

FCC SAR TEST REPORT

FCC ID : 2ATQRCA
Equipment : Controller
Brand Name : Skydio
Model Name : CA110
Applicant : Skydio, Inc
3000 Clearview Way San Mateo CA 94402
Manufacturer : Skydio, Inc
3000 Clearview Way San Mateo CA 94402
Standard : FCC 47 CFR Part 2 (2.1093)

The product was received on Oct. 04, 2025 and testing was started from Oct. 05, 2025 and completed on Apr. 28, 2026. We, SPORTON INTERNATIONAL INC., would like to declare that the tested sample provide by manufacturer and the test data has been evaluated in accordance with the test procedures given in 47 CFR Part 2.1093 and FCC KDB and has been pass the FCC requirement.

The test results in this report apply exclusively to the tested model / sample. Without written approval of SPORTON INTERNATIONAL INC. Laboratory, the test report shall not be reproduced except in full.



Approved by: Cona Huang / Deputy Manager



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History of this test report

Report No.	Version	Description	Issued Date
FA572512	01	Initial issue of report	May 21, 2026
FA572512	02	1. Update section 1, 3.1, 14, 17.1, 18.1, 18.2, 19.1,19.3 2. Update Appendix C	Jul. 07, 2026
FA572512	03	1. Update section 1, 3.1, 3.3, 4, 13	Jul. 30, 2026



1. Statement of Compliance

The maximum results of Specific Absorption Rate (SAR) for Skydio, Inc, Controller, CA110, are as follows.

Equipment Class		Frequency Band	SAR Summary		Simultaneous Transmission 1g SAR (W/kg)	Simultaneous Transmission 10g SAR (W/kg)
			Body (Separation 0mm)	Extremity (Separation 0mm)		
			1g SAR (W/kg)	10g SAR (W/kg)		
Licensed	LTE	LTE Band 12/17	0.40	0.54	1.59	3.98
		LTE Band 13	0.46	0.59		
		LTE Band 14	0.33	0.55		
		LTE Band 2/25	0.32	1.48		
		LTE Band 26	0.32	0.62		
		LTE Band 30	0.37	2.27		
		LTE Band 41	0.30	1.18		
		LTE Band 48	1.00	0.65		
		LTE Band 4/66	0.17	1.39		
		LTE Band 71	0.31	0.46		
	FR1	FR1 n5	0.15	0.35		
		FR1 n2/n25	0.28	1.15		
		FR1 n66	0.05	0.93		
		FR1 n71	0.23	0.25		
		FR1 n38/n41	0.37	1.16		
		FR1 n48	1.05	0.47		
		FR1 n77	0.90	1.88		
DTS	WLAN	2.4GHz WLAN	0.24	2.10	1.59	3.98
NII		5GHz WLAN	1.09	1.61	1.59	3.98
6XD		6GHz WLAN	1.08	0.28		
DSS	2.4GHz Band	Bluetooth	0.24	0.09	1.53	3.96
Equipment Class	Frequency Band		Reported APD		Reported PD (mW/cm^2)	
			Body	Extremity		
			(mW/cm^2)			
6XD	WLAN	6GHz WLAN	0.91	0.65	0.89	
Date of Testing:			2025/10/05 ~ 2026/04/28			

Sporton Lab is accredited to ISO 17025 by Taiwan Accreditation Foundation and the FCC designation No. TW3786 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC test. This device is in compliance with Specific Absorption Rate (SAR) for general population/uncontrolled exposure limits (1.6 W/kg for Partial-Body 1g SAR, 4.0 W/kg for Extremity 10g SAR) specified in FCC 47 CFR part 2 (2.1093), Human Exposure to RF Radiation Limits (1.0 mW/cm²=10 W/m²) specified in FCC 47 CFR part 1.1310 and ANSI/IEEE C95.1-1992, and had been tested in accordance with the measurement methods and procedures specified in IEEE 1528-2013 and FCC KDB publications.

Reviewed by: Jason Wang
Report Producer: Carlie Tsai



2. Guidance Applied

The Specific Absorption Rate (SAR) testing specification, method, and procedure for this device is in accordance with the following standards, the below KDB standard may not including in the TAF code without accreditation.

- FCC 47 CFR Part 2 (2.1093)
- ANSI/IEEE C95.1-1992
- IEEE 1528-2013
- FCC KDB 865664 D01 SAR Measurement 100 MHz to 6 GHz v01r04
- FCC KDB 865664 D02 SAR Reporting v01r02
- FCC KDB 447498 D01 General RF Exposure Guidance v06
- FCC KDB 248227 D01 802.11 Wi-Fi SAR v02r02
- FCC KDB 941225 D05 SAR for LTE Devices v02r05
- IEC/IEEE 62209-1528:2020
- SPEAG DASY6 System Handbook
- SPEAG DASY6 Application Note (Interim Procedure for Device Operation at 6GHz-10GHz)

3. Equipment Under Test (EUT) Information

3.1 General Information

Product Feature & Specification	
Equipment Name	Controller
Brand Name	Skydio
Model Name	CA110
FCC ID	2ATQRC A
Integrated WWAN Module	Brand Name: Telit Model Name: FN990A40
Integrated WLAN Module 1	Brand Name: Skydio Model Name: SMODBV3S
Integrated WLAN Module 2	Brand Name: Einfochips, Inc. Model Name: Aikri-64X-90AS-8-LGA, Aikri-64X-90LS-8-LGA
Wireless Technology and Frequency Range	LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 14: 788 MHz ~ 798 MHz LTE Band 17: 704 MHz ~ 716 MHz LTE Band 25: 1850 MHz ~ 1915 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 30: 2305 MHz ~ 2315 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 48: 3550 MHz ~ 3700 MHz LTE Band 66: 1710 MHz ~ 1780 MHz LTE Band 71: 663 MHz ~ 698 MHz 5G NR n2 : 1850 MHz ~ 1910 MHz 5G NR n5 : 824 MHz ~ 849 MHz 5G NR n25 : 1850 MHz ~ 1915 MHz 5G NR n38 : 2570 MHz ~ 2620 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n48 : 3550 MHz ~ 3700 MHz 5G NR n66 : 1710 MHz ~ 1780 MHz 5G NR n71 : 663 MHz ~ 698 MHz 5G NR n77: 3700 MHz ~ 3980 MHz, 3450 MHz ~ 3550 MHz WLAN 2.4 GHz Band: 2400 MHz ~ 2483.5 MHz WLAN 5.2 GHz Band: 5150 MHz ~ 5250 MHz WLAN 5.3 GHz Band: 5250 MHz ~ 5350 MHz WLAN 5.6 GHz Band: 5470 MHz ~ 5725 MHz WLAN 5.8 GHz Band: 5725 MHz ~ 5850 MHz WLAN 6GHz Band: 5925 MHz ~ 6425 MHz, 6425 MHz ~ 6525 MHz, 6525 MHz ~ 6875 MHz, 6875 MHz ~ 7125 MHz Bluetooth: 2400 MHz ~ 2483.5 MHz
Mode	LTE: QPSK, 16QAM, 64QAM, 256QAM 5G NR: DFT-s-OFDM/CP-OFDM, Pi/2 BPSK/QPSK/16QAM/64QAM/256QAM WLAN: 802.11a/b/g/n/ac/ax HT20/HT40/VHT20/VHT40/VHT80/VHT160/HE20/HE40/HE80/HE160 Bluetooth BR/EDR/LE
EUT Stage	Production Unit

3.2 General LTE SAR Test and Reporting Considerations

Summarized necessary items addressed in KDB 941225 D05 v02r05								
FCC ID	2ATQRCA							
Equipment Name	Controller							
Operating Frequency Range of each LTE transmission band	LTE Band 2: 1850 MHz ~ 1910 MHz LTE Band 4: 1710 MHz ~ 1755 MHz LTE Band 12: 699 MHz ~ 716 MHz LTE Band 13: 777 MHz ~ 787 MHz LTE Band 14: 788 MHz ~ 798 MHz LTE Band 17: 704 MHz ~ 716 MHz LTE Band 25: 1850 MHz ~ 1915 MHz LTE Band 26: 814 MHz ~ 849 MHz LTE Band 30: 2305 MHz ~ 2315 MHz LTE Band 41: 2496 MHz ~ 2690 MHz LTE Band 48: 3550 MHz ~ 3700 MHz LTE Band 66: 1710 MHz ~ 1780 MHz LTE Band 71: 663 MHz ~ 698 MHz							
Channel Bandwidth	LTE Band 2:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 4:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 12:1.4MHz, 3MHz, 5MHz, 10MHz LTE Band 13: 5MHz, 10MHz LTE Band 14: 5MHz, 10MHz LTE Band 17: 5MHz, 10MHz LTE Band 25:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 26:1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz LTE Band 30: 5MHz, 10MHz LTE Band 41: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 48: 5MHz, 10MHz, 15MHz, 20MHz LTE Band 66: 1.4MHz, 3MHz, 5MHz, 10MHz, 15MHz, 20MHz LTE Band 71: 5MHz, 10MHz, 15MHz, 20MHz							
uplink modulations used	QPSK / 16QAM / 64QAM / 256QAM							
LTE Voice / Data requirements	Data only							
LTE MPR permanently built-in by design	Table 6.2.3-1: Maximum Power Reduction (MPR) for Power Class 1, 2 and 3							
	Modulation	Channel bandwidth / Transmission bandwidth (N _{RB})						MPR (dB)
		1.4 MHz	3.0 MHz	5 MHz	10 MHz	15 MHz	20 MHz	
	QPSK	> 5	> 4	> 8	> 12	> 16	> 18	≤ 1
	16 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 1
	16 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 2
	64 QAM	≤ 5	≤ 4	≤ 8	≤ 12	≤ 16	≤ 18	≤ 2
	64 QAM	> 5	> 4	> 8	> 12	> 16	> 18	≤ 3
	256 QAM	≥ 1						≤ 5
LTE A-MPR	In the base station simulator configuration, Network Setting value is set to NS_01 to disable A-MPR during SAR testing and the LTE SAR tests was transmitting on all TTI frames (Maximum TTI)							
Spectrum plots for RB configuration	A properly configured base station simulator was used for the SAR and power measurement; therefore, spectrum plots for each RB allocation and offset configuration are not included in the SAR report.							

Transmission (H, M, L) channel numbers and frequencies in each LTE band												
LTE Band 2												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	18607	1850.7	18615	1851.5	18625	1852.5	18650	1855	18675	1857.5	18700	1860
M	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880	18900	1880
H	19193	1909.3	19185	1908.5	19175	1907.5	19150	1905	19125	1902.5	19100	1900
LTE Band 4												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	19957	1710.7	19965	1711.5	19975	1712.5	20000	1715	20025	1717.5	20050	1720
M	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5	20175	1732.5
H	20393	1754.3	20385	1753.5	20375	1752.5	20350	1750	20325	1747.5	20300	1745
LTE Band 12												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	23017	699.7	23025	700.5	23035	701.5	23060	704				
M	23095	707.5	23095	707.5	23095	707.5	23095	707.5				
H	23173	715.3	23165	714.5	23155	713.5	23130	711				
LTE Band 13												
	Bandwidth 5 MHz					Bandwidth 10 MHz						
	Channel #		Freq.(MHz)			Channel #		Freq.(MHz)				
L	23205		779.5			23230		782				
M	23230		782									
H	23255		784.5									
LTE Band 14												
	Bandwidth 5 MHz					Bandwidth 10 MHz						
	Channel #		Channel #			Channel #		Freq.(MHz)				
L	23305		790.5			23330		793				
M	23330		793									
H	23355		795.5									
LTE Band 17												
	Bandwidth 5 MHz					Bandwidth 10 MHz						
	Channel #		Freq.(MHz)			Channel #		Freq. (MHz)				
L	23755		706.5			23780		709				
M	23790		710			23790		710				
H	23825		713.5			23800		711				
LTE Band 25												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	26047	1850.7	26055	1851.5	26065	1852.5	26090	1855	26115	1857.5	26140	1860
M	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880	26340	1880
H	26683	1914.3	26675	1913.5	26665	1912.5	26640	1910	26615	1907.5	26590	1905
LTE Band 26												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz			
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	26697	814.7	26705	815.5	26715	816.5	26740	819	26765	821.5		
M	26865	831.5	26865	831.5	26865	831.5	26865	831.5	26865	831.5		
H	27033	848.3	27025	847.5	27015	846.5	26990	844	26965	841.5		

LTE Band 30												
	Bandwidth 5 MHz				Bandwidth 10 MHz							
	Channel #		Freq.(MHz)		Channel #		Freq.(MHz)					
L	27685		2307.5		27710		2310					
M	27710		2310									
H	27735		2312.5									
LTE Band 41												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)				
L	39675	2498.5	39700	2501	39725	2503.5	39750	2506				
L	40148	2545.8	40160	2547	40173	2548.3	40185	2549.5				
M	40620	2593	40620	2593	40620	2593	40620	2593				
H	41093	2640.3	41080	2639	41068	2637.8	41055	2636.5				
H	41565	2687.5	41540	2685	41515	2682.5	41490	2680				
LTE Band 48												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)				
L	55265	3552.5	55290	3555	55315	3557.5	55340	3560				
L	55810	3607	55815	3607.5	55820	3608	55830	3609				
M	56170	3643	56165	3642.5	56160	3642	56150	3641				
H	56715	3697.5	56690	3695	56665	3692.5	56640	3690				
LTE Band 66												
	Bandwidth 1.4 MHz		Bandwidth 3 MHz		Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz	
	Ch. #	Freq.(MHz)	Ch. #	Freq.(MHz)	Ch. #	Freq.(MHz)	Ch. #	Freq.(MHz)	Ch. #	Freq.(MHz)	Ch. #	Freq.(MHz)
L	131979	1710.7	131987	1711.5	131997	1712.5	132022	1715	132047	1717.5	132072	1720
M	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745	132322	1745
H	132665	1779.3	132657	1778.5	132647	1777.5	132622	1775	132597	1772.5	132572	1770
LTE Band 71												
	Bandwidth 5 MHz		Bandwidth 10 MHz		Bandwidth 15 MHz		Bandwidth 20 MHz					
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)				
L	133147	665.5	133172	668	133197	670.5	133222	673				
M	133297	680.5	133297	680.5	133297	680.5	133297	680.5				
H	133447	695.5	133422	693	133397	690.5	133372	688				



3.3 General 5G NR SAR Test and Reporting Considerations

5G NR Information																
FCC ID		2ATQRCA														
Equipment Name		Controller														
Operating Frequency Range of each 5G NR transmission band		5G NR n2 : 1850 MHz ~ 1910 MHz 5G NR n5 : 824 MHz ~ 849 MHz 5G NR n25 : 1850 MHz ~ 1915 MHz 5G NR n38 : 2570 MHz ~ 2620 MHz 5G NR n41 : 2496 MHz ~ 2690 MHz 5G NR n48 : 3550 MHz ~ 3700 MHz 5G NR n66 : 1710 MHz ~ 1780 MHz 5G NR n71 : 663 MHz ~ 698 MHz 5G NR n77: 3700 MHz ~ 3980 MHz, 3450 MHz ~ 3550 MHz														
		5G NR n2: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n5: 5MHz, 10MHz, 15MHz, 20MHz 5G NR n25: 5MHz, 10MHz, 15MHz, 20MHz, 25 MHz, 30MHz, 35MHz, 40MHz 5G NR n38: 5MHz, 10MHz, 15MHz, 20MHz, 25 MHz, 30MHz, 40MHz 5G NR n41: 10MHz, 15MHz, 20MHz, 30MHz, 40MHz, 50MHz, 60MHz, 70MHz, 80MHz, 90MHz, 100MHz 5G NR n48: 5MHz,10MHz, 15MHz, 20MHz, 30MHz, 40MHz 5G NR n66: 5MHz, 10MHz, 15MHz, 20MHz, 25 MHz, 30MHz, 35MHz, 40MHz 5G NR n71: 5MHz, 10MHz, 15MHz, 20MHz, 25 MHz, 30 MHz 5G NR n77: 10MHz, 15MHz, 20MHz, 25 MHz, 30MHz, 40MHz, 50MHz, 60MHz, 70MHz, 80MHz, 90MHz, 100MHz														
		SCS														
		uplink modulations used														
		DFT-s-OFDM: PI/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM CP-OFDM QPSK / 16QAM / 64QAM / 256QAM														
		A-MPR (Additional MPR) disabled for SAR Testing?														
		Yes														
		LTE Anchor Bands for n2														
LTE Anchor Bands for n2		LTE B2/12/13/14/25/66/71														
LTE Anchor Bands for n5		LTE B2/30/48/66														
LTE Anchor Bands for n41		LTE B2/25/26/66														
LTE Anchor Bands for n66		LTE B2/12/13/14/48/66/71														
LTE Anchor Bands for n71		LTE B2/66														
LTE Anchor Bands for n77		LTE B2/13/66														
NR Band 2																
	Bandwidth 5MHz				Bandwidth 10MHz				Bandwidth 15MHz				Bandwidth 20MHz			
	Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)	
L	370500		1852.5		371000		1855		371500		1857.5		372000		1860	
M	376000		1880		376000		1880		376000		1880		376000		1880	
H	381500		1907.5		381000		1905		380500		1902.5		380000		1900	
NR Band 5																
	Bandwidth 5MHz				Bandwidth 10MHz				Bandwidth 15MHz				Bandwidth 20MHz			
	Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)	
L	165300		826.5		165800		829		166300		831.5		166800		834	
M	167300		836.5		167300		836.5		167300		836.5		167300		836.5	
H	169300		846.5		168800		844		168300		841.5		167800		839	
NR Band 25																
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 35MHz		Bandwidth 40MHz	
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)
L	370500	1852.5	371000	1855	371500	1857.5	372000	1860	372500	1862.5	373000	1865	373500	1867.5	374000	1870
M	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5	376500	1882.5
H	382500	1912.5	382000	1910	381500	1907.5	381000	1905	380500	1902.5	380000	1900	379500	1897.5	379000	1895
NR Band 38																
	Bandwidth 5MHz		Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz			
	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)		
L	514500	2572.5	515004	2575.02	515502	2577.51	516000	2580	516504	2582.52	517002	2585.01	518004	2590.02		
M	519000	2595	519000	2595	519000	2595	519000	2595	519000	2595	519000	2595	519000	2595		
H	523500	2617.5	522996	2614.98	522498	2612.49	522000	2610	521496	2607.48	520998	2604.99	519996	2599.98		



NR Band 41																													
Bandwidth 10MHz		Bandwidth 15MHz		Bandwidth 20MHz		Bandwidth 25MHz		Bandwidth 30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth100MHz							
Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)						
L	500202	2501.01	500700	2503.5	501204	2506.02	501702	2508.51	502200	2511	503202	2516.01	504204	2521.02	505200	2526	506202	2531.01	507204	2536.02	508200	2541	509202	2546.01					
M	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99	518598	2592.99					
H	537000	2685	536496	2682.48	535998	2679.99	535500	2677.5	534996	2674.98	534000	2670	532998	2664.99	531996	2659.98	531000	2655	529998	2649.99	528996	2644.98	528000	2640					
NR Band 48																													
Bandwidth 5MHz				Bandwidth10MHz				Bandwidth 15MHz				Bandwidth20MHz				Bandwidth30MHz				Bandwidth 40MHz									
Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)							
L	636834		3552.51		637000		3555		637168		3557.52		637334		3560.01		637668		3565.02		638000		3570						
M	641666		3624.99		641666		3624.99		641666		3624.99		641666		3624.99		641666		3624.99		641666		3624.99						
H	646500		3697.5		646332		3694.98		646166		3692.49		646000		3690		645666		3684.99		645332		3679.98						
NR Band 66																													
Bandwidth 5MHz				Bandwidth 10MHz				Bandwidth 15MHz				Bandwidth 20MHz				Bandwidth 25MHz				Bandwidth 30MHz				Bandwidth 35MHz				Bandwidth 40MHz	
Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)			
L	342500	1712.5	343000	1715	343500	1717.5	344000	1720	344500	1722.5	345000	1725	345500	1727.5	346000	1730													
M	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745	349000	1745													
H	355500	1777.5	355000	1775	354500	1772.5	354000	1770	353500	1767.5	353000	1765	352500	1762.5	352000	1760													
NR Band 71																													
Bandwidth 5MHz				Bandwidth 10MHz				Bandwidth 15MHz				Bandwidth 20MHz				Bandwidth 25MHz				Bandwidth 30MHz									
Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)		Ch. #		Freq. (MHz)							
L	133100		665.5		133600		668		13410		670.5		134600		673		135100		675.5		135600		678						
M	136100		680.5		136100		680.5		136100		680.5		136100		680.5		136100		680.5		136100		680.5						
H	139100		695.5		138600		693		13810		690.5		137600		688		137100		685.5		136600		683						
NR Band 77_Part 27O																													
Bandwidth10MHz		Bandwidth15MHz		Bandwidth 20MHz		Bandwidth25MHz		Bandwidth30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth100MHz							
Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)						
L	647000	3705	647168	3707.52	647334	3710.01	647500	3712.5	647668	3715.02	648000	3720	648334	3725.01	648668	3730.02	649000	3735	649334	3740.01	649668	3745.02	650000	3750					
M	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840	656000	3840					
H	665000	3975	664832	3972.48	664666	3969.99	664500	3967.50	664332	3964.98	664000	3960	663666	3954.99	663332	3949.98	663000	3945	662666	3939.99	662332	3934.98	662000	3930					
NR Band 77_Part 27Q																													
Bandwidth10MHz		Bandwidth15MHz		Bandwidth 20MHz		Bandwidth25MHz		Bandwidth30MHz		Bandwidth 40MHz		Bandwidth 50MHz		Bandwidth 60MHz		Bandwidth 70MHz		Bandwidth 80MHz		Bandwidth 90MHz		Bandwidth100MHz							
Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)	Ch. #	Freq. (MHz)						
L	630334	3455.01	630500	3457.5	630668	3460.02	630834	3462.51	631000	3465	631334	3470.01	631668	3475.02	632000	3480	632334	3485.01	632668	3490.02	633000	3495	633332	3499.98					
M	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98	633332	3499.98							
H	636332	3544.98	636166	3542.49	636000	3540	635832	3537.48	635666	3534.99	635332	3529.98	635000	3525	634666	3519.99	634332	3514.98	634000	3510	633666	3504.99							

4. Smart Transmit feature for RF Exposure compliance

The RF exposure limit is defined based on time-averaged RF exposure. The product implements Qualcomm Smart Transmit feature which controls the instantaneous transmitting power for WWAN/WLAN/BT and RFID transmitter to ensure the product in compliance with RF exposure limit over a defined time window. To control and manage transmitting power in real time and to ensure at all times the time-averaged RF exposure is compliant to the regulation requirement. Smart Transmit allows the device to transmit at higher power instantaneously, as high as Pmax, when needed, but enforces power limiting to maintain time-averaged transmit power to Plimit. Below table shows Plimit EFS settings and maximum tune up output power Pmax configured for this EUT for various transmit conditions (Device State Index DSI).

<Terminologies in this report>

Plimit	The time-averaged RF power which corresponds to SAR_design_target.
Pmax	Maximum target power level
SAR_design_target:	The design target for SAR compliance. It should be less than regulatory power density limit to account for all device design related uncertainties.
SAR char	Plimit for all the technologies/bands for all applicable DSI

<Plimit for supported technologies and bands (Plimit in EFS file)>

General Note:

1. Pmax is used for RF tune up procedure. The maximum allowed output power is equal to Pmax + device uncertainty.
2. All Plimit power levels entered in the Table correspond to average power levels after accounting for duty cycle in the case TDD modulation schemes (for e.g., GSM& LTE TDD & NR TDD).
3. The max allowed output power is the Plimit + device uncertainty, and if Plimit is higher than Pmax, the device output power will be Pmax instead.

Band	Antenna	Duty cycle(%)	Plimit (Time average power)	Pmax (Time average power)	1g SAR Design Target (W/kg)	Power tolerance
LTE B2/25	0	100.00%	22.0	23	0.95	1.0
LTE B66/4	0	100.00%	22.0	23	0.95	1.0
LTE B12	0	100.00%	23.0	23	0.95	1.0
LTE B13	0	100.00%	23.0	23	0.95	1.0
LTE B14	0	100.00%	23.0	23	0.95	1.0
LTE B26	0	100.00%	23.0	23	0.95	1.0
LTE B30	0	100.00%	19.0	22	0.95	1.0
LTE B41/38(PC3)	0	63.30%	21.9	20.5	0.95	1.0
LTE B41 (PC2)	0	43.30%		21.9	0.95	1.0
LTE B48	3	63.30%	15.0	20.5	0.95	1.0
LTE B71	0	100.00%	23.0	23.0	0.95	1.0
n5	0	100.00%	23.5	23.5	0.95	1.0
n25/2	0	100.00%	23.5	23.5	0.95	1.0
n66	0	100.00%	23.5	23.5	0.95	1.0
n71	0	100.00%	23.5	23.5	0.95	1.0
n41/n38(PC3)	0	100.00%	19	19	0.95	1.0
n41/n38(PC2)	0	50.00%		19	0.95	1.0
n41/n38(PC3)	2	100.00%	22.0	22.0	0.95	1.0
n41/n38(PC2)	2	50.00%		22.0	0.95	1.0
n48	1	100.00%	13.5	18.5	0.95	1.0
n48	3	100.00%	13.5	21.5	0.95	1.0
n77 (PC3)	1	100.00%	14.5	23.5	0.95	1.0
n77 (PC2)	1	50.00%		23.5	0.95	1.0
n77 (PC3)	3	100.00%	14.5	23.5	0.95	1.0
n77 (PC2)	3	50.00%		23.5	0.95	1.0

5. RF Exposure Limits

5.1 Uncontrolled Environment

Uncontrolled Environments are defined as locations where there is the exposure of individuals who have no knowledge or control of their exposure. The general population/uncontrolled exposure limits are applicable to situations in which the general public may be exposed or in which persons who are exposed as a consequence of their employment may not be made fully aware of the potential for exposure or cannot exercise control over their exposure. Members of the general public would come under this category when exposure is not employment-related; for example, in the case of a wireless transmitter that exposes persons in its vicinity.

5.2 Controlled Environment

Controlled Environments are defined as locations where there is exposure that may be incurred by persons who are aware of the potential for exposure, (i.e. as a result of employment or occupation). In general, occupational/controlled exposure limits are applicable to situations in which persons are exposed as a consequence of their employment, who have been made fully aware of the potential for exposure and can exercise control over their exposure. The exposure category is also applicable when the exposure is of a transient nature due to incidental passage through a location where the exposure levels may be higher than the general population/uncontrolled limits, but the exposed person is fully aware of the potential for exposure and can exercise control over his or her exposure by leaving the area or by some other appropriate means.

Limits for Occupational/Controlled Exposure (W/kg)

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.4	8.0	20.0

Limits for General Population/Uncontrolled Exposure (W/kg)

Whole-Body	Partial-Body	Hands, Wrists, Feet and Ankles
0.08	1.6	4.0

1. Whole-Body SAR is averaged over the entire body, partial-body SAR is averaged over any 1gram of tissue defined as a tissue volume in the shape of a cube. SAR for hands, wrists, feet and ankles is averaged over any 10 grams of tissue defined as a tissue volume in the shape of a cube.

5.3 RF Exposure limit for above 6GHz

According to ANSI/IEEE C95.1-1992, the criteria listed in Table 1 shall be used to evaluate the environmental impact of human exposure to radio frequency (RF) radiation as specified in §1.1310.

Peak Spatially Averaged Power Density was evaluated over a circular area of 4cm² per interim FCC Guidance for near-field power density evaluations per October 2018 TCB Workshop notes

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm ²)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
0.3-3.0	614	1.63	*(100)	6
3.0-30	1842/f	4.89/f	*(900/f ²)	6
30-300	61.4	0.163	1.0	6
300-1500			f/300	6
1500-100,000			5	6
(B) Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500			f/1500	30
1500-100,000			1.0	30

6. Specific Absorption Rate (SAR)

6.1 Introduction

SAR is related to the rate at which energy is absorbed per unit mass in an object exposed to a radio field. The SAR distribution in a biological body is complicated and is usually carried out by experimental techniques or numerical modeling. The standard recommends limits for two tiers of groups, occupational/controlled and general population/uncontrolled, based on a person's awareness and ability to exercise control over his or her exposure. In general, occupational/controlled exposure limits are higher than the limits for general population/uncontrolled.

6.2 SAR Definition

The SAR definition is the time derivative (rate) of the incremental energy (dW) absorbed by (dissipated in) an incremental mass (dm) contained in a volume element (dv) of a given density (ρ). The equation description is as below:

$$SAR = \frac{d}{dt} \left(\frac{dW}{dm} \right) = \frac{d}{dt} \left(\frac{dW}{\rho dv} \right)$$

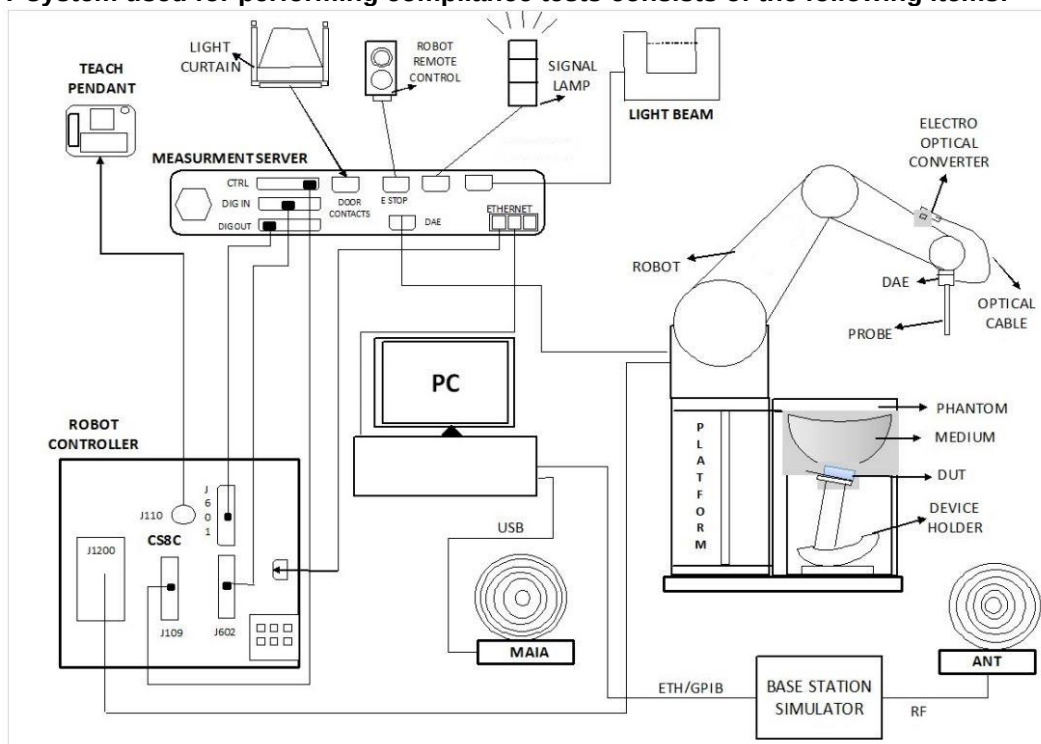
SAR is expressed in units of Watts per kilogram (W/kg)

$$SAR = \frac{\sigma |E|^2}{\rho}$$

Where: σ is the conductivity of the tissue, ρ is the mass density of the tissue and E is the RMS electrical field strength.

7. System Description and Setup

The DASY system used for performing compliance tests consists of the following items:



- The DASY system in SAR Configuration is shown above
- A standard high precision 6-axis robot with controller, teach pendant and software. An arm extension for accommodating the data acquisition electronics (DAE).
- An isotropic Field probe optimized and calibrated for the targeted measurement.
- A data acquisition electronics (DAE) which performs the signal amplification, signal multiplexing, AD-conversion, offset measurements, mechanical surface detection, collision detection, etc. The unit is battery powered with standard or rechargeable batteries. The signal is optically transmitted to the EOC.
- The Electro-optical converter (EOC) performs the conversion from optical to electrical signals for the digital communication to the DAE. To use optical surface detection, a special version of the EOC is required. The EOC signal is transmitted to the measurement server.
- The function of the measurement server is to perform the time critical tasks such as signal filtering, control of the robot operation and fast movement interrupts.
- The Light Beam used is for probe alignment. This improves the (absolute) accuracy of the probe positioning.
- A computer running windows software and the DASY software.
- Remote control and teach pendant as well as additional circuitry for robot safety such as warning lamps, etc.
- The phantom, the device holder and other accessories according to the targeted measurement.

7.1 Test Site Location

The SAR measurement facilities used to collect data are within both Sporton Lab list below test site location are accredited to ISO 17025 by Taiwan Accreditation Foundation (TAF code: 1190 and 3786) and the FCC designation No. TW1190 and TW3786 under the FCC 2.948(e) by Mutual Recognition Agreement (MRA) in FCC test.

Laboratory	EMC & Wireless Communications Laboratory		Wensan Laboratory				
Test Site Location	TW1190 No.52, Huaya 1st Rd., Guishan Dist., Taoyuan City 333, Taiwan		TW3786 No.58, Aly. 75, Ln. 564, Wenhua 3rd, Rd., Guishan Dist., Taoyuan City 333010, Taiwan				
Test Site No.	SAR01-HY	SAR03-HY	SAR08-HY	SAR09-HY	SAR15-HY	SAR18-HY	SAR21-HY
	SAR04-HY	SAR05-HY	SAR11-HY	SAR12-HY	SAR16-HY	SAR19-HY	SAR22-HY
	SAR06-HY	SAR10-HY	SAR13-HY	SAR14-HY	SAR17-HY	SAR20-HY	

7.2 E-Field Probe

The SAR measurement is conducted with the dosimetric probe (manufactured by SPEAG). The probe is specially designed and calibrated for use in liquid with high permittivity. The dosimetric probe has special calibration in liquid at different frequency. This probe has a built in optical surface detection system to prevent from collision with phantom.

< ES3DV3 Probe >

Construction	Symmetric design with triangular core Interleaved sensors Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	
Frequency	4 MHz – 4 GHz; Linearity: ± 0.2 dB (30 MHz – 4 GHz)	
Directivity	± 0.2 dB in TSL (rotation around probe axis) ± 0.3 dB in TSL (rotation normal to probe axis)	
Dynamic Range	5 μ W/g – > 100 mW/g; Linearity: ± 0.2 dB	
Dimensions	Overall length: 337 mm (tip: 20 mm) Tip diameter: 3.9 mm (body: 12 mm) Distance from probe tip to dipole centers: 3.0 mm	

< EX3DV4 Probe >

Construction	Symmetric design with triangular core Built-in shielding against static charges PEEK enclosure material (resistant to organic solvents, e.g., DGBE)	
Frequency	4 MHz – > 6 GHz Linearity: ± 0.2 dB (30 MHz – 6 GHz)	
Directivity	± 0.3 dB in TSL (rotation around probe axis) ± 0.5 dB in TSL (rotation normal to probe axis)	
Dynamic Range	10 μ W/g – > 100 mW/g Linearity: ± 0.2 dB (noise: typically < 1 μ W/g)	
Dimensions	Overall length: 337 mm (tip: 20 mm) Tip diameter: 2.5 mm (body: 12 mm) Typical distance from probe tip to dipole centers: 1 mm	

7.3 Data Acquisition Electronics (DAE)

The data acquisition electronics (DAE) consists of a highly sensitive electrometer-grade preamplifier with auto-zeroing, a channel and gain-switching multiplexer, a fast 16 bit AD-converter and a command decoder and control logic unit. Transmission to the measurement server is accomplished through an optical downlink for data and status information as well as an optical uplink for commands and the clock.

The input impedance of the DAE is 200 MOhm; the inputs are symmetrical and floating. Common mode rejection is above 80 dB.

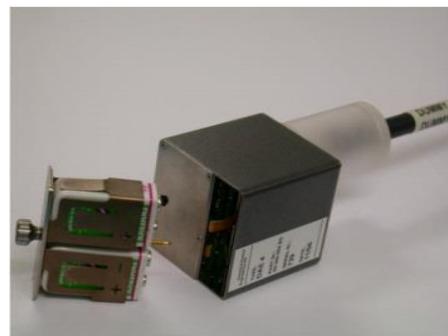


Fig 5.1 Photo of DAE

7.4 Phantom

< SAM Twin Phantom >

Shell Thickness	2 ± 0.2 mm; Center ear point: 6 ± 0.2 mm	
Filling Volume	Approx. 25 liters	
Dimensions	Length: 1000 mm; Width: 500 mm; Height: adjustable feet	
Measurement Areas	Left Hand, Right Hand, Flat Phantom	

The bottom plate contains three pair of bolts for locking the device holder. The device holder positions are adjusted to the standard measurement positions in the three sections. A white cover is provided to tap the phantom during off-periods to prevent water evaporation and changes in the liquid parameters. On the phantom top, three reference markers are provided to identify the phantom position with respect to the robot.

< ELI Phantom >

Shell Thickness	2 ± 0.2 mm (sagging: < 1%)	
Filling Volume	Approx. 30 liters	
Dimensions	Major ellipse axis: 600 mm Minor axis: 400 mm	

The ELI phantom is intended for compliance testing of handheld and body-mounted wireless devices in the frequency range of 30 MHz to 6 GHz. ELI4 is fully compatible with standard and all known tissue simulating liquids.

7.5 Device Holder

< Mounting Device for Hand-Held Transmitter >

In combination with the Twin SAM V5.0/V5.0c or ELI phantoms, the Mounting Device for Hand-Held Transmitters enables rotation of the mounted transmitter device to specified spherical coordinates. At the heads, the rotation axis is at the ear opening. Transmitter devices can be easily and accurately positioned according to IEC 62209-1, IEEE 1528, FCC, or other specifications. The device holder can be locked for positioning at different phantom sections (left head, right head, flat). And upgrade kit to Mounting Device to enable easy mounting of wider devices like big smart-phones, e-books, small tablets, etc. It holds devices with width up to 140 mm.



Mounting Device for Hand-Held Transmitters



Mounting Device Adaptor for Wide-Phones

< Mounting Device for Laptops and other Body-Worn Transmitters >

The extension is lightweight and made of POM, acrylic glass and foam. It fits easily on the upper part of the mounting device in place of the phone positioned. The extension is fully compatible with the SAM Twin and ELI phantoms.



Mounting Device for Laptops

8. Measurement Procedures

The measurement procedures are as follows:

- (a) Configure the device RF transmitters to be in continuous transmission mode., at maximum RF power, in the highest power channel.
- (b) Place the EUT in the positions as Appendix D demonstrates.
- (c) Set scan area, grid size and other setting on the DASY software.
- (d) Measure SAR results for the highest power channel on each testing position.
- (e) Find out the largest SAR result on these testing positions of each band
- (f) Measure SAR results for other channels in worst SAR testing position if the reported SAR of highest power channel is larger than 0.8 W/kg

According to the test standard, the recommended procedure for assessing the peak spatial-average SAR value consists of the following steps:

- (a) Power reference measurement
- (b) Area scan
- (c) Zoom scan
- (d) Power drift measurement

8.1 Spatial Peak SAR Evaluation

The procedure for spatial peak SAR evaluation has been implemented according to the test standard. It can be conducted for 1g and 10g, as well as for user-specific masses. The DASY software includes all numerical procedures necessary to evaluate the spatial peak SAR value.

The base for the evaluation is a "cube" measurement. The measured volume must include the 1g and 10g cubes with the highest averaged SAR values. For that purpose, the center of the measured volume is aligned to the interpolated peak SAR value of a previously performed area scan.

The entire evaluation of the spatial peak values is performed within the post-processing engine (SEMCAD). The system always gives the maximum values for the 1g and 10g cubes. The algorithm to find the cube with highest averaged SAR is divided into the following stages:

- (a) Extraction of the measured data (grid and values) from the Zoom Scan
- (b) Calculation of the SAR value at every measurement point based on all stored data (A/D values and measurement parameters)
- (c) Generation of a high-resolution mesh within the measured volume
- (d) Interpolation of all measured values from the measurement grid to the high-resolution grid
- (e) Extrapolation of the entire 3-D field distribution to the phantom surface over the distance from sensor to surface
- (f) Calculation of the averaged SAR within masses of 1g and 10g

8.2 Power Reference Measurement

The Power Reference Measurement and Power Drift Measurements are for monitoring the power drift of the device under test in the batch process. The minimum distance of probe sensors to surface determines the closest measurement point to phantom surface. This distance cannot be smaller than the distance of sensor calibration points to probe tip as defined in the probe properties.

8.3 Area Scan

The area scan is used as a fast scan in two dimensions to find the area of high field values, before doing a fine measurement around the hot spot. The sophisticated interpolation routines implemented in DASY software can find the maximum found in the scanned area, within a range of the global maximum. The range (in dB0) is specified in the standards for compliance testing. For example, a 2 dB range is required in IEEE standard 1528 and IEC 62209 standards, whereby 3 dB is a requirement when compliance is assessed in accordance with the ARIB standard (Japan), if only one zoom scan follows the area scan, then only the absolute maximum will be taken as reference. For cases where multiple maximums are detected, the number of zoom scans has to be increased accordingly.

Area scan parameters extracted from FCC KDB 865664 D01v01r04 SAR measurement 100 MHz to 6 GHz.

	≤ 3 GHz	> 3 GHz
Maximum distance from closest measurement point (geometric center of probe sensors) to phantom surface	5 ± 1 mm	$\frac{1}{2} \cdot \delta \cdot \ln(2) \pm 0.5$ mm
Maximum probe angle from probe axis to phantom surface normal at the measurement location	$30^\circ \pm 1^\circ$	$20^\circ \pm 1^\circ$
Maximum area scan spatial resolution: Δx_{Area} , Δy_{Area}	≤ 2 GHz: ≤ 15 mm $2 - 3$ GHz: ≤ 12 mm	$3 - 4$ GHz: ≤ 12 mm $4 - 6$ GHz: ≤ 10 mm
	When the x or y dimension of the test device, in the measurement plane orientation, is smaller than the above, the measurement resolution must be $\leq$ the corresponding x or y dimension of the test device with at least one measurement point on the test device.	

8.4 Zoom Scan

Zoom scans are used to assess the peak spatial SAR values within a cubic averaging volume containing 1 gram and 10 gram of simulated tissue. The zoom scan measures points (refer to table below) within a cube whose base faces are centered on the maxima found in a preceding area scan job within the same procedure. When the measurement is done, the zoom scan evaluates the averaged SAR for 1 gram and 10 gram and displays these values next to the job's label.

Zoom scan parameters extracted from FCC KDB 865664 D01v01r04 SAR measurement 100 MHz to 6 GHz.

			≤ 3 GHz	> 3 GHz
Maximum zoom scan spatial resolution: $\Delta x_{\text{Zoom}}, \Delta y_{\text{Zoom}}$			≤ 2 GHz: ≤ 8 mm $2 - 3$ GHz: ≤ 5 mm*	$3 - 4$ GHz: ≤ 5 mm* $4 - 6$ GHz: ≤ 4 mm*
Maximum zoom scan spatial resolution, normal to phantom surface	uniform grid: $\Delta z_{\text{Zoom}}(n)$		≤ 5 mm	$3 - 4$ GHz: ≤ 4 mm $4 - 5$ GHz: ≤ 3 mm $5 - 6$ GHz: ≤ 2 mm
	graded grid	$\Delta z_{\text{Zoom}}(1)$: between 1 st two points closest to phantom surface	≤ 4 mm	$3 - 4$ GHz: ≤ 3 mm $4 - 5$ GHz: ≤ 2.5 mm $5 - 6$ GHz: ≤ 2 mm
		$\Delta z_{\text{Zoom}}(n>1)$: between subsequent points	$\leq 1.5 \cdot \Delta z_{\text{Zoom}}(n-1)$	
Minimum zoom scan volume	x, y, z		≥ 30 mm	$3 - 4$ GHz: ≥ 28 mm $4 - 5$ GHz: ≥ 25 mm $5 - 6$ GHz: ≥ 22 mm
Note: δ is the penetration depth of a plane-wave at normal incidence to the tissue medium; see draft standard IEEE P1528-2011 for details.				
* When zoom scan is required and the <i>reported</i> SAR from the <i>area scan based 1-g SAR estimation</i> procedures of KDB 447498 is ≤ 1.4 W/kg, ≤ 8 mm, ≤ 7 mm and ≤ 5 mm zoom scan resolution may be applied, respectively, for 2 GHz to 3 GHz, 3 GHz to 4 GHz and 4 GHz to 6 GHz.				

8.5 Volume Scan Procedures

The volume scan is used to assess overlapping SAR distributions for antennas transmitting in different frequency bands. It is equivalent to an oversized zoom scan used in standalone measurements. The measurement volume will be used to enclose all the simultaneous transmitting antennas. For antennas transmitting simultaneously in different frequency bands, the volume scan is measured separately in each frequency band. In order to sum correctly to compute the 1g aggregate SAR, the EUT remain in the same test position for all measurements and all volume scan use the same spatial resolution and grid spacing. When all volume scan were completed, the software, SEMCAD postprocessor can combine and subsequently superpose these measurement data to calculating the multiband SAR.

8.6 Power Drift Monitoring

All SAR testing is under the EUT install full charged battery and transmit maximum output power. In DASy measurement software, the power reference measurement and power drift measurement procedures are used for monitoring the power drift of EUT during SAR test. Both these procedures measure the field at a specified reference position before and after the SAR testing. The software will calculate the field difference in dB. If the power drifts more than 5%, the SAR will be retested.

9. Test Equipment List

Manufacturer	Name of Equipment	Type/Model	Serial Number	Calibration	
				Last Cal.	Due Date
SPEAG	750MHz System Validation Kit	D750V3	1107	Jun. 11, 2025	Jun. 10, 2026
SPEAG	750MHz System Validation Kit ⁽²⁾	D750V3	1117	Mar. 12, 2025	Mar. 10, 2027
SPEAG	835MHz System Validation Kit ⁽²⁾	D835V2	4d060	Feb. 17, 2025	Feb. 15, 2027
SPEAG	1750MHz System Validation Kit ⁽²⁾	D1750V2	1112	Feb. 20, 2025	Feb. 18, 2027
SPEAG	1900MHz System Validation Kit ⁽²⁾	D1900V2	5d093	Mar. 20, 2025	Mar. 18, 2027
SPEAG	1900MHz System Validation Kit	D1900V2	5d185	Jun. 11, 2025	Jun. 10, 2026
SPEAG	2300MHz System Validation Kit ⁽²⁾	D2300V2	1006	Jan. 14, 2025	Jan. 12, 2027
SPEAG	2300MHz System Validation Kit ⁽²⁾	D2300V2	1088	Jul. 10, 2024	Jul. 08, 2026
SPEAG	2450MHz System Validation Kit	D2450V2	929	Nov. 12, 2025	Nov. 11, 2026
SPEAG	2450MHz System Validation Kit ⁽²⁾	D2450V2	806	Mar. 13, 2025	Mar. 11, 2027
SPEAG	2600MHz System Validation Kit ⁽²⁾	D2600V2	1008	Aug. 15, 2024	Aug. 13, 2026
SPEAG	2600MHz System Validation Kit	D2600V2	1078	Jun. 11, 2025	Jun. 10, 2026
SPEAG	3500MHz System Validation Kit ⁽²⁾	D3500V2	1014	Jan. 15, 2025	Jan. 13, 2027
SPEAG	3500MHz System Validation Kit ⁽²⁾	D3500V2	1036	Mar. 11, 2025	Mar. 09, 2027
SPEAG	3700MHz System Validation Kit	D3700V2	1006	Jun. 12, 2025	Jun. 11, 2026
SPEAG	3700MHz System Validation Kit ⁽²⁾	D3700V2	1022	Jul. 10, 2024	Jul. 08, 2026
SPEAG	3900MHz System Validation Kit ⁽²⁾	D3900V2	1092	May. 15, 2023	May. 12, 2026
SPEAG	5GHz System Validation Kit ⁽²⁾	D5GHZV2	1006	Oct. 15, 2024	Oct. 13, 2026
SPEAG	6500MHz System Validation Kit	D6.5GHZV2	1083	Oct. 22, 2025	Oct. 21, 2026
SPEAG	5G Verification Source	10GHz	1020	Jan. 15, 2026	Jan. 14, 2027
SPEAG	EUmmWV Probe Tip Protection	EUmmWV4	9461	Oct. 15, 2025	Oct. 14, 2026
SPEAG	Data Acquisition Electronics	DAE4	656	Jan. 15, 2026	Jan. 14, 2027
SPEAG	Data Acquisition Electronics	DAE4	661	May. 19, 2025	May. 18, 2026
SPEAG	Data Acquisition Electronics	DAE4	699	Feb. 13, 2026	Feb. 12, 2027
SPEAG	Data Acquisition Electronics	DAE4	778	Jan. 15, 2026	Jan. 14, 2027
SPEAG	Data Acquisition Electronics	DAE4	1424	Dec. 19, 2024	Dec. 18, 2025
SPEAG	Data Acquisition Electronics	DAE4	1424	Dec. 03, 2025	Dec. 02, 2026
SPEAG	Data Acquisition Electronics	DAE4	1697	Nov. 19, 2025	Nov. 18, 2026
SPEAG	Data Acquisition Electronics	DAE4	1776	Feb. 12, 2025	Feb. 11, 2026
SPEAG	Data Acquisition Electronics	DAE4	1805	May. 21, 2025	May. 20, 2026
SPEAG	Dosimetric E-Field Probe	EX3DV4	3976	Jan. 27, 2026	Jan. 26, 2027
SPEAG	Dosimetric E-Field Probe	EX3DV4	7625	Dec. 13, 2024	Dec. 12, 2025
SPEAG	Dosimetric E-Field Probe	EX3DV4	7695	Jul. 01, 2025	Jun. 30, 2026
SPEAG	Dosimetric E-Field Probe	EX3DV4	7791	Feb. 19, 2025	Feb. 18, 2026
SPEAG	Dosimetric E-Field Probe	EX3DV4	7793	Feb. 23, 2026	Feb. 22, 2027
SPEAG	Dosimetric E-Field Probe	EX3DV4	7813	May. 21, 2025	May. 20, 2026
SPEAG	Dosimetric E-Field Probe	EX3DV4	7814	Jun. 19, 2025	Jun. 18, 2026
Testo	Hygro meter	608-H1	45196600	Nov. 04, 2025	Nov. 03, 2026
Anritsu	Radio Communication Analyzer	MT8821C	6201341950	Nov. 20, 2025	Nov. 19, 2026
Keysight	5G Wireless Test Platform	E7515B	MY58300712	Sep. 09, 2025	Sep. 08, 2026
R&S	BT Base Station	CBT	101136	Oct. 29, 2025	Oct. 28, 2026
R&S	BT Base Station	CBT	100815	Feb. 26, 2025	Feb. 25, 2026
SPEAG	Device Holder	N/A	N/A	N/A	N/A
Anritsu	Signal Generator	MG3710A	6201502524	Sep. 24, 2025	Sep. 23, 2026
Keysight	ENA Network Analyzer	E5071C	MY46104758	Oct. 14, 2025	Oct. 13, 2026
SPEAG	Dielectric Probe Kit	DAK-3.5	1126	Sep. 16, 2025	Sep. 15, 2026
LINE SEIKI	Digital Thermometer	DTM3000-spezial	3690	Aug. 14, 2025	Aug. 13, 2026
Anritsu	Power Meter	ML2496A	2119003	Jul. 14, 2025	Jul. 13, 2026
Anritsu	Power Sensor	MA2411B	1726150	Aug. 18, 2025	Aug. 17, 2026
Anritsu	Spectrum Analyzer	MS2830A	6201396378	Jul. 09, 2025	Jul. 08, 2026
Mini-Circuits	Power Amplifier	ZVE-8G+	6418	Oct. 23, 2025	Oct. 22, 2026
ATM	Dual Directional Coupler	C122H-10	P610410z-02	Note 1	
Warison	Directional Coupler	WCOU-10-50S-10	WR889BMC4B1	Note 1	
Woken	Attenuator 1	WK0602-XX	N/A	Note 1	
PE	Attenuator 2	PE7005-10	N/A	Note 1	
PE	Attenuator 3	PE7005- 3	N/A	Note 1	

General Note:

1. Prior to system verification and validation, the path loss from the signal generator to the system check source and the power meter, which includes the amplifier, cable, attenuator and directional coupler, was measured by the network analyzer. The reading of the power meter was offset by the path loss difference between the path to the power meter and the path to the system check source to monitor the actual power level fed to the system check source.
2. The dipole calibration interval can be extended to 3 years with justification. The dipoles are also not physically damaged, or repaired during the interval. The justification data in appendix C can be found which the return loss is < -20dB, within 20% of prior calibration, the impedance is within 5 ohm of prior calibration for each dipole.

10. System Verification

10.1 Tissue Verification

The tissue dielectric parameters of tissue-equivalent media used for SAR measurements must be characterized within a temperature range of 18°C to 25°C, measured with calibrated instruments and apparatuses, such as network analyzers and temperature probes. The temperature of the tissue-equivalent medium during SAR measurement must also be within 18°C to 25°C and within $\pm 2^\circ\text{C}$ of the temperature when the tissue parameters are characterized. The tissue dielectric measurement system must be calibrated before use. The dielectric parameters must be measured before the tissue-equivalent medium is used in a series of SAR measurements.

The liquid tissue depth was at least 15cm in the phantom for all SAR testing

The SPEAG Dasy Measurement system implement a SAR error compensation algorithm as documented in IEEE Std 1528-2013 to automatically compensate the measured SAR results for deviations between the measured and required tissue dielectric parameters, according to KDB 865664 D01 and IEC/IEEE 62209-1528, the tolerance for "Delta (σ)" and "Delta (ϵ_r)" can be relaxed to $\pm 10\%$

< Tissue Dielectric Parameter Check Results >

Frequency (MHz)	Liquid Temp. (°C)	Conductivity (σ)	Permittivity (ϵ_r)	Conductivity Target (σ)	Permittivity Target (ϵ_r)	Delta (σ) (%)	Delta (ϵ_r) (%)	Limit (%)	Date
750	22.5	0.870	43.700	0.89	41.90	-2.25	4.30	± 10	2025/10/12
750	22.5	0.869	45.700	0.89	41.90	-2.36	9.07	± 10	2025/10/17
750	22.4	0.885	44.626	0.89	41.90	-0.56	6.51	± 10	2026/4/23
750	22.5	0.918	42.700	0.89	41.90	3.15	1.91	± 10	2026/4/25
835	22.5	0.895	43.400	0.90	41.50	-0.56	4.58	± 10	2025/10/12
1750	22.5	1.340	41.600	1.37	40.10	-2.19	3.74	± 10	2025/10/12
1750	22.5	1.320	43.900	1.37	40.10	-3.65	9.48	± 10	2025/10/17
1900	22.5	1.430	41.500	1.40	40.00	2.14	3.75	± 10	2025/10/12
2300	22.5	1.700	40.900	1.67	39.50	1.80	3.54	± 10	2025/10/12
2600	22.6	1.960	39.400	1.96	39.00	0.00	1.03	± 10	2026/4/26
2600	22.8	1.880	41.000	1.96	39.00	-4.08	5.13	± 10	2026/4/28
3500	22.5	2.745	37.652	2.91	37.90	-5.67	-0.65	± 10	2026/4/25
3500	22.5	2.700	38.500	2.91	37.90	-7.22	1.58	± 10	2026/4/25
3500	22.6	2.719	38.107	2.91	37.90	-6.56	0.55	± 10	2026/4/26
3500	22.7	2.740	38.900	2.91	37.90	-5.84	2.64	± 10	2026/4/27
3700	22.5	2.924	37.316	3.12	37.70	-6.28	-1.02	± 10	2026/4/25
3700	22.6	2.893	37.804	3.12	37.70	-7.28	0.28	± 10	2026/4/26
3700	22.7	2.920	38.600	3.12	37.70	-6.41	2.39	± 10	2026/4/27
3900	22.5	3.093	37.037	3.33	37.51	-7.12	-1.26	± 10	2026/4/25
3900	22.7	3.087	37.535	3.33	37.51	-7.30	0.07	± 10	2026/4/26
3900	22.7	3.120	38.300	3.33	37.51	-6.31	2.11	± 10	2026/4/27
2450	22.5	1.840	39.900	1.80	39.20	2.22	1.79	± 10	2025/10/5
2450	22.5	1.790	39.600	1.80	39.20	-0.56	1.02	± 10	2025/10/22
5250	22.5	4.540	35.300	4.71	35.95	-3.61	-1.81	± 10	2025/10/5
5250	22.5	4.500	34.600	4.71	35.95	-4.46	-3.76	± 10	2025/10/22
5250	22.5	4.560	38.200	4.71	35.95	-3.18	6.26	± 10	2026/4/22
5600	22.5	4.930	34.700	5.07	35.50	-2.76	-2.25	± 10	2025/10/5
5600	22.5	4.880	33.900	5.07	35.50	-3.75	-4.51	± 10	2025/10/22
5600	22.5	4.960	37.600	5.07	35.50	-2.17	5.92	± 10	2026/4/22
5800	22.5	5.160	34.300	5.27	35.30	-2.09	-2.83	± 10	2025/10/5
5800	22.5	5.120	33.600	5.27	35.30	-2.85	-4.82	± 10	2025/10/22
5800	22.5	5.190	37.300	5.27	35.30	-1.52	5.67	± 10	2026/4/22
2450	22.3	1.790	42.800	1.80	39.20	-0.56	9.18	± 10	2026/4/23
6500	22.5	6.050	36.100	6.07	34.50	-0.33	4.64	± 10	2026/4/24
2450	22.8	1.760	41.200	1.80	39.20	-2.22	5.10	± 10	2026/4/28
5250	22.8	4.520	36.700	4.71	35.95	-4.03	2.09	± 10	2026/4/28
5600	22.8	4.910	36.100	5.07	35.50	-3.16	1.69	± 10	2026/4/28
5800	22.8	5.160	35.700	5.27	35.30	-2.09	1.13	± 10	2026/4/28



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6500	22.8	6.020	34.500	6.07	34.50	-0.82	0.00	±10	2026/4/28
750	22.5	0.887	42.600	0.89	41.90	-0.34	1.67	±10	2025/10/28
750	22.5	0.888	42.500	0.89	41.90	-0.22	1.43	±10	2025/10/29
835	22.5	0.917	42.400	0.90	41.50	1.89	2.17	±10	2025/10/28
835	22.5	0.919	42.400	0.90	41.50	2.11	2.17	±10	2025/10/29
1750	22.5	1.350	40.700	1.37	40.10	-1.46	1.50	±10	2025/10/28
1750	22.5	1.360	40.800	1.37	40.10	-0.73	1.75	±10	2025/10/29
1900	22.5	1.420	40.400	1.40	40.00	1.43	1.00	±10	2025/10/28
1900	22.5	1.430	40.400	1.40	40.00	2.14	1.00	±10	2025/10/29
2300	22.5	1.710	39.900	1.67	39.50	2.40	1.01	±10	2025/10/28
2600	22.5	1.940	39.400	1.96	39.00	-1.02	1.03	±10	2025/10/29
2600	22.8	1.880	41.000	1.96	39.00	-4.08	5.13	±10	2026/4/28
3500	22.5	2.710	37.700	2.91	37.90	-6.87	-0.53	±10	2025/10/28
3500	22.5	2.720	37.800	2.91	37.90	-6.53	-0.26	±10	2025/10/29
3500	22.7	2.740	38.900	2.91	37.90	-5.84	2.64	±10	2026/4/27
3700	22.5	2.89	37.4	3.12	37.70	-7.37	-0.80	±10	2025/10/28
3700	22.5	2.9	37.5	3.12	37.70	-7.05	-0.53	±10	2025/10/29
3700	22.7	2.92	38.6	3.12	37.70	-6.41	2.39	±10	2026/4/27
3900	22.7	3.12	38.3	3.33	37.51	-6.31	2.11	±10	2026/4/27
3900	22.5	3.06	37.2	3.33	37.51	-8.11	-0.83	±10	2025/10/29
3500	22.5	2.72	37.8	2.91	37.90	-6.53	-0.26	±10	2025/10/29

10.2 System Performance Check Results

Comparing to the original SAR value provided by SPEAG, the verification data should be within its specification of 10 %. Below table shows the target SAR and measured SAR after normalized to 1W input power. The table below indicates the system performance check can meet the variation criterion and the plots can be referred to Appendix A of this report.

Test Site	Date	Frequency (MHz)	Input Power (mW)	Dipole S/N	Probe S/N	DAE S/N	Measured 1g SAR (W/kg)	Targeted 1g SAR (W/kg)	Normalized 1g SAR (W/kg)	Deviation (%)	Measured 10g SAR (W/kg)	Targeted 10g SAR (W/kg)	Normalized 10g SAR (W/kg)	Deviation (%)
SAR-14	2025/10/12	750	50	D750V3-1117	EX3DV4 - SN7625	DAE4 Sn1776	0.429	8.600	8.58	-0.23	0.282	5.570	5.64	1.26
SAR-20	2025/10/17	750	250	D750V3-1117	EX3DV4 - SN7814	DAE4 Sn1697	2.220	8.600	8.88	3.26	1.470	5.570	5.88	5.57
SAR-08	2026/4/23	750	50	D750V3-1117	EX3DV4 - SN7970	DAE4 Sn1424	0.419	8.600	8.38	-2.56	0.281	5.570	5.62	0.90
SAR-09	2026/4/25	750	50	D750V3-1107	EX3DV4 - SN3976	DAE4 Sn699	0.424	8.840	8.48	-4.07	0.282	5.810	5.64	-2.93
SAR-14	2025/10/12	835	50	D835V2-4d060	EX3DV4 - SN7625	DAE4 Sn1776	0.504	9.280	10.08	8.62	0.328	6.010	6.56	9.15
SAR-14	2025/10/12	1750	50	D1750V2-1112	EX3DV4 - SN7625	DAE4 Sn1776	1.800	36.300	36	-0.83	0.968	19.300	19.36	0.31
SAR-20	2025/10/17	1750	50	D1750V2-1112	EX3DV4 - SN7814	DAE4 Sn1697	1.840	36.300	36.8	1.38	0.973	19.300	19.46	0.83
SAR-14	2025/10/12	1900	50	D1900V2-5d093	EX3DV4 - SN7625	DAE4 Sn1776	1.890	39.300	37.8	-3.82	0.989	20.800	19.78	-4.90
SAR-14	2025/10/12	2300	100	D2300V2-1088	EX3DV4 - SN7625	DAE4 Sn1776	5.300	48.200	53	9.96	2.550	23.300	25.5	9.44
SAR-10	2026/4/26	2600	50	D2600V2-1078	EX3DV4 - SN7793	DAE4 Sn699	2.550	55.300	51	-7.78	1.130	24.900	22.6	-9.24
SAR-09	2026/4/28	2600	50	D2600V2-1008	EX3DV4 - SN3976	DAE4 Sn699	2.630	55.700	52.6	-5.57	1.160	25.300	23.2	-8.30
SAR-09	2026/4/25	3500	100	D3500V2-1036	EX3DV4 - SN3976	DAE4 Sn778	6.650	65.600	66.5	1.37	2.470	24.900	24.7	-0.80
SAR-09	2026/4/25	3500	100	D3500V2-1014	EX3DV4 - SN3976	DAE4 Sn778	6.520	65.700	65.2	-0.76	2.470	24.900	24.7	-0.80
SAR-09	2026/4/26	3500	50	D3500V2-1014	EX3DV4 - SN3976	DAE4 Sn699	3.320	65.700	66.4	1.07	1.270	24.900	25.4	2.01
SAR-09	2026/4/27	3500	50	D3500V2-1014	EX3DV4 - SN3976	DAE4 Sn699	3.130	65.700	62.6	-4.72	1.180	24.900	23.6	-5.22
SAR-09	2026/4/25	3700	100	D3700V2-1022	EX3DV4 - SN3976	DAE4 Sn778	6.640	68.100	66.4	-2.50	2.380	25.200	23.8	-5.56
SAR-09	2026/4/26	3700	50	D3700V2-1022	EX3DV4 - SN3976	DAE4 Sn699	3.430	68.100	68.6	0.73	1.260	25.200	25.2	0.00
SAR-09	2026/4/27	3700	50	D3700V2-1006	EX3DV4 - SN3976	DAE4 Sn699	3.160	69.900	63.2	-9.59	1.160	25.600	23.2	-9.38
SAR-09	2026/4/25	3900	100	D3900V2-1092	EX3DV4 - SN3976	DAE4 Sn778	6.790	67.000	67.9	1.34	2.320	23.200	23.2	0.00
SAR-09	2026/4/26	3900	50	D3900V2-1092	EX3DV4 - SN3976	DAE4 Sn699	3.320	67.000	66.4	-0.90	1.180	23.200	23.6	1.72
SAR-09	2026/4/27	3900	50	D3900V2-1092	EX3DV4 - SN3976	DAE4 Sn699	3.040	67.000	60.8	-9.25	1.060	23.200	21.2	-8.62
SAR-11	2025/10/5	2450	50	D2450V2-806	EX3DV4 - SN7791	DAE4 Sn661	2.640	52.900	52.8	-0.19	1.310	24.700	26.2	6.07
SAR-12	2025/10/22	2450	50	D2450V2-806	EX3DV4 - SN7813	DAE4 Sn1424	2.560	52.900	51.2	-3.21	1.220	24.700	24.4	-1.21
SAR-11	2025/10/5	5250	50	D5GH2v2-1006	EX3DV4 - SN7791	DAE4 Sn661	3.650	80.600	73	-9.43	1.050	22.800	21	-7.89



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SAR-12	2025/10/22	5250	50	D5GHzV2-1006	EX3DV4 - SN7813	DAE4 Sn1424	3.740	80.600	74.8	-7.20	1.100	22.800	22	-3.51
SAR-13	2026/4/22	5250	100	D5GHzV2-1006	EX3DV4 - SN7695	DAE4 Sn661	7.840	80.600	78.4	-2.73	2.230	22.800	22.3	-2.19
SAR-11	2025/10/5	5600	50	D5GHzV2-1006	EX3DV4 - SN7791	DAE4 Sn661	3.810	83.400	76.2	-8.63	1.080	23.700	21.6	-8.86
SAR-12	2025/10/22	5600	50	D5GHzV2-1006	EX3DV4 - SN7813	DAE4 Sn1424	3.850	83.400	77	-7.67	1.120	23.700	22.4	-5.49
SAR-13	2026/4/22	5600	100	D5GHzV2-1006	EX3DV4 - SN7695	DAE4 Sn661	8.390	83.400	83.9	0.60	2.400	23.700	24	1.27
SAR-11	2025/10/5	5800	50	D5GHzV2-1006	EX3DV4 - SN7791	DAE4 Sn661	3.740	80.600	74.8	-7.20	1.060	22.700	21.2	-6.61
SAR-12	2025/10/22	5800	50	D5GHzV2-1006	EX3DV4 - SN7813	DAE4 Sn1424	3.680	80.600	73.6	-8.68	1.070	22.700	21.4	-5.73
SAR-13	2026/4/22	5800	100	D5GHzV2-1006	EX3DV4 - SN7695	DAE4 Sn661	7.910	80.600	79.1	-1.86	2.240	22.700	22.4	-1.32
SAR-13	2026/4/23	2450	100	D2450V2-929	EX3DV4 - SN7695	DAE4 Sn661	5.290	53.300	52.9	-0.75	2.460	25.200	24.6	-2.38
SAR-13	2026/4/24	6500	100	D6.5GHzV2-1083	EX3DV4 - SN7695	DAE4 Sn661	31.500	302.000	315	4.30	5.860	56.500	58.6	3.72
SAR-09	2026/4/28	2450	250	D2450V2-929	EX3DV4 - SN3976	DAE4 Sn699	12.900	53.300	51.6	-3.19	5.920	25.200	23.68	-6.03
SAR-09	2026/4/28	5250	100	D5GHzV2-1006	EX3DV4 - SN3976	DAE4 Sn699	7.320	80.600	73.2	-9.18	2.090	22.800	20.9	-8.33
SAR-09	2026/4/28	5600	50	D5GHzV2-1006	EX3DV4 - SN3976	DAE4 Sn699	3.950	83.400	79	-5.28	1.110	23.700	22.2	-6.33
SAR-09	2026/4/28	5800	50	D5GHzV2-1006	EX3DV4 - SN3976	DAE4 Sn699	3.770	80.600	75.4	-6.45	1.060	22.700	21.2	-6.61
SAR-09	2026/4/28	6500	100	D6.5GHzV2-1083	EX3DV4 - SN3976	DAE4 Sn699	27.400	302.000	274	-9.27	5.130	56.500	51.3	-9.20
SAR-10	2025/10/28	750	250	D750V3-1107	EX3DV4 - SN7793	DAE4 Sn1805	2.280	8.840	9.12	3.17	1.530	5.810	6.12	5.34
SAR-10	2025/10/29	750	250	D750V3-1107	EX3DV4 - SN7793	DAE4 Sn1805	2.270	8.840	9.08	2.71	1.520	5.810	6.08	4.65
SAR-10	2025/10/28	835	250	D835V2-4d060	EX3DV4 - SN7793	DAE4 Sn1805	2.520	9.280	10.08	8.62	1.650	6.010	6.6	9.82
SAR-10	2025/10/29	835	250	D835V2-4d060	EX3DV4 - SN7793	DAE4 Sn1805	2.500	9.280	10	7.76	1.640	6.010	6.56	9.15
SAR-10	2025/10/28	1750	50	D1750V2-1112	EX3DV4 - SN7793	DAE4 Sn1805	1.820	36.300	36.4	0.28	0.960	19.300	19.2	-0.52
SAR-10	2025/10/29	1750	50	D1750V2-1112	EX3DV4 - SN7793	DAE4 Sn1805	1.800	36.300	36	-0.83	0.960	19.300	19.2	-0.52
SAR-10	2025/10/28	1900	50	D1900V2-5d185	EX3DV4 - SN7793	DAE4 Sn1805	1.880	39.600	37.6	-5.05	0.985	20.800	19.7	-5.29
SAR-10	2025/10/29	1900	50	D1900V2-5d185	EX3DV4 - SN7793	DAE4 Sn1805	1.890	39.600	37.8	-4.55	0.989	20.800	19.78	-4.90
SAR-10	2025/10/28	2300	250	D2300V2-1006	EX3DV4 - SN7793	DAE4 Sn1805	12.800	48.200	51.2	6.22	6.130	23.200	24.52	5.69
SAR-10	2025/10/29	2600	50	D2600V2-1008	EX3DV4 - SN7793	DAE4 Sn1805	2.700	55.700	54	-3.05	1.210	25.300	24.2	-4.35

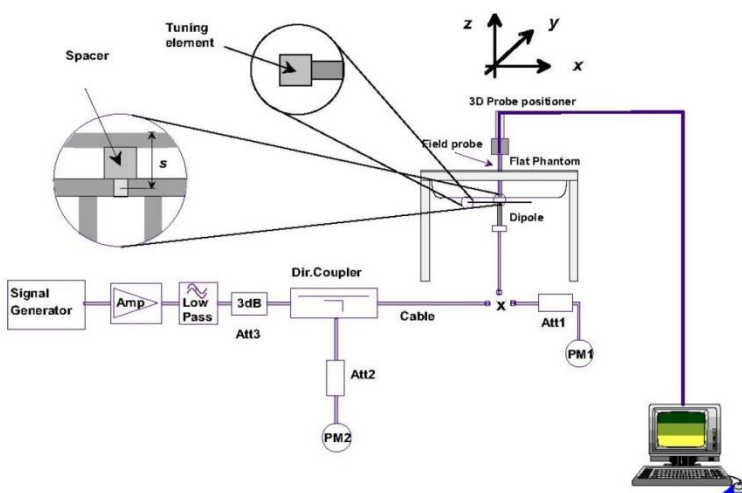


Fig 8.3.1 System Performance Check Setup

Fig 8.3.2 Setup Photo

10.3 PD System Performance Check Results

The system was verified to be within ± 0.66 dB of the power density targets on the calibration certificate according to the test system specification in the user's manual and calibration facility recommendation. The 0.66 dB deviation threshold represents the expanded uncertainty for system performance checks using SPEAG's mmWave verification sources. The same spatial resolution and measurement region used in the source calibration was applied during the system check. The measured power density distribution of verification source was also confirmed through visual inspection to have no noticeable differences, both spatially (shape) and numerically (level) from the distribution provided by the manufacturer, per November 2017 TCBC Workshop Notes

<Infra-Close/Open>

Test Location	Frequency (GHz)	5G Verification Source	Probe S/N	DAE S/N	Distance (mm)	Measured 4 cm ² (W/m ²)	Targeted 4 cm ² (W/m ²)	Deviation (dB)	Date
SAR14	10G	10GHz_1020	EUmmWV4 - 9461	656	10	54	54.6	-0.05	2026/4/19

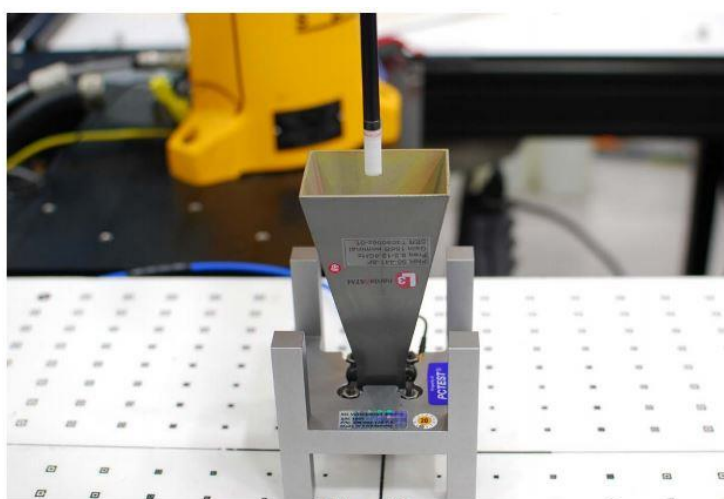


Figure 4-3
System Verification Setup Photo

System Performance Check Setup



11. RF Exposure Positions

11.1 Extremity Exposure

For smart phones with a display diagonal dimension > 15.0 cm or an overall diagonal dimension > 16.0 cm that provide similar mobile web access and multimedia support found in mini-tablets or UMPC mini-tablets that support voice calls next to the ear, According to KDB648474 D04v01r03, the following phablet procedures should be applied to evaluate SAR compliance for each applicable wireless modes and frequency band. Devices marketed as phablets, regardless of form factors and operating characteristics must be tested as a phablet to determine SAR compliance

1. The normally required head and body-worn accessory SAR test procedures for handsets, including hotspot mode, must be applied.
2. The UMPC mini-tablet procedures must also be applied to test the SAR of all surfaces and edges with an antenna located at ≤ 25 mm from that surface or edge, in direct contact with a flat phantom, for 10-g extremity SAR according to the body-equivalent tissue dielectric parameters in KDB 865664 to address interactive hand use exposure conditions.⁶ The UMPC mini-tablet 1-g SAR at 5 mm is not required. When hotspot mode applies, 10-g extremity SAR is required only for the surfaces and edges with hotspot mode 1-g reported SAR > 1.2 W/kg.

12. LTE Output Power (Unit: dBm)

< LTE Conducted Power >

General Note:

1. A Base station simulator was used to setup the connection with EUT; the frequency band, channel bandwidth, RB allocation configuration, modulation type are set in the base station simulator to configure EUT transmitting at maximum power and at different configurations which are requested to be reported to FCC, for conducted power measurement and SAR testing.
2. Per KDB 941225 D05v02r05, when a properly configured base station simulator is used for the SAR and power measurements, spectrum plots for each RB allocation and offset configuration is not required.
3. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
4. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
5. Per KDB 941225 D05v02r05, For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
6. Per KDB 941225 D05v02r05, 16QAM output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM SAR testing is not required.
7. Per KDB 941225 D05v02r05, Smaller bandwidth output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
8. For LTE B4/B12/B17/B26/B71 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
9. LTE band 2/4/17 SAR test was covered by Band 25/66/12; according to April 2015 TCB workshop, SAR test for overlapping LTE bands can be reduced if
 - a. the maximum output power, including tolerance, for the smaller band is $\leq$ the larger band to qualify for the SAR test exclusion
 - b. the channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band



<Close/Open>

<LTE Band 2_Ant 0>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				18700	18900	19100	
Frequency (MHz)				1860	1880	1900	
20	QPSK	1	0	22.22	22.40	22.20	24
20	QPSK	1	49	22.09	22.09	22.06	
20	QPSK	1	99	22.12	22.08	22.21	
20	QPSK	50	0	21.35	21.17	21.21	23
20	QPSK	50	24	21.31	21.24	21.19	
20	QPSK	50	50	21.20	21.23	21.24	
20	QPSK	100	0	21.27	21.04	21.29	
20	16QAM	1	0	21.00	21.07	21.45	23
20	16QAM	1	49	21.95	21.29	21.88	
20	16QAM	1	99	21.16	21.58	21.18	
20	16QAM	50	0	20.30	20.14	20.18	22
20	16QAM	50	24	20.28	20.08	20.27	
20	16QAM	50	50	20.22	20.12	20.21	
20	16QAM	100	0	20.28	20.01	20.38	
20	64QAM	1	0	20.53	20.19	20.40	22
20	64QAM	1	49	20.56	20.03	20.33	
20	64QAM	1	99	20.12	20.07	20.30	
20	64QAM	50	0	19.33	19.10	19.18	21
20	64QAM	50	24	19.32	19.04	19.23	
20	64QAM	50	50	19.03	19.09	19.34	
20	64QAM	100	0	19.26	19.14	19.26	
20	256QAM	1	0	17.36	17.37	17.23	19
20	256QAM	1	49	17.30	17.39	17.19	
20	256QAM	1	99	17.37	17.56	17.46	
20	256QAM	50	0	17.18	17.35	17.18	19
20	256QAM	50	24	17.16	17.36	17.34	
20	256QAM	50	50	17.30	17.41	17.37	
20	256QAM	100	0	17.45	17.52	17.49	
Channel				18675	18900	19125	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	
15	QPSK	1	0	22.11	22.11	22.00	24
15	QPSK	1	37	22.11	22.11	22.18	
15	QPSK	1	74	22.18	22.17	22.37	
15	QPSK	36	0	21.33	21.10	21.01	23
15	QPSK	36	20	21.21	21.07	21.17	
15	QPSK	36	39	21.12	21.06	21.06	
15	QPSK	75	0	21.46	21.04	21.44	
15	16QAM	1	0	21.05	21.17	21.56	23
15	16QAM	1	37	21.82	21.17	21.85	
15	16QAM	1	74	21.18	21.75	21.21	
15	16QAM	36	0	20.40	20.19	20.36	22
15	16QAM	36	20	20.42	20.11	20.40	
15	16QAM	36	39	20.40	20.24	20.33	
15	16QAM	75	0	20.42	20.18	20.41	
15	64QAM	1	0	20.53	20.25	20.50	22
15	64QAM	1	37	20.67	20.15	20.46	
15	64QAM	1	74	20.13	20.08	20.43	
15	64QAM	36	0	19.46	19.13	19.20	21
15	64QAM	36	20	19.35	19.07	19.41	
15	64QAM	36	39	19.17	19.12	19.37	
15	64QAM	75	0	19.37	19.21	19.32	
15	256QAM	1	0	17.25	17.23	17.16	19
15	256QAM	1	37	17.29	17.19	17.16	
15	256QAM	1	74	17.19	17.51	17.40	
15	256QAM	36	0	17.08	17.20	17.13	19



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15	256QAM	36	20	17.09	17.19	17.15	
15	256QAM	36	39	17.26	17.36	17.27	
15	256QAM	75	0	17.44	17.40	17.30	
Channel				18650	18900	19150	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	QPSK	1	0	22.05	22.23	22.03	24
10	QPSK	1	25	22.16	22.26	22.00	
10	QPSK	1	49	22.30	22.18	22.39	
10	QPSK	25	0	21.47	21.18	21.28	23
10	QPSK	25	12	21.18	21.22	21.05	
10	QPSK	25	25	21.00	21.17	21.13	
10	QPSK	50	0	21.31	21.05	21.38	23
10	16QAM	1	0	21.01	21.24	21.45	
10	16QAM	1	25	22.10	21.38	21.98	
10	16QAM	1	49	21.19	21.70	21.34	22
10	16QAM	25	0	20.49	20.15	20.27	
10	16QAM	25	12	20.32	20.19	20.42	
10	16QAM	25	25	20.35	20.18	20.26	22
10	16QAM	50	0	20.30	20.11	20.57	
10	64QAM	1	0	20.68	20.37	20.43	
10	64QAM	1	25	20.72	20.22	20.38	21
10	64QAM	1	49	20.16	20.15	20.36	
10	64QAM	25	0	19.39	19.19	19.37	
10	64QAM	25	12	19.44	19.13	19.30	19
10	64QAM	25	25	19.11	19.21	19.42	
10	64QAM	50	0	19.20	19.08	19.13	
10	256QAM	1	0	17.34	17.17	17.16	19
10	256QAM	1	25	17.19	17.30	17.12	
10	256QAM	1	49	17.29	17.49	17.31	
10	256QAM	25	0	17.12	17.25	17.12	19
10	256QAM	25	12	17.14	17.25	17.18	
10	256QAM	25	25	17.27	17.37	17.23	
10	256QAM	50	0	17.26	17.39	17.42	
Channel				18625	18900	19175	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	
5	QPSK	1	0	22.06	22.13	22.04	24
5	QPSK	1	12	22.13	22.15	22.03	
5	QPSK	1	24	22.13	22.14	22.22	
5	QPSK	12	0	21.45	21.26	21.28	23
5	QPSK	12	7	21.40	21.24	21.24	
5	QPSK	12	13	21.30	21.31	21.33	
5	QPSK	25	0	21.35	21.08	21.30	23
5	16QAM	1	0	21.03	21.12	21.55	
5	16QAM	1	12	21.97	21.37	21.92	
5	16QAM	1	24	21.25	21.66	21.21	22
5	16QAM	12	0	20.39	20.14	20.28	
5	16QAM	12	7	20.33	20.16	20.35	
5	16QAM	12	13	20.27	20.15	20.23	22
5	16QAM	25	0	20.36	20.07	20.41	
5	64QAM	1	0	20.58	20.27	20.43	
5	64QAM	1	12	20.60	20.07	20.36	21
5	64QAM	1	24	20.16	20.14	20.39	
5	64QAM	12	0	19.33	19.20	19.22	
5	64QAM	12	7	19.38	19.06	19.31	19
5	64QAM	12	13	19.11	19.09	19.42	
5	64QAM	25	0	19.36	19.15	19.30	
5	256QAM	1	0	17.19	17.23	17.12	19
5	256QAM	1	12	17.18	17.28	17.03	
5	256QAM	1	24	17.18	17.40	17.29	
5	256QAM	12	0	17.02	17.22	17.08	19
5	256QAM	12	7	17.04	17.25	17.24	
5	256QAM	12	13	17.16	17.30	17.27	



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5	256QAM	25	0	17.35	17.39	17.30	Tune-up limit (dBm)
Channel				18615	18900	19185	
Frequency (MHz)				1851.5	1880	1908.5	
3	QPSK	1	0	22.07	22.16	22.04	24
3	QPSK	1	8	22.13	22.16	22.06	
3	QPSK	1	14	22.22	22.08	22.25	
3	QPSK	8	0	21.38	21.17	21.25	23
3	QPSK	8	4	21.33	21.31	21.20	
3	QPSK	8	7	21.22	21.28	21.28	
3	QPSK	15	0	21.34	21.10	21.35	23
3	16QAM	1	0	21.04	21.09	21.54	
3	16QAM	1	8	21.99	21.39	21.91	
3	16QAM	1	14	21.17	21.58	21.19	22
3	16QAM	8	0	20.39	20.14	20.28	
3	16QAM	8	4	20.32	20.12	20.28	
3	16QAM	8	7	20.26	20.14	20.26	22
3	16QAM	15	0	20.31	20.04	20.46	
3	64QAM	1	0	20.23	20.07	20.17	
3	64QAM	1	8	20.60	20.06	20.33	22
3	64QAM	1	14	20.19	20.17	20.31	
3	64QAM	8	0	19.33	19.14	19.22	
3	64QAM	8	4	19.36	19.10	19.31	21
3	64QAM	8	7	19.08	19.16	19.39	
3	64QAM	15	0	19.29	19.14	19.33	
3	256QAM	1	0	17.17	17.17	17.12	19
3	256QAM	1	8	17.19	17.29	17.02	
3	256QAM	1	14	17.18	17.42	17.28	
3	256QAM	8	0	17.02	17.15	17.01	19
3	256QAM	8	4	17.06	17.24	17.18	
3	256QAM	8	7	17.10	17.27	17.24	
3	256QAM	15	0	17.26	17.36	17.38	Tune-up limit (dBm)
Channel				18607	18900	19193	
Frequency (MHz)				1850.7	1880	1909.3	
1.4	QPSK	1	0	22.05	22.07	22.01	24
1.4	QPSK	1	3	22.08	22.15	22.05	
1.4	QPSK	1	5	22.16	22.03	22.20	
1.4	QPSK	3	0	22.02	22.10	22.00	23
1.4	QPSK	3	1	22.09	22.12	22.00	
1.4	QPSK	3	3	22.20	22.06	22.18	
1.4	QPSK	6	0	21.30	21.27	21.17	23
1.4	16QAM	1	0	21.02	21.02	21.45	
1.4	16QAM	1	3	21.96	21.38	21.88	
1.4	16QAM	1	5	21.15	21.56	21.18	23
1.4	16QAM	3	0	21.00	21.02	21.53	
1.4	16QAM	3	1	21.93	21.34	21.89	
1.4	16QAM	3	3	21.14	21.57	21.16	22
1.4	16QAM	6	0	20.31	20.06	20.22	
1.4	64QAM	1	0	20.28	20.09	20.22	
1.4	64QAM	1	3	20.17	20.13	20.21	22
1.4	64QAM	1	5	20.24	20.02	20.41	
1.4	64QAM	3	0	20.21	20.03	20.10	
1.4	64QAM	3	1	20.54	20.02	20.30	21
1.4	64QAM	3	3	20.15	20.13	20.27	
1.4	64QAM	6	0	19.36	19.15	19.31	
1.4	256QAM	1	0	17.13	17.15	17.03	19
1.4	256QAM	1	3	17.18	17.20	17.05	
1.4	256QAM	1	5	17.16	17.35	17.18	
1.4	256QAM	3	0	17.04	17.14	17.02	19
1.4	256QAM	3	1	17.06	17.19	17.14	
1.4	256QAM	3	3	17.01	17.25	17.19	
1.4	256QAM	6	0	17.17	17.30	17.31	19



<LTE Band 4_Ant 0>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				20050	20175	20300	
Frequency (MHz)				1720	1732.5	1745	
20	QPSK	1	0	22.20	22.54	22.37	24
20	QPSK	1	49	22.28	22.45	22.36	
20	QPSK	1	99	22.36	22.44	22.40	
20	QPSK	50	0	21.24	21.51	21.50	23
20	QPSK	50	24	21.46	21.64	21.55	
20	QPSK	50	50	21.44	21.63	21.48	
20	QPSK	100	0	21.49	21.53	21.59	23
20	16QAM	1	0	21.59	21.80	21.75	
20	16QAM	1	49	21.49	21.35	21.86	
20	16QAM	1	99	21.67	22.07	21.96	22
20	16QAM	50	0	20.25	20.57	20.66	
20	16QAM	50	24	20.45	20.58	20.58	
20	16QAM	50	50	20.59	20.54	20.53	22
20	16QAM	100	0	20.51	20.48	20.70	
20	64QAM	1	0	20.33	20.46	21.17	
20	64QAM	1	49	20.74	20.69	20.63	21
20	64QAM	1	99	20.48	20.76	20.79	
20	64QAM	50	0	19.24	19.60	19.64	
20	64QAM	50	24	19.46	19.51	19.67	19
20	64QAM	50	50	19.52	19.61	19.58	
20	64QAM	100	0	19.45	19.53	19.67	
20	256QAM	1	0	17.30	17.50	17.35	19
20	256QAM	1	49	17.58	17.70	17.57	
20	256QAM	1	99	17.68	17.86	17.78	
20	256QAM	50	0	17.52	17.62	17.58	19
20	256QAM	50	24	17.39	17.57	17.57	
20	256QAM	50	50	17.67	17.69	17.49	
20	256QAM	100	0	17.45	17.58	17.49	
Channel				20025	20175	20325	
Frequency (MHz)				1717.5	1732.5	1747.5	
15	QPSK	1	0	22.11	22.50	22.36	24
15	QPSK	1	37	22.26	22.44	22.33	
15	QPSK	1	74	22.33	22.40	22.37	
15	QPSK	36	0	21.19	21.42	21.42	23
15	QPSK	36	20	21.40	21.59	21.45	
15	QPSK	36	39	21.34	21.57	21.41	
15	QPSK	75	0	21.46	21.50	21.51	23
15	16QAM	1	0	21.49	21.73	21.72	
15	16QAM	1	37	21.40	21.33	21.76	
15	16QAM	1	74	21.66	21.99	21.92	22
15	16QAM	36	0	20.23	20.50	20.62	
15	16QAM	36	20	20.42	20.55	20.49	
15	16QAM	36	39	20.58	20.51	20.52	22
15	16QAM	75	0	20.44	20.39	20.61	
15	64QAM	1	0	20.27	20.43	21.15	
15	64QAM	1	37	20.73	20.66	20.58	21
15	64QAM	1	74	20.39	20.73	20.71	
15	64QAM	36	0	19.19	19.55	19.54	
15	64QAM	36	20	19.43	19.50	19.64	19
15	64QAM	36	39	19.51	19.56	19.56	
15	64QAM	75	0	19.37	19.46	19.62	
15	256QAM	1	0	17.22	17.43	17.31	19
15	256QAM	1	37	17.53	17.68	17.52	
15	256QAM	1	74	17.58	17.77	17.71	
15	256QAM	36	0	17.45	17.56	17.52	19
15	256QAM	36	20	17.33	17.54	17.56	



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15	256QAM	36	39	17.59	17.61	17.47	Tune-up limit (dBm)
15	256QAM	75	0	17.42	17.48	17.39	
Channel				20000	20175	20350	Tune-up limit (dBm)
Frequency (MHz)				1715	1732.5	1750	
10	QPSK	1	0	22.19	22.49	22.32	24
10	QPSK	1	25	22.18	22.38	22.35	
10	QPSK	1	49	22.35	22.42	22.38	
10	QPSK	25	0	21.23	21.50	21.44	23
10	QPSK	25	12	21.40	21.58	21.50	
10	QPSK	25	25	21.41	21.55	21.40	
10	QPSK	50	0	21.39	21.46	21.56	
10	16QAM	1	0	21.54	21.73	21.65	23
10	16QAM	1	25	21.41	21.28	21.76	
10	16QAM	1	49	21.57	21.97	21.94	
10	16QAM	25	0	20.15	20.49	20.56	22
10	16QAM	25	12	20.42	20.52	20.56	
10	16QAM	25	25	20.58	20.53	20.52	
10	16QAM	50	0	20.50	20.43	20.62	
10	64QAM	1	0	20.31	20.37	21.16	22
10	64QAM	1	25	20.70	20.63	20.60	
10	64QAM	1	49	20.40	20.74	20.70	
10	64QAM	25	0	19.19	19.55	19.62	21
10	64QAM	25	12	19.44	19.44	19.63	
10	64QAM	25	25	19.48	19.55	19.53	
10	64QAM	50	0	19.37	19.43	19.60	
10	256QAM	1	0	17.27	17.42	17.30	19
10	256QAM	1	25	17.49	17.67	17.53	
10	256QAM	1	49	17.62	17.80	17.70	
10	256QAM	25	0	17.45	17.52	17.49	19
10	256QAM	25	12	17.34	17.54	17.53	
10	256QAM	25	25	17.66	17.64	17.42	
10	256QAM	50	0	17.37	17.55	17.44	
Channel				19975	20175	20375	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1732.5	1752.5	
5	QPSK	1	0	22.18	22.44	22.27	24
5	QPSK	1	12	22.27	22.38	22.28	
5	QPSK	1	24	22.30	22.40	22.37	
5	QPSK	12	0	21.14	21.50	21.43	23
5	QPSK	12	7	21.44	21.58	21.53	
5	QPSK	12	13	21.36	21.60	21.40	
5	QPSK	25	0	21.44	21.49	21.58	
5	16QAM	1	0	21.54	21.79	21.70	23
5	16QAM	1	12	21.48	21.31	21.85	
5	16QAM	1	24	21.66	22.05	21.86	
5	16QAM	12	0	20.24	20.55	20.65	22
5	16QAM	12	7	20.35	20.52	20.50	
5	16QAM	12	13	20.50	20.47	20.46	
5	16QAM	25	0	20.48	20.38	20.68	
5	64QAM	1	0	20.26	20.38	21.07	22
5	64QAM	1	12	20.66	20.67	20.53	
5	64QAM	1	24	20.44	20.72	20.70	
5	64QAM	12	0	19.14	19.55	19.54	21
5	64QAM	12	7	19.41	19.48	19.58	
5	64QAM	12	13	19.47	19.52	19.53	
5	64QAM	25	0	19.41	19.45	19.63	
5	256QAM	1	0	17.20	17.40	17.26	19
5	256QAM	1	12	17.57	17.62	17.54	
5	256QAM	1	24	17.66	17.80	17.75	
5	256QAM	12	0	17.49	17.52	17.54	19
5	256QAM	12	7	17.33	17.47	17.54	
5	256QAM	12	13	17.58	17.61	17.41	
5	256QAM	25	0	17.40	17.55	17.41	



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Channel				19965	20175	20385	Tune-up limit (dBm)
Frequency (MHz)				1711.5	1732.5	1753.5	
3	QPSK	1	0	22.10	22.44	22.30	24
3	QPSK	1	8	22.25	22.43	22.30	
3	QPSK	1	14	22.29	22.38	22.35	
3	QPSK	8	0	21.14	21.49	21.46	23
3	QPSK	8	4	21.44	21.63	21.49	
3	QPSK	8	7	21.41	21.58	21.41	
3	QPSK	15	0	21.39	21.43	21.51	23
3	16QAM	1	0	21.56	21.74	21.69	
3	16QAM	1	8	21.48	21.34	21.79	
3	16QAM	1	14	21.59	22.00	21.93	22
3	16QAM	8	0	20.18	20.55	20.58	
3	16QAM	8	4	20.38	20.57	20.57	
3	16QAM	8	7	20.49	20.45	20.52	22
3	16QAM	15	0	20.46	20.41	20.67	
3	64QAM	1	0	20.31	20.45	21.12	
3	64QAM	1	8	20.66	20.63	20.62	22
3	64QAM	1	14	20.47	20.66	20.75	
3	64QAM	8	0	19.18	19.54	19.54	
3	64QAM	8	4	19.38	19.42	19.57	21
3	64QAM	8	7	19.51	19.52	19.55	
3	64QAM	15	0	19.36	19.46	19.61	
3	256QAM	1	0	17.22	17.49	17.28	19
3	256QAM	1	8	17.50	17.60	17.48	
3	256QAM	1	14	17.58	17.82	17.69	
3	256QAM	8	0	17.47	17.58	17.53	19
3	256QAM	8	4	17.33	17.56	17.54	
3	256QAM	8	7	17.60	17.66	17.41	
3	256QAM	15	0	17.35	17.51	17.39	
Channel				19957	20175	20393	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1732.5	1754.3	
1.4	QPSK	1	0	22.10	22.48	22.28	24
1.4	QPSK	1	3	22.20	22.37	22.34	
1.4	QPSK	1	5	22.32	22.40	22.31	
1.4	QPSK	3	0	22.08	22.35	22.37	
1.4	QPSK	3	1	22.35	22.49	22.43	
1.4	QPSK	3	3	22.32	22.45	22.33	
1.4	QPSK	6	0	21.42	21.45	21.56	23
1.4	16QAM	1	0	21.57	21.71	21.68	23
1.4	16QAM	1	3	21.48	21.26	21.80	
1.4	16QAM	1	5	21.62	22.05	21.87	
1.4	16QAM	3	0	21.08	21.41	21.48	
1.4	16QAM	3	1	21.28	21.39	21.44	
1.4	16QAM	3	3	21.45	21.42	21.42	
1.4	16QAM	6	0	20.48	20.42	20.67	22
1.4	64QAM	1	0	20.26	20.39	21.16	22
1.4	64QAM	1	3	20.67	20.61	20.61	
1.4	64QAM	1	5	20.46	20.71	20.71	
1.4	64QAM	3	0	20.05	20.44	20.52	
1.4	64QAM	3	1	20.31	20.32	20.52	
1.4	64QAM	3	3	20.39	20.42	20.43	
1.4	64QAM	6	0	19.37	19.50	19.61	21
1.4	256QAM	1	0	17.28	17.43	17.26	19
1.4	256QAM	1	3	17.55	17.63	17.51	
1.4	256QAM	1	5	17.62	17.76	17.77	
1.4	256QAM	3	0	17.51	17.59	17.55	
1.4	256QAM	3	1	17.38	17.56	17.51	
1.4	256QAM	3	3	17.61	17.67	17.42	
1.4	256QAM	6	0	17.44	17.53	17.47	19



<LTE Band 12_Ant 0>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				23060	23095	23130	
Frequency (MHz)				704	707.5	711	
10	QPSK	1	0	22.75	22.42	22.41	24
10	QPSK	1	25	22.80	22.44	22.42	
10	QPSK	1	49	22.39	22.37	22.10	
10	QPSK	25	0	21.76	21.47	21.32	23
10	QPSK	25	12	21.78	21.51	21.36	
10	QPSK	25	25	21.51	21.39	21.15	
10	QPSK	50	0	21.68	21.57	21.38	
10	16QAM	1	0	21.96	21.88	21.62	23
10	16QAM	1	25	21.75	21.91	21.44	
10	16QAM	1	49	21.46	21.76	21.36	
10	16QAM	25	0	20.72	20.60	20.40	22
10	16QAM	25	12	20.77	20.48	20.41	
10	16QAM	25	25	20.64	20.39	20.34	
10	16QAM	50	0	20.63	20.55	20.34	
10	64QAM	1	0	21.24	20.72	20.72	22
10	64QAM	1	25	20.93	20.98	20.17	
10	64QAM	1	49	20.80	20.53	20.24	
10	64QAM	25	0	19.74	19.51	19.43	21
10	64QAM	25	12	19.77	19.56	19.31	
10	64QAM	25	25	19.70	19.43	19.25	
10	64QAM	50	0	19.66	19.56	19.37	
10	256QAM	1	0	18.01	17.74	17.93	19
10	256QAM	1	25	17.77	17.63	17.73	
10	256QAM	1	49	17.38	17.08	17.22	
10	256QAM	25	0	17.62	17.51	17.62	19
10	256QAM	25	12	17.78	17.50	17.67	
10	256QAM	25	25	17.39	17.26	17.52	
10	256QAM	50	0	17.56	17.42	17.64	
Channel				23035	23095	23155	Tune-up limit (dBm)
Frequency (MHz)				701.5	707.5	713.5	
5	QPSK	1	0	22.71	22.41	22.37	24
5	QPSK	1	12	22.63	22.25	22.24	
5	QPSK	1	24	22.22	22.29	22.02	
5	QPSK	12	0	21.74	21.36	21.16	23
5	QPSK	12	7	21.73	21.41	21.32	
5	QPSK	12	13	21.35	21.34	21.08	
5	QPSK	25	0	21.66	21.49	21.20	
5	16QAM	1	0	21.76	21.79	21.42	23
5	16QAM	1	12	21.64	21.87	21.41	
5	16QAM	1	24	21.42	21.63	21.32	
5	16QAM	12	0	20.72	20.45	20.32	22
5	16QAM	12	7	20.64	20.48	20.39	
5	16QAM	12	13	20.49	20.25	20.16	
5	16QAM	25	0	20.45	20.48	20.19	
5	64QAM	1	0	21.21	20.69	20.55	22
5	64QAM	1	12	20.89	20.96	20.07	
5	64QAM	1	24	20.78	20.49	20.09	
5	64QAM	12	0	19.74	19.31	19.30	21
5	64QAM	12	7	19.70	19.46	19.24	
5	64QAM	12	13	19.66	19.26	19.08	
5	64QAM	25	0	19.51	19.38	19.32	
5	256QAM	1	0	18.01	17.63	17.89	19
5	256QAM	1	12	17.57	17.48	17.69	
5	256QAM	1	24	17.24	17.07	17.19	
5	256QAM	12	0	17.42	17.32	17.58	19
5	256QAM	12	7	17.73	17.31	17.54	



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5	256QAM	12	13	17.33	17.10	17.37	Tune-up limit (dBm)
5	256QAM	25	0	17.38	17.42	17.50	
Channel				23025	23095	23165	Tune-up limit (dBm)
Frequency (MHz)				700.5	707.5	714.5	
3	QPSK	1	0	22.61	22.34	22.34	24
3	QPSK	1	8	22.63	22.35	22.17	
3	QPSK	1	14	22.20	22.26	22.06	
3	QPSK	8	0	21.74	21.46	21.25	23
3	QPSK	8	4	21.62	21.32	21.23	
3	QPSK	8	7	21.43	21.26	21.10	
3	QPSK	15	0	21.51	21.46	21.18	
3	16QAM	1	0	21.83	21.88	21.62	23
3	16QAM	1	8	21.73	21.91	21.42	
3	16QAM	1	14	21.38	21.62	21.21	22
3	16QAM	8	0	20.67	20.41	20.20	
3	16QAM	8	4	20.59	20.39	20.40	
3	16QAM	8	7	20.59	20.29	20.24	
3	16QAM	15	0	20.60	20.51	20.24	22
3	64QAM	1	0	21.15	20.69	20.69	
3	64QAM	1	8	20.77	20.93	20.16	
3	64QAM	1	14	20.69	20.52	20.10	
3	64QAM	8	0	19.73	19.50	19.28	21
3	64QAM	8	4	19.74	19.44	19.22	
3	64QAM	8	7	19.50	19.35	19.25	
3	64QAM	15	0	19.57	19.45	19.36	
3	256QAM	1	0	17.85	17.57	17.82	19
3	256QAM	1	8	17.57	17.56	17.66	
3	256QAM	1	14	17.29	17.01	17.05	
3	256QAM	8	0	17.60	17.47	17.42	19
3	256QAM	8	4	17.63	17.40	17.66	
3	256QAM	8	7	17.35	17.12	17.46	
3	256QAM	15	0	17.39	17.40	17.61	
Channel				23017	23095	23173	Tune-up limit (dBm)
Frequency (MHz)				699.7	707.5	715.3	
1.4	QPSK	1	0	22.79	22.30	22.01	24
1.4	QPSK	1	3	22.78	22.22	22.13	
1.4	QPSK	1	5	22.79	22.17	22.10	
1.4	QPSK	3	0	22.72	22.37	22.06	
1.4	QPSK	3	1	22.77	22.37	22.03	
1.4	QPSK	3	3	22.71	22.34	22.12	23
1.4	QPSK	6	0	21.82	21.42	21.08	
1.4	16QAM	1	0	22.10	21.75	21.15	23
1.4	16QAM	1	3	21.58	21.80	21.51	
1.4	16QAM	1	5	22.17	21.98	21.65	
1.4	16QAM	3	0	21.77	21.72	21.32	
1.4	16QAM	3	1	22.11	21.46	21.33	
1.4	16QAM	3	3	21.96	21.52	21.12	22
1.4	16QAM	6	0	20.82	20.53	20.23	
1.4	64QAM	1	0	20.44	20.57	20.22	22
1.4	64QAM	1	3	21.49	20.55	20.22	
1.4	64QAM	1	5	20.88	20.71	20.25	
1.4	64QAM	3	0	20.80	20.60	20.10	
1.4	64QAM	3	1	21.08	20.54	20.09	
1.4	64QAM	3	3	20.91	20.40	20.18	21
1.4	64QAM	6	0	19.71	19.42	19.22	
1.4	256QAM	1	0	17.51	17.61	17.56	19
1.4	256QAM	1	3	17.61	17.62	17.53	
1.4	256QAM	1	5	17.48	17.58	17.43	
1.4	256QAM	3	0	17.52	17.65	17.59	
1.4	256QAM	3	1	17.52	17.58	17.40	
1.4	256QAM	3	3	17.54	17.55	17.40	19
1.4	256QAM	6	0	17.42	17.59	17.43	



<LTE Band 13_Ant 0>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				23230			
Frequency (MHz)				782			
10	QPSK	1	0		23.02		24
10	QPSK	1	25		23.01		
10	QPSK	1	49		22.97		
10	QPSK	25	0		21.98		23
10	QPSK	25	12		22.04		
10	QPSK	25	25		21.96		
10	QPSK	50	0		22.00		
10	16QAM	1	0		22.26		23
10	16QAM	1	25		22.50		
10	16QAM	1	49		22.50		
10	16QAM	25	0		20.99		22
10	16QAM	25	12		21.11		
10	16QAM	25	25		21.13		
10	16QAM	50	0		21.06		
10	64QAM	1	0		21.06		22
10	64QAM	1	25		21.05		
10	64QAM	1	49		20.86		
10	64QAM	25	0		19.88		21
10	64QAM	25	12		20.10		
10	64QAM	25	25		19.99		
10	64QAM	50	0		20.09		
10	256QAM	1	0		18.02		19
10	256QAM	1	25		18.14		
10	256QAM	1	49		18.14		
10	256QAM	25	0		18.07		19
10	256QAM	25	12		18.06		
10	256QAM	25	25		18.03		
10	256QAM	50	0		18.04		
Channel				23205	23230	23255	Tune-up limit (dBm)
Frequency (MHz)				779.5	782	784.5	
5	QPSK	1	0	22.98	23.00	22.96	24
5	QPSK	1	12	22.92	22.99	22.97	
5	QPSK	1	24	22.90	22.87	22.95	
5	QPSK	12	0	21.95	21.94	21.92	23
5	QPSK	12	7	22.01	21.99	21.96	
5	QPSK	12	13	21.95	21.87	21.95	
5	QPSK	25	0	21.91	21.95	21.99	
5	16QAM	1	0	22.24	22.16	22.20	23
5	16QAM	1	12	22.45	22.42	22.47	
5	16QAM	1	24	22.48	22.44	22.44	
5	16QAM	12	0	20.90	20.91	20.92	22
5	16QAM	12	7	21.04	21.06	21.06	
5	16QAM	12	13	21.09	21.05	21.10	
5	16QAM	25	0	21.05	21.03	21.01	
5	64QAM	1	0	21.02	20.97	21.02	22
5	64QAM	1	12	20.99	21.03	20.97	
5	64QAM	1	24	20.78	20.79	20.79	
5	64QAM	12	0	19.86	19.79	19.85	
5	64QAM	12	7	20.07	20.04	20.07	21
5	64QAM	12	13	19.97	19.93	19.91	
5	64QAM	25	0	20.07	20.05	20.01	
5	256QAM	1	0	18.01	17.99	18.00	
5	256QAM	1	12	18.06	18.12	18.04	19
5	256QAM	1	24	18.06	18.12	18.09	
5	256QAM	12	0	18.03	18.05	18.01	19



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5	256QAM	12	7	18.02	18.01	17.96	
5	256QAM	12	13	18.02	17.97	17.98	
5	256QAM	25	0	18.02	18.03	18.03	

<LTE Band 14_Ant 0>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				23330			
Frequency (MHz)				793			
10	QPSK	1	0		22.87		24
10	QPSK	1	25		22.80		
10	QPSK	1	49		22.76		
10	QPSK	25	0		21.99		23
10	QPSK	25	12		21.89		
10	QPSK	25	25		21.89		
10	QPSK	50	0		21.86		
10	16QAM	1	0		22.37		23
10	16QAM	1	25		22.50		
10	16QAM	1	49		22.19		
10	16QAM	25	0		21.02		22
10	16QAM	25	12		20.95		
10	16QAM	25	25		20.84		
10	16QAM	50	0		20.89		
10	64QAM	1	0		21.17		22
10	64QAM	1	25		21.24		
10	64QAM	1	49		20.52		
10	64QAM	25	0		19.88		21
10	64QAM	25	12		19.82		
10	64QAM	25	25		19.86		
10	64QAM	50	0		19.91		
10	256QAM	1	0		18.31		19
10	256QAM	1	25		18.05		
10	256QAM	1	49		18.03		
10	256QAM	25	0		18.03		19
10	256QAM	25	12		17.97		
10	256QAM	25	25		17.93		
10	256QAM	50	0		18.01		
Channel				23305	23330	23355	Tune-up limit (dBm)
Frequency (MHz)				790.5	793	795.5	
5	QPSK	1	0	22.82	22.77	22.80	24
5	QPSK	1	12	22.77	22.79	22.77	
5	QPSK	1	24	22.66	22.71	22.66	
5	QPSK	12	0	21.91	21.94	21.93	23
5	QPSK	12	7	21.81	21.87	21.87	
5	QPSK	12	13	21.88	21.82	21.80	
5	QPSK	25	0	21.76	21.80	21.83	23
5	16QAM	1	0	22.34	22.33	22.36	
5	16QAM	1	12	22.45	22.45	22.45	
5	16QAM	1	24	22.11	22.12	22.12	22
5	16QAM	12	0	20.98	20.99	20.95	
5	16QAM	12	7	20.88	20.85	20.94	
5	16QAM	12	13	20.83	20.75	20.74	22
5	16QAM	25	0	20.86	20.82	20.83	
5	64QAM	1	0	21.13	21.16	21.12	
5	64QAM	1	12	21.19	21.18	21.19	22
5	64QAM	1	24	20.44	20.42	20.47	
5	64QAM	12	0	19.80	19.81	19.78	21
5	64QAM	12	7	19.80	19.76	19.72	
5	64QAM	12	13	19.81	19.85	19.78	
5	64QAM	25	0	19.89	19.86	19.85	
5	256QAM	1	0	18.30	18.29	18.24	19



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5	256QAM	1	12	18.01	17.96	18.02	19
5	256QAM	1	24	17.96	18.02	17.94	
5	256QAM	12	0	18.00	17.98	17.96	
5	256QAM	12	7	17.89	17.96	17.93	
5	256QAM	12	13	17.88	17.88	17.86	
5	256QAM	25	0	17.95	17.96	17.96	

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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				23780	23790	23800	
Frequency (MHz)				709	710	711	
10	QPSK	1	0	22.11	22.16	22.26	24
10	QPSK	1	25	22.14	22.39	22.38	
10	QPSK	1	49	22.00	22.18	22.04	
10	QPSK	25	0	21.23	21.32	21.31	23
10	QPSK	25	12	21.13	21.20	21.27	
10	QPSK	25	25	21.13	21.20	21.23	
10	QPSK	50	0	21.10	21.35	21.34	23
10	16QAM	1	0	21.61	21.38	21.78	
10	16QAM	1	25	21.74	21.53	21.65	
10	16QAM	1	49	21.43	21.83	21.68	22
10	16QAM	25	0	20.26	20.50	20.34	
10	16QAM	25	12	20.19	20.36	20.28	
10	16QAM	25	25	20.08	20.23	20.18	22
10	16QAM	50	0	20.13	20.18	20.33	
10	64QAM	1	0	20.41	20.31	20.78	
10	64QAM	1	25	20.48	20.56	20.83	22
10	64QAM	1	49	20.06	20.71	20.46	
10	64QAM	25	0	19.12	19.48	19.26	
10	64QAM	25	12	19.06	19.24	19.41	21
10	64QAM	25	25	19.10	19.30	19.24	
10	64QAM	50	0	19.15	19.28	19.26	
10	256QAM	1	0	17.23	17.30	17.23	19
10	256QAM	1	25	17.14	17.25	17.12	
10	256QAM	1	49	17.05	17.05	17.03	
10	256QAM	25	0	17.07	17.19	17.12	19
10	256QAM	25	12	17.13	17.14	17.13	
10	256QAM	25	25	17.08	17.01	17.06	
10	256QAM	50	0	17.05	17.03	17.02	Tune-up limit (dBm)
Channel				23755	23790	23825	
Frequency (MHz)				706.5	710	713.5	
5	QPSK	1	0	22.31	22.20	22.27	24
5	QPSK	1	12	22.24	22.30	22.38	
5	QPSK	1	24	22.01	22.24	22.17	
5	QPSK	12	0	21.37	21.51	21.49	23
5	QPSK	12	7	21.26	21.25	21.39	
5	QPSK	12	13	21.26	21.24	21.39	
5	QPSK	25	0	21.14	21.30	21.38	23
5	16QAM	1	0	21.72	21.41	21.98	
5	16QAM	1	12	21.90	21.62	21.80	
5	16QAM	1	24	21.57	21.94	21.86	22
5	16QAM	12	0	20.40	20.55	20.34	
5	16QAM	12	7	20.21	20.42	20.44	
5	16QAM	12	13	20.09	20.25	20.37	22
5	16QAM	25	0	20.28	20.23	20.36	
5	64QAM	1	0	20.49	20.37	20.91	
5	64QAM	1	12	20.67	20.74	20.99	21
5	64QAM	1	24	20.23	20.82	20.54	
5	64QAM	12	0	19.30	19.48	19.32	
5	64QAM	12	7	19.20	19.38	19.46	



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5	64QAM	12	13	19.12	19.47	19.33	19
5	64QAM	25	0	19.26	19.34	19.44	
5	256QAM	1	0	17.33	17.50	17.38	
5	256QAM	1	12	17.32	17.40	17.14	
5	256QAM	1	24	17.06	17.19	17.17	19
5	256QAM	12	0	17.17	17.35	17.12	
5	256QAM	12	7	17.33	17.28	17.28	
5	256QAM	12	13	17.15	17.15	17.08	
5	256QAM	25	0	17.08	17.20	17.12	

<LTE Band 25_Ant 0>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				26140	26340	26590	
Frequency (MHz)				1860	1880	1905	
20	QPSK	1	0	22.31	22.46	22.43	23
20	QPSK	1	49	22.28	22.13	22.38	
20	QPSK	1	99	22.16	22.04	22.26	
20	QPSK	50	0	21.47	21.31	21.45	22
20	QPSK	50	24	21.48	21.53	21.52	
20	QPSK	50	50	21.36	21.28	21.37	
20	QPSK	100	0	21.35	21.40	21.37	
20	16QAM	1	0	21.45	21.57	21.70	22
20	16QAM	1	49	21.64	21.25	22.01	
20	16QAM	1	99	22.18	22.08	22.11	
20	16QAM	50	0	20.51	20.36	20.43	22
20	16QAM	50	24	20.58	20.36	20.49	
20	16QAM	50	50	20.43	20.36	20.57	
20	16QAM	100	0	20.48	20.32	20.51	
20	64QAM	1	0	20.90	20.18	20.36	22
20	64QAM	1	49	20.79	20.03	20.45	
20	64QAM	1	99	20.40	20.22	21.41	
20	64QAM	50	0	19.55	19.47	19.48	21
20	64QAM	50	24	19.52	19.34	19.35	
20	64QAM	50	50	19.39	19.35	19.45	
20	64QAM	100	0	19.50	19.43	19.34	
20	256QAM	1	0	17.33	17.53	17.40	19
20	256QAM	1	49	17.08	17.23	17.08	
20	256QAM	1	99	17.42	17.55	17.43	
20	256QAM	50	0	17.32	17.43	17.28	19
20	256QAM	50	24	17.06	17.23	17.08	
20	256QAM	50	50	17.39	17.42	17.33	
20	256QAM	100	0	17.49	17.61	17.56	
Channel				26115	26340	26615	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1907.5	
15	QPSK	1	0	22.29	22.37	22.32	23
15	QPSK	1	37	22.20	22.04	22.39	
15	QPSK	1	74	22.08	21.94	22.19	
15	QPSK	36	0	21.45	21.22	21.37	22
15	QPSK	36	20	21.41	21.52	21.49	
15	QPSK	36	39	21.30	21.26	21.28	
15	QPSK	75	0	21.49	21.28	21.38	
15	16QAM	1	0	21.40	21.51	21.64	22
15	16QAM	1	37	21.62	21.16	22.00	
15	16QAM	1	74	22.08	21.99	22.02	
15	16QAM	36	0	20.44	20.35	20.41	22
15	16QAM	36	20	20.51	20.26	20.43	
15	16QAM	36	39	20.38	20.33	20.55	
15	16QAM	75	0	20.43	20.22	20.48	
15	64QAM	1	0	20.82	20.13	20.32	22
15	64QAM	1	37	20.73	19.98	20.37	



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15	64QAM	1	74	20.34	20.19	21.33	21
15	64QAM	36	0	19.47	19.38	19.42	
15	64QAM	36	20	19.46	19.30	19.25	
15	64QAM	36	39	19.37	19.31	19.44	
15	64QAM	75	0	19.49	19.36	19.27	
15	256QAM	1	0	17.31	17.44	17.36	19
15	256QAM	1	37	16.99	17.15	17.06	
15	256QAM	1	74	17.36	17.51	17.38	
15	256QAM	36	0	17.22	17.36	17.18	19
15	256QAM	36	20	17.00	17.15	17.04	
15	256QAM	36	39	17.30	17.37	17.30	
15	256QAM	75	0	17.45	17.51	17.51	
Channel				26090	26340	26640	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1910	
10	QPSK	1	0	22.23	22.45	22.37	23
10	QPSK	1	25	22.27	22.05	22.39	
10	QPSK	1	49	22.10	21.94	22.21	
10	QPSK	25	0	21.40	21.30	21.40	22
10	QPSK	25	12	21.47	21.45	21.42	
10	QPSK	25	25	21.34	21.22	21.33	
10	QPSK	50	0	21.53	21.25	21.46	
10	16QAM	1	0	21.40	21.50	21.69	22
10	16QAM	1	25	21.60	21.20	21.92	
10	16QAM	1	49	22.14	22.05	22.04	
10	16QAM	25	0	20.42	20.27	20.38	22
10	16QAM	25	12	20.51	20.28	20.43	
10	16QAM	25	25	20.40	20.32	20.50	
10	16QAM	50	0	20.39	20.22	20.50	
10	64QAM	1	0	20.82	20.12	20.34	22
10	64QAM	1	25	20.72	20.00	20.37	
10	64QAM	1	49	20.31	20.12	21.36	
10	64QAM	25	0	19.54	19.40	19.43	21
10	64QAM	25	12	19.48	19.32	19.30	
10	64QAM	25	25	19.36	19.26	19.41	
10	64QAM	50	0	19.44	19.34	19.24	
10	256QAM	1	0	17.31	17.52	17.39	19
10	256QAM	1	25	17.02	17.20	17.05	
10	256QAM	1	49	17.37	17.49	17.39	
10	256QAM	25	0	17.25	17.33	17.21	19
10	256QAM	25	12	17.02	17.18	17.04	
10	256QAM	25	25	17.36	17.38	17.24	
10	256QAM	50	0	17.41	17.54	17.47	
Channel				26065	26340	26665	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1912.5	
5	QPSK	1	0	22.22	22.45	22.32	23
5	QPSK	1	12	22.22	22.11	22.42	
5	QPSK	1	24	22.12	22.03	22.21	
5	QPSK	12	0	21.45	21.23	21.43	22
5	QPSK	12	7	21.44	21.43	21.42	
5	QPSK	12	13	21.28	21.24	21.27	
5	QPSK	25	0	21.48	21.30	21.38	
5	16QAM	1	0	21.42	21.48	21.69	22
5	16QAM	1	12	21.61	21.16	22.00	
5	16QAM	1	24	22.17	22.03	22.02	
5	16QAM	12	0	20.50	20.29	20.34	22
5	16QAM	12	7	20.56	20.35	20.44	
5	16QAM	12	13	20.36	20.34	20.51	
5	16QAM	25	0	20.46	20.31	20.41	
5	64QAM	1	0	20.86	20.08	20.35	22
5	64QAM	1	12	20.72	20.00	20.43	
5	64QAM	1	24	20.30	20.17	21.33	
5	64QAM	12	0	19.53	19.38	19.41	21



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5	64QAM	12	7	19.45	19.29	19.31	
5	64QAM	12	13	19.37	19.30	19.41	
5	64QAM	25	0	19.41	19.36	19.28	
5	256QAM	1	0	17.29	17.47	17.36	19
5	256QAM	1	12	17.07	17.18	17.02	
5	256QAM	1	24	17.32	17.46	17.35	
5	256QAM	12	0	17.24	17.35	17.24	19
5	256QAM	12	7	17.04	17.22	17.06	
5	256QAM	12	13	17.30	17.38	17.25	
5	256QAM	25	0	17.46	17.55	17.51	
Channel				26055	26340	26675	Tune-up limit (dBm)
Frequency (MHz)				1851.5	1880	1913.5	
3	QPSK	1	0	22.26	22.45	22.32	23
3	QPSK	1	8	22.27	22.10	22.40	
3	QPSK	1	14	22.13	21.97	22.23	
3	QPSK	8	0	21.41	21.21	21.37	22
3	QPSK	8	4	21.47	21.50	21.43	
3	QPSK	8	7	21.34	21.24	21.32	
3	QPSK	15	0	21.46	21.27	21.46	22
3	16QAM	1	0	21.43	21.48	21.63	
3	16QAM	1	8	21.63	21.19	21.99	
3	16QAM	1	14	22.14	22.02	22.04	22
3	16QAM	8	0	20.45	20.28	20.34	
3	16QAM	8	4	20.55	20.34	20.46	
3	16QAM	8	7	20.40	20.27	20.54	22
3	16QAM	15	0	20.44	20.26	20.42	
3	64QAM	1	0	20.83	20.15	20.33	
3	64QAM	1	8	20.74	20.00	20.42	22
3	64QAM	1	14	20.37	20.12	21.31	
3	64QAM	8	0	19.53	19.42	19.38	
3	64QAM	8	4	19.47	19.28	19.29	21
3	64QAM	8	7	19.32	19.31	19.38	
3	64QAM	15	0	19.44	19.41	19.30	
3	256QAM	1	0	17.31	17.45	17.30	19
3	256QAM	1	8	17.05	17.22	17.07	
3	256QAM	1	14	17.39	17.53	17.33	
3	256QAM	8	0	17.29	17.40	17.19	19
3	256QAM	8	4	17.01	17.17	17.04	
3	256QAM	8	7	17.31	17.39	17.23	
3	256QAM	15	0	17.44	17.53	17.47	
Channel				26047	26340	26683	Tune-up limit (dBm)
Frequency (MHz)				1850.7	1880	1914.3	
1.4	QPSK	1	0	22.28	22.38	22.28	23
1.4	QPSK	1	3	22.23	22.03	22.39	
1.4	QPSK	1	5	22.13	21.99	22.20	
1.4	QPSK	3	0	22.36	22.15	22.32	22
1.4	QPSK	3	1	22.31	22.41	22.41	
1.4	QPSK	3	3	22.20	22.11	22.17	
1.4	QPSK	6	0	21.52	21.33	21.44	22
1.4	16QAM	1	0	21.44	21.51	21.61	
1.4	16QAM	1	3	21.61	21.15	21.97	
1.4	16QAM	1	5	22.09	22.07	22.03	22
1.4	16QAM	3	0	21.35	21.17	21.27	
1.4	16QAM	3	1	21.39	21.20	21.32	
1.4	16QAM	3	3	21.31	21.16	21.39	22
1.4	16QAM	6	0	20.42	20.31	20.48	
1.4	64QAM	1	0	20.82	20.11	20.27	
1.4	64QAM	1	3	20.78	20.00	20.39	22
1.4	64QAM	1	5	20.36	20.18	21.37	
1.4	64QAM	3	0	20.41	20.27	20.33	
1.4	64QAM	3	1	20.40	20.23	20.23	22
1.4	64QAM	3	3	20.26	20.22	20.29	



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1.4	64QAM	6	0	19.46	19.39	19.33	21
1.4	256QAM	1	0	17.26	17.46	17.36	19
1.4	256QAM	1	3	17.04	17.14	17.02	
1.4	256QAM	1	5	17.34	17.52	17.42	
1.4	256QAM	3	0	17.31	17.39	17.19	
1.4	256QAM	3	1	17.04	17.15	16.98	
1.4	256QAM	3	3	17.37	17.33	17.25	
1.4	256QAM	6	0	17.45	17.56	17.52	19

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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				26765	26865	26965	
Frequency (MHz)				821.5	831.5	841.5	
15	QPSK	1	0	22.02	22.60	22.48	24
15	QPSK	1	37	22.10	22.36	22.59	
15	QPSK	1	74	22.09	22.41	22.29	
15	QPSK	36	0	21.26	21.61	21.56	23
15	QPSK	36	20	21.10	21.58	21.45	
15	QPSK	36	39	21.18	21.60	21.47	
15	QPSK	75	0	21.12	21.57	21.53	23
15	16QAM	1	0	21.07	21.54	21.67	
15	16QAM	1	37	21.56	21.76	21.95	
15	16QAM	1	74	21.67	21.41	21.78	22
15	16QAM	36	0	20.03	20.55	20.49	
15	16QAM	36	20	20.19	20.62	20.48	
15	16QAM	36	39	20.27	20.66	20.58	22
15	16QAM	75	0	20.10	20.53	20.40	
15	64QAM	1	0	20.07	20.79	21.47	
15	64QAM	1	37	21.03	20.56	20.96	21
15	64QAM	1	74	20.08	20.56	20.40	
15	64QAM	36	0	19.07	19.47	19.47	
15	64QAM	36	20	19.12	19.57	19.49	19
15	64QAM	36	39	19.29	19.68	19.55	
15	64QAM	75	0	19.21	19.56	19.61	
15	256QAM	1	0	17.29	17.33	17.28	19
15	256QAM	1	37	17.67	17.76	17.60	
15	256QAM	1	74	17.49	17.67	17.55	
15	256QAM	36	0	17.35	17.51	17.38	19
15	256QAM	36	20	17.61	17.65	17.65	
15	256QAM	36	39	17.60	17.70	17.50	
15	256QAM	75	0	17.56	17.61	17.48	
Channel				26740	26865	26990	Tune-up limit (dBm)
Frequency (MHz)				819	831.5	844	
10	QPSK	1	0	22.08	22.31	22.41	24
10	QPSK	1	25	22.05	22.43	22.55	
10	QPSK	1	49	22.16	22.25	22.20	
10	QPSK	25	0	21.20	21.36	21.44	23
10	QPSK	25	12	21.10	21.44	21.30	
10	QPSK	25	25	21.27	21.47	21.40	
10	QPSK	50	0	21.15	21.38	21.44	23
10	16QAM	1	0	21.06	21.49	21.60	
10	16QAM	1	25	21.66	21.60	21.83	
10	16QAM	1	49	21.65	21.41	21.70	22
10	16QAM	25	0	20.07	20.39	20.44	
10	16QAM	25	12	20.18	20.53	20.29	
10	16QAM	25	25	20.31	20.64	20.42	22
10	16QAM	50	0	20.02	20.52	20.25	
10	64QAM	1	0	20.08	20.76	21.45	
10	64QAM	1	25	21.09	20.54	20.92	22
10	64QAM	1	49	20.00	20.40	20.32	



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10	64QAM	25	0	19.17	19.32	19.33	21
10	64QAM	25	12	19.13	19.37	19.46	
10	64QAM	25	25	19.35	19.63	19.44	
10	64QAM	50	0	19.18	19.40	19.47	
10	256QAM	1	0	17.39	17.22	17.28	19
10	256QAM	1	25	17.72	17.73	17.47	
10	256QAM	1	49	17.41	17.67	17.45	
10	256QAM	25	0	17.29	17.50	17.37	19
10	256QAM	25	12	17.57	17.52	17.59	
10	256QAM	25	25	17.57	17.66	17.43	
10	256QAM	50	0	17.48	17.58	17.36	
Channel				26715	26865	27015	Tune-up limit (dBm)
Frequency (MHz)				816.5	831.5	846.5	
5	QPSK	1	0	22.03	22.34	22.36	24
5	QPSK	1	12	22.07	22.37	22.53	
5	QPSK	1	24	22.13	22.27	22.15	
5	QPSK	12	0	21.15	21.48	21.55	23
5	QPSK	12	7	21.07	21.54	21.30	
5	QPSK	12	13	21.33	21.41	21.43	
5	QPSK	25	0	21.09	21.50	21.52	
5	16QAM	1	0	21.08	21.43	21.60	23
5	16QAM	1	12	21.58	21.57	21.93	
5	16QAM	1	24	21.63	21.25	21.68	
5	16QAM	12	0	20.12	20.45	20.45	22
5	16QAM	12	7	20.29	20.54	20.42	
5	16QAM	12	13	20.19	20.51	20.58	
5	16QAM	25	0	20.15	20.46	20.25	
5	64QAM	1	0	20.06	20.66	21.42	22
5	64QAM	1	12	21.12	20.40	20.89	
5	64QAM	1	24	20.15	20.41	20.34	
5	64QAM	12	0	19.06	19.39	19.37	21
5	64QAM	12	7	19.04	19.55	19.36	
5	64QAM	12	13	19.29	19.59	19.55	
5	64QAM	25	0	19.27	19.42	19.52	
5	256QAM	1	0	17.33	17.15	17.24	19
5	256QAM	1	12	17.69	17.62	17.54	
5	256QAM	1	24	17.47	17.48	17.52	
5	256QAM	12	0	17.44	17.33	17.32	19
5	256QAM	12	7	17.60	17.53	17.51	
5	256QAM	12	13	17.56	17.55	17.34	
5	256QAM	25	0	17.60	17.43	17.29	
Channel				26705	26865	27025	Tune-up limit (dBm)
Frequency (MHz)				815.5	831.5	847.5	
3	QPSK	1	0	22.07	22.23	22.48	24
3	QPSK	1	8	22.08	22.44	22.43	
3	QPSK	1	14	22.09	22.24	22.21	
3	QPSK	8	0	21.13	21.38	21.44	23
3	QPSK	8	4	21.12	21.46	21.41	
3	QPSK	8	7	21.37	21.41	21.39	
3	QPSK	15	0	21.04	21.47	21.33	
3	16QAM	1	0	21.00	21.49	21.56	23
3	16QAM	1	8	21.59	21.68	21.79	
3	16QAM	1	14	21.77	21.28	21.66	
3	16QAM	8	0	20.13	20.40	20.42	22
3	16QAM	8	4	20.28	20.53	20.38	
3	16QAM	8	7	20.18	20.47	20.49	
3	16QAM	15	0	20.18	20.39	20.28	
3	64QAM	1	0	20.05	20.67	21.39	22
3	64QAM	1	8	20.95	20.38	20.80	
3	64QAM	1	14	20.09	20.39	20.38	
3	64QAM	8	0	19.05	19.36	19.44	21
3	64QAM	8	4	19.02	19.44	19.36	



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3	64QAM	8	7	19.27	19.57	19.44	19
3	64QAM	15	0	19.26	19.38	19.59	
3	256QAM	1	0	17.22	17.17	17.17	
3	256QAM	1	8	17.72	17.61	17.50	
3	256QAM	1	14	17.48	17.66	17.51	19
3	256QAM	8	0	17.28	17.50	17.19	
3	256QAM	8	4	17.52	17.57	17.63	
3	256QAM	8	7	17.66	17.65	17.39	
3	256QAM	15	0	17.57	17.48	17.41	Tune-up limit (dBm)
Channel				26697	26865	27033	
Frequency (MHz)				814.7	831.5	848.3	24
1.4	QPSK	1	0	22.20	22.52	22.32	
1.4	QPSK	1	3	22.12	22.58	22.44	
1.4	QPSK	1	5	22.10	22.57	22.50	
1.4	QPSK	3	0	22.13	22.57	22.38	
1.4	QPSK	3	1	22.23	22.56	22.41	
1.4	QPSK	3	3	22.27	22.58	22.34	23
1.4	QPSK	6	0	21.21	21.60	21.46	23
1.4	16QAM	1	0	21.50	22.14	21.84	
1.4	16QAM	1	3	21.39	21.81	21.84	
1.4	16QAM	1	5	21.66	22.24	21.95	
1.4	16QAM	3	0	21.23	21.90	21.55	
1.4	16QAM	3	1	21.25	21.65	21.44	
1.4	16QAM	3	3	21.17	21.84	21.47	22
1.4	16QAM	6	0	20.42	20.69	20.54	
1.4	64QAM	1	0	20.40	20.63	20.78	
1.4	64QAM	1	3	20.02	20.93	20.97	
1.4	64QAM	1	5	20.38	20.90	20.70	
1.4	64QAM	3	0	20.29	20.75	20.57	
1.4	64QAM	3	1	20.48	20.89	20.63	21
1.4	64QAM	3	3	20.41	20.88	20.40	
1.4	64QAM	6	0	19.24	19.81	19.54	
1.4	256QAM	1	0	17.16	17.77	17.74	
1.4	256QAM	1	3	17.21	17.86	17.70	
1.4	256QAM	1	5	17.22	17.85	17.66	
1.4	256QAM	3	0	17.00	17.72	17.58	19
1.4	256QAM	3	1	17.15	17.77	17.69	
1.4	256QAM	3	3	17.14	17.76	17.61	
1.4	256QAM	6	0	17.00	17.69	17.57	
1.4	256QAM	6	0	17.00	17.69	17.57	
1.4	256QAM	6	0	17.00	17.69	17.57	

<LTE Band 30_Ant 0>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				27710			
Frequency (MHz)				2310			
10	QPSK	1	0		19.65		20
10	QPSK	1	25		19.34		
10	QPSK	1	49		19.17		
10	QPSK	25	0		18.12		20
10	QPSK	25	12		18.25		
10	QPSK	25	25		18.19		
10	QPSK	50	0		18.05		20
10	16QAM	1	0		18.39		
10	16QAM	1	25		18.18		
10	16QAM	1	49		18.70		20
10	16QAM	25	0		19.13		
10	16QAM	25	12		19.30		
10	16QAM	25	25		19.11		20
10	16QAM	50	0		19.20		
10	64QAM	1	0		19.37		
10	64QAM	1	25		19.05		20



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10	64QAM	1	49		19.08		
10	64QAM	25	0		18.13		
10	64QAM	25	12		18.30		
10	64QAM	25	25		18.17		
10	64QAM	50	0		18.22		
10	256QAM	1	0		16.42		
10	256QAM	1	25		16.56		
10	256QAM	1	49		16.37		
10	256QAM	25	0		16.21		
10	256QAM	25	12		16.30		
10	256QAM	25	25		16.26		
10	256QAM	50	0		16.23		
Channel				27685	27710	27735	
Frequency (MHz)				2307.5	2310	2312.5	Tune-up limit (dBm)
5	QPSK	1	0	19.28	19.34	19.33	
5	QPSK	1	12	19.30	19.31	19.31	
5	QPSK	1	24	19.09	19.08	19.09	
5	QPSK	12	0	18.07	18.02	18.10	
5	QPSK	12	7	18.23	18.15	18.23	
5	QPSK	12	13	18.13	18.18	18.16	
5	QPSK	25	0	18.01	18.02	18.03	
5	16QAM	1	0	18.33	18.36	18.36	
5	16QAM	1	12	18.12	18.16	18.09	
5	16QAM	1	24	18.63	18.62	18.60	
5	16QAM	12	0	19.04	19.11	19.09	
5	16QAM	12	7	19.23	19.20	19.28	
5	16QAM	12	13	19.09	19.07	19.02	
5	16QAM	25	0	19.12	19.11	19.10	
5	64QAM	1	0	19.29	19.32	19.31	
5	64QAM	1	12	19.00	19.02	19.01	
5	64QAM	1	24	19.03	19.04	19.02	
5	64QAM	12	0	18.10	18.04	18.05	
5	64QAM	12	7	18.23	18.21	18.23	
5	64QAM	12	13	18.07	18.13	18.13	
5	64QAM	25	0	18.16	18.18	18.17	
5	256QAM	1	0	16.34	16.39	16.33	
5	256QAM	1	12	16.53	16.52	16.55	
5	256QAM	1	24	16.27	16.32	16.35	
5	256QAM	12	0	16.17	16.17	16.16	
5	256QAM	12	7	16.21	16.29	16.27	
5	256QAM	12	13	16.23	16.23	16.25	
5	256QAM	25	0	16.18	16.19	16.14	

<LTE Band 66_Ant 0>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				132072	132322	132572	
Frequency (MHz)				1720	1745	1770	
20	QPSK	1	0	22.63	22.73	22.36	
20	QPSK	1	49	22.64	22.69	22.66	
20	QPSK	1	99	22.45	22.35	22.89	
20	QPSK	50	0	21.69	21.79	21.76	
20	QPSK	50	24	21.75	21.87	21.77	
20	QPSK	50	50	21.83	21.88	22.06	
20	QPSK	100	0	21.72	21.76	21.98	
20	16QAM	1	0	21.74	21.78	21.67	
20	16QAM	1	49	21.41	22.27	21.33	
20	16QAM	1	99	22.23	21.91	21.49	
20	16QAM	50	0	20.79	20.71	20.78	
20	16QAM	50	24	20.80	20.83	20.85	
20	16QAM	50	50	20.77	20.99	20.97	



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20	16QAM	100	0	20.79	21.42	21.01	22
20	64QAM	1	0	20.67	21.73	21.20	
20	64QAM	1	49	20.83	21.27	20.75	
20	64QAM	1	99	20.90	21.19	20.85	
20	64QAM	50	0	19.66	19.72	19.74	21
20	64QAM	50	24	19.73	19.88	19.81	
20	64QAM	50	50	19.73	19.97	20.06	
20	64QAM	100	0	19.72	19.84	19.98	
20	256QAM	1	0	17.80	17.91	17.79	19
20	256QAM	1	49	17.65	17.83	17.67	
20	256QAM	1	99	18.19	18.24	18.19	
20	256QAM	50	0	17.72	17.82	17.72	
20	256QAM	50	24	17.88	17.92	17.72	19
20	256QAM	50	50	17.91	18.05	18.05	
20	256QAM	100	0	17.86	17.86	17.75	
Channel				132047	132322	132597	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1745	1772.5	
15	QPSK	1	0	22.00	22.15	21.69	23
15	QPSK	1	37	21.98	22.05	21.98	
15	QPSK	1	74	22.09	22.30	21.50	
15	QPSK	36	0	21.54	21.60	21.65	
15	QPSK	36	20	21.68	21.81	21.76	23
15	QPSK	36	39	21.70	21.84	21.94	
15	QPSK	75	0	21.74	21.60	21.81	
15	16QAM	1	0	22.19	22.18	22.16	
15	16QAM	1	37	21.71	22.63	21.75	23
15	16QAM	1	74	22.63	22.40	21.94	
15	16QAM	36	0	20.67	20.57	20.59	
15	16QAM	36	20	20.63	20.68	20.85	
15	16QAM	36	39	20.74	20.84	20.85	22
15	16QAM	75	0	20.73	21.22	21.00	
15	64QAM	1	0	20.58	21.72	21.17	
15	64QAM	1	37	20.65	21.19	20.72	
15	64QAM	1	74	20.71	21.18	20.85	22
15	64QAM	36	0	19.49	19.53	19.68	
15	64QAM	36	20	19.56	19.86	19.78	
15	64QAM	36	39	19.56	19.94	19.89	
15	64QAM	75	0	19.71	19.83	19.93	21
15	256QAM	1	0	17.60	17.85	17.60	
15	256QAM	1	37	17.64	17.64	17.58	
15	256QAM	1	74	18.12	18.08	18.18	
15	256QAM	36	0	17.57	17.68	17.59	19
15	256QAM	36	20	17.85	17.74	17.52	
15	256QAM	36	39	17.85	17.97	18.03	
15	256QAM	75	0	17.71	17.71	17.68	
Channel				132022	132322	132622	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	QPSK	1	0	22.06	22.14	21.81	23
10	QPSK	1	25	22.08	22.13	22.05	
10	QPSK	1	49	21.90	22.27	22.38	
10	QPSK	25	0	21.56	21.70	21.66	
10	QPSK	25	12	21.68	21.76	21.63	23
10	QPSK	25	25	21.74	21.73	22.04	
10	QPSK	50	0	21.71	21.69	21.85	
10	16QAM	1	0	22.20	22.08	22.07	
10	16QAM	1	25	21.90	22.64	21.77	23
10	16QAM	1	49	22.66	22.37	21.87	
10	16QAM	25	0	20.63	20.56	20.65	
10	16QAM	25	12	20.63	20.63	20.78	
10	16QAM	25	25	20.57	20.84	20.84	22
10	16QAM	50	0	20.77	21.34	20.99	
10	64QAM	1	0	20.48	21.55	21.04	
10	64QAM	1	0	20.48	21.55	21.04	



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10	64QAM	1	25	20.65	21.20	20.59	21
10	64QAM	1	49	20.74	21.02	20.73	
10	64QAM	25	0	19.47	19.60	19.60	
10	64QAM	25	12	19.65	19.74	19.73	
10	64QAM	25	25	19.62	19.84	19.98	
10	64QAM	50	0	19.53	19.83	19.87	19
10	256QAM	1	0	17.73	17.77	17.62	
10	256QAM	1	25	17.53	17.68	17.62	
10	256QAM	1	49	18.04	18.15	18.18	19
10	256QAM	25	0	17.67	17.75	17.69	
10	256QAM	25	12	17.84	17.86	17.58	
10	256QAM	25	25	17.80	17.88	17.96	
10	256QAM	50	0	17.69	17.68	17.60	
Channel				131997	132322	132647	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1745	1777.5	
5	QPSK	1	0	22.15	22.09	21.72	23
5	QPSK	1	12	22.13	22.02	22.02	
5	QPSK	1	24	21.94	22.36	22.46	
5	QPSK	12	0	21.52	21.65	21.56	23
5	QPSK	12	7	21.73	21.78	21.75	
5	QPSK	12	13	21.65	21.78	22.03	
5	QPSK	25	0	21.67	21.66	21.96	23
5	16QAM	1	0	22.21	22.23	22.16	
5	16QAM	1	12	21.81	22.72	21.78	
5	16QAM	1	24	22.65	22.34	21.93	22
5	16QAM	12	0	20.70	20.67	20.58	
5	16QAM	12	7	20.70	20.77	20.66	
5	16QAM	12	13	20.59	20.90	20.84	22
5	16QAM	25	0	20.73	21.40	20.83	
5	64QAM	1	0	20.61	21.53	21.07	
5	64QAM	1	12	20.82	21.16	20.55	22
5	64QAM	1	24	20.89	21.10	20.82	
5	64QAM	12	0	19.53	19.68	19.54	
5	64QAM	12	7	19.72	19.80	19.75	21
5	64QAM	12	13	19.60	19.84	19.89	
5	64QAM	25	0	19.58	19.71	19.88	
5	256QAM	1	0	17.62	17.90	17.74	19
5	256QAM	1	12	17.62	17.79	17.60	
5	256QAM	1	24	18.02	18.06	18.17	
5	256QAM	12	0	17.71	17.71	17.64	19
5	256QAM	12	7	17.71	17.78	17.68	
5	256QAM	12	13	17.75	17.97	18.00	
5	256QAM	25	0	17.81	17.81	17.62	Tune-up limit (dBm)
Channel				131987	132322	132657	
Frequency (MHz)				1711.5	1745	1778.5	Tune-up limit (dBm)
3	QPSK	1	0	22.11	22.06	21.75	
3	QPSK	1	8	22.05	22.01	22.08	23
3	QPSK	1	14	21.96	22.42	22.46	
3	QPSK	8	0	21.65	21.70	21.56	23
3	QPSK	8	4	21.59	21.75	21.61	
3	QPSK	8	7	21.63	21.85	22.02	
3	QPSK	15	0	21.63	21.67	21.97	23
3	16QAM	1	0	22.16	22.23	22.17	
3	16QAM	1	8	21.89	22.68	21.63	
3	16QAM	1	14	22.70	22.34	21.91	22
3	16QAM	8	0	20.67	20.53	20.58	
3	16QAM	8	4	20.76	20.76	20.79	
3	16QAM	8	7	20.66	20.92	20.77	22
3	16QAM	15	0	20.70	21.24	20.85	
3	64QAM	1	0	20.54	21.63	21.02	
3	64QAM	1	8	20.66	21.16	20.71	22
3	64QAM	1	14	20.76	20.99	20.77	



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3	64QAM	8	0	19.48	19.62	19.65	21
3	64QAM	8	4	19.53	19.72	19.64	
3	64QAM	8	7	19.55	19.81	20.04	
3	64QAM	15	0	19.66	19.65	19.96	
3	256QAM	1	0	17.60	17.88	17.76	19
3	256QAM	1	8	17.52	17.67	17.61	
3	256QAM	1	14	18.08	18.19	18.07	
3	256QAM	8	0	17.65	17.77	17.61	19
3	256QAM	8	4	17.73	17.77	17.55	
3	256QAM	8	7	17.78	17.93	17.98	
3	256QAM	15	0	17.71	17.79	17.73	
Channel				131979	132322	132665	Tune-up limit (dBm)
Frequency (MHz)				1710.7	1745	1779.3	
1.4	QPSK	1	0	22.16	22.09	21.72	23
1.4	QPSK	1	3	22.00	22.01	22.11	
1.4	QPSK	1	5	21.96	22.29	22.45	
1.4	QPSK	3	0	22.01	22.02	22.04	
1.4	QPSK	3	1	22.02	22.27	22.03	
1.4	QPSK	3	3	22.11	22.10	22.42	
1.4	QPSK	6	0	21.74	21.57	21.90	23
1.4	16QAM	1	0	22.16	22.11	21.97	23
1.4	16QAM	1	3	21.86	22.68	21.81	
1.4	16QAM	1	5	22.69	22.29	21.98	
1.4	16QAM	3	0	21.64	21.59	21.54	
1.4	16QAM	3	1	21.62	21.58	21.56	
1.4	16QAM	3	3	21.61	21.74	21.74	
1.4	16QAM	6	0	20.76	21.37	20.81	22
1.4	64QAM	1	0	20.60	21.55	21.00	22
1.4	64QAM	1	3	20.80	21.12	20.58	
1.4	64QAM	1	5	20.89	21.11	20.75	
1.4	64QAM	3	0	20.37	20.61	20.52	
1.4	64QAM	3	1	20.55	20.62	20.70	
1.4	64QAM	3	3	20.53	20.77	20.79	
1.4	64QAM	6	0	19.53	19.78	19.97	21
1.4	256QAM	1	0	17.64	17.83	17.62	19
1.4	256QAM	1	3	17.54	17.63	17.49	
1.4	256QAM	1	5	18.02	18.10	18.02	
1.4	256QAM	3	0	17.65	17.66	17.71	
1.4	256QAM	3	1	17.71	17.91	17.70	
1.4	256QAM	3	3	17.82	18.02	17.99	
1.4	256QAM	6	0	17.74	17.73	17.68	19

<LTE Band 71_Ant 0>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				133222	133297	133372	
Frequency (MHz)				673	680.5	688	
20	QPSK	1	0	22.64	22.78	22.90	24
20	QPSK	1	49	22.91	22.93	22.91	
20	QPSK	1	99	22.86	22.92	22.79	
20	QPSK	50	0	21.97	22.03	22.03	23
20	QPSK	50	24	21.94	22.01	22.00	
20	QPSK	50	50	22.05	22.18	22.04	
20	QPSK	100	0	22.02	22.03	22.00	
20	16QAM	1	0	22.52	22.31	22.33	23
20	16QAM	1	49	22.25	22.02	22.85	
20	16QAM	1	99	21.75	22.41	22.03	
20	16QAM	50	0	20.94	21.02	21.11	22
20	16QAM	50	24	21.04	21.14	21.04	
20	16QAM	50	50	21.04	21.05	20.98	
20	16QAM	100	0	21.08	21.04	21.01	



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20	64QAM	1	0	20.65	21.00	20.84	22
20	64QAM	1	49	21.37	21.22	21.27	
20	64QAM	1	99	21.06	20.99	20.92	
20	64QAM	50	0	19.88	20.00	20.08	21
20	64QAM	50	24	20.04	20.00	19.93	
20	64QAM	50	50	20.01	20.08	20.05	
20	64QAM	100	0	19.98	20.08	20.03	
20	256QAM	1	0	17.94	18.01	17.97	19
20	256QAM	1	49	18.18	18.20	18.09	
20	256QAM	1	99	18.06	18.18	18.07	
20	256QAM	50	0	17.77	17.94	17.93	19
20	256QAM	50	24	17.97	18.05	17.89	
20	256QAM	50	50	17.90	18.06	17.98	
20	256QAM	100	0	17.87	18.05	17.99	
Channel				133197	133297	133397	Tune-up limit (dBm)
Frequency (MHz)				670.5	680.5	690.5	
15	QPSK	1	0	22.59	22.68	22.80	24
15	QPSK	1	37	22.68	22.74	22.85	
15	QPSK	1	74	22.89	22.76	22.61	
15	QPSK	36	0	21.82	21.94	21.83	23
15	QPSK	36	20	21.87	21.87	21.92	
15	QPSK	36	39	21.89	22.05	21.97	
15	QPSK	75	0	21.88	22.01	21.83	
15	16QAM	1	0	22.33	22.29	22.27	23
15	16QAM	1	37	22.23	21.83	22.75	
15	16QAM	1	74	21.61	22.35	21.88	
15	16QAM	36	0	20.85	20.86	21.07	22
15	16QAM	36	20	20.87	20.99	21.00	
15	16QAM	36	39	20.97	20.87	20.93	
15	16QAM	75	0	21.04	20.87	20.92	
15	64QAM	1	0	20.53	20.84	20.80	22
15	64QAM	1	37	21.34	21.11	21.26	
15	64QAM	1	74	20.86	20.83	20.73	
15	64QAM	36	0	19.70	19.89	19.88	21
15	64QAM	36	20	19.96	19.85	19.76	
15	64QAM	36	39	19.91	19.92	19.86	
15	64QAM	75	0	19.92	19.95	19.84	
15	256QAM	1	0	17.79	17.95	17.96	19
15	256QAM	1	37	18.02	18.01	17.94	
15	256QAM	1	74	18.02	18.10	17.94	
15	256QAM	36	0	17.73	17.90	17.85	19
15	256QAM	36	20	17.92	18.05	17.75	
15	256QAM	36	39	17.72	18.03	17.90	
15	256QAM	75	0	17.75	17.93	17.95	
Channel				133172	133297	133422	Tune-up limit (dBm)
Frequency (MHz)				668	680.5	693	
10	QPSK	1	0	22.48	22.68	22.90	24
10	QPSK	1	25	22.68	22.80	22.92	
10	QPSK	1	49	22.86	22.80	22.68	
10	QPSK	25	0	21.78	21.89	21.88	23
10	QPSK	25	12	21.87	21.83	21.89	
10	QPSK	25	25	21.96	22.05	21.94	
10	QPSK	50	0	21.96	21.89	21.81	
10	16QAM	1	0	22.52	22.17	22.19	23
10	16QAM	1	25	22.13	21.99	22.85	
10	16QAM	1	49	21.71	22.24	22.03	
10	16QAM	25	0	20.75	21.00	21.04	22
10	16QAM	25	12	20.91	20.97	21.02	
10	16QAM	25	25	20.89	20.86	20.93	
10	16QAM	50	0	20.96	20.89	20.88	
10	64QAM	1	0	20.48	20.83	20.81	22
10	64QAM	1	25	21.24	21.10	21.07	



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10	64QAM	1	49	20.94	20.91	20.86	21
10	64QAM	25	0	19.69	19.87	19.88	
10	64QAM	25	12	19.90	19.99	19.79	
10	64QAM	25	25	19.96	19.98	19.86	
10	64QAM	50	0	19.90	19.93	19.98	
10	256QAM	1	0	17.79	18.00	17.93	19
10	256QAM	1	25	18.02	18.01	17.96	
10	256QAM	1	49	17.99	18.02	18.00	
10	256QAM	25	0	17.58	17.88	17.88	19
10	256QAM	25	12	17.93	17.91	17.85	
10	256QAM	25	25	17.71	17.95	17.91	
10	256QAM	50	0	17.79	17.93	17.81	
Channel				133147	133297	133447	Tune-up limit (dBm)
Frequency (MHz)				665.5	680.5	695.5	
5	QPSK	1	0	22.64	22.71	22.91	24
5	QPSK	1	12	22.81	22.71	22.90	
5	QPSK	1	24	22.91	22.92	22.77	
5	QPSK	12	0	21.89	21.91	21.88	23
5	QPSK	12	7	21.92	21.93	21.80	
5	QPSK	12	13	21.85	21.98	21.81	
5	QPSK	25	0	21.88	21.85	21.87	
5	16QAM	1	0	22.43	22.24	22.14	23
5	16QAM	1	12	22.19	21.89	22.66	
5	16QAM	1	24	21.59	22.27	21.92	
5	16QAM	12	0	20.80	20.88	20.95	22
5	16QAM	12	7	21.04	21.03	20.87	
5	16QAM	12	13	21.04	21.00	20.90	
5	16QAM	25	0	21.01	21.04	20.81	
5	64QAM	1	0	20.59	20.84	20.79	22
5	64QAM	1	12	21.19	21.16	21.25	
5	64QAM	1	24	21.00	20.81	20.85	
5	64QAM	12	0	19.78	19.97	19.94	21
5	64QAM	12	7	19.96	19.99	19.90	
5	64QAM	12	13	19.87	19.94	20.05	
5	64QAM	25	0	19.96	19.96	19.96	
5	256QAM	1	0	17.83	17.83	17.82	19
5	256QAM	1	12	18.12	18.05	18.06	
5	256QAM	1	24	17.98	18.03	18.04	
5	256QAM	12	0	17.57	17.78	17.79	19
5	256QAM	12	7	17.93	17.99	17.82	
5	256QAM	12	13	17.74	17.88	17.82	
5	256QAM	25	0	17.75	18.02	17.97	

< TDD LTE SAR Measurement >

TDD LTE configuration setup for SAR measurement

SAR was tested with a fixed periodic duty factor according to the highest transmission duty factor implemented for the device and supported by 3GPP.

- 3GPP TS 36.211 section 4.2 for Type 2 Frame Structure and Table 4.2-2 for uplink-downlink configurations
- “special subframe S” contains both uplink and downlink transmissions, it has been taken into consideration to determine the transmission duty factor according to the worst case uplink and downlink cyclic prefix requirements for UpPTS
- Establishing connections with base station simulators ensure a consistent means for testing SAR and recommended for evaluating SAR. The Base station simulator was used for LTE output power measurements and SAR testing.

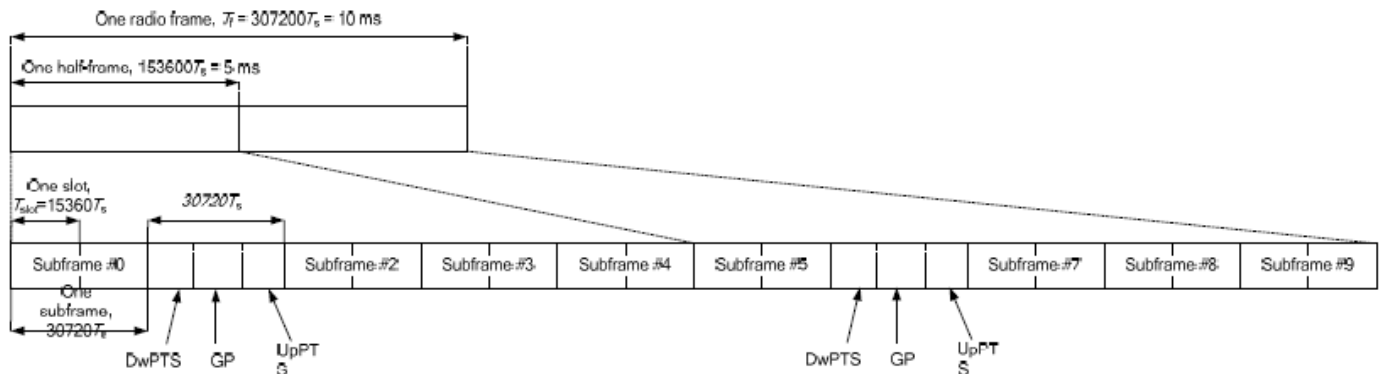


Figure 4.2-1: Frame structure type 2 (for 5 ms switch-point periodicity).

Table 4.2-2: Uplink-downlink configurations.

Uplink-downlink configuration	Downlink-to-Uplink Switch-point periodicity	Subframe number									
		0	1	2	3	4	5	6	7	8	9
0	5 ms	D	S	U	U	U	D	S	U	U	U
1	5 ms	D	S	U	U	D	D	S	U	U	D
2	5 ms	D	S	U	D	D	D	S	U	D	D
3	10 ms	D	S	U	U	U	D	D	D	D	D
4	10 ms	D	S	U	U	D	D	D	D	D	D
5	10 ms	D	S	U	D	D	D	D	D	D	D
6	5 ms	D	S	U	U	U	D	S	U	U	D

Table 4.2-1: Configuration of special subframe (lengths of DwPTS/GP/UpPTS).

Special subframe configuration	Normal cyclic prefix in downlink			Extended cyclic prefix in downlink		
	DwPTS	UpPTS		DwPTS	UpPTS	
		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink		Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
0	$6592 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$	$7680 \cdot T_s$	$2192 \cdot T_s$	$2560 \cdot T_s$
1	$19760 \cdot T_s$			$20480 \cdot T_s$		
2	$21952 \cdot T_s$			$23040 \cdot T_s$		
3	$24144 \cdot T_s$			$25600 \cdot T_s$		
4	$26336 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$	$7680 \cdot T_s$	$4384 \cdot T_s$	$5120 \cdot T_s$
5	$6592 \cdot T_s$			$20480 \cdot T_s$		
6	$19760 \cdot T_s$			$23040 \cdot T_s$		
7	$21952 \cdot T_s$			$12800 \cdot T_s$	-	-
8	$24144 \cdot T_s$			-		
9	$13168 \cdot T_s$			-		

Special subframe (30720·T _s): Normal cyclic prefix in downlink (UpPTS)			
	Special subframe configuration	Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
Uplink duty factor in one special subframe	0~4	7.13%	8.33%
	5~9	14.3%	16.7%

Special subframe(30720·T _s): Extended cyclic prefix in downlink (UpPTS)			
	Special subframe configuration	Normal cyclic prefix in uplink	Extended cyclic prefix in uplink
Uplink duty factor in one special subframe	0~3	7.13%	8.33%
	4~7	14.3%	16.7%

The highest duty factor is resulted from:

- i. Uplink-downlink configuration: 0. In a half-frame consisted of 5 subframes, uplink operation is in 3 uplink subframes and 1 special subframe.
- ii. special subframe configuration: 5-9 for normal cyclic prefix in downlink, 4-7 for extended cyclic prefix in downlink
- iii. for special subframe with extended cyclic prefix in uplink, the total uplink duty factor in one half-frame is: $(3+0.167)/5 = 63.3\%$
- iv. for special subframe with normal cyclic prefix in uplink, the total uplink duty factor in one half-frame is: $(3+0.143)/5 = 62.9\%$
- v. For TDD LTE SAR measurement, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix $63.3\%/62.9\% = 1.006$ is applied to scale-up the measured SAR result. The scaled TDD LTE SAR = measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.
- vi. The device supports Power Class 3 uplink-downlink configurations 0 and 6, and Power Class 2 uplink-downlink configurations 1 to 5 operations for LTE Band 41.
- vii. The highest available duty cycle for Power Class 2 operation is 43.3% using UL-DL configuration 1, for Power Class 3 operation is 63.3% using UL-DL configuration 0. Per FCC Guidance, all SAR tests were performed using Power Class 3. SAR with Power Class 2 at the available duty factor was additionally performed for the Power Class 3 configuration with the highest SAR among all exposure condition.



<Close/Open>

<LTE Band 41_Ant 0>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Low Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power High Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				39750	40185	40620	41055	41490	
Frequency (MHz)				2506	2549.5	2593	2636.5	2680	
20	QPSK	1	0	21.63	22.09	22.50	22.03	22.21	23.5
20	QPSK	1	49	21.75	22.19	21.99	22.15	22.40	
20	QPSK	1	99	21.92	22.35	22.14	22.19	22.49	
20	QPSK	50	0	20.84	21.07	21.49	21.31	21.47	22.5
20	QPSK	50	24	20.94	21.14	21.18	21.27	21.41	
20	QPSK	50	50	20.90	21.19	21.12	21.14	21.46	
20	QPSK	100	0	20.96	21.19	21.10	21.27	21.38	22.5
20	16QAM	1	0	20.81	20.93	20.89	21.25	21.22	
20	16QAM	1	49	20.90	21.10	21.02	21.36	21.37	
20	16QAM	1	99	20.83	20.97	20.92	21.45	21.35	21.5
20	16QAM	50	0	19.85	20.10	20.21	20.26	20.71	
20	16QAM	50	24	19.91	20.14	20.27	20.26	20.42	
20	16QAM	50	50	20.00	20.18	20.12	20.16	20.43	21.5
20	16QAM	100	0	19.93	20.19	20.14	20.25	20.39	
20	64QAM	1	0	19.61	19.84	20.03	19.89	20.56	
20	64QAM	1	49	19.96	20.12	20.01	19.84	20.31	21.5
20	64QAM	1	99	19.78	20.37	20.15	20.05	20.67	
20	64QAM	50	0	18.69	19.05	19.20	19.15	19.43	
20	64QAM	50	24	18.95	19.15	19.19	19.19	19.40	20.5
20	64QAM	50	50	18.90	19.07	19.00	19.19	19.48	
20	64QAM	100	0	18.97	19.15	19.10	19.19	19.40	
20	256QAM	1	0	17.32	17.56	17.60	17.54	17.52	18.5
20	256QAM	1	49	17.17	17.36	17.45	17.35	17.43	
20	256QAM	1	99	17.34	17.52	17.58	17.55	17.49	
20	256QAM	50	0	17.22	17.35	17.44	17.42	17.37	18.5
20	256QAM	50	24	17.05	17.30	17.35	17.34	17.30	
20	256QAM	50	50	17.04	17.27	17.29	17.24	17.26	
20	256QAM	100	0	17.11	17.27	17.35	17.34	17.30	
Channel				39725	40173	40620	41068	41515	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5	
15	QPSK	1	0	21.62	22.00	22.47	21.98	22.20	23.50
15	QPSK	1	37	21.65	22.16	21.90	22.12	22.31	
15	QPSK	1	74	21.89	22.34	22.04	22.14	22.47	
15	QPSK	36	0	20.83	21.01	21.45	21.26	21.41	22.5
15	QPSK	36	20	20.90	21.07	21.15	21.24	21.33	
15	QPSK	36	39	20.81	21.18	21.03	21.04	21.44	
15	QPSK	75	0	20.90	21.16	21.02	21.20	21.34	22.5
15	16QAM	1	0	20.75	20.88	20.80	21.19	21.14	
15	16QAM	1	37	20.80	21.08	20.93	21.34	21.32	
15	16QAM	1	74	20.77	20.95	20.91	21.35	21.30	21.5
15	16QAM	36	0	19.79	20.05	20.18	20.25	20.65	
15	16QAM	36	20	19.83	20.08	20.23	20.22	20.41	
15	16QAM	36	39	19.98	20.16	20.08	20.14	20.38	21.5
15	16QAM	75	0	19.90	20.16	20.13	20.23	20.35	
15	64QAM	1	0	19.53	19.83	19.98	19.82	20.53	
15	64QAM	1	37	19.93	20.08	19.98	19.74	20.22	21.5
15	64QAM	1	74	19.75	20.36	20.09	19.96	20.65	
15	64QAM	36	0	18.67	18.97	19.14	19.11	19.41	
15	64QAM	36	20	18.86	19.06	19.14	19.16	19.38	20.5
15	64QAM	36	39	18.87	19.04	18.93	19.13	19.43	
15	64QAM	75	0	18.95	19.12	19.07	19.11	19.33	
15	256QAM	1	0	17.29	17.46	17.56	17.48	17.49	18.5
15	256QAM	1	37	17.09	17.26	17.35	17.27	17.35	
15	256QAM	1	74	17.26	17.49	17.50	17.50	17.45	
15	256QAM	36	0	17.21	17.28	17.43	17.37	17.35	18.5



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15	256QAM	36	20	16.99	17.25	17.27	17.24	17.26	
15	256QAM	36	39	16.98	17.21	17.24	17.21	17.17	
15	256QAM	75	0	17.03	17.22	17.27	17.33	17.24	
Channel				39700	40160	40620	41080	41540	Tune-up limit (dBm)
Frequency (MHz)				2501	2547	2593	2639	2685	
10	QPSK	1	0	21.54	22.07	22.45	22.02	22.16	23.50
10	QPSK	1	25	21.69	22.17	21.92	22.14	22.33	
10	QPSK	1	49	21.83	22.25	22.13	22.10	22.48	
10	QPSK	25	0	20.81	21.04	21.47	21.25	21.46	22.5
10	QPSK	25	12	20.90	21.06	21.08	21.21	21.31	
10	QPSK	25	25	20.85	21.13	21.10	21.04	21.41	
10	QPSK	50	0	20.90	21.09	21.09	21.25	21.34	
10	16QAM	1	0	20.77	20.88	20.79	21.15	21.16	22.5
10	16QAM	1	25	20.86	21.00	20.92	21.31	21.33	
10	16QAM	1	49	20.78	20.87	20.91	21.37	21.27	
10	16QAM	25	0	19.76	20.08	20.11	20.23	20.67	21.5
10	16QAM	25	12	19.81	20.08	20.20	20.18	20.36	
10	16QAM	25	25	19.95	20.15	20.07	20.15	20.37	
10	16QAM	50	0	19.84	20.14	20.10	20.22	20.29	
10	64QAM	1	0	19.54	19.78	20.02	19.84	20.53	21.5
10	64QAM	1	25	19.92	20.09	19.95	19.77	20.26	
10	64QAM	1	49	19.77	20.33	20.06	20.02	20.57	
10	64QAM	25	0	18.61	18.98	19.17	19.13	19.40	20.5
10	64QAM	25	12	18.90	19.12	19.12	19.09	19.35	
10	64QAM	25	25	18.88	18.99	18.95	19.13	19.39	
10	64QAM	50	0	18.92	19.08	19.06	19.11	19.32	
10	256QAM	1	0	17.22	17.46	17.57	17.50	17.50	18.5
10	256QAM	1	25	17.12	17.34	17.35	17.25	17.34	
10	256QAM	1	49	17.28	17.43	17.56	17.51	17.48	
10	256QAM	25	0	17.12	17.25	17.42	17.41	17.33	18.5
10	256QAM	25	12	16.98	17.22	17.27	17.26	17.26	
10	256QAM	25	25	16.98	17.25	17.19	17.21	17.16	
10	256QAM	50	0	17.09	17.25	17.25	17.30	17.24	
Channel				39675	40148	40620	41093	41565	Tune-up limit (dBm)
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5	
5	QPSK	1	0	21.60	22.03	22.48	21.98	22.13	23.50
5	QPSK	1	12	21.66	22.10	21.91	22.14	22.36	
5	QPSK	1	24	21.85	22.30	22.10	22.11	22.39	
5	QPSK	12	0	20.82	21.03	21.47	21.28	21.37	22.5
5	QPSK	12	7	20.91	21.11	21.11	21.18	21.34	
5	QPSK	12	13	20.81	21.15	21.09	21.05	21.37	
5	QPSK	25	0	20.87	21.09	21.07	21.19	21.37	
5	16QAM	1	0	20.73	20.87	20.80	21.20	21.12	22.5
5	16QAM	1	12	20.89	21.01	20.95	21.31	21.30	
5	16QAM	1	24	20.79	20.91	20.83	21.43	21.26	
5	16QAM	12	0	19.80	20.02	20.11	20.19	20.63	21.5
5	16QAM	12	7	19.82	20.04	20.25	20.18	20.37	
5	16QAM	12	13	19.93	20.12	20.11	20.10	20.40	
5	16QAM	25	0	19.83	20.13	20.11	20.22	20.34	
5	64QAM	1	0	19.55	19.74	19.95	19.84	20.48	21.5
5	64QAM	1	12	19.89	20.03	19.94	19.78	20.26	
5	64QAM	1	24	19.69	20.36	20.08	20.01	20.59	
5	64QAM	12	0	18.63	19.03	19.11	19.09	19.38	20.5
5	64QAM	12	7	18.90	19.05	19.18	19.11	19.34	
5	64QAM	12	13	18.87	18.98	18.92	19.17	19.39	
5	64QAM	25	0	18.91	19.09	19.00	19.18	19.31	
5	256QAM	1	0	17.29	17.46	17.54	17.51	17.51	18.5
5	256QAM	1	12	17.11	17.33	17.37	17.29	17.37	
5	256QAM	1	24	17.28	17.48	17.56	17.51	17.45	
5	256QAM	12	0	17.13	17.31	17.34	17.40	17.29	18.5
5	256QAM	12	7	16.95	17.23	17.27	17.24	17.22	
5	256QAM	12	13	16.95	17.23	17.23	17.14	17.17	



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5	256QAM	25	0	17.05	17.18	17.32	17.28	17.26	
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<LTE Band 41_HPUE_Ant 0>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Low Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power High Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				39750	40185	40620	41055	41490	
Frequency (MHz)				2506	2549.5	2593	2636.5	2680	
20	QPSK	1	0	24.56	24.68	25.01	24.58	24.86	26.5
20	QPSK	1	49	24.86	24.82	24.97	24.79	24.83	
20	QPSK	1	99	24.86	24.56	24.70	24.70	25.00	
20	QPSK	50	0	23.75	23.74	23.79	23.72	24.43	25.5
20	QPSK	50	24	23.88	23.96	23.56	23.75	23.88	
20	QPSK	50	50	23.85	23.53	23.51	23.64	23.92	
20	QPSK	100	0	23.92	23.95	23.59	23.76	23.82	25.5
20	16QAM	1	0	23.88	23.92	23.67	23.89	24.14	
20	16QAM	1	49	24.25	23.79	24.08	23.78	24.01	
20	16QAM	1	99	24.31	23.71	24.10	23.90	24.66	24.5
20	16QAM	50	0	22.85	22.82	22.87	22.80	22.83	
20	16QAM	50	24	22.93	22.93	22.61	22.73	22.83	
20	16QAM	50	50	22.88	22.86	22.53	22.68	22.89	24.5
20	16QAM	100	0	22.89	22.86	22.59	22.71	22.92	
20	64QAM	1	0	23.07	22.77	22.92	23.22	22.75	
20	64QAM	1	49	22.99	22.64	22.60	23.38	22.82	24.5
20	64QAM	1	99	23.25	22.77	22.55	22.89	23.74	
20	64QAM	50	0	21.77	21.84	21.77	21.56	21.90	
20	64QAM	50	24	21.80	21.89	21.67	21.68	21.81	23.5
20	64QAM	50	50	21.95	21.87	21.51	21.69	21.93	
20	64QAM	100	0	21.89	21.90	21.63	21.71	21.87	
20	256QAM	1	0	19.81	19.52	19.95	19.93	19.91	21.5
20	256QAM	1	49	19.72	19.81	19.85	19.75	19.76	
20	256QAM	1	99	19.54	19.61	19.68	19.60	19.61	
20	256QAM	50	0	19.56	19.72	19.74	19.70	19.66	21.5
20	256QAM	50	24	19.68	19.85	19.88	19.83	19.85	
20	256QAM	50	50	19.58	19.63	19.71	19.63	19.64	
20	256QAM	100	0	19.59	19.71	19.72	19.64	19.68	Tune-up limit (dBm)
Channel				39725	40173	40620	41068	41515	
Frequency (MHz)				2503.5	2548.3	2593	2637.8	2682.5	
15	QPSK	1	0	24.53	24.66	24.99	24.54	24.85	26.50
15	QPSK	1	37	24.83	24.80	24.95	24.75	24.80	
15	QPSK	1	74	24.85	24.55	24.69	24.67	24.99	
15	QPSK	36	0	23.72	23.70	23.75	23.71	24.42	25.5
15	QPSK	36	20	23.85	23.92	23.55	23.71	23.85	
15	QPSK	36	39	23.82	23.53	23.51	23.63	23.90	
15	QPSK	75	0	23.88	23.94	23.55	23.73	23.78	25.5
15	16QAM	1	0	23.85	23.91	23.63	23.87	24.13	
15	16QAM	1	37	24.22	23.78	24.07	23.74	24.00	
15	16QAM	1	74	24.29	23.68	24.09	23.88	24.64	24.5
15	16QAM	36	0	22.81	22.81	22.83	22.79	22.81	
15	16QAM	36	20	22.92	22.91	22.58	22.72	22.81	
15	16QAM	36	39	22.85	22.83	22.52	22.67	22.85	24.5
15	16QAM	75	0	22.86	22.85	22.55	22.68	22.88	
15	64QAM	1	0	23.03	22.74	22.90	23.19	22.74	
15	64QAM	1	37	22.97	22.63	22.59	23.36	22.79	24.5
15	64QAM	1	74	23.24	22.73	22.51	22.86	23.71	
15	64QAM	36	0	21.74	21.82	21.74	21.55	21.88	
15	64QAM	36	20	21.76	21.87	21.63	21.65	21.80	23.5
15	64QAM	36	39	21.92	21.86	21.51	21.67	21.91	
15	64QAM	75	0	21.86	21.86	21.61	21.69	21.86	
15	256QAM	1	0	19.77	19.53	19.92	19.89	19.90	21.5
15	256QAM	1	37	19.70	19.79	19.84	19.71	19.73	
15	256QAM	1	74	19.51	19.58	19.66	19.58	19.60	



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15	256QAM	36	0	19.54	19.70	19.72	19.66	19.62	21.5
15	256QAM	36	20	19.65	19.82	19.85	19.80	19.81	
15	256QAM	36	39	19.54	19.60	19.68	19.61	19.63	
15	256QAM	75	0	19.56	19.70	19.69	19.62	19.64	
Channel				39700	40160	40620	41080	41540	Tune-up limit (dBm)
Frequency (MHz)				2501	2547	2593	2639	2685	
10	QPSK	1	0	24.52	24.65	25.00	24.57	24.82	26.50
10	QPSK	1	25	24.82	24.80	24.96	24.76	24.81	
10	QPSK	1	49	24.83	24.54	24.66	24.67	24.96	
10	QPSK	25	0	23.72	23.71	23.75	23.70	24.40	25.5
10	QPSK	25	12	23.84	23.94	23.54	23.73	23.86	
10	QPSK	25	25	23.83	23.50	23.51	23.63	23.88	
10	QPSK	50	0	23.88	23.93	23.56	23.73	23.78	
10	16QAM	1	0	23.84	23.89	23.65	23.88	24.11	25.5
10	16QAM	1	25	24.23	23.77	24.05	23.75	23.98	
10	16QAM	1	49	24.30	23.68	24.08	23.89	24.65	
10	16QAM	25	0	22.81	22.78	22.83	22.79	22.79	24.5
10	16QAM	25	12	22.92	22.89	22.57	22.69	22.81	
10	16QAM	25	25	22.85	22.82	22.53	22.67	22.88	
10	16QAM	50	0	22.87	22.83	22.56	22.67	22.89	
10	64QAM	1	0	23.04	22.76	22.90	23.21	22.72	24.5
10	64QAM	1	25	22.95	22.62	22.56	23.34	22.80	
10	64QAM	1	49	23.23	22.73	22.51	22.88	23.71	
10	64QAM	25	0	21.74	21.82	21.76	21.52	21.89	23.5
10	64QAM	25	12	21.78	21.85	21.66	21.65	21.79	
10	64QAM	25	25	21.93	21.84	21.53	21.66	21.89	
10	64QAM	50	0	21.88	21.89	21.59	21.70	21.86	
10	256QAM	1	0	19.78	19.52	19.92	19.92	19.89	21.5
10	256QAM	1	25	19.70	19.80	19.82	19.74	19.75	
10	256QAM	1	49	19.53	19.57	19.67	19.56	19.59	
10	256QAM	25	0	19.54	19.69	19.73	19.68	19.64	21.5
10	256QAM	25	12	19.65	19.83	19.87	19.79	19.83	
10	256QAM	25	25	19.57	19.62	19.68	19.62	19.60	
10	256QAM	50	0	19.57	19.67	19.69	19.61	19.67	
Channel				39675	40148	40620	41093	41565	Tune-up limit (dBm)
Frequency (MHz)				2498.5	2545.8	2593	2640.30	2687.5	
5	QPSK	1	0	24.52	24.65	25.00	24.57	24.85	26.50
5	QPSK	1	12	24.85	24.79	24.93	24.77	24.81	
5	QPSK	1	24	24.85	24.54	24.68	24.69	24.97	
5	QPSK	12	0	23.73	23.72	23.76	23.69	24.42	25.5
5	QPSK	12	7	23.87	23.95	23.52	23.74	23.86	
5	QPSK	12	13	23.83	23.51	23.52	23.61	23.91	
5	QPSK	25	0	23.89	23.92	23.57	23.73	23.78	
5	16QAM	1	0	23.85	23.89	23.65	23.87	24.13	25.5
5	16QAM	1	12	24.22	23.75	24.04	23.75	24.00	
5	16QAM	1	24	24.27	23.69	24.09	23.89	24.62	
5	16QAM	12	0	22.82	22.78	22.86	22.78	22.80	24.5
5	16QAM	12	7	22.90	22.92	22.58	22.69	22.79	
5	16QAM	12	13	22.85	22.85	22.51	22.67	22.85	
5	16QAM	25	0	22.85	22.82	22.55	22.68	22.89	
5	64QAM	1	0	23.05	22.74	22.89	23.20	22.73	24.5
5	64QAM	1	12	22.96	22.63	22.56	23.37	22.78	
5	64QAM	1	24	23.23	22.75	22.53	22.86	23.72	
5	64QAM	12	0	21.73	21.82	21.73	21.52	21.86	23.5
5	64QAM	12	7	21.76	21.86	21.64	21.65	21.79	
5	64QAM	12	13	21.94	21.83	21.53	21.65	21.89	
5	64QAM	25	0	21.85	21.87	21.60	21.70	21.85	
5	256QAM	1	0	19.77	19.50	19.94	19.92	19.88	21.5
5	256QAM	1	12	19.70	19.80	19.83	19.74	19.72	
5	256QAM	1	24	19.53	19.58	19.65	19.56	19.60	
5	256QAM	12	0	19.55	19.70	19.72	19.68	19.64	21.5
5	256QAM	12	7	19.67	19.81	19.84	19.81	19.81	



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5	256QAM	12	13	19.55	19.59	19.69	19.60	19.61	
5	256QAM	25	0	19.56	19.67	19.68	19.60	19.64	

<LTE Band 48_Ant 3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Low Middle Ch. / Freq.	Power Middle Ch. / Freq.	Power High Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				55340	55830	55990	56150	56640	
Frequency (MHz)				3560	3609	3625	3641	3690	
20	QPSK	1	0	17.69	17.89	17.55	17.56	17.52	18
20	QPSK	1	49	17.36	17.44	17.44	17.37	17.14	
20	QPSK	1	99	17.19	17.27	17.54	17.23	17.23	
20	QPSK	50	0	17.52	17.75	17.74	17.64	17.45	18
20	QPSK	50	24	17.44	17.60	17.50	17.52	17.12	
20	QPSK	50	50	17.46	17.53	17.61	17.45	17.08	
20	QPSK	100	0	17.44	17.54	17.49	17.48	17.05	
20	16QAM	1	0	17.35	17.49	17.47	17.46	17.21	18
20	16QAM	1	49	17.22	17.64	17.66	17.29	17.01	
20	16QAM	1	99	17.16	17.10	17.50	17.33	17.13	
20	16QAM	50	0	17.39	17.72	17.63	17.54	17.12	18
20	16QAM	50	24	17.47	17.50	17.58	17.58	17.02	
20	16QAM	50	50	17.42	17.47	17.54	17.40	17.06	
20	16QAM	100	0	17.43	17.57	17.56	17.59	17.03	
20	64QAM	1	0	17.01	17.88	17.42	17.39	17.39	18
20	64QAM	1	49	17.49	17.47	17.65	17.41	17.09	
20	64QAM	1	99	17.14	17.51	17.39	17.23	17.13	
20	64QAM	50	0	16.78	16.87	17.00	16.89	17.08	18
20	64QAM	50	24	16.79	16.93	16.81	16.92	17.02	
20	64QAM	50	50	16.76	16.86	16.91	16.64	16.93	
20	64QAM	100	0	16.77	16.83	16.83	16.86	16.93	
20	256QAM	1	0	17.02	17.06	17.02	17.18	17.18	18
20	256QAM	1	49	17.11	17.13	17.00	17.16	16.98	
20	256QAM	1	99	17.15	17.04	17.02	17.21	17.19	
20	256QAM	50	0	17.20	17.10	17.18	17.20	17.12	18
20	256QAM	50	24	17.19	17.29	17.23	17.29	17.11	
20	256QAM	50	50	17.24	17.06	17.25	17.25	17.05	
20	256QAM	100	0	17.17	17.06	17.25	17.26	17.13	
Channel				55315	55820	55990	56160	56665	Tune-up limit (dBm)
Frequency (MHz)				3557.5	3608	3625	3642	3692.5	
15	QPSK	1	0	17.53	17.75	17.38	17.38	17.38	18
15	QPSK	1	37	17.24	17.26	17.30	17.25	16.95	
15	QPSK	1	74	16.99	17.09	17.43	17.13	17.18	
15	QPSK	36	0	17.48	17.60	17.65	17.47	17.25	18
15	QPSK	36	20	17.37	17.54	17.45	17.46	16.99	
15	QPSK	36	39	17.36	17.47	17.54	17.29	17.04	
15	QPSK	75	0	17.34	17.40	17.42	17.44	16.98	
15	16QAM	1	0	17.27	17.29	17.40	17.34	17.06	18
15	16QAM	1	37	17.08	17.50	17.63	17.10	16.82	
15	16QAM	1	74	17.04	16.98	17.46	17.18	17.08	
15	16QAM	36	0	17.33	17.62	17.60	17.41	16.94	18
15	16QAM	36	20	17.29	17.45	17.43	17.42	16.94	
15	16QAM	36	39	17.25	17.27	17.38	17.28	17.02	
15	16QAM	75	0	17.31	17.42	17.37	17.53	16.93	
15	64QAM	1	0	16.95	17.77	17.27	17.27	17.28	18
15	64QAM	1	37	17.33	17.27	17.53	17.26	16.99	
15	64QAM	1	74	16.99	17.31	17.26	17.15	16.97	
15	64QAM	36	0	16.67	16.77	16.92	16.80	17.01	18
15	64QAM	36	20	16.61	16.74	16.73	16.86	16.85	
15	64QAM	36	39	16.67	16.73	16.80	16.54	16.87	
15	64QAM	75	0	16.59	16.70	16.65	16.78	16.77	
15	256QAM	1	0	16.94	16.92	16.93	16.99	17.03	18
15	256QAM	1	37	17.08	16.99	16.89	17.04	16.89	



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15	256QAM	1	74	17.07	16.90	16.99	17.07	17.14	18
15	256QAM	36	0	17.04	16.97	17.12	17.03	16.96	
15	256QAM	36	20	17.07	17.16	17.03	17.26	16.92	
15	256QAM	36	39	17.19	16.90	17.21	17.17	17.01	
15	256QAM	75	0	17.09	17.00	17.16	17.12	17.10	
Channel				55290	55815	55990	56165	56690	Tune-up limit (dBm)
Frequency (MHz)				3555	3607.5	3625	3642.5	3695	
10	QPSK	1	0	17.55	17.71	17.46	17.47	17.47	18
10	QPSK	1	25	17.28	17.24	17.36	17.28	16.98	
10	QPSK	1	49	17.12	17.23	17.48	17.20	17.18	
10	QPSK	25	0	17.48	17.70	17.66	17.47	17.37	18
10	QPSK	25	12	17.34	17.56	17.45	17.35	17.08	
10	QPSK	25	25	17.35	17.42	17.49	17.25	16.90	
10	QPSK	50	0	17.28	17.43	17.33	17.34	16.91	
10	16QAM	1	0	17.26	17.33	17.37	17.43	17.08	18
10	16QAM	1	25	17.06	17.54	17.54	17.20	16.91	
10	16QAM	1	49	17.09	16.97	17.42	17.24	16.93	
10	16QAM	25	0	17.31	17.53	17.47	17.36	16.97	18
10	16QAM	25	12	17.37	17.46	17.41	17.42	16.94	
10	16QAM	25	25	17.23	17.29	17.40	17.20	16.97	
10	16QAM	50	0	17.28	17.42	17.48	17.53	16.88	
10	64QAM	1	0	16.98	17.75	17.39	17.25	17.26	18
10	64QAM	1	25	17.46	17.41	17.55	17.26	16.90	
10	64QAM	1	49	17.00	17.42	17.27	17.19	17.02	
10	64QAM	25	0	16.68	16.83	16.87	16.74	17.00	18
10	64QAM	25	12	16.64	16.75	16.72	16.83	16.96	
10	64QAM	25	25	16.73	16.69	16.85	16.60	16.89	
10	64QAM	50	0	16.66	16.69	16.67	16.76	16.83	
10	256QAM	1	0	16.90	17.02	16.82	17.12	17.08	18
10	256QAM	1	25	17.04	16.97	16.95	17.11	16.78	
10	256QAM	1	49	17.06	16.89	16.93	17.11	17.10	
10	256QAM	25	0	17.02	17.04	17.10	17.05	17.07	18
10	256QAM	25	12	17.04	17.20	17.16	17.11	16.97	
10	256QAM	25	25	17.15	16.94	17.17	17.20	16.99	
10	256QAM	50	0	17.02	16.86	17.05	17.07	17.05	
Channel				55265	55810	55990	56170	56715	Tune-up limit (dBm)
Frequency (MHz)				3552.5	3607	3625	3643	3697.5	
5	QPSK	1	0	17.66	17.82	17.46	17.46	17.43	18
5	QPSK	1	12	17.28	17.29	17.39	17.34	17.05	
5	QPSK	1	24	17.10	17.15	17.38	17.15	17.13	
5	QPSK	12	0	17.43	17.64	17.61	17.52	17.39	18
5	QPSK	12	7	17.25	17.52	17.38	17.48	16.94	
5	QPSK	12	13	17.41	17.45	17.57	17.41	17.02	
5	QPSK	25	0	17.29	17.37	17.30	17.38	16.94	
5	16QAM	1	0	17.26	17.34	17.41	17.31	17.10	18
5	16QAM	1	12	17.13	17.50	17.55	17.25	16.91	
5	16QAM	1	24	16.97	16.94	17.41	17.14	16.94	
5	16QAM	12	0	17.35	17.61	17.45	17.47	17.01	18
5	16QAM	12	7	17.41	17.45	17.48	17.46	16.90	
5	16QAM	12	13	17.37	17.44	17.35	17.24	16.89	
5	16QAM	25	0	17.34	17.46	17.43	17.52	17.00	
5	64QAM	1	0	16.82	17.75	17.24	17.22	17.35	18
5	64QAM	1	12	17.37	17.42	17.59	17.33	16.96	
5	64QAM	1	24	17.08	17.33	17.28	17.11	16.95	
5	64QAM	12	0	16.58	16.80	16.88	16.77	17.03	18
5	64QAM	12	7	16.70	16.90	16.76	16.87	16.99	
5	64QAM	12	13	16.73	16.82	16.84	16.48	16.87	
5	64QAM	25	0	16.57	16.79	16.76	16.72	16.74	
5	256QAM	1	0	16.93	16.87	16.97	17.10	17.12	18
5	256QAM	1	12	17.04	17.01	16.94	17.03	16.93	
5	256QAM	1	24	16.95	16.85	16.85	17.14	17.04	
5	256QAM	12	0	17.10	16.95	17.07	17.06	17.06	18



FCC SAR TEST REPORT

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5	256QAM	12	7	17.02	17.22	17.07	17.21	17.03	
5	256QAM	12	13	17.21	17.00	17.12	17.21	16.95	
5	256QAM	25	0	16.97	16.90	17.05	17.09	16.94	

13. 5G NR Output Power (Unit: dBm)

General Note:

1. Referencing the procedure in KDB 941225, the test procedures are outlined as below
 - a. For DFT-OFDM output power measurement, full measurement was done for Pi/2 BPSK and QPSK and for the largest supported bandwidth, repeat test for 16QAM/64QAM/256QAM under 1RB 1Offset configuration. For smaller bandwidth, measure conducted power for Pi/2 BPSK and 1RB 1Offset configuration.
 - b. According to the tune-up, CP-OFDM output power is not ½ dB higher than DFT-OFDM mode, and the reported SAR of DFT-OFDM mode reported SAR is ≤ 1.45 W/kg, SAR test and thus conducted power for CP-OFDM mode is not required.
 - c. To start SAR test for the largest channel bandwidth for Pi/2 BPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel. Also do SAR test for 50% RB allocation for Pi/2 BPSK SAR testing using 1RB Pi/2 BPSK allocation procedure
 - d. For Pi/2 BPSK with 100% RB allocation, SAR test is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
 - e. For higher modulation QPSK/16QAM/64QAM/256QAM, according to tune-up document the power level is not ½ dB higher than the same configuration in Pi/2 BPSK, also reported SAR for the Pi/2 BPSK configuration is less than 1.45 W/kg, QPSK/16QAM/64QAM/256QAM SAR testing are not required.
 - f. Smaller bandwidth output power for each RB allocation configuration for this device is not ½ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device
2. For FR1 was establishing connections via a base station simulator to use for output power measurement and SAR testing.
3. For FR1 TDD PC3 support 100% transmission, since establishing connections via a base station simulator non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to "1/(duty cycle*100)"
4. For FR1 TDD PC2 support 50% transmission, since establishing connections via a base station simulator non-50% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to "1/(duty cycle*50)"

< 3GPP 38.101 MPR for EN-DC >
Table 6.2.2-1 Maximum power reduction (MPR) for power class 3

Modulation		MPR (dB)		
		Edge RB allocations	Outer RB allocations	Inner RB allocations
DFT-s-OFDM	Pi/2 BPSK	$\leq 3.5^1$	$\leq 1.2^1$	$\leq 0.2^1$
		$\leq 0.5^2$	$\leq 0.5^2$	0 ²
	QPSK	≤ 1		0
	16 QAM	≤ 2		≤ 1
	64 QAM		≤ 2.5	
CP-OFDM	256 QAM		≤ 4.5	
	QPSK	≤ 3		≤ 1.5
	16 QAM	≤ 3		≤ 2
	64 QAM		≤ 3.5	
	256 QAM		≤ 6.5	

NOTE 1: Applicable for UE operating in TDD mode with Pi/2 BPSK modulation and UE indicates support for UE capability *powerBoosting-pi2BPSK* and if the IE *powerBoostPi2BPSK* is set to 1 and 40 % or less slots in radio frame are used for UL transmission for bands n40, n41, n77, n78 and n79. The reference power of 0 dB MPR is 26 dBm.

NOTE 2: Applicable for UE operating in FDD mode, or in TDD mode in bands other than n40, n41, n77, n78 and n79 with Pi/2 BPSK modulation and if the IE *powerBoostPi2BPSK* is set to 0 and if more than 40 % of slots in radio frame are used for UL transmission for bands n40, n41, n77, n78 and n79.

Table 6.2.2-2 Maximum power reduction (MPR) for power class 2

Modulation		MPR (dB)		
		Edge RB allocations	Outer RB allocations	Inner RB allocations
DFT-s-OFDM	Pi/2 BPSK	≤ 3.5	≤ 0.5	0
	QPSK	≤ 3.5	≤ 1	0
	16 QAM	≤ 3.5	≤ 2	≤ 1
	64 QAM	≤ 3.5		≤ 2.5
	256 QAM		≤ 4.5	
CP-OFDM	QPSK	≤ 3.5	≤ 3	≤ 1.5
	16 QAM	≤ 3.5	≤ 3	≤ 2
	64 QAM		≤ 3.5	
	256 QAM		≤ 6.5	

<Close/Open>

<FR1 n2_Ant 0>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				372000	376000	380000	
Frequency (MHz)				1860	1880	1900	
20	PI/2 BPSK	1	1	22.58	22.74	22.64	
20	PI/2 BPSK	1	53	22.56	22.69	22.59	24.5
20	PI/2 BPSK	1	104	22.61	22.72	22.70	
20	PI/2 BPSK	50	0	22.53	22.59	22.46	24.0
20	PI/2 BPSK	50	28	23.00	23.08	22.91	24.5
20	PI/2 BPSK	50	56	22.58	22.58	22.59	24.0
20	PI/2 BPSK	100	0	22.41	22.60	22.50	
20	QPSK	1	1	22.97	23.04	23.03	24.5
20	QPSK	1	53	22.95	22.94	23.06	
20	QPSK	1	104	23.07	23.01	23.05	
20	QPSK	50	0	21.99	22.14	22.09	23.5
20	QPSK	50	28	22.90	23.05	22.99	24.5
20	QPSK	50	56	22.14	22.16	22.11	23.5
20	QPSK	100	0	22.03	22.13	22.10	
20	16QAM	1	1	22.07	22.15	22.06	23.5
20	64QAM	1	1	20.56	20.67	20.55	22.0
20	256QAM	1	1	18.45	18.65	18.52	20.0
Channel				371500	376000	380500	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1880	1902.5	
15	PI/2 BPSK	1	1	22.53	22.64	22.56	24.5
Channel				371000	376000	381000	Tune-up limit (dBm)
Frequency (MHz)				1855	1880	1905	
10	PI/2 BPSK	1	1	22.56	22.65	22.58	24.5
Channel				370500	376000	381500	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1880	1907.5	
5	PI/2 BPSK	1	1	23.05	22.71	22.58	24.5

<FR1 n5_Ant 0>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				166800	167300	167800	
Frequency (MHz)				834	836.5	839	
20	PI/2 BPSK	1	1	23.17	23.29	23.12	
20	PI/2 BPSK	1	53	23.16	23.28	23.11	24.5
20	PI/2 BPSK	1	104	23.14	23.19	23.10	
20	PI/2 BPSK	50	0	22.86	22.94	22.88	24.0
20	PI/2 BPSK	50	28	23.17	23.26	23.22	24.5
20	PI/2 BPSK	50	56	22.98	23.01	22.93	24.0
20	PI/2 BPSK	100	0	22.93	22.97	22.96	
20	QPSK	1	1	23.01	23.06	22.99	24.5
20	QPSK	1	53	23.22	23.28	23.25	
20	QPSK	1	104	23.24	23.25	23.22	
20	QPSK	50	0	22.40	22.42	22.38	23.5
20	QPSK	50	28	23.15	23.22	23.20	24.5
20	QPSK	50	56	22.39	22.47	22.37	23.5
20	QPSK	100	0	22.40	22.44	22.41	
20	16QAM	1	1	22.06	22.08	22.07	23.5
20	64QAM	1	1	20.64	20.74	20.73	22.0
20	256QAM	1	1	18.09	18.14	18.13	20.0
Channel				166300	167300	168300	Tune-up limit (dBm)
Frequency (MHz)				831.5	836.5	841.5	
15	PI/2 BPSK	1	1	22.95	23.28	22.82	24.5
Channel				165800	167300	168800	Tune-up limit (dBm)
Frequency (MHz)				829	836.5	844	
10	PI/2 BPSK	1	1	22.95	23.27	22.85	24.5
Channel				165300	167300	169300	Tune-up limit (dBm)
Frequency (MHz)				826.5	836.5	846.5	
5	PI/2 BPSK	1	1	22.89	23.20	22.91	24.5

<FR1 n25_Ant 0>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				374000	376500	379000	
Frequency (MHz)				1870	1882.5	1895	
40	PI/2 BPSK	1	1	22.68	22.71	22.56	24.5
40	PI/2 BPSK	1	108	22.53	22.57	22.53	
40	PI/2 BPSK	1	214	22.54	22.58	22.54	
40	PI/2 BPSK	108	0	22.08	22.13	22.08	24.0
40	PI/2 BPSK	108	54	22.54	22.56	22.51	24.5
40	PI/2 BPSK	108	108	22.13	22.16	22.12	24.0
40	PI/2 BPSK	216	0	22.06	22.11	22.07	
40	QPSK	1	1	22.65	22.70	22.66	24.5
40	QPSK	1	108	22.63	22.64	22.59	
40	QPSK	1	214	22.62	22.65	22.61	
40	QPSK	108	0	22.15	22.16	22.15	23.5
40	QPSK	108	54	22.59	22.62	22.60	24.5
40	QPSK	108	108	22.17	22.19	22.17	23.5
40	QPSK	216	0	22.17	22.22	22.18	
40	16QAM	1	1	21.72	21.73	21.69	23.5
40	64QAM	1	1	20.32	20.36	20.35	22.0
40	256QAM	1	1	18.08	18.13	18.11	20.0
Channel				373500	376500	379500	Tune-up limit (dBm)
Frequency (MHz)				1867.5	1882.5	1897.5	
35	PI/2 BPSK	1	1	22.59	22.68	22.53	24.5
Channel				373000	376500	380000	Tune-up limit (dBm)
Frequency (MHz)				1865	1882.5	1900	
30	PI/2 BPSK	1	1	22.58	22.66	22.50	24.5
Channel				372500	376500	380500	Tune-up limit (dBm)
Frequency (MHz)				1862.5	1882.5	1902.5	
25	PI/2 BPSK	1	1	22.61	22.63	22.55	24.5
Channel				372000	376500	381000	Tune-up limit (dBm)
Frequency (MHz)				1860	1882.5	1905	
20	PI/2 BPSK	1	1	22.62	22.62	22.52	24.5
Channel				371500	376500	381500	Tune-up limit (dBm)
Frequency (MHz)				1857.5	1882.5	1907.5	
15	PI/2 BPSK	1	1	22.58	22.69	22.56	24.5
Channel				371000	376500	382000	Tune-up limit (dBm)
Frequency (MHz)				1855	1882.5	1910	
10	PI/2 BPSK	1	1	22.59	22.66	22.57	24.5
Channel				370500	376500	382500	Tune-up limit (dBm)
Frequency (MHz)				1852.5	1882.5	1912.5	
5	PI/2 BPSK	1	1	22.63	22.66	22.51	24.5

<FR1 n66_Ant 0>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				346000	349000	352000	
Frequency (MHz)				1730	1745	1760	
40	PI/2 BPSK	1	1	23.09	23.02	23.21	24.5
40	PI/2 BPSK	1	108	23.06	23.12	23.00	
40	PI/2 BPSK	1	214	23.37	23.52	23.43	
40	PI/2 BPSK	108	0	22.47	22.57	22.55	24.0
40	PI/2 BPSK	108	54	23.11	23.24	23.07	24.5
40	PI/2 BPSK	108	108	22.73	22.92	22.79	24.0
40	PI/2 BPSK	216	0	22.54	22.70	22.59	
40	QPSK	1	1	22.55	22.70	22.52	24.5
40	QPSK	1	108	22.90	23.08	23.06	
40	QPSK	1	214	23.36	23.51	23.31	
40	QPSK	108	0	21.95	22.12	22.01	23.5
40	QPSK	108	54	23.18	23.20	23.03	24.5
40	QPSK	108	108	22.39	22.45	22.43	23.5
40	QPSK	216	0	22.22	22.26	22.19	
40	16QAM	1	1	21.56	21.57	21.52	23.5
40	64QAM	1	1	20.13	20.30	20.21	22.0
40	256QAM	1	1	18.07	18.13	18.14	20.0
Channel				345500	349000	352500	Tune-up limit (dBm)
Frequency (MHz)				1727.5	1745	1762.5	
35	PI/2 BPSK	1	1	22.65	22.55	22.79	24.5
Channel				345000	349000	353000	Tune-up limit (dBm)
Frequency (MHz)				1725	1745	1765	
30	PI/2 BPSK	1	1	22.66	22.61	22.75	24.5
Channel				344500	349000	353500	Tune-up limit (dBm)
Frequency (MHz)				1722.5	1745	1767.5	
25	PI/2 BPSK	1	1	22.68	22.58	22.76	24.5
Channel				344000	349000	354000	Tune-up limit (dBm)
Frequency (MHz)				1720	1745	1770	
20	PI/2 BPSK	1	1	22.59	22.54	22.75	24.5
Channel				343500	349000	354500	Tune-up limit (dBm)
Frequency (MHz)				1717.5	1745	1772.5	
15	PI/2 BPSK	1	1	22.68	22.57	22.72	24.5
Channel				343000	349000	355000	Tune-up limit (dBm)
Frequency (MHz)				1715	1745	1775	
10	PI/2 BPSK	1	1	22.67	22.59	22.78	24.5
Channel				342500	349000	355500	Tune-up limit (dBm)
Frequency (MHz)				1712.5	1745	1777.5	
5	PI/2 BPSK	1	1	22.67	22.60	22.72	24.5

<FR1 n71_Ant 0>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				135600	136100	136600	
Frequency (MHz)				678	680.5	683	
30	PI/2 BPSK	1	1	23.75	23.87	23.82	24.5
30	PI/2 BPSK	1	80	23.74	23.76	23.72	
30	PI/2 BPSK	1	158	23.72	23.77	23.76	
30	PI/2 BPSK	80	0	23.26	23.28	23.23	24.0
30	PI/2 BPSK	80	40	23.71	23.76	23.73	24.5
30	PI/2 BPSK	80	80	23.41	23.45	23.43	24.0
30	PI/2 BPSK	160	0	23.45	23.47	23.44	
30	QPSK	1	1	23.66	23.71	23.69	24.5
30	QPSK	1	80	23.64	23.68	23.66	
30	QPSK	1	158	23.78	23.81	23.78	
30	QPSK	80	0	22.81	22.82	22.78	23.5
30	QPSK	80	40	23.79	23.81	23.76	24.5
30	QPSK	80	80	22.92	22.97	22.93	23.5
30	QPSK	160	0	22.88	22.90	22.87	
30	16QAM	1	1	22.57	22.61	22.58	23.5
30	64QAM	1	1	21.41	21.42	21.41	22.0
30	256QAM	1	1	18.71	18.75	18.71	20.0
Channel				135100	136100	137100	Tune-up limit (dBm)
Frequency (MHz)				675.5	680.5	685.5	
25	PI/2 BPSK	1	1	23.67	23.82	23.73	20.0
Channel				134600	136100	137600	Tune-up limit (dBm)
Frequency (MHz)				673	680.5	688	
20	PI/2 BPSK	1	1	23.74	23.82	23.74	24.5
Channel				134100	136100	138100	Tune-up limit (dBm)
Frequency (MHz)				670.5	680.5	690.5	
15	PI/2 BPSK	1	1	23.67	23.77	23.81	24.5
Channel				133600	136100	138600	Tune-up limit (dBm)
Frequency (MHz)				668	680.5	693	
10	PI/2 BPSK	1	1	23.71	23.82	23.75	24.5
Channel				133100	136100	139100	Tune-up limit (dBm)
Frequency (MHz)				665.5	680.5	695.5	
5	PI/2 BPSK	1	1	23.69	23.77	23.78	24.5

<FR1 n38_Ant 2>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				518000	519000	520000	23.0
Frequency (MHz)				2590	2595	2600	
40	PI/2 BPSK	1	1	22.16	22.25	22.09	
40	PI/2 BPSK	1	53	22.06	22.13	22.08	23.0
40	PI/2 BPSK	1	104	22.10	22.17	22.08	
40	PI/2 BPSK	50	0	21.65	21.85	21.65	
40	PI/2 BPSK	50	28	22.11	22.24	22.18	23.0
40	PI/2 BPSK	50	56	21.91	22.03	21.99	
40	PI/2 BPSK	100	0	21.68	21.69	21.66	
40	QPSK	1	1	22.03	22.05	22.02	23.0
40	QPSK	1	53	22.01	22.05	22.00	
40	QPSK	1	104	22.10	22.24	22.18	
40	QPSK	50	0	21.66	21.74	21.58	23.0
40	QPSK	50	28	22.13	22.22	22.07	
40	QPSK	50	56	21.56	21.65	21.62	
40	QPSK	100	0	21.72	21.75	21.70	23.0
40	16QAM	1	1	21.58	21.67	21.49	
40	64QAM	1	1	21.01	21.21	21.13	
40	256QAM	1	1	19.31	19.45	19.39	20.5
Channel				517000	519000	521000	23.0
Frequency (MHz)				2585	2595	2605	
30	PI/2 BPSK	1	1	22.12	22.16	22.06	
Channel				516500	519000	521500	23.0
Frequency (MHz)				2582.5	2595	2607.5	
25	PI/2 BPSK	1	1	22.09	22.20	22.01	
Channel				516000	519000	522000	23.0
Frequency (MHz)				2580	2595	2610	
20	PI/2 BPSK	1	1	22.07	22.22	22.06	
Channel				515500	519000	522500	23.0
Frequency (MHz)				2577.5	2595	2612.5	
15	PI/2 BPSK	1	1	22.08	22.16	22.06	
Channel				515000	519000	523000	23.0
Frequency (MHz)				2575	2595	2615	
10	PI/2 BPSK	1	1	22.07	22.23	22.02	
Channel				514500	519000	523500	23.0
Frequency (MHz)				2572.5	2595	2617.5	
5	PI/2 BPSK	1	1	22.10	22.21	22.03	



<FR1 n41_Ant 0+2(0)>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	20.0
Frequency (MHz)				2546.01	2592.99	2640	
100	QPSK	1	1	19.69	19.98	19.75	
100	QPSK	1	137	19.46	19.56	19.54	20.0
100	QPSK	1	271	19.48	19.49	19.45	
100	QPSK	135	0	19.82	19.84	19.77	
100	QPSK	135	69	19.55	19.62	19.61	20.0
100	QPSK	135	138	19.54	19.61	19.57	20.0
100	QPSK	270	0	19.57	19.62	19.60	
100	16QAM	1	1	19.56	19.61	19.58	
100	64QAM	1	1	19.58	19.60	19.51	20.0
100	256QAM	1	1	18.38	18.45	18.44	19.5
Channel				508200	518598	528996	20.0
Frequency (MHz)				2541	2592.99	2644.98	
90	QPSK	1	1	19.60	19.90	19.76	
Channel				507204	518598	529998	20.0
Frequency (MHz)				2536.02	2592.99	2649.99	
80	QPSK	1	1	19.63	19.87	19.79	
Channel				506202	518598	531000	20.0
Frequency (MHz)				2531.01	2592.99	2655	
70	QPSK	1	1	19.60	19.93	19.82	
Channel				505200	518598	531996	20.0
Frequency (MHz)				2526	2592.99	2659.98	
60	QPSK	1	1	19.62	19.94	19.81	
Channel				504204	518598	532998	20.0
Frequency (MHz)				2521.02	2592.99	2664.99	
50	QPSK	1	1	19.65	19.94	19.83	
Channel				503202	518598	534000	20.0
Frequency (MHz)				2516.01	2592.99	2670	
40	QPSK	1	1	19.59	19.90	19.85	
Channel				502200	518598	534996	20.0
Frequency (MHz)				2511	2592.99	2674.98	
30	QPSK	1	1	19.62	19.87	19.84	
Channel				501702	518598	535500	20.0
Frequency (MHz)				2508.51	2592.99	2677.5	
25	QPSK	1	1	19.65	19.92	19.80	
Channel				501204	518598	535998	20.0
Frequency (MHz)				2506.02	2592.99	2679.99	
20	QPSK	1	1	19.65	19.88	19.79	
Channel				500700	518598	536496	20.0
Frequency (MHz)				2503.5	2592.99	2682.48	
15	QPSK	1	1	19.60	19.86	19.76	
Channel				500202	518598	537000	20.0
Frequency (MHz)				2501.01	2592.99	2685	
10	QPSK	1	1	19.68	19.66	19.75	



<FR1 n41_HPUE_Ant 0+2(0)>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	23.0
Frequency (MHz)				2546.01	2592.99	2640	
100	QPSK	1	1	21.52	21.65	21.50	
100	QPSK	1	137	21.32	21.35	21.33	22.0
100	QPSK	1	271	21.32	21.36	21.26	
100	QPSK	135	0	20.47	20.55	20.45	
100	QPSK	135	69	21.28	21.35	21.28	22.0
100	QPSK	135	138	20.33	20.43	20.37	
100	QPSK	270	0	20.52	20.56	20.50	
100	16QAM	1	1	21.21	21.22	21.21	22.0
100	64QAM	1	1	20.44	20.51	20.50	21.0
100	256QAM	1	1	19.28	19.29	19.25	20.0
Channel				508200	518598	528996	23.0
Frequency (MHz)				2541	2592.99	2644.98	
90	QPSK	1	1	21.50	21.59	21.47	
Channel				507204	518598	529998	23.0
Frequency (MHz)				2536.02	2592.99	2649.99	
80	QPSK	1	1	21.51	21.59	21.45	
Channel				506202	518598	531000	23.0
Frequency (MHz)				2531.01	2592.99	2655	
70	QPSK	1	1	21.50	21.59	21.49	
Channel				505200	518598	531996	23.0
Frequency (MHz)				2526	2592.99	2659.98	
60	QPSK	1	1	21.46	21.60	21.44	
Channel				504204	518598	532998	23.0
Frequency (MHz)				2521.02	2592.99	2664.99	
50	QPSK	1	1	21.50	21.60	21.45	
Channel				503202	518598	534000	23.0
Frequency (MHz)				2516.01	2592.99	2670	
40	QPSK	1	1	21.46	21.59	21.44	
Channel				502200	518598	534996	23.0
Frequency (MHz)				2511	2592.99	2674.98	
30	QPSK	1	1	21.46	21.64	21.44	
Channel				501702	518598	535500	23.0
Frequency (MHz)				2508.51	2592.99	2677.5	
25	QPSK	1	1	21.47	21.59	21.47	
Channel				501204	518598	535998	23.0
Frequency (MHz)				2506.02	2592.99	2679.99	
20	QPSK	1	1	21.50	21.62	21.47	
Channel				500700	518598	536496	23.0
Frequency (MHz)				2503.5	2592.99	2682.48	
15	QPSK	1	1	21.46	21.61	21.49	
Channel				500202	518598	537000	23.0
Frequency (MHz)				2501.01	2592.99	2685	
10	QPSK	1	1	21.49	21.62	21.45	



<FR1 n41_Ant 2>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	
Frequency (MHz)				2546.01	2592.99	2640	
100	PI/2 BPSK	1	1	22.09	22.39	22.05	
100	PI/2 BPSK	1	137	21.89	21.92	21.78	23.0
100	PI/2 BPSK	1	271	21.66	21.82	21.74	
100	PI/2 BPSK	135	0	21.67	21.83	21.70	22.5
100	PI/2 BPSK	135	69	21.90	22.00	21.95	23.0
100	PI/2 BPSK	135	138	21.89	21.95	21.87	22.5
100	PI/2 BPSK	270	0	21.83	21.93	21.76	
100	QPSK	1	1	21.81	21.97	21.89	23.0
100	QPSK	1	137	21.73	21.91	21.88	
100	QPSK	1	271	21.73	21.80	21.77	
100	QPSK	135	0	21.84	21.87	21.72	23.0
100	QPSK	135	69	21.71	21.88	21.84	23.0
100	QPSK	135	138	21.80	21.84	21.75	23.0
100	QPSK	270	0	21.75	21.83	21.63	
100	16QAM	1	1	21.84	21.87	21.68	23.0
100	64QAM	1	1	21.68	21.85	21.83	23.0
100	256QAM	1	1	20.26	20.44	20.35	21.5
Channel				508200	518598	528996	Tune-up limit (dBm)
Frequency (MHz)				2541	2592.99	2644.98	
90	PI/2 BPSK	1	1	21.76	21.93	21.66	23.0
Channel				507204	518598	529998	Tune-up limit (dBm)
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	21.79	21.92	21.66	23.0
Channel				506202	518598	531000	Tune-up limit (dBm)
Frequency (MHz)				2531.01	2592.99	2655	
70	PI/2 BPSK	1	1	21.79	21.69	21.83	23.0
Frequency (MHz)				2506.02	2592.99	2679.99	Tune-up limit (dBm)
20	PI/2 BPSK	1	1	21.76	21.92	21.74	23.0
Channel				500700	518598	536496	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2592.99	2682.48	
15	PI/2 BPSK	1	1	21.88	21.82	21.75	23.0
Channel				500202	518598	537000	Tune-up limit (dBm)
Frequency (MHz)				2501.01	2592.99	2685	
10	PI/2 BPSK	1	1	21.73	21.97	21.72	23.0



<FR1 n41_Ant 0+2(2)>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	20.0
Frequency (MHz)				2546.01	2592.99	2640	
100	QPSK	1	1	19.67	19.94	19.86	
100	QPSK	1	137	19.67	19.75	19.74	20.0
100	QPSK	1	271	19.89	19.92	19.90	
100	QPSK	135	0	19.72	19.82	19.77	
100	QPSK	135	69	19.77	19.81	19.78	20.0
100	QPSK	135	138	19.84	19.93	19.88	20.0
100	QPSK	270	0	19.78	19.83	19.82	
100	16QAM	1	1	19.59	19.63	19.56	
100	64QAM	1	1	19.78	19.81	19.74	20.0
100	256QAM	1	1	18.96	19.05	18.99	19.5
Channel				508200	518598	528996	Tune-up limit (dBm)
Frequency (MHz)				2541	2592.99	2644.98	
90	QPSK	1	1	19.54	19.83	19.73	
Channel				507204	518598	529998	Tune-up limit (dBm)
Frequency (MHz)				2536.02	2592.99	2649.99	
80	QPSK	1	1	19.54	19.81	19.71	
Channel				506202	518598	531000	Tune-up limit (dBm)
Frequency (MHz)				2531.01	2592.99	2655	
70	QPSK	1	1	19.54	19.86	19.73	
Channel				505200	518598	531996	Tune-up limit (dBm)
Frequency (MHz)				2526	2592.99	2659.98	
60	QPSK	1	1	19.54	19.85	19.76	
Channel				504204	518598	532998	Tune-up limit (dBm)
Frequency (MHz)				2521.02	2592.99	2664.99	
50	QPSK	1	1	19.56	19.84	19.74	
Channel				503202	518598	534000	Tune-up limit (dBm)
Frequency (MHz)				2516.01	2592.99	2670	
40	QPSK	1	1	19.52	19.85	19.76	
Channel				502200	518598	534996	Tune-up limit (dBm)
Frequency (MHz)				2511	2592.99	2674.98	
30	QPSK	1	1	19.55	19.85	19.76	
Channel				501702	518598	535500	Tune-up limit (dBm)
Frequency (MHz)				2508.51	2592.99	2677.5	
25	QPSK	1	1	19.54	19.84	19.72	
Channel				501204	518598	535998	Tune-up limit (dBm)
Frequency (MHz)				2506.02	2592.99	2679.99	
20	QPSK	1	1	19.57	19.82	19.71	
Channel				500700	518598	536496	Tune-up limit (dBm)
Frequency (MHz)				2503.5	2592.99	2682.48	
15	QPSK	1	1	19.56	19.81	19.71	
Channel				500202	518598	537000	Tune-up limit (dBm)
Frequency (MHz)				2501.01	2592.99	2685	
10	QPSK	1	1	19.53	19.86	19.75	



<FR1 n41_HPUE_Ant 0+2(2)>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	23.0
Frequency (MHz)				2546.01	2592.99	2640	
100	QPSK	1	1	21.35	21.57	21.29	
100	QPSK	1	137	21.12	21.27	21.13	22.0
100	QPSK	1	271	21.41	21.52	21.39	
100	QPSK	135	0	20.74	20.89	20.74	
100	QPSK	135	69	21.43	21.56	21.44	22.0
100	QPSK	135	138	20.70	20.82	20.69	
100	QPSK	270	0	20.64	20.75	20.60	
100	16QAM	1	1	21.02	21.15	21.04	22.0
100	64QAM	1	1	20.36	20.50	20.35	21.0
100	256QAM	1	1	19.09	19.22	19.08	20.0
Channel				508200	518598	528996	23.0
Frequency (MHz)				2541	2592.99	2644.98	
90	QPSK	1	1	21.28	21.51	21.26	
Channel				507204	518598	529998	23.0
Frequency (MHz)				2536.02	2592.99	2649.99	
80	QPSK	1	1	21.27	21.49	21.21	
Channel				506202	518598	531000	23.0
Frequency (MHz)				2531.01	2592.99	2655	
70	QPSK	1	1	21.28	21.50	21.27	
Channel				505200	518598	531996	23.0
Frequency (MHz)				2526	2592.99	2659.98	
60	QPSK	1	1	21.30	21.53	21.26	
Channel				504204	518598	532998	23.0
Frequency (MHz)				2521.02	2592.99	2664.99	
50	QPSK	1	1	21.28	21.52	21.27	
Channel				503202	518598	534000	23.0
Frequency (MHz)				2516.01	2592.99	2670	
40	QPSK	1	1	21.31	21.53	21.25	
Channel				502200	518598	534996	23.0
Frequency (MHz)				2511	2592.99	2674.98	
30	QPSK	1	1	21.31	21.54	21.25	
Channel				501702	518598	535500	23.0
Frequency (MHz)				2508.51	2592.99	2677.5	
25	QPSK	1	1	21.28	21.49	21.25	
Channel				501204	518598	535998	23.0
Frequency (MHz)				2506.02	2592.99	2679.99	
20	QPSK	1	1	21.31	21.49	21.20	
Channel				500700	518598	536496	23.0
Frequency (MHz)				2503.5	2592.99	2682.48	
15	QPSK	1	1	21.32	21.51	21.25	
Channel				500202	518598	537000	23.0
Frequency (MHz)				2501.01	2592.99	2685	
10	QPSK	1	1	21.34	21.48	21.26	



<FR1 n41_HPUE_Ant 2>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				509202	518598	528000	25.0
Frequency (MHz)				2546.01	2592.99	2640	
100	PI/2 BPSK	1	1	24.82	24.85	24.55	
100	PI/2 BPSK	1	137	24.40	24.59	24.46	24.5
100	PI/2 BPSK	1	271	24.03	24.39	24.39	
100	PI/2 BPSK	135	0	24.34	24.45	24.31	
100	PI/2 BPSK	135	69	24.45	24.69	24.61	24.5
100	PI/2 BPSK	135	138	24.21	24.25	24.25	
100	PI/2 BPSK	270	0	24.20	24.36	24.30	
100	QPSK	1	1	24.67	24.83	24.72	25.0
100	QPSK	1	137	24.27	24.59	24.57	
100	QPSK	1	271	24.00	24.38	24.31	
100	QPSK	135	0	24.01	24.13	23.95	24.5
100	QPSK	135	69	24.43	24.65	24.55	
100	QPSK	135	138	23.79	23.94	23.91	
100	QPSK	270	0	23.86	24.05	24.04	23.5
100	16QAM	1	1	24.11	24.27	24.24	
100	64QAM	1	1	23.21	23.40	23.24	
100	256QAM	1	1	21.10	21.25	21.21	21.5
Channel				508200	518598	528996	25.0
Frequency (MHz)				2541	2592.99	2644.98	
90	PI/2 BPSK	1	1	24.68	24.76	24.46	
Channel				507204	518598	529998	25.0
Frequency (MHz)				2536.02	2592.99	2649.99	
80	PI/2 BPSK	1	1	24.74	24.75	24.45	
Channel				506202	518598	531000	25.0
Frequency (MHz)				2531.01	2592.99	2655	
70	PI/2 BPSK	1	1	24.70	24.71	24.40	
Frequency (MHz)				2506.02	2592.99	2679.99	25.0
20	PI/2 BPSK	1	1	24.78	24.77	24.37	
Channel				500700	518598	536496	25.0
Frequency (MHz)				2503.5	2592.99	2682.48	
15	PI/2 BPSK	1	1	24.63	24.69	24.40	
Channel				500202	518598	537000	25.0
Frequency (MHz)				2501.01	2592.99	2685	
10	PI/2 BPSK	1	1	24.73	24.84	24.43	

<FR1 n48_Ant 1+3(1)>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				638000	641666	645332	14.5
Frequency (MHz)				3570	3624.99	3679.98	
40	QPSK	1	1	13.16	13.24	13.19	
40	QPSK	1	53	13.19	13.21	13.12	14.5
40	QPSK	1	104	13.02	13.19	13.03	
40	QPSK	50	0	13.03	13.18	13.01	
40	QPSK	50	28	13.13	13.13	12.99	14.5
40	QPSK	50	56	12.93	12.96	12.78	14.5
40	QPSK	100	0	12.87	13.05	13.02	
40	16QAM	1	1	12.92	12.95	12.89	
40	64QAM	1	1	12.81	12.98	12.95	14.5
40	256QAM	1	1	12.81	12.81	12.74	14.5
Channel				637668	641666	645666	14.5
Frequency (MHz)				3565.02	3624.99	3684.99	
30	PI/2 BPSK	1	1	13.08	13.15	13.09	
Channel				637334	641666	646000	14.5
Frequency (MHz)				3560.01	3624.99	3690	
20	PI/2 BPSK	1	1	13.06	13.20	13.09	
Channel				637168	641666	646166	14.5
Frequency (MHz)				3557.52	3624.99	3692.49	
15	PI/2 BPSK	1	1	13.15	13.18	13.14	
Channel				637000	641666	646332	14.5
Frequency (MHz)				3555	3624.99	3694.98	
10	PI/2 BPSK	1	1	13.12	13.20	13.17	
Channel				636834	641666	646500	14.5
Frequency (MHz)				3552.51	3624.99	3697.5	
5	PI/2 BPSK	1	1	13.08	13.21	13.13	



<FR1 n48_Ant 1+3(3)>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				638000	641666	645332	14.5
Frequency (MHz)				3570	3624.99	3679.98	
40	QPSK	1	1	14.16	14.24	14.19	
40	QPSK	1	53	14.10	14.21	14.06	14.5
40	QPSK	1	104	14.02	14.19	14.15	
40	QPSK	50	0	13.98	14.18	14.09	
40	QPSK	50	28	14.09	14.13	13.95	14.5
40	QPSK	50	56	13.82	13.96	13.94	14.5
40	QPSK	100	0	14.00	14.05	14.04	
40	16QAM	1	1	13.77	13.95	13.90	
40	64QAM	1	1	13.84	13.98	13.81	14.5
40	256QAM	1	1	13.61	13.81	13.76	14.5
Channel				637668	641666	645666	14.5
Frequency (MHz)				3565.02	3624.99	3684.99	
30	PI/2 BPSK	1	1	14.13	14.15	14.09	
Channel				637334	641666	646000	14.5
Frequency (MHz)				3560.01	3624.99	3690	
20	PI/2 BPSK	1	1	14.09	14.15	14.15	
Channel				637168	641666	646166	14.5
Frequency (MHz)				3557.52	3624.99	3692.49	
15	PI/2 BPSK	1	1	14.09	14.17	14.16	
Channel				637000	641666	646332	14.5
Frequency (MHz)				3555	3624.99	3694.98	
10	PI/2 BPSK	1	1	14.10	14.19	14.11	
Channel				636834	641666	646500	14.5
Frequency (MHz)				3552.51	3624.99	3697.5	
5	PI/2 BPSK	1	1	14.07	14.14	14.15	

<FR1 n48_Ant 3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				638000	641666	645332	14.5
Frequency (MHz)				3570	3624.99	3679.98	
40	PI/2 BPSK	1	1	13.58	13.65	13.62	
40	PI/2 BPSK	1	53	13.20	13.40	13.26	14.5
40	PI/2 BPSK	1	104	13.26	13.41	13.38	
40	PI/2 BPSK	50	0	13.26	13.41	13.30	
40	PI/2 BPSK	50	28	13.47	13.50	13.49	14.5
40	PI/2 BPSK	50	56	13.42	13.45	13.42	14.5
40	PI/2 BPSK	100	0	13.43	13.45	13.30	
40	QPSK	1	1	13.24	13.41	13.33	
40	QPSK	1	53	13.27	13.46	13.26	14.5
40	QPSK	1	104	13.44	13.50	13.46	
40	QPSK	50	0	13.48	13.54	13.37	
40	QPSK	50	28	13.40	13.50	13.33	14.5
40	QPSK	50	56	13.43	13.48	13.42	14.5
40	QPSK	100	0	13.45	13.45	13.37	
40	16QAM	1	1	13.20	13.40	13.29	
40	64QAM	1	1	13.24	13.41	13.38	14.5
40	256QAM	1	1	13.21	13.32	13.28	14.5
Channel				637668	641666	645666	Tune-up limit (dBm)
Frequency (MHz)				3565.02	3624.99	3684.99	
30	PI/2 BPSK	1	1	13.53	13.55	13.53	14.5
Channel				637334	641666	646000	Tune-up limit (dBm)
Frequency (MHz)				3560.01	3624.99	3690	
20	PI/2 BPSK	1	1	13.50	13.57	13.55	14.5
Channel				637168	641666	646166	Tune-up limit (dBm)
Frequency (MHz)				3557.52	3624.99	3692.49	
15	PI/2 BPSK	1	1	13.46	13.61	13.51	14.5
Channel				637000	641666	646332	Tune-up limit (dBm)
Frequency (MHz)				3555	3624.99	3694.98	
10	PI/2 BPSK	1	1	13.46	13.52	13.47	14.5
Channel				636834	641666	646500	Tune-up limit (dBm)
Frequency (MHz)				3552.51	3624.99	3697.5	
5	PI/2 BPSK	1	1	13.44	13.59	13.48	14.5



<FR1 n77_Ant 1>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	15.5
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	14.42	14.46	14.30	
100	PI/2 BPSK	1	137	14.02	14.08	14.02	15.5
100	PI/2 BPSK	1	271	13.97	13.98	13.91	
100	PI/2 BPSK	135	0	13.86	14.02	13.82	
100	PI/2 BPSK	135	69	14.12	14.33	14.16	15.5
100	PI/2 BPSK	135	138	13.72	13.88	13.76	15.5
100	PI/2 BPSK	270	0	13.87	13.92	13.84	
100	QPSK	1	1	13.98	14.05	13.89	
100	QPSK	1	137	13.75	13.90	13.72	15.5
100	QPSK	1	271	13.68	13.84	13.69	
100	QPSK	135	0	13.72	13.74	13.62	
100	QPSK	135	69	13.50	13.70	13.63	15.5
100	QPSK	135	138	13.72	13.88	13.88	15.5
100	QPSK	270	0	13.69	13.80	13.78	
100	16QAM	1	1	13.98	13.98	13.87	
100	64QAM	1	1	14.03	14.10	13.94	15.5
100	256QAM	1	1	13.80	13.92	13.84	15.5
Channel				649668	656000	662332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3840	3934.98	
90	PI/2 BPSK	1	1	14.40	14.41	14.22	15.5
Channel				649334	656000	662666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	14.41	14.44	14.27	15.5
Channel				649000	656000	663000	Tune-up limit (dBm)
Frequency (MHz)				3735	3840	3945	
70	PI/2 BPSK	1	1	14.32	14.38	14.23	15.5
Channel				648668	656000	663332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	14.32	14.42	14.30	15.5
Channel				648334	656000	663666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	14.39	14.42	14.21	15.5
Channel				648000	656000	664000	Tune-up limit (dBm)
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	14.40	14.37	14.24	15.5
Channel				647668	656000	664332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3840.00	3964.98	
30	PI/2 BPSK	1	1	14.34	14.44	14.29	15.5
Channel				647500	656000	664500	Tune-up limit (dBm)
Frequency (MHz)				3712.5	3840.00	3967.50	
25	PI/2 BPSK	1	1	14.37	14.38	14.24	15.5
Channel				647334	656000	664666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	14.40	14.43	14.22	15.5
Channel				647168	656000	664832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	14.34	14.36	14.25	15.5
Channel				647000	656000	665000	Tune-up limit (dBm)
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	14.39	14.43	14.23	15.5

<FR1 n77_Ant 3>

BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	15.5
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	14.44	14.46	14.19	
100	PI/2 BPSK	1	137	14.13	14.32	14.18	15.5
100	PI/2 BPSK	1	271	14.20	14.31	14.23	
100	PI/2 BPSK	135	0	14.17	14.29	14.26	
100	PI/2 BPSK	135	69	14.33	14.36	14.35	15.5
100	PI/2 BPSK	135	138	14.05	14.18	14.08	15.5
100	PI/2 BPSK	270	0	13.97	14.16	14.15	
100	QPSK	1	1	14.13	14.32	14.17	
100	QPSK	1	137	14.18	14.31	14.18	15.5
100	QPSK	1	271	14.09	14.21	14.13	
100	QPSK	135	0	14.12	14.28	14.09	
100	QPSK	135	69	14.24	14.26	14.12	15.5
100	QPSK	135	138	14.05	14.13	14.09	15.5
100	QPSK	270	0	14.05	14.18	13.99	
100	16QAM	1	1	14.23	14.27	14.18	
100	64QAM	1	1	14.19	14.32	14.16	15.5
100	256QAM	1	1	14.25	14.25	14.16	15.5
Channel				649668	656000	662332	15.5
Frequency (MHz)				3745.02	3840	3934.98	
90	PI/2 BPSK	1	1	14.30	14.33	14.08	
Channel				649334	656000	662666	15.5
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	14.37	14.29	14.07	
Channel				649000	656000	663000	15.5
Frequency (MHz)				3735	3840	3945	
70	PI/2 BPSK	1	1	14.37	14.28	14.14	
Channel				648668	656000	663332	15.5
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	14.34	14.34	14.12	
Channel				648334	656000	663666	15.5
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	14.27	14.28	14.13	
Channel				648000	656000	664000	15.5
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	14.31	14.33	14.12	
Channel				647668	656000	664332	15.5
Frequency (MHz)				3715.02	3840.00	3964.98	
30	PI/2 BPSK	1	1	14.28	14.31	14.01	
Channel				647500	656000	664500	15.5
Frequency (MHz)				3712.5	3840.00	3967.50	
25	PI/2 BPSK	1	1	14.30	14.42	14.12	
Channel				647334	656000	664666	15.5
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	14.33	14.40	14.09	
Channel				647168	656000	664832	15.5
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	14.35	14.32	14.15	
Channel				647000	656000	665000	15.5
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	14.26	14.37	14.05	



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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	18.5
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	18.38	18.41	18.02	
100	PI/2 BPSK	1	137	17.89	18.07	17.96	18.5
100	PI/2 BPSK	1	271	17.94	18.04	18.01	
100	PI/2 BPSK	135	0	17.97	17.99	17.96	
100	PI/2 BPSK	135	69	18.09	18.19	18.18	18.5
100	PI/2 BPSK	135	138	17.81	17.82	17.67	18.5
100	PI/2 BPSK	270	0	17.67	17.84	17.70	
100	QPSK	1	1	18.02	18.06	17.95	
100	QPSK	1	137	17.82	17.86	17.85	18.5
100	QPSK	1	271	17.78	17.78	17.68	
100	QPSK	135	0	17.77	17.83	17.63	
100	QPSK	135	69	17.80	17.80	17.64	18.5
100	QPSK	135	138	17.89	17.97	17.85	18.5
100	QPSK	270	0	17.64	17.79	17.72	
100	16QAM	1	1	17.80	17.93	17.86	
100	64QAM	1	1	17.96	18.02	17.83	18.5
100	256QAM	1	1	17.76	17.83	17.64	18.5
Channel				649668	656000	662332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3840	3934.98	
90	PI/2 BPSK	1	1	18.32	18.36	17.96	18.5
Channel				649334	656000	662666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	18.37	18.31	17.97	18.5
Channel				649000	656000	663000	Tune-up limit (dBm)
Frequency (MHz)				3735	3840	3945	
70	PI/2 BPSK	1	1	18.28	18.37	17.95	18.5
Channel				648668	656000	663332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	18.29	18.35	18.00	18.5
Channel				648334	656000	663666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	18.38	18.40	17.96	18.5
Channel				648000	656000	664000	Tune-up limit (dBm)
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	18.38	18.38	18.00	18.5
Channel				647668	656000	664332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3840.00	3964.98	
30	PI/2 BPSK	1	1	18.32	18.33	18.02	18.5
Channel				647500	656000	664500	Tune-up limit (dBm)
Frequency (MHz)				3712.5	3840.00	3967.50	
25	PI/2 BPSK	1	1	18.34	18.31	17.92	18.5
Channel				647334	656000	664666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	18.33	18.40	17.98	18.5
Channel				647168	656000	664832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	18.34	18.33	17.95	18.5
Channel				647000	656000	665000	Tune-up limit (dBm)
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	18.33	18.41	17.98	18.5



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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel				650000	656000	662000	
Frequency (MHz)				3750	3840	3930	
100	PI/2 BPSK	1	1	17.85	17.88	17.75	
100	PI/2 BPSK	1	137	17.31	17.37	17.29	18.5
100	PI/2 BPSK	1	271	17.10	17.22	17.14	
100	PI/2 BPSK	135	0	17.05	17.23	17.21	18.5
100	PI/2 BPSK	135	69	17.41	17.42	17.40	18.5
100	PI/2 BPSK	135	138	17.22	17.26	17.08	18.5
100	PI/2 BPSK	270	0	17.12	17.18	17.17	
100	QPSK	1	1	17.35	17.35	17.19	18.5
100	QPSK	1	137	17.33	17.33	17.13	
100	QPSK	1	271	17.04	17.21	17.08	
100	QPSK	135	0	17.23	17.35	17.16	18.5
100	QPSK	135	69	17.14	17.32	17.24	18.5
100	QPSK	135	138	17.25	17.25	17.22	18.5
100	QPSK	270	0	17.13	17.24	17.12	
100	16QAM	1	1	17.28	17.35	17.30	18.5
100	64QAM	1	1	17.40	17.43	17.26	18.5
100	256QAM	1	1	17.02	17.20	17.18	18.5
Channel				649668	656000	662332	Tune-up limit (dBm)
Frequency (MHz)				3745.02	3840	3934.98	
90	PI/2 BPSK	1	1	17.71	17.81	17.63	18.5
Channel				649334	656000	662666	Tune-up limit (dBm)
Frequency (MHz)				3740.01	3840	3939.99	
80	PI/2 BPSK	1	1	17.77	17.74	17.61	18.5
Channel				649000	656000	663000	Tune-up limit (dBm)
Frequency (MHz)				3735	3840	3945	
70	PI/2 BPSK	1	1	17.72	17.71	17.62	18.5
Channel				648668	656000	663332	Tune-up limit (dBm)
Frequency (MHz)				3730.02	3840	3949.98	
60	PI/2 BPSK	1	1	17.71	17.79	17.59	18.5
Channel				648334	656000	663666	Tune-up limit (dBm)
Frequency (MHz)				3725.01	3840	3954.99	
50	PI/2 BPSK	1	1	17.72	17.71	17.59	18.5
Channel				648000	656000	664000	Tune-up limit (dBm)
Frequency (MHz)				3720	3840	3960	
40	PI/2 BPSK	1	1	17.73	17.76	17.70	18.5
Channel				647668	656000	664332	Tune-up limit (dBm)
Frequency (MHz)				3715.02	3840.00	3964.98	
30	PI/2 BPSK	1	1	17.68	17.82	17.70	18.5
Channel				647500	656000	664500	Tune-up limit (dBm)
Frequency (MHz)				3712.5	3840.00	3967.50	
25	PI/2 BPSK	1	1	17.78	17.70	17.62	18.5
Channel				647334	656000	664666	Tune-up limit (dBm)
Frequency (MHz)				3710.01	3840	3969.99	
20	PI/2 BPSK	1	1	17.79	17.73	17.67	18.5
Channel				647168	656000	664832	Tune-up limit (dBm)
Frequency (MHz)				3707.52	3840	3972.48	
15	PI/2 BPSK	1	1	17.76	17.79	17.65	18.5
Channel				647000	656000	665000	Tune-up limit (dBm)
Frequency (MHz)				3705	3840	3975	
10	PI/2 BPSK	1	1	17.80	17.73	17.59	18.5



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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		15.5
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		14.64		
100	PI/2 BPSK	1	137		14.55		15.5
100	PI/2 BPSK	1	271		14.38		
100	PI/2 BPSK	135	0		14.39		
100	PI/2 BPSK	135	69		14.51		15.5
100	PI/2 BPSK	135	138		14.20		15.5
100	PI/2 BPSK	270	0		14.26		
100	QPSK	1	1		14.45		
100	QPSK	1	137		14.26		15.5
100	QPSK	1	271		14.34		
100	QPSK	135	0		14.06		
100	QPSK	135	69		14.14		15.5
100	QPSK	135	138		14.33		15.5
100	QPSK	270	0		14.21		
100	16QAM	1	1		14.40		
100	64QAM	1	1		14.55		15.5
100	256QAM	1	1		14.22		15.5
Channel				633000	633332	633666	15.5
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	14.43	14.62	14.53	
Channel				632668	633332	634000	15.5
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	14.47	14.58	14.46	
Channel				632334	633332	634332	15.5
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	14.42	14.56	14.55	
Channel				632000	633332	634666	15.5
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	14.41	14.59	14.55	
Channel				631668	633332	635000	15.5
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	14.43	14.57	14.51	
Channel				631334	633332	635332	15.5
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	14.48	14.62	14.54	
Channel				631000	633332	635666	15.5
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	14.43	14.61	14.49	
Channel				630834	633332	635832	15.5
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	14.45	14.60	14.50	
Channel				630668	633332	636000	15.5
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	14.43	14.54	14.48	
Channel				630500	633332	636166	15.5
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	14.42	14.56	14.46	
Channel				630334	633332	636332	15.5
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	14.41	14.56	14.53	

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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		15.5
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		14.56		
100	PI/2 BPSK	1	137		14.42		15.5
100	PI/2 BPSK	1	271		14.46		
100	PI/2 BPSK	135	0		14.48		
100	PI/2 BPSK	135	69		14.50		15.5
100	PI/2 BPSK	135	138		14.35		15.5
100	PI/2 BPSK	270	0		14.41		
100	QPSK	1	1		14.33		
100	QPSK	1	137		14.29		15.5
100	QPSK	1	271		14.31		
100	QPSK	135	0		14.36		
100	QPSK	135	69		14.28		15.5
100	QPSK	135	138		14.41		15.5
100	QPSK	270	0		14.36		
100	16QAM	1	1		14.33		
100	64QAM	1	1		14.36		15.5
100	256QAM	1	1		14.29		15.5
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	14.23	14.28	13.98	
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	14.20	14.15	13.90	
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	14.13	14.21	13.93	
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	14.30	14.33	14.08	
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	14.25	14.16	14.01	
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	14.18	14.15	14.01	
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	14.18	14.17	13.97	
Channel				630834	633332	635832	Tune-up limit (dBm)
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	14.11	14.13	13.88	
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	14.24	14.28	13.97	
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	14.21	14.24	13.88	
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	14.18	14.13	13.90	



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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		18.49		18.5
100	PI/2 BPSK	1	137		18.05		
100	PI/2 BPSK	1	271		17.88		
100	PI/2 BPSK	135	0		17.89		18.5
100	PI/2 BPSK	135	69		18.11		18.5
100	PI/2 BPSK	135	138		17.70		18.5
100	PI/2 BPSK	270	0		17.76		
100	QPSK	1	1		17.95		18.5
100	QPSK	1	137		17.76		
100	QPSK	1	271		17.84		
100	QPSK	135	0		17.56		18.5
100	QPSK	135	69		17.64		18.5
100	QPSK	135	138		17.83		18.5
100	QPSK	270	0		17.71		
100	16QAM	1	1		17.90		18.5
100	64QAM	1	1		18.05		18.5
100	256QAM	1	1		17.72		18.5
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	18.03	18.47	18.09	18.5
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	17.96	18.44	18.07	18.5
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	18.00	18.39	18.07	18.5
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	17.96	18.46	18.10	18.5
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	17.96	18.42	18.04	18.5
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	18.04	18.47	18.05	18.5
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	18.05	18.43	18.03	18.5
Channel				630834	633332	635832	Tune-up limit (dBm)
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	18.05	18.41	18.02	18.5
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	17.97	18.40	18.06	18.5
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	17.97	18.46	18.02	18.5
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	18.00	18.45	18.01	18.5



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BW [MHz]	Modulation	RB Size	RB Offset	Power Low Ch. / Freq.	Power Middle Ch. / Freq.	Power High Ch. / Freq.	Tune-up limit (dBm)
Channel					633332		18.5
Frequency (MHz)					3499.98		
100	PI/2 BPSK	1	1		17.56		
100	PI/2 BPSK	1	137		16.86		18.5
100	PI/2 BPSK	1	271		17.02		
100	PI/2 BPSK	135	0		16.87		
100	PI/2 BPSK	135	69		16.96		18.5
100	PI/2 BPSK	135	138		16.92		18.5
100	PI/2 BPSK	270	0		16.93		
100	QPSK	1	1		16.92		
100	QPSK	1	137		16.87		18.5
100	QPSK	1	271		16.91		
100	QPSK	135	0		17.04		
100	QPSK	135	69		17.01		18.5
100	QPSK	135	138		17.02		18.5
100	QPSK	270	0		16.96		
100	16QAM	1	1		16.90		
100	64QAM	1	1		17.04		18.5
100	256QAM	1	1		16.95		18.5
Channel				633000	633332	633666	Tune-up limit (dBm)
Frequency (MHz)				3495	3499.98	3504.99	
90	PI/2 BPSK	1	1	17.34	17.39	17.37	
Channel				632668	633332	634000	Tune-up limit (dBm)
Frequency (MHz)				3490.02	3499.98	3510	
80	PI/2 BPSK	1	1	17.43	17.46	17.40	
Channel				632334	633332	634332	Tune-up limit (dBm)
Frequency (MHz)				3485.01	3499.98	3514.98	
70	PI/2 BPSK	1	1	17.38	17.42	17.34	
Channel				632000	633332	634666	Tune-up limit (dBm)
Frequency (MHz)				3480	3499.98	3519.99	
60	PI/2 BPSK	1	1	17.33	17.36	17.33	
Channel				631668	633332	635000	Tune-up limit (dBm)
Frequency (MHz)				3475.02	3499.98	3525	
50	PI/2 BPSK	1	1	17.35	17.39	17.35	
Channel				631334	633332	635332	Tune-up limit (dBm)
Frequency (MHz)				3470.01	3499.98	3529.98	
40	PI/2 BPSK	1	1	17.35	17.42	17.37	
Channel				631000	633332	635666	Tune-up limit (dBm)
Frequency (MHz)				3465	3499.98	3534.99	
30	PI/2 BPSK	1	1	17.38	17.42	17.37	
Channel				630834	633332	635832	Tune-up limit (dBm)
Frequency (MHz)				3462.51	3499.98	3537.48	
25	PI/2 BPSK	1	1	17.36	17.39	17.35	
Channel				630668	633332	636000	Tune-up limit (dBm)
Frequency (MHz)				3460.02	3499.98	3540	
20	PI/2 BPSK	1	1	17.33	17.40	17.31	
Channel				630500	633332	636166	Tune-up limit (dBm)
Frequency (MHz)				3457.5	3499.98	3542.49	
15	PI/2 BPSK	1	1	17.33	17.38	17.34	
Channel				630334	633332	636332	Tune-up limit (dBm)
Frequency (MHz)				3455.01	3499.98	3544.98	
10	PI/2 BPSK	1	1	17.38	17.39	17.31	

14. WiFi/Bluetooth Output Power (Unit: dBm)

General Note:

1. For each antenna, transmit power in SISO operation is larger than (or equal to) the power in MIMO operation, RF exposure compliance of MIMO mode can be deduced from the compliance simultaneous transmission of antennas operating in SISO mode.
2. Per KDB 248227 D01v02r02, the simultaneous SAR provisions in KDB publication 447498 should be applied to determine simultaneous transmission SAR test exclusion for WiFi MIMO. If the sum of 1g single transmission chain SAR measurements is $< 1.6\text{W/kg}$ and SAR peak to location ratio ≤ 0.04 , no additional SAR measurements for MIMO.
3. The maximum output power specified for production units are determined for all applicable 802.11 transmission modes in each standalone and aggregated frequency band. Maximum output power is measured for the highest maximum output power configuration(s) in each frequency band according to the default power measurement procedures. For "Not required", SAR Test reduction was applied from KDB 248227 guidance, Sec. 2.1, b), 1) when the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel in the initial test configuration, additional output power measurements were not necessary.
4. Per KDB 248227 D01v02r02, SAR test reduction is determined according to 802.11 transmission mode configurations and certain exposure conditions with multiple test positions. In the 2.4 GHz band, separate SAR procedures are applied to DSSS and OFDM configurations to simplify DSSS test requirements. For OFDM, in both 2.4 and 5 GHz bands, an initial test configuration must be determined for each standalone and aggregated frequency band, according to the transmission mode configuration with the highest maximum output power specified for production units to perform SAR measurements. If the same highest maximum output power applies to different combinations of channel bandwidths, modulations and data rates, additional procedures are applied to determine which test configurations require SAR measurement. When applicable, an initial test position may be applied to reduce the number of SAR measurements required for next to the ear, UMPC mini-tablet or hotspot mode configurations with multiple test positions.
5. For 2.4 GHz 802.11b DSSS, either the initial test position procedure for multiple exposure test positions or the DSSS procedure for fixed exposure position is applied; these are mutually exclusive. For 2.4 GHz and 5 GHz OFDM configurations, the initial test configuration is applied to measure SAR using either the initial test position procedure for multiple exposure test position configurations or the initial test configuration procedures for fixed exposure test conditions. Based on the reported SAR of the measured configurations and maximum output power of the transmission mode configurations that are not included in the initial test configuration, the subsequent test configuration and initial test position procedures are applied to determine if SAR measurements are required for the remaining OFDM transmission configurations. In general, the number of test channels that require SAR measurement is minimized based on maximum output power measured for the test sample(s).
6. For OFDM transmission configurations in the 2.4 GHz and 5 GHz bands, When the same maximum power is specified for multiple transmission modes in a frequency band, the largest channel bandwidth, lowest order modulation, lowest data rate and lowest order 802.11a/g/n/ac mode is used for SAR measurement, on the highest measured output power channel for each frequency band.
7. DSSS and OFDM configurations are considered separately according to the required SAR procedures. SAR is measured in the initial test position using the 802.11 transmission mode configuration required by the DSSS procedure or initial test configuration and subsequent test configuration(s) according to the OFDM procedures.18 The initial test position procedure is described in the following:
 - a. When the reported SAR of the initial test position is $\leq 0.4\text{ W/kg}$, further SAR measurement is not required for the other test positions in that exposure configuration and 802.11 transmission mode combinations within the frequency band or aggregated band.
 - b. When the reported SAR of the test position is $> 0.4\text{ W/kg}$, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position on the highest maximum output power channel, until the report SAR is $\leq 0.8\text{ W/kg}$ or all required test position are tested.
 - c. For all positions/configurations, when the reported SAR is $> 0.8\text{ W/kg}$, SAR is measured for these test positions/configurations on the subsequent next highest measured output power channel(s) until the reported SAR is $\leq 1.2\text{ W/kg}$ or all required channels are tested.
8. Per 201904 TCBC workshops, General principles of FCC KDB Publication 248227 D01 can be applied to determine the SAR Initial Test Configurations and test reduction for 802.11ax SAR testing. For the table below the 802.11ax maximum power is SU (non-OFDMA), and the SU maximum power also higher than RU (OFDMA)
9. In applying the test guidance, the IEEE 802.11 mode with the maximum output power (out of all modes) should be considered for testing
10. For modes with the same maximum output power, the guidance from section 5.3.2 a) of FCC KDB Publication 248227 D01 should be applied, with 802.11ax being considered as the highest 802.11 mode for the appropriate frequency bands
11. When SAR testing for 802.11ax is required
 - a. If the maximum output power is highest for OFDMA scenarios, choose the tone size with the maximum number of tones and the highest maximum output power
 - b. Otherwise, consider the fully allocated channel for SAR testing
 - c. When SAR testing is required on RU sizes less than the fully allocated channel, use the RU number closest to the middle of the channel, choosing the higher RU number when two RUs are equidistant to the middle of the channel



<Close/Open>

Skydiolink

				Skydiolink_Ant 0			Skydiolink_Ant 2			Skydiolink_Ant 0+2 (0)		Skydiolink_Ant 0+2 (2)		Skydiolink_Ant 0+2					
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Duty Cycle %			
2.4GHz WLAN	802.11g 6Mbps	1	2412	Not required	19.00	Not required	Not required	26.00	Not required	Not required	21.50	Not required	21.50	Not required	24.5	Not required			
		6	2437		19.00			26.00			21.50		21.50		24.5				
		11	2462		19.00			26.00			21.50		21.50		24.5				
	802.11n-HT20 MCS0	1	2412		19.00			24.50			21.50		21.50		24.5				
		6	2437		19.00			24.50			21.50		21.50		24.5				
		11	2462		19.00			24.50			21.50		21.50		24.5				
	802.11ac-VHT20 MCS0	1	2412		19.00			24.50			21.50		21.50		24.5				
		6	2437		19.00			24.50			21.50		21.50		24.5				
		11	2462		19.00			24.50			21.50		21.50		24.5				
	802.11ax-HE10 MCS0	1	2412		18.64	85.53		27.10	85.71		21.22	21.50	21.40	21.50	24.32	85.71			
		6	2437		18.94			19.00			27.50	27.50	21.39	21.50	21.45		21.50	24.43	24.5
		11	2462		18.74			19.00			27.30	27.50	21.15	21.50	21.23		21.50	24.20	24.5
		12	2467		18.67			19.00			27.30	27.50	21.26	21.50	21.43		21.50	24.36	24.5
		13	2472		18.77			19.00			27.30	27.50	21.39	21.50	21.36		21.50	24.39	24.5
	802.11ax-HE40 MCS0	3	2422	Not required	19.00	Not required	Not required	27.00	Not required	Not required	21.50	Not required	21.50	Not required	24.5	Not required			
		6	2437		19.00			27.00			21.50		21.50		24.5				
		9	2452		19.00			27.00			21.50		21.50		24.5				

				Skydiolink_Ant 0			Skydiolink_Ant 2			Skydiolink_Ant 0+2 (0)		Skydiolink_Ant 0+2 (2)		Skydiolink_Ant 0+2		
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.2GHz WLAN	802.11a 6Mbps	36	5180	Not required	21.00	Not required	Not required	21.00	Not required	Not required	21.00	Not required	21.00	Not required	24.0	Not required
		40	5200		21.00			21.00			21.00		21.00		24.0	
		44	5220		21.00			21.00			21.00		21.00		24.0	
		48	5240		21.00			21.00			21.00		21.00		24.0	
	802.11n-HT20 MCS0	36	5180		24.50			24.50			24.50		24.50		27.5	
		40	5200		24.50			24.50			24.50		24.50		27.5	
		44	5220		24.50			24.50			24.50		24.50		27.5	
		48	5240		24.50			24.50			24.50		24.50		27.5	
	802.11n-HT40 MCS0	38	5190		24.00			24.00			24.00		24.00		27.0	
		46	5230		24.00			24.00			24.00		24.00		27.0	
	802.11ac-VHT20 MCS0	36	5180		24.50			24.50			24.50		24.50		27.5	
		40	5200		24.50			24.50			24.50		24.50		27.5	
		44	5220		24.50			24.50			24.50		24.50		27.5	
	802.11ac-VHT40 MCS0	38	5190		24.00			24.00			24.00		24.00		27.0	
		46	5230		24.00			24.00			24.00		24.00		27.0	
	802.11ac-VHT80 MCS0	42	5210		19.00			19.00			19.00		19.00		22.0	
	802.11ax-HE20 MCS0	36	5180		24.50			24.50			24.50		24.50		27.5	
		40	5200		24.50			24.50			24.50		24.50		27.5	
		44	5220		24.50			24.50			24.50		24.50		27.5	
		48	5240		24.50			24.50			24.50		24.50		27.5	
	802.11ax-HE40 MCS0	38	5190		24.00			24.00			24.00		24.00		27.0	
		46	5230		24.00			24.00			24.00		24.00		27.0	
	802.11ax-HE80 MCS0	42	5210		19.00			19.00			19.00		19.00		22.0	



				Skydiolink_Ant 0			Skydiolink_Ant 2			Skydiolink_Ant 0+2 (0)		Skydiolink_Ant 0+2 (2)		Skydiolink_Ant 0+2			
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Duty Cycle %	
5.3GHz WLAN	802.11a 6Mbps	52	5260	Not required	15.00	Not required	Not required	15.00	Not required	Not required	15.00	Not required	15.00	Not required	18.0	Not required	
		56	5280		15.00			15.00			15.00		18.0				
		60	5300		15.00			15.00			15.00		18.0				
		64	5320		15.00			15.00			15.00		18.0				
	802.11n-HT20 MCS0	52	5260	Not required	18.00	Not required	Not required	18.00	Not required		18.00		18.00	18.00	18.00		21.0
		56	5280		18.00			18.00			18.00		18.00	21.0			
		60	5300		18.00			18.00			18.00		18.00	21.0			
		64	5320		18.00			18.00			18.00		18.00	21.0			
	802.11n-HT40 MCS0	54	5270	18.70	19.00	85.14	18.60	19.00	85.14		19.00		19.00	19.00	19.00		22.0
		62	5310	18.70	19.00		18.60	19.00			19.00		19.00	22.0			
	802.11ac-VHT20 MCS0	52	5260	Not required	18.00	Not required	Not required	18.00	Not required		18.00		18.00	18.00	18.00		21.0
		56	5280		18.00			18.00			18.00		18.00	21.0			
		60	5300		18.00			18.00			18.00		18.00	21.0			
		64	5320		18.00			18.00			18.00		18.00	21.0			
	802.11ac-VHT40 MCS0	54	5270	Not required	19.00	Not required	Not required	19.00	Not required		19.00		19.00	19.00	19.00		22.0
		62	5310		19.00			19.00			19.00		19.00	22.0			
	802.11ac-VHT80 MCS0	58	5290	18.80	19.00	85.50	19.00	19.00	85.50		19.00		19.00	19.00	19.00		22.0
	802.11ax-HE20 MCS0	52	5260	Not required	18.00	Not required	Not required	18.00	Not required		18.00		18.00	18.00	18.00		21.0
		56	5280		18.00			18.00			18.00		18.00	21.0			
		60	5300		18.00			18.00			18.00		18.00	21.0			
		64	5320		18.00			18.00			18.00		18.00	21.0			
	802.11ax-HE40 MCS0	54	5270	Not required	19.00	Not required	Not required	19.00	Not required		19.00		19.00	19.00	19.00		22.0
		62	5310		19.00			19.00			19.00		19.00	22.0			
	802.11ax-HE80 MCS0	58	5290		19.00			19.00			19.00			19.00			22.0



				Skydiolink_Ant 0			Skydiolink_Ant 2			Skydiolink_Ant 0+2 (0)		Skydiolink_Ant 0+2 (2)		Skydiolink_Ant 0+2		
5.5GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Duty Cycle %
	802.11a 6Mbps	100	5500	Not required	16.00	Not required	Not required	16.00	Not required	Not required	16.00	Not required	16.00	Not required	19.0	Not required
		116	5580		16.00			16.00			16.00		19.0			
		124	5620		16.00			16.00			16.00		19.0			
		132	5660		16.00			16.00			16.00		19.0			
		140	5700		16.00			16.00			16.00		19.0			
	802.11n-HT20 MCS0	100	5500	Not required	19.00	Not required	19.00	Not required	19.00		19.00		19.00	22.0		
		116	5580		19.00		19.00		19.00		22.0					
		124	5620		19.00		19.00		19.00		22.0					
		132	5660		19.00		19.00		19.00		22.0					
		140	5700		19.00		19.00		19.00		22.0					
	802.11n-HT40 MCS0	102	5510	20.00	20.00	85.14	20.00	20.00	85.14		20.00		20.00	23.0		
		110	5550	19.20	20.00		19.90	20.00			20.00		23.0			
		126	5630	19.50	20.00		20.00	20.00			20.00		23.0			
		134	5670	19.50	20.00		19.90	20.00			20.00		23.0			
		142	5710	19.90	20.00		20.00	20.00			20.00		23.0			
	802.11ac-VHT20 MCS0	100	5500	Not required	19.00	Not required	19.00	Not required	19.00		19.00		19.00	22.0		
		116	5580		19.00		19.00		19.00		19.00		22.0			
		124	5620		19.00		19.00		19.00		19.00		22.0			
		132	5660		19.00		19.00		19.00		19.00		22.0			
140		5700	19.00		19.00		19.00		19.00		22.0					
802.11ac-VHT40 MCS0	102	5510	Not required	20.00	Not required	20.00	Not required	20.00	20.00	20.00	23.0					
	110	5550		20.00		20.00		20.00	20.00	23.0						
	126	5630		20.00		20.00		20.00	20.00	23.0						
	134	5670		20.00		20.00		20.00	20.00	23.0						
	142	5710		20.00		20.00		20.00	20.00	23.0						
802.11ac-VHT80 MCS0	106	5530	19.50	20.00	85.50	19.80	20.00	85.50	20.00	20.00	23.0					
	122	5610	19.60	20.00		19.70	20.00		20.00	23.0						
	138	5690	20.00	20.00		20.00	20.00		20.00	23.0						
802.11ax-HE20 MCS0	100	5500	Not required	19.00	Not required	19.00	Not required	19.00	19.00	19.00	22.0					
	116	5580		19.00		19.00		19.00	19.00	22.0						
	124	5620		19.00		19.00		19.00	19.00	22.0						
	132	5660		19.00		19.00		19.00	19.00	22.0						
	140	5700		19.00		19.00		19.00	19.00	22.0						
802.11ax-HE40 MCS0	102	5510	Not required	20.00	Not required	20.00	Not required	20.00	20.00	20.00	23.0					
	110	5550		20.00		20.00		20.00	20.00	23.0						
	126	5630		20.00		20.00		20.00	20.00	23.0						
	134	5670		20.00		20.00		20.00	20.00	23.0						
	142	5710		20.00		20.00		20.00	20.00	23.0						
802.11ax-HE80 MCS0	106	5530	Not required	20.00	Not required	20.00	Not required	20.00	20.00	20.00	23.0					
	122	5610		20.00		20.00		20.00	20.00	23.0						
	138	5690		20.00		20.00		20.00	20.00	23.0						



				Skydiolink_Ant 0			Skydiolink_Ant 2			Skydiolink_Ant 0+2 (0)		Skydiolink_Ant 0+2 (2)		Skydiolink_Ant 0+2		
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Duty Cycle %	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.8GHz WLAN	802.11a 6Mbps	149	5745	25.00	25.00	93.69	24.60	25.00	96.10	25.00	25.00	24.60	25.00	27.81	28.0	96.10
		157	5785	25.00	25.00		24.40	25.00		25.00	25.00	24.40	25.00	27.72	28.0	
		165	5825	25.00	25.00		24.50	25.00		25.00	25.00	24.50	25.00	27.77	28.0	
	802.11n-HT20 MCS0	149	5745	Not required	25.00	Not required	Not required	25.00	Not required	Not required	25.00	Not required	25.00	Not required	28.0	Not required
		157	5785		25.00			25.00			25.00		25.00		28.0	
		165	5825		25.00			25.00			25.00		25.00		28.0	
	802.11n-HT40 MCS0	151	5755		25.00			25.00			25.00		25.00		28.0	
		159	5795		25.00			25.00			25.00		25.00		28.0	
	802.11ac-VHT20 MCS0	149	5745		25.00			25.00			25.00		25.00		28.0	
		157	5785		25.00			25.00			25.00		25.00		28.0	
		165	5825		25.00			25.00			25.00		25.00		28.0	
	802.11ac-VHT40 MCS0	151	5755		25.00			25.00			25.00		25.00		28.0	
		159	5795		25.00			25.00			25.00		25.00		28.0	
	802.11ac-VHT80 MCS0	155	5775		21.50			21.50			21.50		21.50		24.5	
	802.11ax-HE20 MCS0	149	5745		25.00			25.00			25.00		25.00		28.0	
		157	5785		25.00			25.00			25.00		25.00		28.0	
		165	5825		25.00			25.00			25.00		25.00		28.0	
	802.11ax-HE40 MCS0	151	5755		25.00			25.00			25.00		25.00		28.0	
		159	5795		25.00			25.00			25.00		25.00		28.0	
	802.11ax-HE80 MCS0	155	5775		21.50			21.50			21.50		21.50		24.5	

Infra

				infra_Ant 0		
2.4GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
	802.11b 1Mbps	1	2412	17.70	18.00	99.23
		6	2437	17.70	18.00	
		11	2462	17.70	18.00	
		12	2467	17.90	18.00	
		13	2472	17.90	18.00	
	802.11g 6Mbps	1	2412	Not Required	16.00	Not Required
		6	2437		16.00	
		11	2462		16.00	
		12	2467		16.00	
		13	2472		16.00	
	802.11n-HT20 MCS0	1	2412		16.00	
		6	2437		16.00	
		11	2462		16.00	
		12	2467		16.00	
		13	2472		16.00	
	802.11n-HT40 MCS0	3	2422		16.00	
		6	2437		16.00	
		9	2452		16.00	
		10	2457		16.00	
		11	2462		16.00	
	802.11ax-HE20 MCS0	1	2412		16.00	
		6	2437		16.00	
		11	2462		16.00	
		12	2467		16.00	
		13	2472		16.00	
	802.11ax-HE40 MCS0	3	2422		16.00	
		6	2437		16.00	
		9	2452		16.00	
		10	2457		16.00	
		11	2462		16.00	



				infra_Ant 0		
5.2GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
	802.11a 6Mbps	36	5180	Not Required	15.50	Not Required
		40	5200		15.50	
		44	5220		15.50	
		48	5240		15.50	
	802.11n-HT20 MCS0	36	5180		15.50	
		40	5200		15.50	
		44	5220		15.50	
		48	5240		15.50	
	802.11n-HT40 MCS0	38	5190		15.50	
		46	5230		15.50	
	802.11ac-VHT20 MCS0	36	5180		15.50	
		40	5200		15.50	
		44	5220		15.50	
		48	5240		15.50	
	802.11ac-VHT40 MCS0	38	5190		15.50	
		46	5230		15.50	
	802.11ac-VHT80 MCS0	42	5210		15.50	
	802.11ax-HE20 MCS0	36	5180		15.50	
		40	5200		15.50	
		44	5220		15.50	
		48	5240		15.50	
	802.11ax-HE40 MCS0	38	5190		15.50	
		46	5230		15.50	
	802.11ax-HE80 MCS0	42	5210		15.50	

				infra_Ant 0		
5.3GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
	802.11a 6Mbps	52	5260	Not Required	15.50	Not Required
		56	5280		15.50	
		60	5300		15.50	
		64	5320		15.50	
	802.11n-HT20 MCS0	52	5260		15.50	
		56	5280		15.50	
		60	5300		15.50	
		64	5320		15.50	
	802.11n-HT40 MCS0	54	5270		15.50	
		62	5310		15.50	
	802.11ac-VHT20 MCS0	52	5260		15.50	
		56	5280		15.50	
		60	5300		15.50	
		64	5320		15.50	
	802.11ac-VHT40 MCS0	54	5270		15.50	
		62	5310		15.50	
	802.11ac-VHT80 MCS0	58	5290	15.04	15.50	99.70
	802.11ac-VHT160 MCS0	50	5250	15.29	15.50	99.37
	802.11ax-HE20 MCS0	52	5260	Not Required	15.50	Not Required
		56	5280		15.50	
		60	5300		15.50	
		64	5320		15.50	
	802.11ax-HE40 MCS0	54	5270		15.50	
		62	5310		15.50	
	802.11ax-HE80 MCS0	58	5290		15.50	
	802.11ax-HE160 MCS0	50	5250		15.50	



				infra_Ant 0		
	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
5.5GHz WLAN	802.11a 6Mbps	100	5500	Not Required	12.00	Not Required
		116	5580		12.00	
		124	5620		12.00	
		132	5660		12.00	
		140	5700		12.00	
		144	5720		12.00	
	802.11n-HT20 MCS0	100	5500		12.00	
		116	5580		12.00	
		124	5620		12.00	
		132	5660		12.00	
		140	5700		12.00	
		144	5720		12.00	
	802.11n-HT40 MCS0	102	5510		12.00	
		110	5550		12.00	
		126	5630		12.00	
		134	5670		12.00	
		142	5710		12.00	
	802.11ac-VHT20 MCS0	100	5500		12.00	
		116	5580		12.00	
		124	5620		12.00	
		132	5660		12.00	
		140	5700		12.00	
		144	5720		12.00	
	802.11ac-VHT40 MCS0	102	5510		12.00	
		110	5550		12.00	
		126	5630		12.00	
		134	5670		12.00	
		142	5710		12.00	
	802.11ac-VHT80 MCS0	106	5530	11.88	12.00	99.70
		122	5610	11.98	12.00	
		138	5690	11.90	12.00	
	802.11ac-VHT160 MCS0	114	5570	11.99	12.00	99.37
	802.11ax-HE20 MCS0	100	5500	Not Required	12.00	Not Required
		116	5580		12.00	
		124	5620		12.00	
		132	5660		12.00	
		140	5700		12.00	
		144	5720		12.00	
	802.11ax-HE40 MCS0	102	5510		12.00	
		110	5550		12.00	
		126	5630		12.00	
		134	5670		12.00	
		142	5710		12.00	
	802.11ax-HE80 MCS0	106	5530		12.00	
		122	5610		12.00	
		138	5690		12.00	
	802.11ax-HE160 MCS0	114	5570		12.00	

				infra_Ant 0		
5.8GHz WLAN	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
	802.11a 6Mbps	149	5745	Not Required	13.00	Not Required
		157	5785		13.00	
		165	5825		13.00	
	802.11n-HT20 MCS0	149	5745		13.00	
		157	5785		13.00	
		165	5825		13.00	
	802.11n-HT40 MCS0	151	5755	12.58	13.00	99.70
		159	5795	12.54	13.00	
	802.11ac-VHT20 MCS0	149	5745	Not Required	13.00	Not Required
		157	5785		13.00	
		165	5825		13.00	
	802.11ac-VHT40 MCS0	151	5755		13.00	
		159	5795		13.00	
	802.11ac-VHT80 MCS0	155	5775	12.99	13.00	99.70
	802.11ax-HE20 MCS0	149	5745	Not Required	13.00	Not Required
		157	5785		13.00	
		165	5825		13.00	
	802.11ax-HE40 MCS0	151	5755		13.00	
		159	5795		13.00	
	802.11ax-HE80 MCS0	155	5775		13.00	

				infra_Ant 0		
WiFi 6E	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
	802.11a 6Mbps	1	5955	Not Required	13.00	Not Required
		57	6235		13.00	
		113	6515		13.00	
		173	6815		13.00	
		233	7115		13.00	
	802.11ax-HE20 MCS0	1	5955		13.00	
		57	6235		13.00	
		113	6515		13.00	
		173	6815		13.00	
		233	7115		13.00	
	802.11ax-HE40 MCS0	3	5965		13.00	
		59	6245		13.00	
		107	6485		13.00	
		171	6805		13.00	
		227	7085		13.00	
	802.11ax-HE80 MCS0	7	5985		13.00	
		71	6305		13.00	
		119	6545		13.00	
		167	6785		13.00	
		215	7025		13.00	
	802.11ax-HE160 MCS0	15	6025	13.00	13.00	100.00
		47	6185	12.60	13.00	
		111	6505	12.60	13.00	
		143	6665	13.00	13.00	
		207	6985	12.60	13.00	

< 2.4GHz Bluetooth >

<Close/Open>

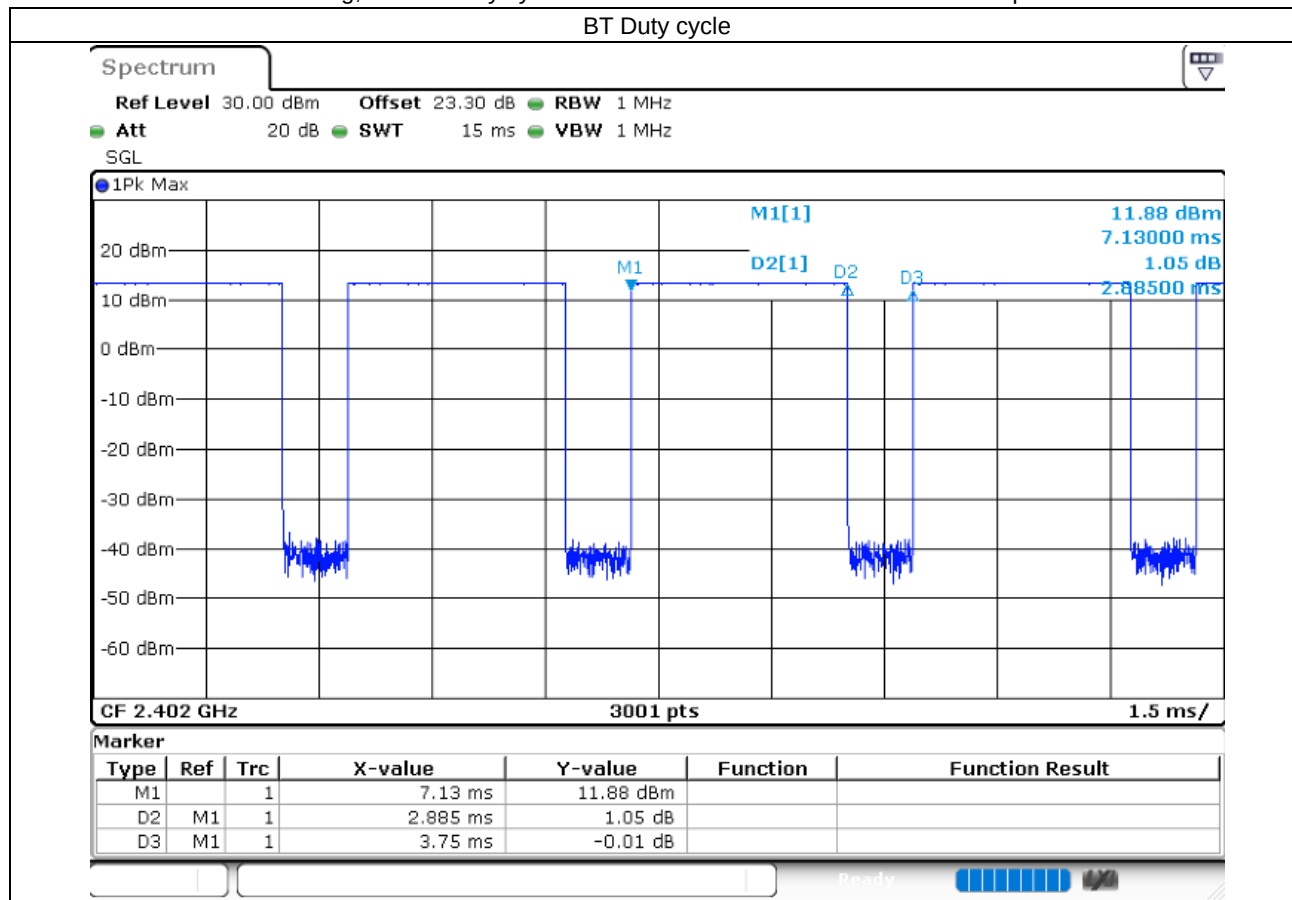
Infra

				infra_Ant 1		
Bluetooth	Mode	Channel	Frequency (MHz)	Average power (dBm)	Tune-Up Limit	Duty Cycle %
	BR / EDR 1Mbps	0	2402	7.80	8.00	76.93
		39	2441	8.00	8.00	
		78	2480	7.00	8.00	
	BR / EDR 2Mbps	0	2402	Not Required	8.00	Not Required
		39	2441		8.00	
		78	2480		8.00	
	BR / EDR 3Mbps	0	2402		8.00	
		39	2441		8.00	
		78	2480		8.00	
	LE 1Mbps	0	2402		8.00	
		19	2440		8.00	
		39	2480		8.00	
	LE 2Mbps	0	2402		8.00	
		19	2440		8.00	
		39	2480		8.00	

General Note:

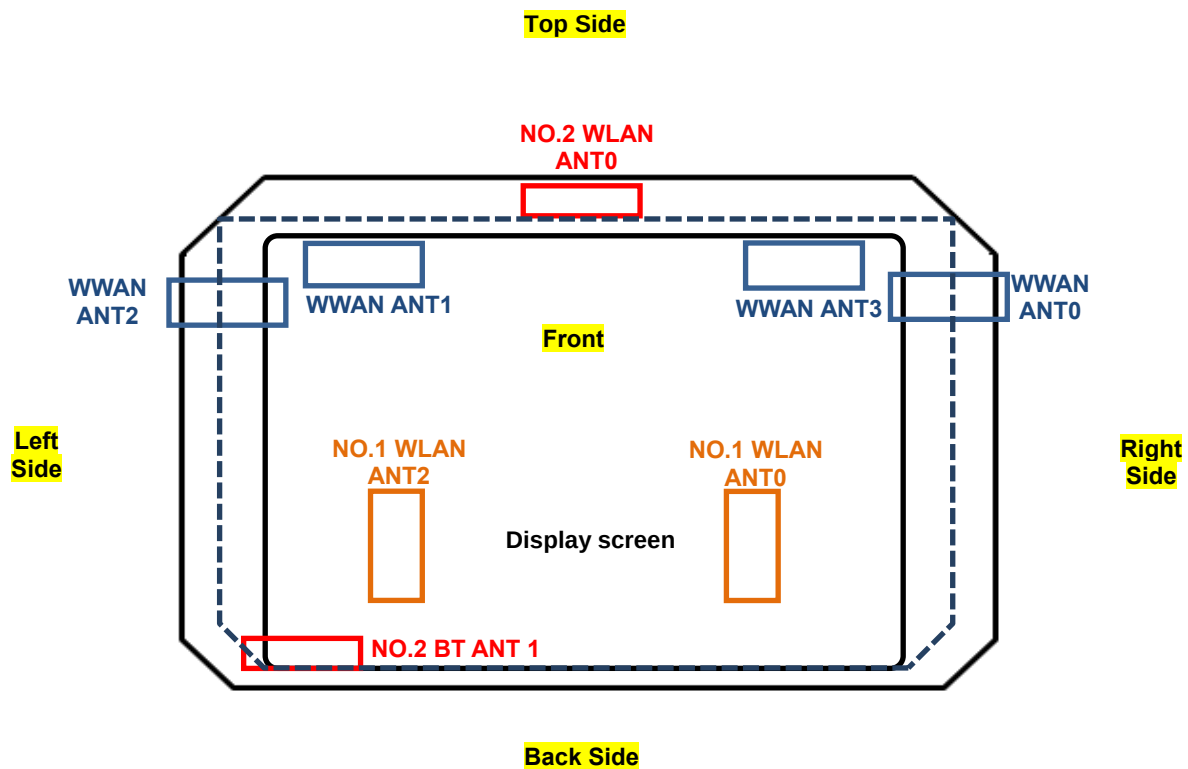
- For 2.4GHz Bluetooth SAR testing was selected 1Mbps due to its highest average power and duty cycle is 76.93% considered in SAR testing, and the duty cycle would be scaled to theoretical 83.3% in reported SAR calculation.

BT Duty cycle



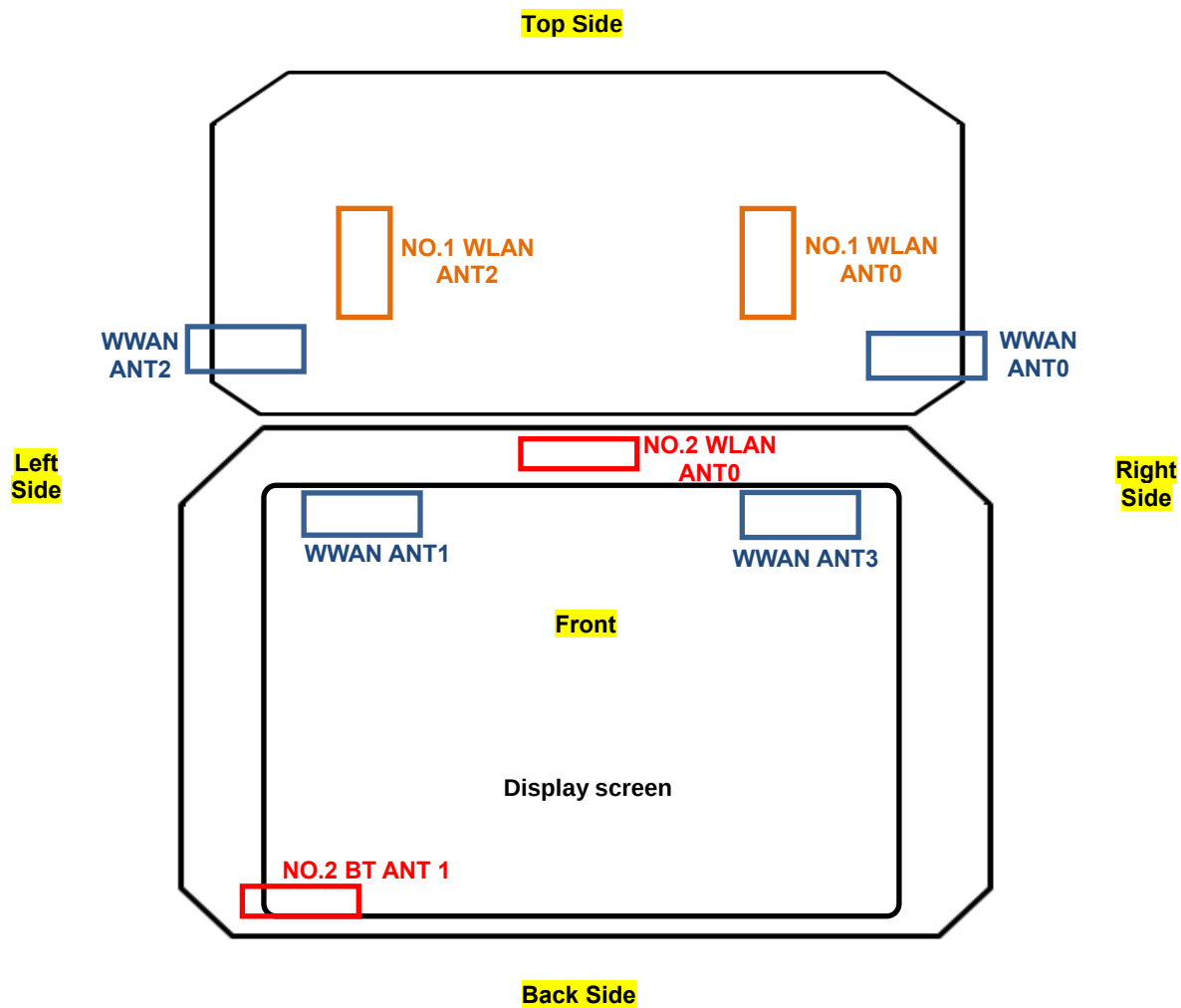
15. Antenna Location

<Close Mode>



Front View

<Open Mode>



Front View

< SAR test exclusion table >
General Note:

- The below table, when the distance is < 50 mm exclusion threshold is "Ratio", when the distance is > 50 mm exclusion threshold is "mW"
- Maximum power is the source-based time-average power and represents the maximum RF output power among production units
- Per KDB 447498 D01v06, for larger devices, the test separation distance of adjacent edge configuration is determined by the closest separation between the antenna and the user.
- Per KDB 447498 D01v06, standalone SAR test exclusion threshold is applied; If the test separation distance is < 5mm, 5mm is used to determine SAR exclusion threshold.
- Per KDB 447498 D01v06, the 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at *test separation distances* ≤ 50 mm are determined by:

$$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0 \text{ for 1-g SAR and } \leq 7.5 \text{ for 10-g extremity SAR}$$
 - f(GHz) is the RF channel transmit frequency in GHz
 - Power and distance are rounded to the nearest mW and mm before calculation
 - The result is rounded to one decimal place for comparison
- Per KDB 447498 D01v06, at 100 MHz to 6 GHz and for test separation distances > 50 mm, the SAR test exclusion threshold is determined according to the following
 - [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · (f(MHz)/150)] mW, at 100 MHz to 1500 MHz
 - [Threshold at 50 mm in step 1) + (test separation distance - 50 mm) · 10] mW at > 1500 MHz and ≤ 6 GHz

<Open>
10g_Ant 1

Exposure Position	Wireless Interface	LTE/NR Band 48/n48	NR Band n77
	Calculated Frequency (MHz)	3697	3650
	Maximum power (dBm)	23.5	24.5
	Maximum rated power(mW)	223.87	281.84
Bottom Side	Separation distance(mm)	111.7	
	exclusion threshold	1739.0	1740.0
	Testing required?	No	No
Top side	Separation distance(mm)	17.0	
	exclusion threshold	25.3	31.7
	Testing required?	Yes	Yes
Left side	Separation distance(mm)	47.4	
	exclusion threshold	9.1	11.4
	Testing required?	Yes	Yes
Right side	Separation distance(mm)	158.9	
	exclusion threshold	2918.0	2919.0
	Testing required?	No	No
Back side	Separation distance(mm)	111.7	
	exclusion threshold	1738.0	1739.0
	Testing required?	No	No

10g_Ant 3

Exposure Position	Wireless Interface	LTE/NR Band 48/n48	NR Band n77
	Calculated Frequency (MHz)	3697	3650
	Maximum power (dBm)	23.5	24.5
	Maximum rated power(mW)	223.87	281.84
Bottom side	Separation distance(mm)	111.7	
	exclusion threshold	1739.0	1740.0
	Testing required?	No	No
Top side	Separation distance(mm)	17.0	
	exclusion threshold	25.3	31.7
	Testing required?	Yes	Yes
Left side	Separation distance(mm)	158.9	
	exclusion threshold	2918.0	2919.0
	Testing required?	No	No
Right side	Separation distance(mm)	47.4	
	exclusion threshold	9.1	11.4
	Testing required?	Yes	Yes
Back side	Separation distance(mm)	111.7	
	exclusion threshold	1738.0	1739.0
	Testing required?	No	No

10g_Ant 0

Exposure Position	Wireless Interface	2.4GHz WLAN ANT 0	5/6GHz WLAN ANT 0
	Calculated Frequency (MHz)	2472	7115
	Maximum power (dBm)	18.0	17.5
	Maximum rated power(mW)	63.10	56.23
Top Side	Separation distance(mm)	5.0	5.0
	exclusion threshold	19.8	30.0
	Testing required?	Yes	Yes
Left side	Separation distance(mm)	113.8	113.8
	exclusion threshold	1833.0	1735.0
	Testing required?	No	No
Right side	Separation distance(mm)	113.8	113.8
	exclusion threshold	1833.0	1735.0
	Testing required?	No	No
Back	Separation distance(mm)	5.0	5.0
	exclusion threshold	19.8	30.0
	Testing required?	Yes	Yes
Bottom	Separation distance(mm)	141.0	141.0
	exclusion threshold	2513.0	2415.0
	Testing required?	No	No

16. General Note for SAR Test

General Note:

1. Per KDB 447498 D01v06, the reported SAR is the measured SAR value adjusted for maximum tune-up tolerance.
 - a. Tune-up scaling Factor = tune-up limit power (mW) / EUT RF power (mW), where tune-up limit is the maximum rated power among all production units.
 - b. For SAR testing of WLAN signal with non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to "1/(duty cycle)"
 - c. For WWAN: Reported SAR(W/kg)= Measured SAR(W/kg)*Tune-up Scaling Factor
 - d. For WLAN/Bluetooth: Reported SAR(W/kg)= Measured SAR(W/kg)* Duty Cycle scaling factor * Tune-up scaling factor
 - e. For TDD LTE SAR measurement, the duty cycle 1:1.59 (62.9 %) was used perform testing and considering the theoretical duty cycle of 63.3% for extended cyclic prefix in the uplink, and the theoretical duty cycle of 62.9% for normal cyclic prefix in uplink, a scaling factor of extended cyclic prefix $63.3\%/62.9\% = 1.006$ is applied to scale-up the measured SAR result. The Reported TDD LTE SAR = measured SAR (W/kg)* Tune-up Scaling Factor* scaling factor for extended cyclic prefix.
2. Per KDB 447498 D01v06, for each exposure position, testing of other required channels within the operating mode of a frequency band is not required when the *reported* 1-g or 10-g SAR for the mid-band or highest output power channel is:
 - ≤ 0.8 W/kg or 2.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≤ 100 MHz
 - ≤ 0.6 W/kg or 1.5 W/kg, for 1-g or 10-g respectively, when the transmission band is between 100 MHz and 200 MHz
 - ≤ 0.4 W/kg or 1.0 W/kg, for 1-g or 10-g respectively, when the transmission band is ≥ 200 MHz
3. Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥ 0.8 W/kg.
4. This product is an aircraft remote controller with different transmission modes in different states. Different usage scenarios are evaluated in both open and closed states to meet RF Exposure assessment.

LTE Note:

1. Per KDB 941225 D05v02r05, start with the largest channel bandwidth and measure SAR for QPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel.
2. Per KDB 941225 D05v02r05, 50% RB allocation for QPSK SAR testing follows 1RB QPSK allocation procedure.
3. Per KDB 941225 D05v02r05, For QPSK with 100% RB allocation, SAR is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
4. Per KDB 941225 D05v02r05, 16QAM output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ dB higher than the same configuration in QPSK and the reported SAR for the QPSK configuration is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, 16QAM SAR testing is not required.
5. Per KDB 941225 D05v02r05, Smaller bandwidth output power for each RB allocation configuration is $>$ not $\frac{1}{2}$ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg; Per KDB 941225 D05v02r05, smaller bandwidth SAR testing is not required.
6. For LTE B4/B12/B17/B26/B71 the maximum bandwidth does not support three non-overlapping channels, per KDB 941225 D05v02r05, when a device supports overlapping channel assignment in a channel bandwidth configuration, the middle channel of the group of overlapping channels should be selected for testing.
7. LTE band 2/4/17 SAR test was covered by Band 25/66/12; according to TCB workshop, SAR test for overlapping LTE bands can be reduced if
 - a. The maximum output power, including tolerance, for the smaller band is $\leq$ the larger band to qualify for the SAR test exclusion.
 - b. The channel bandwidth and other operating parameters for the smaller band are fully supported by the larger band.

5G NR Note:

1. Referencing the procedure in KDB 941225, the test procedures are outlined as below:
 - a. To start SAR test for the largest channel bandwidth for PI/2 BPSK with 1 RB allocation, using the RB offset and required test channel combination with the highest maximum output power for RB offsets at the upper edge, middle and lower edge of each required test channel. Also do SAR test for 50% RB allocation for PI/2 BPSK SAR testing using 1RB PI/2 BPSK allocation procedure
 - b. For PI/2 BPSK with 100% RB allocation, SAR test is not required when the highest maximum output power for 100 % RB allocation is less than the highest maximum output power in 50% and 1 RB allocations and the highest reported SAR for 1 RB and 50% RB allocation are ≤ 0.8 W/kg. Otherwise, SAR is measured for the highest output power channel; and if the reported SAR is > 1.45 W/kg, the remaining required test channels must also be tested.
 - c. For higher modulation QPSK/16QAM/64QAM/256QAM, according to tune-up document the power level is not $\frac{1}{2}$ dB higher than the same configuration in PI/2 BPSK, also reported SAR for the PI/2 BPSK configuration is less than 1.45 W/kg, QPSK/16QAM/64QAM/256QAM SAR testing are not required.
 - d. Smaller bandwidth output power for each RB allocation configuration for this device is not $\frac{1}{2}$ dB higher than the same configuration in the largest supported bandwidth, and the reported SAR for the largest supported bandwidth is ≤ 1.45 W/kg, smaller bandwidth SAR testing is not required for this device
 - e. For 5G FR1 n5/n12/n41/n71/n77, the maximum channel bandwidth does not support three non-overlapping channels in the frequency band, the middle channel of the group of overlapping channels were selected for testing.
 - f. For FR1 was establishing connections via a base station simulator to use for output power measurement and SAR testing.
 - g. For FR1 TDD PC3 support 100% transmission, since establishing connections via a base station simulator non-100% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to " $1/(\text{duty cycle} \times 100)$ "
 - h. For FR1 TDD PC2 support 50% transmission, since establishing connections via a base station simulator non-50% duty cycle, the measured SAR is scaled-up by the duty cycle scaling factor which is equal to " $1/(\text{duty cycle} \times 0.5)$ "

WLAN Note:

1. Per KDB 248227 D01v02r02, for 2.4GHz 802.11g/n SAR testing is not required when the highest reported SAR for DSSS is adjusted by the ratio of OFDM to DSSS specified maximum output power and the adjusted SAR is ≤ 1.2 W/kg.
2. Per KDB 248227 D01v02r02, WLAN5.2GHz SAR testing is not required for hotspot and body-worn condition when the WLAN5.3GHz band highest reported SAR for a test configuration is ≤ 1.2 W/kg, SAR is not required for WLAN5.2GHz band.
3. When the reported SAR of the test position is > 0.4 W/kg, SAR is repeated for the 802.11 transmission mode configuration tested in the initial test position to measure the subsequent next closet/smallest test separation distance and maximum coupling test position on the highest maximum output power channel, until the report SAR is ≤ 0.8 W/kg or all required test position are tested.
4. For all positions / configurations, when the reported SAR is > 0.8 W/kg, SAR is measured for these test positions / configurations on the subsequent next highest measured output power channel(s) until the reported SAR is ≤ 1.2 W/kg or all required channels are tested.
5. For WLAN SAR testing was performed on single antenna RF power in SISO mode is larger or equal to the single antenna RF power in MIMO mode, and for RF exposure assessment of MIMO mode simultaneous transmission exclusion analysis was performed with SAR test results of each antenna in SISO mode.
6. Per KDB 248227 D01v02r02, the simultaneous SAR provisions in KDB publication 447498 should be applied to determine simultaneous transmission SAR test exclusion for WiFi MIMO. If the sum of 1g single transmission chain SAR measurements is < 1.6 W/kg and SAR peak to location ratio ≤ 0.04 , no additional SAR measurements for MIMO.
7. During SAR testing, the WLAN transmit signal was continuously monitored using a spectrum analyzer to ensure continuous and stable signal output throughout the measurement.
8. Skydiolink WLAN operation only support 25% transmission, the WLAN Duty Cycle Scaling Factor is scaled down to 25%.

WLAN PD Note:

1. The WiFi 6E PD was performed according 2020 TCB workshop RF Exposure 5G RFX Policies Interim Procedures.
2. First, evaluate SAR using 6-7 GHz parameters per IEC/IEEE 62209-1528:2020 and evaluate incident PD using the mmw near-field probe and total-field/power-density reconstruction method.
3. Per Interim Procedures. The power density results were scaled according to IEC 62479:2010 for the portion of the measurement uncertainty > 30%. Total expanded uncertainty of 2.68 dB (85.4%) was used to determine the psPD measurement scaling factor
4. The manufacturer has confirmed that the devices tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.
5. The WiFi 6E RF Exposure results are used for simultaneous transmission analysis with the other transmitters and total exposure ratio, the analysis can be found in this report section 17.
6. Absorbed power density (APD) using a 4cm² averaging area is reported based on SAR measurements.
7. Power density was calculated by repeated E-field measurements on two measurement planes separated by $\lambda/4$.
8. The device was configured to transmit continuously at the required data rate, channel bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools.
9. The measurement procedure consists of measuring the PD_{inc} at two different distances: 2 mm (compliance distance) and $\lambda/5$. The grid extents should be large enough to fully capture the transmitted energy. The grid step should be fine enough to demonstrate that the integrated Power Density iPD_n fulfill the criterion described below. Since iPD ratio between the two distances is ≥ -1 dB, the grid step (0.0625) was sufficient for determining compliance at d=2mm.

$$10 \cdot \log_{10} \frac{iPD_n(2mm)}{iPD_n(\lambda/5)} \geq -1$$

17. Close Mode SAR Test Results

17.1 Extremity SAR

< LTE SAR >

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
01	LTE Band 12_Ant 0	10M	QPSK	1	0	Front face	0mm	23095	707.5	22.42	24.00	1.439		1.000	-0.01	0.372	0.535
	LTE Band 12_Ant 0	10M	QPSK	25	12	Front face	0mm	23095	707.5	21.51	23.00	1.409		1.000	0.06	0.286	0.403
	LTE Band 12_Ant 0	10M	QPSK	1	0	Bottom face	0mm	23095	707.5	22.42	24.00	1.439		1.000	0.08	0.056	0.081
	LTE Band 12_Ant 0	10M	QPSK	25	12	Bottom face	0mm	23095	707.5	21.51	23.00	1.409		1.000	0	0.045	0.063
02	LTE Band 13_Ant 0	10M	QPSK	1	0	Front face	0mm	23230	782	23.02	24.00	1.253		1.000	-0.04	0.472	0.591
	LTE Band 13_Ant 0	10M	QPSK	25	12	Front face	0mm	23230	782	22.04	23.00	1.247		1.000	0.06	0.398	0.496
	LTE Band 13_Ant 0	10M	QPSK	1	0	Bottom face	0mm	23230	782	23.02	24.00	1.253		1.000	0.03	0.110	0.138
	LTE Band 13_Ant 0	10M	QPSK	25	12	Bottom face	0mm	23230	782	22.04	23.00	1.247		1.000	0.06	0.095	0.118
03	LTE Band 14_Ant 0	10M	QPSK	1	0	Front face	0mm	23330	793	22.87	24.00	1.297		1.000	-0.06	0.422	0.547
	LTE Band 14_Ant 0	10M	QPSK	25	12	Front face	0mm	23330	793	21.89	23.00	1.291		1.000	0.06	0.368	0.475
	LTE Band 14_Ant 0	10M	QPSK	1	0	Bottom face	0mm	23330	793	22.87	24.00	1.297		1.000	-0.08	0.070	0.091
	LTE Band 14_Ant 0	10M	QPSK	25	12	Bottom face	0mm	23330	793	21.89	23.00	1.291		1.000	-0.08	0.060	0.077
04	LTE Band 25_Ant 0	20M	QPSK	1	0	Front face	0mm	26140	1860	22.31	23.00	1.172		1.000	-0.01	1.260	1.477
	LTE Band 25_Ant 0	20M	QPSK	50	24	Front face	0mm	26140	1860	21.48	22.00	1.127		1.000	0.06	1.080	1.217
	LTE Band 25_Ant 0	20M	QPSK	1	0	Bottom face	0mm	26140	1860	22.31	23.00	1.172		1.000	0.12	0.045	0.053
	LTE Band 25_Ant 0	20M	QPSK	50	24	Bottom face	0mm	26140	1860	21.48	22.00	1.127		1.000	0.06	0.035	0.039
05	LTE Band 26_Ant 0	15M	QPSK	1	0	Front face	0mm	26865	831.5	22.60	24.00	1.380		1.000	0.08	0.452	0.624
	LTE Band 26_Ant 0	15M	QPSK	36	0	Front face	0mm	26865	831.5	21.61	23.00	1.377		1.000	0	0.411	0.566
	LTE Band 26_Ant 0	15M	QPSK	1	0	Bottom face	0mm	26865	831.5	22.60	24.00	1.380		1.000	-0.17	0.045	0.062
	LTE Band 26_Ant 0	15M	QPSK	36	0	Bottom face	0mm	26865	831.5	21.61	23.00	1.377		1.000	0.05	0.035	0.048
06	LTE Band 30_Ant 0	10M	QPSK	1	0	Front face	0mm	27710	2310	19.65	20.00	1.084		1.000	-0.12	2.090	2.266



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	LTE Band 30_Ant 0	10M	QPSK	25	12	Front face	0mm	27710	2310	18.25	20.00	1.496		1.000	-0.05	1.430	2.139
	LTE Band 30_Ant 0	10M	QPSK	1	0	Bottom face	0mm	27710	2310	19.65	20.00	1.084		1.000	-0.05	0.042	0.046
	LTE Band 30_Ant 0	10M	QPSK	25	12	Bottom face	0mm	27710	2310	18.25	20.00	1.496		1.000	0.14	0.038	0.057
	LTE Band 41_Ant 0	20M	QPSK	1	0	Front face	0mm	40620	2593	22.50	23.50	1.259	62.9	1.006	-0.03	0.756	0.958
	LTE Band 41_Ant 0	20M	QPSK	50	0	Front face	0mm	40620	2593	21.49	22.50	1.262	62.9	1.006	0	0.681	0.865
	LTE Band 41_Ant 0	20M	QPSK	1	0	Bottom face	0mm	40620	2593	22.50	23.50	1.259	62.9	1.006	0.05	0.030	0.038
	LTE Band 41_Ant 0	20M	QPSK	50	0	Bottom face	0mm	40620	2593	21.49	22.50	1.262	62.9	1.006	0.14	0.025	0.032
07	LTE Band 41_HPUE_Ant 0	20M	QPSK	1	0	Front face	0mm	40620	2593	25.01	26.50	1.409	42.9	1.009	-0.1	0.832	1.183
	LTE Band 48_Ant 3	20M	QPSK	1	0	Front face	0mm	56150	3641	17.56	18.00	1.107		1.000	0.17	0.046	0.051
	LTE Band 48_Ant 3	20M	QPSK	50	0	Front face	0mm	56150	3641	17.64	18.00	1.086		1.000	0.01	0.032	0.035
08	LTE Band 48_Ant 3	20M	QPSK	1	0	Bottom face	0mm	56150	3641	17.56	18.00	1.107		1.000	-0.04	0.589	0.652
	LTE Band 48_Ant 3	20M	QPSK	50	0	Bottom face	0mm	56150	3641	17.64	18.00	1.086		1.000	0.1	0.481	0.522
09	LTE Band 66_Ant 0	20M	QPSK	1	0	Front face	0mm	132572	1770	22.36	23.00	1.159		1.000	0.01	1.200	1.391
	LTE Band 66_Ant 0	20M	QPSK	50	50	Front face	0mm	132572	1770	22.06	23.00	1.242		1.000	-0.08	1.080	1.341
	LTE Band 66_Ant 0	20M	QPSK	1	0	Bottom face	0mm	132572	1770	22.36	23.00	1.159		1.000	0.05	0.126	0.146
	LTE Band 66_Ant 0	20M	QPSK	50	50	Bottom face	0mm	132572	1770	22.06	23.00	1.242		1.000	0.06	0.116	0.144
10	LTE Band 71_Ant 0	20M	QPSK	1	0	Front face	0mm	133297	680.5	22.78	24.00	1.324		1.000	0.06	0.348	0.461
	LTE Band 71_Ant 0	20M	QPSK	50	50	Front face	0mm	133297	680.5	22.18	23.00	1.208		1.000	0	0.311	0.376
	LTE Band 71_Ant 0	20M	QPSK	1	0	Bottom face	0mm	133297	680.5	22.78	24.00	1.324		1.000	-0.08	0.064	0.085
	LTE Band 71_Ant 0	20M	QPSK	50	50	Bottom face	0mm	133297	680.5	22.18	23.00	1.208		1.000	-0.1	0.054	0.065

< 5G NR SAR >

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
11	FR1 n5_Ant 0	20M	BPSK	1	1	Front face	0mm	167300	836.5	23.29	24.50	1.321		1.000	-0.01	0.267	0.353
	FR1 n5_Ant 0	20M	BPSK	50	28	Front face	0mm	167300	836.5	23.26	24.50	1.330		1.000	0	0.211	0.281
	FR1 n5_Ant 0	20M	BPSK	1	1	Bottom face	0mm	167300	836.5	23.29	24.50	1.321		1.000	0.12	0.074	0.098
	FR1 n5_Ant 0	20M	BPSK	50	28	Bottom face	0mm	167300	836.5	23.26	24.50	1.330		1.000	0.01	0.051	0.068
12	FR1 n25_Ant 0	40M	BPSK	1	1	Front face	0mm	376500	1882.5	22.71	24.50	1.510		1.000	0	0.764	1.154
	FR1 n25_Ant 0	40M	BPSK	108	54	Front face	0mm	376500	1882.5	22.56	24.50	1.563		1.000	0.11	0.721	1.127
	FR1 n25_Ant 0	40M	BPSK	1	1	Bottom face	0mm	376500	1882.5	22.71	24.50	1.510		1.000	0.18	0.050	0.076
	FR1 n25_Ant 0	40M	BPSK	108	54	Bottom face	0mm	376500	1882.5	22.56	24.50	1.563		1.000	-0.06	0.044	0.069
13	FR1 n66_Ant 0	40M	BPSK	1	214	Front face	0mm	349000	1745	23.52	24.50	1.253		1.000	0	0.738	0.925
	FR1 n66_Ant 0	40M	BPSK	108	54	Front face	0mm	349000	1745	23.24	24.50	1.337		1.000	0.06	0.658	0.880
	FR1 n66_Ant 0	40M	BPSK	1	214	Bottom face	0mm	349000	1745	23.52	24.50	1.253		1.000	-0.1	0.036	0.045
	FR1 n66_Ant 0	40M	BPSK	108	54	Bottom face	0mm	349000	1745	23.24	24.50	1.337		1.000	0.09	0.021	0.028
14	FR1 n71_Ant 0	30M	BPSK	1	1	Front face	0mm	136100	680.5	23.87	24.50	1.156		1.000	-0.03	0.217	0.251
	FR1 n71_Ant 0	30M	BPSK	80	40	Front face	0mm	136100	680.5	23.76	24.50	1.186		1.000	0.06	0.185	0.219
	FR1 n71_Ant 0	30M	BPSK	1	1	Bottom face	0mm	136100	680.5	23.87	24.50	1.156		1.000	0.18	0.046	0.053
	FR1 n71_Ant 0	30M	BPSK	80	40	Front face	0mm	136100	680.5	23.76	24.50	1.186		1.000	0.01	0.021	0.025
	FR1 n41_Ant 0+2(0)	100M	QPSK	1	1	Front face	0mm	518598	2592.99	19.98	20.00	1.005	88	1.136	0.03	0.402	0.459
	FR1 n41_Ant 0+2(2)	100M	QPSK	1	1	Front face	0mm	518598	2592.99	19.94	20.00	1.014	88	1.136	0.03	0.348	0.401
	FR1 n41_Ant 0+2(0)	100M	QPSK	135	0	Front face	0mm	518598	2592.99	19.84	20.00	1.038	88	1.136	0	0.351	0.414
	FR1 n41_Ant 0+2(2)	100M	QPSK	135	0	Front face	0mm	518598	2592.99	19.82	20.00	1.042	88	1.136	0	0.298	0.353
	FR1 n41_Ant 0+2(0)	100M	QPSK	1	1	Bottom face	0mm	518598	2592.99	19.98	20.00	1.005	88	1.136	0.01	0.024	0.027
	FR1 n41_Ant 0+2(2)	100M	QPSK	1	1	Bottom face	0mm	518598	2592.99	19.94	20.00	1.014	88	1.136	0.01	0.021	0.024
	FR1 n41_Ant 0+2(0)	100M	QPSK	135	0	Bottom face	0mm	518598	2592.99	19.84	20.00	1.038	88	1.136	0.03	0.018	0.021
	FR1 n41_Ant 0+2(2)	100M	QPSK	135	0	Bottom face	0mm	518598	2592.99	19.82	20.00	1.042	88	1.136	0.03	0.015	0.018
	FR1 n41_HPUE_Ant 0+2(0)	100M	QPSK	1	1	Front face	0mm	518598	2592.99	21.65	23.00	1.365	40	1.250	-0.05	0.256	0.437
	FR1 n41_HPUE_Ant 0+2(2)	100M	QPSK	1	1	Front face	0mm	518598	2592.99	21.57	23.00	1.390	40	1.250	-0.05	0.221	0.384
15	FR1 n41_Ant 2	100M	BPSK	1	1	Front face	0mm	518598	2592.99	22.39	23.00	1.151	88	1.136	-0.08	0.888	1.161
	FR1 n41_Ant 2	100M	BPSK	135	69	Front face	0mm	518598	2592.99	22.00	23.00	1.259	88	1.136	0.09	0.754	1.078
	FR1 n41_Ant 2	100M	BPSK	1	1	Bottom face	0mm	518598	2592.99	22.39	23.00	1.151	88	1.136	0.01	0.036	0.047



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	FR1 n41_Ant 2	100M	BPSK	135	69	Bottom face	0mm	518598	2592.99	22.00	23.00	1.259	88	1.136	0.01	0.025	0.036
	FR1 n41_HPUE_Ant 2	100M	BPSK	1	1	Front face	0mm	518598	2592.99	24.85	25.00	1.035	40	1.250	0.05	0.707	0.915
	FR1 n48_Ant 1+3(1)	40M	QPSK	1	1	Front face	0mm	641666	3624.99	13.24	14.50	1.337	88	1.136	0	0.001	0.002
	FR1 n48_Ant 1+3(3)	40M	QPSK	1	1	Front face	0mm	641666	3624.99	14.24	14.50	1.062	88	1.136	0	0.001	0.001
	FR1 n48_Ant 1+3(1)	40M	QPSK	50	28	Front face	0mm	641666	3624.99	13.13	14.50	1.371	88	1.136	0	0.001	0.002
	FR1 n48_Ant 1+3(3)	40M	QPSK	50	28	Front face	0mm	641666	3624.99	14.13	14.50	1.089	88	1.136	0	0.001	0.001
	FR1 n48_Ant 1+3(1)	40M	QPSK	1	1	Bottom face	0mm	641666	3624.99	13.24	14.50	1.337	88	1.136	-0.11	0.181	0.275
	FR1 n48_Ant 1+3(3)	40M	QPSK	1	1	Bottom face	0mm	641666	3624.99	14.24	14.50	1.062	88	1.136	-0.11	0.062	0.075
	FR1 n48_Ant 1+3(1)	40M	QPSK	50	28	Bottom face	0mm	641666	3624.99	13.13	14.50	1.371	88	1.136	0	0.156	0.243
	FR1 n48_Ant 1+3(3)	40M	QPSK	50	28	Bottom face	0mm	641666	3624.99	14.13	14.50	1.089	88	1.136	0	0.048	0.059
	FR1 n48_Ant 3	40M	BPSK	1	1	Front face	0mm	641666	3624.99	13.65	14.50	1.216	88	1.136	0.02	0.019	0.026
	FR1 n48_Ant 3	40M	BPSK	50	28	Front face	0mm	641666	3624.99	13.50	14.50	1.259	88	1.136	0.11	0.015	0.021
16	FR1 n48_Ant 3	40M	BPSK	1	1	Bottom face	0mm	641666	3624.99	13.65	14.50	1.216	88	1.136	0.07	0.343	0.474
	FR1 n48_Ant 3	40M	BPSK	50	28	Bottom face	0mm	641666	3624.99	13.50	14.50	1.259	88	1.136	0	0.320	0.458
	FR1 n77_Ant 1	100M	BPSK	1	1	Front face	0mm	656000	3840	14.46	15.50	1.271	88	1.136	-0.15	0.105	0.152
	FR1 n77_Ant 1	100M	BPSK	135	69	Front face	0mm	656000	3840	14.33	15.50	1.309	88	1.136	-0.14	0.122	0.181
	FR1 n77_Ant 1	100M	BPSK	1	1	Bottom face	0mm	656000	3840	14.46	15.50	1.271	88	1.136	0.05	0.685	0.989
	FR1 n77_Ant 1	100M	BPSK	135	69	Bottom face	0mm	656000	3840	14.33	15.50	1.309	88	1.136	0.08	0.726	1.080
	FR1 n77_HPUE_Ant 1	100M	BPSK	135	69	Bottom face	0mm	656000	3840	18.19	18.50	1.074	40	1.250	-0.15	0.576	0.773
	FR1 n77_Ant 1	100M	BPSK	1	1	Front face	0mm	633332	3499.98	14.64	15.50	1.219	88	1.136	0.09	0.059	0.082
	FR1 n77_Ant 1	100M	BPSK	135	69	Front face	0mm	633332	3499.98	14.51	15.50	1.256	88	1.136	-0.08	0.064	0.091
	FR1 n77_Ant 1	100M	BPSK	1	1	Bottom face	0mm	633332	3499.98	14.64	15.50	1.219	88	1.136	-0.05	1.000	1.385
	FR1 n77_Ant 1	100M	BPSK	135	69	Bottom face	0mm	633332	3499.98	14.51	15.50	1.256	88	1.136	-0.02	1.050	1.498
	FR1 n77_HPUE_Ant 1	100M	BPSK	135	69	Bottom face	0mm	633332	3499.98	18.11	18.50	1.094	40	1.250	-0.17	0.989	1.352
	FR1 n77_Ant 3	100M	BPSK	1	1	Front face	0mm	656000	3840	14.46	15.50	1.271	88	1.136	0.06	0.054	0.078
	FR1 n77_Ant 3	100M	BPSK	135	69	Front face	0mm	656000	3840	14.36	15.50	1.300	88	1.136	0.05	0.050	0.074
	FR1 n77_Ant 3	100M	BPSK	1	1	Bottom face	0mm	656000	3840	14.46	15.50	1.271	88	1.136	0.05	1.080	1.559
17	FR1 n77_Ant 3	100M	BPSK	135	69	Bottom face	0mm	656000	3840	14.36	15.50	1.300	88	1.136	-0.13	1.270	1.876
	FR1 n77_Ant 3	100M	BPSK	135	69	Bottom face	0mm	650000	3750	14.33	15.50	1.309	88	1.136	0.05	1.100	1.636
	FR1 n77_Ant 3	100M	BPSK	135	69	Bottom face	0mm	662000	3930	14.35	15.50	1.303	88	1.136	0.09	1.070	1.584
	FR1 n77_HPUE_Ant 3	100M	BPSK	135	69	Bottom face	0mm	656000	3840	17.42	18.50	1.282	40	1.250	-0.11	1.100	1.763
	FR1 n77_Ant 3	100M	BPSK	1	1	Front face	0mm	633332	3499.98	14.56	15.50	1.242	88	1.136	0	0.074	0.104
	FR1 n77_Ant 3	100M	BPSK	135	69	Front face	0mm	633332	3499.98	14.50	15.50	1.259	88	1.136	0.03	0.083	0.119
	FR1 n77_Ant 3	100M	BPSK	1	1	Bottom face	0mm	633332	3499.98	14.56	15.50	1.242	88	1.136	0.03	1.150	1.623
	FR1 n77_Ant 3	100M	BPSK	135	69	Bottom face	0mm	633332	3499.98	14.50	15.50	1.259	88	1.136	-0.18	1.210	1.731
	FR1 n77_HPUE_Ant 3	100M	BPSK	135	69	Bottom face	0mm	633332	3499.98	16.96	18.50	1.426	40	1.250	-0.16	0.895	1.595

< WLAN SAR for Skydiolink >

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor For 25%	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
	WLAN2.4GHz	802.11ax-HE10 MCS0	Front face	0mm	NO.1 WLAN ANT 0	6	2437	18.94	19.00	1.014	85.53	0.292	-0.19	1.350	0.400
	WLAN2.4GHz	802.11ax-HE10 MCS0	Front face	0mm	NO.1 WLAN ANT 0	1	2412	18.64	19.00	1.086	85.53	0.292	0.08	1.250	0.396
	WLAN2.4GHz	802.11ax-HE10 MCS0	Front face	0mm	NO.1 WLAN ANT 0	11	2462	18.74	19.00	1.062	85.53	0.292	0.01	1.020	0.316
	WLAN2.4GHz	802.11ax-HE10 MCS0	Front face	0mm	NO.1 WLAN ANT 0	12	2467	18.67	19.00	1.079	85.53	0.292	0.03	1.120	0.353
	WLAN2.4GHz	802.11ax-HE10 MCS0	Front face	0mm	NO.1 WLAN ANT 0	13	2472	18.77	19.00	1.054	85.53	0.292	-0.08	1.060	0.326
	WLAN2.4GHz	802.11ax-HE10 MCS0	Bottom face	0mm	NO.1 WLAN ANT 0	6	2437	18.94	19.00	1.014	85.53	0.292	-0.08	0.001	0.001
18	WLAN2.4GHz	802.11ax-HE10 MCS0	Front face	0mm	NO.1 WLAN ANT 2	6	2437	27.50	27.50	1.000	85.71	0.292	-0.05	7.190	2.099
	WLAN2.4GHz	802.11ax-HE10 MCS0	Front face	0mm	NO.1 WLAN ANT 2	1	2412	27.10	27.50	1.096	85.71	0.292	0.1	6.410	2.051
	WLAN2.4GHz	802.11ax-HE10 MCS0	Front face	0mm	NO.1 WLAN ANT 2	11	2462	27.30	27.50	1.047	85.71	0.292	-0.18	6.510	1.990
	WLAN2.4GHz	802.11ax-HE10 MCS0	Front face	0mm	NO.1 WLAN ANT 2	12	2467	27.30	27.50	1.047	85.71	0.292	0.1	6.570	2.009
	WLAN2.4GHz	802.11ax-HE10 MCS0	Front face	0mm	NO.1 WLAN ANT 2	13	2472	27.30	27.50	1.047	85.71	0.292	0.12	3.070	0.939
	WLAN2.4GHz	802.11ax-HE10 MCS0	Bottom face	0mm	NO.1 WLAN ANT 2	6	2437	27.50	27.50	1.000	85.71	0.292	0.08	0.001	0.001
19	WLAN5GHz	802.11ac-VHT80 MCS0	Front face	0mm	NO.1 WLAN ANT 0	58	5290	18.80	19.00	1.047	85.5	0.292	0.02	1.140	0.349
	WLAN5GHz	802.11ac-VHT80 MCS0	Bottom face	0mm	NO.1 WLAN ANT 0	58	5290	18.80	19.00	1.047	85.5	0.292	-0.17	0.001	0.001
	WLAN5GHz	802.11ac-VHT80 MCS0	Front face	0mm	NO.1 WLAN ANT 2	58	5290	19.00	19.00	1.000	85.5	0.292	0.01	1.110	0.324
	WLAN5GHz	802.11ac-VHT80 MCS0	Bottom face	0mm	NO.1 WLAN ANT 2	58	5290	19.00	19.00	1.000	85.5	0.292	0.14	0.001	0.001
20	WLAN5GHz	802.11ac-VHT80 MCS0	Front face	0mm	NO.1 WLAN ANT 0	138	5690	20.00	20.00	1.000	85.5	0.292	-0.07	1.280	0.374
	WLAN5GHz	802.11ac-VHT80 MCS0	Bottom face	0mm	NO.1 WLAN ANT 0	138	5690	20.00	20.00	1.000	85.5	0.292	0.11	0.001	0.001
	WLAN5GHz	802.11ac-VHT80 MCS0	Front face	0mm	NO.1 WLAN ANT 2	138	5690	20.00	20.00	1.000	85.5	0.292	-0.04	1.030	0.301
	WLAN5GHz	802.11ac-VHT80 MCS0	Bottom face	0mm	NO.1 WLAN ANT 2	138	5690	20.00	20.00	1.000	85.5	0.292	-0.05	0.001	0.001
	WLAN5GHz	802.11a 6Mbps	Front face	0mm	NO.1 WLAN ANT 0	149	5745	23.48	23.50	1.005	93.69	0.267	0.03	2.330	0.625
	WLAN5GHz	802.11a 6Mbps	Bottom face	0mm	NO.1 WLAN ANT 0	149	5745	23.48	23.50	1.005	93.69	0.267	0.18	0.001	0.001
21	WLAN5GHz	802.11a 6Mbps	Front face	0mm	NO.1 WLAN ANT 2	149	5745	24.60	25.00	1.096	96.1	0.260	0.01	3.490	0.995
	WLAN5GHz	802.11a 6Mbps	Bottom face	0mm	NO.1 WLAN ANT 2	149	5745	24.60	25.00	1.096	96.1	0.260	0.14	0.001	0.001

< WLAN SAR for Infra >

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
	WLAN2.4GHz	802.11b 1Mbps	Front face	0mm	NO.2 WLAN ANT 0	13	2472	17.90	18.00	1.023	99.23	1.008	-0.06	0.037	0.038
22	WLAN2.4GHz	802.11b 1Mbps	Bottom face	0mm	NO.2 WLAN ANT 0	13	2472	17.90	18.00	1.023	99.23	1.008	-0.11	0.144	0.148
	WLAN5GHz	802.11ac-VHT160 MCS0	Front face	0mm	NO.2 WLAN ANT 0	50	5250	15.29	15.50	1.050	99.63	1.004	-0.17	0.129	0.136
23	WLAN5GHz	802.11ac-VHT160 MCS0	Bottom face	0mm	NO.2 WLAN ANT 0	50	5250	15.29	15.50	1.050	99.63	1.004	-0.11	0.910	0.959
	WLAN5GHz	802.11ac-VHT160 MCS0	Front face	0mm	NO.2 WLAN ANT 0	114	5570	11.99	12.00	1.002	99.63	1.004	0.03	0.271	0.273
24	WLAN5GHz	802.11ac-VHT160 MCS0	Bottom face	0mm	NO.2 WLAN ANT 0	114	5570	11.99	12.00	1.002	99.63	1.004	0.07	1.600	1.610
	WLAN5GHz	802.11ac-VHT80 MCS0	Front face	0mm	NO.2 WLAN ANT 0	155	5775	12.99	13.00	1.002	99.76	1.002	-0.08	0.253	0.254
25	WLAN5GHz	802.11ac-VHT80 MCS0	Bottom face	0mm	NO.2 WLAN ANT 0	155	5775	12.99	13.00	1.002	99.76	1.002	-0.07	1.200	1.205

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)	Measured APD (W/m^2)	Reported APD (W/m^2)
	WLAN6GHz	802.11ax-HE160 MCS0	Front face	0mm	NO.2 WLAN ANT 0	15	6025	13.00	13.00	1.000	100	1.000	0	0.071	0.071	1.800	1.800
27	WLAN6GHz	802.11ax-HE160 MCS0	Bottom face	0mm	NO.2 WLAN ANT 0	15	6025	13.00	13.00	1.000	100	1.000	-0.07	0.283	0.283	6.490	6.490
	WLAN6GHz	802.11ax-HE160 MCS0	Bottom face	0mm	NO.2 WLAN ANT 0	47	6185	12.60	13.00	1.096	100	1.000	0.1	0.195	0.214	4.550	4.987
	WLAN6GHz	802.11ax-HE160 MCS0	Bottom face	0mm	NO.2 WLAN ANT 0	111	6505	12.60	13.00	1.096	100	1.000	-0.18	0.081	0.089	1.880	2.060
	WLAN6GHz	802.11ax-HE160 MCS0	Bottom face	0mm	NO.2 WLAN ANT 0	143	6665	13.00	13.00	1.000	100	1.000	0.1	0.079	0.079	1.840	1.840
	WLAN6GHz	802.11ax-HE160 MCS0	Bottom face	0mm	NO.2 WLAN ANT 0	207	6985	12.60	13.00	1.096	100	1.000	0.12	0.081	0.089	1.890	2.071

< Bluetooth SAR for Infra >

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
	Bluetooth	1Mbps	Front face	0mm	NO. 2 BT ANT 1	39	2441	8.00	8.00	1.000	76.93	1.083	0.08	0.002	0.002
28	Bluetooth	1Mbps	Bottom face	0mm	NO. 2 BT ANT 1	39	2441	8.00	8.00	1.000	76.93	1.083	0.02	0.003	0.003

**17.2 6GHz PD Test Result**

Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Grid Step (λ)	iPDn	iPD ratio (≥ -1)	Normal psPD (W/m ²)	Total psPD (W/m ²)
WLAN6GHz	802.11ax-HE160 MCS0	Bottom face	2mm	NO.2 WLAN ANT 0	15	6025	13.00	0.0625	7.45	-0.26568909	5.67	5.73
WLAN6GHz	802.11ax-HE160 MCS0	Bottom face	10mm	NO.2 WLAN ANT 0	15	6025	13.00	0.25	7.92		3.65	3.69
WLAN6GHz	802.11ax-HE160 MCS0	Bottom face	2mm	NO.2 WLAN ANT 0	207	6985	12.60	0.0625	2	-0.80987047	1.65	1.67
WLAN6GHz	802.11ax-HE160 MCS0	Bottom face	8.59mm	NO.2 WLAN ANT 0	207	6985	12.60	0.25	2.41		1.42	1.43

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Grid Step (λ)	Scaling Factor for Measurement Uncertainty	Power Drift (dB)	Normal psPD (W/m ²)	Scaled Normal psPD (W/m ²)	Total psPD (W/m ²)	Scaled Total psPD (W/m ²)
01	WLAN6GHz	802.11ax-HE160 MCS0	Front face	2mm	NO.2 WLAN ANT 0	15	6025	13.00	13.00	1.000	100.00	1.000	0.0625	1.5535	0.08	1.57	2.44	1.59	2.47
	WLAN6GHz	802.11ax-HE160 MCS0	Bottom face	2mm	NO.2 WLAN ANT 0	15	6025	13.00	13.00	1.000	100.00	1.000	0.0625	1.5535	0.03	5.67	8.81	5.73	8.90
	WLAN6GHz	802.11ax-HE160 MCS0	Bottom face	2mm	NO.2 WLAN ANT 0	47	6185	12.60	13.00	1.096	100.00	1.000	0.0625	1.5535	0.01	3.98	6.78	4.02	6.85
	WLAN6GHz	802.11ax-HE160 MCS0	Bottom face	2mm	NO.2 WLAN ANT 0	111	6505	12.60	13.00	1.096	100.00	1.000	0.0625	1.5535	0.03	1.65	2.81	1.66	2.83
	WLAN6GHz	802.11ax-HE160 MCS0	Bottom face	2mm	NO.2 WLAN ANT 0	143	6665	13.00	13.00	1.000	100.00	1.000	0.0625	1.5535	-0.08	1.6	2.49	1.62	2.52
	WLAN6GHz	802.11ax-HE160 MCS0	Bottom face	2mm	NO.2 WLAN ANT 0	207	6985	12.60	13.00	1.096	100.00	1.000	0.0625	1.5535	-0.08	1.65	2.81	1.67	2.84



18. Open Mode SAR Test Results

18.1 Body SAR

< LTE SAR >

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	WWAN Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
29	LTE Band 12_Ant 0	10M	QPSK	1	0	Bottom face	0mm	0	23095	707.5	22.42	24.00	1.439			0.04	0.276	0.397
	LTE Band 12_Ant 0	10M	QPSK	25	12	Bottom face	0mm	0	23095	707.5	21.51	23.00	1.409			0.06	0.241	0.340
30	LTE Band 13_Ant 0	10M	QPSK	1	0	Bottom face	0mm	0	23230	782	23.02	24.00	1.253			-0.16	0.368	0.461
	LTE Band 13_Ant 0	10M	QPSK	25	12	Bottom face	0mm	0	23230	782	22.04	23.00	1.247			0.09	0.295	0.368
31	LTE Band 14_Ant 0	10M	QPSK	1	0	Bottom face	0mm	0	23330	793	22.87	24.00	1.297			-0.07	0.256	0.332
	LTE Band 14_Ant 0	10M	QPSK	25	12	Bottom face	0mm	0	23330	793	21.89	23.00	1.291			0.1	0.180	0.232
32	LTE Band 25_Ant 0	20M	QPSK	1	0	Bottom face	0mm	0	26340	1880	22.46	23.00	1.132			0.04	0.278	0.315
	LTE Band 25_Ant 0	20M	QPSK	50	24	Bottom face	0mm	0	26340	1880	21.53	22.00	1.114			0.01	0.198	0.221
33	LTE Band 26_Ant 0	15M	QPSK	1	0	Bottom face	0mm	0	26865	831.5	22.60	24.00	1.380			-0.17	0.228	0.315
	LTE Band 26_Ant 0	15M	QPSK	36	39	Bottom face	0mm	0	26865	831.5	21.60	23.00	1.380			0.16	0.165	0.228
34	LTE Band 30_Ant 0	10M	QPSK	1	0	Bottom face	0mm	0	27710	2310	19.65	20.00	1.084			0.11	0.343	0.372
	LTE Band 30_Ant 0	10M	QPSK	25	12	Bottom face	0mm	0	27710	2310	18.25	20.00	1.496			0.07	0.201	0.301
	LTE Band 41_Ant 0	20M	QPSK	1	0	Bottom face	0mm	0	40620	2593	22.50	23.50	1.259	62.9	1.006	0.01	0.182	0.231
	LTE Band 41_Ant 0	20M	QPSK	50	0	Bottom face	0mm	0	40620	2593	21.49	22.50	1.262	62.9	1.006	0.15	0.156	0.198
35	LTE Band 41_HPUE_Ant 0	20M	QPSK	1	0	Bottom face	0mm	0	40620	2593	25.01	26.50	1.409	42.9	1.009	-0.02	0.214	0.304
	LTE Band 48_Ant 3	20M	QPSK	1	0	Bottom face	0mm	3	55830	3609	17.89	18.00	1.026	62.9	1.006	0.01	0.839	0.866
	LTE Band 48_Ant 3	20M	QPSK	1	0	Bottom face	0mm	3	55340	3560	17.69	18.00	1.074	62.9	1.006	0.19	0.757	0.817
36	LTE Band 48_Ant 3	20M	QPSK	1	0	Bottom face	0mm	3	56150	3641	17.56	18.00	1.107	62.9	1.006	0.02	0.894	0.996
	LTE Band 48_Ant 3	20M	QPSK	1	0	Bottom face	0mm	3	56640	3690	17.52	18.00	1.117	62.9	1.006	0.02	0.721	0.810
	LTE Band 48_Ant 3	20M	QPSK	50	0	Bottom face	0mm	3	55830	3609	17.75	18.00	1.059	62.9	1.006	0.08	0.892	0.950
	LTE Band 48_Ant 3	20M	QPSK	50	0	Bottom face	0mm	3	55340	3560	17.52	18.00	1.117	62.9	1.006	0.06	0.795	0.893
	LTE Band 48_Ant 3	20M	QPSK	50	0	Bottom face	0mm	3	56150	3641	17.64	18.00	1.086	62.9	1.006	0.01	0.863	0.943
	LTE Band 48_Ant 3	20M	QPSK	50	0	Bottom face	0mm	3	56640	3690	17.45	18.00	1.135	62.9	1.006	0.06	0.813	0.928
	LTE Band 48_Ant 3	20M	QPSK	100	0	Bottom face	0mm	3	55830	3609	17.54	18.00	1.112	62.9	1.006	0.11	0.845	0.945
	LTE Band 48_Ant 3	20M	QPSK	1	0	Back side	0mm	3	55830	3609	17.89	18.00	1.026	62.9	1.006	0.04	0.001	0.002
	LTE Band 48_Ant 3	20M	QPSK	50	0	Back side	0mm	3	55830	3609	17.75	18.00	1.059	62.9	1.006	0	0.001	0.002
37	LTE Band 66_Ant 0	20M	QPSK	1	99	Bottom face	0mm	0	132572	1770	22.89	23.00	1.026			0.12	0.162	0.166
	LTE Band 66_Ant 0	20M	QPSK	50	50	Bottom face	0mm	0	132572	1770	22.06	23.00	1.242			0.17	0.131	0.163
	LTE Band 66_Ant 0	20M	QPSK	1	99	Back of cover	25mm	0	132572	1770	22.89	23.00	1.026			0.06	0.097	0.100
	LTE Band 66_Ant 0	20M	QPSK	50	50	Back of cover	25mm	0	132572	1770	22.06	23.00	1.242			0	0.077	0.096
38	LTE Band 71_Ant 0	20M	QPSK	1	49	Bottom face	0mm	0	133297	680.5	22.93	24.00	1.279			0.17	0.240	0.307
	LTE Band 71_Ant 0	20M	QPSK	50	50	Bottom face	0mm	0	133297	680.5	22.18	23.00	1.208			0.05	0.227	0.274
	LTE Band 71_Ant 0	20M	QPSK	1	49	Back of cover	25mm	0	133297	680.5	22.93	24.00	1.279			0.15	0.124	0.159
	LTE Band 71_Ant 0	20M	QPSK	50	50	Back of cover	25mm	0	133297	680.5	22.18	23.00	1.208			0	0.096	0.116

**< 5G NR SAR >**

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	WWAN Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
39	FR1 n5_Ant 0	20M	BPSK	1	1	Bottom face	0mm	0	167300	836.5	23.29	24.50	1.321			0.12	0.114	0.151
	FR1 n5_Ant 0	20M	BPSK	50	28	Bottom face	0mm	0	167300	836.5	23.26	24.50	1.330			0.15	0.091	0.121
40	FR1 n25_Ant 0	40M	BPSK	1	1	Bottom face	0mm	0	376500	1882.5	22.71	24.50	1.510			0	0.186	0.281
	FR1 n25_Ant 0	40M	BPSK	108	54	Bottom face	0mm	0	376500	1882.5	22.56	24.50	1.563			0.05	0.122	0.191
41	FR1 n66_Ant 0	40M	BPSK	1	214	Bottom face	0mm	0	349000	1745	23.52	24.50	1.253			0.12	0.040	0.050
	FR1 n66_Ant 0	40M	BPSK	108	54	Bottom face	0mm	0	349000	1745	23.24	24.50	1.337			0.13	0.030	0.040
42	FR1 n71_Ant 0	30M	BPSK	1	1	Bottom face	0mm	0	136100	680.5	23.87	24.50	1.156			0	0.195	0.225
	FR1 n71_Ant 0	30M	BPSK	80	40	Bottom face	0mm	0	136100	680.5	23.76	24.50	1.186			0.19	0.165	0.196
	FR1 n41_Ant 0+2(0)	100M	QPSK	1	1	Bottom face	0mm	0+2	518598	2592.99	19.98	20.00	1.005	88	1.136	0.02	0.116	0.132
	FR1 n41_Ant 0+2(2)	100M	QPSK	1	1	Bottom face	0mm	0+2	518598	2592.99	19.94	20.00	1.014	88	1.136	0.02	0.076	0.088
	FR1 n41_Ant 0+2(0)	100M	QPSK	135	69	Bottom face	0mm	0+2	518598	2592.99	19.62	20.00	1.091	88	1.136	0.11	0.143	0.177
	FR1 n41_Ant 0+2(2)	100M	QPSK	135	69	Bottom face	0mm	0+2	518598	2592.99	19.81	20.00	1.045	88	1.136	0.11	0.094	0.112
	FR1 n41_HPUE_Ant 0+2(0)	100M	QPSK	135	69	Bottom face	0mm	0+2_HPUE	518598	2592.99	21.35	23.00	1.462	40	1.250	0.04	0.089	0.163
	FR1 n41_HPUE_Ant 0+2(2)	100M	QPSK	135	69	Bottom face	0mm	0+2_HPUE	518598	2592.99	21.56	23.00	1.393	40	1.250	0.04	0.058	0.101
43	FR1 n41_Ant 2	100M	BPSK	1	1	Bottom face	0mm	2	518598	2592.99	22.39	23.00	1.151	88	1.136	-0.04	0.280	0.366
	FR1 n41_Ant 2	100M	BPSK	135	69	Bottom face	0mm	2	518598	2592.99	22.00	23.00	1.259	88	1.136	0.09	0.236	0.338
	FR1 n41_HPUE_Ant 2	100M	BPSK	1	1	Bottom face	0mm	2	518598	2592.99	24.85	25.00	1.035	40	1.250	0.09	0.205	0.265
44	FR1 n48_Ant 1+3(1)	40M	QPSK	1	1	Bottom face	0mm	1+3	641666	3624.99	13.24	14.50	1.337	88	1.136	0.01	0.694	1.054
	FR1 n48_Ant 1+3(3)	40M	QPSK	1	1	Bottom face	0mm	1+3	641666	3624.99	14.24	14.50	1.062	88	1.136	0.01	0.481	0.580
	FR1 n48_Ant 1+3(1)	40M	QPSK	1	1	Bottom face	0mm	1+3	638000	3570	13.16	14.50	1.361	88	1.136	0.05	0.673	1.041
	FR1 n48_Ant 1+3(3)	40M	QPSK	1	1	Bottom face	0mm	1+3	638000	3570	14.16	14.50	1.081	88	1.136	0.05	0.467	0.573
	FR1 n48_Ant 1+3(1)	40M	QPSK	1	1	Bottom face	0mm	1+3	645332	3679.98	13.19	14.50	1.352	88	1.136	0.11	0.677	1.040
	FR1 n48_Ant 1+3(3)	40M	QPSK	1	1	Bottom face	0mm	1+3	645332	3679.98	14.19	14.50	1.074	88	1.136	0.11	0.469	0.573
	FR1 n48_Ant 1+3(1)	40M	QPSK	50	0	Bottom face	0mm	1+3	641666	3624.99	13.18	14.50	1.355	88	1.136	0.03	0.562	0.865
	FR1 n48_Ant 1+3(3)	40M	QPSK	50	0	Bottom face	0mm	1+3	641666	3624.99	14.18	14.50	1.076	88	1.136	0.03	0.399	0.488
	FR1 n48_Ant 1+3(1)	40M	QPSK	50	0	Bottom face	0mm	1+3	638000	3570	13.03	14.50	1.403	88	1.136	0.06	0.536	0.854
	FR1 n48_Ant 1+3(3)	40M	QPSK	50	0	Bottom face	0mm	1+3	638000	3570	13.98	14.50	1.127	88	1.136	0.06	0.368	0.471
	FR1 n48_Ant 1+3(1)	40M	QPSK	50	0	Bottom face	0mm	1+3	645332	3679.98	13.01	14.50	1.409	88	1.136	0.11	0.589	0.943
	FR1 n48_Ant 1+3(3)	40M	QPSK	50	0	Bottom face	0mm	1+3	645332	3679.98	14.09	14.50	1.099	88	1.136	0.11	0.421	0.526
	FR1 n48_Ant 1+3(1)	40M	QPSK	100	0	Bottom face	0mm	1+3	641666	3624.99	13.05	14.50	1.396	88	1.136	0.05	0.469	0.744
	FR1 n48_Ant 1+3(3)	40M	QPSK	100	0	Bottom face	0mm	1+3	641666	3624.99	14.05	14.50	1.109	88	1.136	0.05	0.362	0.456
	FR1 n48_Ant 1+3(1)	40M	QPSK	1	1	Back side	0mm	1+3	641666	3624.99	13.24	14.50	1.337	88	1.136	0	0.001	0.001
	FR1 n48_Ant 1+3(3)	40M	QPSK	1	1	Back side	0mm	1+3	641666	3624.99	14.24	14.50	1.062	88	1.136	0	0.001	0.001
	FR1 n48_Ant 1+3(1)	40M	QPSK	50	0	Back side	0mm	1+3	641666	3624.99	13.18	14.50	1.355	88	1.136	0	0.001	0.001
	FR1 n48_Ant 1+3(3)	40M	QPSK	50	0	Back side	0mm	1+3	641666	3624.99	14.18	14.50	1.076	88	1.136	0	0.001	0.001
	FR1 n48_Ant 3	40M	BPSK	1	1	Bottom face	0mm	3	641666	3624.99	13.65	14.50	1.216	88	1.136	0.01	0.636	0.879
	FR1 n48_Ant 3	40M	BPSK	1	1	Bottom face	0mm	3	638000	3570	13.58	14.50	1.236	88	1.136	0.19	0.552	0.775
	FR1 n48_Ant 3	40M	BPSK	1	1	Bottom face	0mm	3	645332	3679.98	13.62	14.50	1.225	88	1.136	0	0.506	0.705
	FR1 n48_Ant 3	40M	BPSK	50	0	Bottom face	0mm	3	641666	3624.99	13.41	14.50	1.285	88	1.136	0.13	0.592	0.865
	FR1 n48_Ant 3	40M	BPSK	50	0	Bottom face	0mm	3	638000	3570	13.26	14.50	1.330	88	1.136	0.19	0.535	0.809
	FR1 n48_Ant 3	40M	BPSK	50	0	Bottom face	0mm	3	645332	3679.98	13.30	14.50	1.318	88	1.136	0.16	0.500	0.748
	FR1 n48_Ant 3	40M	BPSK	100	0	Bottom face	0mm	3	641666	3624.99	13.45	14.50	1.274	88	1.136	0.05	0.489	0.708
	FR1 n48_Ant 3	40M	BPSK	1	1	Back side	0mm	3	641666	3624.99	13.65	14.50	1.216	88	1.136	0	0.001	0.002
	FR1 n48_Ant 3	40M	BPSK	50	0	Back side	0mm	3	641666	3624.99	13.41	14.50	1.285	88	1.136	0	0.001	0.002
	FR1 n77_Ant 1	100M	BPSK	1	1	Bottom face	0mm	1	656000	3840	14.46	15.50	1.271	88	1.136	-0.14	0.525	0.758
	FR1 n77_Ant 1	100M	BPSK	135	69	Bottom face	0mm	1	656000	3840	14.33	15.50	1.309	88	1.136	0.05	0.496	0.738
	FR1 n77_Ant 1	100M	BPSK	1	1	Back side	0mm	1	656000	3840	14.46	15.50	1.271	88	1.136	0.01	0.001	0.001
	FR1 n77_Ant 1	100M	BPSK	135	69	Back side	0mm	1	656000	3840	14.33	15.50	1.309	88	1.136	0.01	0.001	0.001
	FR1 n77_HPUE_Ant 1	100M	BPSK	1	1	Bottom face	0mm	1	656000	3840	18.41	18.50	1.021	40	1.250	0.01	0.588	0.751
45	FR1 n77_Ant 1	100M	BPSK	1	1	Bottom face	0mm	1	633332	3499.98	14.64	15.50	1.219	88	1.136	0.03	0.652	0.903
	FR1 n77_Ant 1	100M	BPSK	135	69	Bottom face	0mm	1	633332	3499.98	14.51	15.50	1.256	88	1.136	0.04	0.623	0.889
	FR1 n77_Ant 1	100M	BPSK	270	0	Bottom face	0mm	1	633332	3499.98	14.26	15.50	1.330	88	1.136	0.03	0.568	0.858
	FR1 n77_Ant 1	100M	BPSK	1	1	Back side	0mm	1	633332	3499.98	14.64	15.50	1.219	88	1.136	0.14	0.001	0.002



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	FR1 n77_Ant 1	100M	BPSK	135	69	Back side	0mm	1	633332	3499.98	14.51	15.50	1.256	88	1.136	0	0.001	0.002
	FR1 n77_HPUE_Ant 1	100M	BPSK	1	1	Bottom face	0mm	1	633332	3499.98	18.49	18.50	1.002	40	1.250	0.18	0.720	0.902
	FR1 n77_Ant 3	100M	BPSK	1	1	Bottom face	0mm	3	656000	3840	14.46	15.50	1.271	88	1.136	-0.13	0.376	0.543
	FR1 n77_Ant 3	100M	BPSK	135	69	Bottom face	0mm	3	656000	3840	14.36	15.50	1.300	88	1.136	0.18	0.356	0.525
	FR1 n77_Ant 3	100M	BPSK	1	1	Back side	0mm	3	656000	3840	14.46	15.50	1.271	88	1.136	0.12	0.001	0.001
	FR1 n77_Ant 3	100M	BPSK	135	69	Back side	0mm	3	656000	3840	14.36	15.50	1.300	88	1.136	0.12	0.001	0.001
	FR1 n77_HPUE_Ant 3	100M	BPSK	1	1	Bottom face	0mm	3	656000	3840	17.88	18.50	1.153	40	1.250	0.17	0.385	0.555
	FR1 n77_Ant 3	100M	BPSK	1	1	Bottom face	0mm	3	633332	3499.98	14.56	15.50	1.242	88	1.136	-0.1	0.434	0.612
	FR1 n77_Ant 3	100M	BPSK	135	69	Bottom face	0mm	3	633332	3499.98	14.50	15.50	1.259	88	1.136	0	0.284	0.406
	FR1 n77_Ant 3	100M	BPSK	1	1	Back side	0mm	3	633332	3499.98	14.56	15.50	1.242	88	1.136	0.15	0.001	0.001
	FR1 n77_Ant 3	100M	BPSK	135	69	Back side	0mm	3	633332	3499.98	14.50	15.50	1.259	88	1.136	0.15	0.001	0.001
	FR1 n77_HPUE_Ant 3	100M	BPSK	1	1	Bottom face	0mm	3	633332	3499.98	17.56	18.50	1.242	40	1.250	0	0.356	0.553

< WLAN SAR for Skydiolink >

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor For 25%	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN2.4GHz	802.11ax-HE10 MCS0	Bottom face	0mm	NO. 1 WLAN ANT 0	1	2412	18.64	19.00	1.086	85.53	0.292	0.07	0.192	0.061
46	WLAN2.4GHz	802.11ax-HE10 MCS0	Bottom face	0mm	NO. 1 WLAN ANT 2	1	2412	27.10	27.50	1.096	85.71	0.292	-0.02	0.228	0.073
47	WLAN5GHz	802.11ac-VHT80 MCS0	Bottom face	0mm	NO. 1 WLAN ANT 0	58	5290	18.80	19.00	1.047	85.31	0.293	0.09	0.181	0.056
	WLAN5GHz	802.11ac-VHT80 MCS0	Bottom face	0mm	NO. 1 WLAN ANT 2	58	5290	19.00	19.00	1.000	85.5	0.292	0.02	0.154	0.045
48	WLAN5GHz	802.11ac-VHT80 MCS0	Bottom face	0mm	NO. 1 WLAN ANT 0	138	5690	20.00	20.00	1.000	85.31	0.293	0.01	0.221	0.065
	WLAN5GHz	802.11ac-VHT80 MCS0	Bottom face	0mm	NO. 1 WLAN ANT 2	138	5690	20.00	20.00	1.000	85.5	0.292	0.12	0.118	0.034
49	WLAN5GHz	802.11a 6Mbps	Bottom face	0mm	NO. 1 WLAN ANT 0	149	5745	23.48	23.50	1.005	93.69	0.267	0.1	0.449	0.120
	WLAN5GHz	802.11a 6Mbps	Bottom face	0mm	NO. 1 WLAN ANT 2	149	5745	24.60	25.00	1.096	96.1	0.260	-0.17	0.406	0.116

< WLAN SAR for Infra >

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
	WLAN2.4GHz	802.11b 1Mbps	Back side	0mm	NO. 2 WLAN ANT 0	12	2467	17.90	18.00	1.023	99.23	1.008	0.05	0.001	0.001
50	WLAN2.4GHz	802.11b 1Mbps	Bottom face	0mm	NO. 2 WLAN ANT 0	12	2467	17.90	18.00	1.023	99.23	1.008	0	0.236	0.243
	WLAN5GHz	802.11ac-VHT160 MCS0	Back side	0mm	NO. 2 WLAN ANT 0	50	5250	15.29	15.50	1.050	99.37	1.006	0	0.001	0.001
	WLAN5GHz	802.11ac-VHT160 MCS0	Bottom face	0mm	NO. 2 WLAN ANT 0	50	5250	15.29	15.50	1.050	99.37	1.006	0.16	0.938	0.991
	WLAN5GHz	802.11ac-VHT160 MCS0	Bottom face	0mm	NO. 2 WLAN ANT 0	50	5250	15.29	15.50	1.050	99.37	1.006	0.07	0.634	0.670
51	WLAN5GHz	802.11ac-VHT80 MCS0	Bottom face	0mm	NO. 2 WLAN ANT 0	58	5290	15.04	15.50	1.112	99.7	1.003	0.03	0.978	1.091
	WLAN5GHz	802.11ac-VHT160 MCS0	Back side	0mm	NO. 2 WLAN ANT 0	114	5570	11.99	12.00	1.002	99.37	1.006	0	0.001	0.001
52	WLAN5GHz	802.11ac-VHT160 MCS0	Bottom face	0mm	NO. 2 WLAN ANT 0	114	5570	11.99	12.00	1.002	99.37	1.006	0.14	0.431	0.434
	WLAN5GHz	802.11ac-VHT80 MCS0	Back side	0mm	NO. 2 WLAN ANT 0	155	5775	12.99	13.00	1.002	99.7	1.003	0	0.001	0.001
53	WLAN5GHz	802.11ac-VHT80 MCS0	Bottom face	0mm	NO. 2 WLAN ANT 0	155	5775	12.99	13.00	1.002	99.7	1.003	0.02	0.765	0.769

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)	Measured APD (W/m^2)	Reported APD (W/m^2)
	WLAN6GHz	802.11ax-HE160 MCS0	Back side	0mm	NO. 2 WLAN ANT 0	15	6025	13.00	13.00	1.000	100	1.000	0.05	0.001	0.001	0.001	0.001
55	WLAN6GHz	802.11ax-HE160 MCS0	Bottom face	0mm	NO. 2 WLAN ANT 0	15	6025	13.00	13.00	1.000	100	1.000	-0.07	1.080	1.080	9.090	9.090
	WLAN6GHz	802.11ax-HE160 MCS0	Bottom face	0mm	NO. 2 WLAN ANT 0	47	6185	12.60	13.00	1.096	100	1.000	0.01	0.712	0.780	5.990	6.565
	WLAN6GHz	802.11ax-HE160 MCS0	Bottom face	0mm	NO. 2 WLAN ANT 0	111	6505	12.60	13.00	1.096	100	1.000	0.06	0.264	0.289	2.220	2.433
	WLAN6GHz	802.11ax-HE160 MCS0	Bottom face	0mm	NO. 2 WLAN ANT 0	143	6665	13.00	13.00	1.000	100	1.000	0.07	0.269	0.269	2.270	2.270
	WLAN6GHz	802.11ax-HE160 MCS0	Bottom face	0mm	NO. 2 WLAN ANT 0	207	6985	12.60	13.00	1.096	100	1.000	0.08	0.289	0.317	2.440	2.674

< Bluetooth SAR for Infra >

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Reported 1g SAR (W/kg)
56	Bluetooth	1Mbps	Back side	0mm	NO. 2 BT ANT 1	39	2441	8.00	8.00	1.000	76.93	1.083	-0.01	0.223	0.242
	Bluetooth	1Mbps	Bottom face	0mm	NO. 2 BT ANT 1	39	2441	8.00	8.00	1.000	76.93	1.083	0	0.001	0.001

18.2 Extremity SAR
< LTE SAR >

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	WWAN Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
57	LTE Band 48_Ant 3	20M	QPSK	1	0	Top side	0mm	3	55340	3560	17.69	18.00	1.074	62.9	1.006	-0.06	0.104	0.112
	LTE Band 48_Ant 3	20M	QPSK	50	0	Top side	0mm	3	55340	3560	17.52	18.00	1.117	62.9	1.006	0.06	0.095	0.107
	LTE Band 48_Ant 3	20M	QPSK	1	0	Right side	0mm	3	55340	3560	17.69	18.00	1.074	62.9	1.006	0	0.001	0.001
	LTE Band 48_Ant 3	20M	QPSK	50	0	Right side	0mm	3	55340	3560	17.52	18.00	1.117	62.9	1.006	0	0.001	0.001

< 5G NR SAR >

Plot No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	WWAN Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
58	FR1 n48_Ant 1+3(1)	40M	QPSK	1	1	Top side	0mm	1+3	641666	3624.99	13.24	14.50	1.337	88	1.136	0.12	0.156	0.237
	FR1 n48_Ant 1+3(3)	40M	QPSK	1	1	Top side	0mm	1+3	641666	3624.99	14.24	14.50	1.062	88	1.136	0.12	0.092	0.111
	FR1 n48_Ant 1+3(1)	40M	QPSK	1	1	Top side	0mm	1+3	638000	3570	13.16	14.50	1.361	88	1.136	0.04	0.152	0.235
	FR1 n48_Ant 1+3(3)	40M	QPSK	1	1	Top side	0mm	1+3	638000	3570	14.16	14.50	1.081	88	1.136	0.04	0.090	0.111
	FR1 n48_Ant 1+3(1)	40M	QPSK	1	1	Top side	0mm	1+3	645332	3679.98	13.19	14.50	1.352	88	1.136	0.02	0.153	0.235
	FR1 n48_Ant 1+3(3)	40M	QPSK	1	1	Top side	0mm	1+3	645332	3679.98	14.19	14.50	1.074	88	1.136	0.02	0.091	0.111
	FR1 n48_Ant 1+3(1)	40M	QPSK	50	0	Top side	0mm	1+3	638000	3570	13.03	14.50	1.403	88	1.136	0.04	0.126	0.201
	FR1 n48_Ant 1+3(3)	40M	QPSK	50	0	Top side	0mm	1+3	638000	3570	13.98	14.50	1.127	88	1.136	0.04	0.075	0.096
	FR1 n48_Ant 1+3(1)	40M	QPSK	50	0	Top side	0mm	1+3	645332	3679.98	13.01	14.50	1.409	88	1.136	0.03	0.115	0.184
	FR1 n48_Ant 1+3(3)	40M	QPSK	50	0	Top side	0mm	1+3	645332	3679.98	14.09	14.50	1.099	88	1.136	0.03	0.065	0.081
	FR1 n48_Ant 1+3(1)	40M	QPSK	50	0	Top side	0mm	1+3	641666	3624.99	13.18	14.50	1.355	88	1.136	0.02	0.102	0.157
	FR1 n48_Ant 1+3(3)	40M	QPSK	50	0	Top side	0mm	1+3	641666	3624.99	14.18	14.50	1.076	88	1.136	0.02	0.052	0.064
	FR1 n48_Ant 1+3(1)	40M	QPSK	1	1	Right side	0mm	1+3	641666	3624.99	13.24	14.50	1.337	88	1.136	0	0.001	0.002
	FR1 n48_Ant 1+3(3)	40M	QPSK	50	0	Right side	0mm	1+3	641666	3624.99	14.18	14.50	1.076	88	1.136	0	0.001	0.001
	FR1 n48_Ant 1+3(1)	40M	QPSK	1	1	Left side	0mm	1+3	641666	3624.99	13.24	14.50	1.337	88	1.136	0.1	0.001	0.002
	FR1 n48_Ant 1+3(3)	40M	QPSK	50	0	Left side	0mm	1+3	641666	3624.99	14.18	14.50	1.076	88	1.136	0	0.001	0.001
	FR1 n48_Ant 3	40M	BPSK	1	1	Top side	0mm	3	641666	3624.99	13.65	14.50	1.216	88	1.136	-0.17	0.035	0.048
	FR1 n48_Ant 3	40M	BPSK	50	0	Top side	0mm	3	641666	3624.99	13.41	14.50	1.285	88	1.136	0	0.025	0.036
	FR1 n48_Ant 3	40M	BPSK	1	1	Right side	0mm	3	641666	3624.99	13.65	14.50	1.216	88	1.136	0.17	0.001	0.001
	FR1 n48_Ant 3	40M	BPSK	50	0	Right side	0mm	3	641666	3624.99	13.41	14.50	1.285	88	1.136	0	0.001	0.001
	FR1 n77_Ant 1	100M	BPSK	1	1	Top side	0mm	1	656000	3840	14.46	15.50	1.271	88	1.136	0.11	0.105	0.151
	FR1 n77_Ant 1	100M	BPSK	135	69	Top side	0mm	1	656000	3840	14.33	15.50	1.309	88	1.136	0.06	0.095	0.141
	FR1 n77_Ant 1	100M	BPSK	1	1	Left side	0mm	1	656000	3840	14.46	15.50	1.271	88	1.136	0.12	0.001	0.001
	FR1 n77_Ant 1	100M	BPSK	135	69	Left side	0mm	1	656000	3840	14.33	15.50	1.309	88	1.136	0	0.001	0.001
	FR1 n77_HPUE_Ant 1	100M	BPSK	1	1	Top side	0mm	1	656000	3840	18.41	18.50	1.021	40	1.250	0.09	0.122	0.156
	FR1 n77_Ant 1	100M	BPSK	1	1	Top side	0mm	1	633332	3499.98	14.64	15.50	1.219	88	1.136	-0.03	0.139	0.192
	FR1 n77_Ant 1	100M	BPSK	135	69	Top side	0mm	1	633332	3499.98	14.51	15.50	1.256	88	1.136	0.18	0.098	0.140
	FR1 n77_Ant 1	100M	BPSK	1	1	Left side	0mm	1	633332	3499.98	14.64	15.50	1.219	88	1.136	0.09	0.001	0.001
	FR1 n77_Ant 1	100M	BPSK	135	69	Left side	0mm	1	633332	3499.98	14.51	15.50	1.256	88	1.136	0	0.001	0.001
59	FR1 n77_HPUE_Ant 1	100M	BPSK	1	1	Top side	0mm	1	633332	3499.98	18.49	18.50	1.002	40	1.250	0.01	0.155	0.194



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FR1 n77_Ant 3	100M	BPSK	1	1	Top side	0mm	3	656000	3840	14.46	15.50	1.271	88	1.136	0.04	0.054	0.078
FR1 n77_Ant 3	100M	BPSK	135	69	Top side	0mm	3	656000	3840	14.36	15.50	1.300	88	1.136	0.16	0.040	0.059
FR1 n77_Ant 3	100M	BPSK	1	1	Right side	0mm	3	656000	3840	14.46	15.50	1.271	88	1.136	0.05	0.001	0.001
FR1 n77_Ant 3	100M	BPSK	135	69	Right side	0mm	3	656000	3840	14.36	15.50	1.300	88	1.136	0.07	0.001	0.001
FR1 n77_HPUE_Ant 3	100M	BPSK	1	1	Top side	0mm	3	656000	3840	17.88	18.50	1.153	40	1.250	0.05	0.059	0.085
FR1 n77_Ant 3	100M	BPSK	1	1	Top side	0mm	3	633332	3499.98	14.56	15.50	1.242	88	1.136	0.07	0.072	0.102
FR1 n77_Ant 3	100M	BPSK	135	69	Top side	0mm	3	633332	3499.98	14.50	15.50	1.259	88	1.136	0.05	0.061	0.087
FR1 n77_Ant 3	100M	BPSK	1	1	Right side	0mm	3	633332	3499.98	14.56	15.50	1.242	88	1.136	0.01	0.001	0.001
FR1 n77_Ant 3	100M	BPSK	135	69	Right side	0mm	3	633332	3499.98	14.50	15.50	1.259	88	1.136	0.07	0.001	0.001
FR1 n77_HPUE_Ant 3	100M	BPSK	1	1	Top side	0mm	3	633332	3499.98	17.56	18.50	1.242	40	1.250	0.14	0.059	0.092

< WLAN SAR for Infra >

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
60	WLAN2.4GHz	802.11b 1Mbps	Top Side	0mm	NO. 2 WLAN ANT 0	12	2467	17.90	18.00	1.023	99.23	1.008	-0.06	0.006	0.006
	WLAN2.4GHz	802.11b 1Mbps	Back side	0mm	NO. 2 WLAN ANT 0	12	2467	17.90	18.00	1.023	99.23	1.008	0	0.001	0.001
61	WLAN5GHz	802.11ac-VHT160 MCS0	Top Side	0mm	NO. 2 WLAN ANT 0	50	5250	15.29	15.50	1.050	99.37	1.006	0.06	0.045	0.048
	WLAN5GHz	802.11ac-VHT160 MCS0	Back side	0mm	NO. 2 WLAN ANT 0	50	5250	15.29	15.50	1.050	99.37	1.006	0	0.001	0.001
62	WLAN5GHz	802.11ac-VHT160 MCS0	Top Side	0mm	NO. 2 WLAN ANT 0	114	5570	11.99	12.00	1.002	99.37	1.006	0.02	0.006	0.006
	WLAN5GHz	802.11ac-VHT160 MCS0	Back side	0mm	NO. 2 WLAN ANT 0	114	5570	11.99	12.00	1.002	99.37	1.006	0	0.001	0.001
63	WLAN5GHz	802.11ac-VHT80 MCS0	Top Side	0mm	NO. 2 WLAN ANT 0	155	5775	12.99	13.00	1.002	99.7	1.003	0.08	0.020	0.020
	WLAN5GHz	802.11ac-VHT80 MCS0	Back side	0mm	NO. 2 WLAN ANT 0	155	5775	12.99	13.00	1.002	99.7	1.003	0	0.001	0.001

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)	Measured APD (W/m^2)	Reported APD (W/m^2)
65	WLAN6GHz	802.11ax-HE160 MCS0	Top Side	0mm	NO. 2 WLAN ANT 0	15	6025	13.00	13.00	1.000	100	1.000	0.15	0.061	0.061	1.400	1.400
	WLAN6GHz	802.11ax-HE160 MCS0	Back side	0mm	NO. 2 WLAN ANT 0	15	6025	13.00	13.00	1.000	100	1.000	0	0.001	0.001	0.001	0.001
	WLAN6GHz	802.11ax-HE160 MCS0	Top Side	0mm	NO. 2 WLAN ANT 0	47	6185	12.60	13.00	1.096	100	1.000	0.05	0.054	0.059	1.230	1.348
	WLAN6GHz	802.11ax-HE160 MCS0	Top Side	0mm	NO. 2 WLAN ANT 0	111	6505	12.60	13.00	1.096	100	1.000	0.11	0.026	0.028	0.596	0.653
	WLAN6GHz	802.11ax-HE160 MCS0	Top Side	0mm	NO. 2 WLAN ANT 0	143	6665	13.00	13.00	1.000	100	1.000	0.16	0.033	0.033	0.757	0.757
	WLAN6GHz	802.11ax-HE160 MCS0	Top Side	0mm	NO. 2 WLAN ANT 0	207	6985	12.60	13.00	1.096	100	1.000	-0.06	0.048	0.053	1.100	1.206

< Bluetooth SAR for Infra >

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Reported 10g SAR (W/kg)
	Bluetooth	1Mbps	Front face	0mm	NO. 2 BT ANT 1	39	2441	8.00	8.00	1.000	76.93	1.083	0	0.001	0.001
	Bluetooth	1Mbps	Top Side	0mm	NO. 2 BT ANT 1	39	2441	8.00	8.00	1.000	76.93	1.083	0	0.001	0.001
66	Bluetooth	1Mbps	Back side	0mm	NO. 2 BT ANT 1	39	2441	8.00	8.00	1.000	76.93	1.083	-0.01	0.084	0.091

18.3 6GHz PD Test Result

Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Grid Step (λ)	iPDn	iPD ratio (≥ -1)	Normal psPD (W/m ²)	Total psPD (W/m ²)
WLAN6GHz	802.11ax-HE160 MCS0	Bottom face	2mm	NO.2 WLAN ANT 0	15	6025	13.00	0.0625	5.6	-0.26328939	5.25	5.44
WLAN6GHz	802.11ax-HE160 MCS0	Bottom face	10mm	NO.2 WLAN ANT 0	15	6025	13.00	0.25	5.95		3.38	3.5
WLAN6GHz	802.11ax-HE160 MCS0	Bottom face	2mm	NO.2 WLAN ANT 0	207	6985	12.60	0.0625	1.5	-0.81587316	1.41	1.46
WLAN6GHz	802.11ax-HE160 MCS0	Bottom face	8.59mm	NO.2 WLAN ANT 0	207	6985	12.60	0.25	1.81		1.21	1.25

Plot No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Grid Step (λ)	Scaling Factor for Measurement Uncertainty	Power Drift (dB)	Normal psPD (W/m ²)	Scaled Normal psPD (W/m ²)	Total psPD (W/m ²)	Scaled Total psPD (W/m ²)
	WLAN6GHz	802.11ax-HE160 MCS0	Back side	2mm	NO.2 WLAN ANT 0	15	6025	13.00	13.00	1.000	100.00	1.000	0.0625	1.5535	0	0	0.00	0	0.00
02	WLAN6GHz	802.11ax-HE160 MCS0	Bottom face	2mm	NO.2 WLAN ANT 0	15	6025	13.00	13.00	1.000	100.00	1.000	0.0625	1.5535	0	5.25	8.16	5.44	8.45
	WLAN6GHz	802.11ax-HE160 MCS0	Bottom face	2mm	NO.2 WLAN ANT 0	47	6185	12.60	13.00	1.096	100.00	1.000	0.0625	1.5535	-0.08	3.46	5.89	3.58	6.10
	WLAN6GHz	802.11ax-HE160 MCS0	Bottom face	2mm	NO.2 WLAN ANT 0	111	6505	12.60	13.00	1.096	100.00	1.000	0.0625	1.5535	0.1	1.28	2.18	1.33	2.27
	WLAN6GHz	802.11ax-HE160 MCS0	Bottom face	2mm	NO.2 WLAN ANT 0	143	6665	13.00	13.00	1.000	100.00	1.000	0.0625	1.5535	-0.18	1.31	2.04	1.36	2.11
	WLAN6GHz	802.11ax-HE160 MCS0	Bottom face	2mm	NO.2 WLAN ANT 0	207	6985	12.60	13.00	1.096	100.00	1.000	0.0625	1.5535	0.1	1.41	2.40	1.46	2.49

18.4 Repeated SAR Measurement

<Close>

No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Power Drift (dB)	Measured 10g SAR (W/kg)	Ratio	Reported 10g SAR (W/kg)
1st	LTE Band 30_Ant 0	10M	QPSK	1	0	Front face	0mm	27710	2310	19.65	20.00	1.084	-0.12	2.090	-	2.266
2nd	LTE Band 30_Ant 0	10M	QPSK	1	0	Front face	0mm	27710	2310	19.65	20.00	1.084	-0.05	1.980	1.06	2.146

<Open>

No.	Band	BW (MHz)	Modulation	RB Size	RB offset	Test Position	Gap (mm)	WWAN Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Ratio	Reported 1g SAR (W/kg)
1st	LTE Band 48_Ant 3	20M	QPSK	1	0	Bottom face	0mm	3	56150	3641	17.56	18.00	1.107	62.9	1.006	0.02	0.894	-	0.996
2nd	LTE Band 48_Ant 3	20M	QPSK	1	0	Bottom face	0mm	3	56150	3641	17.56	18.00	1.107	62.9	1.006	0.02	0.877	1.02	0.977

No.	Band	Mode	Test Position	Gap (mm)	Antenna	Ch.	Freq. (MHz)	Average Power (dBm)	Tune-Up Limit (dBm)	Tune-up Scaling Factor	Duty Cycle %	Duty Cycle Scaling Factor	Power Drift (dB)	Measured 1g SAR (W/kg)	Ratio	Reported 1g SAR (W/kg)
1st	WLAN5GHz	802.11ac-VHT80 MCS0	Bottom face	0mm	NO. 2 WLAN ANT 0	58	5290	15.04	15.50	1.112	99.7	1.003	0.03	0.978	-	1.091
2nd	WLAN5GHz	802.11ac-VHT80 MCS0	Bottom face	0mm	NO. 2 WLAN ANT 0	58	5290	15.04	15.50	1.112	99.7	1.003	0.05	0.923	1.06	1.029
1st	WLAN6GHz	802.11ax-HE160 MCS0	Bottom face	0mm	NO. 2 WLAN ANT 0	15	6025	13.00	13.00	1.000	100	1.000	-0.07	1.080	-	1.080
2nd	WLAN6GHz	802.11ax-HE160 MCS0	Bottom face	0mm	NO. 2 WLAN ANT 0	15	6025	13.00	13.00	1.000	100	1.000	0.09	0.945	1.14	0.945

General Note:

- Per KDB 865664 D01v01r04, for each frequency band, repeated SAR measurement is required only when the measured SAR is ≥ 0.8 W/kg.
- Per KDB 865664 D01v01r04, if the ratio among the repeated measurement is ≤ 1.2 and the measured SAR < 1.45 W/kg, only one repeated measurement is required.
- Per KDB 865664 D01v01r04, if the extremity repeated SAR is necessary, the same procedures should be adapted for measurements according to extremity and occupational exposure limits by applying a factor of 2.5 for extremity exposure and a factor of 5 for occupational exposure to the corresponding SAR thresholds.
- The ratio is the difference in percentage between original and repeated *measured* SAR.
- All measurement SAR result is scaled-up to account for tune-up tolerance and is compliant.

18.5 Power Class 2 and Power Class 3 Linearity

General Note:

This device support Power Class 2 and Power Class 3 operations. Based on the device behavior, all SAR tests were performed using Power Class 3. Power Class 2 is tested using the highest SAR test configuration in Power Class 3 for each LTE and FR1 configuration and exposure condition combination, according to the highest time averaged power for Power Class 2. When the reported SAR vs. output power is linearly scaled with < 10% discrepancy between power classes and all reported SAR are < 1.4 W/kg, Separate SAR testing for Power Class 2 is not required. Use PC3 power level and SAR to estimated PC2 SAR linearly, and check if the deviation from the measured PC2 SAR is < 10%

< Close >

	LTE Band 41_Ant 0	LTE Band 41_Ant 0
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	23.5	26.5
Reported 1g SAR (W/kg)	0.958	1.183
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	141.71	193.41
Linearity SAR(W/kg)	1.31	
% deviation from expected linearity		-9.52%

	FR1 n41_Ant 0+2	FR1 n41_Ant 0+2
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	20	23
Reported 1g SAR (W/kg)	0.459	0.437
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	100.00	99.76
Linearity SAR(W/kg)	0.46	
% deviation from expected linearity		-4.57%

	FR1 n41_Ant 2	FR1 n41_Ant 2
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	23	25
Reported 1g SAR (W/kg)	1.161	0.915
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	199.53	158.11
Linearity SAR(W/kg)	0.92	
% deviation from expected linearity		-0.55%

	FR1 n77_Ant 1_(FCC Part 27Q)	FR1 n77_Ant 1_(FCC Part 27Q)
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	15.5	18.5
Reported 1g SAR (W/kg)	1.498	1.352
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	35.48	35.40
Linearity SAR(W/kg)	1.49	
% deviation from expected linearity		-9.53%

	FR1 n77_Ant 3_(FCC Part 27O)	FR1 n77_Ant 3_(FCC Part 27O)
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	15.5	18.5
Reported 1g SAR (W/kg)	1.876	1.763
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	35.48	35.40
Linearity SAR(W/kg)	1.87	
% deviation from expected linearity		-5.80%

< Open >

Body

	LTE Band 41_Ant 0	LTE Band 41_Ant 0
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	23.5	26.5
Reported 1g SAR (W/kg)	0.231	0.304
Duty Cycle	63.30%	43.30%
Frame Averaged (mW)	141.71	193.41
Linearity SAR(W/kg)	0.32	
% deviation from expected linearity		-3.58%

	FR1 n41_Ant 0+2	FR1 n41_Ant 0+2
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	20	23
Reported 1g SAR (W/kg)	0.177	0.163
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	100.00	99.76
Linearity SAR(W/kg)	0.18	
% deviation from expected linearity		-7.69%

	FR1 n41_Ant 2	FR1 n41_Ant 2
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	23	25
Reported 1g SAR (W/kg)	0.366	0.265
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	199.53	158.11
Linearity SAR(W/kg)	0.29	
% deviation from expected linearity		-8.63%

	FR1 n77_Ant 1_ (FCC Part 27Q)	FR1 n77_Ant 1_ (FCC Part 27Q)
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	15.5	18.5
Reported 1g SAR (W/kg)	0.903	0.902
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	35.48	35.40
Linearity SAR(W/kg)	0.90	
% deviation from expected linearity		0.13%

	FR1 n77_Ant 3_(FCC Part 27Q)	FR1 n77_Ant 3_(FCC Part 27Q)
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	15.5	18.5
Reported 1g SAR (W/kg)	0.612	0.553
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	35.48	35.40
Linearity SAR(W/kg)	0.61	
% deviation from expected linearity		-9.43%

Extremity

	FR1 n77_Ant 1_ (FCC Part 27Q)	FR1 n77_Ant 1_ (FCC Part 27Q)
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	15.5	18.5
Reported 1g SAR (W/kg)	0.192	0.194
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	35.48	35.40
Linearity SAR(W/kg)	0.19	
% deviation from expected linearity		1.28%

	FR1 n77_Ant 3_ (FCC Part 27Q)	FR1 n77_Ant 3_ (FCC Part 27Q)
	(Power Class 3)	(Power Class 2)
Maximum Tune up Power (dBm)	15.5	18.5
Reported 1g SAR (W/kg)	0.102	0.092
Duty Cycle	100.00%	50.00%
Frame Averaged (mW)	35.48	35.40
Linearity SAR(W/kg)	0.10	
% deviation from expected linearity		-9.59%

19. Simultaneous Transmission Analysis

NO.	Simultaneous Transmission Configurations	Body	Extremity
Close Mode			
1.	WWAN + WLAN2.4GHz NO.1 WLAN ANT 0 + WLAN2.4GHz NO.1 WLAN ANT 2 + WLAN5GHz NO.2 WLAN ANT 0		Yes
2.	WWAN + WLAN2.4GHz NO.1 WLAN ANT 0 + WLAN2.4GHz NO.1 WLAN ANT 2 + WLAN6GHz NO.2 WLAN ANT 0		Yes
3.	WWAN + WLAN5GHz NO.1 WLAN ANT 0 + WLAN5GHz NO.1 WLAN ANT 2 + WLAN2.4GHz NO.2 WLAN ANT 0 + Bluetooth NO.2 BT ANT 1		Yes
4.	WWAN + WLAN5GHz NO.1 WLAN ANT 0 + WLAN5GHz NO.1 WLAN ANT 2 + WLAN5GHz NO.2 WLAN ANT 0 + Bluetooth NO.2 BT ANT 1		Yes
5.	WWAN + WLAN5GHz NO.1 WLAN ANT 0 + WLAN5GHz NO.1 WLAN ANT 2 + WLAN6GHz NO.2 WLAN ANT 0 + Bluetooth NO.2 BT ANT 1		Yes
Open Mode			
6.	WWAN + WLAN2.4GHz NO.1 WLAN ANT 0 + WLAN2.4GHz NO.1 WLAN ANT 2 + WLAN5GHz NO.2 WLAN ANT 0	Yes	Yes
7.	WWAN + WLAN2.4GHz NO.1 WLAN ANT 0 + WLAN2.4GHz NO.1 WLAN ANT 2 + WLAN6GHz NO.2 WLAN ANT 0	Yes	Yes
8.	WWAN + WLAN5GHz NO.1 WLAN ANT 0 + WLAN5GHz NO.1 WLAN ANT 2 + WLAN2.4GHz NO.2 WLAN ANT 0 + Bluetooth NO.2 BT ANT 1	Yes	Yes
9.	WWAN + WLAN5GHz NO.1 WLAN ANT 0 + WLAN5GHz NO.1 WLAN ANT 2 + WLAN5GHz NO.2 WLAN ANT 0 + Bluetooth NO.2 BT ANT 1	Yes	Yes
10.	WWAN + WLAN5GHz NO.1 WLAN ANT 0 + WLAN5GHz NO.1 WLAN ANT 2 + WLAN6GHz NO.2 WLAN ANT 0 + Bluetooth NO.2 BT ANT 1	Yes	Yes

General Note:

1. The worst case WLAN reported SAR for each configuration was used for SAR summation. Therefore, the following summations represent the absolute worst cases for simultaneous transmission with WLAN.
2. The Scaled SAR summation is calculated based on the same configuration and test position.
3. Per KDB 447498 D01v06, simultaneous transmission SAR is compliant if,
 - i) Scalar SAR summation < 1g 1.6W/kg or 10g 4.0W/kg.
 - ii) $SPLSR = (SAR1 + SAR2)^{1.5} / (\text{min. separation distance, mm})$, and the peak separation distance is determined from the square root of $[(x1-x2)^2 + (y1-y2)^2 + (z1-z2)^2]$, where (x1, y1, z1) and (x2, y2, z2) are the coordinates of the extrapolated peak SAR locations in the zoom scan.
 - iii) If $SPLSR \leq 0.04$ for 1g SAR, ≤ 0.1 for 10g SAR, simultaneously transmission SAR measurement is not necessary.
 - iv) Simultaneously transmission SAR measurement, and the reported multi-band 1g SAR < 1.6W/kg or 10g SAR < 4.0W/kg.
 - v) Simultaneously transmission SAR measurement, and the reported multi-band SAR < 1.6W/kg.
 - vi) The SPLSR calculated results please refer to section 18.3.

**19.1 Body Exposure Conditions**

<Open>

WWAN Antenna	Exposure Position	0	2	3	4	5	6	7	8	9	0+2+3+7 Summed 1g SAR (W/kg)	0+2+3+8 Summed 1g SAR (W/kg)	0+4+5+6+9 Summed 1g SAR (W/kg)	0+4+5+7+9 Summed 1g SAR (W/kg)	0+4+5+8+9 Summed 1g SAR (W/kg)	SPLSR	Case No
		WWAN	WLAN2.4GHz NO. 1 WLAN ANT 0	WLAN2.4GHz NO. 1 WLAN ANT 2	WLAN5GHz NO. 1 WLAN ANT 0	WLAN5GHz NO. 1 WLAN ANT 2	WLAN2.4GHz NO. 2 WLAN ANT 0	WLAN5GHz NO. 2 WLAN ANT 0	WLAN6GHz NO. 2 WLAN ANT 0	Bluetooth NO. 2 BT ANT 1							
		10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)							
Ant 0	Bottom Face at 0mm	0.461	0.061	0.073	0.120	0.116	0.243	1.091	1.080	0.001	1.686	1.675	0.941	1.789	1.778	Case 5	0.040
	Back side at 0mm						0.001	0.001	0.001	0.242	0.001	0.001	0.243	0.243	0.243		
Ant 1	Bottom Face at 0mm	1.054	0.061	0.073	0.120	0.116	0.243	1.091	1.080	0.001	2.279	2.268	1.534	2.382	2.371	Case 1	0.040
	Back side at 0mm	0.002					0.001	0.001	0.001	0.242	0.003	0.003	0.245	0.245	0.245		
Ant 2	Bottom Face at 0mm	0.366	0.061	0.073	0.120	0.116	0.243	1.091	1.080	0.001	1.591	1.580	0.846	1.694	1.683	Case 3	0.020
	Back side at 0mm						0.001	0.001	0.001	0.242	0.001	0.001	0.243	0.243	0.243		
Ant 3	Bottom Face at 0mm	0.996	0.061	0.073	0.120	0.116	0.243	1.091	1.080	0.001	2.221	2.210	1.476	2.324	2.313	Case 2	0.040
	Back side at 0mm	0.002					0.001	0.001	0.001	0.242	0.003	0.003	0.245	0.245	0.245		

19.2 Extremity Exposure Conditions

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WWAN Band	Exposure Position	0	1	2	3	4	5	6	7	8	0+1+2+6 Summed 10g SAR (W/kg)	0+1+2+7 Summed 10g SAR (W/kg)	0+3+4+5+8 Summed 10g SAR (W/kg)	0+3+4+6+8 Summed 10g SAR (W/kg)	0+3+4+7+8 Summed 10g SAR (W/kg)	SPLSR	Case No
		WWAN	WLAN2.4GHz NO.1 WLAN ANT 0	WLAN2.4GHz NO.1 WLAN ANT 2	WLAN5GHz NO.1 WLAN ANT 0	WLAN5GHz NO.1 WLAN ANT 2	WLAN2.4GHz NO.2 WLAN ANT 0	WLAN5GHz NO.2 WLAN ANT 0	WLAN6GHz NO.2 WLAN ANT 0	Bluetooth NO. 2 BT ANT 1							
		10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)							
MAX SAR Ant 0	Front Face at 0mm	2.266	0.400	2.099	0.625	0.995	0.038	0.319	0.071	0.002	5.084	4.836	3.926	4.207	3.959	0.070	Case 1
	Bottom Face at 0mm	0.146	0.001	0.001	0.001	0.001	0.148	1.610	0.283	0.003	1.758	0.431	0.299	1.761	0.434		
MAX SAR Ant 1	Front Face at 0mm	0.181	0.400	2.099	0.625	0.995	0.038	0.319	0.071	0.002	2.999	2.751	1.841	2.122	1.874		
	Bottom Face at 0mm	1.498	0.001	0.001	0.001	0.001	0.148	1.610	0.283	0.003	3.110	1.783	1.651	3.113	1.786		
MAX SAR Ant 2	Front Face at 0mm	1.161	0.400	2.099	0.625	0.995	0.038	0.319	0.071	0.002	3.979	3.731	2.821	3.102	2.854		
	Bottom Face at 0mm	0.047	0.001	0.001	0.001	0.001	0.148	1.610	0.283	0.003	1.659	0.332	0.200	1.662	0.335		
MAX SAR Ant 3	Front Face at 0mm	0.119	0.400	2.099	0.625	0.995	0.038	0.319	0.071	0.002	2.937	2.689	1.779	2.060	1.812		
	Bottom Face at 0mm	1.876	0.001	0.001	0.001	0.001	0.148	1.610	0.283	0.003	3.488	2.161	2.029	3.491	2.164		

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WWAN Antenna	Exposure Position	0	2	3	4	5	6	7	8	9	0+2+3+7 Summed 10g SAR (W/kg)	0+2+3+8 Summed 10g SAR (W/kg)	0+4+5+6+9 Summed 10g SAR (W/kg)	0+4+5+7+9 Summed 10g SAR (W/kg)	0+4+5+8+9 Summed 10g SAR (W/kg)
		WWAN	WLAN2.4GHz NO. 1 WLAN ANT 0	WLAN2.4GHz NO. 1 WLAN ANT 2	WLAN5GHz NO. 1 WLAN ANT 0	WLAN5GHz NO. 1 WLAN ANT 2	WLAN2.4GHz NO. 2 WLAN ANT 0	WLAN5GHz NO. 2 WLAN ANT 0	WLAN6GHz NO. 2 WLAN ANT 0	Bluetooth NO. 2 BT ANT 1					
		10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)	10g SAR (W/kg)					
Ant 1	Top side at 0mm	0.237					0.006	0.048	0.061	0.001	0.285	0.298	0.244	0.286	0.299
	Left side at 0mm	0.002									0.002	0.002	0.002	0.002	0.002
	Right side at 0mm	0.002									0.002	0.002	0.002	0.002	0.002
	Back side at 0mm						0.001	0.001	0.001	0.091	0.001	0.001	0.092	0.092	0.092
Ant 3	Top side at 0mm	0.112					0.006	0.048	0.061	0.001	0.160	0.173	0.119	0.161	0.174
	Left side at 0mm	0.001									0.001	0.001	0.001	0.001	0.001
	Right side at 0mm	0.001					0.001	0.001	0.001	0.001	0.002	0.002	0.003	0.003	0.003
	Back side at 0mm						0.001	0.001	0.001	0.091	0.001	0.001	0.092	0.092	0.092

19.3 SPLSR Evaluation and Analysis

General Note:

1. Simultaneous transmission SAR test exclusion is determined for each operating configuration and exposure condition according to the reported standalone SAR of each applicable simultaneously transmitting antenna. When the sum of 1-g or 10-g SAR of all simultaneously transmitting antennas in an operating mode and exposure condition combination is within the SAR limit, SAR test exclusion applies to that simultaneous transmission configuration. Therefore, the adjacent transmit antennas will be summed first, and then the SPLSR calculation will be evaluated with the farther transmitted antennas.
2. $SPLSR = (SAR_1 + SAR_2)^{1.5} / (\text{min. separation distance, mm})$. If $SPLSR \leq 0.04$, simultaneously transmission SAR measurement is not necessary
3. The detail hotspot point for each transmitter in each exposure condition are showing as below figure and the minimum 3D distance for each sum combination is used for SPLSR analysis.

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	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
Case 1	LTE Band 30_Ant 0	Front face	2.266	0	16.5	-105.0	-177.	62.9	2.67	0.07	Not required
	WLAN2.4GHz NO.1 WLAN ANT 0		0.400	0	-16.5	-51.5	-177.				
	LTE Band 30_Ant 0	Front face	2.266	0	16.5	-105.0	-177.	160.0	4.37	0.06	Not required
	WLAN2.4GHz NO.1 WLAN ANT 2		2.099	0	-17.0	51.5	-177.				
	LTE Band 30_Ant 0	Front face	2.266	0	16.5	-105.0	-177.	67.5	2.89	0.07	Not required
	WLAN5GHz NO.1 WLAN ANT 0		0.625	0	-21.7	-49.3	-177.				
	LTE Band 30_Ant 0	Front face	2.266	0	16.5	-105.0	-177.	160.8	3.26	0.04	Not required
	WLAN5GHz NO.1 WLAN ANT 2		0.995	0	-17.2	52.2	-177.				
	LTE Band 30_Ant 0	Front face	2.266	0	16.5	-105.0	-177.	122.2	2.31	0.03	Not required
	WLAN2.4GHz NO.2 WLAN ANT 0+ Bluetooth NO.2 WLAN ANT 1		0.040	0	83.0	-2.5	-177.				
	LTE Band 30_Ant 0	Front face	2.266	0	16.5	-105.0	-177.	123.7	2.59	0.03	Not required
	WLAN5GHz NO.2 WLAN ANT 0		0.319	0	86.3	-2.9	-177.				
	LTE Band 30_Ant 0	Front face	2.266	0	16.5	-105.0	-177.	123.7	2.34	0.03	Not required
	WLAN6GHz NO.2 WLAN ANT 0		0.071	0	86.3	-2.9	-177.				
	WLAN2.4GHz NO.1 WLAN ANT 0	Front face	0.400	0	-16.5	-51.5	-177.	103.0	2.50	0.04	Not required
	WLAN2.4GHz NO.1 WLAN ANT 2		2.099	0	-17.0	51.5	-177.				
	WLAN2.4GHz NO.1 WLAN ANT 0	Front face	0.400	0	-16.5	-51.5	-177.	113.7	0.72	0.01	Not required
	WLAN5GHz NO.2 WLAN ANT 0		0.319	0	86.3	-2.9	-177.				
	WLAN2.4GHz NO.1 WLAN ANT 0	Front face	0.400	0	-16.5	-51.5	-177.	113.7	0.47	0.00	Not required
	WLAN6GHz NO.2 WLAN ANT 0		0.071	0	86.3	-2.9	-177.				
	WLAN2.4GHz NO.1 WLAN ANT 2	Front face	2.099	0	-17.0	51.5	-177.	116.7	2.42	0.03	Not required
	WLAN5GHz NO.2 WLAN ANT 0		0.319	0	86.3	-2.9	-177.				
	WLAN2.4GHz NO.1 WLAN ANT 2	Front face	2.099	0	-17.0	51.5	-177.	116.7	2.17	0.03	Not required
	WLAN6GHz NO.2 WLAN ANT 0		0.071	0	86.3	-2.9	-177.				
	WLAN5GHz NO.1 WLAN ANT 0	Front face	0.625	0	-22.4	-52.3	-177.	104.6	1.62	0.02	Not required
	WLAN5GHz NO.1 WLAN ANT 2		0.995	0	-17.2	52.2	-177.				
	WLAN5GHz NO.1 WLAN ANT 0	Front face	0.625	0	-22.4	-52.3	-177.	116.6	0.67	0.00	Not required
	WLAN2.4GHz NO.2 WLAN ANT 0+ Bluetooth NO.2 WLAN ANT 1		0.040	0	83.0	-2.5	-177.				
	WLAN5GHz NO.1 WLAN ANT 0	Front face	0.625	0	-22.4	-52.3	-177.	119.4	0.95	0.01	Not required
	WLAN5GHz NO.2 WLAN ANT 0+ Bluetooth NO.2 WLAN ANT 1		0.321	0	86.3	-2.9	-177.				
	WLAN5GHz NO.1 WLAN ANT 0	Front face	0.625	0	-22.4	-52.3	-177.	119.4	0.70	0.00	Not required
	WLAN6GHz NO.2 WLAN ANT 0+ Bluetooth NO.2 WLAN ANT 1		0.073	0	86.3	-2.9	-177.				
	WLAN5GHz NO.1 WLAN ANT 2	Front face	0.995	0	-17.2	52.2	-177.	114.2	1.04	0.01	Not required
	WLAN2.4GHz NO.2 WLAN ANT 0+ Bluetooth NO.2 WLAN ANT 1		0.040	0	83.0	-2.5	-177.				
	WLAN5GHz NO.1 WLAN ANT 2	Front face	0.995	0	-17.2	52.2	-177.	117.3	1.32	0.01	Not required
	WLAN5GHz NO.2 WLAN ANT 0+ Bluetooth NO.2 WLAN ANT 1		0.321	0	86.3	-2.9	-177.				
	WLAN5GHz NO.1 WLAN ANT 2	Front face	0.995	0	-17.2	52.2	-177.	117.3	1.07	0.01	Not required
	WLAN6GHz NO.2 WLAN ANT 0+ Bluetooth NO.2 WLAN ANT 1		0.073	0	86.3	-2.9	-177.				

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	Band	Position	SAR (W/kg)	Gap	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
				(mm)	X	Y	Z				
Case 1	MAX SAR_Ant 1	Bottom Face	1.054	0	45.5	-76.5	-177.	133.4	1.12	0.010	Not required
	WLAN2.4GHz NO.1 WLAN Ant 0		0.061	0	99.5	45.5	-177.				
	MAX SAR_Ant 1	Bottom Face	1.054	0	45.5	-76.5	-177.	72.0	1.13	0.020	Not required
	WLAN2.4GHz NO.1 WLAN Ant 2		0.073	0	102.5	-32.5	-177.				
	MAX SAR_Ant 1	Bottom Face	1.054	0	45.5	-76.5	-177.	133.4	1.17	0.010	Not required
	WLAN5GHz NO.1 WLAN Ant 0		0.12	0	99.5	45.5	-177.				
	MAX SAR_Ant 1	Bottom Face	1.054	0	45.5	-76.5	-177.	55.5	1.17	0.020	Not required
	WLAN5GHz NO.1 WLAN Ant 2		0.116	0	98.8	-61.0	-177.				
	MAX SAR_Ant 1	Bottom Face	1.054	0	45.5	-76.5	-177.	82.1	2.15	0.040	Not required
	WLAN5GHz NO.2 WLAN Ant 0+BT		1.092	0	62.5	3.8	-177.				
	MAX SAR_Ant 1	Bottom Face	1.054	0	45.5	-76.5	-177.	79.9	2.14	0.040	Not required
	WLAN6GHz NO.2 WLAN Ant 0+BT		1.081	0	60.8	1.9	-177.				
	WLAN2.4GHz NO.1 WLAN Ant 0	Bottom Face	0.061	0	99.5	45.5	-177.	78.1	0.13	0.000	Not required
	WLAN2.4GHz NO.1 WLAN Ant 2		0.073	0	102.5	-32.5	-177.				
	WLAN2.4GHz NO.1 WLAN Ant 0	Bottom Face	0.061	0	99.5	45.5	-177.	55.7	1.15	0.020	Not required
	WLAN5GHz NO.2 WLAN Ant 0+BT		1.092	0	62.5	3.8	-177.				
	WLAN2.4GHz NO.1 WLAN Ant 2	Bottom Face	0.073	0	102.5	-32.5	-177.	54.0	1.17	0.020	Not required
	WLAN5GHz NO.2 WLAN Ant 0+BT		1.092	0	62.5	3.8	-177.				
	WLAN2.4GHz NO.1 WLAN Ant 0	Bottom Face	0.061	0	99.5	45.5	-177.	58.3	1.14	0.020	Not required
	WLAN6GHz NO.2 WLAN Ant 0+BT		1.081	0	60.8	1.9	-177.				
	WLAN2.4GHz NO.1 WLAN Ant 2	Bottom Face	0.073	0	102.5	-32.5	-177.	54.1	1.15	0.020	Not required
	WLAN6GHz NO.2 WLAN Ant 0+BT		1.081	0	60.8	1.9	-177.				
	WLAN5GHz NO.1 WLAN Ant 0	Bottom Face	0.12	0	99.5	45.5	-177.	106.5	0.24	0.000	Not required
	WLAN5GHz NO.1 WLAN Ant 2		0.116	0	98.8	-61.0	-177.				
	WLAN5GHz NO.1 WLAN Ant 0	Bottom Face	0.12	0	99.5	45.5	-177.	55.7	1.21	0.020	Not required
	WLAN5GHz NO.2 WLAN Ant 0+BT		1.092	0	62.5	3.8	-177.				
	WLAN5GHz NO.1 WLAN Ant 0	Bottom Face	0.12	0	99.5	45.5	-177.	58.3	1.20	0.020	Not required
	WLAN6GHz NO.2 WLAN Ant 0+BT		1.081	0	60.8	1.9	-177.				
	WLAN5GHz NO.1 WLAN Ant 2	Bottom Face	0.116	0	98.8	-61.0	-177.	74.3	1.21	0.020	Not required
	WLAN5GHz NO.2 WLAN Ant 0+BT		1.092	0	62.5	3.8	-177.				
	WLAN5GHz NO.1 WLAN Ant 2	Bottom Face	0.116	0	98.8	-61.0	-177.	73.5	1.20	0.020	Not required
	WLAN6GHz NO.2 WLAN Ant 0+BT		1.081	0	60.8	1.9	-177.				
	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	MAX SAR_Ant 3	Bottom Face	0.996	0	53.5	74.0	-177.	54.1	1.06	0.020	Not required
	WLAN2.4GHz NO.1 WLAN Ant 0		0.061	0	99.5	45.5	-177.				
	MAX SAR_Ant 3	Bottom Face	0.996	0	53.5	74.0	-177.	117.2	1.07	0.010	Not required
	WLAN2.4GHz NO.1 WLAN Ant 2		0.073	0	102.5	-32.5	-177.				
	MAX SAR_Ant 3	Bottom Face	0.996	0	53.5	74.0	-177.	54.1	1.12	0.020	Not required
	WLAN5GHz NO.1 WLAN Ant 0		0.12	0	99.5	45.5	-177.				
	MAX SAR_Ant 3	Bottom Face	0.996	0	53.5	74.0	-177.	117.2	1.11	0.010	Not required
	WLAN5GHz NO.1 WLAN Ant 2		0.116	0	102.5	-32.5	-177.				
	MAX SAR_Ant 3	Bottom Face	0.996	0	53.5	74.0	-177.	70.8	2.09	0.040	Not required
	WLAN5GHz NO.2 WLAN Ant 0		1.092	0	62.5	3.8	-177.				
	MAX SAR_Ant 3	Bottom Face	0.996	0	53.5	74.0	-177.	72.5	2.08	0.040	Not required
	WLAN6GHz NO.2 WLAN Ant 0		1.081	0	60.8	1.9	-177.				
Case 3	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
	MAX SAR_Ant 2	Bottom Face	0.366	0	102.5	-94.5	-177.	140.0	0.49	0.000	Not required
	WLAN5GHz NO.1 WLAN Ant 0		0.12	0	99.5	45.5	-177.				
	MAX SAR_Ant 2	Bottom Face	0.366	0	102.5	-94.5	-177.	62.0	0.48	0.010	Not required
	WLAN5GHz NO.1 WLAN Ant 2		0.116	0	102.5	-32.5	-177.				
	MAX SAR_Ant 2	Bottom Face	0.366	0	102.5	-94.5	-177.	106.1	1.46	0.020	Not required

	WLAN5GHz NO.2 WLAN Ant 0		1.092	0	62.5	3.8	-177.				
	MAX SAR_Ant 2	Bottom Face	0.366	0	102.5	-94.5	-177.	105.0	1.45	0.020	Not required
	WLAN6GHz NO.2 WLAN Ant 0		1.081	0	60.8	1.9	-177.				
Case 5	Band	Position	SAR (W/kg)	Gap (mm)	SAR peak location (mm)			3D distance (mm)	Summed SAR (W/kg)	SPLSR Results	Simultaneous SAR
					X	Y	Z				
	MAX SAR_Ant 0	Bottom Face	0.461	0	69.2	35.7	-177.	31.8	0.52	0.010	Not required
	WLAN2.4GHz NO.1 WLAN Ant 0		0.061	0	99.5	45.5	-177.				
	MAX SAR_Ant 0	Bottom Face	0.461	0	69.2	35.7	-177.	75.9	0.53	0.010	Not required
	WLAN2.4GHz NO.1 WLAN Ant 2		0.073	0	102.5	-32.5	-177.				
	MAX SAR_Ant 0	Bottom Face	0.461	0	69.2	35.7	-177.	31.8	0.58	0.010	Not required
	WLAN5GHz NO.1 WLAN Ant 0		0.12	0	99.5	45.5	-177.				
	MAX SAR_Ant 0	Bottom Face	0.461	0	69.2	35.7	-177.	75.9	0.58	0.010	Not required
	WLAN5GHz NO.1 WLAN Ant 2		0.116	0	102.5	-32.5	-177.				
	MAX SAR_Ant 0	Bottom Face	0.461	0	52.9	54.1	-177.	51.2	1.55	0.040	Not required
	WLAN5GHz NO.2 WLAN Ant 0		1.092	0	62.5	3.8	-177.				
	MAX SAR_Ant 0	Bottom Face	0.461	0	52.9	54.1	-177.	52.8	1.54	0.040	Not required
	WLAN6GHz NO.2 WLAN Ant 0		1.081	0	60.8	1.9	-177.				

Test Engineer : John Fan and Harry Hsu

20. Uncertainty Assessment

Declaration of Conformity:

The test results with all measurement uncertainty excluded is presented in accordance with the regulation limits or requirements declared by manufacturers.

Comments and Explanations:

The declared of product specification for EUT presented in the report are provided by the manufacturer, and the manufacturer takes all the responsibilities for the accuracy of product specification.

The component of uncertainty may generally be categorized according to the methods used to evaluate them. The evaluation of uncertainty by the statistical analysis of a series of observations is termed a Type A evaluation of uncertainty. The evaluation of uncertainty by means other than the statistical analysis of a series of observation is termed a Type B evaluation of uncertainty. Each component of uncertainty, however evaluated, is represented by an estimated standard deviation, termed standard uncertainty, which is determined by the positive square root of the estimated variance.

A Type A evaluation of standard uncertainty may be based on any valid statistical method for treating data. This includes calculating the standard deviation of the mean of a series of independent observations; using the method of least squares to fit a curve to the data in order to estimate the parameter of the curve and their standard deviations; or carrying out an analysis of variance in order to identify and quantify random effects in certain kinds of measurement.

A type B evaluation of standard uncertainty is typically based on scientific judgment using all of the relevant information available. These may include previous measurement data, experience, and knowledge of the behavior and properties of relevant materials and instruments, manufacture's specification, data provided in calibration reports and uncertainties assigned to reference data taken from handbooks. Broadly speaking, the uncertainty is either obtained from an outdoor source or obtained from an assumed distribution, such as the normal distribution, rectangular or triangular distributions indicated in table below.

Uncertainty Distributions	Normal	Rectangular	Triangular	U-Shape
Multi-plying Factor ^(a)	$1/k^{(b)}$	$1/\sqrt{3}$	$1/\sqrt{6}$	$1/\sqrt{2}$

(a) standard uncertainty is determined as the product of the multiplying factor and the estimated range of variations in the measured quantity

(b) k is the coverage factor

Standard Uncertainty for Assumed Distribution

The combined standard uncertainty of the measurement result represents the estimated standard deviation of the result. It is obtained by combining the individual standard uncertainties of both Type A and Type B evaluation using the usual "root-sum-squares" (RSS) methods of combining standard deviations by taking the positive square root of the estimated variances.

Expanded uncertainty is a measure of uncertainty that defines an interval about the measurement result within which the measured value is confidently believed to lie. It is obtained by multiplying the combined standard uncertainty by a coverage factor. Typically, the coverage factor ranges from 2 to 3. Using a coverage factor allows the true value of a measured quantity to be specified with a defined probability within the specified uncertainty range. For purpose of this document, a coverage factor two is used, which corresponds to confidence interval of about 95 %. The DASY uncertainty Budget is shown in the following tables.

The judgment of conformity in the report is based on the measurement results excluding the measurement uncertainty.

Applicable for SAR Measurements:

Uncertainty Budget (4 MHz - 10 GHz range)							
Error Description	Uncertainty Value (±%)	Probability	Divisor	(Ci) 1g	(Ci) 10g	Standard Uncertainty (1g) (±%)	Standard Uncertainty (10g) (±%)
Measurement System							
Probe Calibration	18.60	N	2	1	1	9.3	9.3
Axial Isotropy	4.70	R	1.732	0.7	0.7	1.9	1.9
Hemispherical Isotropy	9.60	R	1.732	0.7	0.7	3.9	3.9
Linearity	4.70	R	1.732	1	1	2.7	2.7
Modulation Response	4.68	R	1.732	1	1	2.7	2.7
System Detection Limits	1.00	R	1.732	1	1	0.6	0.6
Boundary Effects	2.00	R	1.732	1	1	1.2	1.2
Readout Electronics	0.30	N	1	1	1	0.3	0.3
Response Time	0.00	R	1.732	1	1	0.0	0.0
Integration Time	2.60	R	1.732	1	1	1.5	1.5
RF Ambient Noise	3.00	R	1.732	1	1	1.7	1.7
RF Ambient Reflections	3.00	R	1.732	1	1	1.7	1.7
Probe Positioner	0.40	R	1.732	1	1	0.2	0.2
Probe Positioning	6.70	R	1.732	1	1	3.9	3.9
Post-processing	4.00	R	1.732	1	1	2.3	2.3
Test Sample Related							
Device Holder	3.60	N	1	1	1	3.6	3.6
Test sample Positioning	3.03	N	1	1	1	3.0	3.0
Power Scaling	0.00	R	1.732	1	1	0.0	0.0
Power Drift	5.00	R	1.732	1	1	2.9	2.9
Phantom and Setup							
Phantom Uncertainty	7.60	R	1.732	1	1	4.4	4.4
SAR correction	0.00	R	1.732	1	0.84	0.0	0.0
Liquid Conductivity Repeatability	0.03	N	1	0.78	0.77	0.0	0.0
Liquid Conductivity (target)	5.00	R	1.732	0.78	0.77	2.3	2.2
Liquid Conductivity (mea.)	2.50	R	1.732	0.78	0.77	1.1	1.1
Temp. unc. - Conductivity	3.68	R	1.732	0.78	0.77	1.7	1.6
Liquid Permittivity Repeatability	0.02	N	1	0.23	0.26	0.0	0.0
Liquid Permittivity (target)	5.00	R	1.732	0.23	0.26	0.7	0.8
Liquid Permittivity (mea.)	2.50	R	1.732	0.23	0.26	0.3	0.4
Temp. unc. - Permittivity	0.84	R	1.732	0.23	0.26	0.1	0.1
Combined Std. Uncertainty						14.5%	14.2%
Coverage Factor for 95 %						K=2	K=2
Expanded STD Uncertainty						29.0%	28.4%

Applicable for Power Density Measurements:

Error Description	Uncertainty Value (±dB)	Probability	Divisor	(Ci)	Standard Uncertainty (±dB)
Probe Calibration	0.49	N	1	1	0.49
Probe correction	0.00	R	1.732	1	0.00
Frequency response (BW ≤ 1 GHz)	0.20	R	1.732	1	0.12
Sensor cross coupling	0.00	R	1.732	1	0.00
Isotropy	0.50	R	1.732	1	0.29
Linearity	0.20	R	1.732	1	0.12
Probe scattering	0.00	R	1.732	1	0.00
Probe positioning offset	0.30	R	1.732	1	0.17
Probe positioning repeatability	0.04	R	1.732	1	0.02
Sensor mechanical offset	0.00	R	1.732	1	0.00
Probe spatial resolution	0.00	R	1.732	1	0.00
Field impedance dependance	0.00	R	1.732	1	0.00
Amplitude and phase drift	0.00	R	1.732	1	0.00
Amplitude and phase noise	0.04	R	1.732	1	0.02
Measurement area truncation	0.00	R	1.732	1	0.00
Data acquisition	0.03	N	1	1	0.03
Sampling	0.00	R	1.732	1	0.00
Field reconstruction	2.00	R	1.732	1	1.15
Forward transformation	0.00	R	1.732	1	0.00
Power density scaling	0.00	R	1.732	1	0.00
Spatial averaging	0.10	R	1.732	1	0.06
System detection limit	0.04	R	1.732	1	0.02
Uncertainty terms dep endent on the DUT and environmental factors					
Probe coupling with DUT	0.00	R	1.732	1	0.0
Modulation response	0.40	R	1.732	1	0.2
Integration time	0.00	R	1.732	1	0.0
Response time	0.00	R	1.732	1	0.0
Device holder influence	0.10	R	1.732	1	0.1
DUT alignment	0.00	R	1.732	1	0.0
RF ambient conditions	0.04	R	1.732	1	0.0
Ambient reflections	0.04	R	1.732	1	0.0
Immunity / secondary reception	0.00	R	1.732	1	0.0
Drift of the DUT		R	1.732	1	
Combined Std. Uncertainty					1.34
Expanded STD Uncertainty (95%)					2.68

21. References

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- [5] FCC KDB 447498 D01 v06, “Mobile and Portable Device RF Exposure Procedures and Equipment Authorization Policies”, Oct 2015
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- [9] IEC/IEEE 62209-1528:2020, “Measurement procedure for the assessment of specific absorption rate of human exposure to radio frequency fields from hand-held and body-mounted wireless communication devices – Part 1528: Human models, instrumentation, and procedures (Frequency range of 4 MHz to 10 GHz)”, Oct. 2020
- [10] SPEAG DASY6 System Handbook
- [11] SPEAG DASY6 Application Note (Interim Procedure for Device Operation at 6GHz-10GHz)