11.4 NR Maximum Output Power

Only the Conducted Power measurement results of the maximum bandwidth, which is the SAR test condition of NR Bands according to FCC KDB 941225 D05v02r05, are included, and the measurement results of other bandwidths are listed in Appendix K.

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11.4.1. NR FDD Band n5 Maximum Conducted Power

NR FDD Band n5 Conducted Power_ Measured *Pmax*, RSI = 1 _Antenna A

NR FDD Band n5_ 5 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
						165300	167300	169300	
						826.5 MHz	836.5 MHz	846.5 MHz	
5 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	23.92	23.89	23.59	0
				1	13	23.88	23.76	23.45	0
				1	23	23.97	23.84	23.51	0
				12	0	23.50	23.36	23.10	0.5
				12	7	23.97	23.85	23.50	0
				12	13	23.48	23.34	23.01	0.5
				25	0	23.49	23.37	23.03	0.5
			QPSK	1	1	23.96	23.91	23.64	0
				1	13	23.89	23.75	23.46	0
				1	23	23.99	23.84	23.53	0
				12	0	22.99	22.88	22.61	1
				12	7	23.99	23.85	23.52	0
				12	13	22.99	22.85	22.51	1
				25	0	23.00	22.87	22.54	1
			16QAM	1	1	22.85	22.89	22.65	1
			64QAM	1	1	21.50	21.46	21.17	2.5
			256QAM	1	1	19.37	19.34	18.95	4.5
		CP	QPSK	1	1	22.40	22.33	22.08	1.5

NR FDD Band n5_ 10 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR [dB]
						167300	
						836.5 MHz	
10 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	23.84	0
				1	26	23.98	0
				1	50	23.72	0
				25	0	23.36	0.5
				25	14	23.84	0
				25	27	23.31	0.5
				50	0	23.35	0.5
			QPSK	1	1	23.90	0
				1	26	23.90	0
				1	50	23.76	0
				25	0	22.90	1
				25	14	23.88	0
				25	27	22.86	1
				50	0	22.86	1
			16QAM	1	1	22.79	1
			64QAM	1	1	21.57	2.5
			256QAM	1	1	19.32	4.5
		CP	QPSK	1	1	22.31	1.5

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NR FDD Band n5_ 15 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 167300 836.5 MHz	MPR [dB]
15 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	23.80	0
				1	40	23.76	0
				1	77	23.61	0
				36	0	23.37	0.5
				36	22	23.83	0
				36	43	23.26	0.5
				75	0	23.33	0.5
			QPSK	1	1	23.85	0
				1	40	23.76	0
				1	77	23.67	0
				36	0	22.90	1
				36	22	23.86	0
				36	43	22.78	1
				75	0	22.88	1
			16QAM	1	1	22.95	1
			64QAM	1	1	21.40	2.5
			256QAM	1	1	19.41	4.5
		CP	QPSK	1	1	22.35	1.5

NR FDD Band n5_ 20 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 167300 836.5 MHz	MPR [dB]
20 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	23.78	0
				1	53	24.02	0
				1	104	23.55	0
				50	0	23.37	0.5
				50	28	23.86	0
				50	56	23.20	0.5
				100	0	23.36	0.5
			QPSK	1	1	23.81	0
				1	53	23.98	0
				1	104	23.54	0
				50	0	22.88	1
				50	28	23.88	0
				50	56	22.73	1
				100	0	22.87	1
			16QAM	1	1	22.80	1
			64QAM	1	1	21.26	2.5
			256QAM	1	1	19.20	4.5
		CP	QPSK	1	1	22.30	1.5

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NR FDD Band n5 Conducted Power_ Measured RSI = 0 _Antenna A

NR FDD Band n5_ 5 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
						165300	167300	169300	
						826.5 MHz	836.5 MHz	846.5 MHz	
5 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	17.88	17.81	17.51	0
				1	13	17.82	17.67	17.37	0
				1	23	17.89	17.76	17.43	0
				12	0	17.91	17.77	17.49	0.5
				12	7	17.90	17.76	17.42	0
				12	13	17.89	17.75	17.43	0.5
				25	0	17.90	17.78	17.47	0.5
			QPSK	1	1	17.91	17.81	17.55	0
				1	13	17.85	17.69	17.38	0
				1	23	17.90	17.74	17.45	0
				12	0	17.89	17.80	17.49	1
				12	7	17.89	17.74	17.45	0
				12	13	17.91	17.76	17.39	1
				25	0	17.89	17.80	17.46	1
			16QAM	1	1	17.83	17.91	17.55	1
			64QAM	1	1	17.82	17.80	17.60	2.5
			256QAM	1	1	17.87	17.81	17.55	4.5
		CP	QPSK	1	1	17.86	17.76	17.47	1.5

NR FDD Band n5_ 10 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]	MPR [dB]
						167300	
						836.5 MHz	
10 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	17.82	0
				1	26	17.82	0
				1	50	17.65	0
				25	0	17.80	0.5
				25	14	17.78	0
				25	27	17.74	0.5
				50	0	17.78	0.5
			QPSK	1	1	17.79	0
				1	26	17.91	0
				1	50	17.69	0
				25	0	17.82	1
				25	14	17.75	0
				25	27	17.74	1
				50	0	17.77	1
			16QAM	1	1	17.79	1
			64QAM	1	1	17.83	2.5
			256QAM	1	1	17.67	4.5
		CP	QPSK	1	1	17.76	1.5

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NR FDD Band n5_ 15 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 167300 836.5 MHz	MPR [dB]
15 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	17.76	0
				1	40	17.67	0
				1	77	17.56	0
				36	0	17.80	0.5
				36	22	17.77	0
				36	43	17.69	0.5
				75	0	17.77	0.5
			QPSK	1	1	17.74	0
				1	40	17.68	0
				1	77	17.53	0
				36	0	17.79	1
				36	22	17.78	0
				36	43	17.69	1
				75	0	17.77	1
			16QAM	1	1	17.78	1
			64QAM	1	1	17.81	2.5
			256QAM	1	1	17.68	4.5
		CP	QPSK	1	1	17.74	1.5

NR FDD Band n5_ 20 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm] 167300 836.5 MHz	MPR [dB]
20 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	17.71	0
				1	53	17.92	0
				1	104	17.45	0
				50	0	17.78	0.5
				50	28	17.77	0
				50	56	17.63	0.5
				100	0	17.75	0.5
			QPSK	1	1	17.75	0
				1	53	17.88	0
				1	104	17.48	0
				50	0	17.79	1
				50	28	17.76	0
				50	56	17.63	1
				100	0	17.76	1
			16QAM	1	1	17.77	1
			64QAM	1	1	17.68	2.5
			256QAM	1	1	17.66	4.5
		CP	QPSK	1	1	17.70	1.5

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11.4.2. NR FDD Band n66 Maximum Conducted Power

NR FDD Band n66 Conducted Power_Measured *Pmax*, RSI = 1 _Antenna B

NR FDD Band n66 _5 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
						342500	349000	355500	
						1712.5 MHz	1745 MHz	1777.5 MHz	
5 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	23.53	23.75	23.61	0
				1	13	23.45	23.68	23.51	0
				1	23	23.53	23.80	23.60	0
				12	0	23.04	23.26	23.12	0.5
				12	7	23.55	23.78	23.57	0
				12	13	23.07	23.32	23.10	0.5
				25	0	23.06	23.29	23.12	0.5
			QPSK	1	1	23.58	23.78	23.63	0
				1	13	23.49	23.74	23.54	0
				1	23	23.58	23.86	23.63	0
				12	0	22.54	22.80	22.65	1
				12	7	23.56	23.80	23.62	0
				12	13	22.58	22.81	22.61	1
				25	0	22.56	22.82	22.63	1
			16QAM	1	1	22.56	22.85	22.59	1
			64QAM	1	1	21.04	21.26	21.26	2.5
			256QAM	1	1	19.03	19.28	19.10	4.5
		CP	QPSK	1	1	22.04	22.24	22.15	1.5

NR FDD Band n66 _ 10 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
						343000	349000	355000	
						1715 MHz	1745 MHz	1775 MHz	
10 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	23.60	23.74	23.67	0
				1	26	23.64	23.90	23.68	0
				1	50	23.66	23.88	23.65	0
				25	0	23.13	23.28	23.20	0.5
				25	14	23.67	23.83	23.70	0
				25	27	23.19	23.35	23.19	0.5
				50	0	23.16	23.32	23.19	0.5
			QPSK	1	1	23.63	23.82	23.71	0
				1	26	23.73	23.90	23.74	0
				1	50	23.68	23.90	23.65	0
				25	0	22.68	22.82	22.72	1
				25	14	23.68	23.83	23.69	0
				25	27	22.70	22.88	22.70	1
				50	0	22.71	22.83	22.71	1
			16QAM	1	1	22.60	22.81	22.72	1
			64QAM	1	1	21.17	21.38	21.38	2.5
			256QAM	1	1	19.31	19.22	19.16	4.5
		CP	QPSK	1	1	22.15	22.25	22.21	1.5

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NR FDD Band n66 _ 15 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
						343500	349000	354500	
						1717.5 MHz	1745 MHz	1772.5 MHz	
15 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	23.52	23.70	23.58	0
				1	40	23.52	23.70	23.51	0
				1	77	23.66	23.86	23.51	0
				36	0	23.09	23.26	23.09	0.5
				36	22	23.61	23.81	23.59	0
				36	43	23.17	23.36	23.11	0.5
				75	0	23.14	23.32	23.11	0.5
			QPSK	1	1	23.59	23.72	23.63	0
				1	40	23.61	23.71	23.57	0
				1	77	23.72	23.84	23.55	0
				36	0	22.60	22.81	22.59	1
				36	22	23.65	23.84	23.62	0
				36	43	22.70	22.89	22.64	1
				75	0	22.65	22.81	22.63	1
			16QAM	1	1	22.48	22.74	22.52	1
			64QAM	1	1	21.15	21.37	21.19	2.5
			256QAM	1	1	18.95	19.20	18.94	4.5
		CP	QPSK	1	1	22.03	22.23	22.11	1.5

NR FDD Band n66 _ 20 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
						344000	349000	354000	
						1720 MHz	1745 MHz	1770 MHz	
20 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	23.41	23.69	23.59	0
				1	53	23.64	23.95	23.77	0
				1	104	23.72	23.83	23.53	0
				50	0	23.03	23.29	23.16	0.5
				50	28	23.62	23.81	23.71	0
				50	56	23.19	23.40	23.17	0.5
				100	0	23.09	23.30	23.18	0.5
			QPSK	1	1	23.48	23.74	23.59	0
				1	53	23.71	23.90	23.74	0
				1	104	23.75	23.87	23.51	0
				50	0	22.57	22.78	22.68	1
				50	28	23.63	23.86	23.72	0
				50	56	22.71	22.89	22.68	1
				100	0	22.60	22.81	22.67	1
			16QAM	1	1	22.43	22.62	22.60	1
			64QAM	1	1	20.93	21.22	21.25	2.5
			256QAM	1	1	18.85	19.21	19.00	4.5
		CP	QPSK	1	1	21.95	22.19	22.18	1.5

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NR FDD Band n66 _ 25 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
						344000	349000	354000	
						1720 MHz	1745 MHz	1770 MHz	
25 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	23.27	23.57	23.55	0
				1	66	23.69	23.88	23.72	0
				1	131	23.63	23.76	23.43	0
				64	0	22.99	23.23	23.14	0.5
				64	35	23.62	23.82	23.68	0
				64	69	23.24	23.38	23.11	0.5
				128	0	23.05	23.27	23.17	0.5
			QPSK	1	1	23.32	23.61	23.55	0
				1	66	23.78	23.95	23.79	0
				1	131	23.66	23.80	23.49	0
				64	0	22.51	22.77	22.70	1
				64	35	23.64	23.85	23.70	0
				64	69	22.76	22.91	22.66	1
				128	0	22.58	22.78	22.68	1
			16QAM	1	1	22.36	22.63	22.64	1
			64QAM	1	1	20.74	21.15	21.20	2.5
			256QAM	1	1	18.75	19.18	19.15	4.5
		CP	QPSK	1	1	21.79	22.04	22.07	1.5

NR FDD Band n66 _ 30 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							349000		
							1745 MHz		
30 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1		23.46		0
				1	80		23.95		0
				1	158		23.63		0
				80	0		23.19		0.5
				80	40		23.80		0
				80	80		23.35		0.5
				160	0		23.22		0.5
			QPSK	1	1		23.51		0
				1	80		23.90		0
				1	158		23.71		0
				80	0		22.73		1
				80	40		23.82		0
				80	80		22.86		1
				160	0		22.77		1
			16QAM	1	1		22.44		1
			64QAM	1	1		21.08		2.5
			256QAM	1	1		18.90		4.5
		CP	QPSK	1	1		22.00		1.5

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NR FDD Band n66 _ 40 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							349000		
							1745 MHz		
40 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1		23.10		0
				1	108		23.92		0
				1	214		23.37		0
				108	0		23.12		0.5
				108	54		23.78		0
				108	108		23.28		0.5
				216	0		23.18		0.5
			QPSK	1	1		23.14		0
				1	108		23.88		0
				1	214		23.39		0
				108	0		22.64		1
				108	54		23.82		0
				108	108		22.79		1
				216	0		22.68		1
			16QAM	1	1		22.10		1
			64QAM	1	1		20.59		2.5
			256QAM	1	1		18.79		4.5
		CP	QPSK	1	1		21.67		1.5

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NR FDD Band n66 Conducted Power_Measured RSI = 0 _Antenna B

NR FDD Band n66 _5 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
						342500	349000	355500	
						1712.5 MHz	1745 MHz	1777.5 MHz	
5 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	19.22	19.68	19.54	0
				1	13	19.32	19.60	19.41	0
				1	23	19.44	19.74	19.51	0
				12	0	19.45	19.70	19.52	0
				12	7	19.42	19.71	19.50	0
				12	13	19.45	19.72	19.50	0
				25	0	19.46	19.68	19.51	0
			QPSK	1	1	19.47	19.68	19.59	0
				1	13	19.34	19.64	19.51	0
				1	23	19.45	19.75	19.54	0
				12	0	19.44	19.67	19.53	0
				12	7	19.47	19.71	19.50	0
				12	13	19.45	19.72	19.49	0
				25	0	19.45	19.71	19.52	0
			16QAM	1	1	19.38	19.68	19.59	0
			64QAM	1	1	19.42	19.76	19.59	0
			256QAM	1	1	18.97	19.19	18.99	0
		CP	QPSK	1	1	19.40	19.70	19.52	0

NR FDD Band n66 _ 10 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
						343000	349000	355000	
						1715 MHz	1745 MHz	1775 MHz	
10 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	19.48	19.68	19.57	0
				1	26	19.59	19.73	19.61	0
				1	50	19.57	19.74	19.53	0
				25	0	19.54	19.66	19.57	0
				25	14	19.54	19.70	19.58	0
				25	27	19.56	19.72	19.57	0
				50	0	19.56	19.71	19.59	0
			QPSK	1	1	19.50	19.67	19.60	0
				1	26	19.64	19.82	19.69	0
				1	50	19.56	19.82	19.50	0
				25	0	19.56	19.70	19.59	0
				25	14	19.57	19.73	19.60	0
				25	27	19.58	19.74	19.57	0
				50	0	19.56	19.73	19.60	0
			16QAM	1	1	19.52	19.76	19.65	0
			64QAM	1	1	19.52	19.72	19.59	0
			256QAM	1	1	19.09	19.27	19.29	0
		CP	QPSK	1	1	19.49	19.67	19.58	0

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NR FDD Band n66 _ 15 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
						343500	349000	354500	
						1717.5 MHz	1745 MHz	1772.5 MHz	
15 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	19.38	19.64	19.47	0
				1	40	19.42	19.62	19.43	0
				1	77	19.57	19.77	19.43	0
				36	0	19.49	19.66	19.48	0
				36	22	19.52	19.72	19.51	0
				36	43	19.57	19.78	19.52	0
				75	0	19.53	19.72	19.47	0
			QPSK	1	1	19.39	19.58	19.47	0
				1	40	19.46	19.65	19.41	0
				1	77	19.57	19.76	19.44	0
				36	0	19.47	19.69	19.48	0
				36	22	19.55	19.71	19.51	0
				36	43	19.59	19.77	19.49	0
				75	0	19.55	19.71	19.51	0
			16QAM	1	1	19.45	19.53	19.44	0
			64QAM	1	1	19.46	19.63	19.42	0
			256QAM	1	1	19.03	19.16	19.01	0
		CP	QPSK	1	1	19.43	19.54	19.51	0

NR FDD Band n66 _ 20 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
						344000	349000	354000	
						1720 MHz	1745 MHz	1770 MHz	
20 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	19.28	19.58	19.49	0
				1	53	19.53	19.72	19.68	0
				1	104	19.63	19.70	19.43	0
				50	0	19.42	19.67	19.55	0
				50	28	19.51	19.69	19.57	0
				50	56	19.59	19.78	19.55	0
				100	0	19.48	19.67	19.57	0
			QPSK	1	1	19.34	19.56	19.49	0
				1	53	19.59	19.82	19.61	0
				1	104	19.65	19.77	19.45	0
				50	0	19.45	19.68	19.58	0
				50	28	19.55	19.71	19.60	0
				50	56	19.59	19.77	19.55	0
				100	0	19.49	19.69	19.59	0
			16QAM	1	1	19.28	19.56	19.58	0
			64QAM	1	1	19.37	19.58	19.57	0
			256QAM	1	1	18.82	19.27	19.09	0
		CP	QPSK	1	1	19.29	19.55	19.49	0

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NR FDD Band n66 _ 25 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
						344000	349000	354000	
						1720 MHz	1745 MHz	1770 MHz	
25 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	19.18	19.46	19.48	0
				1	66	19.59	19.80	19.69	0
				1	131	19.53	19.65	19.35	0
				64	0	19.38	19.61	19.57	0
				64	35	19.51	19.71	19.59	0
				64	69	19.65	19.76	19.54	0
				128	0	19.46	19.65	19.58	0
			QPSK	1	1	19.17	19.49	19.47	0
				1	66	19.59	19.80	19.76	0
				1	131	19.55	19.67	19.38	0
				64	0	19.37	19.65	19.59	0
				64	35	19.52	19.71	19.61	0
				64	69	19.66	19.78	19.53	0
				128	0	19.45	19.68	19.54	0
			16QAM	1	1	19.21	19.51	19.41	0
			64QAM	1	1	19.29	19.60	19.64	0
			256QAM	1	1	18.78	19.11	18.98	0
		CP	QPSK	1	1	19.17	19.44	19.49	0

NR FDD Band n66 _ 30 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							349000		
							1745 MHz		
30 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1		19.35		0
				1	80		19.80		0
				1	158		19.53		0
				80	0		19.57		0
				80	40		19.69		0
				80	80		19.73		0
				160	0		19.62		0
			QPSK	1	1		19.37		0
				1	80		19.75		0
				1	158		19.55		0
				80	0		19.58		0
				80	40		19.71		0
				80	80		19.74		0
				160	0		19.62		0
			16QAM	1	1		19.34		0
			64QAM	1	1		19.43		0
			256QAM	1	1		19.02		0
		CP	QPSK	1	1		19.35		0

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NR FDD Band n66 _ 40 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							349000		
							1745 MHz		
40 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1		18.99		0
				1	108		19.81		0
				1	214		19.25		0
				108	0		19.49		0
				108	54		19.66		0
				108	108		19.65		0
				216	0		19.53		0
			QPSK	1	1		19.00		0
				1	108		19.85		0
				1	214		19.27		0
				108	0		19.51		0
				108	54		19.67		0
				108	108		19.63		0
				216	0		19.54		0
			16QAM	1	1		19.05		0
			64QAM	1	1		19.06		0
			256QAM	1	1		18.53		0
		CP	QPSK	1	1		19.06		0

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NR FDD Band n66 Conducted Power_ Measured Pmax_ Antenna D

NR FDD Band n66 _5 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
						342500	349000	355500	
						1712.5 MHz	1745 MHz	1777.5 MHz	
5 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	24.13	24.30	24.22	0
				1	13	24.03	24.18	24.20	0
				1	23	24.15	24.29	24.35	0
				12	0	23.61	23.76	23.80	0.5
				12	7	24.12	24.34	24.31	0
				12	13	23.60	23.85	23.81	0.5
				25	0	23.62	23.83	23.82	0.5
			QPSK	1	1	24.04	24.22	24.32	0
				1	13	24.01	24.25	24.26	0
				1	23	24.17	24.34	24.40	0
				12	0	23.09	23.31	23.32	1
				12	7	24.09	24.35	24.29	0
				12	13	23.09	23.37	23.30	1
				25	0	23.09	23.36	23.32	1
			16QAM	1	1	23.05	23.40	23.26	1
			64QAM	1	1	21.53	21.83	21.73	2.5
			256QAM	1	1	19.61	19.84	19.73	4.5
		CP	QPSK	1	1	22.55	22.78	22.71	1.5

NR FDD Band n66 _ 10 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
						343000	349000	355000	
						1715 MHz	1745 MHz	1775 MHz	
10 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	24.02	24.04	24.20	0
				1	26	24.36	24.33	24.21	0
				1	50	24.21	24.25	24.13	0
				25	0	23.62	23.63	23.65	0.5
				25	14	24.19	24.22	24.15	0
				25	27	23.75	23.74	23.68	0.5
				50	0	23.70	23.69	23.68	0.5
			QPSK	1	1	24.05	24.01	24.17	0
				1	26	24.35	24.34	24.29	0
				1	50	24.22	24.22	24.16	0
				25	0	23.16	23.13	23.18	1
				25	14	24.22	24.20	24.15	0
				25	27	23.28	23.22	23.19	1
				50	0	23.21	23.18	23.18	1
			16QAM	1	1	23.08	23.17	23.09	1
			64QAM	1	1	21.68	21.59	21.63	2.5
			256QAM	1	1	19.65	19.51	19.71	4.5
		CP	QPSK	1	1	22.55	22.60	22.64	1.5

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NR FDD Band n66 _ 15 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
						343500	349000	354500	
						1717.5 MHz	1745 MHz	1772.5 MHz	
15 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	23.88	23.81	24.02	0
				1	40	23.90	24.03	23.96	0
				1	77	23.98	24.19	24.00	0
				36	0	23.46	23.53	23.57	0.5
				36	22	24.03	24.17	24.06	0
				36	43	23.55	23.70	23.55	0.5
				75	0	23.53	23.60	23.56	0.5
			QPSK	1	1	23.91	23.85	24.05	0
				1	40	23.89	24.05	23.98	0
				1	77	24.01	24.22	23.97	0
				36	0	22.96	23.03	23.10	1
				36	22	24.03	24.17	24.08	0
				36	43	23.07	23.21	23.07	1
				75	0	23.02	23.12	23.04	1
			16QAM	1	1	22.93	22.86	23.09	1
			64QAM	1	1	21.39	21.38	21.52	2.5
			256QAM	1	1	19.32	19.45	19.52	4.5
		CP	QPSK	1	1	22.35	22.31	22.49	1.5

NR FDD Band n66 _ 20 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
						344000	349000	354000	
						1720 MHz	1745 MHz	1770 MHz	
20 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	23.77	23.82	23.93	0
				1	53	24.19	24.21	24.20	0
				1	104	23.98	24.09	23.99	0
				50	0	23.41	23.51	23.60	0.5
				50	28	24.07	24.15	24.14	0
				50	56	23.53	23.70	23.59	0.5
				100	0	23.52	23.61	23.59	0.5
			QPSK	1	1	23.76	23.89	23.98	0
				1	53	24.13	24.20	24.19	0
				1	104	24.02	24.13	23.96	0
				50	0	22.93	23.04	23.11	1
				50	28	24.07	24.14	24.17	0
				50	56	23.06	23.23	23.12	1
				100	0	23.05	23.10	23.13	1
			16QAM	1	1	22.74	22.75	22.94	1
			64QAM	1	1	21.27	21.38	21.46	2.5
			256QAM	1	1	19.10	19.22	19.42	4.5
		CP	QPSK	1	1	22.27	22.31	22.41	1.5

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NR FDD Band n66 _ 30 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							349000		
							1745 MHz		
30 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1		23.63		0
				1	80		24.09		0
				1	158		23.94		0
				80	0		23.37		0.5
				80	40		24.12		0
				80	80		23.66		0.5
				160	0		23.53		0.5
			QPSK	1	1		23.64		0
				1	80		24.13		0
				1	158		23.97		0
				80	0		22.88		1
				80	40		24.13		0
				80	80		23.17		1
				160	0		23.05		1
			16QAM	1	1		22.69		1
			64QAM	1	1		21.18		2.5
			256QAM	1	1		19.27		4.5
		CP	QPSK	1	1		22.19		1.5

NR FDD Band n66 _ 40 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							349000		
							1745 MHz		
40 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1		23.44		0
				1	108		24.19		0
				1	214		23.70		0
				108	0		23.27		0.5
				108	54		24.10		0
				108	108		23.59		0.5
				216	0		23.45		0.5
			QPSK	1	1		23.48		0
				1	108		24.20		0
				1	214		23.69		0
				108	0		22.78		1
				108	54		24.11		0
				108	108		23.06		1
				216	0		22.92		1
			16QAM	1	1		22.56		1
			64QAM	1	1		20.91		2.5
			256QAM	1	1		18.89		4.5
		CP	QPSK	1	1		21.92		1.5

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NR FDD Band n66 Conducted Power_Measured RSI = 0, RSI = 1_Antenna D

NR FDD Band n66 _5 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
						342500	349000	355500	
						1712.5 MHz	1745 MHz	1777.5 MHz	
5 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	19.39	19.34	19.31	0
				1	13	19.35	19.18	19.26	0
				1	23	19.32	19.32	19.35	0
				12	0	19.37	19.25	19.31	0
				12	7	19.39	19.30	19.31	0
				12	13	19.32	19.34	19.34	0
				25	0	19.36	19.26	19.34	0
			QPSK	1	1	19.37	19.29	19.37	0
				1	13	19.37	19.17	19.26	0
				1	23	19.30	19.30	19.36	0
				12	0	19.36	19.22	19.33	0
				12	7	19.38	19.29	19.35	0
				12	13	19.30	19.37	19.33	0
				25	0	19.36	19.28	19.34	0
			16QAM	1	1	19.49	19.38	19.39	0
			64QAM	1	1	19.49	19.36	19.37	0
			256QAM	1	1	18.91	18.96	18.86	0
		CP	QPSK	1	1	19.39	19.28	19.29	0

NR FDD Band n66 _ 10 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
						343000	349000	355000	
						1715 MHz	1745 MHz	1775 MHz	
10 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	19.45	19.19	19.27	0
				1	26	19.48	19.27	19.47	0
				1	50	19.35	19.38	19.35	0
				25	0	19.39	19.26	19.34	0
				25	14	19.34	19.27	19.39	0
				25	27	19.42	19.31	19.37	0
				50	0	19.39	19.26	19.35	0
			QPSK	1	1	19.47	19.13	19.28	0
				1	26	19.41	19.29	19.38	0
				1	50	19.30	19.38	19.39	0
				25	0	19.38	19.25	19.35	0
				25	14	19.36	19.28	19.36	0
				25	27	19.42	19.31	19.37	0
				50	0	19.37	19.26	19.36	0
			16QAM	1	1	19.40	19.17	19.30	0
			64QAM	1	1	19.46	19.01	19.33	0
			256QAM	1	1	19.02	18.90	18.82	0
		CP	QPSK	1	1	19.41	19.14	19.25	0

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NR FDD Band n66 _ 15 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
						343500	349000	354500	
						1717.5 MHz	1745 MHz	1772.5 MHz	
15 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	19.47	19.23	19.22	0
				1	40	19.30	19.13	19.20	0
				1	77	19.38	19.32	19.28	0
				36	0	19.42	19.24	19.25	0
				36	22	19.45	19.26	19.27	0
				36	43	19.43	19.32	19.28	0
				75	0	19.47	19.27	19.27	0
			QPSK	1	1	19.49	19.31	19.25	0
				1	40	19.33	19.17	19.23	0
				1	77	19.45	19.36	19.30	0
				36	0	19.47	19.24	19.27	0
				36	22	19.48	19.28	19.29	0
				36	43	19.43	19.31	19.28	0
				75	0	19.46	19.25	19.30	0
			16QAM	1	1	19.40	19.28	19.19	0
			64QAM	1	1	19.47	19.19	19.35	0
			256QAM	1	1	19.05	18.80	18.86	0
		CP	QPSK	1	1	19.41	19.20	19.18	0

NR FDD Band n66 _ 20 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
						344000	349000	354000	
						1720 MHz	1745 MHz	1770 MHz	
20 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1	19.39	19.12	19.13	0
				1	53	19.34	19.25	19.32	0
				1	104	19.22	19.34	19.23	0
				50	0	19.34	19.15	19.21	0
				50	28	19.31	19.24	19.25	0
				50	56	19.30	19.32	19.31	0
				100	0	19.34	19.22	19.26	0
			QPSK	1	1	19.40	19.08	19.08	0
				1	53	19.28	19.30	19.37	0
				1	104	19.27	19.36	19.21	0
				50	0	19.36	19.20	19.23	0
				50	28	19.33	19.28	19.28	0
				50	56	19.31	19.31	19.30	0
				100	0	19.36	19.21	19.29	0
			16QAM	1	1	19.40	19.11	19.10	0
			64QAM	1	1	19.37	19.27	19.17	0
			256QAM	1	1	19.11	18.79	18.71	0
		CP	QPSK	1	1	19.38	19.10	19.10	0

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NR FDD Band n66 _ 30 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							349000		
							1745 MHz		
30 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1		18.84		0
				1	80		19.35		0
				1	158		19.18		0
				80	0		19.19		0
				80	40		19.25		0
				80	80		19.31		0
				160	0		19.21		0
			QPSK	1	1		18.91		0
				1	80		19.25		0
				1	158		19.17		0
				80	0		19.18		0
				80	40		19.25		0
				80	80		19.32		0
				160	0		19.18		0
			16QAM	1	1		18.96		0
			64QAM	1	1		19.02		0
			256QAM	1	1		18.38		0
		CP	QPSK	1	1		18.92		0

NR FDD Band n66 _ 40 MHz Bandwidth Conducted Power

Bandwidth	SCS(kHz)	OFDM	Modulation	RB Size	RB Offset	Max. Average Power [dBm]			MPR [dB]
							349000		
							1745 MHz		
40 MHz	15	DFT-s OFDM	pi/2 BPSK	1	1		18.78		0
				1	108		19.33		0
				1	214		19.02		0
				108	0		19.02		0
				108	54		19.24		0
				108	108		19.26		0
				216	0		19.11		0
			QPSK	1	1		18.71		0
				1	108		19.34		0
				1	214		19.04		0
				108	0		19.03		0
				108	54		19.25		0
				108	108		19.30		0
				216	0		19.14		0
			16QAM	1	1		18.65		0
			64QAM	1	1		18.76		0
			256QAM	1	1		18.41		0
		CP	QPSK	1	1		18.73		0

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11.5 WIFI Conducted Power measurement method

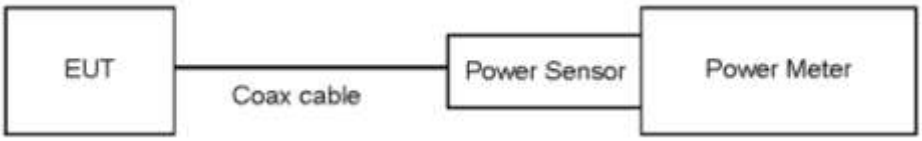
Un-Licensed Bands (DTS Band)

Test Description	Test Procedure Used
Conducted Output Power	- KDB 558074 v05 – Section 8.3.2.3 - ANSI 63.10-2013 – Section 11.9.2.3

Test Procedure

1. Measure the duty cycle.
2. Measure the average power of the transmitter. This measurement is an average over both the on and off periods of the transmitter.
3. Add 10 log (1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times.

Test setup



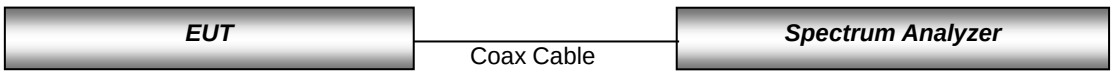
Un-Licensed Bands(NII Band)

Test Description	Test Procedure Used
Conducted Output Power	- KDB 789033 D02 v02r01 – Section E.3.a

Test Procedure

1. Measure the duty cycle.
2. Measure the average power of the transmitter. This measurement is an average over both the on and off periods of the transmitter.
3. Add 10 log (1/x), where x is the duty cycle, to the measured power in order to compute the average power during the actual transmission times.

Test setup



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11.5.1 IEEE 802.11 (2.4 GHz) Maximum and Reduced Conducted Power

Mode	Frequency [MHz]	Channel	Reduced Power -RCV_ON RF Conducted Power [dBm] IEEE 802.11 (2.4 GHz)
802.11b	2 412	1	15.38
	2 437	6	15.72
	2 462	11	15.70

Mode	Frequency [MHz]	Channel	Maximum Power Conducted Power [dBm] IEEE 802.11 (2.4 GHz)
802.11b	2 412	1	16.37
	2 437	6	16.75
	2 462	11	16.21
	2467	12	7.38
	2472	13	6.39
802.11g	2 412	1	15.12
	2 437	6	14.90
	2457	10	11.38
	2 462	11	12.18
	2467	12	4.03
	2472	13	3.14
802.11n	2 412	1	15.84
	2 437	6	15.66
	2452	9	12.69
	2457	10	11.23
	2 462	11	11.91
	2467	12	3.85
	2472	13	2.93

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11.5.2 IEEE 802.11 (5 GHz) Maximum and Reduced Conducted Power

Frequency [MHz]	Channel	Reduced Conducted Power [dBm] RCV_ON
		WIFI IEEE 802.11 n(40 MHz BW)
5 190	38	12.55
5 230	46	12.63
5 270	54	12.61
5 310	62	12.91
5 510	102	12.71
5 590	118	12.87
5 630	126	13.04
5 710	142	13.41

Frequency [MHz]	Channel	Reduced Conducted Power [dBm] -RCV_ON UNII-2C/3/4
		WIFI IEEE 802.11 ac (80 MHz BW)
5 610	122	12.48
5 690	138	13.01
5 775	155	13.00
5 855	171	11.93

Frequency [MHz]	Channel	Maximum Conducted Power [dBm]
		IEEE 802.11 a (20 MHz BW)
5 180	36	16.52
5 200	40	16.39
5 220	44	16.59
5 240	48	16.54
5 260	52	16.54
5 280	56	16.56
5 300	60	16.43
5 320	64	16.52
5 500	100	16.77
5 600	120	17.96
5 620	124	17.59
5 720	144	17.94
5 745	149	17.93
5 785	157	17.96
5 825	165	17.58
5 845	169	17.43
5 865	173	17.17
5 885	177	16.91

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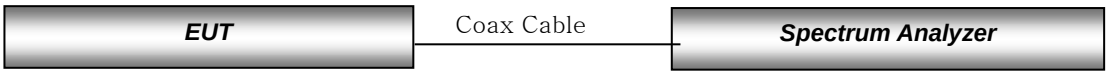
Note:

Justification for test configurations for WLAN per KDB Publication 248227 D01v02r02:

- Power measurements were performed for the transmission mode configuration with the highest maximum output power specified for production units.
- For transmission mode with the same maximum output power specification, powers were measured for the largest channel Bandwidth, lowest order modulation and lowest data rate.
- For transmission modes with identical maximum specified output power, channel Bandwidth, modulation and data rates, power measurements were required for all identical configurations.
- For each transmission mode configuration, powers were measured for the highest and lowest channels; and at the mid-Band channel(s) when there were at least 3 channels supported. For configurations with multiple mid-Band channels, due to an even number of channels, both channels were measured.

Test Configuration



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11.6 Bluetooth Maximum Conducted Power

11.6.1BluetoothMaximum Conducted Power

The Burst Averaged-conducted power

Mode	Channel	Max. Average Conducted Power [dBm]
DH5	0	9.47
	39	10.39
	78	9.21
2-DH5	0	7.03
	39	7.94
	78	6.73
3-DH5	0	7.04
	39	7.95
	78	6.75

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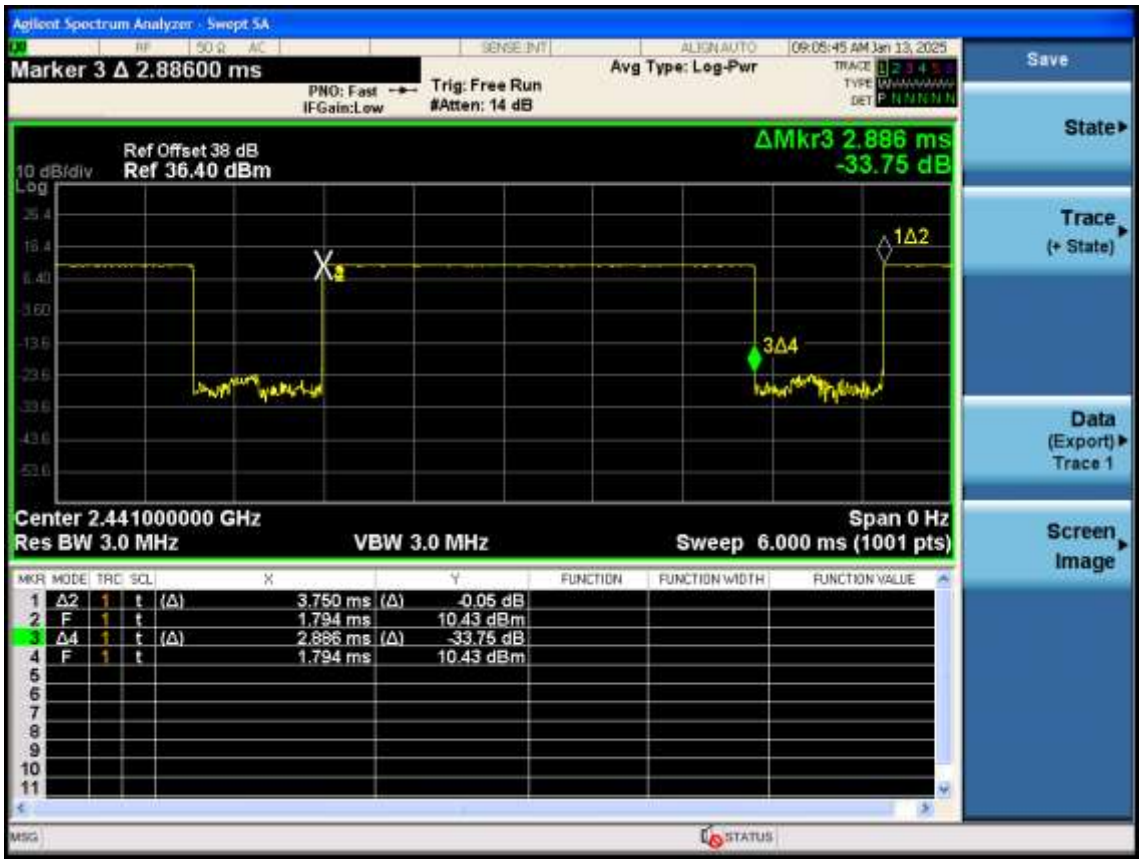
Per October 2016 TCB Workshop Notes:

When call box and Bluetooth protocol are used for Bluetooth SAR measurement, time-domain plot is required to identify duty factor for supporting the test setup and result.
Bluetooth duty cycle was measured using Bluetooth tester equipment (CBT / R&S) with Bluetooth.

Bluetooth Duty cycle Measurement results



BT DH5 Maximum Duty Factor:

The maximum duty cycle defined by chipset manufacturer is 78.0 % The duty cycle of DH5 measured by DUT was 77.0 %, and the measured SAR results was compensated by applying the maximum duty cycle.

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12. System Verification

12.1 Tissue Verification

The head simulating material is calibrated by HCT using the DAKS 3.5 to determine the conductivity and permittivity.

◆ GSM/ UMTS/ LTE/ WLAN/ NFC Band

Table for Head Tissue Verification									
Date of Tests	Tissue Temp. (°C)	Tissue Type	Freq. (MHz)	Measured Conductivity σ (S/m)	Measured Dielectric Constant, ε	Target Conductivity σ (S/m)	Target Dielectric Constant, ε	% dev σ	% dev ε
2025/01/10	22.4	13H	12	0.730	54.350	0.750	55.000	-2.67	-1.18
			13	0.735	54.490	0.750	55.000	-2.00	-0.93
			14	0.740	54.500	0.750	55.000	-1.33	-0.91
2024/12/16	21.8	750H	705	0.894	41.900	0.889	42.174	0.56	-0.65
			710	0.894	41.900	0.890	42.148	0.45	-0.59
			750	0.912	41.800	0.893	41.940	2.13	-0.33
2024/12/17	21.2	750H	750	0.917	41.900	0.893	41.940	2.69	-0.10
			785	0.931	41.800	0.896	41.758	3.91	0.10
2024/12/19	21.4	835H	820	0.914	40.900	0.899	41.577	1.67	-1.63
			835	0.920	40.900	0.900	41.500	2.22	-1.45
			850	0.925	40.800	0.916	41.500	0.98	-1.69
2024/12/13	21.3	835H	820	0.921	41.100	0.899	41.577	2.45	-1.15
			835	0.927	41.000	0.900	41.500	3.00	-1.20
			850	0.933	41.000	0.916	41.500	1.86	-1.20
2025/01/07	21.6	835H	820	0.917	41.300	0.899	41.577	2.00	-0.67
			835	0.922	41.200	0.900	41.500	2.44	-0.72
			850	0.927	41.200	0.916	41.500	1.20	-0.72
2024/12/23	21.8	835H	820	0.932	41.300	0.899	41.577	3.67	-0.67
			835	0.938	41.300	0.900	41.500	4.22	-0.48
			850	0.944	41.200	0.916	41.500	3.06	-0.72
2024/12/12	21.4	1800H	1 710	1.300	41.500	1.348	40.144	-3.56	3.38
			1 750	1.340	41.400	1.371	40.080	-2.26	3.29
			1 800	1.400	41.200	1.400	40.000	0.00	3.00
2024/12/24	22.0	1800H	1710	1.300	41.600	1.348	40.144	-3.56	3.63
			1750	1.350	41.400	1.371	40.080	-1.53	3.29
			1800	1.400	41.200	1.400	40.000	0.00	3.00
2024/12/20	22.3	1900H	1 850	1.400	40.500	1.400	40.000	0.00	1.25
			1 900	1.450	40.300	1.400	40.000	3.57	0.75
			1 910	1.460	40.200	1.400	40.000	4.29	0.50

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Table for Head Tissue Verification									
Date of Tests	Tissue Temp. (°C)	Tissue Type	Freq. (MHz)	Measured Conductivity σ (S/m)	Measured Dielectric Constant, ε	Target Conductivity σ (S/m)	Target Dielectric Constant, ε	% dev σ	% dev ε
2024/12/11	21.2	1900H	1850	1.400	40.400	1.400	40.000	0.00	1.00
			1900	1.450	40.200	1.400	40.000	3.57	0.50
			1910	1.460	40.200	1.400	40.000	4.29	0.50
2024/12/18	22.1	1900H	1850	1.400	40.500	1.400	40.000	0.00	1.25
			1900	1.450	40.300	1.400	40.000	3.57	0.75
			1910	1.460	40.200	1.400	40.000	4.29	0.50
2025/01/09	20.8	1900H	1850	1.370	40.900	1.400	40.000	-2.14	2.25
			1900	1.410	40.800	1.400	40.000	0.71	2.00
			1910	1.410	40.800	1.400	40.000	0.71	2.00
2025/01/14	20.6	2450H	2 400	1.700	38.700	1.756	39.290	-3.19	-1.50
			2 450	1.750	38.500	1.800	39.200	-2.78	-1.79
			2 500	1.810	38.300	1.855	39.140	-2.43	-2.15
2025/01/13	20.4	2450H	2 400	1.700	38.800	1.756	39.290	-3.19	-1.25
			2 450	1.750	38.600	1.800	39.200	-2.78	-1.53
			2 500	1.800	38.500	1.855	39.140	-2.96	-1.64
2024/12/17	20.1	2450H	2 400	1.740	39.800	1.756	39.290	-0.91	1.30
			2 450	1.800	39.600	1.800	39.200	0.00	1.02
			2 500	1.850	39.400	1.855	39.140	-0.27	0.66
2024/12/20	20.9	2600H	2 500	1.810	39.300	1.855	39.140	-2.43	0.41
			2 600	1.920	38.900	1.964	39.010	-2.24	-0.28
			2 690	2.020	38.400	2.062	38.894	-2.04	-1.27
2025/01/15	22.1	5180H-5320H	5 180	4.520	35.220	4.635	36.010	-2.48	-2.19
			5 250	4.607	34.990	4.706	35.930	-2.10	-2.62
			5 280	4.650	34.930	4.737	35.894	-1.84	-2.69
			5 320	4.705	34.900	4.778	35.846	-1.53	-2.64
2025/01/15	22.1	5500H-5600H	5 500	4.862	34.740	4.963	35.640	-2.04	-2.53
			5 600	4.960	34.540	5.065	35.530	-2.07	-2.79
			5 750	5.176	34.430	5.219	35.360	-0.82	-2.63
2025/01/15	22.1	5750H-5825H	5 750	5.176	34.430	5.219	35.360	-0.82	-2.63
			5 800	5.109	34.440	5.270	35.300	-3.06	-2.44
			5 825	5.302	34.390	5.296	35.270	0.11	-2.50
2025/01/15	22.1	5885H	5 800	5.109	34.440	5.270	35.300	-3.06	-2.44
			5 855	5.282	34.285	5.326	35.235	-0.83	-2.70
			5 885	5.293	34.125	5.357	35.205	-1.19	-3.07

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Table for Head Tissue Verification									
Date of Tests	Tissue Temp. (°C)	Tissue Type	Freq. (MHz)	Measured Conductivity σ (S/m)	Measured Dielectric Constant, ε	Target Conductivity σ (S/m)	Target Dielectric Constant, ε	% dev σ	% dev ε
2025/01/14	22.2	5180H-5320H	5 180	4.602	35.490	4.635	36.010	-0.71	-1.44
			5 250	4.682	35.260	4.706	35.930	-0.51	-1.86
			5 280	4.721	35.190	4.737	35.894	-0.34	-1.96
			5 320	4.775	35.150	4.778	35.846	-0.06	-1.94
2025/01/14	22.2	5500H-5600H	5 500	4.938	34.970	4.963	35.640	-0.50	-1.88
			5 600	5.051	34.800	5.065	35.530	-0.28	-2.05
			5 750	5.252	34.720	5.219	35.360	0.63	-1.81
2025/01/14	22.2	5750H-5825H	5 750	5.252	34.720	5.219	35.360	0.63	-1.81
			5 800	5.177	34.730	5.270	35.300	-1.76	-1.61
			5 825	5.143	34.690	5.296	35.270	-2.89	-1.64
2025/01/14	22.2	5885H	5 800	5.177	34.730	5.270	35.300	-1.76	-1.61
			5 855	5.136	34.575	5.326	35.235	-3.57	-1.87
			5 885	5.162	34.415	5.357	35.205	-3.64	-2.24

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◆ 5G NR SUB 6 Band

Table for Head Tissue Verification									
Date of Tests	Tissue Temp. (°C)	Tissue Type	Freq. (MHz)	Measured Conductivity σ (S/m)	Measured Dielectric Constant, ε	Target Conductivity σ (S/m)	Target Dielectric Constant, ε	% dev σ	% dev ε
2025/12/26	22.2	835H	820	0.918	41.300	0.899	41.577	2.11	-0.67
			835	0.923	41.300	0.900	41.500	2.56	-0.48
			850	0.929	41.200	0.916	41.500	1.42	-0.72
2024/12/27	21.8	1800H	1710	1.320	40.800	1.348	40.144	-2.08	1.63
			1750	1.340	40.900	1.371	40.080	-2.26	2.05
			1800	1.380	40.800	1.400	40.000	-1.43	2.00
2024/12/30	22.6	1800H	1710	1.330	39.900	1.348	40.144	-1.34	-0.61
			1750	1.350	39.900	1.371	40.080	-1.53	-0.45
			1800	1.390	39.800	1.400	40.000	-0.71	-0.50

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12.2 System Verification

◆ GSM/ UMTS/ LTE/ WLAN Band

Input Power: 50 mW

Freq.	Date	Probe	Dipole	Liquid	Amb. Temp.	Liquid Temp.	1 W Target SAR_{1g} (SPEAG)	50 mW Measured SAR_{1g}	1 W Normalized SAR_{1g}	Deviation	Limit
[MHz]		(S/N)	(S/N)		[°C]	[°C]	[W/kg]	[W/kg]	[W/kg]	[%]	[%]
750	2024/12/16	7681	1014	Head	21.9	21.8	8.50	0.442	8.84	4.00	± 10
750	2024/12/17	7681		Head	21.3	21.2	8.50	0.445	8.90	4.71	± 10
835	2024/12/19	7681	441	Head	21.5	21.4	9.73	0.508	10.2	4.42	± 10
835	2024/12/13	7681		Head	21.4	21.3	9.73	0.500	10.0	2.77	± 10
835	2025/01/07	7681		Head	21.7	21.6	9.73	0.488	9.76	0.31	± 10
835	2024/12/23	7681		Head	21.9	21.8	9.73	0.503	10.1	3.39	± 10
1 800	2024/12/12	7681	2d007	Head	21.5	21.4	39.0	1.92	38.4	-1.54	± 10
1 800	2024/12/24	7681		Head	22.1	22.0	39.0	1.93	38.6	-1.03	± 10
1 900	2024/12/20	7681	5d032	Head	22.4	22.3	40.2	2.01	40.2	0.00	± 10
1 900	2024/12/11	7681		Head	21.3	21.2	40.2	2.00	40.0	-0.50	± 10
1 900	2024/12/18	7681		Head	22.2	22.1	40.2	2.01	40.2	0.00	± 10
1 900	2025/01/09	7681		Head	20.9	20.8	40.2	1.96	39.2	-2.48	± 10
2 450	2025/01/14	7681	743	Head	20.7	20.6	51.8	2.54	50.8	- 1.93	± 10
2 450	2025/01/06	3797		Head	205	204	51.8	2.65	53.0	+ 2.32	± 10
2 450	2024/12/17	3797		Head	20.2	20.1	51.8	2.66	53.2	2.70	± 10
2 600	2024/12/20	3797	1015	Head	21.0	20.9	56.4	2.81	56.2	-0.35	± 10
5 250	2025/01/15	7654	1107	Head	22.2	22.1	80.2	4.06	81.2	+ 1.25	± 10
5 600	2025/01/15	7654		Head	22.2	22.1	82.1	4.34	86.8	+ 5.72	± 10
5 750	2025/01/15	7654		Head	22.2	22.1	79.9	3.74	74.8	- 6.38	± 10
5 800	2025/01/15	7654		Head	22.2	22.1	79.3	4	80.0	+ 0.88	± 10
5 250	2025/01/14	7654		Head	22.3	22.2	80.2	4.15	83.0	+ 3.49	± 10
5 600	2025/01/14	7654		Head	22.3	22.2	82.1	4.27	85.4	+ 4.02	± 10
5 750	2025/01/14	7654		Head	22.3	22.2	79.9	3.7	74.0	- 7.38	± 10
5 800	2025/01/14	7654		Head	22.3	22.2	79.3	4.07	81.4	+ 2.65	± 10

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◆ 5G NR SUB 6 Band

Input Power: 50 mW

Freq.	Date	Probe (S/N)	Dipole (S/N)	Liquid	Amb. Temp.	Liquid Temp.	1 W Target SAR_{1g} (SPEAG)	50 mW Measured SAR_{1g}	1 W Normalized SAR_{1g}	Deviation	Limit
[MHz]					[°C]	[°C]	[W/kg]	[W/kg]	[W/kg]	[%]	[%]
835	2024/12/26	7681	441	Head	22.3	22.2	9.73	0.497	9.94	2.16	± 10
1 800	2024/12/27	7681	2d007	Head	21.9	21.8	39.0	1.90	38.0	-2.56	± 10
1 800	2024/12/30	7681		Head	22.7	22.6	39.0	1.90	38.0	-2.56	± 10

◆System Verification Results –Extremity SAR

Input Power: 50 mW

Freq.	Date	Probe (S/N)	Dipole (S/N)	Liquid	Amb. Temp.	Liquid Temp.	1 W Target SAR_{10g} (SPEAG)	50 mW Measured SAR_{10g}	1 W Normalized SAR_{10g}	Deviation	Limit
[MHz]					[°C]	[°C]	[W/kg]	[W/kg]	[W/kg]	[%]	[%]
13	2025/01/10	3076	1016	Head	22.5	22.4	0.347	0.018	0.360	3.75	± 10

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12.3 SAR Test System Verification Procedure

SAR measurement was prior to assessment; the system is verified to the ± 10 % of the specifications at each frequency Band by using the system verification kit. (Graphic Plots Attached)
- Cabling the system, using the verification kit equipment.
- Dipole antenna was placed below the flat phantom.
- The measured one-gram SAR at the surface of the phantom above the dipole feed-point should be within 10 % of the target reference value.

Note;
SAR Verification was performed according to the FCC KDB 865664 D01v01r04.

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13. SAR Test Data Summary

13.1 SAR Measurement Results

13.1.1 Head SAR Measurement Results

GSM 850 Head SAR													
Frequency		Mode	Ant.	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(dBm)	(dBm)	(dB)				(W/kg)		(W/kg)	
836.6	190	GPRS 4Tx	A	29.0	27.32	-0.08	Left Touch	1:2.08	-	0.141	1.472	0.208	-
836.6	190	GPRS 4Tx	A	29.0	27.32	0.01	Left Tilt	1:2.08	-	0.082	1.472	0.121	-
836.6	190	GPRS 4Tx	A	29.0	27.32	0.04	Right Touch	1:2.08	-	**0.214**	1.472	**0.315**	**A1**
836.6	190	GPRS 4Tx	A	29.0	27.32	0.08	Right Tilt	1:2.08	-	0.109	1.472	0.160	-
836.6	190	GSM Voice	A	34.0	33.14	-0.05	Left Touch	1:8.3	-	0.130	1.219	0.158	-
836.6	190	GSM Voice	A	34.0	33.14	-0.03	Left Tilt	1:8.3	-	0.077	1.219	0.094	-
836.6	190	GSM Voice	A	34.0	33.14	-0.07	Right Touch	1:8.3	-	0.197	1.219	0.240	-
836.6	190	GSM Voice	A	34.0	33.14	0.02	Right Tilt	1:8.3	-	0.101	1.219	0.123	-
ANSI/ IEEE C95.1 – 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Head 1.6 W/kg Averaged over 1 gram						

GSM 1900 Head SAR													
Frequency		Mode	Ant.	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(dBm)	(dBm)	(dB)				(W/kg)		(W/kg)	
1 880	661	GPRS 2Tx	B	28.0	26.65	-0.04	Left Touch	1:4.15	-	**0.110**	1.365	**0.150**	**A2**
1 880	661	GPRS 2Tx	B	28.0	26.65	-0.15	Left Tilt	1:4.15	-	0.058	1.365	0.079	-
1 880	661	GPRS 2Tx	B	28.0	26.65	-0.05	Right Touch	1:4.15	-	0.077	1.365	0.105	-
1 880	661	GPRS 2Tx	B	28.0	26.65	0.16	Right Tilt	1:4.15	-	0.060	1.365	0.082	-
1 880	661	GSM Voice	B	30.0	29.62	-0.12	Left Touch	1:8.3	-	0.103	1.091	0.112	-
1 880	661	GSM Voice	B	30.0	29.62	0.03	Left Tilt	1:8.3	-	0.059	1.091	0.064	-
1 880	661	GSM Voice	B	30.0	29.62	-0.17	Right Touch	1:8.3	-	0.088	1.091	0.096	-
1 880	661	GSM Voice	B	30.0	29.62	0.03	Right Tilt	1:8.3	-	0.062	1.091	0.068	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Head 1.6 W/kg Averaged over 1 gram						

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UMTS Band 5 Head SAR													
Frequency		Mode	Ant.	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(dBm)	(dBm)	(dB)				(W/kg)		(W/kg)	
836.6	4183	RMC	A	25.5	24.68	-0.14	Left Touch	1:1	-	0.177	1.208	0.214	-
836.6	4183	RMC	A	25.5	24.68	-0.01	Left Tilt	1:1	-	0.107	1.208	0.129	-
836.6	4183	RMC	A	25.5	24.68	-0.10	Right Touch	1:1	-	**0.237**	1.208	**0.286**	**A3**
836.6	4183	RMC	A	25.5	24.68	0.01	Right Tilt	1:1	-	0.132	1.208	0.159	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Head 1.6 W/kg Averaged over 1 gram						

UMTS Band 4 Head SAR													
Frequency		Mode	Ant.	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(dBm)	(dBm)	(dB)				(W/kg)		(W/kg)	
1 732.4	1412	RMC	B	24.0	24.35	0.17	Left Touch	1:1	-	**0.192**	0.923	**0.177**	**A4**
1 732.4	1412	RMC	B	24.0	24.35	-0.09	Left Tilt	1:1	-	0.092	0.923	0.085	-
1 732.4	1412	RMC	B	24.0	24.35	0.16	Right Touch	1:1	-	0.161	0.923	0.149	-
1 732.4	1412	RMC	B	24.0	24.35	-0.15	Right Tilt	1:1	-	0.103	0.923	0.095	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Head 1.6 W/kg Averaged over 1 gram						

UMTS Band 2 Head SAR													
Frequency		Mode	Ant.	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(dBm)	(dBm)	(dB)				(W/kg)		(W/kg)	
1 880	9400	RMC	B	25.0	23.70	-0.11	Left Touch	1:1	-	**0.293**	1.219	**0.339**	**A5**
1 880	9400	RMC	B	25.0	23.70	0.01	Left Tilt	1:1	-	0.176	1.219	0.182	-
1 880	9400	RMC	B	25.0	23.70	-0.10	Right Touch	1:1	-	0.282	1.219	0.260	-
1 880	9400	RMC	B	25.0	23.70	-0.06	Right Tilt	1:1	-	0.179	1.219	0.166	-
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LTE FDD Band 2 (PCS) Head SAR																	
Frequency		Mode	Ant.	Bandwidth	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(W/kg)		(W/kg)	
1 900	19100	QPSK	B	20	24.0	22.67	-0.03	Left Touch	0	1	49	1:1	-	0.224	1.358	0.304	-
1 900	19100	QPSK	B	20	23.0	21.96	0.18	Left Touch	1	50	25	1:1	-	0.188	1.271	0.239	-
1 900	19100	QPSK	B	20	24.0	22.67	-0.04	Left Tilt	0	1	49	1:1	-	0.098	1.358	0.133	-
1 900	19100	QPSK	B	20	23.0	21.96	-0.02	Left Tilt	1	50	25	1:1	-	0.079	1.271	0.100	-
1 900	19100	QPSK	B	20	24.0	22.67	-0.19	Right Touch	0	1	49	1:1	-	0.154	1.358	0.209	-
1 900	19100	QPSK	B	20	23.0	21.96	-0.01	Right Touch	1	50	25	1:1	-	0.129	1.271	0.164	-
1 900	19100	QPSK	B	20	24.0	22.67	0.08	Right Tilt	0	1	49	1:1	-	0.111	1.358	0.151	-
1 900	19100	QPSK	B	20	23.0	21.96	-0.15	Right Tilt	1	50	25	1:1	-	0.095	1.271	0.121	-
1 900	19100	QPSK	D	20	21.0	19.63	0.02	Left Touch	0	1	99	1:1	-	0.399	1.371	0.547	-
1 900	19100	QPSK	D	20	21.0	19.72	-0.03	Left Touch	0	50	49	1:1	-	0.387	1.343	0.520	-
1 900	19100	QPSK	D	20	21.0	19.63	-0.02	Left Tilt	0	1	99	1:1	-	0.439	1.371	0.602	-
1 900	19100	QPSK	D	20	21.0	19.72	0.02	Left Tilt	0	50	49	1:1	-	0.442	1.343	0.594	-
1 860	18700	QPSK	D	20	21.0	19.40	0.01	Right Touch	0	1	49	1:1	-	0.552	1.445	0.798	-
1 880	18900	QPSK	D	20	21.0	19.46	0.08	Right Touch	0	1	49	1:1	-	0.548	1.426	0.781	-
1 900	19100	QPSK	D	20	21.0	19.63	0.02	Right Touch	0	1	99	1:1	-	**0.599**	1.371	**0.821**	**A6**
1 860	18700	QPSK	D	20	21.0	19.52	-0.02	Right Touch	0	50	25	1:1	-	0.567	1.406	0.797	-
1 880	18900	QPSK	D	20	21.0	19.59	-0.03	Right Touch	0	50	25	1:1	-	0.562	1.384	0.778	-
1 900	19100	QPSK	D	20	21.0	19.72	0.02	Right Touch	0	50	49	1:1	-	0.598	1.343	0.803	-
1 900	19100	QPSK	D	20	21.0	19.69	0.02	Right Touch	0	100	0	1:1	-	0.597	1.352	0.807	-
1 900	19100	QPSK	D	20	21.0	19.63	0.03	Right Tilt	0	1	99	1:1	-	0.569	1.371	0.780	-
1 900	19100	QPSK	D	20	21.0	19.72	0.02	Right Tilt	0	50	49	1:1	-	0.579	1.343	0.778	-
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LTE FDD Band 5 Head SAR																	
Frequency		Mode	Ant.	Bandwidth	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(W/kg)		(W/kg)	
836.5	20525	QPSK	A	10	25.5	24.22	0.19	Left Touch	0	1	0	1:1	-	0.171	1.343	0.230	-
836.5	20525	QPSK	A	10	24.5	23.38	0.00	Left Touch	1	25	0	1:1	-	0.146	1.294	0.189	-
836.5	20525	QPSK	A	10	25.5	24.22	0.04	Left Tilt	0	1	0	1:1	-	0.104	1.343	0.140	-
836.5	20525	QPSK	A	10	24.5	23.38	0.01	Left Tilt	1	25	0	1:1	-	0.085	1.294	0.110	-
836.5	20525	QPSK	A	10	25.5	24.22	-0.04	Right Touch	0	1	0	1:1	-	**0.223**	1.343	**0.299**	A7
836.5	20525	QPSK	A	10	24.5	23.38	-0.07	Right Touch	1	25	0	1:1	-	0.192	1.294	0.248	-
836.5	20525	QPSK	A	10	25.5	24.22	0.03	Right Tilt	0	1	0	1:1	-	0.112	1.343	0.150	-
836.5	20525	QPSK	A	10	24.5	23.38	-0.17	Right Tilt	1	25	0	1:1	-	0.095	1.294	0.123	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram									

LTE FDD Band 12 Head SAR																	
Frequency		Mode	Ant.	Bandwidth	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(W/kg)		(W/kg)	
707.5	23095	QPSK	A	10	25.5	24.72	0.03	Left Touch	0	1	0	1:1	-	0.145	1.067	0.155	-
707.5	23095	QPSK	A	10	24.5	23.89	-0.11	Left Touch	1	25	0	1:1	-	0.126	1.026	0.129	-
707.5	23095	QPSK	A	10	25.5	24.72	-0.08	Left Tilt	0	1	0	1:1	-	0.069	1.067	0.074	-
707.5	23095	QPSK	A	10	24.5	23.89	-0.07	Left Tilt	1	25	0	1:1	-	0.059	1.026	0.061	-
707.5	23095	QPSK	A	10	25.5	24.72	0.11	Right Touch	0	1	0	1:1	-	**0.166**	1.067	**0.177**	A8
707.5	23095	QPSK	A	10	24.5	23.89	-0.11	Right Touch	1	25	0	1:1	-	0.156	1.026	0.160	-
707.5	23095	QPSK	A	10	25.5	24.72	-0.11	Right Tilt	0	1	0	1:1	-	0.089	1.067	0.095	-
707.5	23095	QPSK	A	10	24.5	23.89	0.01	Right Tilt	1	25	0	1:1	-	0.074	1.026	0.076	-
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LTE FDD Band 13 Head SAR

Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(W/kg)		(W/kg)	
782	23230	QPSK	A	10	25.5	24.05	0.15	Left Touch	0	1	0	1:1	-	0.142	1.396	0.198	-
782	23230	QPSK	A	10	24.5	23.23	0.18	Left Touch	1	25	0	1:1	-	0.114	1.340	0.153	-
782	23230	QPSK	A	10	25.5	24.05	-0.12	Left Tilt	0	1	0	1:1	-	0.076	1.396	0.106	-
782	23230	QPSK	A	10	24.5	23.23	-0.17	Left Tilt	1	50	49	1:1	-	0.062	1.340	0.083	-
782	23230	QPSK	A	10	25.5	24.05	-0.03	Right Touch	0	1	0	1:1	-	**0.166**	1.396	**0.232**	**A9**
782	23230	QPSK	A	10	24.5	23.23	-0.18	Right Touch	1	50	49	1:1	-	0.138	1.340	0.185	-
782	23230	QPSK	A	10	25.5	24.05	0.12	Right Tilt	0	1	0	1:1	-	0.083	1.396	0.116	-
782	23230	QPSK	A	10	24.5	23.23	-0.04	Right Tilt	1	50	49	1:1	-	0.070	1.340	0.094	-

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LTE FDD Band 26 (Cell) Head SAR

Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(W/kg)		(W/kg)	
831.5	26865	QPSK	A	15	24.0	22.67	-0.08	Left Touch	0	1	74	1:1	-	0.081	1.358	0.110	-
831.5	26865	QPSK	A	15	23.0	21.90	0.11	Left Touch	1	36	18	1:1	-	0.084	1.288	0.108	-
831.5	26865	QPSK	A	15	25.0	22.67	0.07	Left Tilt	0	1	74	1:1	-	0.059	1.358	0.080	-
831.5	26865	QPSK	A	15	24.0	21.90	-0.16	Left Tilt	1	36	18	1:1	-	0.047	1.288	0.061	-
831.5	26865	QPSK	A	15	25.0	22.67	-0.10	Right Touch	0	1	74	1:1	-	**0.135**	1.358	**0.183**	**A10**
831.5	26865	QPSK	A	15	24.0	21.90	-0.16	Right Touch	1	36	18	1:1	-	0.097	1.288	0.125	-
831.5	26865	QPSK	A	15	25.0	22.67	0.19	Right Tilt	0	1	74	1:1	-	0.072	1.358	0.098	-
831.5	26865	QPSK	A	15	24.0	21.90	-0.01	Right Tilt	1	36	18	1:1	-	0.053	1.288	0.068	-

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LTE TDD Band 41 (Power Class 3) Head SAR																	
Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(W/kg)		(W/kg)	
2 636.5	41055	QPSK	B	20	24.5	23.39	0.12	Left Touch	0	1	0	1:1.58	-	**0.086**	1.291	**0.111**	**A11**
2 636.5	41055	QPSK	B	20	23.5	22.49	-0.18	Left Touch	1	50	0	1:1.58	-	0.070	1.262	0.088	-
2 636.5	41055	QPSK	B	20	24.5	23.39	-0.11	Left Tilt	0	1	0	1:1.58	-	0.029	1.291	0.037	-
2 636.5	41055	QPSK	B	20	23.5	22.49	0.13	Left Tilt	1	50	0	1:1.58	-	0.023	1.262	0.029	-
2 636.5	41055	QPSK	B	20	24.5	23.39	-0.12	Right Touch	0	1	0	1:1.58	-	0.057	1.291	0.074	-
2 636.5	41055	QPSK	B	20	23.5	22.49	0.10	Right Touch	1	50	0	1:1.58	-	0.044	1.262	0.056	-
2 636.5	41055	QPSK	B	20	24.5	23.39	0.19	Right Tilt	0	1	0	1:1.58	-	0.057	1.291	0.074	-
2 636.5	41055	QPSK	B	20	23.5	22.49	-0.09	Right Tilt	1	50	0	1:1.58	-	0.045	1.262	0.057	-
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LTE FDD Band 66 (AWS) Head SAR																		
Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(W/kg)		(W/kg)	
1 745	132322	QPSK	B	20	24.0	22.33	-0.04	Left Touch	0	1	49	1:1	-	**0.155**	1.469	**0.228**	A12
1 745	132322	QPSK	B	20	23.0	21.73	0.02	Left Touch	1	50	25	1:1	-	0.131	1.340	0.176	-
1 745	132322	QPSK	B	20	24.0	22.33	0.15	Left Tilt	0	1	49	1:1	-	0.070	1.469	0.103	-
1 745	132322	QPSK	B	20	23.0	21.73	-0.08	Left Tilt	1	50	25	1:1	-	0.059	1.340	0.079	-
1 745	132322	QPSK	B	20	24.0	22.33	-0.13	Right Touch	0	1	49	1:1	-	0.116	1.469	0.170	-
1 745	132322	QPSK	B	20	23.0	21.73	0.06	Right Touch	1	50	25	1:1	-	0.097	1.340	0.130	-
1 745	132322	QPSK	B	20	24.0	22.33	-0.05	Right Tilt	0	1	49	1:1	-	0.078	1.469	0.115	-
1 745	132322	QPSK	B	20	23.0	21.73	0.12	Right Tilt	1	50	25	1:1	-	0.060	1.340	0.080	-
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Note: # Data entry indicate Variability measurement.

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NR FDD Band n5 Head SAR																	
Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(W/kg)		(W/kg)	
836.5	167300	DFT-s OFDM QPSK	A	20	25.0	23.98	0.16	Left Touch	0	1	53	1:1	-	0.157	1.265	0.199	-
836.5	167300	DFT-s OFDM QPSK	A	20	25.0	23.88	-0.16	Left Touch	0	50	28	1:1	-	0.163	1.294	0.211	-
836.5	167300	DFT-s OFDM QPSK	A	20	25.0	23.98	0.11	Left Tilt	0	1	53	1:1	-	0.096	1.265	0.121	-
836.5	167300	DFT-s OFDM QPSK	A	20	25.0	23.88	-0.04	Left Tilt	0	50	28	1:1	-	0.093	1.294	0.120	-
836.5	167300	DFT-s OFDM QPSK	A	20	25.0	23.98	-0.15	Right Touch	0	1	53	1:1	-	**0.227**	1.265	**0.287**	**A13**
836.5	167300	DFT-s OFDM QPSK	A	20	25.0	23.88	-0.16	Right Touch	0	50	28	1:1	-	0.213	1.294	0.276	-
836.5	167300	DFT-s OFDM QPSK	A	20	25.0	23.98	-0.15	Right Tilt	0	1	53	1:1	-	0.112	1.265	0.142	-
836.5	167300	DFT-s OFDM QPSK	A	20	25.0	23.88	-0.08	Right Tilt	0	50	28	1:1	-	0.110	1.294	0.142	-
836.5	167300	CP QPSK	A	20	23.5	22.30	0.18	Right Touch	1.5	1	1	1:1	-	0.118	1.318	0.156	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram									

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NR FDD Band n66 Head SAR																	
Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(W/kg)		(W/kg)	
1 745	349000	DFT-s OFDM QPSK	B	40	24.5	23.86	-0.10	Left Touch	0	1	108	1:1	-	0.145	1.159	0.168	-
1 745	349000	DFT-s OFDM QPSK	B	40	24.5	23.82	0.15	Left Touch	0	108	54	1:1	-	0.145	1.169	0.170	-
1 745	349000	DFT-s OFDM QPSK	B	40	24.5	23.86	0.09	Left Tilt	0	1	108	1:1	-	0.090	1.159	0.104	-
1 745	349000	DFT-s OFDM QPSK	B	40	24.5	23.82	0.05	Left Tilt	0	108	54	1:1	-	0.086	1.169	0.101	-
1 745	349000	DFT-s OFDM QPSK	B	40	24.5	23.86	0.08	Right Touch	0	1	108	1:1	-	0.142	1.159	0.165	-
1 745	349000	DFT-s OFDM QPSK	B	40	24.5	23.82	0.11	Right Touch	0	108	54	1:1	-	0.137	1.169	0.160	-
1 745	349000	DFT-s OFDM QPSK	B	40	24.5	23.86	0.11	Right Tilt	0	1	108	1:1	-	0.085	1.159	0.099	-
1 745	349000	DFT-s OFDM QPSK	B	40	24.5	23.82	-0.03	Right Tilt	0	108	54	1:1	-	0.080	1.169	0.094	-
1 745	349000	CP QPSK	B	40	23.0	21.67	-0.13	Right Touch	1.5	1	1	1:1	-	0.083	1.358	0.113	-
1 745	349000	DFT-s OFDM QPSK	D	40	19.5	19.34	0.00	Left Touch	0	1	108	1:1	-	0.402	1.038	0.417	-
1 745	349000	DFT-s OFDM QPSK	D	40	19.5	19.30	0.02	Left Touch	0	108	108	1:1	-	0.377	1.047	0.395	-
1 745	349000	DFT-s OFDM QPSK	D	40	19.5	19.34	0.07	Left Tilt	0	1	108	1:1	-	0.432	1.038	0.448	-
1 745	349000	DFT-s OFDM QPSK	D	40	19.5	19.30	0.00	Left Tilt	0	108	108	1:1	-	0.405	1.047	0.424	-
1 745	349000	DFT-s OFDM QPSK	D	40	19.5	19.34	0.02	Right Touch	0	1	108	1:1	-	0.630	1.038	0.654	-
1 745	349000	DFT-s OFDM QPSK	D	40	19.5	19.30	-0.02	Right Touch	0	108	108	1:1	-	0.588	1.047	0.616	-
1 745	349000	DFT-s OFDM QPSK	D	40	19.5	19.34	0.00	Right Tilt	0	1	108	1:1	-	0.600	1.038	0.623	-
1 745	349000	DFT-s OFDM QPSK	D	40	19.5	19.30	0.01	Right Tilt	0	108	108	1:1	-	0.570	1.047	0.597	-
1 745	349000	CP QPSK	D	40	19.5	18.73	-0.02	Right Touch	0	1	1	1:1	-	**0.682**	1.194	**0.814**	**A14**
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Head 1.6 W/kg Averaged over 1 gram									

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DTS Head SAR –RCV ON																
Frequency		Mode	Ant.	Bandwidth (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Area Scan Peak SAR (W/kg)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Scaled SAR (W/kg)	Plot No.
MHz	Ch.															
2 437	6	802.11b	F	20	1	16.0	15.72	-0.14	Left Touch	98.3	0.16	0.124	1.067	1.017	0.135	-
2 437	6	802.11b	F	20	1	16.0	15.72	0.14	Left Tilt	98.3	0.039	0.032	1.067	1.017	0.035	-
2 437	6	802.11b	F	20	1	16.0	15.72	-0.10	Right Touch	98.3	0.502	**0.395**	1.067	1.017	**0.429**	**A15**
2 437	6	802.11b	F	20	1	16.0	15.72	0.15	Right Tilt	98.3	0.107	0.079	1.067	1.017	0.086	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population											Head 1.6 W/kg Averaged over 1 gram					

NII Head SAR – RCVON																
Frequency		Mode	Ant.	Bandwidth	Data Rate	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Area Scan Peak SAR	Meas. SAR	Scaling Factor	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(Mbps)	(dBm)	(dBm)	(dB)			(W/kg)	(W/kg)		(Duty)	(W/kg)	
5 310	62	802.11n	E	40	MCS0	14.0	12.91	-0.03	Left Touch	91	0.0419	0.014	1.285	1.099	0.020	-
5 310	62	802.11n	E	40	MCS0	14.0	12.91	-0.12	Left Tilt	91	0.0796	0.019	1.285	1.099	0.027	-
5 310	62	802.11n	E	40	MCS0	14.0	12.91	0.19	Right Touch	91	0.401	0.093	1.285	1.099	0.131	-
5 310	62	802.11n	E	40	MCS0	14.0	12.91	0.19	Right Tilt	91	0.210	0.053	1.285	1.099	0.075	-
5 690	138	802.11ac	E	80	MCS0	14.0	13.45	0.11	Left Touch	90.5	0.151	0.035	1.135	1.105	0.044	-
5 690	138	802.11ac	E	80	MCS0	14.0	13.45	0.09	Left Tilt	90.5	0.103	0.030	1.135	1.105	0.038	-
5 690	138	802.11ac	E	80	MCS0	14.0	13.45	-0.14	Right Touch	90.5	0.318	**0.112**	1.135	1.105	**0.140**	**A16**
5 690	138	802.11ac	E	80	MCS0	14.0	13.45	0.10	Right Tilt	90.5	0.231	0.091	1.135	1.105	0.114	-
5 775	155	802.11ac	E	80	MCS0	14.0	13.44	-0.13	Left Touch	90.5	0.104	0.031	1.138	1.105	0.039	-
5 775	155	802.11ac	E	80	MCS0	14.0	13.44	0.15	Left Tilt	90.5	0.102	0.023	1.138	1.105	0.029	-
5 775	155	802.11ac	E	80	MCS0	14.0	13.44	-0.05	Right Touch	90.5	0.361	0.086	1.138	1.105	0.108	-
5 775	155	802.11ac	E	80	MCS0	14.0	13.44	0.18	Right Tilt	90.5	0.236	0.077	1.138	1.105	0.097	-
5 855	171	802.11ac	E	80	MCS0	14.0	12.37	0.00	Left Touch	90.5	0.000	0.000	1.455	1.105	0.000	
5 855	171	802.11ac	E	80	MCS0	14.0	12.37	0.15	Left Tilt	90.5	0.0458	0.014	1.455	1.105	0.023	
5 855	171	802.11ac	E	80	MCS0	14.0	12.37	-0.18	Right Touch	90.5	0.452	0.071	1.455	1.105	0.114	
5 855	171	802.11ac	E	80	MCS0	14.0	12.37	-0.13	Right Tilt	90.5	0.182	0.054	1.455	1.105	0.087	
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DSS Head SAR –RCV ON												
Frequency		Mode	Ant.	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Meas. SAR	Scaling Factor	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(dBm)	(dBm)	(dB)		(W/kg)		(Duty)	(W/kg)	
2 441	39	Bluetooth DH5	F	11.0	10.39	0.12	Left Touch	0.042	1.151	1.013	0.049	-
2 441	39	Bluetooth DH5	F	11.0	10.39	0.14	Left Tilt	0.013	1.151	1.013	0.015	-
2 441	39	Bluetooth DH5	F	11.0	10.39	0.14	Right Touch	**0.112**	1.151	1.013	**0.131**	**A17**
2 441	39	Bluetooth DH5	F	11.0	10.39	0.06	Right Tilt	0.035	1.151	1.013	0.041	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Head 1.6 W/kg Averaged over 1 gram					

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13.1.2 Body/Hotspot SAR Measurement Results

GSM 850 Body/Hotspot SAR														
Frequency		Mode	Ant.	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Distance	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(dBm)	(dBm)	(dB)			(mm)		(W/kg)		(W/kg)	
824.2	128	GPRS 4Tx	A	30.0	28.46	-0.02	Rear	1:2.08	5	-	0.607	1.426	0.866	-
836.6	190	GPRS 4Tx	A	30.0	28.28	-0.01	Rear	1:2.08	5	-	0.738	1.486	1.097	-
848.8	251	GPRS 4Tx	A	30.0	28.04	-0.01	Rear	1:2.08	5	-	**0.755**	1.570	**1.185**	**B1**
836.6	190	GPRS 4Tx	A	30.0	28.28	0.08	Front	1:2.08	5	-	0.432	1.486	0.642	-
836.6	190	GPRS 4Tx	A	30.0	28.28	-0.13	left	1:2.08	5	-	0.091	1.486	0.135	-
836.6	190	GPRS 4Tx	A	30.0	28.28	-0.01	Right	1:2.08	5	-	0.258	1.486	0.383	-
836.6	190	GPRS 4Tx	A	30.0	28.28	0.02	Bottom	1:2.08	5	-	0.501	1.486	0.744	-
824.2	128	Voice	A	33.0	31.31	-0.05	Rear	1:8.3	5	-	0.707	1.476	1.044	-
836.6	190	Voice	A	33.0	31.38	-0.02	Rear	1:8.3	5	-	0.706	1.452	1.025	-
848.8	251	Voice	A	33.0	31.26	-0.01	Rear	1:8.3	5	-	0.723	1.493	1.079	-
836.6	190	Voice	A	33.0	31.38	-0.03	Front	1:8.3	5	-	0.374	1.452	0.543	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population							Body 1.6 W/kg Averaged over 1 gram							

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GSM 1900 Body/Hotspot SAR														
Frequency		Mode	Ant.	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Distance	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(dBm)	(dBm)	(dB)			(mm)		(W/kg)		(W/kg)	
1 880	661	GPRS 3Tx	B	22.5	21.07	-0.11	Rear	1:2.77	5	-	0.323	1.390	0.449	-
1 880	661	GPRS 3Tx	B	22.5	21.07	-0.13	Front	1:2.77	5	-	0.207	1.390	0.288	-
1 880	661	GPRS 3Tx	B	22.5	21.07	-0.07	left	1:2.77	5	-	0.164	1.390	0.228	-
1 880	661	GPRS 3Tx	B	22.5	21.07	-0.12	Right	1:2.77	5	-	0.032	1.390	0.044	-
1 880	661	GPRS 3Tx	B	22.5	21.07	-0.01	Bottom	1:2.77	5	-	0.283	1.390	0.393	-
1 880	661	Voice	B	27.0	26.02	-0.06	Rear	1:1	5	-	**0.391**	1.253	**0.490**	**B2**
1 880	661	Voice	B	27.0	26.02	-0.10	Front	1:1	5	-	0.239	1.253	0.299	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram						

UMTS Band 5 Body/Hotspot SAR														
Frequency		Mode	Ant.	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Distance	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(dBm)	(dBm)	(dB)			(mm)		(W/kg)		(W/kg)	
836.6	4183	RMC	A	21.0	19.48	-0.05	Rear	1:1	5	-	**0.472**	1.419	**0.670**	**B3**
836.6	4183	RMC	A	21.0	19.48	-0.19	Front	1:1	5	-	0.254	1.419	0.360	-
836.6	4183	RMC	A	21.0	19.48	0.01	Left	1:1	5	-	0.062	1.419	0.088	-
836.6	4183	RMC	A	21.0	19.48	-0.07	Right	1:1	5	-	0.117	1.419	0.166	-
836.6	4183	RMC	A	21.0	19.48	0.02	Bottom	1:1	5	-	0.326	1.419	0.463	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram						

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UMTS Band 4 Body/Hotspot SAR														
Frequency		Mode	Ant.	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Distance	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(dBm)	(dBm)	(dB)			(mm)		(W/kg)		(W/kg)	
1712.4	1312	RMC	B	21.0	19.56	-0.04	Rear	1:1	5	-	0.716	1.393	0.997	-
1732.4	1412	RMC	B	21.0	19.72	0.01	Rear	1:1	5	-	0.813	1.343	**1.092**	-
1752.6	1513	RMC	B	21.0	19.93	-0.01	Rear	1:1	5	-	0.750	1.279	0.959	-
1732.4	1412	RMC	B	21.0	19.72	-0.12	Front	1:1	5	-	0.463	1.343	0.622	-
1732.4	1412	RMC	B	21.0	19.72	-0.08	Left	1:1	5	-	0.297	1.343	0.399	-
1732.4	1412	RMC	B	21.0	19.72	-0.11	Right	1:1	5	-	0.111	1.343	0.149	-
1712.4	1312	RMC	B	21.0	19.56	-0.01	Bottom	1:1	5	-	0.733	1.393	1.021	-
1732.4	1412	RMC	B	21.0	19.72	0.01	Bottom	1:1	5	-	0.626	1.343	0.841	-
1752.6	1513	RMC	B	21.0	19.93	-0.01	Bottom	1:1	5	-	**0.821**	1.279	1.050	**B4**
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram						

UMTS Band 2 Body/Hotspot SAR														
Frequency		Mode	Ant.	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Duty Cycle	Distance	Ant. State	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(dBm)	(dBm)	(dB)			(mm)		(W/kg)		(W/kg)	
1 880	9400	RMC	B	19.0	17.18	-0.12	Rear	1:1	5	-	0.521	1.521	0.792	-
1 880	9400	RMC	B	19.0	17.18	-0.13	Front	1:1	5	-	0.397	1.521	0.604	-
1 880	9400	RMC	B	19.0	17.18	-0.05	Left	1:1	5	-	0.219	1.521	0.333	-
1 880	9400	RMC	B	19.0	17.18	-0.13	Right	1:1	5	-	0.085	1.521	0.129	-
1 852.4	9262	RMC	B	19.0	17.25	0.01	Bottom	1:1	5	-	0.365	1.496	0.546	-
1 880	9400	RMC	B	19.0	17.18	-0.03	Bottom	1:1	5	-	**0.539**	1.521	**0.820**	**B5**
1 907.6	9538	RMC	B	19.0	17.53	0.01	Bottom	1:1	5	-	0.427	1.403	0.599	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram						

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LTE FDD Band 2 (PCS) Body/Hotspot SAR																		
Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
1 900	19100	QPSK	B	20	20.5	19.38	0.01	Rear	0	1	0	1:1	-	5	0.578	1.294	0.748	-
1 900	19100	QPSK	B	20	20.5	19.62	-0.02	Rear	0	50	0	1:1	-	5	0.611	1.225	0.748	-
1 900	19100	QPSK	B	20	20.5	19.38	-0.05	Front	0	1	0	1:1	-	5	0.462	1.294	0.598	-
1 900	19100	QPSK	B	20	20.5	19.62	-0.01	Front	0	50	0	1:1	-	5	0.518	1.225	0.635	-
1 900	19100	QPSK	B	20	20.5	19.38	0.03	Left	0	1	0	1:1	-	5	0.376	1.294	0.487	-
1 900	19100	QPSK	B	20	20.5	19.62	-0.07	Left	0	50	0	1:1	-	5	0.418	1.225	0.512	-
1 900	19100	QPSK	B	20	20.5	19.38	-0.02	Right	0	1	0	1:1	-	5	0.091	1.294	0.118	-
1 900	19100	QPSK	B	20	20.5	19.62	-0.02	Right	0	50	0	1:1	-	5	0.095	1.225	0.116	-
1 900	19100	QPSK	B	20	20.5	19.38	-0.01	Bottom	0	1	0	1:1	-	5	0.555	1.294	0.718	-
1 900	19100	QPSK	B	20	20.5	19.62	0.00	Bottom	0	50	0	1:1	-	5	0.587	1.225	0.719	-
1 900	19100	QPSK	D	20	21.0	19.63	-0.13	Rear	0	1	99	1:1	-	5	0.483	1.371	0.662	-
1 900	19100	QPSK	D	20	21.0	19.72	0.13	Rear	0	50	49	1:1	-	5	0.494	1.343	0.663	-
1 900	19100	QPSK	D	20	21.0	19.63	0.18	Front	0	1	99	1:1	-	5	0.264	1.371	0.362	-
1 900	19100	QPSK	D	20	21.0	19.72	-0.02	Front	0	50	49	1:1	-	5	0.271	1.343	0.364	-
1 900	19100	QPSK	D	20	21.0	19.63	0.04	Left	0	1	99	1:1	-	5	0.080	1.371	0.110	-
1 900	19100	QPSK	D	20	21.0	19.72	0.09	Left	0	50	49	1:1	-	5	0.082	1.343	0.110	-
1 860	18700	QPSK	D	20	21.0	19.40	0.00	Top	0	1	49	1:1	-	5	0.597	1.445	0.863	-
1 880	18900	QPSK	D	20	21.0	19.46	0.00	Top	0	1	49	1:1	-	5	0.595	1.426	0.848	-
1 900	19100	QPSK	D	20	21.0	19.63	0.01	Top	0	1	99	1:1	-	5	0.636	1.371	**0.872**	-
1 860	18700	QPSK	D	20	21.0	19.52	0.03	Top	0	50	25	1:1	-	5	0.611	1.406	0.859	-
1 880	18900	QPSK	D	20	21.0	19.59	-0.01	Top	0	50	25	1:1	-	5	0.608	1.384	0.841	-
1 900	19100	QPSK	D	20	21.0	19.72	0.00	Top	0	50	49	1:1	-	5	**0.642**	1.343	0.862	**B6**
1 900	19100	QPSK	D	20	21.0	19.69	-0.01	Top	0	100	0	1:1	-	5	0.625	1.352	0.845	-
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LTE FDD Band 12 Body/Hotspot SAR

Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
707.5	23095	QPSK	A	10	20.5	19.87	-0.05	Rear	0	1	0	1:1	-	5	0.263	1.156	0.304	-
707.5	23095	QPSK	A	10	20.5	20.05	-0.02	Rear	1	25	0	1:1	-	5	**0.279**	1.109	**0.309**	**B7**
707.5	23095	QPSK	A	10	20.5	19.87	0.03	Front	0	1	0	1:1	-	5	0.144	1.156	0.166	-
707.5	23095	QPSK	A	10	20.5	20.05	-0.06	Front	1	25	0	1:1	-	5	0.152	1.109	0.169	-
707.5	23095	QPSK	A	10	20.5	19.87	-0.02	Left	0	1	0	1:1	-	5	0.063	1.156	0.073	-
707.5	23095	QPSK	A	10	20.5	20.05	-0.06	Left	1	25	0	1:1	-	5	0.068	1.109	0.075	-
707.5	23095	QPSK	A	10	20.5	19.87	0.02	Right	0	1	0	1:1	-	5	0.136	1.156	0.157	-
707.5	23095	QPSK	A	10	20.5	20.05	0.01	Right	1	25	0	1:1	-	5	0.128	1.109	0.142	-
707.5	23095	QPSK	A	10	20.5	19.87	-0.01	Bottom	1	1	0	1:1	-	5	0.172	1.156	0.199	-
707.5	23095	QPSK	A	10	20.5	20.05	-0.01	Bottom	1	25	0	1:1	-	5	0.184	1.109	0.204	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram									

LTE FDD Band 13 Body/Hotspot SAR

Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
782	23230	QPSK	A	10	20.5	19.39	-0.04	Rear	0	1	0	1:1	-	5	0.347	1.291	0.448	-
782	23230	QPSK	A	10	20.5	19.58	-0.06	Rear	1	25	24	1:1	-	5	**0.376**	1.236	**0.465**	**B8**
782	23230	QPSK	A	10	20.5	19.39	-0.03	Front	0	1	0	1:1	-	5	0.197	1.291	0.254	-
782	23230	QPSK	A	10	20.5	19.58	0.04	Front	1	25	24	1:1	-	5	0.202	1.236	0.250	-
782	23230	QPSK	A	10	20.5	19.39	-0.04	Left	0	1	0	1:1	-	5	0.084	1.291	0.108	-
782	23230	QPSK	A	10	20.5	19.58	0.00	Left	1	25	24	1:1	-	5	0.086	1.236	0.106	-
782	23230	QPSK	A	10	20.5	19.39	-0.02	Right	0	1	0	1:1	-	5	0.208	1.291	0.269	-
782	23230	QPSK	A	10	20.5	19.58	0.00	Right	1	25	24	1:1	-	5	0.212	1.236	0.262	-
782	23230	QPSK	A	10	20.5	19.39	0.01	Bottom	1	1	0	1:1	-	5	0.235	1.291	0.303	-
782	23230	QPSK	A	10	20.5	19.58	0.02	Bottom	1	25	24	1:1	-	5	0.263	1.236	0.325	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram									

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LTE FDD Band 26 (Cell) Body/Hotspot SAR																		
Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
782	831.5	26865	A	15	21.0	19.02	-0.01	Rear	0	1	74	1:1	-	5	**0.403**	1.578	**0.636**	**B9**
782	831.5	26865	A	15	21.0	19.22	0.04	Rear	1	36	0	1:1	-	5	0.363	1.507	0.547	-
782	831.5	26865	A	15	21.0	19.02	0.02	Front	0	1	74	1:1	-	5	0.208	1.578	0.328	-
782	831.5	26865	A	15	21.0	19.22	0.02	Front	1	36	0	1:1	-	5	0.182	1.507	0.274	-
782	831.5	26865	A	15	21.0	19.02	0.02	Left	0	1	74	1:1	-	5	0.062	1.578	0.098	-
782	831.5	26865	A	15	21.0	19.22	0.00	Left	1	36	0	1:1	-	5	0.060	1.507	0.090	-
782	831.5	26865	A	15	21.0	19.02	-0.01	Right	0	1	74	1:1	-	5	0.100	1.578	0.158	-
782	831.5	26865	A	15	21.0	19.22	0.01	Right	1	36	0	1:1	-	5	0.108	1.507	0.163	-
782	831.5	26865	A	15	21.0	19.02	-0.01	Bottom	1	1	74	1:1	-	5	0.267	1.578	0.421	-
782	831.5	26865	A	15	21.0	19.22	0.00	Bottom	1	36	0	1:1	-	5	0.235	1.507	0.354	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram									

LTE TDD Band 41 Body/Hotspot SAR																		
Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
2 636.5	41055	QPSK	B	20	19.0	18.29	-0.14	Rear	0	1	0	1:1.58	-	5	0.196	1.178	0.231	-
2 636.5	41055	QPSK	B	20	19.0	18.27	-0.15	Rear	0	50	0	1:1.58	-	5	0.199	1.183	0.235	-
2 636.5	41055	QPSK	B	20	19.0	18.29	0.15	Front	0	1	0	1:1.58	-	5	0.139	1.178	0.164	-
2 636.5	41055	QPSK	B	20	19.0	18.27	0.11	Front	0	50	0	1:1.58	-	5	0.145	1.183	0.172	-
2 636.5	41055	QPSK	B	20	19.0	18.29	-0.14	Left	0	1	0	1:1.58	-	5	0.065	1.178	0.077	-
2 636.5	41055	QPSK	B	20	19.0	18.27	-0.14	Left	0	50	0	1:1.58	-	5	0.049	1.183	0.058	-
2 636.5	41055	QPSK	B	20	19.0	18.29	0.04	Bottom	0	1	0	1:1.58	-	5	0.240	1.178	0.283	-
2 636.5	41055	QPSK	B	20	19.0	18.27	0.00	Bottom	0	50	0	1:1.58	-	5	**0.291**	1.183	**0.344**	**B10**
ANSI/IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/General Population									Body 1.6 W/kg Averaged over 1 gram									

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LTE FDD Band 66 (AWS) Body/Hotspot SAR																		
Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
1 720	132072	QPSK	B	20	20.5	18.86	-0.02	Rear	0	1	49	1:1	-	5	0.648	1.459	0.945	-
1 745	132322	QPSK	B	20	20.5	19.01	-0.18	Rear	0	1	49	1:1	-	5	0.654	1.409	0.921	-
1 770	132572	QPSK	B	20	20.5	18.95	-0.01	Rear	0	1	49	1:1	-	5	0.616	1.429	0.880	-
1 745	132322	QPSK	B	20	20.5	19.10	-0.14	Rear	0	50	25	1:1	-	5	0.725	1.380	**1.001**	-
1 745	132322	QPSK	B	20	20.5	19.27	-0.15	Rear	0	50	25	1:1	-	5	0.729	1.327	0.967	-
1 745	132322	QPSK	B	20	20.5	19.18	0.14	Rear	0	50	49	1:1	-	5	0.682	1.355	0.924	-
1 745	132322	QPSK	B	20	20.5	19.25	0.00	Rear	0	100	0	1:1	-	5	0.715	1.334	0.954	-
1 745	132322	QPSK	B	20	20.5	19.01	-0.04	Front	0	1	49	1:1	-	5	0.454	1.409	0.640	-
1 745	132322	QPSK	B	20	20.5	19.27	0.15	Front	0	50	25	1:1	-	5	0.478	1.327	0.634	-
1 745	132322	QPSK	B	20	20.5	19.01	0.00	Left	0	1	49	1:1	-	5	0.301	1.409	0.424	-
1 745	132322	QPSK	B	20	20.5	19.27	-0.01	Left	0	50	25	1:1	-	5	0.299	1.327	0.397	-
1 745	132322	QPSK	B	20	20.5	19.01	0.05	Right	0	1	49	1:1	-	5	0.114	1.409	0.161	-
1 745	132322	QPSK	B	20	20.5	19.27	-0.08	Right	0	50	25	1:1	-	5	0.118	1.327	0.157	-
1 720	132072	QPSK	B	20	20.5	18.86	0.01	Bottom	0	1	49	1:1	-	5	0.649	1.459	0.947	-
1 745	132322	QPSK	B	20	20.5	19.01	-0.02	Bottom	0	1	49	1:1	-	5	0.700	1.409	0.986	-
1 770	132572	QPSK	B	20	20.5	18.95	0.00	Bottom	0	1	49	1:1	-	5	0.668	1.429	0.955	-
1 745	132322	QPSK	B	20	20.5	19.10	0.00	Bottom	0	50	25	1:1	-	5	0.695	1.380	0.959	-
1 745	132322	QPSK	B	20	20.5	19.27	-0.01	Bottom	0	50	25	1:1	-	5	**0.736**	1.327	0.977	**B11**
1 745	132322	QPSK	B	20	20.5	19.18	0.00	Bottom	0	50	49	1:1	-	5	0.701	1.355	0.950	-
1 745	132322	QPSK	B	20	20.5	19.25	0.00	Bottom	0	100	0	1:1	-	5	0.725	1.334	0.967	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram									

Note: # Data entry indicate Variability measurement.

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NR FDD Band n5 Body/Hotspot SAR																		
Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
836.5	167300	DFT-s OFDM QPSK	A	20	19.0	17.88	-0.04	Rear	0	1	53	1:1	-	5	**0.331**	1.294	**0.428**	**B12**
836.5	167300	DFT-s OFDM QPSK	A	20	19.0	17.79	-0.04	Rear	0	50	0	1:1	-	5	0.291	1.321	0.384	-
836.5	167300	DFT-s OFDM QPSK	A	20	19.0	17.88	-0.17	Front	0	1	53	1:1	-	5	0.161	1.294	0.208	-
836.5	167300	DFT-s OFDM QPSK	A	20	19.0	17.79	-0.15	Front	0	50	0	1:1	-	5	0.152	1.321	0.201	-
836.5	167300	DFT-s OFDM QPSK	A	20	19.0	17.88	0.00	Left	0	1	53	1:1	-	5	0.055	1.294	0.071	-
836.5	167300	DFT-s OFDM QPSK	A	20	19.0	17.79	0.03	Left	0	50	0	1:1	-	5	0.049	1.321	0.065	-
836.5	167300	DFT-s OFDM QPSK	A	20	19.0	17.88	-0.03	Right	0	1	53	1:1	-	5	0.112	1.294	0.145	-
836.5	167300	DFT-s OFDM QPSK	A	20	19.0	17.79	-0.02	Right	0	50	0	1:1	-	5	0.099	1.321	0.131	-
836.5	167300	DFT-s OFDM QPSK	A	20	19.0	17.88	0.01	Bottom	0	1	53	1:1	-	5	0.290	1.294	0.375	-
836.5	167300	DFT-s OFDM QPSK	A	20	19.0	17.79	0.00	Bottom	0	50	0	1:1	-	5	0.256	1.321	0.338	-
836.5	167300	CP QPSK	A	20	19.0	17.70	-0.02	Rear	0	1	1	1:1	-	5	0.304	1.349	0.410	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram									

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NR FDD Band n66 Body /Hotspot SAR																		
Frequency		Mode	Ant.	Band width	Tune-Up Limit	Meas. Power	Power Drift	Test Position	MPR	RB Size	RB offset	Duty Cycle	Ant. State	Distance	Meas. SAR	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(MHz)	(dBm)	(dBm)	(dB)		(dB)					(mm)	(W/kg)		(W/kg)	
1 745	349000	DFT-s OFDM QPSK	B	40	21.0	19.85	-0.07	Rear	0	1	108	1:1	-	5	0.778	1.303	1.014	-
1 745	349000	DFT-s OFDM QPSK	B	40	21.0	19.67	0.18	Rear	0	108	54	1:1	-	5	0.764	1.358	1.038	-
1 745	349000	DFT-s OFDM QPSK	B	40	21.0	19.54	0.12	Rear	0	216	0	1:1	-	5	0.743	1.400	1.040	-
1 745	349000	DFT-s OFDM QPSK	B	40	21.0	19.85	0.03	Front	0	1	108	1:1	-	5	0.484	1.303	0.631	-
1 745	349000	DFT-s OFDM QPSK	B	40	21.0	19.67	0.18	Front	0	108	54	1:1	-	5	0.471	1.358	0.640	-
1 745	349000	DFT-s OFDM QPSK	B	40	21.0	19.85	-0.03	Left	0	1	108	1:1	-	5	0.304	1.303	0.396	-
1 745	349000	DFT-s OFDM QPSK	B	40	21.0	19.67	-0.06	Left	0	108	54	1:1	-	5	0.318	1.358	0.432	-
1 745	349000	DFT-s OFDM QPSK	B	40	21.0	19.85	0.06	Bottom	0	1	108	1:1	-	5	**0.908**	1.303	1.183	B13
1 745	349000	DFT-s OFDM QPSK	B	40	21.0	19.67	0.01	Bottom	0	108	54	1:1	-	5	0.883	1.358	**1.199**	-
1 745	349000	DFT-s OFDM QPSK	B	40	21.0	19.54	0.02	Bottom	0	216	0	1:1	-	5	0.848	1.400	1.187	-
1 745	349000	CP OFDM QPSK	B	40	21.0	19.06	0.02	Bottom	0	1	1	1:1	-	5	0.755	1.563	1.180	-
1 745	349000	DFT-s OFDM QPSK	B	40	21.0	19.85	0.06	Bottom	0	1	108	1:1	-	5	0.899	1.303	1.171	#
1 745	349000	DFT-s OFDM QPSK	D	40	19.5	19.34	-0.10	Rear	0	1	108	1:1	-	5	0.602	1.038	0.625	-
1 745	349000	DFT-s OFDM QPSK	D	40	19.5	19.30	-0.01	Rear	0	108	108	1:1	-	5	0.558	1.047	0.584	-
1 745	349000	DFT-s OFDM QPSK	D	40	19.5	19.14	-0.08	Rear	0	216	0	1:1	-	5	0.594	1.086	0.645	-
1 745	349000	DFT-s OFDM QPSK	D	40	19.5	19.34	-0.05	Front	0	1	108	1:1	-	5	0.317	1.038	0.329	-
1 745	349000	DFT-s OFDM QPSK	D	40	19.5	19.30	-0.18	Front	0	108	108	1:1	-	5	0.299	1.047	0.313	-
1 745	349000	DFT-s OFDM QPSK	D	40	19.5	19.34	-0.18	Left	0	1	108	1:1	-	5	0.074	1.038	0.077	-
1 745	349000	DFT-s OFDM QPSK	D	40	19.5	19.30	0.15	Left	0	108	108	1:1	-	5	0.074	1.047	0.077	-
1 745	349000	DFT-s OFDM QPSK	D	40	19.5	19.34	0.00	Top	0	1	108	1:1	-	5	0.905	1.038	0.939	-
1 745	349000	DFT-s OFDM QPSK	D	40	19.5	19.30	-0.02	Top	0	108	108	1:1	-	5	0.850	1.047	0.890	-
1 745	349000	CP OFDM QPSK	D	40	19.5	19.14	0.00	Top	0	216	0	1:1	-	5	0.855	1.086	0.929	-
1 745	349000	CP OFDM QPSK	D	40	19.5	18.73	0.00	Top	0	1	1	1:1	-	5	0.900	1.194	1.075	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population									Body 1.6 W/kg Averaged over 1 gram									

Note: # Data entry indicate Variability measurement.

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DTS Body/Hotspot SAR																	
Frequency		Mode	Ant.	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Distance (mm)	Area Scan Peak SAR (W/kg)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
MHz	Ch.																
2 437	6	802.11b	F	20	1	17.0	16.75	-0.12	Rear	98.3	5	0.798	0.715	1.059	1.017	0.770	-
2 437	6	802.11b	F	20	1	17.0	16.75	-0.15	Front	98.3	5	0.387	0.304	1.059	1.017	0.328	-
2 412	1	802.11b	F	20	1	17.0	16.37	0.04	Left	98.3	5	0.963	0.729	1.156	1.017	0.857	-
2 437	6	802.11b	F	20	1	17.0	16.75	0.00	Left	98.3	5	1.250	**0.923**	1.059	1.017	**0.994**	B14
2 472	11	802.11b	F	20	1	17.0	16.21	-0.01	Left	98.3	5	1.020	0.758	1.199	1.017	0.925	
2 437	6	802.11b	F	20	1	17.0	16.75	-0.12	Top	98.3	5	0.069	0.053	1.059	1.017	0.057	-
2 437	6	802.11b	F	20	1	17.0	16.75	0.03	Left	98.3	5	1.230	0.920	1.059	1.017	0.991	
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population										Body 1.6 W/kg Averaged over 1 gram							

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5 GHz WLAN Body/Hotspot SAR																	
Frequency		Mode	Ant.	Band width (MHz)	Data Rate (Mbps)	Tune-Up Limit (dBm)	Meas. Power (dBm)	Power Drift (dB)	Test Position	Duty Cycle	Distance (mm)	Area Scan Peak SAR (W/kg)	Meas. SAR (W/kg)	Scaling Factor	Scaling Factor (Duty)	Reported SAR (W/kg)	Plot No.
MHz	Ch.																
5 280	56	802.11a	Ant.1	20	6Mbps	18.0	16.56	0.00	Rear	91.4	5	0.644	0.214	1.393	1.094	0.326	-
5 280	56	802.11a	Ant.1	20	6Mbps	18.0	16.56	0.00	Front	91.4	5	0.178	0.058	1.393	1.094	0.088	-
5 280	56	802.11a	Ant.1	20	6Mbps	18.0	16.56	0.10	Left	91.4	5	0.315	0.119	1.393	1.094	0.181	-
5 280	56	802.11a	Ant.1	20	6Mbps	18.0	16.56	0.14	Top	91.4	5	0.275	0.079	1.393	1.094	0.120	-
5 600	120	802.11a	Ant.1	20	6Mbps	18.0	17.96	0.00	Rear	91.4	5	0.915	0.413	1.009	1.094	0.456	-
5 600	120	802.11a	Ant.1	20	6Mbps	18.0	17.96	0.00	Front	91.4	5	0.206	0.089	1.009	1.094	0.098	-
5 600	120	802.11a	Ant.1	20	6Mbps	18.0	17.96	0.13	Left	91.4	5	0.505	0.197	1.009	1.094	0.217	-
5 600	120	802.11a	Ant.1	20	6Mbps	18.0	17.96	-0.11	Top	91.4	5	0.318	0.109	1.009	1.094	0.120	-
5 785	157	802.11a	Ant.1	20	6Mbps	18.0	17.96	0.00	Rear	91.4	5	1.150	**0.459**	1.009	1.094	**0.507**	**B15**
5 785	157	802.11a	Ant.1	20	6Mbps	18.0	17.96	0.00	Front	91.4	5	0.223	0.068	1.009	1.094	0.075	-
5 785	157	802.11a	Ant.1	20	6Mbps	18.0	17.96	0.10	Left	91.4	5	0.514	0.185	1.009	1.094	0.204	-
5 785	157	802.11a	Ant.1	20	6Mbps	18.0	17.96	0.15	Top	91.4	5	0.296	0.159	1.009	1.094	0.176	
5 845	169	802.11a	Ant.1	20	6Mbps	18.0	17.43	0.00	Rear	91.4	5	0.925	0.334	1.140	1.094	0.417	
5 845	169	802.11a	Ant.1	20	6Mbps	18.0	17.43	0.00	Front	91.4	5	0.161	0.056	1.140	1.094	0.070	
5 845	169	802.11a	Ant.1	20	6Mbps	18.0	17.43	0.08	Left	91.4	5	0.408	0.139	1.140	1.094	0.173	
5 845	169	802.11a	Ant.1	20	6Mbps	18.0	17.43	0.09	Top	91.4	5	0.290	0.119	1.140	1.094	0.148	
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population										Body 1.6 W/kg Averaged over 1 gram							

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DSS Tethering SAR													
Frequency		Mode	Ant.	Tune-Up Limit	Meas. Power	Power Drift	Test Position	Distance	Meas. SAR	Scaling Factor	Scaling Factor	Scaled SAR	Plot No.
MHz	Ch.			(dBm)	(dBm)	(dB)		(mm)	(W/kg)		(Duty)	(W/kg)	
2 441	39	Bluetooth DH5	F	11.0	10.39	-0.19	Rear	5	0.150	1.151	1.013	0.175	-
2 441	39	Bluetooth DH5	F	11.0	10.39	-0.13	Front	5	0.059	1.151	1.013	0.069	-
2 441	39	Bluetooth DH5	F	11.0	10.39	-0.01	Left	5	**0.174**	1.151	1.013	**0.203**	**B16**
2 441	39	Bluetooth DH5	F	11.0	10.39	-0.19	Top	5	0.011	1.151	1.013	0.013	-
ANSI/ IEEE C95.1 - 2005– Safety Limit Spatial Peak Uncontrolled Exposure/ General Population								Body 1.6 W/kg Averaged over 1 gram					

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13.1.3 Phablet SAR Measurement Considerations

Per FCC KDB 648474 D04v01r03, this device is considered a "Phablet" since the diagonal dimension is greater than 160 mm and less than 200 mm. Therefore, extremity SAR tests are required when wireless router mode does not apply or if wireless router 1g SAR >1.2 W/kg. When hotspot mode applies, 10g SAR required only for the surfaces and edges with hotspot mode scaled to the maximum output power (including tolerance) is 1g SAR > 1.2 W/kg.

13.1.4 Phablet SAR Measurement Results

NFCPhablet SAR _10g							
Frequency MHz	Mode	Data Rate (Kbps)	Power Drift (dB)	Test Position	Distance (mm)	Meas. SAR (W/kg)	Plot No.
13.56	NFC (Type A)	106	-0.12	Rear	0	**0.068**	C2
13.56	NFC (Type B)	106	0.00	Rear	0	0.066	-
13.56	NFC (Type F)	106	0.00	Rear	0	0.067	-
13.56	NFC (Type A)	106	0.00	Front	0	0.000	-
13.56	NFC (Type A)	106	0.00	Left	0	0.00022	-
13.56	NFC (Type A)	106	0.00	Right	0	0.000	-
13.56	NFC (Type A)	106	0.00	Top	0	0.000	-
13.56	NFC (Type A)	106	0.00	Bottom	0	0.000	-
ANSI/ IEEE C95.1 - 2005 – Safety Limit Spatial Peak Uncontrolled Exposure/ General Population			Hand 4.0 W/kg Averaged over 10 gram				

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13.2 SAR Test Notes

General Notes:

1. The test data reported are the worst-case SAR values according to test procedures specified in IEEE 1528-2013, FCC KDB Procedure.
2. Batteries are fully charged at the beginning of the SAR measurements. A standard battery was used for all SAR measurements.
3. Liquid tissue depth was at least 15.0 cm for all frequencies.
4. The manufacturer has confirmed that the device(s) tested have the same physical, mechanical and thermal characteristics and are within operational tolerances expected for production units.
5. SAR results were scaled to the maximum allowed power to demonstrate compliance per FCC KDB 447498 D01v06.
6. Device was tested using a fixed spacing for body SAR. A separation distance of 5 mm was considered. because the manufacturer has determined that there will be body-worn accessories available in the marketplace for users to support this separation distance.
   To comply with KDB 941225 D07 v10r02 and KDB 648474 D04 v01r03, 1-g SAR testing was performed at a Separation distance of 5 mm.
   Thus, Body, Hotspot mode and Extremity were amalgamated into one exposure condition using 1-g SAR at 5 mm to confirm compliance. 1g SAR at a separation distance of 5mm, is a more conservative representation than 10-g SAR at 0 mm.
7. Per FCC KDB 648474 D04v01r03, SAR was evaluated without a headset connected to the device. Since the standalone reported SAR was 1.2 W/kg, no additional SAR evaluation using a headset cable were required.
8. Per FCC KDB 865664 D01v01r04, variability SAR measurement were performed when the measured SAR results for a frequency Band were greater than or equal to 0.8 W/kg for 1g SAR and >2 for 10g SAR Please see Section 15 for variability analysis.
9. This device utilizes power reduction for some wireless mode and technologies, as outlined in sec. 4 The maximum output power allowed for each transmitter and exposure condition was evaluated for SAR compliance based on expected use conditions and simultaneous scenarios.
10. During SAR testing for the Hotspot conditions per KDB 941225 D06v02r01, the actual portable hotspot operation (with actual simultaneous transmission of a transmitter with WiFi) was not activated.

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GSM/GPRS Test Notes:

1. This EUT'S GSM and GPRS device class is B.
2. This device supports GPRS VOIP in the head and the body-worn configurations therefore GPRS was additionally evaluated for head and body-worn compliance.
3. Justification for reduced test configurations per KDB 941225 D01v03r01: The source-based time-averaged output power was evaluated for all multi-slot operations. The multi-slot configuration with the highest frame averaged output power including tolerance was evaluated for SAR.
4. Per FCC KDB 447498 D04v01, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is 0.8 W/kg then testing at the other channels is not required for such test configuration(s). When the maximum output power variation across the required test channels is 1/2 dB, instead of the middle channel, the highest output power channel must be used.

UMTS Notes:

1. The 12.2 kbps RMC mode is the primary mode per KDB 941225 D01v03r01.
2. UMTS SAR was tested under RMC 12.2 kbps with HSPA inactive per KDB publication 941225 D01v03r01. AMR and HSPA SAR was not required per the 3G Test Reduction Procedure in KDB Publication 941225 D01v03r01.
3. Per FCC KDB 447498 D01v06, if the reported (scaled) SAR measured at the middle channel or highest output power channel for each test configuration is 0.8 W/kg then testing at the other channels is not required for such test configuration(s). When the maximum output power variation across the channel highest output power channel was used.

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LTE Notes:

1. LTE Considerations: LTE test configurations are determined according to SAR Evaluation Consideration for LTE Devices in FCC KDB 941225 D05v02r05.
2. According to FCC KDB 941225 D05v02r05:
   When the reported SAR is 0.8 W/kg, testing of the 100% RB allocation and required test channels is not required. Otherwise, SAR is required for the remaining required test channels using the 1RB, 50%RB and 100%RB allocation with highest output power for that channel.
   Only one channel, and as reported SAR values for 1RB allocation and 50%RB allocation were less than 1.45W/Kg only the highest power RB offset for each allocation was required.
3. MPR is permanently implemented for this device by the manufacturer. The specific manufacturer target MPR is indicated alongside the SAR results. MPR is enabled for this device, according to target MPR is indicated alongside the SAR results.
4. When Power reduction is applied, MPR is 0 for some modes.
5. A-MPR was disabled for all SAR tests by setting NS=01 on the base station simulator.
6. Per FCC KDB Publication 447498 D01v06, if the reported (scaled) LTE TDD Band 41 SAR measured at the highest output power channel for each test configuration is 0.6 W/kg then testing at the other channels is not required for such test configurations.
7. TDD LTE (Power Class 3) was tested using UL-DL configuration 0 with 6 UL sub frames and 2S sub frames using extended cyclic prefix only and special sub frame configuration 6. SAR tests were performed at maximum output power and worst-case transmission duty factor in extended cyclic prefix. Per 3GPP 36.211 Sec. 4, the duty factor using extended cyclic prefix is 0.633(cf=1.58).
8. Per KDB 941225 D05Av01r02, SAR for LTE Carrier Aggregation operations was not needed because the maximum average output power in LTE CA mode was not > 0.25 dB higher than the maximum output power when downlink CA was not activated.

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9. SAR test reduction is applied using the following criteria:
   Start with the largest channel Bandwidth and measure SAR for QPSK with 1 RB, and 50% RB allocation, using the RB offset and required test channel combination with the highest maximum output power among RB offsets at the upper edge, middle and lower edge of each required test channel. When the reported SAR is >0.8 W/kg, testing for other Channels is performed at the highest output power level for 1RB, and 50% RB configuration for that channel. Testing for 100% RB configuration is performed at the highest output power level for 100% RB configuration across the Low, Mid and High Channel when the highest reported SAR for 1 RB and 50% RB are >0.8 W/kg, testing for the remaining required channels is not needed because the reported SAR for 100% RB Allocation <1.45 W/kg. Testing for 16-QAM modulation is not required because the reported SAR for QPSK is <1.45 W/kg and its output power is not more than 0.5 dB higher than that a QPSK. Testing for the other channel Bandwidths is not required because the reported SAR for the highest channel Bandwidth is <1.45 W/kg and its output power is not more than 0.5 dB higher than that of the highest channel Bandwidth.

NR Notes:

1. This device supports SA and NSA mode for NR implementation. In EN-DC Mode, NR operate with the LTE Bands shown in the NR FR1 checklist acting as anchor Bands.
2. More detailed specifications of the NR Bands are contained in the technical description document.
3. This device additionally supports some EN-DC conditions where additional LTE carriers are added on the downlink only.
4. For NR modulations and RB Sizes/Offsets were selected for testing such that configurations with the highest output power was evaluated for SAR tests.

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WLAN Notes:

1. For held-to-ear and hotspot operations, the initial test position procedures were applied. For initial test position, the highest extrapolated peak SAR will be used. When reported SAR for the initial test position is ≤ 0.4 W/kg for 1g SAR and ≤ 1.0 W/kg for 10g SAR, no additional testing for the remaining test positions was required. Otherwise, SAR is evaluated at the subsequent highest peak SAR positions until the reported SAR results is ≤ 0.8 W/kg for 1g SAR and ≤ 2.0 W/kg for 10g SAR or all test position are measured.
2. Per KDB 2482227 D01v02r02 justification for test configurations of 2.4 GHz WiFi Single transmission chain operations, the highest measured maximum output power channel for DSSS was selected for SAR measurement.
3. Per KDB 2482227 D01v02r02 justification for test configurations of 5 GHz WiFi Single transmission chain operations, the initial test configuration was selected according to the transmission mode with the highest maximum allowed powers. Other transmission mode was not investigated since the highest reported SAR for initial test configuration adjusted by the ration of maximum output powers is less than 1.2 W/kg for 1g SAR and less than 3.0 W/kg for 10 g SAR.
4. When the maximum reported 1g averaged SAR is ≤ 0.8 W/kg, SAR testing on additional channels was not required. Otherwise, SAR for the next highest output power channel was required until the reported SAR result was ≤ 1.20 W/kg or all test channels were measured.
5. The device was configured to transmit continuously at the required data rated, channel Bandwidth and signal modulation, using the highest transmission duty factor supported by the test mode tools. The reported SAR was scaled to the 100% transmission duty factor to determine compliance. Procedures used to measure the duty factor are identical to that in the associated WLAN test reports.

Bluetooth Notes:

1. Bluetooth SAR was measured with the device connected to a call box with hopping disabled with DH5 operation and Tx Tests mode type. In the technical documentation, the maximum duty factor of the declared BT was applied to the SAR results. Please see sec.11 for the time-domain plot and calculation for duty factor of the device.
2. Head and Bluetooth tethering SAR were evaluated for BT BDR tethering applications.

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14. Simultaneous SAR Analysis

This device contains transmitters that may operate simultaneously. Therefore, simultaneous transmission analysis is required. Per KDB Publication 447498 D01v06 section 4.3.2 and IEEE 1528-2013 section 6.3.4.1.2, simultaneous transmission SAR test exclusion may be applied when the sum of 1g SAR and 10g SAR for all the simultaneous transmitting antennas in a specific a physical test configuration is ≤1.6W/kg for 1g SAR and ≤4 W/kg for 10g SAR. The different test positions in an exposure condition may be considered collectively to determine SAR exclusion according to the sum of 1g or 10g SAR.

When operating in the same antenna group, Samsung S.LSI TAS algorithm in WWAN directly adds the time-averaged RF exposure from 4G and time-averaged RF exposure from 5G NR. S.LSI algorithm controls the total RF exposure from both 4G and 5G NR to not exceed FCC limit. Therefore, simultaneous transmission compliance between 4G+5G operations within an antenna group is demonstrated in the Part 2 Report during algorithm validation.

This device is enabled with S.LSI Time average SAR algorithm with pre-defined sub6 antenna groups (AG0 and AG1). Simultaneous transmission analysis is performed per antenna groups. Section 14.5 contains analysis to demonstrate the AG0 and AG1 are operate mutually exclusive.

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14.1 Sub6 Antenna Groups

S.LSI Time average SAR(TAS) algorithm operates based on pre-defined sub6 antenna groups (AG). Sub6 Tx antennas in the device are grouped based on spatial variation of RF exposure distributions, where the RF exposure of one AG is mutually exclusive from other AG. This is accomplished by demonstrating either of below conditions for all exposure scenarios:

Sum of SAR of one antenna from each of the sub6 AGs and the RF exposure from radios outside TAS is less than regulatory limits. This condition must be demonstrated for all antenna combinations of sub6 AGs.This device supports two sub6 AG: AG0 and AG1, with AG0 having 2 antennas (A, B) and AG1 having 1 antennas (D). The conditions are verified through the following criteria.

The highest reported SAR at Plimit (or Pmax when Plimit > Pmax) for each antenna should be obtained out of all supported WWAN technologies and frequency bands for each exposure condition Demonstrate that the sum of reported SAR of antenna from each of the sub6 AGs and the sum of RF exposure of TAS should be less than the regulatory limit as given below for each RSI.

Obtain the worst-case reported SAR for each antenna group (i.e., maximum reported SAR at Plimit (or Pmax when Plimit > Pmax) out of all supported technologies, frequency bands and antennas in AG0 and AG1), denoted as max.SAR.AG0 and max.SAR.AG1, and obtain the worst-case RF exposure, and demonstrate that the sum of these RF exposures meets

[Max.SAR.AG0 + Max.SAR.AG1] + [Max.5 ㎓ WLAN + Max.Bluetooth] ≤ 1.6 (for 1g SAR or 4.0 for 10g)

[Max.SAR.AG0 + Max.SAR.AG1] + [Max.2.4 ㎓ WLAN] ≤ 1.6 (for 1g SAR or 4.0 for 10g)

If sum result with both antenna group and BT/WAN exceeds the FCC SAR limit of 1.6 W/kg 1g,

4.0W/kg 10g, can use below contents.

If the sum result with each antenna group and BT/WLAN exceeds the FCC SAR limit of 1.6 W/kg 1g ,4.0 W/kg 10g, the SPLSR was re-evaluated according to FCC KDB 447498 D01v06 4.3.2.

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AG0, AG1, WLAN/BT are described in the table below.

AG0	
Ant.A	GSM850, UMTS B5, LTE B5/B12/B13/B17/B26, NR n5
Ant.B	GSM1900, UMTS B2/B4, LTE B2/B4/B41/B66, NR n66

AG1	
Ant.D	LTE B2, NR n66

WLAN/BT	
Ant.E	WLAN 5GHz
Ant.F	WLAN 2.4GHz, Bluetooth

NFC

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14.2 Head SAR Simultaneous Transmission Analysis

The Maximum measurement result for AG0			
Position	Ant.A	Ant.B	Max.AG0
Left Touch	0.230	0.339	0.339
Left Tilt	0.140	0.182	0.182
Right Touch	0.315	0.260	0.315
Right Tilt	0.160	0.166	0.166

The Maximum measurement result for AG1		
Position	Ant.D	Max.AG1
Left Touch	0.547	0.547
Left Tilt	0.602	0.602
Right Touch	0.821	0.821
Right Tilt	0.78	0.78

The Maximum measurement result for WLAN/BT					
Position	2.4 GHz WLAN (Ant.F)	5 GHz WLAN (Ant.E)	Bluetooth (Ant.F)	5 GHz WLAN (Ant.E)+Bluetooth	Max.WLAN/BT
Left Touch	0.135	0.044	0.049	0.093	0.135
Left Tilt	0.035	0.038	0.015	0.053	0.053
Right Touch	0.429	0.14	0.131	0.271	0.429
Right Tilt	0.086	0.114	0.041	0.155	0.155

Simultaneous Transmission analysis for Head SAR				
Position	Max.AG0	Max.AG1	Max.WLAN/BT	AG0+AG1+WLAN/BT
Left Touch	0.339	0.547	0.135	1.021
Left Tilt	0.182	0.602	0.053	0.837
Right Touch	0.315	0.821	0.429	**1.565**
Right Tilt	0.166	0.78	0.155	1.101

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14.3 Hotspot/BodyWorn SAR Simultaneous Transmission Analysis

The Maximum measurement result for AG0			
Position	Ant.A	Ant.B	Max.AG0
Rear	1.185	1.092	1.185
Front	0.642	0.640	0.642
Left	0.135	0.512	0.512
Right	0.383	0.000	0.383
Top			0
Bottom	0.744	1.199	1.199

The Maximum measurement result for AG1		
Position	Ant.D	Max.AG1
Rear	0.663	0.663
Front	0.329	0.329
Left	0.082	0.082
Right		0
Top	1.075	1.075
Bottom		0

The measurement result for 5 GHz WLAN/ BT				
Position	5 GHz WLAN (Ant.E)	Bluetooth (Ant.F)	5 GHz WLAN (Ant.E)+Bluetooth	Max. 5 GHz WLAN/BT
Rear	0.507	0.175	0.682	0.682
Front	0.098	0.069	0.167	0.167
Left	0.217	0.203	0.420	0.420
Right				0
Top	0.176	0.013	0.189	0.189
Bottom				0

The measurement result for 2.4 GHz WLAN		
Position	2.4 GHz WLAN (Ant.F)	Max.2.4 GHz WLAN
Rear	0.770	0.770
Front	0.328	0.328
Left	0.944	0.944
Right		0
Top	0.061	0.061
Bottom		0

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Simultaneous Transmission analysis for Body SAR						
Position	Max.AG0	Max.AG1	Max. 5 GHz WLAN+BT	Max.2.4 GHz WLAN	AG0+AG1+ 5 GHz WLAN+BT	AG0+AG1+ 2.4 GHz WLAN
Rear	1.185	0.663	0.682	0.770	**See Sec. 14.5.2**	**See Sec. 14.5.3**
Front	0.642	0.329	0.167	0.328	1.138	1.299
Left	0.512	0.082	0.420	0.944	1.014	1.538
Right	0.383				0.383	0.383
Top		1.075	0.189	0.061	1.264	1.136
Bottom	1.199				1.199	1.199

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14.4 Phablet SAR Simultaneous Transmission Analysis

Position	NFC	Max
Rear	0.068	0.068
Front	0.000	0.000
Left	0.00022	0.00022
Right	0.000	0.000
Top	0.000	0.000
Bottom	0.000	0.000

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14.5 SAR to Peak Location Separation Ratio (SPLSR)

FCC KDB 447498 D01v06 General RF Exposure Guidance introduces a new formula for calculating the SAR a Peak Location Separation Ratio (SPLSR) between pairs of simultaneously transmitting antennas:

$$SPLSR_i = (SAR_1 + SAR_2)^{1.5}/R_i$$

Where:

SAR_1 is the highest measured or estimated SAR for the first of a pair of simultaneous transmitting antennas, in a specific test operating mode and exposure condition

SAR_2 is the highest measured of estimated SAR for the second of a pair of simultaneous transmitting antennas, in the same test operating mode and exposure condition as the first

R_i is the separation distance between the pair of simultaneous transmitting antennas, When the SAR is measured, for both antennas in the pair, it is determined by the actual x, y and z coordinates in the 1-g SAR for each SAR peak location, based on the extrapolated and interpolated result in the zoom scan measurement, using the formula of $[(X_1 - X_2)^2 + (Y_1 - Y_2)^2 + (Z_1 - Z_2)^2]$

In order for a pair of simultaneous transmitting antennas with the sum 1-g of SAR> 1.6 W/kg and with the sum 10-g of SAR >4 W/kg to qualify for exemption from Simultaneous Transmission SAR measurements, it has to satisfy the condition of:

$(SAR_1 + SAR_2)^{1.5}/R_i \leq 0.04$ for 1g SAR and $(SAR_1 + SAR_2)^{1.5}/R_i \leq 0.1$ for 10g SAR

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14.5.1 Hotspot/BodyWorn(Rear) SPLSR Evaluation

Ant Group 0

Mode/Band	Antenna	X(mm)	Y(mm)	Z(mm)	Reported SAR [W/kg]
GSM850	Ant.A	-40	-75	-204	1.185
GSM1900	Ant.B	-6	-71	-204	0.490
WCDMA 2	Ant.B	2	-74	-204	0.792
WCDMA 4	Ant.B	1	-74	-204	1.092
WCDMA 5	Ant.A	-40	-89	-204	0.670
LTE 2	Ant.B	-9	-86	-204	0.748
LTE 12	Ant.A	-40	-87	-204	0.309
LTE 13	Ant.A	-40	-87	-204	0.465
LTE 26	Ant.A	-39	-77	-204	0.636
LTE 41	Ant.B	-4	-79	-204	0.199
LTE 66	Ant.B	-9	-87	-204	1.009
NR n5	Ant.A	-40	-89	-204	0.428
NR n66	Ant.B	1	-74	-204	1.040

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Ant Group 1

Mode/Band	Antenna	X(mm)	Y(mm)	Z(mm)	Reported SAR [W/kg]
LTE 2	Ant.D	1	72	-204	0.663
NR n66	Ant.D	-12	86	-204	0.625

WLAN

Mode/Band	Antenna	X(mm)	Y(mm)	Z(mm)	Reported SAR [W/kg]
2.4 GHz WLAN	Ant.F	11	49	-204	0.770
5 GHz WLAN	Ant.E	14	71	-207	0.507
Bluetooth	Ant.F	13	51	-204	0.175

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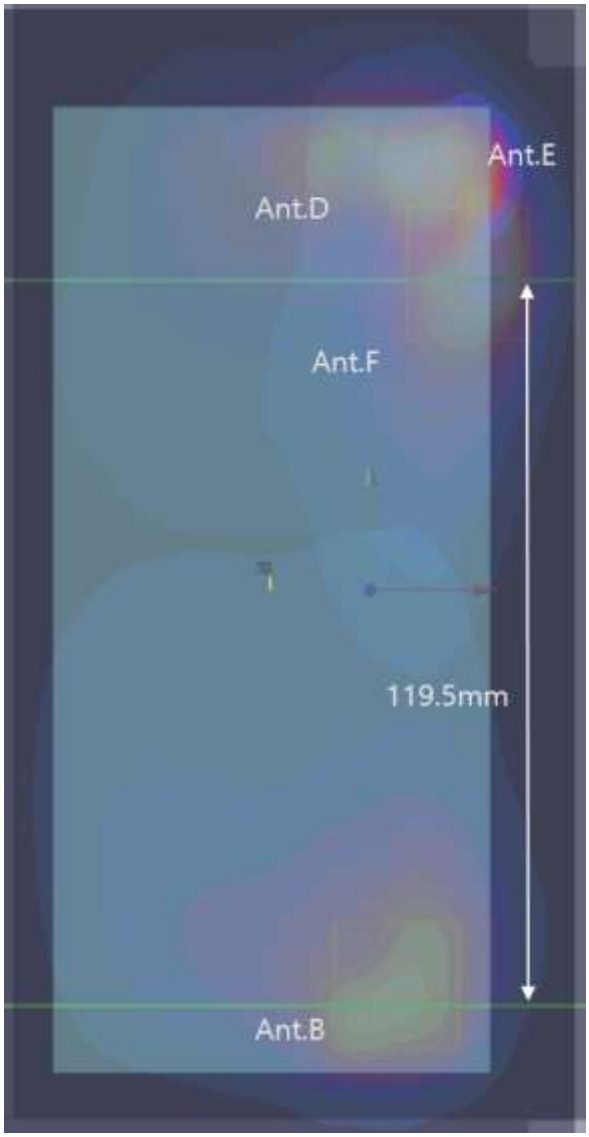
14.5.2 Group analysis SPLSR AG0+AG1+5 GHz WLAN + Bluetooth

	AG0	AG1	5 GHz WLAN+BT
Max Y-axis(mm)	-70.5		
Max SAR(W/kg)	1.185		
Min Y-axis(mm)		72.0	49.0
Max SAR(W/kg)		0.663	0.682
AG0,AG1/WLAN Distance(mm)		119.5	
AG1+ER SAR(W/kg)		1.345	
AG0+(AG1+ER) SAR(W/kg)	2.530		
AG0,AG1+WLAN5G+BT(SPLSR)	0.035		

SPLSR Plot for Antenna Group



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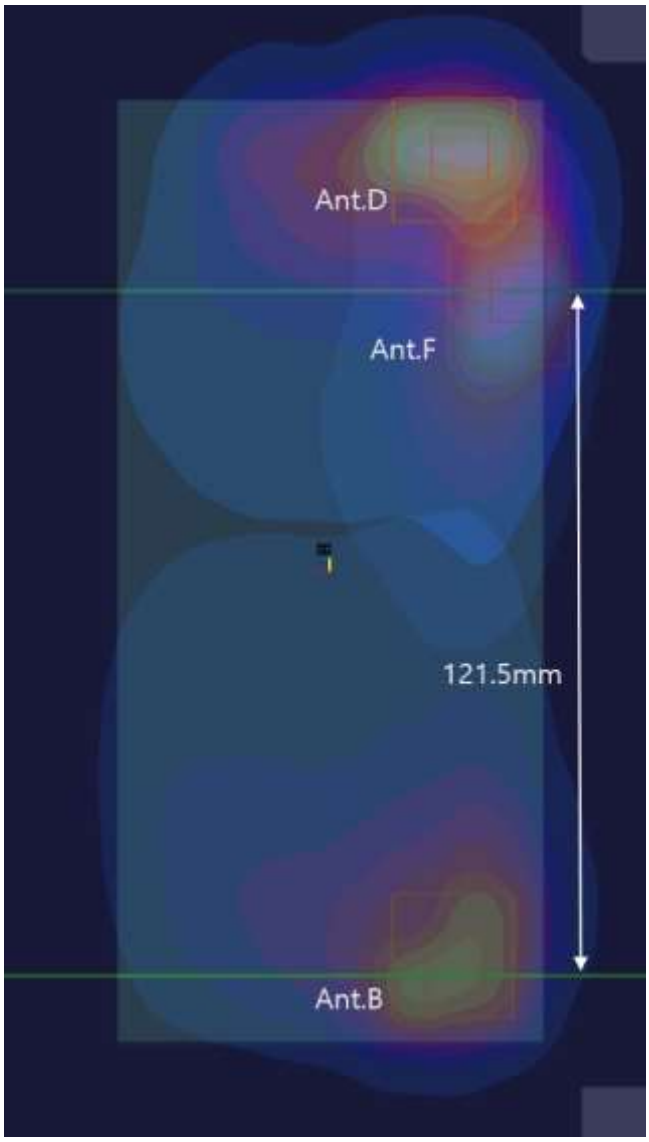
14.5.3 Group analysis SPLSR AG0+AG1+2.4 GHz WLAN

	AG0	AG1	2.4 GHz WLAN
Max Y-axis(mm)	-70.5		
Max SAR(W/kg)	1.185		
Min Y-axis(mm)		72.0	51.0
Max SAR(W/kg)		0.663	0.770
AG0,AG1/WLAN Distance(mm)		121.5	
AG1+ER SAR(W/kg)		1.443	
AG0+(AG1+ER) SAR(W/kg)	2.628		
AG0,AG1+WLAN2.4G (SPLSR)	0.035		

SPLSR Plot for Antenna Group



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15. SAR Measurement Variability and Uncertainty

In accordance with KDB procedure 865664 D01v01r04 SAR measurement 100 MHz to 6 GHz, SAR additional measurements are repeated after the completion of all measurements requiring the same head or body tissue-equivalent medium in a frequency Band. The test device should be returned to ambient conditions (normal room temperature) with the battery fully charged before it is re-mounted on the device holder for the repeated measurement(s) to minimize any unexpected variations in the repeated results.

SAR Measurement variability was assessed using the following procedures for each frequency Band:

1) Repeated measurement is not required when the original highest measured SAR is < 0.80 W/kg for 1g SAR or < 2.0 W/kg for 10g SAR; steps 2) through 4) do not apply.

2) When the original highest measured 1g SAR is ≥ 0.80 W/kg or 10g SAR ≥ 2.0W/kg, repeat that measurement once.

3) Perform a second repeated measurement only if the ratio of largest to smallest SAR for the original and first repeated measurements is > 1.20 or when the original or repeated measurement is ≥ 1.45 W/kg for 1g SAR or ≥ 3.625 W/kg for 10g SAR (~ 10% from the 1-g SAR limit).

4) Perform a third repeated measurement only if the original, first or second repeated measurement is ≥1.5 W/kg for 1g SAR or ≥3.75 W/kg for 10g SAR and the ratio of largest to smallest SAR for the original, first and second repeated measurements is > 1.20.

Body SAR measurement variability Results

Frequency		Mode/Band	Configuration	Measured SAR (W/kg)	Repeated SAR (W/kg)	SAR Ratio
MHz	Channel					
1 720	132072	NR Band n66 (Ant.B)/DFT-s QPSK 1RB 108offset	Bottom	0.908	0.899	1.01
2 437	6	802.11b/1Mbps	Left	0.923	0.920	1.00

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16. Measurement Uncertainty

The measured SAR was <1.5 W/kg for 1g SAR and <3.75 W/kg, for 10g SAR for all frequency Bands. Therefore, per KDB Publication 865664 D01v01r04, the extended measurement uncertainty analysis per IEEE1528-2013 was not required.

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17. SAR Test Equipment

Manufacturer	Type / Model	S/N	Calib. Date	Calib.Interval	Calib.Due
SPEAG	SAM Phantom	-	N/A	N/A	N/A
SPEAG	ELI Phantom	-	N/A	N/A	N/A
SPEAG	cDASY6 5G Module Phantom		N/A	N/A	N/A
HP	SAR System Control PC	-	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F11/ 5K3RA1/ C/ 01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F13/ 5R4XF1/ C/ 01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX90	F17/ 59CHA1/ C/ 01	N/A	N/A	N/A
Staubli	CS8Cspeag-TX60	F/20/0018446/C/001	N/A	N/A	N/A
N/A	TX90 Lspeag	F11/ 5K3RA1/ A/ 01	N/A	N/A	N/A
N/A	TX90 XLspeag	F13/ 5R4XF1/ A/ 01	N/A	N/A	N/A
N/A	TX90 XLspeag	F17/ 59CHA1/ A/ 01	N/A	N/A	N/A
N/A	TX60 Lspeag	F/20/0018446/A/001	N/A	N/A	N/A
N/A	Teach Pendant (Joystick)	D21142603	N/A	N/A	N/A
N/A	Teach Pendant (Joystick)	D21142605	N/A	N/A	N/A
N/A	Teach Pendant (Joystick)	D21142606B	N/A	N/A	N/A
N/A	Teach Pendant (Joystick)	D21142608A	N/A	N/A	N/A
TESTO1	175-H1/Thermometer	40331936309	12/26/2023	Annual	12/26/2024
TESTO1	175-H1/Thermometer	40331936309	12/26/2024	Annual	12/26/2025
TESTO2	175-H1/Thermometer	40331953309	01/18/2024	Annual	01/18/2025
TESTO4	175-H1/Thermometer	40331915309	12/26/2023	Annual	12/26/2024
TESTO4	175-H1/Thermometer	40331915309	12/26/2024	Annual	12/26/2025
TESTO	175-H1/Thermometer	44606611906	03/20/2024	Annual	03/20/2025
SPEAG	DAE4	869	03/15/2024	Annual	03/15/2025
SPEAG	DAE4	1687	07/12/2024	Annual	07/12/2025
SPEAG	DAE4	1464	06/19/2024	Annual	06/19/2025
SPEAG	DAE4	1417	02/16/2024	Annual	02/16/2025
SPEAG	E-Field Probe ES3DV3	3076	07/17/2024	Annual	07/17/2025
SPEAG	E-Field Probe EX3DV4	3797	01/23/2024	Annual	01/23/2025
SPEAG	E-Field Probe EX3DV4	7654	05/22/2024	Annual	05/22/2025
SPEAG	E-Field Probe EX3DV4	7680	05/28/2024	Annual	05/28/2025
SPEAG	E-Field Probe EX3DV4	7681	11/22/2024	Annual	11/22/2025
SPEAG	CLA13	1016	11/19/2024	Annual	11/19/2025
SPEAG	Dipole D750V3	1014	05/20/2024	Annual	05/20/2025
SPEAG	Dipole D835V2	441	04/18/2024	Annual	04/18/2025
SPEAG	Dipole D1800V2	2d007	04/15/2024	Annual	04/15/2025
SPEAG	Dipole D1900V2	5d032	01/18/2024	Annual	01/18/2025
SPEAG	Dipole D2450V2	743	03/14/2024	Annual	03/14/2025
SPEAG	Dipole D2600V2	1015	04/22/2024	Annual	04/22/2025
SPEAG	Dipole D5 GHz V2	1107	04/19/2024	Annual	04/19/2025

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Manufacturer	Type / Model	S/N	Calib. Date	Calib.Interval	Calib.Due
Agilent	Power Meter E4419B	MY41291386	09/11/2024	Annual	09/11/2025
Agilent	Power Meter N1911A	MY45101406	05/21/2024	Annual	05/21/2025
Agilent	Power Sensor 8481A	SG1091286	09/12/2024	Annual	09/12/2025
H.P	Power Sensor 8481A	MY41090675	09/12/2024	Annual	09/12/2025
Agilent	Wideband Power Sensor N1921A	MY55220026	07/30/2024	Annual	07/30/2025
Agilent	11636B/Power Divider	58698	01/15/2024	Annual	01/15/2025
Agilent	11636B/Power Divider	58698	01/13/2025	Annual	01/13/2026
SPEAG	DAKS 3.5	1038	01/22/2024	Annual	01/22/2025
SPEAG	Vector Reflectometer	141013	01/11/2024	Annual	01/11/2025
SPEAG	Vector Reflectometer	0050813	04/15/2024	Annual	04/15/2025
SPEAG	DAKS 12	1048	03/20/2024	Annual	03/20/2025
SPEAG	MXA Signal Analyzer	MY49100108	01/09/2024	Annual	01/09/2025
H.P	Network Analyzer /8753ES	JP39240221	12/26/2023	Annual	12/26/2024
H.P	Network Analyzer /8753ES	JP39240221	12/23/2024	Annual	12/23/2025
Agilent	WIRELESS COMMUNICATION E5515C	MY48360252	07/29/2024	Annual	07/29/2025
Agilent	WIRELESS COMMUNICATION E5515C	MY50260992	05/22/2024	Annual	05/22/2025
R&S	Wireless Communication Test Set CMW500	115733	03/19/2024	Annual	03/19/2025
Agilent	SIGNAL GENERATOR N5182A	MY47070230	03/19/2024	Annual	03/19/2025
EMPOWER	RF Power Amplifier	1084	05/21/2024	Annual	05/21/2025
EMPOWER	RF Power Amplifier	1041D/C0508	05/21/2024	Annual	05/21/2025
EMPOWER	RF Power Amplifier	1011	09/11/2024	Annual	09/11/2025
MICRO LAB	LP Filter / LA-15N	10453	09/11/2024	Annual	09/11/2025
MICRO LAB	LP Filter / LA-30N	-	09/11/2024	Annual	09/11/2025
MICRO LAB	LP Filter / LA-60N	32011	09/11/2024	Annual	09/11/2025
Agilent	Attenuator (3dB) 8693B	MY39260298	08/20/2024	Annual	08/20/2025
HP	Attenuator (20dB) 8493C	09271	08/20/2024	Annual	08/20/2025
Agilent	Directional Bridge 86205A	3140A04581	04/22/2024	Annual	04/22/2025
Anritsu	Radio Communication Test Station MT8000A	6262036812	11/27/2024	Annual	11/27/2025
Anritsu	Radio Communication Tester MT8820C	6201074225	01/17/2024	Annual	01/17/2025
Anritsu	Radio Communication Tester MT8820C	6200695605	03/19/2024	Annual	03/19/2025
Anritsu	Radio Communication Tester MT8821C	6201502997	05/21/2024	Annual	05/21/2025
Anritsu	Radio Communication Tester MT8821C	6262044720	11/27/2024	Annual	11/27/2025
ROHDE&SCHWARZ	BLUETOOTH TESTER CBT	100272	01/16/2024	Annual	01/16/2025

Note: All measurements were performed within the valid calibration period of the specific equipment.

* The E-field probe was calibrated by SPEAG, by the waveguide technique procedure. Dipole Verification measurement is performed by HCT Lab. before each test. The brain/body simulating material is calibrated by HCT using the DAKS 3.5 to determine the conductivity and permittivity (dielectric constant) of the brain/body-equivalent material.

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18. Conclusion

The SAR and RF Exposure measurement indicates that the EUT complies with the RF radiation exposure limits of the ANSI/ IEEE C95.1 - 2005.

These measurements were taken to simulate the RF effects exposure under worst-case conditions. Precise laboratory measures were taken to assure repeatability of the tests. The results and statements relate only to the item(s) tested.

Please note that the abortion and distribution of electromagnetic energy in the body are very complex phenomena the depend on the mass, shape, and size of the body, the orientation of the body with respect to the field vectors, and the electrical properties of both the body and the environment. Other variables that may play a substantial role in possible biological effects are those that characterize the environment (e.g. ambient temperature, air velocity, relative humidity, and body insulation) and those that characterize the individual (e.g. age, gender, activity level, debilitation, or disease). Because various factors may interact with one another to vary the specific biological outcome of an exposure to electromagnetic fields, any protection guide should consider maximal amplification of biological effects as a result of field-body interactions, environmental conditions, and physiological variables.

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Appendix A. DUT Ant. Information & SETUP PHOTO

Please refer to test DUT Ant. Information &setup photo file no. as follows:

Report No.
HCT-SR-2501-FC006-P

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