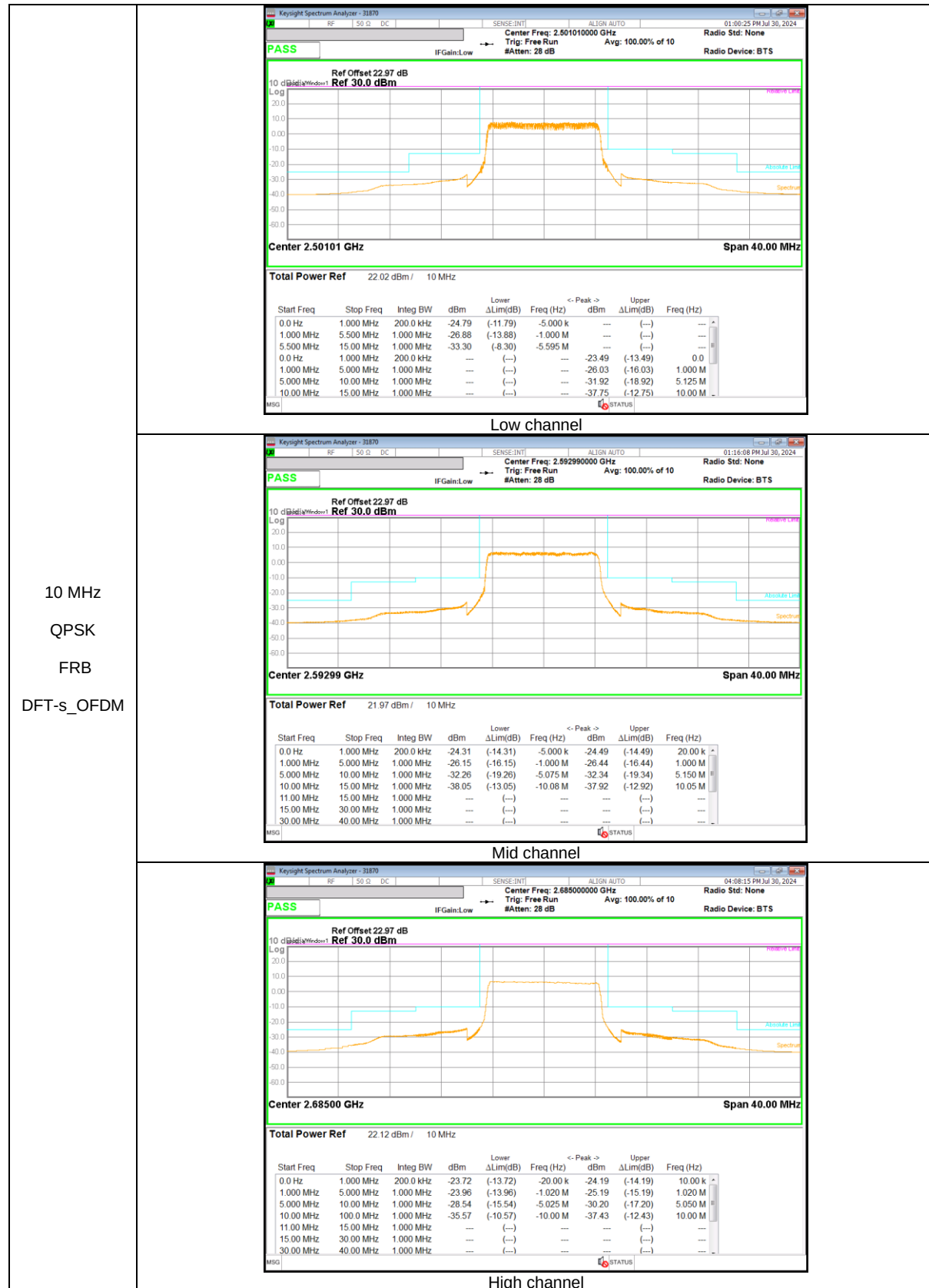
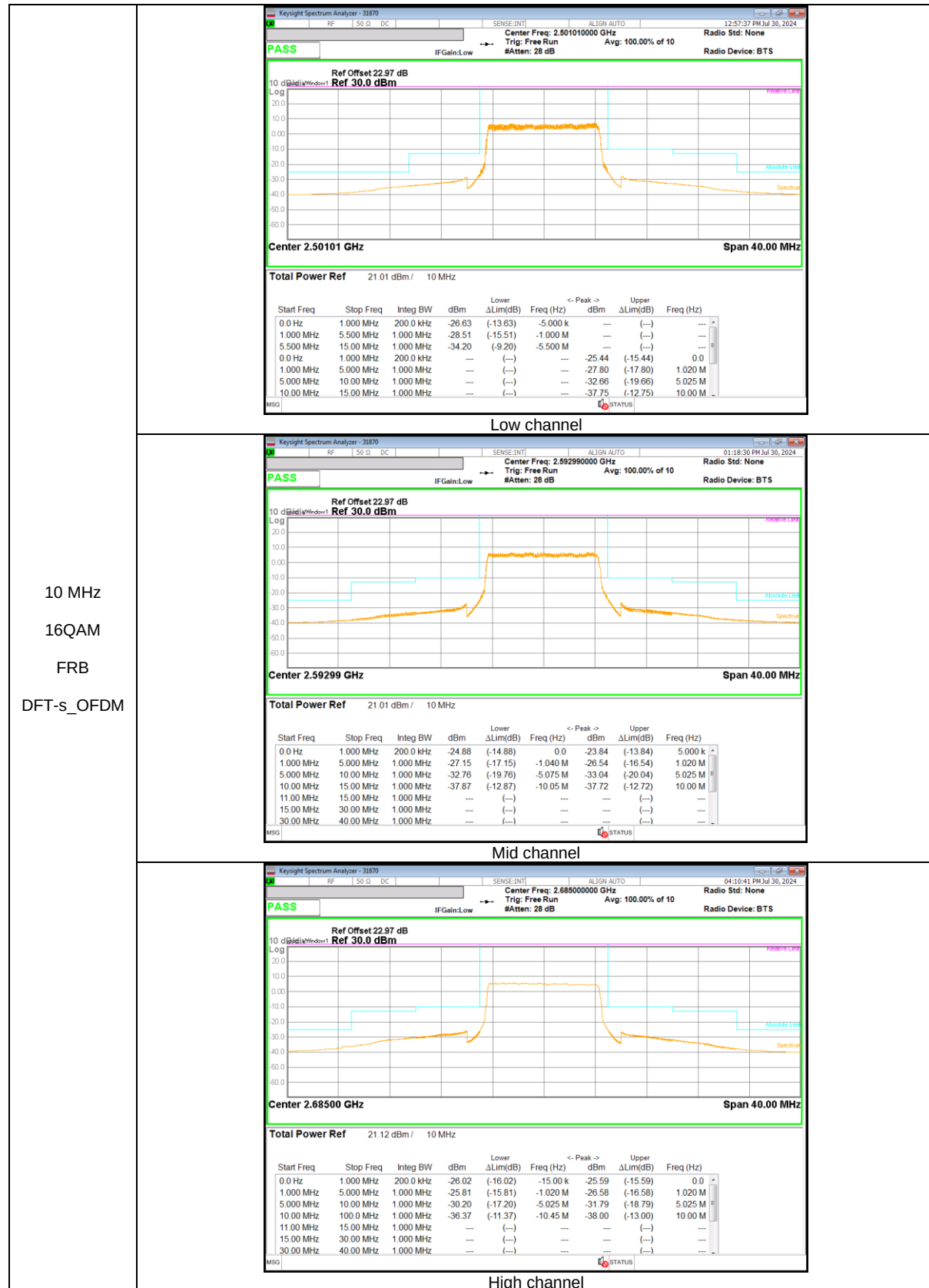




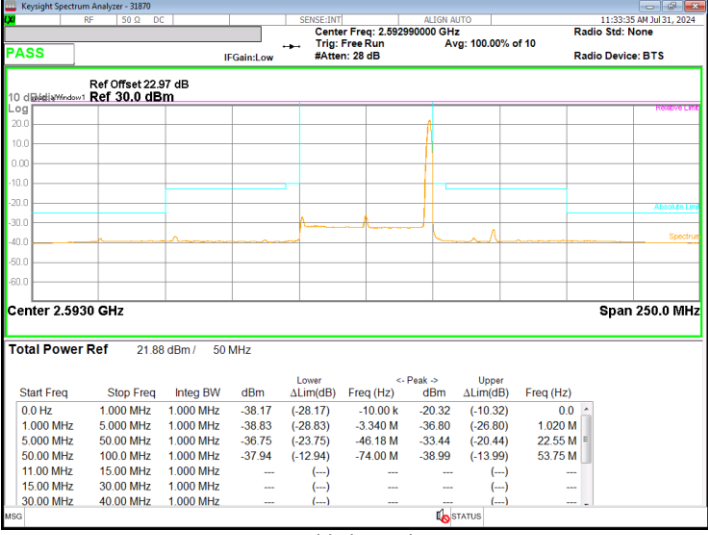


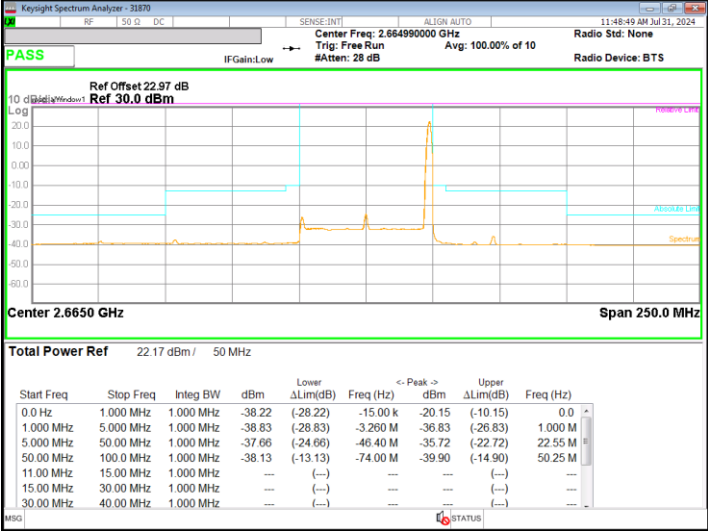




NR Band n41_1 RB (Worst Case)



50 MHz QPSK 1RB Offste 0 DFT-s_OFDM	 Mid channel
50 MHz QPSK 1RB Offste 132 DFT-s_OFDM	 Mid channel

50 MHz QPSK 1RB Offste 0 DFT-s_OFDM	 High channel
50 MHz QPSK 1RB Offste 132 DFT-s_OFDM	 High channel

8.5. CONDUCTED SPURIOUS EMISSIONS

RULE PART(S)

FCC: §27.53

LIMITS

Part 27.53:

(c)(2) On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB.

(g) For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB.

(h) The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10} (P)$ dB.

(m) (4) For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

TEST PROCEDURE

Per KDB 971168 D01 Power Meas License Digital Systems v03r01

The RF output of the transmitter was connected to a spectrum analyzer through a calibrated coaxial cable. Sufficient scans were taken to show the out-of-band Emissions, if any, up to 10th harmonic. Multiple sweeps were recorded in maximum hold Mode using a peak detector to ensure that the worst-case emissions were caught.

- a) Set the RBW = 100 kHz for emission below 1 GHz and 1 MHz for emissions above 1 GHz
(Tests were performed 1MHz [Worst case], to sweep 1 time for all frequency range)
- b) Set VBW $\geq 3 \times$ RBW;
- c) Set span ≥ 1.5 times the OBW;
- d) Sweep time = auto couple;
- e) Detector = rms;
- f) Ensure that the number of measurement points = Max (40001);
- g) Trace Mode = average(LTE FDD, 5G NR FDD), Max hold(LTE TDD, 5G NR TDD);

NOTE1

UMTS: It was tested at REL 99 as worst case (the highest output power and density).

LTE: It was tested at 1RB QPSK as worst case (the highest output power and density).

5G NR: All Waveforms (CP-OFDM vs DFT-s_OFDM) and modulations ($\pi/2$ BPSK, QPSK, 16QAM, 64QAM, 256QAM) were investigated to determine the worst case configuration. All Modes of operation were investigated and the worst case configuration results are reported in this section.

NOTE2

Please refer to section 5.4 for bandwidth and RB setting about LTE, 5G NR bands.

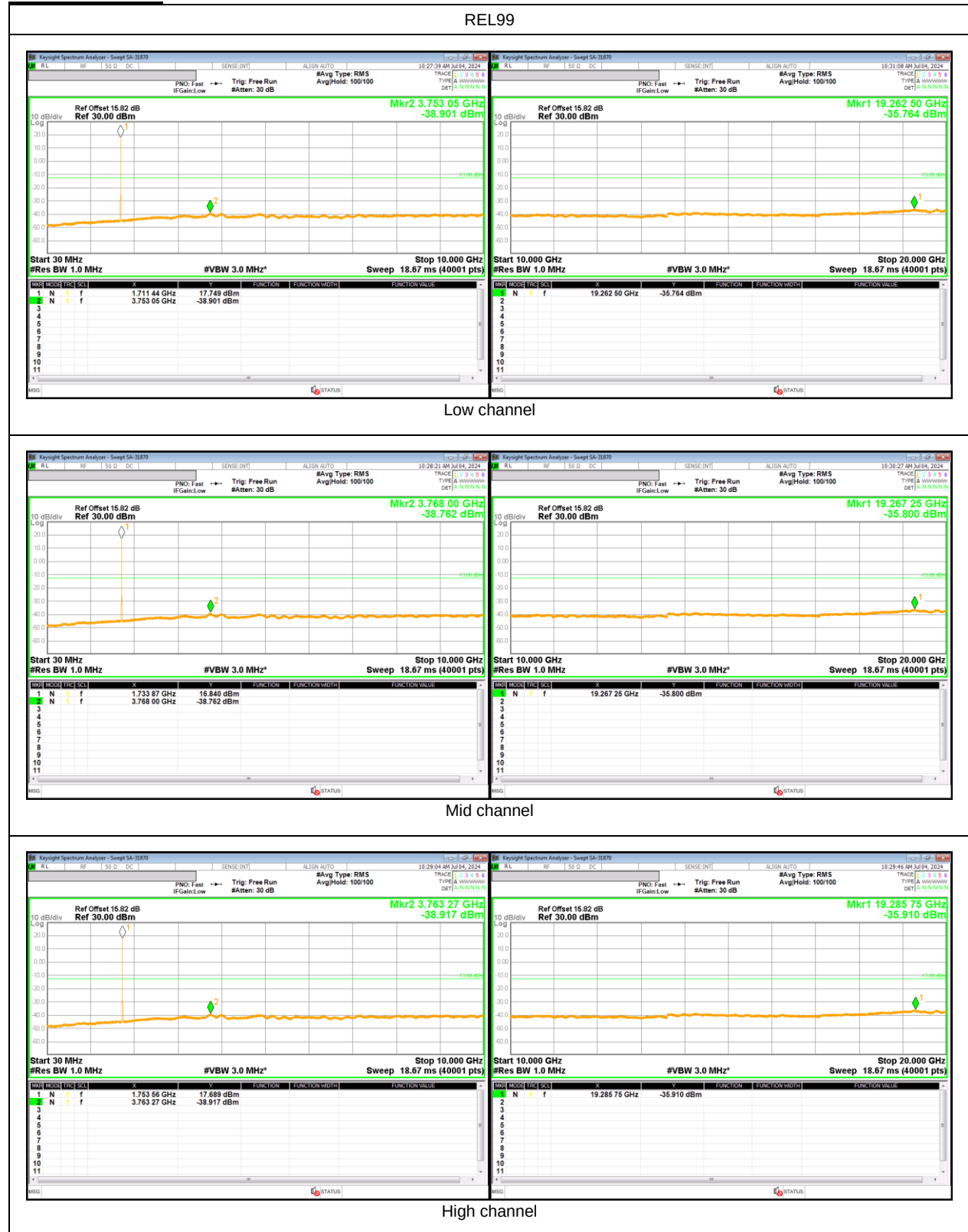
RESULTS

See the following pages.

8.5.1. OUT OF BAND EMISSIONS RESULT

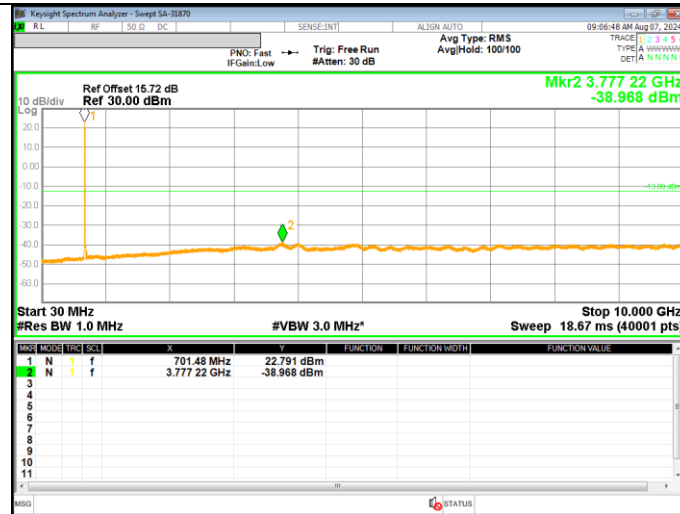
WCDMA Band 4

REL99

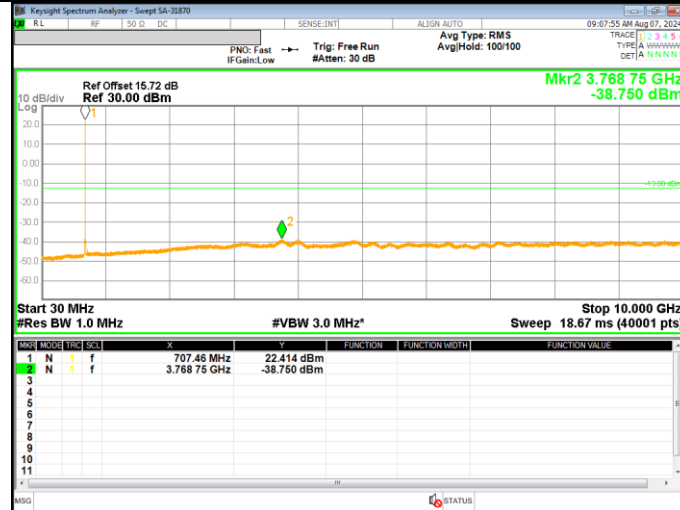


LTE Band 12

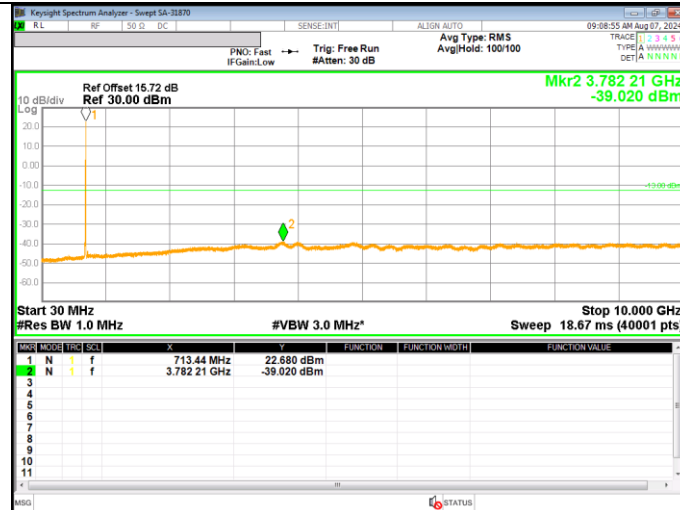
5 MHz QPSK



Low channel



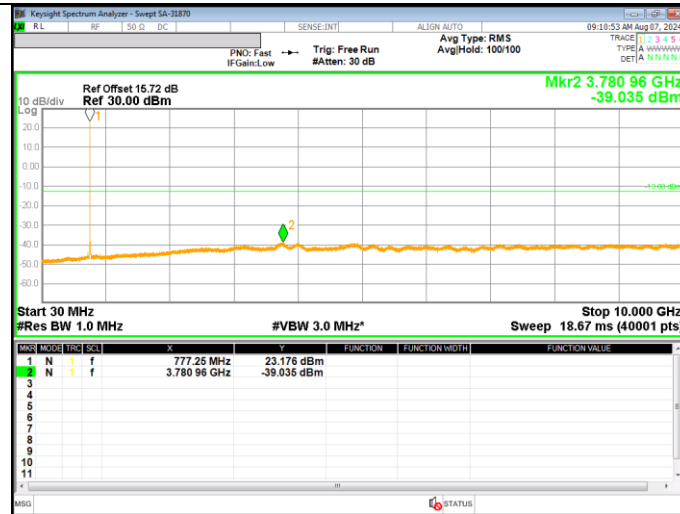
Mid channel



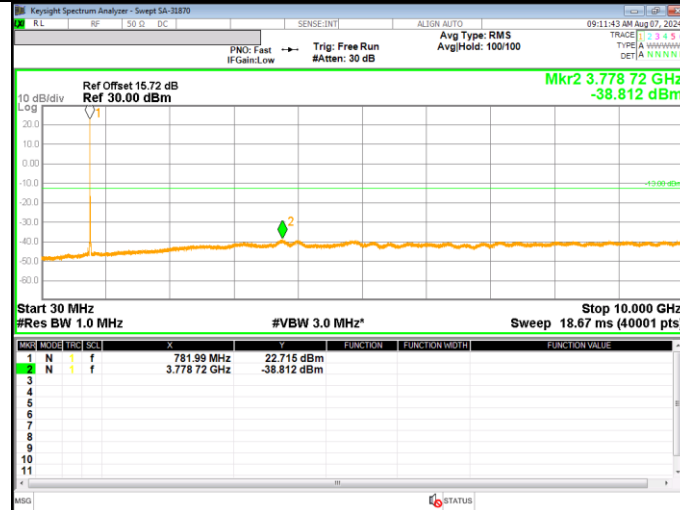
High channel

LTE Band 13

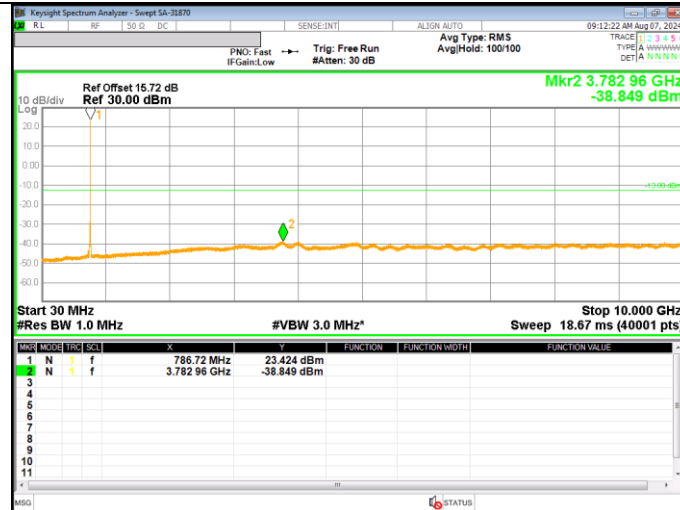
5 MHz QPSK



Low channel



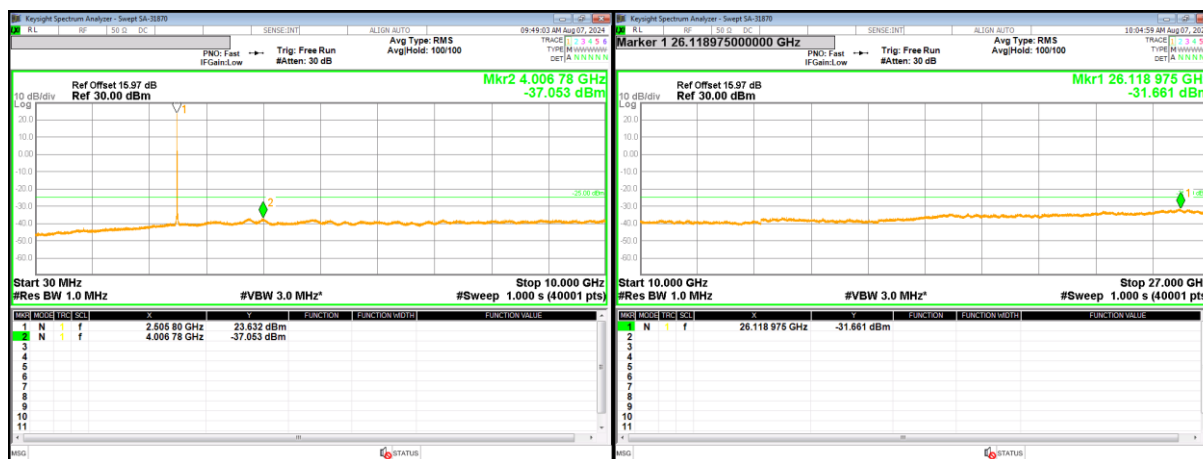
Mid channel



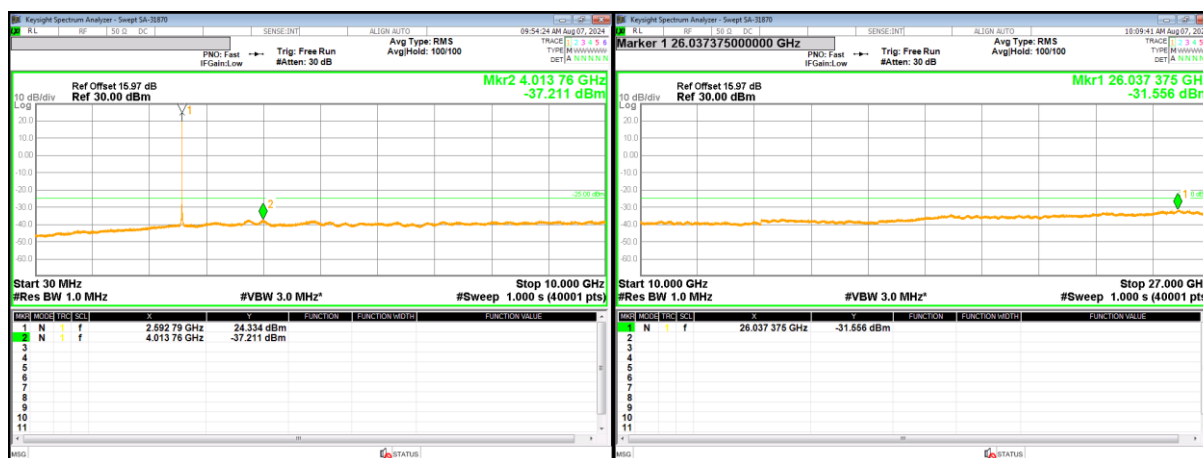
High channel

LTE Band 41

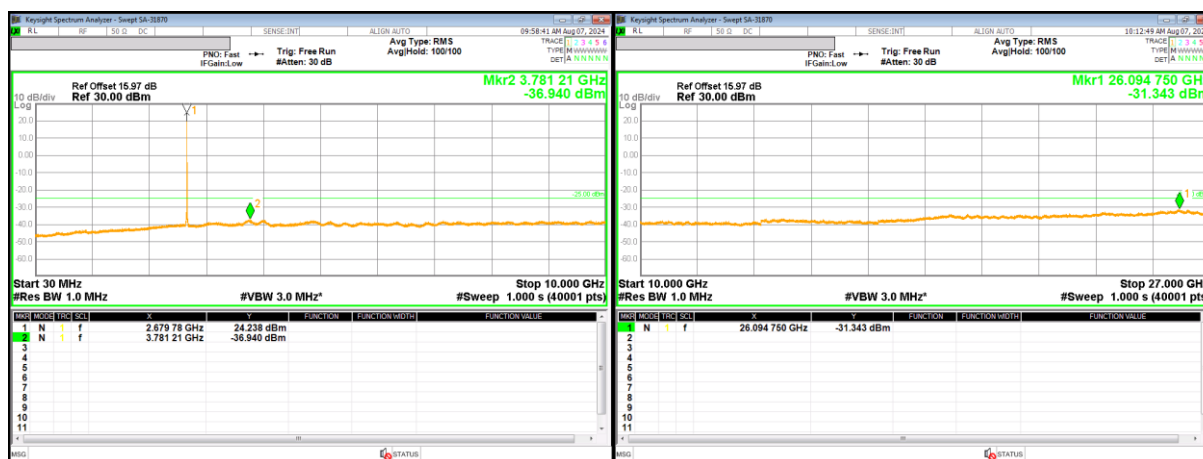
20 MHz QPSK



Low channel



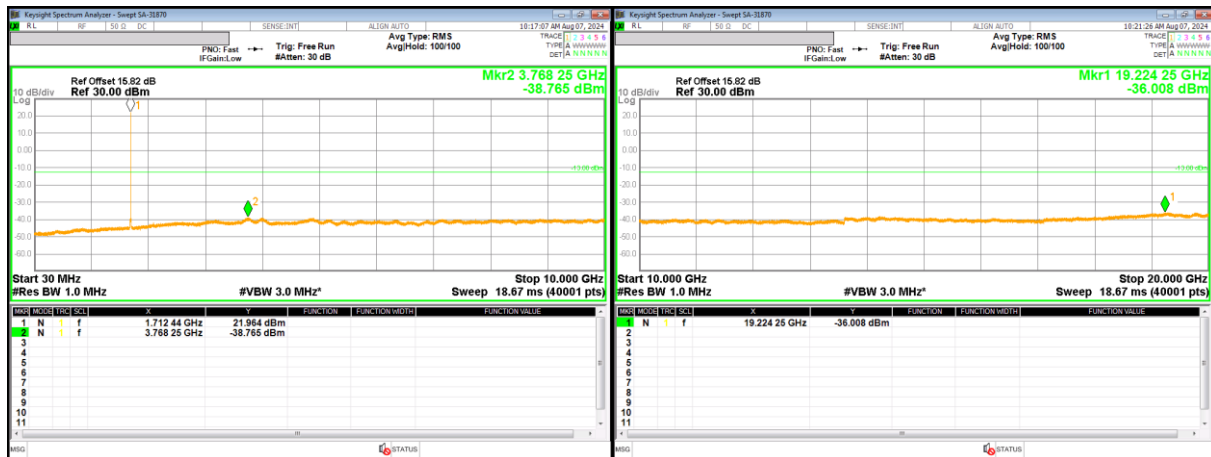
Mid channel



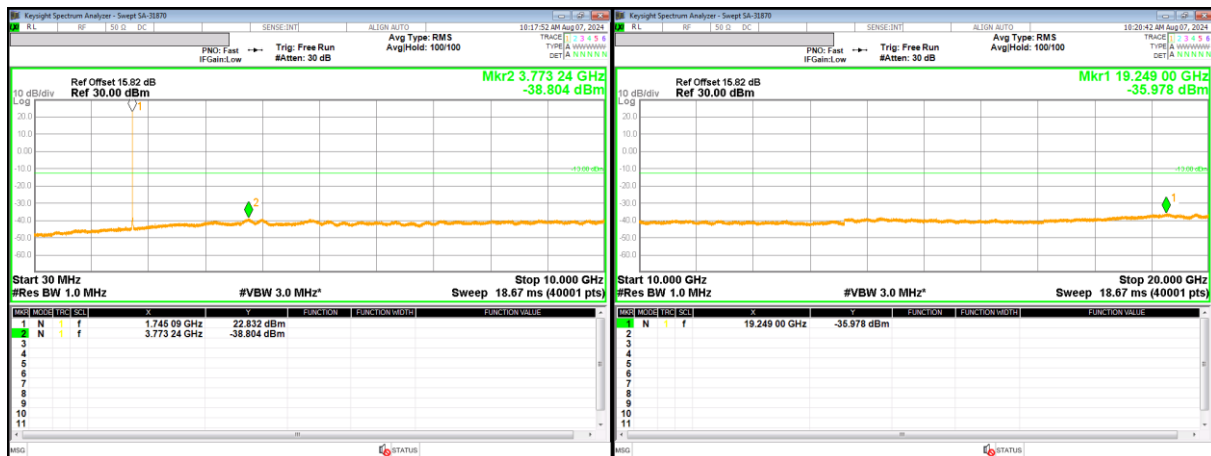
High channel

LTE Band 66

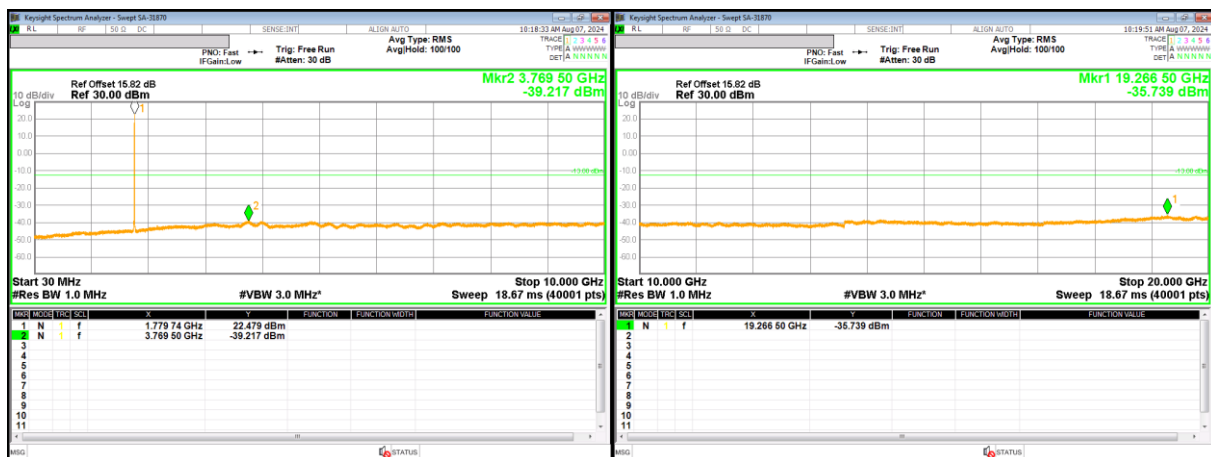
5 MHz QPSK



Low channel



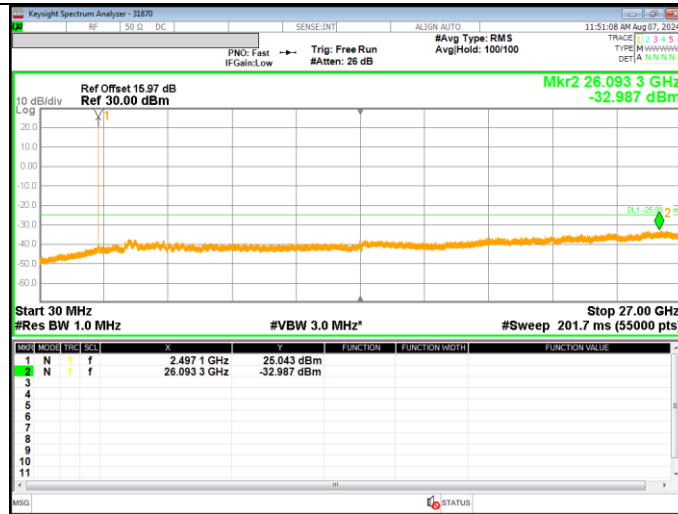
Mid channel



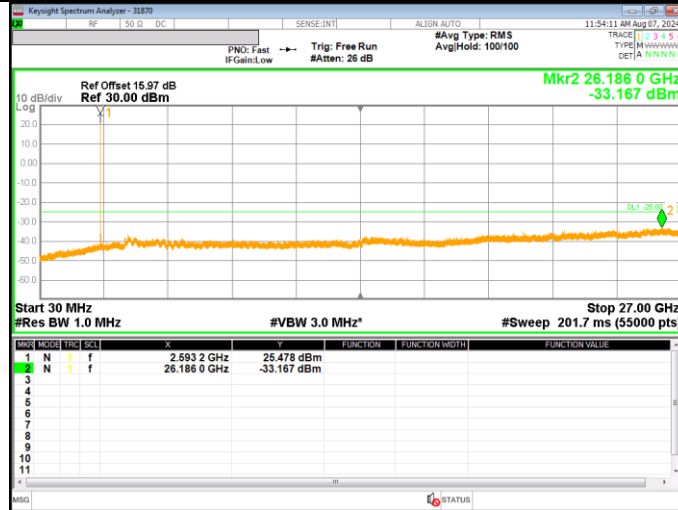
High channel

NR Band n41

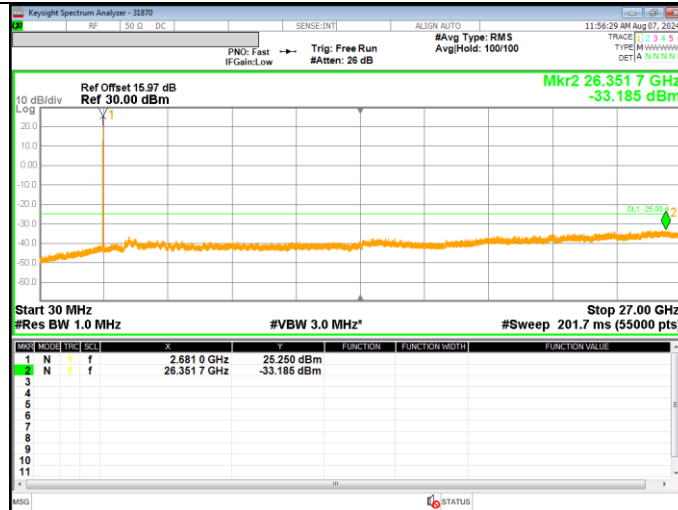
10 MHz QPSK DFT-s_OFDM



Low channel



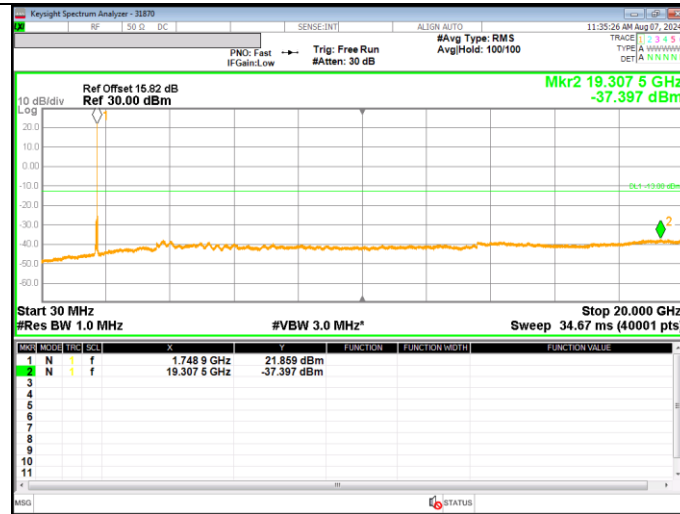
Mid channel



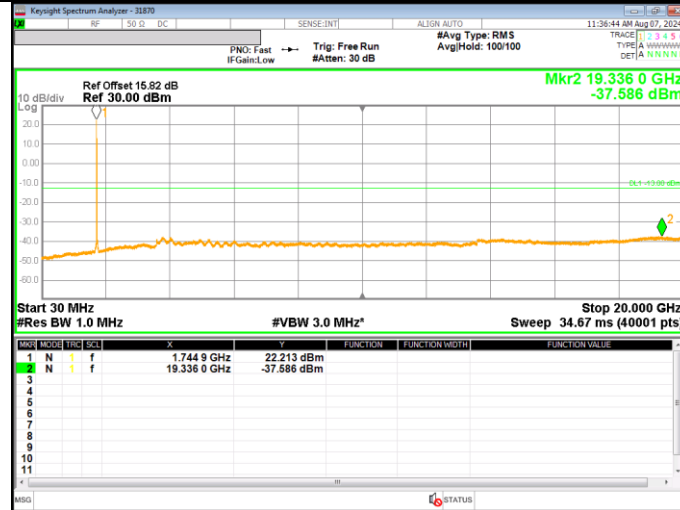
High channel

NR Band n66

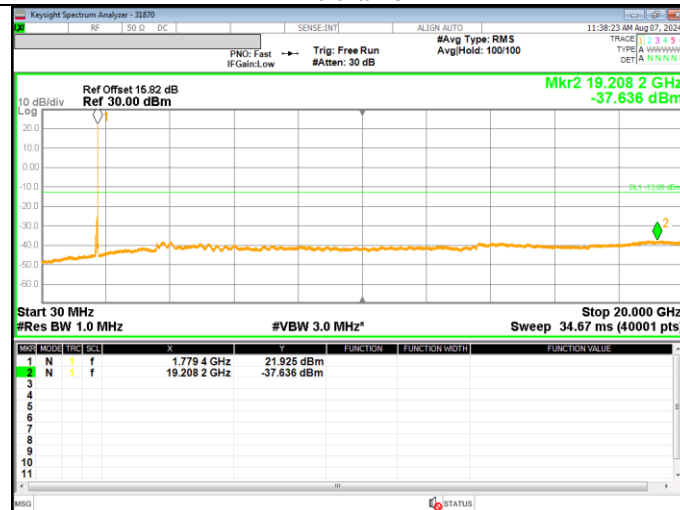
40 MHz QPSK DFT-s_OFDM



Low channel



Mid channel



High channel

8.6. FREQUENCY STABILITY

RULE PART(S)

FCC: §2.1055, §27.54

LIMITS

Part 27.54

The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

TEST PROCEDURE

Per KDB 971168 D01 Power Meas License Digital Systems v03r01

NOTE

Test were performed each lowest or highest frequency on the modulation condition of more wide bandwidth.(Please refer to OBW results)

RESULTS

See the following pages.

8.6.1. FREQUENCY STABILITY RESULT

WCDMA Band 4 (Lowest Frequency: HSDPA / Highest Frequency: HSDPA)

Test Date	2024-07-05
Test Engineer	47989

Limit		1710	1755	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ End of OBW	F high @ End of OBW		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)	Normal	1710.3169	1754.6872		
Extreme (50C)		1710.3169	1754.6872	6.7	0.004
Extreme (40C)		1710.3169	1754.6872	10.5	0.006
Extreme (30C)		1710.3169	1754.6872	9.2	0.005
Extreme (10C)		1710.3169	1754.6872	6.9	0.004
Extreme (0C)		1710.3169	1754.6872	10.2	0.006
Extreme (-10C)		1710.3169	1754.6872	7.3	0.004
Extreme (-20C)		1710.3169	1754.6872	8.3	0.005
Extreme (-30C)		1710.3169	1754.6872	9.9	0.006
20C	15%	1710.3169	1754.6872	8.5	0.005
	-15%	1710.3169	1754.6872	8.5	0.005
	End Point	1710.3169	1754.6872	9.7	0.006

LTE Band 12 (Lowest Frequency: 16QAM / Highest Frequency: QPSK)

Test Date	2024-07-10
Test Engineer	47989

Limit		699	716	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ End of OBW	F high @ End of OBW		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)	Normal	699.1532	715.8426		
Extreme (50C)		699.1532	715.8426	5.2	0.007
Extreme (40C)		699.1532	715.8426	5.7	0.008
Extreme (30C)		699.1532	715.8426	3.5	0.005
Extreme (10C)		699.1532	715.8426	3.6	0.005
Extreme (0C)		699.1532	715.8426	4.1	0.006
Extreme (-10C)		699.1532	715.8426	2.2	0.003
Extreme (-20C)		699.1532	715.8426	5.6	0.008
Extreme (-30C)		699.1532	715.8426	7.3	0.010
20C	15%	699.1532	715.8426	1.7	0.002
	-15%	699.1532	715.8426	1.6	0.002
	End Point	699.1532	715.8426	1.6	0.002

LTE Band 13 (Lowest Frequency: QPSK / Highest Frequency: 16QAM)

Test Date	2024-07-11
Test Engineer	47989

Limit		777	787	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ End of OBW	F high @ End of OBW		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)	Normal	777.2479	786.7483		
Extreme (50C)		777.2479	786.7483	9.5	0.012
Extreme (40C)		777.2479	786.7483	7.3	0.009
Extreme (30C)		777.2479	786.7483	3.2	0.004
Extreme (10C)		777.2479	786.7483	2.6	0.003
Extreme (0C)		777.2479	786.7483	5.2	0.007
Extreme (-10C)		777.2479	786.7483	4.8	0.006
Extreme (-20C)		777.2479	786.7483	6.3	0.008
Extreme (-30C)		777.2479	786.7483	6.8	0.009
20C	15%	777.2479	786.7483	0.4	0.000
	-15%	777.2479	786.7483	1.1	0.001
	End Point	777.2479	786.7483	1.4	0.002

LTE Band 41 (Lowest Frequency: QPSK / Highest Frequency: QPSK)

Test Date	2024-07-15
Test Engineer	47989

Limit		2496	2690	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ End of OBW	F high @ End of OBW		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)	Normal	2496.2510	2689.7489		
Extreme (50C)		2496.2510	2689.7489	9.7	0.004
Extreme (40C)		2496.2510	2689.7489	6.3	0.002
Extreme (30C)		2496.2510	2689.7489	4.3	0.002
Extreme (10C)		2496.2510	2689.7489	2.1	0.001
Extreme (0C)		2496.2510	2689.7489	2.7	0.001
Extreme (-10C)		2496.2510	2689.7489	3.7	0.001
Extreme (-20C)		2496.2510	2689.7489	6.7	0.003
Extreme (-30C)		2496.2510	2689.7489	7.3	0.003
20C	15%	2496.2510	2689.7489	1.1	0.000
	-15%	2496.2510	2689.7489	1.3	0.000
	End Point	2496.2510	2689.7489	5.3	0.002

LTE Band 66 (Lowest Frequency: QPSK / Highest Frequency: QPSK)

Test Date	2024-07-16
Test Engineer	47989

Limit		1710	1780	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ End of OBW	F high @ End of OBW		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)	Normal	1710.1545	1779.8428		
Extreme (50C)		1710.1545	1779.8428	-8.2	-0.005
Extreme (40C)		1710.1545	1779.8428	-15.2	-0.009
Extreme (30C)		1710.1545	1779.8428	-19.2	-0.011
Extreme (10C)		1710.1545	1779.8428	-23.2	-0.013
Extreme (0C)		1710.1545	1779.8428	-11.6	-0.007
Extreme (-10C)		1710.1545	1779.8428	-16.6	-0.010
Extreme (-20C)		1710.1545	1779.8428	-18.1	-0.010
Extreme (-30C)		1710.1545	1779.8428	-19.3	-0.011
20C	15%	1710.1545	1779.8428	-26.3	-0.015
	-15%	1710.1545	1779.8428	-26.8	-0.015
	End Point	1710.1545	1779.8428	-25.1	-0.014

NR Band n41 (Lowest Frequency: QPSK / Highest Frequency: QPSK)

Test Date	2024-07-18
Test Engineer	47989

Normal (20C)		2496	2690	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ End of OBW	F high @ End of OBW		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)	Normal	2496.7116	2689.3009		
Extreme (50C)		2496.7116	2689.3009	11.4	0.004
Extreme (40C)		2496.7116	2689.3009	12.1	0.005
Extreme (30C)		2496.7116	2689.3009	8.7	0.003
Extreme (10C)		2496.7116	2689.3009	5.3	0.002
Extreme (0C)		2496.7116	2689.3009	3.3	0.001
Extreme (-10C)		2496.7116	2689.3009	6.7	0.003
Extreme (-20C)		2496.7116	2689.3009	9.1	0.004
Extreme (-30C)		2496.7116	2689.3009	10.3	0.004
20C	15%	2496.7116	2689.3009	5.6	0.002
	-15%	2496.7116	2689.3009	6.3	0.002
	End Point	2496.7116	2689.3009	4.8	0.002

NR Band n66 (Lowest Frequency: 16QAM / Highest Frequency: 16QAM)

Test Date	2024-07-18
Test Engineer	47989

Limit		1710	1780	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ End of OBW	F high @ End of OBW		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)	Normal	1710.2510	1779.7491		
Extreme (50C)		1710.2510	1779.7491	7.3	0.004
Extreme (40C)		1710.2510	1779.7491	8.4	0.005
Extreme (30C)		1710.2510	1779.7491	5.7	0.003
Extreme (10C)		1710.2510	1779.7491	3.1	0.002
Extreme (0C)		1710.2510	1779.7491	4.2	0.002
Extreme (-10C)		1710.2510	1779.7491	2.2	0.001
Extreme (-20C)		1710.2510	1779.7491	1.2	0.001
Extreme (-30C)		1710.2510	1779.7491	0.8	0.000
20C	15%	1710.2510	1779.7491	-0.7	0.000
	-15%	1710.2510	1779.7491	0.9	0.001
	End Point	1710.2510	1779.7491	-0.6	0.000

9. RADIATED RESULTS

9.1. RADIATED POWER (ERP & EIRP)

RULE PART(S)

FCC: §2.1046, §27.50

LIMITS

Part 27.50:

(b)(10) Portable stations (hand-held devices) transmitting in the 746-757 MHz, 776-788 MHz, and 805-806 MHz bands are limited to 3 watts ERP.

(c) (10) - Portable stations (hand-held devices) in the 600 MHz uplink band and the 698-746 MHz band, and fixed and mobile stations in the 600 MHz uplink band are limited to 3 watts ERP.

(d)(4) Fixed, mobile, and portable (hand-held) stations operating in the 1710-1755 MHz band and mobile and portable stations operating in the 1695-1710 MHz and 1755-1780 MHz bands are limited to 1 watt EIRP.

(h) The following power limits shall apply in the BRS and EBS:

(2) Mobile stations are limited to 2.0 watts EIRP. All user stations are limited to 2.0 watts transmitter output power.

TEST PROCEDURE

ANSI / TIA / EIA 603 E Clause 2.2.17; ESU40 setting reference to 971168 D01 v03r01

For radiated output power measurement with a ESU40:

- a) Set the RBW $\geq$ OBW;
- b) Set VBW $\geq 3 \times$ RBW;
- c) Set span $\geq 2 \times$ RBW;
- d) Sweep time = auto couple or 1 second;
- e) Detector = rms;
- f) Ensure that the number of measurement points $\geq$ span/RBW;
- g) Trace Mode = max hold(WCDMA), average(LTE, 5G NR);

TEST RESULTS

See the following pages.

9.1.1. ERP/EIRP RESULT

WCDMA

Band	Mode	Frequency (MHz)	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Delta (dB)
Band 4	REL99	1712.40	19.06	H	4.31	9.51	24.26	266.69	30.00	-5.74
		1732.60	18.55	H	4.33	9.60	23.83	241.55	30.00	-6.17
		1752.60	18.40	H	4.36	9.68	23.73	236.05	30.00	-6.27
	HSDPA	1712.40	19.10	H	4.31	9.51	24.20	263.03	30.00	-5.80
		1732.60	18.55	H	4.33	9.60	23.83	241.55	30.00	-6.17
		1752.60	18.30	H	4.36	9.68	23.63	230.67	30.00	-6.37

LTE Band 12

BW (MHz)	Modulation	Frequency (MHz)	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	ERP (mW)	Limit (dBm)	Delta (dB)	RB
10	QPSK	704.00	21.20	H	2.79	-1.34	17.07	50.93	34.77	-17.70	1/0
		707.50	21.97	H	2.79	-1.34	17.84	60.81	34.77	-16.93	1/0
		711.00	22.19	H	2.80	-1.33	18.06	63.97	34.77	-16.71	1/49
	16-QAM	704.00	20.15	H	2.79	-1.34	16.02	39.99	34.77	-18.75	1/0
		707.50	20.94	H	2.79	-1.34	16.81	47.97	34.77	-17.96	1/49
		711.00	21.06	H	2.80	-1.33	16.93	49.32	34.77	-17.84	1/25
5	QPSK	701.50	21.01	H	2.78	-1.35	16.88	48.75	34.77	-17.89	1/12
		707.50	21.86	H	2.79	-1.34	17.73	59.29	34.77	-17.04	1/12
		713.50	21.95	H	2.81	-1.32	17.82	60.53	34.77	-16.95	1/12
	16-QAM	701.50	20.20	H	2.78	-1.35	16.07	40.46	34.77	-18.70	1/12
		707.50	20.92	H	2.79	-1.34	16.79	47.75	34.77	-17.98	1/24
		713.50	21.00	H	2.81	-1.32	16.87	48.64	34.77	-17.90	1/24
3	QPSK	700.50	21.05	H	2.78	-1.35	16.92	49.20	34.77	-17.85	1/8
		707.50	21.98	H	2.79	-1.34	17.85	60.95	34.77	-16.92	1/0
		714.50	22.29	H	2.81	-1.32	18.16	65.46	34.77	-16.61	1/0
	16-QAM	700.50	19.77	H	2.78	-1.35	15.64	36.64	34.77	-19.13	1/8
		707.50	20.83	H	2.79	-1.34	16.70	46.77	34.77	-18.07	1/0
		714.50	21.29	H	2.81	-1.32	17.16	52.00	34.77	-17.61	1/0
1.4	QPSK	699.70	20.94	H	2.78	-1.35	16.80	47.86	34.77	-17.97	1/0
		707.50	21.89	H	2.79	-1.34	17.76	59.70	34.77	-17.01	1/0
		715.30	22.17	H	2.81	-1.32	18.05	63.83	34.77	-16.72	1/0
	16-QAM	699.70	19.92	H	2.78	-1.35	15.78	37.84	34.77	-18.99	1/3
		707.50	20.80	H	2.79	-1.34	16.67	46.45	34.77	-18.10	1/3
		715.30	21.05	H	2.81	-1.32	16.93	49.32	34.77	-17.84	1/0

LTE Band 13

BW (MHz)	Modulation	Frequency (MHz)	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBd)	ERP (dBm)	ERP (mW)	Limit (dBm)	Delta (dB)	RB
10	QPSK	782.00	22.21	H	2.93	-1.19	18.09	64.42	34.77	-16.68	1/25
	16-QAM	782.00	21.14	H	2.93	-1.19	17.02	50.35	34.77	-17.75	1/25
5	QPSK	779.50	21.94	H	2.93	-1.19	17.82	60.53	34.77	-16.95	1/0
		782.00	21.79	H	2.93	-1.19	17.67	58.48	34.77	-17.10	1/12
		784.50	21.47	H	2.94	-1.18	17.35	54.33	34.77	-17.42	1/0
	16-QAM	779.50	20.78	H	2.93	-1.19	16.66	46.34	34.77	-18.11	1/0
		782.00	20.68	H	2.93	-1.19	16.56	45.29	34.77	-18.21	1/12
		784.50	20.37	H	2.94	-1.18	16.25	42.17	34.77	-18.52	1/12

LTE Band 41

BW (MHz)	Modulation	Frequency (MHz)	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Delta (dB)	RB
20	QPSK	2506.00	16.41	V	5.25	10.07	21.23	132.74	33.00	-11.77	1/99
		2593.00	18.77	V	5.34	9.97	23.40	218.78	33.00	-9.60	1/99
		2680.00	19.37	V	5.43	10.04	23.97	249.46	33.00	-9.03	1/49
	16-QAM	2506.00	15.83	V	5.25	10.07	20.65	116.14	33.00	-12.35	1/49
		2593.00	18.31	V	5.34	9.97	22.94	196.79	33.00	-10.06	1/0
		2680.00	18.75	V	5.43	10.04	23.35	216.27	33.00	-9.65	1/99
15	QPSK	2503.50	16.53	V	5.24	10.07	21.36	136.77	33.00	-11.64	1/0
		2593.00	18.62	V	5.34	9.97	23.25	211.35	33.00	-9.75	1/0
		2682.50	19.35	V	5.43	10.05	23.96	248.89	33.00	-9.04	1/0
	16-QAM	2503.50	15.96	V	5.24	10.07	20.79	119.95	33.00	-12.21	1/74
		2593.00	17.97	V	5.34	9.97	22.60	181.97	33.00	-10.40	1/0
		2682.50	18.85	V	5.43	10.05	23.46	221.82	33.00	-9.54	1/37
10	QPSK	2501.00	16.55	V	5.24	10.07	21.39	137.72	33.00	-11.61	1/0
		2593.00	18.58	V	5.34	9.97	23.21	209.41	33.00	-9.79	1/49
		2685.00	19.15	V	5.43	10.05	23.77	238.23	33.00	-9.23	1/0
	16-QAM	2501.00	15.88	V	5.24	10.07	20.72	118.03	33.00	-12.28	1/25
		2593.00	18.06	V	5.34	9.97	22.69	185.78	33.00	-10.31	1/25
		2685.00	18.63	V	5.43	10.05	23.25	211.35	33.00	-9.75	1/25
5	QPSK	2498.50	16.40	V	5.23	10.07	21.24	133.05	33.00	-11.76	1/24
		2593.00	18.67	V	5.34	9.97	23.30	213.80	33.00	-9.70	1/24
		2687.50	19.31	V	5.44	10.06	23.92	246.60	33.00	-9.08	1/24
	16-QAM	2498.50	16.01	V	5.23	10.07	20.85	121.62	33.00	-12.15	1/24
		2593.00	18.18	V	5.34	9.97	22.81	190.99	33.00	-10.19	1/24
		2687.50	18.81	V	5.44	10.06	23.42	219.79	33.00	-9.58	1/0

LTE Band 66 (ANT A)

BW (MHz)	Modulation	Frequency (MHz)	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Delta (dB)	RB
20	QPSK	1720.00	19.92	H	4.32	9.55	25.15	327.34	30.00	-4.85	1/99
		1745.00	19.39	H	4.35	9.66	24.70	295.12	30.00	-5.30	1/49
		1770.00	18.56	H	4.38	9.68	23.87	243.78	30.00	-6.13	1/49
	16-QAM	1720.00	19.07	H	4.32	9.55	24.30	269.15	30.00	-5.70	1/99
		1745.00	18.55	H	4.35	9.66	23.86	243.22	30.00	-6.14	1/99
		1770.00	17.59	H	4.38	9.68	22.90	194.98	30.00	-7.10	1/0
15	QPSK	1717.50	19.54	H	4.31	9.53	24.76	299.23	30.00	-5.24	1/37
		1745.00	19.62	H	4.35	9.66	24.93	311.17	30.00	-5.07	1/0
		1772.50	18.41	H	4.38	9.68	23.71	234.96	30.00	-6.29	1/0
	16-QAM	1717.50	18.54	H	4.31	9.53	23.76	237.68	30.00	-6.24	1/37
		1745.00	18.71	H	4.35	9.66	24.02	252.35	30.00	-5.98	1/74
		1772.50	17.40	H	4.38	9.68	22.70	186.21	30.00	-7.30	1/37
10	QPSK	1715.00	19.82	H	4.31	9.52	25.03	318.42	30.00	-4.97	1/49
		1745.00	19.42	H	4.35	9.66	24.73	297.17	30.00	-5.27	1/0
		1775.00	18.24	H	4.38	9.68	23.54	225.94	30.00	-6.46	1/0
	16-QAM	1715.00	18.97	H	4.31	9.52	24.18	261.82	30.00	-5.82	1/25
		1745.00	18.55	H	4.35	9.66	23.86	243.22	30.00	-6.14	1/49
		1775.00	17.28	H	4.38	9.68	22.58	181.13	30.00	-7.42	1/0
5	QPSK	1712.50	18.98	H	4.31	9.51	24.19	262.42	30.00	-5.81	1/24
		1745.00	19.21	H	4.35	9.66	24.52	283.14	30.00	-5.48	1/12
		1777.50	17.18	H	4.39	9.68	22.48	177.01	30.00	-7.52	1/12
	16-QAM	1712.50	17.91	H	4.31	9.51	23.12	205.12	30.00	-6.88	1/12
		1745.00	18.34	H	4.35	9.66	23.65	231.74	30.00	-6.35	1/12
		1777.50	16.00	H	4.39	9.68	21.30	134.90	30.00	-8.70	1/0
3	QPSK	1711.50	19.03	H	4.31	9.51	24.23	264.85	30.00	-5.77	1/14
		1745.00	19.37	H	4.35	9.66	24.68	293.76	30.00	-5.32	1/14
		1778.50	17.09	H	4.39	9.68	22.38	172.98	30.00	-7.62	1/8
	16-QAM	1711.50	18.14	H	4.31	9.51	23.34	215.77	30.00	-6.66	1/8
		1745.00	18.45	H	4.35	9.66	23.76	237.68	30.00	-6.24	1/8
		1778.50	16.19	H	4.39	9.68	21.48	140.60	30.00	-8.52	1/8
1.4	QPSK	1710.70	19.01	H	4.31	9.50	24.20	263.03	30.00	-5.80	1/5
		1745.00	19.16	H	4.35	9.66	24.47	279.90	30.00	-5.53	1/5
		1779.30	16.63	H	4.39	9.68	21.92	155.60	30.00	-8.08	1/0
	16-QAM	1710.70	18.06	H	4.31	9.50	23.26	211.84	30.00	-6.74	1/3
		1745.00	18.59	H	4.35	9.66	23.90	245.47	30.00	-6.10	1/3
		1779.30	15.61	H	4.39	9.68	20.90	123.03	30.00	-9.10	1/3

LTE Band 66 (ANT B)

BW (MHz)	Modulation	Frequency (MHz)	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Delta (dB)	RB
20	QPSK	1720.00	13.65	H	4.32	9.55	18.88	77.27	30.00	-11.12	1/0
		1745.00	11.12	H	4.35	9.66	16.43	43.95	30.00	-13.57	1/0
		1770.00	10.39	H	4.38	9.68	15.70	37.15	30.00	-14.30	1/49
	16-QAM	1720.00	12.39	H	4.32	9.55	17.62	57.81	30.00	-12.38	1/99
		1745.00	10.28	H	4.35	9.66	15.59	36.22	30.00	-14.41	1/49
		1770.00	9.18	H	4.38	9.68	14.49	28.12	30.00	-15.51	1/0
15	QPSK	1717.50	13.85	H	4.31	9.53	19.07	80.72	30.00	-10.93	1/37
		1745.00	11.03	H	4.35	9.66	16.34	43.05	30.00	-13.66	1/74
		1772.50	10.63	H	4.38	9.68	15.94	39.26	30.00	-14.06	1/74
	16-QAM	1717.50	12.25	H	4.31	9.53	17.47	55.85	30.00	-12.53	1/0
		1745.00	10.73	H	4.35	9.66	16.04	40.18	30.00	-13.96	1/74
		1772.50	9.41	H	4.38	9.68	14.72	29.65	30.00	-15.28	1/37
10	QPSK	1715.00	13.49	H	4.31	9.52	18.70	74.13	30.00	-11.30	1/0
		1745.00	11.08	H	4.35	9.66	16.39	43.55	30.00	-13.61	1/49
		1775.00	10.70	H	4.38	9.68	16.00	39.81	30.00	-14.00	1/49
	16-QAM	1715.00	11.90	H	4.31	9.52	17.11	51.40	30.00	-12.89	1/0
		1745.00	10.67	H	4.35	9.66	15.98	39.63	30.00	-14.02	1/49
		1775.00	9.31	H	4.38	9.68	14.61	28.91	30.00	-15.39	1/0
5	QPSK	1712.50	12.69	H	4.31	9.51	17.89	61.52	30.00	-12.11	1/0
		1745.00	11.08	H	4.35	9.66	16.39	43.55	30.00	-13.61	1/12
		1777.50	10.43	H	4.39	9.68	15.72	37.33	30.00	-14.28	1/12
	16-QAM	1712.50	11.41	H	4.31	9.51	16.61	45.81	30.00	-13.39	1/0
		1745.00	10.43	H	4.35	9.66	15.74	37.50	30.00	-14.26	1/12
		1777.50	8.79	H	4.39	9.68	14.08	25.59	30.00	-15.92	1/12
3	QPSK	1711.50	12.71	H	4.31	9.51	17.92	61.94	30.00	-12.08	1/0
		1745.00	11.18	H	4.35	9.66	16.49	44.57	30.00	-13.51	1/14
		1778.50	10.27	H	4.39	9.68	15.56	35.97	30.00	-14.44	1/8
	16-QAM	1711.50	11.23	H	4.31	9.51	16.44	44.06	30.00	-13.56	1/0
		1745.00	9.53	H	4.35	9.66	14.84	30.48	30.00	-15.16	1/8
		1778.50	8.69	H	4.39	9.68	13.98	25.00	30.00	-16.02	1/8
1.4	QPSK	1710.70	12.57	H	4.31	9.50	17.77	59.84	30.00	-12.23	1/0
		1745.00	11.11	H	4.35	9.66	16.42	43.85	30.00	-13.58	1/5
		1779.30	10.16	H	4.39	9.68	15.45	35.08	30.00	-14.55	1/5
	16-QAM	1710.70	11.13	H	4.31	9.50	16.33	42.95	30.00	-13.67	1/0
		1745.00	10.34	H	4.35	9.66	15.65	36.73	30.00	-14.35	1/3
		1779.30	8.65	H	4.39	9.68	13.94	24.77	30.00	-16.06	1/3

NR Band n41

BW (MHz)	Modulation	Frequency (MHz)	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Delta (dB)	RB
100	QPSK	2546.01	20.85	H	5.29	9.91	25.48	353.18	33.00	-7.52	1/271
		2592.99	19.69	H	5.34	9.91	24.27	267.30	33.00	-8.73	1/137
		2640.00	19.32	H	5.39	9.88	23.81	240.44	33.00	-9.19	1/1
	16-QAM	2546.01	19.89	H	5.29	9.91	24.52	283.14	33.00	-8.48	1/271
		2592.99	18.77	H	5.34	9.91	23.34	215.77	33.00	-9.66	1/137
		2640.00	18.34	H	5.39	9.88	22.82	191.43	33.00	-10.18	1/137
90	QPSK	2541.00	20.82	H	5.28	9.92	25.46	351.59	33.00	-7.54	1/243
		2592.99	19.64	H	5.34	9.91	24.22	263.98	33.00	-8.78	1/123
		2644.98	19.36	H	5.40	9.87	23.84	241.86	33.00	-9.16	1/1
	16-QAM	2541.00	19.85	H	5.28	9.92	24.49	281.22	33.00	-8.51	1/1
		2592.99	18.56	H	5.34	9.91	23.14	205.86	33.00	-9.86	1/123
		2644.98	18.49	H	5.40	9.87	22.97	197.95	33.00	-10.03	1/1
80	QPSK	2536.02	20.76	H	5.28	9.93	25.42	348.06	33.00	-7.58	1/215
		2592.99	19.67	H	5.34	9.91	24.25	265.81	33.00	-8.75	1/109
		2649.99	19.33	H	5.41	9.87	23.79	239.49	33.00	-9.21	1/1
	16-QAM	2536.02	19.80	H	5.28	9.93	24.46	279.03	33.00	-8.54	1/1
		2592.99	18.60	H	5.34	9.91	23.18	207.76	33.00	-9.82	1/109
		2649.99	18.14	H	5.41	9.87	22.60	182.09	33.00	-10.40	1/215
70	QPSK	2531.02	20.71	H	5.28	9.94	25.38	344.89	33.00	-7.62	1/1
		2593.99	19.54	H	5.34	9.91	24.12	258.14	33.00	-8.88	1/95
		2654.98	19.36	H	5.41	9.87	23.82	240.77	33.00	-9.18	1/1
	16-QAM	2531.02	19.67	H	5.28	9.94	24.34	271.44	33.00	-8.66	1/1
		2593.99	18.54	H	5.34	9.91	23.12	205.05	33.00	-9.88	1/95
		2654.98	18.29	H	5.41	9.87	22.75	188.19	33.00	-10.25	1/1
60	QPSK	2526.00	20.51	H	5.27	9.95	25.19	330.54	33.00	-7.81	1/81
		2592.99	19.66	H	5.34	9.91	24.24	265.19	33.00	-8.76	1/81
		2659.98	19.44	H	5.41	9.87	23.89	245.04	33.00	-9.11	1/81
	16-QAM	2526.00	19.50	H	5.27	9.95	24.18	261.95	33.00	-8.82	1/1
		2592.99	18.52	H	5.34	9.91	23.10	203.97	33.00	-9.90	1/160
		2659.98	18.25	H	5.41	9.87	22.70	186.31	33.00	-10.30	1/160
50	QPSK	2521.01	20.22	H	5.26	9.96	24.92	310.34	33.00	-8.08	1/131
		2592.99	19.61	H	5.34	9.91	24.19	262.16	33.00	-8.81	1/67
		2665.00	19.47	H	5.42	9.87	23.92	246.37	33.00	-9.08	1/1
	16-QAM	2521.01	19.25	H	5.26	9.96	23.95	248.22	33.00	-9.05	1/131
		2592.99	18.62	H	5.34	9.91	23.20	208.72	33.00	-9.80	1/67
		2665.00	18.58	H	5.42	9.87	23.03	200.72	33.00	-9.97	1/1
40	QPSK	2516.01	20.14	H	5.26	9.97	24.85	305.68	33.00	-8.15	1/1
		2592.99	19.53	H	5.34	9.91	24.11	257.37	33.00	-8.89	1/53
		2670.00	19.54	H	5.43	9.87	23.99	250.58	33.00	-9.01	1/53
	16-QAM	2516.01	19.27	H	5.26	9.97	23.98	250.19	33.00	-9.02	1/104
		2592.99	18.51	H	5.34	9.91	23.09	203.50	33.00	-9.91	1/1
		2670.00	18.47	H	5.43	9.87	22.92	195.86	33.00	-10.08	1/53
30	QPSK	2511.00	20.64	H	5.25	9.98	25.37	344.43	33.00	-7.63	1/39
		2592.99	20.03	H	5.34	9.91	24.61	288.78	33.00	-8.39	1/39
		2675.00	20.20	H	5.43	9.87	24.65	291.43	33.00	-8.35	1/39
	16-QAM	2511.00	19.55	H	5.25	9.98	24.28	267.98	33.00	-8.72	1/1
		2592.99	19.09	H	5.34	9.91	23.67	232.58	33.00	-9.33	1/39
		2675.00	19.10	H	5.43	9.87	23.55	226.22	33.00	-9.45	1/39
20	QPSK	2506.02	20.61	H	5.25	9.99	25.35	342.82	33.00	-7.65	1/26
		2592.99	19.99	H	5.34	9.91	24.57	286.13	33.00	-8.43	1/26
		2679.99	20.18	H	5.43	9.87	24.62	289.53	33.00	-8.38	1/1
	16-QAM	2506.02	19.51	H	5.25	9.99	24.25	266.12	33.00	-8.75	1/1
		2592.99	19.00	H	5.34	9.91	23.58	227.81	33.00	-9.42	1/49
		2679.99	19.11	H	5.43	9.87	23.55	226.30	33.00	-9.45	1/26
15	QPSK	2503.50	20.56	H	5.24	9.99	25.31	339.70	33.00	-7.69	1/19
		2592.99	20.01	H	5.34	9.91	24.59	287.45	33.00	-8.41	1/19
		2682.48	20.21	H	5.43	9.87	24.65	291.87	33.00	-8.35	1/1
	16-QAM	2503.50	19.62	H	5.24	9.99	24.37	273.59	33.00	-8.63	1/1
		2592.99	18.90	H	5.34	9.91	23.48	222.62	33.00	-9.52	1/36
		2682.48	19.12	H	5.43	9.87	23.56	227.09	33.00	-9.44	1/1
10	QPSK	2501.01	20.55	H	5.24	10.00	25.31	339.62	33.00	-7.69	1/1
		2592.99	20.13	H	5.34	9.91	24.71	295.51	33.00	-8.29	1/12
		2685.00	20.37	H	5.43	9.87	24.81	302.67	33.00	-8.19	1/1
	16-QAM	2501.01	19.48	H	5.24	10.00	24.24	265.46	33.00	-8.76	1/1
		2592.99	19.06	H	5.34	9.91	23.64	230.98	33.00	-9.36	1/22
		2685.00	19.26	H	5.43	9.87	23.70	234.40	33.00	-9.30	1/12

NR Band n41 (SRS1, ANT C)

BW (MHz)	Frequency (MHz)	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Delta (dB)
10	2501.01	8.98	H	5.24	10.00	13.74	23.66	33.00	-19.26
	2592.99	10.93	H	5.34	9.91	15.50	35.52	33.00	-17.50
	2685.00	9.68	H	5.43	9.87	14.12	25.83	33.00	-18.88

NR Band n41 (SRS2, ANT B)

BW (MHz)	Frequency (MHz)	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Delta (dB)
30	2511.01	9.68	H	5.25	9.98	14.41	27.61	33.00	-18.59
	2592.99	11.11	H	5.34	9.91	15.68	36.98	33.00	-17.32
	2675.00	7.40	H	5.43	9.87	11.85	15.31	33.00	-21.15

NR Band n41 (SRS3, ANT F)

BW (MHz)	Frequency (MHz)	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Delta (dB)
10	2501.01	8.50	H	5.24	10.00	13.26	21.18	33.00	-19.74
	2592.99	9.59	H	5.34	9.91	14.17	26.13	33.00	-18.83
	2685.00	9.71	H	5.43	9.87	14.15	26.03	33.00	-18.85

NR Band n66

BW (MHz)	Modulation	Frequency (MHz)	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Delta (dB)	RB
40	QPSK	1730.00	19.21	H	4.33	9.59	24.47	279.90	30.00	-5.53	1/214
		1745.00	19.14	H	4.35	9.66	24.45	278.61	30.00	-5.55	1/108
		1760.00	17.96	H	4.37	9.68	23.28	212.81	30.00	-6.72	1/214
	16-QAM	1730.00	18.52	H	4.33	9.59	23.78	238.78	30.00	-6.22	1/214
		1745.00	18.36	H	4.35	9.66	23.68	233.35	30.00	-6.32	1/108
		1760.00	17.06	H	4.37	9.68	22.37	172.58	30.00	-7.63	1/108
30	QPSK	1725.00	19.36	H	4.32	9.57	24.60	288.40	30.00	-5.40	1/80
		1745.00	18.58	H	4.35	9.66	23.90	245.47	30.00	-6.10	1/158
		1765.00	18.15	H	4.37	9.68	23.45	221.31	30.00	-6.55	1/158
	16-QAM	1725.00	18.46	H	4.32	9.57	23.70	234.42	30.00	-6.30	1/80
		1745.00	17.69	H	4.35	9.66	23.00	199.53	30.00	-7.00	1/158
		1765.00	17.20	H	4.37	9.68	22.51	178.24	30.00	-7.49	1/158
25	QPSK	1722.50	19.01	H	4.32	9.56	24.24	265.46	30.00	-5.76	1/67
		1745.00	18.45	H	4.35	9.66	23.76	237.68	30.00	-6.24	1/131
		1767.50	17.71	H	4.38	9.68	23.02	200.45	30.00	-6.98	1/131
	16-QAM	1722.50	18.06	H	4.32	9.56	23.30	213.80	30.00	-6.70	1/67
		1745.00	17.52	H	4.35	9.66	22.84	192.31	30.00	-7.16	1/131
		1767.50	16.83	H	4.38	9.68	22.14	163.68	30.00	-7.86	1/131
20	QPSK	1720.00	18.73	H	4.32	9.55	23.96	248.89	30.00	-6.04	1/53
		1745.00	18.21	H	4.35	9.66	23.52	224.91	30.00	-6.48	1/104
		1770.00	17.49	H	4.38	9.68	22.80	190.55	30.00	-7.20	1/104
	16-QAM	1720.00	17.80	H	4.32	9.55	23.03	200.91	30.00	-6.97	1/53
		1745.00	17.29	H	4.35	9.66	22.61	182.39	30.00	-7.39	1/104
		1770.00	16.63	H	4.38	9.68	21.94	156.31	30.00	-8.06	1/104
15	QPSK	1717.50	19.83	H	4.31	9.53	25.05	319.89	30.00	-4.95	1/77
		1745.00	19.12	H	4.35	9.66	24.44	277.97	30.00	-5.56	1/77
		1772.50	17.94	H	4.38	9.68	23.24	210.86	30.00	-6.76	1/77
	16-QAM	1717.50	18.94	H	4.31	9.53	24.16	260.62	30.00	-5.84	1/77
		1745.00	18.26	H	4.35	9.66	23.58	228.03	30.00	-6.42	1/77
		1772.50	17.05	H	4.38	9.68	22.36	172.19	30.00	-7.64	1/77
10	QPSK	1715.00	19.41	H	4.31	9.52	24.62	289.73	30.00	-5.38	1/50
		1745.00	18.80	H	4.35	9.66	24.12	258.23	30.00	-5.88	1/50
		1775.00	17.46	H	4.38	9.68	22.76	188.80	30.00	-7.24	1/50
	16-QAM	1715.00	18.54	H	4.31	9.52	23.75	237.14	30.00	-6.25	1/50
		1745.00	17.95	H	4.35	9.66	23.26	211.84	30.00	-6.74	1/50
		1775.00	16.27	H	4.38	9.68	21.57	143.55	30.00	-8.43	1/50
5	QPSK	1712.50	18.94	H	4.31	9.51	24.15	260.02	30.00	-5.85	1/23
		1745.00	18.87	H	4.35	9.66	24.19	262.42	30.00	-5.81	1/23
		1777.50	16.45	H	4.39	9.68	21.74	149.28	30.00	-8.26	1/23
	16-QAM	1712.50	17.96	H	4.31	9.51	23.16	207.01	30.00	-6.84	1/23
		1745.00	18.00	H	4.35	9.66	23.32	214.78	30.00	-6.68	1/23
		1777.50	15.49	H	4.39	9.68	20.78	119.67	30.00	-9.22	1/23

9.2. RADIATED SPURIOUS EMISSION

RULE PART(S)

FCC: §2.1053, §27.53

LIMIT

Part 27.53:

(c)(2) On any frequency outside the 776-788 MHz band, the power of any emission shall be attenuated outside the band below the transmitter power (P) by at least $43 + 10 \log (P)$ dB.

(g) For operations in the 600 MHz band and the 698-746 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power (P) within the licensed band(s) of operation, measured in watts, by at least $43 + 10 \log (P)$ dB.

(h) The power of any emission outside a licensee's frequency block shall be attenuated below the transmitter power (P) in watts by at least $43 + 10 \log_{10} (P)$ dB.

(m) (4) For mobile digital stations, the attenuation factor shall be not less than $40 + 10 \log (P)$ dB on all frequencies between the channel edge and 5 megahertz from the channel edge, $43 + 10 \log (P)$ dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and $55 + 10 \log (P)$ dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less than $43 + 10 \log (P)$ dB on all frequencies between 2490.5 MHz and 2496 MHz and $55 + 10 \log (P)$ dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.

TEST PROCEDURE

ANSI / TIA / EIA 603 E Clause 2.2.12; ESU40 setting reference to 971168 D01 v03r01

For peak power measurement with a ESU40:

- a) Set the RBW = 100 kHz for emission below 1 GHz and 1 MHz for emissions above 1 GHz
- b) Set VBW $\geq 3 \times$ RBW;
- c) Set span ≥ 1.5 times the OBW;
- d) Sweep time = auto couple;
- e) Detector = rms;
- f) Ensure that the number of measurement points $\geq$ span/RBW;
- g) Trace Mode = average(WCDMA, LTE FDD, 5G NR FDD), Maxhold(LTE TDD, 5G NR TDD);

NOTE1

UMTS: It was tested at REL 99 as worst case (the highest output power and density).

LTE: It was tested at 1RB QPSK as worst case (the highest output power and density).

5G NR: All Waveforms (CP-OFDM vs DFT-s_OFDM) and modulations ($\pi/2$ BPSK, QPSK, 16QAM, 64QAM, 256QAM) were investigated to determine the worst case configuration. All Modes of operation were investigated and the worst case configuration results are reported in this section.

NOTE2

Please refer to section 5.4 for bandwidth and RB setting about LTE, 5G NR bands.

RESULTS

See the following pages.

9.2.1. SPURIOUS RADIATION RESULT

WCDMA Band 4

REL99

UL Verification Services, Inc.
Above 1GHz High Frequency Substitution Measurement

Company: Samsung

Project #: 4791377016

Date: 2024-08-01

Test Engineer: 27089

Configuration: EUT / AC Adapter, X-Position

Location: Chamber 2

Mode: Rel99 Band 4 Harmonics

Test Votage: AC 120 V, 60 Hz

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1712.4MHz									
3424.80	-8.6	V	3.0	42.9	1.0	-50.5	-13.0	-37.5	
5137.20	-9.2	V	3.0	43.3	1.0	-51.4	-13.0	-38.4	
6849.60	-6.0	V	3.0	43.3	1.0	-48.3	-13.0	-35.3	
3424.80	-8.4	H	3.0	42.9	1.0	-50.3	-13.0	-37.3	
5137.20	-9.3	H	3.0	43.3	1.0	-51.6	-13.0	-38.6	
6849.60	-6.5	H	3.0	43.3	1.0	-48.8	-13.0	-35.8	
Mid Ch, 1732.6MHz									
3465.20	-8.3	V	3.0	43.0	1.0	-50.3	-13.0	-37.3	
5197.80	-8.9	V	3.0	43.3	1.0	-51.2	-13.0	-38.2	
6930.40	-6.1	V	3.0	43.3	1.0	-48.4	-13.0	-35.4	
3465.20	-8.1	H	3.0	43.0	1.0	-50.0	-13.0	-37.0	
5197.80	-9.0	H	3.0	43.3	1.0	-51.3	-13.0	-38.3	
6930.40	-6.5	H	3.0	43.3	1.0	-48.8	-13.0	-35.8	
High Ch, 1752.6MHz									
3505.20	-8.1	V	3.0	43.0	1.0	-50.1	-13.0	-37.1	
5257.80	-9.0	V	3.0	43.3	1.0	-51.3	-13.0	-38.3	
7010.40	-5.8	V	3.0	43.3	1.0	-48.1	-13.0	-35.1	
3505.20	-7.9	H	3.0	43.0	1.0	-49.9	-13.0	-36.9	
5257.80	-9.0	H	3.0	43.3	1.0	-51.4	-13.0	-38.4	
7010.40	-6.2	H	3.0	43.3	1.0	-48.5	-13.0	-35.5	

LTE Band 12

3 MHz QPSK	UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement Company: Samsung Project #: 4791377016 Date: 2024-07-25 Test Engineer: 26087 Configuration: EUT / AC Adapter, X-Position Location: Chamber 1 Mode: LTE_QPSK Band 12 Harmonics, 3MHz Bandwidth Test Votage: AC 120 V, 60 Hz									
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch, 700.5MHz									
	1401.00	-16.6	V	3.0	43.3	1.0	-58.9	-13.0	-45.9	
	2101.50	-13.2	V	3.0	43.4	1.0	-55.6	-13.0	-42.6	
	2802.00	-11.0	V	3.0	43.7	1.0	-53.7	-13.0	-40.7	
	1401.00	-18.0	H	3.0	43.3	1.0	-60.2	-13.0	-47.2	
	2101.50	-13.6	H	3.0	43.4	1.0	-56.0	-13.0	-43.0	
	2802.00	-10.7	H	3.0	43.7	1.0	-53.4	-13.0	-40.4	
	Mid Ch, 707.5MHz									
	1415.00	-16.5	V	3.0	43.3	1.0	-58.8	-13.0	-45.8	
	2122.50	-13.1	V	3.0	43.4	1.0	-55.5	-13.0	-42.5	
	2830.00	-10.9	V	3.0	43.7	1.0	-53.6	-13.0	-40.6	
	1415.00	-17.9	H	3.0	43.3	1.0	-60.2	-13.0	-47.2	
	2122.50	-13.6	H	3.0	43.4	1.0	-56.0	-13.0	-43.0	
	2830.00	-10.8	H	3.0	43.7	1.0	-53.5	-13.0	-40.5	
	High Ch, 714.5MHz									
	1429.00	-16.4	V	3.0	43.3	1.0	-58.7	-13.0	-45.7	
	2143.50	-12.7	V	3.0	43.4	1.0	-55.1	-13.0	-42.1	
	2858.00	-10.8	V	3.0	43.7	1.0	-53.5	-13.0	-40.5	
	1429.00	-17.8	H	3.0	43.3	1.0	-60.1	-13.0	-47.1	
	2143.50	-12.9	H	3.0	43.4	1.0	-55.3	-13.0	-42.3	
	2858.00	-10.6	H	3.0	43.7	1.0	-53.3	-13.0	-40.3	

LTE Band 13

10 MHz QPSK	UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement Company: Samsung Project #: 4791377016 Date: 2024-07-29 Test Engineer: 26087 Configuration: EUT, X-Position Location: Chamber 1 Mode: LTE_QPSK Band 13 Harmonics, 10MHz Bandwidth Test Votage: AC 120 V, 60 Hz									
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Mid Ch, 782MHz									
	1564.00	-25.4	V	3.0	43.3	1.0	-67.7	-40.0	-27.7	
	2346.00	-12.4	V	3.0	43.5	1.0	-54.9	-13.0	-41.9	
	3128.00	-10.1	V	3.0	43.8	1.0	-52.9	-13.0	-39.9	
	1564.00	-23.4	H	3.0	43.3	1.0	-65.7	-40.0	-25.7	
	2346.00	-12.7	H	3.0	43.5	1.0	-55.2	-13.0	-42.2	
	3128.00	-9.7	H	3.0	43.8	1.0	-52.6	-13.0	-39.6	

LTE Band 41

UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company:		Samsung							
Project #:		4791377016							
Date:		2024-07-30							
Test Engineer:		27089							
Configuration:		EUT / Y-Position							
Location:		Chamber 2							
Mode:		LTE_QPSK Band 41 Harmonics, 20MHz Bandwidth							
Test Votage:		AC 120 V, 60 Hz							
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 2506MHz									
5012.00	-7.0	V	3.0	43.3	1.0	-49.3	-25.0	-24.3	
7518.00	-7.5	V	3.0	42.9	1.0	-49.5	-25.0	-24.5	
10024.00	-2.2	V	3.0	41.5	1.0	-42.8	-25.0	-17.8	
12530.00	3.5	V	3.0	39.9	1.0	-35.4	-25.0	-10.4	
15036.00	-7.2	V	3.0	40.1	1.0	-46.3	-25.0	-21.3	
5012.00	-8.8	H	3.0	43.3	1.0	-51.0	-25.0	-26.0	
7518.00	-8.1	H	3.0	42.9	1.0	-50.0	-25.0	-25.0	
10024.00	1.8	H	3.0	41.5	1.0	-38.7	-25.0	-13.7	
12530.00	0.4	H	3.0	39.9	1.0	-38.5	-25.0	-13.5	
15036.00	-7.4	H	3.0	40.1	1.0	-46.5	-25.0	-21.5	
Mid Ch, 2593MHz									
5186.00	-6.2	V	3.0	43.3	1.0	-48.5	-25.0	-23.5	
7779.00	-5.4	V	3.0	42.8	1.0	-47.2	-25.0	-22.2	
10372.00	-4.3	V	3.0	41.3	1.0	-44.6	-25.0	-19.6	
12965.00	-2.3	V	3.0	40.0	1.0	-41.2	-25.0	-16.2	
15558.00	-7.0	V	3.0	40.2	1.0	-46.2	-25.0	-21.2	
5186.00	-8.1	H	3.0	43.3	1.0	-50.5	-25.0	-25.5	
7779.00	-5.8	H	3.0	42.8	1.0	-47.6	-25.0	-22.6	
10372.00	2.6	H	3.0	41.3	1.0	-37.7	-25.0	-12.7	
12965.00	-4.2	H	3.0	40.0	1.0	-43.2	-25.0	-18.2	
15558.00	-7.4	H	3.0	40.2	1.0	-46.6	-25.0	-21.6	
High Ch, 2680MHz									
5360.00	-6.2	V	3.0	43.4	1.0	-48.6	-25.0	-23.6	
8040.00	-7.2	V	3.0	42.6	1.0	-48.8	-25.0	-23.8	
10720.00	-3.9	V	3.0	41.0	1.0	-43.9	-25.0	-18.9	
13400.00	-7.4	V	3.0	40.0	1.0	-46.4	-25.0	-21.4	
16080.00	-6.5	V	3.0	40.3	1.0	-45.8	-25.0	-20.8	
5360.00	-7.2	H	3.0	43.4	1.0	-49.6	-25.0	-24.6	
8040.00	-6.8	H	3.0	42.6	1.0	-48.4	-25.0	-23.4	
10720.00	-1.3	H	3.0	41.0	1.0	-41.2	-25.0	-16.2	
13400.00	-6.2	H	3.0	40.0	1.0	-45.2	-25.0	-20.2	
16080.00	-7.5	H	3.0	40.3	1.0	-46.8	-25.0	-21.8	

20 MHz
QPSK

LTE Band 66

20 MHz QPSK ANT A	UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
	Company: Samsung									
	Project #: 4791377016									
	Date: 2024-08-01									
	Test Engineer: 26087									
	Configuration: EUT / AC Adapter, X-Position									
	Location: Chamber 1									
	Mode: LTE_QPSK Band 66 Harmonics, 20MHz Bandwidth									
	Test Votage: AC 120 V, 60 Hz									
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch, 1720MHz									
	3440.00	-8.4	V	3.0	44.0	1.0	-51.3	-13.0	-38.3	
	5160.00	-6.6	V	3.0	44.8	1.0	-50.4	-13.0	-37.4	
	6880.00	-4.0	V	3.0	45.1	1.0	-48.2	-13.0	-35.2	
	3440.00	-8.1	H	3.0	44.0	1.0	-51.1	-13.0	-38.1	
	5160.00	-6.7	H	3.0	44.8	1.0	-50.6	-13.0	-37.6	
	6880.00	-3.9	H	3.0	45.1	1.0	-48.0	-13.0	-35.0	
	Mid Ch, 1745MHz									
	3490.00	-7.9	V	3.0	44.0	1.0	-50.9	-13.0	-37.9	
	5235.00	-5.5	V	3.0	44.8	1.0	-49.3	-13.0	-36.3	
	6980.00	-4.0	V	3.0	45.1	1.0	-48.1	-13.0	-35.1	
	3490.00	-7.8	H	3.0	44.0	1.0	-50.8	-13.0	-37.8	
	5235.00	-5.8	H	3.0	44.8	1.0	-49.6	-13.0	-36.6	
	6980.00	-3.9	H	3.0	45.1	1.0	-48.0	-13.0	-35.0	
	High Ch, 1770MHz									
3540.00	-7.9	V	3.0	44.0	1.0	-50.9	-13.0	-37.9		
5310.00	-6.4	V	3.0	44.9	1.0	-50.3	-13.0	-37.3		
7080.00	-3.5	V	3.0	45.1	1.0	-47.7	-13.0	-34.7		
3540.00	-7.6	H	3.0	44.0	1.0	-50.6	-13.0	-37.6		
5310.00	-6.3	H	3.0	44.9	1.0	-50.2	-13.0	-37.2		
7080.00	-3.4	H	3.0	45.1	1.0	-47.6	-13.0	-34.6		
15 MHz QPSK ANT B	UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
	Company: Samsung									
	Project #: 4791377016									
	Date: 2024-08-13									
	Test Engineer: 26087									
	Configuration: EUT / Y-Position									
	Location: Chamber 1									
	Mode: LTE_QPSK Band 66 Harmonics, 15MHz Bandwidth									
	Test Votage: AC 120 V, 60 Hz									
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
	Low Ch, 1717.5MHz									
	3435.00	-8.5	V	3.0	44.0	1.0	-51.5	-13.0	-38.5	
	5152.50	-6.8	V	3.0	44.8	1.0	-50.6	-13.0	-37.6	
	6870.00	-4.0	V	3.0	45.1	1.0	-48.1	-13.0	-35.1	
	3435.00	-8.3	H	3.0	44.0	1.0	-51.3	-13.0	-38.3	
	5152.50	-6.7	H	3.0	44.8	1.0	-50.6	-13.0	-37.6	
	6870.00	-3.9	H	3.0	45.1	1.0	-48.0	-13.0	-35.0	
	Mid Ch, 1745MHz									
	3490.00	-8.1	V	3.0	44.0	1.0	-51.1	-13.0	-38.1	
	5235.00	-6.5	V	3.0	44.8	1.0	-50.3	-13.0	-37.3	
	6980.00	-4.0	V	3.0	45.1	1.0	-48.2	-13.0	-35.2	
	3490.00	-8.0	H	3.0	44.0	1.0	-51.0	-13.0	-38.0	
	5235.00	-6.4	H	3.0	44.8	1.0	-50.3	-13.0	-37.3	
	6980.00	-3.9	H	3.0	45.1	1.0	-48.1	-13.0	-35.1	
	High Ch, 1772.5MHz									
3545.00	-7.8	V	3.0	44.0	1.0	-50.8	-13.0	-37.8		
5317.50	-6.1	V	3.0	44.9	1.0	-50.0	-13.0	-37.0		
7090.00	-3.6	V	3.0	45.1	1.0	-47.7	-13.0	-34.7		
3545.00	-7.6	H	3.0	44.0	1.0	-50.7	-13.0	-37.7		
5317.50	-6.2	H	3.0	44.9	1.0	-50.1	-13.0	-37.1		
7090.00	-3.5	H	3.0	45.1	1.0	-47.6	-13.0	-34.6		

NR Band n41

	UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement								
	f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)
100 MHz QPSK	Company: Samsung								
	Project #: 4791377016								
	Date: 2024-07-30								
	Test Engineer: 26087								
	Configuration: EUT, Y-Position								
	Location: Chamber 1								
	Mode: 5G NR_QPSK NR n41 Harmonics, 100MHz Bandwidth								
	Test Votage: AC 120 V, 60 Hz								
	Notes								
	Low Ch, 2546.01MHz								
	5092.02	-8.4	V	3.0	44.8	1.0	-52.2	-25.0	-27.2
	7638.03	-8.9	V	3.0	44.9	1.0	-52.8	-25.0	-27.8
	10184.04	-1.9	V	3.0	43.6	1.0	-44.5	-25.0	-19.5
	12730.05	3.6	V	3.0	43.6	1.0	-39.0	-25.0	-14.0
	15276.06	-7.4	V	3.0	44.8	1.0	-51.2	-25.0	-26.2
	5092.02	-10.5	H	3.0	44.8	1.0	-54.3	-25.0	-29.3
	7638.03	-7.2	H	3.0	44.9	1.0	-51.1	-25.0	-26.1
	10184.04	3.8	H	3.0	43.6	1.0	-38.8	-25.0	-13.8
	12730.05	5.3	H	3.0	43.6	1.0	-37.3	-25.0	-12.3
	15276.06	-7.3	H	3.0	44.8	1.0	-51.0	-25.0	-26.0
	Mid Ch, 2592.99MHz								
	5185.98	-8.2	V	3.0	44.8	1.0	-52.0	-25.0	-27.0
	7778.97	-7.9	V	3.0	44.8	1.0	-51.8	-25.0	-26.8
	10371.96	-1.7	V	3.0	43.5	1.0	-44.2	-25.0	-19.2
	12964.95	4.2	V	3.0	43.7	1.0	-38.5	-25.0	-13.5
	15557.94	-7.4	V	3.0	44.7	1.0	-51.0	-25.0	-26.0
	5185.98	-9.0	H	3.0	44.8	1.0	-52.9	-25.0	-27.9
	7778.97	-4.9	H	3.0	44.8	1.0	-48.7	-25.0	-23.7
	10371.96	4.1	H	3.0	43.5	1.0	-38.4	-25.0	-13.4
	12964.95	5.9	H	3.0	43.7	1.0	-36.8	-25.0	-11.8
	15557.94	-7.1	H	3.0	44.7	1.0	-50.8	-25.0	-25.8
	High Ch, 2640MHz								
	5280.00	-8.1	V	3.0	44.9	1.0	-51.9	-25.0	-26.9
	7920.00	-9.3	V	3.0	44.8	1.0	-53.1	-25.0	-28.1
	10560.00	-0.7	V	3.0	43.5	1.0	-43.2	-25.0	-18.2
	13200.00	0.2	V	3.0	43.9	1.0	-42.6	-25.0	-17.6
	15840.00	-6.8	V	3.0	44.6	1.0	-50.4	-25.0	-25.4
	5280.00	-10.8	H	3.0	44.9	1.0	-54.6	-25.0	-29.6
	7920.00	-4.6	H	3.0	44.8	1.0	-48.4	-25.0	-23.4
	10560.00	-0.3	H	3.0	43.5	1.0	-42.8	-25.0	-17.8
	13200.00	0.4	H	3.0	43.9	1.0	-42.5	-25.0	-17.5
	15840.00	-6.7	H	3.0	44.6	1.0	-50.3	-25.0	-25.3

UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company:		Samsung							
Project #:		4791377016							
Date:		2024-08-06							
Test Engineer:		27089							
Configuration:		EUT / AC Adapter, Z-Position							
Location:		Chamber 2							
Mode:		5G NR n41(SRS) Harmonics, 10MHz Bandwidth							
Test Voltage:		AC 120 V, 60 Hz							
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 2501.01MHz									
5002.02	-12.4	V	3.0	43.3	1.0	-54.7	-25.0	-29.7	
7503.03	-15.6	V	3.0	42.9	1.0	-57.6	-25.0	-32.6	
10004.04	0.4	V	3.0	41.6	1.0	-40.1	-25.0	-15.1	
12505.05	-6.8	V	3.0	39.9	1.0	-45.7	-25.0	-20.7	
15006.06	-9.1	V	3.0	40.1	1.0	-48.3	-25.0	-23.3	
5002.02	-13.6	H	3.0	43.3	1.0	-55.9	-25.0	-30.9	
7503.03	-15.5	H	3.0	42.9	1.0	-57.5	-25.0	-32.5	
10004.04	0.3	H	3.0	41.6	1.0	-40.3	-25.0	-15.3	
12505.05	-5.4	H	3.0	39.9	1.0	-44.3	-25.0	-19.3	
15006.06	-9.7	H	3.0	40.1	1.0	-48.8	-25.0	-23.8	
Mid Ch, 2592.99MHz									
5185.98	-13.0	V	3.0	43.3	1.0	-55.3	-25.0	-30.3	
7778.97	-13.0	V	3.0	42.8	1.0	-54.7	-25.0	-29.7	
10371.96	-4.9	V	3.0	41.3	1.0	-45.1	-25.0	-20.1	
12964.95	-7.8	V	3.0	40.0	1.0	-46.7	-25.0	-21.7	
15557.94	-9.3	V	3.0	40.2	1.0	-48.6	-25.0	-23.6	
5185.98	-13.6	H	3.0	43.3	1.0	-55.9	-25.0	-30.9	
7778.97	-14.0	H	3.0	42.8	1.0	-55.8	-25.0	-30.8	
10371.96	-7.1	H	3.0	41.3	1.0	-47.3	-25.0	-22.3	
12964.95	-9.2	H	3.0	40.0	1.0	-48.2	-25.0	-23.2	
15557.94	-9.9	H	3.0	40.2	1.0	-49.1	-25.0	-24.1	
High Ch, 2685MHz									
5370.00	-13.1	V	3.0	43.4	1.0	-55.4	-25.0	-30.4	
8055.00	-12.6	V	3.0	42.6	1.0	-54.2	-25.0	-29.2	
10740.00	-9.7	V	3.0	40.9	1.0	-49.6	-25.0	-24.6	
13425.00	-11.6	V	3.0	40.0	1.0	-50.6	-25.0	-25.6	
16110.00	-9.4	V	3.0	40.3	1.0	-48.7	-25.0	-23.7	
5370.00	-15.7	H	3.0	43.4	1.0	-58.0	-25.0	-33.0	
8055.00	-13.4	H	3.0	42.6	1.0	-55.0	-25.0	-30.0	
10740.00	-7.8	H	3.0	40.9	1.0	-47.7	-25.0	-22.7	
13425.00	-11.9	H	3.0	40.0	1.0	-50.9	-25.0	-25.9	
16110.00	-9.9	H	3.0	40.3	1.0	-49.2	-25.0	-24.2	

10 MHz
SRS1
ANT C

UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company:		Samsung							
Project #:		4791							
Date:		2024-08-07							
Test Engineer:		28775							
Configuration:		EUT / AC Adapter, Y-Position							
Location:		Chamber 2							
Mode:		5G NR n41(SRS) Harmonics, 30MHz Bandwidth							
Test Voltage:		AC 120 V, 60 Hz							
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 2511.01MHz									
5022.02	-13.0	V	3.0	43.3	1.0	-55.3	-25.0	-30.3	
7533.03	-15.9	V	3.0	42.9	1.0	-57.8	-25.0	-32.8	
10044.04	-6.0	V	3.0	41.5	1.0	-46.5	-25.0	-21.5	
12555.05	-5.0	V	3.0	39.9	1.0	-43.9	-25.0	-18.9	
15066.06	-9.4	V	3.0	40.1	1.0	-48.5	-25.0	-23.5	
5022.02	-14.6	H	3.0	43.3	1.0	-56.8	-25.0	-31.8	
7533.03	-15.6	H	3.0	42.9	1.0	-57.6	-25.0	-32.6	
10044.04	-1.0	H	3.0	41.5	1.0	-41.5	-25.0	-16.5	
12555.05	-8.0	H	3.0	39.9	1.0	-46.9	-25.0	-21.9	
15066.06	-9.8	H	3.0	40.1	1.0	-48.9	-25.0	-23.9	
Mid Ch, 2592.99MHz									
5185.98	-13.5	V	3.0	43.3	1.0	-55.8	-25.0	-30.8	
7778.97	-15.0	V	3.0	42.8	1.0	-56.8	-25.0	-31.8	
10371.96	-9.0	V	3.0	41.3	1.0	-49.3	-25.0	-24.3	
12964.95	-7.8	V	3.0	40.0	1.0	-46.7	-25.0	-21.7	
15557.94	-9.7	V	3.0	40.2	1.0	-49.0	-25.0	-24.0	
5185.98	-14.0	H	3.0	43.3	1.0	-56.3	-25.0	-31.3	
7778.97	-14.2	H	3.0	42.8	1.0	-56.0	-25.0	-31.0	
10371.96	-3.5	H	3.0	41.3	1.0	-43.7	-25.0	-18.7	
12964.95	-8.6	H	3.0	40.0	1.0	-47.6	-25.0	-22.6	
15557.94	-10.2	H	3.0	40.2	1.0	-49.4	-25.0	-24.4	
High Ch, 2675MHz									
5350.00	-12.3	V	3.0	43.4	1.0	-54.6	-25.0	-29.6	
8025.00	-11.6	V	3.0	42.6	1.0	-53.2	-25.0	-28.2	
10700.00	-6.6	V	3.0	41.0	1.0	-46.5	-25.0	-21.5	
13375.00	-9.9	V	3.0	40.0	1.0	-48.9	-25.0	-23.9	
16050.00	-9.5	V	3.0	40.3	1.0	-48.9	-25.0	-23.9	
5350.00	-14.4	H	3.0	43.4	1.0	-56.7	-25.0	-31.7	
8025.00	-11.4	H	3.0	42.6	1.0	-53.0	-25.0	-28.0	
10700.00	-7.4	H	3.0	41.0	1.0	-47.4	-25.0	-22.4	
13375.00	-11.1	H	3.0	40.0	1.0	-50.1	-25.0	-25.1	
16050.00	-10.0	H	3.0	40.3	1.0	-49.3	-25.0	-24.3	

UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company:		Samsung							
Project #:		4791377016							
Date:		2024-08-07							
Test Engineer:		26087							
Configuration:		EUT / AC Adapter, Z-Position							
Location:		Chamber 1							
Mode:		5G NR n41(SRS) Harmonics, 10MHz Bandwidth							
Test Voltage:		AC 120 V, 60 Hz							
f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 2501.01MHz									
5002.02	-9.5	V	3.0	44.8	1.0	-53.3	-25.0	-28.3	
7503.03	-11.5	V	3.0	45.0	1.0	-55.5	-25.0	-30.5	
10004.04	3.6	V	3.0	43.6	1.0	-39.1	-25.0	-14.1	
12505.05	-3.0	V	3.0	43.5	1.0	-45.5	-25.0	-20.5	
15006.06	-8.8	V	3.0	44.8	1.0	-52.7	-25.0	-27.7	
5002.02	-10.7	H	3.0	44.8	1.0	-54.5	-25.0	-29.5	
7503.03	-12.2	H	3.0	45.0	1.0	-56.1	-25.0	-31.1	
10004.04	5.5	H	3.0	43.6	1.0	-37.2	-25.0	-12.2	
12505.05	-0.6	H	3.0	43.5	1.0	-43.1	-25.0	-18.1	
15006.06	-8.7	H	3.0	44.8	1.0	-52.6	-25.0	-27.6	
Mid Ch, 2592.99MHz									
5185.98	-9.6	V	3.0	44.8	1.0	-53.4	-25.0	-28.4	
7778.97	-11.0	V	3.0	44.8	1.0	-54.9	-25.0	-29.9	
10371.96	-3.5	V	3.0	43.5	1.0	-46.1	-25.0	-21.1	
12964.95	-5.3	V	3.0	43.7	1.0	-48.0	-25.0	-23.0	
15557.94	-8.3	V	3.0	44.7	1.0	-51.9	-25.0	-26.9	
5185.98	-12.4	H	3.0	44.8	1.0	-56.3	-25.0	-31.3	
7778.97	-11.8	H	3.0	44.8	1.0	-55.6	-25.0	-30.6	
10371.96	-1.1	H	3.0	43.5	1.0	-43.6	-25.0	-18.6	
12964.95	-1.4	H	3.0	43.7	1.0	-44.1	-25.0	-19.1	
15557.94	-8.0	H	3.0	44.7	1.0	-51.7	-25.0	-26.7	
High Ch, 2685MHz									
5370.00	-10.7	V	3.0	44.9	1.0	-54.6	-25.0	-29.6	
8055.00	-11.7	V	3.0	44.7	1.0	-55.4	-25.0	-30.4	
10740.00	-7.3	V	3.0	43.5	1.0	-49.8	-25.0	-24.8	
13425.00	-10.0	V	3.0	44.0	1.0	-52.9	-25.0	-27.9	
16110.00	-7.6	V	3.0	44.5	1.0	-51.1	-25.0	-26.1	
5370.00	-13.0	H	3.0	44.9	1.0	-56.9	-25.0	-31.9	
8055.00	-11.9	H	3.0	44.7	1.0	-55.6	-25.0	-30.6	
10740.00	-4.4	H	3.0	43.5	1.0	-46.8	-25.0	-21.8	
13425.00	-9.9	H	3.0	44.0	1.0	-52.9	-25.0	-27.9	
16110.00	-7.5	H	3.0	44.5	1.0	-51.0	-25.0	-26.0	

10 MHz
SRS3
ANT F

NR Band n66

15 MHz

QPSK

UL Verification Services, Inc.

Above 1GHz High Frequency Substitution Measurement

Company:

Project #:

Date:

Test Engineer:

Configuration:

Location:

Mode:

Test Votage:

Samsung

4791377016

2024-08-01

27089

EUT / AC Adapter, X-Position

Chamber 2

5G NR_QPSK NR n66 Harmonics, 15MHz Bandwidth

AC 120 V, 60 Hz

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1717.5MHz									
3435.00	-8.5	V	3.0	43.0	1.0	-50.5	-13.0	-37.5	
5152.50	-9.2	V	3.0	43.3	1.0	-51.5	-13.0	-38.5	
6870.00	-6.0	V	3.0	43.3	1.0	-48.3	-13.0	-35.3	
3435.00	-8.3	H	3.0	43.0	1.0	-50.2	-13.0	-37.2	
5152.50	-9.2	H	3.0	43.3	1.0	-51.5	-13.0	-38.5	
6870.00	-6.3	H	3.0	43.3	1.0	-48.6	-13.0	-35.6	
Mid Ch, 1745MHz									
3490.00	-8.3	V	3.0	43.0	1.0	-50.3	-13.0	-37.3	
5235.00	-9.0	V	3.0	43.3	1.0	-51.3	-13.0	-38.3	
6980.00	-6.0	V	3.0	43.3	1.0	-48.3	-13.0	-35.3	
3490.00	-8.1	H	3.0	43.0	1.0	-50.1	-13.0	-37.1	
5235.00	-9.1	H	3.0	43.3	1.0	-51.4	-13.0	-38.4	
6980.00	-6.4	H	3.0	43.3	1.0	-48.7	-13.0	-35.7	
High Ch, 1772.5MHz									
3545.00	-8.0	V	3.0	43.0	1.0	-50.0	-13.0	-37.0	
5317.50	-8.6	V	3.0	43.3	1.0	-50.9	-13.0	-37.9	
7090.00	-5.8	V	3.0	43.2	1.0	-48.0	-13.0	-35.0	
3545.00	-7.9	H	3.0	43.0	1.0	-49.9	-13.0	-36.9	
5317.50	-8.7	H	3.0	43.3	1.0	-51.0	-13.0	-38.0	
7090.00	-6.3	H	3.0	43.2	1.0	-48.5	-13.0	-35.5	

END OF REPORT