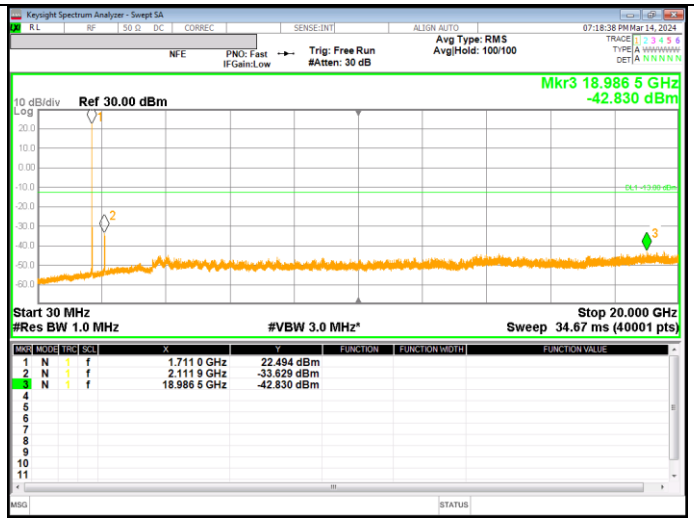
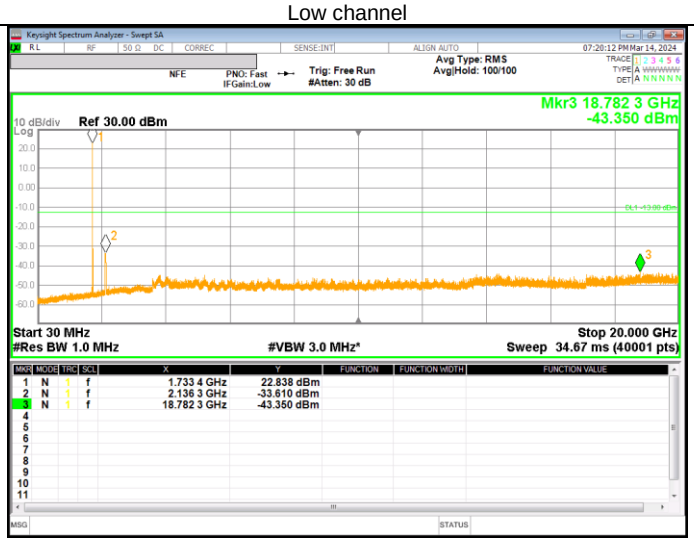
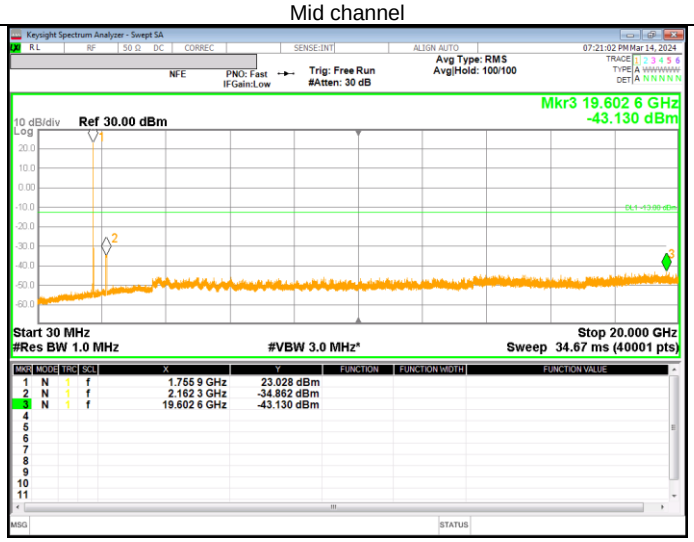
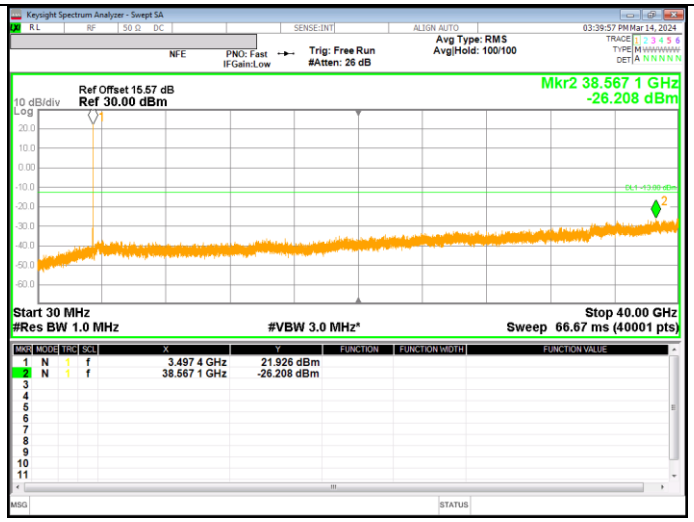
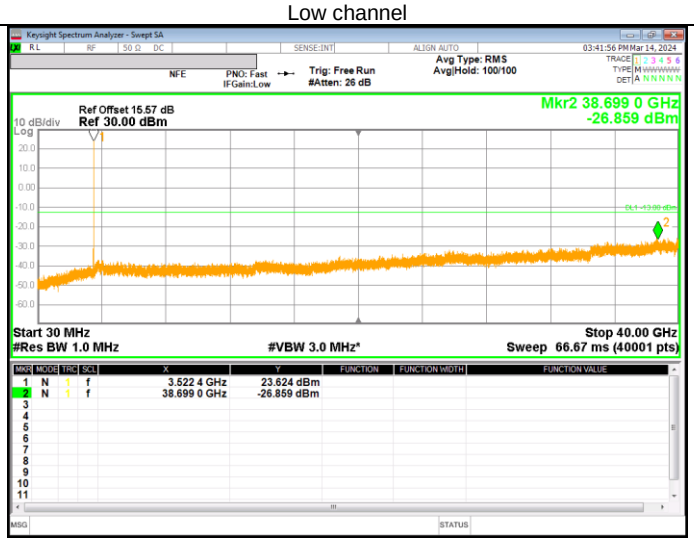
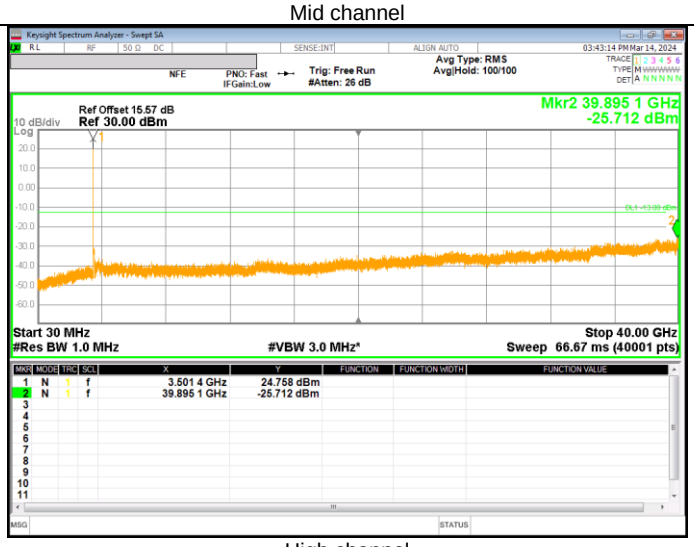
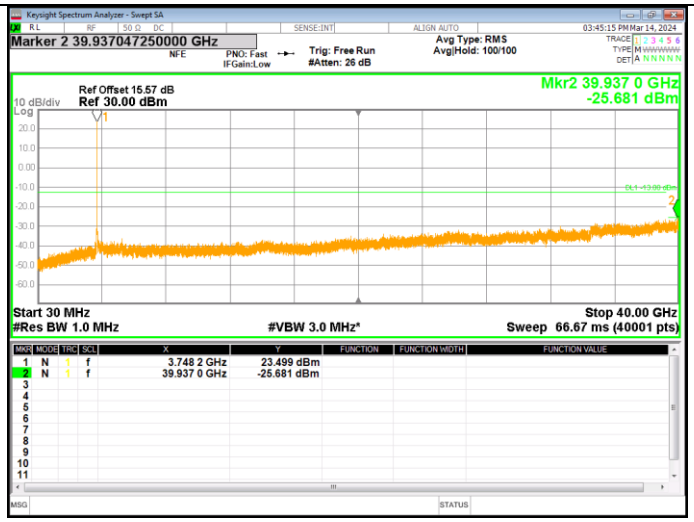
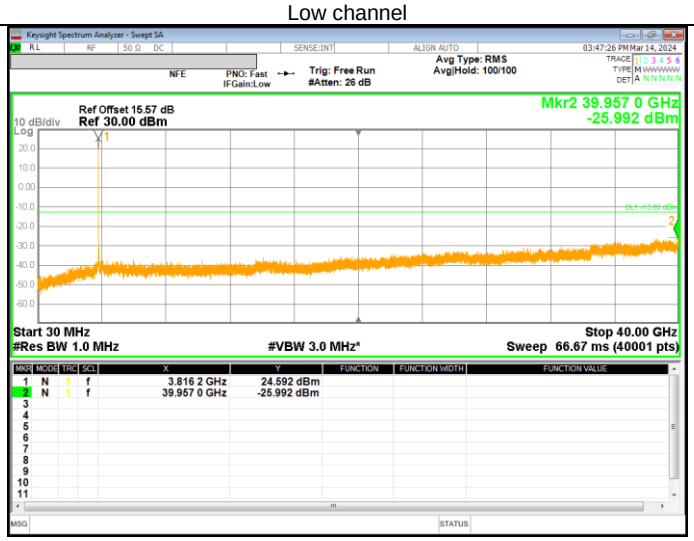
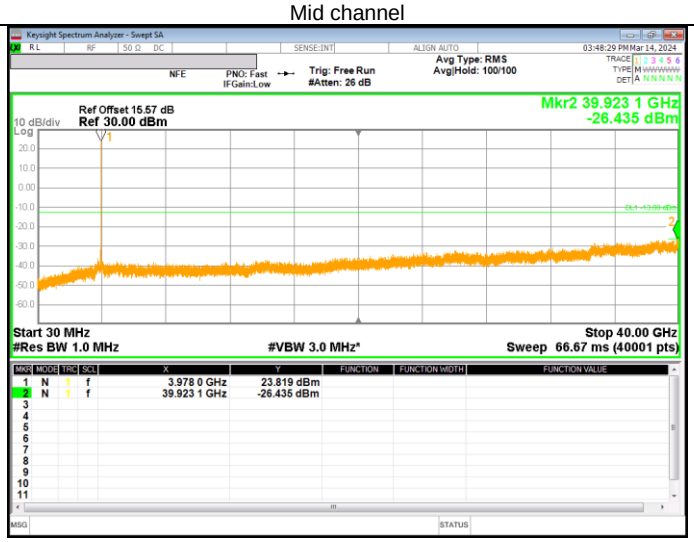
NR Band n66

25 MHz QPSK DFT-s_OFDM
 Low channel
 Mid channel
 High channel

NR Band n77 (3450–3550 MHz)

50 MHz QPSK DFT-s_OFDM

Low channel

Mid channel

High channel

NR Band n77 (3700-3980 MHz)

50 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 RESULTS

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

Test Date	2024-02-28
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	1710.3217	1754.6745		
Extreme (50C)		1710.3217	1754.6745	11.4	0.007
Extreme (40C)		1710.3217	1754.6745	11.4	0.007
Extreme (30C)		1710.3217	1754.6745	11.9	0.007
Extreme (10C)		1710.3217	1754.6745	8.9	0.005
Extreme (0C)		1710.3217	1754.6745	8.5	0.005
Extreme (-10C)		1710.3217	1754.6745	10.7	0.006
Extreme (-20C)		1710.3217	1754.6745	16.2	0.009
Extreme (-30C)		1710.3217	1754.6745	15.6	0.009
20C	15%	1710.3217	1754.6745	7.2	0.004
	-15%	1710.3217	1754.6745	6.6	0.004
	End Point	1710.3217	1754.6745	7.8	0.005

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

Test Date	2024-03-05
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	699.1537	715.8472		
Extreme (50C)		699.1537	715.8472	18.5	0.026
Extreme (40C)		699.1537	715.8472	10.5	0.015
Extreme (30C)		699.1537	715.8472	8.0	0.011
Extreme (10C)		699.1537	715.8472	6.0	0.008
Extreme (0C)		699.1537	715.8472	5.4	0.008
Extreme (-10C)		699.1537	715.8472	15.1	0.021
Extreme (-20C)		699.1537	715.8472	5.4	0.008
Extreme (-30C)		699.1537	715.8472	7.4	0.010
20C	15%	699.1537	715.8472	5.3	0.007
	-15%	699.1537	715.8472	5.0	0.007
	End Point	699.1537	715.8472	5.6	0.008

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

Test Date	2024-03-06
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	777.2532	786.7493		
Extreme (50C)		777.2532	786.7493	4.5	0.006
Extreme (40C)		777.2532	786.7493	7.5	0.010
Extreme (30C)		777.2532	786.7493	11.1	0.014
Extreme (10C)		777.2532	786.7493	7.6	0.010
Extreme (0C)		777.2532	786.7493	10.4	0.013
Extreme (-10C)		777.2532	786.7493	7.9	0.010
Extreme (-20C)		777.2532	786.7493	8.6	0.011
Extreme (-30C)		777.2532	786.7493	6.4	0.008
20C	15%	777.2532	786.7493	5.5	0.007
	-15%	777.2532	786.7493	4.8	0.006
	End Point	777.2532	786.7493	5.3	0.007

LTE Band 41 (Lowest Frequency: 16QAM / Highest Frequency: QPSK)

Test Date	2024-03-11
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	2496.2552	2689.7398		
Extreme (50C)		2496.2552	2689.7398	10.5	0.004
Extreme (40C)		2496.2552	2689.7398	10.0	0.004
Extreme (30C)		2496.2552	2689.7398	8.4	0.003
Extreme (10C)		2496.2552	2689.7398	8.1	0.003
Extreme (0C)		2496.2552	2689.7398	8.5	0.003
Extreme (-10C)		2496.2552	2689.7398	10.7	0.004
Extreme (-20C)		2496.2552	2689.7398	11.6	0.004
Extreme (-30C)		2496.2552	2689.7398	11.4	0.004
20C	15%	2496.2552	2689.7398	7.6	0.003
	-15%	2496.2552	2689.7398	8.4	0.003
	End Point	2496.2552	2689.7398	9.2	0.004

LTE Band 66 (Lowest Frequency: 16QAM / Highest Frequency: 16QAM)

Test Date	2024-03-12
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	1710.1547	1779.8469		
Extreme (50C)		1710.1547	1779.8469	9.6	0.005
Extreme (40C)		1710.1547	1779.8469	8.8	0.005
Extreme (30C)		1710.1547	1779.8469	9.7	0.006
Extreme (10C)		1710.1547	1779.8469	9.4	0.005
Extreme (0C)		1710.1547	1779.8469	8.5	0.005
Extreme (-10C)		1710.1547	1779.8469	10.6	0.006
Extreme (-20C)		1710.1547	1779.8469	10.8	0.006
Extreme (-30C)		1710.1547	1779.8469	10.6	0.006
20C	15%	1710.1547	1779.8469	8.8	0.005
	-15%	1710.1547	1779.8469	10.7	0.006
	End Point	1710.1547	1779.8469	8.0	0.005

NR Band n41 (Lowest Frequency: 16QAM / Highest Frequency: 16QAM)

Test Date	2024-03-15
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	2496.7198	2689.2840		
Extreme (50C)		2496.7198	2689.2840	14.6	0.006
Extreme (40C)		2496.7198	2689.2840	13.7	0.005
Extreme (30C)		2496.7198	2689.2840	15.1	0.006
Extreme (10C)		2496.7198	2689.2840	15.1	0.006
Extreme (0C)		2496.7198	2689.2840	15.3	0.006
Extreme (-10C)		2496.7198	2689.2840	15.7	0.006
Extreme (-20C)		2496.7198	2689.2840	15.7	0.006
Extreme (-30C)		2496.7198	2689.2840	18.3	0.007
20C	15%	2496.7198	2689.2840	10.3	0.004
	-15%	2496.7198	2689.2840	13.8	0.005
	End Point	2496.7198	2689.2840	11.7	0.005

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

Test Date	2024-03-18
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	1710.2575	1779.7428		
Extreme (50C)		1710.2575	1779.7428	6.6	0.004
Extreme (40C)		1710.2575	1779.7428	7.1	0.004
Extreme (30C)		1710.2575	1779.7428	5.5	0.003
Extreme (10C)		1710.2575	1779.7428	6.1	0.004
Extreme (0C)		1710.2575	1779.7428	7.0	0.004
Extreme (-10C)		1710.2575	1779.7428	5.8	0.003
Extreme (-20C)		1710.2575	1779.7428	6.1	0.003
Extreme (-30C)		1710.2575	1779.7428	6.1	0.004
20C	15%	1710.2575	1779.7428	6.3	0.004
	-15%	1710.2575	1779.7428	6.3	0.004
	End Point	1710.2575	1779.7428	4.7	0.003

NR Band n77 3450 – 3550 MHz (Lowest Frequency: QPSK / Highest Frequency: 16QAM)

Test Date	2024-03-19
Test Engineer	47989

Limit		3450	3550	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ End of OBW	F high @ End of OBW		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)	Normal	3450.7056	3549.2825		
Extreme (50C)		3450.7056	3549.2825	24.0	0.007
Extreme (40C)		3450.7056	3549.2825	17.2	0.005
Extreme (30C)		3450.7056	3549.2825	22.5	0.006
Extreme (10C)		3450.7056	3549.2825	19.3	0.006
Extreme (0C)		3450.7056	3549.2825	20.6	0.006
Extreme (-10C)		3450.7056	3549.2825	20.6	0.006
Extreme (-20C)		3450.7056	3549.2825	21.3	0.006
Extreme (-30C)		3450.7056	3549.2825	22.6	0.006
20C	15%	3450.7056	3549.2825	17.9	0.005
	-15%	3450.7056	3549.2825	16.5	0.005
	End Point	3450.7056	3549.2825	15.3	0.004

NR Band n77 3700 – 3980 MHz (Lowest Frequency: QPSK / Highest Frequency: 16QAM)

Test Date	2024-03-19
Test Engineer	47989

Limit		3700	3980	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ End of OBW	F high @ End of OBW		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)	Normal	3700.7083	3979.3003		
Extreme (50C)		3700.7083	3979.3003	13.3	0.003
Extreme (40C)		3700.7083	3979.3003	12.6	0.003
Extreme (30C)		3700.7083	3979.3003	11.4	0.003
Extreme (10C)		3700.7083	3979.3003	13.0	0.003
Extreme (0C)		3700.7083	3979.3003	13.3	0.003
Extreme (-10C)		3700.7083	3979.3003	14.6	0.004
Extreme (-20C)		3700.7083	3979.3003	23.0	0.006
Extreme (-30C)		3700.7083	3979.3003	20.3	0.005
20C	15%	3700.7083	3979.3003	15.1	0.004
	-15%	3700.7083	3979.3003	21.7	0.006
	End Point	3700.7083	3979.3003	13.3	0.003

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.

(j)(3) Mobile and portable stations are limited to 1 Watt EIRP. Mobile and portable stations operating in these bands must employ a means for limiting power to the minimum necessary for successful communications.

(k)(3) Mobile devices are limited to 1Watt (30 dBm) EIRP. Mobile devices operating in these bands must employ a means for limiting power to the minimum necessary for successful communications.

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 ≥ OBW;
b) Set VBW ≥ 3 × RBW;
c) Set span ≥ 2 x RBW;
d) Sweep time = auto couple or 1 second;
e) Detector = rms;
f) Ensure that the number of measurement points ≥ span/RBW;
g) Trace Mode = average(LTE, 5G NR);

NOTE1

LTE Band 41(PC2) A-MPR is implemented in this EUT when operating on HPUE per the A-MPR specification in 3GPP TS 36.101 (Table 6.2.4-4a). Also only Emission mask test item were performd A-MPR condition.

TEST RESULTS

See the following pages.

9.1.1. ERP/EIRP RESULT

WCDMA (ANT B)

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	19.04	H	4.31	9.51	24.24	265.46	30.00	-5.76
		1732.60	18.37	H	4.33	9.60	23.65	231.74	30.00	-6.35
		1752.60	18.36	H	4.36	9.68	23.69	233.88	30.00	-6.31
	HSDPA	1712.40	17.77	H	4.31	9.51	22.97	198.15	30.00	-7.03
		1732.60	17.24	H	4.33	9.60	22.52	178.65	30.00	-7.48
		1752.60	17.24	H	4.36	9.68	22.57	180.72	30.00	-7.43

LTE Band 12 (ANT A+B)

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	20.93	V	2.79	-1.34	16.81	47.97	34.77	-17.96	1/49
		707.50	21.35	V	2.79	-1.34	17.22	52.72	34.77	-17.55	1/49
		711.00	21.54	V	2.80	-1.33	17.41	55.08	34.77	-17.36	1/25
	16-QAM	704.00	20.24	V	2.79	-1.34	16.12	40.93	34.77	-18.65	1/49
		707.50	20.22	V	2.79	-1.34	16.09	40.64	34.77	-18.68	1/49
		711.00	20.25	V	2.80	-1.33	16.12	40.93	34.77	-18.65	1/49
5	QPSK	701.50	21.68	V	2.78	-1.35	17.55	56.89	34.77	-17.22	1/12
		707.50	21.37	V	2.79	-1.34	17.24	52.97	34.77	-17.53	1/12
		713.50	21.82	V	2.81	-1.32	17.69	58.75	34.77	-17.08	1/12
	16-QAM	701.50	20.55	V	2.78	-1.35	16.42	43.85	34.77	-18.35	1/12
		707.50	20.47	V	2.79	-1.34	16.34	43.05	34.77	-18.43	1/12
		713.50	20.68	V	2.81	-1.32	16.55	45.19	34.77	-18.22	1/12
3	QPSK	700.50	21.55	V	2.78	-1.35	17.42	55.21	34.77	-17.35	1/8
		707.50	21.27	V	2.79	-1.34	17.14	51.76	34.77	-17.63	1/8
		714.50	21.83	V	2.81	-1.32	17.70	58.88	34.77	-17.07	1/8
	16-QAM	700.50	20.42	V	2.78	-1.35	16.29	42.56	34.77	-18.48	1/8
		707.50	19.88	V	2.79	-1.34	15.75	37.58	34.77	-19.02	1/8
		714.50	20.86	V	2.81	-1.32	16.73	47.10	34.77	-18.04	1/8
1.4	QPSK	699.70	21.61	V	2.78	-1.35	17.48	55.98	34.77	-17.29	1/5
		707.50	21.14	V	2.79	-1.34	17.01	50.23	34.77	-17.76	1/5
		715.30	21.41	V	2.81	-1.32	17.28	53.46	34.77	-17.49	1/5
	16-QAM	699.70	20.23	V	2.78	-1.35	16.10	40.74	34.77	-18.67	1/3
		707.90	20.02	V	2.79	-1.34	15.89	38.82	34.77	-18.88	1/3
		715.30	20.28	V	2.81	-1.32	16.15	41.21	34.77	-18.62	1/0

LTE Band 12 (ANT A)

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	18.56	V	2.79	-1.34	14.44	27.80	34.77	-20.33	1/25
		707.50	18.88	V	2.79	-1.34	14.75	29.85	34.77	-20.02	1/25
		711.00	19.23	V	2.80	-1.33	15.10	32.36	34.77	-19.67	1/25
	16-QAM	704.00	17.37	V	2.79	-1.34	13.25	21.13	34.77	-21.52	1/49
		707.50	17.78	V	2.79	-1.34	13.65	23.17	34.77	-21.12	1/25
		711.00	17.95	V	2.80	-1.33	13.82	24.10	34.77	-20.95	1/25
5	QPSK	701.50	18.97	V	2.78	-1.35	14.84	30.48	34.77	-19.93	1/12
		707.50	18.93	V	2.79	-1.34	14.80	30.20	34.77	-19.97	1/12
		713.50	19.47	V	2.81	-1.32	15.34	34.20	34.77	-19.43	1/12
	16-QAM	701.50	18.32	V	2.78	-1.35	14.19	26.24	34.77	-20.58	1/12
		707.50	18.15	V	2.79	-1.34	14.02	25.23	34.77	-20.75	1/12
		713.50	18.30	V	2.81	-1.32	14.17	26.12	34.77	-20.60	1/12
3	QPSK	700.50	18.95	V	2.78	-1.35	14.82	30.34	34.77	-19.95	1/8
		707.50	19.05	V	2.79	-1.34	14.92	31.05	34.77	-19.85	1/8
		714.50	19.27	V	2.81	-1.32	15.14	32.66	34.77	-19.63	1/8
	16-QAM	700.50	18.19	V	2.78	-1.35	14.06	25.47	34.77	-20.71	1/8
		707.50	17.73	V	2.79	-1.34	13.60	22.91	34.77	-21.17	1/8
		714.50	18.46	V	2.81	-1.32	14.33	27.10	34.77	-20.44	1/8
1.4	QPSK	699.70	18.89	V	2.78	-1.35	14.76	29.92	34.77	-20.01	1/0
		707.50	18.62	V	2.79	-1.34	14.49	28.12	34.77	-20.28	1/5
		715.30	19.45	V	2.81	-1.32	15.32	34.04	34.77	-19.45	1/3
	16-QAM	699.70	17.83	V	2.78	-1.35	13.70	23.44	34.77	-21.07	1/3
		707.50	17.75	V	2.79	-1.34	13.62	23.01	34.77	-21.15	1/5
		715.30	18.94	V	2.81	-1.32	14.81	30.27	34.77	-19.96	1/3

LTE Band 12 (ANT D)

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	20.55	V	2.79	-1.34	16.43	43.95	34.77	-18.34	1/25
		707.50	20.54	V	2.79	-1.34	16.41	43.75	34.77	-18.36	1/25
		711.00	20.68	V	2.80	-1.33	16.55	45.19	34.77	-18.22	1/25
	16-QAM	704.00	19.61	V	2.79	-1.34	15.49	35.40	34.77	-19.28	1/49
		707.50	19.53	V	2.79	-1.34	15.40	34.67	34.77	-19.37	1/25
		711.00	19.48	V	2.80	-1.33	15.35	34.28	34.77	-19.42	1/25
5	QPSK	701.50	20.24	V	2.78	-1.35	16.11	40.83	34.77	-18.66	1/12
		707.50	20.32	V	2.79	-1.34	16.19	41.59	34.77	-18.58	1/12
		713.50	20.28	V	2.81	-1.32	16.15	41.21	34.77	-18.62	1/12
	16-QAM	701.50	19.22	V	2.78	-1.35	15.09	32.28	34.77	-19.68	1/12
		707.50	19.04	V	2.79	-1.34	14.91	30.97	34.77	-19.86	1/12
		713.50	18.95	V	2.81	-1.32	14.82	30.34	34.77	-19.95	1/12
3	QPSK	700.50	18.81	V	2.78	-1.35	14.68	29.38	34.77	-20.09	1/8
		707.50	19.11	V	2.79	-1.34	14.98	31.48	34.77	-19.79	1/8
		714.50	19.10	V	2.81	-1.32	14.97	31.41	34.77	-19.80	1/8
	16-QAM	700.50	18.73	V	2.78	-1.35	14.60	28.84	34.77	-20.17	1/8
		707.50	18.84	V	2.79	-1.34	14.71	29.58	34.77	-20.06	1/8
		714.50	18.97	V	2.81	-1.32	14.84	30.48	34.77	-19.93	1/8
1.4	QPSK	699.70	18.62	V	2.78	-1.35	14.49	28.12	34.77	-20.28	1/0
		707.50	19.00	V	2.79	-1.34	14.87	30.69	34.77	-19.90	1/5
		715.30	19.04	V	2.81	-1.32	14.91	30.97	34.77	-19.86	1/3
	16-QAM	699.70	18.50	V	2.78	-1.35	14.37	27.35	34.77	-20.40	1/3
		707.50	18.77	V	2.79	-1.34	14.64	29.11	34.77	-20.13	1/5
		715.30	18.90	V	2.81	-1.32	14.77	29.99	34.77	-20.00	1/3

LTE Band 13 (ANT A+B)

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	21.72	H	2.93	-1.19	17.60	57.51	34.77	-17.17	1/25
	16-QAM	782.00	20.57	H	2.93	-1.19	16.45	44.13	34.77	-18.32	1/25
5	QPSK	779.50	21.98	H	2.93	-1.19	17.86	61.09	34.77	-16.91	1/0
		782.00	21.96	H	2.93	-1.19	17.84	60.81	34.77	-16.93	1/12
		784.50	21.76	H	2.94	-1.18	17.64	58.08	34.77	-17.13	1/12
	16-QAM	779.50	20.95	H	2.93	-1.19	16.83	48.19	34.77	-17.94	1/0
		782.00	20.82	H	2.93	-1.19	16.70	46.77	34.77	-18.07	1/12
		784.50	20.66	H	2.94	-1.18	16.54	45.08	34.77	-18.23	1/12

LTE Band 13 (ANT A)

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	19.20	V	2.93	-1.19	15.08	32.21	34.77	-19.69	1/25
	16-QAM	782.00	18.20	V	2.93	-1.19	14.08	25.59	34.77	-20.69	1/25
5	QPSK	779.50	19.58	V	2.93	-1.19	15.46	35.16	34.77	-19.31	1/0
		782.00	18.96	V	2.93	-1.19	14.84	30.48	34.77	-19.93	1/12
		784.50	19.56	V	2.94	-1.18	15.44	34.99	34.77	-19.33	1/12
	16-QAM	779.50	18.41	V	2.93	-1.19	14.29	26.85	34.77	-20.48	1/0
		782.00	17.89	V	2.93	-1.19	13.77	23.82	34.77	-21.00	1/12
		784.50	17.92	V	2.94	-1.18	13.80	23.99	34.77	-20.97	1/12

LTE Band 13 (ANT D)

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	19.72	V	2.93	-1.19	15.60	36.31	34.77	-19.17	1/0
	16-QAM	782.00	18.70	V	2.93	-1.19	14.58	28.71	34.77	-20.19	1/0
5	QPSK	779.50	19.56	V	2.93	-1.19	15.44	34.99	34.77	-19.33	1/12
		782.00	19.50	V	2.93	-1.19	15.38	34.51	34.77	-19.39	1/0
		784.50	19.56	V	2.94	-1.18	15.44	34.99	34.77	-19.33	1/12
	16-QAM	779.50	18.39	V	2.93	-1.19	14.27	26.73	34.77	-20.50	1/12
		782.00	18.50	V	2.93	-1.19	14.38	27.42	34.77	-20.39	1/0
		784.50	18.37	V	2.94	-1.18	14.25	26.61	34.77	-20.52	1/0

LTE Band 41 (PC2) (ANT B)

BW (MHz)	MoHulation	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	21.72	H	5.25	10.07	26.54	450.82	33.00	-6.46	1/0
		2593.00	22.97	H	5.34	9.97	27.60	575.44	33.00	-5.40	1/49
		2680.00	22.95	H	5.43	10.04	27.56	570.16	33.00	-5.44	1/49
	16-QAM	2506.00	21.00	H	5.25	10.07	25.82	381.94	33.00	-7.18	1/0
		2593.00	22.33	H	5.34	9.97	26.96	496.59	33.00	-6.04	1/49
		2680.00	22.15	H	5.43	10.04	26.76	474.24	33.00	-6.24	1/49
15	QPSK	2503.50	21.63	H	5.24	10.07	26.46	442.59	33.00	-6.54	1/0
		2593.00	22.91	H	5.34	9.97	27.54	567.54	33.00	-5.46	1/37
		2682.50	22.98	H	5.43	10.05	27.60	575.44	33.00	-5.40	1/0
	16-QAM	2503.50	21.02	H	5.24	10.07	25.85	384.59	33.00	-7.15	1/0
		2593.00	22.36	H	5.34	9.97	26.99	500.03	33.00	-6.01	1/37
		2682.50	22.43	H	5.43	10.05	27.05	506.99	33.00	-5.95	1/37
10	QPSK	2501.00	21.40	H	5.24	10.07	26.23	419.76	33.00	-6.77	1/0
		2593.00	22.87	H	5.34	9.97	27.50	562.34	33.00	-5.50	1/25
		2685.00	22.72	H	5.43	10.05	27.34	542.00	33.00	-5.66	1/25
	16-QAM	2501.00	20.82	H	5.24	10.07	25.65	367.28	33.00	-7.35	1/25
		2593.00	22.36	H	5.34	9.97	26.99	500.03	33.00	-6.01	1/25
		2685.00	22.30	H	5.43	10.05	26.92	492.04	33.00	-6.08	1/25
5	QPSK	2498.50	21.29	H	5.23	10.07	26.13	410.20	33.00	-6.87	1/12
		2593.00	22.99	H	5.34	9.97	27.62	578.10	33.00	-5.38	1/12
		2687.50	22.69	H	5.44	10.06	27.30	537.03	33.00	-5.70	1/12
	16-QAM	2498.50	20.62	H	5.23	10.07	25.46	351.56	33.00	-7.54	1/0
		2593.00	22.22	H	5.34	9.97	26.85	484.17	33.00	-6.15	1/12
		2687.50	21.97	H	5.44	10.06	26.58	454.99	33.00	-6.42	1/12

LTE Band 41 (PC2) (ANT E)

BW (MHz)	MoHulation	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	18.32	H	5.25	10.07	23.14	206.06	33.00	-9.86	1/49
		2593.00	20.17	H	5.34	9.97	24.80	302.00	33.00	-8.20	1/49
		2680.00	19.35	H	5.43	10.04	23.96	248.89	33.00	-9.04	1/49
	16-QAM	2506.00	17.62	H	5.25	10.07	22.44	175.39	33.00	-10.56	1/0
		2593.00	19.42	H	5.34	9.97	24.05	254.10	33.00	-8.95	1/0
		2680.00	18.57	H	5.43	10.04	23.18	207.97	33.00	-9.82	1/0
15	QPSK	2503.50	17.97	H	5.24	10.07	22.80	190.55	33.00	-10.20	1/37
		2593.00	20.06	H	5.34	9.97	24.69	294.44	33.00	-8.31	1/37
		2682.50	19.80	H	5.43	10.05	24.42	276.69	33.00	-8.58	1/37
	16-QAM	2503.50	17.40	H	5.24	10.07	22.23	167.11	33.00	-10.77	1/0
		2593.00	19.53	H	5.34	9.97	24.16	260.62	33.00	-8.84	1/37
		2682.50	19.13	H	5.43	10.05	23.75	237.14	33.00	-9.25	1/37
10	QPSK	2501.00	18.07	H	5.24	10.07	22.90	194.98	33.00	-10.10	1/25
		2593.00	20.14	H	5.34	9.97	24.77	299.92	33.00	-8.23	1/25
		2685.00	19.51	H	5.43	10.05	24.13	258.82	33.00	-8.87	1/0
	16-QAM	2501.00	17.41	H	5.24	10.07	22.24	167.49	33.00	-10.76	1/25
		2593.00	19.53	H	5.34	9.97	24.16	260.62	33.00	-8.84	1/25
		2685.00	19.03	H	5.43	10.05	23.65	231.74	33.00	-9.35	1/0
5	QPSK	2498.50	18.30	H	5.23	10.07	23.14	206.06	33.00	-9.86	1/12
		2593.00	20.10	H	5.34	9.97	24.73	297.17	33.00	-8.27	1/12
		2687.50	19.65	H	5.44	10.06	24.26	266.69	33.00	-8.74	1/0
	16-QAM	2498.50	17.53	H	5.23	10.07	22.37	172.58	33.00	-10.63	1/12
		2593.00	19.44	H	5.34	9.97	24.07	255.27	33.00	-8.93	1/12
		2687.50	18.83	H	5.44	10.06	23.44	220.80	33.00	-9.56	1/0

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	16.59	H	4.32	9.55	21.82	152.05	30.00	-8.18	1/49
		1745.00	16.63	H	4.35	9.66	21.94	156.31	30.00	-8.06	1/0
		1770.00	17.72	H	4.38	9.68	23.03	200.91	30.00	-6.97	1/0
	16-QAM	1720.00	15.44	H	4.32	9.55	20.67	116.68	30.00	-9.33	1/0
		1745.00	15.97	H	4.35	9.66	21.28	134.28	30.00	-8.72	1/0
		1770.00	16.71	H	4.38	9.68	22.02	159.22	30.00	-7.98	1/49
15	QPSK	1717.50	16.67	H	4.31	9.53	21.89	154.53	30.00	-8.11	1/37
		1745.00	16.62	H	4.35	9.66	21.93	155.96	30.00	-8.07	1/0
		1772.50	17.63	H	4.38	9.68	22.93	196.34	30.00	-7.07	1/0
	16-QAM	1717.50	16.24	H	4.31	9.53	21.46	139.96	30.00	-8.54	1/0
		1745.00	15.83	H	4.35	9.66	21.14	130.02	30.00	-8.86	1/0
		1772.50	16.99	H	4.38	9.68	22.29	169.43	30.00	-7.71	1/0
10	QPSK	1715.00	16.39	H	4.31	9.52	21.60	144.54	30.00	-8.40	1/25
		1745.00	16.42	H	4.35	9.66	21.73	148.94	30.00	-8.27	1/25
		1775.00	17.53	H	4.38	9.68	22.83	191.87	30.00	-7.17	1/25
	16-QAM	1715.00	15.53	H	4.31	9.52	20.74	118.58	30.00	-9.26	1/25
		1745.00	15.61	H	4.35	9.66	20.92	123.59	30.00	-9.08	1/0
		1775.00	17.10	H	4.38	9.68	22.40	173.78	30.00	-7.60	1/49
5	QPSK	1712.50	16.56	H	4.31	9.51	21.77	150.31	30.00	-8.23	1/12
		1745.00	16.74	H	4.35	9.66	22.05	160.32	30.00	-7.95	1/12
		1777.50	17.61	H	4.39	9.68	22.91	195.43	30.00	-7.09	1/12
	16-QAM	1712.50	15.66	H	4.31	9.51	20.87	122.18	30.00	-9.13	1/12
		1745.00	15.80	H	4.35	9.66	21.11	129.12	30.00	-8.89	1/24
		1777.50	17.06	H	4.39	9.68	22.36	172.19	30.00	-7.64	1/0
3	QPSK	1711.50	16.40	H	4.31	9.51	21.60	144.54	30.00	-8.40	1/8
		1745.00	16.58	H	4.35	9.66	21.89	154.53	30.00	-8.11	1/8
		1778.50	17.59	H	4.39	9.68	22.88	194.09	30.00	-7.12	1/8
	16-QAM	1711.50	15.52	H	4.31	9.51	20.72	118.03	30.00	-9.28	1/8
		1745.00	15.83	H	4.35	9.66	21.14	130.02	30.00	-8.86	1/8
		1778.50	17.11	H	4.39	9.68	22.40	173.78	30.00	-7.60	1/8
1.4	QPSK	1710.70	16.32	H	4.31	9.50	21.52	141.91	30.00	-8.48	1/0
		1745.00	16.54	H	4.35	9.66	21.85	153.11	30.00	-8.15	1/3
		1779.30	17.66	H	4.39	9.68	22.95	197.24	30.00	-7.05	1/0
	16-QAM	1710.70	15.59	H	4.31	9.50	20.79	119.95	30.00	-9.21	1/0
		1745.00	15.70	H	4.35	9.66	21.01	126.18	30.00	-8.99	1/0
		1779.30	16.87	H	4.39	9.68	22.16	164.44	30.00	-7.84	1/3

LTE Band 66 (ANT E)

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	16.30	H	4.32	9.55	21.53	142.23	30.00	-8.47	1/0
		1745.00	16.99	H	4.35	9.66	22.30	169.82	30.00	-7.70	1/49
		1770.00	17.31	H	4.38	9.68	22.62	182.81	30.00	-7.38	1/49
	16-QAM	1720.00	15.68	H	4.32	9.55	20.91	123.31	30.00	-9.09	1/49
		1745.00	15.90	H	4.35	9.66	21.21	132.13	30.00	-8.79	1/0
		1770.00	16.59	H	4.38	9.68	21.90	154.88	30.00	-8.10	1/49
15	QPSK	1717.50	16.31	H	4.31	9.53	21.53	142.23	30.00	-8.47	1/0
		1745.00	16.90	H	4.35	9.66	22.21	166.34	30.00	-7.79	1/0
		1772.50	17.49	H	4.38	9.68	22.79	190.11	30.00	-7.21	1/74
	16-QAM	1717.50	15.63	H	4.31	9.53	20.85	121.62	30.00	-9.15	1/0
		1745.00	16.16	H	4.35	9.66	21.47	140.28	30.00	-8.53	1/0
		1772.50	16.60	H	4.38	9.68	21.90	154.88	30.00	-8.10	1/74
10	QPSK	1715.00	16.44	H	4.31	9.52	21.65	146.22	30.00	-8.35	1/25
		1745.00	16.79	H	4.35	9.66	22.10	162.18	30.00	-7.90	1/25
		1775.00	17.40	H	4.38	9.68	22.70	186.21	30.00	-7.30	1/25
	16-QAM	1715.00	15.77	H	4.31	9.52	20.98	125.31	30.00	-9.02	1/25
		1745.00	15.95	H	4.35	9.66	21.26	133.66	30.00	-8.74	1/25
		1775.00	16.69	H	4.38	9.68	21.99	158.12	30.00	-8.01	1/25
5	QPSK	1712.50	16.39	H	4.31	9.51	21.60	144.54	30.00	-8.40	1/12
		1745.00	17.07	H	4.35	9.66	22.38	172.98	30.00	-7.62	1/12
		1777.50	17.32	H	4.39	9.68	22.62	182.81	30.00	-7.38	1/12
	16-QAM	1712.50	15.26	H	4.31	9.51	20.47	111.43	30.00	-9.53	1/12
		1745.00	16.13	H	4.35	9.66	21.44	139.32	30.00	-8.56	1/12
		1777.50	16.64	H	4.39	9.68	21.94	156.31	30.00	-8.06	1/12
3	QPSK	1711.50	16.56	H	4.31	9.51	21.76	149.97	30.00	-8.24	1/8
		1745.00	16.66	H	4.35	9.66	21.97	157.40	30.00	-8.03	1/8
		1778.50	16.72	H	4.39	9.68	22.01	158.85	30.00	-7.99	1/8
	16-QAM	1711.50	15.58	H	4.31	9.51	20.78	119.67	30.00	-9.22	1/8
		1745.00	15.94	H	4.35	9.66	21.25	133.35	30.00	-8.75	1/8
		1778.50	16.18	H	4.39	9.68	21.47	140.28	30.00	-8.53	1/8
1.4	QPSK	1710.70	16.36	H	4.31	9.50	21.56	143.22	30.00	-8.44	1/5
		1745.00	16.44	H	4.35	9.66	21.75	149.62	30.00	-8.25	1/3
		1779.30	16.85	H	4.39	9.68	22.14	163.68	30.00	-7.86	1/5
	16-QAM	1710.70	15.46	H	4.31	9.50	20.66	116.41	30.00	-9.34	1/0
		1745.00	15.85	H	4.35	9.66	21.16	130.62	30.00	-8.84	1/0
		1779.30	16.18	H	4.39	9.68	21.47	140.28	30.00	-8.53	1/0

NR Band n41 (ANT E)

BW (MHz)	Modulation	Frequency (MHz)	SG reading (dBm)	Ant. ol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Delta (dB)	RB
100	QPSK	2546.01	18.79	V	5.29	10.02	23.53	225.42	33.00	-9.47	1/1
		2592.99	19.35	V	5.34	9.97	23.98	250.03	33.00	-9.02	1/1
		2640.00	20.48	V	5.39	9.98	25.07	321.37	33.00	-7.93	1/1
	16-QAM	2546.01	17.62	V	5.29	10.02	22.36	172.19	33.00	-10.64	1/1
		2592.99	17.20	V	5.34	9.97	21.83	152.41	33.00	-11.17	1/1
		2640.00	19.66	V	5.39	9.98	24.25	266.07	33.00	-8.75	1/1
90	QPSK	2541.00	18.68	V	5.28	10.03	23.42	219.79	33.00	-9.58	1/1
		2592.99	19.12	V	5.34	9.97	23.75	237.14	33.00	-9.25	1/1
		2644.98	20.20	V	5.40	9.98	24.79	301.30	33.00	-8.21	1/1
	16-QAM	2541.00	17.86	V	5.28	10.03	22.60	181.97	33.00	-10.40	1/1
		2592.99	18.15	V	5.34	9.97	22.78	189.67	33.00	-10.22	1/1
		2644.98	19.30	V	5.40	9.98	23.89	244.91	33.00	-9.11	1/1
80	QPSK	2536.02	18.88	V	5.28	10.04	23.64	231.21	33.00	-9.36	1/1
		2592.99	19.34	V	5.34	9.97	23.97	249.46	33.00	-9.03	1/215
		2649.99	20.05	V	5.41	9.99	24.63	290.40	33.00	-8.37	1/1
	16-QAM	2536.02	17.70	V	5.28	10.04	22.46	176.20	33.00	-10.54	1/1
		2592.99	18.46	V	5.34	9.97	23.09	203.70	33.00	-9.91	1/215
		2649.99	19.22	V	5.41	9.99	23.80	239.88	33.00	-9.20	1/1
70	QPSK	2531.02	18.08	V	5.28	10.04	22.84	192.31	33.00	-10.16	1/1
		2593.99	18.37	V	5.34	9.97	23.00	199.53	33.00	-10.00	1/95
		2654.98	18.67	V	5.41	9.99	23.25	211.35	33.00	-9.75	1/1
	16-QAM	2531.02	17.29	V	5.28	10.04	22.05	160.32	33.00	-10.95	1/1
		2593.99	17.46	V	5.34	9.97	22.09	161.81	33.00	-10.91	1/95
		2654.98	17.94	V	5.41	9.99	22.52	178.65	33.00	-10.48	1/1
60	QPSK	2526.00	18.77	V	5.27	10.05	23.55	226.46	33.00	-9.45	1/1
		2592.99	19.26	V	5.34	9.97	23.89	244.91	33.00	-9.11	1/160
		2659.98	18.72	V	5.41	10.00	23.31	214.29	33.00	-9.69	1/1
	16-QAM	2526.00	17.74	V	5.27	10.05	22.52	178.65	33.00	-10.48	1/1
		2592.99	18.47	V	5.34	9.97	23.10	204.17	33.00	-9.90	1/160
		2659.98	17.76	V	5.41	10.00	22.35	171.79	33.00	-10.65	1/1
50	QPSK	2521.01	18.98	V	5.26	10.05	23.77	238.23	33.00	-9.23	1/1
		2592.99	19.32	V	5.34	9.97	23.95	248.31	33.00	-9.05	1/131
		2665.00	19.33	V	5.42	10.01	23.92	246.60	33.00	-9.08	1/1
	16-QAM	2521.01	17.73	V	5.26	10.05	22.52	178.65	33.00	-10.48	1/1
		2592.99	17.73	V	5.34	9.97	22.36	172.19	33.00	-10.64	1/131
		2665.00	18.44	V	5.42	10.01	23.03	200.91	33.00	-9.97	1/1
40	QPSK	2516.01	17.70	V	5.26	10.06	22.49	177.42	33.00	-10.51	1/1
		2592.99	19.38	V	5.34	9.97	24.01	251.77	33.00	-8.99	1/104
		2670.00	18.26	V	5.43	10.02	22.86	193.20	33.00	-10.14	1/1
	16-QAM	2516.01	16.69	V	5.26	10.06	21.48	140.60	33.00	-11.52	1/1
		2592.99	18.18	V	5.34	9.97	22.81	190.99	33.00	-10.19	1/104
		2670.00	17.28	V	5.43	10.02	21.88	154.17	33.00	-11.12	1/1
30	QPSK	2511.00	17.98	V	5.25	10.06	22.78	189.67	33.00	-10.22	1/1
		2592.99	19.36	V	5.34	9.97	23.99	250.61	33.00	-9.01	1/76
		2675.00	18.47	V	5.43	10.03	23.08	203.24	33.00	-9.92	1/1
	16-QAM	2511.00	16.70	V	5.25	10.06	21.50	141.25	33.00	-11.50	1/1
		2592.99	18.44	V	5.34	9.97	23.07	202.77	33.00	-9.93	1/76
		2675.00	17.55	V	5.43	10.03	22.16	164.44	33.00	-10.84	1/1
25	QPSK	2508.51	17.54	V	5.25	10.06	22.36	172.19	33.00	-10.64	1/1
		2592.99	19.36	V	5.34	9.97	23.99	250.61	33.00	-9.01	1/32
		2677.50	19.55	V	5.43	10.04	24.15	260.02	33.00	-8.85	1/1
	16-QAM	2508.51	16.82	V	5.25	10.06	21.64	145.88	33.00	-11.36	1/1
		2592.99	18.70	V	5.34	9.97	23.33	215.28	33.00	-9.67	1/32
		2677.50	18.57	V	5.43	10.04	23.17	207.49	33.00	-9.83	1/1
20	QPSK	2506.02	18.59	V	5.25	10.07	23.41	219.28	33.00	-9.59	1/1
		2592.99	19.58	V	5.34	9.97	24.21	263.63	33.00	-8.79	1/1
		2679.99	19.58	V	5.43	10.04	24.18	261.82	33.00	-8.82	1/1
	16-QAM	2506.02	17.78	V	5.25	10.07	22.60	181.97	33.00	-10.40	1/1
		2592.99	18.80	V	5.34	9.97	23.43	220.29	33.00	-9.57	1/1
		2679.99	18.89	V	5.43	10.04	23.49	223.36	33.00	-9.51	1/1
15	QPSK	2503.50	18.34	V	5.24	10.07	23.17	207.49	33.00	-9.83	1/1
		2592.99	19.39	V	5.34	9.97	24.02	252.35	33.00	-8.98	1/36
		2682.48	19.83	V	5.43	10.05	24.44	277.97	33.00	-8.56	1/19
	16-QAM	2503.50	17.68	V	5.24	10.07	22.51	178.24	33.00	-10.49	1/1
		2592.99	18.63	V	5.34	9.97	23.26	211.84	33.00	-9.74	1/36
		2682.48	19.43	V	5.43	10.05	24.04	253.51	33.00	-8.96	1/19
10	QPSK	2501.01	18.53	V	5.24	10.07	23.36	216.77	33.00	-9.64	1/22
		2592.99	19.69	V	5.34	9.97	24.32	270.40	33.00	-8.68	1/22
		2685.00	19.52	V	5.43	10.05	24.14	259.42	33.00	-8.86	1/1
	16-QAM	2501.01	17.30	V	5.24	10.07	22.13	163.31	33.00	-10.87	1/22
		2592.99	18.94	V	5.34	9.97	23.57	227.51	33.00	-9.43	1/22
		2685.00	18.59	V	5.43	10.05	23.21	209.41	33.00	-9.79	1/1

NR Band n41 (ANT B) (SRS1)

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)
40	2516.01	18.70	H	5.26	9.97	23.41	219.28	33.00	-9.59
	2592.99	16.81	H	5.34	9.91	21.38	137.40	33.00	-11.62
	2670.00	19.78	H	5.43	9.87	24.23	264.85	33.00	-8.77

NR Band n41 (ANT G) (SRS2)

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)
50	2521.01	7.73	V	5.26	9.96	12.43	17.50	33.00	-20.57
	2592.99	6.40	V	5.34	9.91	10.98	12.53	33.00	-22.02
	2665.00	5.99	H	5.42	9.87	10.43	11.04	33.00	-22.57

NR Band n41 (ANT C) (SRS3)

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	7.84	H	5.24	10.00	12.60	18.20	33.00	-20.40
	2592.99	7.48	H	5.34	9.91	12.05	16.03	33.00	-20.95
	2685.00	9.01	H	5.43	9.87	13.45	22.13	33.00	-19.55

UL KOREA LTD. Suwon Laboratory FORM ID: FCC_27(05)
218 Maeyeong-ro, Yeongtong-gu, Suwon-si, Gyeonggi-do, 16675, Korea TEL: (031) 337-9902 FAX: (031) 213-5433

NR Band n41 Switching (SA) (ANT B)

BW (MHz)	Modulation	Frequency (MHz)	SG reading (dBm)	Ant. ol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (mW)	Limit (dBm)	Delta (dB)	RB
100	QPSK	2546.01	22.08	H	5.29	9.91	26.70	467.74	33.00	-6.30	1/271
		2592.99	22.26	H	5.34	9.91	26.84	483.06	33.00	-6.16	1/1
		2640.00	21.81	H	5.39	9.88	26.30	426.58	33.00	-6.70	1/1
	16-QAM	2546.01	21.29	H	5.29	9.91	25.91	389.94	33.00	-7.09	1/271
		2592.99	21.73	H	5.34	9.91	26.31	427.56	33.00	-6.69	1/1
		2640.00	21.21	H	5.39	9.88	25.70	371.54	33.00	-7.30	1/1
90	QPSK	2541.00	21.51	H	5.28	9.92	26.15	412.10	33.00	-6.85	1/1
		2592.99	21.90	H	5.34	9.91	26.48	444.63	33.00	-6.52	1/1
		2644.98	21.82	H	5.40	9.87	26.30	426.58	33.00	-6.70	1/1
	16-QAM	2541.00	20.95	H	5.28	9.92	25.59	362.24	33.00	-7.41	1/1
		2592.99	21.04	H	5.34	9.91	25.62	364.75	33.00	-7.38	1/1
		2644.98	20.95	H	5.40	9.87	25.43	349.14	33.00	-7.57	1/1
80	QPSK	2536.02	21.78	H	5.28	9.93	26.43	439.54	33.00	-6.57	1/1
		2592.99	21.93	H	5.34	9.91	26.51	447.71	33.00	-6.49	1/1
		2649.99	21.45	H	5.41	9.87	25.91	389.94	33.00	-7.09	1/1
	16-QAM	2536.02	21.28	H	5.28	9.93	25.93	391.74	33.00	-7.07	1/1
		2592.99	21.17	H	5.34	9.91	25.75	375.84	33.00	-7.25	1/1
		2649.99	20.93	H	5.41	9.87	25.39	345.94	33.00	-7.61	1/1
70	QPSK	2531.02	21.61	H	5.28	9.94	26.28	424.62	33.00	-6.72	1/95
		2593.99	21.09	H	5.34	9.91	25.67	368.98	33.00	-7.33	1/187
		2654.98	21.92	H	5.41	9.87	26.37	433.51	33.00	-6.63	1/1
	16-QAM	2531.02	21.09	H	5.28	9.94	25.76	376.70	33.00	-7.24	1/95
		2593.99	20.46	H	5.34	9.91	25.04	319.15	33.00	-7.96	1/187
		2654.98	21.13	H	5.41	9.87	25.58	361.41	33.00	-7.42	1/1
60	QPSK	2526.00	21.49	H	5.27	9.95	26.18	414.95	33.00	-6.82	1/160
		2592.99	21.67	H	5.34	9.91	26.25	421.70	33.00	-6.75	1/1
		2659.98	21.73	H	5.41	9.87	26.18	414.95	33.00	-6.82	1/1
	16-QAM	2526.00	20.78	H	5.27	9.95	25.47	352.37	33.00	-7.53	1/160
		2592.99	20.99	H	5.34	9.91	25.57	360.58	33.00	-7.43	1/1
		2659.98	20.91	H	5.41	9.87	25.36	343.56	33.00	-7.64	1/1
50	QPSK	2521.01	21.78	H	5.26	9.96	26.48	444.63	33.00	-6.52	1/131
		2592.99	21.64	H	5.34	9.91	26.22	418.79	33.00	-6.78	1/131
		2665.00	21.49	H	5.42	9.87	25.94	392.64	33.00	-7.06	1/1
	16-QAM	2521.01	20.10	H	5.26	9.96	24.80	302.00	33.00	-8.20	1/131
		2592.99	20.99	H	5.34	9.91	25.57	360.58	33.00	-7.43	1/131
		2665.00	20.73	H	5.42	9.87	25.18	329.61	33.00	-7.82	1/1
40	QPSK	2516.01	20.84	H	5.26	9.97	25.54	358.10	33.00	-7.46	1/104
		2592.99	21.99	H	5.34	9.91	26.57	453.94	33.00	-6.43	1/53
		2670.00	21.56	H	5.43	9.87	26.01	399.02	33.00	-6.99	1/1
	16-QAM	2516.01	20.27	H	5.26	9.97	24.97	314.05	33.00	-8.03	1/104
		2592.99	21.25	H	5.34	9.91	25.83	382.82	33.00	-7.17	1/53
		2670.00	20.68	H	5.43	9.87	25.13	325.84	33.00	-7.87	1/1
30	QPSK	2511.00	20.74	H	5.25	9.98	25.46	351.56	33.00	-7.54	1/76
		2592.99	21.94	H	5.34	9.91	26.52	448.75	33.00	-6.48	1/76
		2675.00	21.57	H	5.43	9.87	26.02	399.94	33.00	-6.98	1/1
	16-QAM	2511.00	20.06	H	5.25	9.98	24.78	300.61	33.00	-8.22	1/76
		2592.99	21.47	H	5.34	9.91	26.05	402.72	33.00	-6.95	1/76
		2675.00	20.91	H	5.43	9.87	25.36	343.56	33.00	-7.64	1/1
25	QPSK	2508.51	21.04	H	5.25	9.98	25.78	378.44	33.00	-7.22	1/63
		2592.99	22.04	H	5.34	9.91	26.62	459.20	33.00	-6.38	1/1
		2677.50	21.74	H	5.43	9.87	26.18	414.95	33.00	-6.82	1/1
	16-QAM	2508.51	20.50	H	5.25	9.98	25.24	334.20	33.00	-7.76	1/63
		2592.99	21.44	H	5.34	9.91	26.02	399.94	33.00	-6.98	1/1
		2677.50	21.13	H	5.43	9.87	25.57	360.58	33.00	-7.43	1/1
20	QPSK	2506.02	21.25	H	5.25	9.99	25.99	397.19	33.00	-7.01	1/1
		2592.99	22.16	H	5.34	9.91	26.74	472.06	33.00	-6.26	1/1
		2679.99	21.49	H	5.43	9.87	25.93	391.74	33.00	-7.07	1/1
	16-QAM	2506.02	20.31	H	5.25	9.99	25.05	319.89	33.00	-7.95	1/1
		2592.99	21.39	H	5.34	9.91	25.97	395.37	33.00	-7.03	1/1
		2679.99	20.62	H	5.43	9.87	25.06	320.63	33.00	-7.94	1/1
15	QPSK	2503.50	20.94	H	5.24	10.07	25.77	377.57	33.00	-7.23	1/36
		2592.99	21.64	H	5.34	9.97	26.27	423.64	33.00	-6.73	1/36
		2682.48	21.58	H	5.43	10.05	26.20	416.87	33.00	-6.80	1/36
	16-QAM	2503.50	20.43	H	5.24	10.07	25.26	335.74	33.00	-7.74	1/36
		2592.99	20.84	H	5.34	9.97	25.47	352.37	33.00	-7.53	1/36
		2682.48	20.78	H	5.43	10.05	25.40	346.74	33.00	-7.60	1/36
10	QPSK	2501.01	21.29	H	5.24	10.07	26.12	409.26	33.00	-6.88	1/1
		2592.99	21.71	H	5.34	9.97	26.34	430.53	33.00	-6.66	1/12
		2685.00	21.84	H	5.43	10.05	26.46	442.59	33.00	-6.54	1/22
	16-QAM	2501.01	20.69	H	5.24	10.07	25.52	356.45	33.00	-7.48	1/1
		2592.99	20.90	H	5.34	9.97	25.53	357.27	33.00	-7.47	1/12
		2685.00	21.21	H	5.43	10.05	25.83	382.82	33.00	-7.17	1/22

NR Band n41 (ANT E) (SRS1)

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)
50	2521.01	17.92	H	5.26	9.96	22.62	182.81	33.00	-10.38
	2592.99	17.79	H	5.34	9.91	22.37	172.58	33.00	-10.63
	2665.00	16.59	H	5.42	9.87	21.04	127.06	33.00	-11.96

NR Band n41 (ANT C) (SRS2)

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)
50	2521.01	11.44	H	5.26	9.96	16.14	41.11	33.00	-16.86
	2592.99	7.64	H	5.34	9.91	12.22	16.67	33.00	-20.78
	2665.00	7.18	H	5.42	9.87	11.63	14.55	33.00	-21.37

NR Band n41 (ANT G) (SRS3)

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)
50	2521.01	2.80	V	5.26	9.96	7.50	5.62	33.00	-25.50
	2592.99	6.07	V	5.34	9.91	10.65	11.61	33.00	-22.35
	2665.00	6.27	V	5.42	9.87	10.72	11.80	33.00	-22.28

NR Band n66 (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
40	QPSK	1730.00	18.49	H	4.33	9.59	23.76	237.68	30.00	-6.24	1/1
		1745.00	18.76	H	4.35	9.66	24.07	255.27	30.00	-5.93	1/1
		1760.00	18.44	H	4.37	9.68	23.75	237.14	30.00	-6.25	1/1
	16-QAM	1730.00	17.45	H	4.33	9.59	22.72	187.07	30.00	-7.28	1/1
		1745.00	17.74	H	4.35	9.66	23.05	201.84	30.00	-6.95	1/1
		1760.00	17.61	H	4.37	9.68	22.92	195.88	30.00	-7.08	1/1
35	QPSK	1727.50	18.51	H	4.33	9.58	23.76	237.68	30.00	-6.24	1/1
		1745.00	18.57	H	4.35	9.66	23.88	244.34	30.00	-6.12	1/93
		1762.50	19.09	H	4.37	9.68	24.40	275.42	30.00	-5.60	1/93
	16-QAM	1727.50	17.52	H	4.33	9.58	22.77	189.23	30.00	-7.23	1/1
		1745.00	17.72	H	4.35	9.66	23.03	200.91	30.00	-6.97	1/1
		1762.50	18.09	H	4.37	9.68	23.40	218.78	30.00	-6.60	1/93
30	QPSK	1725.00	18.56	H	4.32	9.57	23.81	240.44	30.00	-6.19	1/1
		1745.00	18.92	H	4.35	9.66	24.23	264.85	30.00	-5.77	1/1
		1765.00	19.10	H	4.37	9.68	24.41	276.06	30.00	-5.59	1/1
	16-QAM	1725.00	17.58	H	4.32	9.57	22.83	191.87	30.00	-7.17	1/1
		1745.00	17.89	H	4.35	9.66	23.20	208.93	30.00	-6.80	1/1
		1765.00	18.12	H	4.37	9.68	23.43	220.29	30.00	-6.57	1/1
25	QPSK	1722.50	18.30	H	4.32	9.56	23.54	225.94	30.00	-6.46	1/1
		1745.00	18.77	H	4.35	9.66	24.08	255.86	30.00	-5.92	1/1
		1767.50	19.18	H	4.38	9.68	24.49	281.19	30.00	-5.51	1/1
	16-QAM	1722.50	17.33	H	4.32	9.56	22.57	180.72	30.00	-7.43	1/1
		1745.00	17.81	H	4.35	9.66	23.12	205.12	30.00	-6.88	1/1
		1767.50	18.16	H	4.38	9.68	23.47	222.33	30.00	-6.53	1/1
20	QPSK	1720.00	18.33	H	4.32	9.55	23.56	226.99	30.00	-6.44	1/1
		1745.00	18.76	H	4.35	9.66	24.07	255.27	30.00	-5.93	1/1
		1770.00	18.94	H	4.38	9.68	24.25	266.07	30.00	-5.75	1/1
	16-QAM	1720.00	17.41	H	4.32	9.55	22.64	183.65	30.00	-7.36	1/1
		1745.00	17.68	H	4.35	9.66	22.99	199.07	30.00	-7.01	1/1
		1770.00	17.94	H	4.38	9.68	23.25	211.35	30.00	-6.75	1/1
15	QPSK	1717.50	18.40	H	4.31	9.53	23.62	230.14	30.00	-6.38	1/1
		1745.00	18.67	H	4.35	9.66	23.98	250.03	30.00	-6.02	1/1
		1772.50	19.23	H	4.38	9.68	24.53	283.79	30.00	-5.47	1/1
	16-QAM	1717.50	17.41	H	4.31	9.53	22.63	183.23	30.00	-7.37	1/1
		1745.00	17.62	H	4.35	9.66	22.93	196.34	30.00	-7.07	1/1
		1772.50	18.26	H	4.38	9.68	23.56	226.99	30.00	-6.44	1/1
10	QPSK	1715.00	18.31	H	4.31	9.52	23.52	224.91	30.00	-6.48	1/1
		1745.00	18.38	H	4.35	9.66	23.69	233.88	30.00	-6.31	1/1
		1775.00	19.27	H	4.38	9.68	24.57	286.42	30.00	-5.43	1/1
	16-QAM	1715.00	17.25	H	4.31	9.52	22.46	176.20	30.00	-7.54	1/1
		1745.00	17.52	H	4.35	9.66	22.83	191.87	30.00	-7.17	1/1
		1775.00	18.22	H	4.38	9.68	23.52	224.91	30.00	-6.48	1/1
5	QPSK	1712.50	18.23	H	4.31	9.51	23.44	220.80	30.00	-6.56	1/13
		1745.00	18.58	H	4.35	9.66	23.89	244.91	30.00	-6.11	1/13
		1777.50	18.67	H	4.39	9.68	23.97	249.46	30.00	-6.03	1/13
	16-QAM	1712.50	17.35	H	4.31	9.51	22.56	180.30	30.00	-7.44	1/1
		1745.00	17.54	H	4.35	9.66	22.85	192.75	30.00	-7.15	1/13
		1777.50	17.68	H	4.39	9.68	22.98	198.61	30.00	-7.02	1/23

NR Band n66 (ANT E)

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	16.35	H	4.33	9.59	21.62	145.21	30.00	-8.38	1/1
		1745.00	16.52	H	4.35	9.66	21.83	152.41	30.00	-8.17	1/1
		1760.00	16.92	H	4.37	9.68	22.23	167.11	30.00	-7.77	1/1
	16-QAM	1730.00	15.77	H	4.33	9.59	21.04	127.06	30.00	-8.96	1/108
		1745.00	16.10	H	4.35	9.66	21.41	138.36	30.00	-8.59	1/1
		1760.00	16.01	H	4.37	9.68	21.32	135.52	30.00	-8.68	1/1
35	QPSK	1727.50	16.59	H	4.33	9.58	21.84	152.76	30.00	-8.16	1/93
		1745.00	16.33	H	4.35	9.66	21.64	145.88	30.00	-8.36	1/1
		1762.50	16.73	H	4.37	9.68	22.04	159.96	30.00	-7.96	1/93
	16-QAM	1727.50	15.78	H	4.33	9.58	21.03	126.77	30.00	-8.97	1/93
		1745.00	15.60	H	4.35	9.66	20.91	123.31	30.00	-9.09	1/1
		1762.50	16.01	H	4.37	9.68	21.32	135.52	30.00	-8.68	1/93
30	QPSK	1725.00	16.56	H	4.32	9.57	21.81	151.71	30.00	-8.19	1/80
		1745.00	16.59	H	4.35	9.66	21.90	154.88	30.00	-8.10	1/1
		1765.00	16.71	H	4.37	9.68	22.02	159.22	30.00	-7.98	1/158
	16-QAM	1725.00	15.65	H	4.32	9.57	20.90	123.03	30.00	-9.10	1/80
		1745.00	15.56	H	4.35	9.66	20.87	122.18	30.00	-9.13	1/1
		1765.00	15.78	H	4.37	9.68	21.09	128.53	30.00	-8.91	1/80
25	QPSK	1722.50	15.92	H	4.32	9.56	21.16	130.62	30.00	-8.84	1/1
		1745.00	16.36	H	4.35	9.66	21.67	146.89	30.00	-8.33	1/1
		1767.50	16.74	H	4.38	9.68	22.05	160.32	30.00	-7.95	1/67
	16-QAM	1722.50	15.31	H	4.32	9.56	20.55	113.50	30.00	-9.45	1/67
		1745.00	15.56	H	4.35	9.66	20.87	122.18	30.00	-9.13	1/1
		1767.50	15.73	H	4.38	9.68	21.04	127.06	30.00	-8.96	1/1
20	QPSK	1720.00	16.16	H	4.32	9.55	21.39	137.72	30.00	-8.61	1/1
		1745.00	16.21	H	4.35	9.66	21.52	141.91	30.00	-8.48	1/1
		1770.00	16.83	H	4.38	9.68	22.14	163.68	30.00	-7.86	1/104
	16-QAM	1720.00	15.16	H	4.32	9.55	20.39	109.40	30.00	-9.61	1/1
		1745.00	15.93	H	4.35	9.66	21.24	133.05	30.00	-8.76	1/53
		1770.00	15.92	H	4.38	9.68	21.23	132.74	30.00	-8.77	1/53
15	QPSK	1717.50	16.03	H	4.31	9.53	21.25	133.35	30.00	-8.75	1/1
		1745.00	16.35	H	4.35	9.66	21.66	146.55	30.00	-8.34	1/1
		1772.50	16.80	H	4.38	9.68	22.10	162.18	30.00	-7.90	1/77
	16-QAM	1717.50	15.25	H	4.31	9.53	20.47	111.43	30.00	-9.53	1/1
		1745.00	15.84	H	4.35	9.66	21.15	130.32	30.00	-8.85	1/1
		1772.50	16.46	H	4.38	9.68	21.76	149.97	30.00	-8.24	1/1
10	QPSK	1715.00	15.83	H	4.31	9.52	21.04	127.06	30.00	-8.96	1/1
		1745.00	16.38	H	4.35	9.66	21.69	147.57	30.00	-8.31	1/50
		1775.00	16.76	H	4.38	9.68	22.06	160.69	30.00	-7.94	1/26
	16-QAM	1715.00	15.00	H	4.31	9.52	20.21	104.95	30.00	-9.79	1/1
		1745.00	15.28	H	4.35	9.66	20.59	114.55	30.00	-9.41	1/1
		1775.00	15.89	H	4.38	9.68	21.19	131.52	30.00	-8.81	1/26
5	QPSK	1712.50	15.21	H	4.31	9.51	20.42	110.15	30.00	-9.58	1/13
		1745.00	16.05	H	4.35	9.66	21.36	136.77	30.00	-8.64	1/13
		1777.50	15.94	H	4.39	9.68	21.24	133.05	30.00	-8.76	1/13
	16-QAM	1712.50	14.52	H	4.31	9.51	19.73	93.97	30.00	-10.27	1/13
		1745.00	15.06	H	4.35	9.66	20.37	108.89	30.00	-9.63	1/13
		1777.50	14.96	H	4.39	9.68	20.26	106.17	30.00	-9.74	1/13

NR Band n77(3450-3550 MHz) (ANT E)

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	3499.98	19.70	H	6.21	10.67	24.16	260.62	30.00	-5.84	1/137
	16-QAM	3499.98	18.86	H	6.21	10.67	23.32	214.78	30.00	-6.68	1/137
90	QSK	3495.00	19.77	H	6.21	10.66	24.22	264.24	30.00	-5.78	1/243
		3499.98	19.67	H	6.21	10.67	24.13	258.82	30.00	-5.87	1/243
		3504.99	19.76	H	6.21	10.68	24.22	264.24	30.00	-5.78	1/243
	16-QAM	3495.00	19.24	H	6.21	10.66	23.69	233.88	30.00	-6.31	1/243
		3499.98	18.70	H	6.21	10.67	23.16	207.01	30.00	-6.84	1/243
		3504.99	18.68	H	6.21	10.68	23.14	206.06	30.00	-6.86	1/243
80	QPSK	3490.02	19.76	H	6.20	10.66	24.22	264.24	30.00	-5.78	1/215
		3499.98	19.78	H	6.21	10.67	24.24	265.46	30.00	-5.76	1/215
		3510.00	19.63	H	6.22	10.69	24.10	257.04	30.00	-5.90	1/215
	16-QAM	3490.02	19.05	H	6.20	10.66	23.51	224.39	30.00	-6.49	1/215
		3499.98	18.45	H	6.21	10.67	22.91	195.43	30.00	-7.09	1/215
		3510.00	18.78	H	6.22	10.69	23.25	211.35	30.00	-6.75	1/215
70	QPSK	3485.01	19.90	H	6.20	10.65	24.35	272.27	30.00	-5.65	1/187
		3499.98	19.77	H	6.21	10.67	24.23	264.85	30.00	-5.77	1/187
		3514.98	19.93	H	6.22	10.69	24.40	275.42	30.00	-5.60	1/95
	16-QAM	3485.01	19.41	H	6.20	10.65	23.86	243.22	30.00	-6.14	1/187
		3499.98	18.90	H	6.21	10.67	23.36	216.77	30.00	-6.64	1/187
		3514.98	19.30	H	6.22	10.69	23.77	238.23	30.00	-6.23	1/95
60	QPSK	3480.00	20.02	H	6.18	10.64	24.48	280.54	30.00	-5.52	1/160
		3499.98	20.25	H	6.21	10.67	24.71	295.80	30.00	-5.29	1/160
		3519.99	19.92	H	6.23	10.71	24.40	275.42	30.00	-5.60	1/1
	16-QAM	3480.00	18.90	H	6.19	10.65	23.36	216.77	30.00	-6.64	1/160
		3499.98	18.72	H	6.21	10.67	23.18	207.97	30.00	-6.82	1/160
		3514.98	18.66	H	6.22	10.70	23.14	206.06	30.00	-6.86	1/1
50	QPSK	3475.02	20.02	H	6.18	10.64	24.48	280.54	30.00	-5.52	1/131
		3499.98	20.25	H	6.21	10.67	24.71	295.80	30.00	-5.29	1/131
		3525.00	19.92	H	6.23	10.71	24.40	275.42	30.00	-5.60	1/1
	16-QAM	3475.02	19.02	H	6.18	10.64	23.48	222.84	30.00	-6.52	1/131
		3499.98	19.78	H	6.21	10.67	24.24	265.46	30.00	-5.76	1/131
		3525.00	19.10	H	6.23	10.71	23.58	228.03	30.00	-6.42	1/1
40	QPSK	3470.01	19.60	H	6.18	10.63	24.05	254.10	30.00	-5.95	1/104
		3499.98	19.99	H	6.21	10.67	24.45	278.61	30.00	-5.55	1/104
		3529.98	19.87	H	6.23	10.72	24.36	272.90	30.00	-5.64	1/1
	16-QAM	3470.01	18.65	H	6.18	10.63	23.10	204.17	30.00	-6.90	1/104
		3499.98	19.49	H	6.21	10.67	23.95	248.31	30.00	-6.05	1/104
		3529.98	18.87	H	6.23	10.72	23.36	216.77	30.00	-6.64	1/1
30	QPSK	3465.00	19.69	H	6.17	10.63	24.14	259.42	30.00	-5.86	1/76
		3499.98	20.09	H	6.21	10.67	24.55	285.10	30.00	-5.45	1/76
		3535.02	20.16	H	6.24	10.73	24.65	291.74	30.00	-5.35	1/1
	16-QAM	3465.00	18.70	H	6.17	10.63	23.15	206.54	30.00	-6.85	1/76
		3499.98	19.01	H	6.21	10.67	23.47	222.33	30.00	-6.53	1/76
		3535.02	19.11	H	6.24	10.73	23.60	229.09	30.00	-6.40	1/1
25	QPSK	3462.51	19.63	H	6.17	10.62	24.09	256.45	30.00	-5.91	1/63
		3499.98	20.17	H	6.21	10.67	24.63	290.40	30.00	-5.37	1/1
		3537.48	19.79	H	6.24	10.74	24.29	268.53	30.00	-5.71	1/1
	16-QAM	3462.51	18.48	H	6.17	10.62	22.94	196.79	30.00	-7.06	1/63
		3499.98	19.17	H	6.21	10.67	23.63	230.67	30.00	-6.37	1/1
		3537.48	19.02	H	6.24	10.74	23.52	224.91	30.00	-6.48	1/1
20	QPSK	3460.02	19.37	H	6.17	10.62	23.82	240.99	30.00	-6.18	1/26
		3499.98	20.00	H	6.21	10.67	24.46	279.25	30.00	-5.54	1/1
		3540.00	19.84	H	6.24	10.74	24.34	271.64	30.00	-5.66	1/1
	16-QAM	3460.02	18.45	H	6.17	10.62	22.90	194.98	30.00	-7.10	1/26
		3499.98	18.89	H	6.21	10.67	23.35	216.27	30.00	-6.65	1/1
		3540.00	18.78	H	6.24	10.74	23.28	212.81	30.00	-6.72	1/1
15	QPSK	3457.50	19.41	H	6.17	10.62	23.86	243.22	30.00	-6.14	1/36
		3499.98	20.54	H	6.21	10.67	25.00	316.23	30.00	-5.00	1/1
		3542.49	20.47	H	6.24	10.74	24.97	314.05	30.00	-5.03	1/1
	16-QAM	3457.50	18.23	H	6.17	10.62	22.68	185.35	30.00	-7.32	1/36
		3499.98	19.55	H	6.21	10.67	24.01	251.77	30.00	-5.99	1/1
		3542.49	19.71	H	6.24	10.74	24.21	263.63	30.00	-5.79	1/1
10	QPSK	3455.01	20.43	H	6.16	10.61	24.88	307.61	30.00	-5.12	1/22
		3499.98	20.39	H	6.21	10.67	24.85	305.49	30.00	-5.15	1/1
		3544.98	20.46	H	6.24	10.75	24.97	314.05	30.00	-5.03	1/1
	16-QAM	3455.01	19.46	H	6.16	10.61	23.91	246.04	30.00	-6.09	1/22
		3499.98	19.27	H	6.21	10.67	23.73	236.05	30.00	-6.27	1/1
		3544.98	19.49	H	6.24	10.75	24.00	251.19	30.00	-6.00	1/1

NR Band n77(3450-3550 MHz) (ANT C) (SRS1)

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)
50	3475.02	9.49	H	6.18	10.64	13.95	24.83	30.00	-16.05
	3499.98	9.64	H	6.21	10.67	14.11	25.76	30.00	-15.89
	3525.00	9.15	H	6.23	10.71	13.64	23.12	30.00	-16.36

NR Band n77(3450-3550 MHz) (ANT F) (SRS2)

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)
50	3475.02	16.40	H	6.18	10.64	20.86	121.90	30.00	-9.14
	3499.98	16.61	H	6.21	10.67	21.07	127.94	30.00	-8.93
	3525.00	16.02	H	6.23	10.71	20.50	112.20	30.00	-9.50

NR Band n77(3450-3550 MHz) (ANT A) (SRS3)

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)
50	3475.02	10.24	H	6.18	10.64	14.70	29.51	30.00	-15.30
	3499.98	10.11	H	6.21	10.67	14.57	28.64	30.00	-15.43
	3525.00	9.82	H	6.23	10.71	14.30	26.92	30.00	-15.70

NR Band n77(3700-3980 MHz) (ANT E)

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	3750.00	21.45	H	6.43	10.69	25.71	372.39	30.00	-4.29	1/271
		3840.00	21.69	H	6.50	10.58	25.76	376.70	30.00	-4.24	1/1
		3930.00	21.70	H	6.58	10.48	25.60	363.08	30.00	-4.40	1/1
	16-QAM	3750.00	21.04	H	6.43	10.69	25.30	338.84	30.00	-4.70	1/271
		3840.00	20.86	H	6.50	10.58	24.93	311.17	30.00	-5.07	1/1
		3930.00	21.17	H	6.58	10.48	25.07	321.37	30.00	-4.93	1/1
90	QPSK	3745.02	21.23	H	6.43	10.70	25.51	355.63	30.00	-4.49	1/243
		3840.00	21.20	H	6.50	10.58	25.27	336.51	30.00	-4.73	1/243
		3934.98	21.35	H	6.59	10.48	25.24	334.20	30.00	-4.76	1/1
	16-QAM	3745.02	20.14	H	6.43	10.70	24.42	276.69	30.00	-5.58	1/243
		3840.00	20.20	H	6.50	10.58	24.27	267.30	30.00	-5.73	1/243
		3934.98	20.56	H	6.59	10.48	24.45	278.61	30.00	-5.55	1/1
80	QPSK	3740.01	20.64	H	6.42	10.70	24.93	311.17	30.00	-5.07	1/215
		3840.00	21.71	H	6.50	10.58	25.78	378.44	30.00	-4.22	1/215
		3939.99	21.21	H	6.59	10.47	25.09	322.85	30.00	-4.91	1/1
	16-QAM	3740.01	20.05	H	6.42	10.70	24.34	271.64	30.00	-5.66	1/215
		3840.00	21.08	H	6.50	10.58	25.15	327.34	30.00	-4.85	1/215
		3939.99	20.21	H	6.59	10.47	24.09	256.45	30.00	-5.91	1/1
70	QPSK	3735.00	20.86	H	6.41	10.71	25.15	327.34	30.00	-4.85	1/187
		3840.00	21.45	H	6.50	10.58	25.52	356.45	30.00	-4.48	1/187
		3945.00	20.92	H	6.60	10.47	24.80	302.00	30.00	-5.20	1/187
	16-QAM	3735.00	20.01	H	6.41	10.71	24.30	269.15	30.00	-5.70	1/187
		3840.00	20.75	H	6.50	10.58	24.82	303.39	30.00	-5.18	1/187
		3945.00	19.74	H	6.60	10.47	23.62	230.14	30.00	-6.38	1/187
60	QPSK	3730.02	20.67	H	6.41	10.72	24.97	314.05	30.00	-5.03	1/160
		3840.00	21.74	H	6.50	10.58	25.81	381.07	30.00	-4.19	1/160
		3949.98	20.81	H	6.60	10.47	24.68	293.76	30.00	-5.32	1/160
	16-QAM	3730.02	20.01	H	6.41	10.72	24.31	269.77	30.00	-5.69	1/160
		3840.00	21.13	H	6.50	10.58	25.20	331.13	30.00	-4.80	1/160
		3949.98	19.70	H	6.60	10.47	23.57	227.51	30.00	-6.43	1/160
50	QPSK	3725.01	20.79	H	6.41	10.72	25.11	324.34	30.00	-4.89	1/131
		3840.00	21.54	H	6.50	10.58	25.61	363.92	30.00	-4.39	1/1
		3954.99	20.90	H	6.60	10.47	24.76	299.23	30.00	-5.24	1/131
	16-QAM	3725.01	19.85	H	6.41	10.72	24.17	261.22	30.00	-5.83	1/131
		3840.00	20.41	H	6.50	10.58	24.48	280.54	30.00	-5.52	1/1
		3954.99	19.99	H	6.60	10.47	23.85	242.66	30.00	-6.15	1/131
40	QPSK	3720.02	20.96	H	6.40	10.73	25.29	338.06	30.00	-4.71	1/104
		3840.00	21.30	H	6.50	10.58	25.37	344.35	30.00	-4.63	1/104
		3960.00	20.54	H	6.60	10.47	24.40	275.42	30.00	-5.60	1/104
	16-QAM	3720.02	20.55	H	6.40	10.73	24.88	307.61	30.00	-5.12	1/104
		3840.00	20.38	H	6.50	10.58	24.45	278.61	30.00	-5.55	1/104
		3960.00	19.87	H	6.60	10.47	23.73	236.05	30.00	-6.27	1/104
30	QPSK	3715.02	20.55	H	6.40	10.73	24.89	308.32	30.00	-5.11	1/76
		3840.00	21.41	H	6.50	10.58	25.48	353.18	30.00	-4.52	1/1
		3964.98	20.25	H	6.61	10.46	24.10	257.04	30.00	-5.90	1/76
	16-QAM	3715.02	19.44	H	6.40	10.73	23.78	238.78	30.00	-6.22	1/76
		3840.00	20.24	H	6.50	10.58	24.31	269.77	30.00	-5.69	1/1
		3964.98	19.26	H	6.61	10.46	23.11	204.64	30.00	-6.89	1/76
25	QPSK	3712.50	20.16	H	6.40	10.74	24.50	281.84	30.00	-5.50	1/63
		3840.00	21.34	H	6.50	10.58	25.41	347.54	30.00	-4.59	1/1
		3967.50	20.25	H	6.61	10.46	24.10	257.04	30.00	-5.90	1/63
	16-QAM	3710.01	18.77	H	6.40	10.74	23.11	204.64	30.00	-6.89	1/63
		3840.00	20.43	H	6.50	10.58	24.50	281.84	30.00	-5.50	1/1
		3969.99	19.53	H	6.61	10.46	23.38	217.77	30.00	-6.62	1/63
20	QPSK	3710.01	20.37	H	6.39	10.74	24.71	295.80	30.00	-5.29	1/1
		3840.00	21.15	H	6.50	10.58	25.22	332.66	30.00	-4.78	1/1
		3969.99	19.91	H	6.61	10.46	23.76	237.68	30.00	-6.24	1/1
	16-QAM	3710.01	19.27	H	6.39	10.74	23.61	229.61	30.00	-6.39	1/1
		3840.00	19.93	H	6.50	10.58	24.00	251.19	30.00	-6.00	1/1
		3969.99	18.91	H	6.61	10.46	22.76	188.80	30.00	-7.24	1/1
15	QPSK	3707.52	20.26	H	6.39	10.74	24.61	289.07	30.00	-5.39	1/36
		3840.00	21.17	H	6.50	10.58	25.24	334.20	30.00	-4.76	1/36
		3972.48	20.15	H	6.62	10.46	24.00	251.19	30.00	-6.00	1/36
	16-QAM	3707.52	18.97	H	6.39	10.74	23.32	214.78	30.00	-6.68	1/36
		3840.00	20.28	H	6.50	10.58	24.35	272.27	30.00	-5.65	1/36
		3972.48	19.42	H	6.62	10.46	23.26	211.84	30.00	-6.74	1/36
10	QPSK	3705.00	20.13	H	6.39	10.74	24.49	281.19	30.00	-5.51	1/22
		3840.00	21.15	H	6.50	10.58	25.22	332.66	30.00	-4.78	1/22
		3975.00	19.89	H	6.62	10.46	23.72	235.50	30.00	-6.28	1/22
	16-QAM	3705.00	19.06	H	6.39	10.74	23.42	219.79	30.00	-6.58	1/22
		3840.00	19.90	H	6.50	10.58	23.97	249.46	30.00	-6.03	1/22
		3975.00	18.89	H	6.62	10.46	22.72	187.07	30.00	-7.28	1/22

NR Band n77(3700-3980 MHz) (ANT C) (SRS1)

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)
25	3712.50	8.08	H	6.40	10.74	12.42	17.46	30.00	-17.58
	3840.00	9.96	H	6.50	10.58	14.03	25.29	30.00	-15.97
	3967.50	11.52	H	6.61	10.46	15.37	34.43	30.00	-14.63

NR Band n77(3700-3980 MHz) (ANT F) (SRS2)

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)
50	3725.00	19.23	H	6.41	10.72	23.54	225.94	30.00	-6.46
	3840.00	20.88	H	6.50	10.58	24.95	312.61	30.00	-5.05
	3955.00	21.37	H	6.60	10.47	25.23	333.43	30.00	-4.77

NR Band n77(3700-3980 MHz) (ANT A) (SRS3)

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)
50	3725.00	13.67	H	6.41	10.72	17.98	62.81	30.00	-12.02
	3840.00	14.80	H	6.50	10.58	18.88	77.27	30.00	-11.12
	3955.00	14.84	H	6.60	10.47	18.70	74.13	30.00	-11.30

9.2. RADIATIED 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 that 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.

(l)(2) For mobile operations in the 3700-3980 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed −13 dBm/MHz. Compliance with this paragraph (l)(2) is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be either one percent of the emission bandwidth of the fundamental emission of the transmitter or 350 kHz. In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

(n)(2) For mobile operations in the 3450-3550 MHz band, the conducted power of any emission outside the licensee's authorized bandwidth shall not exceed −13 dBm/MHz. Compliance with this paragraph (n)(2) is based on the use of measurement instrumentation employing a resolution bandwidth of 1 megahertz or greater. However, in the 1 megahertz bands immediately outside and adjacent to the licensee's frequency block, a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed, but limited to a maximum of 200 kHz. In the bands between 1 and 5 MHz removed from the licensee's frequency block, the minimum resolution bandwidth for the measurement shall be 500 kHz. The emission bandwidth is defined as the width of the signal between two points, one below the carrier center frequency and one above the carrier center frequency, outside of which all emissions are attenuated at least 26 dB below the transmitter power.

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 ≥ 3 × 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 ≥ 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 highst output power and density).
LTE: It was tested at 1RB QPSK as worst case (the highst output power and density).
5G NR: All Waveforms (CP-OFDM vs DFT-s_OFDM) and modulations (π/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 #:	4791196626
Date:	2024-03-19
Test Engineer:	28183
Configuration:	EUT / AC Adapter, X-Position, Open
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	-8.5	V	3.0	42.2	1.0	-49.7	-13.0	-36.7	
5137.20	-8.7	V	3.0	42.9	1.0	-50.7	-13.0	-37.7	
6849.60	-5.5	V	3.0	42.9	1.0	-47.4	-13.0	-34.4	
3424.80	-8.1	H	3.0	42.2	1.0	-49.3	-13.0	-36.3	
5137.20	-8.8	H	3.0	42.9	1.0	-50.7	-13.0	-37.7	
6849.60	-6.0	H	3.0	42.9	1.0	-47.9	-13.0	-34.9	
Mid Ch, 1732.6MHz									
3465.20	-8.2	V	3.0	42.2	1.0	-49.4	-13.0	-36.4	
5197.80	-8.5	V	3.0	43.0	1.0	-50.4	-13.0	-37.4	
6930.40	-5.5	V	3.0	42.9	1.0	-47.4	-13.0	-34.4	
3465.20	-7.8	H	3.0	42.2	1.0	-49.0	-13.0	-36.0	
5197.80	-8.5	H	3.0	43.0	1.0	-50.4	-13.0	-37.4	
6930.40	-5.9	H	3.0	42.9	1.0	-47.8	-13.0	-34.8	
High Ch, 1752.6MHz									
3505.20	-11.3	V	3.0	42.2	1.0	-52.5	-13.0	-39.5	
5257.80	-8.5	V	3.0	43.0	1.0	-50.4	-13.0	-37.4	
7010.40	-5.3	V	3.0	42.8	1.0	-47.1	-13.0	-34.1	
3505.20	-7.7	H	3.0	42.2	1.0	-48.9	-13.0	-35.9	
5257.80	-8.5	H	3.0	43.0	1.0	-50.5	-13.0	-37.5	
7010.40	-5.7	H	3.0	42.8	1.0	-47.6	-13.0	-34.6	

LTE Band 12

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

Company: Samsung
Project #: 4791196626
Date: 2024-03-06
Test Engineer: 28183
Configuration: EUT / AC Adapter, X-Position, Open
Location: Chamber 2
Mode: LTE_QPSK Band 12 Harmonics, 3MHz Bandwidth
Test Votage: AC 120 V, 60 Hz

3 MHz
QPSK
ANT A+B

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	-15.8	V	3.0	40.9	1.0	-55.7	-13.0	-42.7	
2101.50	-11.5	V	3.0	40.9	1.0	-51.4	-13.0	-38.4	
2802.00	-10.6	V	3.0	41.9	1.0	-51.5	-13.0	-38.5	
1401.00	-17.3	H	3.0	40.9	1.0	-57.1	-13.0	-44.1	
2101.50	-10.8	H	3.0	40.9	1.0	-50.7	-13.0	-37.7	
2802.00	-10.0	H	3.0	41.9	1.0	-50.9	-13.0	-37.9	
Mid Ch, 707.5MHz									
1415.00	-16.1	V	3.0	40.9	1.0	-55.9	-13.0	-42.9	
2122.50	-12.2	V	3.0	40.9	1.0	-52.1	-13.0	-39.1	
2830.00	-10.4	V	3.0	41.9	1.0	-51.3	-13.0	-38.3	
1415.00	-16.9	H	3.0	40.9	1.0	-56.7	-13.0	-43.7	
2122.50	-9.5	H	3.0	40.9	1.0	-49.4	-13.0	-36.4	
2830.00	-9.7	H	3.0	41.9	1.0	-50.7	-13.0	-37.7	
High Ch, 714.5MHz									
1429.00	-15.8	V	3.0	40.9	1.0	-55.6	-13.0	-42.6	
2143.50	-12.1	V	3.0	41.0	1.0	-52.0	-13.0	-39.0	
2858.00	-10.1	V	3.0	42.0	1.0	-51.1	-13.0	-38.1	
1429.00	-15.4	H	3.0	40.9	1.0	-55.3	-13.0	-42.3	
2143.50	-11.6	H	3.0	41.0	1.0	-51.6	-13.0	-38.6	
2858.00	-9.4	H	3.0	42.0	1.0	-50.3	-13.0	-37.3	

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

Company: Samsung
Project #: 4791196626
Date: 2024-03-14
Test Engineer: 26087
Configuration: EUT / AC Adapter, Z-Position, FF
Location: Chamber 1
Mode: LTE_QPSK Band 12 Harmonics, 5MHz Bandwidth
Test Votage: AC 120 V, 60 Hz

5 MHz
QPSK
ANT A

f MHz	SG reading (dBm)	Ant. Pol. (H/V)	Distance (m)	Preamp (dB)	Filter (dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 701.5MHz									
1403.00	-16.0	V	3.0	43.3	1.0	-58.3	-13.0	-45.3	
2104.50	-13.2	V	3.0	43.4	1.0	-55.6	-13.0	-42.6	
2806.00	-10.9	V	3.0	43.7	1.0	-53.6	-13.0	-40.6	
1403.00	-17.7	H	3.0	43.3	1.0	-60.0	-13.0	-47.0	
2104.50	-13.6	H	3.0	43.4	1.0	-56.0	-13.0	-43.0	
2806.00	-10.9	H	3.0	43.7	1.0	-53.6	-13.0	-40.6	
Mid Ch, 707.5MHz									
1415.00	-15.9	V	3.0	43.3	1.0	-58.2	-13.0	-45.2	
2122.50	-13.0	V	3.0	43.4	1.0	-55.4	-13.0	-42.4	
2830.00	-10.8	V	3.0	43.7	1.0	-53.5	-13.0	-40.5	
1415.00	-17.6	H	3.0	43.3	1.0	-59.8	-13.0	-46.8	
2122.50	-10.6	H	3.0	43.4	1.0	-53.1	-13.0	-40.1	
2830.00	-10.8	H	3.0	43.7	1.0	-53.5	-13.0	-40.5	
High Ch, 713.5MHz									
1427.00	-16.0	V	3.0	43.3	1.0	-58.3	-13.0	-45.3	
2140.50	-12.8	V	3.0	43.4	1.0	-55.3	-13.0	-42.3	
2854.00	-10.6	V	3.0	43.7	1.0	-53.3	-13.0	-40.3	
1427.00	-17.5	H	3.0	43.3	1.0	-59.8	-13.0	-46.8	
2140.50	-13.1	H	3.0	43.4	1.0	-55.5	-13.0	-42.5	
2854.00	-10.6	H	3.0	43.7	1.0	-53.3	-13.0	-40.3	

10 MHz

QPSK

ANT D

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

Company: Samsung
Project #: 4791196626
Date: 2024-04-30
Test Engineer: 26087
Configuration: EUT / AC Adapter, Z-Position, Open
Location: Chamber 1
Mode: LTE_QPSK Band 12 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
Low Ch, 704MHz									
1408.00	-14.4	V	3.0	43.3	1.0	-56.7	-13.0	-43.7	
2112.00	-13.4	V	3.0	43.4	1.0	-55.9	-13.0	-42.9	
2816.00	-11.0	V	3.0	43.7	1.0	-53.7	-13.0	-40.7	
1408.00	-17.4	H	3.0	43.3	1.0	-59.6	-13.0	-46.6	
2112.00	-14.2	H	3.0	43.4	1.0	-56.6	-13.0	-43.6	
2816.00	-10.9	H	3.0	43.7	1.0	-53.6	-13.0	-40.6	
Mid Ch, 707.5MHz									
1415.00	-14.6	V	3.0	43.3	1.0	-56.9	-13.0	-43.9	
2122.50	-13.2	V	3.0	43.4	1.0	-55.7	-13.0	-42.7	
2830.00	-11.0	V	3.0	43.7	1.0	-53.7	-13.0	-40.7	
1415.00	-17.4	H	3.0	43.3	1.0	-59.7	-13.0	-46.7	
2122.50	-14.1	H	3.0	43.4	1.0	-56.5	-13.0	-43.5	
2830.00	-11.0	H	3.0	43.7	1.0	-53.7	-13.0	-40.7	
High Ch, 711MHz									
1422.00	-14.2	V	3.0	43.3	1.0	-56.5	-13.0	-43.5	
2133.00	-13.3	V	3.0	43.4	1.0	-55.8	-13.0	-42.8	
2844.00	-10.9	V	3.0	43.7	1.0	-53.6	-13.0	-40.6	
1422.00	-17.2	H	3.0	43.3	1.0	-59.4	-13.0	-46.4	
2133.00	-14.0	H	3.0	43.4	1.0	-56.4	-13.0	-43.4	
2844.00	-10.8	H	3.0	43.7	1.0	-53.5	-13.0	-40.5	

LTE Band 13

5 MHz
QPSK
ANT A+B

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

Company: Samsung
Project #: 4791196626
Date: 2024-03-06
Test Engineer: 28183
Configuration: EUT / AC Adapter, Z-Position, Open
Location: Chamber 2
Mode: LTE_QPSK Band 13 Harmonics, 5MHz 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, 779.5MHz									
1559.00	-30.3	V	3.0	40.8	1.0	-70.1	-40.0	-30.1	
2338.50	-12.0	V	3.0	41.2	1.0	-52.2	-13.0	-39.2	
3118.00	-9.1	V	3.0	42.2	1.0	-50.3	-13.0	-37.3	
1559.00	-31.3	H	3.0	40.8	1.0	-71.1	-40.0	-31.1	
2338.50	-12.2	H	3.0	41.2	1.0	-52.4	-13.0	-39.4	
3118.00	-8.3	H	3.0	42.2	1.0	-49.5	-13.0	-36.5	
Mid Ch, 782MHz									
1564.00	-30.0	V	3.0	40.8	1.0	-69.8	-40.0	-29.8	
2346.00	-9.3	V	3.0	41.2	1.0	-49.6	-13.0	-36.6	
3128.00	-9.1	V	3.0	42.2	1.0	-50.3	-13.0	-37.3	
1564.00	-30.7	H	3.0	40.8	1.0	-70.6	-40.0	-30.6	
2346.00	-10.6	H	3.0	41.2	1.0	-50.9	-13.0	-37.9	
3128.00	-8.3	H	3.0	42.2	1.0	-49.5	-13.0	-36.5	
High Ch, 784.5MHz									
1569.00	-29.4	V	3.0	40.8	1.0	-69.2	-40.0	-29.2	
2353.50	-11.9	V	3.0	41.3	1.0	-52.2	-13.0	-39.2	
3138.00	-9.0	V	3.0	42.2	1.0	-50.2	-13.0	-37.2	
1569.00	-30.0	H	3.0	40.8	1.0	-69.8	-40.0	-29.8	
2353.50	-12.2	H	3.0	41.3	1.0	-52.4	-13.0	-39.4	
3138.00	-8.3	H	3.0	42.2	1.0	-49.5	-13.0	-36.5	

5 MHz
QPSK
ANT A

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

Company: Samsung
Project #: 4791196626
Date: 2024-03-24
Test Engineer: 28183
Configuration: EUT / AC Adapter, Z-Position, FF
Location: Chamber 2
Mode: LTE_QPSK Band 13 Harmonics, 5MHz 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, 779.5MHz									
1559.00	-29.0	V	3.0	40.8	1.0	-68.8	-40.0	-28.8	
2338.50	-11.9	V	3.0	41.2	1.0	-52.1	-13.0	-39.1	
3118.00	-9.0	V	3.0	42.2	1.0	-50.2	-13.0	-37.2	
1559.00	-31.0	H	3.0	40.8	1.0	-70.8	-40.0	-30.8	
2338.50	-12.1	H	3.0	41.2	1.0	-52.4	-13.0	-39.4	
3118.00	-8.2	H	3.0	42.2	1.0	-49.4	-13.0	-36.4	
Mid Ch, 782MHz									
1564.00	-28.8	V	3.0	40.8	1.0	-68.6	-40.0	-28.6	
2346.00	-12.0	V	3.0	41.2	1.0	-52.2	-13.0	-39.2	
3128.00	-9.1	V	3.0	42.2	1.0	-50.3	-13.0	-37.3	
1564.00	-30.8	H	3.0	40.8	1.0	-70.6	-40.0	-30.6	
2346.00	-12.1	H	3.0	41.2	1.0	-52.4	-13.0	-39.4	
3128.00	-8.2	H	3.0	42.2	1.0	-49.4	-13.0	-36.4	
High Ch, 784.5MHz									
1569.00	-28.9	V	3.0	40.8	1.0	-68.8	-40.0	-28.8	
2353.50	-12.2	V	3.0	41.3	1.0	-52.5	-13.0	-39.5	
3138.00	-9.0	V	3.0	42.2	1.0	-50.2	-13.0	-37.2	
1569.00	-30.4	H	3.0	40.8	1.0	-70.3	-40.0	-30.3	
2353.50	-12.2	H	3.0	41.3	1.0	-52.5	-13.0	-39.5	
3138.00	-8.3	H	3.0	42.2	1.0	-49.5	-13.0	-36.5	

10 MHz

QPSK

ANT D

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

Company: Samsung
Project #: 4791196626
Date: 2024-04-29
Test Engineer: 26087
Configuration: EUT / Z-Position, Open
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	-27.1	V	3.0	43.3	1.0	-69.4	-40.0	-29.4	
2346.00	-12.8	V	3.0	43.5	1.0	-55.3	-13.0	-42.3	
3128.00	-10.5	V	3.0	43.8	1.0	-53.3	-13.0	-40.3	
1564.00	-28.6	H	3.0	43.3	1.0	-70.9	-40.0	-30.9	
2346.00	-13.3	H	3.0	43.5	1.0	-55.8	-13.0	-42.8	
3128.00	-10.2	H	3.0	43.8	1.0	-53.0	-13.0	-40.0	

LTE Band 41(PC2)

5 MHz
QPSK
ANT B

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

Company: Samsung
Project #: 4791196626
Date: 2024-03-17
Test Engineer: 28775
Configuration: EUT / AC Adapter, Y-Position, Open
Location: Chamber 2
Mode: LTE_QPSK Band 41 Harmonics, 5MHz 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, 2498.5MHz									
4997.00	-19.3	V	3.0	42.9	1.0	-61.2	-25.0	-36.2	
7495.50	-13.1	V	3.0	42.6	1.0	-54.7	-25.0	-29.7	
9994.00	-11.4	V	3.0	41.0	1.0	-51.4	-25.0	-26.4	
4997.00	-19.2	H	3.0	42.9	1.0	-61.2	-25.0	-36.2	
7495.50	-15.6	H	3.0	42.6	1.0	-57.2	-25.0	-32.2	
9994.00	-12.2	H	3.0	41.0	1.0	-52.2	-25.0	-27.2	
Mid Ch, 2593MHz									
5186.00	-18.2	V	3.0	43.0	1.0	-60.1	-25.0	-35.1	
7779.00	-14.4	V	3.0	42.4	1.0	-55.8	-25.0	-30.8	
10372.00	-12.0	V	3.0	41.2	1.0	-52.1	-25.0	-27.1	
5186.00	-18.6	H	3.0	43.0	1.0	-60.6	-25.0	-35.6	
7779.00	-13.4	H	3.0	42.4	1.0	-54.9	-25.0	-29.9	
10372.00	-13.2	H	3.0	41.2	1.0	-53.3	-25.0	-28.3	
High Ch, 2687.5MHz									
5375.00	-16.9	V	3.0	43.0	1.0	-58.8	-25.0	-33.8	
8062.50	-15.0	V	3.0	42.3	1.0	-56.3	-25.0	-31.3	
10750.00	-12.3	V	3.0	41.3	1.0	-52.6	-25.0	-27.6	
5375.00	-18.2	H	3.0	43.0	1.0	-60.2	-25.0	-35.2	
8062.50	-15.4	H	3.0	42.3	1.0	-56.7	-25.0	-31.7	
10750.00	-12.7	H	3.0	41.3	1.0	-53.1	-25.0	-28.1	

20 MHz
QPSK
ANT E

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

Company: Samsung
Project #: 4791196626
Date: 2024-04-08
Test Engineer: 24542
Configuration: EUT / AC Adapter, Z-Position, Open
Location: Chamber 1
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	-14.9	V	3.0	44.8	1.0	-58.7	-25.0	-33.7	
7518.00	-12.2	V	3.0	44.9	1.0	-56.2	-25.0	-31.2	
10024.00	-9.3	V	3.0	43.6	1.0	-51.9	-25.0	-26.9	
5012.00	-15.0	H	3.0	44.8	1.0	-58.8	-25.0	-33.8	
7518.00	-12.3	H	3.0	44.9	1.0	-56.2	-25.0	-31.2	
10024.00	-7.7	H	3.0	43.6	1.0	-50.3	-25.0	-25.3	
Mid Ch, 2593MHz									
5186.00	-14.0	V	3.0	44.8	1.0	-57.8	-25.0	-32.8	
7779.00	-12.5	V	3.0	44.8	1.0	-56.3	-25.0	-31.3	
10372.00	-10.6	V	3.0	43.5	1.0	-53.2	-25.0	-28.2	
5186.00	-11.2	H	3.0	44.8	1.0	-55.0	-25.0	-30.0	
7779.00	-11.9	H	3.0	44.8	1.0	-55.8	-25.0	-30.8	
10372.00	-10.2	H	3.0	43.5	1.0	-52.7	-25.0	-27.7	
High Ch, 2680MHz									
5360.00	-10.2	V	3.0	44.9	1.0	-54.1	-25.0	-29.1	
8040.00	-11.9	V	3.0	44.7	1.0	-55.7	-25.0	-30.7	
10720.00	-10.1	V	3.0	43.5	1.0	-52.6	-25.0	-27.6	
5360.00	-9.4	H	3.0	44.9	1.0	-53.3	-25.0	-28.3	
8040.00	-12.0	H	3.0	44.7	1.0	-55.7	-25.0	-30.7	
10720.00	-9.8	H	3.0	43.5	1.0	-52.3	-25.0	-27.3	

LTE Band 66

20 MHz
QPSK
ANT B

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

Company: Samsung
Project #: 4791196626
Date: 2024-03-18
Test Engineer: 26087
Configuration: EUT / AC Adapter, Z-Position, HF
Location: Chamber 2
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	42.2	1.0	-49.6	-13.0	-36.6	
5160.00	-8.7	V	3.0	42.9	1.0	-50.6	-13.0	-37.6	
6880.00	-5.6	V	3.0	42.9	1.0	-47.5	-13.0	-34.5	
3440.00	-8.2	H	3.0	42.2	1.0	-49.4	-13.0	-36.4	
5160.00	-8.7	H	3.0	42.9	1.0	-50.6	-13.0	-37.6	
6880.00	-6.0	H	3.0	42.9	1.0	-47.9	-13.0	-34.9	
Mid Ch, 1745MHz									
3490.00	-8.1	V	3.0	42.2	1.0	-49.3	-13.0	-36.3	
5235.00	-8.5	V	3.0	43.0	1.0	-50.5	-13.0	-37.5	
6980.00	-5.4	V	3.0	42.8	1.0	-47.3	-13.0	-34.3	
3490.00	-7.9	H	3.0	42.2	1.0	-49.1	-13.0	-36.1	
5235.00	-8.8	H	3.0	43.0	1.0	-50.7	-13.0	-37.7	
6980.00	-5.9	H	3.0	42.8	1.0	-47.7	-13.0	-34.7	
High Ch, 1770MHz									
3540.00	-7.2	V	3.0	42.2	1.0	-48.4	-13.0	-35.4	
5310.00	-8.2	V	3.0	43.0	1.0	-50.2	-13.0	-37.2	
7080.00	-5.3	V	3.0	42.8	1.0	-47.1	-13.0	-34.1	
3540.00	-7.1	H	3.0	42.2	1.0	-48.3	-13.0	-35.3	
5310.00	-8.3	H	3.0	43.0	1.0	-50.2	-13.0	-37.2	
7080.00	-5.8	H	3.0	42.8	1.0	-47.5	-13.0	-34.5	

15 MHz
QPSK
ANT E

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

Company: Samsung
Project #: 4791196626
Date: 2024-04-08
Test Engineer: 24542
Configuration: EUT / AC Adapter, Z-Position, FF
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
High Ch, 1717.5MHz									
3435.00	-8.5	V	3.0	44.0	1.0	-51.5	-13.0	-38.5	
5152.50	-3.5	V	3.0	44.8	1.0	-47.3	-13.0	-34.3	
6870.00	-4.0	V	3.0	45.1	1.0	-48.2	-13.0	-35.2	
3435.00	-8.0	H	3.0	44.0	1.0	-51.0	-13.0	-38.0	
5152.50	-6.5	H	3.0	44.8	1.0	-50.3	-13.0	-37.3	
6870.00	-4.0	H	3.0	45.1	1.0	-48.1	-13.0	-35.1	
Mid Ch, 1745MHz									
3490.00	-8.4	V	3.0	44.0	1.0	-51.4	-13.0	-38.4	
5235.00	-6.5	V	3.0	44.8	1.0	-50.4	-13.0	-37.4	
6980.00	-3.9	V	3.0	45.1	1.0	-48.1	-13.0	-35.1	
3490.00	-7.9	H	3.0	44.0	1.0	-50.9	-13.0	-37.9	
5235.00	-1.4	H	3.0	44.8	1.0	-45.3	-13.0	-32.3	
6980.00	-3.7	H	3.0	45.1	1.0	-47.9	-13.0	-34.9	
High Ch, 1772.5MHz									
3545.00	-7.7	V	3.0	44.0	1.0	-50.7	-13.0	-37.7	
5317.50	-6.1	V	3.0	44.9	1.0	-49.9	-13.0	-36.9	
7090.00	-3.8	V	3.0	45.1	1.0	-47.9	-13.0	-34.9	
3545.00	-7.9	H	3.0	44.0	1.0	-51.0	-13.0	-38.0	
5317.50	-3.5	H	3.0	44.9	1.0	-47.4	-13.0	-34.4	
7090.00	-3.6	H	3.0	45.1	1.0	-47.7	-13.0	-34.7	

NR Band n41

100 MHz
QPSK
ANT E

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

Company: Samsung
Project #: 4791196626
Date: 2024-04-02
Test Engineer: 28183
Configuration: EUT / AC Adapter, Y-Position, HF
Location: Chamber 2
Mode: 5G NR_QPSK NR n41 Harmonics, 100MHz 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, 2546.01MHz									
5092.02	-18.9	V	3.0	42.9	1.0	-60.8	-25.0	-35.8	
7638.03	-15.4	V	3.0	42.5	1.0	-56.9	-25.0	-31.9	
10184.04	-13.7	V	3.0	41.1	1.0	-53.7	-25.0	-28.7	
5092.02	-18.3	H	3.0	42.9	1.0	-60.3	-25.0	-35.3	
7638.03	-16.1	H	3.0	42.5	1.0	-57.6	-25.0	-32.6	
10184.04	-13.6	H	3.0	41.1	1.0	-53.7	-25.0	-28.7	
Mid Ch, 2592.99MHz									
5185.98	-18.1	V	3.0	43.0	1.0	-60.1	-25.0	-35.1	
7778.97	-15.4	V	3.0	42.4	1.0	-56.8	-25.0	-31.8	
10371.96	-13.2	V	3.0	41.2	1.0	-53.3	-25.0	-28.3	
5185.98	-18.8	H	3.0	43.0	1.0	-60.8	-25.0	-35.8	
7778.97	-16.2	H	3.0	42.4	1.0	-57.7	-25.0	-32.7	
10371.96	-12.6	H	3.0	41.2	1.0	-52.8	-25.0	-27.8	
High Ch, 2640MHz									
5280.00	-17.9	V	3.0	43.0	1.0	-59.8	-25.0	-34.8	
7920.00	-15.3	V	3.0	42.4	1.0	-56.7	-25.0	-31.7	
10560.00	-12.6	V	3.0	41.2	1.0	-52.8	-25.0	-27.8	
5280.00	-18.1	H	3.0	43.0	1.0	-60.0	-25.0	-35.0	
7920.00	-16.2	H	3.0	42.4	1.0	-57.5	-25.0	-32.5	
10560.00	-12.7	H	3.0	41.2	1.0	-52.9	-25.0	-27.9	

40 MHz
QPSK
ANT B
SRS1

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

Company: Samsung
Project #: 4791196626
Date: 2024-04-23
Test Engineer: 24542
Configuration: EUT / AC Adapter, Y-Position, Open
Location: Chamber 1
Mode: 5G NR n41(SRS) Harmonics, 40MHz 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, 2516.01MHz									
5032.02	-17.3	V	3.0	44.8	1.0	-61.1	-25.0	-36.1	
7548.03	-4.4	V	3.0	44.9	1.0	-48.3	-25.0	-23.3	
10064.04	-12.3	V	3.0	43.6	1.0	-54.9	-25.0	-29.9	
5032.02	-15.6	H	3.0	44.8	1.0	-59.4	-25.0	-34.4	
7548.03	-10.7	H	3.0	44.9	1.0	-54.7	-25.0	-29.7	
10064.04	-12.2	H	3.0	43.6	1.0	-54.8	-25.0	-29.8	
Mid Ch, 2592.99MHz									
5185.98	-12.5	V	3.0	44.8	1.0	-56.3	-25.0	-31.3	
7778.97	-2.0	V	3.0	44.8	1.0	-45.8	-25.0	-20.8	
10371.96	-12.5	V	3.0	43.5	1.0	-55.1	-25.0	-30.1	
5185.98	-17.2	H	3.0	44.8	1.0	-61.1	-25.0	-36.1	
7778.97	-4.1	H	3.0	44.8	1.0	-48.0	-25.0	-23.0	
10371.96	-12.9	H	3.0	43.5	1.0	-55.5	-25.0	-30.5	
High Ch, 2670MHz									
5340.00	-13.5	V	3.0	44.9	1.0	-57.4	-25.0	-32.4	
8010.00	-14.6	V	3.0	44.8	1.0	-58.4	-25.0	-33.4	
10680.00	-12.9	V	3.0	43.5	1.0	-55.3	-25.0	-30.3	
5340.00	-15.2	H	3.0	44.9	1.0	-59.0	-25.0	-34.0	
8010.00	-14.7	H	3.0	44.8	1.0	-58.5	-25.0	-33.5	
10680.00	-12.4	H	3.0	43.5	1.0	-54.9	-25.0	-29.9	

50 MHz

QPSK

ANT G
SRS2

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

Company: Samsung
Project #: 4791196626
Date: 2024-04-23
Test Engineer: 28775
Configuration: EUT / AC Adapter, Y-Position, HF
Location: Chamber 2
Mode: 5G NR n41(SRS) Harmonics, 50MHz 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, 2521.01MHz									
5042.02	-21.0	V	3.0	42.9	1.0	-62.9	-25.0	-37.9	
7563.03	-17.5	V	3.0	42.5	1.0	-59.0	-25.0	-34.0	
10084.04	-16.4	V	3.0	41.0	1.0	-56.4	-25.0	-31.4	
5042.02	-20.6	H	3.0	42.9	1.0	-62.5	-25.0	-37.5	
7563.03	-18.2	H	3.0	42.5	1.0	-59.8	-25.0	-34.8	
10084.04	-16.6	H	3.0	41.0	1.0	-56.6	-25.0	-31.6	
Mid Ch, 2592.99MHz									
5185.98	-20.3	V	3.0	43.0	1.0	-62.2	-25.0	-37.2	
7778.97	-18.0	V	3.0	42.4	1.0	-59.4	-25.0	-34.4	
10371.96	-16.0	V	3.0	41.2	1.0	-56.1	-25.0	-31.1	
5185.98	-21.2	H	3.0	43.0	1.0	-63.2	-25.0	-38.2	
7778.97	-18.7	H	3.0	42.4	1.0	-60.1	-25.0	-35.1	
10371.96	-16.1	H	3.0	41.2	1.0	-56.3	-25.0	-31.3	
High Ch, 2665MHz									
5330.00	-19.9	V	3.0	43.0	1.0	-61.9	-25.0	-36.9	
7995.00	-16.7	V	3.0	42.3	1.0	-58.1	-25.0	-33.1	
10660.00	-15.4	V	3.0	41.3	1.0	-55.7	-25.0	-30.7	
5330.00	-20.4	H	3.0	43.0	1.0	-62.4	-25.0	-37.4	
7995.00	-15.6	H	3.0	42.3	1.0	-56.9	-25.0	-31.9	
10660.00	-15.7	H	3.0	41.3	1.0	-56.0	-25.0	-31.0	

10 MHz

QPSK

ANT C
SRS3

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

Company: Samsung
Project #: 479196626
Date: 2024-04-23
Test Engineer: 26087
Configuration: EUT / AC Adapter, X-Position, HF
Location: Chamber 1
Mode: 5G NR n41(SRS) 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
Low Ch, 2501.01MHz									
5002.02	-17.7	V	3.0	44.8	1.0	-61.5	-25.0	-36.5	
7503.03	-14.9	V	3.0	45.0	1.0	-58.9	-25.0	-33.9	
10004.04	-13.3	V	3.0	43.6	1.0	-55.9	-25.0	-30.9	
5002.02	-17.8	H	3.0	44.8	1.0	-61.5	-25.0	-36.5	
7503.03	-14.9	H	3.0	45.0	1.0	-58.8	-25.0	-33.8	
10004.04	-13.0	H	3.0	43.6	1.0	-55.6	-25.0	-30.6	
Mid Ch, 2592.99MHz									
5185.98	-17.3	V	3.0	44.8	1.0	-61.2	-25.0	-36.2	
7778.97	-14.8	V	3.0	44.8	1.0	-58.7	-25.0	-33.7	
10371.96	-13.1	V	3.0	43.5	1.0	-55.7	-25.0	-30.7	
5185.98	-17.4	H	3.0	44.8	1.0	-61.2	-25.0	-36.2	
7778.97	-14.9	H	3.0	44.8	1.0	-58.7	-25.0	-33.7	
10371.96	-13.0	H	3.0	43.5	1.0	-55.5	-25.0	-30.5	
High Ch, 2685MHz									
5370.00	-17.0	V	3.0	44.9	1.0	-60.9	-25.0	-35.9	
8055.00	-14.7	V	3.0	44.7	1.0	-58.4	-25.0	-33.4	
10740.00	-12.8	V	3.0	43.5	1.0	-55.3	-25.0	-30.3	
5370.00	-16.9	H	3.0	44.9	1.0	-60.8	-25.0	-35.8	
8055.00	-14.7	H	3.0	44.7	1.0	-58.4	-25.0	-33.4	
10740.00	-12.6	H	3.0	43.5	1.0	-55.0	-25.0	-30.0	

NR Band n41 Switching (SA)

100 MHz
QPSK
ANT B

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

Company: Samsung
Project #: 4791196626
Date: 2024-04-02
Test Engineer: 24542
Configuration: EUT / AC Adapter, X-Position, Open
Location: Chamber 1
Mode: 5G NR_QPSK NR n41 Harmonics, 100MHz 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, 2546.01MHz									
5092.02	-12.2	V	3.0	44.8	1.0	-56.0	-25.0	-31.0	
7638.03	-11.4	V	3.0	44.9	1.0	-55.3	-25.0	-30.3	
10184.04	-11.7	V	3.0	43.6	1.0	-54.3	-25.0	-29.3	
5092.02	-11.3	H	3.0	44.8	1.0	-55.1	-25.0	-30.1	
7638.03	-8.4	H	3.0	44.9	1.0	-52.3	-25.0	-27.3	
10184.04	-11.6	H	3.0	43.6	1.0	-54.2	-25.0	-29.2	
Mid Ch, 2592.99MHz									
5185.98	-13.4	V	3.0	44.8	1.0	-57.2	-25.0	-32.2	
7778.97	-12.7	V	3.0	44.8	1.0	-56.5	-25.0	-31.5	
10371.96	-10.1	V	3.0	43.5	1.0	-52.7	-25.0	-27.7	
5185.98	-12.1	H	3.0	44.8	1.0	-55.9	-25.0	-30.9	
7778.97	-9.5	H	3.0	44.8	1.0	-53.3	-25.0	-28.3	
10371.96	-10.8	H	3.0	43.5	1.0	-53.3	-25.0	-28.3	
High Ch, 2640MHz									
5280.00	-10.5	V	3.0	44.9	1.0	-54.3	-25.0	-29.3	
7920.00	-11.4	V	3.0	44.8	1.0	-55.2	-25.0	-30.2	
10560.00	-11.4	V	3.0	43.5	1.0	-53.9	-25.0	-28.9	
5280.00	-11.2	H	3.0	44.9	1.0	-55.1	-25.0	-30.1	
7920.00	-7.2	H	3.0	44.8	1.0	-51.0	-25.0	-26.0	
10560.00	-11.2	H	3.0	43.5	1.0	-53.7	-25.0	-28.7	

50 MHz
QPSK
ANT E
SRS1

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

Company: Samsung
Project #: 4791196626
Date: 2024-04-23
Test Engineer: 27089
Configuration: EUT / AC Adapter, X-Position, HF
Location: Chamber 2
Mode: 5G NR n41(SRS) Harmonics, 50MHz 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, 2521.01MHz									
5042.02	-21.3	V	3.0	42.9	1.0	-63.2	-25.0	-38.2	
7563.03	-18.5	V	3.0	42.5	1.0	-60.0	-25.0	-35.0	
10084.04	-16.4	V	3.0	41.0	1.0	-56.5	-25.0	-31.5	
5042.02	-21.3	H	3.0	42.9	1.0	-63.2	-25.0	-38.2	
7563.03	-19.1	H	3.0	42.5	1.0	-60.7	-25.0	-35.7	
10084.04	-16.6	H	3.0	41.0	1.0	-56.6	-25.0	-31.6	
Mid Ch, 2592.99MHz									
5185.98	-21.3	V	3.0	43.0	1.0	-63.2	-25.0	-38.2	
7778.97	-18.4	V	3.0	42.4	1.0	-59.8	-25.0	-34.8	
10371.96	-16.0	V	3.0	41.2	1.0	-56.1	-25.0	-31.1	
5185.98	-21.4	H	3.0	43.0	1.0	-63.4	-25.0	-38.4	
7778.97	-19.1	H	3.0	42.4	1.0	-60.5	-25.0	-35.5	
10371.96	-16.1	H	3.0	41.2	1.0	-56.3	-25.0	-31.3	
High Ch, 2665MHz									
5330.00	-20.6	V	3.0	43.0	1.0	-62.6	-25.0	-37.6	
7995.00	-18.0	V	3.0	42.3	1.0	-59.3	-25.0	-34.3	
10660.00	-15.5	V	3.0	41.3	1.0	-55.8	-25.0	-30.8	
5330.00	-20.7	H	3.0	43.0	1.0	-62.7	-25.0	-37.7	
7995.00	-18.8	H	3.0	42.3	1.0	-60.1	-25.0	-35.1	
10660.00	-15.6	H	3.0	41.3	1.0	-55.8	-25.0	-30.8	

50 MHz

QPSK

ANT C
SRS2

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

Company: Samsung
Project #: 4791196626
Date: 2024-04-23
Test Engineer: 27089
Configuration: EUT / AC Adapter, Y-Position, Open
Location: Chamber 2
Mode: 5G NR n41(SRS) Harmonics, 50MHz 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, 2521.01MHz									
5042.02	-21.3	V	3.0	42.9	1.0	-63.2	-25.0	-38.2	
7563.03	-18.5	V	3.0	42.5	1.0	-60.0	-25.0	-35.0	
10084.04	-16.4	V	3.0	41.0	1.0	-56.5	-25.0	-31.5	
5042.02	-21.3	H	3.0	42.9	1.0	-63.2	-25.0	-38.2	
7563.03	-19.2	H	3.0	42.5	1.0	-60.7	-25.0	-35.7	
10084.04	-16.6	H	3.0	41.0	1.0	-56.6	-25.0	-31.6	
Mid Ch, 2592.99MHz									
5185.98	-21.3	V	3.0	43.0	1.0	-63.2	-25.0	-38.2	
7778.97	-18.4	V	3.0	42.4	1.0	-59.8	-25.0	-34.8	
10371.96	-16.1	V	3.0	41.2	1.0	-56.2	-25.0	-31.2	
5185.98	-21.4	H	3.0	43.0	1.0	-63.3	-25.0	-38.3	
7778.97	-19.1	H	3.0	42.4	1.0	-60.5	-25.0	-35.5	
10371.96	-16.2	H	3.0	41.2	1.0	-56.4	-25.0	-31.4	
High Ch, 2665MHz									
5330.00	-20.5	V	3.0	43.0	1.0	-62.5	-25.0	-37.5	
7995.00	-17.9	V	3.0	42.3	1.0	-59.2	-25.0	-34.2	
10660.00	-15.4	V	3.0	41.3	1.0	-55.7	-25.0	-30.7	
5330.00	-20.8	H	3.0	43.0	1.0	-62.7	-25.0	-37.7	
7995.00	-18.8	H	3.0	42.3	1.0	-60.1	-25.0	-35.1	
10660.00	-15.6	H	3.0	41.3	1.0	-55.9	-25.0	-30.9	

50 MHz

QPSK

ANT G
SRS3

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

Company: Samsung
Project #: 4791196626
Date: 2024-04-23
Test Engineer: 27089
Configuration: EUT / AC Adapter, Y-Position, HF
Location: Chamber 2
Mode: 5G NR n41(SRS) Harmonics, 50MHz 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, 2521.01MHz									
5042.02	-21.2	V	3.0	42.9	1.0	-63.1	-25.0	-38.1	
7563.03	-18.3	V	3.0	42.5	1.0	-59.9	-25.0	-34.9	
10084.04	-16.2	V	3.0	41.0	1.0	-56.2	-25.0	-31.2	
5042.02	-21.3	H	3.0	42.9	1.0	-63.2	-25.0	-38.2	
7563.03	-19.1	H	3.0	42.5	1.0	-60.7	-25.0	-35.7	
10084.04	-16.6	H	3.0	41.0	1.0	-56.6	-25.0	-31.6	
Mid Ch, 2592.99MHz									
5185.98	-21.3	V	3.0	43.0	1.0	-63.2	-25.0	-38.2	
7778.97	-18.4	V	3.0	42.4	1.0	-59.8	-25.0	-34.8	
10371.96	-16.0	V	3.0	41.2	1.0	-56.2	-25.0	-31.2	
5185.98	-21.3	H	3.0	43.0	1.0	-63.3	-25.0	-38.3	
7778.97	-19.1	H	3.0	42.4	1.0	-60.6	-25.0	-35.6	
10371.96	-16.1	H	3.0	41.2	1.0	-56.3	-25.0	-31.3	
High Ch, 2665MHz									
5330.00	-20.6	V	3.0	43.0	1.0	-62.5	-25.0	-37.5	
7995.00	-18.0	V	3.0	42.3	1.0	-59.3	-25.0	-34.3	
10660.00	-15.4	V	3.0	41.3	1.0	-55.7	-25.0	-30.7	
5330.00	-20.6	H	3.0	43.0	1.0	-62.6	-25.0	-37.6	
7995.00	-18.7	H	3.0	42.3	1.0	-60.1	-25.0	-35.1	
10660.00	-15.6	H	3.0	41.3	1.0	-55.9	-25.0	-30.9	

NR Band n66

10 MHz
QPSK
ANT B

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

Company: Samsung
Project #: 4791196626
Date: 2024-04-22
Test Engineer: 26087
Configuration: EUT / AC Adapter, Y-Position, Open
Location: Chamber 1
Mode: 5G NR_QPSK NR n66 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
Low Ch, 1715MHz									
3430.00	-8.5	V	3.0	44.0	1.0	-51.4	-13.0	-38.4	
5145.00	0.1	V	3.0	44.8	1.0	-43.7	-13.0	-30.7	
6860.00	-4.1	V	3.0	45.1	1.0	-48.2	-13.0	-35.2	
3430.00	-8.4	H	3.0	44.0	1.0	-51.3	-13.0	-38.3	
5145.00	-1.1	H	3.0	44.8	1.0	-44.9	-13.0	-31.9	
6860.00	-4.0	H	3.0	45.1	1.0	-48.2	-13.0	-35.2	
Mid Ch, 1745MHz									
3490.00	-8.1	V	3.0	44.0	1.0	-51.1	-13.0	-38.1	
5235.00	2.0	V	3.0	44.8	1.0	-41.9	-13.0	-28.9	
6980.00	-3.9	V	3.0	45.1	1.0	-48.1	-13.0	-35.1	
3490.00	-8.1	H	3.0	44.0	1.0	-51.1	-13.0	-38.1	
5235.00	-0.5	H	3.0	44.8	1.0	-44.3	-13.0	-31.3	
6980.00	-3.9	H	3.0	45.1	1.0	-48.1	-13.0	-35.1	
High Ch, 1775MHz									
3550.00	-7.9	V	3.0	44.0	1.0	-51.0	-13.0	-38.0	
5325.00	-0.2	V	3.0	44.9	1.0	-44.1	-13.0	-31.1	
7100.00	-3.6	V	3.0	45.1	1.0	-47.7	-13.0	-34.7	
3550.00	-7.8	H	3.0	44.0	1.0	-50.8	-13.0	-37.8	
5325.00	0.2	H	3.0	44.9	1.0	-43.7	-13.0	-30.7	
7100.00	-3.5	H	3.0	45.1	1.0	-47.6	-13.0	-34.6	

40 MHz
QPSK
ANT E

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

Company: Samsung
Project #: 4791196626
Date: 2024-04-02
Test Engineer: 28183
Configuration: EUT / AC Adapter, Z-Position, Open
Location: Chamber 2
Mode: 5G NR_QPSK NR n66 Harmonics, 40MHz 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, 1730MHz									
3460.00	-8.4	V	3.0	42.2	1.0	-49.6	-13.0	-36.6	
5190.00	-8.4	V	3.0	43.0	1.0	-50.4	-13.0	-37.4	
6920.00	-5.6	V	3.0	42.9	1.0	-47.4	-13.0	-34.4	
3460.00	-8.0	H	3.0	42.2	1.0	-49.2	-13.0	-36.2	
5190.00	-8.6	H	3.0	43.0	1.0	-50.5	-13.0	-37.5	
6920.00	-6.0	H	3.0	42.9	1.0	-47.9	-13.0	-34.9	
Mid Ch, 1745MHz									
3490.00	-8.1	V	3.0	42.2	1.0	-49.3	-13.0	-36.3	
5235.00	-8.5	V	3.0	43.0	1.0	-50.4	-13.0	-37.4	
6980.00	-5.3	V	3.0	42.8	1.0	-47.2	-13.0	-34.2	
3490.00	-8.0	H	3.0	42.2	1.0	-49.2	-13.0	-36.2	
5235.00	-8.7	H	3.0	43.0	1.0	-50.6	-13.0	-37.6	
6980.00	-5.9	H	3.0	42.8	1.0	-47.7	-13.0	-34.7	
High Ch, 1760MHz									
3520.00	-7.7	V	3.0	42.2	1.0	-48.9	-13.0	-35.9	
5280.00	-8.2	V	3.0	43.0	1.0	-50.2	-13.0	-37.2	
7040.00	-5.3	V	3.0	42.8	1.0	-47.1	-13.0	-34.1	
3520.00	-7.6	H	3.0	42.2	1.0	-48.8	-13.0	-35.8	
5280.00	-8.5	H	3.0	43.0	1.0	-50.4	-13.0	-37.4	
7040.00	-5.7	H	3.0	42.8	1.0	-47.5	-13.0	-34.5	

NR Band n77 (3450-3550 MHz)

15 MHz
QPSK
ANT E

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

Company: Samsung
Project #: 4791196626
Date: 2024-04-12
Test Engineer: 28183
Configuration: EUT / AC Adapter, X-Position, Open
Location: Chamber 2
Mode: 5G NR_QPSK NR n77 LO 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, 3457.5MHz									
6915.00	-2.7	V	3.0	42.9	1.0	-44.6	-13.0	-31.6	
10372.50	-1.6	V	3.0	41.2	1.0	-41.8	-13.0	-28.8	
13830.00	4.1	V	3.0	43.1	1.0	-37.9	-13.0	-24.9	
6915.00	-3.5	H	3.0	42.9	1.0	-45.4	-13.0	-32.4	
10372.50	0.6	H	3.0	41.2	1.0	-39.6	-13.0	-26.6	
13830.00	6.4	H	3.0	43.1	1.0	-35.7	-13.0	-22.7	
Mid Ch, 3499.98MHz									
6999.96	-2.4	V	3.0	42.8	1.0	-44.2	-13.0	-31.2	
10499.94	1.3	V	3.0	41.2	1.0	-38.9	-13.0	-25.9	
13999.92	6.1	V	3.0	43.2	1.0	-36.0	-13.0	-23.0	
6999.96	-3.2	H	3.0	42.8	1.0	-45.1	-13.0	-32.1	
10499.94	1.3	H	3.0	41.2	1.0	-38.9	-13.0	-25.9	
13999.92	7.0	H	3.0	43.2	1.0	-35.1	-13.0	-22.1	
High Ch, 3541.5MHz									
7083.00	-2.5	V	3.0	42.8	1.0	-44.3	-13.0	-31.3	
10624.50	1.8	V	3.0	41.3	1.0	-38.5	-13.0	-25.5	
14166.00	7.2	V	3.0	43.3	1.0	-35.0	-13.0	-22.0	
7083.00	-2.9	H	3.0	42.8	1.0	-44.7	-13.0	-31.7	
10624.50	1.3	H	3.0	41.3	1.0	-39.0	-13.0	-26.0	
14166.00	6.9	H	3.0	43.3	1.0	-35.4	-13.0	-22.4	

50 MHz
QPSK
ANT C
SRS1

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

Company: Samsung
Project #: 4791196626
Date: 2024-04-19
Test Engineer: 26087
Configuration: EUT / AC Adapter, X-Position, Open
Location: Chamber 1
Mode: 5G NR n77 LO(SRS) Harmonics, 50MHz 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, 3475MHz									
6950.00	-4.1	V	3.0	45.1	1.0	-48.2	-13.0	-35.2	
10425.00	0.0	V	3.0	43.5	1.0	-42.6	-13.0	-29.6	
13900.00	3.7	V	3.0	44.2	1.0	-39.5	-13.0	-26.5	
6950.00	-4.0	H	3.0	45.1	1.0	-48.1	-13.0	-35.1	
10425.00	0.2	H	3.0	43.5	1.0	-42.3	-13.0	-29.3	
13900.00	3.9	H	3.0	44.2	1.0	-39.3	-13.0	-26.3	
Mid Ch, 3499.98MHz									
6999.96	-4.0	V	3.0	45.1	1.0	-48.1	-13.0	-35.1	
10499.94	0.0	V	3.0	43.5	1.0	-42.5	-13.0	-29.5	
13999.92	3.9	V	3.0	44.3	1.0	-39.4	-13.0	-26.4	
6999.96	-3.9	H	3.0	45.1	1.0	-48.1	-13.0	-35.1	
10499.94	0.5	H	3.0	43.5	1.0	-42.1	-13.0	-29.1	
13999.92	4.0	H	3.0	44.3	1.0	-39.3	-13.0	-26.3	
High Ch, 3524MHz									
7048.00	-3.8	V	3.0	45.1	1.0	-47.9	-13.0	-34.9	
10572.00	0.3	V	3.0	43.5	1.0	-42.2	-13.0	-29.2	
14096.00	4.3	V	3.0	44.3	1.0	-39.1	-13.0	-26.1	
7048.00	-3.7	H	3.0	45.1	1.0	-47.8	-13.0	-34.8	
10572.00	0.6	H	3.0	43.5	1.0	-41.9	-13.0	-28.9	
14096.00	4.3	H	3.0	44.3	1.0	-39.0	-13.0	-26.0	

50 MHz

QPSK

ANT F
SRS2

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

Company: Samsung
Project #: 4791196626
Date: 2024-04-19
Test Engineer: 26087
Configuration: EUT / AC Adapter, Z-Position, Open
Location: Chamber 1
Mode: 5G NR n77 LO(SRS) Harmonics, 50MHz 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, 3475MHz									
6950.00	-4.1	V	3.0	45.1	1.0	-48.3	-13.0	-35.3	
10425.00	0.0	V	3.0	43.5	1.0	-42.6	-13.0	-29.6	
13900.00	3.7	V	3.0	44.2	1.0	-39.5	-13.0	-26.5	
6950.00	-3.9	H	3.0	45.1	1.0	-48.1	-13.0	-35.1	
10425.00	0.1	H	3.0	43.5	1.0	-42.4	-13.0	-29.4	
13900.00	3.8	H	3.0	44.2	1.0	-39.4	-13.0	-26.4	
Mid Ch, 3499.98MHz									
6999.96	-4.0	V	3.0	45.1	1.0	-48.2	-13.0	-35.2	
10499.94	0.4	V	3.0	43.5	1.0	-42.1	-13.0	-29.1	
13999.92	3.8	V	3.0	44.3	1.0	-39.5	-13.0	-26.5	
6999.96	-3.9	H	3.0	45.1	1.0	-48.0	-13.0	-35.0	
10499.94	0.3	H	3.0	43.5	1.0	-42.3	-13.0	-29.3	
13999.92	4.0	H	3.0	44.3	1.0	-39.3	-13.0	-26.3	
High Ch, 3524MHz									
7048.00	-3.8	V	3.0	45.1	1.0	-47.9	-13.0	-34.9	
10572.00	0.4	V	3.0	43.5	1.0	-42.1	-13.0	-29.1	
14096.00	4.2	V	3.0	44.3	1.0	-39.2	-13.0	-26.2	
7048.00	-3.6	H	3.0	45.1	1.0	-47.8	-13.0	-34.8	
10572.00	0.5	H	3.0	43.5	1.0	-42.0	-13.0	-29.0	
14096.00	4.4	H	3.0	44.3	1.0	-38.9	-13.0	-25.9	

50 MHz

QPSK

ANT A
SRS3

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

Company: Samsung
Project #: 4791196626
Date: 2024-04-19
Test Engineer: 26087
Configuration: EUT / AC Adapter, Y-Position, FF
Location: Chamber 1
Mode: 5G NR n77 LO(SRS) Harmonics, 50MHz 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, 3475MHz									
6950.00	-4.1	V	3.0	45.1	1.0	-48.2	-13.0	-35.2	
10425.00	0.0	V	3.0	43.5	1.0	-42.6	-13.0	-29.6	
13900.00	3.7	V	3.0	44.2	1.0	-39.5	-13.0	-26.5	
6950.00	-4.0	H	3.0	45.1	1.0	-48.1	-13.0	-35.1	
10425.00	0.1	H	3.0	43.5	1.0	-42.4	-13.0	-29.4	
13900.00	3.9	H	3.0	44.2	1.0	-39.4	-13.0	-26.4	
Mid Ch, 3499.98MHz									
6999.96	-3.9	V	3.0	45.1	1.0	-48.1	-13.0	-35.1	
10499.94	0.4	V	3.0	43.5	1.0	-42.1	-13.0	-29.1	
13999.92	3.9	V	3.0	44.3	1.0	-39.4	-13.0	-26.4	
6999.96	-3.8	H	3.0	45.1	1.0	-48.0	-13.0	-35.0	
10499.94	0.2	H	3.0	43.5	1.0	-42.3	-13.0	-29.3	
13999.92	4.0	H	3.0	44.3	1.0	-39.3	-13.0	-26.3	
High Ch, 3524MHz									
7048.00	-3.8	V	3.0	45.1	1.0	-47.9	-13.0	-34.9	
10572.00	0.2	V	3.0	43.5	1.0	-42.3	-13.0	-29.3	
14096.00	4.2	V	3.0	44.3	1.0	-39.2	-13.0	-26.2	
7048.00	-3.7	H	3.0	45.1	1.0	-47.8	-13.0	-34.8	
10572.00	0.5	H	3.0	43.5	1.0	-42.0	-13.0	-29.0	
14096.00	4.3	H	3.0	44.3	1.0	-39.1	-13.0	-26.1	

NR Band n77(3700-3980 MHz)

60 MHz
QPSK
ANT E

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

Company: Samsung
Project #: 4791196626
Date: 2024-04-03
Test Engineer: 26087
Configuration: EUT / AC Adapter, Y-Position, HF
Location: Chamber 1
Mode: 5G NR_QPSK NR n77 UP Harmonics, 60MHz 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, 3730MHz									
7460.00	-0.4	V	3.0	45.0	1.0	-44.4	-13.0	-31.4	
11190.00	4.2	V	3.0	43.4	1.0	-38.2	-13.0	-25.2	
14920.00	7.7	V	3.0	44.8	1.0	-36.1	-13.0	-23.1	
7460.00	-0.3	H	3.0	45.0	1.0	-44.2	-13.0	-31.2	
11190.00	4.4	H	3.0	43.4	1.0	-37.9	-13.0	-24.9	
14920.00	7.7	H	3.0	44.8	1.0	-36.1	-13.0	-23.1	
Mid Ch, 3840MHz									
7680.00	-0.8	V	3.0	44.9	1.0	-44.7	-13.0	-31.7	
11520.00	4.9	V	3.0	43.3	1.0	-37.4	-13.0	-24.4	
15360.00	8.0	V	3.0	44.7	1.0	-35.7	-13.0	-22.7	
7680.00	0.1	H	3.0	44.9	1.0	-43.8	-13.0	-30.8	
11520.00	4.7	H	3.0	43.3	1.0	-37.6	-13.0	-24.6	
15360.00	8.0	H	3.0	44.7	1.0	-35.8	-13.0	-22.8	
High Ch, 3950MHz									
7900.00	0.3	V	3.0	44.8	1.0	-43.5	-13.0	-30.5	
11850.00	5.1	V	3.0	43.2	1.0	-37.1	-13.0	-24.1	
15800.00	7.7	V	3.0	44.6	1.0	-35.9	-13.0	-22.9	
7900.00	-0.2	H	3.0	44.8	1.0	-43.9	-13.0	-30.9	
11850.00	5.2	H	3.0	43.2	1.0	-37.1	-13.0	-24.1	
15800.00	7.9	H	3.0	44.6	1.0	-35.7	-13.0	-22.7	

25 MHz
QPSK
ANT C
SRS1

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

Company: Samsung
Project #: 4791196626
Date: 2024-04-22
Test Engineer: 24542
Configuration: EUT / AC Adapter, X-Position, Open
Location: Chamber 1
Mode: 5G NR n77 UP(SRS) Harmonics, 25MHz 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, 3712.5MHz									
7425.00	-3.6	V	3.0	45.0	1.0	-47.6	-13.0	-34.6	
11137.50	1.4	V	3.0	43.4	1.0	-41.0	-13.0	-28.0	
14850.00	4.9	V	3.0	44.8	1.0	-38.9	-13.0	-25.9	
7425.00	-3.5	H	3.0	45.0	1.0	-47.5	-13.0	-34.5	
11137.50	1.6	H	3.0	43.4	1.0	-40.8	-13.0	-27.8	
14850.00	5.0	H	3.0	44.8	1.0	-38.8	-13.0	-25.8	
Mid Ch, 3840MHz									
7680.00	-3.3	V	3.0	44.9	1.0	-47.1	-13.0	-34.1	
11520.00	1.4	V	3.0	43.3	1.0	-40.8	-13.0	-27.8	
15360.00	5.4	V	3.0	44.7	1.0	-38.3	-13.0	-25.3	
7680.00	-3.2	H	3.0	44.9	1.0	-47.1	-13.0	-34.1	
11520.00	1.7	H	3.0	43.3	1.0	-40.6	-13.0	-27.6	
15360.00	5.5	H	3.0	44.7	1.0	-38.2	-13.0	-25.2	
High Ch, 3967.5MHz									
7935.00	-2.9	V	3.0	44.8	1.0	-46.7	-13.0	-33.7	
11902.50	2.1	V	3.0	43.2	1.0	-40.1	-13.0	-27.1	
15870.00	6.0	V	3.0	44.6	1.0	-37.5	-13.0	-24.5	
7935.00	-2.9	H	3.0	44.8	1.0	-46.7	-13.0	-33.7	
11902.50	2.3	H	3.0	43.2	1.0	-39.9	-13.0	-26.9	
15870.00	6.2	H	3.0	44.6	1.0	-37.4	-13.0	-24.4	

50 MHz

QPSK

ANT F
SRS2

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

Company: Samsung
Project #: 4791196626
Date: 2024-04-23
Test Engineer: 26087
Configuration: EUT / AC Adapter, X-Position, Open
Location: Chamber 1
Mode: 5G NR n77 UP(SRS) Harmonics, 50MHz 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, 3725MHz									
7450.00	-3.5	V	3.0	45.0	1.0	-47.4	-13.0	-34.4	
11175.00	1.3	V	3.0	43.4	1.0	-41.1	-13.0	-28.1	
14900.00	4.8	V	3.0	44.8	1.0	-39.0	-13.0	-26.0	
7450.00	-3.4	H	3.0	45.0	1.0	-47.4	-13.0	-34.4	
11175.00	1.4	H	3.0	43.4	1.0	-41.0	-13.0	-28.0	
14900.00	4.9	H	3.0	44.8	1.0	-38.8	-13.0	-25.8	
Mid Ch, 3840MHz									
7680.00	-3.3	V	3.0	44.9	1.0	-47.2	-13.0	-34.2	
11520.00	1.4	V	3.0	43.3	1.0	-40.9	-13.0	-27.9	
15360.00	5.5	V	3.0	44.7	1.0	-38.2	-13.0	-25.2	
7680.00	-3.3	H	3.0	44.9	1.0	-47.1	-13.0	-34.1	
11520.00	1.5	H	3.0	43.3	1.0	-40.8	-13.0	-27.8	
15360.00	5.6	H	3.0	44.7	1.0	-38.1	-13.0	-25.1	
High Ch, 3955MHz									
7910.00	-3.0	V	3.0	44.8	1.0	-46.8	-13.0	-33.8	
11865.00	2.0	V	3.0	43.2	1.0	-40.3	-13.0	-27.3	
15820.00	6.0	V	3.0	44.6	1.0	-37.6	-13.0	-24.6	
7910.00	-3.0	H	3.0	44.8	1.0	-46.8	-13.0	-33.8	
11865.00	2.2	H	3.0	43.2	1.0	-40.0	-13.0	-27.0	
15820.00	6.1	H	3.0	44.6	1.0	-37.5	-13.0	-24.5	

50 MHz

QPSK

ANT A
SRS3

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

Company: Samsung
Project #: 4791196626
Date: 2024-04-19
Test Engineer: 24542
Configuration: EUT / AC Adapter, X-Position, HF
Location: Chamber 1
Mode: 5G NR n77 UP(SRS) Harmonics, 50MHz 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, 3725.01MHz									
7450.02	-3.3	V	3.0	45.0	1.0	-47.2	-13.0	-34.2	
11175.03	1.4	V	3.0	43.4	1.0	-41.0	-13.0	-28.0	
14900.40	5.1	V	3.0	44.8	1.0	-38.7	-13.0	-25.7	
7450.02	-3.3	H	3.0	45.0	1.0	-47.3	-13.0	-34.3	
11175.03	1.7	H	3.0	43.4	1.0	-40.7	-13.0	-27.7	
14900.40	5.2	H	3.0	44.8	1.0	-38.6	-13.0	-25.6	
Mid Ch, 3840MHz									
7680.00	-3.2	V	3.0	44.9	1.0	-47.1	-13.0	-34.1	
11520.00	1.8	V	3.0	43.3	1.0	-40.5	-13.0	-27.5	
15360.00	5.6	V	3.0	44.7	1.0	-38.2	-13.0	-25.2	
7680.00	-3.2	H	3.0	44.9	1.0	-47.1	-13.0	-34.1	
11520.00	1.9	H	3.0	43.3	1.0	-40.4	-13.0	-27.4	
15360.00	5.7	H	3.0	44.7	1.0	-38.0	-13.0	-25.0	
High Ch, 3954.99MHz									
7909.98	-2.7	V	3.0	44.8	1.0	-46.5	-13.0	-33.5	
11864.97	2.3	V	3.0	43.2	1.0	-39.9	-13.0	-26.9	
15819.96	6.2	V	3.0	44.6	1.0	-37.4	-13.0	-24.4	
7909.98	-2.7	H	3.0	44.8	1.0	-46.5	-13.0	-33.5	
11864.97	2.4	H	3.0	43.2	1.0	-39.8	-13.0	-26.8	
15819.96	6.2	H	3.0	44.6	1.0	-37.4	-13.0	-24.4	

END OF REPORT