



8.5. CONDUCTED SPURIOUS EMISSIONS

RULE PART(S)

FCC: §2.1051, §24.238

LIMITS

§24.238

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

TEST PROCEDURE

Per KDB 971168 D01 Power Meas License Digital Systems v03r01

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

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

NOTE1

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

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

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

NOTE2

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

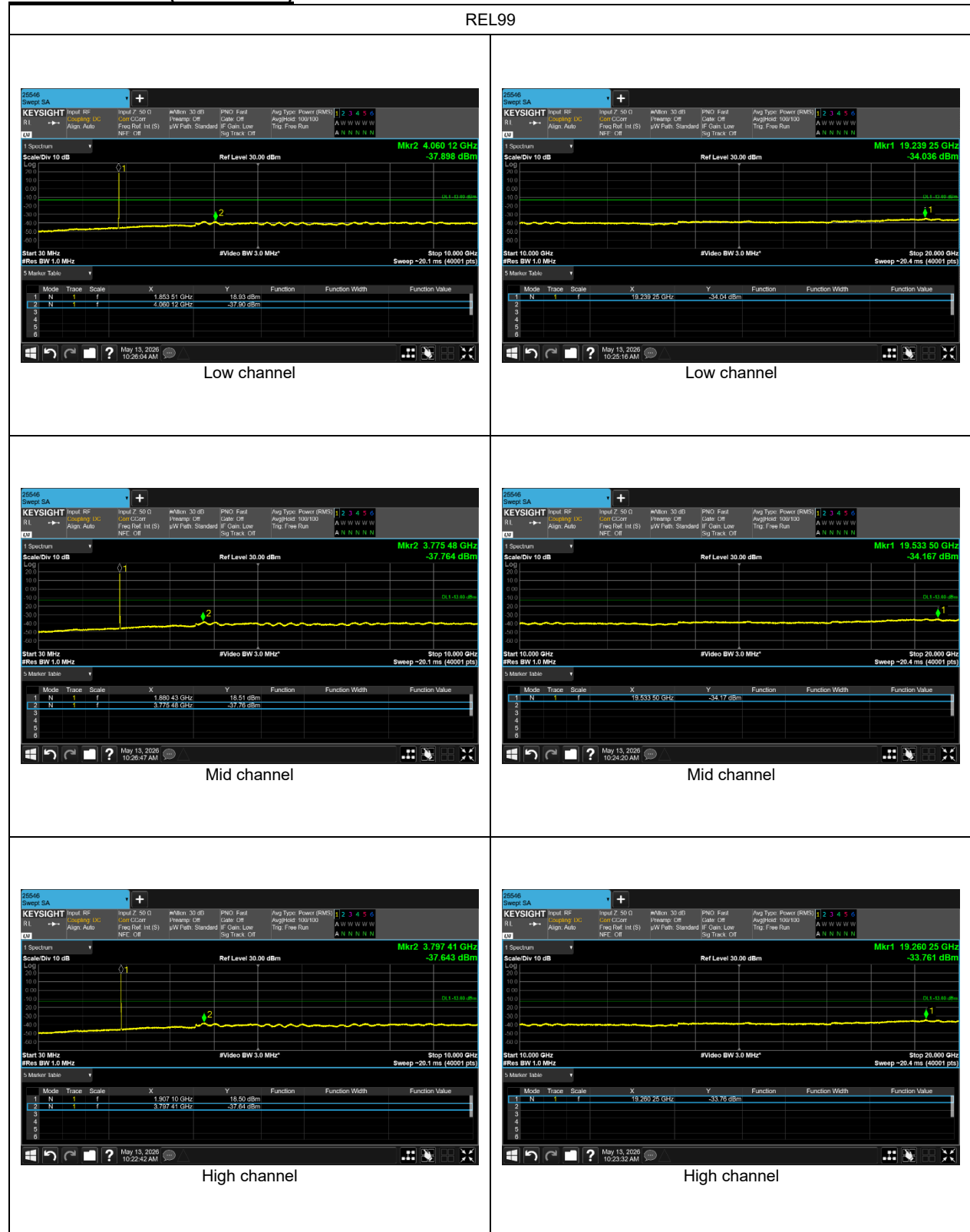
RESULTS

See the following pages.

8.5.1. OUT OF BAND EMISSIONS RESULT

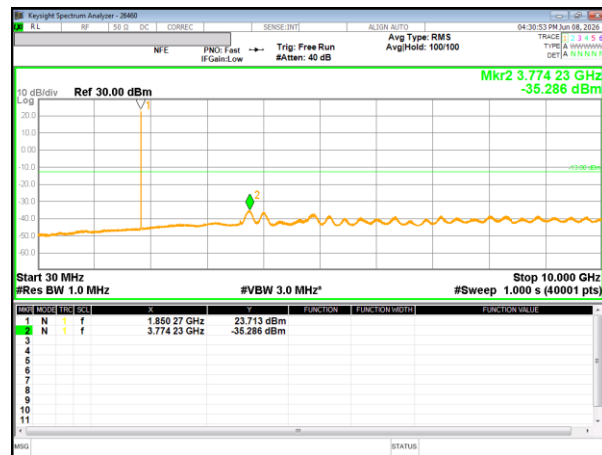
WCDMA Band 2 (ANT Main 1)

REL99

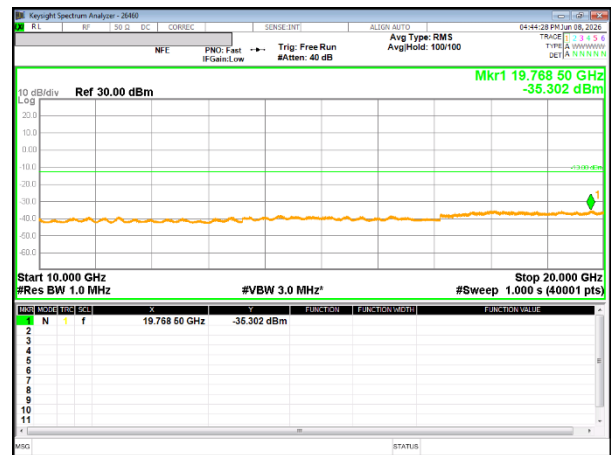


LTE Band 25 (ANT Main 1)

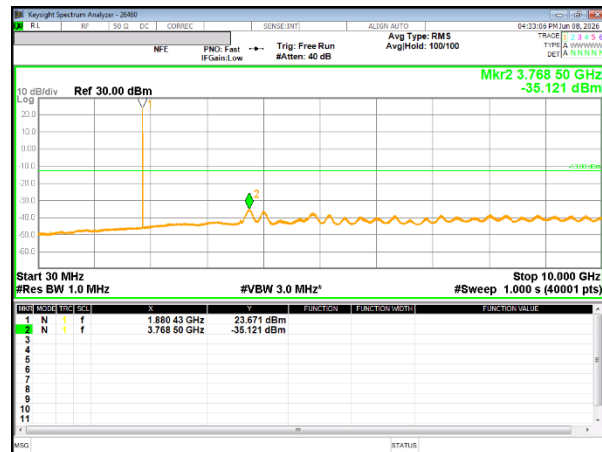
5 MHz QPSK



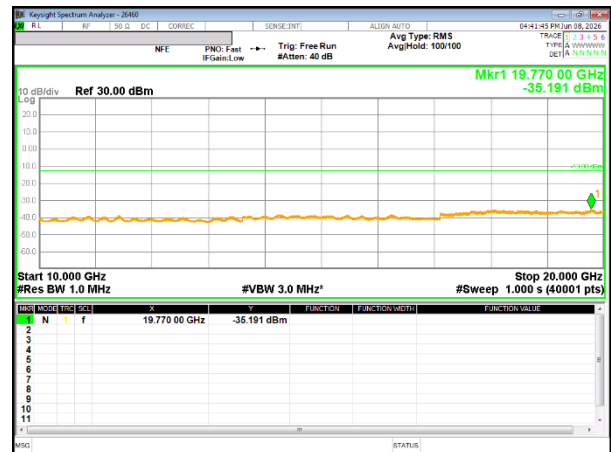
Low channel



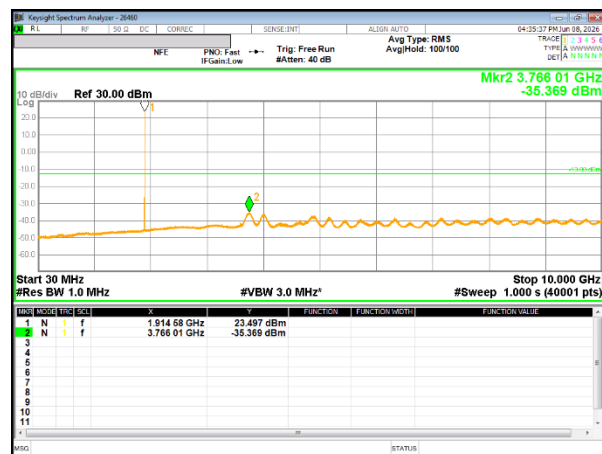
Low channel



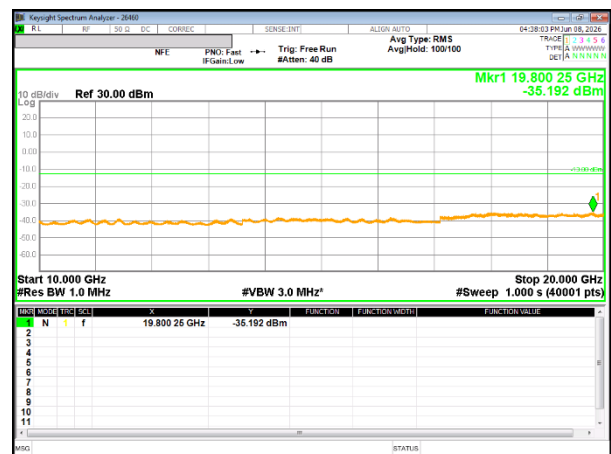
Mid channel



Mid channel



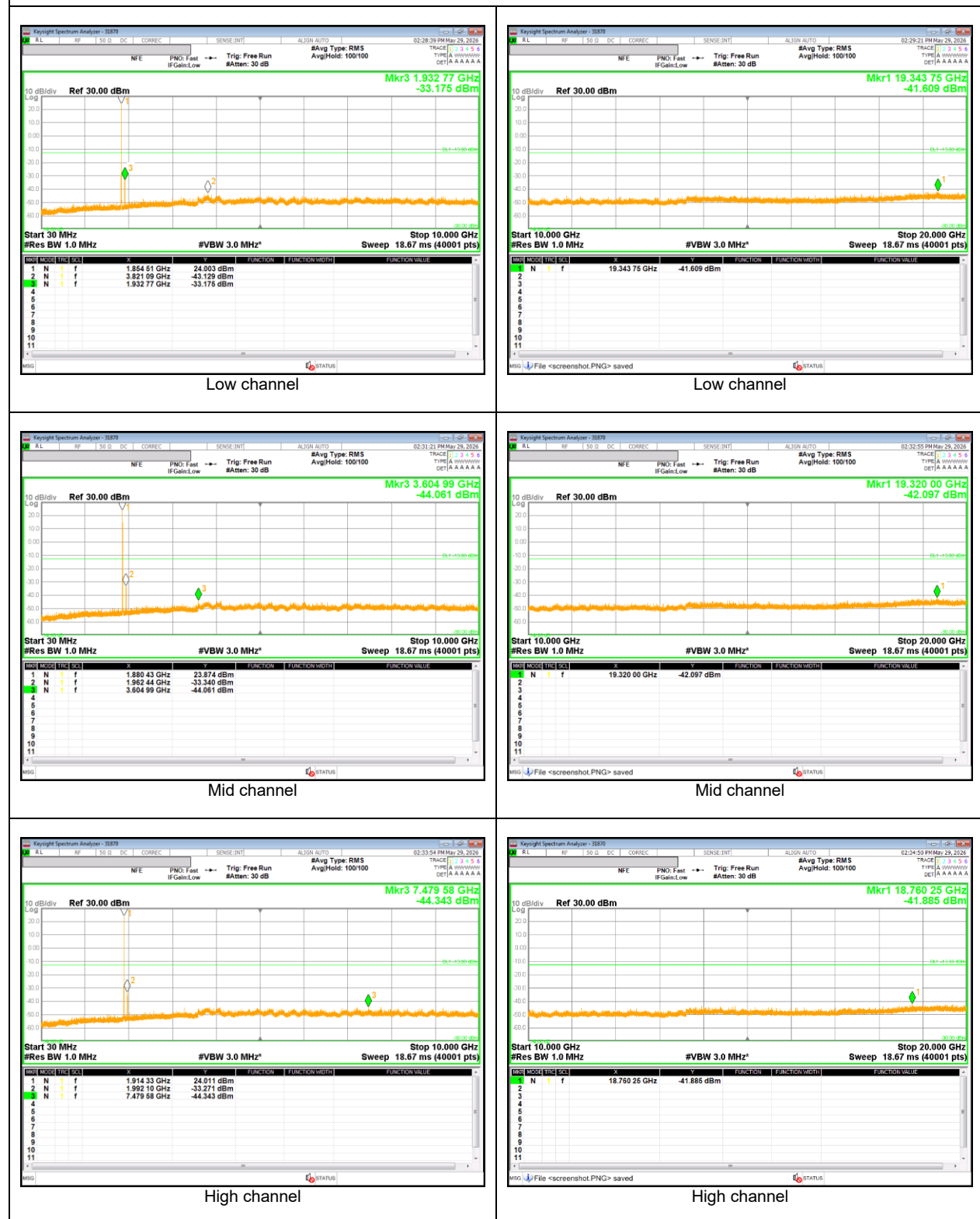
High channel



High channel

NR Band n25 DFT-s OFDM (ANT Main 1)

5 MHz QPSK



8.6. FREQUENCY STABILITY

RULE PART(S)

FCC: §2.1055, §24.235

LIMITS

§24.235

The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

TEST PROCEDURE

Per KDB 971168 D01 Power Meas License Digital Systems v03r01

NOTE

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

RESULTS

See the following pages.

8.6.1. FREQUENCY STABILITY RESULT

WCDMA Band 2 (Lowest Frequency: Rel99/ Highest Frequency: Rel99)

Test Date	2026-05-21
Test Engineer	25546

Limit		1850	1910	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ End of OBW	F high @ End of OBW		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)	Normal	1850.3205	1909.6770		
Extreme (50C)		1850.3205	1909.6770	13.6	0.007
Extreme (40C)		1850.3205	1909.6770	16.8	0.009
Extreme (30C)		1850.3205	1909.6770	25.4	0.014
Extreme (10C)		1850.3205	1909.6770	20.1	0.011
Extreme (0C)		1850.3205	1909.6770	36.5	0.019
Extreme (-10C)		1850.3205	1909.6770	18.5	0.010
Extreme (-20C)		1850.3205	1909.6770	27.4	0.015
Extreme (-30C)		1850.3205	1909.6770	20.1	0.011
20C	15%	1850.3205	1909.6770	23.9	0.013
	-15%	1850.3205	1909.6770	33.7	0.018
	End Point	1850.3205	1909.6770	26.9	0.014

LTE Band 25 (Lowest Frequency: 16QAM / Highest Frequency: QPSK)

Test Date	2026-05-12
Test Engineer	25546

Limit		1850	1915	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ End of OBW	F high @ End of OBW		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)	Normal	1850.1565	1914.8460		
Extreme (50C)		1850.1565	1914.8460	9.6	0.005
Extreme (40C)		1850.1565	1914.8460	16.4	0.009
Extreme (30C)		1850.1565	1914.8460	4.8	0.003
Extreme (10C)		1850.1565	1914.8460	12.7	0.007
Extreme (0C)		1850.1565	1914.8460	10.1	0.005
Extreme (-10C)		1850.1565	1914.8460	11.1	0.006
Extreme (-20C)		1850.1565	1914.8460	13.4	0.007
Extreme (-30C)		1850.1565	1914.8460	10.4	0.005
20C	15%	1850.1565	1914.8460	15.7	0.008
	-15%	1850.1565	1914.8460	14.7	0.008
	End Point	1850.1565	1914.8460	13.2	0.007

NR Band n25 (Lowest Frequency: 16QAM / Highest Frequency: 16QAM)

Test Date	2026-05-27
Test Engineer	31870

Limit		1850	1915	Delta (Hz)	Frequency Stability (ppm)
Condition		F low @ End of OBW	F high @ End of OBW		
Temperature	Voltage	(MHz)	(MHz)		
Normal (20C)	Normal	1850.2510	1914.7425		
Extreme (50C)		1850.2510	1914.7425	12.3	0.007
Extreme (40C)		1850.2510	1914.7425	11.5	0.006
Extreme (30C)		1850.2510	1914.7425	15.7	0.008
Extreme (10C)		1850.2510	1914.7425	10.6	0.006
Extreme (0C)		1850.2510	1914.7425	23.7	0.013
Extreme (-10C)		1850.2510	1914.7425	15.5	0.008
Extreme (-20C)		1850.2510	1914.7425	29.4	0.016
Extreme (-30C)		1850.2510	1914.7425	31.4	0.017
20C	15%	1850.2510	1914.7425	18.7	0.010
	-15%	1850.2510	1914.7425	25.0	0.013
	End Point	1850.2510	1914.7425	11.5	0.006

9. RADIATED RESULTS

9.1. RADIATED POWER (EIRP)

RULE PART(S)

FCC: §2.1046, §24.232

LIMITS

§24.232(c)

Mobile/portable stations are limited to 2 watts e.i.r.p. peak power and the equipment must employ means to limit the 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 $\geq 1\%$ to 5% of the OBW;
- b) Set VBW $\geq 3 \times$ RBW;
- c) Set span $\geq 2 \times$ to $3 \times$ the OBW.;
- d) Sweep time = auto couple or Set $\geq [10 \times (\text{number of points in sweep}) \times (\text{transmission period})]$ for single sweep (automation-compatible) measurement. Transmission period is the on and off time of the transmitter.;
- e) Detector = rms;
- f) Ensure that the number of measurement points $\geq 2 \times \text{span/RBW}$;
- g) Trace mode = average;
- h) If the EUT can be configured to transmit continuously, then set the trigger to free run.
- i) If the EUT cannot be configured to transmit continuously, then use a sweep trigger with the level set to enable triggering only on full power bursts and configure the EUT to transmit at full power for the entire duration of each sweep. Verify that the sweep time is less than or equal to the transmission burst duration. Time gating can also be used under similar constraints (i.e., configured such that measurement data is collected only during active full-power transmissions).
- j) Trace average at least 100 traces in power averaging (rms) mode if sweep is set to auto-couple. To accurately determine the average power over multiple symbols, it can be necessary to increase the number of traces to be averaged above 100 or, if using a manually configured sweep time, increase the sweep time.
- k) Compute the power by integrating the spectrum across the OBW of the signal using the instrument's band or channel power measurement function, with the band/channel limits set equal to the OBW band edges. If the instrument does not have a band or channel power function, then sum the spectrum levels (in linear power units) at intervals equal to the RBW extending across the entire OBW of the spectrum.

NOTE

LTE, 5G NR : The OBW value corresponding to the total channel bandwidth is the OBW of FullRB. Measurements were made with a 1RB configuration (worst-case) across the entire channel bandwidth, and FRB configurations were reported for the widest BW.

TEST RESULTS

See the following pages.

9.1.1. EIRP RESULT

WCDMA Band 2 (ANT Main 1)

Band	Mode	Frequency (MHz)	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (dBm)	Delta (dB)
Band 2	REL99	1852.40	22.08	H	4.46	9.46	27.08	0.510	33.00	-5.92
		1880.00	20.86	H	4.50	9.20	25.56	0.360	33.00	-7.44
		1907.60	21.77	H	4.53	8.89	26.14	0.411	33.00	-6.86
	HSDPA	1852.40	21.02	H	4.46	9.46	26.02	0.400	33.00	-6.98
		1880.00	20.68	H	4.50	9.20	25.38	0.345	33.00	-7.62
		1907.60	21.00	H	4.53	8.89	25.37	0.344	33.00	-7.63

LTE Band 25 (ANT Main 1)

BW (MHz)	Modulation	Frequency (MHz)	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (dBm)	Delta (dB)	RB
20	QPSK	1860.00	20.09	H	4.48	9.39	25.00	0.316	33.00	-8.00	1 / 0
		1882.50	20.97	H	4.50	9.17	25.64	0.366	33.00	-7.36	1 / 0
		1905.00	22.13	H	4.52	8.93	26.54	0.451	33.00	-6.46	1 / 99
	16-QAM	1860.00	19.52	H	4.48	9.39	24.43	0.277	33.00	-8.57	1 / 0
		1882.50	20.11	H	4.50	9.17	24.78	0.301	33.00	-8.22	1 / 0
		1905.00	21.45	H	4.52	8.93	25.86	0.385	33.00	-7.14	1 / 99
15	QPSK	1857.50	20.14	H	4.48	9.41	25.07	0.321	33.00	-7.93	1 / 0
		1882.50	20.87	H	4.50	9.17	25.54	0.358	33.00	-7.46	1 / 0
		1907.50	22.33	H	4.53	8.89	26.69	0.467	33.00	-6.31	1 / 74
	16-QAM	1857.50	19.59	H	4.48	9.41	24.52	0.283	33.00	-8.48	1 / 0
		1882.50	19.59	H	4.50	9.17	24.26	0.267	33.00	-8.74	1 / 0
		1907.50	21.55	H	4.53	8.89	25.91	0.390	33.00	-7.09	1 / 74
10	QPSK	1855.00	20.09	H	4.47	9.43	25.05	0.320	33.00	-7.95	1 / 0
		1882.50	20.88	H	4.50	9.17	25.55	0.359	33.00	-7.45	1 / 0
		1910.00	22.34	H	4.53	8.85	26.66	0.463	33.00	-6.34	1 / 49
	16-QAM	1855.00	19.09	H	4.47	9.43	24.05	0.254	33.00	-8.95	1 / 0
		1882.50	19.62	H	4.50	9.17	24.29	0.269	33.00	-8.71	1 / 0
		1910.00	21.75	H	4.53	8.85	26.07	0.405	33.00	-6.93	1 / 49
5	QPSK	1852.50	20.11	H	4.46	9.46	25.11	0.324	33.00	-7.89	1 / 0
		1882.50	20.95	H	4.50	9.17	25.62	0.365	33.00	-7.38	1 / 0
		1912.50	22.47	H	4.53	8.82	26.76	0.474	33.00	-6.24	1 / 24
	16-QAM	1852.50	19.56	H	4.46	9.46	24.56	0.286	33.00	-8.44	1 / 0
		1882.50	19.70	H	4.50	9.17	24.37	0.274	33.00	-8.63	1 / 0
		1912.50	21.43	H	4.53	8.82	25.72	0.373	33.00	-7.28	1 / 24
3	QPSK	1851.50	20.08	H	4.46	9.47	25.09	0.323	33.00	-7.91	1 / 8
		1882.50	20.74	H	4.50	9.17	25.41	0.348	33.00	-7.59	1 / 0
		1913.50	22.34	H	4.54	8.80	26.60	0.457	33.00	-6.40	1 / 8
	16-QAM	1851.50	19.02	H	4.46	9.47	24.03	0.253	33.00	-8.97	1 / 0
		1882.50	19.55	H	4.50	9.17	24.22	0.264	33.00	-8.78	1 / 0
		1913.50	21.77	H	4.54	8.80	26.03	0.401	33.00	-6.97	1 / 14
1.4	QPSK	1850.70	19.99	H	4.46	9.48	25.01	0.317	33.00	-7.99	1 / 5
		1882.50	20.79	H	4.50	9.17	25.46	0.352	33.00	-7.54	1 / 0
		1914.30	22.47	H	4.54	8.79	26.72	0.470	33.00	-6.28	1 / 5
	16-QAM	1850.70	19.08	H	4.46	9.48	24.10	0.257	33.00	-8.90	1 / 5
		1882.50	20.03	H	4.50	9.17	24.70	0.295	33.00	-8.30	1 / 0
		1914.30	21.45	H	4.54	8.79	25.70	0.372	33.00	-7.30	1 / 5
20	QPSK	1860.00	19.02	H	4.48	9.39	23.93	0.247	33.00	-9.07	100/0
		1882.50	19.75	H	4.50	9.17	24.42	0.277	33.00	-8.58	100/0
		1905.00	21.09	H	4.52	8.93	25.50	0.355	33.00	-7.50	100/0
	16-QAM	1860.00	18.02	H	4.48	9.39	22.93	0.196	33.00	-10.07	100/0
		1882.50	18.52	H	4.50	9.17	23.19	0.208	33.00	-9.81	100/0
		1905.00	20.00	H	4.52	8.93	24.41	0.276	33.00	-8.59	100/0

LTE Band 25 (ANT Sub 3)

BW (MHz)	Modulation	Frequency (MHz)	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (dBm)	Delta (dB)	RB
20	QPSK	1860.00	18.06	H	4.48	9.39	22.97	0.198	33.00	-10.03	1 / 99
		1882.50	18.79	H	4.50	9.17	23.46	0.222	33.00	-9.54	1 / 99
		1905.00	19.16	H	4.52	8.93	23.57	0.228	33.00	-9.43	1 / 49
	16-QAM	1860.00	17.15	H	4.48	9.39	22.06	0.161	33.00	-10.94	1 / 99
		1882.50	17.80	H	4.50	9.17	22.47	0.177	33.00	-10.53	1 / 99
		1905.00	18.12	H	4.52	8.93	22.53	0.179	33.00	-10.47	1 / 49
15	QPSK	1857.50	17.96	H	4.48	9.41	22.89	0.195	33.00	-10.11	1 / 74
		1882.50	18.78	H	4.50	9.17	23.45	0.221	33.00	-9.55	1 / 74
		1907.50	19.09	H	4.53	8.89	23.45	0.221	33.00	-9.55	1 / 0
	16-QAM	1857.50	16.97	H	4.48	9.41	21.90	0.155	33.00	-11.10	1 / 74
		1882.50	17.32	H	4.50	9.17	21.99	0.158	33.00	-11.01	1 / 74
		1907.50	18.25	H	4.53	8.89	22.61	0.182	33.00	-10.39	1 / 74
10	QPSK	1855.00	17.80	H	4.47	9.43	22.76	0.189	33.00	-10.24	1 / 49
		1882.50	18.76	H	4.50	9.17	23.43	0.220	33.00	-9.57	1 / 25
		1910.00	19.12	H	4.53	8.85	23.44	0.221	33.00	-9.56	1 / 0
	16-QAM	1855.00	16.52	H	4.47	9.43	21.48	0.141	33.00	-11.52	1 / 49
		1882.50	17.26	H	4.50	9.17	21.93	0.156	33.00	-11.07	1 / 25
		1910.00	18.24	H	4.53	8.85	22.56	0.180	33.00	-10.44	1 / 0
5	QPSK	1852.50	17.86	H	4.46	9.46	22.86	0.193	33.00	-10.14	1 / 24
		1882.50	18.92	H	4.50	9.17	23.59	0.229	33.00	-9.41	1 / 0
		1912.50	19.23	H	4.53	8.82	23.52	0.225	33.00	-9.48	1 / 0
	16-QAM	1852.50	16.59	H	4.46	9.46	21.59	0.144	33.00	-11.41	1 / 24
		1882.50	17.45	H	4.50	9.17	22.12	0.163	33.00	-10.88	1 / 24
		1912.50	18.35	H	4.53	8.82	22.64	0.184	33.00	-10.36	1 / 24
3	QPSK	1851.50	17.70	H	4.46	9.47	22.71	0.187	33.00	-10.29	1 / 0
		1882.50	18.86	H	4.50	9.17	23.53	0.225	33.00	-9.47	1 / 8
		1913.50	19.16	H	4.54	8.80	23.42	0.220	33.00	-9.58	1 / 0
	16-QAM	1851.50	16.40	H	4.46	9.47	21.41	0.138	33.00	-11.59	1 / 0
		1882.50	17.29	H	4.50	9.17	21.96	0.157	33.00	-11.04	1 / 0
		1913.50	18.35	H	4.54	8.80	22.61	0.182	33.00	-10.39	1 / 0
1.4	QPSK	1850.70	17.74	H	4.46	9.48	22.76	0.189	33.00	-10.24	1 / 5
		1882.50	18.80	H	4.50	9.17	23.47	0.222	33.00	-9.53	1 / 5
		1914.30	19.54	H	4.54	8.79	23.79	0.239	33.00	-9.21	1 / 5
	16-QAM	1850.70	16.88	H	4.46	9.48	21.90	0.155	33.00	-11.10	1 / 5
		1882.50	17.40	H	4.50	9.17	22.07	0.161	33.00	-10.93	1 / 5
		1914.30	18.04	H	4.54	8.79	22.29	0.169	33.00	-10.71	1 / 5
20	QPSK	1860.00	16.86	H	4.48	9.39	21.77	0.150	33.00	-11.23	100/0
		1882.50	17.80	H	4.50	9.17	22.47	0.177	33.00	-10.53	100/0
		1905.00	18.08	H	4.52	8.93	22.49	0.177	33.00	-10.51	100/0
	16-QAM	1860.00	15.61	H	4.48	9.39	20.52	0.113	33.00	-12.48	100/0
		1882.50	16.34	H	4.50	9.17	21.01	0.126	33.00	-11.99	100/0
		1905.00	16.71	H	4.52	8.93	21.12	0.129	33.00	-11.88	100/0

NR Band n25 DFT-s OFDM (ANT Main 1)

BW (MHz)	Modulation	Frequency (MHz)	SG reading (dBm)	Ant. Pol. (H/V)	Cable Loss (dB)	Antenna Gain (dBi)	EIRP (dBm)	EIRP (W)	Limit (dBm)	Delta (dB)	RB
40	QPSK	1870.00	21.46	H	4.49	9.29	26.26	0.423	33.00	-6.74	1 / 1
		1882.50	22.14	H	4.50	9.17	26.81	0.480	33.00	-6.19	1 / 107
		1895.00	22.71	H	4.52	9.05	27.25	0.531	33.00	-5.75	1 / 1
	16-QAM	1870.00	20.41	H	4.49	9.29	25.21	0.332	33.00	-7.79	1 / 1
		1882.50	20.85	H	4.50	9.17	25.52	0.356	33.00	-7.48	1 / 1
		1895.00	21.72	H	4.52	9.05	26.25	0.422	33.00	-6.75	1 / 1
35	QPSK	1867.50	21.63	H	4.49	9.32	26.46	0.443	33.00	-6.54	1 / 1
		1882.50	22.35	H	4.50	9.17	27.02	0.504	33.00	-5.98	1 / 1
		1897.50	22.87	H	4.52	9.03	27.38	0.547	33.00	-5.62	1 / 1
	16-QAM	1867.50	20.61	H	4.49	9.32	25.44	0.350	33.00	-7.56	1 / 1
		1882.50	21.11	H	4.50	9.17	25.78	0.378	33.00	-7.22	1 / 1
		1897.50	21.93	H	4.52	9.03	26.44	0.441	33.00	-6.56	1 / 1
30	QPSK	1865.00	21.65	H	4.48	9.34	26.51	0.448	33.00	-6.49	1 / 1
		1882.50	22.37	H	4.50	9.17	27.04	0.506	33.00	-5.96	1 / 1
		1900.00	22.84	H	4.52	9.01	27.33	0.541	33.00	-5.67	1 / 1
	16-QAM	1865.00	20.60	H	4.48	9.34	25.46	0.352	33.00	-7.54	1 / 1
		1882.50	21.11	H	4.50	9.17	25.78	0.378	33.00	-7.22	1 / 1
		1900.00	21.87	H	4.52	9.01	26.36	0.433	33.00	-6.64	1 / 158
25	QPSK	1862.50	21.60	H	4.48	9.36	26.48	0.445	33.00	-6.52	1 / 1
		1882.50	22.38	H	4.50	9.17	27.05	0.507	33.00	-5.95	1 / 1
		1902.50	22.84	H	4.52	8.97	27.29	0.536	33.00	-5.71	1 / 131
	16-QAM	1862.50	20.55	H	4.48	9.36	25.43	0.349	33.00	-7.57	1 / 1
		1882.50	21.14	H	4.50	9.17	25.81	0.381	33.00	-7.19	1 / 1
		1902.50	21.93	H	4.52	8.97	26.38	0.435	33.00	-6.62	1 / 131
20	QPSK	1860.00	21.63	H	4.48	9.39	26.54	0.451	33.00	-6.46	1 / 1
		1882.50	22.41	H	4.50	9.17	27.08	0.511	33.00	-5.92	1 / 1
		1905.00	22.91	H	4.52	8.93	27.32	0.540	33.00	-5.68	1 / 104
	16-QAM	1860.00	20.58	H	4.48	9.39	25.49	0.354	33.00	-7.51	1 / 1
		1882.50	21.17	H	4.50	9.17	25.84	0.384	33.00	-7.16	1 / 1
		1905.00	22.05	H	4.52	8.93	26.46	0.443	33.00	-6.54	1 / 104
15	QPSK	1857.50	21.62	H	4.48	9.41	26.55	0.452	33.00	-6.45	1 / 1
		1882.50	22.42	H	4.50	9.17	27.09	0.512	33.00	-5.91	1 / 1
		1907.50	22.98	H	4.53	8.89	27.34	0.542	33.00	-5.66	1 / 77
	16-QAM	1857.50	20.61	H	4.48	9.41	25.54	0.358	33.00	-7.46	1 / 1
		1882.50	21.16	H	4.50	9.17	25.83	0.383	33.00	-7.17	1 / 1
		1907.50	22.08	H	4.53	8.89	26.44	0.441	33.00	-6.56	1 / 77
10	QPSK	1855.00	21.58	H	4.47	9.43	26.54	0.451	33.00	-6.46	1 / 1
		1882.50	22.38	H	4.50	9.17	27.05	0.507	33.00	-5.95	1 / 1
		1910.00	22.96	H	4.53	8.85	27.28	0.535	33.00	-5.72	1 / 50
	16-QAM	1855.00	20.52	H	4.47	9.43	25.48	0.353	33.00	-7.52	1 / 1
		1882.50	21.10	H	4.50	9.17	25.77	0.378	33.00	-7.23	1 / 1
		1910.00	22.10	H	4.53	8.85	26.42	0.439	33.00	-6.58	1 / 50
5	QPSK	1852.50	21.63	H	4.46	9.46	26.63	0.460	33.00	-6.37	1 / 23
		1882.50	22.39	H	4.50	9.17	27.06	0.508	33.00	-5.94	1 / 1
		1912.50	23.01	H	4.53	8.82	27.30	0.537	33.00	-5.70	1 / 23
	16-QAM	1852.50	20.44	H	4.46	9.46	25.44	0.350	33.00	-7.56	1 / 1
		1882.50	21.08	H	4.50	9.17	25.75	0.376	33.00	-7.25	1 / 1
		1912.50	22.14	H	4.53	8.82	26.43	0.440	33.00	-6.57	1 / 23
40	QPSK	1870.00	20.44	H	4.49	9.29	25.24	0.334	33.00	-7.76	216/0
		1882.50	21.18	H	4.50	9.17	25.85	0.385	33.00	-7.15	216/0
		1895.00	21.68	H	4.52	9.05	26.22	0.419	33.00	-6.78	216/0
	16-QAM	1870.00	19.02	H	4.49	9.29	23.82	0.241	33.00	-9.18	216/0
		1882.50	19.47	H	4.50	9.17	24.14	0.259	33.00	-8.86	216/0
		1895.00	20.20	H	4.52	9.05	24.74	0.298	33.00	-8.26	216/0

9.2. RADIATED SPURIOUS EMISSION

RULE PART(S)

FCC: §2.1053, §24.238

LIMIT

24.238(a)

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least $43 + 10 \log (P)$ dB.

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 = 1 MHz for emissions above 1 GHz
- b) Set VBW $\geq 3 \times$ RBW;
- c) Set span ≥ 1.5 times the OBW;
- d) Sweep time = auto couple;
- e) Detector = rms;
- f) Ensure that the number of measurement points $\geq 2 \times$ span/RBW;
- g) Trace Mode = average;

NOTE1

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

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

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

NOTE2

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

RESULTS

See the following pages.

9.2.1. SPURIOUS RADIATION RESULT

WCDMA Band 2

REL99

ANT Main 1

UL Verification Services, Inc.

Above 1GHz High Frequency Substitution Measurement

Company: Samsung
Project #: 4792232010
Date: 2026-05-21
Test Engineer: 28183
Configuration: EUT / AC Adapter, Y-Position
Location: Chamber 2
Mode: Rel99 Band 2 Harmonics
Test Voltage: AC 120 V, 60 Hz

f MHz	SA reading (dBm)	Ant. Pol. (H/V)	Distance (m)	AFCL (dB/m)	Conversion Factor(dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1852.4MHz									
3704.80	-76.6	H	3.0	0.7	11.74	-64.2	-13.0	-51.2	
5557.20	-77.6	H	3.0	4.3	11.74	-61.6	-13.0	-48.6	
7409.60	-80.1	H	3.0	8.1	11.74	-60.2	-13.0	-47.2	NF
9262.00	-82.6	H	3.0	11.9	11.74	-58.9	-13.0	-45.9	NF
11114.40	-83.7	H	3.0	15.5	11.74	-56.5	-13.0	-43.5	NF
Mid Ch, 1880MHz									
3760.00	-76.9	V	3.0	0.9	11.74	-64.2	-13.0	-51.2	
5640.00	-77.2	V	3.0	4.4	11.74	-61.0	-13.0	-48.0	
7520.00	-79.8	V	3.0	8.3	11.74	-59.7	-13.0	-46.7	NF
9400.00	-82.3	V	3.0	12.3	11.74	-58.2	-13.0	-45.2	NF
11280.00	-84.2	V	3.0	15.8	11.74	-56.6	-13.0	-43.6	NF
3760.00	-72.7	H	3.0	0.9	11.74	-60.0	-13.0	-47.0	
5640.00	-77.9	H	3.0	4.4	11.74	-61.7	-13.0	-48.7	
7520.00	-79.7	H	3.0	8.3	11.74	-59.7	-13.0	-46.7	NF
9400.00	-82.3	H	3.0	12.3	11.74	-58.3	-13.0	-45.3	NF
11280.00	-84.1	H	3.0	15.8	11.74	-56.5	-13.0	-43.5	NF
High Ch, 1907.6MHz									
3815.20	-76.8	H	3.0	1.2	11.74	-63.9	-13.0	-50.9	
5722.80	-78.4	H	3.0	4.6	11.74	-62.0	-13.0	-49.0	
7630.40	-80.2	H	3.0	8.5	11.74	-60.0	-13.0	-47.0	NF
9538.00	-82.5	H	3.0	12.7	11.74	-58.0	-13.0	-45.0	NF
11445.60	-84.2	H	3.0	16.2	11.74	-56.2	-13.0	-43.2	NF

NF : Noise Floor

LTE Band 25

5 MHz

QPSK

ANT Main 1

UL Verification Services, Inc.

Above 1GHz High Frequency Substitution Measurement

Company: Samsung

Project #: 4792232010

Date: 2026-05-22

Test Engineer: 28183

Configuration: EUT / AC Adapter, Z-Position

Location: Chamber 2

Mode: LTE_QPSK Band 25 Harmonics, 5MHz Bandwidth

Test Votage: AC 120 V, 60 Hz

f MHz	SA reading (dBm)	Ant. Pol. (H/V)	Distance (m)	AFCL (dB/m)	Conversion Factor(dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1852.5MHz									
3705.00	-51.0	H	3.0	0.7	11.74	-38.5	-13.0	-25.5	NF
5557.50	-51.3	H	3.0	4.3	11.74	-35.3	-13.0	-22.3	NF
7410.00	-50.8	H	3.0	8.1	11.74	-31.0	-13.0	-18.0	NF
Mid Ch, 1882.5MHz									
3765.00	-50.8	H	3.0	1.0	11.74	-38.1	-13.0	-25.1	NF
5647.50	-51.2	H	3.0	4.4	11.74	-35.1	-13.0	-22.1	NF
7530.00	-50.5	H	3.0	8.3	11.74	-30.5	-13.0	-17.5	NF
High Ch, 1912.5MHz									
3825.00	-50.8	V	3.0	1.2	11.74	-37.8	-13.0	-24.8	NF
5737.50	-51.4	V	3.0	4.7	11.74	-34.9	-13.0	-21.9	NF
7650.00	-50.7	V	3.0	8.5	11.74	-30.4	-13.0	-17.4	NF
3825.00	-50.7	H	3.0	1.2	11.74	-37.8	-13.0	-24.8	NF
5737.50	-51.4	H	3.0	4.7	11.74	-35.0	-13.0	-22.0	NF
7650.00	-50.6	H	3.0	8.5	11.74	-30.4	-13.0	-17.4	NF
NF : Noise Floor									

1.4 MHz

QPSK

ANT Sub 3

UL Verification Services, Inc.

Above 1GHz High Frequency Substitution Measurement

Company: Samsung

Project #: 4792232010

Date: 2026-06-01

Test Engineer: 28183

Configuration: EUT / AC Adapter, Z-Position

Location: Chamber 2

Mode: LTE_QPSK Band 25 Harmonics, 1.4MHz Bandwidth

Test Votage: AC 120 V, 60 Hz

f MHz	SA reading (dBm)	Ant. Pol. (H/V)	Distance (m)	AFCL (dB/m)	Conversion Factor(dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1850.7MHz									
3701.40	-58.2	H	3.0	0.7	11.74	-45.8	-13.0	-32.8	
5552.10	-70.9	H	3.0	4.2	11.74	-54.9	-13.0	-41.9	
7402.80	-65.6	H	3.0	8.1	11.74	-45.8	-13.0	-32.8	
9253.50	-76.2	H	3.0	11.9	11.74	-52.6	-13.0	-39.6	
11104.20	-84.1	H	3.0	15.4	11.74	-56.9	-13.0	-43.9	NF
12954.90	-84.8	H	3.0	18.5	11.74	-54.6	-13.0	-41.6	NF
Mid Ch, 1882.5MHz									
3765.00	-58.0	H	3.0	1.0	11.74	-45.3	-13.0	-32.3	
5647.50	-70.4	H	3.0	4.4	11.74	-54.2	-13.0	-41.2	
7530.00	-66.1	H	3.0	8.3	11.74	-46.1	-13.0	-33.1	
9412.50	-76.8	H	3.0	12.4	11.74	-52.6	-13.0	-39.6	
11295.00	-84.0	H	3.0	15.8	11.74	-56.4	-13.0	-43.4	NF
13177.50	-84.8	H	3.0	18.8	11.74	-54.2	-13.0	-41.2	NF
High Ch, 1914.3MHz									
3828.60	-59.2	V	3.0	1.2	11.74	-46.3	-13.0	-33.3	
5742.90	-68.9	V	3.0	4.7	11.74	-52.4	-13.0	-39.4	
7657.20	-66.1	V	3.0	8.5	11.74	-45.8	-13.0	-32.8	
9571.50	-77.9	V	3.0	12.7	11.74	-53.4	-13.0	-40.4	
11485.80	-83.9	V	3.0	16.4	11.74	-55.7	-13.0	-42.7	NF
13400.10	-85.2	V	3.0	18.5	11.74	-55.0	-13.0	-42.0	NF
3828.60	-56.9	H	3.0	1.2	11.74	-44.0	-13.0	-31.0	
5742.90	-68.8	H	3.0	4.7	11.74	-52.3	-13.0	-39.3	
7657.20	-67.0	H	3.0	8.5	11.74	-46.7	-13.0	-33.7	
9571.50	-78.2	H	3.0	12.7	11.74	-53.8	-13.0	-40.8	
11485.80	-84.4	H	3.0	16.4	11.74	-56.3	-13.0	-43.3	NF
13400.10	-85.1	H	3.0	18.5	11.74	-54.9	-13.0	-41.9	NF
NF : Noise Floor									

NR Band n25 DFT-s OFDM

UL Verification Services, Inc. Above 1GHz High Frequency Substitution Measurement									
Company:		Samsung							
Project #:		4792232010							
Date:		2026-06-15							
Test Engineer:		28183							
Configuration:		EUT / AC Adapter, X-Position							
Location:		Chamber 2							
Mode:		5G NR_QPSK NR n25 Harmonics, 35MHz Bandwidth							
Test Votage:		AC 120 V, 60 Hz							
f MHz	SA reading (dBm)	Ant. Pol. (H/V)	Distance (m)	AFCL (dB/m)	Conversion Factor(dB)	EIRP (dBm)	Limit (dBm)	Delta (dB)	Notes
Low Ch, 1867.5MHz									
3735.00	-72.9	V	3.0	0.8	11.74	-60.4	-13.0	-47.4	
5602.50	-77.9	V	3.0	4.3	11.74	-61.9	-13.0	-48.9	
7470.00	-78.3	V	3.0	8.2	11.74	-58.4	-13.0	-45.4	
9337.50	-82.6	V	3.0	12.1	11.74	-58.7	-13.0	-45.7	
11205.00	-84.0	V	3.0	16.0	11.74	-56.3	-13.0	-43.3	NF
13072.50	-85.2	V	3.0	18.3	11.74	-55.1	-13.0	-42.1	NF
Mid Ch, 1882.5MHz									
3765.00	-69.6	V	3.0	1.0	11.74	-56.9	-13.0	-43.9	
5647.50	-78.3	V	3.0	4.4	11.74	-62.2	-13.0	-49.2	
7530.00	-79.3	V	3.0	8.3	11.74	-59.2	-13.0	-46.2	
9412.50	-82.7	V	3.0	12.4	11.74	-58.5	-13.0	-45.5	NF
11295.00	-83.9	V	3.0	15.8	11.74	-56.3	-13.0	-43.3	NF
3765.00	-71.1	H	3.0	1.0	11.74	-58.4	-13.0	-45.4	
5647.50	-78.2	H	3.0	4.4	11.74	-62.0	-13.0	-49.0	
7530.00	-80.4	H	3.0	8.3	11.74	-60.4	-13.0	-47.4	NF
9412.50	-82.7	H	3.0	12.4	11.74	-58.5	-13.0	-45.5	NF
High Ch, 1897.5MHz									
3795.00	-72.5	V	3.0	1.1	11.74	-59.6	-13.0	-46.6	
5692.50	-76.4	V	3.0	4.5	11.74	-60.2	-13.0	-47.2	
7590.00	-77.5	V	3.0	8.4	11.74	-57.4	-13.0	-44.4	
9487.50	-82.4	V	3.0	12.7	11.74	-58.0	-13.0	-45.0	
11385.00	-84.1	V	3.0	15.9	11.74	-56.5	-13.0	-43.5	NF
13282.50	-84.8	V	3.0	18.7	11.74	-54.4	-13.0	-41.4	NF
NF : Noise Floor									

35 MHz

QPSK

ANT Main 1

END OF REPORT