



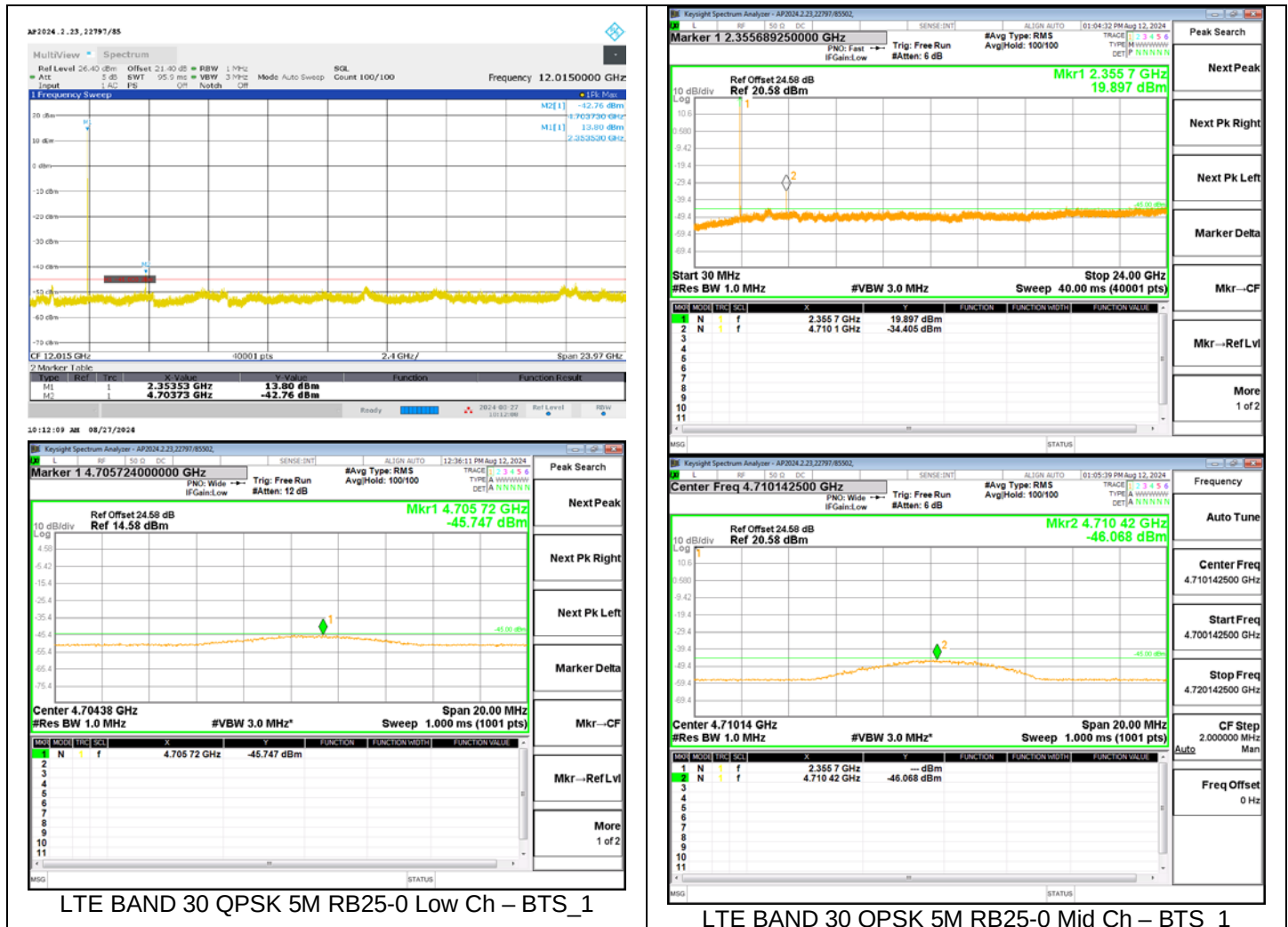
9.3.6. LTE BAND 30

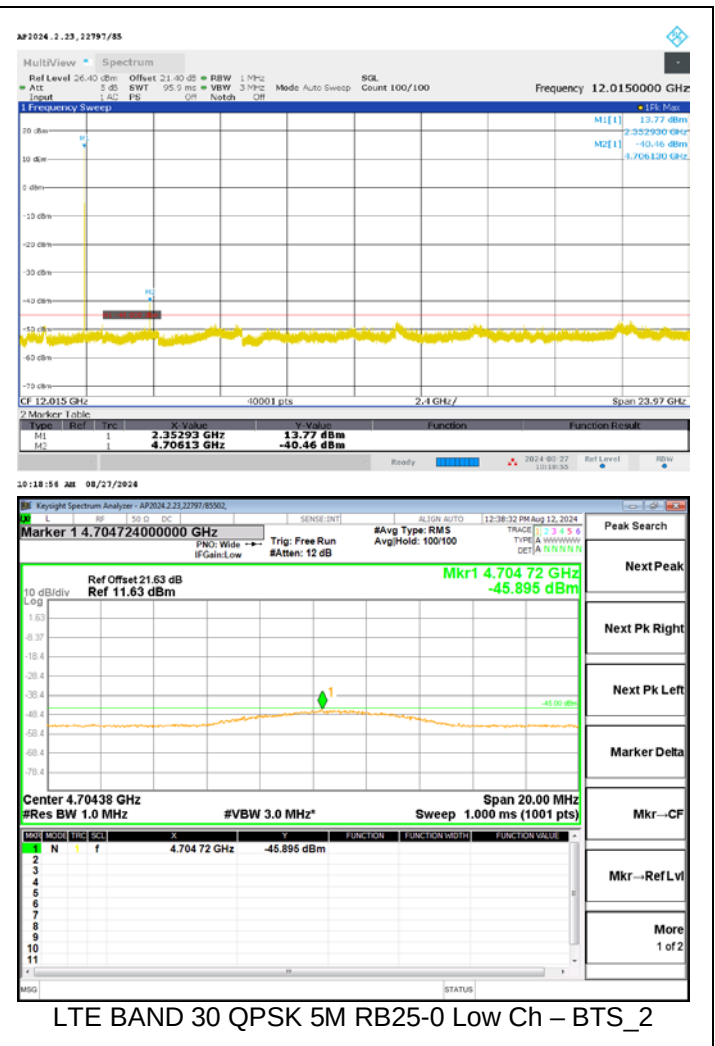
LIMITS

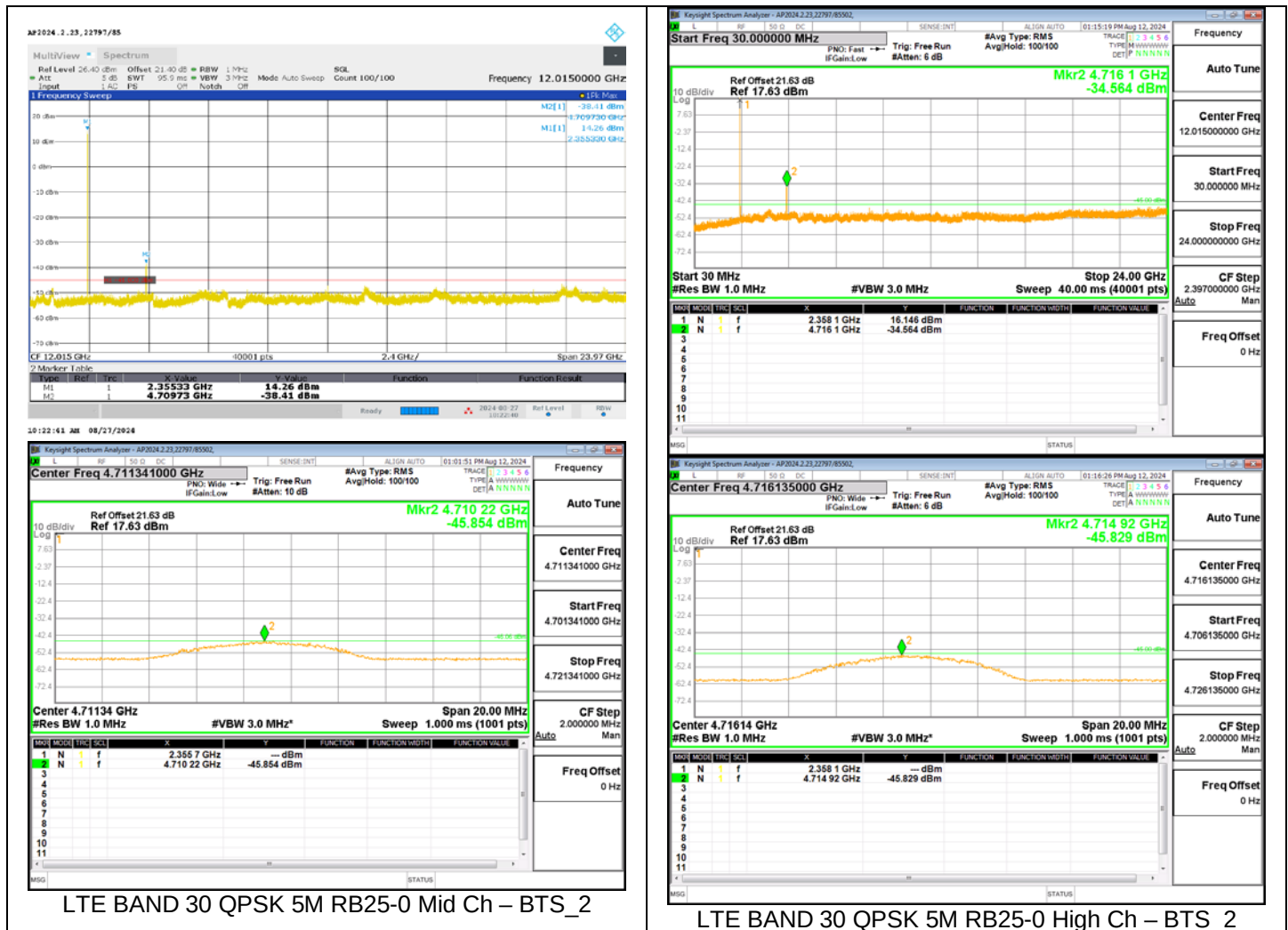
FCC: §27.53 (a)

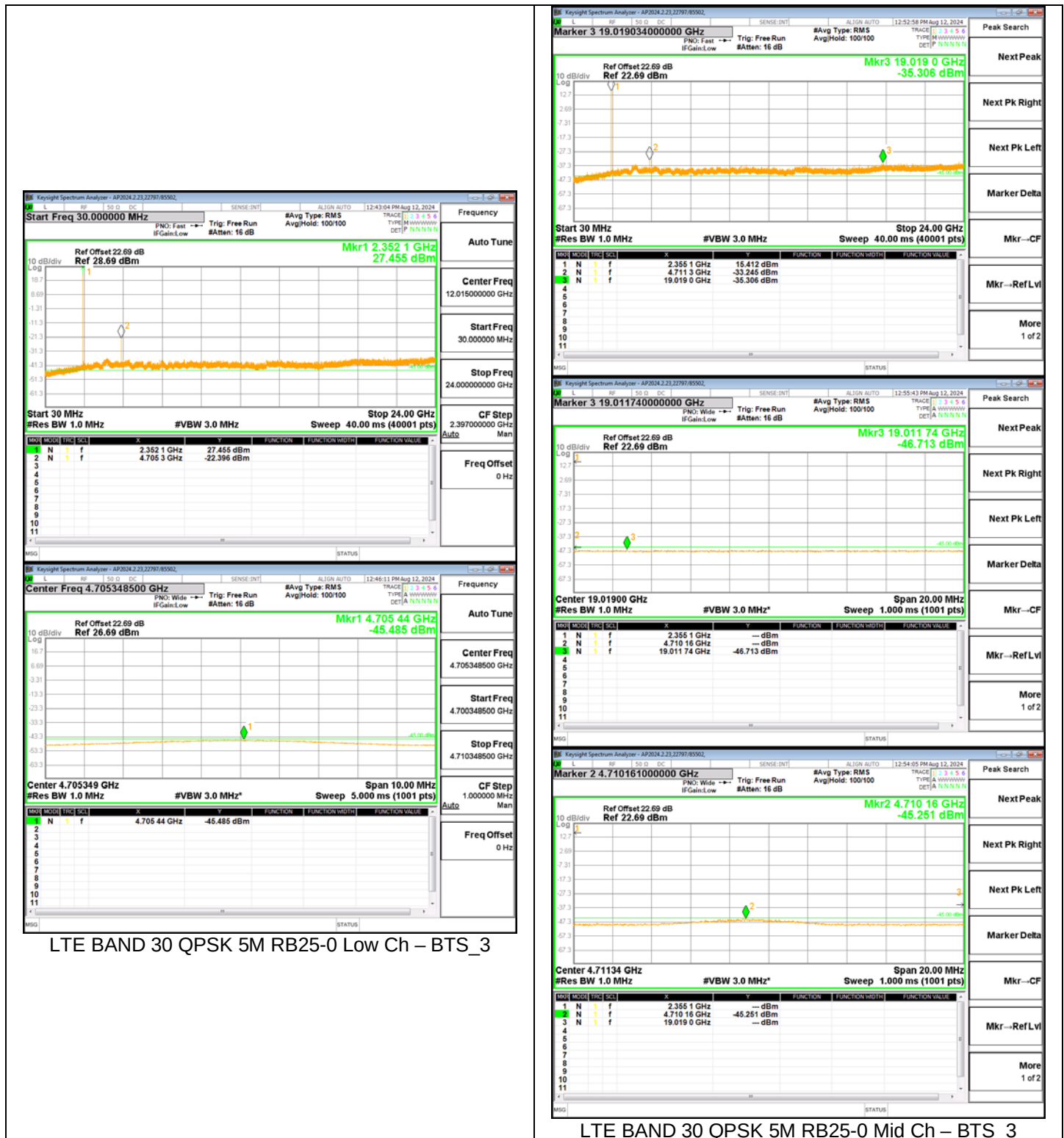
The minimum permissible attenuation level of any spurious emissions is $70 + 10 \log (P)$ dB where transmitting power (P) in Watts.

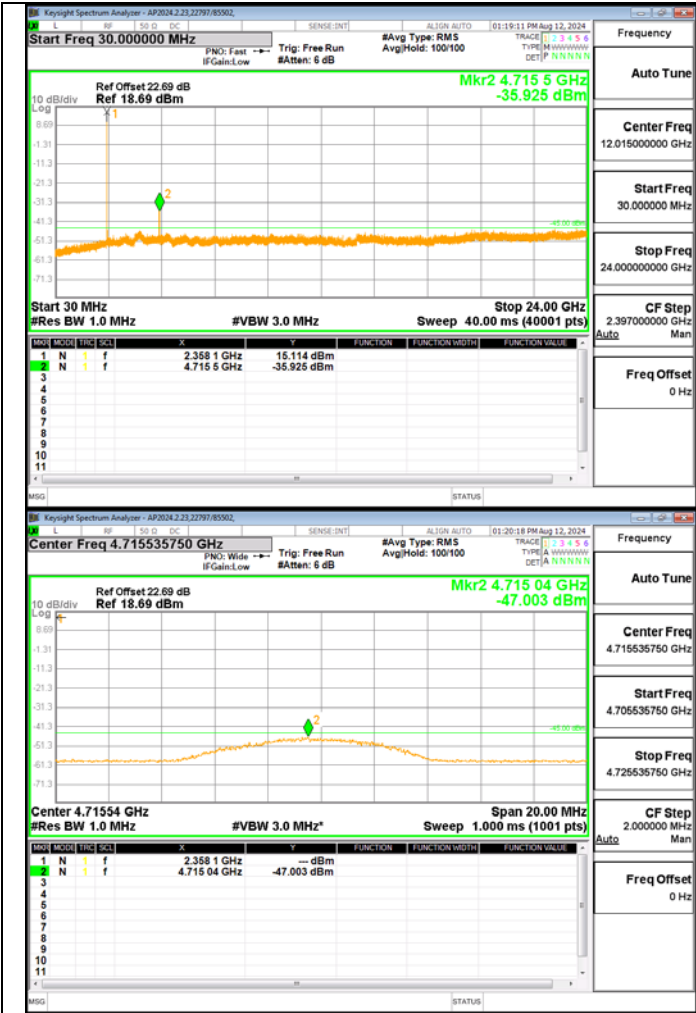
LTE BAND 30











LTE BAND 30 QPSK 5M RB25-0 High Ch – BTS_3

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9.3.7. LTE BAND 66

LIMITS

FCC: §27.53 (h)

The minimum permissible attenuation level of any spurious emissions is $43 + 10 \log (P)$ dB where transmitting power (P) in Watts.

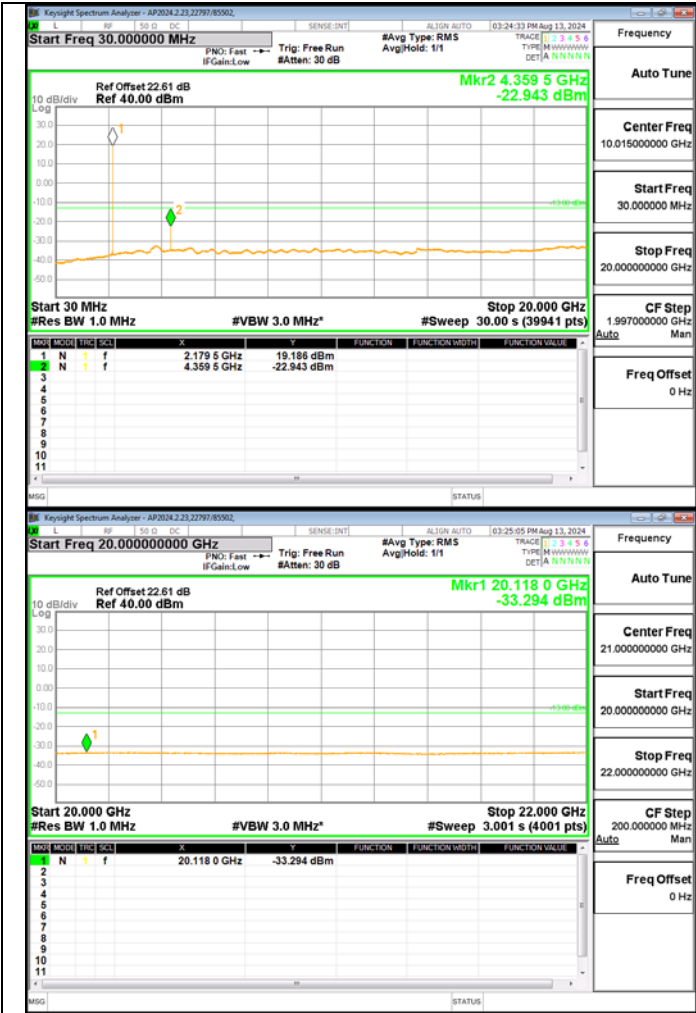
LTE BAND 66











LTE BAND 66 QPSK 5M RB25-0 High Ch – BTS_3

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9.3.8. LTE BAND 71 AND 5G NR n71

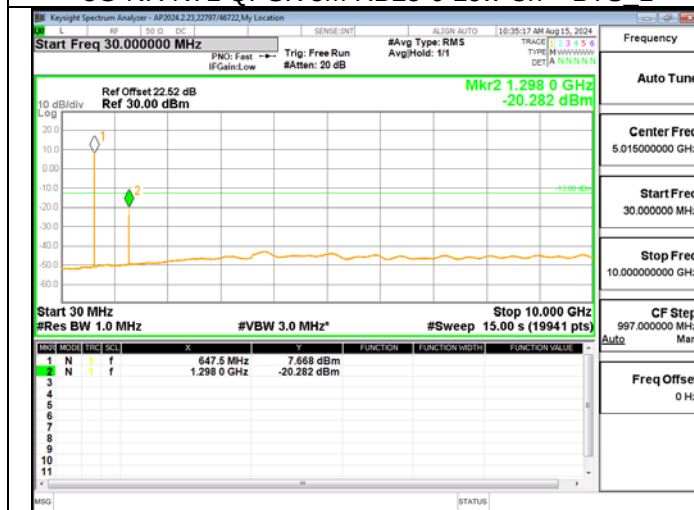
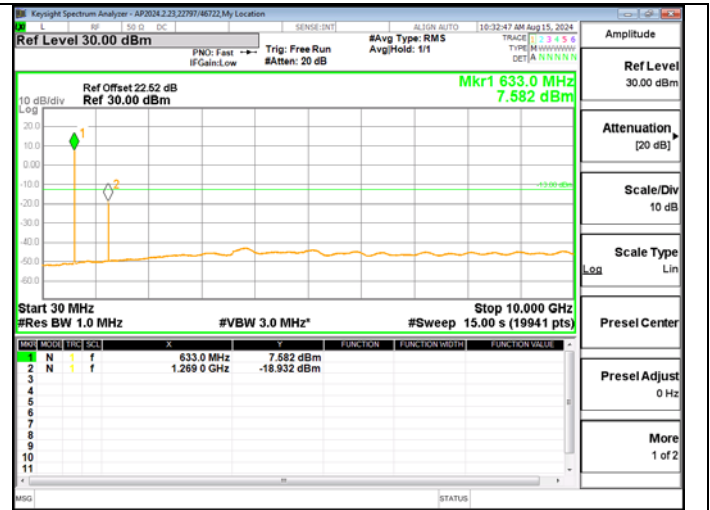
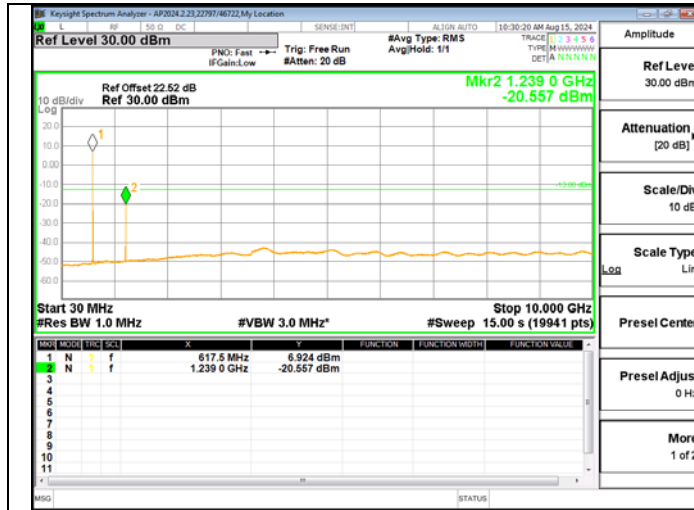
LIMITS

FCC: \$27.53 (g)
The minimum permissible attenuation level of any spurious emissions is 43 + 10 log (P) dB where transmitting power (P) in Watts.

LTE BAND 71



5G NR n71



9.3.9. 5G NR n77 (FCC Part 27 3450-3550MHz)

LIMITS

FCC: §27.53

(n) 3.45 GHz Service. The following emission limits apply to stations transmitting in the 3450-3550 MHz band:

(1) For base station 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 the provisions of this [paragraph \(n\)\(1\)](#) 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. 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. Notwithstanding the channel edge requirement of -13 dBm per megahertz, for base station operations in the 3450-3550 MHz band, the conducted power of any emission below 3440 MHz or above 3560 MHz shall not exceed -25 dBm/MHz, and the conducted power of emissions below 3430 MHz or above 3570 MHz shall not exceed -40 dBm/MHz.





9.3.10. 5G NR n77 (FCC Part 27 3700-3980MHz)

LIMITS

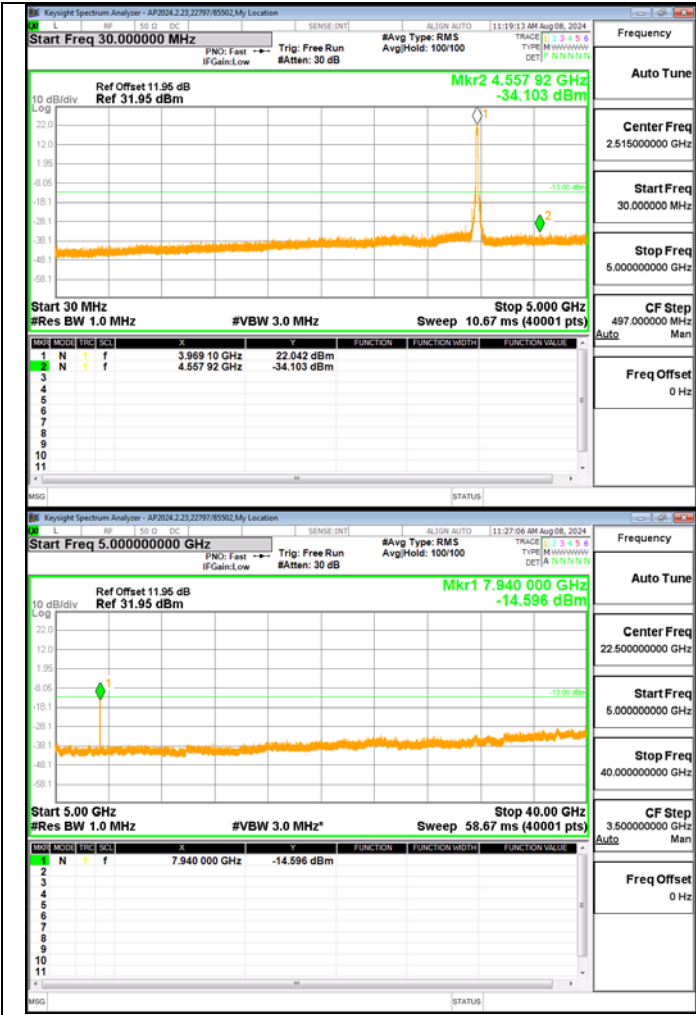
FCC: §27.53

(l) 3.7 GHz Service. The following emission limits apply to stations transmitting in the 3700-3980 MHz band:

(1) For base station 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 \(l\)\(1\)](#) 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. 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.

5G NR n77





5G NR N77-C QPSK 5M RB25-0 High Ch – BTS_1

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9.4. FREQUENCY STABILITY

TEST PROCEDURE

ANSI C63.26:2015 Section 5.6

- Temp. = 0°C to +50°C
- Voltage = (85% - 115%)
Low voltage, 102VDC, Normal, 120VAC and High voltage, 138VAC.

Frequency Stability vs Temperature:
The EUT is place inside a temperature chamber. The temperature is set to 20°C and allowed to stabilize. After sufficient soak time, the transmitting frequency error is measured. The temperature is increased by 10 degrees, allowed to stabilize and soak, and then the measurement is repeated. This is repeated until +50°C is reached.

Frequency Stability vs Voltage:
The peak frequency error is recorded (worst-case).

RESULTS

See the following pages.

Test Engineer ID:	22797/46722	Test Date:	2024-08-15, 2024-08-16, 2024-08-27, 2024-08-28
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9.4.1. LTE BAND 12

LIMITS

FCC: §27.54

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

LTE BAND 12 QPSK (5MHz BANDWIDTH)

Band	12	Frequency Range		Frequency Error Reading (Hz)	Limit
Condition		729	746		
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Within Authorized Frequency Block (Hz)
Temperature	Voltage				
Normal (20°C)	Normal	729.1480	745.8580		
Extreme (50°C)		729.1464	745.8564	-1572	Yes
Extreme (40°C)		729.1482	745.8582	228	Yes
Extreme (30°C)		729.1486	745.8586	631	Yes
Extreme (10°C)		729.1471	745.8571	-939	Yes
Extreme (0°C)		729.1502	745.8602	2181	Yes
20°C	15%	729.1480	745.8580	1.332	Yes
	-15%	729.1497	745.8597	1659	Yes

9.4.2. LTE BAND 13

LIMITS

FCC: §27.54

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

QPSK (5MHz BANDWIDTH)

Band	13	Frequency Range		Frequency Error Reading (Hz)	Limit
Condition		746	756		
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Within Authorized Frequency Block (Hz)
Temperature	Voltage				
Normal (20°C)	Normal	746.2150	755.7850		
Extreme (50°C)		746.2154	755.7854	428	Yes
Extreme (40°C)		746.2151	755.7851	138	Yes
Extreme (30°C)		746.2167	755.7867	1726	Yes
Extreme (10°C)		746.2158	755.7858	788	Yes
Extreme (0°C)		746.2160	755.7860	1048	Yes
20°C	15%	746.2213	755.7913	6299	Yes
	-15%	746.2157	755.7857	653	Yes

9.4.3. LTE BAND 14

LIMITS

FCC: §90.539

(e) The frequency stability of mobile, portable and control transmitters operating in the wideband segment must be 1.25 ppm or better when AFC is locked to a base station, and 5 ppm or better when AFC is not locked.

LTE BAND 14 QPSK (5MHz BANDWIDTH)

Band	14	Frequency Range		Frequency Error Reading (Hz)	Limit
Condition		758	768		1
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)
Temperature	Voltage				
Normal (20°C)	Normal	758.2110	767.7880		
Extreme (50°C)		758.2113	767.7883	304.283	0.399
Extreme (40°C)		758.2117	767.7887	687.595	0.901
Extreme (30°C)		758.2109	767.7879	-114.517	-0.150
Extreme (10°C)		758.2109	767.7879	-95.63	-0.125
Extreme (0°C)		758.2116	767.7886	572.734	0.751
20°C	15%	758.2105	767.7875	-452.98	-0.594
	-15%	758.2105	767.7875	-501.492	-0.657

9.4.4. LTE BAND 26 and 5G NR n26(FCC PART 90S)

LIMITS

FCC: §90.213

The carrier frequency shall not depart from the reference frequency in excess of ± 1.5 ppm for mobile stations.

LTE BAND 26 QPSK (5MHz BANDWIDTH)

Band	26	Frequency Range		Frequency Error Reading (Hz)	Limit
Condition		859	869		1.5
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)
Temperature	Voltage				
Normal (20°C)	Normal	859.1490	893.8715		
Extreme (50°C)		859.1484	893.8709	-567	-0.656
Extreme (40°C)		859.1492	893.8717	238	0.275
Extreme (30°C)		859.1487	893.8712	-259	-0.300
Extreme (10°C)		859.1483	893.8708	-727	-0.841
Extreme (0°C)		859.1489	893.8714	-107	-0.124
20°C	15%	859.1490	893.8715	-28	-0.032
	-15%	859.1499	893.8724	927	1.073

5G NR n26 QPSK (5MHz BANDWIDTH)

Band	26	Frequency Range		Frequency Error Reading (Hz)	Limit
Condition		859	869		1.5
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)
Temperature	Voltage				
Normal (20°C)	Normal	859.1590	868.8700		
Extreme (50°C)		859.1581	868.8691	-925.735	-1.071
Extreme (40°C)		859.1583	868.8693	-685.361	-0.793
Extreme (30°C)		859.1588	868.8698	-151.649	-0.176
Extreme (10°C)		859.1583	868.8693	-659.843	-0.764
Extreme (0°C)		859.1598	868.8708	807.242	0.934
20°C	15%	859.1578	868.8688	-1158	-1.340
	-15%	859.1596	868.8706	573.437	0.664

9.4.5. LTE BAND 26 and 5G NR n26(FCC PART 22)

LIMITS

FCC: §22.355

The carrier frequency shall not depart from the reference frequency in excess of ± 1.5 ppm for base stations.

LTE BAND 26 QPSK (5MHz BANDWIDTH)

Band	26	Frequency Range		Frequency Error Reading (Hz)	Limit
Condition		869	894		1.5
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)
Temperature	Voltage				
Normal (20°C)	Normal	869.1979	893.7466		
Extreme (50°C)		869.1974	893.7460	-567	-0.643
Extreme (40°C)		869.1982	893.7468	238	0.270
Extreme (30°C)		869.1977	893.7463	-259	-0.294
Extreme (10°C)		869.1972	893.7459	-727	-0.825
Extreme (0°C)		869.1978	893.7465	-107	-0.121
20°C	15%	869.1979	893.7466	-28	-0.032
	-15%	869.1989	893.7475	927	1.052

5G NR n26 QPSK (5MHz BANDWIDTH)

Band	26	Frequency Range		Frequency Error Reading (Hz)	Limit
Condition		869	894		1.5
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Frequency Stability (ppm)
Temperature	Voltage				
Normal (20°C)	Normal	868.8950	894.0415		
Extreme (50°C)		868.8941	894.0406	-925.735	-1.050
Extreme (40°C)		868.8943	894.0408	-685.361	-0.777
Extreme (30°C)		868.8948	894.0413	-151.649	-0.172
Extreme (10°C)		868.8943	894.0408	-659.843	-0.749
Extreme (0°C)		868.8958	894.0423	807.242	0.916
20°C	15%	868.8938	894.0403	-1158	-1.314
	-15%	868.8956	894.0421	573.437	0.651

9.4.6. LTE BAND 30

LIMITS

FCC: §27.54

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

LTE BAND 30 QPSK (5MHz BANDWIDTH)

Band	30	Frequency Range		Frequency Error Reading (Hz)	Limit
Condition		2350	2360		Within Authorized Frequency Block (Hz)
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		
Temperature	Voltage				
Normal (20°C)	Normal	2350.1880	2359.8195		
Extreme (50°C)		2350.1874	2359.8189	-570	Yes
Extreme (40°C)		2350.1883	2359.8198	306	Yes
Extreme (30°C)		2350.1888	2359.8203	811	Yes
Extreme (10°C)		2350.1887	2359.8202	702	Yes
Extreme (0°C)		2350.1865	2359.8180	-1525	Yes
20°C	15%	2350.1874	2359.8189	-614	Yes
	-15%	2350.1889	2359.8204	861	Yes

9.4.7. LTE BAND 66

LIMITS

FCC: §27.54

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

LTE BAND 66 QPSK (5MHz BANDWIDTH)

Band	66	Frequency Range		Frequency Error Reading (Hz)	Limit
Condition		2110	2200		
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Within Authorized Frequency Block (Hz)
Temperature	Voltage				
Normal (20°C)	Normal	2110.1675	2182.2255		
Extreme (50°C)		2110.1685	2182.2265	995	Yes
Extreme (40°C)		2110.1672	2182.2252	-303	Yes
Extreme (30°C)		2110.1652	2182.2232	-2272	Yes
Extreme (10°C)		2110.1613	2182.2193	-6197	Yes
Extreme (0°C)		2110.1611	2182.2191	-6425	Yes
20°C	15%	2110.1636	2182.2216	-3867	Yes
	-15%	2110.1658	2182.2238	-1707	Yes

9.4.8. LTE BAND 71 AND 5G NR n71

LIMITS

FCC: §27.54

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

LTE BAND 71 QPSK (5MHz BANDWIDTH)

Band	71	Frequency Range		Frequency Error Reading (Hz)	Limit
Condition		617	652		
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Within Authorized Frequency Block (Hz)
Temperature	Voltage				
Normal (20°C)	Normal	617.1450	651.8755		
Extreme (50°C)		617.1452	651.8757	154	Yes
Extreme (40°C)		617.1456	651.8761	625	Yes
Extreme (30°C)		617.1400	651.8705	-4973	Yes
Extreme (10°C)		617.1450	651.8755	-2.184	Yes
Extreme (0°C)		617.1477	651.8782	2715	Yes
20°C	15%	617.1450	651.8755	9	Yes
	-15%	617.1442	651.8747	-817	Yes

5G NR n71 QPSK (5MHz BANDWIDTH)

Band	71	Frequency Range		Frequency Error Reading (Hz)	Limit
Condition		617	652		
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Within Authorized Frequency Block (Hz)
Temperature	Voltage				
Normal (20°C)	Normal	617.0615	651.6380		
Extreme (50°C)		617.0325	651.6090	-29002	Yes
Extreme (40°C)		617.0280	651.6045	-33489	Yes
Extreme (30°C)		617.0285	651.6050	-32965	Yes
Extreme (10°C)		617.0413	651.6178	-20183	Yes
Extreme (0°C)		617.0312	651.6077	-30316	Yes
20°C	15%	617.0360	651.6125	-25469	Yes
	-15%	617.0324	651.6089	-29089	Yes

9.4.9. 5G NR n77 (FCC Part 27 3450-3550MHz)

LIMITS

FCC: §27.54

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

5G NR n77 QPSK (20MHz BANDWIDTH)

Band	77	Frequency Range		Frequency Error Reading (Hz)	Limit
Condition		3450	3550		
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Within Authorized Frequency Block (Hz)
Temperature	Voltage				
Normal (20°C)	Normal	3451.4960	3549.2895		
Extreme (50°C)		3451.5236	3549.3171	27554	Yes
Extreme (40°C)		3451.4639	3549.2574	-32133	Yes
Extreme (30°C)		3451.4626	3549.2561	-33427	Yes
Extreme (10°C)		3451.4747	3549.2682	-21284	Yes
Extreme (0°C)		3451.4599	3549.2534	-36101	Yes
20°C	15%	3451.4698	3549.2633	-26174	Yes
	-15%	3451.4767	3549.2702	-19274	Yes

9.4.10. 5G NR n77 (FCC Part 27 3700-3980MHz)

LIMITS

FCC: §27.54

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

5G NR n77 QPSK (20MHz BANDWIDTH)

Band	77	Frequency Range		Frequency Error Reading (Hz)	Limit
Condition		3700	3980		
		Freq Reading @ Low End (MHz)	Freq Reading @ High End (MHz)		Within Authorized Frequency Block (Hz)
Temperature	Voltage				
Normal (20°C)	Normal	3702.0220	3978.4750		
Extreme (50°C)		3702.0248	3978.4778	2778	Yes
Extreme (40°C)		3702.0297	3978.4827	7694	Yes
Extreme (30°C)		3701.9854	3978.4384	-36574	Yes
Extreme (10°C)		3702.0220	3978.4750	-31.727	Yes
Extreme (0°C)		3701.9919	3978.4449	-30141	Yes
20°C	15%	3701.9992	3978.4522	-22808	Yes
	-15%	3702.0041	3978.4571	-17899	Yes

10. RADIATED TEST RESULTS

Radiated measurement using the Field Strength Method

Using the test configuration shown in Figure 6 below, We measure the radiated emissions directly from the EUT and convert the measured field strength or received power to ERP or EIRP, as required, for comparison to the applicable limits. As stated in 5.5.1 of ANSI C63.26-2015, the field strength measurement method using a test site validated to the requirements of ANSI C63.4 is an alternative to the substitution measurement method.

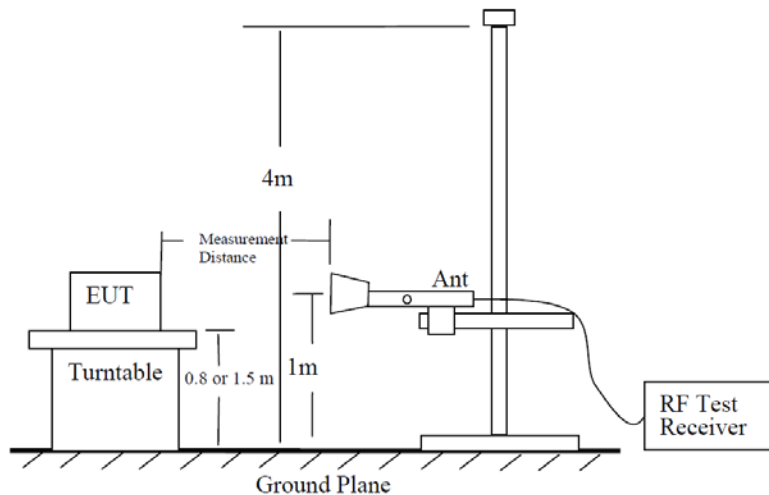


Figure 6 —Test site-up for radiated ERP and/or EIRP measurements

Radiated Power Measurement Calculation According to ANSI C63.26-2015

- a) $E \text{ (dB}\mu\text{V/m)} = \text{Measured amplitude level (dB}\mu\text{V)} + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}.$
- b) $E \text{ (dB}\mu\text{V/m)} = \text{Measured amplitude level (dBm)} + 107 + \text{Cable Loss (dB)} + \text{Antenna Factor (dB/m)}.$
- c) $E \text{ (dB}\mu\text{V/m)} = \text{EIRP (dBm)} - 20\log(D) + 104.8$; where D is the measurement distance (in the far field region) in m.
- d) $\text{EIRP (dBm)} = E \text{ (dB}\mu\text{V/m)} + 20\log(D) - 104.8$; where D is the measurement distance (in the far field region) in m.

So, from d)

The measuring distance is usually at 3m, then $20 \cdot \log(3) = 9.5424$

Then, $\text{EIRP (dBm)} = E \text{ (dB}\mu\text{V/m)} + 9.5424 - 104.8 = E \text{ (dB}\mu\text{V/m)} - 95.2576$

10.1. FIELD STRENGTH OF SPURIOUS RADIATION, ABOVE 1GHz

TEST PROCEDURE

KDB 971168 D01 /D02

All measurements above 1GHz were done with a Resolution Bandwidth of 1MHz, and a Video Bandwidth of 3MHz.

RESULTS

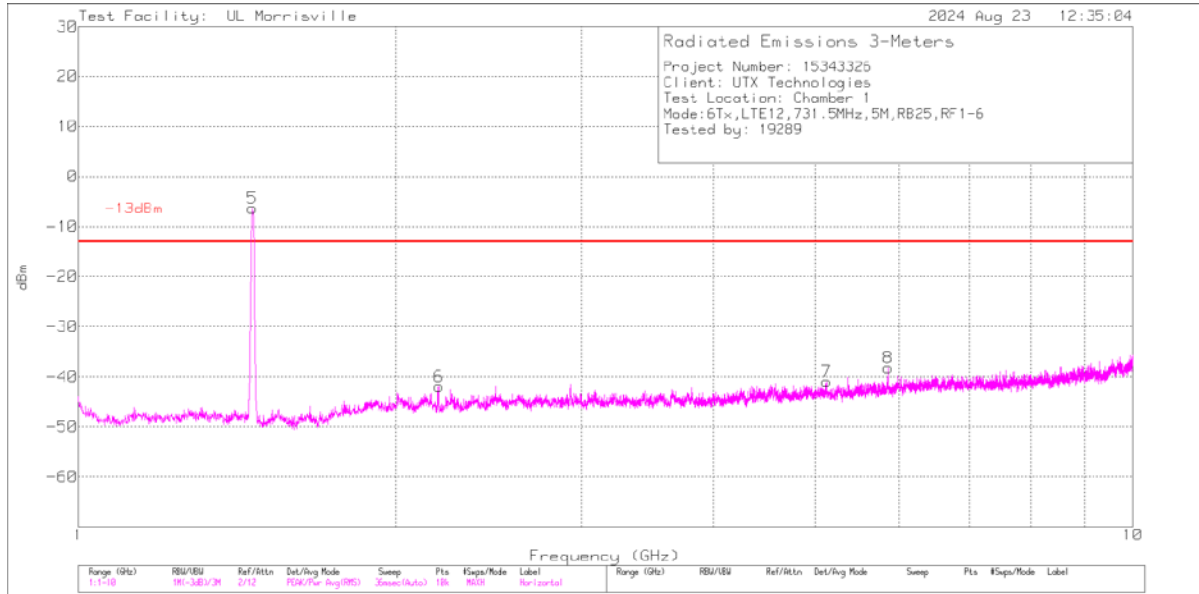
10.1.1. LTE BAND 12

LIMITS

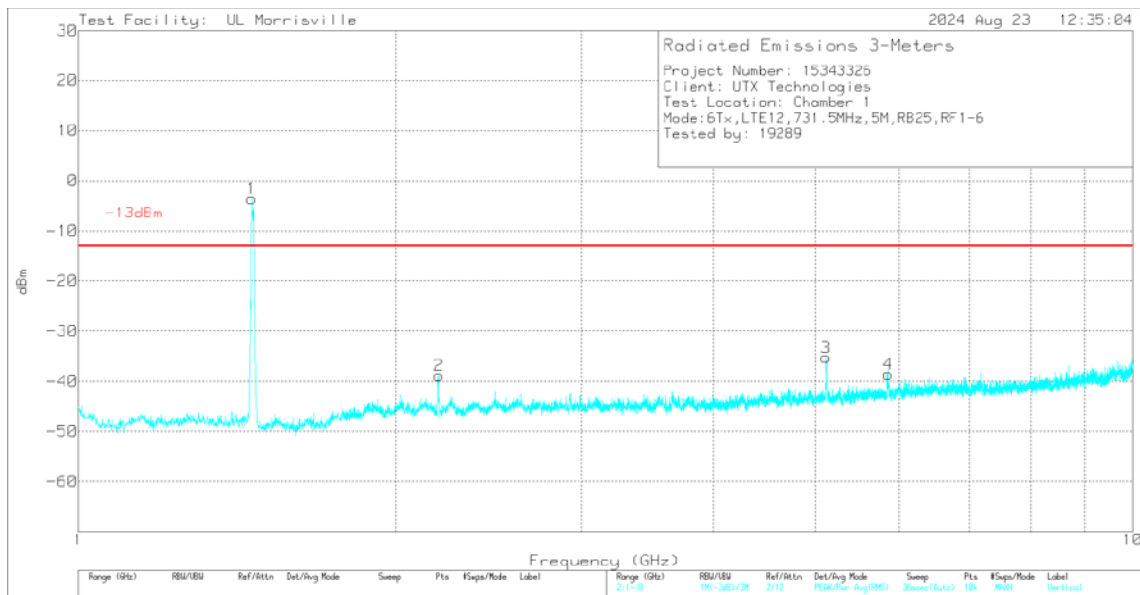
FCC: §27.53 (g)

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.

OPSK LTE BAND 12 (5MHz BANDWIDTH)



Rev 9.5 18 Oct 2021

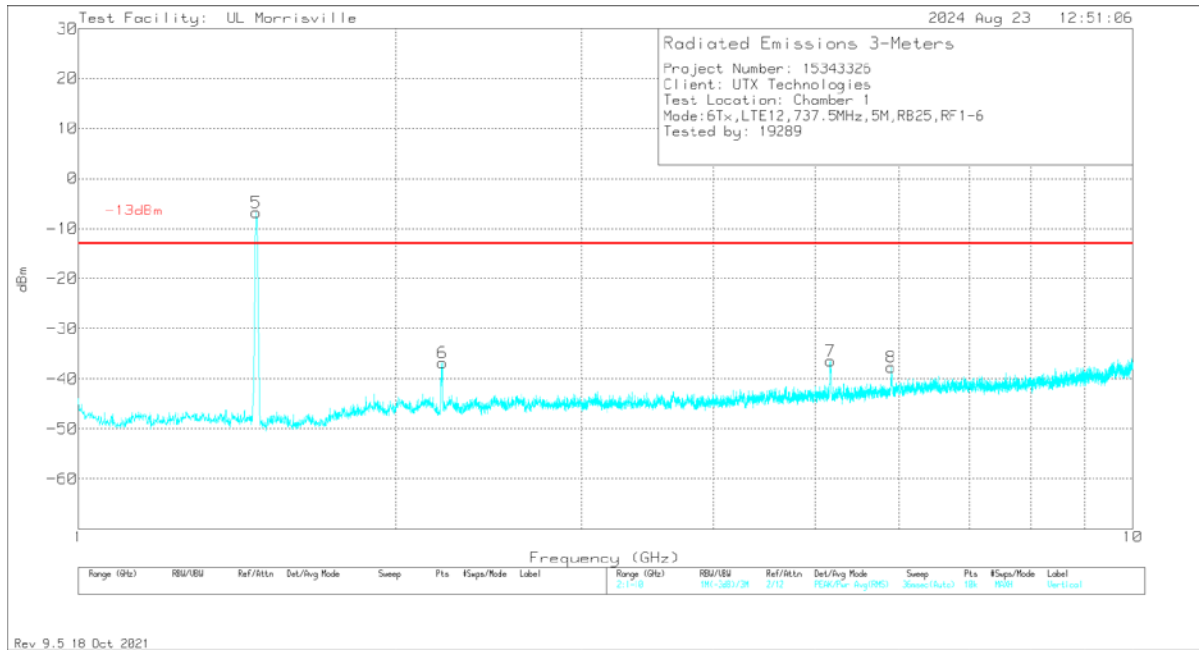
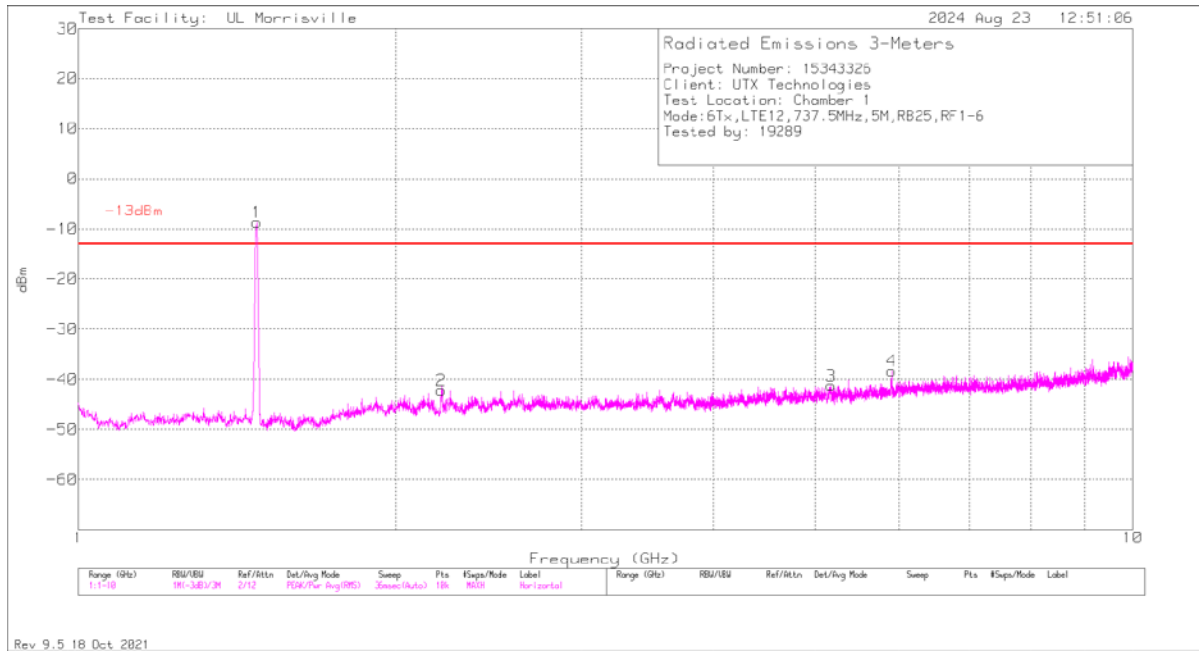


Rev 9.5 18 Oct 2021

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	135143 (dB/m)	Gain/Loss (dB)	Filter (dB)	CF (dB)	Pad (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.46305	-16.41	RMS	28.4	-48.1	.7	11.8	9.9	-13.71	-13	-.71	57	133	V
5	1.4632	-16.36	RMS	28.4	-48.1	.7	11.8	9.9	-13.66	-13	-.66	293	100	H
6	2.1961	-47.44	Pk	31.6	-48.2	.4	11.8	9.9	-41.94	-13	-28.94	0-360	199	H
2	2.1961	-44.35	Pk	31.6	-48.2	.4	11.8	9.9	-38.85	-13	-25.85	0-360	300	V
3	5.1193	-46.47	Pk	34.3	-45.2	.3	11.8	10	-35.27	-13	-22.27	0-360	200	V
7	5.1211	-52.05	Pk	34.3	-45.3	.3	11.8	10	-40.95	-13	-27.95	0-360	300	H
8	5.8591	-52.07	Pk	35	-43.2	.3	11.8	10	-38.17	-13	-25.17	0-360	199	H
4	5.8618	-52.39	Pk	35	-43.3	.3	11.8	10	-38.59	-13	-25.59	0-360	200	V

Pk - Peak detector

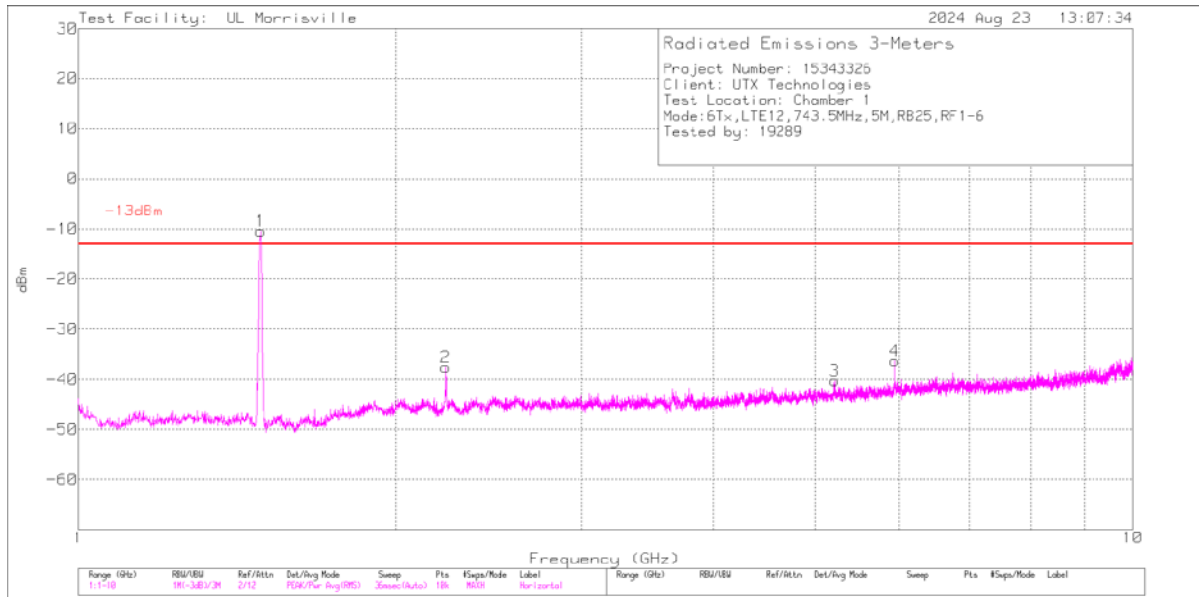
RMS - RMS detection



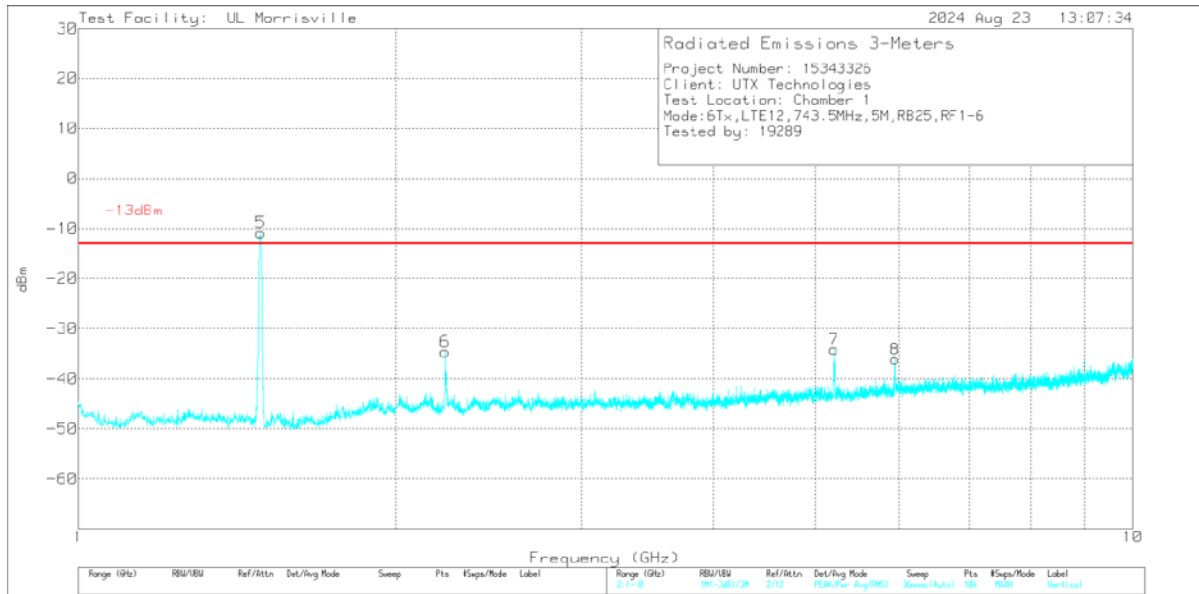
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	135143 (dB/m)	Gain/Loss (dB)	Filter (dB)	CF (dB)	Pad (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	1.47463	-18.03	RMS	28.4	-48	.7	11.8	9.9	-15.23	-13	-2.23	38	105	V
1	1.47515	-19.13	RMS	28.4	-48	.7	11.8	9.9	-16.33	-13	-3.33	291	235	H
2	2.2105	-47.83	Pk	31.6	-48.2	.4	11.8	10	-42.23	-13	-29.23	0-360	299	H
6	2.215	-42.57	Pk	31.6	-48.1	.4	11.8	10	-36.87	-13	-23.87	0-360	200	V
7	5.1688	-47.93	Pk	34.3	-44.8	.3	11.8	9.9	-36.43	-13	-23.43	0-360	200	V
3	5.1742	-53.08	Pk	34.3	-44.6	.3	11.8	10	-41.28	-13	-28.28	0-360	299	H
8	5.8996	-51.24	Pk	35	-43.6	.3	11.8	10	-37.74	-13	-24.74	0-360	200	V
4	5.9041	-51.86	Pk	35	-43.6	.3	11.8	10	-38.36	-13	-25.36	0-360	100	H

Pk - Peak detector

RMS - RMS detection



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Marker	Frequency (GHz)	Meter Reading (dBm)	Det	135143 (dB/m)	Gain/Loss (dB)	Filter (dB)	CF (dB)	Pad (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.48728	-20.58	RMS	28.3	-47.9	.6	11.8	9.9	-17.88	-13	-4.88	3	107	H
5	1.48765	-19.82	RMS	28.3	-47.9	.6	11.8	9.9	-17.12	-13	-4.12	61	108	V
6	2.2276	-40.25	Pk	31.6	-48.1	.4	11.8	10	-34.55	-13	-21.55	0-360	101	V
2	2.2321	-43.24	Pk	31.6	-48.1	.4	11.8	10	-37.54	-13	-24.54	0-360	300	H
7	5.2057	-45.84	Pk	34.3	-44.8	.4	11.8	10	-34.14	-13	-21.14	0-360	201	V
3	5.2138	-52.08	Pk	34.3	-44.7	.4	11.8	10	-40.28	-13	-27.28	0-360	300	H
4	5.9473	-50.12	Pk	35.1	-43.5	.4	11.8	10	-36.32	-13	-23.32	0-360	101	H
8	5.9509	-49.94	Pk	35.1	-43.5	.4	11.8	10	-36.14	-13	-23.14	0-360	101	V

Pk - Peak detector

RMS - RMS detection

10.1.2. LTE BAND 13

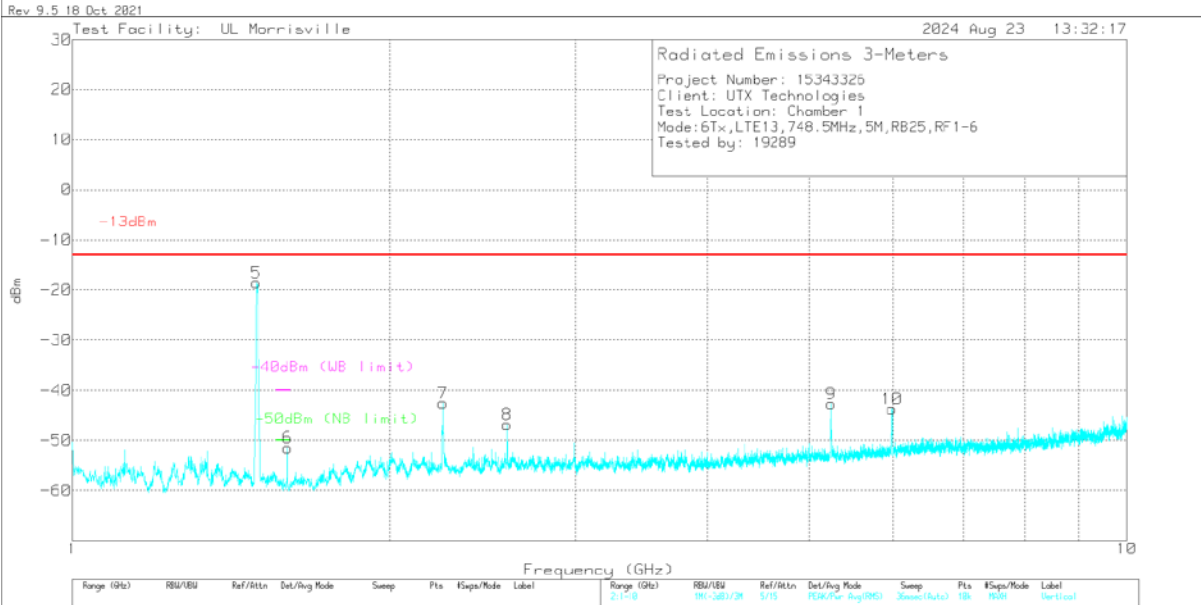
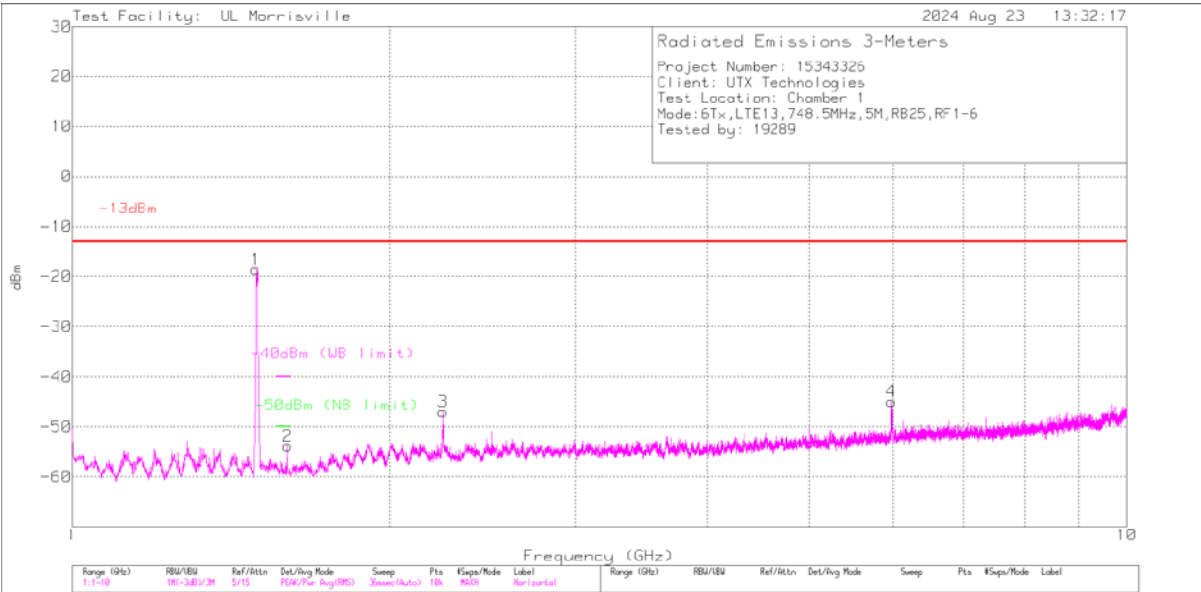
LIMITS

FCC: §27.53

(c) 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.

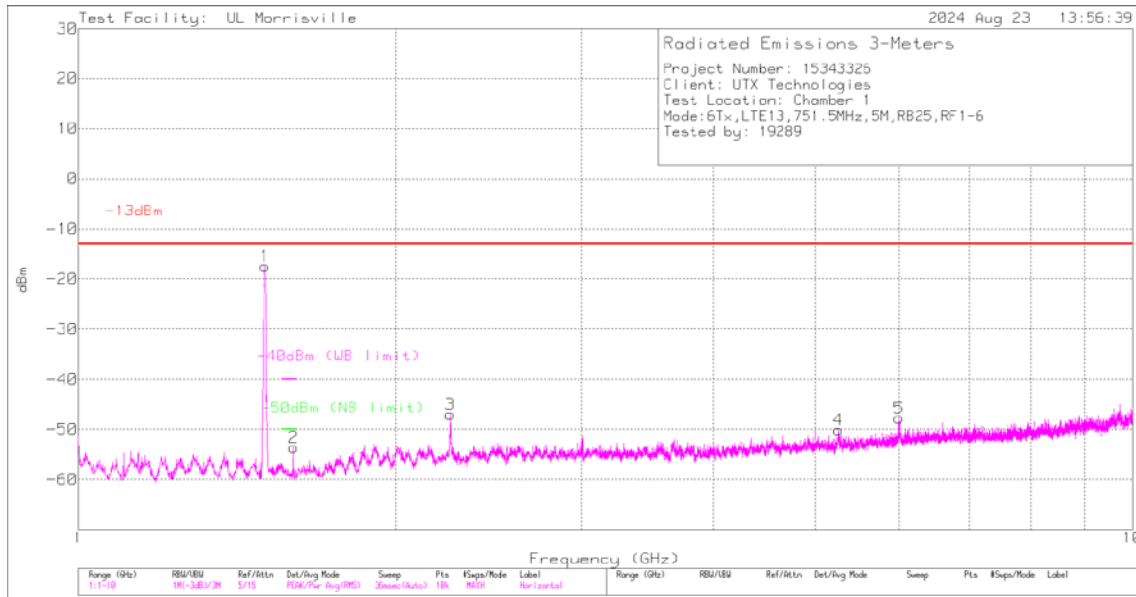
(f) Emissions in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth.

OPSK LTE BAND 13 (5MHz BANDWIDTH)

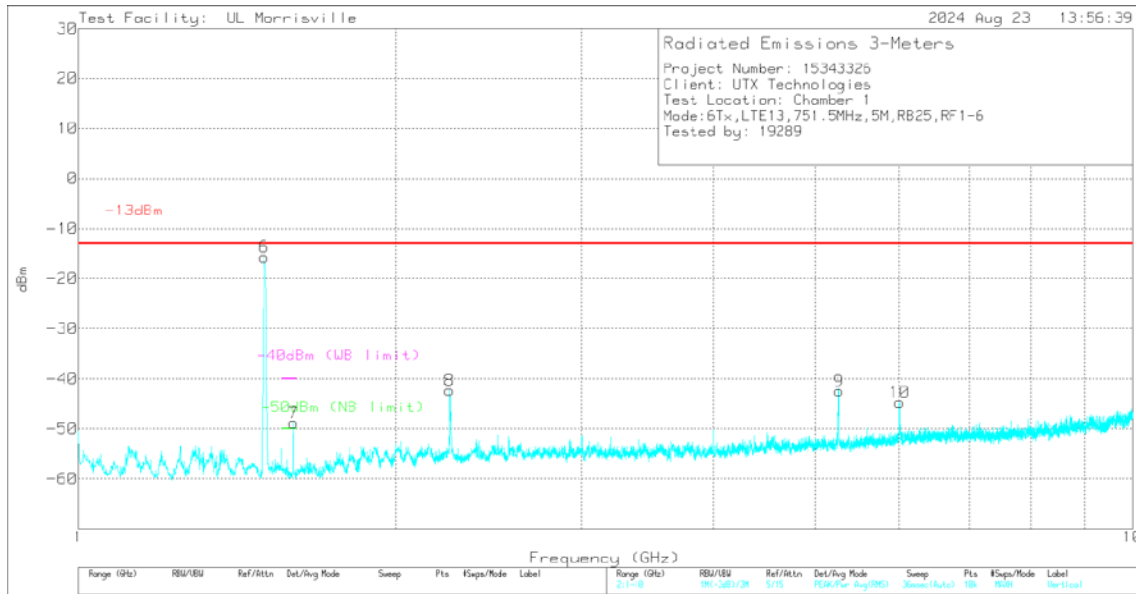


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	135143 (dB/m)	Gain/Loss (dB)	Filter (dB)	CF (dB)	Corrected Reading dBm	- 13dBm	Margin (dB)	- 40dBm (WB limit)	Margin (dB)	- 50dBm (NB limit)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.4967	-19.86	RMS	28.2	-48	.6	11.8	-27.26	-13	-14.26	-	-	-	-	360	283	H
5	1.49754	-18.99	RMS	28.2	-48	.6	11.8	-26.39	-13	-13.39	-	-	-	-	264	271	V
6	1.6	-46.76	RMS	28.1	-47.9	.6	11.8	-54.16	-13	-41.16	-40	-14.16	-50	-4.16	68	277	V
2	1.60006	-46	RMS	28.1	-47.9	.6	11.8	-53.4	-13	-40.4	-40	-13.4	-50	-3.4	21	339	H
3	2.2456	-42.62	Pk	31.6	-48.3	.5	11.8	-47.02	-13	-34.02	-	-	-	-	0-360	200	H
7	2.2456	-38.17	Pk	31.6	-48.3	.5	11.8	-42.57	-13	-29.57	-	-	-	-	0-360	101	V
8	2.584	-43.85	Pk	32.4	-47.6	.4	11.8	-46.85	-13	-33.85	-	-	-	-	0-360	200	V
9	5.2408	-44.37	Pk	34.3	-44.8	.4	11.8	-42.67	-13	-29.67	-	-	-	-	0-360	200	V
4	5.9824	-49.32	Pk	35.1	-42.9	.3	11.8	-45.02	-13	-32.02	-	-	-	-	0-360	101	H
10	5.9878	-47.97	Pk	35.1	-42.9	.3	11.8	-43.67	-13	-30.67	-	-	-	-	0-360	101	V

Pk - Peak detector, RMS - RMS detection



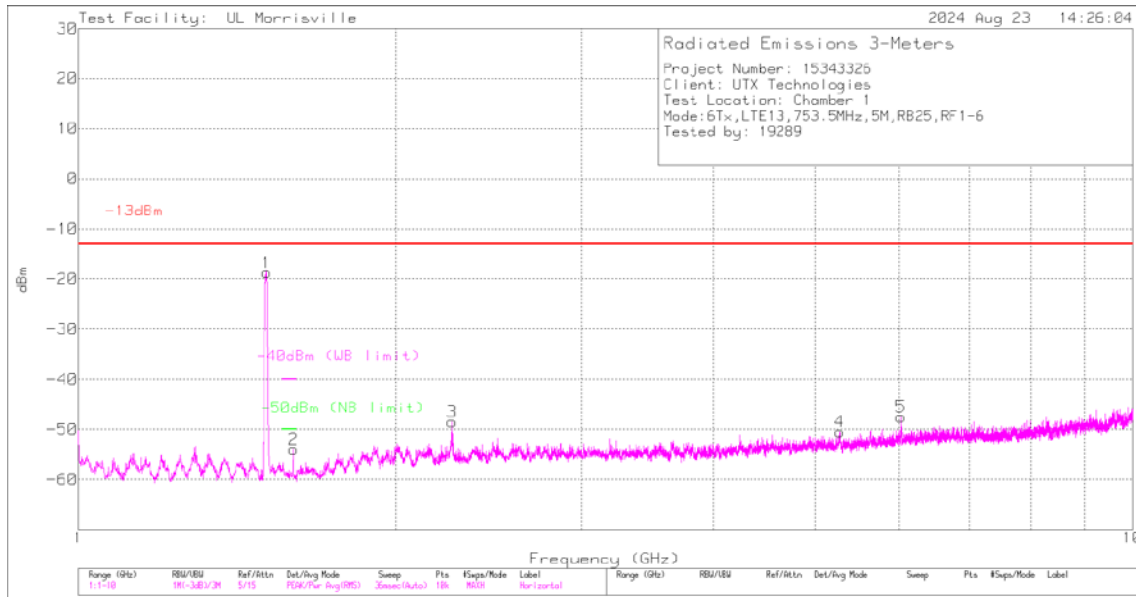
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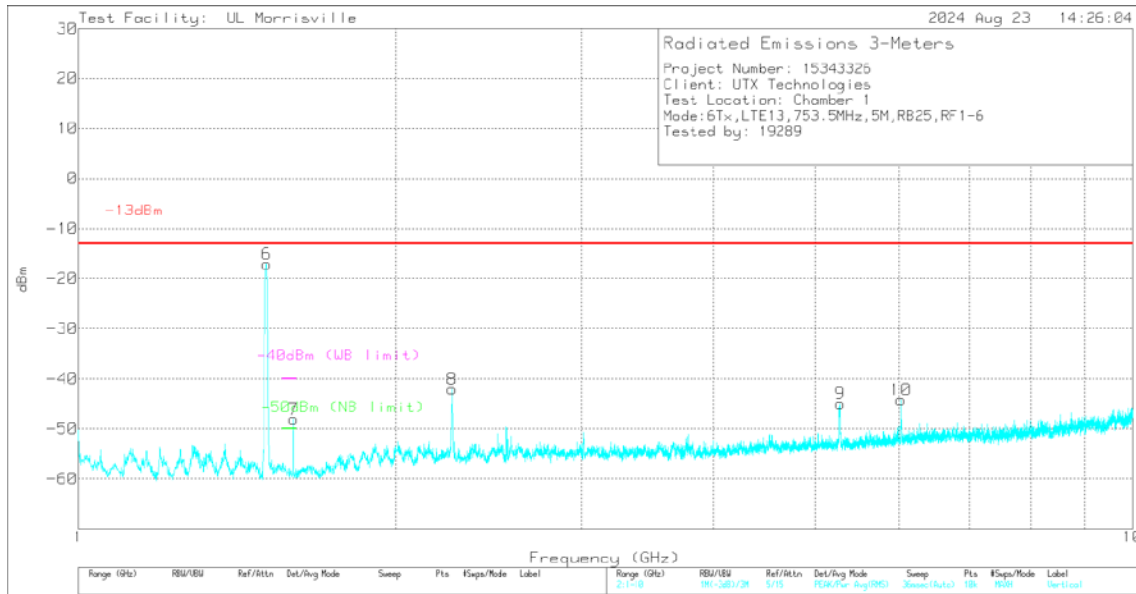
Rev 9.5 18 Oct 2021

Marker	Frequency (GHz)	Meter Reading (dBm)	Det	135143 (dB/m)	Gain/Loss (dB)	Filter (dB)	CF (dB)	Corrected Reading dBm	- 13dBm	Margin (dB)	- 40dBm (WB limit)	Margin (dB)	- 50dBm (NB limit)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	1.50308	-17.68	RMS	28.2	-48.1	.6	11.8	-25.18	-13	-12.18	-	-	-	-	62	148	V
1	1.502	-16.54	RMS	28.2	-48.1	.6	11.8	-24.04	-13	-11.04	-	-	-	-	333	183	H
2	1.6	-47.59	RMS	28.1	-47.9	.6	11.8	-54.99	-13	-41.99	-40	-14.99	-50	-4.99	151	106	H
7	1.59986	-43.68	RMS	28.1	-47.9	.6	11.8	-51.08	-13	-38.08	-40	-11.08	-50	-1.08	110	127	V
8	2.2501	-37.96	Pk	31.6	-48.3	.5	11.8	-42.36	-13	-29.36	-	-	-	-	0-360	101	V
3	2.2537	-42.73	Pk	31.6	-48.2	.5	11.8	-47.03	-13	-34.03	-	-	-	-	0-360	299	H
4	5.257	-52.69	Pk	34.3	-43.8	.3	11.8	-50.09	-13	-37.09	-	-	-	-	0-360	200	H
9	5.2633	-45.39	Pk	34.3	-43.5	.3	11.8	-42.49	-13	-29.49	-	-	-	-	0-360	101	V
5	6.0013	-52.08	Pk	35.1	-42.9	.3	11.8	-47.78	-13	-34.78	-	-	-	-	0-360	101	H
10	6.0085	-48.36	Pk	35.1	-43.6	.3	11.8	-44.76	-13	-31.76	-	-	-	-	0-360	300	V

Pk - Peak detector
RMS - RMS detection



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Marker	Frequency (GHz)	Meter Reading (dBm)	Det	135143 (dB/m)	Gain/Loss (dB)	Filter (dB)	CF (dB)	Corrected Reading dBm	- 13dBm	Margin (dB)	- 40dBm (WB limit)	Margin (dB)	- 50dBm (NB limit)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.5075	-17.25	RMS	28.2	-48.1	.6	11.8	-24.75	-13	-11.75	-	-	-	-	341	145	H
6	1.50786	-16.07	RMS	28.2	-48.1	.6	11.8	-23.57	-13	-10.57	-	-	-	-	278	111	V
2	1.6	-47.61	RMS	28.1	-47.9	.6	11.8	-55.01	-13	-42.01	-40	-15.01	-50	-5.01	156	140	H
7	1.59989	-44.76	RMS	28.1	-47.9	.6	11.8	-52.16	-13	-39.16	-40	-12.16	-50	-2.16	251	109	V
3	2.2609	-44.41	Pk	31.6	-48	.5	11.8	-48.51	-13	-35.51	-	-	-	-	0-360	299	H
8	2.2618	-37.89	Pk	31.6	-48.1	.5	11.8	-42.09	-13	-29.09	-	-	-	-	0-360	201	V
4	5.2705	-53.03	Pk	34.3	-43.8	.3	11.8	-50.43	-13	-37.43	-	-	-	-	0-360	200	H
9	5.2813	-47.48	Pk	34.3	-43.9	.3	11.8	-44.98	-13	-31.98	-	-	-	-	0-360	201	V
10	6.0256	-48.95	Pk	35.2	-42.6	.3	11.8	-44.25	-13	-31.25	-	-	-	-	0-360	300	V
5	6.0274	-52.2	Pk	35.2	-42.6	.3	11.8	-47.5	-13	-34.5	-	-	-	-	0-360	101	H

Pk - Peak detector
RMS - RMS detection

10.1.3. LTE BAND 14

LIMITS

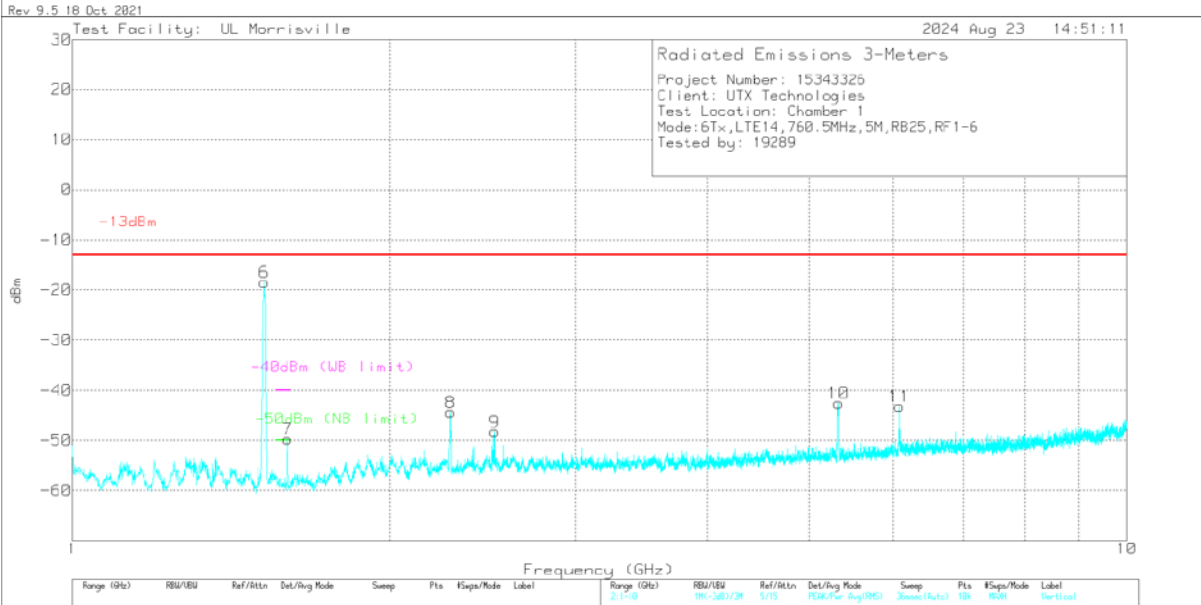
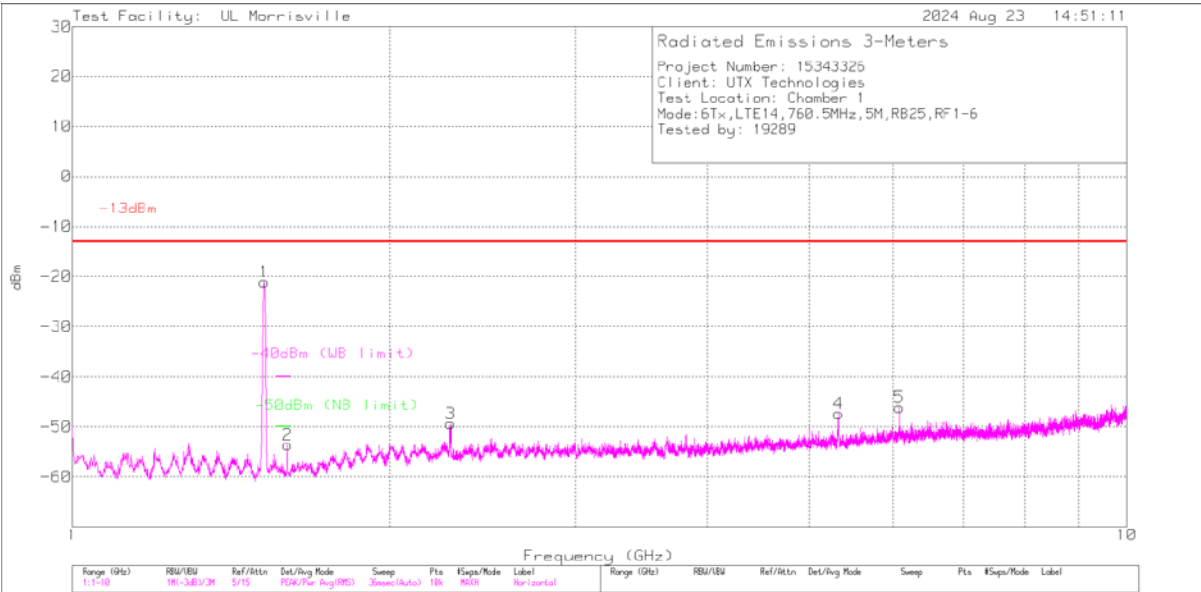
FCC: §90.543 Emission Limitations. (Band 14)

(e) For operations in the 758-768 MHz and the 788-798 MHz bands, the power of any emission outside the 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, in accordance with the following:

(3) On any frequency between 775-788 MHz, above 805 MHz, and below 758 MHz, by at least $43 + 10 \log (P)$ dB.

(f) For operations in the 758-775 MHz and 788-805 MHz bands, all emissions including harmonics in the band 1559-1610 MHz shall be limited to -70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and -80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. For the purpose of equipment authorization, a transmitter shall be tested with an antenna that is representative of the type that will be used with the equipment in normal operation

OPSK LTE BAND 14 (5MHz BANDWIDTH)

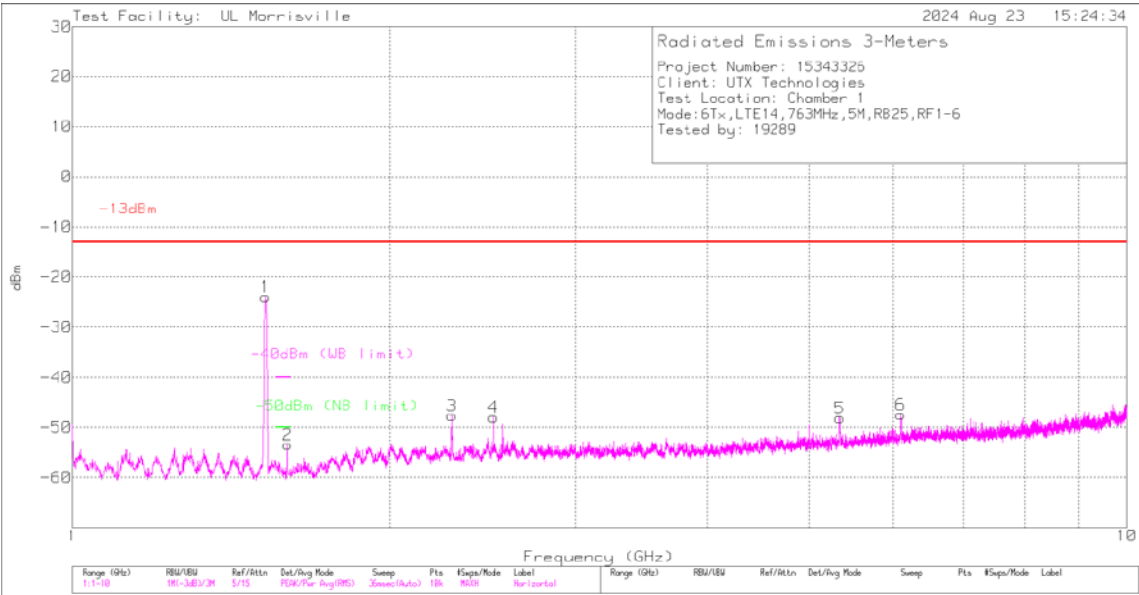


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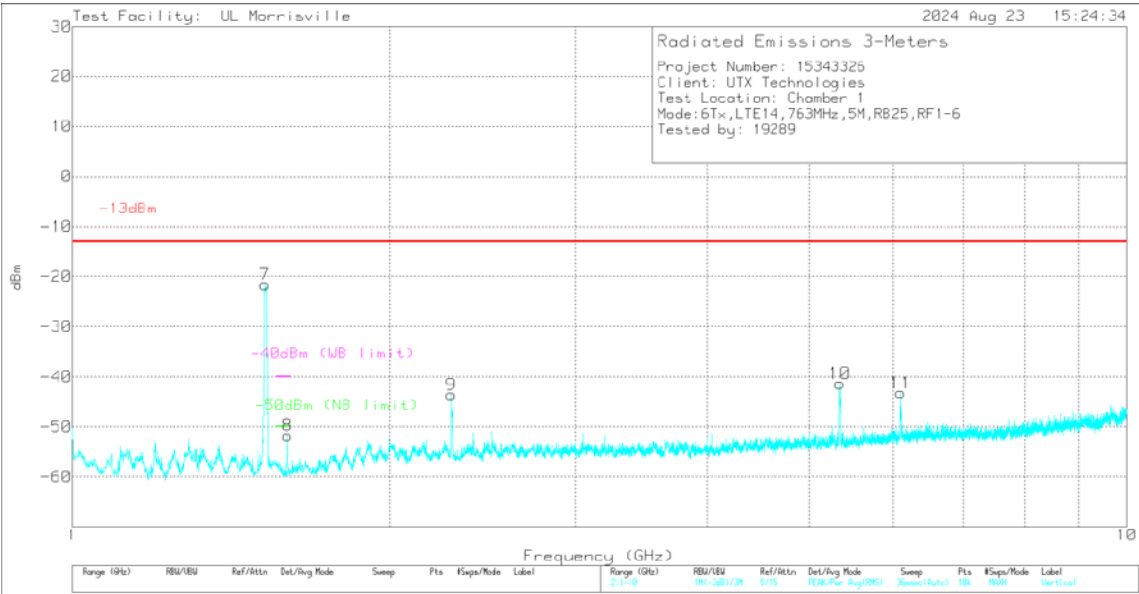
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	135143 (dB/m)	Gain/Loss (dB)	Filter (dB)	CF (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	-40dBm (WB limit)	Margin (dB)	-50dBm (NB limit)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	1.52068	-20.38	RMS	28.1	-48.1	.6	11.8	-27.98	-13	-14.98	-	-	-	-	353	170	V
1	1.5211	-13.51	Pk	28.1	-48.1	.6	11.8	-21.11	-13	-8.11	-	-	-	-	0-360	299	H
2	1.59987	-45.9	RMS	28.1	-47.9	.6	11.8	-53.3	-13	-40.3	-40	-13.3	-50	-3.3	157	170	H
7	1.59993	-43.71	RMS	28.1	-47.9	.6	11.8	-51.11	-13	-38.11	-40	-11.11	-50	-1.11	109	136	V
8	2.2825	-39.81	Pk	31.6	-48.5	.5	11.8	-44.41	-13	-31.41	-	-	-	-	0-360	200	V
3	2.2843	-44.84	Pk	31.6	-48.4	.5	11.8	-49.34	-13	-36.34	-	-	-	-	0-360	199	H
9	2.5147	-45.09	Pk	32.3	-47.8	.5	11.8	-48.29	-13	-35.29	-	-	-	-	0-360	200	V
4	5.3272	-49.54	Pk	34.3	-44.2	.3	11.8	-47.34	-13	-34.34	-	-	-	-	0-360	101	H
10	5.3281	-44.74	Pk	34.3	-44.3	.3	11.8	-42.64	-13	-29.64	-	-	-	-	0-360	200	V
5	6.0841	-50	Pk	35.2	-43.4	.3	11.8	-46.1	-13	-33.1	-	-	-	-	0-360	101	H
11	6.0841	-47.07	Pk	35.2	-43.4	.3	11.8	-43.17	-13	-30.17	-	-	-	-	0-360	300	V

Pk - Peak detector

RMS - RMS detection



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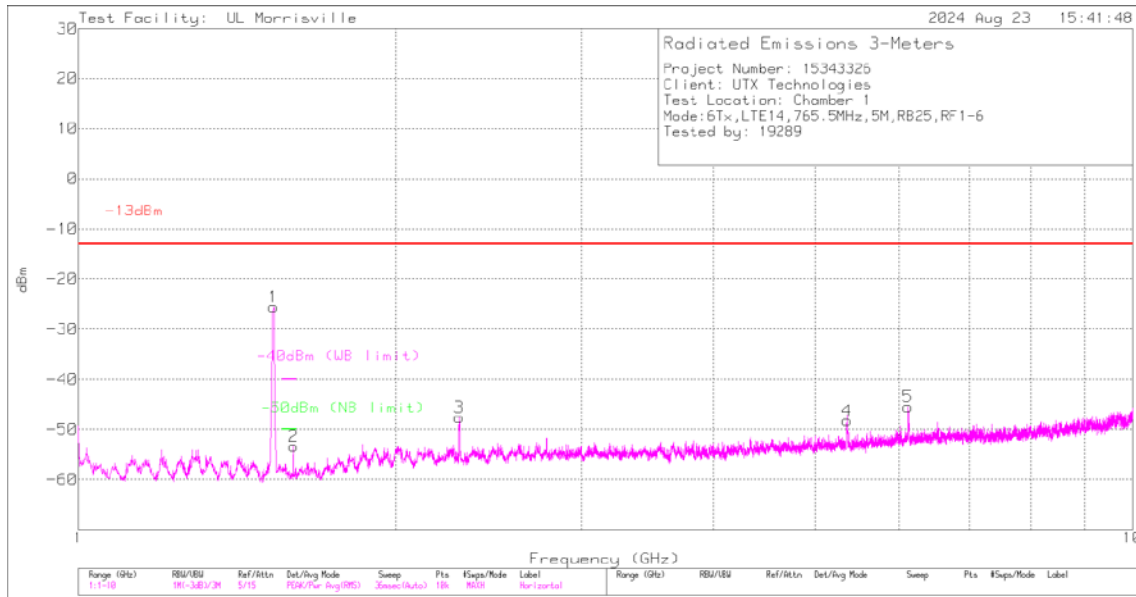


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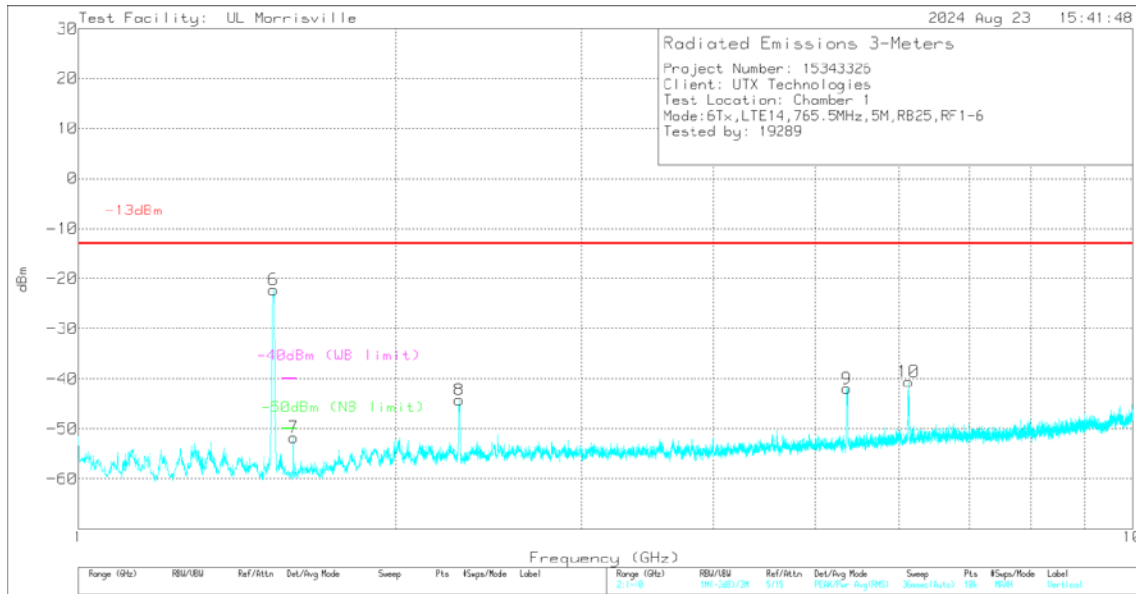
Marker	Frequency (GHz)	Meter Reading (dBm)	Det	135143 (dB/m)	Gain/Loss (dB)	Filter (dB)	CF (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	-40dBm (WB limit)	Margin (dB)	-50dBm (NB limit)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
7	1.5238	-13.83	Pk	28.1	-48.2	.6	11.8	-21.53	-13	-8.53	-	-	-	-	0-360	101	V
1	1.5256	-16.21	Pk	28.1	-48.2	.6	11.8	-23.91	-13	-10.91	-	-	-	-	0-360	299	H
2	1.59998	-47.44	RMS	28.1	-47.9	.6	11.8	-54.84	-13	-41.84	-40	-14.84	-50	-4.84	152	133	H
8	1.59996	-42.92	RMS	28.1	-47.9	.6	11.8	-50.32	-13	-37.32	-40	-10.32	-50	-3.32	330	109	V
9	2.287	-39.27	Pk	31.6	-48.2	.5	11.8	-43.57	-13	-30.57	-	-	-	-	0-360	101	V
3	2.2888	-43.36	Pk	31.6	-48.2	.5	11.8	-47.66	-13	-34.66	-	-	-	-	0-360	199	H
4	2.5093	-44.79	Pk	32.3	-47.8	.5	11.8	-47.99	-13	-34.99	-	-	-	-	0-360	299	H
5	5.3434	-50.46	Pk	34.3	-44.2	.4	11.8	-48.16	-13	-35.16	-	-	-	-	0-360	101	H
10	5.3452	-43.72	Pk	34.3	-44.1	.4	11.8	-41.32	-13	-28.32	-	-	-	-	0-360	101	V
6	6.1039	-51.62	Pk	35.2	-43.1	.3	11.8	-47.42	-13	-34.42	-	-	-	-	0-360	199	H
11	6.1039	-47.46	Pk	35.2	-43.1	.3	11.8	-43.26	-13	-30.26	-	-	-	-	0-360	101	V

Pk - Peak detector

RMS - RMS detection



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Marker	Frequency (GHz)	Meter Reading (dBm)	Det	135143 (dBm)	Gain/Loss (dB)	Filter (dB)	CF (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	-40dBm (WB limit)	Margin (dB)	-50dBm (NB limit)	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.5319	-18	Pk	28.1	-48.1	.6	11.8	-25.6	-13	-12.6	-	-	-	-	0-360	101	H
6	1.5319	-14.64	Pk	28.1	-48.1	.6	11.8	-22.24	-13	-9.24	-	-	-	-	0-360	101	V
2	1.5995	-47.78	RMS	28.1	-47.9	.6	11.8	-55.18	-13	-42.18	-40	-15.18	-50	-5.18	154	142	H
7	1.6005	-45.66	RMS	28.1	-47.9	.6	11.8	-53.06	-13	-40.06	-40	-13.06	-50	-3.06	330	163	V
3	2.2969	-43.25	Pk	31.6	-48.2	.5	11.8	-47.55	-13	-34.55	-	-	-	-	0-360	101	H
8	2.2969	-39.93	Pk	31.6	-48.2	.5	11.8	-44.23	-13	-31.23	-	-	-	-	0-360	200	V
9	5.356	-44.39	Pk	34.3	-44.1	.4	11.8	-41.99	-13	-28.99	-	-	-	-	0-360	200	V
4	5.3614	-50.68	Pk	34.3	-44.1	.4	11.8	-48.28	-13	-35.28	-	-	-	-	0-360	101	H
5	6.1237	-49.54	Pk	35.3	-43.3	.3	11.8	-45.44	-13	-32.44	-	-	-	-	0-360	101	H
10	6.1318	-44.72	Pk	35.3	-43.3	.3	11.8	-40.62	-13	-27.62	-	-	-	-	0-360	200	V

Pk - Peak detector

RMS - RMS detection

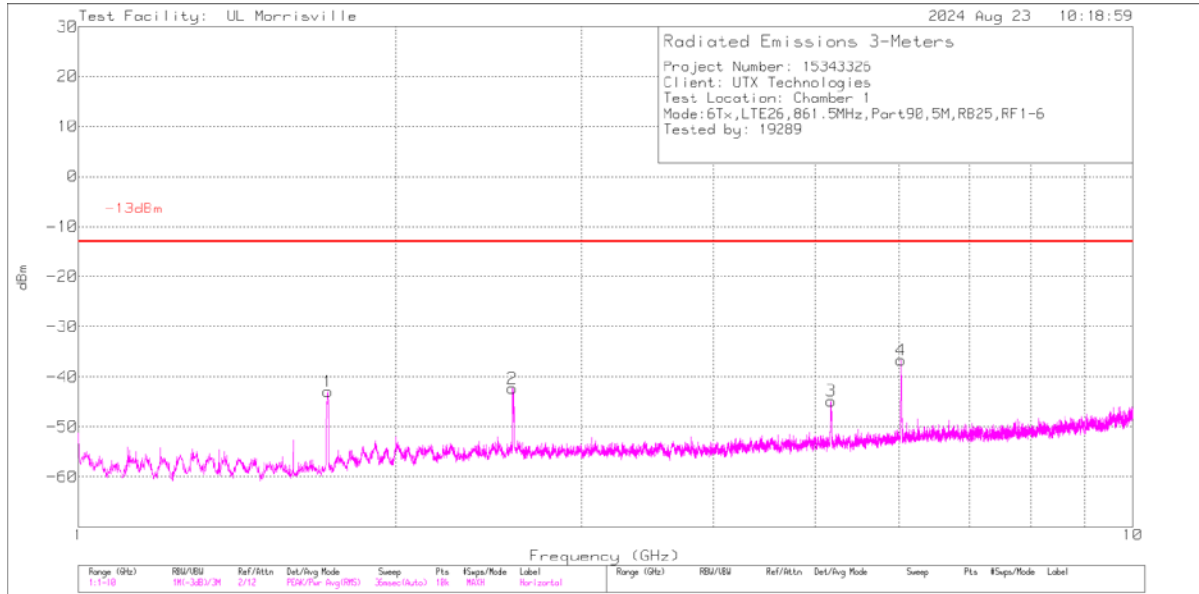
10.1.4. LTE BAND 26 (FCC PART 90S)

LIMITS

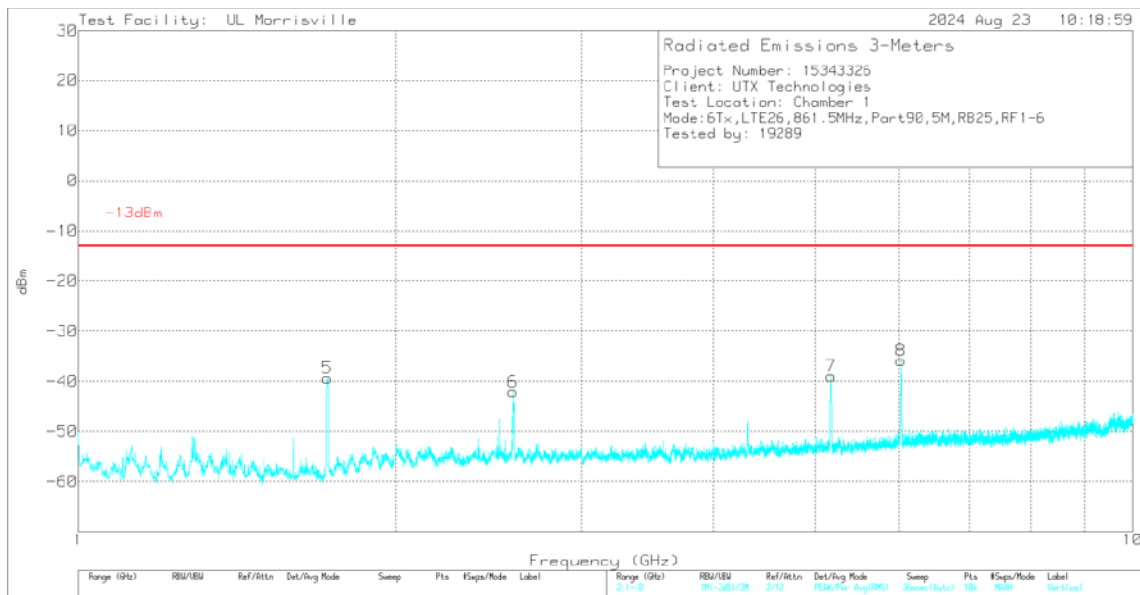
FCC: §90.691

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.

OPSK LTE BAND 26 (5MHz BANDWIDTH)



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Marker	Frequency (GHz)	Meter Reading (dBm)	Det	135143 (dB/m)	Gain/Loss (dB)	Filter (dB)	CF (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	1.7236	-32.42	Pk	29.1	-48.2	.4	11.8	-39.32	-13	-26.32	0-360	101	V
1	1.7245	-36.05	Pk	29.1	-48.2	.4	11.8	-42.95	-13	-29.95	0-360	200	H
2	2.5804	-39.35	Pk	32.4	-47.6	.4	11.8	-42.35	-13	-29.35	0-360	200	H
6	2.5822	-39.11	Pk	32.4	-47.6	.4	11.8	-42.11	-13	-29.11	0-360	101	V
3	5.1697	-46.47	Pk	34.3	-44.8	.3	11.8	-44.87	-13	-31.87	0-360	299	H
7	5.1724	-40.68	Pk	34.3	-44.7	.3	11.8	-38.98	-13	-25.98	0-360	200	V
8	6.0274	-40.52	Pk	35.2	-42.6	.3	11.8	-35.82	-13	-22.82	0-360	101	V
4	6.0319	-41.25	Pk	35.2	-42.8	.3	11.8	-36.75	-13	-23.75	0-360	101	H

Pk - Peak detector