2.8 FIELD STRENGTH OF SPURIOUS RADIATION

2.8.1 Specification Reference

FCC 47 CFR Part 2, Clause 2.1053
FCC 47 CFR Part 27, Clause 27.53 (h)(1)
FCC 47 CFR Part 27, Clause 27.53 (g)
FCC 47 CFR Part 27, Clause 27.53 (c)
FCC 47 CFR Part 27, Clause 27.53(a)(1)
RSS-139, Clause 6.6
RSS-130, Clause 4.7
RSS-195, Clause 5.6.1

2.8.2 Standard Applicable

FCC 47 CFR Part 27, Clause 27.53:
(h) AWS emission limits – (1) General protection levels. Except as otherwise specified below, for operatios in the 1695-1710 MHz, 1710-1755 MHz, 1755-1780 MHz, 1915-1920 MHz, 1995-2000 MHz, 2000-2020 MHz, 2110-2155 MHz, 2155-2180 MHz, and 2180-2200 MHz bands, 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 log10 (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. Compliance with this provision is based on the use of measurement instrumentation employing a resolution bandwidth of 100 kilohertz or greater. However, in the 100 kilohertz bands immediately outside and adjacent to a licensee's frequency block, a resolution bandwidth of at least 30 kHz may be employed.

(c) For operations in the 746–758 MHz band and the 776–788 MHz band, 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:
(1) On any frequency outside the 746–758 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;
(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;

(a) For operations in the 2305–2320 MHz band and the 2345–2360 MHz band, the power of any emission outside a licensee's frequency band(s) of operation shall be attenuated below the transmitter power P (with averaging performed only during periods of transmission) within the licensed band(s) of operation, in watts, by the following amounts:
(1) For base and fixed stations' operations in the 2305–2320 MHz band and the 2345–2360 MHz band:
(i) By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2305 and 2320 MHz and on all frequencies between 2345 and 2360 MHz that are outside the licensed band(s) of operation, and not less than 75 + 10 log (P) dB on all frequencies between 2320 and 2345 MHz;
(ii) By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2300 and 2305 MHz, 70 + 10 log (P) dB on all frequencies between 2287.5 and 2300 MHz, 72 + 10 log (P) dB on all frequencies between 2285 and 2287.5 MHz, and 75 + 10 log (P) dB below 2285 MHz;

(iii) By a factor of not less than 43 + 10 log (P) dB on all frequencies between 2360 and 2362.5 MHz, 55 + 10 log (P) dB on all frequencies between 2362.5 and 2365 MHz, 70 + 10 log (P) dB on all frequencies between 2365 and 2367.5 MHz, 72 + 10 log (P) dB on all frequencies between 2367.5 and 2370 MHz, and 75 + 10 log (P) dB above 2370 MHz.

RSS-139, Clause 6.6:
(i) In the first 1.0 MHz bands immediatel outside and adjacent to the equipment's smallest opreating frequency block, which can contain the equipment's occupied bandwidth, the emission power per any 1% of the emission bandwidth shall be attenuated below the transmitter output power P (dBW), by at least 43 + 10 $\log_{10}$ p (watts) dB.

RSS-130:
4.7.1 General unwanted emissions limits
The unwanted emissions in any 100 kHz bandwidth on any frequency outside the low frequency edge and the high frequency edge of each frequency block range(s), shall be attenuated below the transmitter power, P (dBW), by at least 43 + 10 log10 p (watts), dB. However, in the 100 kHz band immediately outside of the equipment's frequency block range, a resolution bandwidth of 30 kHz may be employed.

RSS-195, Clause 5.6.1:
The power of any emission outside the frequency range(s) in which the equipment operates shall be attenuated below the transmitter power, P(dBW), by the amount indicated in Table 1 and graphically represented in Figure 1, where p is the transmitter output power measured in watts.

Table 1 — Unwanted Emissions for Base Station, Fixed Station and High-Power Fixed Subscriber Equipment

Frequency (MHz)	Attenuation (dB)
<2200	43 + 10 $\log_{10}$(p)
2200 - 2285	75 + 10 $\log_{10}$(p)
2285 - 2287.5	72 + 10 $\log_{10}$(p)
2287.5 - 2300	70 + 10 $\log_{10}$(p)
2300 - 2305	43 + 10 $\log_{10}$(p)
2305 - 2320	43 + 10 $\log_{10}$(p) Note
2320 - 2345	75 + 10 $\log_{10}$(p)
2345 - 2360	43 + 10 $\log_{10}$(p) Note
2360 - 2362.5	43 + 10 $\log_{10}$(p)
2362.5 - 2365	55 + 10 $\log_{10}$(p)
2365 - 2367.5	70 + 10 $\log_{10}$(p)
2367.5 - 2370	72 + 10 $\log_{10}$(p)
2370 - 2395	75 + 10 $\log_{10}$(p)
>2395	43 + 10 $\log_{10}$(p)

Note: Measured at the edges of the highest and lowest frequency range(s) in which the equipment is designed to operate. See Section 5.2 for the permitted frequency ranges for the various equipment types.

2.8.3 Equipment Under Test and Modification State

Serial No: 370920000139 (NU) and 371929000156 (CU) / Test Configuration C and D

2.8.4 Date of Test/Initial of test personnel who performed the test

August 14 to September 07, 2019/XYZ

2.8.5 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.8.6 Environmental Conditions

Test performed at TÜV SÜD America Inc. Rancho Bernardo facility.

Ambient Temperature	25.2 - 26.4°C
Relative Humidity	42.3 - 53.7%
ATM Pressure	98.8 - 99.1kPa

2.8.7 Additional Observations

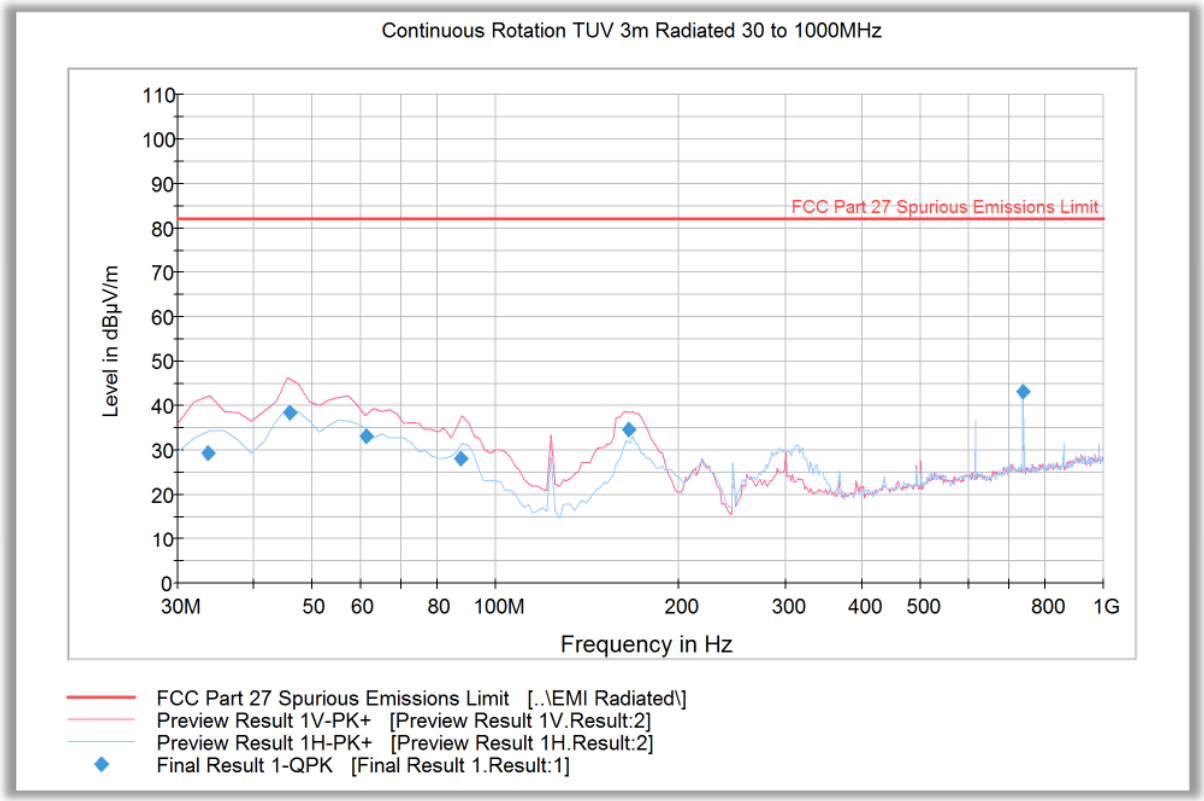
- This is a radiated test using the Direct Radiated Field Strength method of C63.26 2015.
- Emissions within 6dB of the limit will be proven by substitution method.
- This is cabinet spurious emissions testing. Main antenna port was terminated during the test. Fundamental frequency measurement will be ignored for this test.
- Only the worst case configuration presented in this test report.
- Measurement was done using EMC32 automated software. Reported level is the actual level with all the correction factors factored in. Correction Factor column is for informational purposes only.

2.8.8 Test Results

Compliant. See attached plots.

TÜV SÜD AMERICA INC 10040 Mesa Rim Road San Diego, CA 92121-2912 Phone: 858 678 1400 FAX: 858 546 0364

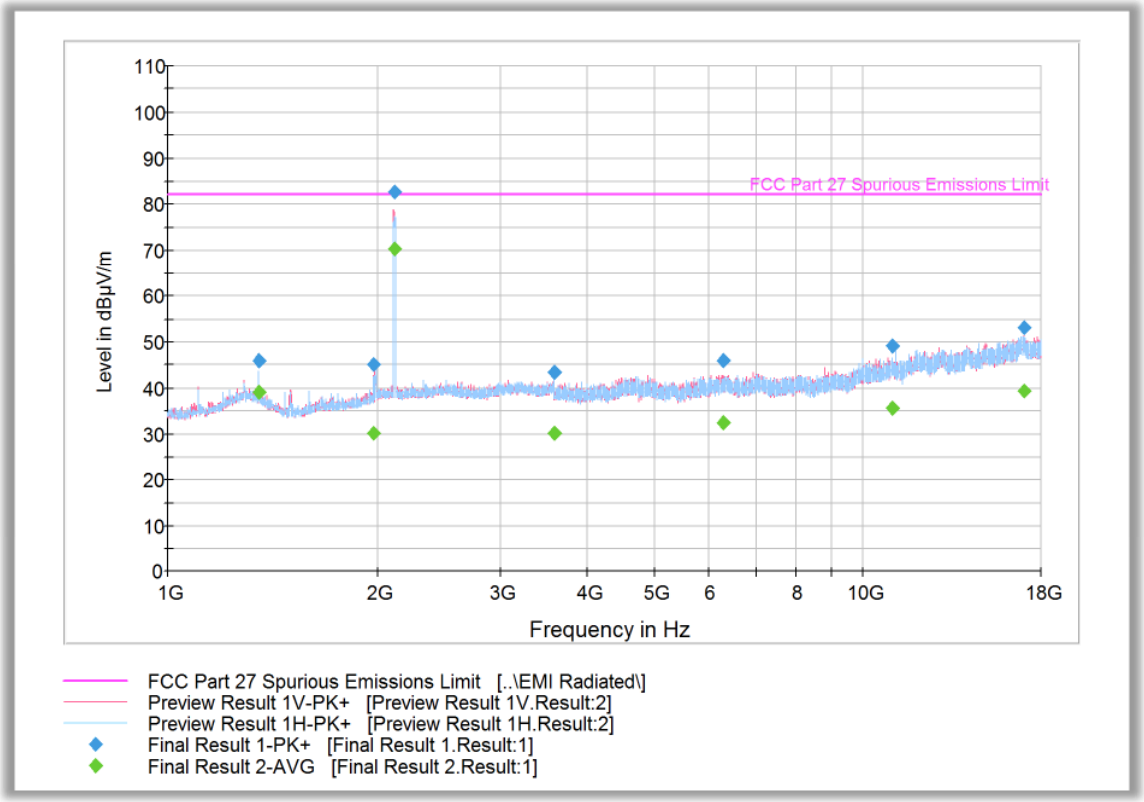
2.8.9 Test Results Below 1GHz (LTE Band 4 Downlink Worst Case Configuration) - 20MHz Bandwidth High Channel



Quasi Peak Data

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
33.607776	29.5	1000.0	120.000	150.0	V	1.0	-9.3	52.7	82.2
45.831102	38.5	1000.0	120.000	100.0	V	194.0	-13.8	43.7	82.2
61.406092	33.2	1000.0	120.000	160.0	V	223.0	-16.8	49.0	82.2
87.876633	28.1	1000.0	120.000	110.0	V	322.0	-15.5	54.1	82.2
165.288257	34.7	1000.0	120.000	110.0	V	79.0	-11.8	47.5	82.2
737.295150	43.1	1000.0	120.000	100.0	H	254.0	2.7	39.1	82.2

2.8.10 Test Results Above 1GHz (LTE Band 4 Downlink Worst Case Configuration) - 20MHz Bandwidth Low Channel



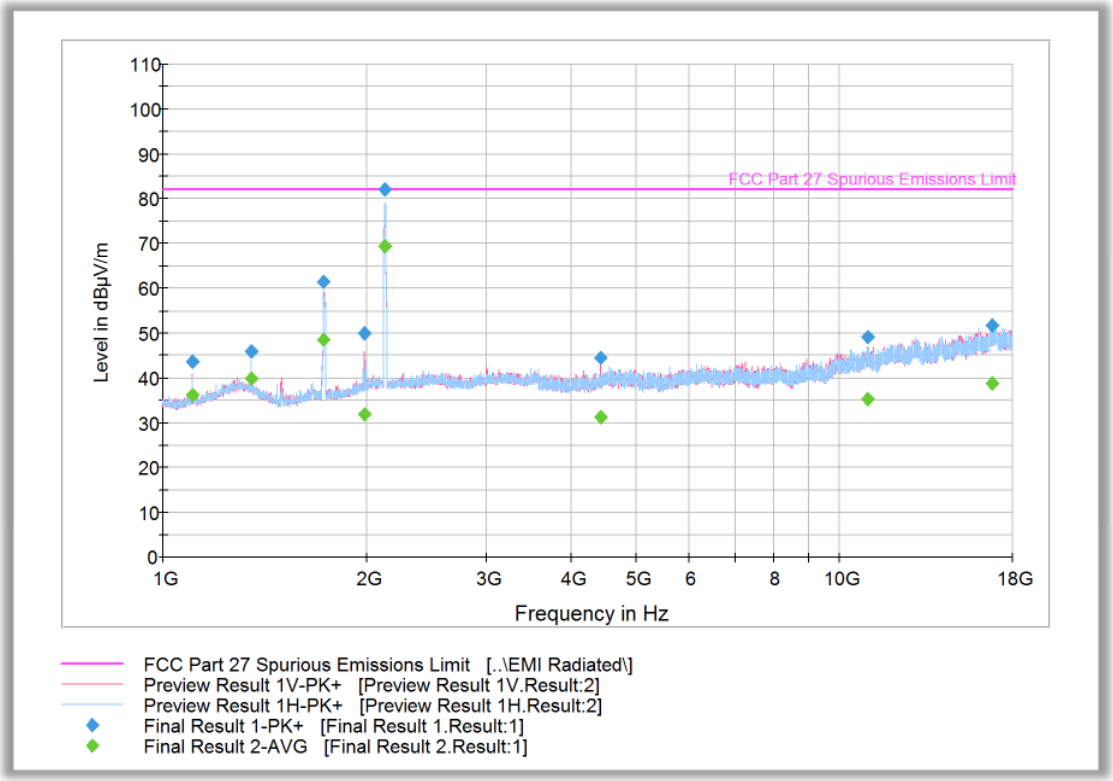
Peak Data

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1351.733333	45.9	1000.0	1000.000	191.5	H	-3.0	-5.1	36.3	82.2
1976.233333	45.2	1000.0	1000.000	138.7	H	23.0	-2.3	37.0	82.2
2114.866667	82.8	1000.0	1000.000	252.3	V	184.0	-2.2	Fundamental Carrier	
3593.266667	43.4	1000.0	1000.000	338.1	H	105.0	1.7	38.8	82.2
6273.033333	46.0	1000.0	1000.000	187.5	V	20.0	6.3	36.2	82.2
11003.566667	49.1	1000.0	1000.000	124.7	V	335.0	11.8	33.1	82.2
17038.900000	53.1	1000.0	1000.000	162.6	V	210.0	17.8	29.1	82.2

Average Data

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1351.733333	39.2	1000.0	1000.000	191.5	H	-3.0	-5.1	43.0	82.2
1976.233333	30.0	1000.0	1000.000	138.7	H	23.0	-2.3	52.2	82.2
2114.866667	70.3	1000.0	1000.000	252.3	V	184.0	-2.2	Fundamental Carrier	
3593.266667	30.1	1000.0	1000.000	338.1	H	105.0	1.7	52.1	82.2
6273.033333	32.5	1000.0	1000.000	187.5	V	20.0	6.3	49.7	82.2
11003.566667	35.5	1000.0	1000.000	124.7	V	335.0	11.8	46.7	82.2
17038.900000	39.4	1000.0	1000.000	162.6	V	210.0	17.8	42.8	82.2

2.8.11 Test Results Above 1GHz (LTE Band 4 Downlink Worst Case Configuration) - 20MHz Bandwidth Middle Channel



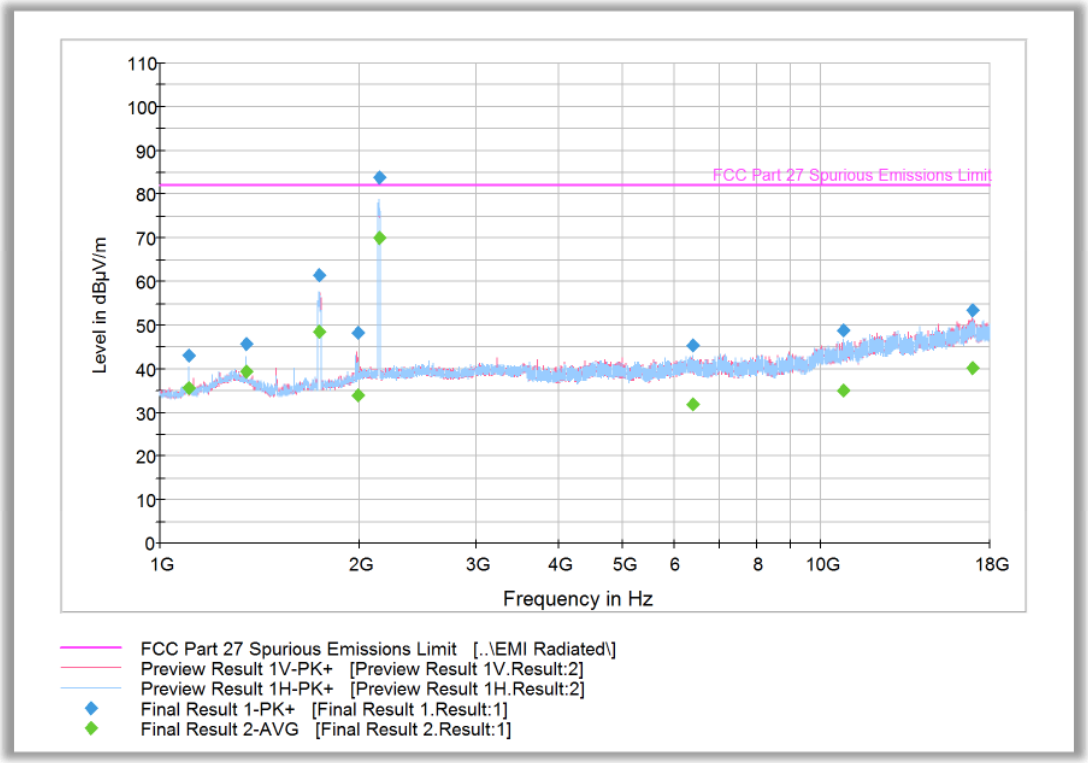
Peak Data

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1105.800000	43.7	1000.0	1000.000	103.7	H	198.0	-6.9	38.5	82.2
1351.533333	46.0	1000.0	1000.000	194.5	H	-3.0	-5.1	36.2	82.2
1725.700000	61.5	1000.0	1000.000	186.5	H	287.0	-4.7	20.7	82.2
1986.766667	49.9	1000.0	1000.000	200.5	V	122.0	-2.3	32.3	82.2
2124.866667	82.3	1000.0	1000.000	306.2	H	246.0	-2.2	Fundamental Carrier	
4431.700000	44.5	1000.0	1000.000	295.2	V	335.0	3.2	37.7	82.2
10998.500000	49.1	1000.0	1000.000	177.6	V	282.0	11.8	33.1	82.2
16760.366667	51.8	1000.0	1000.000	285.3	H	286.0	17.8	30.4	82.2

Average Data

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1105.800000	36.3	1000.0	1000.000	103.7	H	198.0	-6.9	45.9	82.2
1351.533333	39.9	1000.0	1000.000	194.5	H	-3.0	-5.1	42.3	82.2
1725.700000	48.5	1000.0	1000.000	186.5	H	287.0	-4.7	33.7	82.2
1986.766667	31.9	1000.0	1000.000	200.5	V	122.0	-2.3	50.3	82.2
2124.866667	69.6	1000.0	1000.000	306.2	H	246.0	-2.2	Fundamental Carrier	
4431.700000	31.4	1000.0	1000.000	295.2	V	335.0	3.2	50.8	82.2
10998.500000	35.4	1000.0	1000.000	177.6	V	282.0	11.8	46.8	82.2
16760.366667	38.9	1000.0	1000.000	285.3	H	286.0	17.8	43.3	82.2

2.8.12 Test Results Above 1GHz (LTE Band 4 Downlink Worst Case Configuration) - 20MHz Bandwidth High Channel



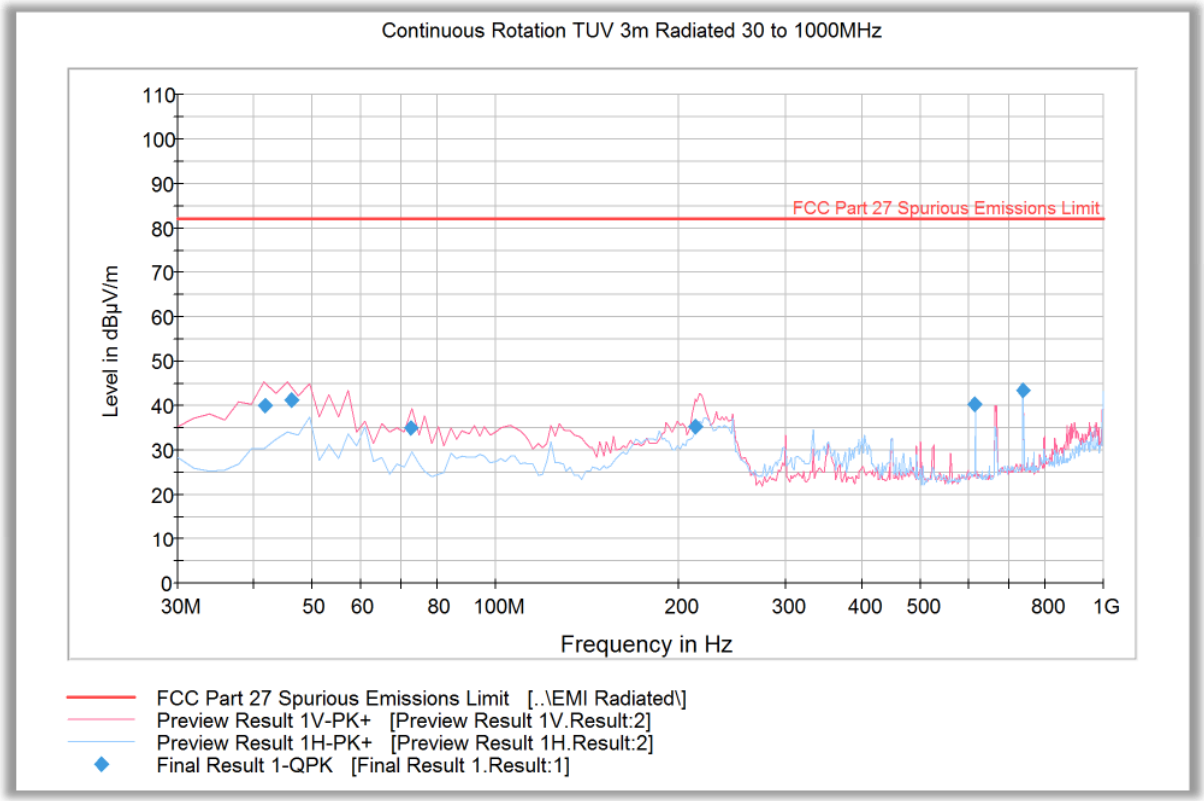
Peak Data

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1105.766667	43.2	1000.0	1000.000	100.7	H	222.0	-6.9	39.0	82.2
1351.533333	45.8	1000.0	1000.000	195.5	H	0.0	-5.1	36.4	82.2
1744.000000	61.5	1000.0	1000.000	178.6	H	291.0	-4.4	20.7	82.2
1992.933333	48.4	1000.0	1000.000	275.3	V	304.0	-2.2	33.8	82.2
2147.300000	83.8	1000.0	1000.000	252.3	H	255.0	-2.2	Fundamental Carrier	
6392.800000	45.5	1000.0	1000.000	99.7	H	150.0	6.4	36.7	82.2
10793.666667	48.8	1000.0	1000.000	103.7	H	110.0	11.7	33.4	82.2
16969.633333	53.3	1000.0	1000.000	240.4	V	322.0	17.9	28.9	82.2

Average Data

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1105.766667	35.5	1000.0	1000.000	100.7	H	222.0	-6.9	46.7	82.2
1351.533333	39.4	1000.0	1000.000	195.5	H	0.0	-5.1	42.8	82.2
1744.000000	48.5	1000.0	1000.000	178.6	H	291.0	-4.4	33.7	82.2
1992.933333	33.8	1000.0	1000.000	275.3	V	304.0	-2.2	48.4	82.2
2147.300000	70.2	1000.0	1000.000	252.3	H	255.0	-2.2	Fundamental Carrier	
6392.800000	31.8	1000.0	1000.000	99.7	H	150.0	6.4	50.4	82.2
10793.666667	35.1	1000.0	1000.000	103.7	H	110.0	11.7	47.1	82.2
16969.633333	40.1	1000.0	1000.000	240.4	V	322.0	17.9	42.1	82.2

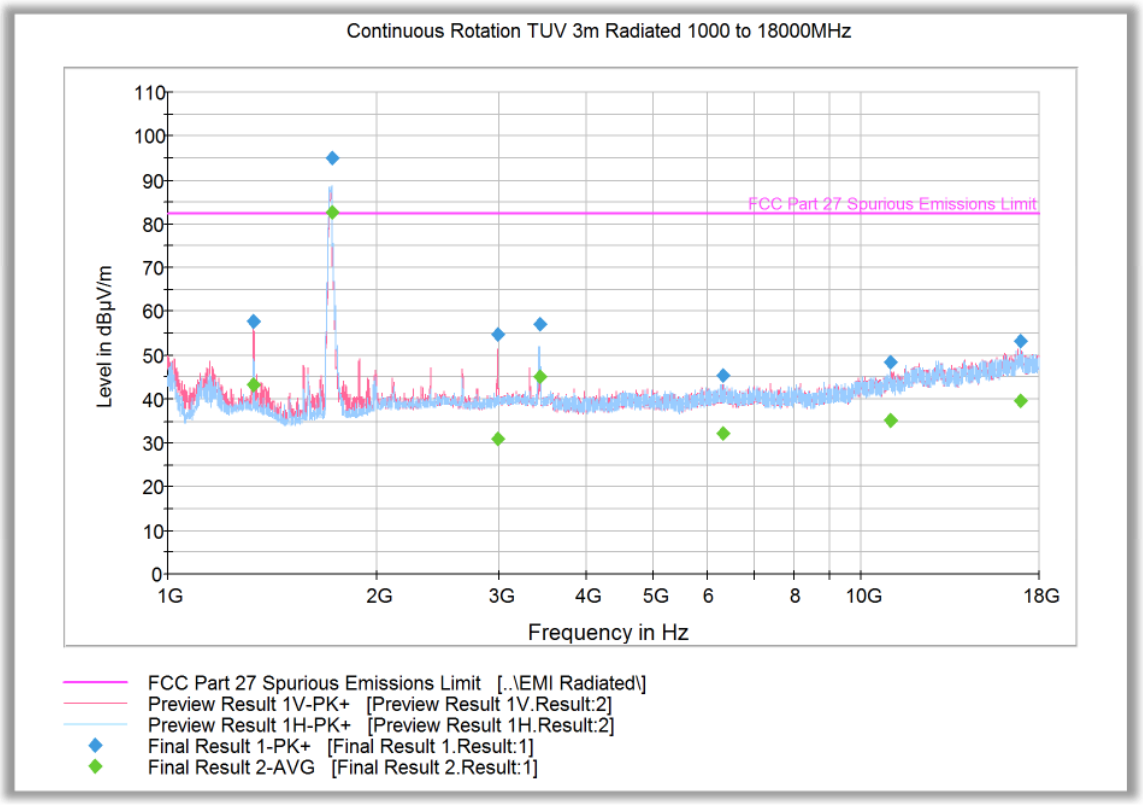
2.8.13 Test Results Below 1GHz (LTE Band 4 Uplink Worst Case Configuration) - 15MHz Bandwidth Low Channel



Quasi Peak Data

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
41.743327	39.9	1000.0	120.000	122.0	V	271.0	-12.6	42.3	82.2
46.071102	41.3	1000.0	120.000	100.0	V	279.0	-13.9	40.9	82.2
72.405531	35.0	1000.0	120.000	100.0	V	79.0	-17.2	47.2	82.2
213.573226	35.2	1000.0	120.000	100.0	V	221.0	-10.0	47.0	82.2
614.390220	40.2	1000.0	120.000	140.0	H	302.0	0.9	42.0	82.2
737.295150	43.3	1000.0	120.000	201.0	V	164.0	2.7	38.9	82.2

2.8.14 Test Results Above 1GHz (LTE Band 4 Uplink Worst Case Configuration) - 15MHz Bandwidth Low Channel



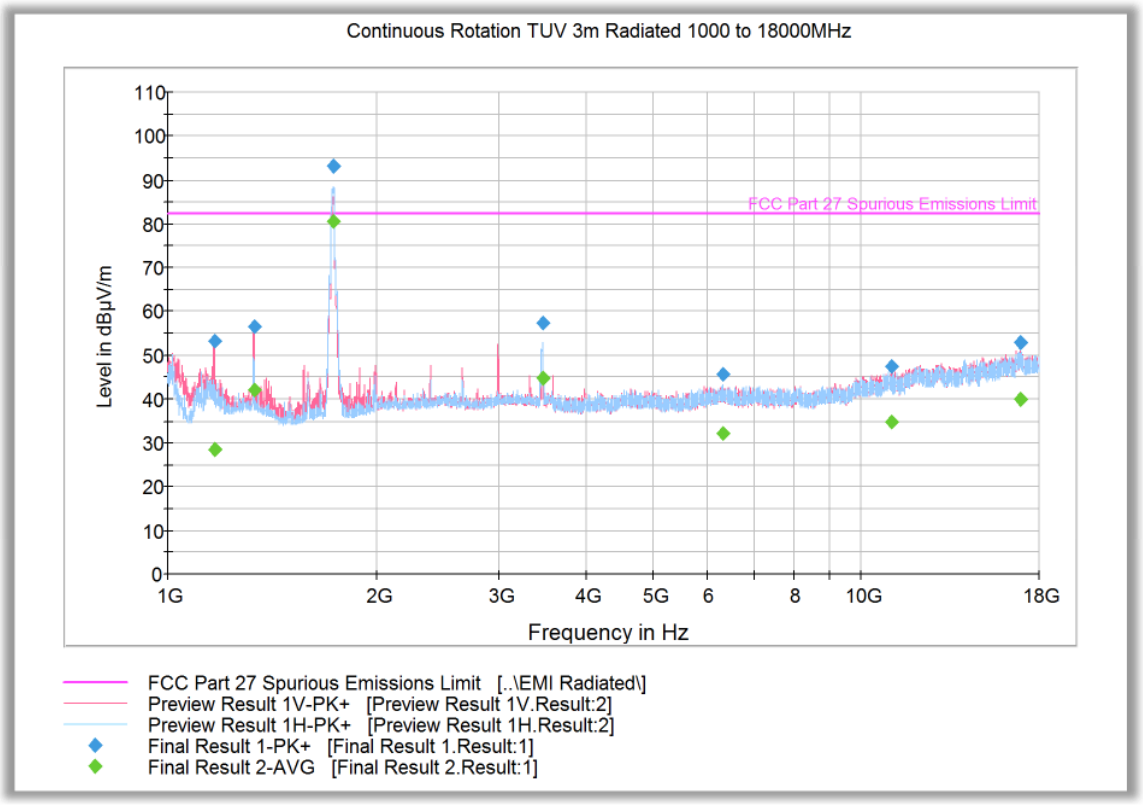
Peak Data

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1329.600000	57.7	1000.0	1000.000	195.5	V	93.0	-5.1	24.5	82.2
1722.300000	95.0	1000.0	1000.000	296.2	H	97.0	-4.7	Fundamental Carrier	
2995.033333	54.8	1000.0	1000.000	151.6	V	269.0	0.8	27.4	82.2
3435.933333	57.1	1000.0	1000.000	291.2	H	118.0	0.9	25.1	82.2
6323.833333	45.4	1000.0	1000.000	344.1	V	252.0	6.2	36.8	82.2
11000.733333	48.2	1000.0	1000.000	270.3	H	1.0	11.8	34.0	82.2
16957.366667	53.1	1000.0	1000.000	165.6	H	27.0	17.9	29.1	82.2

Average Data

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1329.600000	43.3	1000.0	1000.000	195.5	V	93.0	-5.1	38.9	82.2
1722.300000	82.7	1000.0	1000.000	296.2	H	97.0	-4.7	Fundamental Carrier	
2995.033333	30.9	1000.0	1000.000	151.6	V	269.0	0.8	51.3	82.2
3435.933333	45.0	1000.0	1000.000	291.2	H	118.0	0.9	37.2	82.2
6323.833333	32.2	1000.0	1000.000	344.1	V	252.0	6.2	50.0	82.2
11000.733333	35.2	1000.0	1000.000	270.3	H	1.0	11.8	47.0	82.2
16957.366667	39.7	1000.0	1000.000	165.6	H	27.0	17.9	42.5	82.2

2.8.15 Test Results Above 1GHz (LTE Band 4 Uplink Worst Case Configuration) - 15MHz Bandwidth Middle Channel



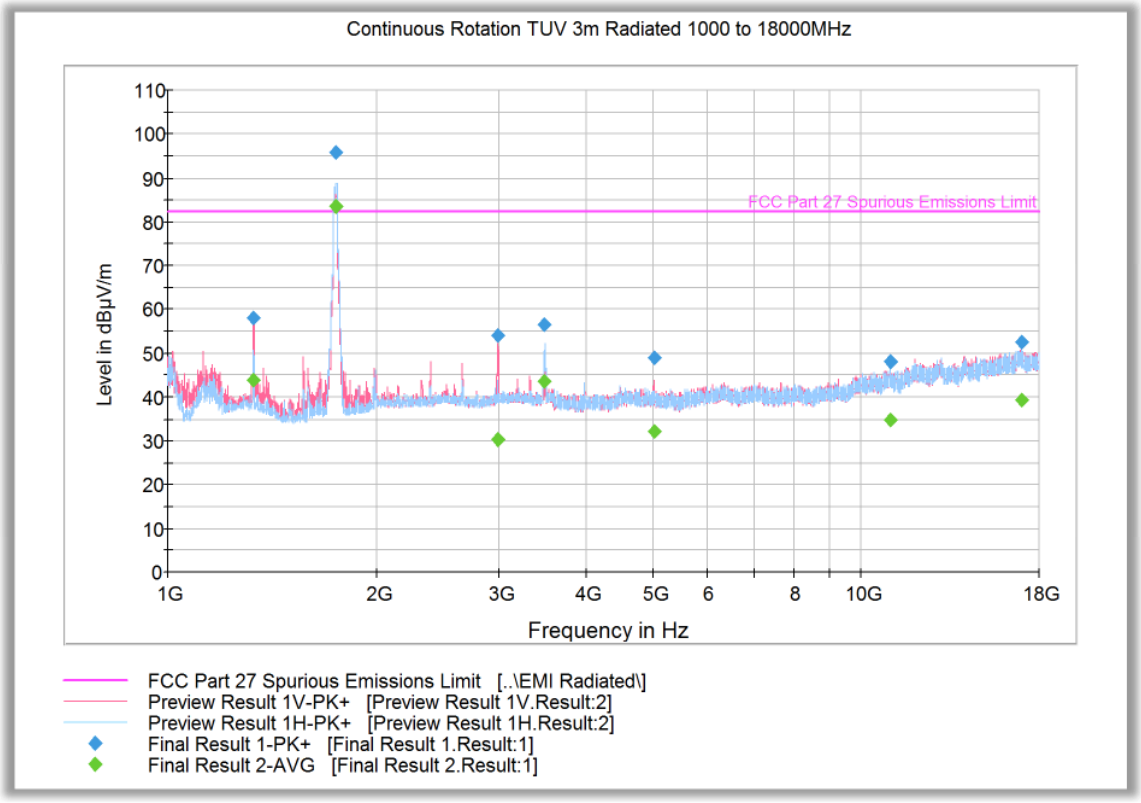
Peak Data

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1169.100000	53.2	1000.0	1000.000	241.3	V	231.0	-6.7	29.0	82.2
1331.866667	56.6	1000.0	1000.000	194.5	V	88.0	-5.1	25.6	82.2
1737.233333	93.1	1000.0	1000.000	142.7	H	96.0	-4.5	Fundamental Carrier	
3466.700000	57.5	1000.0	1000.000	124.7	H	116.0	1.1	24.7	82.2
6318.400000	45.7	1000.0	1000.000	285.3	H	15.0	6.2	36.5	82.2
11020.033333	47.4	1000.0	1000.000	199.5	V	36.0	11.8	34.8	82.2
16937.066667	52.8	1000.0	1000.000	178.6	V	263.0	18.0	29.4	82.2

Average Data

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1169.100000	28.4	1000.0	1000.000	241.3	V	231.0	-6.7	53.8	82.2
1331.866667	41.9	1000.0	1000.000	194.5	V	88.0	-5.1	40.3	82.2
1737.233333	80.6	1000.0	1000.000	142.7	H	96.0	-4.5	Fundamental Carrier	
3466.700000	44.7	1000.0	1000.000	124.7	H	116.0	1.1	37.5	82.2
6318.400000	32.2	1000.0	1000.000	285.3	H	15.0	6.2	50.0	82.2
11020.033333	34.7	1000.0	1000.000	199.5	V	36.0	11.8	47.5	82.2
16937.066667	39.9	1000.0	1000.000	178.6	V	263.0	18.0	42.4	82.2

2.8.16 Test Results Above 1GHz (LTE Band 4 Uplink Worst Case Configuration) - 15MHz Bandwidth High Channel



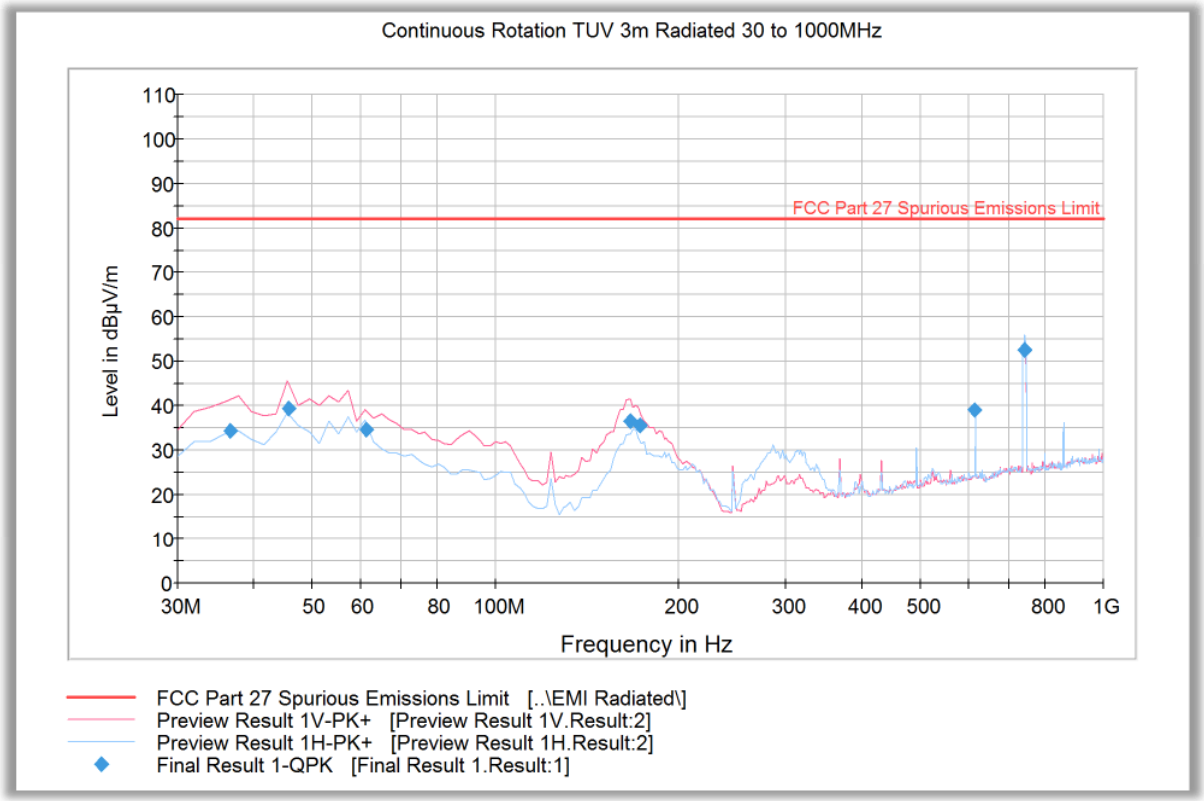
Peak Data

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1330.166667	58.1	1000.0	1000.000	194.5	V	89.0	-5.1	24.1	82.2
1752.000000	95.8	1000.0	1000.000	116.7	H	109.0	-4.2	Fundamental Carrier	
2991.233333	54.1	1000.0	1000.000	151.6	V	285.0	0.8	28.1	82.2
3492.233333	56.5	1000.0	1000.000	111.7	H	115.0	1.2	25.7	82.2
5039.400000	48.9	1000.0	1000.000	200.5	V	294.0	3.9	33.3	82.2
11012.966667	48.0	1000.0	1000.000	338.1	H	114.0	11.8	34.2	82.2
17022.866667	52.5	1000.0	1000.000	280.2	V	5.0	17.8	29.7	82.2

Average Data

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1330.166667	44.0	1000.0	1000.000	194.5	V	89.0	-5.1	38.2	82.2
1752.000000	83.5	1000.0	1000.000	116.7	H	109.0	-4.2	Fundamental Carrier	
2991.233333	30.3	1000.0	1000.000	151.6	V	285.0	0.8	51.9	82.2
3492.233333	43.4	1000.0	1000.000	111.7	H	115.0	1.2	38.8	82.2
5039.400000	32.0	1000.0	1000.000	200.5	V	294.0	3.9	50.2	82.2
11012.966667	34.9	1000.0	1000.000	338.1	H	114.0	11.8	47.3	82.2
17022.866667	39.4	1000.0	1000.000	280.2	V	5.0	17.8	42.8	82.2

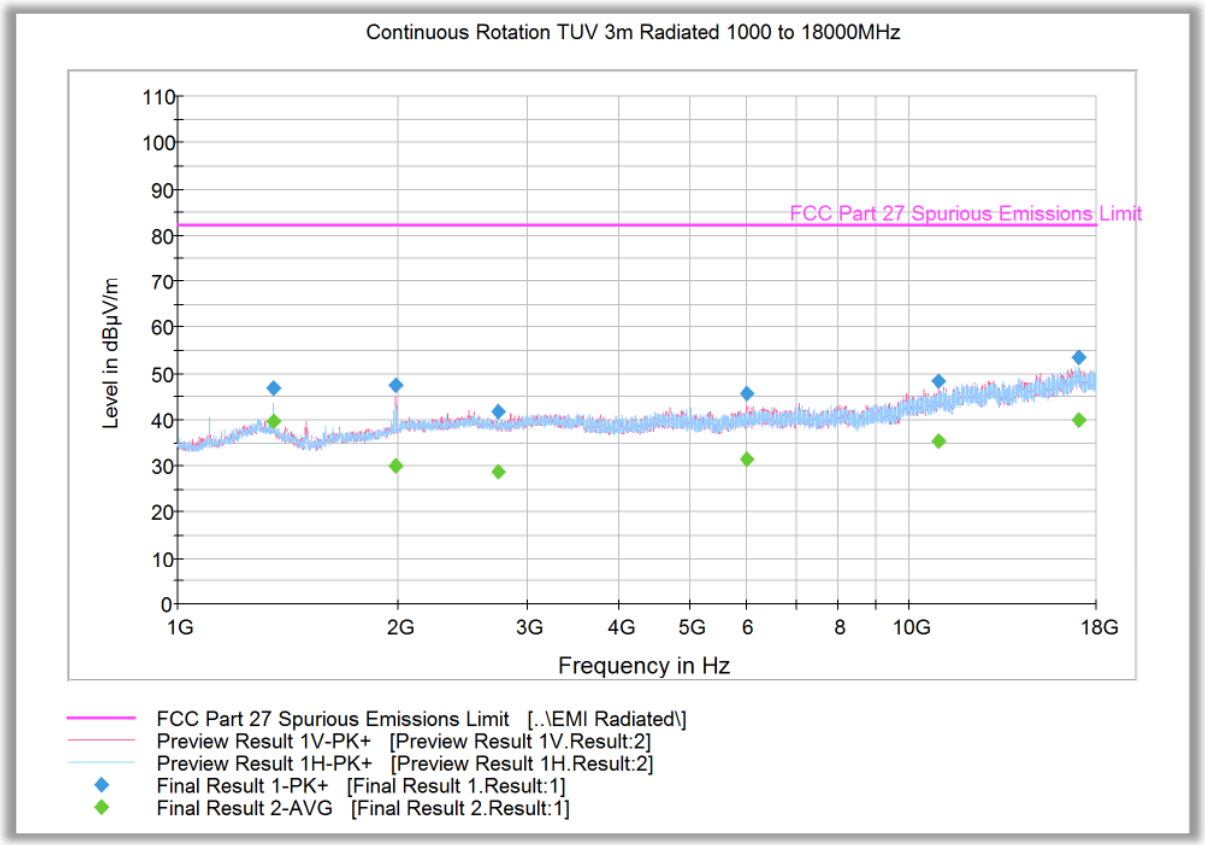
2.8.17 Test Results Below 1GHz (LTE Band 12 Downlink Worst Case Configuration) - 10MHz Bandwidth High Channel



Quasi Peak Data

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
36.655551	34.3	1000.0	120.000	100.0	V	320.0	-10.6	47.9	82.2
45.711102	39.2	1000.0	120.000	109.0	V	260.0	-13.7	43.0	82.2
61.462204	34.6	1000.0	120.000	155.0	V	166.0	-16.8	47.6	82.2
166.432144	36.6	1000.0	120.000	100.0	V	88.0	-11.8	45.6	82.2
172.607695	35.5	1000.0	120.000	100.0	V	83.0	-11.7	46.7	82.2
614.390220	39.2	1000.0	120.000	160.0	V	198.0	0.9	43.0	82.2
740.702926	52.4	1000.0	120.000	100.0	H	122.0	2.6	Fundamental Carrier	

2.8.18 Test Results Above 1GHz (LTE Band 12 Downlink Worst Case Configuration) - 10MHz Bandwidth Low Channel



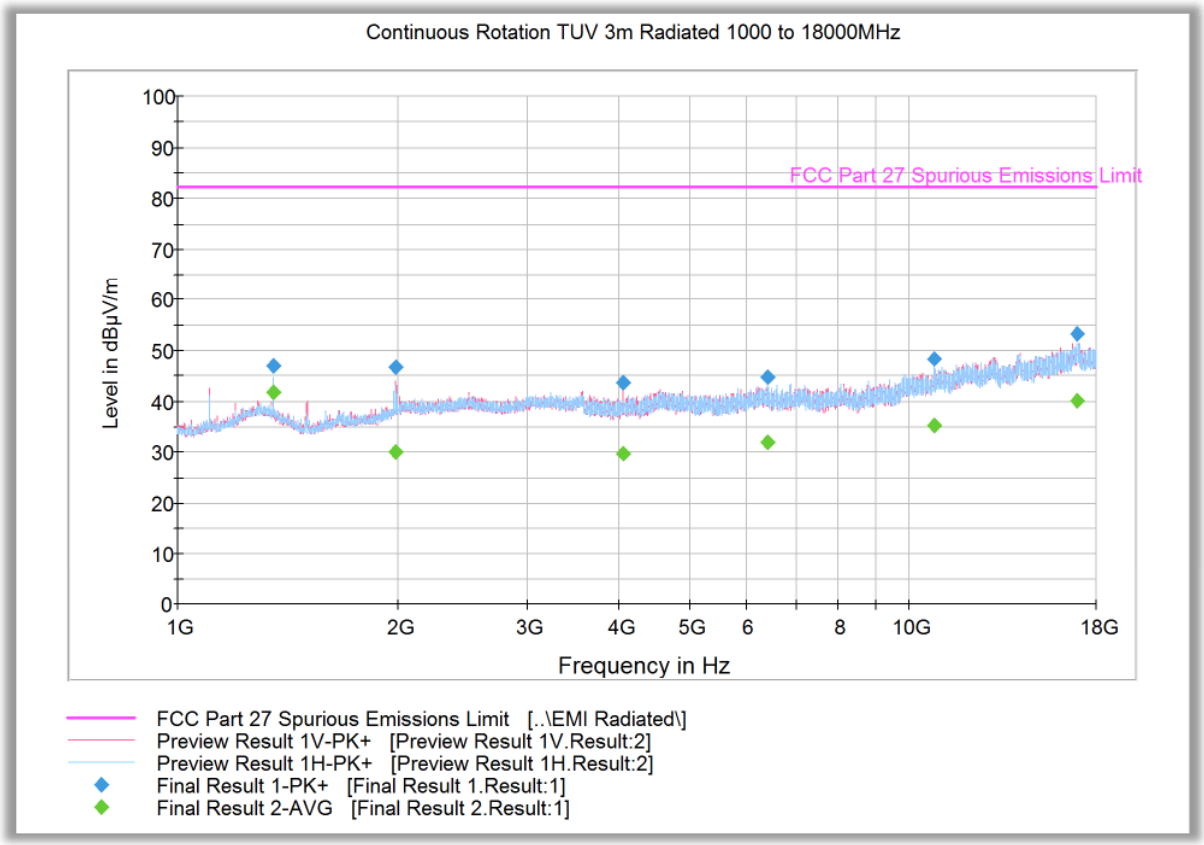
Peak Data

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1351.533333	46.8	1000.0	1000.000	151.6	H	1.0	-5.1	35.4	82.2
1986.966667	47.3	1000.0	1000.000	245.3	V	186.0	-2.3	34.9	82.2
2737.600000	41.8	1000.0	1000.000	250.5	H	228.0	-0.1	40.4	82.2
5991.633333	45.6	1000.0	1000.000	252.3	V	53.0	5.7	36.6	82.2
10960.866667	48.5	1000.0	1000.000	139.7	V	18.0	11.9	33.7	82.2
16972.600000	53.4	1000.0	1000.000	252.3	H	34.0	17.9	28.8	82.2

Average Data

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1351.533333	39.6	1000.0	1000.000	151.6	H	1.0	-5.1	42.6	82.2
1986.966667	30.2	1000.0	1000.000	245.3	V	186.0	-2.3	52.0	82.2
2737.600000	28.8	1000.0	1000.000	250.5	H	228.0	-0.1	53.4	82.2
5991.633333	31.4	1000.0	1000.000	252.3	V	53.0	5.7	50.8	82.2
10960.866667	35.4	1000.0	1000.000	139.7	V	18.0	11.9	46.8	82.2
16972.600000	40.1	1000.0	1000.000	252.3	H	34.0	17.9	42.1	82.2

2.8.19 Test Results Above 1GHz (LTE Band 12 Downlink Worst Case Configuration) - 10MHz Bandwidth Middle Channel



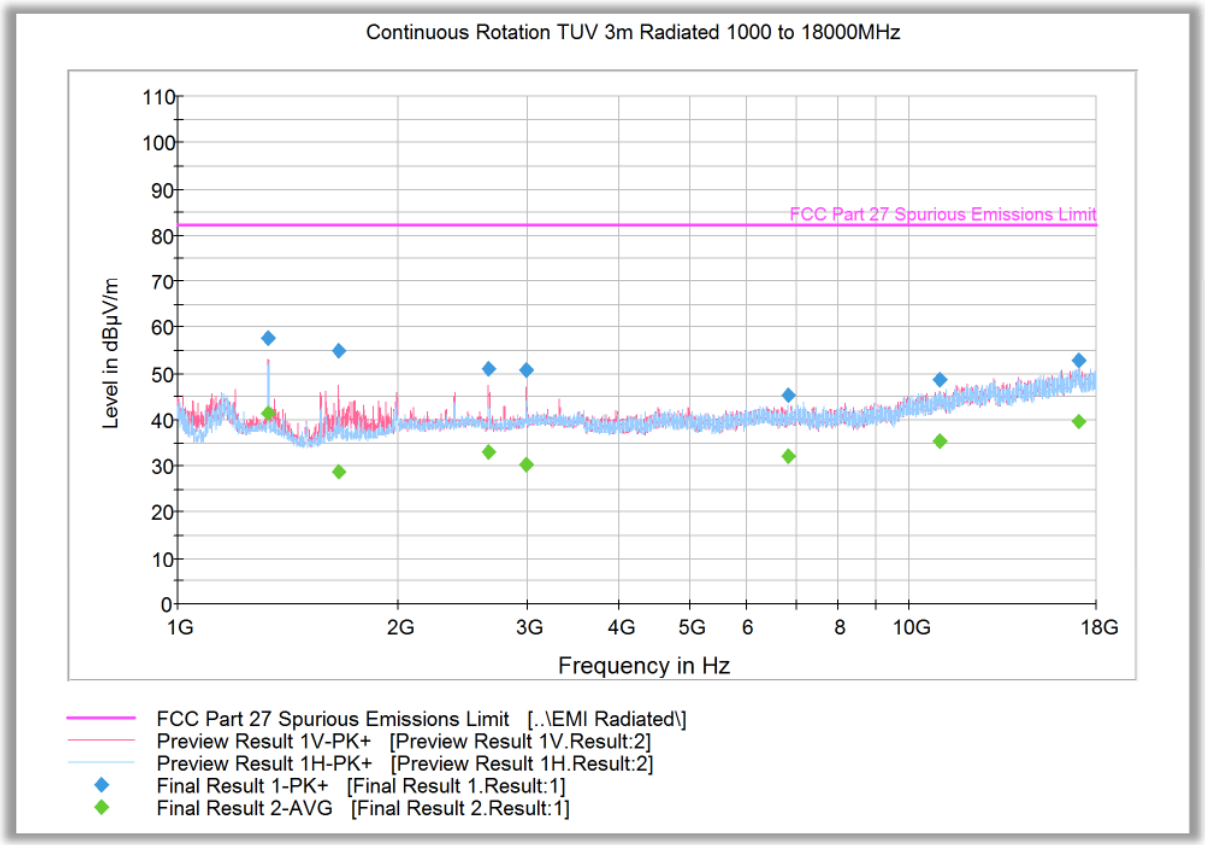
Peak Data

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1351.733333	46.9	1000.0	1000.000	198.5	H	3.0	-5.1	35.3	82.2
1987.533333	46.6	1000.0	1000.000	241.3	V	116.0	-2.3	35.6	82.2
4066.633333	43.8	1000.0	1000.000	103.7	V	103.0	2.6	38.4	82.2
6393.200000	44.7	1000.0	1000.000	352.7	H	160.0	6.4	37.5	82.2
10817.700000	48.5	1000.0	1000.000	317.2	H	80.0	11.8	33.7	82.2
16946.366667	53.2	1000.0	1000.000	295.2	H	295.0	18.0	29.0	82.2

Average Data

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1351.733333	41.7	1000.0	1000.000	198.5	H	3.0	-5.1	40.5	82.2
1987.533333	30.0	1000.0	1000.000	241.3	V	116.0	-2.3	52.2	82.2
4066.633333	29.8	1000.0	1000.000	103.7	V	103.0	2.6	52.4	82.2
6393.200000	31.9	1000.0	1000.000	352.7	H	160.0	6.4	50.3	82.2
10817.700000	35.3	1000.0	1000.000	317.2	H	80.0	11.8	46.9	82.2
16946.366667	40.1	1000.0	1000.000	295.2	H	295.0	18.0	42.1	82.2

2.8.20 Test Results Above 1GHz (LTE Band 12 Downlink Worst Case Configuration) - 10MHz Bandwidth High Channel



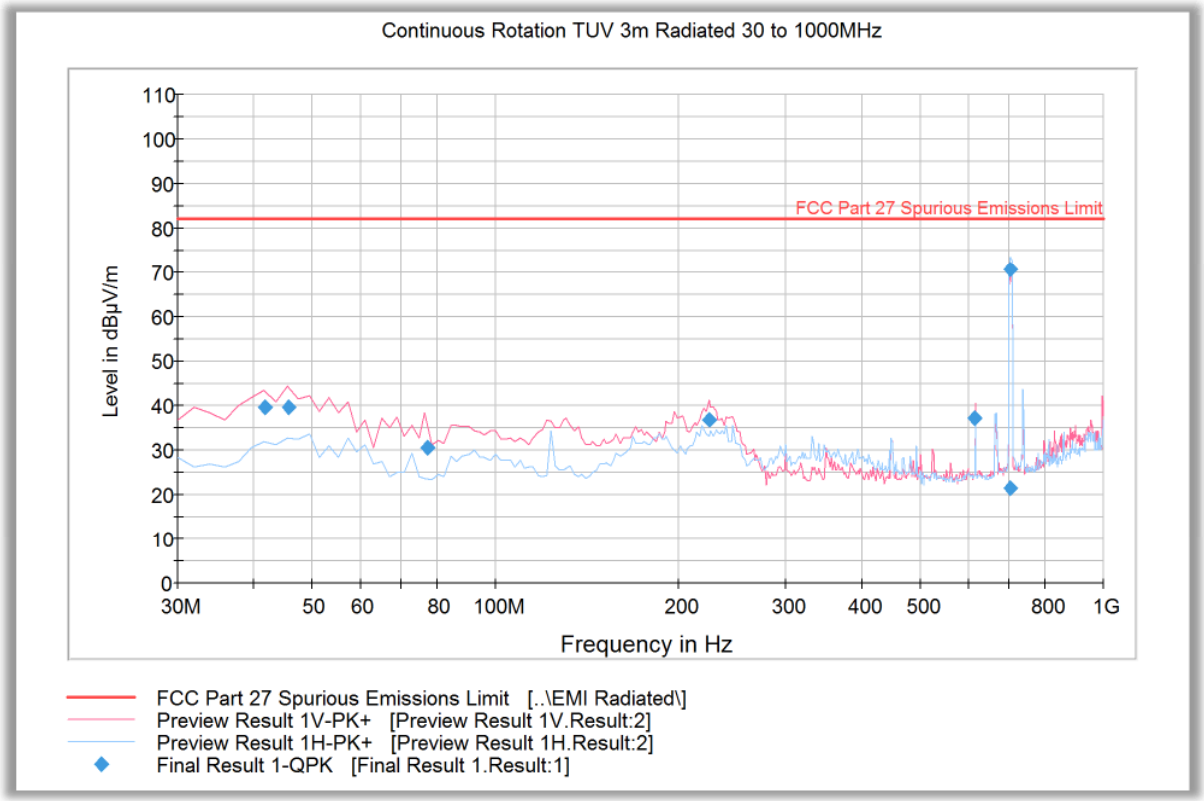
Peak Data

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1330.333333	57.6	1000.0	1000.000	213.4	V	290.0	-5.1	24.6	82.2
1660.166667	55.0	1000.0	1000.000	337.1	V	268.0	-5.2	27.2	82.2
2660.566667	51.0	1000.0	1000.000	296.2	V	252.0	-0.2	31.2	82.2
2988.566667	50.8	1000.0	1000.000	178.6	V	22.0	0.7	31.4	82.2
6832.900000	45.4	1000.0	1000.000	151.2	H	164.0	6.6	36.8	82.2
10993.533333	48.5	1000.0	1000.000	352.7	V	7.0	11.8	33.7	82.2

Average Data

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1330.333333	41.5	1000.0	1000.000	213.4	V	290.0	-5.1	40.7	82.2
1660.166667	28.9	1000.0	1000.000	337.1	V	268.0	-5.2	53.3	82.2
2660.566667	33.1	1000.0	1000.000	296.2	V	252.0	-0.2	49.1	82.2
2988.566667	30.4	1000.0	1000.000	178.6	V	22.0	0.7	51.8	82.2
6832.900000	32.2	1000.0	1000.000	151.2	H	164.0	6.6	50.0	82.2
10993.533333	35.4	1000.0	1000.000	352.7	V	7.0	11.8	46.8	82.2

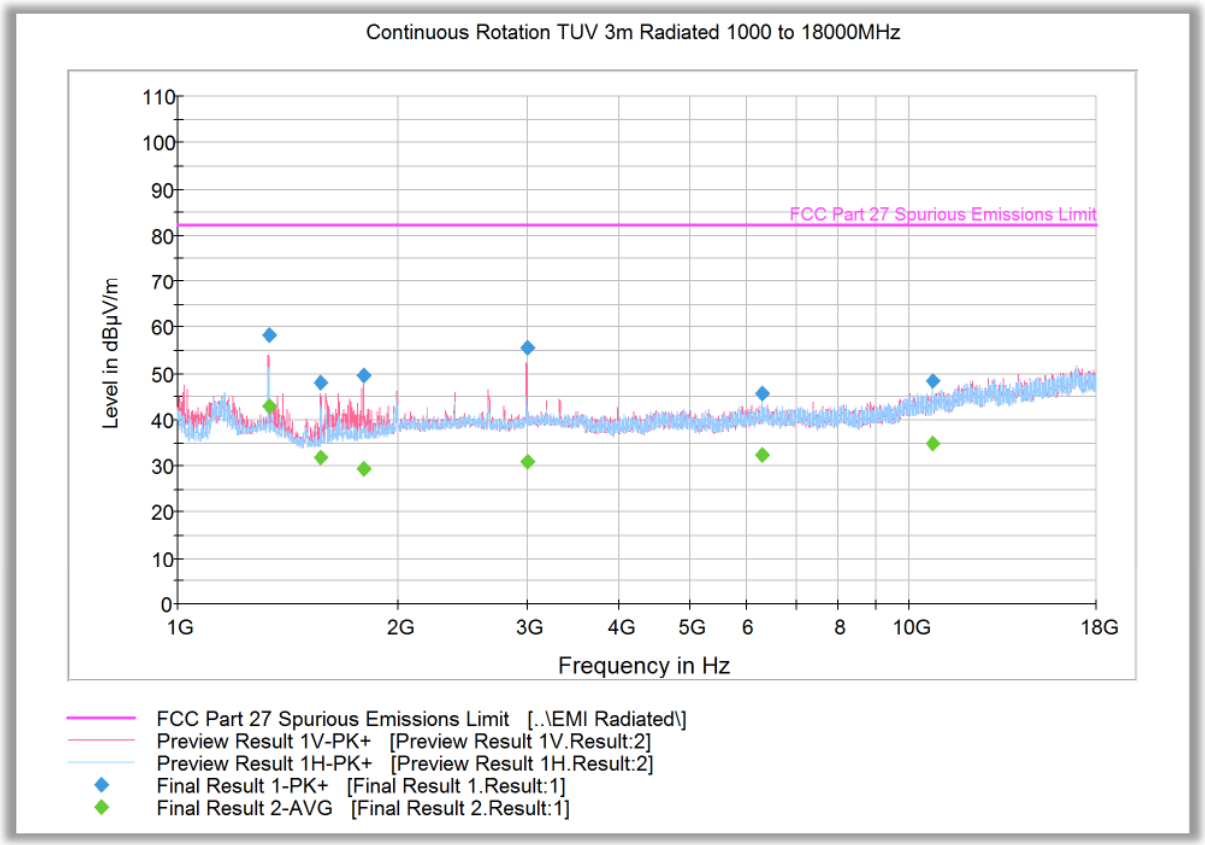
2.8.21 Test Results Below 1GHz (LTE Band 12 Uplink Worst Case Configuration) - 10MHz Bandwidth Low Channel



Quasi Peak Data

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
41.743327	39.8	1000.0	120.000	100.0	V	307.0	-12.6	42.4	82.2
45.671102	39.8	1000.0	120.000	134.0	V	307.0	-13.7	42.4	82.2
77.213307	30.7	1000.0	120.000	100.0	V	307.0	-17.2	51.5	82.2
224.148778	36.8	1000.0	120.000	100.0	V	216.0	-9.5	45.4	82.2
614.390220	37.3	1000.0	120.000	100.0	V	173.0	0.9	44.9	82.2
703.705170	70.5	1000.0	120.000	100.0	H	223.0	2.7	Fundamental Carrier	
703.729058	21.6	1000.0	120.000	100.0	H	225.0	2.7	60.6	82.2

2.8.22 Test Results Above 1GHz (LTE Band 12 Uplink Worst Case Configuration) - 10MHz Bandwidth Low Channel



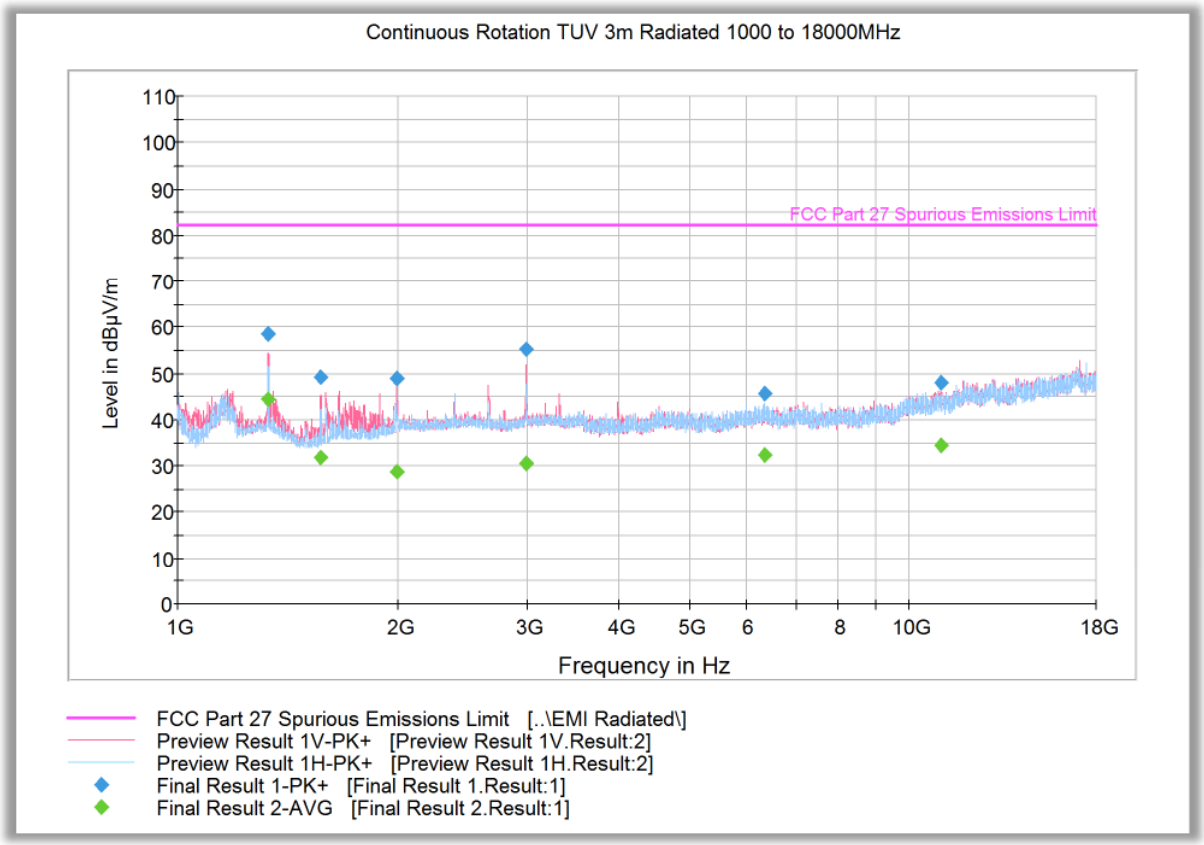
Peak Data

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1331.333333	58.4	1000.0	1000.000	231.4	V	287.0	-5.1	23.8	82.2
1570.866667	48.0	1000.0	1000.000	152.2	V	290.0	-5.9	34.2	82.2
1792.000000	49.5	1000.0	1000.000	252.3	V	293.0	-3.5	32.7	82.2
2998.466667	55.7	1000.0	1000.000	232.4	V	269.0	0.9	26.5	82.2
6288.500000	45.6	1000.0	1000.000	132.7	H	240.0	6.2	36.6	82.2
10759.666667	48.3	1000.0	1000.000	318.2	H	145.0	11.6	33.9	82.2

Average Data

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1331.333333	43.0	1000.0	1000.000	231.4	V	287.0	-5.1	39.2	82.2
1570.866667	31.8	1000.0	1000.000	152.2	V	290.0	-5.9	50.4	82.2
1792.000000	29.4	1000.0	1000.000	252.3	V	293.0	-3.5	52.8	82.2
2998.466667	31.0	1000.0	1000.000	232.4	V	269.0	0.9	51.2	82.2
6288.500000	32.5	1000.0	1000.000	132.7	H	240.0	6.2	49.7	82.2
10759.666667	34.9	1000.0	1000.000	318.2	H	145.0	11.6	47.3	82.2

2.8.23 Test Results Above 1GHz (LTE Band 12 Uplink Worst Case Configuration) - 10MHz Bandwidth Middle Channel



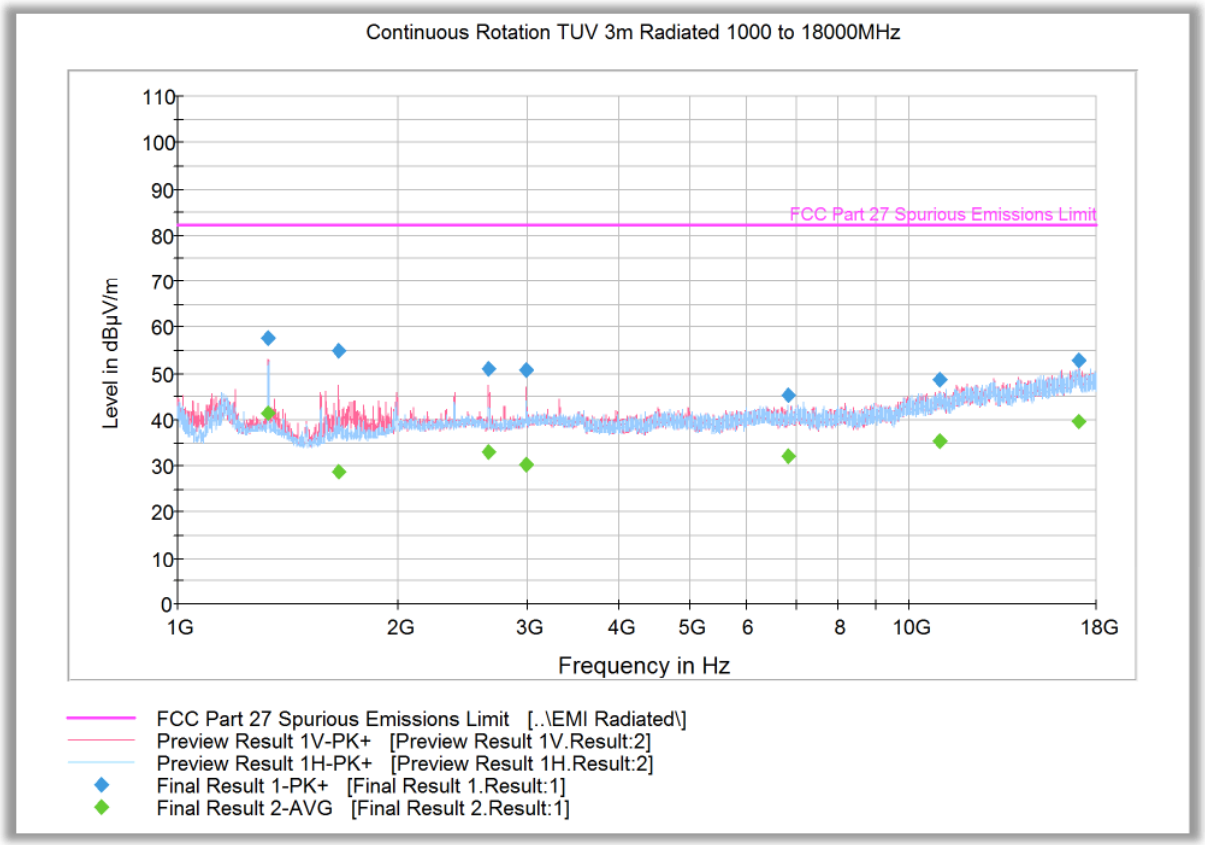
Peak Data

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1330.933333	58.6	1000.0	1000.000	178.6	V	99.0	-5.1	23.6	82.2
1568.200000	49.3	1000.0	1000.000	207.5	V	292.0	-5.9	32.9	82.2
1997.566667	49.1	1000.0	1000.000	200.5	V	236.0	-2.2	33.1	82.2
2986.866667	55.4	1000.0	1000.000	252.3	V	253.0	0.7	26.8	82.2
6334.833333	45.8	1000.0	1000.000	252.3	H	143.0	6.3	36.4	82.2
11051.933333	48.1	1000.0	1000.000	231.4	V	198.0	12.0	34.1	82.2

Average Data

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1330.933333	44.6	1000.0	1000.000	178.6	V	99.0	-5.1	37.6	82.2
1568.200000	31.9	1000.0	1000.000	207.5	V	292.0	-5.9	50.3	82.2
1997.566667	29.0	1000.0	1000.000	200.5	V	236.0	-2.2	53.2	82.2
2986.866667	30.8	1000.0	1000.000	252.3	V	253.0	0.7	51.4	82.2
6334.833333	32.5	1000.0	1000.000	252.3	H	143.0	6.3	49.7	82.2
11051.933333	34.7	1000.0	1000.000	231.4	V	198.0	12.0	47.5	82.2

2.8.24 Test Results Above 1GHz (LTE Band 12 Uplink Worst Case Configuration) - 10MHz Bandwidth High Channel



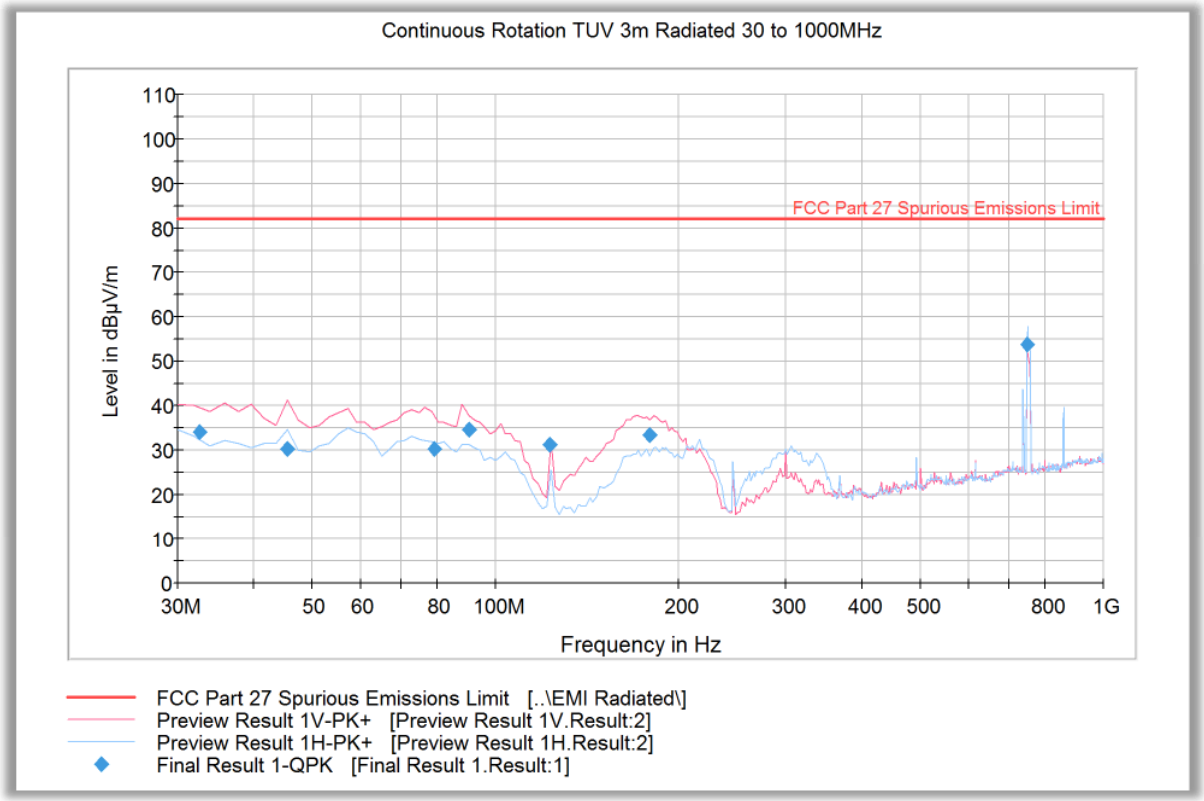
Peak Data

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1330.333333	57.6	1000.0	1000.000	213.4	V	290.0	-5.1	24.6	82.2
1660.166667	55.0	1000.0	1000.000	337.1	V	268.0	-5.2	27.2	82.2
2660.566667	51.0	1000.0	1000.000	296.2	V	252.0	-0.2	31.2	82.2
2988.566667	50.8	1000.0	1000.000	178.6	V	22.0	0.7	31.4	82.2
6832.900000	45.4	1000.0	1000.000	151.2	H	164.0	6.6	36.8	82.2
10993.533333	48.5	1000.0	1000.000	352.7	V	7.0	11.8	33.7	82.2

Average Data

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1330.333333	41.5	1000.0	1000.000	213.4	V	290.0	-5.1	40.7	82.2
1660.166667	28.9	1000.0	1000.000	337.1	V	268.0	-5.2	53.3	82.2
2660.566667	33.1	1000.0	1000.000	296.2	V	252.0	-0.2	49.1	82.2
2988.566667	30.4	1000.0	1000.000	178.6	V	22.0	0.7	51.8	82.2
6832.900000	32.2	1000.0	1000.000	151.2	H	164.0	6.6	50.0	82.2
10993.533333	35.4	1000.0	1000.000	352.7	V	7.0	11.8	46.8	82.2

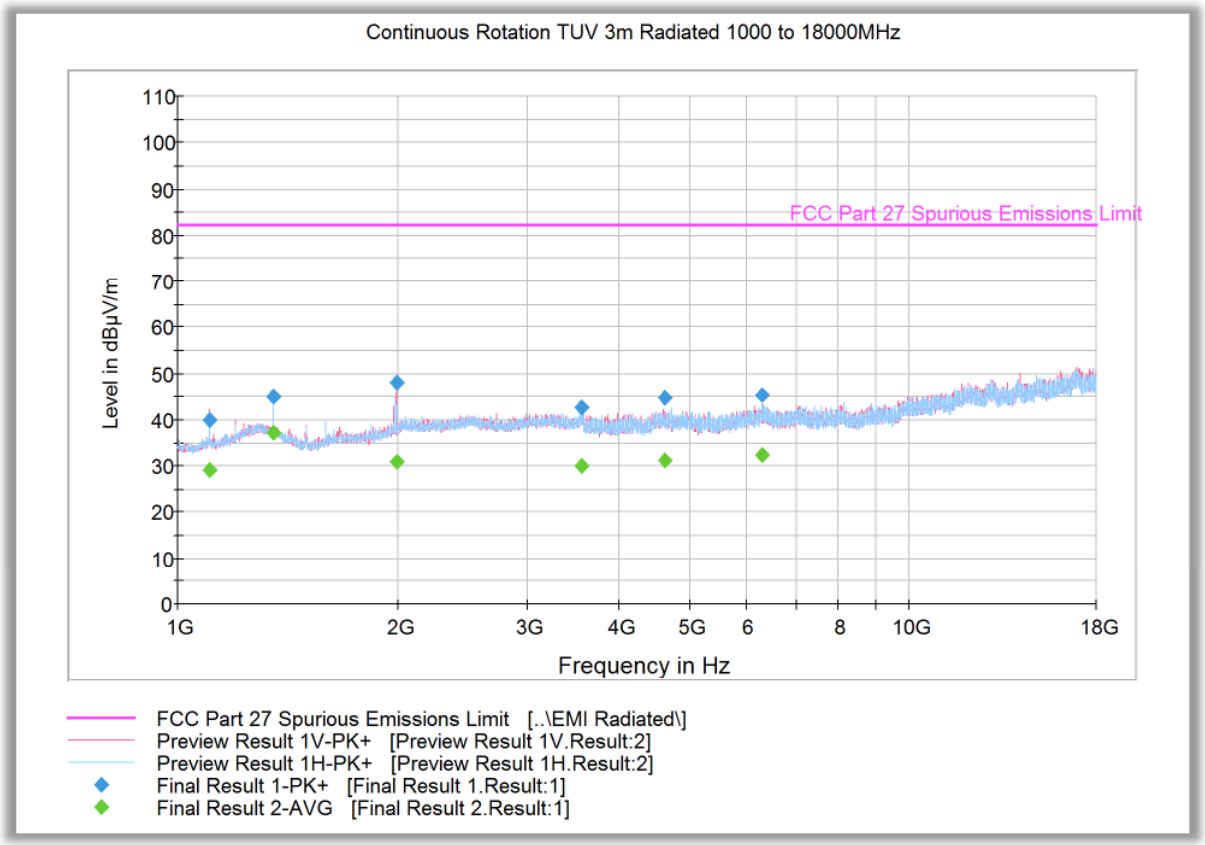
2.8.25 Test Results Below 1GHz (LTE Band 13 Downlink Worst Case Configuration) - 10MHz Bandwidth Middle Channel



Quasi Peak Data

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
32.551663	34.1	1000.0	120.000	100.0	V	80.0	-8.9	48.1	82.2
45.511102	30.2	1000.0	120.000	109.0	V	6.0	-13.7	52.0	82.2
79.493307	30.3	1000.0	120.000	109.0	V	14.0	-17.2	51.9	82.2
90.676633	34.6	1000.0	120.000	100.0	V	204.0	-14.9	47.6	82.2
122.866613	31.1	1000.0	120.000	100.0	V	145.0	-14.6	51.1	82.2
178.983246	33.6	1000.0	120.000	105.0	V	51.0	-11.7	48.6	82.2
750.742365	53.6	1000.0	120.000	100.0	H	235.0	2.6	Fundamental Carrier	

2.8.26 Test Results Above 1GHz (LTE Band 13 Downlink Worst Case Configuration) - 10MHz Bandwidth Middle Channel



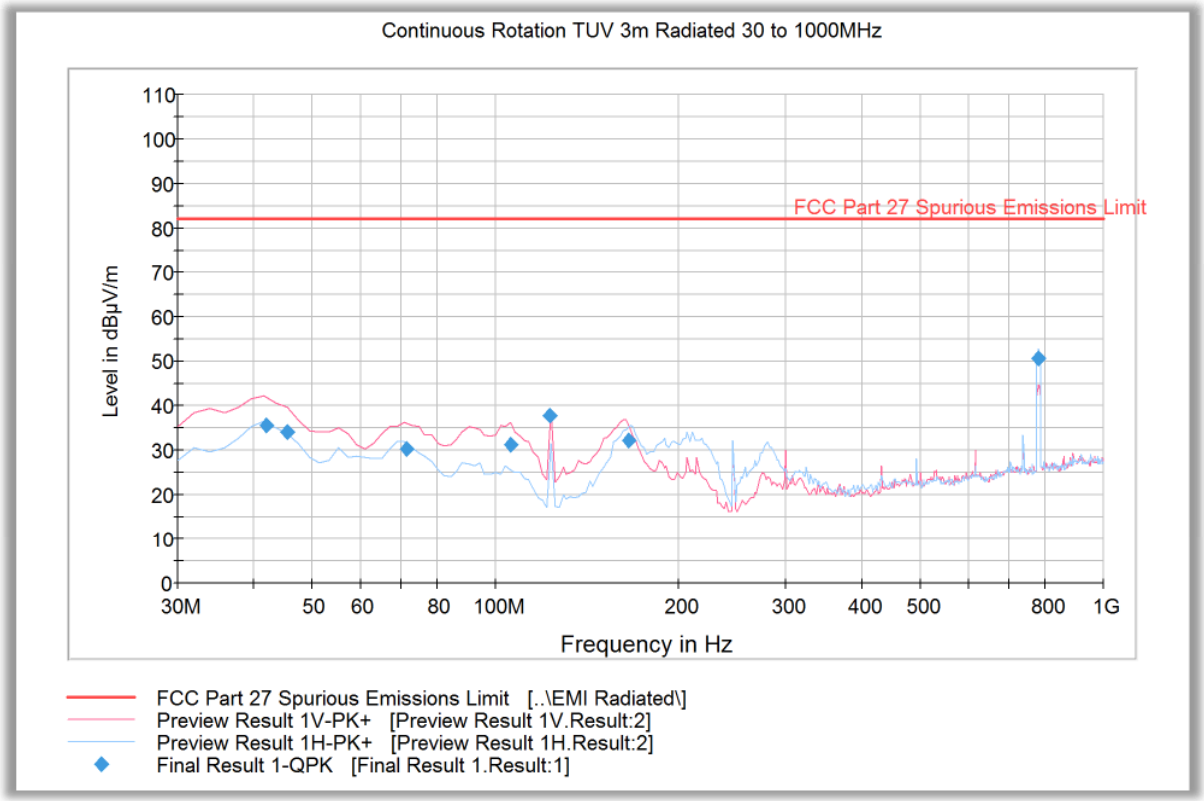
Peak Data

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1105.766667	39.8	1000.0	1000.000	152.2	V	257.0	-6.9	42.4	82.2
1351.733333	45.2	1000.0	1000.000	111.7	H	-3.0	-5.1	37.0	82.2
1989.800000	48.2	1000.0	1000.000	174.6	V	127.0	-2.3	34.0	82.2
3563.566667	42.7	1000.0	1000.000	236.4	V	313.0	1.7	39.5	82.2
4633.266667	44.7	1000.0	1000.000	352.6	V	176.0	3.6	37.5	82.2
6295.900000	45.3	1000.0	1000.000	251.4	H	34.0	6.2	36.9	82.2

Average Data

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1105.766667	29.1	1000.0	1000.000	152.2	V	257.0	-6.9	53.1	82.2
1351.733333	37.1	1000.0	1000.000	111.7	H	-3.0	-5.1	45.1	82.2
1989.800000	30.9	1000.0	1000.000	174.6	V	127.0	-2.3	51.3	82.2
3563.566667	29.9	1000.0	1000.000	236.4	V	313.0	1.7	52.3	82.2
4633.266667	31.2	1000.0	1000.000	352.6	V	176.0	3.6	51.0	82.2
6295.900000	32.4	1000.0	1000.000	251.4	H	34.0	6.2	49.8	82.2

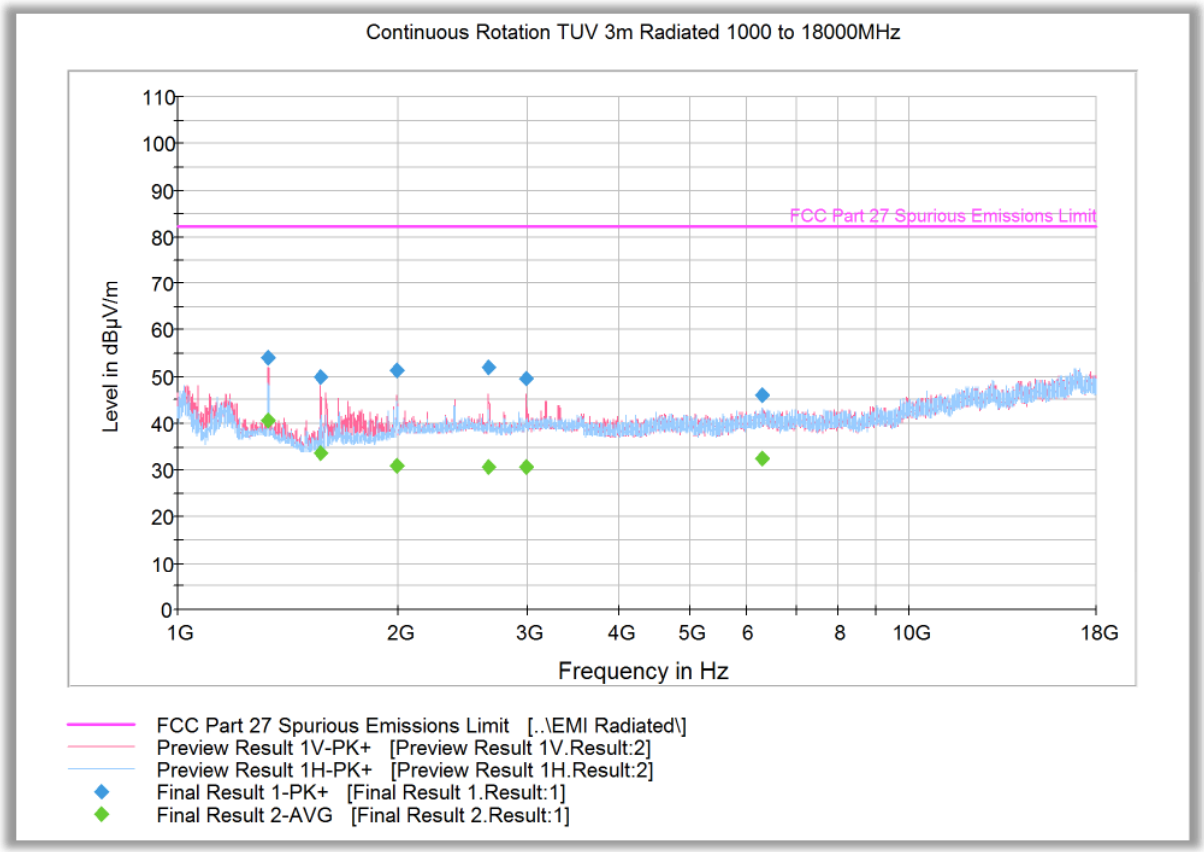
2.8.27 Test Results Below 1GHz (LTE Band 13 Uplink Worst Case Configuration) - 10MHz Bandwidth Middle Channel



Quasi Peak Data

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
42.103327	35.5	1000.0	120.000	100.0	V	297.0	-12.7	46.7	82.2
45.527214	34.0	1000.0	120.000	109.0	V	315.0	-13.7	48.2	82.2
71.581643	30.2	1000.0	120.000	178.0	V	197.0	-17.2	52.0	82.2
105.931623	31.4	1000.0	120.000	105.0	V	284.0	-13.2	50.8	82.2
122.866613	37.8	1000.0	120.000	115.0	V	191.0	-14.6	44.4	82.2
165.912144	32.1	1000.0	120.000	190.0	H	328.0	-11.8	50.1	82.2
781.724569	50.5	1000.0	120.000	100.0	H	237.0	3.1	Fundamental Carrier	

2.8.28 Test Results Above 1GHz (LTE Band 13 Uplink Worst Case Configuration) - 10MHz Bandwidth Middle Channel



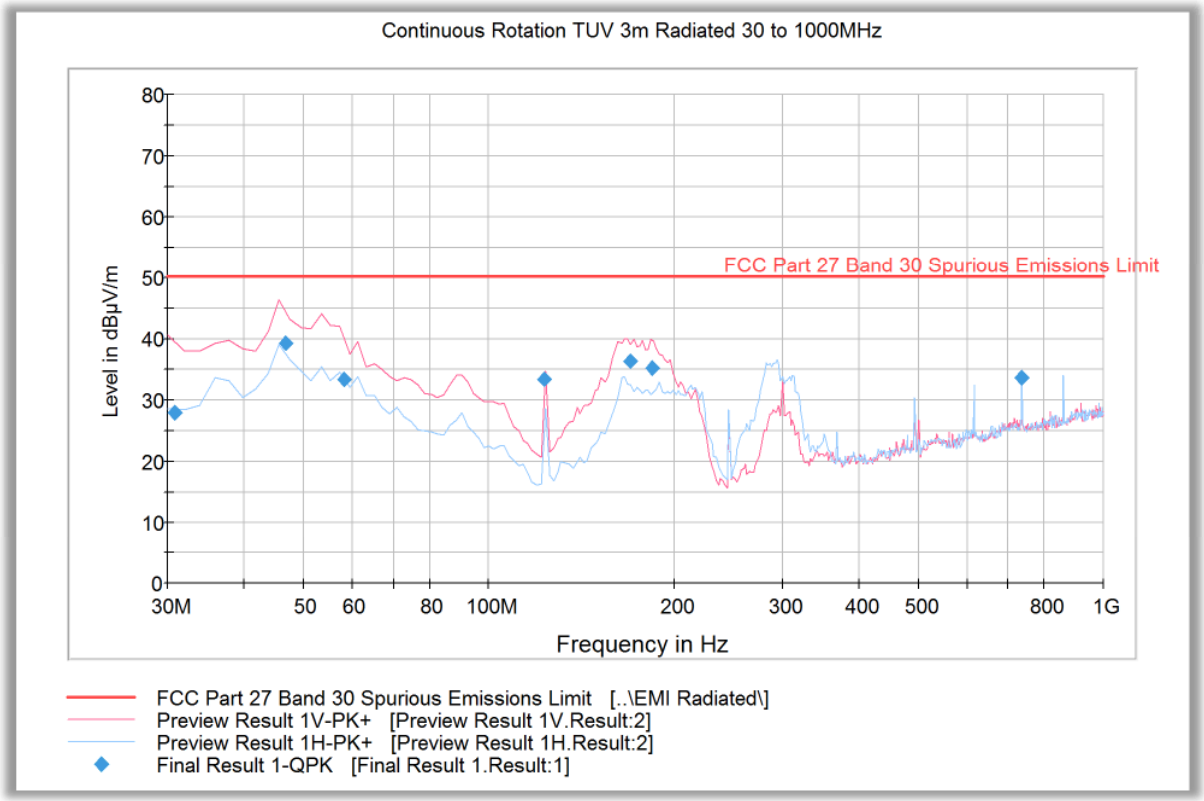
Peak Data

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1330.166667	54.1	1000.0	1000.000	186.5	V	96.0	-5.1	28.1	82.2
1568.566667	50.0	1000.0	1000.000	169.6	V	307.0	-5.9	32.2	82.2
1994.333333	51.3	1000.0	1000.000	343.1	V	4.0	-2.2	30.9	82.2
2654.500000	52.1	1000.0	1000.000	235.4	V	300.0	-0.2	30.1	82.2
2993.333333	49.6	1000.0	1000.000	303.2	V	305.0	0.8	32.6	82.2
6298.133333	45.9	1000.0	1000.000	134.7	H	131.0	6.2	36.3	82.2

Average Data

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1330.166667	40.7	1000.0	1000.000	186.5	V	96.0	-5.1	41.5	82.2
1568.566667	33.7	1000.0	1000.000	169.6	V	307.0	-5.9	48.5	82.2
1994.333333	31.0	1000.0	1000.000	343.1	V	4.0	-2.2	51.2	82.2
2654.500000	30.7	1000.0	1000.000	235.4	V	300.0	-0.2	51.5	82.2
2993.333333	30.6	1000.0	1000.000	303.2	V	305.0	0.8	51.6	82.2
6298.133333	32.4	1000.0	1000.000	134.7	H	131.0	6.2	49.8	82.2

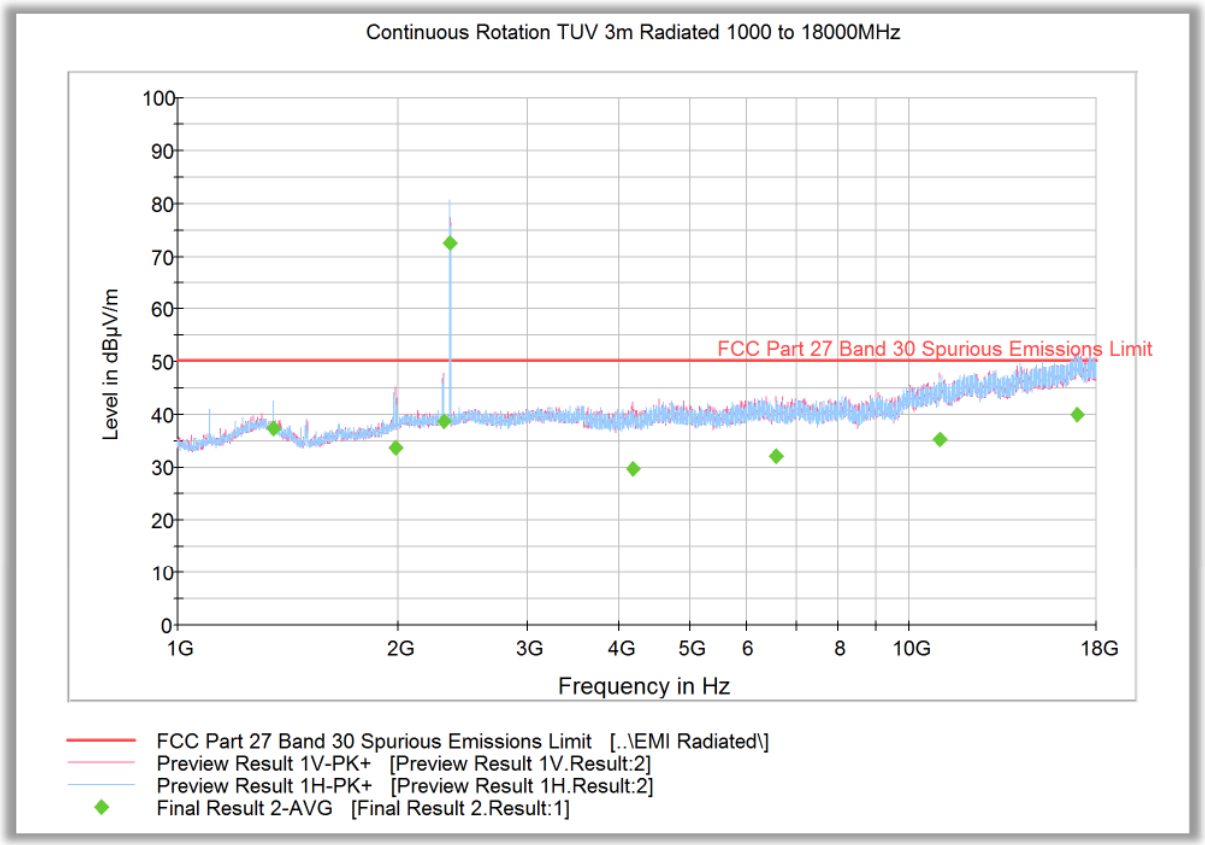
2.8.29 Test Results Below 1GHz (LTE Band 30 Downlink Worst Case Configuration) - 10MHz Bandwidth Middle Channel



Quasi Peak Data

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
30.720000	28.0	1000.0	120.000	100.0	V	202.0	-8.2	22.2	50.2
46.711102	39.4	1000.0	120.000	100.0	V	295.0	-14.1	10.8	50.2
57.942204	33.4	1000.0	120.000	150.0	V	1.0	-16.3	16.8	50.2
122.866613	33.5	1000.0	120.000	110.0	V	202.0	-14.6	16.8	50.2
169.943808	36.3	1000.0	120.000	100.0	V	70.0	-11.7	13.9	50.2
184.327134	35.2	1000.0	120.000	105.0	V	54.0	-11.4	15.1	50.2
737.295150	33.6	1000.0	120.000	100.0	H	246.0	2.7	16.6	50.2

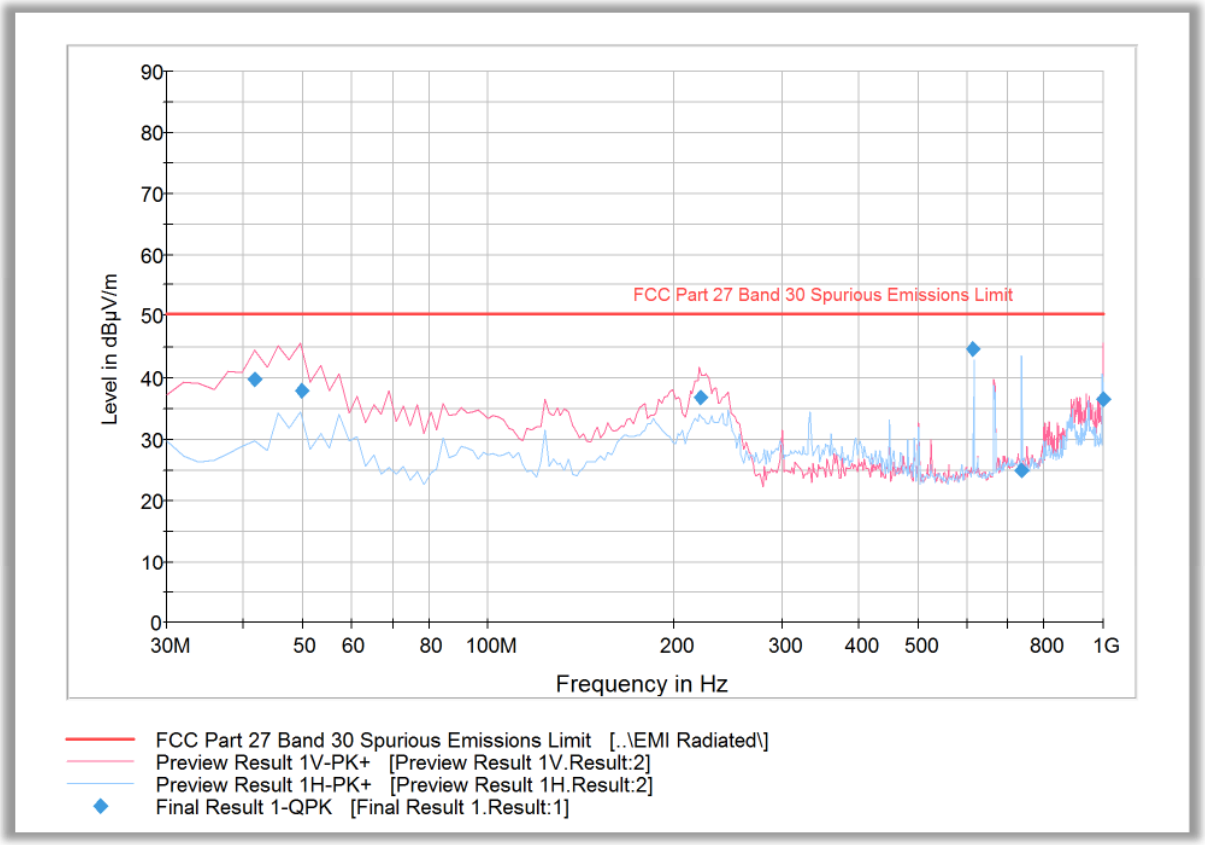
2.8.30 Test Results Above 1GHz (LTE Band 30 Downlink Worst Case Configuration) - 10MHz Bandwidth Middle Channel



Average Data

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1351.933333	37.4	1000.0	1000.000	195.5	H	-4.0	-5.1	12.8	50.2
1986.433333	33.8	1000.0	1000.000	209.4	V	292.0	-2.3	16.4	50.2
2312.766667	38.7	1000.0	1000.000	103.7	V	348.0	-1.2	11.5	50.2
2352.500000	72.5	1000.0	1000.000	241.3	H	119.0	-1.0	Fundamental Carrier	
4184.666667	29.8	1000.0	1000.000	124.7	V	324.0	2.7	20.4	50.2
6556.600000	32.1	1000.0	1000.000	151.6	V	55.0	6.6	18.1	50.2
10991.133333	35.3	1000.0	1000.000	151.6	V	36.0	11.8	14.9	50.2
16940.900000	39.9	1000.0	1000.000	198.5	H	203.0	18.0	10.3	50.2

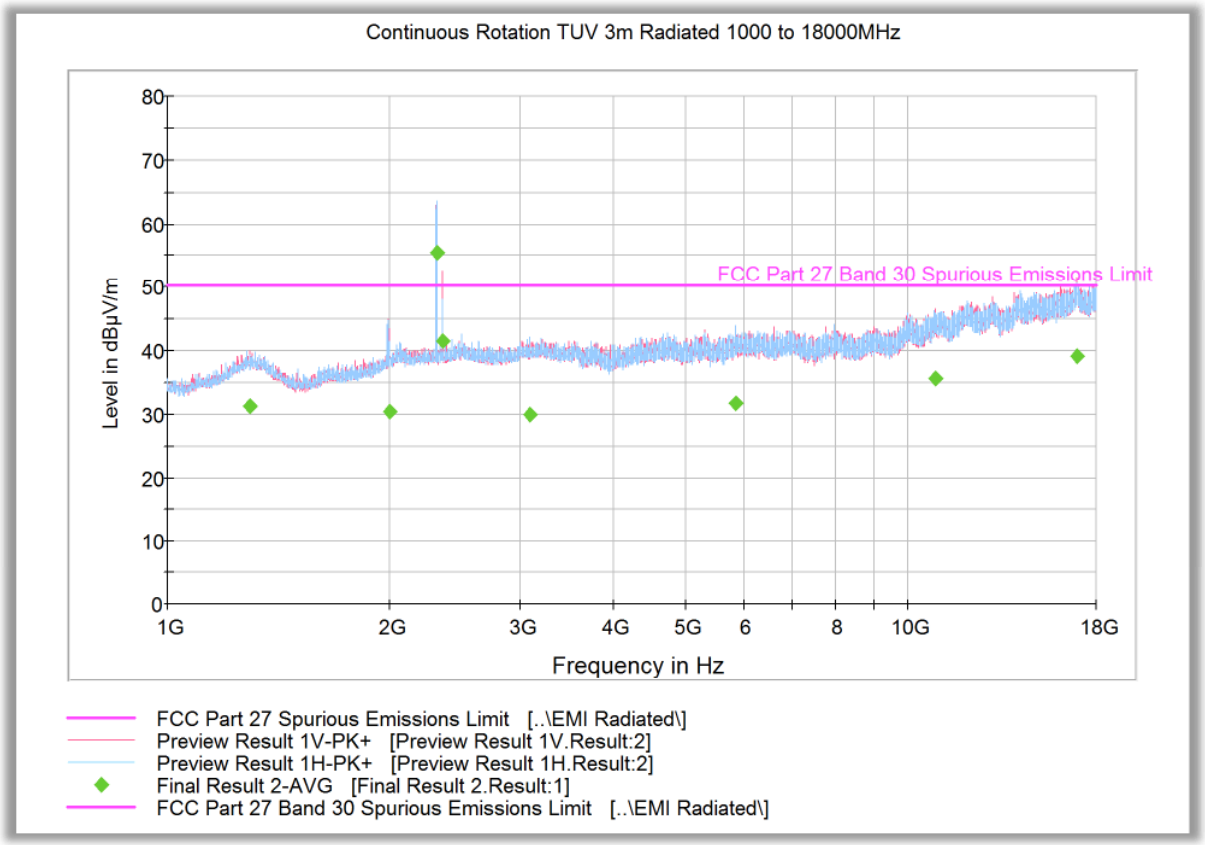
2.8.31 Test Results Below 1GHz (LTE Band 30 Uplink Worst Case Configuration) - 5MHz Bandwidth High Channel



Quasi Peak Data

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
41.743327	39.7	1000.0	120.000	100.0	V	237.0	-12.6	10.5	50.2
49.598878	37.9	1000.0	120.000	115.0	V	13.0	-15.1	12.3	50.2
220.661002	36.8	1000.0	120.000	100.0	V	210.0	-9.8	13.4	50.2
614.390220	44.6	1000.0	120.000	122.0	H	304.0	0.9	5.6	50.2
737.295150	24.9	1000.0	120.000	100.0	H	280.0	2.7	25.3	50.2
999.120000	36.4	1000.0	120.000	100.0	V	243.0	6.0	13.8	50.2

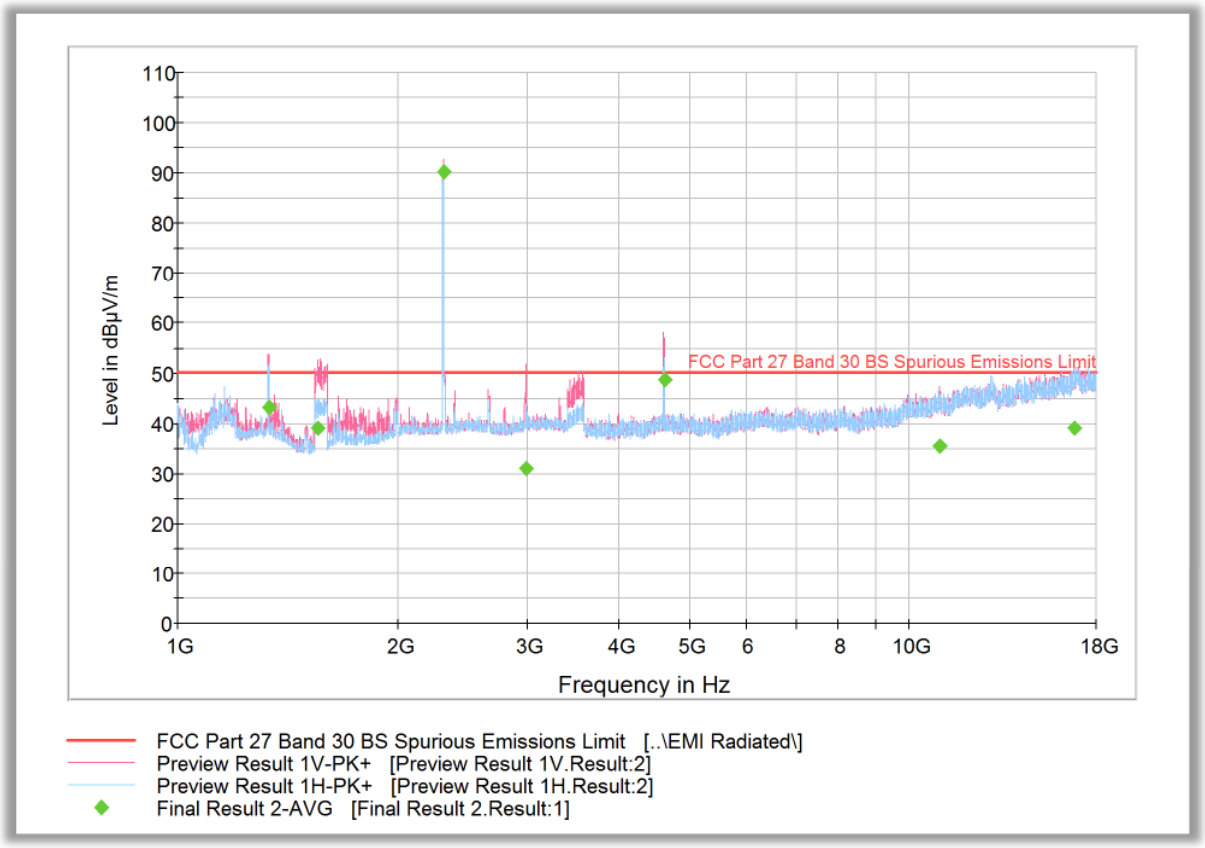
2.8.32 Test Results Above 1GHz (LTE Band 30 Uplink Worst Case Configuration) - 5MHz Bandwidth Low Channel



Average Data

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1290.566667	31.2	1000.0	1000.000	151.6	V	282.0	-5.3	19.0	50.2
1992.766667	30.4	1000.0	1000.000	275.3	V	241.0	-2.2	19.8	50.2
2307.500000	55.6	1000.0	1000.000	194.5	H	117.0	-1.2	Fundamental Carrier	
2352.033333	41.6	1000.0	1000.000	307.2	V	255.0	-1.0	8.6	50.2
3085.366667	29.9	1000.0	1000.000	352.7	H	282.0	0.9	20.3	50.2
5850.633333	31.7	1000.0	1000.000	151.2	H	103.0	5.6	18.5	50.2
10913.100000	35.7	1000.0	1000.000	216.4	V	5.0	11.9	14.5	50.2
16925.733333	39.1	1000.0	1000.000	112.7	V	-10.0	18.0	11.1	50.2

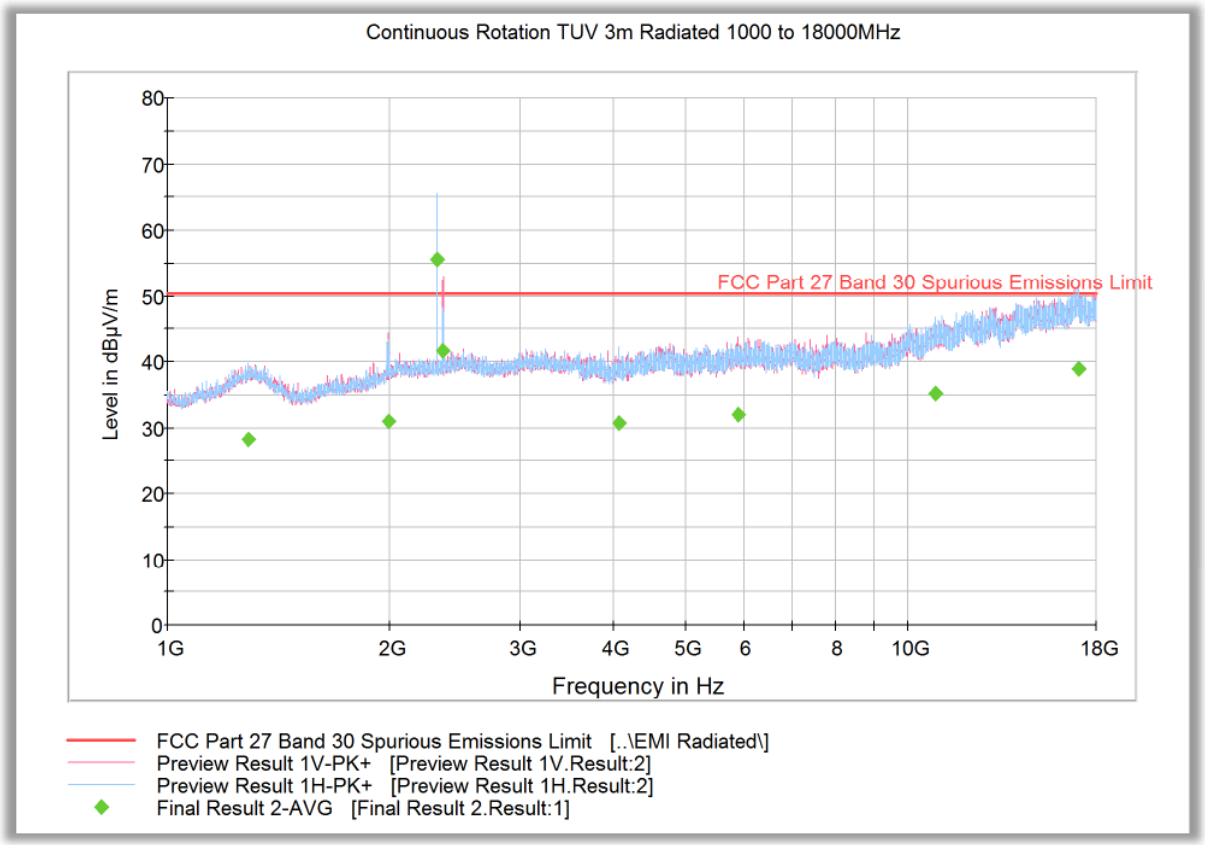
2.8.33 Test Results Above 1GHz (LTE Band 30 Uplink Worst Case Configuration) - 5MHz Bandwidth Middle Channel



Average Data

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1331.733333	43.3	1000.0	1000.000	203.5	V	287.0	-5.1	6.9	50.2
1556.466667	39.1	1000.0	1000.000	203.5	V	193.0	-5.9	11.1	50.2
2310.000000	90.3	1000.0	1000.000	194.5	V	178.0	-1.1	Fundamental Carrier	
2991.066667	31.2	1000.0	1000.000	207.5	V	245.0	0.8	19.0	50.2
4619.733333	48.9	1000.0	1000.000	203.5	V	173.0	3.6	1.3	50.2
11002.233333	35.5	1000.0	1000.000	321.1	V	265.0	11.8	14.7	50.2
16759.366667	39.1	1000.0	1000.000	111.7	V	134.0	17.8	11.1	50.2

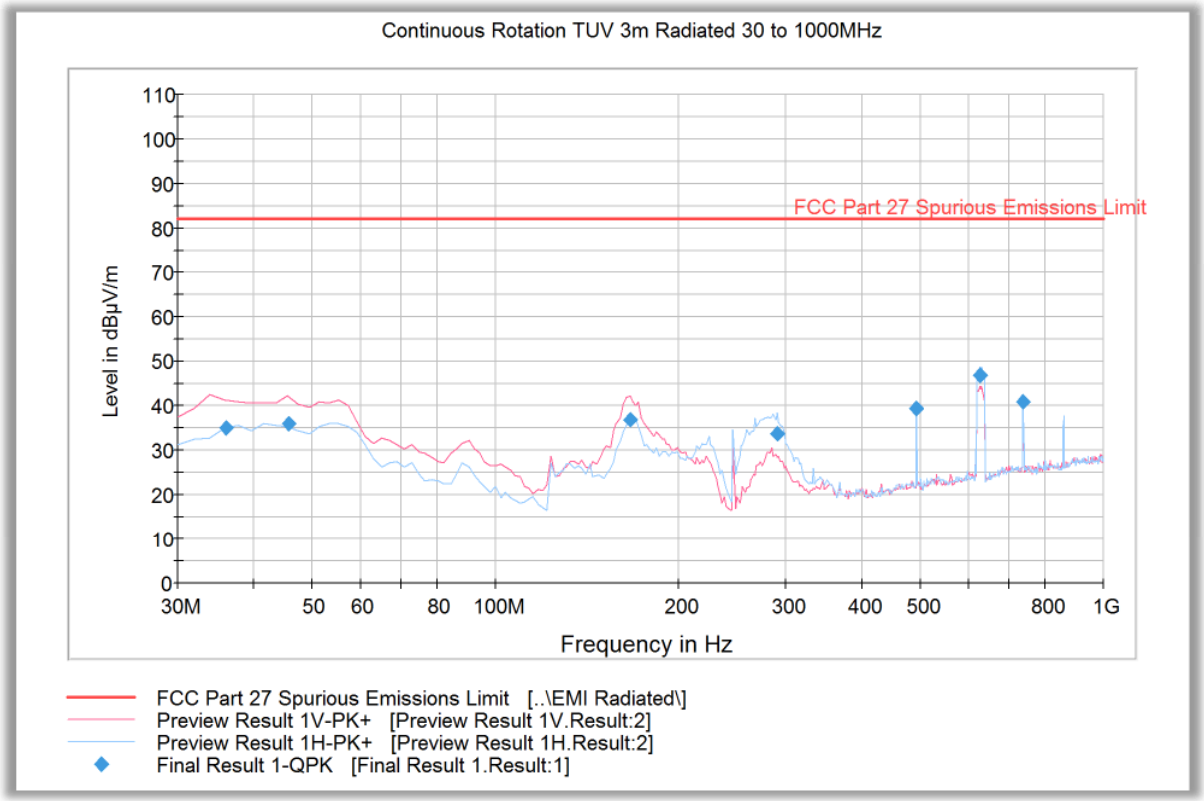
2.8.34 Test Results Above 1GHz (LTE Band 30 Uplink Worst Case Configuration) - 5MHz Bandwidth High Channel



Average Data

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1282.600000	28.3	1000.0	1000.000	152.2	H	166.0	-5.3	213.9	50.2
1986.800000	31.0	1000.0	1000.000	212.4	V	266.0	-2.3	19.2	50.2
2313.333333	55.6	1000.0	1000.000	195.5	H	116.0	-1.2	Fundamental Carrier	
2356.433333	41.6	1000.0	1000.000	186.5	V	209.0	-1.0	8.6	50.2
4074.700000	30.8	1000.0	1000.000	103.7	H	322.0	2.6	19.4	50.2
5895.833333	31.9	1000.0	1000.000	352.7	V	35.0	5.7	18.3	50.2
10900.833333	35.2	1000.0	1000.000	303.2	H	253.0	11.9	15.0	50.2
17007.066667	39.0	1000.0	1000.000	145.7	H	16.0	17.8	11.2	82.2

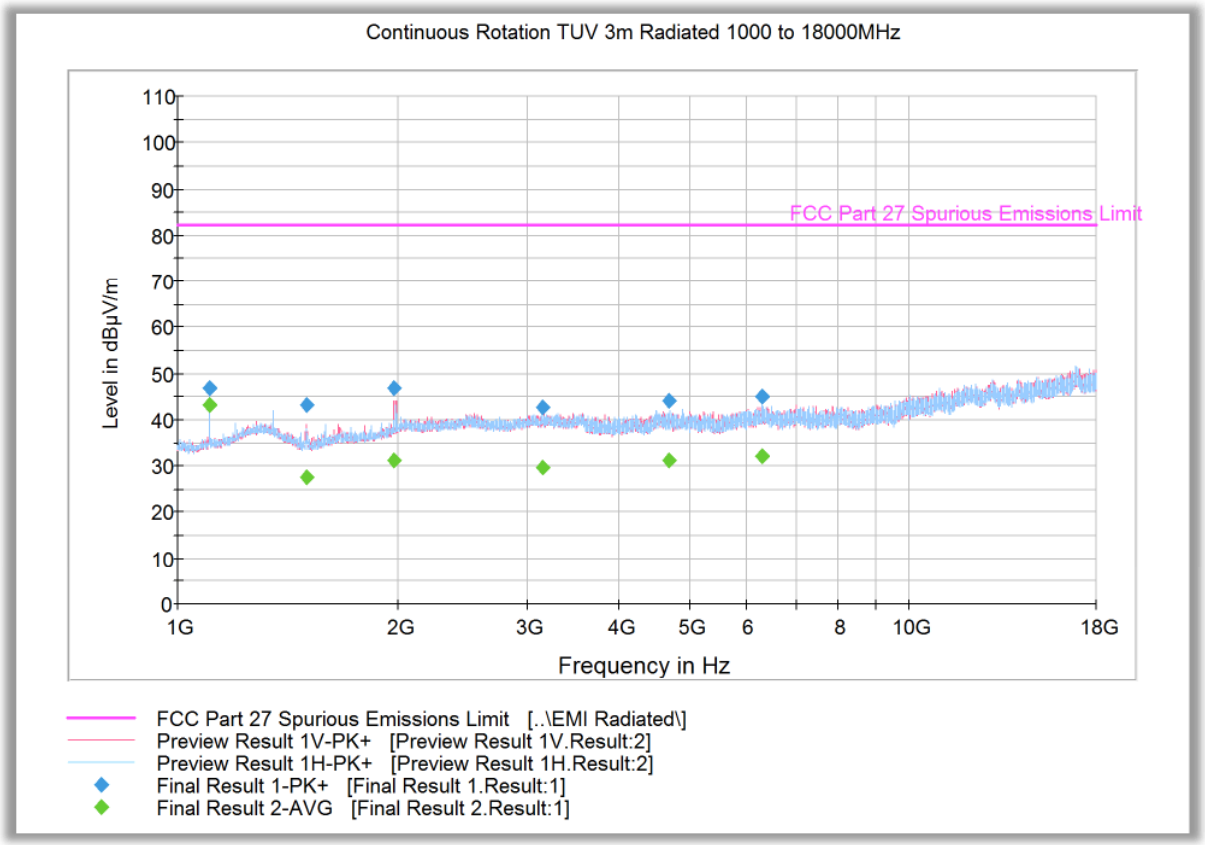
2.8.35 Test Results Below 1GHz (LTE Band 71 Downlink Worst Case Configuration) - 20MHz Bandwidth Low Channel



Quasi Peak Data

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
36.127776	34.9	1000.0	120.000	105.0	V	211.0	-10.4	47.3	82.2
45.751102	36.1	1000.0	120.000	114.0	V	310.0	-13.7	46.1	82.2
166.592144	36.8	1000.0	120.000	106.0	V	240.0	-11.8	45.4	82.2
290.000962	33.8	1000.0	120.000	100.0	H	10.0	-7.7	48.4	82.2
491.525291	39.5	1000.0	120.000	171.0	H	87.0	-2.0	42.7	82.2
627.693547	46.9	1000.0	120.000	115.0	H	244.0	0.7	Fundamental Carrier	
737.295150	41.0	1000.0	120.000	100.0	H	264.0	2.7	41.2	82.2

2.8.36 Test Results Above 1GHz (LTE Band 71 Downlink Worst Case Configuration) - 20MHz Bandwidth Low Channel



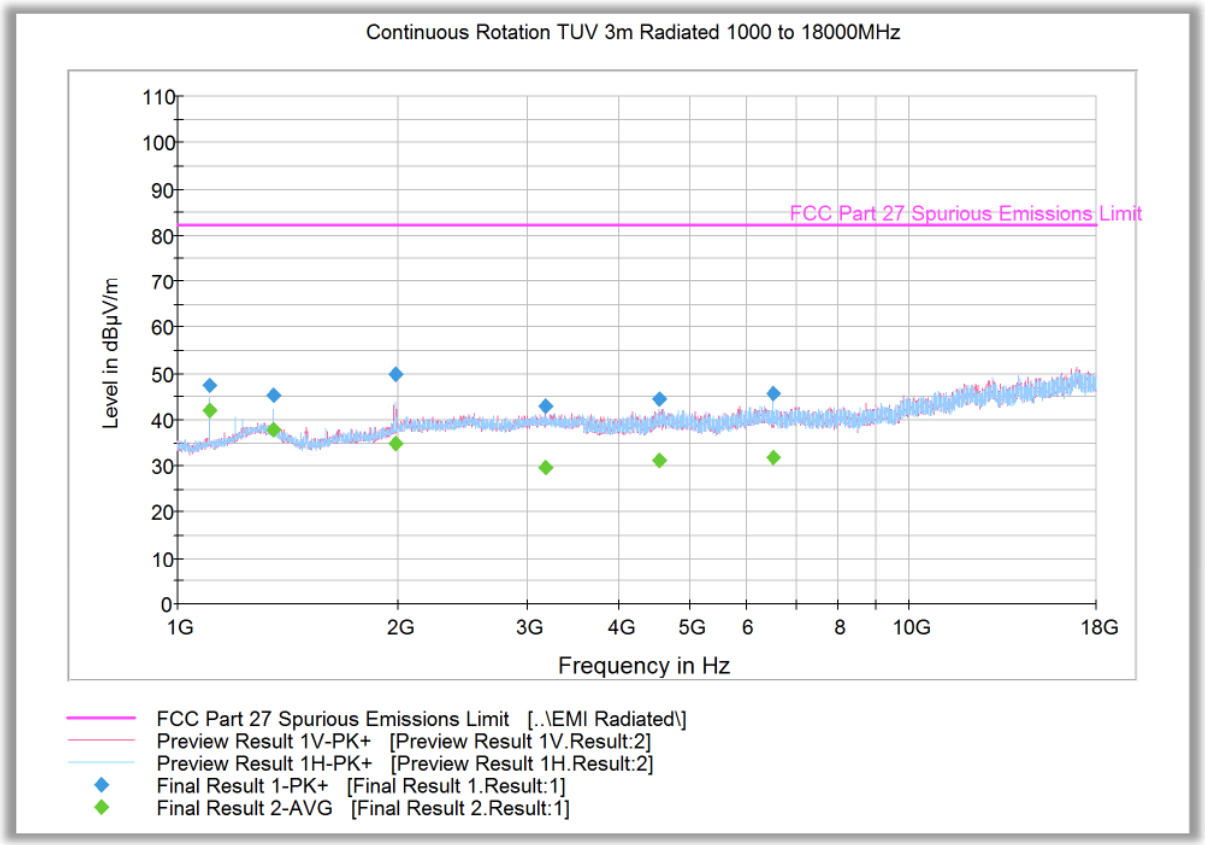
Peak Data

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1105.800000	46.9	1000.0	1000.000	139.7	H	248.0	-6.9	35.3	82.2
1499.200000	43.3	1000.0	1000.000	195.5	V	-4.0	-6.1	38.9	82.2
1976.766667	46.8	1000.0	1000.000	103.7	V	60.0	-2.3	35.4	82.2
3150.700000	42.7	1000.0	1000.000	252.3	V	79.0	1.1	39.5	82.2
4688.800000	44.2	1000.0	1000.000	231.4	H	14.0	3.7	38.0	82.2
6290.433333	45.0	1000.0	1000.000	147.7	H	185.0	6.2	37.2	82.2

Average Data

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1105.800000	43.2	1000.0	1000.000	139.7	H	248.0	-6.9	39.0	82.2
1499.200000	27.6	1000.0	1000.000	195.5	V	-4.0	-6.1	54.6	82.2
1976.766667	31.4	1000.0	1000.000	103.7	V	60.0	-2.3	50.8	82.2
3150.700000	29.9	1000.0	1000.000	252.3	V	79.0	1.1	52.3	82.2
4688.800000	31.2	1000.0	1000.000	231.4	H	14.0	3.7	51.0	82.2
6290.433333	32.2	1000.0	1000.000	147.7	H	185.0	6.2	50.0	82.2

2.8.37 Test Results Above 1GHz (LTE Band 71 Downlink Worst Case Configuration) - 20MHz Bandwidth Middle Channel



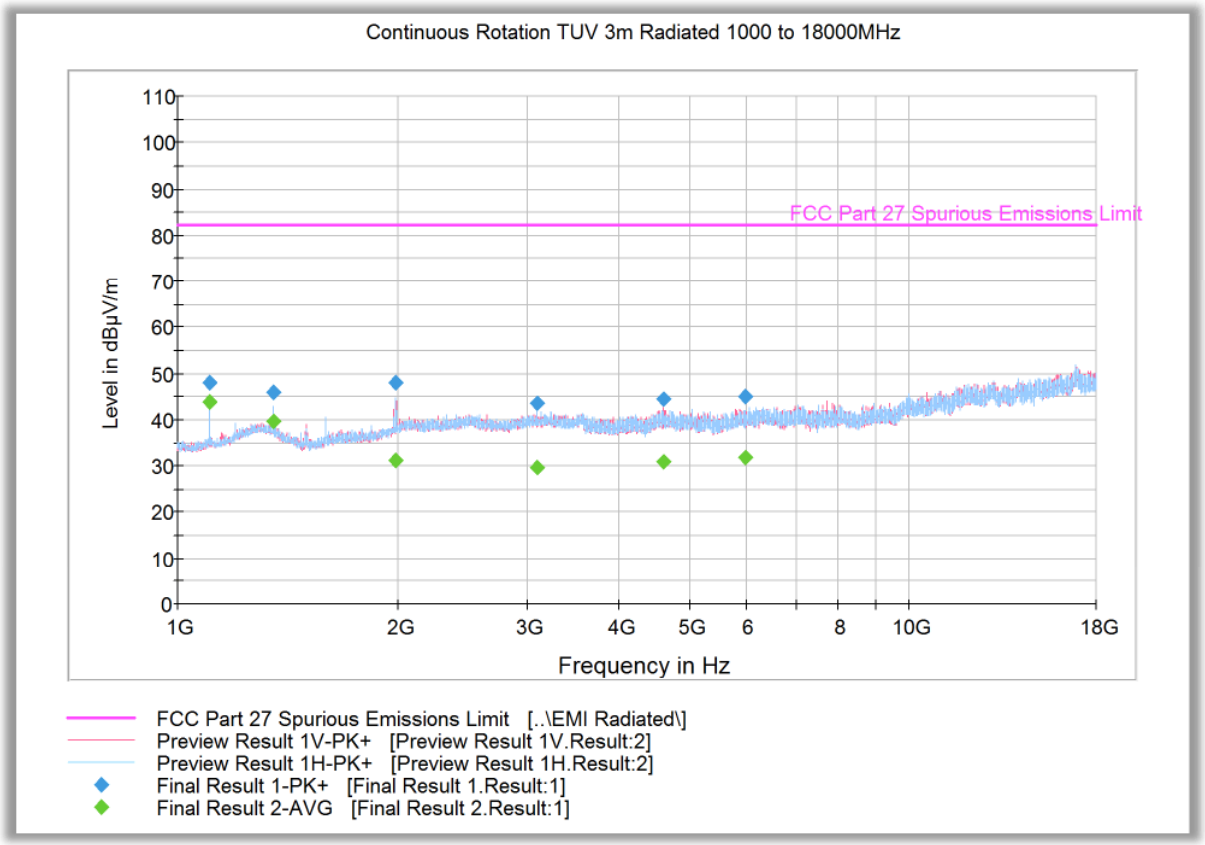
Peak Data

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1105.766667	47.4	1000.0	1000.000	103.7	H	241.0	-6.9	34.8	82.2
1351.766667	45.4	1000.0	1000.000	152.2	H	246.0	-5.1	36.8	82.2
1986.966667	50.0	1000.0	1000.000	103.7	V	131.0	-2.3	32.2	82.2
3186.166667	42.8	1000.0	1000.000	290.3	V	123.0	1.0	39.4	82.2
4555.833333	44.4	1000.0	1000.000	285.3	H	35.0	3.7	37.8	82.2
6498.366667	45.6	1000.0	1000.000	252.4	H	26.0	6.2	36.6	82.2

Average Data

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1105.766667	42.2	1000.0	1000.000	103.7	H	241.0	-6.9	40.0	82.2
1351.766667	37.9	1000.0	1000.000	152.2	H	246.0	-5.1	44.3	82.2
1986.966667	35.0	1000.0	1000.000	103.7	V	131.0	-2.3	47.2	82.2
3186.166667	29.8	1000.0	1000.000	290.3	V	123.0	1.0	52.4	82.2
4555.833333	31.2	1000.0	1000.000	285.3	H	35.0	3.7	51.0	82.2
6498.366667	31.7	1000.0	1000.000	252.4	H	26.0	6.2	50.5	82.2

2.8.38 Test Results Above 1GHz (LTE Band 71 Downlink Worst Case Configuration) - 20MHz Bandwidth High Channel



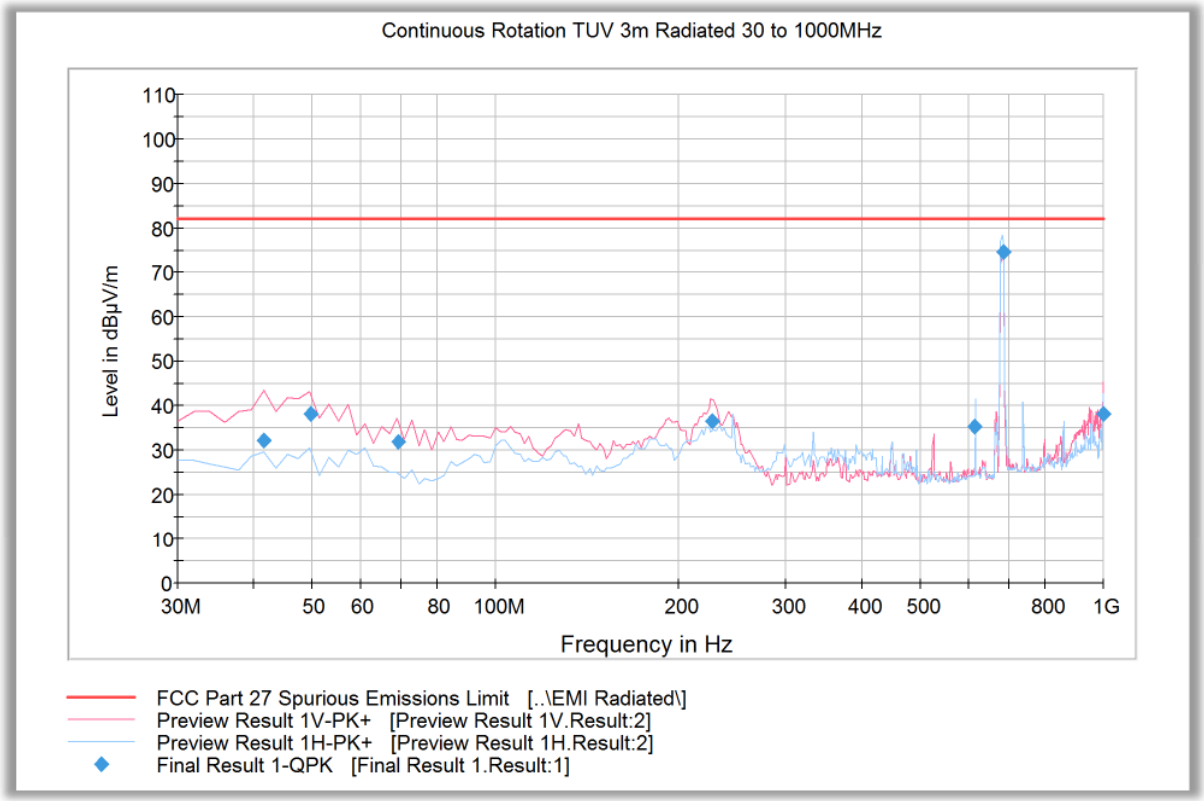
Peak Data

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1105.800000	48.2	1000.0	1000.000	103.7	H	243.0	-6.9	34.0	82.2
1351.533333	46.0	1000.0	1000.000	112.7	H	34.0	-5.1	36.2	82.2
1986.533333	48.0	1000.0	1000.000	252.3	H	328.0	-2.3	34.2	82.2
3093.866667	43.7	1000.0	1000.000	312.2	H	209.0	0.9	38.5	82.2
4615.700000	44.6	1000.0	1000.000	116.7	V	80.0	3.6	37.6	82.2
5972.733333	45.1	1000.0	1000.000	151.2	H	151.0	5.7	37.1	82.2

Average Data

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1105.800000	43.9	1000.0	1000.000	103.7	H	243.0	-6.9	38.3	82.2
1351.533333	39.6	1000.0	1000.000	112.7	H	34.0	-5.1	42.6	82.2
1986.533333	31.3	1000.0	1000.000	252.3	H	328.0	-2.3	51.0	82.2
3093.866667	29.8	1000.0	1000.000	312.2	H	209.0	0.9	52.4	82.2
4615.700000	31.1	1000.0	1000.000	116.7	V	80.0	3.6	51.1	82.2
5972.733333	31.8	1000.0	1000.000	151.2	H	151.0	5.7	50.4	82.2

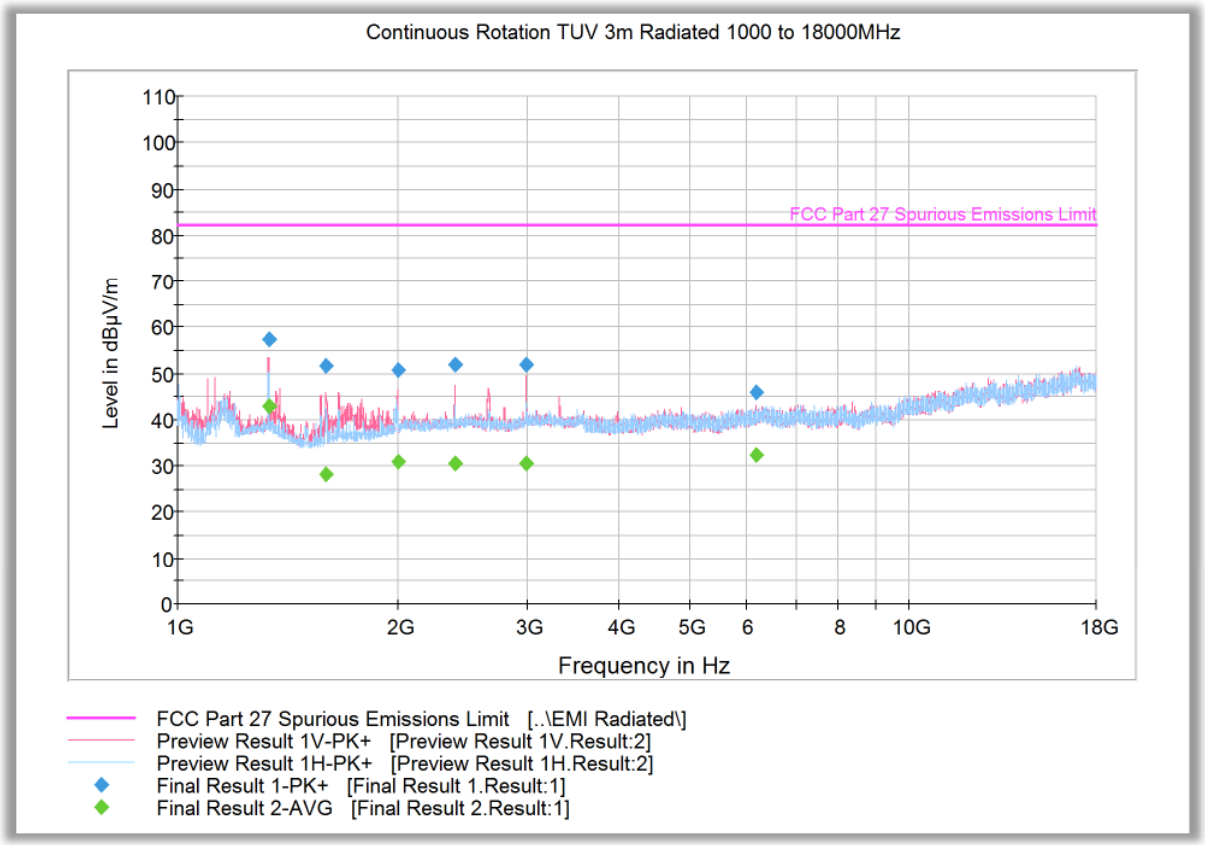
2.8.39 Test Results Below 1GHz (LTE Band 71 Uplink Worst Case Configuration) - 10MHz Bandwidth Middle Channel



Quasi Peak Data

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
41.583327	32.0	1000.0	120.000	114.0	V	-13.0	-12.5	50.2	82.2
49.598878	38.0	1000.0	120.000	100.0	V	230.0	-15.1	44.2	82.2
69.317756	31.7	1000.0	120.000	150.0	V	129.0	-17.1	50.5	82.2
227.252665	36.6	1000.0	120.000	100.0	V	205.0	-9.3	45.6	82.2
614.390220	35.4	1000.0	120.000	127.0	H	303.0	0.9	46.8	82.2
683.442405	74.5	1000.0	120.000	105.0	H	145.0	2.1	Fundamental Carrier	
998.280000	38.3	1000.0	120.000	100.0	V	249.0	6.0	43.9	82.2

2.8.40 Test Results Above 1GHz (LTE Band 71 Uplink Worst Case Configuration) - 10MHz Bandwidth Low Channel



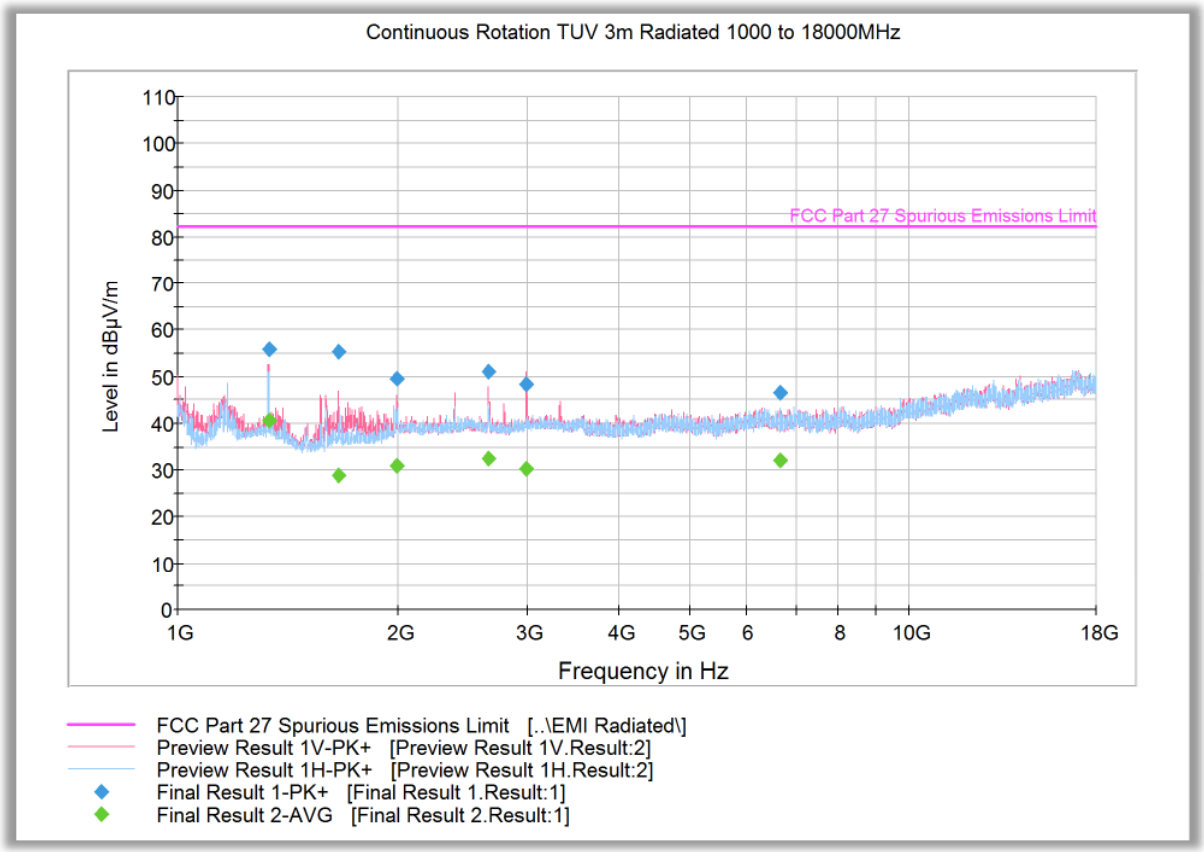
Peak Data

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1331.900000	57.5	1000.0	1000.000	222.4	V	282.0	-5.1	24.7	82.2
1593.133333	51.7	1000.0	1000.000	103.7	V	269.0	-5.8	30.5	82.2
1998.300000	50.8	1000.0	1000.000	352.7	V	3.0	-2.2	31.4	82.2
2390.633333	52.0	1000.0	1000.000	250.5	V	198.0	-1.0	30.2	82.2
2990.500000	51.9	1000.0	1000.000	317.2	V	304.0	0.8	30.3	82.2
6183.666667	46.0	1000.0	1000.000	161.6	V	190.0	6.1	36.2	82.2

Average Data

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1331.900000	43.1	1000.0	1000.000	222.4	V	282.0	-5.1	39.1	82.2
1593.133333	28.3	1000.0	1000.000	103.7	V	269.0	-5.8	53.9	82.2
1998.300000	30.8	1000.0	1000.000	352.7	V	3.0	-2.2	51.4	82.2
2390.633333	30.5	1000.0	1000.000	250.5	V	198.0	-1.0	51.7	82.2
2990.500000	30.7	1000.0	1000.000	317.2	V	304.0	0.8	51.5	82.2
6183.666667	32.6	1000.0	1000.000	161.6	V	190.0	6.1	49.6	82.2

2.8.41 Test Results Above 1GHz (LTE Band 71 Uplink Worst Case Configuration) - 10MHz Bandwidth Middle Channel



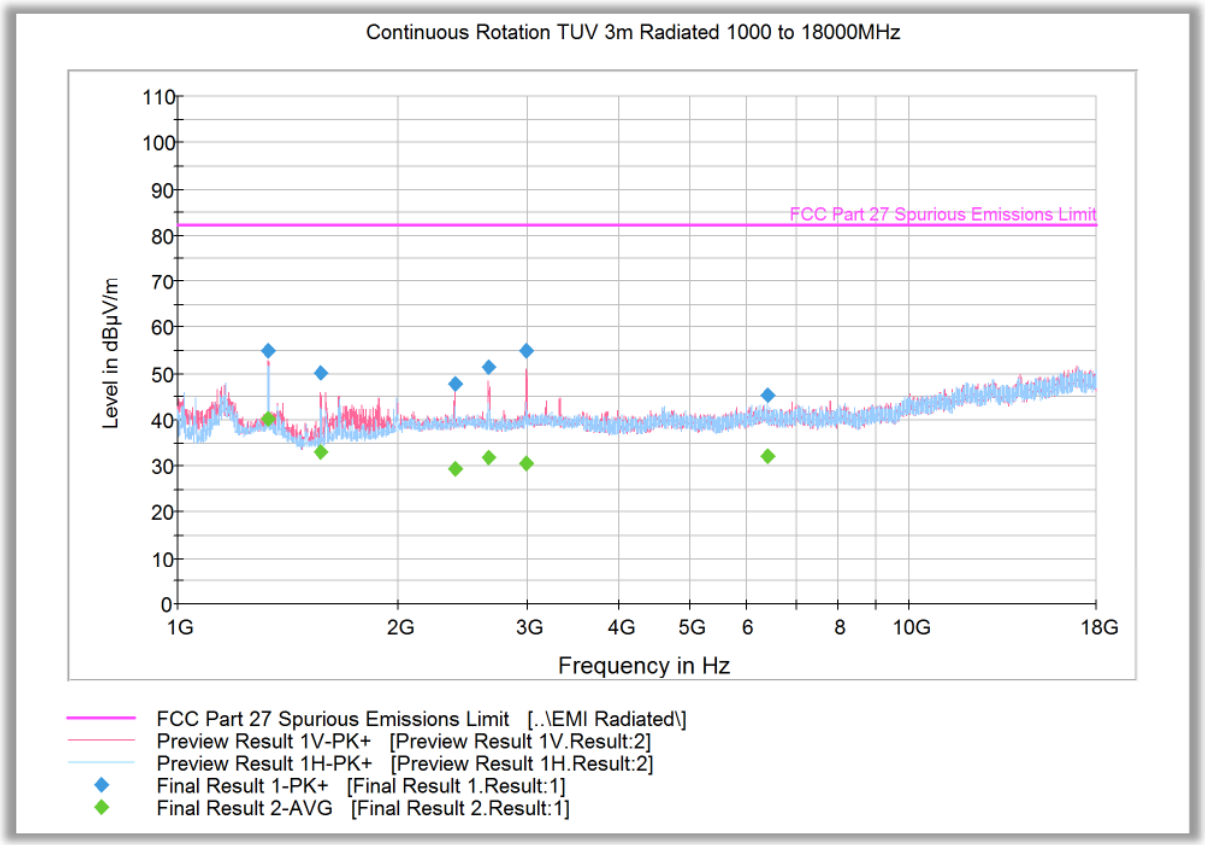
Peak Data

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1332.066667	56.0	1000.0	1000.000	217.4	V	287.0	-5.1	26.2	82.2
1659.566667	55.2	1000.0	1000.000	352.7	V	271.0	-5.2	27.0	82.2
1991.800000	49.6	1000.0	1000.000	240.4	V	290.0	-2.2	32.6	82.2
2662.266667	51.1	1000.0	1000.000	285.3	V	253.0	-0.2	31.1	82.2
2991.833333	48.5	1000.0	1000.000	252.4	V	262.0	0.8	33.7	82.2
6663.100000	46.7	1000.0	1000.000	252.4	H	97.0	6.4	35.5	82.2

Average Data

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1332.066667	40.4	1000.0	1000.000	217.4	V	287.0	-5.1	41.8	82.2
1659.566667	28.7	1000.0	1000.000	352.7	V	271.0	-5.2	53.5	82.2
1991.800000	30.9	1000.0	1000.000	240.4	V	290.0	-2.2	51.3	82.2
2662.266667	32.4	1000.0	1000.000	285.3	V	253.0	-0.2	49.8	82.2
2991.833333	30.3	1000.0	1000.000	252.4	V	262.0	0.8	51.9	82.2
6663.100000	32.1	1000.0	1000.000	252.4	H	97.0	6.4	50.1	82.2

2.8.42 Test Results Above 1GHz (LTE Band 71 Uplink Worst Case Configuration) - 10MHz Bandwidth High Channel



Peak Data

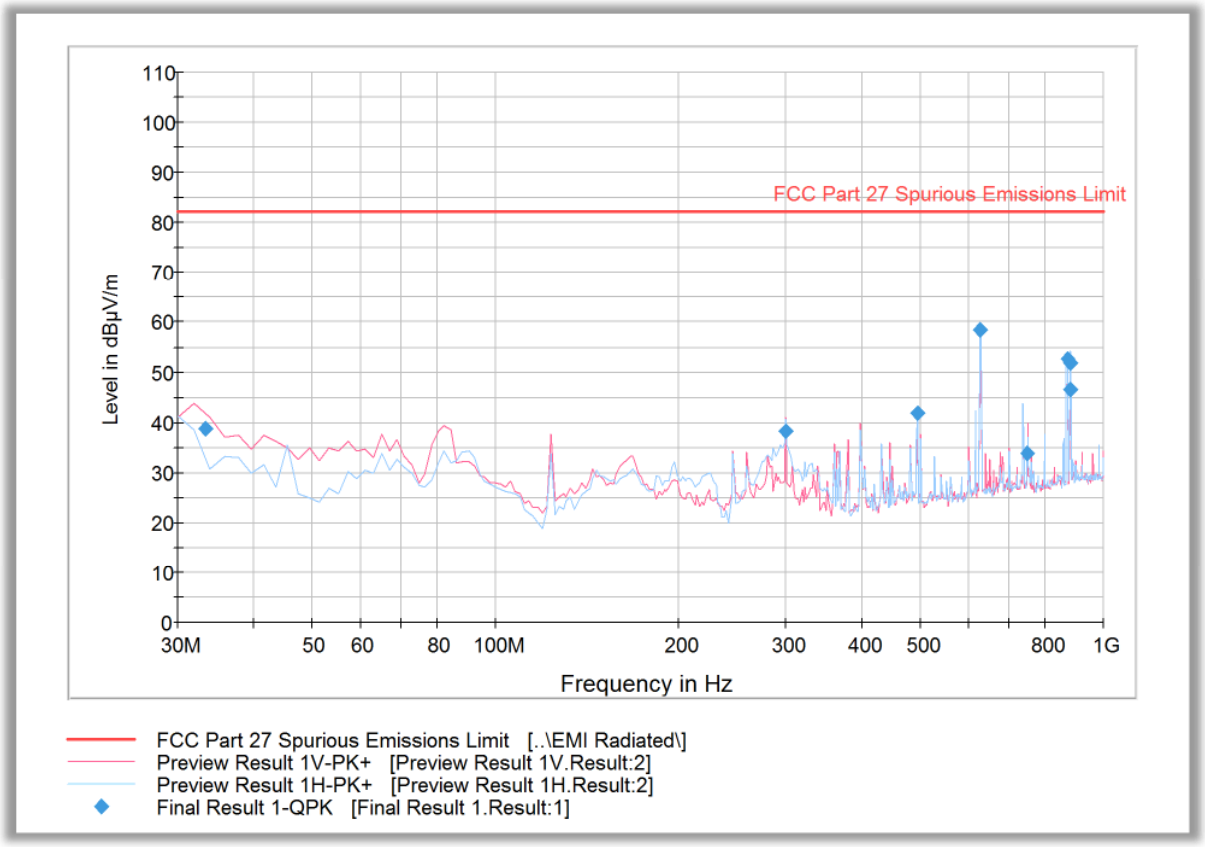
Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1330.800000	55.0	1000.0	1000.000	327.2	V	303.0	-5.1	27.2	82.2
1570.300000	50.2	1000.0	1000.000	190.5	V	290.0	-5.9	32.0	82.2
2395.933333	47.8	1000.0	1000.000	102.7	V	187.0	-1.1	34.4	82.2
2655.066667	51.4	1000.0	1000.000	252.3	V	303.0	-0.2	30.8	82.2
2995.933333	55.0	1000.0	1000.000	306.2	V	263.0	0.9	27.2	82.2
6382.433333	45.3	1000.0	1000.000	127.7	H	189.0	6.4	36.9	82.2

Average Data

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1330.800000	40.2	1000.0	1000.000	327.2	V	303.0	-5.1	42.0	82.2
1570.300000	33.1	1000.0	1000.000	190.5	V	290.0	-5.9	49.1	82.2
2395.933333	29.3	1000.0	1000.000	102.7	V	187.0	-1.1	52.9	82.2
2655.066667	31.9	1000.0	1000.000	252.3	V	303.0	-0.2	50.3	82.2
2995.933333	30.7	1000.0	1000.000	306.2	V	263.0	0.9	51.5	82.2
6382.433333	32.2	1000.0	1000.000	127.7	H	189.0	6.4	50.0	82.2

2.8.43 Intermodulation Test Results Below 1GHz (8 Bands on CU port Downlink and Modem Worst Case Configuration)

WCDMA Band 5 15MHz BW Low Ch & LTE Band 30 10MHz BW Mid Ch inject on NU port A
LTE Band 25 20MHz BW Mid Ch & LTE Band 71 20MHz BW Low Ch inject on NU Port B
LTE Band 13 10MHz BW Mid Ch & LTE Band 4 20MHz BW High Ch inject on NU Port C
LTE Band 26 5MHz BW High Ch & LTE Band 25 20MHz BW Low Ch inject on NU Port D

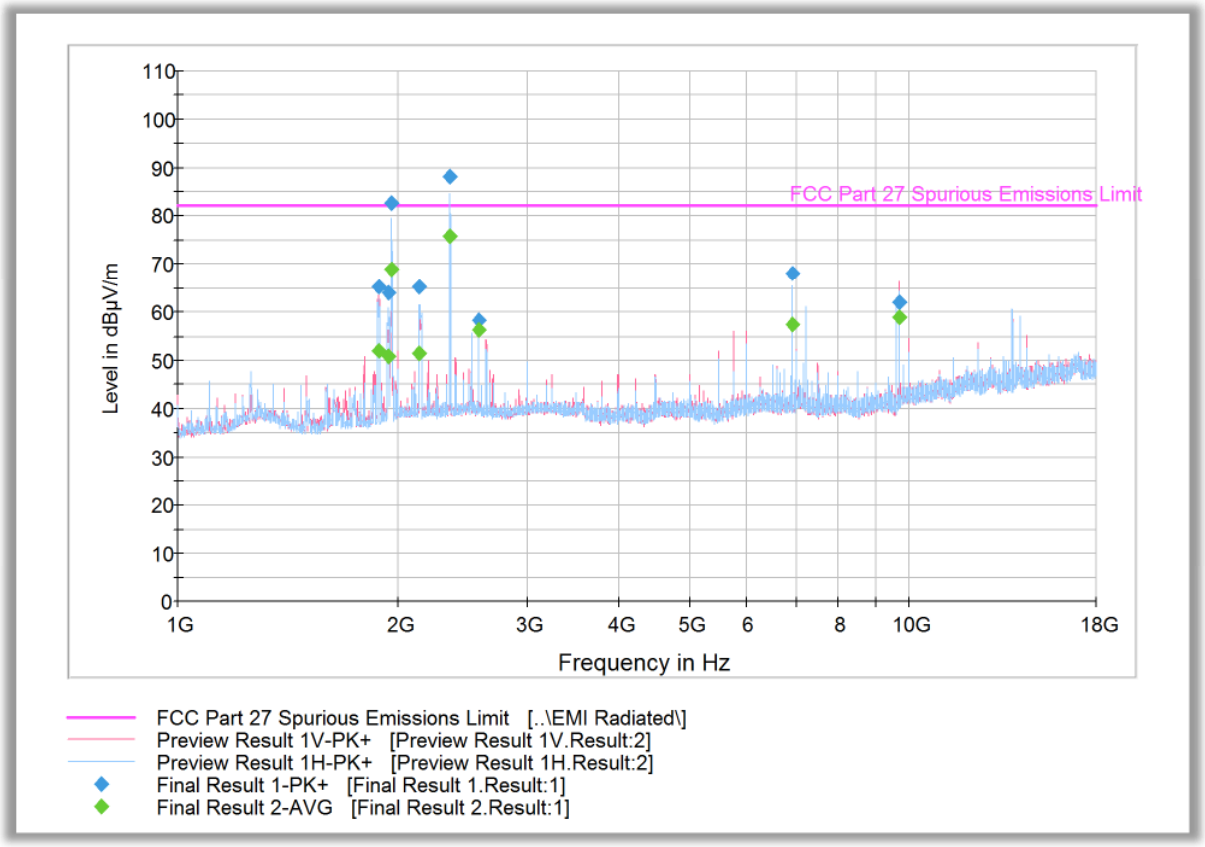


Quasi Peak Data

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
33.360000	38.9	1000.0	120.000	100.0	V	277.0	-10.9	43.3	82.2
300.000401	38.1	1000.0	120.000	150.0	V	106.0	-7.8	44.1	82.2
494.989178	41.9	1000.0	120.000	121.0	H	222.0	-2.8	40.3	82.2
625.573547	58.4	1000.0	120.000	116.0	H	17.0	-0.3	LTE B71 Fundamental	
749.982365	33.7	1000.0	120.000	135.0	H	-3.0	1.6	LTE B13 Fundamental	
872.143407	52.7	1000.0	120.000	100.0	H	42.0	3.5	WCDMA B5 Fundamental	
881.726733	51.7	1000.0	120.000	100.0	H	264.0	3.9	WCDMA B5 Fundamental	
882.030621	46.5	1000.0	120.000	150.0	V	274.0	3.9	LTE B26 Fundamental	

2.8.44 Intermodulation Test Results Above 1GHz (8 Bands on CU port Downlink and Modem Worst Case Configuration)

WCDMA Band 5 15MHz BW Low Ch & LTE Band 30 10MHz BW Mid Ch inject on NU port A
LTE Band 25 20MHz BW Mid Ch & LTE Band 71 20MHz BW Low Ch inject on NU Port B
LTE Band 13 10MHz BW Mid Ch & LTE Band 4 20MHz BW High Ch inject on NU Port C
LTE Band 26 5MHz BW High Ch & LTE Band 25 20MHz BW Low Ch inject on NU Port D



Peak Data

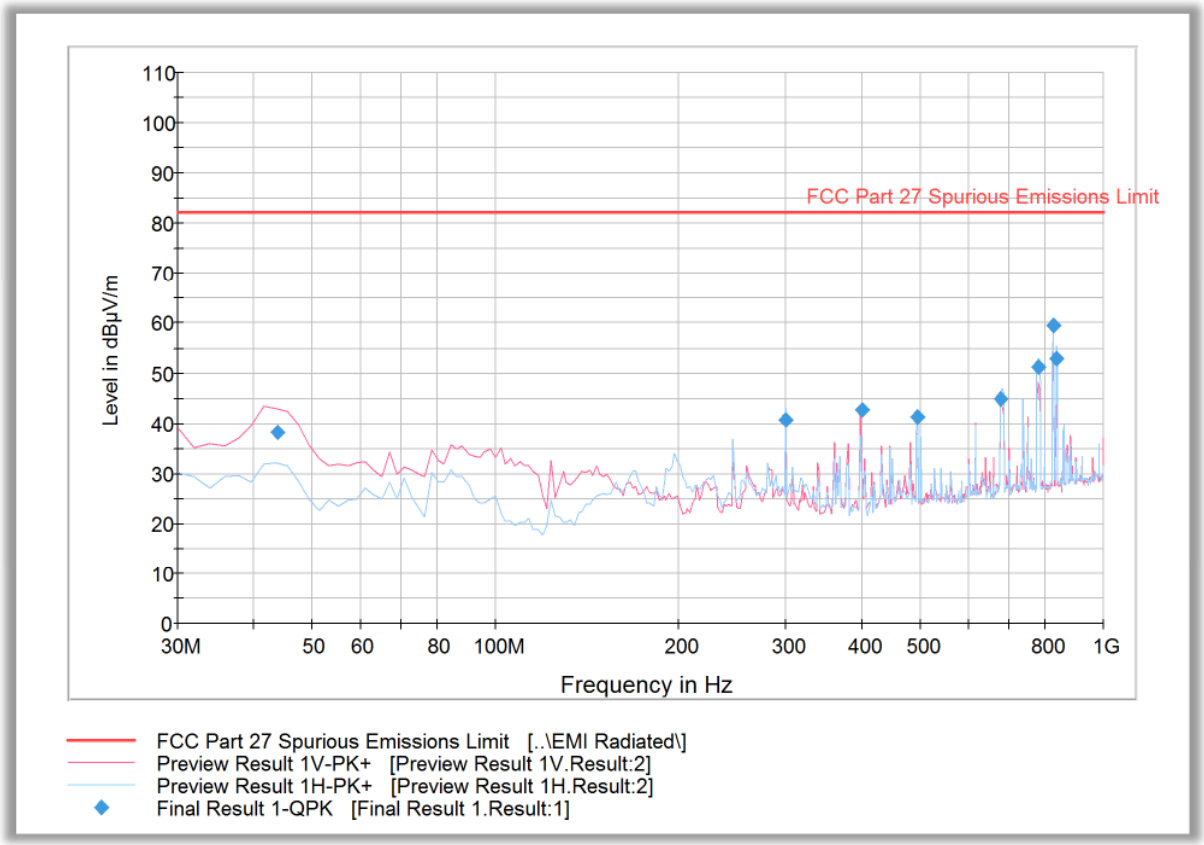
Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1882.666667	65.2	1000.0	1000.000	143.7	V	239.0	-2.7	17.0	82.2
1940.900000	64.0	1000.0	1000.000	191.5	H	121.0	-2.4	LTE B25 Fundamental	
1957.533333	82.6	1000.0	1000.000	102.8	H	100.0	-2.3	LTE B25 Fundamental	
2141.800000	65.1	1000.0	1000.000	290.3	H	253.0	-2.2	LTE B4 Fundamental	
2354.733333	88.2	1000.0	1000.000	290.3	H	129.0	-1.0	LTE B30 Fundamental	
2580.266667	58.3	1000.0	1000.000	103.7	V	355.0	-0.3	23.9	82.2
6909.966667	68.2	1000.0	1000.000	138.7	H	11.0	6.7	14.0	82.2
9701.300000	62.2	1000.0	1000.000	252.4	V	-3.0	8.9	20.0	82.2

Average Data

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1882.666667	52.0	1000.0	1000.000	143.7	V	239.0	-2.7	30.2	82.2
1940.900000	51.0	1000.0	1000.000	191.5	H	121.0	-2.4	LTE B25 Fundamental	
1957.533333	68.8	1000.0	1000.000	102.8	H	100.0	-2.3	LTE B25 Fundamental	
2141.800000	51.5	1000.0	1000.000	290.3	H	253.0	-2.2	LTE B4 Fundamental	
2354.733333	75.9	1000.0	1000.000	290.3	H	129.0	-1.0	LTE B30 Fundamental	
2580.266667	56.3	1000.0	1000.000	103.7	V	355.0	-0.3	25.9	82.2
6909.966667	57.4	1000.0	1000.000	138.7	H	11.0	6.7	24.8	82.2
9701.300000	58.8	1000.0	1000.000	252.4	V	-3.0	8.9	23.4	82.2

2.8.45 Intermodulation Test Results Below 1GHz (2 Bands per port on 4 NU ports Uplink Worst Case Configuration)

WCDMA Band 5 5MHz BW Mid Ch & LTE Band 30 5MHz BW High Ch transmit on NU port A
LTE Band 25 20MHz BW High Ch & LTE Band 71 10MHz BW Mid Ch transmit on NU Port B
LTE Band 13 10MHz BW Mid Ch & LTE Band 4 15MHz BW Low Ch transmit on NU Port C
LTE Band 26 5MHz BW Low Ch & LTE Band 25 20MHz BW Low Ch transmit on NU Port D
LTE Modem transmit LTE Band 2 Middle Channel

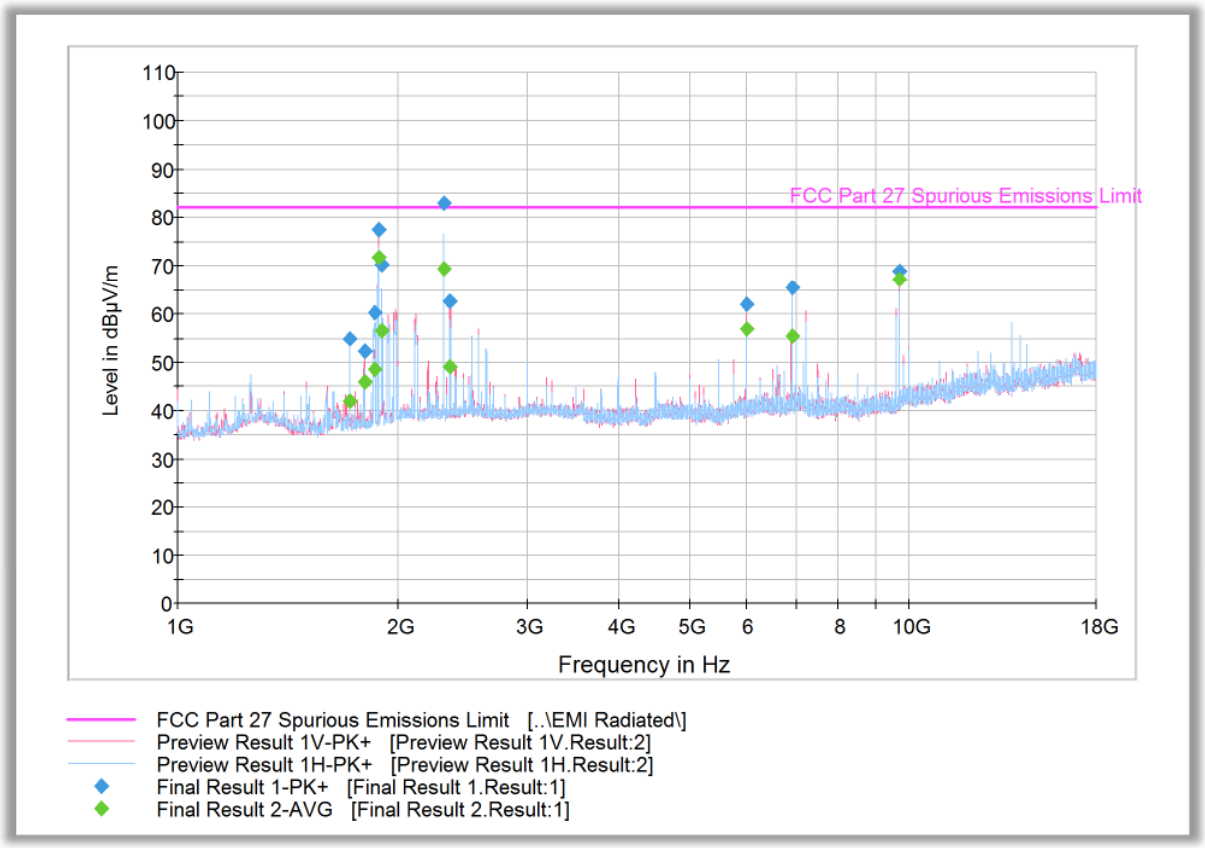


Quasi Peak Data

Frequency (MHz)	QuasiPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
43.703327	38.2	1000.0	120.000	100.0	V	23.0	-14.8	44.0	82.2
300.000401	40.6	1000.0	120.000	100.0	H	107.0	-7.8	41.6	82.2
399.978677	42.6	1000.0	120.000	115.0	V	338.0	-5.5	39.6	82.2
494.965291	41.4	1000.0	120.000	150.0	H	335.0	-2.8	40.8	82.2
679.362405	44.8	1000.0	120.000	105.0	H	101.0	1.2	LTE B71 Fundamental	
781.684569	51.3	1000.0	120.000	100.0	H	27.0	2.3	LTE B13 Fundamental	
826.473988	59.5	1000.0	120.000	100.0	H	271.0	3.0	LTE B26 Fundamental	
835.393427	53.0	1000.0	120.000	100.0	H	82.0	3.2	WCDMA B5 Fundamental	

2.8.46 Intermodulation Test Results Above 1GHz (2 Bands per port on 4 NU ports Uplink Worst Case Configuration)

WCDMA Band 5 5MHz BW Mid Ch & LTE Band 30 5MHz BW High Ch transmit on NU port A
LTE Band 25 20MHz BW High Ch & LTE Band 71 10MHz BW Mid Ch transmit on NU Port B
LTE Band 13 10MHz BW Mid Ch & LTE Band 4 15MHz BW Low Ch transmit on NU Port C
LTE Band 26 5MHz BW Low Ch & LTE Band 25 20MHz BW Low Ch transmit on NU Port D
LTE Modem transmit LTE Band 2 Middle Channel



Peak Data

Frequency (MHz)	MaxPeak (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1720.433333	54.7	1000.0	1000.000	116.7	V	14.0	-4.8	LTE B4 Fundamental	
1799.966667	52.4	1000.0	1000.000	204.5	V	356.0	-3.4	29.8	82.2
1859.600000	60.4	1000.0	1000.000	102.8	H	142.0	-2.8	LTE B25 Fundamental	
1880.233333	77.5	1000.0	1000.000	200.5	V	25.0	-2.7	Modem LTE B2 Fundamental	
1901.800000	70.4	1000.0	1000.000	152.7	H	227.0	-2.5	LTE B25 Fundamental	
2312.600000	83.0	1000.0	1000.000	137.7	H	126.0	-1.2	LTE B30 Fundamental	
2356.233333	62.7	1000.0	1000.000	103.7	V	14.0	-1.0	19.5	82.2
6000.100000	62.1	1000.0	1000.000	103.7	V	321.0	5.7	20.1	82.2
6907.066667	65.5	1000.0	1000.000	142.7	H	331.0	6.8	16.7	82.2
9695.466667	69.0	1000.0	1000.000	252.4	V	0.0	8.8	13.2	82.2

Average Data

Frequency (MHz)	Average (dBµV/m)	Meas. Time (ms)	Bandwidth (kHz)	Height (cm)	Polarization	Azimuth (deg)	Corr. (dB)	Margin (dB)	Limit (dBµV/m)
1720.433333	41.9	1000.0	1000.000	116.7	V	14.0	-4.8	LTE B4 Fundamental	
1799.966667	45.9	1000.0	1000.000	204.5	V	356.0	-3.4	36.3	82.2
1859.600000	48.4	1000.0	1000.000	102.8	H	142.0	-2.8	LTE B25 Fundamental	
1880.233333	71.7	1000.0	1000.000	200.5	V	25.0	-2.7	Modem LTE B2 Fundamental	
1901.800000	56.5	1000.0	1000.000	152.7	H	227.0	-2.5	LTE B25 Fundamental	
2312.600000	69.6	1000.0	1000.000	137.7	H	126.0	-1.2	LTE B30 Fundamental	
2356.233333	49.1	1000.0	1000.000	103.7	V	14.0	-1.0	33.1	82.2
6000.100000	56.9	1000.0	1000.000	103.7	V	321.0	5.7	25.3	82.2
6907.066667	55.4	1000.0	1000.000	142.7	H	331.0	6.8	26.8	82.2
9695.466667	67.3	1000.0	1000.000	252.4	V	0.0	8.8	14.9	82.2

2.9 FREQUENCY STABILITY

2.9.1 Specification Reference

FCC 47 CFR Part 2, Clause 2.1055
FCC 47 CFR Part 27, Clause 27.54
RSS-139, Clause 6.4
RSS-130, Clause 4.5
RSS-195, Clause 5.4

2.9.2 Standard Applicable

FCC 47 CFR Part 27, Clause 27.54:
The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.

RSS-139, Clause 6.4, RSS-130, Clause 4.5 and RSS-195, Clause 5.4:
The frequency stability shall be sufficient to ensure that the occupied bandwidth stays within the operating frequency block when tested to the tmperature and supply voltage variations specified in RSS-Gen.

2.9.3 Equipment Under Test and Modification State

Serial No: 370920000139 (NU) and 371929000156 (CU) / Test Configuration A and B

2.9.4 Date of Test/Initial of test personnel who performed the test

August 20 and 21, 2019/XYZ

2.9.5 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.9.6 Environmental Conditions

Test performed at TÜV SÜD America Inc. Rancho Bernardo facility.

Ambient Temperature	25.0 - 25.2°C
Relative Humidity	43.8 - 47.3%
ATM Pressure	98.8 - 98.9kPa

2.9.7 Additional Observations

- This is a conducted test.
- The EUT was operated at 120.0VAC nominal voltage and was placed in the temperature chamber for the series of evaluations performed.
- Test performed in 5 MHz Bandwidth Middle channel as the representative configuration.
- Input Type "Tones" was selected and the EUT was injected a CW signal from a Signal Generator and maximum frequency error was monitored using the spectrum analyzer.
- The Temperature was reduced to -30°C and allowed to sit for 1 hour to allow the equipment and chamber temperature to stabilize. The measurements on both downlink and uplink were then performed. The temperature was then increased by 10°C steps and allowed to settle before taking the next set of measurements. The EUT was tested over the temperature -30°C to +50°C.
- Voltage variation was also performed at 85% and 115% of the nominal voltage.

2.9.8 Test Results Summary

LTE B4 Downlink – 5 MHz BW Middle Channel 2132.5 MHz				
Voltage (VDC)	**Temperature (°C)**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
120	-30	0	0	-
	-20	0	0	-
	-10	0	0	-
	0	0	0	-
	+10	0	0	-
	+20	0	0	-
	+30	0	0	-
	+40	0	0	-
	+50	0	0	-
102	+20	0	0	-
138		0	0	-

LTE B4 Downlink Frequency Range – 5 MHz BW					
Channel	**Temperature (°C)**	**Voltage (VAC)**	**F_L (MHz)**	**F_H (MHz)**	**Limit (MHz)**
Low Channel	-30	120	2110.2727	-	>2110
	+20	102	2110.2769	-	
		120	2110.2703	-	
		138	2110.2748	-	
	+50	120	2110.2738	-	
High Channel	-30	120	-	2154.7176	<2155
	+20	102	-	2154.7200	
		120	-	2154.7161	
		138	-	2154.7172	
	+50	120	-	2154.7164	

The frequency stability of the EUT is sufficient to keep it within the authorised frequency ranges at any temperature interval and voltage variations across the measured range.

LTE B4 Uplink – 5 MHz BW Middle Channel 1732.5 MHz				
Voltage (VDC)	**Temperature (°C)**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
120	-30	0	0	-
	-20	0	0	-
	-10	0	0	-
	0	0	0	-
	+10	0	0	-
	+20	0	0	-
	+30	0	0	-
	+40	0	0	-
	+50	0	0	-
102	+20	0	0	-
138		0	0	-

LTE B4 Uplink Frequency Range – 5 MHz BW					
Channel	**Temperature (°C)**	**Voltage (VAC)**	**F_L (MHz)**	**F_H (MHz)**	**Limit (MHz)**
Low Channel	-30	120	1710.2729	-	>1710
	+20	102	1710.2753	-	
		120	1710.2731	-	
		138	1710.2745	-	
	+50	120	1710.2737	-	
High Channel	-30	120	-	1754.7082	<1755
	+20	102	-	1754.7048	
		120	-	1754.7065	
		138	-	1754.7053	
	+50	120	-	1754.7074	

The frequency stability of the EUT is sufficient to keep it within the authorised frequency ranges at any temperature interval and voltage variations across the measured range.

LTE B12 Downlink – 5 MHz BW Middle Channel 737.5 MHz				
Voltage (VDC)	**Temperature (°C)**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
120	-30	0	0	-
	-20	0	0	-
	-10	0	0	-
	0	0	0	-
	+10	0	0	-
	+20	0	0	-
	+30	0	0	-
	+40	0	0	-
	+50	0	0	-
102	+20	0	0	-
138		0	0	-

LTE B12 Downlink Frequency Range – 5 MHz BW					
Channel	**Temperature (°C)**	**Voltage (VAC)**	**F_L (MHz)**	**F_H (MHz)**	**Limit (MHz)**
Low Channel	-30	120	729.3126	-	>729
	+20	102	729.3133	-	
		120	729.3139	-	
		138	729.3142	-	
	+50	120	729.3097	-	
High Channel	-30	120	-	745.7382	<746
	+20	102	-	745.7384	
		120	-	745.7381	
		138	-	745.7324	
	+50	120	-	745.7376	

The frequency stability of the EUT is sufficient to keep it within the authorised frequency ranges at any temperature interval and voltage variations across the measured range.

LTE B12 Uplink – 5 MHz BW Middle Channel 707.5 MHz				
Voltage (VDC)	**Temperature (°C)**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
120	-30	0	0	-
	-20	0	0	-
	-10	0	0	-
	0	0	0	-
	+10	0	0	-
	+20	0	0	-
	+30	0	0	-
	+40	0	0	-
	+50	0	0	-
102	+20	0	0	-
138		0	0	-

LTE B12 Uplink Frequency Range – 5 MHz BW					
Channel	**Temperature (°C)**	**Voltage (VAC)**	**F_L (MHz)**	**F_H (MHz)**	**Limit (MHz)**
Low Channel	-30	120	699.2950	-	>699
	+20	102	699.2989	-	
		120	699.2970	-	
		138	699.2978	-	
	+50	120	699.2958	-	
High Channel	-30	120	-	715.7062	<716
	+20	102	-	715.7116	
		120	-	715.7077	
		138	-	715.7104	
	+50	120	-	715.7125	

The frequency stability of the EUT is sufficient to keep it within the authorised frequency ranges at any temperature interval and voltage variations across the measured range.

LTE B13 Downlink – 5 MHz BW Middle Channel 751 MHz				
Voltage (VDC)	**Temperature (°C)**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
120	-30	0	0	-
	-20	0	0	-
	-10	0	0	-
	0	0	0	-
	+10	0	0	-
	+20	0	0	-
	+30	0	0	-
	+40	0	0	-
	+50	0	0	-
102	+20	0	0	-
138		0	0	-

LTE B13 Downlink Frequency Range – 5 MHz BW					
Channel	**Temperature (°C)**	**Voltage (VAC)**	**F_L (MHz)**	**F_H (MHz)**	**Limit (MHz)**
Low Channel	-30	120	746.3471	-	>746
	+20	102	746.3488	-	
		120	746.3451	-	
		138	746.3468	-	
	+50	120	746.3474	-	
High Channel	-30	120	-	755.6972	<756
	+20	102	-	755.6964	
		120	-	755.6992	
		138	-	755.6970	
	+50	120	-	755.7047	

The frequency stability of the EUT is sufficient to keep it within the authorised frequency ranges at any temperature interval and voltage variations across the measured range.

LTE B13 Uplink – 5 MHz BW Middle Channel 782 MHz				
Voltage (VDC)	**Temperature (°C)**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
120	-30	0	0	-
	-20	0	0	-
	-10	0	0	-
	0	0	0	-
	+10	0	0	-
	+20	0	0	-
	+30	0	0	-
	+40	0	0	-
	+50	0	0	-
102	+20	0	0	-
138		0	0	-

LTE B13 Uplink Frequency Range – 5 MHz BW					
Channel	**Temperature (°C)**	**Voltage (VAC)**	**F_L (MHz)**	**F_H (MHz)**	**Limit (MHz)**
Low Channel	-30	120	777.2857	-	>777
	+20	102	777.2876	-	
		120	777.2863	-	
		138	777.2871	-	
	+50	120	777.2876	-	
High Channel	-30	120	-	786.7098	<787
	+20	102	-	786.7099	
		120	-	786.7078	
		138	-	786.7100	
	+50	120	-	786.7096	

The frequency stability of the EUT is sufficient to keep it within the authorised frequency ranges at any temperature interval and voltage variations across the measured range.

LTE B30 Downlink – 5 MHz BW Middle Channel 2355 MHz				
Voltage (VDC)	**Temperature (°C)**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
120	-30	0	0	-
	-20	0	0	-
	-10	0	0	-
	0	0	0	-
	+10	0	0	-
	+20	0	0	-
	+30	0	0	-
	+40	0	0	-
	+50	0	0	-
102	+20	0	0	-
138		0	0	-

LTE B30 Downlink Frequency Range – 5 MHz BW					
Channel	**Temperature (°C)**	**Voltage (VAC)**	**F_L (MHz)**	**F_H (MHz)**	**Limit (MHz)**
Low Channel	-30	120	2350.2049	-	>2350
	+20	102	2350.2062	-	
		120	2350.2089	-	
		138	2350.2145	-	
	+50	120	2350.2071	-	
High Channel	-30	120	-	2359.6993	<2360
	+20	102	-	2359.6968	
		120	-	2359.6987	
		138	-	2359.7008	
	+50	120	-	2359.7011	

The frequency stability of the EUT is sufficient to keep it within the authorised frequency ranges at any temperature interval and voltage variations across the measured range.

LTE B30 Uplink – 5 MHz BW Middle Channel 2310 MHz				
Voltage (VDC)	**Temperature (°C)**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
120	-30	0	0	-
	-20	0	0	-
	-10	0	0	-
	0	0	0	-
	+10	0	0	-
	+20	0	0	-
	+30	0	0	-
	+40	0	0	-
	+50	0	0	-
102	+20	0	0	-
138		0	0	-

LTE B30 Uplink Frequency Range – 5 MHz BW					
Channel	**Temperature (°C)**	**Voltage (VAC)**	**F_L (MHz)**	**F_H (MHz)**	**Limit (MHz)**
Low Channel	-30	120	2305.2779	-	>2305
	+20	102	2305.2767	-	
		120	2305.2784	-	
		138	2305.2769	-	
	+50	120	2305.2784	-	
High Channel	-30	120	-	2314.7134	<2315
	+20	102	-	2314.7112	
		120	-	2314.7097	
		138	-	2314.7058	
	+50	120	-	2314.7086	

The frequency stability of the EUT is sufficient to keep it within the authorised frequency ranges at any temperature interval and voltage variations across the measured range.

LTE B71 Downlink – 5 MHz BW Middle Channel 634.5 MHz				
Voltage (VDC)	**Temperature (°C)**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
120	-30	0	0	-
	-20	0	0	-
	-10	0	0	-
	0	0	0	-
	+10	0	0	-
	+20	0	0	-
	+30	0	0	-
	+40	0	0	-
	+50	0	0	-
102	+20	0	0	-
138		0	0	-

LTE B71 Downlink Frequency Range – 5 MHz BW					
Channel	**Temperature (°C)**	**Voltage (VAC)**	**F_L (MHz)**	**F_H (MHz)**	**Limit (MHz)**
Low Channel	-30	120	617.2827	-	>617
	+20	102	617.2830	-	
		120	617.2831	-	
		138	617.2796	-	
	+50	120	617.2823	-	
High Channel	-30	120	-	651.7113	<652
	+20	102	-	651.7126	
		120	-	651.7139	
		138	-	651.7158	
	+50	120	-	651.7140	

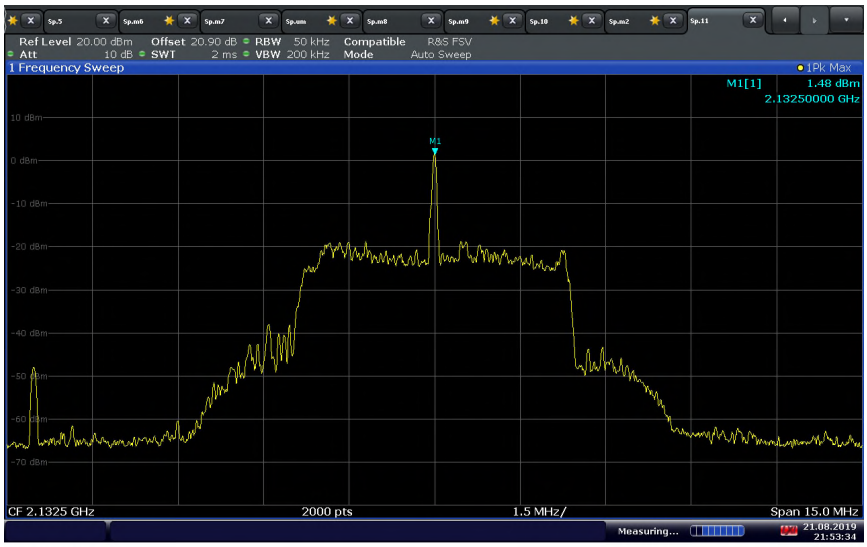
The frequency stability of the EUT is sufficient to keep it within the authorised frequency ranges at any temperature interval and voltage variations across the measured range.

LTE B71 Uplink – 5 MHz BW Middle Channel 680.5 MHz				
Voltage (VDC)	**Temperature (°C)**	**Frequency Error (Hz)**	**Frequency Error (ppm)**	**Limit (ppm)**
120	-30	0	0	-
	-20	0	0	-
	-10	0	0	-
	0	0	0	-
	+10	0	0	-
	+20	0	0	-
	+30	0	0	-
	+40	0	0	-
	+50	0	0	-
102	+20	0	0	-
138		0	0	-

LTE B71 Uplink Frequency Range – 5 MHz BW					
Channel	**Temperature (°C)**	**Voltage (VAC)**	**F_L (MHz)**	**F_H (MHz)**	**Limit (MHz)**
Low Channel	-30	120	663.3225	-	>663
	+20	102	663.3250	-	
		120	663.3214	-	
		138	663.3239	-	
	+50	120	663.3187	-	
High Channel	-30	120	-	697.7082	<698
	+20	102	-	697.7070	
		120	-	697.7078	
		138	-	697.7092	
	+50	120	-	697.7096	

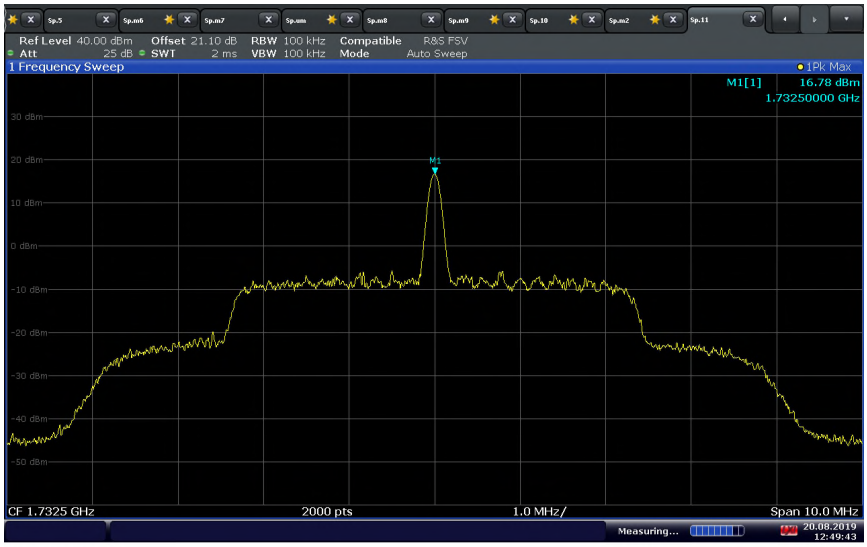
The frequency stability of the EUT is sufficient to keep it within the authorised frequency ranges at any temperature interval and voltage variations across the measured range.

2.9.9 Sample Test Plots



21:53:35 21.08.2019

LTE Band 4 Downlink Middle Channel 120VAC @ 20°C



12:49:44 20.08.2019

LTE Band 4 Uplink Middle Channel 120VAC @ 20°C

15:45:06 21.08.2019

LTE B4 Downlink Low Channel @ 20°C Nominal Voltage

15:49:53 21.08.2019

LTE B4 Downlink High Channel @ 20°C Nominal Voltage

13:39:17 20.08.2019

LTE B4 Uplink Low Channel @ 20°C Nominal Voltage

13:44:31 20.08.2019

LTE B4 Uplink High Channel @ 20°C Nominal Voltage

2.10 POWER LINE CONDUCTED EMISSIONS

2.10.1 Specification Reference

RSS-Gen, Section 8.8

2.10.2 Standard Applicable

An intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 µH/50 ohms line impedance stabilization network (LISN).

Frequency of emission (MHz)	Conducted limit (dBµV)	
	Quasi-peak	Average
0.15–0.5	66 to 56*	56 to 46*
0.5–5	56	46
5–30	60	50

**Decreases with the logarithm of the frequency.*

2.10.3 Equipment Under Test and Modification State

Serial No: 370920000139 (NU) and 371929000156 (CU) / Test Configuration B

2.10.4 Date of Test/Initial of test personnel who performed the test

August 30, 2019/XYZ

2.10.5 Test Equipment Used

The major items of test equipment used for the above tests are identified in Section 3.1.

2.10.6 Environmental Conditions

Test performed at TÜV SÜD America Inc. Rancho Bernardo facility.

Ambient Temperature	25.2 °C
Relative Humidity	47.3 %
ATM Pressure	98.9 kPa

2.10.7 Additional Observations

- EUT verified using input voltage of 120VAC 60Hz.
- There are no significant variations in test results between each operating modes. Only the worst operation mode is presented.
- Measurement was done using EMC32 automated software. Reported level is the actual level with all the correction factors factored in. Correction Factor column is for informational purposes only. See Section 2.10.8 for sample computation.

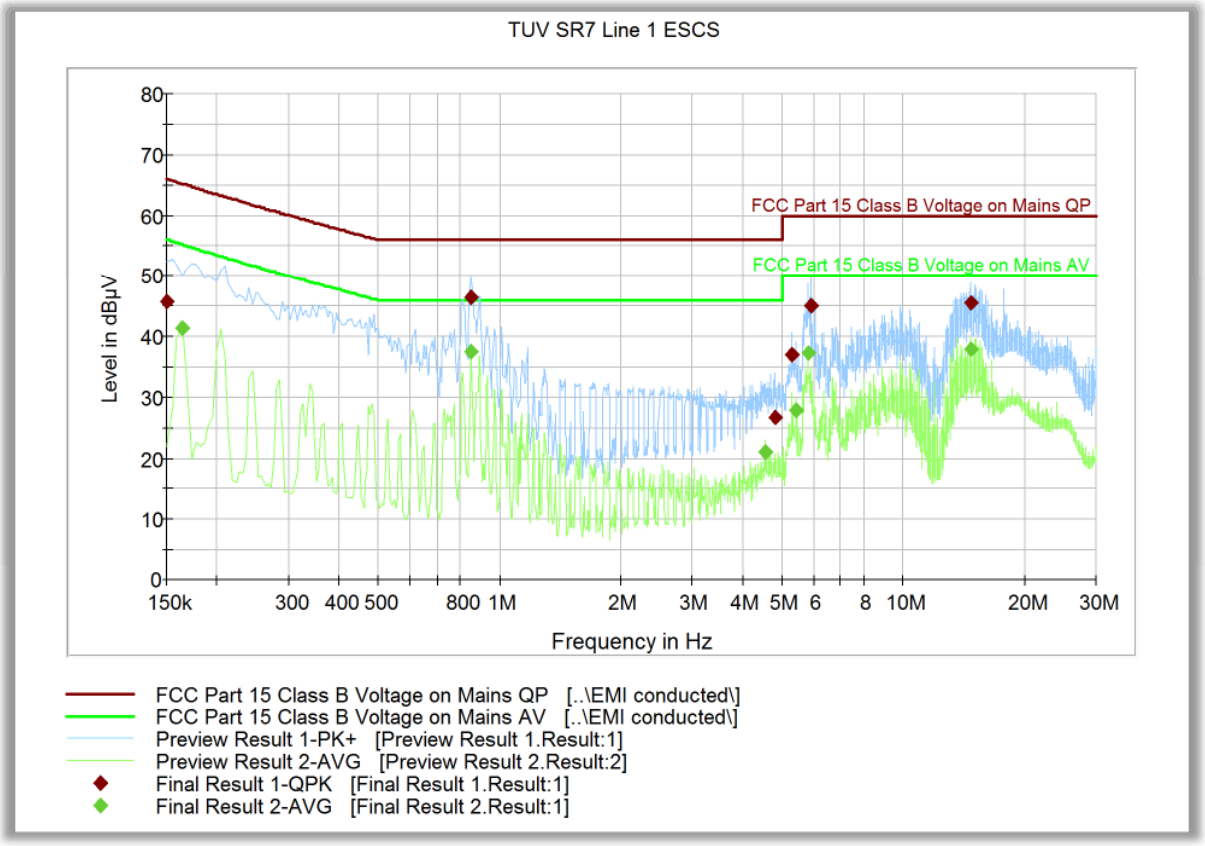
2.10.8 Sample Computation (Conducted Emission – Quasi Peak)

Measuring equipment raw measurement (dbµV) @ 150kHz			5.5
Correction Factor (dB)	Asset# 8607 (20 dB attenuator)	19.9	20.7
	Asset# 1177 (cable)	0.15	
	Asset# 1176 (cable)	0.35	
	Asset# 7568 (LISN)	0.30	
Reported QuasiPeak Final Measurement (dbµV) @ 150kHz			**26.2**

2.10.9 Test Results

Compliant. See attached plots and tables.

2.10.10 Test Results - Conducted Emissions Line 1 – Hot (LTE B4 as the worst case)



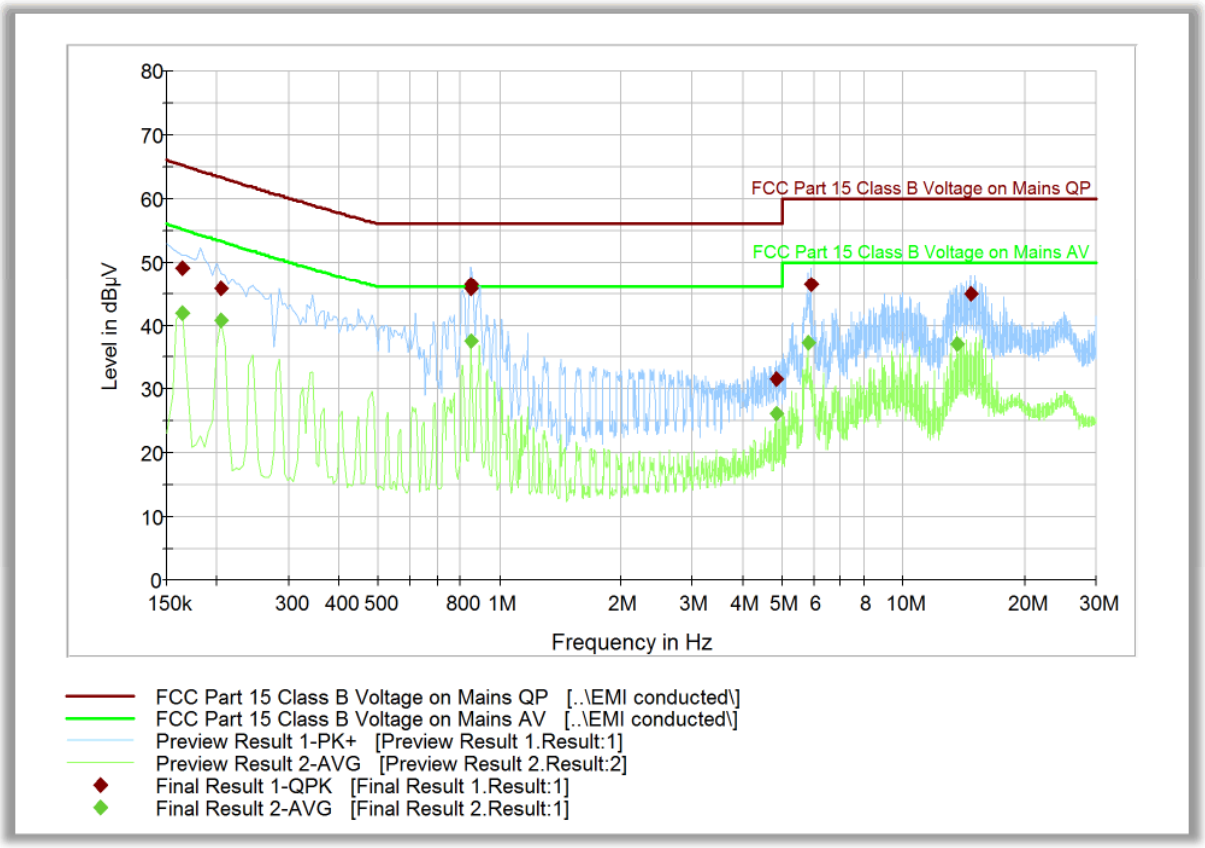
Quasi Peak

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBµV)
0.150000	45.8	1000.0	9.000	Off	L1	20.1	20.2	66.0
0.852000	46.3	1000.0	9.000	Off	L1	19.9	9.7	56.0
4.812000	26.6	1000.0	9.000	Off	L1	20.5	29.4	56.0
5.311500	37.0	1000.0	9.000	Off	L1	20.4	23.0	60.0
5.905500	45.1	1000.0	9.000	Off	L1	20.4	14.9	60.0
14.653500	45.4	1000.0	9.000	Off	L1	20.5	14.6	60.0

Average

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin - Ave (dB)	Limit - Ave (dBµV)
0.163500	41.4	1000.0	9.000	Off	L1	20.1	13.8	55.2
0.852000	37.5	1000.0	9.000	Off	L1	19.9	8.5	46.0
4.551000	21.0	1000.0	9.000	Off	L1	20.4	25.0	46.0
5.415000	27.9	1000.0	9.000	Off	L1	20.4	22.1	50.0
5.824500	37.2	1000.0	9.000	Off	L1	20.4	12.8	50.0
14.653500	38.0	1000.0	9.000	Off	L1	20.5	12.0	50.0

2.10.11 Test Result - Conducted Emissions Line 2 – Neutral (LTE B4 as the worst case)



Quasi Peak

Frequency (MHz)	QuasiPeak (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin - QPK (dB)	Limit - QPK (dBµV)
0.163500	49.0	1000.0	9.000	Off	N	20.0	16.2	65.2
0.204000	45.8	1000.0	9.000	Off	N	19.9	17.5	63.3
0.852000	46.4	1000.0	9.000	Off	N	19.8	9.6	56.0
4.857000	31.6	1000.0	9.000	Off	N	20.5	24.4	56.0
5.905500	46.4	1000.0	9.000	Off	N	20.3	13.6	60.0
14.658000	44.9	1000.0	9.000	Off	N	20.6	15.1	60.0

Average

Frequency (MHz)	Average (dBµV)	Meas. Time (ms)	Bandwidth (kHz)	Filter	Line	Corr. (dB)	Margin - Ave (dB)	Limit - Ave (dBµV)
0.163500	41.9	1000.0	9.000	Off	N	20.0	13.3	55.2
0.204000	40.7	1000.0	9.000	Off	N	19.9	12.5	53.3
0.852000	37.5	1000.0	9.000	Off	N	19.8	8.5	46.0
4.857000	26.1	1000.0	9.000	Off	N	20.5	19.9	46.0
5.820000	37.2	1000.0	9.000	Off	N	20.3	12.8	50.0
13.636500	37.0	1000.0	9.000	Off	N	20.6	13.0	50.0

SECTION 3

TEST EQUIPMENT USED

3.1 TEST EQUIPMENT USED

List of absolute measuring and other principal items of test equipment.

ID Number (SDGE/SDRB)	Test Equipment	Type	Serial Number	Manufacturer	Cal Date	Cal Due Date
Antenna Conducted Port Setup						
7662	P-Series Power Meter	N1911A	MY45100951	Agilent	06/28/19	06/28/20
7661	50MHz-18GHz Wideband Power Sensor	N1921A	MY45241383	Agilent	07/24/19	07/24/20
7608	Vector Signal Generator	SMBV100A	259021	Rhode & Schwarz	10/10/19	10/10/21
7582	Signal/Spectrum Analyzer	FSW26	101614	Rhode & Schwarz	01/07/19	01/07/20
8825	20dB Attenuator	46-20-34	BK5773	Weinschel Corp.	Verified by 7608 and 7582	
-	10dB Attenuator	VAT-10W2+2W	N/A	MCL	Verified by 7608 and 7582	
Radiated Test Setup						
1033	Bilog Antenna	3142C	00044556	EMCO	09/05/19	09/05/21
7575	Double-ridged waveguide horn antenna	3117	00155511	EMCO	06/16/18	06/16/20
8628	Pre-amplifier	QLJ 01182835-JO	8986002	QuinStar Technologies Inc.	03/07/19	03/07/20
1040	EMI Test Receiver	ESIB40	100292	Rhode & Schwarz	10/11/19	10/11/20
7620	EMI Test Receiver	ESU	100399	Rhode & Schwarz	10/18/19	10/18/20
1016	Pre-amplifier	PAM-0202	187	A.H. Systems, Inc.	03/08/19	03/08/20
Conducted Emissions						
7620	EMI Test Receiver	ESU	100399	Rhode & Schwarz	10/18/19	10/18/20
7567	LISN	FCC-LISN-50-25-2	120304	Fischer Custom Comm.	12/14/17	12/14/19
8822	20dB Attenuator	34-20-34	N/A	MCE / Weinschel	03/05/19	03/06/20
8824	20dB Attenuator	34-20-34	N/A	MCE / Weinschel	03/05/19	03/05/20
Miscellaneous						
43003	True RMS Multimeter	85 III	96880143	Fluke	10/07/19	10/07/20
7579	Temperature Chamber	115	151617	TestQuity	09/09/19	09/09/20
7619	Temp & Humidity Sensor	iBTHX-W	15050268	Omega	06/18/19	06/18/20
	Test Software	EMC32	V8.53	Rhode & Schwarz	N/A	

3.2 MEASUREMENT UNCERTAINTY

For a 95% confidence level, the measurement uncertainties for defined systems are:

3.2.1 Conducted Antenna Port Measurement

	Input Quantity (Contribution) X_i	Value		Prob. Dist.	Divisor	$u_i(x)$	$u_i(x)^2$
1	Receiver reading	0.10	dB	Normal, k=1	1.000	0.10	0.01
2	Cable attenuation	1.00	dB	Normal, k=2	2.000	0.50	0.25
3	Received sinewave accuracy	0.07	dB	Normal, k=2	2.000	0.04	0.00
4	Receiver pulse amplitude	0.00	dB	Rectangular	1.732	0.00	0.00
5	Receiver pulse repetition rate	0.00	dB	Rectangular	1.732	0.00	0.00
6	Noise floor proximity	0.00	dB	Rectangular	1.732	0.00	0.00
7	Frequency interpolation	0.10	dB	Rectangular	1.732	0.06	0.00
8	Mismatch	0.07	dB	U-shaped	1.414	0.05	0.00
	Combined standard uncertainty			Normal	0.52	dB	
	Expanded uncertainty			Normal, k=2	**1.03**	**dB**	

3.2.2 Radiated Emission Measurements (Below 1GHz)

	Input Quantity (Contribution) X_i	Value		Prob. Dist.	Divisor	$u_i(x)$	$u_i(x)^2$
1	Receiver reading	0.10	dB	Normal, k=1	1.000	0.10	0.01
2	Attenuation: antenna-receiver	0.20	dB	Normal, k=2	2.000	0.10	0.01
3	Antenna factor AF	0.75	dB	Normal, k=2	2.000	0.38	0.14
4	Receiver sinewave accuracy	1.10	dB	Normal, k=2	2.000	0.55	0.30
5	Receiver pulse amplitude	1.50	dB	Rectangular	1.732	0.87	0.75
6	Receiver pulse repetition rate	1.50	dB	Rectangular	1.732	0.87	0.75
7	Noise floor proximity	0.50	dB	Rectangular	1.732	0.29	0.08
8	Mismatch: antenna-receiver	0.95	dB	U-shaped	1.414	0.67	0.45
9	AF frequency interpolation	0.30	dB	Rectangular	1.732	0.17	0.03
10	AF height deviations	0.10	dB	Rectangular	1.732	0.06	0.00
11	Directivity difference at 3 m	3.12	dB	Rectangular	1.732	1.80	3.24
12	Phase center location at 3 m	1.00	dB	Rectangular	1.732	0.58	0.33
13	Cross-polarisation	0.90	dB	Rectangular	1.732	0.52	0.27
14	Balance	0.00	dB	Rectangular	1.732	0.00	0.00
15	Site imperfections	3.91	dB	Triangular	2.449	1.60	2.55
16	Separation distance at 3 m	0.30	dB	Rectangular	1.732	0.17	0.03
17	Effect of setup table material	0.40	dB	Rectangular	1.732	0.23	0.05
18	Table height at 3 m	0.10	dB	Normal, k=2	2.000	0.05	0.00
19	Near-field effects	0.00	dB	Triangular	2.449	0.00	0.00
20	Effect of ambient noise on OATS	0.00	dB				0.00
	Combined standard uncertainty			Normal	3.00	dB	
	Expanded uncertainty			**Normal, k=2**	**6.00**	**dB**	

3.2.3 Radiated Emission Measurements (Above 1GHz)

	Input Quantity (Contribution) X_i	Value	Prob. Dist.	Divisor	$u_i(x)$	$u_i(x)^2$
1	Receiver reading	0.10 dB	Normal, k=1	1.000	0.10	0.01
2	Attenuation: antenna-receiver	0.30 dB	Normal, k=2	2.000	0.15	0.02
3	Preamplifier Gain	0.20 dB	Normal, k=2	2.000	0.10	0.01
4	Antenna factor AF	0.37 dB	Normal, k=2	2.000	0.19	0.03
5	Sinewave accuracy	0.57 dB	Normal, k=2	2.000	0.29	0.08
6	Instability of preamp gain	1.21 dB	Rectangular	1.732	0.70	0.49
7	Noise floor proximity	0.70 dB	Rectangular	1.732	0.40	0.16
8	Mismatch: antenna-preamplifier	1.41 dB	U-shaped	1.414	1.00	0.99
9	Mismatch: preamplifier-receiver	1.30 dB	U-shaped	1.414	0.92	0.85
10	AF frequency interpolation	0.30 dB	Rectangular	1.732	0.17	0.03
11	Directivity difference at 3 m	1.50 dB	Rectangular	1.732	0.87	0.75
12	Phase center location at 3 m	0.30 dB	Rectangular	1.732	0.17	0.03
13	Cross-polarisation	0.90 dB	Rectangular	1.732	0.52	0.27
14	Site imperfections VSWR (Method 2)	5.30 dB	Triangular	2.449	2.16	4.68
15	Effect of setup table material	1.15 dB	Rectangular	1.732	0.66	0.44
16	Separation distance at 3 m	0.30 dB	Rectangular	1.732	0.17	0.03
17	Table height at 3 m	0.00 dB	Normal, k=2	2.000	0.00	0.00
	Combined standard uncertainty		Normal		2.98 dB	
	Expanded uncertainty		**Normal, k=2**		**5.96 dB**	

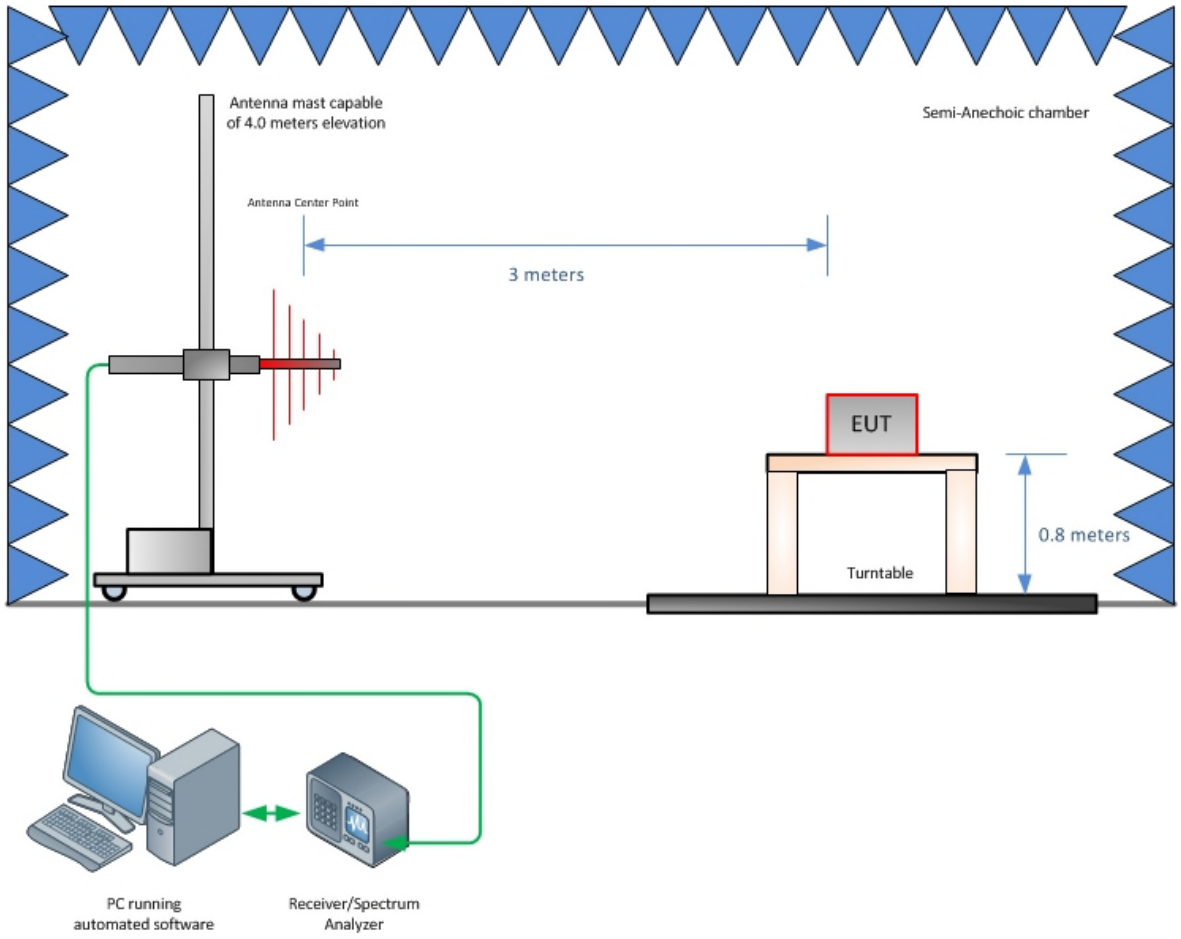
3.2.4 Conducted Measurements

	Input Quantity (Contribution) X_i	Value	Prob. Dist.	Divisor	$u_i(x)$	$u_i(x)^2$
1	Receiver reading	0.10 dB	Normal, k=1	1.000	0.10	0.01
2	LISN-receiver attenuation	0.10 dB	Normal, k=2	2.000	0.05	0.00
3	LISN voltage division factor	0.30 dB	Normal, k=2	2.000	0.15	0.02
4	Receiver sinewave accuracy	0.36 dB	Normal, k=2	2.000	0.18	0.03
5	Receiver pulse amplitude	1.50 dB	Rectangular	1.732	0.87	0.75
6	Receiver pulse repetition rate	1.50 dB	Rectangular	1.732	0.87	0.75
7	Noise floor proximity	0.00 dB	Rectangular	1.732	0.00	0.00
8	AMN VDF frequency interpolation	0.10 dB	Rectangular	1.732	0.06	0.00
9	Mismatch	0.07 dB	U-shaped	1.414	0.05	0.00
10	LISN impedance	2.65 dB	Triangular	2.449	1.08	1.17
11	Effect of mains disturbance	0.00 dB			0.00	0.00
12	Effect of the environment					
	Combined standard uncertainty		Normal		1.66 dB	
	Expanded uncertainty		**Normal, k=2**		**3.31 dB**	

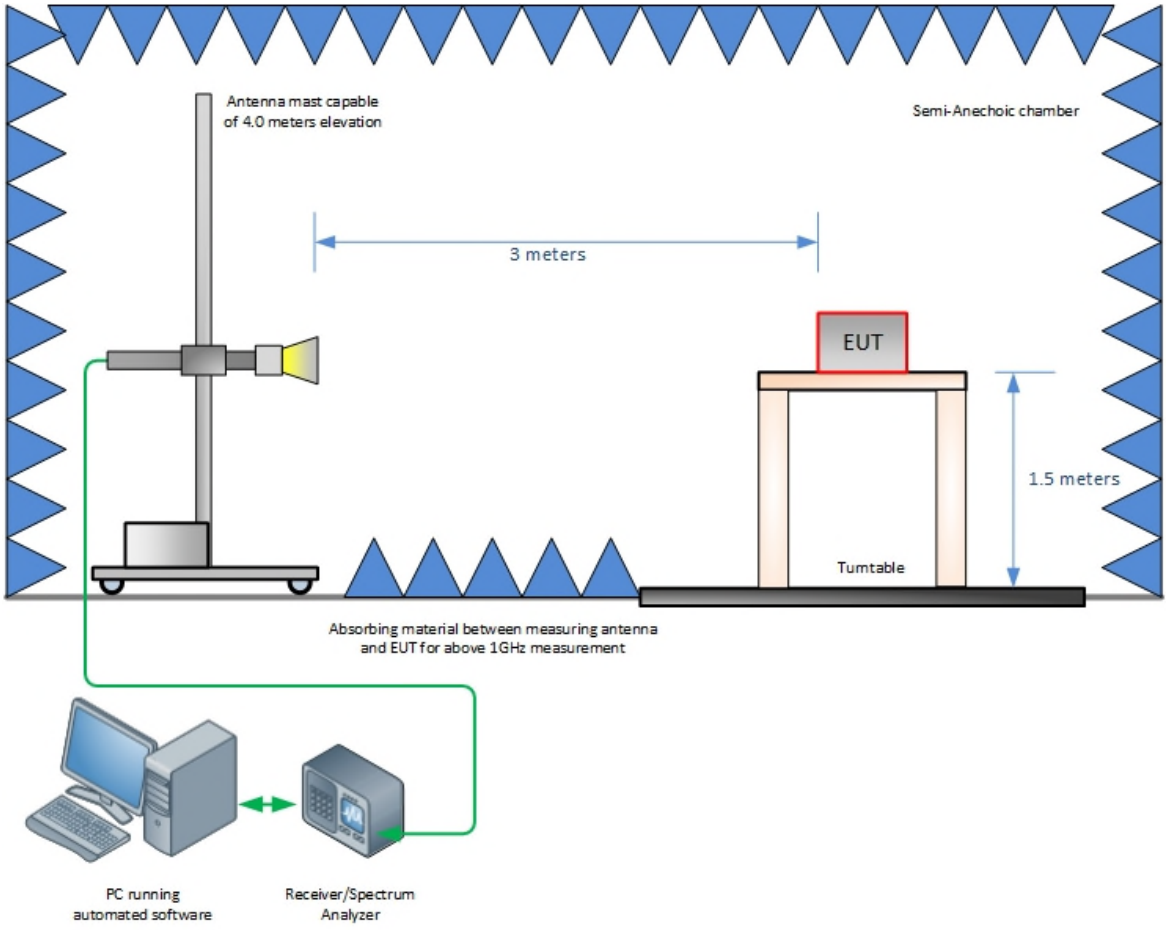
SECTION 4

DIAGRAM OF TEST SETUP

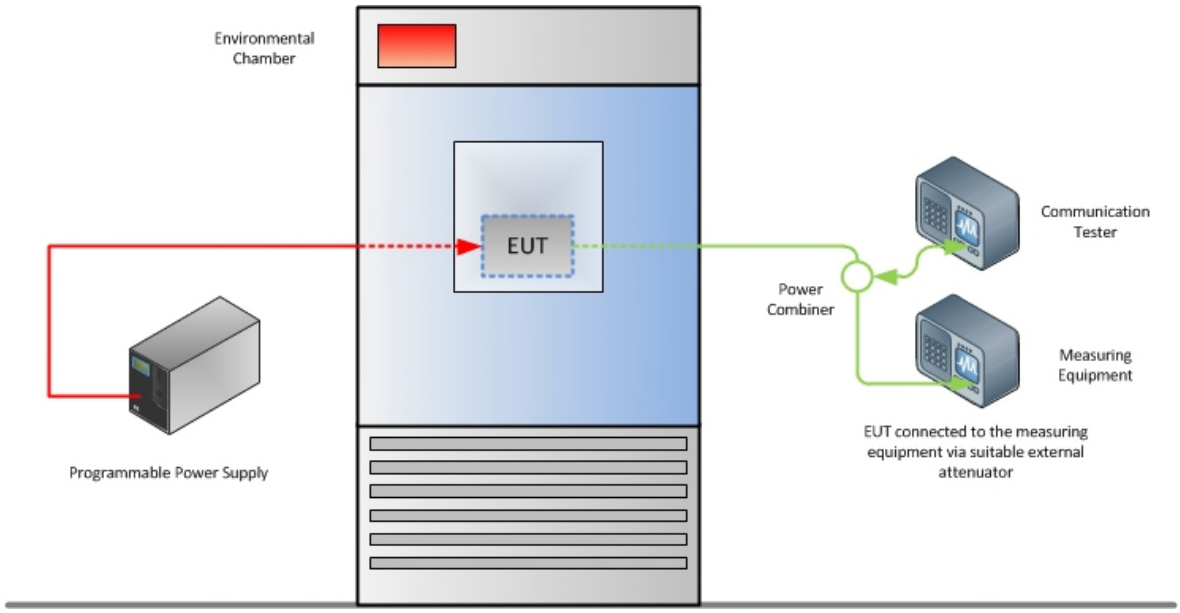
4.1 TEST SETUP DIAGRAM



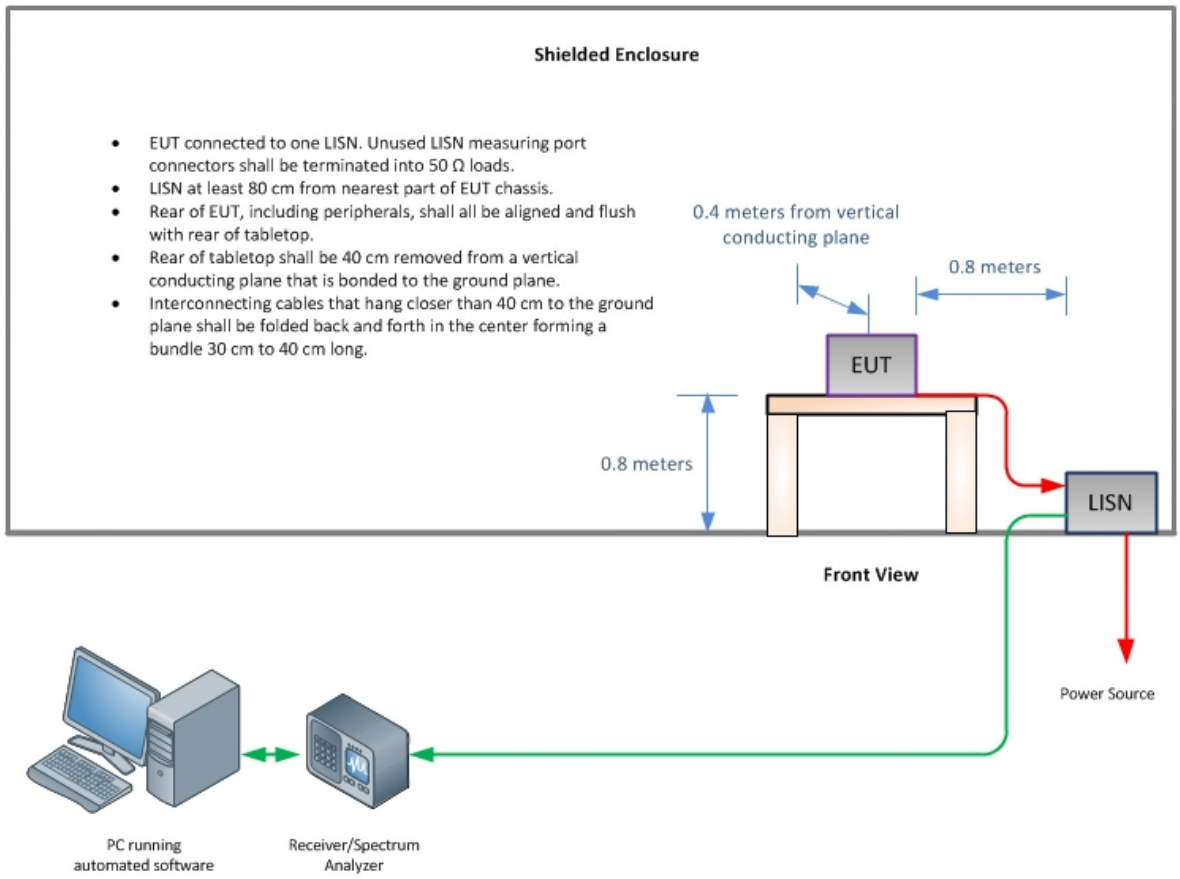
Radiated Emission Test Setup (Below 1GHz)



Radiated Emission Test Setup (Above 1GHz)



Frequency Stability Test Comfiguration



Conducted Emissions Test Configuration (if applicable)

SECTION 5

ACCREDITATION, DISCLAIMERS AND COPYRIGHT

5.1 ACCREDITATION, DISCLAIMERS AND COPYRIGHT

TÜV SÜD America Inc.'s reports apply only to the specific sample tested under stated test conditions. It is the manufacturer's responsibility to assure the continued compliance of production units of this model. TÜV SÜD America, Inc. shall have no liability for any deductions, inferences or generalizations drawn by the client or others from TÜV SÜD America, Inc.'s issued reports.

This report is the confidential property of the client. As a mutual protection to our clients, the public and TÜV SÜD America, Inc., extracts from the test report shall not be reproduced, except in full without TÜV SÜD America, Inc.'s written approval.

This report must not be used to claim product certification, approval, or endorsement by A2LA, NIST, or any agency of the federal government.

TÜV SÜD America, Inc. and its professional staff hold government
and professional organization certifications for
AAMI, ACIL, AEA, ANSI, IEEE, A2LA, NIST and VCCI.

A2LA Cert. No. 2955.13

TÜV SÜD AMERICA INC 10040 Mesa Rim Road San Diego, CA 92121-2912 Phone: 858 678 1400 FAX: 858 546 0364