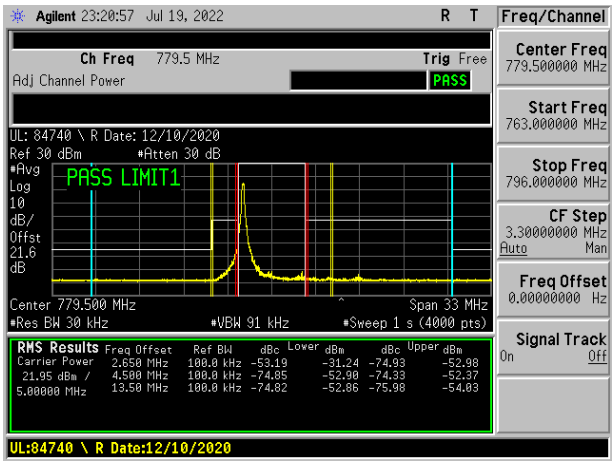
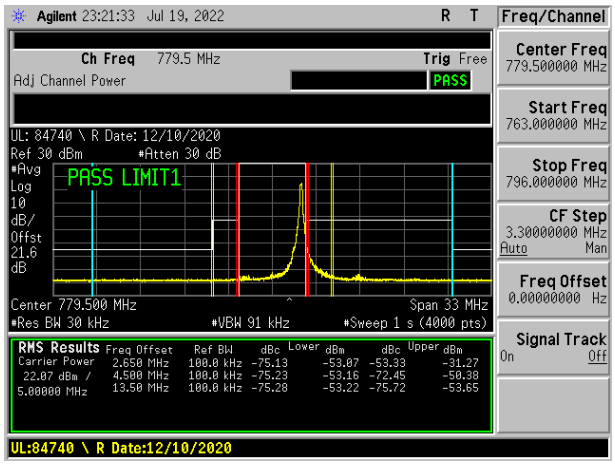
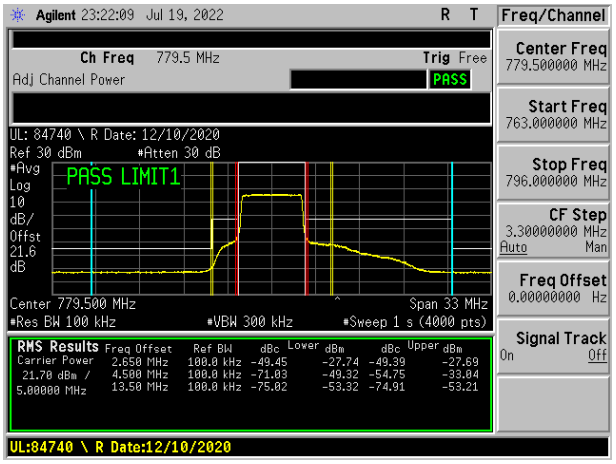


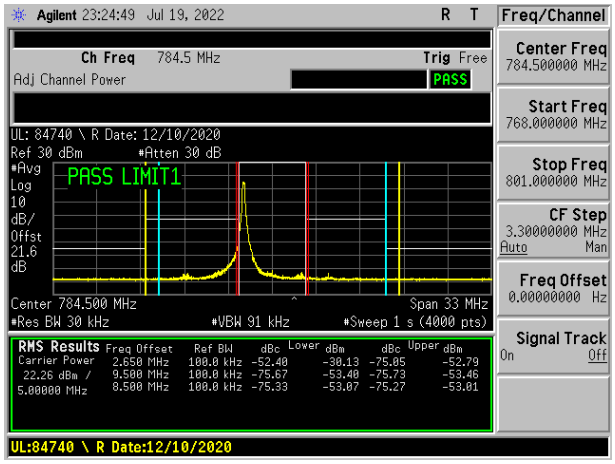
LTE13 5MHz 16QAM LOW Ch RB1-0



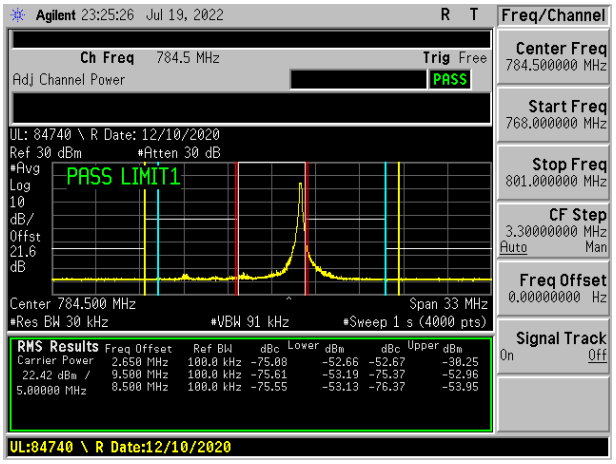
LTE13 5MHz 16QAM LOW Ch RB1-24



LTE13 5MHz 16QAM LOW Ch RB25-0



LTE13 5MHz 16QAM HIGH Ch RB1-0



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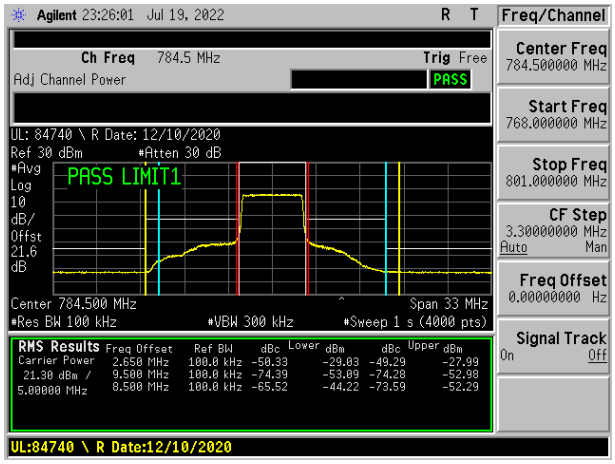
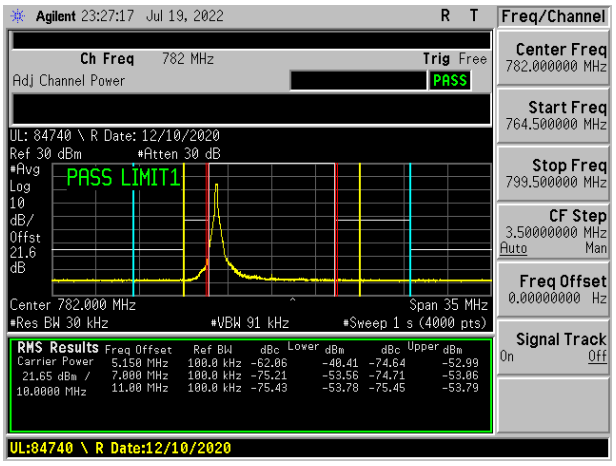
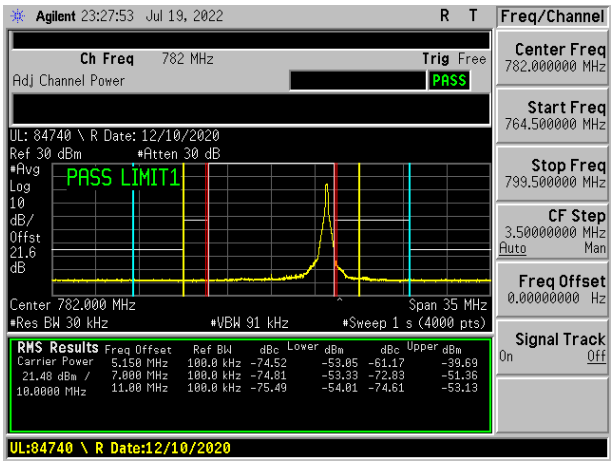


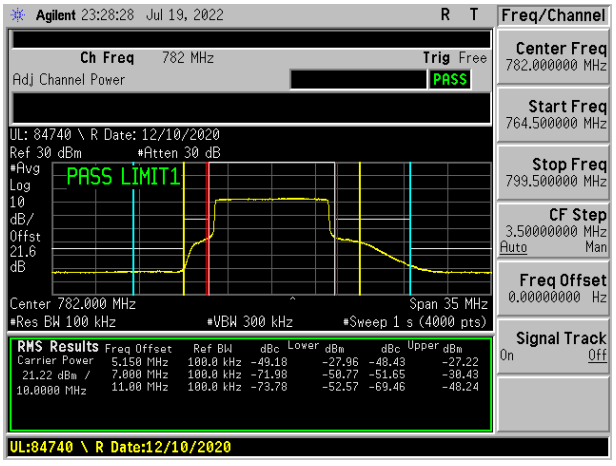
LTE13 5MHz 16QAM HIGH Ch RB25-0



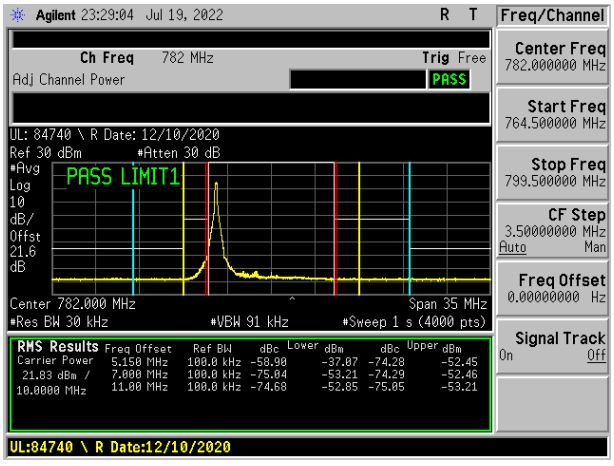
LTE13 10MHz QPSK MID Ch RB1-0



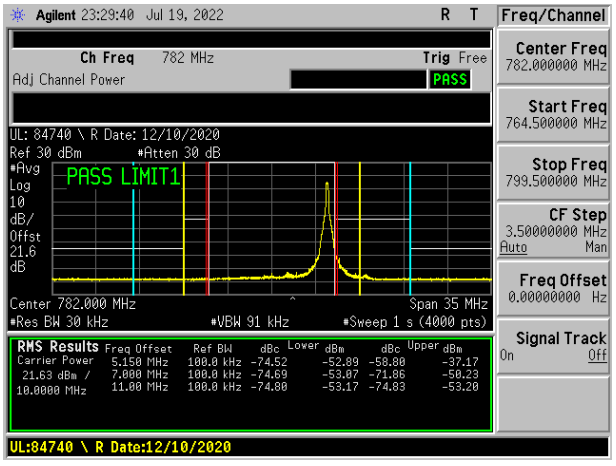
LTE13 10MHz QPSK MID Ch RB1-49



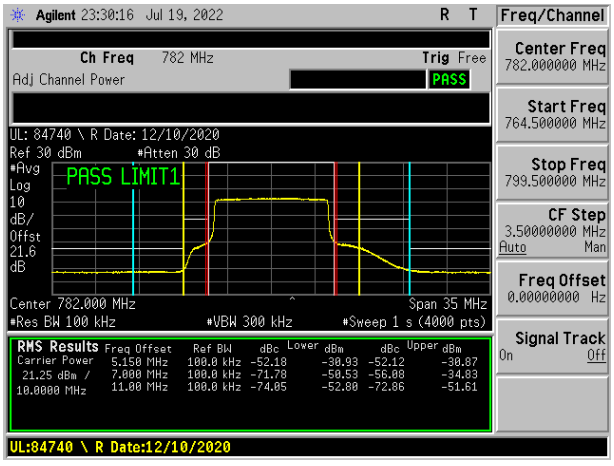
LTE13 10MHz QPSK MID Ch RB50-0



LTE13 10MHz 16QAM MID Ch RB1-0



LTE13 10MHz 16QAM MID Ch RB1-49

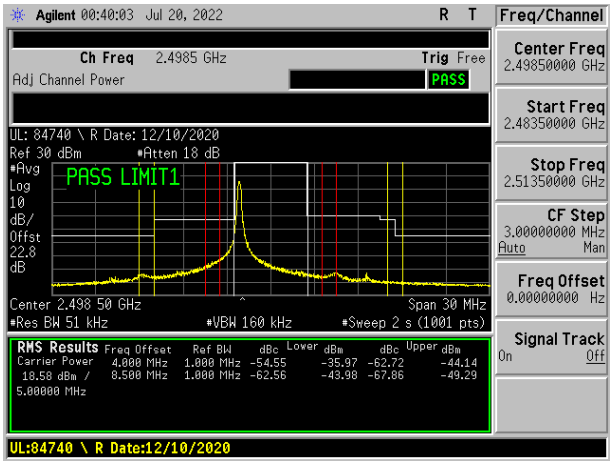


LTE13 10MHz 16QAM MID Ch RB50-0

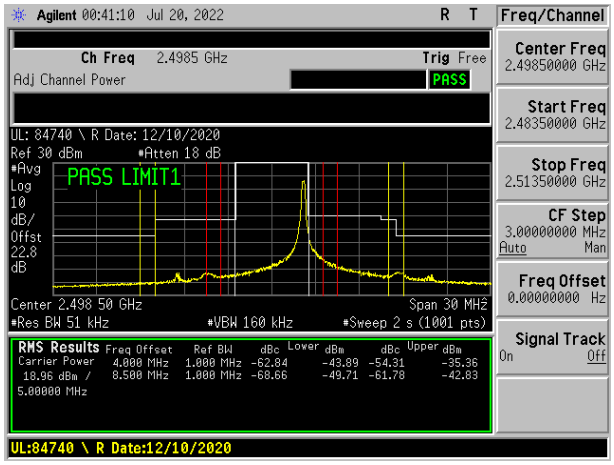
9.2.8. LTE BAND 41

LIMITS

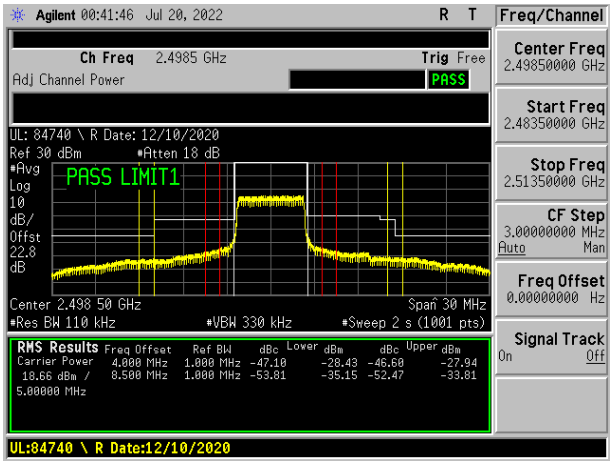
FCC: §27.53
(m)(4) For mobile digital stations, the attenuation factor shall be not less than 40 + 10 log (P) dB on all frequencies between the channel edge and 5 megahertz from the channel edge, 43 + 10 log (P) dB on all frequencies between 5 megahertz and X megahertz from the channel edge, and 55 + 10 log (P) dB on all frequencies more than X megahertz from the channel edge, where X is the greater of 6 megahertz or the actual emission bandwidth as defined in paragraph (m)(6) of this section. In addition, the attenuation factor shall not be less that 43 + 10 log (P) dB on all frequencies between 2490.5 MHz and 2496 MHz and 55 + 10 log (P) dB at or below 2490.5 MHz. Mobile Satellite Service licensees operating on frequencies below 2495 MHz may also submit a documented interference complaint against BRS licensees operating on channel BRS Channel 1 on the same terms and conditions as adjacent channel BRS or EBS licensees.



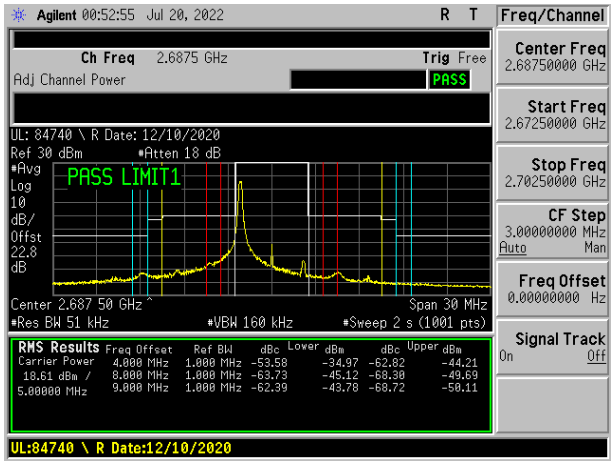
LTE41 5MHz QPSK LOW Ch RB1-0



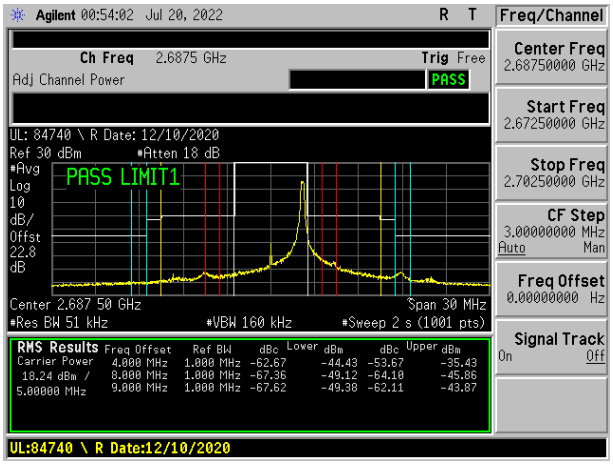
LTE41 5MHz QPSK LOW Ch RB1-24



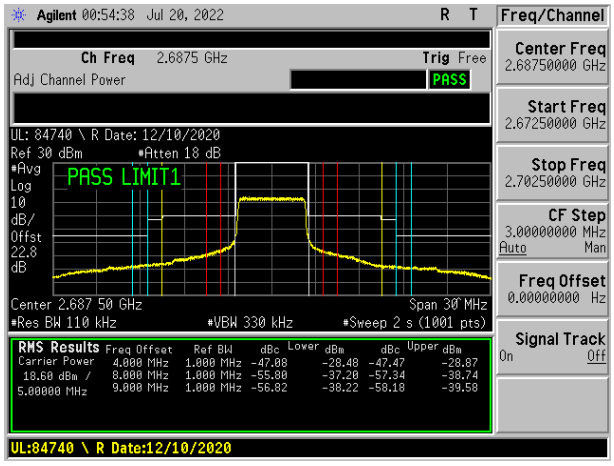
LTE41 5MHz QPSK LOW Ch RB25-0



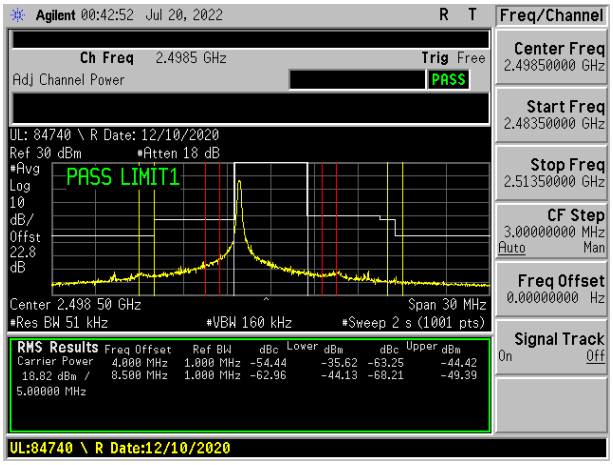
LTE41 5MHz QPSK HIGH Ch RB1-0



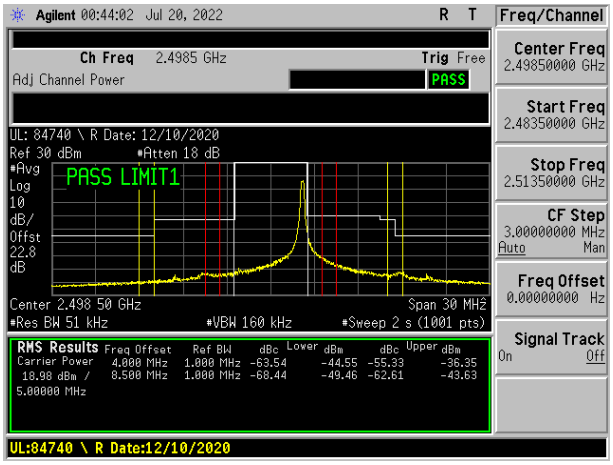
LTE41 5MHz QPSK HIGH Ch RB1-24



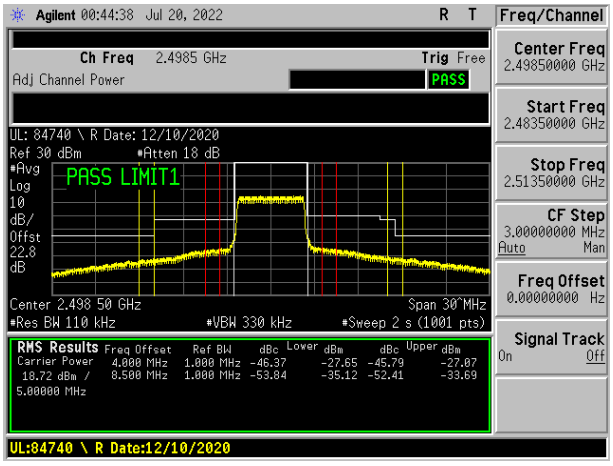
LTE41 5MHz QPSK HIGH Ch RB25-0



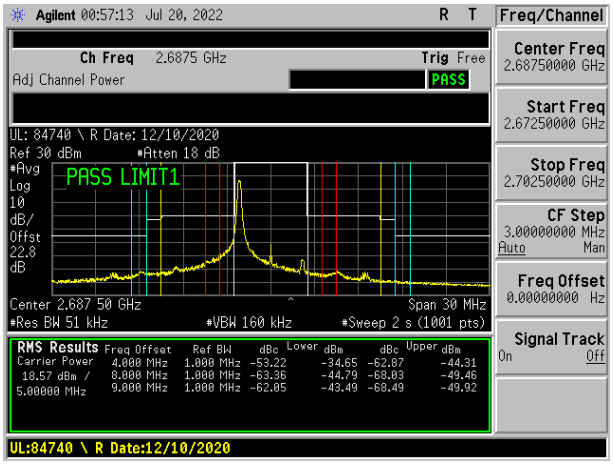
LTE41 5MHz 16QAM LOW Ch RB1-0



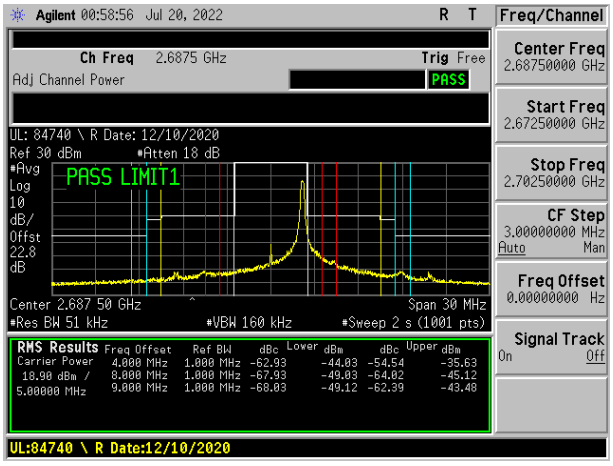
LTE41 5MHz 16QAM LOW Ch RB1-24



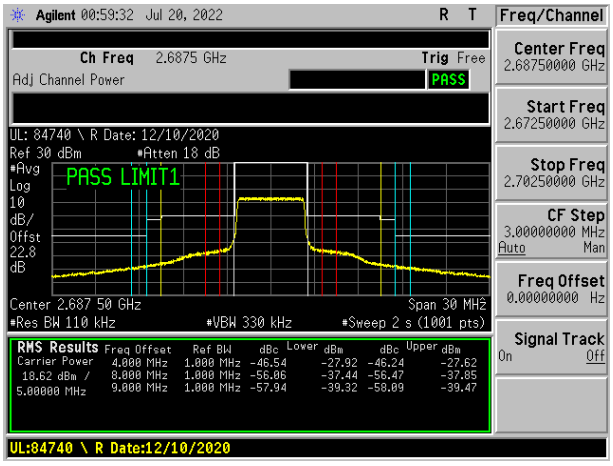
LTE41 5MHz 16QAM LOW Ch RB25-0



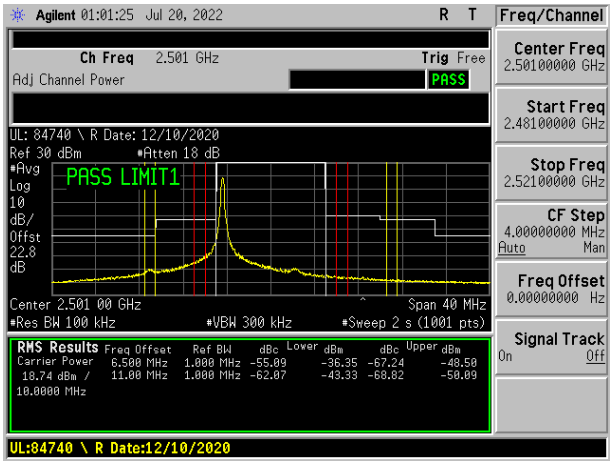
LTE41 5MHz 16QAM HIGH Ch RB1-0



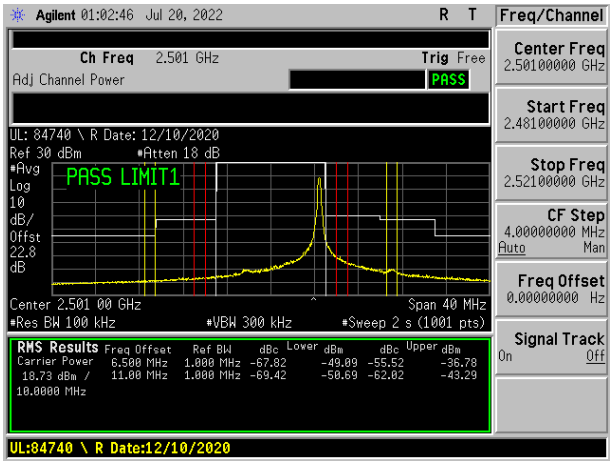
LTE41 5MHz 16QAM HIGH Ch RB1-24



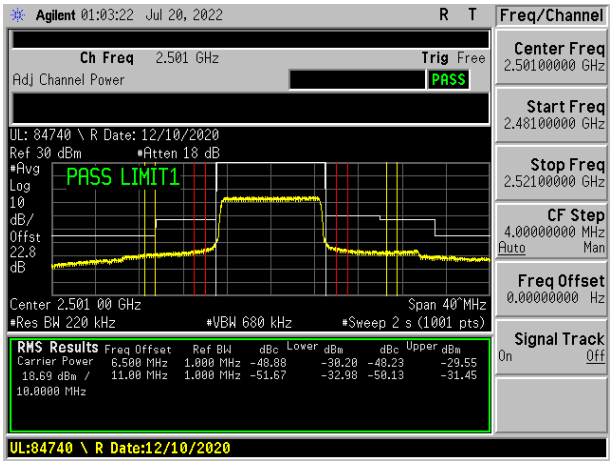
LTE41 5MHz 16QAM HIGH Ch RB25-0



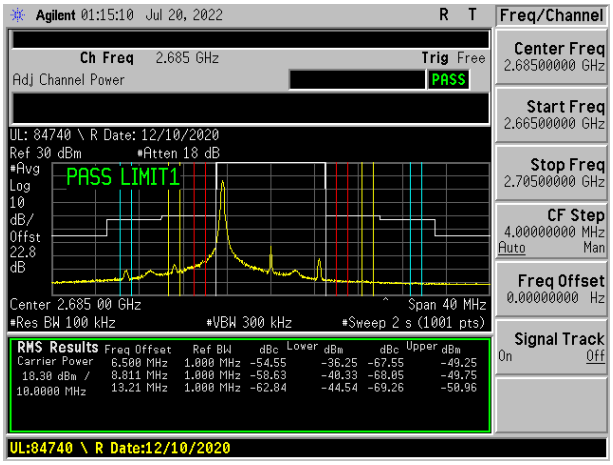
LTE41 10MHz QPSK LOW Ch RB1-0



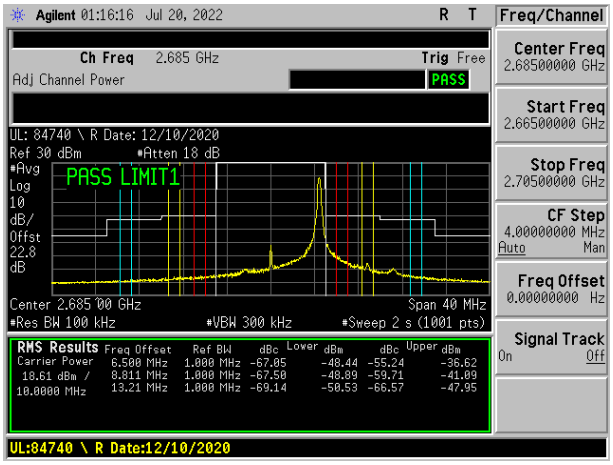
LTE41 10MHz QPSK LOW Ch RB1-49



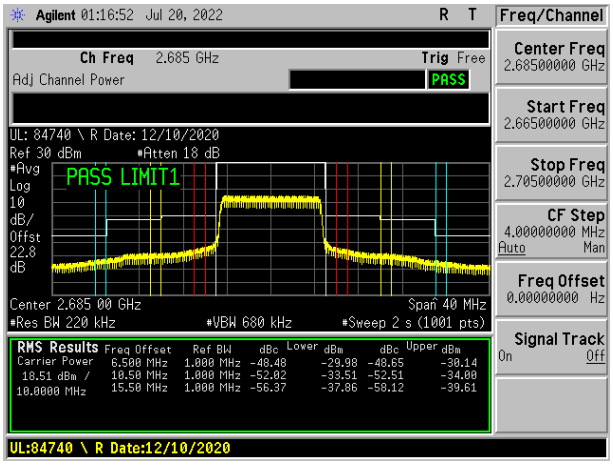
LTE41 10MHz QPSK LOW Ch RB50-0



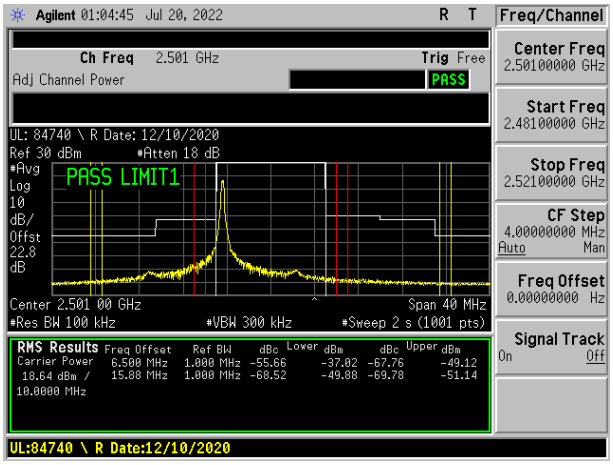
LTE41 10MHz QPSK HIGH Ch RB1-0



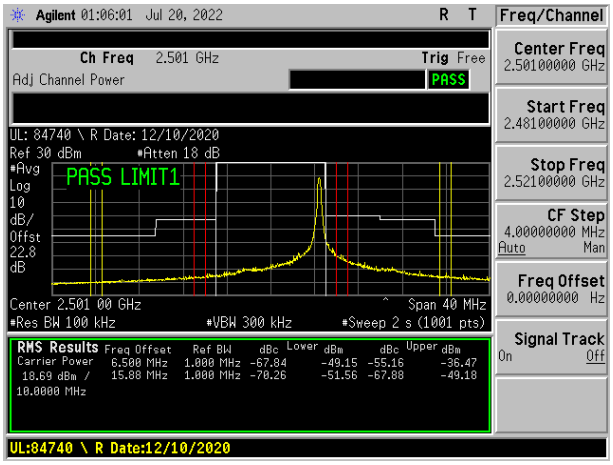
LTE41 10MHz QPSK HIGH Ch RB1-49



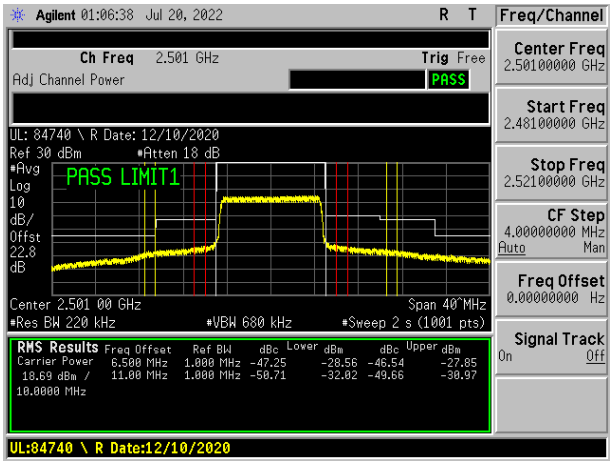
LTE41 10MHz QPSK HIGH Ch RB50-0



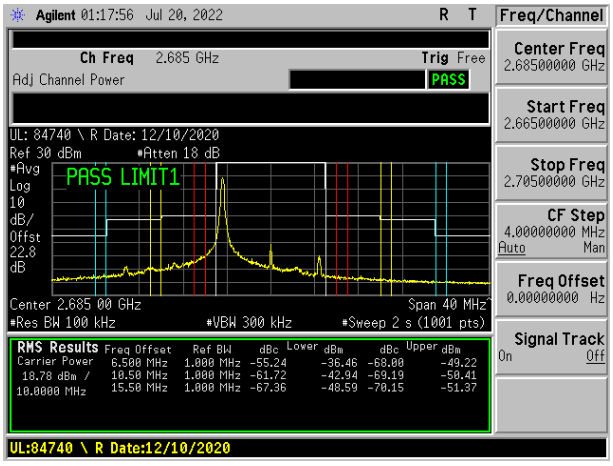
LTE41 10MHz 16QAM LOW Ch RB1-0



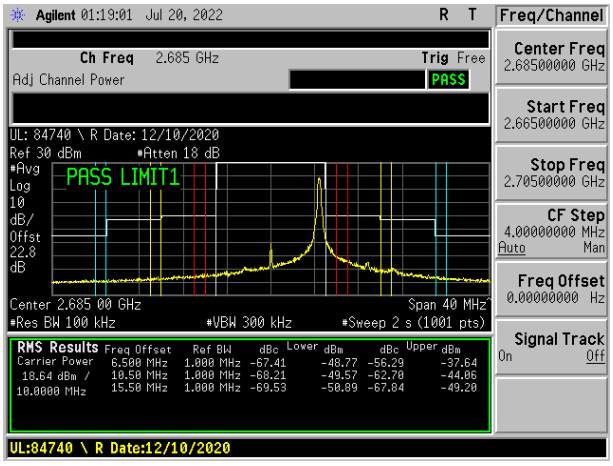
LTE41 10MHz 16QAM LOW Ch RB1-49



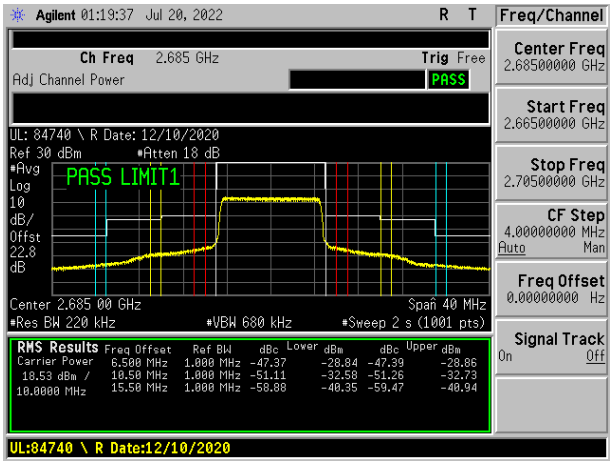
LTE41 10MHz 16QAM LOW Ch RB50-0



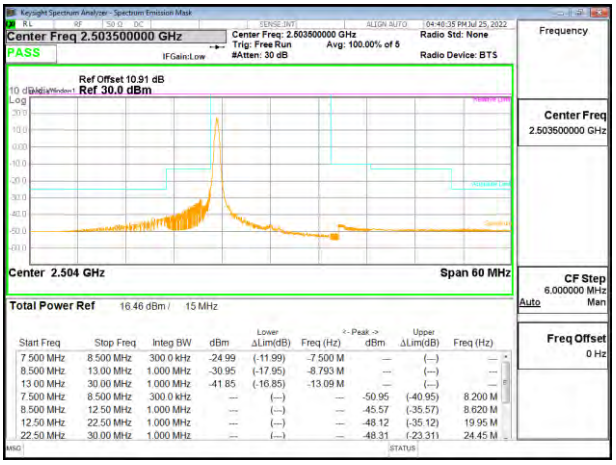
LTE41 10MHz 16QAM HIGH Ch RB1-0



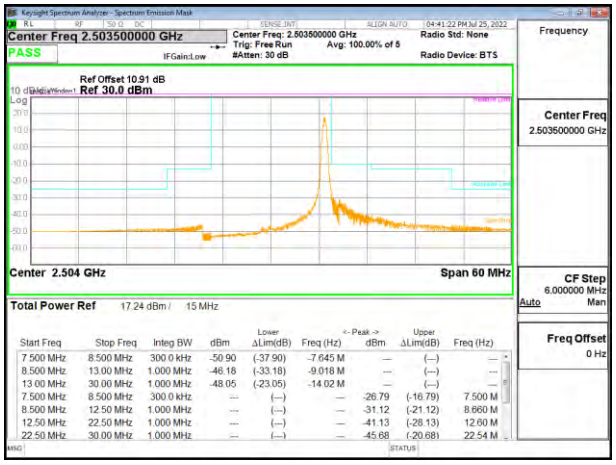
LTE41 10MHz 16QAM HIGH Ch RB1-49



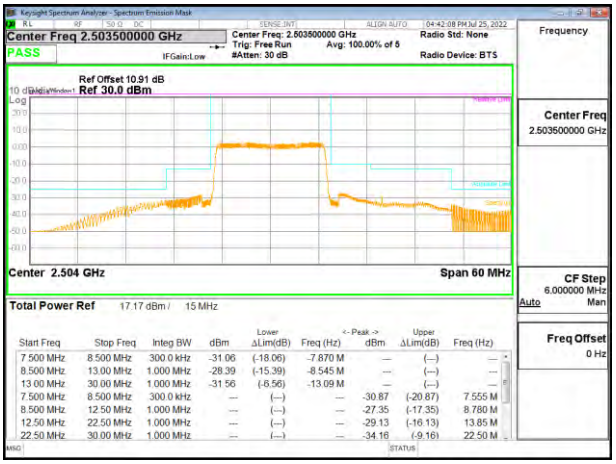
LTE41 10MHz 16QAM HIGH Ch RB50-0



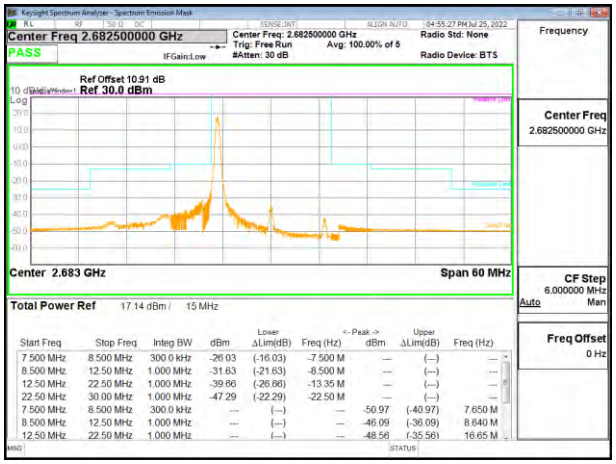
LTE41 15MHz QPSK LOW Ch RB1-0



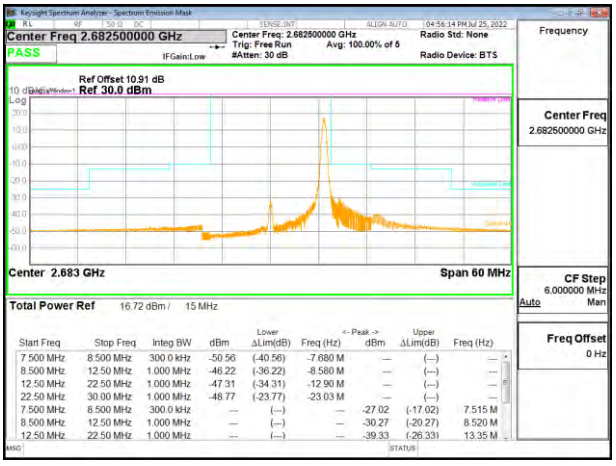
LTE41 15MHz QPSK LOW Ch RB1-74



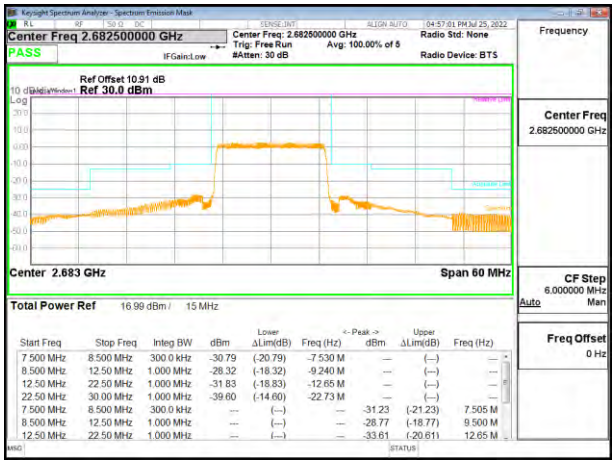
LTE41 15MHz QPSK LOW Ch RB75-0



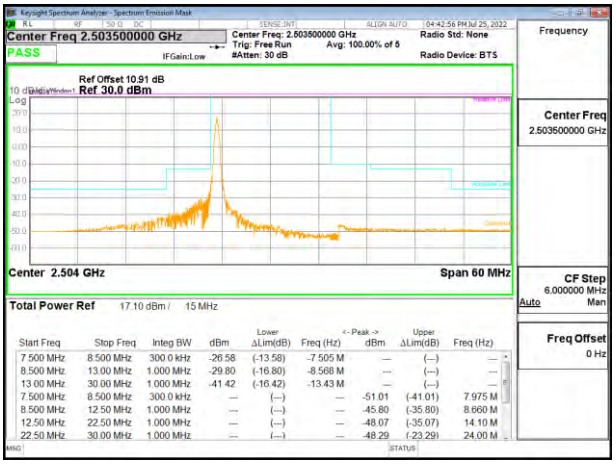
LTE41 15MHz QPSK HIGH Ch RB1-0



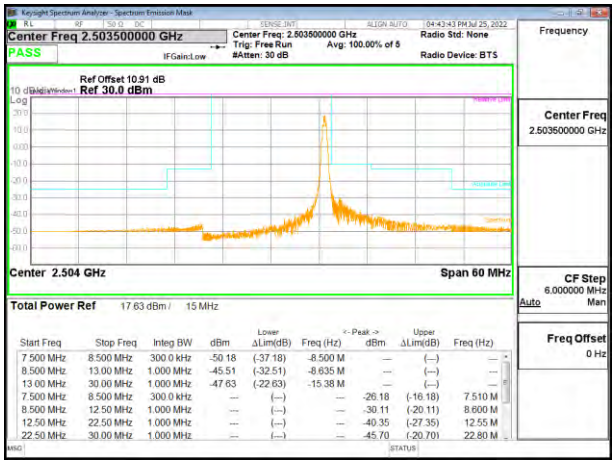
LTE41 15MHz QPSK HIGH Ch RB1-74



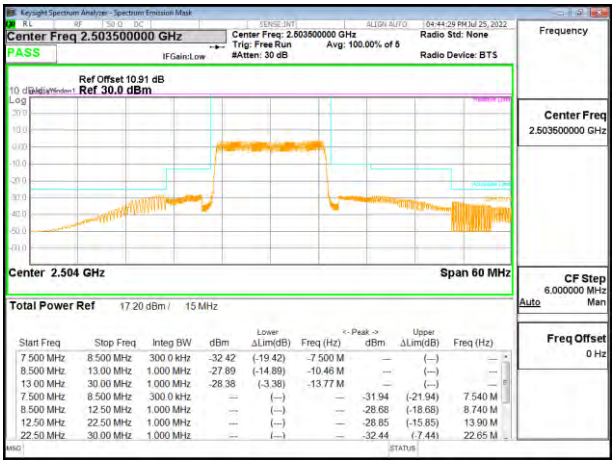
LTE41 15MHz QPSK HIGH Ch RB75-0



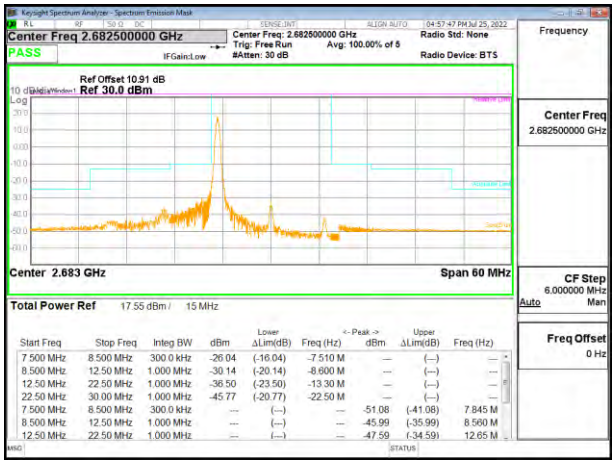
LTE41 15MHz 16QAM LOW Ch RB1-0



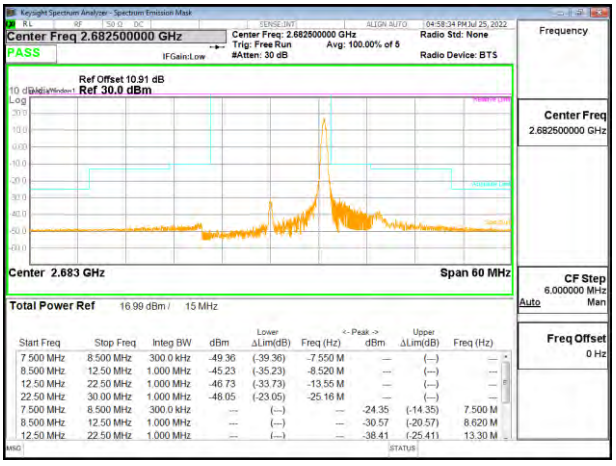
LTE41 15MHz 16QAM LOW Ch RB1-74



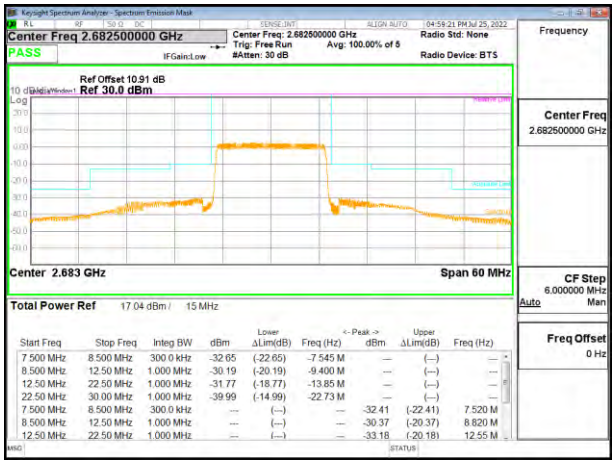
LTE41 15MHz 16QAM LOW Ch RB75-0



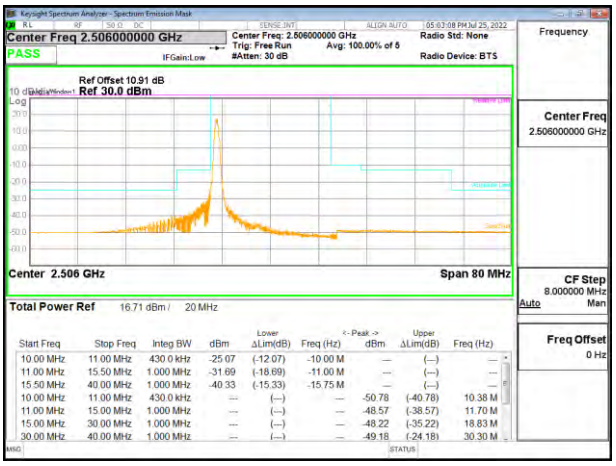
LTE41 15MHz 16QAM HIGH Ch RB1-0



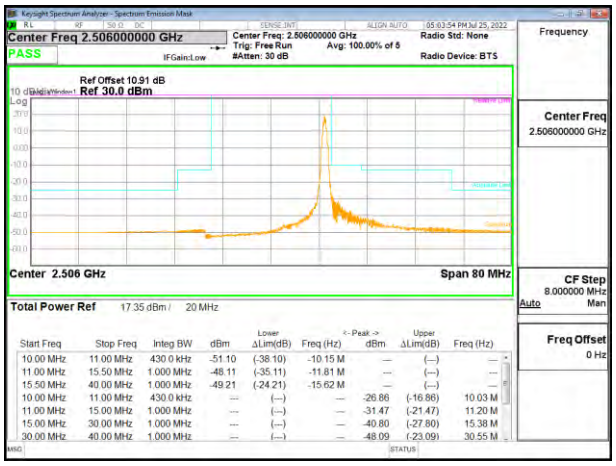
LTE41 15MHz 16QAM HIGH Ch RB1-74



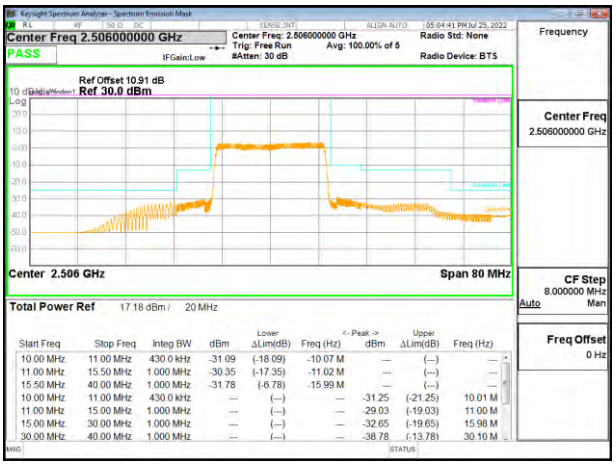
LTE41 15MHz 16QAM HIGH Ch RB75-0



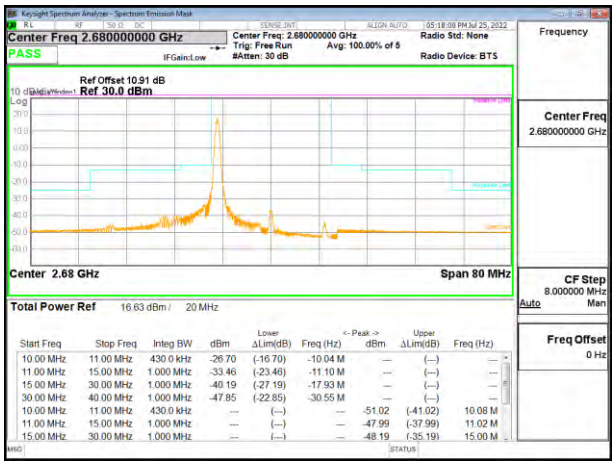
LTE41 20MHz QPSK LOW Ch RB1-0



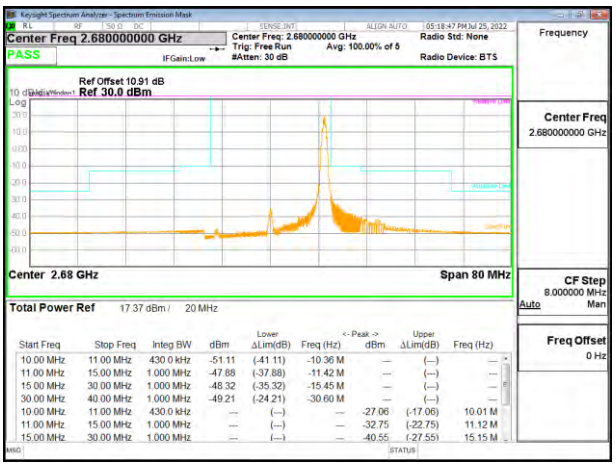
LTE41 20MHz QPSK LOW Ch RB1-99



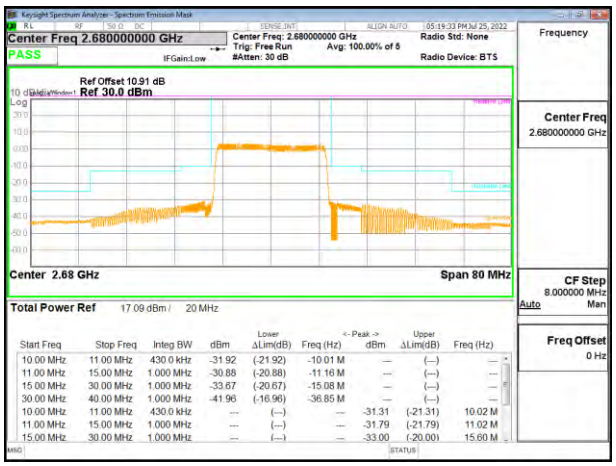
LTE41 20MHz QPSK LOW Ch RB100-0



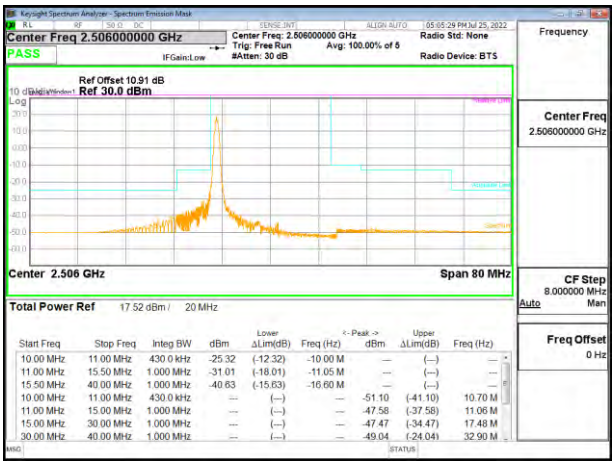
LTE41 20MHz QPSK HIGH Ch RB1-0



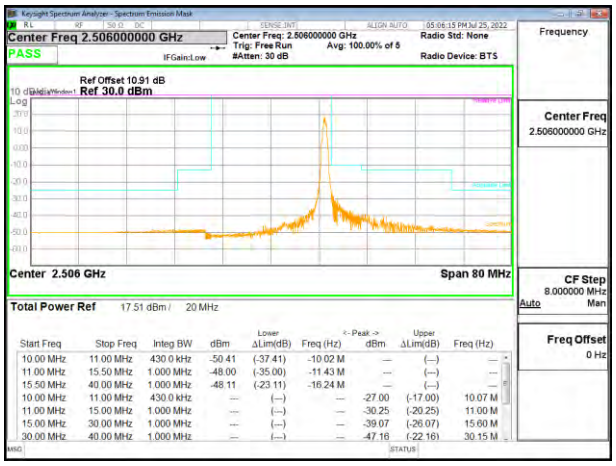
LTE41 20MHz QPSK HIGH Ch RB1-99



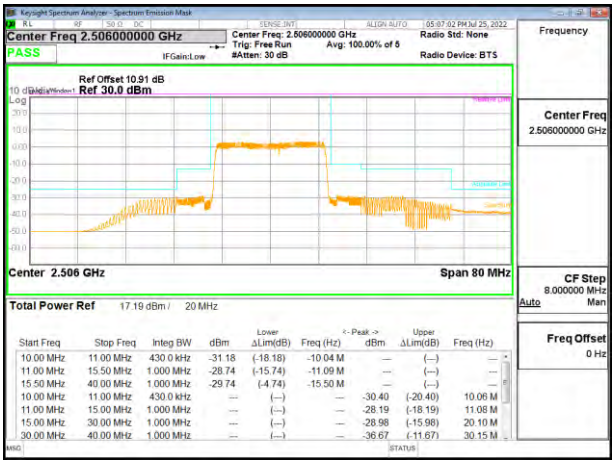
LTE41 20MHz QPSK HIGH Ch RB100-0



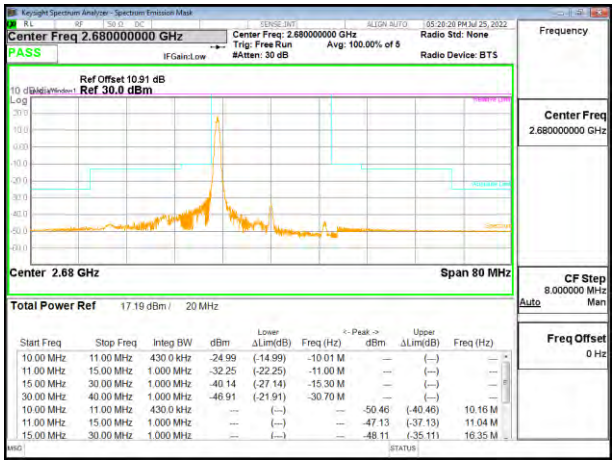
LTE41 20MHz 16QAM LOW Ch RB1-0



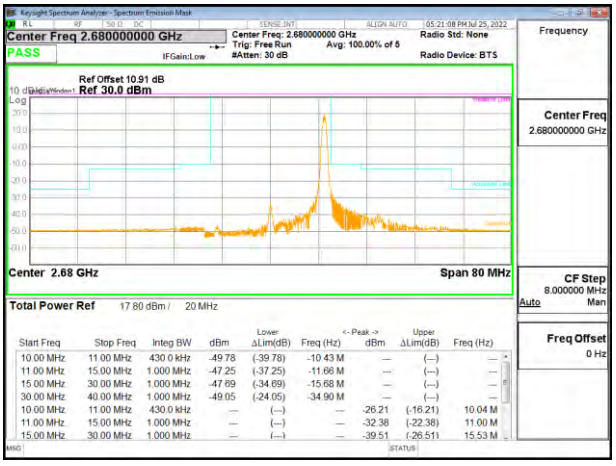
LTE41 20MHz 16QAM LOW Ch RB1-99



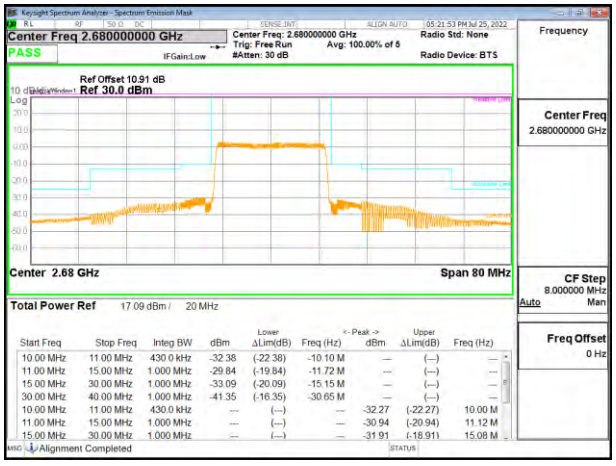
LTE41 20MHz 16QAM LOW Ch RB100-0



LTE41 20MHz 16QAM HIGH Ch RB1-0



LTE41 20MHz 16QAM HIGH Ch RB1-99



LTE41 20MHz 16QAM HIGH Ch RB100-0

9.3. OUT OF BAND EMISSIONS

TEST PROCEDURE

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

For each out of band emissions measurement:

(v) Set display line at -13 dBm, -25dBm and -40dBm according to the band Limit

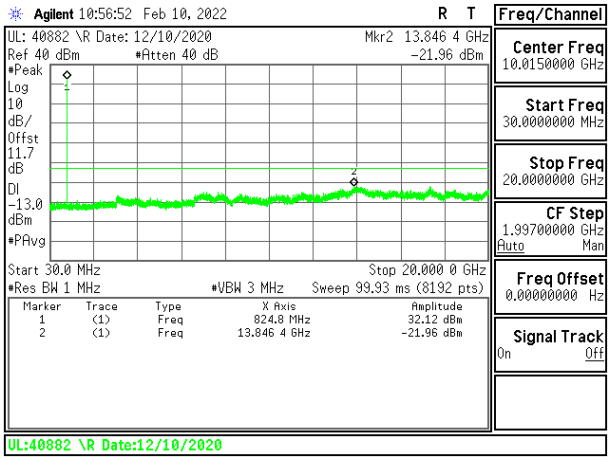
(vi) Set RBW & VBW to 100 kHz for the measurement below 1 GHz, and 1 MHz for the measurement above 1 GHz. (NOTE: Worst case set RBW/VBW to 1MHz/3MHz)

RESULTS

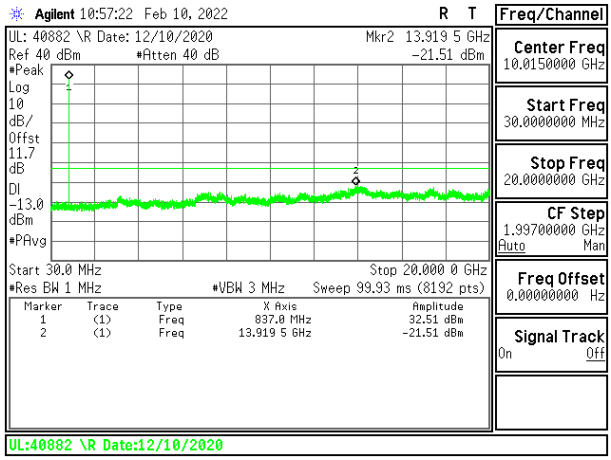
9.3.1. GSM GSM850

LIMITS

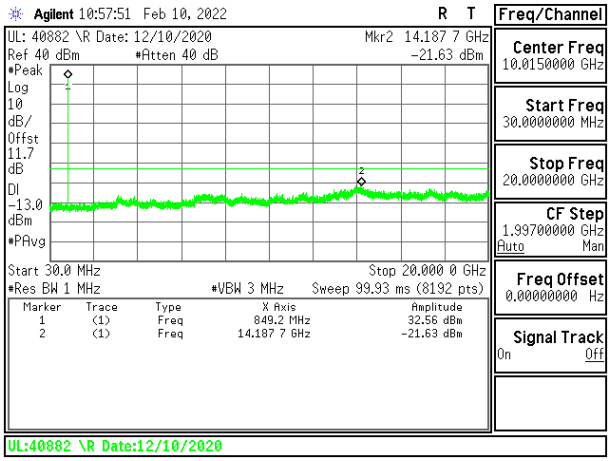
FCC: §22.917
The minimum permissible attenuation level of any spurious emissions is 43 + 10 log (P) dB where transmitting power (P) in Watts.



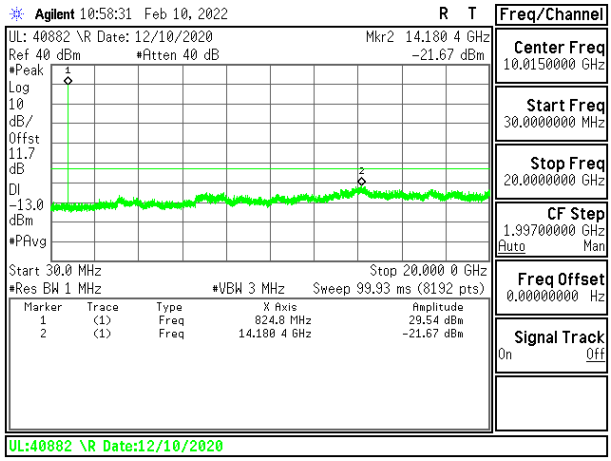
GSM850 GPRS LOW Channel



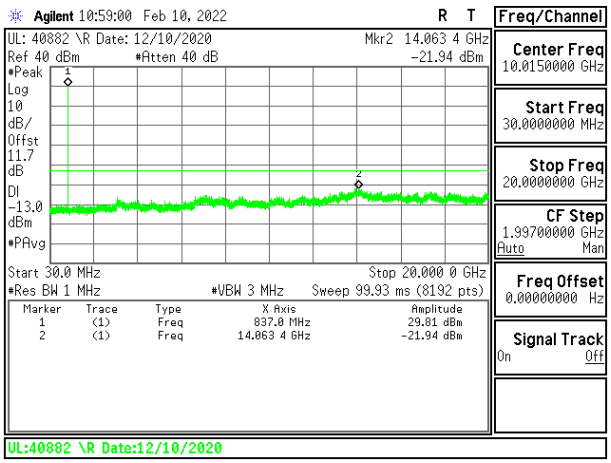
GSM850 GPRS MID Channel



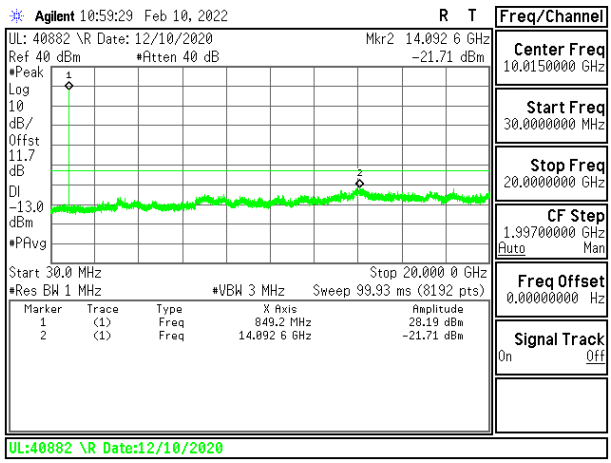
GSM850 GPRS HIGH Channel



GSM850 EGPRS LOW Channel



GSM850 EGPRS MID Channel



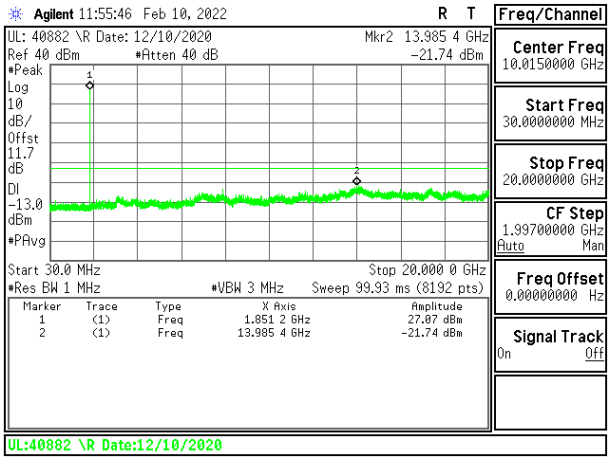
GSM850 EGPRS HIGH Channel

Note: Test was performed on 2022-07-20. Due to a software error on the spectrum analyzer, the internal date, and therefore date reported on the above plots, are incorrect.

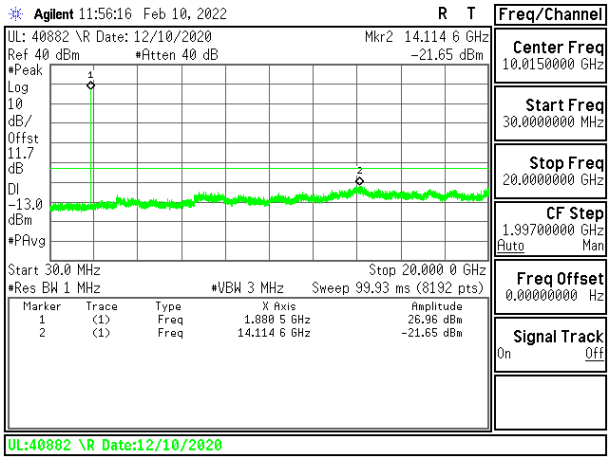
9.3.2. GSM GSM1900

LIMITS

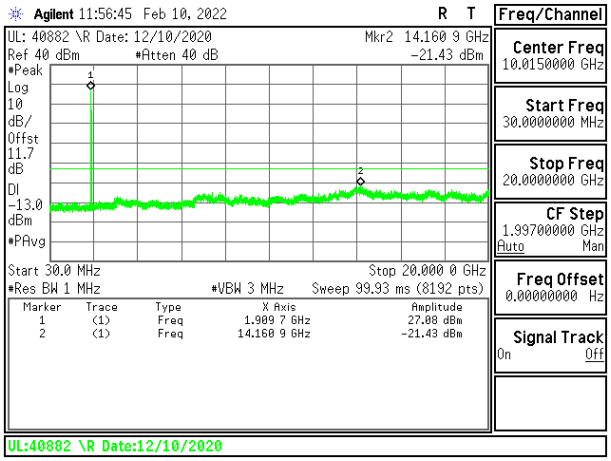
FCC: §24.238 (a)
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.



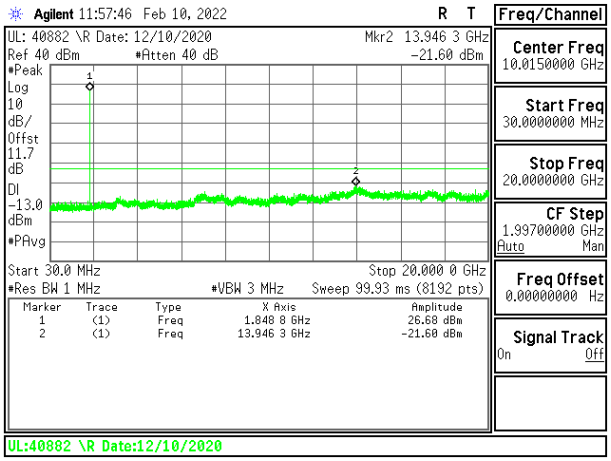
GSM1900 GPRS LOW Channel



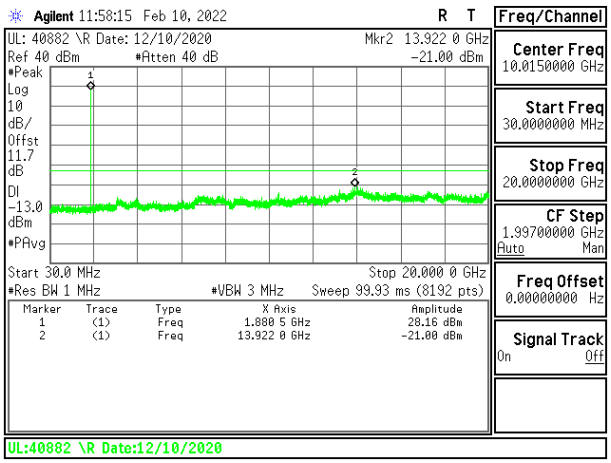
GSM1900 GPRS MID Channel



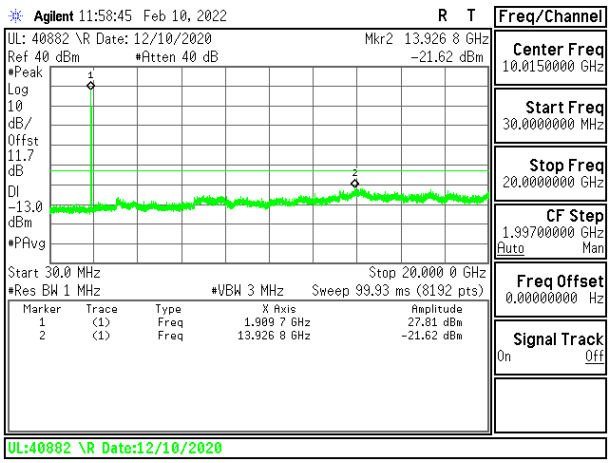
GSM1900 GPRS HIGH Channel



GSM1900 EGPRS LOW Channel



GSM1900 EGPRS MID Channel



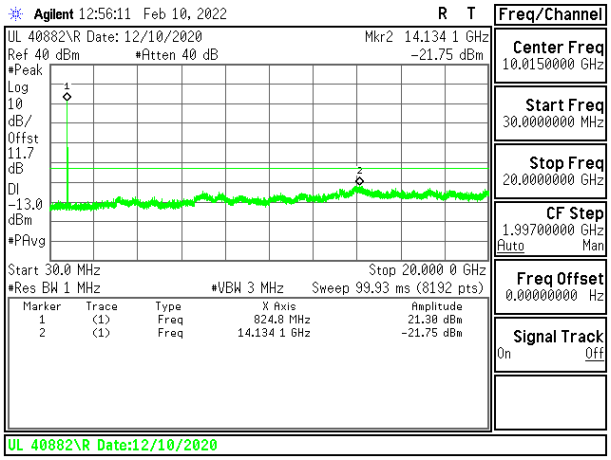
GSM1900 EGPRS HIGH Channel

Note: Test was performed on 2022-07-20. Due to a software error on the spectrum analyzer, the internal date, and therefore date reported on the above plots, are incorrect.

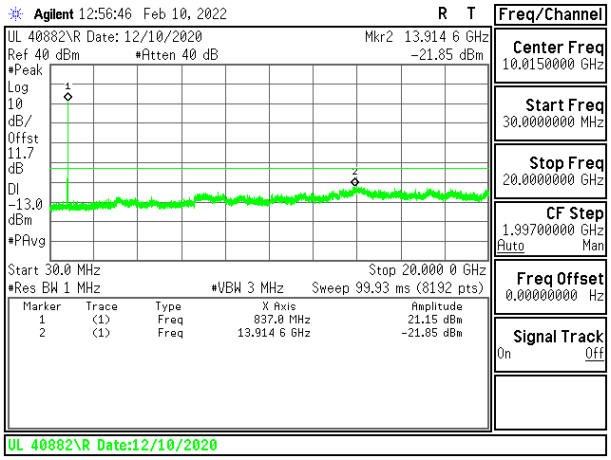
9.3.3. WCDMA BAND 5

LIMITS

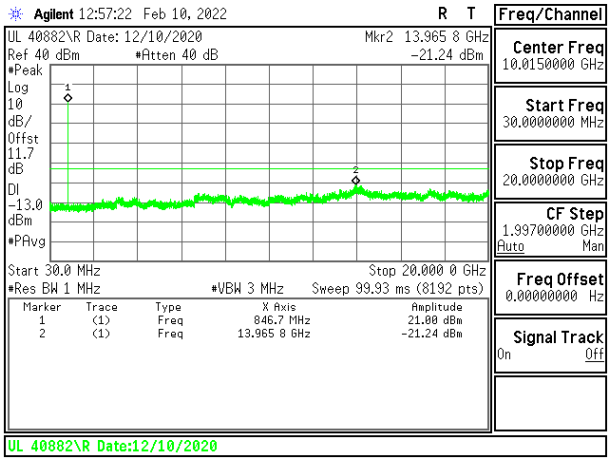
FCC: §22.917
The minimum permissible attenuation level of any spurious emissions is 43 + 10 log (P) dB where transmitting power (P) in Watts.



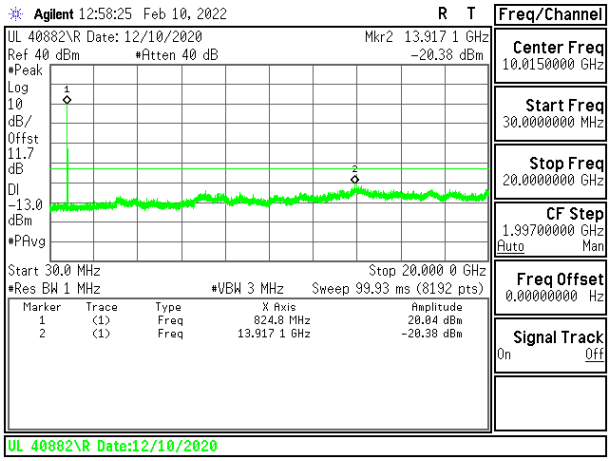
BAND 5 Rel 99 LOW Channel



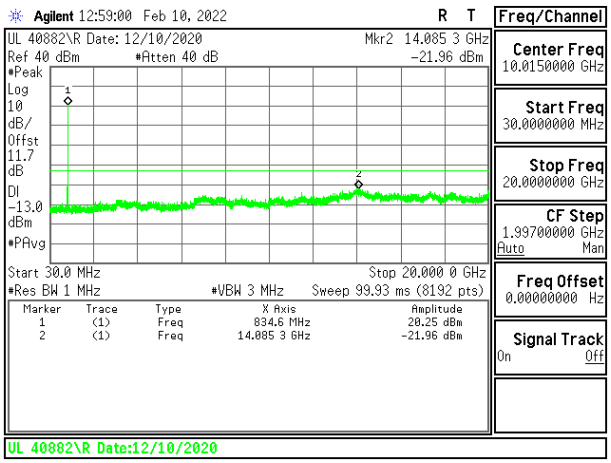
BAND 5 Rel 99 MID Channel



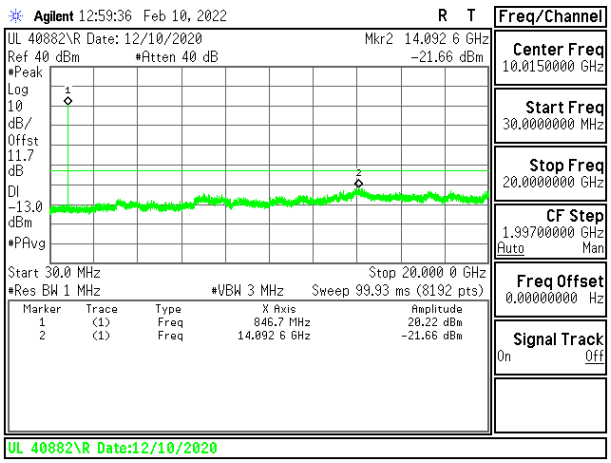
BAND 5 Rel 99 HIGH Channel



BAND 5 HSDPA LOW Channel



BAND 5 HSDPA MID Channel

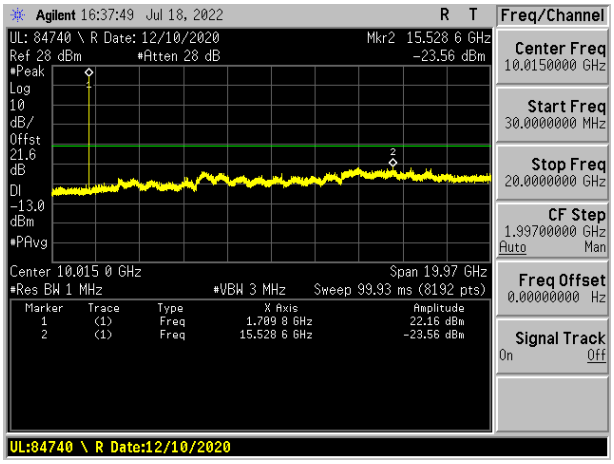


BAND 5 HSDPA HIGH Channel

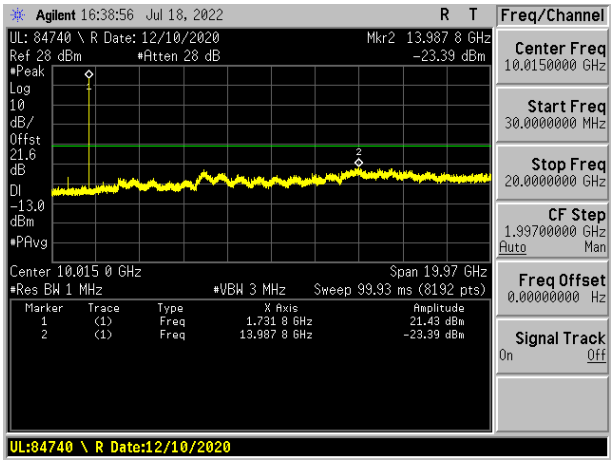
9.3.4. LTE BAND 4

LIMITS

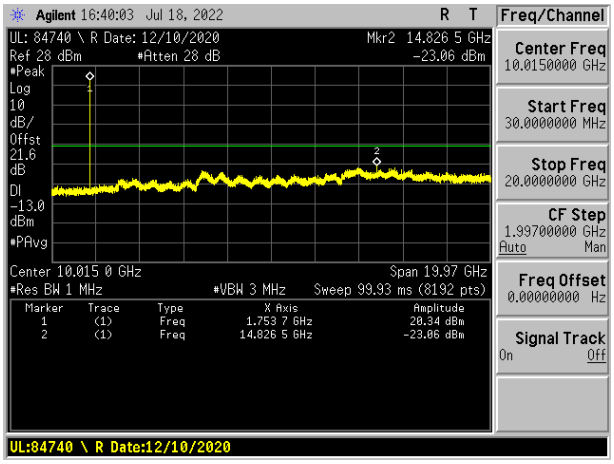
FCC: §27.53(h)
The minimum permissible attenuation level of any spurious emissions is 43 + 10 log (P) dB where transmitting power (P) in Watts.



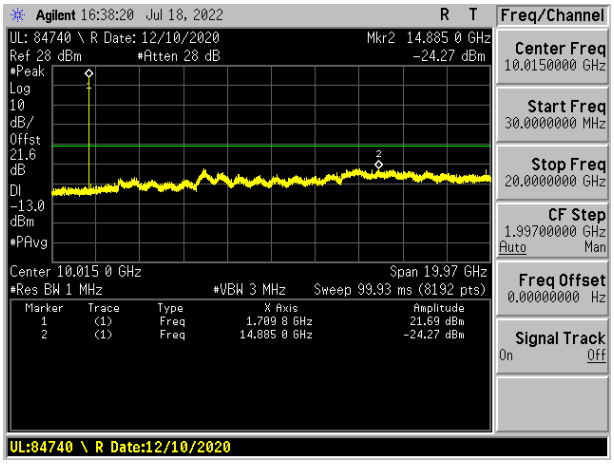
LTE4 1.4MHz QPSK LOW Ch RB1-0



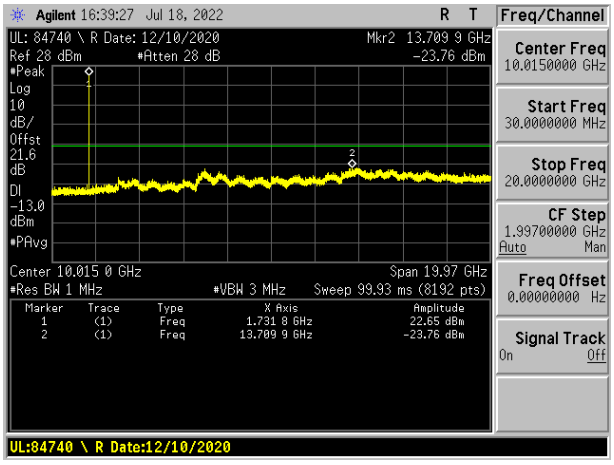
LTE4 1.4MHz QPSK MID Ch RB1-0



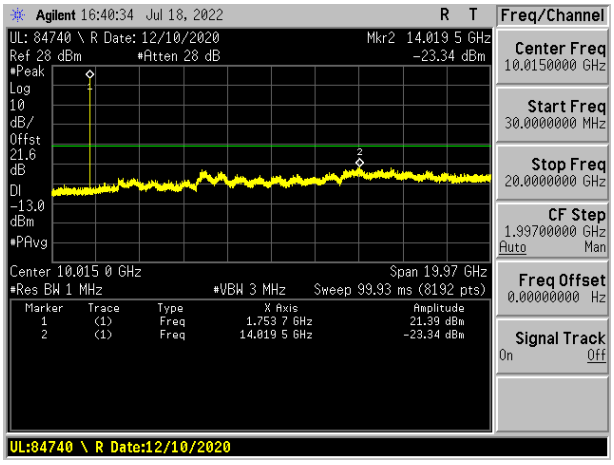
LTE4 1.4MHz QPSK HIGH Ch RB1-0



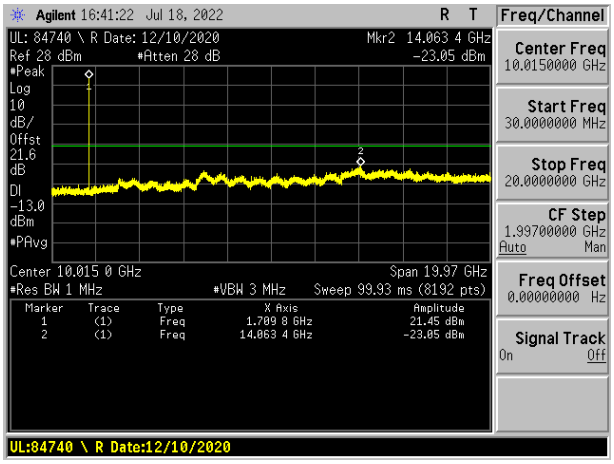
LTE4 1.4MHz 16QAM LOW Ch RB1-0



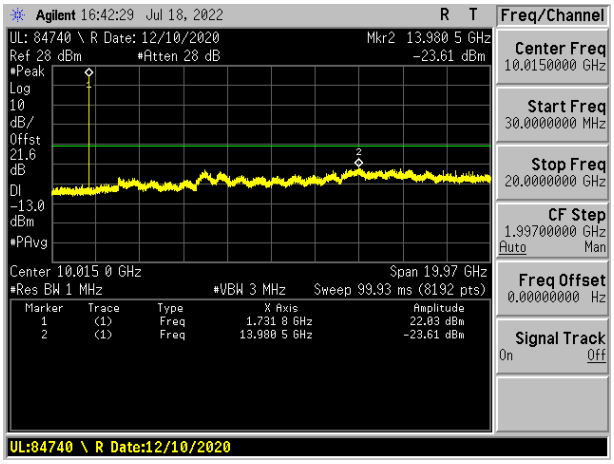
LTE4 1.4MHz 16QAM MID Ch RB1-0



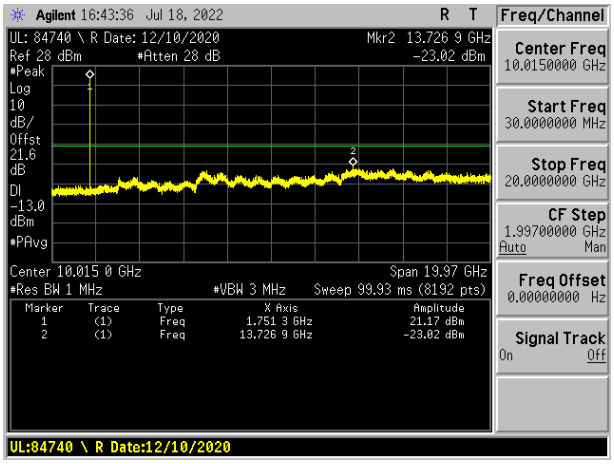
LTE4 1.4MHz 16QAM HIGH Ch RB1-0



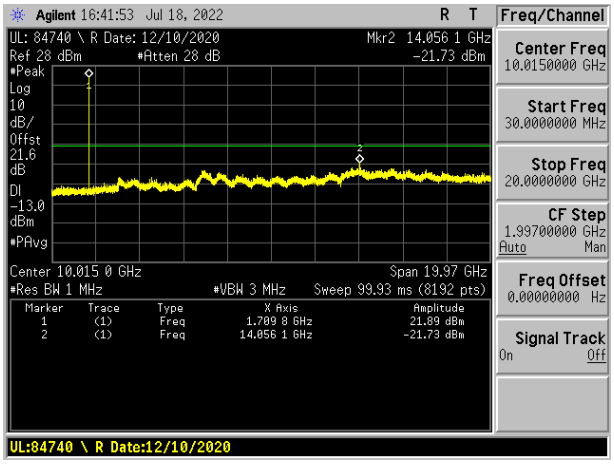
LTE4 3MHz QPSK LOW Ch RB1-0



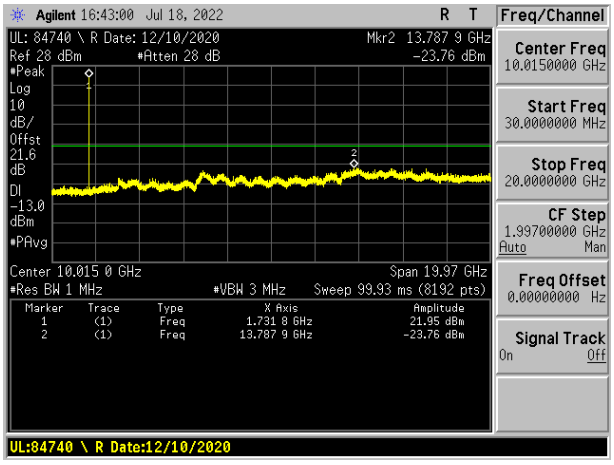
LTE4 3MHz QPSK MID Ch RB1-0



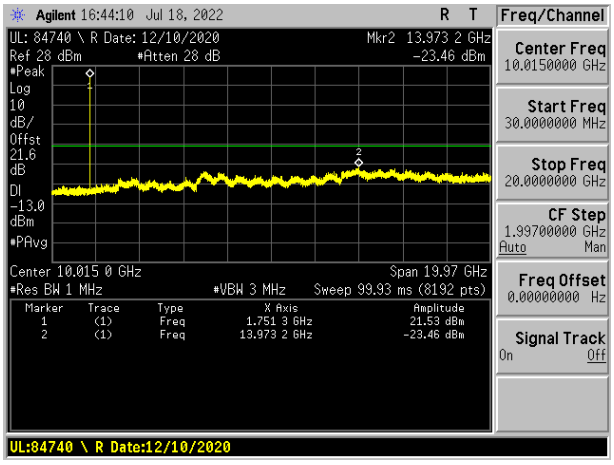
LTE4 3MHz QPSK HIGH Ch RB1-0



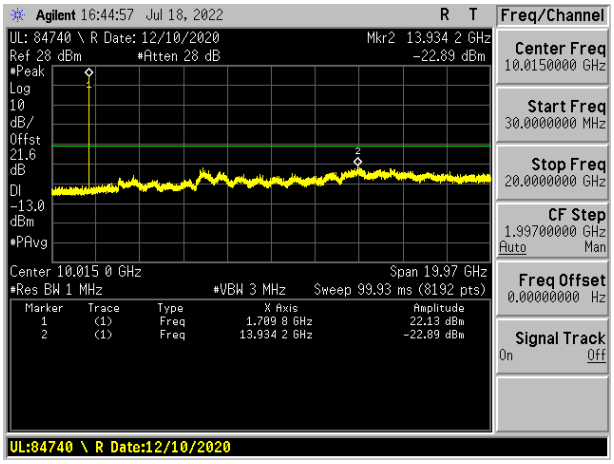
LTE4 3MHz 16QAM LOW Ch RB1-0



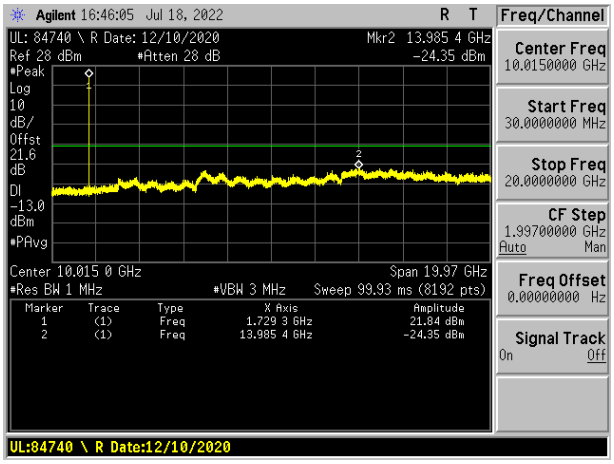
LTE4 3MHz 16QAM MID Ch RB1-0



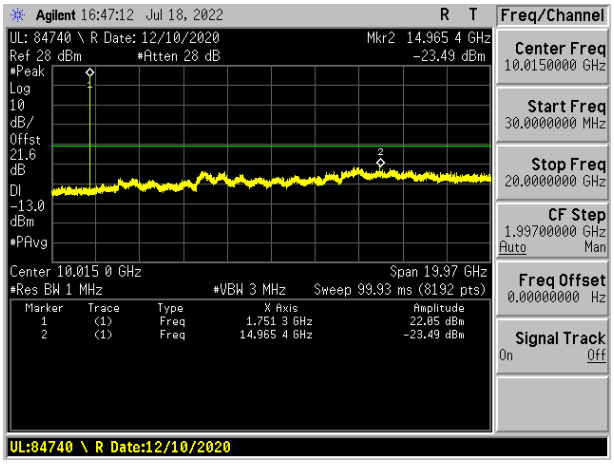
LTE4 3MHz 16QAM HIGH Ch RB1-0



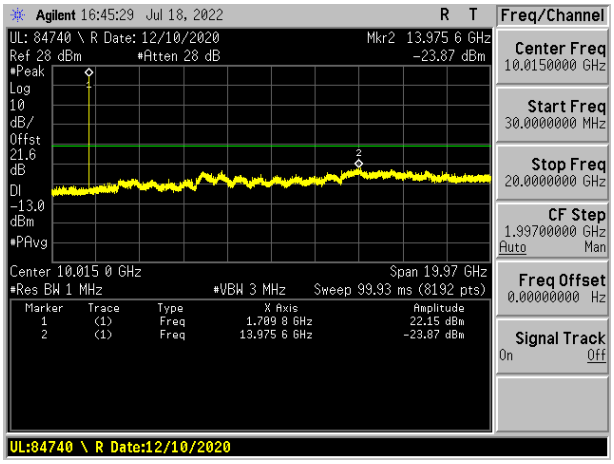
LTE4 5MHz QPSK LOW Ch RB1-0



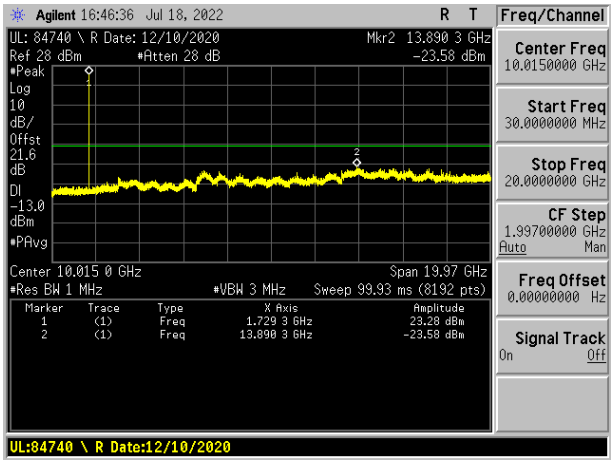
LTE4 5MHz QPSK MID Ch RB1-0



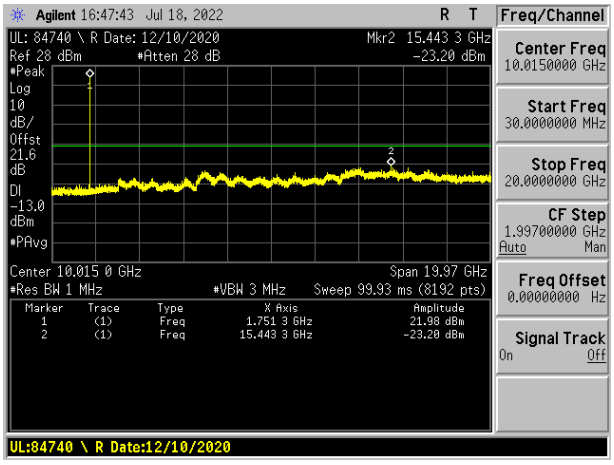
LTE4 5MHz QPSK HIGH Ch RB1-0



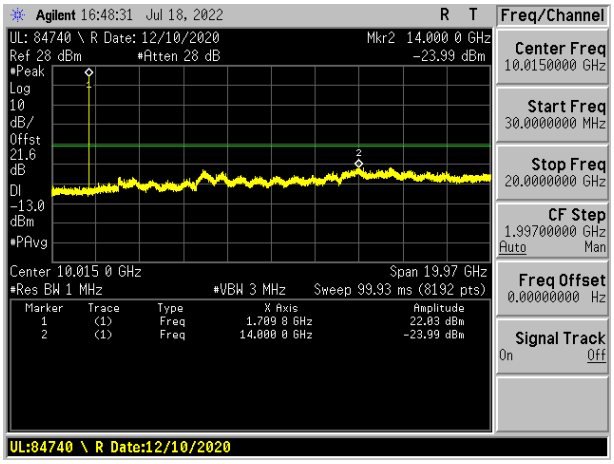
LTE4 5MHz 16QAM LOW Ch RB1-0



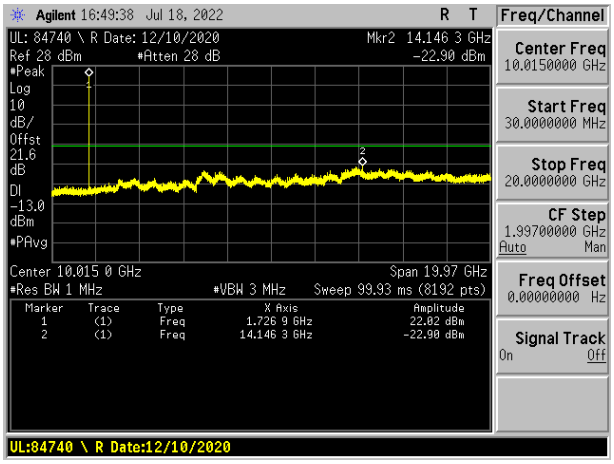
LTE4 5MHz 16QAM MID Ch RB1-0



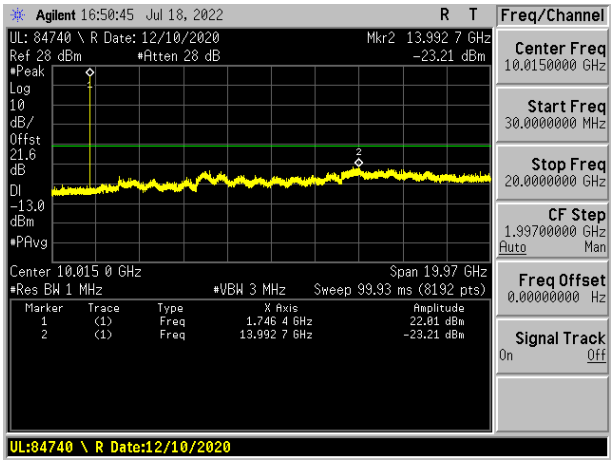
LTE4 5MHz 16QAM HIGH Ch RB1-0



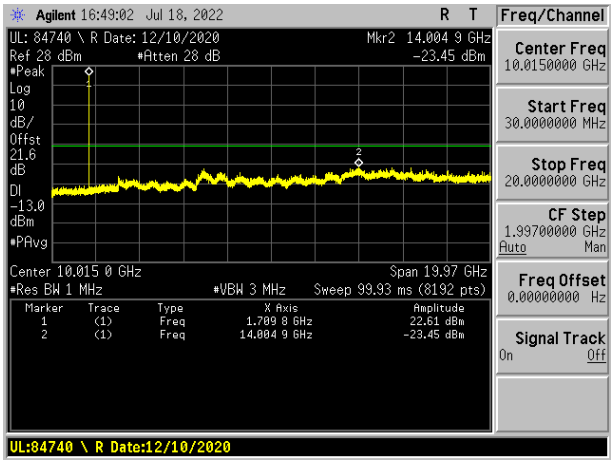
LTE4 10MHz QPSK LOW Ch RB1-0



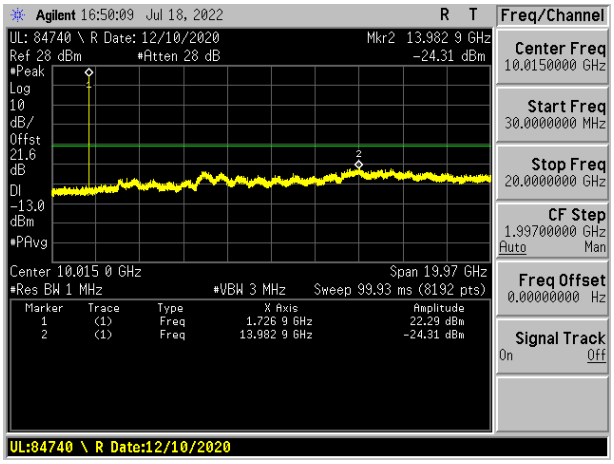
LTE4 10MHz QPSK MID Ch RB1-0



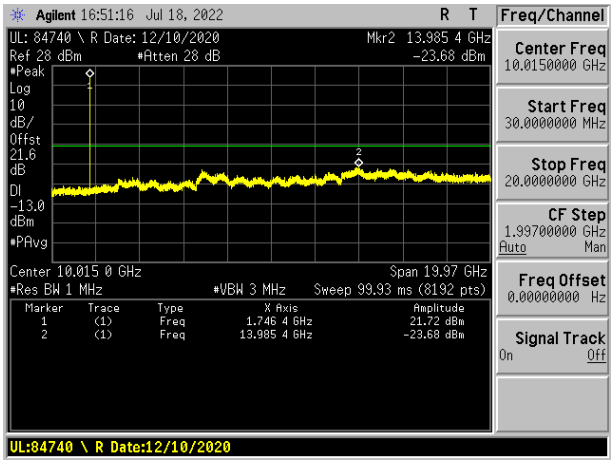
LTE4 10MHz QPSK HIGH Ch RB1-0



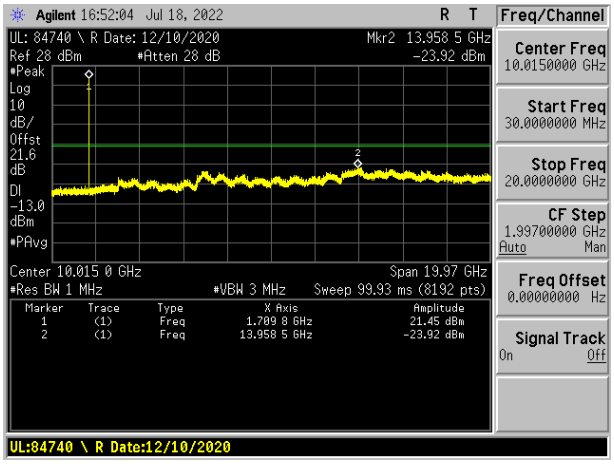
LTE4 10MHz 16QAM LOW Ch RB1-0



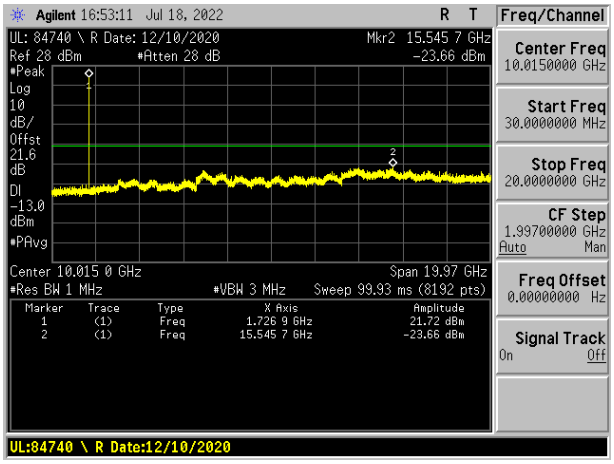
LTE4 10MHz 16QAM MID Ch RB1-0



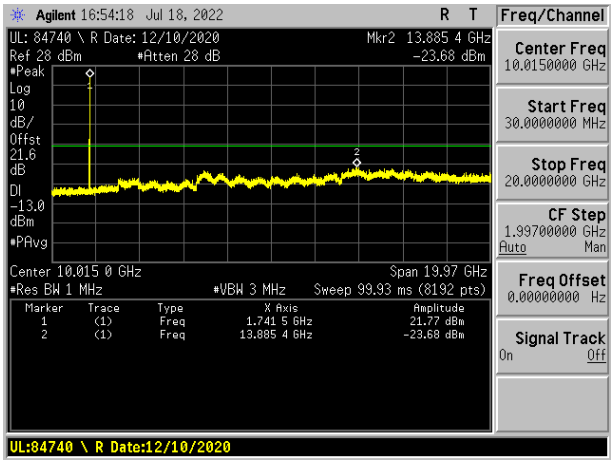
LTE4 10MHz 16QAM HIGH Ch RB1-0



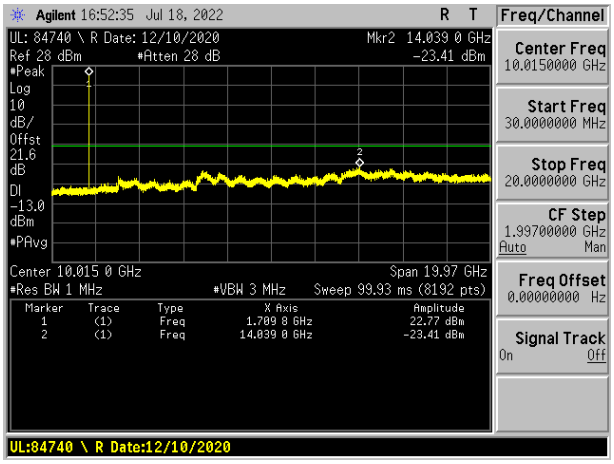
LTE4 15MHz QPSK LOW Ch RB1-0



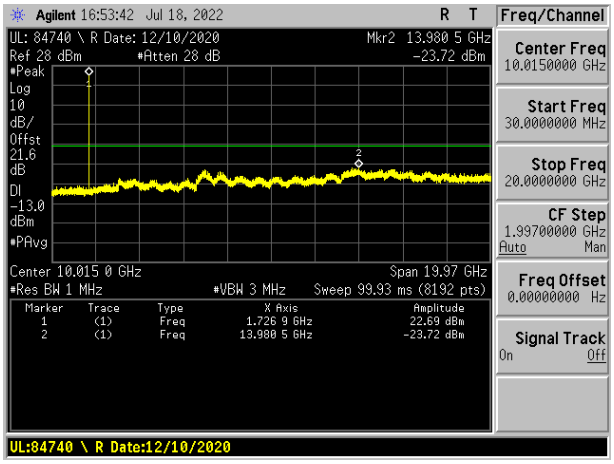
LTE4 15MHz QPSK MID Ch RB1-0



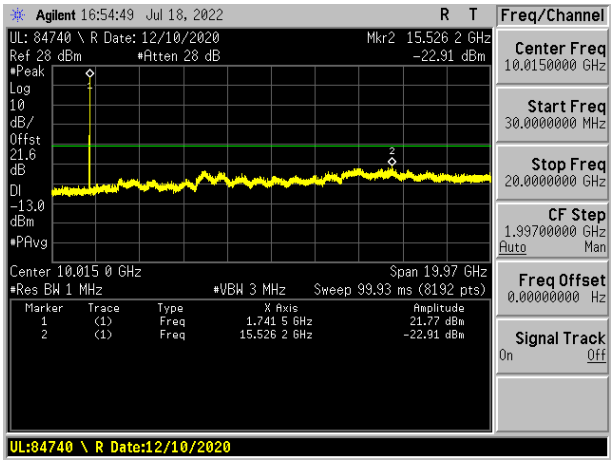
LTE4 15MHz QPSK HIGH Ch RB1-0



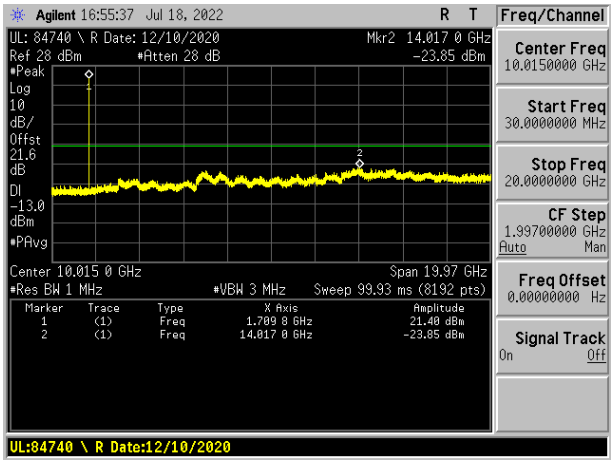
LTE4 15MHz 16QAM LOW Ch RB1-0



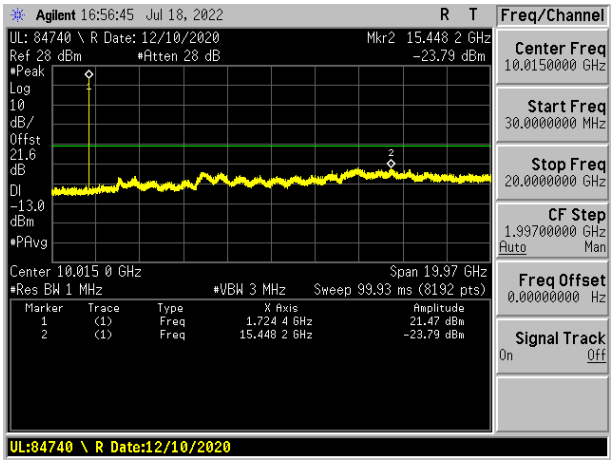
LTE4 15MHz 16QAM MID Ch RB1-0



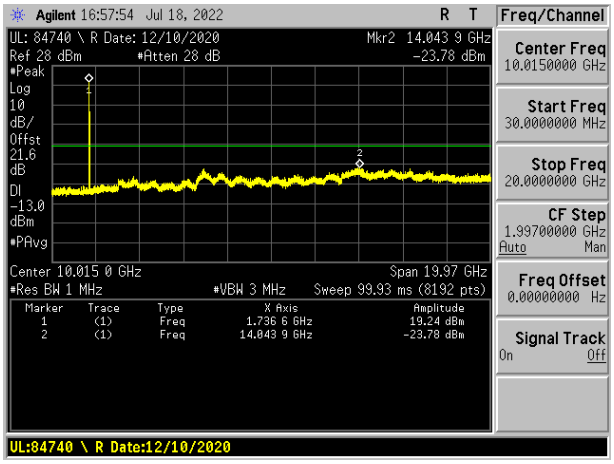
LTE4 15MHz 16QAM HIGH Ch RB1-0



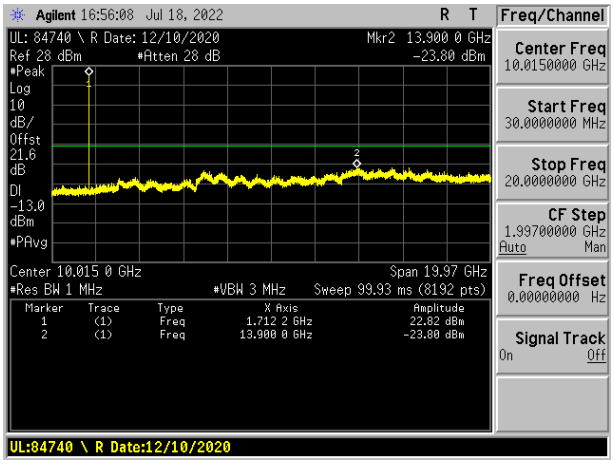
LTE4 20MHz QPSK LOW Ch RB1-0



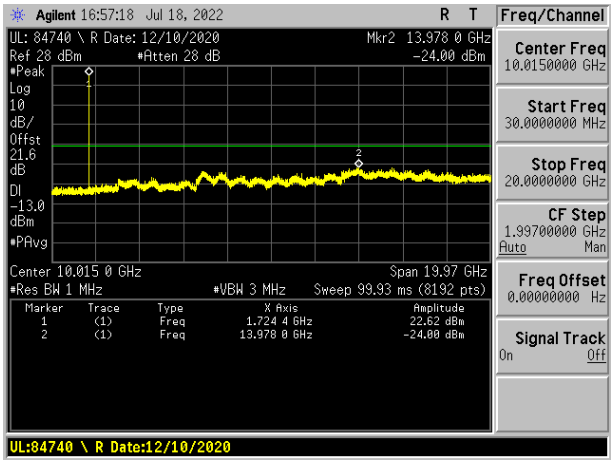
LTE4 20MHz QPSK MID Ch RB1-0



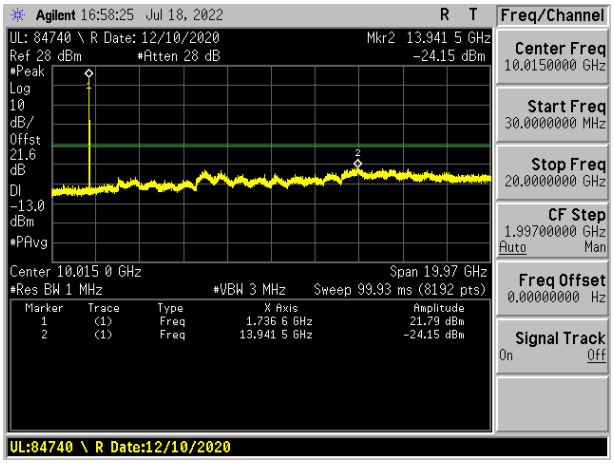
LTE4 20MHz QPSK HIGH Ch RB1-0



LTE4 20MHz 16QAM LOW Ch RB1-0



LTE4 20MHz 16QAM MID Ch RB1-0

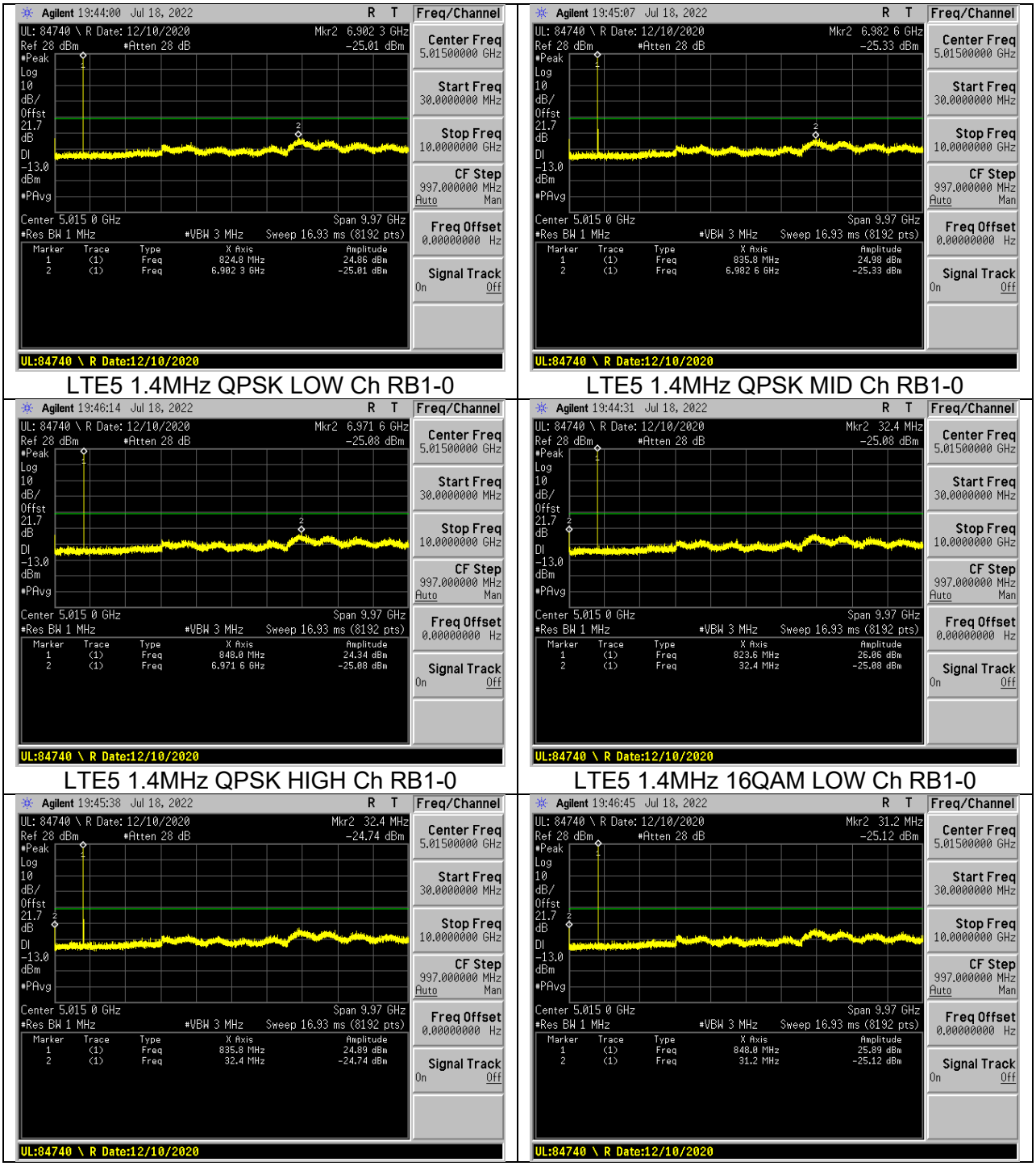


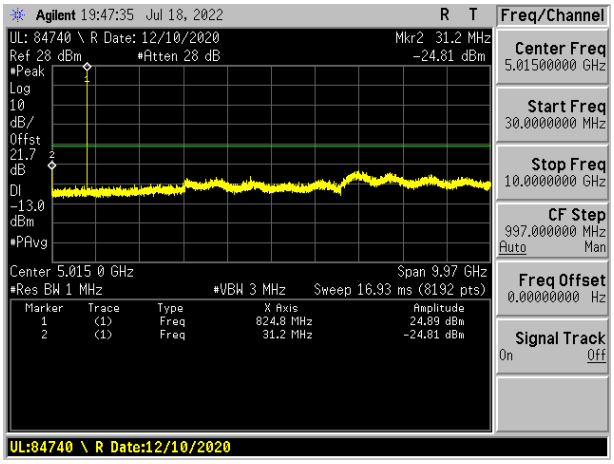
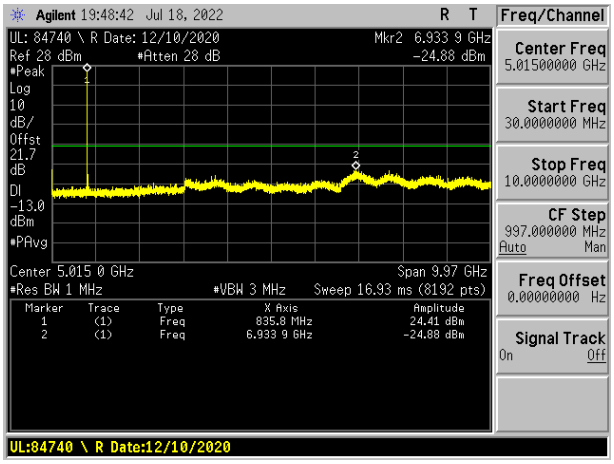
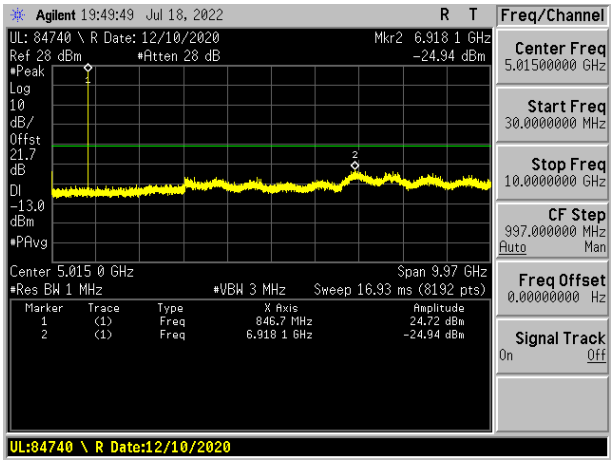
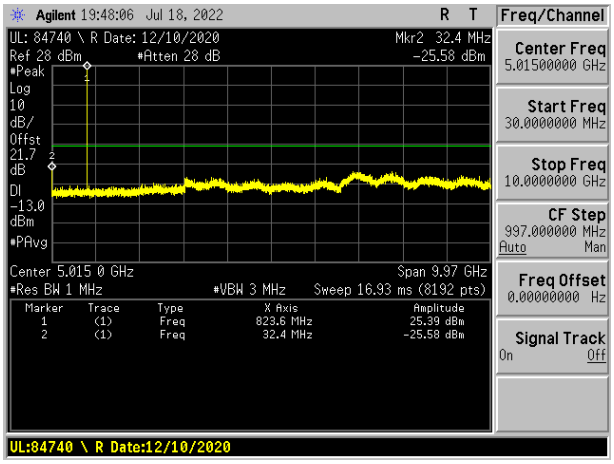
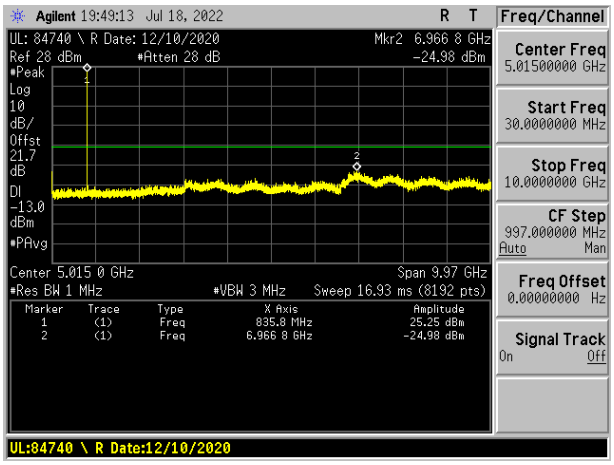
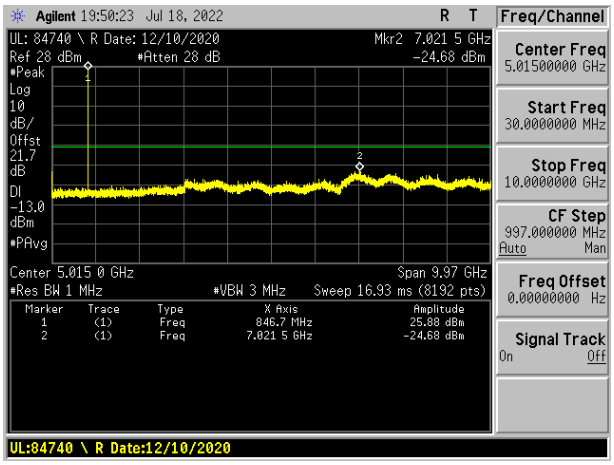
LTE4 20MHz 16QAM HIGH Ch RB1-0

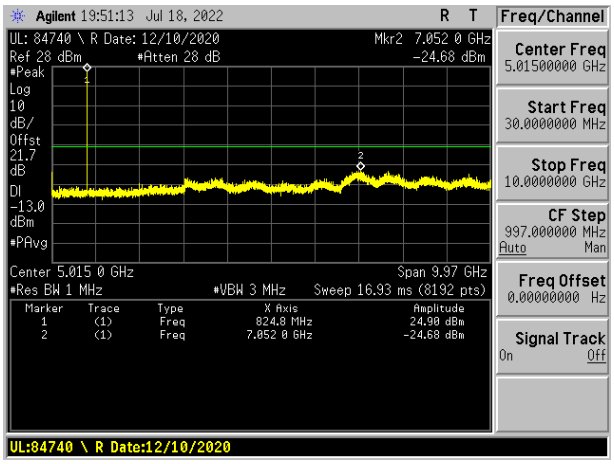
9.3.5. LTE BAND 5

LIMITS

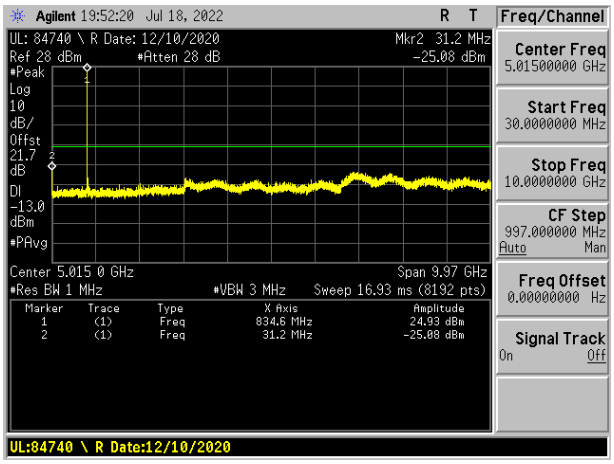
FCC: §22.917
The minimum permissible attenuation level of any spurious emissions is 43 + 10 log (P) dB where transmitting power (P) in Watts.



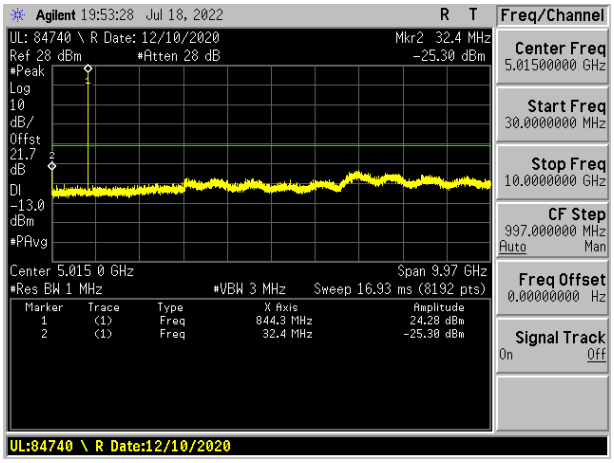
LTE5 1.4MHz 16QAM MID Ch RB1-0	LTE5 1.4MHz 16QAM HIGH Ch RB1-0
	
LTE5 3MHz QPSK LOW Ch RB1-0	LTE5 3MHz QPSK MID Ch RB1-0
	
LTE5 3MHz QPSK HIGH Ch RB1-0	LTE5 3MHz 16QAM LOW Ch RB1-0
	
LTE5 3MHz 16QAM MID Ch RB1-0	LTE5 3MHz 16QAM HIGH Ch RB1-0



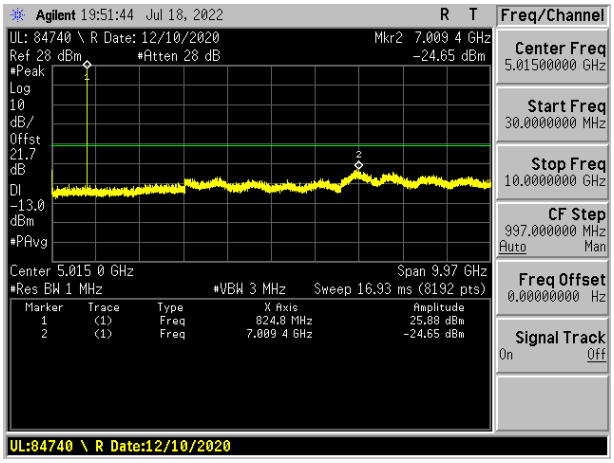
LTE5 5MHz QPSK LOW Ch RB1-0



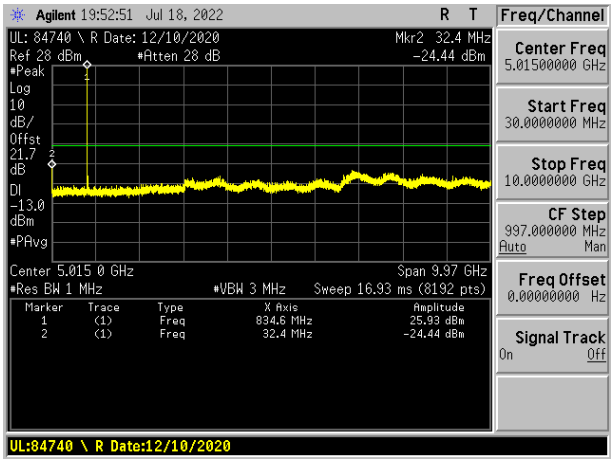
LTE5 5MHz QPSK MID Ch RB1-0



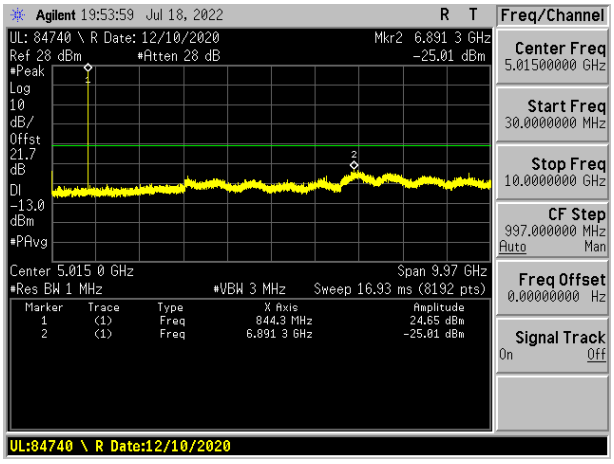
LTE5 5MHz QPSK HIGH Ch RB1-0



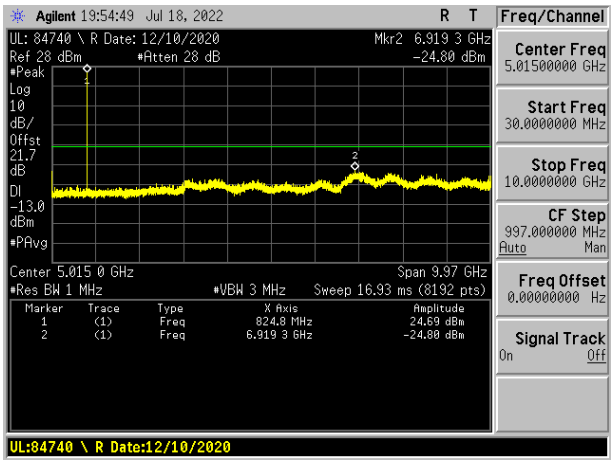
LTE5 5MHz 16QAM LOW Ch RB1-0



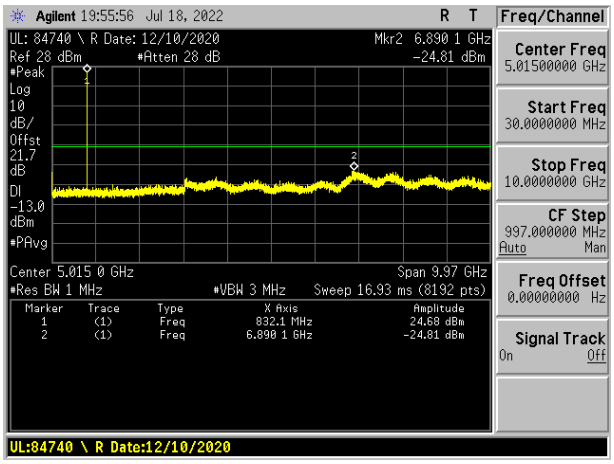
LTE5 5MHz 16QAM MID Ch RB1-0



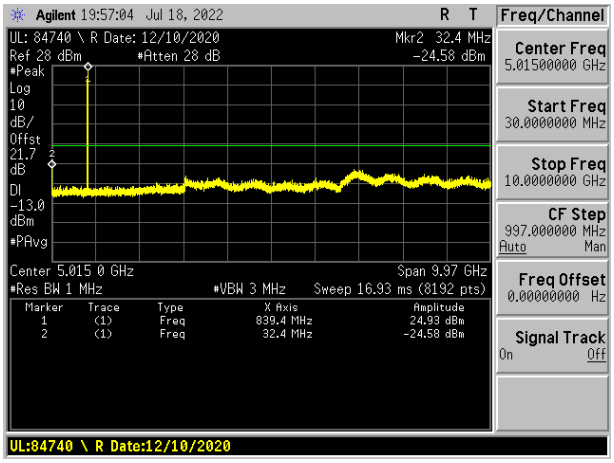
LTE5 5MHz 16QAM HIGH Ch RB1-0



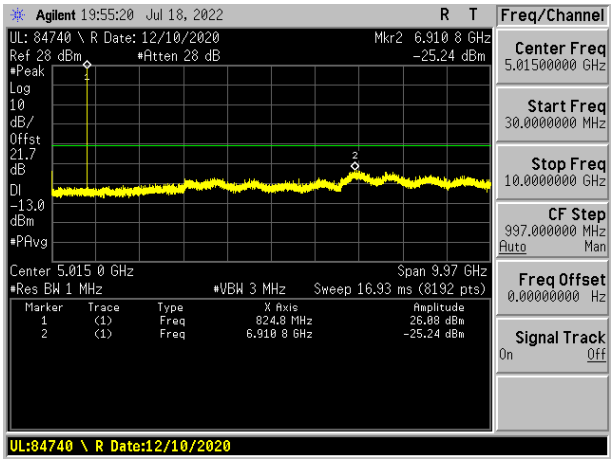
LTE5 10MHz QPSK LOW Ch RB1-0



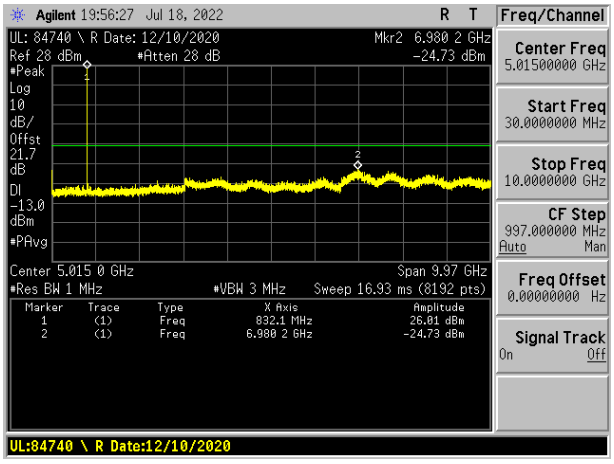
LTE5 10MHz QPSK MID Ch RB1-0



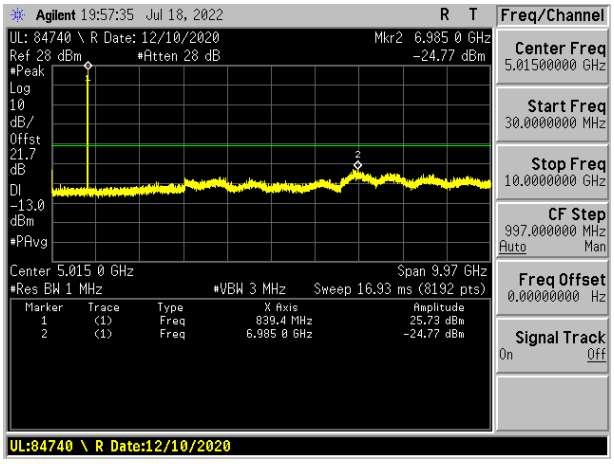
LTE5 10MHz QPSK HIGH Ch RB1-0



LTE5 10MHz 16QAM LOW Ch RB1-0



LTE5 10MHz 16QAM MID Ch RB1-0

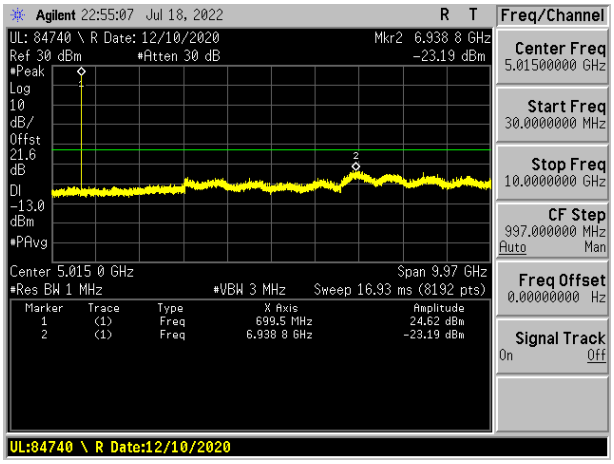


LTE5 10MHz 16QAM HIGH Ch RB1-0

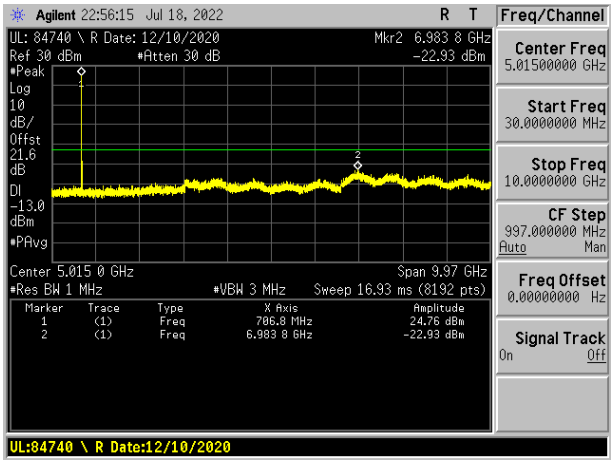
9.3.6. LTE BAND 12

LIMITS

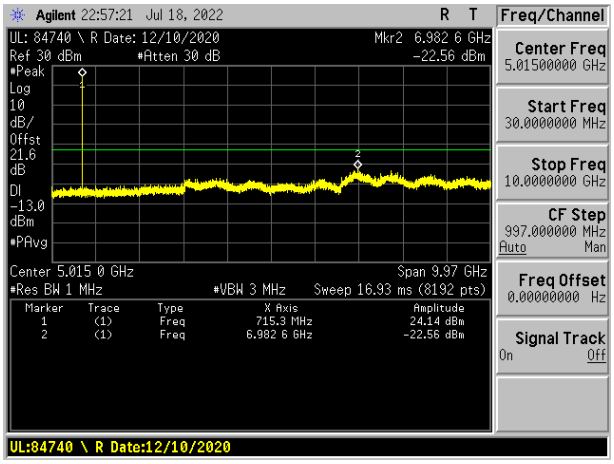
FCC: §27.53 (g)
The minimum permissible attenuation level of any spurious emissions is 43 + 10 log (P) dB where transmitting power (P) in Watts.



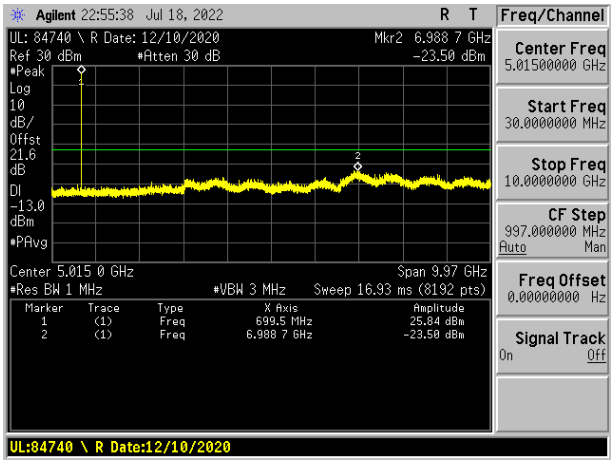
LTE12 1.4MHz QPSK LOW Ch RB1-0



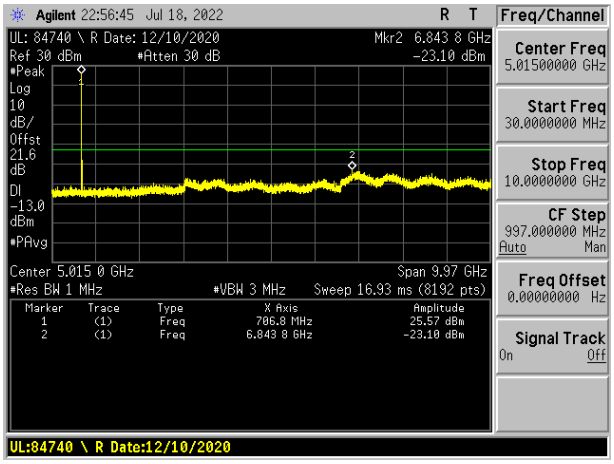
LTE12 1.4MHz QPSK MID Ch RB1-0



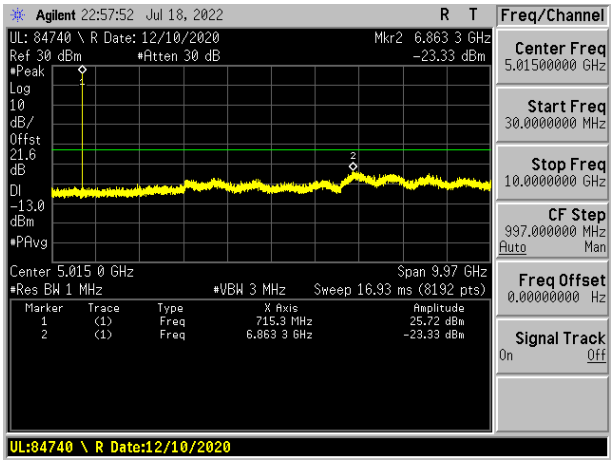
LTE12 1.4MHz QPSK HIGH Ch RB1-0



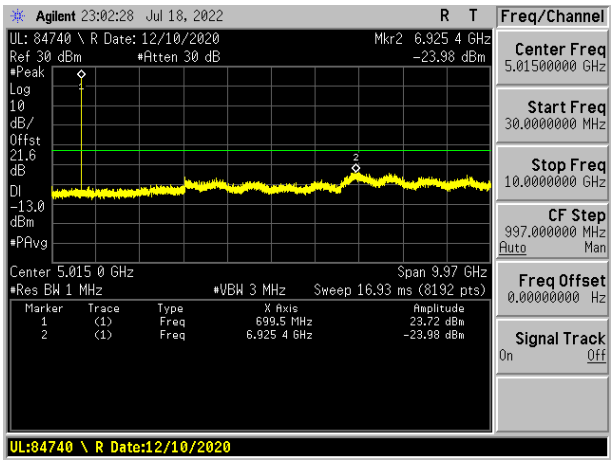
LTE12 1.4MHz 16QAM LOW Ch RB1-0



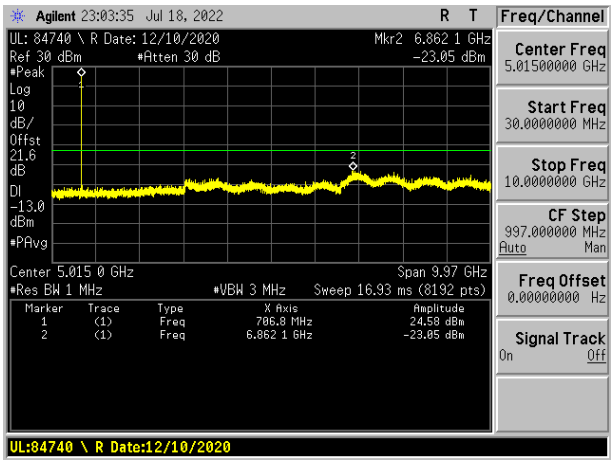
LTE12 1.4MHz 16QAM MID Ch RB1-0



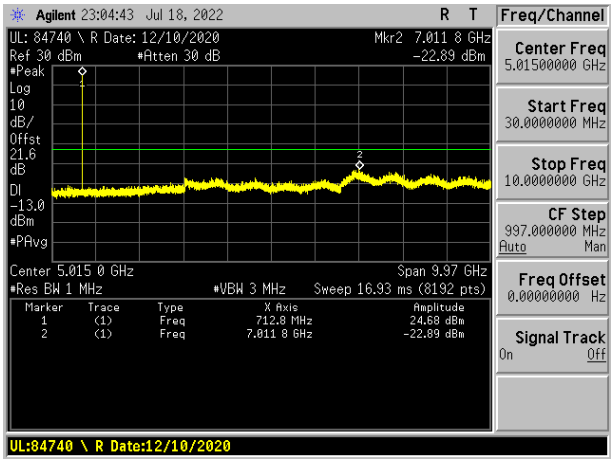
LTE12 1.4MHz 16QAM HIGH Ch RB1-0



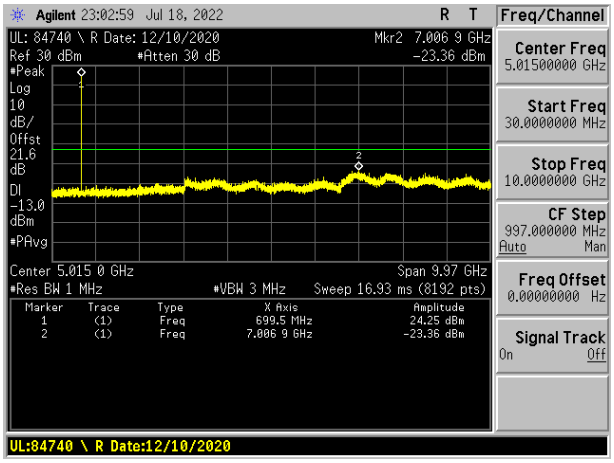
LTE12 3MHz QPSK LOW Ch RB1-0



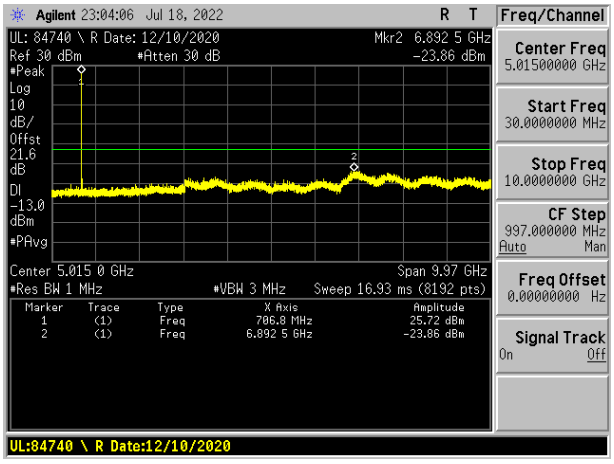
LTE12 3MHz QPSK MID Ch RB1-0



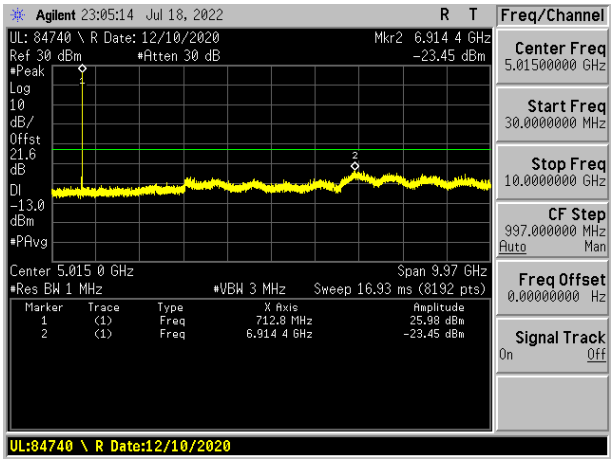
LTE12 3MHz QPSK HIGH Ch RB1-0



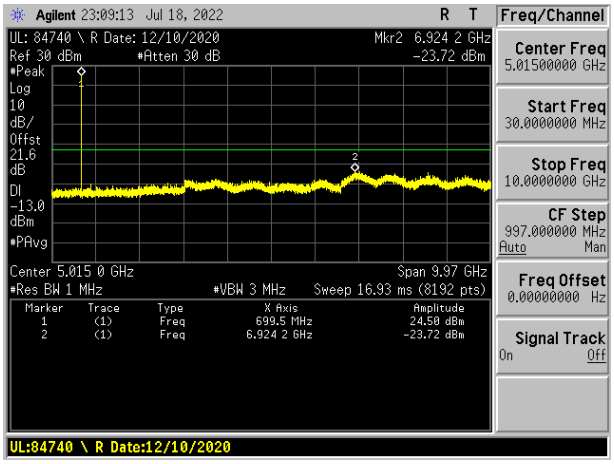
LTE12 3MHz 16QAM LOW Ch RB1-0



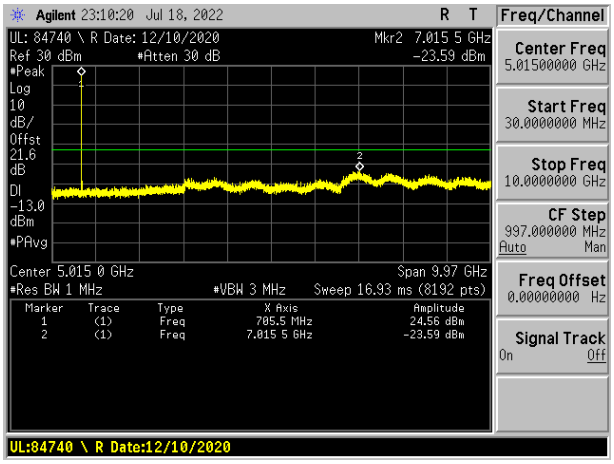
LTE12 3MHz 16QAM MID Ch RB1-0



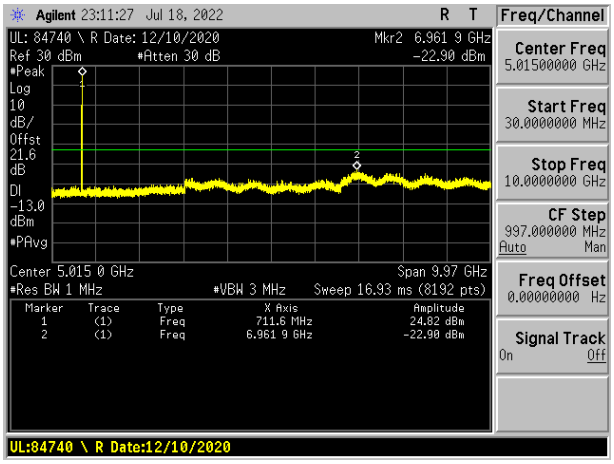
LTE12 3MHz 16QAM HIGH Ch RB1-0



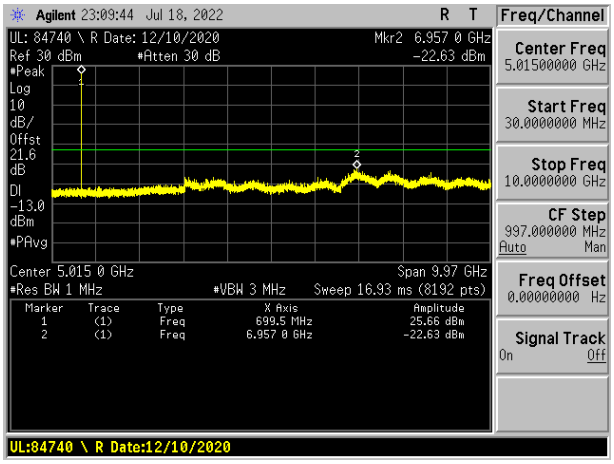
LTE12 5MHz QPSK LOW Ch RB1-0



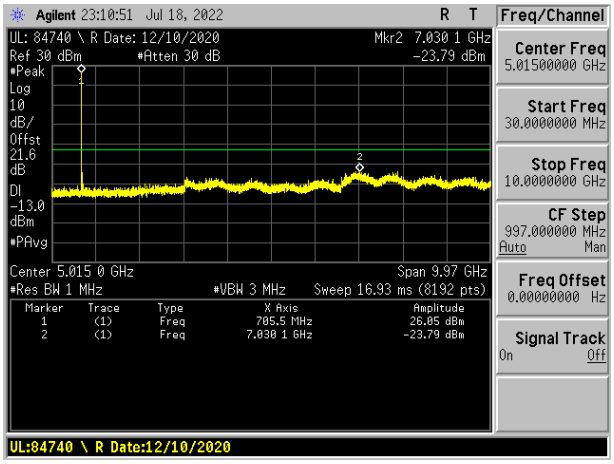
LTE12 5MHz QPSK MID Ch RB1-0



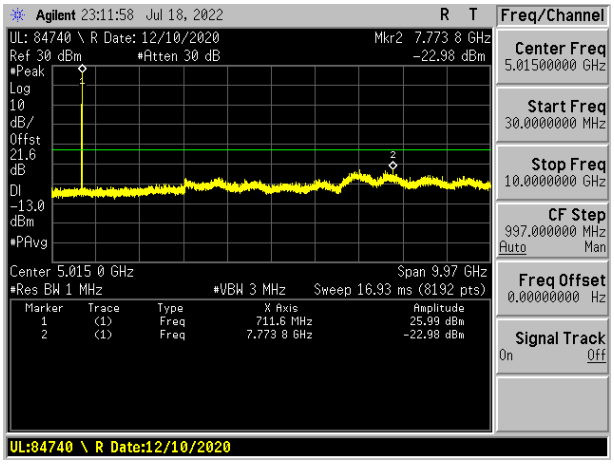
LTE12 5MHz QPSK HIGH Ch RB1-0



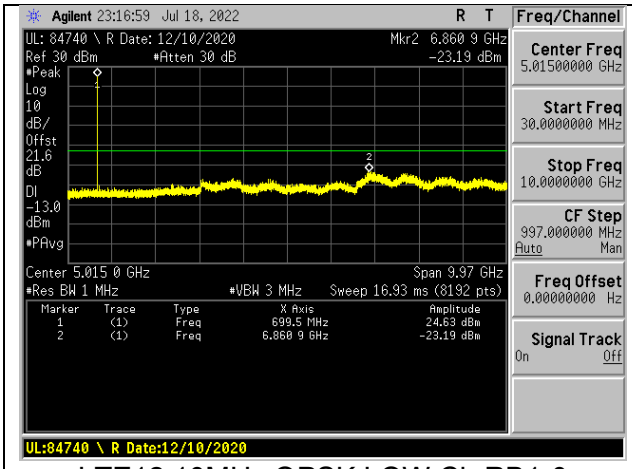
LTE12 5MHz 16QAM LOW Ch RB1-0



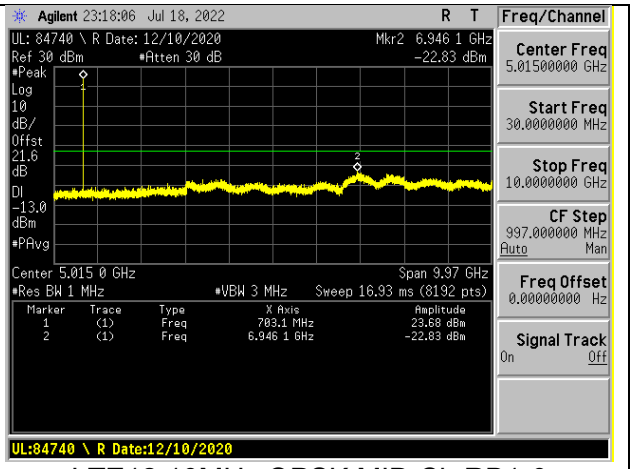
LTE12 5MHz 16QAM MID Ch RB1-0



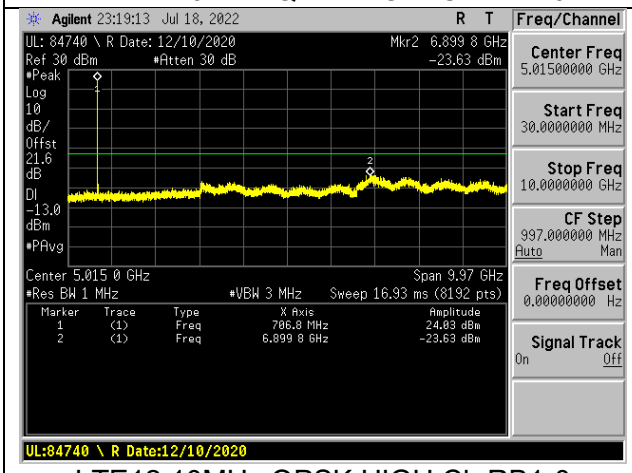
LTE12 5MHz 16QAM HIGH Ch RB1-0



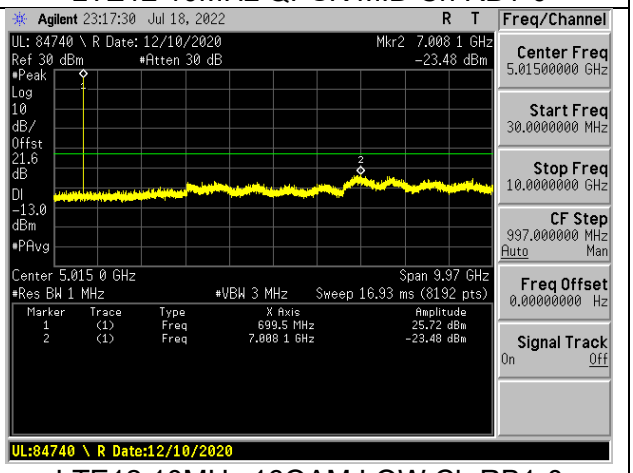
LTE12 10MHz QPSK LOW Ch RB1-0



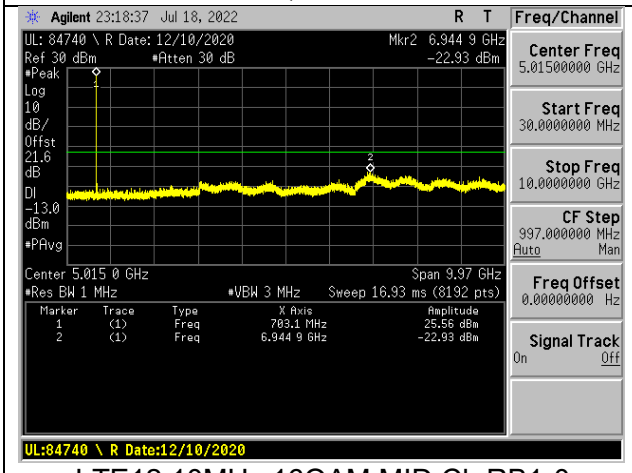
LTE12 10MHz QPSK MID Ch RB1-0



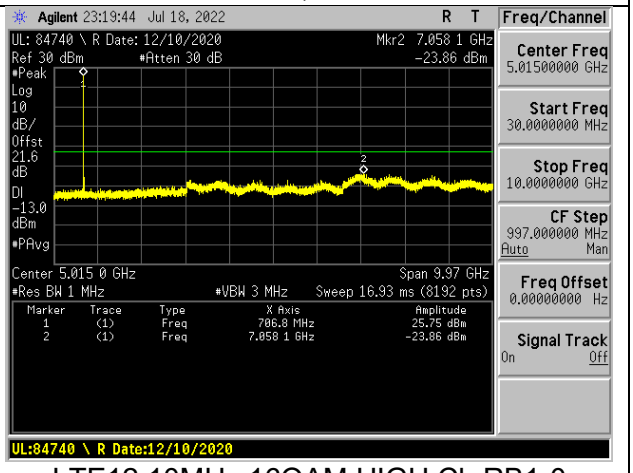
LTE12 10MHz QPSK HIGH Ch RB1-0



LTE12 10MHz 16QAM LOW Ch RB1-0



LTE12 10MHz 16QAM MID Ch RB1-0

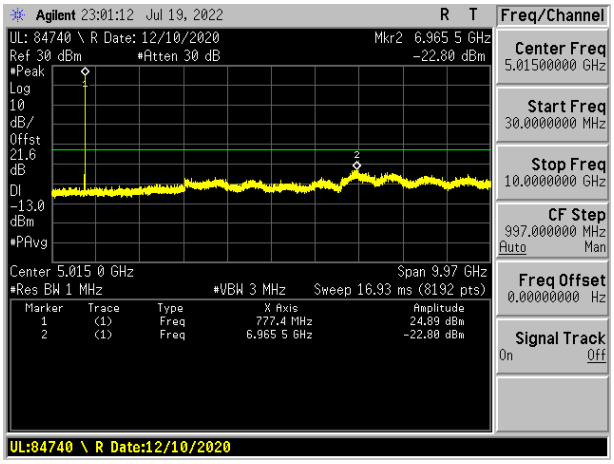


LTE12 10MHz 16QAM HIGH Ch RB1-0

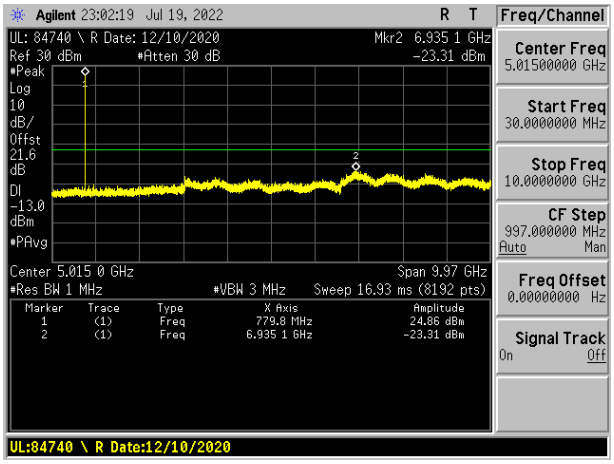
9.3.7. LTE BAND 13

LIMITS

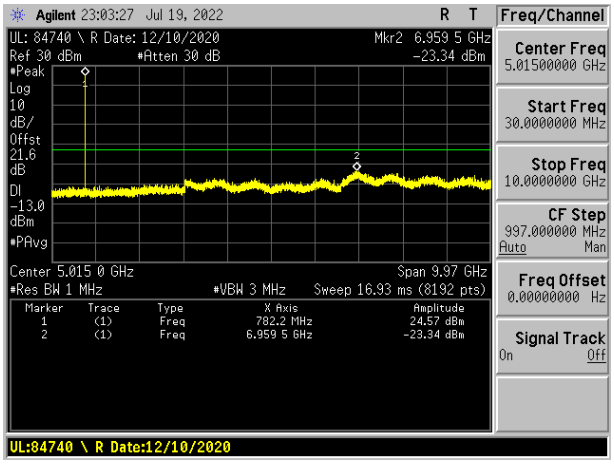
FCC: §27.53 (c), (f)
The minimum permissible attenuation level of any spurious emissions is 43 + 10 log (P) dB where transmitting power (P) in Watts. The band 1559-1610 MHz shall be limited to −70 dBW/MHz equivalent isotropically radiated power (EIRP) for wideband signals, and −80 dBW EIRP for discrete emissions of less than 700 Hz bandwidth. Note: Radiated data in section 9.1.6 confirms a compliance for the emissions in GPS 1559 - 1610 MHz band were wideband emissions therefore the - 40dBm / MHz limit was used.



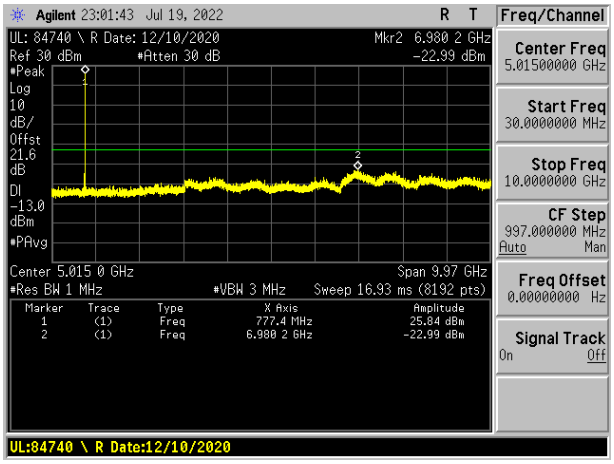
LTE13 5MHz QPSK LOW Ch RB1-0



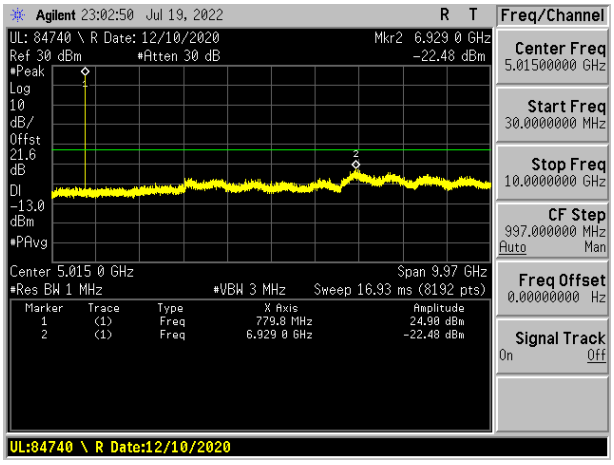
LTE13 5MHz QPSK MID Ch RB1-0



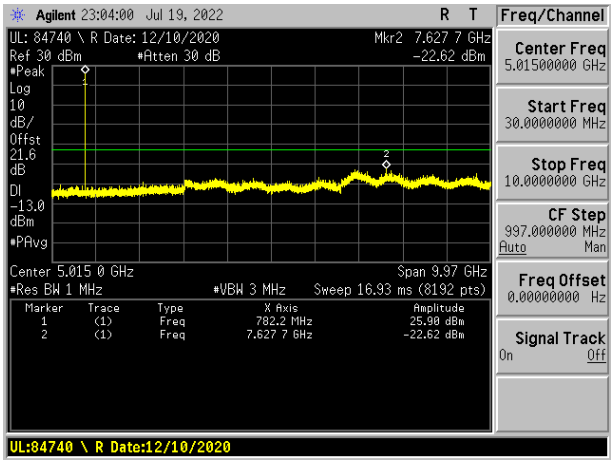
LTE13 5MHz QPSK HIGH Ch RB1-0



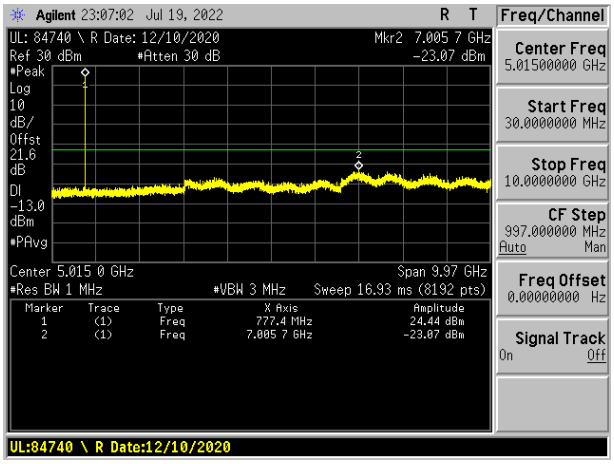
LTE13 5MHz 16QAM LOW Ch RB1-0



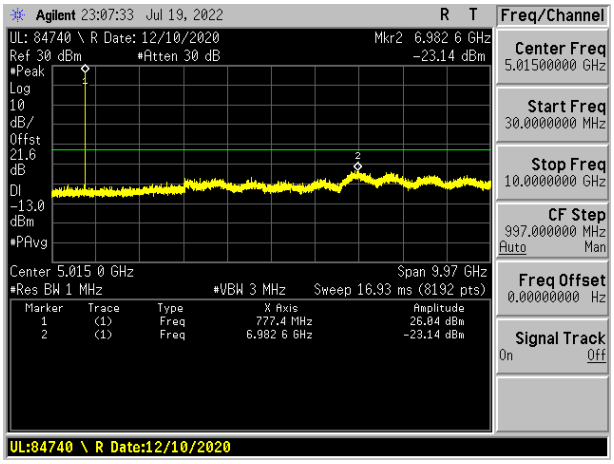
LTE13 5MHz 16QAM MID Ch RB1-0



LTE13 5MHz 16QAM HIGH Ch RB1-0



LTE13 10MHz QPSK MID Ch RB1-0

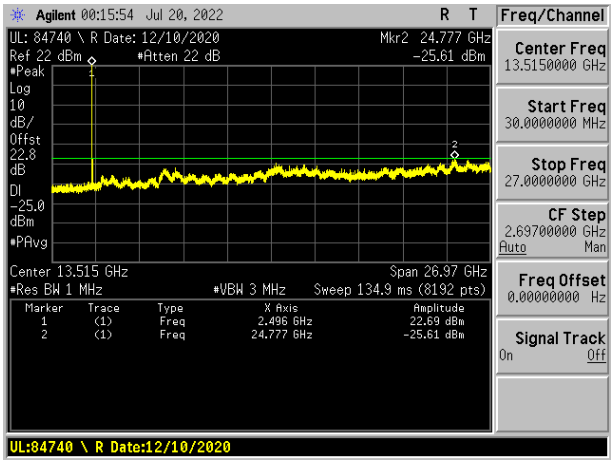


LTE13 10MHz 16QAM LOW Ch RB1-0

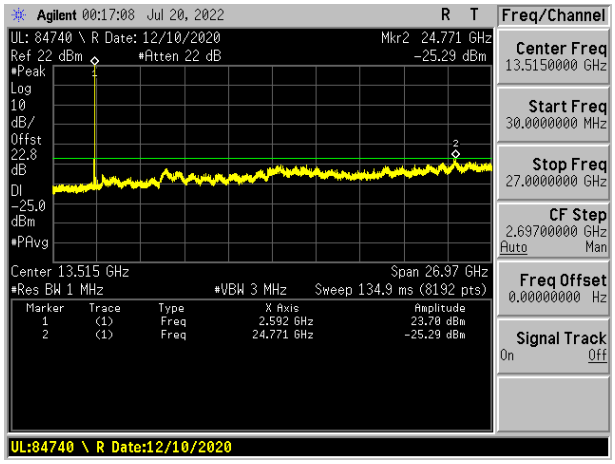
9.3.8. LTE BAND 41

LIMITS

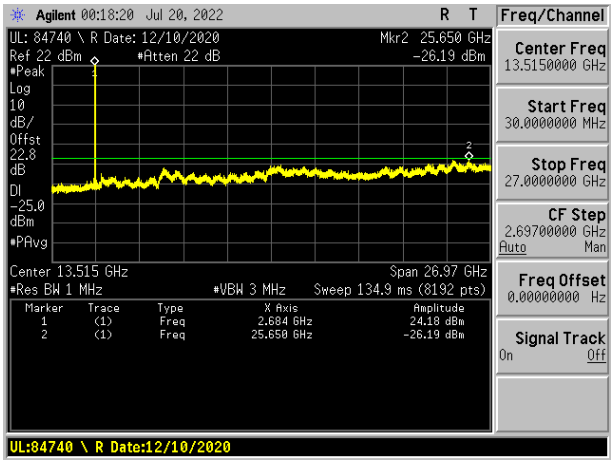
FCC: §27.53 (m)
The minimum permissible attenuation level of any spurious emissions is 43 + 10 log (P) dB where transmitting power (P) in Watts.



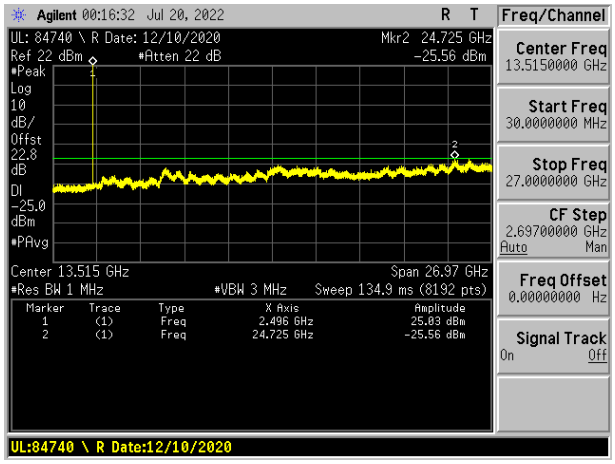
LTE41 5MHz QPSK LOW Ch RB1-0



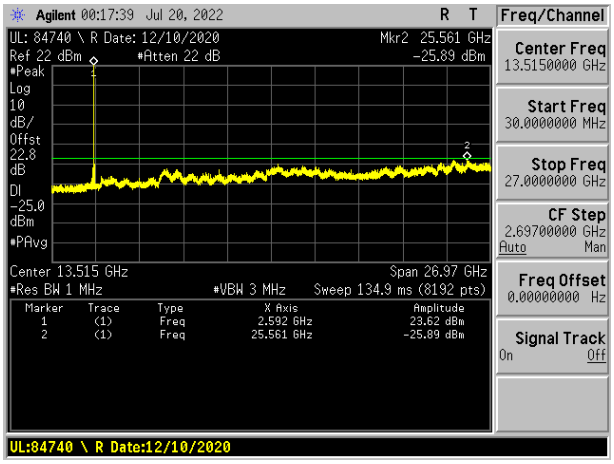
LTE41 5MHz QPSK MID Ch RB1-0



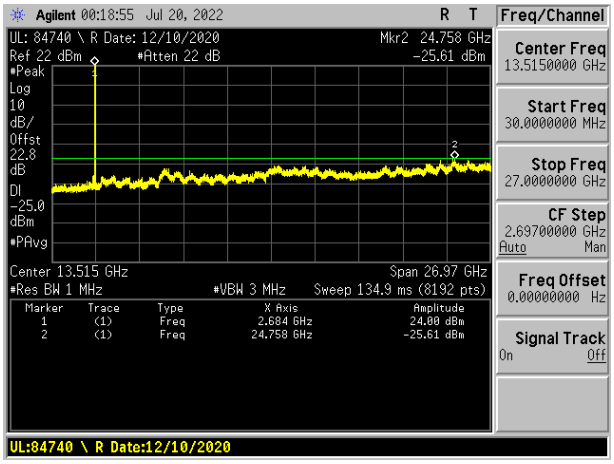
LTE41 5MHz QPSK HIGH Ch RB1-0



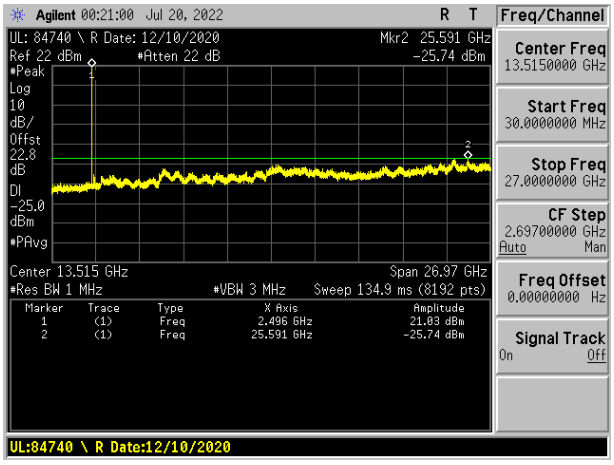
LTE41 5MHz 16QAM LOW Ch RB1-0



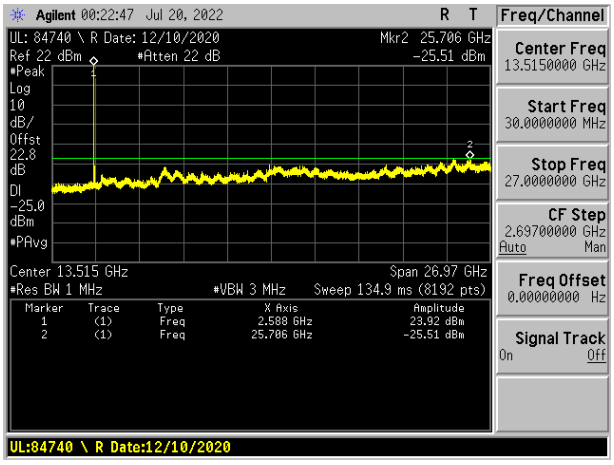
LTE41 5MHz 16QAM MID Ch RB1-0



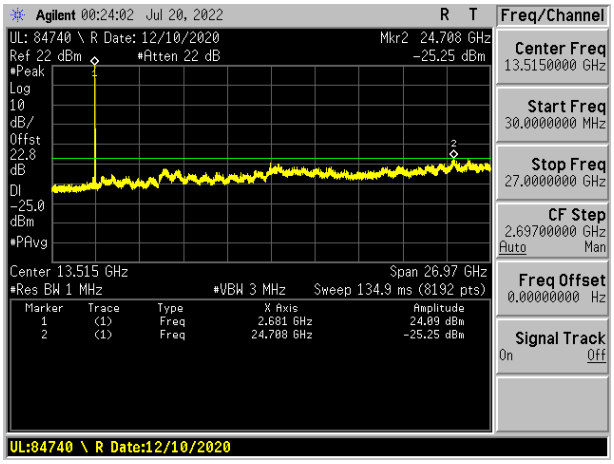
LTE41 5MHz 16QAM HIGH Ch RB1-0



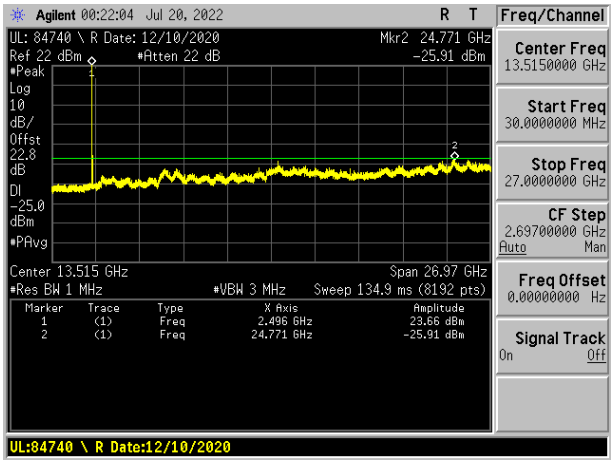
LTE41 10MHz QPSK LOW Ch RB1-0



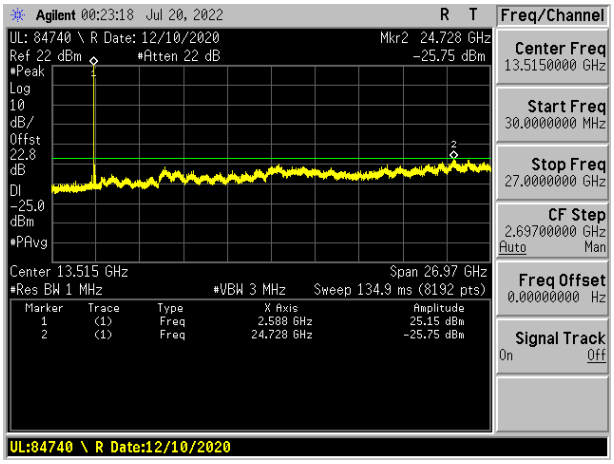
LTE41 10MHz QPSK MID Ch RB1-0



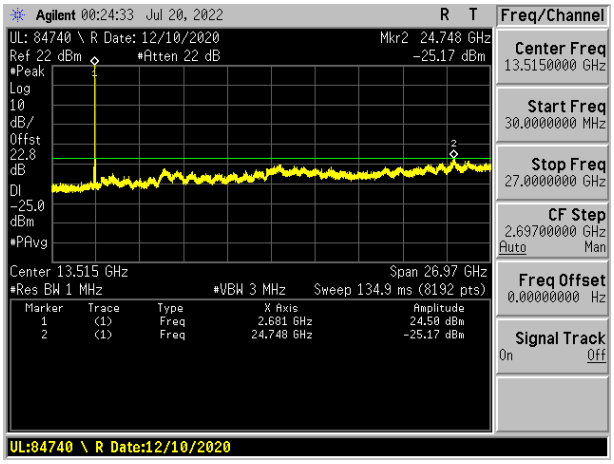
LTE41 10MHz QPSK HIGH Ch RB1-0



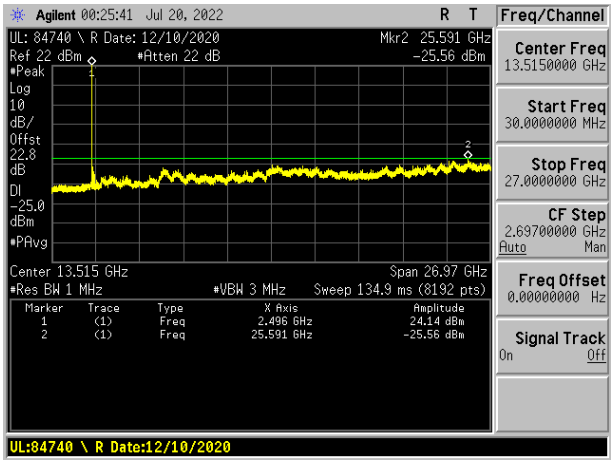
LTE41 10MHz 16QAM LOW Ch RB1-0



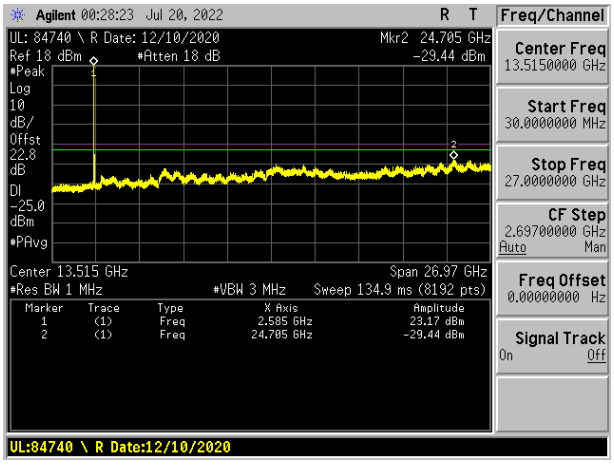
LTE41 10MHz 16QAM MID Ch RB1-0



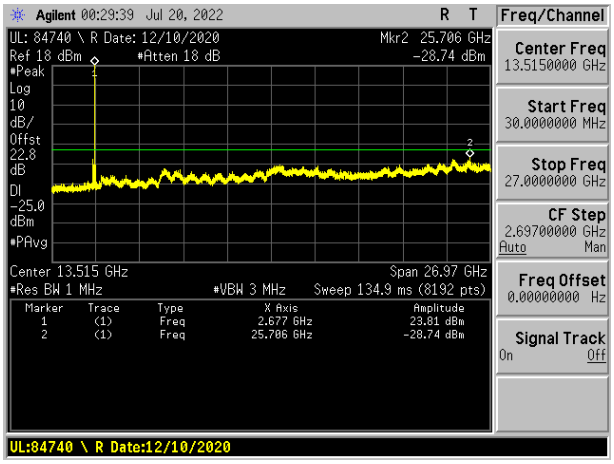
LTE41 10MHz 16QAM HIGH Ch RB1-0



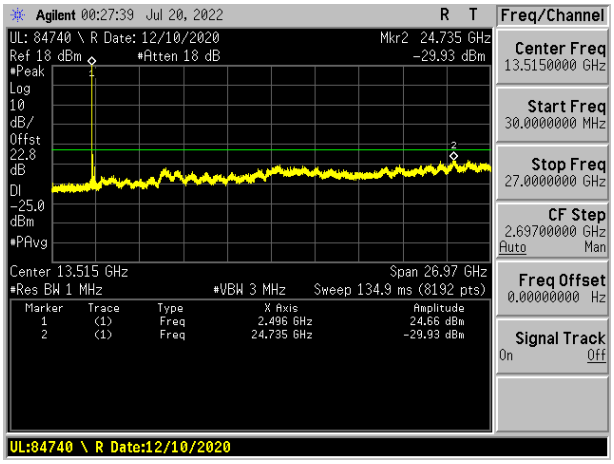
LTE41 15MHz QPSK LOW Ch RB1-0



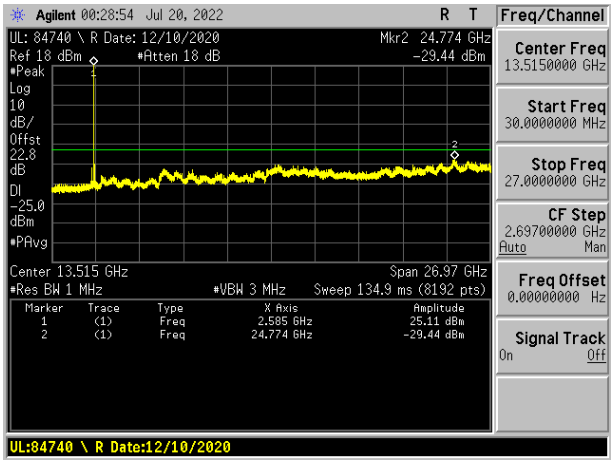
LTE41 15MHz QPSK MID Ch RB1-0



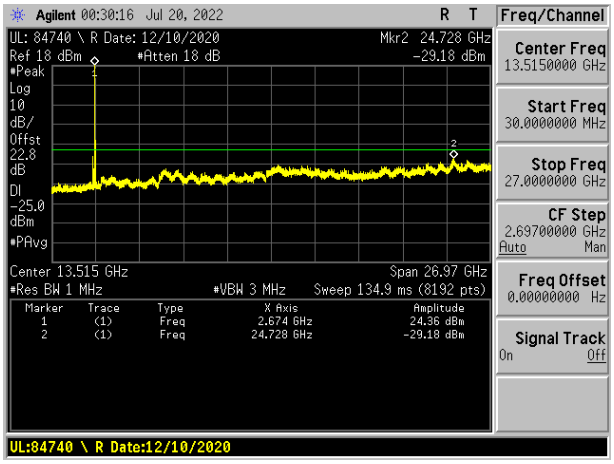
LTE41 15MHz QPSK HIGH Ch RB1-0



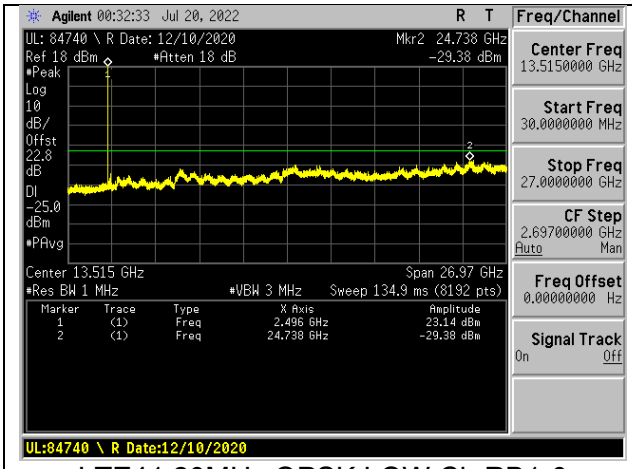
LTE41 15MHz 16QAM LOW Ch RB1-0



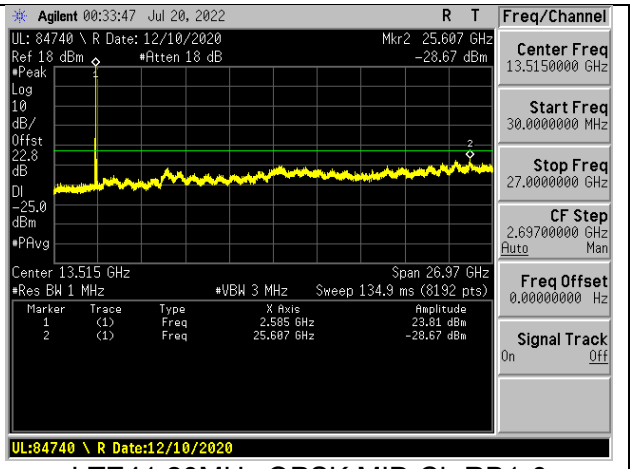
LTE41 15MHz 16QAM MID Ch RB1-0



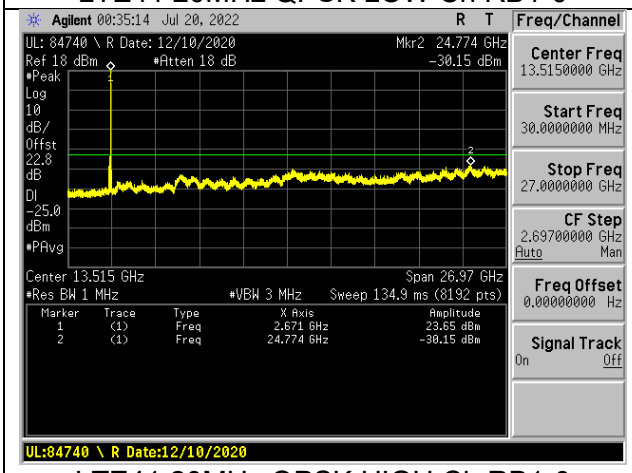
LTE41 15MHz 16QAM HIGH Ch RB1-0



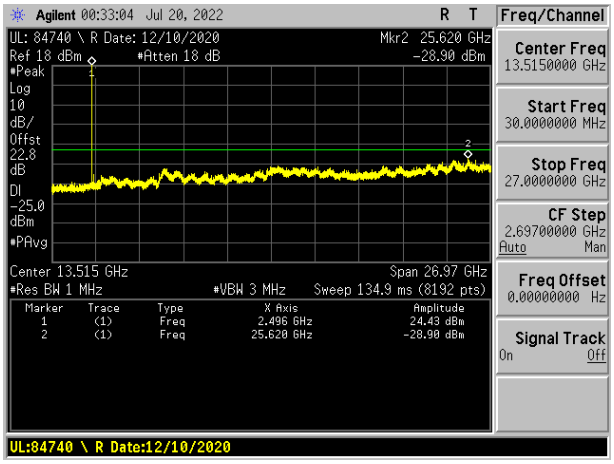
LTE41 20MHz QPSK LOW Ch RB1-0



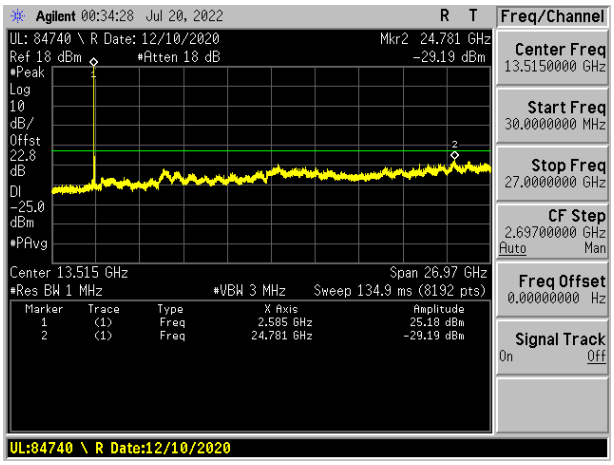
LTE41 20MHz QPSK MID Ch RB1-0



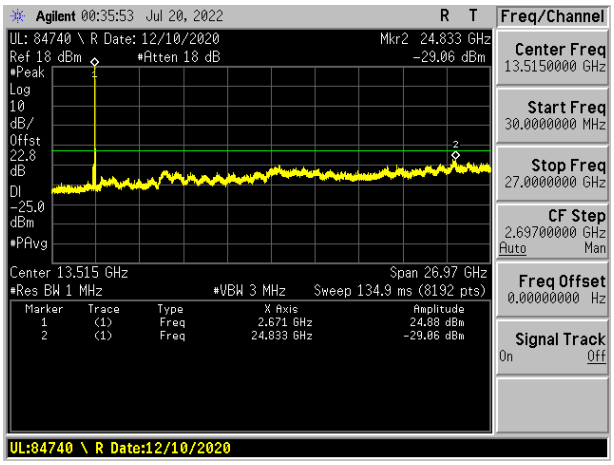
LTE41 20MHz QPSK HIGH Ch RB1-0



LTE41 20MHz 16QAM LOW Ch RB1-0



LTE41 20MHz 16QAM MID Ch RB1-0



LTE41 20MHz 16QAM HIGH Ch RB1-0

9.4. FREQUENCY STABILITY

TEST PROCEDURE

Use CMW 500 with Frequency Error measurement capability.

(i) Temp. = −30°C to +50°C
(ii) Voltage = Normal, Endpoint
Normal, 3.89VDC
End Voltage, 3.69VDC.

Frequency Stability vs Temperature:

The EUT is place inside a temperature chamber. The temperature is set to 20ºC 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 +50ºC is reached.

Frequency Stability vs Voltage:

The peak frequency error is recorded (worst-case).

RESULTS

9.4.1. GSM

GSM850

Test Engineer ID:	85502/44389	Test Date:	2022-07-22

Limit		824	849	Delta (Hz) LOW	Delta (Hz) HIGH	Frequency Stability (ppm) LOW	Frequency Stability (ppm) HIGH
Condition		F low @ -13dBm	F high @ -13dBm				
Temperature	Voltage	(MHz)	(MHz)				
Normal (20C)	Normal	824.2000	848.8000				
Extreme (50C)		824.2000	848.8000	16.0	17.0	0.04	0.04
Extreme (40C)		824.2000	848.8000	19.8	19.4	0.05	0.05
Extreme (30C)		824.2000	848.8000	18.4	21.0	0.04	0.05
Extreme (10C)		824.2000	848.8000	22.6	23.5	0.05	0.06
Extreme (0C)		824.2000	848.8000	22.9	19.6	0.06	0.05
Extreme (-10C)		824.2000	848.8000	22.0	25.8	0.05	0.06
Extreme (-20C)		824.2000	848.8000	21.4	22.9	0.05	0.05
Extreme (-30C)		824.2000	848.8000	19.8	22.3	0.05	0.05
20C	End Point	824.2000	848.8000	22.3	21.7	0.05	0.05

GSM1900

Test Engineer ID:	85502/44389	Test Date:	2022-07-22

Limit		1850	1910	Delta (Hz) LOW	Delta (Hz) HIGH	Frequency Stability (ppm) LOW	Frequency Stability (ppm) HIGH
Condition		F low @ -13dBm	F high @ -13dBm				
Temperature	Voltage	(MHz)	(MHz)				
Normal (20C)	Normal	1850.2000	1909.8000				
Extreme (50C)		1850.2000	1909.8000	16.7	16.6	0.02	0.02
Extreme (40C)		1850.2000	1909.8000	15.0	16.2	0.02	0.02
Extreme (30C)		1850.2000	1909.8000	15.3	15.5	0.02	0.02
Extreme (10C)		1850.2000	1909.8000	15.7	15.4	0.02	0.02
Extreme (0C)		1850.2000	1909.8000	21.3	21.0	0.02	0.02
Extreme (-10C)		1850.2000	1909.8000	22.0	22.7	0.02	0.02
Extreme (-20C)		1850.2000	1909.8000	22.9	24.7	0.02	0.03
Extreme (-30C)		1850.2000	1909.8000	22.3	22.2	0.02	0.02
20C	End Point	1850.2000	1909.8000	21.0	21.9	0.02	0.02

9.4.2. WCDMA

REL99

Test Engineer ID:	84740/44389	Test Date:	2022-07-22

Limit		824	849	Delta (Hz) LOW	Delta (Hz) HIGH	Frequency Stability (ppm) LOW	Frequency Stability (ppm) HIGH
Condition		F low @ -13dBm	F high @ -13dBm				
Temperature	Voltage	(MHz)	(MHz)				
Normal (20C)	Normal	826.4000	846.6000				
Extreme (50C)		826.4000	846.6000	1.3	-3.1	0.00	-0.01
Extreme (40C)		826.4000	846.6000	1.6	-2.9	0.00	-0.01
Extreme (30C)		826.4000	846.6000	2.7	-2.7	0.01	-0.01
Extreme (10C)		826.4000	846.6000	0.5	-0.7	0.00	0.00
Extreme (0C)		826.4000	846.6000	-1.7	2.1	0.00	0.00
Extreme (-10C)		826.4000	846.6000	-1.5	2.6	0.00	0.01
Extreme (-20C)		826.4000	846.6000	-2.2	4.1	-0.01	0.01
Extreme (-30C)		826.4000	846.6000	-3.1	3.8	-0.01	0.01
20C	End Point	826.4000	846.6000	-1.8	2.1	0.00	0.00

9.4.3. LTE BAND 4

LIMITS

FCC: §27.54
The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

Test Engineer ID:	85502/44389	Test Date:	2022-07-23

QPSK (20MHz)

Limit		1710	1755	Delta (Hz) LOW	Delta (Hz) HIGH	Frequency Stability (ppm) LOW	Frequency Stability (ppm) HIGH
Condition		F low @ -13dBm	F high @ -13dBm				
Temperature	Voltage	(MHz)	(MHz)				
Normal (20C)		1720.0000	1745.0000				
Extreme (50C)		1720.0000	1745.0000	-2.8	-3.5	0.00	0.00
Extreme (40C)		1720.0000	1745.0000	-2.6	-1.9	0.00	0.00
Extreme (30C)		1720.0000	1745.0000	2.7	3.0	0.00	0.00
Extreme (10C)	Normal	1720.0000	1745.0000	2.5	2.7	0.00	0.00
Extreme (0C)		1720.0000	1745.0000	1.2	2.1	0.00	0.00
Extreme (-10C)		1720.0000	1745.0000	2.0	0.6	0.00	0.00
Extreme (-20C)		1720.0000	1745.0000	-2.0	2.2	0.00	0.00
Extreme (-30C)		1720.0000	1745.0000	1.9	2.5	0.00	0.00
20C	End Point	1720.0000	1745.0000	-2.0	-2.4	0.00	0.00

9.4.4. LTE BAND 5

LIMITS

FCC: §22.355
The carrier frequency shall not depart from the reference frequency in excess of ±2.5 ppm for mobile stations.

Test Engineer ID:	84740/44389	Test Date:	2022-07-22

QPSK (10MHz)

Limit		824	849	Delta (Hz) LOW	Delta (Hz) HIGH	Frequency Stability (ppm) LOW	Frequency Stability (ppm) HIGH
Condition		F low @ -13dBm	F high @ -13dBm				
Temperature	Voltage	(MHz)	(MHz)				
Normal (20C)		829.0000	844.0000				
Extreme (50C)		829.0000	844.0000	-2.1	0.6	-0.01	0.00
Extreme (40C)		829.0000	844.0000	1.1	0.1	0.00	0.00
Extreme (30C)		829.0000	844.0000	-0.5	-0.3	0.00	0.00
Extreme (10C)	Normal	829.0000	844.0000	0.0	0.1	0.00	0.00
Extreme (0C)		829.0000	844.0000	0.1	0.8	0.00	0.00
Extreme (-10C)		829.0000	844.0000	-0.4	-0.4	0.00	0.00
Extreme (-20C)		829.0000	844.0000	0.9	-0.9	0.00	0.00
Extreme (-30C)		829.0000	844.0000	-0.1	0.4	0.00	0.00
20C	End Point	829.0000	844.0000	1.2	1.2	0.00	0.00

9.4.5. 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.

Test Engineer ID:	84740/44389	Test Date:	2022-07-22

QPSK (10MHz)

Limit		699	716	Delta (Hz) LOW	Delta (Hz) HIGH	Frequency Stability (ppm) LOW	Frequency Stability (ppm) HIGH
Condition		F low @ -13dBm	F high @ -13dBm				
Temperature	Voltage	(MHz)	(MHz)				
Normal (20C)	Normal	704.0000	711.0000				
Extreme (50C)		704.0000	711.0000	-0.4	0.4	0.00	0.00
Extreme (40C)		704.0000	711.0000	0.1	0.9	0.00	0.00
Extreme (30C)		704.0000	711.0000	0.2	0.4	0.00	0.00
Extreme (10C)		704.0000	711.0000	0.3	0.6	0.00	0.00
Extreme (0C)		704.0000	711.0000	0.8	0.4	0.00	0.00
Extreme (-10C)		704.0000	711.0000	-0.2	0.5	0.00	0.00
Extreme (-20C)		704.0000	711.0000	0.4	0.4	0.00	0.00
Extreme (-30C)		704.0000	711.0000	0.0	0.1	0.00	0.00
20C	End Point	704.0000	711.0000	0.1	0.5	0.00	0.00

9.4.6. 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.

Test Engineer ID:	85502/44389	Test Date:	2022-07-23

QPSK (10MHz)

Limit		777	787	Delta (Hz) LOW	Delta (Hz) HIGH	Frequency Stability (ppm) LOW	Frequency Stability (ppm) HIGH
Condition		F low @ -13dBm	F high @ -13dBm				
Temperature	Voltage	(MHz)	(MHz)				
Normal (20C)		779.5000	784.5000				
Extreme (50C)		779.5000	784.5000	1.1	-0.3	0.00	0.00
Extreme (40C)		779.5000	784.5000	-1.8	1.7	0.00	0.00
Extreme (30C)		779.5000	784.5000	2.8	2.3	0.01	0.01
Extreme (10C)	Normal	779.5000	784.5000	2.0	2.2	0.01	0.01
Extreme (0C)		779.5000	784.5000	2.2	2.2	0.01	0.01
Extreme (-10C)		779.5000	784.5000	3.0	2.5	0.01	0.01
Extreme (-20C)		779.5000	784.5000	2.1	1.6	0.01	0.00
Extreme (-30C)		779.5000	784.5000	2.2	3.6	0.01	0.01
20C	End Point	779.5000	784.5000	2.5	2.2	0.01	0.01

9.4.7. LTE BAND 41

LIMITS

FCC: §27.54
The frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block.

Test Engineer ID:	85502/44389	Test Date:	2022-07-23

QPSK (20MHz)

Limit		2496	2690	Delta (Hz) LOW	Delta (Hz) HIGH	Frequency Stability (ppm) LOW	Frequency Stability (ppm) HIGH
Condition		F low @ -13dBm	F high @ -13dBm				
Temperature	Voltage	(MHz)	(MHz)				
Normal (20C)	Normal	2506.0000	2680.0000				
Extreme (50C)		2506.0000	2680.0000	-2.6	-3.5	0.00	0.00
Extreme (40C)		2506.0000	2680.0000	-3.7	-3.4	0.00	0.00
Extreme (30C)		2506.0000	2680.0000	-3.3	-3.0	0.00	0.00
Extreme (10C)		2506.0000	2680.0000	-2.3	-3.1	0.00	0.00
Extreme (0C)		2506.0000	2680.0000	-3.5	-3.4	0.00	0.00
Extreme (-10C)		2506.0000	2680.0000	-3.6	-3.0	0.00	0.00
Extreme (-20C)		2506.0000	2680.0000	-2.8	-2.2	0.00	0.00
Extreme (-30C)		2506.0000	2680.0000	-3.6	-3.4	0.00	0.00
20C	End Point	2506.0000	2680.0000	-2.5	-2.9	0.00	0.00

9.5. PEAK TO AVERAGE RATIO

LIMIT

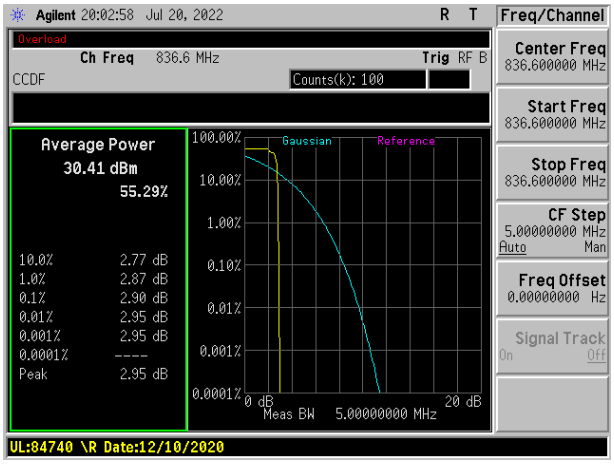
FCC 22.913 (d), 24.232 (d), 27.50 (d) (5), 27.50 (j) (4)

In addition, the peak to average power ratio (PAPR) of the transmitter shall not exceed 13 dB for more than 0.1% of the time and shall use a signal corresponding to the highest PAPR during periods of continuous transmission.

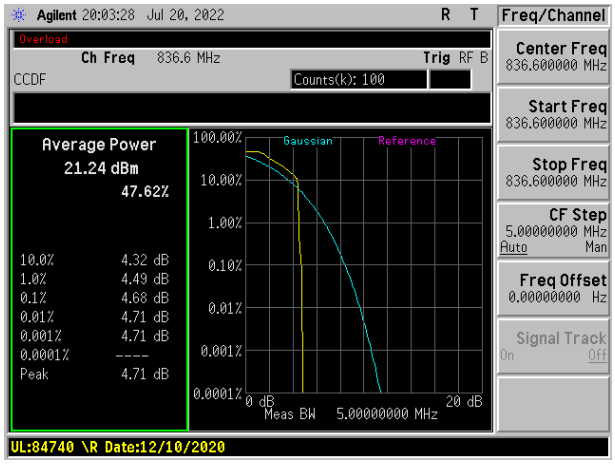
RESULTS

Antenna 1 was used to measure as the worst case; full resource block (FRB) for each bandwidth was used to measure as the worst case. The results from all CCDF measurements are passed with 13dB peak-to-average power ratio criteria.

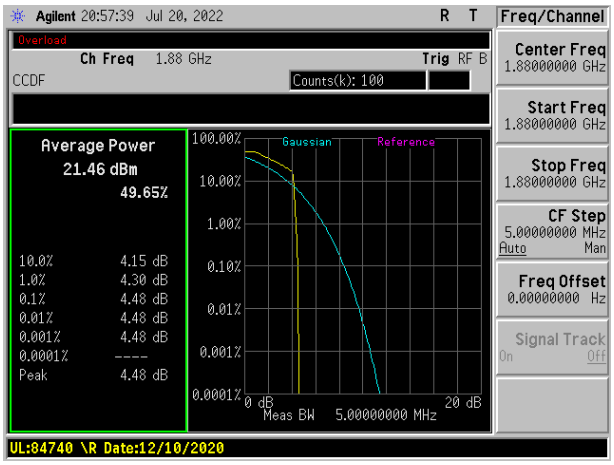
9.5.1. GSM



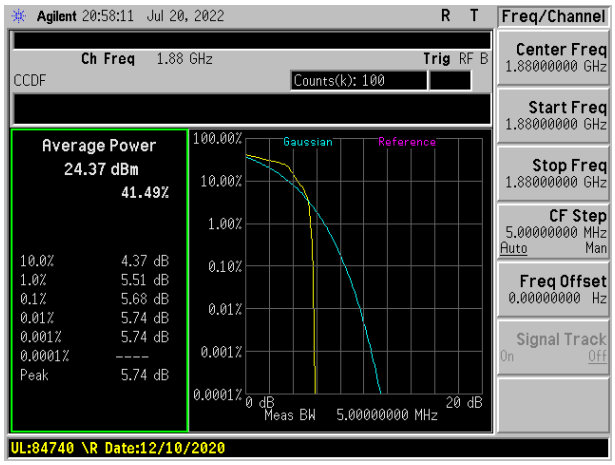
GSM850 GPRS MID Channel



GSM850 EGPRS MID Channel

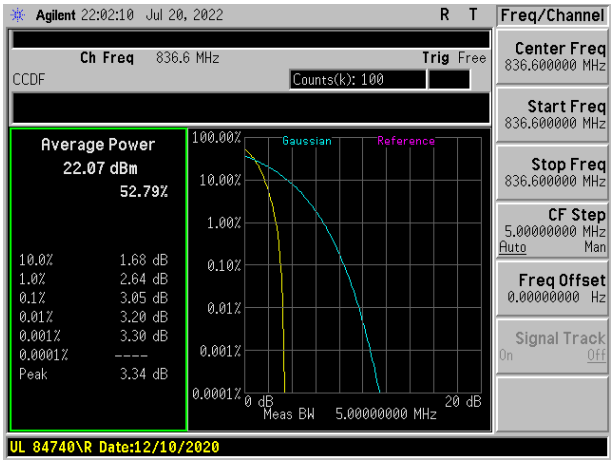


GSM1900 GPRS MID Channel

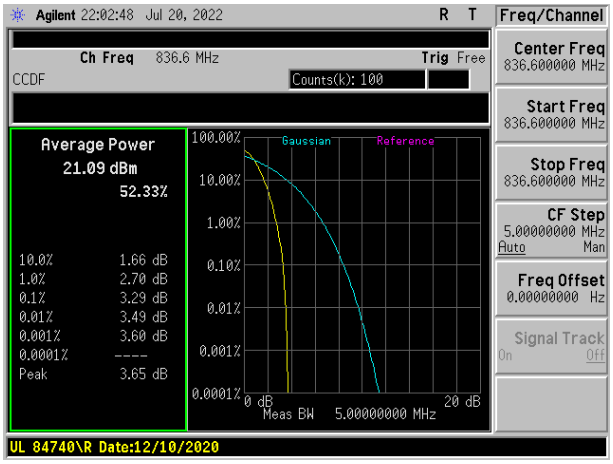


GSM1900 EGPRS MID Channel

9.5.2. WCDMA

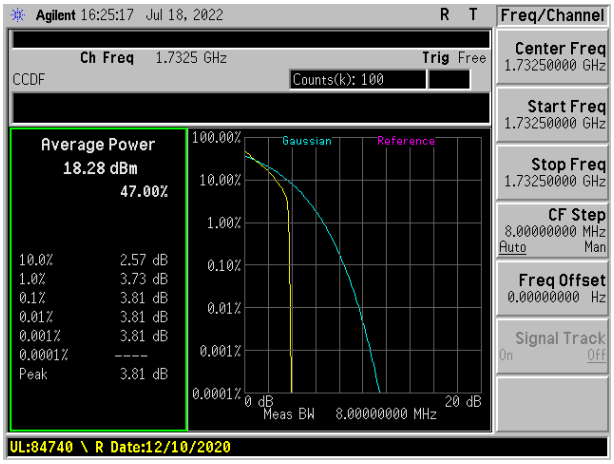


BAND 5 Rel 99 MID Channel

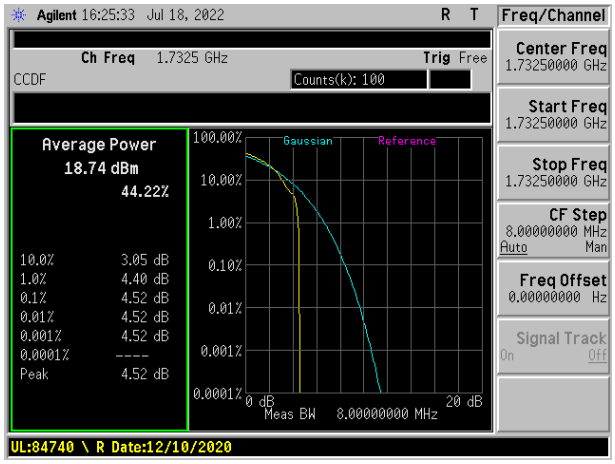


BAND 5 HSDPA MID Channel

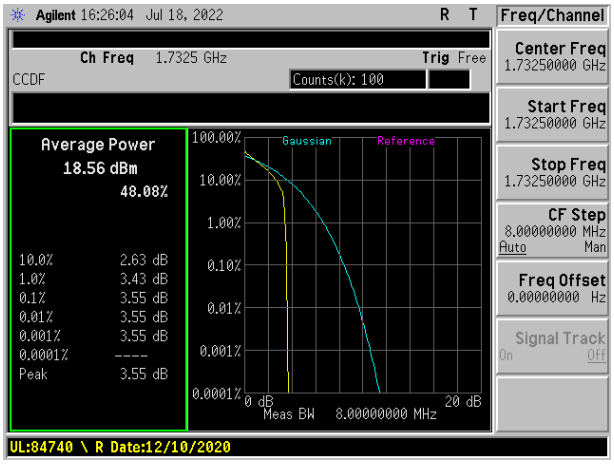
9.5.3. LTE BAND 4



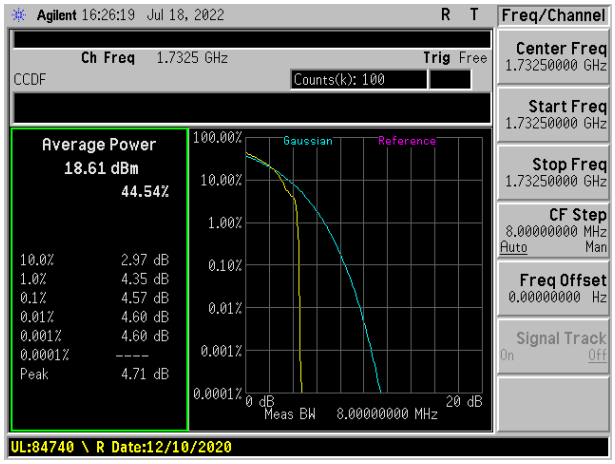
LTE4 1.4MHz QPSK MID Ch RB6-0



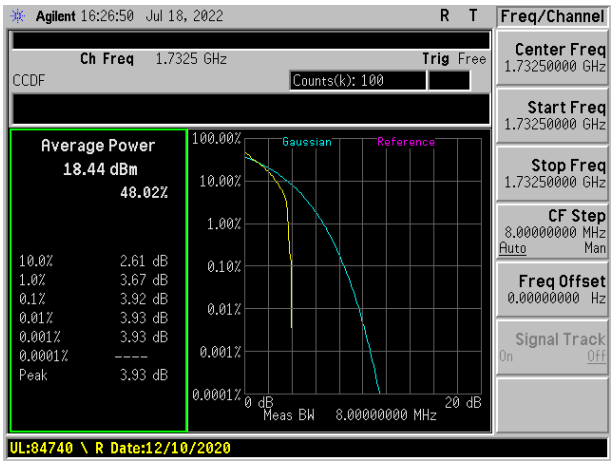
LTE4 1.4MHz 16QAM MID Ch RB6-0



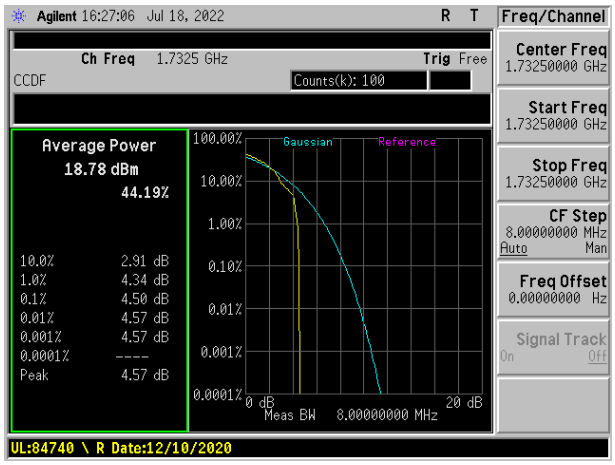
LTE4 3MHz QPSK MID Ch RB15-0



LTE4 3MHz 16QAM MID Ch RB15-0



LTE4 5MHz QPSK MID Ch RB25-0

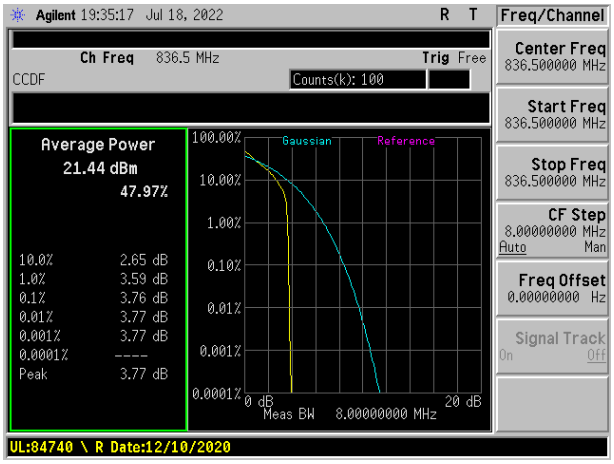


LTE4 5MHz 16QAM MID Ch RB25-0

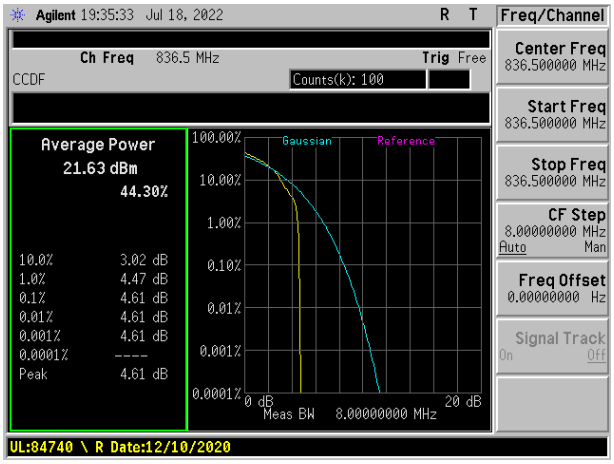
LTE Band and BW:	QPSK Mid Channel(dBm):	16QAM Mid Channel(dBm):
Band 4 10MHz	23.32 - 17.90 = 5.42	24.25 – 17.9 = 6.35
Band 4 15MHz	23.36 – 17.7 = 5.66	24.24 – 17.8 = 6.44
Band 4 20MHz	23.19 – 17.76 = 5.43	24.30 – 17.77 = 6.53

Note: Due to limitations of the test equipment PAR testing of frequencies with BWs greater than or equal to 10MHz were done with a Wideband power meter. Testing was performed in accordance with ANCI:C63.26-2015, where PAPR (dB) = P_{pk} (Meas. Peak Power) – P_{avg} (Meas. Avg Power).

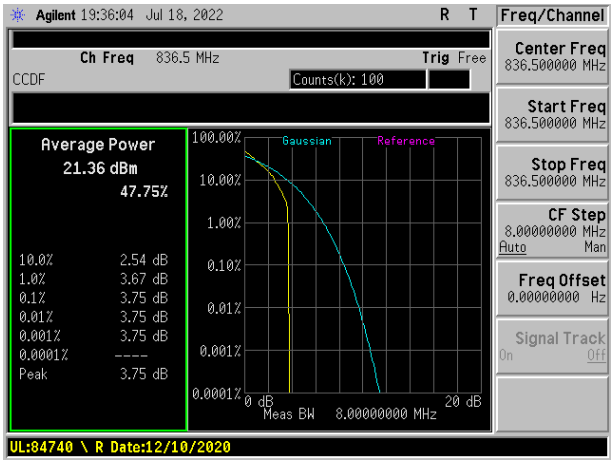
9.5.4. LTE BAND 5



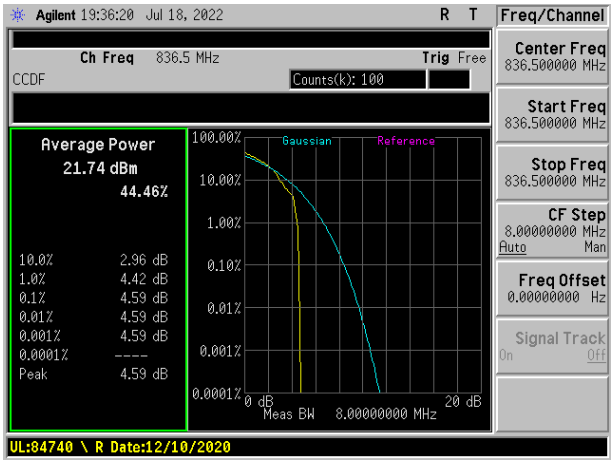
LTE5 1.4MHz QPSK MID Ch RB6-0



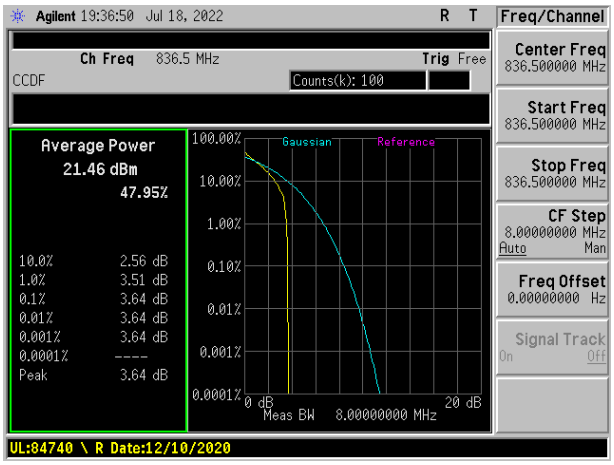
LTE5 1.4MHz 16QAM MID Ch RB6-0



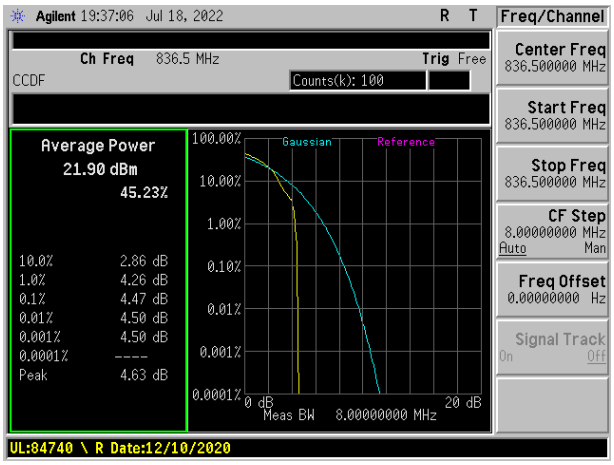
LTE5 3MHz QPSK MID Ch RB15-0



LTE5 3MHz 16QAM MID Ch RB15-0



LTE5 5MHz QPSK MID Ch RB25-0



LTE5 5MHz 16QAM MID Ch RB25-0

LTE Band and BW:	QPSK Mid Channel:	16QAM Mid Channel:
Band 5 10MHz	26.14dBm – 21.6dBm = 4.61dB	27.07dBm – 22.0dBm = 5.69dB

Note: Due to limitations of the test equipment PAR testing of frequencies with BWs greater than or equal to 10MHz were done with a Wideband power meter. Testing was performed in accordance with ANCI:C63.26-2015, where PAPR (dB) = P_{pk} (Meas. Peak Power) – P_{avg} (Meas. Avg Power).

10. RADIATED TEST RESULTS

10.1. FIELD STRENGTH OF SPURIOUS RADIATION ABOVE 1GHz

TEST PROCEDURE

KDB 971168 D01 v03r01/D02 v02/r01

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

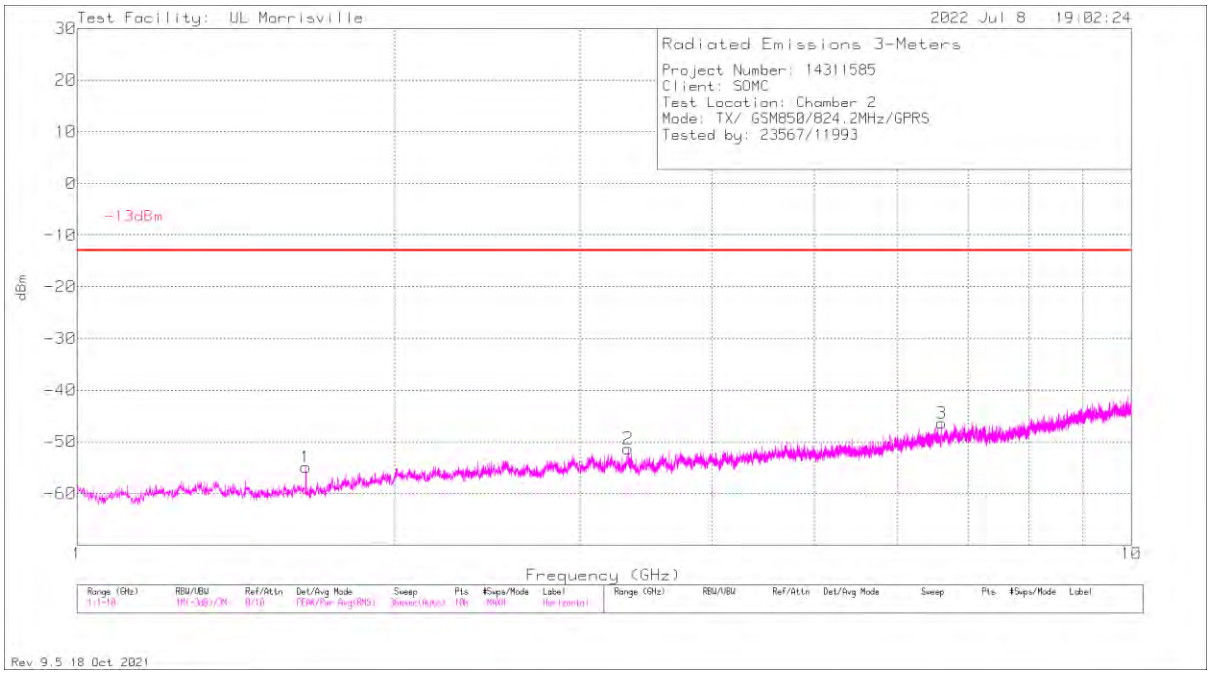
RESULTS

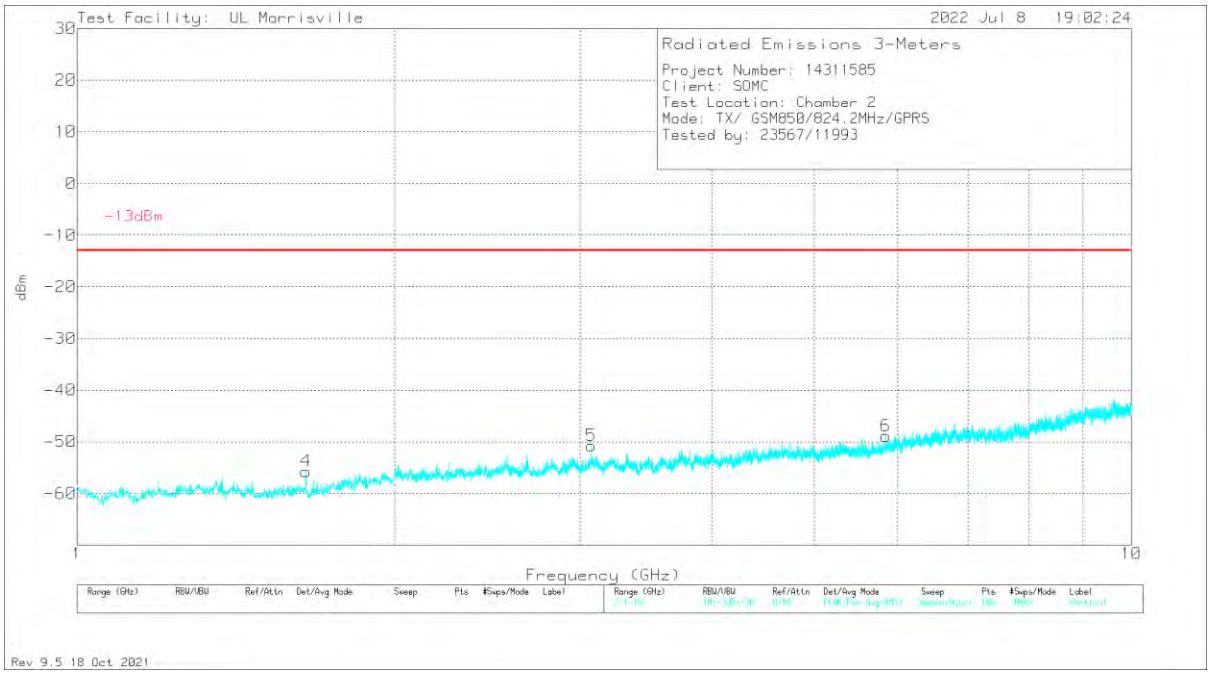
10.1.1. GSM850

LIMITS

FCC: §22.917 (a)
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

GPRS Low Channel

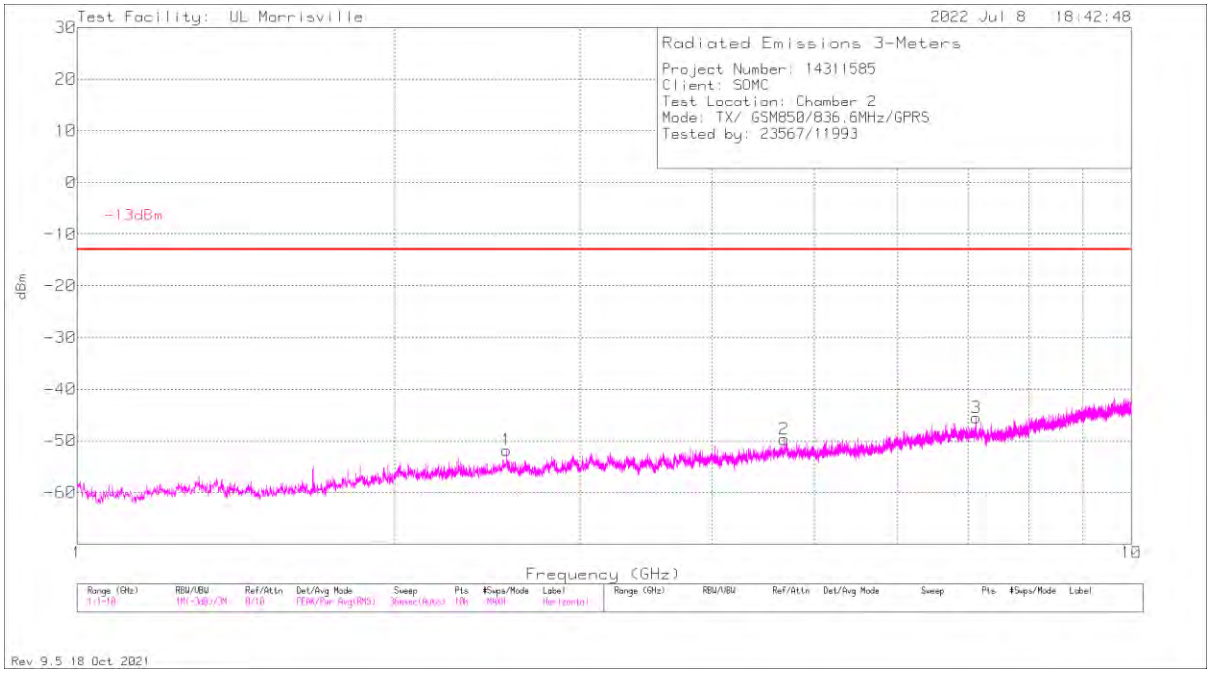


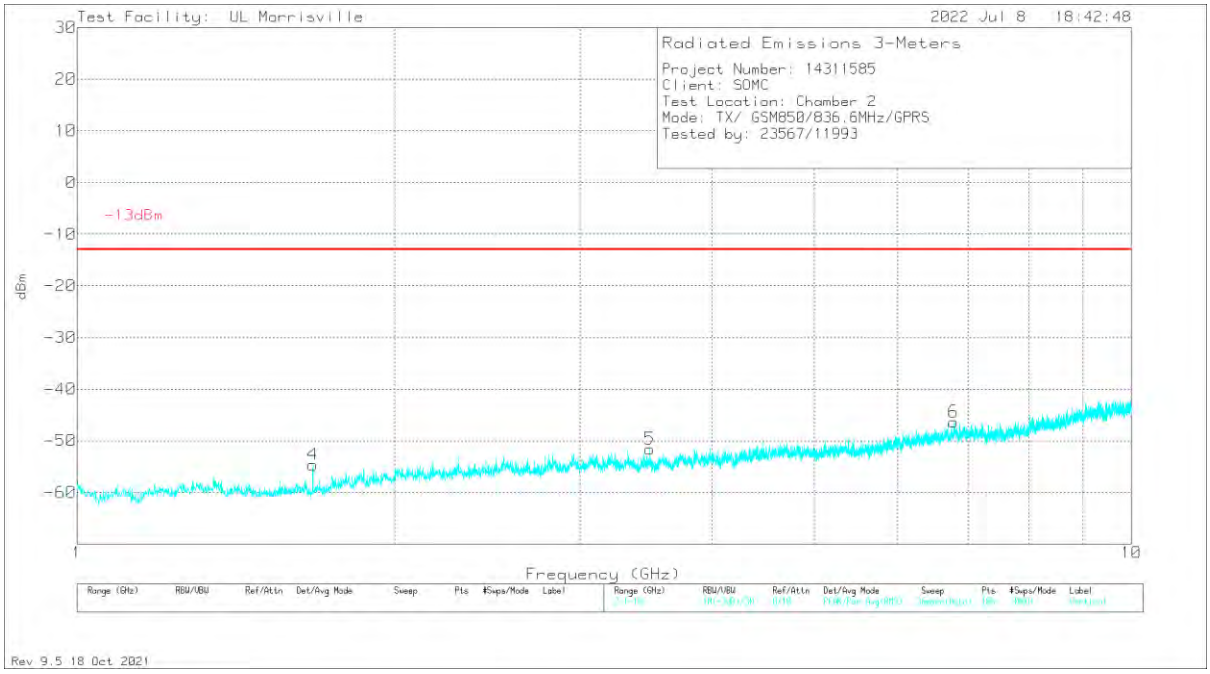


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	206211 (dB/m)	Gain/Loss (dB)	Filter (dB)	CF (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.648	-61.02	Pk	28.6	-34.8	.5	11.8	-54.92	-13	-41.92	0-360	101	H
4	1.648	-61.81	Pk	28.6	-34.8	.5	11.8	-55.71	-13	-42.71	0-360	101	V
5	3.0745	-62.85	Pk	33	-33.4	.7	11.8	-50.75	-13	-37.75	0-360	101	V
2	3.331	-63.47	Pk	32.6	-33.1	.8	11.8	-51.37	-13	-38.37	0-360	101	H
6	5.851	-66.26	Pk	34.9	-29.8	.5	11.8	-48.86	-13	-35.86	0-360	200	V
3	6.607	-65.81	Pk	35.6	-28.6	.6	11.8	-46.41	-13	-33.41	0-360	101	H

Pk - Peak detector

GPRS Mid channel

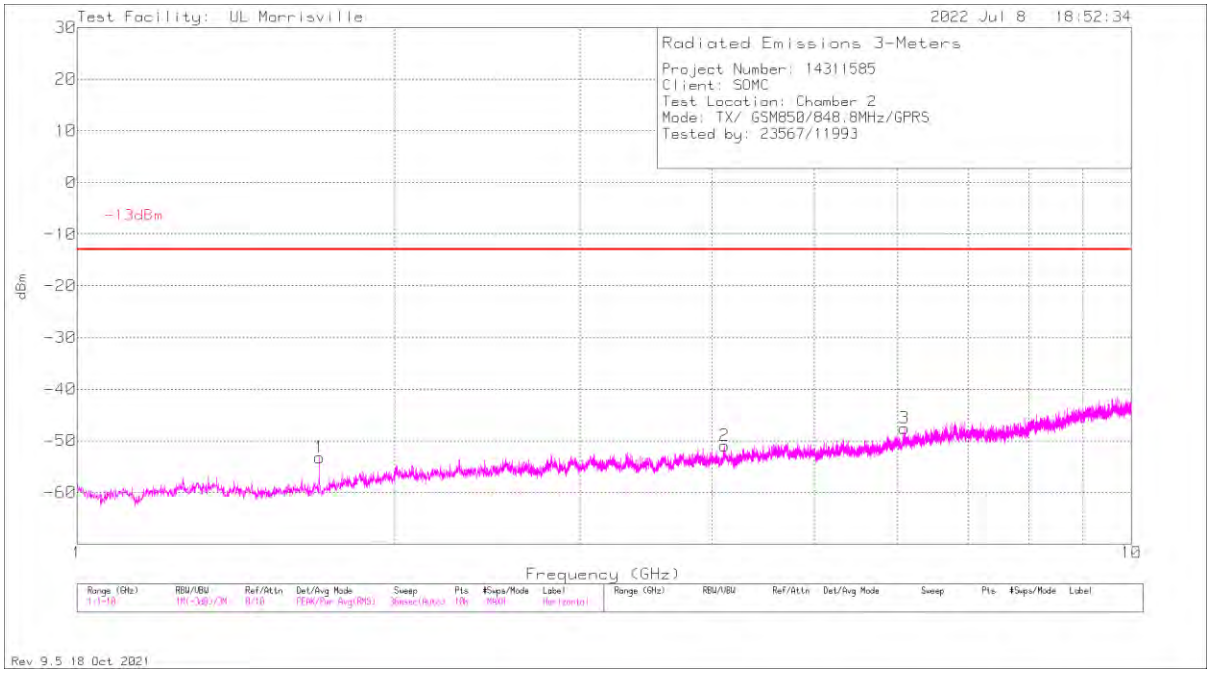


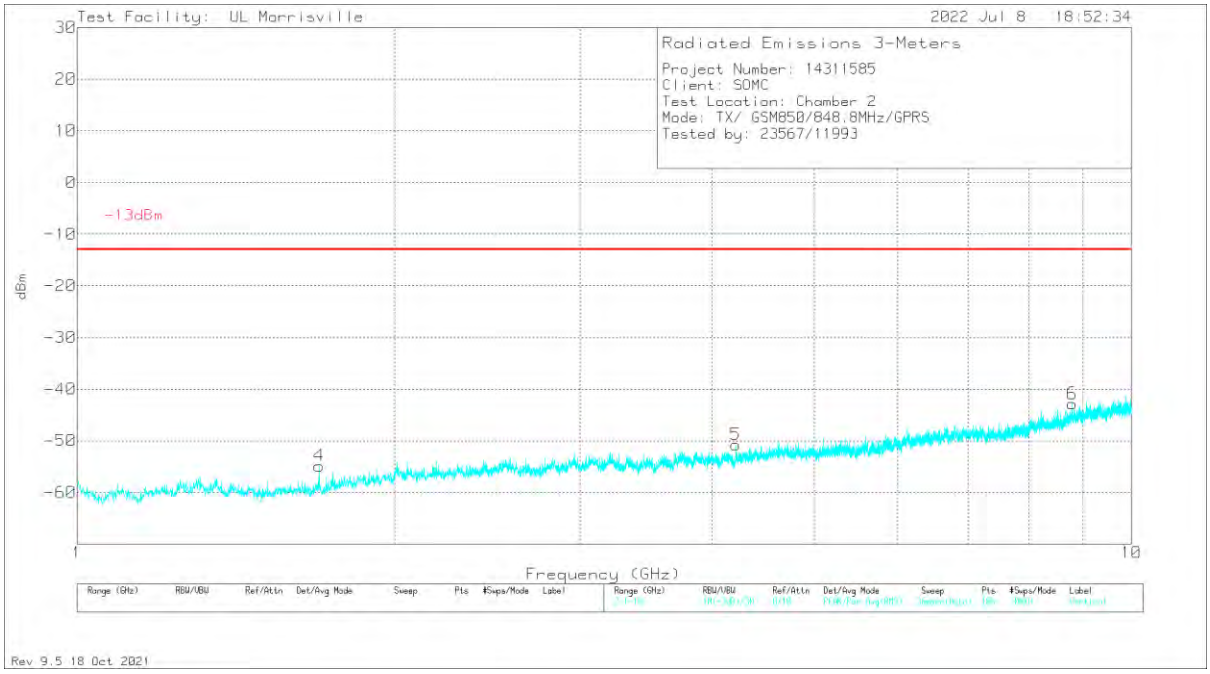


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	206211 (dB/m)	Gain/Loss (dB)	Filter (dB)	CF (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	1.6732	-60.81	Pk	28.5	-34.6	.5	11.8	-54.61	-13	-41.61	0-360	101	V
1	2.5543	-63.01	Pk	32.5	-33.6	.5	11.8	-51.81	-13	-38.81	0-360	200	H
5	3.4921	-63.58	Pk	32.5	-32.8	.5	11.8	-51.58	-13	-38.58	0-360	101	V
2	4.6855	-65.01	Pk	34.1	-30.9	.3	11.8	-49.71	-13	-36.71	0-360	100	H
6	6.7816	-65.68	Pk	35.6	-28.8	.7	11.8	-46.38	-13	-33.38	0-360	200	V
3	7.1254	-65.54	Pk	35.7	-28	.5	11.8	-45.54	-13	-32.54	0-360	300	H

Pk - Peak detector

GPRS High Channel

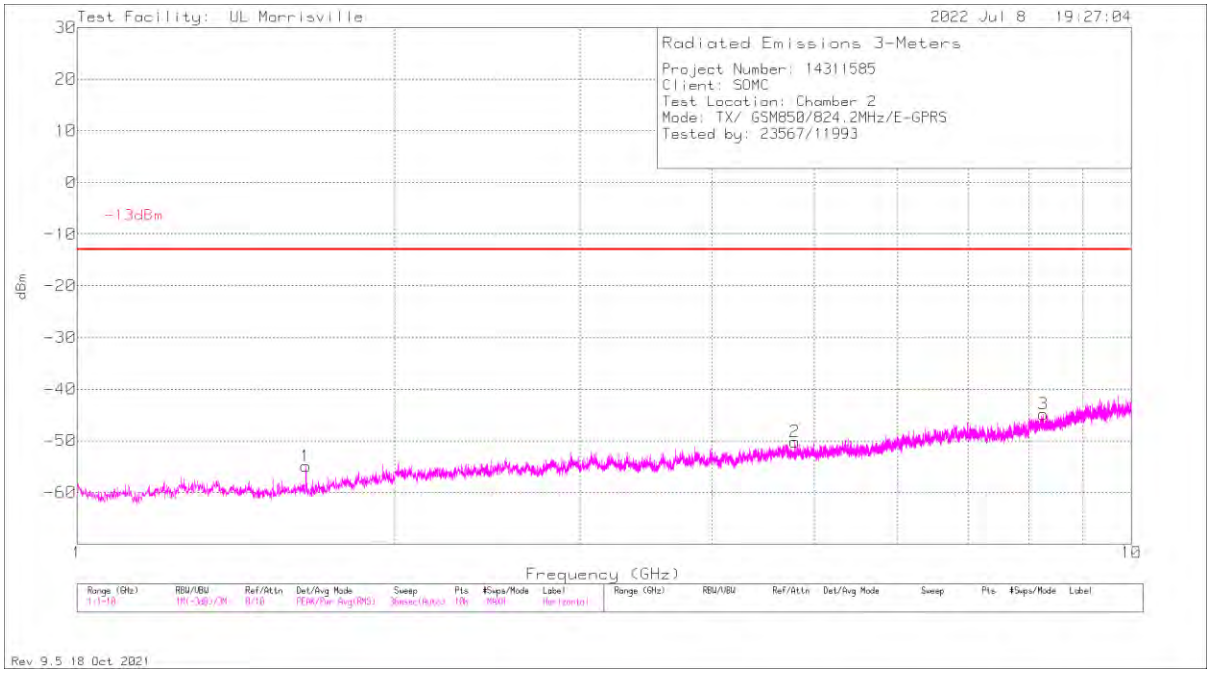


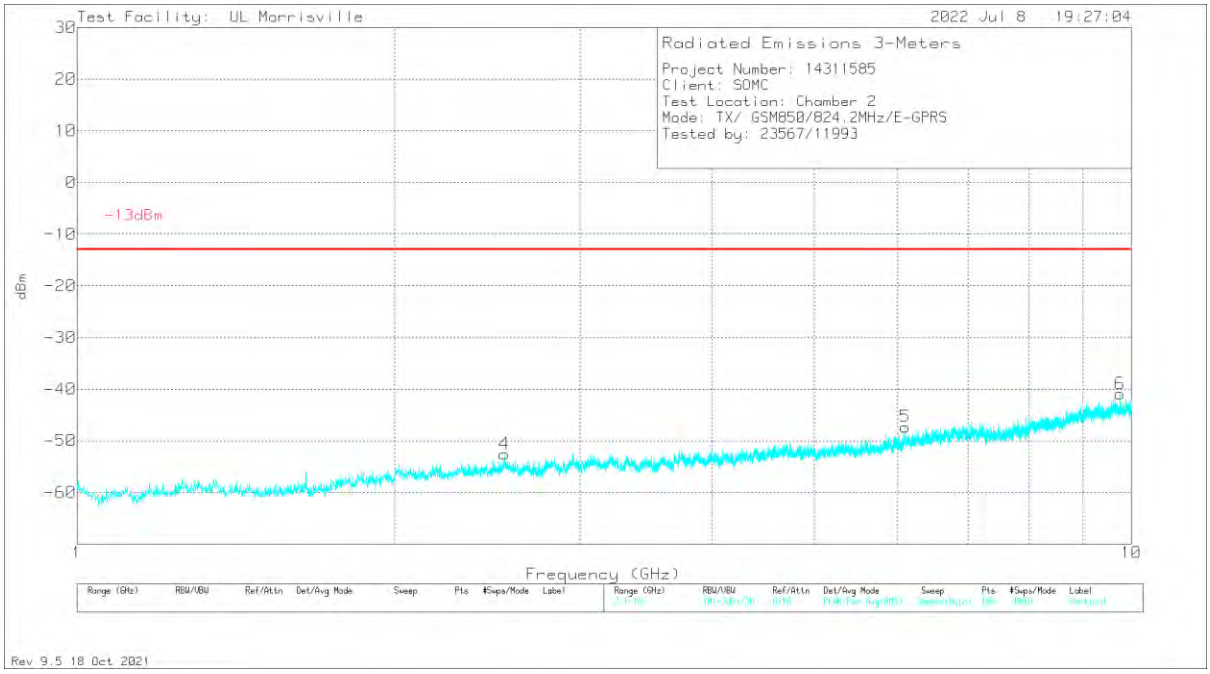


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	206211 (dB/m)	Gain/Loss (dB)	Filter (dB)	CF (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
4	1.6966	-61.35	Pk	28.7	-34.5	.5	11.8	-54.85	-13	-41.85	0-360	101	V
1	1.6975	-59.75	Pk	28.7	-34.5	.5	11.8	-53.25	-13	-40.25	0-360	101	H
2	4.1095	-64.95	Pk	33.4	-31.7	.5	11.8	-50.95	-13	-37.95	0-360	199	H
5	4.2157	-64.13	Pk	33.2	-31.9	.3	11.8	-50.73	-13	-37.73	0-360	101	V
3	6.0904	-66.24	Pk	35.2	-29.1	.8	11.8	-47.54	-13	-34.54	0-360	101	H
6	8.7886	-64.93	Pk	36	-26.2	.5	11.8	-42.83	-13	-29.83	0-360	101	V

Pk - Peak detector

EGPRS Low Channel

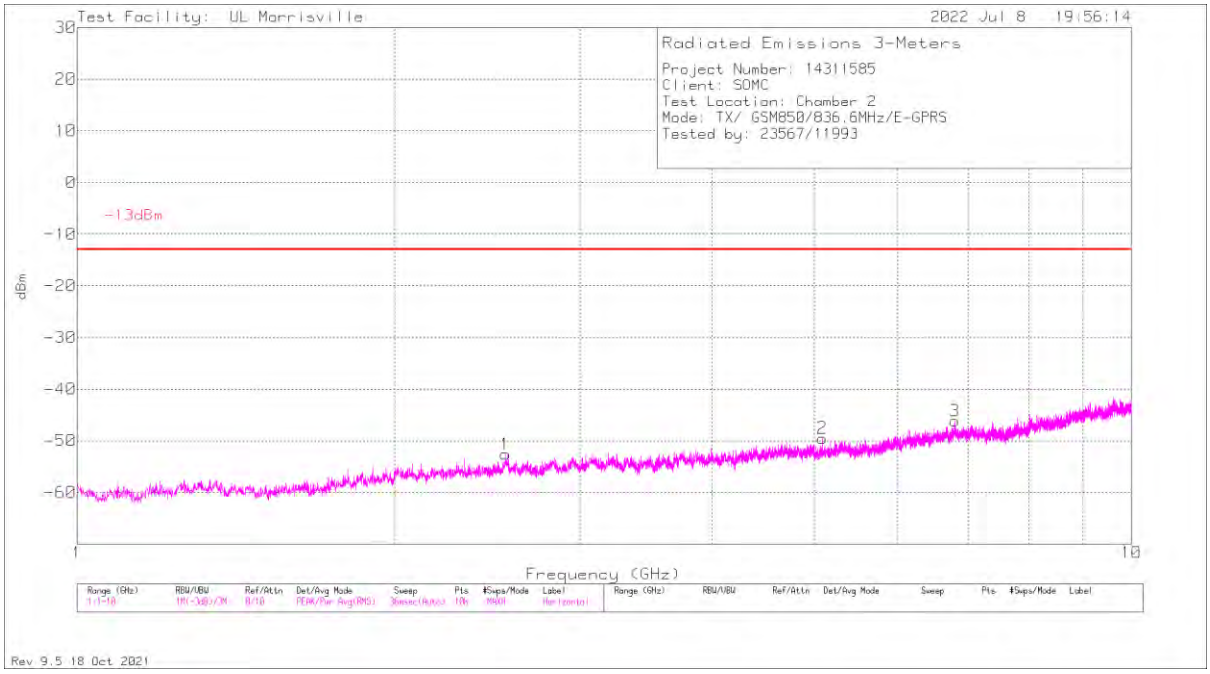


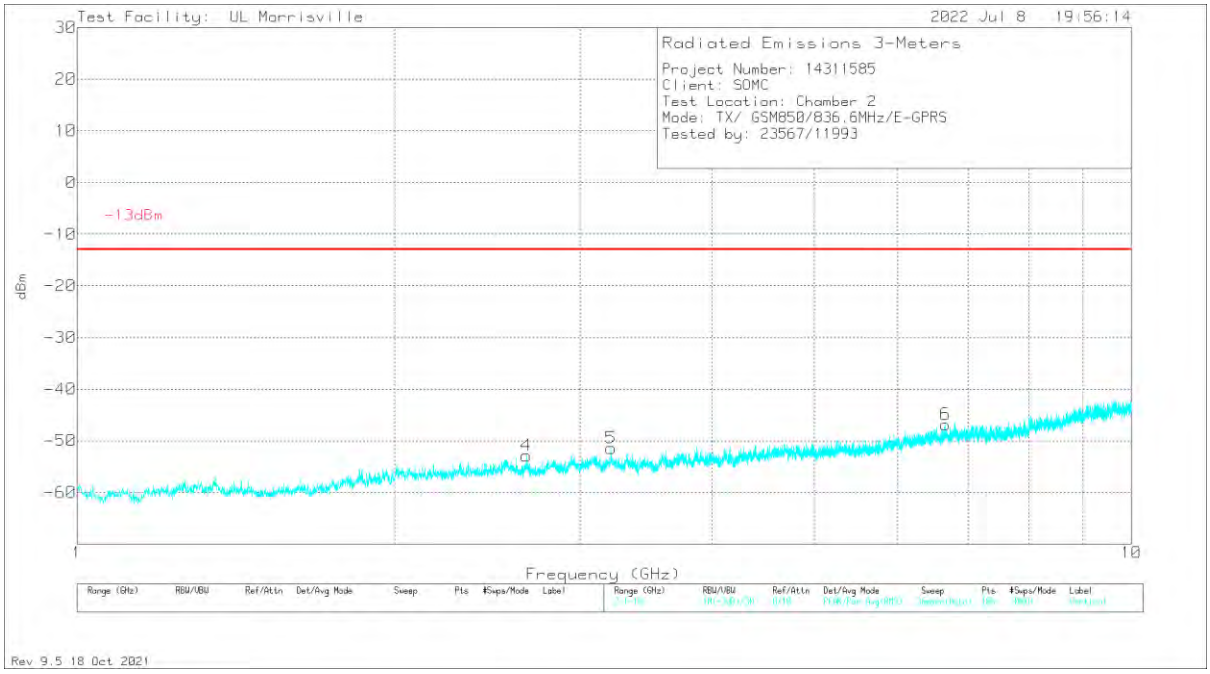


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	206211 (dB/m)	Gain/Loss (dB)	Filter (dB)	CF (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.648	-61.04	Pk	28.6	-34.8	.5	11.8	-54.94	-13	-41.94	0-360	101	H
4	2.5426	-63.68	Pk	32.5	-33.7	.5	11.8	-52.58	-13	-39.58	0-360	201	V
2	4.7935	-65	Pk	34	-31.3	.3	11.8	-50.2	-13	-37.2	0-360	300	H
5	6.1012	-65.91	Pk	35.3	-29.2	.7	11.8	-47.31	-13	-34.31	0-360	201	V
3	8.2522	-65.86	Pk	35.8	-27	.4	11.8	-44.86	-13	-31.86	0-360	101	H
6	9.7516	-64.59	Pk	36.8	-25.8	.9	11.8	-40.89	-13	-27.89	0-360	300	V

Pk - Peak detector

EGPRS Mid Channel

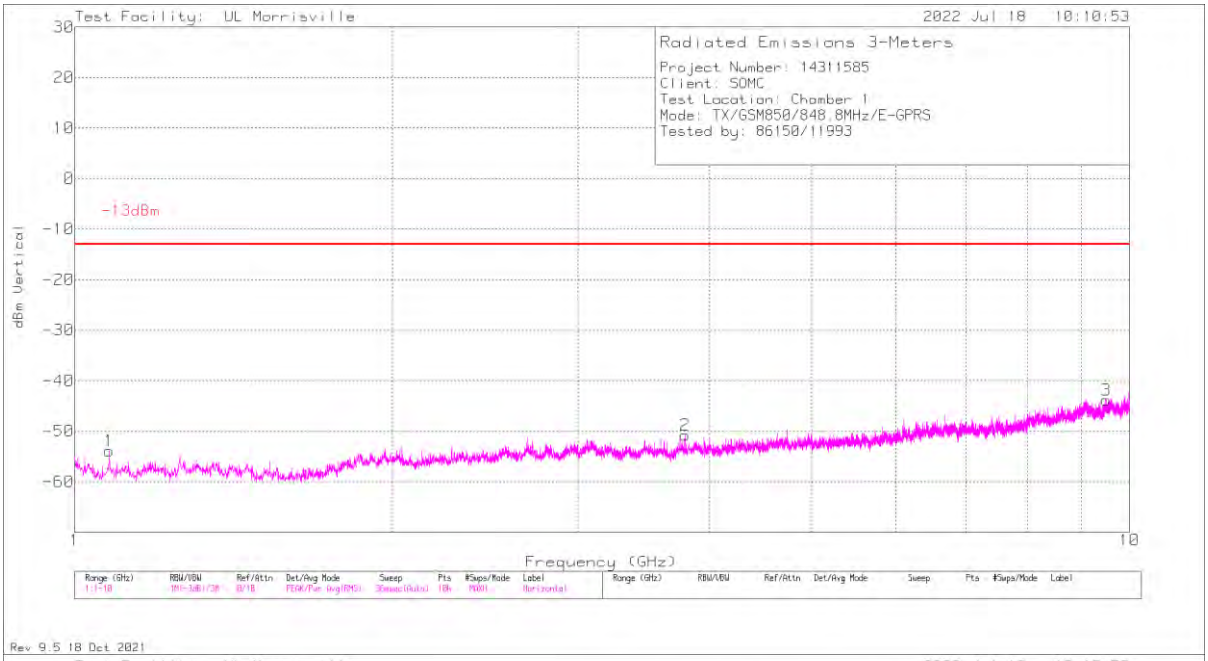


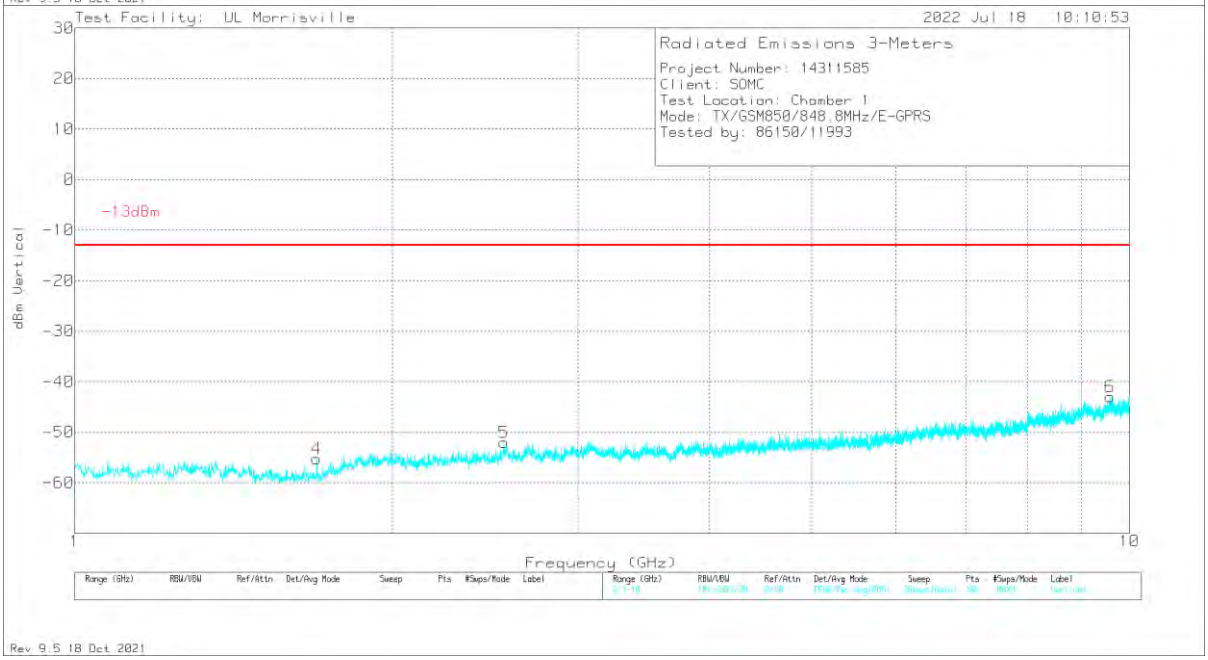


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	206211 (dB/m)	Gain/Loss (dB)	Filter (dB)	CF (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	2.5489	-63.83	Pk	32.5	-33.6	.5	11.8	-52.63	-13	-39.63	0-360	300	H
4	2.6677	-63.48	Pk	32.1	-33.8	.5	11.8	-52.88	-13	-39.88	0-360	200	V
5	3.2095	-63.62	Pk	32.8	-33.2	.8	11.8	-51.42	-13	-38.42	0-360	101	V
2	5.0896	-64.32	Pk	34.1	-31.5	.4	11.8	-49.52	-13	-36.52	0-360	300	H
6	6.6601	-66.34	Pk	35.6	-28.5	.6	11.8	-46.84	-13	-33.84	0-360	300	V
3	6.7987	-66.24	Pk	35.6	-28	.7	11.8	-46.14	-13	-33.14	0-360	200	H

Pk - Peak detector

EGPRS High Channel





Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0072 (dB/m)	Gain/Loss (dB)	Filter (dB)	CF (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.0783	-59	Pk	27.7	-35.6	1.2	11.8	-53.9	-13	-40.9	0-360	101	H
4	1.6966	-60.82	Pk	29	-35.7	.5	11.8	-55.22	-13	-42.22	0-360	200	V
5	2.5516	-62.65	Pk	32.6	-34.3	.5	11.8	-52.05	-13	-39.05	0-360	200	V
2	3.79	-63.14	Pk	33.4	-33	.2	11.8	-50.74	-13	-37.74	0-360	300	H
3	9.5104	-64.86	Pk	36.8	-28.5	.9	11.8	-43.86	-13	-30.86	0-360	300	H
6	9.5833	-63.34	Pk	36.8	-28.8	.6	11.8	-42.94	-13	-29.94	0-360	200	V

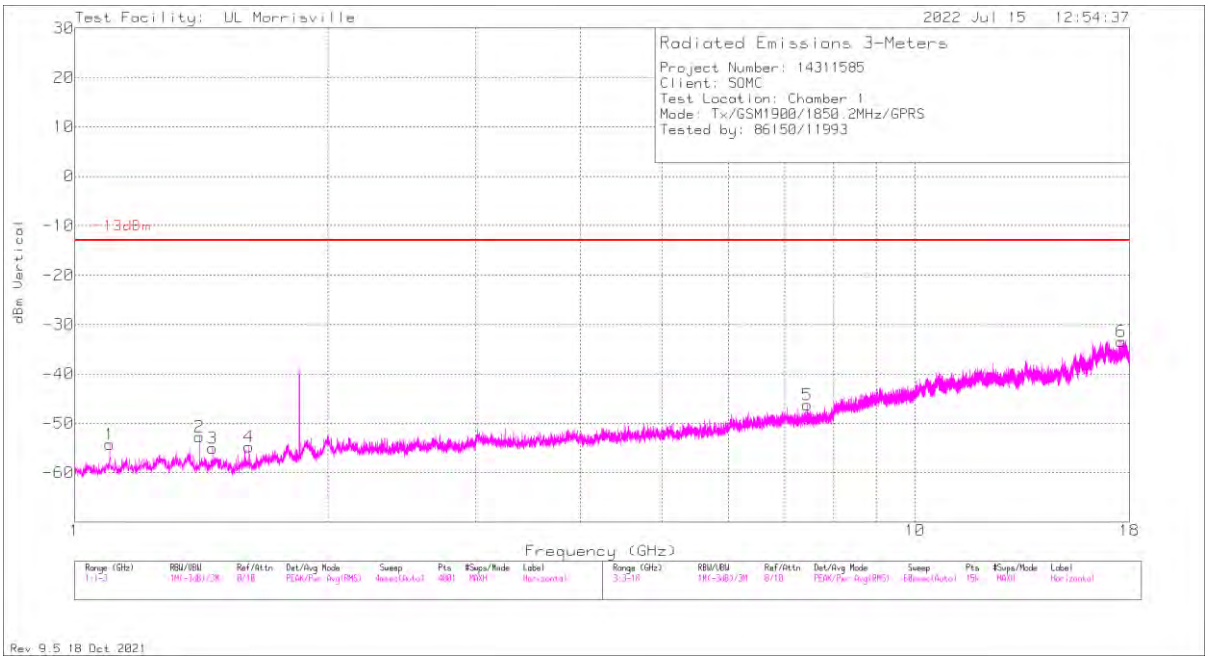
Pk - Peak detector

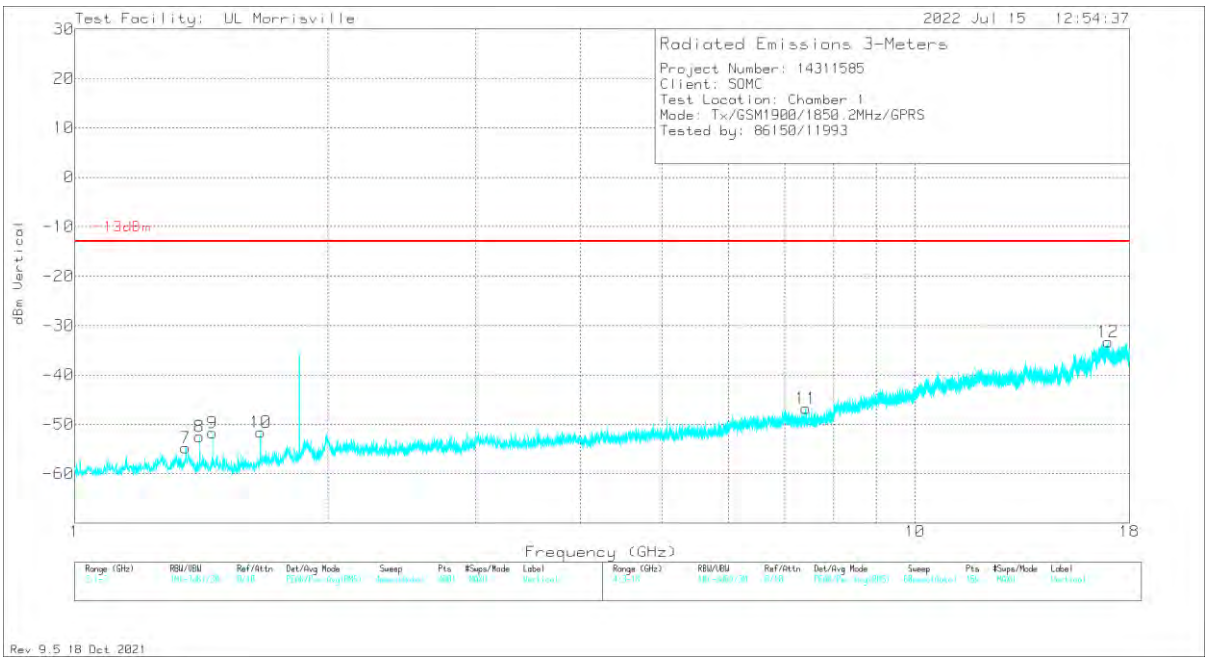
10.1.2. GSM1900

LIMITS

FCC: §24.238 (a)
The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43 + 10 log (P) dB.

GPRS Low Channel

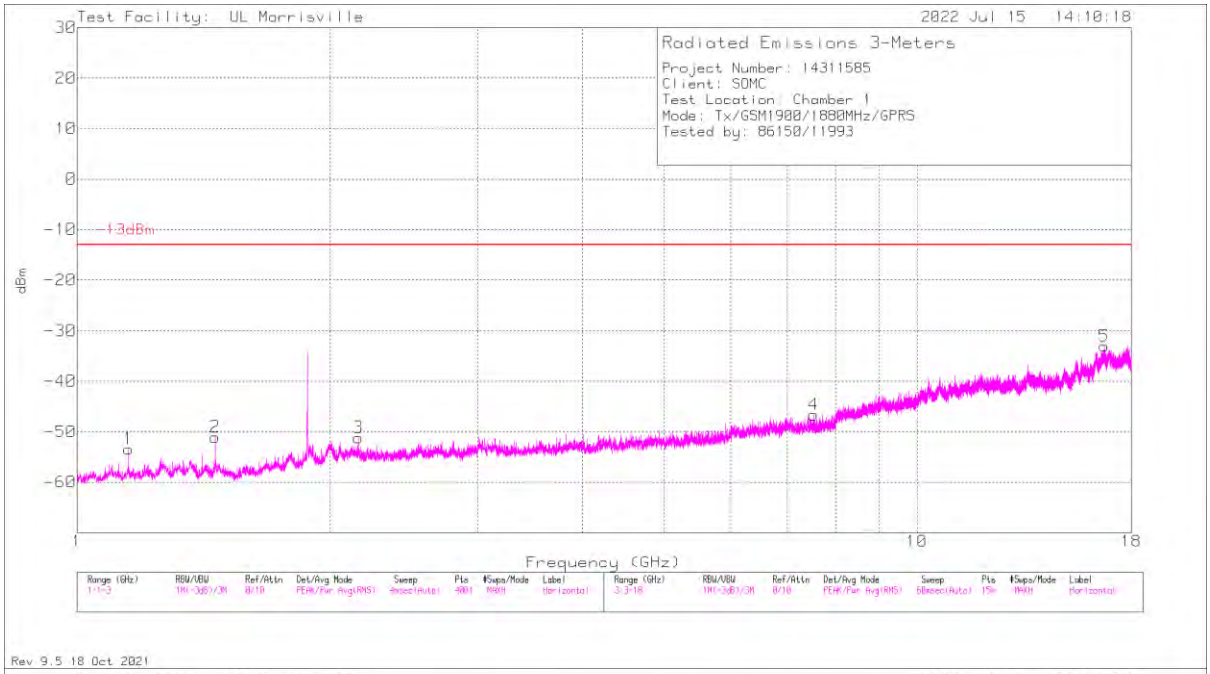


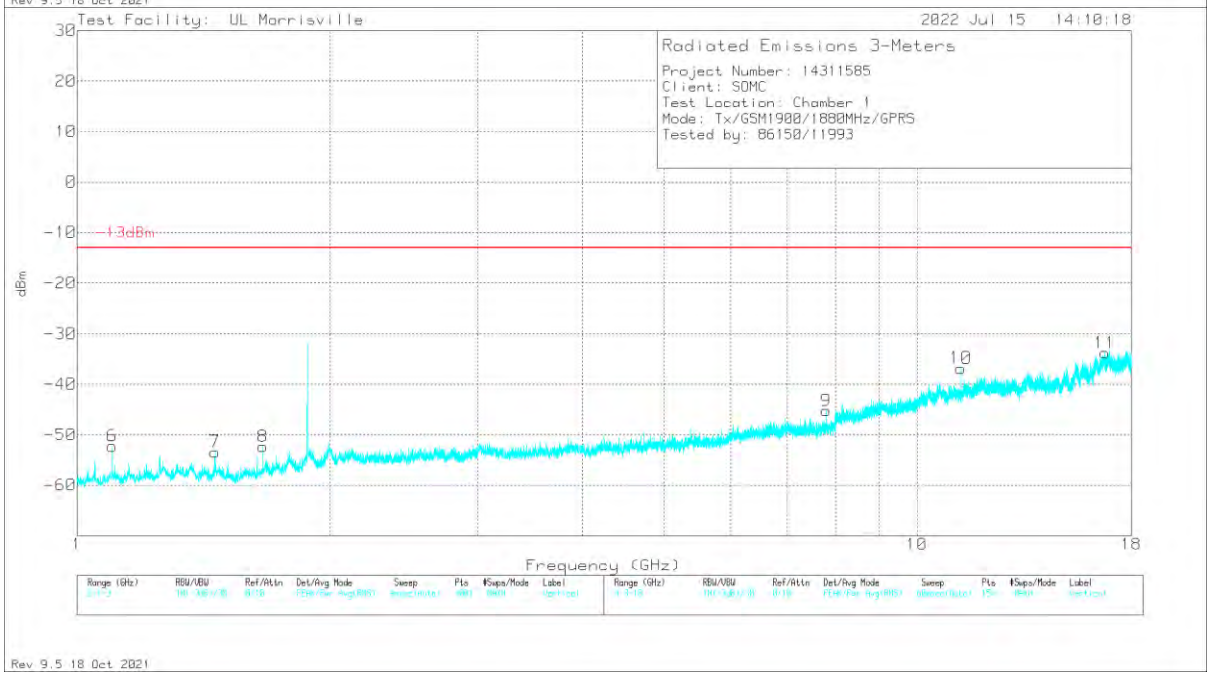


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0072 (dB/m)	Gain/Loss (dB)	CF (dB)	Filter (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.101	-58.41	Pk	28.1	-36	11.8	.3	-54.21	-13	-41.21	0-360	101	H
7	1.356	-60.54	Pk	29.6	-36.2	11.8	.6	-54.74	-13	-41.74	0-360	101	V
2	1.4075	-58.56	Pk	28.7	-35.5	11.8	.8	-52.76	-13	-39.76	0-360	101	H
8	1.4075	-58.24	Pk	28.7	-35.5	11.8	.8	-52.44	-13	-39.44	0-360	200	V
3	1.4585	-60.79	Pk	28.5	-35.3	11.8	.8	-54.99	-13	-41.99	0-360	300	H
9	1.459	-57.56	Pk	28.5	-35.3	11.8	.8	-51.76	-13	-38.76	0-360	200	V
4	1.6125	-60.87	Pk	28.4	-35.4	11.8	1.3	-54.77	-13	-41.77	0-360	300	H
10	1.664	-58.13	Pk	28.6	-35.6	11.8	1.7	-51.63	-13	-38.63	0-360	101	V
11	7.414	-65.11	Pk	35.6	-29.1	11.8	0	-46.81	-13	-33.81	0-360	101	V
5	7.451	-64.2	Pk	35.6	-29.4	11.8	0	-46.2	-13	-33.2	0-360	300	H
12	16.968	-63.32	Pk	41.8	-23.6	11.8	0	-33.32	-13	-20.32	0-360	200	V
6	17.614	-63.58	Pk	41.2	-22.8	11.8	0	-33.38	-13	-20.38	0-360	300	H

Pk - Peak detector

GPRS Mid Channel

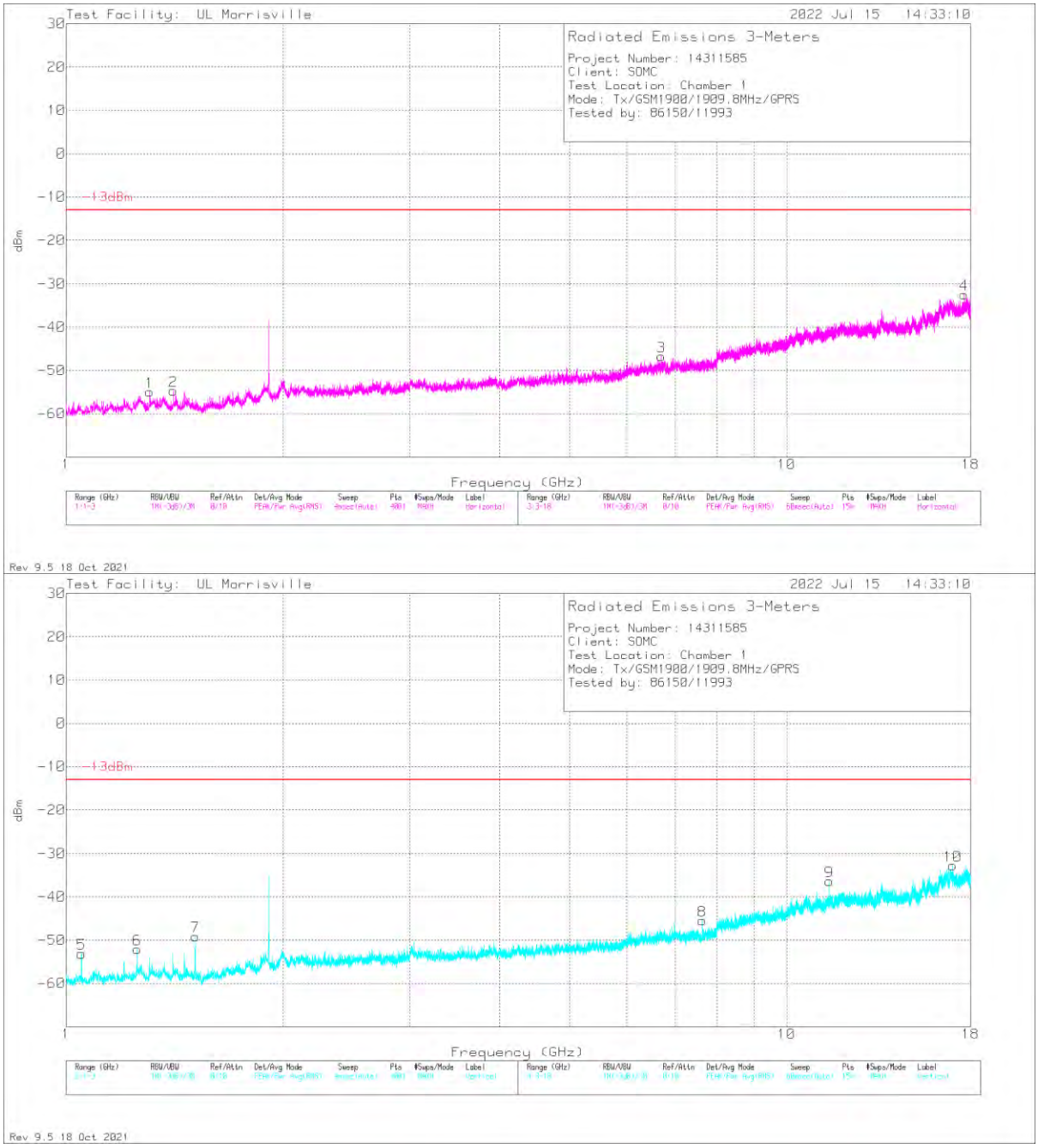




Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0072 (dB/m)	Gain/Loss (dB)	CF (dB)	Filter (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
6	1.101	-56.46	Pk	28.1	-36	11.8	.3	-52.26	-13	-39.26	0-360	200	V
1	1.1515	-57.91	Pk	28.1	-35.7	11.8	.3	-53.41	-13	-40.41	0-360	200	H
7	1.459	-59.21	Pk	28.5	-35.3	11.8	.8	-53.41	-13	-40.41	0-360	200	V
2	1.46	-56.96	Pk	28.5	-35.2	11.8	.8	-51.06	-13	-38.06	0-360	300	H
8	1.664	-58.86	Pk	28.6	-35.6	11.8	1.7	-52.36	-13	-39.36	0-360	101	V
3	2.1605	-60.97	Pk	31.4	-34.8	11.8	1.4	-51.17	-13	-38.17	0-360	200	H
4	7.532	-64.75	Pk	35.7	-29.4	11.8	0	-46.65	-13	-33.65	0-360	101	H
9	7.793	-63.85	Pk	35.8	-29	11.8	0	-45.25	-13	-32.25	0-360	299	V
10	11.279	-60.14	Pk	38	-26.5	11.8	0	-36.84	-13	-23.84	0-360	101	V
5	16.711	-63.54	Pk	41.8	-23.1	11.8	0	-33.04	-13	-20.04	0-360	300	H
11	16.743	-63.78	Pk	41.9	-23.7	11.8	0	-33.78	-13	-20.78	0-360	299	V

Pk - Peak detector

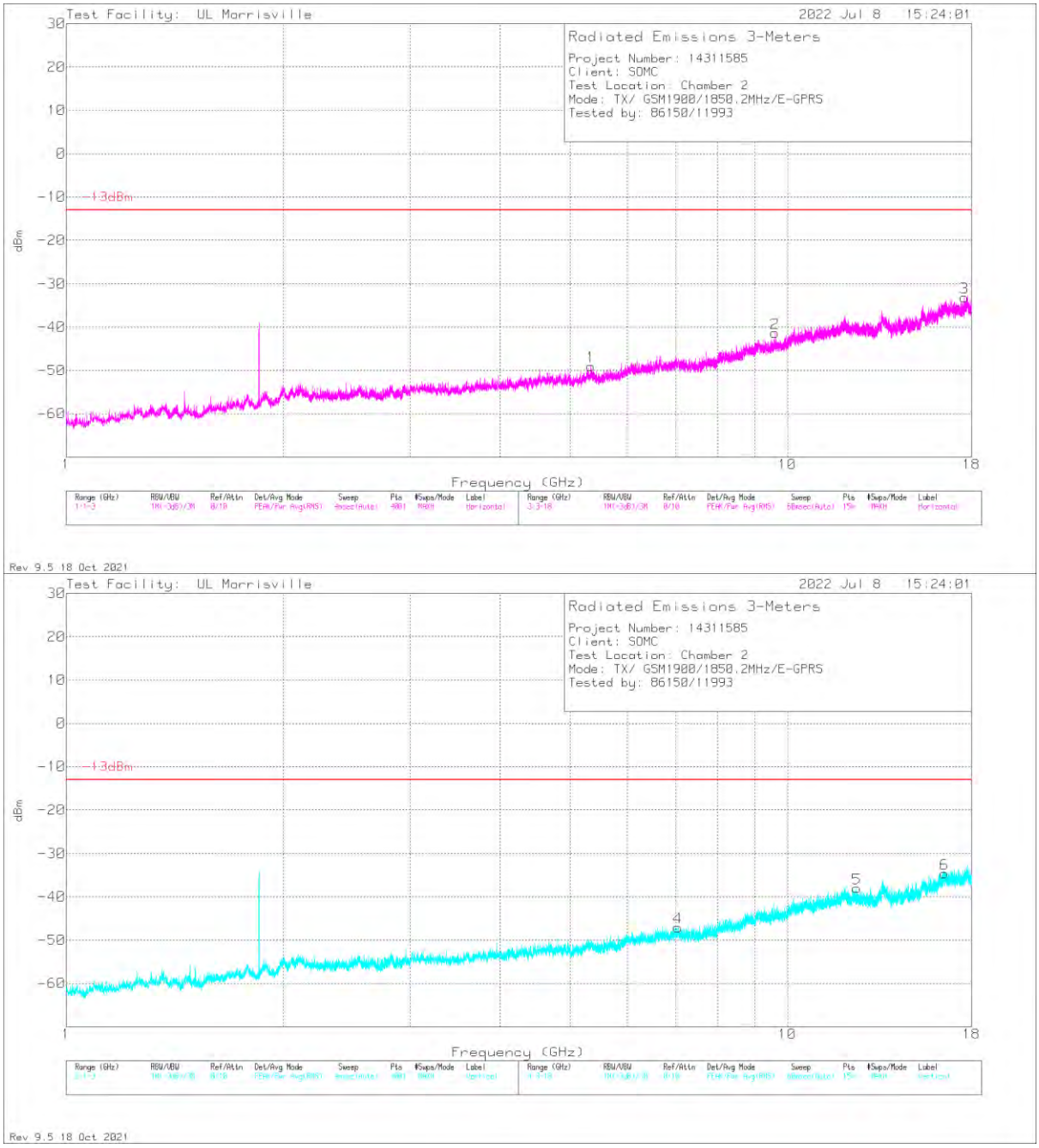
GPRS High Channel



Marker	Frequency (GHz)	Meter Reading (dBm)	Det	AT0072 (dB/m)	Gain/Loss (dB)	CF (dB)	Filter (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
5	1.05	-56.73	Pk	27.2	-35.7	11.8	.3	-53.13	-13	-40.13	0-360	300	V
6	1.255	-57.89	Pk	29.4	-35.9	11.8	.5	-52.09	-13	-39.09	0-360	200	V
1	1.3055	-60.76	Pk	29.5	-36	11.8	.5	-54.96	-13	-41.96	0-360	100	H
2	1.408	-60.5	Pk	28.7	-35.5	11.8	.8	-54.7	-13	-41.7	0-360	299	H
7	1.5105	-54.66	Pk	28.1	-35.4	11.8	1	-49.16	-13	-36.16	0-360	101	V
3	6.701	-64.35	Pk	35.5	-29.7	11.8	0	-46.75	-13	-33.75	0-360	101	H
8	7.634	-63.78	Pk	35.7	-29.2	11.8	0	-45.48	-13	-32.48	0-360	101	V
9	11.459	-60.62	Pk	38.1	-25.7	11.8	0	-36.42	-13	-23.42	0-360	101	V
10	17	-62.1	Pk	41.8	-24.3	11.8	0	-32.8	-13	-19.8	0-360	200	V
4	17.618	-63.3	Pk	41.2	-22.2	11.8	0	-32.5	-13	-19.5	0-360	199	H

Pk - Peak detector

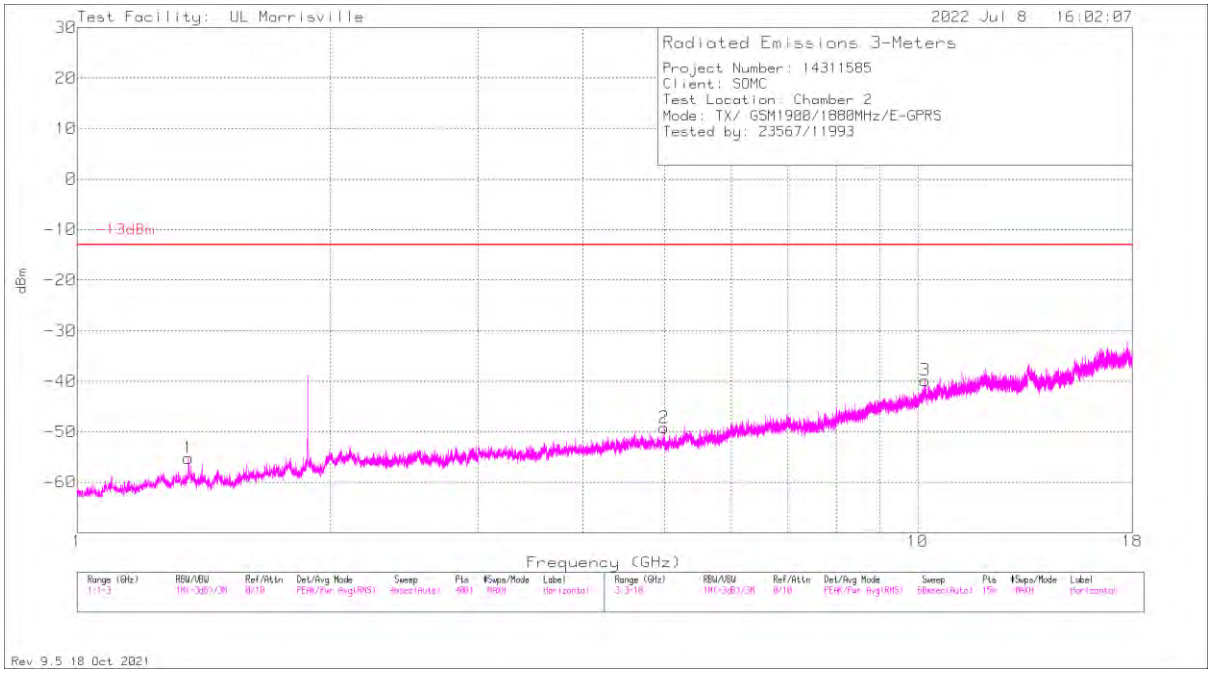
EGPRS Low Channel

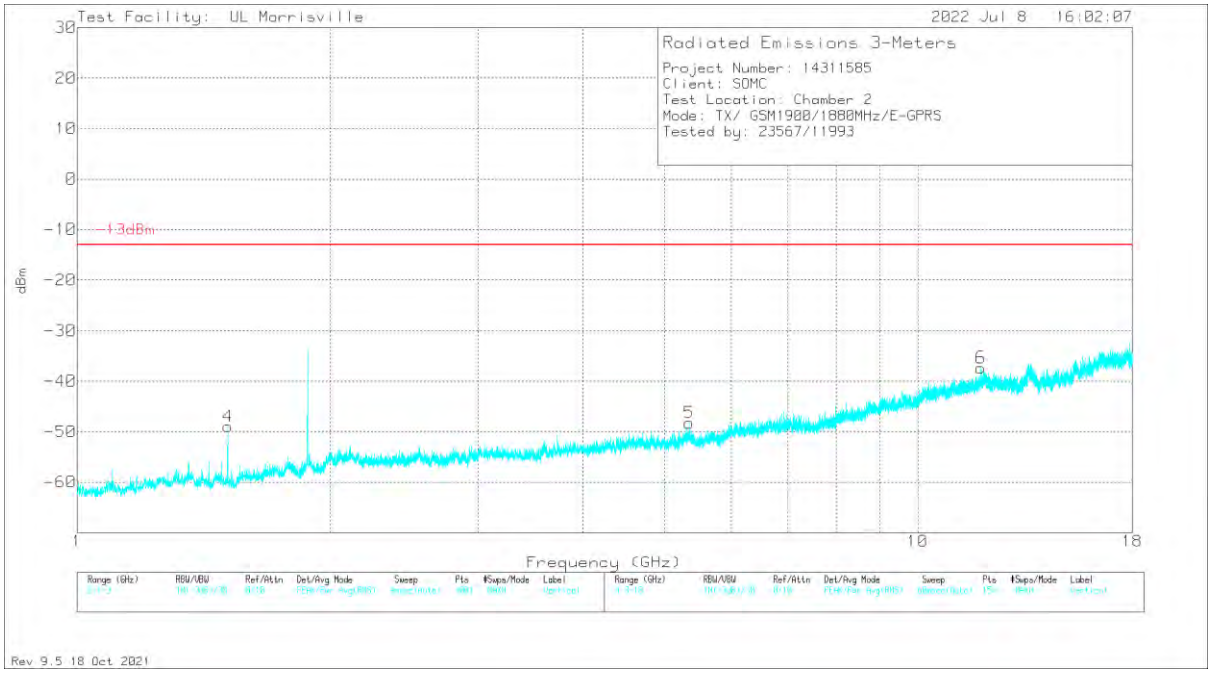


Marker	Frequency (GHz)	Meter Reading (dBm)	Det	206211 (dB/m)	Gain/Loss (dB)	CF (dB)	Filter (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	5.34	-66.55	Pk	34.6	-28.9	11.8	0	-49.05	-13	-36.05	0-360	300	H
4	7.049	-67.29	Pk	35.6	-27.2	11.8	0	-47.09	-13	-34.09	0-360	101	V
2	9.609	-64.78	Pk	36.7	-25.1	11.8	0	-41.38	-13	-28.38	0-360	200	H
5	12.482	-64.71	Pk	38.9	-24	11.8	0	-38.01	-13	-25.01	0-360	101	V
6	16.512	-65.65	Pk	41.3	-22.1	11.8	0	-34.65	-13	-21.65	0-360	300	V
3	17.603	-65.34	Pk	41.2	-20.8	11.8	0	-33.14	-13	-20.14	0-360	101	H

Pk - Peak detector

EGPRS Mid Channel





Marker	Frequency (GHz)	Meter Reading (dBm)	Det	206211 (dB/m)	Gain/Loss (dB)	CF (dB)	Filter (dB)	Corrected Reading dBm	-13dBm	Margin (dB)	Azimuth (Degs)	Height (cm)	Polarity
1	1.3565	-62.04	Pk	29.2	-34.8	11.8	.6	-55.24	-13	-42.24	0-360	299	H
4	1.511	-54.67	Pk	27.7	-34.8	11.8	1	-48.97	-13	-35.97	0-360	200	V
2	4.991	-64.31	Pk	34	-30.7	11.8	0	-49.21	-13	-36.21	0-360	200	H
5	5.348	-66.17	Pk	34.6	-28.5	11.8	0	-48.27	-13	-35.27	0-360	201	V
3	10.205	-64.71	Pk	37.3	-24.2	11.8	0	-39.81	-13	-26.81	0-360	200	H
6	11.893	-64.48	Pk	38.5	-23.2	11.8	0	-37.38	-13	-24.38	0-360	300	V

Pk - Peak detector