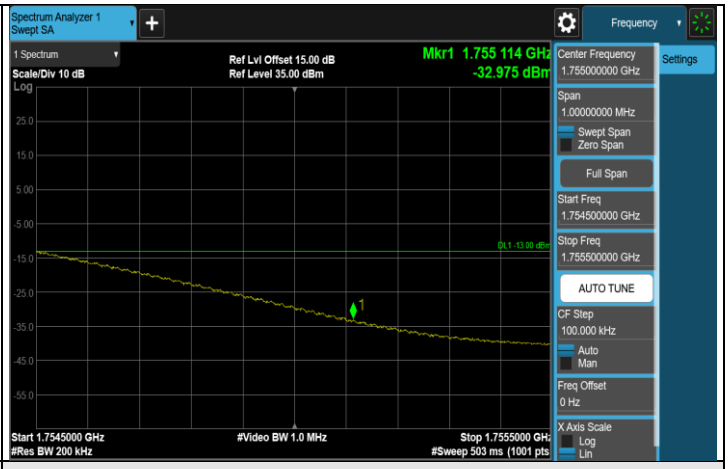
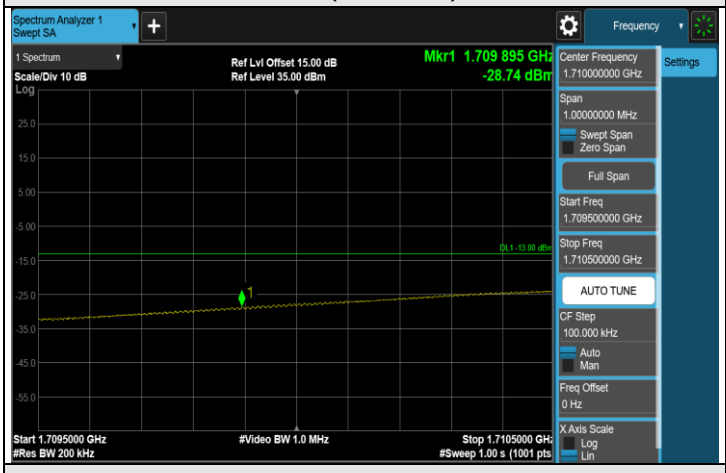
LTE Band 4 (Channel Bandwidth 20MHz)

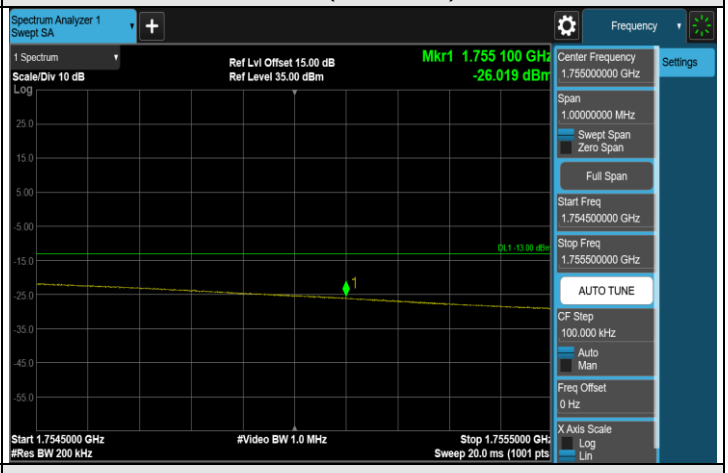
1RB (1720MHz)



1RB (1745MHz)

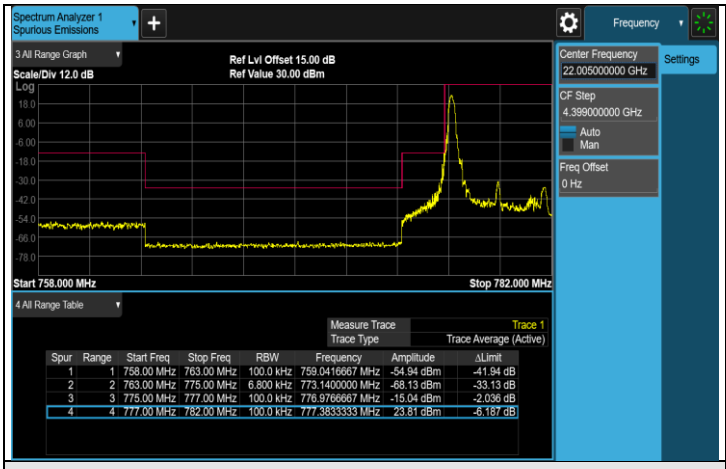


FULL (1720MHz)

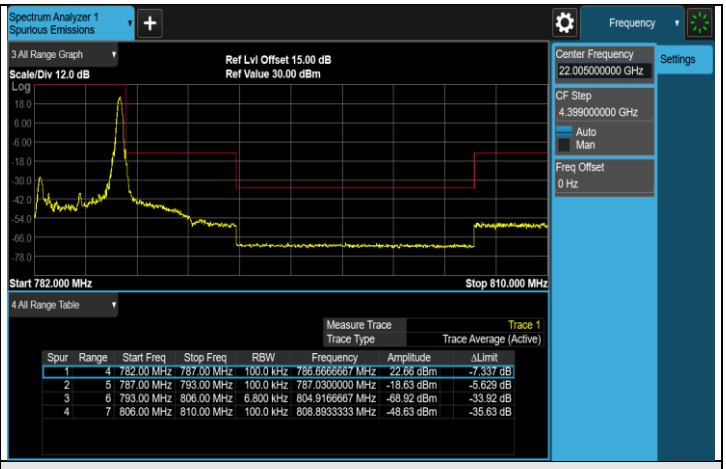


FULL (1745MHz)

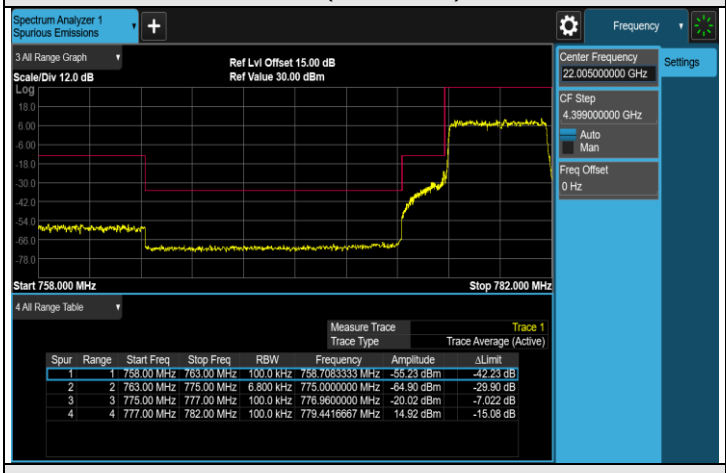
LTE Band 13 (Channel Bandwidth 5MHz)



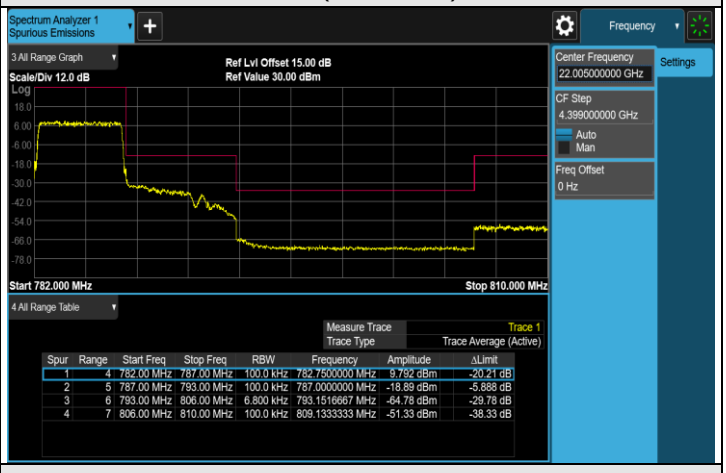
1RB (779.5MHz)



1RB (784.5MHz)

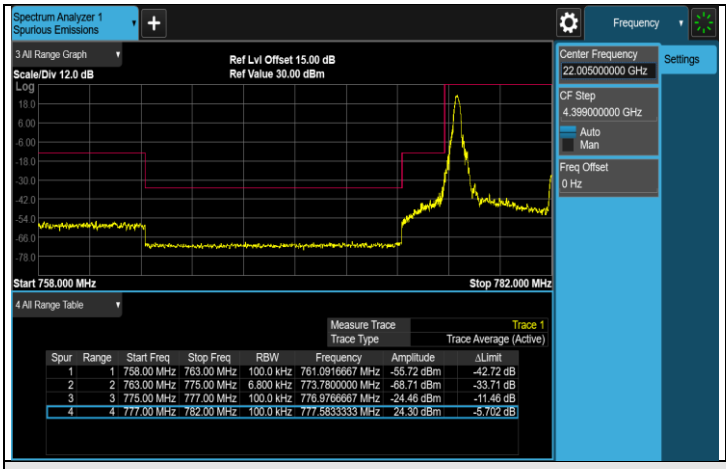


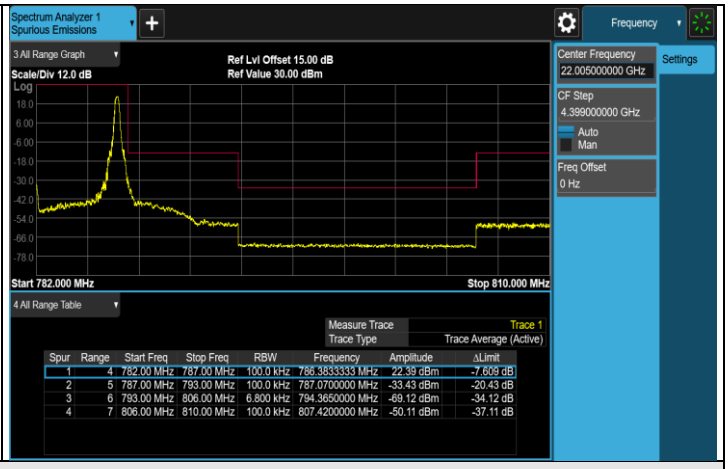
FULL (779.5MHz)



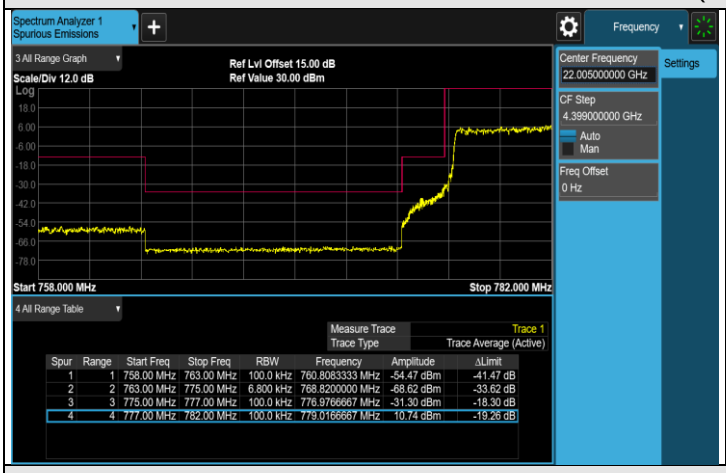
FULL (784.5MHz)

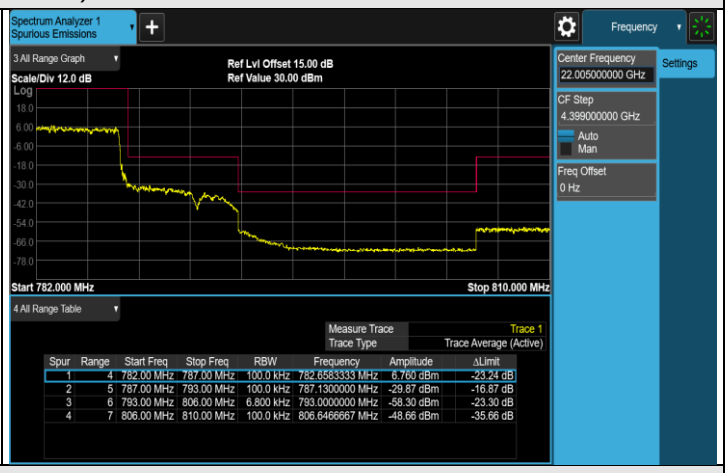
LTE Band 13 (Channel Bandwidth 10MHz)





1RB (782MHz)





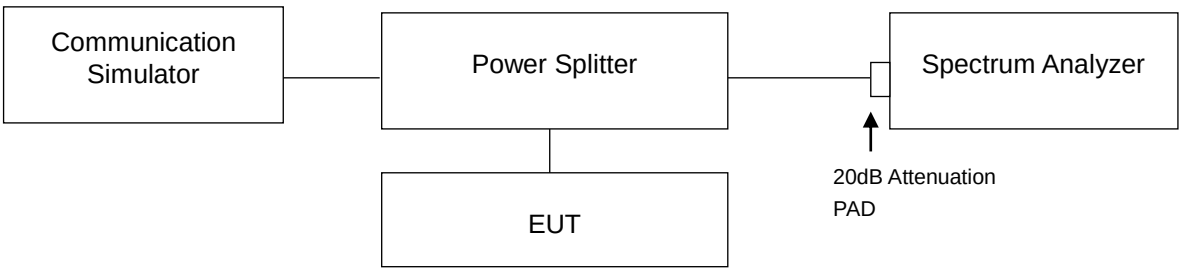
FULL (782MHz)

4.6 Peak to Average Ratio

4.6.1 Limits of Peak to Average Ratio Measurement

In measuring transmissions in this band using an average power technique, the peak to-average ratio (PAR) of the transmission may not exceed 13 dB.

4.6.2 Test Setup



4.6.3 Test Procedures

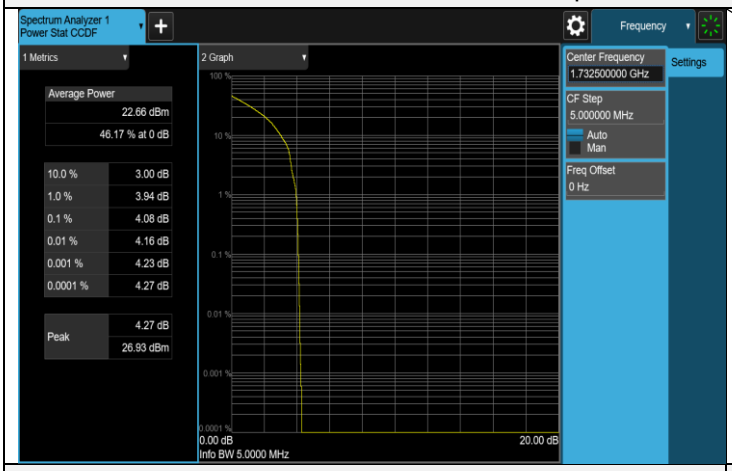
1. Set resolution/measurement bandwidth ≥ signal's occupied bandwidth;
2. Set the number of counts to a value that stabilizes the measured CCDF curve;
3. Record the maximum PAPR level associated with a probability of 0.1 %.

4.6.4 Test Results

LTE Band 4 (Channel Bandwidth 1.4MHz)

Test Condition	Channel	Frequency (MHz)	Measure. Value(dB)	Limit dB	Result
QPSK	19957	1710.7	3.05	13	PASS
QPSK	20175	1732.5	2.94	13	PASS
QPSK	20393	1754.3	2.03	13	PASS
16QAM	19957	1710.7	3.95	13	PASS
16QAM	20175	1732.5	4.08	13	PASS
16QAM	20393	1754.3	3.45	13	PASS

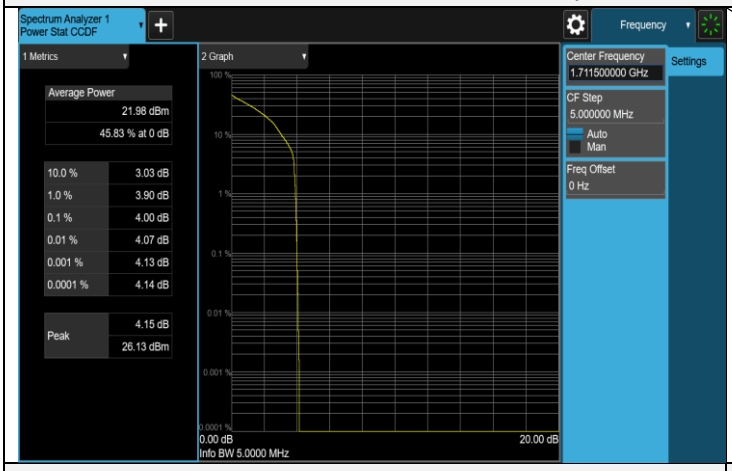
NOTE: For the test plots please refer to the below pages.

Spectrum Plot of Worst Value	
	
16QAM CH 20175 (1732.5MHz)	

LTE Band 4 (Channel Bandwidth 3MHz)

Test Condition	Channel	Frequency (MHz)	Measure. Value(dB)	Limit dB	Result
QPSK	19965	1711.5	3.06	13	PASS
QPSK	20175	1732.5	2.92	13	PASS
QPSK	20385	1753.5	2.42	13	PASS
16QAM	19965	1711.5	4.00	13	PASS
16QAM	20175	1732.5	3.91	13	PASS
16QAM	20385	1753.5	3.55	13	PASS

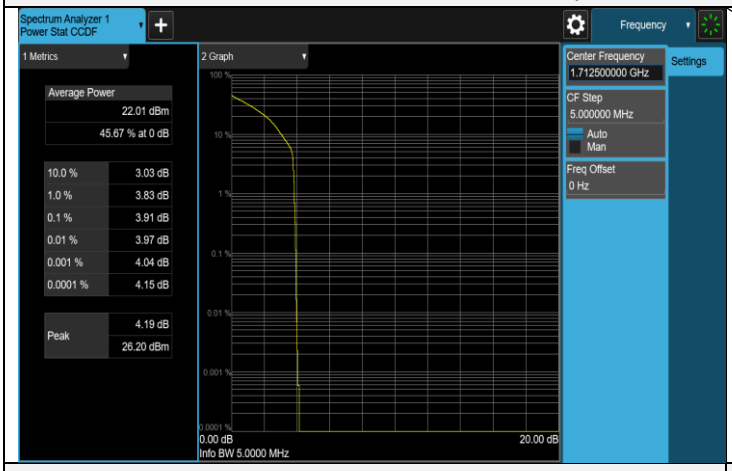
NOTE: For the test plots please refer to the below pages.

Spectrum Plot of Worst Value	
	
16QAM CH 19965 (1711.5MHz)	

LTE Band 4 (Channel Bandwidth 5MHz)

Test Condition	Channel	Frequency (MHz)	Measure. Value(dB)	Limit dB	Result
QPSK	19975	1712.5	2.97	13	PASS
QPSK	20175	1732.5	2.81	13	PASS
QPSK	20375	1752.5	2.58	13	PASS
16QAM	19975	1712.5	3.91	13	PASS
16QAM	20175	1732.5	3.69	13	PASS
16QAM	20375	1752.5	3.48	13	PASS

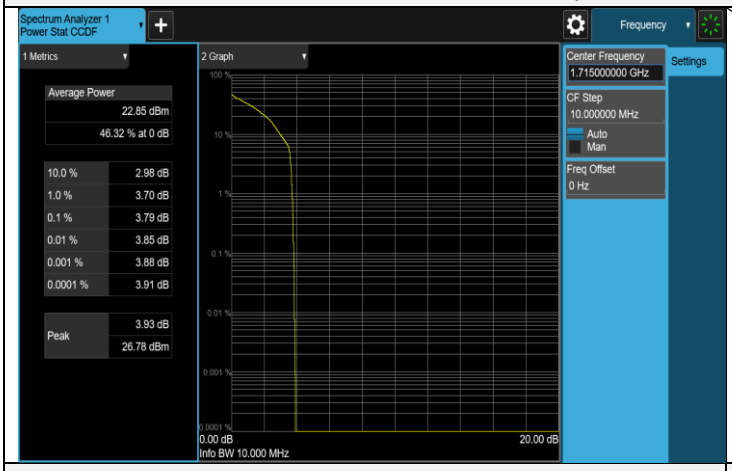
NOTE: For the test plots please refer to the below pages.

Spectrum Plot of Worst Value	
	
16QAM CH 19975 (1712.5MHz)	

LTE Band 4 (Channel Bandwidth 10MHz)

Test Condition	Channel	Frequency (MHz)	Measure. Value(dB)	Limit dB	Result
QPSK	20000	1715	2.95	13	PASS
QPSK	20175	1732.5	2.66	13	PASS
QPSK	20350	1750	2.66	13	PASS
16QAM	20000	1715	3.79	13	PASS
16QAM	20175	1732.5	3.55	13	PASS
16QAM	20350	1750	3.70	13	PASS

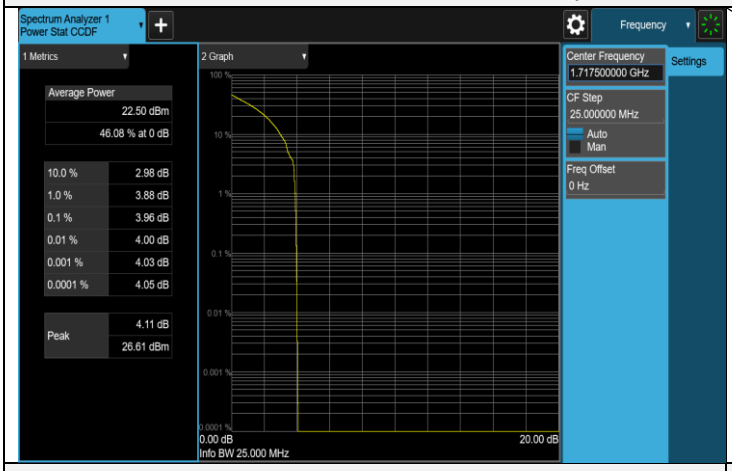
NOTE: For the test plots please refer to the below pages.

Spectrum Plot of Worst Value	
	
16QAM CH 20000 (1715MHz)	

LTE Band 4 (Channel Bandwidth 15MHz)

Test Condition	Channel	Frequency (MHz)	Measure. Value(dB)	Limit dB	Result
QPSK	20025	1717.5	2.84	13	PASS
QPSK	20175	1732.5	2.56	13	PASS
QPSK	20325	1747.5	2.85	13	PASS
16QAM	20025	1717.5	3.96	13	PASS
16QAM	20175	1732.5	3.56	13	PASS
16QAM	20325	1747.5	3.77	13	PASS

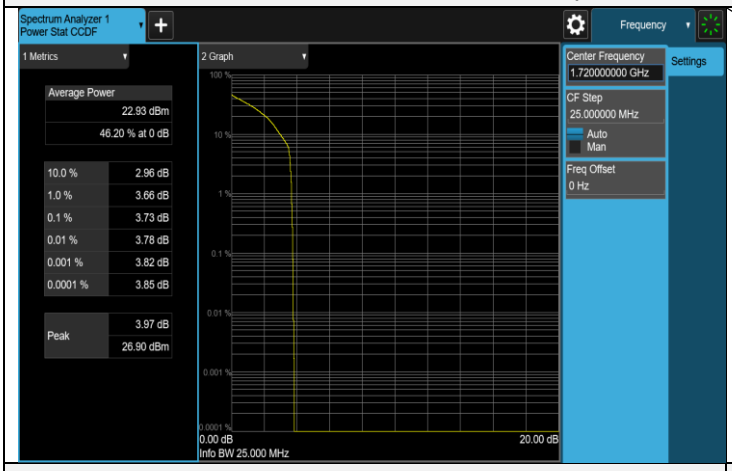
NOTE: For the test plots please refer to the below pages.

Spectrum Plot of Worst Value	
	
16QAM CH 20025 (1717.5MHz)	

LTE Band 4 (Channel Bandwidth 20MHz)

Test Condition	Channel	Frequency (MHz)	Measure. Value(dB)	Limit dB	Result
QPSK	20050	1720	2.86	13	PASS
QPSK	20175	1732.5	2.48	13	PASS
QPSK	20300	1745	2.82	13	PASS
16QAM	20050	1720	3.73	13	PASS
16QAM	20175	1732.5	3.44	13	PASS
16QAM	20300	1745	3.66	13	PASS

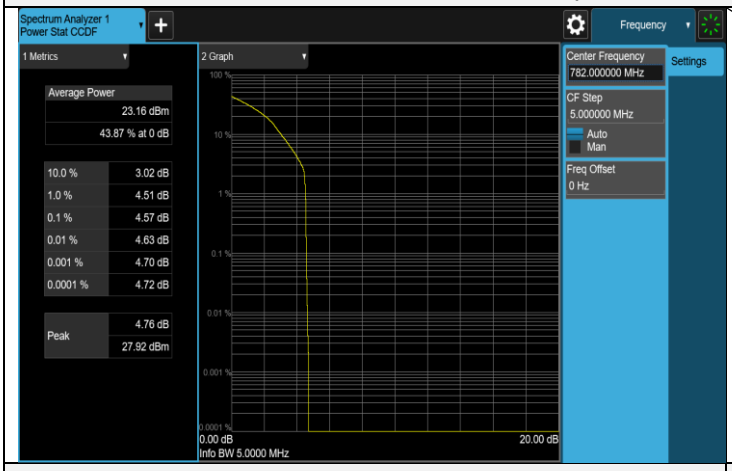
NOTE: For the test plots please refer to the below pages.

Spectrum Plot of Worst Value	
	
16QAM CH 20050 (1720MHz)	

LTE Band 13 (Channel Bandwidth 5MHz)

Test Condition	Channel	Frequency (MHz)	Measure. Value(dB)	Limit dB	Result
QPSK	23205	779.5	2.69	13	PASS
QPSK	23230	782	3.59	13	PASS
QPSK	23255	784.5	3.43	13	PASS
16QAM	23205	779.5	3.82	13	PASS
16QAM	23230	782	4.57	13	PASS
16QAM	23255	784.5	4.37	13	PASS

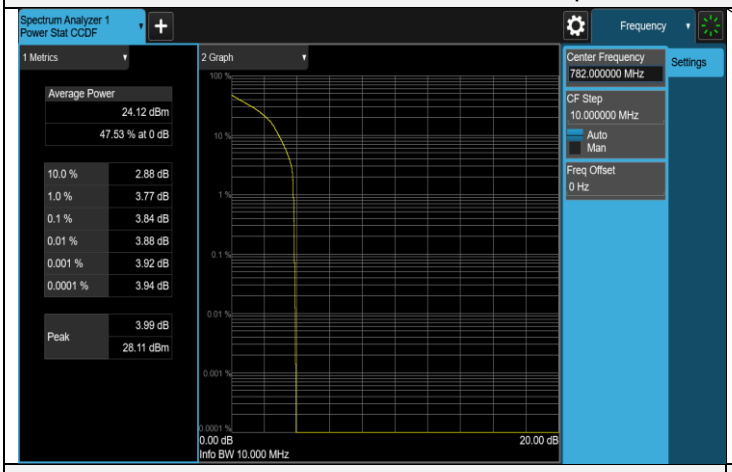
NOTE: For the test plots please refer to the below pages.

Spectrum Plot of Worst Value	
	
16QAM CH 23230 (782MHz)	

LTE Band 13 (Channel Bandwidth 10MHz)

Test Condition	Channel	Frequency (MHz)	Measure. Value(dB)	Limit dB	Result
QPSK	23230	782	2.84	13	PASS
16QAM	23230	782	3.84	13	PASS

NOTE: For the test plots please refer to the below pages.

Spectrum Plot of Worst Value	
	
16QAM CH 23230 (782MHz)	

4.7 Conducted Spurious Emissions

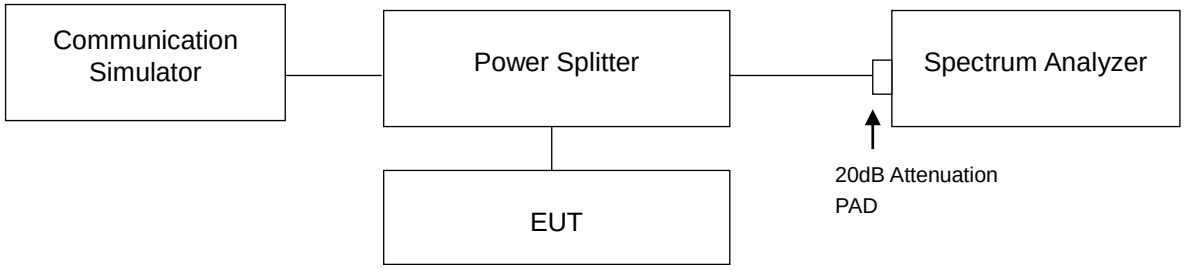
4.7.1 Limits of Conducted Spurious Emissions Measurement

For LTE Band 4:
According to FCC 27.53(h), for operations in the 1695-1710MHz, 1710-1755MHz, 1755-1780 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 log (P) dB.

For LTE Band 13:
According to FCC 27.53(c)(2), for 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. The limit of emissions is equal to -13 dBm.

According to FCC 27.53(f), for operations in the 775-788 MHz, emissions in the band 1559-1610MHz shall be limited to -70 dBW/MHz (EIRP). The limit of emissions is equal to -40 dBm.

4.7.2 Test Setup

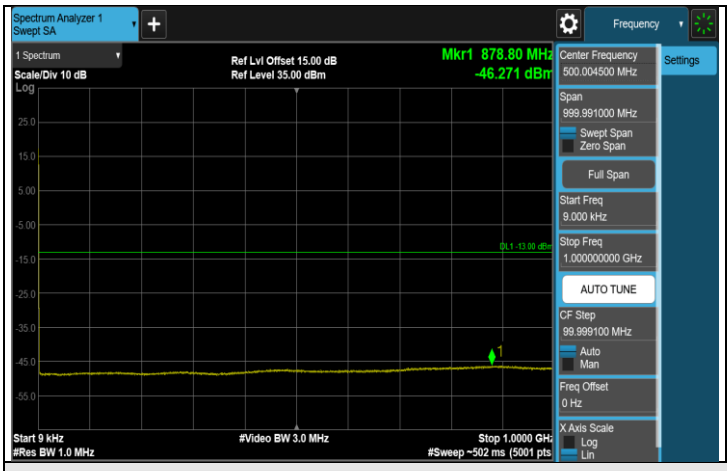


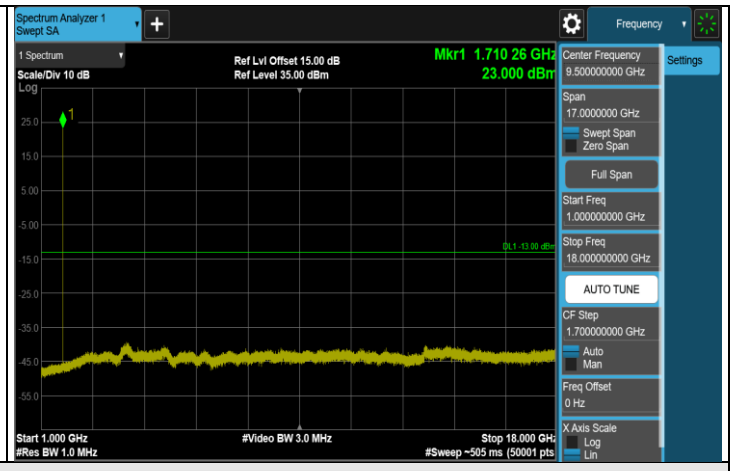
4.7.3 Test Procedure

a. The EUT makes a phone call to the communication simulator. All measurements were done at low, middle and high operational frequency range.
b. The detector of the spectrum is RMS, and if the device can be configured to transmit continuously (duty cycle ≥ 98%), set the (sweep time) > (number of points in sweep) × (symbol period) (e.g., by a factor of 10 × symbol period × number of points). Increasing the sweep time (i.e., slowing the sweep speed) will allow for averaging over multiple symbols
c. Measuring frequency range is from 9 kHz to 1 GHz. 20 dB attenuation pad is connected with spectrum. RBW = 1 MHz and VBW = 3 MHz is used for conducted emission measurement.
d. Measuring frequency range is from 1 GHz to 8 GHz or 18 GHz. 20 dB attenuation pad is connected with spectrum. RBW = 1 MHz and VBW = 3 MHz is used for conducted emission measurement.

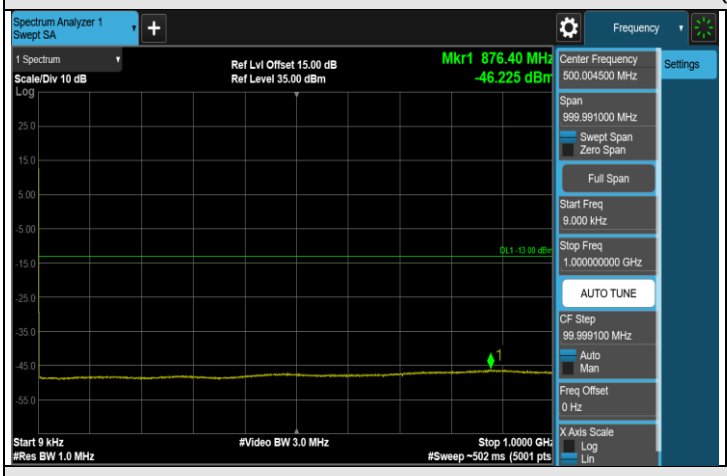
4.7.4 Test Results

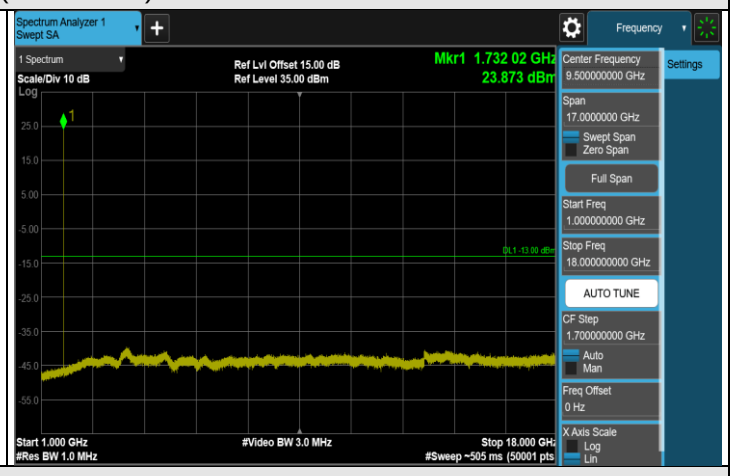
LTE Band 4 (Channel Bandwidth 1.4MHz)



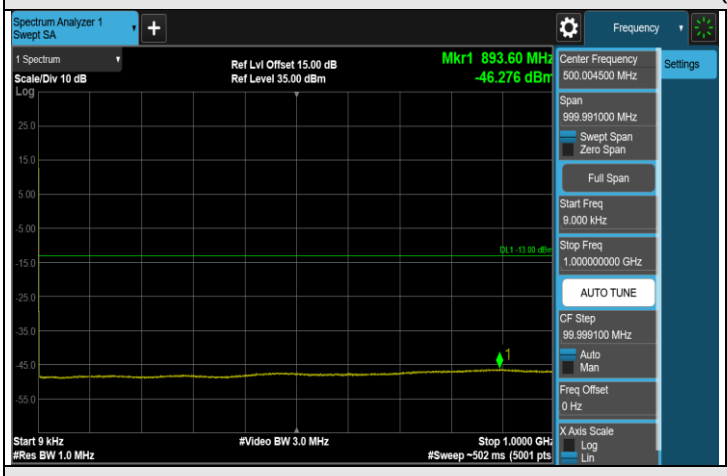


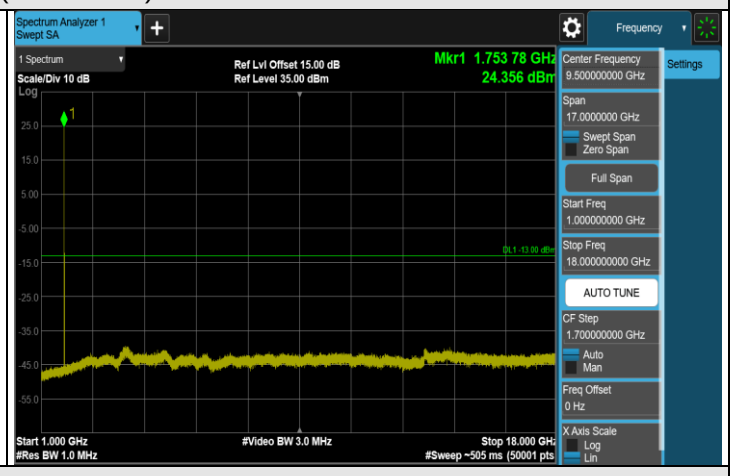
CH 19957 (1710.7MHz)





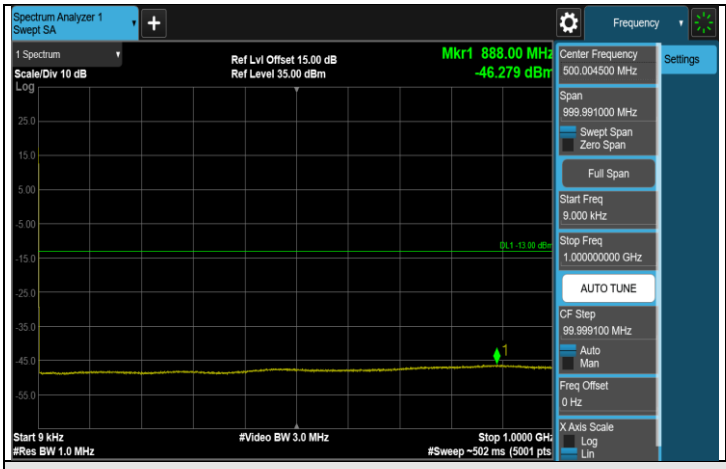
CH 20175 (1732.5MHz)

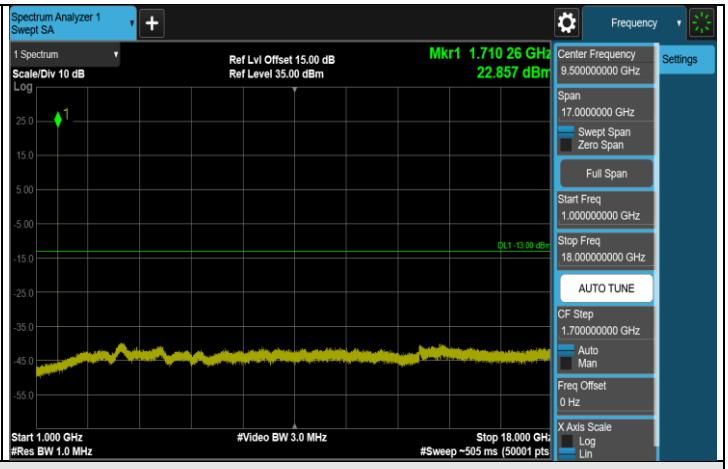




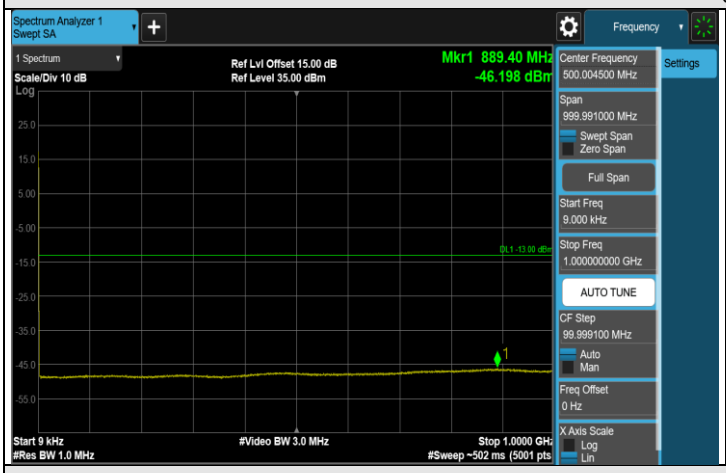
CH 20393 (1754.3MHz)

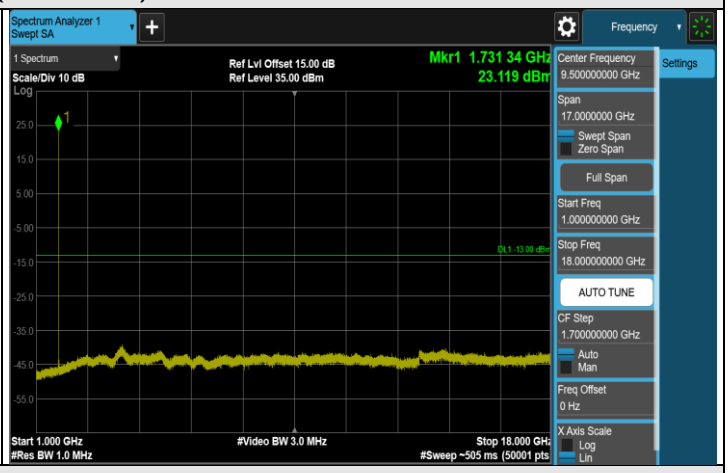
LTE Band 4 (Channel Bandwidth 3MHz)



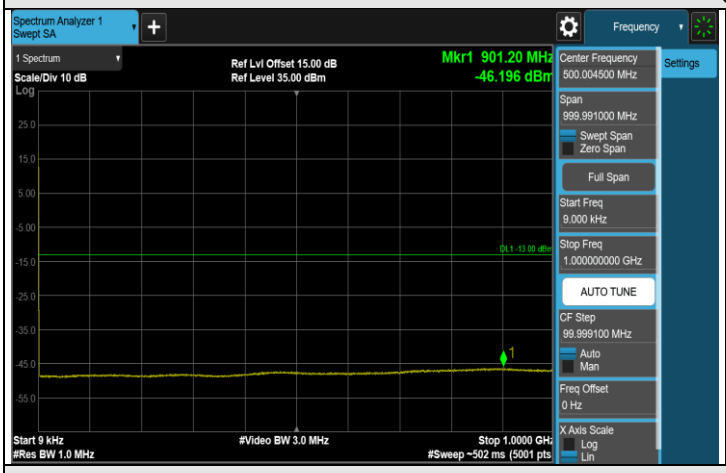


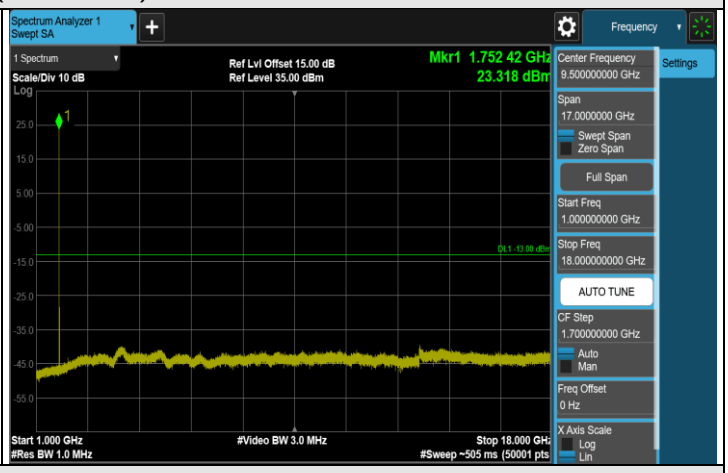
CH 19965 (1711.5MHz)





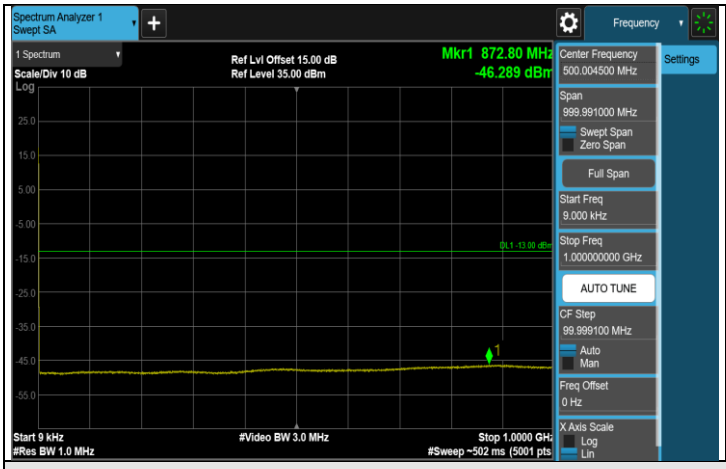
CH 20175 (1732.5MHz)

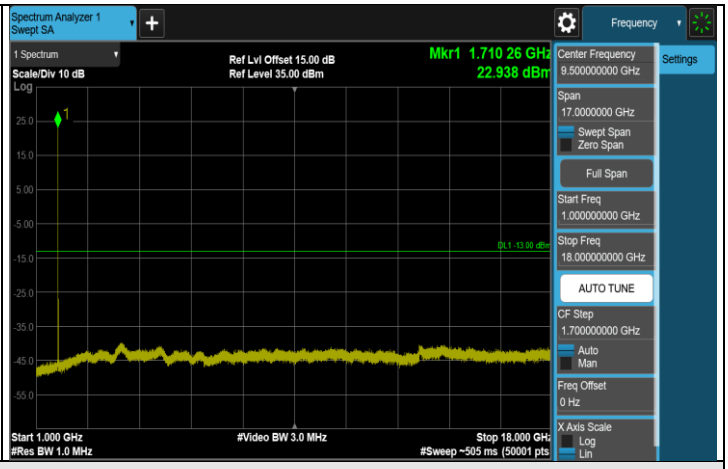




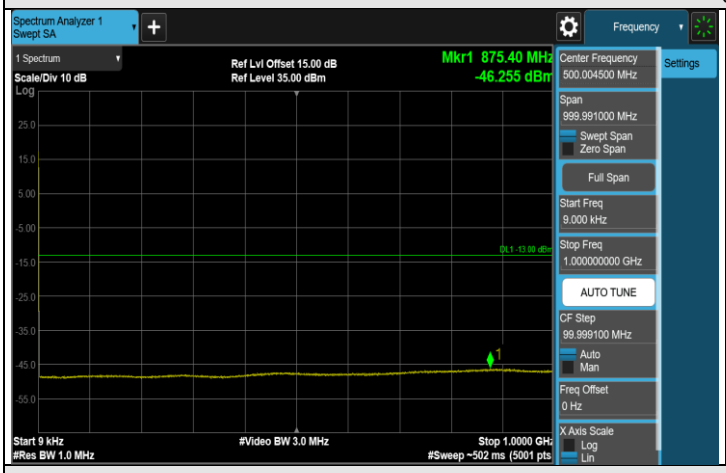
CH 20385 (1753.5MHz)

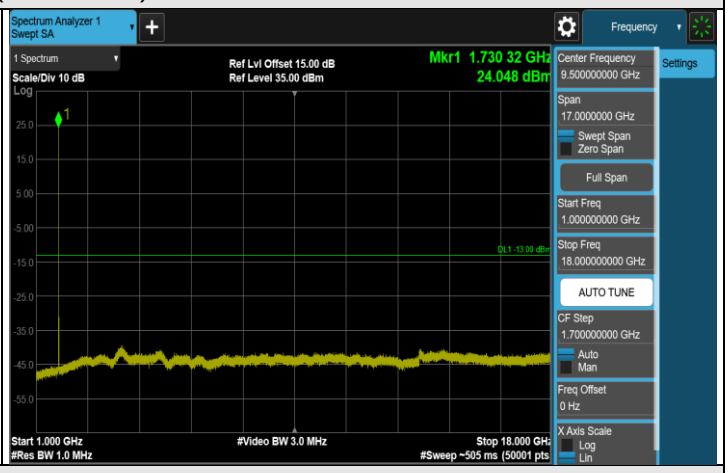
LTE Band 4 (Channel Bandwidth 5MHz)



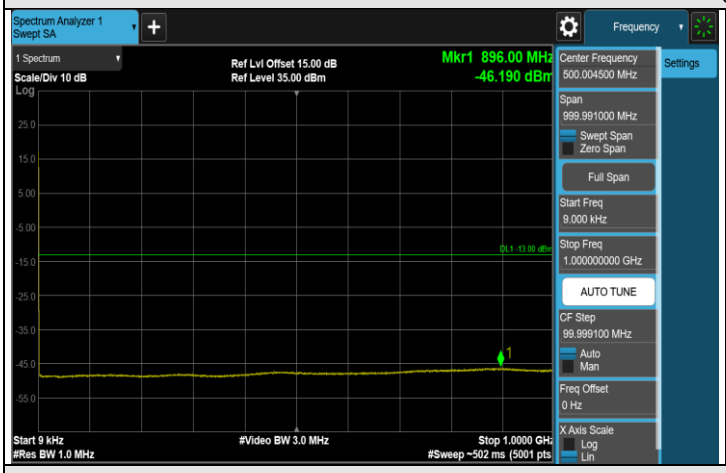


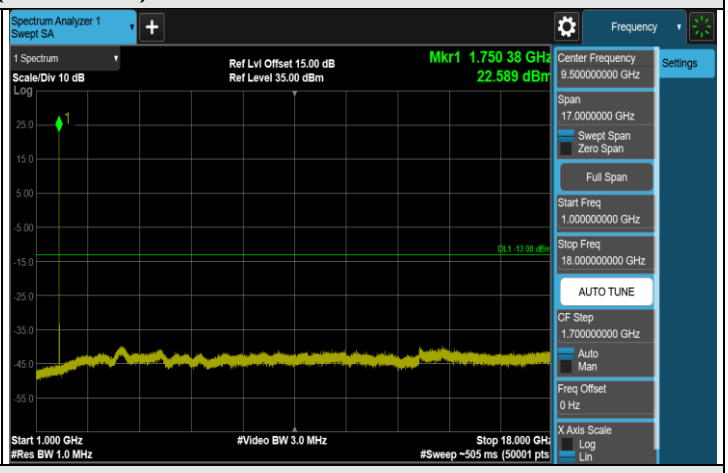
CH 19975 (1712.5MHz)





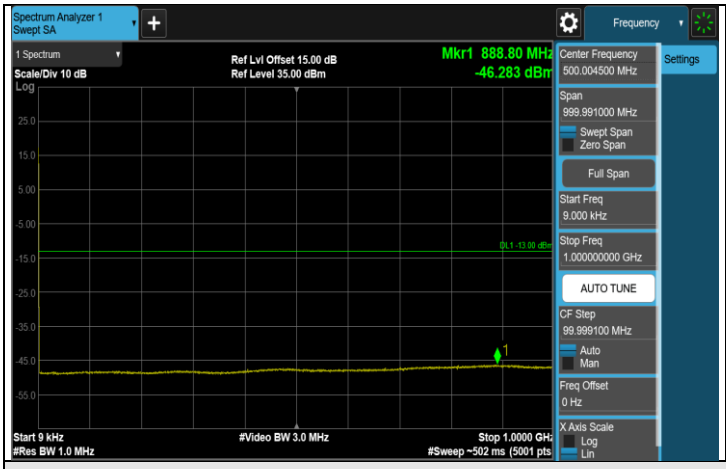
CH 20175 (1732.5MHz)

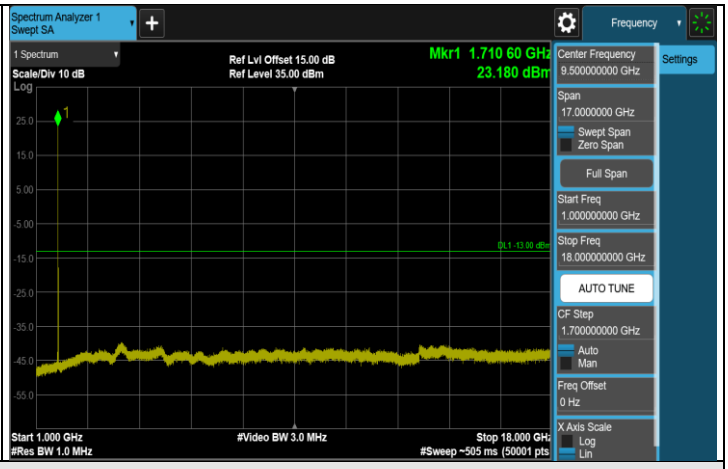




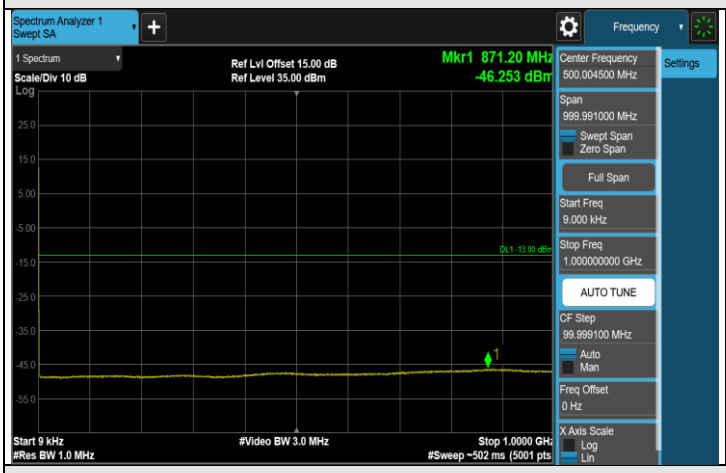
CH 20375 (1752.5MHz)

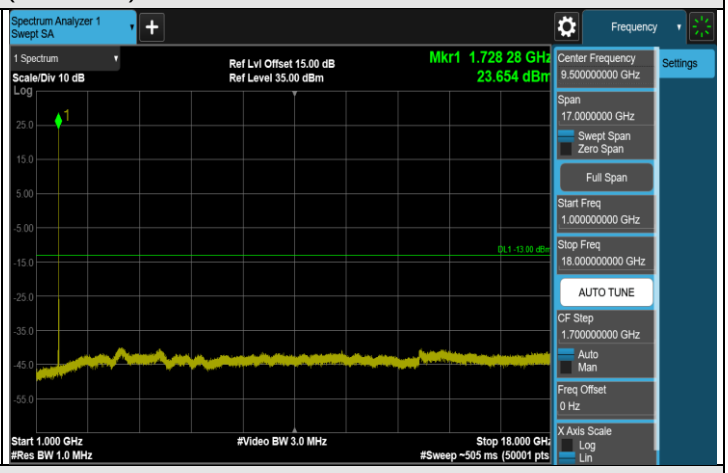
LTE Band 4 (Channel Bandwidth 10MHz)



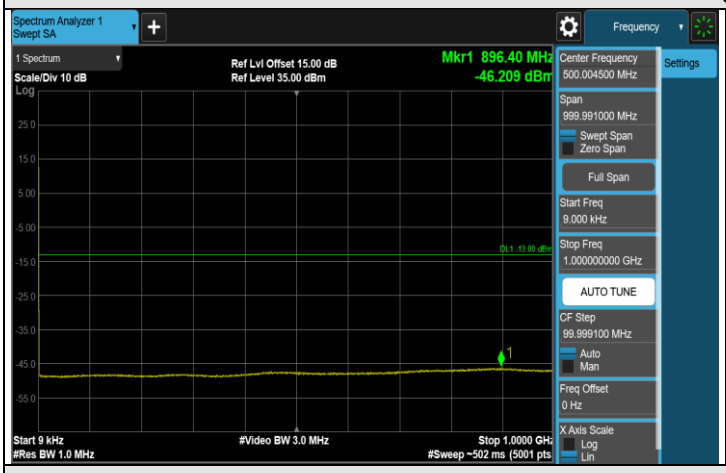


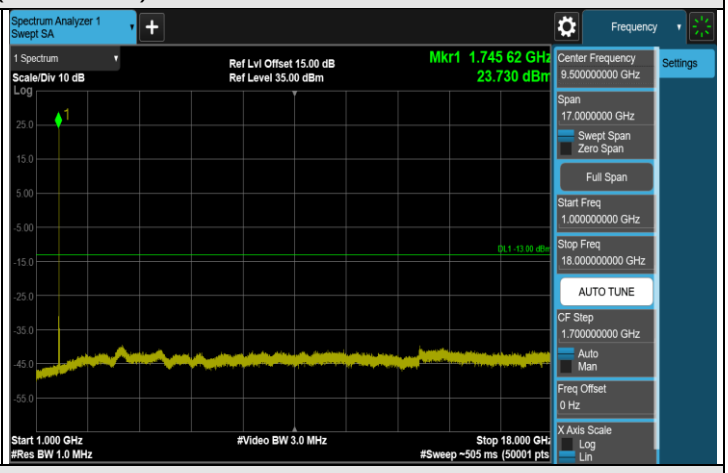
CH 20000 (1715MHz)





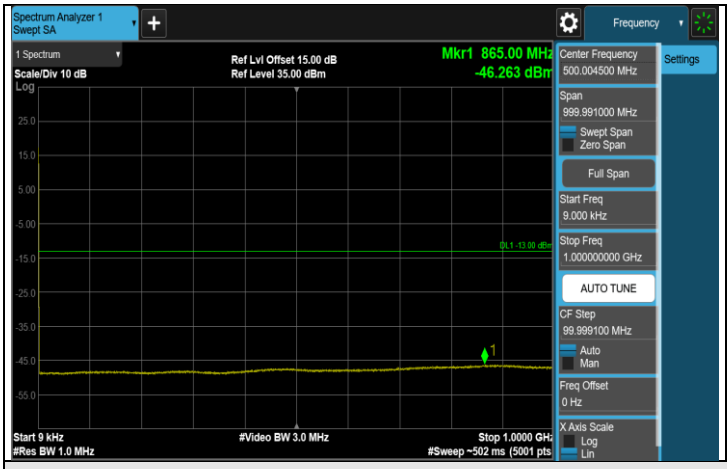
CH 20175 (1732.5MHz)

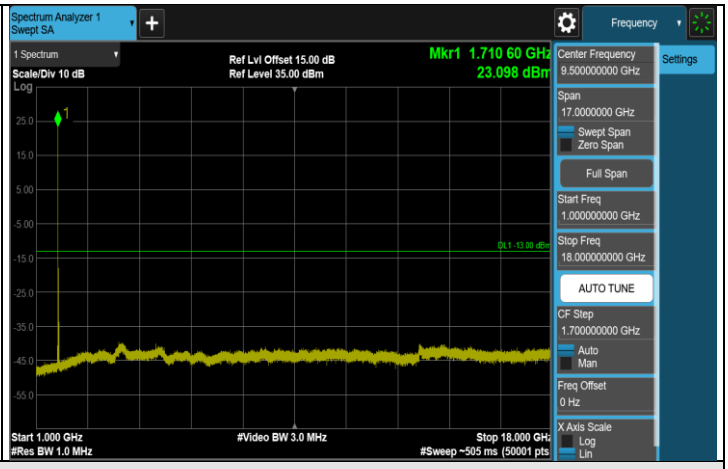




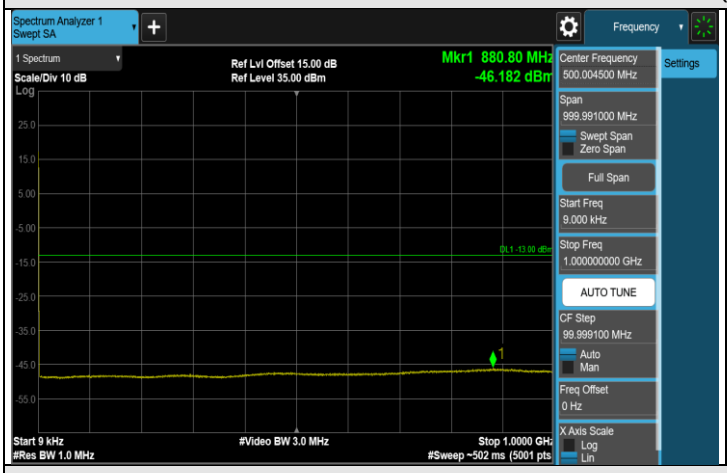
CH 20350 (1750MHz)

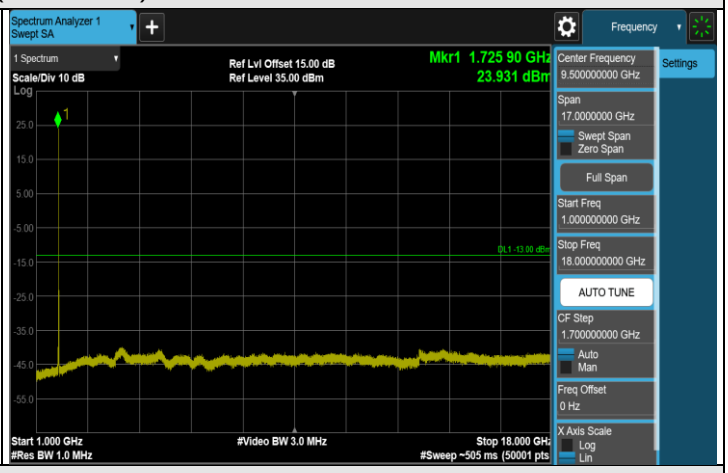
LTE Band 4 (Channel Bandwidth 15MHz)



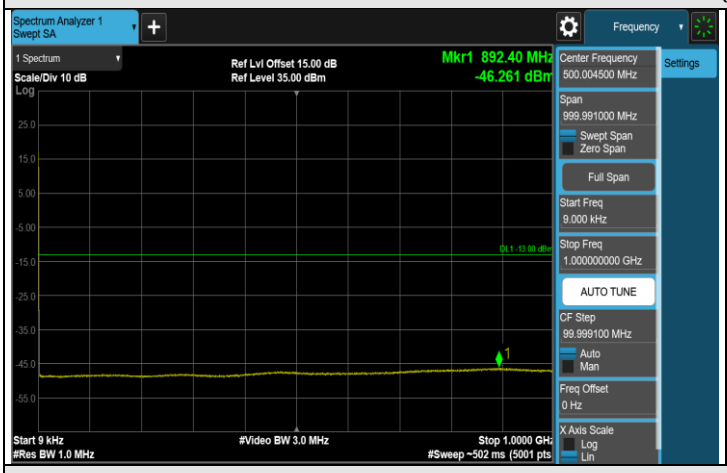


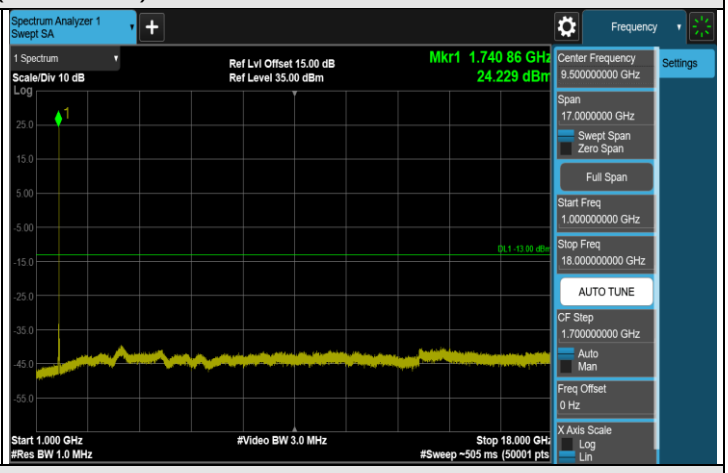
CH 20025 (1717.5MHz)





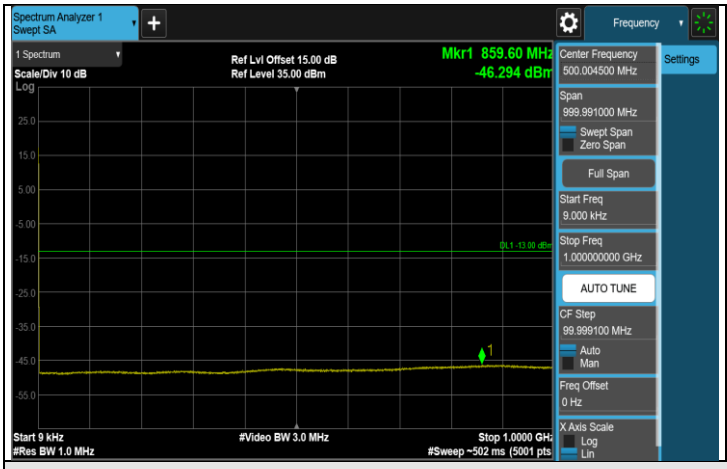
CH 20175 (1732.5MHz)

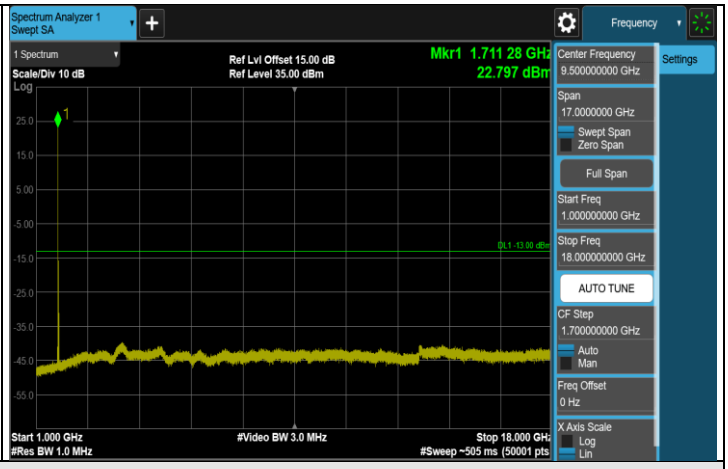




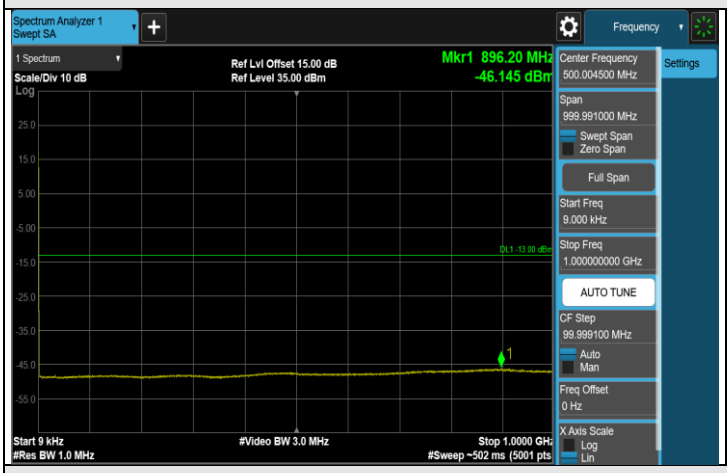
CH 20325 (1747.5MHz)

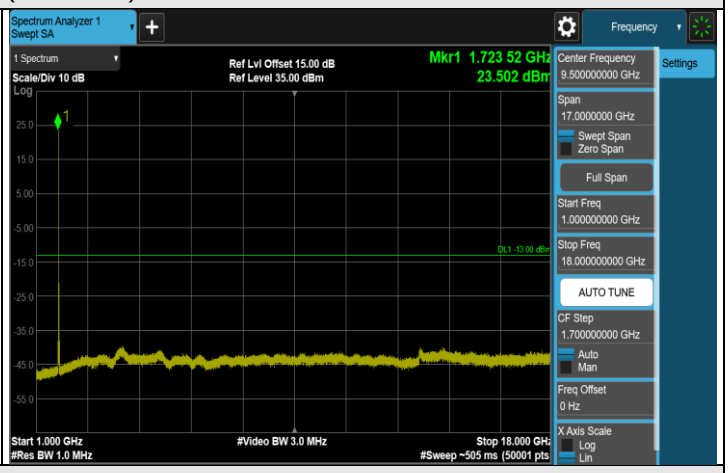
LTE Band 4 (Channel Bandwidth 20MHz)



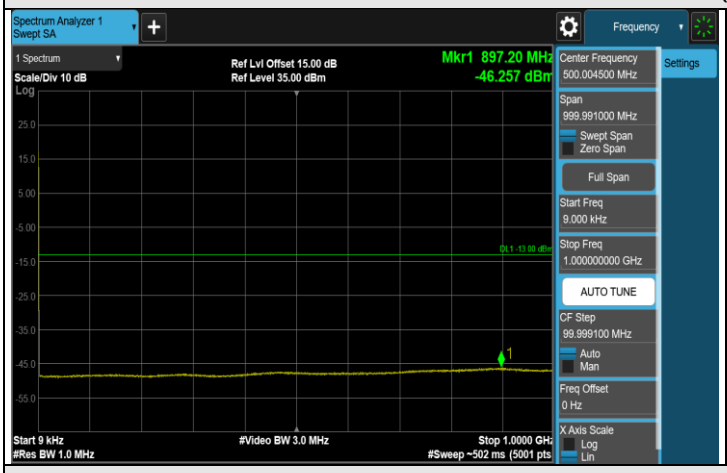


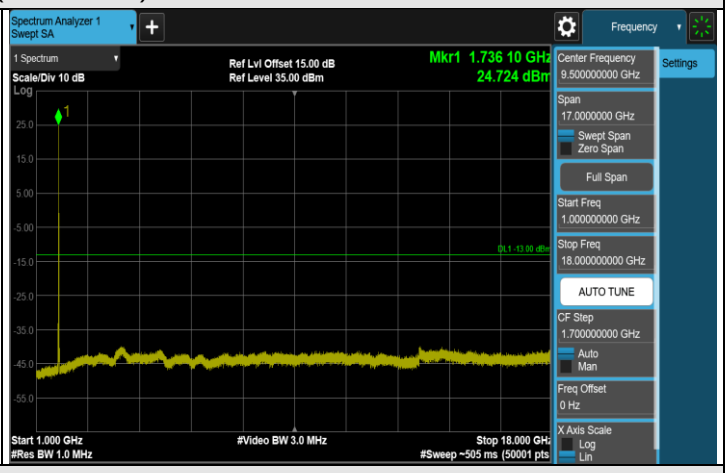
CH 20050 (1720MHz)





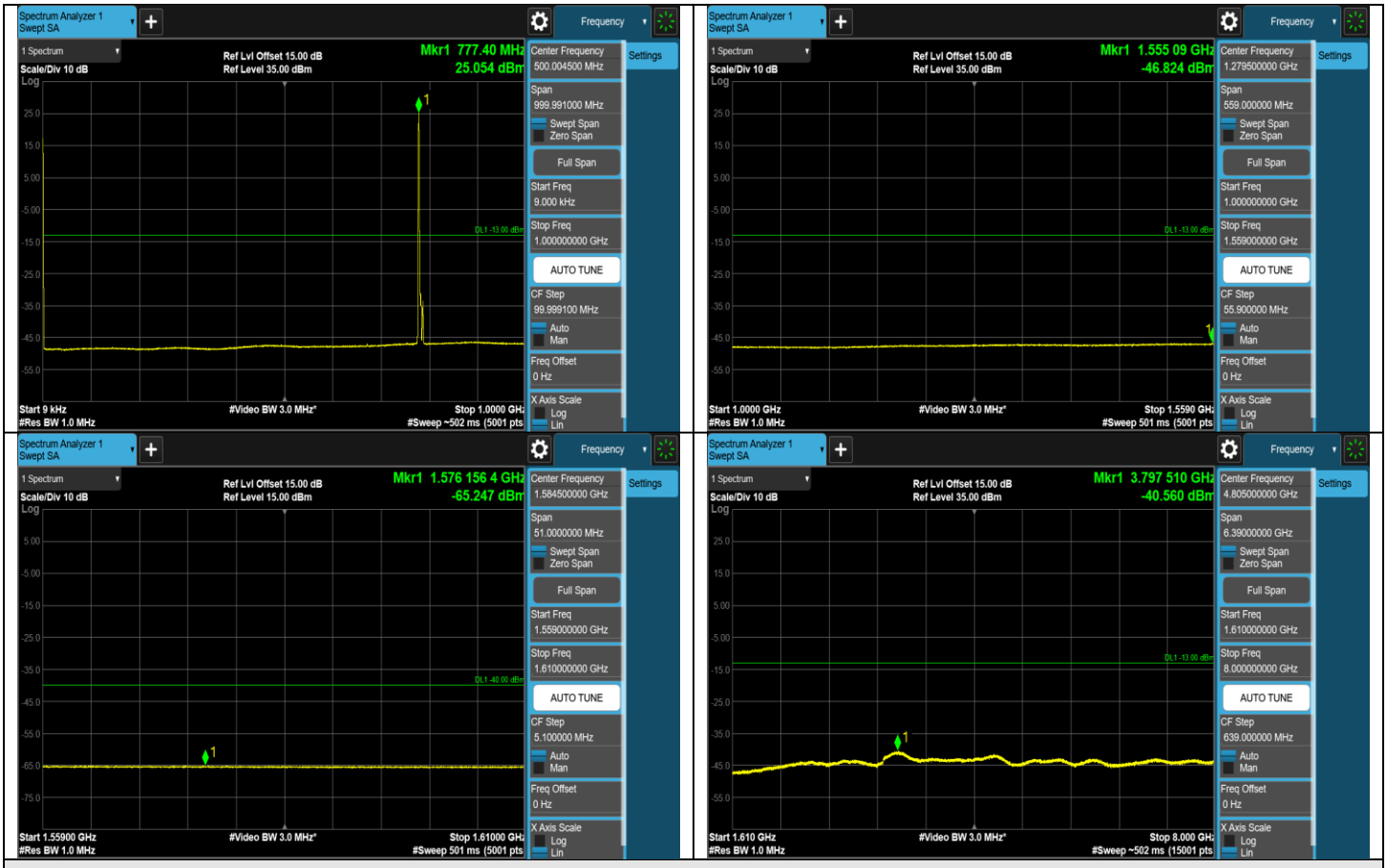
CH 20175 (1732.5MHz)



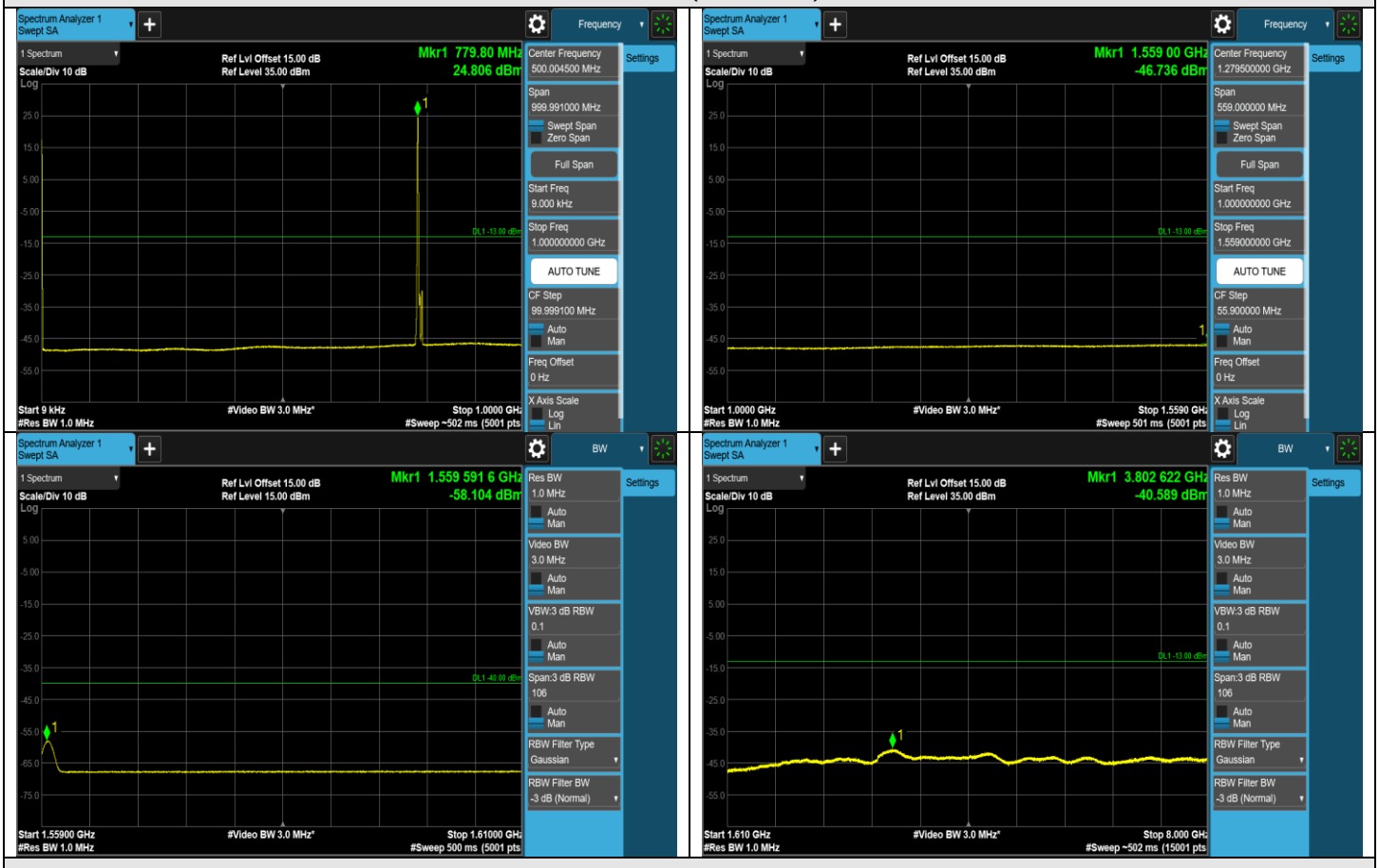


CH 20300 (1745MHz)

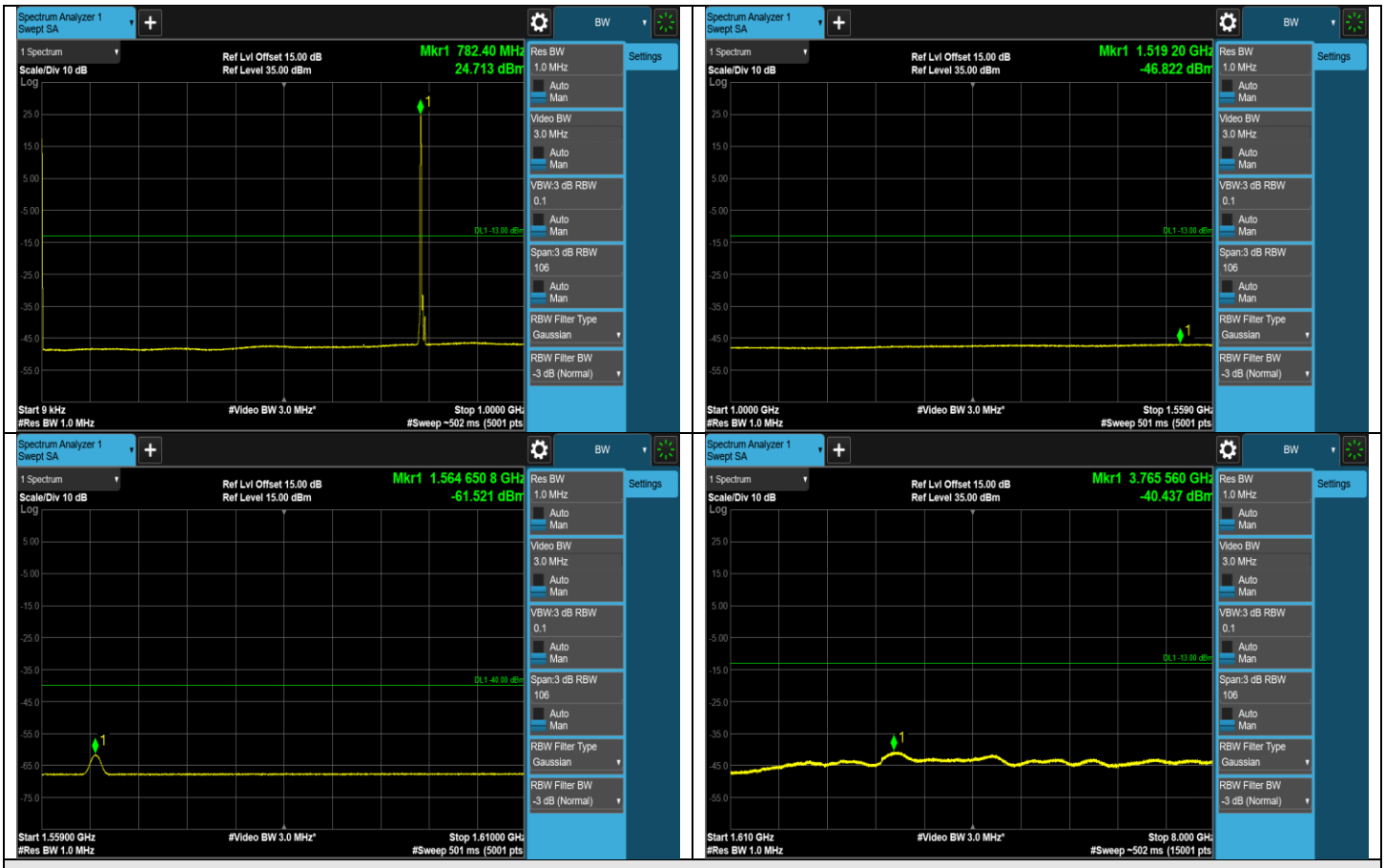
LTE Band 13 (Channel Bandwidth 5MHz)



CH 23205 (779.5MHz)

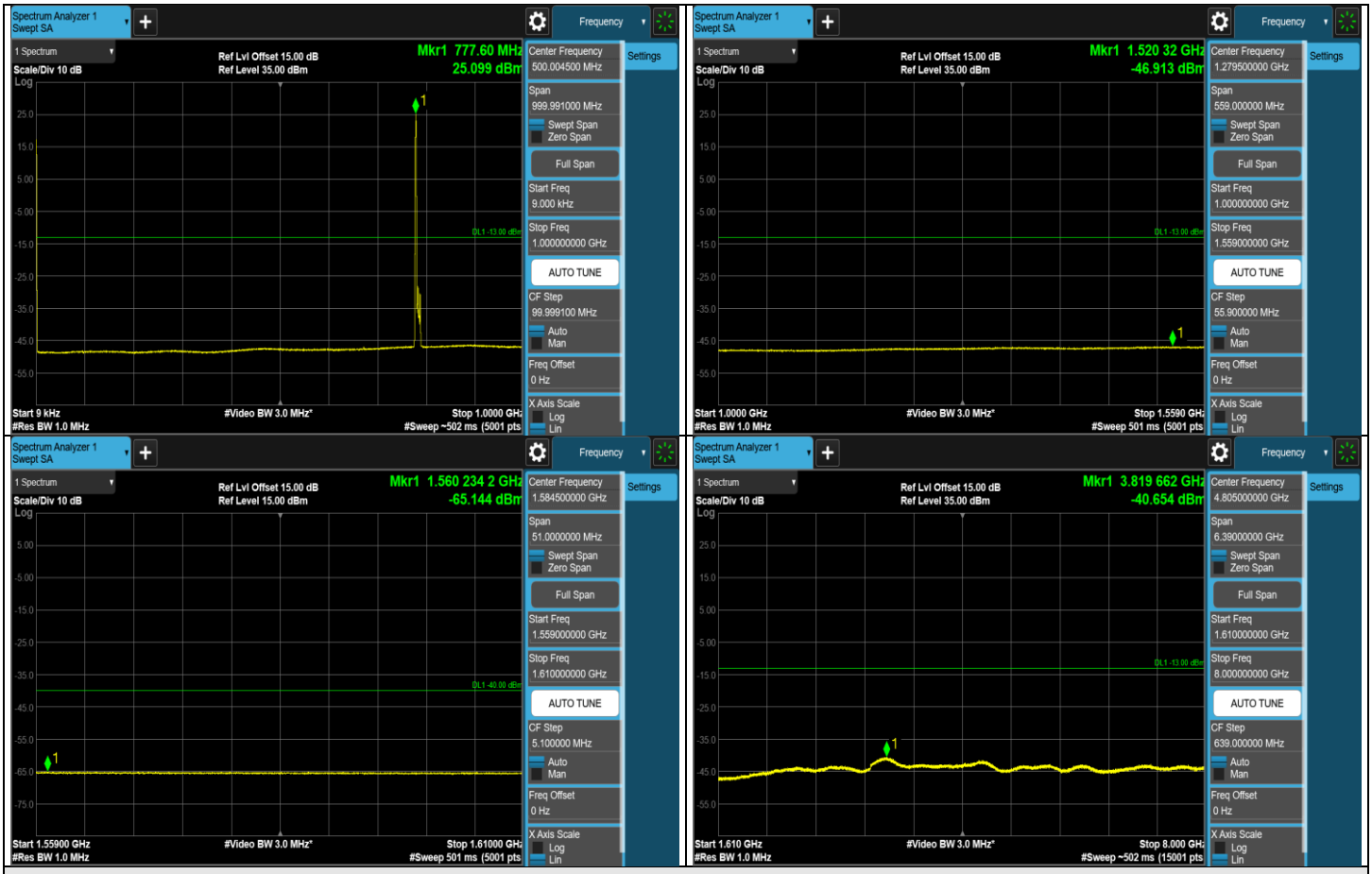


CH 23230 (782MHz)



CH 23255 (784.5MHz)

LTE Band 13 (Channel Bandwidth 10MHz)



CH 23230 (782MHz)

4.8 Radiated Emission Measurement

4.8.1 Limits of Radiated Emission Measurement

For LTE Band 4:
According to FCC 27.53(h), for operations in the 1695-1710MHz, 1710-1755MHz, 1755-1780 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 log (P) dB.

For LTE Band 13:
According to FCC 27.53(c)(2), for 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. The limit of emissions is equal to -13 dBm.

According to FCC 27.53(f), for operations in the 775-788 MHz, emissions in the band 1559-1610MHz shall be limited to -70 dBW/MHz (EIRP). The limit of emissions is equal to -40 dBm.

4.8.2 Test Procedure

a. In the semi-anechoic chamber, EUT placed on the 0.8m(below or equal 1GHz) and/or 1.5m(above 1GHz) height of Turn Table, rotated the table around 360 degrees to search the maximum radiation power and receiver antenna shall be rotated vertical and horizontal polarization and moved height from 1m to 4m to find the maximum polar radiated power. The “Read Value” is the spectrum reading the maximum power value.
b. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
c. Perform a field strength measurement and record the worse read value, is the field strength value via a spectrum reading obtained corrected for antenna factor, cable loss and pre-amplifier factor and then mathematically convert the measured field strength level to EIRP/ERP level.
d. Following C63.26 section 5.5 and 5.2.7
EIRP (dBm) = E (dBμV/m) + 20log(D) - 104.8; where D is the measurement distance (in the far field region) in m.
ERP (dBm) = E (dBμV/m) + 20log(D) - 104.8 - 2.15; where D is the measurement distance (in the far field region) in m.
e. The detector of the spectrum is RMS, and if the device can be configured to transmit continuously (duty cycle ≥ 98%), set the (sweep time) > (number of points in sweep) × (symbol period) (e.g., by a factor of 10 × symbol period × number of points). Increasing the sweep time (i.e., slowing the sweep speed) will allow for averaging over multiple symbols

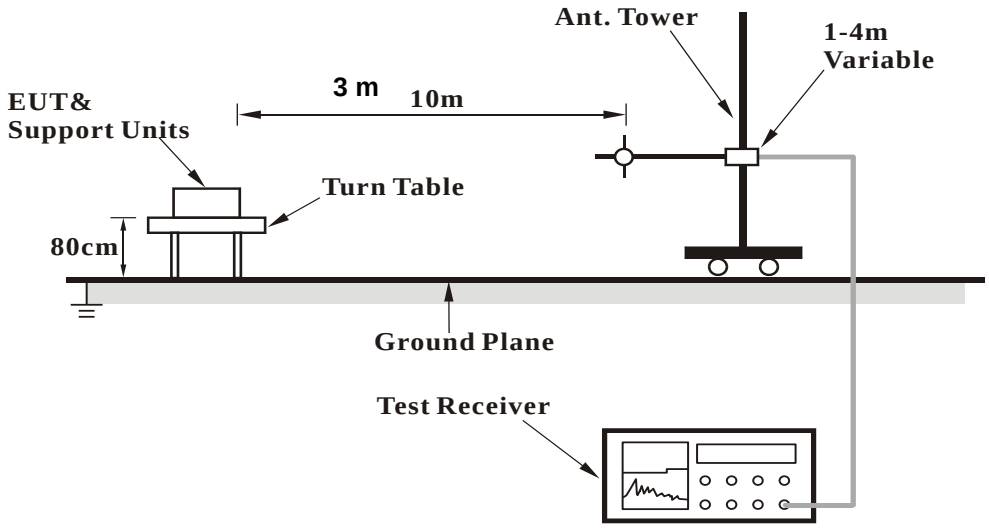
Note: The resolution bandwidth of spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz.

4.8.3 Deviation from Test Standard

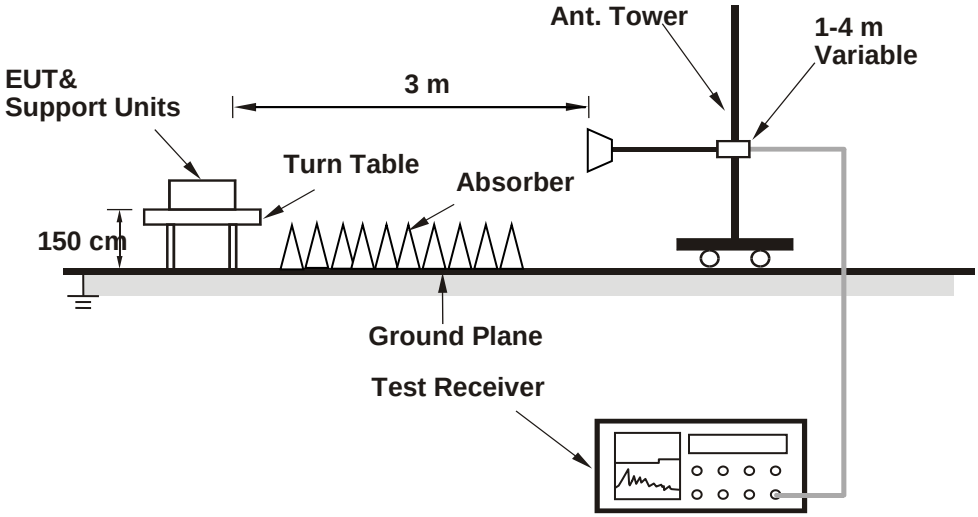
No deviation.

4.8.4 Test Setup

<Radiated Emission below or equal 1 GHz>



<Radiated Emission above 1 GHz>



For the actual test configuration, please refer to the attached file (Test Setup Photo).

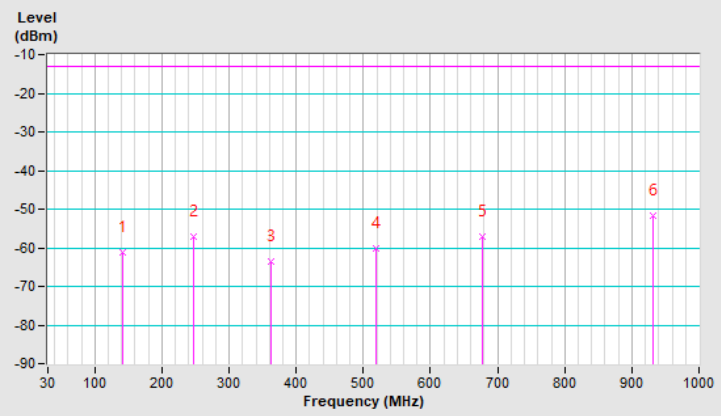
4.8.5 Test Results

RF Mode	TX LTE Band IV-20MHz	Channel	CH 20175：1732.5 MHz
Frequency Range	30 MHz ~ 1 GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	141.55	-61.1	-13.0	-48.1	2.93 H	93	46.6	-107.7
2	246.31	-57.1	-13.0	-44.1	1.78 H	319	52.7	-109.8
3	362.71	-63.5	-13.0	-50.5	2.02 H	346	41.9	-105.4
4	518.88	-60.3	-13.0	-47.3	2.79 H	133	40.7	-101.0
5	677.96	-57.2	-13.0	-44.2	3.49 H	292	40.1	-97.3
6	932.10	-51.6	-13.0	-38.6	2.22 H	74	41.5	-93.1

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The EIRP levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

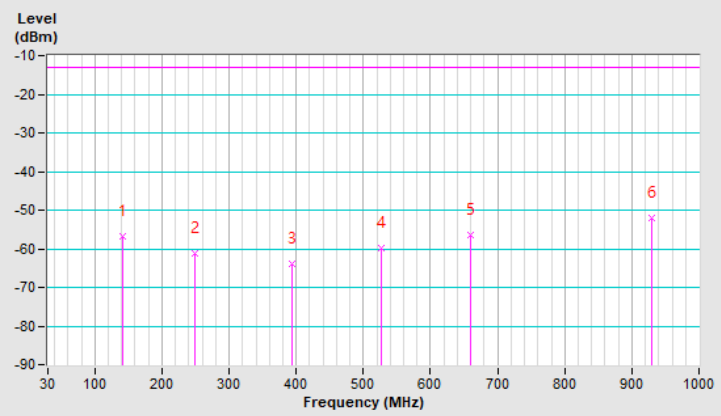


RF Mode	TX LTE Band IV-20MHz	Channel	CH 20175：1732.5 MHz
Frequency Range	30 MHz ~ 1 GHz		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	141.55	-56.7	-13.0	-43.7	1.79 V	168	51.0	-107.7
2	248.25	-61.1	-13.0	-48.1	3.71 V	332	48.7	-109.8
3	392.78	-64.0	-13.0	-51.0	1.74 V	90	40.7	-104.7
4	527.61	-59.8	-13.0	-46.8	2.63 V	353	41.2	-101.0
5	659.53	-56.4	-13.0	-43.4	2.35 V	176	41.3	-97.7
6	930.16	-52.2	-13.0	-39.2	2.85 V	206	40.7	-92.9

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The EIRP levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

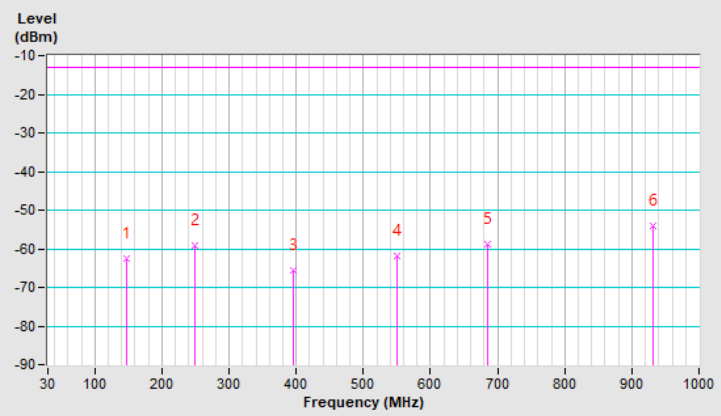


RF Mode	TX LTE Band XIII-10MHz	Channel	CH 23230：782 MHz
Frequency Range	30 MHz ~ 1 GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	147.37	-62.5	-13.0	-49.5	3.12 H	66	47.2	-109.7
2	249.22	-59.1	-13.0	-46.1	2.30 H	318	52.9	-112.0
3	396.66	-65.5	-13.0	-52.5	2.82 H	224	41.3	-106.8
4	550.89	-62.0	-13.0	-49.0	3.74 H	30	40.7	-102.7
5	684.75	-58.7	-13.0	-45.7	2.65 H	198	40.7	-99.4
6	931.13	-54.2	-13.0	-41.2	3.70 H	181	40.9	-95.1

Remarks:

1. ERP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The ERP levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.

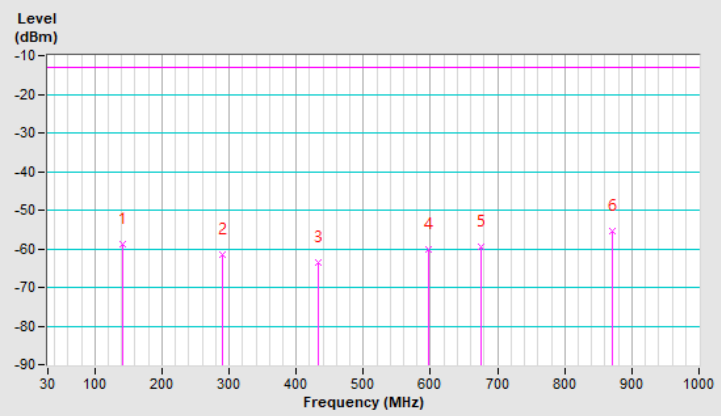


RF Mode	TX LTE Band XIII-10MHz	Channel	CH 23230：782 MHz
Frequency Range	30 MHz ~ 1 GHz		

Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	ERP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	141.55	-58.9	-13.0	-45.9	1.95 V	88	51.0	-109.9
2	289.96	-61.5	-13.0	-48.5	3.90 V	187	48.5	-110.0
3	433.52	-63.7	-13.0	-50.7	3.17 V	138	41.5	-105.2
4	596.48	-60.1	-13.0	-47.1	2.29 V	93	41.0	-101.1
5	675.05	-59.4	-13.0	-46.4	1.92 V	37	40.2	-99.6
6	870.02	-55.4	-13.0	-42.4	1.86 V	161	40.8	-96.2

Remarks:

1. ERP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8 – 2.15
3. Margin value = ERP – Limit value
4. The other ERP levels were very low against the limit of frequency range 30 MHz ~ 1 GHz.
5. The ERP levels were very low against the limit of frequency range 9 kHz ~ 30 MHz: the amplitude of spurious emissions attenuated more than 20 dB below the permissible value to be report.



RF Mode	TX LTE Band IV-1.4MHz	Channel	CH 19957：1710.7 MHz
Frequency Range	1 GHz ~ 18 GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3421.40	-56.49	-13.00	-43.49	2.76 H	198	59.98	-116.47
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	3421.40	-56.24	-13.00	-43.24	1.57 V	236	60.23	-116.47

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	TX LTE Band IV-1.4MHz	Channel	CH 20175：1732.5 MHz
Frequency Range	1 GHz ~ 18 GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3465.00	-55.97	-13.00	-42.97	3.12 H	204	60.35	-116.32
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	3465.00	-55.79	-13.00	-42.79	1.32 V	278	60.53	-116.32

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	TX LTE Band IV-1.4MHz	Channel	CH 20393：1754.3 MHz
Frequency Range	1 GHz ~ 18 GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3508.60	-55.41	-13.00	-42.41	3.20 H	15	60.63	-116.04
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	3508.60	-55.17	-13.00	-42.17	2.36 V	287	60.87	-116.04

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	TX LTE Band IV-5MHz	Channel	CH 19975：1712.5 MHz
Frequency Range	1 GHz ~ 18 GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3425.00	-56.17	-13.00	-43.17	2.35 H	179	60.29	-116.46
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	3425.00	-55.98	-13.00	-42.98	1.97 V	256	60.48	-116.46

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	TX LTE Band IV-5MHz	Channel	CH 20175：1732.5 MHz
Frequency Range	1 GHz ~ 18 GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3465.00	-54.99	-13.00	-41.99	1.37 H	193	61.33	-116.32
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	3465.00	-54.88	-13.00	-41.88	2.35 V	182	61.44	-116.32

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	TX LTE Band IV-5MHz	Channel	CH 20375：1752.5 MHz
Frequency Range	1 GHz ~ 18 GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3505.00	-56.71	-13.00	-43.71	1.78 H	232	59.35	-116.06
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	3505.00	-56.19	-13.00	-43.19	2.87 V	165	59.87	-116.06

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	TX LTE Band IV-20MHz	Channel	CH 20050：1720 MHz
Frequency Range	1 GHz ~ 18 GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3440.00	-55.98	-13.00	-42.98	2.32 H	71	60.46	-116.44
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	3440.00	-55.77	-13.00	-42.77	1.96 V	232	60.67	-116.44

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	TX LTE Band IV-20MHz	Channel	CH 20175：1732.5 MHz
Frequency Range	1 GHz ~ 18 GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3465.00	-54.79	-13.00	-41.79	1.63 H	289	61.53	-116.32
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	3465.00	-54.64	-13.00	-41.64	2.89 V	111	61.68	-116.32

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	TX LTE Band IV-20MHz	Channel	CH 20300：1745 MHz
Frequency Range	1 GHz ~ 18 GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	3490.00	-56.18	-13.00	-43.18	1.38 H	65	59.98	-116.16
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	3490.00	-56.03	-13.00	-43.03	2.21 V	120	60.13	-116.16

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	TX LTE Band XIII-5MHz	Channel	CH 23205：779.5 MHz
Frequency Range	1 GHz ~ 18 GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1559.00	-53.45	-40.00	-13.45	2.42 H	163	66.37	-119.82
Antenna Polarity & Test Distance : Vertical at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1559.00	-53.93	-40.00	-13.93	1.63 V	287	65.89	-119.82

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	TX LTE Band XIII-5MHz	Channel	CH 23230：782 MHz
Frequency Range	1 GHz ~ 18 GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1564.00	-53.28	-40.00	-13.28	2.13 H	156	66.56	-119.84
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1564.00	-53.84	-40.00	-13.84	2.23 V	173	66.00	-119.84

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	TX LTE Band XIII-5MHz	Channel	CH 23255：784.5 MHz
Frequency Range	1 GHz ~ 18 GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	1569.00	-53.75	-40.00	-13.75	1.78 H	232	66.13	-119.88
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1569.00	-54.18	-40.00	-14.18	2.36 V	174	65.70	-119.88

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

RF Mode	TX LTE Band XIII-10MHz	Channel	CH 23230：782 MHz
Frequency Range	1 GHz ~ 18 GHz		

Antenna Polarity & Test Distance : Horizontal at 3 m								
No	Frequency (MHz)	EIRP (dBm)	Limit (dBm)	Margin (dB)	Antenna Height (m)	Table Angle (Degree)	Raw Value (dBuV)	Correction Factor (dB/m)
1	**1564.00**	**-53.06**	**-40.00**	**-13.06**	**2.03 H**	**222**	**66.78**	**-119.84**
Antenna Polarity & Test Distance : Vertical at 3 m								
No	**Frequency (MHz)**	**EIRP (dBm)**	**Limit (dBm)**	**Margin (dB)**	**Antenna Height (m)**	**Table Angle (Degree)**	**Raw Value (dBuV)**	**Correction Factor (dB/m)**
1	1564.00	-53.53	-40.00	-13.53	1.45 V	159	66.31	-119.84

Remarks:

1. EIRP(dBm) = Raw Value(dBuV) + Correction Factor(dB/m)
2. Correction Factor(dB/m) = Antenna Factor(dB/m) + Cable Factor(dB) – Pre-Amplifier Factor(dB) + 20log(D) – 104.8
3. Margin value = EIRP – Limit value
4. The other EIRP levels were very low against the limit.

5 Pictures of Test Arrangements

Please refer to the attached file (Test Setup Photo).

Appendix – Information of the Testing Laboratories

We, Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch, were founded in 1988 to provide our best service in EMC, Radio, Telecom and Safety consultation. Our laboratories are FCC recognized accredited test firms and accredited according to ISO/IEC 17025.

If you have any comments, please feel free to contact us at the following:

Lin Kou EMC/RF Lab
Tel: 886-2-26052180
Fax: 886-2-26051924

Hsin Chu EMC/RF/Telecom Lab
Tel: 886-3-6668565
Fax: 886-3-6668323

Hwa Ya EMC/RF/Safety Lab
Tel: 886-3-3183232
Fax: 886-3-3270892

Email: service.adt@tw.bureauveritas.com
Web Site: www.bureauveritas-adt.com

The address and road map of all our labs can be found in our web site also.

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