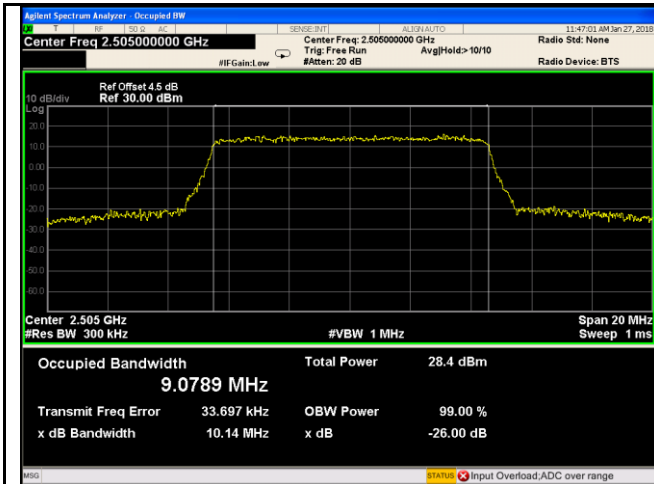
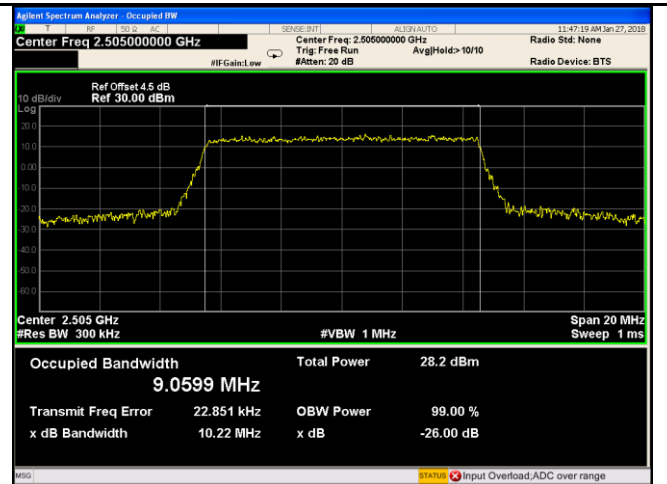
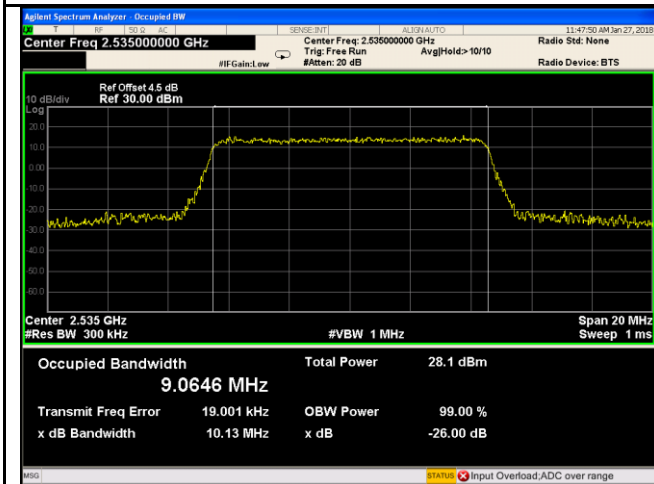




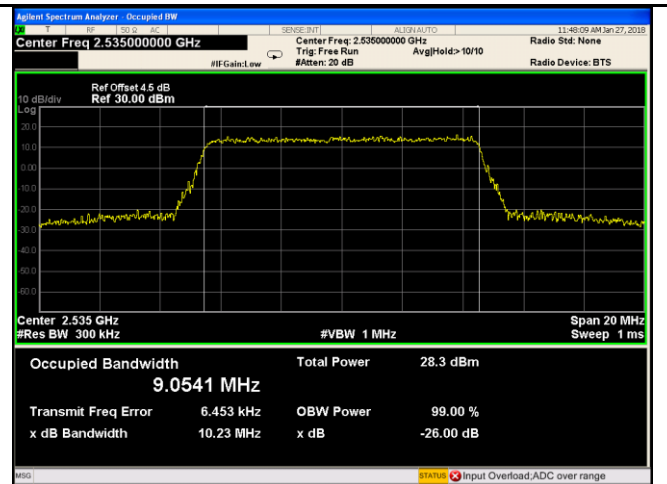
LTE Band VII - Low CH QPSK-10



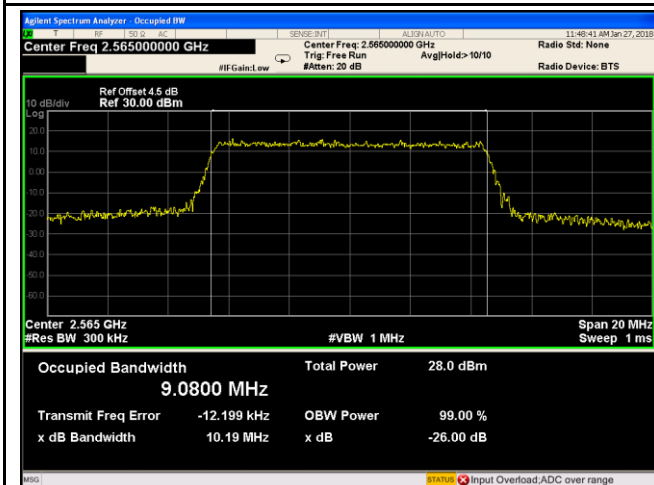
LTE Band VII - Low CH 16QAM-10



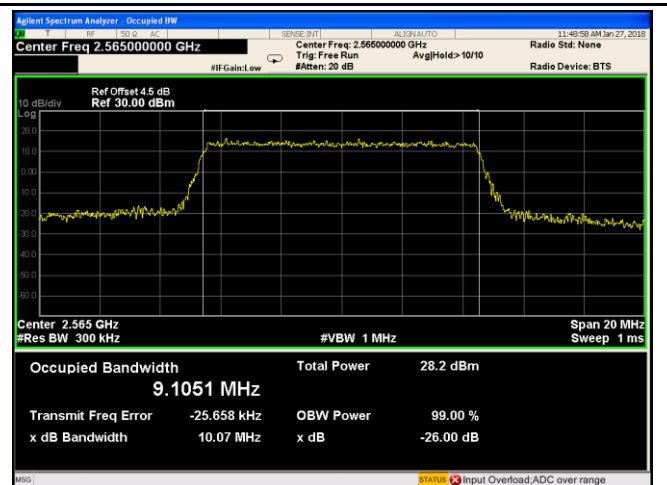
LTE Band VII - Middle CH QPSK-10



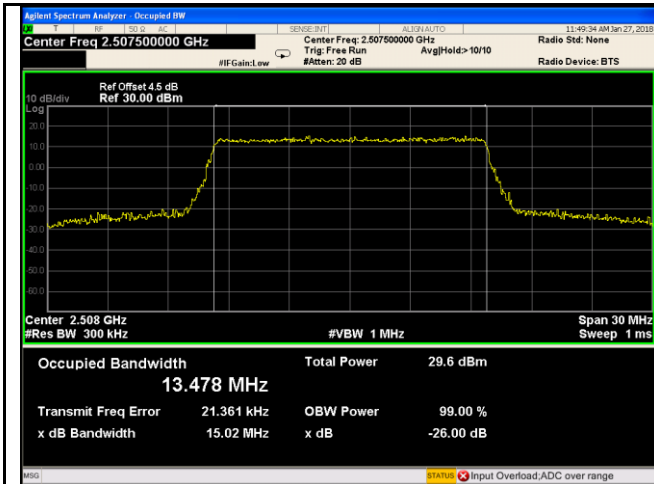
LTE Band VII - Middle CH 16QAM-10



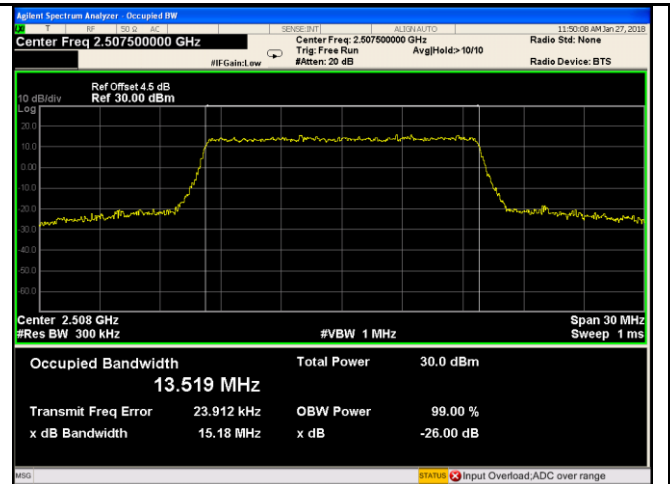
LTE Band VII - High CH QPSK-10



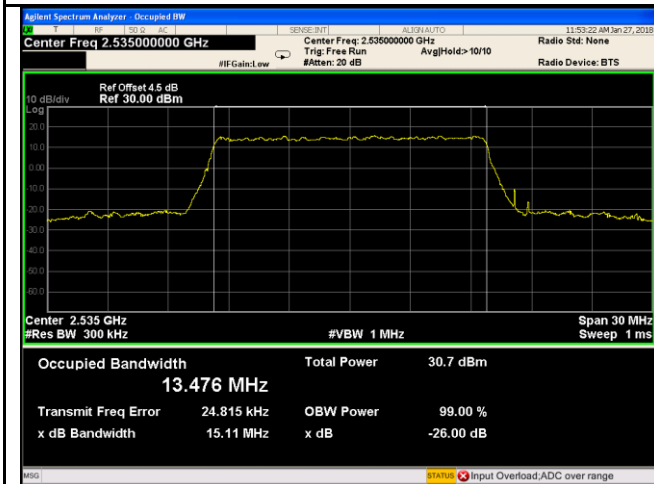
LTE Band VII - High CH 16QAM-10



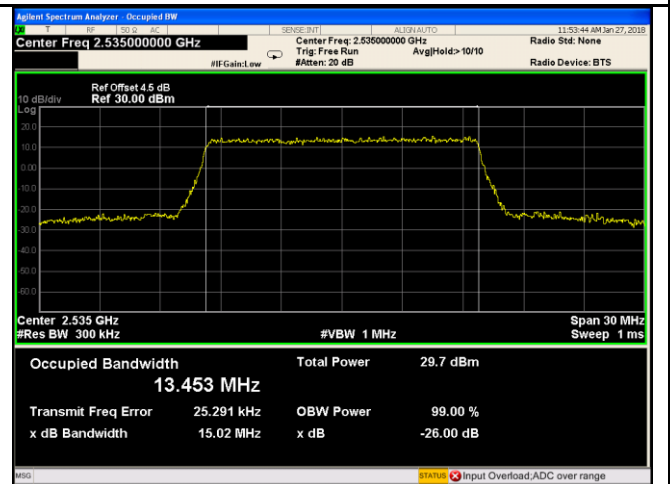
LTE Band VII - Low CH QPSK-15



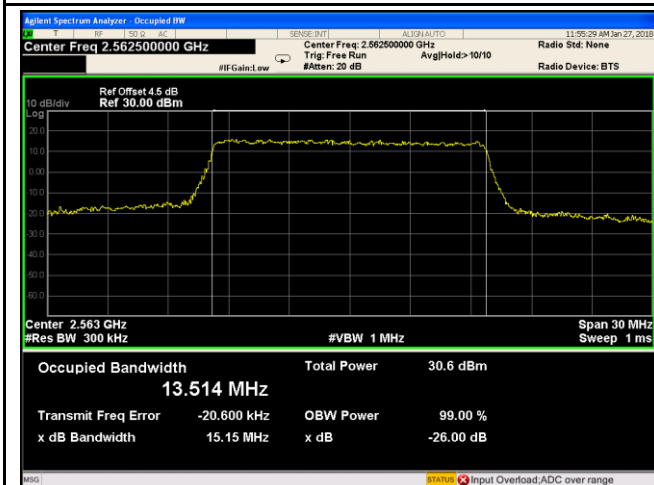
LTE Band VII - Low CH 16QAM-15



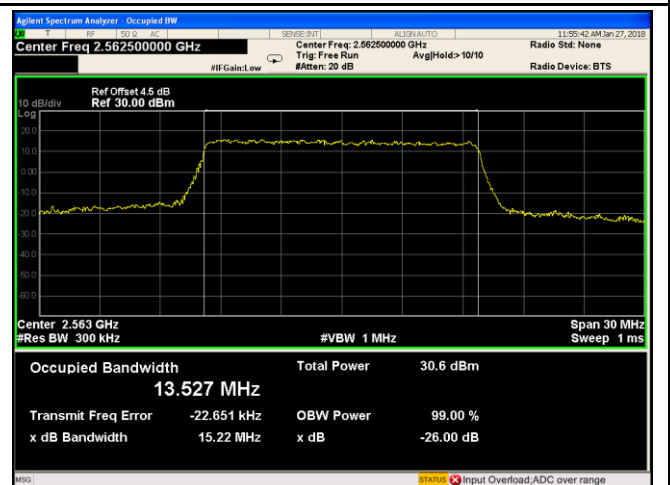
LTE Band VII - Middle CH QPSK-15



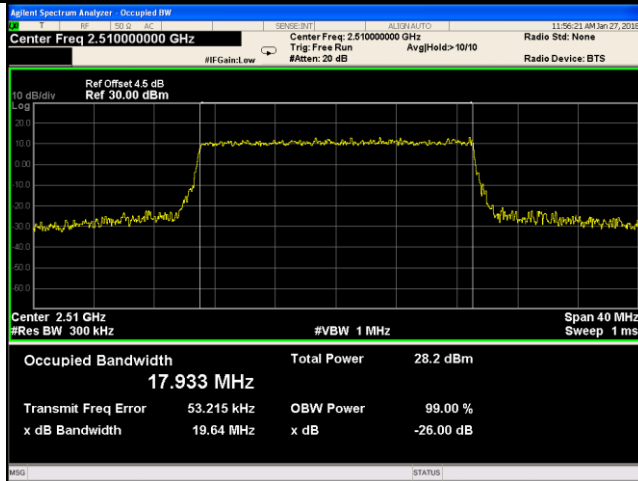
LTE Band VII - Middle CH 16QAM-15



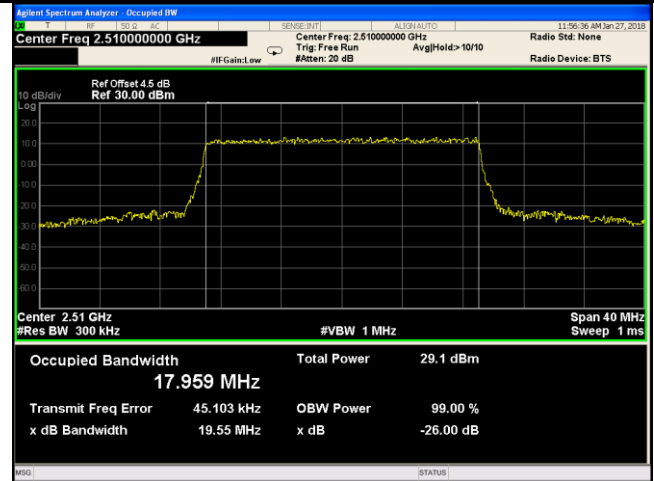
LTE Band VII - High CH QPSK-15



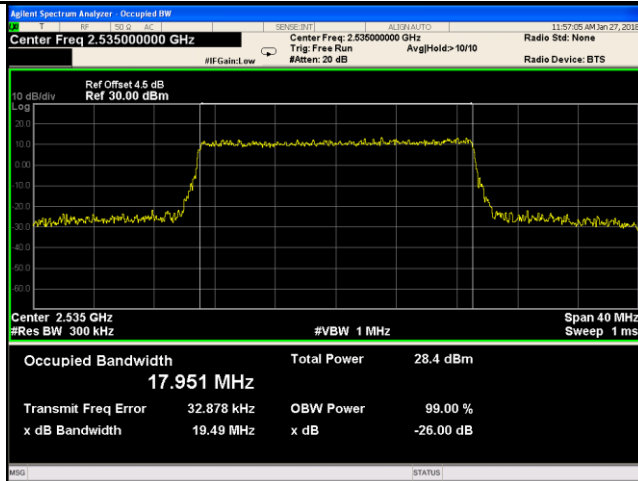
LTE Band VII - High CH 16QAM-15



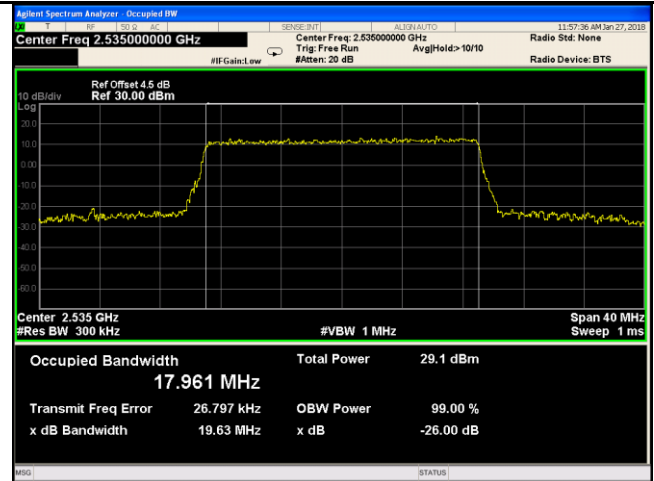
LTE Band VII - Low CH QPSK-20



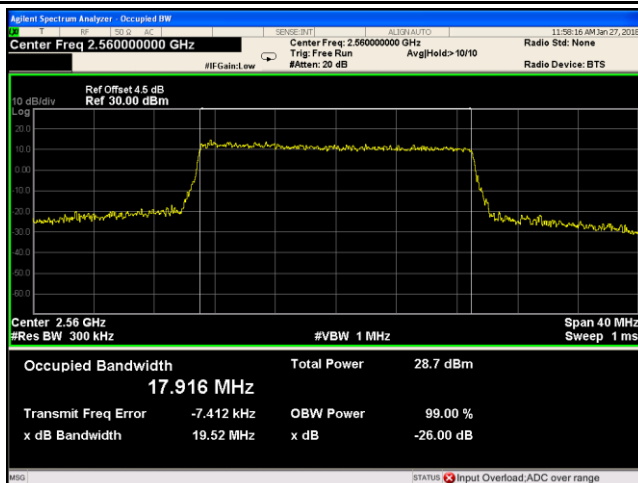
LTE Band VII - Low CH 16QAM-20



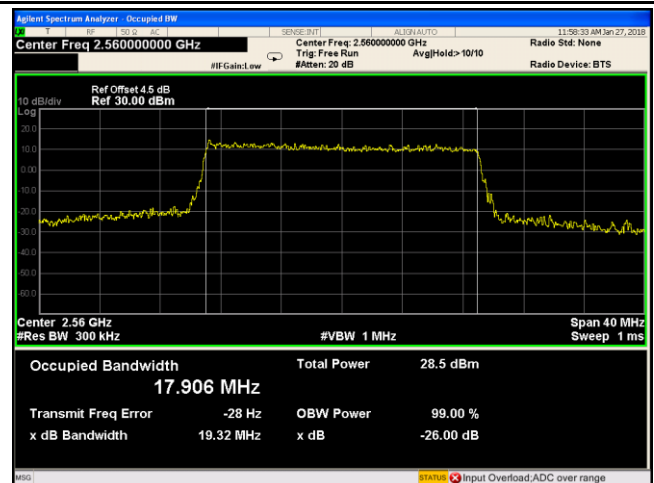
LTE Band VII - Middle CH QPSK-20



LTE Band VII - Middle CH 16QAM-20

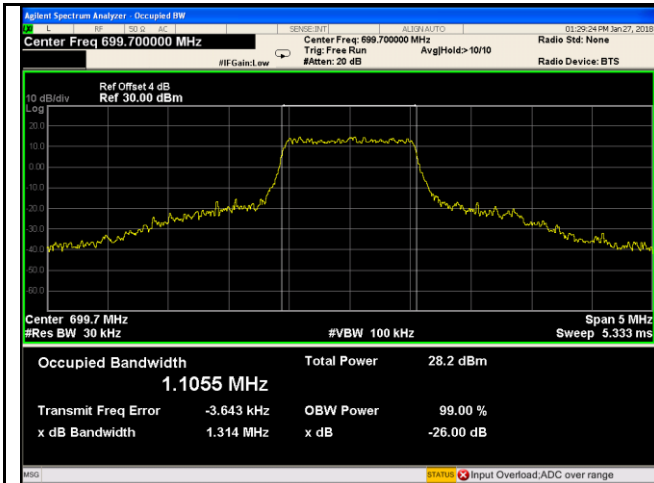


LTE Band VII - High CH QPSK-20

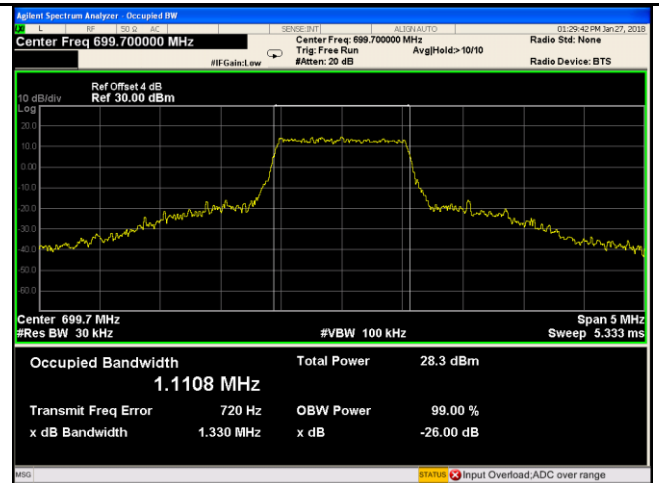


LTE Band VII - High CH 16QAM-20

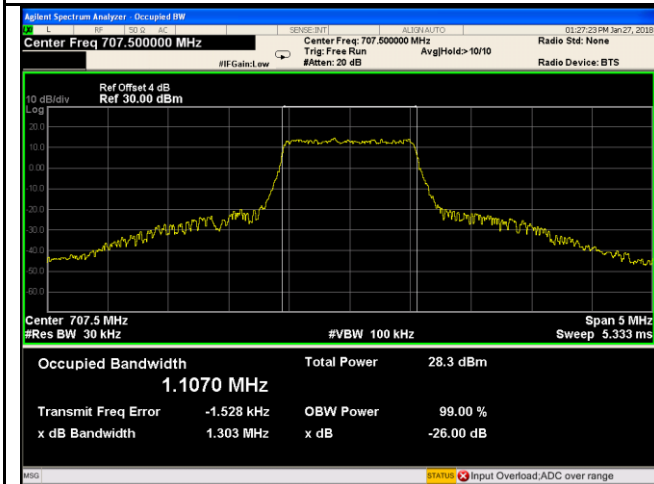
LTE Band XII (Part 27)



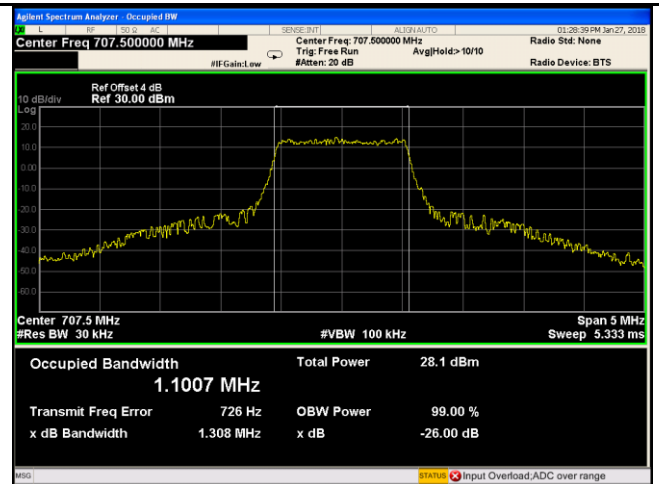
LTE Band XII - Low CH QPSK-1.4



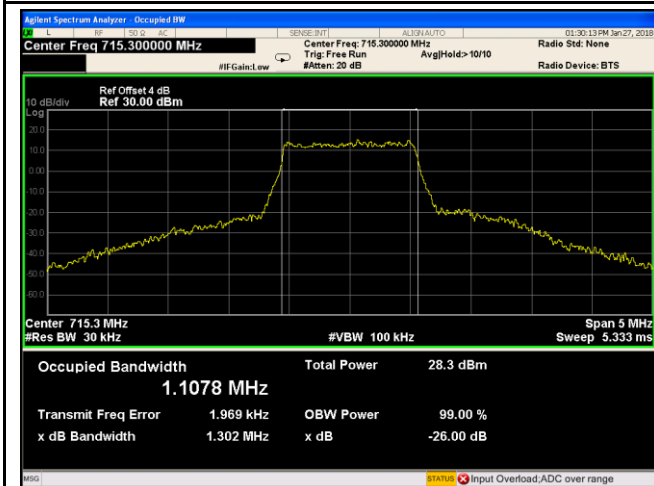
LTE Band XII - Low CH 16QAM-1.4



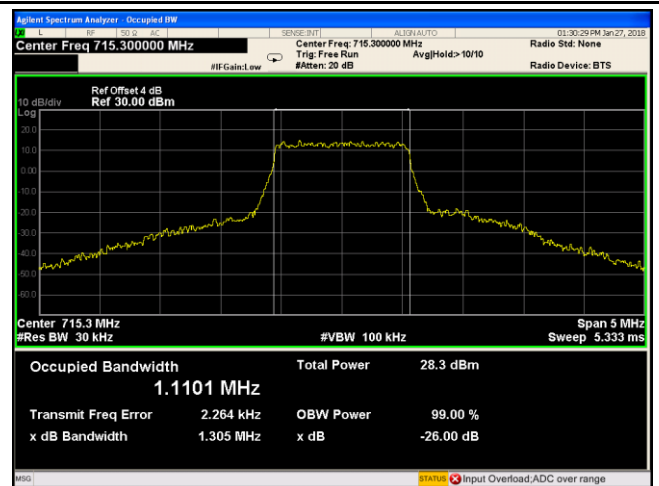
LTE Band XII - Middle CH QPSK-1.4



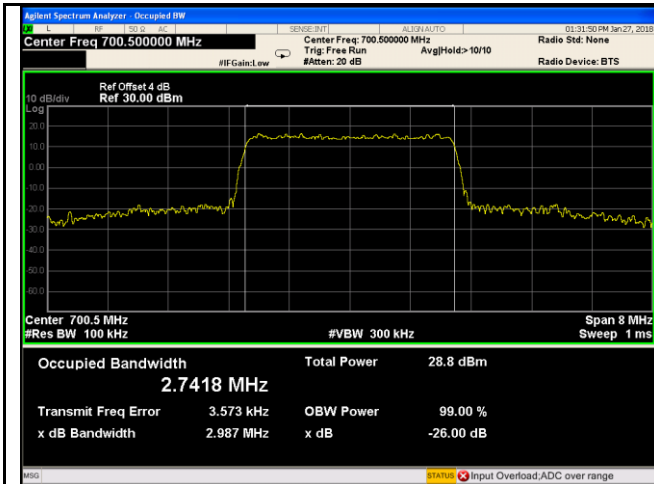
LTE Band XII - Middle CH 16QAM-1.4



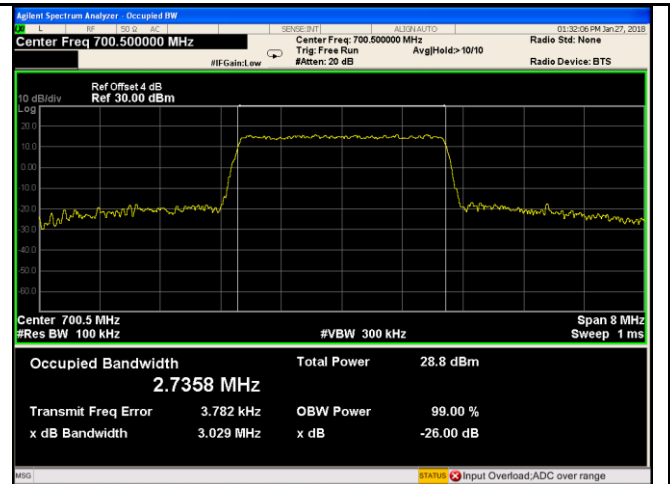
LTE Band XII - High CH QPSK-1.4



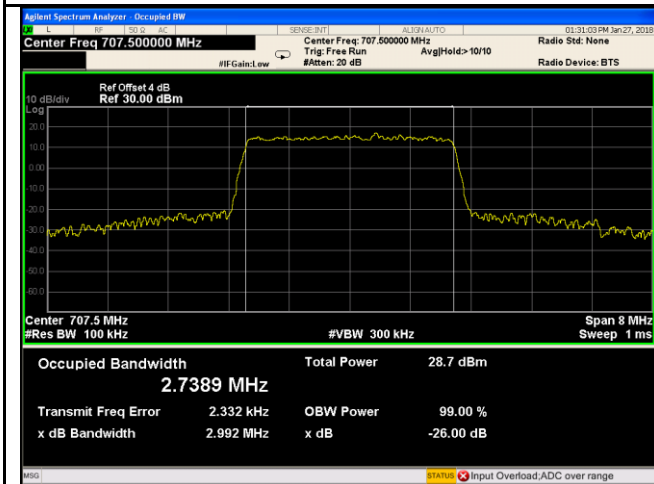
LTE Band XII - High CH 16QAM-1.4



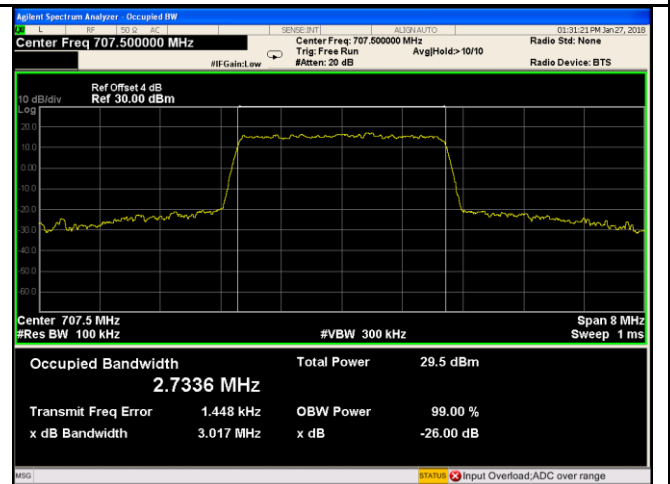
LTE Band XII - Low CH QPSK-3



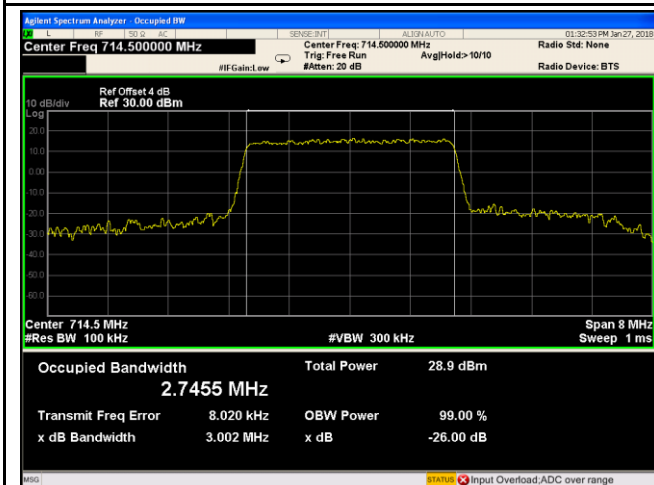
LTE Band XII - Low CH 16QAM-3



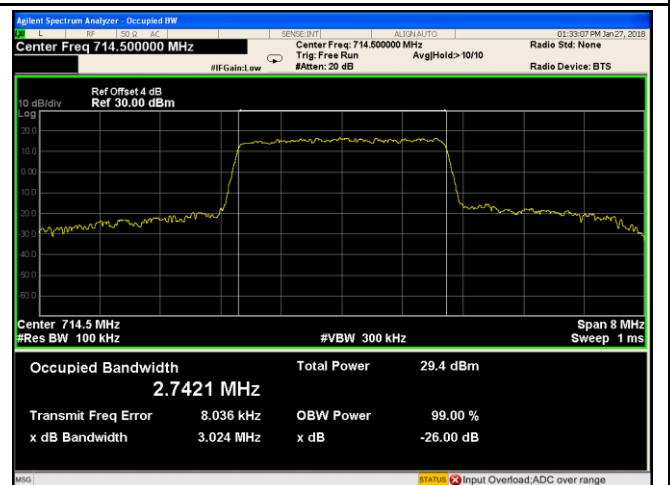
LTE Band XII - Middle CH QPSK-3



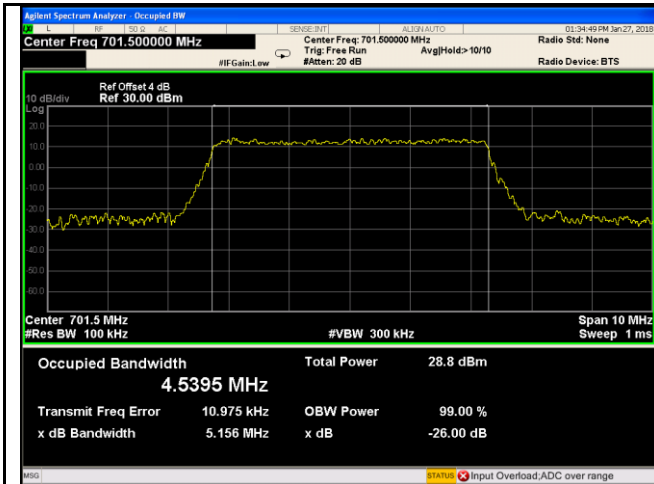
LTE Band XII - Middle CH 16QAM-3



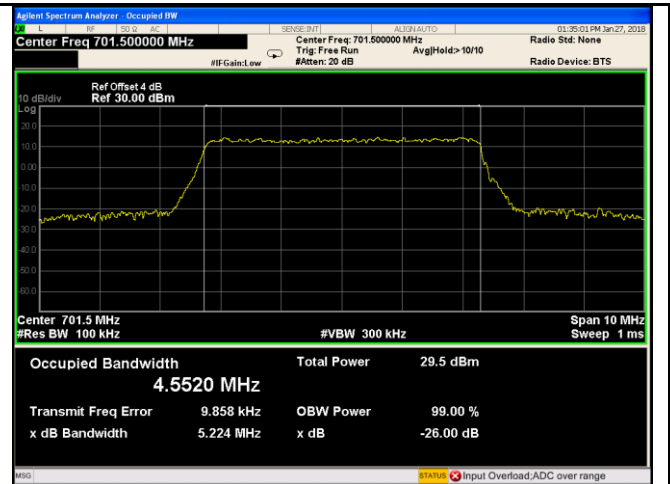
LTE Band XII - High CH QPSK-3



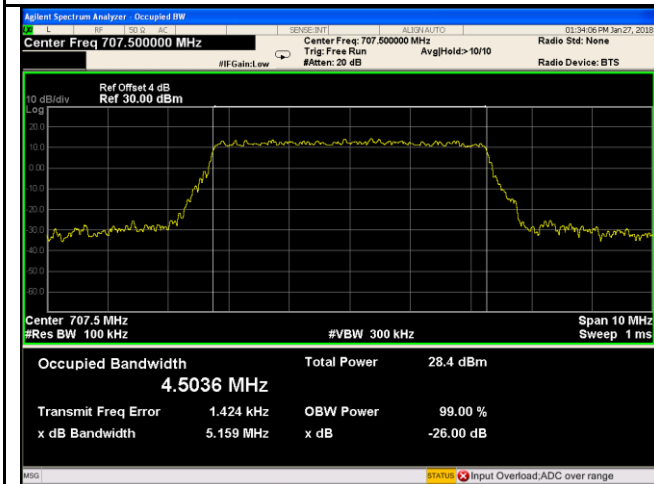
LTE Band XII - High CH 16QAM-3



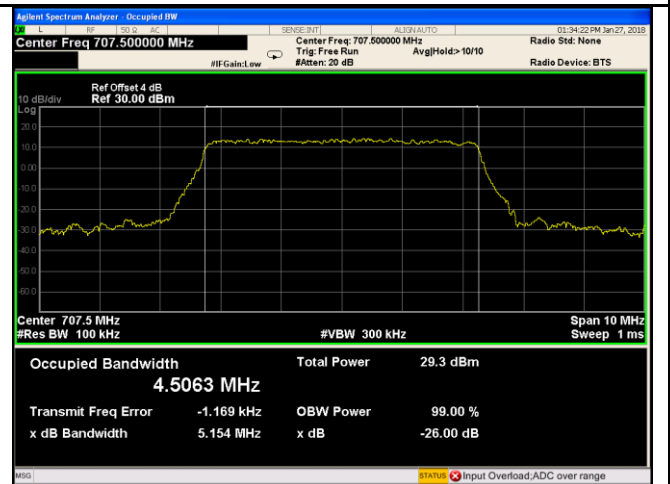
LTE Band XII - Low CH QPSK-5



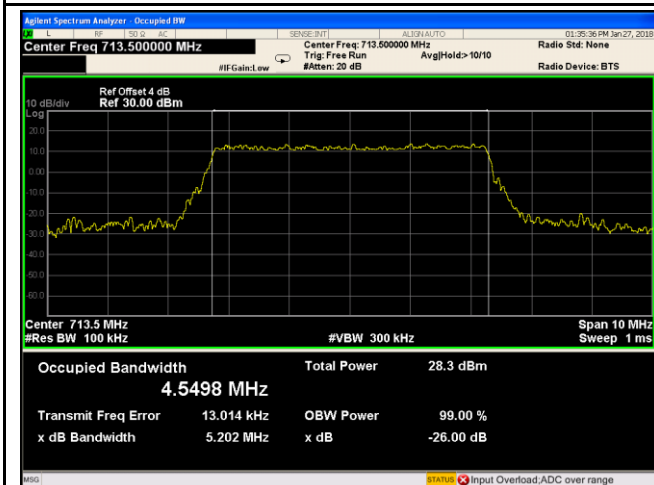
LTE Band XII - Low CH 16QAM-5



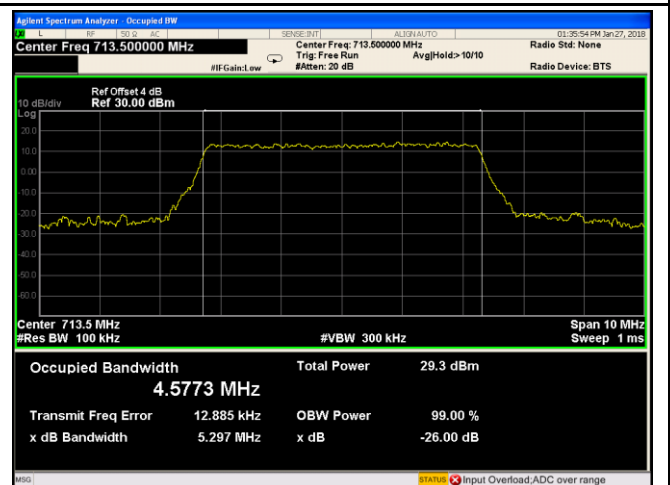
LTE Band XII - Middle CH QPSK-5



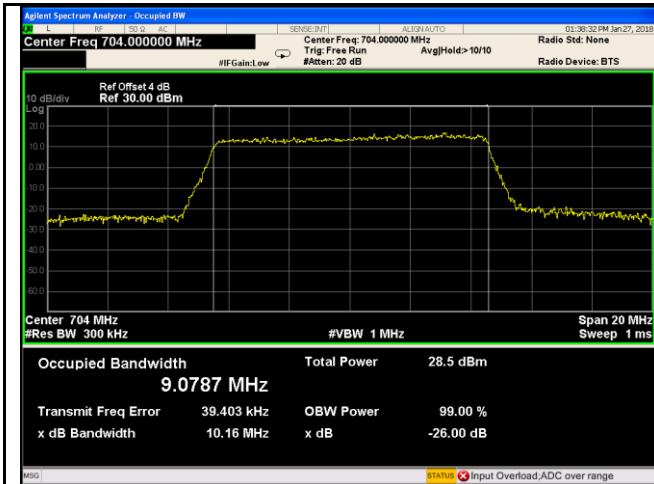
LTE Band XII - Middle CH 16QAM-5



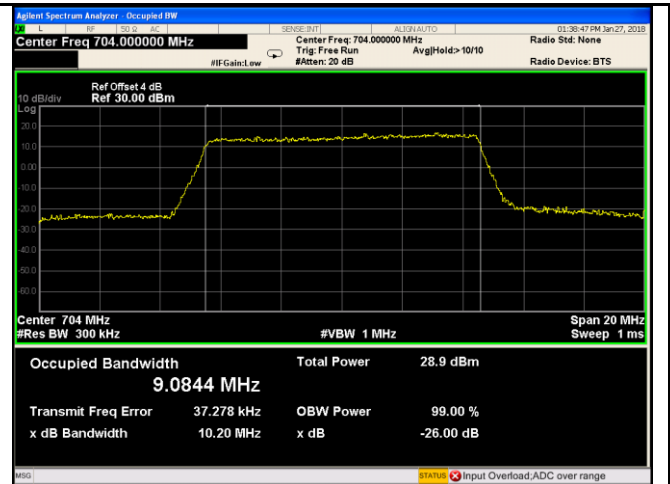
LTE Band XII - High CH QPSK-5



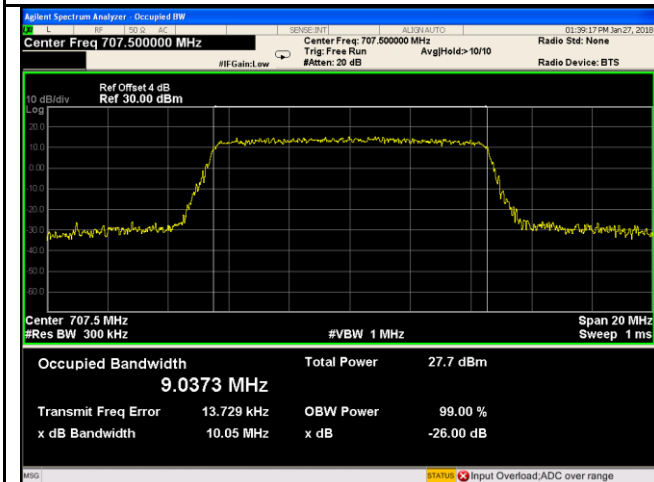
LTE Band XII - High CH 16QAM-5



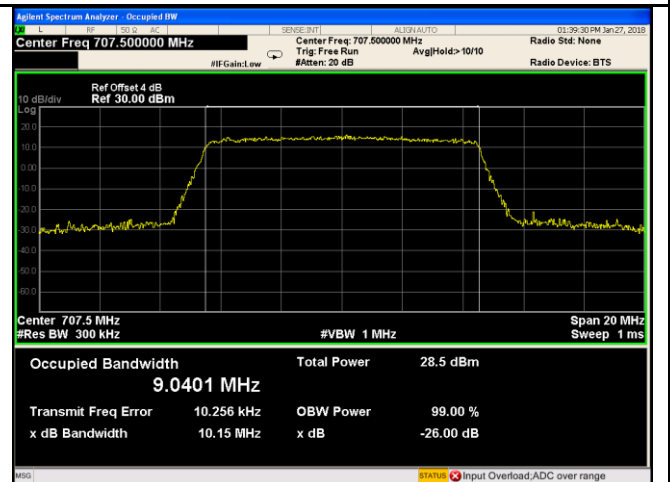
LTE Band XII - Low CH QPSK-10



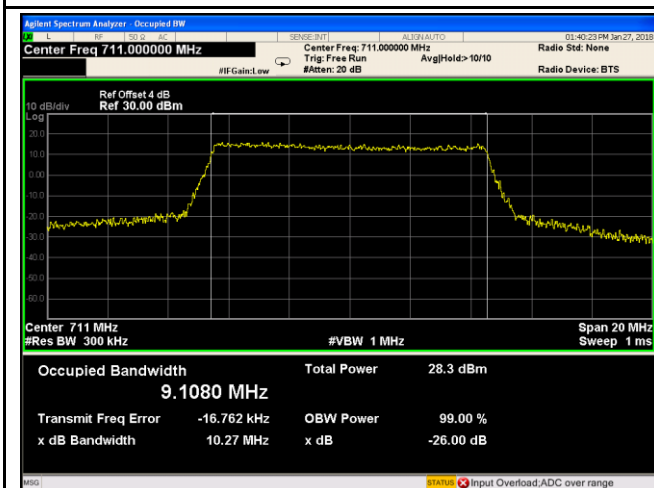
LTE Band XII - Low CH 16QAM-10



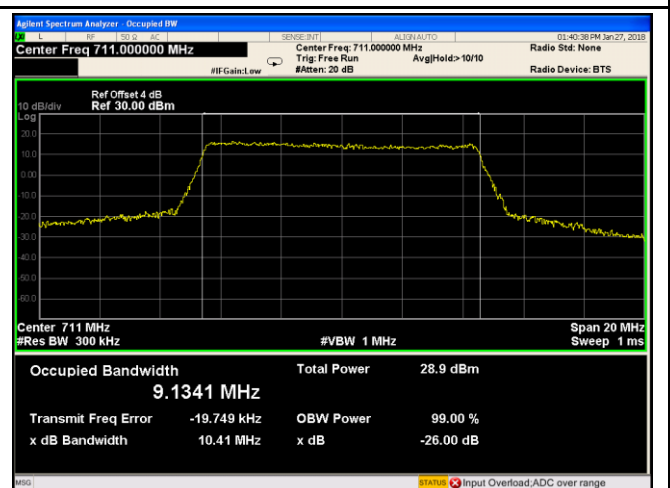
LTE Band XII - Middle CH QPSK-10



LTE Band XII - Middle CH 16QAM-10

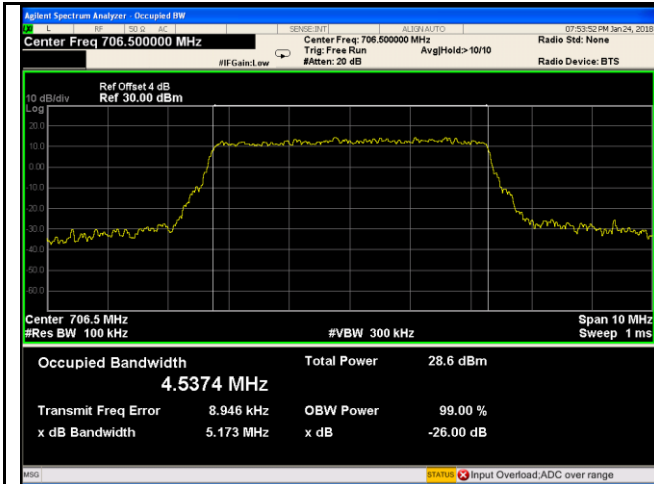


LTE Band XII - High CH QPSK-10

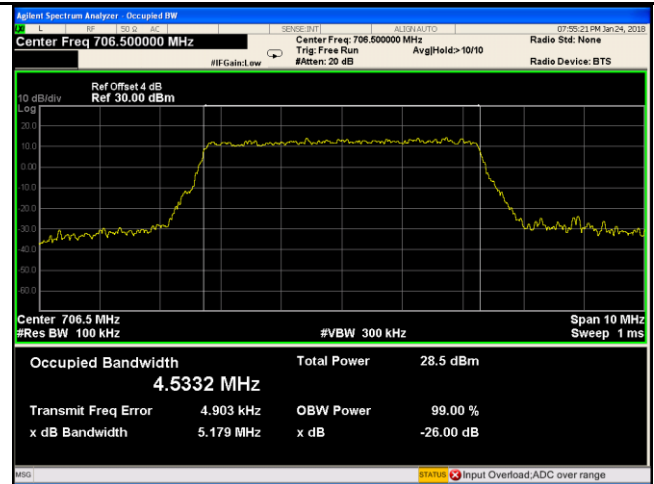


LTE Band XII - High CH 16QAM-10

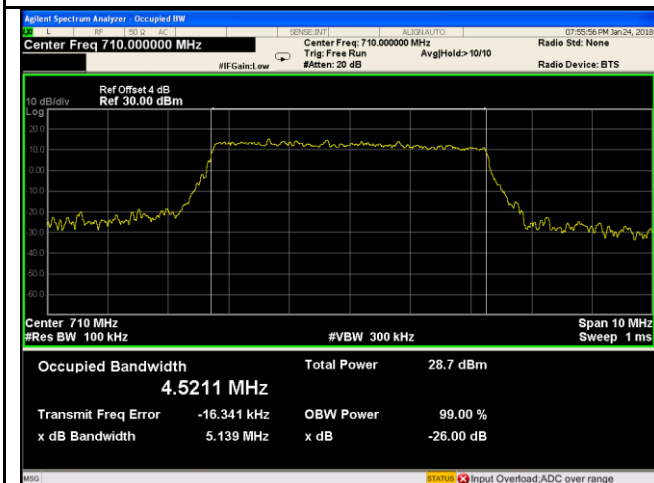
LTE Band XVII (Part 27)



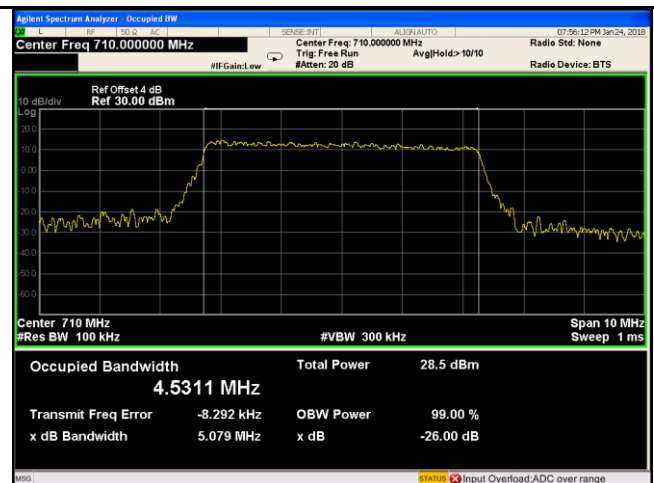
LTE Band XVII - Low CH QPSK-5



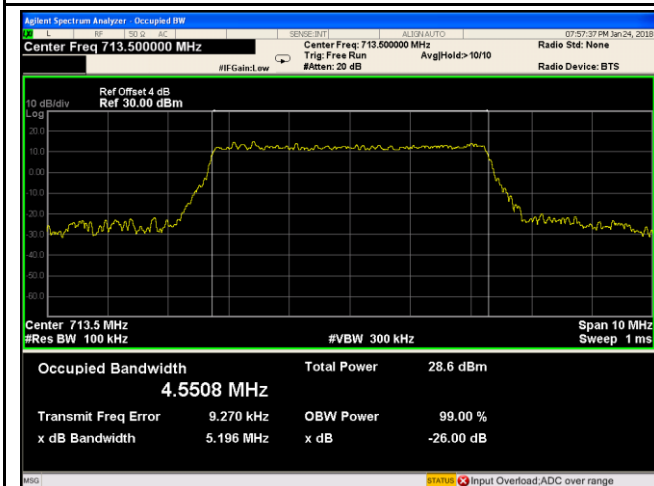
LTE Band XVII - Low CH 16QAM-5



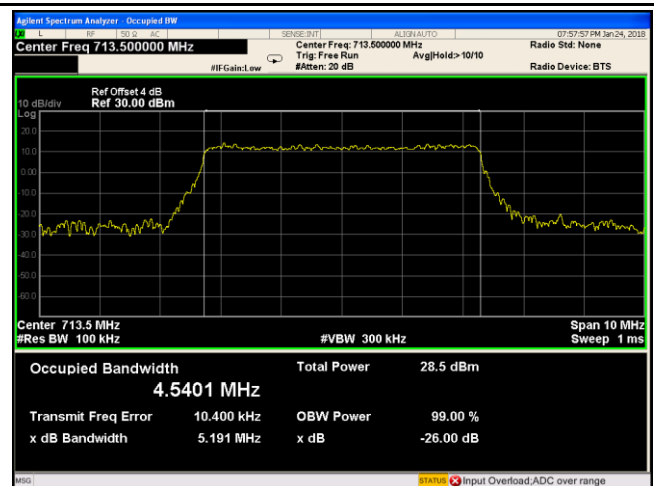
LTE Band XVII - Middle CH QPSK-5



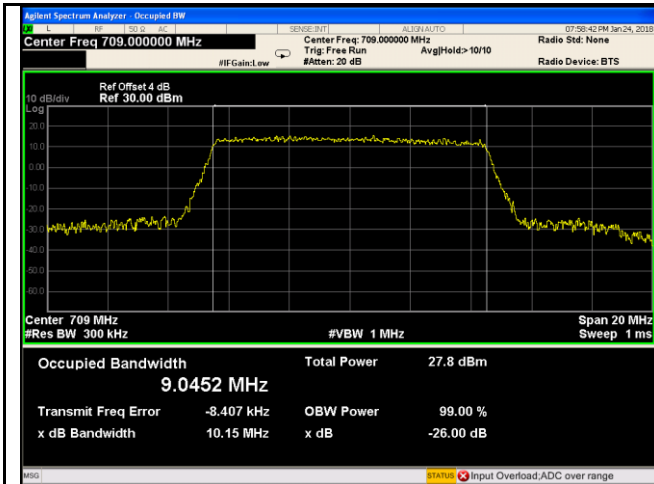
LTE Band XVII - Middle CH 16QAM-5



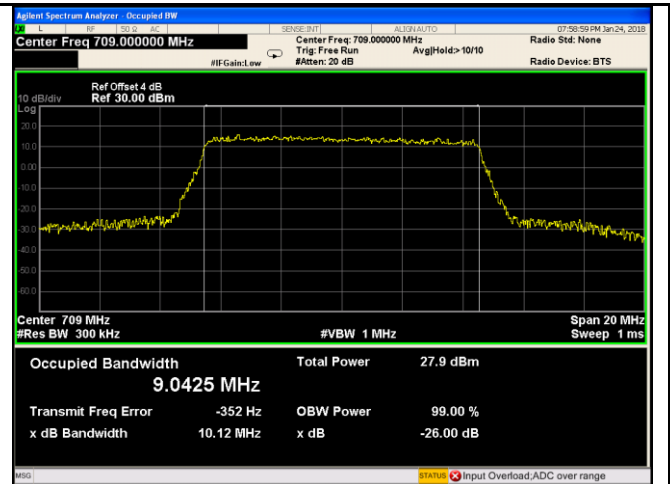
LTE Band XVII - High CH QPSK-5



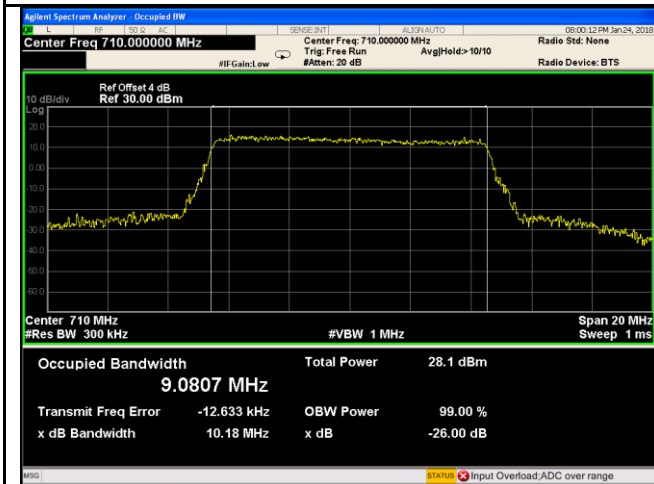
LTE Band XVII - High CH 16QAM-5



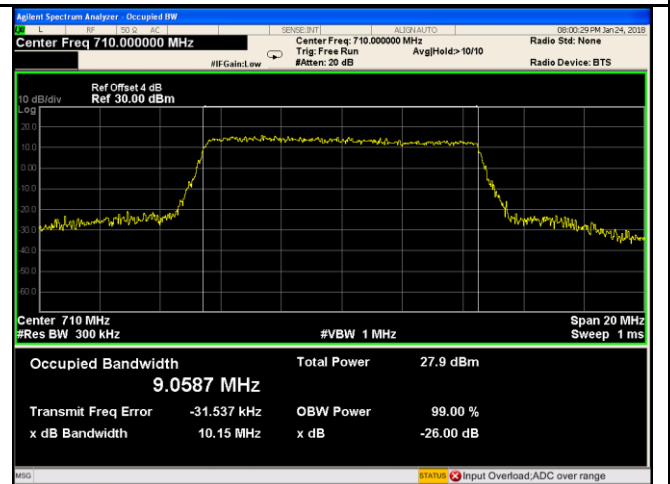
LTE Band XVII - Low CH QPSK-10



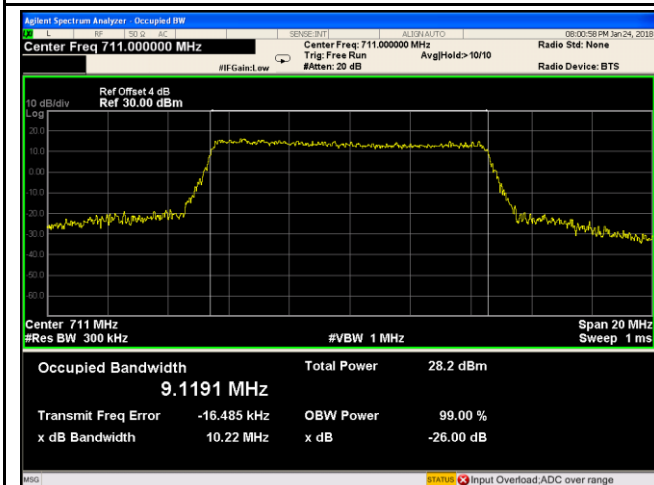
LTE Band XVII - Low CH 16QAM-10



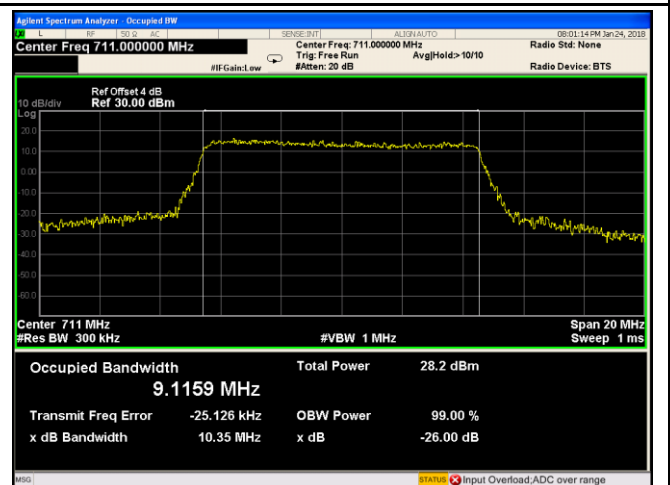
LTE Band XVII - Middle CH QPSK-10



LTE Band XVII - Middle CH 16QAM-10



LTE Band XVII - High CH QPSK-10

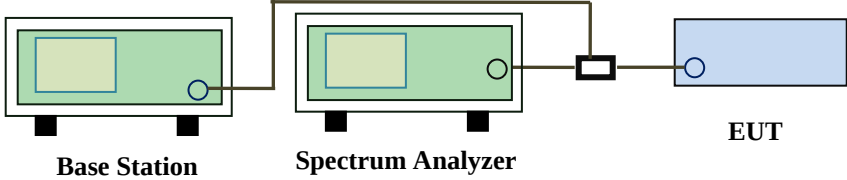


LTE Band XVII - High CH 16QAM-10

6.5 Spurious Emissions at Antenna Terminals

Temperature	25 °C
Relative Humidity	57%
Atmospheric Pressure	1024mbar
Test date :	January 24&27, 2018
Tested By :	Aaron Liang

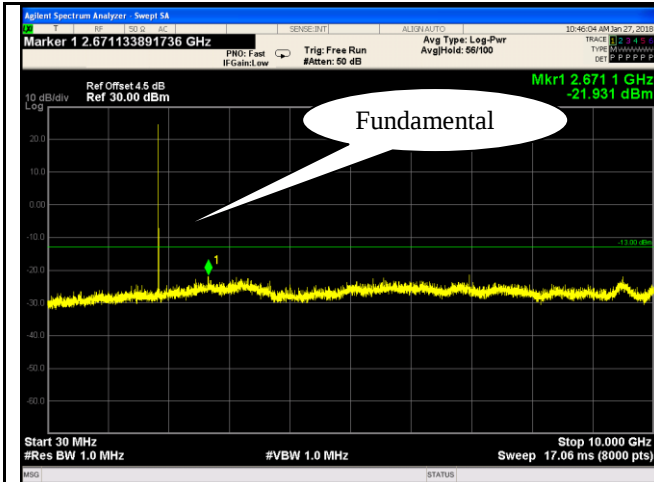
Requirement(s):

Spec	Item	Requirement	Applicable
§2.1051, §22.917(a)& §24.238(a) § 27.53(h)	a)	The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB	☒
Test Setup			
Test Procedure	- The EUT was connected to Spectrum Analyzer and Base Station via power divider. - The Band Edges of low and high channels for the highest RF powers were measured. - Setting RBW as roughly BW/100.		
Remark			
Result	☒ Pass ☐ Fail		

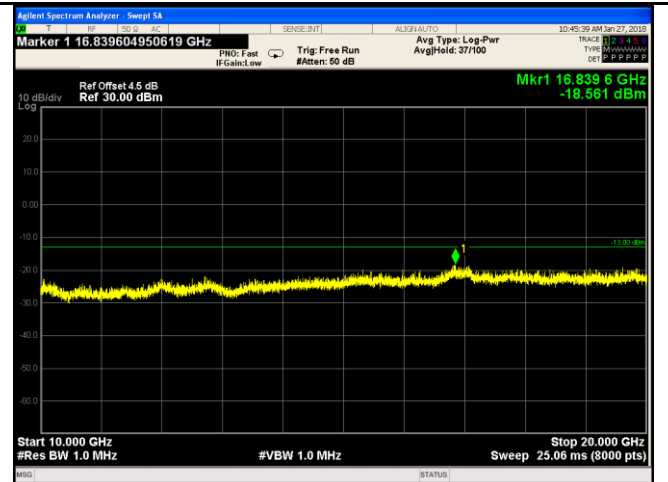
Test Data ☒ Yes ☐ N/A
 Test Plot ☒ Yes (See below) ☐ N/A

Test Plots 30MHz-5GHz

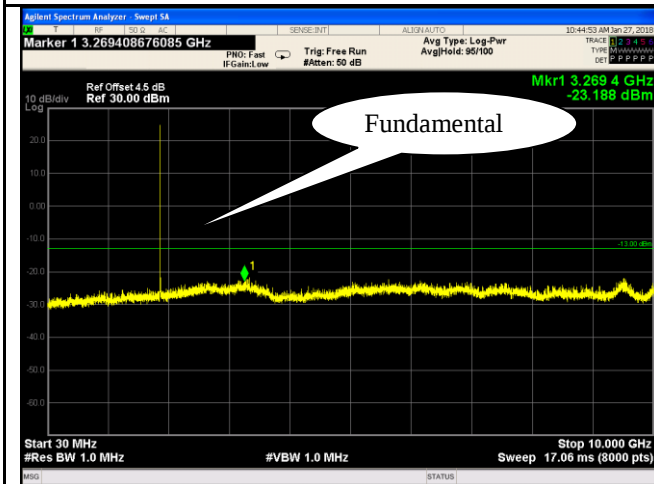
LTE Band II (Part 24E)



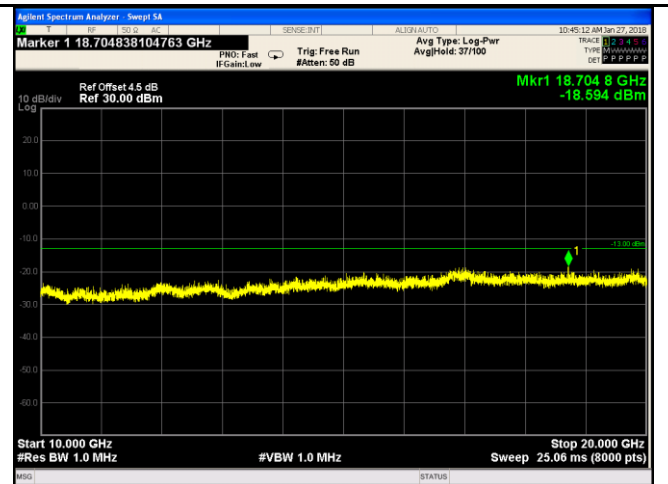
LTE Band II - Low Channel-1



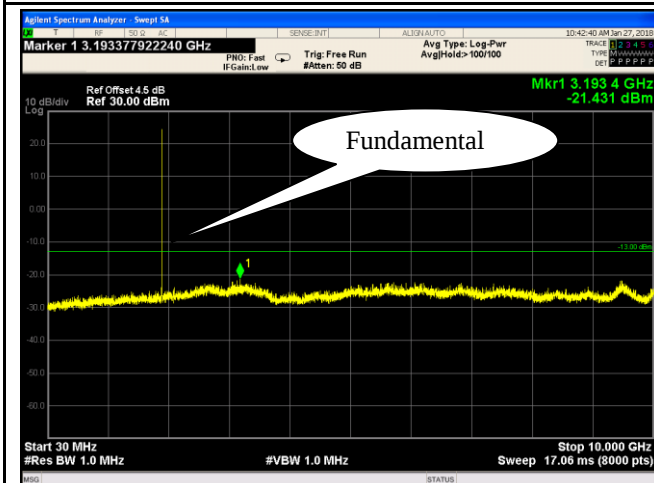
LTE Band II - Low Channel-2



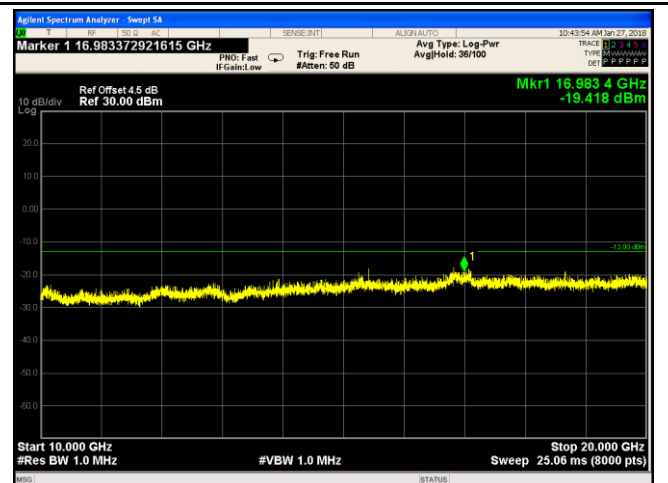
LTE Band II Middle Channel-1



LTE Band II Middle Channel-2

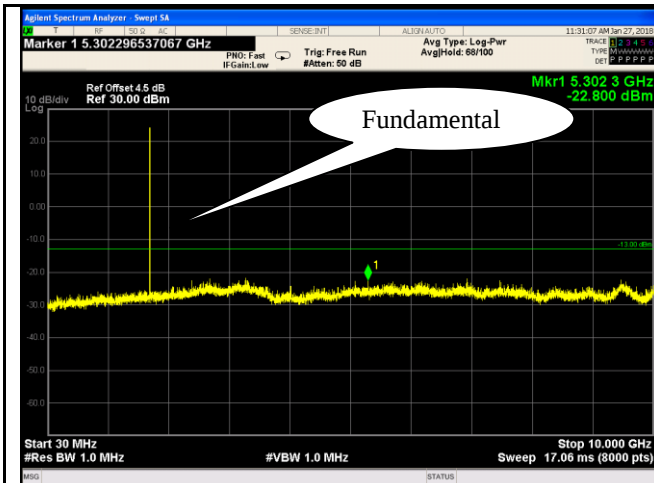


LTE Band II - High Channel-1

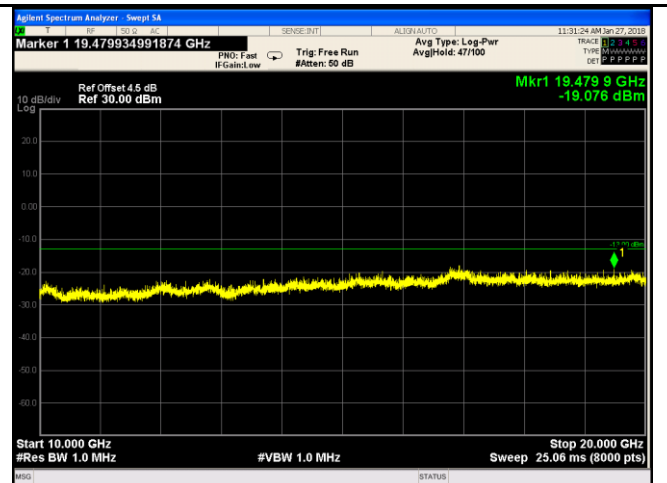


LTE Band II - High Channel-2

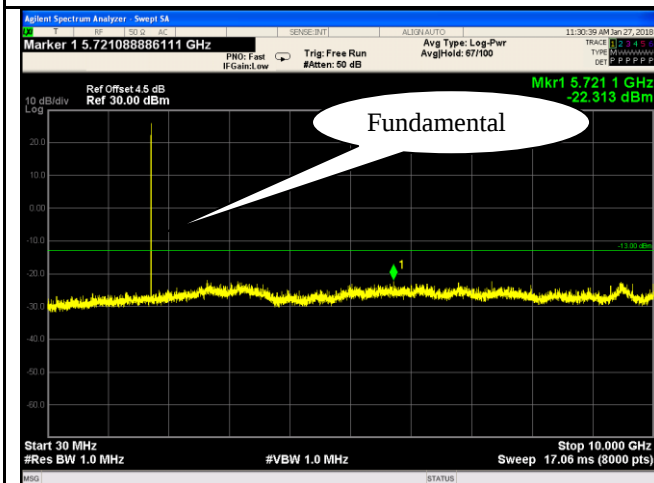
LTE Band IV (Part27) result



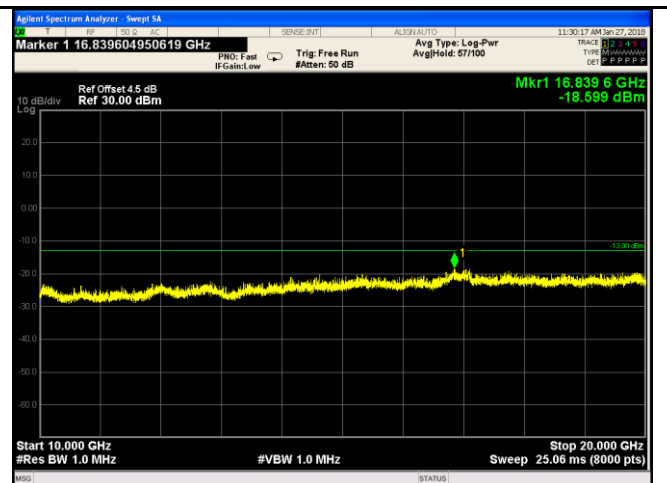
LTE Band IV - Low Channel-1



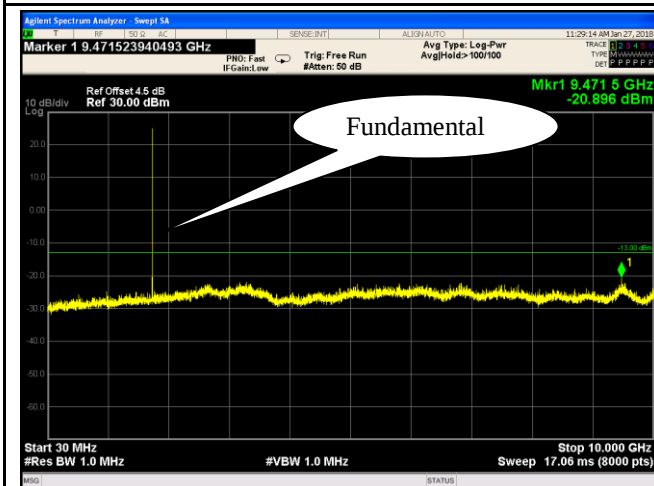
LTE Band IV - Low Channel-2



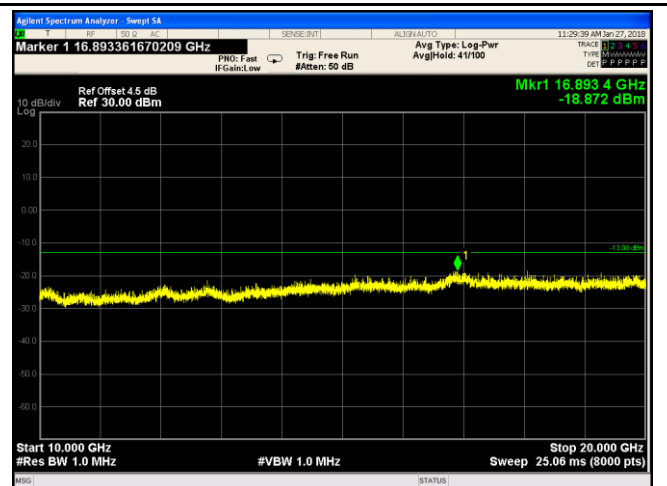
LTE Band IV - Middle Channel-1



LTE Band IV - Middle Channel-2

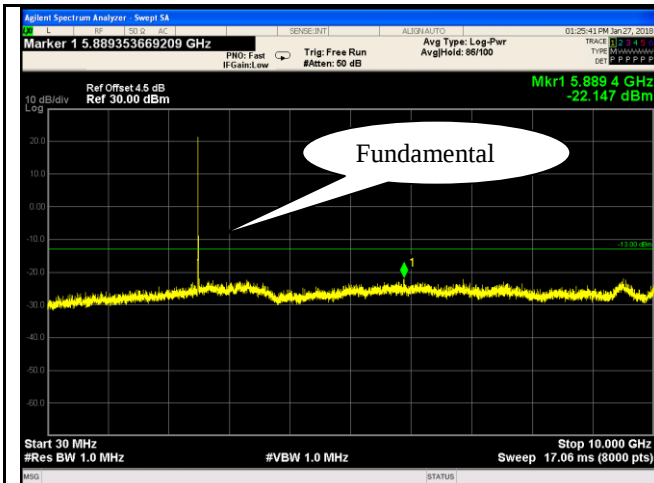


LTE Band IV - High Channel-1

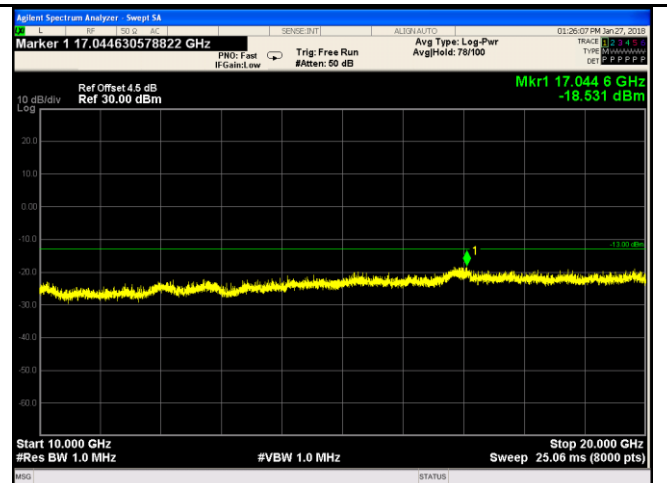


LTE Band IV - High Channel-2

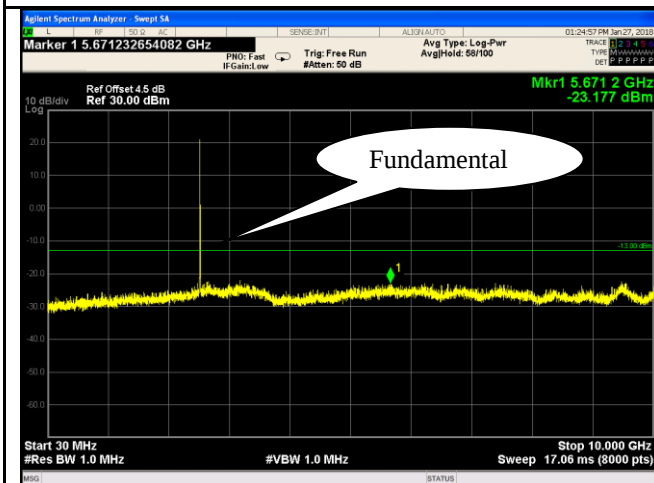
LTE Band VII (Part 27)



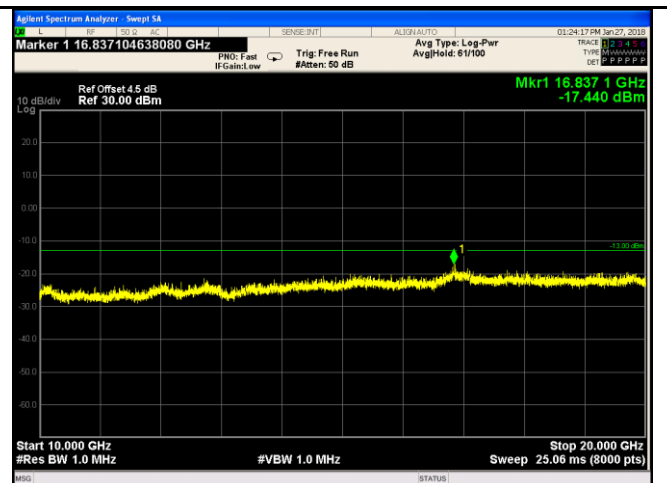
LTE Band VII - Low Channel-1



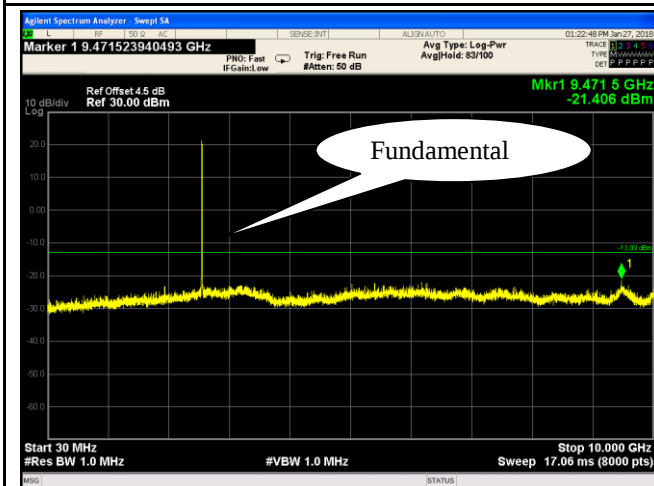
LTE Band VII - Low Channel-2



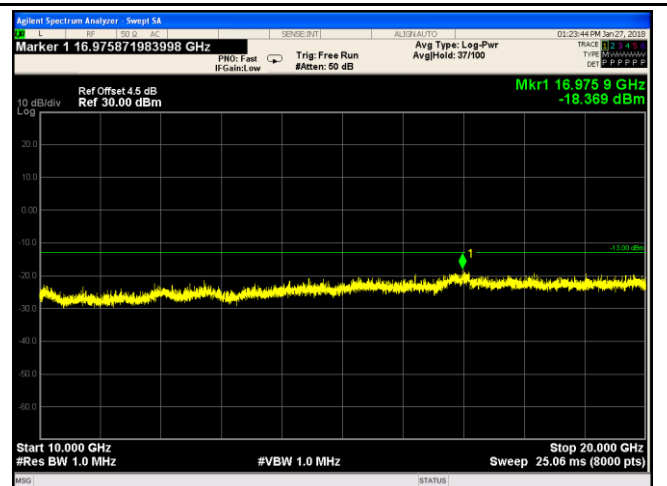
LTE Band VII - Middle Channel-1



LTE Band VII - Middle Channel-2

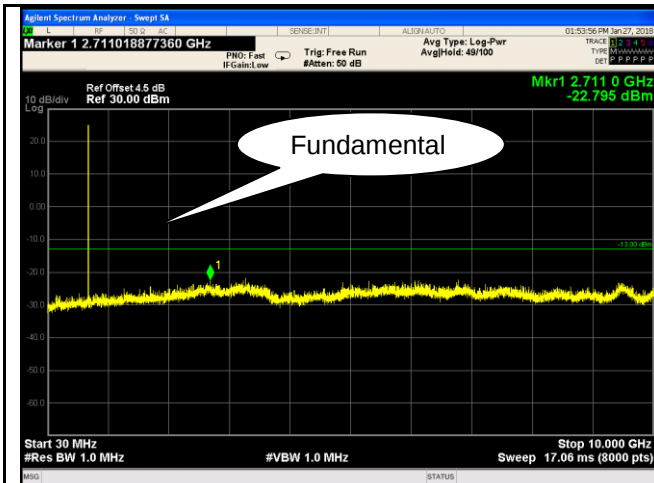


LTE Band VII - High Channel-1

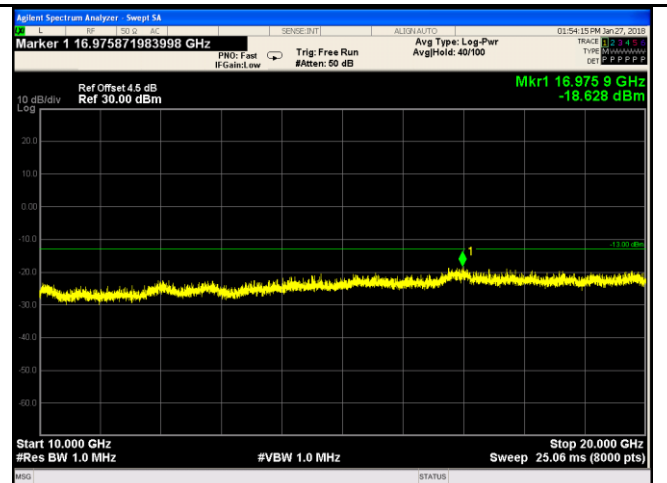


LTE Band VII - High Channel-2

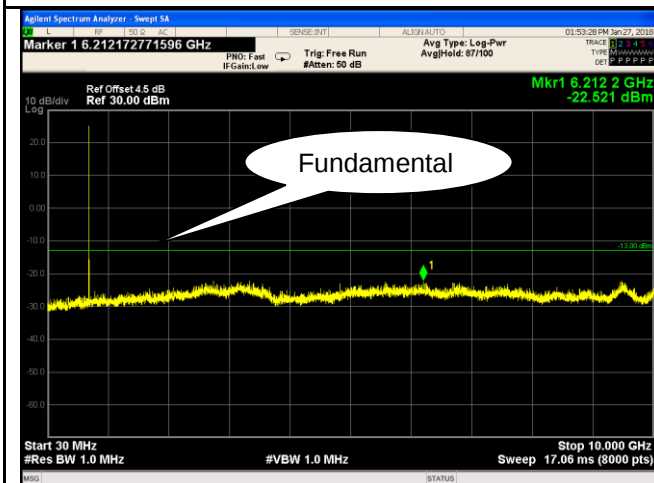
LTE Band XII (Part 27)



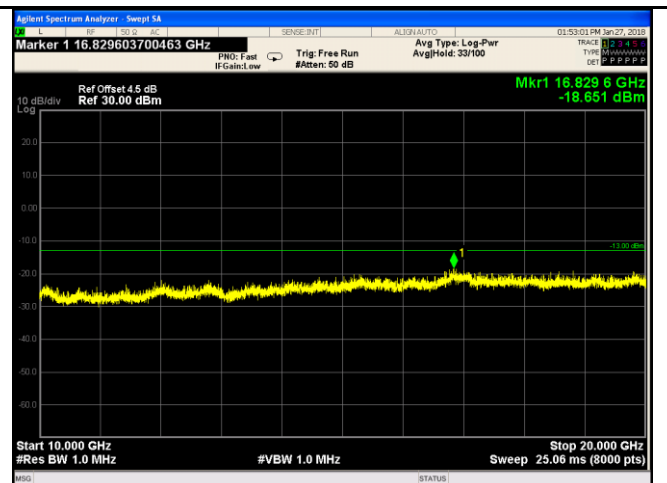
LTE Band XII - Low Channel-1



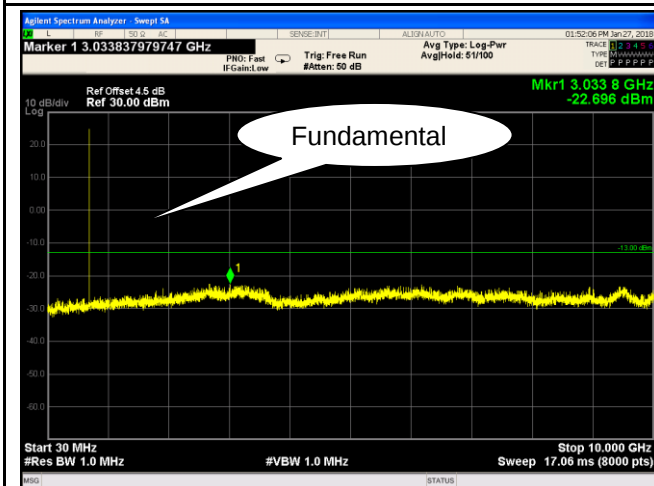
LTE Band XII - Low Channel-2



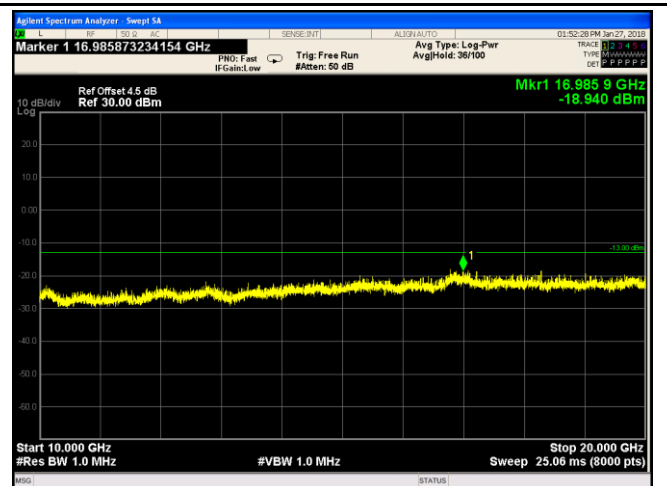
LTE Band XII - Middle Channel-1



LTE Band XII - Middle Channel-2

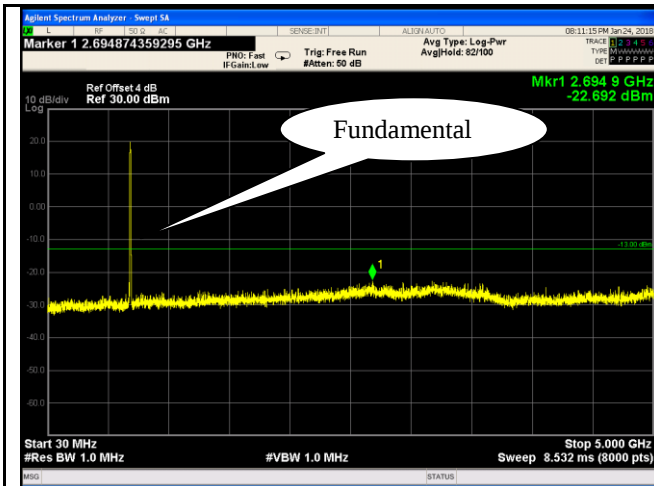


LTE Band XII - High Channel-1

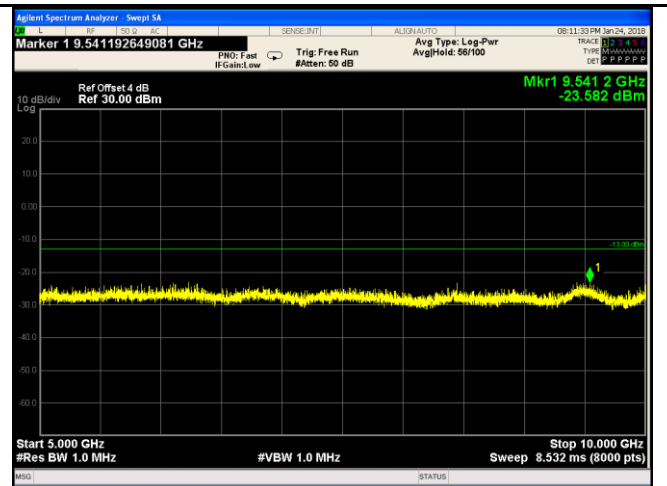


LTE Band XII - High Channel-2

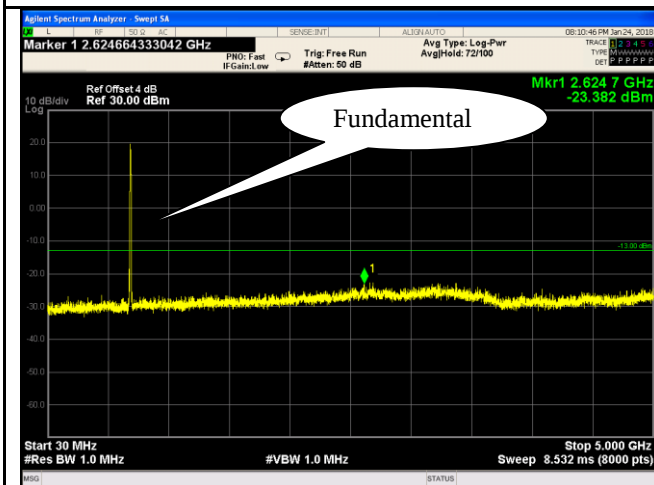
LTE Band XVII (Part 27)



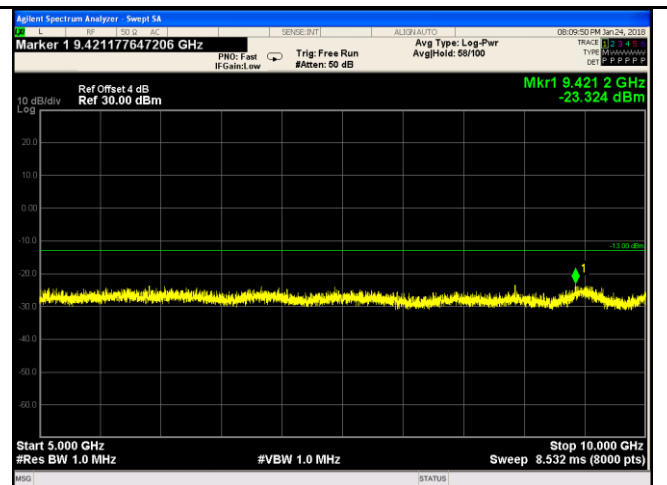
LTE Band XVII - Low Channel-1



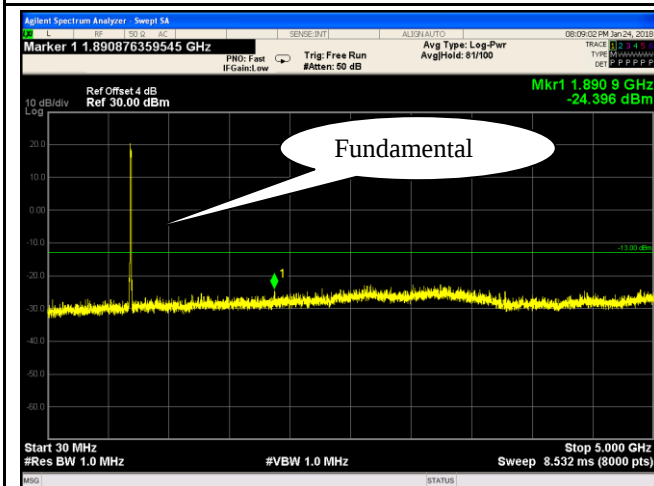
LTE Band XVII - Low Channel-2



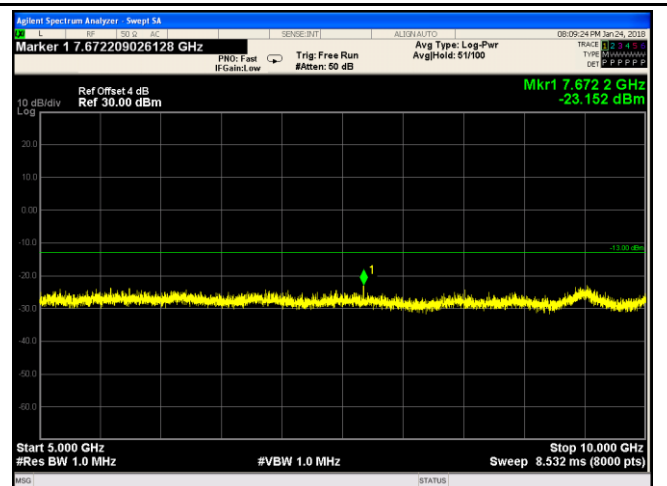
LTE Band XVII- Middle Channel-1



LTE Band XVII - Middle Channel-2



LTE Band XVII - High Channel-1



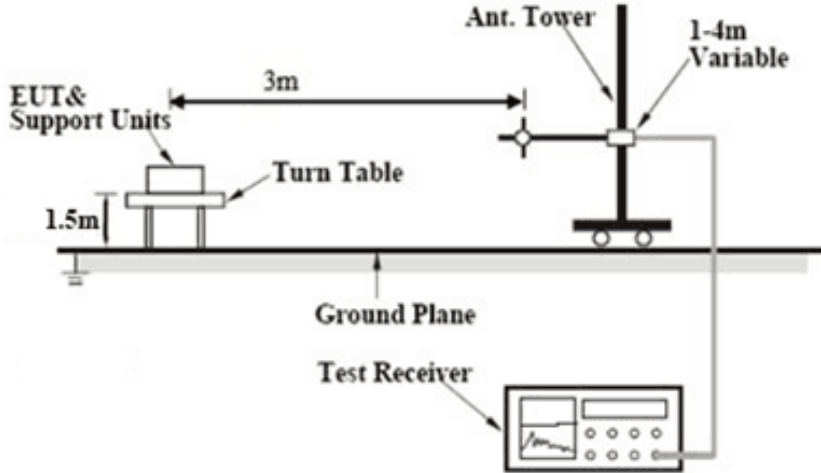
LTE Band XVII - High Channel-2

6.6 Spurious Radiated Emissions

Temperature	25 °C
Relative Humidity	55%
Atmospheric Pressure	1017mbar
Test date :	January 23, 2018
Tested By :	Aaron Liang

Requirement(s):

Spec	Item	Requirement	Applicable
§2.1053, §22.917 & §24.238 § 27.53(h)	a)	The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least $43 + 10 \log (P)$ dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.	☒

Test setup	
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Test Procedure	- The transmitter was placed on a wooden turntable, and it was transmitting into a non-radiating load which was also placed on the turntable. - The measurement antenna was placed at a distance of 3 meters from the EUT. During the tests, the antenna height and polarization as well as EUT azimuth were varied in order to identify the maximum level of emissions from the EUT. The test was performed by placing the EUT on 3-orthogonal axis. - Remove the EUT and replace it with substitution antenna. A signal generator was connected to the substitution antenna by a non-radiating cable. The absolute levels of the spurious emissions were measured by the substitution. Sample Calculation: EUT Field Strength = Raw Amplitude (dBμV/m) – Amplifier Gain (dB) + Antenna Factor (dB) + Cable Loss (dB) + Filter Attenuation (dB, if used)
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Remark	
Result	☒ Pass ☐ Fail

Test Data ☒ Yes ☐ N/A
 Test Plot ☐ Yes (See below) ☒ N/A

LTE Band II (Part 24E) result

Low channel

Frequency (MHz)	Antenna Polarization (H/V)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
3720	V	-36.96	-13	-23.96
3720	H	-38.1	-13	-25.1
403.16	V	-40.72	-13	-27.72
393.29	H	-41.41	-13	-28.41

Middle channel

Frequency (MHz)	Antenna Polarization (H/V)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
3760	V	-32.8	-13	-19.8
3760	H	-30.12	-13	-17.12
290.7	V	-36.93	-13	-23.93
798.34	H	-38.25	-13	-25.25

High channel

Frequency (MHz)	Antenna Polarization (H/V)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
3800	V	-28.61	-13	-15.61
3800	H	-30.56	-13	-17.56
269.18	V	-36.51	-13	-23.51
298.52	H	-40.98	-13	-27.98

Note:

- 1, The testing has been conformed to $10 \times 1907.5 \text{ MHz} = 19,075 \text{ MHz}$
- 2, All other emissions more than 30 dB below the limit
- 3, X-Axis, Y-Axis and Z-Axis were investigated. The results above show only the worst case.
- 4, The radiated spurious test above 18GHz is subcontracted to SIEMIC (Nanjing-China) Laboratories. and found 30dB below the limit at least.

LTE Band IV (Part27) result

Low channel

Frequency (MHz)	Antenna Polarization (H/V)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
3440	V	-30.51	-13	-17.51
3440	H	-32.89	-13	-19.89
378.86	V	-40.38	-13	-27.38
305.24	H	-40.46	-13	-27.46

Middle channel

Frequency (MHz)	Antenna Polarization (H/V)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
3465	V	-28.06	-13	-15.06
3465	H	-26.77	-13	-13.77
413.74	V	-34.98	-13	-21.98
270.42	H	-42.14	-13	-29.14

High channel

Frequency (MHz)	Antenna Polarization (H/V)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
3490	V	-28.24	-13	-15.24
3490	H	-32.99	-13	-19.99
323.86	V	-34.67	-13	-21.67
207.4	H	-40.25	-13	-27.25

Note:

1, The testing has been conformed to $10 \times 1752.5 \text{ MHz} = 17,525 \text{ MHz}$

2, All other emissions more than 30 dB below the limit

3, X-Axis, Y-Axis and Z-Axis were investigated. The results above show only the worst case.

LTE Band VII (Part27) result

Low channel

Frequency (MHz)	Antenna Polarization (H/V)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
5020	V	-30.67	-13	-17.67
5020	H	-30.1	-13	-17.1
812.38	V	-41.37	-13	-28.37
393.71	H	-33.27	-13	-20.27

Middle channel

Frequency (MHz)	Antenna Polarization (H/V)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
5070	V	-38.62	-13	-25.62
5070	H	-30.48	-13	-17.48
481.25	V	-41.98	-13	-28.98
481.64	H	-34.24	-13	-21.24

High channel

Frequency (MHz)	Antenna Polarization (H/V)	Corrected Reading (dBm)	Limit (dBm)	Margin (dB)
5120	V	-35.12	-13	-22.12
5120	H	-35.95	-13	-22.95
339.31	V	-37.92	-13	-24.92
396.61	H	-40.92	-13	-27.92

Note:

1, The testing has been conformed to $10 \times 2567.5 \text{ MHz} = 25,675 \text{ MHz}$

2, All other emissions more than 30 dB below the limit

3, X-Axis, Y-Axis and Z –Axis were investigated. The results above show only the worst case.

4, The radiated spurious test above 18GHz is subcontracted to SIEMIC (Nanjing-China) Laboratories. and found 30dB below the limit at least.