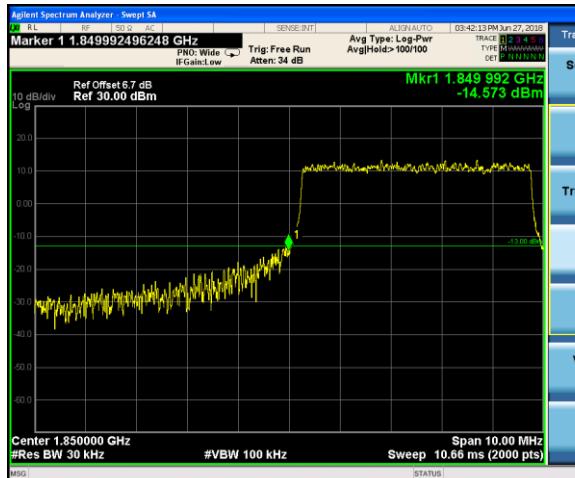


Note: Offset=Cable loss (4.5) + 10log
 $(51.83/30)=4.5+2.2=6.7\text{ dB}$

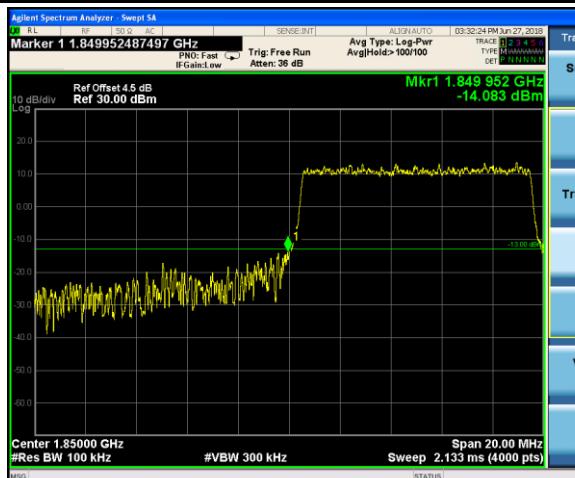


Note: Offset=Cable loss (4.5) + 10log
 $(52.13/30)=4.5+2.2=6.7\text{ dB}$



LTE Band II - Low Channel 16QAM-5

Note: Offset=Cable loss (4.5) + 10log
 $(52.07/30)=4.5+2.2=6.7\text{ dB}$

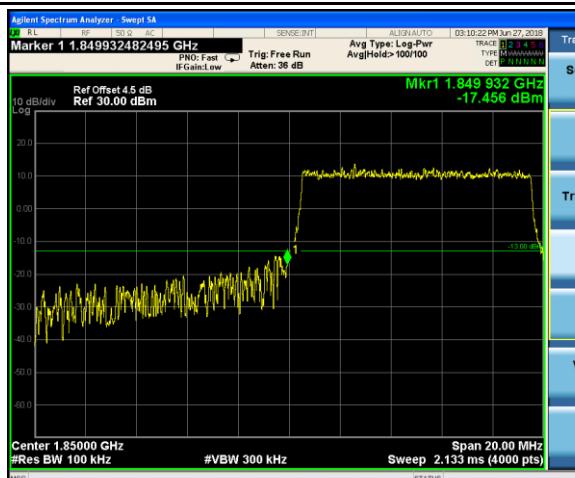


LTE Band II - High Channel 16QAM-5

Note: Offset=Cable loss (4.5) + 10log
 $(51.42/30)=4.5+2.2=6.7\text{ dB}$



LTE Band II - Low Channel QPSK-10



LTE Band II - High Channel QPSK-10



LTE Band II - Low Channel 16QAM-10

LTE Band II - High Channel 16QAM-10

Note: Offset=Cable loss (4.5) + 10log
 $(102.7/100)=4.5+0.0=4.5$ dB



Note: Offset=Cable loss (4.5) + 10log
 $(100.6/100)=4.5+0.0=4.5$ dB



LTE Band II - Low Channel QPSK-15

Note: Offset=Cable loss (4.5) + 10log
 $(150.7/100)=4.5+1.7=6.2$ dB



LTE Band II - High Channel QPSK-15

Note: Offset=Cable loss (4.5) + 10log
 $(151.5/100)=4.5+1.6=6.1$ dB

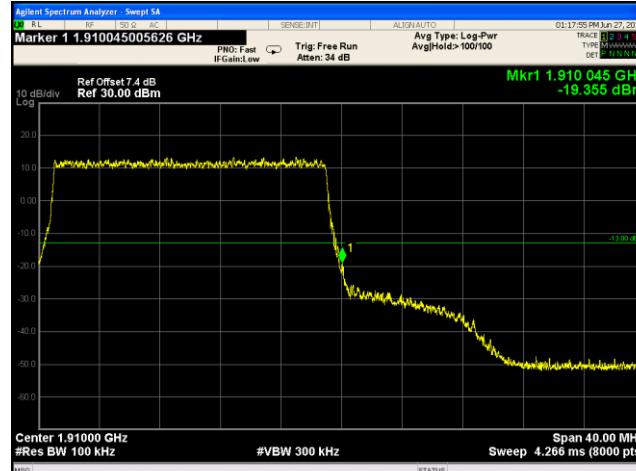
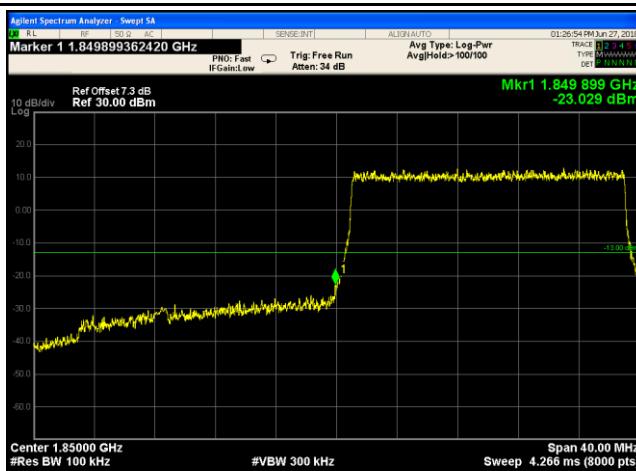
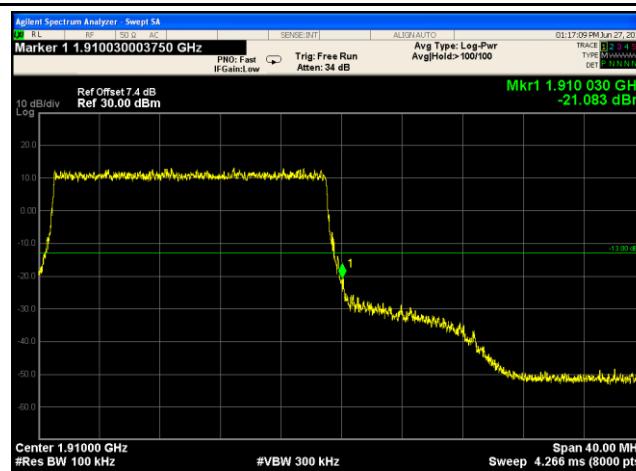


LTE Band II - Low Channel 16QAM-15

Note: Offset=Cable loss (4.5) + 10log
 $(150.8/100)=4.5+1.7=6.2$ dB

LTE Band II - High Channel 16QAM-15

Note: Offset=Cable loss (4.5) + 10log
 $(151.5/100)=4.5+1.6=6.1$ dB

 <p>Marker 1.849987498437 GHz PNO: Fast IFGain:Low Trig: Free Run Atten: 34 dB</p> <p>Mkr1 1.849 987 GHz -20.410 dBm</p> <p>Ref Offset 7.3 dB Ref 30.00 dBm</p> <p>Center 1.85000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 4.266 ms (8000 pts)</p>	 <p>Marker 1.910045005626 GHz PNO: Fast IFGain:Low Trig: Free Run Atten: 34 dB</p> <p>Mkr1 1.910 045 GHz -19.355 dBm</p> <p>Ref Offset 7.4 dB Ref 30.00 dBm</p> <p>Center 1.91000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 4.266 ms (8000 pts)</p>
<p>LTE Band II - Low Channel QPSK-20</p> <p>Note: Offset=Cable loss (4.5) + 10log (195.3/100)=4.5+2.8=7.3 dB</p>	<p>LTE Band II - High Channel QPSK-20</p> <p>Note: Offset=Cable loss (4.5) + 10log (198.1/100)=4.5+2.9=7.4 dB</p>
 <p>Marker 1.849899362420 GHz PNO: Fast IFGain:Low Trig: Free Run Atten: 34 dB</p> <p>Mkr1 1.849 899 GHz -23.029 dBm</p> <p>Ref Offset 7.3 dB Ref 30.00 dBm</p> <p>Center 1.85000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 4.266 ms (8000 pts)</p>	 <p>Marker 1.910030003750 GHz PNO: Fast IFGain:Low Trig: Free Run Atten: 34 dB</p> <p>Mkr1 1.910 030 GHz -21.083 dBm</p> <p>Ref Offset 7.4 dB Ref 30.00 dBm</p> <p>Center 1.91000 GHz #Res BW 100 kHz #VBW 300 kHz Sweep 4.266 ms (8000 pts)</p>
<p>LTE Band II - Low Channel 16QAM-20</p> <p>Note: Offset=Cable loss (4.5) + 10log (194.8/100)=4.5+2.8=7.3dB</p>	<p>LTE Band II - High Channel 16QAM-20</p> <p>Note: Offset=Cable loss (4.5) + 10log (197.2/100)=4.5+2.9=7.4 dB</p>

LTE Band IV (Part 27)



LTE Band IV - Low Channel QPSK-1.4

Note: Offset=Cable loss (4.5) + 10log
(13.48/10)=4.5+1.0=5.5 dB

LTE Band IV - High Channel QPSK-1.4

Note: Offset=Cable loss (4.5) + 10log
(13.02/10)=4.5+1.0=5.5 dB

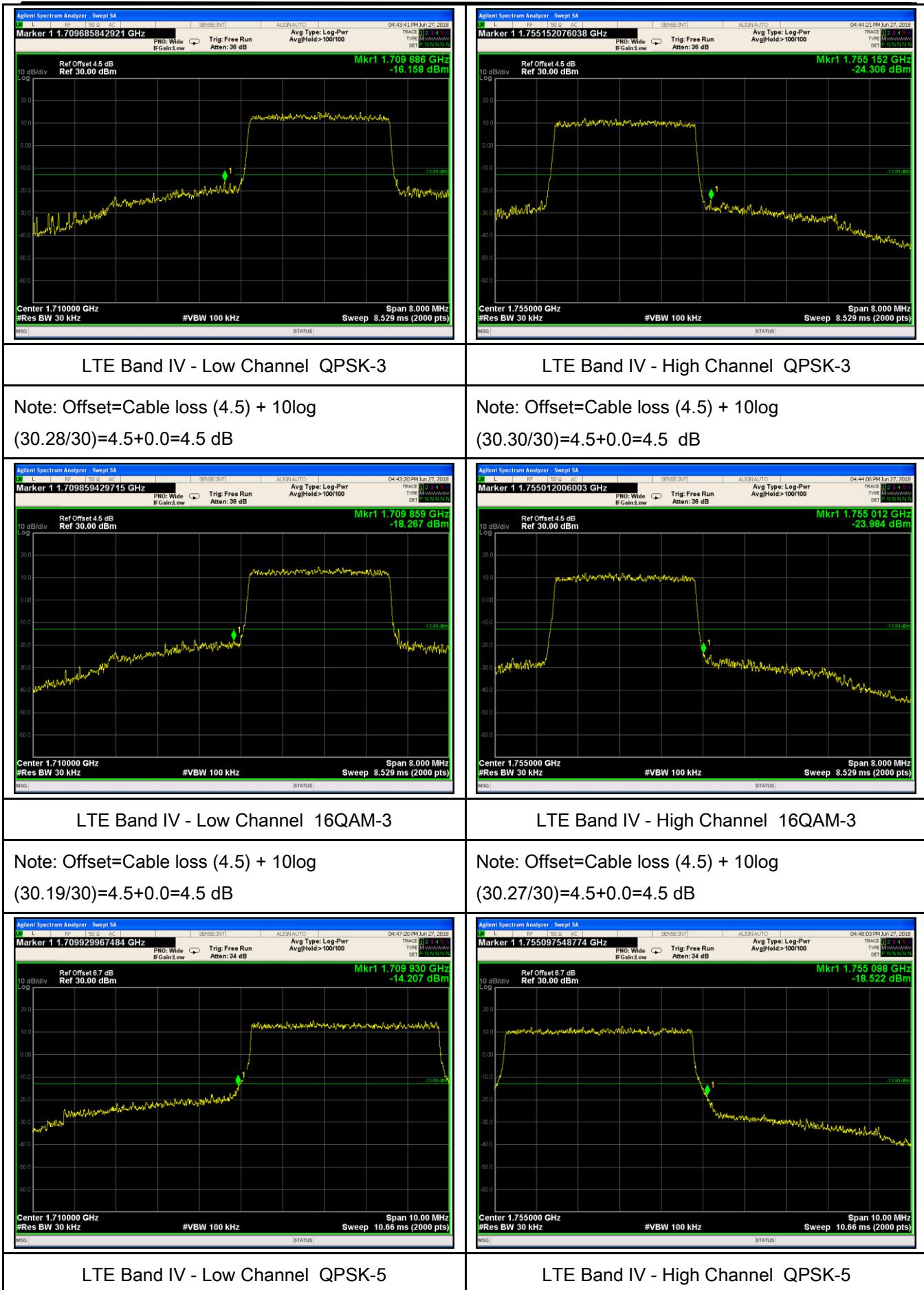


LTE Band IV - Low Channel 16QAM-1.4

Note: Offset=Cable loss (4.5) + 10log
(16.46/10)=4.5+1.0=5.5 dB

LTE Band IV - High Channel 16QAM-1.4

Note: Offset=Cable loss (4.5) + 10log
(13.01/10)=4.5+1.1=5.6 dB



Note: Offset=Cable loss (4.5) + 10log
 $(52.43/30)=4.5+2.2=6.7 \text{ dB}$

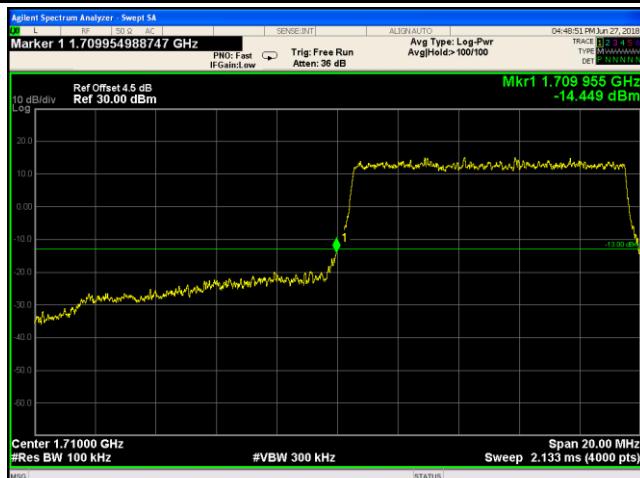


Note: Offset=Cable loss (4.5) + 10log
 $(51.77/30)=4.5+2.2=6.7 \text{ dB}$



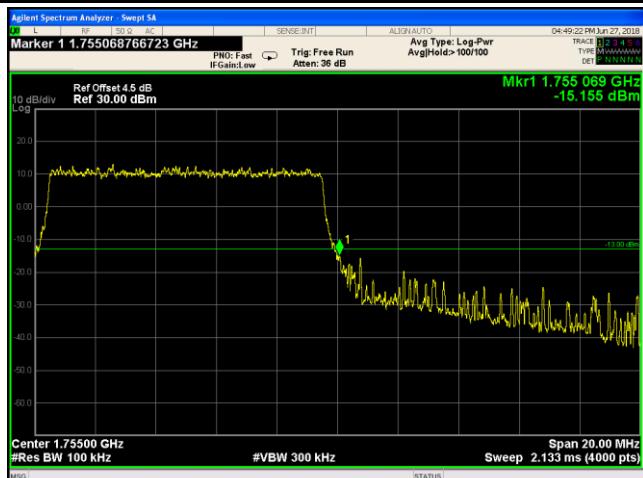
LTE Band IV - Low Channel 16QAM-5

Note: Offset=Cable loss (4.5) + 10log
 $(52.23/30)=4.5+2.7=6.7 \text{ dB}$

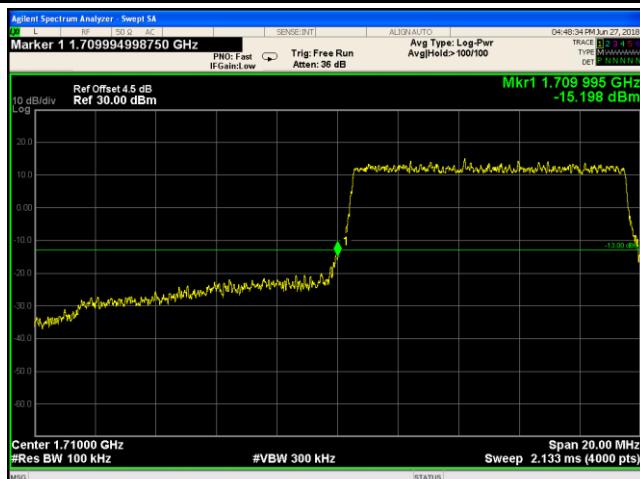


LTE Band IV - High Channel 16QAM-5

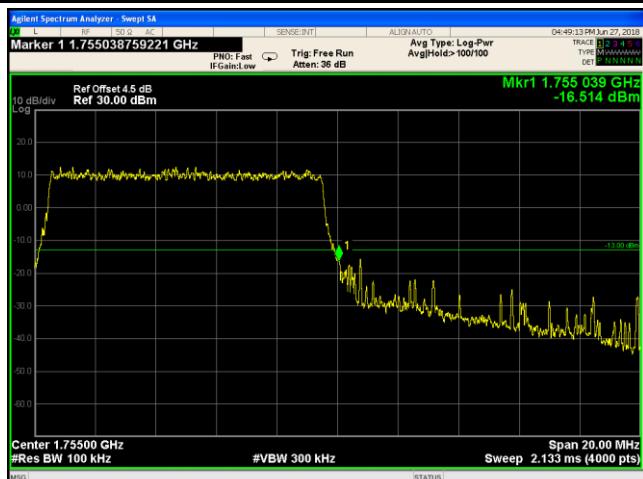
Note: Offset=Cable loss (4.5) + 10log
 $(51.39/30)=4.5+2.7=6.7 \text{ dB}$



LTE Band IV - Low Channel QPSK-10



LTE Band IV - High Channel QPSK-10

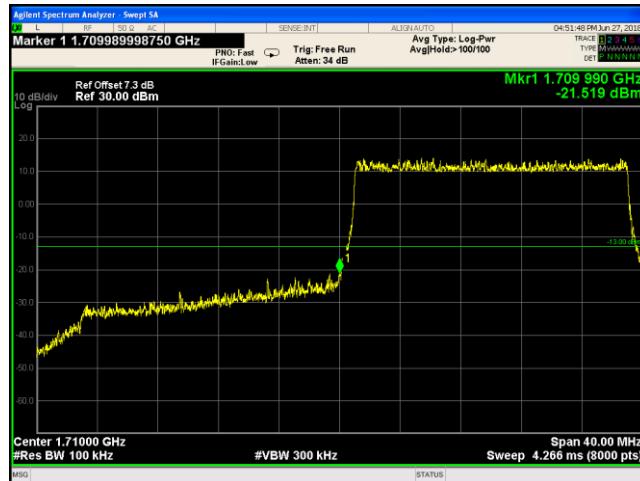


LTE Band IV - Low Channel 16QAM-10

LTE Band IV - High Channel 16QAM-10

 <p>Marker 1 1.709979997500 GHz PNO: Fast IFGain:Low Trig: Free Run Atten: 34 dB</p> <p>Mkr1 1.709 980 GHz -16.456 dBm</p> <p>Ref Offset 6.2 dB Ref 30.00 dBm</p> <p>10 dB/div Log</p> <p>Center 1.71000 GHz #Res BW 100 kHz #VBW 300 kHz Span 30.00 MHz Sweep 3.200 ms (8000 pts)</p>	 <p>Marker 1 1.756185148144 GHz PNO: Fast IFGain:Low Trig: Free Run Atten: 34 dB</p> <p>Mkr1 1.756 185 GHz -16.334 dBm</p> <p>Ref Offset 6.2 dB Ref 30.00 dBm</p> <p>10 dB/div Log</p> <p>Center 1.75500 GHz #Res BW 100 kHz #VBW 300 kHz Span 30.00 MHz Sweep 3.200 ms (8000 pts)</p>
<p>LTE Band IV - Low Channel QPSK-15</p> <p>Note: Offset=Cable loss (4.5) + 10log (150.9/100)=4.5+1.7=6.2 dB</p>	<p>LTE Band IV - High Channel QPSK-15</p> <p>Note: Offset=Cable loss (4.5) + 10log (148.4/100)=4.5+1.7=6.2 dB</p>
 <p>Marker 1 1.709991248906 GHz PNO: Fast IFGain:Low Trig: Free Run Atten: 34 dB</p> <p>Mkr1 1.709 991 GHz -17.159 dBm</p> <p>Ref Offset 6.2 dB Ref 30.00 dBm</p> <p>10 dB/div Log</p> <p>Center 1.71000 GHz #Res BW 100 kHz #VBW 300 kHz Span 30.00 MHz Sweep 3.200 ms (8000 pts)</p>	 <p>Marker 1 1.755033754219 GHz PNO: Fast IFGain:Low Trig: Free Run Atten: 34 dB</p> <p>Mkr1 1.755 034 GHz -18.326 dBm</p> <p>Ref Offset 6.2 dB Ref 30.00 dBm</p> <p>10 dB/div Log</p> <p>Center 1.75500 GHz #Res BW 100 kHz #VBW 300 kHz Span 30.00 MHz Sweep 3.200 ms (8000 pts)</p>
<p>LTE Band IV - Low Channel 16QAM-15</p> <p>Note: Offset=Cable loss (4.5) + 10log (151.3/100)=4.5+1.7=6.2 dB</p>	<p>LTE Band IV - High Channel 16QAM-15</p> <p>Note: Offset=Cable loss (4.5) + 10log (150.4/100)=4.5+1.7=6.2 dB</p>
 <p>Marker 1 1.709974996875 GHz PNO: Fast IFGain:Low Trig: Free Run Atten: 34 dB</p> <p>Mkr1 1.709 975 GHz -20.210 dBm</p> <p>Ref Offset 7.3 dB Ref 30.00 dBm</p> <p>10 dB/div Log</p> <p>Center 1.71000 GHz #Res BW 100 kHz #VBW 300 kHz Span 40.00 MHz Sweep 4.266 ms (8000 pts)</p>	 <p>Marker 1 1.755147518440 GHz PNO: Fast IFGain:Low Trig: Free Run Atten: 34 dB</p> <p>Mkr1 1.755 148 GHz -23.142 dBm</p> <p>Ref Offset 7.3 dB Ref 30.00 dBm</p> <p>10 dB/div Log</p> <p>Center 1.75500 GHz #Res BW 100 kHz #VBW 300 kHz Span 40.00 MHz Sweep 4.266 ms (8000 pts)</p>
<p>LTE Band IV - Low Channel QPSK-20</p>	<p>LTE Band IV - High Channel QPSK-20</p>

Note: Offset=Cable loss (4.5) + 10log
 $(197.2/100)=4.5+2.8=7.3 \text{ dB}$



Note: Offset=Cable loss (4.5) + 10log
 $(194.5/100)=4.5+2.8=7.3 \text{ dB}$



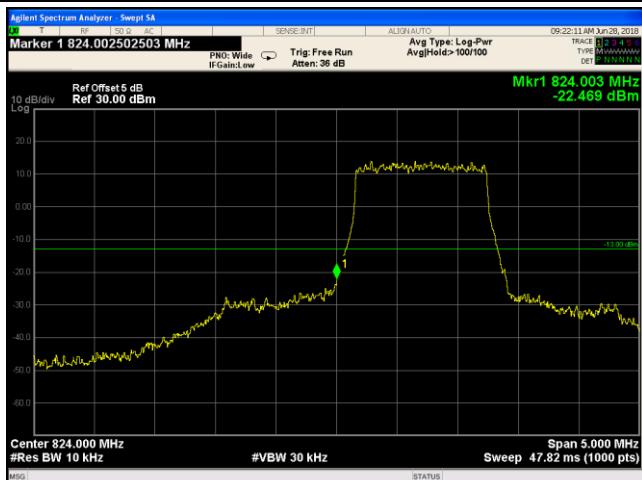
LTE Band IV - Low Channel 16QAM-20

Note: Offset=Cable loss (4.5) + 10log
 $(176.7/100)=4.5+2.8=7.3 \text{ dB}$

LTE Band IV - High Channel 16QAM-20

Note: Offset=Cable loss (4.5) + 10log
 $(193.9/100)=4.5+2.8=7.3 \text{ dB}$

LTE Band V (Part 22H)

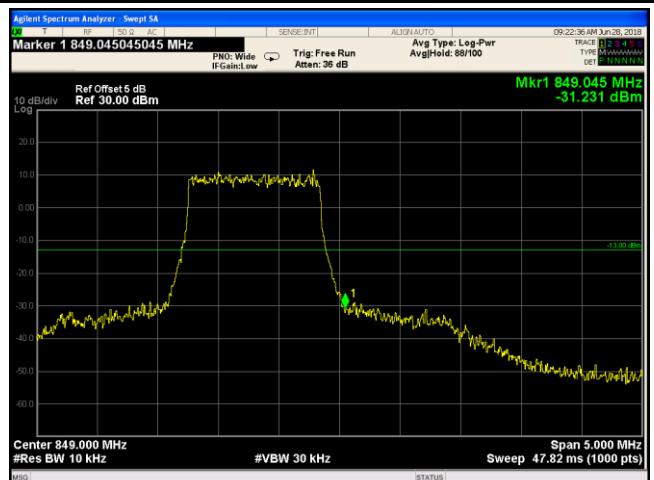


LTE Band V - Low Channel QPSK-1.4

LTE Band V - High Channel QPSK-1.4

Note: Offset=Cable loss (4.5) + 10log
 $(13.13/10)=4.5+0.5=5.0$ dB

Note: Offset=Cable loss (4.5) + 10log
 $(13.03/10)=4.5+0.5=5.0$ dB

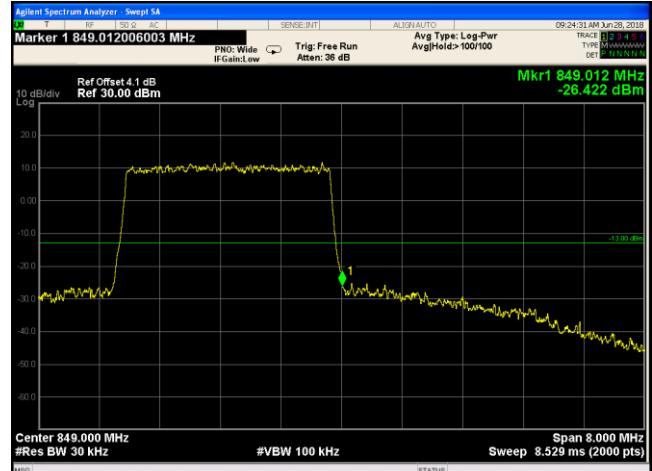
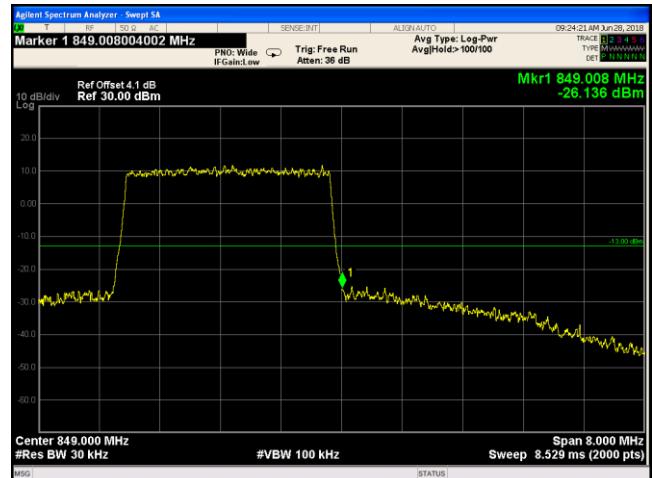
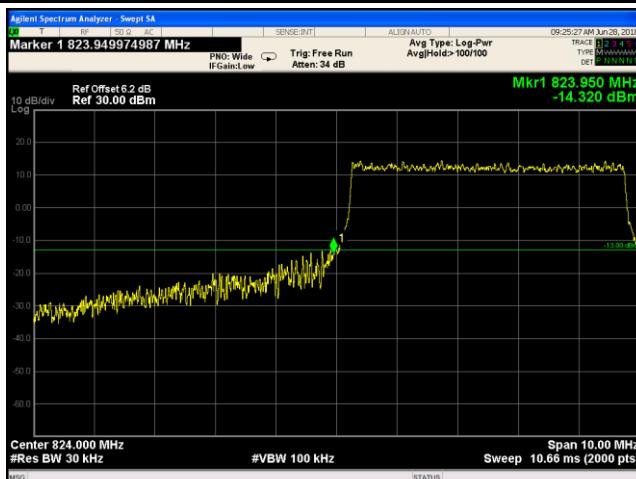


LTE Band V - Low Channel 16QAM-1.4

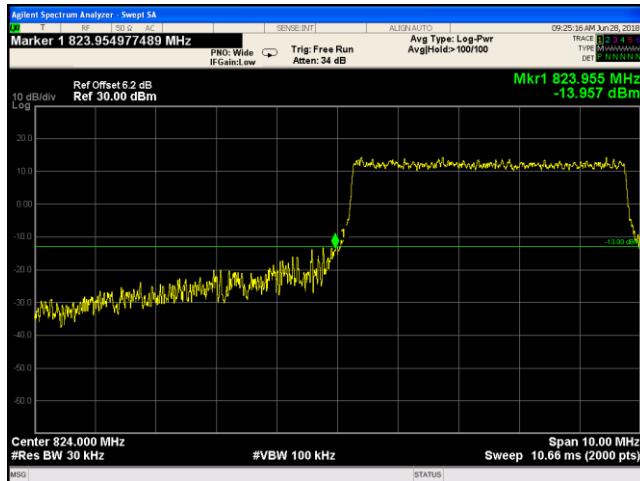
LTE Band V - High Channel 16QAM-1.4

Note: Offset=Cable loss (4.5) + 10log
 $(13.05/10)=4.5+0.5=5.0$ dB

Note: Offset=Cable loss (4.5) + 10log
 $(12.91/10)=4.5+0.5=5.0$ dB

 <p>Marker 1 823.995451429 MHz PNO: Wide IFGain:Low Trig: Free Run Atten: 36 dB Avg Type: Log-Pwr AvgHold>100/100</p> <p>Mkr1 823.995 MHz -21.582 dBm</p> <p>Ref Offset 4.1 dB Ref 30.00 dBm</p> <p>Center 824.000 MHz #Res BW 30 kHz #VBW 100 kHz Span 8.000 MHz Sweep 8.529 ms (2000 pts)</p>	 <p>Marker 1 849.012006003 MHz PNO: Wide IFGain:Low Trig: Free Run Atten: 36 dB Avg Type: Log-Pwr AvgHold>100/100</p> <p>Mkr1 849.012 MHz -26.422 dBm</p> <p>Ref Offset 4.1 dB Ref 30.00 dBm</p> <p>Center 849.000 MHz #Res BW 30 kHz #VBW 100 kHz Span 8.000 MHz Sweep 8.529 ms (2000 pts)</p>
<p>LTE Band V - Low Channel QPSK-3</p> <p>Note: Offset=Cable loss (4.5) + 10log (30.01/30)=4.0+0.1=4.1 dB</p>	<p>LTE Band V - High Channel QPSK-3</p> <p>Note: Offset=Cable loss (4.5) + 10log (30.17/30)=4.0+0.1=4.1 dB</p>
 <p>Marker 1 823.995451429 MHz PNO: Wide IFGain:Low Trig: Free Run Atten: 36 dB Avg Type: Log-Pwr AvgHold>100/100</p> <p>Mkr1 823.995 MHz -22.617 dBm</p> <p>Ref Offset 4.1 dB Ref 30.00 dBm</p> <p>Center 824.000 MHz #Res BW 30 kHz #VBW 100 kHz Span 8.000 MHz Sweep 8.529 ms (2000 pts)</p>	 <p>Marker 1 849.008004002 MHz PNO: Wide IFGain:Low Trig: Free Run Atten: 36 dB Avg Type: Log-Pwr AvgHold>100/100</p> <p>Mkr1 849.008 MHz -26.136 dBm</p> <p>Ref Offset 4.1 dB Ref 30.00 dBm</p> <p>Center 849.000 MHz #Res BW 30 kHz #VBW 100 kHz Span 8.000 MHz Sweep 8.529 ms (2000 pts)</p>
<p>LTE Band V - Low Channel 16QAM-3</p> <p>Note: Offset=Cable loss (4.5) + 10log (30.09/30)=4.0+0.1=4.1 dB</p>	<p>LTE Band V - High Channel 16QAM-3</p> <p>Note: Offset=Cable loss (4.5) + 10log (30.17/30)=4.0+0.1=4.1 dB</p>
 <p>Marker 1 823.949974987 MHz PNO: Wide IFGain:Low Trig: Free Run Atten: 34 dB Avg Type: Log-Pwr AvgHold>100/100</p> <p>Mkr1 823.950 MHz -14.320 dBm</p> <p>Ref Offset 5.2 dB Ref 30.00 dBm</p> <p>Center 824.000 MHz #Res BW 30 kHz #VBW 100 kHz Span 10.00 MHz Sweep 10.66 ms (2000 pts)</p>	 <p>Marker 1 849.009004502 MHz PNO: Wide IFGain:Low Trig: Free Run Atten: 34 dB Avg Type: Log-Pwr AvgHold>100/100</p> <p>Mkr1 849.009 MHz -15.610 dBm</p> <p>Ref Offset 5.2 dB Ref 30.00 dBm</p> <p>Center 849.000 MHz #Res BW 30 kHz #VBW 100 kHz Span 10.00 MHz Sweep 10.66 ms (2000 pts)</p>
<p>LTE Band V - Low Channel QPSK-5</p>	<p>LTE Band V - High Channel QPSK-5</p>

Note: Offset=Cable loss (4.5) + 10log
 $(51.79/30)=4.0+2.2=6.2$ dB

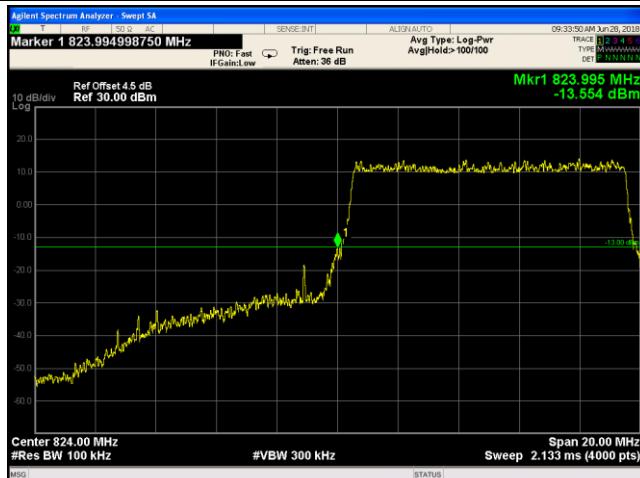


Note: Offset=Cable loss (4.5) + 10log
 $(51.81/30)=4.0+2.2=6.2$ dB



LTE Band V - Low Channel 16QAM-5

Note: Offset=Cable loss (4.5) + 10log
 $(51.64/30)=4.0+2.2=6.2$ dB

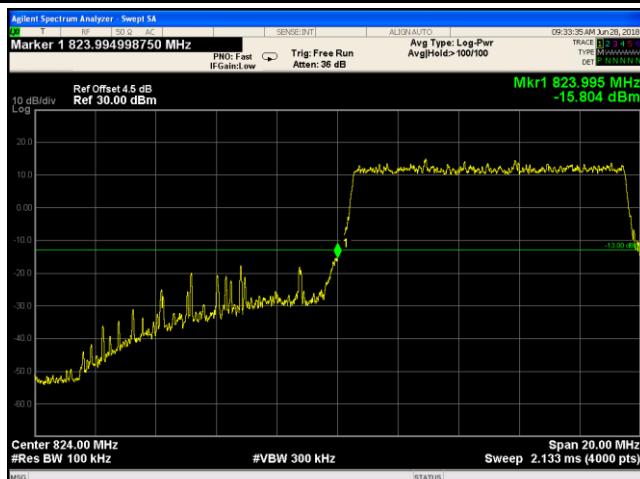


LTE Band V - High Channel 16QAM-5

Note: Offset=Cable loss (4.5) + 10log
 $(51.50/30)=4.0+2.2=6.2$ dB



LTE Band V - Low Channel QPSK-10



LTE Band V - High Channel QPSK-10



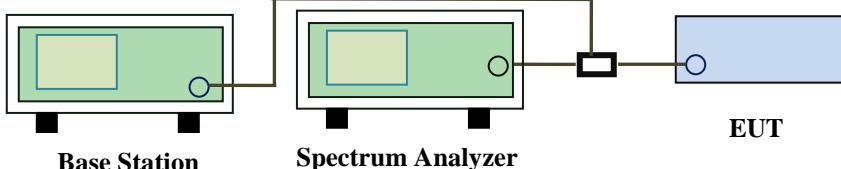
LTE Band V - Low Channel 16QAM-10

LTE Band V - High Channel 16QAM-10

6.8 Band Edge 27.53(m)

Temperature	24°C
Relative Humidity	57%
Atmospheric Pressure	1022mbar
Test date :	June 28, 2018
Tested By :	Aarron Liang

Requirement(s):

Spec	Requirement	Applicable
§27.53(m)	<p>According to FCC 27.53(m)(4) specified that power of any emmission ouutside of the channel edge must be attenuated below the transmitting power(P) by a factor shall be not less than $43+10\log(P)$dB at the channel edge, the limit of emission equal to -13dBm.</p> <p>And $55+10\log(P)$dB at 5.5MHz from the channel edges, the limit of emission equal to -25dBm. In the 1MHz bands immediately outside and adjacent to the frenqency block a resolution bandwidth of at least one percent of the emission bandwidth of the fundamental emission of the transmitter may be employed.</p>	<input checked="" type="checkbox"/>
Test Setup	 <p style="text-align: center;">Base Station Spectrum Analyzer EUT</p>	
Test Procedure	<ul style="list-style-type: none"> The EUT was connected to Spectrum Analyzer and Base Station via power divider. The 99% and 26 dB occupied bandwidth (BW) of the middle channel for the highest RF powers. 	
Remark		
Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail	

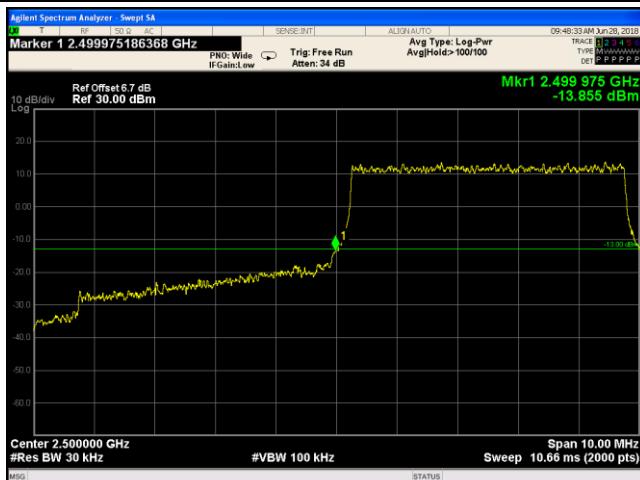
Test Data Yes N/A

Test Plot Yes (See below) N/A

LTE Band VII (Part 27) result

BW(MHz)	Channel	Frequency (MHz)	Mode	Emission (dBm)	Limit (dBm)
5	20775	2500	QPSK	-13.855	-13
			16QAM	-13.415	-13
5	21425	2570	QPSK	-13.390	-13
			16QAM	-13.483	-13
10	20800	2500	QPSK	-14.677	-13
			16QAM	-14.157	-13
10	21400	2570	QPSK	-13.787	-13
			16QAM	-14.123	-13
15	20825	2500	QPSK	-13.667	-13
			16QAM	-15.367	-13
15	21400	2570	QPSK	-17.555	-13
			16QAM	-17.670	-13
20	20850	2500	QPSK	-20.540	-13
			16QAM	-22.556	-13
20	21350	2571	QPSK	-16.017	-13
			16QAM	-15.855	-13

LTE Band VII (Part 27)

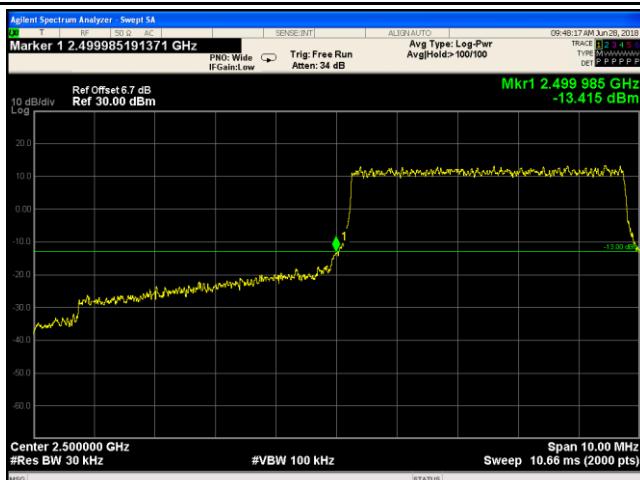


LTE Band VII - Low Channel QPSK-5

Note: Offset=Cable loss (4.5) + 10log
(52.93/30)=4.5+2.2=6.7 dB

LTE Band VII - High Channel QPSK-5

Note: Offset=Cable loss (4.5) + 10log
(51.16/30)=4.5+2.2=6.7 dB

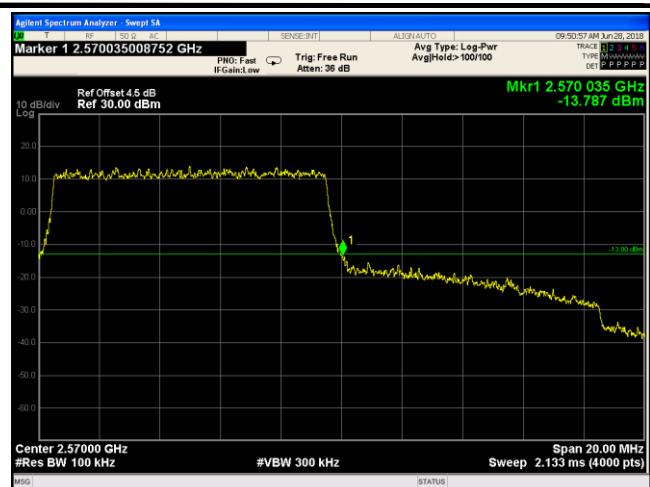
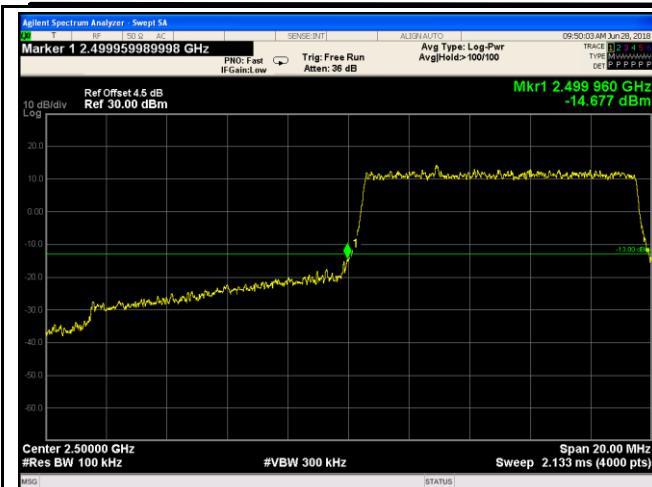


LTE Band VII - Low Channel 16QAM-5

Note: Offset=Cable loss (4.5) + 10log
(52.98/30)=4.5+2.2=6.7 dB

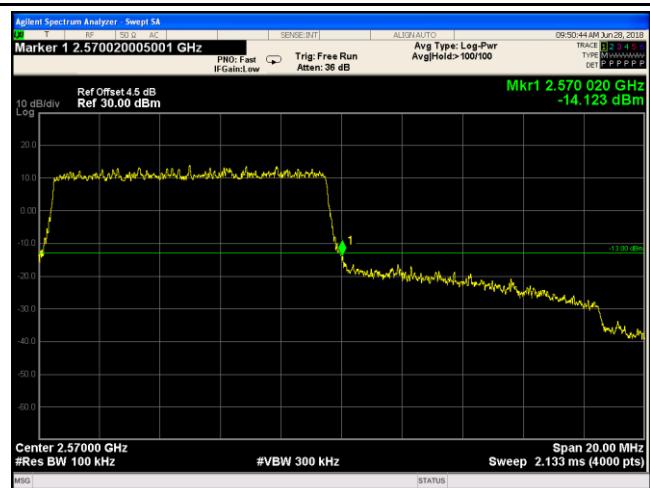
LTE Band VII - High Channel 16QAM-5

Note: Offset=Cable loss (4.5) + 10log
(51.83/30)=4.5+2.2=6.7 dB



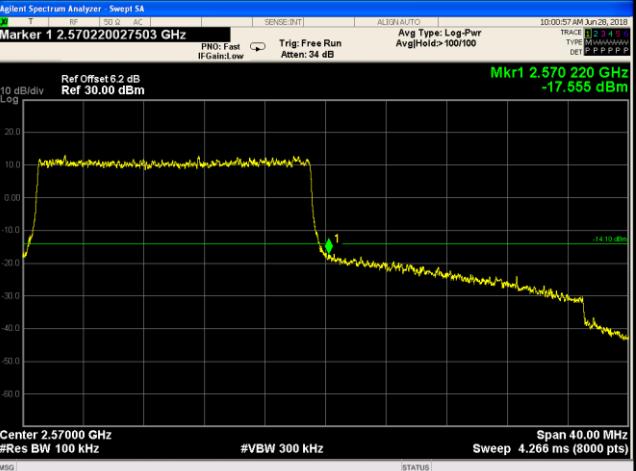
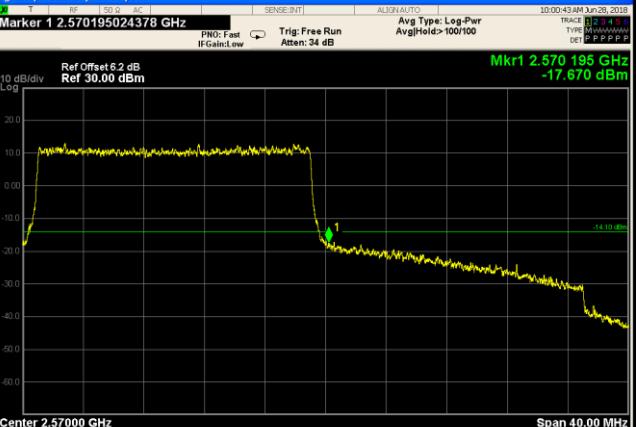
LTE Band VII - Low Channel QPSK-10

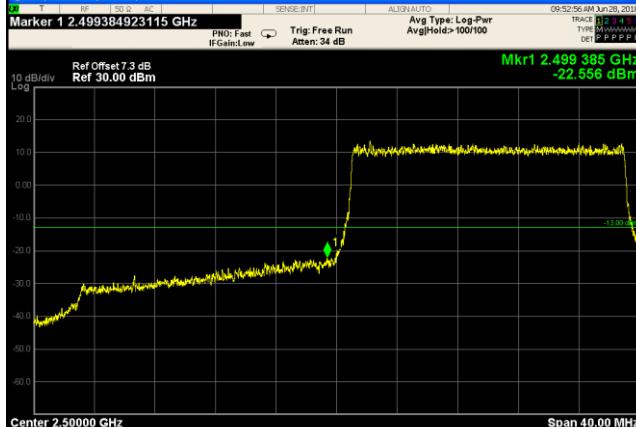
LTE Band VII - High Channel QPSK-10



LTE Band VII - Low Channel 16QAM-10

LTE Band VII - High Channel 16QAM-10

 <p>Marker 1 2.49957494062 GHz Mkr1 2.499 957 GHz -13.667 dBm</p> <p>Center 2.50000 GHz #Res BW 100 kHz #VBW 300 kHz Span 30.00 MHz Sweep 3.200 ms (8000 pts)</p>	 <p>Marker 1 2.570220027503 GHz Mkr1 2.570 220 GHz -17.555 dBm</p> <p>Center 2.57000 GHz #Res BW 100 kHz #VBW 300 kHz Span 40.00 MHz Sweep 4.266 ms (8000 pts)</p>
<p>LTE Band VII - Low Channel QPSK-15</p> <p>Note: Offset=Cable loss (4.5) + 10log (151.3/100)=4.5+1.7=6.2 dB</p>	<p>LTE Band VII - High Channel QPSK-15</p> <p>Note: Offset=Cable loss (4.5) + 10log (151.5/100)=4.5+1.7=6.2 dB</p>
 <p>Marker 1 2.499286160145 GHz Mkr1 2.499 286 GHz -15.367 dBm</p> <p>Center 2.50000 GHz #Res BW 100 kHz #VBW 300 kHz Span 30.00 MHz Sweep 3.200 ms (8000 pts)</p>	 <p>Marker 1 2.570195024378 GHz Mkr1 2.570 195 GHz -17.670 dBm</p> <p>Center 2.57000 GHz #Res BW 100 kHz #VBW 300 kHz Span 40.00 MHz Sweep 4.266 ms (8000 pts)</p>
<p>LTE Band VII - Low Channel 16QAM-15</p> <p>Note: Offset=Cable loss (4.5) + 10log (148.6/100)=4.5+1.7=6.2dB</p>	<p>LTE Band VII - High Channel 16QAM-15</p> <p>Note: Offset=Cable loss (4.5) + 10log (151.4/100)=4.5+1.7=6.2 dB</p>

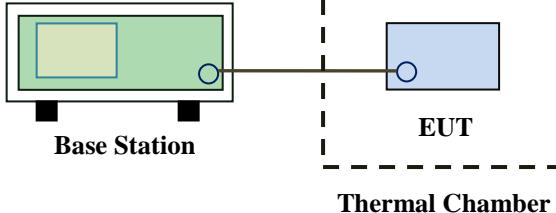
 <p>Marker 1 2.49929991249 GHz Mkr1 2.499 930 GHz -20.540 dBm</p> <p>Center 2.50000 GHz #Res BW 100 kHz #VBW 300 kHz Span 4.00 MHz Sweep 4.266 ms (8000 pts)</p>	 <p>Marker 1 2.569944993124 GHz Mkr1 2.569 945 GHz -16.017 dBm</p> <p>Center 2.57000 GHz #Res BW 100 kHz #VBW 300 kHz Span 4.00 MHz Sweep 4.266 ms (8000 pts)</p>
<p>LTE Band VII - Low Channel QPSK-20</p> <p>Note: Offset=Cable loss (4.5) + 10log $(194.8/100)=4.5+2.8=7.3$ dB</p>	<p>LTE Band VII - High Channel QPSK-20</p> <p>Note: Offset=Cable loss (4.5) + 10log $(196/100)=4.5+2.8=7.3$ dB</p>
 <p>Marker 1 2.499384923115 GHz Mkr1 2.499 385 GHz -22.556 dBm</p> <p>Center 2.50000 GHz #Res BW 100 kHz #VBW 300 kHz Span 4.00 MHz Sweep 4.266 ms (8000 pts)</p>	 <p>Marker 1 2.569929991249 GHz Mkr1 2.569 930 GHz -15.855 dBm</p> <p>Center 2.57000 GHz #Res BW 100 kHz #VBW 300 kHz Span 4.00 MHz Sweep 4.266 ms (8000 pts)</p>
<p>LTE Band VII - Low Channel 16QAM-20</p> <p>Note: Offset=Cable loss (4.5) + 10log $(193.7/100)=4.5+2.8=7.3$ dB</p>	<p>LTE Band VII - High Channel 16QAM-20</p> <p>Note: Offset=Cable loss (4.5) + 10log $(194.5/100)=4.5+2.8=7.3$ dB</p>

6.9 Frequency Stability

Temperature	24°C
Relative Humidity	57%
Atmospheric Pressure	1023mbar
Test date :	June 27, 2018
Tested By :	Aarron Liang

Requirement(s):

Spec	Item	Requirement	Applicable																																
§2.1055, §22.355 & §24.235 § 27.5(h); § 27.54	a)	<p>According to §22.355, the carrier frequency of each transmitter in the Public Mobile Services must be maintained within the tolerances given in Table below:</p> <p>Frequency Tolerance for Transmitters in the Public Mobile Services</p> <table border="1"> <thead> <tr> <th>Frequency Range (MHz)</th> <th>Base, fixed (ppm)</th> <th>Mobile ≤ 3 watts (ppm)</th> <th>Mobile ≤ 3 watts (ppm)</th> </tr> </thead> <tbody> <tr> <td>25 to 50</td> <td>20.0</td> <td>20.0</td> <td>50.0</td> </tr> <tr> <td>50 to 450</td> <td>5.0</td> <td>5.0</td> <td>50.0</td> </tr> <tr> <td>450 to 512</td> <td>2.5</td> <td>5.0</td> <td>50.0</td> </tr> <tr> <td>821 to 896</td> <td>1.5</td> <td>2.5</td> <td>2.5</td> </tr> <tr> <td>928 to 929.</td> <td>5.0</td> <td>N/A</td> <td>N/A</td> </tr> <tr> <td>929 to 960.</td> <td>1.5</td> <td>N/A</td> <td>N/A</td> </tr> <tr> <td>2110 to 2220</td> <td>10.0</td> <td>N/A</td> <td>N/A</td> </tr> </tbody> </table> <p>According to §24.235, the frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized frequency block.</p> <p>According to §27.54, The frequency stability shall be sufficient to ensure that the fundamental emissions stay within the authorized bands of operation.</p>	Frequency Range (MHz)	Base, fixed (ppm)	Mobile ≤ 3 watts (ppm)	Mobile ≤ 3 watts (ppm)	25 to 50	20.0	20.0	50.0	50 to 450	5.0	5.0	50.0	450 to 512	2.5	5.0	50.0	821 to 896	1.5	2.5	2.5	928 to 929.	5.0	N/A	N/A	929 to 960.	1.5	N/A	N/A	2110 to 2220	10.0	N/A	N/A	<input checked="" type="checkbox"/>
Frequency Range (MHz)	Base, fixed (ppm)	Mobile ≤ 3 watts (ppm)	Mobile ≤ 3 watts (ppm)																																
25 to 50	20.0	20.0	50.0																																
50 to 450	5.0	5.0	50.0																																
450 to 512	2.5	5.0	50.0																																
821 to 896	1.5	2.5	2.5																																
928 to 929.	5.0	N/A	N/A																																
929 to 960.	1.5	N/A	N/A																																
2110 to 2220	10.0	N/A	N/A																																

Test setup	 <p>Base Station EUT</p> <p>Thermal Chamber</p>
Procedure	<p>A communication link was established between EUT and base station. The frequency error was monitored and measured by base station under variation of ambient temperature and variation of primary supply voltage.</p> <p>Limit: The frequency stability of the transmitter shall be maintained within $\pm 0.00025\%$ ($\pm 2.5\text{ppm}$) of the center frequency.</p>
Remark	<p>Frequency Stability versus Temperature: The Frequency tolerance of the carrier signal shall be maintained within 2.5ppm of the operating frequency over a temperature variation of -10°C to $+55^\circ\text{C}$ at normal supply voltage.</p>
Result	<input checked="" type="checkbox"/> Pass <input type="checkbox"/> Fail

Test Data Yes N/A

Test Plot Yes (See below) N/A

LTE Band II (Part 24E) result

Middle Channel, $f_0 = 1880$ MHz				
Temperature (°C)	Power Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-10	3.85	-6	0.0032	2.5
0		-10	0.0053	2.5
10		-9	0.0048	2.5
20		-11	0.0059	2.5
30		-14	0.0074	2.5
40		-9	0.0048	2.5
50		-10	0.0053	2.5
55		-10	0.0053	2.5
25	4.4	-12	0.0064	2.5
	3.6	-14	0.0074	2.5

LTE Band IV (Part 27) result

Middle Channel, $f_0 = 1732.5$ MHz				
Temperature (°C)	Power Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-10	3.85	-11	0.0063	2.5
0		-19	0.0110	2.5
10		-16	0.0092	2.5
20		-10	0.0058	2.5
30		-7	0.0040	2.5
40		-9	0.0052	2.5
50		-11	0.0063	2.5
55		-13	0.0075	2.5
25	4.4	-15	0.0087	2.5
	3.6	-17	0.0098	2.5

LTE Band V (Part 22H) result

Middle Channel, $f_0 = 836.5$ MHz				
Temperature (°C)	Power Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-10	3.85	-11	0.0043	2.5
0		-9	0.0036	2.5
10		-9	0.0036	2.5
20		-8	0.0032	2.5
30		-11	0.0043	2.5
40		-9	0.0036	2.5
50		-10	0.0039	2.5
55		-6	0.0024	2.5
25		-10	0.0039	2.5
	4.4	-12	0.0047	2.5
	3.6			

LTE Band VII (Part 27) result

Middle Channel, $f_0 = 2535$ MHz				
Temperature (°C)	Power Supplied (V _{DC})	Frequency Error (Hz)	Frequency Error (ppm)	Limit (ppm)
-10	3.85	-11	0.0043	2.5
0		-9	0.0036	2.5
10		-9	0.0036	2.5
20		-8	0.0032	2.5
30		-11	0.0043	2.5
40		-9	0.0036	2.5
50		-10	0.0039	2.5
55		-6	0.0024	2.5
25		-10	0.0039	2.5
	4.4	-12	0.0047	2.5
	3.6			

Annex A. TEST INSTRUMENT

Instrument	Model	Serial #	Cal Date	Cal Due	In use
RF Conducted Test					
Agilent ESA-E SERIES SPECTRUM ANALYZER	E4407B	MY45108319	09/14/2017	09/13/2018	<input checked="" type="checkbox"/>
Power Splitter	1#	1#	08/30/2017	08/29/2018	<input checked="" type="checkbox"/>
Universal Radio Communication Tester	CMU200	121393	09/23/2017	09/22/2018	<input checked="" type="checkbox"/>
Temperature/Humidity Chamber	UHL-270	001	10/07/2017	10/06/2018	<input checked="" type="checkbox"/>
DC Power Supply	E3640A	MY40004013	09/15/2017	09/14/2018	<input checked="" type="checkbox"/>
RF Power Sensor	Dare RPR3006C/P/W	AY554013	09/15/2017	09/14/2018	<input checked="" type="checkbox"/>
Radiated Emissions					
EMI test receiver	ESL6	100262	09/15/2017	09/14/2018	<input checked="" type="checkbox"/>
OPT 010 AMPLIFIER (0.1-1300MHz)	8447E	2727A02430	08/30/2017	08/29/2018	<input checked="" type="checkbox"/>
Horn Antenna	BBHA9170	3145226D1	09/27/2017	09/26/2018	<input checked="" type="checkbox"/>
Microwave Preamplifier (1 ~ 26.5GHz)	8449B	3008A02402	03/22/2018	03/21/2019	<input checked="" type="checkbox"/>
Bilog Antenna (30MHz~6GHz)	JB6	A110712	09/19/2017	09/18/2018	<input checked="" type="checkbox"/>
Bilog Antenna (30MHz~2GHz)	JB1	A112017	09/19/2017	09/18/2018	<input checked="" type="checkbox"/>
Double Ridge Horn Antenna (1 ~18GHz)	AH-118	71259	09/22/2017	09/21/2018	<input checked="" type="checkbox"/>
Double Ridge Horn Antenna (1 ~18GHz)	AH-118	71283	09/22/2017	09/21/2018	<input checked="" type="checkbox"/>
SYNTHESIZED SIGNAL GENERATOR	8665B	3744A01293	09/15/2017	09/14/2018	<input checked="" type="checkbox"/>
Power Amplifier	SMC150D	R1553-0313	03/07/2018	03/06/2019	<input checked="" type="checkbox"/>
Power Amplifier	S61-25	R1553-0516	05/25/2018	05/24/2019	<input checked="" type="checkbox"/>
Power Amplifier	S41-25D	R1553-0314	05/25/2018	05/24/2019	<input checked="" type="checkbox"/>



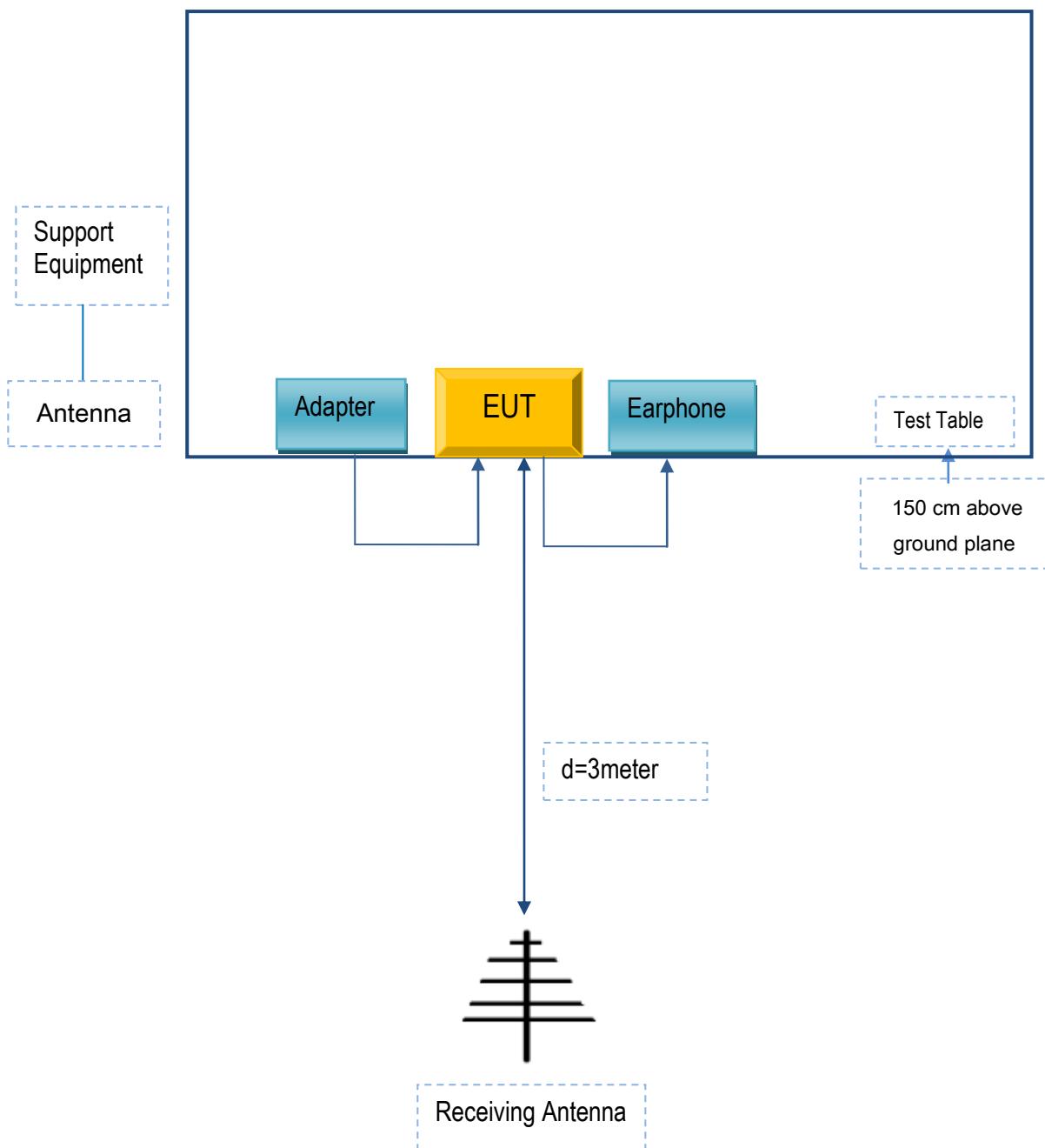
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Tunable Notch Filter	3NF-800/1000-S	AA4	08/30/2017	08/29/2018	<input checked="" type="checkbox"/>
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Annex B. TEST SETUP AND SUPPORTING EQUIPMENT

Annex B.i. TEST SET UP BLOCK

Block Configuration Diagram for Radiated Emissions



Annex B. ii. SUPPORTING EQUIPMENT DESCRIPTION

The following is a description of supporting equipment and details of cables used with the EUT.

Supporting Equipment:

Manufacturer	Equipment Description	Model	Serial No
TECNO MOBILE LIMITED	Adapter	A8-501000	N/A
TECNO MOBILE LIMITED	Earphone	F4	N/A

Supporting Cable:

Cable type	Shield Type	Ferrite Core	Length	Serial No
USB Cable	Un-shielding	No	0.8m	N/A

Annex C. EUT OPERATING CONDITIONS

N/A

Annex D. User Manual / Block Diagram / Schematics / Partlist/ DECLARATION OF SIMILARITY

Please see the attachment