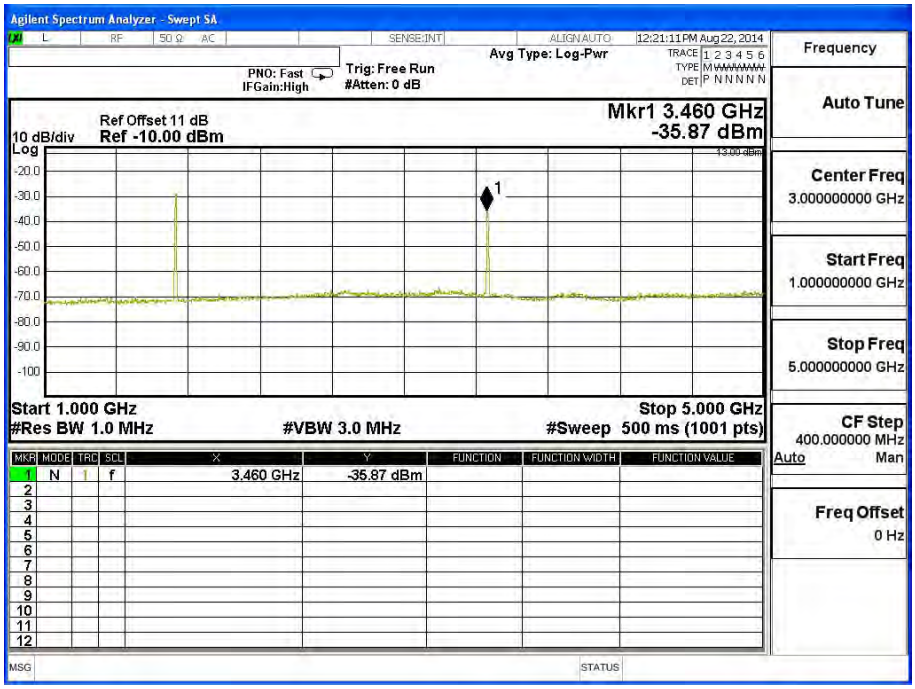
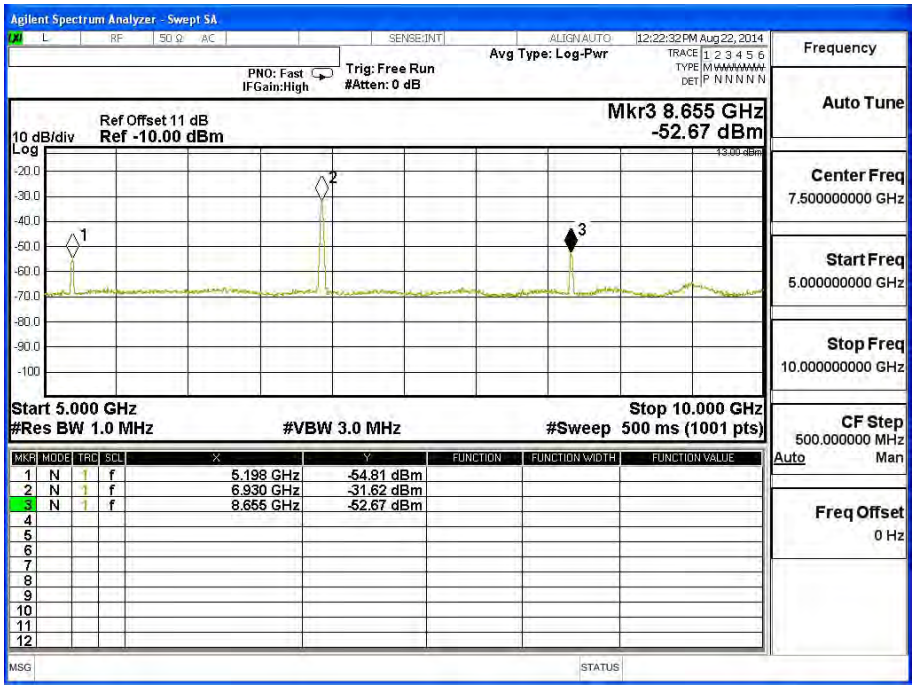
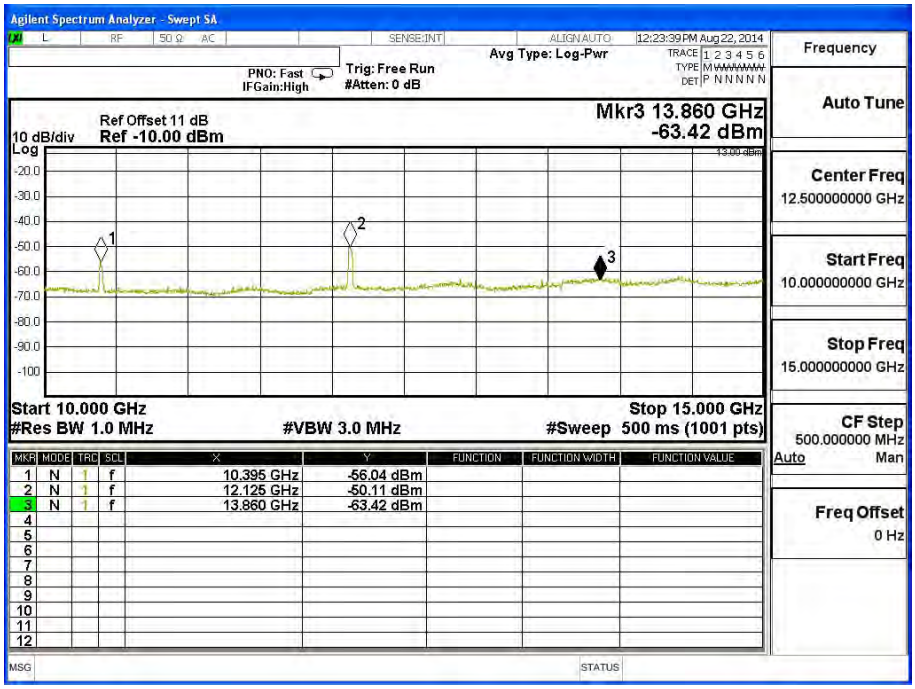
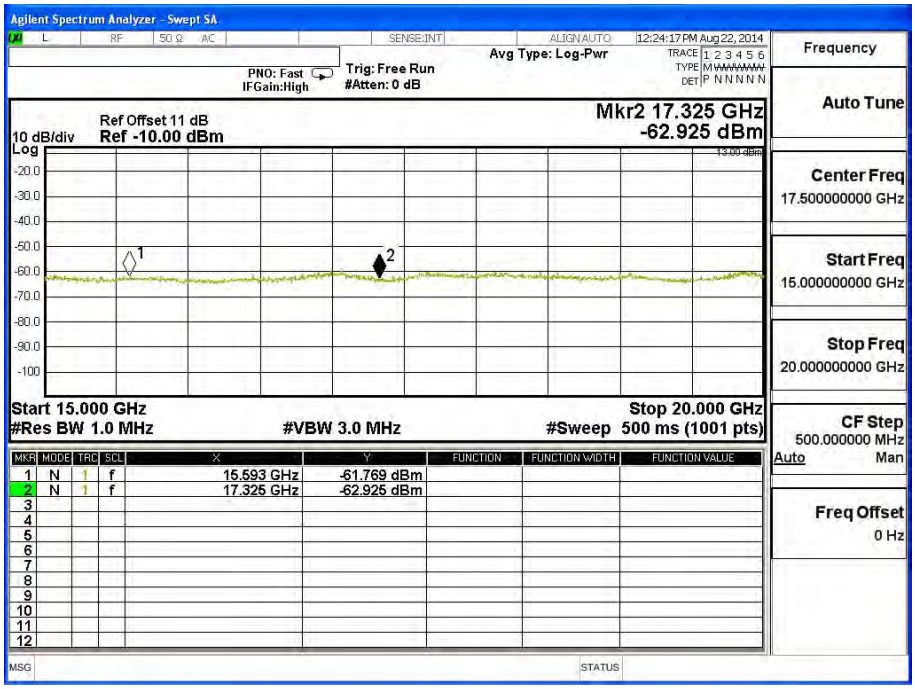

Agilent Spectrum Analyzer - Swept SA
12:21:11 PM Aug 22, 2014
Avg Type: Log-Pwr
PNO: Fast
IFGain:High
Trig: Free Run
#Atten: 0 dB
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr1 3.460 GHz
-35.87 dBm
Start 1.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 5.000 GHz
#Sweep 500 ms (1001 pts)
1 N 1 f 3.460 GHz -35.87 dBm
Frequency
Auto Tune
Center Freq
3.000000000 GHz
Start Freq
1.000000000 GHz
Stop Freq
5.000000000 GHz
CF Step
400.000000 MHz
Auto Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
12:22:32 PM Aug 22, 2014
Avg Type: Log-Pwr
PNO: Fast
IFGain:High
Trig: Free Run
#Atten: 0 dB
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr3 8.655 GHz
-52.67 dBm
Start 5.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 10.000 GHz
#Sweep 500 ms (1001 pts)
1 N 1 f 5.198 GHz -54.81 dBm
2 N 1 f 6.930 GHz -31.62 dBm
3 N 1 f 8.655 GHz -52.67 dBm
Frequency
Auto Tune
Center Freq
7.500000000 GHz
Start Freq
5.000000000 GHz
Stop Freq
10.000000000 GHz
CF Step
500.000000 MHz
Auto Man
Freq Offset
0 Hz

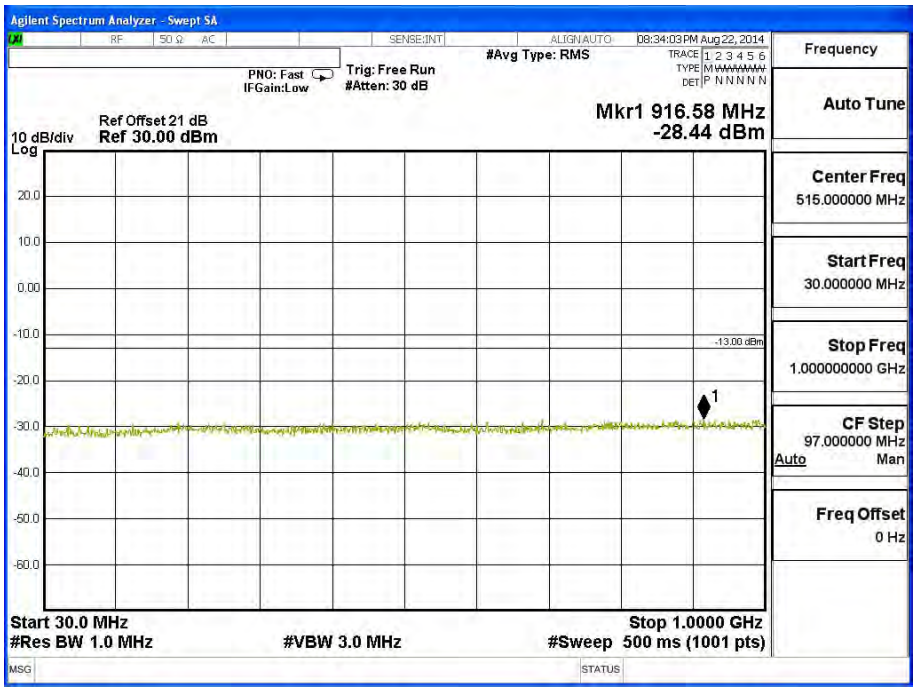

Agilent Spectrum Analyzer - Swept SA
12:23:39 PM Aug 22, 2014
Avg Type: Log-Pwr
Trig: Free Run
#Atten: 0 dB
PNO: Fast
IFGain:High
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr3 13.860 GHz
-63.42 dBm
Start 10.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 15.000 GHz
#Sweep 500 ms (1001 pts)
1 N 1 f 10.395 GHz -56.04 dBm
2 N 1 f 12.125 GHz -50.11 dBm
3 N 1 f 13.860 GHz -63.42 dBm
Frequency
Auto Tune
Center Freq
12.500000000 GHz
Start Freq
10.000000000 GHz
Stop Freq
15.000000000 GHz
CF Step
500.000000 MHz
Auto Man
Freq Offset
0 Hz

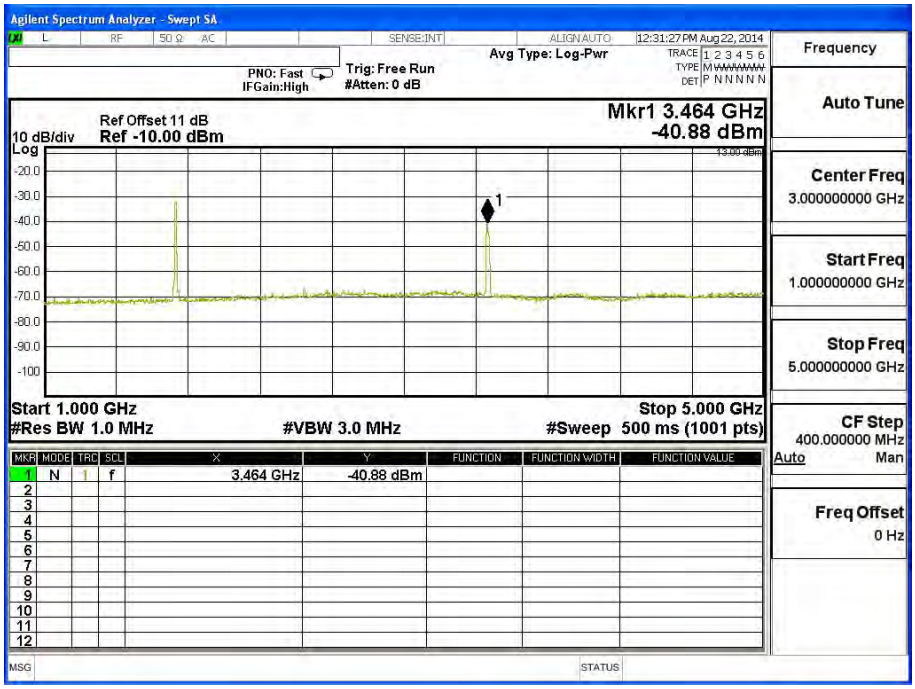

Agilent Spectrum Analyzer - Swept SA
12:24:17 PM Aug 22, 2014
Avg Type: Log-Pwr
Trig: Free Run
#Atten: 0 dB
PNO: Fast
IFGain:High
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr2 17.325 GHz
-62.925 dBm
Start 15.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 20.000 GHz
#Sweep 500 ms (1001 pts)
1 N 1 f 15.593 GHz -61.769 dBm
2 N 1 f 17.325 GHz -62.925 dBm
Frequency
Auto Tune
Center Freq
17.500000000 GHz
Start Freq
15.000000000 GHz
Stop Freq
20.000000000 GHz
CF Step
500.000000 MHz
Auto Man
Freq Offset
0 Hz

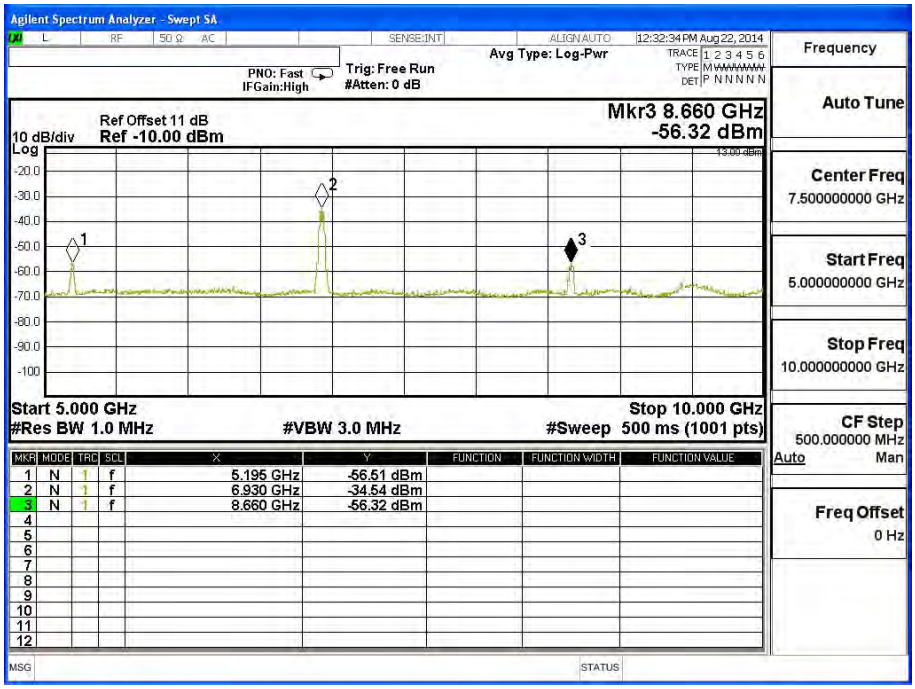
Product	Notebook PC		
Test Mode	Spurious Emission (Conducted)		
Date of Test	2014/09/19	Test Site	CTR
Test Condition	LTE-Band IV (10M)	Test Range	30MHz~20GHz

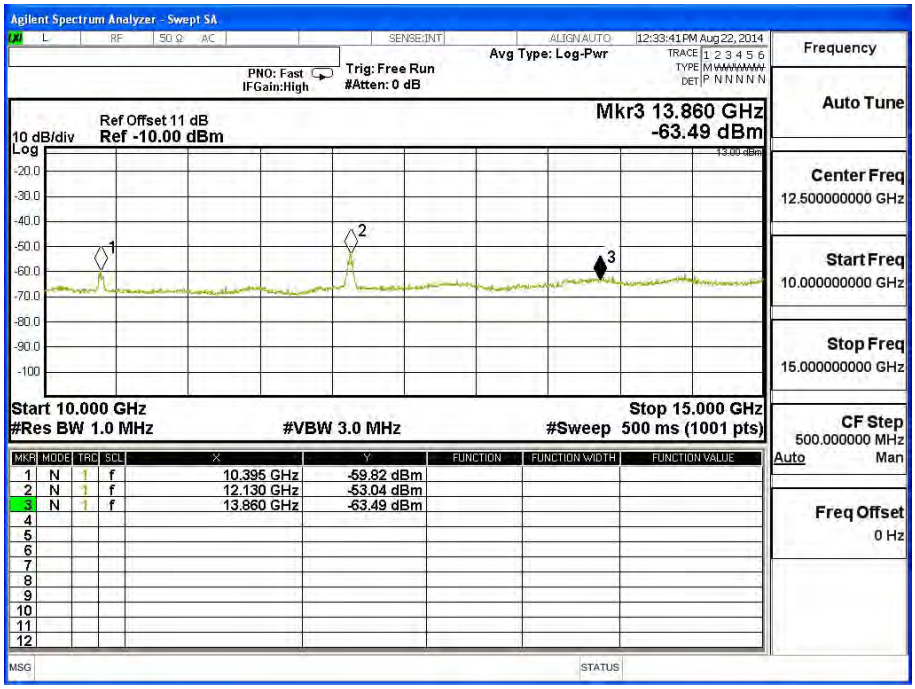
LTE- Band IV (10M) QPSK(50,0) CH20175

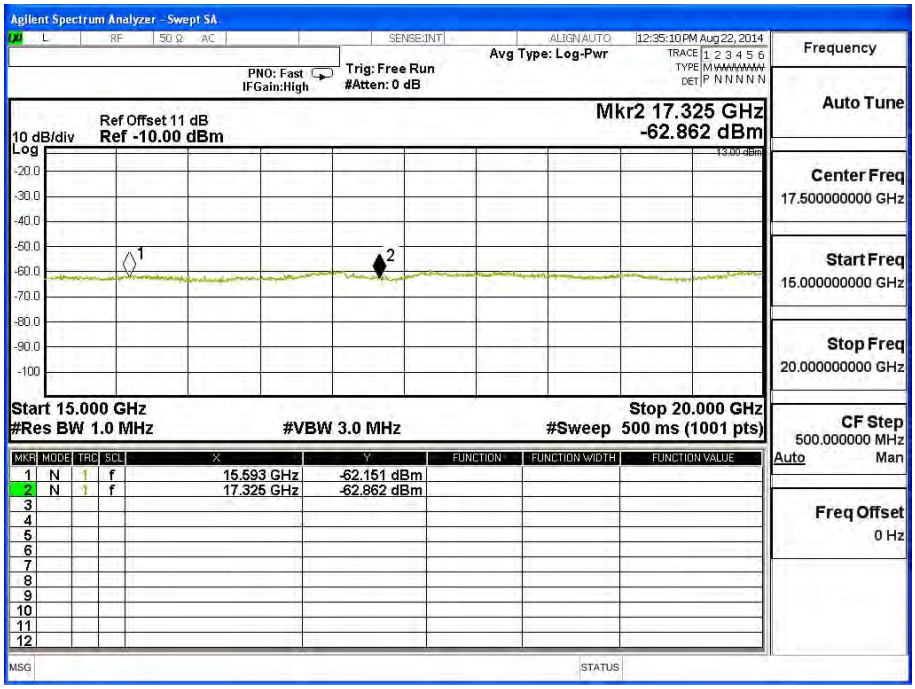
Frequency (MHz)	Reading Level (dBm)	Path Loss (dB)	Emission Level (dBm)	Limit (dBm)
3464	-40.880	1.1	-39.780	-13
5195	-56.510	1.23	-55.280	-13
6930	-34.540	1.59	-32.950	-13
8660	-56.320	1.89	-54.430	-13
10395	-59.820	2.07	-57.750	-13
12130	-53.040	2.26	-50.780	-13
13860	-63.490	2.64	-60.850	-13
15593	-62.151	3.5	-58.651	-13
17325	-62.862	3.7	-59.162	-13




Agilent Spectrum Analyzer - Swept SA
12:31:27 PM Aug 22, 2014
Avg Type: Log-Pwr
Trig: Free Run
#Atten: 0 dB
PNO: Fast
IFGain:High
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr1 3.464 GHz
-40.88 dBm
Start 1.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 5.000 GHz
#Sweep 500 ms (1001 pts)
1 N 1 f 3.464 GHz -40.88 dBm
Frequency
Auto Tune
Center Freq
3.000000000 GHz
Start Freq
1.000000000 GHz
Stop Freq
5.000000000 GHz
CF Step
400.000000 MHz
Auto Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
12:32:34 PM Aug 22, 2014
Avg Type: Log-Pwr
Trig: Free Run
#Atten: 0 dB
PNO: Fast
IFGain:High
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr3 8.660 GHz
-56.32 dBm
Start 5.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 10.000 GHz
#Sweep 500 ms (1001 pts)
1 N 1 f 5.195 GHz -56.51 dBm
2 N 1 f 6.930 GHz -34.54 dBm
3 N 1 f 8.660 GHz -56.32 dBm
Frequency
Auto Tune
Center Freq
7.500000000 GHz
Start Freq
5.000000000 GHz
Stop Freq
10.000000000 GHz
CF Step
500.000000 MHz
Auto Man
Freq Offset
0 Hz

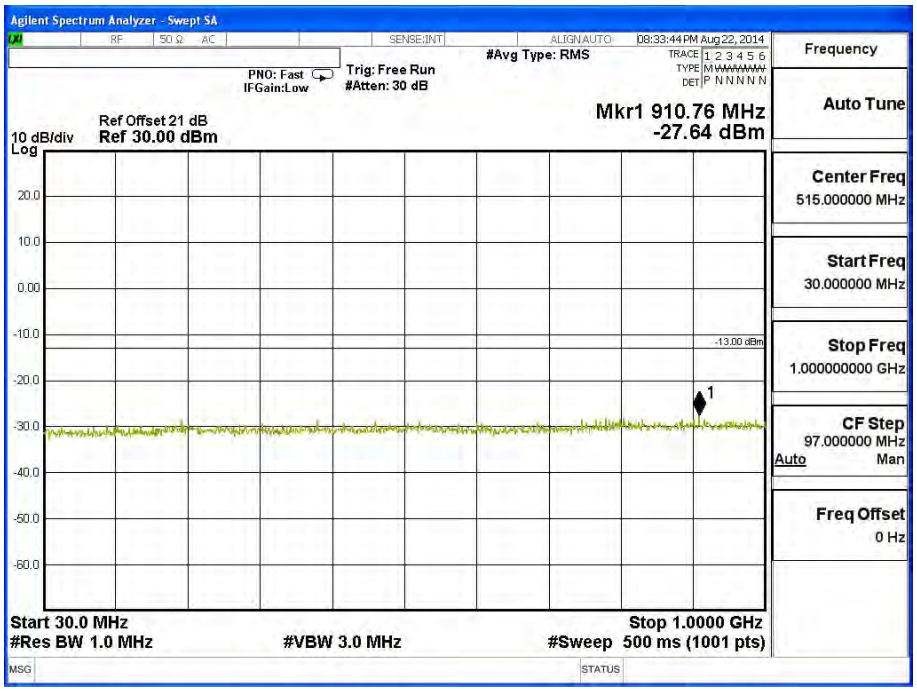

Agilent Spectrum Analyzer - Swept SA
12:33:41 PM Aug 22, 2014
Avg Type: Log-Pwr
Trig: Free Run
#Atten: 0 dB
PNO: Fast
IFGain:High
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr3 13.860 GHz
-63.49 dBm
Start 10.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 15.000 GHz
#Sweep 500 ms (1001 pts)
1 N 1 f 10.395 GHz -59.82 dBm
2 N 1 f 12.130 GHz -53.04 dBm
3 N 1 f 13.860 GHz -63.49 dBm
Frequency
Auto Tune
Center Freq
12.500000000 GHz
Start Freq
10.000000000 GHz
Stop Freq
15.000000000 GHz
CF Step
500.000000 MHz
Auto Man
Freq Offset
0 Hz

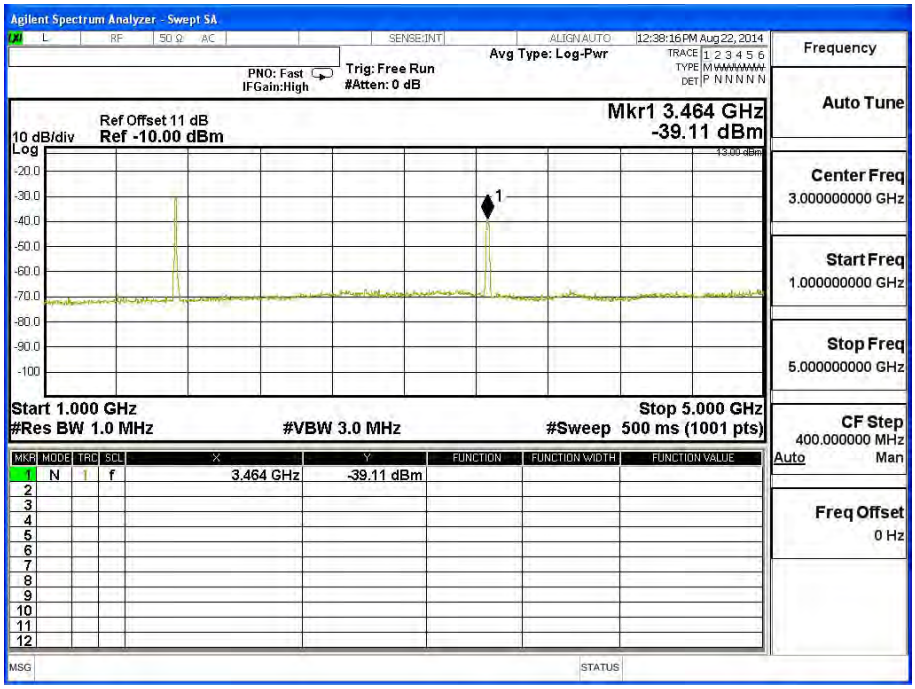

Agilent Spectrum Analyzer - Swept SA
12:35:10 PM Aug 22, 2014
Avg Type: Log-Pwr
Trig: Free Run
#Atten: 0 dB
PNO: Fast
IFGain:High
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr2 17.325 GHz
-62.862 dBm
Start 15.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 20.000 GHz
#Sweep 500 ms (1001 pts)
1 N 1 f 15.593 GHz -62.151 dBm
2 N 1 f 17.325 GHz -62.862 dBm
Frequency
Auto Tune
Center Freq
17.500000000 GHz
Start Freq
15.000000000 GHz
Stop Freq
20.000000000 GHz
CF Step
500.000000 MHz
Auto Man
Freq Offset
0 Hz

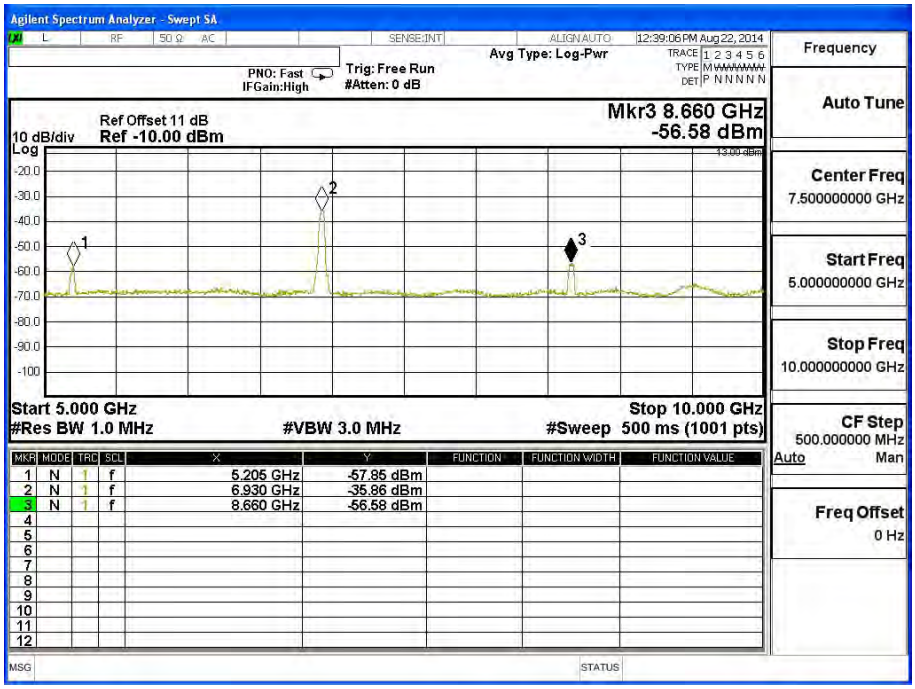
Product	Notebook PC		
Test Mode	Spurious Emission (Conducted)		
Date of Test	2014/09/19	Test Site	CTR
Test Condition	LTE-Band IV (10M)	Test Range	30MHz~20GHz

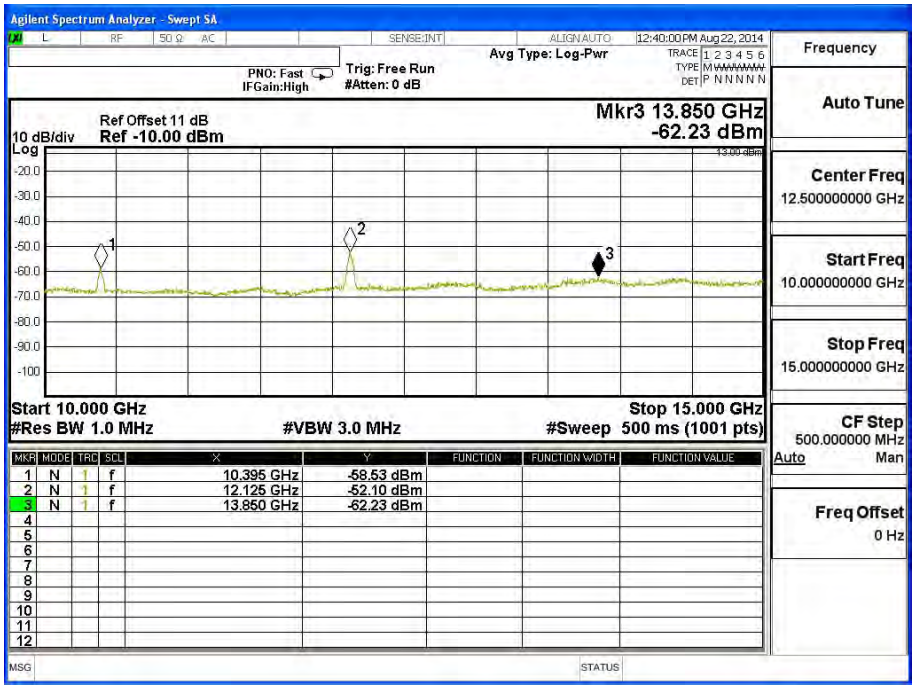
LTE- Band IV 10M 16QAM(50,0) CH20175

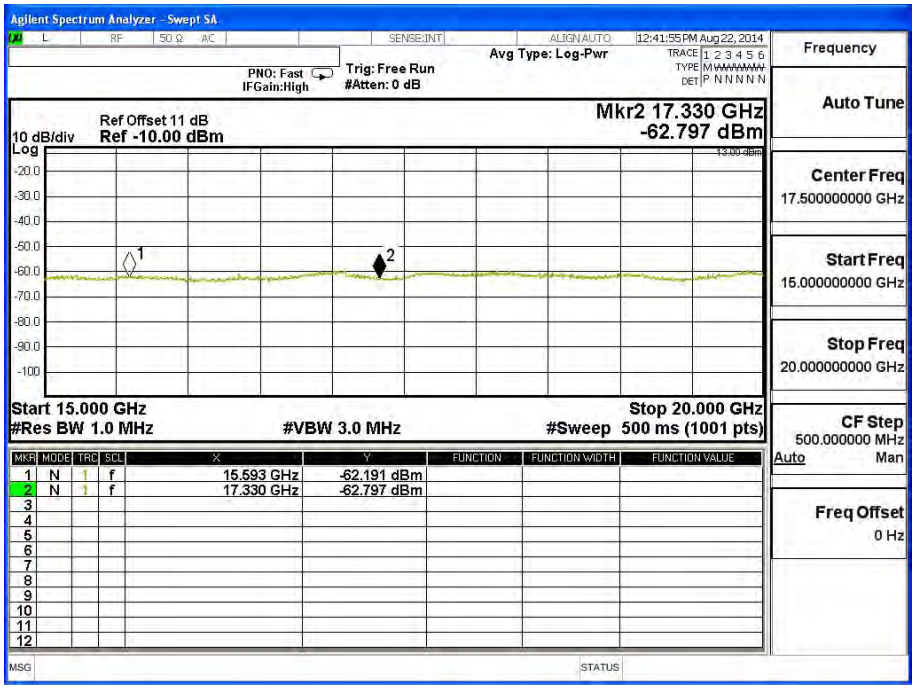
Frequency (MHz)	Reading Level (dBm)	Path Loss (dB)	Emission Level (dBm)	Limit (dBm)
3464	-39.110	1.1	-38.010	-13
5205	-57.850	1.23	-56.620	-13
6930	-35.860	1.59	-34.270	-13
8660	-56.580	1.89	-54.690	-13
10395	-58.530	2.07	-56.460	-13
12125	-52.100	2.26	-49.840	-13
13850	-62.230	2.64	-59.590	-13
15593	-62.191	3.5	-58.691	-13
17330	-62.797	3.7	-59.097	-13




Agilent Spectrum Analyzer - Swept SA
12:38:16 PM Aug 22, 2014
Avg Type: Log-Pwr
PNO: Fast
IFGain:High
Trig: Free Run
#Atten: 0 dB
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr1 3.464 GHz
-39.11 dBm
Start 1.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 5.000 GHz
#Sweep 500 ms (1001 pts)
1 N 1 f 3.464 GHz -39.11 dBm
Frequency
Auto Tune
Center Freq
3.000000000 GHz
Start Freq
1.000000000 GHz
Stop Freq
5.000000000 GHz
CF Step
400.000000 MHz
Auto Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
12:39:06 PM Aug 22, 2014
Avg Type: Log-Pwr
PNO: Fast
IFGain:High
Trig: Free Run
#Atten: 0 dB
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr3 8.660 GHz
-56.58 dBm
Start 5.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 10.000 GHz
#Sweep 500 ms (1001 pts)
1 N 1 f 5.205 GHz -57.85 dBm
2 N 1 f 6.930 GHz -35.86 dBm
3 N 1 f 8.660 GHz -56.58 dBm
Frequency
Auto Tune
Center Freq
7.500000000 GHz
Start Freq
5.000000000 GHz
Stop Freq
10.000000000 GHz
CF Step
500.000000 MHz
Auto Man
Freq Offset
0 Hz

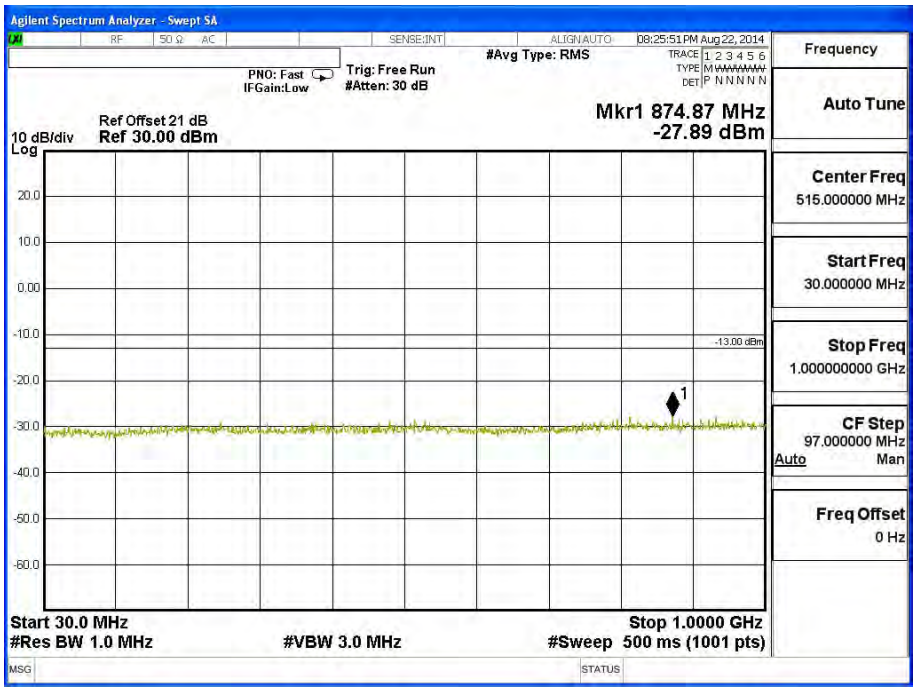

Agilent Spectrum Analyzer - Swept SA
12:40:00 PM Aug 22, 2014
Avg Type: Log-Pwr
PNO: Fast
IFGain:High
Trig: Free Run
#Atten: 0 dB
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr3 13.850 GHz
-62.23 dBm
Start 10.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 15.000 GHz
#Sweep 500 ms (1001 pts)
1 N 1 f 10.395 GHz -58.53 dBm
2 N 1 f 12.125 GHz -52.10 dBm
3 N 1 f 13.850 GHz -62.23 dBm
Frequency
Auto Tune
Center Freq
12.500000000 GHz
Start Freq
10.000000000 GHz
Stop Freq
15.000000000 GHz
CF Step
500.000000 MHz
Auto Man
Freq Offset
0 Hz

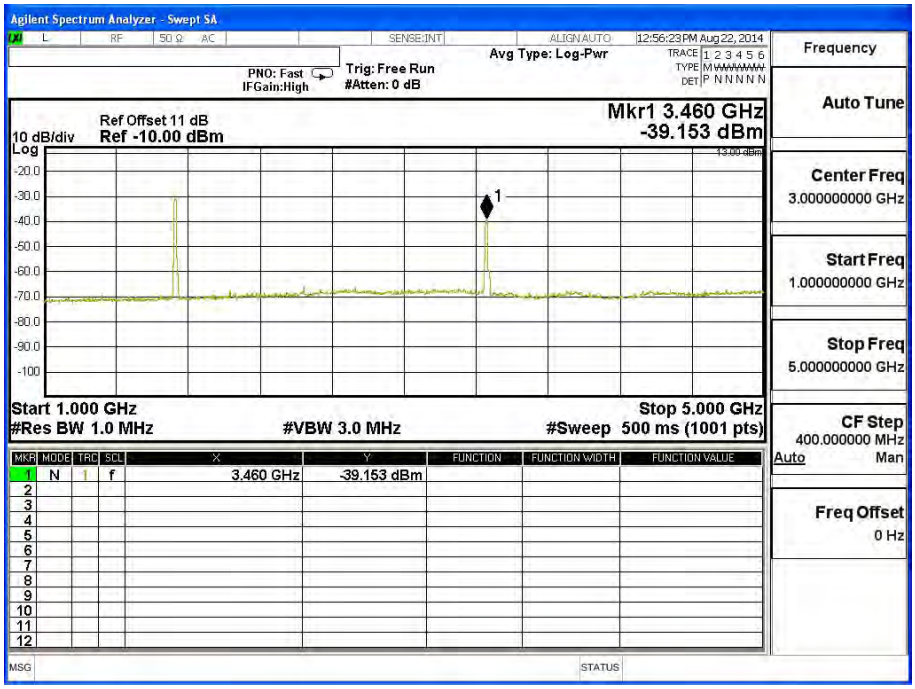

Agilent Spectrum Analyzer - Swept SA
12:41:55 PM Aug 22, 2014
Avg Type: Log-Pwr
PNO: Fast
IFGain:High
Trig: Free Run
#Atten: 0 dB
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr2 17.330 GHz
-62.797 dBm
Start 15.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 20.000 GHz
#Sweep 500 ms (1001 pts)
1 N 1 f 15.593 GHz -62.191 dBm
2 N 1 f 17.330 GHz -62.797 dBm
Frequency
Auto Tune
Center Freq
17.500000000 GHz
Start Freq
15.000000000 GHz
Stop Freq
20.000000000 GHz
CF Step
500.000000 MHz
Auto Man
Freq Offset
0 Hz

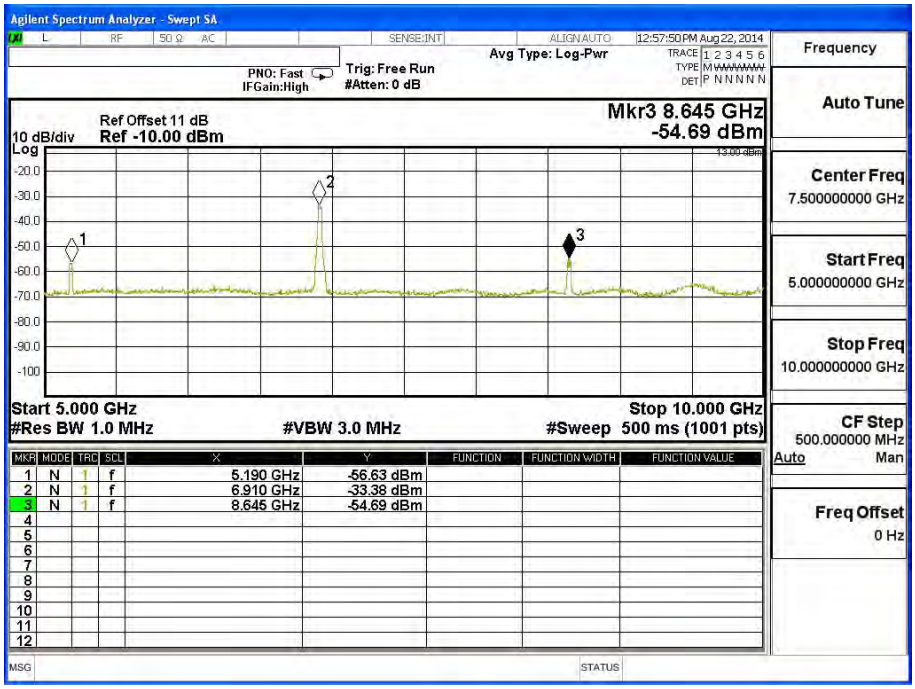
Product	Notebook PC		
Test Mode	Spurious Emission (Conducted)		
Date of Test	2014/09/19	Test Site	CTR
Test Condition	LTE-Band IV 15M	Test Range	30MHz~20GHz

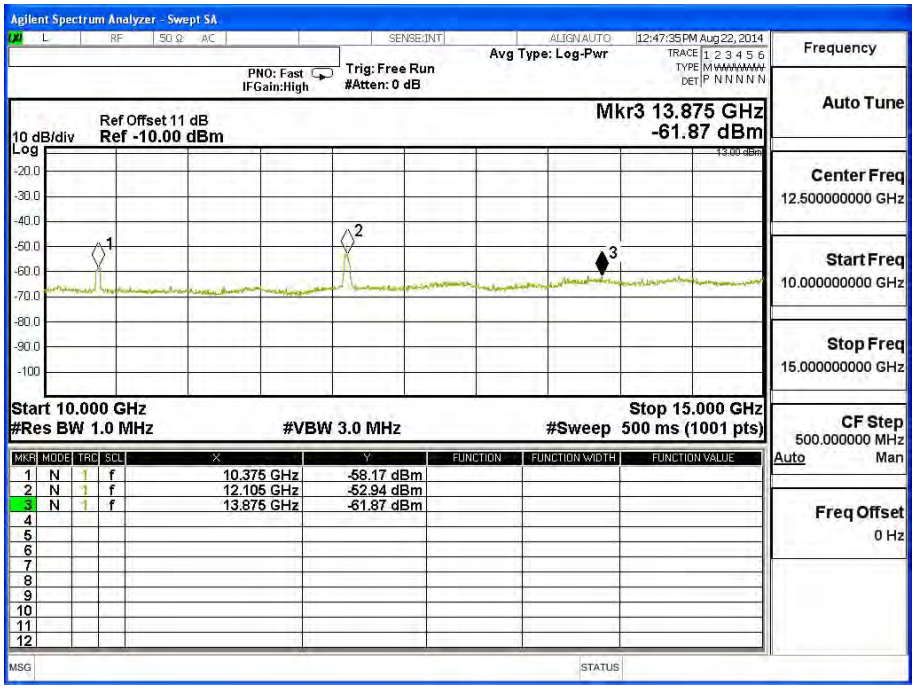
LTE-Band IV 15M QPSK(36,0) CH20175

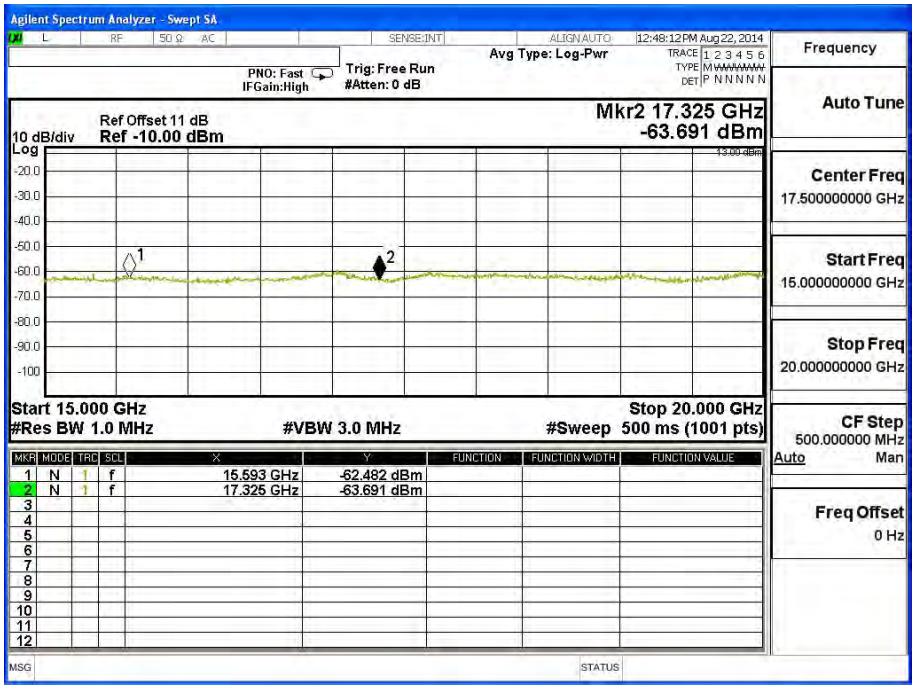
Frequency (MHz)	Reading Level (dBm)	Path Loss (dB)	Emission Level (dBm)	Limit (dBm)
3460	-39.153	1.1	-38.053	-13
5190	-56.630	1.23	-55.400	-13
6910	-33.380	1.59	-31.790	-13
8645	-54.690	1.89	-52.800	-13
10375	-58.170	2.07	-56.100	-13
12105	-52.940	2.26	-50.680	-13
13875	-61.870	2.64	-59.230	-13
15593	-62.482	3.5	-58.982	-13
17325	-63.691	3.7	-59.991	-13




Agilent Spectrum Analyzer - Swept SA
12:56:23 PM Aug 22, 2014
Avg Type: Log-Pwr
Trig: Free Run
#Atten: 0 dB
PNO: Fast
IFGain:High
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr1 3.460 GHz
-39.153 dBm
Start 1.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 5.000 GHz
#Sweep 500 ms (1001 pts)
1 N 1 f 3.460 GHz -39.153 dBm
Frequency
Auto Tune
Center Freq
3.000000000 GHz
Start Freq
1.000000000 GHz
Stop Freq
5.000000000 GHz
CF Step
400.000000 MHz
Auto Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
12:57:50 PM Aug 22, 2014
Avg Type: Log-Pwr
Trig: Free Run
#Atten: 0 dB
PNO: Fast
IFGain:High
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr3 8.645 GHz
-54.69 dBm
Start 5.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 10.000 GHz
#Sweep 500 ms (1001 pts)
1 N 1 f 5.190 GHz -56.63 dBm
2 N 1 f 6.910 GHz -33.38 dBm
3 N 1 f 8.645 GHz -54.69 dBm
Frequency
Auto Tune
Center Freq
7.500000000 GHz
Start Freq
5.000000000 GHz
Stop Freq
10.000000000 GHz
CF Step
500.000000 MHz
Auto Man
Freq Offset
0 Hz

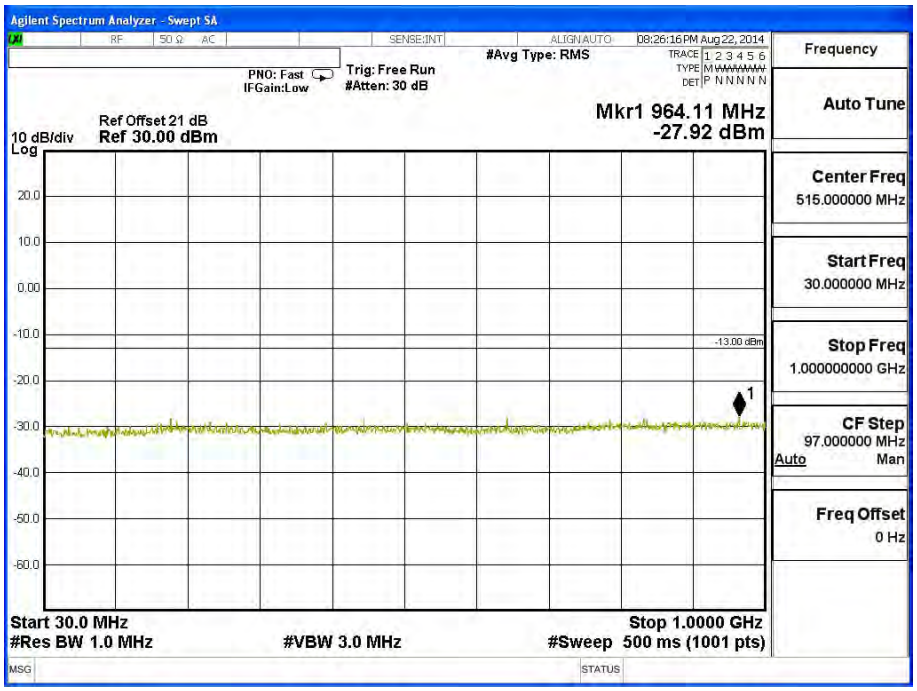

Agilent Spectrum Analyzer - Swept SA
12:47:35 PM Aug 22, 2014
Avg Type: Log-Pwr
PNO: Fast
IFGain:High
Trig: Free Run
#Atten: 0 dB
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr3 13.875 GHz
-61.87 dBm
Start 10.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 15.000 GHz
#Sweep 500 ms (1001 pts)
Frequency
Auto Tune
Center Freq
12.500000000 GHz
Start Freq
10.000000000 GHz
Stop Freq
15.000000000 GHz
CF Step
500.000000 MHz
Auto
Man
Freq Offset
0 Hz
1 N 1 f 10.375 GHz -58.17 dBm
2 N 1 f 12.105 GHz -52.94 dBm
3 N 1 f 13.875 GHz -61.87 dBm

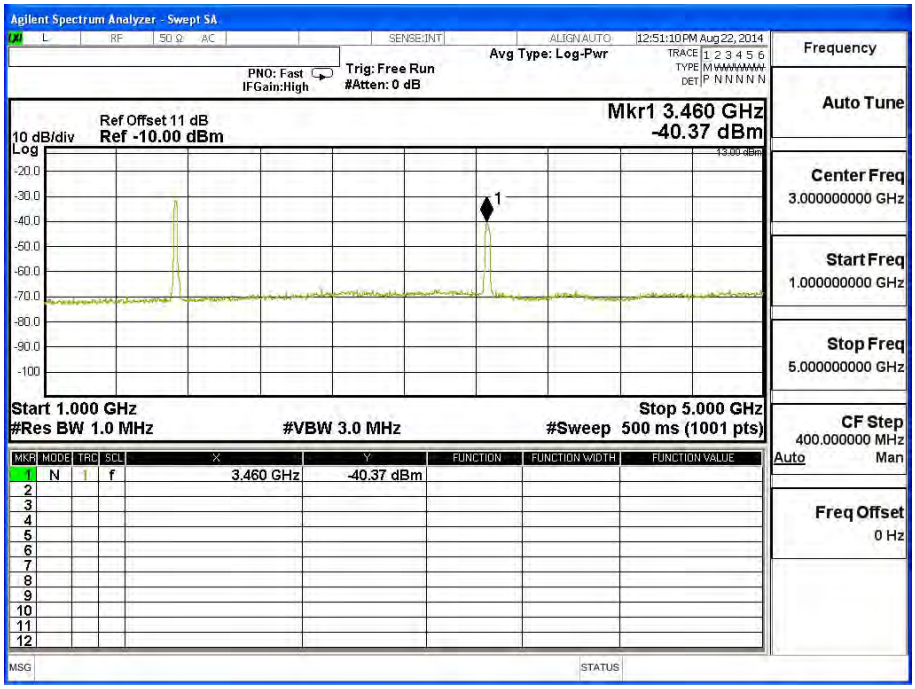

Agilent Spectrum Analyzer - Swept SA
12:48:12 PM Aug 22, 2014
Avg Type: Log-Pwr
PNO: Fast
IFGain:High
Trig: Free Run
#Atten: 0 dB
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr2 17.325 GHz
-63.691 dBm
Start 15.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 20.000 GHz
#Sweep 500 ms (1001 pts)
Frequency
Auto Tune
Center Freq
17.500000000 GHz
Start Freq
15.000000000 GHz
Stop Freq
20.000000000 GHz
CF Step
500.000000 MHz
Auto
Man
Freq Offset
0 Hz
1 N 1 f 15.593 GHz -62.482 dBm
2 N 1 f 17.325 GHz -63.691 dBm

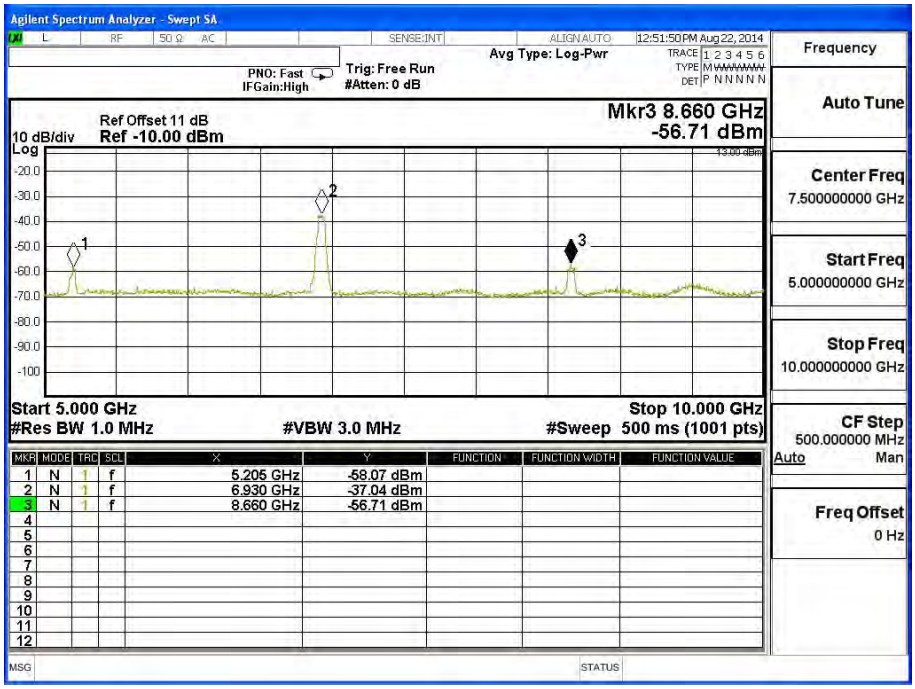
Product	Notebook PC		
Test Mode	Spurious Emission (Conducted)		
Date of Test	2014/09/19	Test Site	CTR
Test Condition	LTE-Band IV (15M)	Test Range	30MHz~20GHz

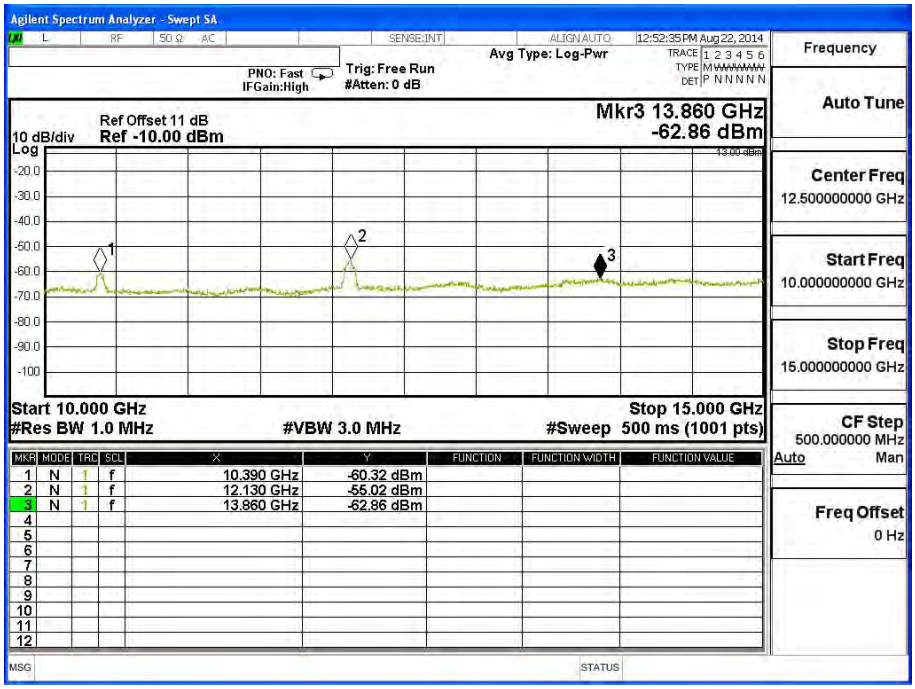
LTE-Band IV (15M) 16QAM(75,0) CH20175

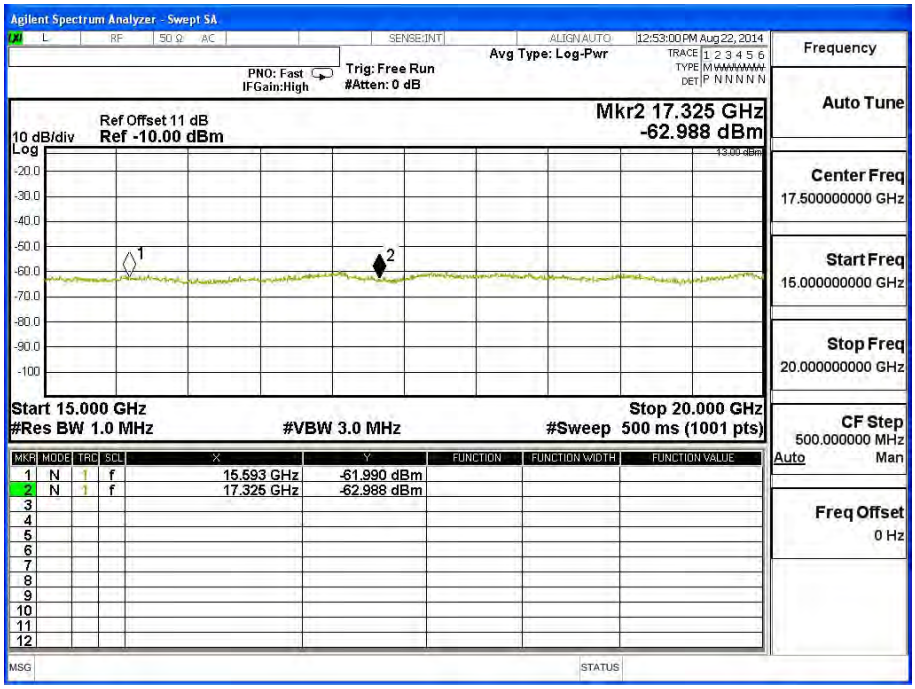
Frequency (MHz)	Reading Level (dBm)	Path Loss (dB)	Emission Level (dBm)	Limit (dBm)
3460	-40.370	1.1	-39.270	-13
5205	-58.070	1.23	-56.840	-13
6930	-37.040	1.59	-35.450	-13
8660	-56.710	1.89	-54.820	-13
10390	-60.320	2.07	-58.250	-13
12130	-55.020	2.26	-52.760	-13
13860	-62.860	2.64	-60.220	-13
15593	-61.990	3.5	-58.490	-13
17325	-62.988	3.7	-59.288	-13




Agilent Spectrum Analyzer - Swept SA
12:51:10 PM Aug 22, 2014
Avg Type: Log-Pwr
PNO: Fast
IFGain:High
Trig: Free Run
#Atten: 0 dB
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr1 3.460 GHz
-40.37 dBm
Start 1.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 5.000 GHz
#Sweep 500 ms (1001 pts)
1 N 1 f 3.460 GHz -40.37 dBm
Frequency
Auto Tune
Center Freq
3.000000000 GHz
Start Freq
1.000000000 GHz
Stop Freq
5.000000000 GHz
CF Step
400.000000 MHz
Auto Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
12:51:50 PM Aug 22, 2014
Avg Type: Log-Pwr
PNO: Fast
IFGain:High
Trig: Free Run
#Atten: 0 dB
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr3 8.660 GHz
-56.71 dBm
Start 5.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 10.000 GHz
#Sweep 500 ms (1001 pts)
1 N 1 f 5.205 GHz -58.07 dBm
2 N 1 f 6.930 GHz -37.04 dBm
3 N 1 f 8.660 GHz -56.71 dBm
Frequency
Auto Tune
Center Freq
7.500000000 GHz
Start Freq
5.000000000 GHz
Stop Freq
10.000000000 GHz
CF Step
500.000000 MHz
Auto Man
Freq Offset
0 Hz

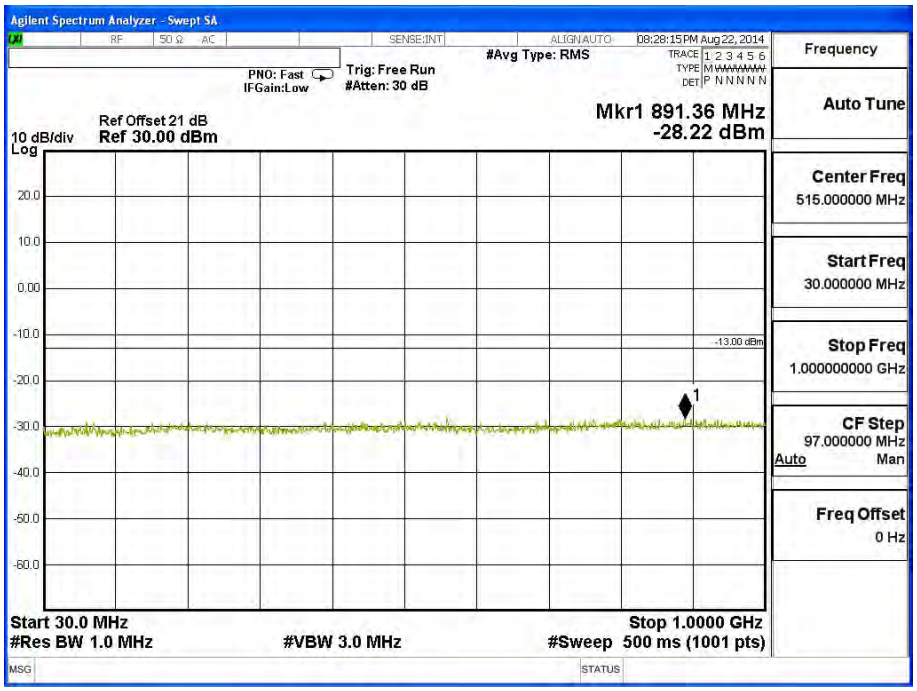

Agilent Spectrum Analyzer - Swept SA
12:52:35 PM Aug 22, 2014
Avg Type: Log-Pwr
Trig: Free Run
#Atten: 0 dB
PNO: Fast
IFGain:High
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr3 13.860 GHz
-62.86 dBm
Start 10.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 15.000 GHz
#Sweep 500 ms (1001 pts)
Frequency
Auto Tune
Center Freq
12.500000000 GHz
Start Freq
10.000000000 GHz
Stop Freq
15.000000000 GHz
CF Step
500.000000 MHz
Auto Man
Freq Offset
0 Hz
1 N 1 f 10.390 GHz -60.32 dBm
2 N 1 f 12.130 GHz -55.02 dBm
3 N 1 f 13.860 GHz -62.86 dBm

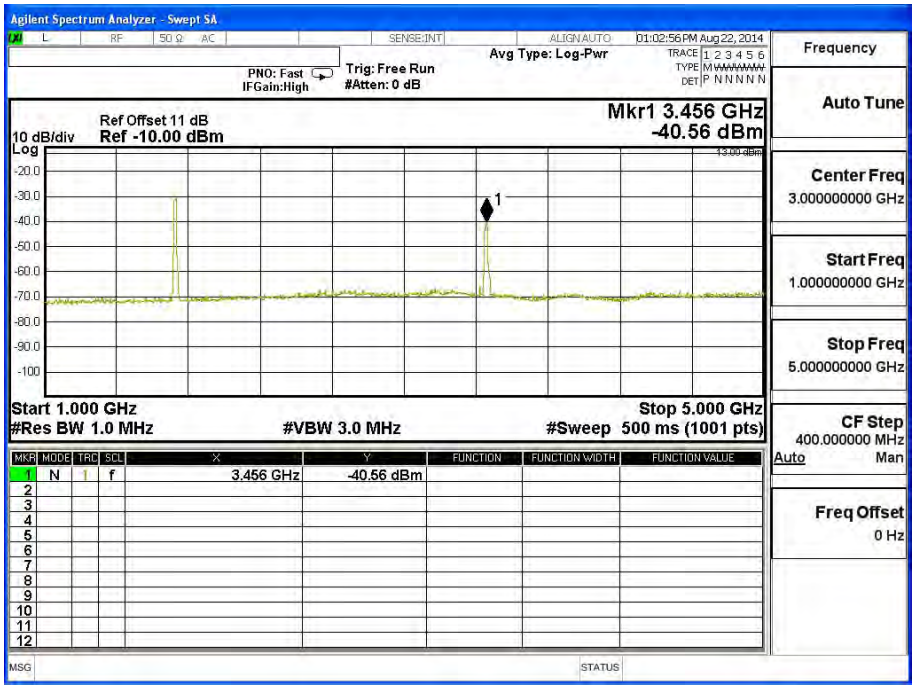

Agilent Spectrum Analyzer - Swept SA
12:53:00 PM Aug 22, 2014
Avg Type: Log-Pwr
Trig: Free Run
#Atten: 0 dB
PNO: Fast
IFGain:High
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr2 17.325 GHz
-62.988 dBm
Start 15.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 20.000 GHz
#Sweep 500 ms (1001 pts)
Frequency
Auto Tune
Center Freq
17.500000000 GHz
Start Freq
15.000000000 GHz
Stop Freq
20.000000000 GHz
CF Step
500.000000 MHz
Auto Man
Freq Offset
0 Hz
1 N 1 f 15.593 GHz -61.990 dBm
2 N 1 f 17.325 GHz -62.988 dBm

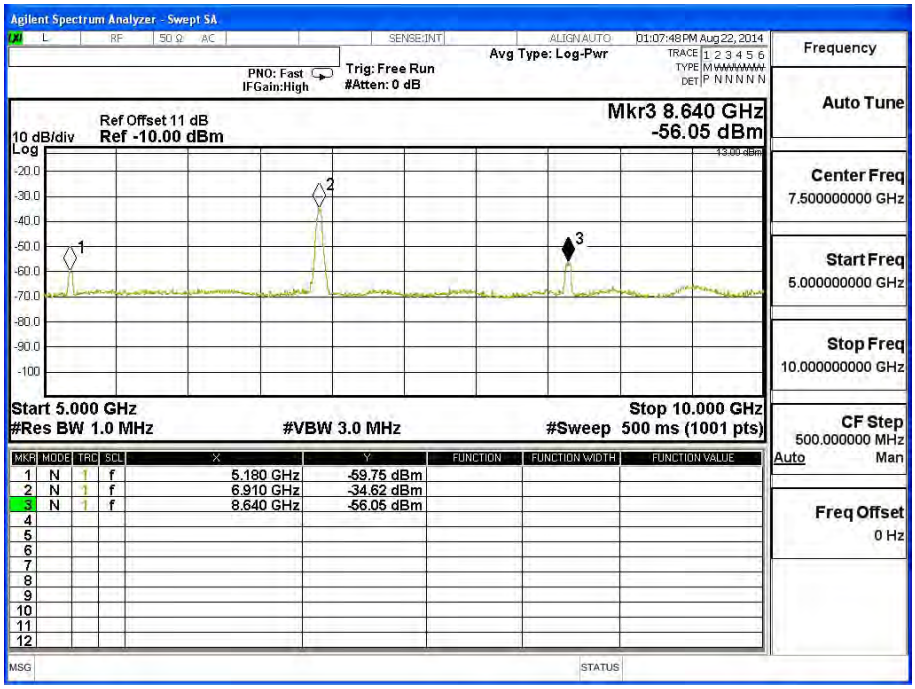
Product	Notebook PC		
Test Mode	Spurious Emission (Conducted)		
Date of Test	2014/09/19	Test Site	CTR
Test Condition	LTE-Band IV (20M)	Test Range	30MHz~20GHz

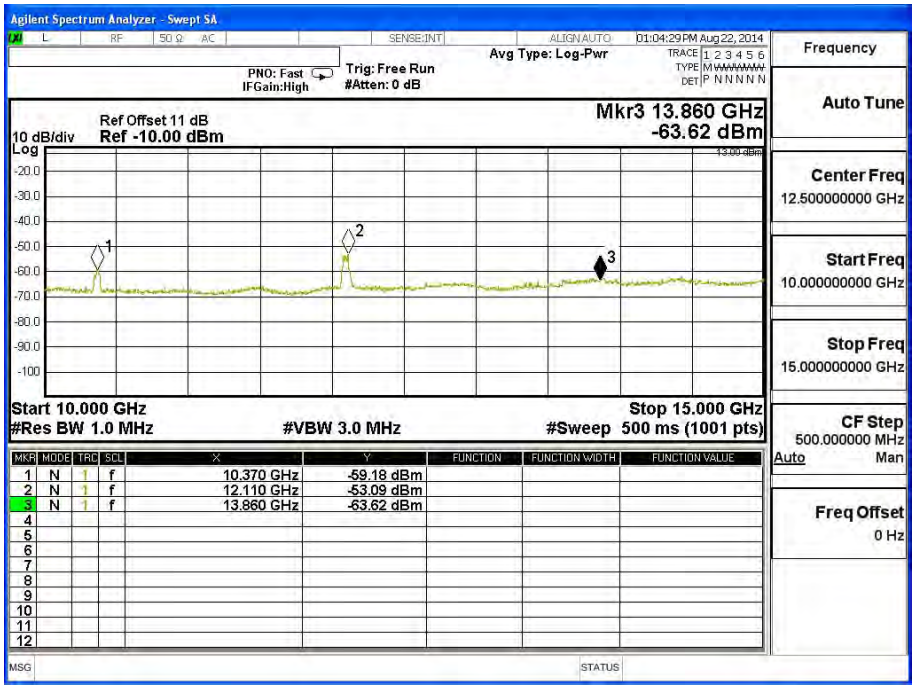
LTE-Band IV (20M) QPSK(50,0) CH20175

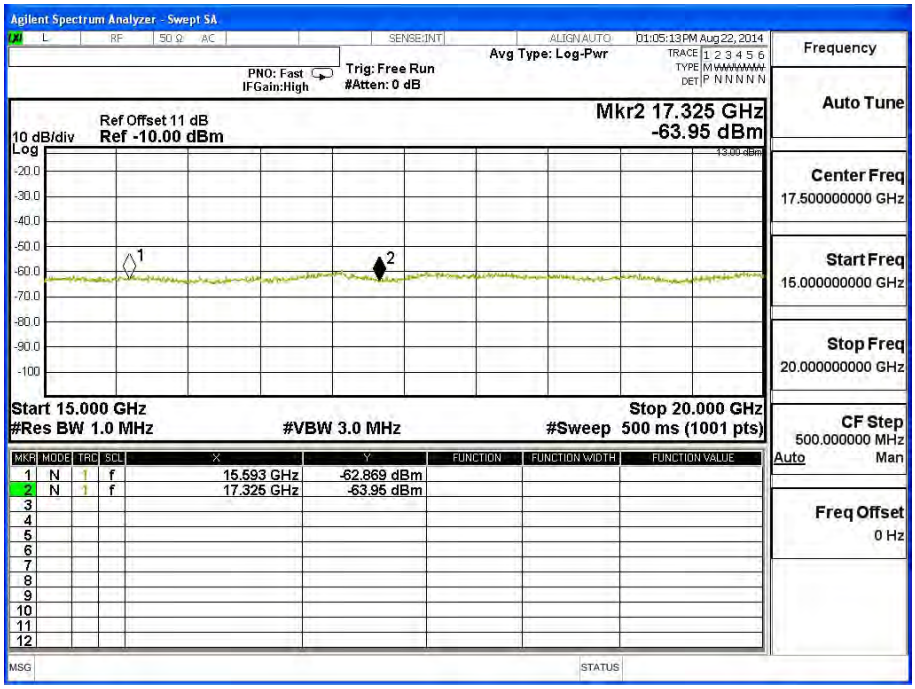
Frequency (MHz)	Reading Level (dBm)	Path Loss (dB)	Emission Level (dBm)	Limit (dBm)
3456	-40.560	1.1	-39.460	-13
5180	-57.000	1.23	-55.770	-13
6910	-33.610	1.59	-32.020	-13
8650	-56.270	1.89	-54.380	-13
10370	-59.180	2.07	-57.110	-13
12110	-53.090	2.26	-50.830	-13
13860	-63.620	2.64	-60.980	-13
15593	-62.869	3.5	-59.369	-13
17325	-63.950	3.7	-60.250	-13




Agilent Spectrum Analyzer - Swept SA
01:02:56 PM Aug 22, 2014
Avg Type: Log-Pwr
Trig: Free Run
#Atten: 0 dB
PNO: Fast
IFGain:High
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr1 3.456 GHz
-40.56 dBm
Start 1.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 5.000 GHz
#Sweep 500 ms (1001 pts)
1 N 1 f 3.456 GHz -40.56 dBm
Frequency
Auto Tune
Center Freq
3.000000000 GHz
Start Freq
1.000000000 GHz
Stop Freq
5.000000000 GHz
CF Step
400.000000 MHz
Auto Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
01:07:48 PM Aug 22, 2014
Avg Type: Log-Pwr
Trig: Free Run
#Atten: 0 dB
PNO: Fast
IFGain:High
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr3 8.640 GHz
-56.05 dBm
Start 5.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 10.000 GHz
#Sweep 500 ms (1001 pts)
1 N 1 f 5.180 GHz -59.75 dBm
2 N 1 f 6.910 GHz -34.62 dBm
3 N 1 f 8.640 GHz -56.05 dBm
Frequency
Auto Tune
Center Freq
7.500000000 GHz
Start Freq
5.000000000 GHz
Stop Freq
10.000000000 GHz
CF Step
500.000000 MHz
Auto Man
Freq Offset
0 Hz

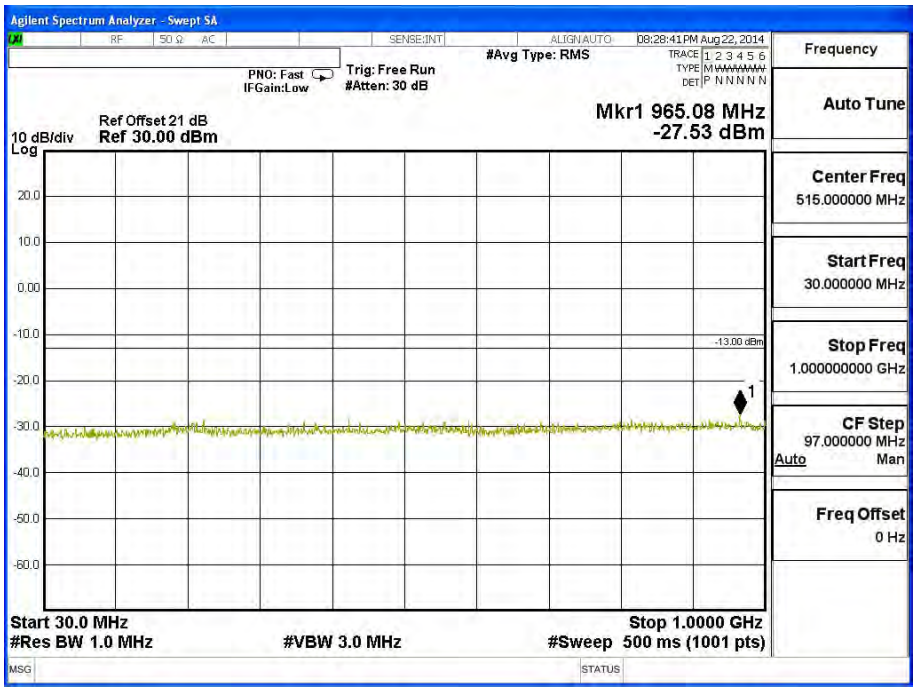

Agilent Spectrum Analyzer - Swept SA
01:04:29 PM Aug 22, 2014
Avg Type: Log-Pwr
Trig: Free Run
#Atten: 0 dB
PNO: Fast
IFGain:High
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr3 13.860 GHz
-63.62 dBm
Start 10.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 15.000 GHz
#Sweep 500 ms (1001 pts)
1 N 1 f 10.370 GHz -59.18 dBm
2 N 1 f 12.110 GHz -53.09 dBm
3 N 1 f 13.860 GHz -63.62 dBm
Frequency
Auto Tune
Center Freq
12.500000000 GHz
Start Freq
10.000000000 GHz
Stop Freq
15.000000000 GHz
CF Step
500.000000 MHz
Auto Man
Freq Offset
0 Hz

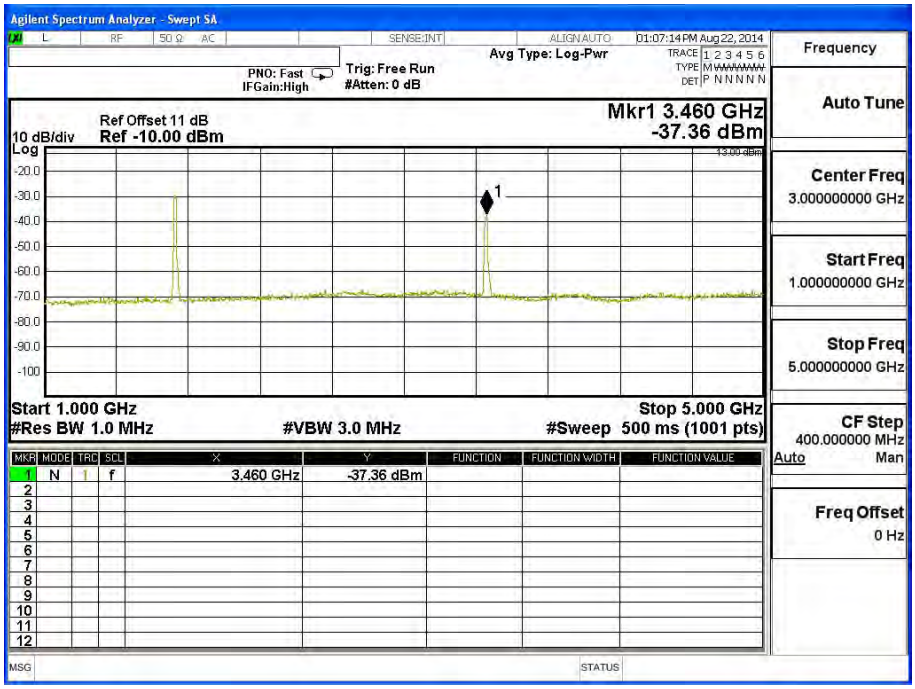

Agilent Spectrum Analyzer - Swept SA
01:05:13 PM Aug 22, 2014
Avg Type: Log-Pwr
Trig: Free Run
#Atten: 0 dB
PNO: Fast
IFGain:High
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr2 17.325 GHz
-63.95 dBm
Start 15.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 20.000 GHz
#Sweep 500 ms (1001 pts)
1 N 1 f 15.593 GHz -62.869 dBm
2 N 1 f 17.325 GHz -63.95 dBm
Frequency
Auto Tune
Center Freq
17.500000000 GHz
Start Freq
15.000000000 GHz
Stop Freq
20.000000000 GHz
CF Step
500.000000 MHz
Auto Man
Freq Offset
0 Hz

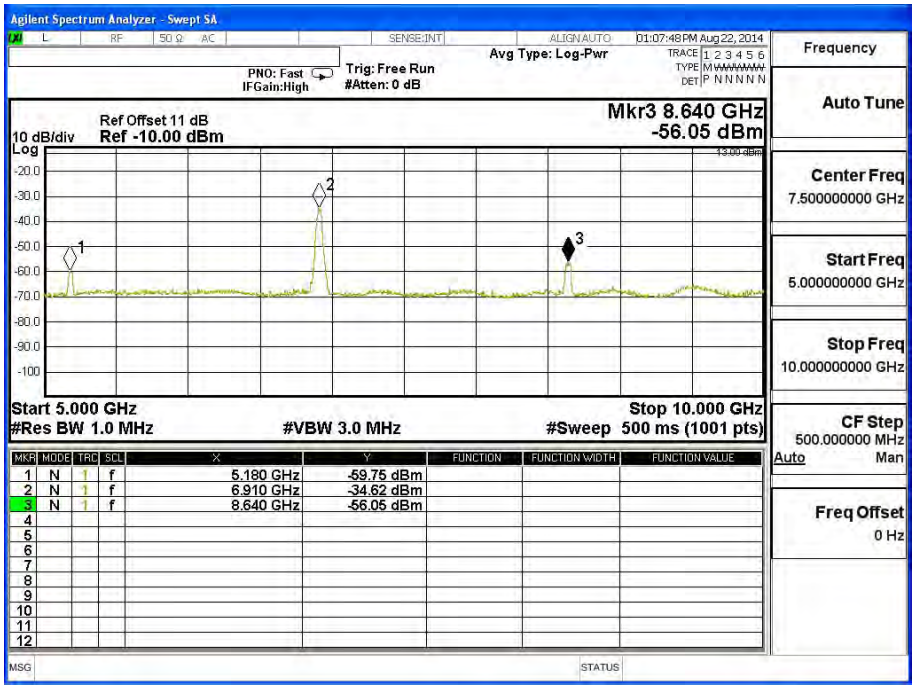
Product	Notebook PC		
Test Mode	Spurious Emission (Conducted)		
Date of Test	2014/09/19	Test Site	CTR
Test Condition	LTE-Band IV (20M)	Test Range	30MHz~20GHz

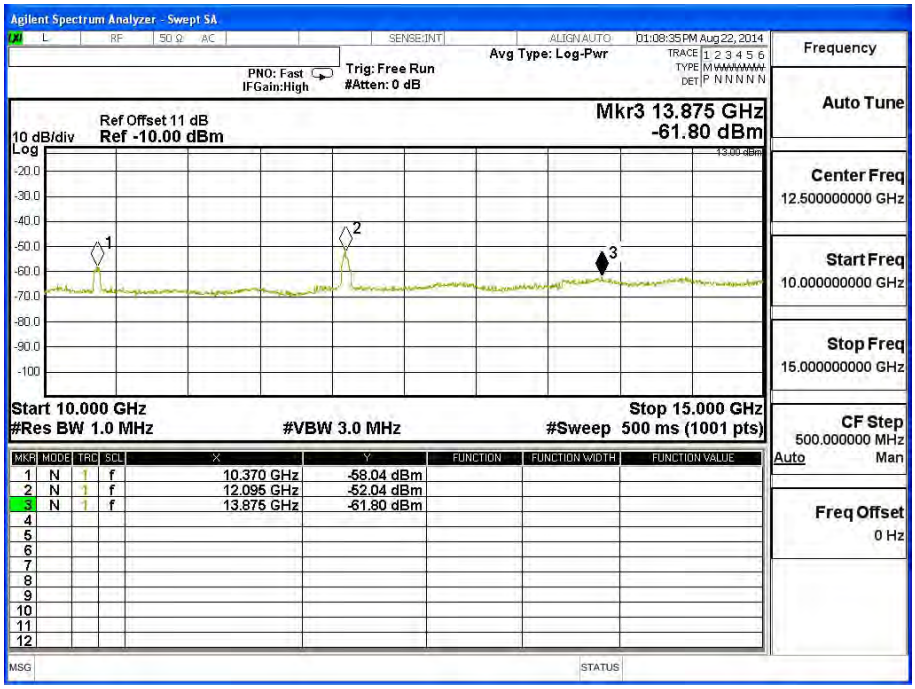
LTE-Band IV (20M) 16QAM(50,0) CH20175

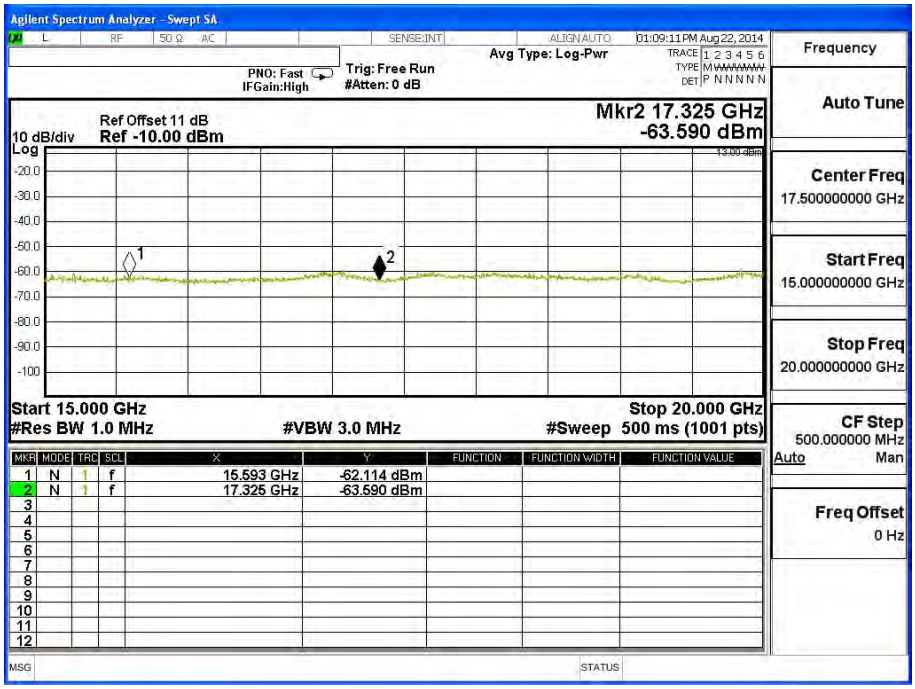
Frequency (MHz)	Reading Level (dBm)	Path Loss (dB)	Emission Level (dBm)	Limit (dBm)
3460	-37.360	1.1	-36.260	-13
5180	-59.750	1.23	-58.520	-13
6910	-34.620	1.59	-33.030	-13
8640	-56.050	1.89	-54.160	-13
10375	-58.040	2.07	-55.970	-13
12095	-52.040	2.26	-49.780	-13
13875	-61.800	2.64	-59.160	-13
15593	-62.114	3.5	-58.614	-13
17325	-63.590	3.7	-59.890	-13




Agilent Spectrum Analyzer - Swept SA
01:07:14 PM Aug 22, 2014
Avg Type: Log-Pwr
PNO: Fast
IFGain:High
Trig: Free Run
#Atten: 0 dB
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr1 3.460 GHz
-37.36 dBm
Start 1.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 5.000 GHz
#Sweep 500 ms (1001 pts)
1 N 1 f 3.460 GHz -37.36 dBm
Frequency
Auto Tune
Center Freq
3.000000000 GHz
Start Freq
1.000000000 GHz
Stop Freq
5.000000000 GHz
CF Step
400.000000 MHz
Auto Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
01:07:48 PM Aug 22, 2014
Avg Type: Log-Pwr
PNO: Fast
IFGain:High
Trig: Free Run
#Atten: 0 dB
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr3 8.640 GHz
-56.05 dBm
Start 5.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 10.000 GHz
#Sweep 500 ms (1001 pts)
1 N 1 f 5.180 GHz -59.75 dBm
2 N 1 f 6.910 GHz -34.62 dBm
3 N 1 f 8.640 GHz -56.05 dBm
Frequency
Auto Tune
Center Freq
7.500000000 GHz
Start Freq
5.000000000 GHz
Stop Freq
10.000000000 GHz
CF Step
500.000000 MHz
Auto Man
Freq Offset
0 Hz

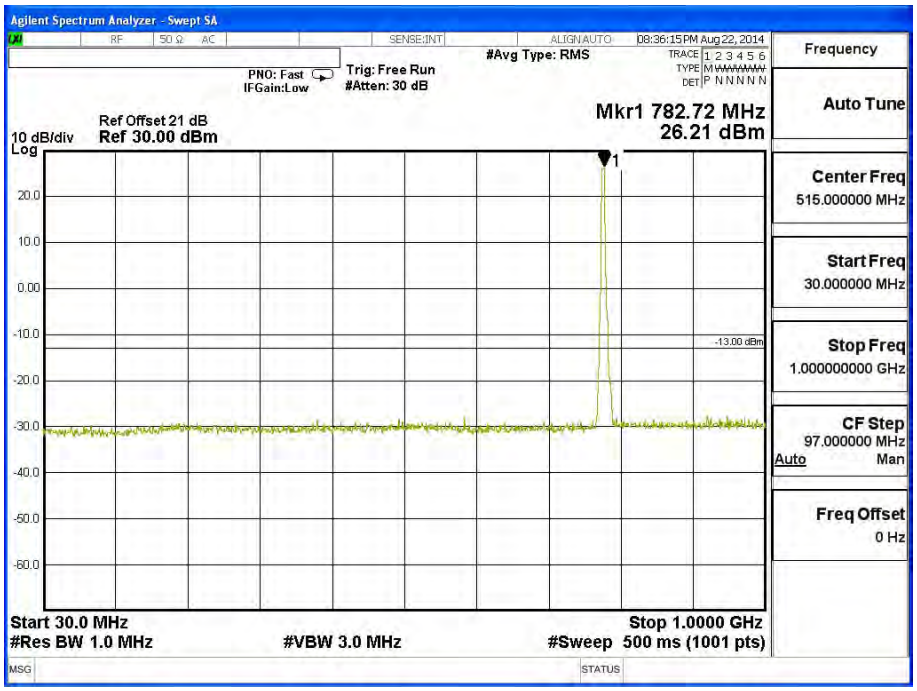

Agilent Spectrum Analyzer - Swept SA
01:08:35 PM Aug 22, 2014
Avg Type: Log-Pwr
Trig: Free Run
#Atten: 0 dB
PNO: Fast
IFGain:High
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr3 13.875 GHz
-61.80 dBm
Start 10.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 15.000 GHz
#Sweep 500 ms (1001 pts)
1 N 1 f 10.370 GHz -58.04 dBm
2 N 1 f 12.095 GHz -52.04 dBm
3 N 1 f 13.875 GHz -61.80 dBm
Frequency
Auto Tune
Center Freq
12.500000000 GHz
Start Freq
10.000000000 GHz
Stop Freq
15.000000000 GHz
CF Step
500.000000 MHz
Auto Man
Freq Offset
0 Hz

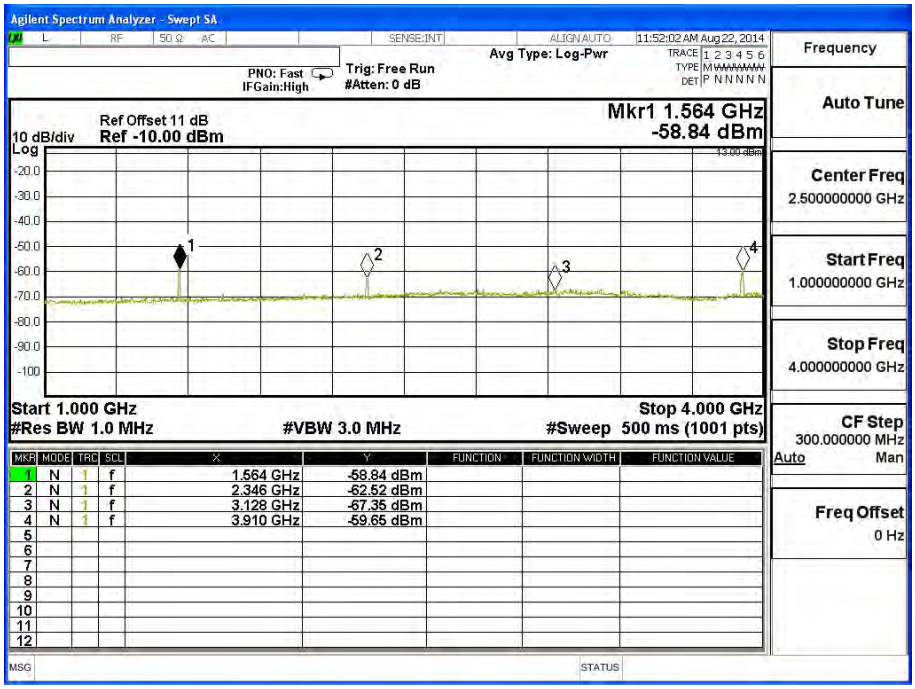

Agilent Spectrum Analyzer - Swept SA
01:09:11 PM Aug 22, 2014
Avg Type: Log-Pwr
Trig: Free Run
#Atten: 0 dB
PNO: Fast
IFGain:High
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr2 17.325 GHz
-63.590 dBm
Start 15.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 20.000 GHz
#Sweep 500 ms (1001 pts)
1 N 1 f 15.593 GHz -62.114 dBm
2 N 1 f 17.325 GHz -63.590 dBm
Frequency
Auto Tune
Center Freq
17.500000000 GHz
Start Freq
15.000000000 GHz
Stop Freq
20.000000000 GHz
CF Step
500.000000 MHz
Auto Man
Freq Offset
0 Hz

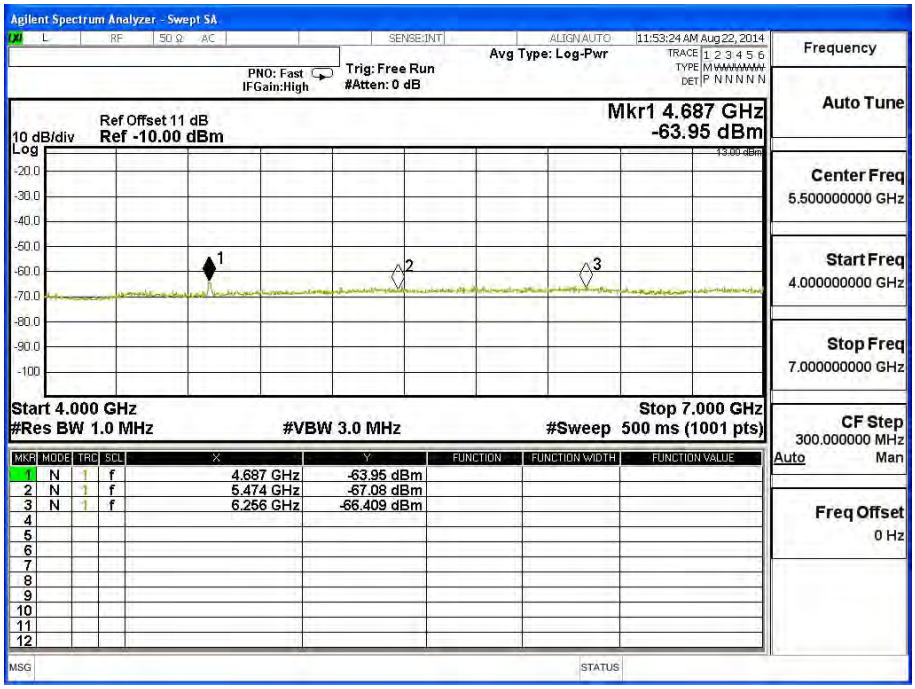
Product	Notebook PC		
Test Mode	Spurious Emission (Conducted)		
Date of Test	2014/09/19	Test Site	CTR
Test Condition	LTE-Band XIII (5M)	Test Range	30MHz~10GHz

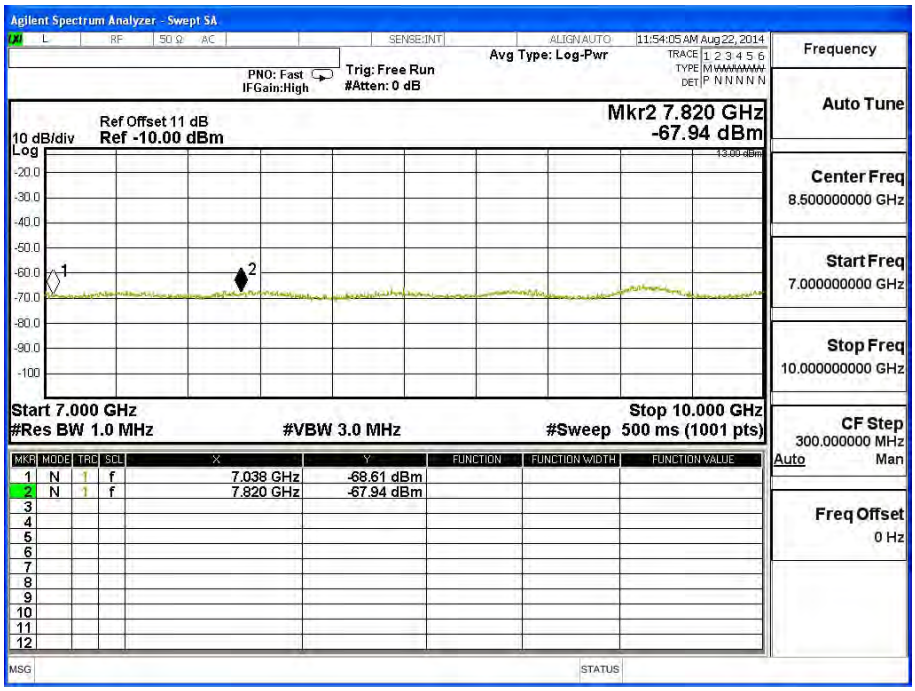
LTE-Band XIII (5M) QPSK(12,6) CH23230

Frequency (MHz)	Reading Level (dBm)	Path Loss (dB)	Emission Level (dBm)	Limit (dBm)
1564	-58.840	0.58	-58.260	-13
2346	-62.520	0.7	-61.820	-13
3128	-67.350	1.01	-66.340	-13
3910	-59.650	1.18	-58.470	-13
4687	-63.950	1.23	-62.720	-13
5474	-67.080	1.45	-65.630	-13
6256	-66.409	1.56	-64.849	-13
7038	-68.610	1.59	-67.020	-13
7820	-67.940	1.82	-66.120	-13




Agilent Spectrum Analyzer - Swept SA
11:52:02 AM Aug 22, 2014
Avg Type: Log-Pwr
Trig: Free Run
#Atten: 0 dB
PNO: Fast
IFGain:High
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr1 1.564 GHz
-58.84 dBm
Start 1.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 4.000 GHz
#Sweep 500 ms (1001 pts)
1 N 1 f 1.564 GHz -58.84 dBm
2 N 1 f 2.346 GHz -62.52 dBm
3 N 1 f 3.128 GHz -67.35 dBm
4 N 1 f 3.910 GHz -59.65 dBm
Frequency
Auto Tune
Center Freq
2.500000000 GHz
Start Freq
1.000000000 GHz
Stop Freq
4.000000000 GHz
CF Step
300.000000 MHz
Auto Man
Freq Offset
0 Hz

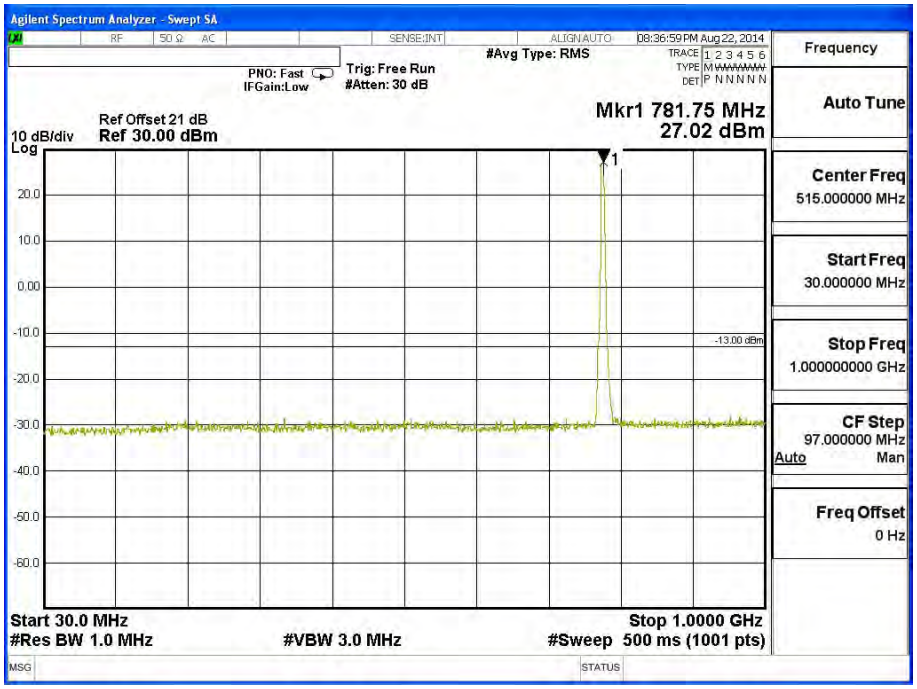

Agilent Spectrum Analyzer - Swept SA
11:53:24 AM Aug 22, 2014
Avg Type: Log-Pwr
Trig: Free Run
#Atten: 0 dB
PNO: Fast
IFGain:High
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr1 4.687 GHz
-63.95 dBm
Start 4.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 7.000 GHz
#Sweep 500 ms (1001 pts)
1 N 1 f 4.687 GHz -63.95 dBm
2 N 1 f 5.474 GHz -67.08 dBm
3 N 1 f 6.256 GHz -66.409 dBm
Frequency
Auto Tune
Center Freq
5.500000000 GHz
Start Freq
4.000000000 GHz
Stop Freq
7.000000000 GHz
CF Step
300.000000 MHz
Auto Man
Freq Offset
0 Hz

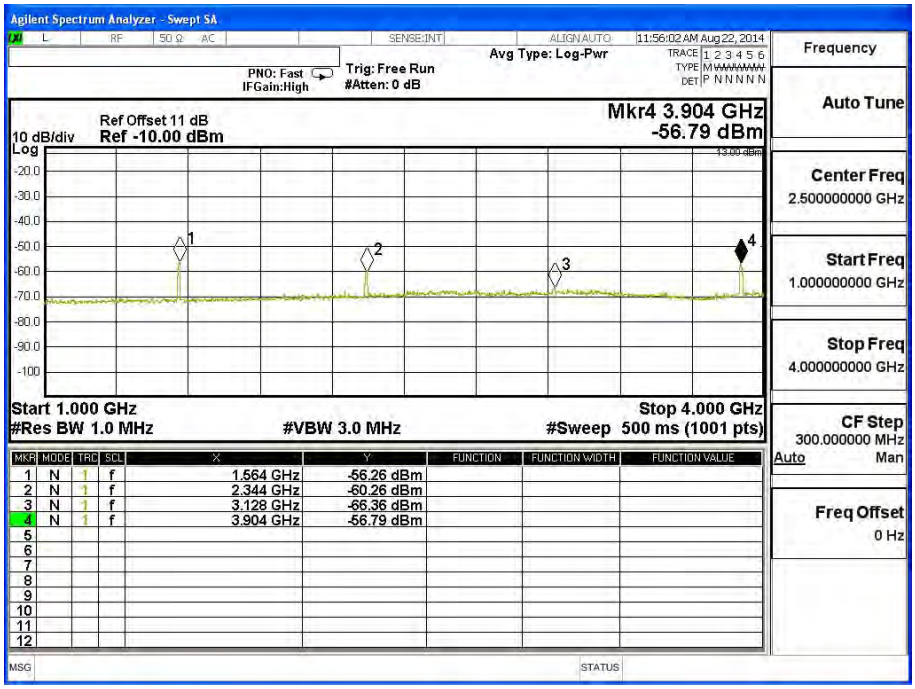

Agilent Spectrum Analyzer - Swept SA
Avg Type: Log-Pwr
Trig: Free Run
#Atten: 0 dB
PNO: Fast
IFGain:High
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr2 7.820 GHz
-67.94 dBm
Start 7.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 10.000 GHz
#Sweep 500 ms (1001 pts)
1 N 1 f 7.038 GHz -68.61 dBm
2 N 1 f 7.820 GHz -67.94 dBm
Frequency
Auto Tune
Center Freq
8.500000000 GHz
Start Freq
7.000000000 GHz
Stop Freq
10.000000000 GHz
CF Step
300.000000 MHz
Auto Man
Freq Offset
0 Hz

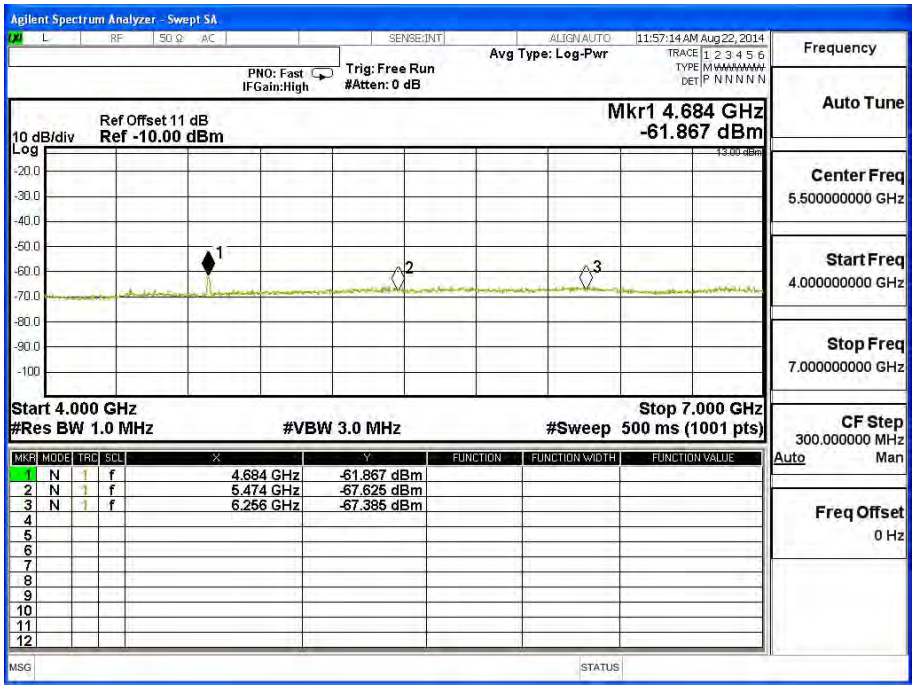
Product	Notebook PC		
Test Mode	Spurious Emission (Conducted)		
Date of Test	2014/09/19	Test Site	CTR
Test Condition	LTE-Band XIII (5M)	Test Range	30MHz~10GHz

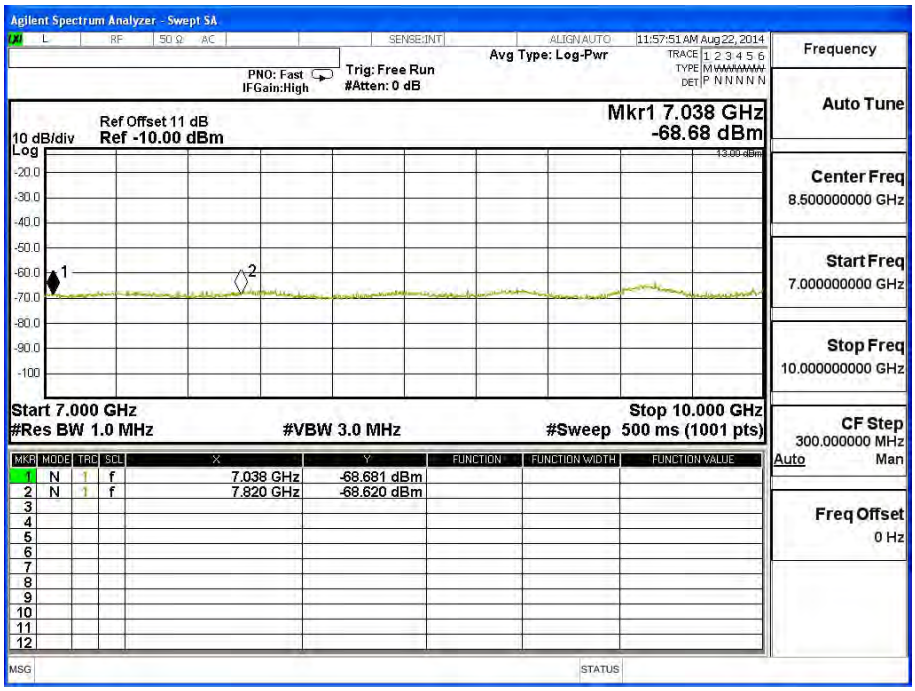
LTE-and XIII (5M) 16QAM(12,0) CH23230

Frequency (MHz)	Reading Level (dBm)	Path Loss (dB)	Emission Level (dBm)	Limit (dBm)
1564	-56.260	0.58	-55.680	-13
2344	-60.260	0.7	-59.560	-13
3128	-66.360	1.01	-65.350	-13
3904	-56.790	1.18	-55.610	-13
4684	-61.867	1.23	-60.637	-13
5474	-67.625	1.45	-66.175	-13
6256	-67.385	1.56	-65.825	-13
7038	-68.681	1.59	-67.091	-13
7820	-68.620	1.82	-66.800	-13




Agilent Spectrum Analyzer - Swept SA
11:56:02 AM Aug 22, 2014
Avg Type: Log-Pwr
Trig: Free Run
#Atten: 0 dB
PNO: Fast
IFGain:High
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr4 3.904 GHz
-56.79 dBm
Start 1.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 4.000 GHz
#Sweep 500 ms (1001 pts)
1 N 1 f 1.564 GHz -56.26 dBm
2 N 1 f 2.344 GHz -60.26 dBm
3 N 1 f 3.128 GHz -66.36 dBm
4 N 1 f 3.904 GHz -56.79 dBm
Frequency
Auto Tune
Center Freq
2.500000000 GHz
Start Freq
1.000000000 GHz
Stop Freq
4.000000000 GHz
CF Step
300.000000 MHz
Auto Man
Freq Offset
0 Hz

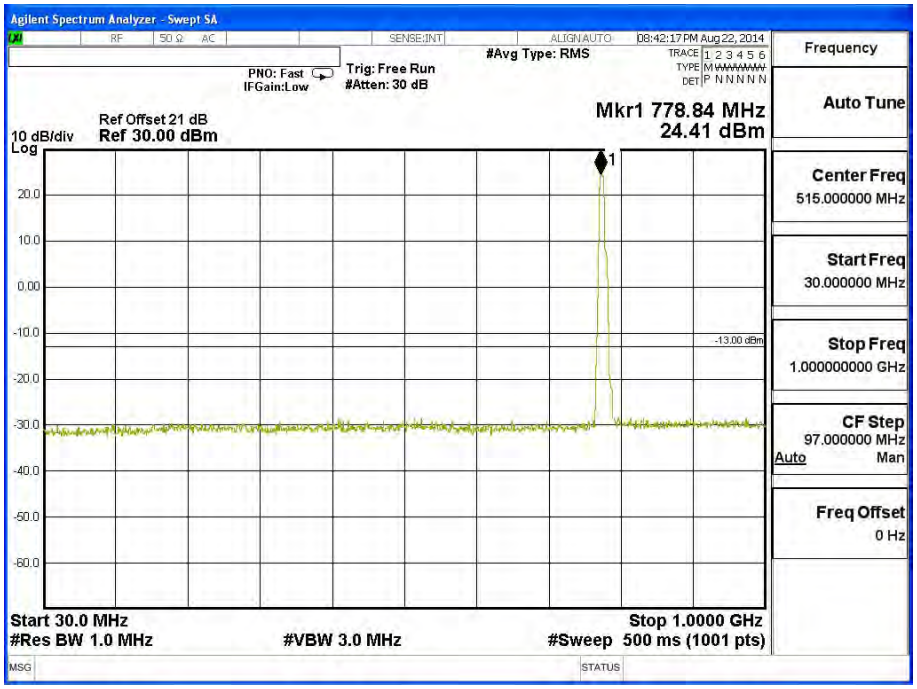

Agilent Spectrum Analyzer - Swept SA
11:57:14 AM Aug 22, 2014
Avg Type: Log-Pwr
Trig: Free Run
#Atten: 0 dB
PNO: Fast
IFGain:High
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr1 4.684 GHz
-61.867 dBm
Start 4.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 7.000 GHz
#Sweep 500 ms (1001 pts)
1 N 1 f 4.684 GHz -61.867 dBm
2 N 1 f 5.474 GHz -67.625 dBm
3 N 1 f 6.256 GHz -67.385 dBm
Frequency
Auto Tune
Center Freq
5.500000000 GHz
Start Freq
4.000000000 GHz
Stop Freq
7.000000000 GHz
CF Step
300.000000 MHz
Auto Man
Freq Offset
0 Hz

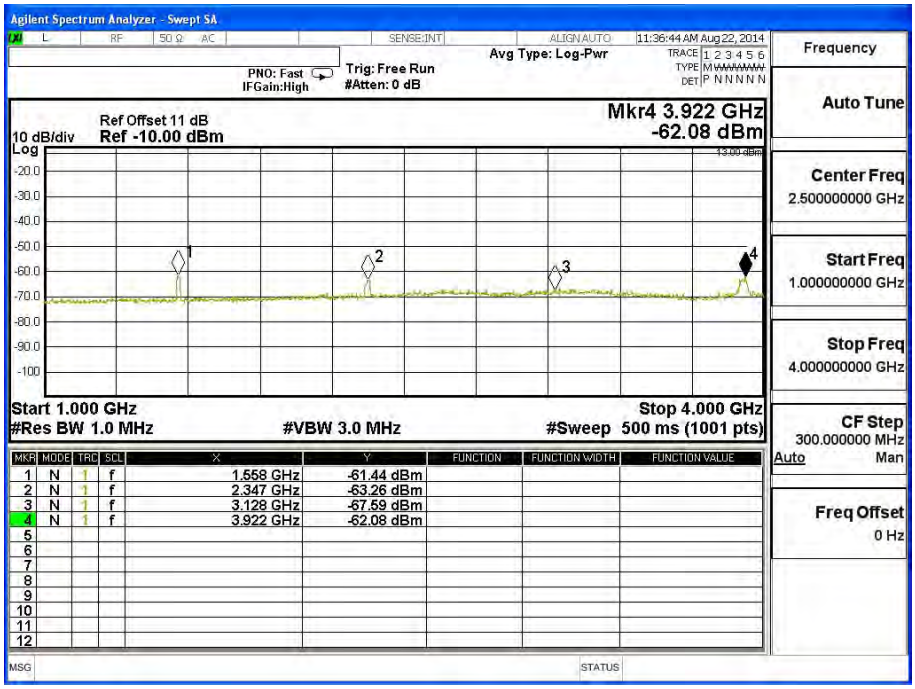

Agilent Spectrum Analyzer - Swept SA
Avg Type: Log-Pwr
Trig: Free Run
#Atten: 0 dB
PNO: Fast
IFGain:High
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr1 7.038 GHz
-68.68 dBm
Start 7.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 10.000 GHz
#Sweep 500 ms (1001 pts)
1 N 1 f 7.038 GHz -68.681 dBm
2 N 1 f 7.820 GHz -68.620 dBm
Frequency
Auto Tune
Center Freq
8.500000000 GHz
Start Freq
7.000000000 GHz
Stop Freq
10.000000000 GHz
CF Step
300.000000 MHz
Auto Man
Freq Offset
0 Hz

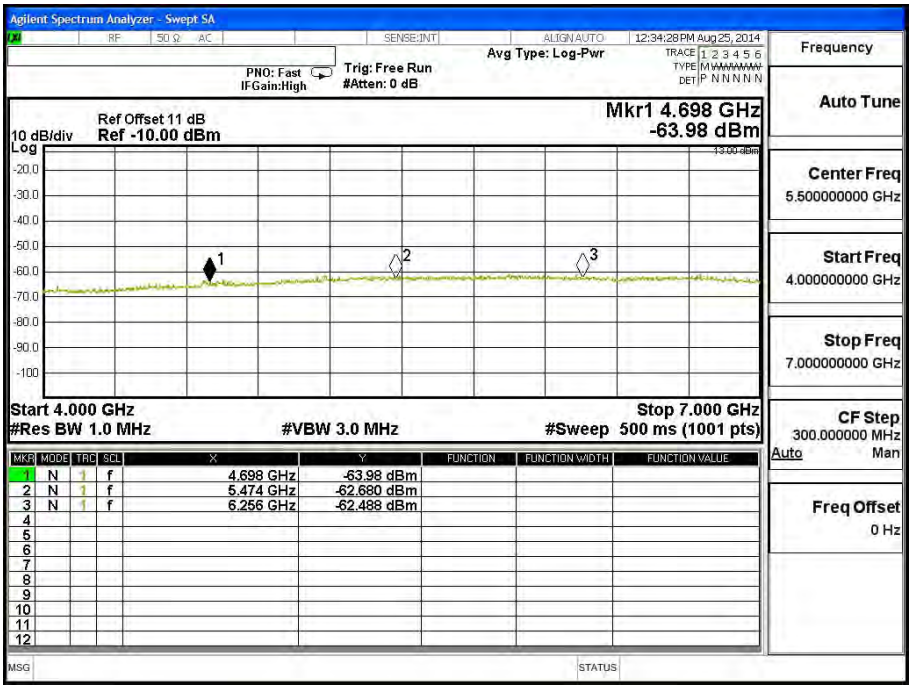
Product	Notebook PC		
Test Mode	Spurious Emission (Conducted)		
Date of Test	2014/09/19	Test Site	CTR
Test Condition	LTE-Band XIII (10M)	Test Range	30MHz~10GHz

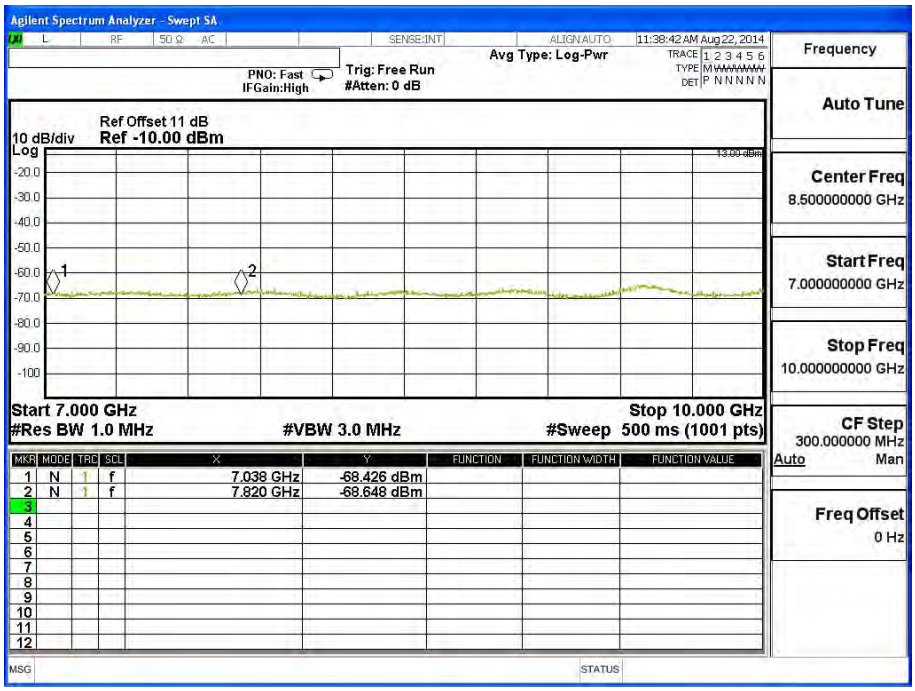
LTE-Band XIII (10M) QPSK(25,0) CH23230

Frequency (MHz)	Reading Level (dBm)	Path Loss (dB)	Emission Level (dBm)	Limit (dBm)
1558	-61.440	0.58	-60.860	-13
2347	-63.260	0.7	-62.560	-13
3128	-67.590	1.01	-66.580	-13
3922	-62.080	1.18	-60.900	-13
4698	-63.980	1.23	-62.750	-13
5474	-62.680	1.45	-61.230	-13
6256	-62.488	1.56	-60.928	-13
7038	-68.426	1.59	-66.836	-13
7820	-68.648	1.82	-66.828	-13




Agilent Spectrum Analyzer - Swept SA
11:36:44 AM Aug 22, 2014
Avg Type: Log-Pwr
Trig: Free Run
#Atten: 0 dB
PNO: Fast
IFGain:High
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr4 3.922 GHz
-62.08 dBm
Start 1.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 4.000 GHz
#Sweep 500 ms (1001 pts)
1 N 1 f 1.558 GHz -61.44 dBm
2 N 1 f 2.347 GHz -63.26 dBm
3 N 1 f 3.128 GHz -67.59 dBm
4 N 1 f 3.922 GHz -62.08 dBm
Frequency
Auto Tune
Center Freq
2.500000000 GHz
Start Freq
1.000000000 GHz
Stop Freq
4.000000000 GHz
CF Step
300.000000 MHz
Auto Man
Freq Offset
0 Hz

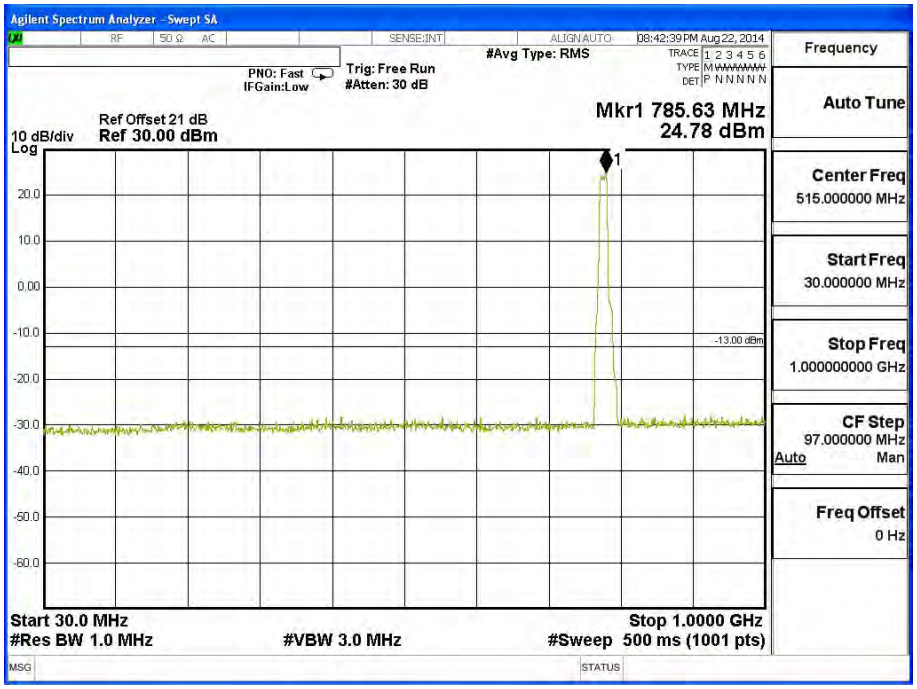

Agilent Spectrum Analyzer - Swept SA
12:34:28 PM Aug 25, 2014
Avg Type: Log-Pwr
Trig: Free Run
#Atten: 0 dB
PNO: Fast
IFGain:High
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr1 4.698 GHz
-63.98 dBm
Start 4.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 7.000 GHz
#Sweep 500 ms (1001 pts)
1 N 1 f 4.698 GHz -63.98 dBm
2 N 1 f 5.474 GHz -62.680 dBm
3 N 1 f 6.256 GHz -62.488 dBm
Frequency
Auto Tune
Center Freq
5.500000000 GHz
Start Freq
4.000000000 GHz
Stop Freq
7.000000000 GHz
CF Step
300.000000 MHz
Auto Man
Freq Offset
0 Hz

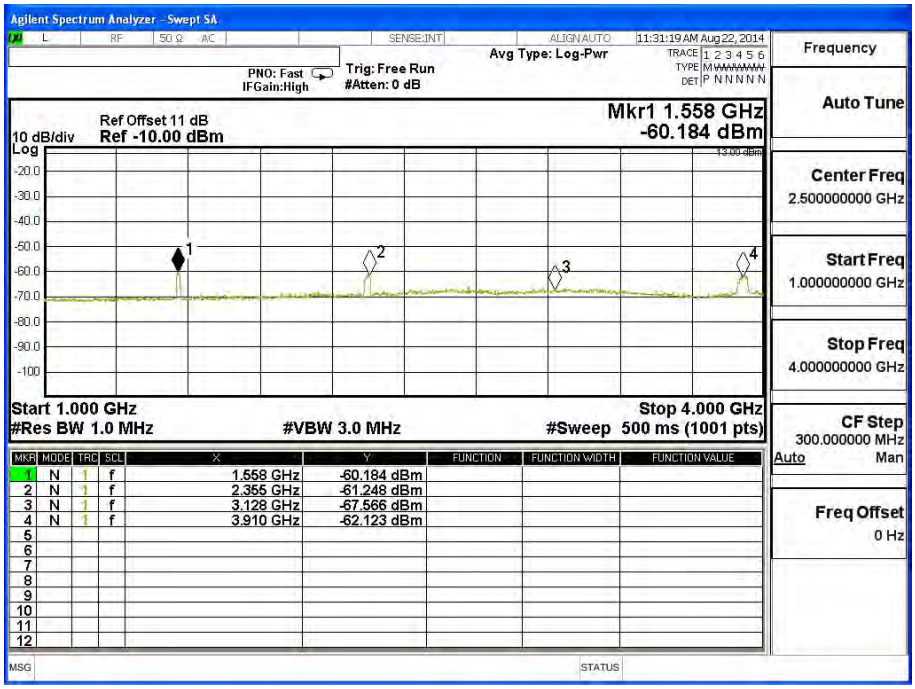

Agilent Spectrum Analyzer - Swept SA
SENSE:INT
ALIGN AUTO
11:38:42 AM Aug 22, 2014
Avg Type: Log-Pwr
TRACE 1 2 3 4 5 6
TYPE M
DET P N N N N N
PNO: Fast
IFGain:High
Trig: Free Run
#Atten: 0 dB
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Log
-20.0
-30.0
-40.0
-50.0
-60.0
-70.0
-80.0
-90.0
-100
Start 7.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 10.000 GHz
#Sweep 500 ms (1001 pts)
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N 1 f 7.038 GHz -68.426 dBm
2 N 1 f 7.820 GHz -68.648 dBm
Frequency
Auto Tune
Center Freq
8.500000000 GHz
Start Freq
7.000000000 GHz
Stop Freq
10.000000000 GHz
CF Step
300.000000 MHz
Auto Man
Freq Offset
0 Hz
MSG
STATUS

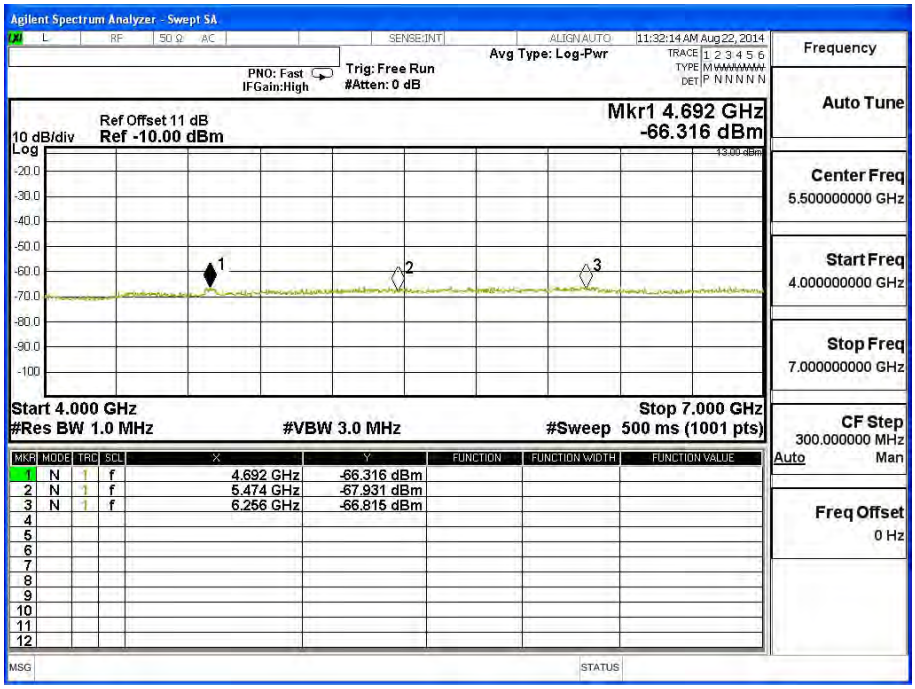
Product	Notebook PC		
Test Mode	Spurious Emission (Conducted)		
Date of Test	2014/09/19	Test Site	CTR
Test Condition	LTE-Band XIII (10M)	Test Range	30MHz~10GHz

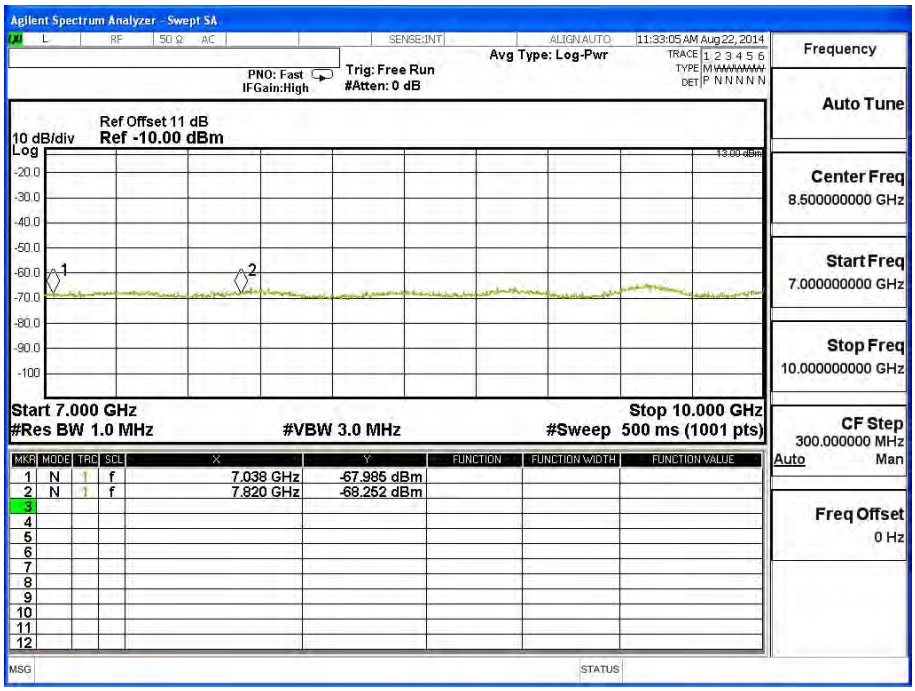
LTE-Band XIII (10M 16QAM(50,0) CH23230

Frequency (MHz)	Reading Level (dBm)	Path Loss (dB)	Emission Level (dBm)	Limit (dBm)
1558	-60.184	0.58	-59.604	-13
2355	-61.248	0.7	-60.548	-13
3128	-67.566	1.01	-66.556	-13
3910	-62.123	1.18	-60.943	-13
4692	-66.316	1.23	-65.086	-13
5474	-67.931	1.45	-66.481	-13
6256	-66.815	1.56	-65.255	-13
7038	-67.985	1.59	-66.395	-13
7820	-68.252	1.82	-66.432	-13




Agilent Spectrum Analyzer - Swept SA
11:31:19 AM Aug 22, 2014
Avg Type: Log-Pwr
Trig: Free Run
#Atten: 0 dB
PNO: Fast
IFGain:High
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr1 1.558 GHz
-60.184 dBm
Start 1.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 4.000 GHz
#Sweep 500 ms (1001 pts)
1 N 1 f 1.558 GHz -60.184 dBm
2 N 1 f 2.355 GHz -61.248 dBm
3 N 1 f 3.128 GHz -67.566 dBm
4 N 1 f 3.910 GHz -62.123 dBm
Frequency
Auto Tune
Center Freq
2.500000000 GHz
Start Freq
1.000000000 GHz
Stop Freq
4.000000000 GHz
CF Step
300.000000 MHz
Auto Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
11:32:14 AM Aug 22, 2014
Avg Type: Log-Pwr
Trig: Free Run
#Atten: 0 dB
PNO: Fast
IFGain:High
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Mkr1 4.692 GHz
-66.316 dBm
Start 4.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 7.000 GHz
#Sweep 500 ms (1001 pts)
1 N 1 f 4.692 GHz -66.316 dBm
2 N 1 f 5.474 GHz -67.931 dBm
3 N 1 f 6.256 GHz -66.815 dBm
Frequency
Auto Tune
Center Freq
5.500000000 GHz
Start Freq
4.000000000 GHz
Stop Freq
7.000000000 GHz
CF Step
300.000000 MHz
Auto Man
Freq Offset
0 Hz


Agilent Spectrum Analyzer - Swept SA
Avg Type: Log-Pwr
Trig: Free Run
#Atten: 0 dB
PNO: Fast
IFGain:High
Ref Offset 11 dB
10 dB/div
Ref -10.00 dBm
Log
Start 7.000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz
Stop 10.000 GHz
#Sweep 500 ms (1001 pts)
1 N 1 f 7.038 GHz -67.985 dBm
2 N 1 f 7.820 GHz -68.252 dBm
Frequency
Auto Tune
Center Freq
8.500000000 GHz
Start Freq
7.000000000 GHz
Stop Freq
10.000000000 GHz
CF Step
300.000000 MHz
Auto
Man
Freq Offset
0 Hz

Product	Notebook PC		
Test Mode	Spurious Emission (Radiated)		
Date of Test	2014/09/12	Test Site	Site3
Test Condition	Band IV (5M) QPSK(1,0)	Test Range	9KHz ~10GHz

Frequency	Reading Level	Signal Generator Level	Cable Loss	Antenna Gain	EIRP Value	Limit
(GHz)	(dBm)	(dBm)	(dB)	(dBi)	(dBm)	(dBm)

Horizontal Emissions Band IV (5M) QPSK(1,0)

3646.000	-38.610	-39.297	2.530	12.600	-29.227	-13
5187.500	-61.520	-57.486	3.050	13.100	-47.436	-13
6920.000	-54.850	-43.146	3.650	11.500	-35.296	-13
8672.500	-65.740	-50.214	3.850	12.000	-42.064	-13
10395.000	-64.510	-47.789	4.580	12.000	-40.369	-13
12127.500	-68.220	-51.125	4.800	13.300	-42.625	-13
13860.000	-58.770	-37.333	5.500	13.700	-29.133	-13
15592.500	-60.490	-40.651	5.560	15.300	-30.911	-13
17325.000	-61.240	-32.743	5.830	8.900	-29.673	-13

Vertical Emissions Band IV (5M) QPSK(1,0)

3464.000	-42.260	-42.161	2.530	12.600	-32.091	-13
5187.500	-62.010	-57.640	3.050	13.100	-47.590	-13
6920.000	-50.030	-37.838	3.650	11.500	-29.988	-13
8662.500	-66.630	-50.615	3.850	12.000	-42.465	-13
10395.000	-65.480	-48.543	4.580	12.000	-41.123	-13
12107.500	-67.410	-50.505	4.800	13.300	-42.005	-13
13870.000	-58.140	-36.476	5.500	13.700	-28.276	-13
15592.500	-61.580	-42.552	5.560	15.300	-32.812	-13
17325.000	-61.000	-30.175	5.830	8.900	-27.105	-13

Note:

1. Receiver setting (Peak Detector) : RBW:3MHz; VBW:3MHz
2. EIRP Value = Signal Generator Level + Antenna Gain - Cable Loss

Product	Notebook PC		
Test Mode	Spurious Emission (Radiated)		
Date of Test	2014/09/12	Test Site	Site3
Test Condition	Band IV (10M) QPSK(1,0)	Test Range	9KHz ~20GHz

Frequency	Reading Level	Signal Generator Level	Cable Loss	Antenna Gain	EIRP Value	Limit
(GHz)	(dBm)	(dBm)	(dB)	(dBi)	(dBm)	(dBm)

Horizontal Emissions Band IV (10M) QPSK(1,0)

3456.000	-40.090	-40.978	2.530	12.600	-30.908	-13
5177.500	-62.590	-58.547	3.050	13.100	-48.497	-13
6910.000	-55.740	-44.191	3.650	11.500	-36.341	-13
8672.000	-66.340	-50.816	3.850	12.000	-42.666	-13
10385.000	-65.120	-48.358	4.580	12.000	-40.938	-13
12137.500	-67.250	-50.127	4.800	13.300	-41.627	-13

Vertical Emissions Band IV (10M) QPSK(1,0)

3456.000	-37.610	-37.585	2.530	12.600	-27.515	-13
5177.000	-60.460	-56.056	3.050	13.100	-46.006	-13
6910.000	-49.700	-37.675	3.650	11.500	-29.825	-13
8662.500	-66.340	-50.325	3.850	12.000	-42.175	-13
10375.000	-65.220	-48.445	4.580	12.000	-41.025	-13
12097.500	-65.820	-48.952	4.800	13.300	-40.452	-13

Note:

1. Receiver setting (Peak Detector) : RBW:1MHz; VBW:3MHz
2. ERP Value = Signal Generator Level + Antenna Gain - Cable Loss
3. Spurious emissions past 13 GHz are not shown, due to the magnitude of spurious emissions attenuated more than 20 dB below the limit.

Product	Notebook PC		
Test Mode	Spurious Emission (Radiated)		
Date of Test	2014/09/12	Test Site	Site3
Test Condition	Band IV (15M) QPSK(1,0)	Test Range	9KHz ~20GHz

Frequency	Reading Level	Signal Generator Level	Cable Loss	Antenna Gain	EIRP Value	Limit
(GHz)	(dBm)	(dBm)	(dB)	(dBi)	(dBm)	(dBm)

Horizontal Emissions Band IV (15M) QPSK(1,0)

3456.000	-40.550	-41.438	2.530	12.600	-31.368	-13
5167.500	-61.330	-57.246	3.050	13.100	-47.196	-13
6900.000	-56.480	-45.086	3.650	11.500	-37.236	-13
8682.500	-67.660	-52.105	3.850	12.000	-43.955	-13
10395.000	-65.940	-49.219	4.580	12.000	-41.799	-13
12127.500	-68.250	-51.155	4.800	13.300	-42.655	-13

Vertical Emissions Band IV (15M) QPSK(1,0)

3456.000	-39.180	-39.155	2.530	12.600	-29.085	-13
5167.500	-58.730	-54.296	3.050	13.100	-44.246	-13
6900.000	-52.140	-40.280	3.650	11.500	-32.430	-13
8672.500	-67.840	-51.781	3.850	12.000	-43.631	-13
10385.000	-65.120	-48.260	4.580	12.000	-40.840	-13
12077.500	-64.670	-47.891	4.800	13.300	-39.391	-13

Note:

1. Receiver setting (Peak Detector) : RBW:1MHz; VBW:3MHz
2. EIRP Value = Signal Generator Level + Antenna Gain - Cable Loss
3. Spurious emissions past 13 GHz are not shown, due to the magnitude of spurious emissions attenuated more than 20 dB below the limit.

Product	Notebook PC		
Test Mode	Spurious Emission (Radiated)		
Date of Test	2014/09/12	Test Site	Site3
Test Condition	Band IV (20M) QPSK(1,0)	Test Range	9KHz ~20GHz

Frequency	Reading Level	Signal Generator Level	Cable Loss	Antenna Gain	EIRP Value	Limit
(GHz)	(dBm)	(dBm)	(dB)	(dBi)	(dBm)	(dBm)

Horizontal Emissions Band IV (20M) QPSK(1,0)

3448.000	-38.930	-39.913	2.530	12.600	-29.843	-13
5167.500	-62.000	-57.916	3.050	13.100	-47.866	-13
6890.000	-55.650	-44.406	3.650	11.500	-36.556	-13
8672.500	-66.400	-50.874	3.850	12.000	-42.724	-13
10395.000	-64.340	-47.619	4.580	12.000	-40.199	-13
12127.500	-67.700	-50.605	4.800	13.300	-42.105	-13

Vertical Emissions Band IV (20M) QPSK(1,0)

3448.000	-38.250	-38.298	2.530	12.600	-28.228	-13
5167.500	-58.650	-54.216	3.050	13.100	-44.166	-13
6890.000	-49.090	-37.299	3.650	11.500	-29.449	-13
8622.500	-65.650	-49.811	3.850	12.000	-41.661	-13
10405.000	-66.010	-49.051	4.580	12.000	-41.631	-13
12057.500	-65.220	-48.531	4.800	13.300	-40.031	-13

Note:

1. Receiver setting (Peak Detector) : RBW:1MHz; VBW:3MHz
2. EIRP Value = Signal Generator Level + Antenna Gain - Cable Loss
3. Spurious emissions past 13 GHz are not shown, due to the magnitude of spurious emissions attenuated more than 20 dB below the limit.

Product	Notebook PC		
Test Mode	Spurious Emission (Radiated)		
Date of Test	2014/09/12	Test Site	Site3
Test Condition	Band XIII (5M) QPSK(50,0)	Test Range	9KHz ~10GHz

Frequency	Reading Level	Signal Generator Level	Cable Loss	Antenna Gain	EIRP Value	Limit
(GHz)	(dBm)	(dBm)	(dB)	(dBi)	(dBm)	(dBm)

Horizontal Emissions Band XIII (5M) QPSK(50,0)

1564.000	-60.860	-65.280	1.630	9.800	-57.110	-13
2364.000	-61.900	-62.344	2.100	10.600	-53.844	-13
3128.000	-62.440	-63.509	2.350	12.300	-53.559	-13
3910.000	-62.450	-62.600	2.700	12.600	-52.700	-13
4680.000	-63.680	-60.382	2.830	12.700	-50.512	-13
5456.000	-64.600	-60.454	3.200	13.000	-50.654	-13

Vertical Emissions Band XIII (5M) QPSK(50,0)

1552.000	-60.620	-64.335	1.630	9.800	-56.165	-13
2346.000	-62.130	-61.758	2.100	10.600	-53.258	-13
3128.000	-62.010	-62.088	2.350	12.300	-52.138	-13
3910.000	-63.020	-61.135	2.700	12.600	-51.235	-13
4686.000	-64.750	-60.721	2.830	12.700	-50.851	-13
5468.000	-64.970	-60.447	3.200	13.000	-50.647	-13

Note:

1. Receiver setting (Peak Detector) : RBW:1MHz; VBW:3MHz
2. EIRP Value = Signal Generator Level + Antenna Gain - Cable Loss
3. Spurious emissions past 6 GHz are not shown, due to the magnitude of spurious emissions attenuated more than 20 dB below the limit.

Product	Notebook PC		
Test Mode	Spurious Emission (Radiated)		
Date of Test	2014/09/12	Test Site	Site3
Test Condition	Band XIII (5M) QPSK(1,12)	Test Range	9KHz ~10GHz

Frequency	Reading Level	Signal Generator Level	Cable Loss	Antenna Gain	EIRP Value	Limit
(GHz)	(dBm)	(dBm)	(dB)	(dBi)	(dBm)	(dBm)

Horizontal Emissions Band XIII (5M) QPSK(1,12)

1564.000	-57.930	-62.350	1.630	9.800	-54.180	-13
2346.000	-55.150	-55.380	2.100	10.600	-46.880	-13
3134.000	-62.190	-63.242	2.350	12.300	-53.292	-13
3916.000	-57.240	-57.308	2.700	12.600	-47.408	-13
4722.000	-63.850	-60.405	2.830	12.700	-50.535	-13
5468.000	-64.900	-60.744	3.200	13.000	-50.944	-13

Vertical Emissions Band XIII (5M) QPSK(1,12)

1564.000	-61.350	-65.097	1.630	9.800	-56.927	-13
2346.000	-62.760	-62.388	2.100	10.600	-53.888	-13
3116.000	-61.630	-61.717	2.350	12.300	-51.767	-13
3916.000	-60.200	-58.294	2.700	12.600	-48.394	-13
4728.000	-63.930	-59.698	2.830	12.700	-49.828	-13
5456.000	-64.690	-60.169	3.200	13.000	-50.369	-13

Note:

1. Receiver setting (Peak Detector) : RBW:1MHz; VBW:3MHz
2. EIRP Value = Signal Generator Level + Antenna Gain - Cable Loss
3. Spurious emissions past 6 GHz are not shown, due to the magnitude of spurious emissions attenuated more than 20 dB below the limit.

Product	Notebook PC		
Test Mode	Spurious Emission (Radiated)		
Date of Test	2014/09/12	Test Site	Site3
Test Condition	Band XIII (10M) QPSK(50,0)	Test Range	9KHz ~10GHz

Frequency	Reading Level	Signal Generator Level	Cable Loss	Antenna Gain	EIRP Value	Limit
(GHz)	(dBm)	(dBm)	(dB)	(dBi)	(dBm)	(dBm)

Horizontal Emissions Band XIII (10M) QPSK(50,0)

1564.000	-61.710	-66.130	1.630	9.800	-57.960	-13
2340.000	-62.930	-63.088	2.100	10.600	-54.588	-13
3134.000	-61.560	-62.612	2.350	12.300	-52.662	-13
3898.000	-62.070	-62.384	2.700	12.600	-52.484	-13
4692.000	-64.660	-61.311	2.830	12.700	-51.441	-13
5468.000	-64.350	-60.194	3.200	13.000	-50.394	-13

Vertical Emissions Band XIII (10M) QPSK(50,0)

1552.000	-60.830	-64.545	1.630	9.800	-56.375	-13
2346.000	-62.580	-62.208	2.100	10.600	-53.708	-13
3128.000	-62.030	-62.108	2.350	12.300	-52.158	-13
3904.000	-62.140	-60.261	2.700	12.600	-50.361	-13
4704.000	-64.640	-60.493	2.830	12.700	-50.623	-13
5486.000	-64.500	-59.972	3.200	13.000	-50.172	-13

Note:

1. Receiver setting (Peak Detector) : RBW:1MHz; VBW:3MHz
2. EIRP Value = Signal Generator Level + Antenna Gain - Cable Loss
3. Spurious emissions past 6 GHz are not shown, due to the magnitude of spurious emissions attenuated more than 20 dB below the limit.

Product	Notebook PC		
Test Mode	Spurious Emission (Radiated)		
Date of Test	2014/09/12	Test Site	Site3
Test Condition	Band XIII (10M) QPSK(1,49)	Test Range	9KHz ~10GHz

Frequency	Reading Level	Signal Generator Level	Cable Loss	Antenna Gain	EIRP Value	Limit
(GHz)	(dBm)	(dBm)	(dB)	(dBi)	(dBm)	(dBm)

Horizontal Emissions Band XIII (10M) QPSK(1,49)

1570.000	-61.180	-65.578	1.630	9.800	-57.408	-13
2346.000	-62.840	-63.070	2.100	10.600	-54.570	-13
3122.000	-61.770	-62.857	2.350	12.300	-52.907	-13
3934.000	-59.160	-58.981	2.700	12.600	-49.081	-13
4680.000	-63.990	-60.692	2.830	12.700	-50.822	-13
5474.000	-63.910	-59.756	3.200	13.000	-49.956	-13

Vertical Emissions Band XIII (10M) QPSK(1,49)

1546.000	-61.520	-65.219	1.630	9.800	-57.049	-13
2364.000	-59.520	-59.315	2.100	10.600	-50.815	-13
3116.000	-61.280	-61.367	2.350	12.300	-51.417	-13
3940.000	-61.210	-59.220	2.700	12.600	-49.320	-13
4674.000	-64.150	-60.215	2.830	12.700	-50.345	-13
5456.000	-64.320	-59.799	3.200	13.000	-49.999	-13

Note:

1. Receiver setting (Peak Detector) : RBW:1MHz; VBW:3MHz
2. EIRP Value = Signal Generator Level + Antenna Gain - Cable Loss
3. Spurious emissions past 6 GHz are not shown, due to the magnitude of spurious emissions attenuated more than 20 dB below the limit.

6. Frequency Stability Under Temperature & Voltage Variations

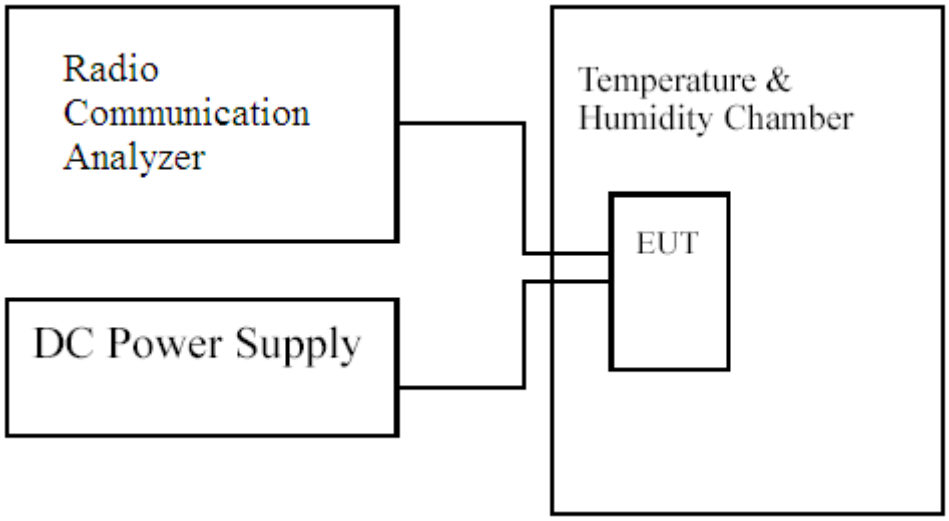
6.1. Test Equipment

The following test equipments are used during the frequency stability test:

Equipment	Manufacturer	Model No./Serial No.	Last Cal.
Radio Communication Analyzer	Anritsu	MT8820C / 6201091166	2014/01/17
Standard Temperature & Humidity Chamber	WIT	TH-1S-B / 108210	2013/09/26

Note: All equipments upon which need to be calibrated are with calibration period of 1 year

6.2. Test Setup



6.3. Limits

Limit	**<±2.5ppm**

6.4. Test Procedure

The frequency stability of transmitter is measured by:

(a) Temperature: The temperature is varied from -30°C to 50°C in 10°C increment using a standard temperature & Humidity chamber.

(b) Primary Supply Voltage: The primary supply voltage is varied 85% to 115% of the nominal value for non hand-carried equipment. For hand-carried, battery-powered equipment, primary supply voltage is reduced to the battery operating endpoint which shall be specified by the manufacturer.

The EUT was connected via the base station simulator. Universal Radio Communication Tester, (MT8820C), was used to measure The Frequency Error. The maximum result of measurements was recorded.

6.5. Test Specification

According to Part 2.1055, 27.54

6.6. Test Result of Frequency Stability Under Temperature Variations

Product	Notebook PC		
Test Mode	Frequency Stability Under Temperature Variations & Voltage Variations		
Date of Test	2014/09/20	Test Site	CTR
Test Condition	Band IV (5M) CH20175(1732.5MHz)	Test Range	-20℃~+50℃

Frequency Stability Under Temperature Variations

Temperature Interval(℃)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
-30	1.73	0.0261	±4.33
-20	1.73	0.0157	±4.33
-10	1.73	0.0218	±4.33
0	1.73	0.0170	±4.33
10	1.73	0.0207	±4.33
20	1.73	0.0201	±4.33
30	1.73	0.0106	±4.33
40	1.73	0.0218	±4.33
50	1.73	0.0205	±4.33

Voltage Variations

AC Voltage (V)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
138	1.73	0.0139	±4.33
120	1.73	0.0201	±4.33
102	1.73	0.0109	±4.33

Product	Notebook PC		
Test Mode	Frequency Stability Under Temperature Variations & Voltage Variations		
Date of Test	2014/09/20	Test Site	CTR
Test Condition	Band IV (10M) CH20175(1732.5MHz)	Test Range	-30℃~+50℃

Frequency Stability Under Temperature Variations

Temperature Interval(℃)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
-30	1.73	0.0204	±4.33
-20	1.73	0.0129	±4.33
-10	1.73	0.0134	±4.33
0	1.73	0.0128	±4.33
10	1.73	0.0128	±4.33
20	1.73	0.0143	±4.33
30	1.73	0.0127	±4.33
40	1.73	0.0149	±4.33
50	1.73	0.0170	±4.33

Voltage Variations

AC Voltage (V)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
138	1.73	0.0095	±4.33
120	1.73	0.0143	±4.33
102	1.73	0.0110	±4.33

Product	Notebook PC		
Test Mode	Frequency Stability Under Temperature Variations & Voltage Variations		
Date of Test	2014/09/20	Test Site	CTR
Test Condition	Band IV (15M) CH20175(1732.5MHz)	Test Range	-30℃~+50℃

Frequency Stability Under Temperature Variations

Temperature Interval(℃)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
-30	1.73	0.0178	±4.33
-20	1.73	0.0177	±4.33
-10	1.73	0.0163	±4.33
0	1.73	0.0158	±4.33
10	1.73	0.0157	±4.33
20	1.73	-0.0095	±4.33
30	1.73	0.0083	±4.33
40	1.73	0.0089	±4.33
50	1.73	0.0106	±4.33

Voltage Variations

AC Voltage (V)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
138	1.73	-0.0080	±4.33
120	1.73	-0.0095	±4.33
102	1.73	-0.0111	±4.33

Product	Notebook PC		
Test Mode	Frequency Stability Under Temperature Variations & Voltage Variations		
Date of Test	2014/09/20	Test Site	CTR
Test Condition	Band IV (20M) CH20175(1732.5MHz)	Test Range	-30℃~+50℃

Frequency Stability Under Temperature Variations

Temperature Interval(℃)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
-30	1.73	0.0107	±4.33
-20	1.73	0.0211	±4.33
-10	1.73	0.0111	±4.33
0	1.73	0.0120	±4.33
10	1.73	0.0088	±4.33
20	1.73	0.0063	±4.33
30	1.73	0.0118	±4.33
40	1.73	0.0204	±4.33
50	1.73	0.0142	±4.33

Voltage Variations

AC Voltage (V)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
138	1.73	0.0111	±4.33
120	1.73	0.0063	±4.33
102	1.73	-0.0082	±4.33

Product	Notebook PC		
Test Mode	Frequency Stability Under Temperature Variations & Voltage Variations		
Date of Test	2014/09/20	Test Site	CTR
Test Condition	Band XIII (5M) CH23230(782MHz)	Test Range	-30℃~+50℃

Frequency Stability Under Temperature Variations

Temperature Interval(℃)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
-30	0.782	0.0181	±1.96
-20	0.782	0.0140	±1.96
-10	0.782	0.0117	±1.96
0	0.782	0.0105	±1.96
10	0.782	0.0169	±1.96
20	0.782	-0.0104	±1.96
30	0.782	-0.0109	±1.96
40	0.782	-0.0125	±1.96
50	0.782	-0.0137	±1.96

Voltage Variations

AC Voltage (V)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
138	0.782	-0.0123	±1.96
120	0.782	-0.0104	±1.96
102	0.782	-0.0102	±1.96

Product	Notebook PC		
Test Mode	Frequency Stability Under Temperature Variations & Voltage Variations		
Date of Test	2014/09/20	Test Site	CTR
Test Condition	Band XIII (10M) CH23230(782MHz)	Test Range	-30℃~+50℃

Frequency Stability Under Temperature Variations

Temperature Interval(℃)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
-30	0.782	0.0174	±1.96
-20	0.782	-0.0096	±1.96
-10	0.782	0.0119	±1.96
0	0.782	-0.0023	±1.96
10	0.782	0.0130	±1.96
20	0.782	-0.0133	±1.96
30	0.782	-0.0135	±1.96
40	0.782	-0.0143	±1.96
50	0.782	-0.0154	±1.96

Voltage Variations

AC Voltage (V)	Test Frequency (GHz)	Deviation (Hz)	Limit (KHz)
138	0.782	-0.0092	±1.96
120	0.782	-0.0133	±1.96
102	0.782	-0.0118	±1.96

7. Peak to Average Ratio

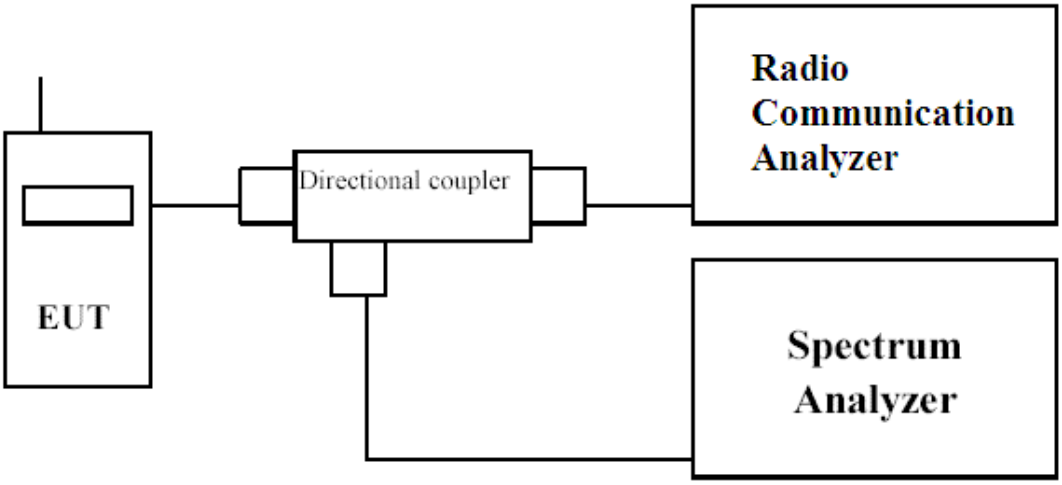
7.1 Test Equipment

The following test equipments are used during the occupied bandwidth tests:

Equipment	Manufacturer	Model No./Serial No.	Last Cal.
Spectrum Analyzer	Agilent	N9020A / MY48010570	2013/12/20
Radio Communication Analyzer	Anritsu	MT8820C / 6201091166	2014/01/17
Directional coupler	Agilent	87300C / MY44300353	2013/11/04
Directional coupler	Agilent	778D / 50550	2013/10/07

Note: All equipments upon which need to be calibrated are with calibration period of 1 year.

7.2 Test Setup



7.3 Limits

The peak-to-average power ratio (PAPR) of the transmitter output power must not exceed 13 dB. The PAPR measurements should be made using either an instrument with complementary cumulative distribution function (CCDF) capabilities to determine that PAPR will not exceed 13 dB for more than 0.1 percent of the time or other Commission approved procedure.

7.4 Test Procedure

a) Refer to instrument's analyzer instruction manual for details on how to use the power statistics/CCDF function;

b) Set resolution/measurement bandwidth ≥ signal's occupied bandwidth;

c) Set the number of counts to a value that stabilizes the measured CCDF curve;

d) Set the measurement interval as follows:

1) for continuous transmissions, set to 1 ms,

2) for burst transmissions, employ an external trigger that is synchronized with the EUT burst timing sequence, or use the internal burst trigger with a trigger level that allows the burst to stabilize and set the measurement interval to a time that is less than or equal to the burst duration.

e) Record the maximum PAPR level associated with a probability of 0.1%.

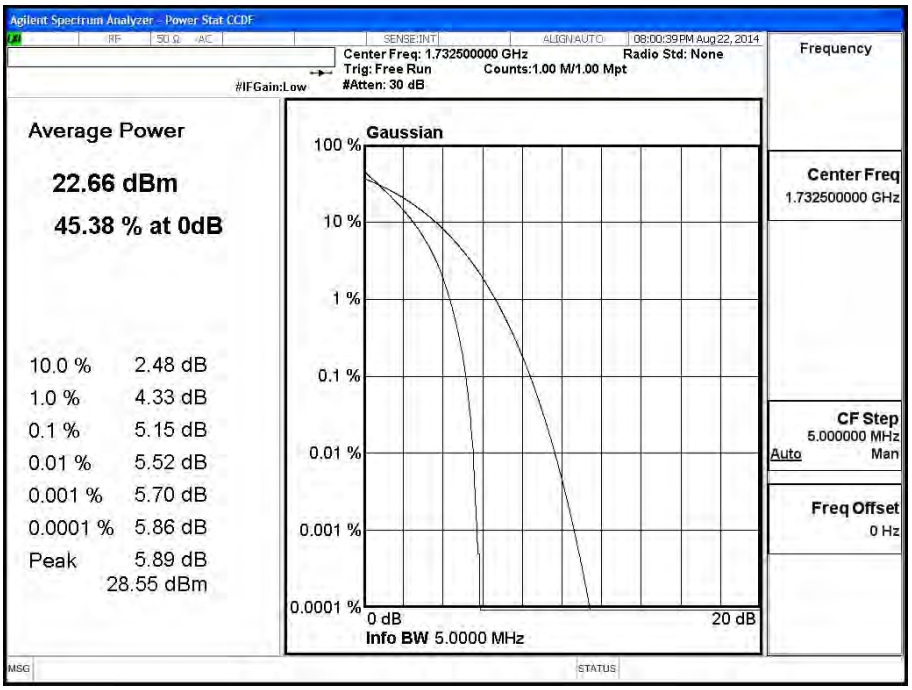
7.5 Test Specification

According to Part 27.50(d).

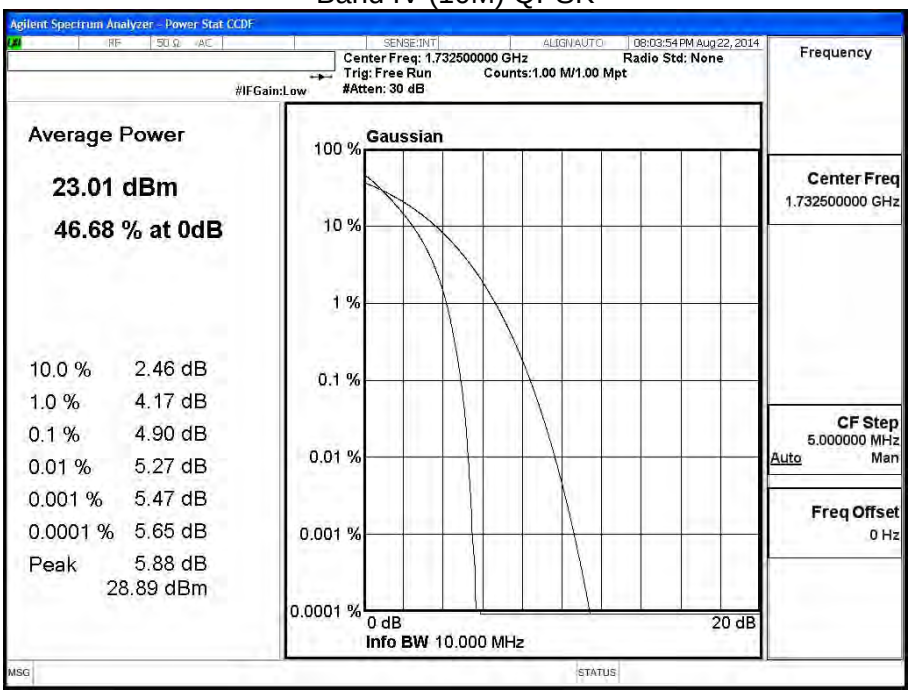
7.6 Test Result of Spurious Emission

Product	Notebook PC		
Test Mode	Peak to Average Ratio		
Date of Test	2014/10/06	Test Site	CTR
Test Condition	LTE-Band IV		

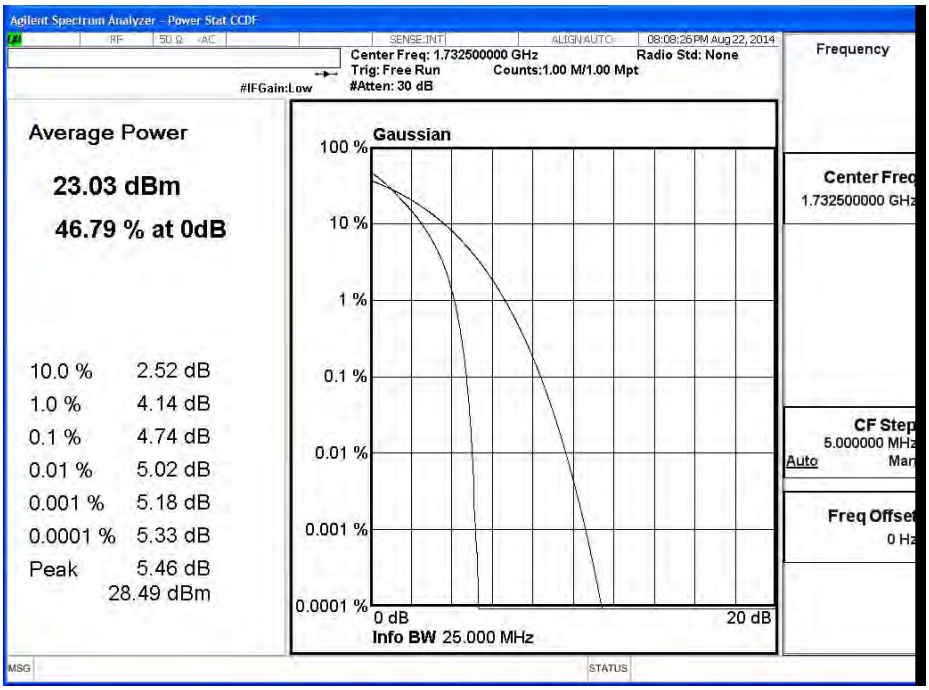
Band IV (5M) QPSK



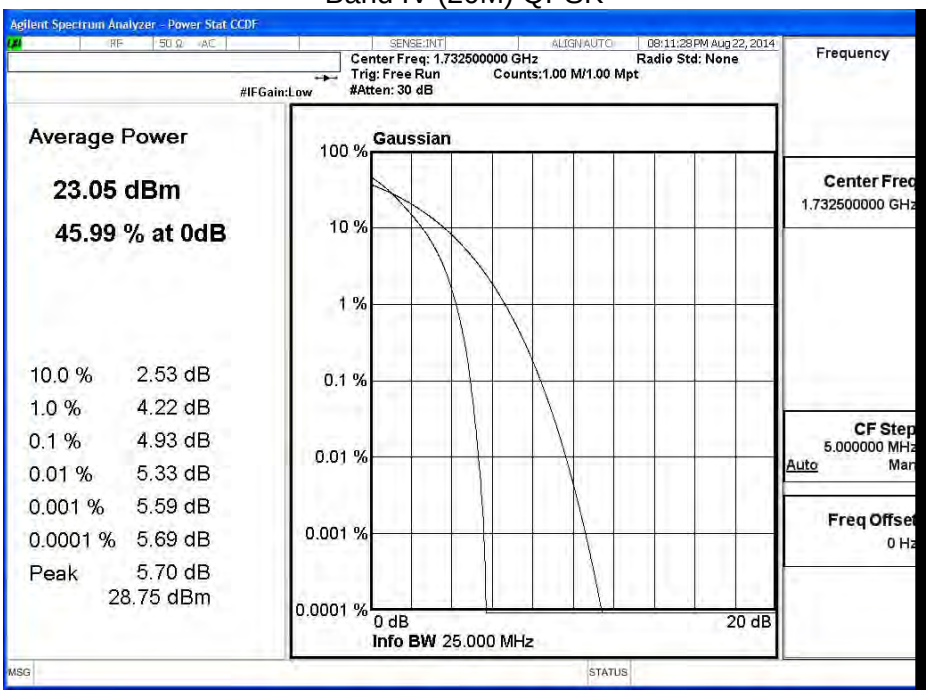
Band IV (10M) QPSK



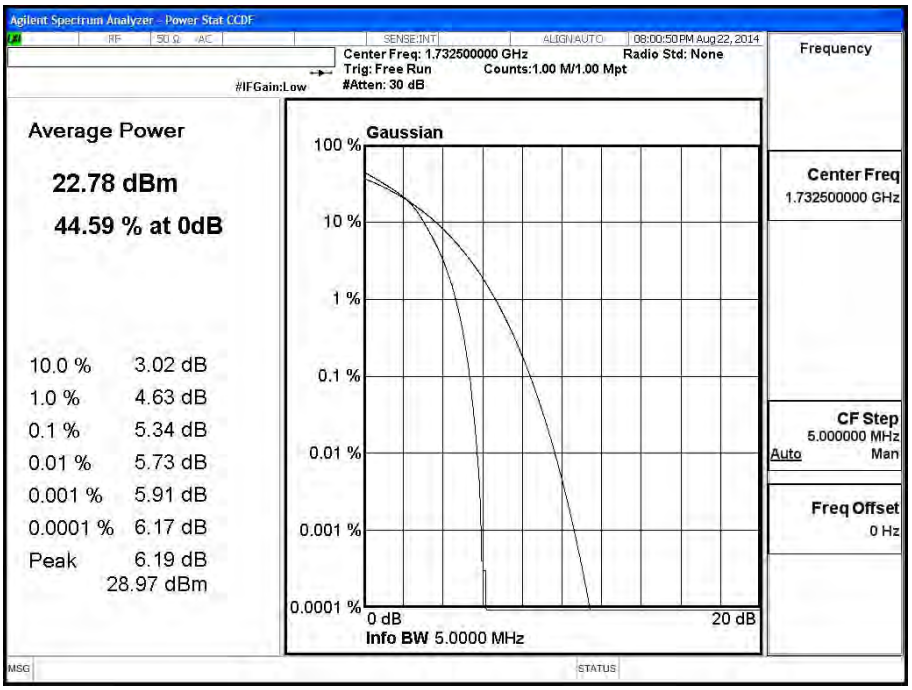
Band IV (15M) QPSK



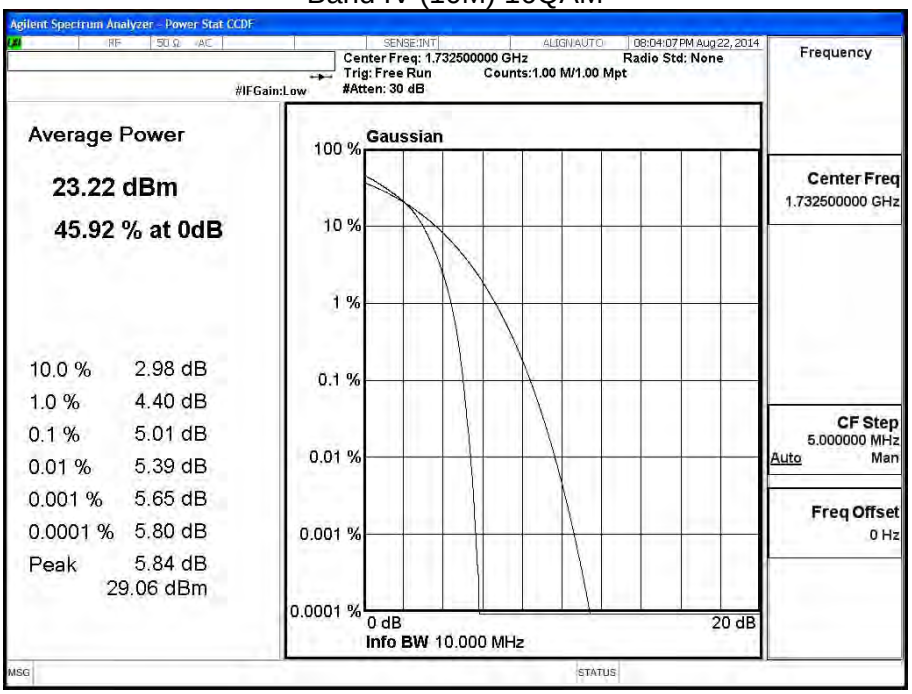
Band IV (20M) QPSK



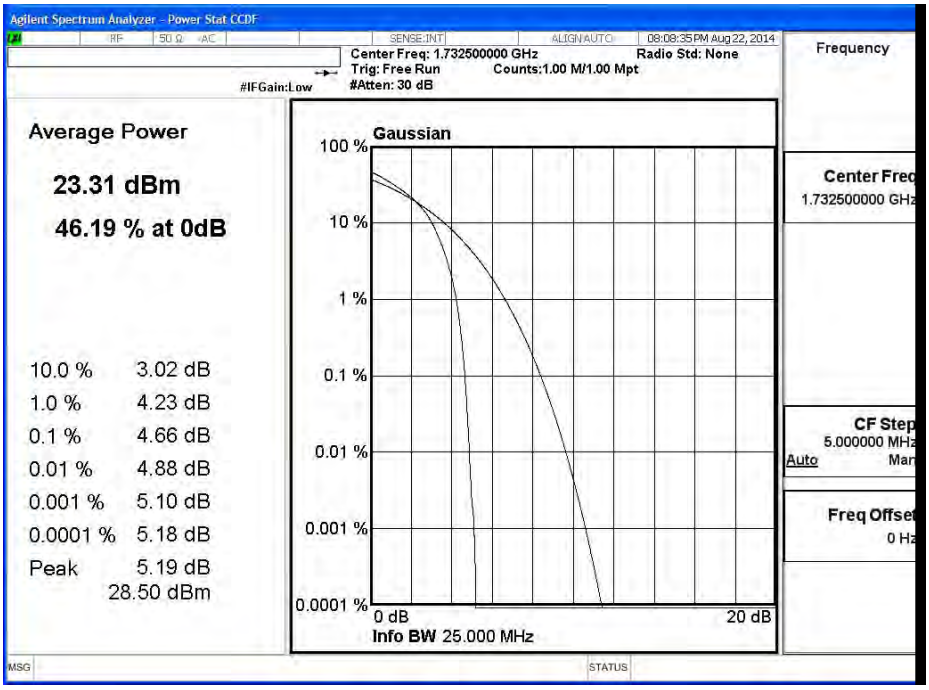
Band IV (5M) 16QAM



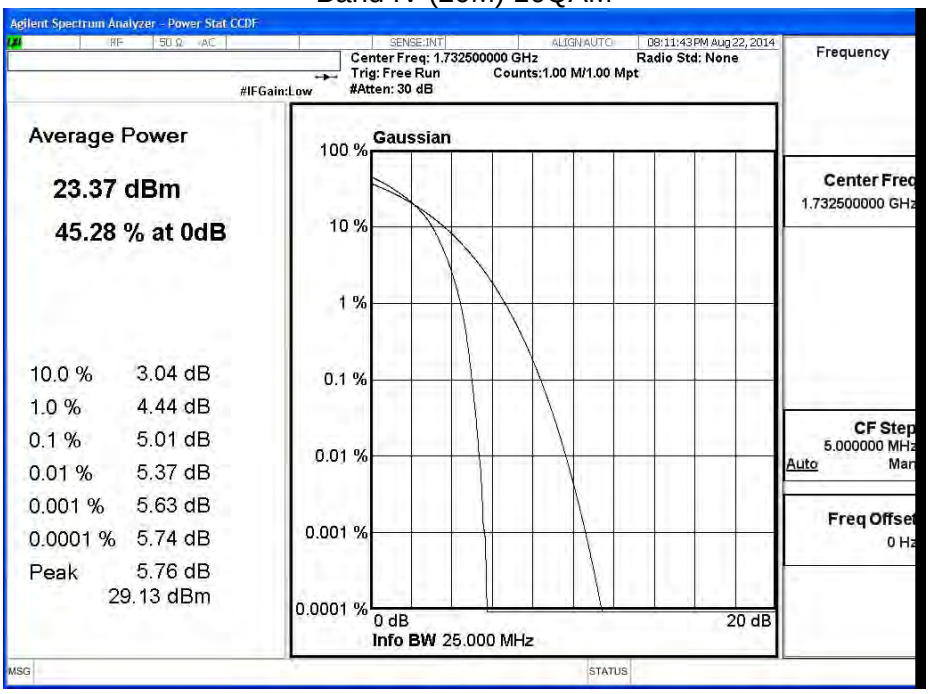
Band IV (10M) 16QAM



Band IV (15M) 16QAM

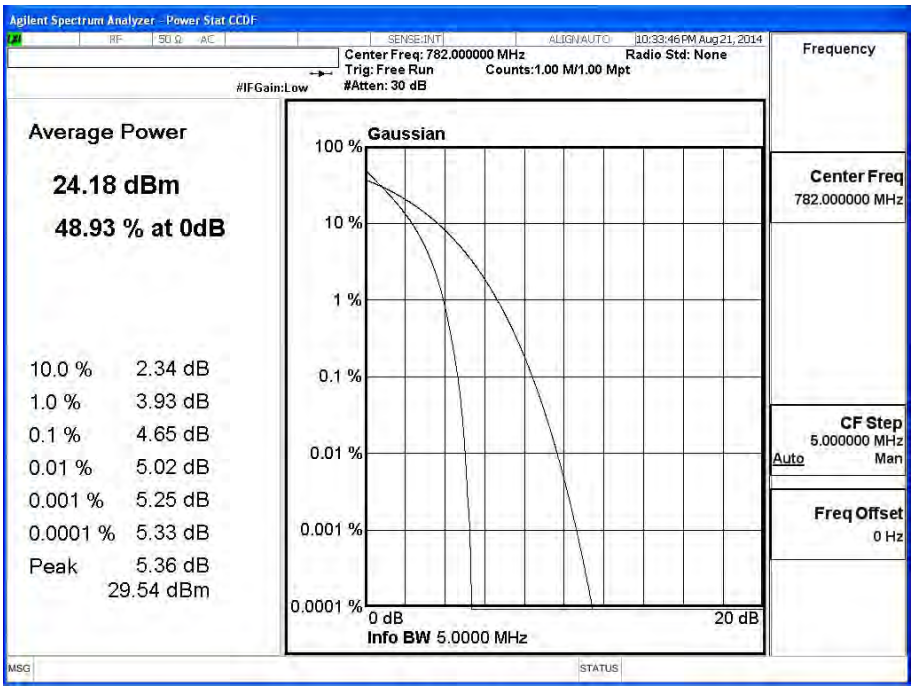


Band IV (20M) 16QAM

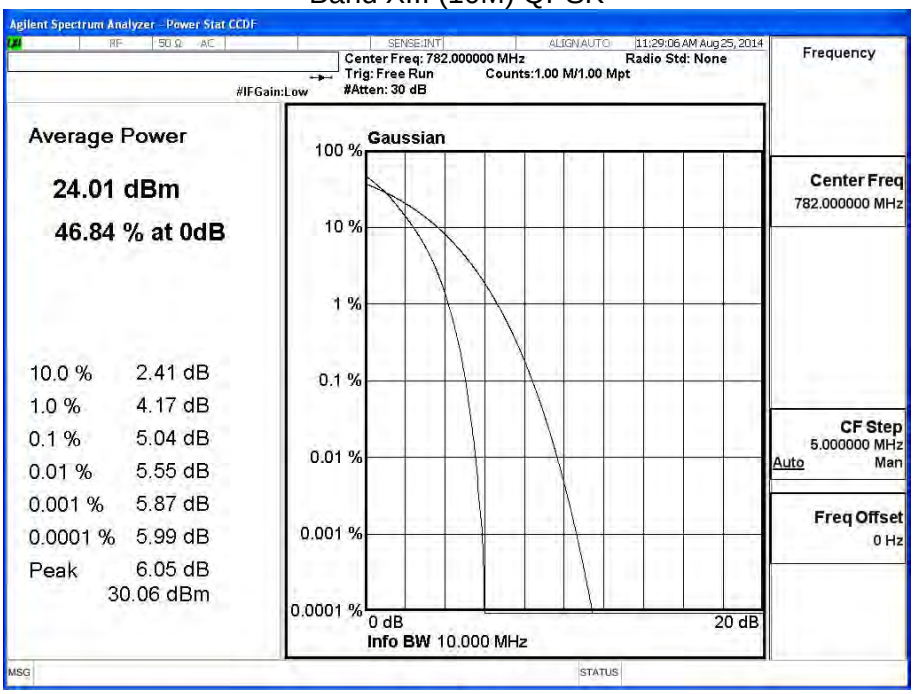


Product	Notebook PC		
Test Mode	Peak to Average Ratio		
Date of Test	2014/10/06	Test Site	CTR
Test Condition	LTE-Band XIII		

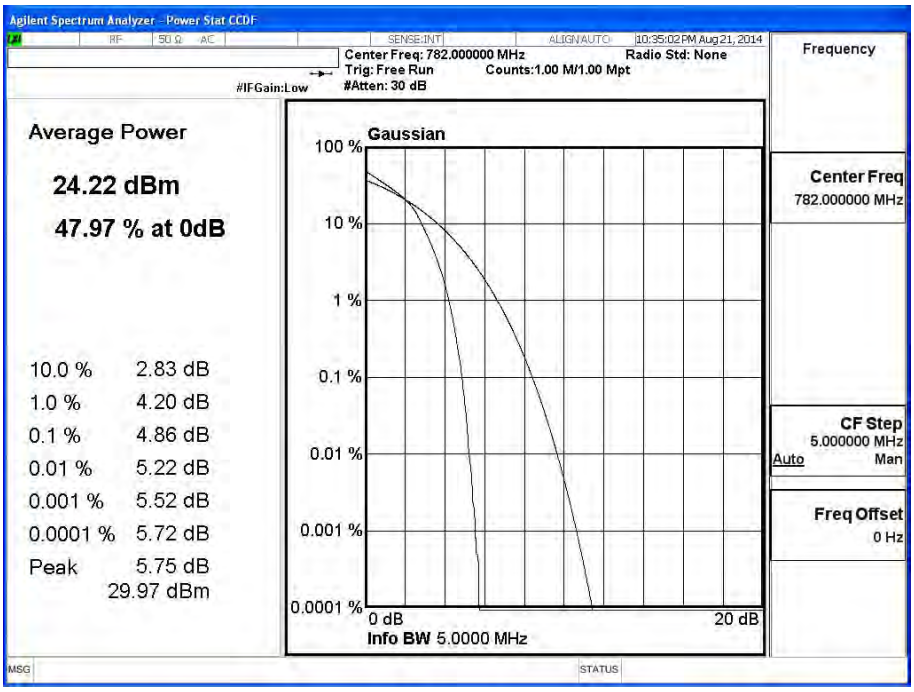
Band XIII (5M) QPSK



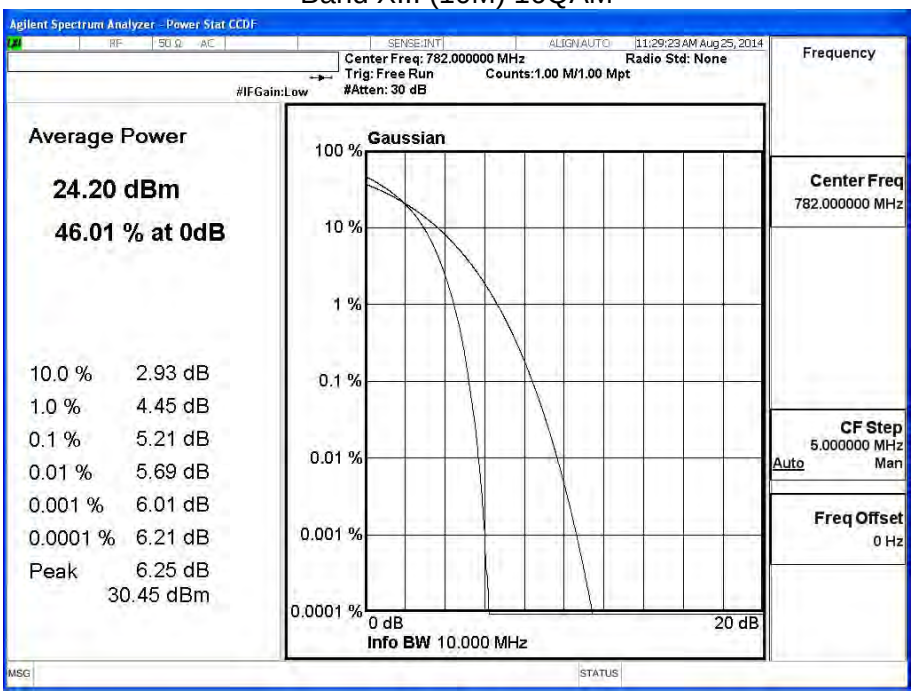
Band XIII (10M) QPSK



Band XIII (5M) 16QAM



Band XIII (10M) 16QAM



Attachment 1: EUT Test Photographs

Attachment 2: EUT Detailed Photographs