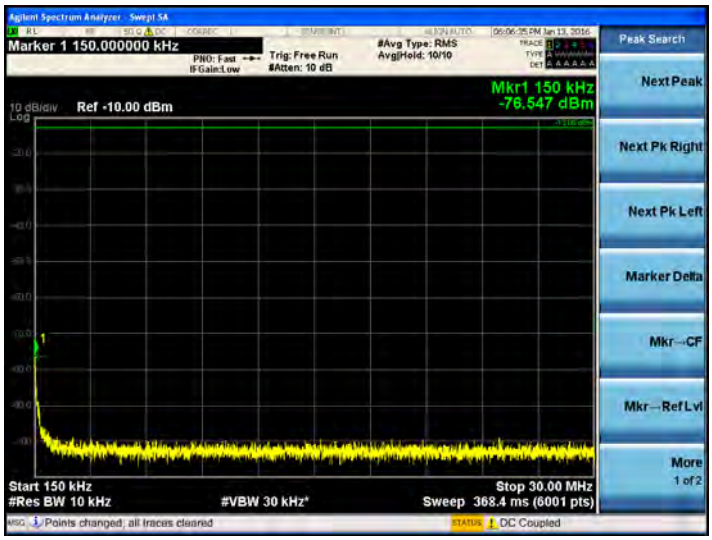
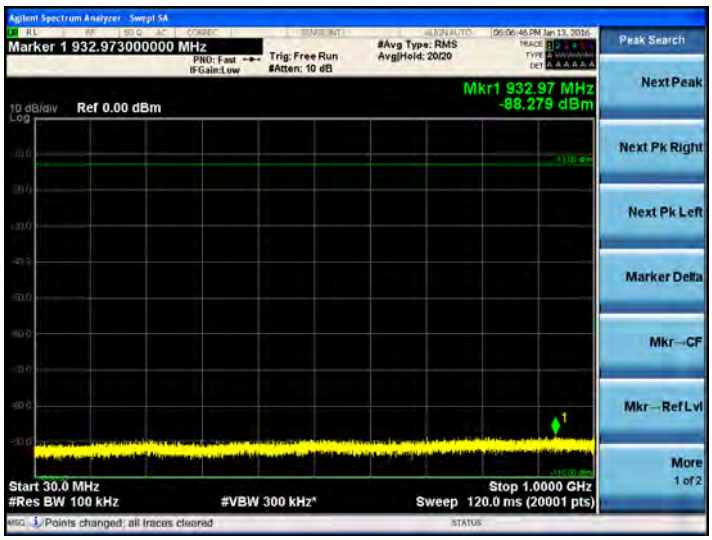
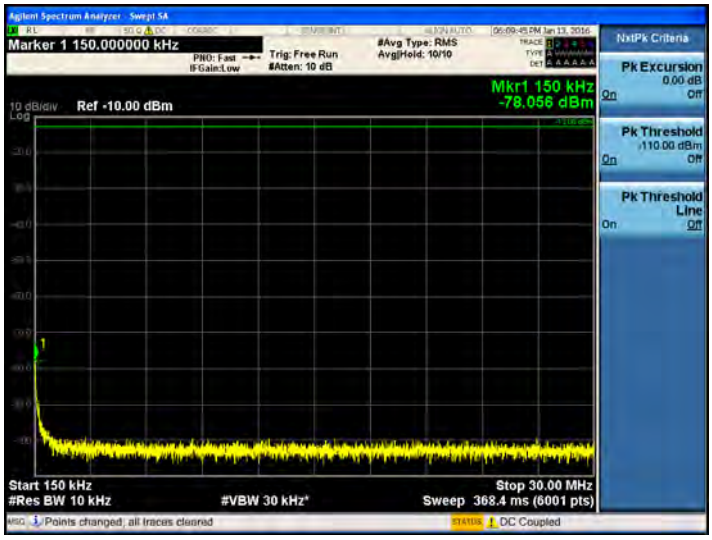
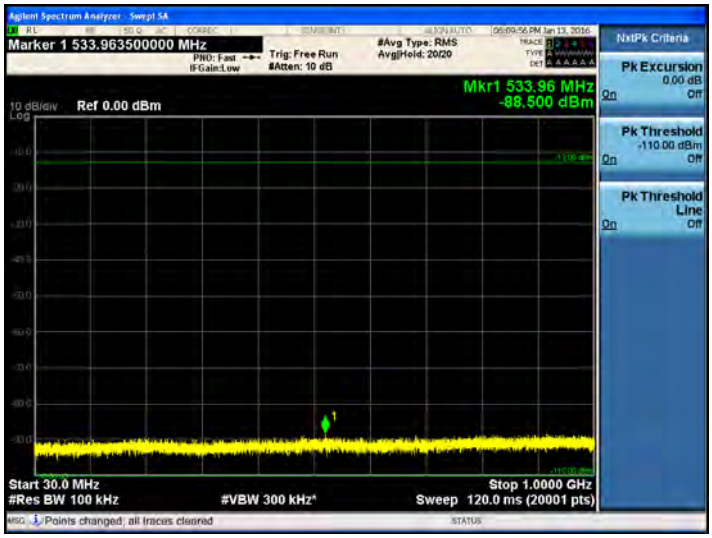
AWS2100 Band

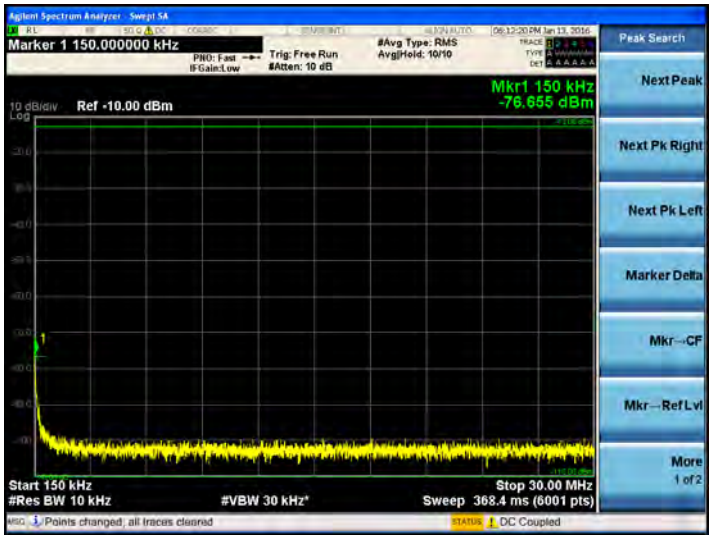
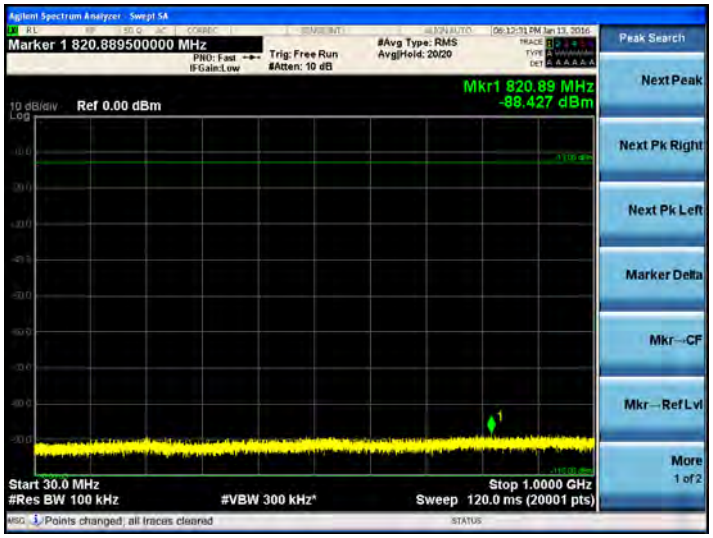
[AWS2100 Band Uplink Low]

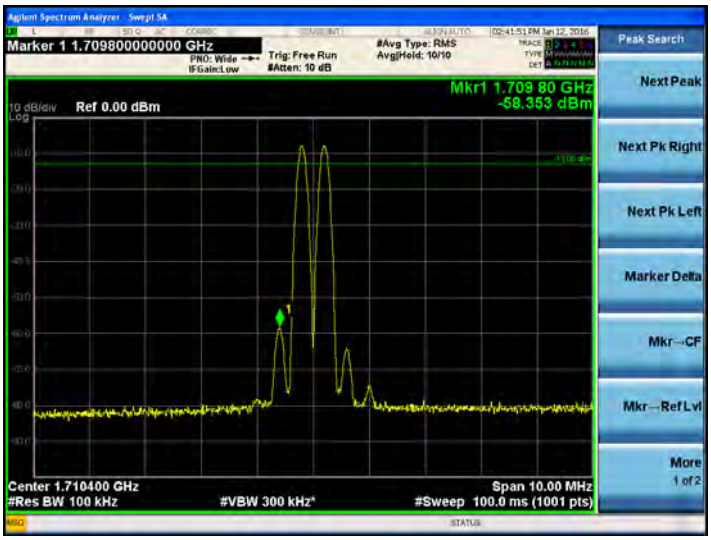
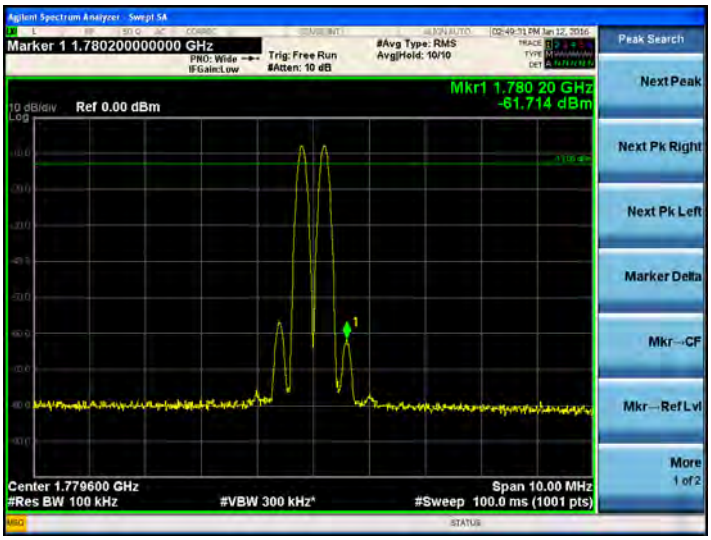
9㎑ ~ 150㎑	150㎑ ~ 30㎒
	
30㎒ ~ 1㎓	**1㎓ ~ 26.5㎓**
	

[AWS2100 Band Uplink Mid]

9㎑ ~ 150㎑	150㎑ ~ 30㎒
	
30㎒ ~ 1㎓	**1㎓ ~ 26.5㎓**
	

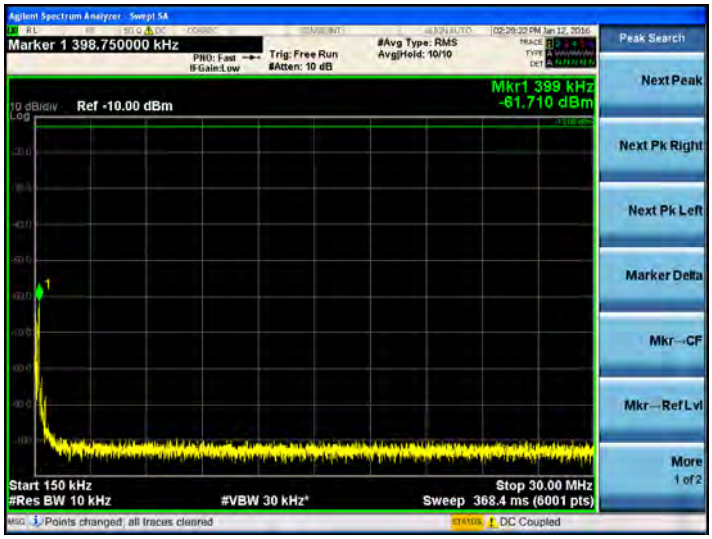
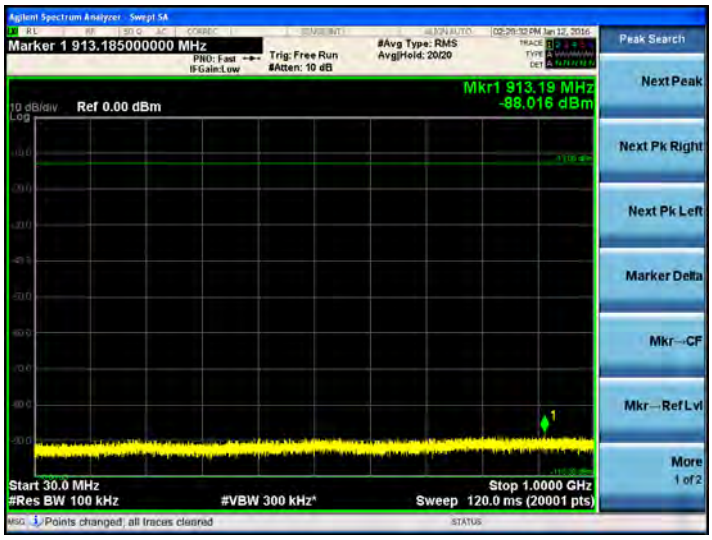
[AWS2100 Band Uplink High]

9㎑ ~ 150㎑	150㎑ ~ 30㎒
	
30㎒ ~ 1㎓	**1㎓ ~ 26.5㎓**
	

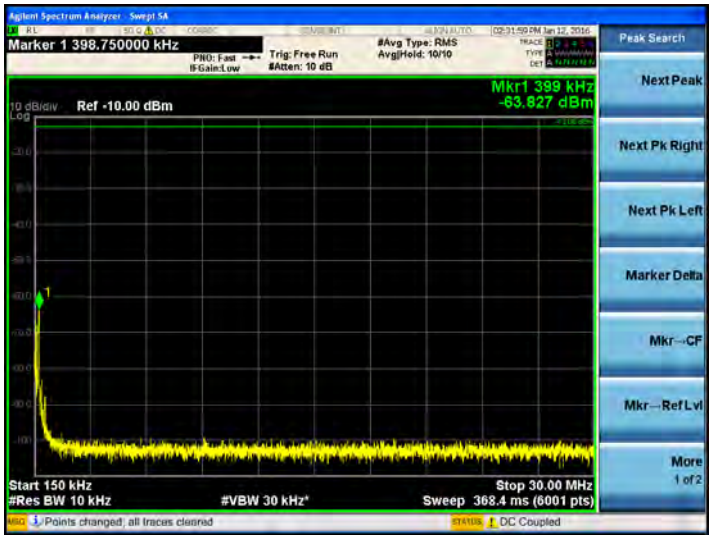
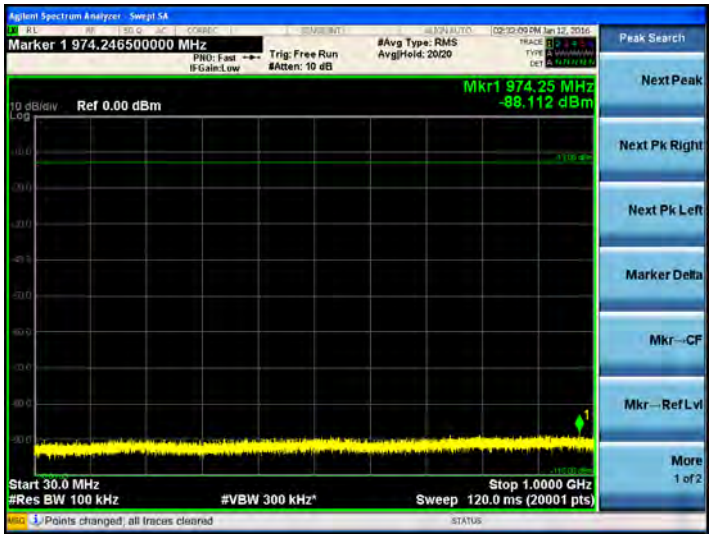
Band Edge Uplink Low	Band Edge_ Uplink High
	

PCS 1900 Band

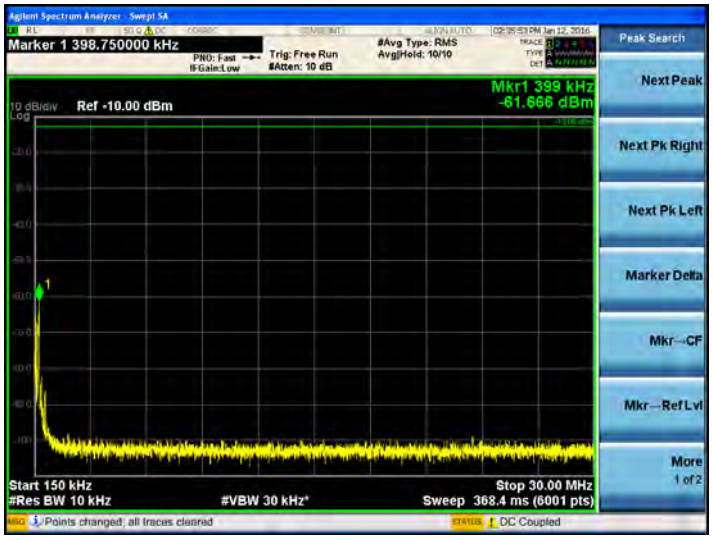
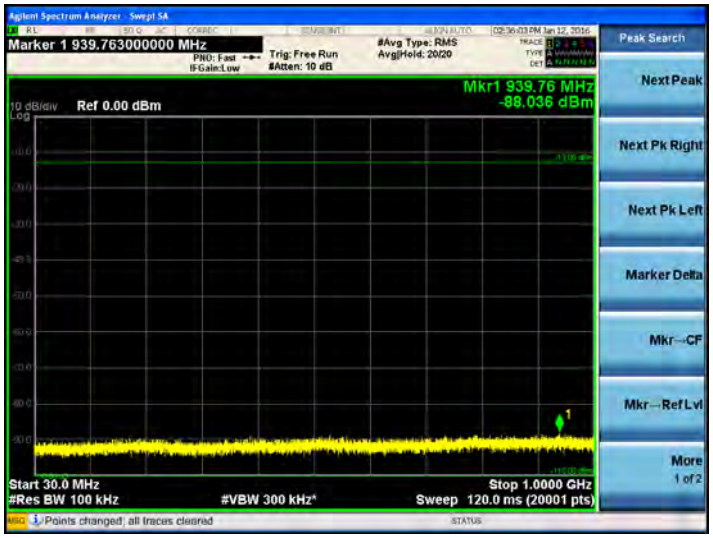
[PCS 1900 Band Uplink Low]

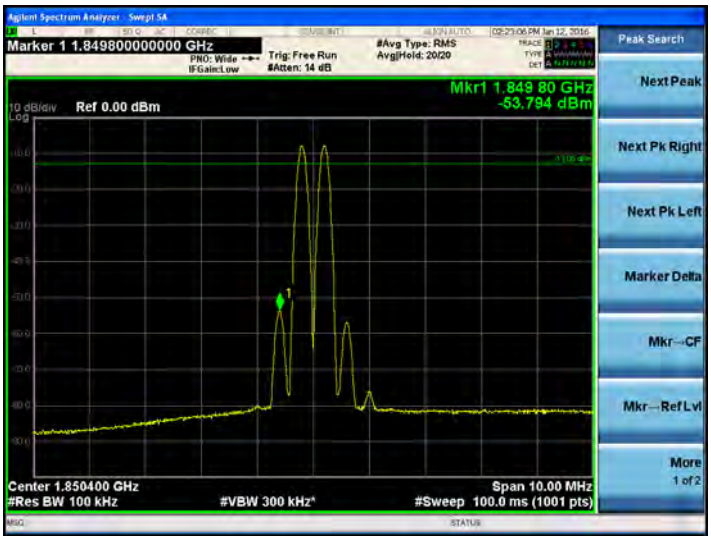
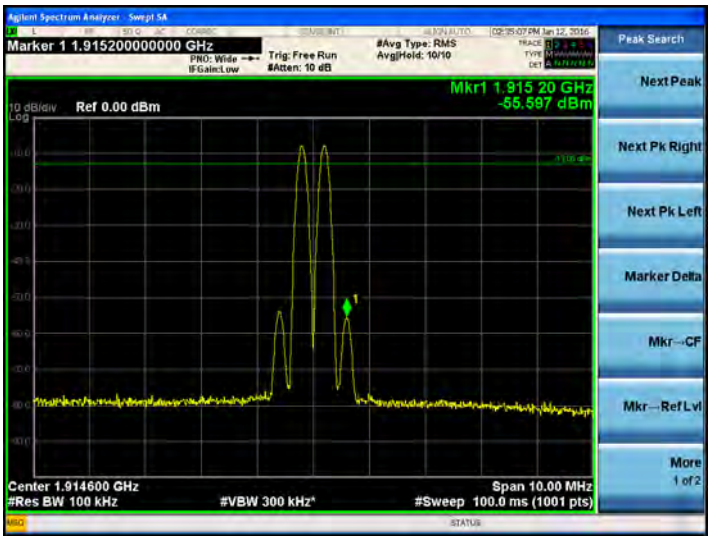
9㎑ ~ 150㎑	150㎑ ~ 30㎒
	
30㎒ ~ 1㎓	**1㎓ ~ 26.5㎓**
	

[PCS 1900 Band _ Uplink Mid]

9㎑ ~ 150㎑	150㎑ ~ 30㎒
	
30㎒ ~ 1㎓	**1㎓ ~ 26.5㎓**
	

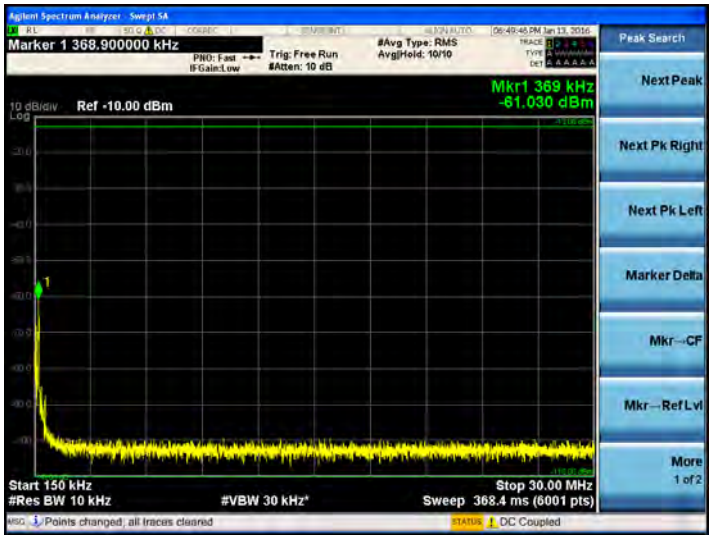
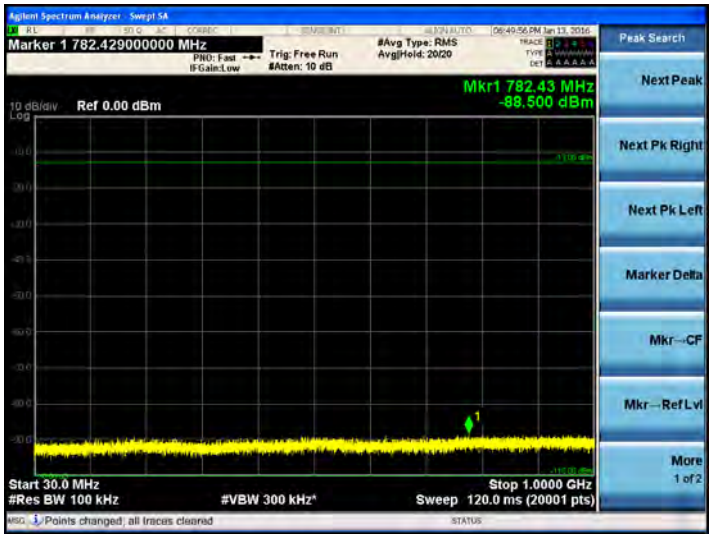
[PCS 1900 Band Uplink High]

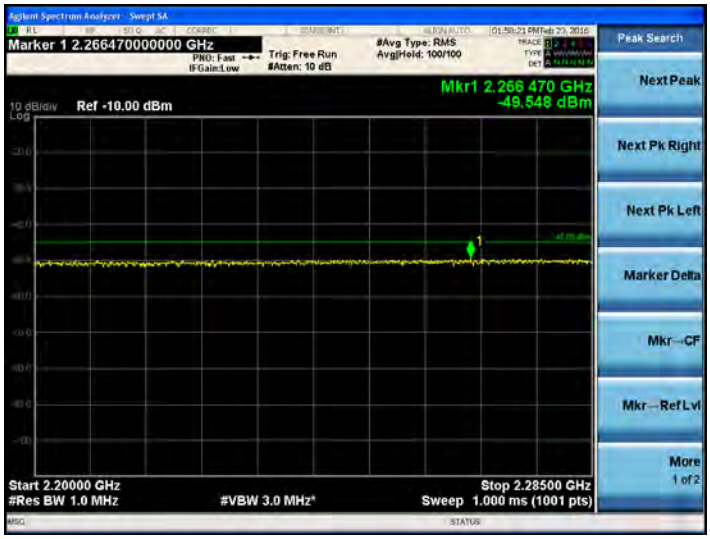
9㎑ ~ 150㎑	150㎑ ~ 30㎒
	
30㎒ ~ 1㎓	**1㎓ ~ 26.5㎓**
	

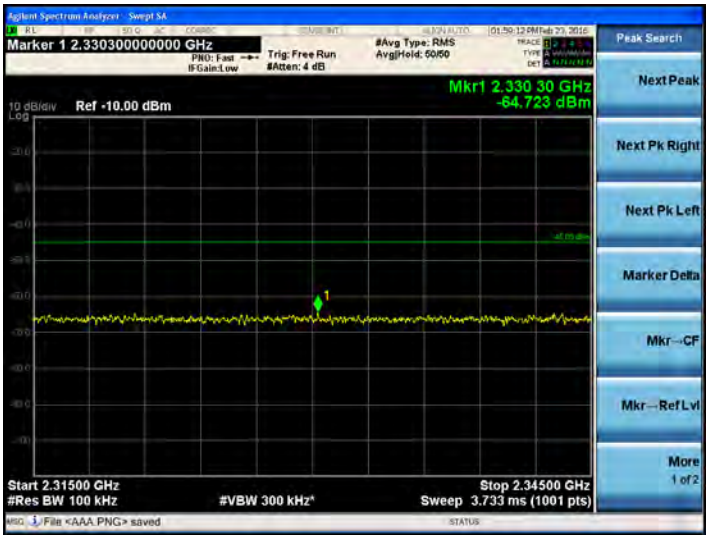
Band Edge_ Uplink Low	Band Edge_ Uplink High
	

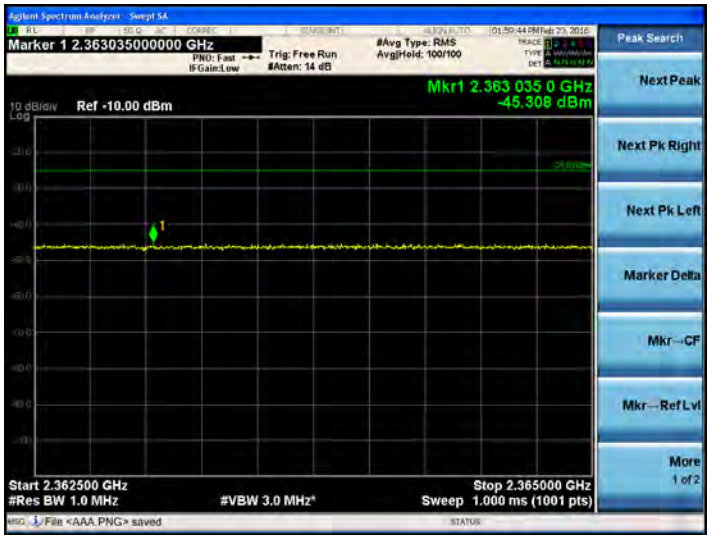
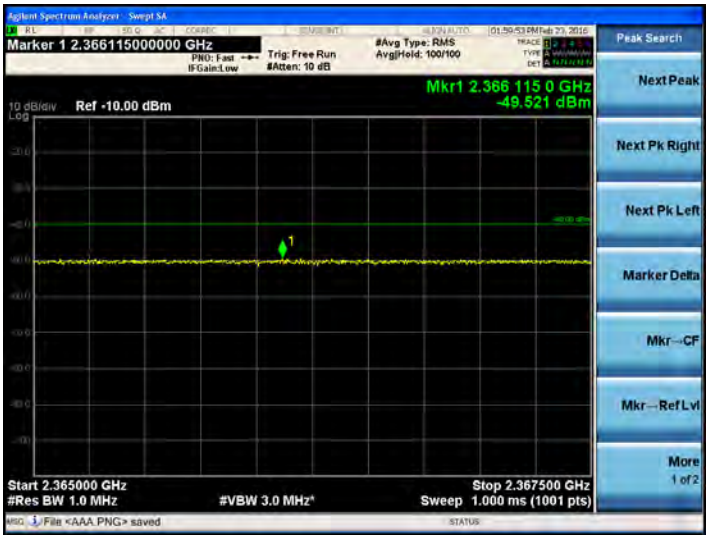
WCS Band

[WCS Band Uplink Low]

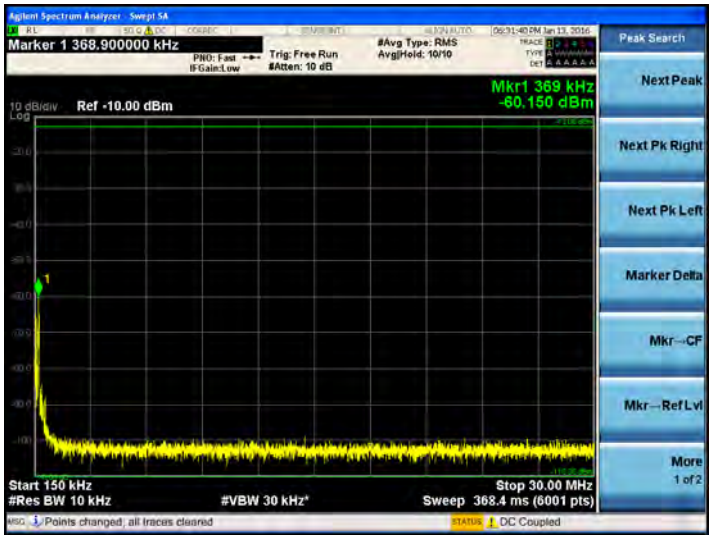
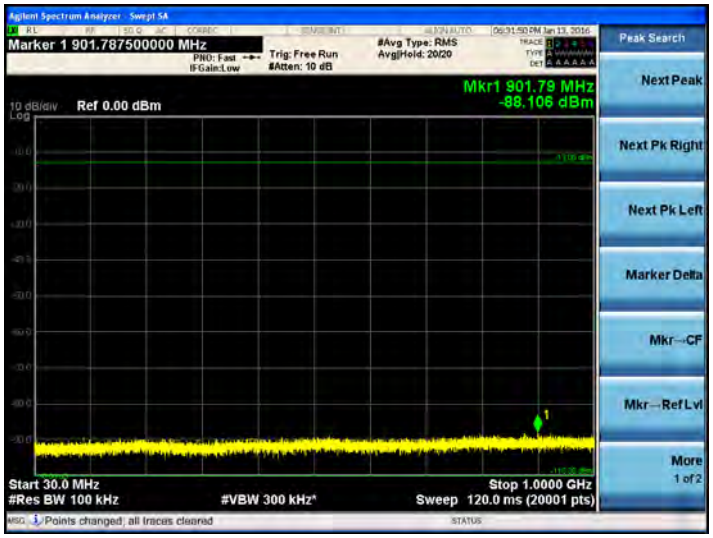
9㎑ ~ 150㎑	150㎑ ~ 30㎒
	
30㎒ ~ 1㎓	**1㎓ ~ 26.5㎓**
	

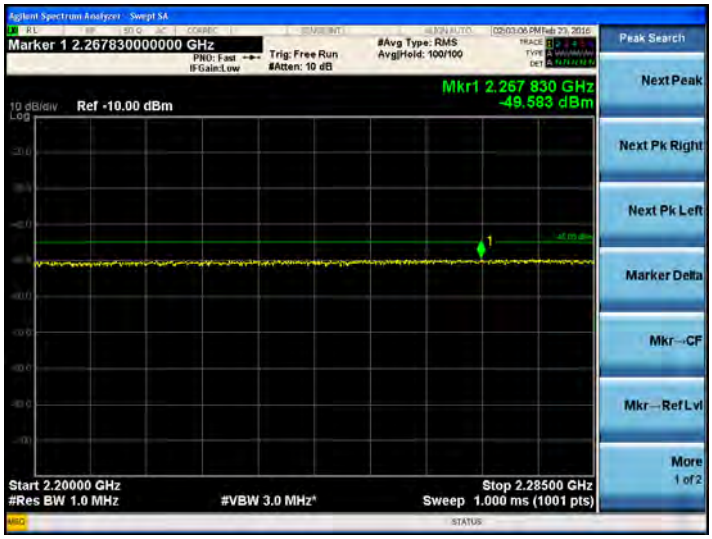
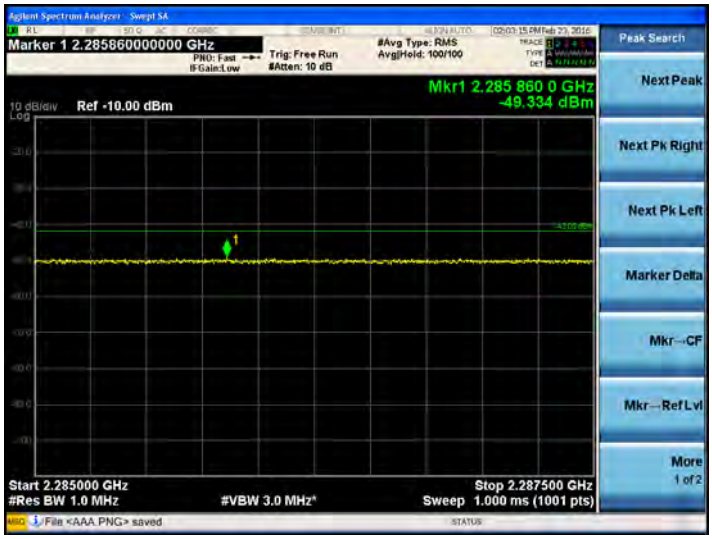
2200 ㎒ ~ 2285 ㎒	2285 ㎒ ~ 2287.5 ㎒
	
2287.5 ㎒ ~ 2300 ㎒	**2300 ㎒ ~ 2305 ㎒**
	

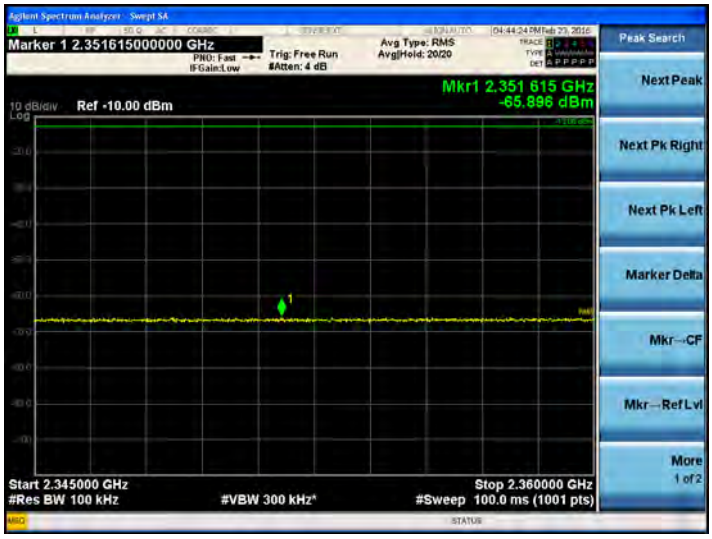
2305 ㎒ ~ 2315 ㎒	2315 ㎒ ~ 2345 ㎒
Note. Rx band is not test	
2345 ㎒ ~ 2360 ㎒	**2360 ㎒ ~ 2362.5 ㎒**
	

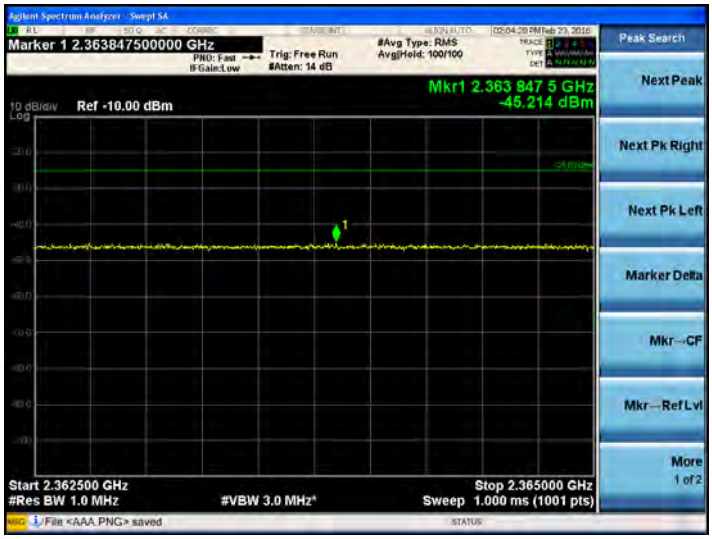
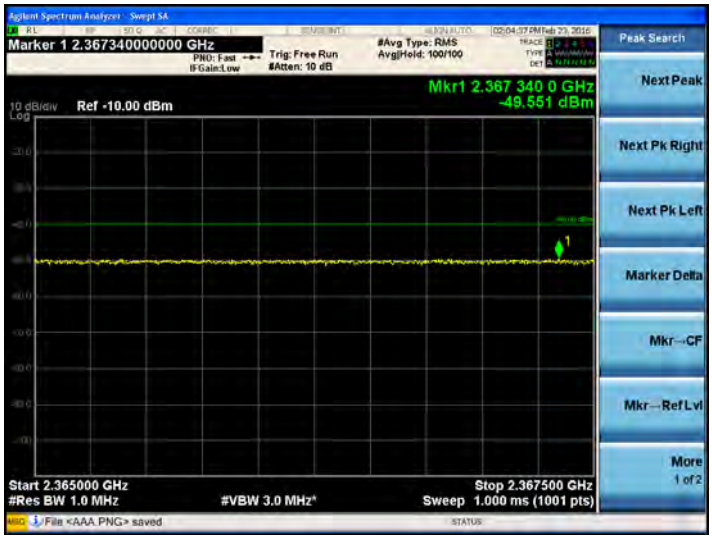
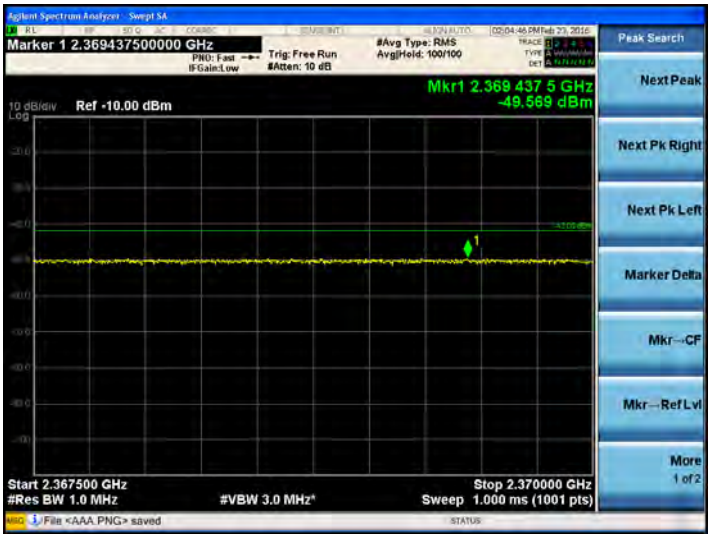
2362.5 ㎒ ~ 2365 ㎒	2365 ㎒ ~ 2367.5 ㎒
	
2367.5 ㎒ ~ 2370 ㎒	**2370 ㎒ ~ 2395 ㎒**
	

[WCS Band Uplink Mid]

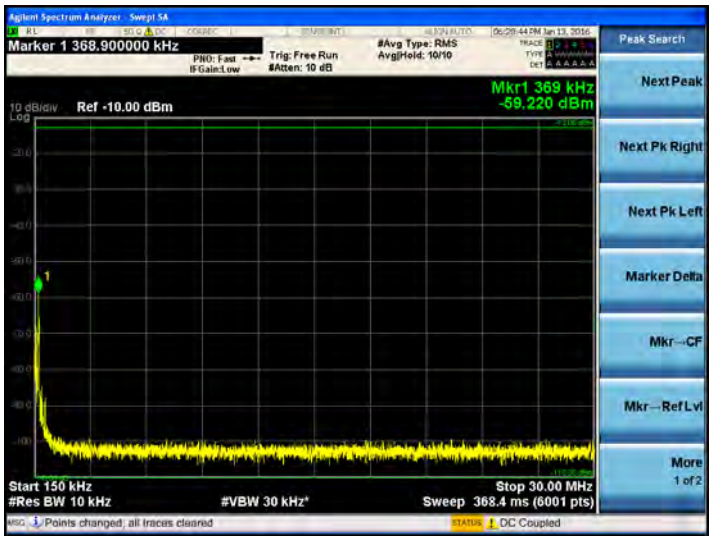
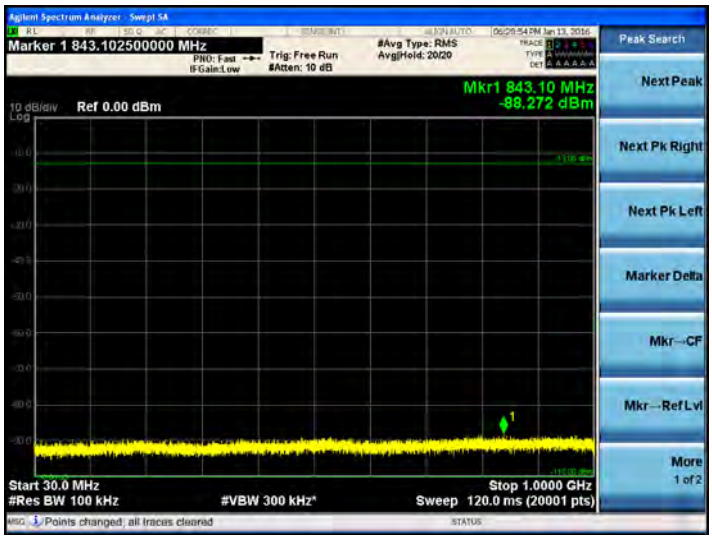
9㎑ ~ 150㎑	150㎑ ~ 30㎒
	
30㎒ ~ 1㎓	**1㎓ ~ 26.5㎓**
	

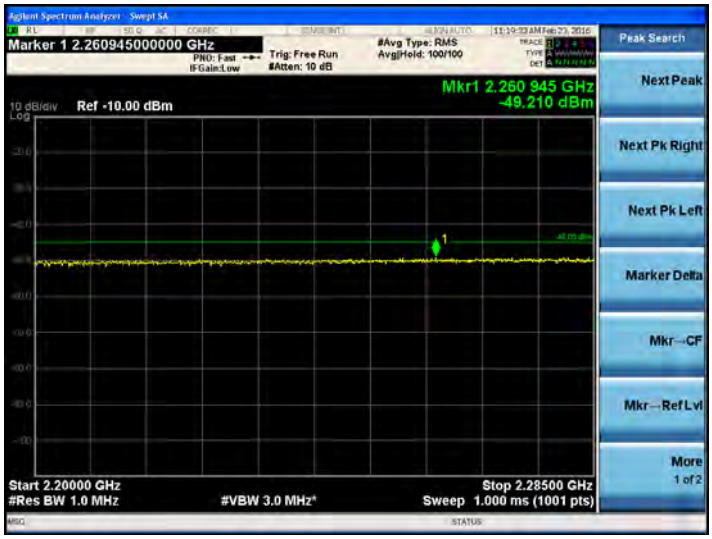
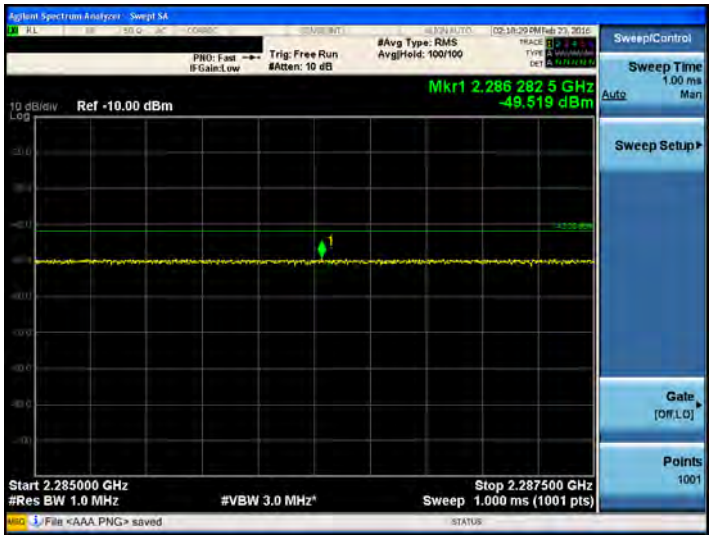
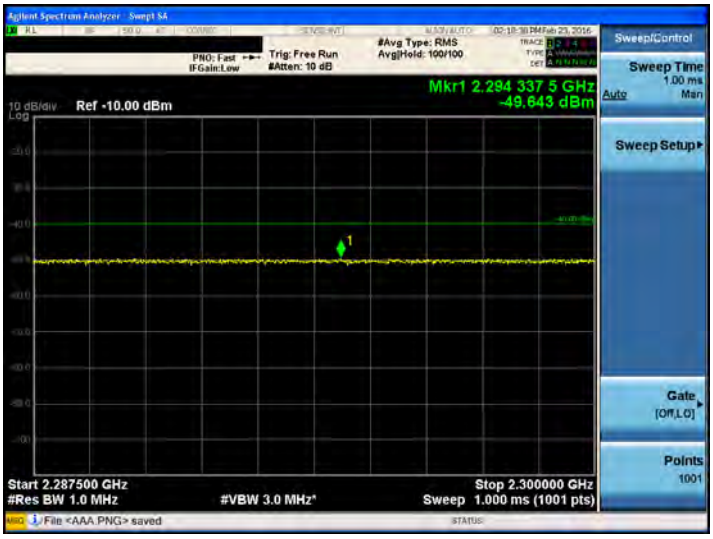
2200 ㎒ ~ 2285 ㎒	2285 ㎒ ~ 2287.5 ㎒
	
2287.5 ㎒ ~ 2300 ㎒	**2300 ㎒ ~ 2305 ㎒**
	

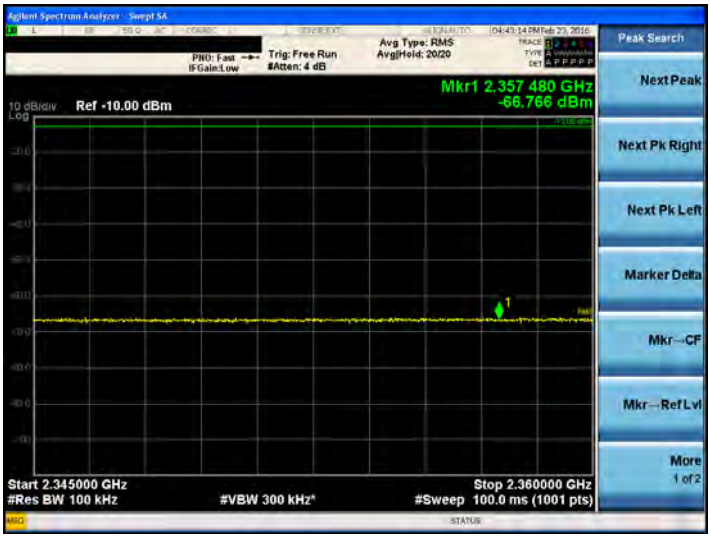
2305 ㎒ ~ 2315 ㎒	2315 ㎒ ~ 2345 ㎒
Note. Tx band is not test	
2345 ㎒ ~ 2360 ㎒	**2360 ㎒ ~ 2362.5 ㎒**
	

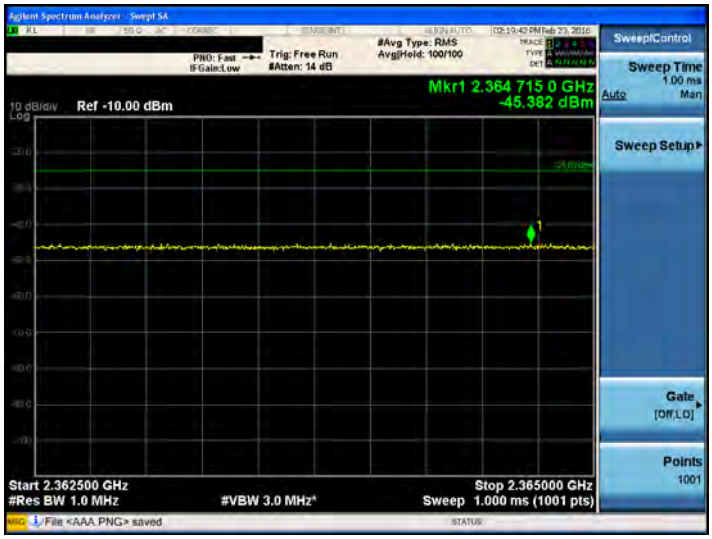
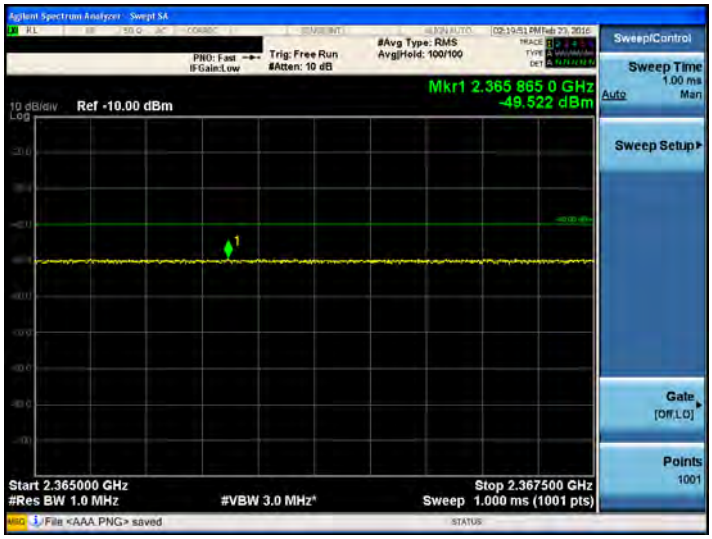
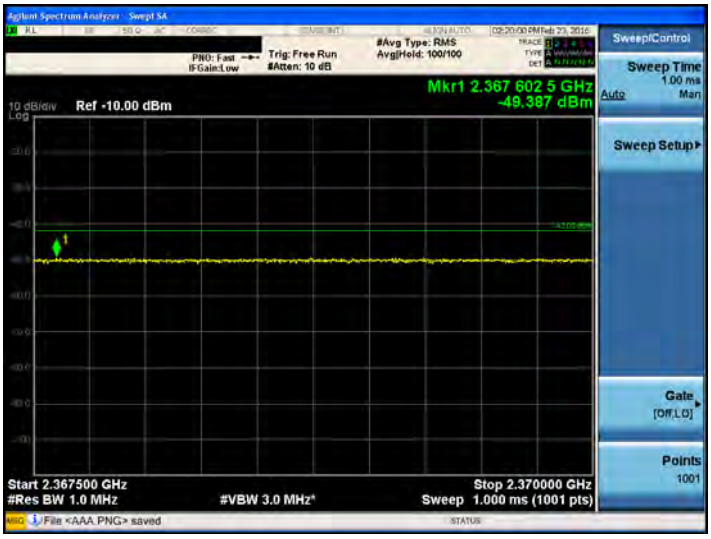
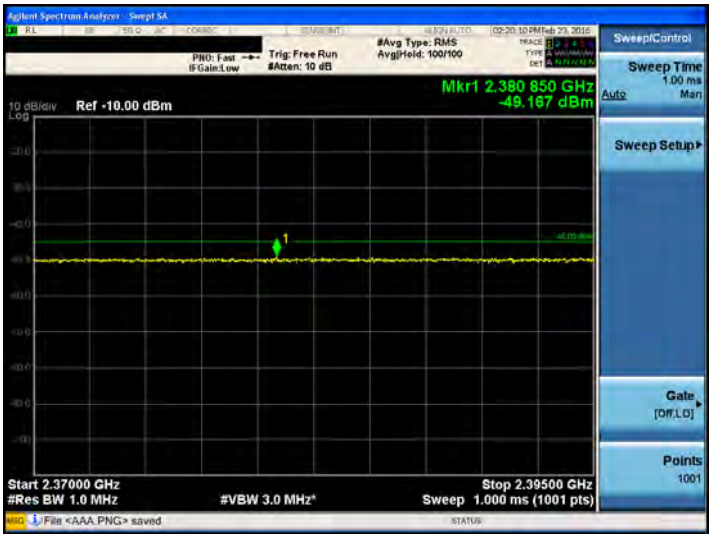
2362.5 ㎒ ~ 2365 ㎒	2365 ㎒ ~ 2367.5 ㎒
	
2367.5 ㎒ ~ 2370 ㎒	**2370 ㎒ ~ 2395 ㎒**
	

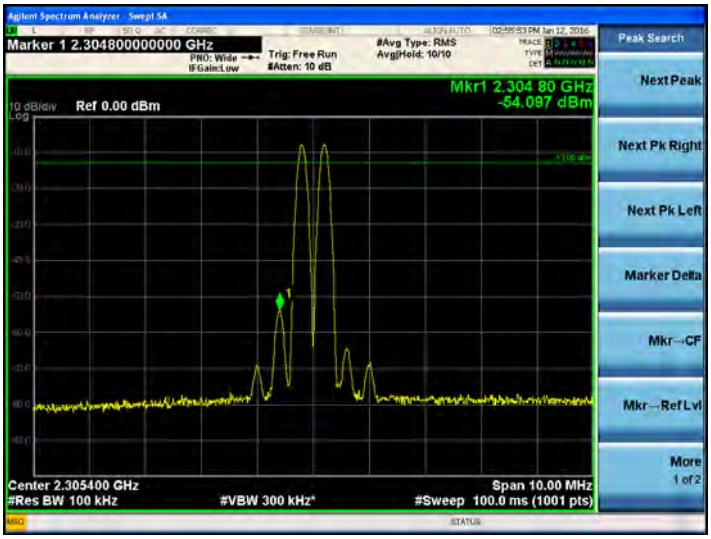
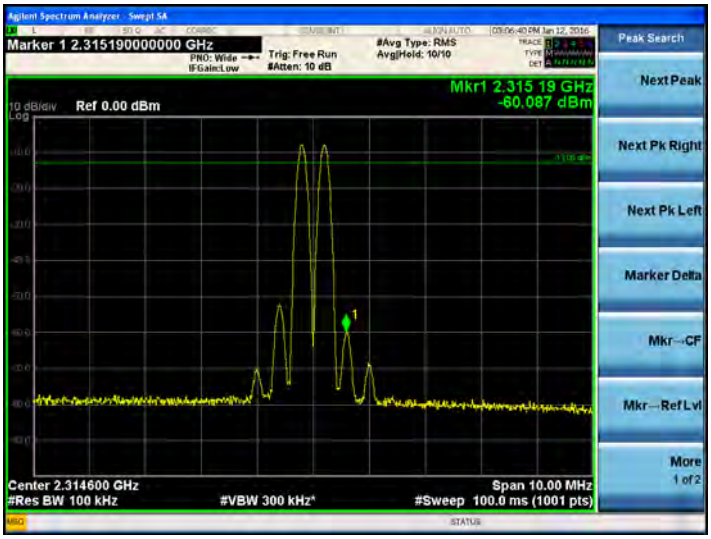
[WCS Band Uplink High]

9㎑ ~ 150㎑	150㎑ ~ 30㎒
	
30㎒ ~ 1㎓	**1㎓ ~ 26.5㎓**
	

2200 ㎒ ~ 2285 ㎒	2285 ㎒ ~ 2287.5 ㎒
	
2287.5 ㎒ ~ 2300 ㎒	**2300 ㎒ ~ 2305 ㎒**
	

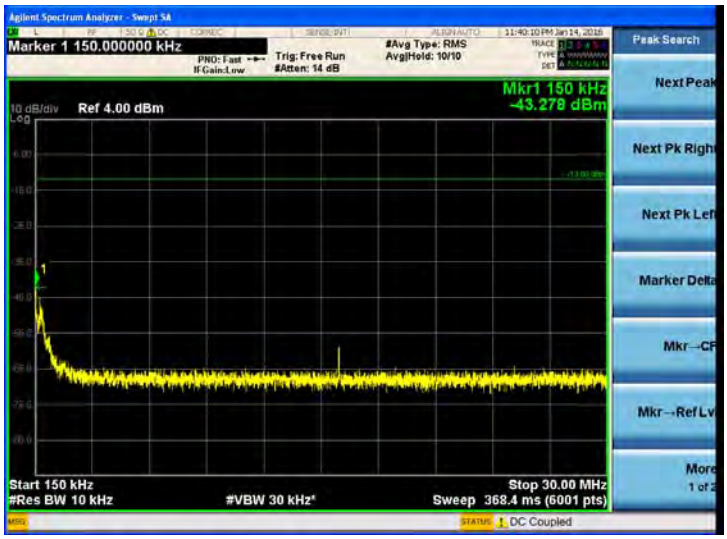
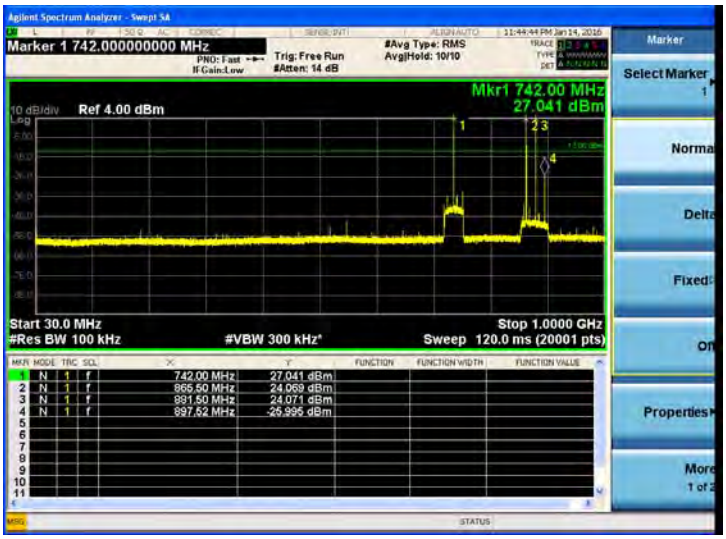
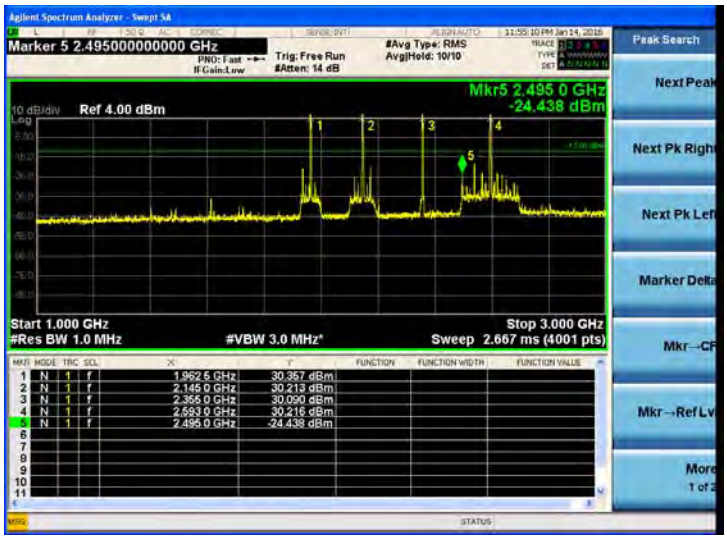
2305 ㎒ ~ 2315 ㎒	2315 ㎒ ~ 2345 ㎒
Note. Tx band is not test	
2345 ㎒ ~ 2360 ㎒	**2360 ㎒ ~ 2362.5 ㎒**
	

2362.5 ㎒ ~ 2365 ㎒	2365 ㎒ ~ 2367.5 ㎒
	
2367.5 ㎒ ~ 2370 ㎒	**2370 ㎒ ~ 2395 ㎒**
	

Band Edge_ Downlink Low	Band Edge Downlink High
	

700 MHz Band, 800 MHz Band,AWS2100 Band, BRS Band,PCS1900 Band, WCS Band ALL

[Downlink]

9㎑ ~ 150㎑	150㎑ ~ 30㎒
	
30㎒ ~ 1㎓	**1㎓ ~ 3㎓**
	

3㎓ ~ 26.5㎓


Agilent Spectrum Analyzer - Swept SA
Marker 1 24.884375000000 GHz
PNO: Fast
IFGain:Low
Trig: Free Run
#Atten: 10 dB
#Avg Type: RMS
Avg|Hold: 10/10
Peak Search
Next Peak
Next Pk Right
Next Pk Left
Marker Delta
Mkr→CF
Mkr→Ref Lvl
10 dB/div
Log
Ref -2.00 dBm
Mkr1 24.884 4 GHz
-21.213 dBm
Start 3.00 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*
Stop 26.50 GHz
Sweep 61.33 ms (40001 pts)

Intermodulation Spurious Emissions for FCC

Downlink

700 MHz Band_LTE

[700 Band LTE 5 MHz Downlink Low]	[700 Band LTE 5 MHz Downlink High]
	
[700 Band LTE 10 MHz Downlink Low]	**[700 Band LTE 10 MHz Downlink High]**
	

SMR800,850Cellular Band

[SMR 800,850 Cellualr LTE 5 MHz Downlink Low]	[SMR 800,850 Cellualr LTE 5MHz Downlink High]
NO TEST **Note. SMR 800 Band amplifies only one selected channel.**	
[850 Cellualr LTE 10 MHz Downlink Low]	**[850 Cellualr LTE 10 MHz Downlink High]**
	

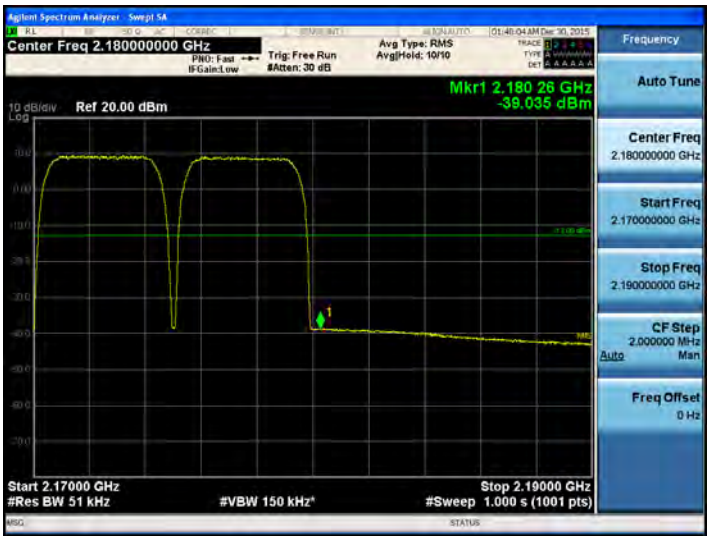
[850 Cellualr UMTS Downlink Low]	[850 Cellualr UMTS Downlink High]
	
[SMR 800,850 Cellualr CDMA Downlink Low]	**[SMR 800,850 Cellualr CDMA Downlink High]**
	

[850 Cellualr GSM Downlink Low]	[850 Cellualr GSM Downlink High]
	

AWS2100 Band

[AWS2100 LTE 5MHz Downlink Low]	[AWS2100 LTE 5MHz Downlink High]
	
[AWS2100 LTE 10MHz Downlink Low]	**[AWS2100 LTE 10MHz Downlink High]**
	

[AWS2100 LTE 15MHz Downlink Low]	[AWS2100 LTE 15MHz Downlink High]
	
[AWS2100 LTE 20MHz Downlink Low]	**[AWS2100 LTE 20MHz Downlink High]**
	

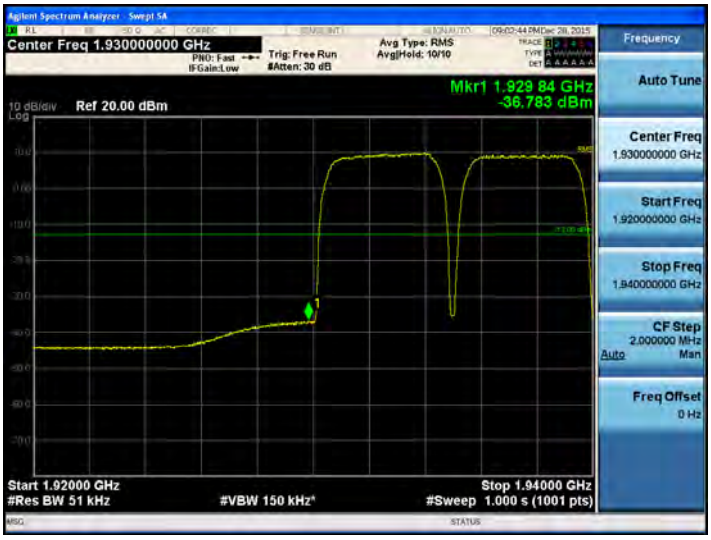
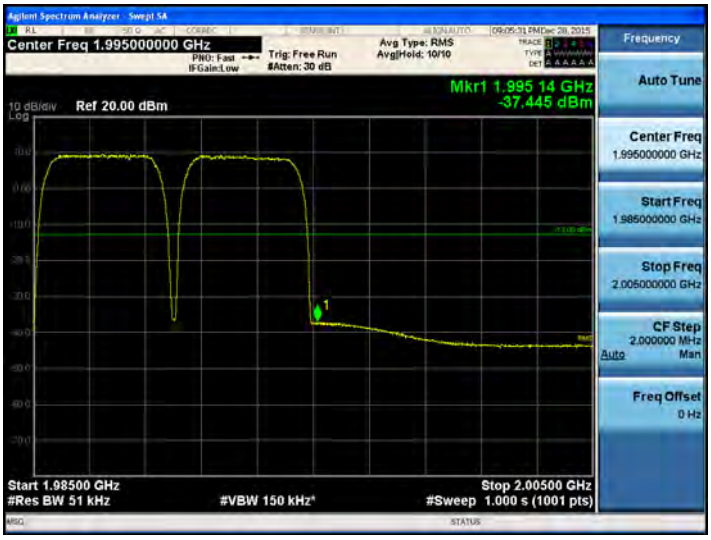
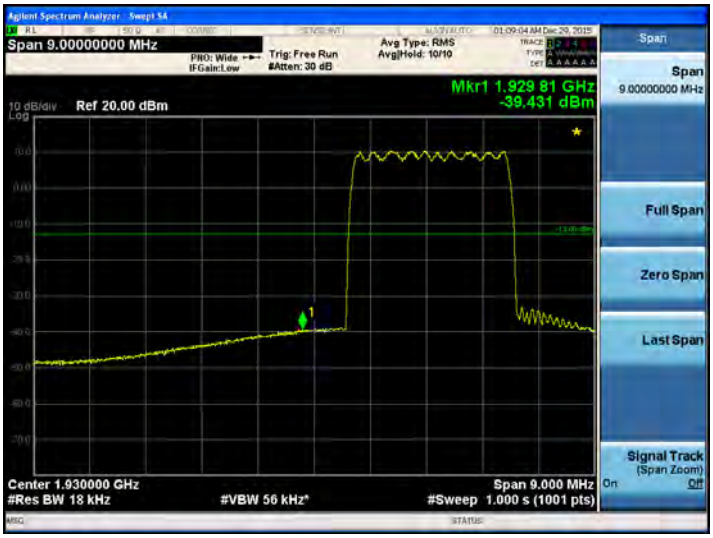
[AWS2100 UMTS Downlink Low]	[AWS2100 UMTS Downlink High]
	

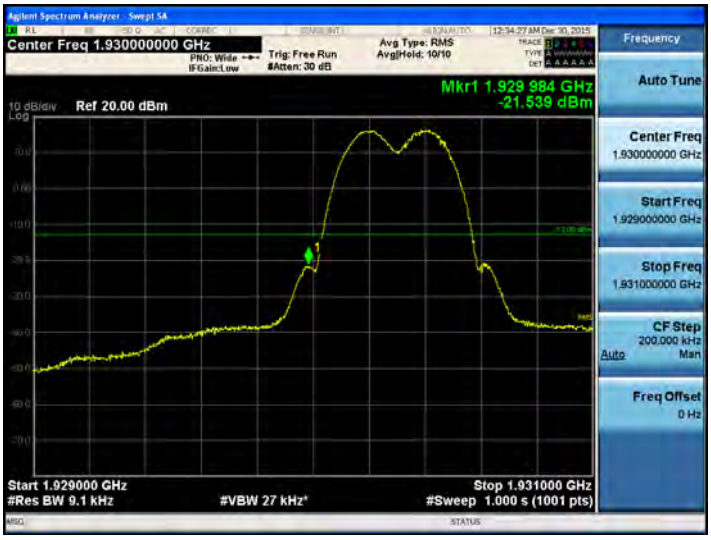
BRS Band

[BRS LTE 20MHz Downlink Low]	[BRS LTE 20MHz Downlink High]
	

PCS 1900 Band

[PCS 1900 LTE 5MHz Downlink Low]	[PCS 1900 LTE 5MHz Downlink High]
	
[PCS 1900 LTE 10MHz Downlink Low]	**[PCS 1900 LTE 10MHz Downlink High]**
	

[PCS 1900 UMTS Downlink Low]	[PCS 1900 UMTS Downlink High]
	
[PCS 1900 CDMA Downlink Low]	**[PCS 1900 CDMA Downlink High]**
	

[PCS 1900 GSM Downlink Low]	[PCS 1900 GSM Downlink High]
	

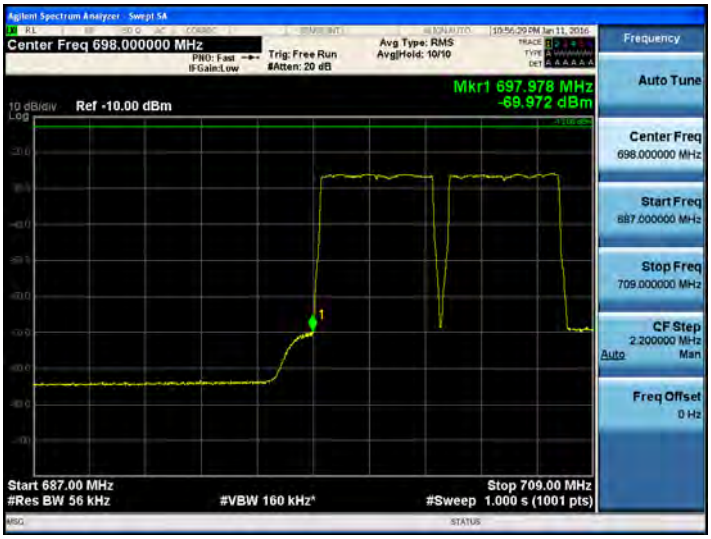
WCS Band

[WCS LTE 10MHz Downlink Low]	[WCS LTE 10MHz Downlink High]
NO Test **Note. The minimum 30MHz bandwidth required to test** **But wcs band supports 10MHz bandwidth**	**NO Test** **Note. The minimum 30MHz bandwidth required to test** **But wcs band supports 10MHz bandwidth**

Intermodulation Spurious Emissions for FCC

Uplink

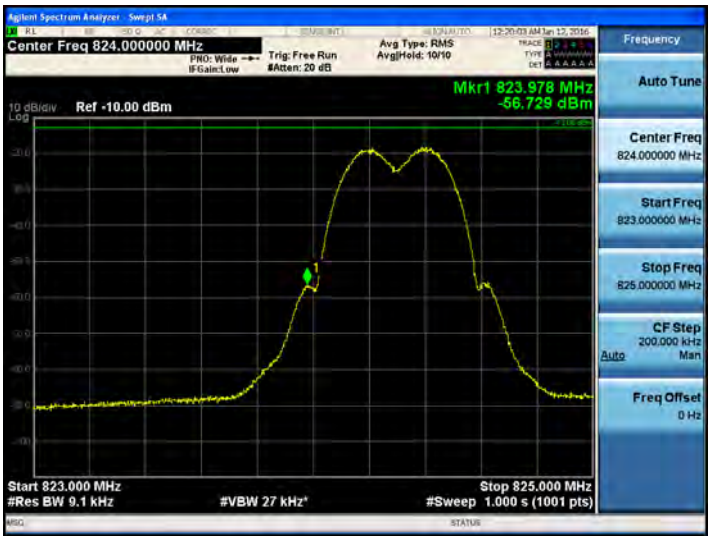
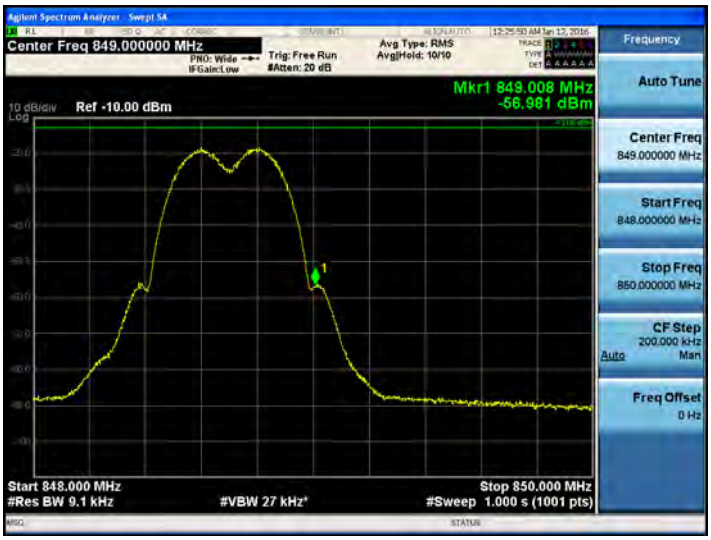
700 MHz Band_LTE

[700 Band LTE 5 MHz Uplink Low]	[700 Band LTE 5 MHz Uplink High]
	

SMR800,850Cellular Band

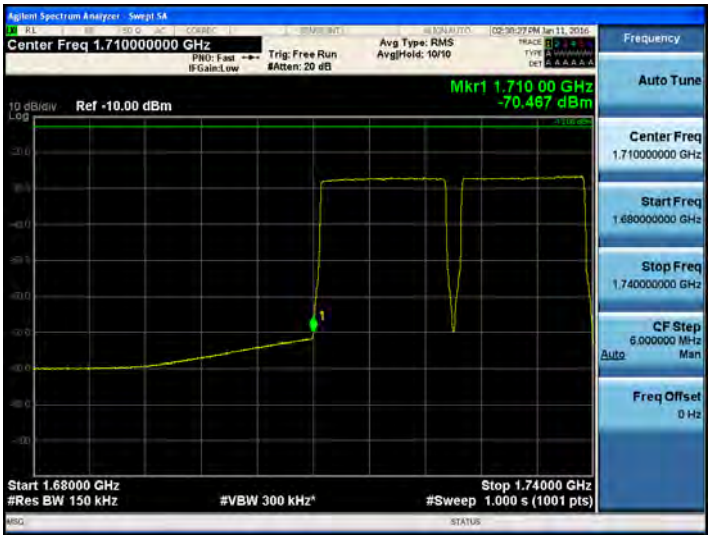
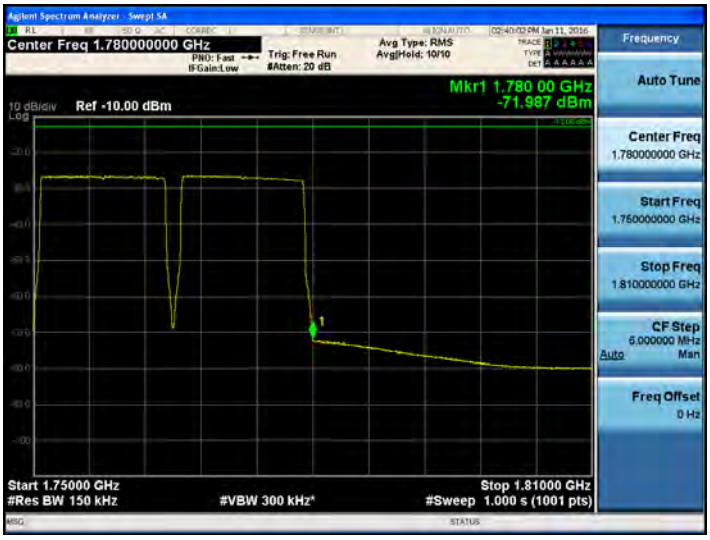
[SMR 800,850 Cellualr LTE 5 MHz Uplink Low]	[SMR 800,850 Cellualr LTE 5MHz Uplink High]
NO TEST **Note. SMR 800 Band amplifies only one selected channel.**	
[850 Cellualr LTE 10 MHz Uplink Low]	**[850 Cellualr LTE 10 MHz Uplink High]**
	

[850 Cellualr UMTS Uplink Low]	[850 Cellualr UMTS Uplink High]
	
[SMR 800,850 Cellualr CDMA Uplink Low]	**[SMR 800,850 Cellualr CDMAUplinkHigh]**
	

[850 Cellualr GSM Uplink Low]	[850 Cellualr GSM Uplink High]
	

AWS2100 Band

[AWS2100 LTE 5MHz Uplink Low]	[AWS2100 LTE 5MHz Uplink High]
	
[AWS2100 LTE 10MHz Uplink Low]	**[AWS2100 LTE 10MHz Uplink High]**
	

[AWS2100 LTE 15MHz Uplink Low]	[AWS2100 LTE 15MHz Uplink High]
	
[AWS2100 LTE 20MHz Uplink Low]	**[AWS2100 LTE 20MHz Uplink High]**
	

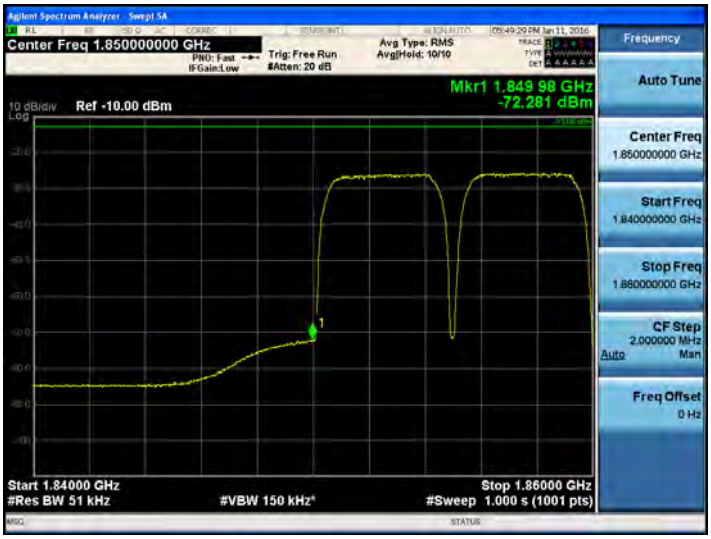
[AWS2100 UMTS Uplink Low]	[AWS2100 UMTS Uplink High]
	

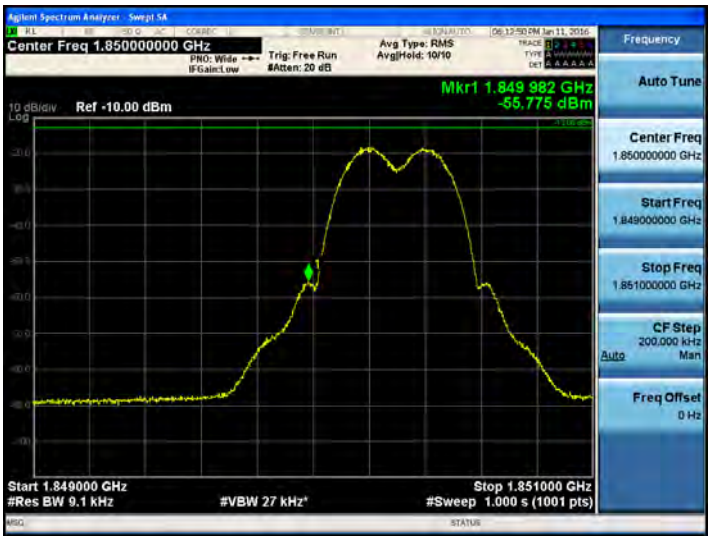
BRS Band

[BRS LTE 20MHz Uplink Low]	[BRS LTE 20MHz Uplink High]
	

PCS 1900 Band

[PCS 1900 LTE 5MHz Uplink Low]	[PCS 1900 LTE 5MHz Uplink High]
	
[PCS 1900 LTE 10MHz Uplink Low]	**[PCS 1900 LTE 10MHz Uplink High]**
	

[PCS 1900 UMTS Uplink Low]	[PCS 1900 UMTS Uplink High]
	
[PCS 1900 CDMA Uplink Low]	**[PCS 1900 CDMA Uplink High]**
	

[PCS 1900 GSM Uplink Low]	[PCS 1900 GSM Uplink High]
	

WCS Band

[WCS LTE 10MHz Downlink Low]	[WCS LTE 10MHz Downlink High]
NO Test **Note. The minimum 30MHz bandwidth required to test** **But wcs band supports 10MHz bandwidth**	**NO Test** **Note. The minimum 30MHz bandwidth required to test** **But wcs band supports 10MHz bandwidth**

10. RADIATED SPURIOUS EMISSIONS

Test Requirement(s): § 2.1053 Measurements required: Field strength of spurious radiation.

§ 2.1053 (a) Measurements shall be made to detect spurious emissions that may be Radiated directly from the cabinet, control circuits, power leads, or intermediate circuit elements under normal conditions of installation and operation. Curves or equivalent data shall be supplied showing the magnitude of each harmonic and other spurious emission. For this test, single sideband, independent sideband, and controlled carrier transmitters shall be modulated under the conditions specified in paragraph (c) of § 2.1049, as appropriate. For equipment operating on frequencies below 890 MHz, an open field test is normally required with the measuring instrument antenna located in the far-field at all test frequencies. In the event it is either impractical or impossible to make open field measurements (e.g. a broadcast transmitter installed in a building) measurements will be accepted of the equipment as installed. Such measurements must be accompanied by a description of the site where the measurements were made showing the location of any possible source of reflections which might distort the field strength measurements. Information submitted shall include the relative radiated power of each spurious emission with reference to the rated power output of the transmitter, assuming all emissions are radiated from half-wave dipole antennas.

§ 2.1053 (b): The measurements specified in paragraph (a) of this section shall be made for the following equipment:

(1) Those in which the spurious emissions are required to be 60 dB or more below the mean power of the transmitter.

(2) All equipment operating on frequencies higher than 25 MHz.

(3) All equipment where the antenna is an integral part of, and attached directly to The transmitter.

(4) Other types of equipment as required, when deemed necessary by the Commission.

Test Procedures: As required by 47 CFR 2.1053, *field strength of radiated spurious measurements* were made in accordance with the procedures of ANSI/TIA-603-C-2004 "Land Mobile FM or PM Communications Equipment Measurement and Performance Standards".

Radiated emission measurements were performed inside a 3 meter semi-anechoic chamber. The EUT was set at a distance of 3m from the receiving antenna. The EUT's RF ports were terminated to 50ohm load. The EUT was set to transmit at the low, mid and high channels of the transmitter frequency range at its maximum power level. The EUT was rotated about

360 and the receiving antenna scanned from 1-3m in order to capture the maximum emission. A calibrated antenna source was positioned in place of the EUT and the previously recorded signal was duplicated. The maximum EIRP of the emission was calculated by adding the forward power to the calibrated source plus its appropriate gain value. These steps were carried. out with the receiving antenna in both vertical and horizontal polarization. Harmonic emissions up to the 10th or 40GHz, whichever was the lesser, were investigated.

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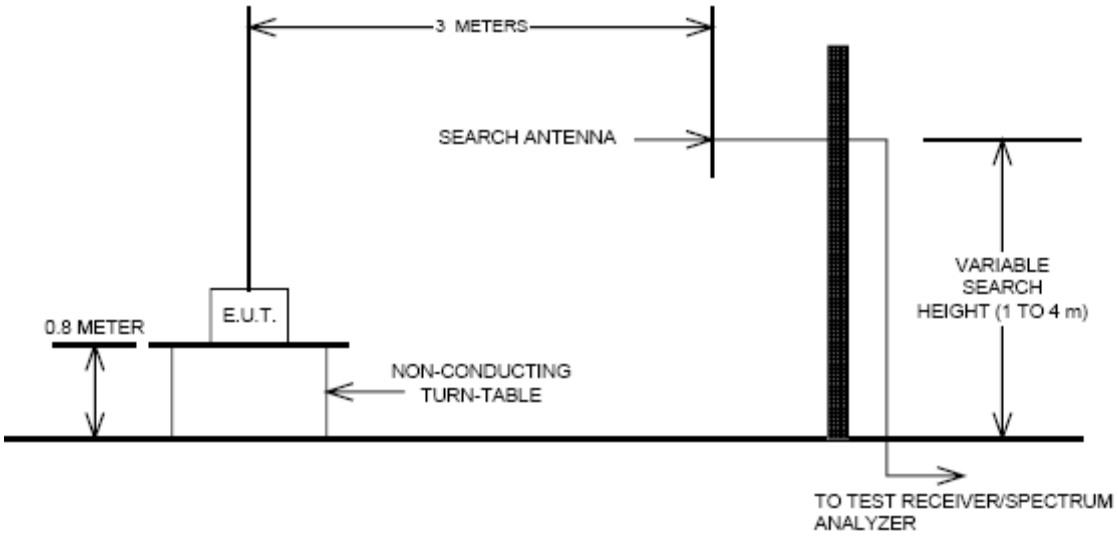
Radiated Spurious Emissions Test Setup



Test Result:

Note.

Input signal is the CW signal.

700 MHz band

[Downlink]

Voltage supplied to EUT	Tx Freq.(MHz)	Freq.(MHz)	Substitute Level [dBm]	Ant. Gain (dBi)	C.L	Pol.	EIRP (dBm)	Margin (dB)
120 Vac	731.50	No Peak Found						
	742.50							
	753.50							

SMR 800, Cellualr 800 MHz band

[Downlink]

Voltage supplied to EUT	Tx Freq.(MHz)	Freq.(MHz)	Substitute Level [dBm]	Ant. Gain (dBi)	C.L	Pol.	EIRP (dBm)	Margin (dB)
120 Vac	864.50	No Peak Found						
	878.00							
	891.50							

AWS2100 band

[Downlink]

Voltage supplied to EUT	Tx Freq.(MHz)	Freq.(MHz)	Substitute Level [dBm]	Ant. Gain (dBi)	C.L	Pol.	EIRP (dBm)	Margin (dB)
120 Vac	2112.50	No Peak Found						
	2145.00							
	2177.50							

BRS band

[Downlink]

Voltage supplied to EUT	Tx Freq.(MHz)	Freq.(MHz)	Substitute Level [dBm]	Ant. Gain (dBi)	C.L	Pol.	EIRP (dBm)	Margin (dB)
120 Vac	2506.00	No Peak Found						
	2593.00							
	2680.00							

PCS 1900 band

[Downlink]

Voltage supplied to EUT	Tx Freq.(MHz)	Freq.(MHz)	Substitute Level [dBm]	Ant. Gain (dBi)	C.L	Pol.	EIRP (dBm)	Margin (dB)
120 Vac	1932.50	No Peak Found						
	1962.50							
	1992.50							

WCS band

[Downlink]

Voltage supplied to EUT	Tx Freq.(MHz)	Freq.(MHz)	Substitute Level [dBm]	Ant. Gain (dBi)	C.L	Pol.	EIRP (dBm)	Margin (dB)
120 Vac	-	No Peak Found						
	2355.00							
	-							