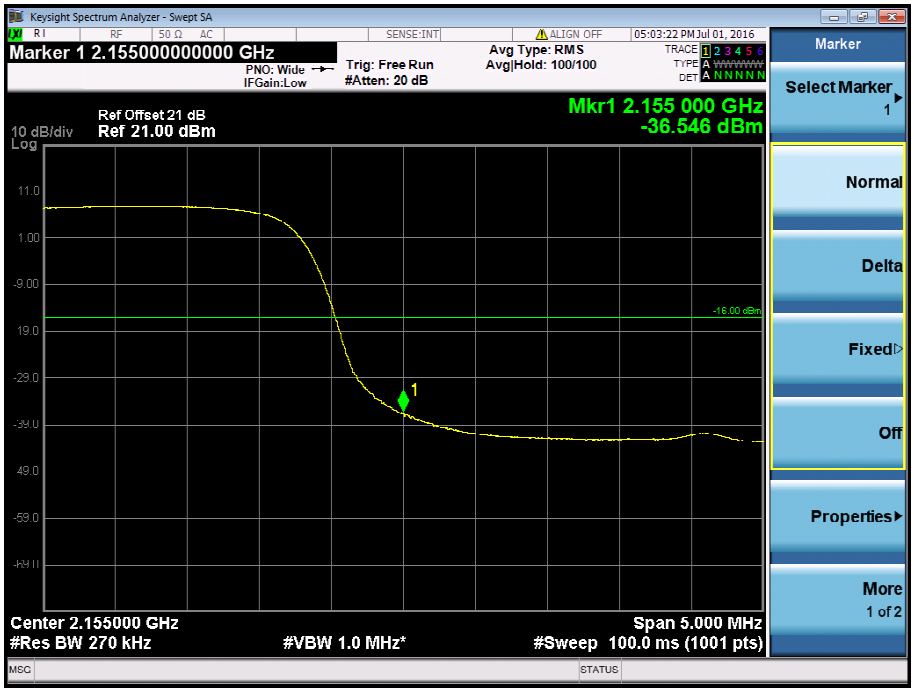
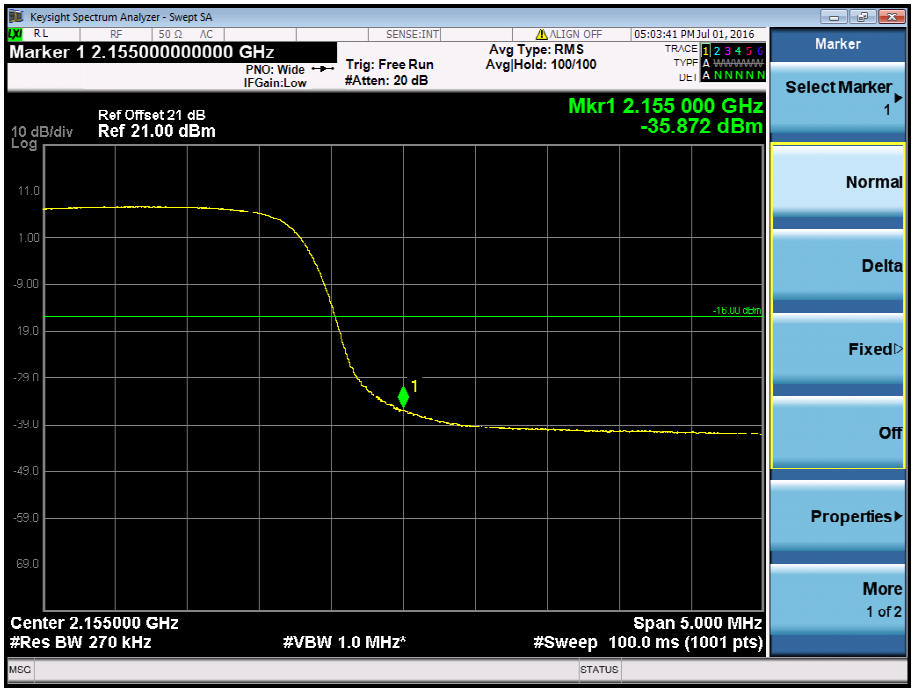
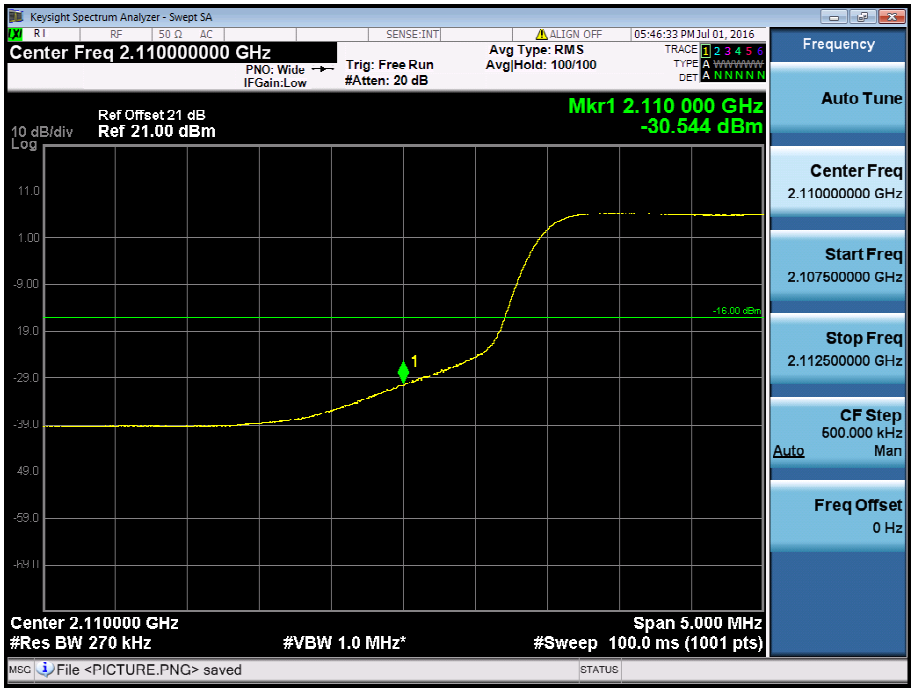
Conducted Band Edge on 15 MHz / T / Chain 0



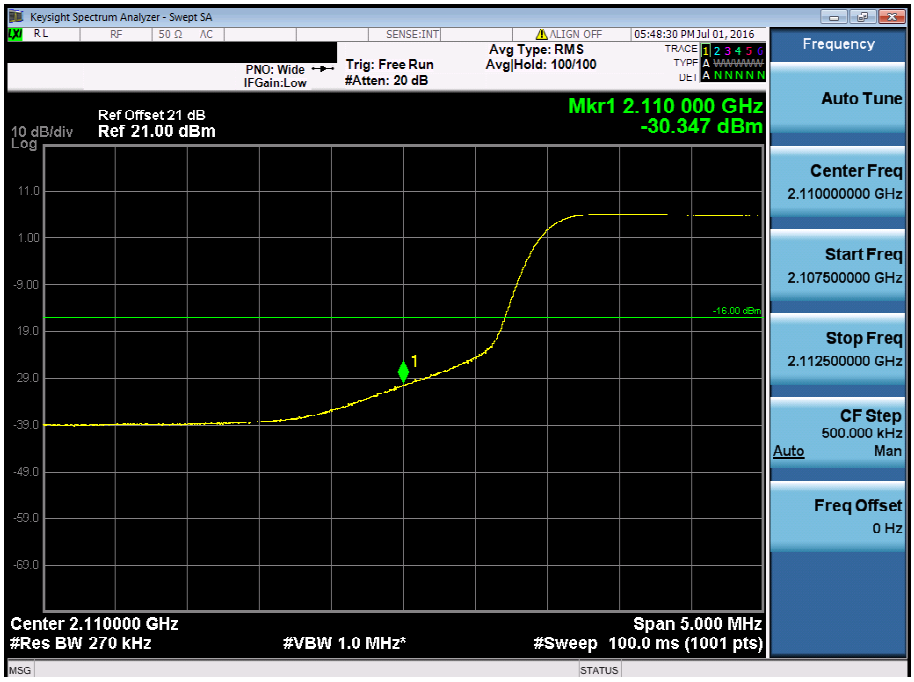
Conducted Band Edge on 15 MHz / T / Chain 1



Conducted Band Edge on 20 MHz / B / Chain 0



Conducted Band Edge on 20 MHz / B / Chain 1



Conducted Band Edge on 20 MHz / T / Chain 0

Conducted Band Edge on 20 MHz / T / Chain 1

3.5 Conducted Spurious Emission Measurement

3.5.1 Description of Conducted Spurious Emission Measurement

The power of any emission outside of the authorized operating frequency ranges must be lower than the transmitter power (P) by a factor of at least 43 + 10 log (P) dB.

It is measured by means of a calibrated spectrum analyzer and scanned from 30 MHz up to a frequency including its 10^{th} harmonic.

3.5.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.5.3 Test Procedures

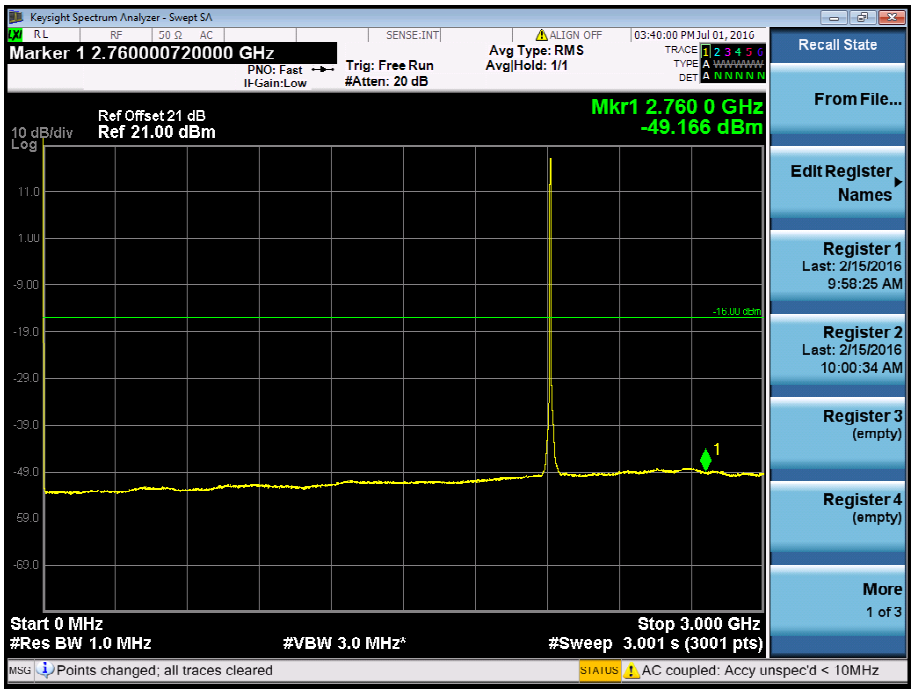
1. The testing follows FCC KDB 971168 D01 v02r02 Section 6.0.
2. The EUT was connected to the spectrum analyzer and system simulator via a power divider.
3. The RF output of EUT was connected to the spectrum analyzer by an RF cable and attenuator. The path loss was compensated to the results for each measurement.
4. The middle channel for the highest RF power within the transmitting frequency was measured.
5. The conducted spurious emission for the whole frequency range was taken.
6. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
7. The limit line is derived from 43 + 10log(P) dB below the transmitter power P(Watts)
   = P(W) - [43 + 10log(P)] (dB)
   = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)
   = -13dBm.

3.5.4 Test Setup

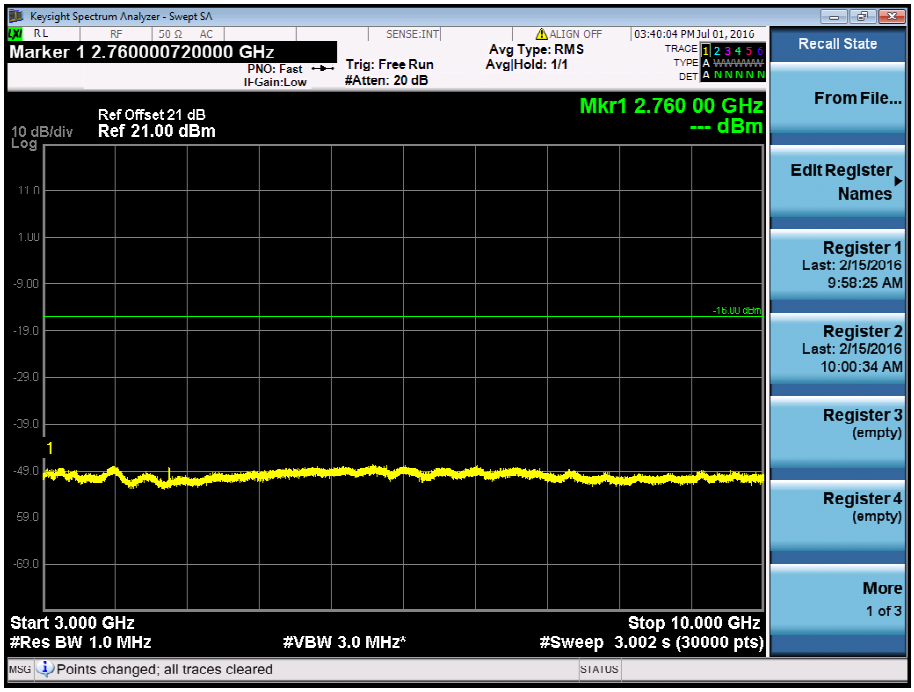
3.5.5 Test Result (Plots) of Conducted Spurious Emission

Band	Modulation
LTE Band IV	QPSK

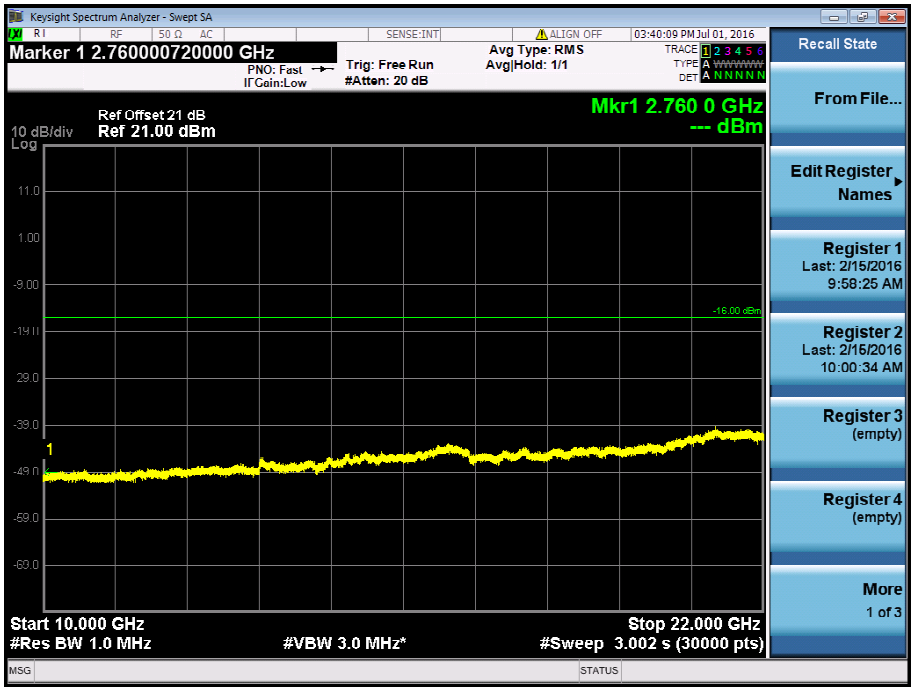
Conducted Spurious Emission Plot on 5 MHz / B / Chain 0 / 9kHz ~ 3GHz



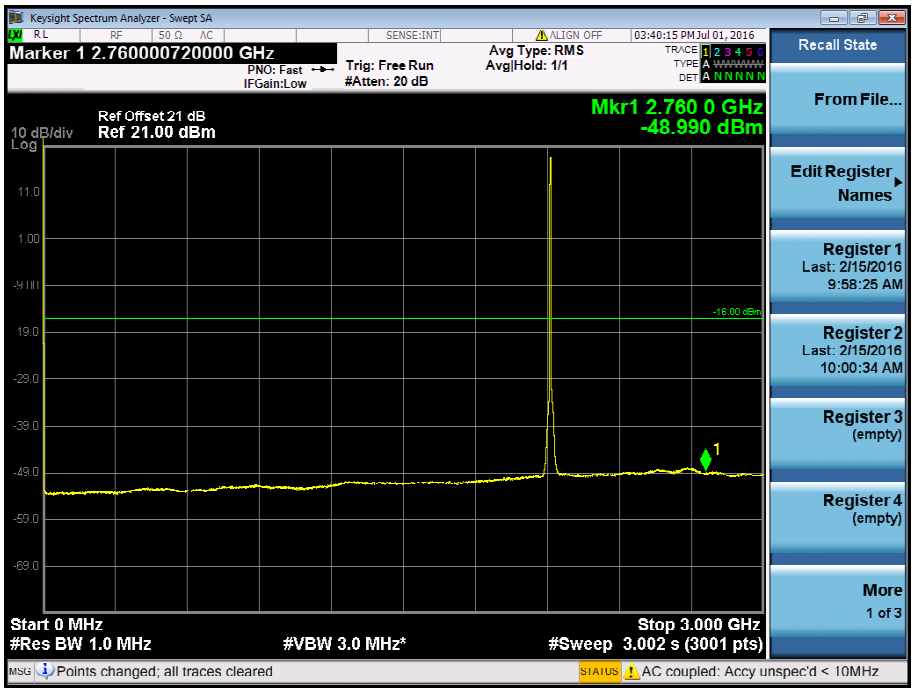
Conducted Spurious Emission Plot on 5 MHz / B / Chain 0 / 3GHz ~ 10GHz



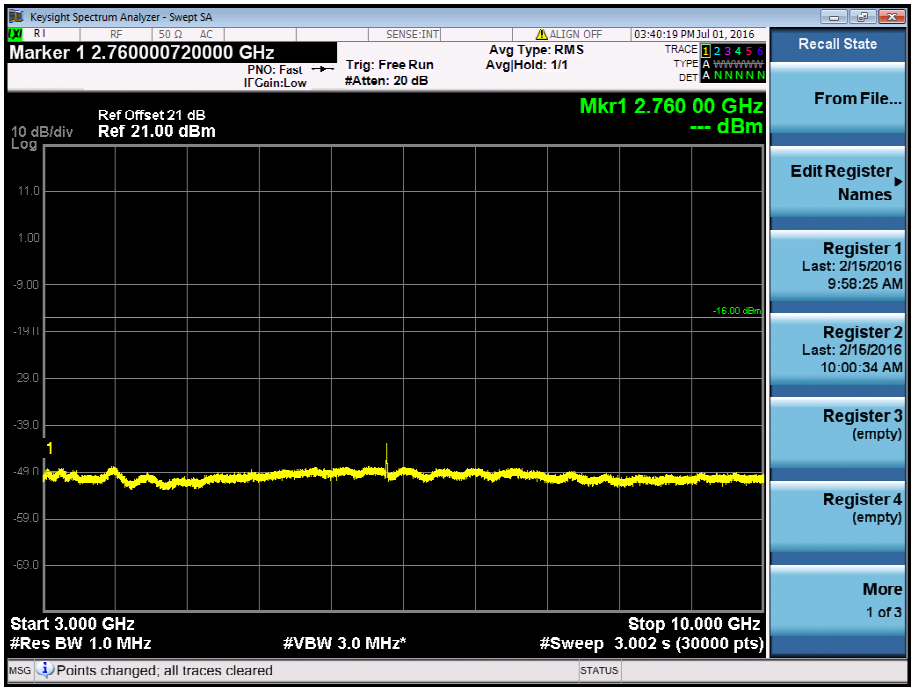
Conducted Spurious Emission Plot on 5 MHz / B / Chain 0 / 10GHz ~ 22GHz



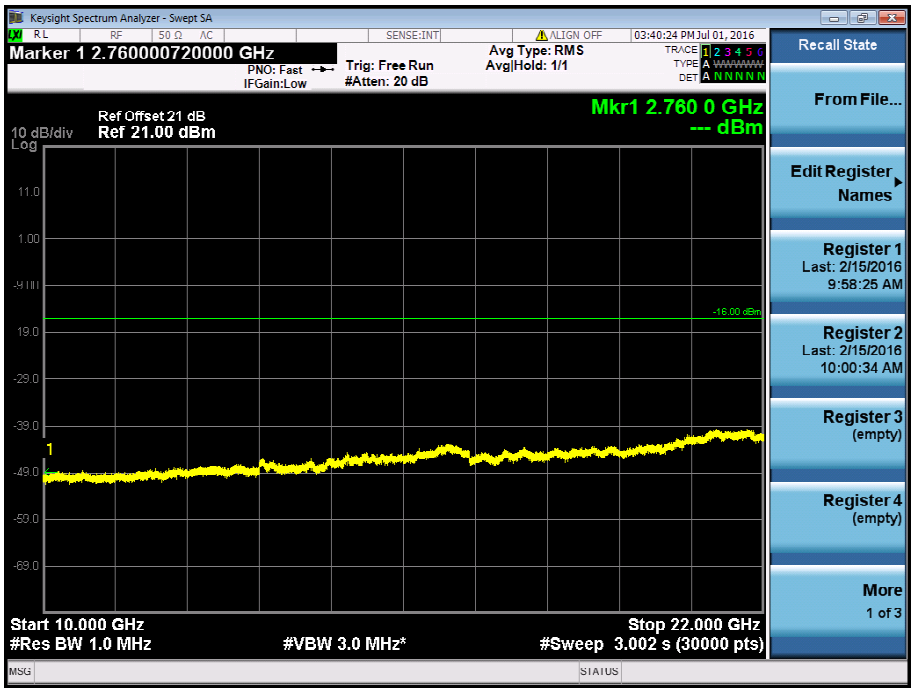
Conducted Spurious Emission Plot on 5 MHz / B / Chain 1 / 9kHz ~ 3GHz



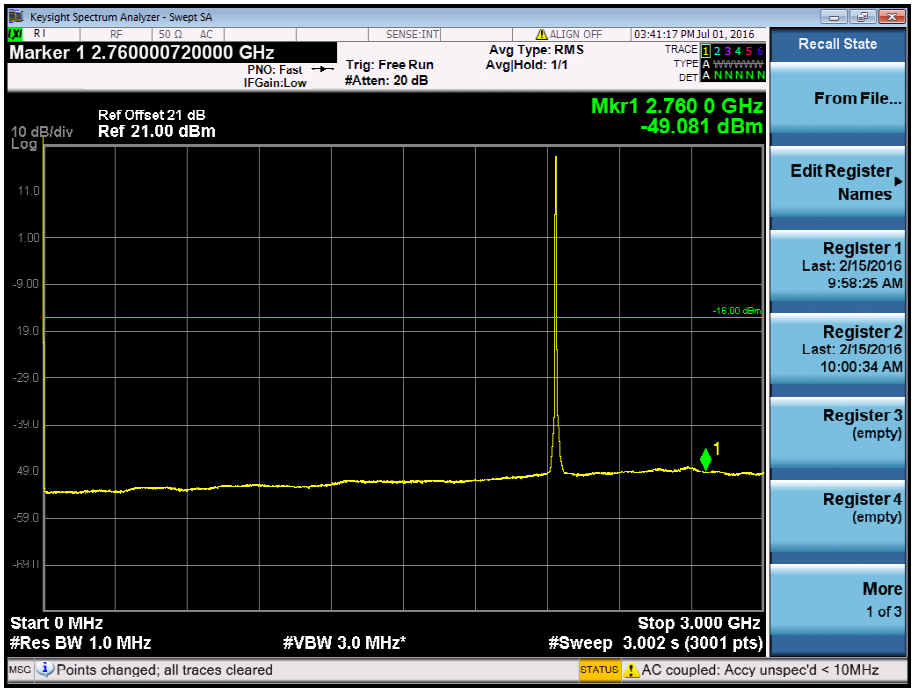
Conducted Spurious Emission Plot on 5 MHz / B / Chain 1 / 3GHz ~ 10GHz



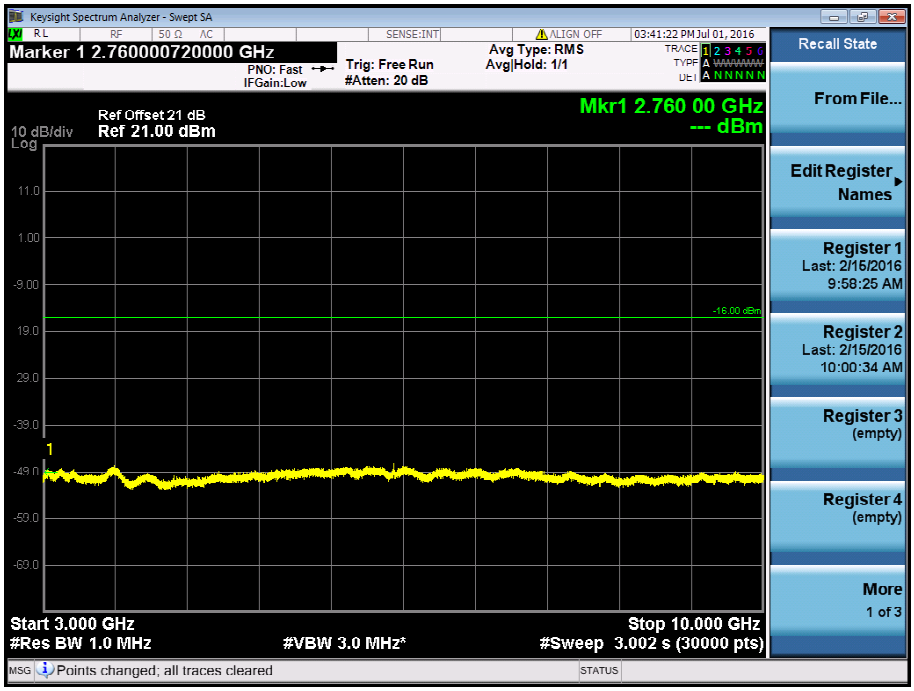
Conducted Spurious Emission Plot on 5 MHz / B / Chain 1 / 10GHz ~ 22GHz



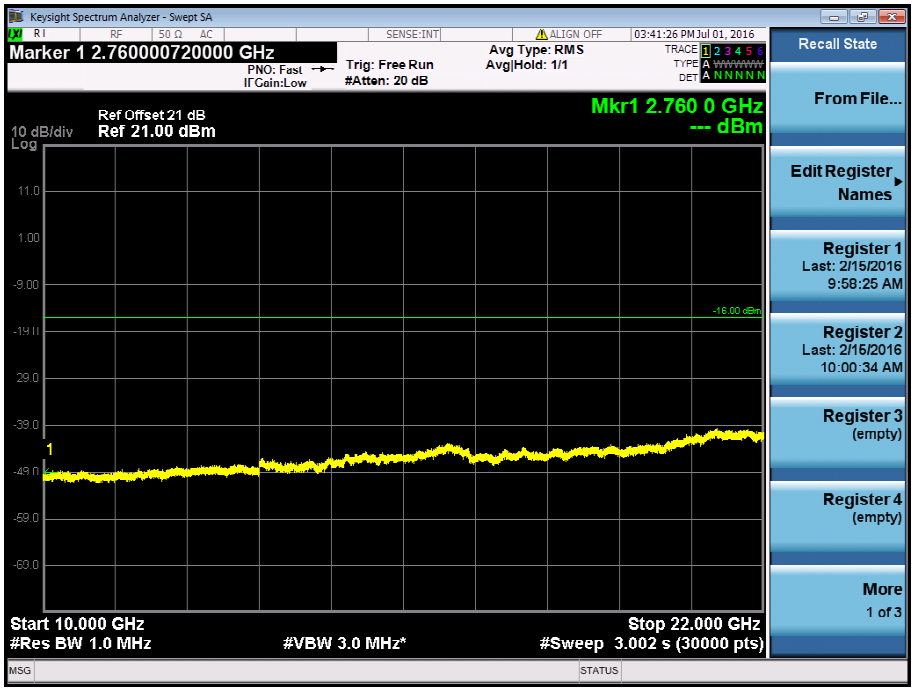
Conducted Spurious Emission Plot on 5 MHz / M / Chain 0 / 9kHz ~ 3GHz



Conducted Spurious Emission Plot on 5 MHz / M / Chain 0 / 3GHz ~ 10GHz

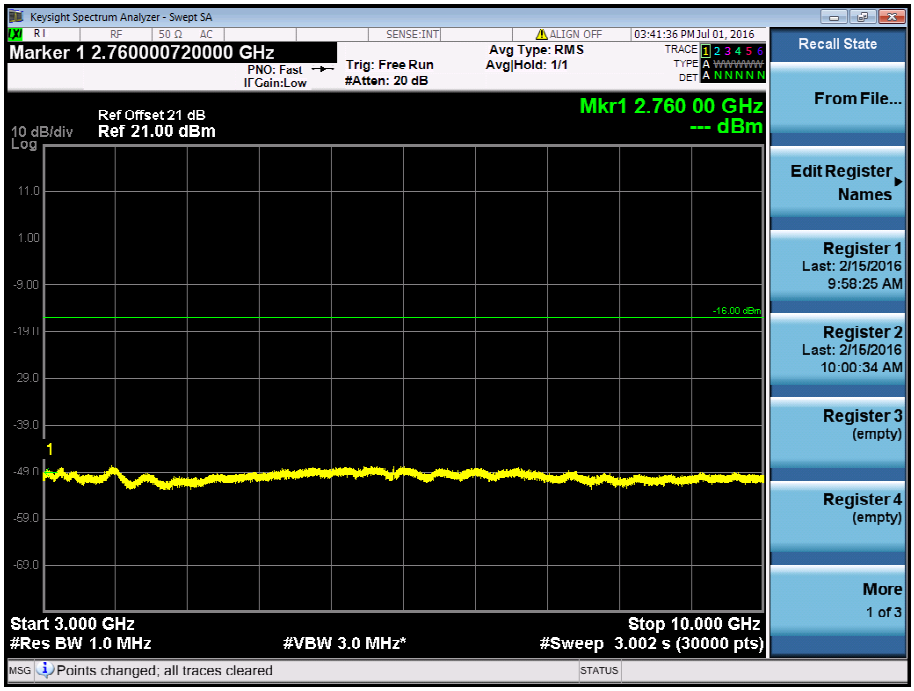


Conducted Spurious Emission Plot on 5 MHz / M / Chain 0 / 10GHz ~ 22GHz

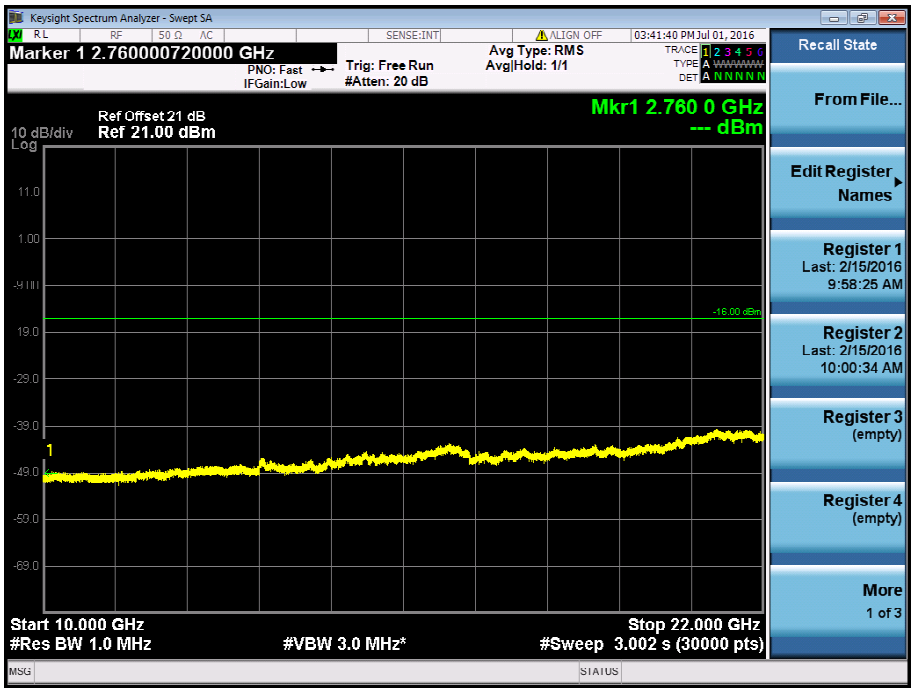


Conducted Spurious Emission Plot on 5 MHz / M / Chain 1 / 9kHz ~ 3GHz

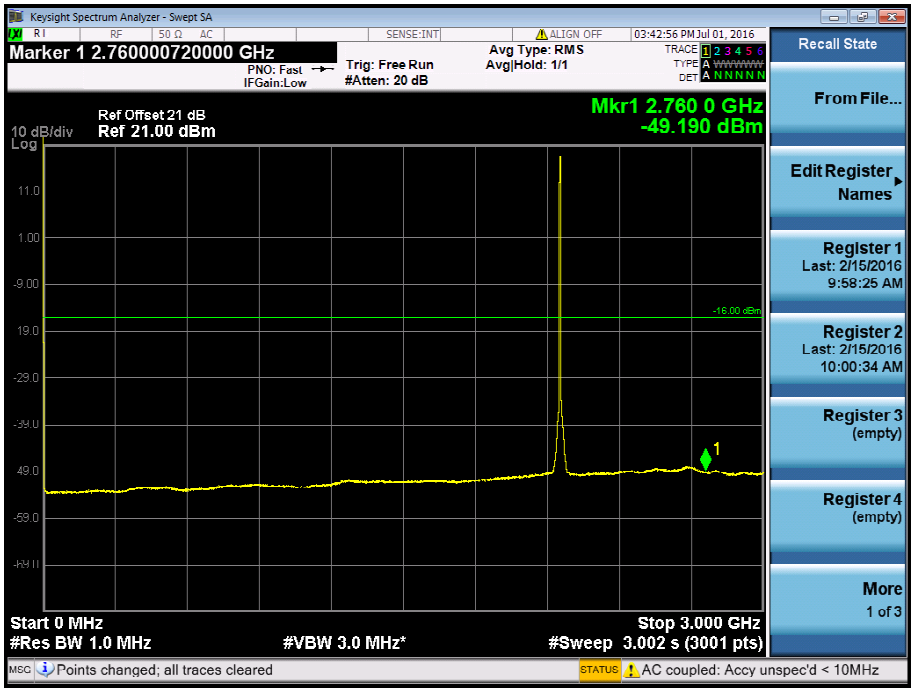
Conducted Spurious Emission Plot on 5 MHz / M / Chain 1 / 3GHz ~ 10GHz



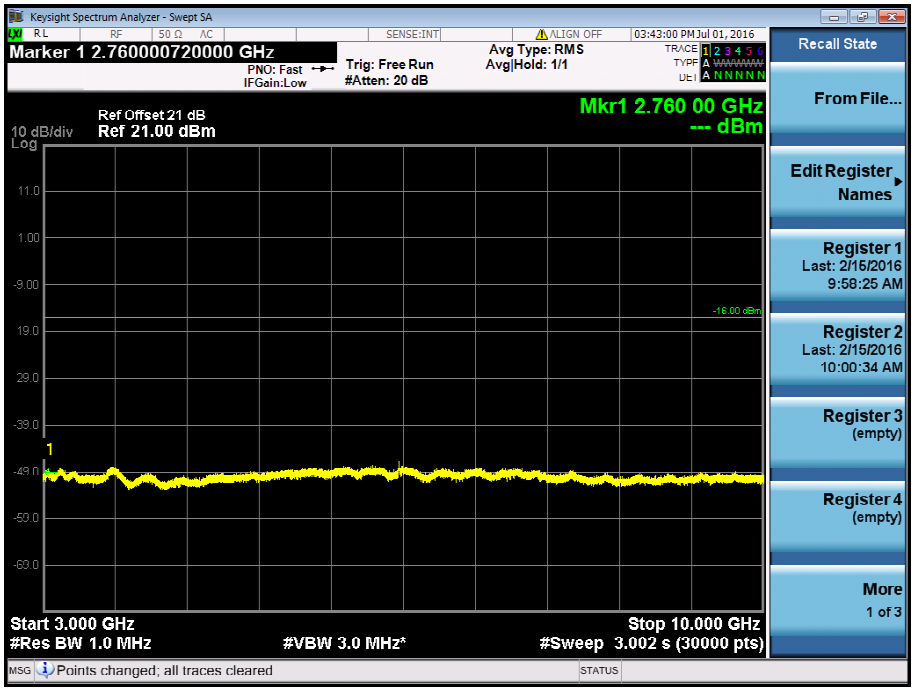
Conducted Spurious Emission Plot on 5 MHz / M / Chain 1 / 10GHz ~ 22GHz



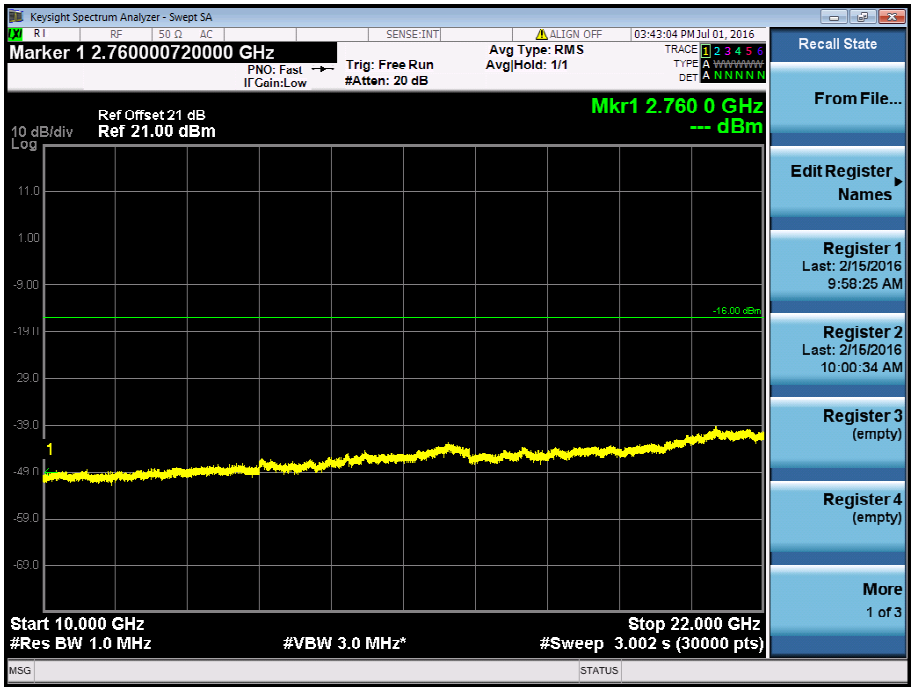
Conducted Spurious Emission Plot on 5 MHz / T / Chain 0 / 9kHz ~ 3GHz



Conducted Spurious Emission Plot on 5 MHz / T / Chain 0 / 3GHz ~ 10GHz

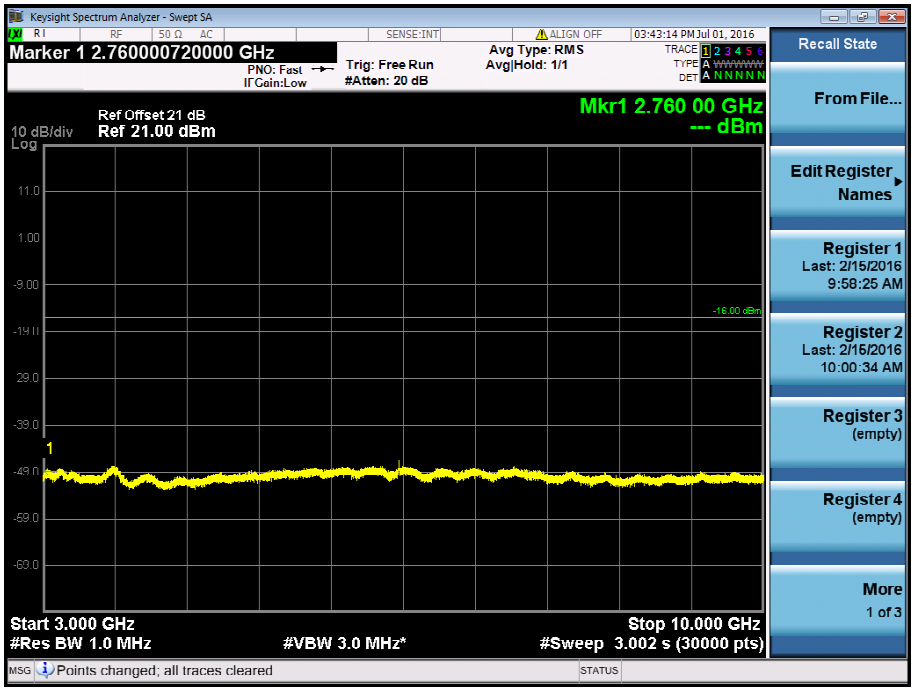


Conducted Spurious Emission Plot on 5 MHz / T / Chain 0 / 10GHz ~ 22GHz



Conducted Spurious Emission Plot on 5 MHz / T / Chain 1 / 9kHz ~ 3GHz

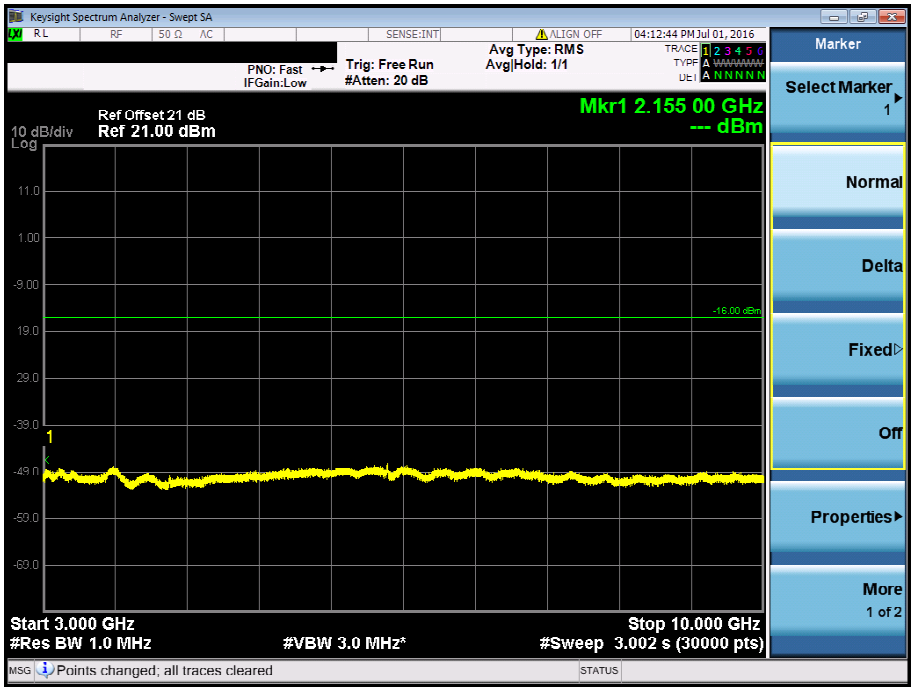
Conducted Spurious Emission Plot on 5 MHz / T / Chain 1 / 3GHz ~ 10GHz



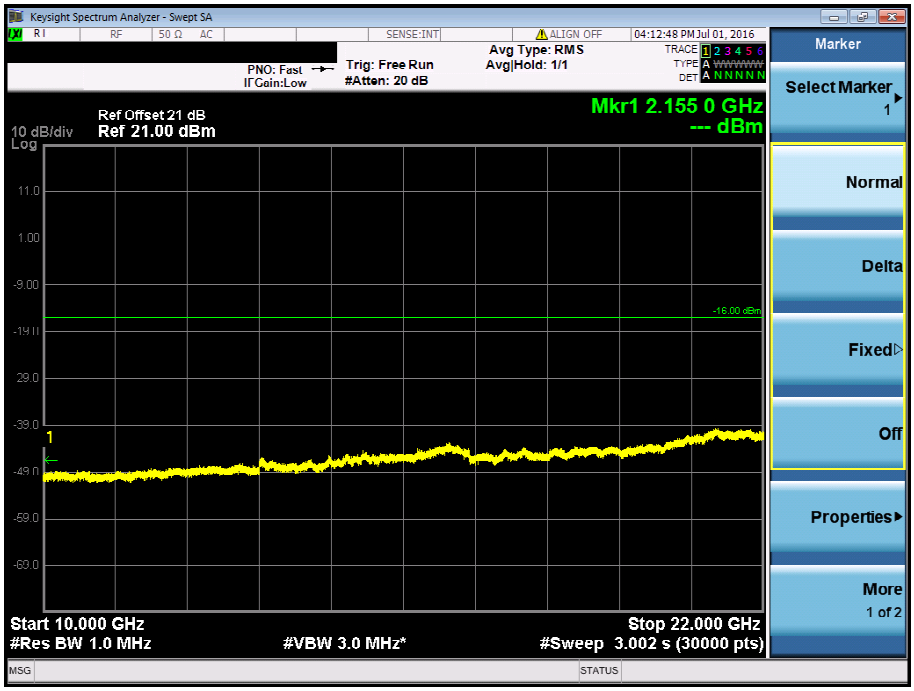
Conducted Spurious Emission Plot on 5 MHz / T / Chain 1 / 10GHz ~ 22GHz

Conducted Spurious Emission Plot on 10 MHz / B / Chain 0 / 9kHz ~ 3GHz

Conducted Spurious Emission Plot on 10 MHz / B / Chain 0 / 3GHz ~ 10GHz

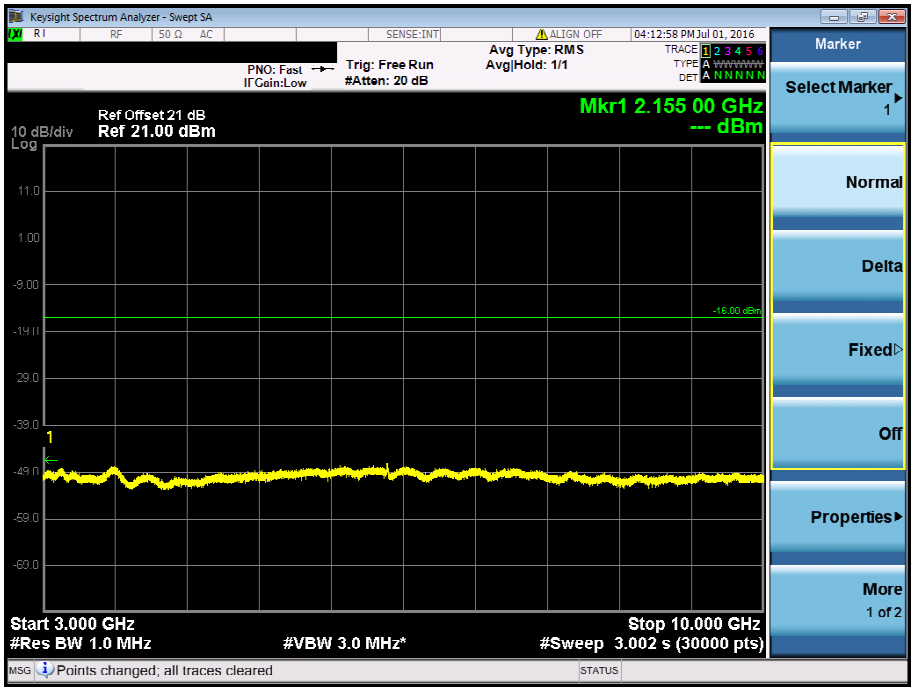


Conducted Spurious Emission Plot on 10 MHz / B / Chain 0 / 10GHz ~ 22GHz

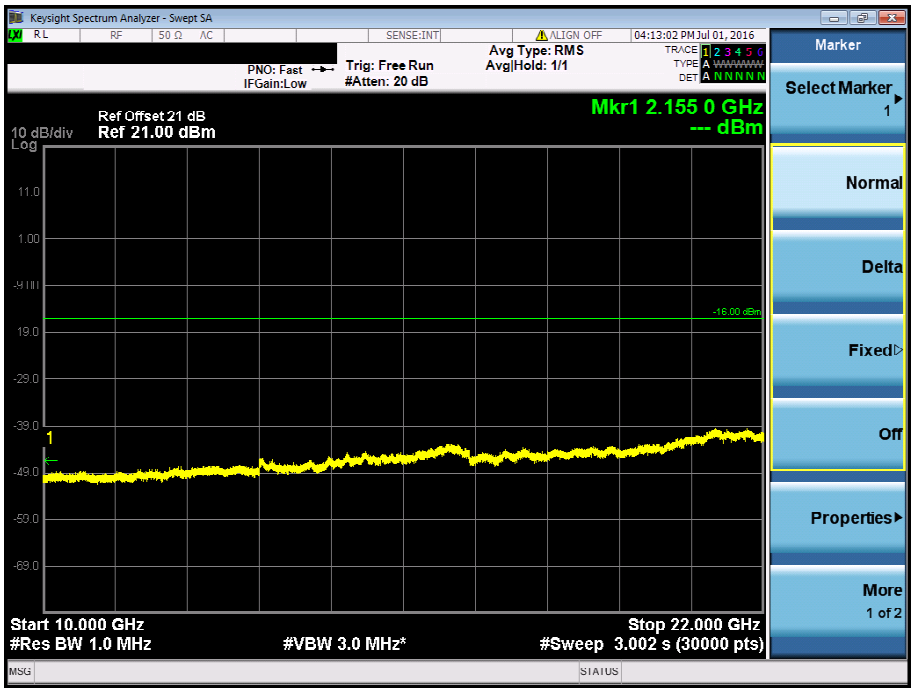


Conducted Spurious Emission Plot on 10 MHz / B / Chain 1 / 9kHz ~ 3GHz

Conducted Spurious Emission Plot on 10 MHz / B / Chain 1 / 3GHz ~ 10GHz

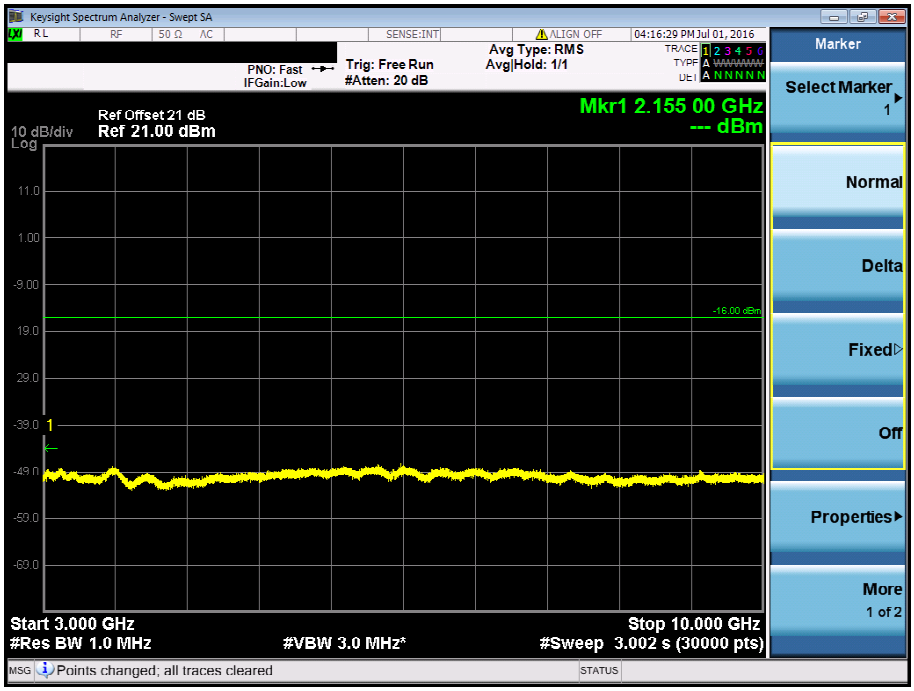


Conducted Spurious Emission Plot on 10 MHz / B / Chain 1 / 10GHz ~ 22GHz

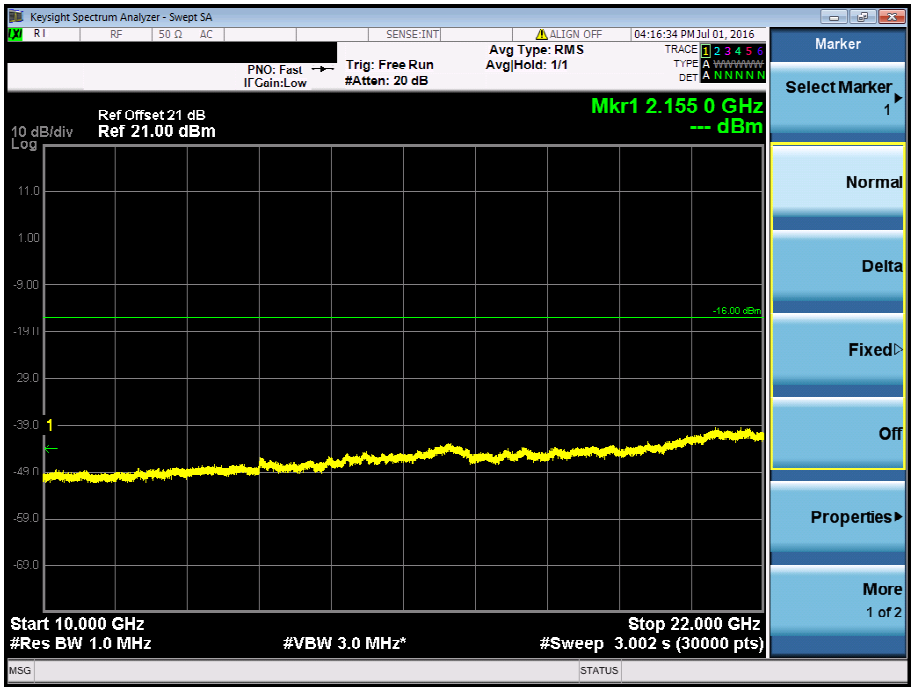


Conducted Spurious Emission Plot on 10 MHz / M / Chain 0 / 9kHz ~ 3GHz

Conducted Spurious Emission Plot on 10 MHz / M / Chain 0 / 3GHz ~ 10GHz

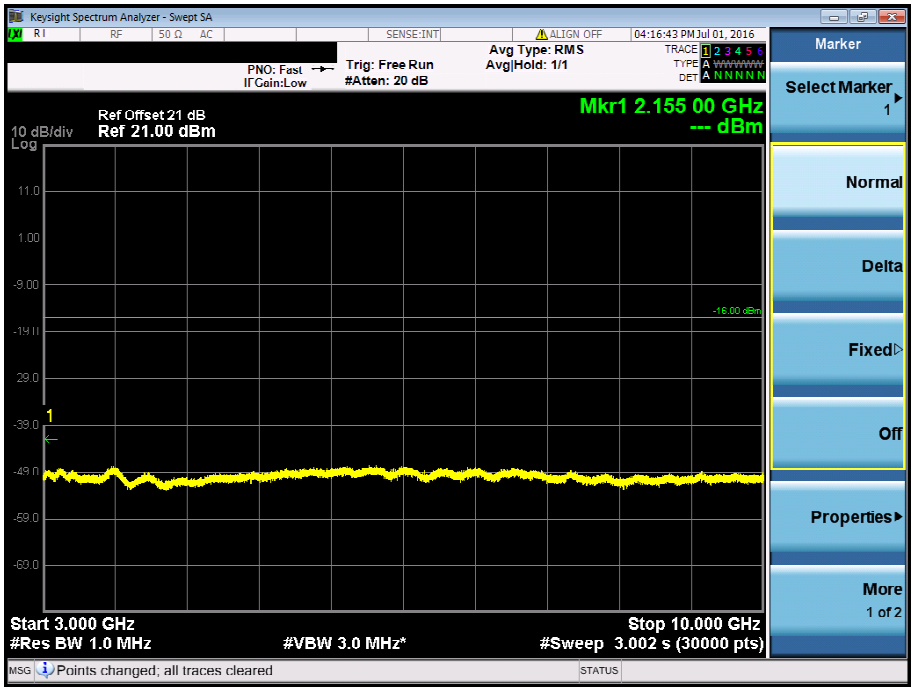


Conducted Spurious Emission Plot on 10 MHz / M / Chain 0 / 10GHz ~ 22GHz

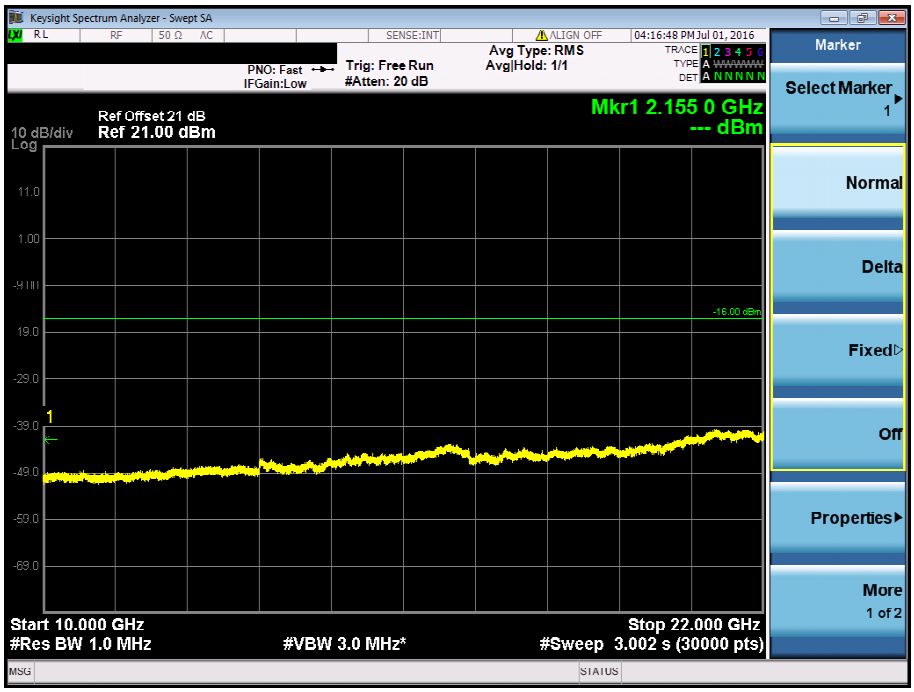


Conducted Spurious Emission Plot on 10 MHz / M / Chain 1 / 9kHz ~ 3GHz

Conducted Spurious Emission Plot on 10 MHz / M / Chain 1 / 3GHz ~ 10GHz

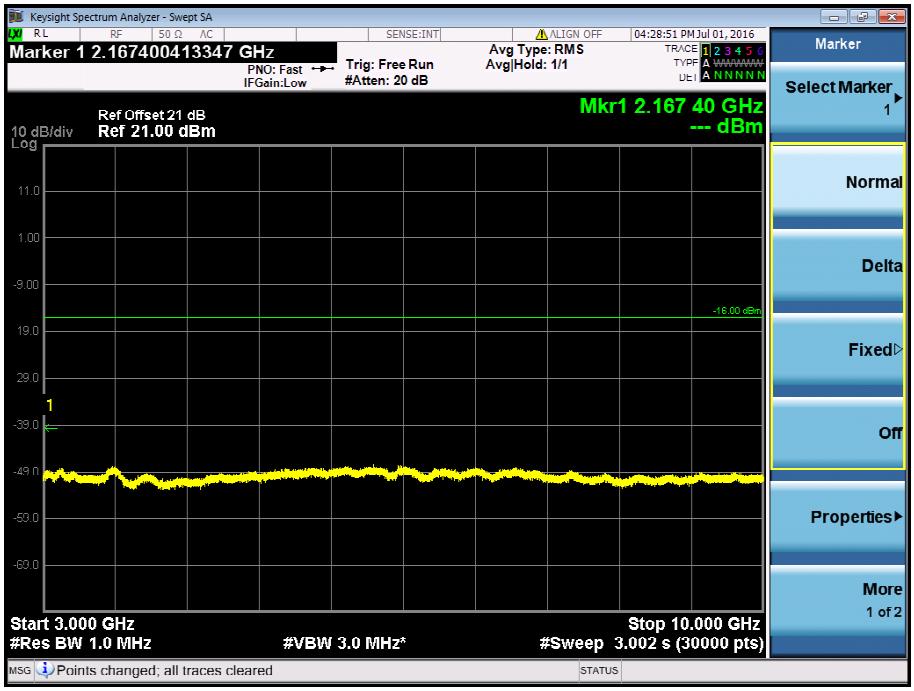


Conducted Spurious Emission Plot on 10 MHz / M / Chain 1 / 10GHz ~ 22GHz

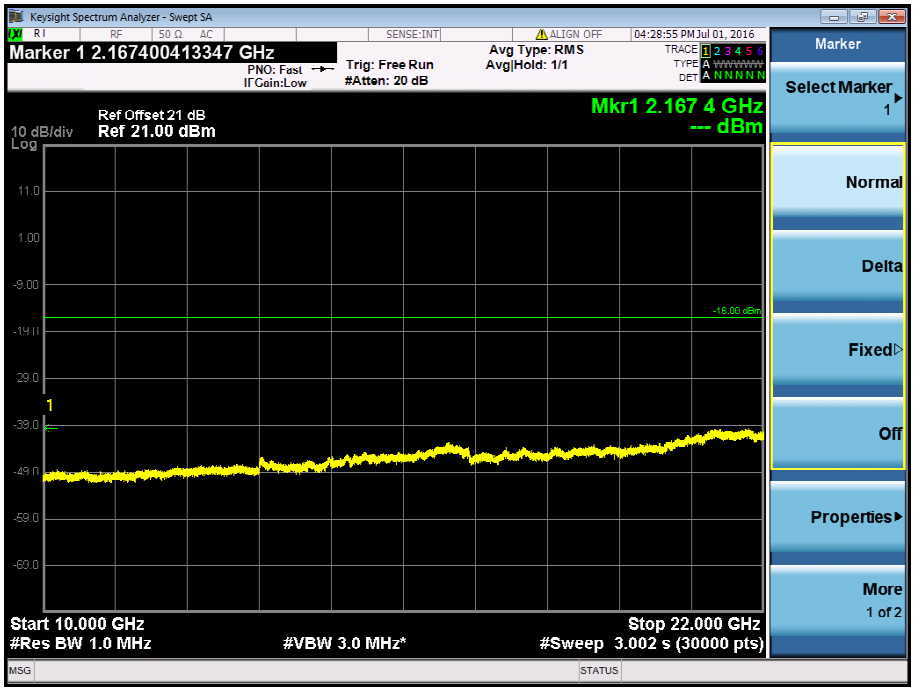


Conducted Spurious Emission Plot on 10 MHz / T / Chain 0 / 9kHz ~ 3GHz

Conducted Spurious Emission Plot on 10 MHz / T / Chain 0 / 3GHz ~ 10GHz

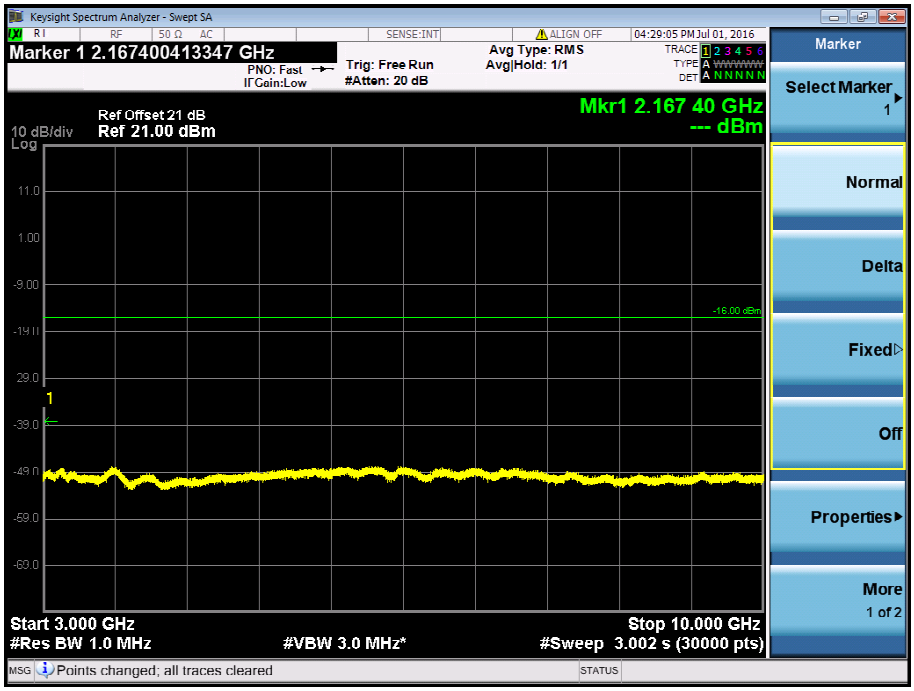


Conducted Spurious Emission Plot on 10 MHz / T / Chain 0 / 10GHz ~ 22GHz

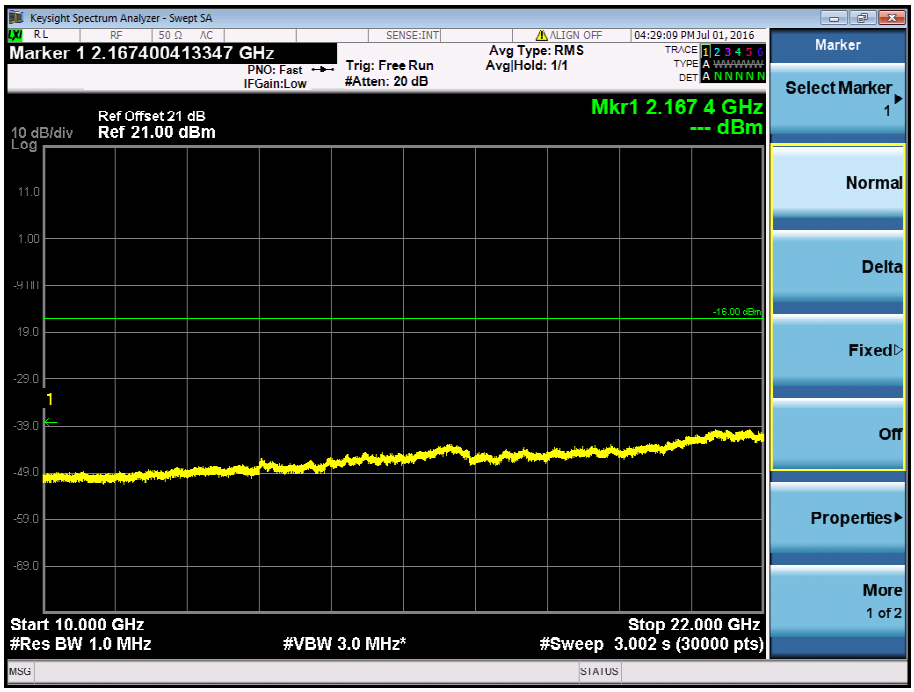


Conducted Spurious Emission Plot on 10 MHz / T / Chain 1 / 9kHz ~ 3GHz

Conducted Spurious Emission Plot on 10 MHz / T / Chain 1 / 3GHz ~ 10GHz

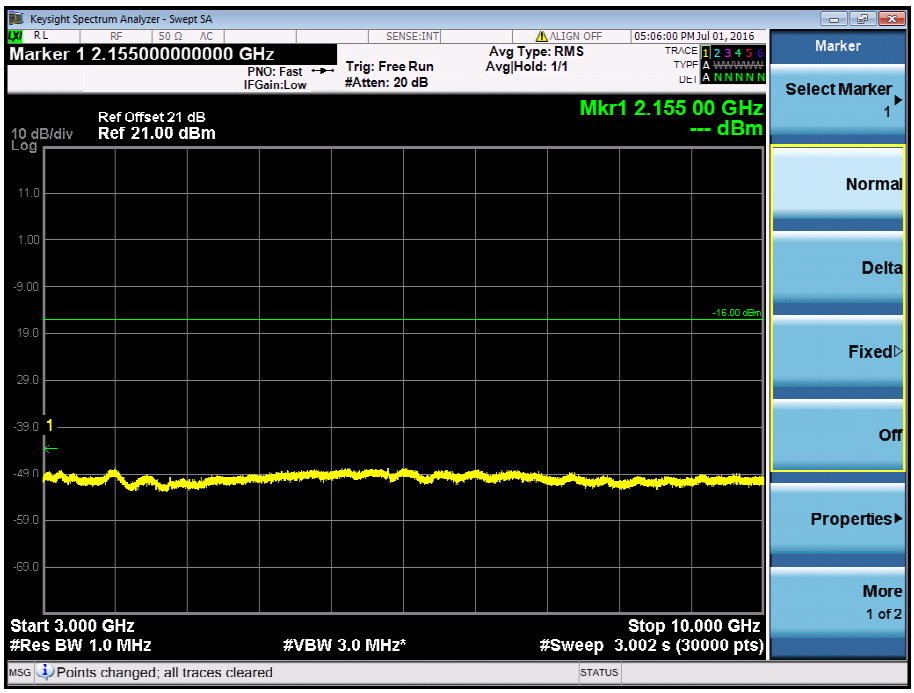


Conducted Spurious Emission Plot on 10 MHz / T / Chain 1 / 10GHz ~ 22GHz

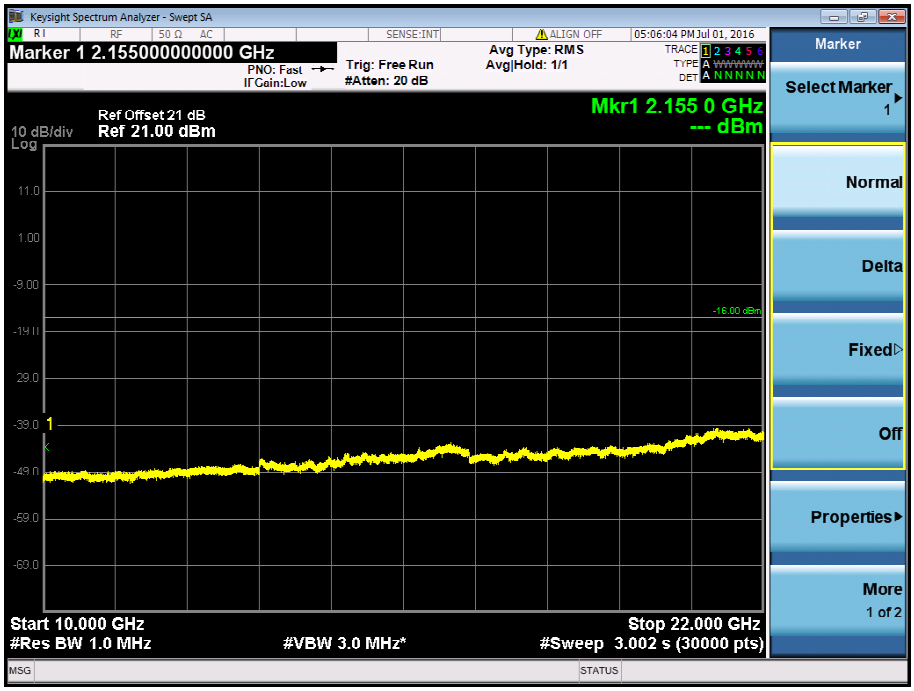


Conducted Spurious Emission Plot on 15 MHz / B / Chain 0 / 9kHz ~ 3GHz

Conducted Spurious Emission Plot on 15 MHz / B / Chain 0 / 3GHz ~ 10GHz

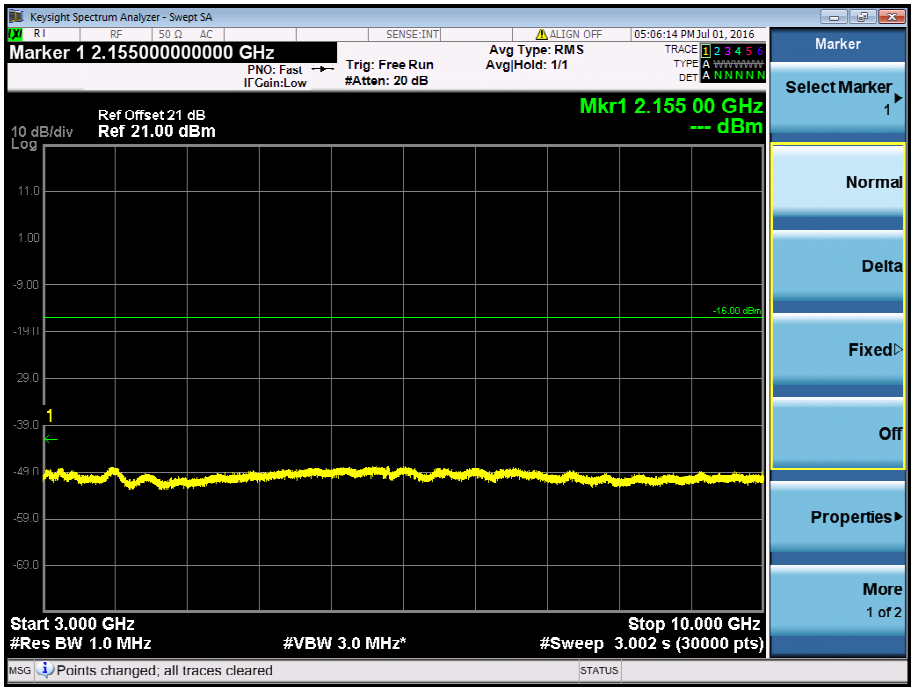


Conducted Spurious Emission Plot on 15 MHz / B / Chain 0 / 10GHz ~ 22GHz



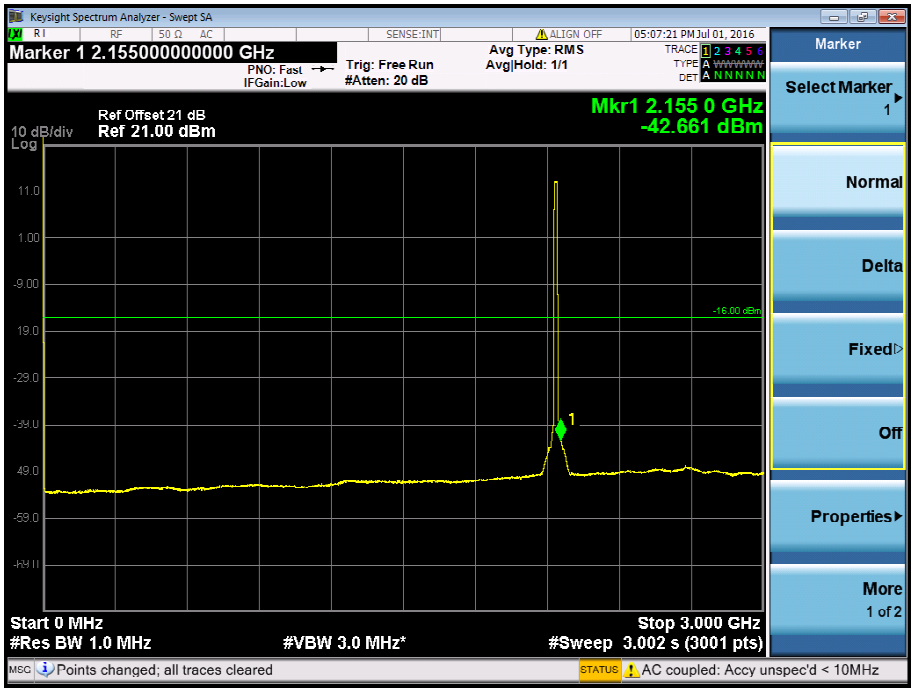
Conducted Spurious Emission Plot on 15 MHz / B / Chain 1 / 9kHz ~ 3GHz

Conducted Spurious Emission Plot on 15 MHz / B / Chain 1 / 3GHz ~ 10GHz

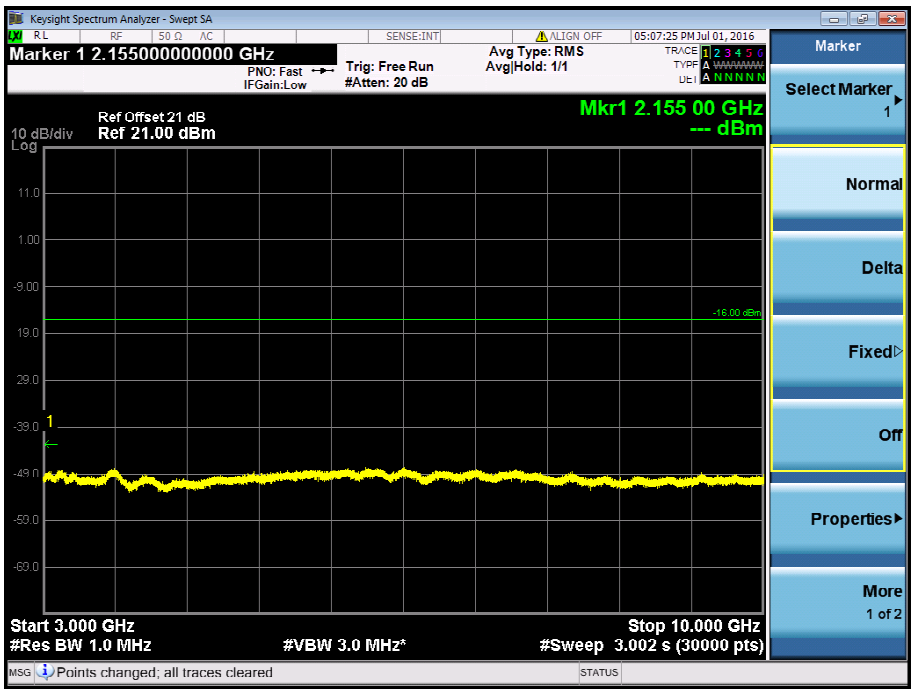


Conducted Spurious Emission Plot on 15 MHz / B / Chain 1 / 10GHz ~ 22GHz

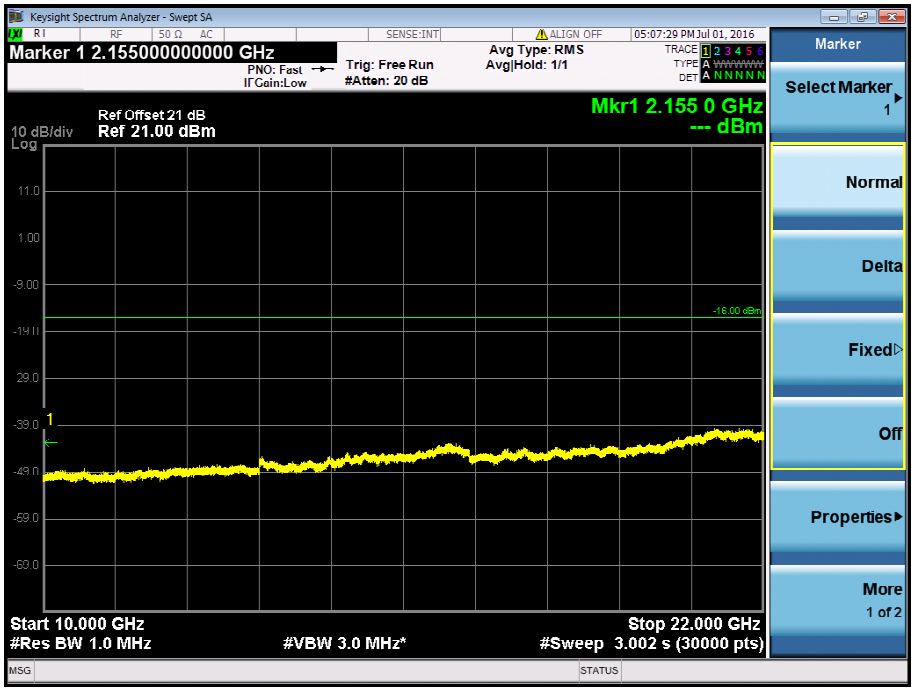
Conducted Spurious Emission Plot on 15 MHz / M / Chain 0 / 9kHz ~ 3GHz



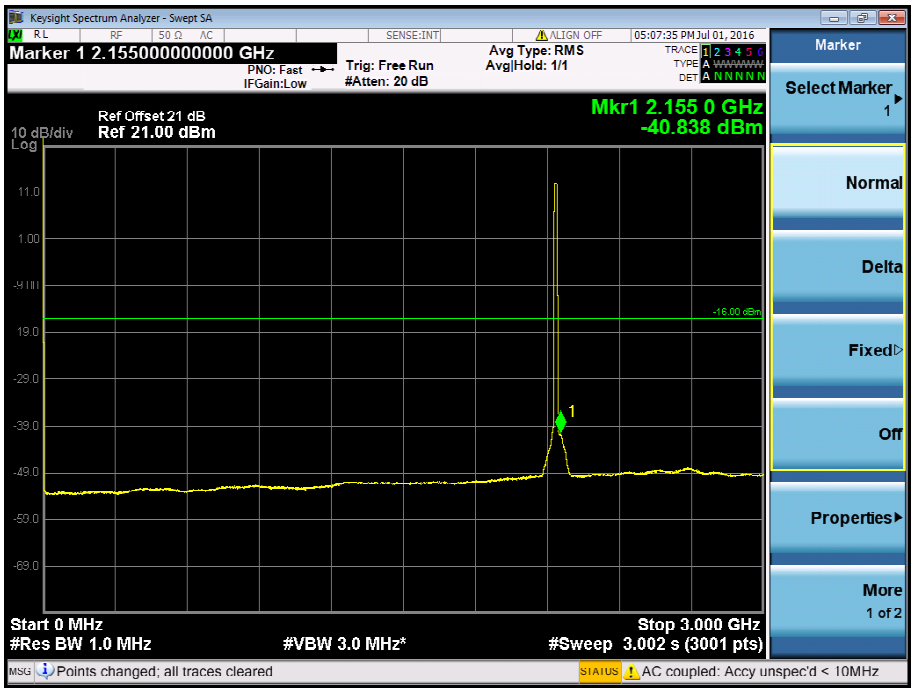
Conducted Spurious Emission Plot on 15 MHz / M / Chain 0 / 3GHz ~ 10GHz



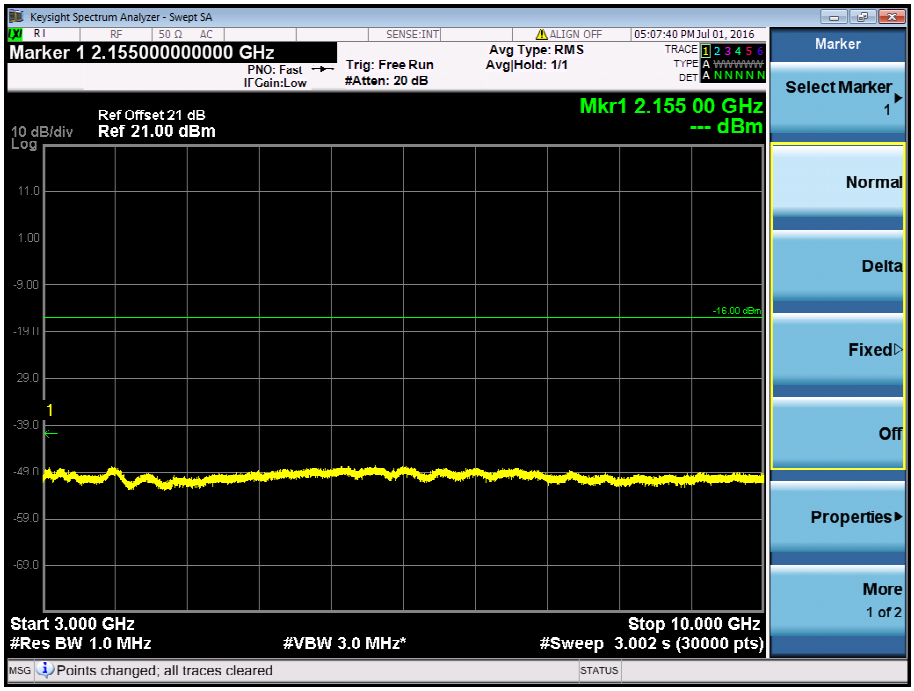
Conducted Spurious Emission Plot on 15 MHz / M / Chain 0 / 10GHz ~ 22GHz



Conducted Spurious Emission Plot on 15 MHz / M / Chain 1 / 9kHz ~ 3GHz



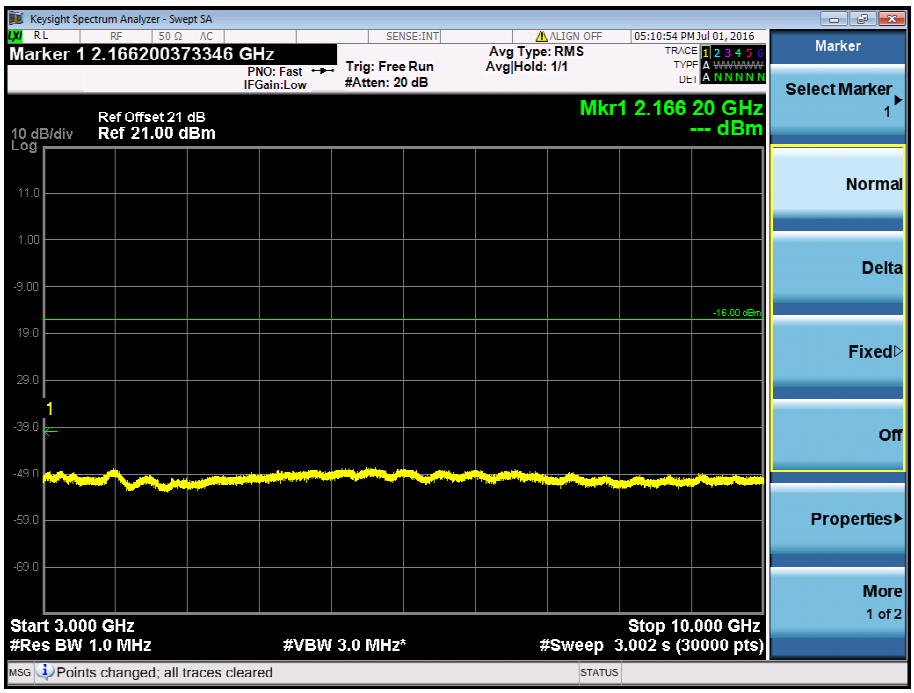
Conducted Spurious Emission Plot on 15 MHz / M / Chain 1 / 3GHz ~ 10GHz



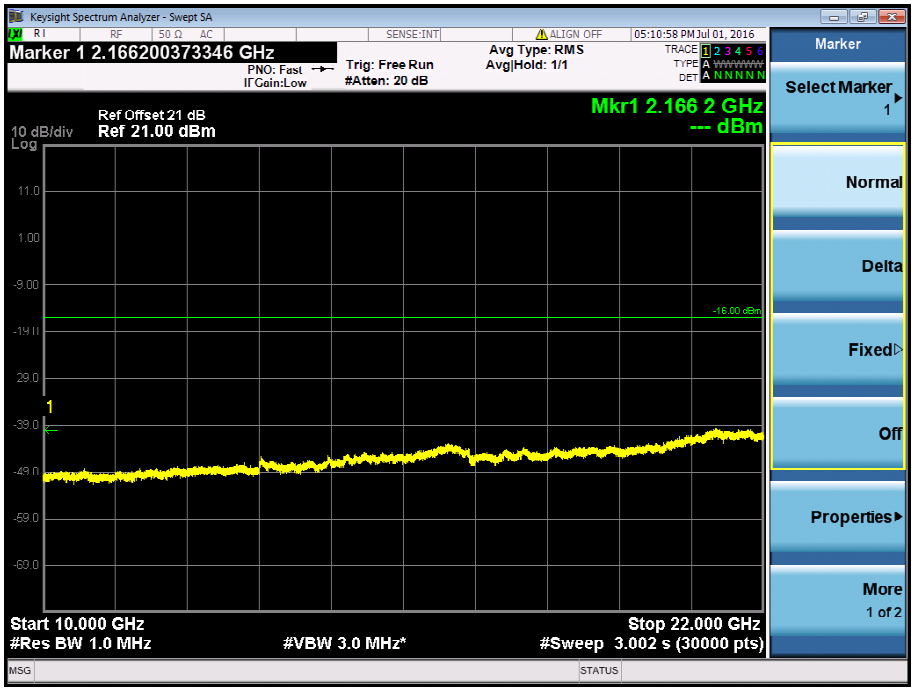
Conducted Spurious Emission Plot on 15 MHz / M / Chain 1 / 10GHz ~ 22GHz

Conducted Spurious Emission Plot on 15 MHz / T / Chain 0 / 9kHz ~ 3GHz

Conducted Spurious Emission Plot on 15 MHz / T / Chain 0 / 3GHz ~ 10GHz

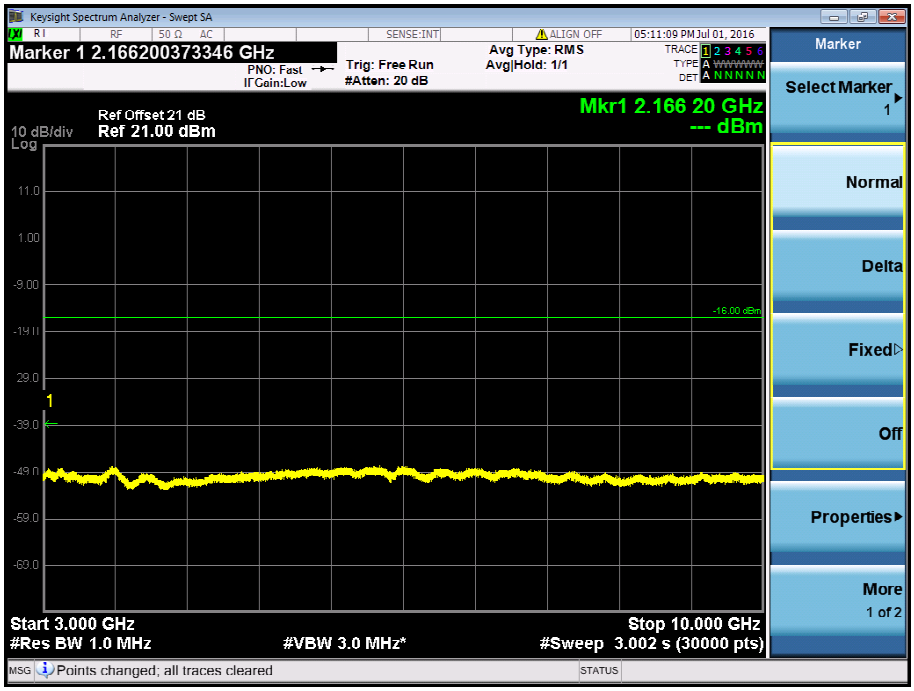


Conducted Spurious Emission Plot on 15 MHz / T / Chain 0 / 10GHz ~ 22GHz

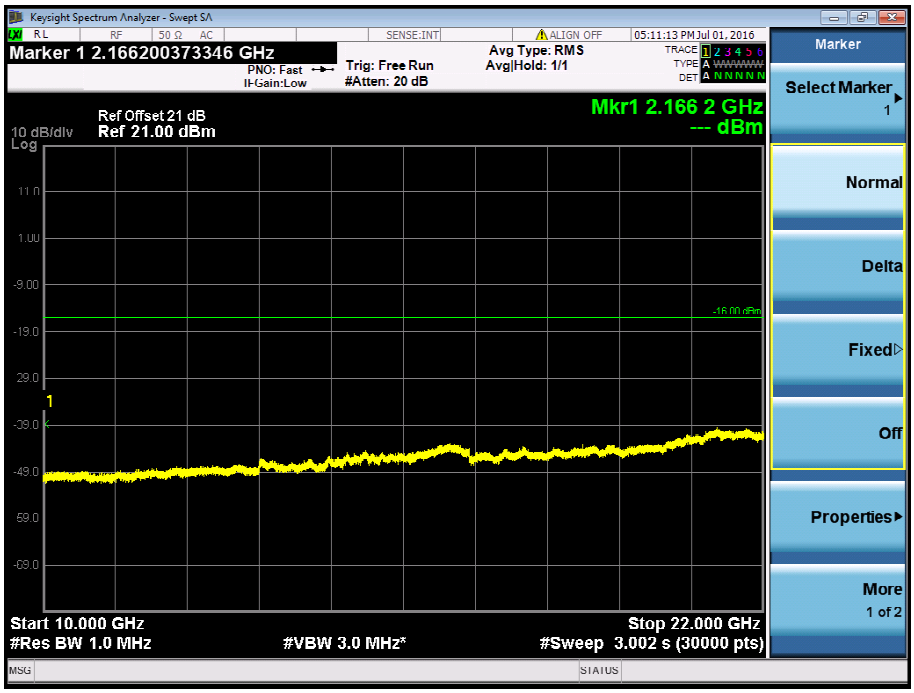


Conducted Spurious Emission Plot on 15 MHz / T / Chain 1 / 9kHz ~ 3GHz

Conducted Spurious Emission Plot on 15 MHz / T / Chain 1 / 3GHz ~ 10GHz

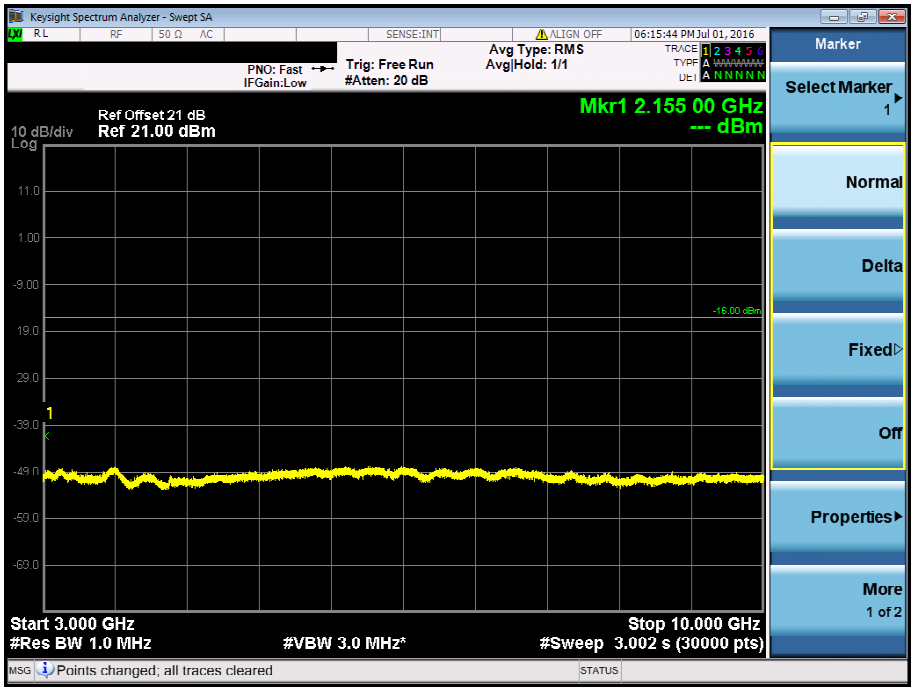


Conducted Spurious Emission Plot on 15 MHz / T / Chain 1 / 10GHz ~ 22GHz

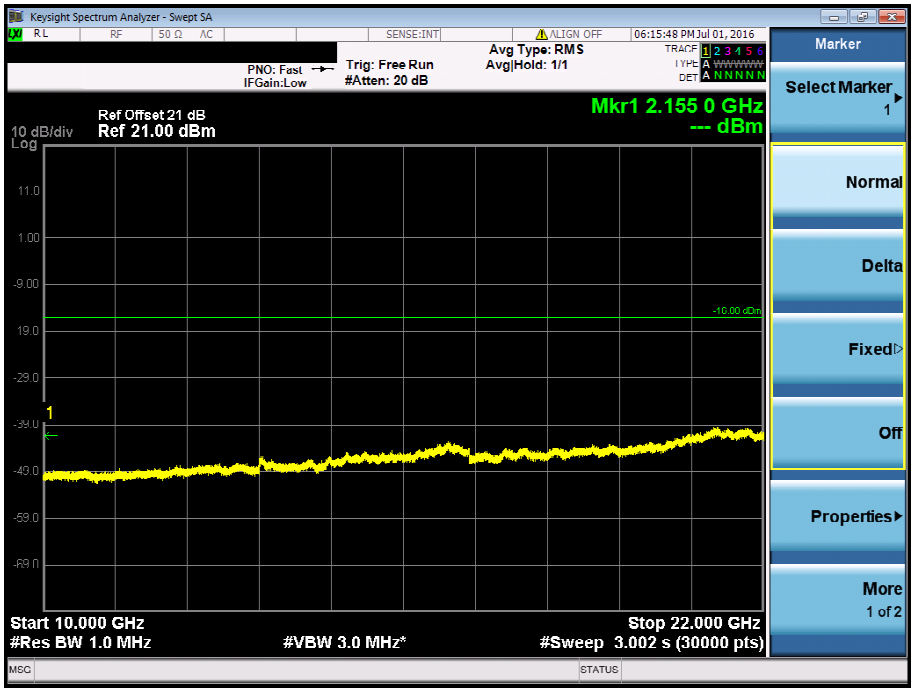


Conducted Spurious Emission Plot on 20 MHz / B / Chain 0 / 9kHz ~ 3GHz

Conducted Spurious Emission Plot on 20 MHz / B / Chain 0 / 3GHz ~ 10GHz

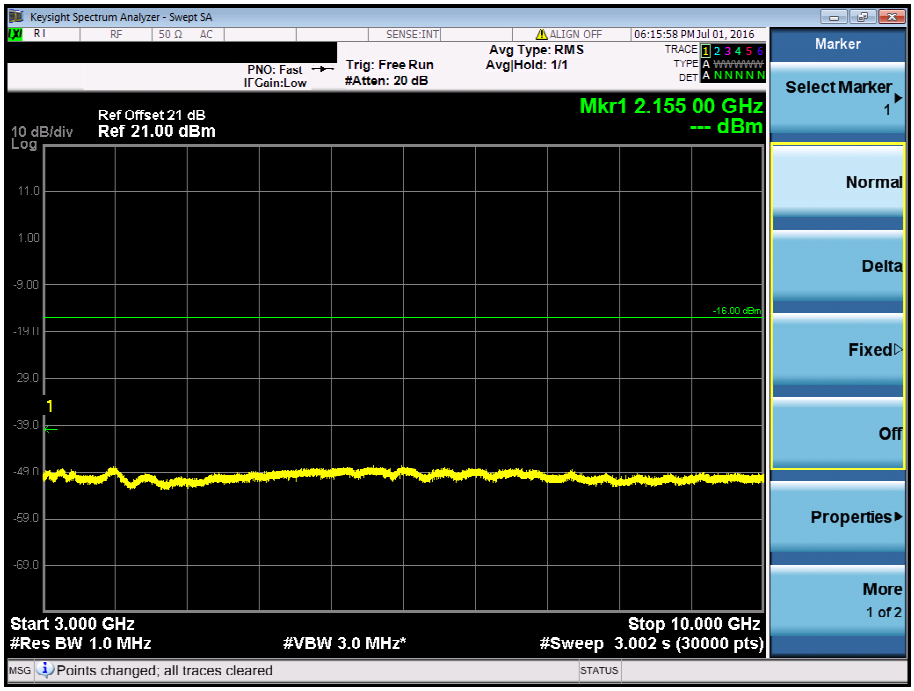


Conducted Spurious Emission Plot on 20 MHz / B / Chain 0 / 10GHz ~ 22GHz

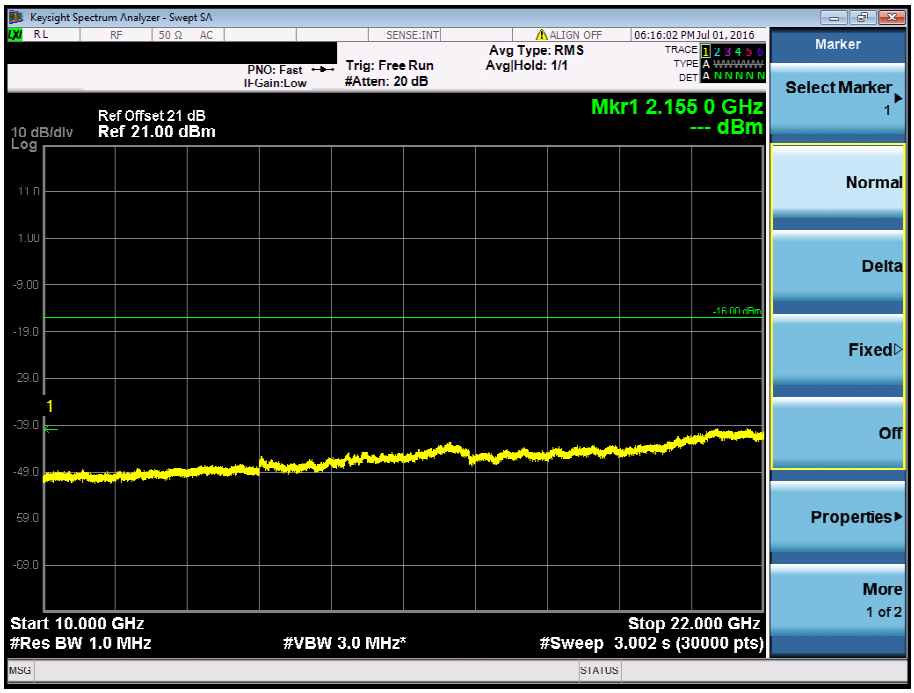


Conducted Spurious Emission Plot on 20 MHz / B / Chain 1 / 9kHz ~ 3GHz

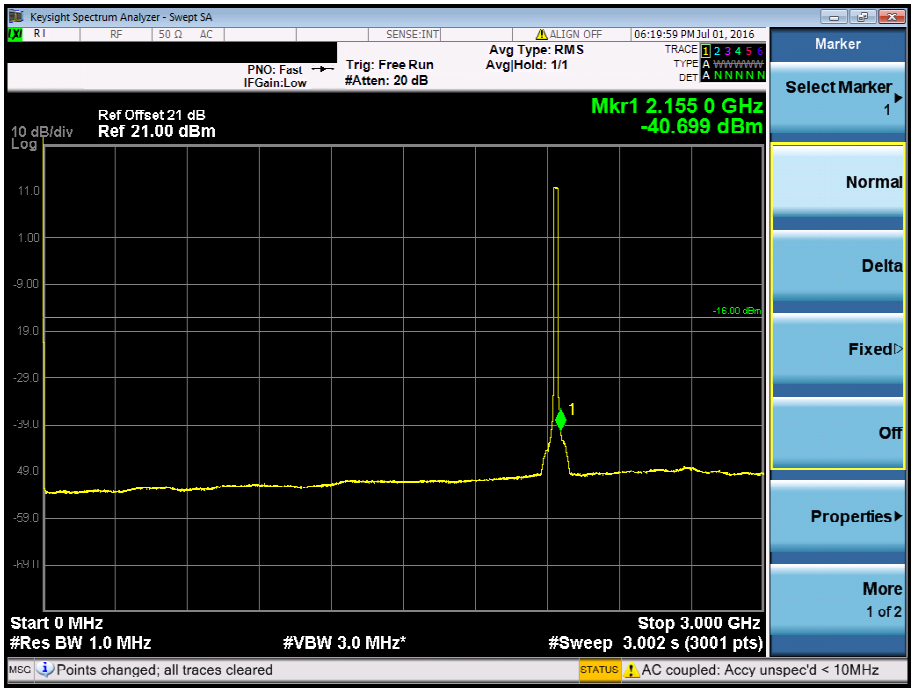
Conducted Spurious Emission Plot on 20 MHz / B / Chain 1 / 3GHz ~ 10GHz



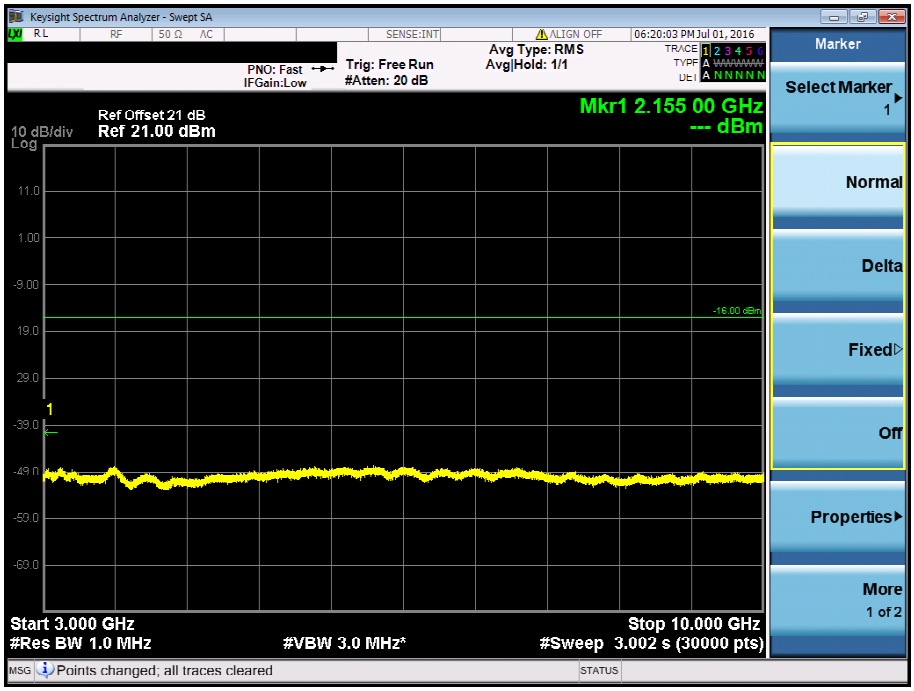
Conducted Spurious Emission Plot on 20 MHz / B / Chain 1 / 10GHz ~ 22GHz



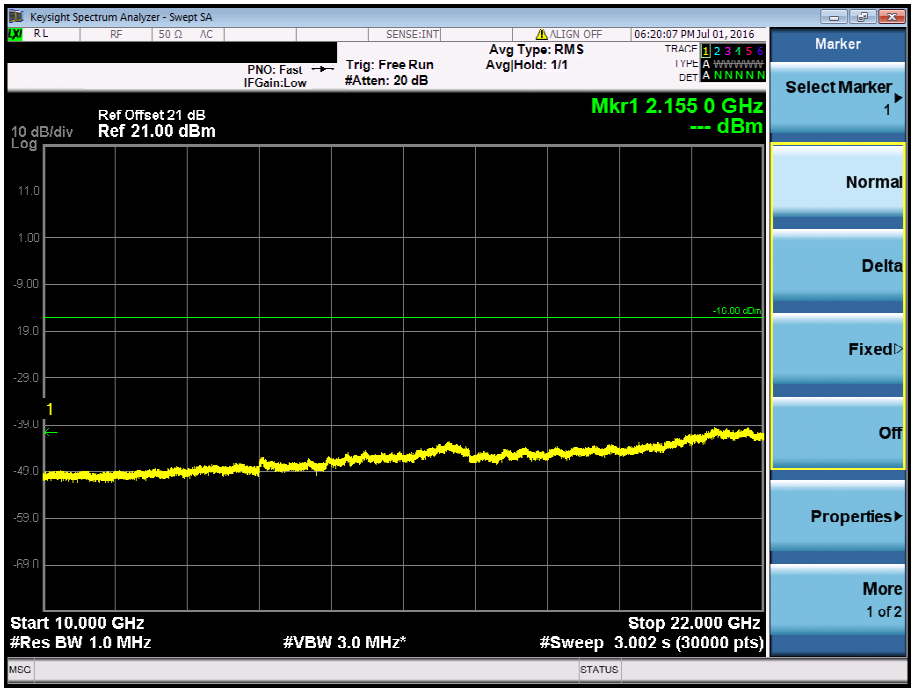
Conducted Spurious Emission Plot on 20 MHz / M / Chain 0 / 9kHz ~ 3GHz



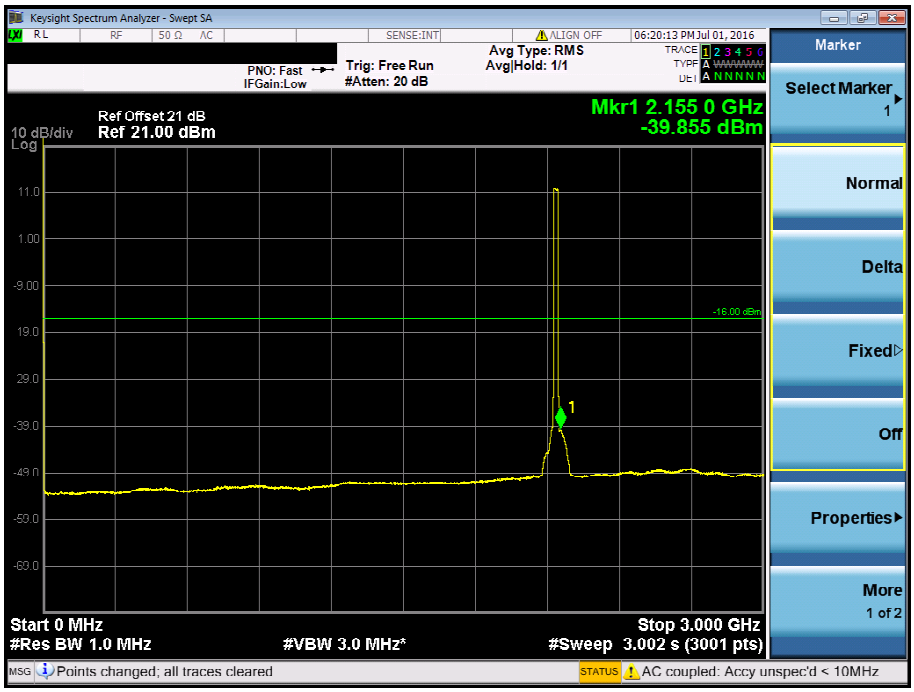
Conducted Spurious Emission Plot on 20 MHz / M / Chain 0 / 3GHz ~ 10GHz



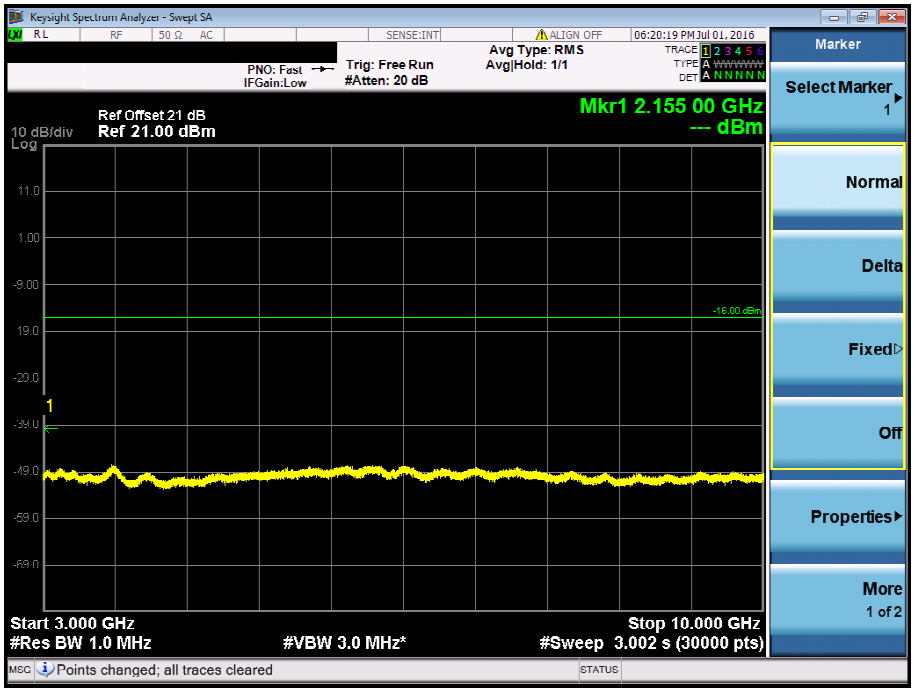
Conducted Spurious Emission Plot on 20 MHz / M / Chain 0 / 10GHz ~ 22GHz



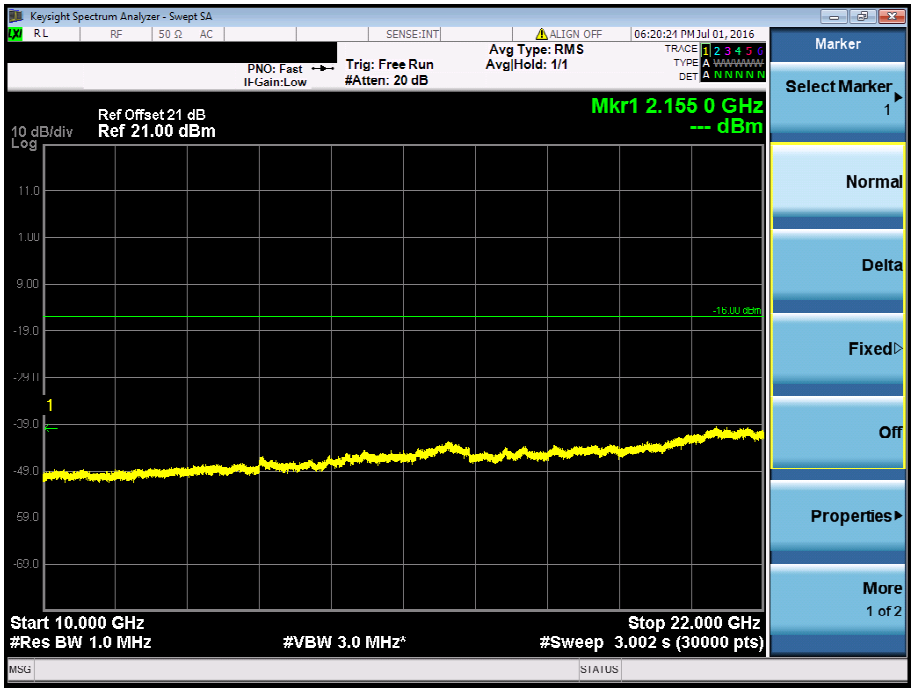
Conducted Spurious Emission Plot on 20 MHz / M / Chain 1 / 9kHz ~ 3GHz



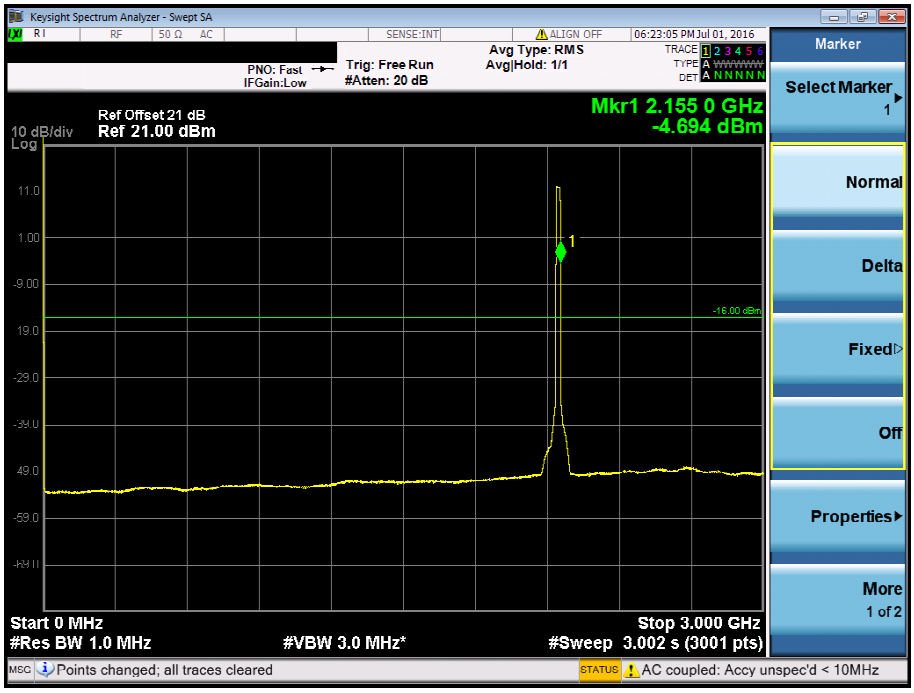
Conducted Spurious Emission Plot on 20 MHz / M / Chain 1 / 3GHz ~ 10GHz



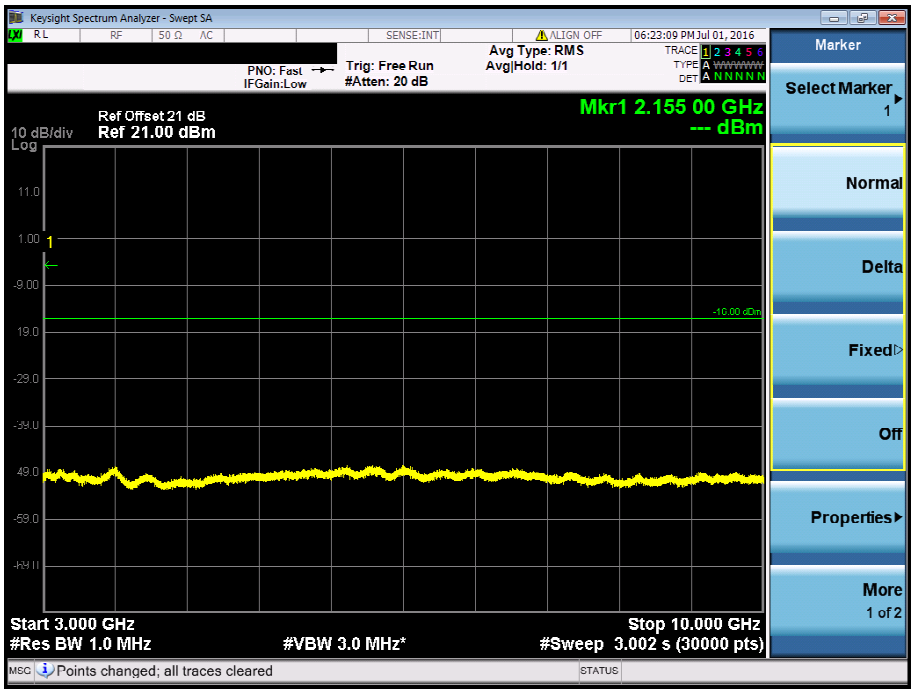
Conducted Spurious Emission Plot on 20 MHz / M / Chain 1 / 10GHz ~ 22GHz



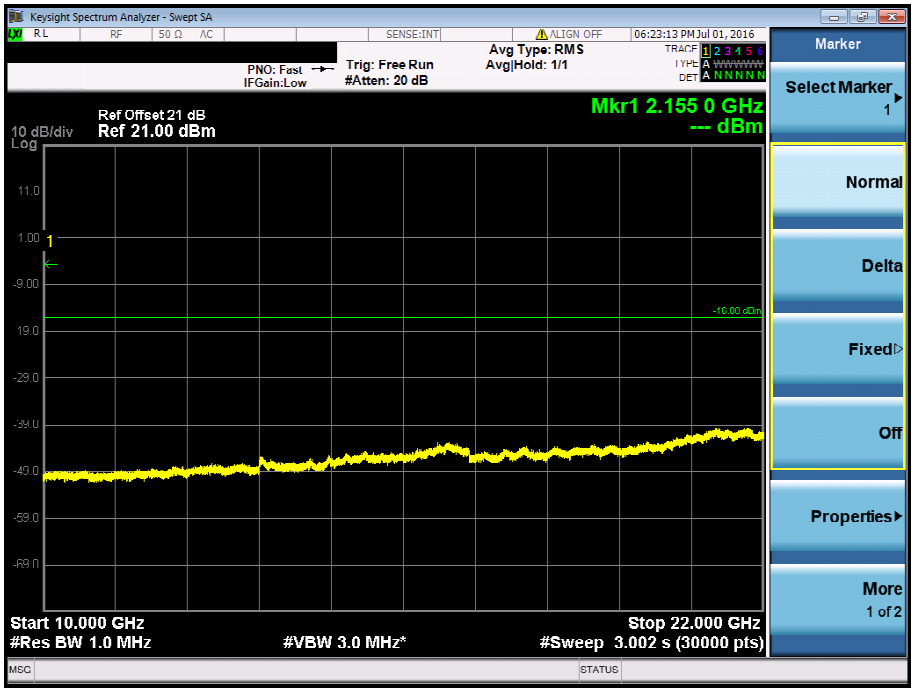
Conducted Spurious Emission Plot on 20 MHz / T / Chain 0 / 9kHz ~ 3GHz



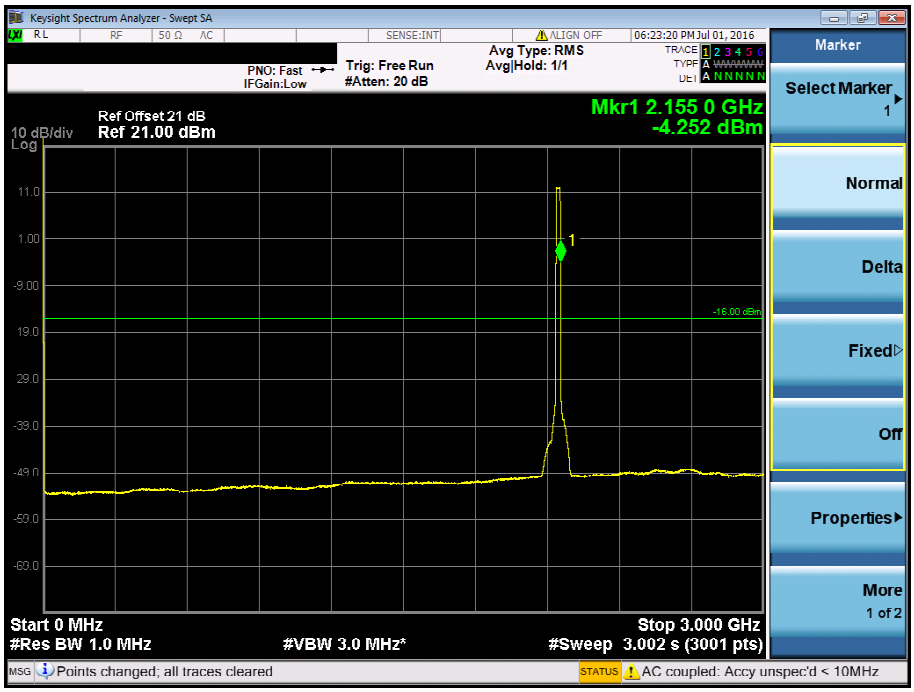
Conducted Spurious Emission Plot on 20 MHz / T / Chain 0 / 3GHz ~ 10GHz



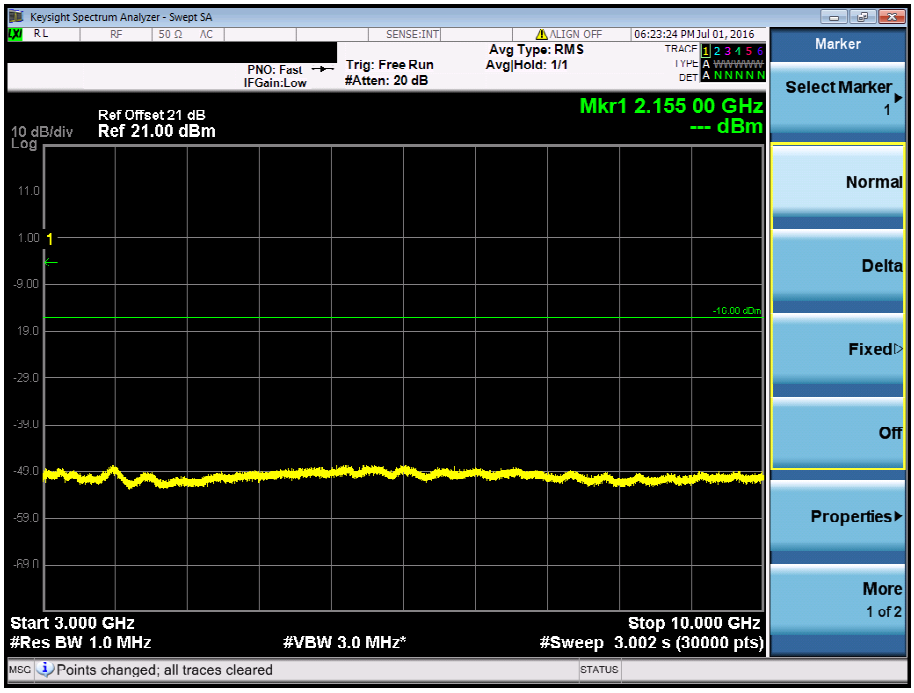
Conducted Spurious Emission Plot on 20 MHz / T / Chain 0 / 10GHz ~ 22GHz



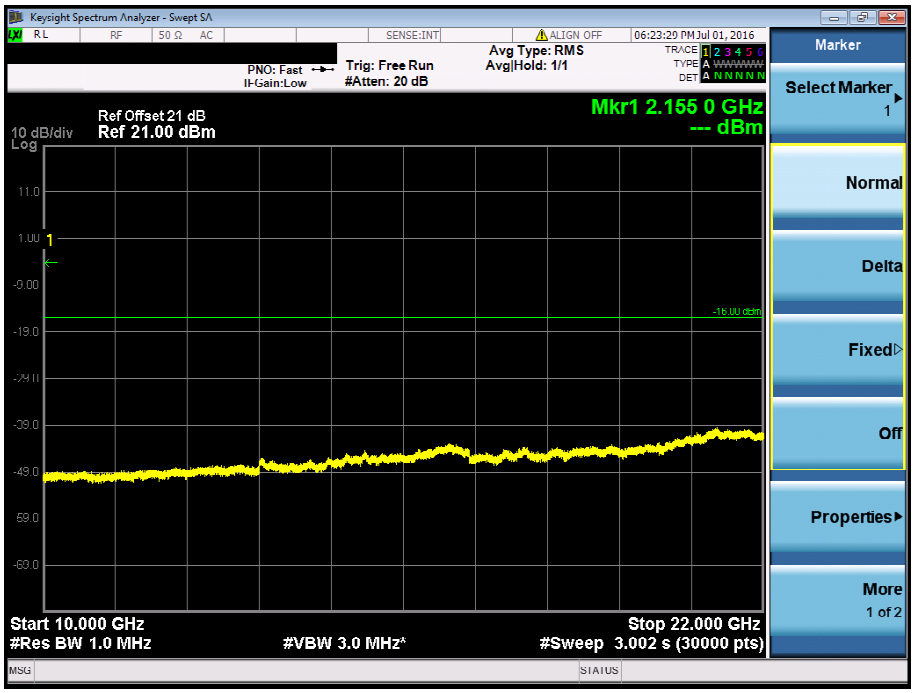
Conducted Spurious Emission Plot on 20 MHz / T / Chain 1 / 9kHz ~ 3GHz



Conducted Spurious Emission Plot on 20 MHz / T / Chain 1 / 3GHz ~ 10GHz



Conducted Spurious Emission Plot on 20 MHz / T / Chain 1 / 10GHz ~ 22GHz



3.6 Field Strength of Spurious Radiation Measurement

3.6.1 Description of Field Strength of Spurious Radiated Measurement

The power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitter power (P) by a factor of at least 43 + 10 log (P) dB. The spectrum is scanned from 30 MHz up to a frequency including its 10th harmonic.

3.6.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

3.6.3 Test Procedures

1. The testing follows FCC KDB 971168 D01 v02r02 Section 5.8 and ANSI/TIA-603-D (2010) Section 2.2.12.
2. The EUT was placed on a rotatable wooden table 0.8 meters above the ground.
3. The EUT was set 3 meters from the receiving antenna, which was mounted on the antenna tower.
4. The table was rotated 360 degrees to determine the position of the highest spurious emission.
5. The height of the receiving antenna is varied between one meter and four meters to search for the maximum spurious emission for both horizontal and vertical polarizations.
6. Make the measurement with the spectrum analyzer's RBW = 1MHz, VBW = 3MHz, taking record of maximum spurious emission.
7. A horn antenna was substituted in place of the EUT and was driven by a signal generator.
8. Tune the output power of signal generator to the same emission level with EUT maximum spurious emission.
9. Taking the record of output power at antenna port.
10. Repeat step 7 to step 8 for another polarization.
11. EIRP (dBm) = S.G. Power – Tx Cable Loss + Tx Antenna Gain
12. ERP (dBm) = EIRP - 2.15
13. The RF fundamental frequency should be excluded against the limit line in the operating frequency band.
14. The limit line is derived from 43 + 10log(P) dB below the transmitter power P(Watts)

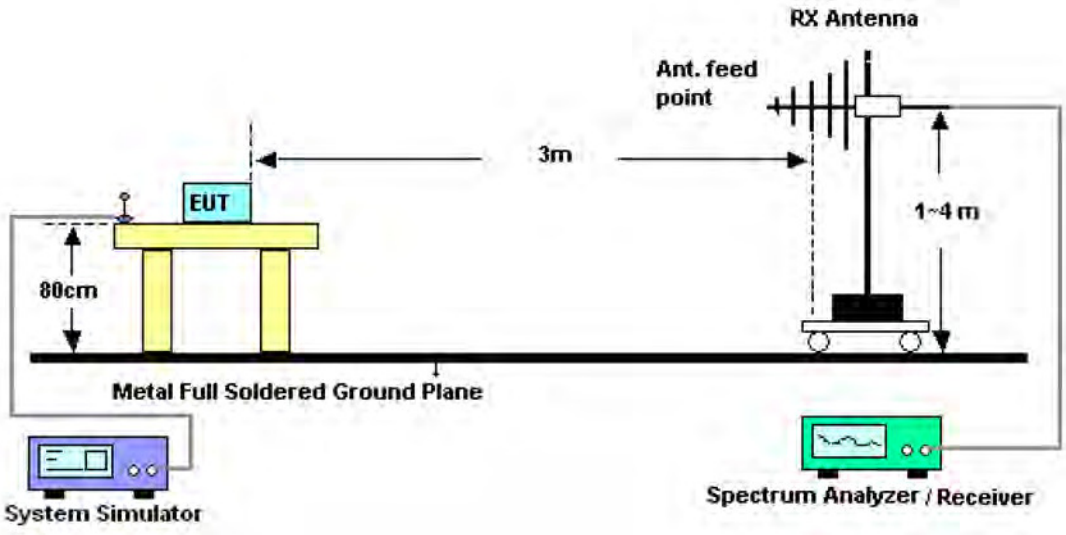
    = P(W) - [43 + 10log(P)] (dB)

    = [30 + 10log(P)] (dBm) - [43 + 10log(P)] (dB)

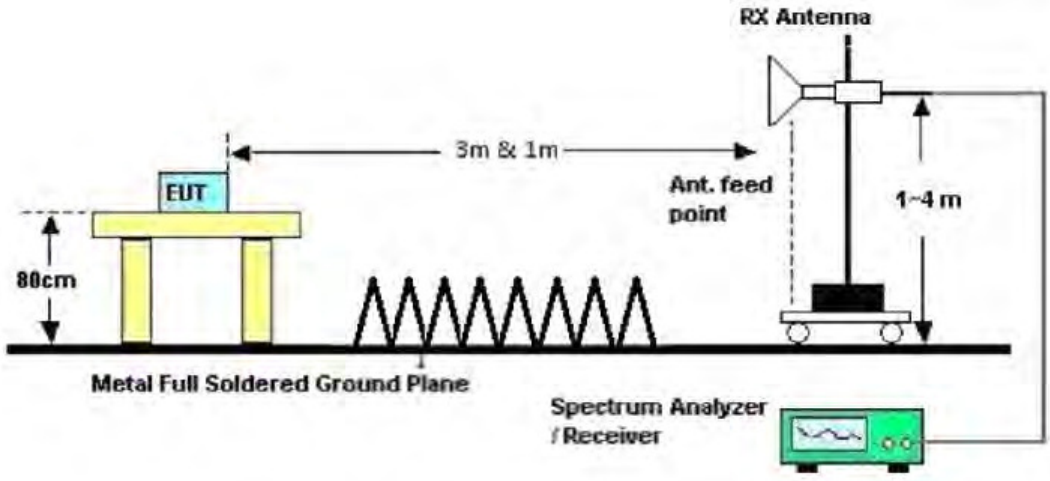
    = -13dBm.

3.6.4 Test Setup

For radiated emissions from 30MHz to 1GHz



For radiated emissions above 1GHz



3.6.5 Test Result of Field Strength of Spurious Radiated

Band	LTE Band IV	Modulation	QPSK
Configurations	5 MHz / B		

Horizontal

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Pol/Phase
	MHz	dBm	dB	dBm	dBm	dB	
1	4225.06	-26.84	-13.84	-13.00	-41.87	15.03	HORIZONTAL

Vertical

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Pol/Phase
	MHz	dBm	dB	dBm	dBm	dB	
1	4225.20	-30.91	-17.91	-13.00	-45.10	14.19	VERTICAL

Band	LTE Band IV	Modulation	QPSK
Configurations	5 MHz / M		

Horizontal

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Pol/Phase
	MHz	dBm	dB	dBm	dBm	dB	
1	4269.98	-29.48	-16.48	-13.00	-44.60	15.12	HORIZONTAL

Vertical

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Pol/Phase
	MHz	dBm	dB	dBm	dBm	dB	
1	4269.90	-31.70	-18.70	-13.00	-46.18	14.48	VERTICAL

Band	LTE Band IV	Modulation	QPSK
Configurations	5 MHz / T		

Horizontal

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Pol/Phase
	MHz	dBm	dB	dBm	dBm	dB	
1	4305.02	-23.18	-10.18	-13.00	-38.39	15.21	HORIZONTAL

Vertical

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Pol/Phase
	MHz	dBm	dB	dBm	dBm	dB	
1	4304.90	-31.78	-18.78	-13.00	-46.54	14.76	VERTICAL

Band	LTE Band IV	Modulation	QPSK
Configurations	10 MHz / B		

Horizontal

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Pol/Phase
	MHz	dBm	dB	dBm	dBm	dB	
1	4230.16	-24.03	-11.03	-13.00	-39.06	15.03	HORIZONTAL

Vertical

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Pol/Phase
	MHz	dBm	dB	dBm	dBm	dB	
1	4230.24	-26.96	-13.96	-13.00	-41.15	14.19	VERTICAL

Band	LTE Band IV	Modulation	QPSK
Configurations	10 MHz / M		

Horizontal

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Pol/Phase
	MHz	dBm	dB	dBm	dBm	dB	
1	4269.92	-26.01	-13.01	-13.00	-41.13	15.12	HORIZONTAL

Vertical

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Pol/Phase
	MHz	dBm	dB	dBm	dBm	dB	
1	4270.08	-26.31	-13.31	-13.00	-40.79	14.48	VERTICAL

Band	LTE Band IV	Modulation	QPSK
Configurations	10 MHz / T		

Horizontal

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Pol/Phase
	MHz	dBm	dB	dBm	dBm	dB	
1	4299.88	-21.07	-8.07	-13.00	-36.28	15.21	HORIZONTAL

Vertical

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Pol/Phase
	MHz	dBm	dB	dBm	dBm	dB	
1	4299.76	-26.07	-13.07	-13.00	-40.83	14.76	VERTICAL

Band	LTE Band IV	Modulation	QPSK
Configurations	15 MHz / B		

Horizontal

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Pol/Phase
	MHz	dBm	dB	dBm	dBm	dB	
1	4234.96	-24.46	-11.46	-13.00	-39.49	15.03	HORIZONTAL

Vertical

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Pol/Phase
	MHz	dBm	dB	dBm	dBm	dB	
1	4235.32	-28.47	-15.47	-13.00	-42.66	14.19	VERTICAL

Band	LTE Band IV	Modulation	QPSK
Configurations	15 MHz / M		

Horizontal

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Pol/Phase
	MHz	dBm	dB	dBm	dBm	dB	
1	4269.96	-23.20	-10.20	-13.00	-38.32	15.12	HORIZONTAL

Vertical

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Pol/Phase
	MHz	dBm	dB	dBm	dBm	dB	
1	4270.16	-26.71	-13.71	-13.00	-41.19	14.48	VERTICAL

Band	LTE Band IV	Modulation	QPSK
Configurations	15 MHz / T		

Horizontal

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Pol/Phase
	MHz	dBm	dB	dBm	dBm	dB	
1	4294.72	-28.98	-15.98	-13.00	-44.16	15.18	HORIZONTAL

Vertical

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Pol/Phase
	MHz	dBm	dB	dBm	dBm	dB	
1	4294.80	-25.75	-12.75	-13.00	-40.42	14.67	VERTICAL

Band	LTE Band IV	Modulation	QPSK
Configurations	20 MHz / B		

Horizontal

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Pol/Phase
	MHz	dBm	dB	dBm	dBm	dB	
1	4240.16	-24.62	-11.62	-13.00	-39.68	15.06	HORIZONTAL

Vertical

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Pol/Phase
	MHz	dBm	dB	dBm	dBm	dB	
1	4239.88	-29.03	-16.03	-13.00	-43.31	14.28	VERTICAL

Band	LTE Band IV	Modulation	QPSK
Configurations	20 MHz / M		

Horizontal

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Pol/Phase
	MHz	dBm	dB	dBm	dBm	dB	
1	4270.04	-23.41	-10.41	-13.00	-38.53	15.12	HORIZONTAL

Vertical

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Pol/Phase
	MHz	dBm	dB	dBm	dBm	dB	
1	4270.20	-27.23	-14.23	-13.00	-41.71	14.48	VERTICAL

Band	LTE Band IV	Modulation	QPSK
Configurations	20 MHz / T		

Horizontal

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Pol/Phase
	MHz	dBm	dB	dBm	dBm	dB	
1	4287.84	-25.44	-12.44	-13.00	-40.62	15.18	HORIZONTAL

Vertical

	Freq	Level	Over Limit	Limit Line	Read Level	Factor	Pol/Phase
	MHz	dBm	dB	dBm	dBm	dB	
1	4289.92	-27.23	-14.23	-13.00	-41.90	14.67	VERTICAL

3.7 Frequency Stability Measurement

3.7.1 Description of Frequency Stability Measurement

The frequency stability shall be measured by variation of ambient temperature and variation of primary supply voltage to ensure that the fundamental emission stays within the authorized frequency block. The frequency stability of the transmitter shall be maintained within authorized band.

3.7.2 Measuring Instruments

The measuring equipment is listed in the section 4 of this test report.

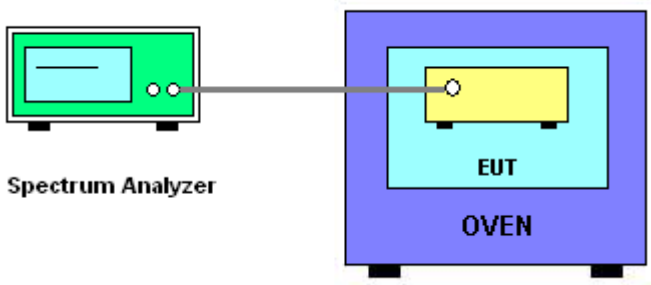
3.7.3 Test Procedures for Temperature Variation

1. The testing follows FCC KDB 971168 D01 v02r02 Section 9.0.
2. The EUT was set up in the thermal chamber and connected with the system simulator.
3. With power OFF, the temperature was decreased to -30℃ and the EUT was stabilized before testing. Power was applied and the maximum change in frequency was recorded within one minute.
4. With power OFF, the temperature was raised in -30℃ steps up to 50℃. The EUT was stabilized at eac h step for at least half an hour. Power was applied and the maximum frequency change was recorded within one minute.

3.7.4 Test Procedures for Voltage Variation

1. The testing follows FCC KDB 971168 D01 v02r02 Section 9.0.
2. The EUT was placed in a temperature chamber at 25±5°C and connected with the system simulator.
3. The power supply voltage to the EUT was varied from 85 to 115% of the nominal value measured at the input to the EUT.
4. The variation in frequency was measured for the worst case.

3.7.5 Test Setup



3.7.6 Test Result of Temperature and Voltage Variation

Band	LTE Band IV	Modulation	QPSK

Item	Frequency Stability			
Band	LTE Band IV			
Chain	Chain 0		Chain 1	
Temperature (℃)	f_L	f_H	f_L	f_H
-30	2110.87	2154.00	2110.90	2154.00
-20	2110.95	2153.95	2110.95	2154.00
-10	2111.00	2153.90	2111.00	2154.00
0	2110.90	2153.90	2110.90	2154.00
10	2110.95	2153.90	2110.90	2153.95
20 (Ref.)	2110.95	2154.00	2111.00	2153.95
30	2110.90	2154.00	2110.90	2154.00
40	2110.90	2153.90	2111.00	2154.00
50	2111.00	2154.00	2111.00	2153.90
Min. f_L / Max. f_H Band Edges	2110.87	2154.00	2110.90	2154.00
Limits	$f_L > 2110$	$f_H < 2155$	$f_L > 2110$	$f_H < 2155$
Result	Complied	Complied	Complied	Complied
Note:	f_L is low frquency edge, f_H is high frequency edge			

Item	Frequency Stability			
Band	LTE Band IV			
Chain	Chain 0		Chain 1	
Voltage (Volt)	f_L	f_H	f_L	f_H
126.5	2110.90	2154.00	2110.90	2154.00
110	2110.95	2154.00	2111.00	2153.95
93.5	2110.90	2154.00	2110.90	2154.00
Min. f_L / Max. f_H Band Edges	2110.90	2154.00	2110.90	2154.00
Limits	$f_L > 2110$	$f_H < 2155$	$f_L > 2110$	$f_H < 2155$
Result	Complied	Complied	Complied	Complied
Note:	f_L is low frquency edge, f_H is high frequency edge			

4 Test Equipment and Calibration Data

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
Bilog Antenna	TESEQ	CBL6112D	37880	20MHz ~ 2GHz	Sep. 03, 2015	Radiation (03CH01-CB)
Horn Antenna	EMCO	3115	00075790	750MHz ~ 18GHz	Oct. 22, 2015	Radiation (03CH01-CB)
Horn Antenna	Schwarzbeck	BBHA 9170	BBHA9170252	15GHz ~ 40GHz	Jul. 21, 2015	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8447D	2944A10991	0.1MHz ~ 1.3GHz	Mar. 15, 2016	Radiation (03CH01-CB)
Pre-Amplifier	Agilent	8449B	3008A02310	1GHz ~ 26.5GHz	Jan. 18, 2016	Radiation (03CH01-CB)
Pre-Amplifier	WM	TF-130N-R1	923365	26GHz ~ 40GHz	Nov. 13, 2015	Radiation (03CH01-CB)
Spectrum Analyzer	R&S	FSP40	100056	9kHz ~ 40GHz	Oct. 27, 2015	Radiation (03CH01-CB)
EMI Test	R&S	ESCS	100355	9kHz ~ 2.75GHz	May 16, 2016	Radiation (03CH01-CB)
RF Cable-low	Woken	Low Cable-1	N/A	30 MHz ~ 1 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-16	N/A	1 GHz ~ 18 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-17	N/A	1 GHz ~ 18 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G-1	N/A	18GHz ~ 40 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
RF Cable-high	Woken	High Cable-40G-2	N/A	18GHz ~ 40 GHz	Nov. 02, 2015	Radiation (03CH01-CB)
Test Software	Audix	E3	6.2009-l0-7	N/A	N/A	Radiation (03CH01-CB)
Spectrum analyzer	Keysight	N9020A	MY55400138	10 Hz up to 26.5 GHz	Jan. 14, 2016	Conducted (TH01-CB
Temp. and Humidity Chamber	Ten Billion	TTH-D3SP	TBN-931011	-30~100 degree	Jun. 03, 2016	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-6	1 GHz – 26.5 GHz	Nov. 02, 2015	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-7	1 GHz – 26.5 GHz	Nov. 02, 2015	Conducted (TH01-CB)

Instrument	Manufacturer	Model No.	Serial No.	Characteristics	Calibration Date	Remark
RF Cable-high	Woken	RG402	High Cable-8	1 GHz – 26.5 GHz	Nov. 02, 2015	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-9	1 GHz – 26.5 GHz	Nov. 02, 2015	Conducted (TH01-CB)
RF Cable-high	Woken	RG402	High Cable-10	1 GHz – 26.5 GHz	Nov. 02, 2015	Conducted (TH01-CB)
Power Sensor	Agilent	U2021XA	MY53410001	50MHz~18GHz	Nov. 02, 2015	Conducted (TH01-CB)
MW Analog Signal Generator	Keysight	N5183A	MY50142965	100kHz~40GHz	Dec. 14, 2015	Conducted (TH01-CB
Vector Signal Generator	Keysight	N5182B	MY530524408	9kHz~6GHz	Jan. 14, 2016	Conducted (TH01-CB

Note: Calibration Interval of instruments listed above is one year.

5 Measurement Uncertainty

Test Items	Uncertainty	Remark
Radiated Emission (30MHz ~ 1,000MHz)	3.6 dB	Confidence levels of 95%
Radiated Emission (1GHz ~ 18GHz)	3.7 dB	Confidence levels of 95%
Radiated Emission (18GHz ~ 40GHz)	3.5 dB	Confidence levels of 95%
Conducted Emission	1.7 dB	Confidence levels of 95%