REPORT No.: SZ15050021W03

FCC RF TEST REPORT

APPLICANT	:	Rand McNally
PRODUCT NAME	:	GPS navigation
MODEL NAME	:	TND 765
TRADE NAME	:	N/A
BRAND NAME	:	Rand McNally
FCC ID	:	A4C01003A
STANDARD(S)	:	47 CFR Part 22 Subpart H 47 CFR Part 24 Subpart E
ISSUE DATE	:	2015-06-18

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DIRECTORY

Change History		
Issue	Date	Reason for change
1.0	2015-06-25	First edition

TEST REPORT DECLARATION

Applicant	Rand McNally
Applicant Address	9855 Woods Drive, Skokies IL 60077
Manufacturer	LONGHORN AUTO LIMITED
Manufacturer Address	Gongyeyuan rd., Dalang street, Longhua , Shenzhen
Product Name	GPS navigation
Model Name	TND 765
Brand Name	Rand McNally
HW Version	RM762_V3.0
SW Version	762.01.01.010
Test Standards	47 CFR Part 22 Subpart H 47 CFR Part 24 Subpart E
Test Date	2015-05-06 to 2015-05-29
Test Result	PASS

Tested by : Zou Jian
Zou Jian (Test Engineer)

Reviewed by : Qiu Xiaojun
Qiu Xiaojun (RF Manager)

Approved by : Peng Huarui
Peng Huarui (Chief Engineer)

1. GENERAL INFORMATION

1.1 EUT Description

EUT Type ..... :	GPS navigation
Model Name..... :	TND 765
Serial No. ..... :	(n.a, marked #1 by test site)
Hardware Version ..... :	RM762_V3.0
Software Version..... :	762.01.01.010
Applicant ..... :	RM Acquisition LLC
	9855 Woods Drive, Skokies IL 60077
Manufacturer..... :	LONGHORN AUTO LIMITED
	Gongyeyuan rd., Dalang street, Longhua , Shenzhen
Frequency Range ..... :	CDMA 800MHz: (BC 0)
	Tx: 824.7 – 848.31 MHz;
	Rx: 869.7-893.31MHz
	CDMA 1900MHz: (BC 1)
	Tx: 1851.25 MHz -1908.75 MHz;
	Rx: 1931.25 MHz-1988.75 MHz
Modulation Type..... :	CDMA 1X
	EVDO 0
	EVDO A
Emission Designators ..... :	BC0:1M28F9W
	BC1: 1M28F9W

Note 1: The transmitter (Tx) frequency arrangement of the Cellular 800MHz band used by the EUT can be represented with the formula F(n)=824.2+0.2*(n-128), 128<=n<=251; the lowest, middle, highest channel numbers (ARFCHs) used and tested in this report are separately BC0 1013 (824.7MHz), 384 (836.52MHz) and 777 (848.31MHz),

Note 2:The transmitter (Tx) frequency arrangement of the CDMA 1900MHz band used by the EUT can be represented with the formula F(n)=1850.2+0.2*(n-512), 512<=n<=810; the lowest, middle and highest channel numbers (ARFCHs) used and tested in this report are separately 25 (1851.25MHz), 600 (1880.0MHz) and 1175 (1908.75MHz).

Note 3:For a more detailed description, please refer to Specification or User's Manual supplied by the applicant and/or manufacturer.

1.2 Test Standards and Results

The objective of the report is to perform testing according to:

No.	Identity (FCC)	Document Title
1	47 CFR Part 2 (10-1-09 Edition)	Frequency Allocations and Radio Treaty Matters; General Rules and Regulations
2	47 CFR Part 22 (10-1-09 Edition)	Public Mobile Services
3	47 CFR Part 24 (10-1-13 Edition)	Personal Communications Services

Test detailed items/section required by FCC rules and results are as below:

No.	Section	Description	Result
1	2.1046	Conducted RF Output Power	PASS
2.	24.232(d)	Peak to average radio	PASS
3	2.1049,22.917 24.238,	99% Occupied Bandwidth	PASS
4	2.1055,22.355 24.235,	Frequency Stability	PASS
5	2.1051,2.1057 22.917,24.238,	Conducted Out of Band Emissions	PASS
6	2.1051,2.1057 22.917,24.238,	Band Edge	PASS
7	2.1046，22.913,24.232	Transmitter Radiated Power (EIPR/ERP)	PASS
8	2.1053,2.1057 22.917,24.238	Radiated Out of Band Emissions	PASS

NOTE: Measurement method according to ANSI/TIA-603-D 2010.

1.3 Facilities and Accreditations

1.3.1 Facilities

Shenzhen Morlab Communications Technology Co., Ltd. Morlab Laboratory is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L3572.

All measurement facilities used to collect the measurement data are located at 3/F, Electronic Testing Building, Shahe Road, Xili, Nanshan District, Shenzhen, 518055 P. R. China. The test site is constructed in conformance with the requirements of ANSI C63.7, ANSI C63.4 and CISPR Publication 22; the FCC registration number is 741109.

1.3.2 Test Environment Conditions

During the measurement, the environmental conditions were within the listed ranges:

Temperature (°C):	15 - 35
Relative Humidity (%):	30 -60
Atmospheric Pressure (kPa):	86-106

2. 47 CFR PART 2, PART 22H REQUIREMENTS

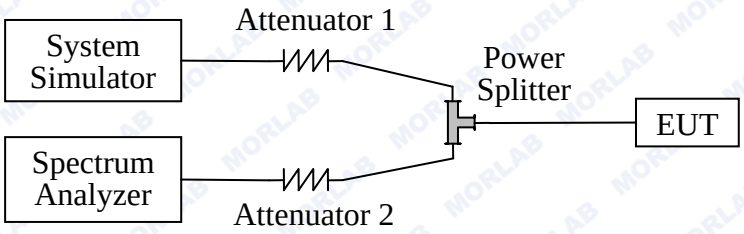
2.1 Conducted RF Output Power

2.1.1 Requirement

According to FCC section 2.1046(a)，for transmitters other than single sideband, independent sideband and controlled carrier radiotelephone, power output shall be measured at the RF output terminals when the transmitter is adjusted in accordance with the tune-up procedure to give the values of current and voltage on the circuit elements specified.

2.1.2 Test Description

Test Setup:



The EUT, which is powered by the Battery, is coupled to the Spectrum Analyzer (SA) and the System Simulator (SS) with Attenuators through the Power Splitter; the RF load attached to the EUT antenna terminal is 50Ohm; the path loss as the factor is calibrated to correct the reading. The EUT is commanded by the SS to operate at the maximum output power i.e. A call is established between the EUT and the SS.

Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
System Simulator	Agilent	E5515C	GB43130131	2015.02.26	2016.02.25
Spectrum Analyzer	Agilent	E7405A	US44210471	2015.02.26	2016.02.25
Power Meter	Agilent	E4418B	GB43318055	2015.02.26	2016.02.25
Power Sensor	Agilent	8482A	MY41091706	2015.02.26	2016.02.25
Power Splitter	Weinschel	1506A	NW521	2015.02.26	2016.02.25
Attenuator 1	Resnet	20dB	(n.a.)	2015.02.26	2016.02.25
Attenuator 2	Resnet	3dB	(n.a.)	2015.02.26	2016.02.25

2.1.3 Test Result

Here the lowest, middle and highest channels are selected to perform testing to verify the conducted RF output power of the EUT. For the CDMA 800MHz(BC0) operates at maximum output Power, the rated conducted RF output power is 38.5dBm, and For the CDMA 1900MHz(BC1) operates at maximum output Power, the rated conducted RF output power is 33dBm.

Test Verdict:

Band	Channel Number	Frequency (MHz)	Measured Power		Refer Plot	Limits	
			dBm	W		dBm	W
CDMA（BC0）	1013	824.7	27.31	0.5383	Plot1	38.5	7
	384	836.52	28.10	0.6457	Plot2		
	777	848.31	27.79	0.6012	Plot3		
EVDO 0（BC0）	1013	824.7	27.30	0.5370	Plot4	38.5	7
	384	836.52	27.87	0.6124	Plot5		
	777	848.31	27.64	0.5808	Plot6		
EVDO A（BC0）	1013	824.7	27.20	0.5248	Plot7	38.5	7
	384	836.52	27.97	0.6266	Plot8		
	777	848.31	27.64	0.5808	Plot9		
CDMA（BC1）	25	1851.25	27.10	0.5129	Plot10	33	2
	600	1880.00	27.14	0.5176	Plot11		
	1175	1908.75	26.46	0.4426	Plot12		
EVDO 0（BC1）	25	1851.25	26.05	0.4027	Plot13	33	2
	600	1880.00	25.74	0.3750	Plot14		
	1175	1908.75	26.18	0.4150	Plot15		
EVDO A（BC1）	25	1851.25	26.97	0.4977	Plot16	33	2
	600	1880.00	27.09	0.5117	Plot17		
	1175	1908.75	26.80	0.4786	Plot18		

Test Plots:

(Plot 1: CDMA BC0 Channel = 1013)

(Plot 2: CDMA BC0 Channel = 384)

(Plot 3: CDMA BC0 Channel = 777)

(Plot 4: EVDO 0 BC0 Channel = 1013)

(Plot 5: EVDO 0 BC0 Channel = 384)

(Plot 6: EVDO 0 BC0 Channel = 777)

(Plot 7: EVDO A BC0 Channel = 1013)

(Plot 8: EVDO A BC0 Channel = 384)

(Plot 9: EVDO A BC0 Channel = 777)

(Plot 10: CDMA BC1 Channel = 25)

(Plot 11: CDMA BC1 Channel = 600)

(Plot 12: CDMA BC1 Channel = 1175)

(Plot 13: EVDO 0 BC1 Channel = 25)

(Plot 14: EVDO A BC1 Channel = 600)

(Plot 15: EVDO 0 BC1 Channel = 1175)

(Plot 16: EVDO A BC1 Channel = 25)

(Plot 17: EVDO A BC1 Channel = 600)

(Plot 18: EVDO A BC1 Channel = 1175)

2.2 Peak to Average Radio

2.2.1 Definition

According to FCC section 2.1049 and FCC 24.232(d) the peak-to-average ratio (PAR) of the transmission may not exceed 13 dB.

2.2.2 Test Description

See section 2.1.2 of this report.

2.2.3 Test Verdict

Here the lowest, middle and highest channels are selected to perform testing to verify the peak-to-average ratio.

Test procedures:

A .For GSM/EGPRS operating mode:

a. Set RBW=1MHz, VBW=1MHz, peak detector in spectrum analyzer.

b. Set EUT in maximum output power, and triggered the bust signal.

c. Measured respectively the peak level and mean level, and the deviation was recorded as Peak to Average radio.

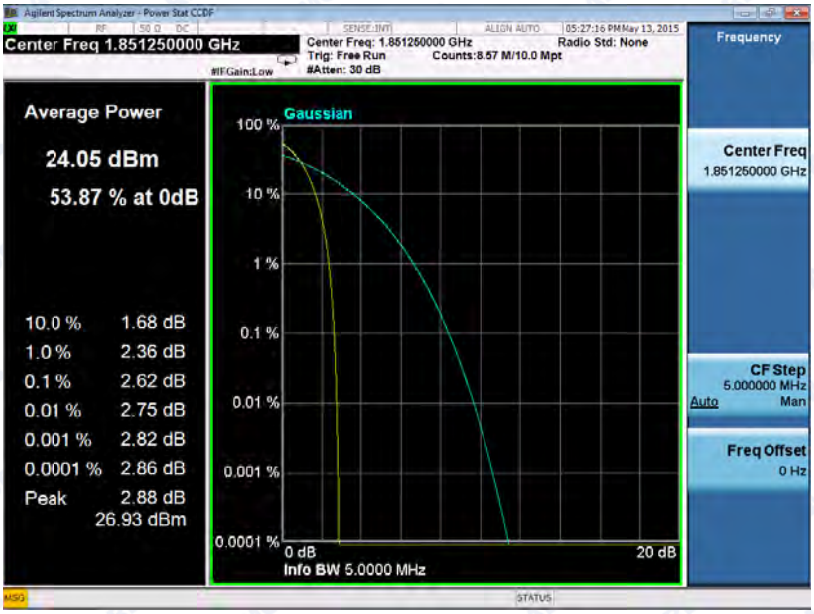
B. For UMTS operating mode:

a. Set the CCDF (Complementary Cumulative Distribution Function) option in spectrum analyzer.

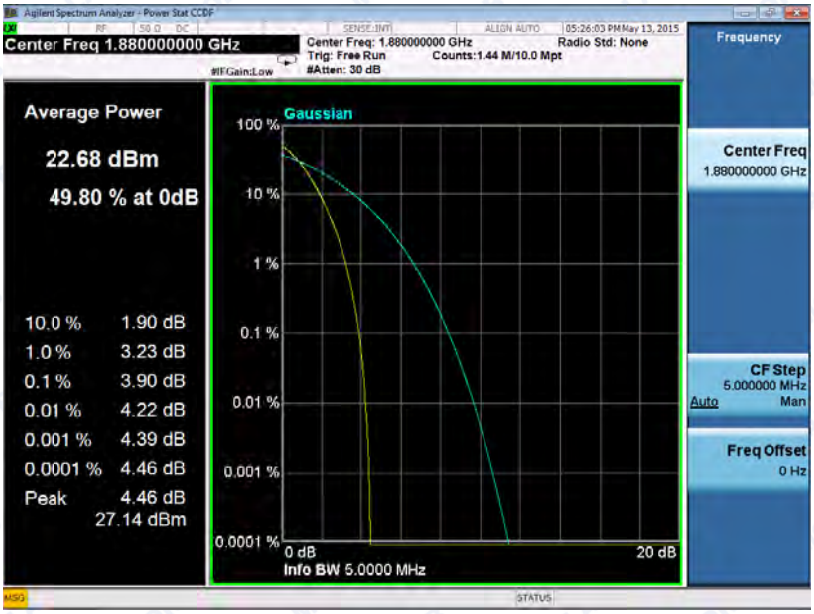
b. The highest RF powers were measured and recorded the maximum PAPR level associated with a probability of 0.1%.

Test Verdict:

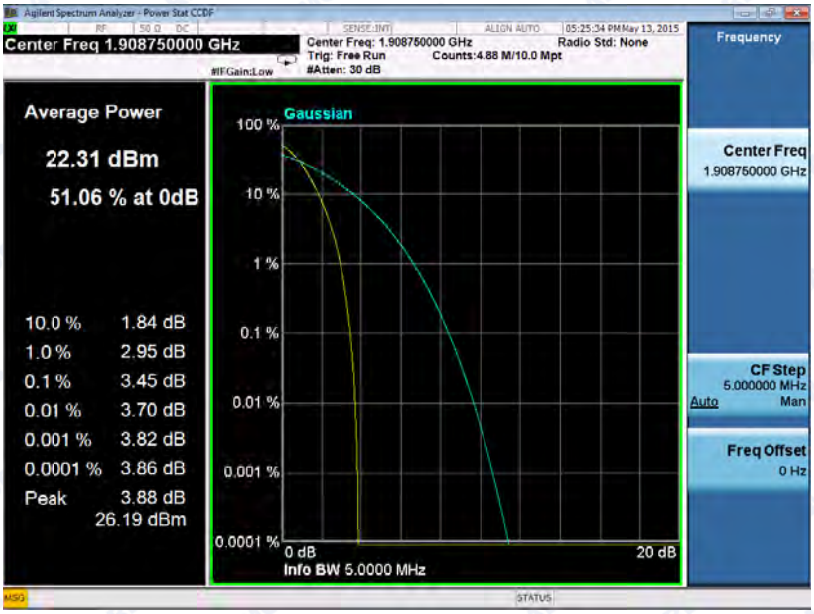
Band	Channel	Frequency (MHz)	Peak to Average radio		Limit	Verdict
			dBm	Refer to Plot	dB	
CDMA (BC1)	25	1851.25	2.62	Plot A1 to A3	13	PASS
	600	1880.0	3.90			PASS
	1175	1908.75	3.45			PASS



(Plot A1:CDMA BC1: Channel =25)



(Plot A2:CDMA BC1:Channel =600)



(Plot A3:CDMA BC1: Channel =1175)

2.3 99% Occupied Bandwidth

2.3.1 Definition

According to FCC section 2.1049, the occupied bandwidth is the frequency bandwidth such that, below its lower and above its upper frequency limits, the mean powers radiated are each equal to 0.5 percent of the total mean power radiated by a given emission.

Occupied bandwidth is also known as the 99% emission bandwidth.

2.3.2 Test Description

See section 2.1.2 of this report.

2.3.3 Test Verdict

Here the lowest, middle and highest channels are tested to record the 99% occupied bandwidth.

Test Verdict:

No.	Channel Number	Frequency (MHz)	Measured 99% Occupied Bandwidth (MHz)	Refer Plot
CDMA（BC0）	1013	824.7	1.27	Plot18
	384	836.52	1.27	Plot19
	777	848.31	1.27	Plot20
EVDO 0（BC0）	1013	824.7	1.27	Plot21
	384	836.52	1.27	Plot22
	777	848.31	1.28	Plot23
EVDO A（BC0）	1013	824.7	1.28	Plot24
	384	836.52	1.27	Plot25
	777	848.31	1.27	Plot26
CDMA（BC1）	25	1851.25	1.28	Plot27
	600	1880.00	1.27	Plot28
	1175	1908.75	1.27	Plot29
EVDO 0（BC1）	25	1851.25	1.28	Plot30
	600	1880.00	1.27	Plot31
	1175	1908.75	1.27	Plot32
EVDO A（BC1）	25	1851.25	1.28	Plot33
	600	1880.00	1.27	Plot34
	1175	1908.75	1.27	Plot35

Test Plots:

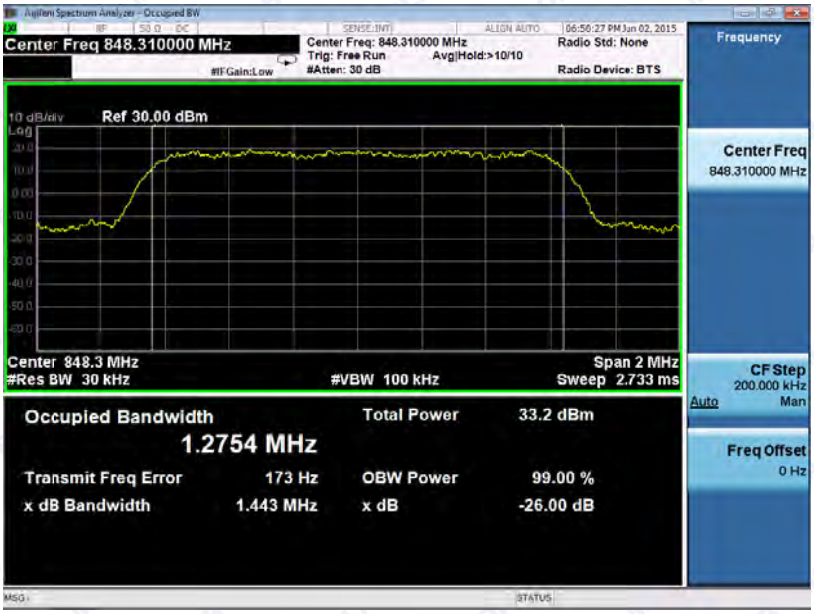
(Plot 18: CDMA BC0 Channel = 1013)

(Plot 19: CDMA BC0 Channel = 384)

(Plot 20: CDMA BC0 Channel = 777)

(Plot 21: EVDO 0 BC0 Channel = 1013)

(Plot 22: EVDO 0 BC0 Channel = 384)



(Plot 23: EVDO 0 BC0 Channel = 777)

(Plot 24: EVDO A BC0 Channel = 1013)

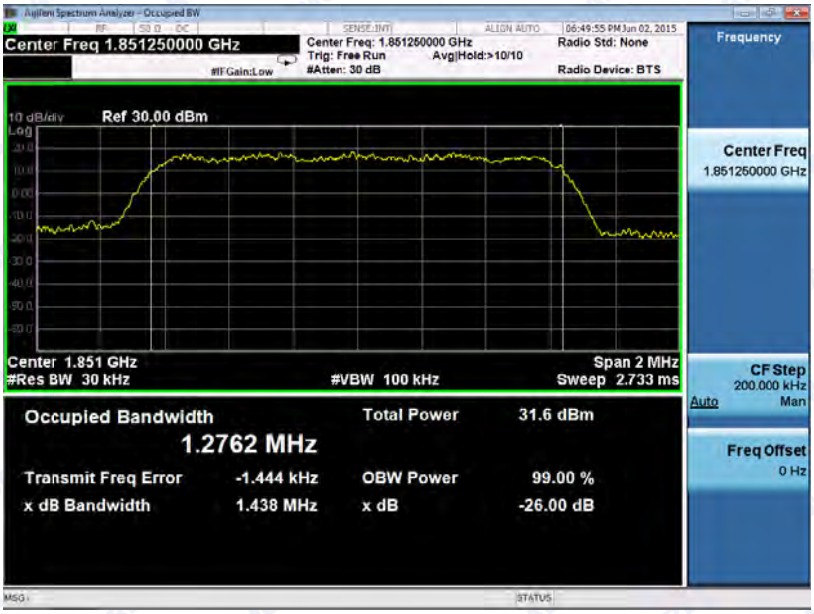
(Plot 25: EVDO A BC0 Channel = 384)

(Plot 26: EVDO A BC0 Channel = 777)

(Plot 27: CDMA BC1 Channel = 25)

(Plot 28: CDMA BC1 Channel = 600)

(Plot 29: CDMA BC1 Channel = 1175)



(Plot 30: EVDO 0 BC1 Channel = 25)

(Plot 31: EVDO 0 BC1 Channel = 600)

(Plot 32: EVDO 0 BC1 Channel = 1175)

(Plot 33: EVDO A BC1 Channel = 25)

(Plot 34: EVDO A BC1 Channel = 600)

(Plot 35: EVDO A BC1 Channel = 1175)

2.4 Frequency Stability

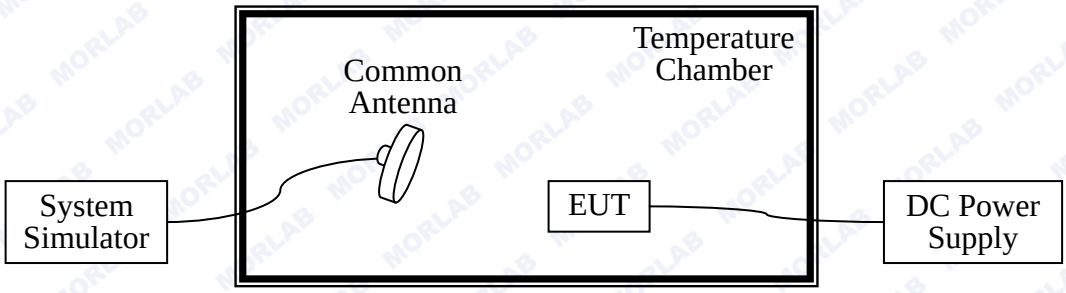
2.4.1 Requirement

According to FCC section 2.1055 , 22.355 and FCC section 24.235 ,the frequency stability shall be sufficient to ensure that the fundamental emission stays within the authorized frequency block. the test conditions are:

(a) The temperature is varied from -30°C to +50°C at intervals of not more than 10°C.
(b) For hand carried battery powered equipment, the primary supply voltage is reduced to the battery operating end point which shall be specified by the manufacture. The supply voltage shall be measured at the input to the cable normally provided with the equipment, or at the power supply terminals if cables are not normally provided.

2.4.2 Test Description

Test Setup:



The EUT, which is powered by the DC Power Supply directly, is located in the Temperature Chamber. The EUT is commanded by the System Simulator (SS) to operate at the maximum output power. A call is established between the EUT and the SS via a Common Antenna.

Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
System Simulator	Agilent	E5515C	GB43130131	2015.02.26	2016.02.25
DC Power Supply	Good Will	GPS-3030DD	EF920938	2015.02.26	2016.02.25
Temperature Chamber	YOMA Experimental Equip.	HL4003T	(n.a.)	2015.02.26	2016.02.25

2.4.3 Test Verdict

The nominal, highest and lowest extreme voltages are separately 12VDC, 18VDC and 8VDC, which are specified by the applicant; the normal temperature here used is 25°C. The frequency deviation limit of BC0 band and BC1 band is ±2.5ppm.

Band	Test Conditions		Frequency Deviation						Verdict
	Power (VDC)	Temperature (°C)	Channel = 1013 (824.7MHz)		Channel = 384 (836.52MHz)		Channel =777 (848.31MHz)		
			Hz	Limits	Hz	Limits	Hz	Limits	
CDMA (BC0)	12	-30	13.1	±2061.75	8.8	±2091.30	17.0	±2120.78	PASS
		-20	3.0		0.7		6.2		
		-10	-8.8		-3.8		-3.9		
		0	-9.2		-19.9		-11.7		
		+10	-6.3		-3.4		-9.9		
		+20	11.9		10.2		9.5		
		+30	-9.1		-9.2		-7.4		
		+40	-9.4		-7.5		-8.9		
		+50	11.8		12.3		9.5		
	18	+25	11.1		12.8		12.6		
	8	+25	-13.5		-14.0		-13.7		

Band	Test Conditions		Frequency Deviation						Verdict
	Power (VDC)	Temperature (°C)	Channel = 1013 (824.7MHz)		Channel = 384 (836.52MHz)		Channel =777 (848.31MHz)		
			Hz	Limits	Hz	Limits	Hz	Limits	
EVDO 0 (BC0)	12	-30	9.2	±2061.75	8.7	±2091.30	8.5	±2120.78	PASS
		-20	3.4		5.2		9.2		
		-10	-8.5		-7.8		-5.9		
		0	-9.3		-8.9		-8.7		
		+10	-5.5		-3.2		-9.4		
		+20	11.9		12.3		11.3		
		+30	-10.2		-9.2		-10.5		
		+40	-8.8		-10.5		-9.9		
		+50	11.2		11.4		10.5		
	18	+25	11.9		11.7		10.7		
	8	+25	-8.5		-10.0		-12.3		

Band	Test Conditions		Frequency Deviation						Verdict
	Power (VDC)	Temperature (°C)	Channel = 1013 (824.7MHz)		Channel = 384 (836.52MHz)		Channel =777 (848.31MHz)		
			Hz	Limits	Hz	Limits	Hz	Limits	
EVDO A (BC0)	12	-30	13.1	±2061.75	8.8	±2091.30	17.0	±2120.78	PASS
		-20	3.0		0.7		6.2		
		-10	-8.8		-3.8		-3.9		
		0	-9.2		-9.9		-9.7		
		+10	-6.3		-3.4		-9.9		
		+20	19.9		14.2		15.5		
		+30	-10.1		-11.2		-11.4		
		+40	-9.4		-9.5		-8.9		
		+50	15.0		12.3		13.5		
	18	+25	12.1		11.8		10.6		
	8	+25	-13.5		-14.0		-13.7		

Band	Test Conditions		Frequency Deviation						Verdict
	Power (VDC)	Temperature (°C)	Channel = 25 (1851.25MHz)		Channel = 600 (1880MHz)		Channel =1175 (1908.75MHz)		
			Hz	Limits	Hz	Limits	Hz	Limits	
CDMA (BC1)	12	-30	16.0	±1851.2	9.7	±1880.0	12.0	±1908.8	PASS
		-20	-10.2		-9.9		-11.4		
		-10	9.3		9.7		9.6		
		0	10.9		11.7		10.2		
		+10	-8.4		-8.7		-8.4		
		+20	-10.7		-10.1		-9.6		
		+30	9.6		9.8		13.6		
		+40	10.0		10.4		10.8		
		+50	8.4		4.4		4.2		
	18	+25	9.8		9.6		9.6		
	8	+25	-6.3		-3.6		-4.2		

Band	Test Conditions		Frequency Deviation						Verdict
	Power (VDC)	Temperature (°C)	Channel = 25 (1851.25MHz)		Channel = 600 (1880MHz)		Channel =1175 (1908.75MHz)		
			Hz	Limits	Hz	Limits	Hz	Limits	
EVDO 0 (BC1)	12	-30	12.2	±1851.2	9.8	±1880.0	10.7	±1908.8	PASS
		-20	5.0		6.7		8.3		
		-10	-9.8		-5.5		-4.5		
		0	-9.3		-9.2		-8.6		
		+10	-8.3		-5.7		-10.9		
		+20	10.9		10.5		8.9		
		+30	-8.3		-8.8		-10.1		
		+40	-11.4		-11.1		-9.9		
		+50	10.6		10.3		10.5		
	18	+25	11.1		11.2		11.4		
	8	+25	-12.8		-12.2		-12.8		

Band	Test Conditions		Frequency Deviation						Verdict
	Power (VDC)	Temperature (°C)	Channel = 25 (1851.25MHz)		Channel = 600 (1880MHz)		Channel =1175 (1908.75MHz)		
			Hz	Limits	Hz	Limits	Hz	Limits	
EVDO A (BC1)	12	-30	13.1	±1851.2	8.8	±1880.0	17.0	±1908.8	PASS
		-20	3.0		0.7		6.2		
		-10	-8.8		-3.8		-3.9		
		0	-9.2		-9.9		-9.7		
		+10	-6.3		-3.4		-9.9		
		+20	9.9		9.2		9.5		
		+30	-9.1		-9.2		-9.4		
		+40	-10.4		-10.5		-10.9		
		+50	11.8		12.3		12.5		
	18	+25	10.1		10.8		10.6		
	8	+25	-13.5		-14.0		-13.7		

2.5 Conducted Out of Band Emissions

2.5.1 Requirement

According to FCC section 2.1051, FCC section 22.917(a) and FCC section 24.238(a),the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43+10*log(P)dB. This calculated to be -13dBm.

2.5.2 Test Description

See section 2.1.2 of this report.

2.5.3 Test Result

The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency. The lowest, middle and highest channels are tested to verify the out of band emissions.

Test Verdict:

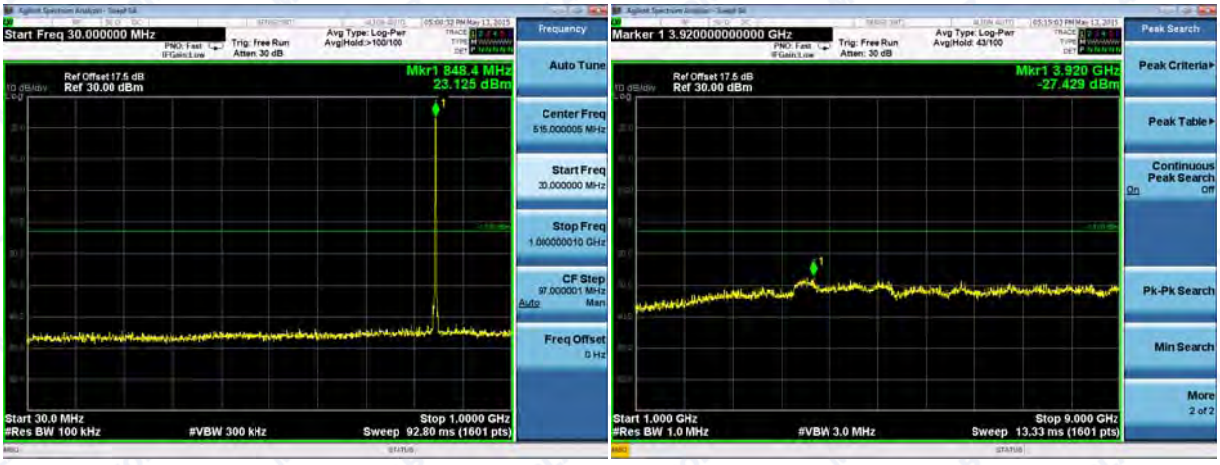
No.	Channel	Frequency(MHz)	Measured Max Spurious Emission(dBm)	Refer Plot	Limit(dBm)
CDMA（BC0）	1013	824.7	< -25	Plot B1	-13
	384	836.52	< -25	Plot B2	-13
	777	848.31	< -25	Plot B3	-13
EVDO 0（BC0）	1013	824.7	< -25	Plot B4	-13
	384	836.52	< -25	Plot B5	-13
	777	848.31	< -25	Plot B6	-13
EVDO A（BC0）	1013	824.7	< -25	Plot B7	-13
	384	836.52	< -25	Plot B8	-13
	777	848.31	< -25	Plot B9	-13
CDMA（BC1）	25	1851.25	< -25	Plot B10	-13
	600	1880.00	< -25	Plot B11	-13
	1175	1908.75	< -25	Plot B12	-13
EVDO 0（BC1）	25	1851.25	< -25	Plot B13	-13
	600	1880.00	< -25	Plot B14	-13
	1175	1908.75	< -25	Plot B15	-13
EVDO A（BC1）	25	1851.25	< -25	Plot B16	-13
	600	1880.00	< -25	Plot B17	-13
	1175	1908.75	< -25	Plot B18	-13

Test Plots for the Whole Measurement Frequency Range:

Note: the power of the EUT transmitting frequency should be ignored.

(Plot B1: CDMA BC0 Channel = 1013, 30MHz to 9GHz)

(Plot B2: CDMA BC0 Channel = 384, 30MHz to 9GHz)



(Plot B3: CDMA BC0 Channel = 777, 30MHz to 9GHz)

(Plot B4: EVDO 0 BC0 Channel = 1013, 30MHz to 9GHz)

(Plot B5: EVDO 0 BC0 Channel = 384, 30MHz to 9GHz)

(Plot B6: EVDO 0 BC0 Channel = 777, 30MHz to 9GHz)

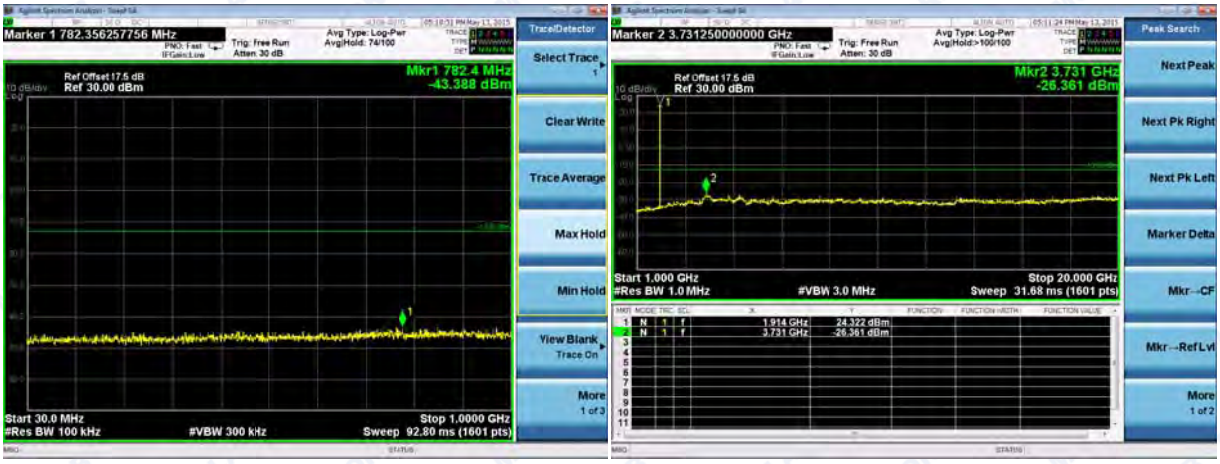
(Plot B7: EVDO A BC0 Channel = 1013, 30MHz to 9GHz)

(Plot B8: EVDO A BC0 Channel = 384, 30MHz to 9GHz)

(Plot B9: EVDO A BC0 Channel = 777, 30MHz to 9GHz)

(Plot B10: CDMA BC1 Channel = 25, 30MHz to 20GHz)

(Plot B11: CDMA BC1 Channel = 600, 30MHz to 20GHz)



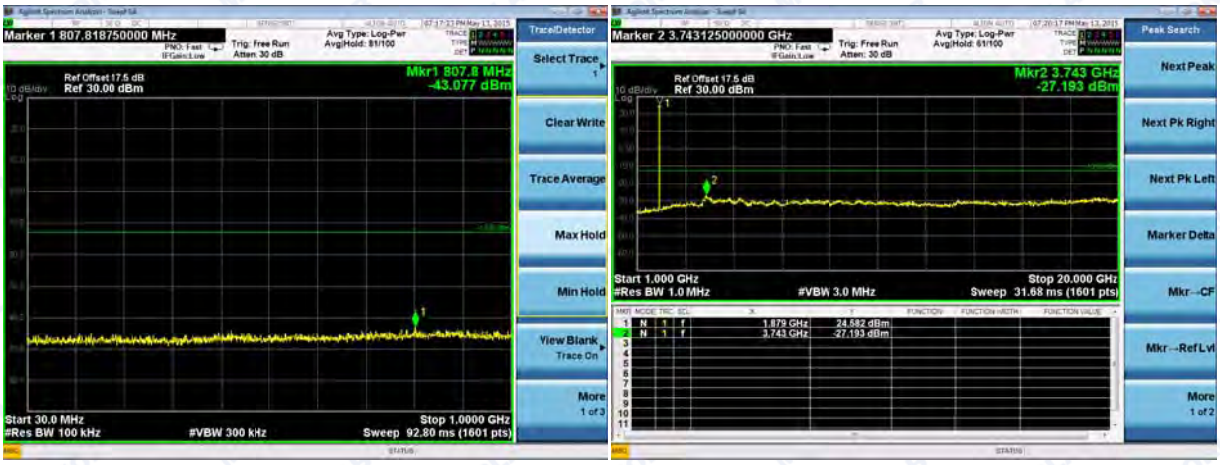
(Plot B12: CDMA BC1 Channel = 1175, 30MHz to 20GHz)

(Plot B13: EVDO 0 BC1 Channel = 25, 30MHz to 20GHz)

(Plot B14: EVDO 0 BC1 Channel = 600, 30MHz to 20GHz)

(Plot B15: EVDO 0 BC1 Channel =1175, 30MHz to 20GHz)

(Plot B16: EVDO A BC1 Channel = 25, 30MHz to 20GHz)



(Plot B17: EVDO A BC1 Channel = 600, 30MHz to 20GHz)

(Plot B18: EVDO A BC1 Channel =1175, 30MHz to 20GHz)

2.6 Band Edge

2.6.1 Requirement

According to FCC section 2.1051, FCC section 22.917(b) and FCC section 24.238(b) , in the 1MHz bands immediately outside and adjacent to the frequency block a resolution bandwidth of at least one percent of the emission bandwidth (26dB emission bandwidth) of the fundamental emission of the transmitter may be employed.

2.6.2 Test Description

See section 2.1.2 of this report.

2.6.3 Test Result

The lowest and highest channels are tested to verify the band edge emissions.

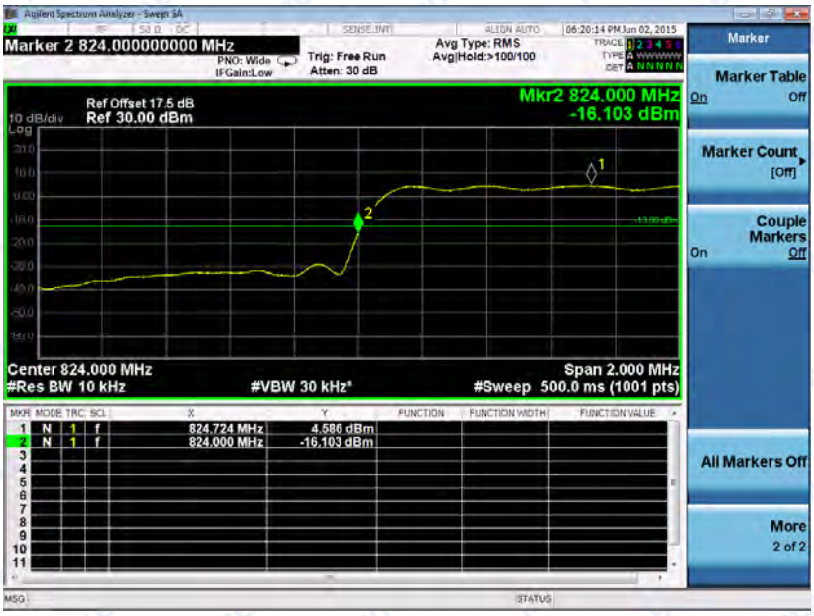
Test Verdict:

Band	Channel	Frequency (MHz)	Measured Max. Band Edge Emission (dBm)	Refer to Plot	Limit (dBm)	Verdict
CDMA （BC0）	1013	824.7	-16.32	Plot C1	-13	PASS
	777	848.31	-13.14	Plot C2		PASS
EVDO 0 （BC0）	1013	824.7	-16.10	Plot C3	-13	PASS
	777	848.31	-13.22	Plot C4		PASS
EVDO A （BC0）	1013	824.7	-15.87	Plot C5	-13	PASS
	777	848.31	-13.23	Plot C6		PASS
CDMA （BC1）	25	1851.25	-29.52	Plot C7	-13	PASS
	1175	1908.75	-40.72	Plot C8		PASS
EVDO A （BC1）	25	1851.25	-29.41	Plot C9	-13	PASS
	1175	1908.75	-39.79	Plot C10		PASS
EVDO A （BC1）	25	1851.25	-30.78	Plot C11	-13	PASS
	1175	1908.75	-39.87	Plot C12		PASS

Test Plots:

(Plot C1: CDMA BC0 Channel = 1013)

(Plot C2: CDMA BC0 Channel = 777)

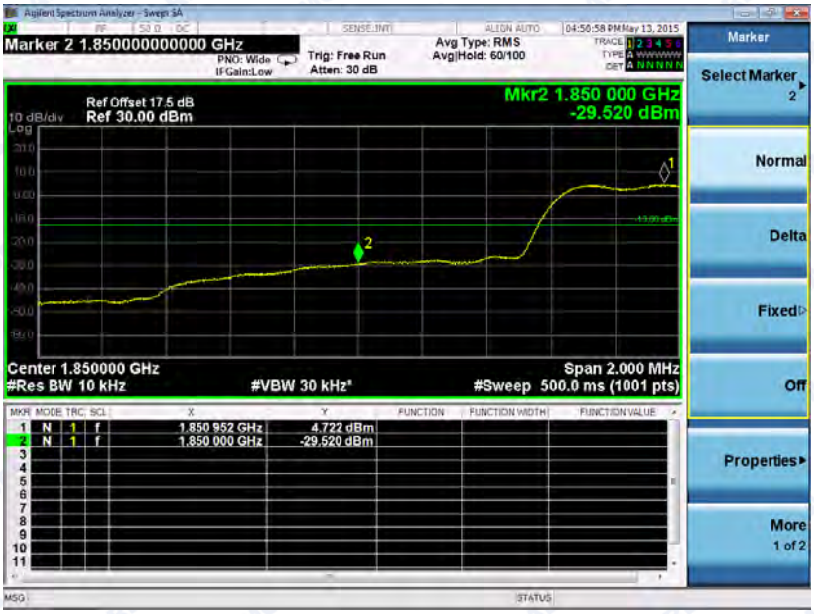


(Plot C3: EVDO 0 BC0 Channel = 1013)

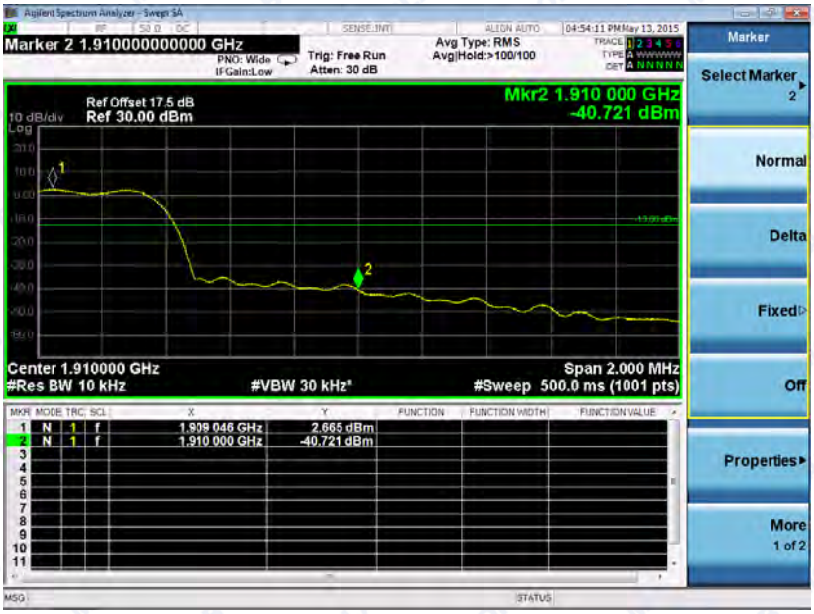
(Plot C4: EVDO 0 BC0 Channel Channel = 777)

(Plot C5: EVDO A BC0 Channel = 1013)

(Plot C6: EVDO A BC0 Channel Channel = 777)

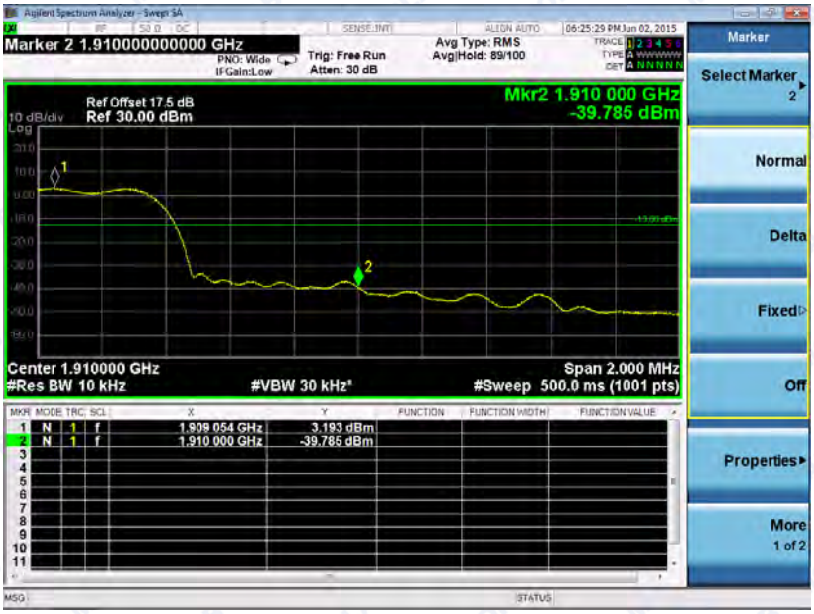


(Plot C7: CDMA BC1 Channel = 25)



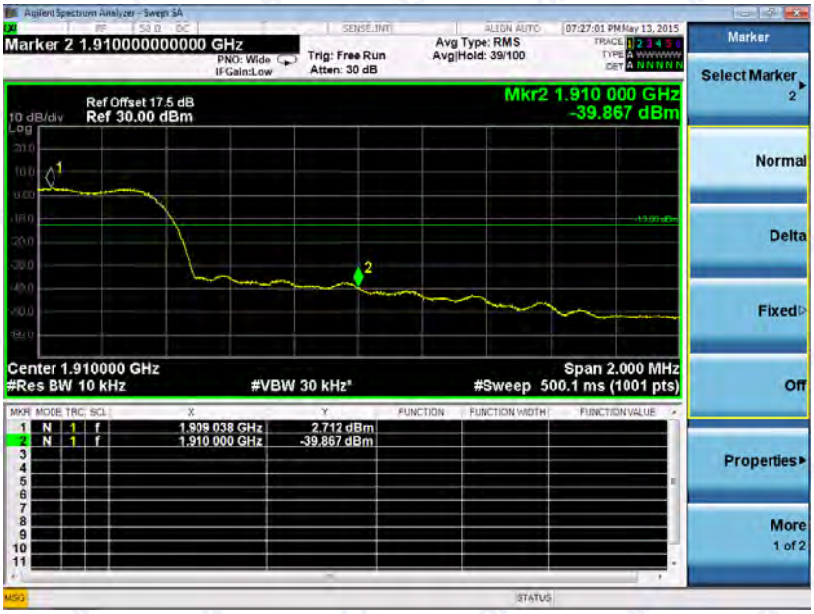
(Plot C8: CDMA BC1 Channel = 1175)

(Plot C9: EVDO 0 BC1 Channel = 25)



(Plot C10: EVDO 0 BC1 Channel = 1175)

(Plot C11: EVDO A BC1 Channel = 25)



(Plot C12: EVDO A BC1 Channel = 1175)

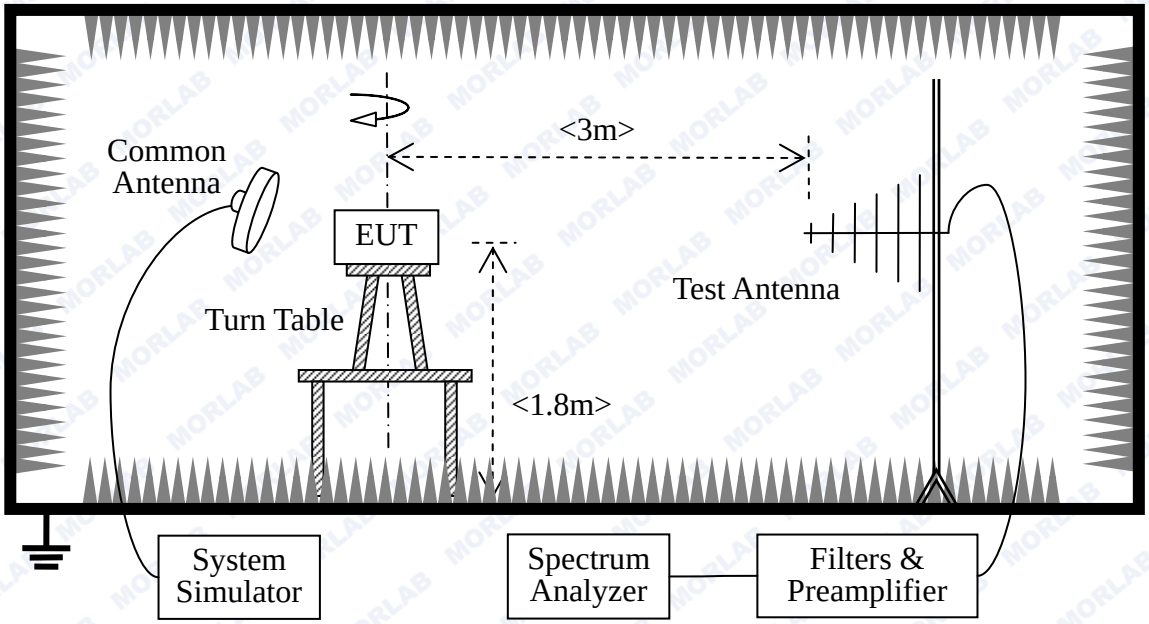
2.7 Transmitter Radiated Power (EIRP/ERP)

2.7.1 Requirement

According to FCC section 22.913 and FCC section 24.232, the Effective Radiated Power (ERP) of mobile transmitters and auxiliary test transmitters must not exceed 7Watts.

2.7.2 Test Description

Test Setup:



The resolution bandwidth of the Spectrum Analyzer is set to be comparable to the emission bandwidth of the transmitter, e.g. for GSM modulated signal (here used): RBW=VBW=1MHz, for CDMA modulated signal: RBW=VBW=3MHz.

The low, middle and the high channels are selected to perform tests respectively.

Employ the bi-log Test Antenna as the test system receiving antenna; set the polarization of the Test Antenna to be the same as that of the EUT transmitting antenna.

Set the frequency range of the Spectrum Analyzer suitably to capture the waveform; actuate the Turn Table to turn from 0 degrees to 360 degrees to find the maximum reading via the Spectrum Analyzer, mark the peak; finally record the peak and the plot.

-Maximum RF output power: CDMA BC0 28.10dBm, EVDO A BC0 27.97dBm, CDMA BC1 27.14dBm, EVDO A BC1 27.09dBm.

- Step size (dB): 3dB

- Minimum RF power: CDMA800 0.5dBm, EVDO 0 800 0.5dBm, EVDO A 800 0.7dBm, EVDO B 800 0.7dBm

Equipments List:

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
System Simulator	Agilent	E5515C	GB43130131	2015.02.26	2016.02.25
Spectrum Analyzer	Agilent	E7405A	US44210471	2015.02.26	2016.02.25
Full-Anechoic Chamber	Albatross	9m*6m*6m	(n.a.)	2015.02.26	2016.02.25
Test Antenna - Bi-Log	Schwarzbeck	VULB 9163	9163-274	2015.02.26	2016.02.25
Test Antenna - Horn	Schwarzbeck	UG -596A/U	A0902607	2015.02.26	2016.02.25
Test Antenna - Horn	Schwarzbeck	BBHA 9120C	9120C-384	2015.02.26	2016.02.25
Substitution Antenna	Schwarzbeck	BBHA 9120C	9120C-384	2015.02.26	2016.02.25
Pre-AMPs	lucix	S10M100L3802	S020180L3203	2015.02.26	2016.02.25
Notch Filter	COM-MW	ZBSF-C836.5-25-X	NA	2015.02.26	2016.02.25
Notch Filter	COM-MW	ZBSF-C1747.5-75-X2	NA	2015.02.26	2016.02.25
Notch Filter	COM-MW	ZBSF-C1880-60-X2	NA	2015.02.26	2016.02.25

2.7.3 Test Result

The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. The lowest, middle and highest channels are tested.

The substitution corrections are obtained as described below:

$A_{SUBST} = P_{SUBST\_TX} - P_{SUBST\_RX} - L_{SUBST\_CABLES} + G_{SUBST\_TX\_ANT}$

$A_{TOT} = L_{CABLES} + A_{SUBST}$

Where A_{SUBST} is the final substitution correction including receive antenna gain.

P_{SUBST_TX} is signal generator level,

P_{SUBST_RX} is receiver level,

L_{SUBST_CABLES} is cable losses including TX cable,

$G_{SUBST\_TX\_ANT}$ is substitution antenna gain.

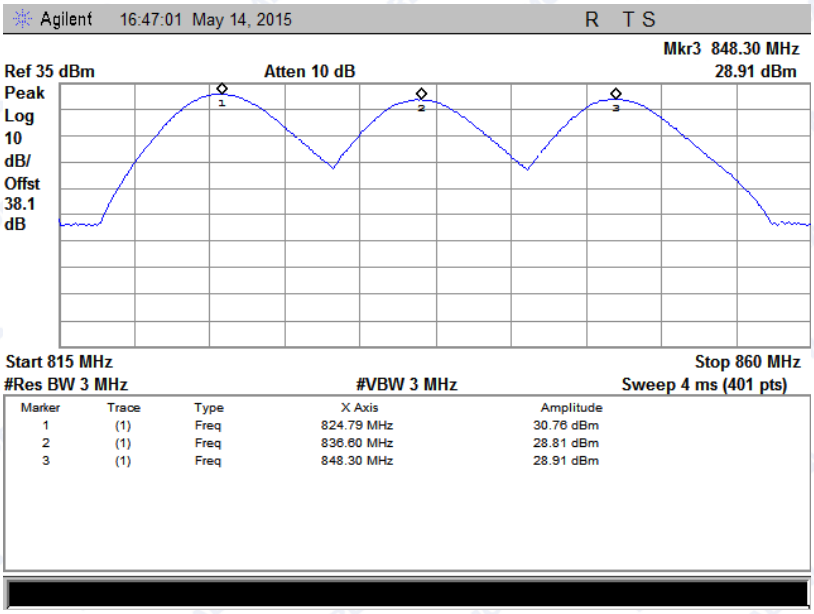
A_{TOT} is total correction factor including cable loss and substitution correction

During the test, the data of A_{TOT} was added in the Test Spectrum Analyze, so Spectrum Analyze reading is the final values which contain the data of A_{TOT}.

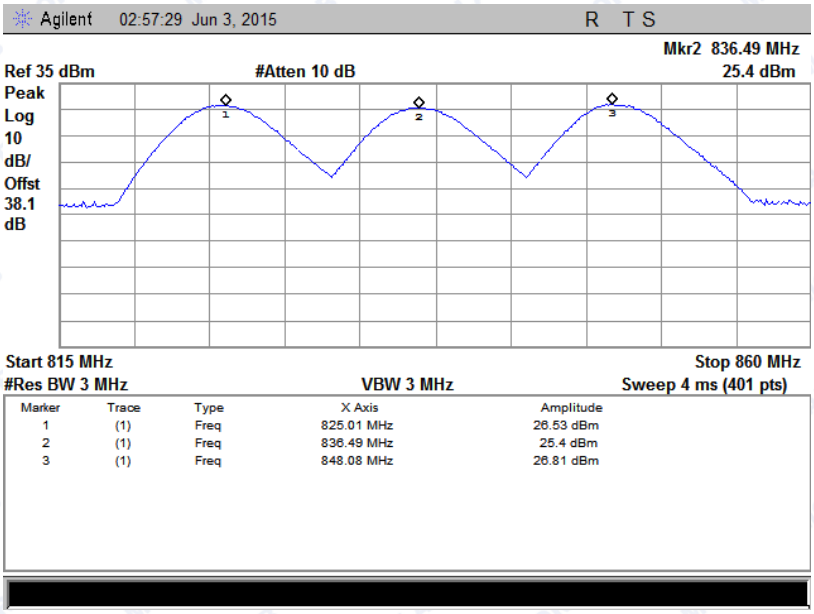
Test Verdict:

No.	Channel	Frequency (MHz)	Measured ERP		Refer to Plot	Limit	
			dBm	W		dBm	W
CDMA（BC0）	1013	824.7	30.76	1.1912	Plot D1	38.5	7
	384	836.52	28.81	0.76033			
	777	848.31	29.91	0.97949			
EVDO 0（BC0）	1013	824.7	26.53	0.44978	Plot D2	38.5	7
	384	836.52	25.40	0.34674			
	777	848.31	26.81	0.47973			
EVDO A（BC0）	1013	824.7	29.34	0.85901	Plot D3	38.5	7
	384	836.52	27.21	0.52602			
	777	848.31	28.53	0.71285			
CDMA（BC1）	25	1851.25	24.29	0.26853	Plot D4	33	2
	600	1880.00	23.58	0.22803			
	1175	1908.75	24.14	0.25942			
EVDO A（BC1）	25	1851.25	24.02	0.25235	Plot D5	33	2
	600	1880.00	22.68	0.18535			
	1175	1908.75	22.64	0.18365			
EVDO A（BC1）	25	1851.25	25.37	0.34435	Plot D6	33	2
	600	1880.00	24.01	0.25177			
	1175	1908.75	24.51	0.31696			

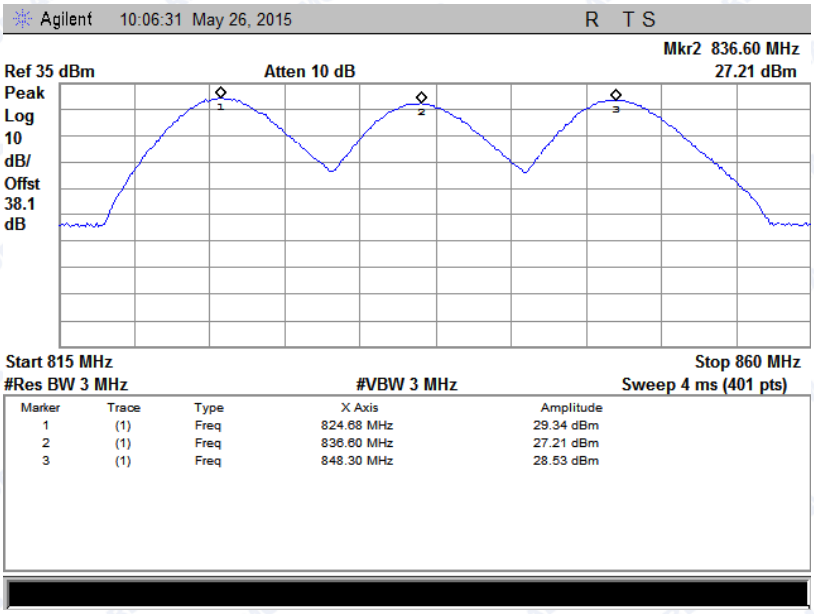
Test Plots:



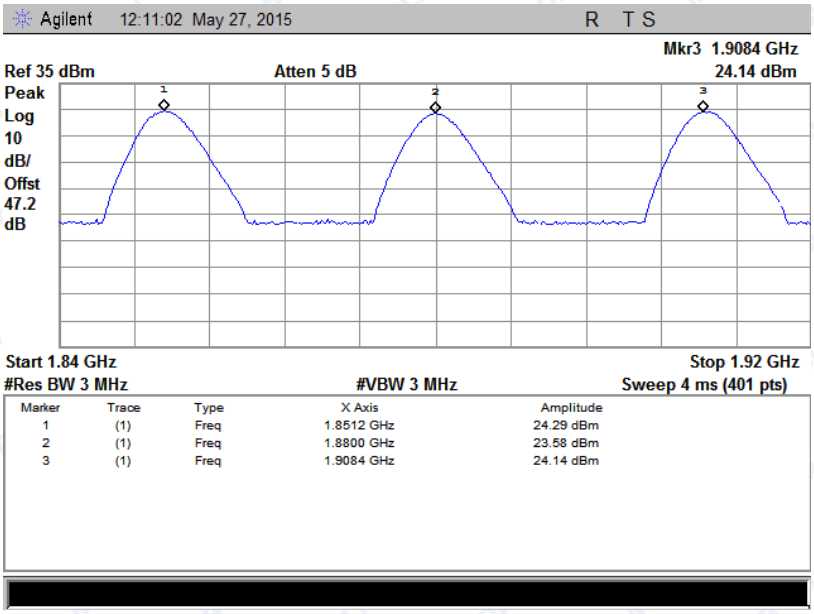
(Plot D1:CDMA BC0 Channel = 1013,384,777)



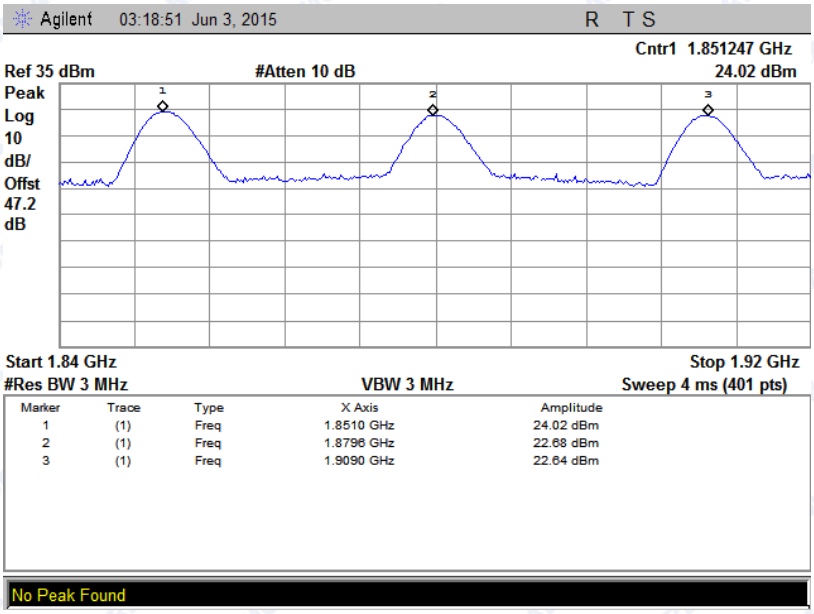
(Plot D2:EVDO 0 BC0 Channel = 1013,384,777)



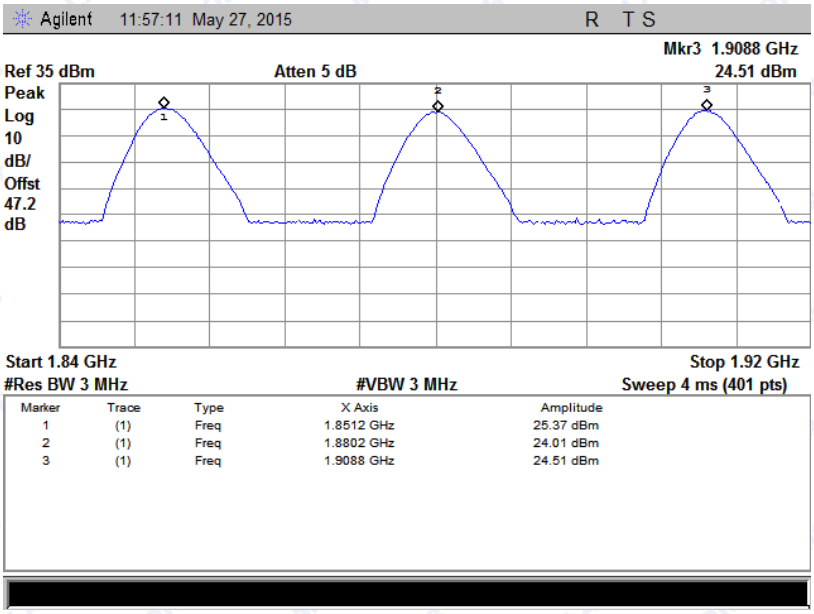
(Plot D3:EVDO A BC0 Channel = 1013,384,777)



(Plot D4: CDMA BC1 Channel = 25,600,1175)



(Plot D5:EVDO 0 BC1 Channel = 25,600,1175)



(Plot D6:EVDO A BC1 Channel = 25,600,1175)

2.8 Radiated Out of Band Emissions

2.8.1 Requirement

According to FCC section 2.1053，FCC section 22.917(a) and section 24.238(a), the power of any emission outside of the authorized operating frequency ranges must be attenuated below the transmitting power (P) by a factor of at least 43+10*log(P)dB. This calculated to be -13dBm.

2.8.2 Test Description

See section 2.7.2 of this report.

Note: when doing measurements above 1GHz, the EUT has been within the 3dB cone width of the horn antenna during horizontal antenna.

2.8.3 Test Result

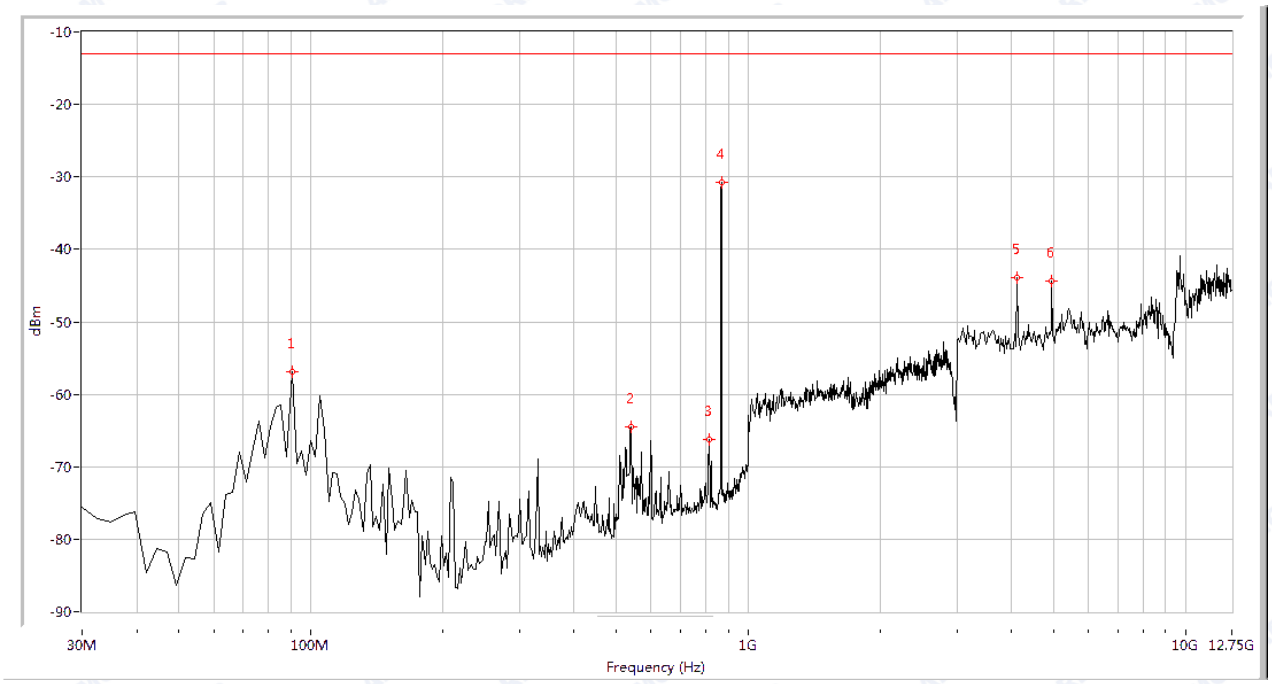
The measurement frequency range is from 30MHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. The lowest, middle and highest channels are tested to verify the out of band emissions.

Test Verdict:

Band	Channel	Frequency (MHz)	Measured Max. Spurious Emission (dBm)		Refer to Plot	Limit (dBm)	Verdict
			Test Antenna Horizontal	Test Antenna Vertical			
CDMA（BC0）	1013	824.7	< -25	< -25	Plot E1/2	-13	PASS
	384	836.52	< -25	< -25	Plot E3/4		PASS
	777	848.31	< -25	< -25	Plot E5/6		PASS
EVDO 0（BC0）	1013	824.7	< -25	< -25	Plot E7/8	-13	PASS
	384	836.52	< -25	< -25	Plot E9/10		PASS
	777	848.31	< -25	< -25	Plot E11/12		PASS
EVDO A（BC0）	1013	824.7	< -25	< -25	Plot E13/14	-13	PASS
	384	836.52	< -25	< -25	Plot E15/16		PASS
	777	848.31	< -25	< -25	Plot E17/18		PASS
CDMA（BC1）	25	1851.25	< -25	< -25	Plot E19/20	-13	PASS
	600	1880.00	< -25	< -25	Plot E21/22		PASS
	1175	1908.75	< -25	< -25	Plot E23/24		PASS
EVDO 0（BC1）	25	1851.25	< -25	< -25	Plot E25/26	-13	PASS
	600	1880.00	< -25	< -25	Plot E27/28		PASS
	1175	1908.75	< -25	< -25	Plot E29/30		PASS
EVDO A（BC1）	25	1851.25	< -25	< -25	Plot E31/32	-13	PASS
	600	1880.00	< -25	< -25	Plot E33/34		PASS
	1175	1908.75	< -25	< -25	Plot E25/36		PASS

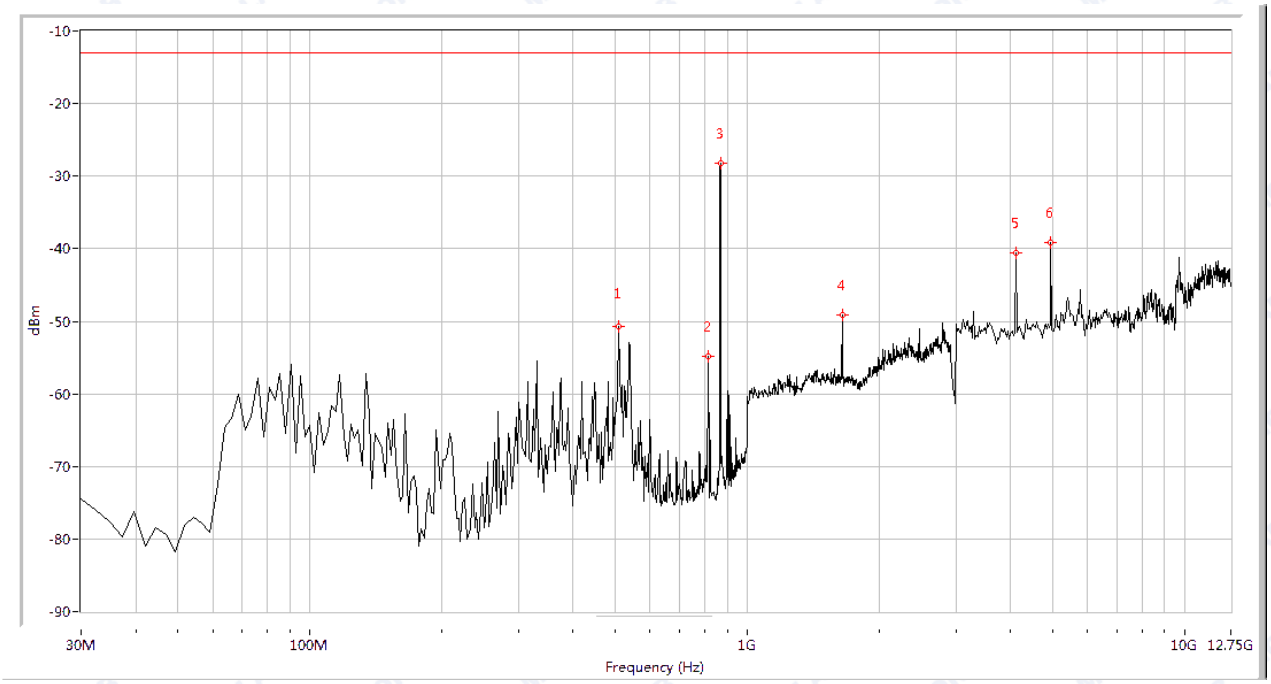
Test Plots for the Whole Measurement Frequency Range:

Note: the power of the EUT transmitting frequency should be ignored.



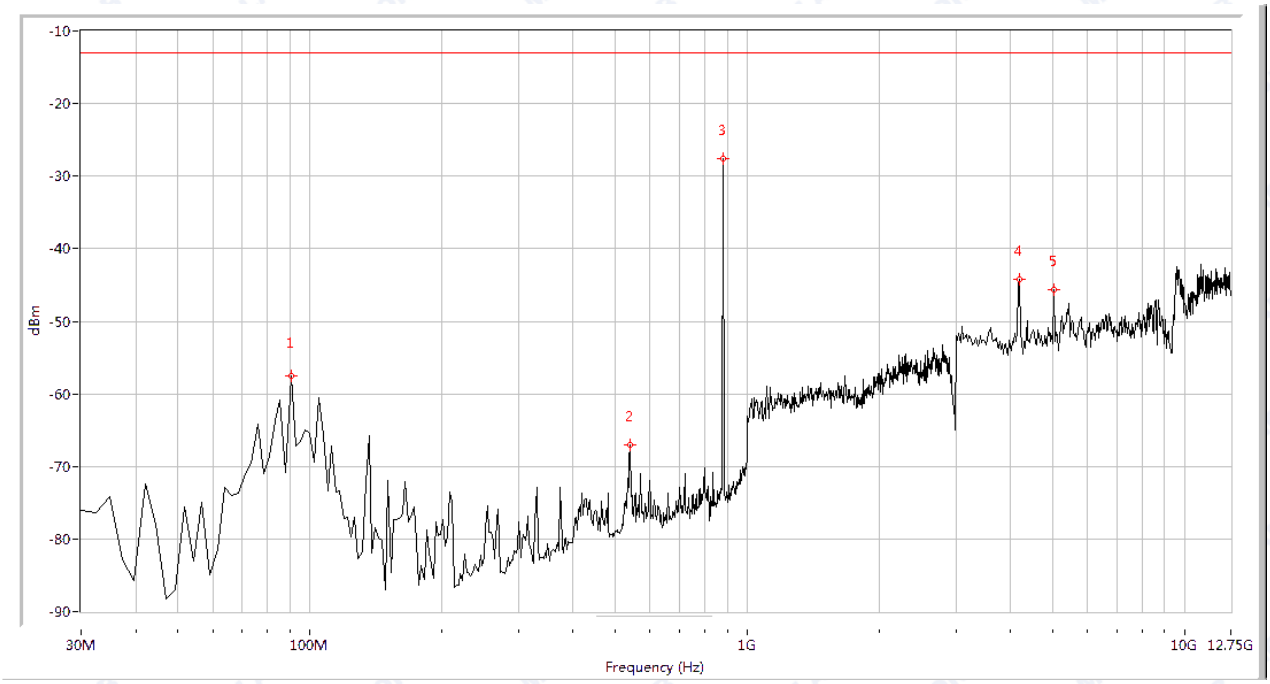
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
90.474	-56.90	-13.0	43.9	241.5	Horizontal	PASS
540.399	-64.42	-13.0	51.4	41.4	Horizontal	PASS
813.741	-66.29	-13.0	53.3	81.2	Horizontal	N.A
869.377	-30.69	-13.0	17.7	55.9	Horizontal	N.A
4118.454	-43.87	-13.0	30.9	243.4	Horizontal	PASS
4945.137	-44.35	-13.0	31.4	112.8	Horizontal	PASS

(Plot E1:CDMA BC0 Channel = 1013, Test Antenna Horizontal)



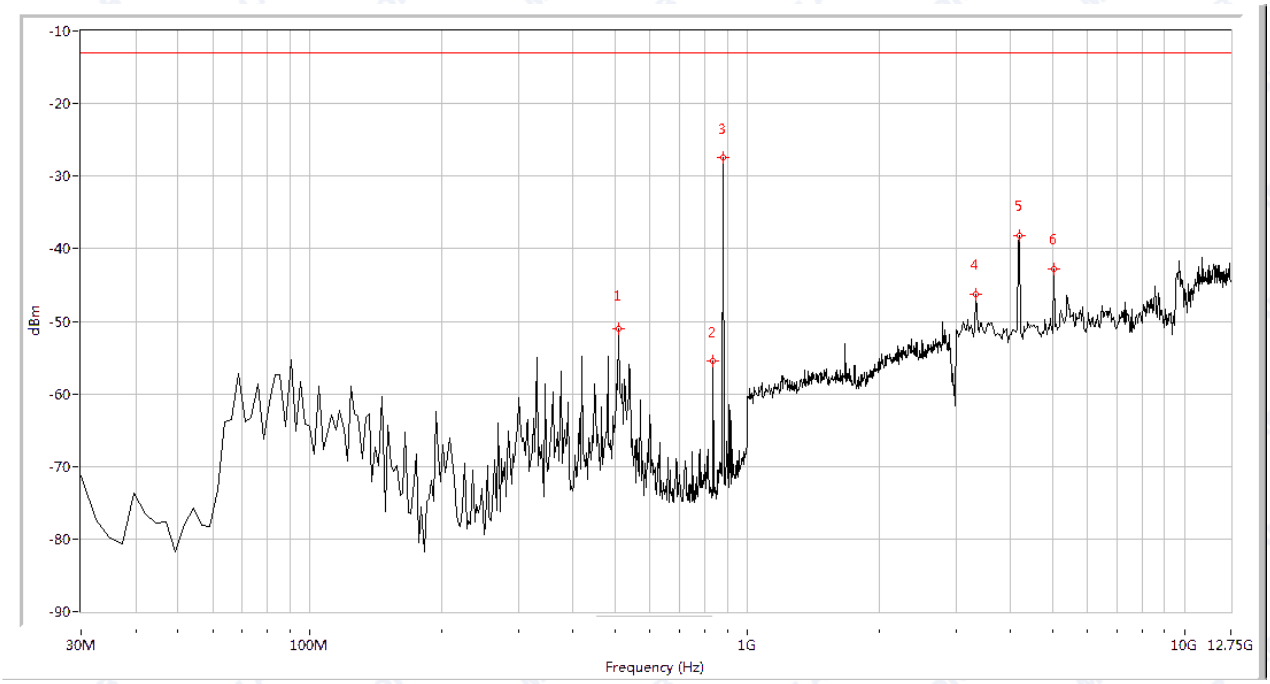
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
508.953	-50.68	-13.0	37.7	337.8	Vertical	PASS
816.160	-54.83	-13.0	41.8	205.1	Vertical	N.A
869.377	-28.30	-13.0	15.3	332.2	Vertical	N.A
1648.379	-49.14	-13.0	36.1	237.1	Vertical	PASS
4118.454	-40.61	-13.0	27.6	92.0	Vertical	PASS
4945.137	-39.07	-13.0	26.1	153.0	Vertical	PASS

(Plot E2: CDMA BC0 Channel = 1013, Test Antenna Vertical)



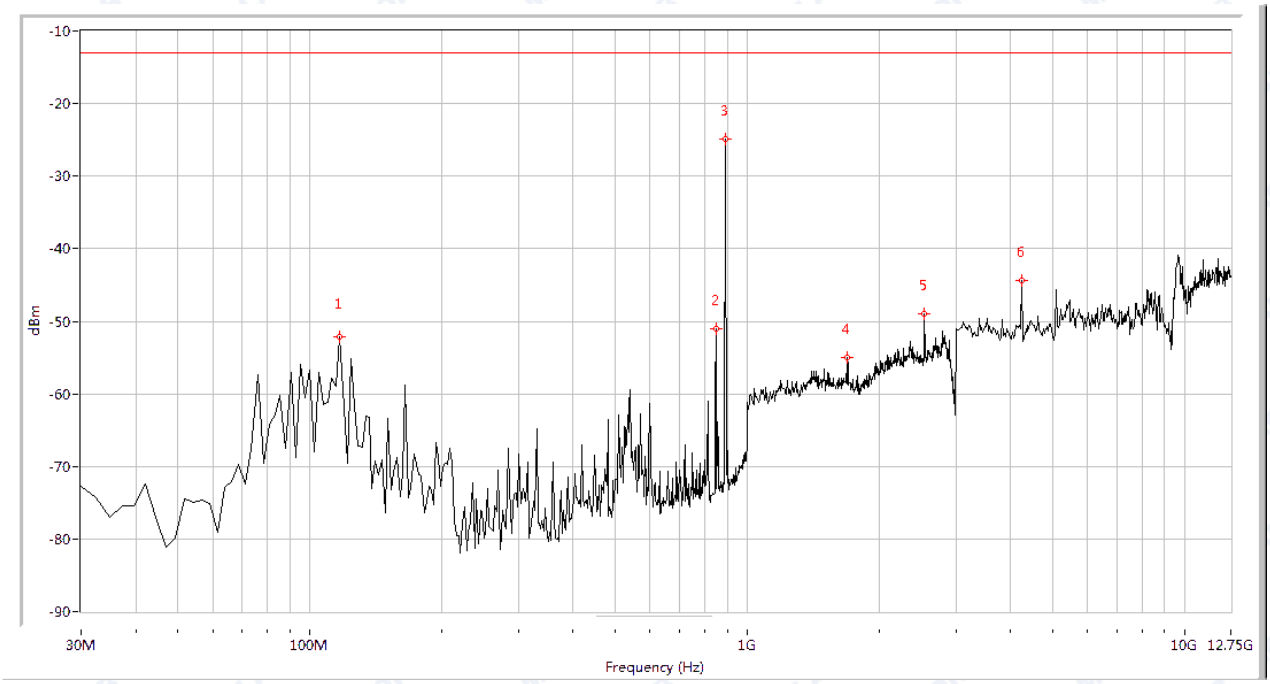
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
90.474	-57.60	-13.0	44.6	272.8	Horizontal	PASS
540.399	-67.05	-13.0	54.1	251.2	Horizontal	PASS
879.052	-27.61	-13.0	14.6	0.0	Horizontal	N.A
4191.397	-44.21	-13.0	31.2	256.4	Horizontal	PASS
5018.080	-45.67	-13.0	32.7	248.3	Horizontal	PASS
9090.474	-57.60	-13.0	44.6	118.0	Horizontal	PASS

(Plot E3: CDMA BC0 Channel = 384, Test Antenna Horizontal)



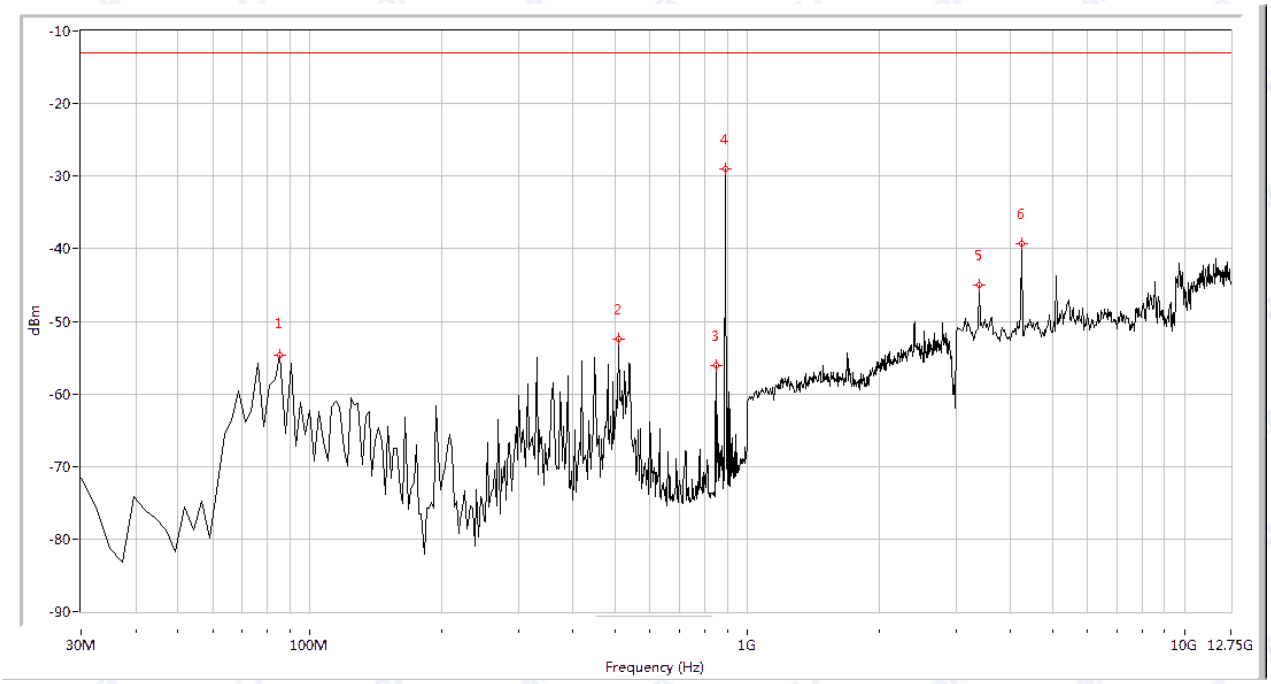
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
508.953	-50.99	-13.0	38.0	359.7	Vertical	PASS
835.511	-55.42	-13.0	42.4	285.7	Vertical	N.A
879.052	-27.45	-13.0	14.4	324.4	Vertical	N.A
3340.399	-46.34	-13.0	33.3	80.1	Vertical	PASS
4191.397	-38.19	-13.0	25.2	68.9	Vertical	PASS
5018.080	-42.85	-13.0	29.9	134.8	Vertical	PASS

(PlotE4: CDMA BC0 Channel = 384, Test Antenna Vertical)



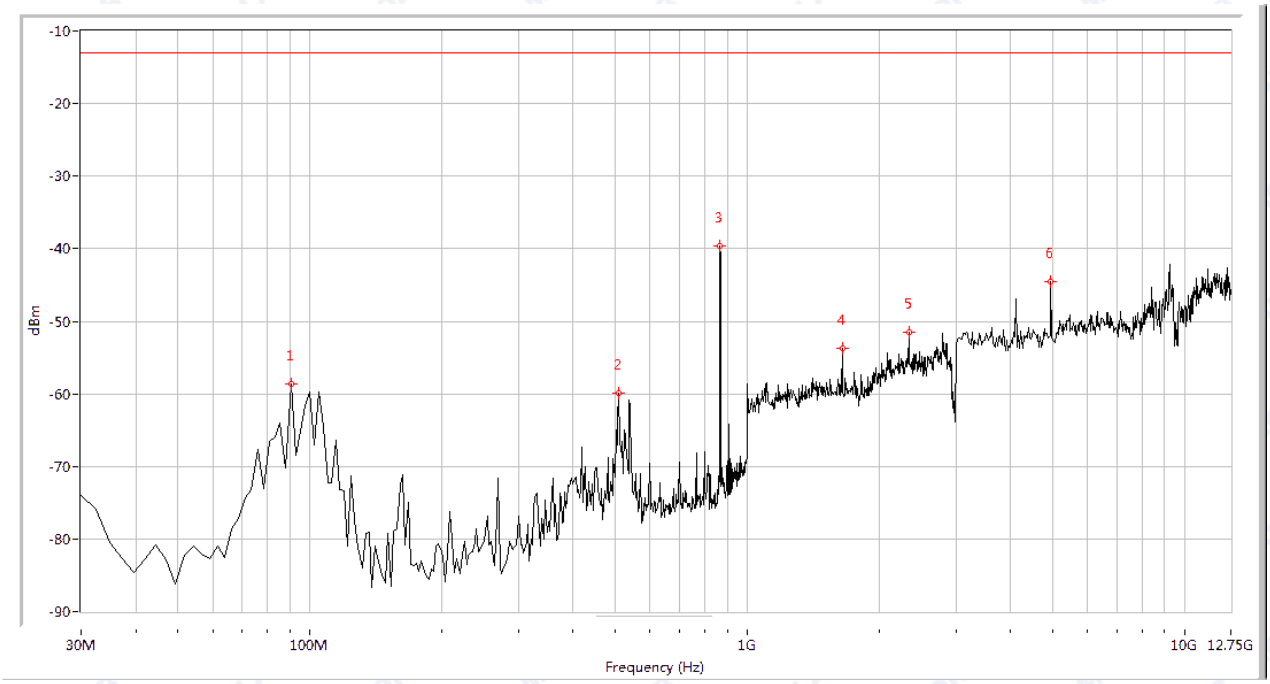
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
117.082	-52.13	-13.0	39.1	72.6	Horizontal	PASS
847.606	-51.10	-13.0	38.1	286.2	Horizontal	N.A
891.147	-24.83	-13.0	11.8	270.9	Horizontal	N.A
1693.267	-55.03	-13.0	42.0	86.1	Horizontal	PASS
2541.147	-48.91	-13.0	35.9	111.7	Horizontal	PASS
4240.025	-44.40	-13.0	31.4	138.9	Horizontal	PASS

(Plot E5: CDMA BC0 Channel = 777, Test Antenna Horizontal)



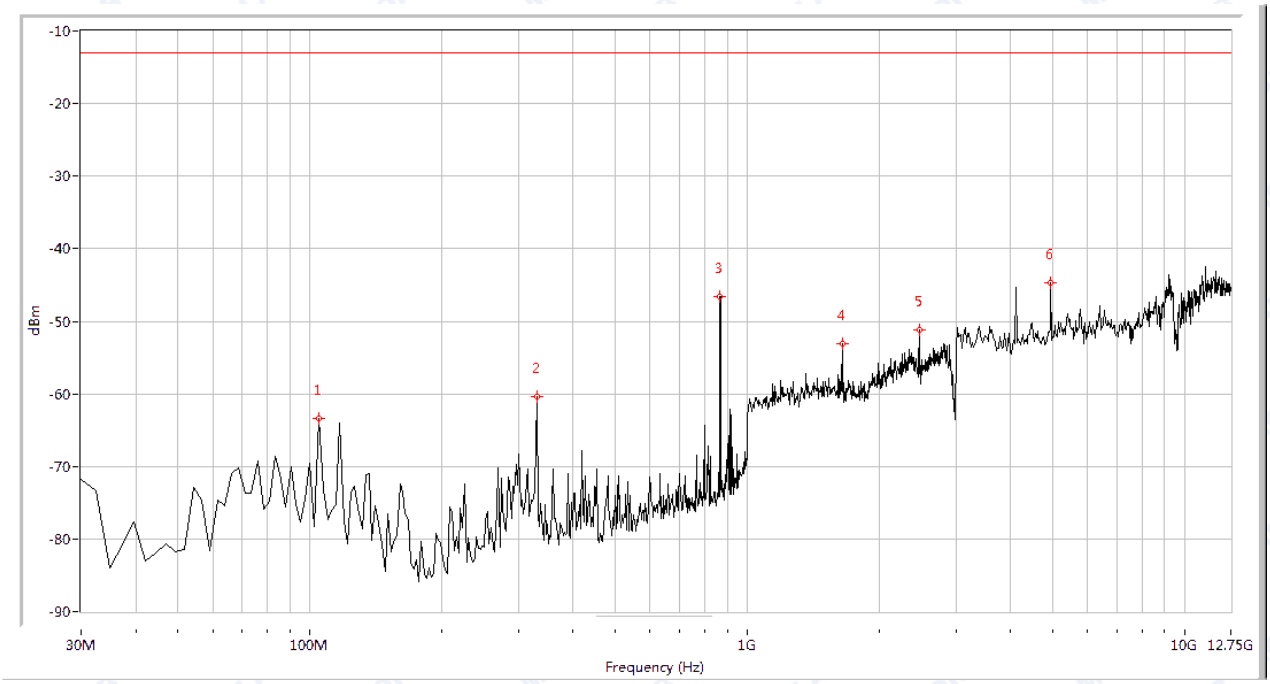
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
85.636	-54.74	-13.0	41.7	112.2	Vertical	PASS
508.953	-52.38	-13.0	39.4	172.9	Vertical	PASS
847.606	-56.05	-13.0	43.0	210.4	Vertical	N.A
891.147	-29.06	-13.0	16.1	-0.0	Vertical	N.A
3389.027	-45.09	-13.0	32.1	100.2	Vertical	PASS
4240.025	-39.38	-13.0	26.4	70.9	Vertical	PASS

(Plot E5: CDMA BC0 Channel = 777, Test Antenna Vertical)



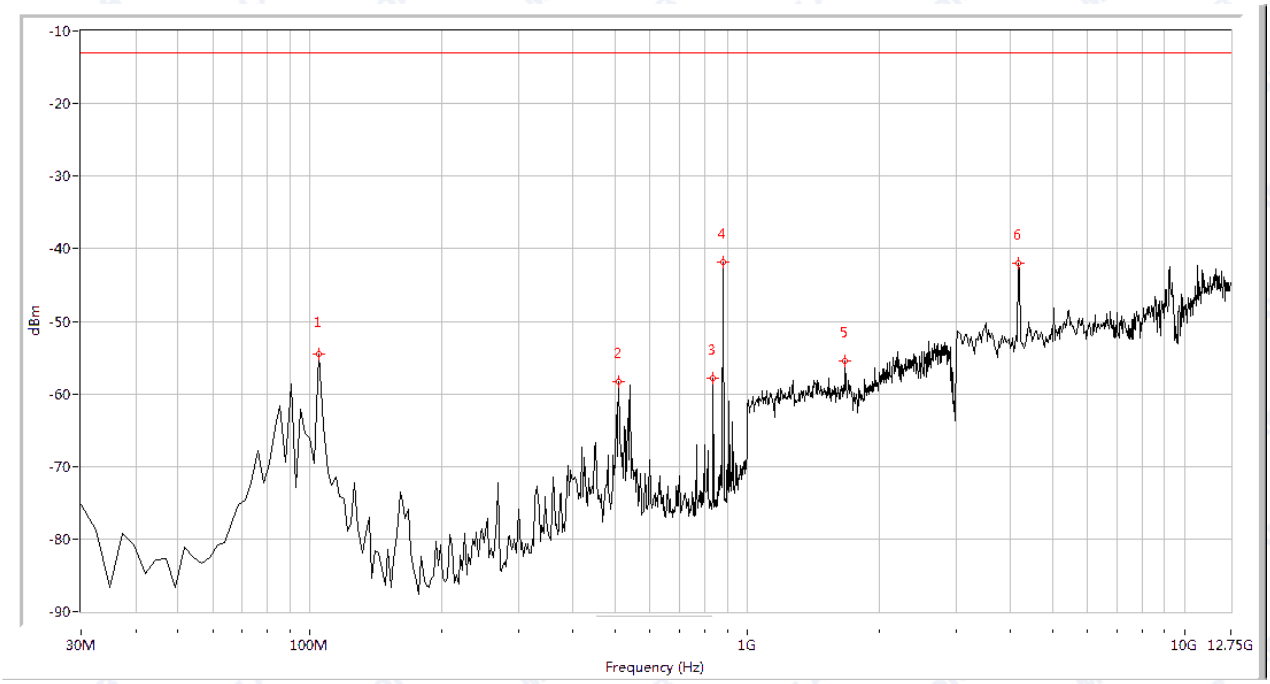
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
90.474	-58.70	-13.0	45.7	344.2	Horizontal	PASS
508.953	-59.88	-13.0	46.9	16.8	Horizontal	PASS
866.958	-39.58	-13.0	26.6	32.8	Horizontal	N.A
1648.379	-53.78	-13.0	40.8	60.0	Horizontal	PASS
2346.633	-51.48	-13.0	38.5	168.7	Horizontal	PASS
4945.137	-44.46	-13.0	31.5	47.3	Horizontal	PASS

(Plot E7: EVDO 0 BC0 Channel = 1013, Test Antenna Horizontal)



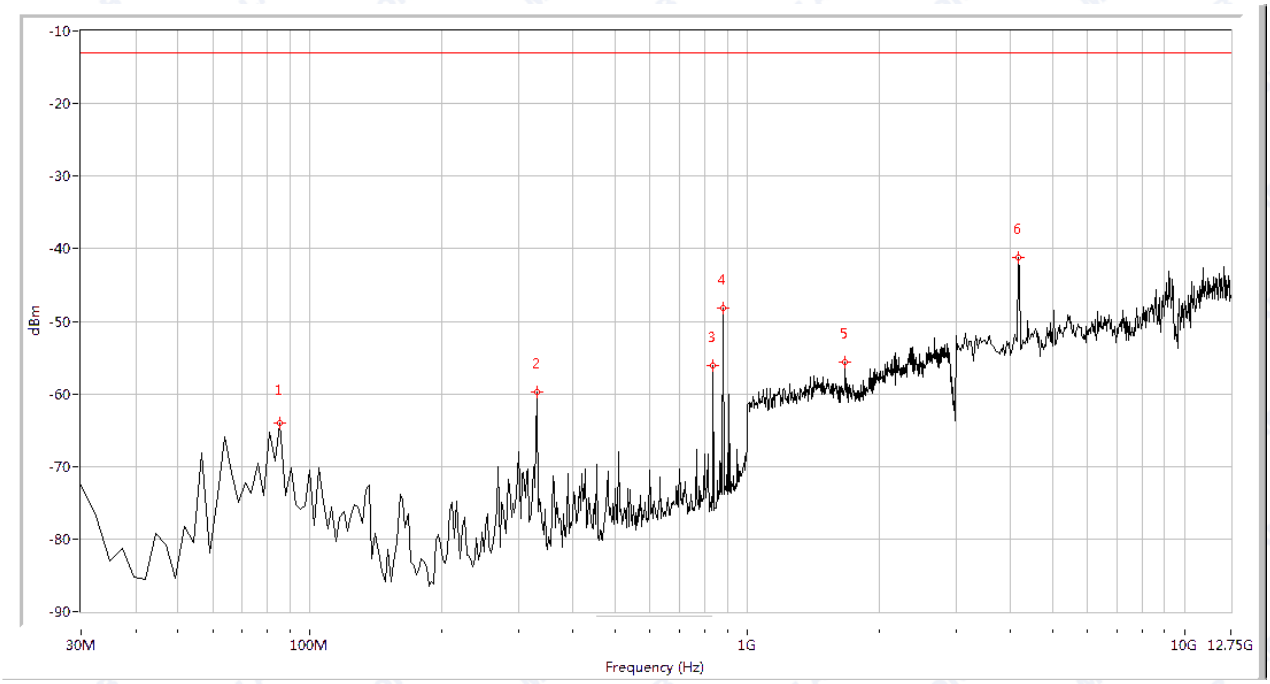
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
104.988	-63.33	-13.0	50.3	41.4	Vertical	PASS
329.950	-60.38	-13.0	47.4	37.2	Vertical	PASS
866.958	-46.51	-13.0	33.5	5.1	Vertical	N.A
1648.379	-53.14	-13.0	40.1	329.4	Vertical	PASS
2471.322	-51.26	-13.0	38.3	187.9	Vertical	PASS
4945.137	-44.71	-13.0	31.7	289.4	Vertical	PASS

(Plot E8: EVDO 0 BC0 Channel = 1013, Test Antenna Vertical)



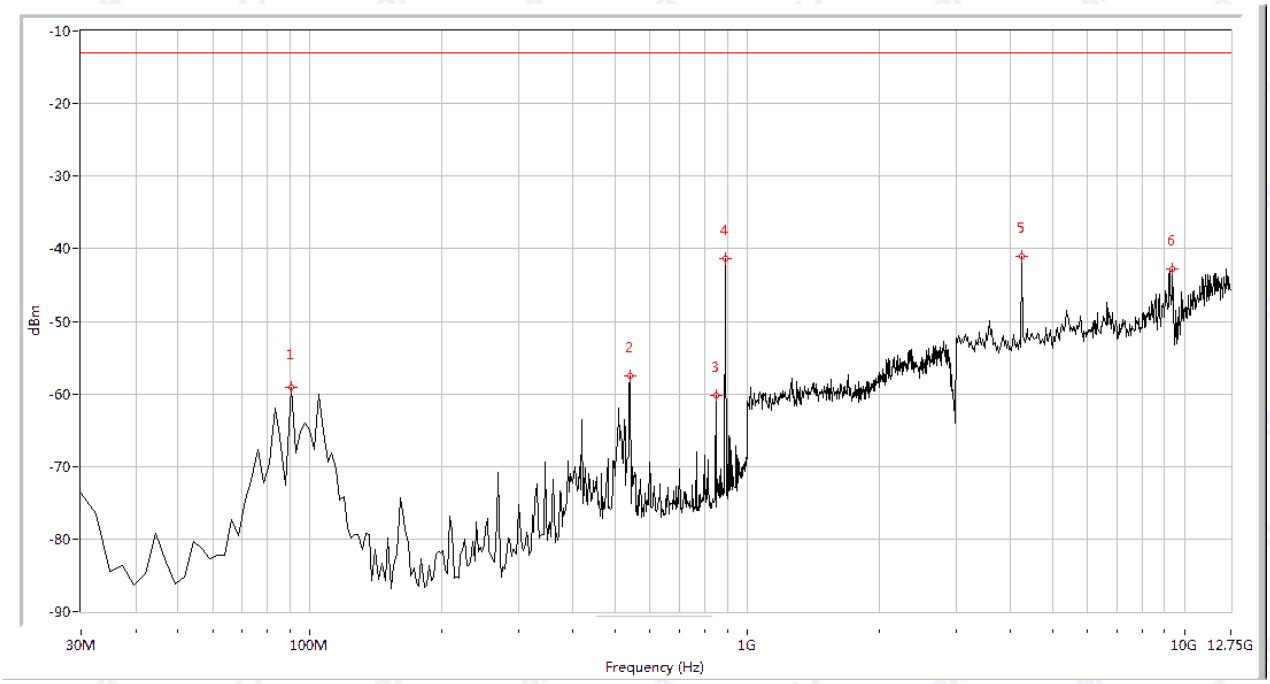
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
104.988	-54.44	-13.0	41.4	37.5	Horizontal	PASS
508.953	-58.36	-13.0	45.4	143.0	Horizontal	PASS
835.511	-57.85	-13.0	44.8	317.5	Horizontal	N.A
879.052	-41.91	-13.0	28.9	329.6	Horizontal	N.A
1673.317	-55.41	-13.0	42.4	0.0	Horizontal	PASS
4167.082	-41.96	-13.0	29.0	353.9	Horizontal	PASS

(Plot E9: EVDO 0 BC0 Channel = 384, Test Antenna Horizontal)



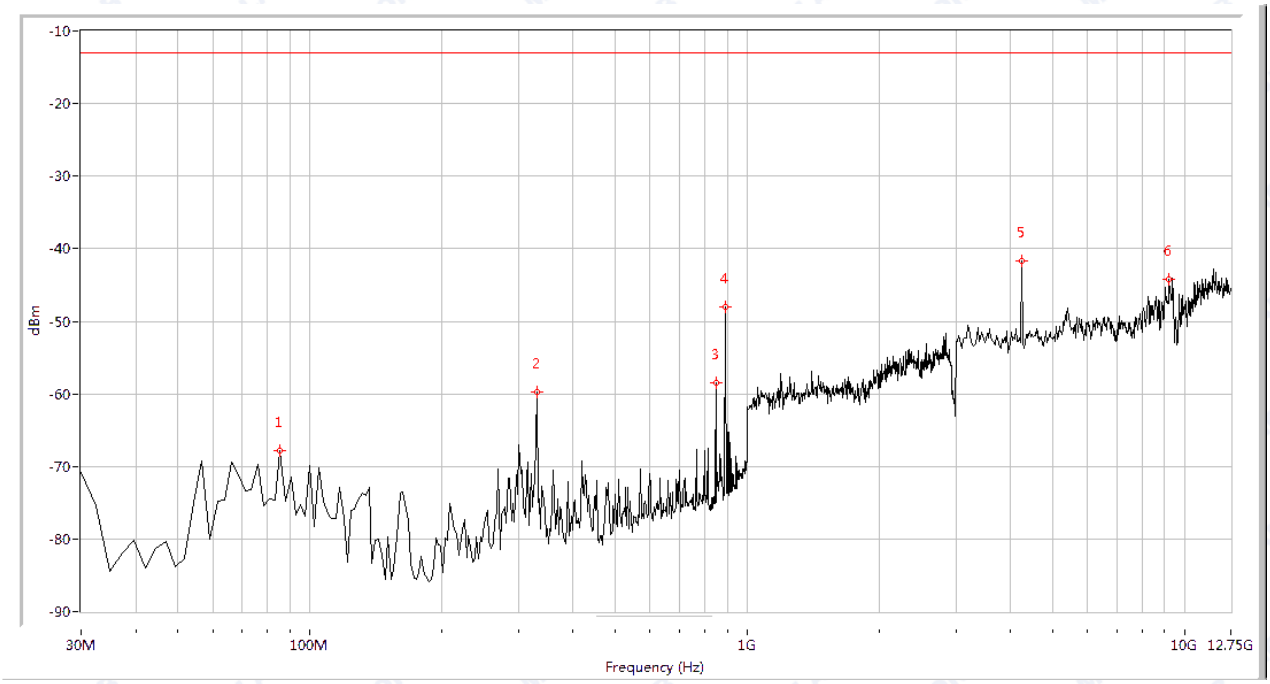
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
85.636	-64.05	-13.0	51.1	329.1	Vertical	PASS
329.950	-59.66	-13.0	46.7	4.9	Vertical	PASS
835.511	-56.16	-13.0	43.2	309.8	Vertical	N.A
881.471	-48.18	-13.0	35.2	130.3	Vertical	N.A
1673.317	-55.64	-13.0	42.6	141.5	Vertical	PASS
4167.082	-41.27	-13.0	28.3	106.5	Vertical	PASS

(Plot E10: EVDO 0 BC0 Channel = 384, Test Antenna Vertical)



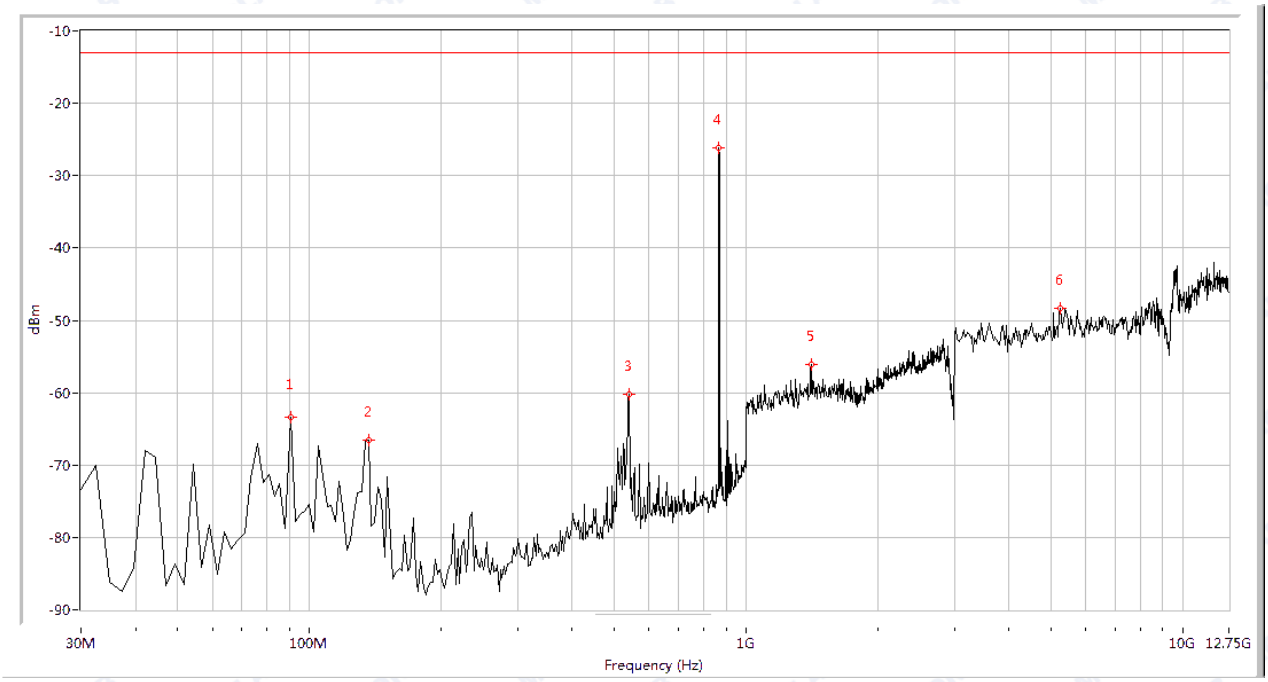
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
90.474	-59.18	-13.0	46.2	126.5	Horizontal	PASS
540.399	-57.58	-13.0	44.6	256.3	Horizontal	PASS
847.606	-60.15	-13.0	47.1	349.6	Horizontal	N.A
891.147	-41.35	-13.0	28.3	85.9	Horizontal	N.A
4240.025	-40.99	-13.0	28.0	322.0	Horizontal	PASS
9394.638	-42.80	-13.0	29.8	241.5	Horizontal	PASS

(Plot E11: EVDO 0 BC0 Channel = 777, Test Antenna Horizontal)



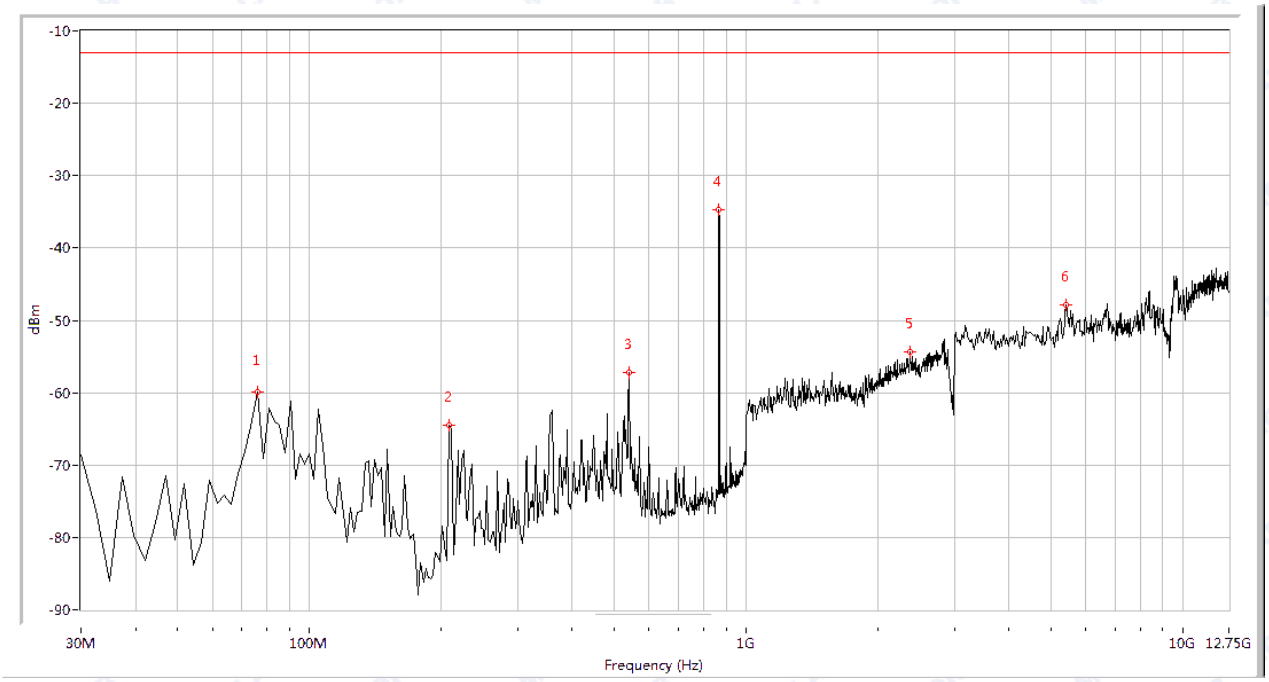
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
85.636	-67.90	-13.0	54.9	305.2	Vertical	PASS
329.950	-59.78	-13.0	46.8	272.9	Vertical	PASS
847.606	-58.40	-13.0	45.4	127.1	Vertical	N.A
891.147	-48.05	-13.0	35.1	5.6	Vertical	N.A
4240.025	-41.61	-13.0	28.6	15.0	Vertical	PASS
9200.125	-44.19	-13.0	31.2	318.5	Vertical	PASS

(Plot E12: EVDO 0 BC0 Channel = 777, Test Antenna Vertical)



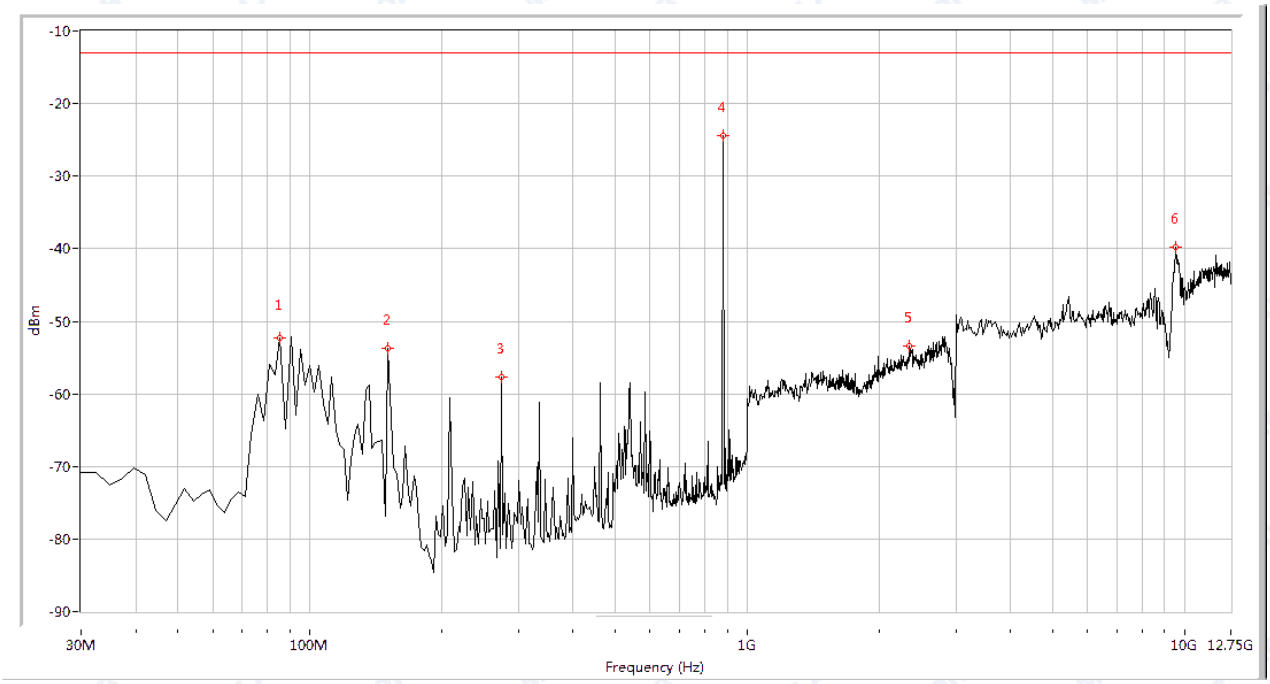
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
90.474	-63.46	-13.0	50.5	157.5	Horizontal	PASS
136.434	-66.61	-13.0	53.6	300.3	Horizontal	PASS
540.399	-60.28	-13.0	47.3	22.5	Horizontal	PASS
866.958	-26.14	-13.0	13.1	336.2	Horizontal	N.A
1408.978	-56.17	-13.0	43.2	278.8	Horizontal	PASS
5236.908	-48.33	-13.0	35.3	345.7	Horizontal	PASS

(Plot E13: EVDO A BC0 Channel = 1013, Test Antenna Horizontal)



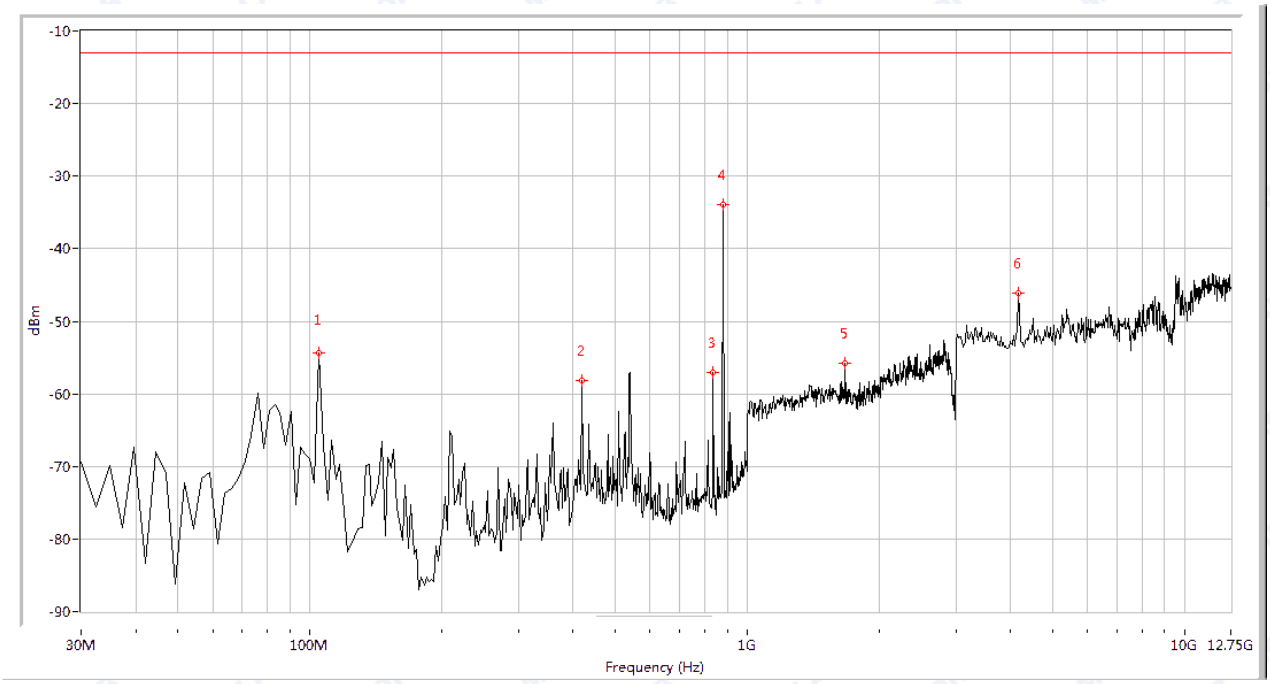
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
75.960	-59.92	-13.0	46.9	283.3	Vertical	PASS
209.002	-64.49	-13.0	51.5	173.4	Vertical	PASS
540.399	-57.17	-13.0	44.2	294.8	Vertical	PASS
866.958	-34.68	-13.0	21.7	277.8	Vertical	N.A
2376.559	-54.36	-13.0	41.4	30.3	Vertical	PASS
5407.107	-47.92	-13.0	34.9	259.6	Vertical	PASS

(Plot E14: EVDO A BC0 Channel = 1013, Test Antenna Vertical)



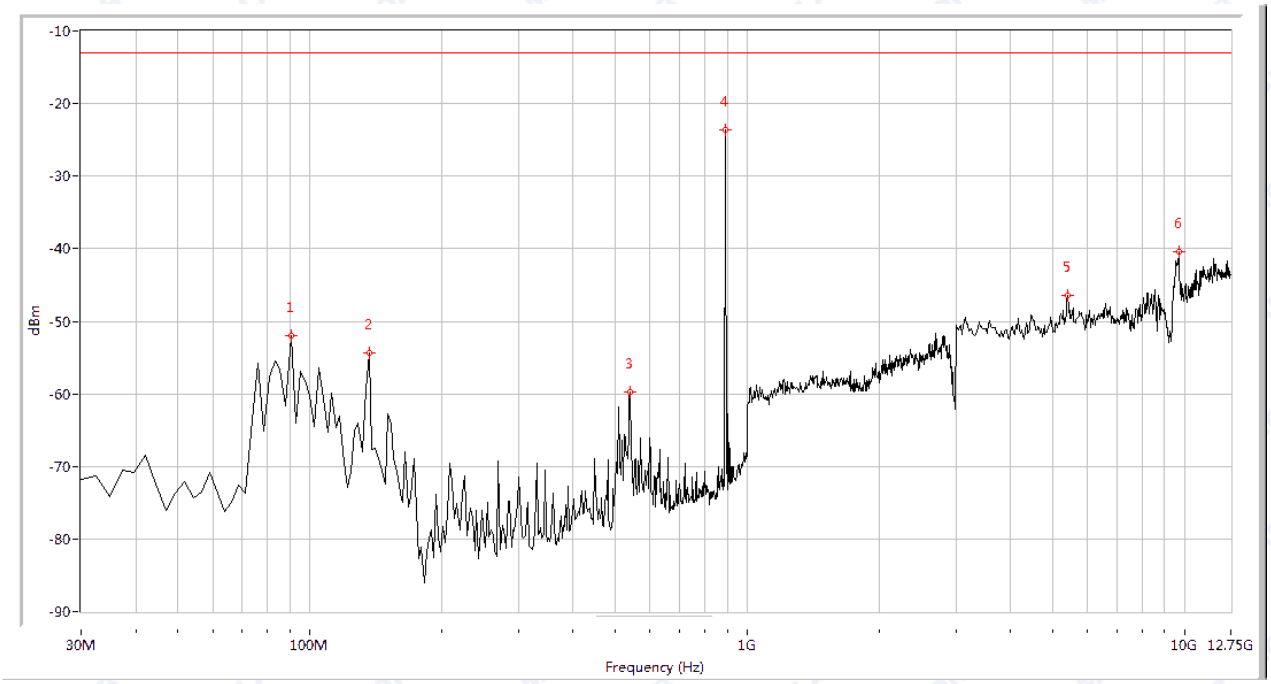
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
85.636	-52.30	-13.0	39.3	118.0	Horizontal	PASS
150.948	-53.68	-13.0	40.7	9.1	Horizontal	PASS
274.314	-57.66	-13.0	44.7	9.1	Horizontal	PASS
881.471	-24.38	-13.0	11.4	360.0	Horizontal	N.A
2346.633	-53.37	-13.0	40.4	200.8	Horizontal	PASS
9516.209	-39.81	-13.0	26.8	236.6	Horizontal	PASS

(Plot E15: EVDO A BC0 Channel = 384, Test Antenna Horizontal)



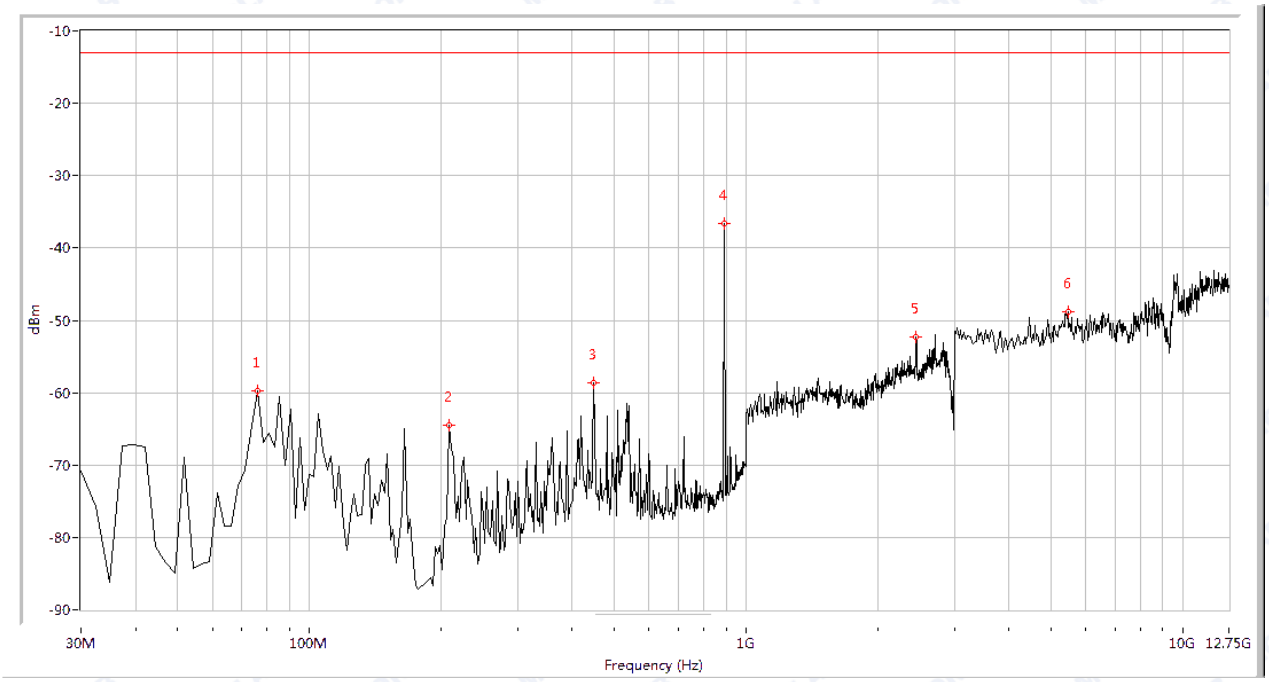
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
104.988	-54.38	-13.0	41.4	262.2	Vertical	PASS
419.451	-58.10	-13.0	45.1	289.1	Vertical	PASS
835.511	-57.01	-13.0	44.0	296.5	Vertical	N.A
879.052	-33.90	-13.0	20.9	335.8	Vertical	N.A
1673.317	-55.82	-13.0	42.8	360.0	Vertical	PASS
4167.082	-46.14	-13.0	33.1	293.3	Vertical	PASS

(Plot E16: EVDO A BC0 Channel = 384, Test Antenna Vertical)



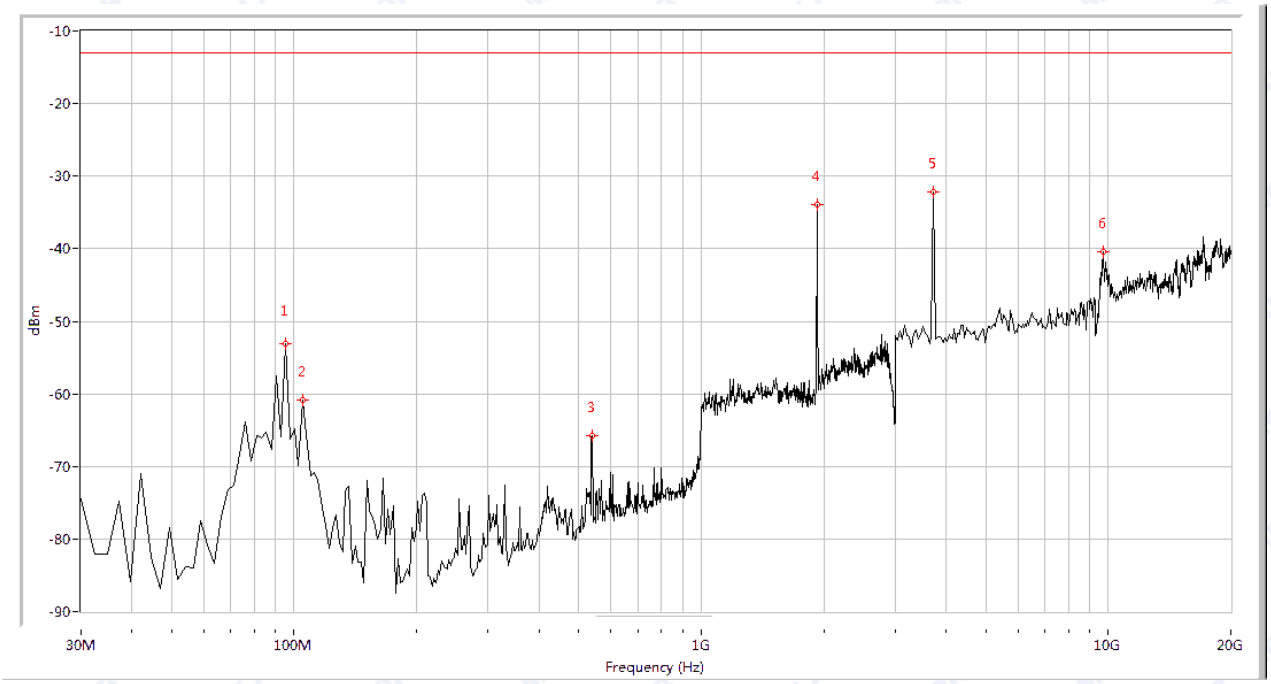
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
90.474	-51.96	-13.0	39.0	88.8	Horizontal	PASS
136.434	-54.41	-13.0	41.4	129.6	Horizontal	PASS
540.399	-59.73	-13.0	46.7	4.9	Horizontal	PASS
891.147	-23.67	-13.0	10.7	139.3	Horizontal	N.A
5407.107	-46.47	-13.0	33.5	147.2	Horizontal	PASS
9710.723	-40.40	-13.0	27.4	24.1	Horizontal	PASS

(Plot E17: EVDO A BC0 Channel = 777, Test Antenna Horizontal)



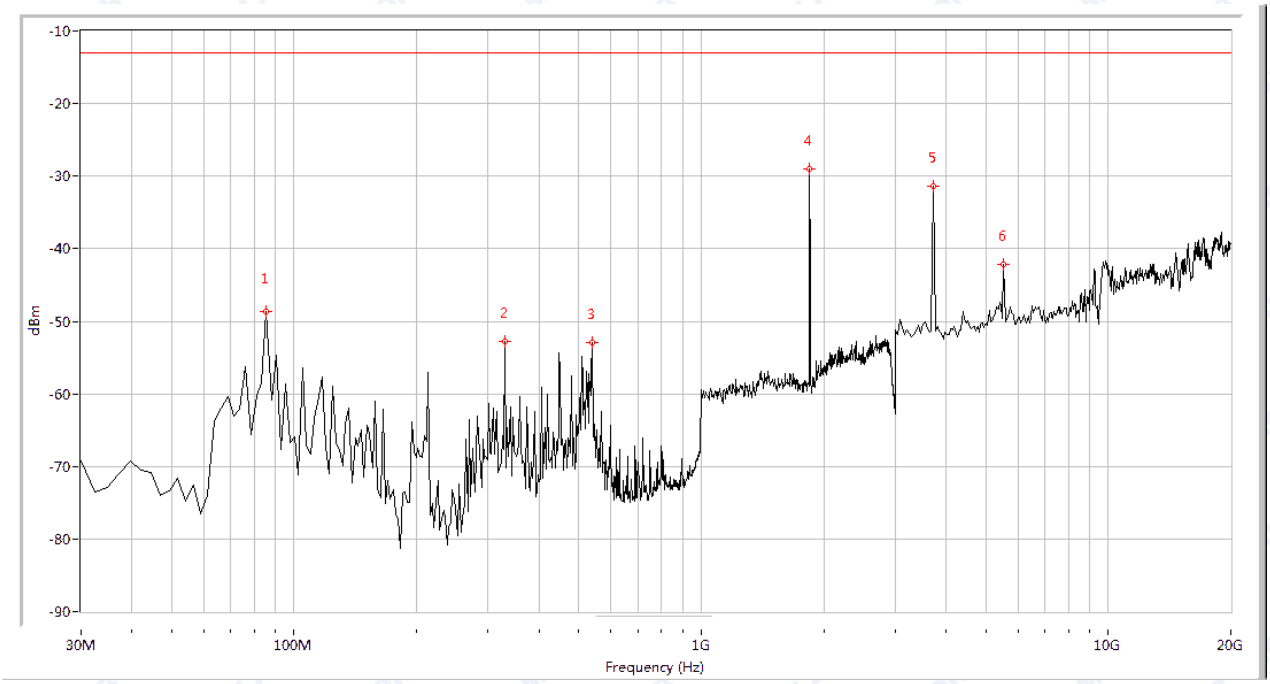
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
75.960	-59.72	-13.0	46.7	75.5	Vertical	PASS
209.002	-64.52	-13.0	51.5	31.6	Vertical	PASS
448.479	-58.65	-13.0	45.7	247.6	Vertical	PASS
891.147	-36.58	-13.0	23.6	331.8	Vertical	N.A
2451.372	-52.27	-13.0	39.3	154.2	Vertical	PASS
5455.736	-48.76	-13.0	35.8	289.4	Vertical	PASS

(Plot E18: EVDO A BC0 Channel = 777, Test Antenna Vertical)



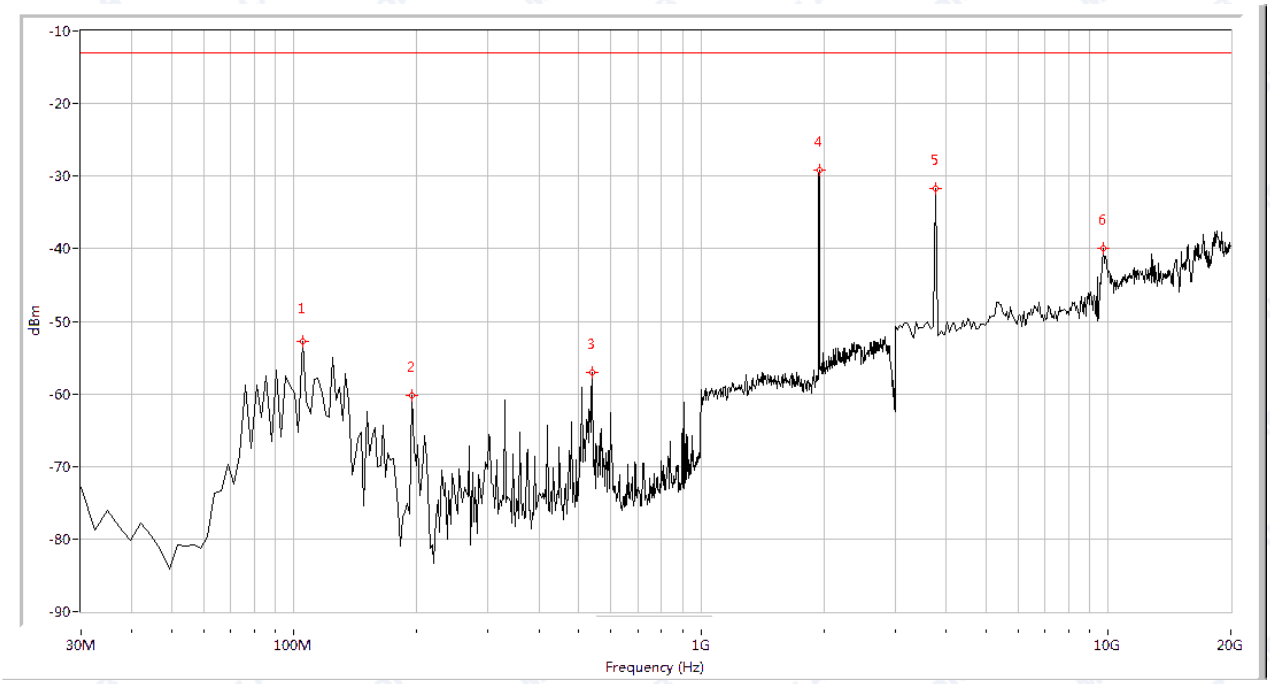
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
95.312	-53.08	-13.0	40.1	360.0	Horizontal	PASS
104.988	-60.93	-13.0	47.9	29.5	Horizontal	PASS
540.399	-65.83	-13.0	52.8	247.9	Horizontal	PASS
1927.681	-33.97	-13.0	21.0	240.0	Horizontal	N.A
3720.698	-32.13	-13.0	19.1	59.2	Horizontal	PASS
9698.254	-40.37	-13.0	27.4	49.5	Horizontal	PASS

(Plot E19: CDMA BC1 Channel = 25, Test Antenna Horizontal)



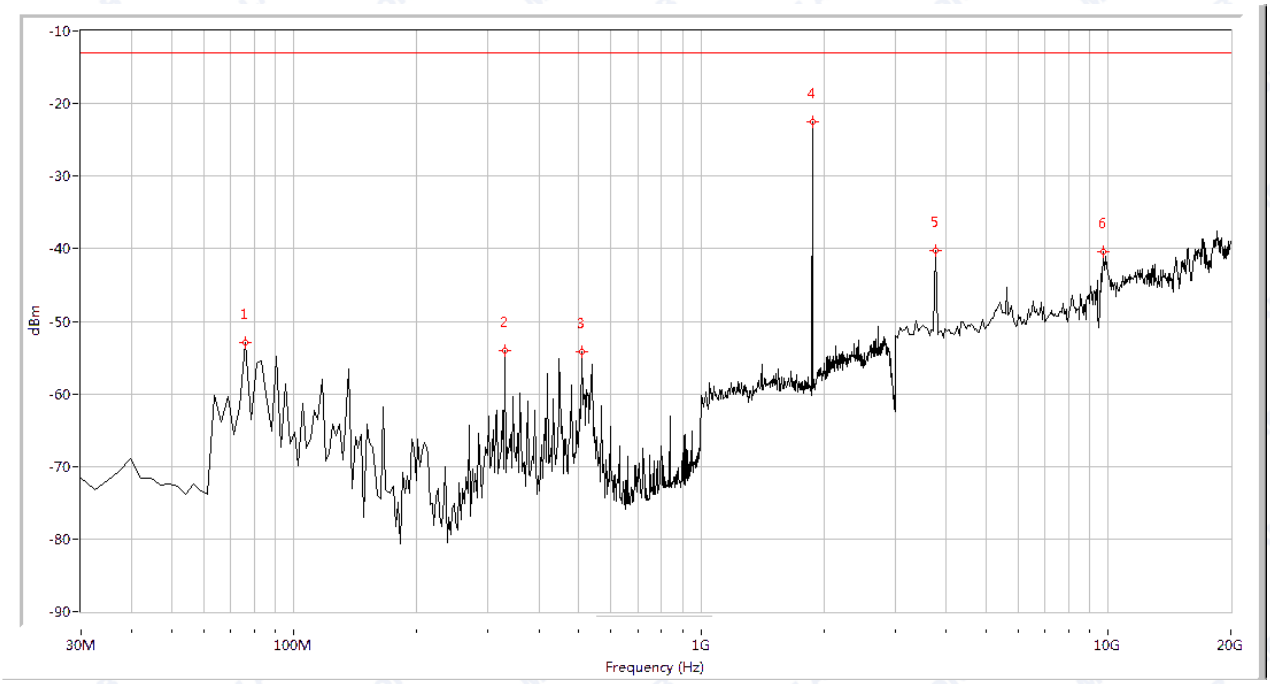
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
85.636	-48.64	-13.0	35.6	196.2	Vertical	PASS
329.950	-52.79	-13.0	39.8	164.9	Vertical	PASS
540.399	-52.93	-13.0	39.9	191.0	Vertical	PASS
1847.880	-28.94	-13.0	15.9	168.3	Vertical	N.A
3720.698	-31.41	-13.0	18.4	148.2	Vertical	PASS
5543.641	-42.21	-13.0	29.2	192.8	Vertical	PASS

(Plot E20: CDMA BC1 Channel = 25, Test Antenna Vertical)



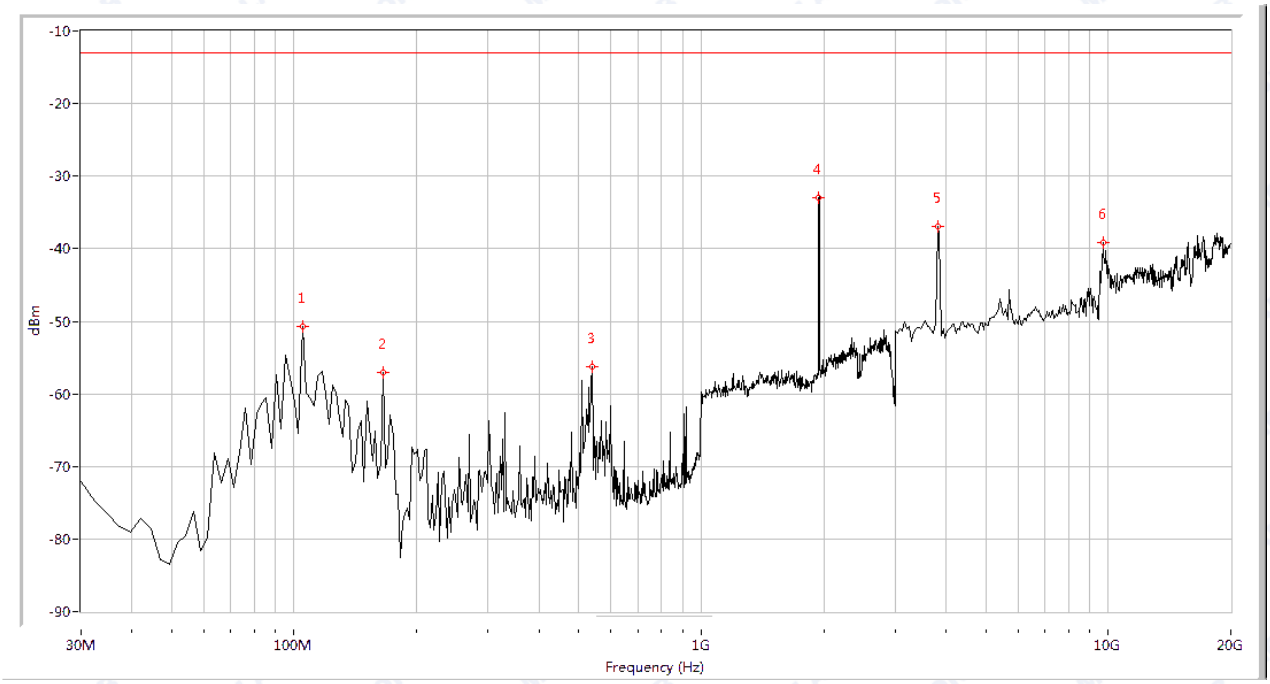
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
104.988	-52.80	-13.0	39.8	6.2	Horizontal	PASS
194.489	-60.26	-13.0	47.3	58.8	Horizontal	PASS
540.399	-57.00	-13.0	44.0	158.6	Horizontal	PASS
1952.618	-29.12	-13.0	16.1	-0.0	Horizontal	N.A
3763.092	-31.72	-13.0	18.7	118.7	Horizontal	PASS
9740.648	-40.01	-13.0	27.0	191.2	Horizontal	PASS

(Plot E21: CDMA BC1 Channel = 600, Test Antenna Horizontal)



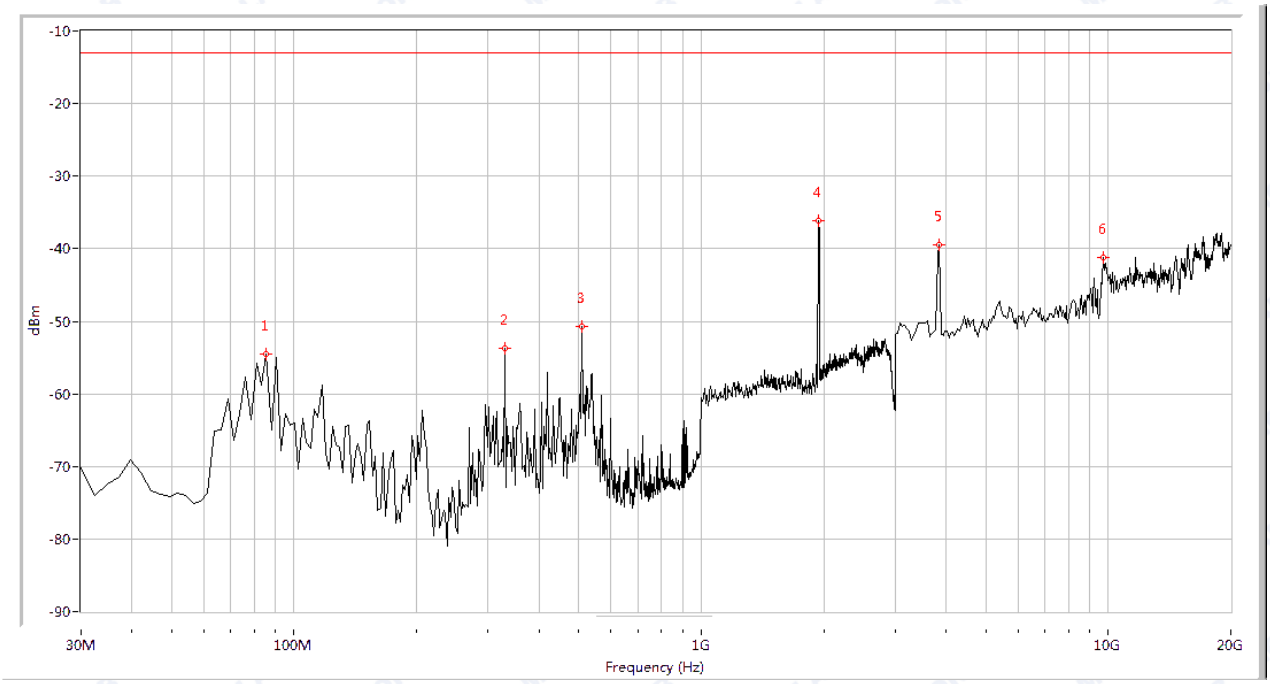
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
75.960	-52.89	-13.0	39.9	154.2	Vertical	PASS
329.950	-53.97	-13.0	41.0	198.1	Vertical	PASS
508.953	-54.12	-13.0	41.1	-0.0	Vertical	PASS
1877.805	-22.55	-13.0	9.6	142.6	Vertical	N.A
3763.092	-40.29	-13.0	27.3	205.2	Vertical	PASS
9740.648	-40.49	-13.0	27.5	35.4	Vertical	PASS

(Plot E22: CDMA BC1 Channel = 600, Test Antenna Vertical)



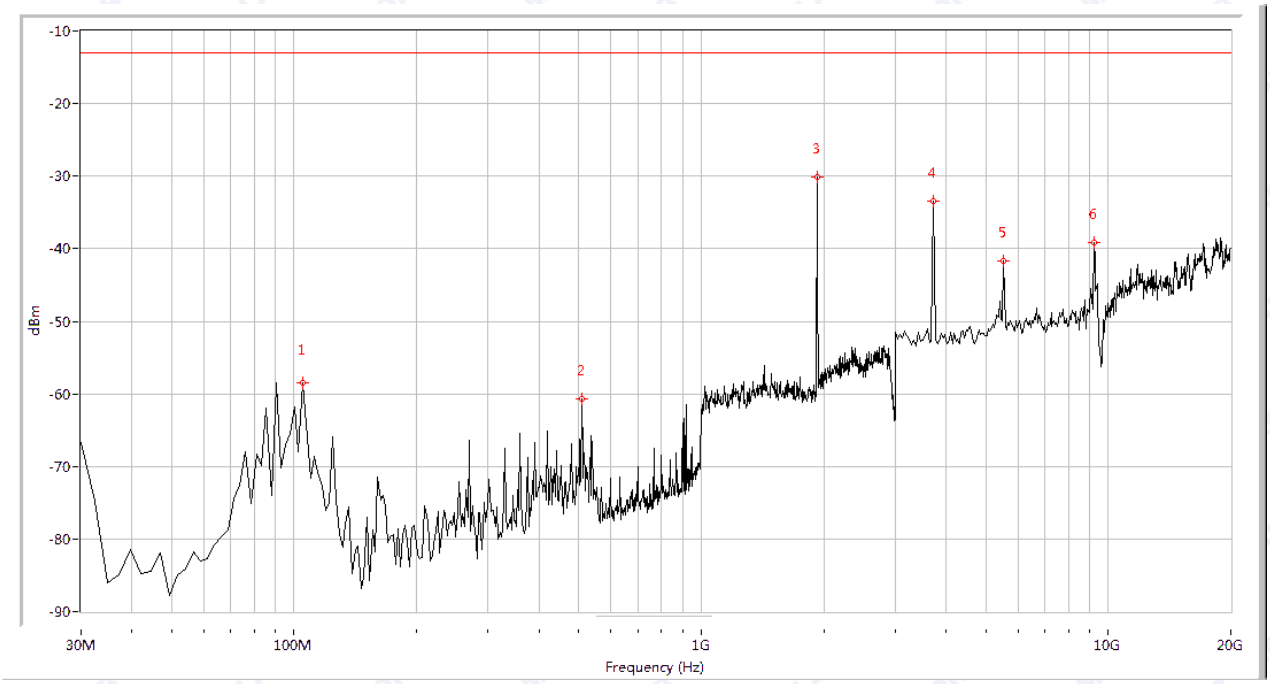
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
104.988	-50.73	-13.0	37.7	76.0	Horizontal	PASS
165.461	-57.01	-13.0	44.0	316.4	Horizontal	PASS
540.399	-56.30	-13.0	43.3	184.4	Horizontal	PASS
1947.631	-32.93	-13.0	19.9	-0.0	Horizontal	N.A
3805.486	-37.00	-13.0	24.0	360.0	Horizontal	PASS
9698.254	-39.14	-13.0	26.1	184.7	Horizontal	PASS

(Plot E23: CDMA BC1 Channel = 1175, Test Antenna Horizontal)



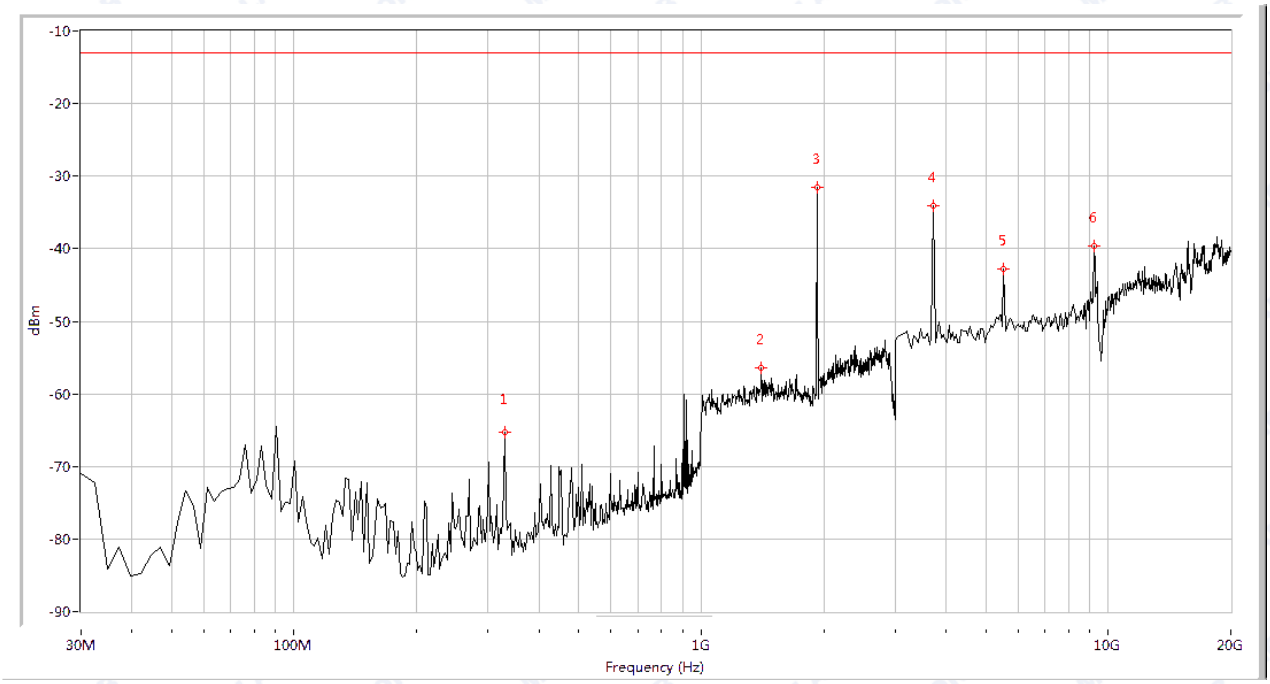
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
85.636	-54.56	-13.0	41.6	337.9	Vertical	PASS
329.950	-53.76	-13.0	40.8	201.4	Vertical	PASS
508.953	-50.73	-13.0	37.7	218.5	Vertical	PASS
1942.643	-36.16	-13.0	23.2	-0.0	Vertical	N.A
3847.880	-39.46	-13.0	26.5	147.5	Vertical	PASS
9740.648	-41.17	-13.0	28.2	61.5	Vertical	PASS

(Plot E24: CDMA BC1 Channel = 1175, Test Antenna Vertical)



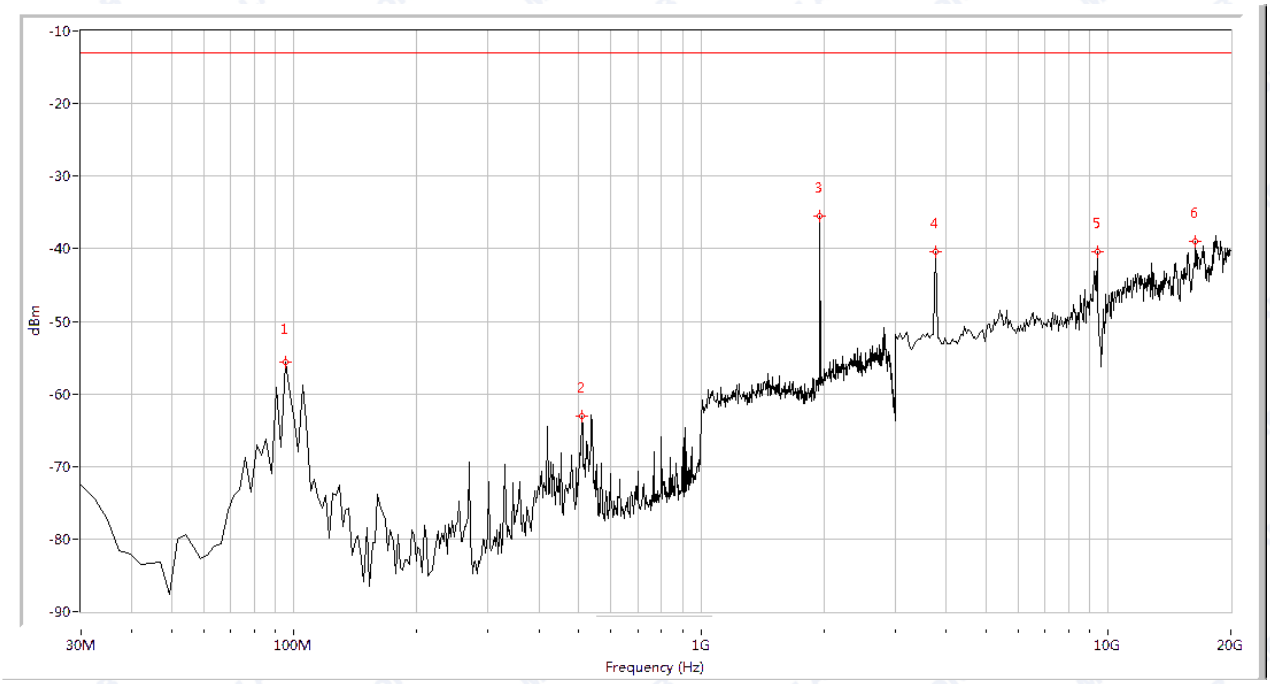
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
104.988	-58.41	-13.0	45.4	257.2	Horizontal	PASS
508.953	-60.77	-13.0	47.8	246.1	Horizontal	PASS
1927.681	-30.04	-13.0	17.0	200.0	Horizontal	N.A
3720.698	-33.51	-13.0	20.5	125.2	Horizontal	PASS
5543.641	-41.68	-13.0	28.7	263.1	Horizontal	PASS
9231.920	-39.10	-13.0	26.1	337.2	Horizontal	PASS

(Plot E25: EVDO 0 BC1 Channel = 25, Test Antenna Horizontal)



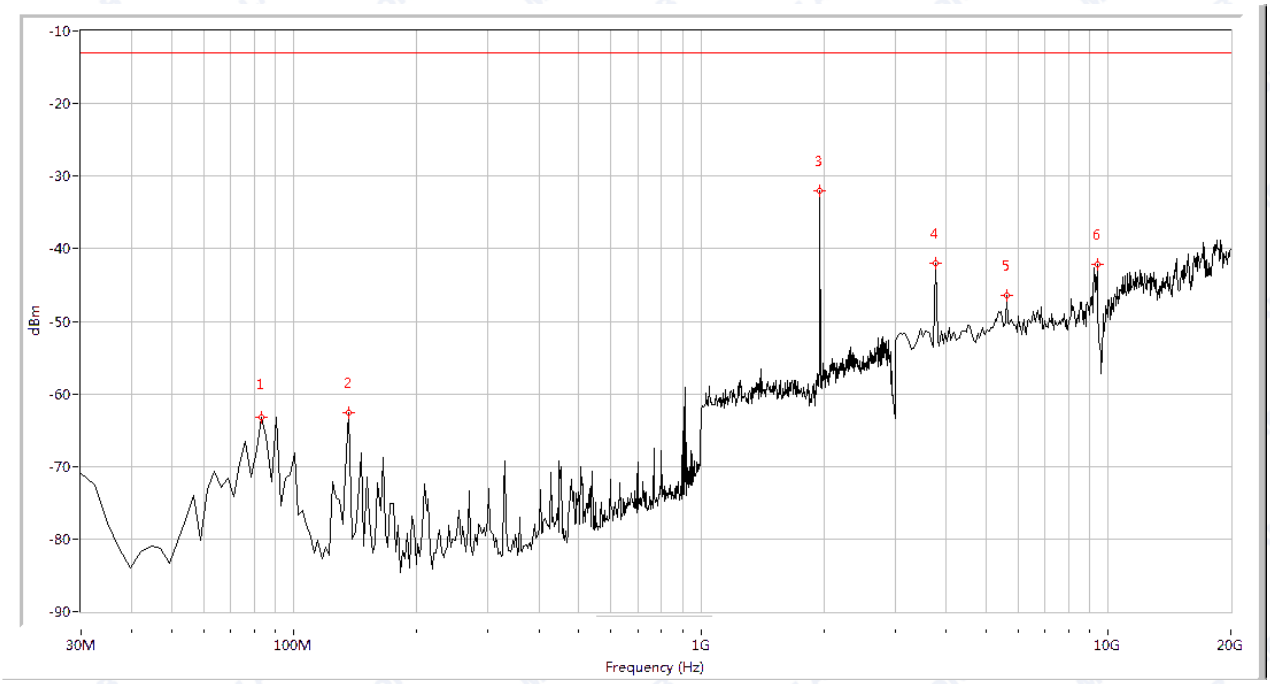
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
329.950	-65.35	-13.0	52.3	114.4	Vertical	PASS
1403.990	-56.35	-13.0	43.4	235.2	Vertical	PASS
1927.681	-31.53	-13.0	18.5	209.2	Vertical	N.A
3720.698	-34.05	-13.0	21.1	20.9	Vertical	PASS
5543.641	-42.72	-13.0	29.7	161.6	Vertical	PASS
9231.920	-39.56	-13.0	26.6	266.2	Vertical	PASS

(Plot E26: EVDO 0 BC1 Channel = 25, Test Antenna Vertical)



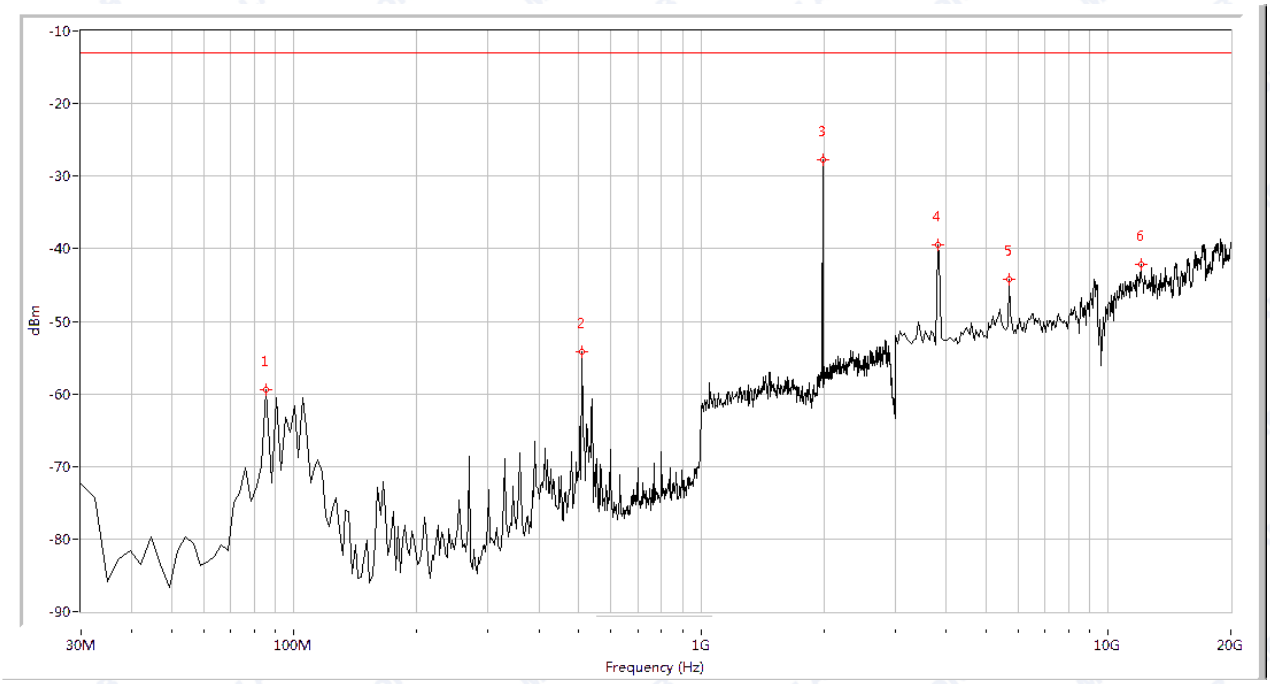
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
95.312	-55.63	-13.0	42.6	157.1	Horizontal	PASS
508.953	-63.13	-13.0	50.1	300.3	Horizontal	PASS
1957.606	-35.43	-13.0	22.4	192.4	Horizontal	N.A
3763.092	-40.42	-13.0	27.4	360.0	Horizontal	PASS
9401.496	-40.44	-13.0	27.4	136.3	Horizontal	PASS
16396.509	-39.06	-13.0	26.1	305.2	Horizontal	PASS

(Plot E27: EVDO 0 BC1 Channel =600, Test Antenna Horizontal)



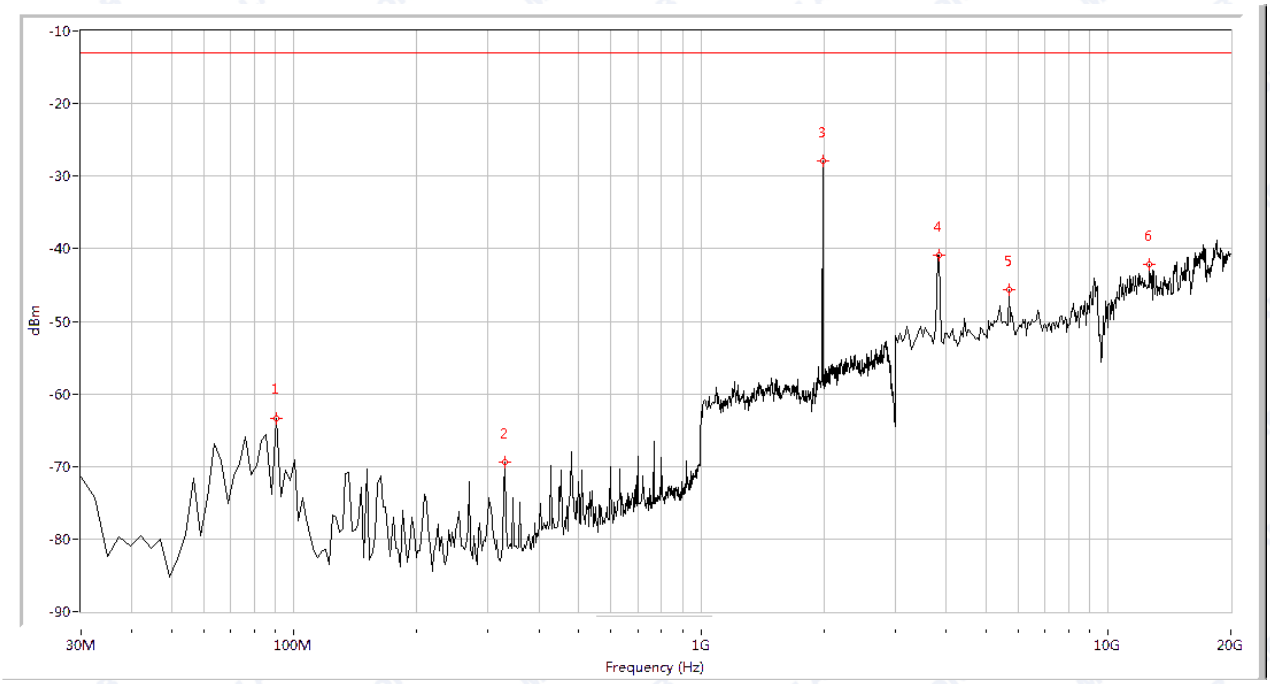
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
83.217	-63.18	-13.0	50.2	34.7	Vertical	PASS
136.434	-62.58	-13.0	49.6	309.0	Vertical	PASS
1957.606	-31.95	-13.0	18.9	75.6	Vertical	N.A
3763.092	-42.07	-13.0	29.1	287.4	Vertical	PASS
5628.429	-46.47	-13.0	33.5	281.8	Vertical	PASS
9401.496	-42.11	-13.0	29.1	359.2	Vertical	PASS

(Plot E28: EVDO 0 BC1 Channel =600, Test Antenna Vertical)



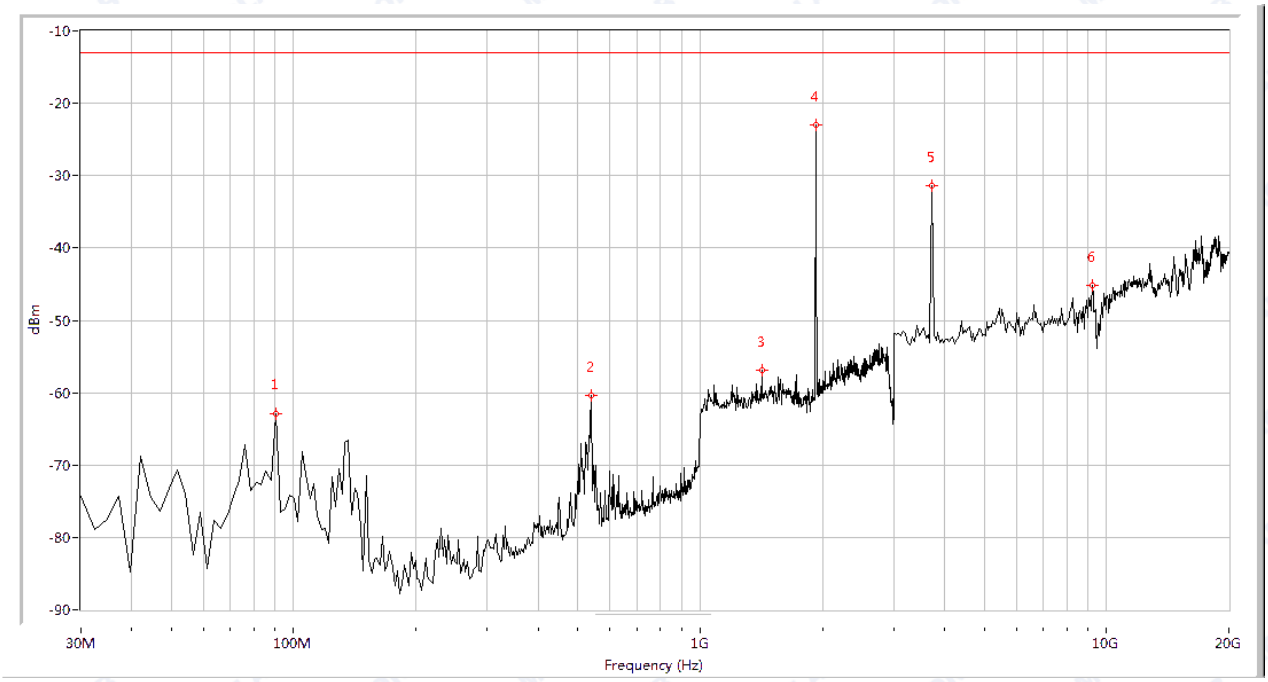
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
85.636	-59.41	-13.0	46.4	359.5	Horizontal	PASS
508.953	-54.23	-13.0	41.2	269.0	Horizontal	PASS
1987.531	-27.69	-13.0	14.7	76.0	Horizontal	N.A
3805.486	-39.49	-13.0	26.5	294.3	Horizontal	PASS
5713.217	-44.25	-13.0	31.2	48.5	Horizontal	PASS
12029.925	-42.15	-13.0	29.1	233.3	Horizontal	PASS

(Plot E29: EVDO 0 BC1 Channel = 1175, Test Antenna Horizontal)



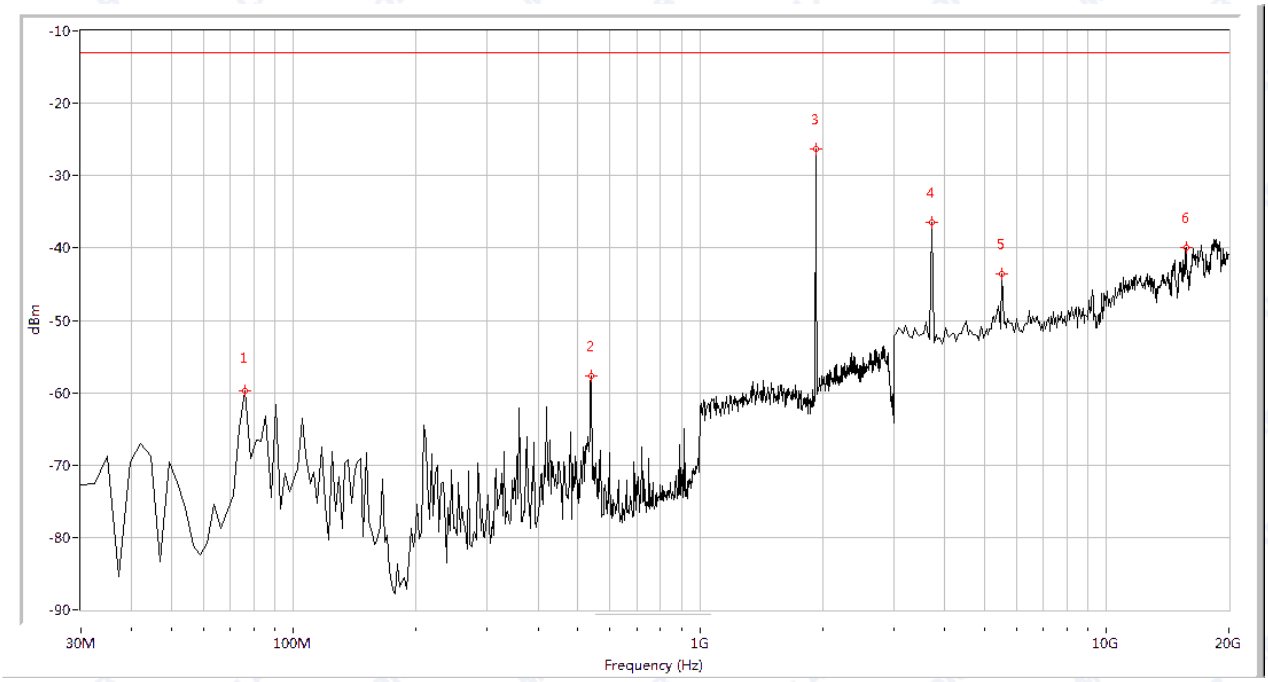
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
90.474	-63.39	-13.0	50.4	222.3	Vertical	PASS
329.950	-69.40	-13.0	56.4	222.3	Vertical	PASS
1987.531	-27.86	-13.0	14.9	232.3	Vertical	N.A
3847.880	-40.96	-13.0	28.0	23.1	Vertical	PASS
5713.217	-45.66	-13.0	32.7	64.8	Vertical	PASS
12623.441	-42.15	-13.0	29.2	140.8	Vertical	PASS

(Plot E30: EVDO 0 BC1 Channel = 1175, Test Antenna Vertical)



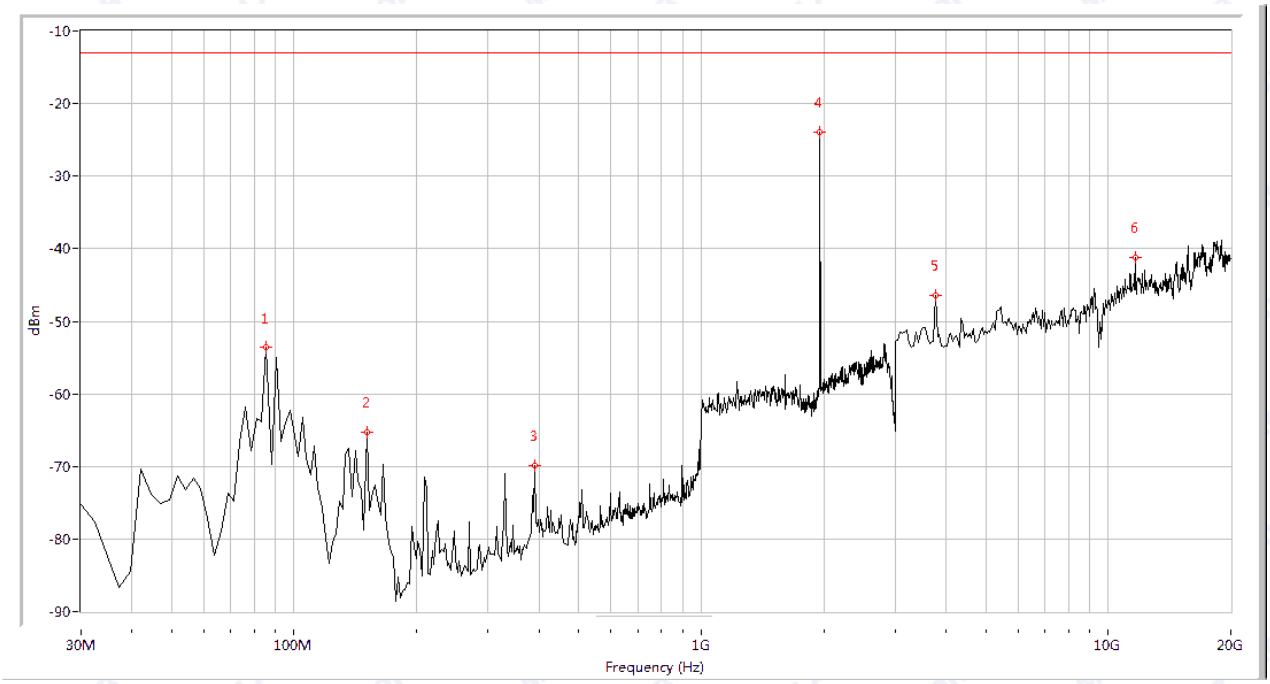
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
90.474	-62.96	-13.0	50.0	166.3	Horizontal	PASS
540.399	-60.42	-13.0	47.4	309.9	Horizontal	PASS
1418.953	-56.87	-13.0	43.9	327.0	Horizontal	PASS
1927.681	-22.96	-13.0	10.0	327.2	Horizontal	N.A
3720.698	-31.34	-13.0	18.3	132.4	Horizontal	PASS
9231.920	-45.11	-13.0	32.1	360.0	Horizontal	PASS

(Plot E31: EVDO A BC1 Channel = 25, Test Antenna Horizontal)



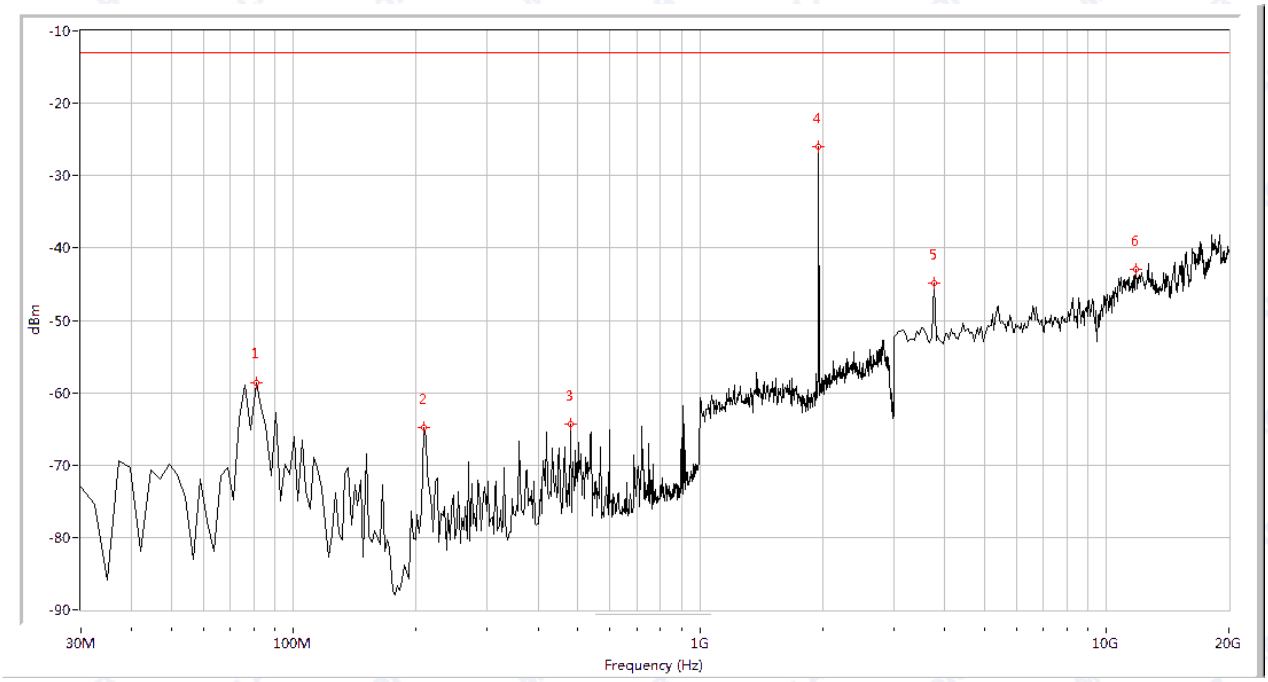
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
75.960	-59.76	-13.0	46.8	268.9	Vertical	PASS
540.399	-57.73	-13.0	44.7	251.1	Vertical	PASS
1927.681	-26.31	-13.0	13.3	65.7	Vertical	N.A
3720.698	-36.42	-13.0	23.4	269.7	Vertical	PASS
5543.641	-43.53	-13.0	30.5	337.8	Vertical	PASS
15718.204	-40.00	-13.0	27.0	312.1	Vertical	PASS

(Plot E32: EVDO A BC1 Channel = 25, Test Antenna Vertical)



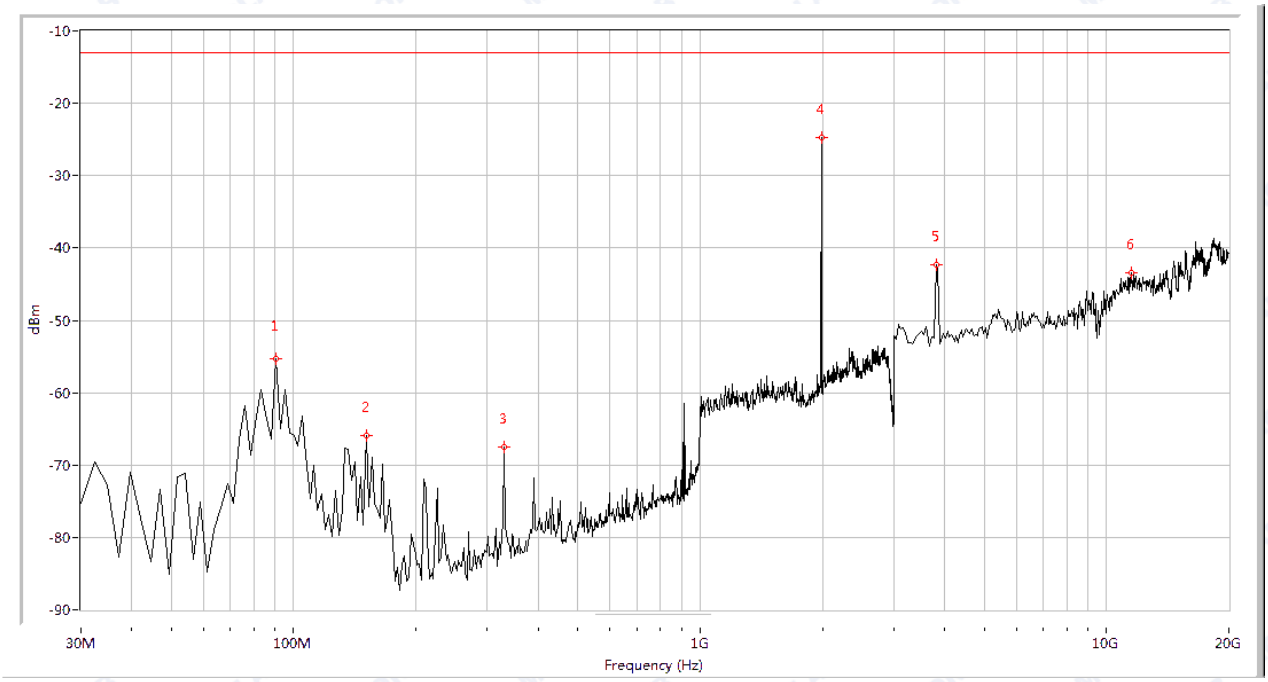
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
85.636	-53.53	-13.0	40.5	264.8	Horizontal	PASS
150.948	-65.31	-13.0	52.3	299.6	Horizontal	PASS
390.424	-69.87	-13.0	56.9	77.0	Horizontal	PASS
1957.606	-23.94	-13.0	10.9	173.1	Horizontal	N.A
3763.092	-46.50	-13.0	33.5	305.1	Horizontal	PASS
11648.379	-41.23	-13.0	28.2	351.2	Horizontal	PASS

(Plot E33: EVDO A BC1 Channel =600, Test Antenna Horizontal)



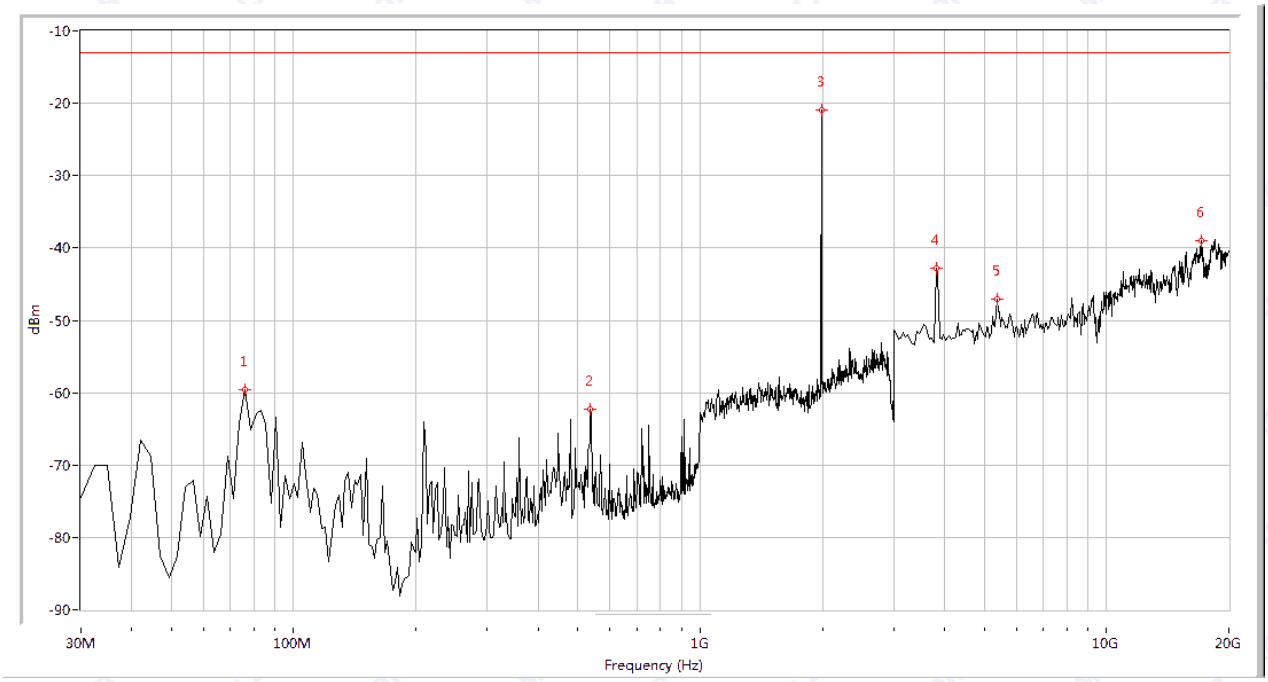
Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
80.798	-58.64	-13.0	45.6	11.5	Vertical	PASS
209.002	-64.87	-13.0	51.9	246.2	Vertical	PASS
479.925	-64.35	-13.0	51.3	283.5	Vertical	PASS
1957.606	-26.04	-13.0	13.0	172.1	Vertical	N.A
3763.092	-44.90	-13.0	31.9	179.0	Vertical	PASS
11817.955	-43.01	-13.0	30.0	-0.0	Vertical	PASS

(Plot E34: EVDO A BC1 Channel =600, Test Antenna Vertical)



Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
90.474	-55.25	-13.0	42.2	360.0	Horizontal	PASS
150.948	-65.95	-13.0	52.9	314.3	Horizontal	PASS
329.950	-67.49	-13.0	54.5	360.0	Horizontal	PASS
1987.531	-24.72	-13.0	11.7	358.4	Horizontal	N.A
3805.486	-42.34	-13.0	29.3	23.3	Horizontal	PASS
11478.803	-43.42	-13.0	30.4	279.8	Horizontal	PASS

(Plot E35: EVDO A BC1 Channel = 1175, Test Antenna Horizontal)



Fre. (MHz)	Peak	Limit(PK)	Margin	Degree	Antenna	Verdict
75.960	-59.52	-13.0	46.5	253.7	Vertical	PASS
537.980	-62.25	-13.0	49.3	210.7	Vertical	PASS
1987.531	-20.91	-13.0	7.9	200.8	Vertical	N.A
3805.486	-42.84	-13.0	29.8	128.1	Vertical	PASS
5374.065	-47.15	-13.0	34.1	112.1	Vertical	PASS
17159.601	-38.98	-13.0	26.0	164.8	Vertical	PASS

(Plot E36: EVDO A BC1 Channel = 1175, Test Antenna Vertical)

***** END OF REPORT *****