FCC 47 CFR PART 15 SUBPART C
INDUSTRY CANADA RSS-210 ISSUE 8

BLUETOOTH LOW ENERGY
CERTIFICATION TEST REPORT

FOR

Five Function Wireless Remote

MODEL NUMBER: 30780-24

FCC ID: 2AC8J-3078024
IC: 12344A-3078024

REPORT NUMBER: 10463456B-1, Revision 1

ISSUE DATE: November 7, 2014
REVISION DATE: January 25, 2015

Prepared for
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1499 Delp Dr.
Harleysville, PA 19438

Prepared by
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Revision History

Rev.	Issue Date	Revisions	Revised By
--	11/07/14	Initial Issue	M.Ferrer
1	1/25/15	Updated with clarifications, Added RF Exposure	M.Ferrer

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1. ATTESTATION OF TEST RESULTS

COMPANY NAME: Medical Components Inc
1499 Delp Dr.
Harleysville, PA, 19438

EUT DESCRIPTION: Five Function wireless remote control

MODEL: 30780-24

SERIAL NUMBER: Prototype

DATE TESTED: October 22, 2014 – November 6, 2014

APPLICABLE STANDARDS	
STANDARD	**TEST RESULTS**
CFR 47 Part 15 Subpart C	Pass
INDUSTRY CANADA RSS-210 Issue 8 Annex 8	Pass
INDUSTRY CANADA RSS-GEN Issue 3	Pass

UL LLC tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by UL LLC based on interpretations and/or observations of test results. Measurement Uncertainties were not taken into account and are published for informational purposes only. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by UL LLC and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by UL LLC will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Approved & Released For UL By:

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UL LLC

2. TEST METHODOLOGY

The tests documented in this report were performed in accordance with ANSI C63.4-2003, FCC CFR 47 Part 2, FCC CFR 47 Part 15, RSS-GEN Issue 3, and RSS-210 Issue 8.

3. FACILITIES AND ACCREDITATION

The test sites and measurement facilities used to collect data are located at 333 Pfingsten Road, Northbrook, IL 60062 USA.

UL NBK is accredited by NVLAP, Laboratory Code 100414-0. The full scope of accreditation can be viewed at http://ts.nist.gov/Standards/scopes/1004140.htm

4. CALIBRATION AND UNCERTAINTY

4.1. MEASURING INSTRUMENT CALIBRATION

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

4.2. SAMPLE CALCULATION

Sample Calculations
Radiated Field Strength and Conducted Emissions data contained within this report is calculated on the following basis:
Field Strength (dBuV/m) = Meter Reading (dBuV) + AF (dB/m) - Gain (dB) + Cable Loss (dB)
Conducted Voltage (dBuV) = Meter Reading (dBuV) + Cable Loss (dB) + LISN IL (dB)
Conducted Current (dBuA) = Meter Reading (dBuV) + Cable Loss (dB) - Transducer Factor (dBohms)

4.3. MEASUREMENT UNCERTAINTY

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

Test	Range	Equipment	Uncertainty k=2
Radiated Emissions	30-200MHz	Bicon 10m Horz	4.27dB
Radiated Emissions	30-200MHz	Bicon 10m Vert	4.28dB
Radiated Emissions	200-1000MHz	LogP 10m Horz	3.33dB
Radiated Emissions	200-1000MHz	LogP 10m Vert	3.39dB
Radiated Emissions	1-6GHz	Horn	5.02dB
Radiated Emissions	6-18GHz	Horn	5.34dB
Radiated Emissions	18-26GHz	Horn	6.60dB
Conducted Ant Port	30MHz-26GHz	Spectrum Analyzer	2.94

Uncertainty figures are valid to a confidence level of 95%.

5. EQUIPMENT UNDER TEST

5.1. DESCRIPTION OF EUT

The EUT is a Five function wireless remote control that contains a BTLE transceiver. The unit is battery powered only.

5.2. MAXIMUM OUTPUT POWER

The transmitter has a maximum peak conducted output power as follows:

Frequency Range (MHz)	Mode	Output Power (dBm)	Output Power (mW)
2402 - 2480	BLE	-7.37	0.18

5.3. DESCRIPTION OF AVAILABLE ANTENNAS

The Remote Control module, model 30780-24 utilizes a PCB antenna, with a maximum gain of 2.58dBi.
Note: There was no antenna spec provided by client and per client's instruction, the antenna was obtained from the calculation as below;

REMOTE						
Band (MHz)	Mode	Freq. (MHz)	Conducted Avg Power (dBm)	E Field (dBuV/m)	EIRP (dBm)	Antenna Gain (dBi)
2.4GHz	BLE	2402	-7.56	90.22	-4.98	2.58

5.4. SOFTWARE AND FIRMWARE

The EUT driver software installed during testing was FTDI, version 2.10.0.0

5.5. WORST-CASE CONFIGURATION AND MODE

Radiated emission and power line conducted emission were performed with the EUT set to transmit at the channel with highest output power as worst-case scenario.

The fundamental of the EUT was investigated in three orthogonal orientations X,Y,Z, it was determined that X orientation was worst-case orientation; therefore, all final radiated testing was performed with the EUT in X orientation.

BLE: 1 Mbps.

5.6. DESCRIPTION OF TEST SETUP

SUPPORT EQUIPMENT

Support Equipment List				
Description	**Manufacturer**	**Model**	**Serial Number**	**FCC ID**
Remote	MedComp	30780-24	-	

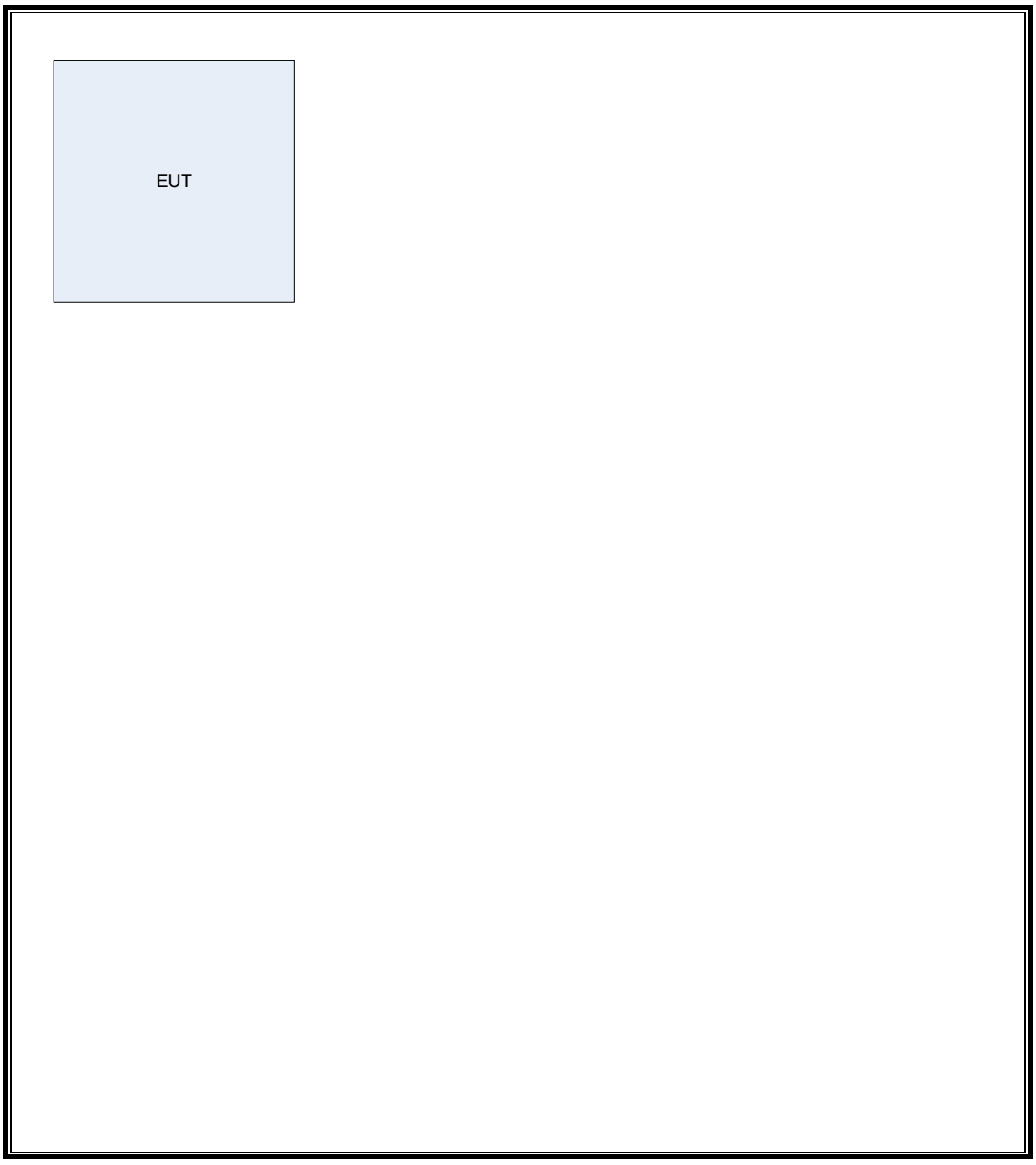
I/O CABLES

None

TEST SETUP

The EUT is a standalone device. A serial cable is connected internally to the EUT for programing. This cable is removed during testing. Test software exercised the radio card.

SETUP DIAGRAM FOR TESTS



6. TEST AND MEASUREMENT EQUIPMENT

The following test and measurement equipment was utilized for the tests documented in this report:

Description	Manufacturer	Model	Asset	Cal Date	Cal Due
EMI Test Receiver	Rohde & Schwarz	ESCI	EMC4328	20131220	20141231
Bicon Antenna	Chase	VBA6106A	EMC4078	20140401	20150401
Log-P Antenna	Schaffner	UPA6109	EMC4313	20131003	20141031
EMI Test Receiver	Rohde & Schwarz	ESU	EMC4323	20131220	20141231
Antenna Array	UL	BOMS	EMC4276	20121227	20141231
EMI Test Receiver	Agilent	N9030A	EMC4360	20131221	20141221
Power Meter	Agilent	N1912A	EMC4362	20130606	20150606
Power Sensor	Agilent	N8481A	EMC4363	20131209	20141209

7. ANTENNA PORT TEST RESULTS

8. ON TIME, DUTY CYCLE AND MEASUREMENT METHODS

LIMITS

None; for reporting purposes only.

PROCEDURE

KDB 558074 Zero-Span Spectrum Analyzer Method.

8.1. ON TIME AND DUTY CYCLE RESULTS

Mode	ON Time B (msec)	Period (msec)	Duty Cycle x (linear)	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/B Minimum VBW (kHz)
BLE	2.117	2.219	0.954	95.40%	0.20	0.472

8.2. MEASUREMENT METHODS

6 dB BW: KDB 558074 D01 v03r02, Section 8.1.

Output Power: KDB 558074 D01 v03r02, Section 9.1.1.

Power Spectral Density: KDB 558074 D01 v03r02, Section 10.2.

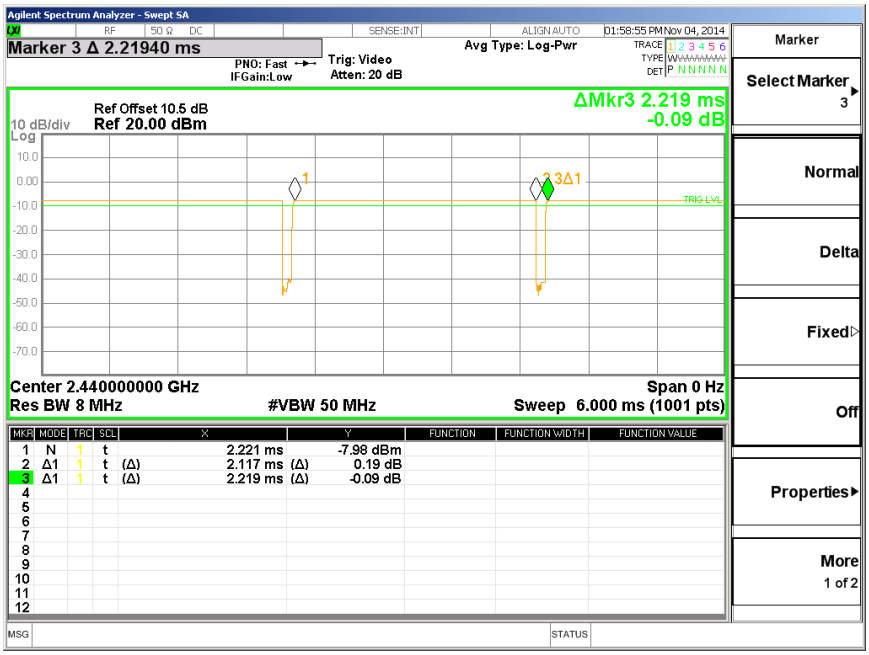
Out-of-band emissions in non-restricted bands: KDB 558074 D01 v03r02, Section 11.0.

Out-of-band emissions in restricted bands: KDB 558074 D01 v03r02, Section 12.1.

Band-edge: KDB 558074 D01 v03r02, Section 13.3.1.

8.3. DUTY CYCLE PLOTS

DUTY CYCLE BLE MODE



8.4. 6 dB BANDWIDTH

LIMITS

FCC §15.247 (a) (2)

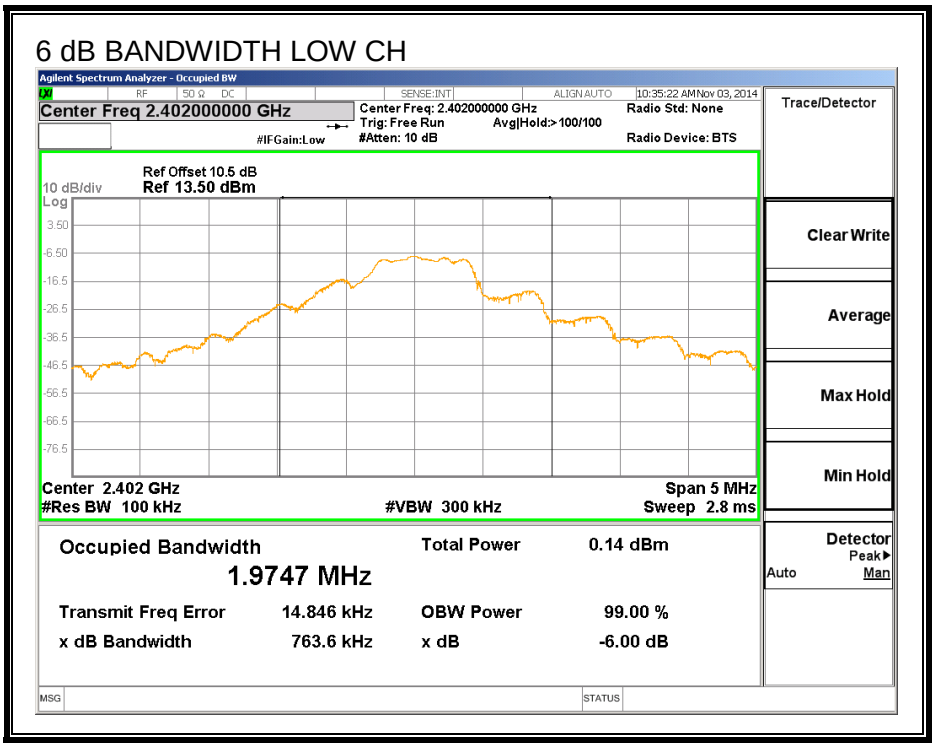
IC RSS-210 A8.2 (a)

The minimum 6 dB bandwidth shall be at least 500 kHz.

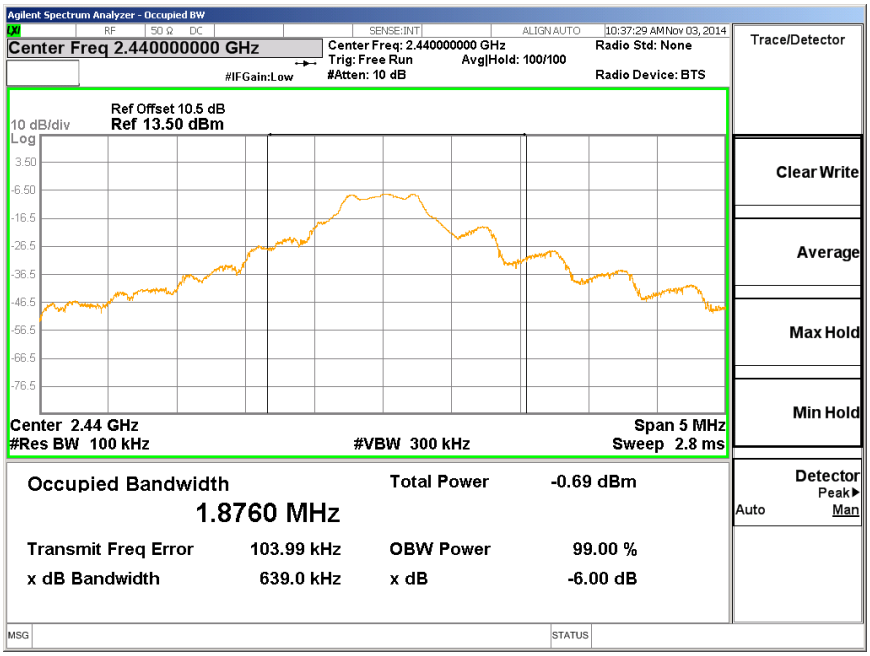
RESULTS

Channel	Frequency (MHz)	6 dB Bandwidth (MHz)	Minimum Limit (MHz)
Low	2402	0.7636	0.5
Middle	2440	0.6390	0.5
High	2480	0.6472	0.5

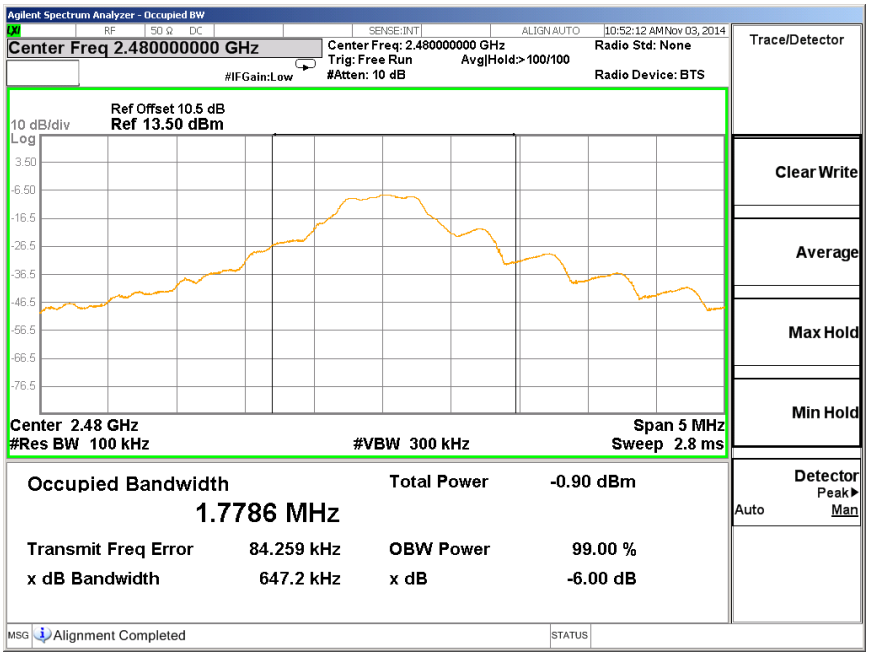
6 dB BANDWIDTH



6 dB BANDWIDTH MID CH



6 dB BANDWIDTH HIGH CH



8.5. 99% BANDWIDTH

LIMITS

None; for reporting purposes only.

TEST PROCEDURE

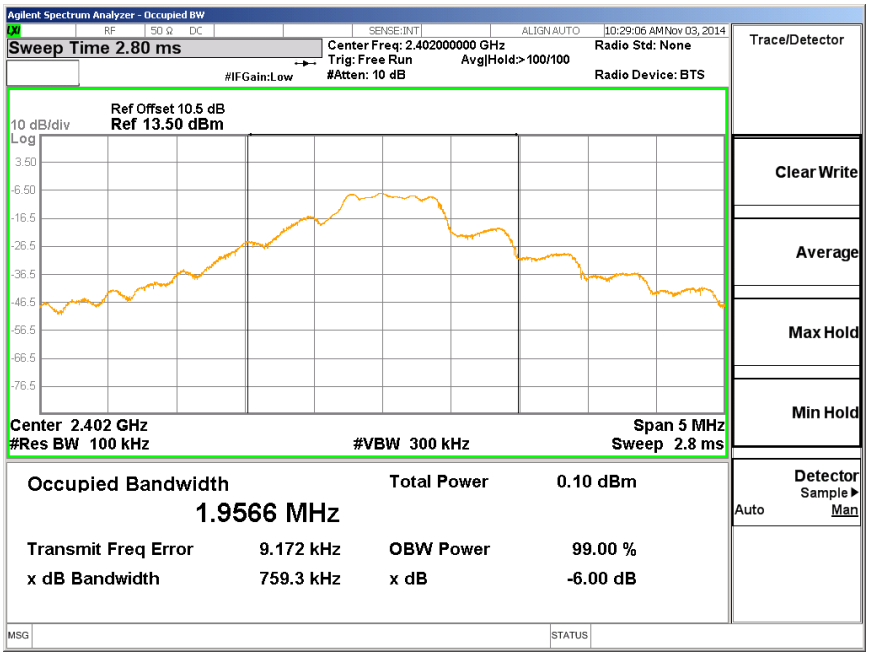
The transmitter output is connected to the spectrum analyzer. The RBW is set to 1% to 3% of the 99 % bandwidth and to 1% of the span. The VBW is set to 3 times the RBW. The sweep time is coupled. The spectrum analyzer internal 99% bandwidth function is utilized.

RESULTS

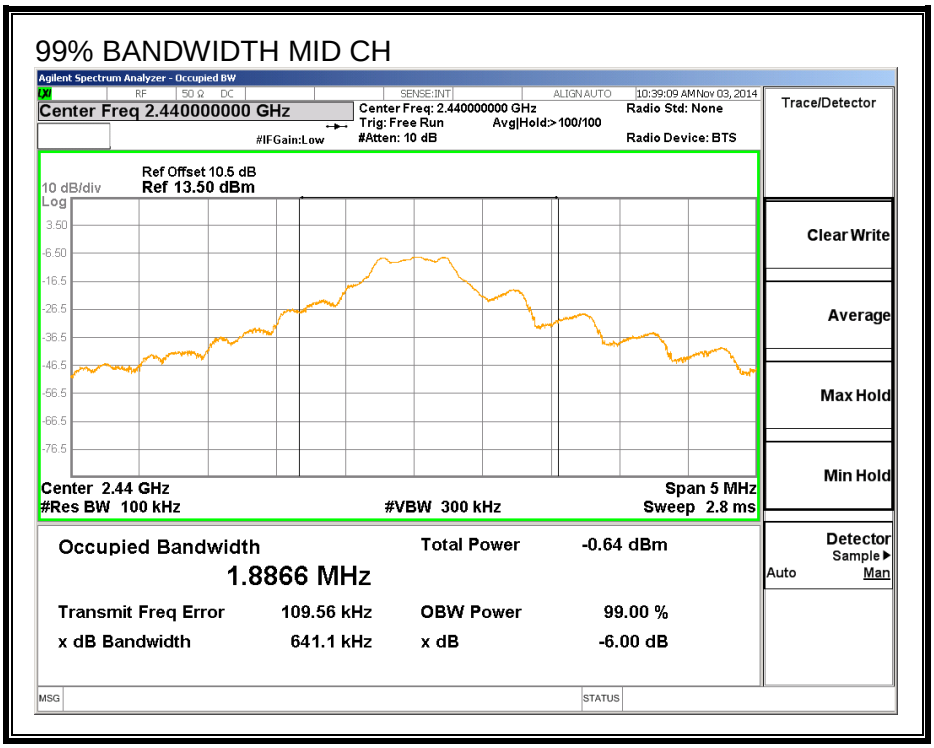
Channel	Frequency (MHz)	99% Bandwidth (MHz)
Low	2402	1.9566
Middle	2440	1.8866
High	2480	1.7141

99% BANDWIDTH

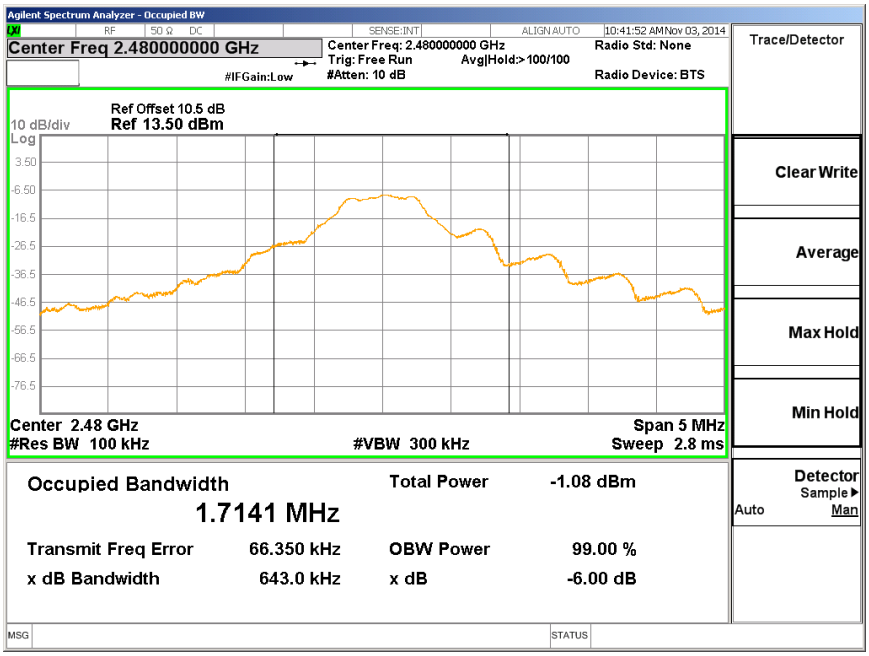
99% BANDWIDTH LOW CH



99% BANDWIDTH MID CH



99% BANDWIDTH HIGH CH



8.6. OUTPUT POWER

LIMITS

FCC §15.247 (b)

IC RSS-210 A8.4

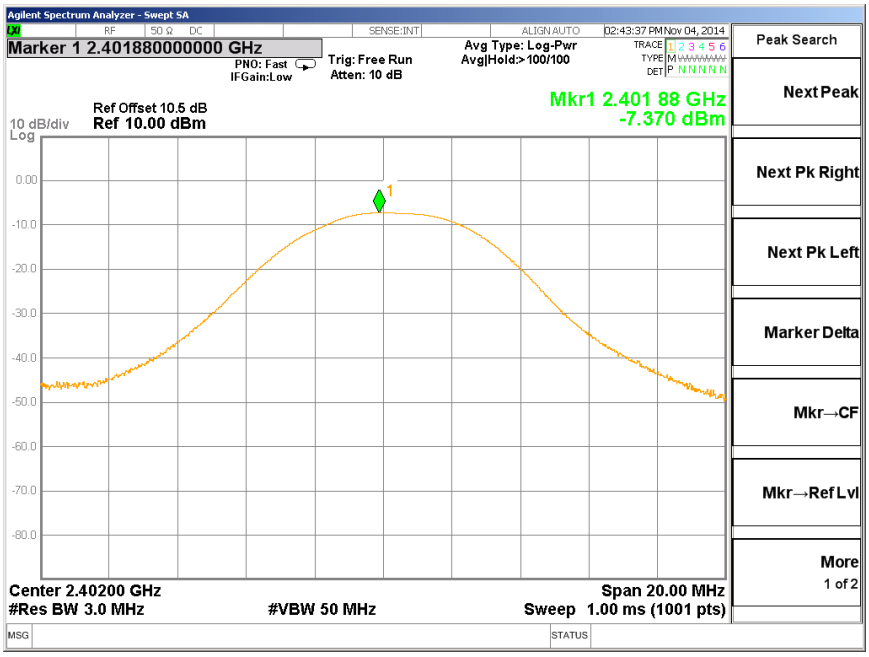
The maximum antenna gain is less than or equal to 6 dBi, therefore the limit is 30 dBm.

RESULTS

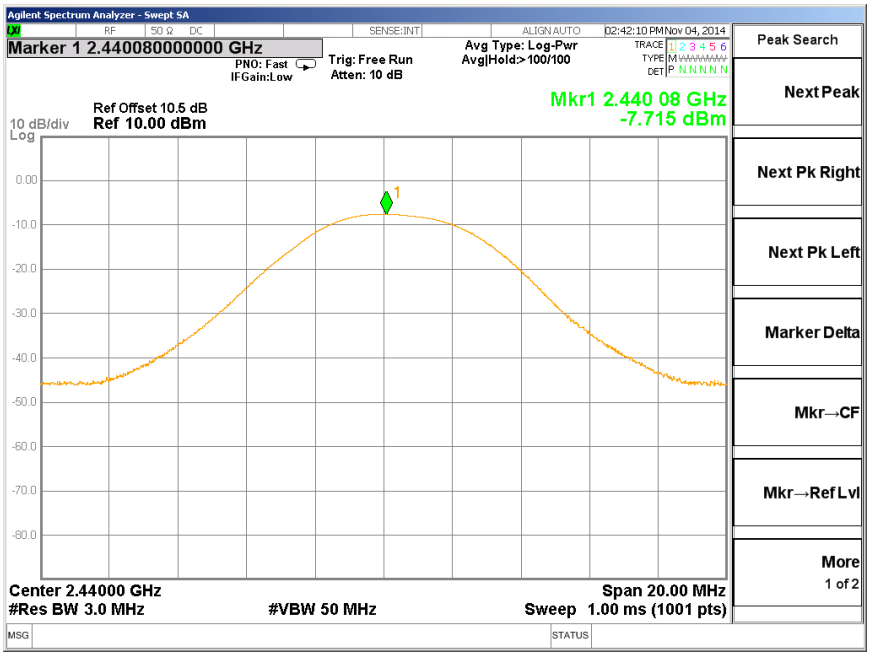
Channel	Frequency (MHz)	Peak Power Reading (dBm)	Limit (dBm)	Margin (dB)
Low	2402	-7.370	30	-37.370
Middle	2440	-7.715	30	-37.715
High	2480	-7.971	30	-37.971

OUTPUT POWER

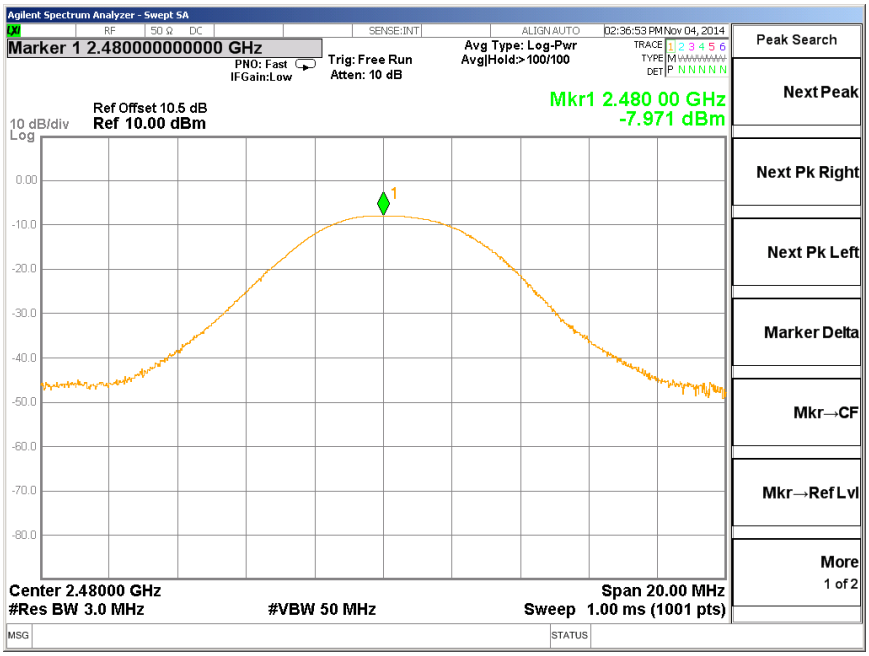
OUTPUT POWER LOW CH



OUTPUT POWER MID CH



OUTPUT POWER HIGH CH



8.7. AVERAGE POWER

LIMITS

None; for reporting purposes only.

RESULTS

The cable assembly insertion loss of 10 dB was entered as an offset in the power meter to allow for direct reading of power.

Channel	Frequency (MHz)	AV power (dBm)
Low	2402	-8.01
Middle	2440	-8.32
High	2480	-8.59

8.8. POWER SPECTRAL DENSITY

LIMITS

FCC §15.247 (e)

IC RSS-210 A8.2 (b)

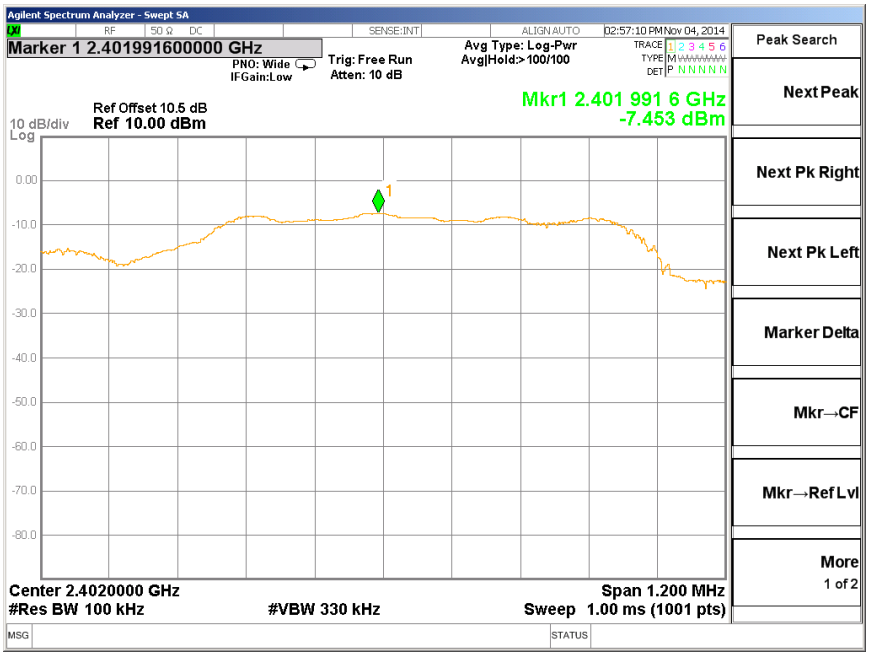
The power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission.

RESULTS

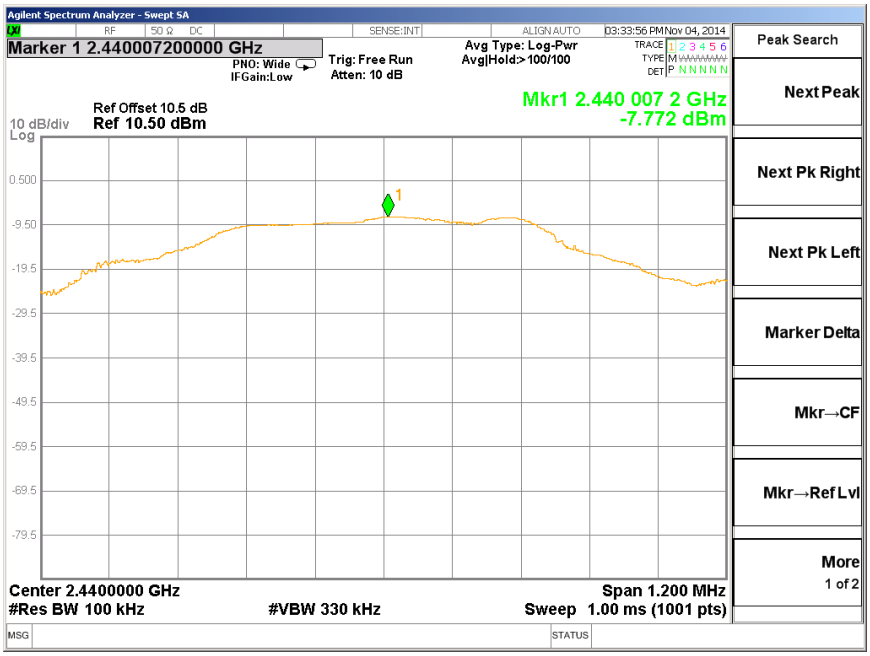
Channel	Frequency (MHz)	PSD (dBm)	Limit (dBm)	Margin (dB)
Low	2402	-7.45	8	-15.45
Middle	2440	-7.77	8	-15.77
High	2480	-8.05	8	-16.05

POWER SPECTRAL DENSITY

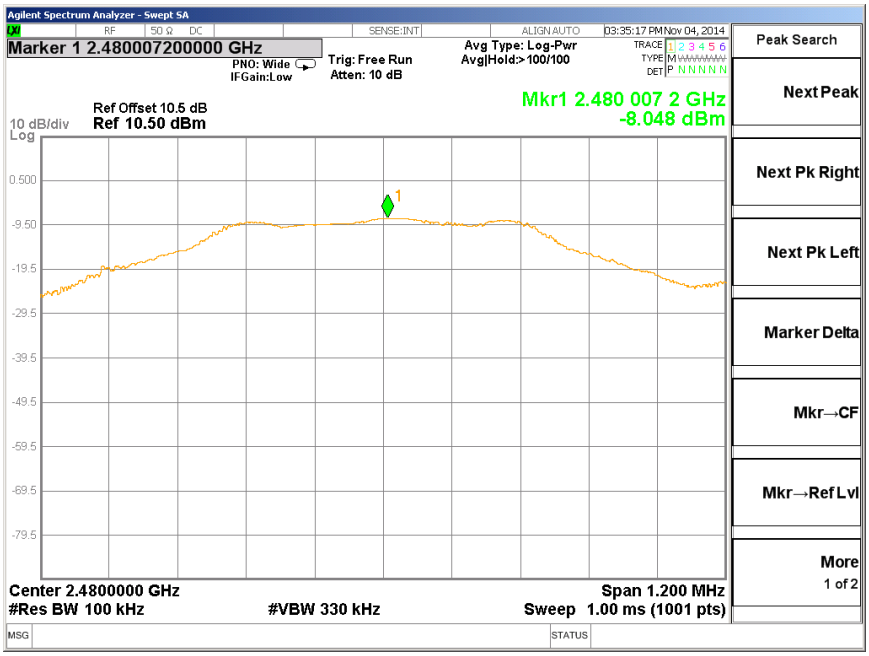
PSD LOW CH



PSD MID CH



PSD HIGH CH



8.9. CONDUCTED SPURIOUS EMISSIONS

LIMITS

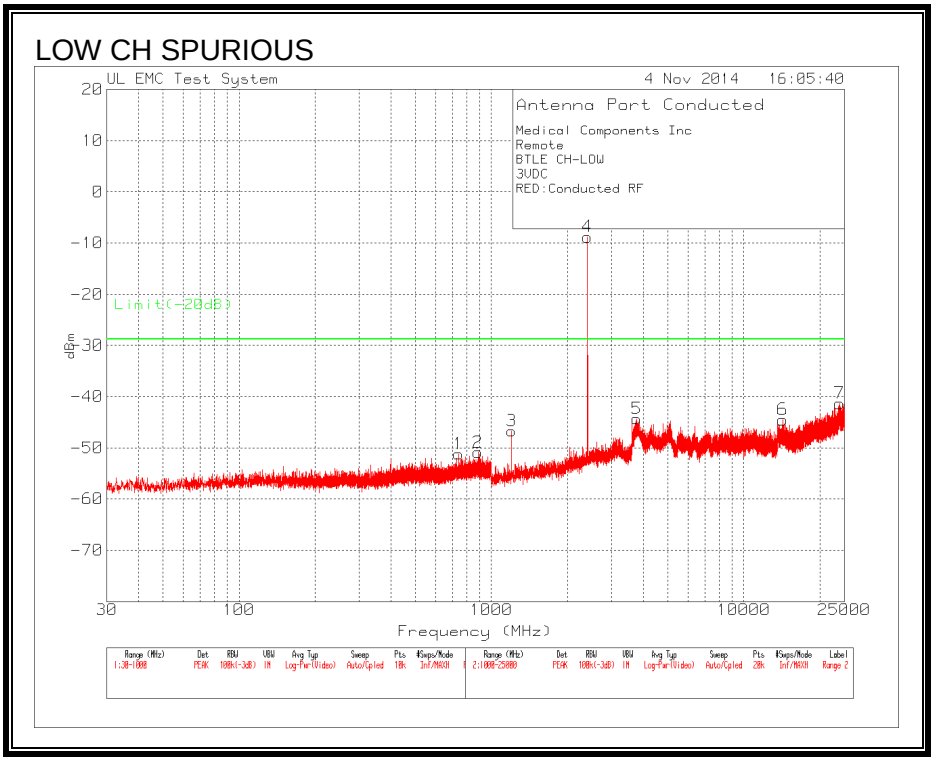
FCC §15.247 (d)

IC RSS-210 A8.5

Output power was measured based on the use of a peak measurement, therefore the required attenuation is 20 dB.

Reference Level set to 5dBm

RESULTS



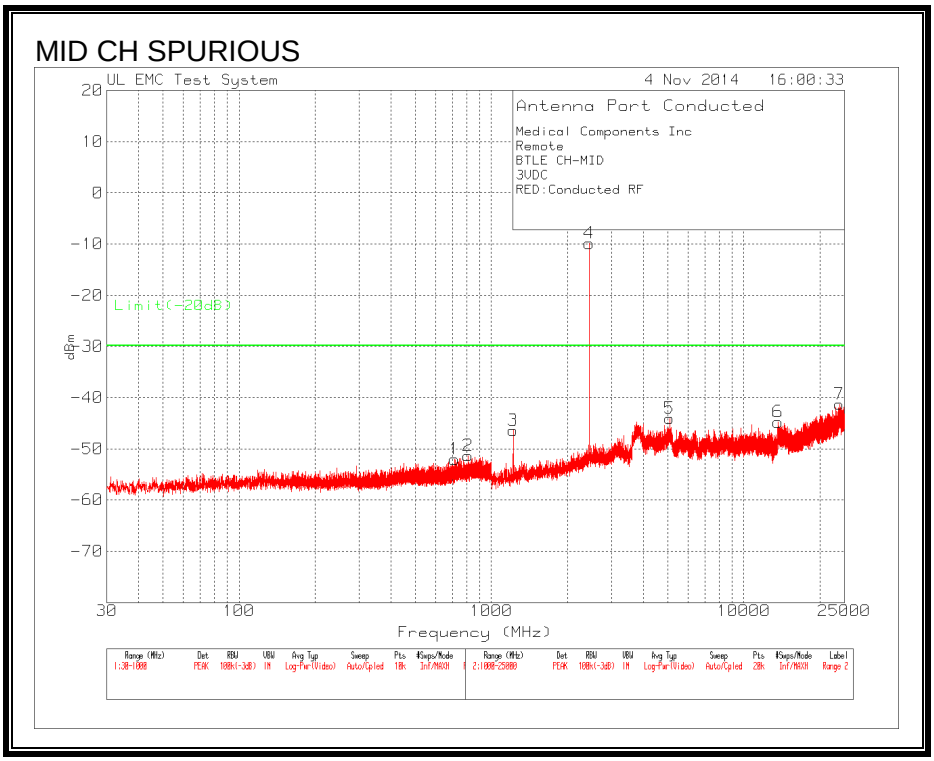
Trace Markers

No.	Test Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading dBm	Limit:1	2	3	4	5	6
Range 1 30 - 1000MHz ----------											
1	740.816	45.59dBuV PK	-107	10.2	-51.21	-28.8	-	-	-	-	-
					Margin (dB)	-22.41	-	-	-	-	-
2	885.055	45.93dBuV PK	-107	10.2	-50.87	-28.8	-	-	-	-	-
					Margin (dB)	-22.07	-	-	-	-	-
Range 2 1000 - 25000MHz ----------											
3 *	1201.6	50.02dBuV PK	-107	10.3	-46.68	-28.8	-	-	-	-	-
					Margin (dB)	-17.88	-	-	-	-	-
Fundamental											
4	2401.6	87.7dBuV PK	-107	10.5	-8.8	-28.8	-	-	-	-	-
					Margin (dB)	-	-	-	-	-	-
5 *	3762.4	51.86dBuV PK	-107	10.8	-44.34	-28.8	-	-	-	-	-
					Margin (dB)	-15.54	-	-	-	-	-
6	14263.6	51.2dBuV PK	-107	11.3	-44.5	-28.8	-	-	-	-	-
					Margin (dB)	-15.7	-	-	-	-	-
7 *	23929.6	53.98dBuV PK	-107	11.7	-41.32	-28.8	-	-	-	-	-
					Margin (dB)	-12.52	-	-	-	-	-

LIMIT 1: Limit

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector



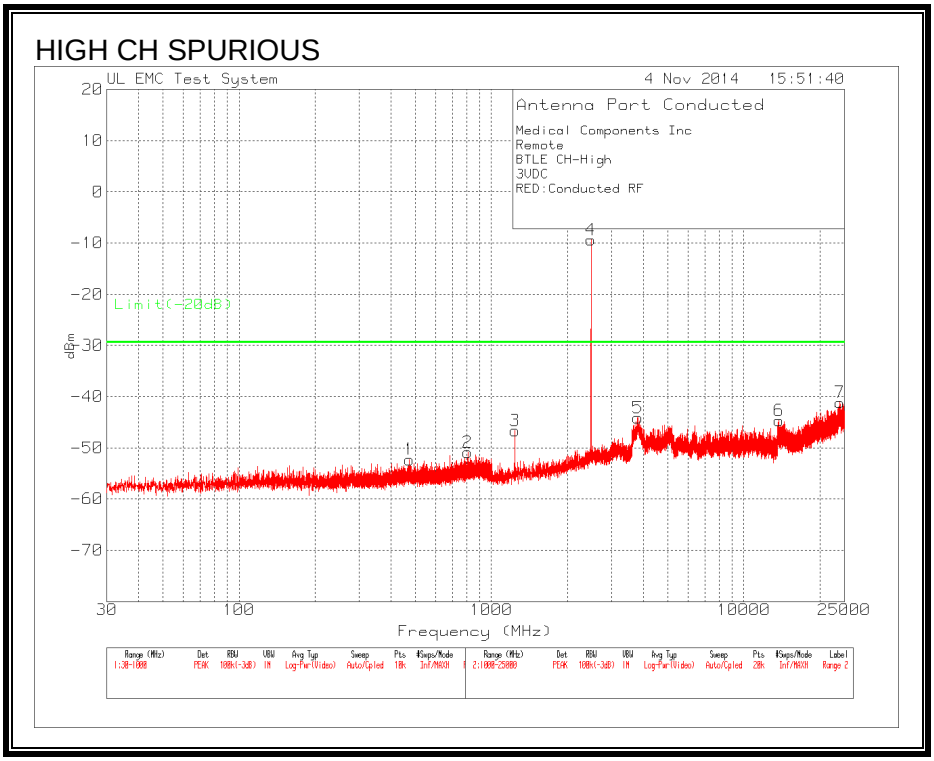
Trace Markers

No.	Test Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading dBm	Limit:1	2	3	4	5	6
Range 1 30 - 1000MHz											
1	713.85	44.77dBuV PK	-107	10.2	-52.03	-29.85	-	-	-	-	-
					Margin (dB)	-22.18	-	-	-	-	-
2	806.97	45.35dBuV PK	-107	10.3	-51.35	-29.85	-	-	-	-	-
					Margin (dB)	-21.5	-	-	-	-	-
Range 2 1000 - 25000MHz											
3 *	1219.6	50.39dBuV PK	-107	10.2	-46.41	-29.85	-	-	-	-	-
					Margin (dB)	-16.56	-	-	-	-	-
Fundamental											
4	2440	86.65dBuV PK	-107	10.5	-9.85	-29.85	-	-	-	-	-
					Margin (dB)	-	-	-	-	-	-
5 *	5078.8	52.13dBuV PK	-107	10.8	-44.07	-29.85	-	-	-	-	-
					Margin (dB)	-14.22	-	-	-	-	-
6	13662.4	50.94dBuV PK	-107	11.3	-44.76	-29.85	-	-	-	-	-
					Margin (dB)	-14.91	-	-	-	-	-
7 *	23899.6	54.01dBuV PK	-107	11.7	-41.29	-29.85	-	-	-	-	-
					Margin (dB)	-11.44	-	-	-	-	-

LIMIT 1: Limit

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector



Trace Markers

No.	Test Frequency (MHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading dBm	Limit:1	2	3	4	5	6
Range 1 30 - 1000MHz ----------											
1	473.387	44.61dBuV PK	-107	10.1	-52.29	-29.38	-	-	-	-	-
					Margin (dB)	-22.91	-	-	-	-	-
2	806.097	45.93dBuV PK	-107	10.2	-50.87	-29.38	-	-	-	-	-
					Margin (dB)	-21.49	-	-	-	-	-
Range 2 1000 - 25000MHz ----------											
3	* 1240	50.18dBuV PK	-107	10.2	-46.62	-29.38	-	-	-	-	-
					Margin (dB)	-17.24	-	-	-	-	-
Fundamental											
4	2479.6	87.12dBuV PK	-107	10.5	-9.38	-29.38	-	-	-	-	-
					Margin (dB)	-	-	-	-	-	-
5	* 3800.8	52.07dBuV PK	-107	10.8	-44.13	-29.38	-	-	-	-	-
					Margin (dB)	-14.75	-	-	-	-	-
6	13763.2	51.01dBuV PK	-107	11.3	-44.69	-29.38	-	-	-	-	-
					Margin (dB)	-15.31	-	-	-	-	-
7	24024.4	54.13dBuV PK	-107	11.7	-41.17	-29.38	-	-	-	-	-
					Margin (dB)	-11.79	-	-	-	-	-

LIMIT 1: Limit

* - indicates frequency in CFR15.205/IC7.2.2 Restricted Band

PK - Peak detector

9. RADIATED TEST RESULTS

9.1. LIMITS AND PROCEDURE

LIMITS

FCC §15.205 and §15.209

IC RSS-210 Clause 2.6 (Transmitter)

IC RSS-GEN Clause 6 (Receiver)

Frequency Range (MHz)	Field Strength Limit (uV/m) at 3 m	Field Strength Limit (dBuV/m) at 3 m
30 - 88	100	40
88 - 216	150	43.5
216 - 960	200	46
Above 960	500	54

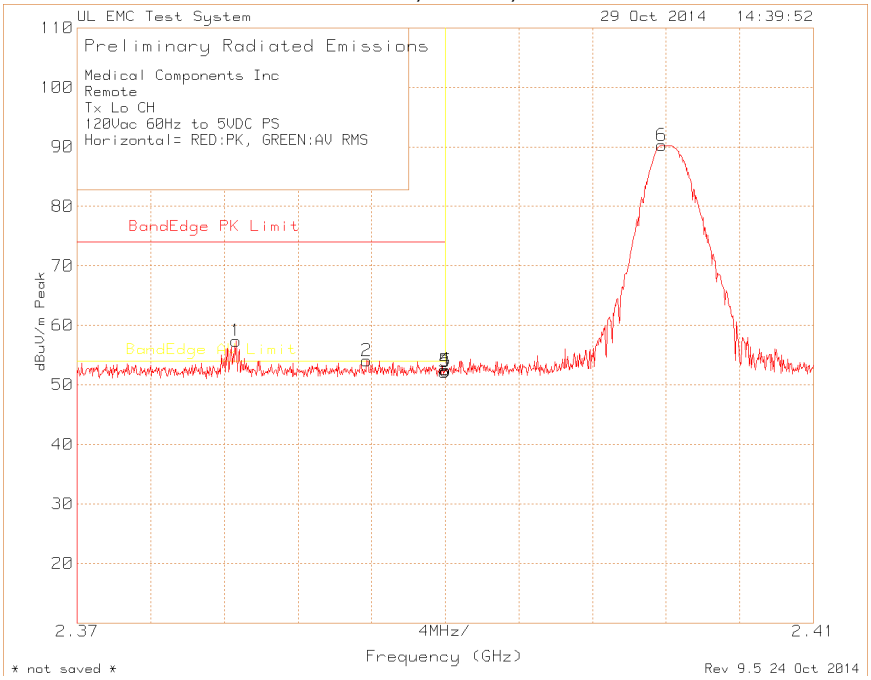
Peak and RMS Avg used for measurements.

9.2. TRANSMITTER ABOVE 1 GHz

9.3. TX ABOVE 1 GHz FOR BLUETOOTH LOW ENERGY MODE IN THE 2.4 GHz BAND

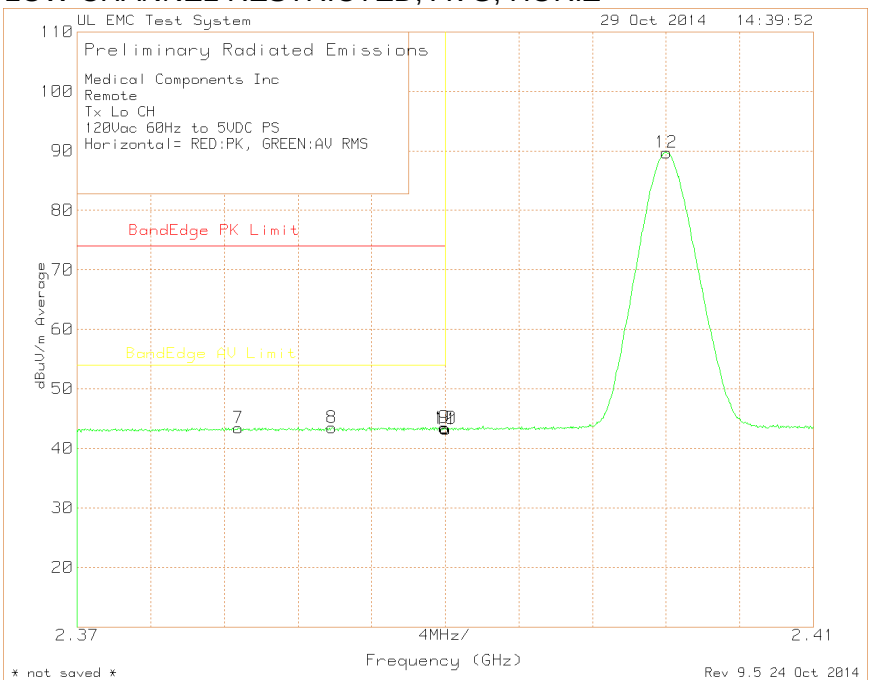
RESTRICTED BANDEDGE (LOW CHANNEL, HORIZONTAL)

LOW CHANNEL RESTRICTED, PEAK, HORIZ



No Emissions below 2370MHz was found to be above the noise floor

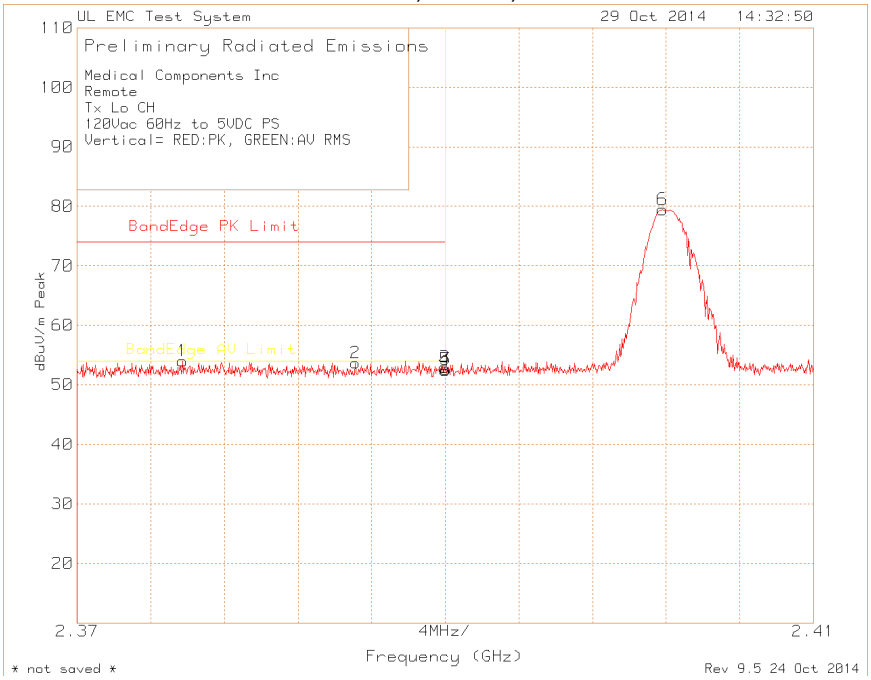
LOW CHANNEL RESTRICTED, AVG, HORIZ



No Emissions below 2370MHz was found to be above the noise floor

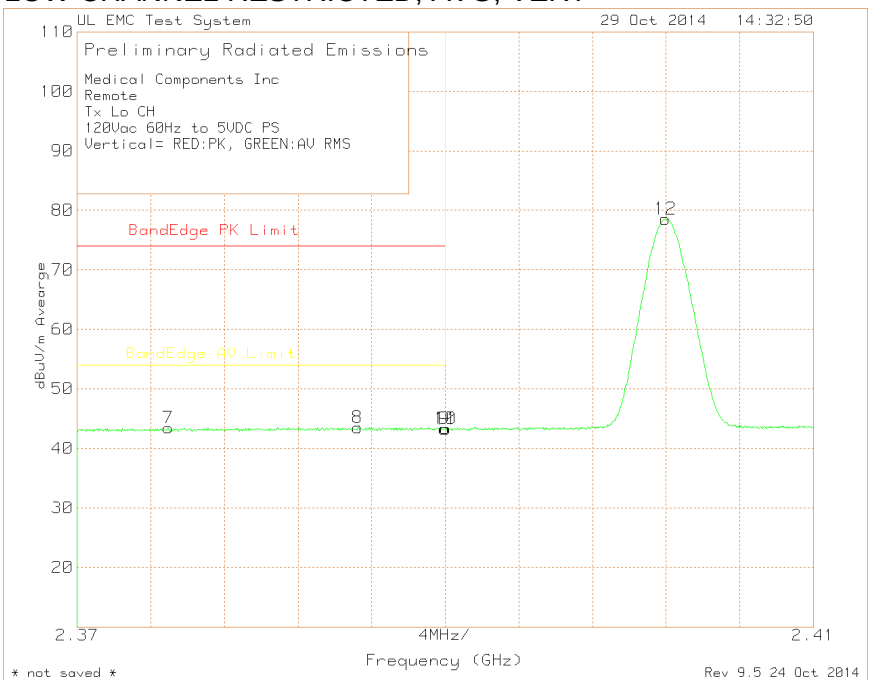
RESTRICTED BANDEDGE (LOW CHANNEL, VERTICAL)

LOW CHANNEL RESTRICTED, PEAK, VERT



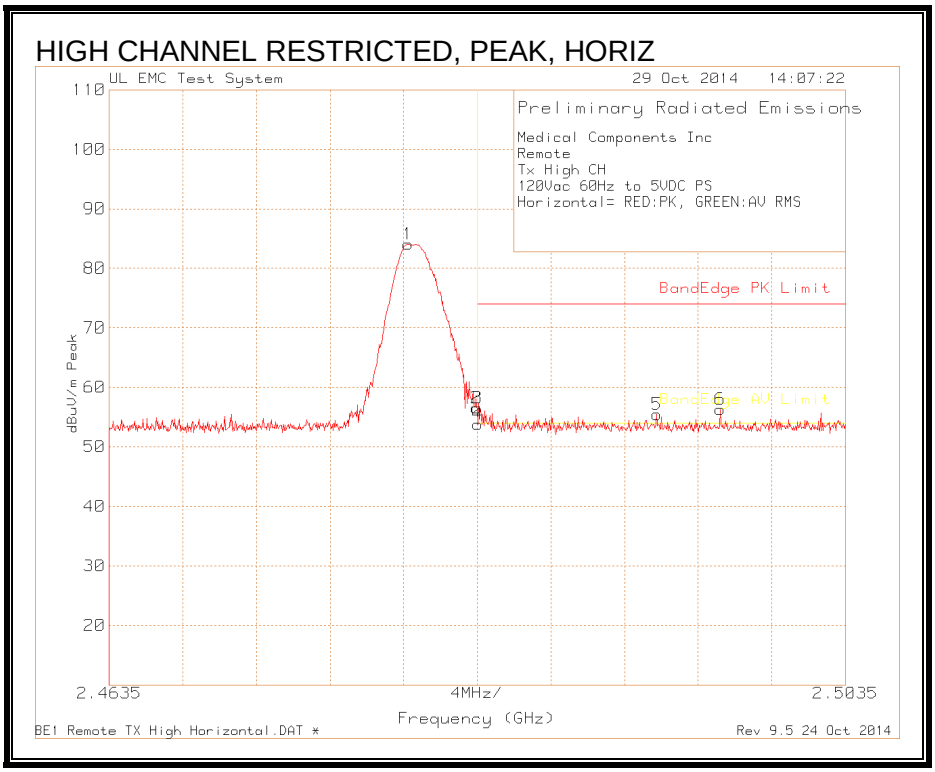
No Emissions below 2370MHz was found to be above the noise floor

LOW CHANNEL RESTRICTED, AVG, VERT

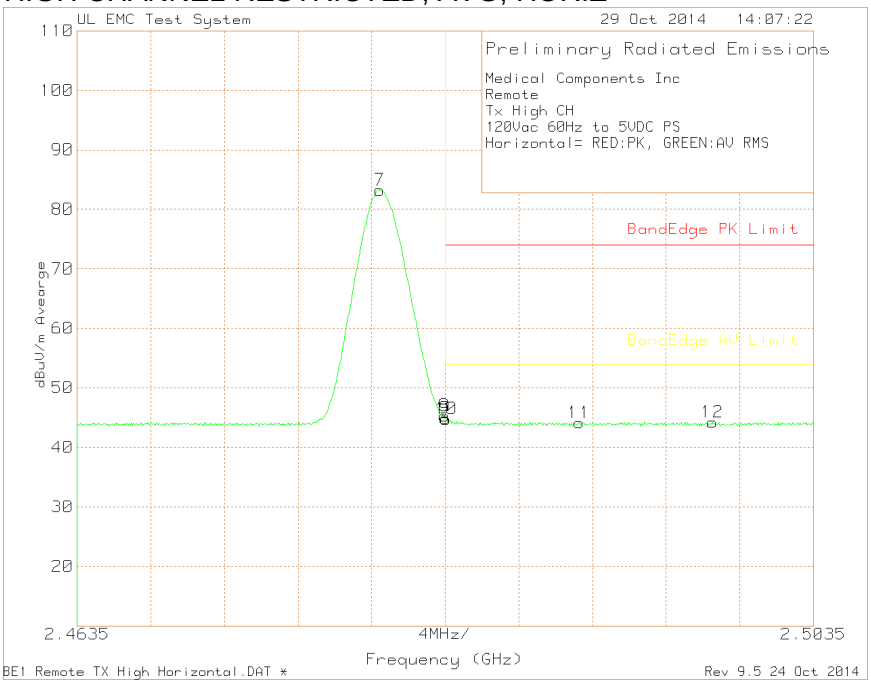


No Emissions below 2370MHz was found to be above the noise floor

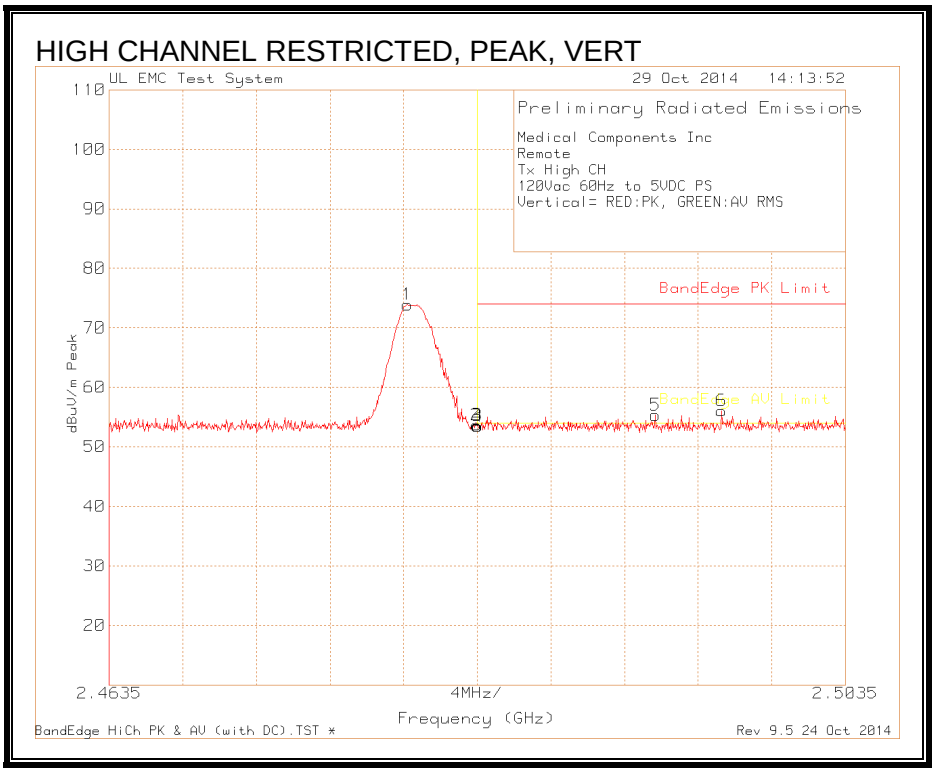
RESTRICTED BANDEDGE (HIGH CHANNEL, HORIZONTAL)



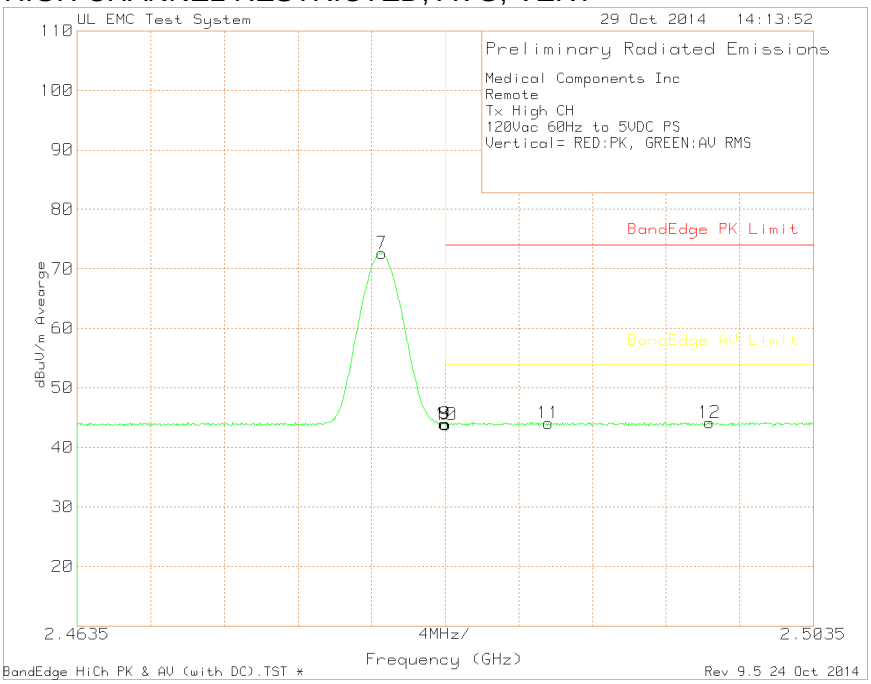
HIGH CHANNEL RESTRICTED, AVG, HORIZ



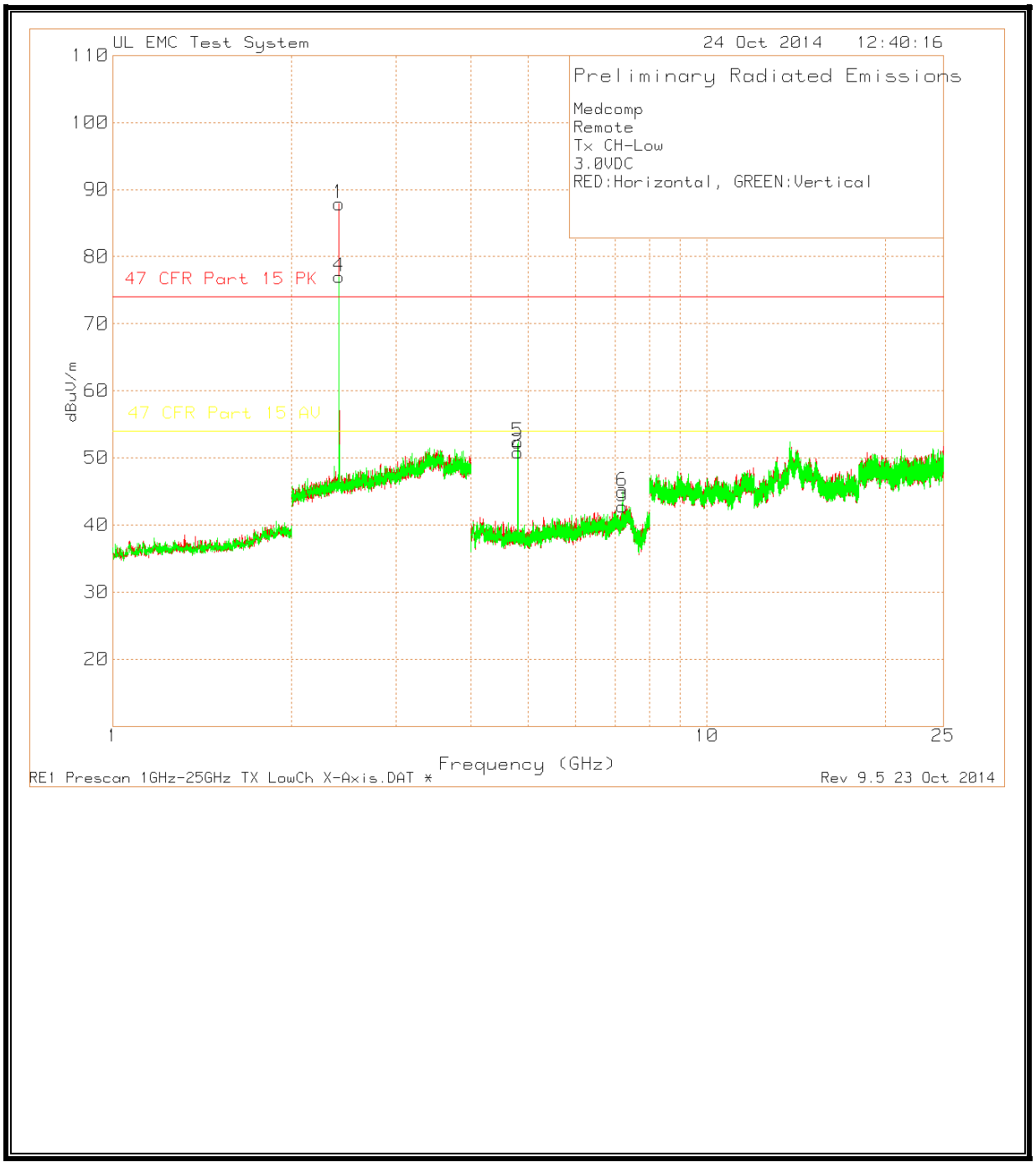
RESTRICTED BANDEDGE (HIGH CHANNEL, VERTICAL)



HIGH CHANNEL RESTRICTED, AVG, VERT



HARMONICS AND SPURIOUS EMISSIONS



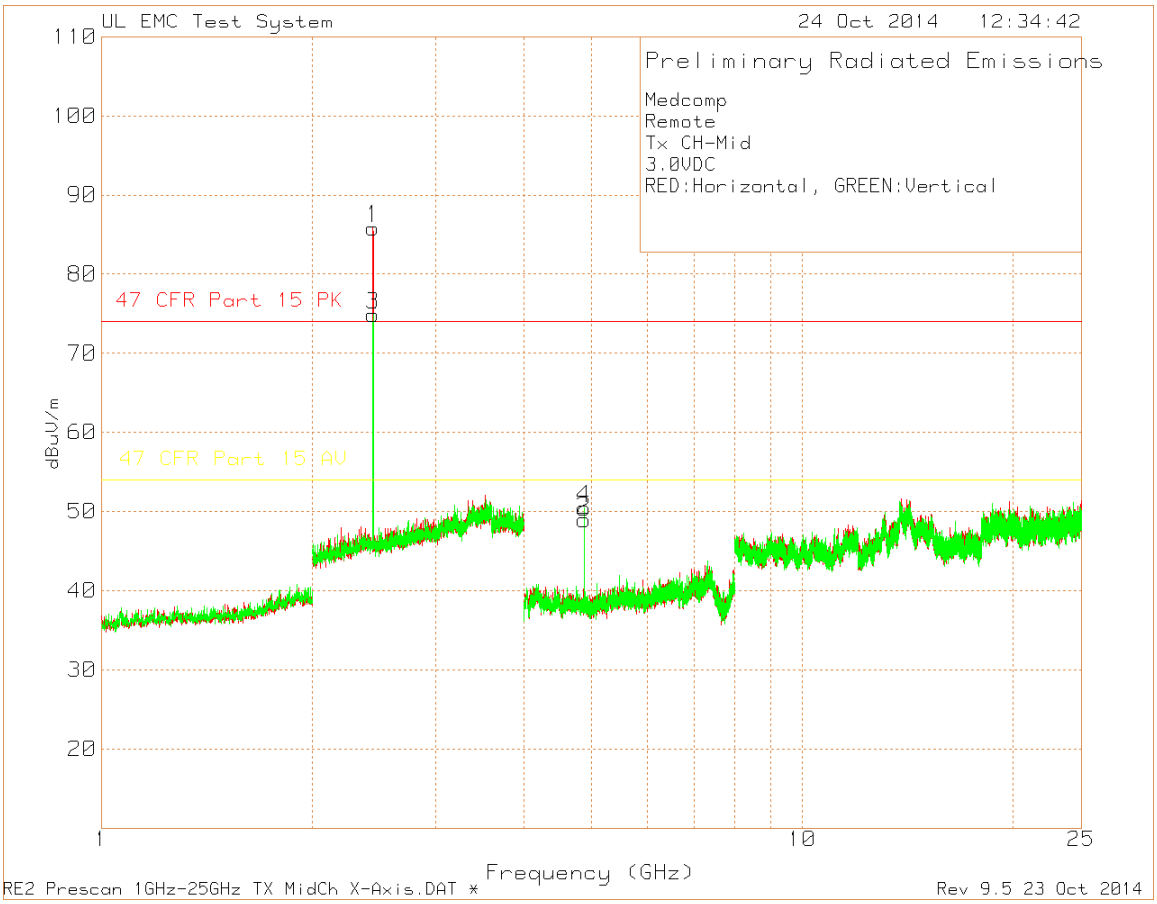
Medcomp
Remote
Tx CH-Low
3.0VDC
RED:Horizontal, GREEN:Vertical

Radiated Emission Data

Test Frequency (GHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading dBuV/m	Limit:1	2	3	4	5	Notes
4 - 8GHz 4 - 8MHz										
4.8028	77.24dBuV Pk	27.7	-50.47	54.47	74	-	-	-	-	2
Azimuth: 249	Height:100 Horz			Margin (dB): -19.53	-	-	-	-		
4.804	71.44dBuV AV	27.7	-50.46	48.68	74	54	-	-	-	1
Azimuth: 249	Height:100 Horz			Margin (dB): -25.32	-5.32	-	-	-		
7.2056	62.95dBuV Pk	29.7	-46.34	46.31	74	-	-	-	-	2
Azimuth: 75	Height:100 Horz			Margin (dB): -27.69	-	-	-	-		
7.2054	53.57dBuV AV	29.7	-46.34	36.93	74	54	-	-	-	1
Azimuth: 75	Height:100 Horz			Margin (dB): -37.07	-17.07	-	-	-		
4 - 8GHz 4 - 8MHz										
4.803	78.89dBuV Pk	27.7	-50.47	56.12	74	-	-	-	-	2
Azimuth: 34	Height:100 Vert			Margin (dB): -17.88	-	-	-	-		
4.804	73.19dBuV AV	27.7	-50.46	50.43	74	54	-	-	-	1
Azimuth: 34	Height:100 Vert			Margin (dB): -23.57	-3.57	-	-	-		
7.2069	64.54dBuV Pk	29.8	-46.33	48.01	74	-	-	-	-	2
Azimuth: 95	Height:100 Vert			Margin (dB): -25.99	-	-	-	-		
7.2054	56.28dBuV AV	29.7	-46.34	39.64	74	54	-	-	-	1
Azimuth: 95	Height:100 Vert			Margin (dB): -34.36	-14.36	-	-	-		

Notes:
1 - Avg RMS
2 - PK

LIMIT 1: 47 CFR Part 15 PK
LIMIT 2: 47 CFR Part 15 AV



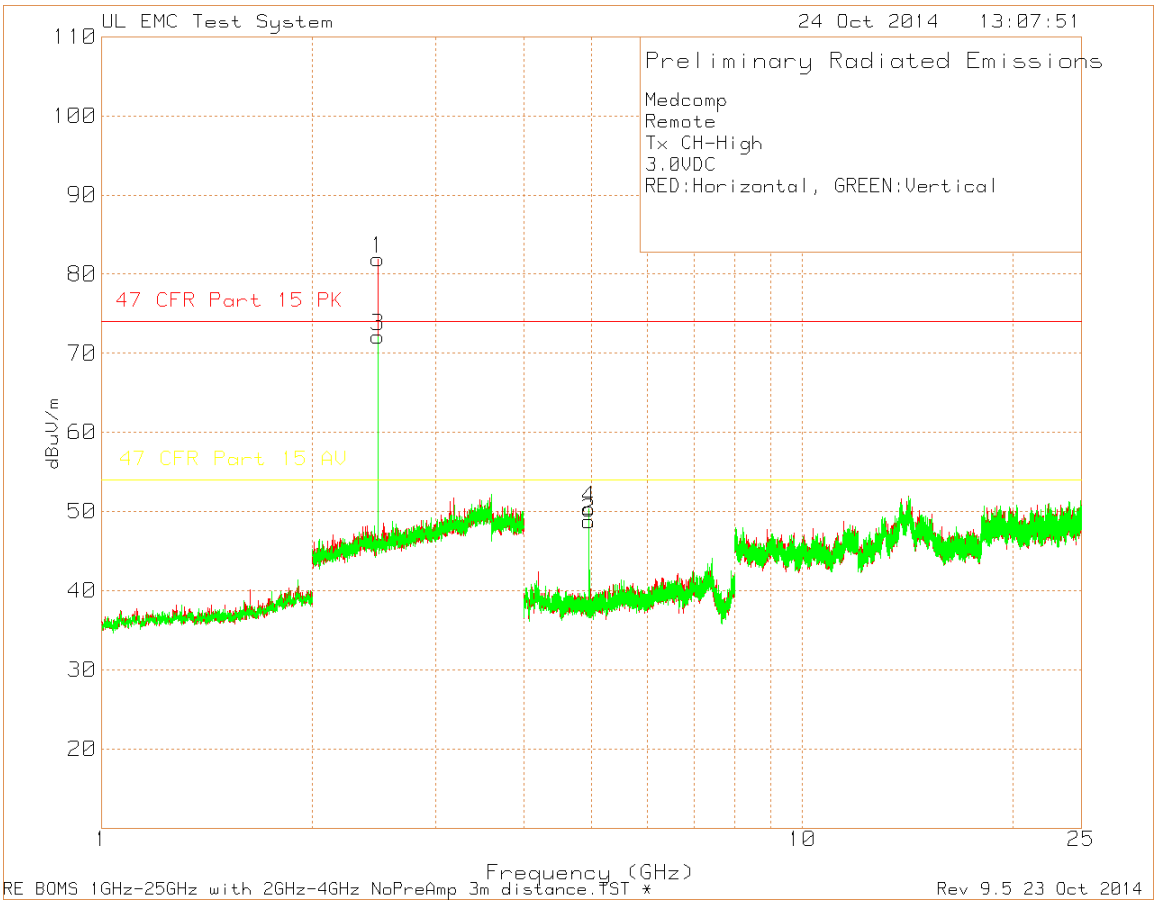
Medcomp
Remote
Tx CH-Mid
3.0VDC
RED:Horizontal, GREEN:Vertical

Radiated Emission Data

Test Frequency (GHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading dBuV/m	Limit:1	2	3	4	5	Notes
4 - 8GHz 4 - 8MHz										
4.8787	75.9dBuV Pk	27.7	-50.1	53.5	74	-	-	-	-	2
Azimuth: 253	Height:100 Horz			Margin (dB): -20.5		-	-	-	-	
4.88	69.33dBuV AV	27.7	-50.11	46.92	74	54	-	-	-	1
Azimuth: 253	Height:100 Horz			Margin (dB): -27.08		-7.08	-	-	-	
4 - 8GHz 4 - 8MHz										
4.8788	77.55dBuV Pk	27.7	-50.1	55.15	74	-	-	-	-	2
Azimuth: 286	Height:123 Vert			Margin (dB): -18.85		-	-	-	-	
4.88	71.13dBuV AV	27.7	-50.11	48.72	74	54	-	-	-	1
Azimuth: 286	Height:123 Vert			Margin (dB): -25.28		-5.28	-	-	-	

Notes:
1 - Avg RMS
2 - PK

LIMIT 1: 47 CFR Part 15 PK
LIMIT 2: 47 CFR Part 15 AV



Medcomp
Remote
Tx CH-High
3.0VDC
RED:Horizontal, GREEN:Vertical

Radiated Emission Data

Test Frequency (GHz)	Meter Reading	Transducer Factor (dB)	Gain/Loss Factor (dB)	Corrected Reading dBuV/m	Limit:1	2	3	4	5	Notes
4 - 8GHz 4 - 8MHz										
4.9593	76.47dBuV Pk	27.8	-50.49	53.78	74	-	-	-	-	2
Azimuth: 30	Height:100 Horz			Margin (dB): -20.22	-	-	-	-		
4.96	68.46dBuV AV	27.8	-50.5	45.76	74	54	-	-	-	1
Azimuth: 30	Height:100 Horz			Margin (dB): -28.24	-8.24	-	-	-		
4 - 8GHz 4 - 8MHz										
4.9594	77.95dBuV Pk	27.8	-50.49	55.26	74	-	-	-	-	2
Azimuth: 38	Height:100 Vert			Margin (dB): -18.74	-	-	-	-		
4.9599	70.15dBuV AV	27.8	-50.5	47.45	74	54	-	-	-	1
Azimuth: 38	Height:100 Vert			Margin (dB): -26.55	-6.55	-	-	-		

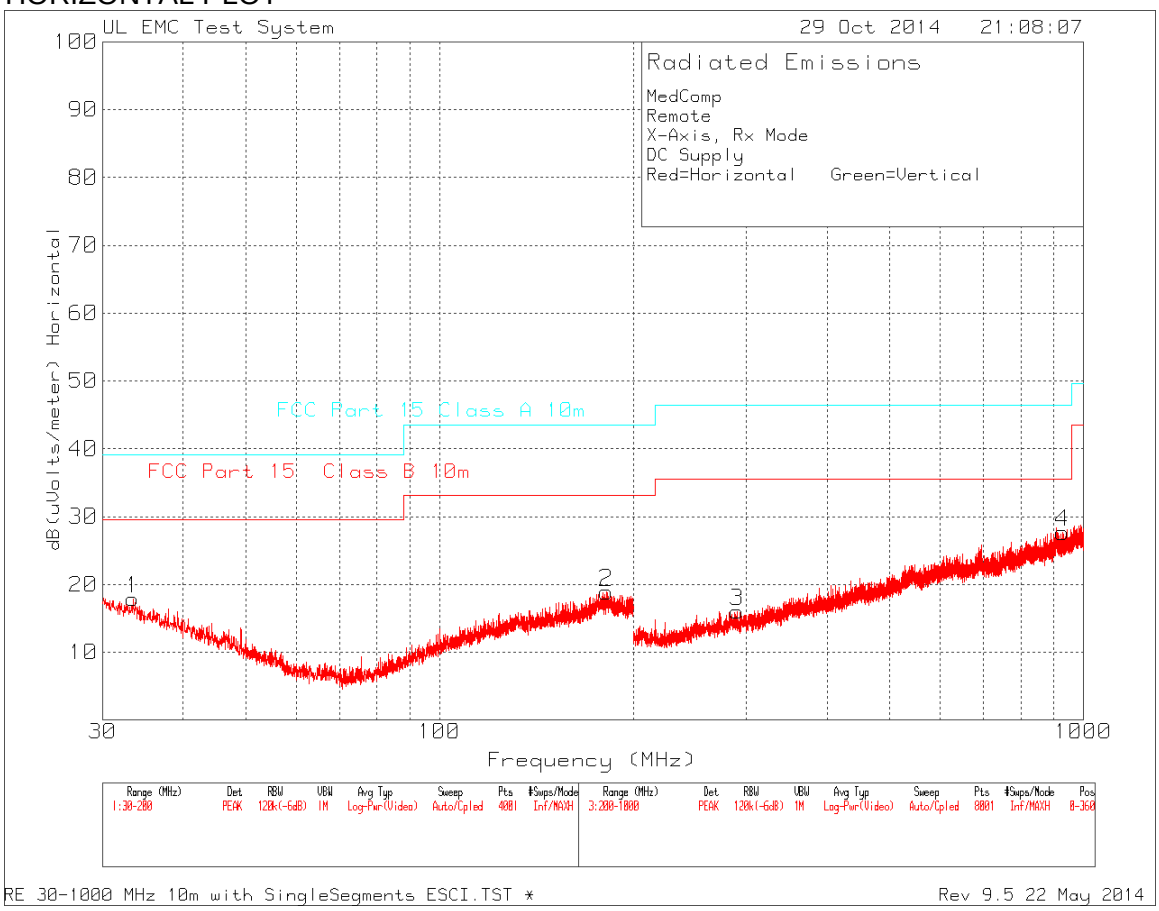
Notes:
1 - RMS AV
2 - PK

LIMIT 1: 47 CFR Part 15 PK
LIMIT 2: 47 CFR Part 15 AV

9.4. WORST-CASE BELOW 1 GHz

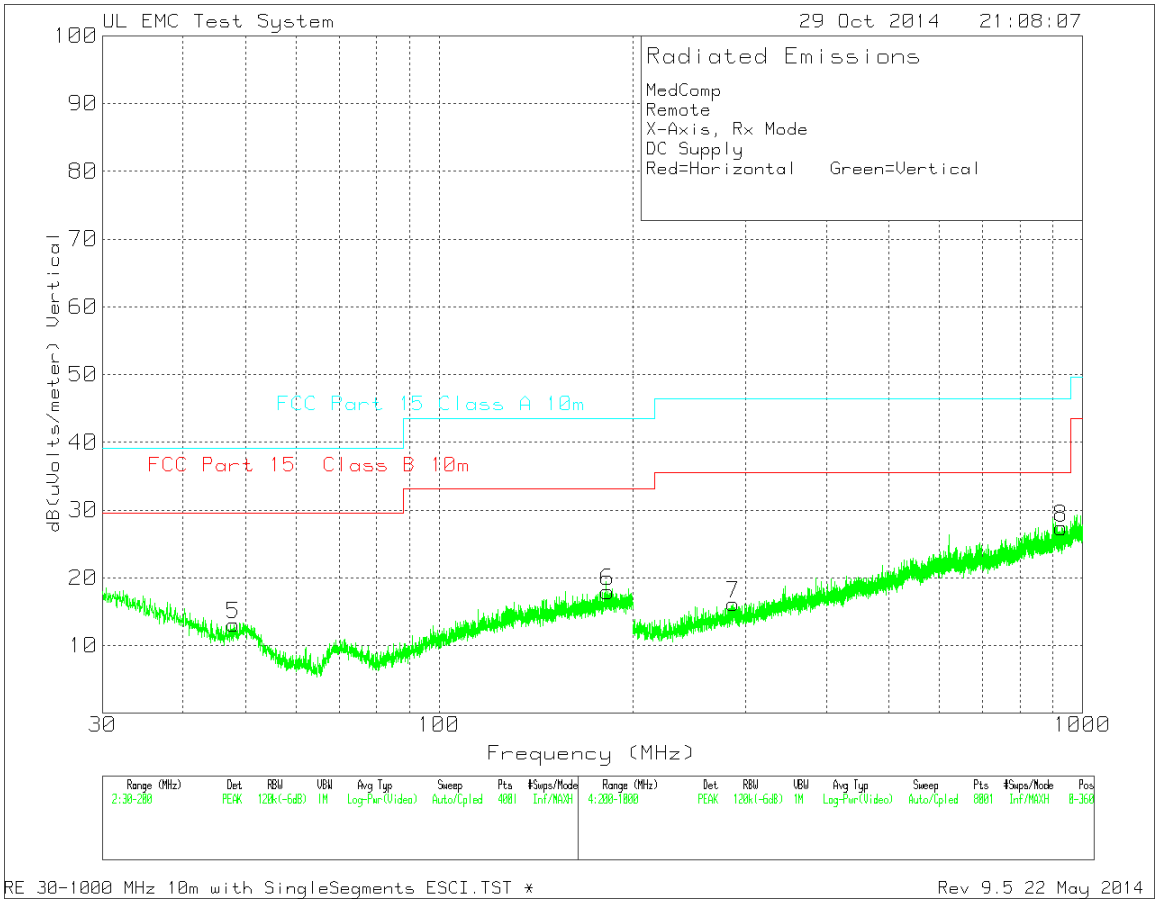
SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, HORIZONTAL)

HORIZONTAL PLOT



SPURIOUS EMISSIONS 30 TO 1000 MHz (WORST-CASE CONFIGURATION, VERTICAL)

VERTICAL PLOT



MedComp
Remote
X-Axis, Tx Mode
DC Supply
Red=Horizontal Green=Vertical

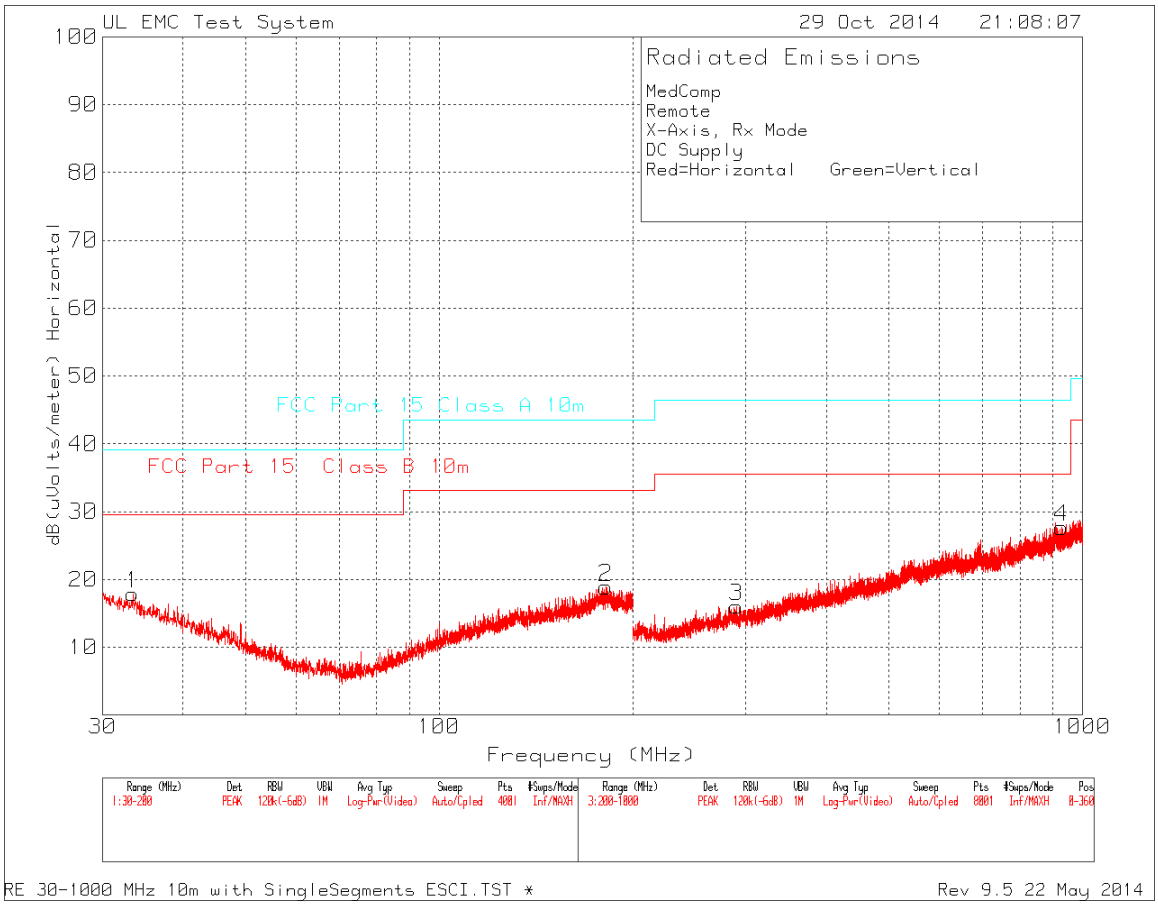
Marker No.	Test Frequency (MHz)	Meter Reading(dBuV)	Detector	Antenna Gain dB/m	Cable Factor dB	Corrected Reading dB(uVolts/meter)	FCC Part 15 Class A 10m	Margin (dB)	FCC Part 15 Class B 10m	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
1	33.3575	31.7	PK	16.4	-30.1	18	39.08	-21.08	29.55	-11.55	0-360	99	H
2	174.4575	32.11	PK	15.5	-29.3	18.31	43.52	-25.21	33.07	-14.76	0-360	400	H
5	69.3125	34.61	PK	6.2	-30	10.81	39.08	-28.27	29.55	-18.74	0-360	249	V
6	188.6525	31.03	PK	15.9	-29.1	17.83	43.52	-25.69	33.07	-15.24	0-360	400	V
3	284.3	28.84	PK	13.2	-26.2	15.84	46.44	-30.6	35.57	-19.73	0-360	99	H
4	947.6	28.51	PK	23.4	-24.4	27.51	46.44	-18.93	35.57	-8.06	0-360	99	H
7	277.9	28.66	PK	12.8	-26.3	15.16	46.44	-31.28	35.57	-20.41	0-360	99	V
8	912.7	28.52	PK	23.2	-24.6	27.12	46.44	-19.32	35.57	-8.45	0-360	99	V

PK - Peak detector

9.5. DIGITAL DEVICE BELOW 1 GHz

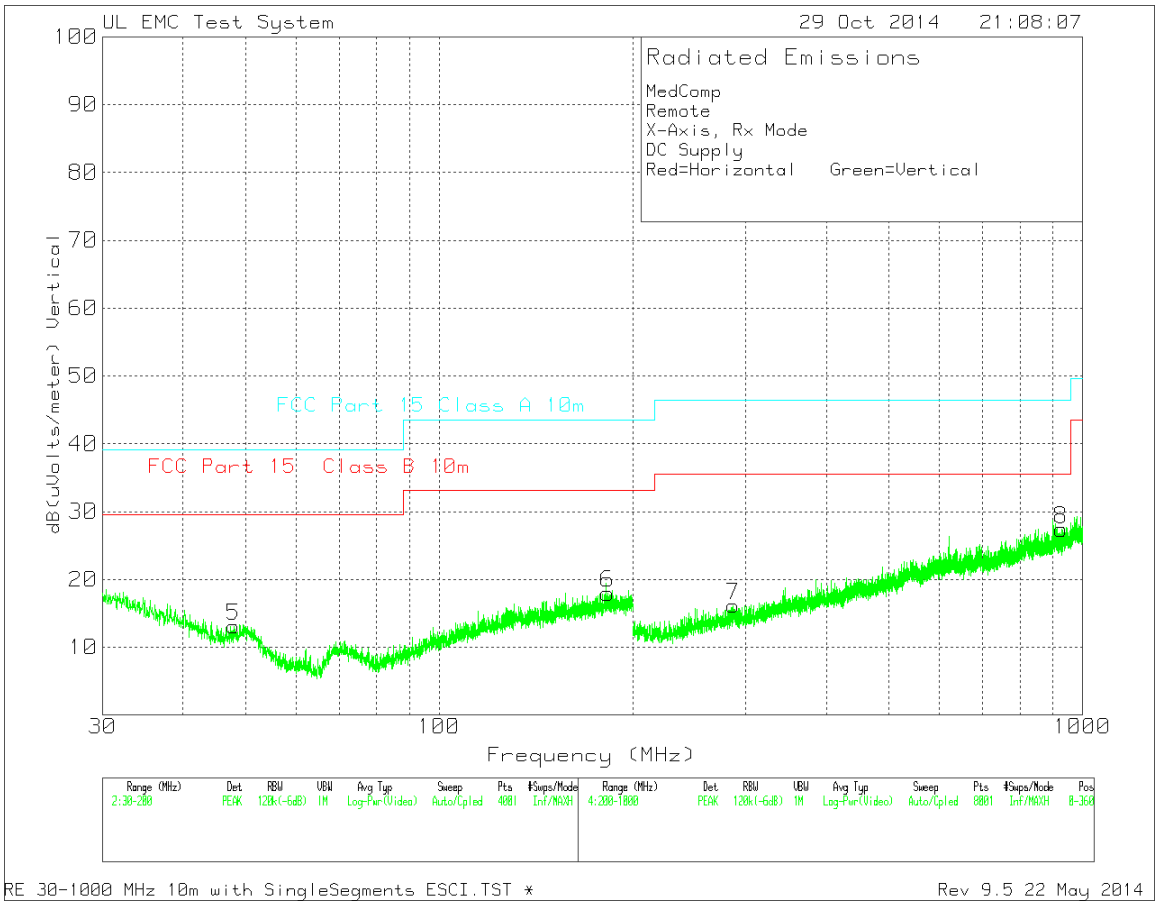
SPURIOUS EMISSIONS 30 TO 1000 MHz (DIGITAL DEVICE, HORIZONTAL)

HORIZONTAL PLOT



SPURIOUS EMISSIONS 30 TO 1000 MHz (DIGITAL DEVICE, VERTICAL)

VERTICAL PLOT



MedComp
Remote
X-Axis, Rx Mode
DC Supply
Red=Horizontal Green=Vertical

Marker No.	Test Frequency (MHz)	Meter Reading(dBuV)	Detector	Antenna Gain dB/m	Cable Factor dB	Corrected Reading dB(uVolts/meter)	FCC Part 15 Class A 10m	Margin (dB)	FCC Part 15 Class B 10m	Margin (dB)	Azimuth [Degs]	Height [cm]	Polarity
1	33.4	31.59	PK	16.4	-30.1	17.89	39.08	-21.19	29.55	-11.66	0-360	400	H
2	181.725	32.08	PK	16	-29.2	18.88	43.52	-24.64	33.07	-14.19	0-360	400	H
5	47.935	32.2	PK	11	-30.1	13.1	39.08	-25.98	29.55	-16.45	0-360	249	V
6	182.7875	31.09	PK	16	-29.1	17.99	43.52	-25.53	33.07	-15.08	0-360	99	V
3	289.8	29.12	PK	13.2	-26.3	16.02	46.44	-30.42	35.57	-19.55	0-360	100	H
4	928.9	28.96	PK	23	-24.3	27.66	46.44	-18.78	35.57	-7.91	0-360	199	H
7	286.7	29.16	PK	13.2	-26.2	16.16	46.44	-30.28	35.57	-19.41	0-360	99	V
8	927.9	28.76	PK	23	-24.4	27.36	46.44	-19.08	35.57	-8.21	0-360	199	V

PK - Peak detector

10. RF EXPOSURE

FCC Part 15
Per KDB 447498 section 4.3.1 #(1), exclusion calculation for 2.45GHz at 5mm separation at 1-g SAR.

[(max. power of channel, including tune-up tolerance, mW)/(min. test separation distance, mm)] $\cdot[\sqrt{f_{(GHz)}}] \leq 3.0$ for 1-g SAR

[(0.2mW)/(5mm)]* $\sqrt{2.54GHz}$=0.064< 3.0 therefore SAR is excluded