



MOBILE DEVICES BUSINESS

**PRODUCT SAFETY AND COMPLIANCE
EMC LABORATORY**

EMC TEST REPORT - Addendum

Test Report Number – 17234-2BT

Report Date – November 23, 2005

Revision 2

The test results contained herein relate only to the model(s) identified. It is the manufacturer's responsibility to assure that additional production units of this model are manufactured with identical electrical and mechanical characteristics.

As the responsible EMC Engineer, I hereby declare that the equipment tested as specified in this report conforms to the requirements indicated.

A handwritten signature in blue ink that reads 'Michael E. Hill'.

Signature:

Name: Michael E. Hill

Title: Senior Staff Electrical Engineer

Date: November 23, 2005

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THIS REPORT MUST NOT BE USED TO CLAIM PRODUCT ENDORSEMENT BY A2LA OR ANY AGENCY OF THE U.S. GOVERNMENT.

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Table of Contents

Test Report Details	4
Applicable Standards	5
Summary of Testing.....	6
General and Special Conditions.....	6
Equipment and Cable Configurations.....	7
Measuring Equipment and Calibration Information	7
Description of Bluetooth Transmitter	8
Measurement Procedures and Data.....	9
CARRIER FREQUENCY SEPARATION	9
Measurement Procedure.....	9
Measurement Results	9
NUMBER OF HOPPING FREQUENCIES	11
Measurement Procedure.....	11
Measurement Results	11
TIME OF OCCUPANCY (DWEEL TIME).....	13
Measurement Procedure.....	13
Measurement Results	13
20dB Bandwidth	15
Measurement Procedure.....	15
Measurement Results	15
20dB Bandwidth	16
FIELD STRENGTH OF SPURIOUS EMISSIONS.....	17
Measurement Procedure.....	17
Measurement Results	17
Measurement Procedure.....	45
Measurement Results	45
BAND-EDGE COMPLIANCE OF RF CONDUCTED EMISSIONS	46
Measurement Procedure.....	46
Measurement Results	46
SPURIOUS RF CONDUCTED EMISSIONS	49
Measurement Procedure.....	49
Measurement Results	49
AC LINE CONDUCTED	56
Measurement Procedure.....	56
Measurement Results	56
Bluetooth Channel 0 2402MHz TX Mode Neutral Coupling Hopping.....	58
Bluetooth Channel 0 2441MHz TX Mode Line Coupling Nonhopping	58
Bluetooth Channel 39 2441MHz TX Mode Line Coupling Nonhopping	Error!
Bookmark not defined.9	
Bluetooth Channel 39 2480MHz TX Mode Neutral Coupling Hopping.....	59
Bluetooth Channel 78 2480MHz TX Mode Line Coupling Hopping	60
Bluetooth Channel 78 2441MHz TX Line Neutral Coupling Hopping.....	60
Bluetooth Channel 0 2402MHz TX Mode Line Coupling Hopping	61
Bluetooth Channel 0 2441MHz TX Mode Neutral Coupling Nonhopping.....	61

Bluetooth Channel 39 2441MHz TX Mode Line Coupling Hopping	62
Bluetooth Channel 39 2480MHz TX Mode Neutral Coupling Nonhopping.....	62
Bluetooth Channel 78 2480MHz TX Mode Line Coupling Nonhopping	63
Bluetooth Channel 78 2480MHz TX Mode Neutral Coupling Nonhopping.....	63

Test Report Details

Tests Performed By: Motorola Mobile Devices business
Product Safety and Compliance Group
600 North US Hwy 45
Libertyville, IL 60048
PH (847) 523-6167 Fax (847) 523-4538
Motorola PCS FRN: 0004321311
FCC Registration Number: 316588
Industry Canada Number: IC3908

Radiated Emissions
Performed By: Underwriters Laboratories
International EMC Services
333 Pfingsten RD
Northbrook, IL 60062
Contact: Lubomir Madjarov
(Tel) 847/664-3957
(Fax) 847/313-3957

Tests Requested By: Motorola Inc.
Mobile Devices business
600 North US Hwy 45
Libertyville, IL 60048

Product Type: Q

Signaling Capability: CDMA 800, 1900 and Bluetooth

Model Number: SJUG1134CC

Serial Numbers: LFC0480086, LFC0440004

Testing Complete Date: November 23, 2005

Applicable Standards

All tests and measurements indicated in this document were performed in accordance with the Code of Federal Regulations Title 47 Part 2, Sub-part J as well as the following parts:

- ☒ Part 15 Subpart C – Intentional Radiators
- ☐ Part 22 Subpart H - Public Mobile Services
- ☐ Part 24 - Personal Communications Services
- ☐ Part 90 - Private Land Mobile Radio Service

Applicable Standards: TIA EIA 137-A, TIA EIA 98-C, ANSI 63.4 2001, RSS-118 (AMPS), RSS-128 (TDMA), RSS-129 (CDMA), RSS-133 (PCS)

DA 00-705, "Filing and Measurement Guidelines for Frequency Hopping Spread Spectrum Systems" published by the Federal Communications Commission was also used in the testing of this product.

Summary of Testing

Test	Test Name	Pass/Fail
1	Carrier Frequency Separation	Result
2	Number of Hopping Frequencies	Result
3	Time of Occupancy (Dwell Time)	Result
4	20 dB Bandwidth	Result
5	Spurious RF Conducted Emissions	Result
6	Field Strength of Spurious Emissions	Result
7	Max Power	N/A
8	Band Edges	See plots
9	Conducted Spurious Emissions	Result
10	AC Line Conducted Emissions	See plots

Test	Test Name	Results
1	Carrier Frequency Separation	1000 kHz
2	Number of Hopping	79
3	Time of Occupancy (Dwell Time)	2.925 ms
4	20 dB Bandwidth	1000 kHz
5	Spurious RF Conducted Emissions	See plots
6	Field Strength of Spurious Emissions	See plots
7	Max Power	2.935 dBm
8	Band Edges	See plots
9	Conducted Spurious Emissions	See plots
10	AC Line Conducted Emissions	See plots

The margin with respect to the limit is the minimum margin for all modes and bands. () indicates the margin at which the product exceeds the limit.

General and Special Conditions

The EUT was tested using a fully charged battery when applicable. Where a battery could not be used due to the need for a controlled variation of input voltage, an external power supply was utilized.

All testing was done in an indoor controlled environment with an average temperature of 22° C and relative humidity of 50%.

Equipment and Cable Configurations

The EUT was tested in a stand-alone configuration that is representative of typical use.

Measuring Equipment and Calibration Information

Manufacturer	Equipment Type	Model No.	Serial Number	Cal. Due Date
Rohde & Schwarz	Receiver	ESI26	838786/010	2/7/2006
Hewlett-Packard	EMC Analyzer	7405	US39440191	1/27/2006
ETS	DRG Horn Antenna	3115	6222	2/9/2006
A.H. Systems Inc.	DRG Horn Antenna	SAS-2--/571	365	5/25/2006
ETS	Log-Periodic Antenna	3148	1188	6/14/2006
ETS	Biconical Antenna	3110B	3370	2/16/2006
Attenuator	Weinschel	AS-6	6675	12/27/2005
Attenuator	Weinschel	AS-6	6677	11/14/2006
Hewlett-Packard	Signal Generator	83623B	3844A01195	6/20/2006
Thermotron	Environmental Chamber	S-4	31580	1/17/2006
Agilent	Power Meter	EE4418B	GB40206388	12/5/2005
Agilent	Power Sensor	E4412B	US38486321	12/5/2005
Hewlett-Packard	Pre-Amplifier	8447F	2805A03419	3/24/2006

U.L. Equipment

Hewlett Packard	QP Adapter	85650A	2811A01069	1/6/2006
Hewlett Packard	S/A Display	8566B	2542A12974	1/6/2006
Hewlett Packard	S/A	8566B	2637A03376	1/6/2006
Hewlett Packard	RF Preselector	85685A	2810A00692	1/6/2006
Rohde & Schwarz	S/A	FSEK20	DE2525315	3/15/2006
EMCO	Horn Antenna 1-18GHz	3115	2638	7/29/2006
EMCO	Horn Antenna 18-26.5GHz	3160-09	9904-1165	N/A*
Chase	Bi-Con Antenna 30-300MHz	VBA6106A	1246	7/22/2006
Chase	Log-Periodic Antenna	UPA6108	1120	8/2/2006

All equipment is on a one-year calibration cycle.

Description of Bluetooth Transmitter

The A760i/A768i cell phone offers Bluetooth as a feature. The Bluetooth spread-spectrum, frequency hopping transceiver is designed to operate between 2400 and 2483 MHz. The Bluetooth antenna is mounted on the PCB inside of the EUT. The antenna installation is permanent. For a more thorough description of the functionality please refer to Exhibit 12 of this package.

As a Bluetooth transmitter, it is designed operate with other Bluetooth devices as defined by industrial standard. In this application, the device is battery-operated.

The maximum Bluetooth antenna gain is -4.7 dB.

Measurement Procedures and Data

CARRIER FREQUENCY SEPARATION

CFR 47 Part 15.247

Measurement Procedure

The RF output port of the Equipment-Under-Test is directly coupled to the input of the EMC analyzer through a specialized RF connector and a 10dB passive attenuator. A fully charged battery was used for the supply voltage.

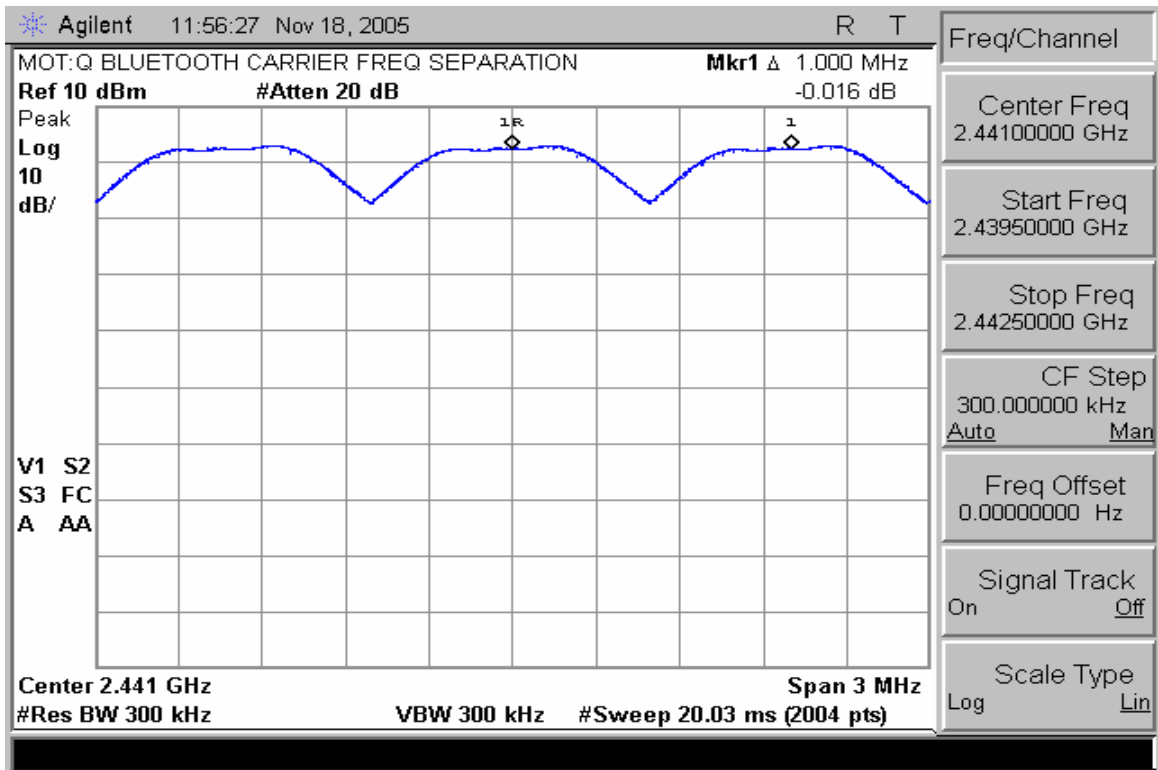
The Bluetooth transmitter of the Q had its hopping function enabled. The following spectrum analyzer settings were used:

1. Span = wide enough to capture the peaks of two adjacent channels
2. Resolution (or IF) Bandwidth (RBW) $\geq$ 1% of the span
3. Video (or Average) Bandwidth (VBW) $\geq$ RBW
4. Sweep = auto
5. Detector function = peak
6. Trace = max hold

The trace was allowed to stabilize. The marker-delta function was used to determine the separation between the peaks of the adjacent channels.

Measurement Results

See attached.



Carrier Frequency Separation

NUMBER OF HOPPING FREQUENCIES

CFR 47 Part 15.247

Measurement Procedure

The RF output port of the Equipment-Under-Test is directly coupled to the input of the EMC analyzer through a specialized RF connector and a 10dB passive attenuator. A fully charged battery was used for the supply voltage.

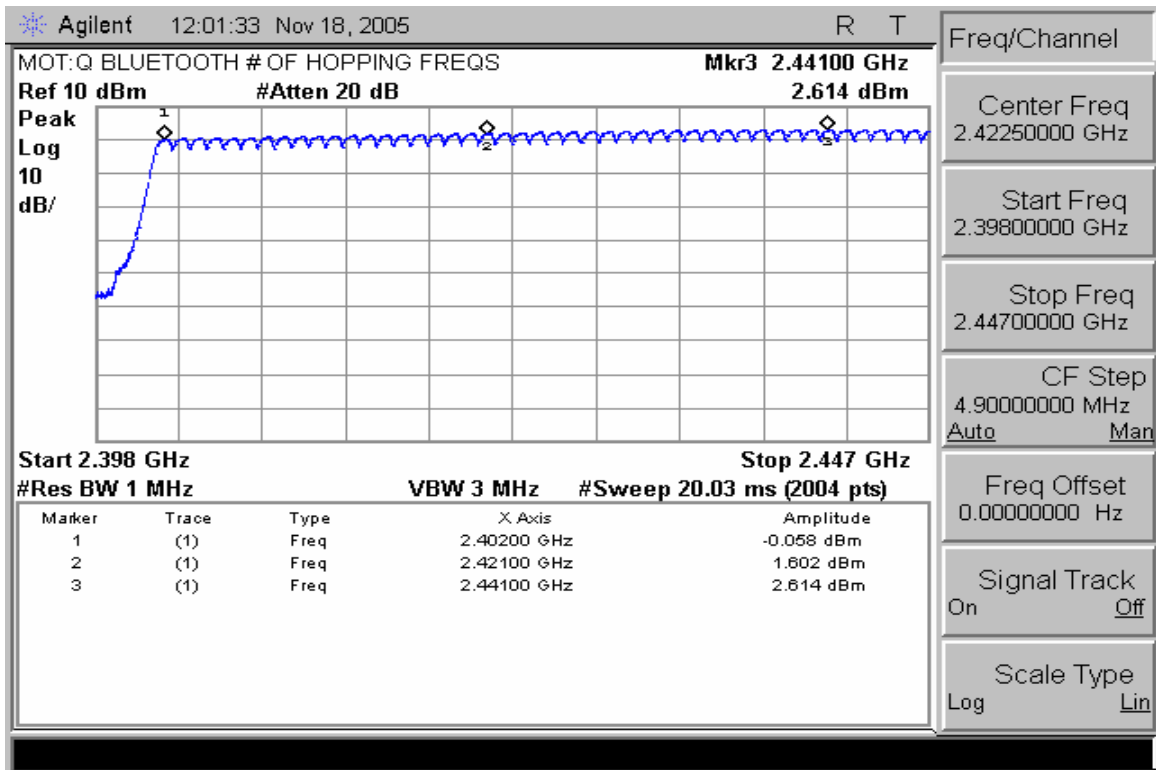
The Bluetooth frequency hopping function of the EUT was enabled. The spectrum analyzer used the following settings:

1. Span = the frequency band of operation
2. RBW $\geq$ 1% of the span
3. VBW $\geq$ RBW
4. Sweep = auto
5. Detector function = peak
6. Trace = max hold

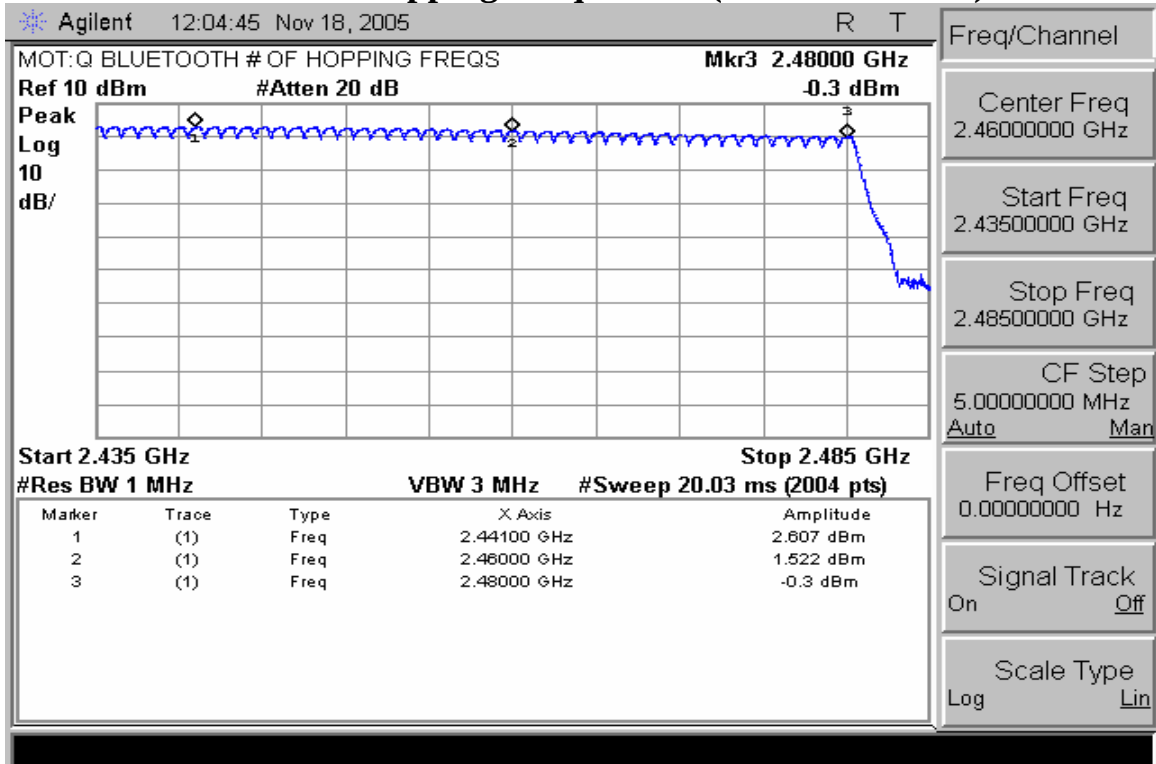
The trace was allowed to stabilize.

Measurement Results

See attached.



Number of Hopping Frequencies (Channels 0 – 39)



Number of Hopping Frequencies (Channels 39 – 78)

TIME OF OCCUPANCY (DWELL TIME)

CFR47 Part 15.247

Measurement Procedure

The RF output port of the Equipment-Under-Test is directly coupled to the input of the EMC analyzer through a specialized RF connector and a 10dB passive attenuator. A fully charged battery was used for the supply voltage.

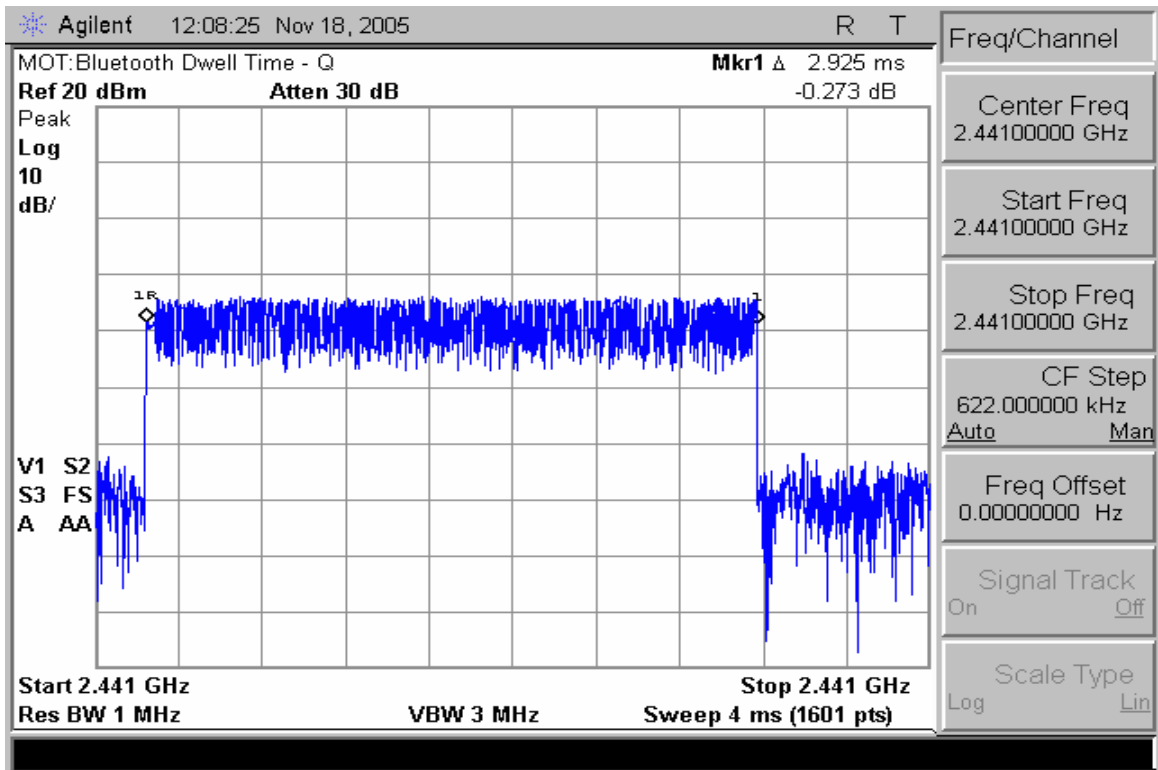
The Bluetooth hopping function of the EUT was enabled. The following spectrum analyzer settings were used:

1. Span = zero span, centered on a hopping channel
2. RBW = 1 MHz
3. VBW $\geq$ RBW
4. Sweep = as necessary to capture the entire dwell time per hopping channel
5. Detector function = peak
6. Trace = max hold

The marker-delta function was used to determine the dwell time.

Measurement Results

Attached



20dB Bandwidth

CFR 47 Part 15.247

Measurement Procedure

The RF output port of the Equipment-Under-Test is directly coupled to the input of the EMC analyzer through a specialized RF connector and a 10dB passive attenuator. A fully charged battery was used for the supply voltage.

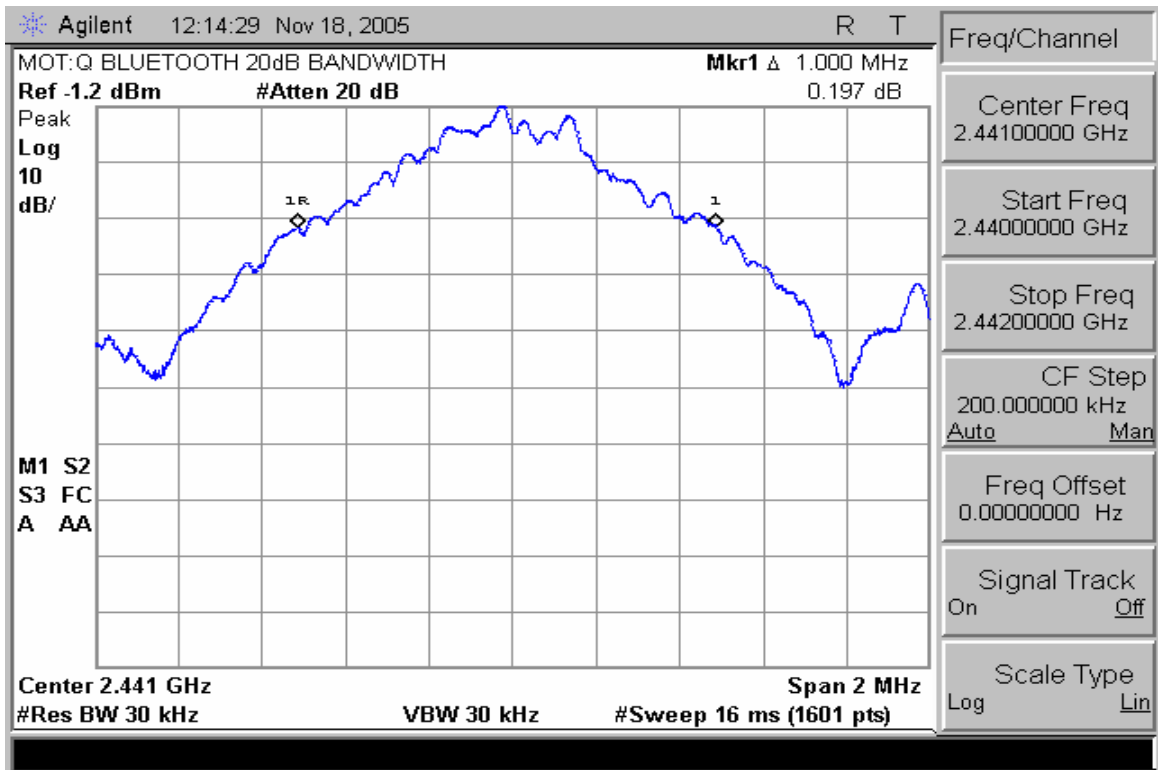
The Bluetooth frequency hopping function of the EUT was enabled. The spectrum analyzer used the following settings:

1. Span = approx. 2 to 3 times the 20dB bandwidth, centered on a hopping frequency
2. RBW $\geq$ 1% of the 20dB span
3. VBW $\geq$ RBW
4. Sweep = auto
5. Detector function = peak
6. Trace = max hold

The trace was allowed to stabilize. The EUT was transmitting at its maximum data rate. The marker-to-peak function was used to set the marker to the peak of the emission. The marker-delta function was used to measure 20dB down one side of the emission. The marker-delta function and marker was moved to the other side of the emission until it was even with the reference marker. The marker-delta reading at this point was the 20dB bandwidth of the emission.

Measurement Results

Attached



20dB Bandwidth

FIELD STRENGTH OF SPURIOUS EMISSIONS

CFR Part 2.1053, 15.247

Measurement Procedure

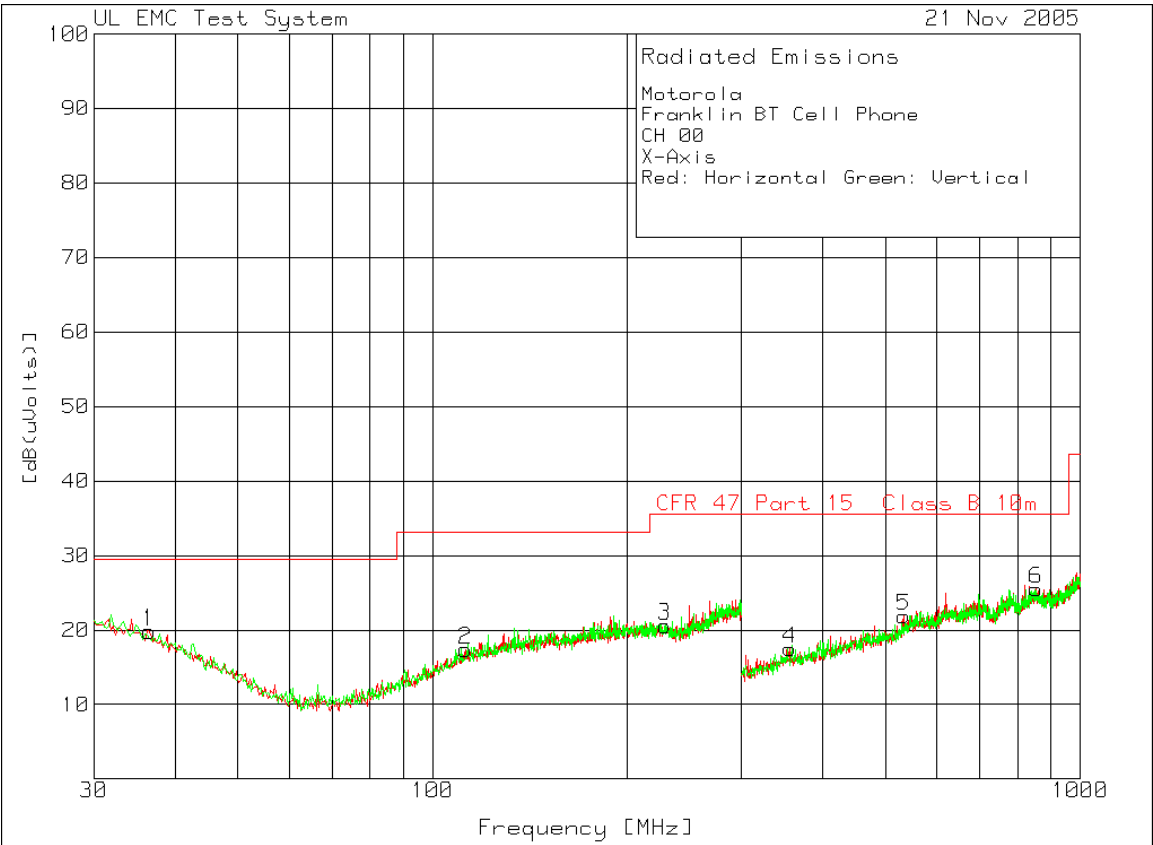
The Equipment-Under-Test is placed inside the semi-anechoic chamber on a wooden table at the turntable center. For each spurious frequency, the antenna mast is raised and lowered from 1 to 4 meters and the turntable is rotated 360 degrees to obtain a maximum reading on the spectrum analyzer. This is repeated for both horizontal and vertical polarizations of the receive antenna.

Field Strength (dBuV/m) = EMI Receiver Level (dBuV) + Cable Loss (dB) -
Amplifier Gain (dB) + Antenna Correction Factor (1/m)

A fully charged battery was used for the supply voltage.

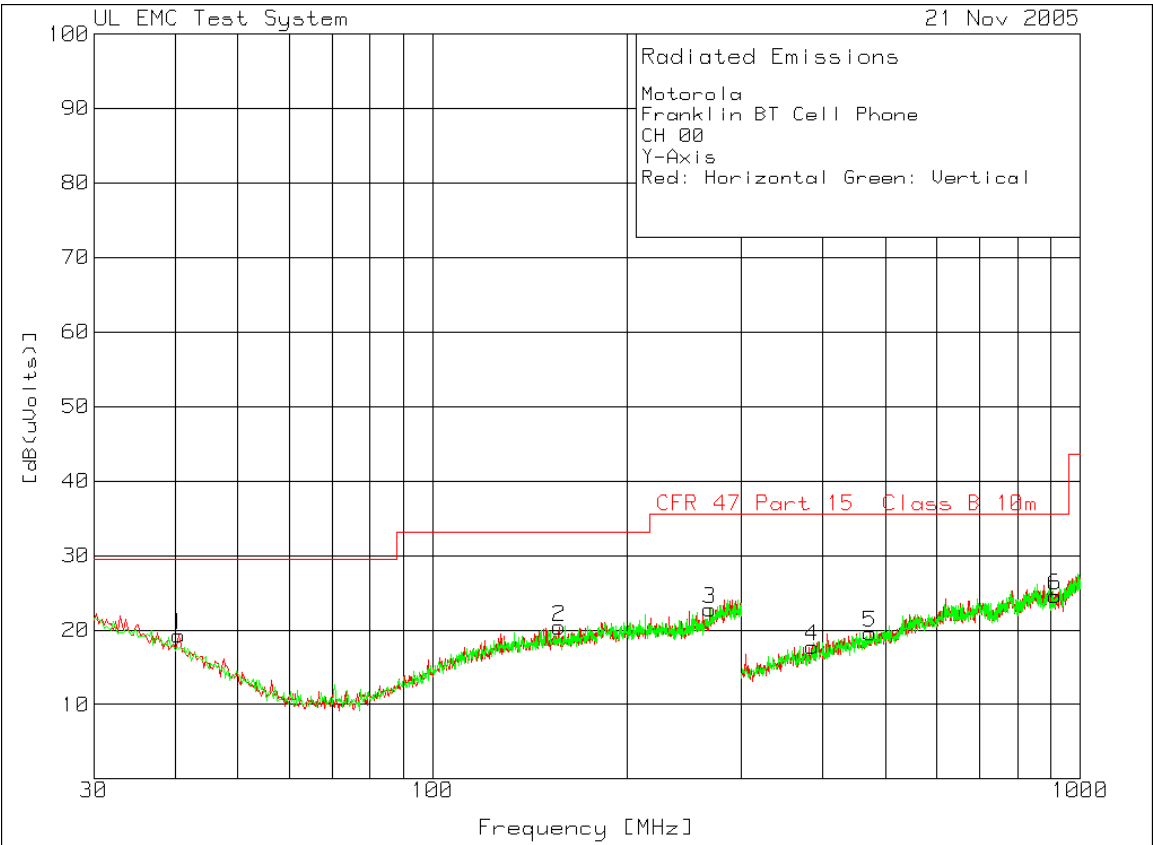
Measurement Results

Attached



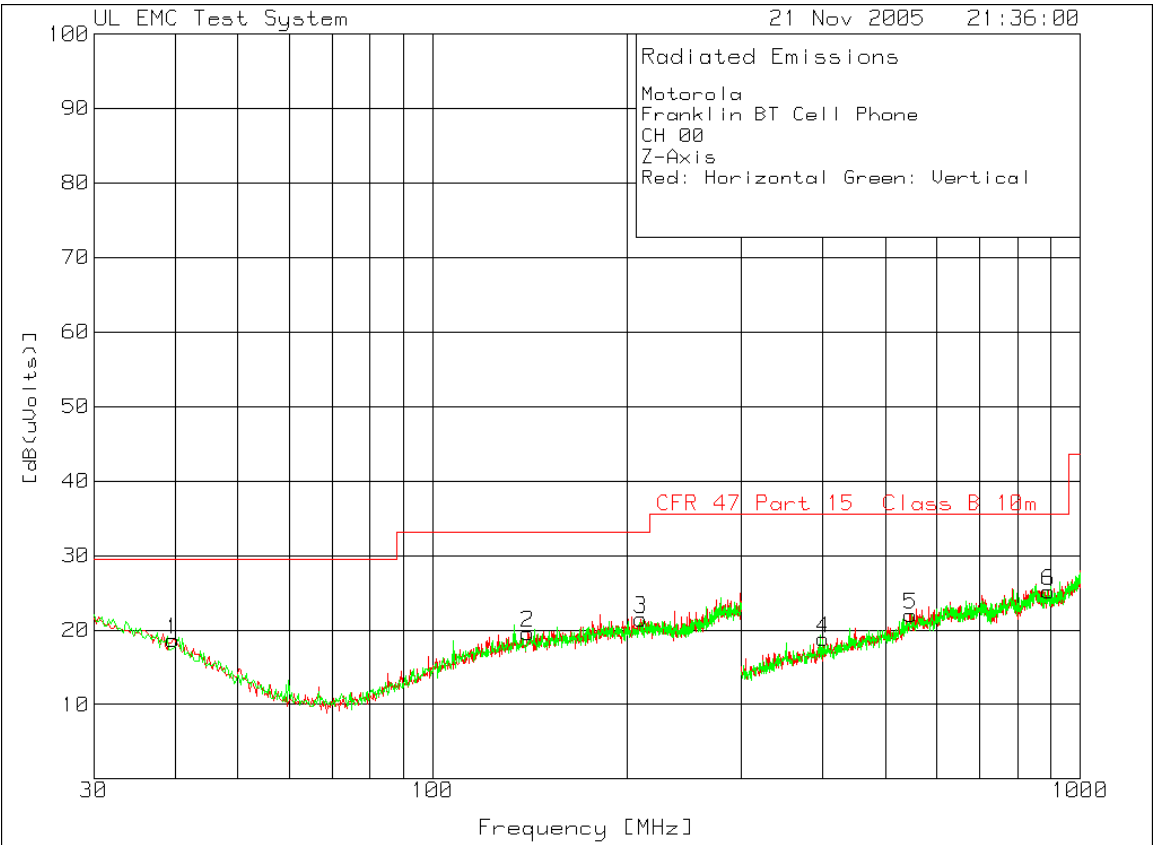
30-1000MHz Low Channel Dual Polarization X

Motorola Franklin BT Cell Phone CH 00 X-Axis Red: Horizontal Green: Vertical											
Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dB(uVolts)]	Limit 1	Margin 1[dB]	Azimuth [deg]	Height [cm]	Polarity
Range 1 30 - 300MHz											
1	36.48	34.5 pk		-30.4	15.7	19.8	29.6	-9.8	334	101	Horz
2	112.35	35.1 pk		-30.1	12.4	17.4	33.1	-15.7	272	101	Horz
3	228.45	34.4 pk		-29.6	15.8	20.6	35.6	-15	88	101	Horz
Range 3 300 - 1000MHz											
4	356.7	35 pk		-32.5	15	17.5	35.6	-18.1	39	100	Horz
5	533.8	35.1 pk		-31.5	18.3	21.9	35.6	-13.7	137	100	Horz
6	855.8	34 pk		-31.5	23	25.5	35.6	-10.1	272	100	Horz
LIMIT 1: CFR 47 Part 15 Class B 10m LIMIT 2: NONE											



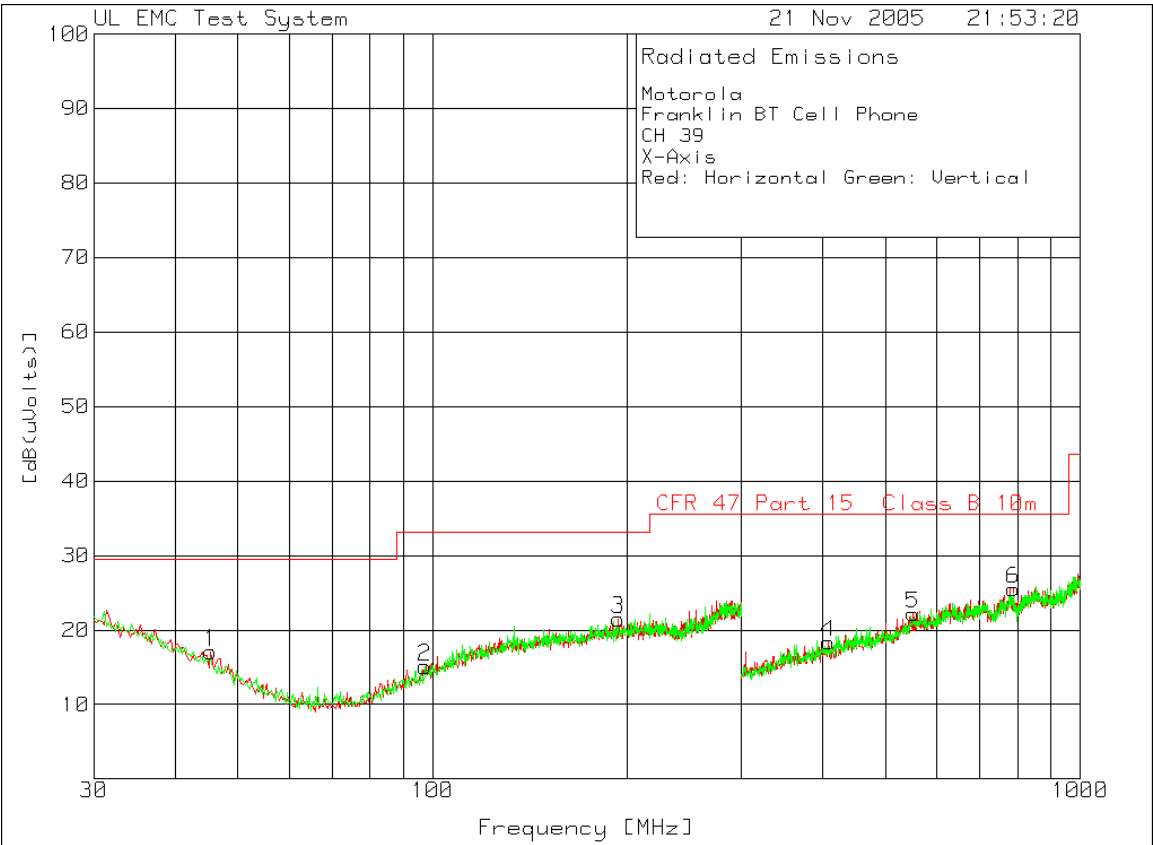
30-1000MHz Low Channel Dual Polarization Y

Motorola Franklin BT Cell Phone CH 00 Y-Axis Red: Horizontal Green: Vertical											
Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dB(uVolts)]	Limit 1	Margin 1[dB]	Azimuth [deg]	Height [cm]	Polarity
Range 1 30 - 300MHz											
1	40.53	35.5 pk		-30.3	14.1	19.3	29.6	-10.3	285	101	Horz
2	156.63	35.5 pk		-30	14.9	20.4	33.1	-12.7	39	101	Horz
3	267.87	35.2 pk		-29.3	16.9	22.8	35.6	-12.8	39	101	Horz
Range 3 300 - 1000MHz											
4	385.4	34.9 pk		-32.2	15.1	17.8	35.6	-17.8	0	100	Horz
5	473.6	34.6 pk		-31.9	16.9	19.6	35.6	-16	357	100	Horz
6	913.9	34 pk		-31.7	22.3	24.6	35.6	-11	162	100	Horz
LIMIT 1: CFR 47 Part 15 Class B 10m LIMIT 2: NONE											



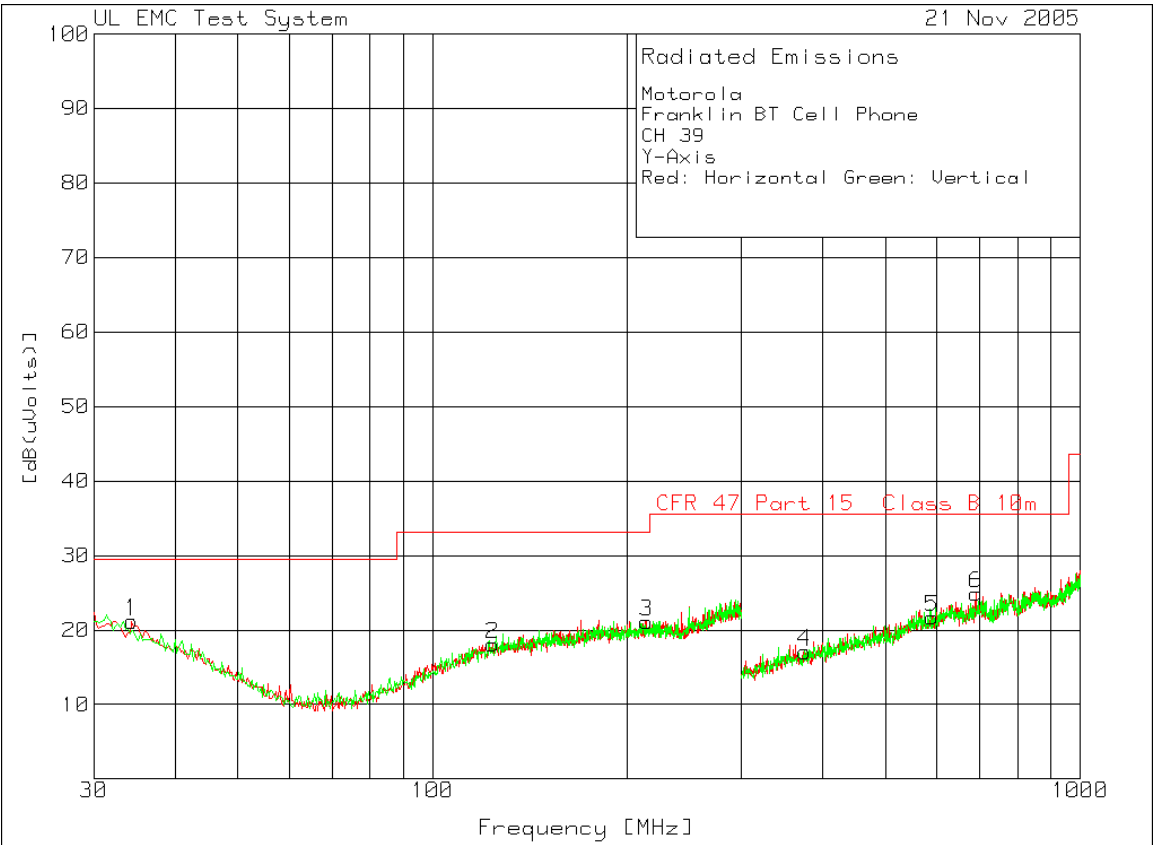
30-1000MHz Low Channel Dual Polarization Z

Motorola Franklin BT Cell Phone CH 00 Z-Axis Red: Horizontal Green: Vertical											
Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dB(uVolts)]	Limit 1	Margin 1[dB]	Azimuth [deg]	Height [cm]	Polarity
Range 1 30 - 300MHz											
1	39.72	34.5 pk		-30.3	14.5	18.7	29.6	-10.9	187	101	Horz
2	140.43	35.3 pk		-30.1	14.4	19.6	33.1	-13.5	356	101	Horz
3	209.685	35.4 pk		-29.8	15.9	21.5	33.1	-11.6	309	101	Horz
Range 3 300 - 1000MHz											
4	400.8	35.2 pk		-32	15.6	18.8	35.6	-16.8	29	100	Horz
5	547.1	34.5 pk		-31.5	19	22	35.6	-13.6	41	100	Horz
6	893.6	34.4 pk		-31.6	22.4	25.2	35.6	-10.4	167	100	Horz
LIMIT 1: CFR 47 Part 15 Class B 10m											
LIMIT 2: NONE											



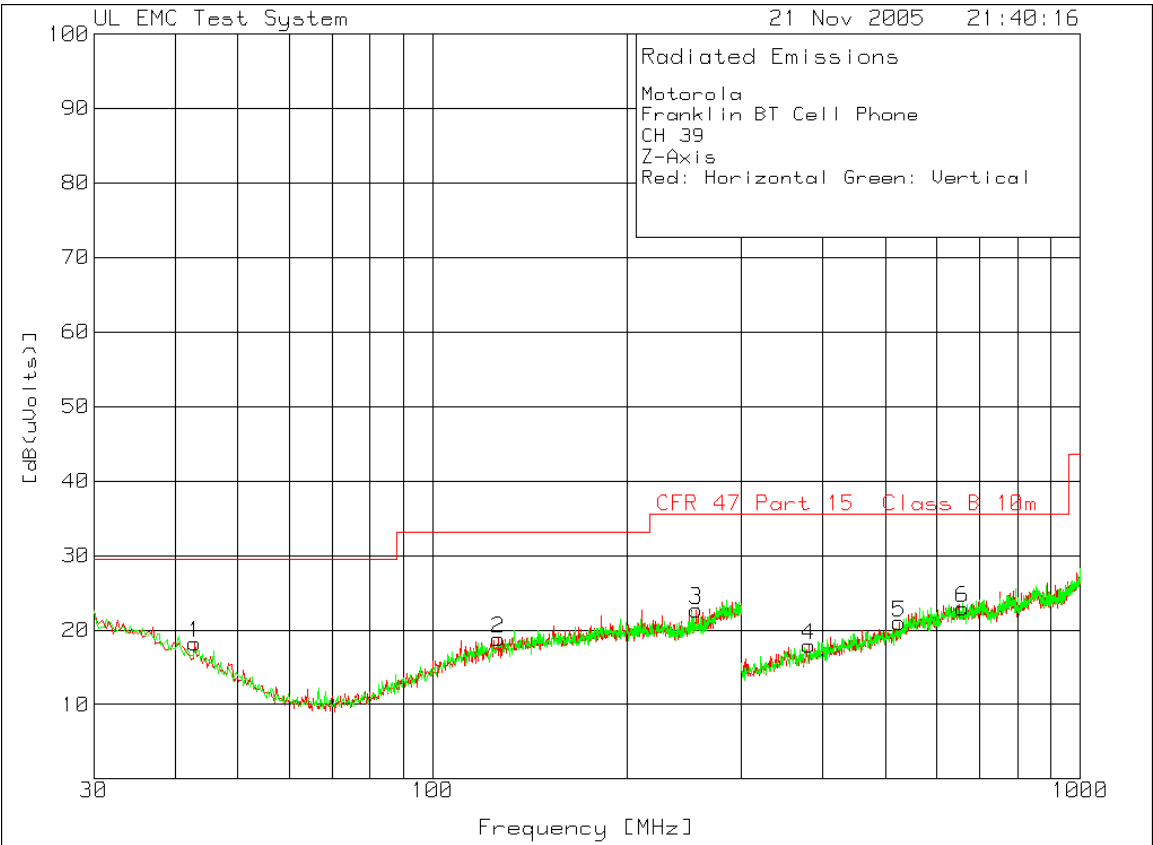
30-1000MHz Mid Channel Dual Polarization X

Motorola Franklin BT Cell Phone CH 39 X-Axis Red: Horizontal Green: Vertical											
Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dB(uVolts)]	Limit 1	Margin 1[dB]	Azimuth [deg]	Height [cm]	Polarity
Range 1 30 - 300MHz											
1	45.39	35.3 pk		-30.3	12.1	17.1	29.6	-12.5	52	101	Horz
2	97.23	35 pk		-30.1	10.2	15.1	33.1	-18	52	101	Horz
3	193.62	35.7 pk		-29.9	15.7	21.5	33.1	-11.6	187	101	Horz
Range 3 300 - 1000MHz											
4	408.5	34.8 pk		-32	15.6	18.4	35.6	-17.2	88	100	Horz
5	552	34.6 pk		-31.5	19.1	22.2	35.6	-13.4	223	100	Horz
6	787.9	35 pk		-31.2	21.7	25.5	35.6	-10.1	321	100	Horz
LIMIT 1: CFR 47 Part 15 Class B 10m LIMIT 2: NONE											



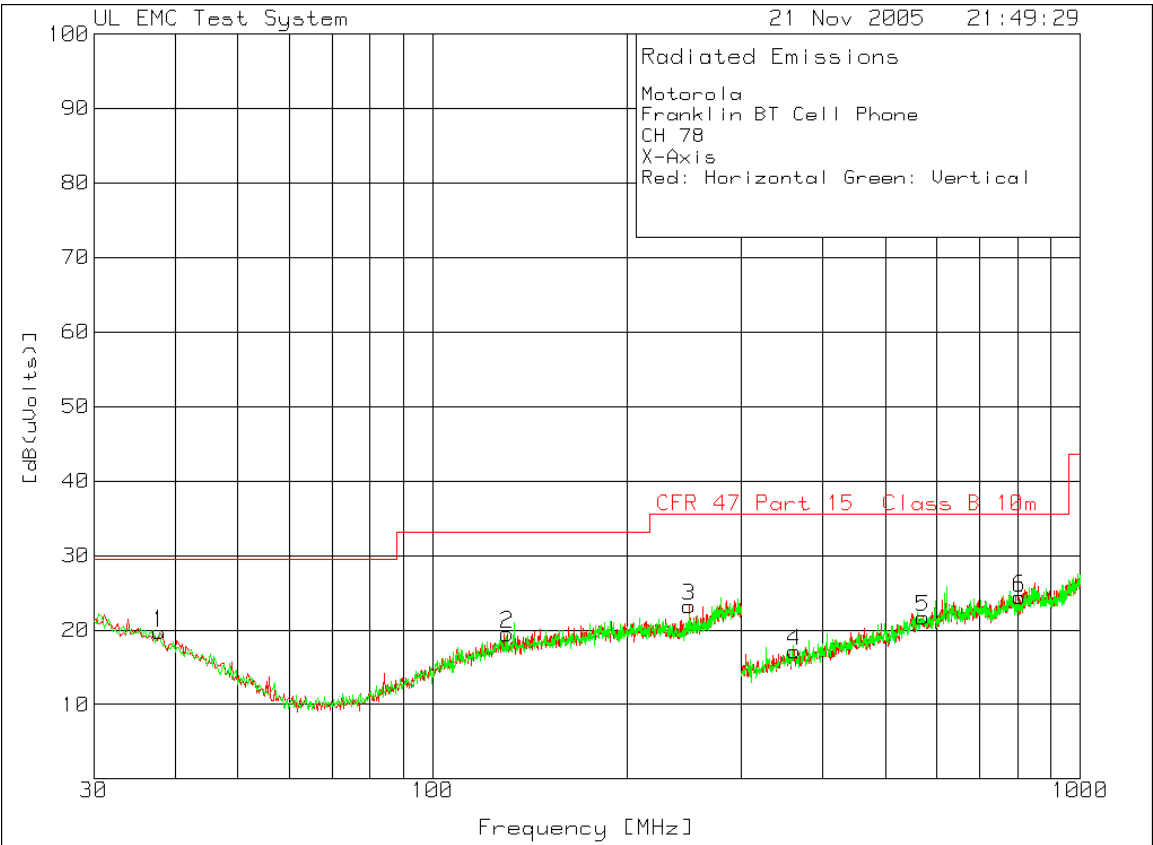
30 -1000MHz Mid Channel Dual Polarization Y

Motorola Franklin BT Cell Phone CH 39 Y-Axis Red: Horizontal Green: Vertical											
Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dB(uVolts)]	Limit 1	Margin 1[dB]	Azimuth [deg]	Height [cm]	Polarity
Range 1 30 - 300MHz											
1	34.32	35.1 pk		-30.4	16.5	21.2	29.6	-8.4	89	101	Horz
2	123.69	34.7 pk		-30.1	13.5	18.1	33.1	-15	273	101	Horz
3	213.87	34.9 pk		-29.7	15.9	21.1	33.1	-12	357	101	Horz
Range 3 300 - 1000MHz											
4	375.6	34.4 pk		-32.3	15	17.1	35.6	-18.5	248	100	Horz
5	589.8	33.8 pk		-31.3	19.2	21.7	35.6	-13.9	235	100	Horz
6	689.9	35.4 pk		-30.7	20.2	24.9	35.6	-10.7	223	100	Horz
LIMIT 1: CFR 47 Part 15 Class B 10m LIMIT 2: NONE											



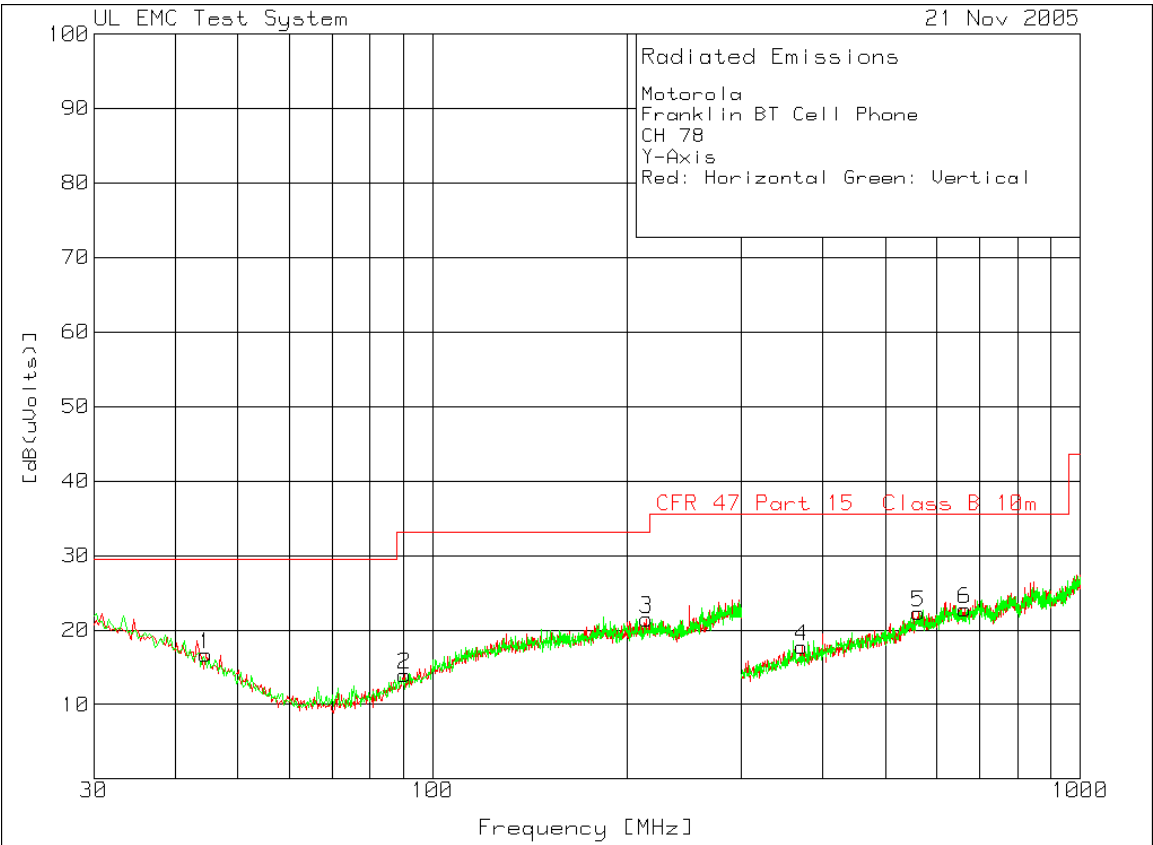
30 -1000MHz Mid Channel Dual Polarization Z

Motorola Franklin BT Cell Phone CH 39 Z-Axis Red: Horizontal Green: Vertical											
Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dB(uVolts)]	Limit 1	Margin 1[dB]	Azimuth [deg]	Height [cm]	Polarity
Range 1 30 - 300MHz											
1	42.96	35.4 pk		-30.3	13.1	18.2	29.6	-11.4	175	101	Horz
2	126.12	35.2 pk		-30.1	13.7	18.8	33.1	-14.3	101	101	Horz
3	255.45	35.8 pk		-29.5	16.4	22.7	35.6	-12.9	199	101	Horz
Range 3 300 - 1000MHz											
4	381.2	35.1 pk		-32.2	15	17.9	35.6	-17.7	0	100	Horz
5	525.4	34.7 pk		-31.5	17.8	21	35.6	-14.6	297	100	Horz
6	657	34.3 pk		-31.2	19.8	22.9	35.6	-12.7	174	100	Horz
LIMIT 1: CFR 47 Part 15 Class B 10m											
LIMIT 2: NONE											



30 -1000MHz High Channel Dual Polarization X

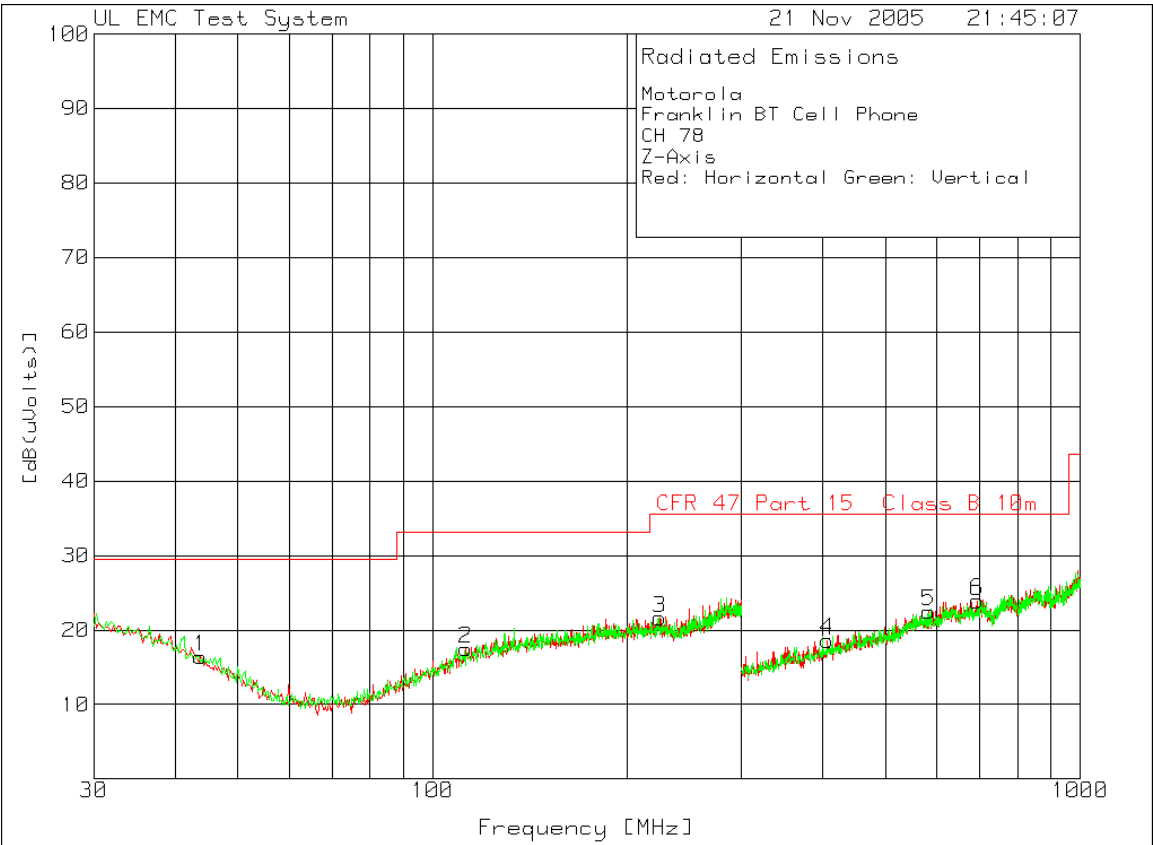
Motorola Franklin BT Cell Phone CH 78 X-Axis Red: Horizontal Green: Vertical											
Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dB(uVolts)]	Limit 1	Margin 1[dB]	Azimuth [deg]	Height [cm]	Polarity
Range 1 30 - 300MHz											
1	37.83	34.9 pk		-30.4	15.2	19.7	29.6	-9.9	199	101	Horz
2	130.44	35.6 pk		-30.1	14	19.5	33.1	-13.6	101	101	Horz
3	248.97	36.8 pk		-29.6	16	23.2	35.6	-12.4	260	101	Horz
Range 3 300 - 1000MHz											
4	362.3	34.7 pk		-32.4	14.9	17.2	35.6	-18.4	357	100	Horz
5	571.6	34 pk		-31.4	19.1	21.7	35.6	-13.9	88	100	Horz
6	806.1	34.7 pk		-31.4	21.1	24.4	35.6	-11.2	0	100	Horz
LIMIT 1: CFR 47 Part 15 Class B 10m LIMIT 2: NONE LIMIT 3: NONE											



30 -1000MHz High Channel Dual Polarization Y

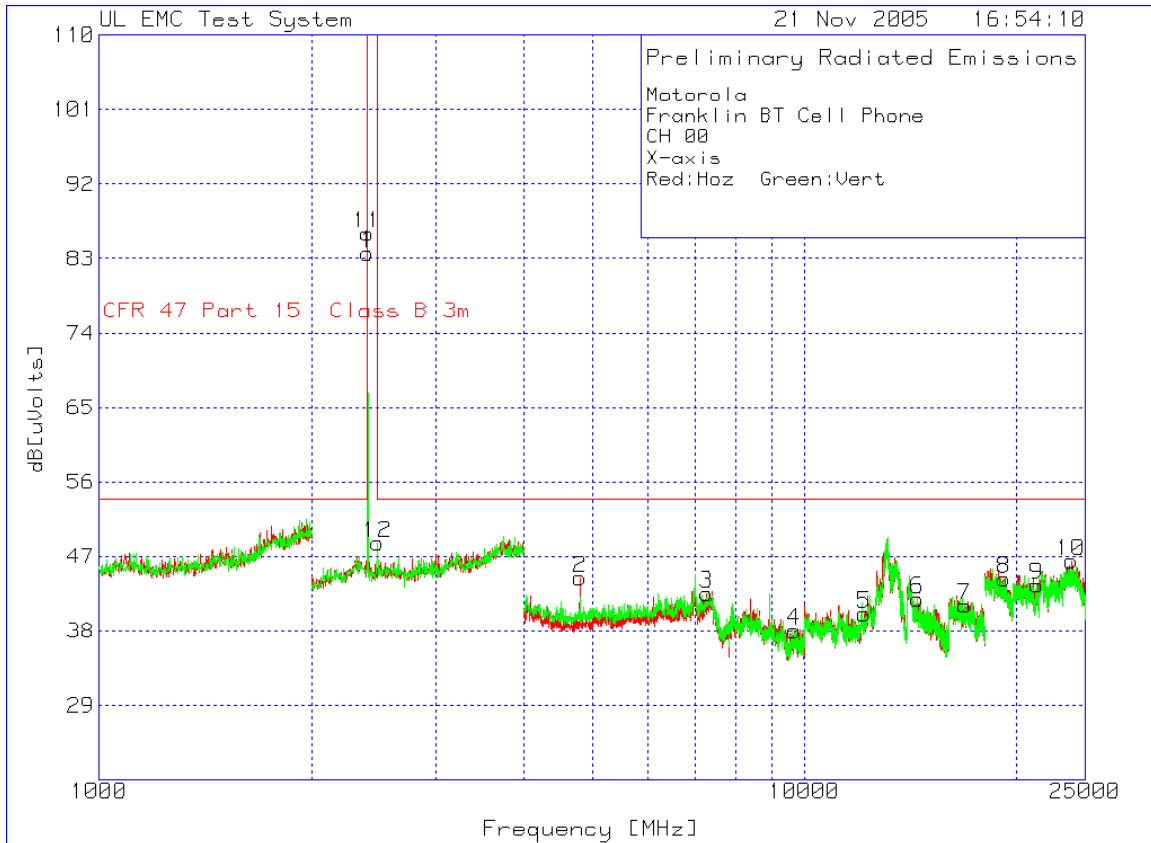
Motorola Franklin BT Cell Phone CH 78 Y-Axis Red: Horizontal Green: Vertical											
Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dB(uVolts)]	Limit 1	Margin 1[dB]	Azimuth [deg]	Height [cm]	Polarity
Range 1 30 - 300MHz											
1	44.58	34.6 pk		-30.3	12.4	16.7	29.6	-12.9	223	101	Horz
2	90.48	34.9 pk		-30.1	9.2	14	33.1	-19.1	39	101	Horz
3	214.14	35.4 pk		-29.8	15.9	21.5	33.1	-11.6	76	101	Horz
Range 3 300 - 1000MHz											
4	371.4	35.3 pk		-32.4	14.9	17.8	35.6	-17.8	322	100	Horz
5	562.5	34.5 pk		-31.5	19.3	22.3	35.6	-13.3	248	100	Horz
6	663.3	34 pk		-31	19.8	22.8	35.6	-12.8	138	100	Horz

LIMIT 1: CFR 47 Part 15 Class B 10m
 LIMIT 2: NONE



30 -1000MHz High Channel Dual Polarization Z

Motorola Franklin BT Cell Phone CH 78 Z-Axis Red: Horizontal Green: Vertical											
Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dB(uVolts)]	Limit 1	Margin 1[dB]	Azimuth [deg]	Height [cm]	Polarity
Range 1 30 - 300MHz											
1	43.77	33.9 pk		-30.3	12.8	16.4	29.6	-13.2	15	101	Horz
2	112.62	35 pk		-30	12.5	17.5	33.1	-15.6	174	101	Horz
3	224.13	35.3 pk		-29.6	15.9	21.6	35.6	-14	346	101	Horz
Range 3 300 - 1000MHz											
4	407.1	34.9 pk		-31.9	15.6	18.6	35.6	-17	150	100	Horz
5	582.8	34.7 pk		-31.3	19.1	22.5	35.6	-13.1	346	100	Horz
6	692.7	34.5 pk		-31	20.4	23.9	35.6	-11.7	187	100	Horz
LIMIT 1: CFR 47 Part 15 Class B 10m LIMIT 2: NONE											



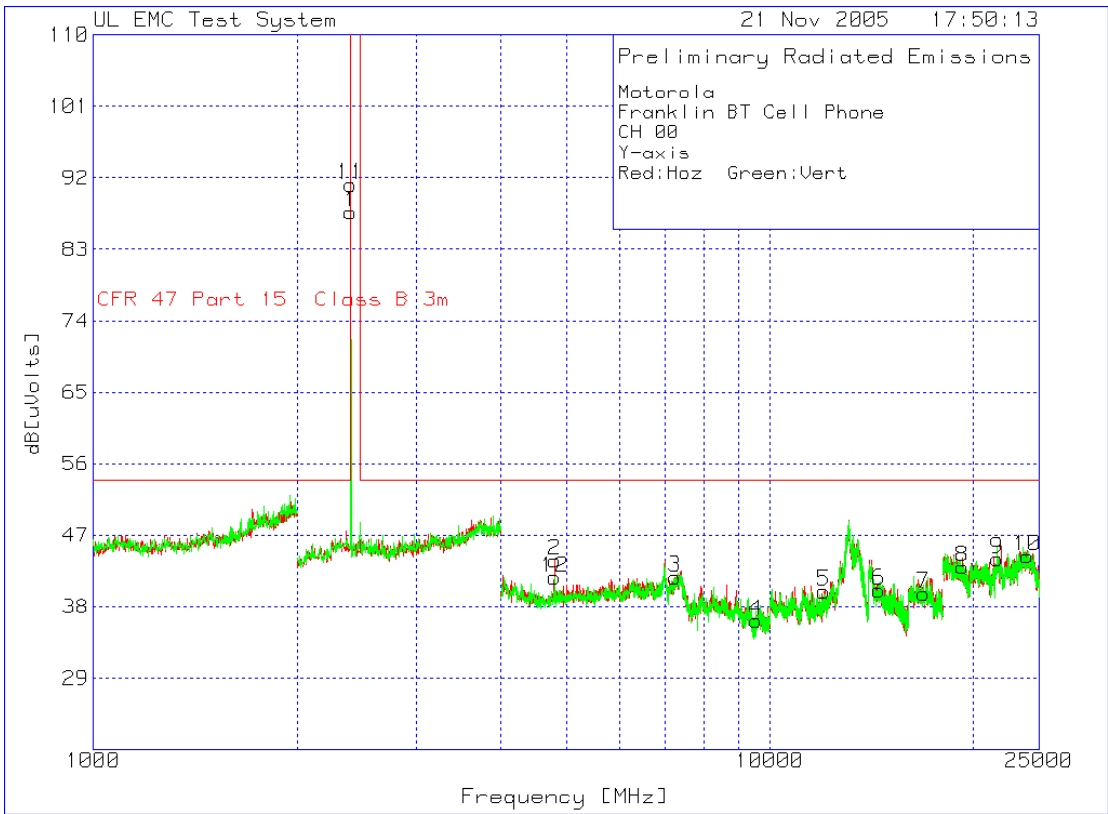
1-25 GHz Low Channel Dual Polarization X

Motorola
Franklin BT Cell Phone
CH 00
X-axis

Red: Hoz Green: Vert

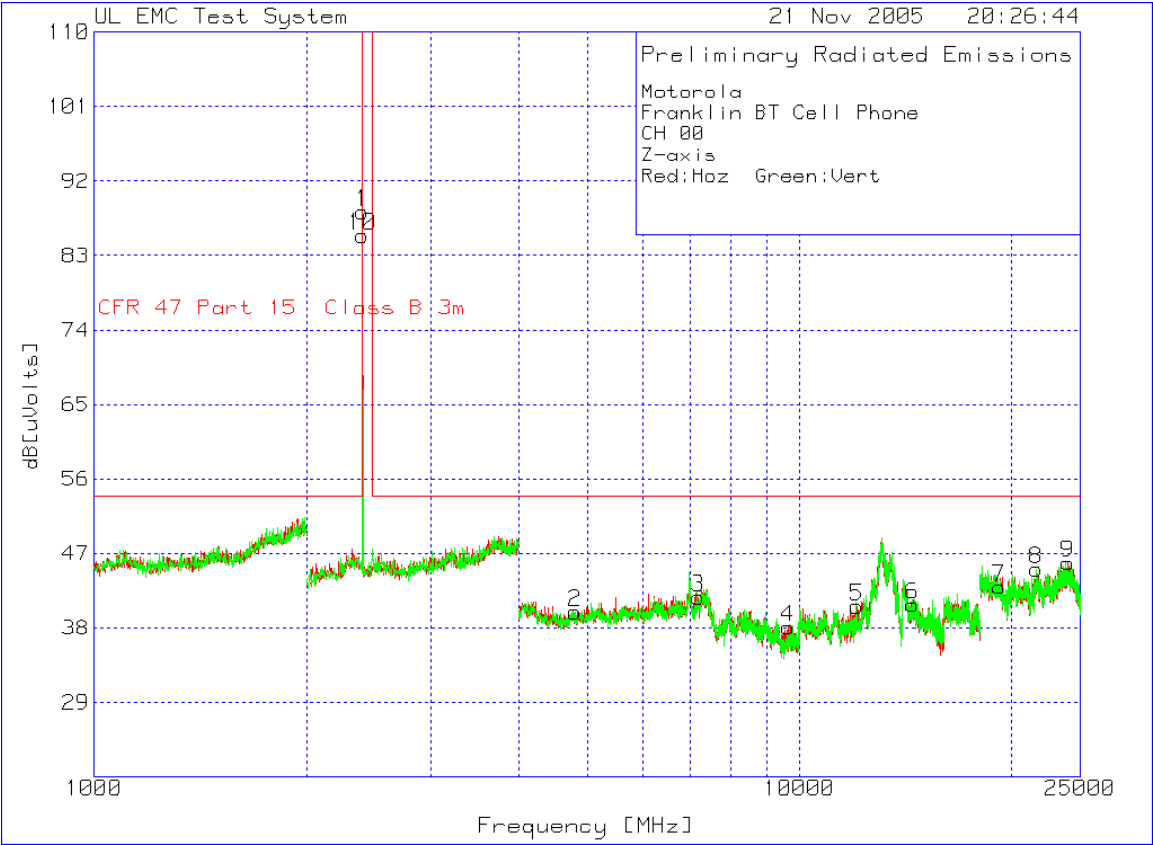
Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uVolts]	Limit 1	Margin 1[dB]	Height [cm]	Polarity
2 - 4GHz 2000 - 4000MHz										
1	2400.802	57.44 pk		4.4	21.8	83.64	999	-915.36	99	Horz
4 - 8GHz 4000 - 8000MHz										
2	4804.805	67.31 pk		-50.6	27.7	44.41	54	-9.59	101	Horz
3	7263.263	58.65 pk		-46.3	30.2	42.55	54	-11.45	101	Horz
8 - 12GHz 8000 - 12000MHz										
4	9657.658	50.12 pk		-48.5	36.4	38.02	54	-15.98	99	Horz
12 - 18GHz 12000 - 18000MHz										
5	12148.099	47.07 pk		-46.4	39.4	40.07	54	-13.93	99	Horz
6	14449.633	42.75 pk		-40.7	39.8	41.85	54	-12.15	99	Horz
7	16867.245	41.77 pk		-40.9	40.2	41.07	54	-12.93	99	Horz
18-26.5GHz 18000 - 25000MHz										
8	19208.104	72.52 pk		-68.5	40.3	44.32	54	-9.68	99	Horz
9	21347.674	66.03 pk		-62.7	40.2	43.53	54	-10.47	99	Horz
10	23886.443	63.85 pk		-57.7	40.3	46.45	54	-7.55	99	Horz
2 - 4GHz 2000 - 4000MHz										
11	2400.802	59.8 pk		4.4	21.8	86	999	-913	101	Vert
12	2480.962	22.53 pk		4.1	22	48.63	999	-950.37	101	Vert

LIMIT 1: CFR 47 Part 15 Class B 3m
LIMIT 2: NONE

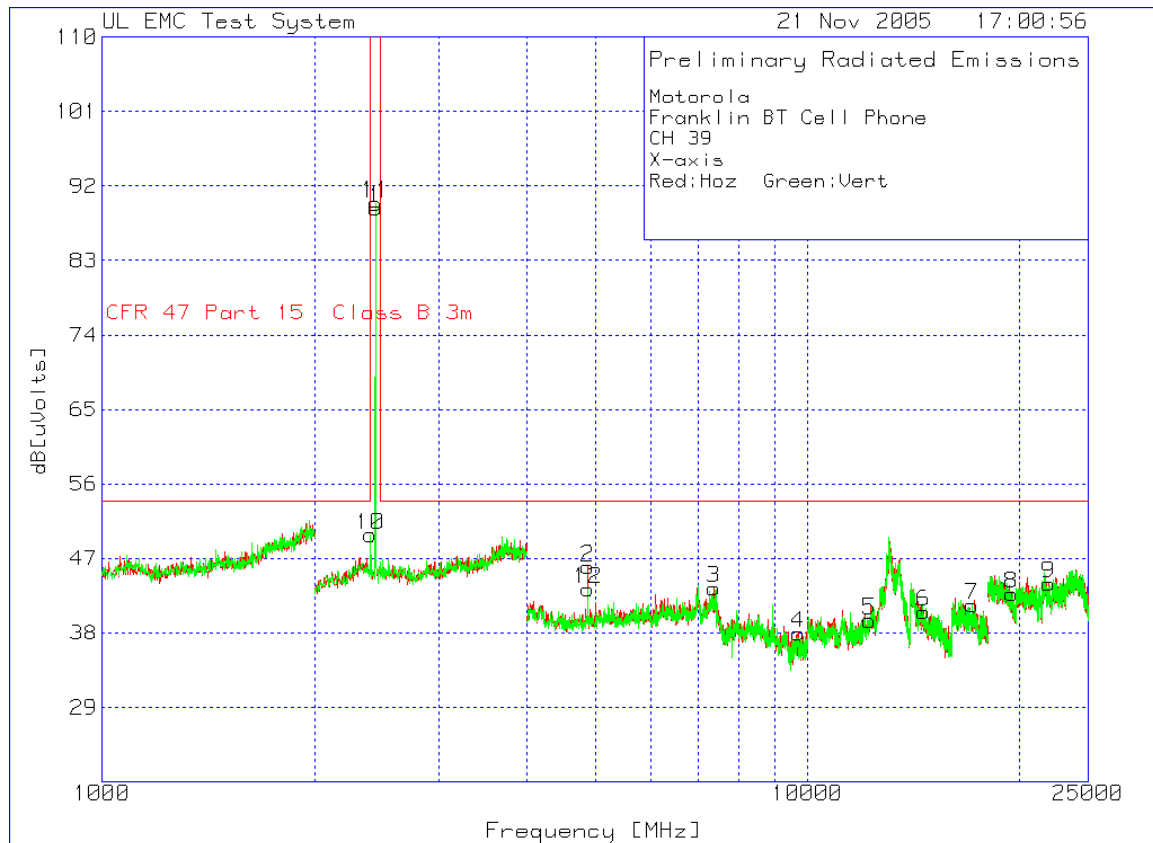


1-25 GHz Low Channel Dual Polarization Y

Motorola Franklin BT Cell Phone CH 00 Y-axis Red:Hoz Green:Vert										
Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uVolts]	Limit 1	Margin 1[dB]	Height [cm]	Polarity
2 - 4GHz 2000 - 4000MHz										
1	2400.802	61.45 pk		4.4	21.8	87.65	999	-911.35	101	Horz
4 - 8GHz 4000 - 8000MHz										
2	4800.801	66.84 pk		-50.7	27.7	43.84	54	-10.16	101	Horz
3	7243.243	58.13 pk		-46.4	30	41.73	54	-12.27	101	Horz
8 - 12GHz 8000 - 12000MHz										
4	9533.534	49.84 pk		-50	36.4	36.24	54	-17.76	101	Horz
12 - 18GHz 12000 - 18000MHz										
5	12008.005	45.95 pk		-45.4	39.4	39.95	54	-14.05	101	Horz
6	14497.665	41.5 pk		-41.2	39.8	40.1	54	-13.9	101	Horz
7	16875.25	40.47 pk		-41	40.2	39.67	54	-14.33	101	Horz
18-26.5GHz 18000 - 25000MHz										
8	19260.63	71.43 pk		-68.7	40.3	43.03	54	-10.97	101	Horz
9	21666.333	64.91 pk		-61.3	40.4	44.01	54	-9.99	101	Horz
10	24002.001	62.96 pk		-58.9	40.3	44.36	54	-9.64	101	Horz
2 - 4GHz 2000 - 4000MHz										
11	2400.802	64.93 pk		4.4	21.8	91.13	999	-907.87	101	Vert
4 - 8GHz 4000 - 8000MHz										
12	4804.805	64.58 pk		-50.6	27.7	41.68	54	-12.32	101	Vert
LIMIT 1: CFR 47 Part 15 Class B 3m LIMIT 2: NONE										



Motorola											
Franklin BT Cell Phone											
CH 00											
Z-axis											
Red:Hoz Green:Vert											
Marker	Test	Meter	Detector	Gain/Loss	Transducer	Level	Limit 1	Margin 1[dB]	Height [cm]	Polarity	
Number	Frequency	Reading	Type	Factor	Factor	dB[uVolts]					
	[MHz]	[dB(uV)]		[dB]	[dB]						
2 - 4GHz 2000 - 4000MHz											
1	2400.802	62.09 pk		4.4	21.8	88.29	999	-910.71	101	Horz	
4 - 8GHz 4000 - 8000MHz											
2	4800.801	62.97 pk		-50.7	27.7	39.97	54	-14.03	101	Horz	
3	7191.191	59.02 pk		-47	29.7	41.72	54	-12.28	101	Horz	
8 - 12GHz 8000 - 12000MHz											
4	9621.622	50.6 pk		-48.9	36.4	38.1	54	-15.9	101	Horz	
12 - 18GHz 12000 - 18000MHz											
5	12052.035	46.83 pk		-45.6	39.4	40.63	54	-13.37	101	Horz	
6	14449.633	41.75 pk		-40.7	39.8	40.85	54	-13.15	101	Horz	
18-26.5GHz 18000 - 25000MHz											
7	19197.599	71.07 pk		-68.4	40.3	42.97	54	-11.03	101	Horz	
8	21676.838	66.02 pk		-61.3	40.4	45.12	54	-8.88	101	Horz	
9	24005.503	64.37 pk		-58.8	40.3	45.87	54	-8.13	101	Horz	
2 - 4GHz 2000 - 4000MHz											
10	2400.802	59.24 pk		4.4	21.8	85.44	999	-913.56	101	Vert	
LIMIT 1: CFR 47 Part 15 Class B 3m											
LIMIT 2: NONE											

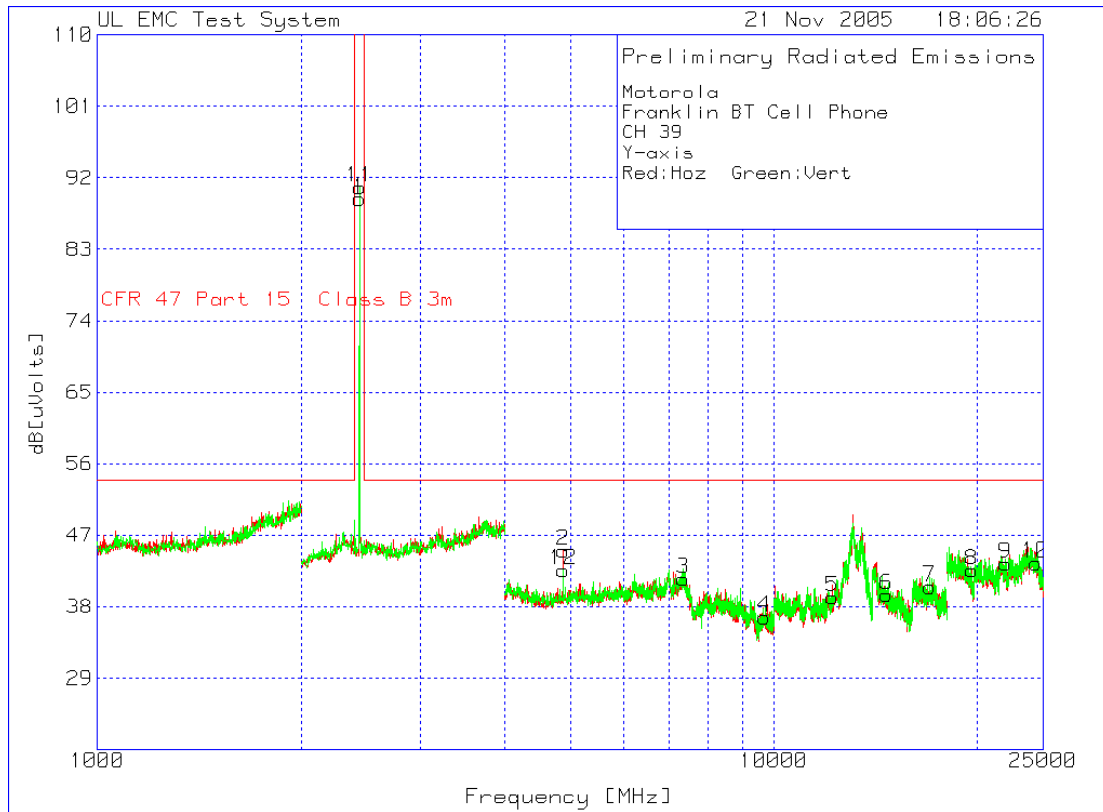


1-25 GHz Mid Channel Dual Polarization X

Motorola
Franklin BT Cell Phone
CH 39
X-axis
Red: Hoz Green: Vert

Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uVolts]	Limit 1	Margin 1[dB]	Height [cm]	Polarity
2 - 4GHz 2000 - 4000MHz										
1	2440.882	63.18 pk		4.2	21.9	89.28	999	-909.72	101	Horz
4 - 8GHz 4000 - 8000MHz										
2	4880.881	68.77 pk		-50.5	27.7	45.97	54	-8.03	101	Horz
3	7363.363	58.92 pk		-46.4	30.9	43.42	54	-10.58	101	Horz
8 - 12GHz 8000 - 12000MHz										
4	9701.702	49.97 pk		-48.4	36.4	37.97	54	-16.03	101	Horz
12 - 18GHz 12000 - 18000MHz										
5	12236.157	45.66 pk		-45.5	39.4	39.56	54	-14.44	101	Horz
6	14605.737	41.03 pk		-40.3	39.8	40.53	54	-13.47	101	Horz
7	17135.424	41.65 pk		-40.6	40.3	41.35	54	-12.65	101	Horz
18-26.5GHz 18000 - 25000MHz										
8	19481.241	71.54 pk		-69.1	40.3	42.74	54	-11.26	101	Horz
9	21946.473	63.87 pk		-60.3	40.4	43.97	54	-10.03	101	Horz
2 - 4GHz 2000 - 4000MHz										
10	2400.802	23.65 pk		4.4	21.8	49.85	999	-949.15	101	Vert
11	2440.882	63.82 pk		4.2	21.9	89.92	999	-909.08	101	Vert
4 - 8GHz 4000 - 8000MHz										
12	4880.881	66.11 pk		-50.5	27.7	43.31	54	-10.69	101	Vert

LIMIT 1: CFR 47 Part 15 Class B 3m
LIMIT 2: NONE

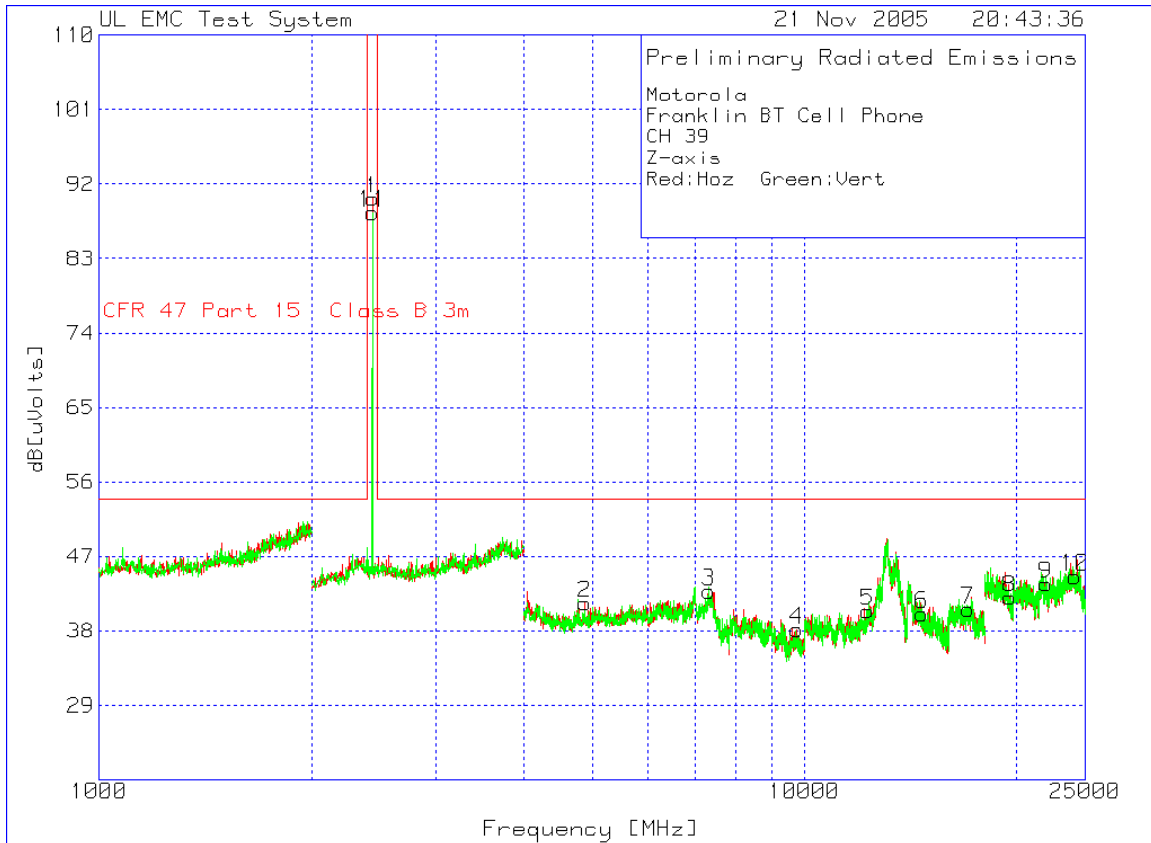


1-25 GHz Mid Channel Dual Polarization Y

Motorola
Franklin BT Cell Phone
CH 39
Y-axis
Red:Horz Green:Vert

Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uVolts]	Limit 1	Margin 1[dB]	Height [cm]	Polarity
2 - 4GHz 2000 - 4000MHz										
1	2440.882	63.27	pk	4.2	21.9	89.37	999	-909.63	101	Horz
4 - 8GHz 4000 - 8000MHz										
2	4880.881	67.86	pk	-50.5	27.7	45.06	54	-8.94	101	Horz
3	7343.343	57.12	pk	-46.4	30.8	41.52	54	-12.48	101	Horz
8 - 12GHz 8000 - 12000MHz										
4	9685.686	48.66	pk	-48.4	36.4	36.66	54	-17.34	101	Horz
12 - 18GHz 12000 - 18000MHz										
5	12208.139	45.97	pk	-46.2	39.4	39.17	54	-14.83	101	Horz
6	14669.78	40.4	pk	-40.7	39.8	39.5	54	-14.5	101	Horz
7	16987.325	40.98	pk	-40.9	40.4	40.48	54	-13.52	101	Horz
18-26.5GHz 18000 - 25000MHz										
8	19610.805	71.47	pk	-69.2	40.3	42.57	54	-11.43	101	Horz
9	21977.989	63.34	pk	-60.3	40.4	43.44	54	-10.56	101	Horz
10	24366.183	64.37	pk	-61.2	40.3	43.47	54	-10.53	101	Horz
2 - 4GHz 2000 - 4000MHz										
11	2440.882	64.7	pk	4.2	21.9	90.8	999	-908.2	101	Vert
4 - 8GHz 4000 - 8000MHz										
12	4880.881	65.38	pk	-50.5	27.7	42.58	54	-11.42	101	Vert

LIMIT 1: CFR 47 Part 15 Class B 3m
LIMIT 2: NONE



1-25 GHz Mid Channel Dual Polarization Z

Motorola

Franklin BT Cell Phone

CH 39

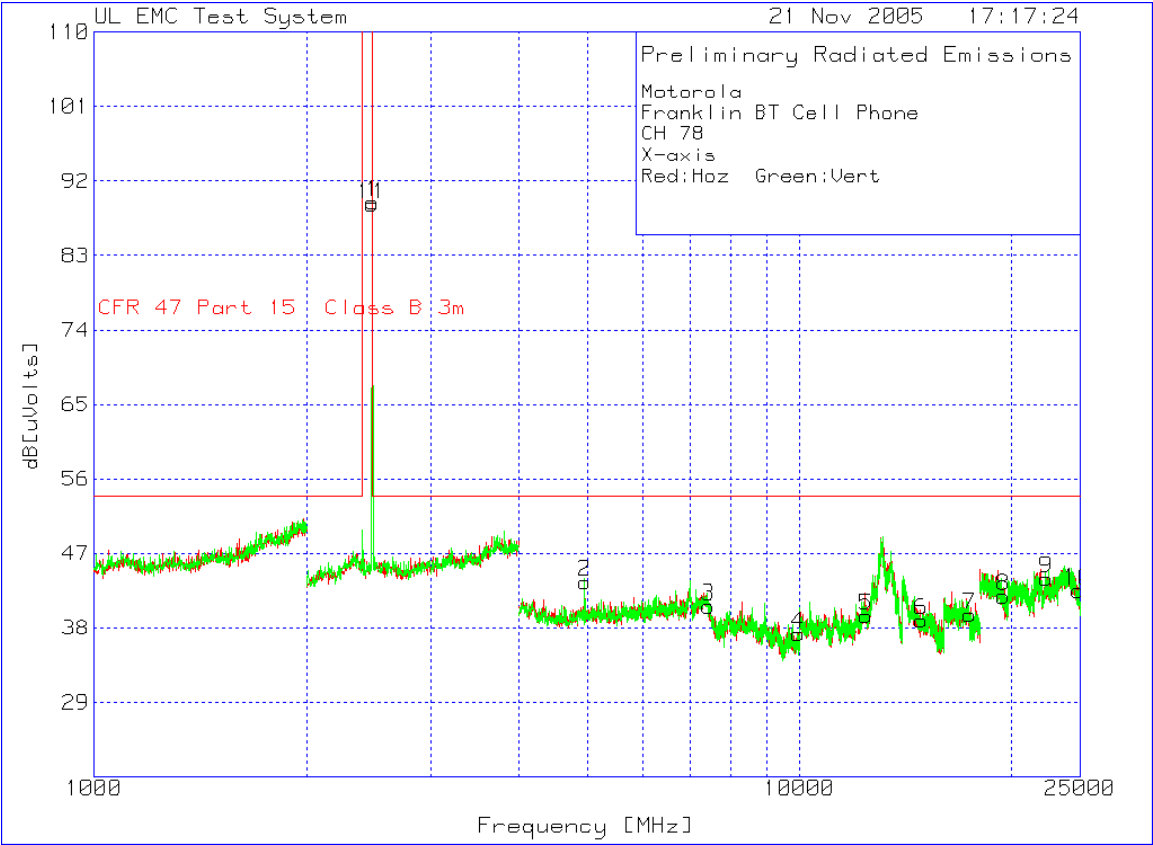
Z-axis

Red:Hoz Green:Vert

Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uVolts]	Limit 1	Margin 1[dB]	Height [cm]	Polarity
2 - 4GHz 2000 - 4000MHz										
1	2440.882	64.17 pk		4.2	21.9	90.27	999	-908.73	101	Horz
4 - 8GHz 4000 - 8000MHz										
2	4880.881	64.2 pk		-50.5	27.7	41.4	54	-12.6	101	Horz
3	7315.315	58.39 pk		-46.2	30.6	42.79	54	-11.21	101	Horz
8 - 12GHz 8000 - 12000MHz										
4	9753.754	51.09 pk		-49.3	36.4	38.19	54	-15.81	101	Horz
12 - 18GHz 12000 - 18000MHz										
5	12268.179	45.74 pk		-44.7	39.4	40.44	54	-13.56	101	Horz
6	14685.79	40.9 pk		-40.6	39.8	40.1	54	-13.9	101	Horz
7	17067.378	41.75 pk		-41.4	40.3	40.65	54	-13.35	101	Horz
18-26.5GHz 18000 - 25000MHz										
8	19558.279	71.05 pk		-69.3	40.3	42.05	54	-11.95	101	Horz
9	21991.996	63.69 pk		-60.4	40.4	43.69	54	-10.31	101	Horz
10	24170.085	63.8 pk		-59.5	40.3	44.6	54	-9.4	101	Horz
2 - 4GHz 2000 - 4000MHz										
11	2440.882	62.43 pk		4.2	21.9	88.53	999	-910.47	101	Vert

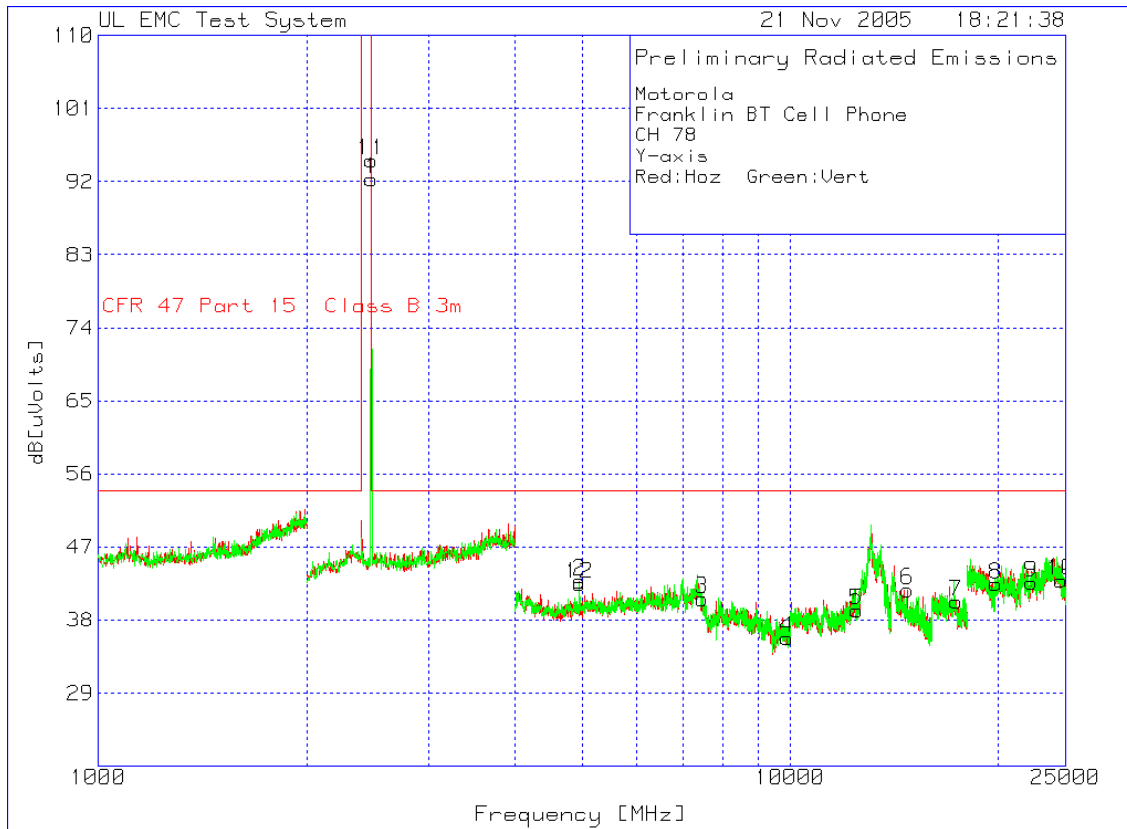
LIMIT 1: CFR 47 Part 15 Class B 3m

LIMIT 2: NONE



1-25 GHz High Channel Dual Polarization X

Motorola											
Franklin BT Cell Phone											
CH 78											
X-axis											
Red:Hoz Green:Vert											
Marker	Test	Meter	Detector	Gain/Loss	Transducer	Level	Limit 1	Margin 1[dB]	Height [cm]	Polarity	
Number	Frequency	Reading	Type	Factor	Factor	dB[uVolts]					
	[MHz]	[dB(uV)]		[dB]	[dB]						
2 - 4GHz 2000 - 4000MHz											
1	2480.962	63.3 pk		4.1	22	89.4	999	-909.6	101	Horz	
4 - 8GHz 4000 - 8000MHz											
2	4960.961	66.53 pk		-50.8	27.8	43.53	54	-10.47	101	Horz	
3	7431.431	56.73 pk		-46.8	30.7	40.63	54	-13.37	101	Horz	
8 - 12GHz 8000 - 12000MHz											
4	9961.962	49.56 pk		-48.7	36.4	37.26	54	-16.74	101	Horz	
12 - 18GHz 12000 - 18000MHz											
5	12420.28	44.48 pk		-44.4	39.4	39.48	54	-14.52	101	Horz	
6	14877.919	40.33 pk		-41.2	39.8	38.93	54	-15.07	101	Horz	
7	17427.618	40.18 pk		-40.7	40.1	39.58	54	-14.42	101	Horz	
18-26.5GHz 18000 - 25000MHz											
8	19460.23	70.54 pk		-69	40.3	41.84	54	-12.16	101	Horz	
9	22380.69	62.78 pk		-59.3	40.5	43.98	54	-10.02	101	Horz	
10	24814.407	64.03 pk		-61.8	40.3	42.53	54	-11.47	101	Horz	
2 - 4GHz 2000 - 4000MHz											
11	2476.954	63.09 pk		4.1	22	89.19	999	-909.81	101	Vert	
LIMIT 1: CFR 47 Part 15 Class B 3m											
LIMIT 2: NONE											



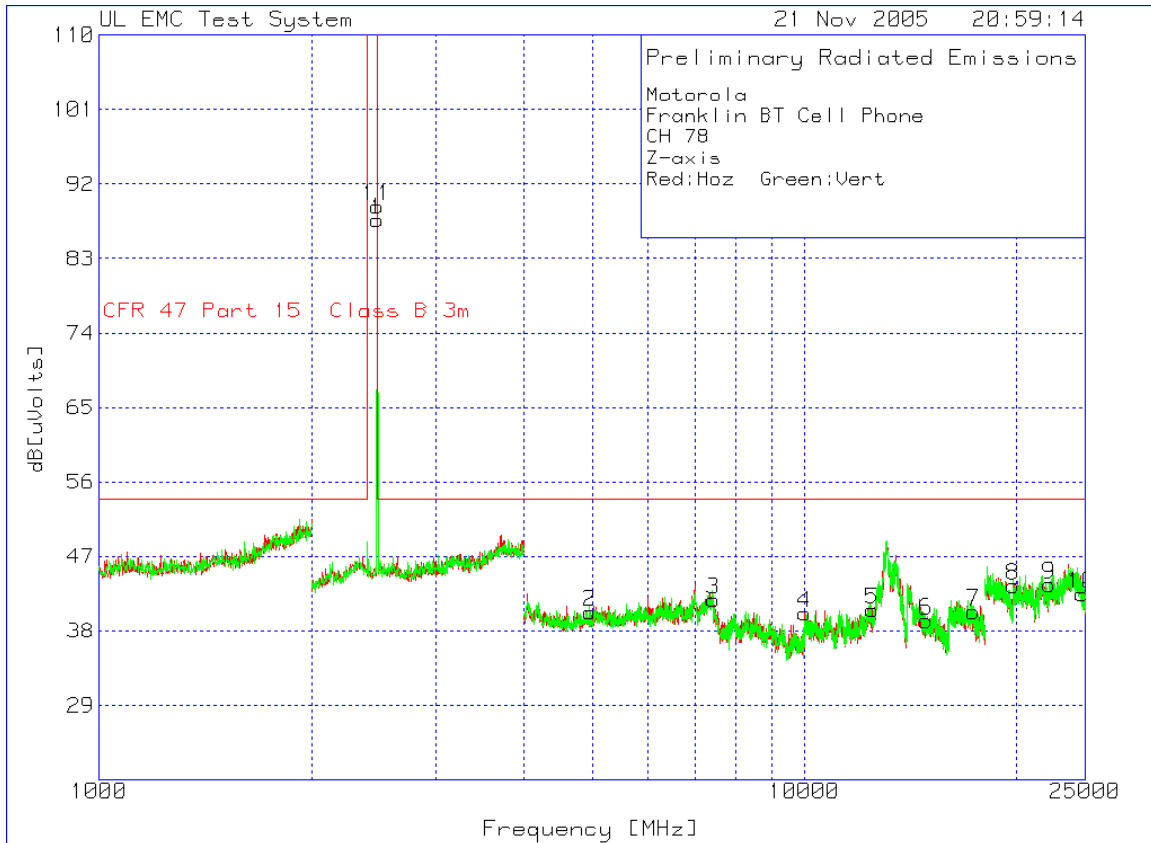
1-25 GHz High Channel Dual Polarization Y

Motorola
Franklin BT Cell Phone
CH 78
Y-axis

Red:Hoz Green:Vert

Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uVolts]	Limit 1	Margin 1[dB]	Height [cm]	Polarity
2 - 4GHz 2000 - 4000MHz										
1	2480.962	66.19 pk		4.1	22	92.29	999	-906.71	101	Horz
4 - 8GHz 4000 - 8000MHz										
2	4960.961	65.79 pk		-50.8	27.8	42.79	54	-11.21	101	Horz
3	7463.463	57.52 pk		-47.1	30.2	40.62	54	-13.38	101	Horz
8 - 12GHz 8000 - 12000MHz										
4	9893.894	49.3 pk		-49.9	36.4	35.8	54	-18.2	101	Horz
12 - 18GHz 12000 - 18000MHz										
5	12476.318	44.79 pk		-45	39.4	39.19	54	-14.81	101	Horz
6	14769.847	43.01 pk		-41.1	39.8	41.71	54	-12.29	101	Horz
7	17367.578	40.79 pk		-40.6	40.1	40.29	54	-13.71	101	Horz
18-26.5GHz 18000 - 25000MHz										
8	19820.91	71.33 pk		-69.2	40.3	42.43	54	-11.57	101	Horz
9	22307.154	61.63 pk		-59.5	40.5	42.63	54	-11.37	101	Horz
10	24625.313	64.86 pk		-62.3	40.3	42.86	54	-11.14	101	Horz
2 - 4GHz 2000 - 4000MHz										
11	2480.962	68.51 pk		4.1	22	94.61	999	-904.39	101	Vert
4 - 8GHz 4000 - 8000MHz										
12	4960.961	65.44 pk		-50.8	27.8	42.44	54	-11.56	101	Vert

LIMIT 1: CFR 47 Part 15 Class B 3m
LIMIT 2: NONE



1-25 GHz High Channel Dual Polarization Z

Motorola
Franklin BT Cell Phone
CH 78
Z-axis
Red:Hoz Green:Vert

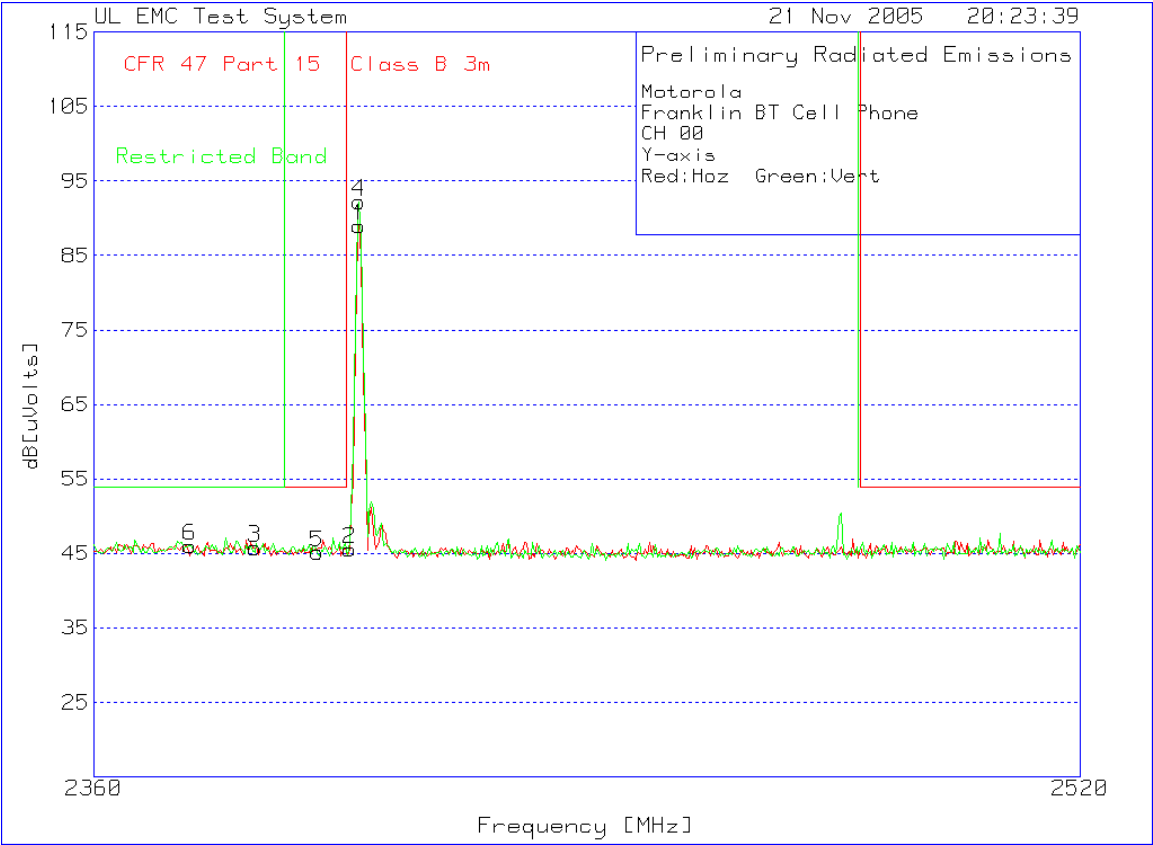
Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uVolts]	Limit 1	Margin 1[dB]	Height [cm]	Polarity
2 - 4GHz 2000 - 4000MHz										
1	2476.954	61.56 pk		4.1	22	87.66	999	-911.34	101	Horz
4 - 8GHz 4000 - 8000MHz										
2	4960.961	63.27 pk		-50.8	27.8	40.27	54	-13.73	101	Horz
3	7427.427	57.68 pk		-46.7	30.8	41.78	54	-12.22	101	Horz
8 - 12GHz 8000 - 12000MHz										
4	10010.01	51.83 pk		-48.1	36.4	40.13	54	-13.87	101	Horz
12 - 18GHz 12000 - 18000MHz										
5	12476.318	46.18 pk		-45	39.4	40.58	54	-13.42	101	Horz
6	14861.908	40.48 pk		-41	39.8	39.28	54	-14.72	101	Horz
7	17343.562	41.08 pk		-40.8	40.1	40.38	54	-13.62	101	Horz
18-26.5GHz 18000 - 25000MHz										
8	19754.377	72.81 pk		-69.6	40.3	43.51	54	-10.49	101	Horz
9	22233.617	62.93 pk		-59.8	40.5	43.63	54	-10.37	101	Horz
10	24740.87	64.16 pk		-62	40.3	42.46	54	-11.54	101	Horz
2 - 4GHz 2000 - 4000MHz										
11	2476.954	63.22 pk		4.1	22	89.32	999	-909.68	101	Vert

LIMIT 1: CFR 47 Part 15 Class B 3m
LIMIT 2: NONE

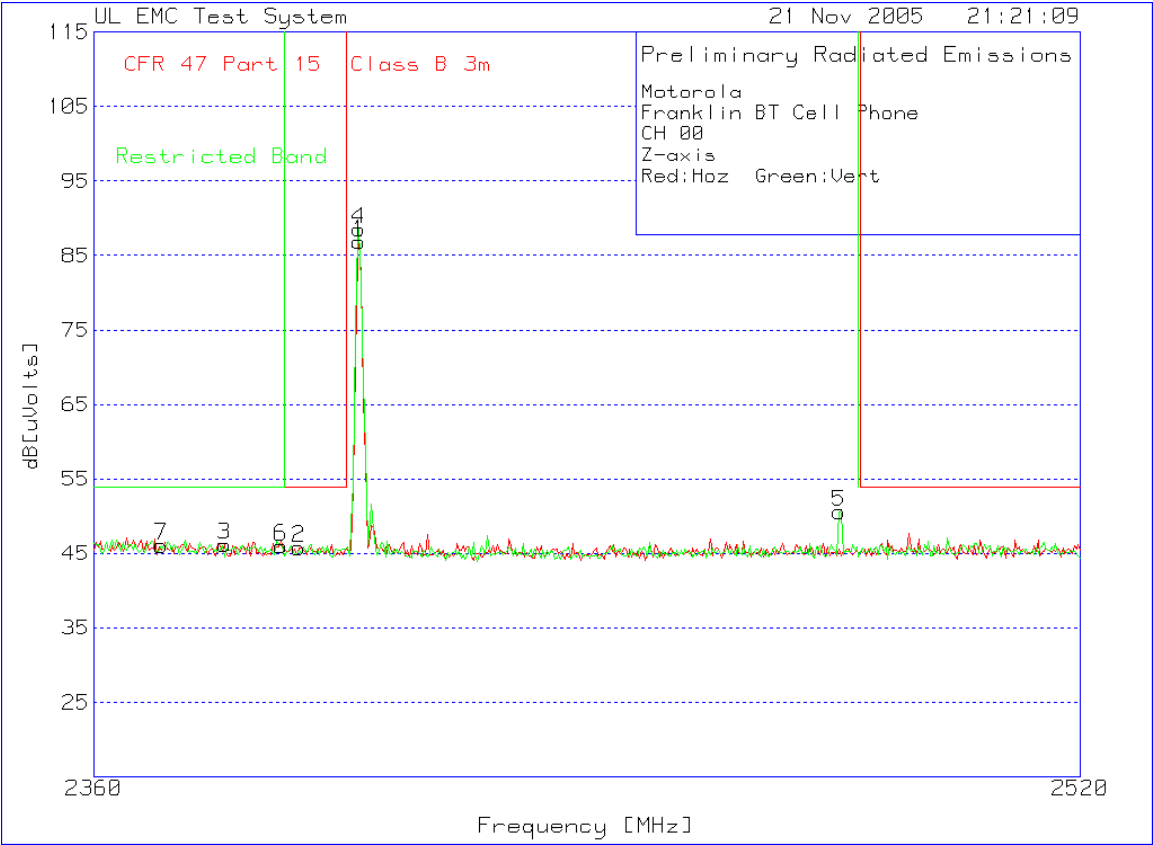


Authorized Band Emissions Low Channel Dual Polarization X

Motorola Franklin BT Cell Phone CH 00 X-axis Red:Hoz Green:Vert												
Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uVolts]	Limit 1	Margin 1[dB]	Limit 2	Margin 2[dB]	Height [cm]	Polarity
2 - 4GHz 2360 - 2520MHz												
1	2402.004	60.61	pk	4.4	21.8	86.81	999	-912.19	999	-912.19	101	Horz
2	2392.385	18.93	pk	4.4	21.8	45.13	54	-8.87	999	-953.87	101	Horz
3	2380.842	19.74	pk	4.4	21.8	45.94	54	-8.06	54	-8.06	101	Horz
2 - 4GHz 2360 - 2520MHz												
4	2402.004	59.28	pk	4.4	21.8	85.48	999	-913.52	999	-913.52	101	Vert
5	2479.92	25.13	pk	4.1	22	51.23	999	-947.77	999	-947.77	101	Vert
6	2372.505	19.53	pk	4.4	21.8	45.73	54	-8.27	54	-8.27	101	Vert
LIMIT 1: CFR 47 Part 15 Class B 3m LIMIT 2: Restricted Band												

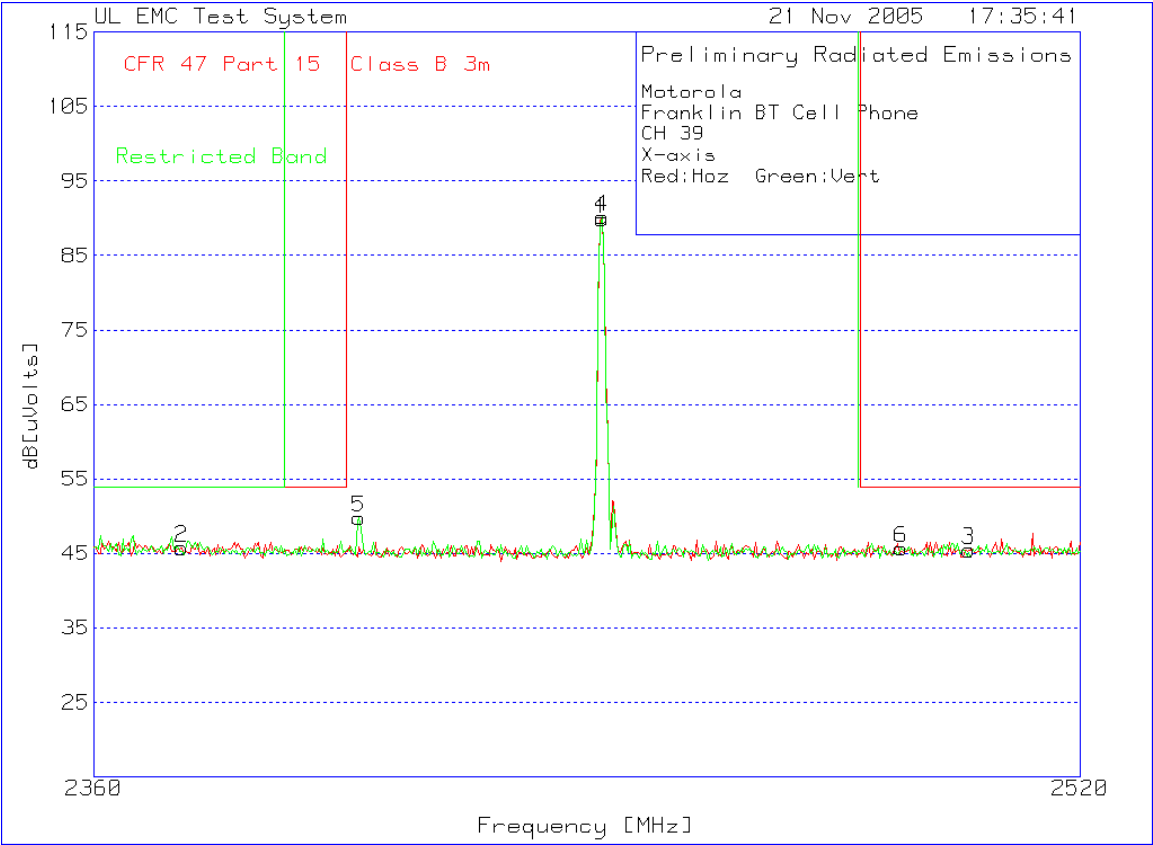


Motorola Franklin BT Cell Phone CH 00 Y-axis Red:Hoz Green:Vert												
Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uVolts]	Limit 1	Margin 1[dB]	Limit 2	Margin 2[dB]	Height [cm]	Polarity
2 - 4GHz 2360 - 2520MHz												
1	2402.004	62.79 pk		4.4	21.8	88.99	999	-910.01	999	-910.01	101	Horz
2	2400.401	19.33 pk		4.4	21.8	45.53	999	-953.47	999	-953.47	101	Horz
3	2385.331	19.58 pk		4.4	21.8	45.78	54	-8.22	54	-8.22	101	Horz
2 - 4GHz 2360 - 2520MHz												
4	2402.004	66.01 pk		4.4	21.8	92.21	999	-906.79	999	-906.79	101	Vert
5	2395.271	18.94 pk		4.4	21.8	45.14	54	-8.86	999	-953.86	101	Vert
6	2375.07	19.82 pk		4.4	21.8	46.02	54	-7.98	54	-7.98	101	Vert
LIMIT 1: CFR 47 Part 15 Class B 3m LIMIT 2: Restricted Band												



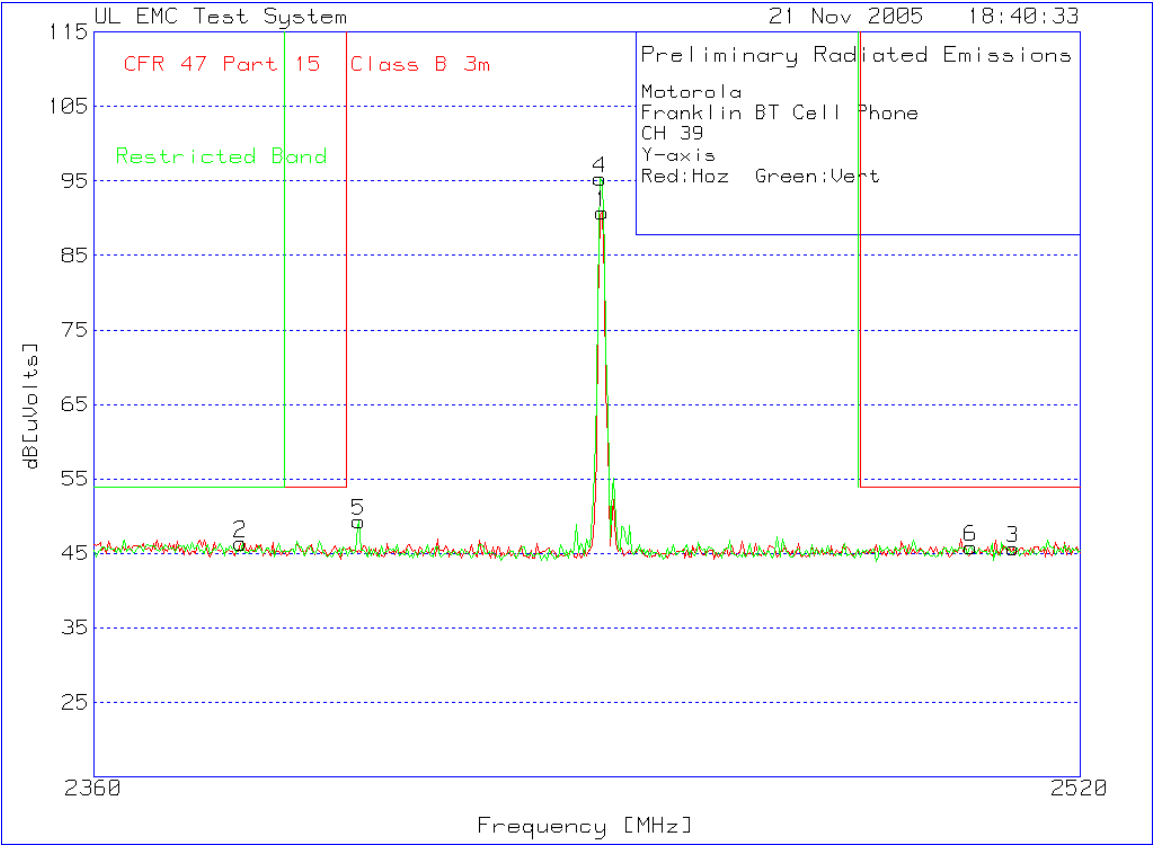
Authorized Band Emissions Low Channel Dual Polarization Z

Motorola Franklin BT Cell Phone CH 00 Z-axis Red:Hoz Green:Vert												
Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uVolts]	Limit 1	Margin 1[dB]	Limit 2	Margin 2[dB]	Height [cm]	Polarity
2 - 4GHz 2360 - 2520MHz												
1	2402.004	60.68	pk	4.4	21.8	86.88	999	-912.12	999	-912.12	101	Horz
2	2392.385	19.58	pk	4.4	21.8	45.78	54	-8.22	999	-953.22	101	Horz
3	2380.521	19.98	pk	4.4	21.8	46.18	54	-7.82	54	-7.82	101	Horz
2 - 4GHz 2360 - 2520MHz												
4	2402.004	62.35	pk	4.4	21.8	88.55	999	-910.45	999	-910.45	101	Vert
5	2479.92	24.49	pk	4.1	22	50.59	999	-948.41	999	-948.41	101	Vert
6	2389.499	19.77	pk	4.4	21.8	45.97	54	-8.03	54	-8.03	101	Vert
7	2370.581	19.9	pk	4.4	21.8	46.1	54	-7.9	54	-7.9	101	Vert
LIMIT 1: CFR 47 Part 15 Class B 3m LIMIT 2: Restricted Band												



Authorized Band Emissions Mid Channel Dual Polarization X

Motorola													
Franklin BT Cell Phone													
CH 39													
X-axis													
Red:Hoz Green:Vert													
Marker	Test	Meter	Detector	Gain/Loss	Transducer	Level	Limit 1	Margin 1[dB]	Limit 2	Margin 2[dB]	Height [cm]	Polarity	
Number	Frequency [MHz]	Reading [dB(uV)]	Type	Factor [dB]	Factor [dB]	dB[uVolts]							
2 - 4GHz 2360 - 2520MHz													
1	2441.122	63.76	pk	4.2	21.9	89.86	999	-909.14	999	-909.14	101	Horz	
2	2373.788	19.56	pk	4.4	21.8	45.76	54	-8.24	54	-8.24	101	Horz	
3	2501.403	19.29	pk	4.1	22.1	45.49	54	-8.51	0	45.49	101	Horz	
2 - 4GHz 2360 - 2520MHz													
4	2441.122	64.07	pk	4.2	21.9	90.17	999	-908.83	999	-908.83	101	Vert	
5	2402.004	23.57	pk	4.4	21.8	49.77	999	-949.23	999	-949.23	101	Vert	
6	2490.18	19.5	pk	4.1	22.1	45.7	54	-8.3	0	45.7	101	Vert	
LIMIT 1: CFR 47 Part 15 Class B 3m													
LIMIT 2: Restricted Band													



Authorized Band Emissions Mid Channel Dual Polarization Y

Motorola													
Franklin BT Cell Phone													
CH 39													
Y-axis													
Red:Hoz Green:Vert													
Marker	Test	Meter	Detector	Gain/Loss	Transducer	Level	Limit 1	Margin 1[dB]	Limit 2	Margin 2[dB]	Height [cm]	Polarity	
Number	Frequency	Reading	Type	Factor	Factor	dB[uVolts]							
	[MHz]	[dB(uV)]		[dB]	[dB]								
2 - 4GHz 2360 - 2520MHz													
1	2441.122	64.66	pk	4.2	21.9	90.76	999	-908.24	999	-908.24	101	Horz	
2	2383.086	20.16	pk	4.4	21.8	46.36	54	-7.64	54	-7.64	101	Horz	
3	2508.778	19.53	pk	4.1	22.1	45.73	54	-8.27	0	45.73	101	Horz	
2 - 4GHz 2360 - 2520MHz													
4	2440.802	69.24	pk	4.2	21.9	95.34	999	-903.66	999	-903.66	101	Vert	
5	2402.004	23.14	pk	4.4	21.8	49.34	999	-949.66	999	-949.66	101	Vert	
6	2501.723	19.64	pk	4.1	22.1	45.84	54	-8.16	0	45.84	101	Vert	
LIMIT 1: CFR 47 Part 15 Class B 3m													
LIMIT 2: Restricted Band													



Authorized Band Emissions Mid Channel Dual Polarization Z

Motorola Franklin BT Cell Phone CH 39 Z-axis Red:Hoz Green:Vert												
Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uVolts]	Limit 1	Margin 1[dB]	Limit 2	Margin 2[dB]	Height [cm]	Polarity
2 - 4GHz 2360 - 2520MHz												
1	2441.122	64.09 pk		4.2	21.9	90.19	999	-908.81	999	-908.81	101	Horz
2	2503.327	20.15 pk		4.1	22.1	46.35	54	-7.65	0	46.35	101	Horz
3	2381.162	20.27 pk		4.4	21.8	46.47	54	-7.53	54	-7.53	101	Horz
2 - 4GHz 2360 - 2520MHz												
4	2441.122	66.2 pk		4.2	21.9	92.3	999	-906.7	999	-906.7	101	Vert
5	2488.898	20.41 pk		4.1	22.1	46.61	54	-7.39	0	46.61	101	Vert
6	2402.004	23.13 pk		4.4	21.8	49.33	999	-949.67	999	-949.67	101	Vert
7	2393.347	20.55 pk		4.4	21.8	46.75	54	-7.25	999	-952.25	101	Vert
LIMIT 1: CFR 47 Part 15 Class B 3m LIMIT 2: Restricted Band												



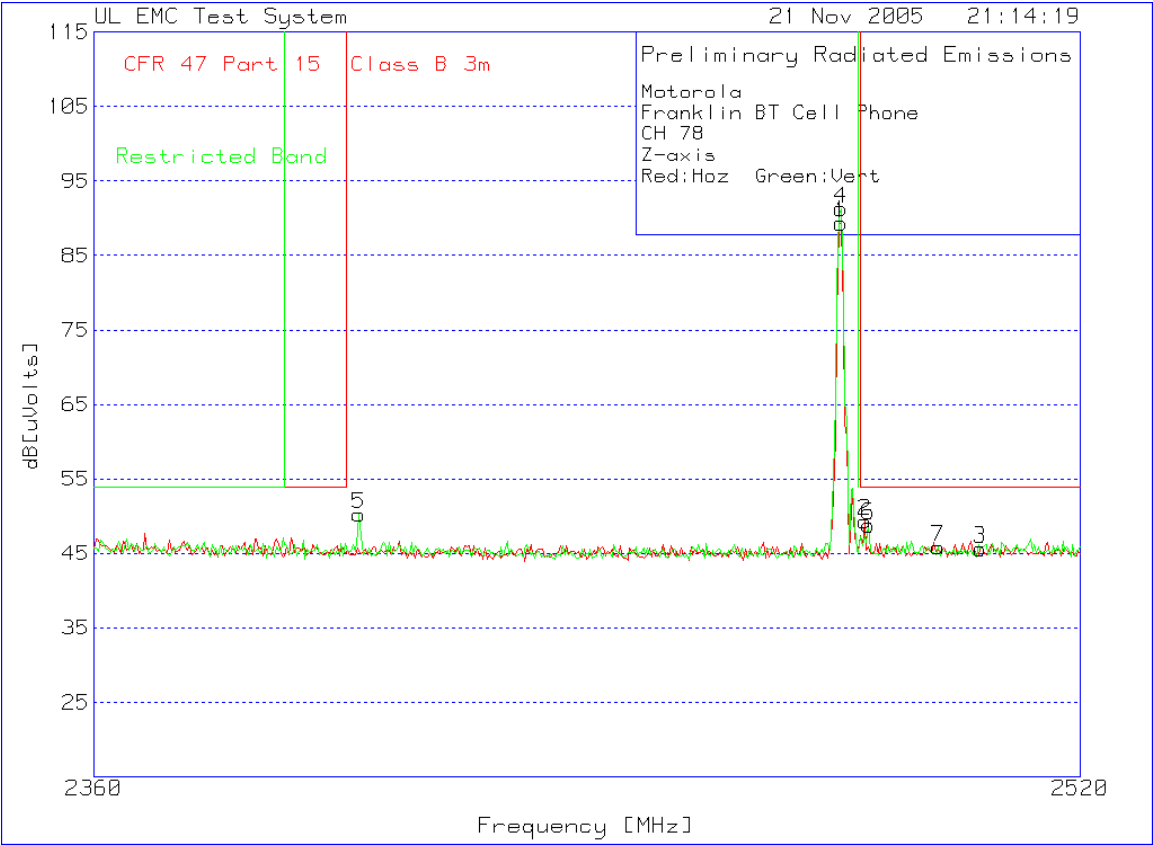
Authorized Band Emissions High Channel Dual Polarization X

Motorola Franklin BT Cell Phone CH 78 X-axis Red:Hoz Green:Vert												
Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uVolts]	Limit 1	Margin 1[dB]	Limit 2	Margin 2[dB]	Height [cm]	Polarity
2 - 4GHz 2360 - 2520MHz												
1	2480.24	63.6 pk		4.1	22	89.7	999	-909.3	999	-909.3	101	Horz
2	2496.593	20.08 pk		4.1	22.1	46.28	54	-7.72	0	46.28	101	Horz
3	2509.419	19.79 pk		4.1	22.1	45.99	54	-8.01	0	45.99	101	Horz
2 - 4GHz 2360 - 2520MHz												
4	2479.92	62.82 pk		4.1	22	88.92	999	-910.08	999	-910.08	101	Vert
5	2402.004	23.78 pk		4.4	21.8	49.98	999	-949.02	999	-949.02	101	Vert
6	2502.365	20.18 pk		4.1	22.1	46.38	54	-7.62	0	46.38	101	Vert
LIMIT 1: CFR 47 Part 15 Class B 3m LIMIT 2: Restricted Band												



Authorized Band Emissions High Channel Dual Polarization Y

Motorola													
Franklin BT Cell Phone													
CH 78													
Y-axis													
Red:Hoz Green:Vert													
Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uVolts]	Limit 1	Margin 1[dB]	Limit 2	Margin 2[dB]	Height [cm]	Polarity	
2 - 4GHz 2360 - 2520MHz													
1	2480.24	61.64	pk	4.1	22	87.74	999	-911.26	999	-911.26	101	Horz	
2	2495.311	20.15	pk	4.1	22.1	46.35	54	-7.65	0	46.35	101	Horz	
3	2507.174	19.59	pk	4.1	22.1	45.79	54	-8.21	0	45.79	101	Horz	
2 - 4GHz 2360 - 2520MHz													
4	2480.24	68.47	pk	4.1	22	94.57	999	-904.43	999	-904.43	101	Vert	
5	2402.004	23.58	pk	4.4	21.8	49.78	999	-949.22	999	-949.22	101	Vert	
6	2482.164	30.8	pk	4.1	22	56.9	999	-942.1	999	-942.1	101	Vert	
7	2483.447	24.05	pk	4.1	22.1	50.25	999	-948.75	0	50.25	101	Vert	
8	2484.729	23.06	pk	4.1	22.1	49.26	54	-4.74	0	49.26	101	Vert	
LIMIT 1: CFR 47 Part 15 Class B 3m													
LIMIT 2: Restricted Band													



Authorized Band Emissions High Channel Dual Polarization Z

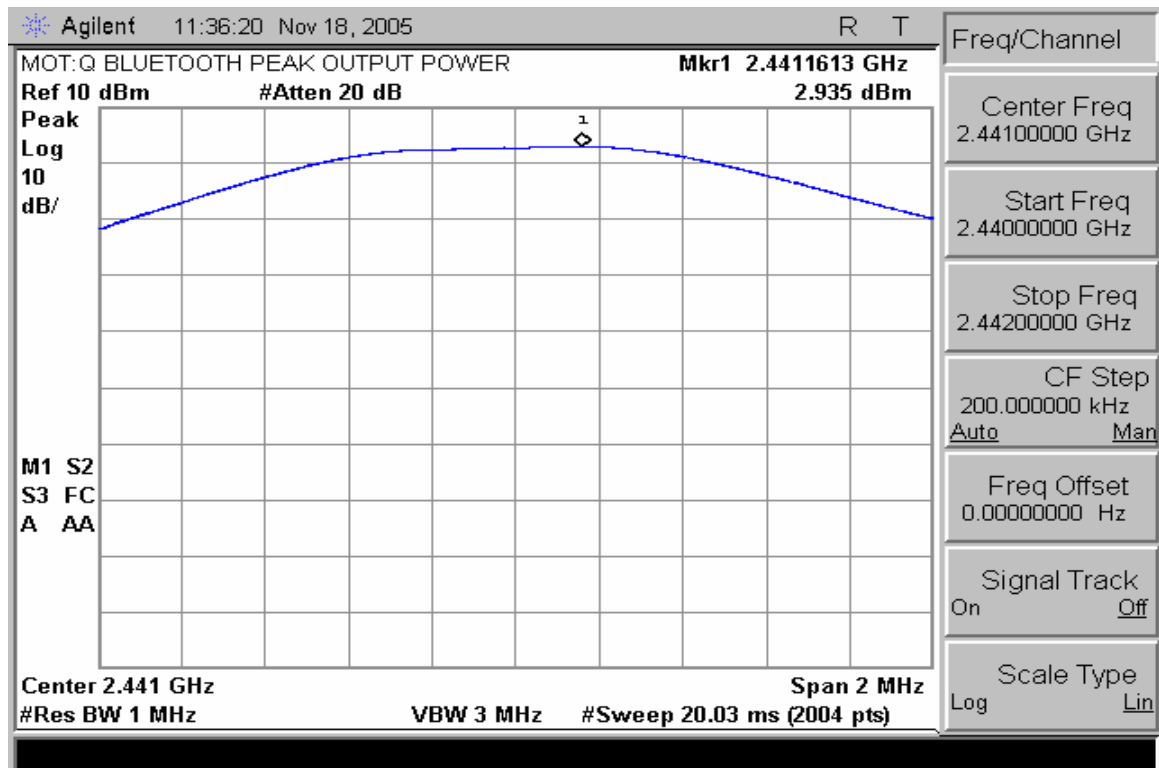
Motorola Franklin BT Cell Phone CH 78 Z-axis Red:Hoz Green:Vert												
Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uVolts]	Limit 1	Margin 1[dB]	Limit 2	Margin 2[dB]	Height [cm]	Polarity
2 - 4GHz 2360 - 2520MHz												
1	2480.24	63.22 pk		4.1	22	89.32	999	-909.68	999	-909.68	101	Horz
2	2484.088	23.12 pk		4.1	22.1	49.32	54	-4.68	0	49.32	101	Horz
3	2503.327	19.43 pk		4.1	22.1	45.63	54	-8.37	0	45.63	101	Horz
2 - 4GHz 2360 - 2520MHz												
4	2480.24	65.18 pk		4.1	22	91.28	999	-907.72	999	-907.72	101	Vert
5	2402.004	24.06 pk		4.4	21.8	50.26	999	-948.74	999	-948.74	101	Vert
6	2484.729	22.61 pk		4.1	22.1	48.81	54	-5.19	0	48.81	101	Vert
7	2496.273	19.66 pk		4.1	22.1	45.86	54	-8.14	0	45.86	101	Vert
LIMIT 1: CFR 47 Part 15 Class B 3m LIMIT 2: Restricted Band												

CFR 47 Part 15.247

Measurement Procedure

The RF output port of the Equipment-Under-Test is directly coupled to the input of the EMC analyzer through a specialized RF connector and a 10dB passive attenuator. A fully charged battery was used for the supply voltage.

Measurement Results



Peak Output Power

BAND-EDGE COMPLIANCE OF RF CONDUCTED EMISSIONS

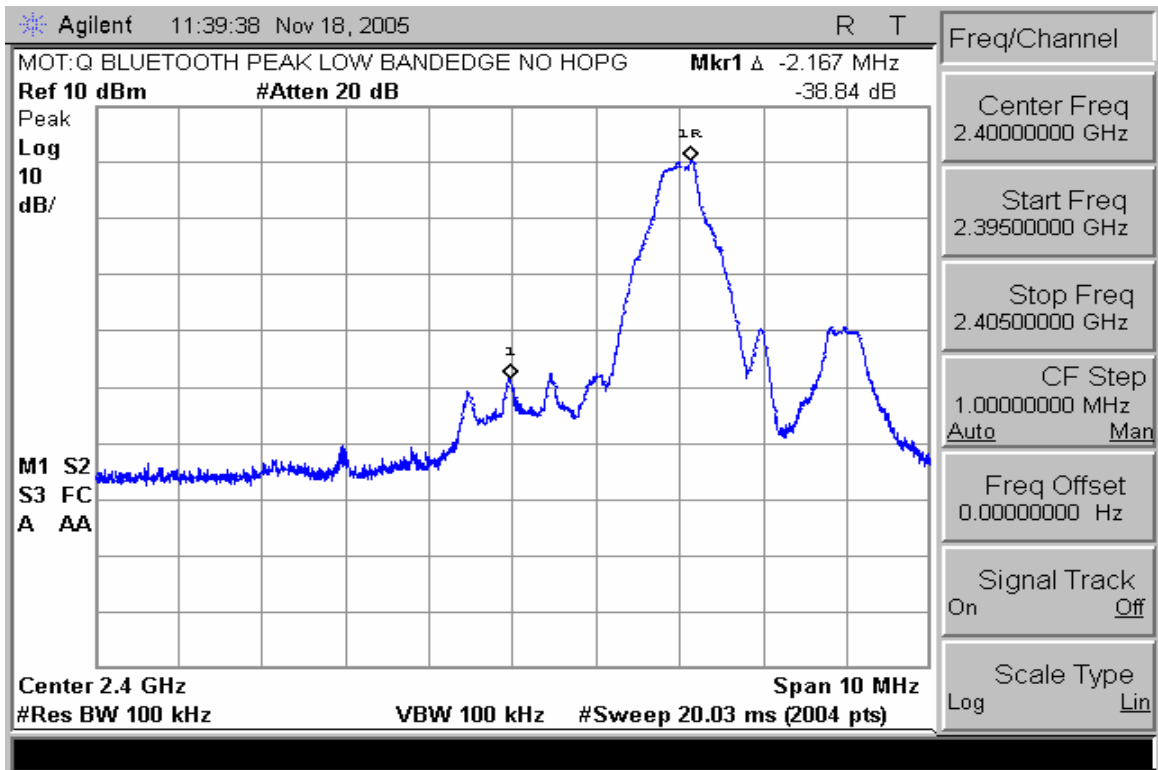
CFR 47 Part 15.247

Measurement Procedure

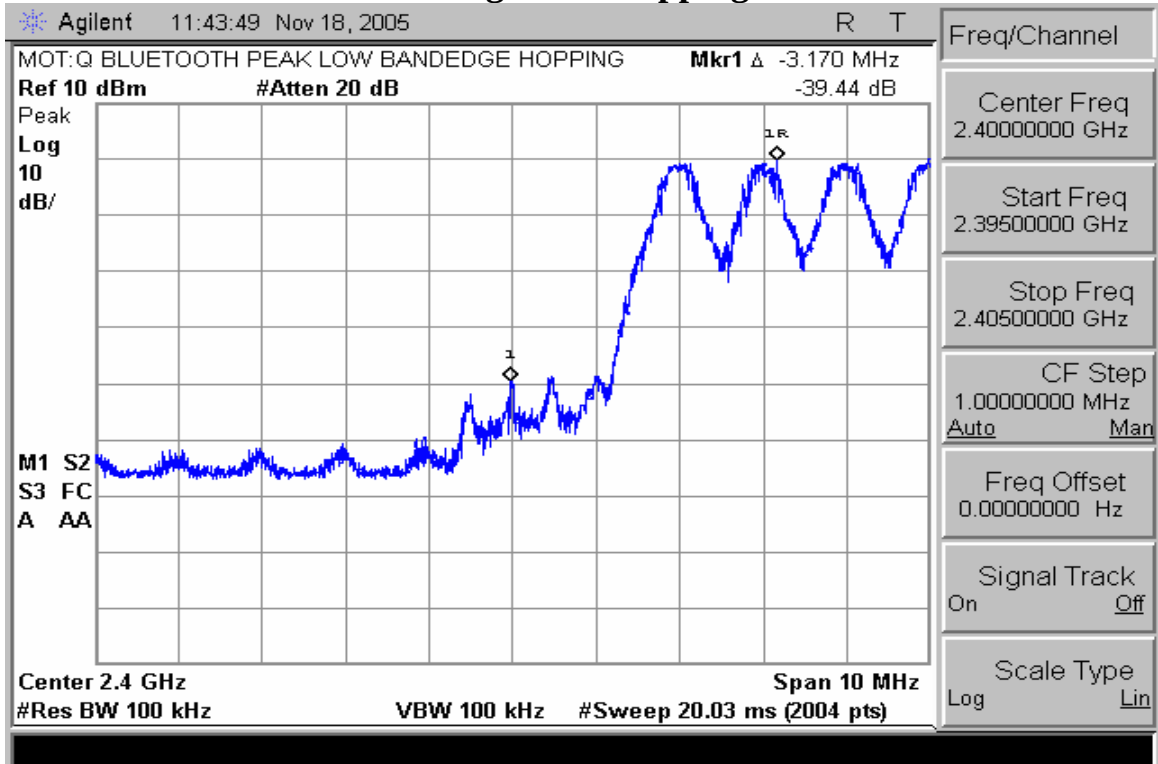
The RF output port of the Equipment-Under-Test is directly coupled to the input of the EMC analyzer through a specialized RF connector and a 10dB passive attenuator. A fully charged battery was used for the supply voltage.

Measurement Results

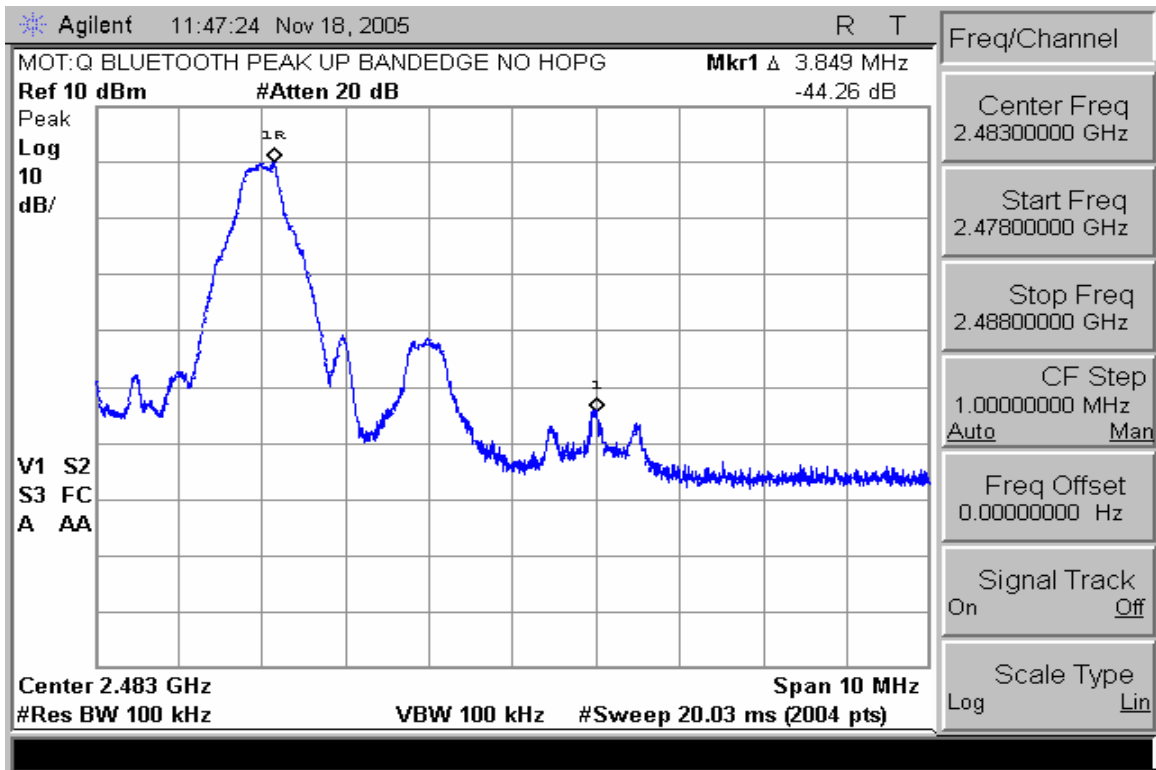
See Attached:



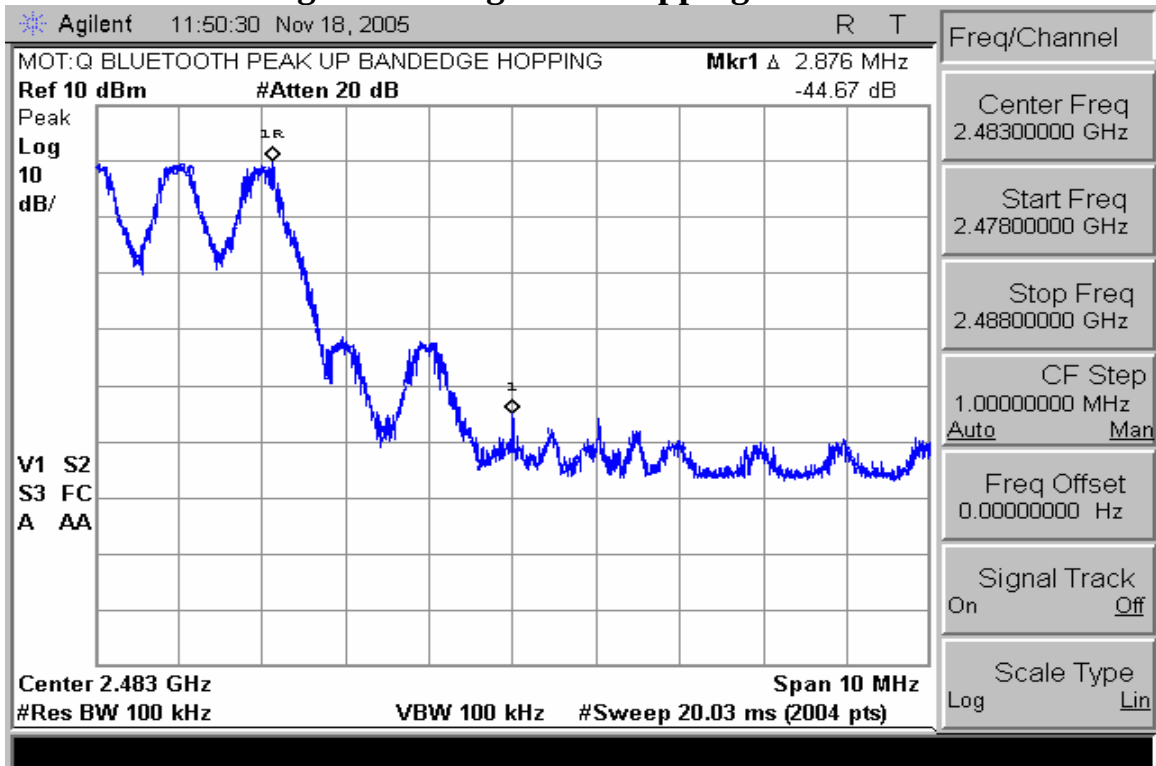
Low Band Edge with Hopping Disabled



Low Band Edge with Hopping Enabled



High Band Edge with Hopping Disabled



High Band Edge with Hopping Enabled

SPURIOUS RF CONDUCTED EMISSIONS

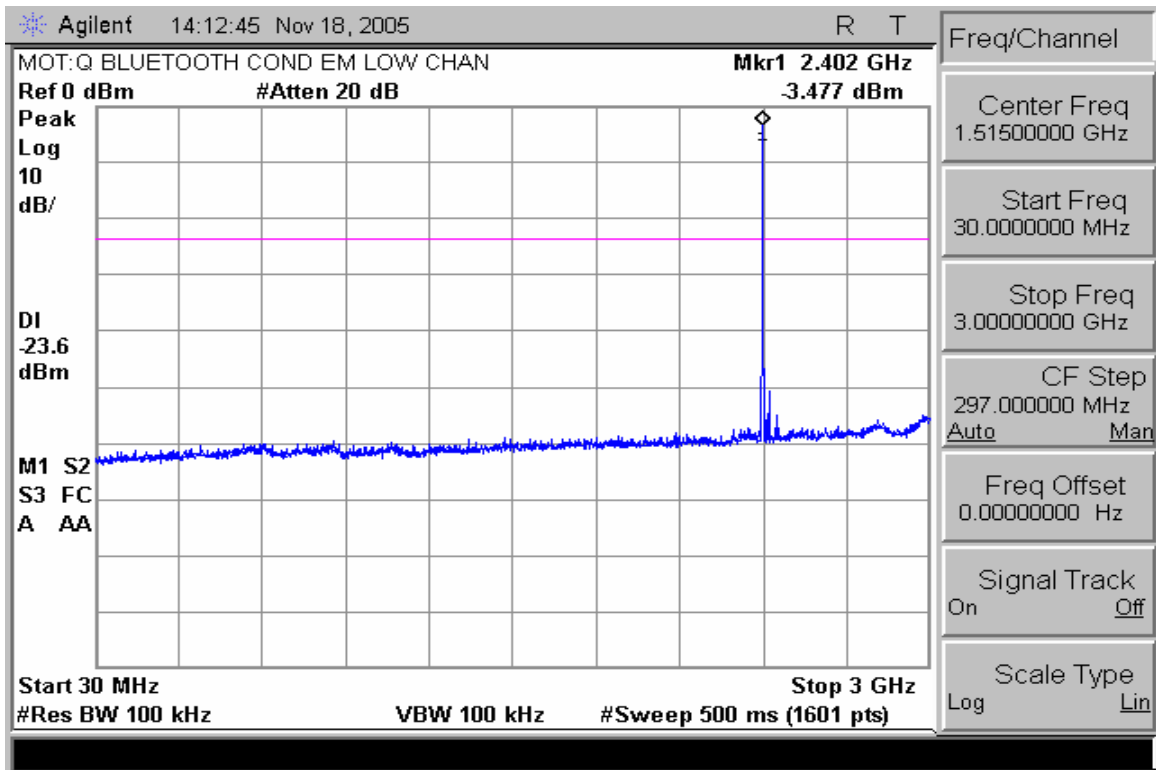
CFR 47 Part 15.247

Measurement Procedure

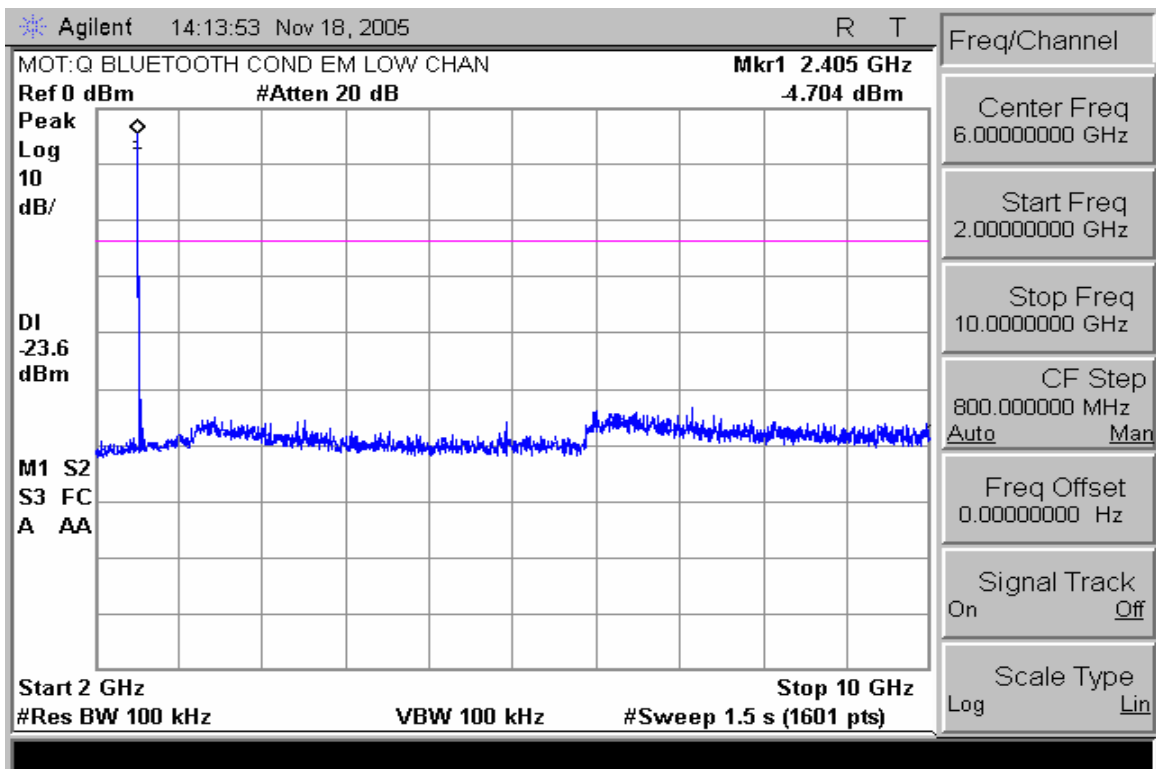
The RF output port of the Equipment-Under-Test is directly coupled to the input of the EMC analyzer through a specialized RF connector and a 10dB passive attenuator. A fully charged battery was used for the supply voltage.

Measurement Results

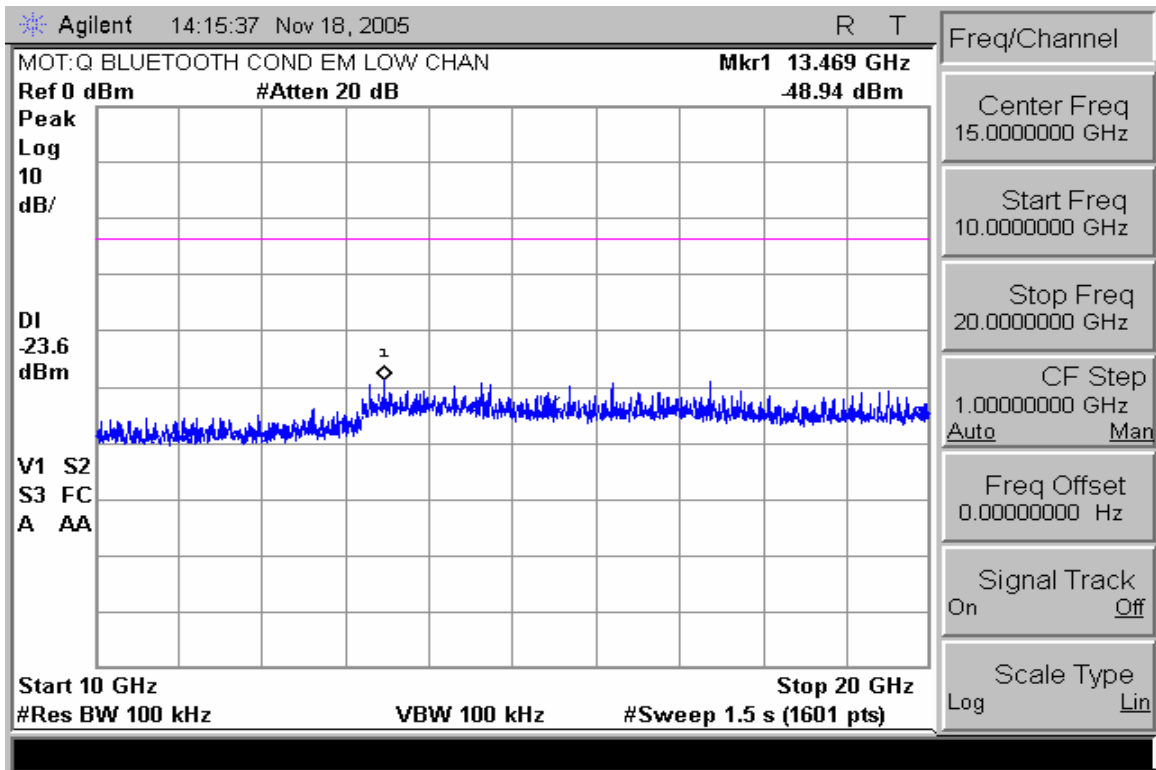
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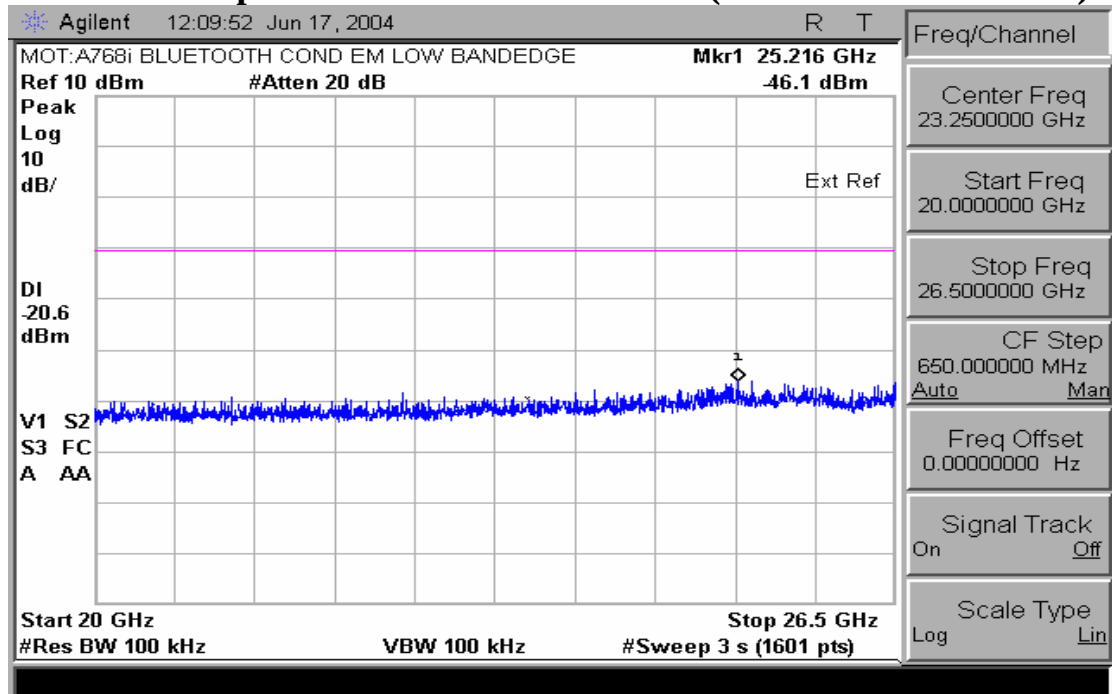
Conducted Spurious Emissions 30-3000MHz (Low Channel Enabled)



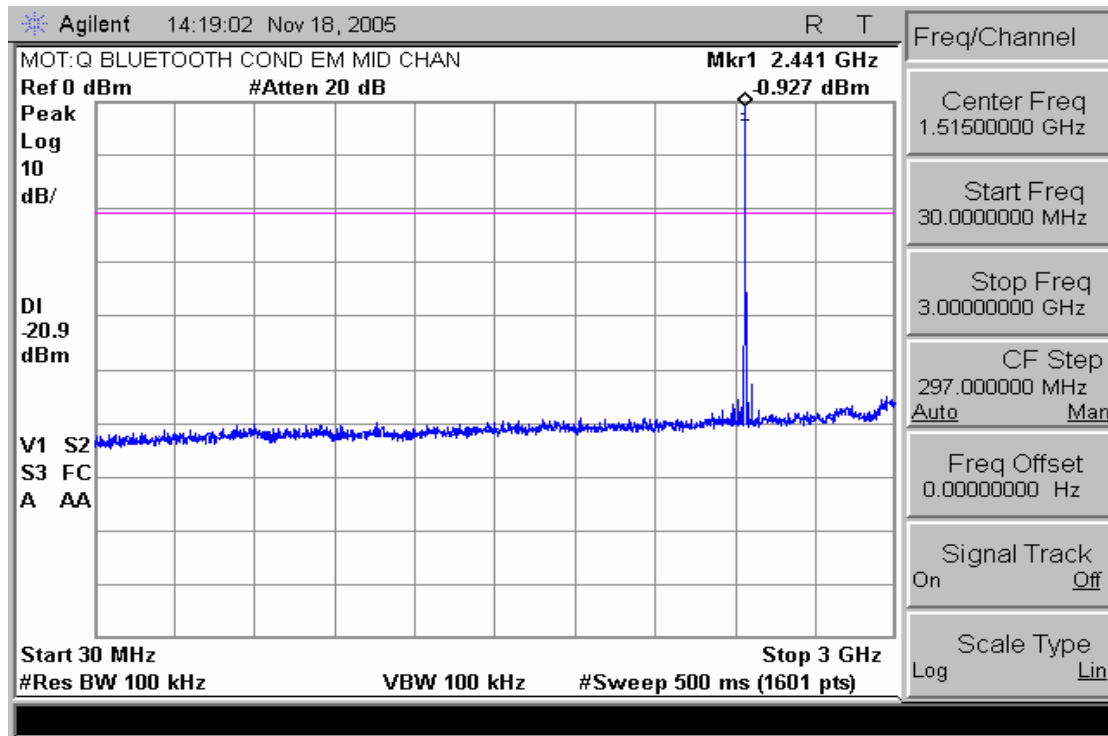
Conducted Spurious Emissions 2-10GHz (Low Channel Enabled)



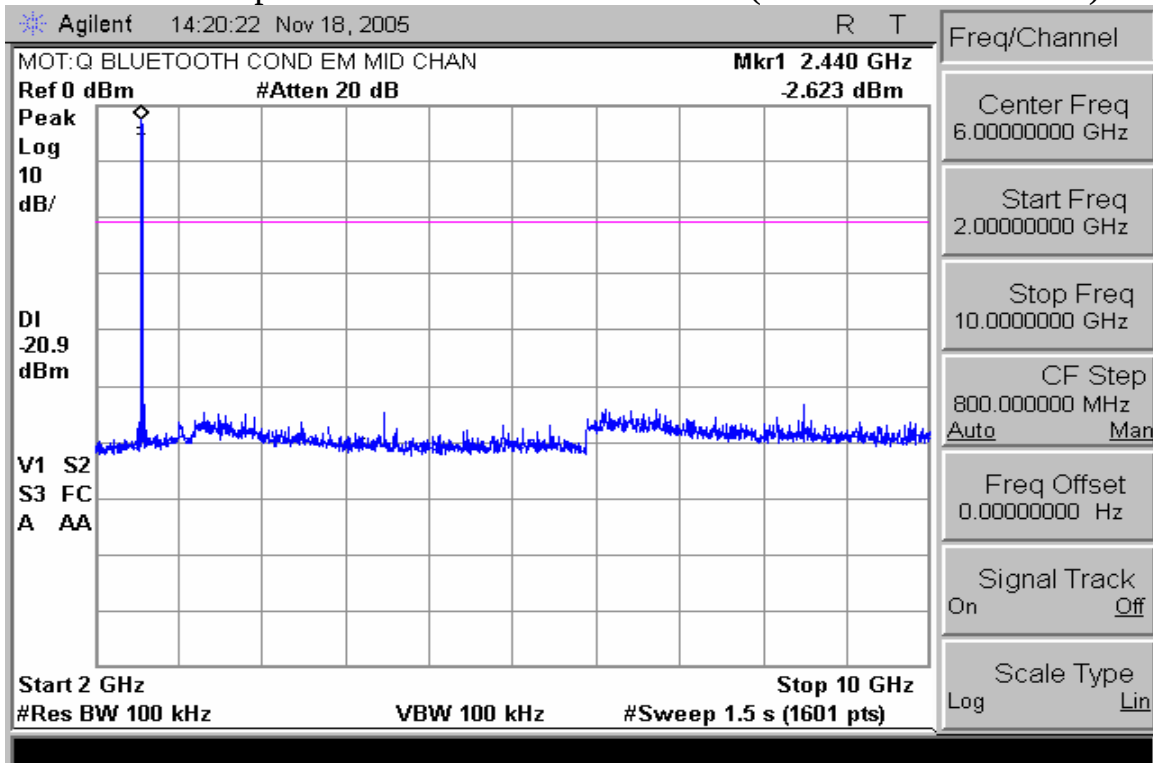
Conducted Spurious Emissions 10-20GHz (Low Channel Enabled)



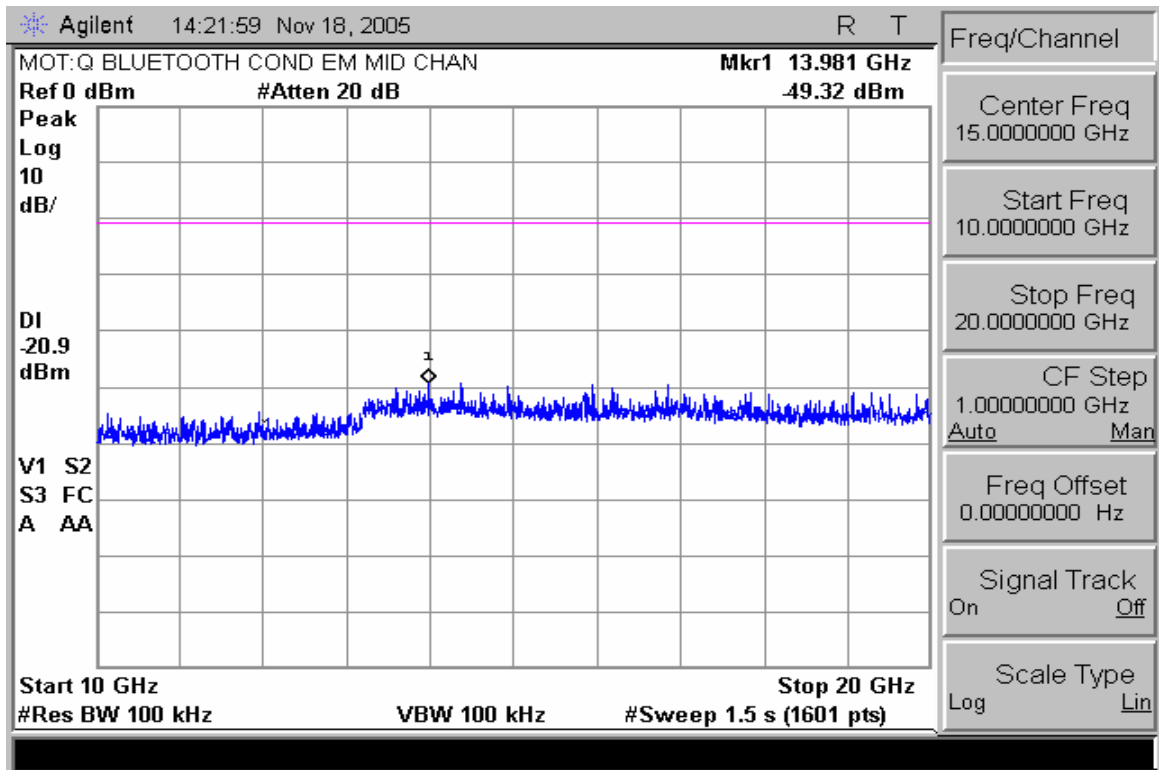
Conducted Spurious Emissions 20-26.5GHz (Low Channel Enabled)



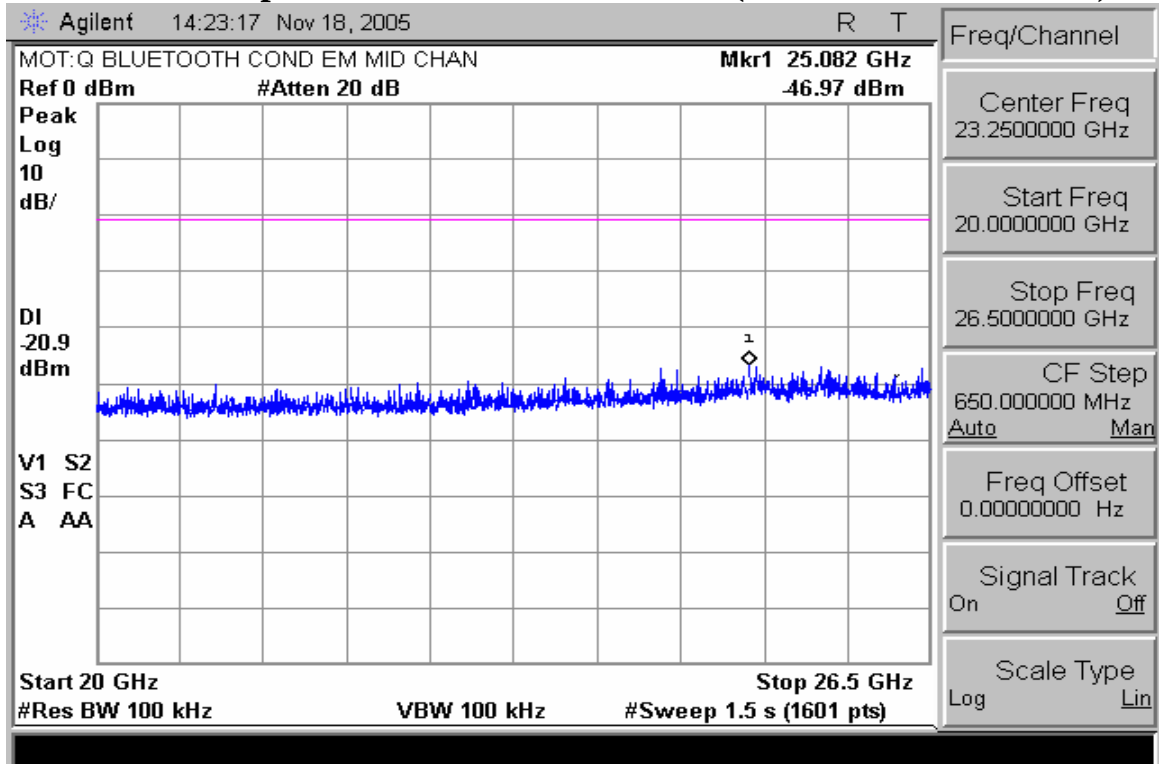
Conducted Spurious Emissions 30-3000MHz (Mid Channel Enabled)



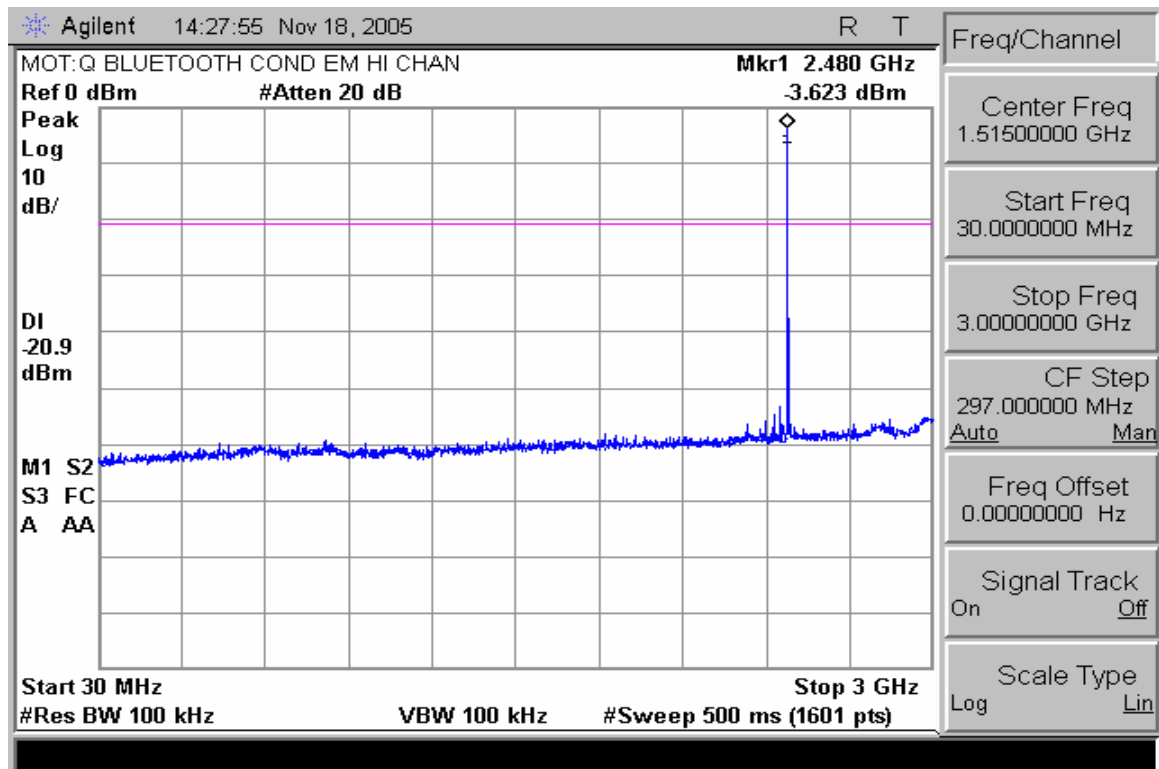
Conducted Spurious Emissions 2-10GHz (Mid Channel Enabled)



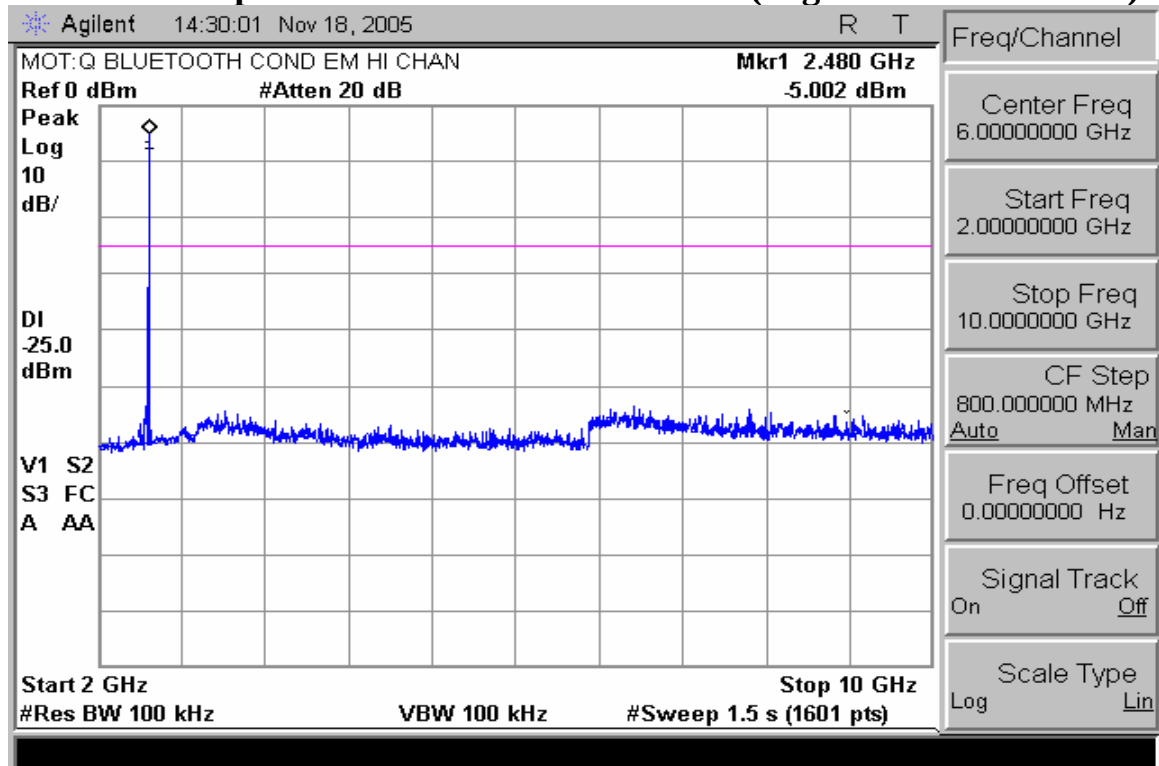
Conducted Spurious Emissions 10-20GHz (Mid Channel Enabled)



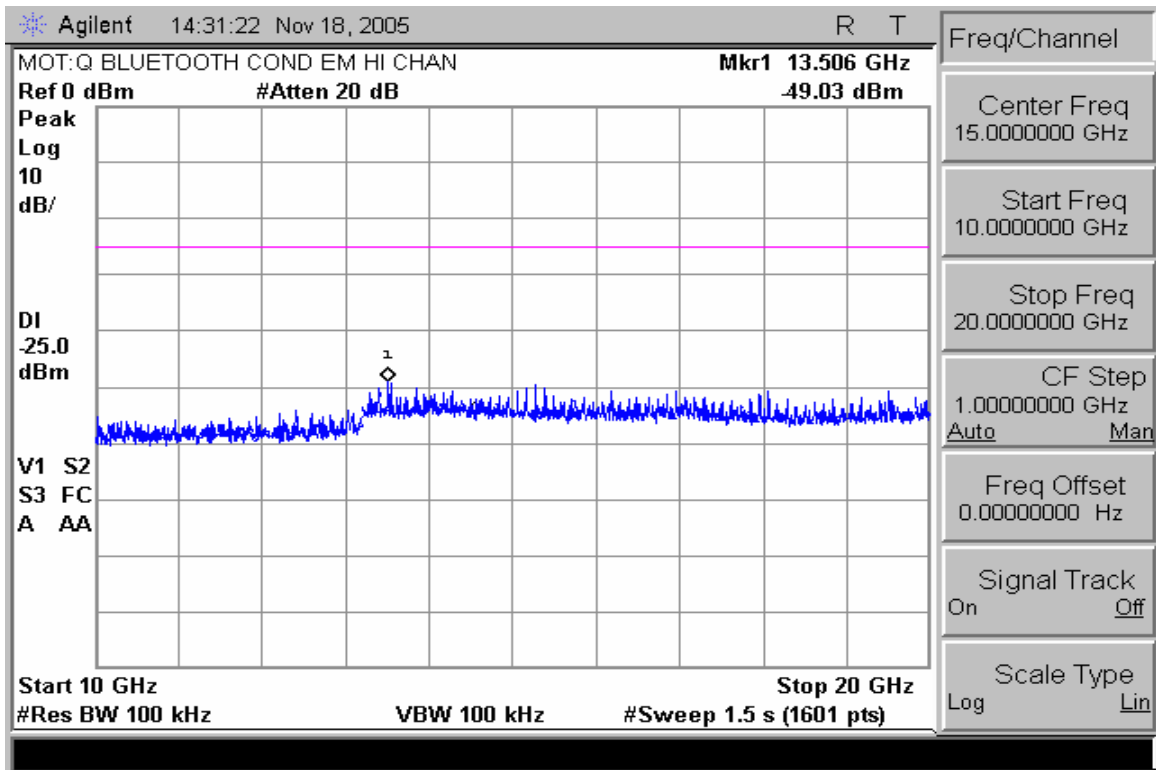
Conducted Spurious Emissions 20-26.5GHz (Mid Chan Enabled)



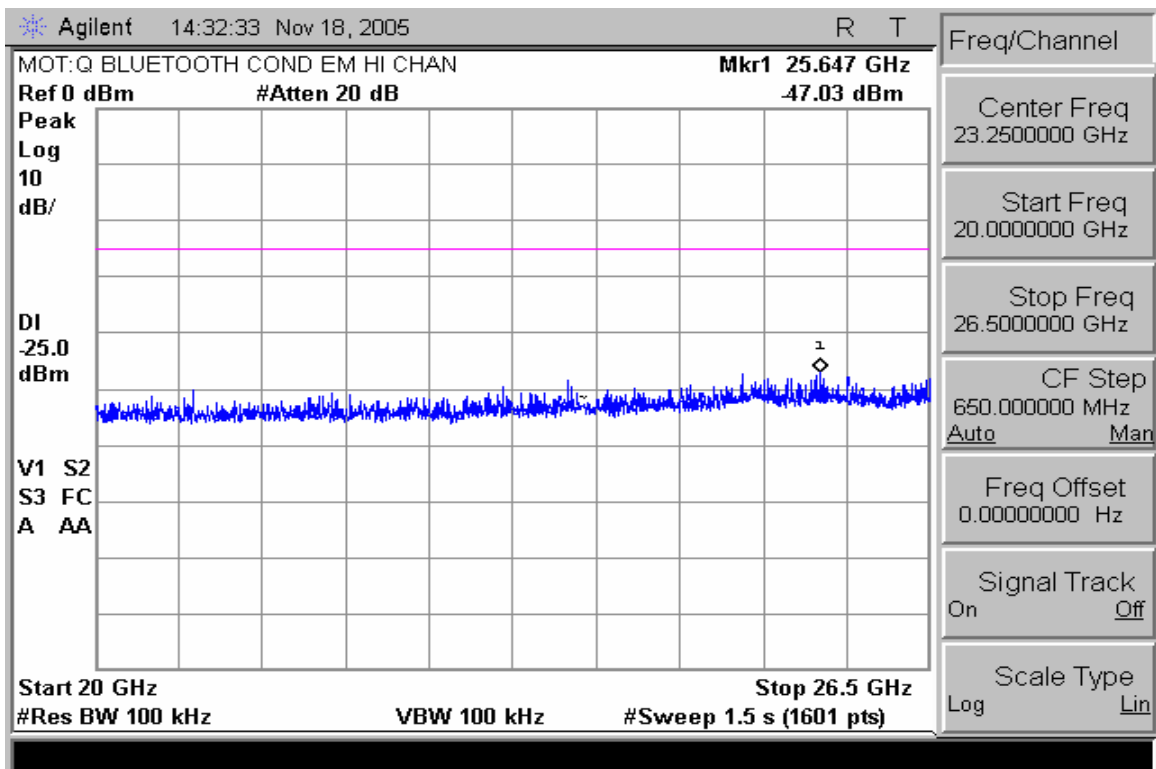
Conducted Spurious Emissions 30-3000MHz (High Channel Enabled)



Conducted Spurious Emissions 2-10GHz (High Channel Enabled)



Conducted Spurious Emissions 10-20GHz (High Channel Enabled)



Conducted Spurious Emissions 20-26.5GHz (High Chan Enabled)

AC LINE CONDUCTED

CFR 47 Part 15.207

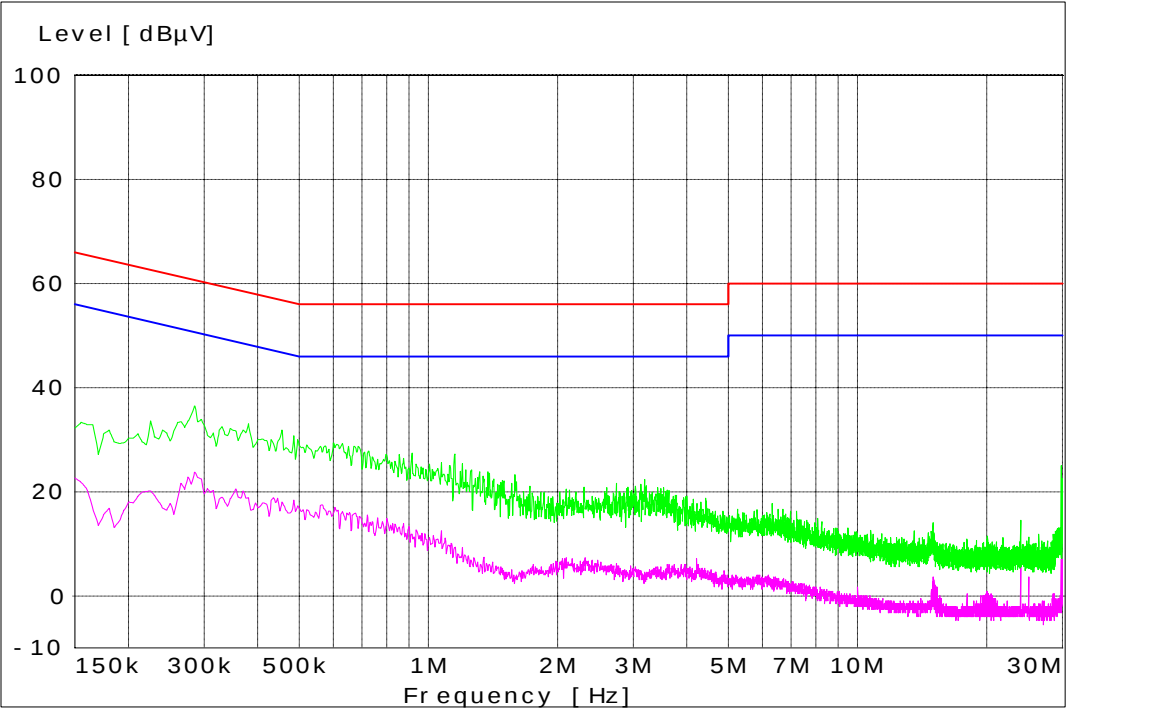
Measurement Procedure

Measured levels of ac powerline conducted emission shall be the radio-noise voltage from the line probe or across the 50 Ω LISN port, where permitted, terminated into a 50 Ω noise meter, or where permitted or required, the radio-noise current on the powerline sensed by a current probe.

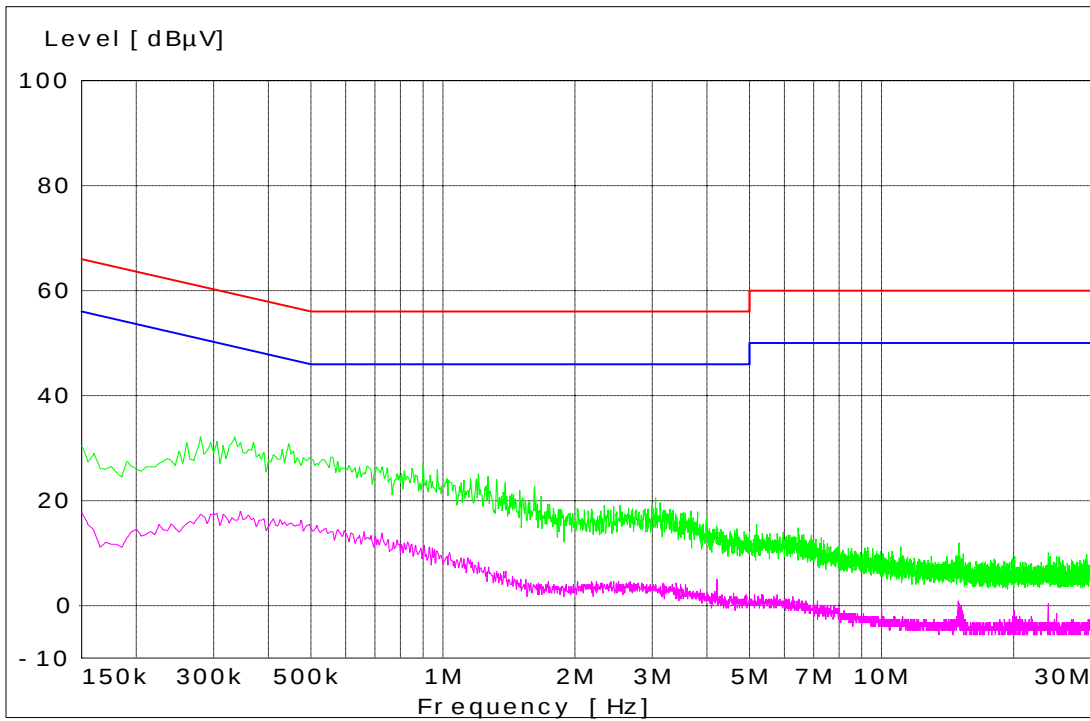
All radio-noise voltage and current measurements shall be made on each current-carrying conductor at the plug end of the EUT power cord or calibrated extension cord by the use of mating plugs and receptacles on the EUT and LISN. Equipment shall be tested with power cords that are normally supplied using an LISN, the 50 Ω measuring port is terminated by a 50 Ω radio-noise meter or a 50 Ω resistive load. All other ports are terminated in 50 Ω .

Measurement Results

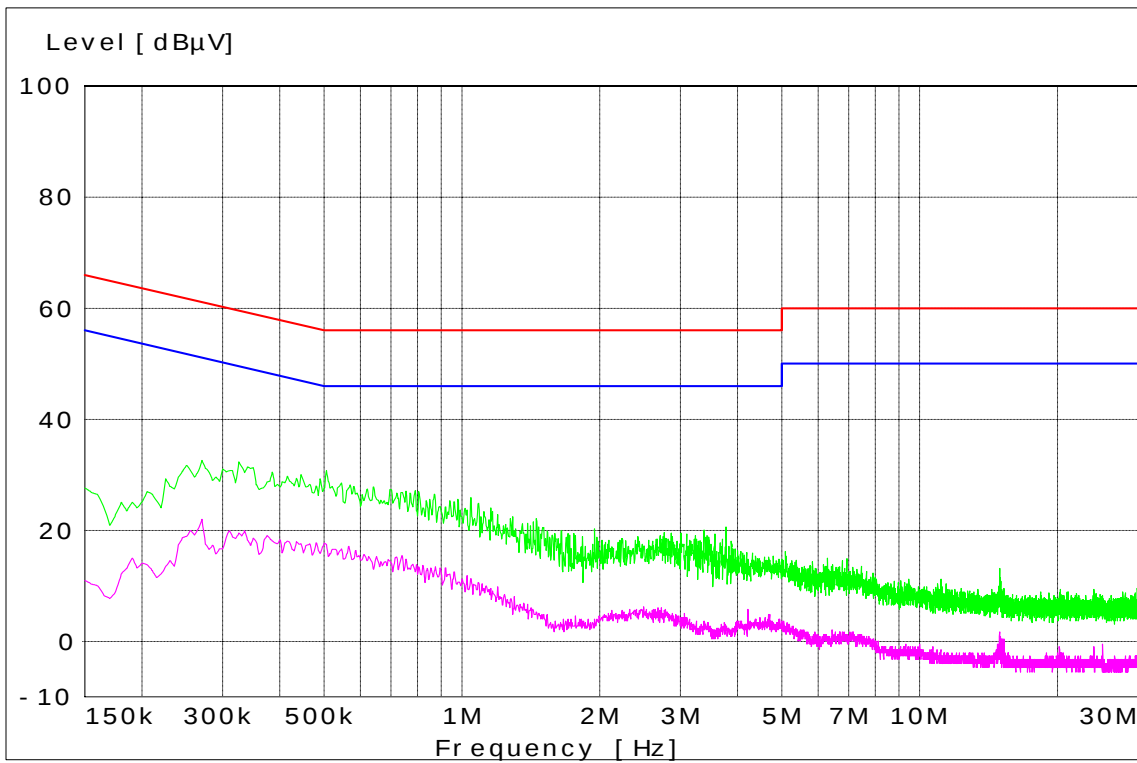
See attached:



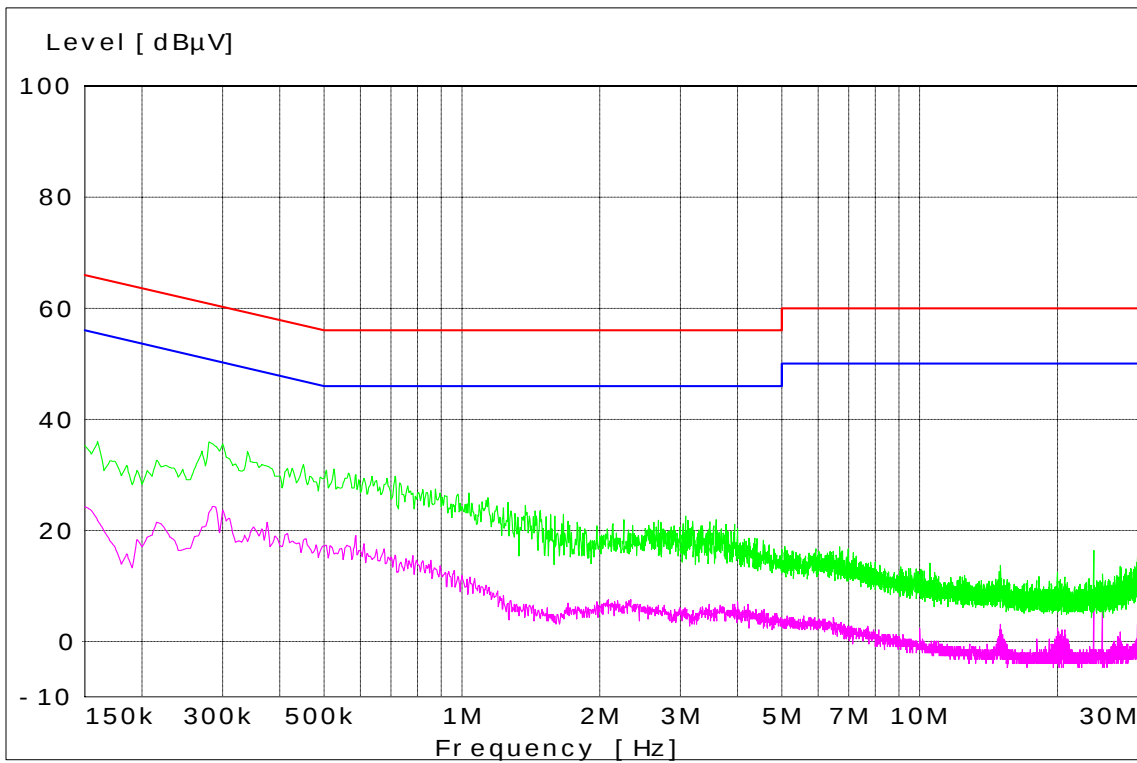
Bluetooth Channel 0 2402MHz - Tx Mode - Neutral Coupling Hopping



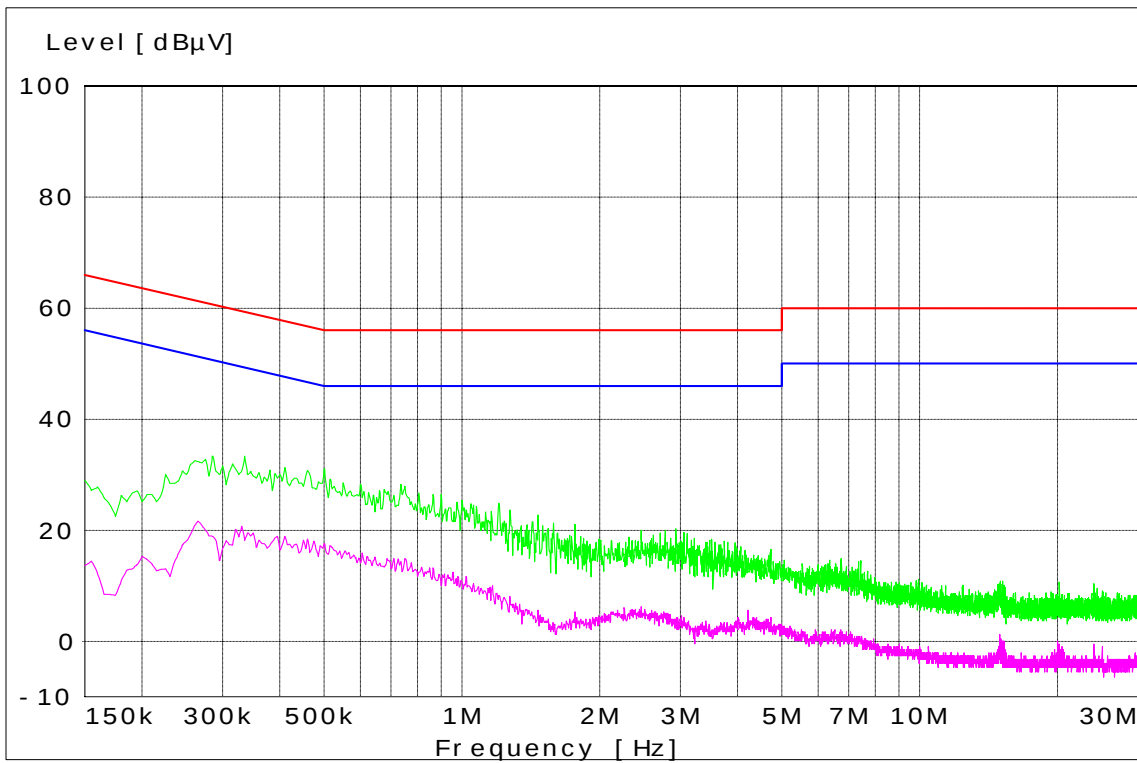
Bluetooth Channel 0 2402MHz - Tx Mode – Line Coupling Nonhopping



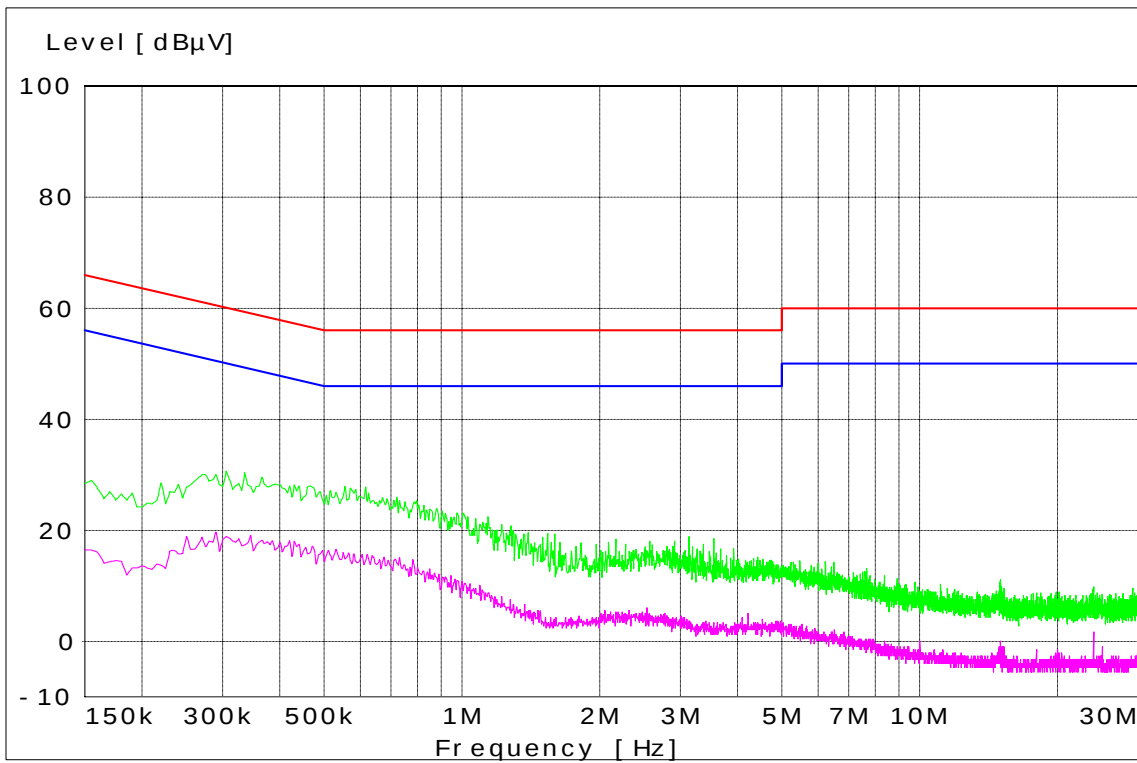
**Bluetooth Channel 39 2441MHz - Tx Mode - Line Coupling
Nonhopping**



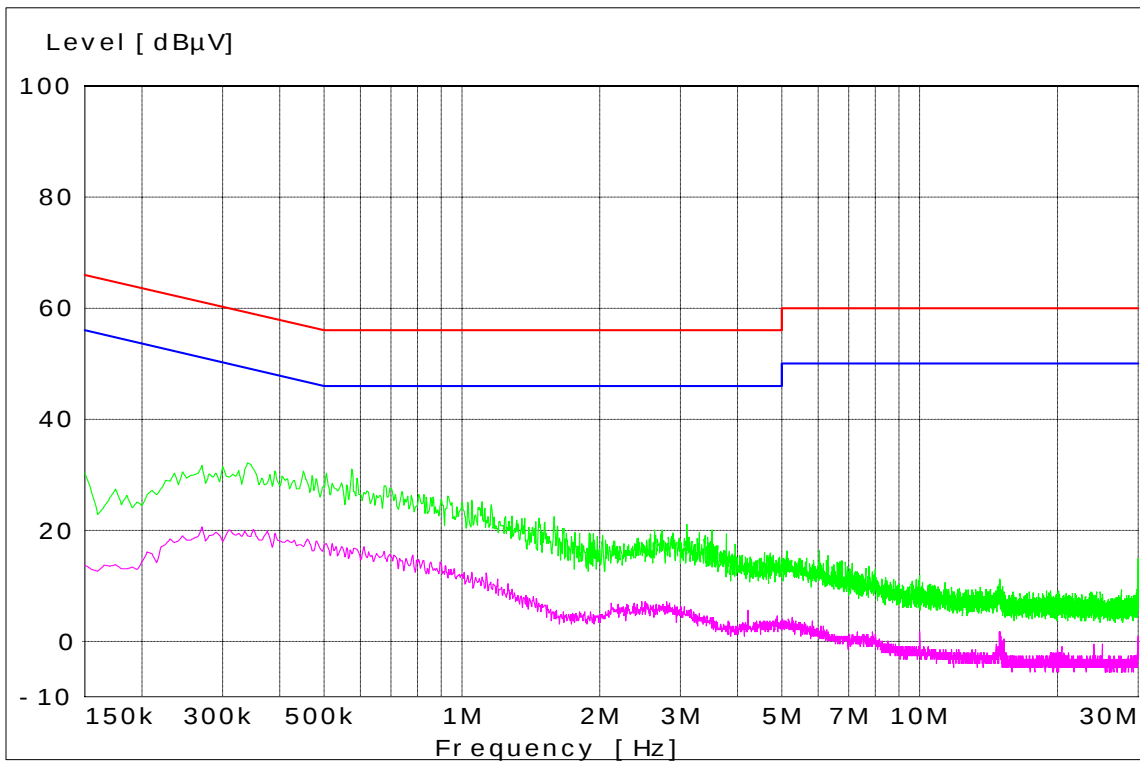
**Bluetooth Channel 39 2441MHz - Tx Mode - Neutral Coupling
Hopping**



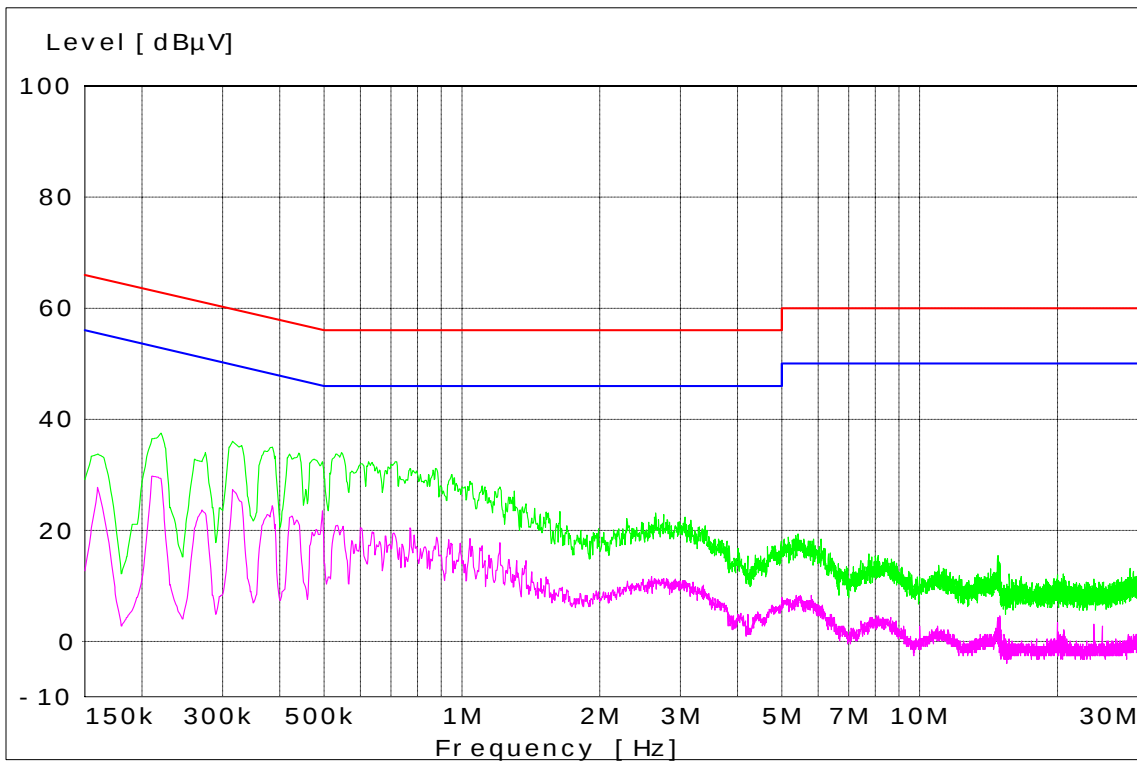
Bluetooth Channel 78 2480MHz - Tx Mode - Line Coupling Hopping



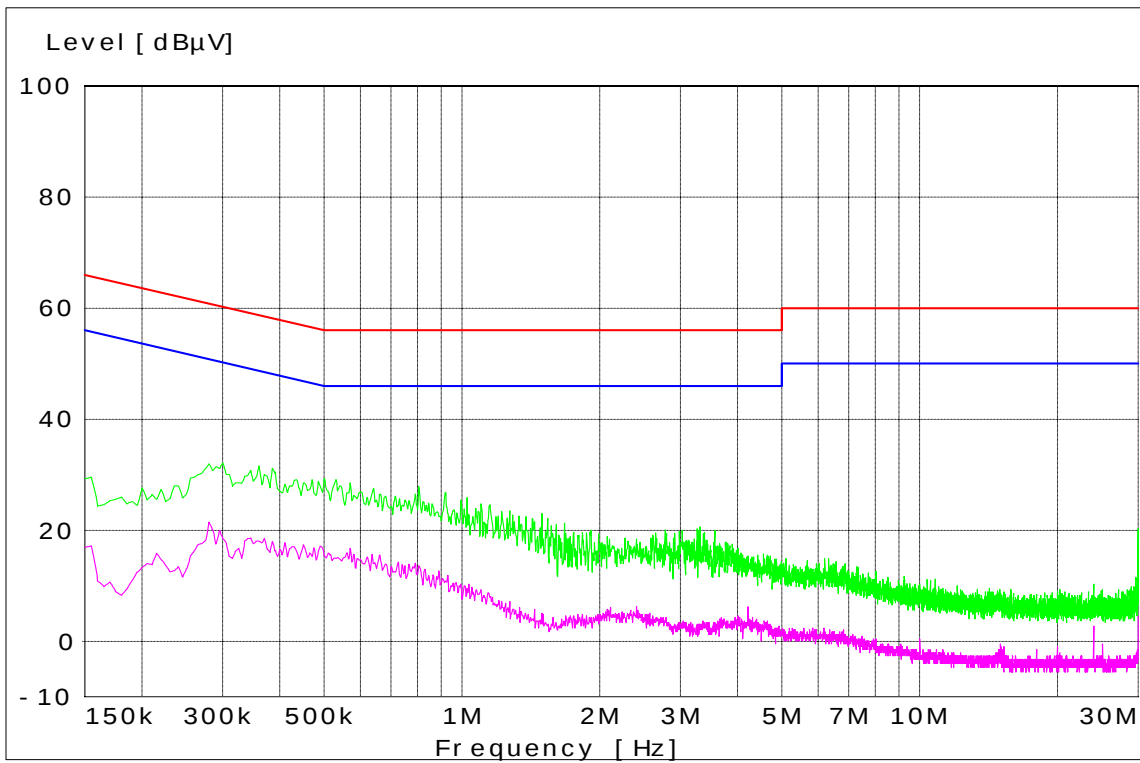
**Bluetooth Channel 78 2480MHz - Tx Mode - Neutral Coupling
Hopping**



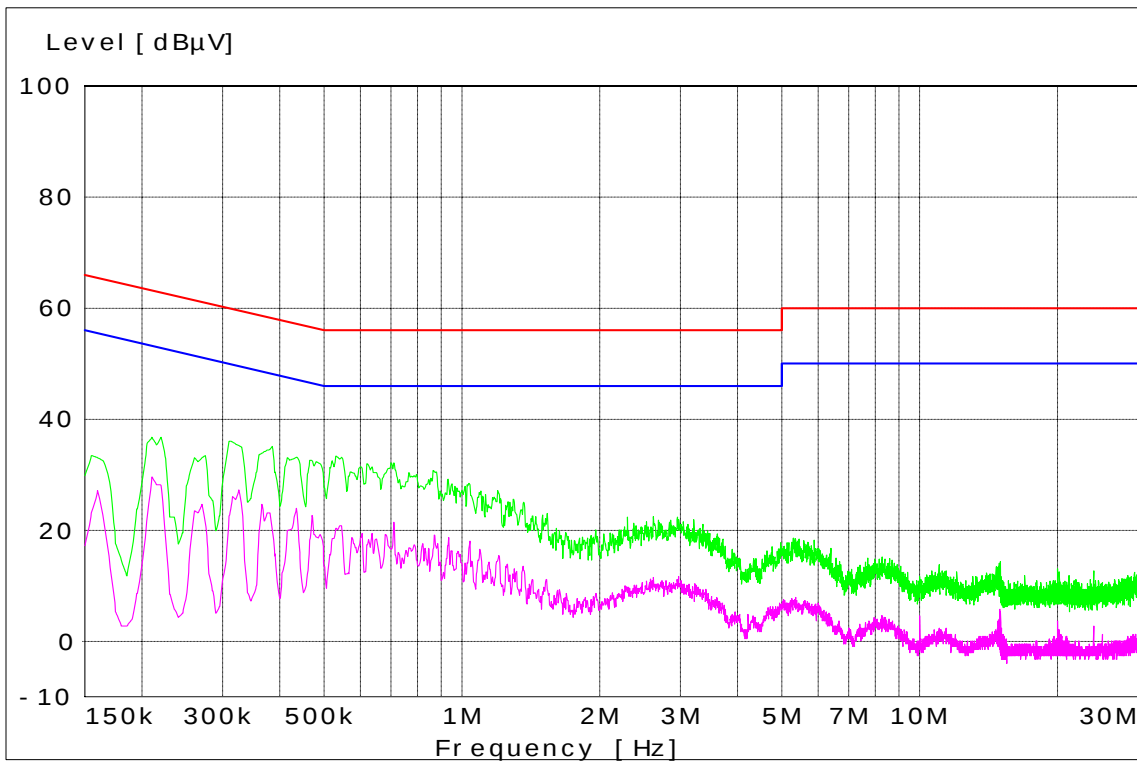
Bluetooth Channel 0 2402MHz - Tx Mode - Line Coupling Hopping



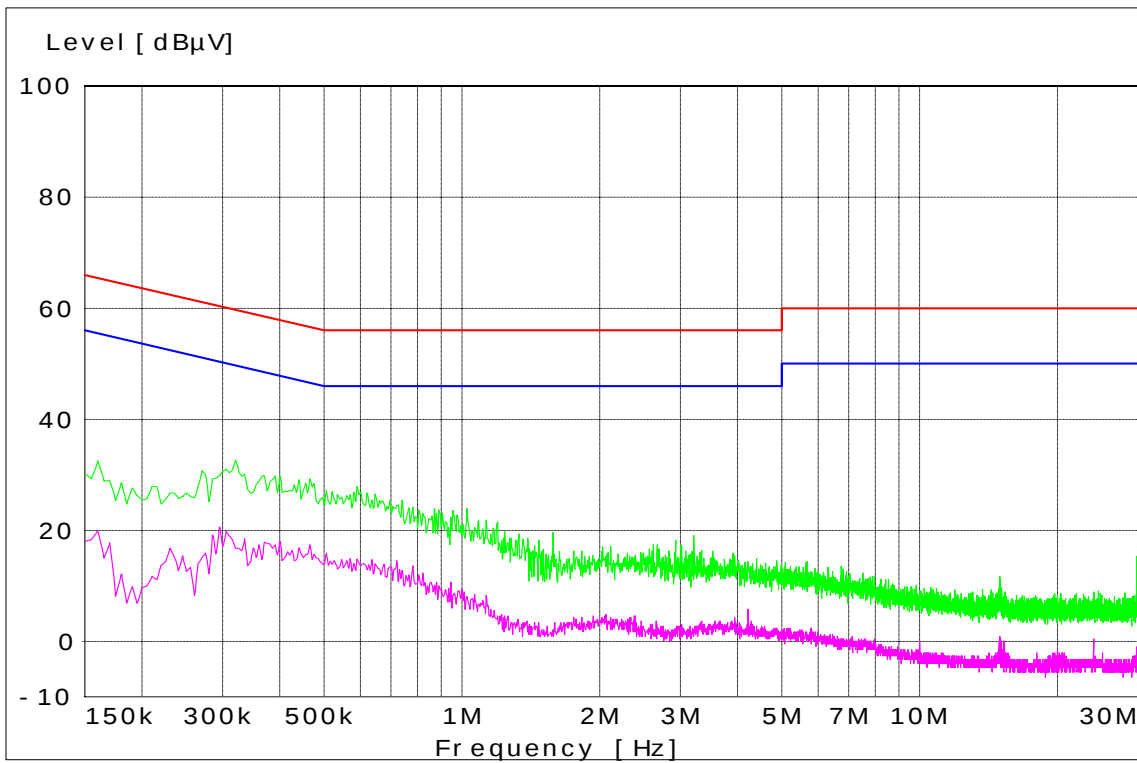
**Bluetooth Channel 0 2402MHz - Tx Mode - Neutral Coupling
Nonhopping**



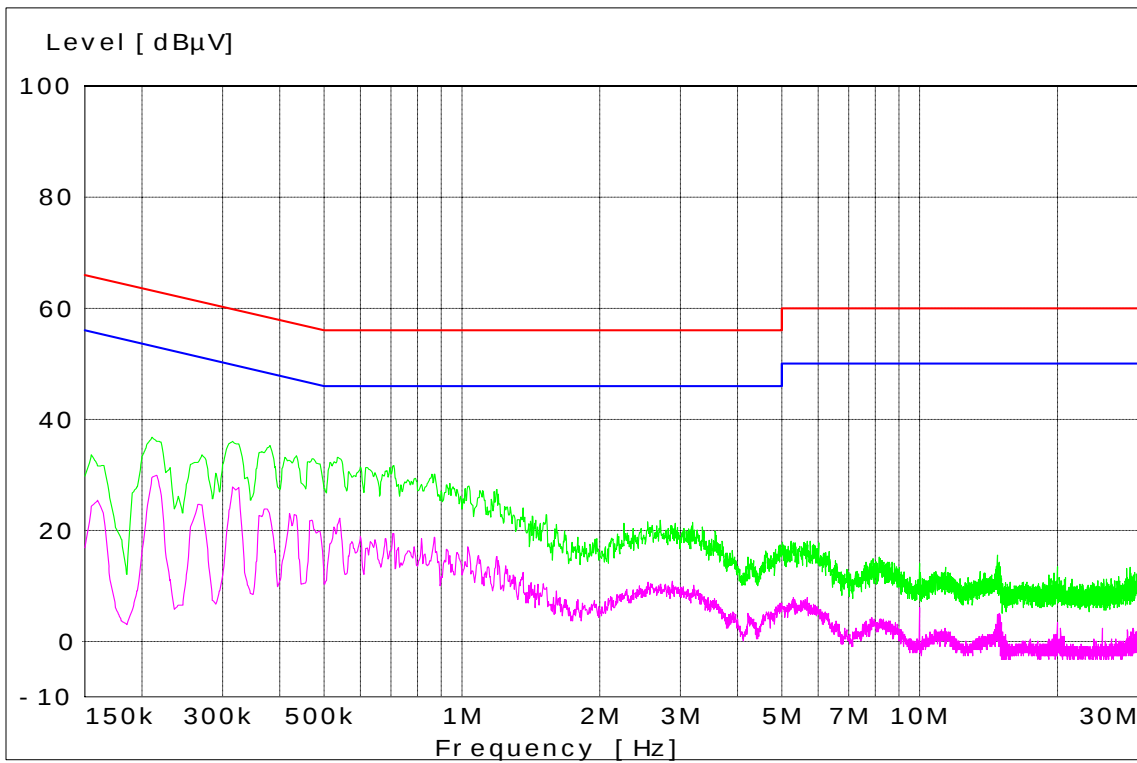
Bluetooth Channel 39 2441MHz - Tx Mode - Line Coupling Hopping



**Bluetooth Channel 39 2441MHz - Tx Mode - Neutral Coupling
Nonhopping**



**Bluetooth Channel 78 2480MHz - Tx Mode - Line Coupling
Nonhopping**



**Bluetooth Channel 78 2480MHz - Tx Mode - Neutral Coupling
Nonhopping**

End of Test Report