



MOBILE DEVICES BUSINESS

**PRODUCT SAFETY AND COMPLIANCE
EMC LABORATORY**

EMC TEST REPORT - Addendum

Test Report Number – 16837-1BT

Report Date – November 9, 2005

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: 11/09/2005

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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: A1200

Signaling Capability: GSM850,1900, Bluetooth

Model Number: CHWF1397

Serial Numbers: NA

Testing Complete Date: November 2, 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

Test	Test Name	Results
1	Carrier Frequency Separation	1.0 MHz
2	Number of Hopping Frequencies	79
3	Time of Occupancy (Dwell Time)	2.862 ms
4	20 dB Bandwidth	1.0 MHz
5	Spurious RF Conducted Emissions	See plots
6	Field Strength of Spurious Emissions	See plots
7	Peak Output Power	1.028 dBm
8	Band Edges	See plots
9	Conducted Spurious 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	11/13/2005
ETS	DRG Horn Antenna	265	2455	5/25/2006
ETS	DRG Horn Antenna	3115	6222	2/9/2006
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	11/4/2005
Rohde & Schwarz	Mobile Test Set	CMD 80	DE29008	N/A
Hewlett-Packard	Signal Generator	83623B	3844A01195	5/23/2006
Thermotron	Environmental Chamber	S-4	31580	1/18/2006
Giga-Tronics	Power Meter	8651A	8650508	12/27/2005

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 A1200 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 dBi.

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.

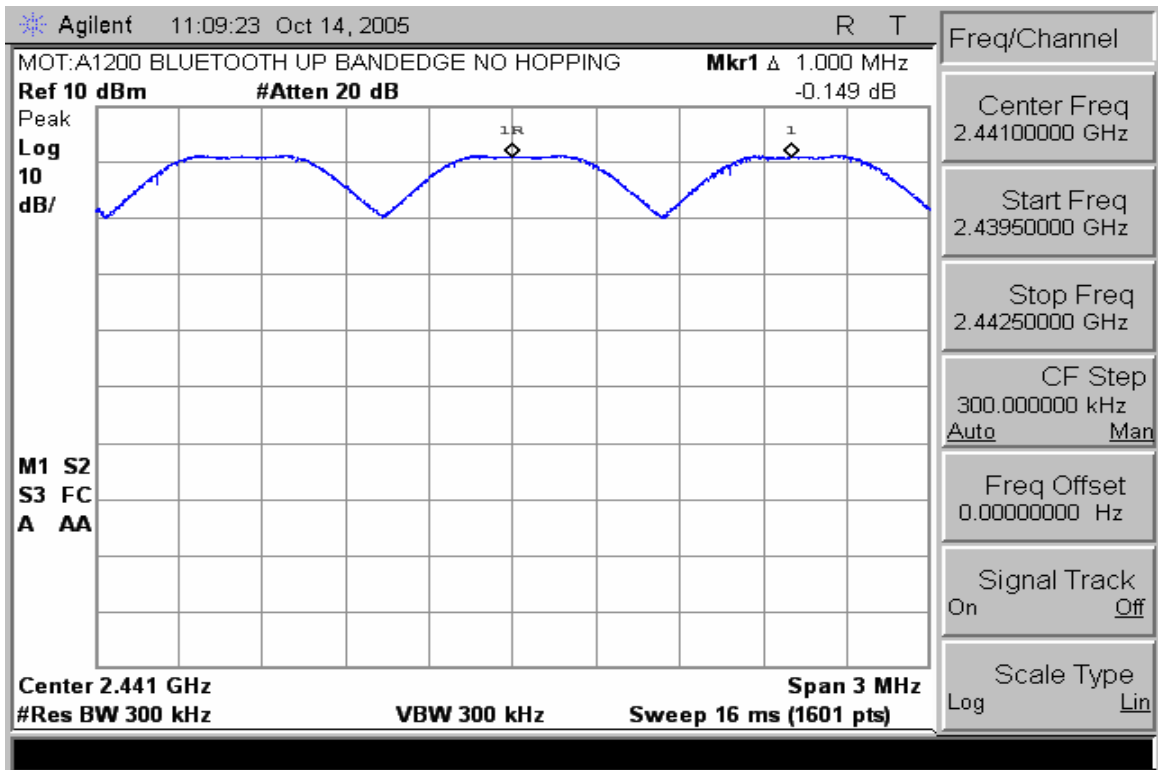
The Bluetooth transmitter of the A1200 had its hopping function enabled. The following spectrum analyzer settings were used:

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.

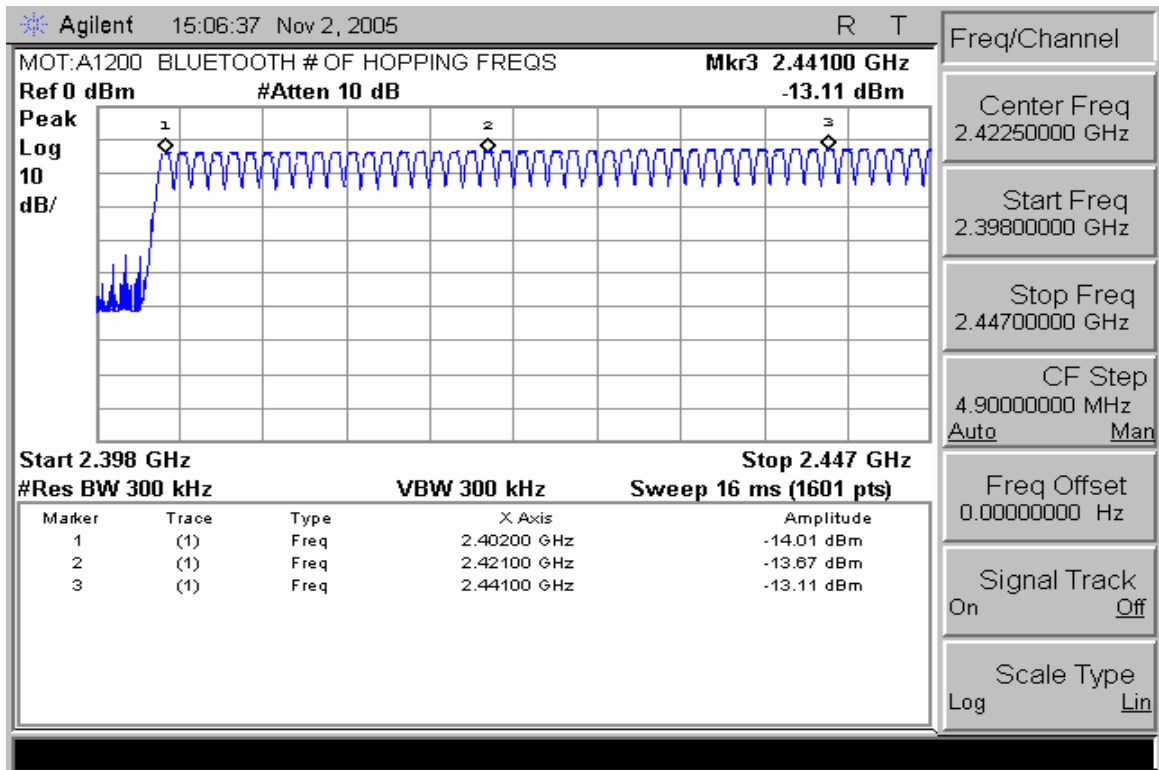
The Bluetooth frequency hopping function of the EUT was enabled. The spectrum analyzer used the following settings:

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

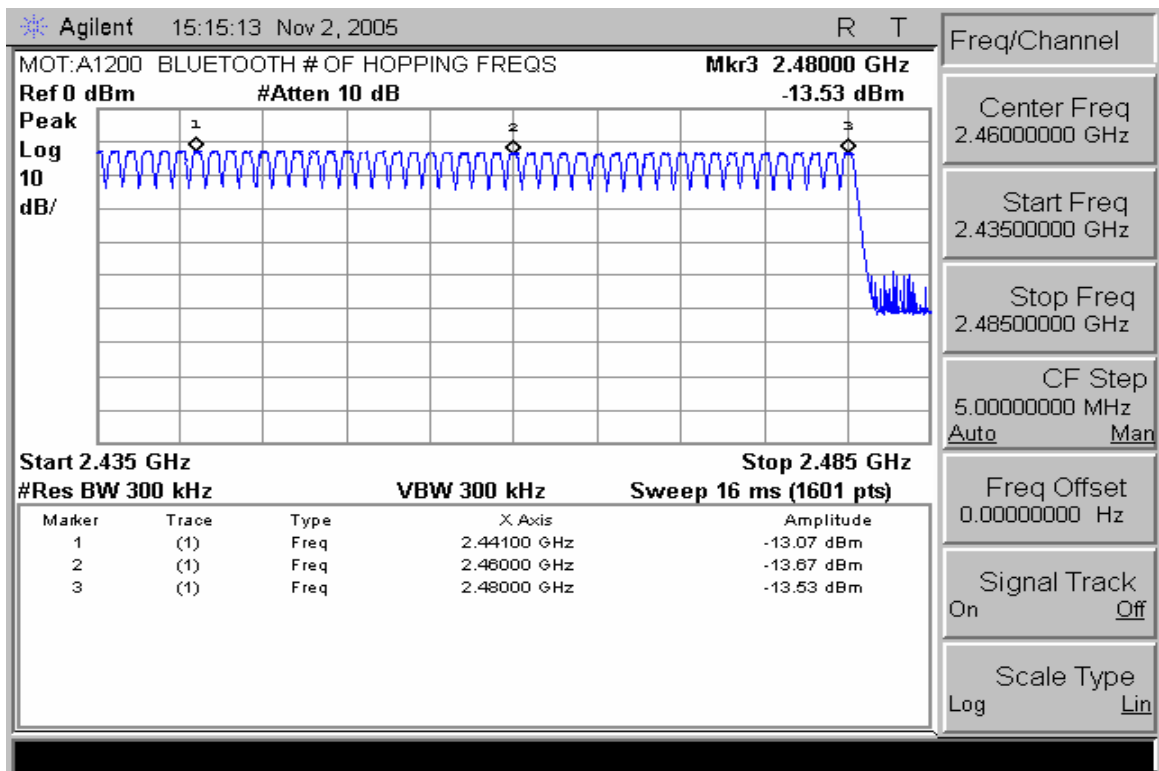
The trace was allowed to stabilize.

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.

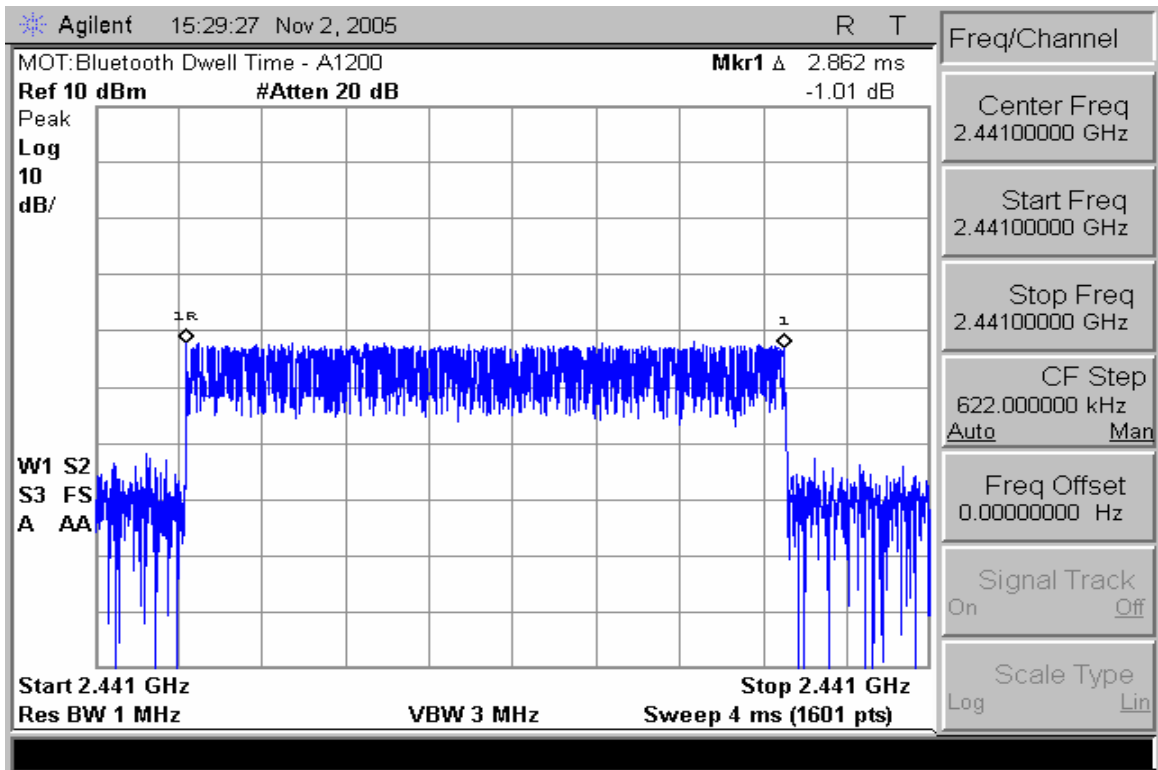
The Bluetooth hopping function of the EUT was enabled. The following spectrum analyzer settings were used:

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



Dwell Time

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.

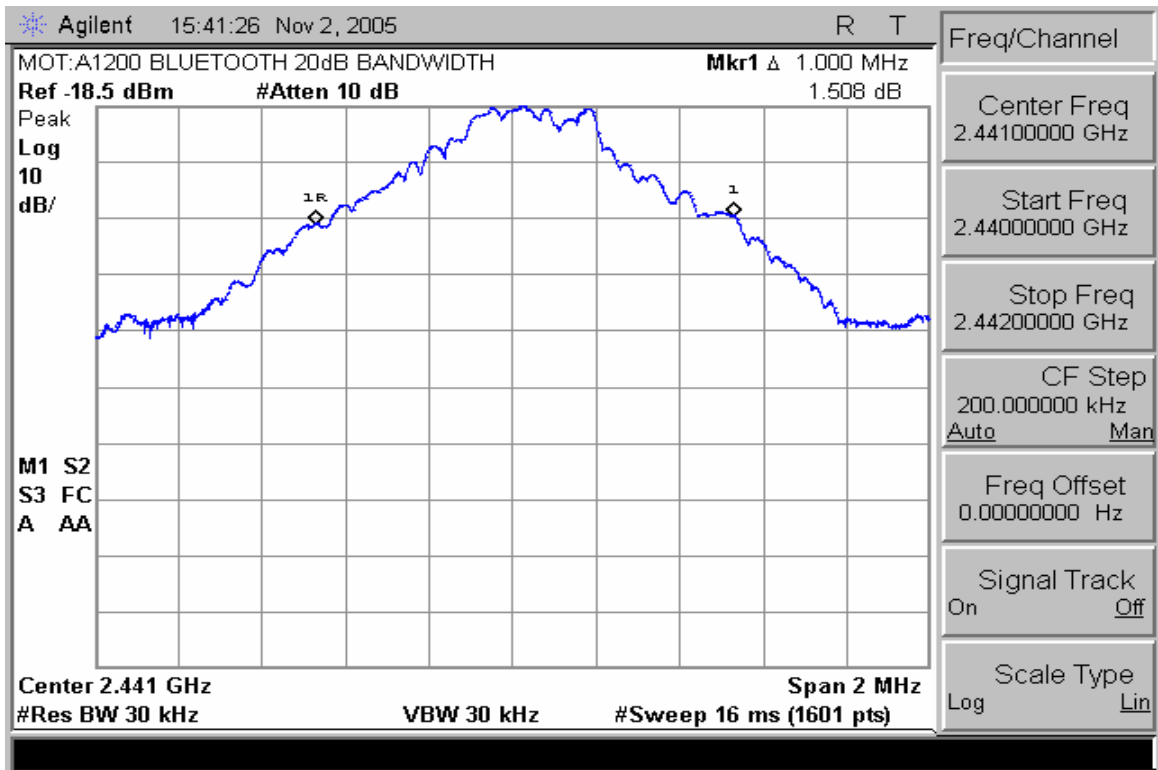
The Bluetooth frequency hopping function of the EUT was enabled. The spectrum analyzer used the following settings:

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

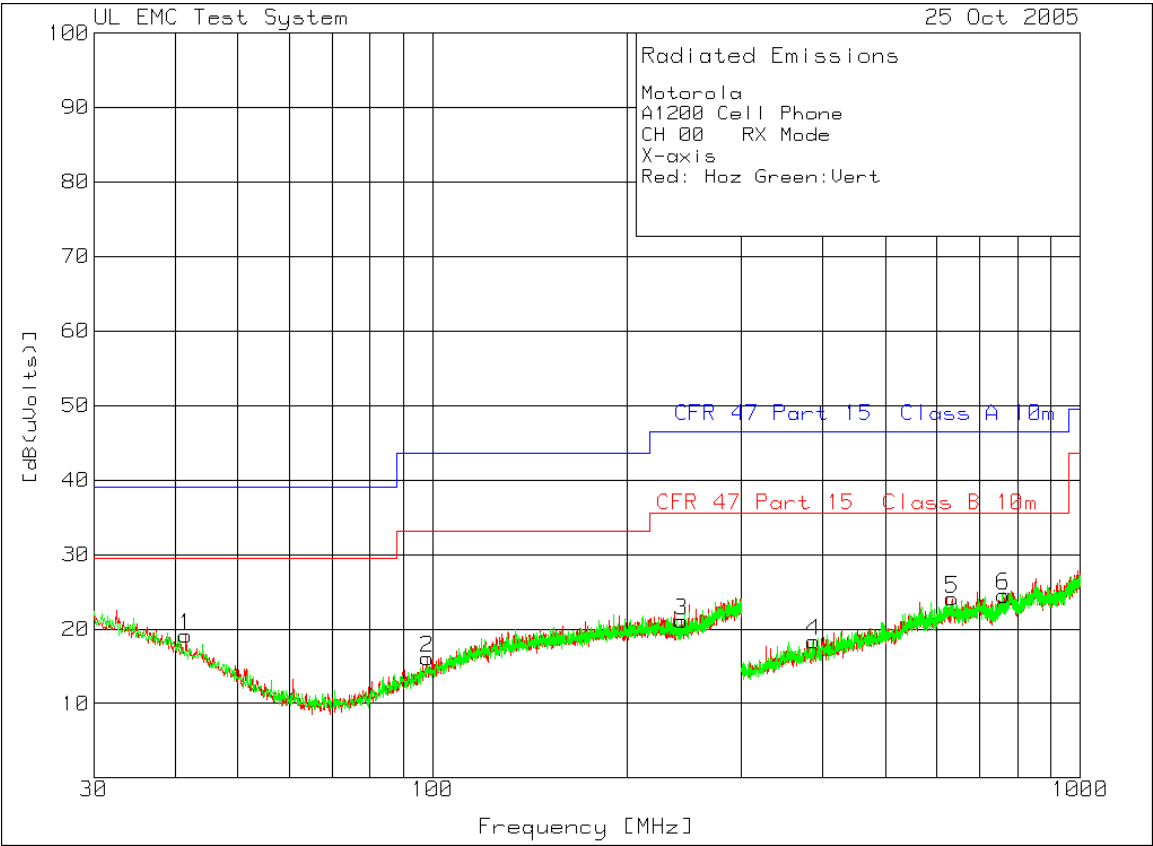
The Equipment-Under-Test is placed inside the semi-anechoic chamber on a wooden table at the turntable center. For each spurious frequency, the antenna mast is raised and lowered from 1 to 4 meters and the turntable is rotated 360 degrees to obtain a maximum reading on the spectrum analyzer. This is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

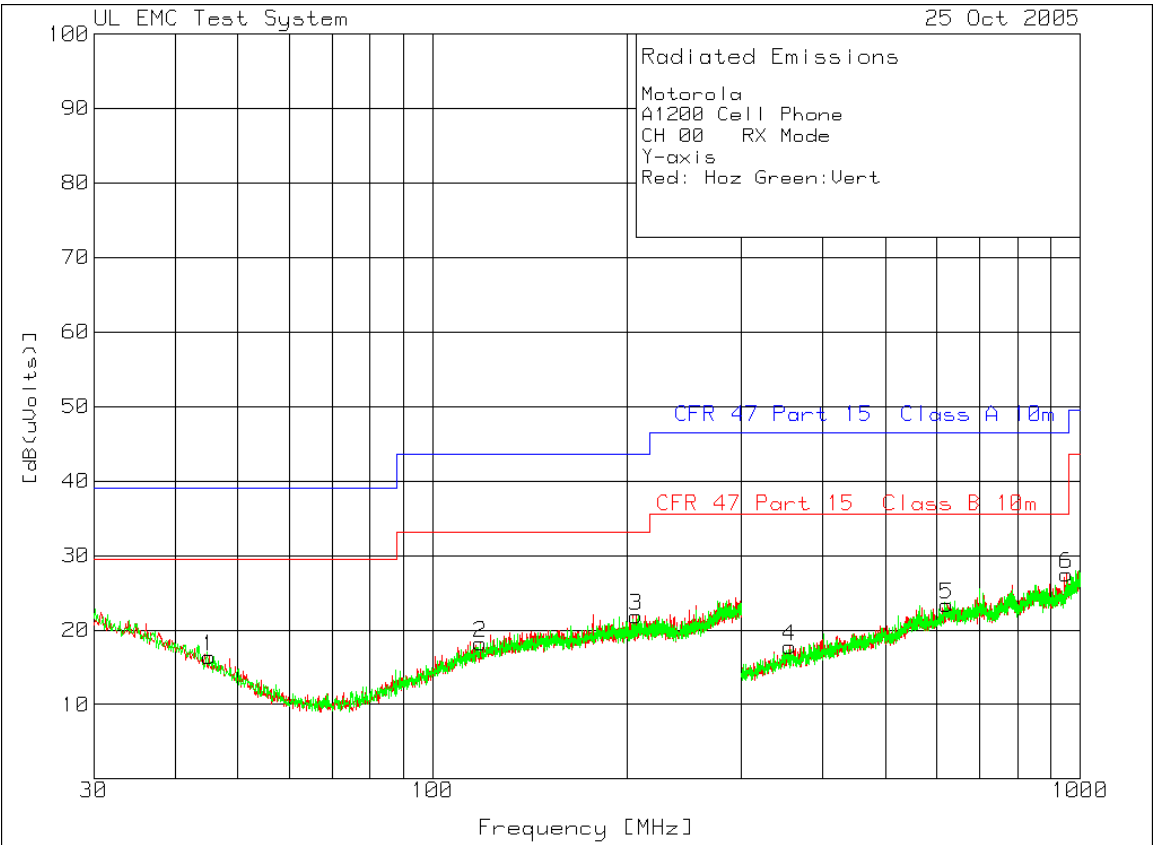
Attached



30-1000MHz Low Channel Dual Polarization X

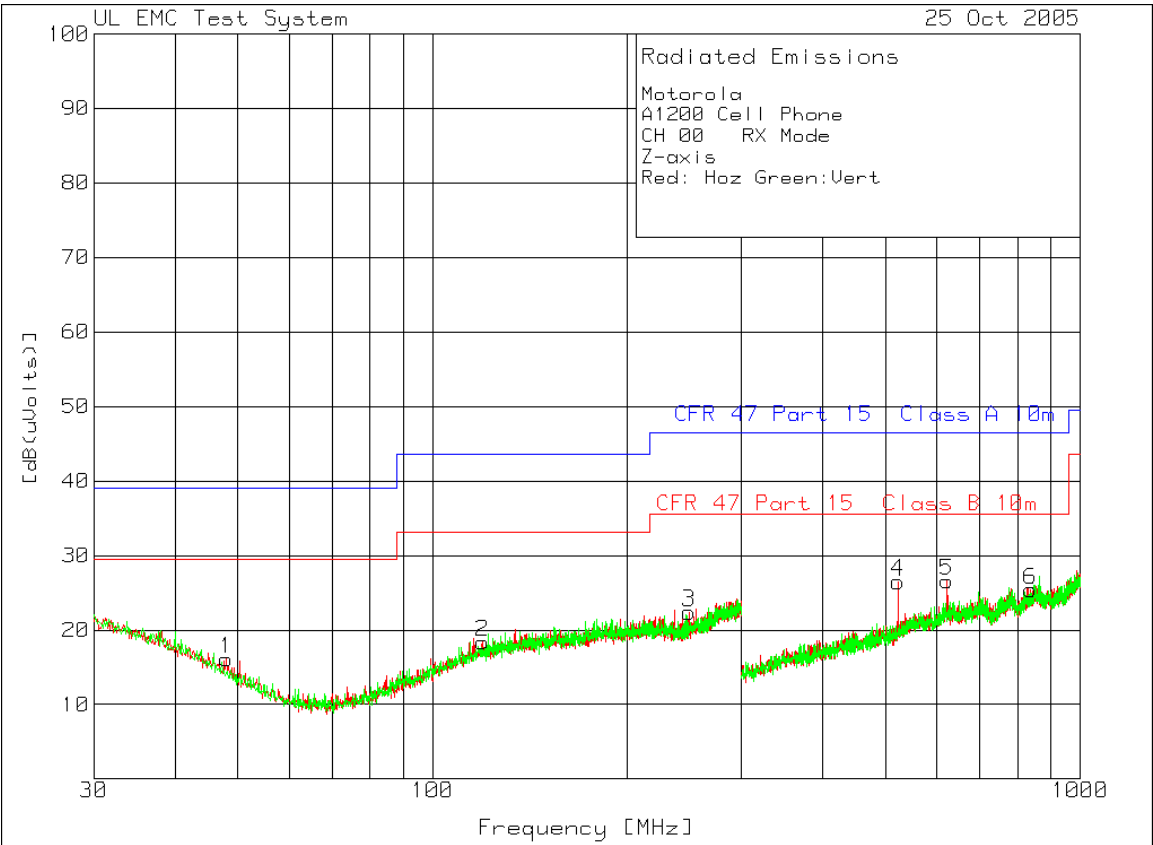
Motorola A1200 Cell Phone CH 00 RX Mode X-axis Red: Hoz Green: Vert													
Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dB(uVolts)]	Limit 1	Margin 1[dB]	Limit 2	Margin 2[dB]	Azimuth [deg]	Height [cm]	Polarity
Range 1 30 - 300MHz													
1	41.6042			35.7 pk		-30.3	13.7	19.1	29.6	-10.5	39.1	295	100 Horz
2	98.2758			35.8 pk		-30.1	10.4	16.1	33.1	-17	43.5	161	100 Horz
3	242.2488	35.2 pk			-29.6	15.5	21.1	35.6	-14.5	46.4	-25.3	52	100 Horz
Range 3 300 - 1000MHz													
4	387.4563	35.3 pk			-32.1	15.2	18.4	35.6	-17.2	46.4	-28	28	101 Horz
5	633.7331	35 pk			-31	20.1	24.1	35.6	-11.5	46.4	-22.3	237	101 Horz
6	761.0695	34.5 pk			-31.1	21.1	24.5	35.6	-11.1	46.4	-21.9	310	101 Horz

LIMIT 1: CFR 47 Part 15 Class B 10m
 LIMIT 2: CFR 47 Part 15 Class A 10m



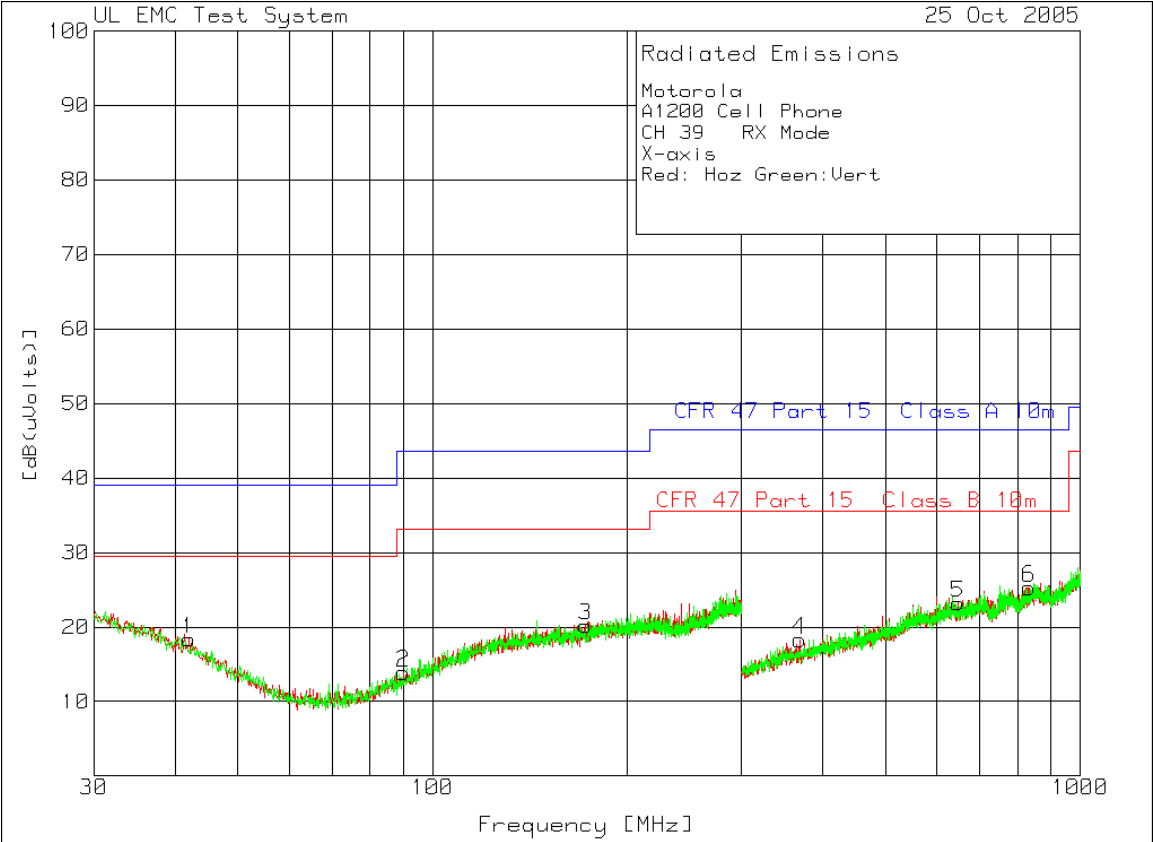
30-1000MHz Low Channel Dual Polarization Y

Motorola A1200 Cell Phone CH 00 RX Mode 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]	Azimuth [deg]	Height [cm]	Polarity
Range 1 30 - 300MHz													
1	45.1124			34.5 pk		-30.3	12.2	16.4	29.6	-13.2	39.1	156	100 Horz
2	118.6507	35.1 pk		-30		13.1	18.2	33.1	-14.9	43.5	-25.3	122	100 Horz
3	205.817			35.9 pk		-29.9	15.9	21.9	33.1	-11.2	43.5	171	100 Horz
Range 3 300 - 1000MHz													
4	355.6222	35.2 pk		-32.4	15	17.8	35.6	-17.8	46.4	-28.6		335	101 Horz
5	621.1394	34.3 pk		-31.1	20.2	23.4	35.6	-12.2	46.4	-23		6	101 Horz
6	950.6747	35.7 pk		-31.3	23.1	27.5	35.6	-8.1	46.4	-18.9		244	101 Horz
LIMIT 1: CFR 47 Part 15 Class B 10m LIMIT 2: CFR 47 Part 15 Class A 10m													



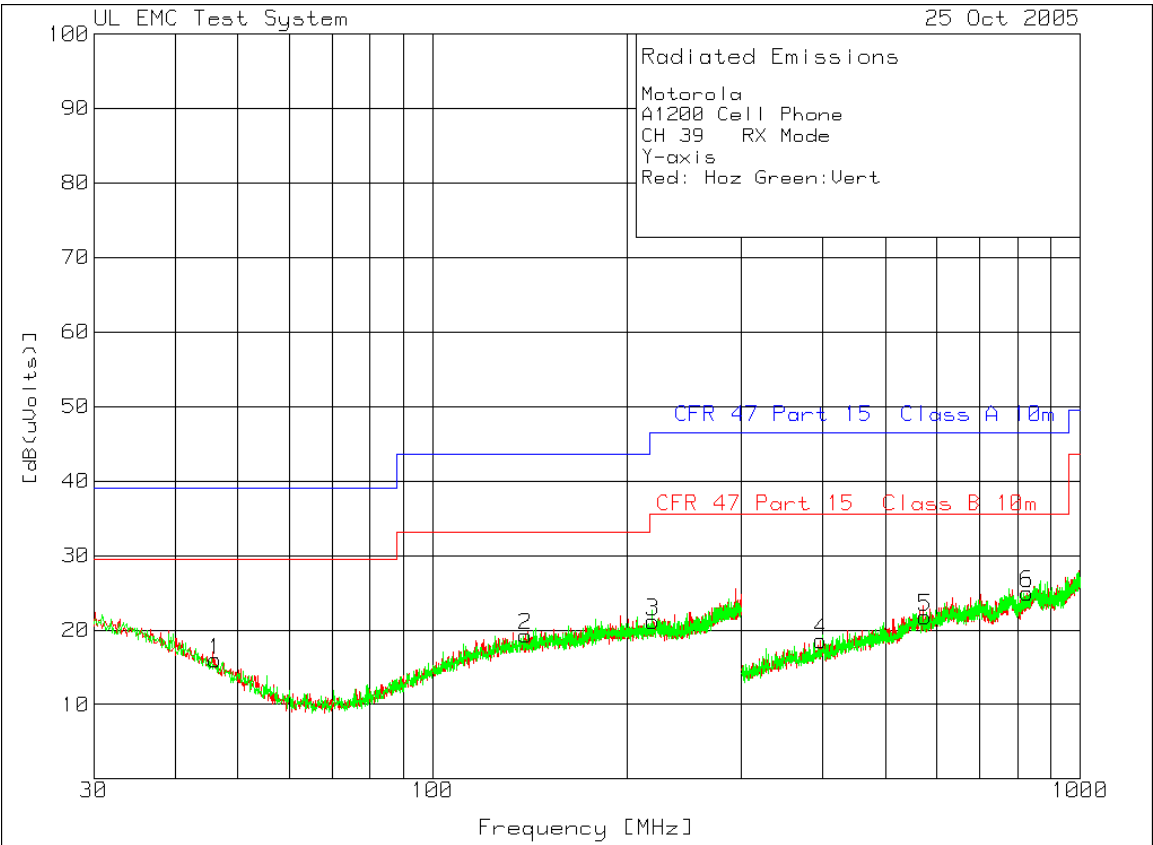
30-1000MHz Low Channel Dual Polarization Z

Motorola A1200 Cell Phone CH 00 RX Mode 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]	Azimuth [degs]	Height [cm]	Polarity
Range 1 30 - 300MHz													
1	48.081	35.4 pk		-30.3	11	16.1	29.6	-13.5	39.1	-23	218		100 Horz
2	119.3253	35.2 pk		-30	13.2	18.4	33.1	-14.7	43.5	-25.1	218		100 Horz
3	248.5907	36.1 pk		-29.6	15.9	22.4	35.6	-13.2	46.4	-24	154		100 Horz
Range 3 300 - 1000MHz													
4	523.1884	40.4 pk		-31.6	17.7	26.5	35.6	-9.1	46.4	-19.9	348		101 Horz
5	623.2384	37.6 pk		-31.1	20.1	26.6	35.6	-9	46.4	-19.8	74		101 Horz
6	838.7307	34.6 pk		-31.5	22.3	25.4	35.6	-10.2	46.4	-21	17		101 Horz
LIMIT 1: CFR 47 Part 15 Class B 10m LIMIT 2: CFR 47 Part 15 Class A 10m													



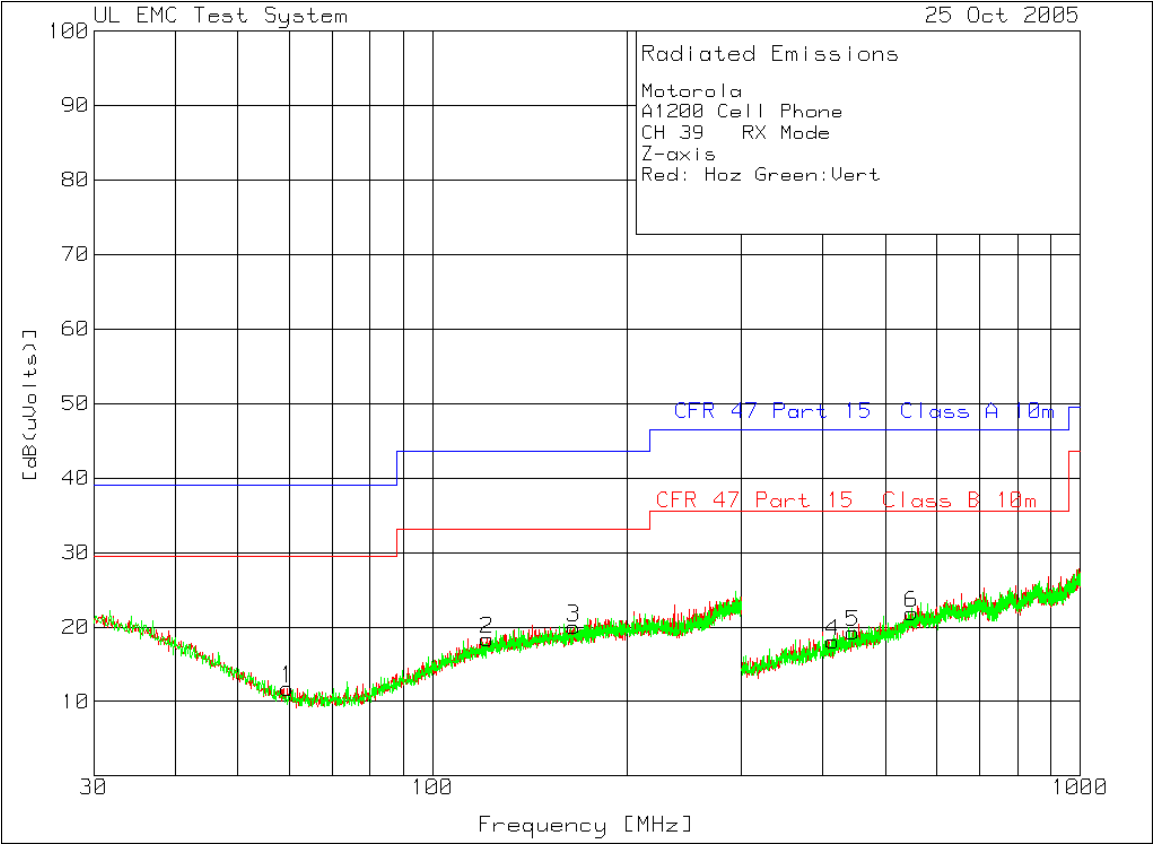
30-1000MHz Mid Channel Dual Polarization X

Motorola A1200 Cell Phone CH 39 RX Mode 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]	Azimuth [deg]	Height [cm]	Polarity
Range 1 30 - 300MHz													
1	42.009	35.2 pk		-30.3	13.5	18.4	29.6	-11.2	39.1	-20.7	40	100	Horz
2	90.1124	35 pk		-30.2	9.1	13.9	33.1	-19.2	43.5	-29.6	233	100	Horz
3	172.2189	34.9 pk		-30	15.3	20.2	33.1	-12.9	43.5	-23.3	131	100	Horz
Range 3 300 - 1000MHz													
4	368.5657	35.8 pk		-32.3	14.8	18.3	35.6	-17.3	46.4	-28.1	256	101	Horz
5	647.3763	34.3 pk		-30.9	19.8	23.2	35.6	-12.4	46.4	-23.2	142	101	Horz
6	833.1335	34.6 pk		-31.5	22.2	25.3	35.6	-10.3	46.4	-21.1	29	101	Horz
LIMIT 1: CFR 47 Part 15 Class B 10m LIMIT 2: CFR 47 Part 15 Class A 10m													



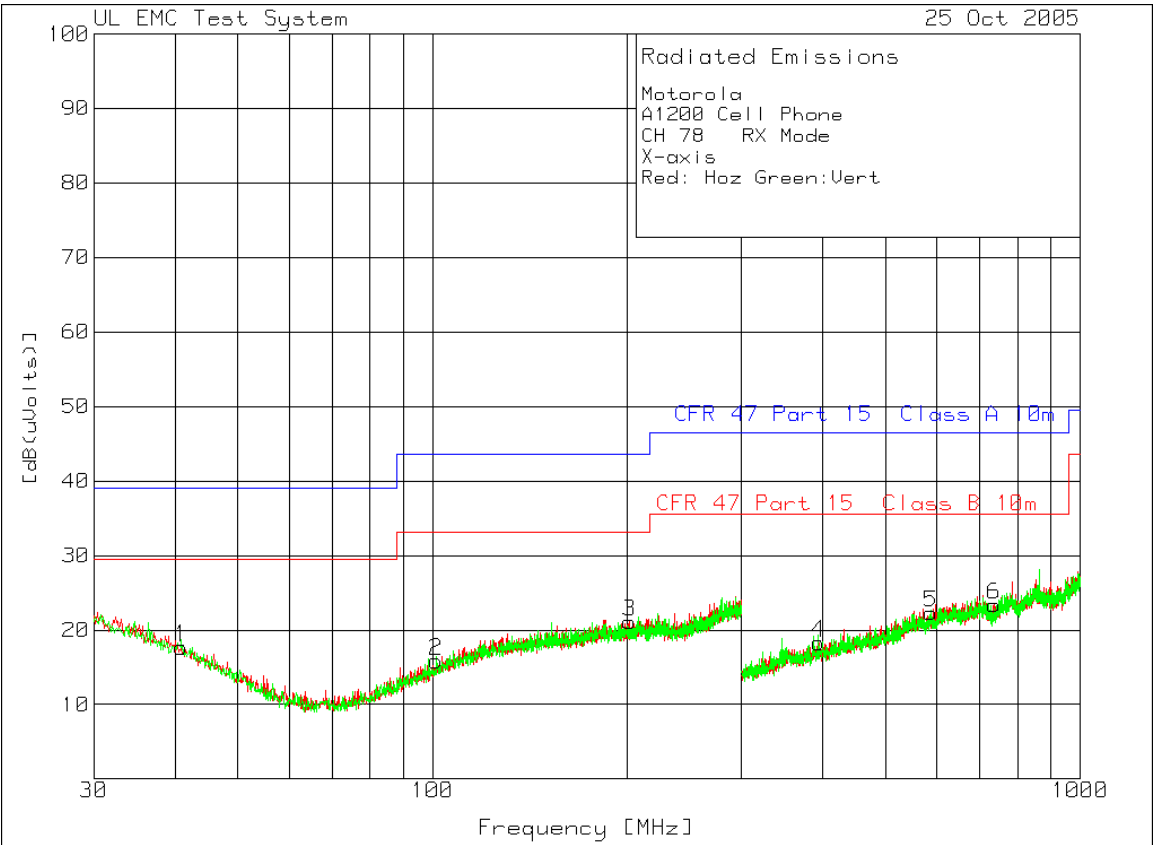
30 -1000MHz Mid Channel Dual Polarization Y

Motorola A1200 Cell Phone CH 39 RX Mode 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]	Azimuth [degs]	Height [cm]	Polarity
Range 1 30 - 300MHz													
1	46.1919	34.5 pk		-30.3	11.8	16	29.6	-13.6	39.1	-23.1	114	100	Horz
2	139.2953	35.1 pk		-30.1	14.3	19.3	33.1	-13.8	43.5	-24.2	76	100	Horz
3	218.7706	35 pk		-29.7	15.9	21.2	35.6	-14.4	46.4	-25.2	65	100	Horz
Range 3 300 - 1000MHz													
4	397.6012	35.3 pk		-32.3	15.6	18.6	35.6	-17	46.4	-27.8	227	101	Horz
5	575.6622	34.2 pk		-31.4	19	21.8	35.6	-13.8	46.4	-24.6	6	101	Horz
6	828.9356	34.4 pk		-31.6	22.2	25	35.6	-10.6	46.4	-21.4	272	101	Horz
LIMIT 1: CFR 47 Part 15 Class B 10m LIMIT 2: CFR 47 Part 15 Class A 10m													



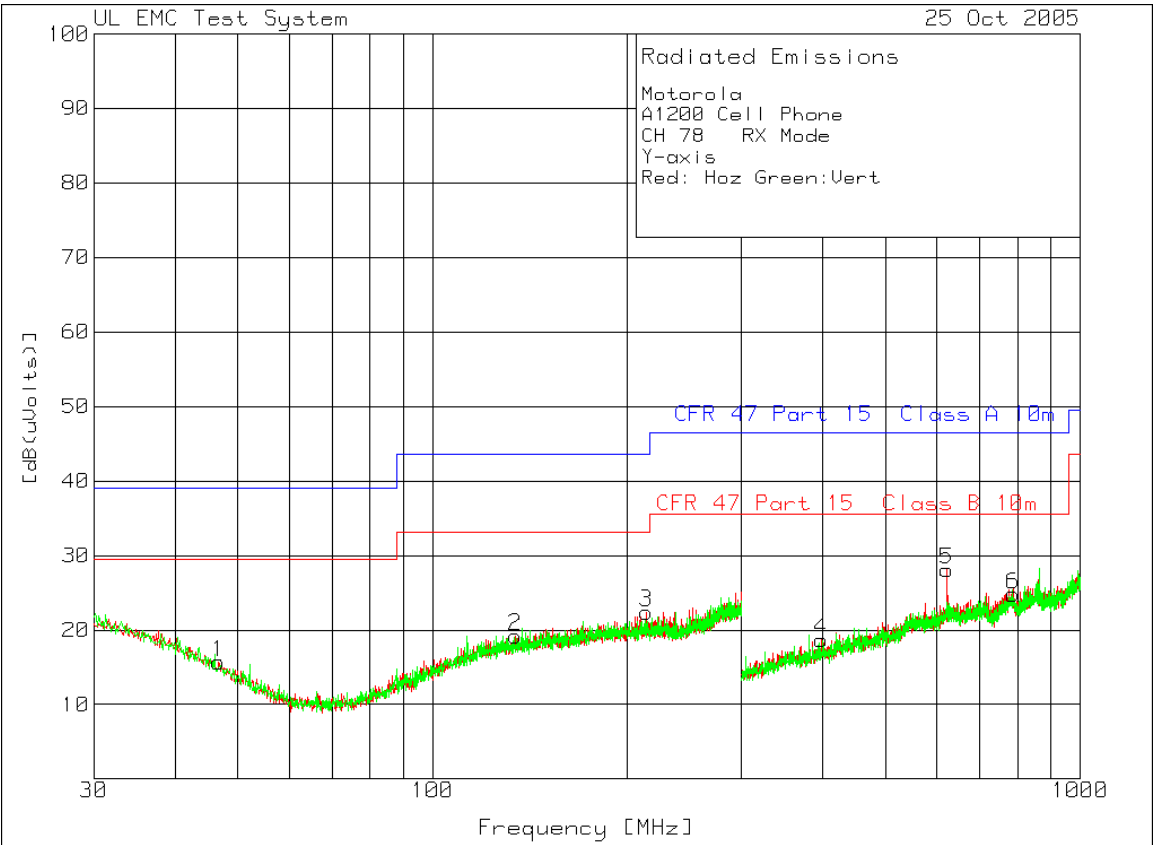
30 -1000MHz Mid Channel Dual Polarization Z

Motorola A1200 Cell Phone CH 39 RX Mode 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]	Azimuth [deg]	Height [cm]	Polarity
Range 1 30 - 300MHz													
1	59.6852	35.2 pk		-30.3	6.9	11.8	29.6	-17.8	39.1	-27.3	7	100	Horz
2	121.4842	35.1 pk		-30.1	13.4	18.4	33.1	-14.7	43.5	-25.1	7	100	Horz
3	165.2024	35 pk		-30	15	20	33.1	-13.1	43.5	-23.5	291	100	Horz
Range 3 300 - 1000MHz													
4	415.4423	34.4 pk		-32.1	15.8	18.1	35.6	-17.5	46.4	-28.3	224	101	Horz
5	445.5272	34.8 pk		-32	16.5	19.3	35.6	-16.3	46.4	-27.1	47	101	Horz
6	548.7256	34.4 pk		-31.5	19	21.9	35.6	-13.7	46.4	-24.5	171	101	Horz
LIMIT 1: CFR 47 Part 15 Class B 10m LIMIT 2: CFR 47 Part 15 Class A 10m													



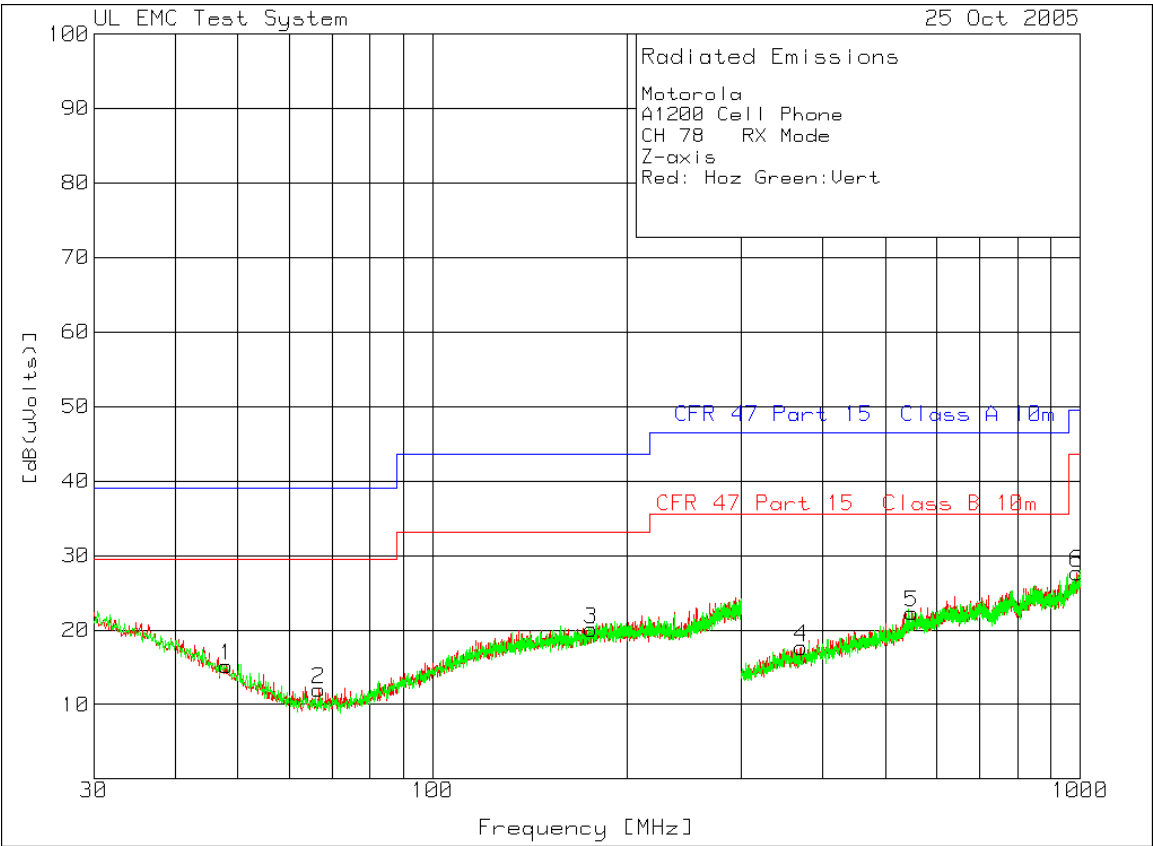
30 -1000MHz High Channel Dual Polarization X

Motorola													
A1200 Cell Phone													
CH 78 RX Mode													
X-axis													
Red: Hoz Green:Vert													
Marker	Test	Meter	Detector	Gain/Loss	Transducer	Level	Limit 1	Margin 1[dB]	Limit 2	Margin 2[dB]	Azimuth [deg]	Height [cm]	Polarity
Number	Frequency [MHz]	Reading [dB(uV)]	Type	Factor [dB]	Factor [dB]	[dB(uVolts)]							
Range 1 30 - 300MHz													
1	40.9295	34.1 pk		-30.3	13.9	17.7	29.6	-11.9	39.1	-21.4	87	100	Horz
2	101.1094	35.1 pk		-30	10.8	15.9	33.1	-17.2	43.5	-27.6	359	100	Horz
3	201.4992	35.2 pk		-29.9	15.8	21.1	33.1	-12	43.5	-22.4	254	100	Horz
Range 3 300 - 1000MHz													
4	394.4528	34.8 pk		-32	15.5	18.3	35.6	-17.3	46.4	-28.1	29	101	Horz
5	587.9061	34.3 pk		-31.2	19.2	22.3	35.6	-13.3	46.4	-24.1	161	101	Horz
6	736.2319	34.7 pk		-31.2	19.9	23.4	35.6	-12.2	46.4	-23	306	101	Horz
LIMIT 1: CFR 47 Part 15 Class B 10m													
LIMIT 2: CFR 47 Part 15 Class A 10m													



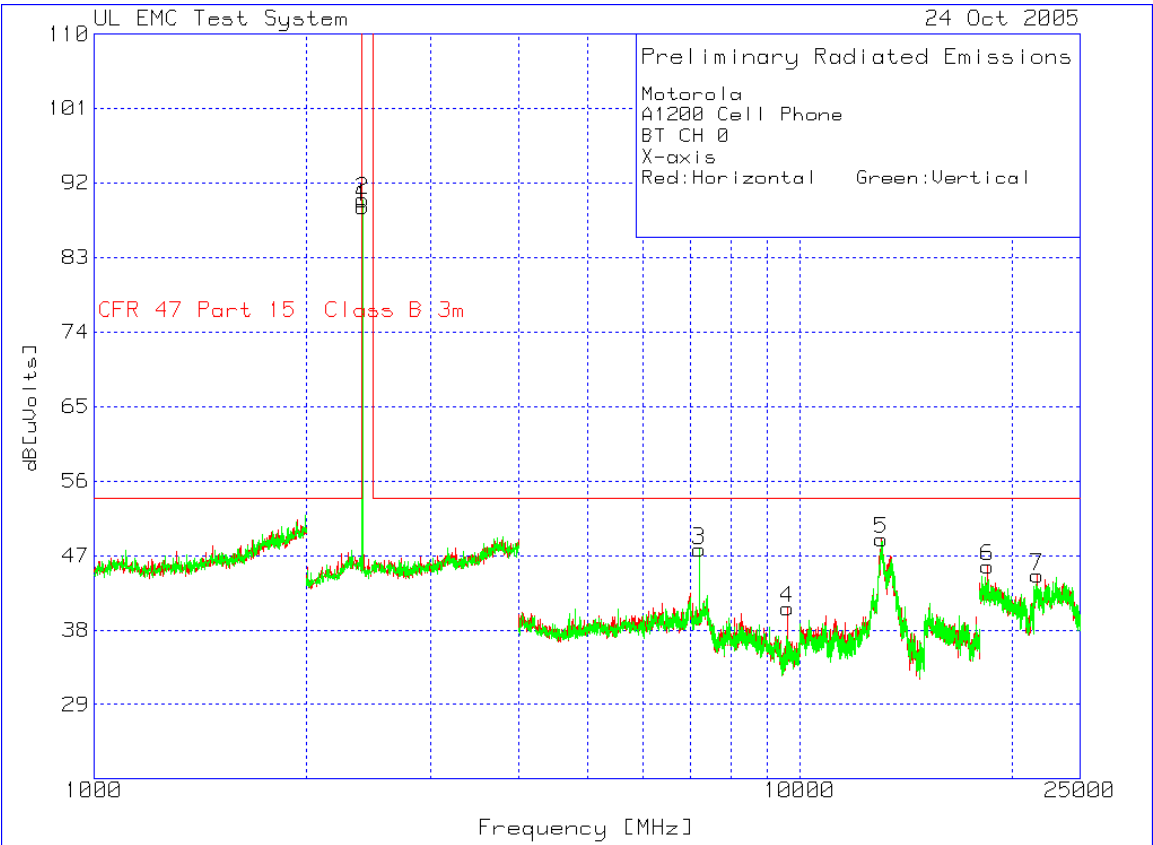
30 -1000MHz High Channel Dual Polarization Y

Motorola													
A1200 Cell Phone													
CH 78 RX Mode													
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]	Azimuth [deg]	Height [cm]	Polarity
Range 1 30 - 300MHz													
1	46.7316	34.5 pk		-30.3	11.5	15.7	29.6	-13.9	39.1	-23.4	246	100	Horz
2	134.1679	35 pk		-30	14.2	19.2	33.1	-13.9	43.5	-24.3	327	100	Horz
3	213.7781	36.2 pk		-29.7	15.9	22.4	33.1	-10.7	43.5	-21.1	18	100	Horz
Range 3 300 - 1000MHz													
4	398.3009	35.4 pk		-32.3	15.6	18.7	35.6	-16.9	46.4	-27.7	359	101	Horz
5	623.2384	39.1 pk		-31.1	20.1	28.1	35.6	-7.5	46.4	-18.3	120	101	Horz
6	787.6562	34.3 pk		-31.2	21.7	24.8	35.6	-10.8	46.4	-21.6	53	101	Horz
LIMIT 1: CFR 47 Part 15 Class B 10m													
LIMIT 2: CFR 47 Part 15 Class A 10m													



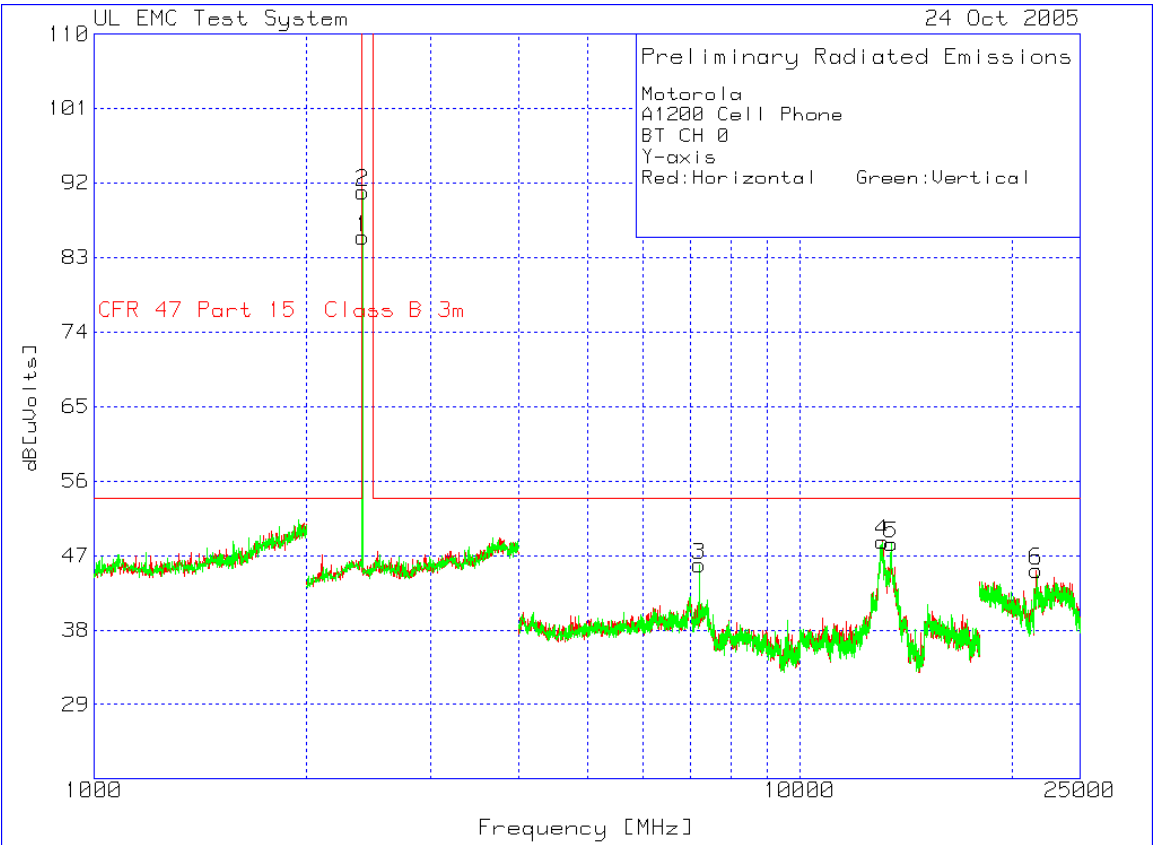
30 -1000MHz High Channel Dual Polarization Z

Motorola A1200 Cell Phone CH 78 RX Mode Z-axis Red: Hoz Green:Vert													
Marker Number	Test Frequency [MHz]	Meter Reading [dB(μV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dB(μVolts)]	Limit 1	Margin 1[dB]	Limit 2	Margin 2[dB]	Azimuth [deg]	Height [cm]	Polarity
Range 1 30 - 300MHz													
1	48.081	34.5 pk		-30.3	11	15.2	29.6	-14.4	39.1	-23.9	326	100	Horz
2	66.7016	35.9 pk		-30.2	6.3	12	29.6	-17.6	39.1	-27.1	348	100	Horz
3	175.862	34.5 pk		-29.9	15.5	20.1	33.1	-13	43.5	-23.4	24	100	Horz
Range 3 300 - 1000MHz													
4	370.6647	35.4 pk		-32.5	14.8	17.7	35.6	-17.9	46.4	-28.7	305	101	Horz
5	549.4253	34.7 pk		-31.5	19.1	22.3	35.6	-13.3	46.4	-24.1	148	101	Horz
6	989.1554	34.5 pk		-30.6	23.8	27.7	43.5	-15.8	49.5	-21.8	46	101	Horz
LIMIT 1: CFR 47 Part 15 Class B 10m LIMIT 2: CFR 47 Part 15 Class A 10m													



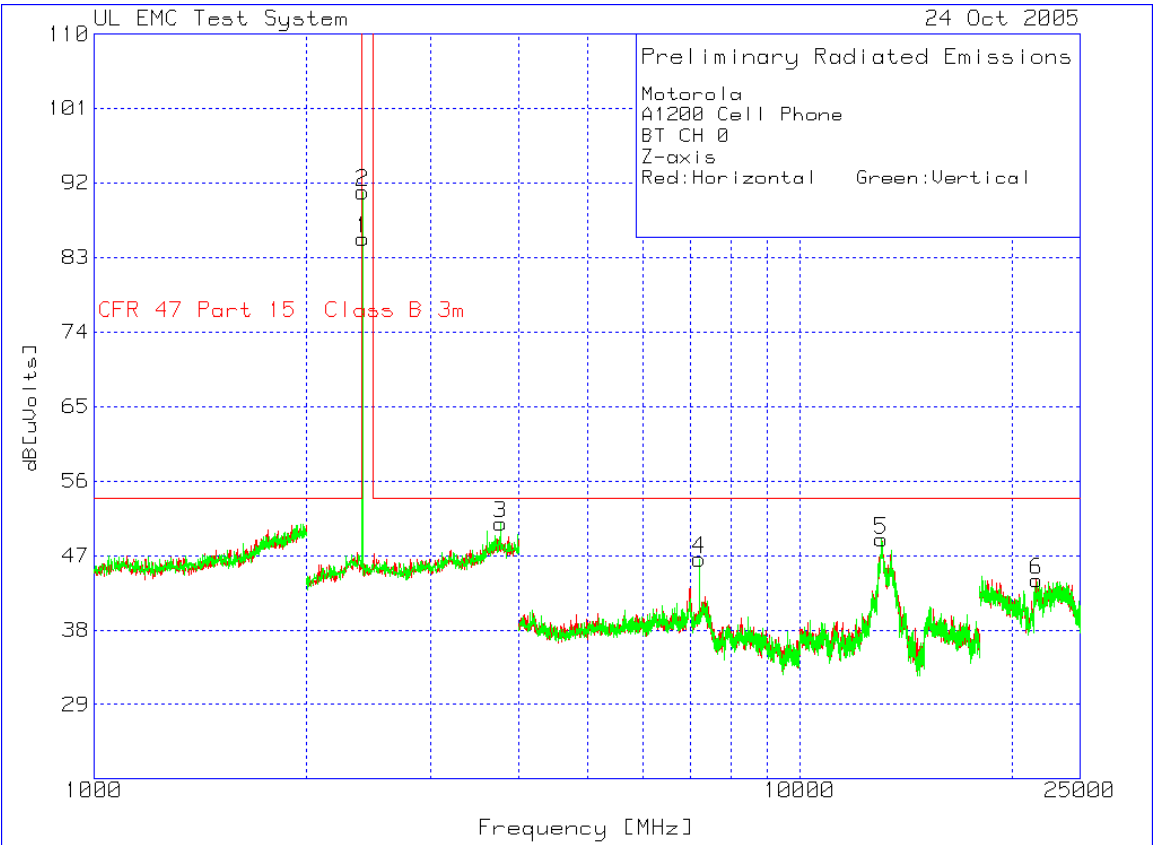
1-25 GHz Low Channel Dual Polarization X

Motorola											
A1200 Cell Phone											
BT CH 0											
X-axis											
Red:Horizontal Green:Vertical											
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	62.95 pk		4.4	21.8	89.15	999	-909.85	100	Horz	
8 - 12GHz 8000 - 12000MHz											
4	9609.61	53.23 pk		-49	36.4	40.63	54	-13.37	100	Horz	
12 - 18GHz 12000 - 18000MHz											
5	13069.069	43.16 pk		-34	39.8	48.96	54	-5.04	100	Horz	
18-26.5GHz 18000 - 25000MHz											
6	18490.49	72.96 pk		-67.4	40.1	45.66	54	-8.34	100	Horz	
7	21720.721	65.36 pk		-61.2	40.4	44.56	54	-9.44	100	Horz	
2 - 4GHz 2000 - 4000MHz											
2	2400.802	63.79 pk		4.4	21.8	89.99	999	-909.01	149	Vert	
4 - 8GHz 4000 - 8000MHz											
3	7207.207	64.8 pk		-46.9	29.8	47.7	54	-6.3	100	Vert	
LIMIT 1: CFR 47 Part 15 Class B 3m											



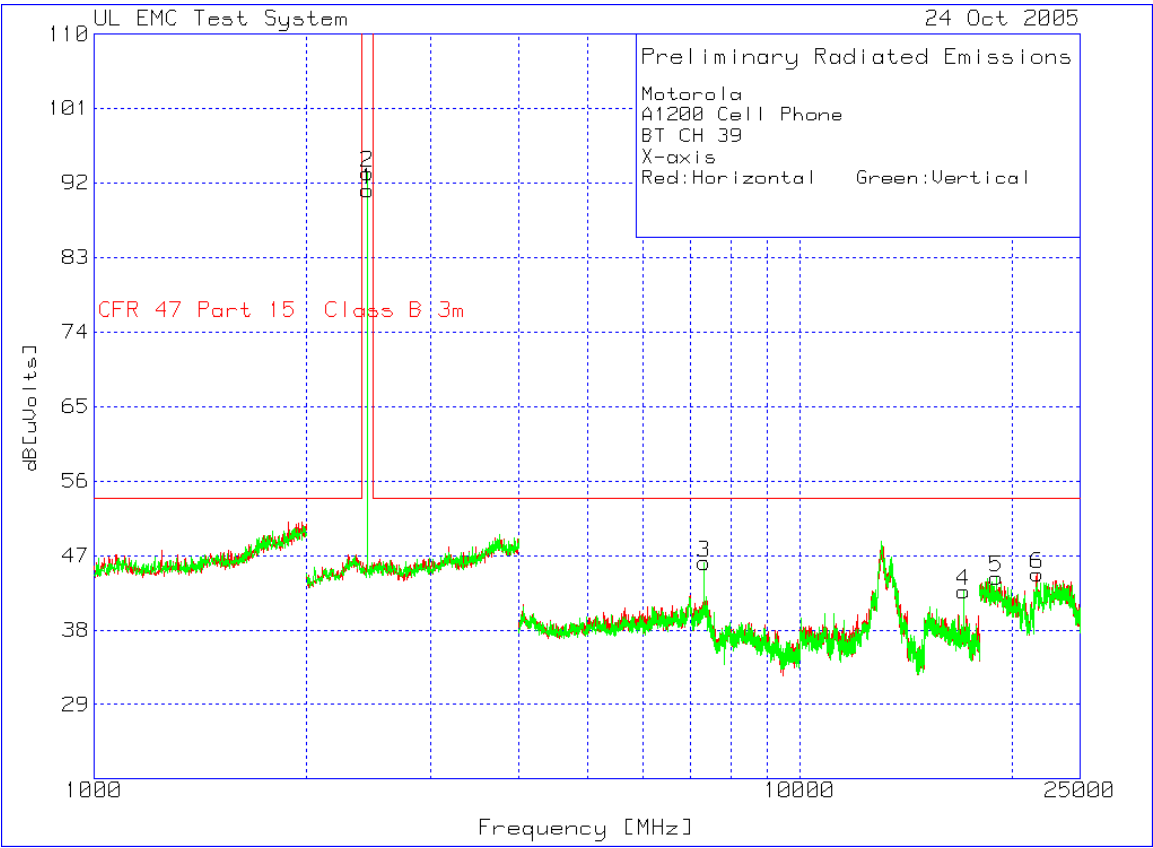
1-25 GHz Low Channel Dual Polarization Y

Motorola A1200 Cell Phone BT CH 0 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]	Height [cm] Polarity
2 - 4GHz 2000 - 4000MHz									
1	2400.802	59.25 pk		4.4	21.8	85.45	999	-913.55	149 Horz
12 - 18GHz 12000 - 18000MHz									
4	13093.093	42.58 pk		-33.7	39.8	48.68	54	-5.32	100 Horz
18-26.5GHz 18000 - 25000MHz									
6	21657.658	66.12 pk		-61.3	40.4	45.22	54	-8.78	100 Horz
2 - 4GHz 2000 - 4000MHz									
2	2400.802	64.73 pk		4.4	21.8	90.93	999	-908.07	100 Vert
4 - 8GHz 4000 - 8000MHz									
3	7207.207	62.97 pk		-46.9	29.8	45.87	54	-8.13	100 Vert
12 - 18GHz 12000 - 18000MHz									
5	13477.477	44.12 pk		-35.5	39.8	48.42	54	-5.58	100 Vert
LIMIT 1: CFR 47 Part 15 Class B 3m									



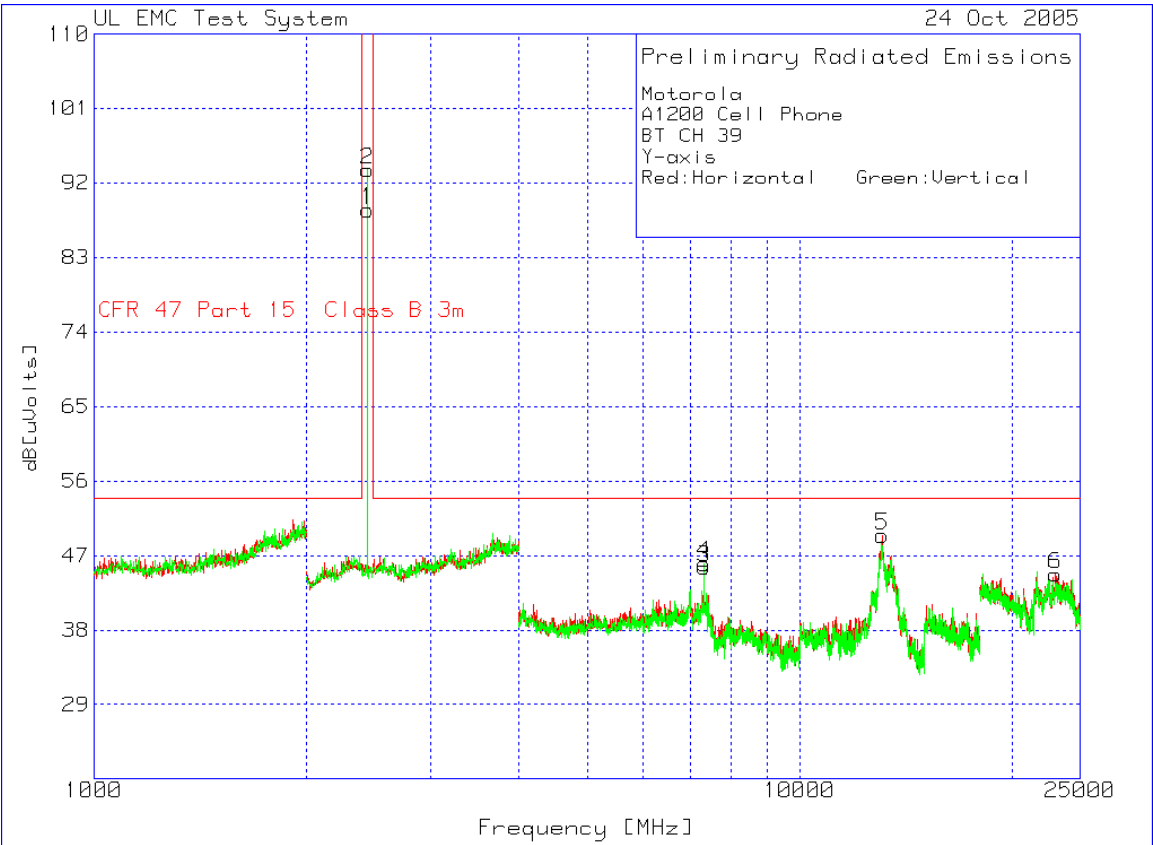
1-25 GHz Low Channel Dual Polarization Z

Motorola A1200 Cell Phone BT CH 0 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]	Height [cm]	Polarity
2 - 4GHz 2000 - 4000MHz										
1	2400.802	59.08 pk		4.4	21.8	85.28	999	-913.72	149	Horz
18-26.5GHz 18000 - 25000MHz										
6	21678.679	64.92 pk		-61.3	40.4	44.02	54	-9.98	100	Horz
2 - 4GHz 2000 - 4000MHz										
2	2400.802	64.73 pk		4.4	21.8	90.93	999	-908.07	100	Vert
3	3767.535	21.5 pk		5.5	23.9	50.9	54	-3.1	100	Vert
4 - 8GHz 4000 - 8000MHz										
4	7207.207	63.67 pk		-46.9	29.8	46.57	54	-7.43	100	Vert
12 - 18GHz 12000 - 18000MHz										
5	13069.069	43.13 pk		-34	39.8	48.93	54	-5.07	100	Vert
LIMIT 1: CFR 47 Part 15 Class B 3m										



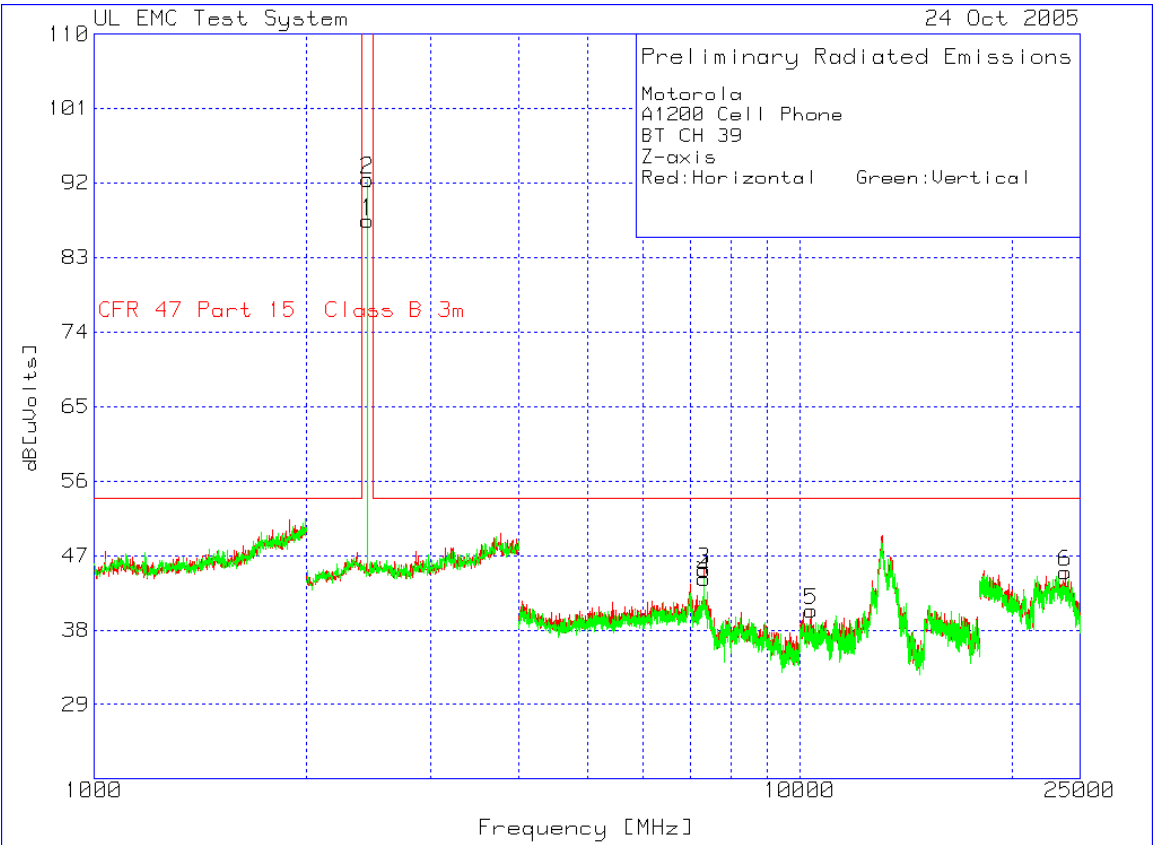
1-25 GHz Mid Channel Dual Polarization X

Motorola											
A1200 Cell Phone											
BT CH 39											
X-axis											
Red:Horizontal Green:Vertical											
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	2440.882	65.03	pk	4.2	21.9	91.13	999	-907.87	100	Horz	
18-26.5GHz 18000 - 25000MHz											
6	21734.735	65.56	pk	-61.2	40.4	44.76	54	-9.24	100	Horz	
2 - 4GHz 2000 - 4000MHz											
2	2440.882	67.12	pk	4.2	21.9	93.22	999	-905.78	149	Vert	
4 - 8GHz 4000 - 8000MHz											
3	7323.323	61.83	pk	-46.3	30.6	46.13	54	-7.87	100	Vert	
12 - 18GHz 12000 - 18000MHz											
4	17087.087	43.47	pk	-41.1	40.3	42.67	54	-11.33	100	Vert	
18-26.5GHz 18000 - 25000MHz											
5	19009.009	72.64	pk	-68.5	40.2	44.34	54	-9.66	100	Vert	
LIMIT 1: CFR 47 Part 15 Class B 3m											



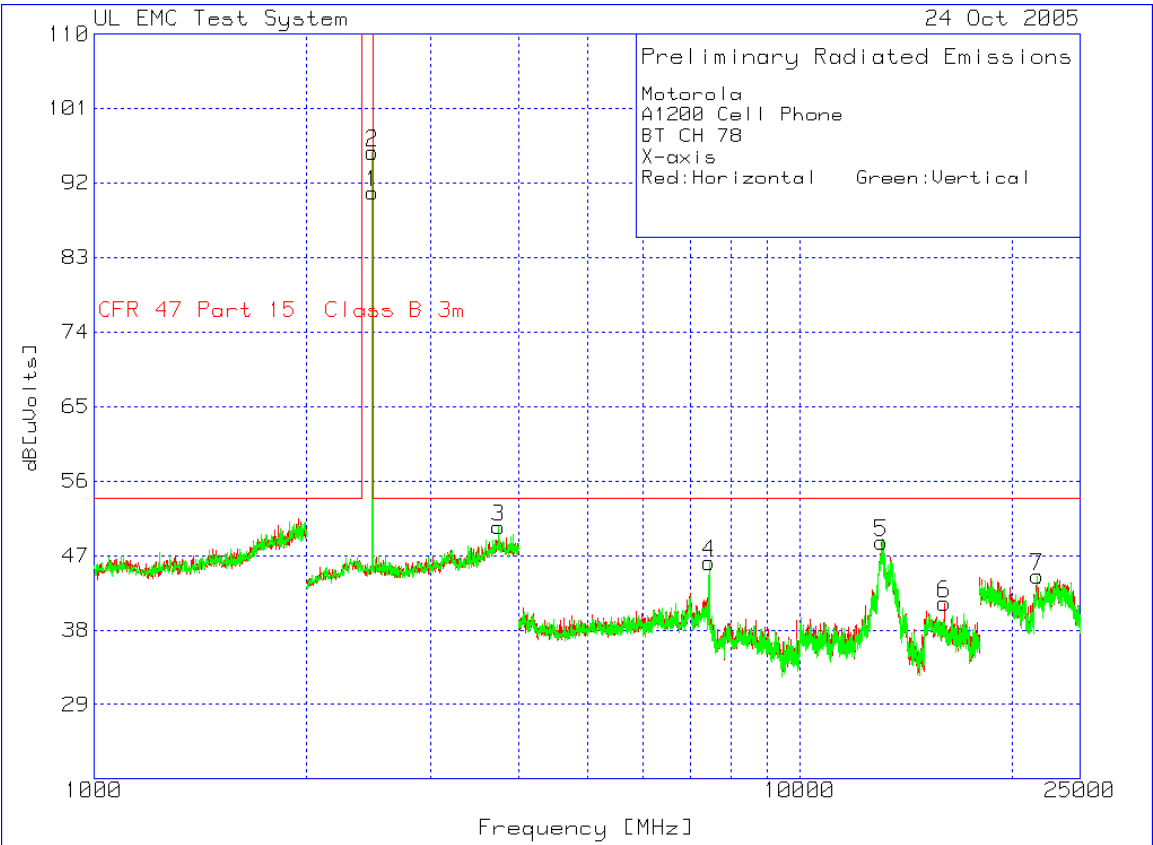
1-25 GHz Mid Channel Dual Polarization Y

Motorola A1200 Cell Phone BT 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]	Height [cm]	Polarity
2 - 4GHz 2000 - 4000MHz										
1	2440.882	62.66 pk		4.2	21.9	88.76	999	-910.24	100	Horz
4 - 8GHz 4000 - 8000MHz										
3	7323.323	61.28 pk		-46.3	30.6	45.58	54	-8.42	100	Horz
12 - 18GHz 12000 - 18000MHz										
5	13105.105	43.43 pk		-33.8	39.8	49.43	54	-4.57	100	Horz
18-26.5GHz 18000 - 25000MHz										
6	23066.066	60.95 pk		-56.5	40.3	44.75	54	-9.25	100	Horz
2 - 4GHz 2000 - 4000MHz										
2	2440.882	67.47 pk		4.2	21.9	93.57	999	-905.43	100	Vert
4 - 8GHz 4000 - 8000MHz										
4	7323.323	61.72 pk		-46.3	30.6	46.02	54	-7.98	100	Vert
LIMIT 1: CFR 47 Part 15 Class B 3m										



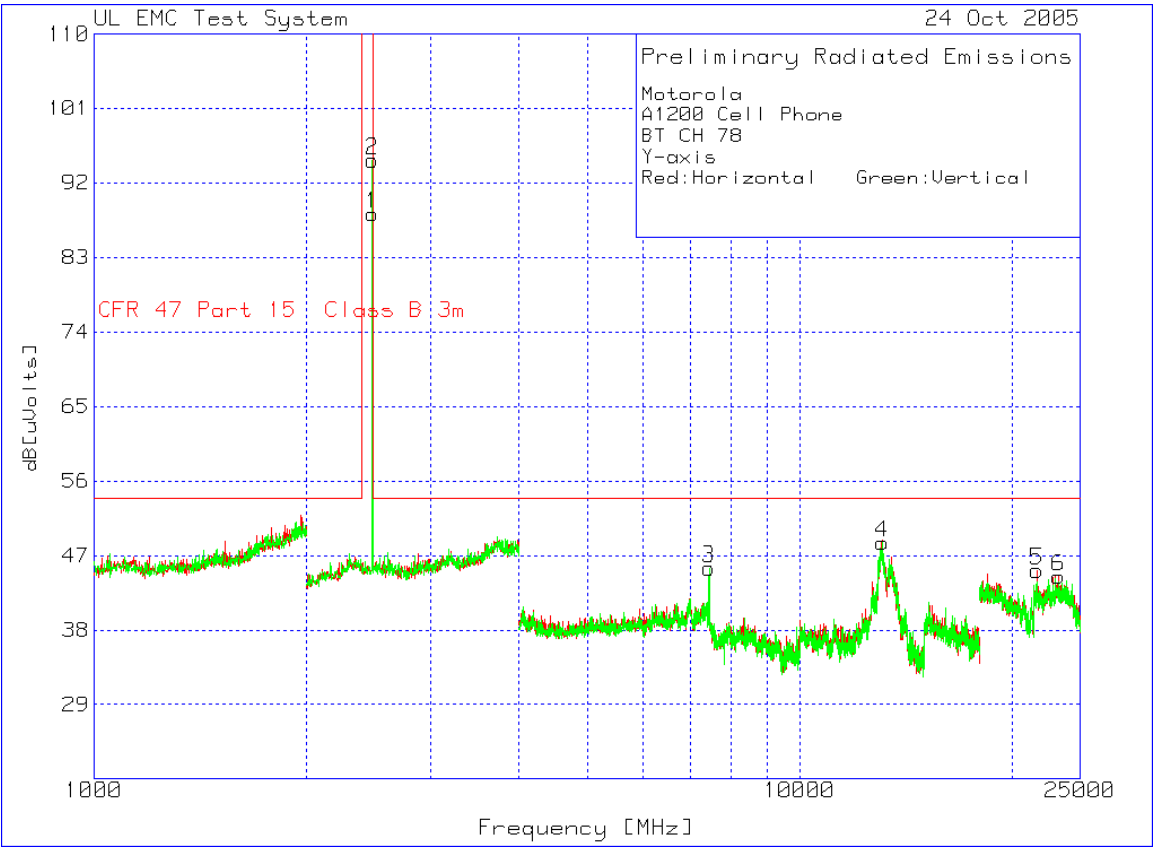
1-25 GHz Mid Channel Dual Polarization Z

Motorola A1200 Cell Phone BT 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]	Height [cm]	Polarity
2 - 4GHz 2000 - 4000MHz										
1	2440.882	61.32	pk	4.2	21.9	87.42	999	-911.58	100	Horz
4 - 8GHz 4000 - 8000MHz										
3	7323.323	60.97	pk	-46.3	30.6	45.27	54	-8.73	100	Horz
8 - 12GHz 8000 - 12000MHz										
5	10386.386	52.17	pk	-48.1	36.3	40.37	54	-13.63	100	Horz
18-26.5GHz 18000 - 25000MHz										
6	23801.802	61.78	pk	-57.1	40.3	44.98	54	-9.02	100	Horz
2 - 4GHz 2000 - 4000MHz										
2	2440.882	66.36	pk	4.2	21.9	92.46	999	-906.54	100	Vert
4 - 8GHz 4000 - 8000MHz										
4	7323.323	59.85	pk	-46.3	30.6	44.15	54	-9.85	100	Vert
LIMIT 1: CFR 47 Part 15 Class B 3m										



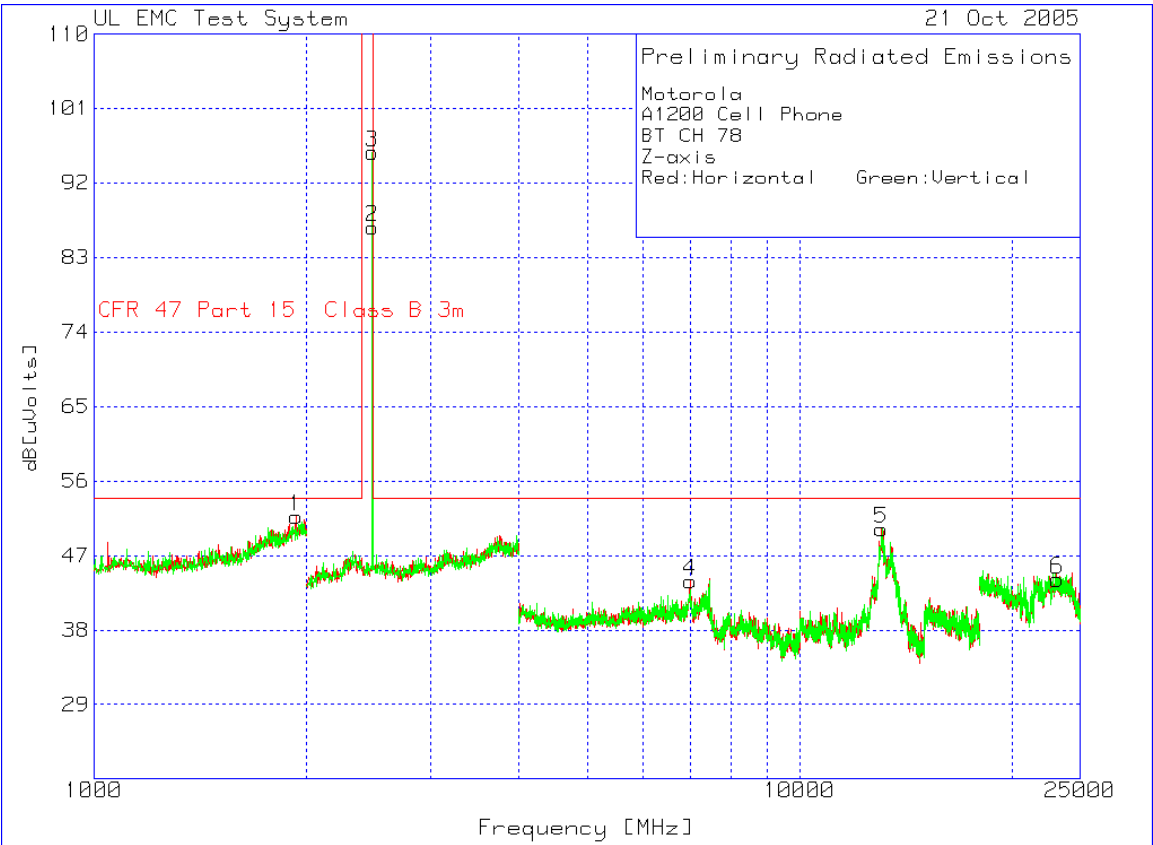
1-25 GHz High Channel Dual Polarization X

Motorola A1200 Cell Phone BT 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]	Height [cm]	Polarity
2 - 4GHz 2000 - 4000MHz										
1	2480.962	64.75 pk		4.1	22	90.85	999	-908.15	100	Horz
12 - 18GHz 12000 - 18000MHz										
5	13069.069	42.84 pk		-34	39.8	48.64	54	-5.36	100	Horz
6	16048.048	42.36 pk		-41	39.9	41.26	54	-12.74	100	Horz
2 - 4GHz 2000 - 4000MHz										
2	2480.962	69.63 pk		4.1	22	95.73	999	-903.27	149	Vert
3	3747.495	20.97 pk		5.7	23.8	50.47	54	-3.53	100	Vert
4 - 8GHz 4000 - 8000MHz										
4	7443.443	62.57 pk		-46.9	30.5	46.17	54	-7.83	100	Vert
18-26.5GHz 18000 - 25000MHz										
7	21734.735	65.31 pk		-61.2	40.4	44.51	54	-9.49	100	Vert
LIMIT 1: CFR 47 Part 15 Class B 3m										



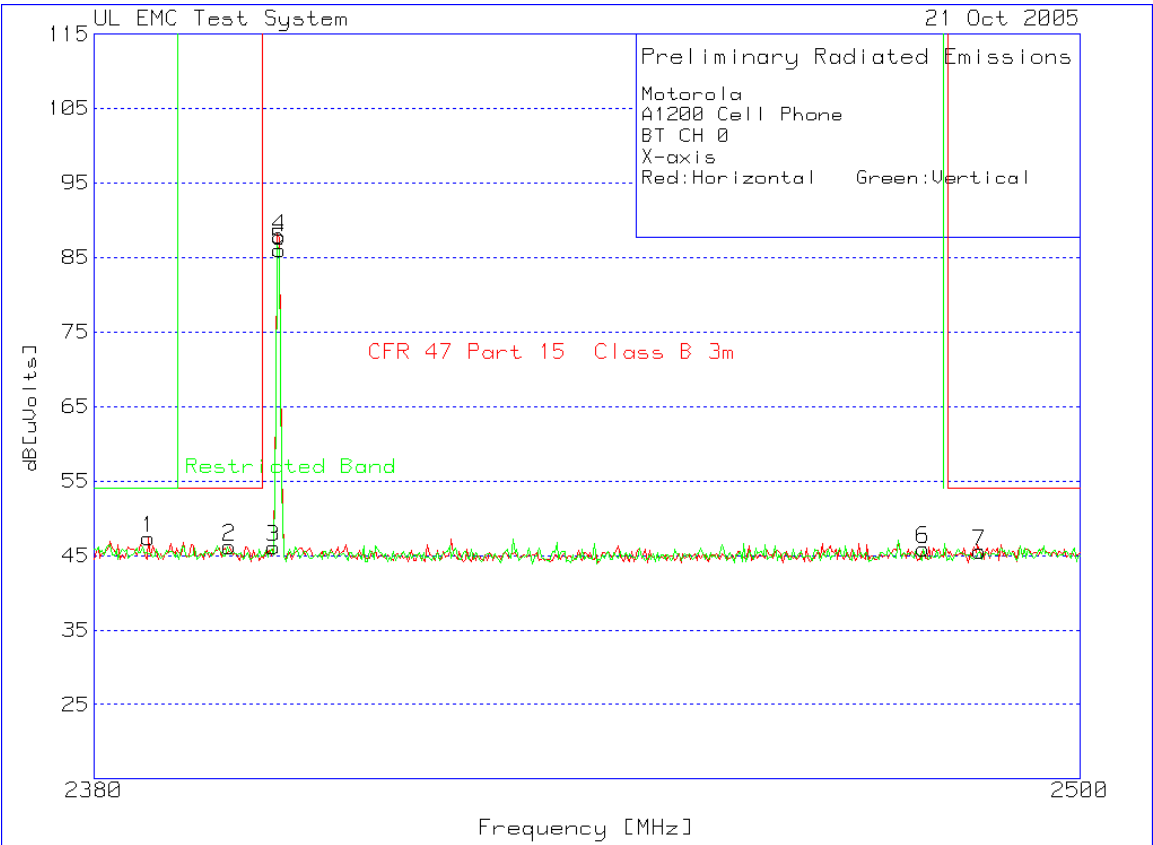
1-25 GHz High Channel Dual Polarization Y

Motorola A1200 Cell Phone BT 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]	Height [cm] Polarity
2 - 4GHz 2000 - 4000MHz									
1	2480.962	62.19 pk		4.1	22	88.29	999	-910.71	100 Horz
18-26.5GHz 18000 - 25000MHz									
5	21699.7	66 pk		-61.2	40.4	45.2	54	-8.8	100 Horz
6	23262.262	60.49 pk		-56.3	40.3	44.49	54	-9.51	100 Horz
2 - 4GHz 2000 - 4000MHz									
2	2480.962	68.65 pk		4.1	22	94.75	999	-904.25	100 Vert
4 - 8GHz 4000 - 8000MHz									
3	7443.443	61.89 pk		-46.9	30.5	45.49	54	-8.51	100 Vert
12 - 18GHz 12000 - 18000MHz									
4	13093.093	42.47 pk		-33.7	39.8	48.57	54	-5.43	100 Vert
LIMIT 1: CFR 47 Part 15 Class B 3m									



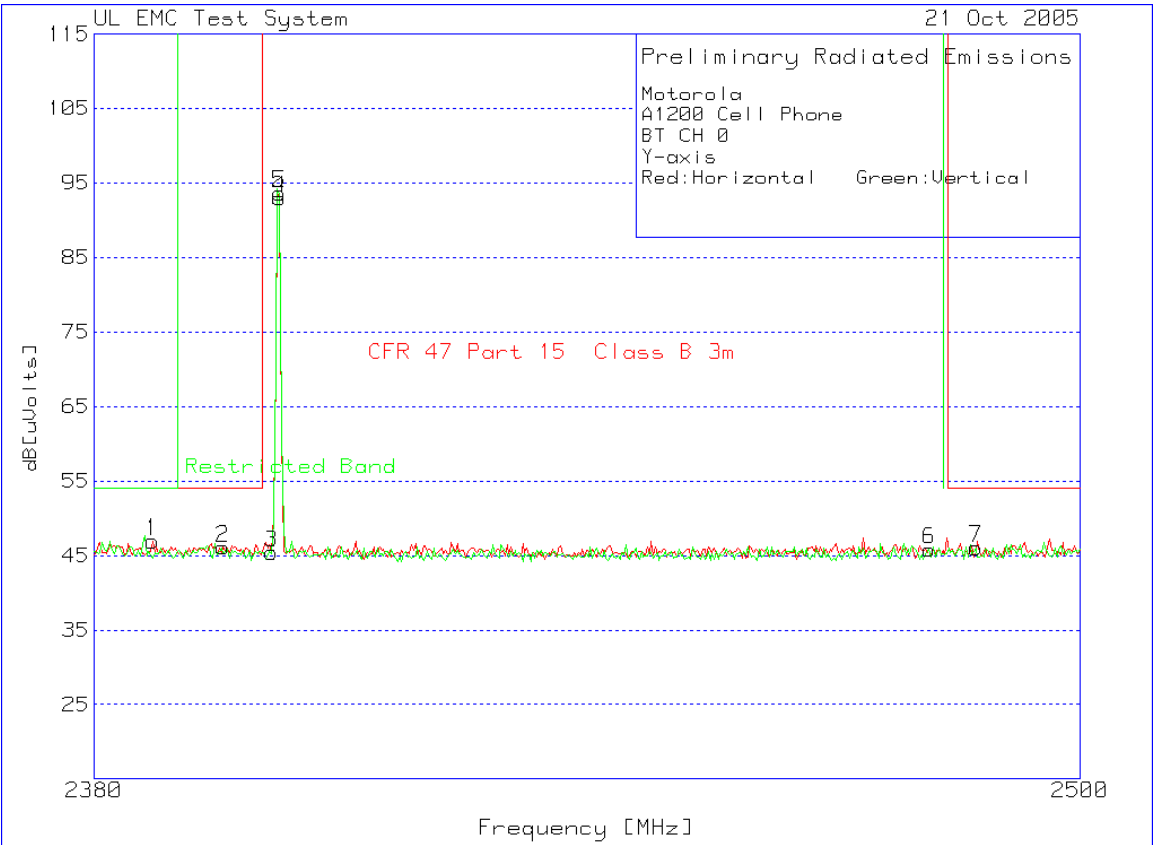
1-25 GHz High Channel Dual Polarization Z

Motorola A1200 Cell Phone BT 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]	Height [cm] Polarity
1 - 2GHz 1000 - 2000MHz									
1	1931.864	20.59 pk		3.6	27.5	51.69	54	-2.31	104 Horz
2 - 4GHz 2000 - 4000MHz									
2	2480.962	60.54 pk		4.1	22	86.64	999	-912.36	104 Horz
4 - 8GHz 4000 - 8000MHz									
4	6994.995	58.9 pk		-44.3	29.3	43.9	54	-10.1	104 Horz
12 - 18GHz 12000 - 18000MHz									
5	13069.069	44.38 pk		-34	39.8	50.18	54	-3.82	104 Horz
2 - 4GHz 2000 - 4000MHz									
3	2480.962	69.59 pk		4.1	22	95.69	999	-903.31	100 Vert
18-26.5GHz 18000 - 25000MHz									
6	23199.199	60.01 pk		-56.2	40.3	44.11	54	-9.89	100 Vert
LIMIT 1: CFR 47 Part 15 Class B 3m									



Authorized Band Emissions Low Channel Dual Polarization X

Motorola A1200 Cell Phone BT CH 0 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]	Limit 2	Margin 2[dB]	Height [cm]	Polarity
2 - 4GHz 2380 - 2500MHz												
1	2386.493	21.1 pk		4.4	21.8	47.3	54	-6.7	54	-6.7	104	Horz
2	2396.112	20 pk		4.4	21.8	46.2	54	-7.8	999	-952.8	104	Horz
3	2401.403	19.89 pk		4.4	21.8	46.09	999	-952.91	999	-952.91	104	Horz
4	2402.124	61.57 pk		4.4	21.8	87.77	999	-911.23	999	-911.23	104	Horz
2 - 4GHz 2380 - 2500MHz												
5	2402.124	59.83 pk		4.4	21.8	86.03	999	-912.97	999	-912.97	104	Vert
6	2480.521	19.81 pk		4.1	22	45.91	999	-953.09	999	-953.09	104	Vert
7	2487.495	19.36 pk		4.1	22.1	45.56	54	-8.44	0	45.56	104	Vert
LIMIT 1: CFR 47 Part 15 Class B 3m LIMIT 2: Restricted Band												



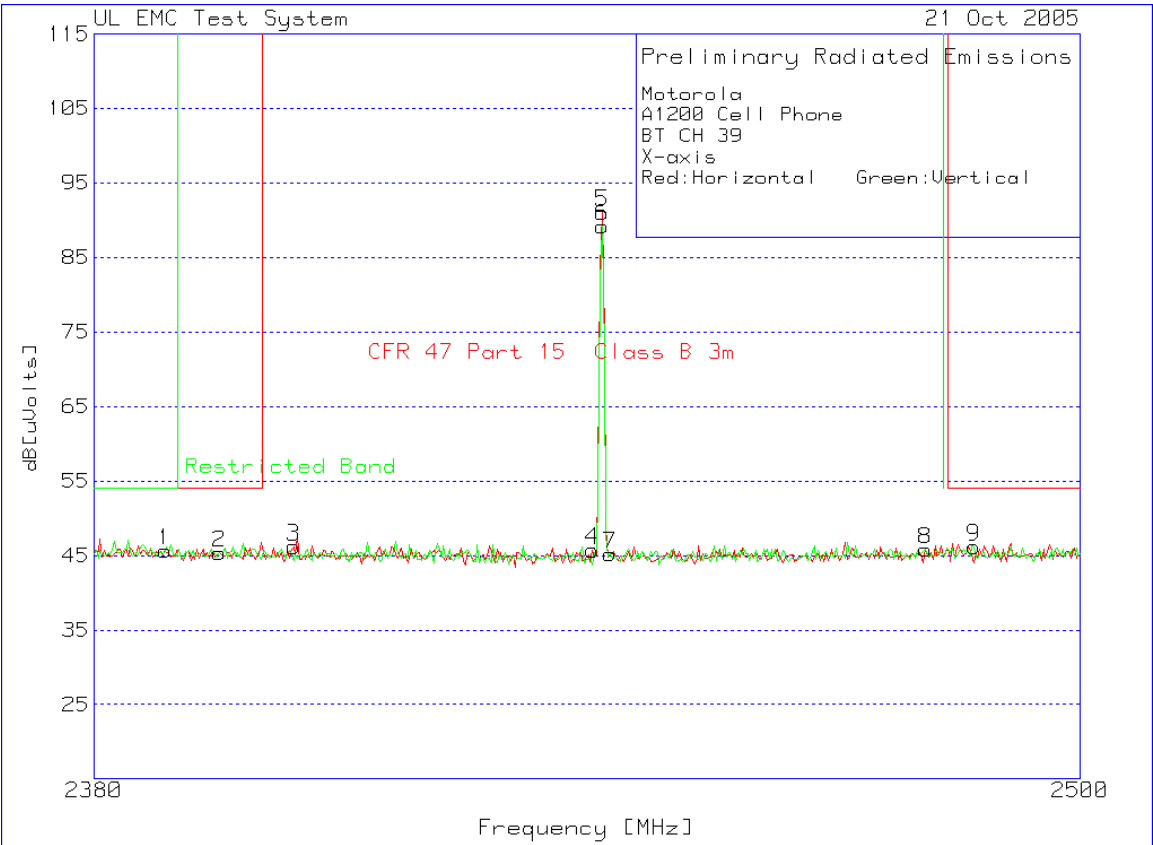
Authorized Band Emissions Low Channel Dual Polarization Y

Motorola A1200 Cell Phone BT CH 0 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]	Limit 2	Margin 2[dB]	Height [cm]	Polarity
2 - 4GHz 2380 - 2500MHz												
1	2386.974	20.78 pk		4.4	21.8	46.98	54	-7.02	54	-7.02	100	Horz
2	2395.391	19.88 pk		4.4	21.8	46.08	54	-7.92	999	-952.92	100	Horz
3	2401.162	19.21 pk		4.4	21.8	45.41	999	-953.59	999	-953.59	150	Horz
4	2402.124	66.81 pk		4.4	21.8	93.01	999	-905.99	999	-905.99	100	Horz
2 - 4GHz 2380 - 2500MHz												
5	2402.124	67.46 pk		4.4	21.8	93.66	999	-905.34	999	-905.34	100	Vert
6	2481.243	19.73 pk		4.1	22	45.83	999	-953.17	999	-953.17	100	Vert
7	2487.014	19.85 pk		4.1	22.1	46.05	54	-7.95	0	46.05	100	Vert
LIMIT 1: CFR 47 Part 15 Class B 3m LIMIT 2: Restricted Band												



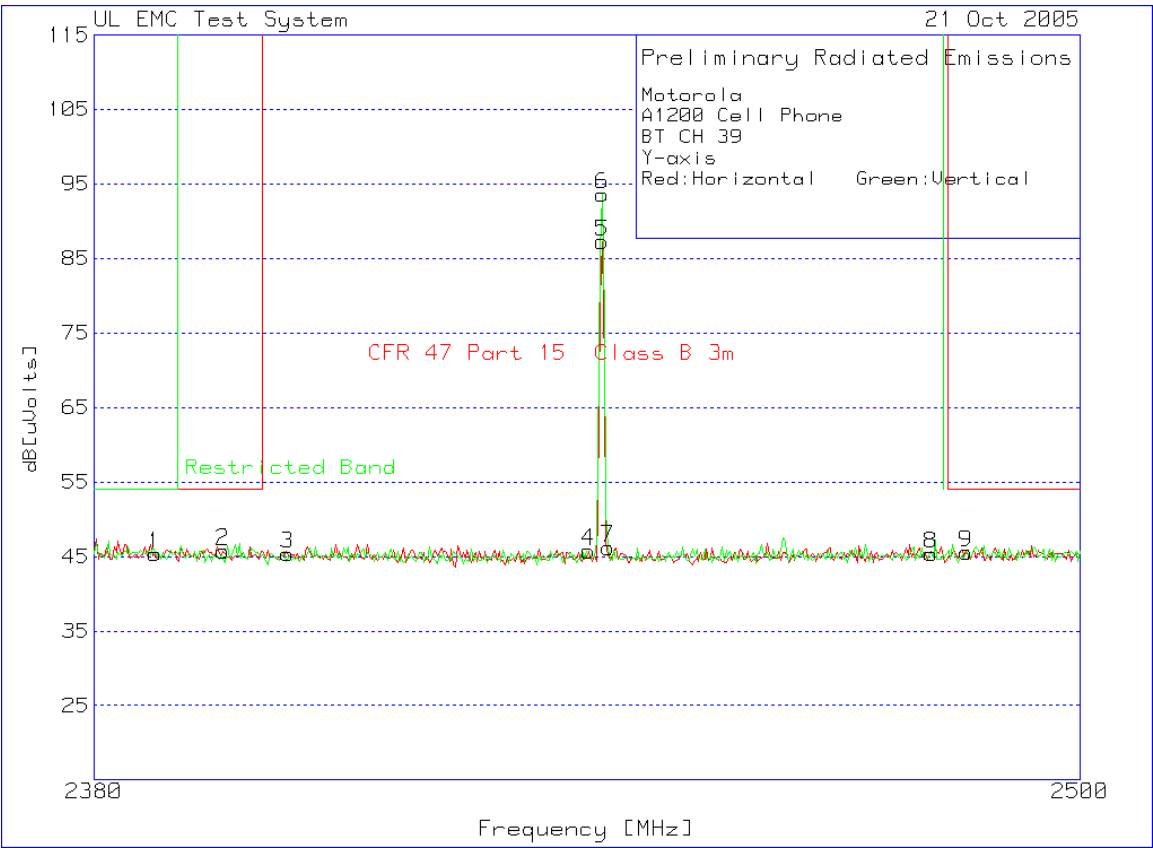
Authorized Band Emissions Low Channel Dual Polarization Z

Motorola													
A1200 Cell Phone													
BT CH 0													
Z-axis													
Red:Horizontal				Green:Vertical									
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 2380 - 2500MHz													
1	2388.417	20.12 pk		4.4	21.8	46.32	54	-7.68	54	-7.68	104	Horz	
2	2396.353	19.14 pk		4.4	21.8	45.34	54	-8.66	999	-953.66	104	Horz	
3	2400.922	18.91 pk		4.4	21.8	45.11	999	-953.89	999	-953.89	104	Horz	
4	2402.124	53.94 pk		4.4	21.8	80.14	999	-918.86	999	-918.86	104	Horz	
6	2481.002	19.63 pk		4.1	22	45.73	999	-953.27	999	-953.27	104	Horz	
7	2487.495	19.67 pk		4.1	22.1	45.87	54	-8.13	0	45.87	104	Horz	
2 - 4GHz 2380 - 2500MHz													
5	2402.124	64.86 pk		4.4	21.8	91.06	999	-907.94	999	-907.94	104	Vert	
LIMIT 1: CFR 47 Part 15 Class B 3m													
LIMIT 2: Restricted Band													



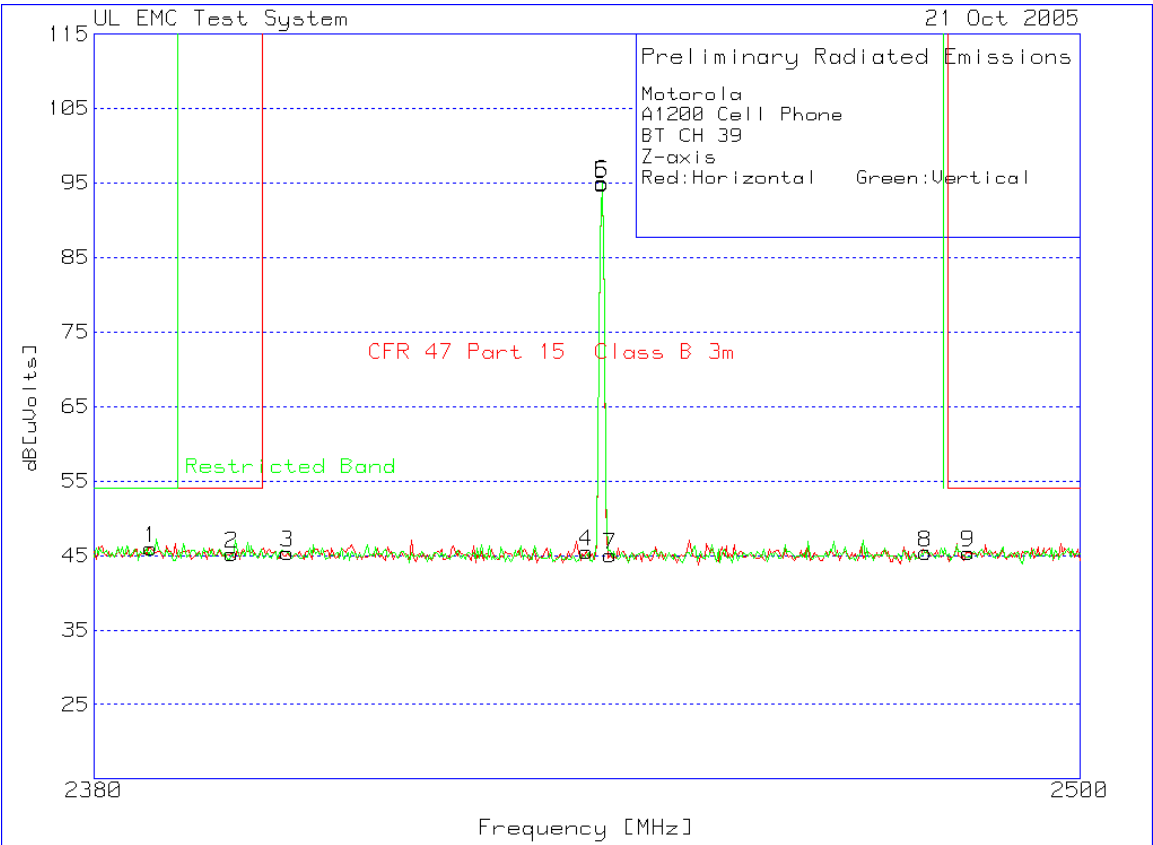
Authorized Band Emissions Mid Channel Dual Polarization X

Motorola A1200 Cell Phone BT 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]	Limit 2	Margin 2[dB]	Height [cm]	Polarity
2 - 4GHz 2380 - 2500MHz												
1	2388.417	19.49 pk		4.4	21.8	45.69	54	-8.31	54	-8.31	104	Horz
2	2394.91	19.14 pk		4.4	21.8	45.34	54	-8.66	999	-953.66	104	Horz
3	2403.808	20.01 pk		4.4	21.8	46.21	999	-952.79	999	-952.79	104	Horz
4	2439.88	19.66 pk		4.2	21.9	45.76	999	-953.24	999	-953.24	104	Horz
5	2441.082	64.97 pk		4.2	21.9	91.07	999	-907.93	999	-907.93	104	Horz
2 - 4GHz 2380 - 2500MHz												
6	2441.082	63.06 pk		4.2	21.9	89.16	999	-909.84	999	-909.84	104	Vert
7	2442.044	19.14 pk		4.2	21.9	45.24	999	-953.76	999	-953.76	104	Vert
8	2480.762	19.73 pk		4.1	22	45.83	999	-953.17	999	-953.17	104	Vert
9	2486.774	20 pk		4.1	22.1	46.2	54	-7.8	0	46.2	104	Vert
LIMIT 1: CFR 47 Part 15 Class B 3m LIMIT 2: Restricted Band												



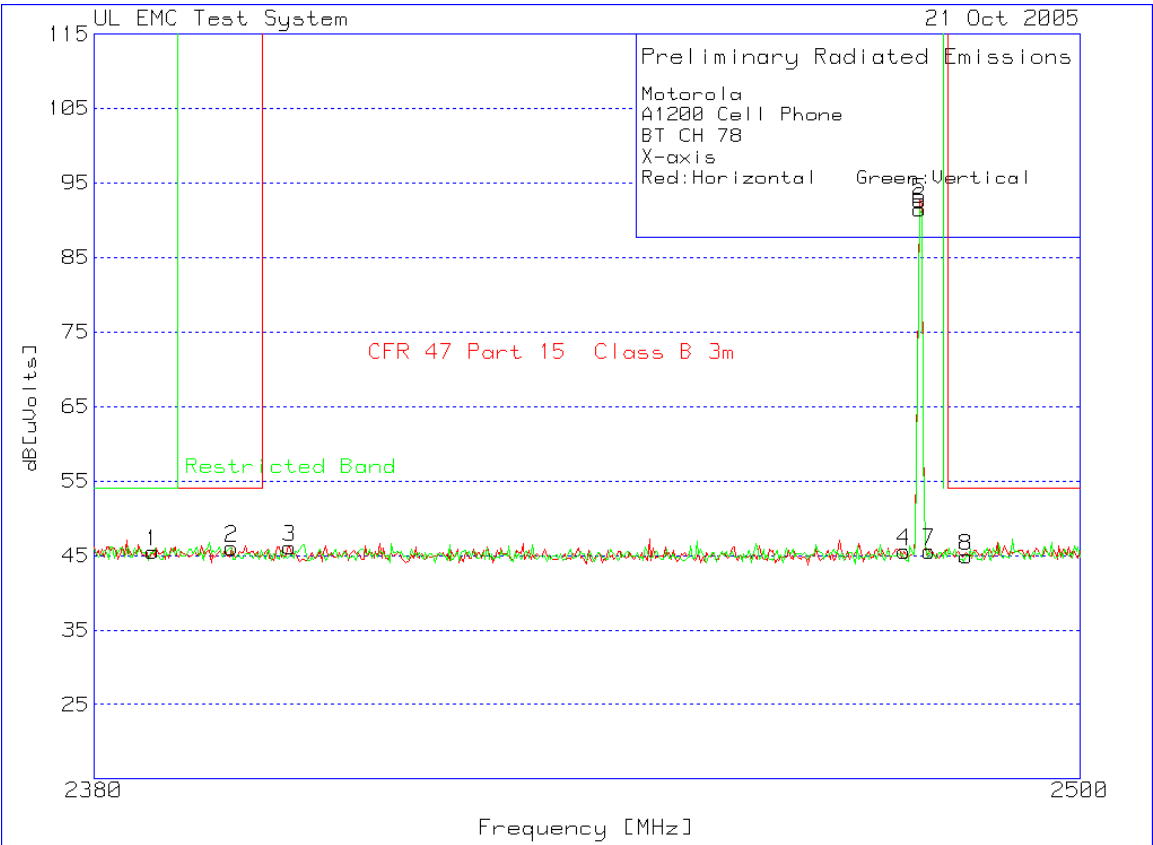
Authorized Band Emissions Mid Channel Dual Polarization Y

Motorola A1200 Cell Phone BT 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]	Limit 2	Margin 2[dB]	Height [cm]	Polarity
2 - 4GHz 2380 - 2500MHz												
1	2387.214	19.18 pk		4.4	21.8	45.38	54	-8.62	54	-8.62	104	Horz
2	2395.391	19.53 pk		4.4	21.8	45.73	54	-8.27	999	-953.27	104	Horz
3	2403.086	19.18 pk		4.4	21.8	45.38	999	-953.62	999	-953.62	104	Horz
4	2439.399	19.65 pk		4.2	21.9	45.75	999	-953.25	999	-953.25	104	Horz
5	2441.082	61.17 pk		4.2	21.9	87.27	999	-911.73	999	-911.73	104	Horz
2 - 4GHz 2380 - 2500MHz												
6	2441.082	67.5 pk		4.2	21.9	93.6	999	-905.4	999	-905.4	104	Vert
7	2441.804	20.09 pk		4.2	21.9	46.19	999	-952.81	999	-952.81	104	Vert
8	2481.483	19.26 pk		4.1	22	45.36	999	-953.64	999	-953.64	104	Vert
9	2485.812	19.36 pk		4.1	22.1	45.56	54	-8.44	0	45.56	104	Vert
LIMIT 1: CFR 47 Part 15 Class B 3m LIMIT 2: Restricted Band												



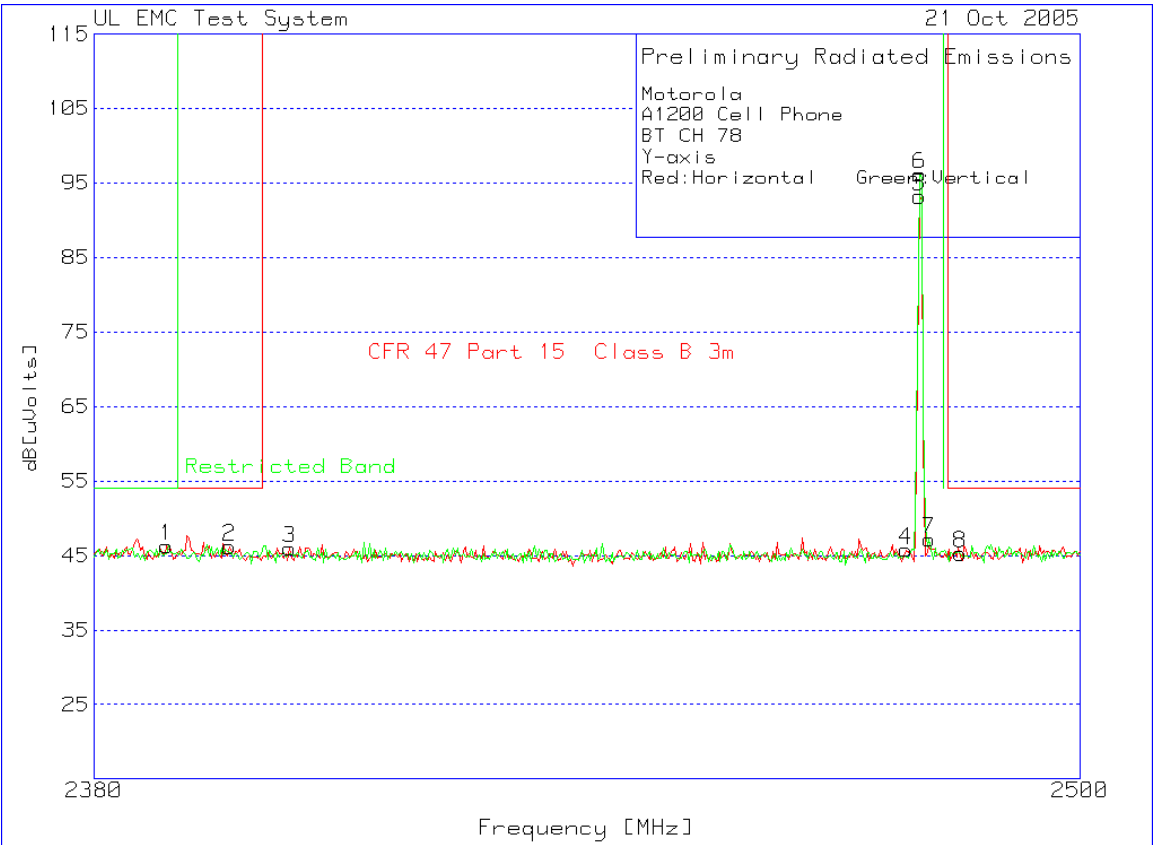
Authorized Band Emissions Mid Channel Dual Polarization Z

Motorola A1200 Cell Phone BT 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]	Limit 2	Margin 2[dB]	Height [cm] Polarity
2 - 4GHz 2380 - 2500MHz											
1	2386.733	19.75 pk		4.4	21.8	45.95	54	-8.05	54	-8.05	104 Horz
2	2396.353	18.99 pk		4.4	21.8	45.19	54	-8.81	999	-953.81	104 Horz
3	2403.086	19.14 pk		4.4	21.8	45.34	999	-953.66	999	-953.66	104 Horz
4	2439.158	19.4 pk		4.2	21.9	45.5	999	-953.5	999	-953.5	104 Horz
5	2441.082	68.76 pk		4.2	21.9	94.86	999	-904.14	999	-904.14	104 Horz
7	2442.044	18.93 pk		4.2	21.9	45.03	999	-953.97	999	-953.97	104 Horz
8	2480.762	19.3 pk		4.1	22	45.4	999	-953.6	999	-953.6	104 Horz
9	2486.052	19.16 pk		4.1	22.1	45.36	54	-8.64	0	45.36	104 Horz
2 - 4GHz 2380 - 2500MHz											
6	2441.082	68.96 pk		4.2	21.9	95.06	999	-903.94	999	-903.94	104 Vert
LIMIT 1: CFR 47 Part 15 Class B 3m LIMIT 2: Restricted Band											



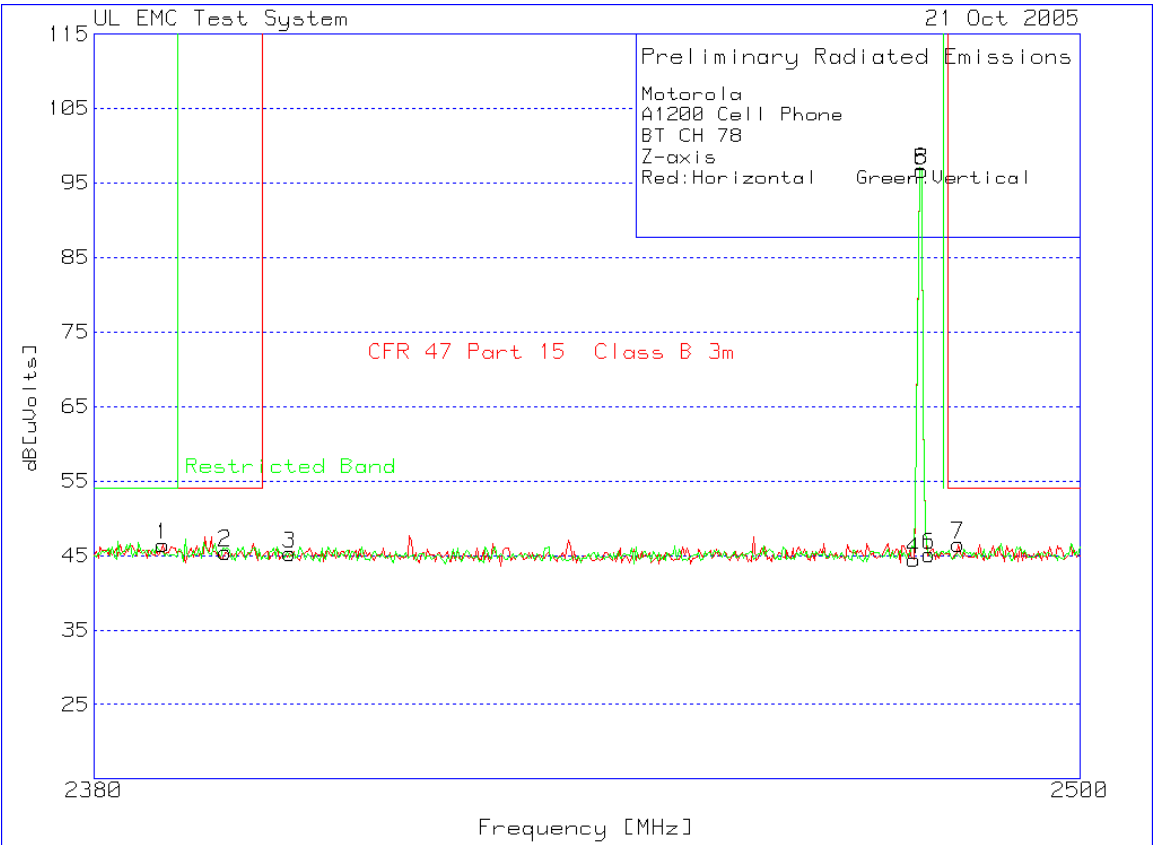
Authorized Band Emissions High Channel Dual Polarization X

Motorola A1200 Cell Phone BT 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]	Limit 2	Margin 2[dB]	Height [cm] Polarity
2 - 4GHz 2380 - 2500MHz											
1	2386.974	19.28 pk		4.4	21.8	45.48	54	-8.52	54	-8.52	104 Horz
2	2396.353	19.87 pk		4.4	21.8	46.07	54	-7.93	999	-952.93	104 Horz
3	2403.327	19.91 pk		4.4	21.8	46.11	999	-952.89	999	-952.89	104 Horz
4	2478.116	19.49 pk		4.1	22	45.59	999	-953.41	999	-953.41	104 Horz
5	2480.04	66.58 pk		4.1	22	92.68	999	-906.32	999	-906.32	104 Horz
2 - 4GHz 2380 - 2500MHz											
6	2480.04	65.36 pk		4.1	22	91.46	999	-907.54	999	-907.54	104 Vert
7	2481.243	19.48 pk		4.1	22	45.58	999	-953.42	999	-953.42	104 Vert
8	2485.812	18.72 pk		4.1	22.1	44.92	54	-9.08	0	44.92	104 Vert
LIMIT 1: CFR 47 Part 15 Class B 3m LIMIT 2: Restricted Band											



Authorized Band Emissions High Channel Dual Polarization Y

Motorola A1200 Cell Phone BT 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]	Limit 2	Margin 2[dB]	Height [cm]	Polarity
2 - 4GHz 2380 - 2500MHz												
1	2388.657	20.06 pk		4.4	21.8	46.26	54	-7.74	54	-7.74	104	Horz
2	2396.112	20.01 pk		4.4	21.8	46.21	54	-7.79	999	-952.79	104	Horz
3	2403.327	19.79 pk		4.4	21.8	45.99	999	-953.01	999	-953.01	104	Horz
4	2478.357	19.67 pk		4.1	22	45.77	999	-953.23	999	-953.23	104	Horz
5	2480.04	67.14 pk		4.1	22	93.24	999	-905.76	999	-905.76	104	Horz
2 - 4GHz 2380 - 2500MHz												
6	2480.04	70.05 pk		4.1	22	96.15	999	-902.85	999	-902.85	104	Vert
7	2481.243	21.09 pk		4.1	22	47.19	999	-951.81	999	-951.81	104	Vert
8	2485.09	19.08 pk		4.1	22.1	45.28	54	-8.72	0	45.28	104	Vert
LIMIT 1: CFR 47 Part 15 Class B 3m LIMIT 2: Restricted Band												



Authorized Band Emissions High Channel Dual Polarization Z

Motorola A1200 Cell Phone BT 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]	Limit 2	Margin 2[dB]	Height [cm]	Polarity
2 - 4GHz 2380 - 2500MHz												
1	2388.176	20.19 pk		4.4	21.8	46.39	54	-7.61	54	-7.61	104	Horz
2	2395.631	19.23 pk		4.4	21.8	45.43	54	-8.57	999	-953.57	104	Horz
3	2403.327	19.06 pk		4.4	21.8	45.26	999	-953.74	999	-953.74	104	Horz
4	2479.319	18.36 pk		4.1	22	44.46	999	-954.54	999	-954.54	104	Horz
5	2480.281	70.51 pk		4.1	22	96.61	999	-902.39	999	-902.39	104	Horz
6	2481.243	19.01 pk		4.1	22	45.11	999	-953.89	999	-953.89	104	Horz
7	2484.85	20.28 pk		4.1	22.1	46.48	54	-7.52	0	46.48	104	Horz
2 - 4GHz 2380 - 2500MHz												
8	2480.281	70.58 pk		4.1	22	96.68	999	-902.32	999	-902.32	104	Vert
LIMIT 1: CFR 47 Part 15 Class B 3m												
LIMIT 2: Restricted Band												

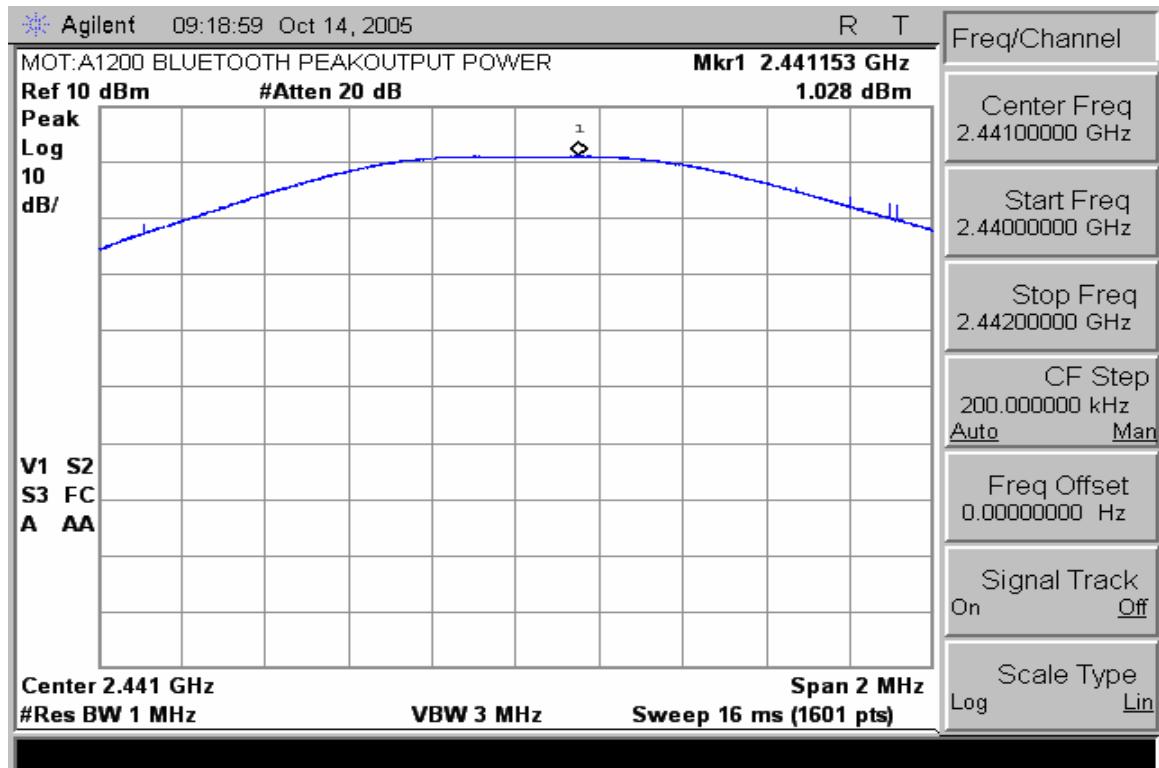
PEAK OUTPUT POWER

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

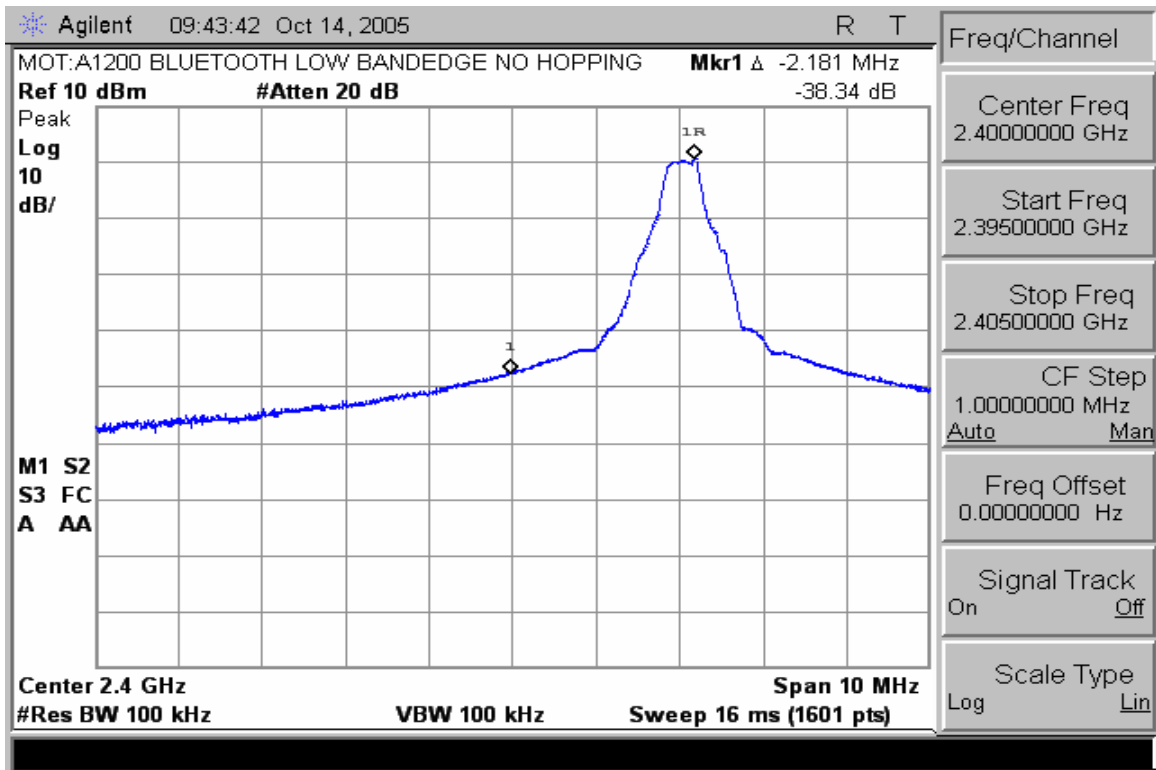
CFR 47 Part 15.247

Measurement Procedure

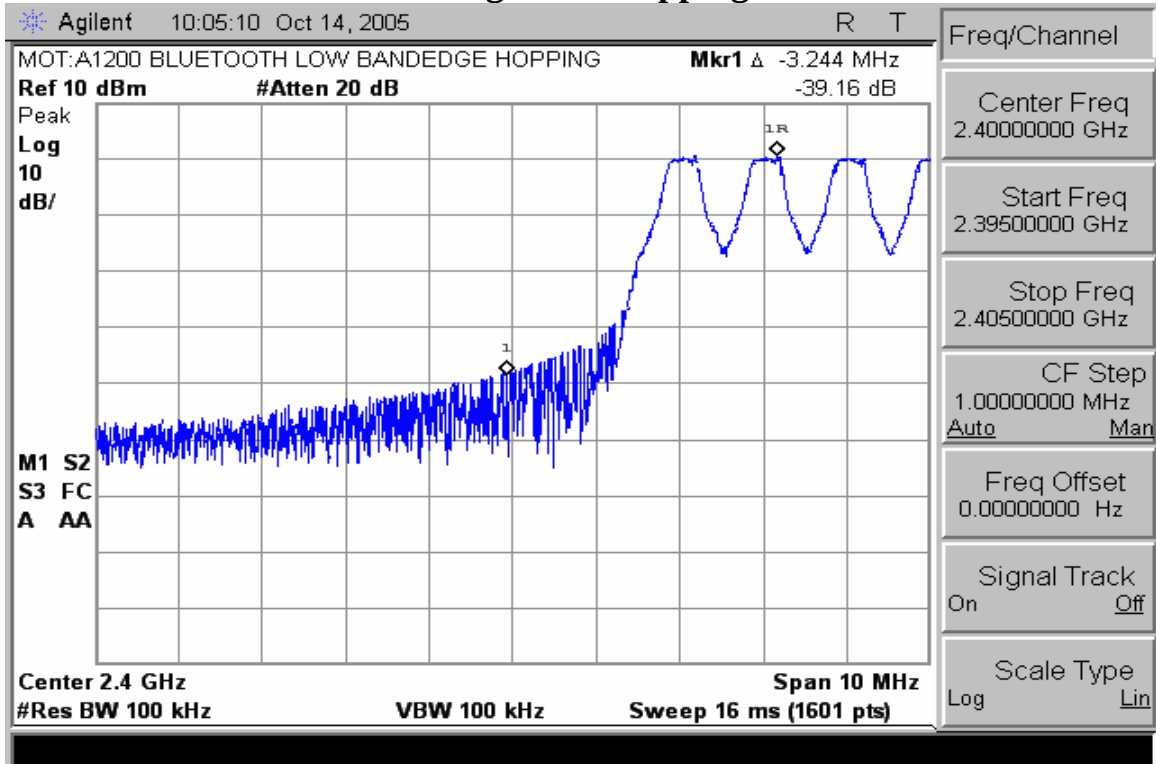
The RF output port of the Equipment-Under-Test is directly coupled to the input of the EMC analyzer through a specialized RF connector and a 10dB passive attenuator. A fully charged battery was used for the supply voltage.

Measurement Results

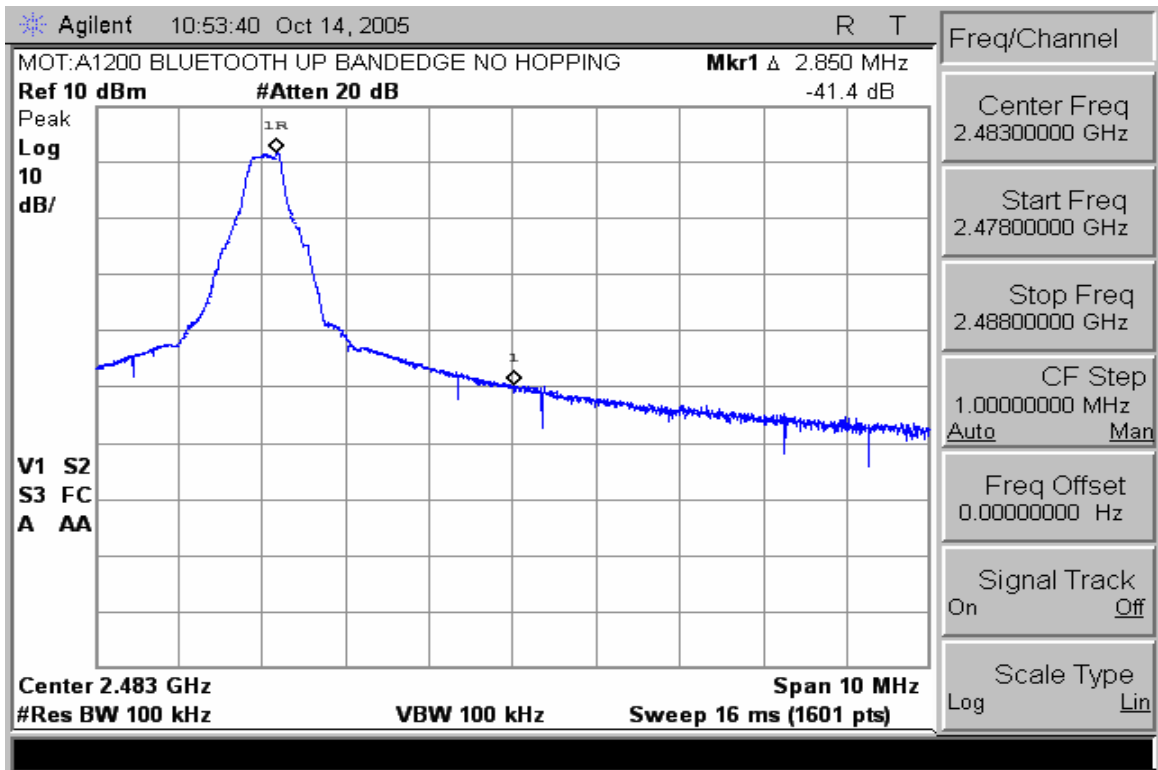
See Attached:



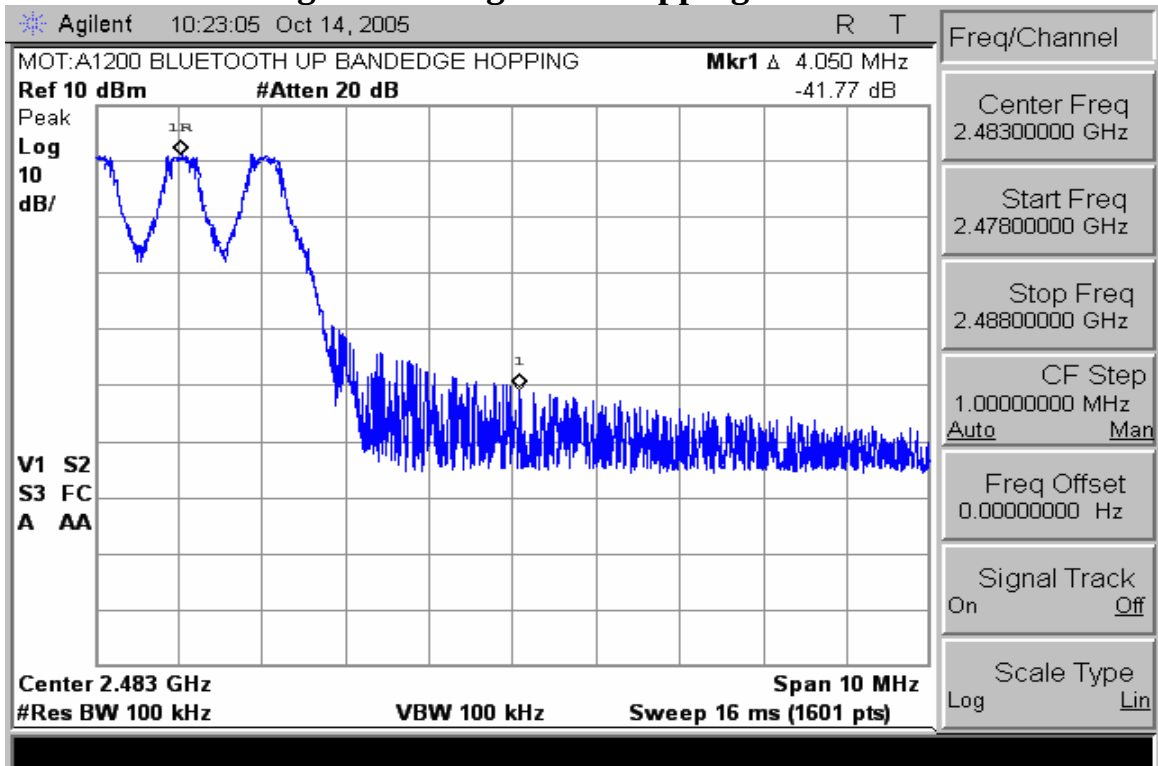
Low Band Edge with Hopping Disabled



Low Band Edge with Hopping Enabled



High Band Edge with Hopping Disabled



High Band Edge with Hopping Enabled

SPURIOUS RF CONDUCTED EMISSIONS

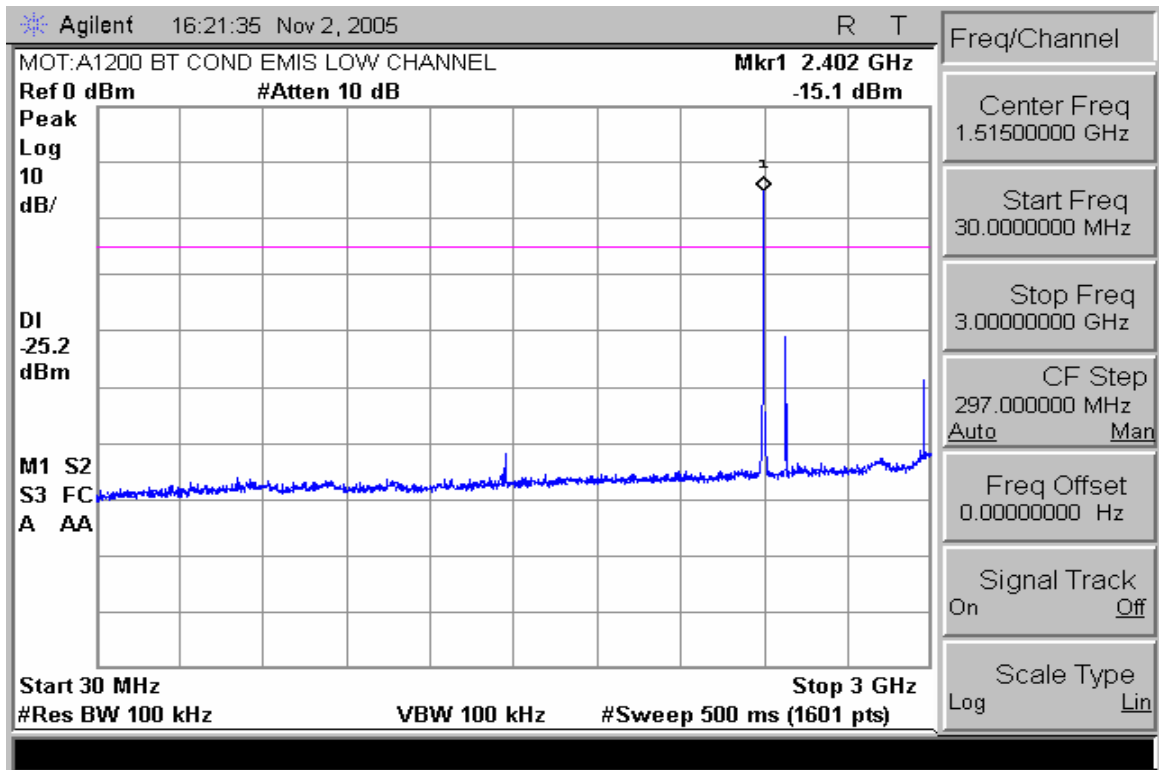
CFR 47 Part 15.247

Measurement Procedure

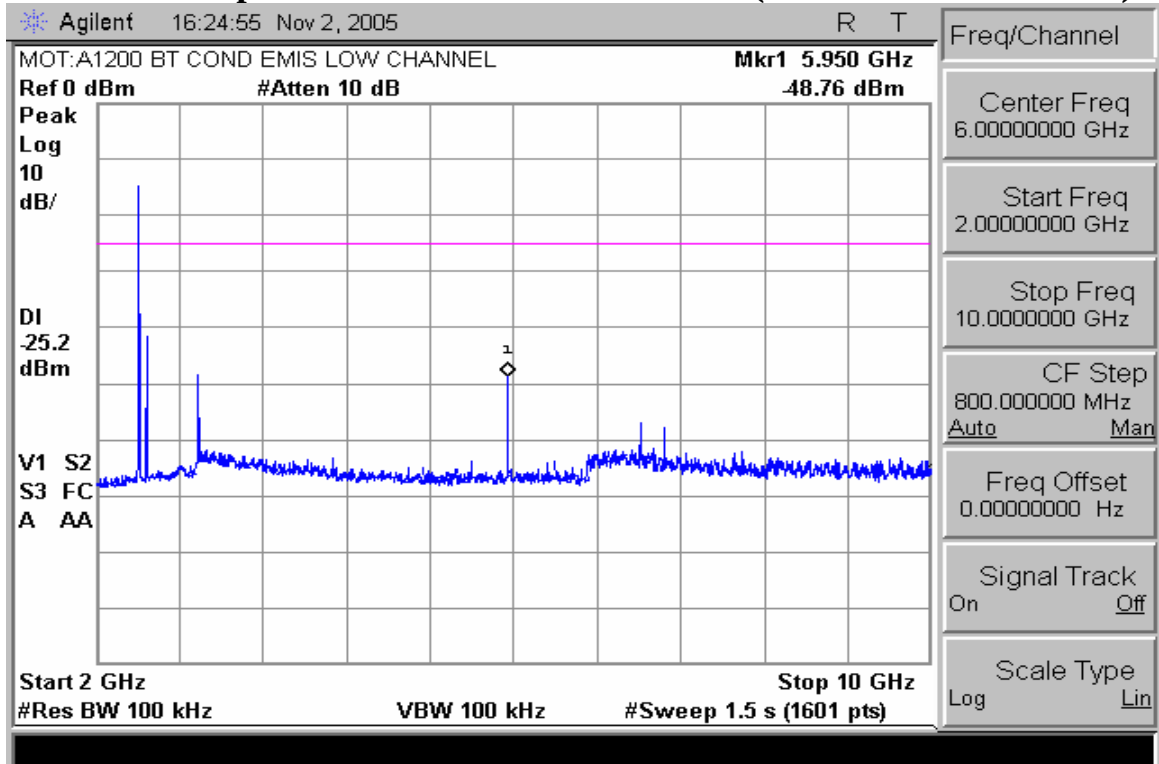
The RF output port of the Equipment-Under-Test is directly coupled to the input of the EMC analyzer through a specialized RF connector and a 10dB passive attenuator. A fully charged battery was used for the supply voltage.

Measurement Results

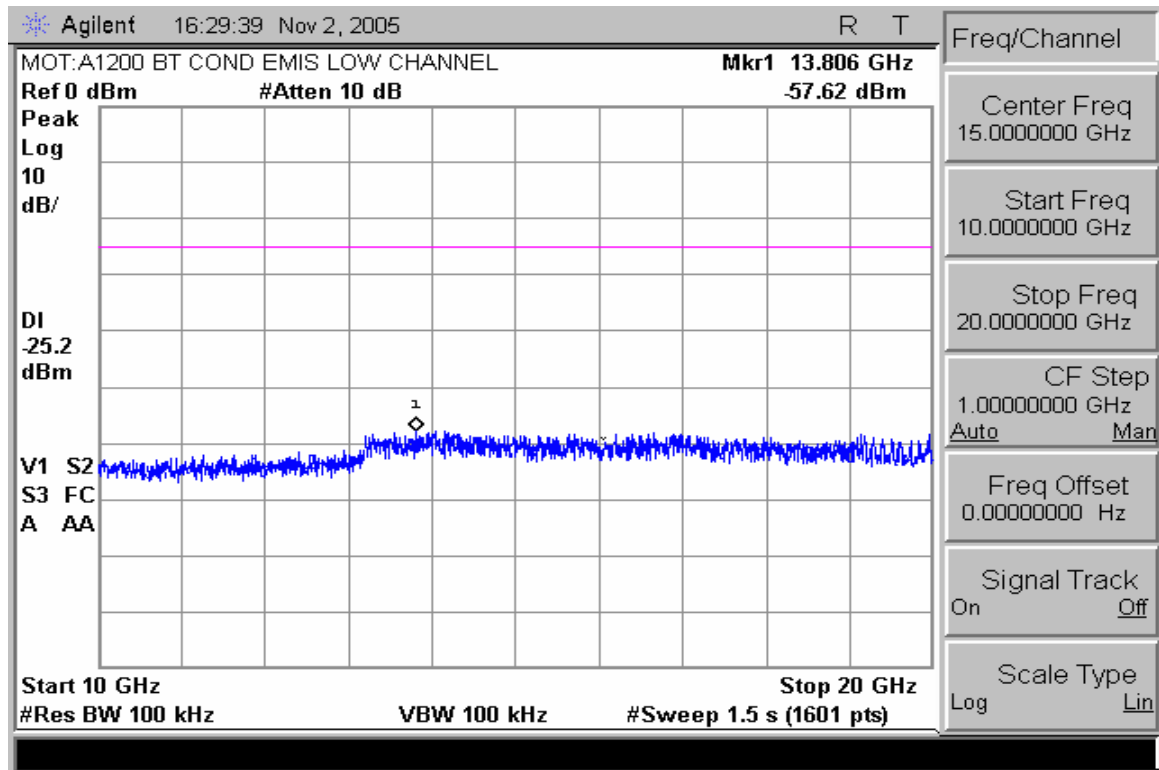
See attached:



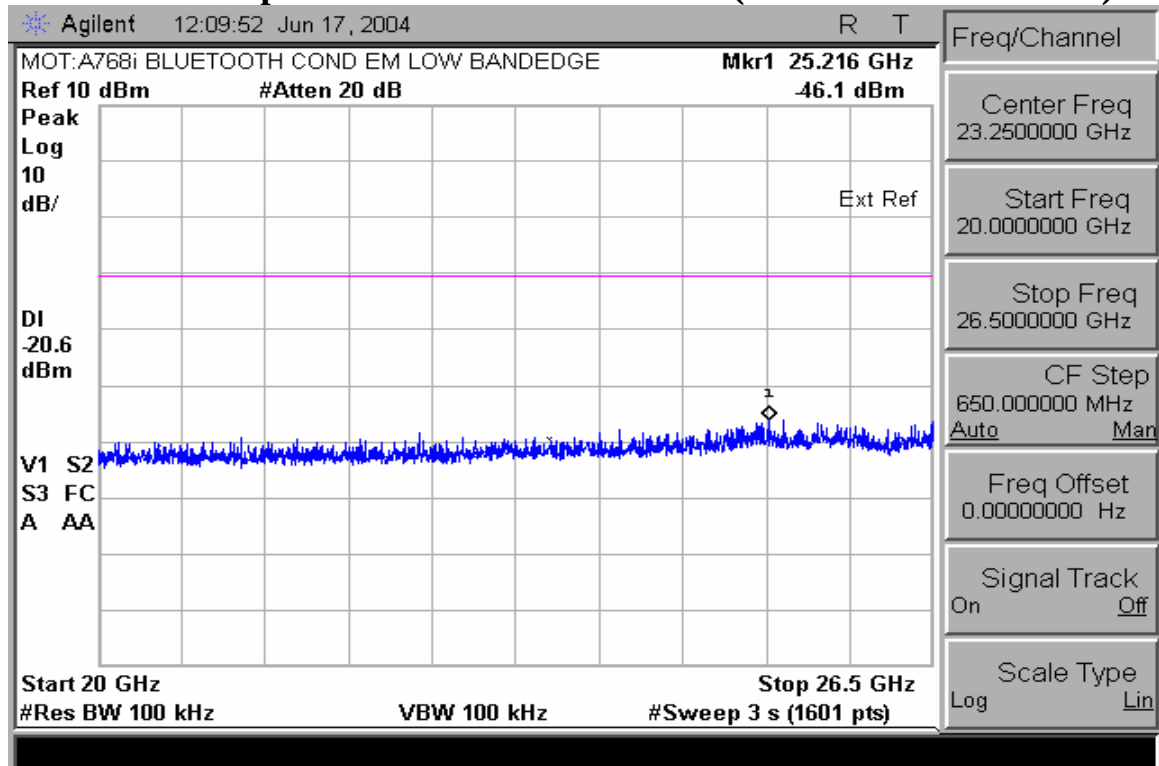
Conducted Spurious Emissions 30-3000MHz (Low Channel Enabled)



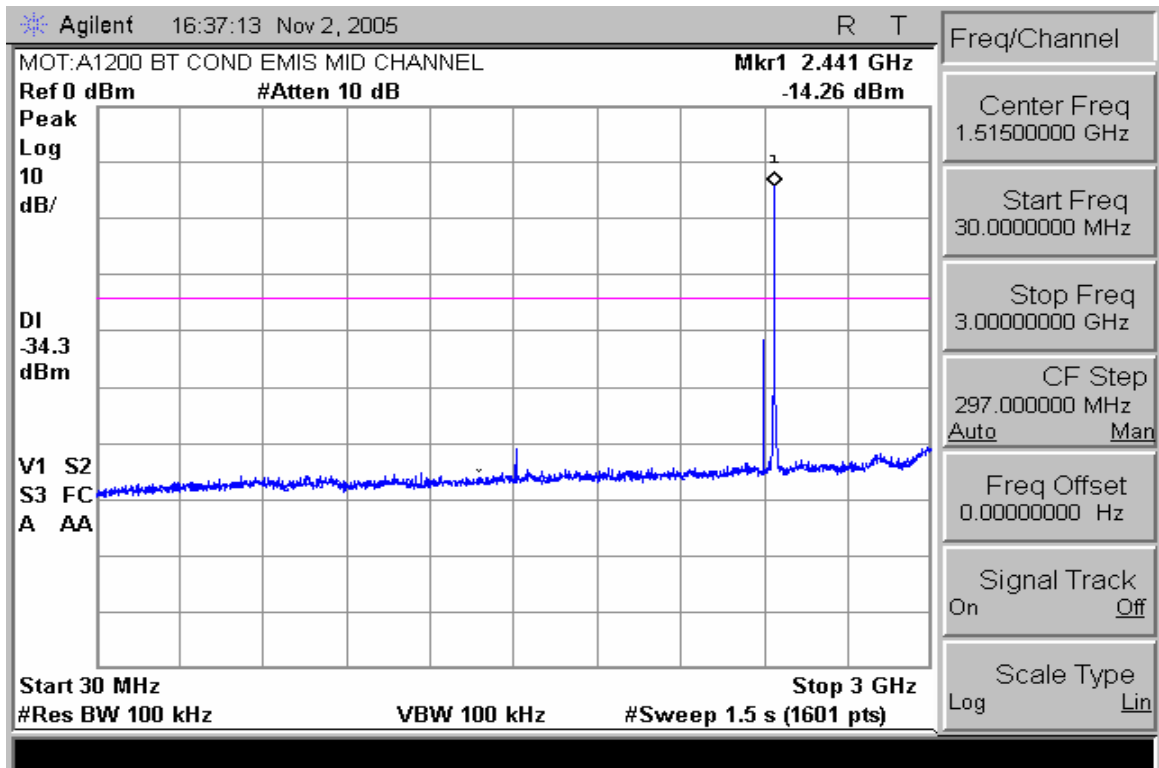
Conducted Spurious Emissions 2-10GHz (Low Channel Enabled)



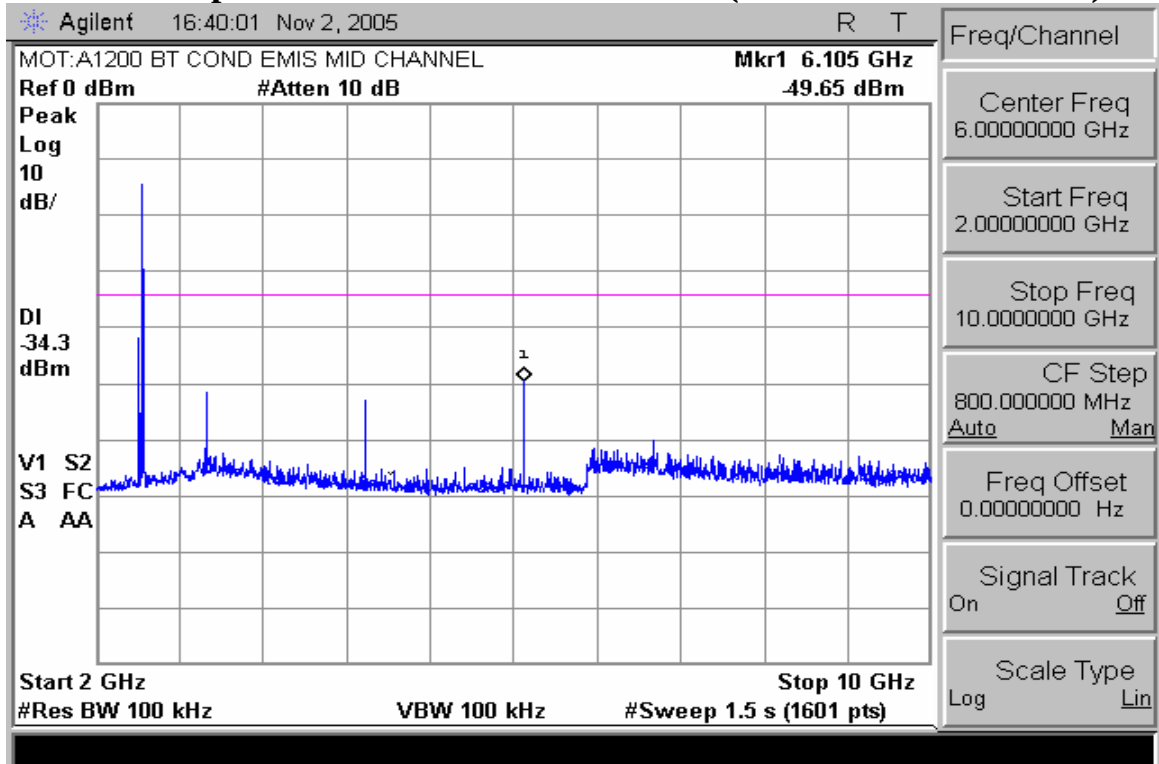
Conducted Spurious Emissions 10-20GHz (Low Channel Enabled)



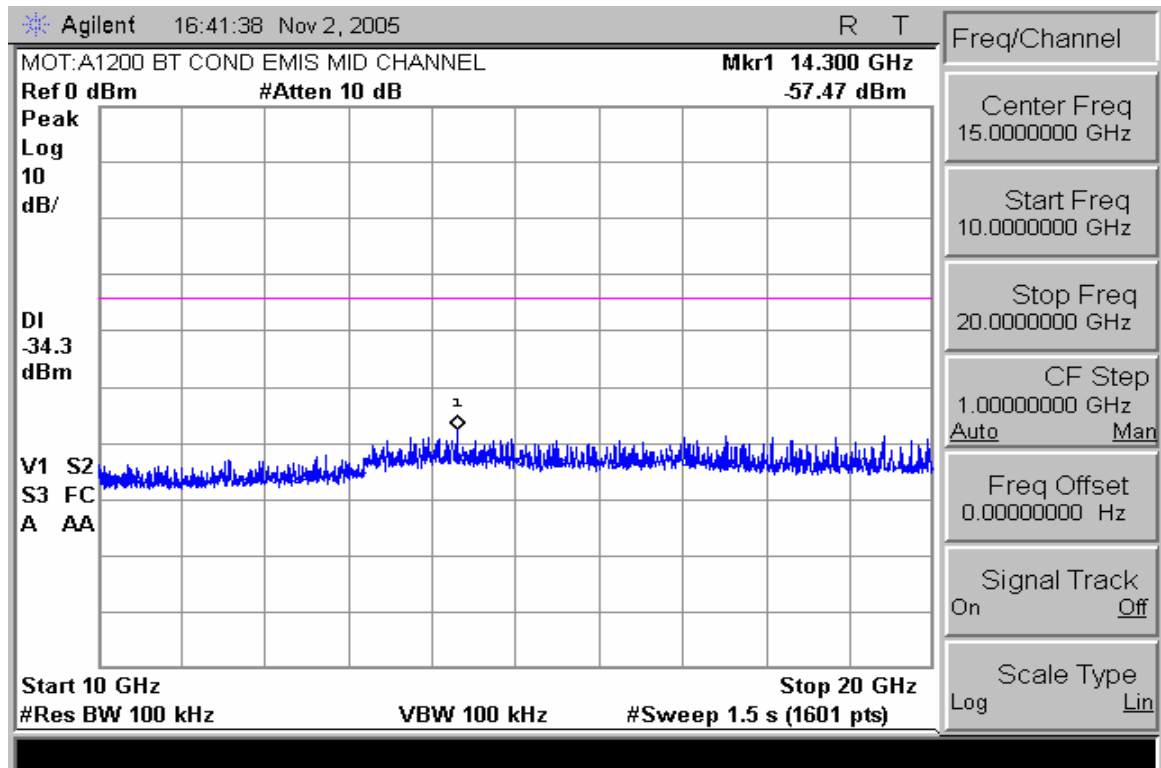
Conducted Spurious Emissions 20-26.5GHz (Low Channel Enabled)



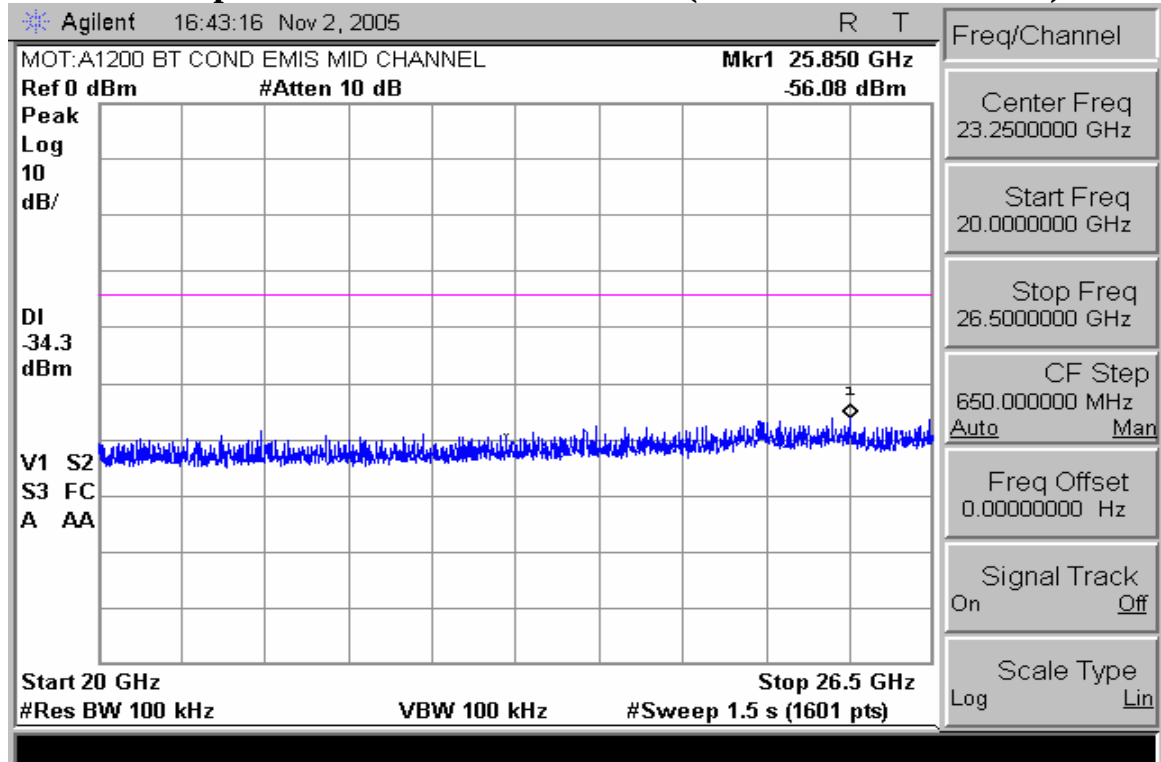
Conducted Spurious Emissions 30-3000MHz (Mid Channel Enabled)



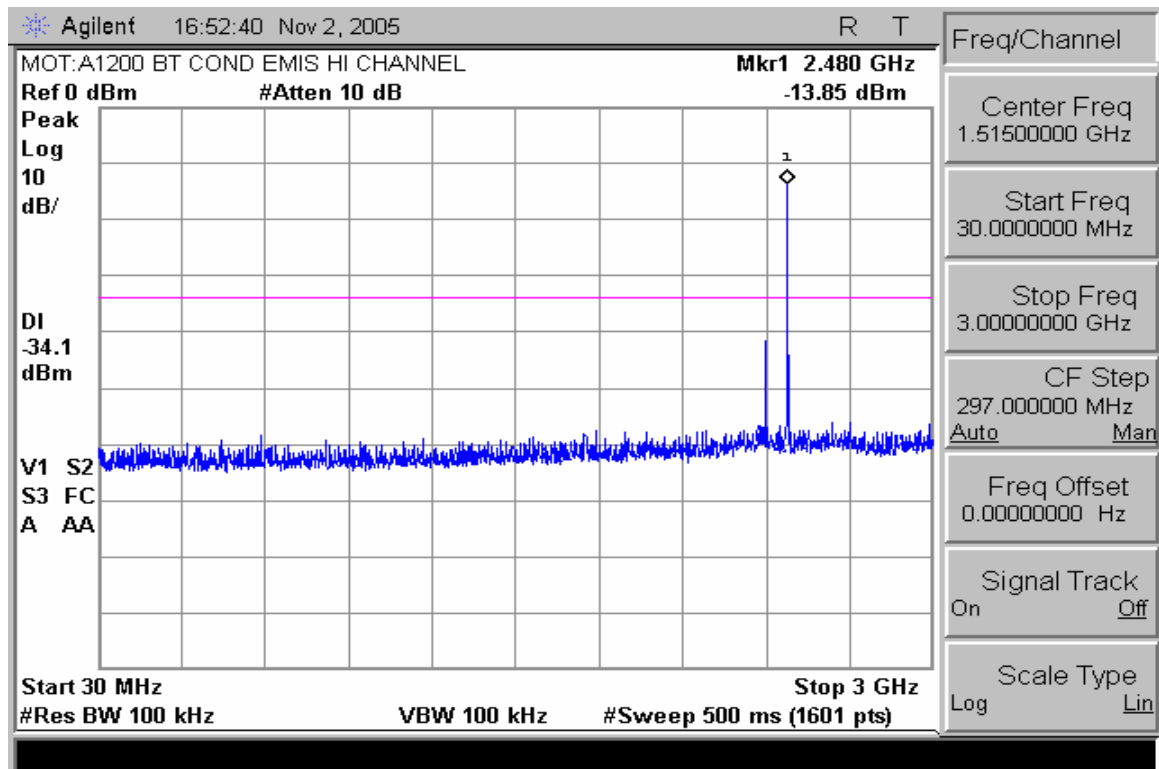
Conducted Spurious Emissions 2-10GHz (Mid Channel Enabled)



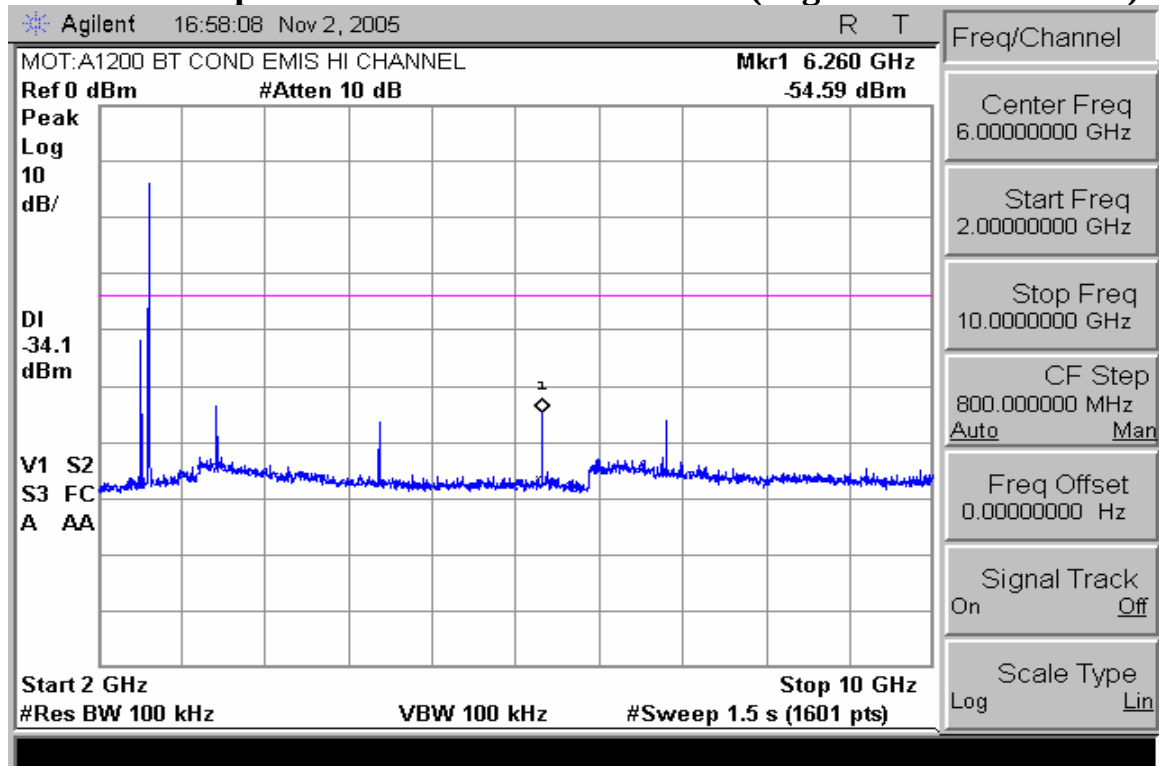
Conducted Spurious Emissions 10-20GHz (Mid Channel Enabled)



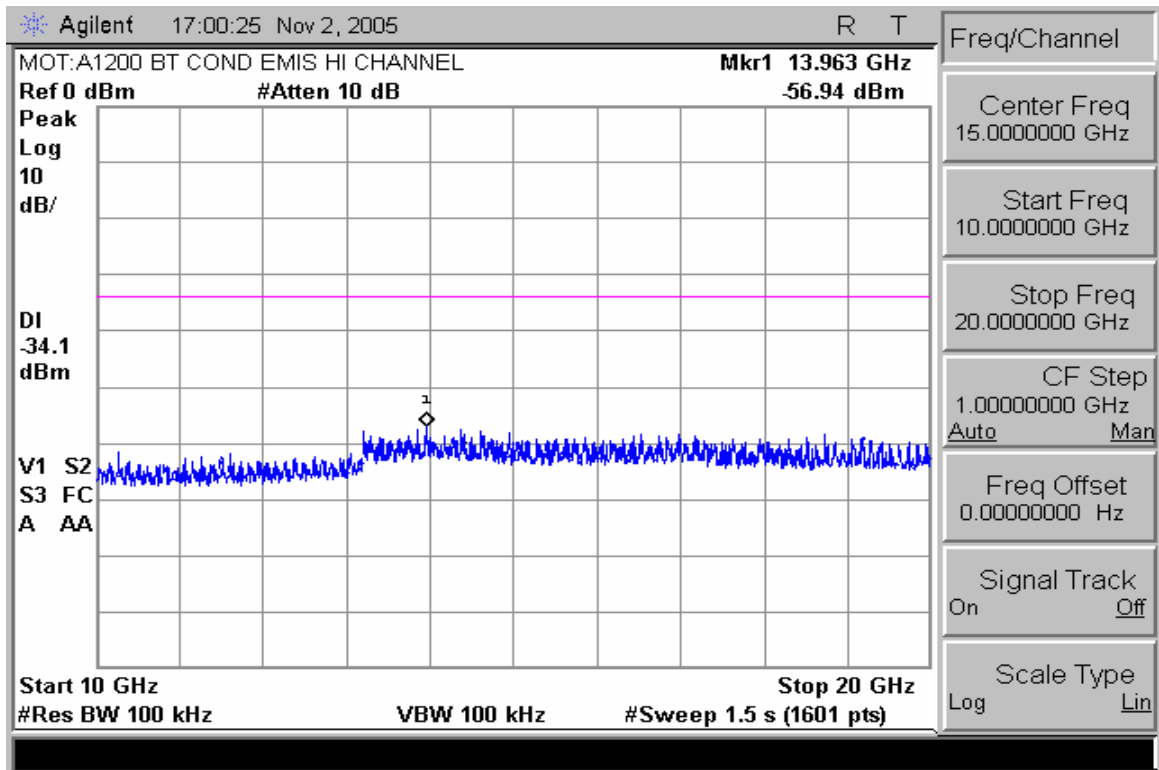
Conducted Spurious Emissions 20-26.5GHz (Mid Chan Enabled)



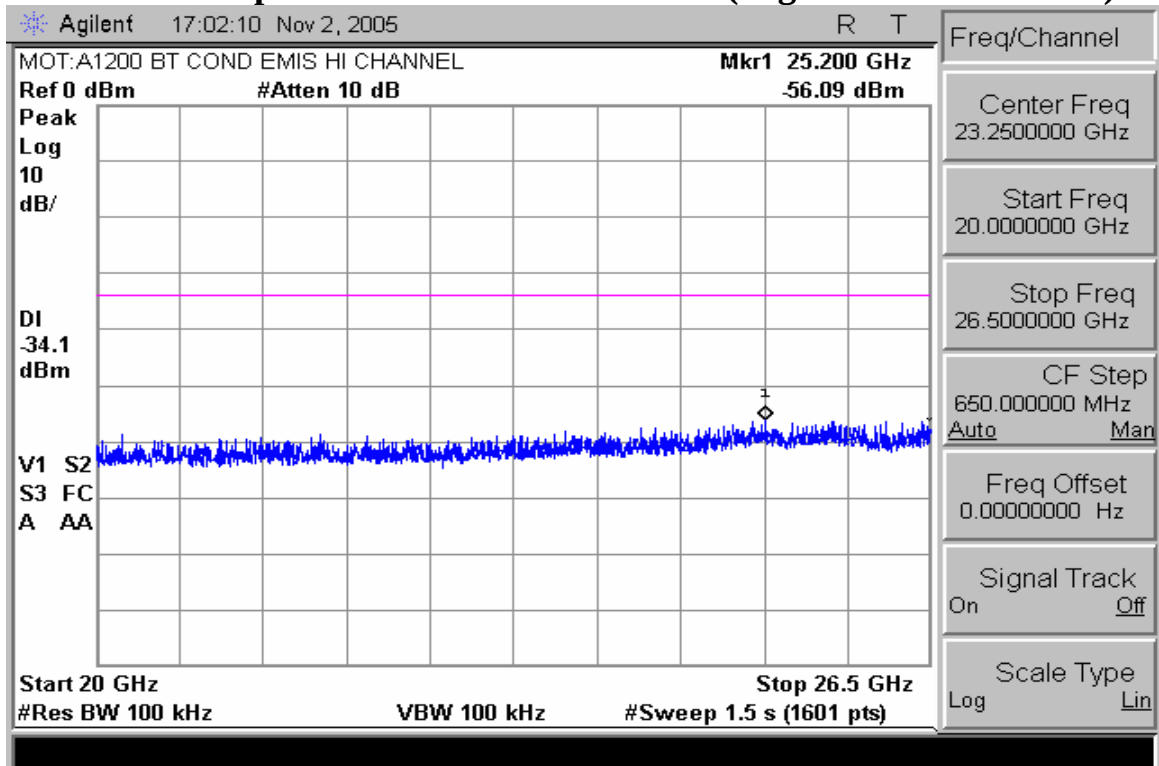
Conducted Spurious Emissions 30-3000MHz (High Channel Enabled)



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

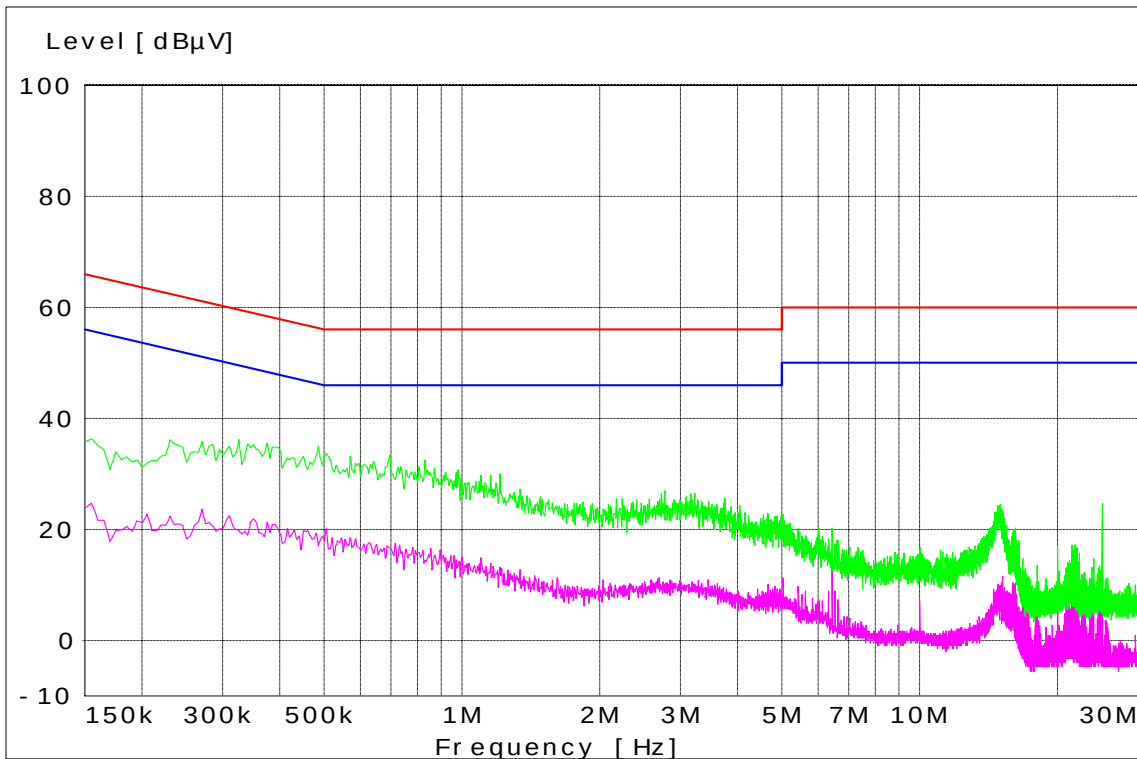
Measurement Procedure

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.

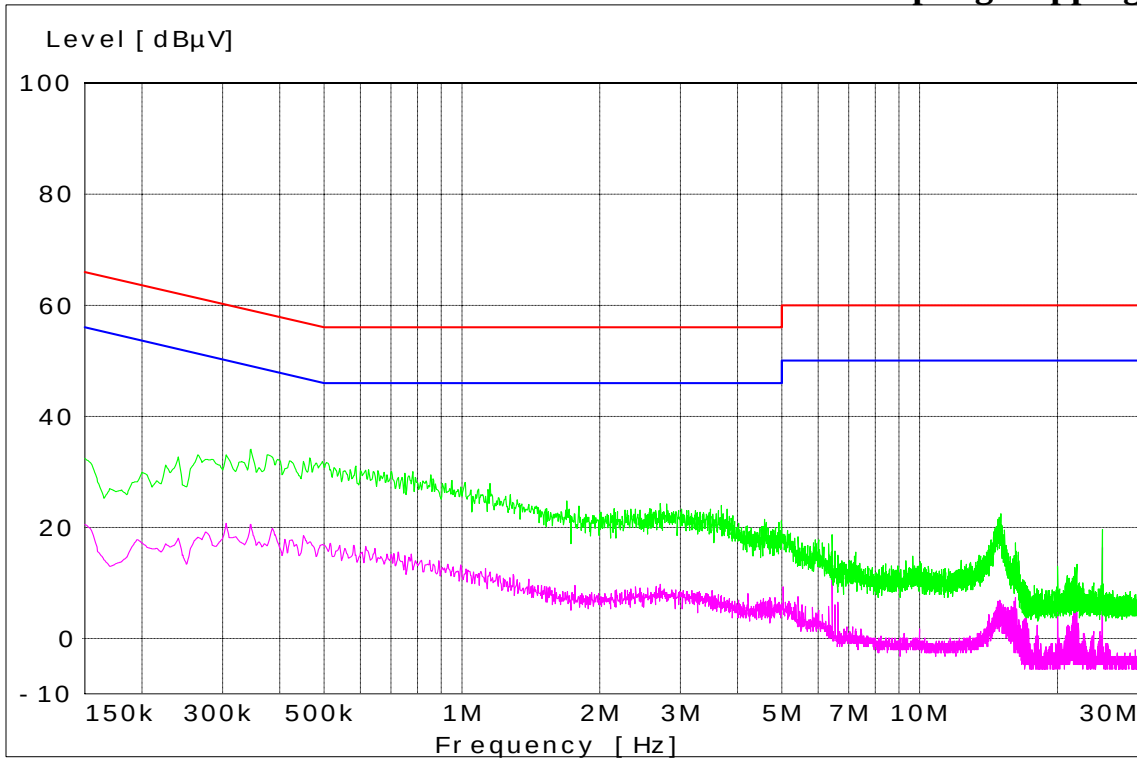
All radio-noise voltage and current measurements shall be made on each current-carrying conductor at the plug end of the EUT power cord or calibrated extension cord by the use of mating plugs and receptacles on the EUT and LISN. Equipment shall be tested with power cords that are normally supplied using 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

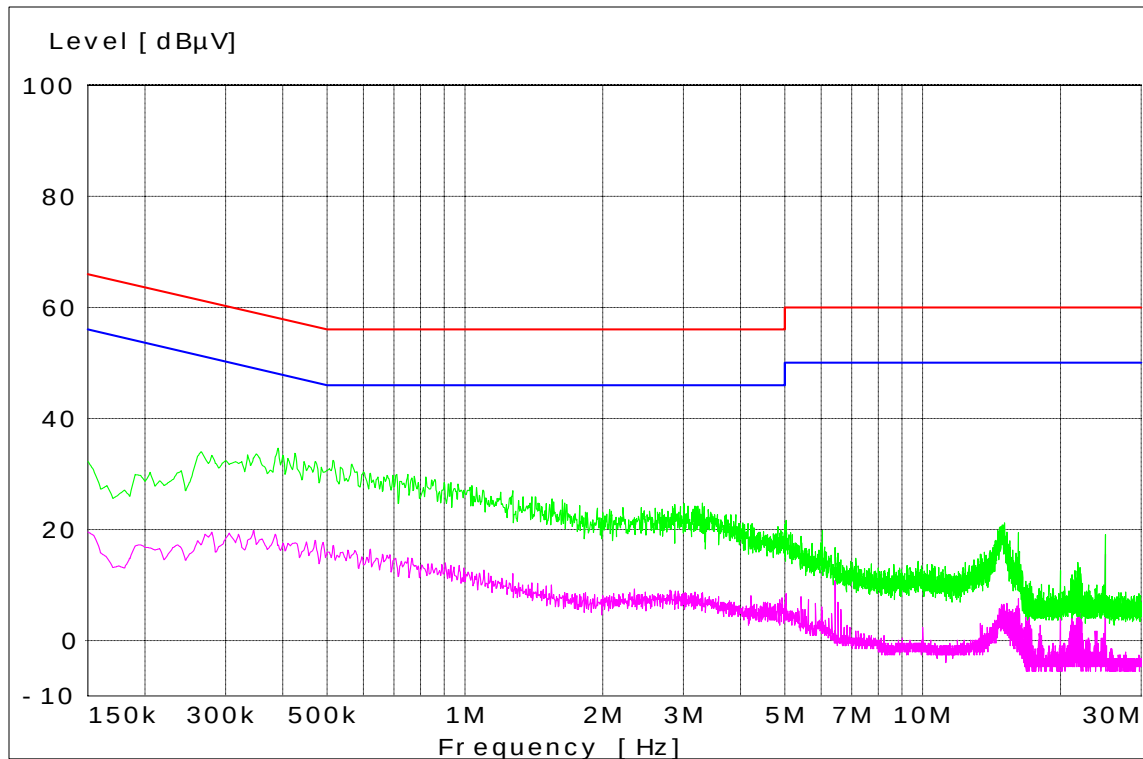
See attached:



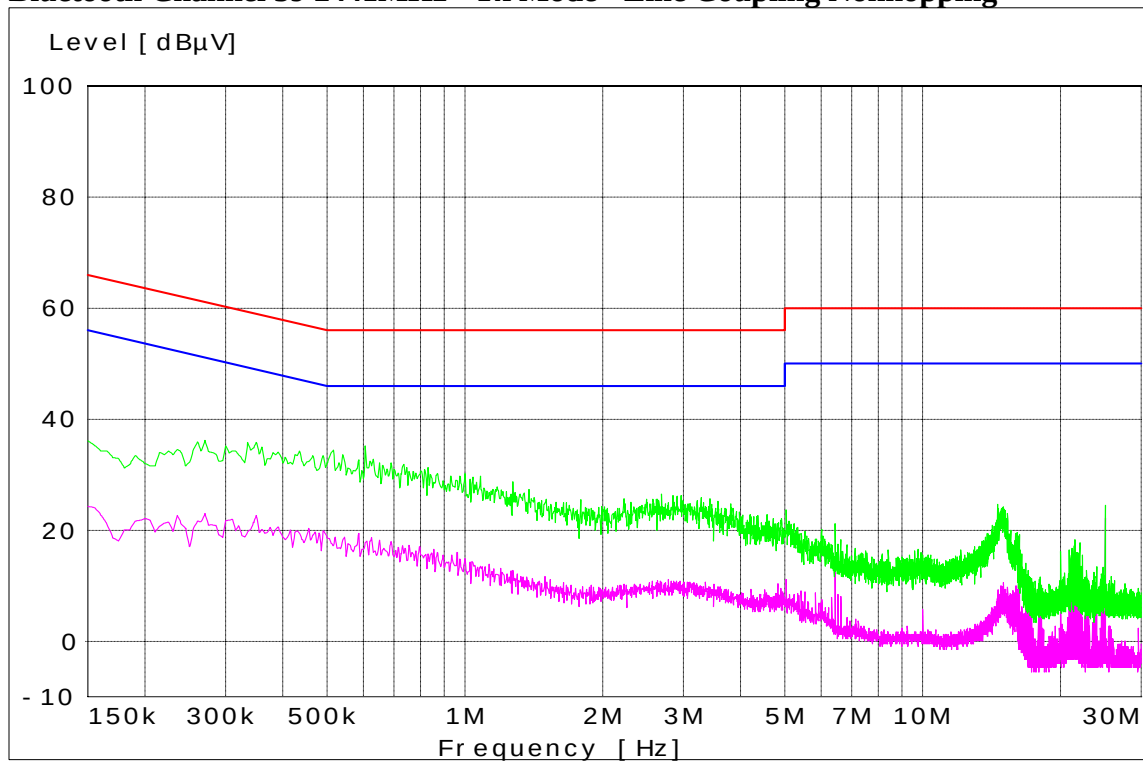
Bluetooth Channel 0 2402MHz - Tx Mode - Neutral Coupling Hopping



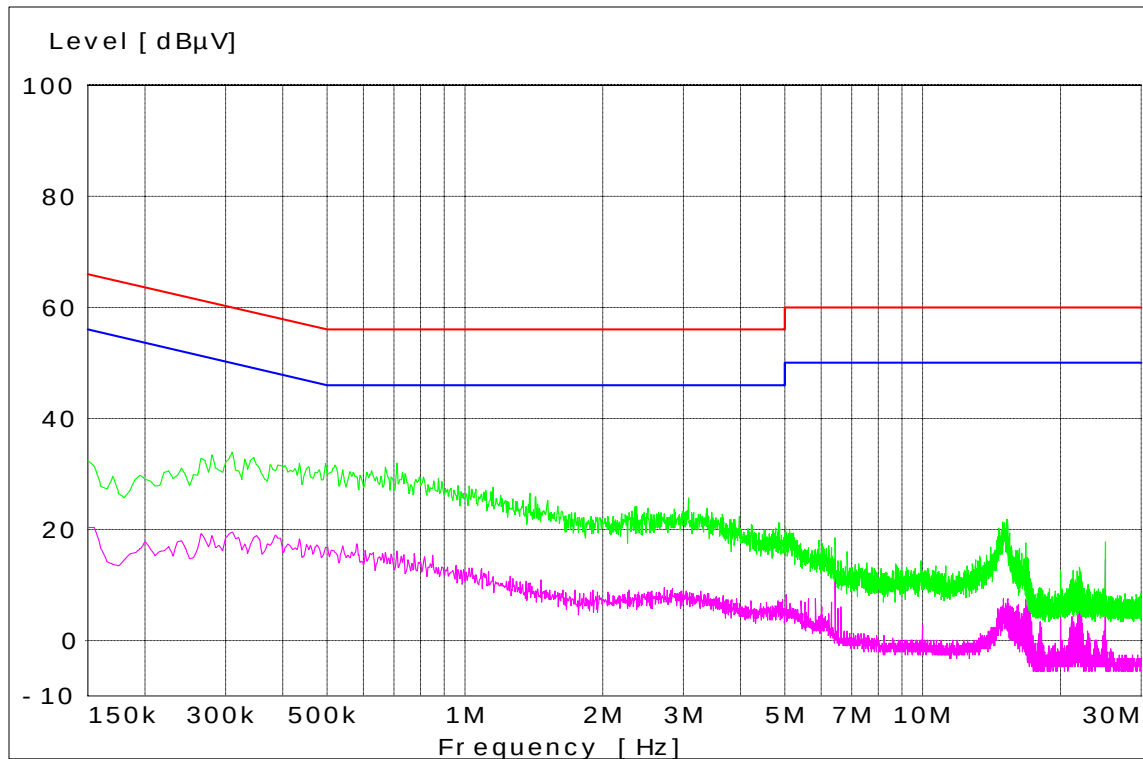
Bluetooth Channel 0 2402MHz - Tx Mode – Line Coupling Nonhopping



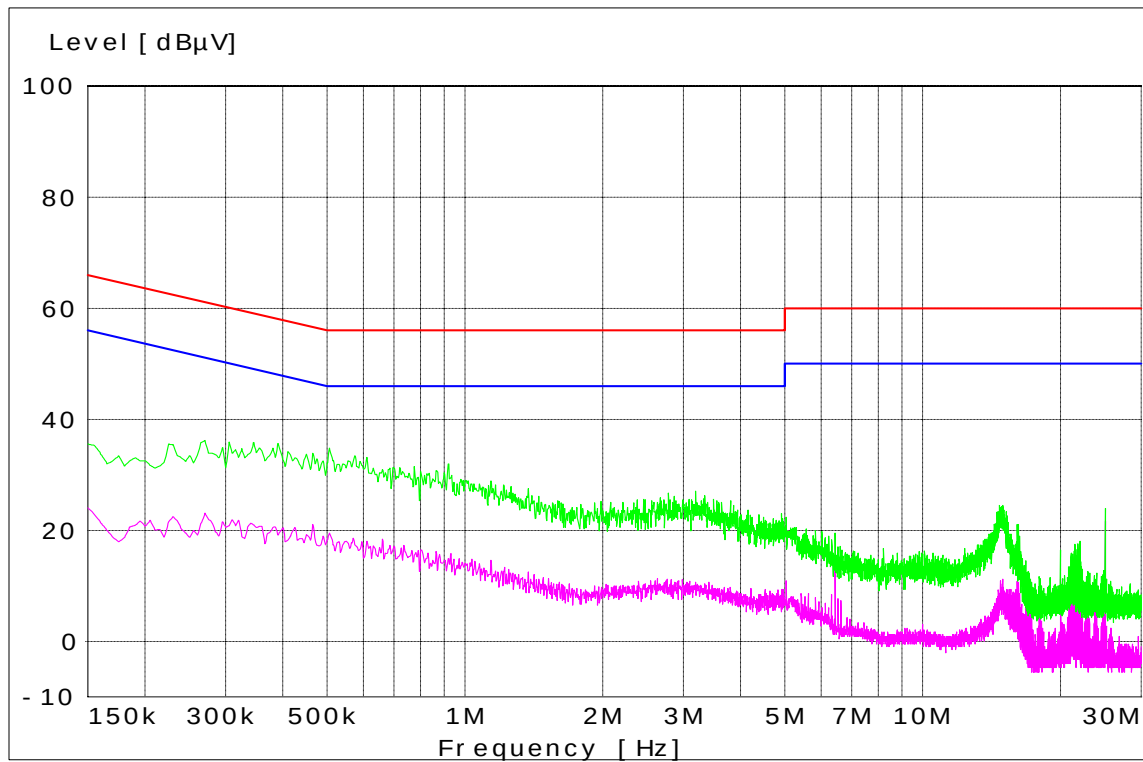
Bluetooth Channel 39 2441MHz - Tx Mode - Line Coupling Nonhopping



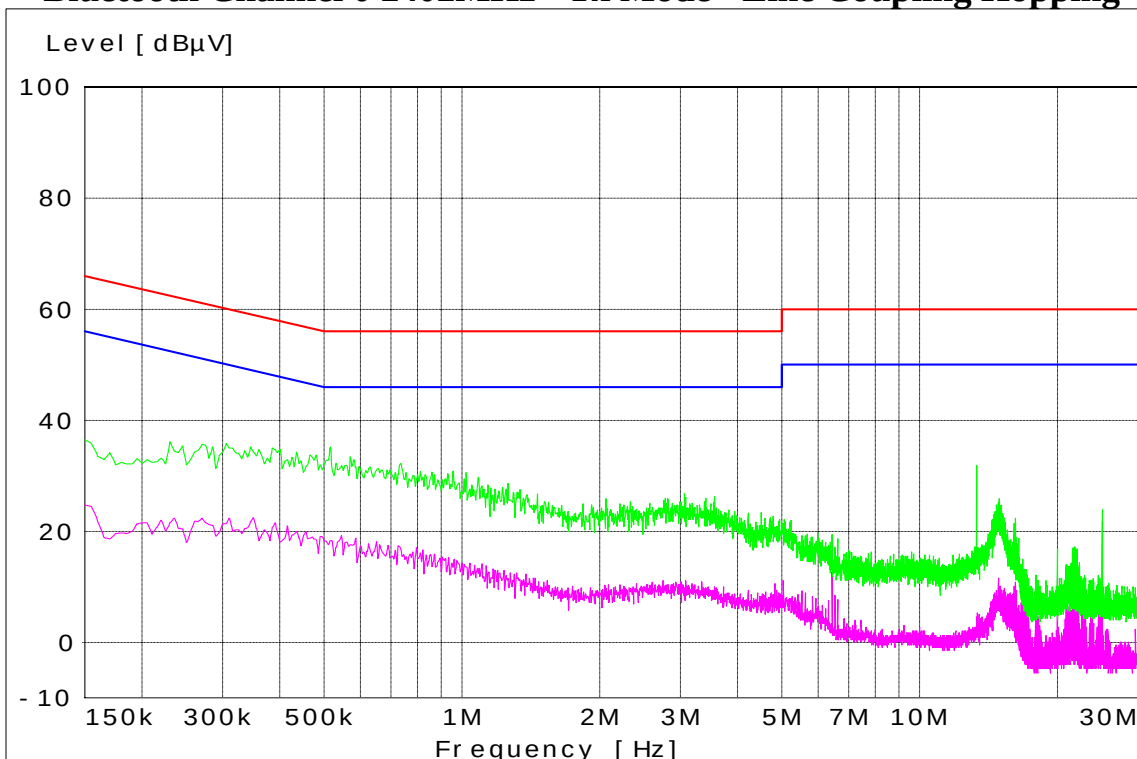
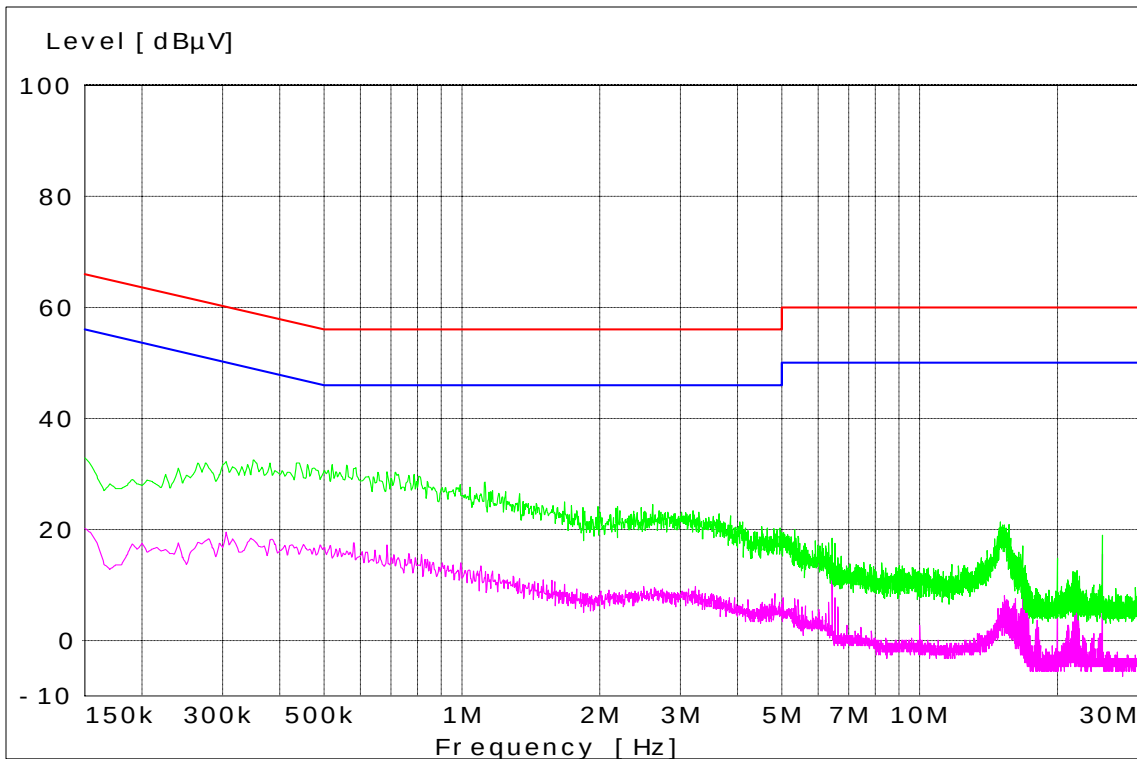
Bluetooth Channel 39 2441MHz - Tx Mode - Neutral Coupling Hopping

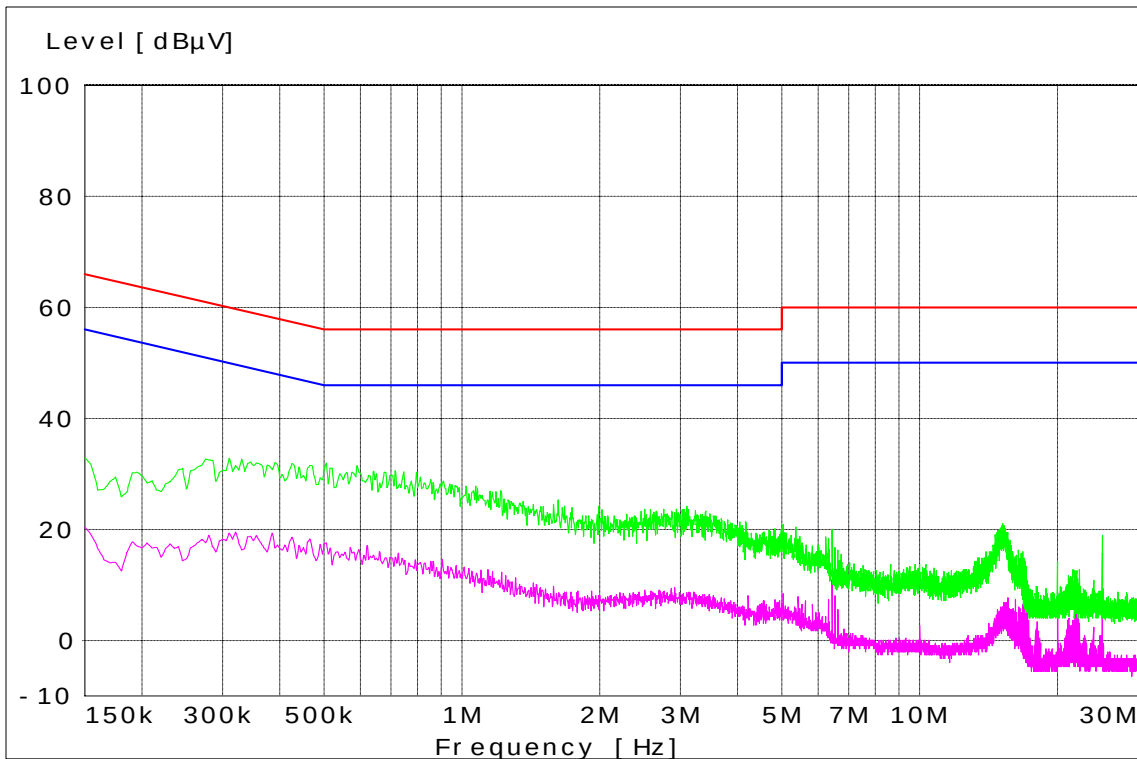


Bluetooth Channel 78 2480MHz - Tx Mode - Line Coupling Hopping

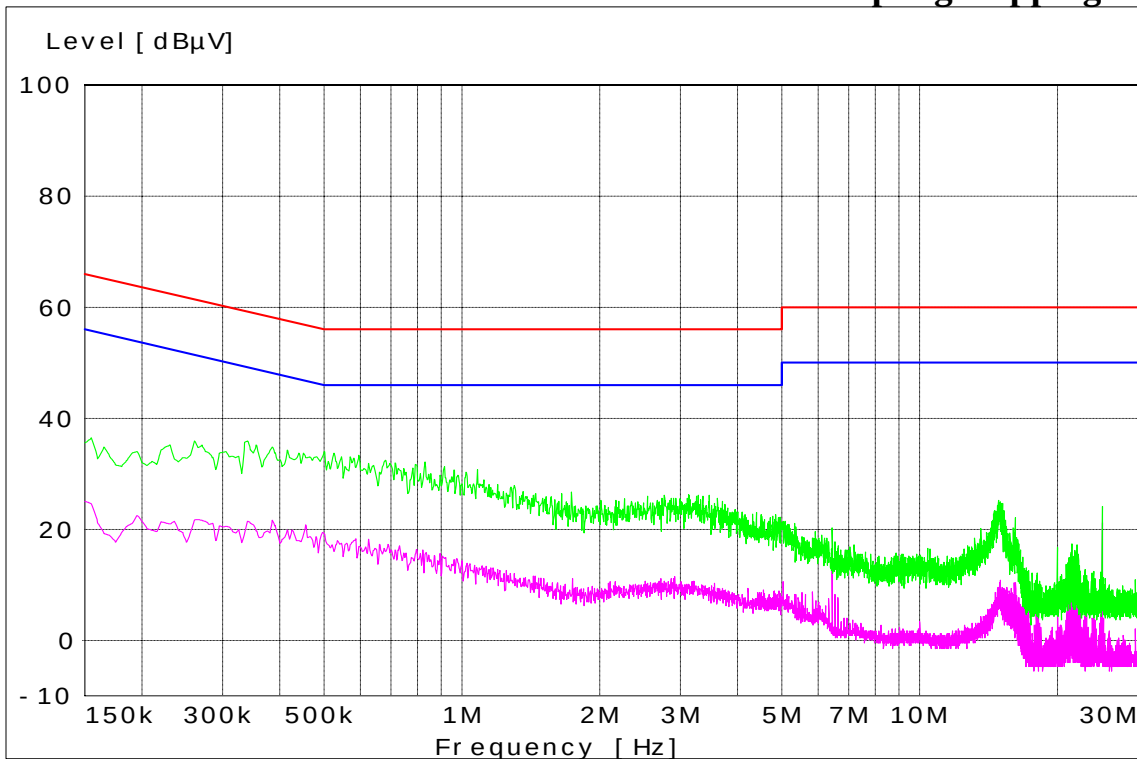


Bluetooth Channel 78 2480MHz - Tx Mode - Neutral Coupling Hopping

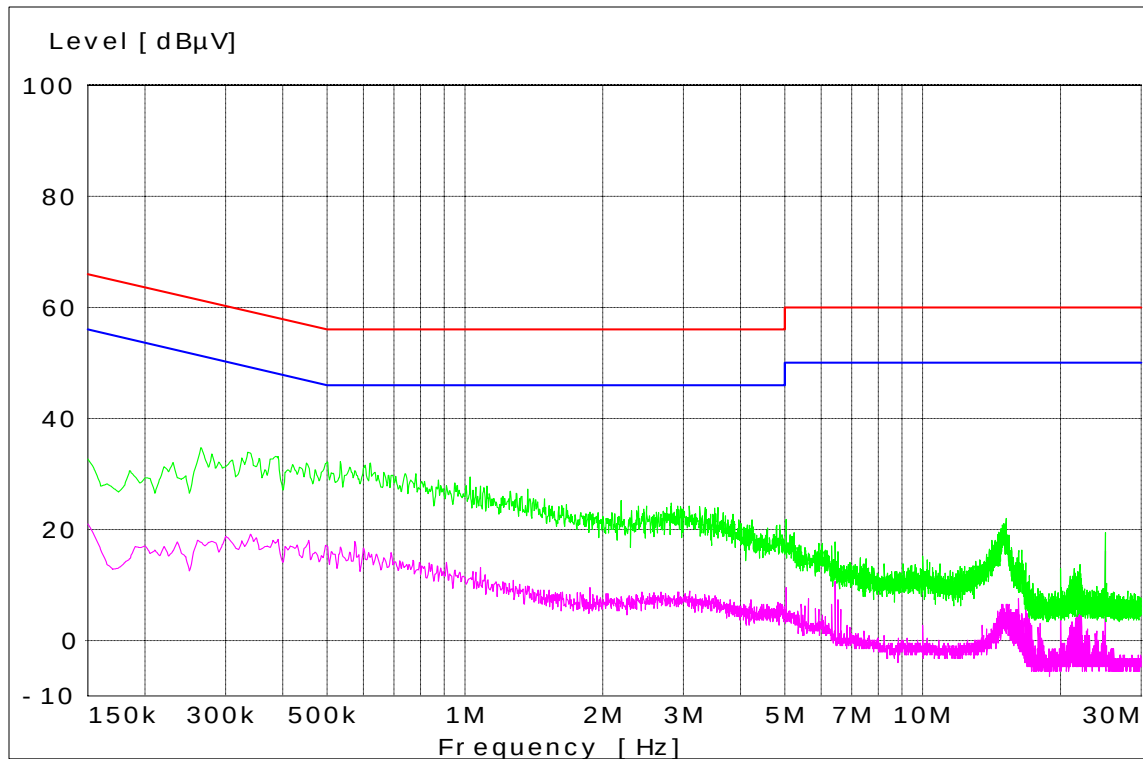




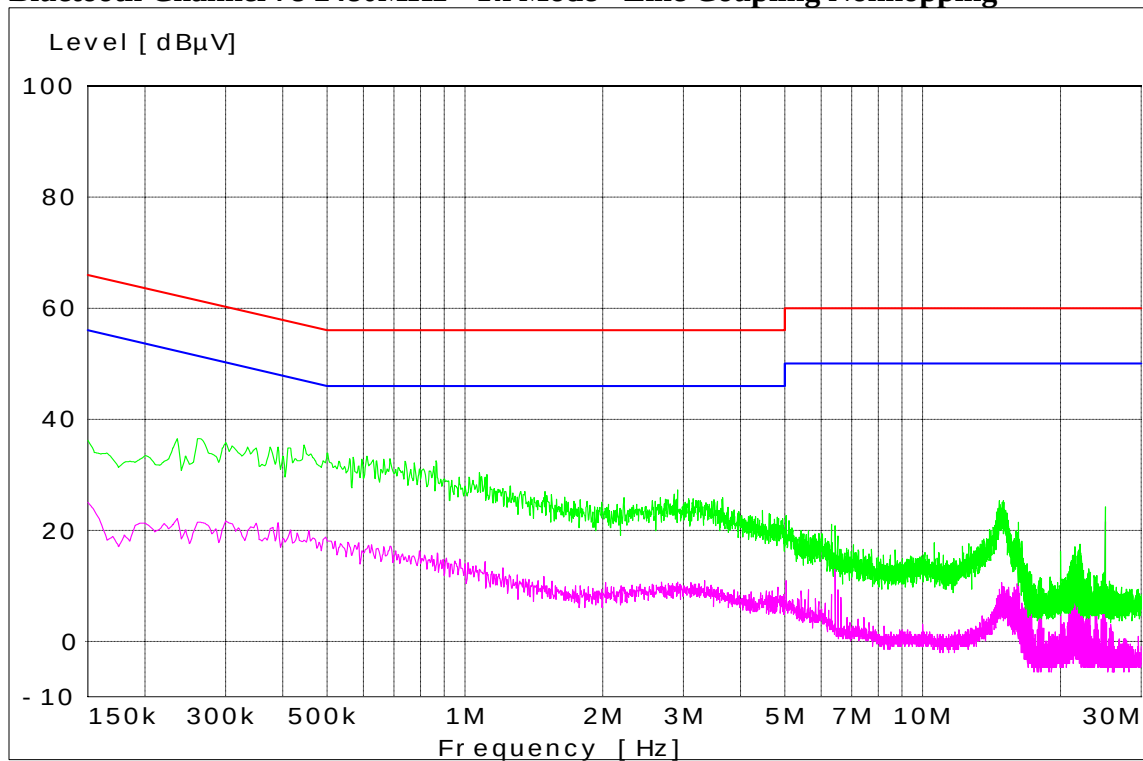
Bluetooth Channel 39 2441MHz - Tx Mode - Line Coupling Hopping



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