

September 1, 2005

## EMC Test Report

This equipment is identical to FCC ID: IHDT56EU2 (granted 6-8-2004) except the 850 MHz band is disabled in software. To simplify the technical review process, the original test report is submitted with the following updates:

- The equipment identification is changed to FCC ID: IHDT56EU3.
- All responses to questions from the original “dual band” submission are incorporated into the following updated report.

Please disregard all reference to the 850 MHz band test results. This filing is applicable to GSM 1900 MHz only.

### Contact Information:

Please contact me by telephone at (847) 523-6167, or by e-mail ([A.Bachler@motorola.com](mailto:A.Bachler@motorola.com)), if there are questions or additional information needed concerning this report.

Regards,

Andrew J. Bachler  
FCC Liaison  
Mobile Devices  
600 N. U.S. Highway 45  
Libertyville, IL 60048-5343

**PERSONAL COMMUNICATIONS SECTOR**

**PRODUCT SAFETY AND COMPLIANCE**

**EMC LABORATORY**

**EMC TEST REPORT - Addendum**

**Test Report Number** – 13913-2BT

**Report Date** – May 28, 2004

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.

Signature: 

Name: Michael E. Hill

Title: Senior Electrical Engineer

Date : 2004-05-28

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

A2LA Certificate Number: 1846-01



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**Test Report Details**

Tests Performed By: Motorola Mobile Devices  
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  
600 North US Hwy 45  
Libertyville, IL 60048

Product Type: Cellular Phone

Signaling Capability: GSM 1900, GSM 850, Bluetooth (Class II)

Model Number: V3

Serial Numbers: LRZ04B007, LRZ04B0093

Testing Complete Date: May 28, 2004

## **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	Pass
2	Number of Hopping Frequencies	Pass
3	Time of Occupancy (Dwell Time)	Pass
4	20 dB Bandwidth	Pass
5	Spurious RF Conducted Emissions	Pass
6	Field Strength of Spurious Emissions	Pass
7	Max Power	N/A
8	Band Edges	See plots
9	Conducted Spurious Emissions	Pass

Test	Test Name	Results
1	Carrier Frequency Separation	1.00MHz
2	Number of Hopping	79
3	Time of Occupancy (Dwell Time)	2.922 ms
4	20 dB Bandwidth	1.016 MHz
5	Spurious RF Conducted Emissions	See plots
6	Field Strength of Spurious Emissions	See plots
7	Max Power	-0.47 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**

<b>Manufacturer Name</b>	<b>Item Name Description</b>	<b>Model #</b>	<b>Serial Number</b>	<b>Calibration Due Date</b>
Hewlett Packard	Spectrum Analyzer, EMC	E7405	US40240219	12-Apr-05
<b>UL Test Equipment</b>				
Hewlett Packard	QP Adapter	85650A	2811A01069	1/08/2005
Hewlett Packard	S/A Display	8566B	2542A12974	1/08/2005
Hewlett Packard	S/A	8566B	2637A03376	1/08/2005
Hewlett Packard	RF Preselector	85685A	2810A00692	1/08/2005
Rohde & Schwarz	S/A	FSEK20	DE2525315	1/09/2005
EMCO	Horn Antenna 1-18GHz	3115	2638	7/10/2004
EMCO	Horn Antenna 18-26.5GHz	3160-09	9904-1165	N/A*
Chase	Bi-Con Antenna 30-300MHz	VBA6106A	1246	6/23/2004
Chase	Log-Periodic Antenna	UPA6108	1120	6/23/2004

\* Per ANSI C63.5-1998 (Revision of ANSI C63.5-1988) pg. 6, under 5.1 General "It is unnecessary to calibrate standard gain horn antennas for use above 1GHz; rather, they are used as gain standards to calibrate other antennas (see 12.3.1 of IEEE Std 149-1979)."

All equipment is on a one-year calibration cycle.

## **Description of Bluetooth Transmitter**

The V3 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. Therefore conducted AC line emissions testing as described in CFR47, Part 15.207 was not necessary.

## **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.

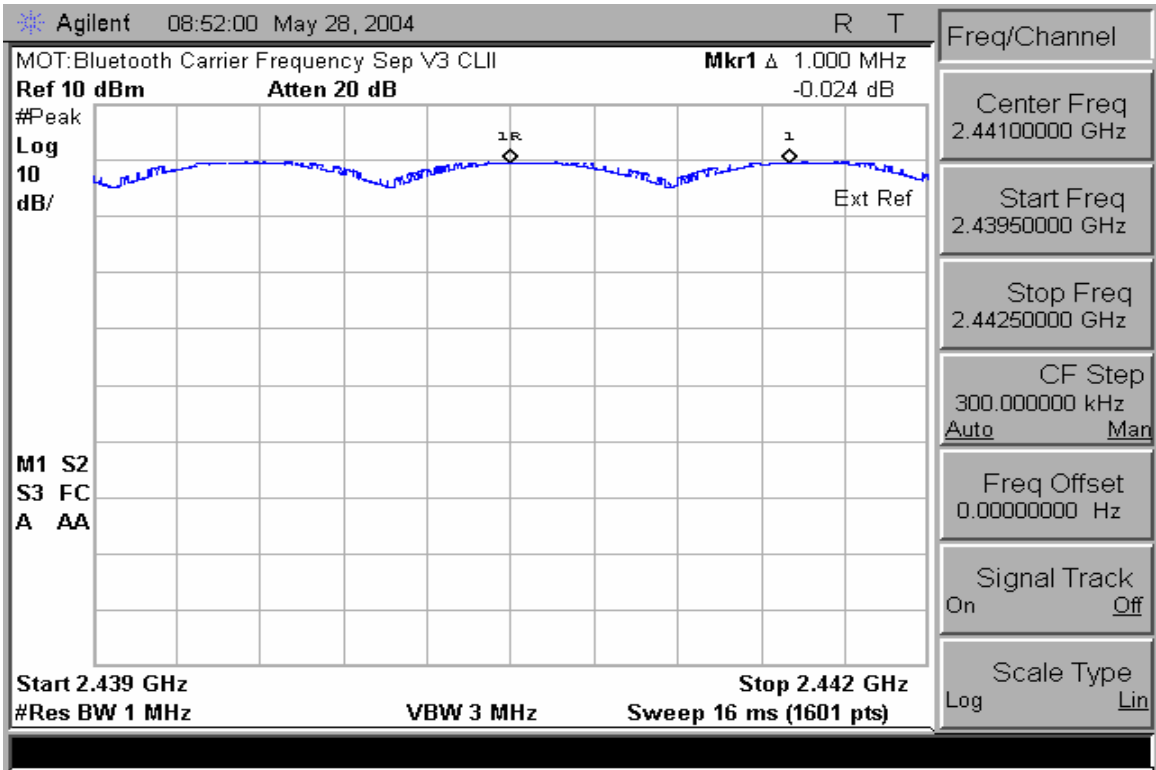
The Bluetooth transmitter of the V3 had its hopping function enabled. The following spectrum analyzer settings were used:

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.

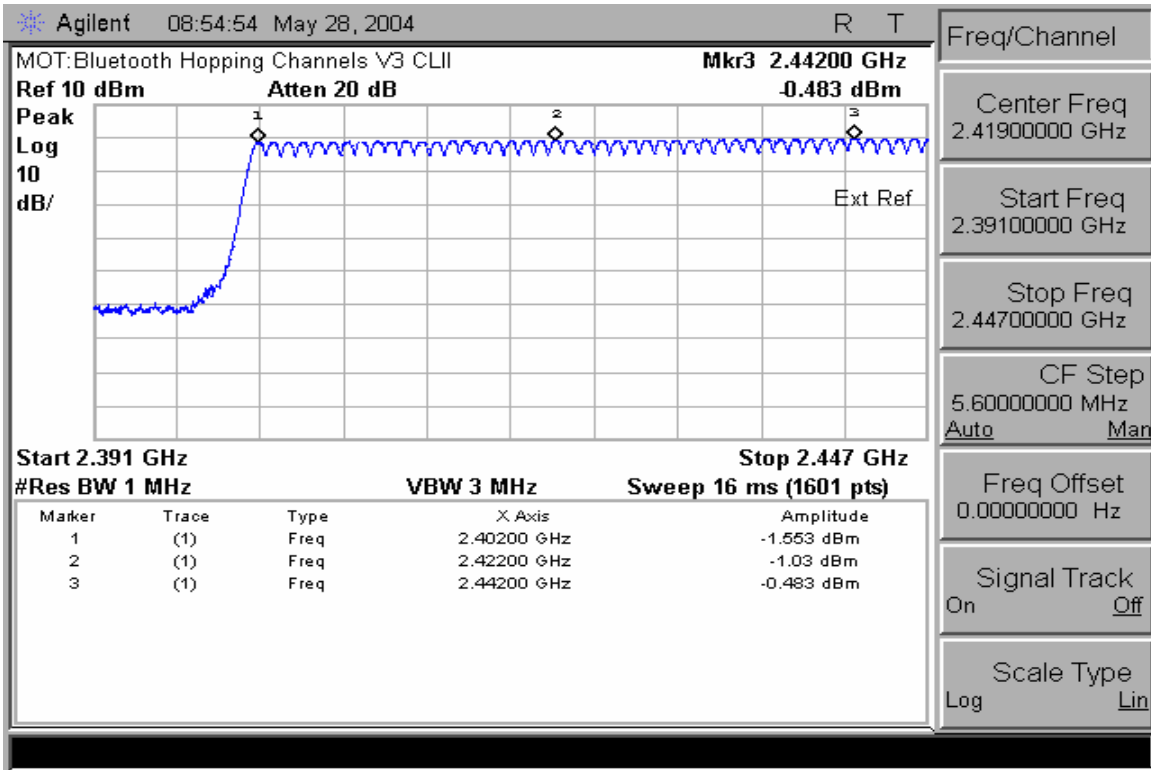
The Bluetooth frequency hopping function of the EUT was enabled. The spectrum analyzer used the following settings:

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

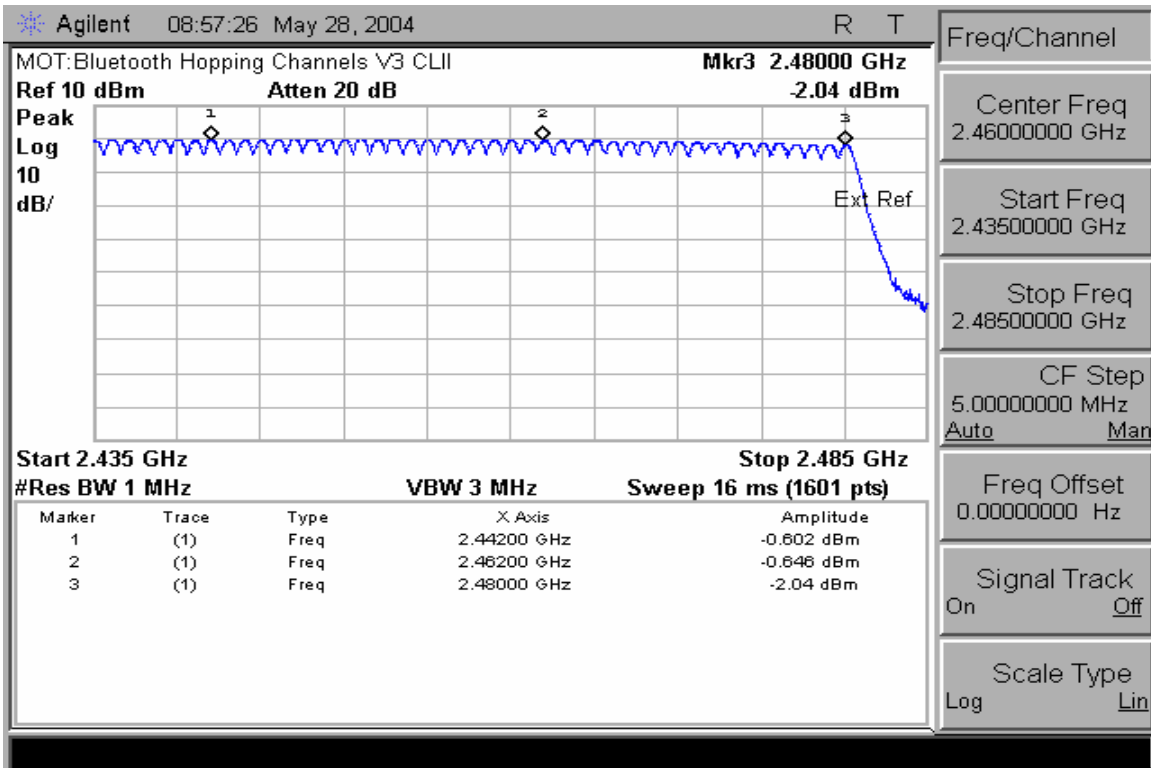
The trace was allowed to stabilize.

### **Measurement Results**

See attached.



Number of Hopping Frequencies (Channels 0 – 40)



Number of Hopping Frequencies (Channels 40 – 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.

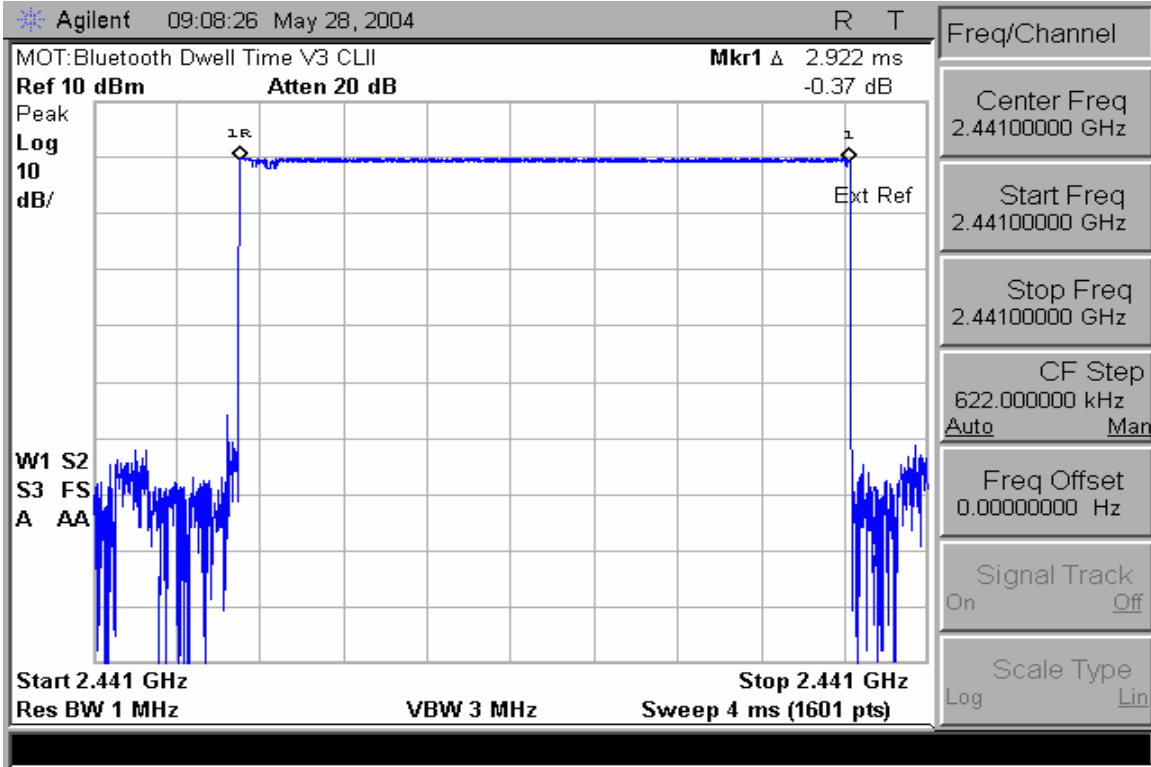
The Bluetooth hopping function of the EUT was enabled. The following spectrum analyzer settings were used:

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**

As defined in DA 0075, dwell time is used to calculate a Duty Cycle Correction Factor for radiated emissions:

$$DCCF = 20 \log [(dwell\ time)/100ms] = 20 \log [2.922ms/100ms] = -30.7$$

## **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.

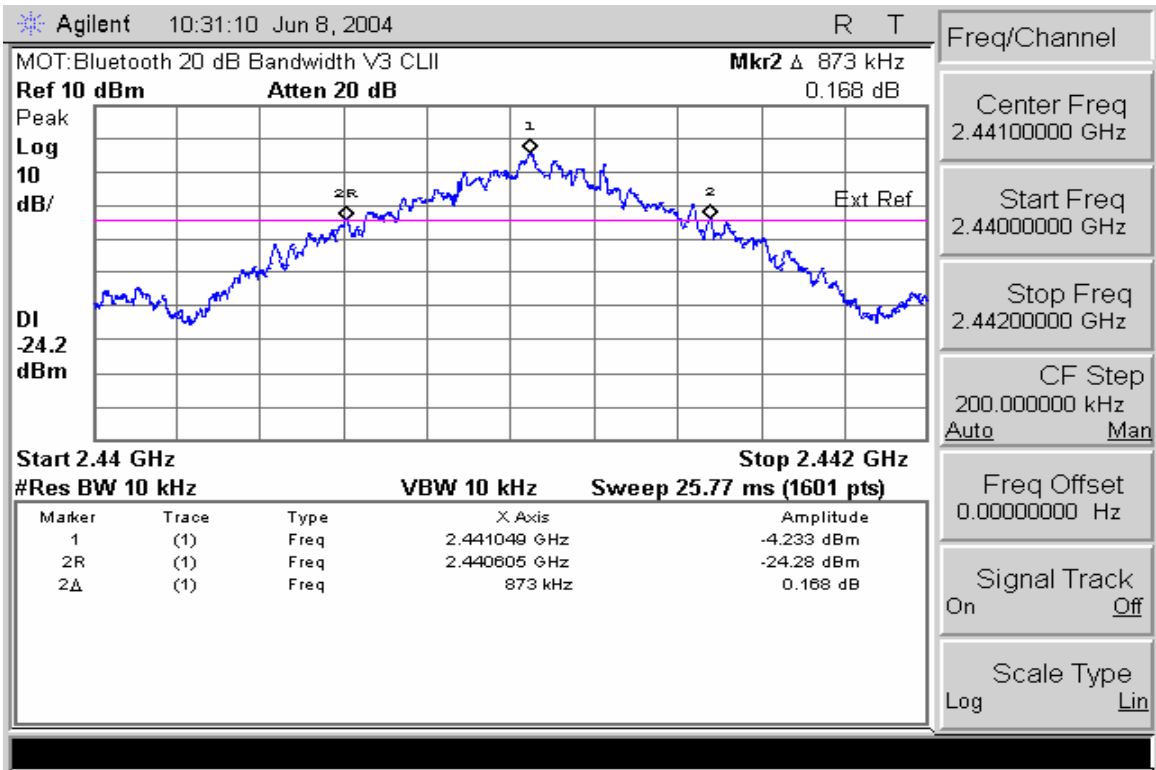
The Bluetooth frequency hopping function of the EUT was enabled. The spectrum analyzer used the following settings:

1. Span = approx. 2 to 3 times the 20dB bandwidth, centered on a hopping frequency
2. RBW  $\geq$  1% of the 20dB bandwidth
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



**20 dB Bandwidth**

## FIELD STRENGTH OF SPURIOUS EMISSIONS

CFR47 Part 2.1053, 15.249

### 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.

The Equipment-Under-Test is then replaced with a substitution antenna fed by a signal generator. With the signal generator tuned to a particular spurious frequency, the antenna mast is raised and lowered from 1 to 4 meters to obtain a maximum reading at the spectrum analyzer. The output of the signal generator is then adjusted until a reading identical to that obtained with the actual transmitter is achieved.

The power in dBm of each spurious emission is calculated by correcting the signal generator level for cable loss and gain of the substitution antenna referenced to a dipole.

The field strength of each radiated emission is calculated by correcting the EMI receiver level for cable loss, amplifier gain, and antenna correction factors.

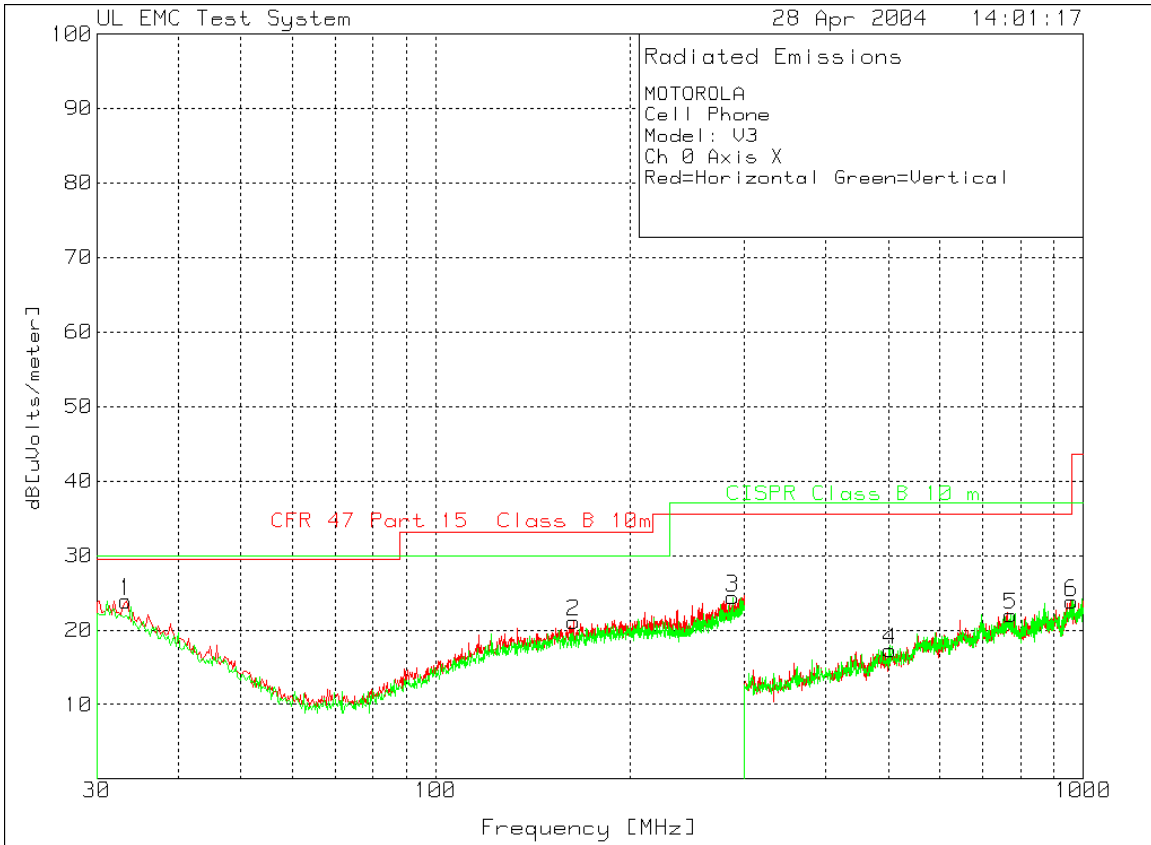
Field Strength (dBuV/m) = EMI Receiver Level (dBuV) + Cable Loss (dB) -  
Amplifier Gain (dB) + Antenna Correction Factor (1/m)

A fully charged battery was used for the supply voltage.

This data was taken at Underwriter's Laboratories.

### Measurement Results

Attached



**30 -1000MHz Low Channel Dual Polarization X-Orientation**

**MOTOROLA**  
**Cell Phone**  
**Model: V3**  
**Ch 0 Axis X**

**Red=Horizontal Green=Vertical**

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1	2
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**Range: 1 30 - 300MHz**

1	33.24	32.3 pk	-26.9	18.5	23.9	29.6	30
	Azimuth:1	Height:101	Horz	<b>Margin [dB]</b>	<b>-5.7</b>	<b>-6.1</b>	
2	163.11	32.6 pk	-26.5	15	21.1	33.1	30
	Azimuth:357	Height:101	Horz	<b>Margin [dB]</b>	<b>-12</b>	<b>-8.9</b>	

**Range: 2 30 - 300MHz**

3	287.31	32.1 pk	-25.7	18	24.4	35.6	37
	Azimuth:324	Height:101	Vert	<b>Margin [dB]</b>	<b>-11.2</b>	<b>-12.6</b>	

**Range: 3 300 - 1000MHz**

4	503	31.3 pk	-31.9	17.9	17.3	35.6	37
	Azimuth:280	Height:101	Horz	<b>Margin [dB]</b>	<b>-18.3</b>	<b>-19.7</b>	

**Range: 4 300 - 1000MHz**

5	771.8	31.3 pk	-31.4	22.1	22	35.6	37
	Azimuth:9	Height:101	Vert	<b>Margin [dB]</b>	<b>-13.6</b>	<b>-15</b>	
6	958.7	30.8 pk	-31.4	24.4	23.8	35.6	37
	Azimuth:148	Height:101	Vert	<b>Margin [dB]</b>	<b>-11.8</b>	<b>-13.2</b>	

LIMIT 1: CFR 47 Part 15 Class B 10m

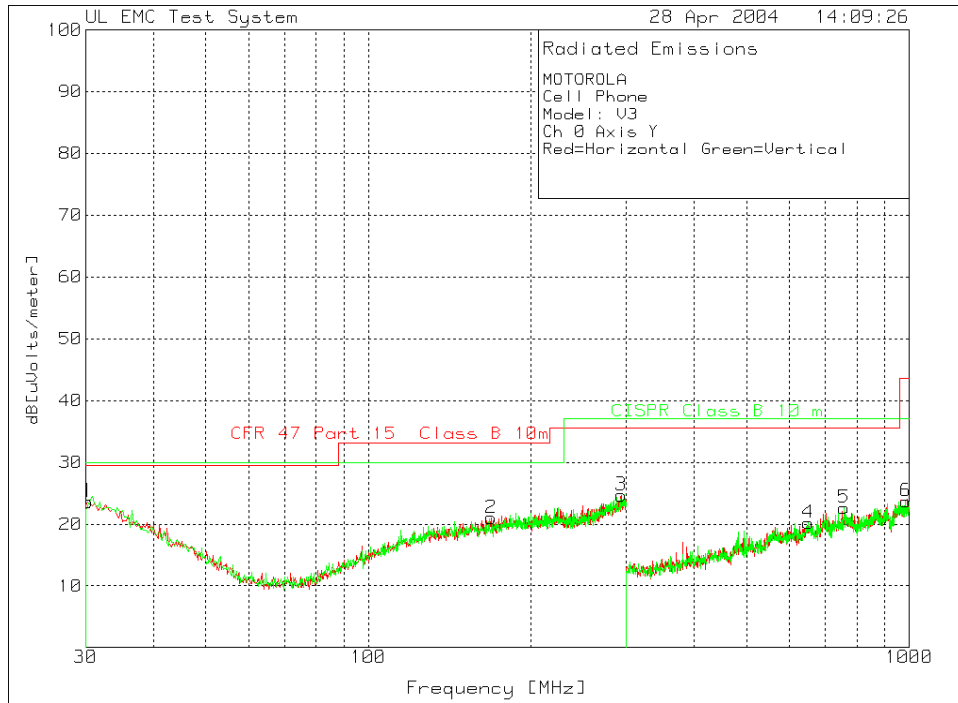
LIMIT 2: CISPR Class B 10 m

LIMIT 3: NONE

LIMIT 4: NONE

LIMIT 5: NONE

LIMIT 6: NONE

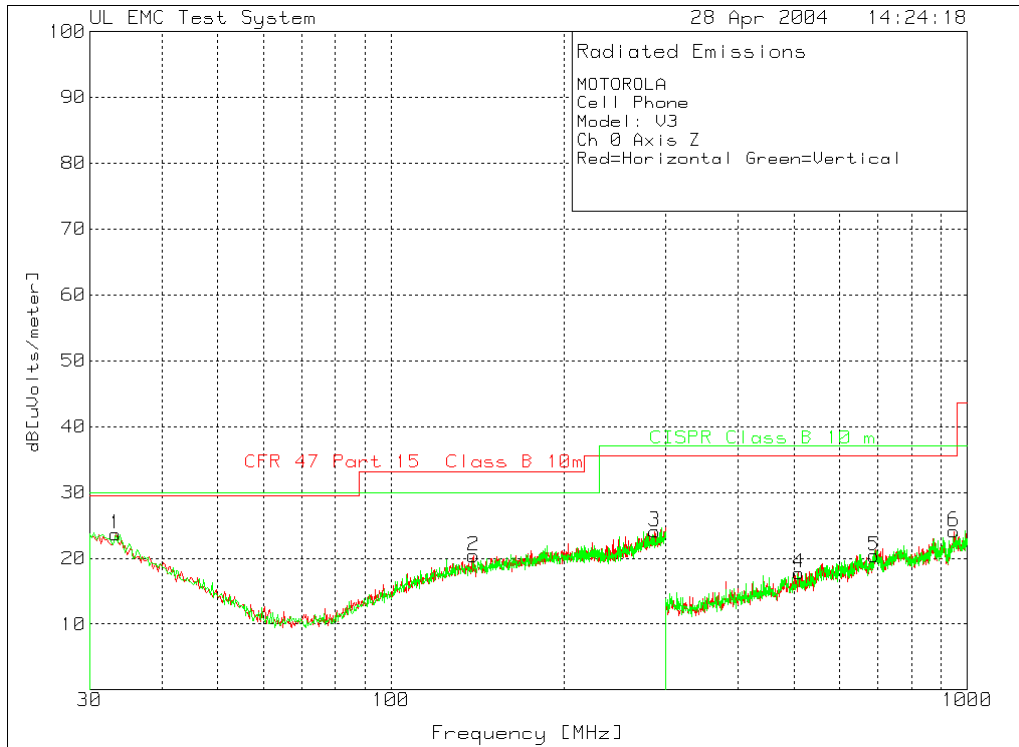


**30 -1000MHz Low Channel Dual Polarization Y-Orientation**

**MOTOROLA**  
**Cell Phone**  
**Model: V3**  
**Ch 0 Axis Y**  
**Red=Horizontal Green=Vertical**

Test No.	Frequency [MHz]	Meter Reading [dB[uV]]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1	2
<b>Range: 1 30 - 300MHz</b>							
1	30.27	31.3 pk	-26.9	19.2	23.6	29.6	30
	Azimuth:269	Height:101	Horz		<b>Margin [dB]</b>	<b>-6</b>	<b>-6.4</b>
2	168.51	32.2 pk	-26.5	15.3	21	33.1	30
	Azimuth:67	Height:101	Horz		<b>Margin [dB]</b>	<b>-12.1</b>	<b>-9</b>
3	293.25	32.2 pk	-25.6	18.1	24.7	35.6	37
	Azimuth:235	Height:101	Horz		<b>Margin [dB]</b>	<b>-10.9</b>	<b>-12.3</b>
<b>Range: 4 300 - 1000MHz</b>							
4	650.7	31 pk	-31.3	20.5	20.2	35.6	37
	Azimuth:195	Height:101	Vert		<b>Margin [dB]</b>	<b>-15.4</b>	<b>-16.8</b>
5	756.4	32.2 pk	-31.2	21.6	22.6	35.6	37
	Azimuth:33	Height:101	Vert		<b>Margin [dB]</b>	<b>-13</b>	<b>-14.4</b>
6	985.3	30.7 pk	-31	24	23.7	43.5	37
	Azimuth:195	Height:101	Vert		<b>Margin [dB]</b>	<b>-19.8</b>	<b>-13.3</b>

LIMIT 1: CFR 47 Part 15 Class B 10m  
 LIMIT 2: CISPR Class B 10 m  
 LIMIT 3: NONE  
 LIMIT 4: NONE  
 LIMIT 5: NONE  
 LIMIT 6: NONE

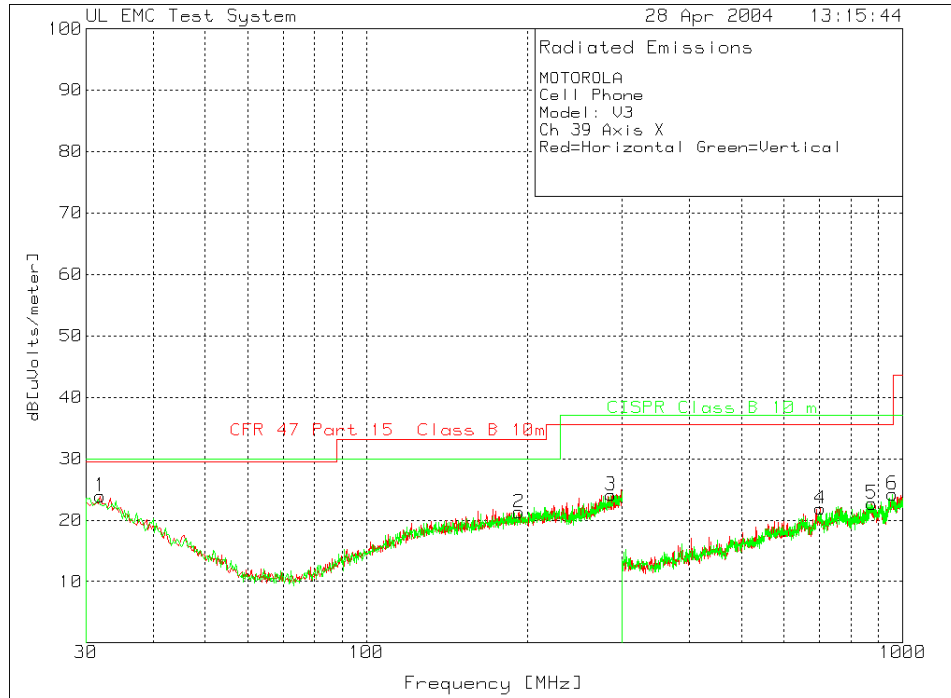


**30 -1000MHz Low Channel Dual Polarization Z-Orientation**

**MOTOROLA**  
**Cell Phone**  
**Model: V3**  
**Ch 0 Axis Z**  
**Red=Horizontal Green=Vertical**

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1	2
<b>Range: 1 30 - 300MHz</b>							
1	33.24	32.1 pk	-26.9	18.5	23.7	29.6	30
		Azimuth:357 Height:101 Horz			<b>Margin [dB]</b>	<b>-5.9</b>	<b>-6.3</b>
2	139.08	32.6 pk	-26.6	14.4	20.4	33.1	30
		Azimuth:357 Height:101 Horz			<b>Margin [dB]</b>	<b>-12.7</b>	<b>-9.6</b>
3	286.77	31.8 pk	-25.7	18	24.1	35.6	37
		Azimuth:337 Height:101 Horz			<b>Margin [dB]</b>	<b>-11.5</b>	<b>-12.9</b>
<b>Range: 3 300 - 1000MHz</b>							
4	510	31.8 pk	-31.9	17.9	17.8	35.6	37
		Azimuth:95 Height:101 Horz			<b>Margin [dB]</b>	<b>-17.8</b>	<b>-19.2</b>
5	689.2	30.5 pk	-31.2	21.1	20.4	35.6	37
		Azimuth:350 Height:101 Horz			<b>Margin [dB]</b>	<b>-15.2</b>	<b>-16.6</b>
6	946.8	31.4 pk	-31.7	24.4	24.1	35.6	37
		Azimuth:211 Height:101 Horz			<b>Margin [dB]</b>	<b>-11.5</b>	<b>-12.9</b>

LIMIT 1: CFR 47 Part 15 Class B 10m  
 LIMIT 2: CISPR Class B 10 m  
 LIMIT 3: NONE  
 LIMIT 4: NONE  
 LIMIT 5: NONE  
 LIMIT 6: NONE

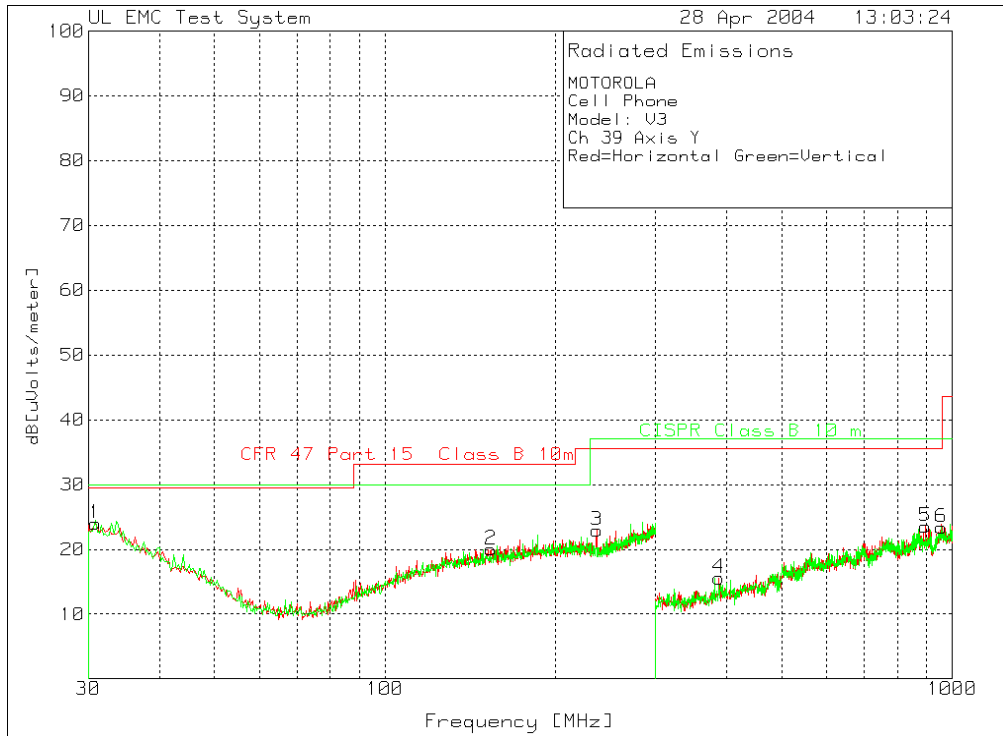


**30 -1000MHz Mid Channel Dual Polarization X-Orientation**

MOTOROLA  
 Cell Phone  
 Model: V3  
 Ch 39 Axis X  
 Red=Horizontal Green=Vertical

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level [dB]	Limit:1 [dB]	Limit:2 [dB]
<b>Range: 1 30 - 300MHz</b>							
1	31.89	31.9 pk	-26.9	18.9	23.9	29.6	30
		Azimuth:324 Height:101 Horz			<b>Margin [dB]</b>	<b>-5.7</b>	<b>-6.1</b>
2	192.27	31.7 pk	-26.3	15.9	21.3	33.1	30
		Azimuth:324 Height:101 Horz			<b>Margin [dB]</b>	<b>-11.8</b>	<b>-8.7</b>
<b>Range: 2 30 - 300MHz</b>							
3	285.69	31.9 pk	-25.7	17.9	24.1	35.6	37
		Azimuth:204 Height:101 Vert			<b>Margin [dB]</b>	<b>-11.5</b>	<b>-12.9</b>
<b>Range: 3 300 - 1000MHz</b>							
4	702.5	31.7 pk	-31.1	21.3	21.9	35.6	37
		Azimuth:172 Height:101 Horz			<b>Margin [dB]</b>	<b>-13.7</b>	<b>-15.1</b>
5	875.4	30.9 pk	-31.9	23.7	22.7	35.6	37
		Azimuth:195 Height:101 Horz			<b>Margin [dB]</b>	<b>-12.9</b>	<b>-14.3</b>
<b>Range: 4 300 - 1000MHz</b>							
6	956.6	31.2 pk	-31.5	24.5	24.2	35.6	37
		Azimuth:116 Height:101 Vert			<b>Margin [dB]</b>	<b>-11.4</b>	<b>-12.8</b>

LIMIT 1: CFR 47 Part 15 Class B 10m  
 LIMIT 2: CISPR Class B 10 m  
 LIMIT 3: NONE  
 LIMIT 4: NONE  
 LIMIT 5: NONE  
 LIMIT 6: NONE



**30 -1000MHz Mid-Channel Dual Polarization Y-Orientation**

**MOTOROLA**  
**Cell Phone**  
**Model: V3**  
**Ch 39 Axis Y**  
**Red=Horizontal Green=Vertical**

Test No.	Meter	Gain/Loss [dB]	Transducer Factor [dB]	Level [dB]	Limit:1 [dB]	Limit:2 [dB]
1	30.81	31.8 pk -26.9	19.1	24	29.6	30
2	153.66	31.6 pk -26.6	15	20	33.1	30
3	236.01	33.3 pk -26	15.6	22.9	35.6	37
4	387.5	32.2 pk -32.3	15.7	15.6	35.6	37
5	896.4	32.1 pk -31.8	23.2	23.5	35.6	37
6	956.6	30.4 pk -31.5	24.5	23.4	35.6	37

**Range: 1 30 - 300MHz**

1	30.81	31.8 pk	-26.9	19.1	24	29.6	30
		Azimuth:9 Height:101 Horz			<b>Margin [dB]</b>	<b>-5.6</b>	<b>-6</b>
2	153.66	31.6 pk	-26.6	15	20	33.1	30
		Azimuth:137 Height:101 Horz			<b>Margin [dB]</b>	<b>-13.1</b>	<b>-10</b>
3	236.01	33.3 pk	-26	15.6	22.9	35.6	37
		Azimuth:306 Height:101 Horz			<b>Margin [dB]</b>	<b>-12.7</b>	<b>-14.1</b>

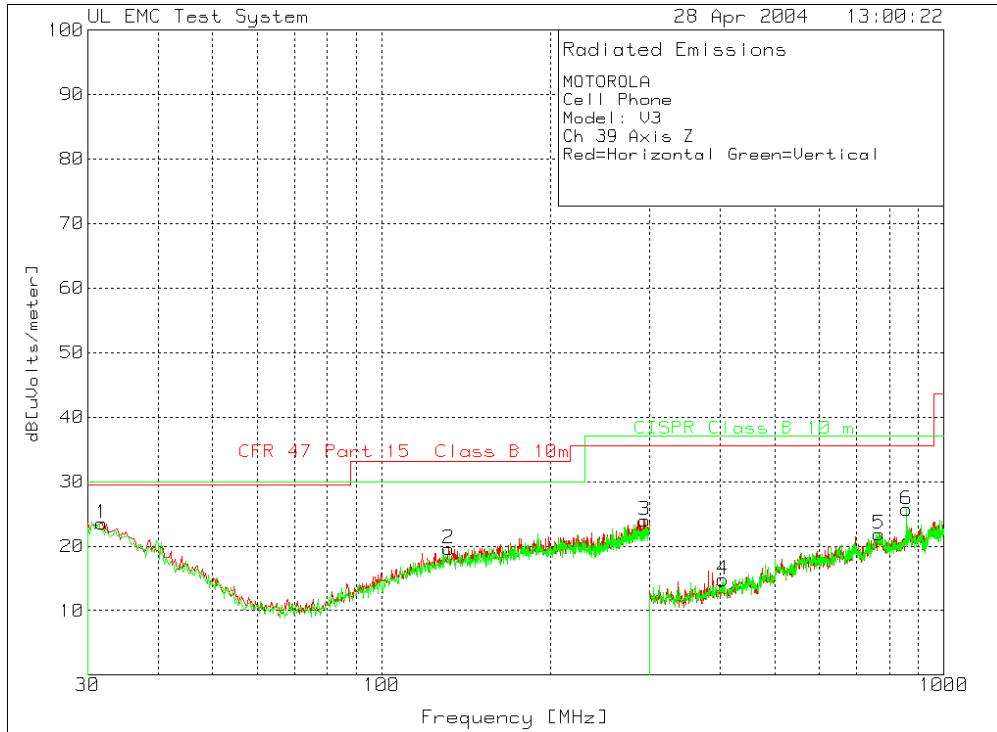
**Range: 3 300 - 1000MHz**

4	387.5	32.2 pk	-32.3	15.7	15.6	35.6	37
		Azimuth:165 Height:101 Horz			<b>Margin [dB]</b>	<b>-20</b>	<b>-21.4</b>
5	896.4	32.1 pk	-31.8	23.2	23.5	35.6	37
		Azimuth:118 Height:101 Horz			<b>Margin [dB]</b>	<b>-12.1</b>	<b>-13.5</b>

**Range: 4 300 - 1000MHz**

6	956.6	30.4 pk	-31.5	24.5	23.4	35.6	37
		Azimuth:148 Height:101 Vert			<b>Margin [dB]</b>	<b>-12.2</b>	<b>-13.6</b>

LIMIT 1: CFR 47 Part 15 Class B 10m  
 LIMIT 2: CISPR Class B 10 m  
 LIMIT 3: NONE  
 LIMIT 4: NONE  
 LIMIT 5: NONE  
 LIMIT 6: NONE



**30 -1000MHz Mid Channel Dual Polarization Z-Orientation**

**MOTOROLA  
Cell Phone  
Model: V3  
Ch 39 Axis Z**

**Red=Horizontal Green=Vertical**

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1	Limit:2
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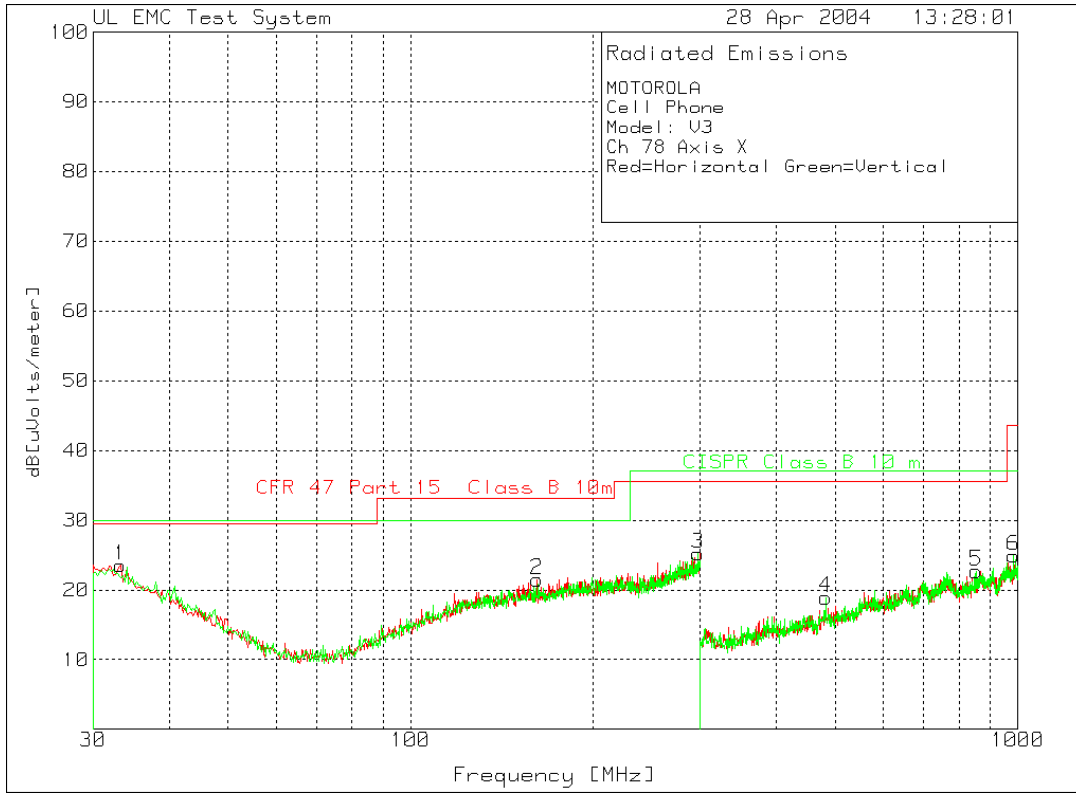
**Range: 1 30 - 300MHz**

1	31.755	31.6 pk	-26.9	18.8	23.5	29.6	30
		Azimuth:291	Height:101			<b>Margin [dB]</b>	<b>-6.1 -6.5</b>
2	131.52	32 pk	-26.6	14.2	19.6	33.1	30
		Azimuth:10	Height:101			<b>Margin [dB]</b>	<b>-13.5 -10.4</b>
3	293.25	31.5 pk	-25.6	18.1	24	35.6	37
		Azimuth:324	Height:101			<b>Margin [dB]</b>	<b>-11.6 -13</b>

**Range: 4 300 - 1000MHz**

4	404.3	31.3 pk	-32.5	16	14.8	35.6	37
		Azimuth:58	Height:101			<b>Margin [dB]</b>	<b>-20.8 -22.2</b>
5	766.2	31.4 pk	-31.5	22	21.9	35.6	37
		Azimuth:287	Height:101			<b>Margin [dB]</b>	<b>-13.7 -15.1</b>
6	859.3	34.6 pk	-31.9	23	25.7	35.6	37
		Azimuth:35	Height:101			<b>Margin [dB]</b>	<b>-9.9 -11.3</b>

LIMIT 1: CFR 47 Part 15 Class B 10m  
 LIMIT 2: CISPR Class B 10 m  
 LIMIT 3: NONE  
 LIMIT 4: NONE  
 LIMIT 5: NONE  
 LIMIT 6: NONE

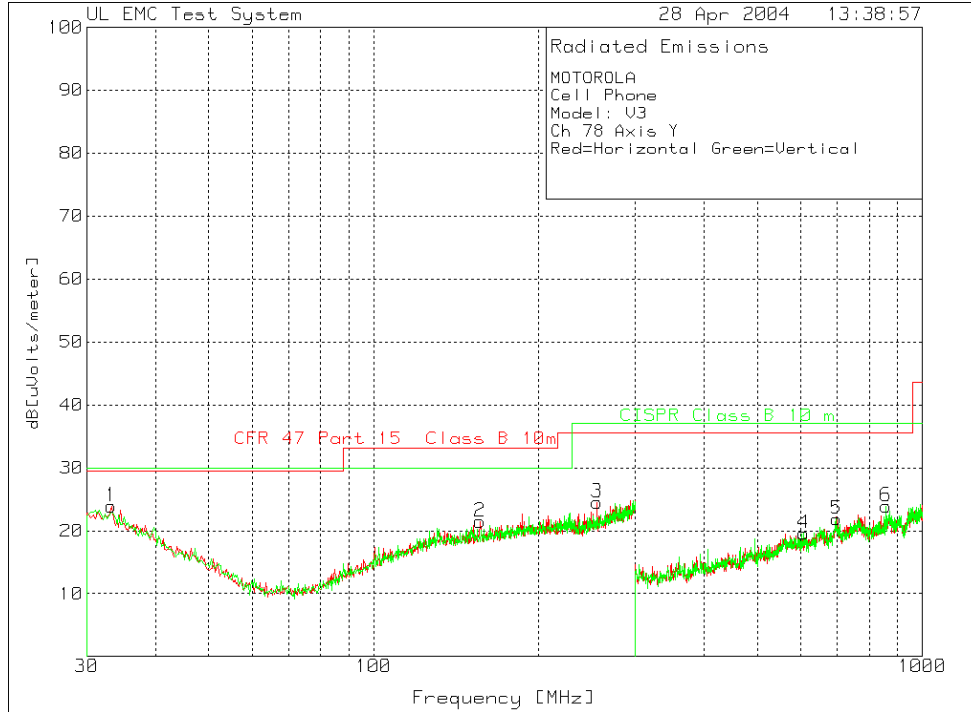


**MOTOROLA**  
**Cell Phone**  
**Model: V3**  
**Ch 78 Axis X**

**Red=Horizontal Green=Vertical**

<b>Test No.</b>	<b>Frequency [MHz]</b>	<b>Meter Reading [dB(uV)]</b>	<b>Gain/Loss Factor [dB]</b>	<b>Transducer Factor [dB]</b>	<b>Level dB[uV/m]</b>	<b>Limit:1</b>	<b>2</b>
<b>Range: 1 30 - 300MHz</b>							
1	33.24	31.9 pk	-26.9	18.5	23.5	29.6	30
	Azimuth:271		Height:101 Horz		<b>Margin [dB]</b>	<b>-6.1</b>	<b>-6.5</b>
2	161.49	33 pk	-26.5	15	21.5	33.1	30
	Azimuth:103		Height:101 Horz		<b>Margin [dB]</b>	<b>-11.6</b>	<b>-8.5</b>
<b>Range: 2 30 - 300MHz</b>							
3	297.57	32.4 pk	-25.7	18.5	25.2	35.6	37
	Azimuth:88		Height:101 Vert		<b>Margin [dB]</b>	<b>-10.4</b>	<b>-11.8</b>
<b>Range: 4 300 - 1000MHz</b>							
4	482.7	32.8 pk	-32	18.1	18.9	5.6	37
	Azimuth:10		Height:101 Vert		<b>Margin [dB]</b>	<b>-16.7</b>	<b>-18.1</b>
5	853.7	31.8 pk	-31.9	22.8	22.7	35.6	37
	Azimuth:287		Height:101 Vert		<b>Margin [dB]</b>	<b>-12.9</b>	<b>-14.3</b>
6	983.9	31.9 pk	-30.9	23.9	24.9	43.5	37
	Azimuth:310		Height:101 Vert		<b>Margin [dB]</b>	<b>-18.6</b>	<b>-12.1</b>

LIMIT 1: CFR 47 Part 15 Class B 10m  
 LIMIT 2: CISPR Class B 10 m  
 LIMIT 3: NONE  
 LIMIT 4: NONE  
 LIMIT 5: NONE  
 LIMIT 6: NONE



**30 -1000MHz High Channel Dual Polarization Y-Orientation**

**MOTOROLA**  
**Cell Phone**  
**Model: V3**  
**Ch 78 Axis Y**

**Red=Horizontal Green=Vertical**

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1	2
<b>Range: 1 30 - 300MHz</b>							
1	33.24	32.3 pk	-26.9	18.5	23.9	29.6	30
		Azimuth:168	Height:101	Horz	<b>Margin [dB]</b>	<b>-5.7</b>	<b>-6.1</b>
2	156.09	32.9 pk	-26.5	15.1	21.5	33.1	30
		Azimuth:100	Height:101	Horz	<b>Margin [dB]</b>	<b>-11.6</b>	<b>-8.5</b>
3	255.18	33.9 pk	-25.9	16.5	24.5	35.6	37
		Azimuth:100	Height:101	Horz	<b>Margin [dB]</b>	<b>-11.1</b>	<b>-12.5</b>
<b>Range: 4 300 - 1000MHz</b>							
4	608	31.5 pk	-31.4	19.5	19.6	35.6	37
		Azimuth:264	Height:101	Vert	<b>Margin [dB]</b>	<b>-16</b>	<b>-17.4</b>
5	697.6	31.3 pk	-31.2	21.8	21.9	35.6	37
		Azimuth:287	Height:101	Vert	<b>Margin [dB]</b>	<b>-13.7</b>	<b>-15.1</b>
6	859.3	32.8 pk	-31.9	23	23.9	35.6	37
		Azimuth:33	Height:101	Vert	<b>Margin [dB]</b>	<b>-11.7</b>	<b>-13.1</b>

LIMIT 1: CFR 47 Part 15 Class B 10m

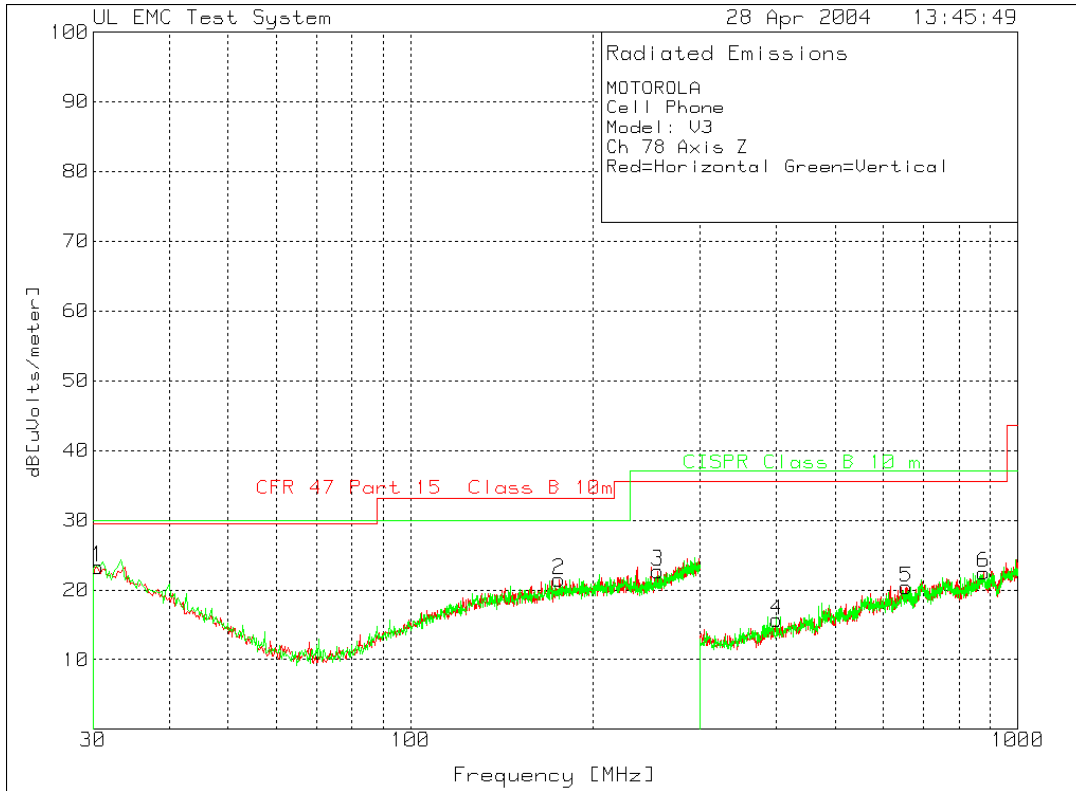
LIMIT 2: CISPR Class B 10 m

LIMIT 3: NONE

LIMIT 4: NONE

LIMIT 5: NONE

LIMIT 6: NONE



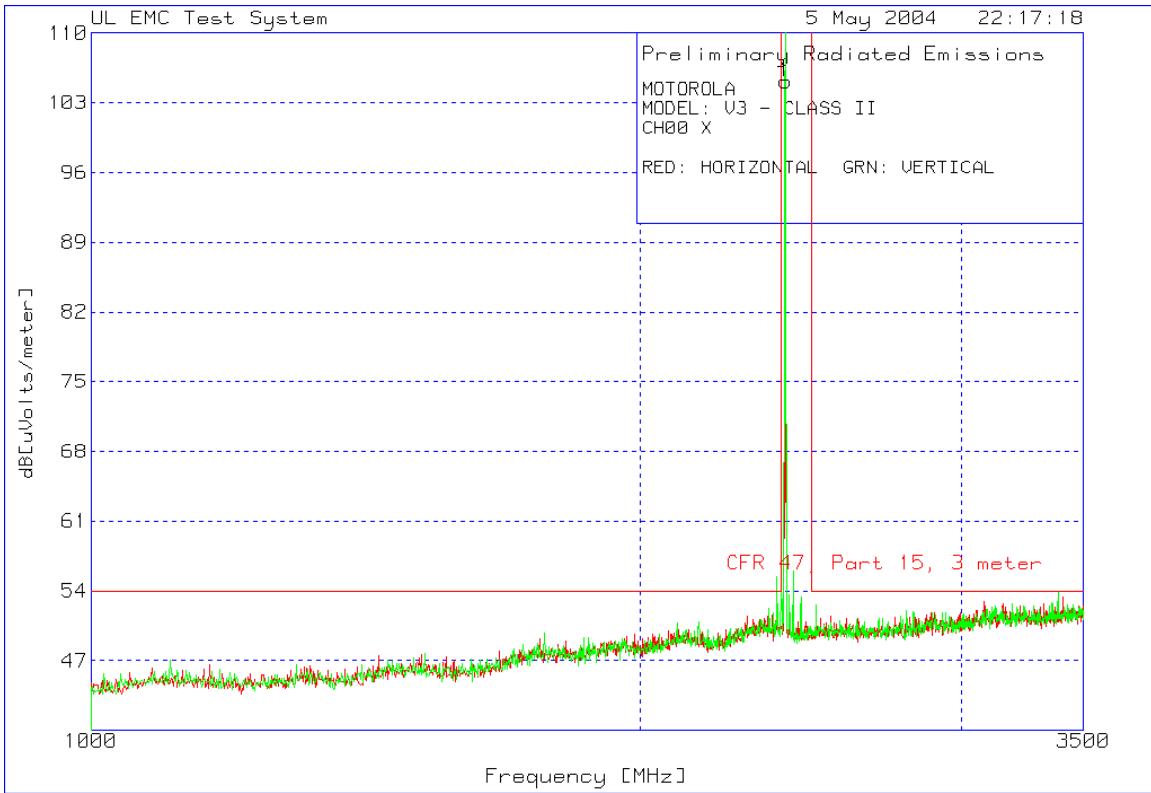
**30 -1000MHz High Channel Dual Polarization Z-Orientation**

**MOTOROLA**  
**Cell Phone**  
**Model: V3**  
**Ch 78 Axis Z**

Red=Horizontal Green=Vertical

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1	2
<b>Range: 1 30 - 300MHz</b>							
1	30.54	31 pk	-26.9	19.2	23.3	29.6	30
	Azimuth:168	Height:101	Horz	<b>Margin [dB]</b>	<b>-6.3</b>	<b>-6.7</b>	
2	175.53	32.4 pk	-26.4	15.5	21.5	33.1	30
	Azimuth:357	Height:101	Horz	<b>Margin [dB]</b>	<b>-11.6</b>	<b>-8.5</b>	
3	255.18	32.1 pk	-25.9	16.5	22.7	35.6	37
	Azimuth:134	Height:101	Horz	<b>Margin [dB]</b>	<b>-12.9</b>	<b>-14.3</b>	
<b>Range: 3 300 - 1000MHz</b>							
4	400.8	32 pk	-32.3	16	15.7	35.6	37
	Azimuth:328	Height:101	Horz	<b>Margin [dB]</b>	<b>-19.9</b>	<b>-21.3</b>	
5	654.9	31.1 pk	-31.2	20.5	20.4	35.6	37
	Azimuth:3	Height:101	Horz	<b>Margin [dB]</b>	<b>-15.2</b>	<b>-16.6</b>	
6	878.2	31 pk	-32	23.5	22.5	35.6	37
	Azimuth:9	Height:101	Horz	<b>Margin [dB]</b>	<b>-13.1</b>	<b>-14.5</b>	

LIMIT 1: CFR 47 Part 15 Class B 10m  
 LIMIT 2: CISPR Class B 10 m  
 LIMIT 3: NONE  
 LIMIT 4: NONE  
 LIMIT 5: NONE  
 LIMIT 6: NONE



### 1-3GHz Low Channel X-Orientation

MODEL: V3 - CLASS II

CH00 X

RED: HORIZONTAL GRN: VERTICAL

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1
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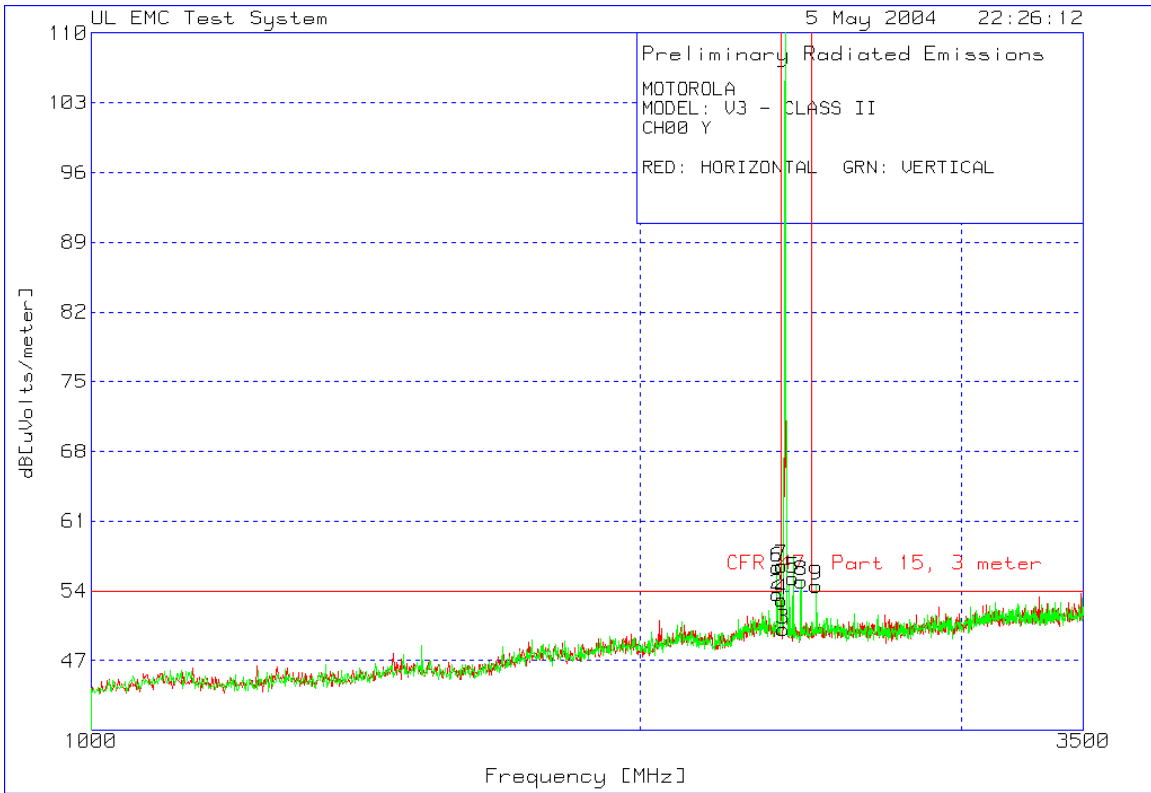
**Horizontal 1000 - 3500MHz**

1	2402.602	74.35 pk	2	28.8	105.15	999
		<b>Height:101 Horz</b>	<b>Margin [dB]</b>		<b>-893.85</b>	

**Vertical 1000 - 3500MHz**

2	2402.602	82.91 pk	2	28.8	113.71	999
		<b>Height:101 Vert</b>	<b>Margin [dB]</b>		<b>-885.29</b>	

LIMIT 1: CFR 47, Part 15, 3 meter



**1-3GHz Low Channel Y-Orientation**

**MOTOROLA  
MODEL: V3 - CLASS II  
CH00 Y**

**RED: HORIZONTAL GRN: VERTICAL**

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1
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**Horizontal 1000 - 3500MHz**

1	2402.602	80.1 pk	2	28.8	110.9	999
		<b>Height:101 Horz</b>		<b>Margin [dB]</b>	<b>-888.1</b>	
2	2377.585	23.05 pk	1.9	28.7	53.65	54
		<b>Height:101 Horz</b>		<b>Margin [dB]</b>	<b>-.35</b>	
3	2395.931	19.32 pk	2	28.8	50.12	999
		<b>Height:101 Horz</b>		<b>Margin [dB]</b>	<b>-948.88</b>	
4	2390.928	22.4 pk	2	28.7	53.1	999
		<b>Height:101 Horz</b>		<b>Margin [dB]</b>	<b>-945.9</b>	
5	2425.951	24.46 pk	2	28.8	55.26	999
		<b>Height:101 Horz</b>		<b>Margin [dB]</b>	<b>-943.74</b>	

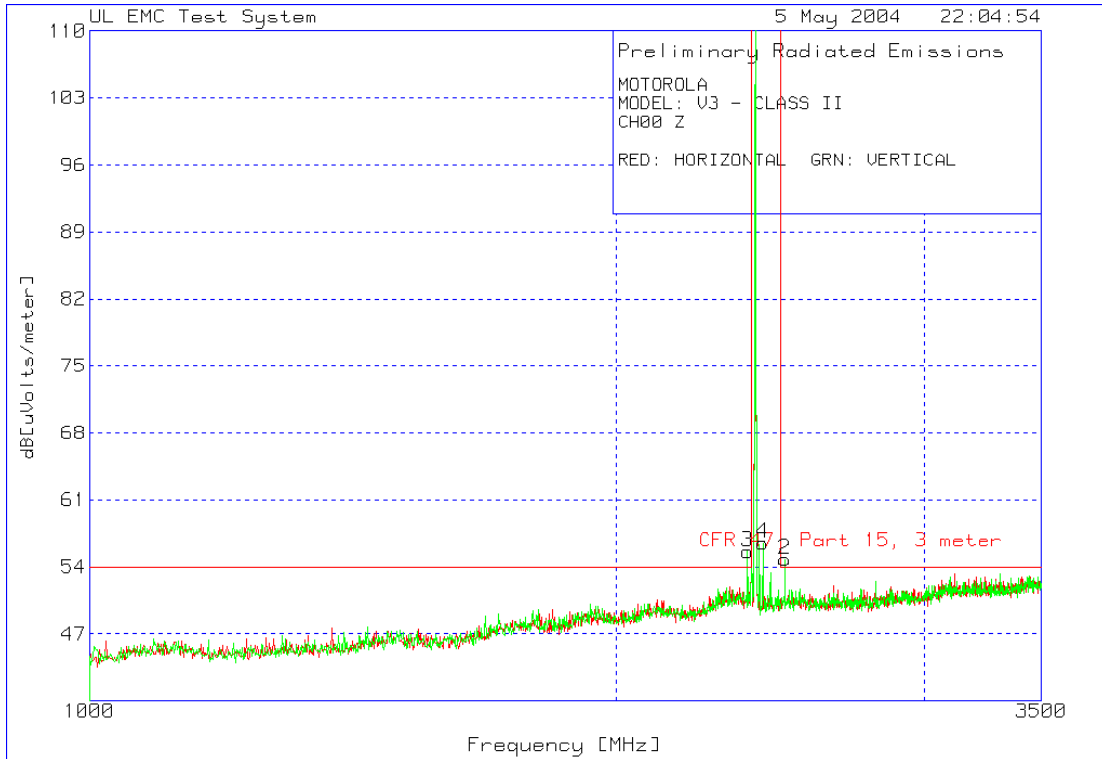
**Vertical 1000 - 3500MHz**

6	2377.585	25.77 pk	1.9	28.7	56.37	54
		<b>Height:101 Vert</b>		<b>Margin [dB]</b>	<b>2.37</b>	
7	2390.928	25.84 pk	2	28.7	56.54	999
		<b>Height:101 Vert</b>		<b>Margin [dB]</b>	<b>-942.46</b>	
8	2450.968	24.17 pk	2	28.8	54.97	999
		<b>Height:101 Vert</b>		<b>Margin [dB]</b>	<b>-944.03</b>	
9	2497.666	23.73 pk	1.9	28.9	54.53	54
		<b>Height:101 Vert</b>		<b>Margin [dB]</b>	<b>.53</b>	

LIMIT 1: CFR 47, Part 15, 3 meter

The duty cycle correction factor was applied to over limit signals:

Frequency (MHz)	Level (dBuV)	Duty Cycle Correction Factor	Corrected Level	Limit	Corrected Margin
2377.585	56.37	-30.66	25.71	54	<b>-28.29</b>
2497.666	54.53	-30.66	23.87	54	<b>-30.13</b>



**1-3GHz Low Channel Z-Orientation**

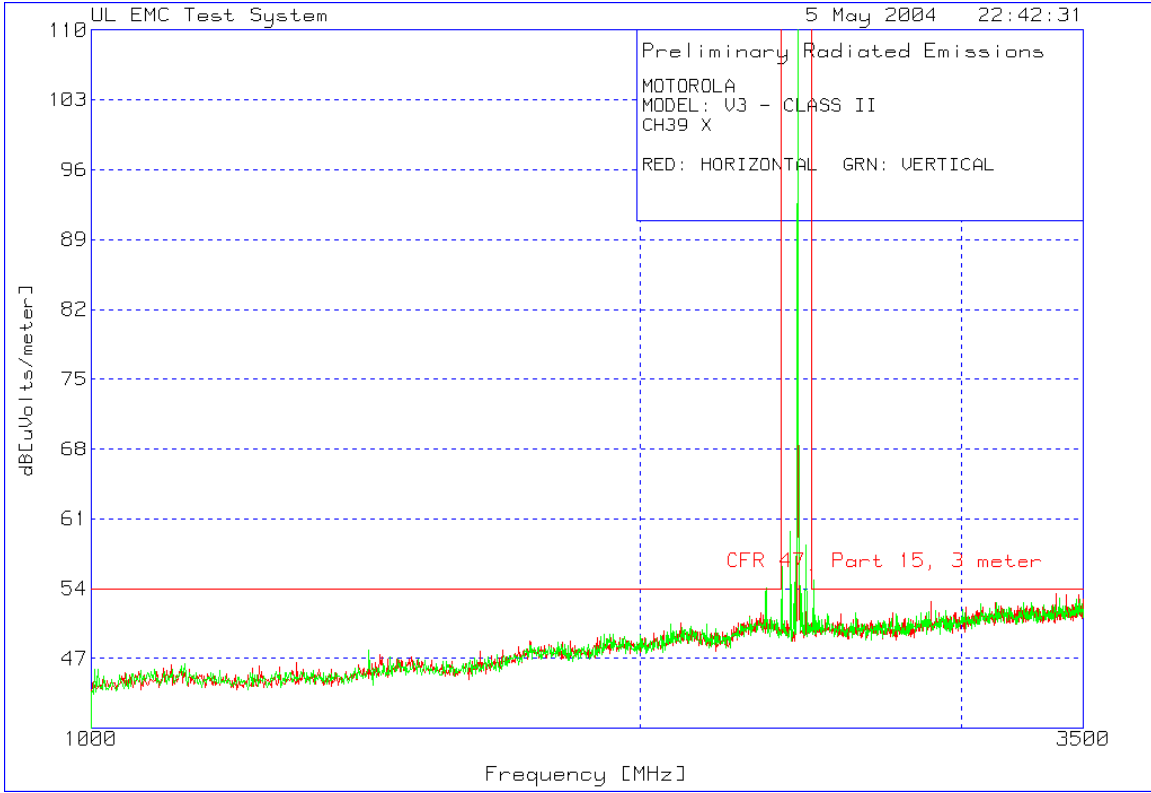
**MOTOROLA  
MODEL: V3 - CLASS II  
CH00 Z  
RED: HORIZONTAL GRN: VERTICAL**

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1
1	2402.602	83.64 pk	2	28.8	114.44	999
		<b>Height:101 Vert</b>		<b>Margin[dB]</b>	<b>-884.56</b>	
2	2497.666	23.99 pk	1.9	28.9	54.79	54
		<b>Height:101 Vert</b>		<b>Margin[dB]</b>	<b>0.79</b>	
3	2377.585	25.03 pk	1.9	28.7	55.63	54
		<b>Height:101 Vert</b>		<b>Margin[dB]</b>	<b>1.63</b>	
4	2425.951	25.69 pk	2	28.8	56.49	999
		<b>Height:101 Vert</b>		<b>Margin[dB]</b>	<b>-942.51</b>	

LIMIT 1: CFR 47, Part 15, 3 meter

The duty cycle correction factor was applied to over limit signals:

Frequency (MHz)	Level (dBuV)	Duty Cycle Correction Factor	Corrected Level	Limit	Corrected Margin
2497.666	54.79	-30.66	24.13	54	<b>-29.87</b>
2377.585	55.63	-30.66	24.97	54	<b>-29.03</b>



**1-3GHz Mid-Channel X-Orientation**

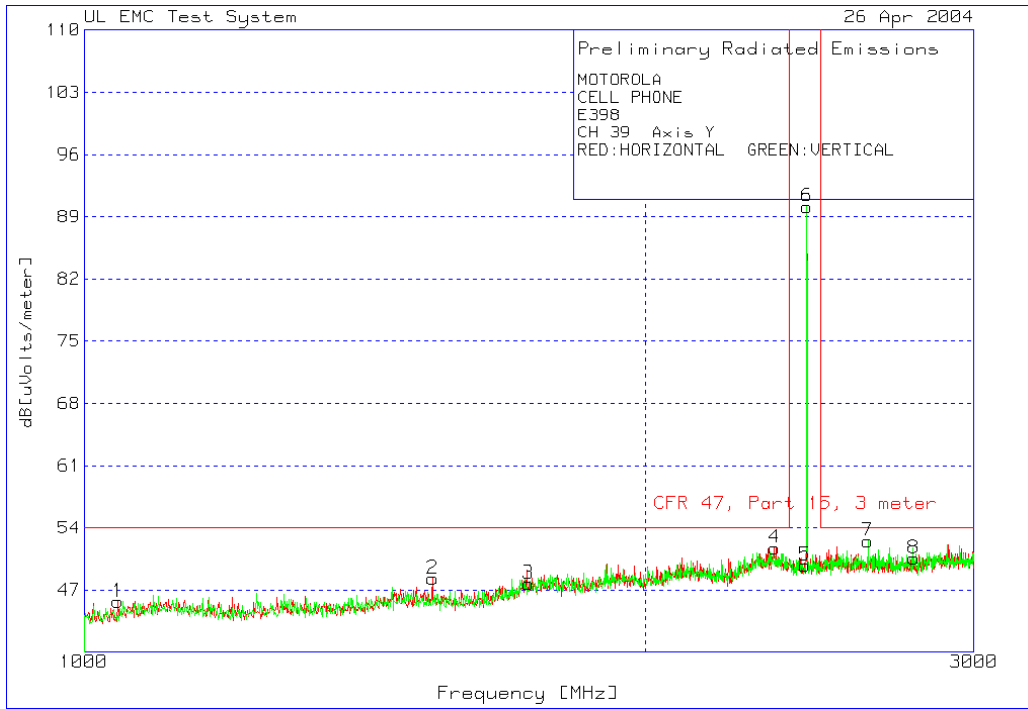
**MOTOROLA  
 MODEL: V3 - CLASS II  
 CH39 X  
 RED: HORIZONTAL GRN: VERTICAL**

Test No.	Meter Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1
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**Vertical 1000 - 3500MHz**

1	2440.961	79.87 pk	2	28.8	110.67	999
		<b>Height:100 Vert</b>		<b>Margin[dB]</b>	<b>-888.33</b>	

LIMIT 1: CFR 47, Part 15, 3 meter



**3GHz Mid-Channel Y-Orientation**

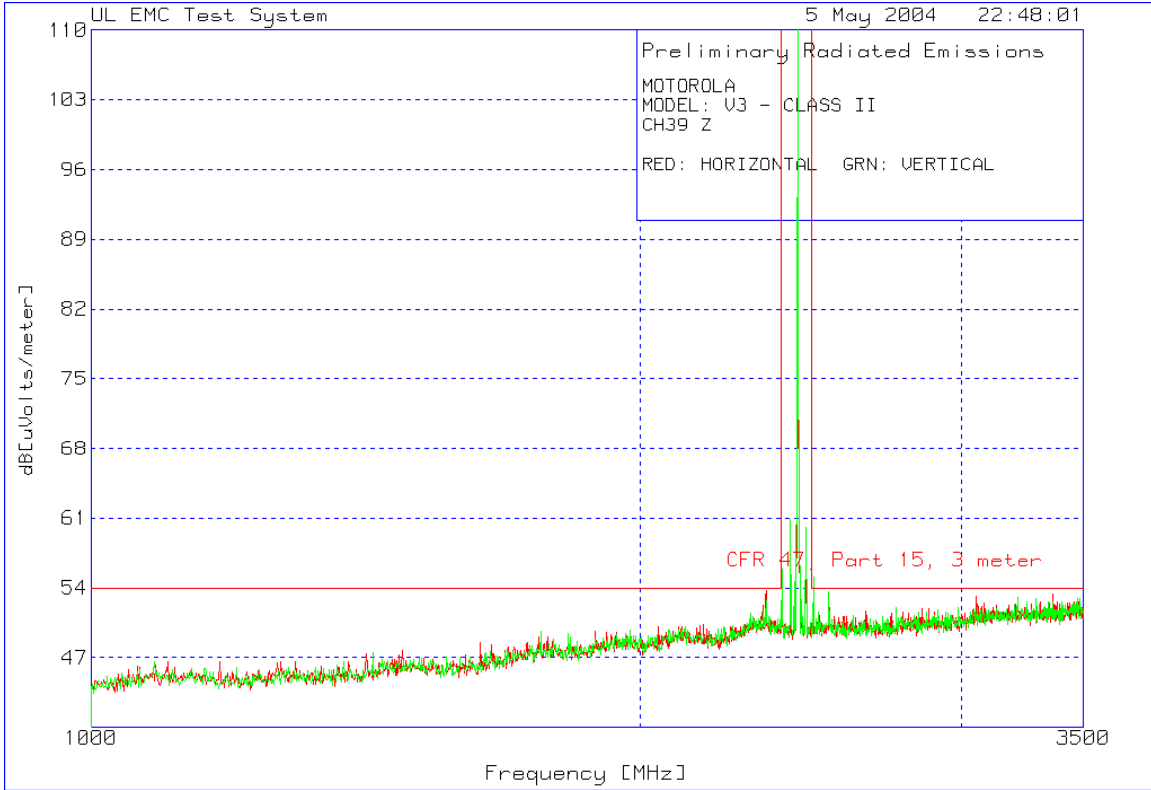
**MOTOROLA  
 MODEL: V3 - CLASS II  
 CH39 Y  
 RED: HORIZONTAL GRN: VERTICAL**

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1
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**Vertical 1000 - 3500MHz**

1	2440.961	83.18	pk 2	28.8	113.98	999
				<b>Height:100 Vert</b>	<b>Margin[dB]</b>	<b>[ -885.02</b>

LIMIT 1: CFR 47, Part 15, 3 meter



**1-3GHz Mid-Channel Z-Orientation**

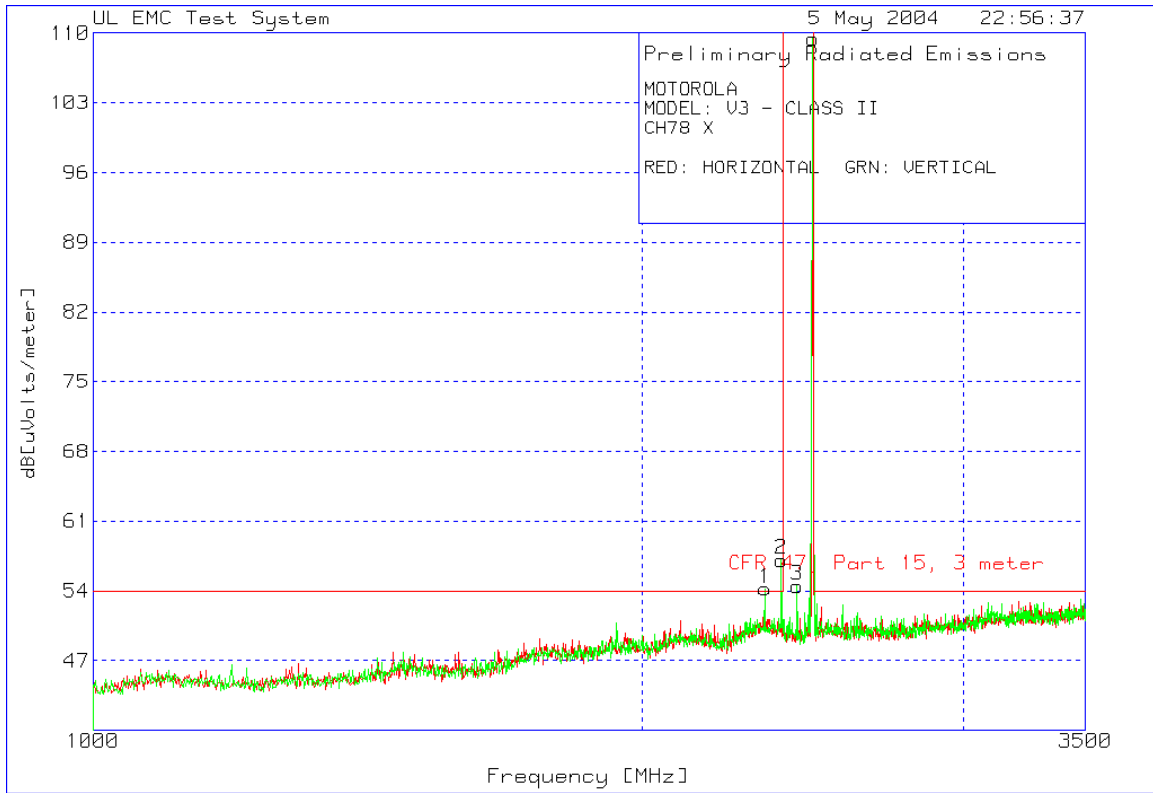
**MOTOROLA  
 MODEL: V3 - CLASS II  
 CH39 Z  
 RED: HORIZONTAL GRN: VERTICAL**

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	G <sub>a</sub> Factor [d [dB]]	Level dB[uV/m]	Limit:1
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**Vertical 1000 - 3500MHz**

1	2440.961	81.26 pk	28.8	112.06	999
		<b>Height:100 Vert</b>	<b>Margin</b>	<b>-886.94</b>	

LIMIT 1: CFR 47, Part 15, 3 meter



**1-3GHz High-Channel X-Orientation**

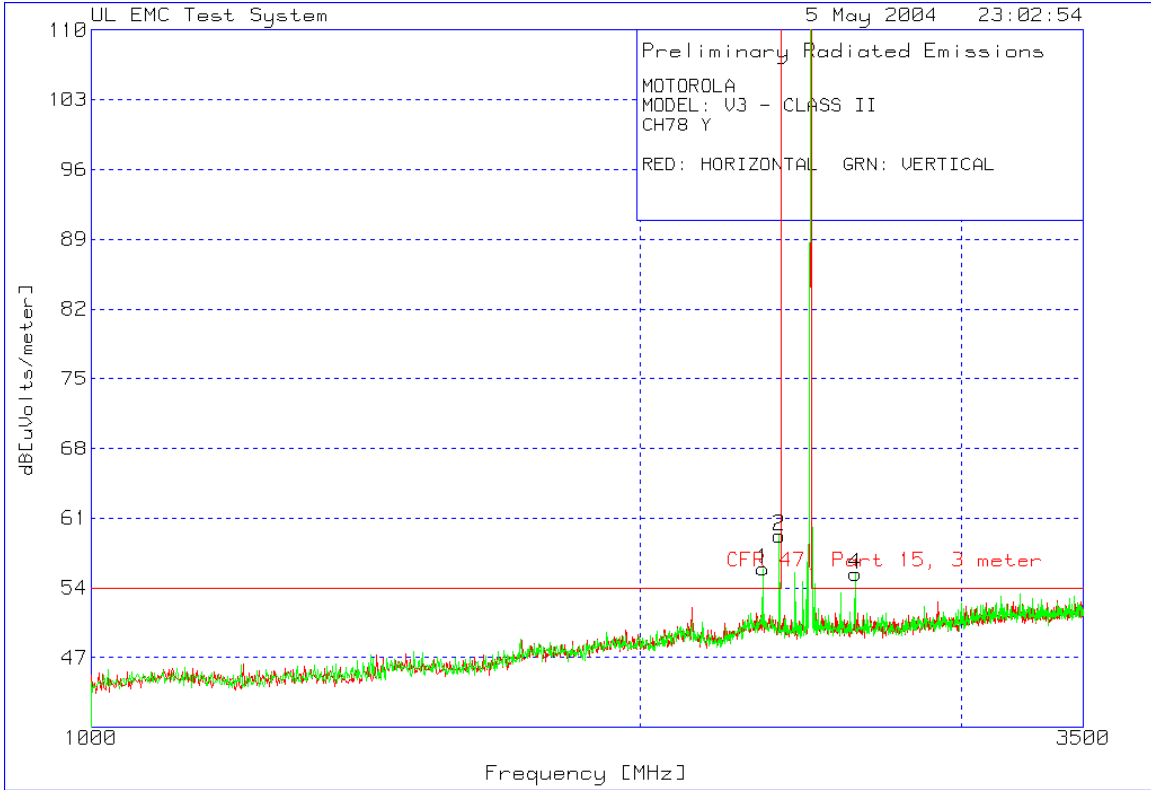
**MOTOROLA**  
**MODEL: V3 - CLASS II**  
**CH78 X**  
**RED: HORIZONTAL GRN: VERTICAL**

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1
<b>Vertical 1000 - 3500MHz</b>						
1	2335.891	23.6 pk	1.9	28.7	54.2	54
		<b>Height:100 Vert</b>		<b>Margin[dB]</b>	<b>0.2</b>	
2	2384.257	26.53 pk	1.9	28.7	57.13	54
		<b>Height:100 Vert</b>		<b>Margin[dB]</b>	<b>3.13</b>	
3	2432.622	23.72 pk	2	28.8	54.52	999
		<b>Height:100 Vert</b>		<b>Margin[dB]</b>	<b>-944.48</b>	
4	2480.988	78.69 pk	1.9	28.9	109.49	999
		<b>Height:100 Vert</b>		<b>Margin[dB]</b>	<b>-889.51</b>	

LIMIT 1: CFR 47, Part 15, 3 meter

The duty cycle correction factor was applied to over limit signals:

Frequency (MHz)	Level (dBuV)	Duty Cycle Correction Factor	Corrected Level	Limit	Corrected Margin
2335.891	54.2	-30.66	23.54	54	<b>-30.46</b>
2384.257	57.13	-30.66	26.47	54	<b>-27.53</b>



**1-3GHz High-Channel Y-Orientation**

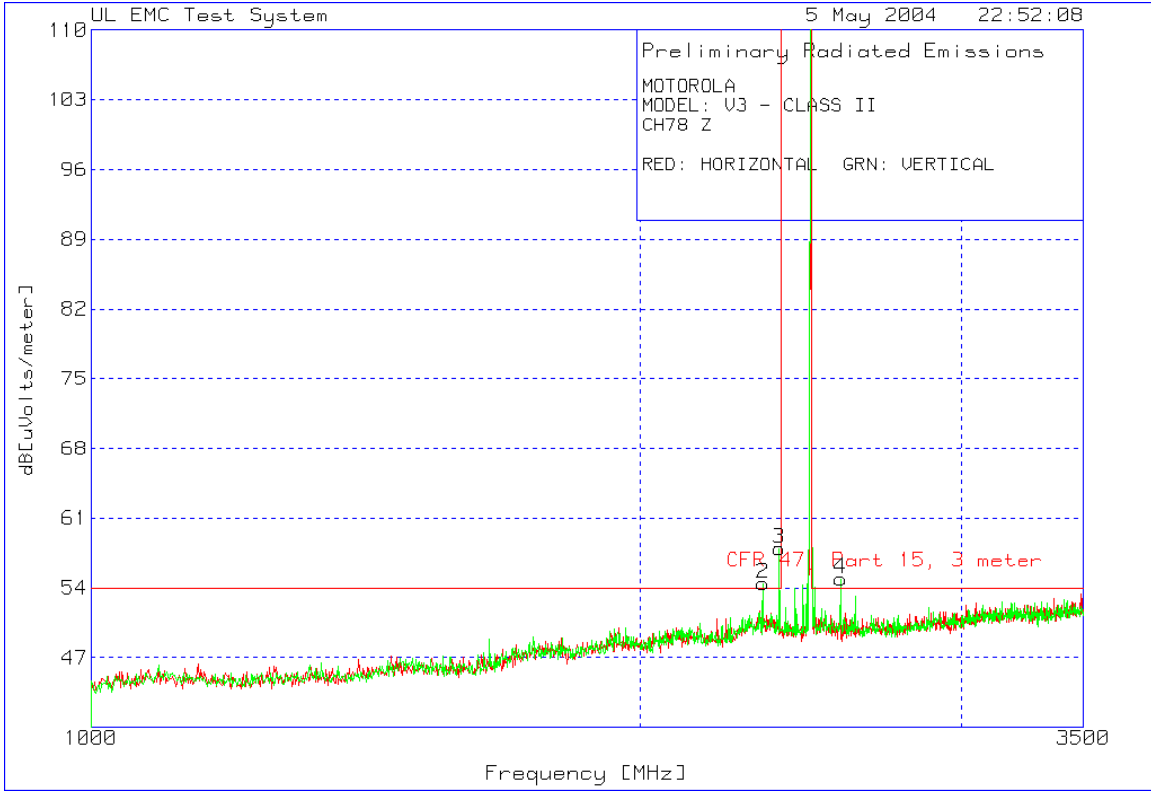
**MOTOROLA  
MODEL: V3 - CLASS II  
CH78 Y**

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1
<b>Vertical 1000 - 3500MHz</b>						
1	2335.891	25.3 pk	1.9		28.7 55.9	54
		<b>Height:100 Vert</b>			<b>Margin[dB]</b>	<b>1.9</b>
2	2384.257	28.67 pk	1.9		28.7 59.27	54
		<b>Height:100 Vert</b>			<b>Margin[dB]</b>	<b>5.27</b>
3	2480.988	82.34 pk	1.9		28.9 113.14	999
		<b>Height:100 Vert</b>			<b>Margin[dB]</b>	<b>-885.86</b>
4	2624.417	24.2 pk	2		29.2 55.4	54
		<b>Height:100 Vert</b>			<b>Margin[dB]</b>	<b>1.4</b>

LIMIT 1: CFR 47, Part 15, 3 meter

The duty cycle correction factor was applied to over limit signals:

Frequency (MHz)	Level (dBuV)	Duty Cycle Correction Factor	Corrected Level	Limit	Corrected Margin
2335.891	55.9	-30.66	25.24	54	<b>-28.76</b>
2384.257	59.27	-30.66	28.61	54	<b>-25.39</b>
2624.417	55.4	-30.66	24.74	54	<b>-29.26</b>



**1-3GHz High-Channel Z-Orientation**

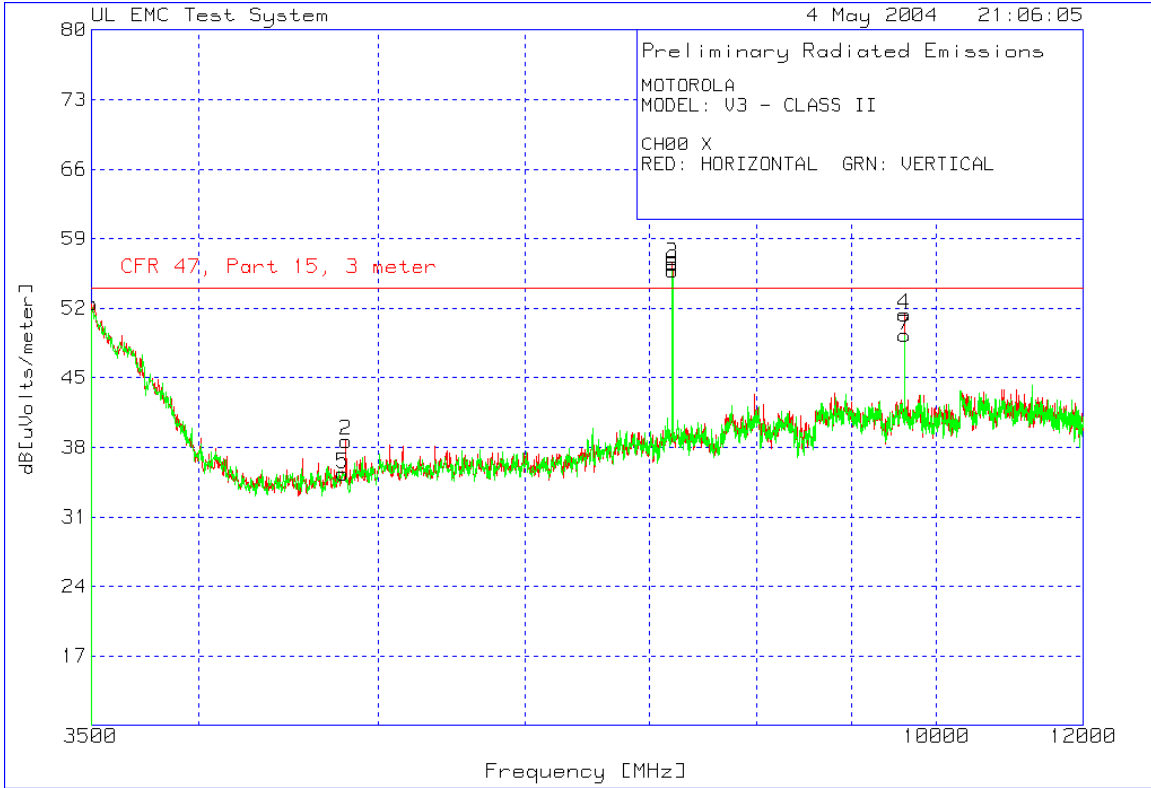
**MOTOROLA**  
**MODEL: V3 - CLASS II**  
**CH78 Z**  
**RED: HORIZONTAL GRN: VERTICAL**

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1
<b>Vertical 1000 - 3500MHz</b>						
1	2480.988	81.2 pk	1.9		112	999
			<b>Height:100 Vert</b>	<b>Margin[dB]</b>	<b>-887</b>	
2	2335.891	23.84 pk	1.9	28.9	54.44	54
			<b>Height:100 Vert</b>	<b>Margin[dB]</b>	<b>0.44</b>	
3	2384.257	27.35 pk	1.9	28.7	57.95	54
			<b>Height:100 Vert</b>	<b>Margin[dB]</b>	<b>3.95</b>	
4	2576.051	23.81 pk	2	29.1	54.91	54
			<b>Height:100 Vert</b>	<b>Margin[dB]</b>	<b>0.91</b>	

LIMIT 1: CFR 47, Part 15, 3 meter

The duty cycle correction factor was applied to over limit signals:

Frequency (MHz)	Level (dBuV)	Duty Cycle Correction Factor	Corrected Level	Limit	Corrected Margin
2335.891	54.44	-30.66	23.78	54	<b>-30.22</b>
2384.257	57.95	-30.66	27.29	54	<b>-26.71</b>



**3-12GHz Low-Channel X-Orientation**

**MOTOROLA**

**MODEL: V3 - CLASS II**

**CH00 X**

**RED: HORIZONTAL GRN: VERTICAL**

<b>Test No.</b>	<b>Frequency [MHz]</b>	<b>Meter Reading [dB(uV)]</b>	<b>Gain/Loss Factor [dB]</b>	<b>Transducer Factor [dB]</b>	<b>Level dB[uV/m]</b>	<b>Limit:1</b>
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**Horizontal 3500 - 12000MHz**

1	3503.401	51.38 pk	-30.2	31.3	52.48	54
		<b>Height:101 Horz</b>	<b>Margin [dB]</b>		<b>-1.52</b>	
2	4802.721	53.87 pk	-48.9	33.7	38.67	54
		<b>Height:150 Horz</b>	<b>Margin [dB]</b>		<b>-15.33</b>	
3	7204.082	65.38 pk	-45.4	36.5	56.48	54
		<b>Height:150 Horz</b>	<b>Margin [dB]</b>		<b>2.48</b>	
4	9608.844	60.75 pk	-47.7	38.3	51.35	54
		<b>Height:150 Horz</b>	<b>Margin [dB]</b>		<b>-2.65</b>	

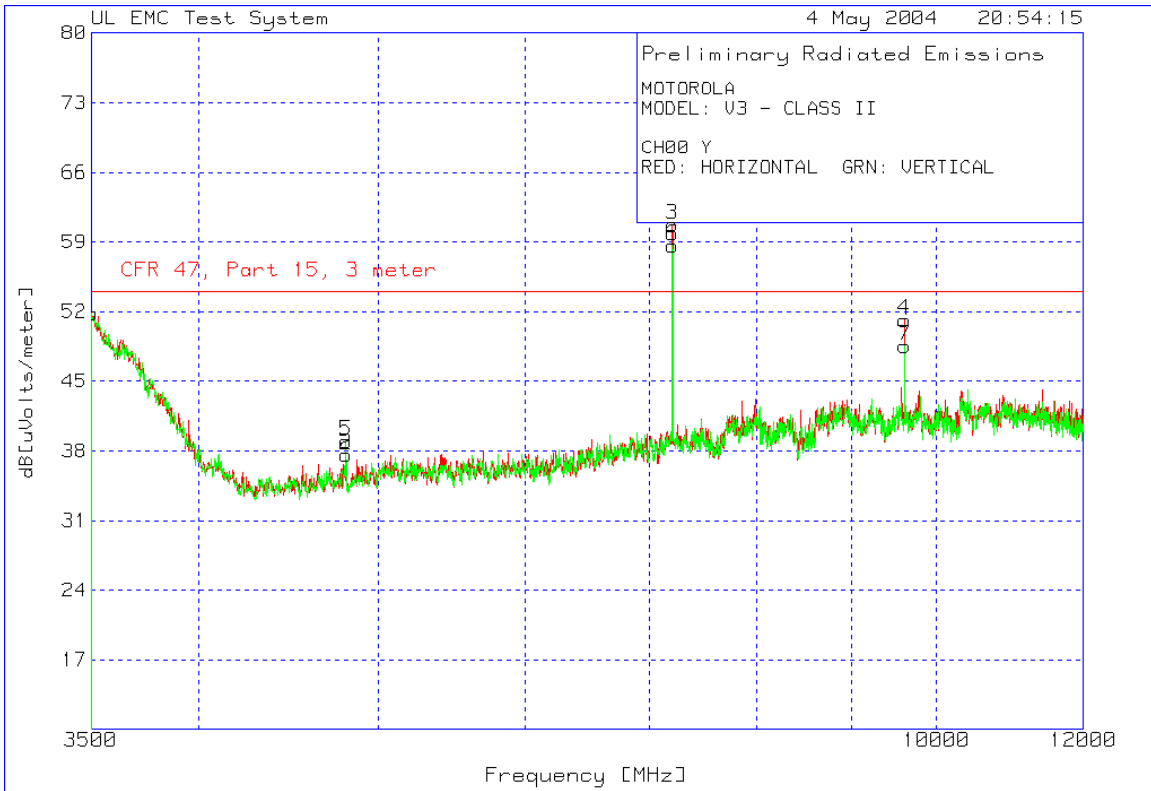
**Vertical 3500 - 12000MHz**

5	4785.714	50.86 pk	-49.2	33.7	35.36	54
		<b>Height:101 Vert</b>	<b>Margin [dB]</b>		<b>-18.64</b>	
6	7204.082	64.7 pk	-45.4	36.5	55.8	54
		<b>Height:150 Vert</b>	<b>Margin [dB]</b>		<b>1.8</b>	
7	9608.844	58.68 pk	-47.7	38.3	49.28	54
		<b>Height:150 Vert</b>	<b>Margin [dB]</b>		<b>-4.72</b>	

LIMIT 1: CFR 47, Part 15, 3 meter

The duty cycle correction factor was applied to over limit signals:

<b>Frequency (MHz)</b>	<b>Level (dBuV)</b>	<b>Duty Cycle Correction Factor</b>	<b>Corrected Level</b>	<b>Limit</b>	<b>Corrected Margin</b>
7204.082	56.48	-30.66	25.82	54	<b>-28.18</b>
7204.082	55.8	-30.66	25.14	54	<b>-28.86</b>



**3-12GHz Low-Channel Y-Orientation**

**MOTOROLA**

**MODEL: V3 - CLASS II**

**CH00 Y**

**RED: HORIZONTAL GRN: VERTICAL**

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1
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**Horizontal 3500 - 12000MHz**

1	3503.401	50.76 pk	-30.2	31.3	51.86	54
		<b>Height:101 Horz</b>	<b>Margin [dB]</b>		<b>-2.14</b>	
2	4802.721	52.84 pk	-48.9	33.7	37.64	54
		<b>Height:101 Horz</b>	<b>Margin [dB]</b>		<b>-16.36</b>	
3	7204.082	69.66 pk	-45.4	36.5	60.76	54
		<b>Height:150 Horz</b>	<b>Margin [dB]</b>		<b>6.76</b>	
4	9608.844	60.55 pk	-47.7	38.3	51.15	54
		<b>Height:150 Horz</b>	<b>Margin [dB]</b>		<b>-2.85</b>	

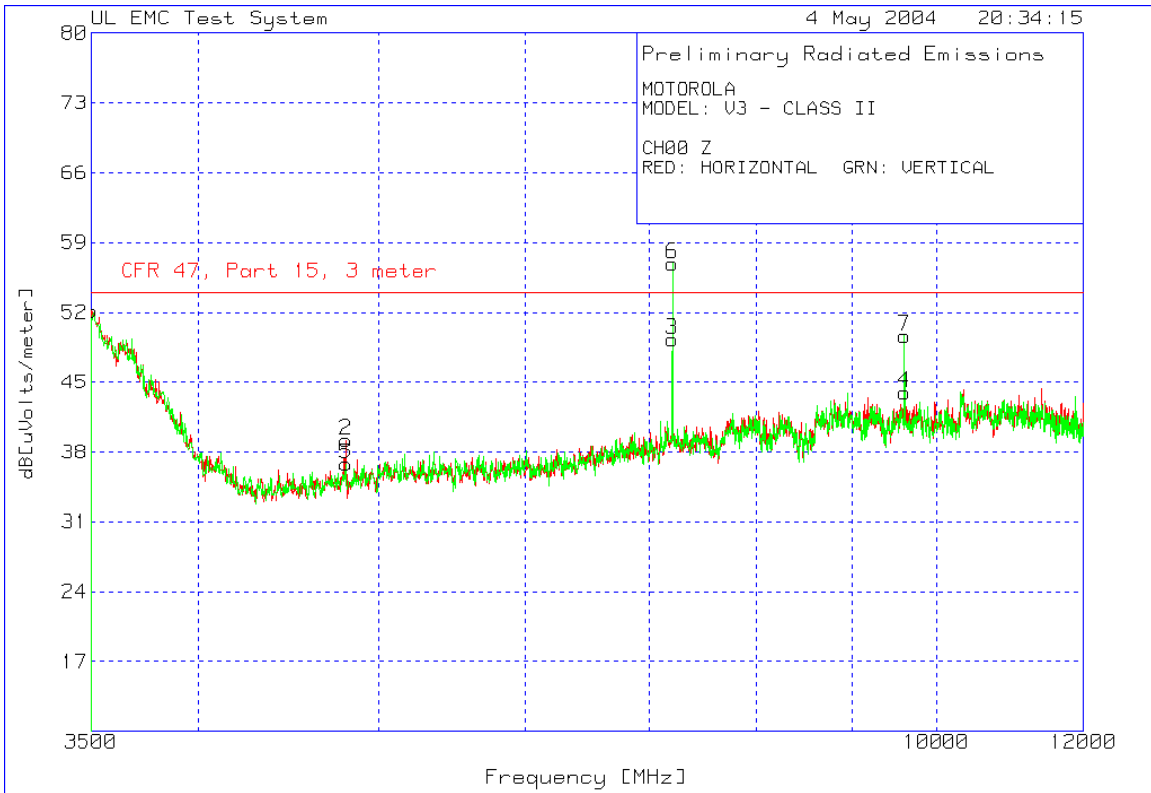
**Vertical 3500 - 12000MHz**

5	4802.721	54.19 pk	-48.9	33.7	38.99	54
		<b>Height:101 Vert</b>	<b>Margin [dB]</b>		<b>-15.01</b>	
6	7204.082	67.54 pk	-45.4	36.5	58.64	54
		<b>Height:101 Vert</b>	<b>Margin [dB]</b>		<b>4.64</b>	
7	9608.844	57.96 pk	-47.7	38.3	48.56	54
		<b>Height:101 Vert</b>	<b>Margin [dB]</b>		<b>-5.44</b>	

LIMIT 1: CFR 47, Part 15, 3 meter

The duty cycle correction factor was applied to over limit signals:

Frequency (MHz)	Level (dBuV)	Duty Cycle Correction Factor	Corrected Level	Limit	Corrected Margin
7204.082	60.76	-30.66	30.1	54	<b>-23.9</b>
7204.082	58.64	-30.66	27.98	54	<b>-26.02</b>



**3-12GHz Low-Channel Z-Orientation**

**MOTOROLA**  
**MODEL: V3 - CLASS II**  
**CH00 Z**  
**RED: HORIZONTAL GRN: VERTICAL**

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1
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**Horizontal 3500 - 12000MHz**

1	3500	50.77 pk	-29.9	31.3	52.17	54
		<b>Height:150 Horz</b>	<b>Margin [dB]</b>		<b>-1.83</b>	
2	4802.721	54.39 pk	-48.9	33.7	39.19	54
		<b>Height:101 Horz</b>	<b>Margin [dB]</b>		<b>-14.81</b>	
3	7204.082	58.21 pk	-45.4	36.5	49.31	54
		<b>Height:150 Horz</b>	<b>Margin [dB]</b>		<b>-4.69</b>	
4	9608.844	53.39 pk	-47.7	38.3	43.99	54
		<b>Height:101 Horz</b>	<b>Margin [dB]</b>		<b>-10.01</b>	

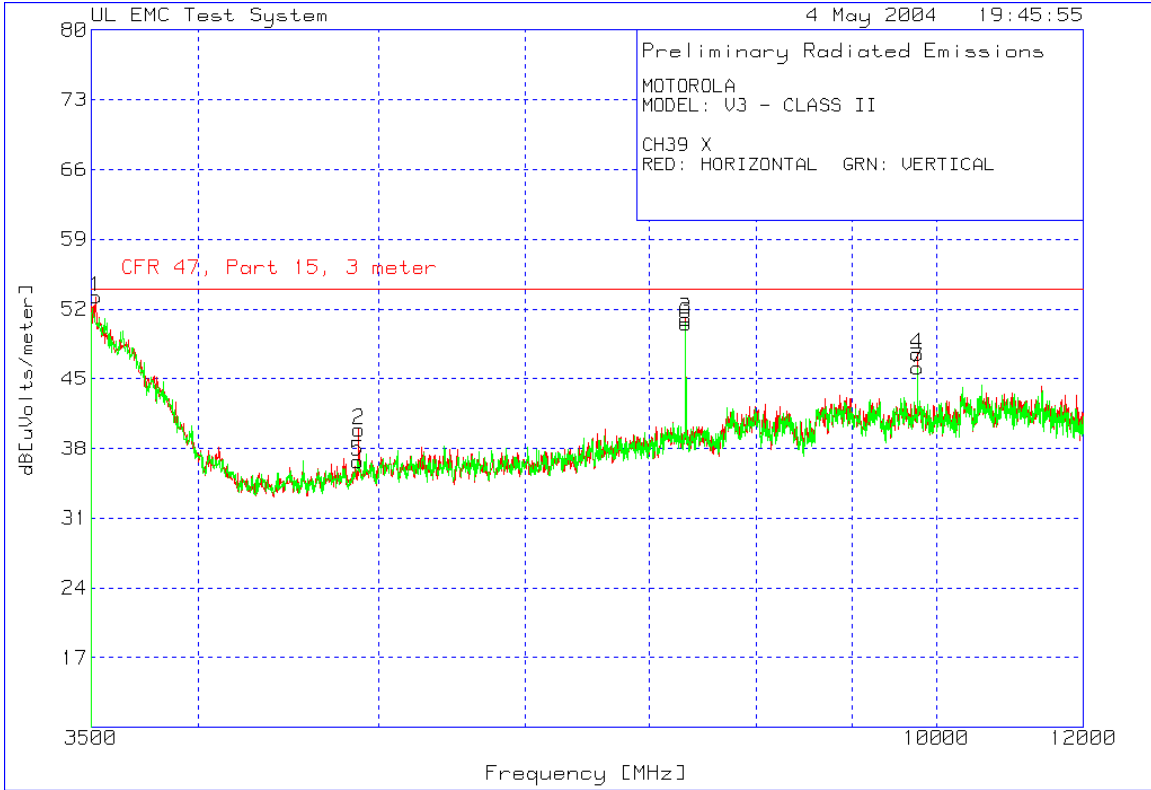
**Vertical 3500 - 12000MHz**

5	4802.721	52 pk	-48.9	33.7	36.8	54
		<b>Height:101 Vert</b>	<b>Margin [dB]</b>		<b>-17.2</b>	
6	7204.082	65.78 pk	-45.4	36.5	56.88	54
		<b>Height:150 Vert</b>	<b>Margin [dB]</b>		<b>2.88</b>	
7	9608.844	59.04 pk	-47.7	38.3	49.64	54
		<b>Height:150 Vert</b>	<b>Margin [dB]</b>		<b>-4.36</b>	

LIMIT 1: CFR 47, Part 15, 3 meter

The margins for the signals measured above are positive. The duty cycle correction factor was applied:

Frequency (MHz)	Level (dBuV)	Duty Cycle Correction Factor	Corrected Level	Limit	Corrected Margin
7204.082	56.88	-30.66	26.22	54	<b>-27.78</b>



**3-12GHz Mid-Channel X-Orientation**

**MOTOROLA**

**MODEL: V3 - CLASS II**

**CH39 X**

**RED: HORIZONTAL GRN: VERTICAL**

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1
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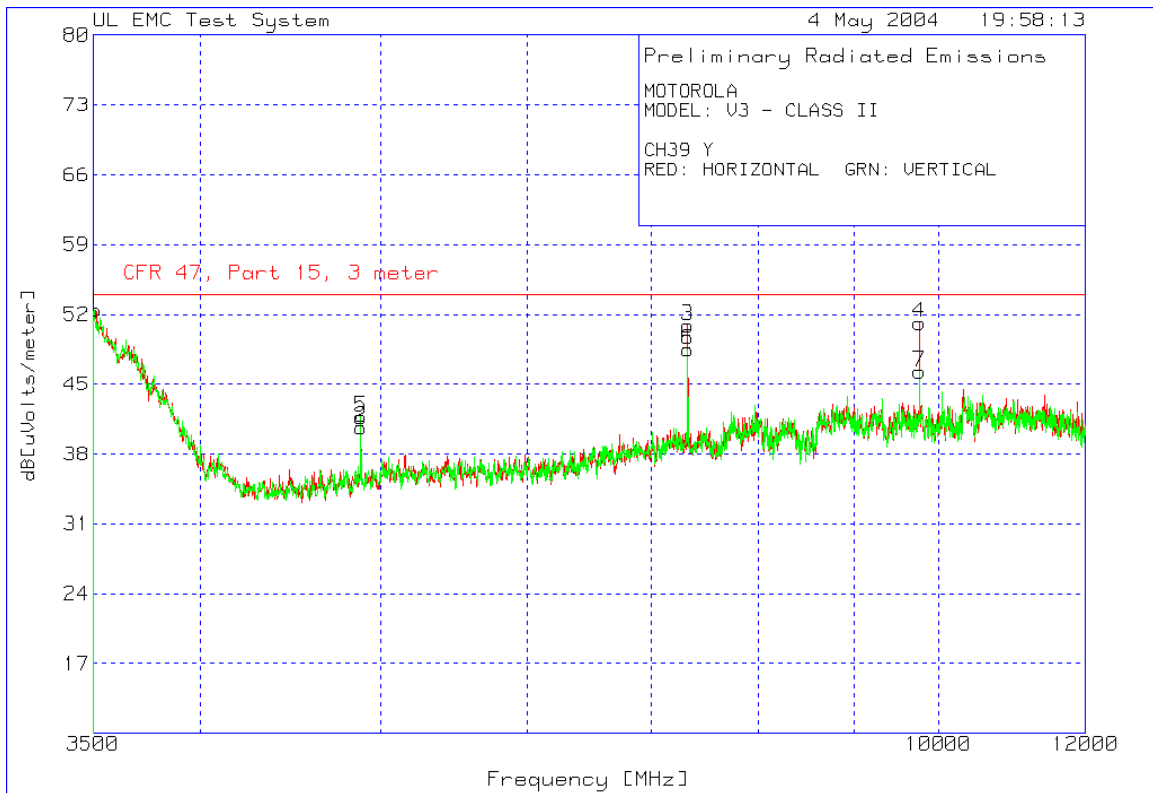
**Horizontal 3500 - 12000MHz**

1	3520.408	53.41 pk	-31.6	31.4	53.21	54
		<b>Height:149 Horz</b>	<b>Margin [dB]</b>		<b>-7.9</b>	
2	4880.953	55.4 pk	-49.4	33.9	39.9	54
		<b>Height:149 Horz</b>	<b>Margin [dB]</b>		<b>-14.1</b>	
3	7323.13	59.4 pk	-44.9	36.5	51	54
		<b>Height:149 Horz</b>	<b>Margin [dB]</b>		<b>-3</b>	
4	9765.307	56.39 pk	-47.4	38.5	47.49	54
		<b>Height:149 Horz</b>	<b>Margin [dB]</b>		<b>-6.51</b>	

**Vertical 3500 - 12000MHz**

5	4874.15	52.23 pk	-49.4	33.9	36.73	54
		<b>Height:101 Vert</b>	<b>Margin [dB]</b>		<b>-17.27</b>	
6	7323.13	58.94 pk	-44.9	36.5	50.54	54
		<b>Height:149 Vert</b>	<b>Margin [dB]</b>		<b>-3.46</b>	
7	9765.307	54.98 pk	-47.4	38.5	46.08	54
		<b>Height:101 Vert</b>	<b>Margin [dB]</b>		<b>-7.92</b>	

LIMIT 1: CFR 47, Part 15, 3 meter



**3-12GHz Mid-Channel Y-Orientation**

**MOTOROLA**

**MODEL: V3 - CLASS II**

**CH39 Y**

**RED: HORIZONTAL GRN: VERTICAL**

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1
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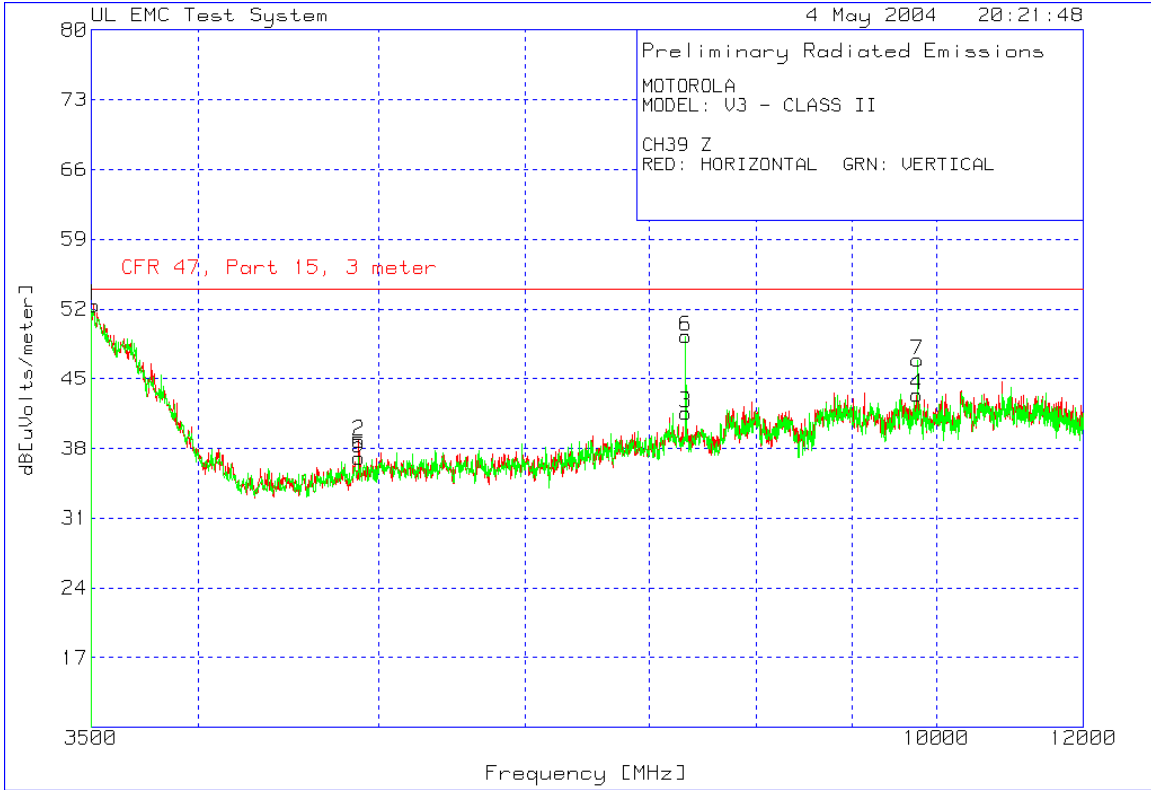
**Horizontal 3500 - 12000MHz**

1	3510.204	51.82 pk	-30.7	31.3	52.42	54
		<b>Height:101 Horz</b>	<b>Margin [dB]</b>		<b>-1.58</b>	
2	4880.953	56.17 pk	-49.4	33.9	40.67	54
		<b>Height:150 Horz</b>	<b>Margin [dB]</b>		<b>-13.33</b>	
3	7323.13	59.28 pk	-44.9	36.5	50.88	54
		<b>Height:150 Horz</b>	<b>Margin [dB]</b>		<b>-3.12</b>	
4	9765.307	60.05 pk	-47.4	38.5	51.15	54
		<b>Height:150 Horz</b>	<b>Margin [dB]</b>		<b>-2.85</b>	

**Vertical 3500 - 12000MHz**

5	4880.953	57.2 pk	-49.4	33.9	41.7	54
		<b>Height:150 Vert</b>	<b>Margin [dB]</b>		<b>-12.3</b>	
6	7323.13	56.87 pk	-44.9	36.5	48.47	54
		<b>Height:150 Vert</b>	<b>Margin [dB]</b>		<b>-5.53</b>	
7	9765.307	55.15 pk	-47.4	38.5	46.25	54
		<b>Height:101 Vert</b>	<b>Margin [dB]</b>		<b>-7.75</b>	

LIMIT 1: CFR 47, Part 15, 3 meter



**3-12GHz Mid-Channel Z-Orientation**

**MOTOROLA**

**MODEL: V3 - CLASS II**

**CH39 Z**

**RED: HORIZONTAL GRN: VERTICAL**

<b>Test No.</b>	<b>Frequency [MHz]</b>	<b>Meter Reading [dB(uV)]</b>	<b>Gain/Loss Factor [dB]</b>	<b>Transducer Factor [dB]</b>	<b>Level dB[uV/m]</b>	<b>Limit:1</b>
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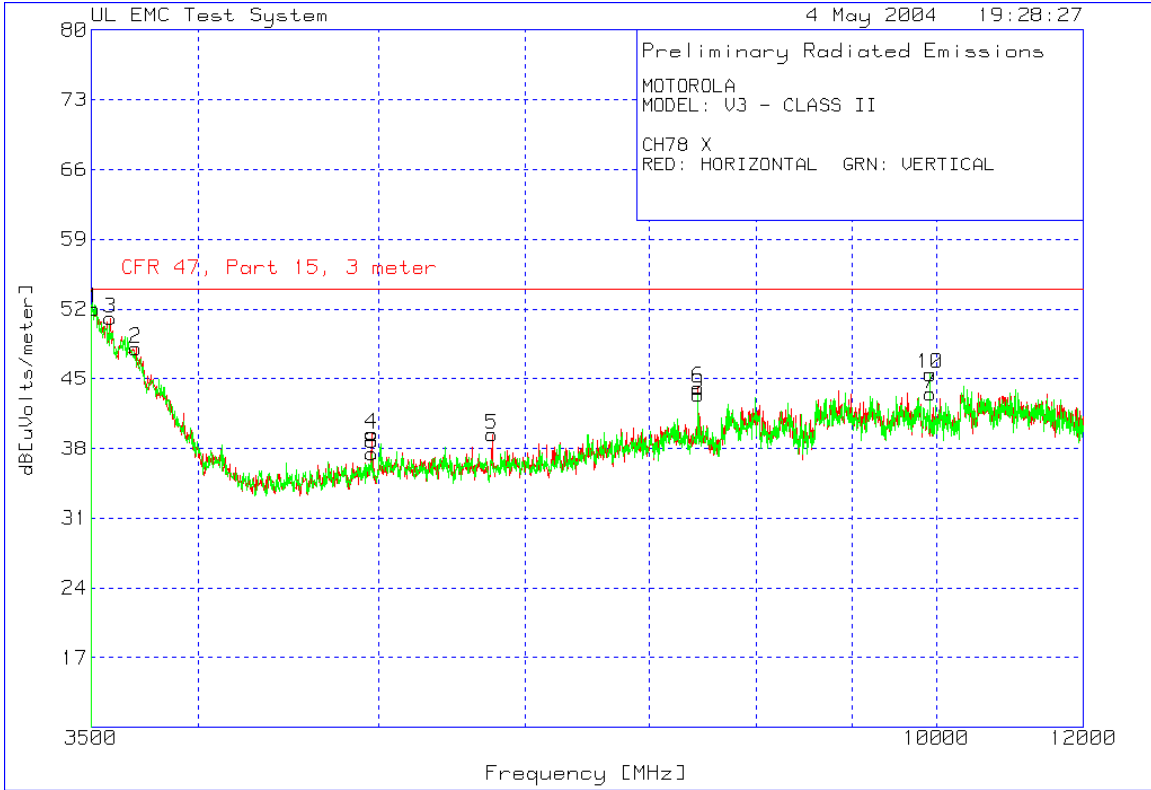
**Horizontal 3500 - 12000MHz**

1	3510.204	51.75 pk	-30.7	31.3	52.35	54
		<b>Height:101 Horz</b>	<b>Margin [dB]</b>		<b>-1.65</b>	
2	4880.953	54.26 pk	-49.4	33.9	38.76	54
		<b>Height:101 Horz</b>	<b>Margin [dB]</b>		<b>-15.24</b>	
3	7323.13	49.97 pk	-44.9	36.5	41.57	54
		<b>Height:150 Horz</b>	<b>Margin [dB]</b>		<b>-12.43</b>	
4	9758.504	52.29 pk	-47.4	38.5	43.39	54
		<b>Height:150 Horz</b>	<b>Margin [dB]</b>		<b>-10.61</b>	

**Vertical 3500 - 12000MHz**

5	4880.953	52.59 pk	-49.4	33.9	37.09	54
		<b>Height:101 Vert</b>	<b>Margin [dB]</b>		<b>-16.91</b>	
6	7323.13	57.66 pk	-44.9	36.5	49.26	54
		<b>Height:150 Vert</b>	<b>Margin [dB]</b>		<b>-4.74</b>	
7	9765.307	55.77 pk	-47.4	38.5	46.87	54
		<b>Height:150 Vert</b>	<b>Margin [dB]</b>		<b>-7.13</b>	

LIMIT 1: CFR 47, Part 15, 3 meter



**3-12GHz High-Channel X-Orientation**

**MOTOROLA  
MODEL: V3 - CLASS II  
CH78 X**

**RED: HORIZONTAL GRN: VERTICAL**

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1
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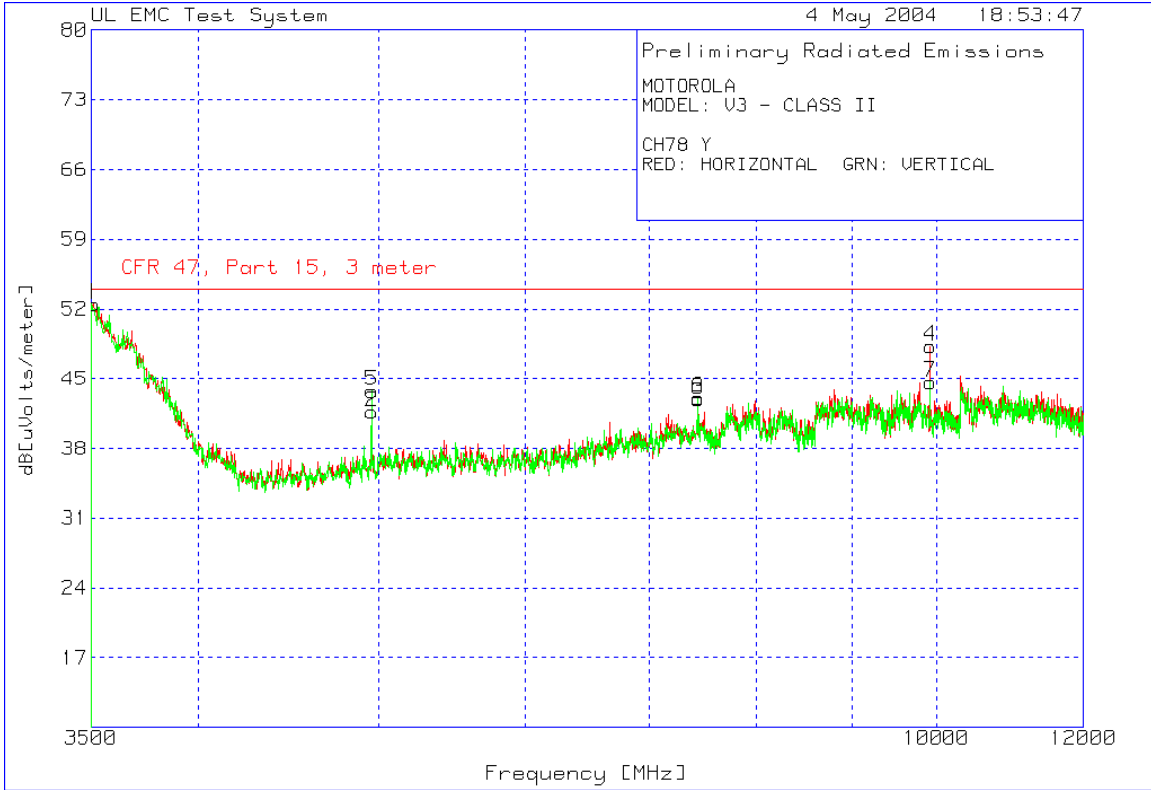
**Horizontal 3500 - 12000MHz**

1	3513.605	51.75 pk	-31	31.3	52.05	54
		<b>Height:150 Horz</b>	<b>Margin [dB]</b>		<b>-1.95</b>	
2	3700.68	50.24 pk	-34.1	31.9	48.04	54
		<b>Height:150 Horz</b>	<b>Margin [dB]</b>		<b>-5.96</b>	
3	3585.034	53.96 pk	-34.4	31.5	51.06	54
		<b>Height:150 Horz</b>	<b>Margin [dB]</b>		<b>-2.94</b>	
4	4959.184	54.47 pk	-49.2	34.2	39.47	54
		<b>Height:150 Horz</b>	<b>Margin [dB]</b>		<b>-14.53</b>	
5	5758.504	52.5 pk	-47.6	34.5	39.4	54
		<b>Height:150 Horz</b>	<b>Margin [dB]</b>		<b>-14.6</b>	
6	7438.776	52.59 pk	-44.9	36.4	44.09	54
		<b>Height:150 Horz</b>	<b>Margin [dB]</b>		<b>-9.91</b>	
7	9921.77	52.19 pk	-47.4	38.7	43.49	54
		<b>Height:150 Horz</b>	<b>Margin [dB]</b>		<b>-10.51</b>	

**Vertical 3500 - 12000MHz**

8	4959.184	52.49 pk	-49.2	34.2	37.49	54
		<b>Height:101 Vert</b>	<b>Margin [dB]</b>		<b>-16.51</b>	
9	7438.776	51.9 pk	-44.9	36.4	43.4	54
		<b>Height:150 Vert</b>	<b>Margin [dB]</b>		<b>-10.6</b>	
10	9921.77	54.18 pk	-47.4	38.7	45.48	54
		<b>Height:101 Vert</b>	<b>Margin [dB]</b>		<b>-8.52</b>	

LIMIT 1: CFR 47, Part 15, 3 meter



**3-12GHz High-Channel Y-Orientation**

**MOTOROLA**

**MODEL: V3 - CLASS II**

**CH78 Y**

**RED: HORIZONTAL GRN: VERTICAL**

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1
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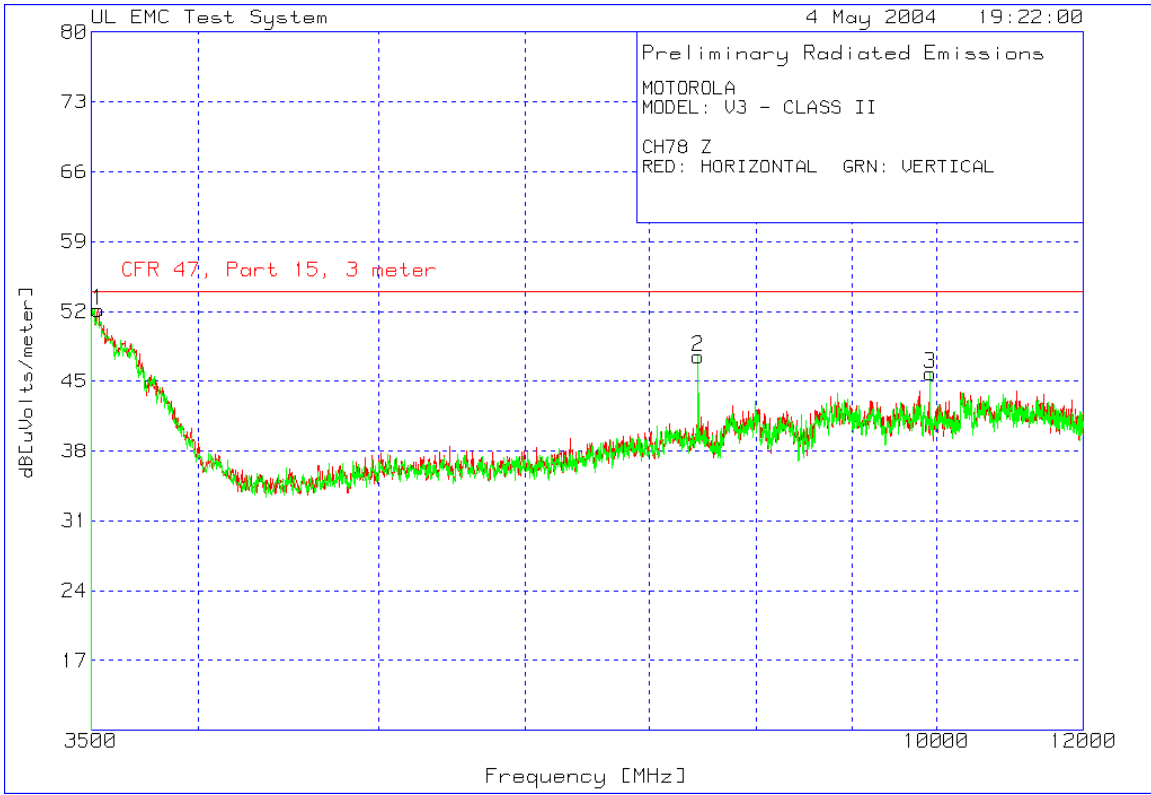
**Horizontal 3500 - 12000MHz**

1	3510.204	51.87 pk	-30.7	31.3	52.47	54
					<b>Height:101 Horz Margin [dB]</b>	<b>-1.53</b>
2	4959.184	56.67 pk	-49.2	34.2	41.67	54
					<b>Height:150 Horz Margin [dB]</b>	<b>-12.33</b>
3	7438.776	51.47 pk	-44.9	36.4	42.97	54
					<b>Height:150 Horz Margin [dB]</b>	<b>-11.03</b>
4	9921.77	56.96 pk	-47.4	38.7	48.26	54
					<b>Height:150 Horz Margin [dB]</b>	<b>-5.74</b>

**Vertical 3500 - 12000MHz**

5	4959.184	58.79 pk	-49.2	34.2	43.79	54
					<b>Height:101 Vert Margin [dB]</b>	<b>-10.21</b>
6	7438.776	51.61 pk	-44.9	36.4	43.11	54
					<b>Height:149 Vert Margin [dB]</b>	<b>-10.89</b>
7	9921.77	53.37 pk	-47.4	38.7	44.67	54
					<b>Height:101 Vert Margin [dB]</b>	<b>-9.33</b>

LIMIT 1: CFR 47, Part 15, 3 meter



**3-12GHz High-Channel Z-Orientation**

**MOTOROLA**  
**MODEL: V3 - CLASS II**  
**CH78 Z**  
**RED: HORIZONTAL GRN: VERTICAL**

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1
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**Horizontal 3500 - 12000MHz**

1	3530.612	53.23 pk	-32.5	31.4	52.13	54
					<b>Height:101 Horz Margin [dB]</b>	<b>-1.87</b>

**Vertical 3500 - 12000MHz**

2	7438.776	55.98 pk	-44.9	36.4	47.48	54
					<b>Height:101 Vert Margin [dB]</b>	<b>-6.52</b>
3	9921.77	54.5 pk	-47.4	38.7	45.8	54
					<b>Height:150 Vert Margin [dB]</b>	<b>-8.2</b>

LIMIT 1: CFR 47, Part 15, 3 meter



**12-18GHz Low-Channel X-Orientation**

**MOTOROLA  
MODEL: V3 - CLASS II  
CH00 X  
RED: HORIZONTAL GRN: VERTICAL**

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1
1	19214.143	73.62 pk	-60.8	40.3	53.12	54
				<b>Margin[dB]</b>	<b>-0.88</b>	
2	19503.669	71.97 pk	-60.9	40.3	51.37	54
				<b>Margin[dB]</b>	<b>-2.63</b>	
3	24780.521	68.82 pk	-58.8	40.3	50.32	54
				<b>Margin[dB]</b>	<b>-3.68</b>	

LIMIT 1: CFR 47 Part 15 Class B 3m



**12-18GHz Low-Channel Y-Orientation**

**MOTOROLA**  
**MODEL: V3 - CLASS II**  
**CH00 Y**  
**RED: HORIZONTAL GRN: VERTICAL**

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1
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**Horizontal 18000 - 25000MHz**

1	18763.764	72.05 pk	-60.5	40.1	51.65	54
		<b>Height:101 Horz</b>	<b>Margin [dB]</b>		<b>-2.35</b>	
2	19212.212	73.12 pk	-60.8	40.3	52.62	54
		<b>Height:101 Horz</b>	<b>Margin [dB]</b>		<b>-1.38</b>	
3	19891.892	72.15 pk	-60.8	40.2	51.55	54
		<b>Height:101 Horz</b>	<b>Margin [dB]</b>		<b>-2.45</b>	

**Vertical 18000 - 25000MHz**

4	24782.783	68.44 pk	-58.8	40.3	49.94	54
		<b>Height:150 Vert</b>	<b>Margin [dB]</b>		<b>-4.06</b>	

LIMIT 1: CFR 47 Part 15 Class B 3m



**12-18GHz Low-Channel Z-Orientation**

**MOTOROLA**  
**MODEL: V3 - CLASS II**  
**CH00 Z**  
**RED: HORIZONTAL GRN: VERTICAL**

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1
<b>Vertical 18000 - 25000MHz</b>						
1	18336.336	71.13 pk	-60.7	40	50.43	54
		<b>Height:149 Vert</b>		<b>Margin[dB]</b>	<b>-3.57</b>	
2	19261.261	71.7 pk	-60.7	40.3	51.3	54
		<b>Height:101 Vert</b>		<b>Margin[dB]</b>	<b>-2.7</b>	
3	24775.776	68.46 pk	-58.8	40.3	49.96	54
		<b>Height:149 Vert</b>		<b>Margin[dB]</b>	<b>-4.04</b>	

LIMIT 1: CFR 47 Part 15 Class B 3m



**12-18GHz Mid-Channel X-Orientation**

**MOTOROLA  
 MODEL: V3 - CLASS II  
 CH39 X  
 RED: HORIZONTAL GRN: VERTICAL**

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1
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**Horizontal 18000 - 25000MHz**

1	19022.682	72.56 pk	-60.7	40.2	52.06	54
		<b>Height:150 Horz</b>	<b>Margin [dB]</b>		<b>-1.94</b>	
2	19891.261	71.11 pk	-60.8	40.2	50.51	54
		<b>Height:101 Horz</b>	<b>Margin [dB]</b>		<b>-3.49</b>	

**Vertical 18000 - 25000MHz**

3	24785.19	68.6 pk	-58.8	40.3	50.1	54
		<b>Height:101 Vert</b>	<b>Margin [dB]</b>		<b>-3.9</b>	

LIMIT 1: CFR 47 Part 15 Class B 3m



**12-18GHz Mid-Channel Y-Orientation**

**MOTOROLA**  
**MODEL: V3 - CLASS II**  
**CH39 Y**  
**RED: HORIZONTAL GRN: VERTICAL**

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1
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**Horizontal 18000 - 25000MHz**

1	18798.532	72.2 pk	-60.5	40.1	51.8	54
		<b>Height:101 Horz</b>	<b>Margin [dB]</b>		<b>-2.2</b>	
2	19097.398	71.41 pk	-60.7	40.2	50.91	54
		<b>Height:150 Horz</b>	<b>Margin [dB]</b>		<b>-3.09</b>	

**Vertical 18000 - 25000MHz**

3	19527.018	72.14 pk	-61	40.3	51.44	54
		<b>Height:149 Vert</b>	<b>Margin [dB]</b>		<b>-2.56</b>	
4	24715.144	69.17 pk	-58.6	40.3	50.87	54
		<b>Height:101 Vert</b>	<b>Margin [dB]</b>		<b>-3.13</b>	

LIMIT 1: CFR 47 Part 15 Class B 3m



**12-18GHz Mid-Channel Z-Orientation**

**MOTOROLA**  
**MODEL: V3 - CLASS II**  
**CH39 Z**  
**RED: HORIZONTAL GRN: VERTICAL**

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1
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**Horizontal 18000 - 25000MHz**

3	19905.27	71.26 pk	-60.8	40.2	50.66	54
<b>Height:150 Horz Margin [dB]</b>					<b>-3.34</b>	

**Vertical 18000 - 25000MHz**

1	18396.931	70.68 pk	-60.5	40.1	50.28	54
<b>Height:150 Vert Margin [dB]</b>					<b>-3.72</b>	
2	19204.803	71.28 pk	-60.8	40.3	50.78	54
<b>Height:150 Vert Margin [dB]</b>					<b>-3.22</b>	
4	24789.86	69.66 pk	-58.9	40.3	51.06	54
<b>Height:150 Vert Margin [dB]</b>					<b>-2.94</b>	

LIMIT 1: CFR 47 Part 15 Class B 3m



**12-18GHz High-Channel X-Orientation**

**MOTOROLA  
 MODEL: V3 - CLASS II  
 CH78 X  
 RED: HORIZONTAL GRN: VERTICAL**

Test No.	Meter Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1
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**Horizontal 18000 - 25000MHz**

1	18551.034	71.56 pk	-60.6	40.1	51.06	54
		<b>Height:100 Horz</b>	<b>Margin [dB]</b>		<b>-2.94</b>	
2	19260.841	72.42 pk	-60.7	40.3	52.02	54
		<b>Height:100 Horz</b>	<b>Margin [dB]</b>		<b>-1.98</b>	
3	19821.214	71.59 pk	-60.8	40.3	51.09	54
		<b>Height:100 Horz</b>	<b>Margin [dB]</b>		<b>-2.91</b>	

**Vertical 18000 - 25000MHz**

4	24775.851	69.41 pk	-58.8	40.3	50.91	54
		<b>Height:150 Vert</b>	<b>Margin [dB]</b>		<b>-3.09</b>	

LIMIT 1: CFR 47 Part 15 Class B 3m



**12-18GHz High-Channel Y-Orientation**

**MOTOROLA  
MODEL: V3 - CLASS II  
CH78 Y**

**RED: HORIZONTAL GRN: VERTICAL**

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1
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**Horizontal 18000 - 25000MHz**

1	18569.713	71.64 pk	-60.6	40.1	51.14	54
		<b>Height:101 Horz</b>	<b>Margin [dB]</b>		<b>-2.86</b>	
2	18835.891	71.74 pk	-60.4	40.1	51.44	54
		<b>Height:150 Horz</b>	<b>Margin [dB]</b>		<b>-2.56</b>	
3	19209.473	71.98 pk	-60.8	40.3	51.48	54
		<b>Height:101 Horz</b>	<b>Margin [dB]</b>		<b>-2.52</b>	

**Vertical 18000 - 25000MHz**

4	24808.539	68.86 pk	-59	40.3	50.16	54
		<b>Height:150 Vert</b>	<b>Margin [dB]</b>		<b>-3.84</b>	

LIMIT 1: CFR 47 Part 15 Class B 3m



**12-18GHz High-Channel Z-Orientation**

**MOTOROLA  
MODEL: V3 - CLASS II  
CH78 Z  
RED: HORIZONTAL GRN: VERTICAL**

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1
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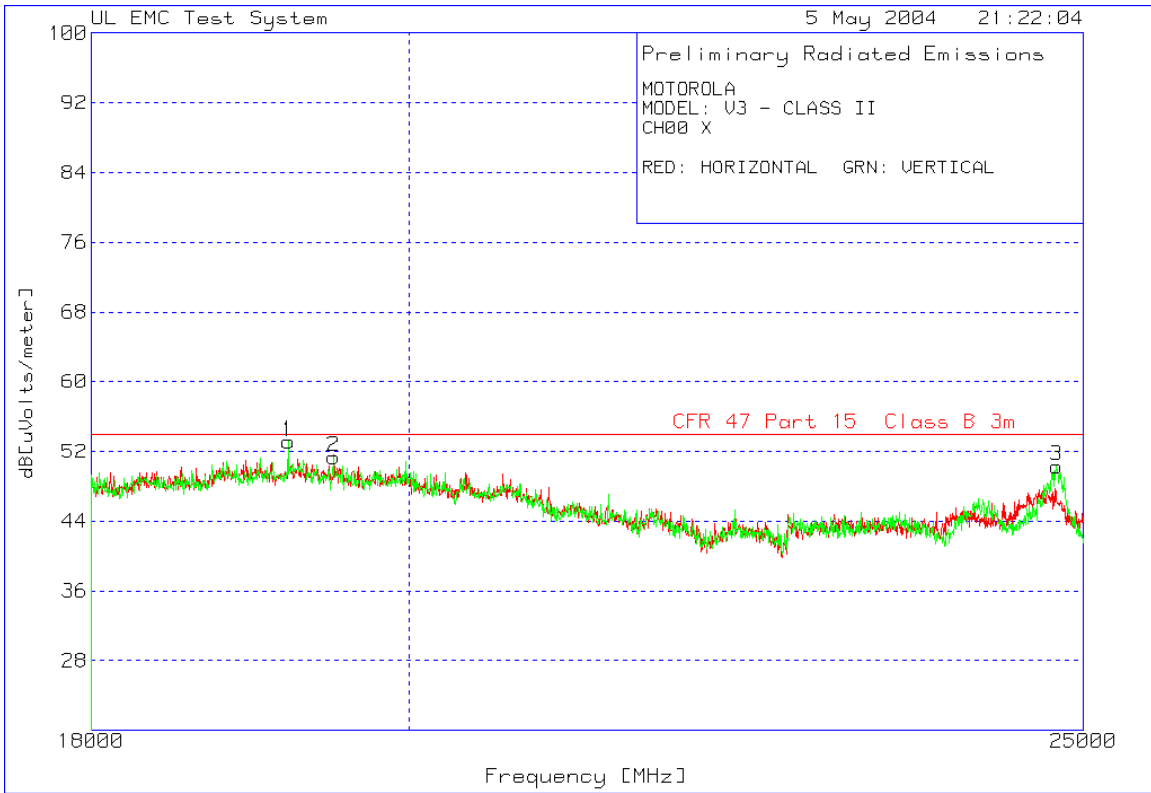
**Horizontal 18000 - 25000MHz**

1	18270.847	70.97 pk	-60.8	40	50.17	54
		<b>Height:101 Horz</b>	<b>Margin [dB]</b>		<b>-3.83</b>	
2	18583.723	71.26 pk	-60.6	40.1	50.76	54
		<b>Height:101 Horz</b>	<b>Margin [dB]</b>		<b>-3.24</b>	

**Vertical 18000 - 25000MHz**

3	18831.221	71.79 pk	-60.4	40.1	51.49	54
		<b>Height:149 Vert</b>	<b>Margin [dB]</b>		<b>-2.51</b>	
4	19288.859	72.22 pk	-60.7	40.3	51.82	54
		<b>Height:149 Vert</b>	<b>Margin [dB]</b>		<b>-2.18</b>	
5	24808.539	69.91 pk	-59	40.3	51.21	54
		<b>Height:149 Vert</b>	<b>Margin [dB]</b>		<b>-2.79</b>	

LIMIT 1: CFR 47 Part 15 Class B 3m

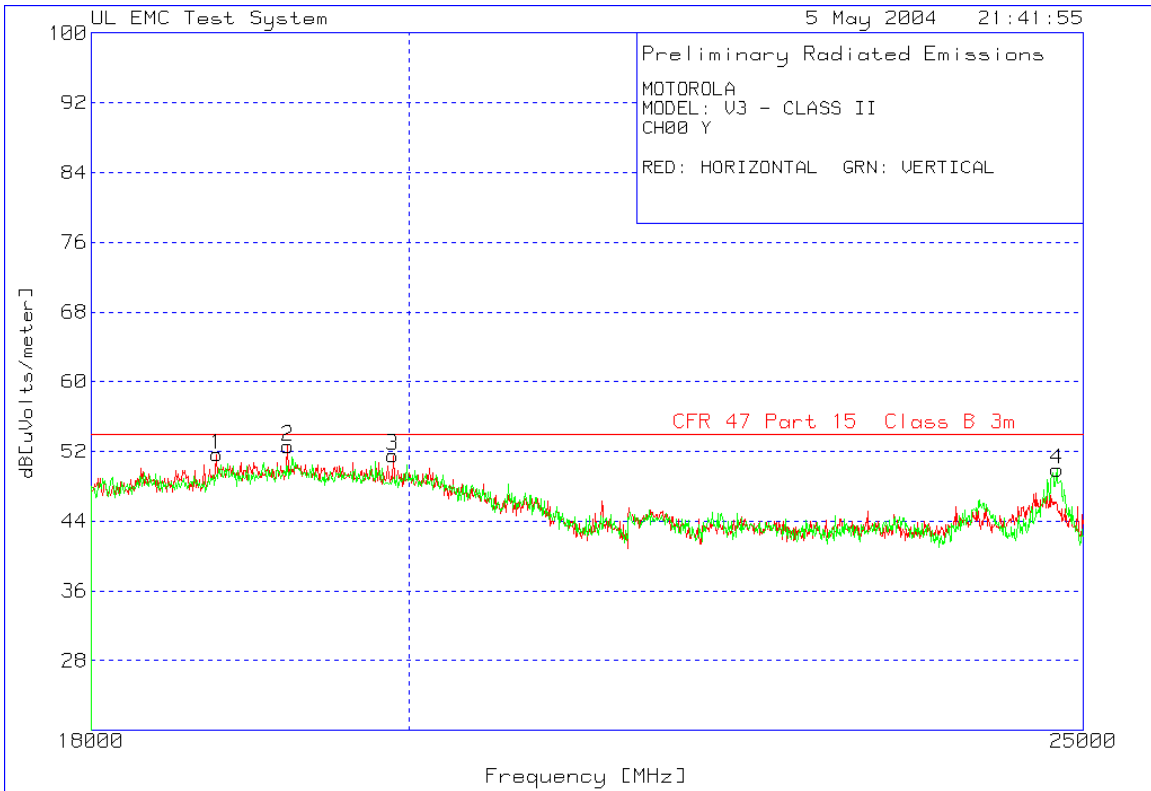


**18-25GHz Low-Channel X-Orientation**

**MOTOROLA  
 MODEL: V3 - CLASS II  
 CH00 X  
 RED: HORIZONTAL GRN: VERTICAL**

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1
<b>Vertical 18000 - 25000MHz</b>						
1	19214.143	73.62 pk	-60.8	40.3	53.12	54
<b>Height:101 Vert</b>				<b>Margin[dB]</b>	<b>-0.88</b>	
2	19503.669	71.97 pk	-60.9	40.3	51.37	54
<b>Height:150 Vert</b>				<b>Margin[dB]</b>	<b>-2.63</b>	
3	24780.521	68.82 pk	-58.8	40.3	50.32	54
<b>Height:101 Vert</b>				<b>Margin[dB]</b>	<b>-3.68</b>	

LIMIT 1: CFR 47 Part 15 Class B 3m



**18-25GHz Low-Channel Y-Orientation**

**MOTOROLA  
MODEL: V3 - CLASS II  
CH00 Y  
RED: HORIZONTAL GRN: VERTICAL**

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1
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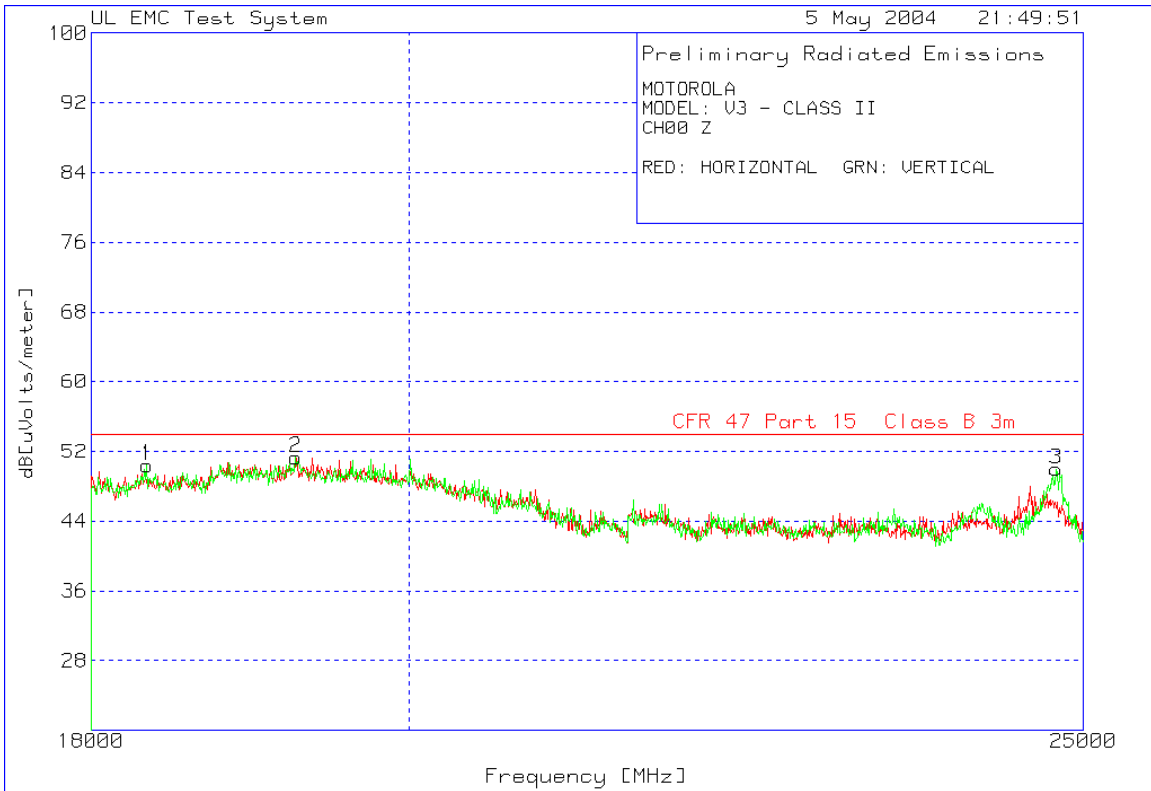
**Horizontal 18000 - 25000MHz**

1	18763.764	72.05 pk	-60.5	40.1	51.65	54
		<b>Height:101 Horz</b>	<b>Margin [dB]</b>		<b>-2.35</b>	
2	19212.212	73.12 pk	-60.8	40.3	52.62	54
		<b>Height:101 Horz</b>	<b>Margin [dB]</b>		<b>-1.38</b>	
3	19891.892	72.15 pk	-60.8	40.2	51.55	54
		<b>Height:101 Horz</b>	<b>Margin [dB]</b>		<b>-2.45</b>	

**Vertical 18000 - 25000MHz**

4	24782.783	68.44 pk	-58.8	40.3	49.94	54
		<b>Height:150 Vert</b>	<b>Margin [dB]</b>		<b>-4.06</b>	

LIMIT 1: CFR 47 Part 15 Class B 3m

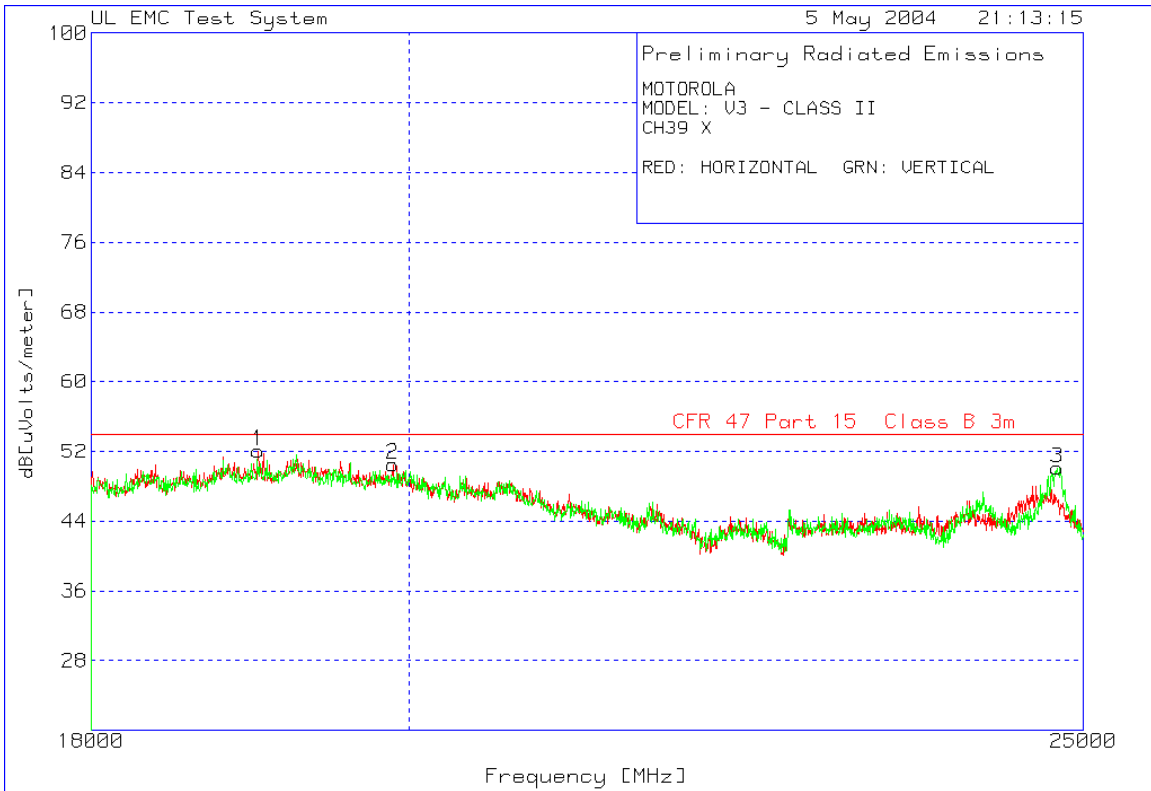


**18-25GHz Low-Channel Z-Orientation**

**MOTOROLA  
MODEL: V3 - CLASS II  
CH00 Z  
RED: HORIZONTAL GRN: VERTICAL**

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1
<b>Vertical 18000 - 25000MHz</b>						
1	18336.336	71.13 pk	-60.7	40	50.43	54
				<b>Margin[dB]</b>	<b>-3.57</b>	
2	19261.261	71.7 pk	-60.7	40.3	51.3	54
				<b>Margin[dB]</b>	<b>-2.7</b>	
3	24775.776	68.46 pk	-58.8	40.3	49.96	54
				<b>Margin[dB]</b>	<b>-4.04</b>	

LIMIT 1: CFR 47 Part 15 Class B 3m



**18-25GHz Mid-Channel X-Orientation**

**MOTOROLA**  
**MODEL: V3 - CLASS II**  
**CH39 X**  
**RED: HORIZONTAL GRN: VERTICAL**

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1
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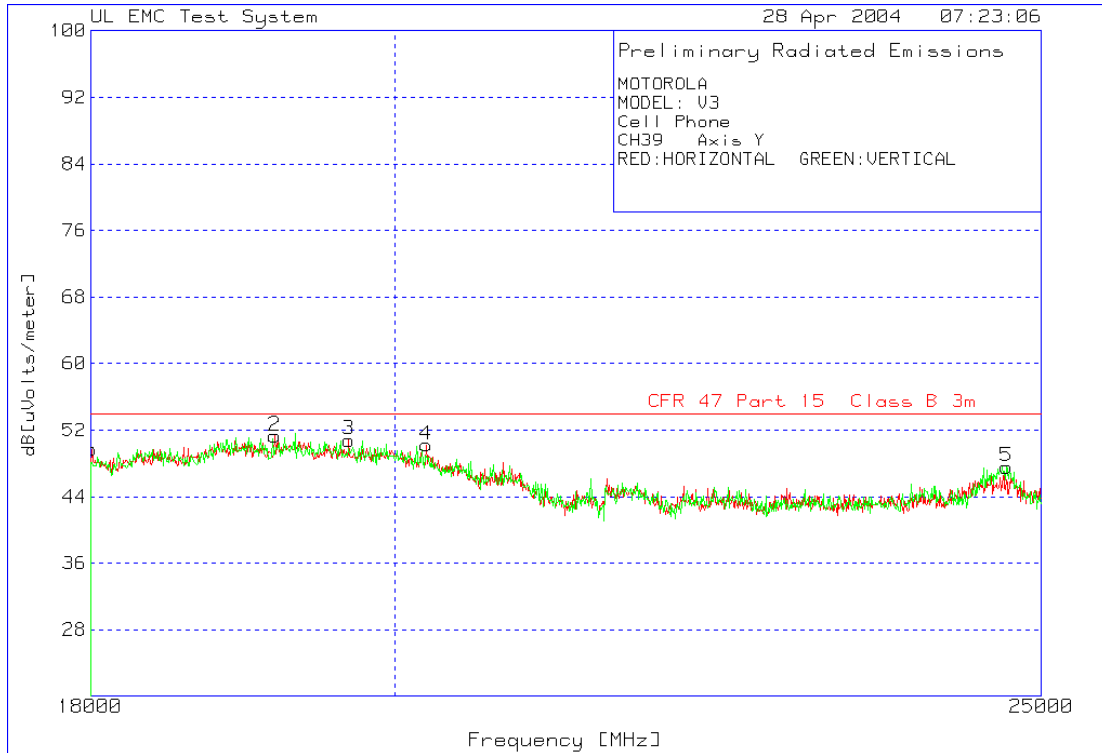
**Horizontal 18000 - 25000MHz**

1	19022.682	72.56 pk	-60.7	40.2	52.06	54
		<b>Height:150 Horz</b>	<b>Margin [dB]</b>		<b>-1.94</b>	
2	19891.261	71.11 pk	-60.8	40.2	50.51	54
		<b>Height:101 Horz</b>	<b>Margin [dB]</b>		<b>-3.49</b>	

**Vertical 18000 - 25000MHz**

3	24785.19	68.6 pk	-58.8	40.3	50.1	54
		<b>Height:101 Vert</b>	<b>Margin [dB]</b>		<b>-3.9</b>	

LIMIT 1: CFR 47 Part 15 Class B 3m



**18-25GHz Mid-Channel Y-Orientation**

**MOTOROLA**

**MODEL: V3 - CLASS II**

**CH39 Y**

**RED: HORIZONTAL GRN: VERTICAL**

Test No.	Meter Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1
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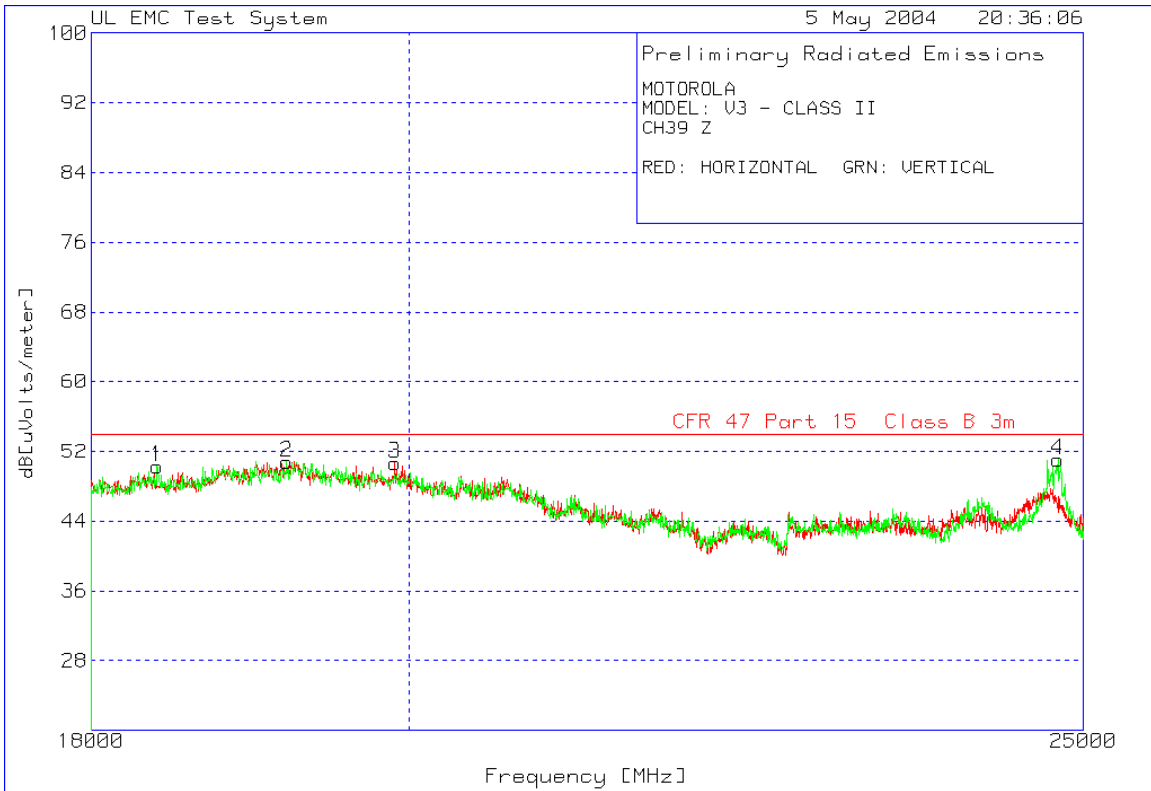
**Horizontal 18000 - 25000MHz**

1	18798.532	72.2 pk	-60.5	40.1	51.8	54
		<b>Height:101 Horz</b>	<b>Margin [dB]</b>		<b>-2.2</b>	
2	19097.398	71.41 pk	-60.7	40.2	50.91	54
		<b>Height:150 Horz</b>	<b>Margin [dB]</b>		<b>-3.09</b>	

**Vertical 18000 - 25000MHz**

3	19527.018	72.14 pk	-61	40.3	51.44	54
		<b>Height:149 Vert</b>	<b>Margin [dB]</b>		<b>-2.56</b>	
4	24715.144	69.17 pk	-58.6	40.3	50.87	54
		<b>Height:101 Vert</b>	<b>Margin [dB]</b>		<b>-3.13</b>	

LIMIT 1: CFR 47 Part 15 Class B 3m



**18-25GHz Mid-Channel Z-Orientation**

**MOTOROLA**  
**MODEL: V3 - CLASS II**  
**CH39 Z**  
**RED: HORIZONTAL GRN: VERTICAL**

Test No.	Meter Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1
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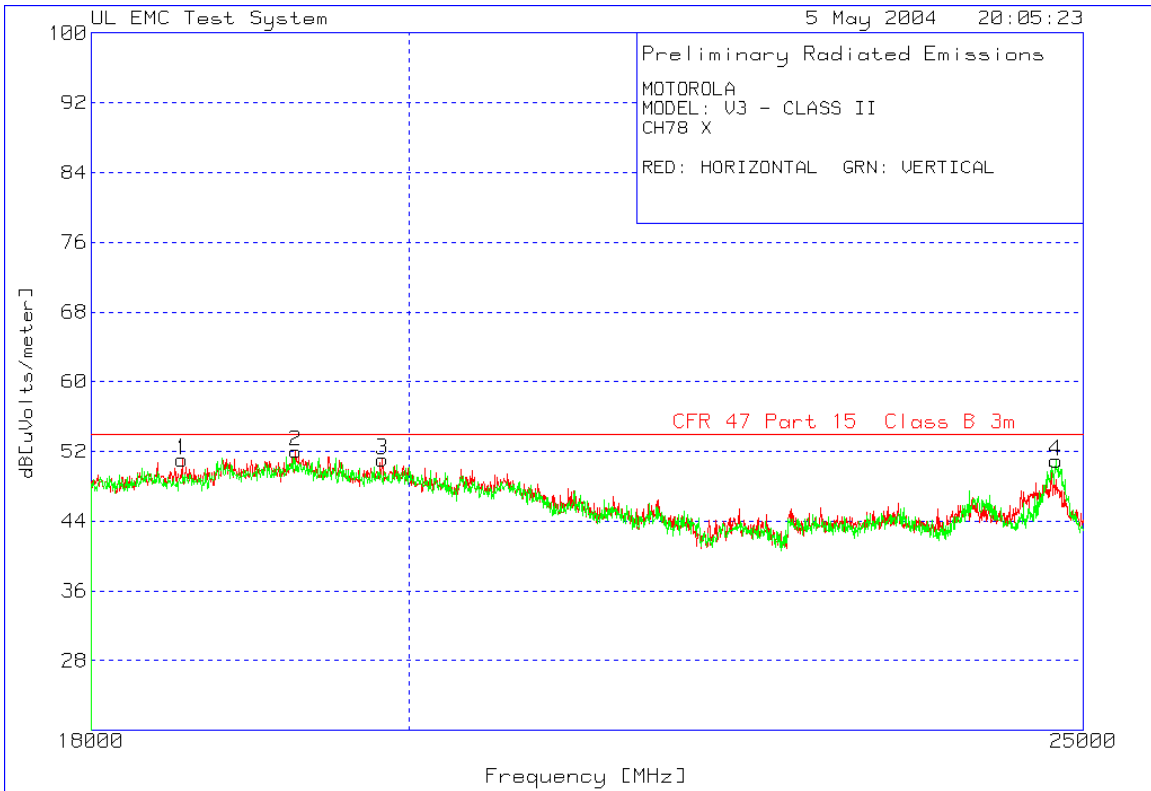
**Horizontal 18000 - 25000MHz**

3	19905.27	71.26 pk	-60.8	40.2	50.66	54
<b>Height:150 Horz Margin [dB]</b>					<b>-3.34</b>	

**Vertical 18000 - 25000MHz**

1	18396.931	70.68 pk	-60.5	40.1	50.28	54
<b>Height:150 Vert Margin [dB]</b>					<b>-3.72</b>	
2	19204.803	71.28 pk	-60.8	40.3	50.78	54
<b>Height:150 Vert Margin [dB]</b>					<b>-3.22</b>	
4	24789.86	69.66 pk	-58.9	40.3	51.06	54
<b>Height:150 Vert Margin [dB]</b>					<b>-2.94</b>	

LIMIT 1: CFR 47 Part 15 Class B 3m



**18-25GHz High-Channel X-Orientation**

**MOTOROLA**  
**MODEL: V3 - CLASS II**  
**CH78 X**  
**RED: HORIZONTAL GRN: VERTICAL**

Test No.	Meter Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1
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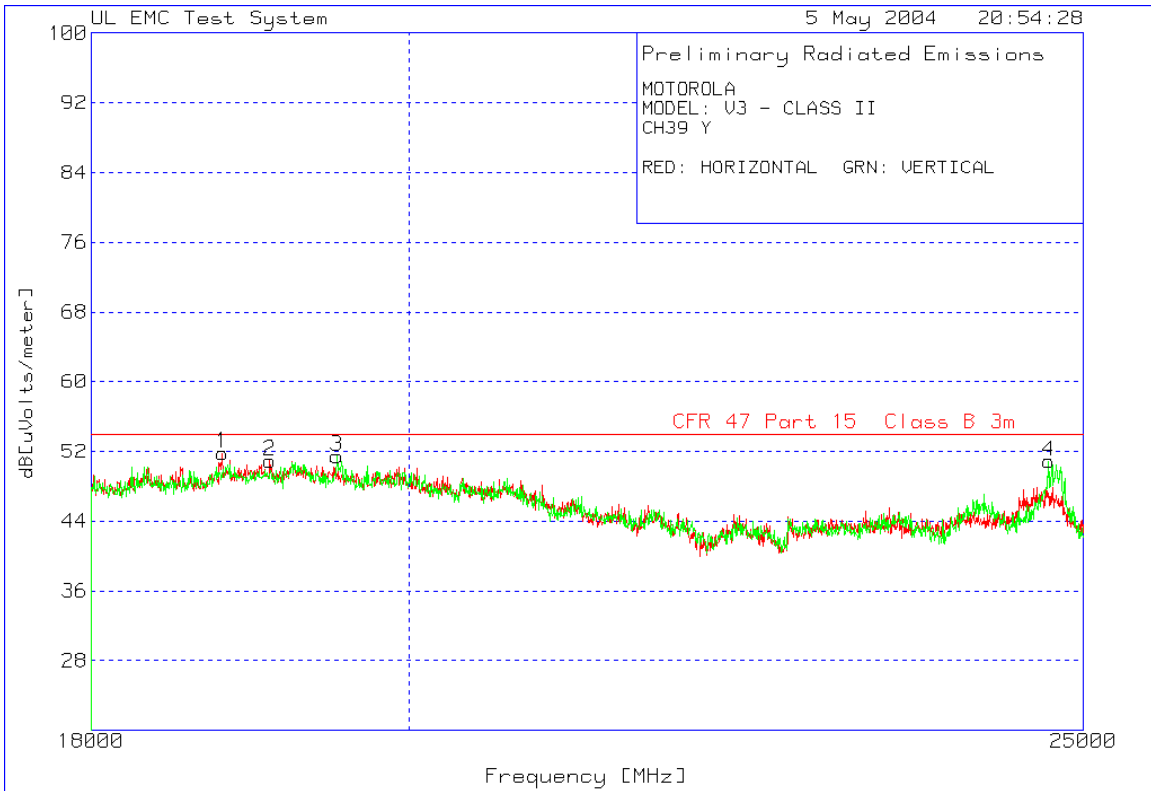
**Horizontal 18000 - 25000MHz**

1	18551.034	71.56 pk	-60.6	40.1	51.06	54
		<b>Height:100 Horz</b>			<b>Margin [dB]</b>	<b>-2.94</b>
2	19260.841	72.42 pk	-60.7	40.3	52.02	54
		<b>Height:100 Horz</b>			<b>Margin [dB]</b>	<b>-1.98</b>
3	19821.214	71.59 pk	-60.8	40.3	51.09	54
		<b>Height:100 Horz</b>			<b>Margin [dB]</b>	<b>-2.91</b>

**Vertical 18000 - 25000MHz**

4	24775.851	69.41 pk	-58.8	40.3	50.91	54
		<b>Height:150 Vert</b>			<b>Margin [dB]</b>	<b>-3.09</b>

LIMIT 1: CFR 47 Part 15 Class B 3m



**18-25GHz High-Channel Y-Orientation**

**MOTOROLA  
MODEL: V3 - CLASS II  
CH78 Y  
RED: HORIZONTAL GRN: VERTICAL**

Test No.	Meter Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1
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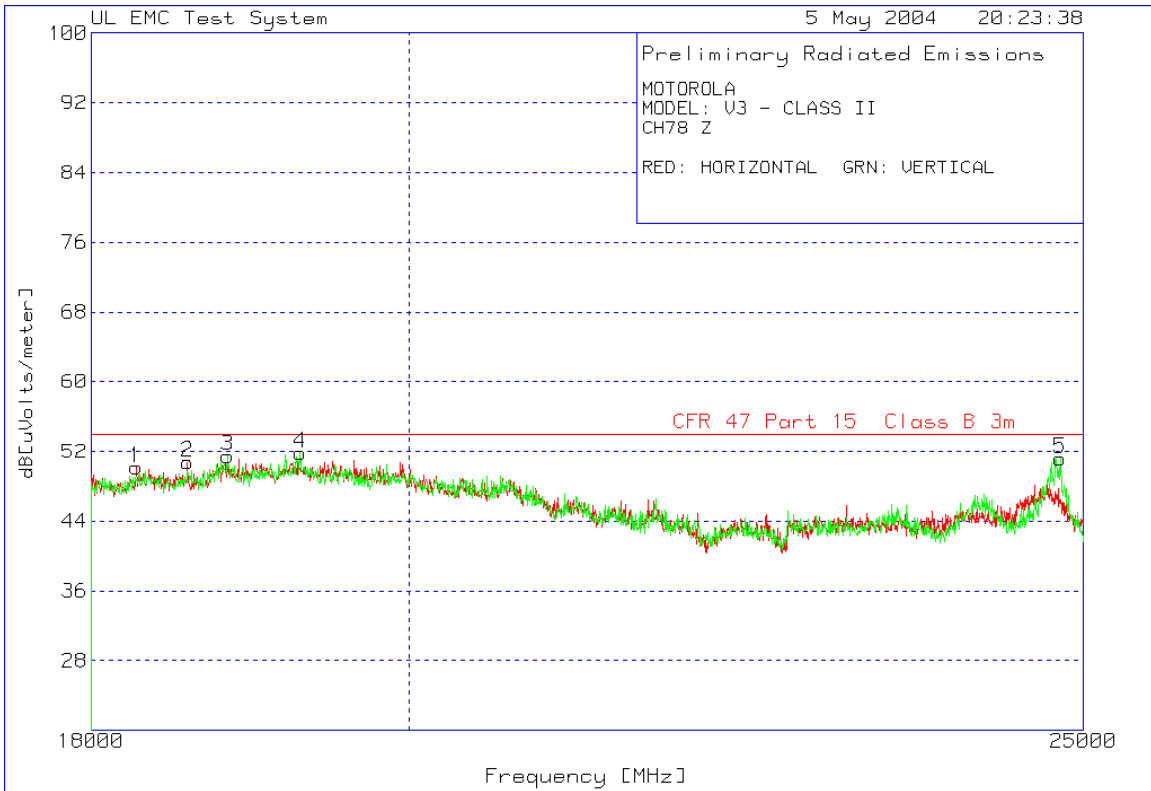
**Horizontal 18000 - 25000MHz**

1	18569.713	71.64 pk	-60.6	40.1	51.14	54
					<b>Height:101 Horz Margin [dB]</b>	<b>-2.86</b>
2	18835.891	71.74 pk	-60.4	40.1	51.44	54
					<b>Height:150 Horz Margin [dB]</b>	<b>-2.56</b>
3	19209.473	71.98 pk	-60.8	40.3	51.48	54
					<b>Height:101 Horz Margin [dB]</b>	<b>-2.52</b>

**Vertical 18000 - 25000MHz**

4	24808.539	68.86 pk	-59	40.3	50.16	54
					<b>Height:150 Vert Margin [dB]</b>	<b>-3.84</b>

LIMIT 1: CFR 47 Part 15 Class B 3m



**18-25GHz High-Channel Z-Orientation**

**MOTOROLA  
MODEL: V3 - CLASS II  
CH78 Z  
RED: HORIZONTAL GRN: VERTICAL**

Test No.	Frequency [MHz]	Meter Reading [dB(uV)]	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dB[uV/m]	Limit:1
----------	-----------------	------------------------	-----------------------	------------------------	----------------	---------

**Horizontal 18000 - 25000MHz**

1	18270.847	70.97 pk	-60.8	40	50.17	54
		<b>Height:101 Horz</b>	<b>Margin [dB]</b>		<b>-3.83</b>	
2	18583.723	71.26 pk	-60.6	40.1	50.76	54
		<b>Height:101 Horz</b>	<b>Margin [dB]</b>		<b>-3.24</b>	

**Vertical 18000 - 25000MHz**

3	18831.221	71.79 pk	-60.4	40.1	51.49	54
		<b>Height:149 Vert</b>	<b>Margin [dB]</b>		<b>-2.51</b>	
4	19288.859	72.22 pk	-60.7	40.3	51.82	54
		<b>Height:149 Vert</b>	<b>Margin [dB]</b>		<b>-2.18</b>	
5	24808.539	69.91 pk	-59	40.3	51.21	54
		<b>Height:149 Vert</b>	<b>Margin [dB]</b>		<b>-2.79</b>	

LIMIT 1: CFR 47 Part 15 Class B 3m

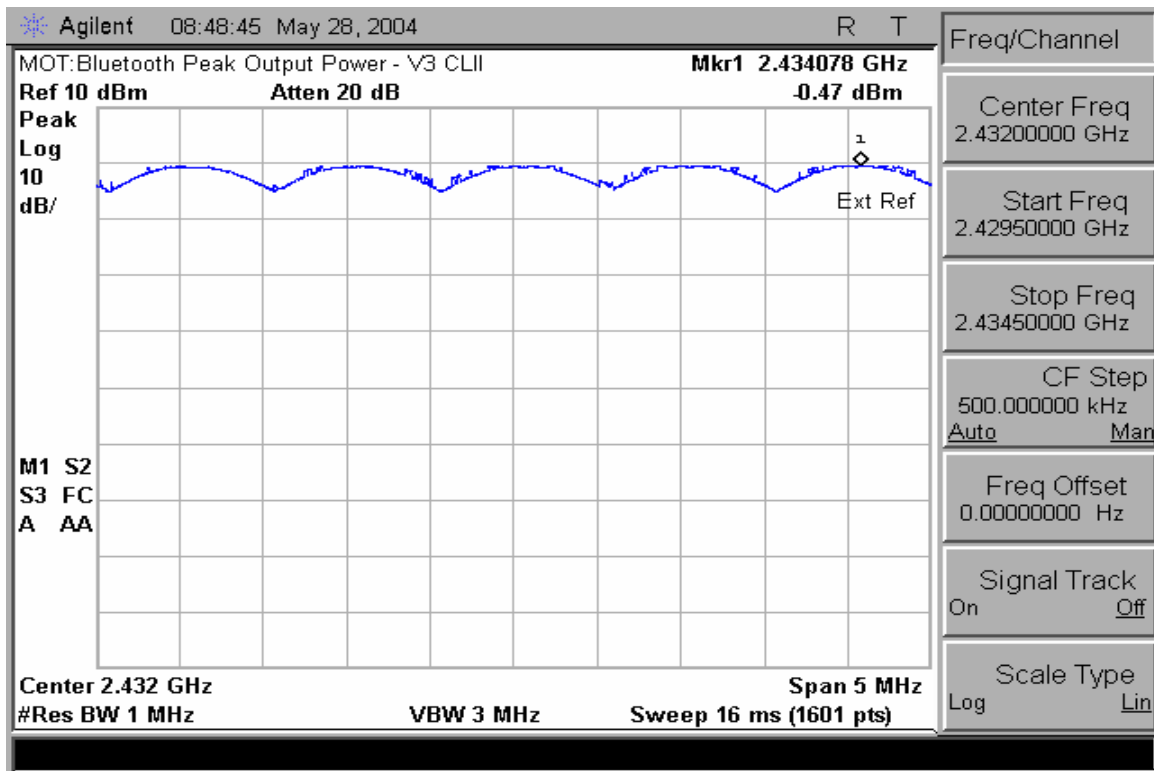
## PEAK OUTPUT POWER

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**

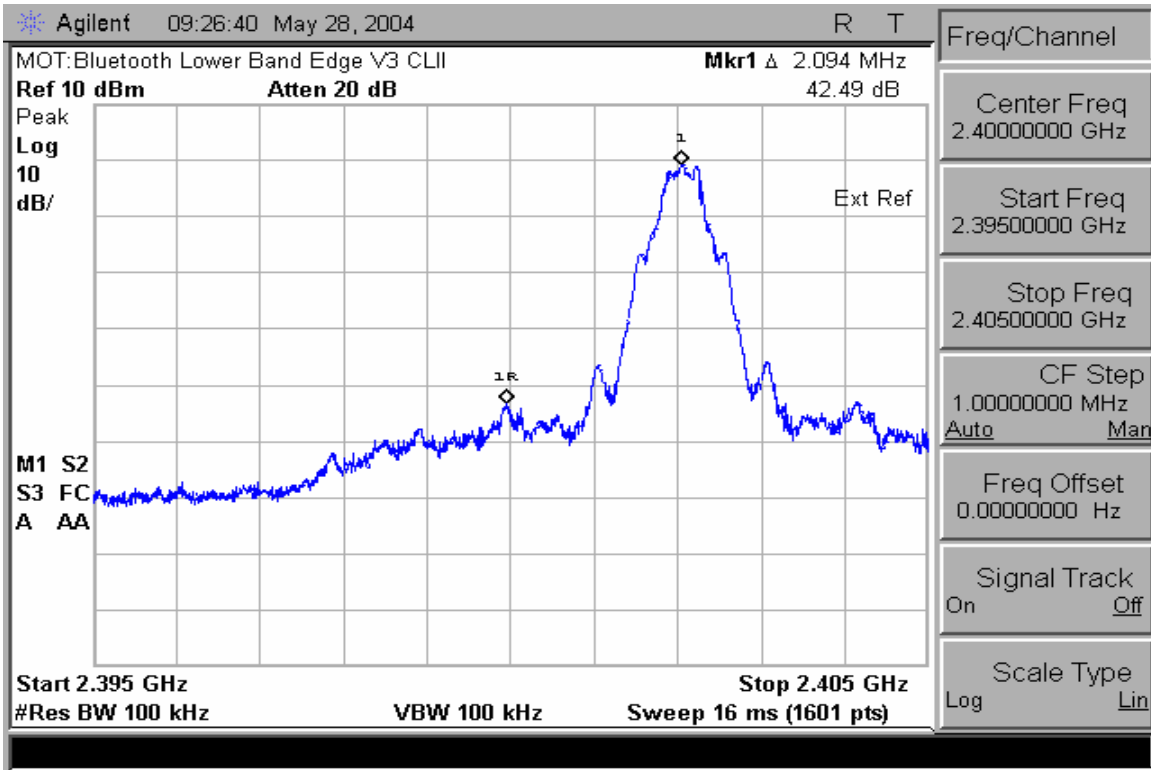
CFR 47 Part 15.247

### **Measurement Procedure**

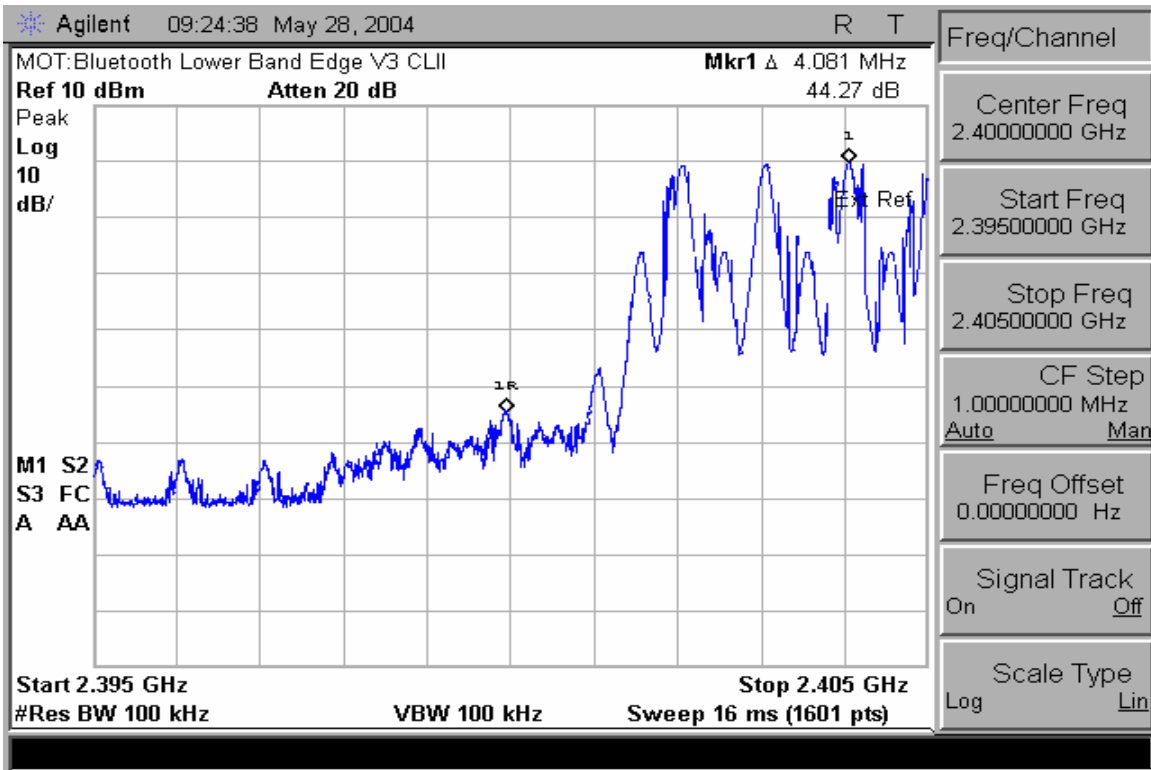
The RF output port of the Equipment-Under-Test is directly coupled to the input of the EMC analyzer through a specialized RF connector and a 10dB passive attenuator. A fully charged battery was used for the supply voltage.

### **Measurement Results**

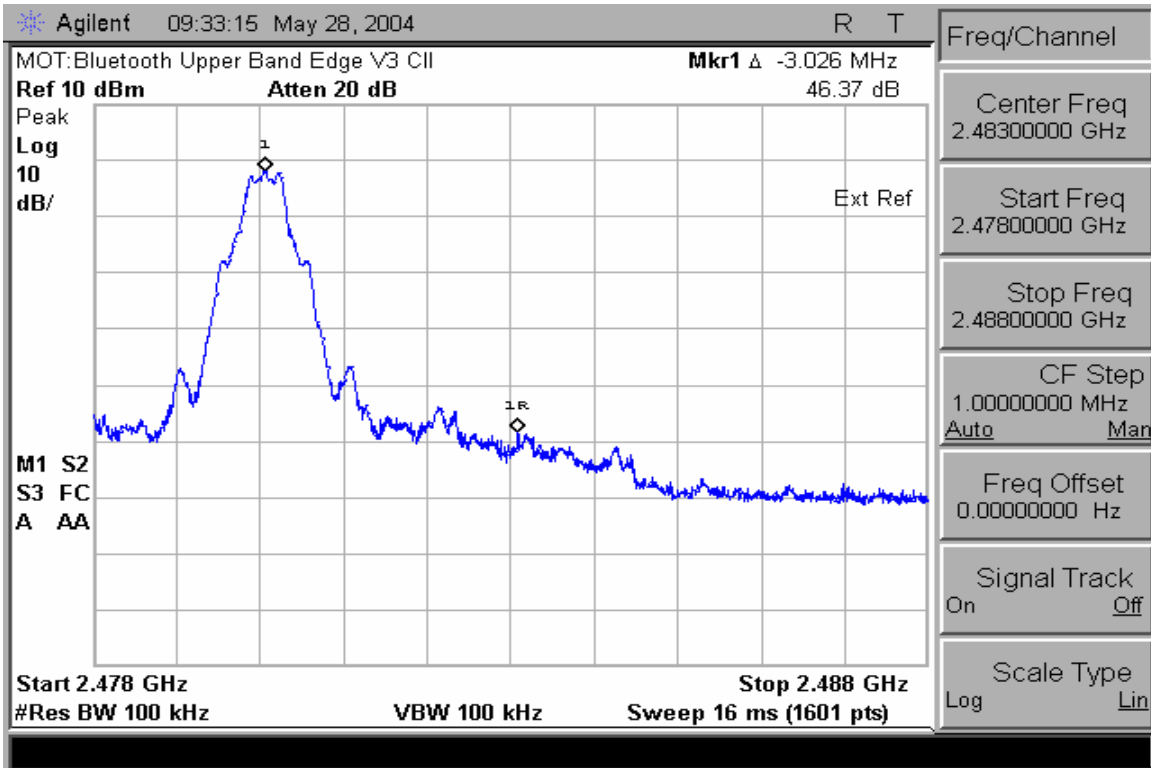
See Attached:



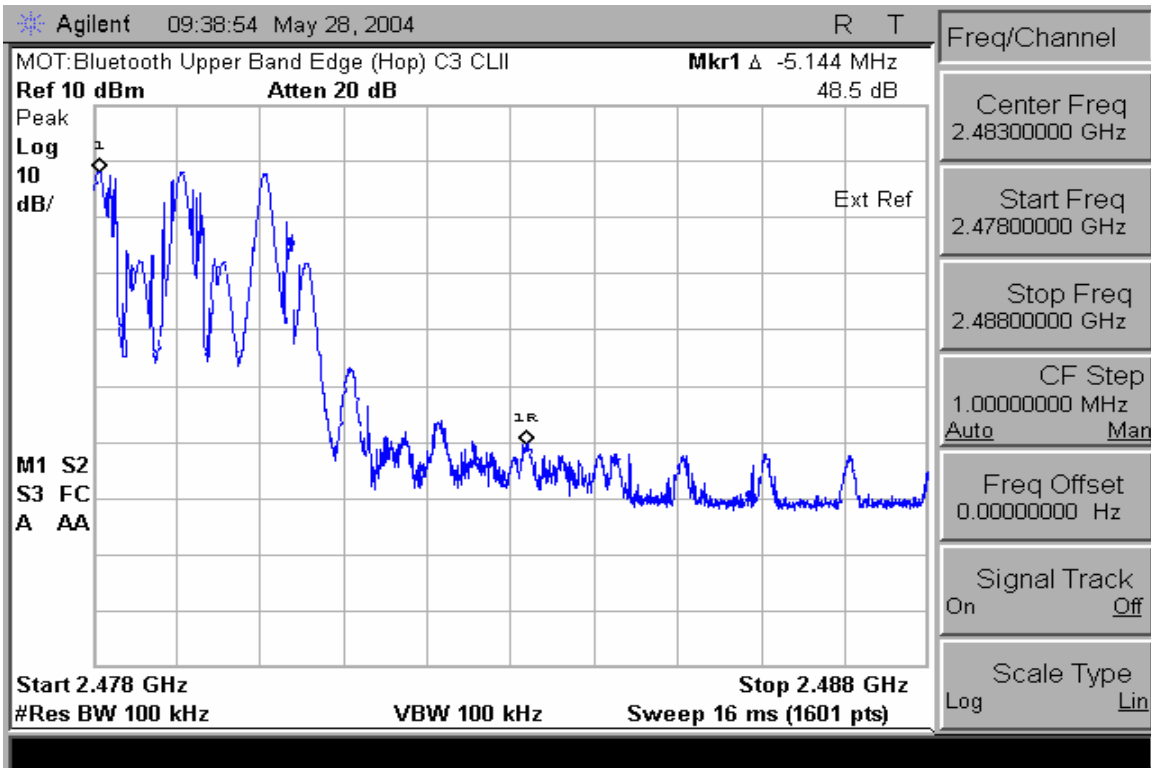
Low Band Edge with Hopping Disabled



Low Band Edge with Hopping Enabled



**High Band Edge with Hopping Disabled**



**High Band Edge with Hopping Enabled**

## **SPURIOUS RF CONDUCTED EMISSIONS**

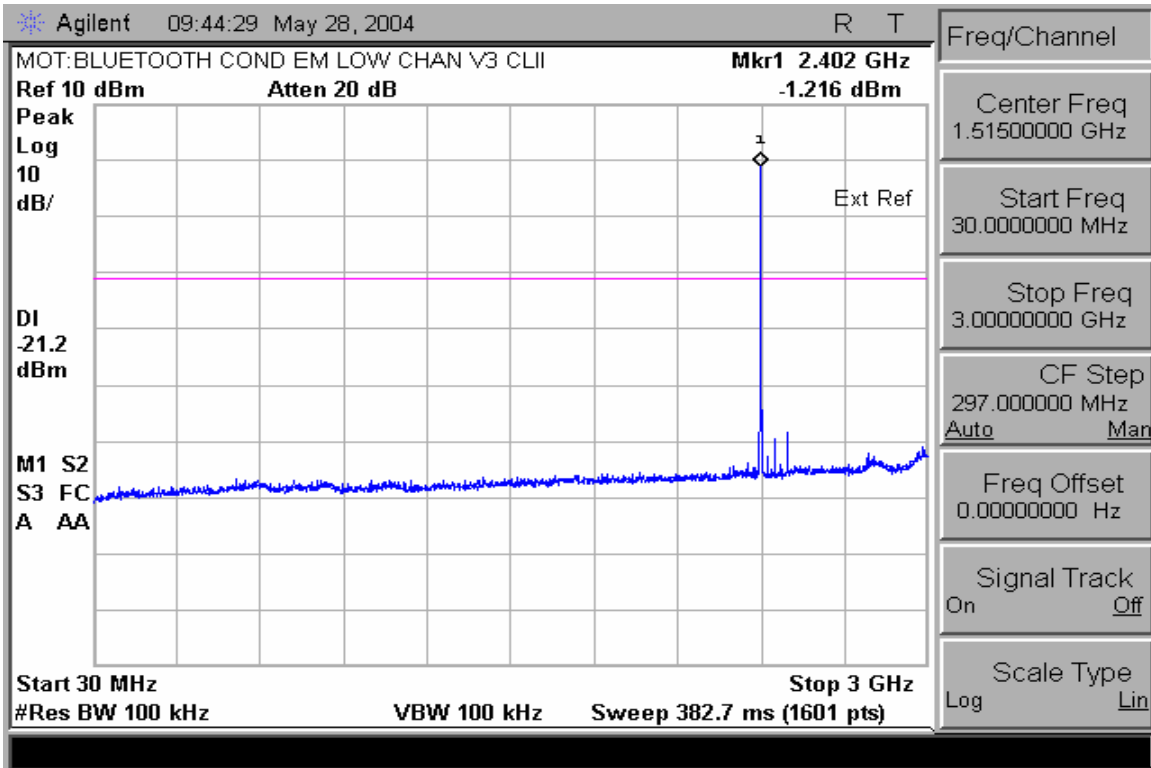
CFR 47 Part 15.247

### **Measurement Procedure**

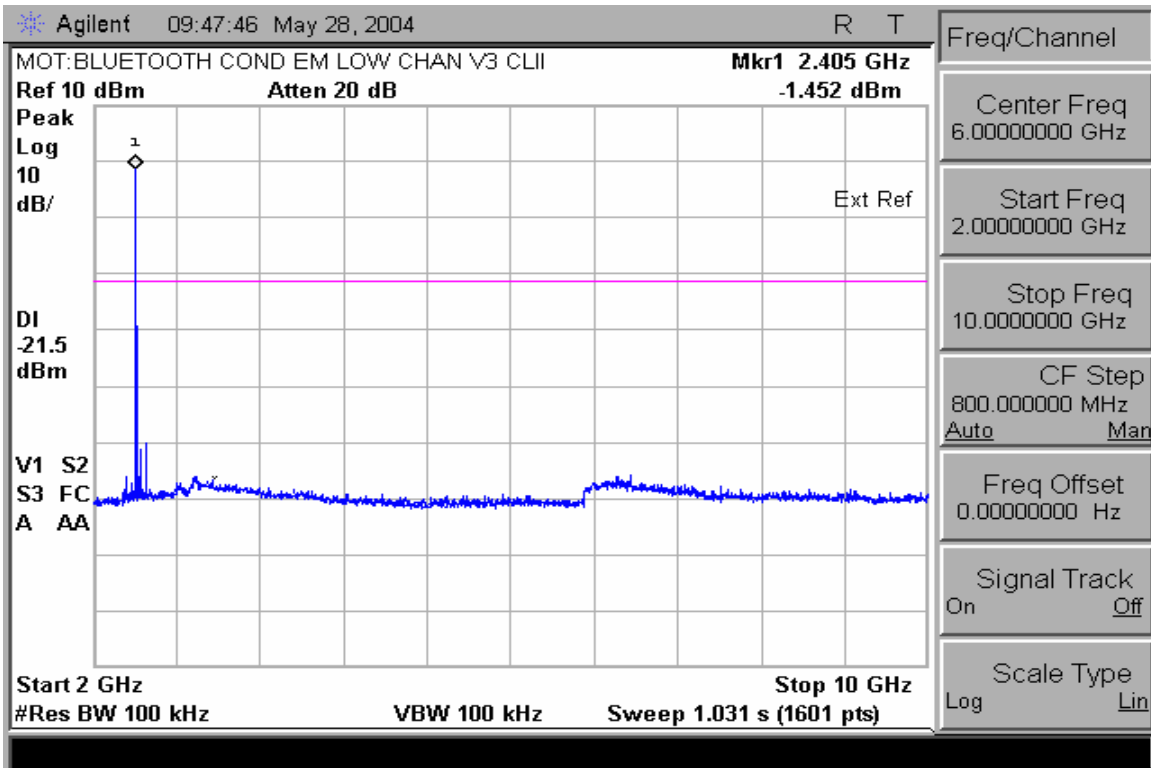
The RF output port of the Equipment-Under-Test is directly coupled to the input of the EMC analyzer through a specialized RF connector and a 10dB passive attenuator. A fully charged battery was used for the supply voltage.

### **Measurement Results**

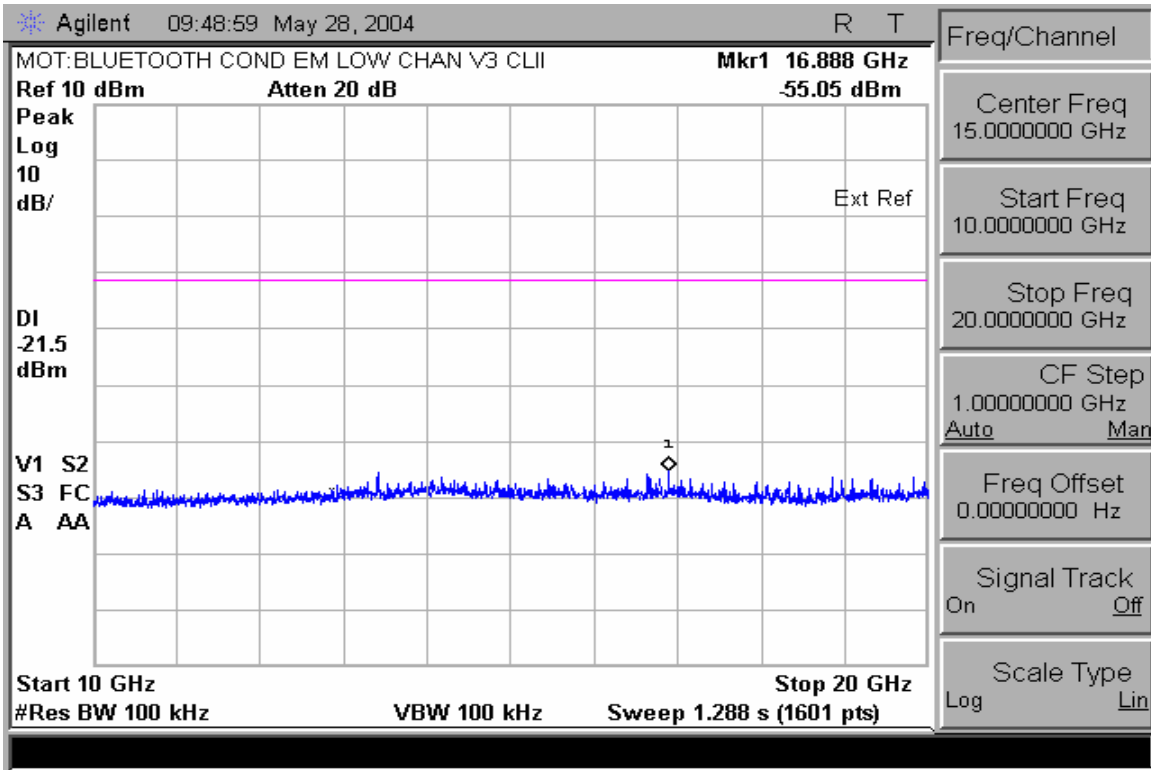
See attached:



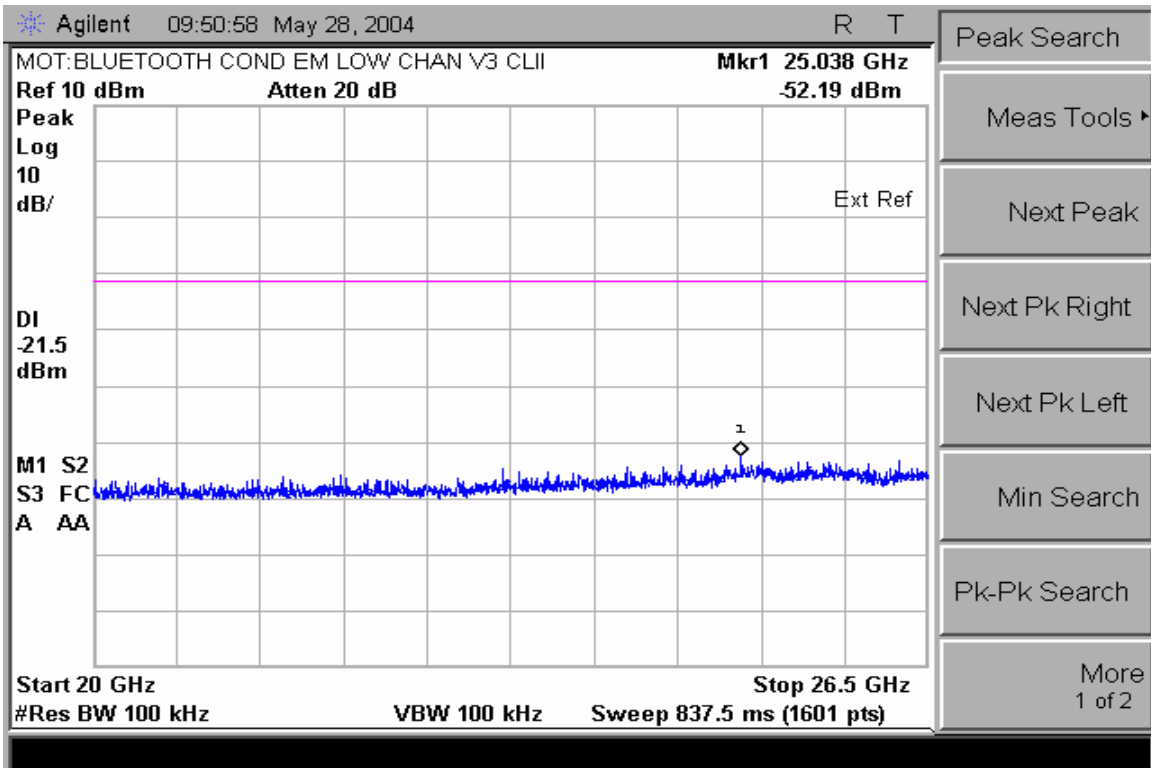
**Conducted Spurious Emissions 30-3000MHz (Low Channel Enabled)**



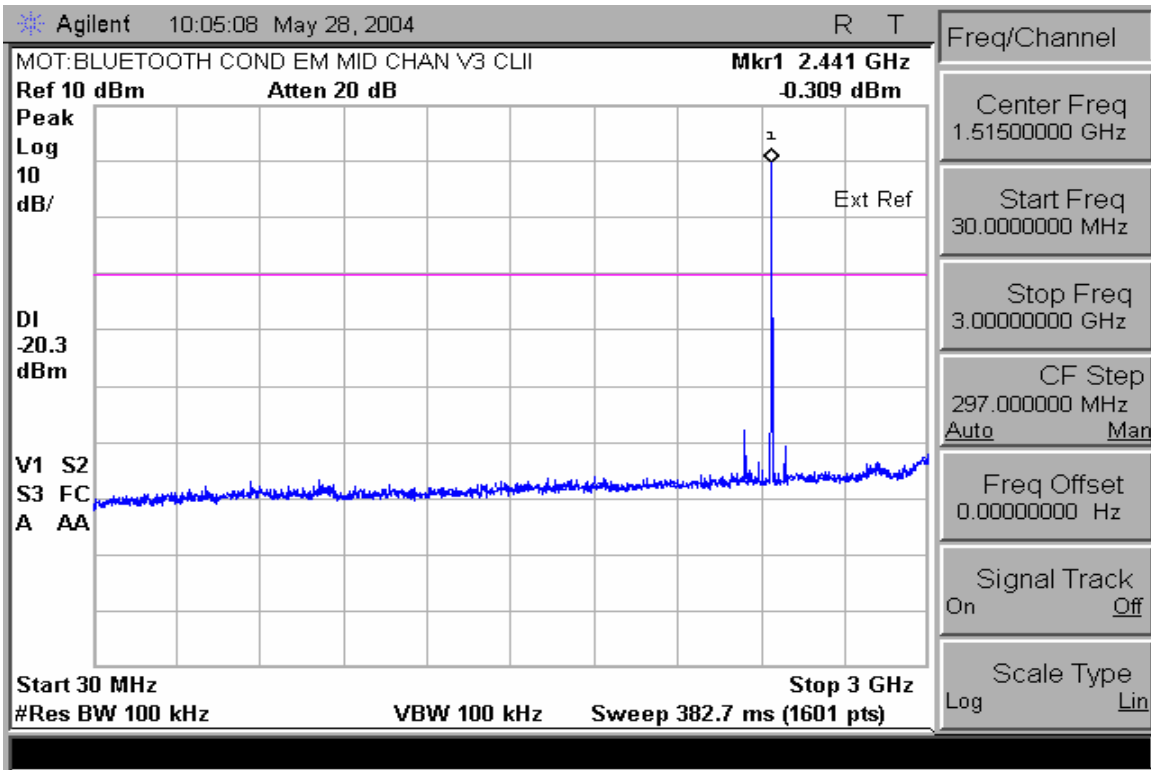
**Conducted Spurious Emissions 2-10GHz (Low Channel Enabled)**



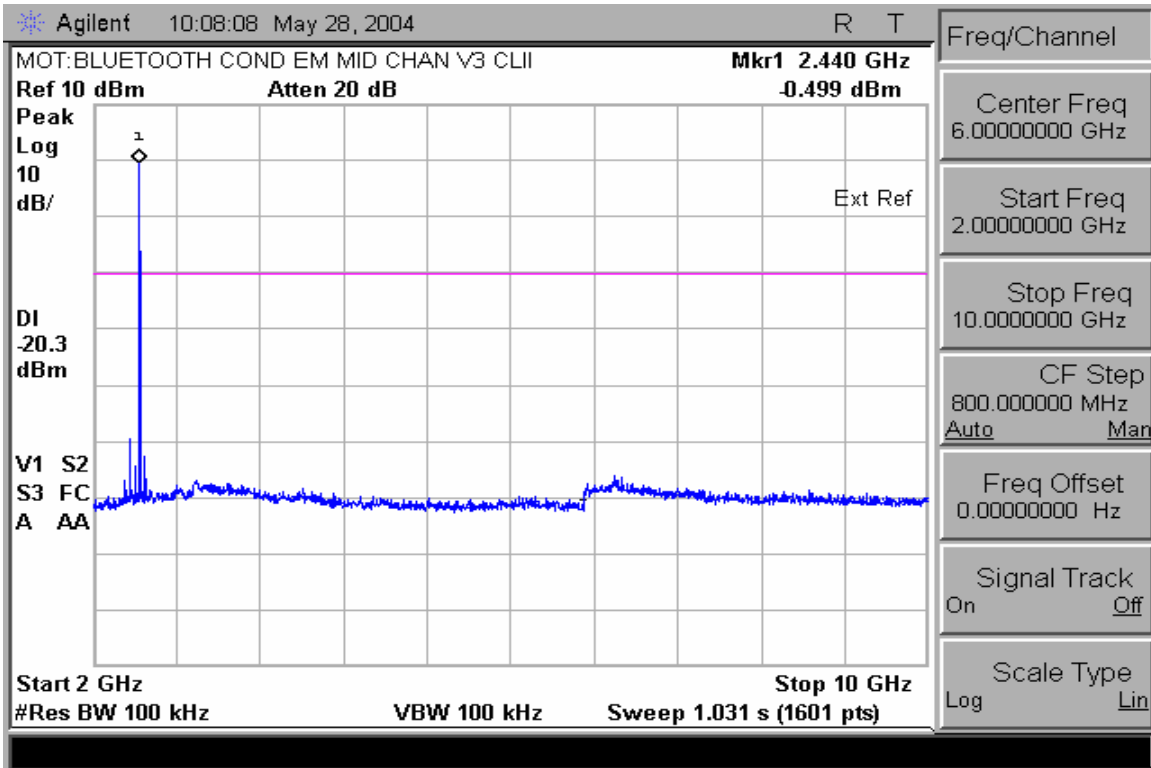
**Conducted Spurious Emissions 10-20GHz (Low Channel Enabled)**



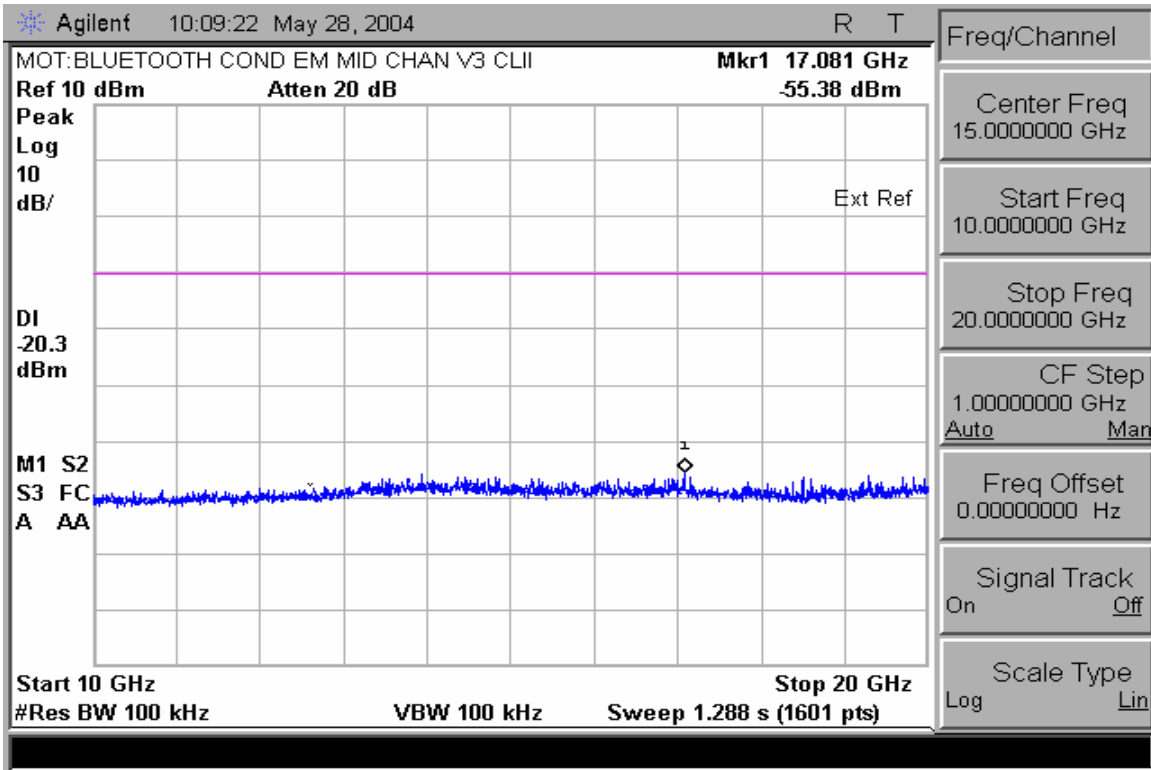
**Conducted Spurious Emissions 20-26.5GHz (Low Channel Enabled)**



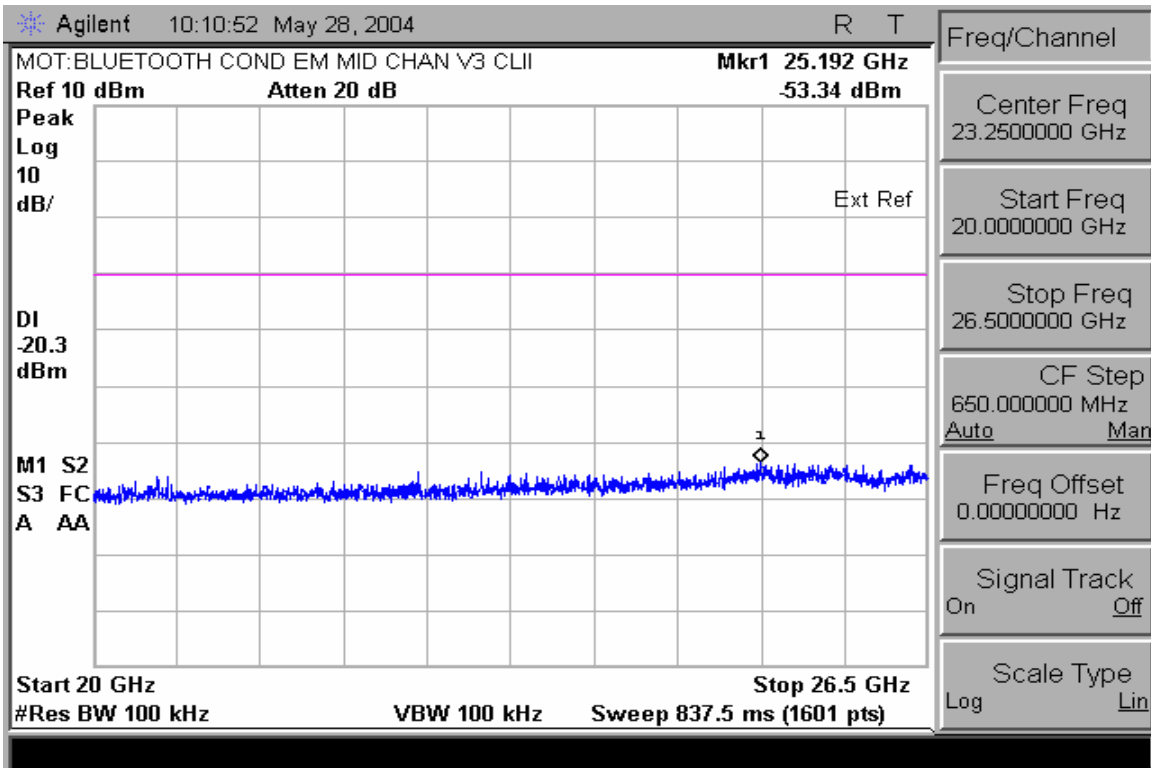
**Conducted Spurious Emissions 30-3000MHz (Mid Channel Enabled)**



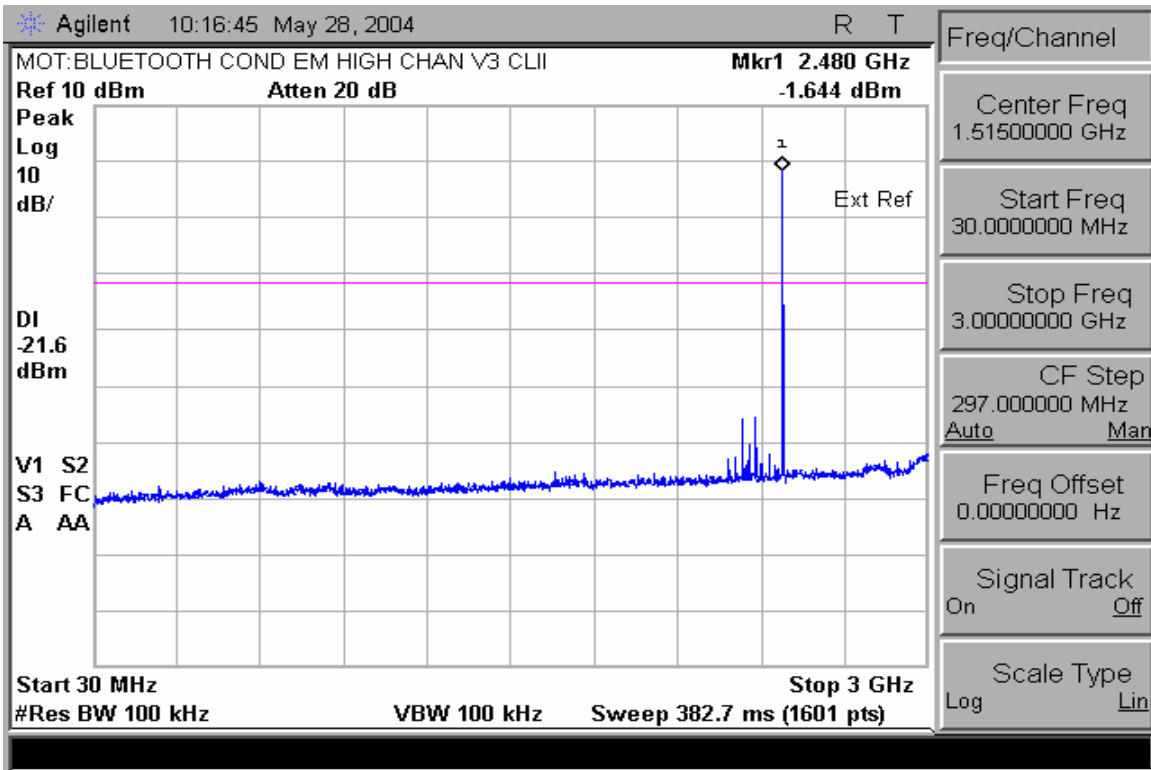
**Conducted Spurious Emissions 2-10GHz (Mid Channel Enabled)**



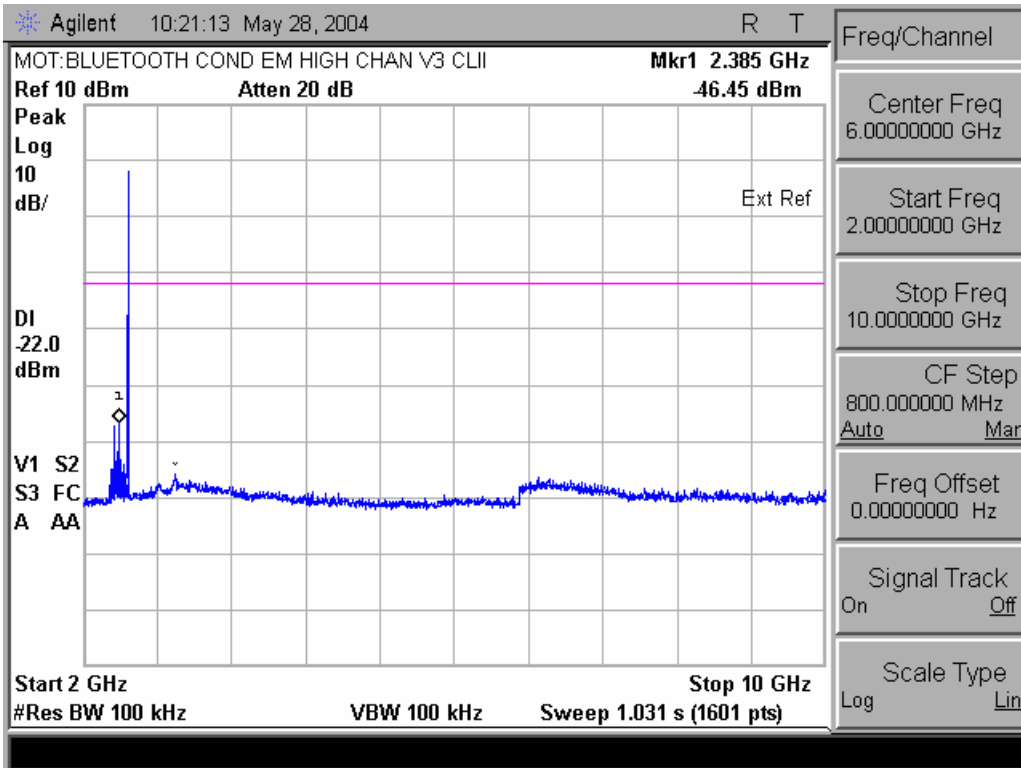
**Conducted Spurious Emissions 10-20GHz (Mid Channel Enabled)**



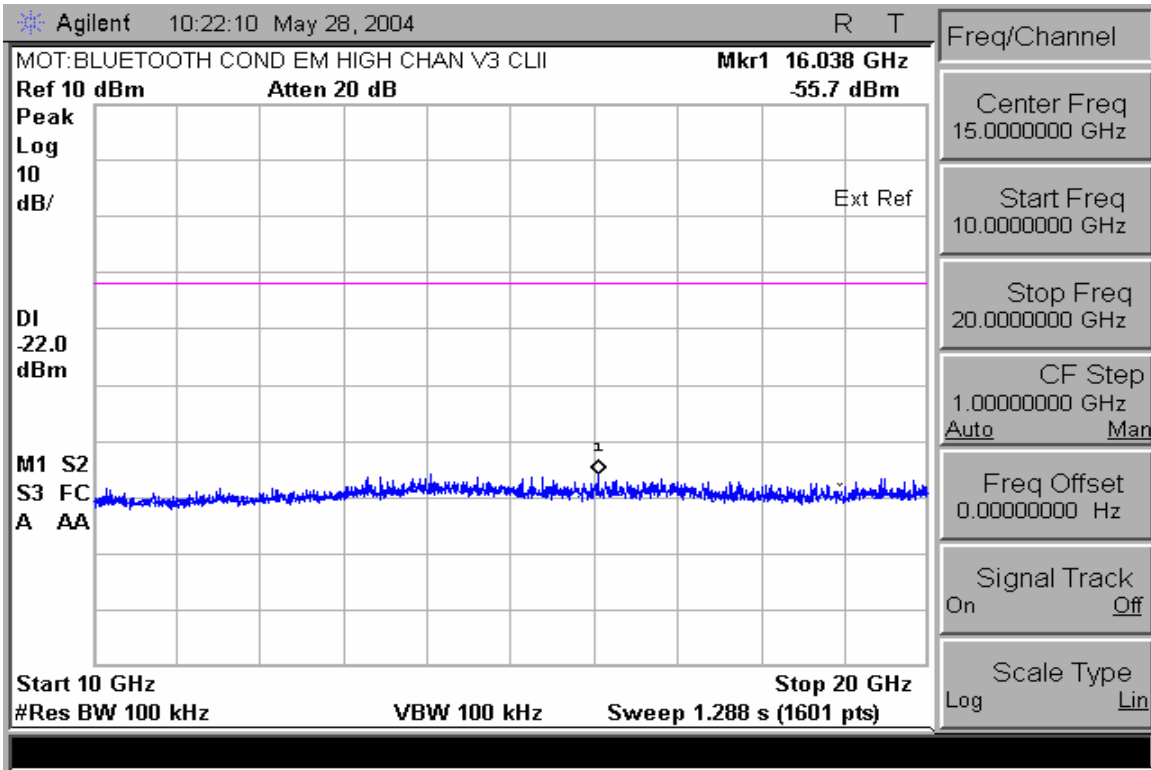
**Conducted Spurious Emissions 20-26.5GHz (Mid Chan Enabled)**



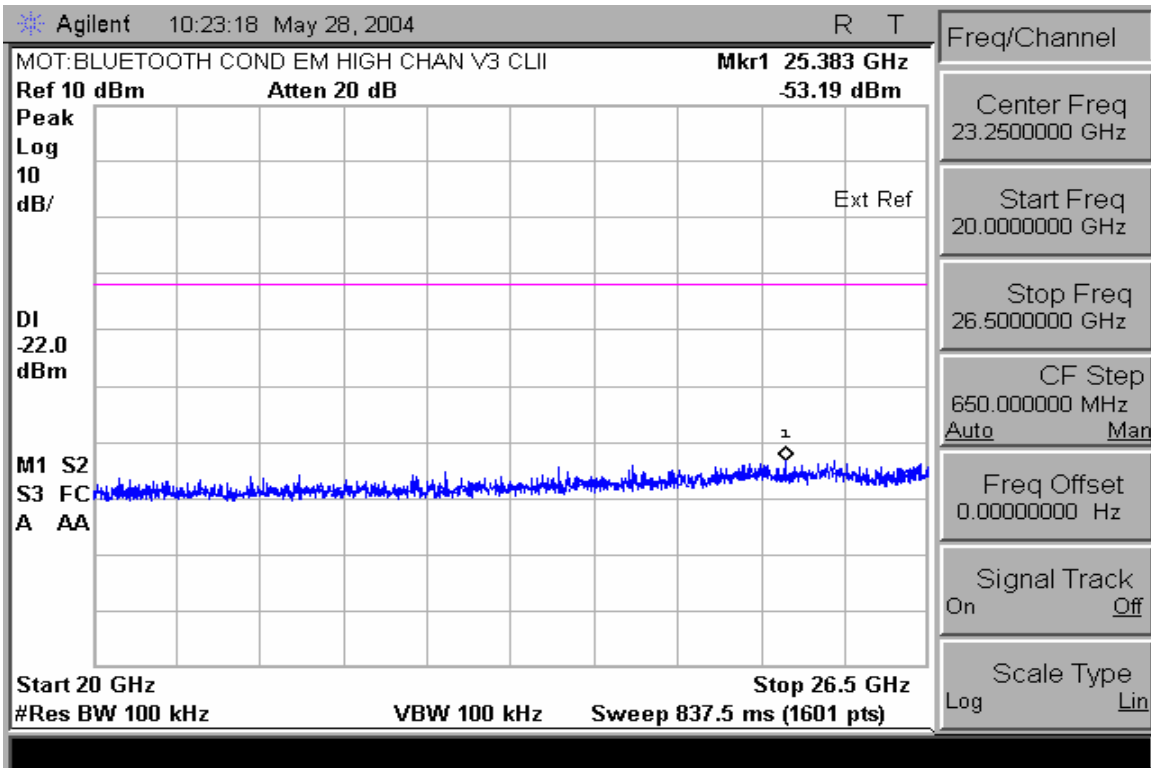
**Conducted Spurious Emissions 30-3000MHz (High Channel Enabled)**



**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)**

**End of Test Report**