



MOTOROLA

MOBILE DEVICES BUSINESS

**PRODUCT SAFETY AND COMPLIANCE
EMC LABORATORY**

EMC TEST REPORT - Addendum

Test Report Number – 18447-1BT

Report Date – June 19, 2006

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: Thanigaiselvan Palaniswami

Title: EMC Engineer

Date: June 19, 2006

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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: 1651-01

Table of Contents

Test Report Details 3

Applicable Standards 4

Summary of Testing..... 5

General and Special Conditions..... 5

Equipment and Cable Configurations..... 6

Measuring Equipment and Calibration Information 6

Description of Bluetooth Transmitter 7

Measurement Procedures and Data..... 8

 CARRIER FREQUENCY SEPARATION 8

 Measurement Procedure..... 8

 Measurement Results..... 8

 NUMBER OF HOPPING FREQUENCIES..... 10

 Measurement Procedure..... 10

 Measurement Results..... 10

 TIME OF OCCUPANCY (DWELL TIME)..... 12

 Measurement Procedure..... 12

 Measurement Results..... 12

 20dB BANDWIDTH 14

 Measurement Procedure..... 14

 Measurement Results..... 14

 FIELD STRENGTH OF SPURIOUS EMISSIONS..... 16

 Measurement Procedure..... 16

 Measurement Results..... 16

 PEAK OUTPUT POWER 53

 Measurement Procedure..... 53

 Measurement Results..... 53

 BAND-EDGE COMPLIANCE OF RF CONDUCTED EMISSIONS 55

 Measurement Procedure..... 55

 Measurement Results..... 55

 SPURIOUS RF CONDUCTED EMISSIONS 58

 Measurement Procedure..... 58

 Measurement Results..... 58

 AC LINE CONDUCTED EMISSIONS 65

 Measurement Procedure..... 65

 Measurement Results..... 65

Test Report Details

Tests Performed By: Motorola Mobile Devices Business
Product Safety and Compliance Group
600 North US Hwy 45
Libertyville, IL 60048
Phone: 847- 523-6167
Fax: 847- 523-4538
Motorola MDB FRN: 0004321311
FCC Registration Number: 316588
Industry Canada Number: IC3908-1

Underwriters Laboratories, Inc.
International EMC Services
333 Pfingsten Rd.
Northbrook, IL 60062
Phone: 847-664-3957
Fax: 847-313-3957
NVLAP Lab Code: 100414-0

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

Product Type: Cellular Phone

Signaling Capability: CDMA 800, 1900 and Bluetooth

FCC ID: IHDT56GQ1

Serial Numbers: 1EAD253B, 1EAD2540, 1EAD253D,

Testing Complete Date: June 05, 2006

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	Pass
9	Conducted Spurious Emissions	Pass

Test	Test Name	Results
1	Carrier Frequency Separation	1 MHz
2	Number of Hopping	79
3	Time of Occupancy (Dwell Time)	2.935 ms
4	20 dB Bandwidth	984 kHz
5	Spurious RF Conducted Emissions	See plots
6	Field Strength of Spurious Emissions	See plots
7	Max Power	-2.901 dBm
8	Band Edges	See plots
9	Conducted Spurious Emissions	See plots

General and Special Conditions

The Cellular Phone hereinafter referred to as the Equipment Under Test or 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
Hewlett-Packard	EMC Analyzer	E7405A	US40240219	1/05/07
Attenuator	Weinschel	AS-6	6677	11/10/06
Attenuator	Weinschel	AS-3	6677	11/10/06
Attenuator	Agilent	8491A	36904	9/19/2006
Rohde & Schwarz	Mobile Test Set	CMU 200	106338	3/17/07
Hewlett Packard	QP Adapter	85650A	2811A01069	1/03/07
Hewlett Packard	S/A Display	8566B	2542A12974	1/03/07
Hewlett Packard	S/A	8566B	2637A03376	1/03/07
Rhode & Schwartz	S/A	FSEK	DE25315	1/04/07
Chase	Bi-Con Antenna 30-300MHz	VBA6106A	1246	7/22/06
Chase	Log-Periodic Antenna	UPA6108	1120	8/02/06
EMCO	Horn Antenna 1-18GHz	3115	2638	7/29/06
EMCO	Horn Antenna 1-18GHz	3115	6546	10/18/06
Emco	Horn Antenna 2-4GHz	3161-02	9906-1052	N/A
Emco	Horn Antenna 4-8GHz	3161-03	9905-1041	N/A
Emco	Horn Antenna 8-12GHz	3160-07	9902-1114	N/A
Emco	Horn Antenna 12-18GHz	3160-08	9904-1100	N/A
Emco	Horn Antenna 18-26.5GHz	3160-09	990345-003	N/A

All equipment is on a one-year calibration cycle.

Description of Bluetooth Transmitter

The EUT offers Bluetooth as a feature. The Bluetooth spread-spectrum, frequency hopping transceiver is designed to operate between 2400 and 2483.5 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 Bluetooth antenna gain is -0.19 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.

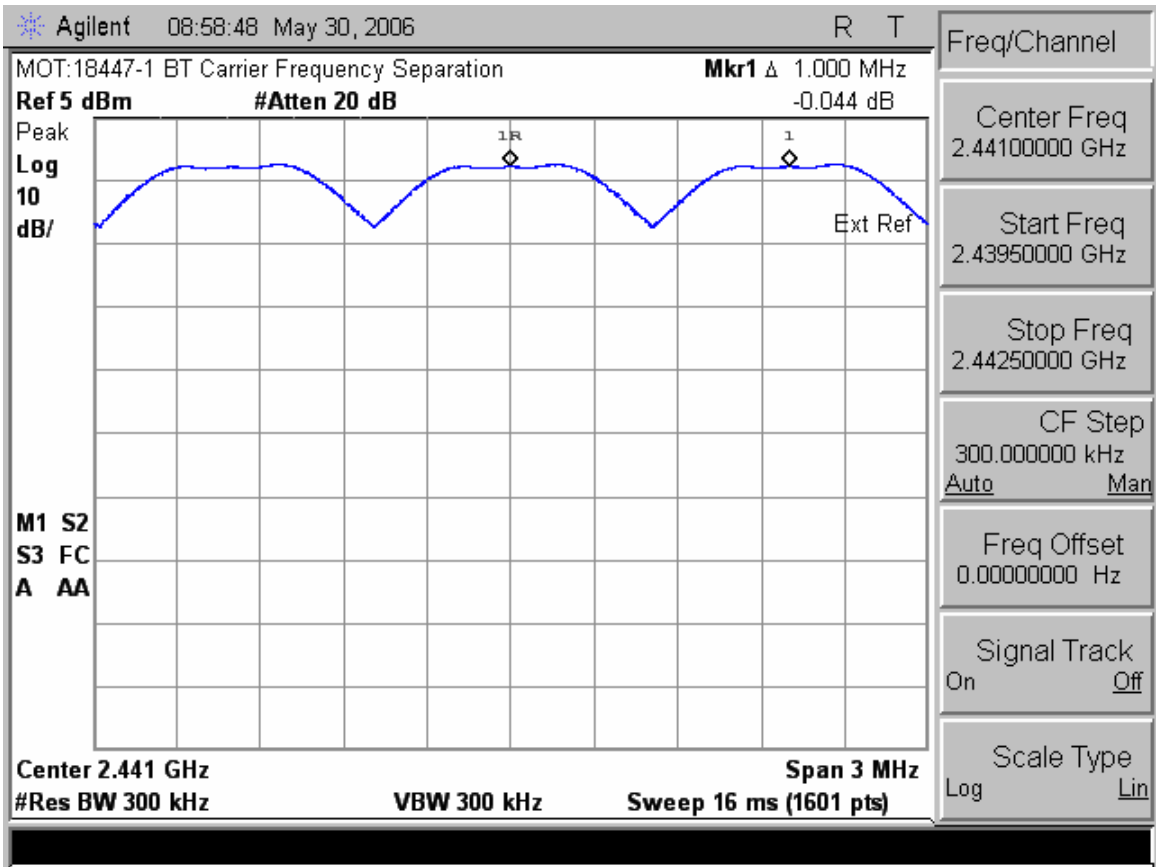
The Bluetooth transmitter of the EUT had its hopping function enabled. The following spectrum analyzer settings were used:

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.

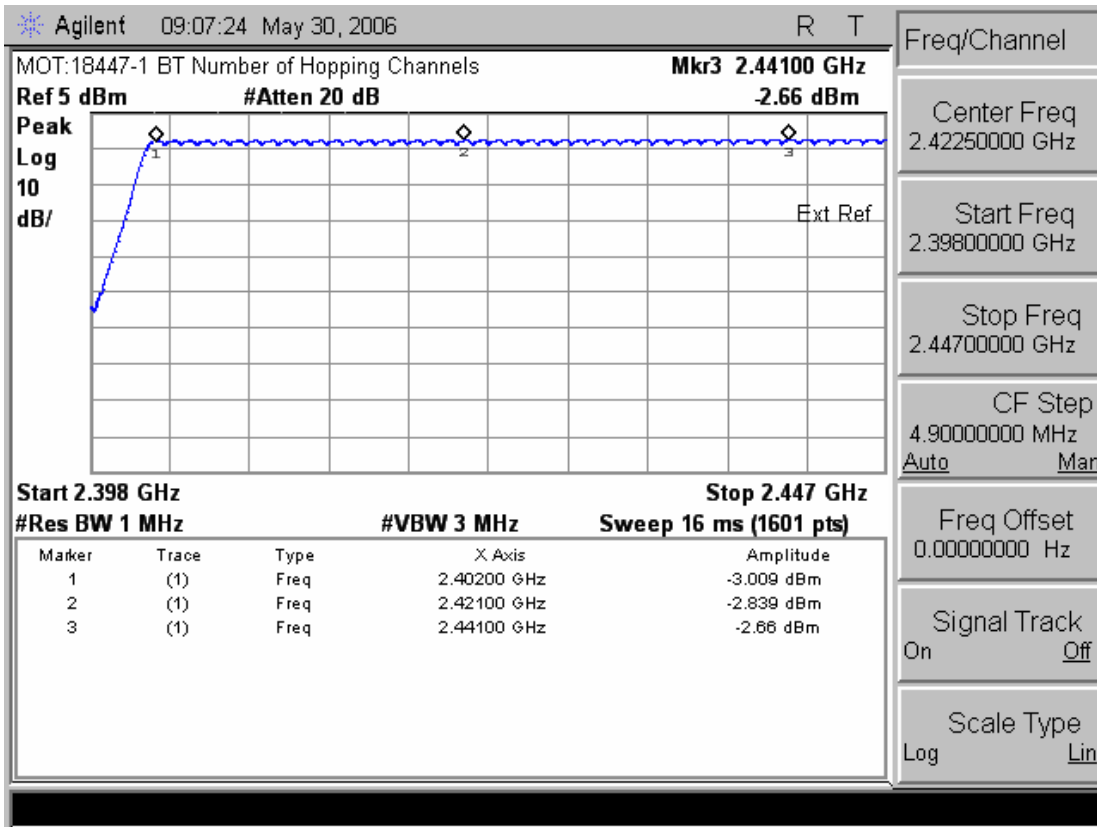
The Bluetooth frequency hopping function of the EUT was enabled. The spectrum analyzer used the following settings:

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

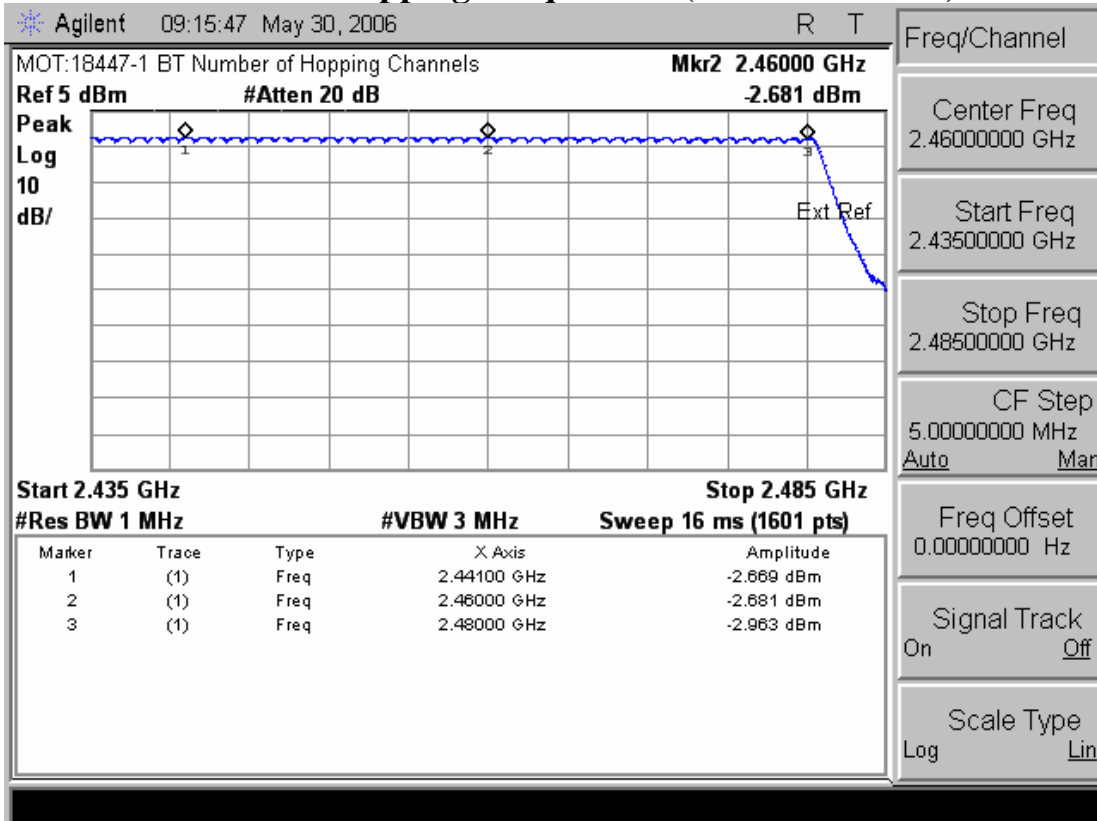
The trace was allowed to stabilize.

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.

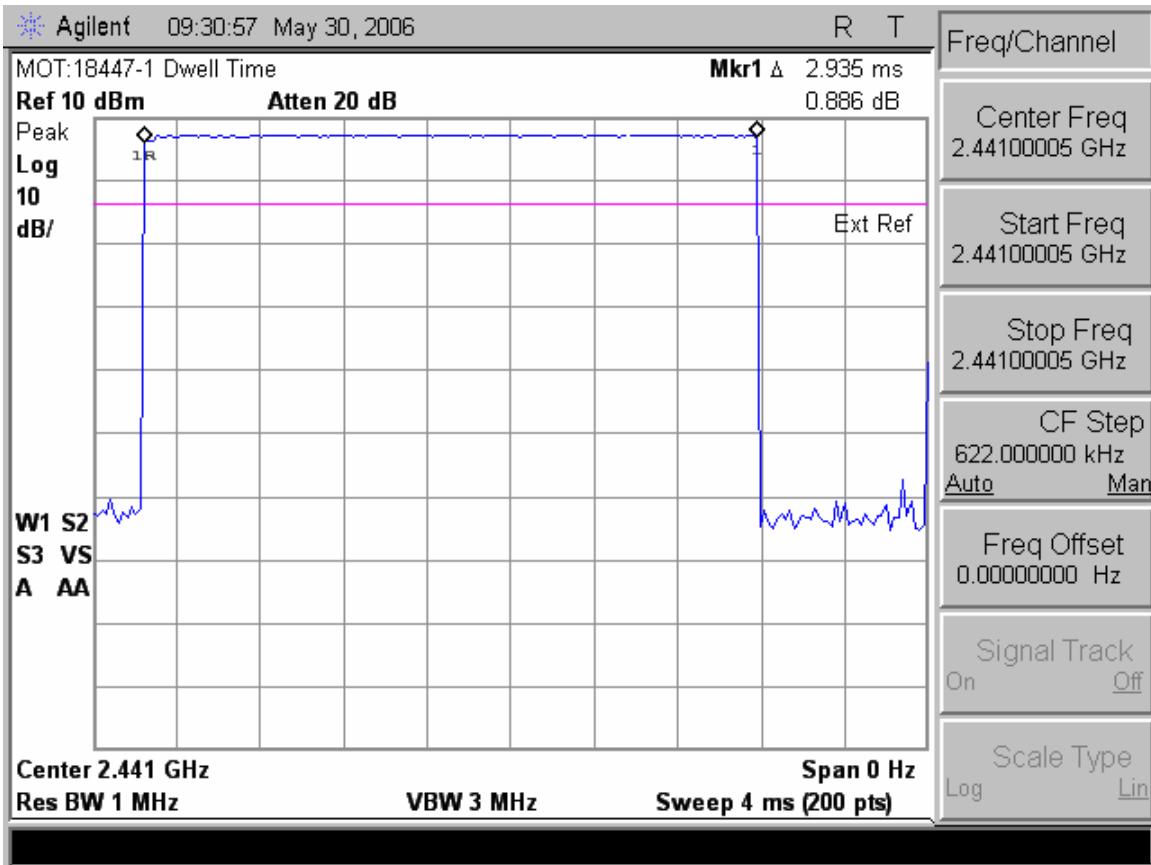
The Bluetooth hopping function of the EUT was enabled. The following spectrum analyzer settings were used:

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

See 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.

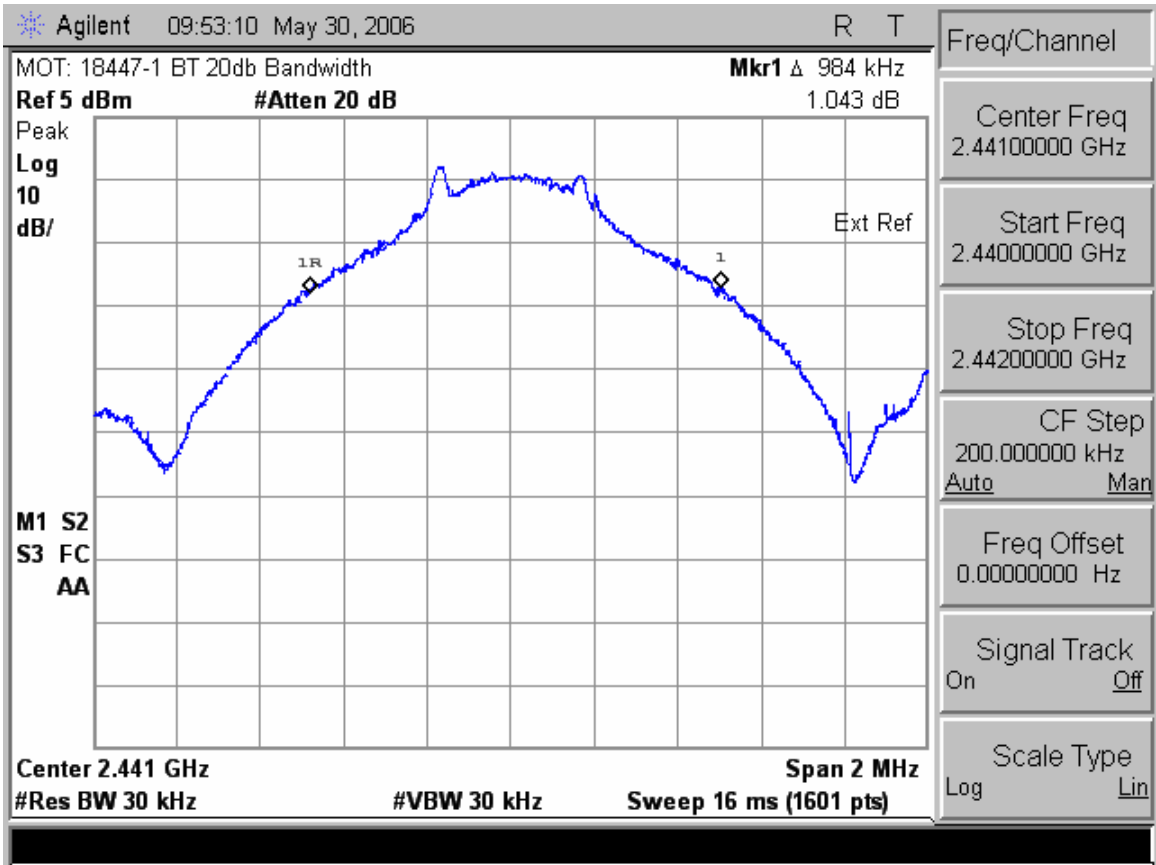
The Bluetooth frequency hopping function of the EUT was enabled. The spectrum analyzer used the following settings:

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

See attached



20dB Bandwidth

FIELD STRENGTH OF SPURIOUS EMISSIONS

CFR Part 2.1053, 15.247

Measurement Procedure

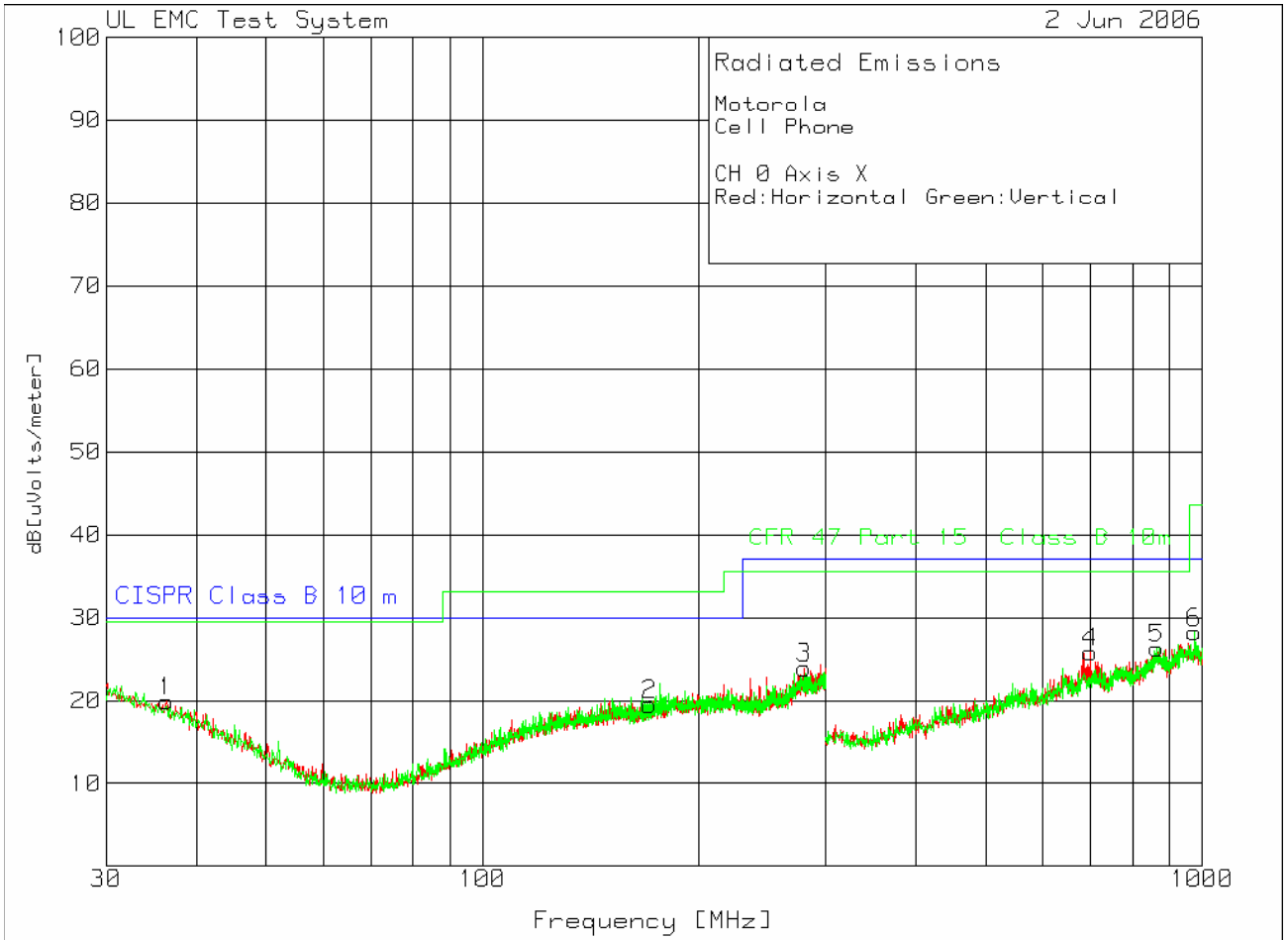
The Equipment-Under-Test is placed inside the semi-anechoic chamber on a wooden table at the turntable center. For each spurious frequency, the antenna mast is raised and lowered from 1 to 4 meters and the turntable is rotated 360 degrees to obtain a maximum reading on the spectrum analyzer. This is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

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

A fully charged battery was used for the supply voltage.

Measurement Results

See attached

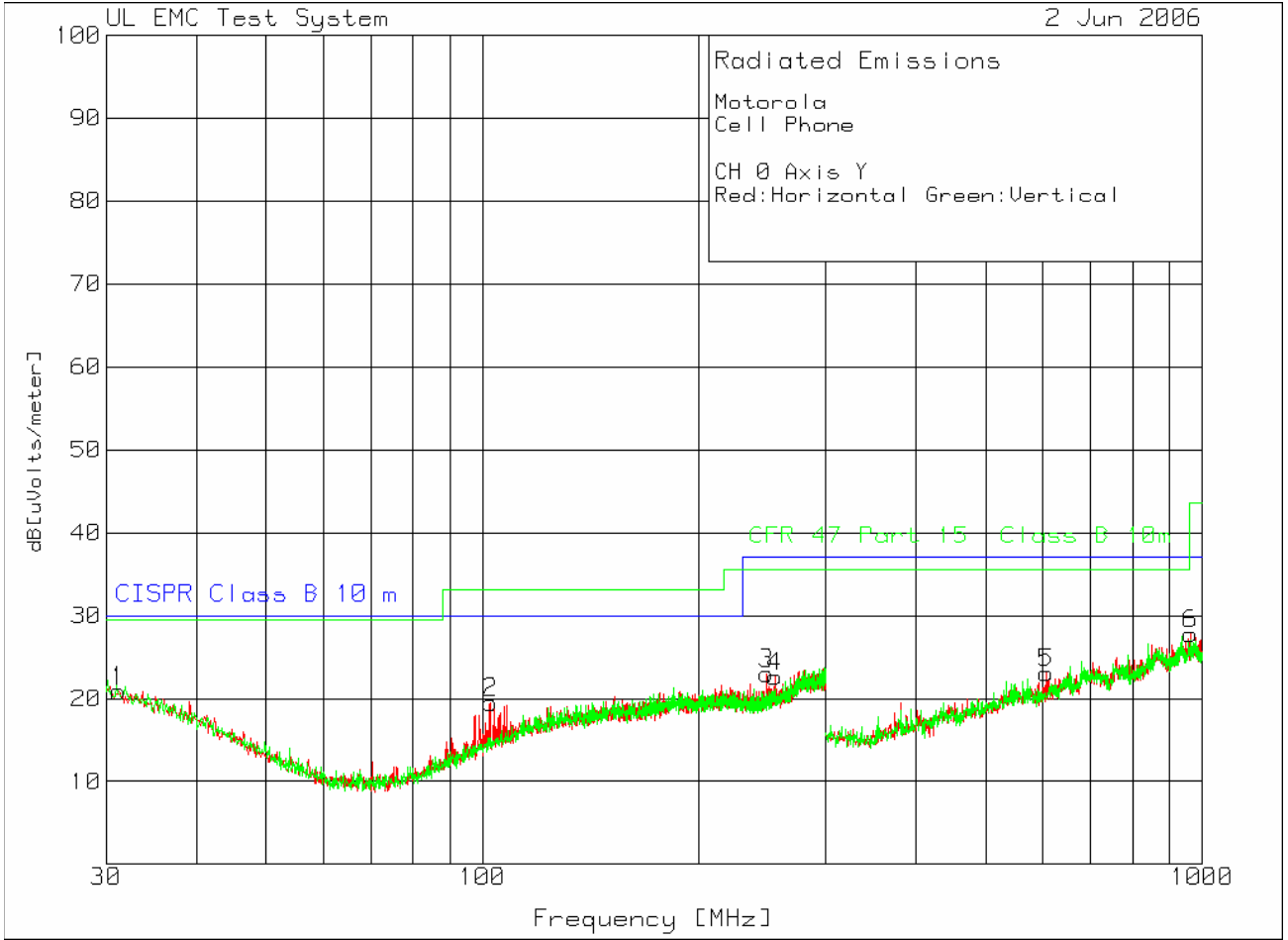


30-1000 MHz Low Channel Dual Polarization X

Motorola
Cell Phone
CH 0 Axis X
Red:Horizontal Green:Vertical

Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dBuV/m	Limit dBuV/m	Margin dB	Azimuth degs	Height cm	Polarity
Range 1 30 - 300MHz											
1	36.3418	34.9	pk	-30.7	15.7	19.9	29.6	-9.7	291	100	Horz
2	170.5997	34.7	pk	-30.4	15.2	19.5	33.1	-13.6	302	100	Horz
3	280.2998	35.7	pk	-29.7	17.9	23.9	35.6	-11.7	324	100	Horz
Range 3 300 - 1000MHz											
4	699.7	36.4	pk	-31.3	20.7	25.8	35.6	-9.8	73	100	Horz
5	864.9	34.4	pk	-31.8	23.7	26.3	35.6	-9.3	17	100	Horz
Range 4 300 - 1000MHz											
6	975.5	35.4	pk	-31.3	24.1	28.2	43.5	-15.3	269	100	Vert

LIMIT : CFR 47 Part 15 Class B 10m
pk - Peak detector
qp - Quasi-Peak detector
av - Average detector

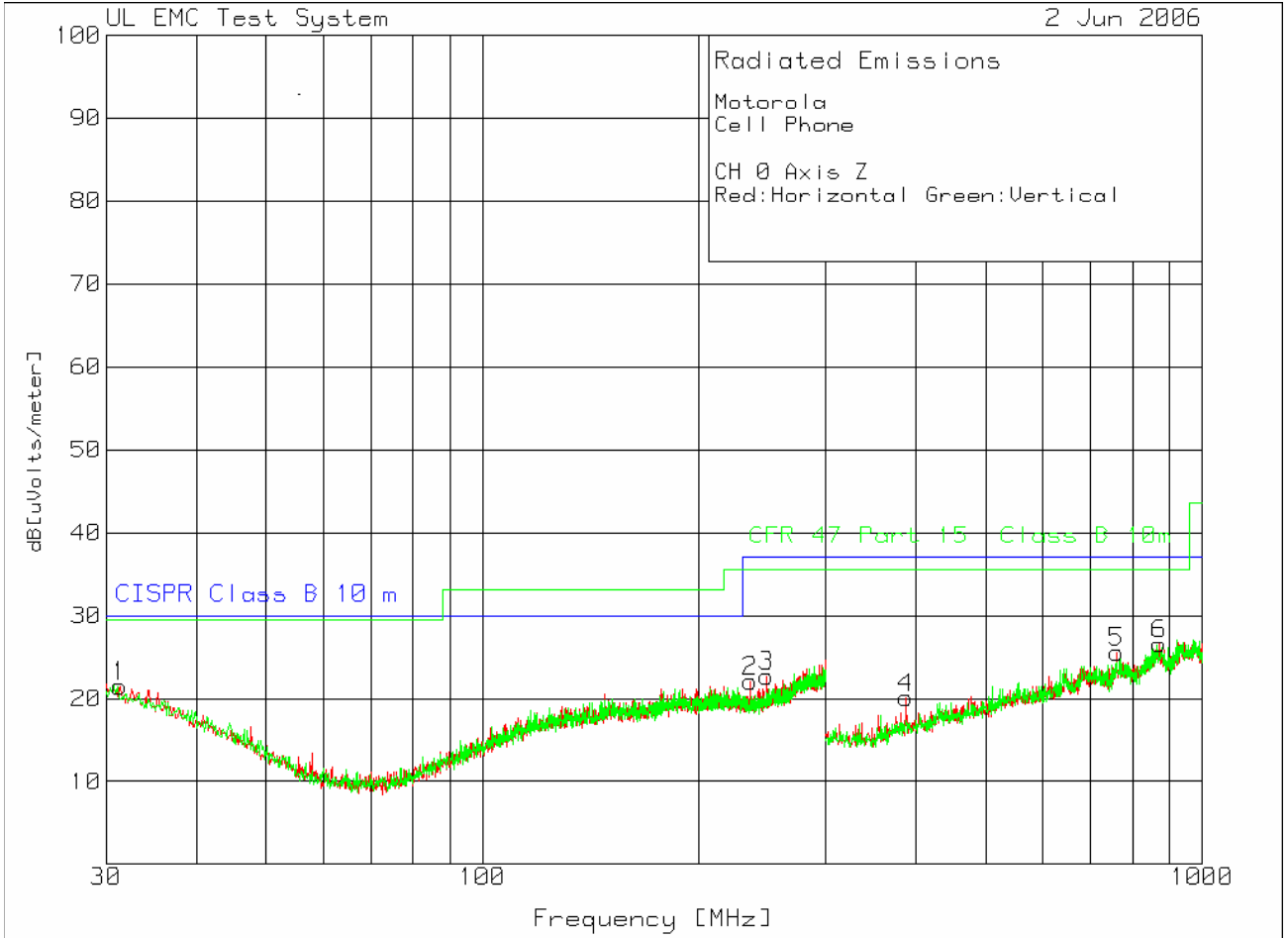


30 -1000 MHz Low Channel Dual Polarization Y

Motorola
Cell Phone
CH 0 Axis Y
Red:Horizontal Green:Vertical

Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dBuV/m	Limit dBuV/m	Margin dB	Azimuth degs	Height cm	Polarity
Range 1 30 - 300MHz											
1	31.2144	34	pk	-30.7	17.6	20.9	29.6	-8.7	324	100	Horz
2	102.5937	38.9	pk	-30.5	11.1	19.5	33.1	-13.6	44	100	Horz
3	248.4557	37	pk	-29.9	15.9	23	35.6	-12.6	212	100	Horz
4	254.7975	36.2	pk	-30	16.4	22.6	35.6	-13	111	100	Horz
Range 3 300 - 1000MHz											
5	606.6	35.9	pk	-31.9	19.1	23.1	35.6	-12.5	33	100	Horz
6	962.2	35.5	pk	-31.8	24.1	27.8	43.5	-15.7	179	100	Horz

LIMIT : CFR 47 Part 15 Class B 10m
pk - Peak detector
qp - Quasi-Peak detector
av - Average detector

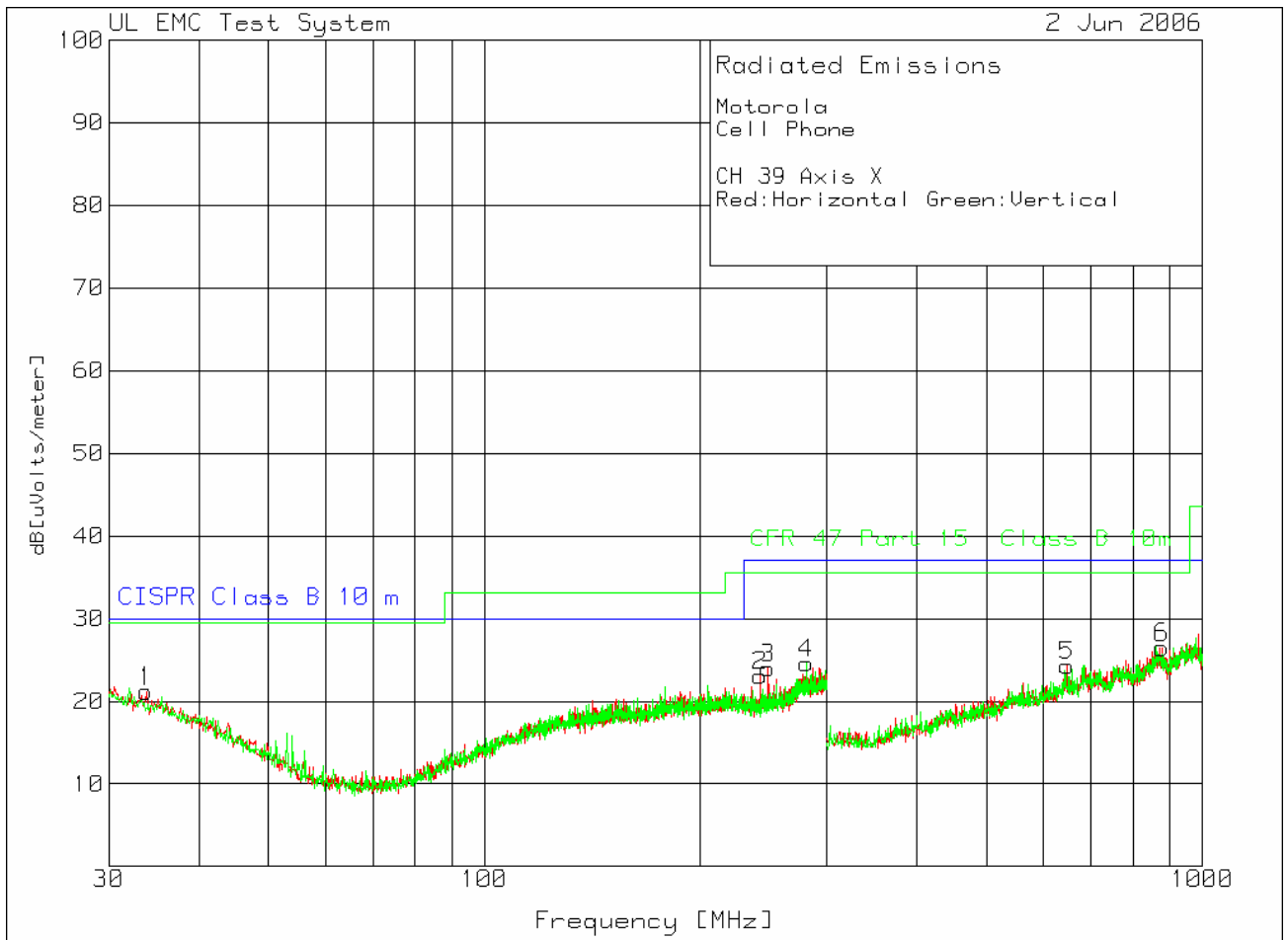


30 -1000 MHz Low Channel Dual Polarization Z

Motorola
Cell Phone
CH 0 Axis Z
Red:Horizontal Green:Vertical

Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dBuV/m	Limit dBuV/m	Margin dB	Azimuth degs	Height cm	Polarity
Range 1 30 - 300MHz											
1	31.3493	34.7	pk	-30.7	17.5	21.5	29.6	-8.1	77	100	Horz
2	235.6371	36.7	pk	-30.1	15.5	22.1	35.6	-13.5	189	100	Horz
3	248.4557	36.7	pk	-29.9	15.9	22.7	35.6	-12.9	268	100	Horz
Range 3 300 - 1000MHz											
4	387.5	37.3	pk	-32.8	15.6	20.1	35.6	-15.5	235	100	Horz
5	760.6	35.2	pk	-31.4	21.8	25.6	35.6	-10	212	100	Horz
6	873.3	34.9	pk	-31.9	23.6	26.6	35.6	-9	313	100	Horz

LIMIT : CFR 47 Part 15 Class B 10m
pk - Peak detector
qp - Quasi-Peak detector
av - Average detector

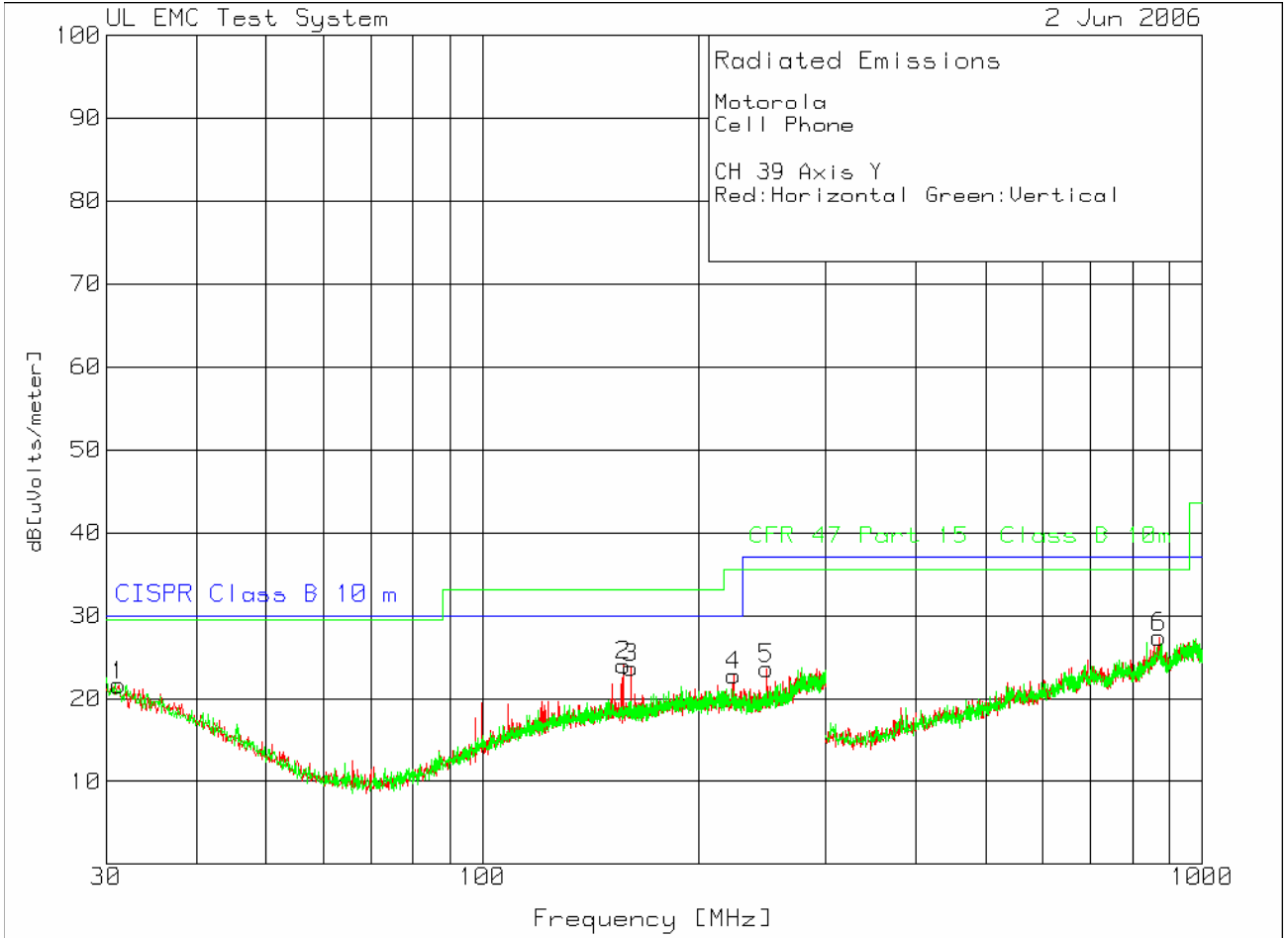


30-1000 MHz Mid Channel Dual Polarization X

Motorola
Cell Phone
CH 39 Axis X
Red:Horizontal Green:Vertical

Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dBuV/m	Limit dBuV/m	Margin dB	Azimuth degs	Height cm	Polarity
Range 1 30 - 300MHz											
1	33.7781	35.4	pk	-30.8	16.6	21.2	29.6	-8.4	201	100	Horz
2	241.979	37.6	pk	-30	15.5	23.1	35.6	-12.5	358	100	Horz
3	248.4557	38	pk	-29.9	15.9	24	35.6	-11.6	55	100	Horz
Range 2 30 - 300MHz											
4	280.7046	36.4	pk	-29.7	17.9	24.6	35.6	-11	156	100	Vert
Range 3 300 - 1000MHz											
5	648.6	35.7	pk	-31.6	20.2	24.3	35.6	-11.3	303	100	Horz
6	878.2	34.9	pk	-31.7	23.3	26.5	35.6	-9.1	202	100	Horz

LIMIT : CFR 47 Part 15 Class B 10m
pk - Peak detector
qp - Quasi-Peak detector
av - Average detector

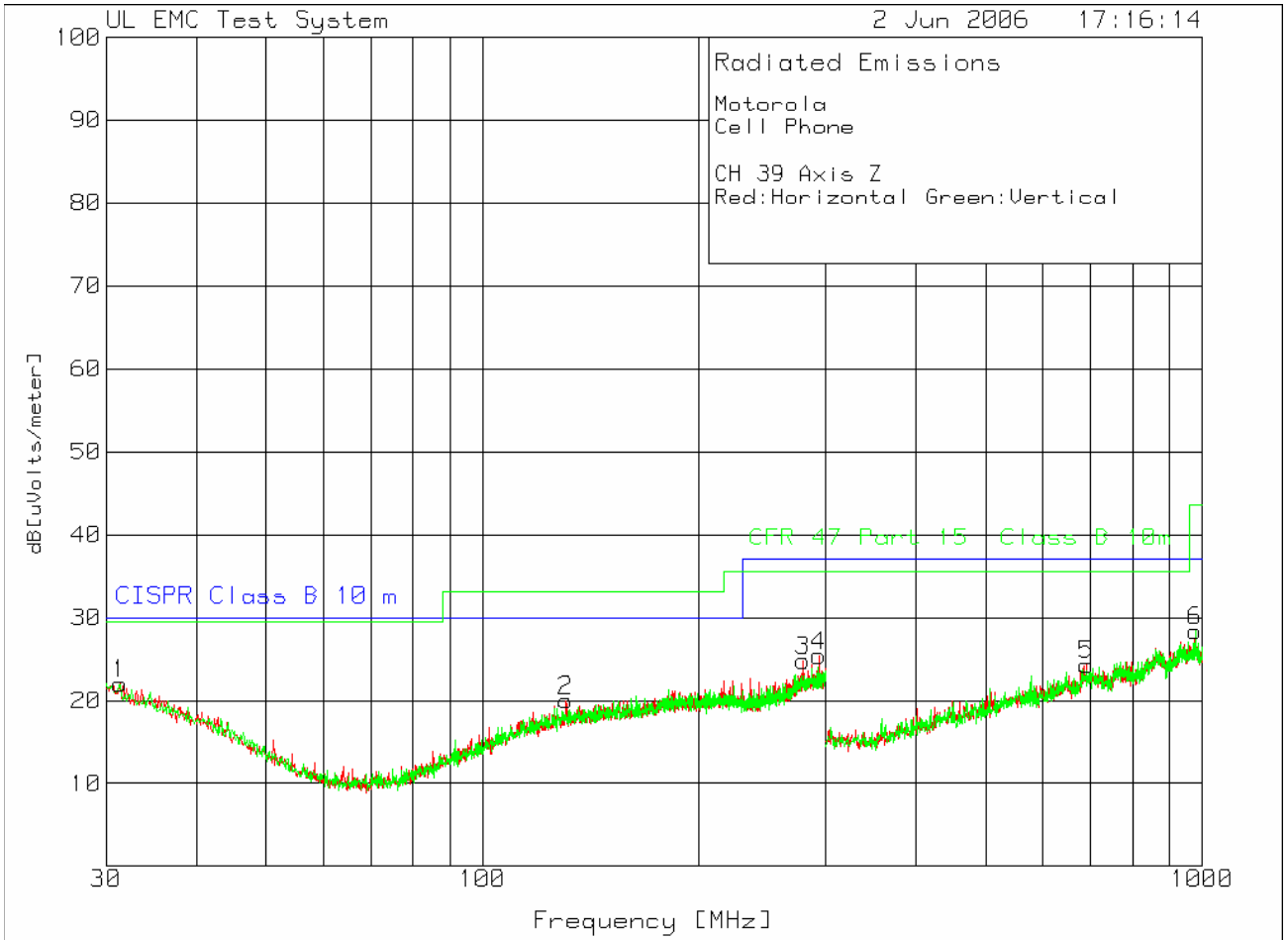


30 -1000 MHz Mid Channel Dual Polarization Y

Motorola
Cell Phone
CH 39 Axis Y
Red:Horizontal Green:Vertical

Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dBuV/m	Limit dBuV/m	Margin dB	Azimuth degs	Height cm	Polarity
Range 1 30 - 300MHz											
1	31.2144	34.7	pk	-30.7	17.6	21.6	29.6	-8	257	100	Horz
2	156.9715	39.5	pk	-30.4	14.9	24	33.1	-9.1	55	100	Horz
3	160.7496	39.2	pk	-30.4	14.9	23.7	33.1	-9.4	279	100	Horz
4	223.0884	36.9	pk	-30	15.9	22.8	35.6	-12.8	223	100	Horz
5	248.4557	37.6	pk	-29.9	15.9	23.6	35.6	-12	223	100	Horz
Range 3 300 - 1000MHz											
6	870.5	35.5	pk	-31.8	23.7	27.4	35.6	-8.2	90	100	Horz

LIMIT : CFR 47 Part 15 Class B 10m
pk - Peak detector
qp - Quasi-Peak detector
av - Average detector



30 -1000 MHz Mid Channel Dual Polarization Z

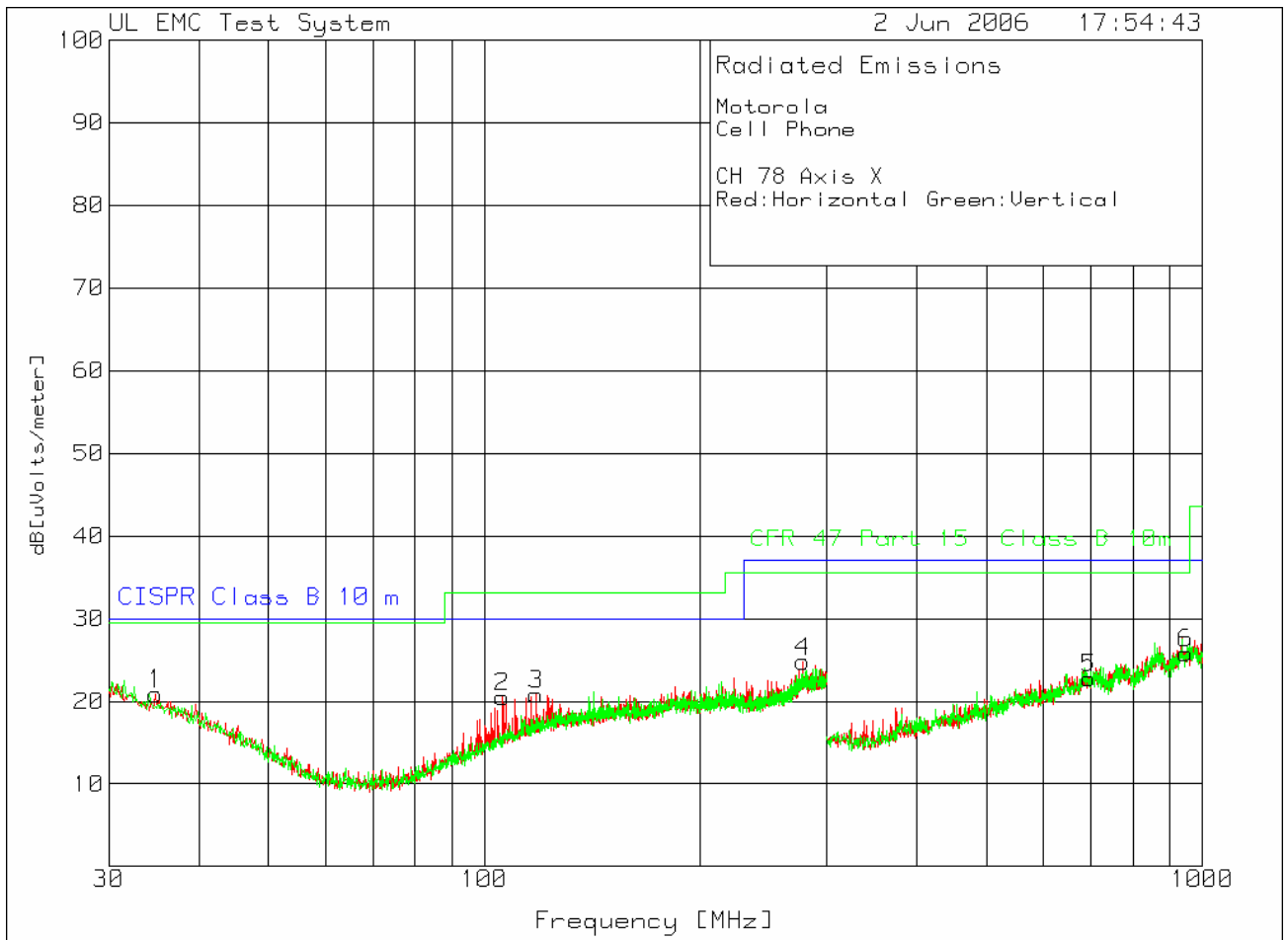
Motorola
Cell Phone
CH 39 Axis Z
Red:Horizontal Green:Vertical

Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dBuV/m	Limit dBuV/m	Margin dB	Azimuth degs	Height cm	Polarity
Range 1 30 - 300MHz											
1	31.3493	35.2	pk	-30.7	17.5	22	29.6	-7.6	258	100	Horz
2	130.6596	36.4	pk	-30.4	14	20	33.1	-13.1	269	200	Horz
3	278.9505	36.6	pk	-29.7	17.9	24.8	35.6	-10.8	11	200	Horz
4	293.1184	37.1	pk	-29.8	18.1	25.4	35.6	-10.2	157	200	Horz
Range 3 300 - 1000MHz											
5	691.3	34.9	pk	-31.5	20.9	24.3	35.6	-11.3	10	100	Horz
Range 4 300 - 1000MHz											
6	977.6	35.7	pk	-31.3	24	28.4	43.5	-15.1	203	100	Vert

LIMIT : CFR 47 Part 15 Class B 10m

pk - Peak detector

qp - Quasi-Peak detector



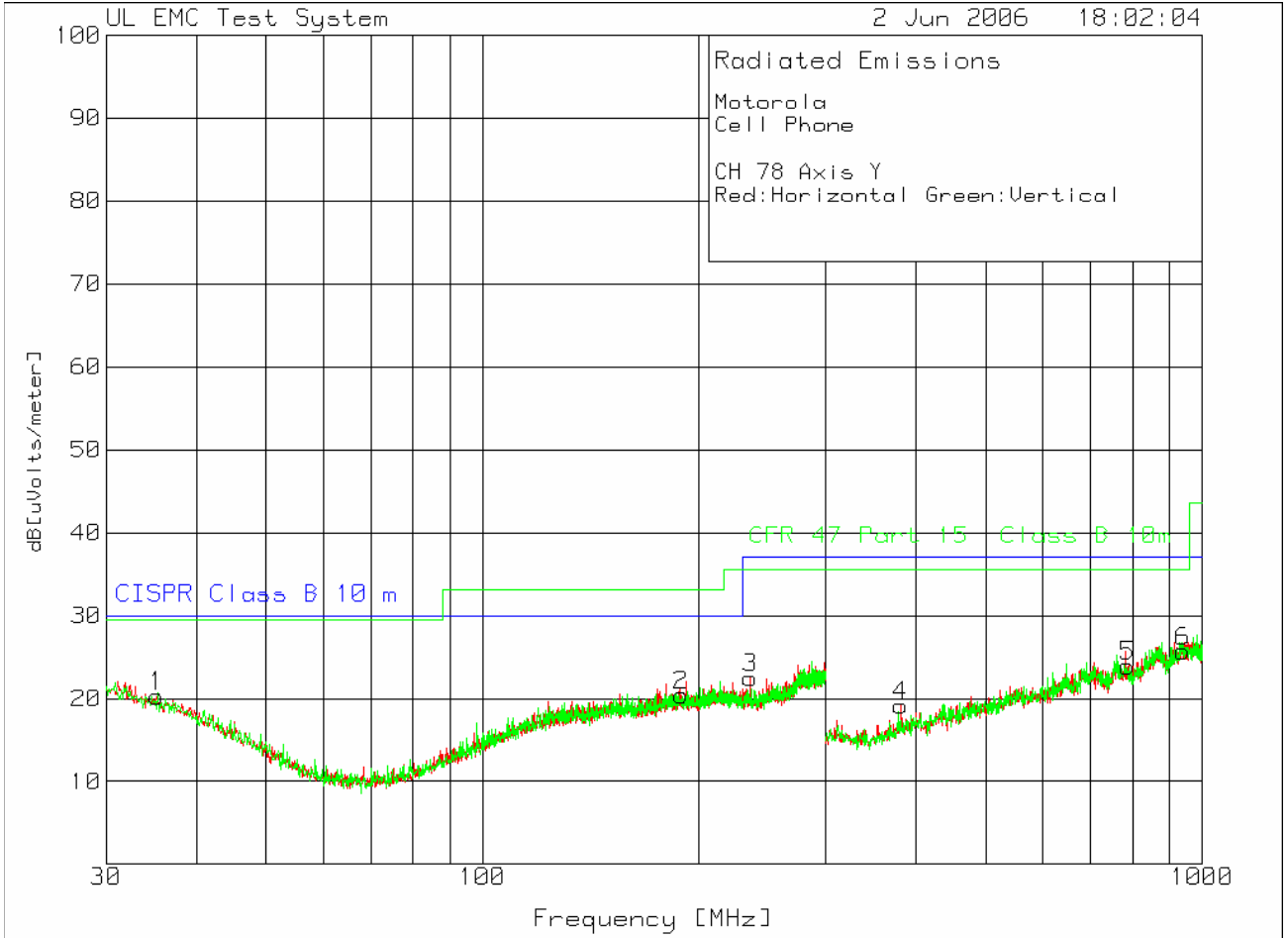
30-1000 MHz High Channel Dual Polarization X

Motorola
Cell Phone
CH 78 Axis X
Red:Horizontal Green:Vertical

Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dBuV/m	Limit dBuV/m	Margin dB	Azimuth degs	Height cm	Polarity
Range 1 30 - 300MHz											
1	34.8576	35.3	pk	-30.8	16.4	20.9	29.6	-8.7	226	100	Horz
2	105.967	39.3	pk	-30.4	11.6	20.5	33.1	-12.6	327	199	Horz
3	118.1109	38.1	pk	-30.4	13.1	20.8	33.1	-12.3	1	199	Horz
4	277.6011	36.7	pk	-29.8	17.9	24.8	35.6	-10.8	1	100	Horz
Range 3 300 - 1000MHz											
5	694.8	33.6	pk	-31.4	20.6	22.8	35.6	-12.8	20	100	Horz
6	946.8	33.6	pk	-31.6	23.8	25.8	35.6	-9.8	278	100	Horz

LIMIT : CFR 47 Part 15 Class B 10m

pk - Peak detector
qp - Quasi-Peak detector
av - Average detector

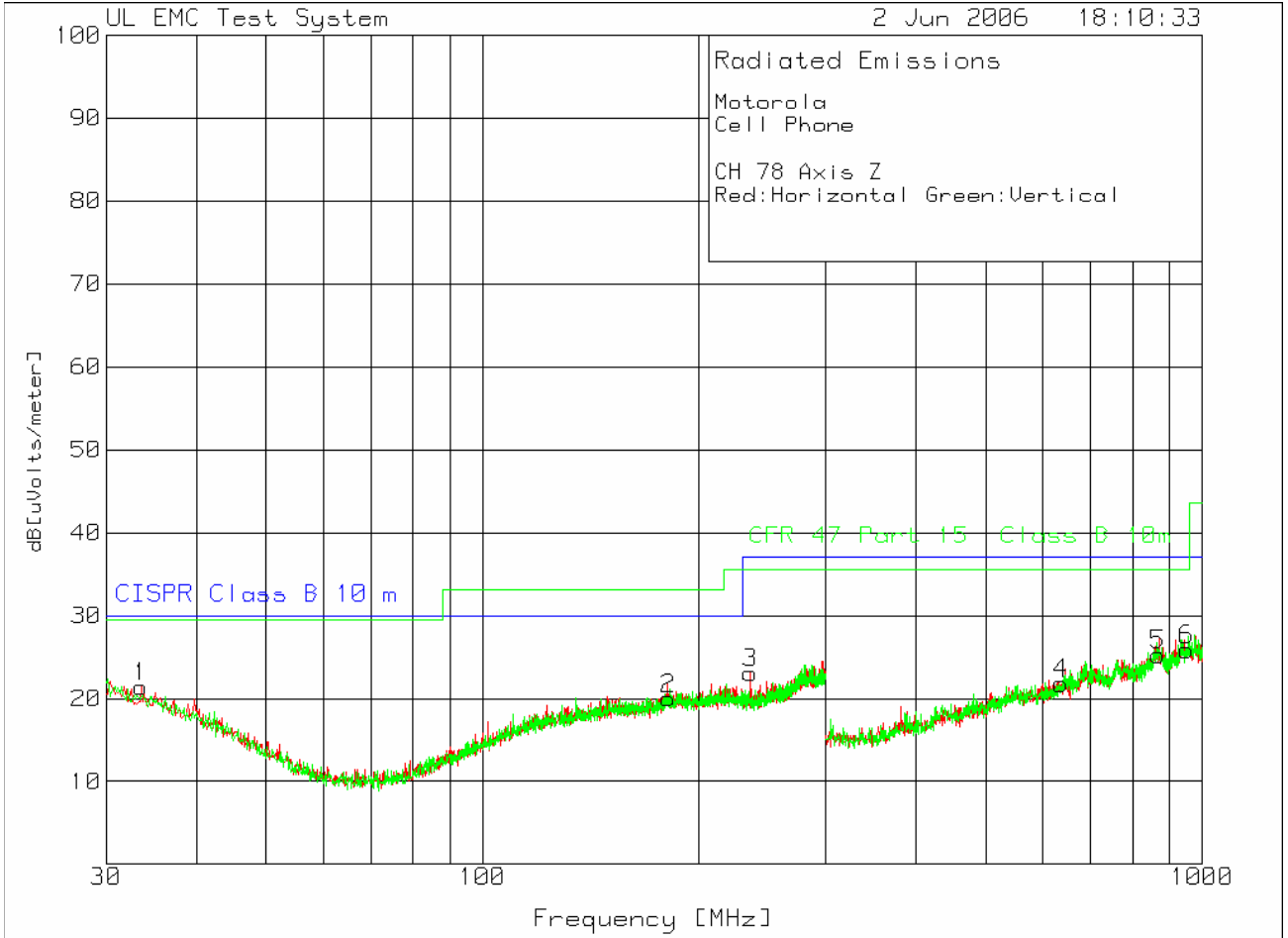


30 -1000 MHz High Channel Dual Polarization Y

Motorola
Cell Phone
CH 78 Axis Y
Red:Horizontal Green:Vertical

Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dBuV/m	Limit dBuV/m	Margin dB	Azimuth degs	Height cm	Polarity
Range 1 30 - 300MHz											
1	35.2624	34.8	pk	-30.7	16.2	20.3	29.6	-9.3	293	199	Horz
2	188.9505	34.8	pk	-30.2	15.8	20.4	33.1	-12.7	68	199	Horz
3	235.6371	37.1	pk	-30.1	15.5	22.5	35.6	-13.1	326	199	Horz
Range 3 300 - 1000MHz											
4	381.2	36.2	pk	-32.8	15.7	19.1	35.6	-16.5	143	100	Horz
5	787.2	34.1	pk	-31.7	21.5	23.9	35.6	-11.7	87	100	Horz
6	940.5	33.3	pk	-31.7	24.1	25.7	35.6	-9.9	323	100	Horz

LIMIT : CFR 47 Part 15 Class B 10m
pk - Peak detector
qp - Quasi-Peak detector
av - Average detector

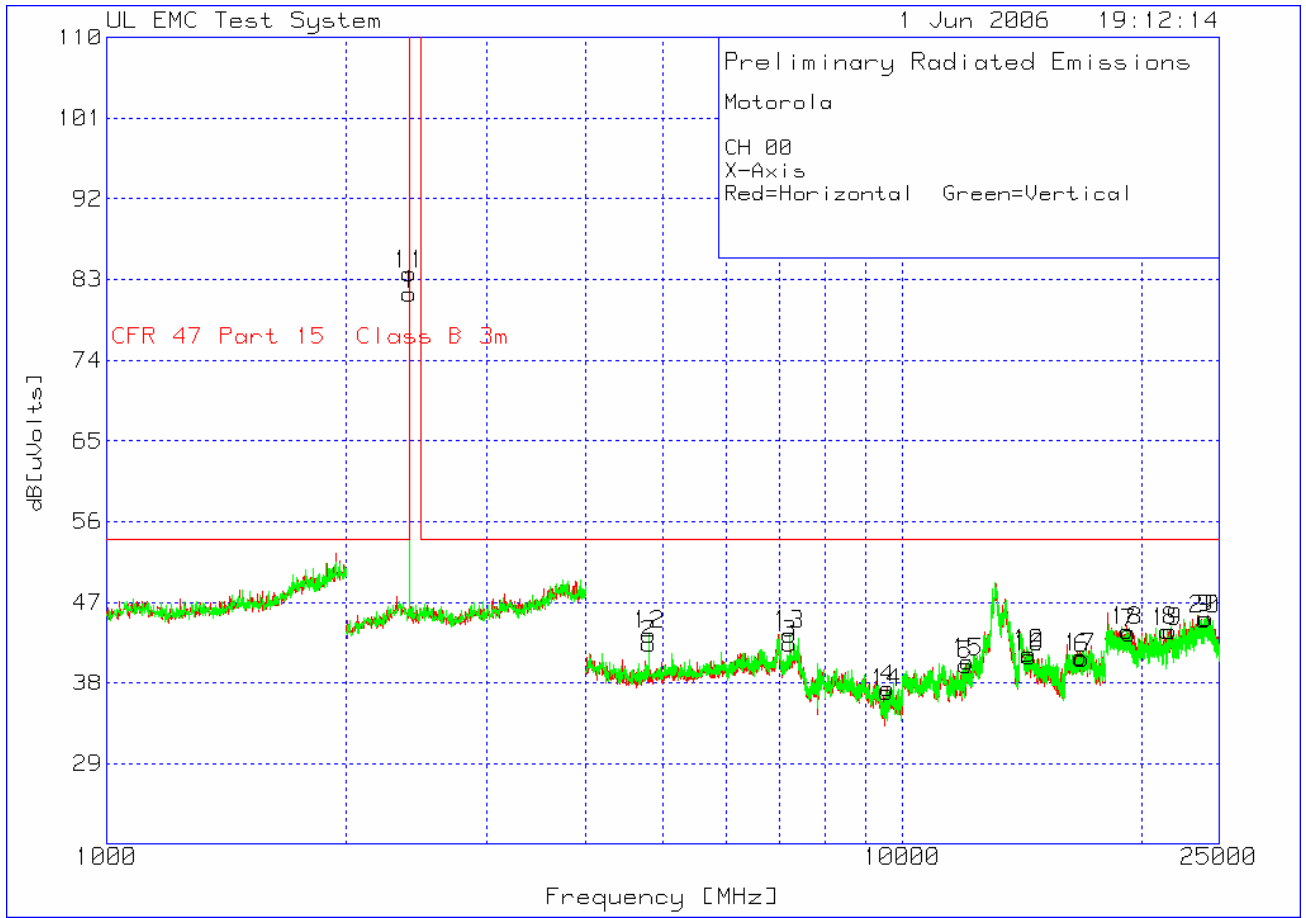


30 -1000 MHz High Channel Dual Polarization Z

Motorola
Cell Phone
CH 78 Axis Z
Red:Horizontal Green:Vertical

Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dBuV/m	Limit dBuV/m	Margin dB	Azimuth degs	Height cm	Polarity
Range 1 30 - 300MHz											
1	33.5082	35.5	pk	-30.8	16.7	21.4	29.6	-8.2	350	100	Horz
2	181.2593	34.5	pk	-30.3	15.8	20	33.1	-13.1	316	200	Horz
3	235.7721	37.7	pk	-30.1	15.5	23.1	35.6	-12.5	356	100	Horz
Range 3 300 - 1000MHz											
4	636.7	33.9	pk	-31.7	19.6	21.8	35.6	-13.8	267	100	Horz
5	869.1	33.4	pk	-31.8	23.7	25.3	35.6	-10.3	143	100	Horz
6	951	33.7	pk	-31.5	23.7	25.9	35.6	-9.7	233	100	Horz

LIMIT : CFR 47 Part 15 Class B 10m
pk - Peak detector
qp - Quasi-Peak detector
av - Average detector



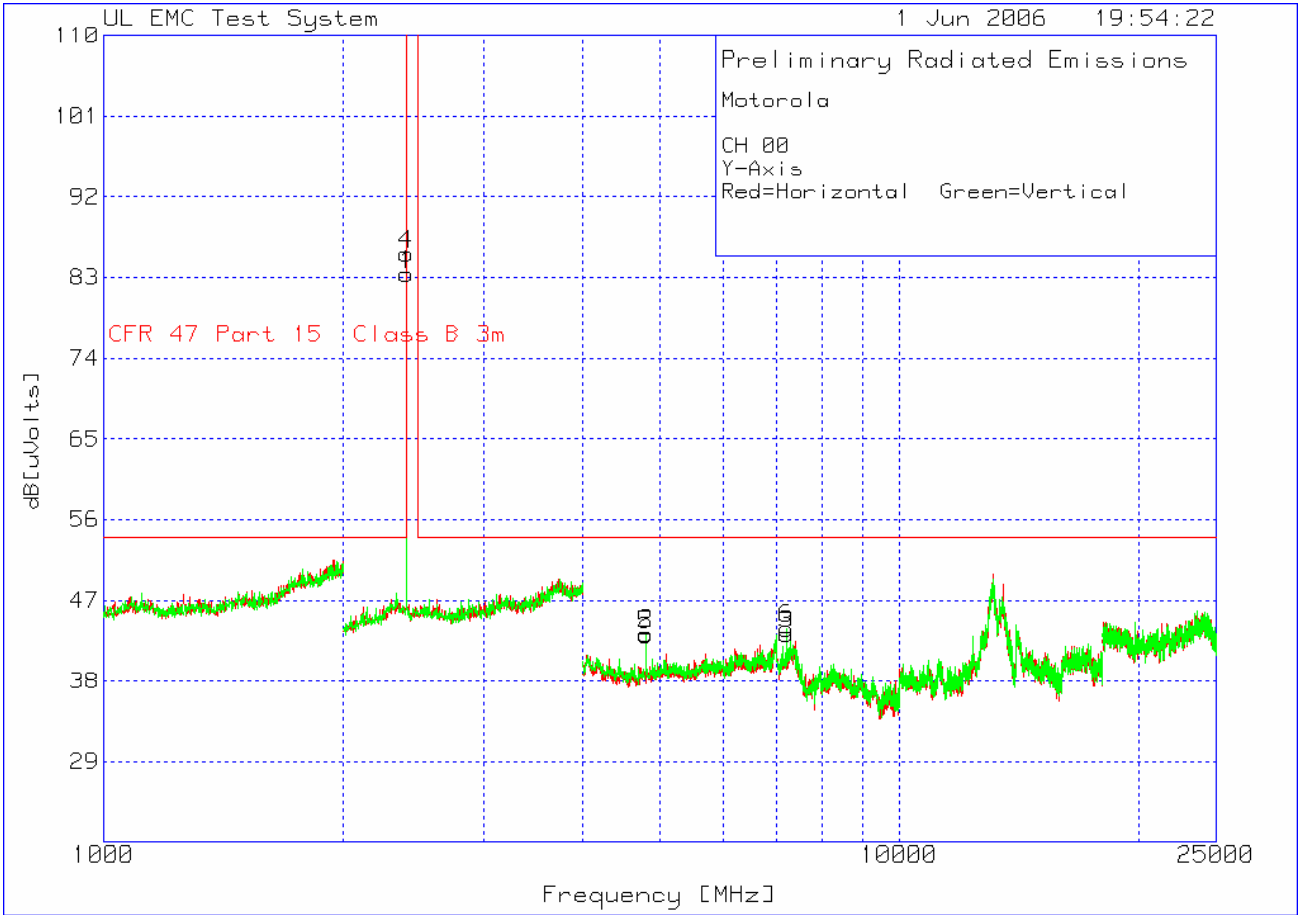
1-25 GHz Low Channel Dual Polarization X

Motorola
 CH 00
 X-Axis
 Red=Horizontal Green=Vertical

Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dBuV/m	Limit dBuV/m	Margin dB	Height cm	Polarity
2 - 4GHz 2000 - 4000MHz 1	2400.802	55.21	pk	4.4	21.8	81.41	999	-917.59	99	Horz
4 - 8GHz 4000 - 8000MHz 2	4802.803	65.38	pk	-50.7	27.7	42.38	54	-11.62	99	Horz
3	7207.207	59.48	pk	-46.9	29.8	42.38	54	-11.62	99	Horz
8 - 12GHz 8000 - 12000MHz 4	9577.578	50.43	pk	-49.4	36.4	37.43	54	-16.57	99	Horz
12 - 18GHz 12000 - 18000MHz 5	12012.008	46.11	pk	-45.5	39.4	40.01	54	-13.99	150	Horz
6	16807.205	42.03	pk	-41.4	40.1	40.73	54	-13.27	150	Horz
10	14409.606	42.66	pk	-41.2	39.8	41.26	54	-12.74	99	Horz
18-26.5GHz 18000 - 25000MHz 7	19271.136	71.96	pk	-68.7	40.3	43.56	54	-10.44	150	Horz
8	21683.842	64.62	pk	-61.2	40.4	43.82	54	-10.18	100	Horz
9	24061.531	63.61	pk	-58.7	40.3	45.21	54	-8.79	150	Horz
2 - 4GHz 2000 - 4000MHz 11	2400.802	57.47	pk	4.4	21.8	83.67	999	-915.33	150	Vert
4 - 8GHz 4000 - 8000MHz 12	4804.805	66.28	pk	-50.6	27.7	43.38	54	-10.62	99	Vert
13	7207.207	60.5	pk	-46.9	29.8	43.4	54	-10.6	99	Vert
8 - 12GHz 8000 - 12000MHz 14	9545.546	50.49	pk	-49.9	36.4	36.99	54	-17.01	99	Vert
12 - 18GHz 12000 - 18000MHz 15	12076.051	47.16	pk	-46.2	39.4	40.36	54	-13.64	149	Vert
16	14425.617	42.11	pk	-41	39.8	40.91	54	-13.09	149	Vert
17	16719.146	41.79	pk	-40.9	40	40.89	54	-13.11	149	Vert
18-26.5GHz 18000 - 25000MHz 18	19152.076	72.01	pk	-68.5	40.3	43.81	54	-10.19	99	Vert
19	21515.758	65.26	pk	-61.8	40.3	43.76	54	-10.24	99	Vert
20	23987.994	63.62	pk	-58.8	40.3	45.12	54	-8.88	99	Vert

LIMIT 1: CFR 47 Part 15 Class B 3m

pk - Peak detector
 qp - Quasi-Peak detector
 av - Average detector



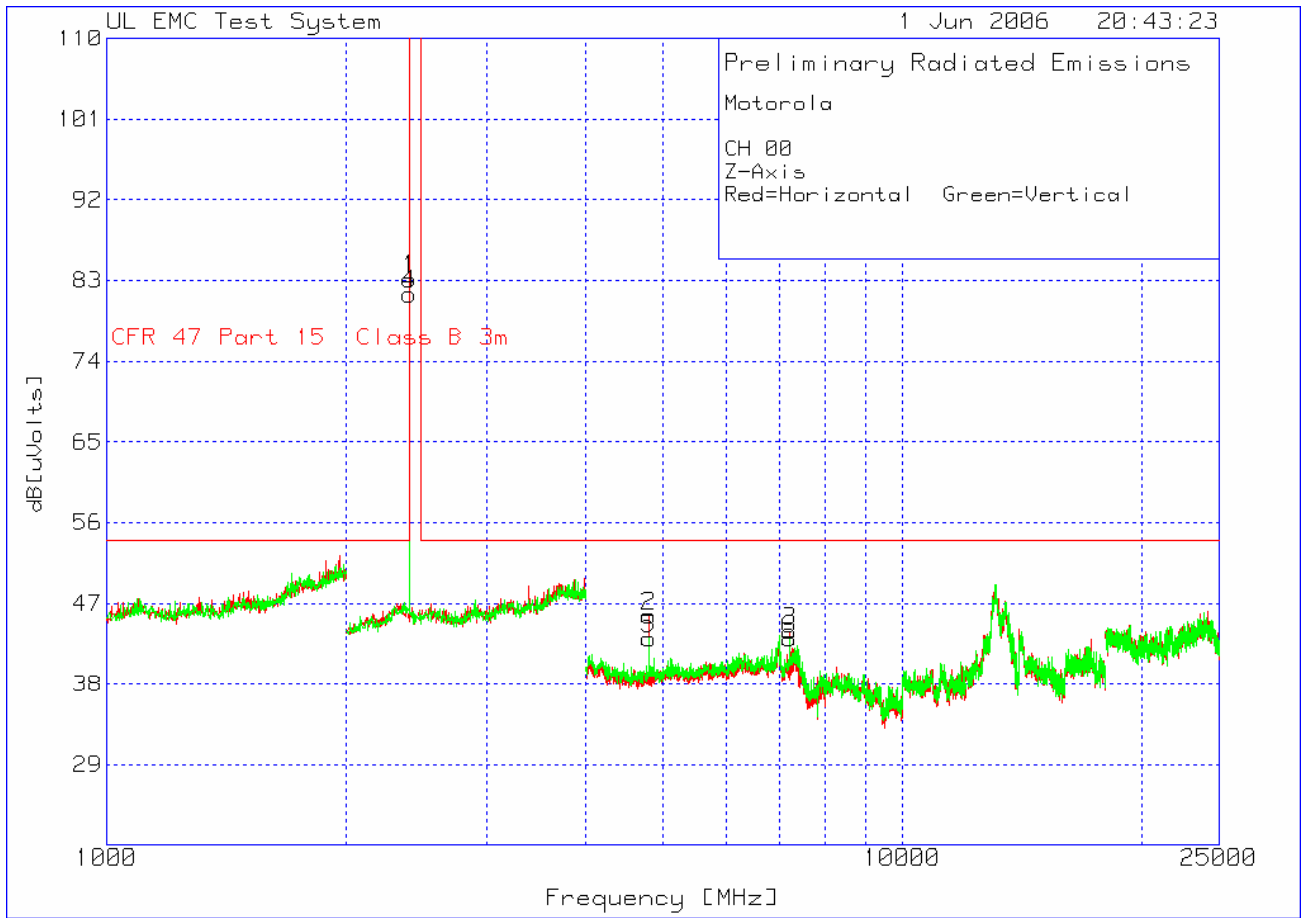
1-25 GHz Low Channel Dual Polarization Y

Motorola
 CH 00
 Y-Axis
 Red=Horizontal Green=Vertical

Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dBuV/m	Limit dBuV/m	Margin dB	Height cm	Polarity
2 - 4GHz 2000 - 4000MHz										
1	2400.802	57.18	pk	4.4	21.8	83.38	999	-915.62	150	Horz
4 - 8GHz 4000 - 8000MHz										
2	4804.805	66.14	pk	-50.6	27.7	43.24	54	-10.76	99	Horz
3	7207.207	60.33	pk	-46.9	29.8	43.23	54	-10.77	99	Horz
2 - 4GHz 2000 - 4000MHz										
4	2400.802	59.46	pk	4.4	21.8	85.66	999	-913.34	150	Vert
4 - 8GHz 4000 - 8000MHz										
5	4800.801	66.1	pk	-50.7	27.7	43.1	54	-10.9	99	Vert
6	7207.207	60.95	pk	-46.9	29.8	43.85	54	-10.15	99	Vert

LIMIT 1: CFR 47 Part 15 Class B 3m

pk - Peak detector
 qp - Quasi-Peak detector
 av - Average detector



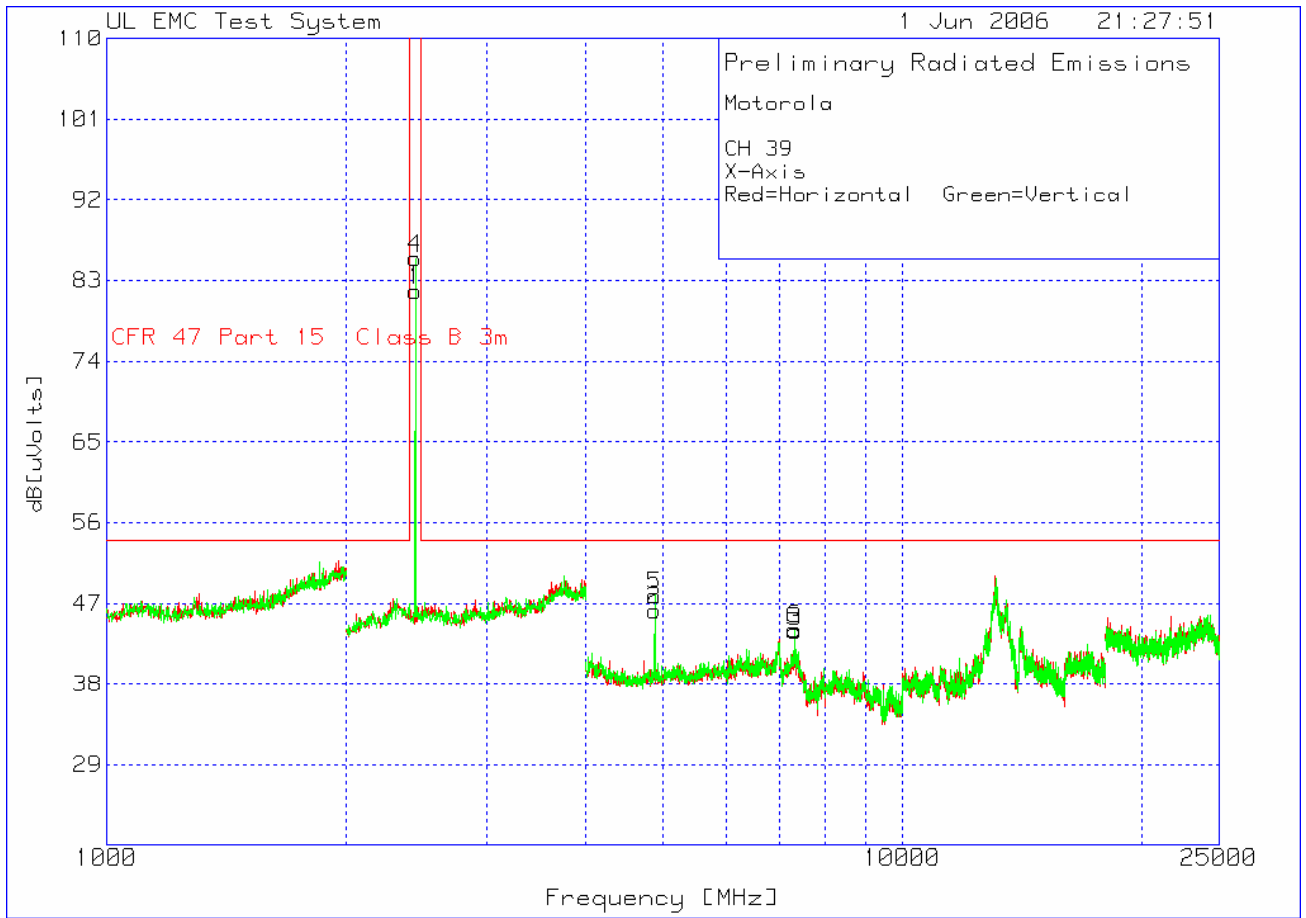
1-25 GHz Low Channel Dual Polarization Z

Motorola
 CH 00
 Z-Axis
 Red=Horizontal Green=Vertical

Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dBuV/m	Limit dBuV/m	Margin dB	Height cm	Polarity
2 - 4GHz 2000 - 4000MHz										
1	2400.802	56.95	pk	4.4	21.8	83.15	999	-915.85	150	Horz
4 - 8GHz 4000 - 8000MHz										
2	4804.805	68.52	pk	-50.6	27.7	45.62	54	-8.38	99	Horz
3	7207.207	61	pk	-46.9	29.8	43.9	54	-10.1	99	Horz
2 - 4GHz 2000 - 4000MHz										
4	2400.802	55.27	pk	4.4	21.8	81.47	999	-917.53	99	Vert
4 - 8GHz 4000 - 8000MHz										
5	4804.805	65.97	pk	-50.6	27.7	43.07	54	-10.93	99	Vert
6	7207.207	60.15	pk	-46.9	29.8	43.05	54	-10.95	99	Vert

LIMIT 1: CFR 47 Part 15 Class B 3m

pk - Peak detector
 qp - Quasi-Peak detector
 av - Average detector



1-25 GHz Mid Channel Dual Polarization X

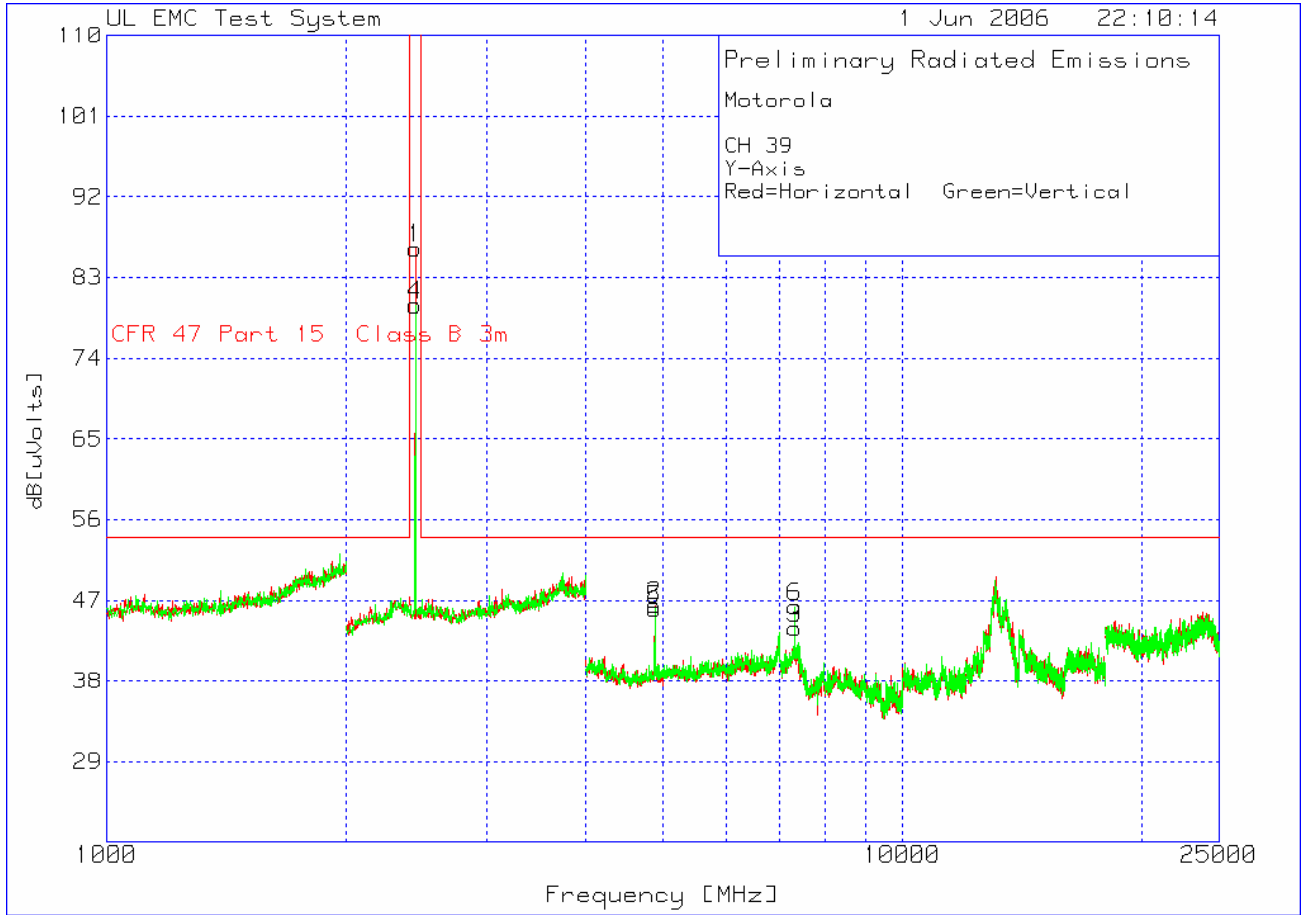
Motorola
CH 39
X-Axis

Red=Horizontal Green=Vertical

Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dBuV/m	Limit dBuV/m	Margin dB	Height cm	Polarity
2 - 4GHz 2000 - 4000MHz										
1	2440.882	55.75	pk	4.2	21.9	81.85	999	-917.15	150	Horz
4 - 8GHz 4000 - 8000MHz										
2	4880.881	69.02	pk	-50.5	27.7	46.22	54	-7.78	99	Horz
3	7323.323	59.57	pk	-46.3	30.6	43.87	54	-10.13	99	Horz
2 - 4GHz 2000 - 4000MHz										
4	2440.882	59.38	pk	4.2	21.9	85.48	999	-913.52	99	Vert
4 - 8GHz 4000 - 8000MHz										
5	4880.881	70.7	pk	-50.5	27.7	47.9	54	-6.1	99	Vert
6	7323.323	59.82	pk	-46.3	30.6	44.12	54	-9.88	99	Vert

LIMIT 1: CFR 47 Part 15 Class B 3m

pk - Peak detector
qp - Quasi-Peak detector
av - Average detector



1-25 GHz Mid Channel Dual Polarization Y

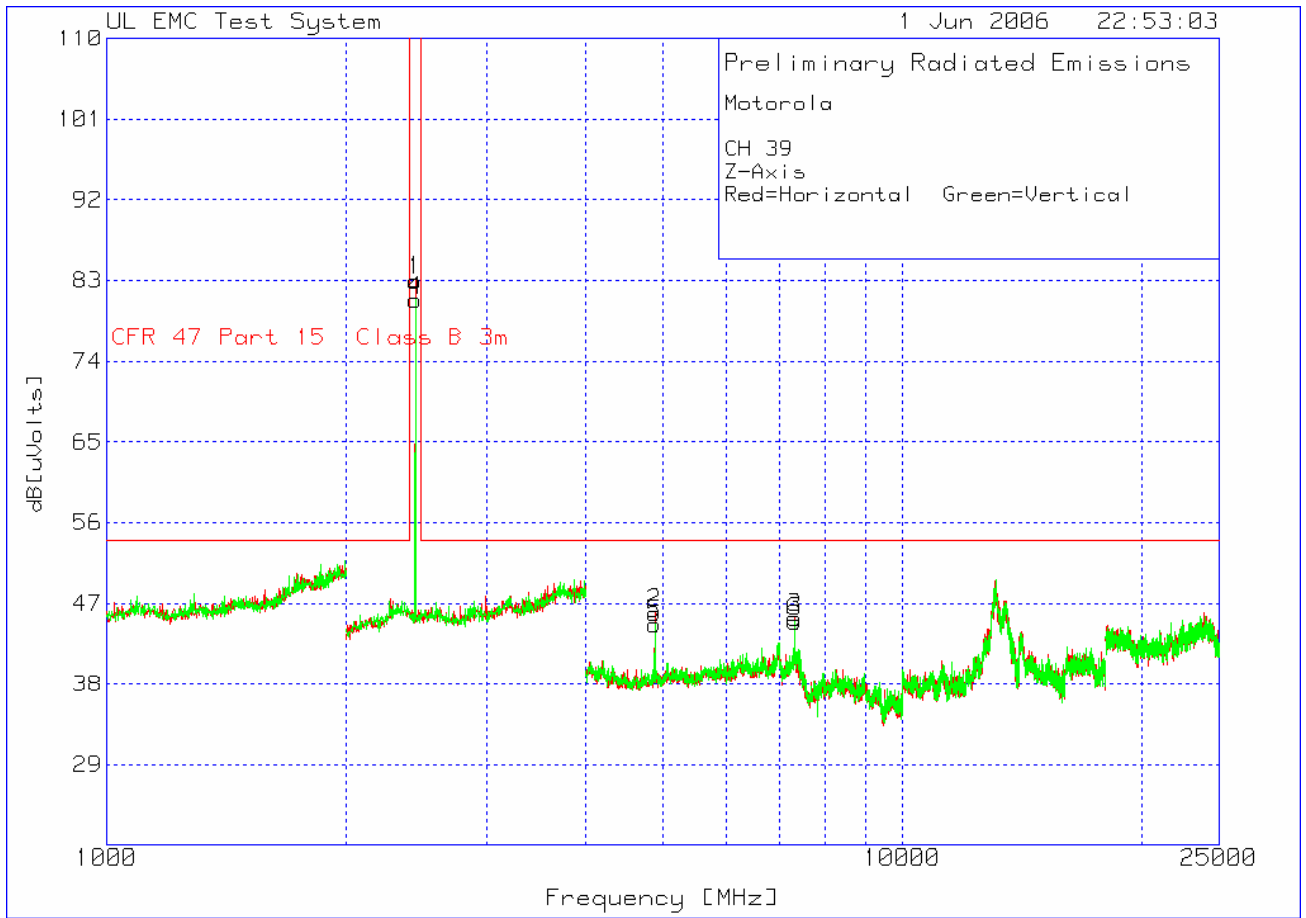
Motorola
 CH 39
 Y-Axis

Red=Horizontal Green=Vertical

Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dBuV/m	Limit dBuV/m	Margin dB	Height cm	Polarity
2 - 4GHz 2000 - 4000MHz										
1	2440.882	60.14	pk	4.2	21.9	86.24	999	-912.76	99	Horz
4 - 8GHz 4000 - 8000MHz										
2	4880.881	69.23	pk	-50.5	27.7	46.43	54	-7.57	99	Horz
3	7323.323	59.6	pk	-46.3	30.6	43.9	54	-10.1	99	Horz
2 - 4GHz 2000 - 4000MHz										
4	2440.882	53.81	pk	4.2	21.9	79.91	999	-919.09	149	Vert
4 - 8GHz 4000 - 8000MHz										
5	4880.881	68.83	pk	-50.5	27.7	46.03	54	-7.97	99	Vert
6	7323.323	61.99	pk	-46.3	30.6	46.29	54	-7.71	99	Vert

LIMIT 1: CFR 47 Part 15 Class B 3m

pk - Peak detector
 qp - Quasi-Peak detector
 av - Average detector



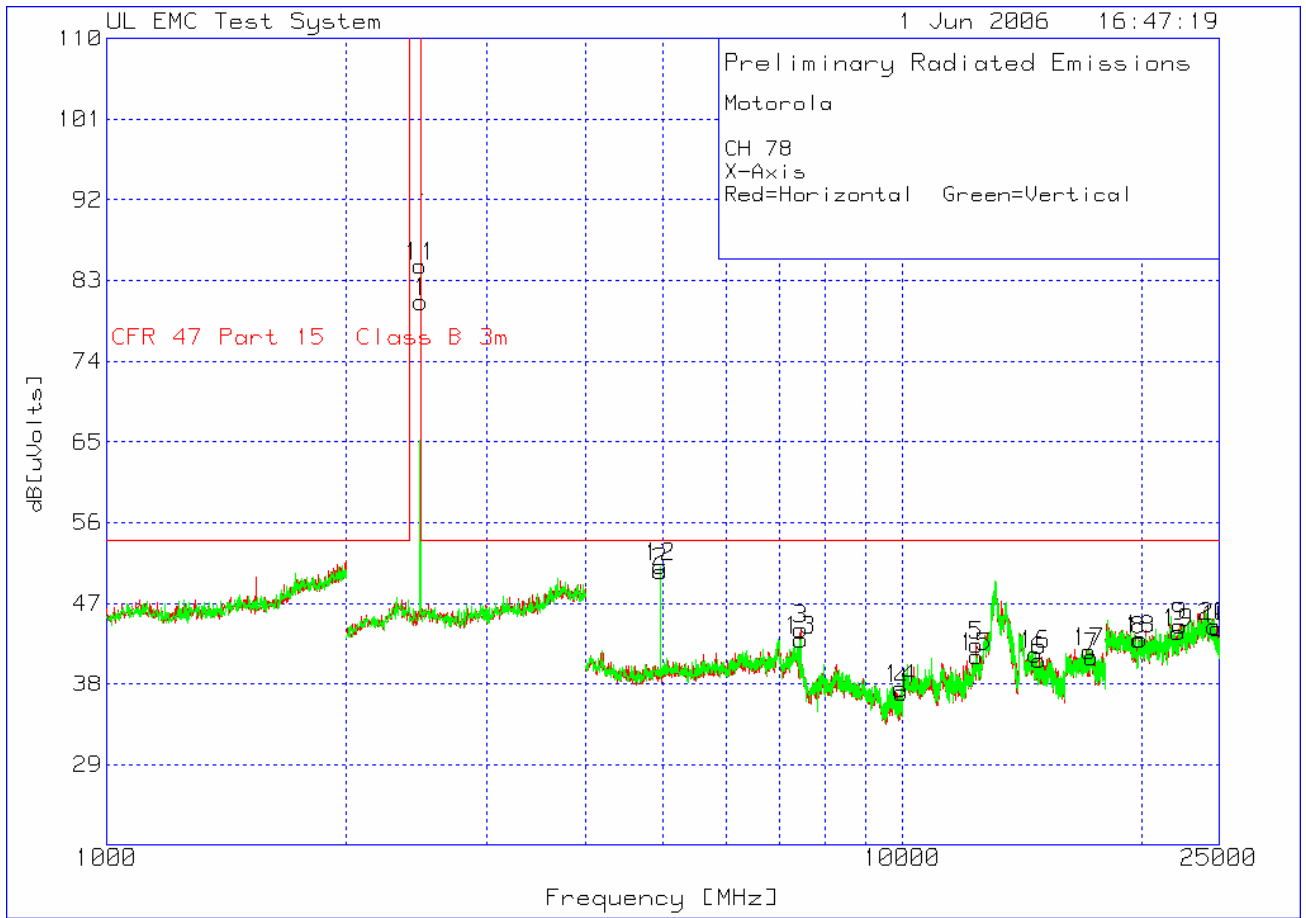
1-25 GHz Mid Channel Dual Polarization Z

Motorola
 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 dBuV/m	Limit dBuV/m	Margin dB	Height cm	Polarity
2 - 4GHz 2000 - 4000MHz										
1	2440.882	56.91	pk	4.2	21.9	83.01	999	-915.99	99	Horz
4 - 8GHz 4000 - 8000MHz										
2	4880.881	68.74	pk	-50.5	27.7	45.94	54	-8.06	150	Horz
3	7323.323	61.06	pk	-46.3	30.6	45.36	54	-8.64	99	Horz
2 - 4GHz 2000 - 4000MHz										
4	2440.882	54.75	pk	4.2	21.9	80.85	999	-918.15	149	Vert
4 - 8GHz 4000 - 8000MHz										
5	4880.881	67.47	pk	-50.5	27.7	44.67	54	-9.33	149	Vert
6	7323.323	60.64	pk	-46.3	30.6	44.94	54	-9.06	99	Vert

LIMIT 1: CFR 47 Part 15 Class B 3m

pk - Peak detector
 qp - Quasi-Peak detector
 av - Average detector



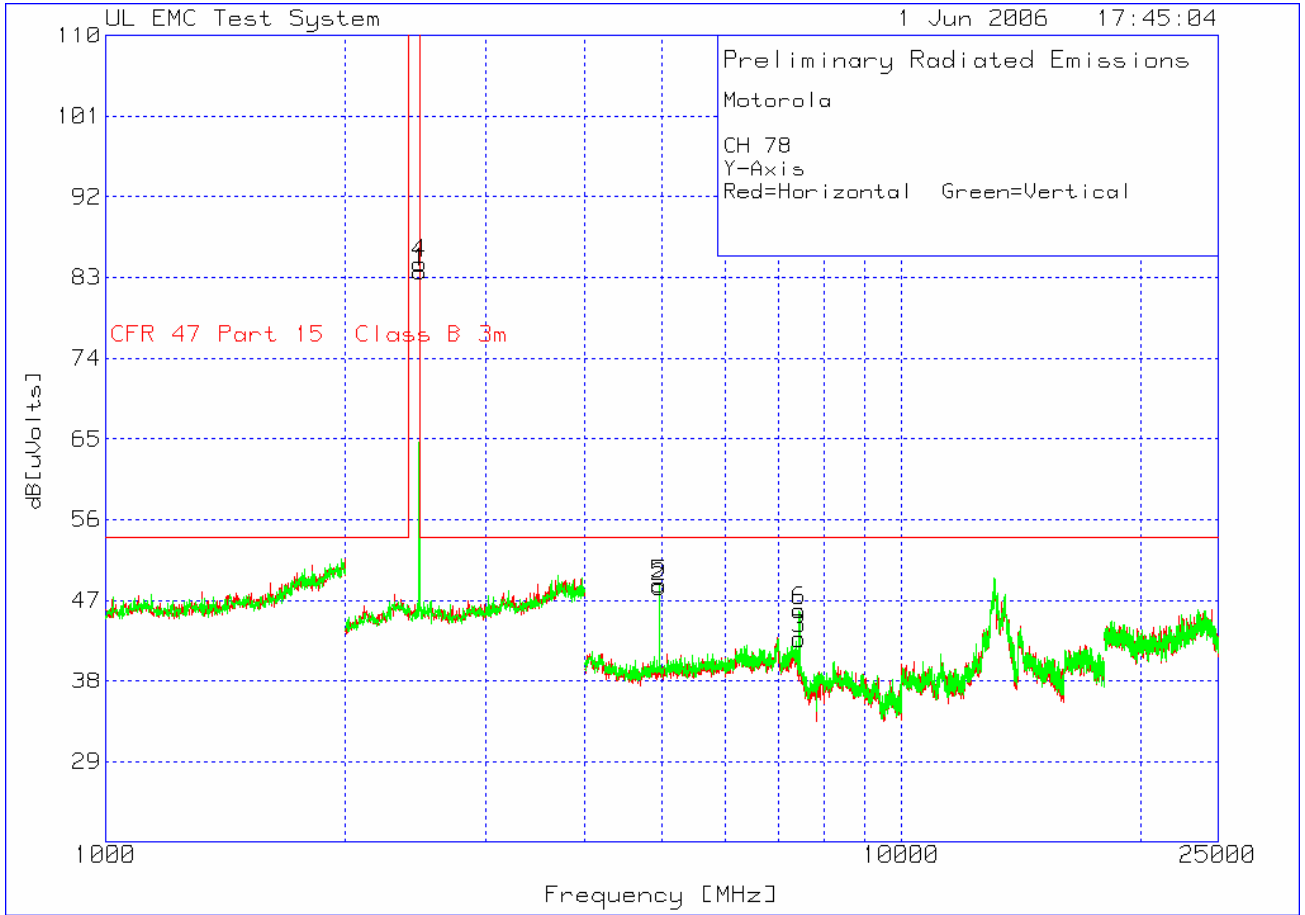
1-25 GHz High Channel Dual Polarization X

Motorola
 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 dBuV/m	Limit dBuV/m	Margin dB	Height cm	Polarity
2 - 4GHz 2000 - 4000MHz										
1	2480.962	54.52	pk	4.1	22	80.62	999	-918.38	99	Horz
4 - 8GHz 4000 - 8000MHz										
2	4960.961	73.54	pk	-50.8	27.8	50.54	54	-3.46	99	Horz
3	7443.443	60.51	pk	-46.9	30.5	44.11	54	-9.89	99	Horz
8 - 12GHz 8000 - 12000MHz										
4	9973.974	49.17	pk	-48.5	36.4	37.07	54	-16.93	150	Horz
12 - 18GHz 12000 - 18000MHz										
5	12376.251	47.17	pk	-44.2	39.4	42.37	54	-11.63	99	Horz
6	14845.897	41.72	pk	-40.9	39.8	40.62	54	-13.38	99	Horz
7	17287.525	41.32	pk	-40.5	40.2	41.02	54	-12.98	150	Horz
18-26.5GHz 18000 - 25000MHz										
8	19796.398	72.04	pk	-69.4	40.3	42.94	54	-11.06	99	Horz
9	22300.15	63.5	pk	-59.5	40.5	44.5	54	-9.5	150	Horz
10	24849.425	65.41	pk	-61.5	40.3	44.21	54	-9.79	99	Horz
2 - 4GHz 2000 - 4000MHz										
11	2476.954	58.5	pk	4.1	22	84.6	999	-914.4	99	Vert
4 - 8GHz 4000 - 8000MHz										
12	4960.961	74.1	pk	-50.8	27.8	51.1	54	-2.9	99	Vert
13	7443.443	59.34	pk	-46.9	30.5	42.94	54	-11.06	99	Vert
8 - 12GHz 8000 - 12000MHz										
14	9949.95	50	pk	-48.9	36.4	37.5	54	-16.5	149	Vert
12 - 18GHz 12000 - 18000MHz										
15	12376.251	45.89	pk	-44.2	39.4	41.09	54	-12.91	150	Vert
16	14681.788	42.11	pk	-40.6	39.8	41.31	54	-12.69	150	Vert
17	17151.434	41.84	pk	-40.5	40.3	41.64	54	-12.36	150	Vert
18-26.5GHz 18000 - 25000MHz										
18	19901.451	71.79	pk	-69	40.2	42.99	54	-11.01	99	Vert
19	22209.105	63.13	pk	-59.9	40.5	43.73	54	-10.27	99	Vert
20	24646.323	66.52	pk	-62.4	40.3	44.42	54	-9.58	150	Vert

LIMIT 1: CFR 47 Part 15 Class B 3m

pk - Peak detector
 qp - Quasi-Peak detector
 av - Average detector



1-25 GHz High Channel Dual Polarization Y

Motorola

CH 78

Y-Axis

Red=Horizontal Green=Vertical

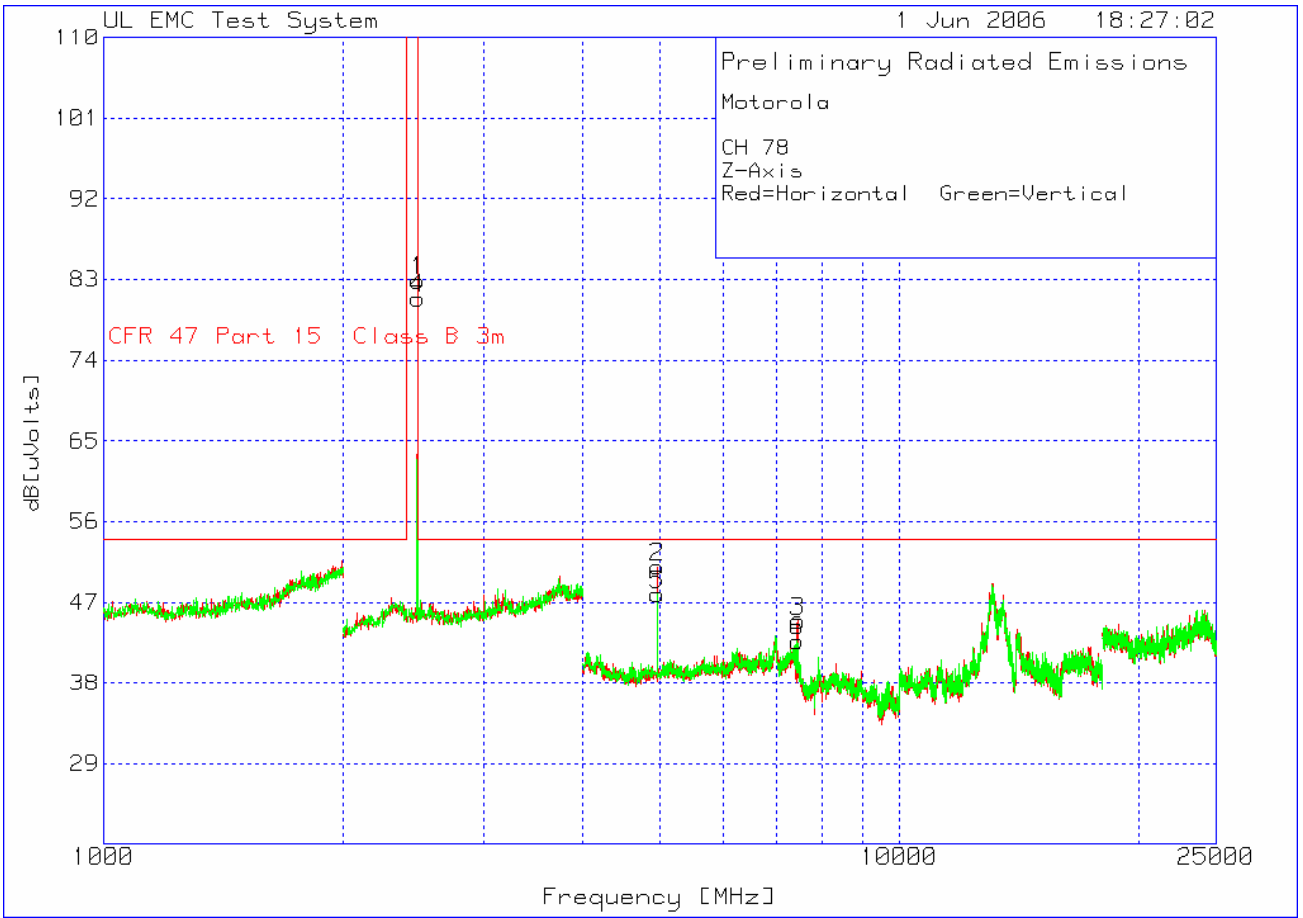
Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dBuV/m	Limit dBuV/m	Margin dB	Height cm	Polarity
2 - 4GHz 2000 - 4000MHz										
1	2480.962	57.51	pk	4.1	22	83.61	999	-915.39	99	Horz
4 - 8GHz 4000 - 8000MHz										
2	4960.961	71.53	pk	-50.8	27.8	48.53	54	-5.47	99	Horz
3	7439.439	59.03	pk	-46.9	30.6	42.73	54	-11.27	99	Horz
2 - 4GHz 2000 - 4000MHz										
4	2480.962	58.46	pk	4.1	22	84.56	999	-914.44	99	Vert
4 - 8GHz 4000 - 8000MHz										
5	4960.961	71.78	pk	-50.8	27.8	48.78	54	-5.22	99	Vert
6	7439.439	62.17	pk	-46.9	30.6	45.87	54	-8.13	99	Vert

LIMIT 1: CFR 47 Part 15 Class B 3m

pk - Peak detector

qp - Quasi-Peak detector

av - Average detector



1-25 GHz High Channel Dual Polarization Z

Motorola
 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 dBuV/m	Limit dBuV/m	Margin dB	Height cm	Polarity
2 - 4GHz 2000 - 4000MHz										
1	2480.962	56.77	pk	4.1	22	82.87	999	-916.13	99	Horz
4 - 8GHz 4000 - 8000MHz										
2	4960.961	73.95	pk	-50.8	27.8	50.95	54	-3.05	99	Horz
3	7443.443	61.31	pk	-46.9	30.5	44.91	54	-9.09	99	Horz
2 - 4GHz 2000 - 4000MHz										
4	2480.962	54.77	pk	4.1	22	80.87	999	-918.13	149	Vert
4 - 8GHz 4000 - 8000MHz										
5	4960.961	70.88	pk	-50.8	27.8	47.88	54	-6.12	99	Vert
6	7439.439	58.98	pk	-46.9	30.6	42.68	54	-11.32	99	Vert

LIMIT 1: CFR 47 Part 15 Class B 3m

pk - Peak detector
 qp - Quasi-Peak detector
 av - Average detector



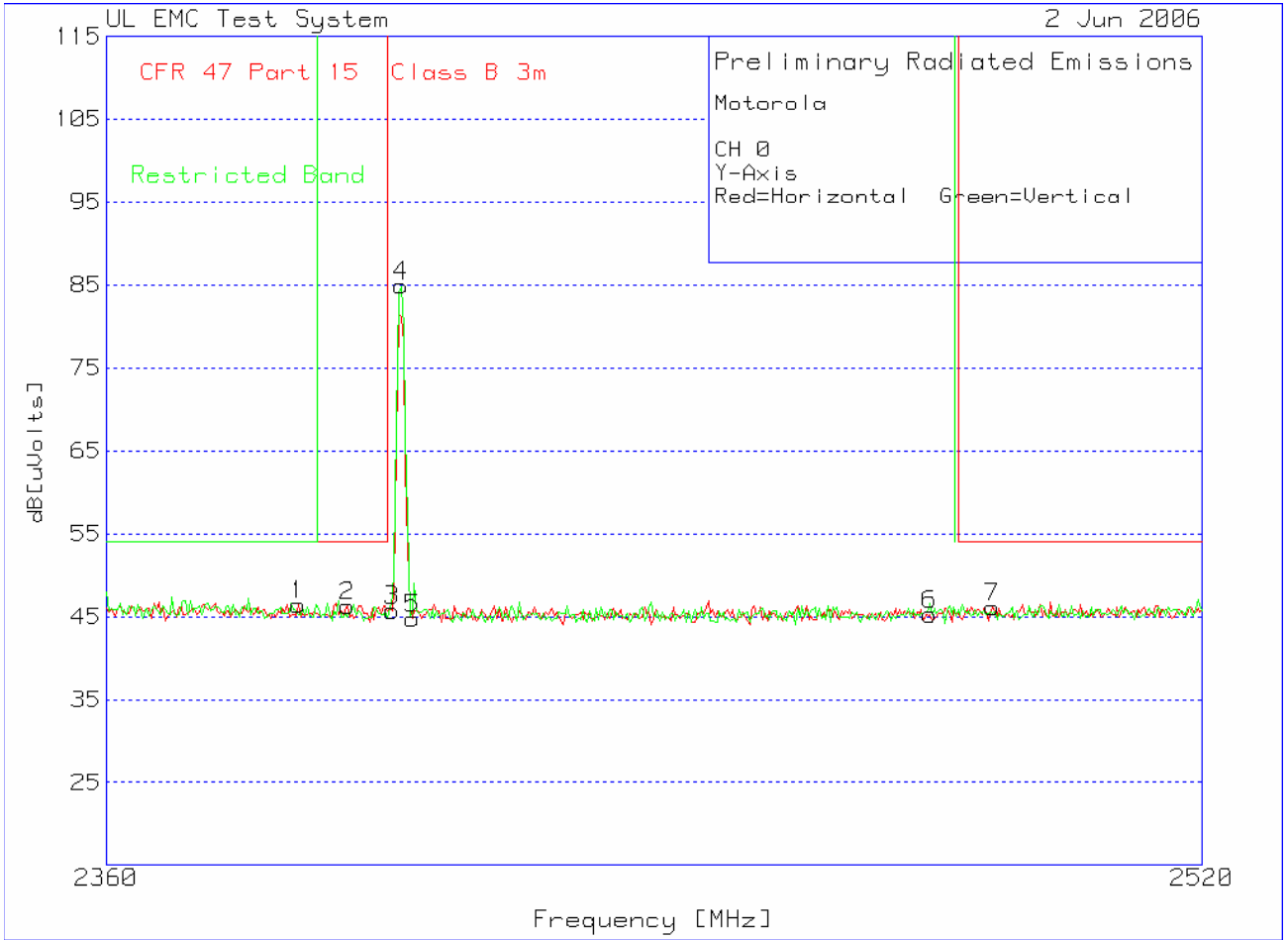
Authorized Band Emissions Low Channel Dual Polarization X

Motorola
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 dBuV/m	Limit dBuV/m	Margin dB	Height cm	Polarity
2 - 4GHz 2360 - 2520MHz										
1	2386.613	19.55	pk	4.4	21.8	45.75	54	-8.25	99	Horz
2	2392.385	19.82	pk	4.4	21.8	46.02	54	-7.98	99	Horz
3	2400.401	20.04	pk	4.4	21.8	46.24	999	-952.76	99	Horz
5	2403.607	18.98	pk	4.4	21.8	45.18	999	-953.82	99	Horz
6	2479.599	20.42	pk	4.1	22	46.52	999	-952.48	99	Horz
7	2487.615	19.89	pk	4.1	22.1	46.09	54	-7.91	99	Horz
2 - 4GHz 2360 - 2520MHz										
4	2402.004	59.37	pk	4.4	21.8	85.57	999	-913.43	99	Vert

LIMIT 1: CFR 47 Part 15 Class B 3m

pk - Peak detector
qp - Quasi-Peak detector
av - Average detector



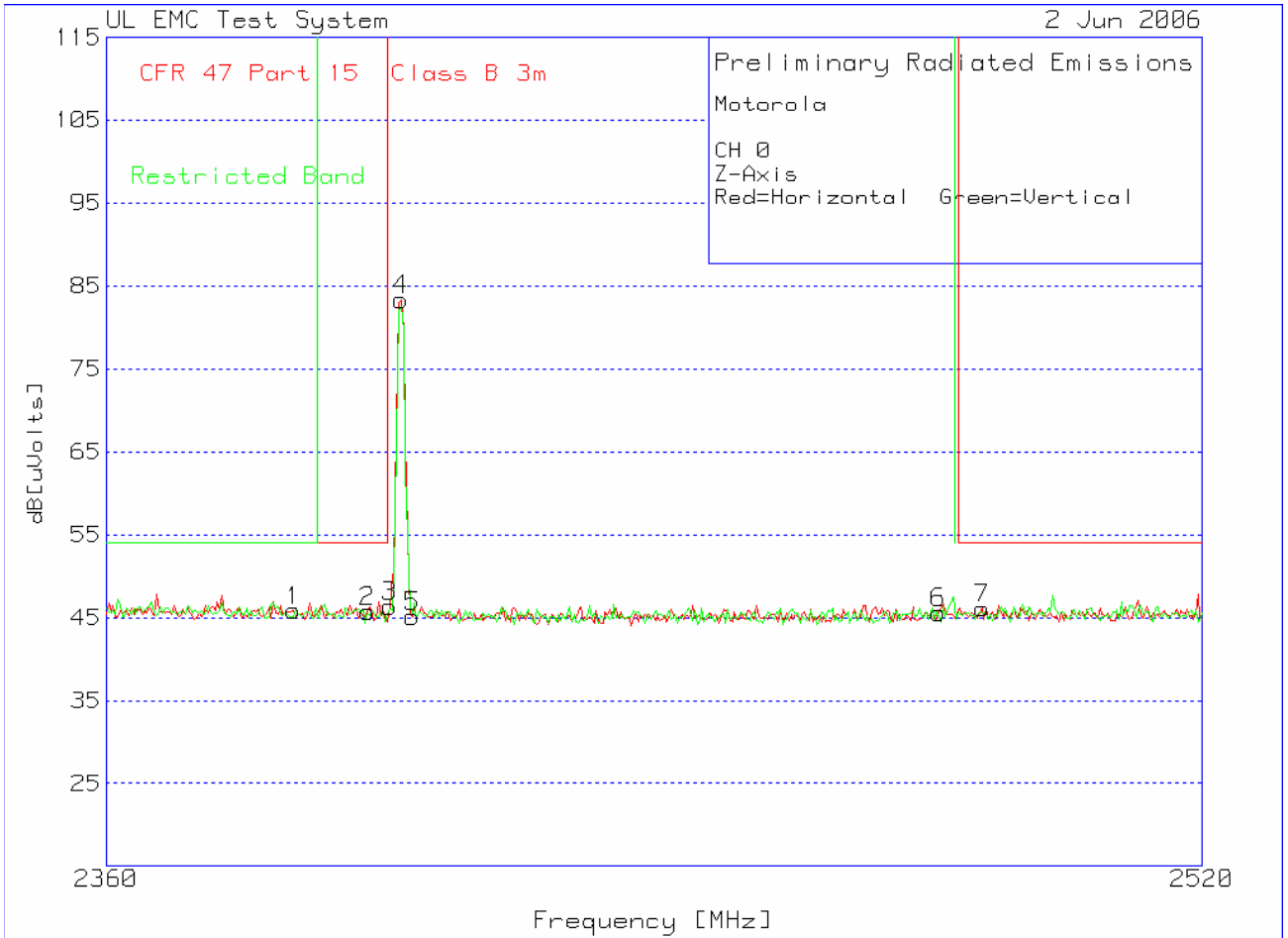
Authorized Band Emissions Low Channel Dual Polarization Y

Motorola
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 dBuV/m	Limit dBuV/m	Margin dB	Height cm	Polarity
2 - 4GHz 2360 - 2520MHz										
1	2387.255	20.2	pk	4.4	21.8	46.4	54	-7.6	99	Horz
2	2394.309	20.04	pk	4.4	21.8	46.24	54	-7.76	99	Horz
3	2400.721	19.55	pk	4.4	21.8	45.75	999	-953.25	99	Horz
5	2403.607	18.56	pk	4.4	21.8	44.76	999	-954.24	99	Horz
6	2479.279	19.16	pk	4.1	22	45.26	999	-953.74	99	Horz
7	2488.577	19.95	pk	4.1	22.1	46.15	54	-7.85	99	Horz
2 - 4GHz 2360 - 2520MHz										
4	2402.004	58.7	pk	4.4	21.8	84.9	999	-914.1	99	Vert

LIMIT 1: CFR 47 Part 15 Class B 3m

pk - Peak detector
qp - Quasi-Peak detector
av - Average detector



Authorized Band Emissions Low Channel Dual Polarization Z

Motorola

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 dBuV/m	Limit dBuV/m	Margin dB	Height cm	Polarity
2 - 4GHz 2360 - 2520MHz										
1	2386.613	19.66	pk	4.4	21.8	45.86	54	-8.14	99	Horz
2	2397.194	19.53	pk	4.4	21.8	45.73	54	-8.27	99	Horz
3	2400.401	20.13	pk	4.4	21.8	46.33	999	-952.67	99	Horz
4	2402.004	57.18	pk	4.4	21.8	83.38	999	-915.62	99	Horz
5	2403.607	18.92	pk	4.4	21.8	45.12	999	-953.88	99	Horz
6	2480.561	19.49	pk	4.1	22	45.59	999	-953.41	99	Horz
7	2486.974	19.89	pk	4.1	22.1	46.09	54	-7.91	99	Horz

LIMIT 1: CFR 47 Part 15 Class B 3m

pk - Peak detector

qp - Quasi-Peak detector

av - Average detector



Authorized Band Emissions Mid Channel Dual Polarization X

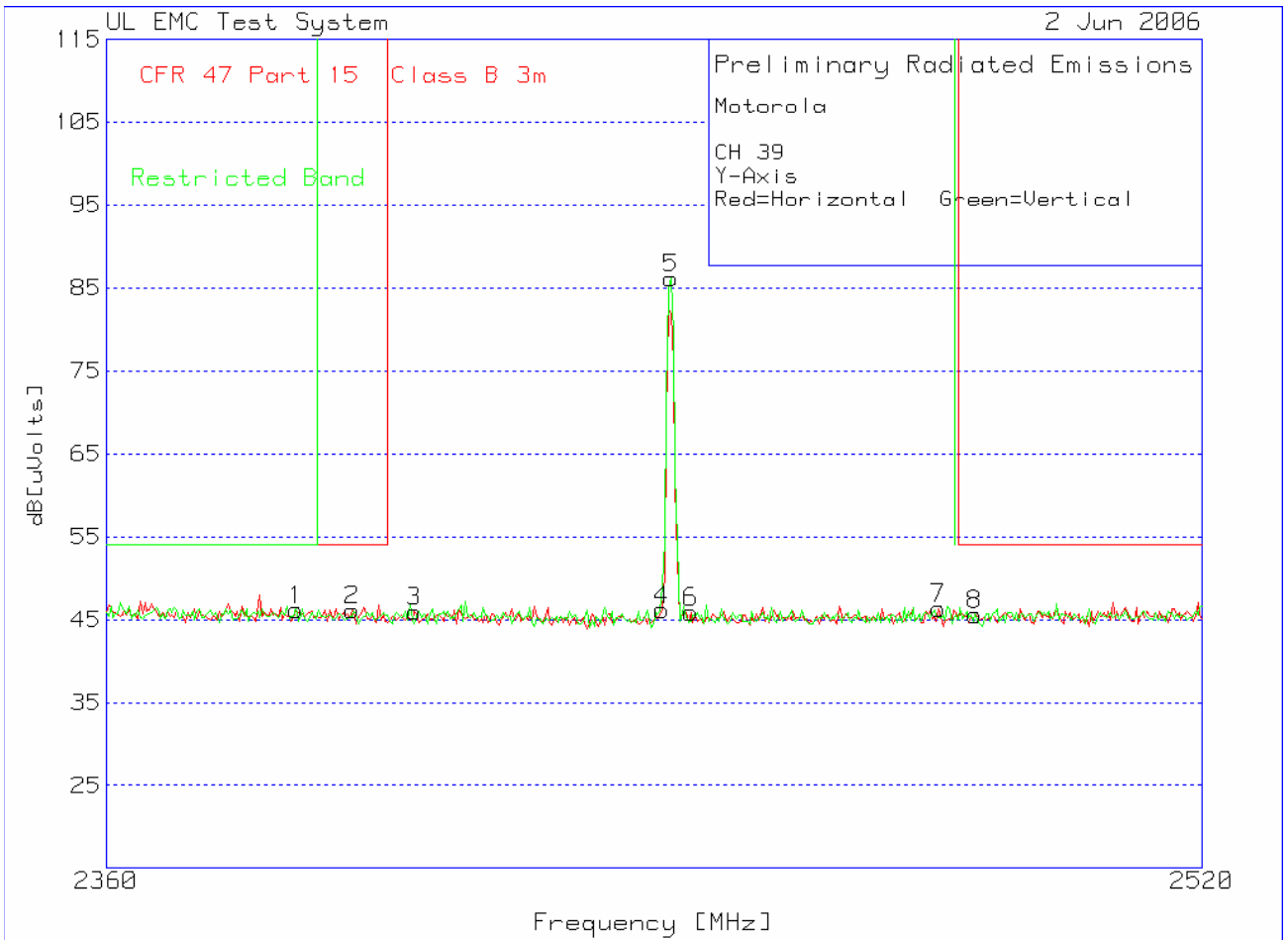
Motorola
CH 39
X-Axis

Red=Horizontal Green=Vertical

Marker Number	Test Frequency [MHz]	Meter Reading [dB(uV)]	Detector Type	Gain/Loss Factor [dB]	Transducer Factor [dB]	Level dBuV/m	Limit dBuV/m	Margin dB	Height cm	Polarity
2 - 4GHz 2360 - 2520MHz										
1	2388.216	20.27	pk	4.4	21.8	46.47	54	-7.53	99	Horz
2	2396.232	19.33	pk	4.4	21.8	45.53	54	-8.47	99	Horz
3	2402.645	19.39	pk	4.4	21.8	45.59	999	-953.41	99	Horz
4	2437.595	19.68	pk	4.2	21.9	45.78	999	-953.22	99	Horz
6	2443.046	20.5	pk	4.2	21.9	46.6	999	-952.4	99	Horz
7	2480.561	19.86	pk	4.1	22	45.96	999	-953.04	99	Horz
8	2486.974	19.46	pk	4.1	22.1	45.66	54	-8.34	99	Horz
2 - 4GHz 2360 - 2520MHz										
5	2440.802	60.89	pk	4.2	21.9	86.99	999	-912.01	99	Vert

LIMIT 1: CFR 47 Part 15 Class B 3m

pk - Peak detector
qp - Quasi-Peak detector
av - Average detector



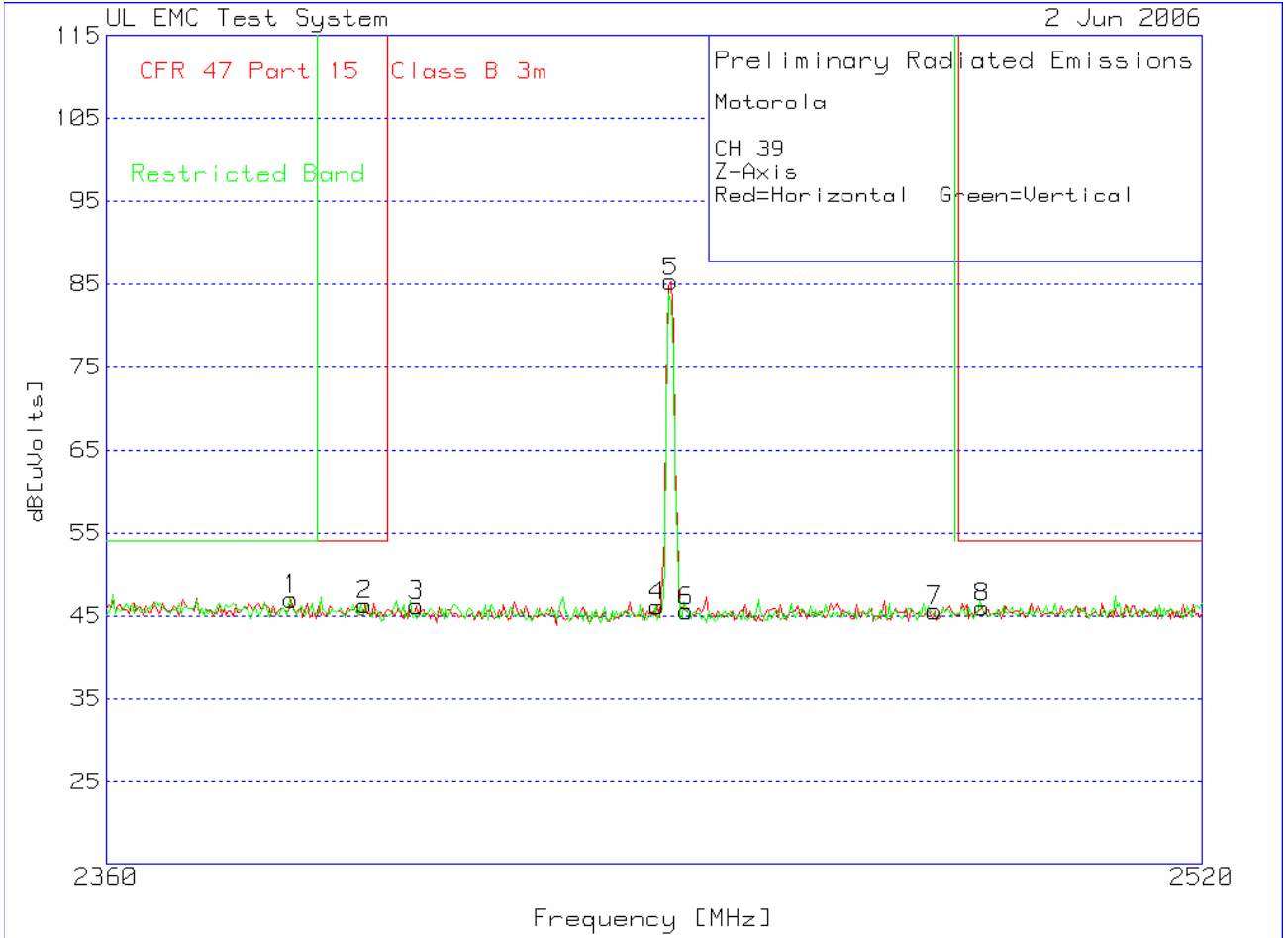
Authorized Band Emissions Mid Channel Dual Polarization Y

Motorola
 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 dBuV/m	Limit dBuV/m	Margin dB	Height cm	Polarity
2 - 4GHz 2360 - 2520MHz										
1	2386.934	19.97	pk	4.4	21.8	46.17	54	-7.83	99	Horz
2	2394.95	19.95	pk	4.4	21.8	46.15	54	-7.85	99	Horz
3	2403.928	19.77	pk	4.4	21.8	45.97	999	-953.03	99	Horz
4	2439.84	20.06	pk	4.2	21.9	46.16	999	-952.84	99	Horz
6	2444.008	19.8	pk	4.2	21.9	45.9	999	-953.1	99	Horz
7	2480.561	20.24	pk	4.1	22	46.34	999	-952.66	99	Horz
8	2486.012	19.38	pk	4.1	22.1	45.58	54	-8.42	99	Horz
2 - 4GHz 2360 - 2520MHz										
5	2441.122	60.05	pk	4.2	21.9	86.15	999	-912.85	99	Vert

LIMIT 1: CFR 47 Part 15 Class B 3m

pk - Peak detector
 qp - Quasi-Peak detector
 av - Average detector



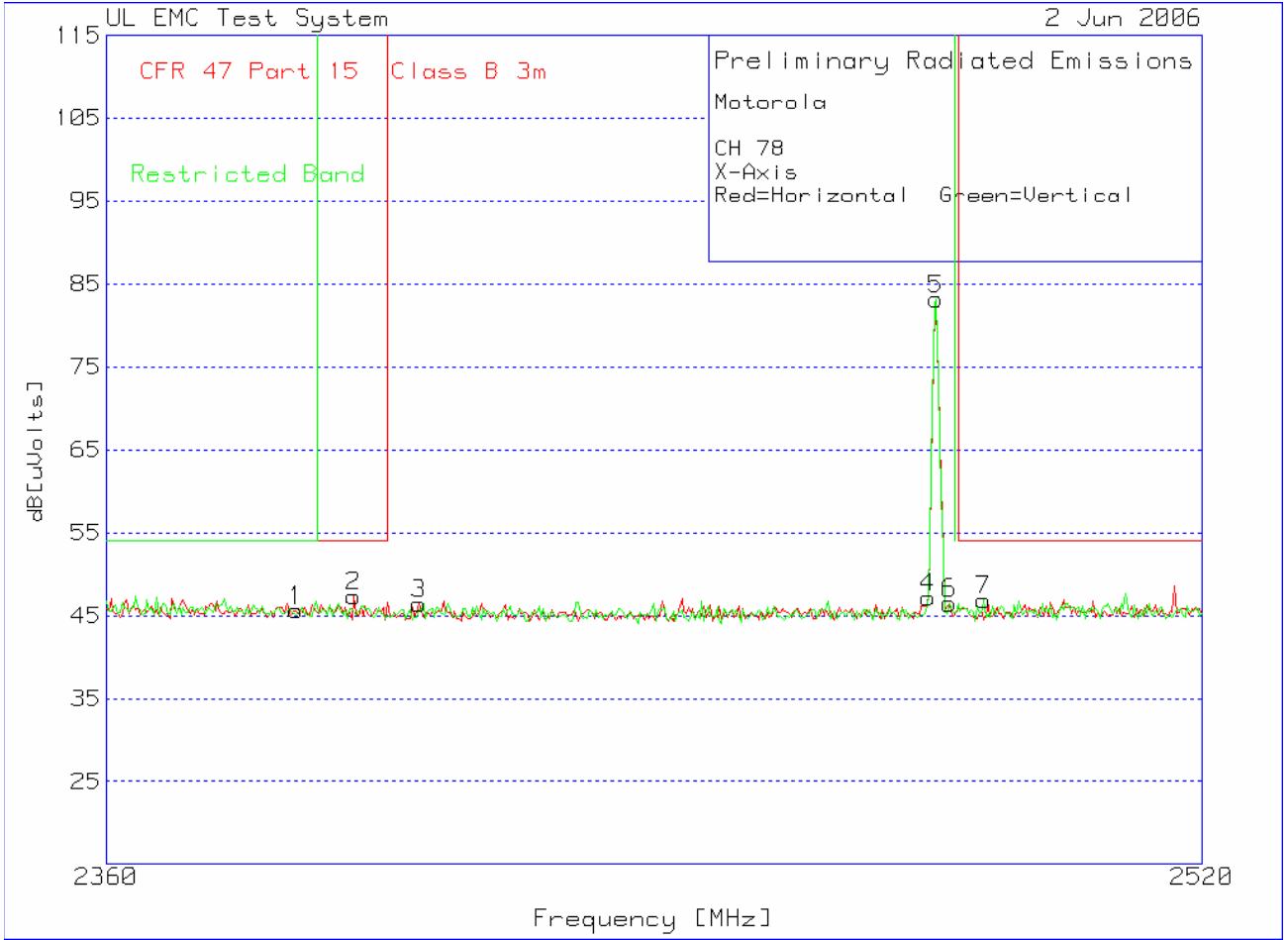
Authorized Band Emissions Mid Channel Dual Polarization Z

Motorola
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 dBuV/m	Limit dBuV/m	Margin dB	Height cm	Polarity
2 - 4GHz 2360 - 2520MHz										
1	2386.293	20.74	pk	4.4	21.8	46.94	54	-7.06	99	Horz
2	2396.874	20.1	pk	4.4	21.8	46.3	54	-7.7	99	Horz
3	2404.248	19.98	pk	4.4	21.8	46.18	999	-952.82	99	Horz
4	2439.198	19.99	pk	4.2	21.9	46.09	999	-952.91	99	Horz
5	2441.122	59.2	pk	4.2	21.9	85.3	999	-913.7	99	Horz
6	2443.367	19.45	pk	4.2	21.9	45.55	999	-953.45	99	Horz
7	2479.92	19.51	pk	4.1	22	45.61	999	-953.39	99	Horz
8	2486.974	19.76	pk	4.1	22.1	45.96	54	-8.04	99	Horz

LIMIT 1: CFR 47 Part 15 Class B 3m

pk - Peak detector
qp - Quasi-Peak detector
av - Average detector



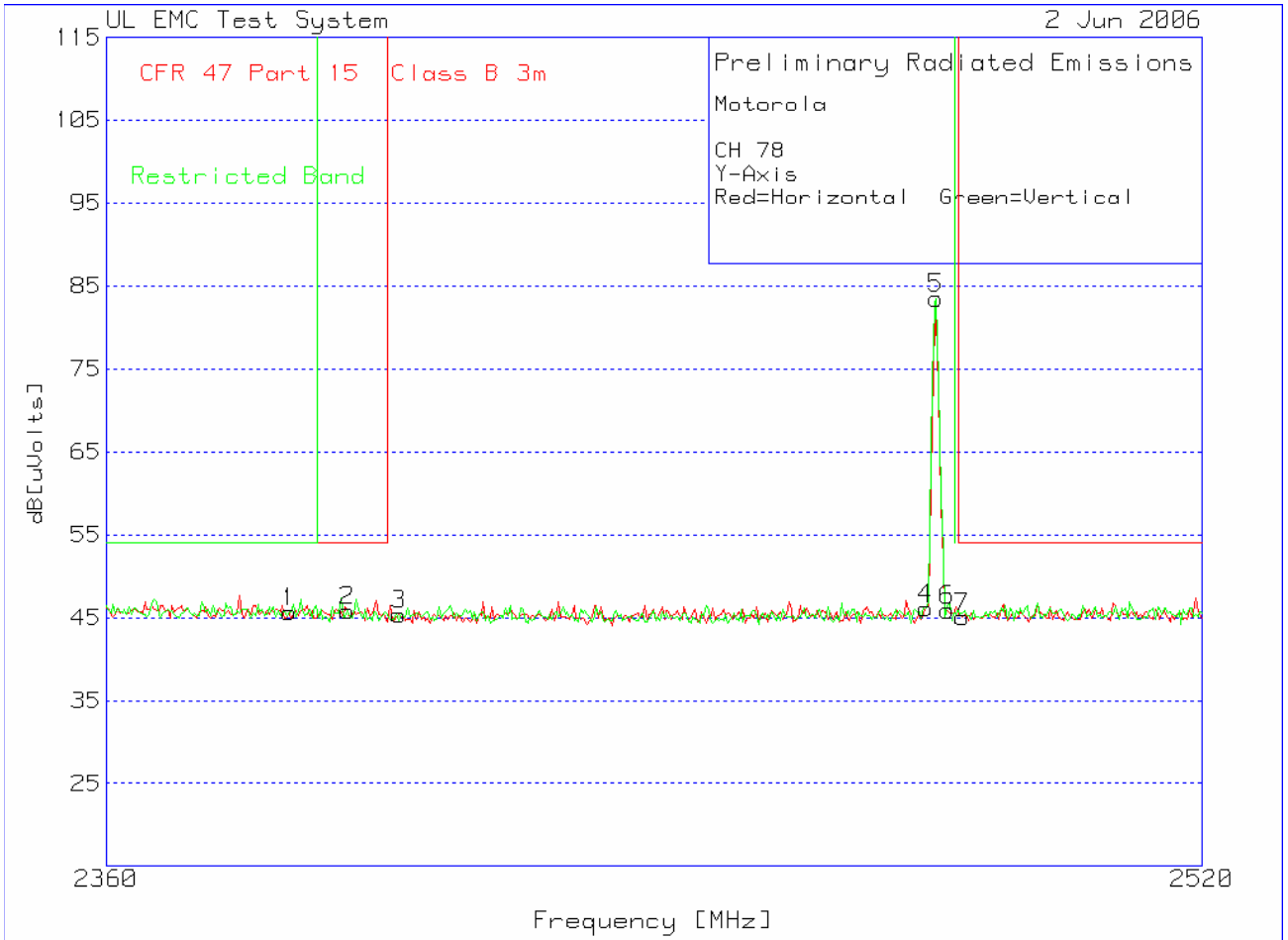
Authorized Band Emissions High Channel Dual Polarization X

Motorola
 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 dBuV/m	Limit dBuV/m	Margin dB	Height cm	Polarity
2 - 4GHz 2360 - 2520MHz										
1	2386.934	19.42	pk	4.4	21.8	45.62	54	-8.38	112	Horz
2	2395.271	21.15	pk	4.4	21.8	47.35	54	-6.65	112	Horz
3	2404.569	20.19	pk	4.4	21.8	46.39	999	-952.61	112	Horz
4	2478.958	21.11	pk	4.1	22	47.21	999	-951.79	112	Horz
2 - 4GHz 2360 - 2520MHz										
5	2480.24	57.08	pk	4.1	22	83.18	999	-915.82	112	Vert
6	2482.164	20.38	pk	4.1	22	46.48	999	-952.52	112	Vert
7	2487.295	20.66	pk	4.1	22.1	46.86	54	-7.14	112	Vert

LIMIT 1: CFR 47 Part 15 Class B 3m

pk - Peak detector
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 av - Average detector



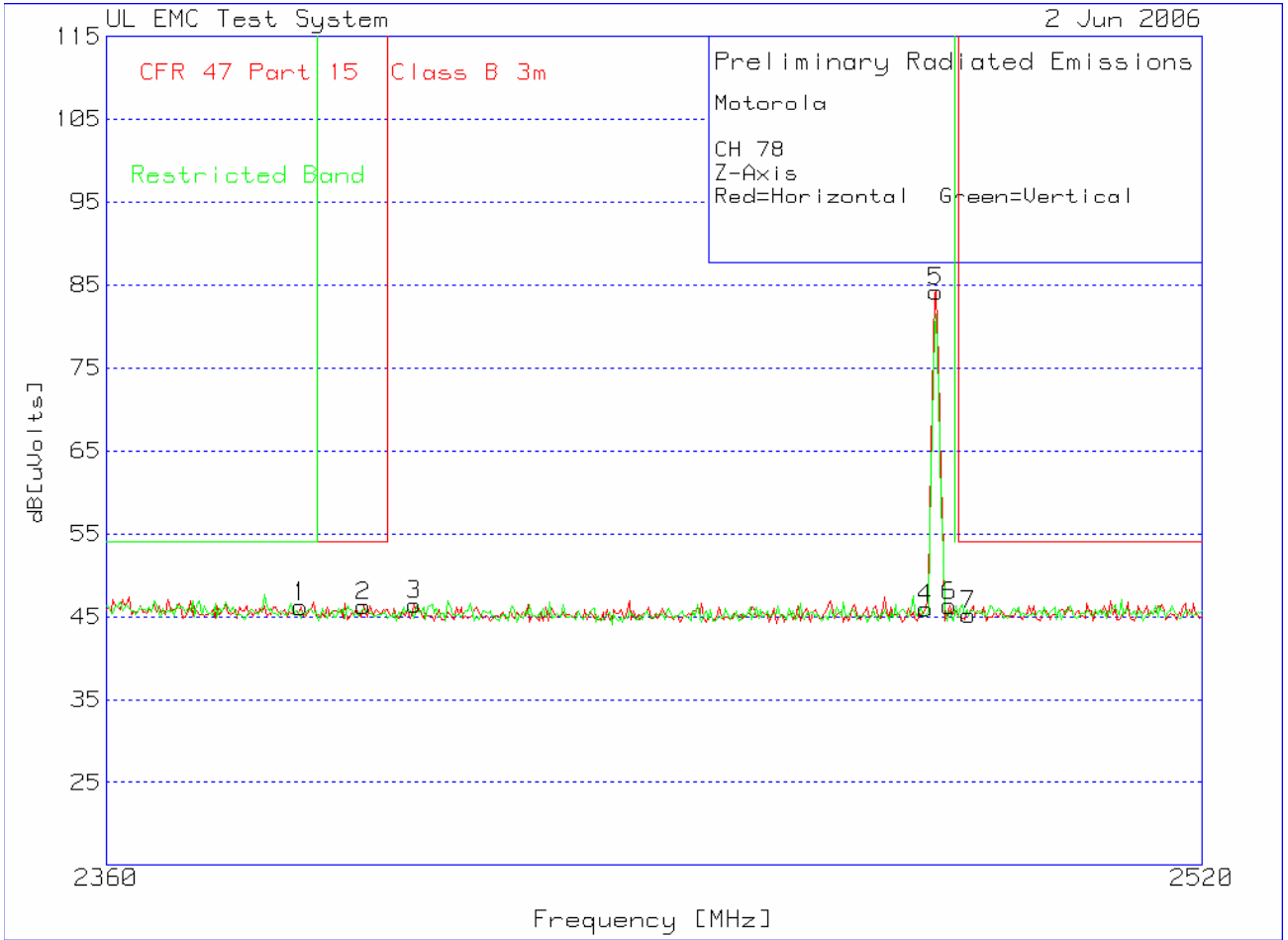
Authorized Band Emissions High Channel Dual Polarization Y

Motorola
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 dBuV/m	Limit dBuV/m	Margin dB	Height cm	Polarity
2 - 4GHz 2360 - 2520MHz										
1	2385.972	19.47	pk	4.4	21.8	45.67	54	-8.33	99	Horz
2	2394.309	19.63	pk	4.4	21.8	45.83	54	-8.17	99	Horz
3	2401.683	19.17	pk	4.4	21.8	45.37	999	-953.63	99	Horz
4	2478.637	19.98	pk	4.1	22	46.08	999	-952.92	99	Horz
6	2481.844	19.8	pk	4.1	22	45.9	999	-953.1	99	Horz
7	2484.088	18.88	pk	4.1	22.1	45.08	54	-8.92	99	Horz
2 - 4GHz 2360 - 2520MHz										
5	2480.24	57.39	pk	4.1	22	83.49	999	-915.51	99	Vert

LIMIT 1: CFR 47 Part 15 Class B 3m

pk - Peak detector
qp - Quasi-Peak detector
av - Average detector



Authorized Band Emissions High Channel Dual Polarization Z

Motorola
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 dBuV/m	Limit dBuV/m	Margin dB	Height cm	Polarity
2 - 4GHz 2360 - 2520MHz										
1	2387.575	20.02	pk	4.4	21.8	46.22	54	-7.78	99	Horz
2	2396.553	20.04	pk	4.4	21.8	46.24	54	-7.76	99	Horz
3	2403.928	20.2	pk	4.4	21.8	46.4	999	-952.6	99	Horz
4	2478.637	19.84	pk	4.1	22	45.94	999	-953.06	99	Horz
5	2480.24	58.1	pk	4.1	22	84.2	999	-914.8	99	Horz
6	2482.164	20.21	pk	4.1	22	46.31	999	-952.69	99	Horz
7	2485.05	19	pk	4.1	22.1	45.2	54	-8.8	99	Horz

LIMIT 1: CFR 47 Part 15 Class B 3m

pk - Peak detector
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av - Average detector

PEAK OUTPUT POWER

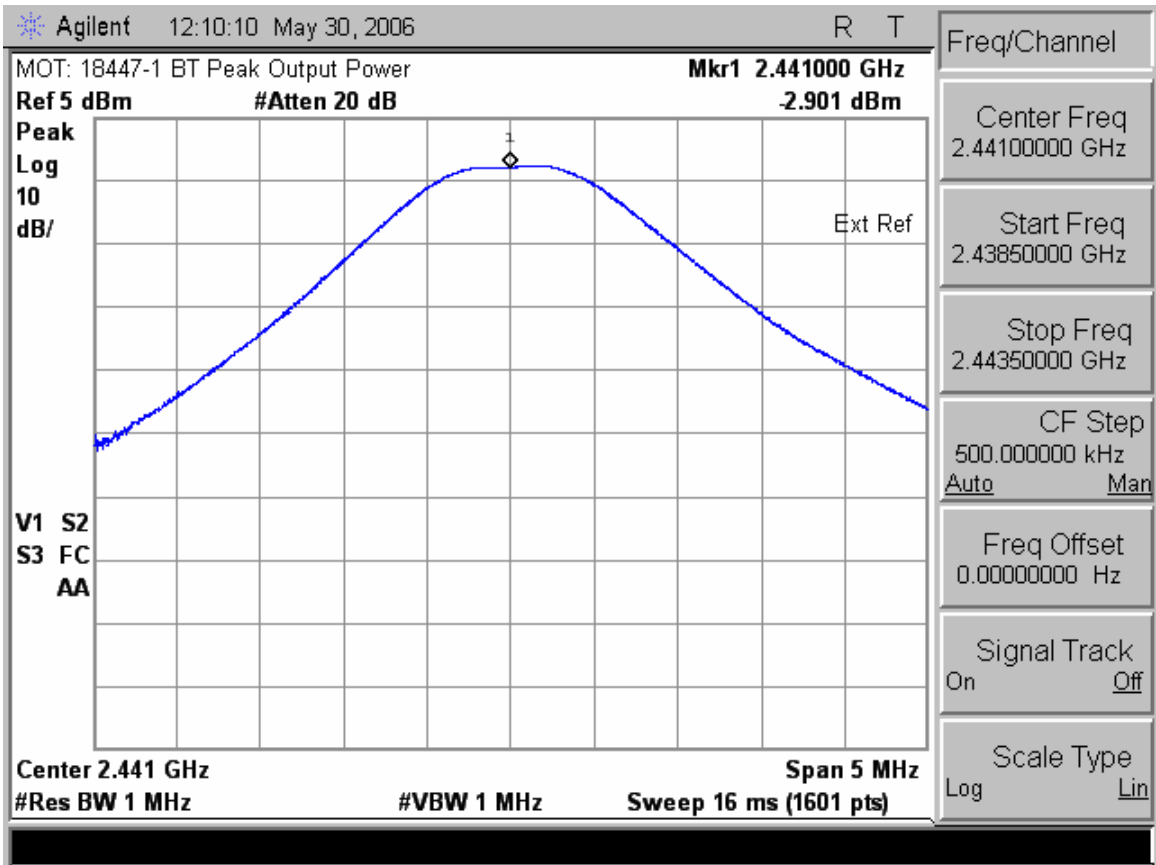
CFR 47 Part 15.247

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

See Attached



Peak Output Power

BAND-EDGE COMPLIANCE OF RF CONDUCTED EMISSIONS

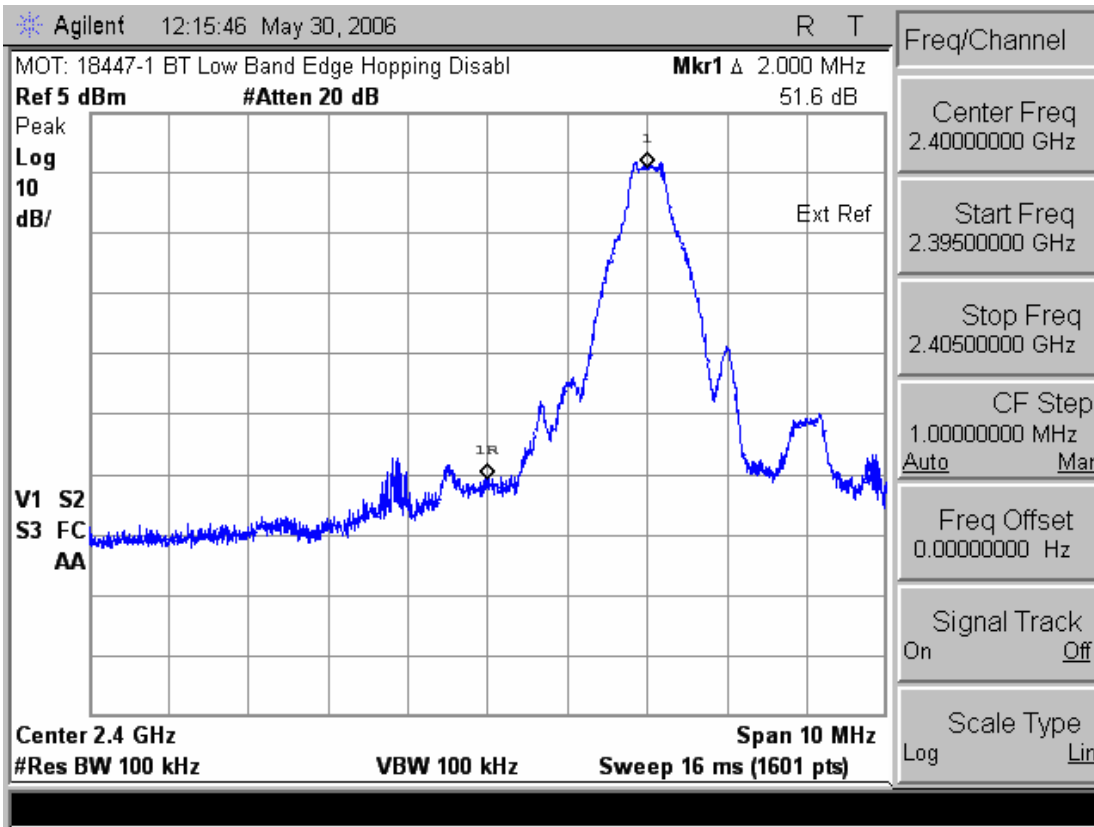
CFR 47 Part 15.247

Measurement Procedure

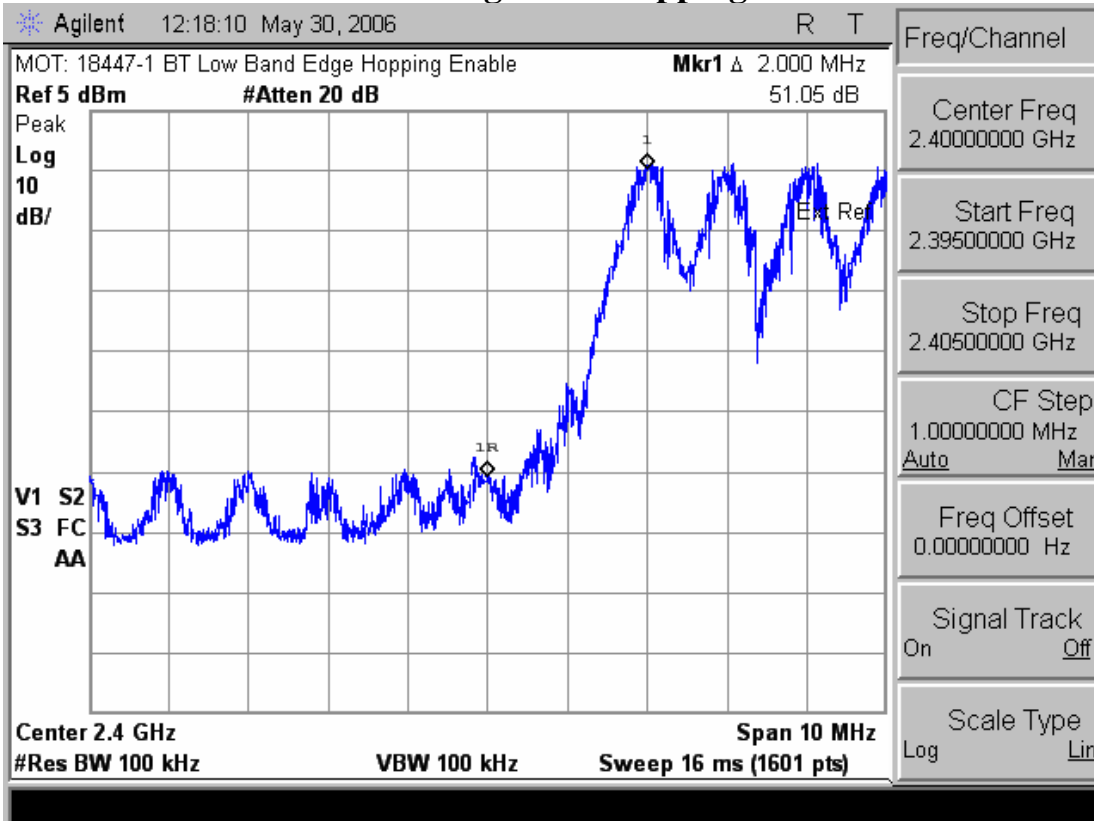
The RF output port of the Equipment-Under-Test is directly coupled to the input of the EMC analyzer through a specialized RF connector and a 10dB passive attenuator. A fully charged battery was used for the supply voltage.

Measurement Results

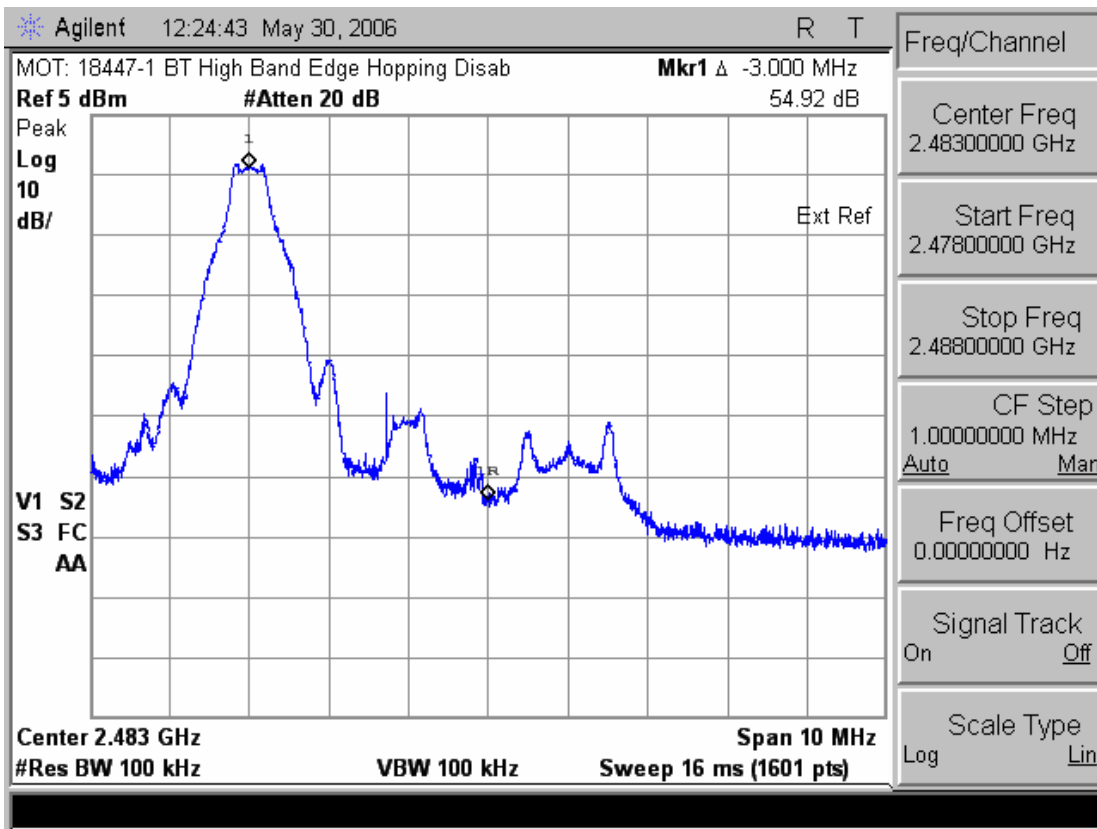
See Attached:



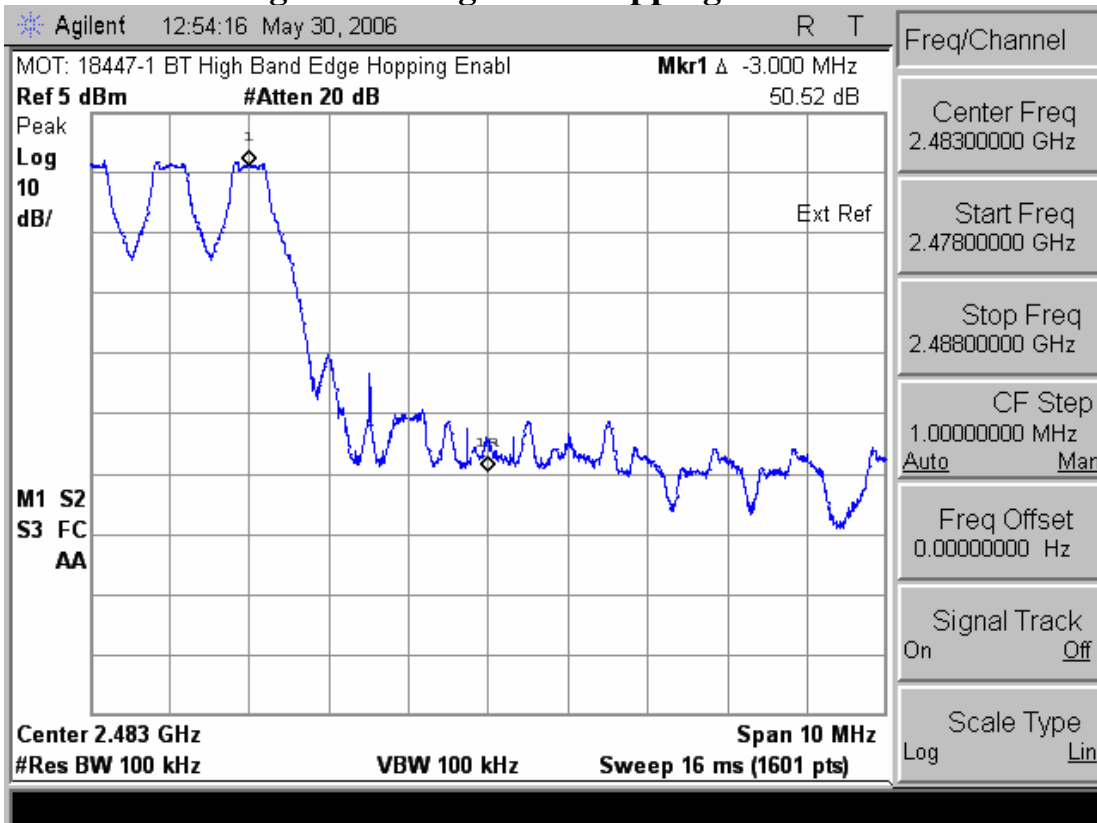
Low Band Edge with Hopping Disabled



Low Band Edge with Hopping Enabled



High Band Edge with Hopping Disabled



High Band Edge with Hopping Enabled

SPURIOUS RF CONDUCTED EMISSIONS

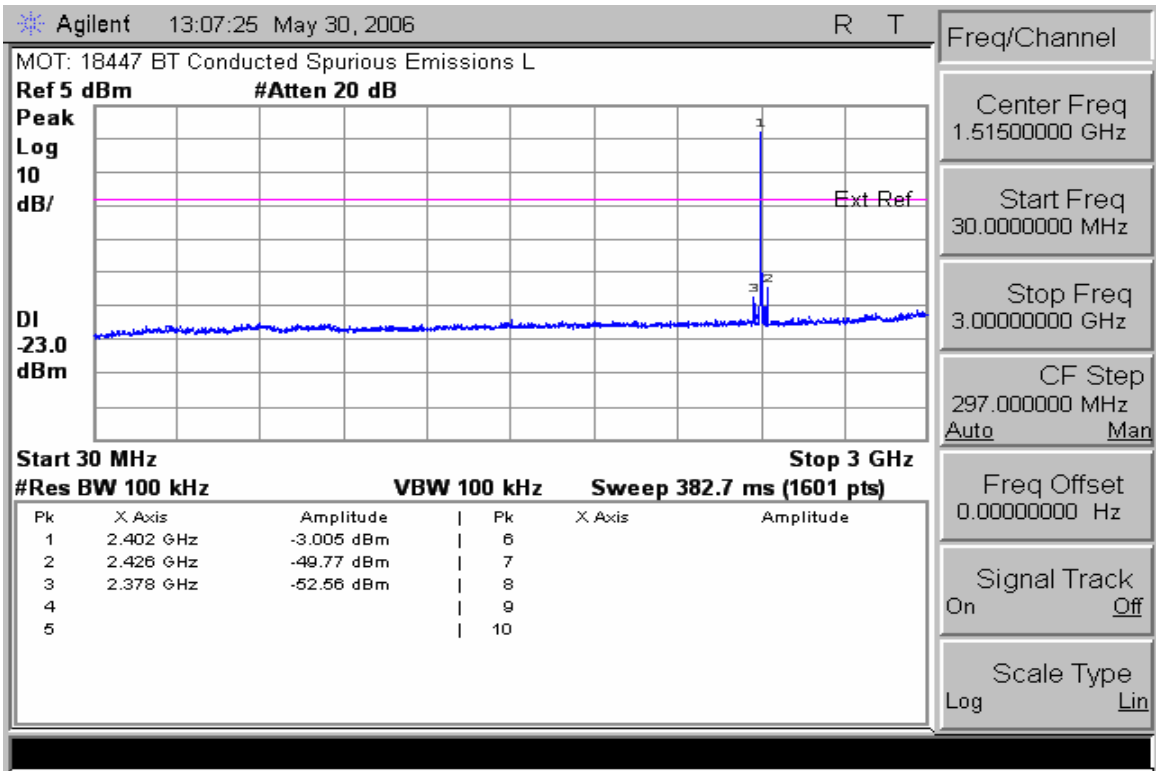
CFR 47 Part 15.247

Measurement Procedure

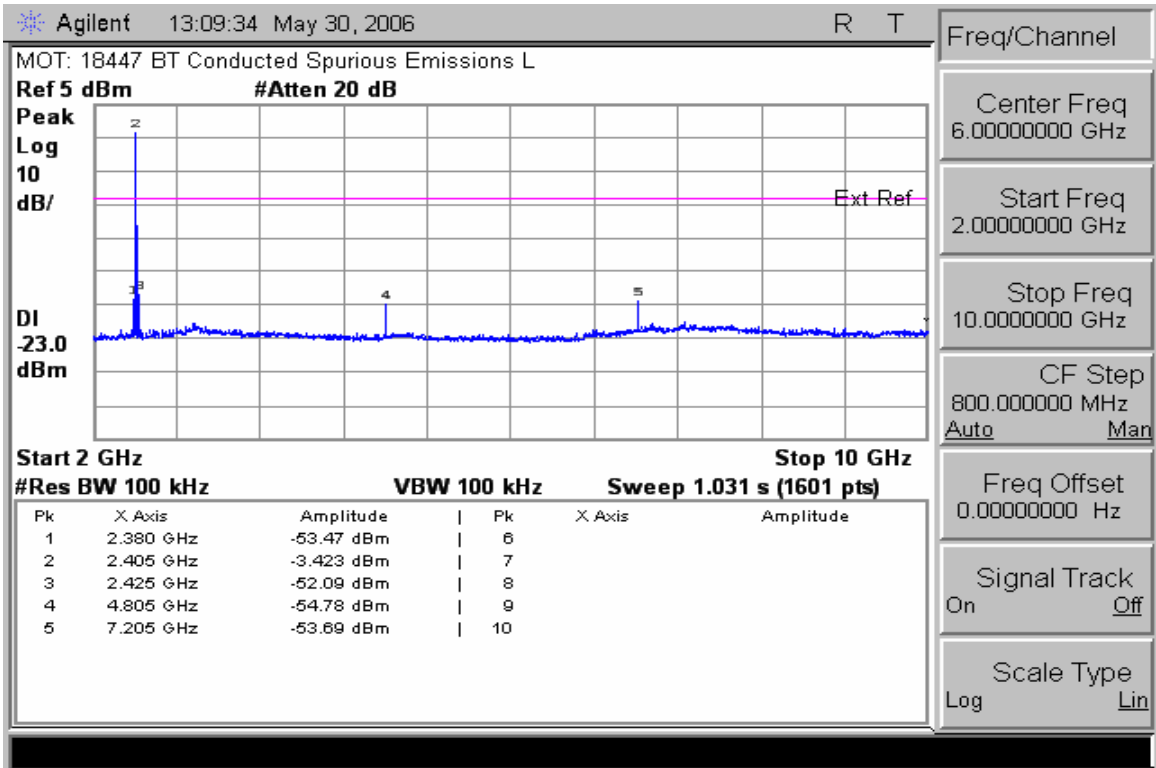
The RF output port of the Equipment-Under-Test is directly coupled to the input of the EMC analyzer through a specialized RF connector and a 10dB passive attenuator. A fully charged battery was used for the supply voltage.

Measurement Results

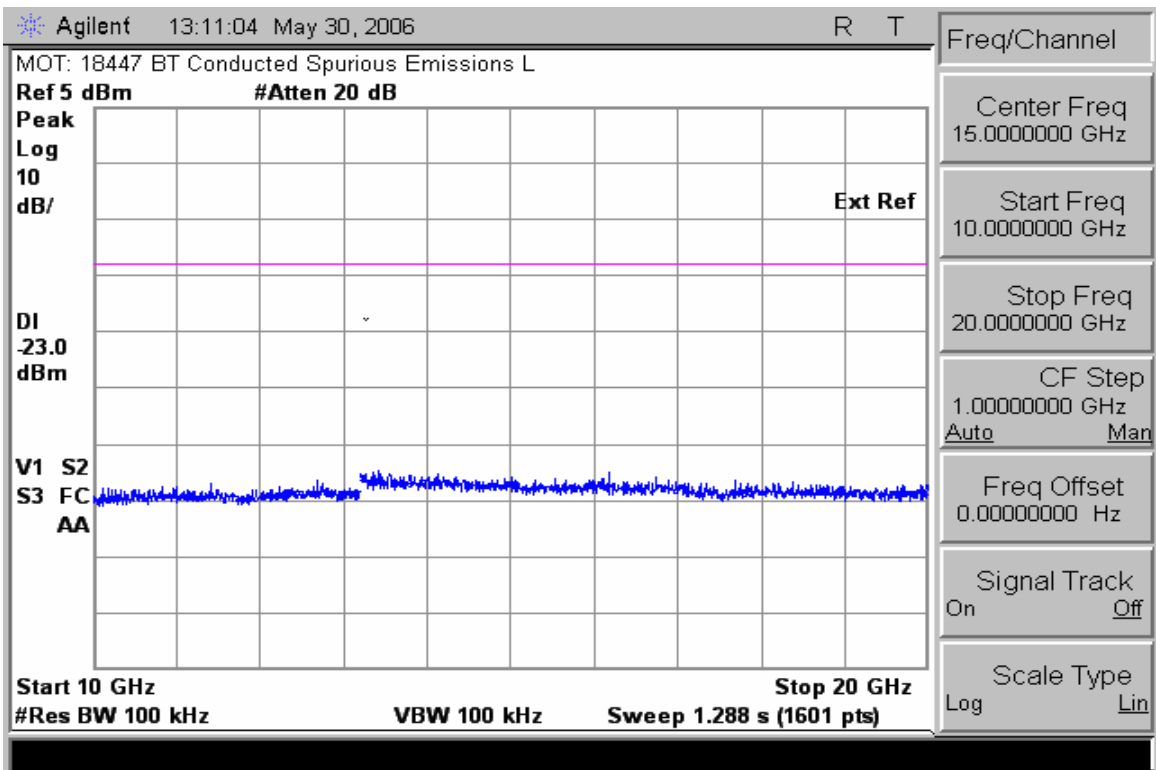
See attached:



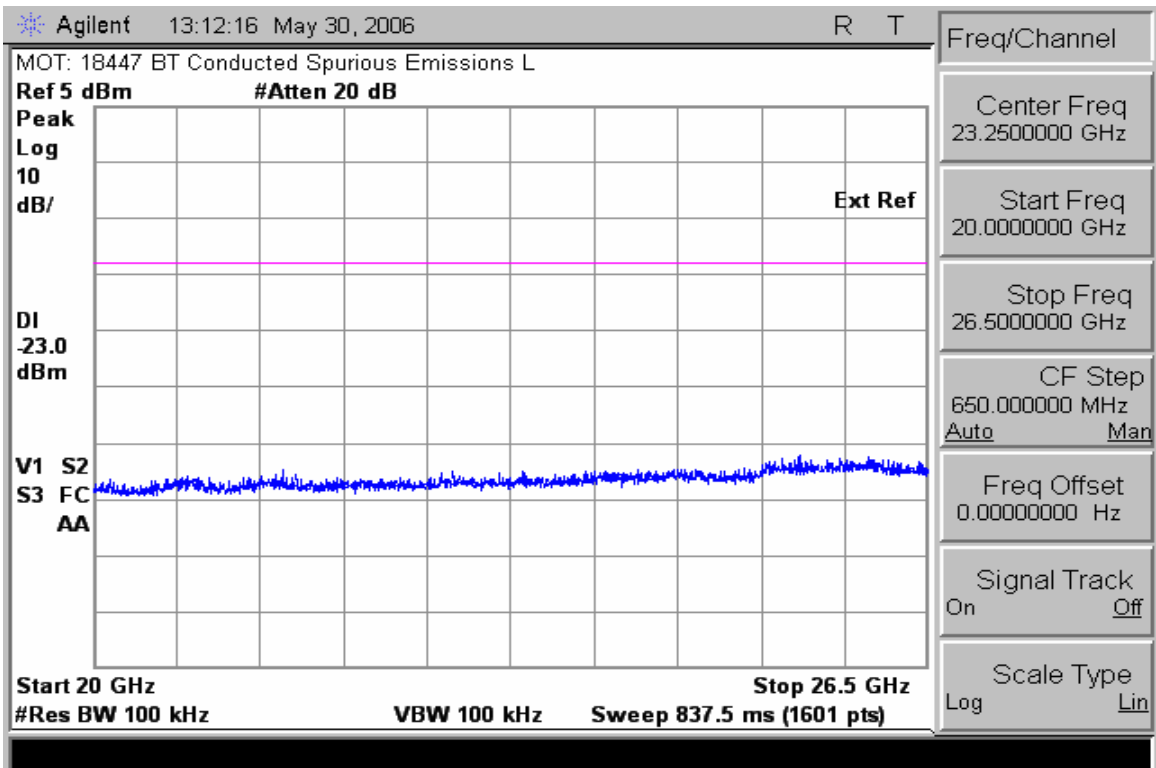
Conducted Spurious Emissions 30-3000MHz (Low Channel)



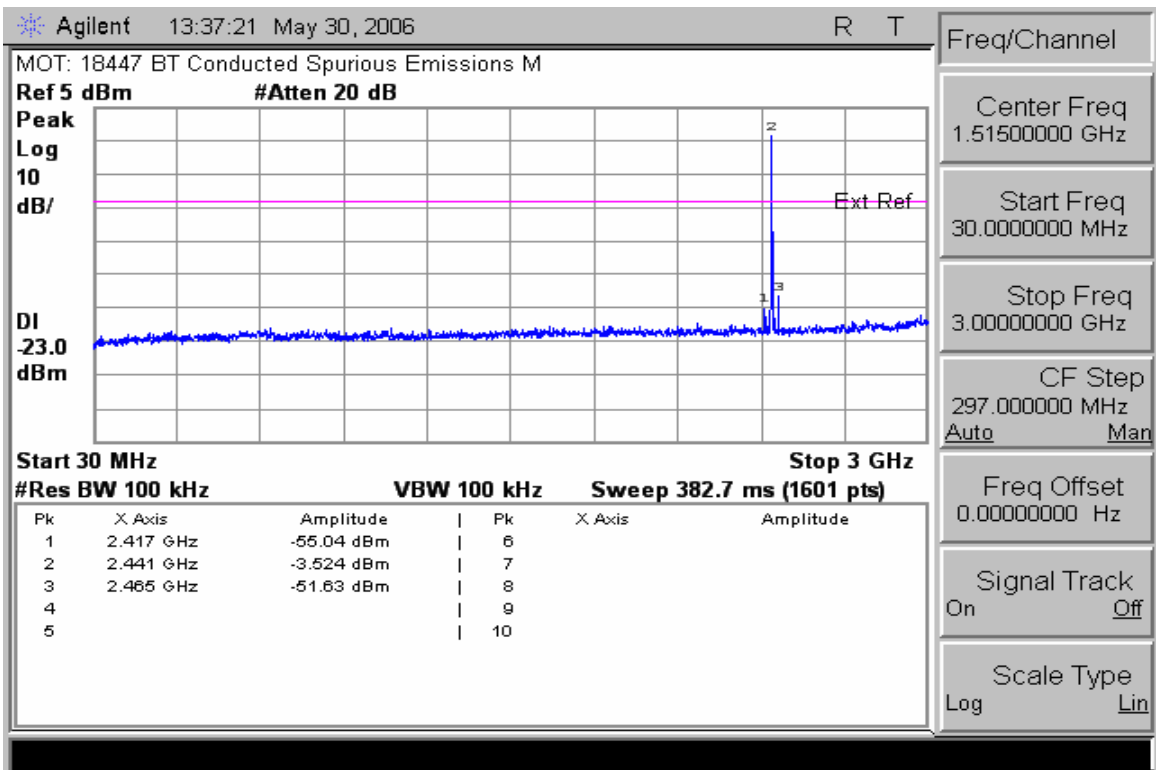
Conducted Spurious Emissions 2-10GHz (Low Channel)



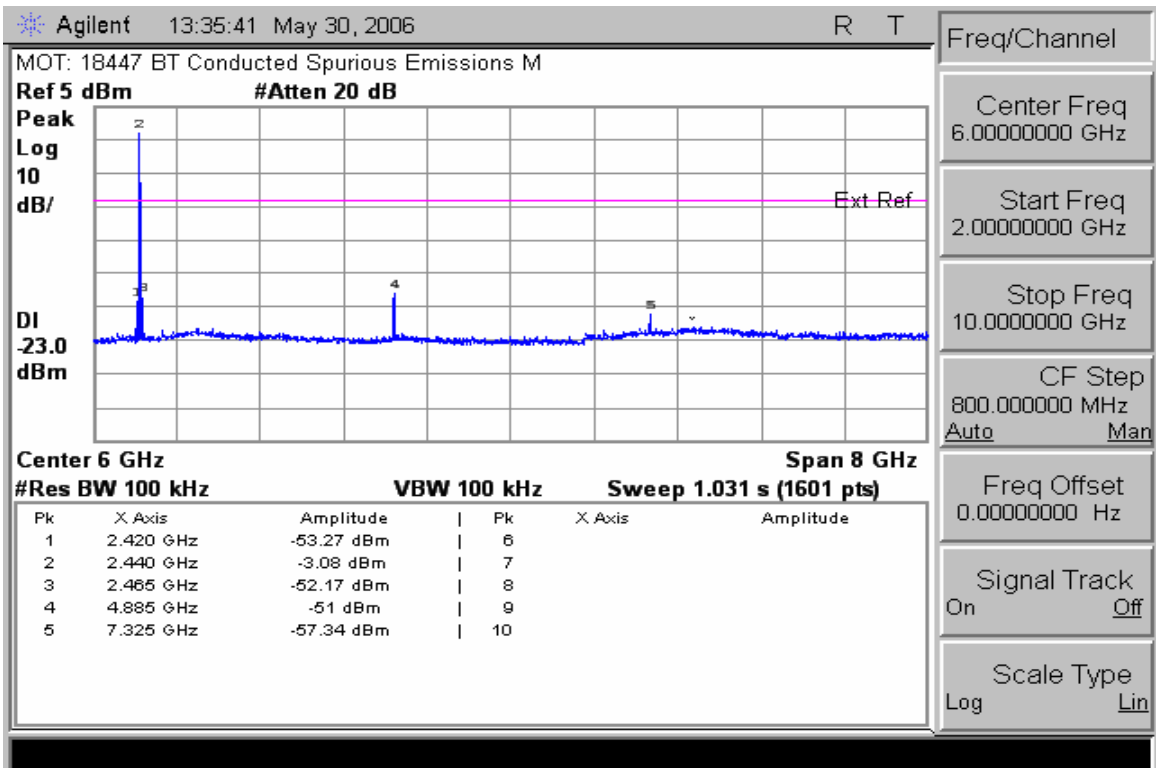
Conducted Spurious Emissions 10-20GHz (Low Channel)



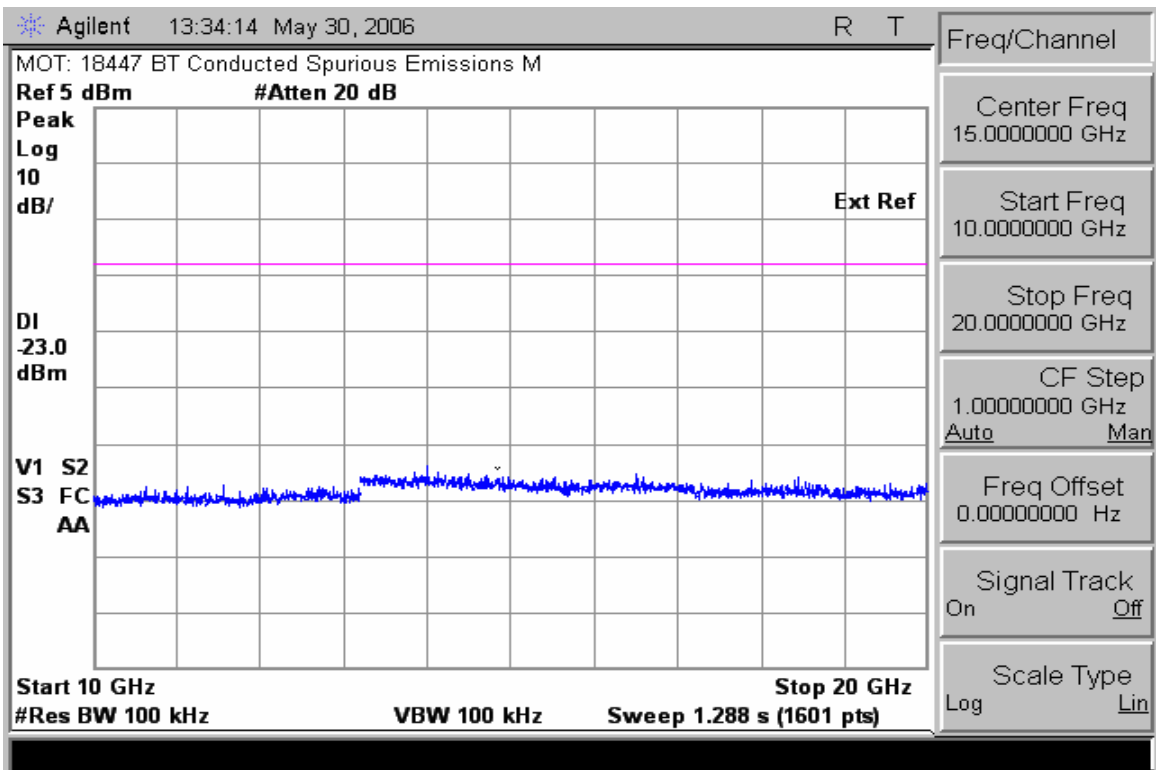
Conducted Spurious Emissions 20-26.5GHz (Low Channel)



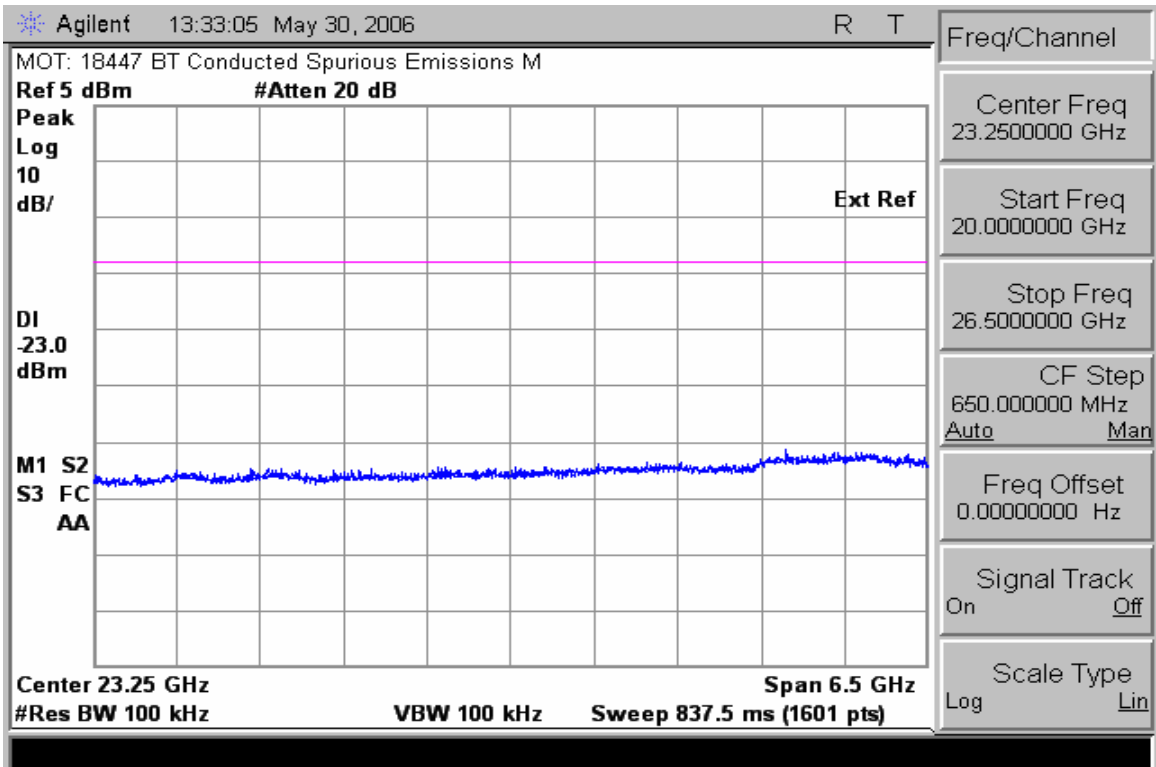
Conducted Spurious Emissions 30-3000MHz (Mid Channel)



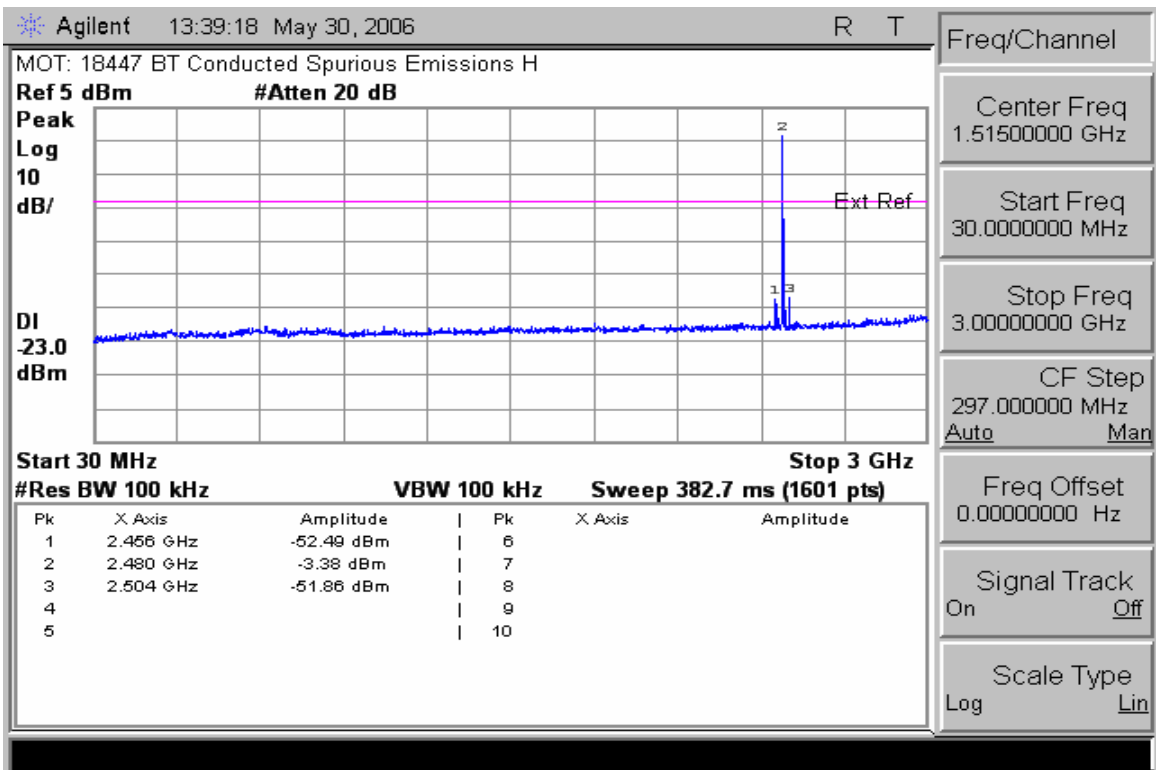
Conducted Spurious Emissions 2-10GHz (Mid Channel)



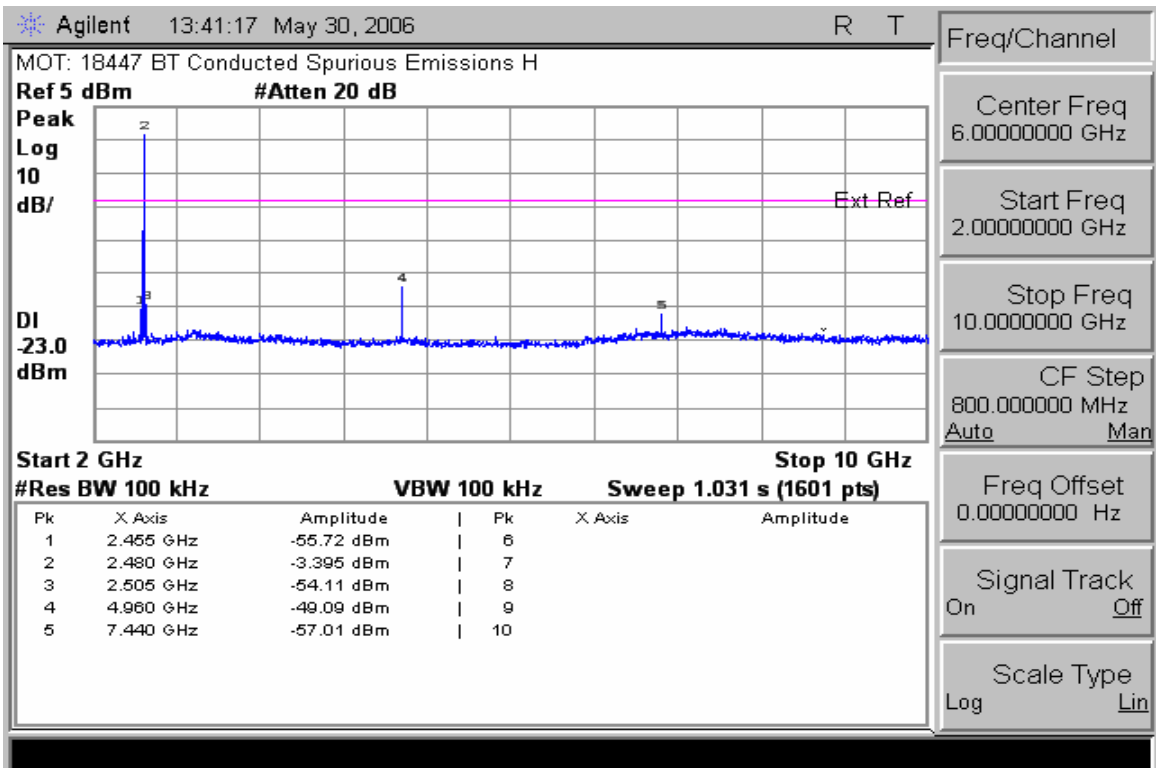
Conducted Spurious Emissions 10-20GHz (Mid Channel)



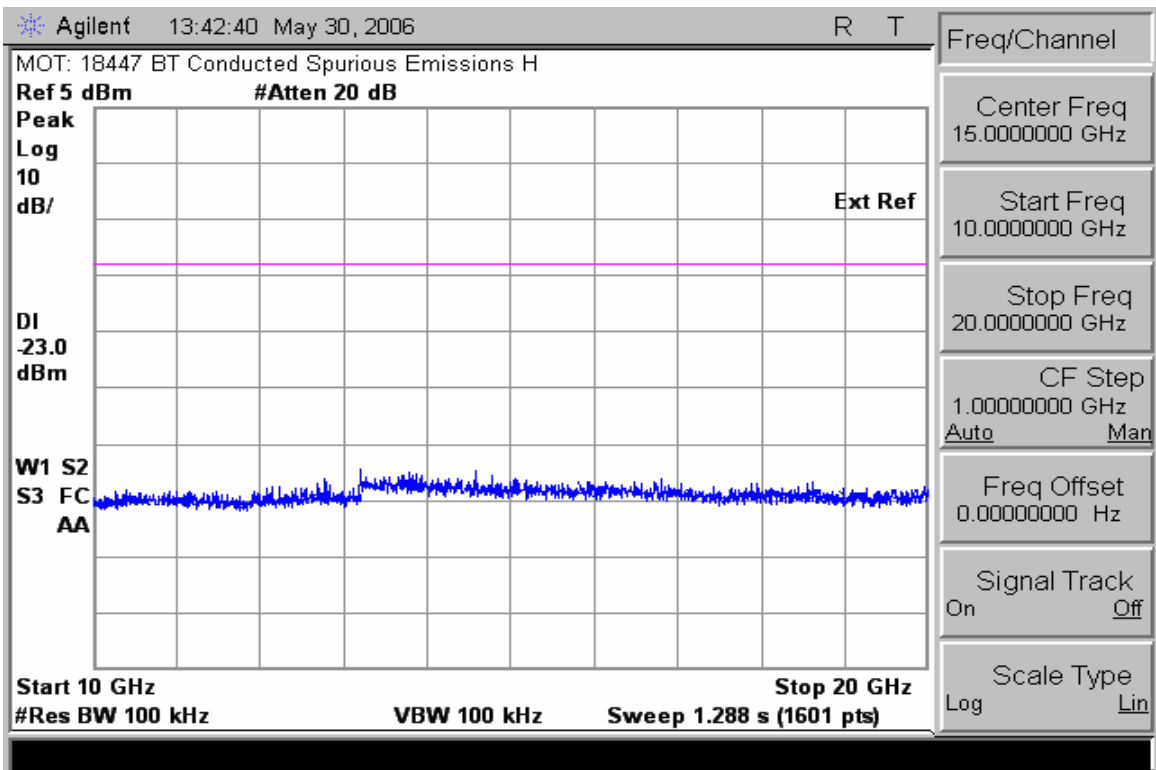
Conducted Spurious Emissions 20-26.5GHz (Mid Channel)



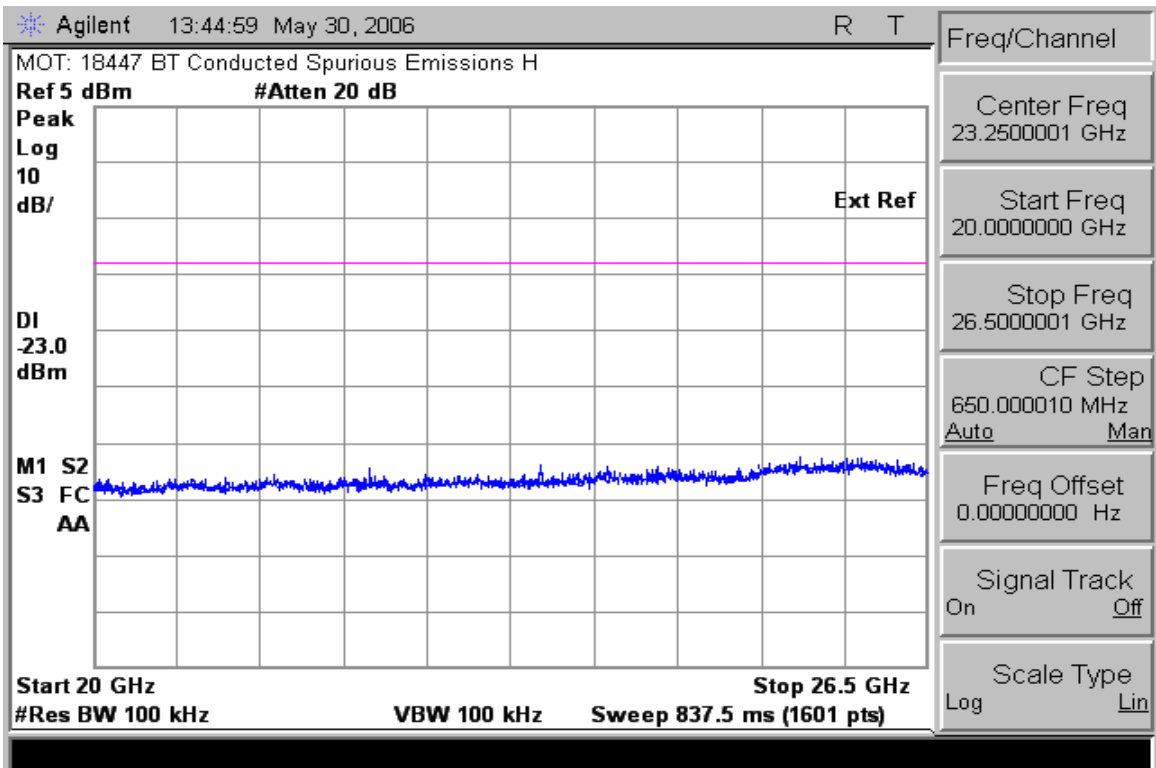
Conducted Spurious Emissions 30-3000MHz (High Channel)



Conducted Spurious Emissions 2-10GHz (High Channel)



Conducted Spurious Emissions 10-20GHz (High Channel)



Conducted Spurious Emissions 20-26.5GHz (High Channel)

AC LINE CONDUCTED

CFR 47 Part 15.207

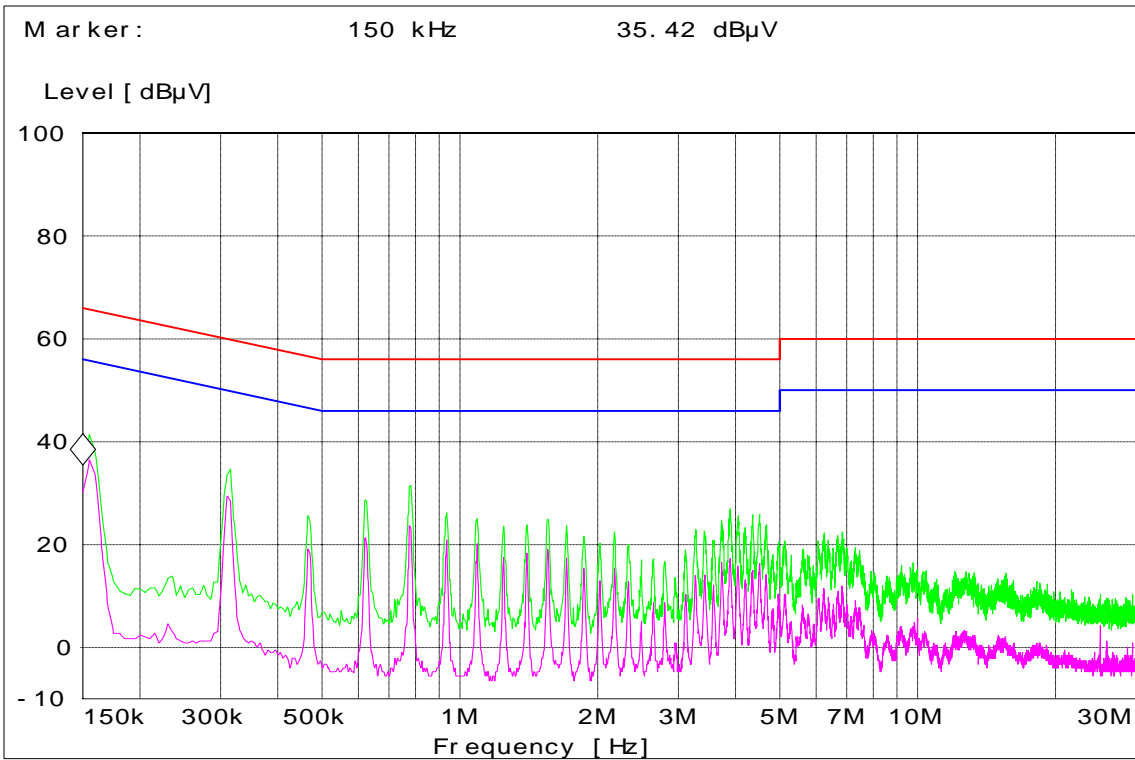
Measurement Procedure

Measured levels of ac power line 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 power line sensed by a current probe.

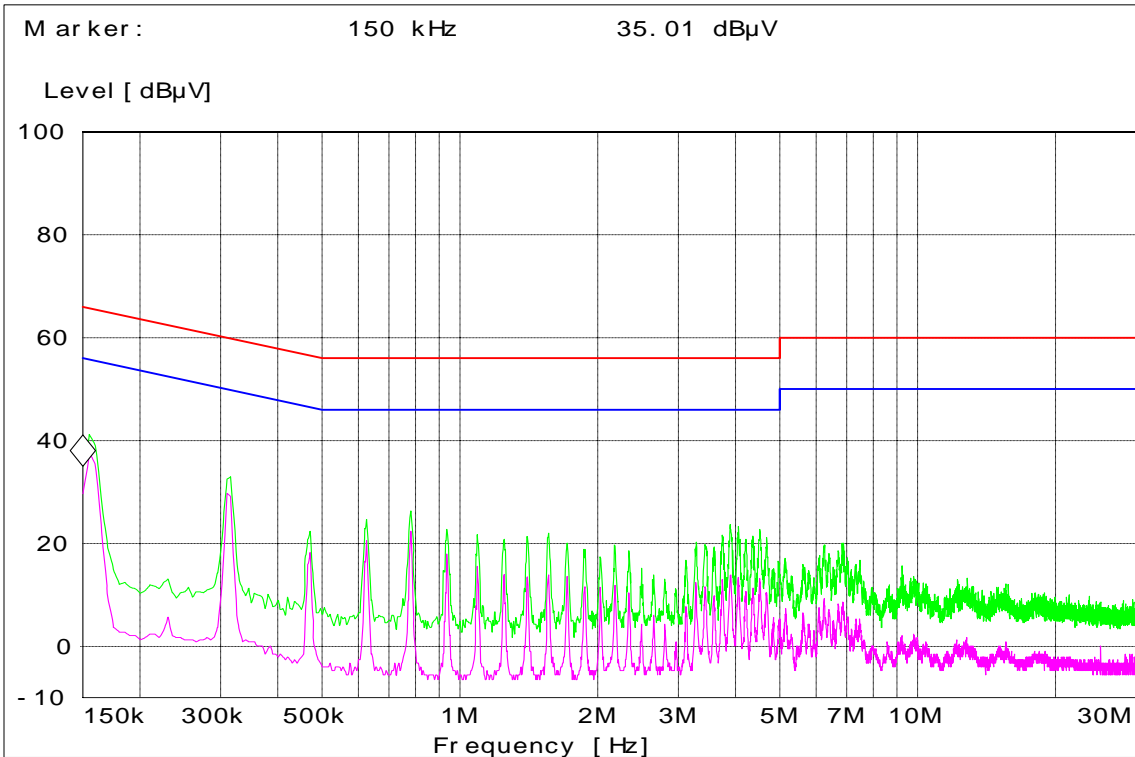
All radio-noise voltage and current measurements shall be made on each current-carrying conductor at the plug end of the EUT power cord or calibrated extension cord by the use of mating plugs and receptacles on the EUT and LISN. Equipment shall be tested with power cords that are normally supplied using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

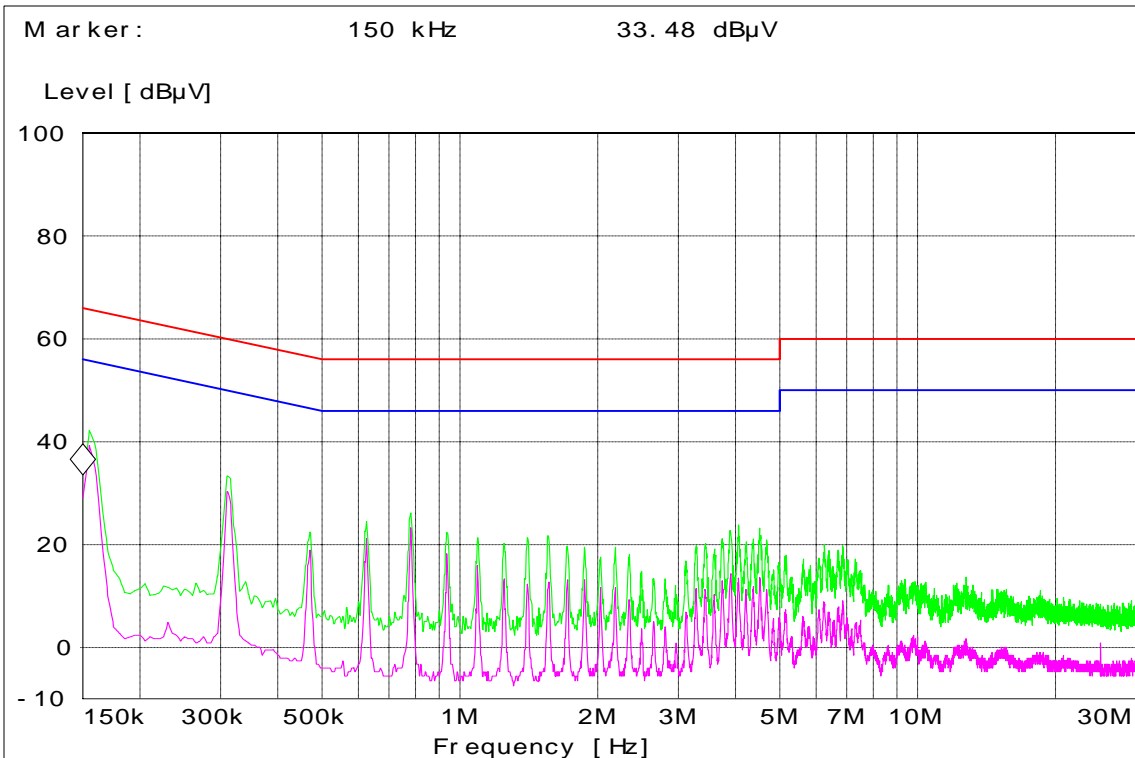
See attached:



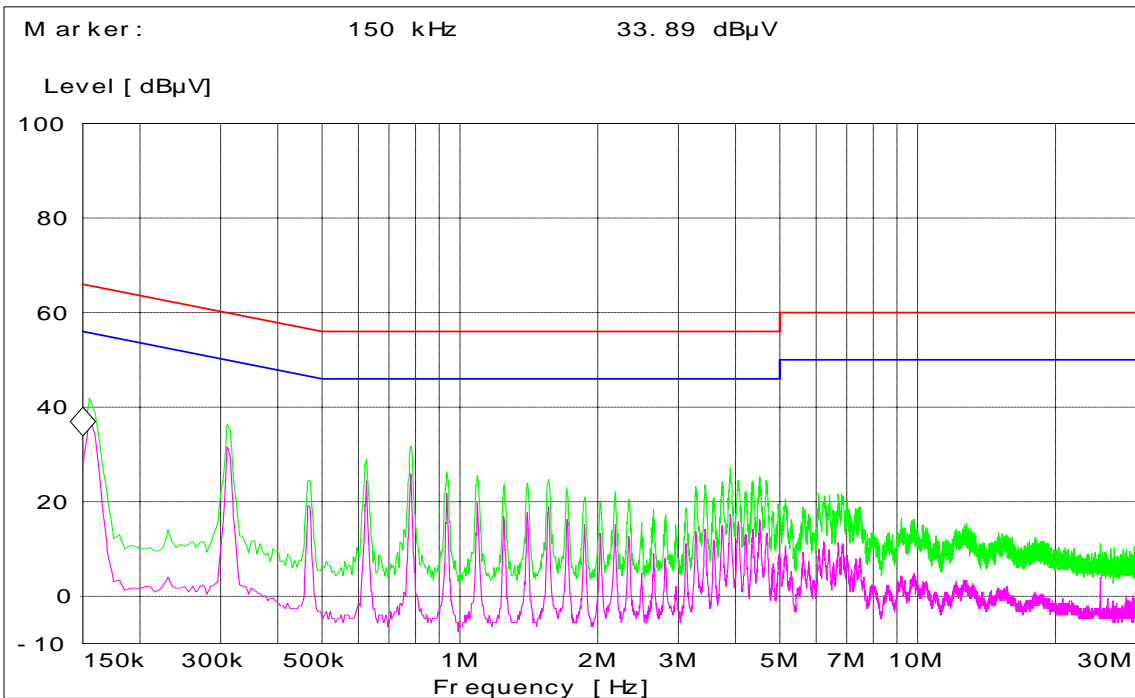
Channel 0 - 2402MHz - Tx Mode - Neutral Coupling Hopping



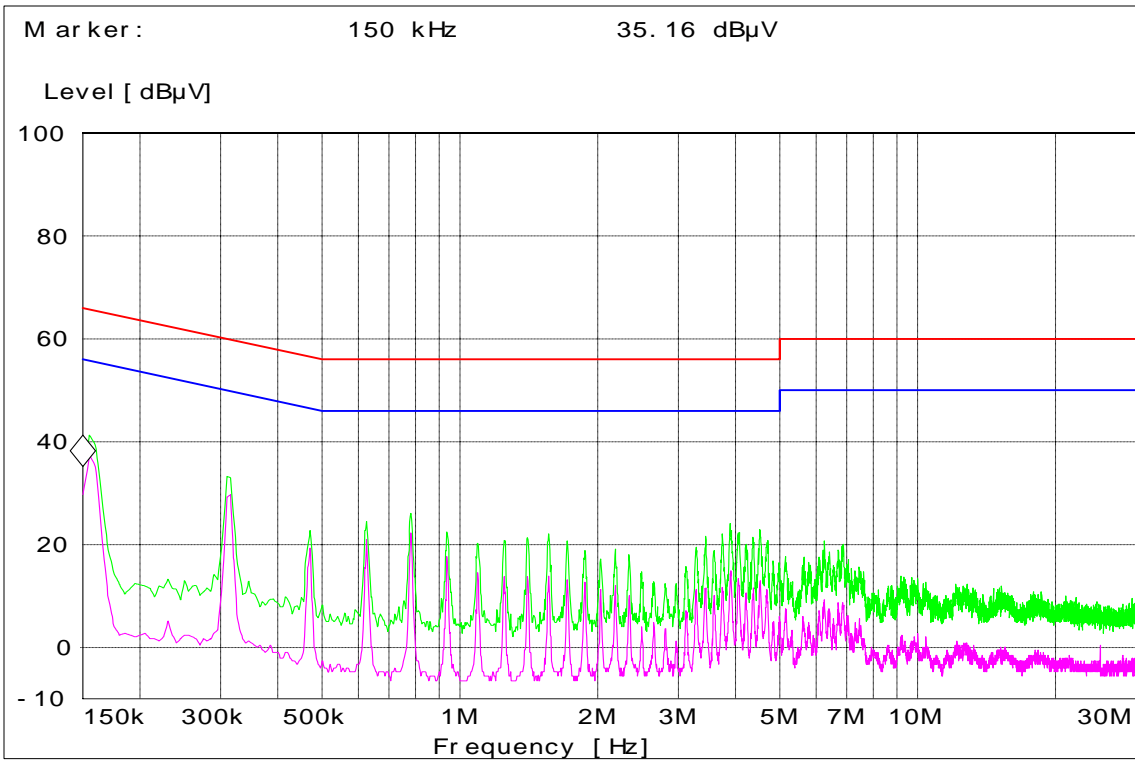
Channel 0 - 2402MHz - Tx Mode - Line Coupling Nonhopping



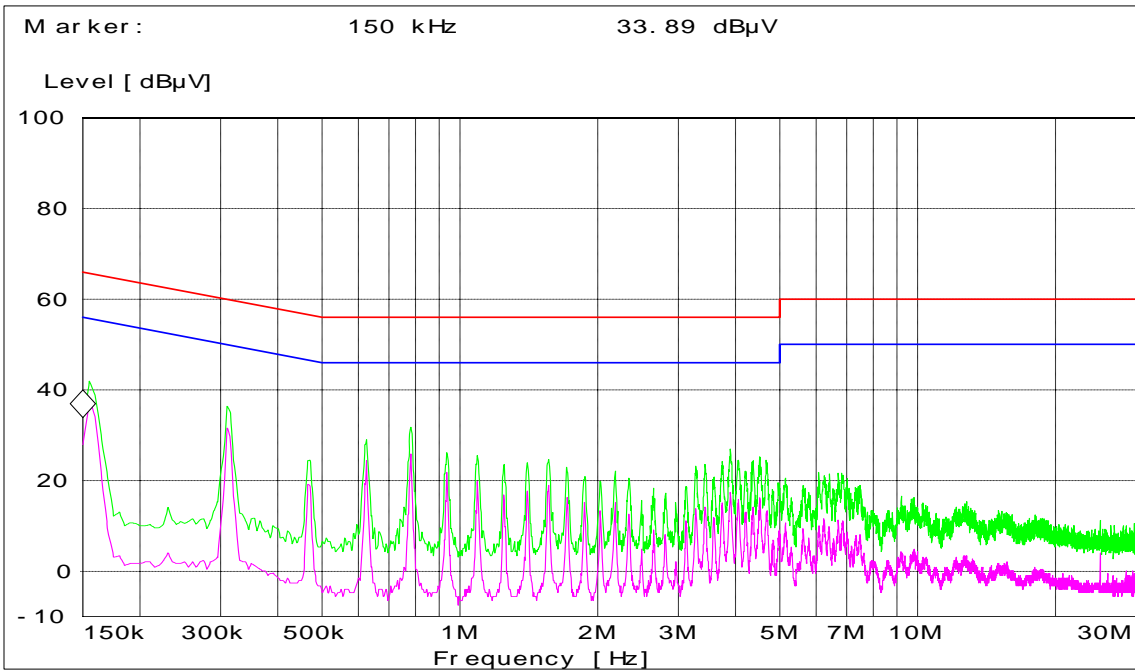
Channel 39 - 2441MHz - Tx Mode - Line Coupling Nonhopping



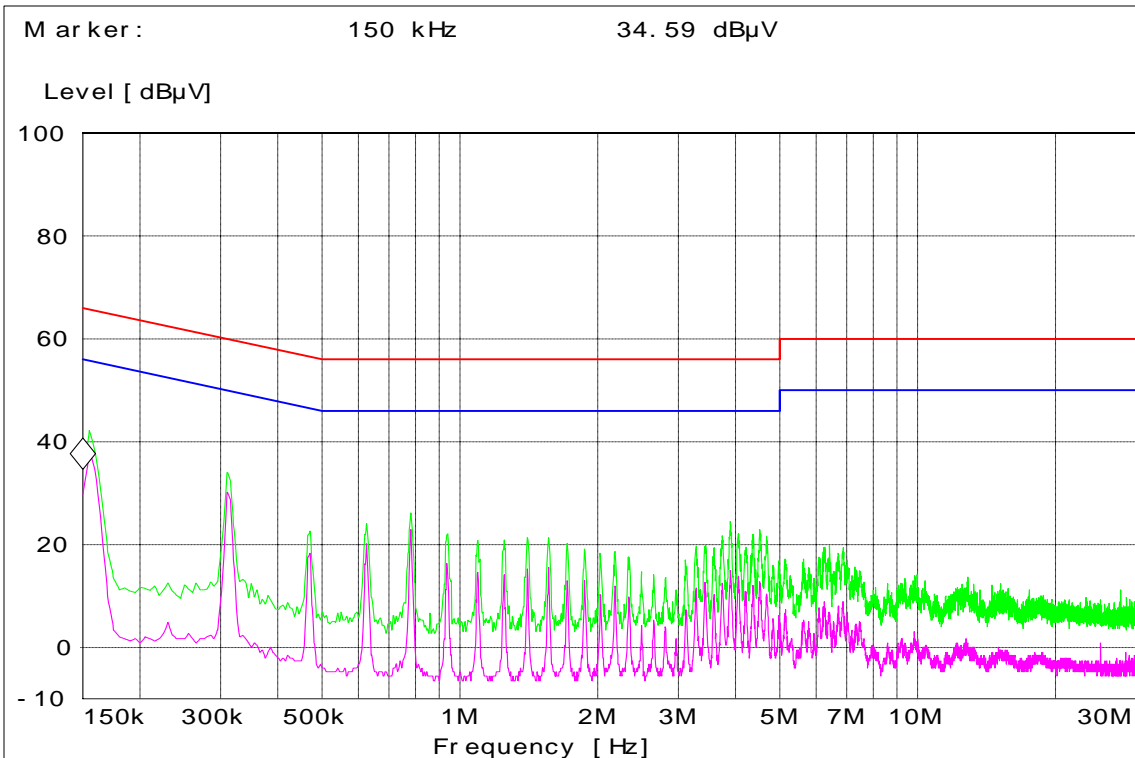
Channel 39 - 2441MHz - Tx Mode - Neutral Coupling Hopping



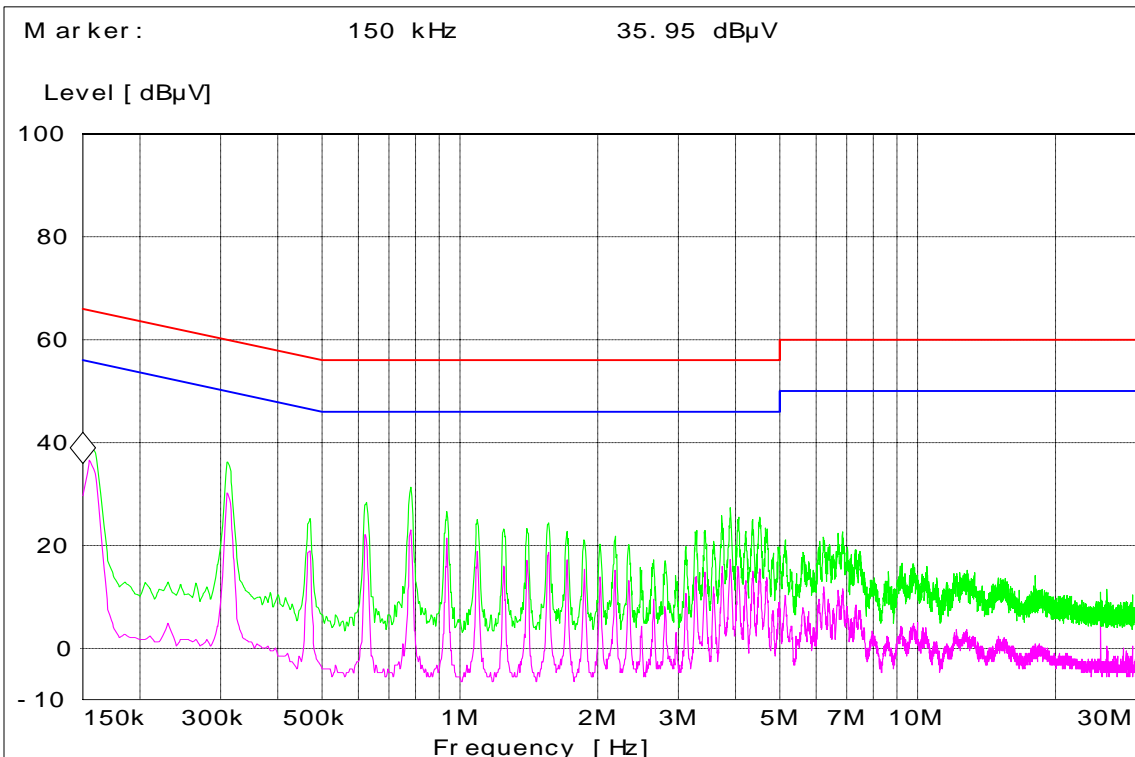
Channel 78 - 2480MHz - Tx Mode - Line Coupling Hopping



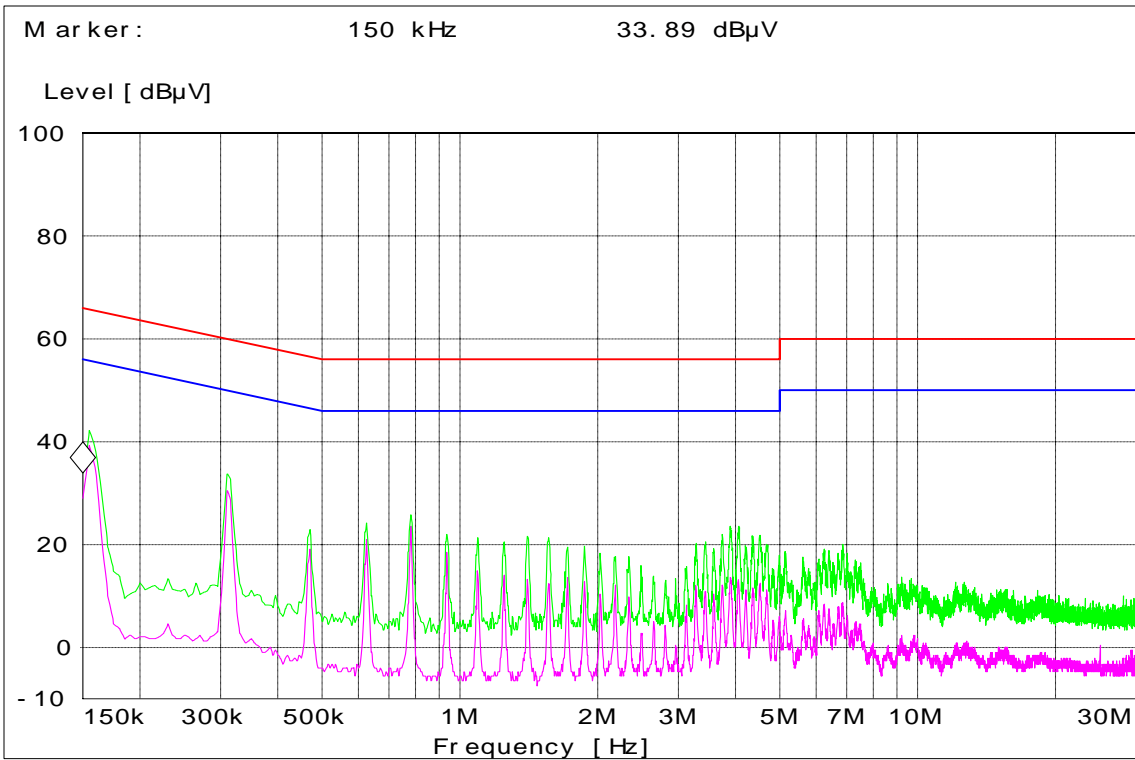
Channel 78 - 2480MHz - Tx Mode - Neutral Coupling Hopping



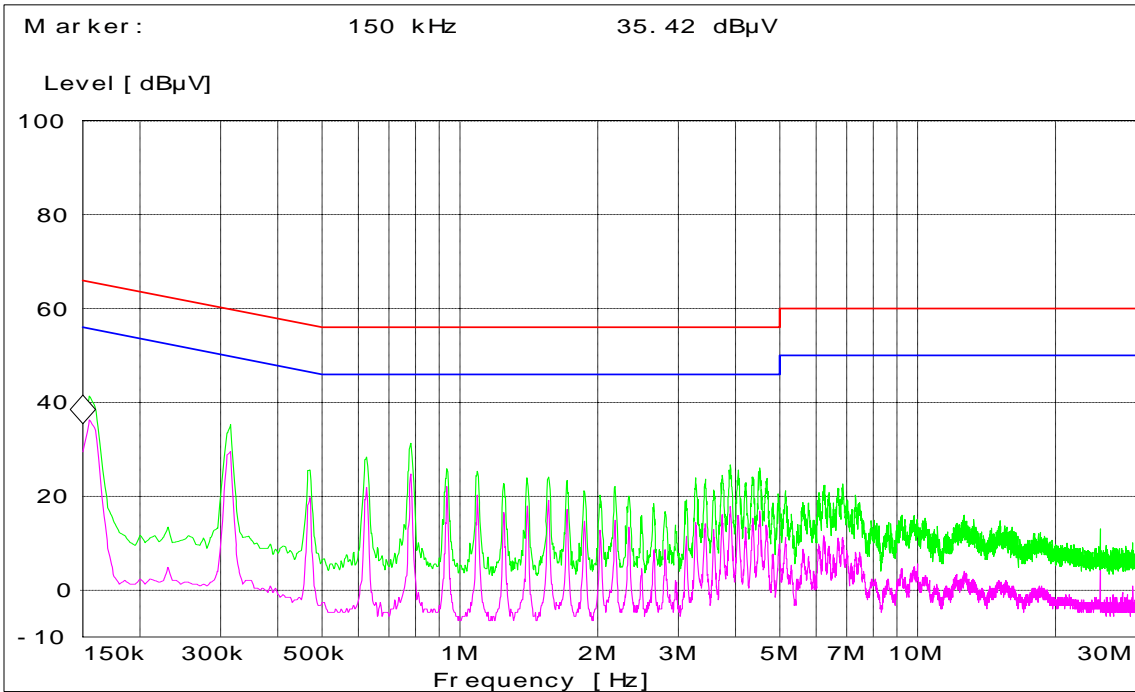
Channel 0 - 2402MHz - Tx Mode - Line Coupling Hopping



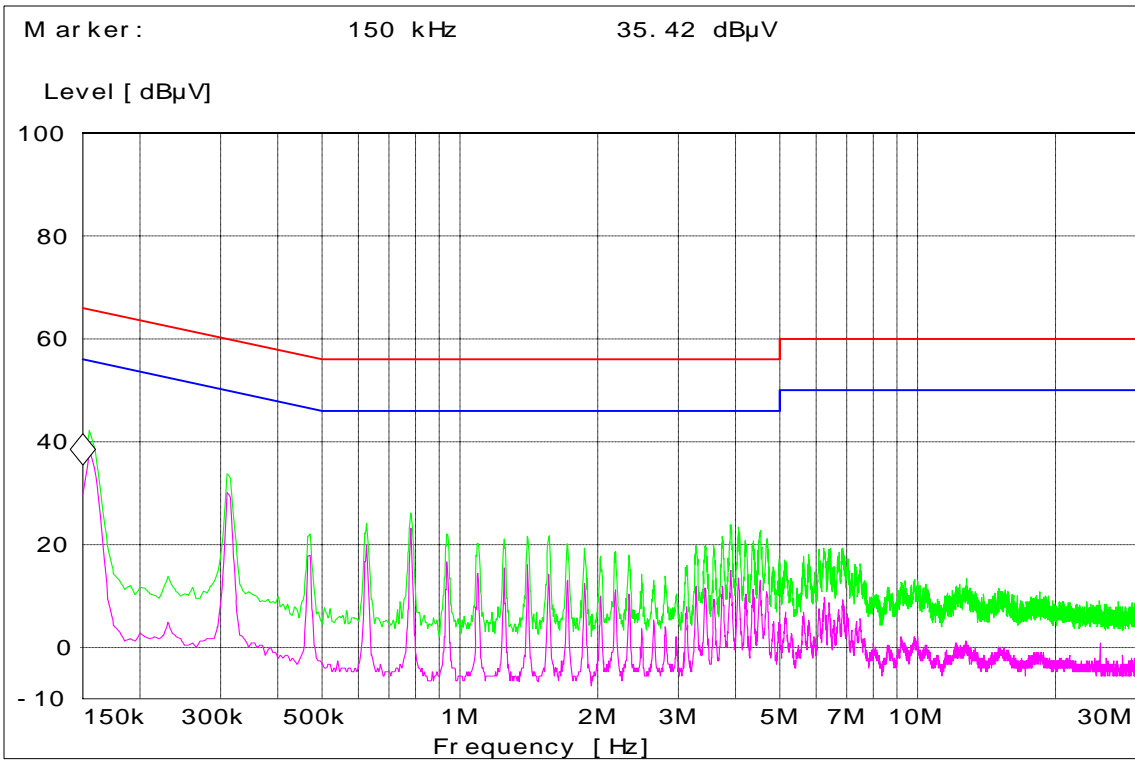
Channel 0 - 2402MHz - Tx Mode - Neutral Coupling Nonhopping



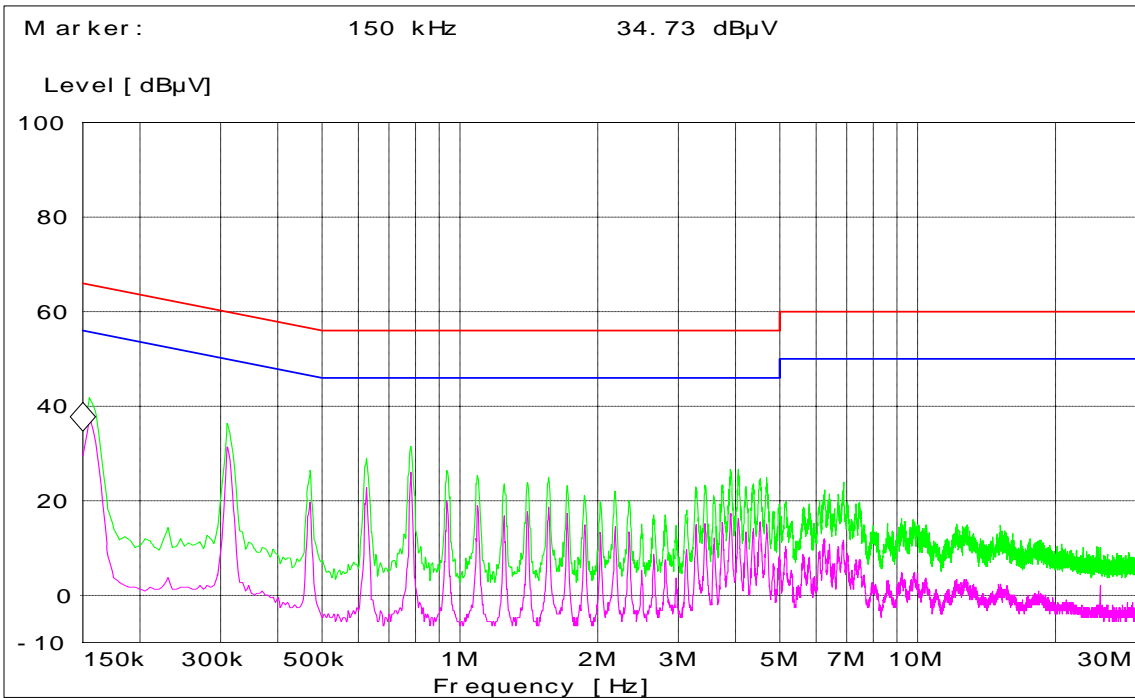
Channel 39 - 2441MHz - Tx Mode - Line Coupling Hopping



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



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



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

End of Test Report