



PERSONAL COMMUNICATIONS SECTOR

**PRODUCT SAFETY AND COMPLIANCE
EMC LABORATORY**

EMC TEST REPORT - Addendum

Test Report Number – 16421-1BT

Report Date – July 13, 2005

Revision 2

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

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

A handwritten signature in cursive script that reads 'Mark Sidlow'.

Signature:

Name: Mark Sidlow

Title: Senior Electrical Engineer

Date : 2005-13-05

This report must not be reproduced, except in full, without written approval from this laboratory.

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



Table of Contents

Test Report Details	4
Applicable Standards	5
Summary of Testing.....	6
General and Special Conditions.....	6
Equipment and Cable Configurations.....	7
Measuring Equipment and Calibration Information	7
Description of Bluetooth Transmitter	8
Measurement Procedures and Data.....	9
CARRIER FREQUENCY SEPARATION	9
Measurement Procedure.....	9
Measurement Results	9
Carrier Frequency Separation	10
NUMBER OF HOPPING FREQUENCIES.....	11
Measurement Procedure.....	11
Measurement Results	11
Number of Hopping Frequencies (Channels 0 – 39)	12
Number of Hopping Frequencies (Channels 39 – 78)	12
TIME OF OCCUPANCY (DWELL TIME).....	13
Measurement Procedure.....	13
Measurement Results	13
Dwell Time	14
20dB Bandwidth	15
Measurement Procedure.....	15
Measurement Results	15
FIELD STRENGTH OF SPURIOUS EMISSIONS.....	17
Measurement Procedure.....	17
Measurement Results	17
30-1000MHz Low Channel Dual Polarization X	18
30-1000MHz Low Channel Dual Polarization Y	19
30-1000MHz Low Channel Dual Polarization Z.....	20
30-1000MHz Mid Channel Dual Polarization X.....	21
30 -1000MHz Mid Channel Dual Polarization Y	22
30 -1000MHz Mid Channel Dual Polarization Z	23
30 -1000MHz High Channel Dual Polarization X.....	24
30 -1000MHz High Channel Dual Polarization Y.....	25
30 -1000MHz High Channel Dual Polarization Z	26
1-25 GHz Low Channel Dual Polarization X	27
1-25 GHz Low Channel Dual Polarization Y	28
1-25 GHz Low Channel Dual Polarization Z	29
1-25 GHz Mid Channel Dual Polarization X.....	30
1-25 GHz Mid Channel Dual Polarization Y.....	31
1-25 GHz Mid Channel Dual Polarization Z	32
1-25 GHz High Channel Dual Polarization X	33
1-25 GHz High Channel Dual Polarization Y	34
1-25 GHz High Channel Dual Polarization Z.....	35

Authorized Band Emissions Low Channel Dual Polarization X	36
Authorized Band Emissions Low Channel Dual Polarization Y	37
Authorized Band Emissions Low Channel Dual Polarization Z	38
Authorized Band Emissions Mid Channel Dual Polarization X.....	39
Authorized Band Emissions Mid Channel Dual Polarization Y.....	40
Authorized Band Emissions Mid Channel Dual Polarization Z	41
Authorized Band Emissions High Channel Dual Polarization X	42
Authorized Band Emissions High Channel Dual Polarization Y	43
Authorized Band Emissions High Channel Dual Polarization Z.....	44
PEAK OUTPUT POWER	45
Measurement Procedure.....	45
Measurement Results	45
Peak Output Power	45
BAND-EDGE COMPLIANCE OF RF CONDUCTED EMISSIONS	46
Measurement Procedure.....	46
Measurement Results	46
Low Band Edge with Hopping Disabled	47
Low Band Edge with Hopping Enabled	47
High Band Edge with Hopping Disabled.....	47
High Band Edge with Hopping Enabled.....	48
SPURIOUS RF CONDUCTED EMISSIONS	49
Measurement Procedure.....	49
Measurement Results	49
Conducted Spurious Emissions 30-3000MHz (Low Channel Enabled).....	50
Conducted Spurious Emissions 2-10GHz (Low Channel Enabled)	50
Conducted Spurious Emissions 10-20GHz (Low Channel Enabled)	51
Conducted Spurious Emissions 30-3000MHz (Mid Channel Enabled)	502
Conducted Spurious Emissions 10-20GHz (Mid Channel Enabled).....	512
Conducted Spurious Emissions 30-3000MHz (High Channel Enabled).....	54
Conducted Spurious Emissions 2-10GHz (High Channel Enabled).....	54
Conducted Spurious Emissions 10-20GHz (High Channel Enabled).....	55
Conducted Spurious Emissions 20-26.5GHz (High Chan Enabled)	55

Test Report Details

Tests Performed By: Motorola Personal Communications Sector
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: Motorola Personal Communications Sector
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

Tests Requested By: Motorola Inc.
Personal Communications Sector
600 North US Hwy 45
Libertyville, IL 60048

Product Type: Cellular Phone

Signaling Capability: GSM 1900, Bluetooth

Model Number: C390

Serial Numbers: TA18502060, TA18502009, TA18502013

Testing Complete Date: July 13, 2005

Applicable Standards

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

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

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

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

Summary of Testing

Test	Test Name	Pass/Fail
1	Carrier Frequency Separation	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	1.0 MHz
2	Number of Hopping	79
3	Time of Occupancy (Dwell Time)	2.93 ms
4	20 dB Bandwidth	829 kHz
5	Spurious RF Conducted Emissions	See plots
6	Field Strength of Spurious Emissions	See plots
7	Max Power	6.616 dBm
8	Band Edges	See plots
9	Conducted Spurious Emissions	See plots

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

General and Special Conditions

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

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

Equipment and Cable Configurations

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

Measuring Equipment and Calibration Information

Manufacturer	Equipment Type	Model No.	Serial Number	Cal. Due Date
Rohde & Schwarz	Receiver	ESI26	838786/010	2/7/2006
Hewlett-Packard	EMC Analyzer	8593EM	3536A00118	10/2/2005
Hewlett-Packard	EMC Analyzer	7405	US39440191	11/13/2005
ETS	DRG Horn Antenna	265	2455	5/25/2006
ETS	DRG Horn Antenna	3115	6222	10/4/2005
ETS	Log-Periodic Antenna	3148	1189	7/15/2005
ETS	Biconical Antenna	3110B	3370	11/14/2005
Attenuator	Weinschel	AS-6	6675	10/14/2005
Attenuator	Weinschel	AS-6	6677	11/4/2005
Rohde & Schwarz	Mobile Test Set	CMD 80	DE29008	N/A
Hewlett-Packard	Signal Generator	83623B	3844A01195	5/23/2006
Thermotron	Environmental Chamber	S-4	31580	1/18/2006
Giga-Tronics	Power Meter	8651A	8650508	12/27/2005
Hewlett-Packard	Pre-Amplifier	8447F	2805A03419	7/7/2005

All equipment is on a one-year calibration cycle.

Description of Bluetooth Transmitter

The C390 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.

The maximum Bluetooth antenna gain is 1.5dB.

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 C390 had its hopping function enabled. The following spectrum analyzer settings were used:

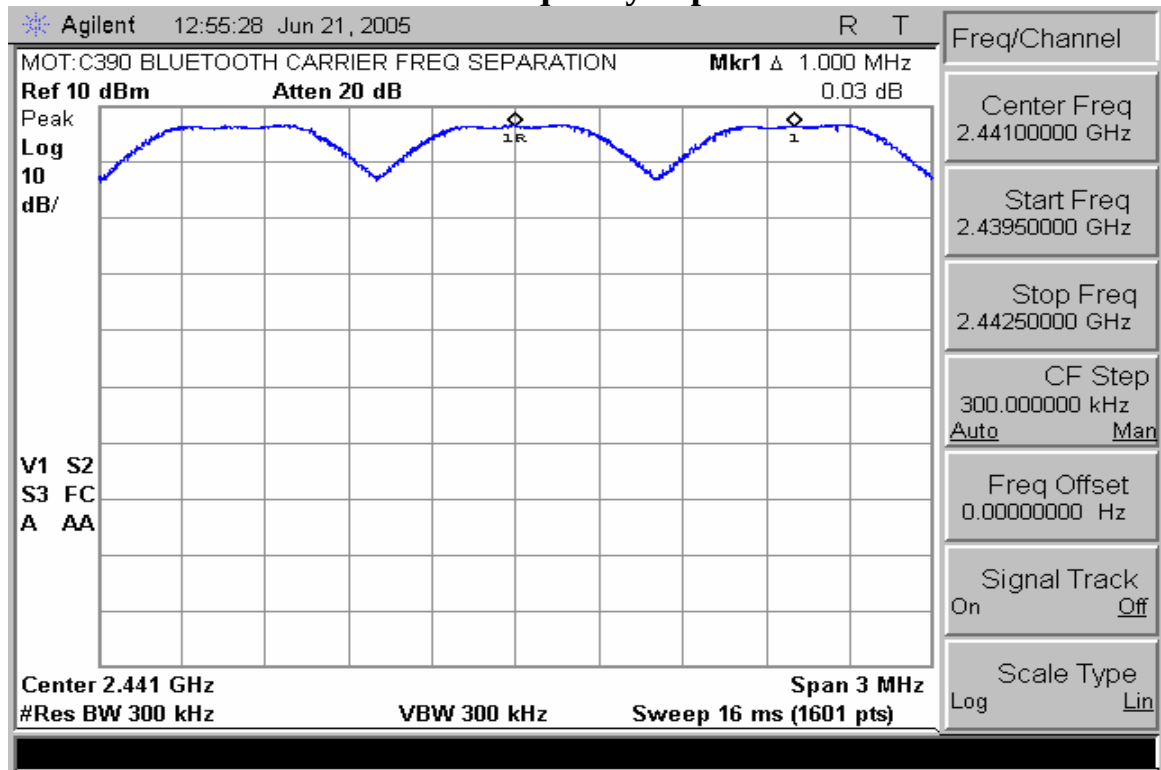
1. Span = wide enough to capture the peaks of two adjacent channels
2. Resolution (or IF) Bandwidth (RBW) $\geq$ 1% of the span
3. Video (or Average) Bandwidth (VBW) $\geq$ RBW
4. Sweep = auto
5. Detector function = peak
6. Trace = max hold

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

Measurement Results

See attached.

Carrier Frequency Separation



NUMBER OF HOPPING FREQUENCIES

CFR 47 Part 15.247

Measurement Procedure

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

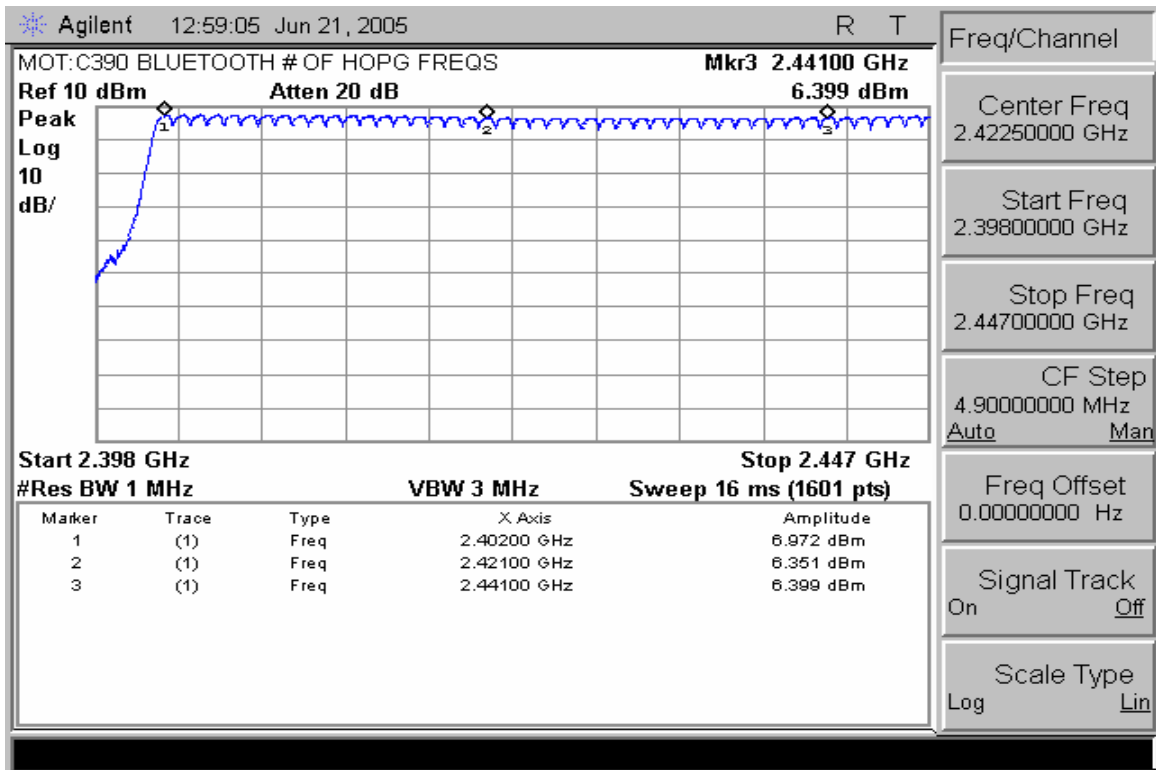
The Bluetooth frequency hopping function of the EUT was enabled. The spectrum analyzer used the following settings:

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

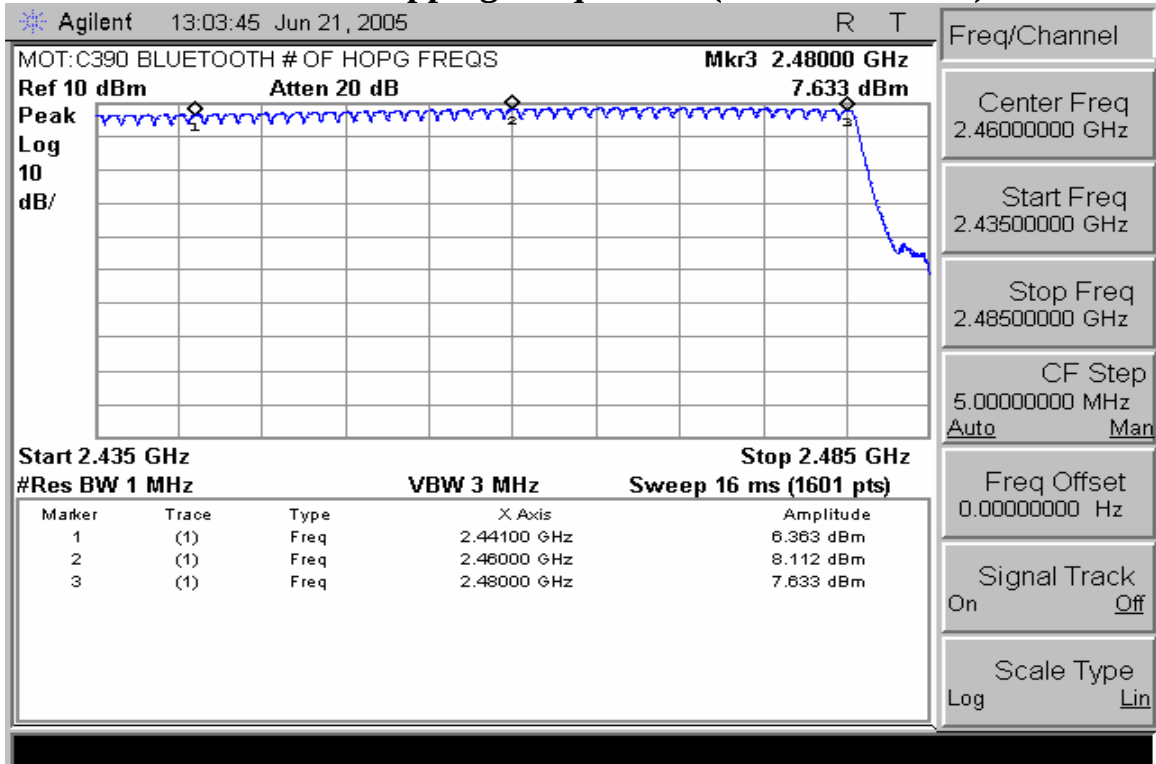
The trace was allowed to stabilize.

Measurement Results

See attached.



Number of Hopping Frequencies (Channels 0 – 39)



Number of Hopping Frequencies (Channels 39 – 78)

TIME OF OCCUPANCY (DWELL TIME)

CFR47 Part 15.247

Measurement Procedure

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

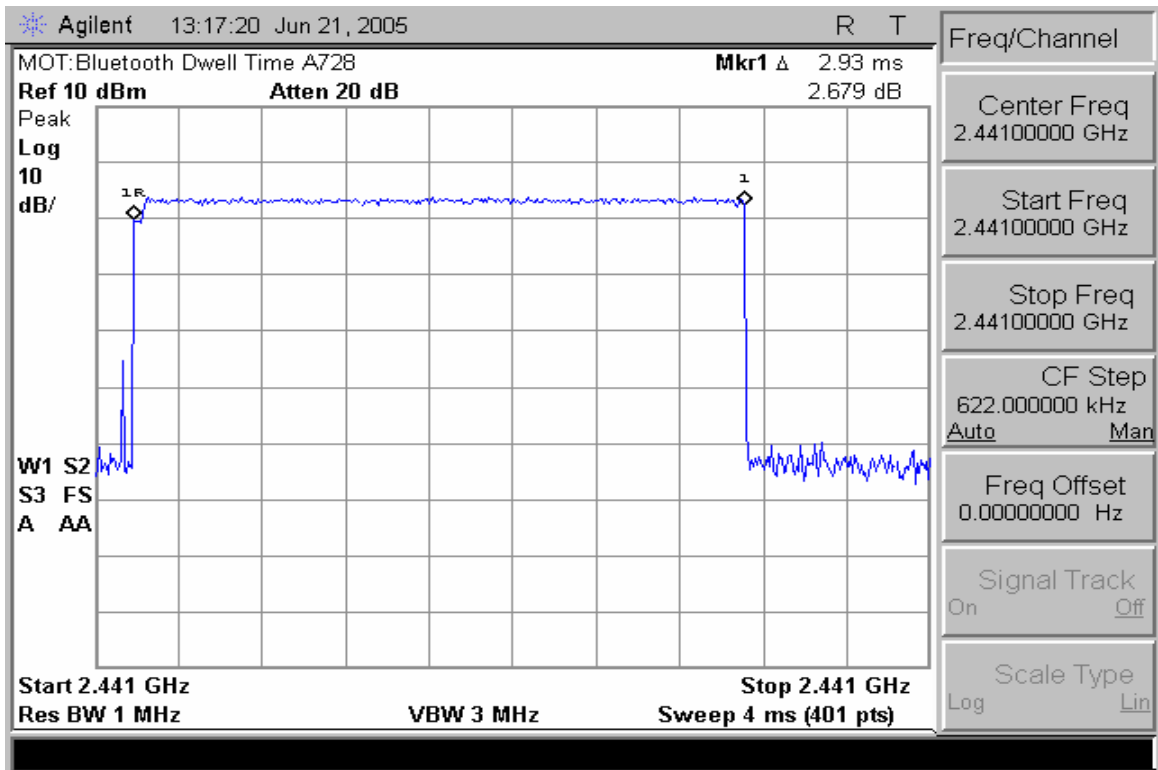
The Bluetooth hopping function of the EUT was enabled. The following spectrum analyzer settings were used:

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

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

Measurement Results

Attached



Dwell Time

20dB Bandwidth

CFR 47 Part 15.247

Measurement Procedure

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

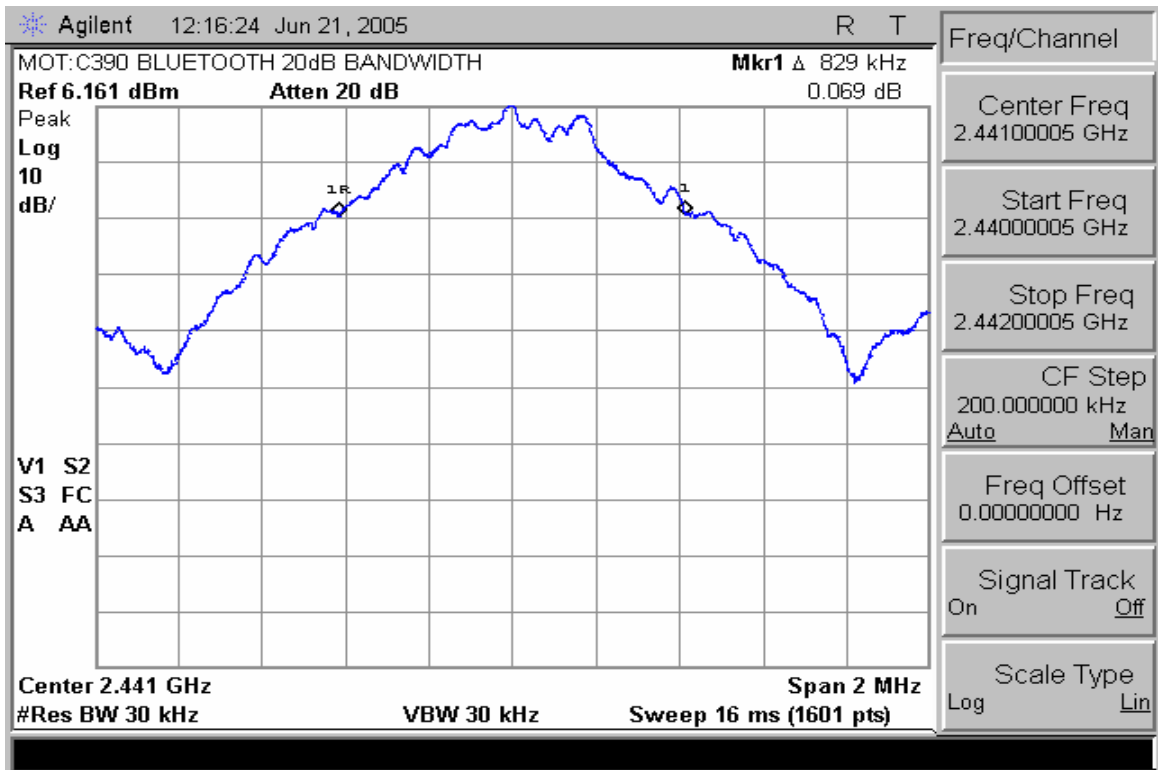
The Bluetooth frequency hopping function of the EUT was enabled. The spectrum analyzer used the following settings:

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

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

Measurement Results

Attached



FIELD STRENGTH OF SPURIOUS EMISSIONS

CFR 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.

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

A fully charged battery was used for the supply voltage.

Measurement Results

Attached

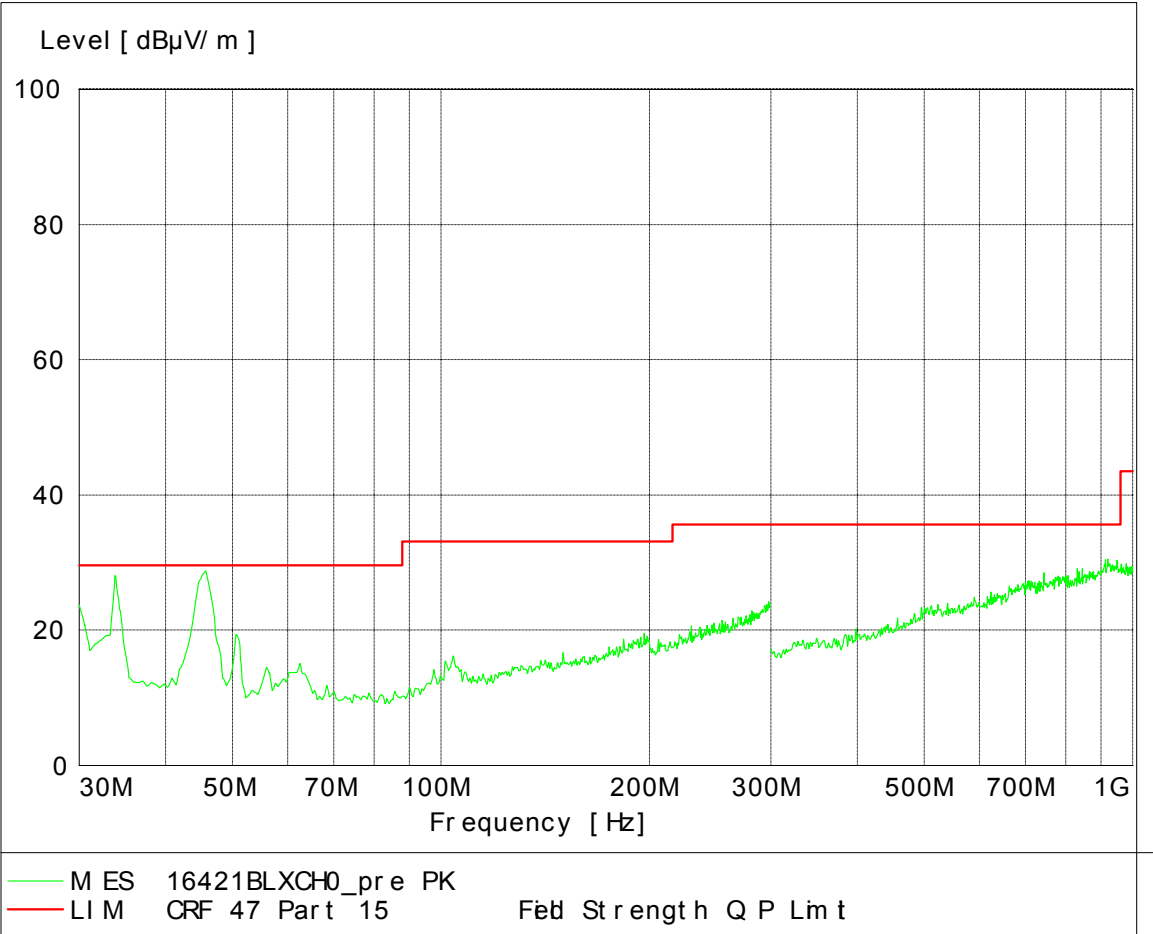
Primary Radiated Emissions

Motorola

Model: C390
 ID Code: 16421-1

BT CH0 2402MHz X-Axis

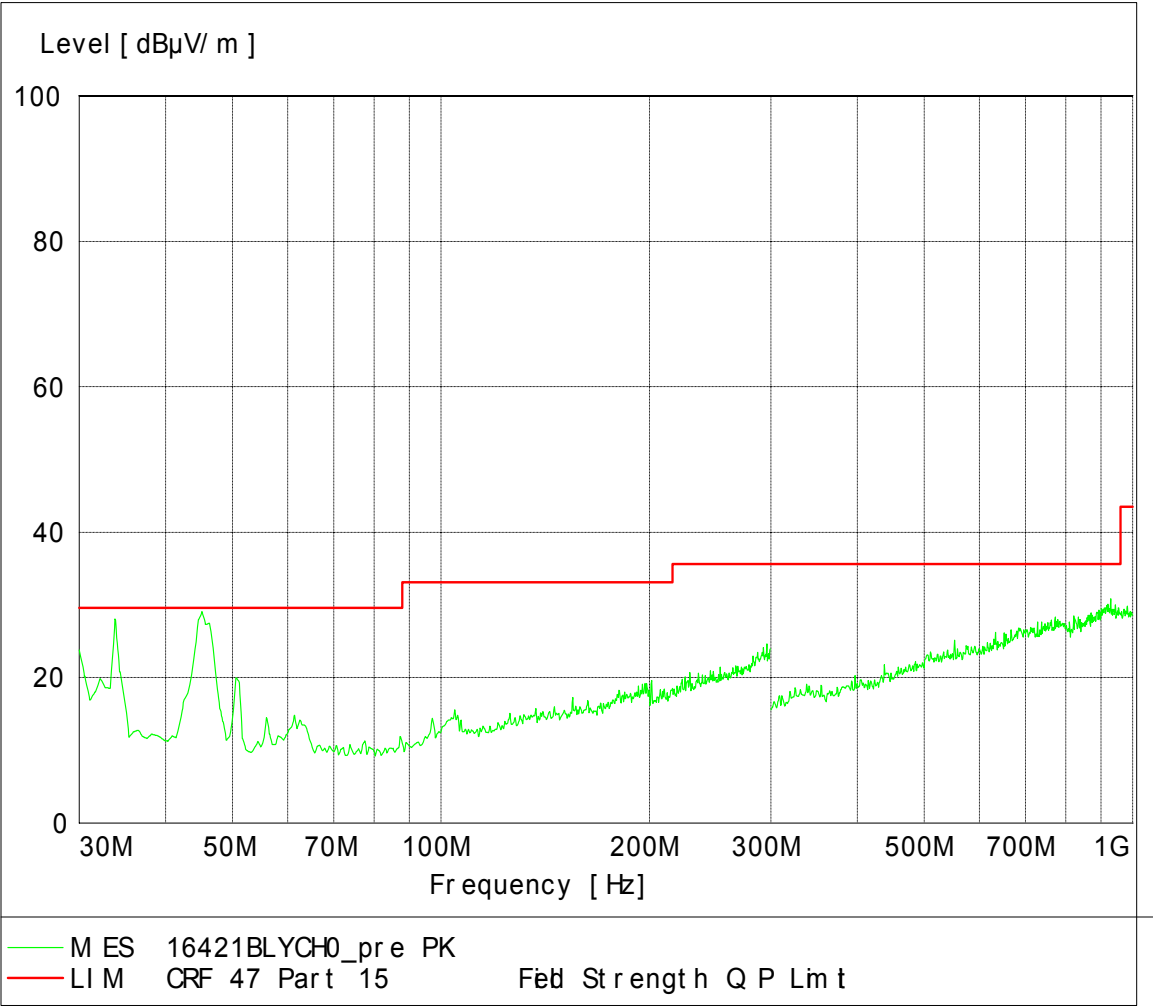
GREEN HORIZONTAL AND VERTICAL



30-1000MHz Low Channel Dual Polarization X

Frequency MHz	Measured dBµV/m	Detector Type	Limit dBµV/m
33.78	28.12	Qusi Peak	29.6
45.69	28.78	Qusi Peak	29.6
50.56	19.38	Qusi Peak	29.6
62.46	15.06	Qusi Peak	29.6
104.12	16.15	Qusi Peak	33.1

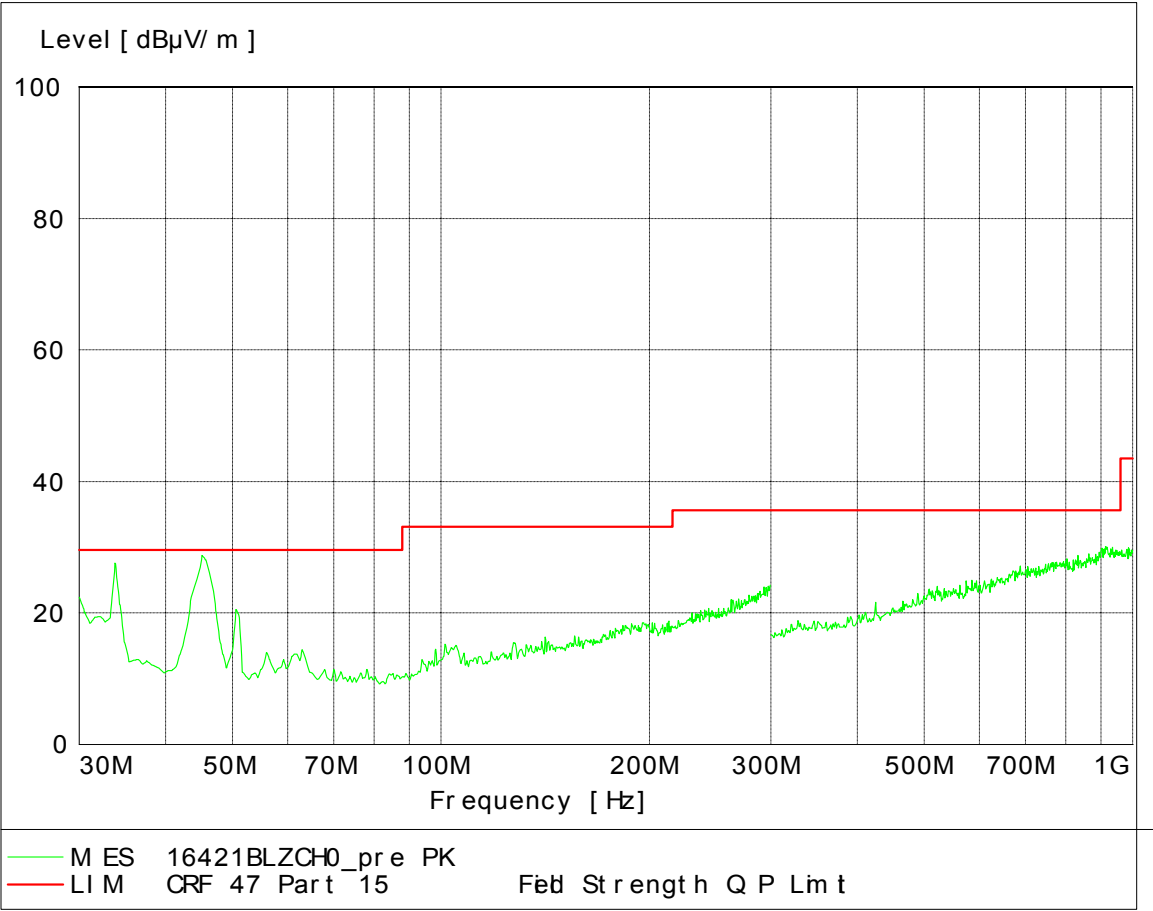
Primary Radiated Emissions
 Motorola
 Model: C390 ID Code: 16421-1
 BT CH0 2402MHz Y-Axis
 GREEN HORIZONTAL AND VERTICAL



30-1000MHz Low Channel Dual Polarization Y

Frequency MHz	Measured dBµV/m	Detector Type	Limit dBµV/m
33.78	28.04	Qusi Peak	29.6
45.15	29.08	Qusi Peak	29.6
50.56	19.96	Qusi Peak	29.6
61.38	14.72	Qusi Peak	29.6
104.67	15.60	Qusi Peak	33.1

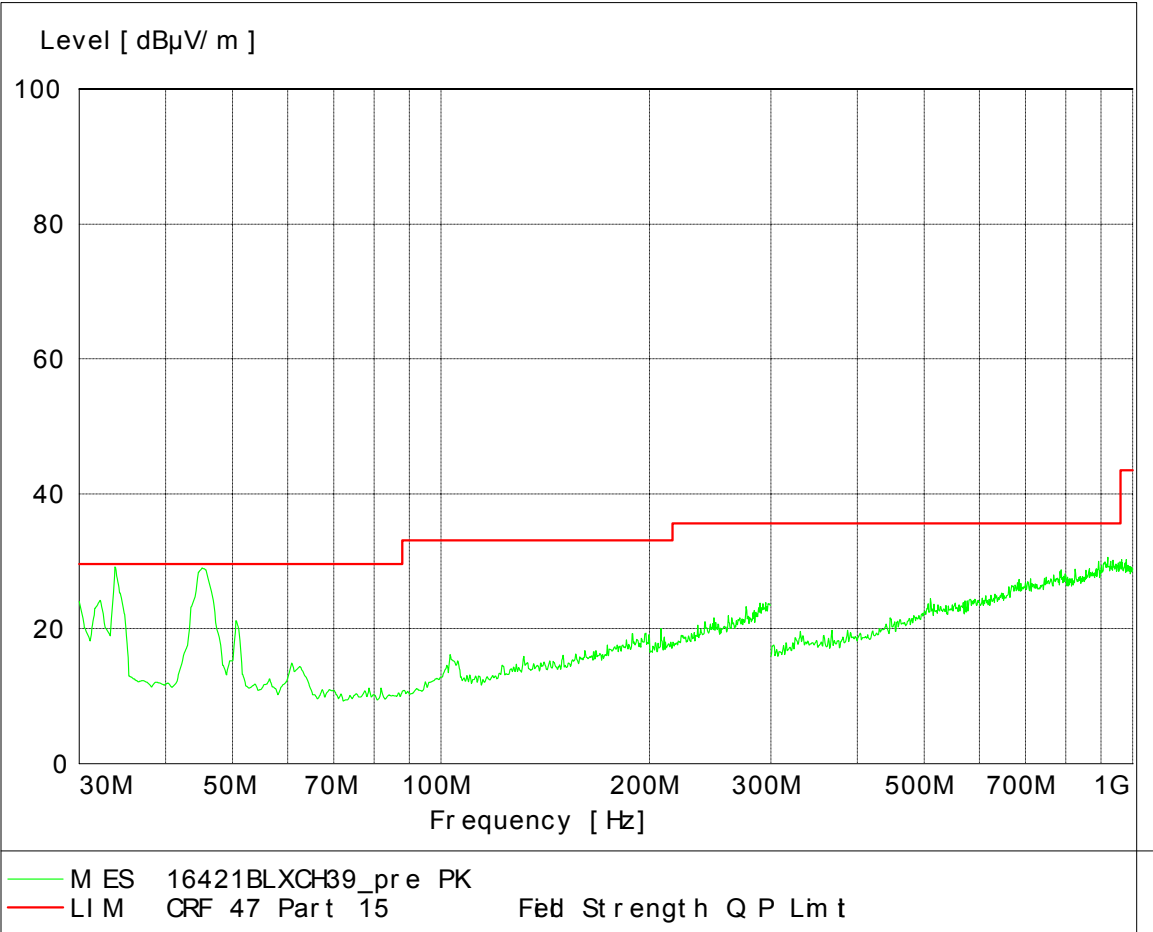
Primary Radiated Emissions
 Motorola
 Model: C390 ID Code: 16421-1
 BT CH0 2402MHz Z-Axis
 GREEN HORIZONTAL AND VERTICAL



30-1000MHz Low Channel Dual Polarization Z

Frequency MHz	Measured dB μ V/m	Detector Type	Limit dB μ V/m
33.78	27.61	Qusi Peak	29.6
45.15	28.77	Qusi Peak	29.6
50.56	20.51	Qusi Peak	29.6

Primary Radiated Emissions
 Motorola
 Model: C390 ID Code: 16421-1
 BT CH39 2442MHz X-Axis
 GREEN HORIZONTAL AND VERTICAL



30-1000MHz Mid Channel Dual Polarization X

Frequency MHz	Measured dB μ V/m	Detector Type	Limit dB μ V/m
32.16	24.25	Qusi Peak	29.6
33.78	29.16	Qusi Peak	29.6
45.15	29.03	Qusi Peak	29.6
50.56	21.22	Qusi Peak	29.6
60.84	14.93	Qusi Peak	29.6
60.84	14.93	Qusi Peak	29.6
103.58	15.40	Qusi Peak	33.1

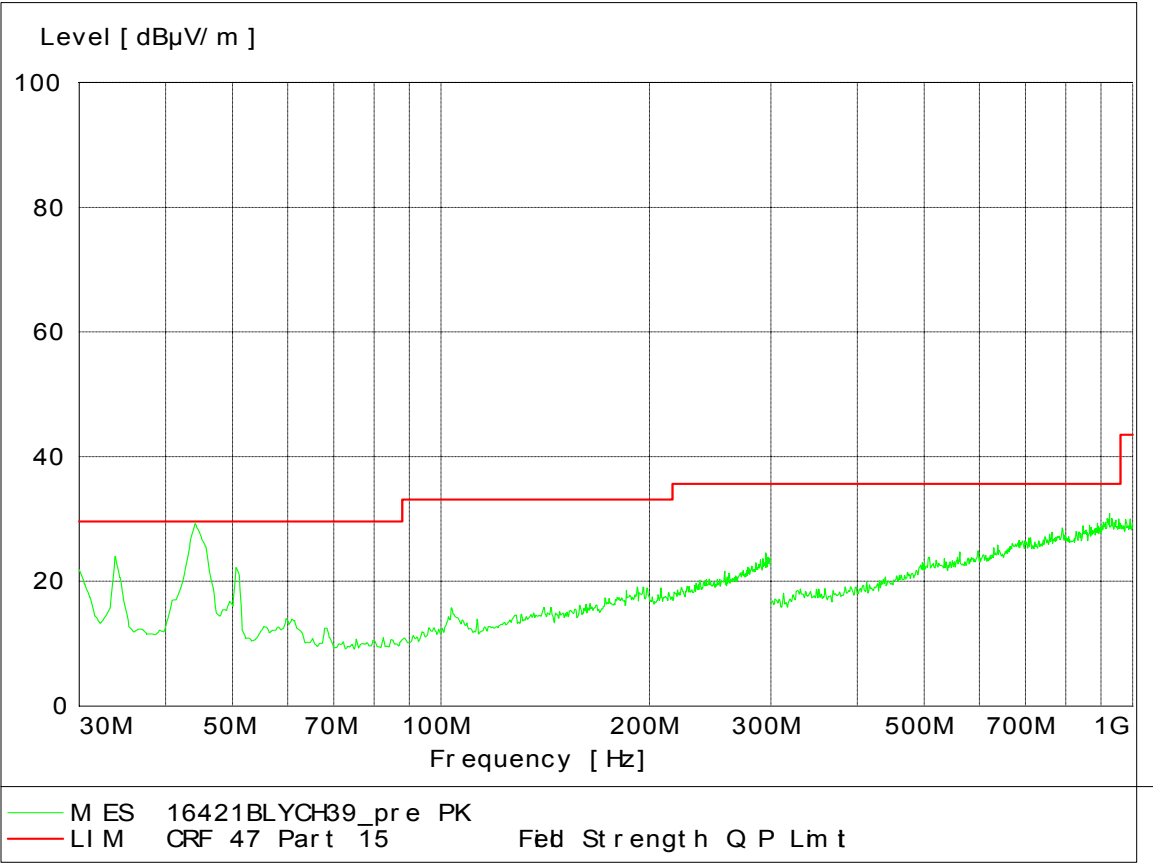
Primary Radiated Emissions

Motorola

Model: C390
 ID Code: 16421-1

BT CH39 2442MHz Y-Axis

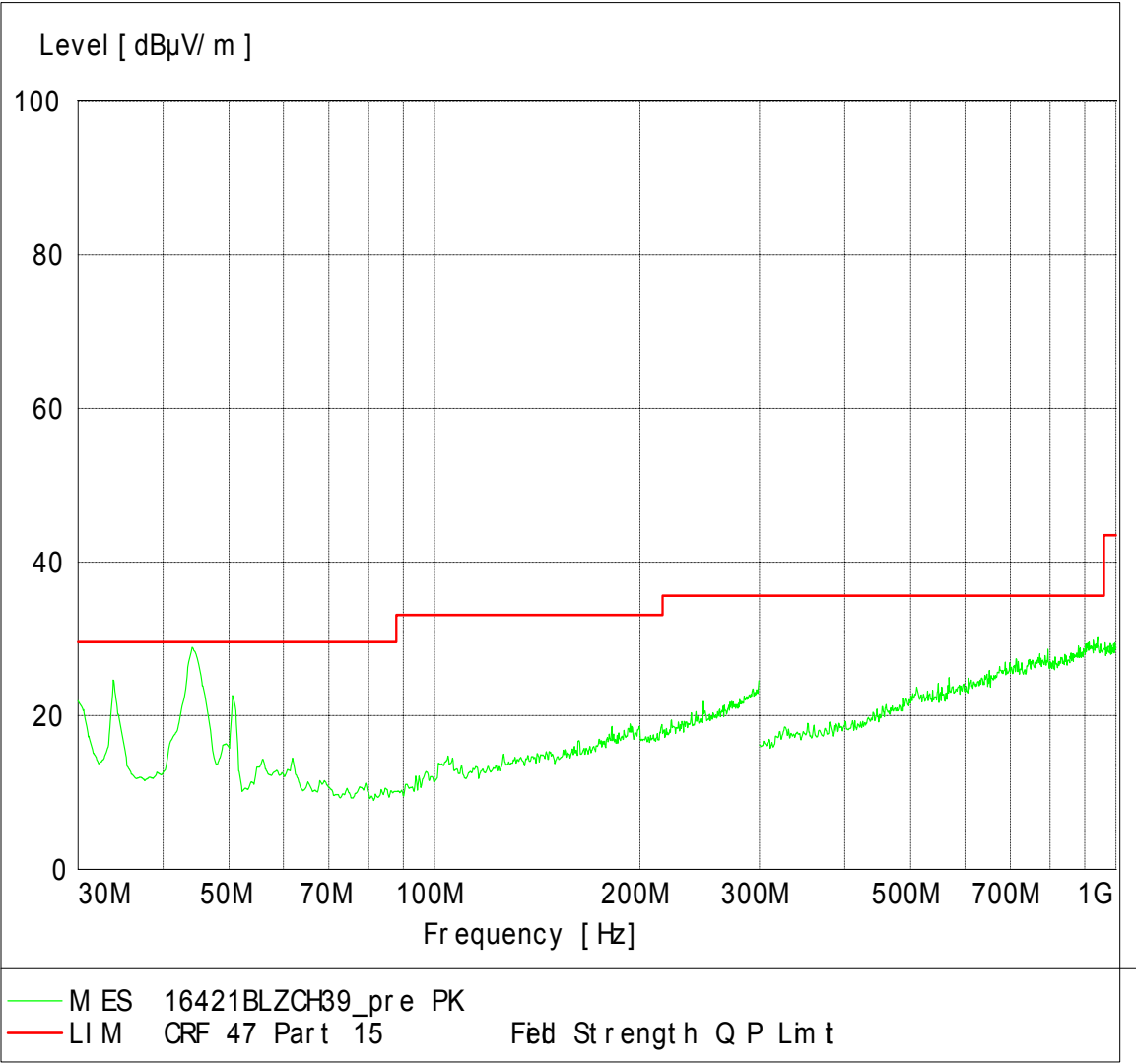
GREEN HORIZONTAL AND VERTICAL



30 -1000MHz Mid Channel Dual Polarization Y

Frequency MHz	Measured dBµV/m	Detector Type	Limit dBµV/m
33.78	24.24	Qusi Peak	29.6
44.06	29.24	Qusi Peak	29.6
50.56	22.21	Qusi Peak	29.6
103.58	15.74	Qusi Peak	33.1

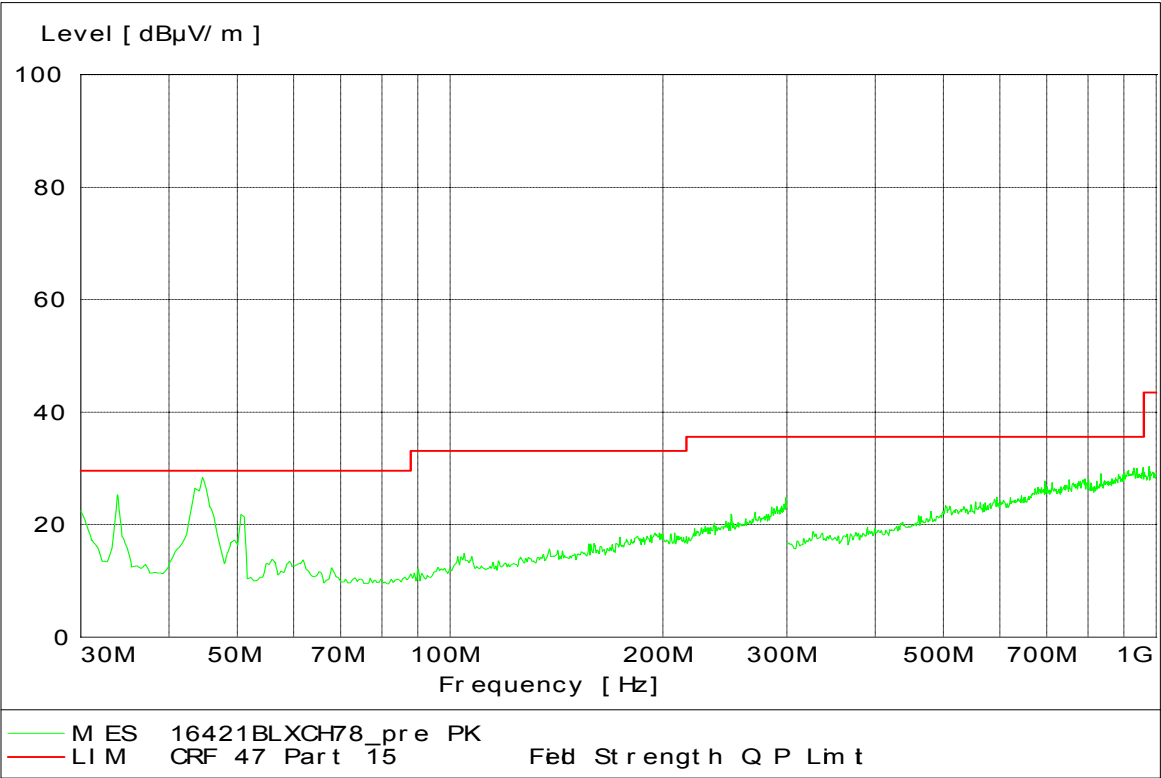
Primary Radiated Emissions
 Motorola
 Model: C390 ID Code: 16421-1
 BT CH39 2442MHz Z-Axis
 GREEN HORIZONTAL AND VERTICAL



30 -1000MHz Mid Channel Dual Polarization Z

Frequency MHz	Measured dBµV/m	Detector Type	Limit dBµV/m
33.78	24.64	Qusi Peak	29.6
44.06	28.94	Qusi Peak	29.6
50.56	22.66	Qusi Peak	29.6

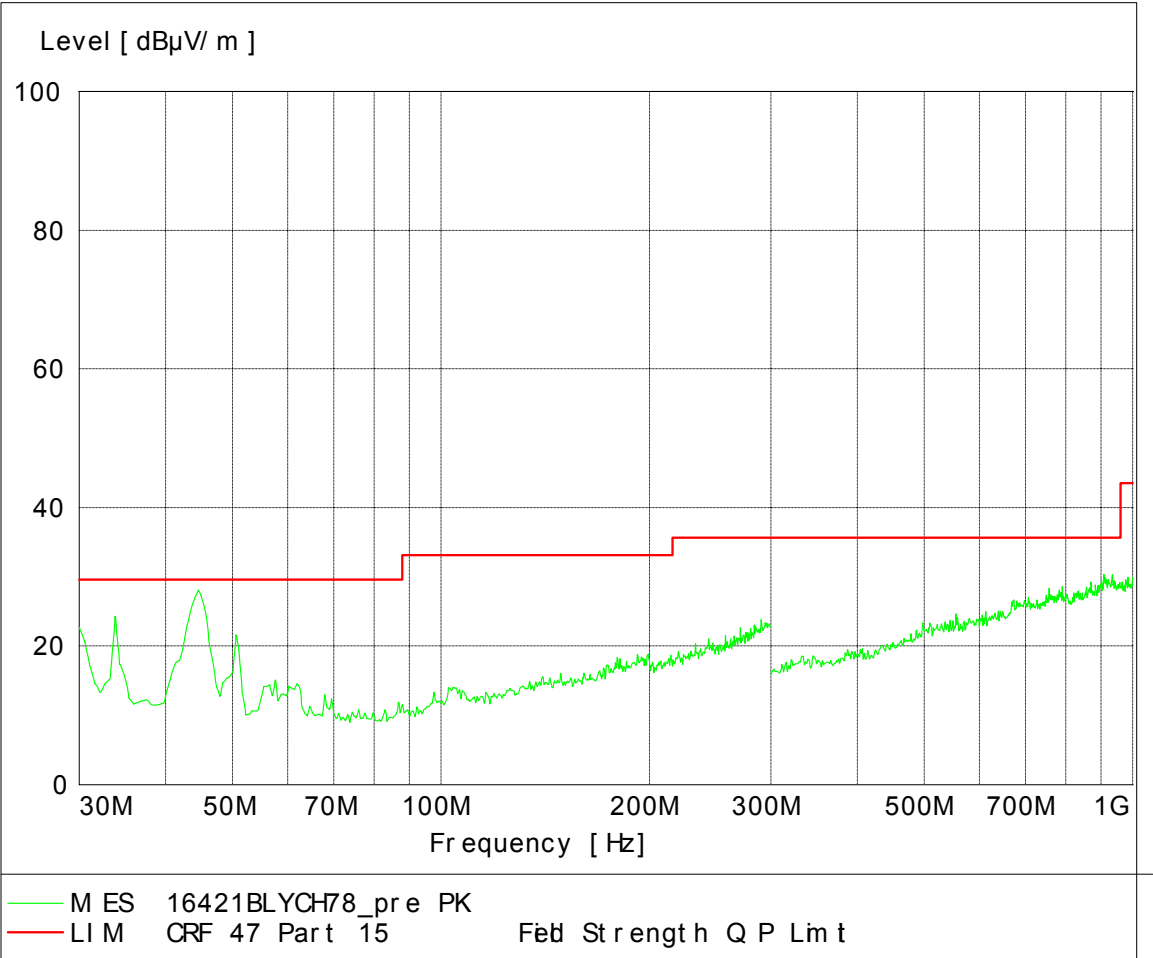
Primary Radiated Emissions
 Motorola
 Model: C390 ID Code: 16421-1
 BT CH78 2480MHz X-Axis
 GREEN HORIZONTAL AND VERTICAL



30 -1000MHz High Channel Dual Polarization X

Frequency MHz	Measured dBµV/m	Detector Type	Limit dBµV/m
33.78	25.32	Qusi Peak	29.6
44.60	28.39	Qusi Peak	29.6
50.56	21.79	Qusi Peak	29.6

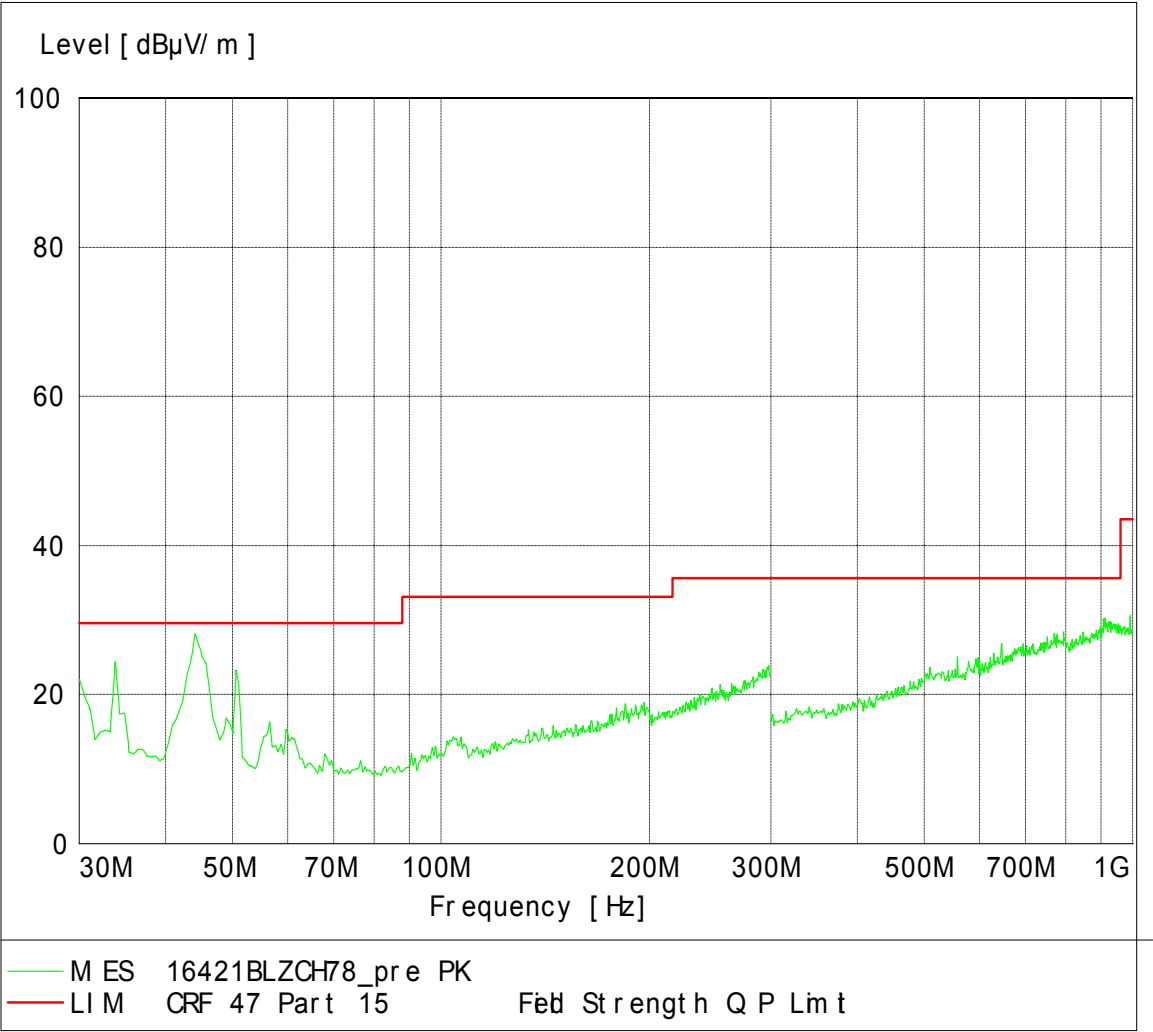
Primary Radiated Emissions
 Motorola
 Model: C390 ID Code: 16421-1
 BT CH78 2480MHz Y-Axis
 GREEN HORIZONTAL AND VERTICAL



30 -1000MHz High Channel Dual Polarization Y

Frequency MHz	Measured dBµV/m	Detector Type	Limit dBµV/m
33.78	24.32	Qusi Peak	29.6
44.60	28.08	Qusi Peak	29.6
50.56	21.65	Qusi Peak	33.1

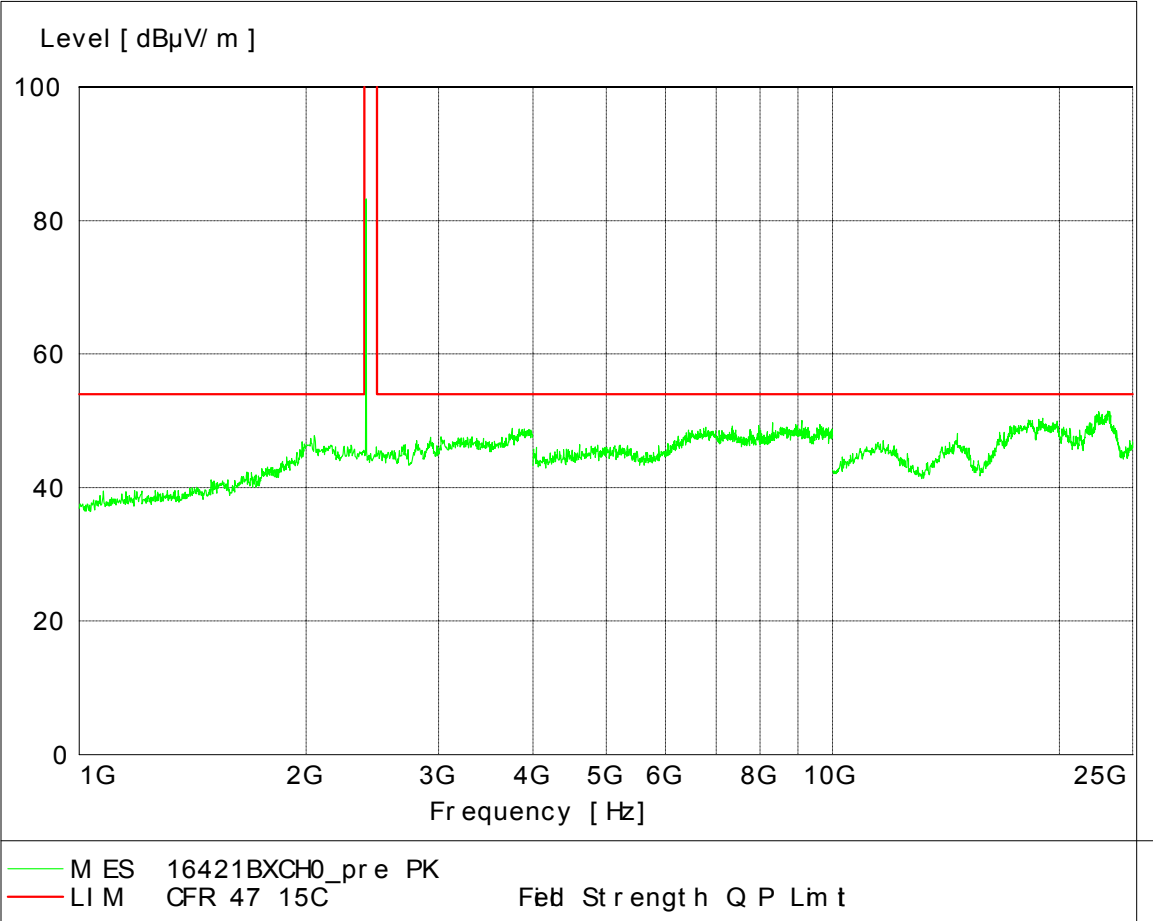
Primary Radiated Emissions
 Motorola
 Model: C390 ID Code: 16421-1
 BT CH78 2480MHz Z-Axis
 GREEN HORIZONTAL AND VERTICAL



30 -1000MHz High Channel Dual Polarization Z

Frequency MHz	Measured dBµV/m	Detector Type	Limit dBµV/m
33.78	24.35	Qusi Peak	29.6
44.60	28.16	Qusi Peak	29.6
50.56	23.30	Qusi Peak	33.1

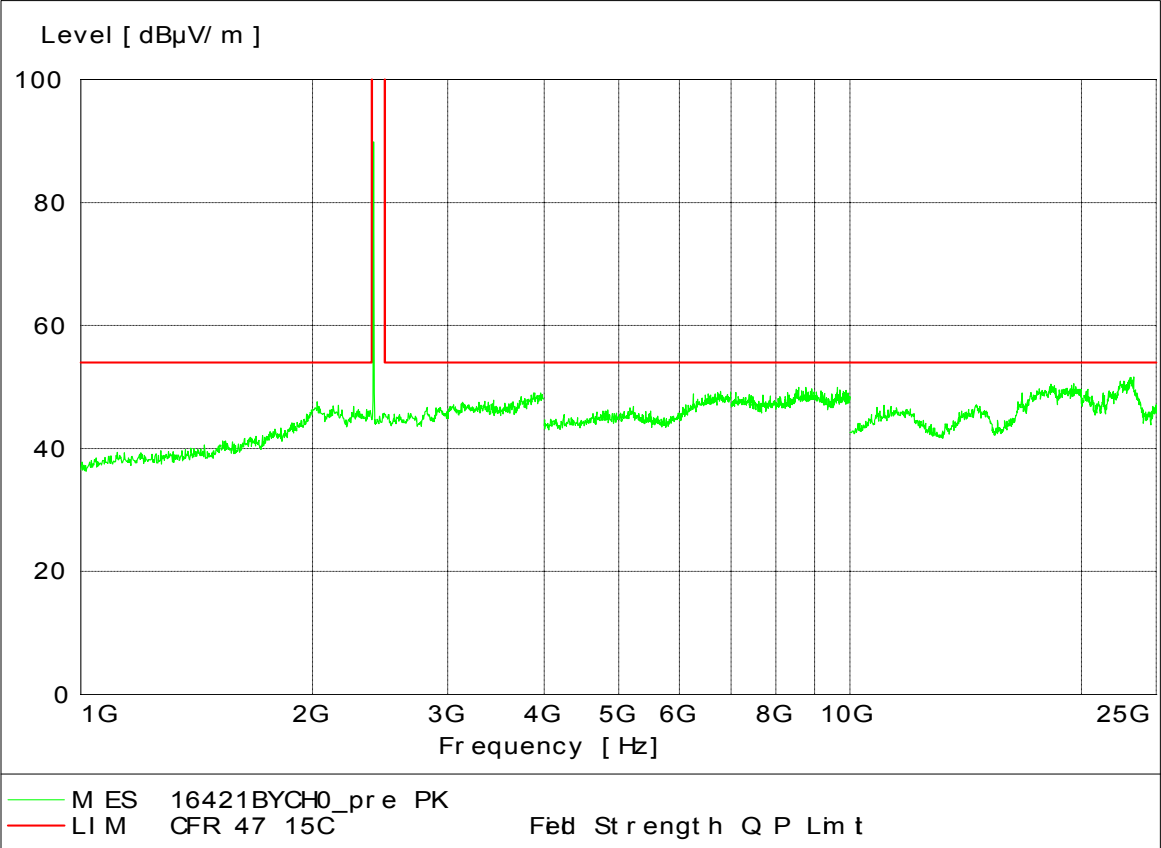
Primary Radiated Emissions
 Motorola
 Model: C390 ID Code: 16421-1
 BT CH0 2402MHz X-Axis
 GREEN HORIZONTAL AND VERTICAL



1-25 GHz Low Channel Dual Polarization X

Frequency MHz	Measured dB μ V/m	Detector Type	Limit dB μ V/m
2400	83.21	Peak	999
14601	46.04	Peak	54

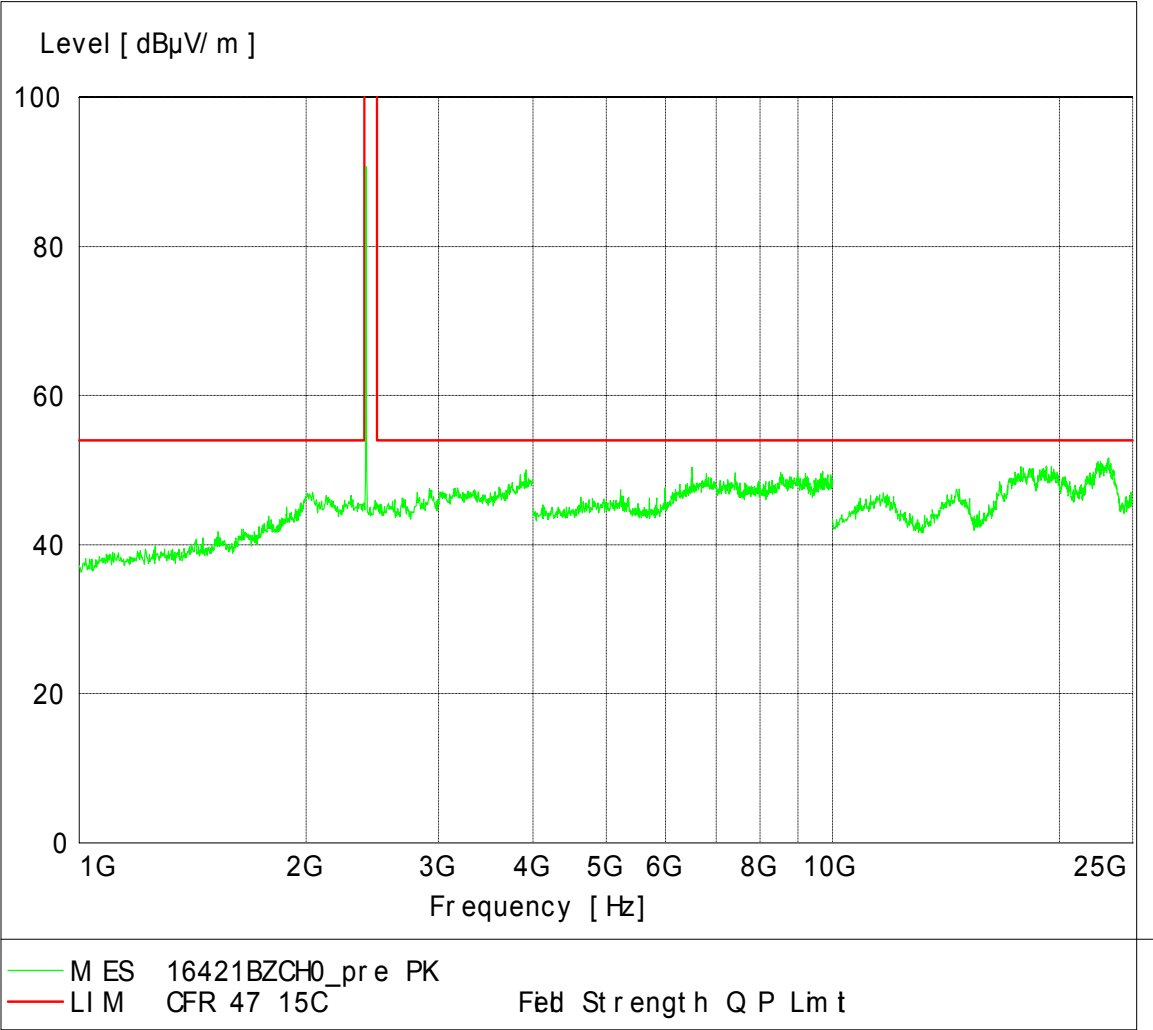
Primary Radiated Emissions
 Motorola
 Model: C390 ID Code: 16421-1
 BT CH0 2402MHz Y-Axis
 GREEN HORIZONTAL AND VERTICAL



1-25 GHz Low Channel Dual Polarization Y

Frequency MHz	Measured dBµV/m	Detector Type	Limit dBµV/m
2400	89.83	Peak	999

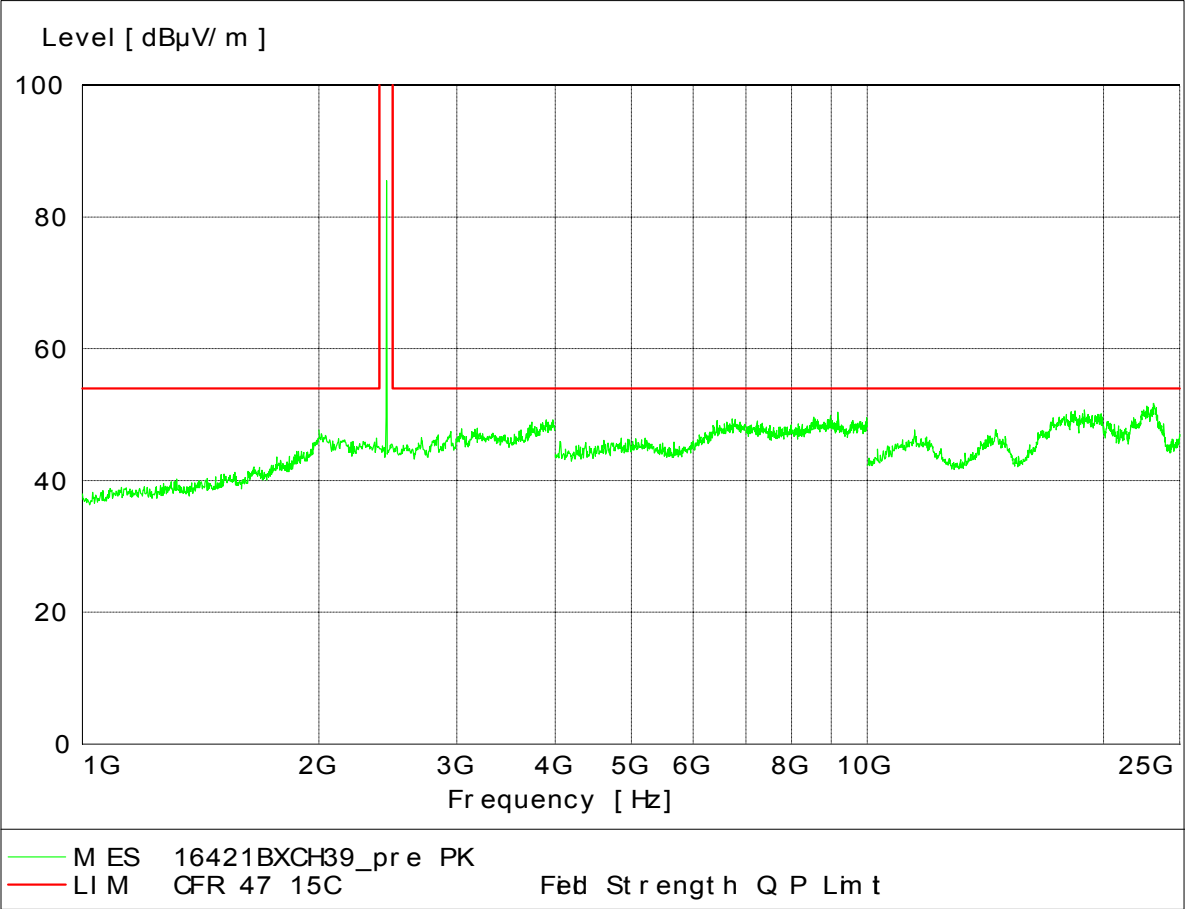
Primary Radiated Emissions
 Motorola
 Model: C390 ID Code: 16421-1
 BT CH0 2402MHz Z-Axis
 GREEN HORIZONTAL AND VERTICAL



1-25 GHz Low Channel Dual Polarization Z

Frequency MHz	Measured dB μ V/m	Detector Type	Limit dB μ V/m
2400	90.71	Peak	999
7438	48.51	Peak	54

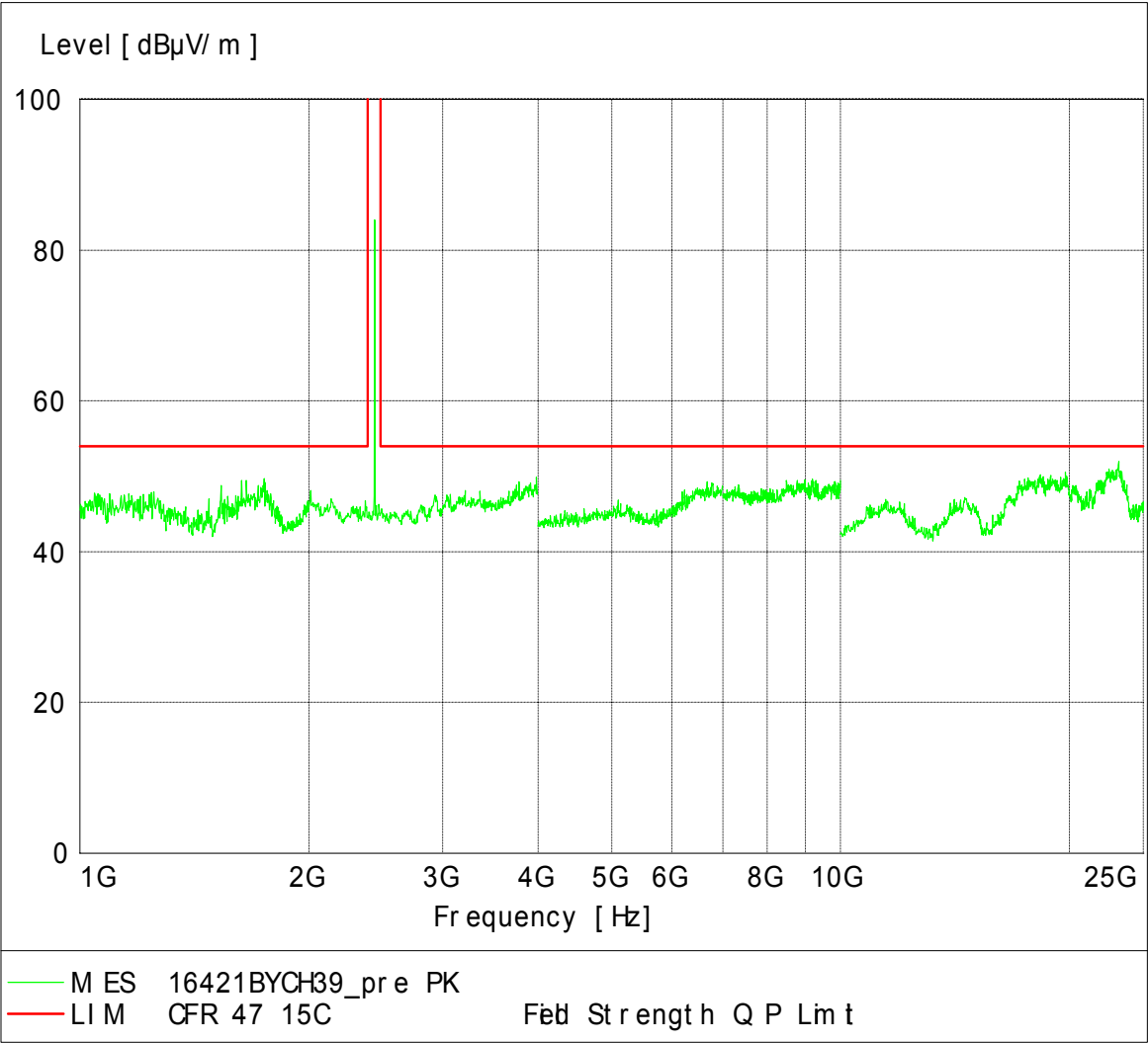
Primary Radiated Emissions
 Motorola
 Model: C390 ID Code: 16421-1
 BT CH39 2441MHz X-Axis
 GREEN HORIZONTAL AND VERTICAL



1-25 GHz Mid Channel Dual Polarization X

Frequency MHz	Measured dBµV/m	Detector Type	Limit dBµV/m
24408	85.5	Peak	999

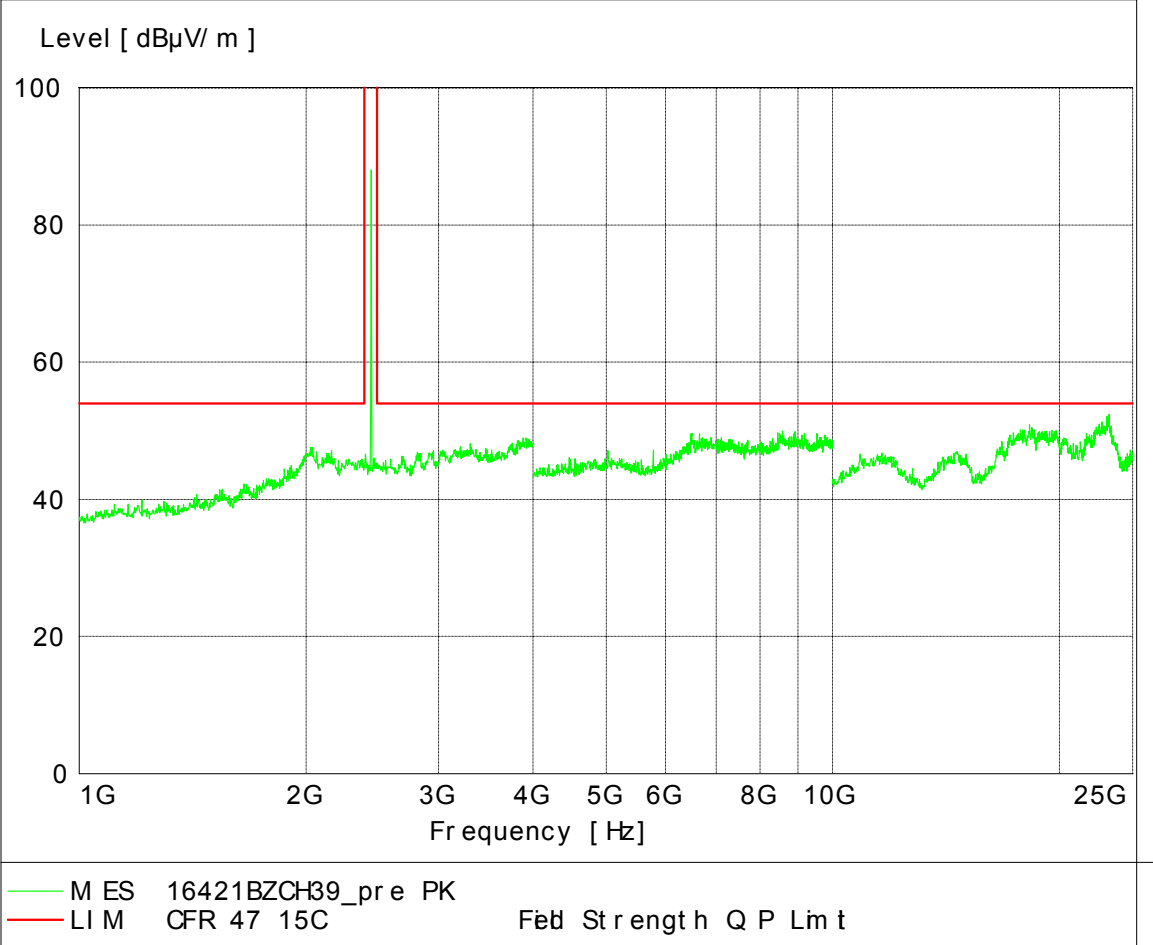
Primary Radiated Emissions
 Motorola
 Model: C390 ID Code: 16421-1
 BT CH39 2441MHz Y-Axis
 GREEN HORIZONTAL AND VERTICAL



1-25 GHz Mid Channel Dual Polarization Y

Frequency MHz	Measured dB μ V/m	Detector Type	Limit dB μ V/m
2440	83.96	Peak	999

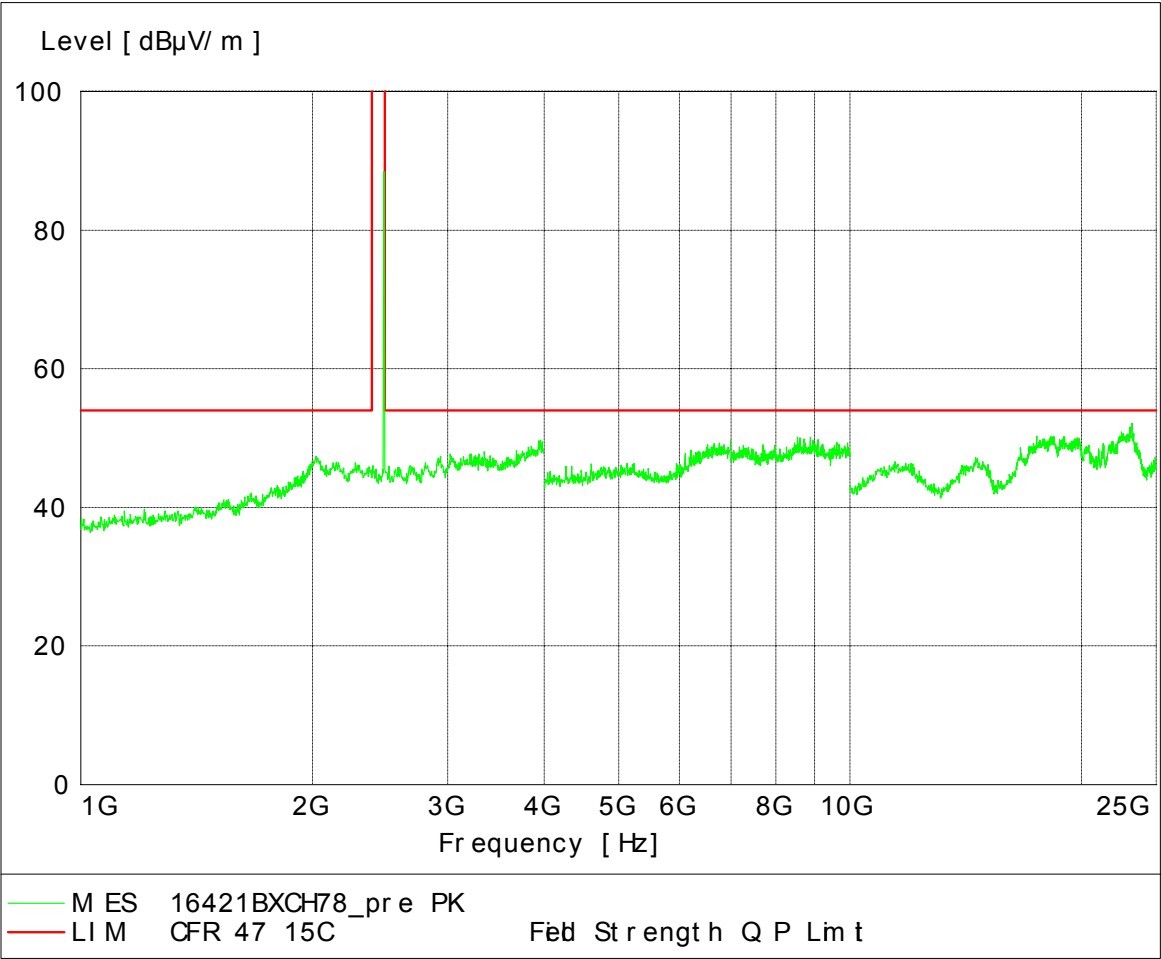
Primary Radiated Emissions
 Motorola
 Model: C390 ID Code: 16421-1
 BT CH39 2441MHz Z-Axis
 GREEN HORIZONTAL AND VERTICAL



1-25 GHz Mid Channel Dual Polarization Z

Frequency MHz	Measured dBµV/m	Detector Type	Limit dBµV/m
2440	88.00	Peak	999

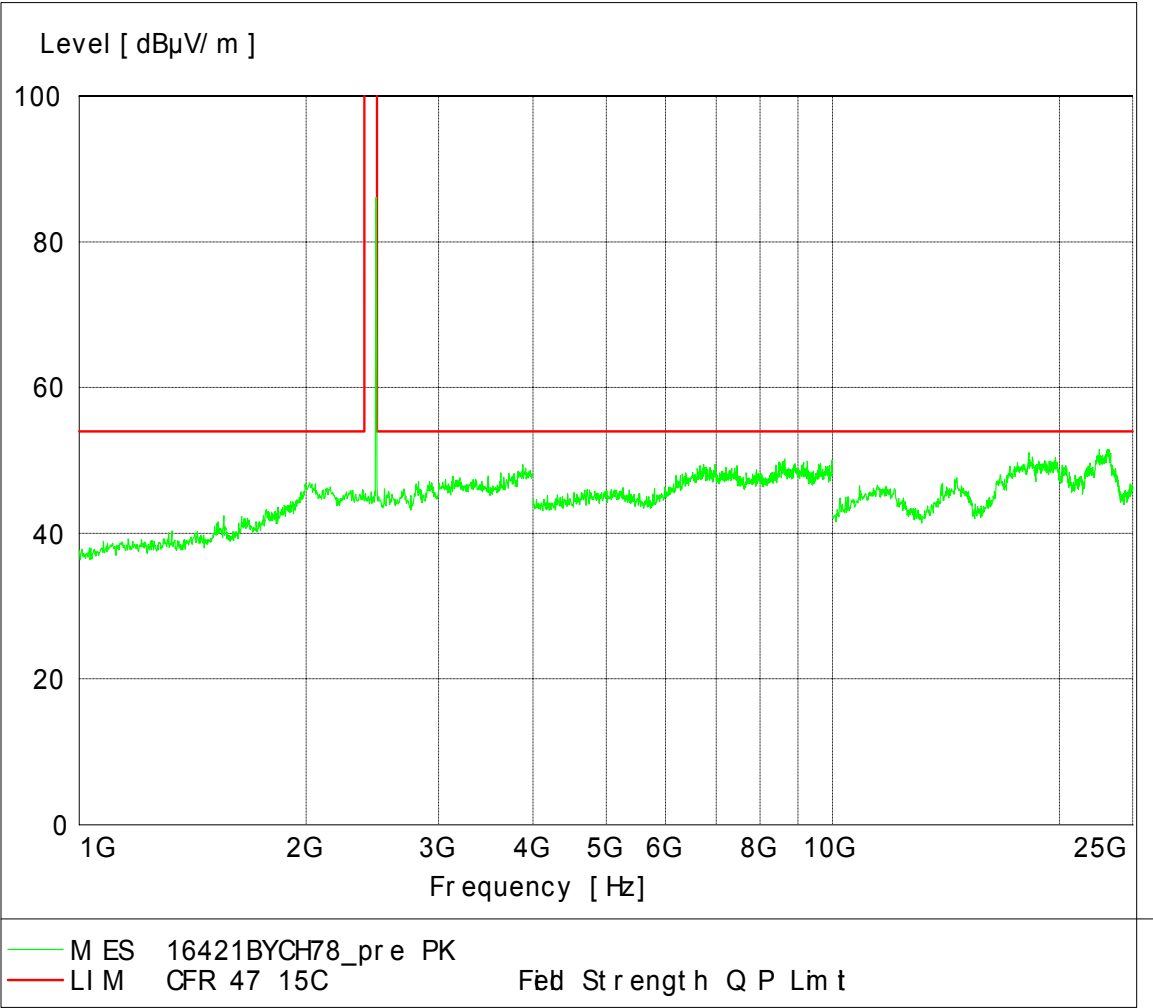
Primary Radiated Emissions
 Motorola
 Model: C390 ID Code: 16421-1
 BT CH78 2480MHz X-Axis
 GREEN HORIZONTAL AND VERTICAL



1-25 GHz High Channel Dual Polarization X

Frequency MHz	Measured dBµV/m	Detector Type	Limit dBµV/m
2477	88.39	Peak	99

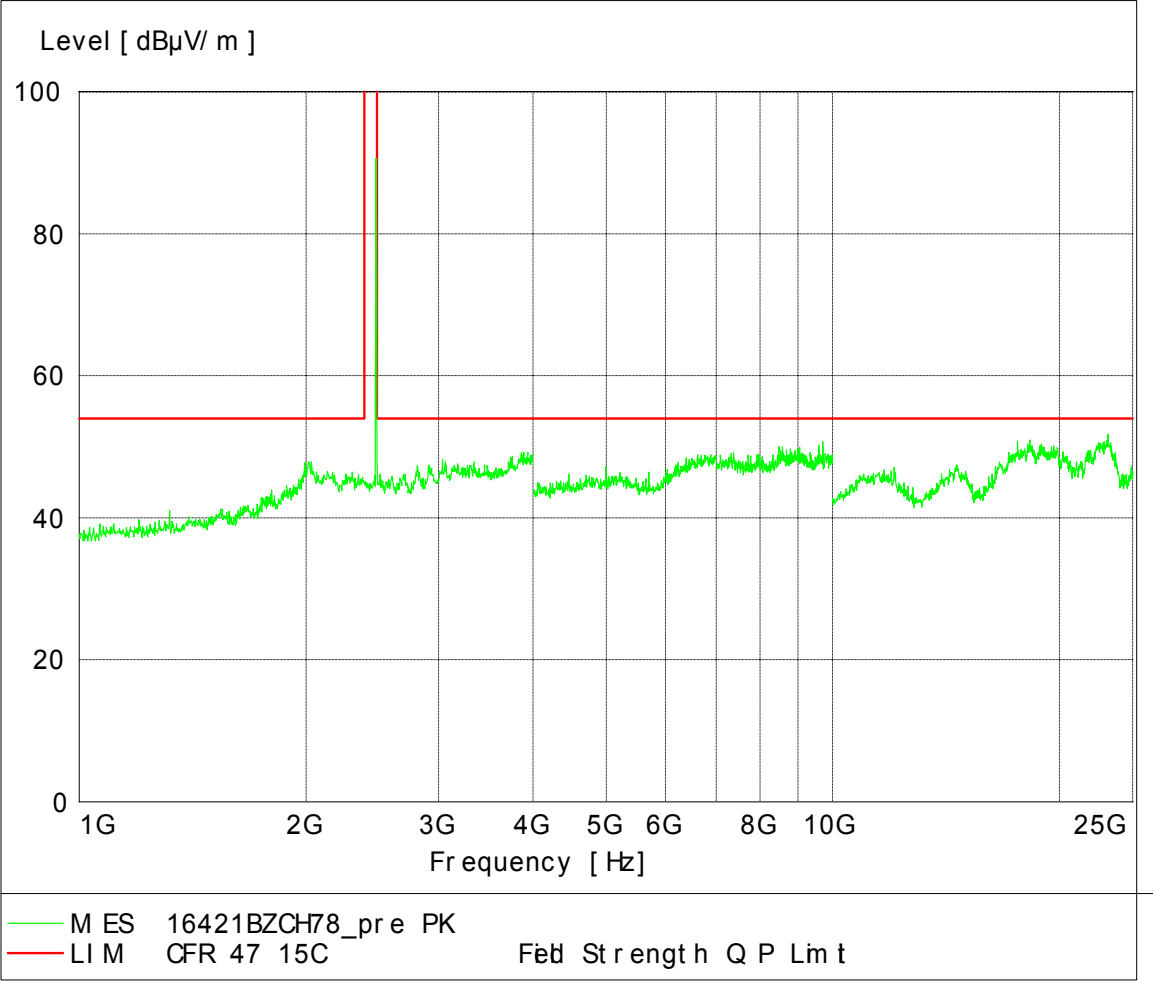
Primary Radiated Emissions
 Motorola
 Model: C390 ID Code: 16421-1
 BT CH78 2480MHz Y-Axis
 GREEN HORIZONTAL AND VERTICAL



1-25 GHz High Channel Dual Polarization Y

Frequency MHz	Measured dBµV/m	Detector Type	Limit dBµV/m
2477	86.02	Peak	999
14601	47.55	Peak	54

Primary Radiated Emissions
 Motorola
 Model: C390 ID Code: 16421-1
 BT CH78 2480MHz Z-Axis
 GREEN HORIZONTAL AND VERTICAL



1-25 GHz High Channel Dual Polarization Z

Frequency MHz	Measured dBµV/m	Detector Type	Limit dBµV/m
2477	90.57	Peak	999
9705	50.67	Peak	54
12068	47.1	Peak	54
17615	49.42	Peak	54
19665	50.16	Peak	54

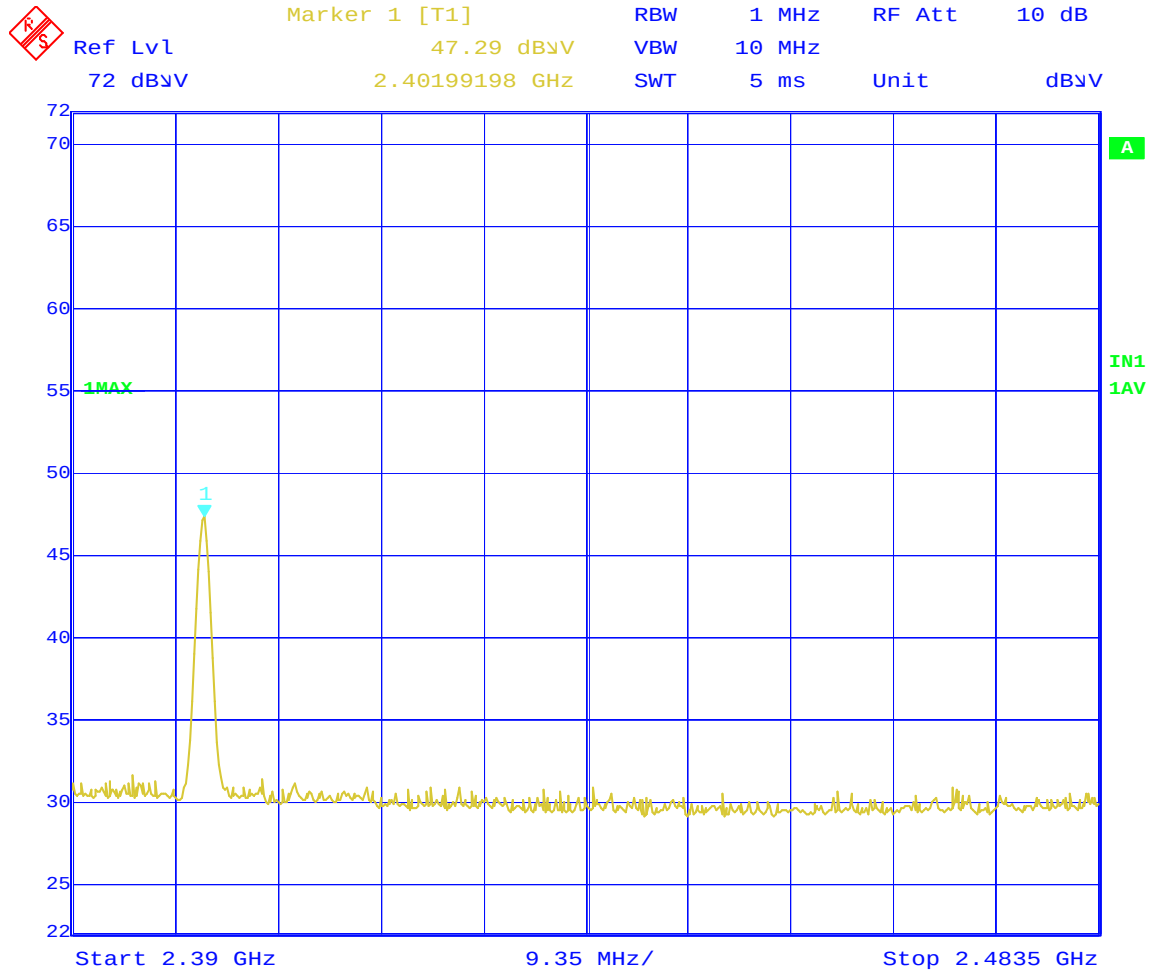
Radiated Emissions Band Edge

Motorola

Model: C390

ID Code: 16421-1

BT CH0 2402MHz X-Axis



Date: 7.JUL.2005 08:27:28

Authorized Band Emissions Low Channel Dual Polarization X

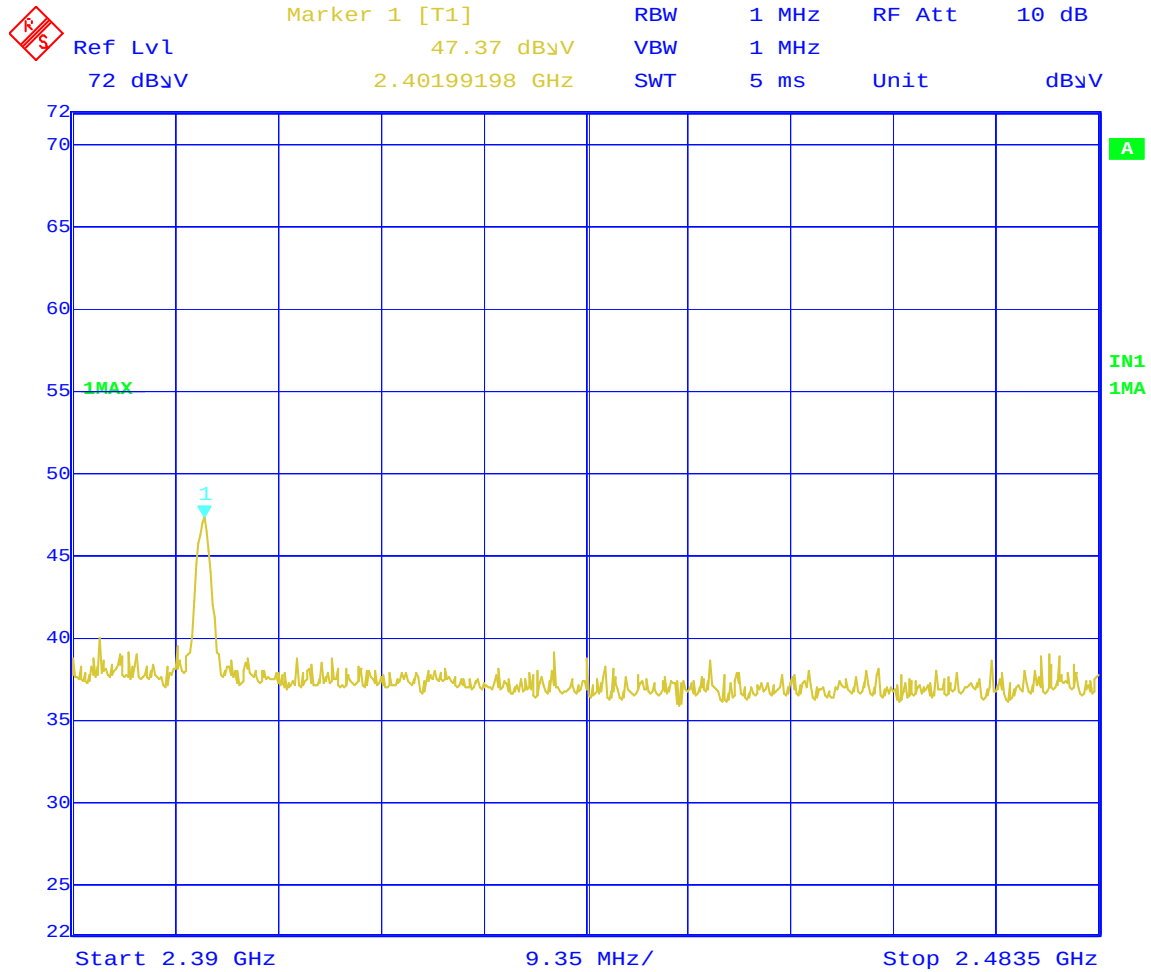
Radiated Emissions Band Edge

Motorola

Model: C390

ID Code: 16421-1

BT CH0 2402MHz Y-Axis



Date: 7.JUL.2005 08:33:20

Authorized Band Emissions Low Channel Dual Polarization Y

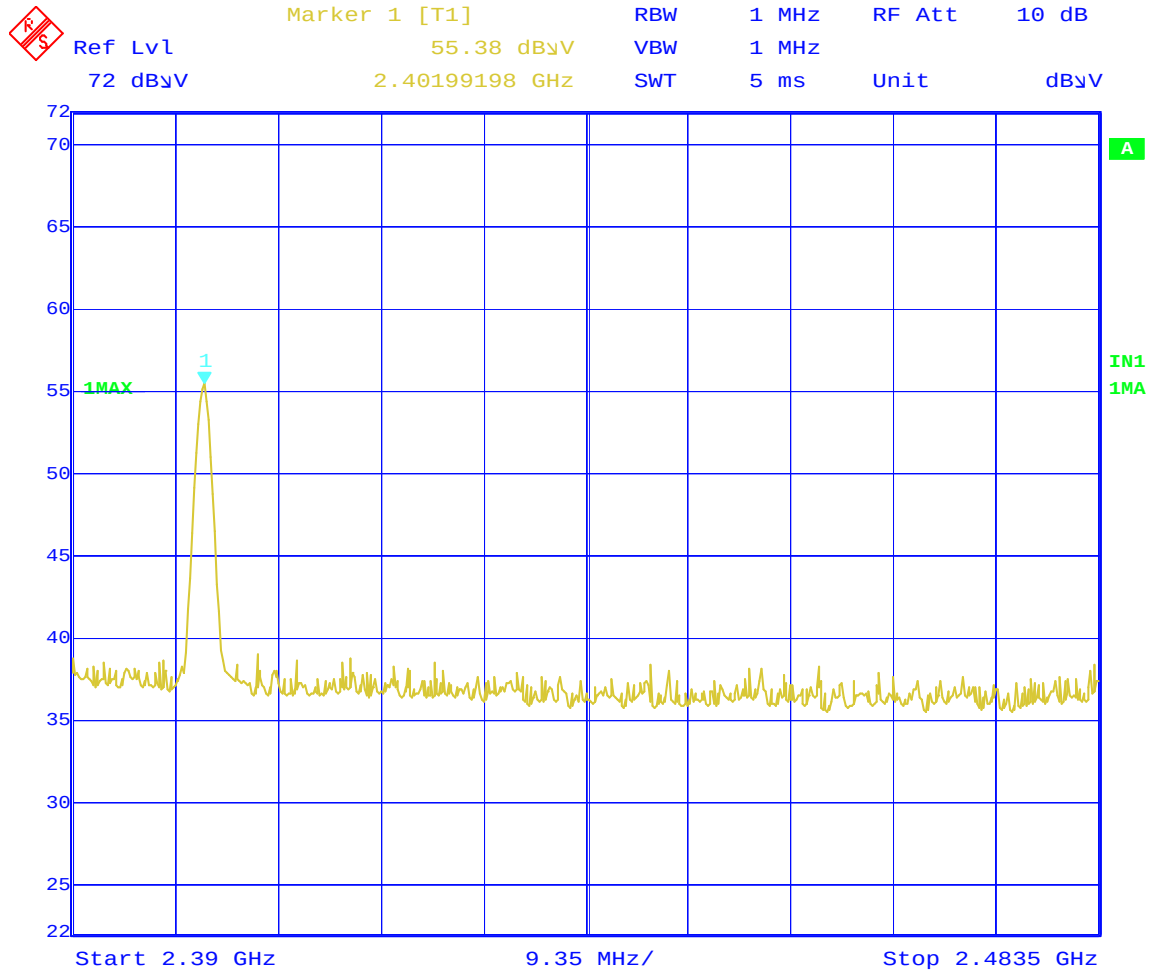
Radiated Emissions Band Edge

Motorola

Model: C390

ID Code: 16421-1

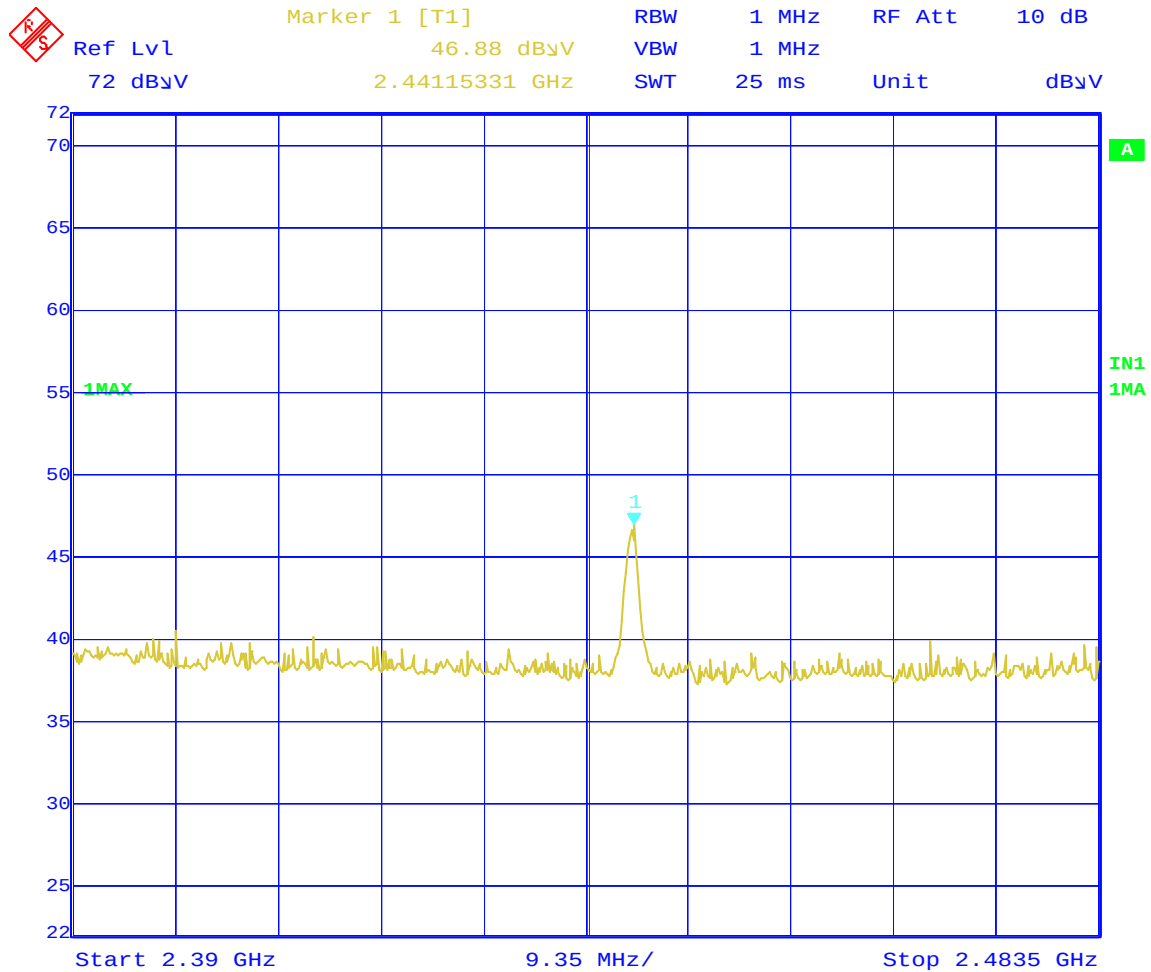
CH0 2402MHz Z-Axis



Date: 7.JUL.2005 08:34:44

Authorized Band Emissions Low Channel Dual Polarization Z

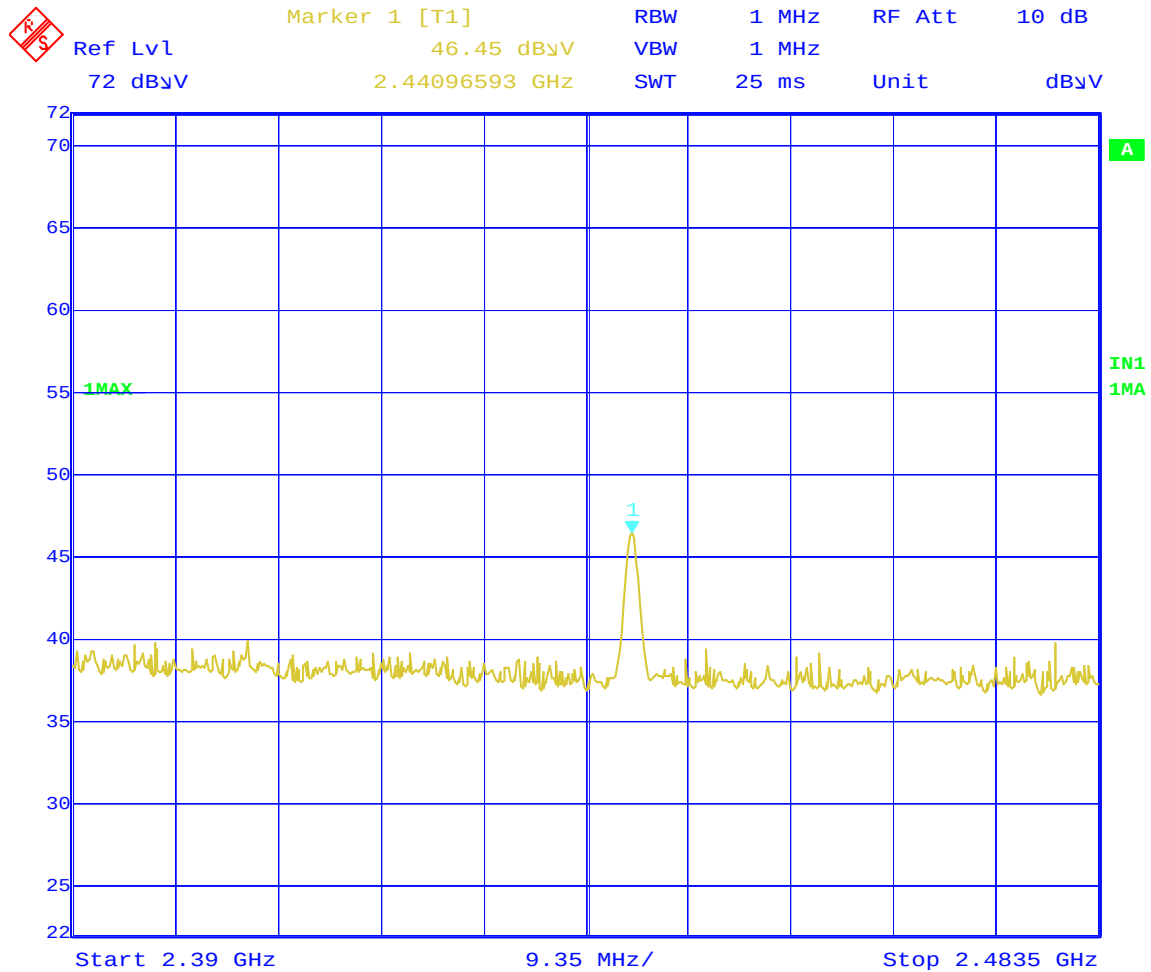
Radiated Emissions Band Edge
 Motorola
 Model: C390 ID Code: 16421-1
 BT CH39 2442MHz X-Axis



Date: 13.JUL.2005 08:55:52

Authorized Band Emissions Mid Channel Dual Polarization X

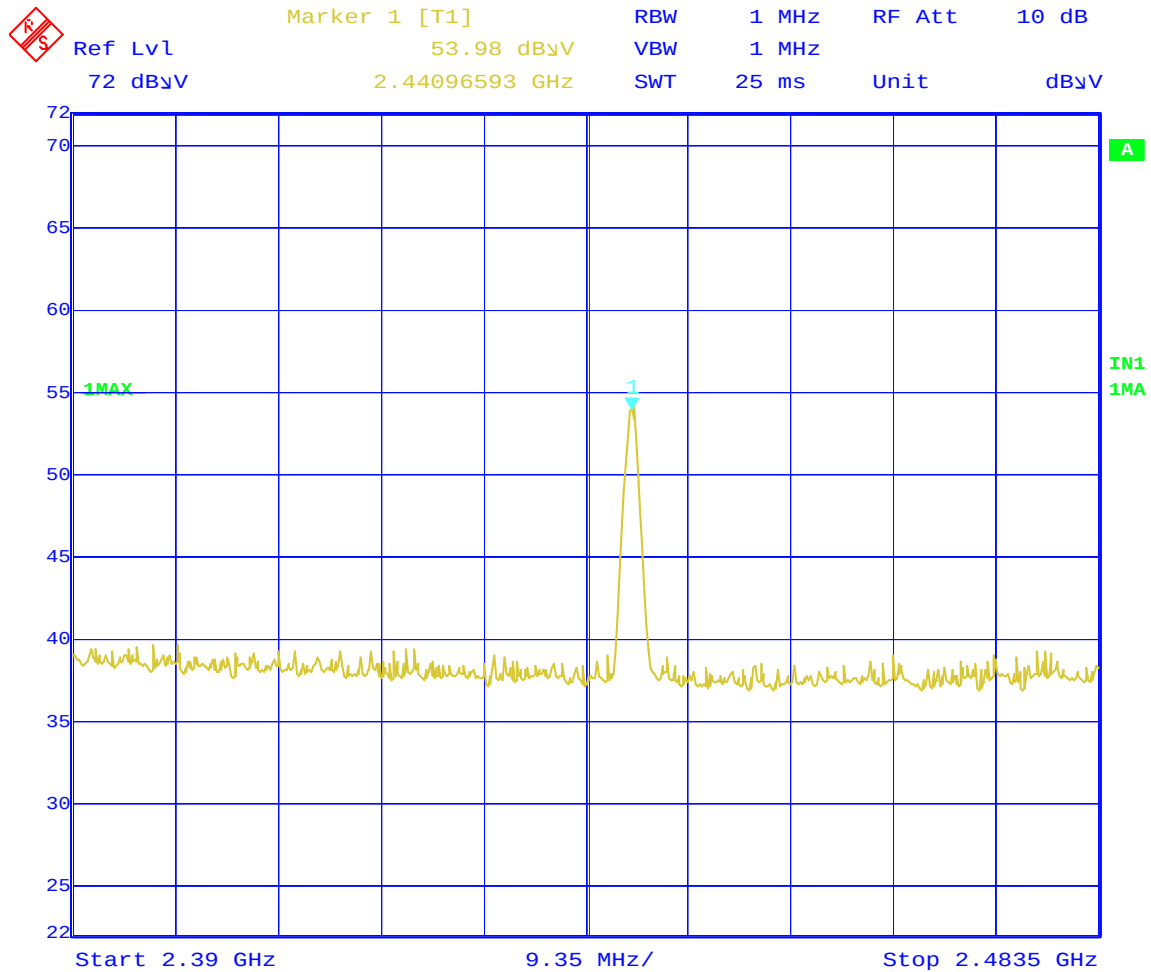
Radiated Emissions Band Edge
 Motorola
 Model: C390 ID Code: 16421-1
 BT CH39 2442MHz Y-Axis



Date: 13 JUL 2005 08:57:05

Authorized Band Emissions Mid Channel Dual Polarization Y

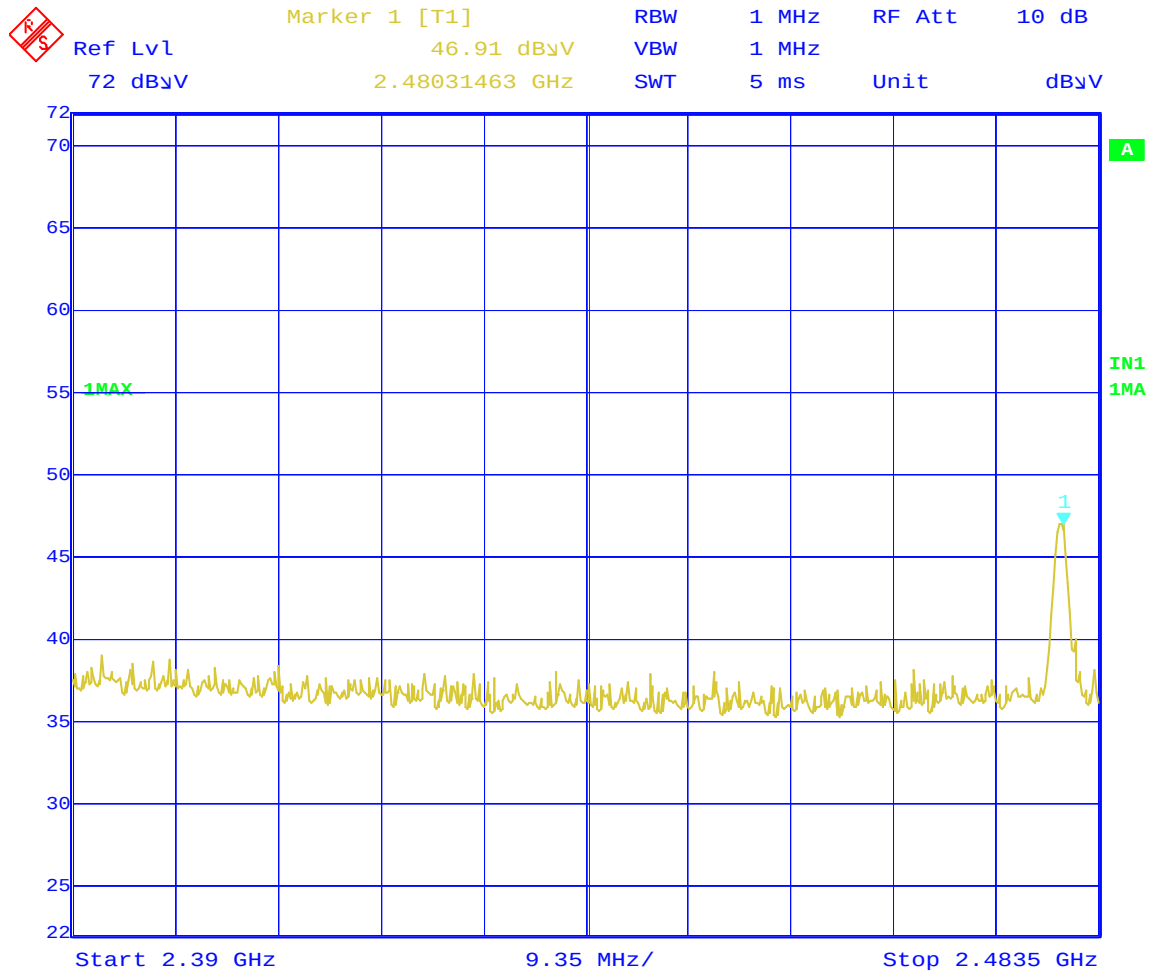
Radiated Emissions Band Edge
 Motorola
 Model: C390 ID Code: 16421-1
 BT CH39 2442MHz Z-Axis



Date: 13.JUL.2005 08:58:55

Authorized Band Emissions Mid Channel Dual Polarization Z

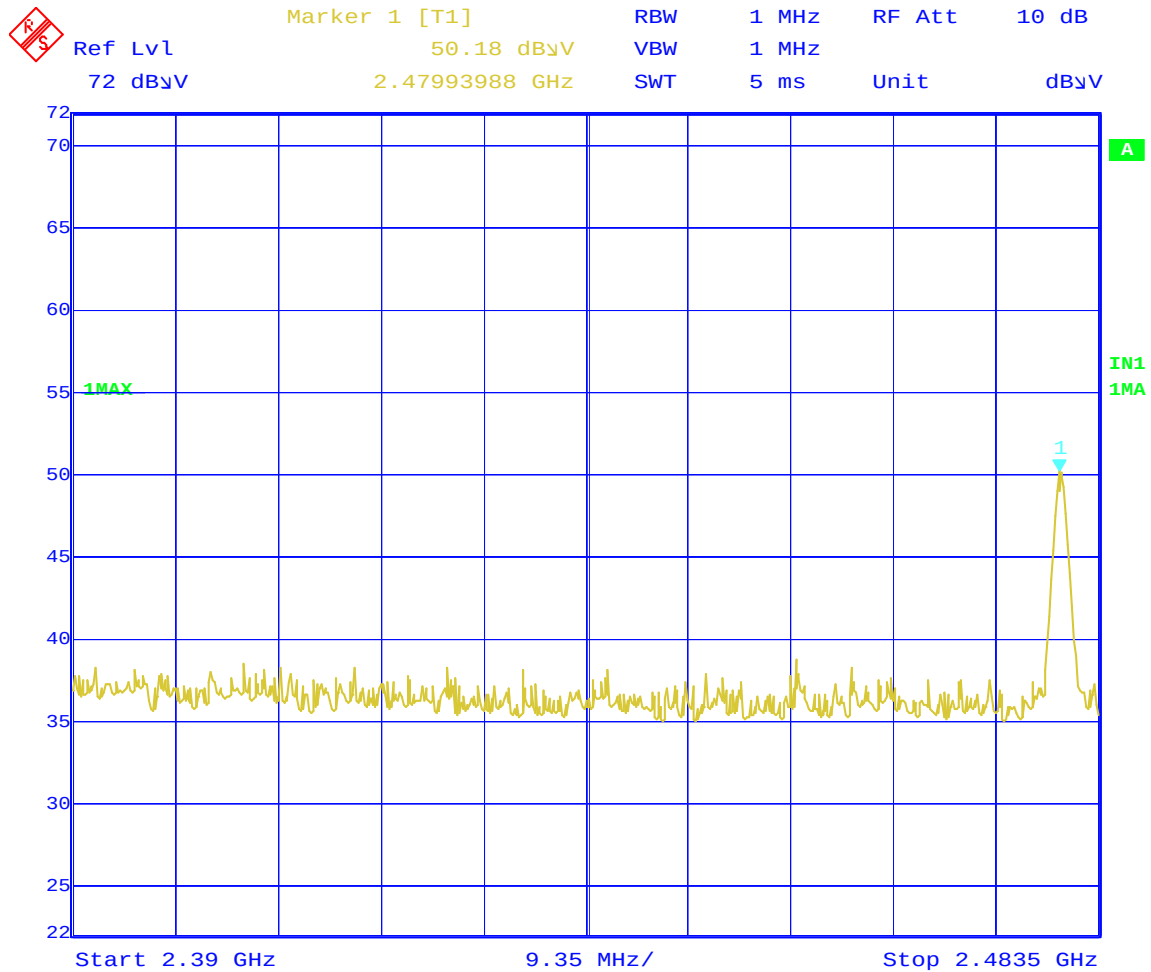
Radiated Emissions Band Edge
 Motorola
 Model: C390 ID Code: 16421-1
 BT CH78 2480MHz X-Axis



Date: 7.JUL.2005 08:40:53

Authorized Band Emissions High Channel Dual Polarization X

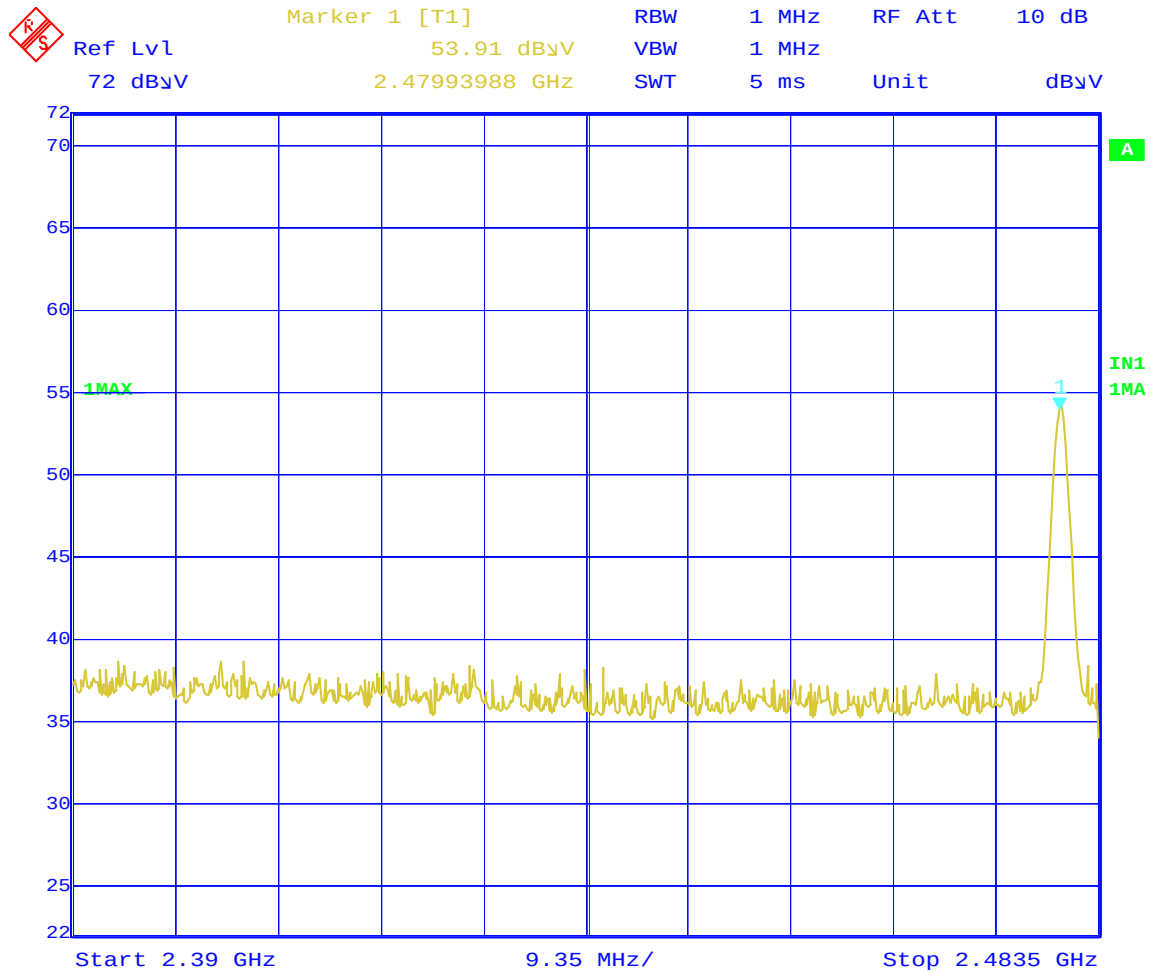
Radiated Emissions Band Edge
 Motorola
 Model: C390 ID Code: 16421-1
 BT CH78 2480MHz Y-Axis



Date: 7.JUL.2005 08:42:10

Authorized Band Emissions High Channel Dual Polarization Y

Radiated Emissions Band Edge
 Motorola
 Model: C390 ID Code: 16421-1
 BT CH78 2480MHz Z-Axis



Date: 7.JUL.2005 08:44:29

Authorized Band Emissions High Channel Dual Polarization Z

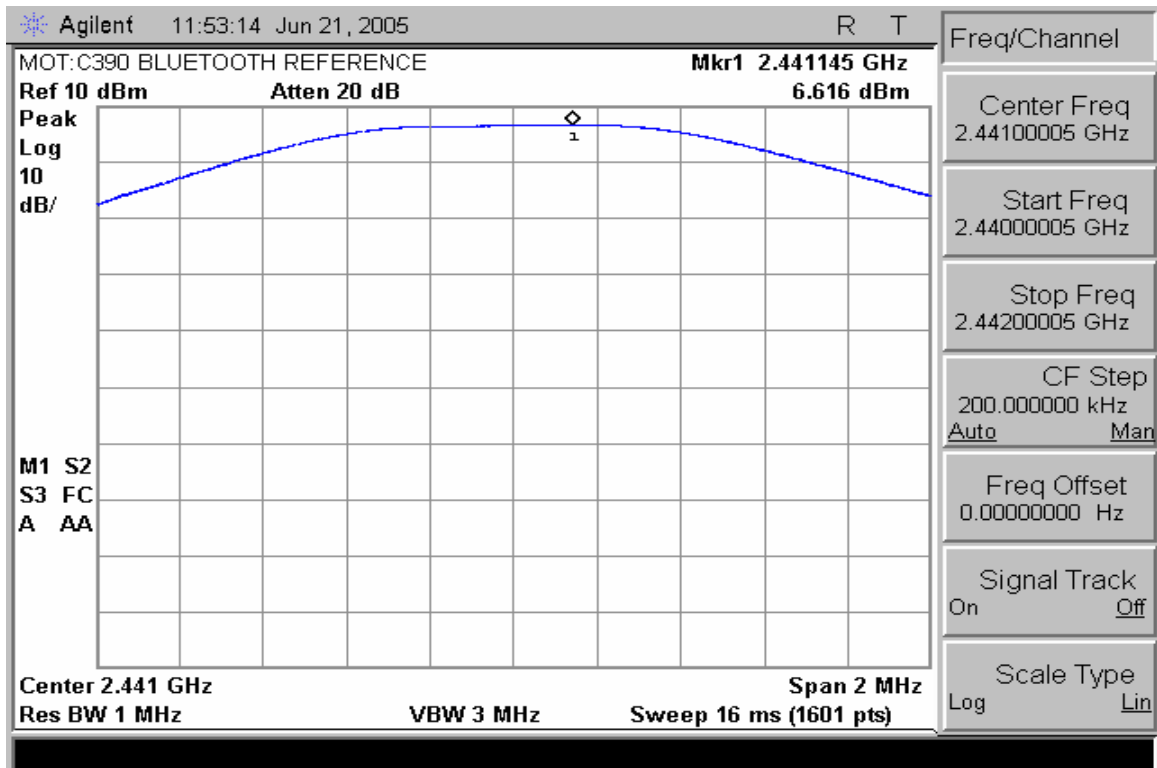
PEAK OUTPUT POWER

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

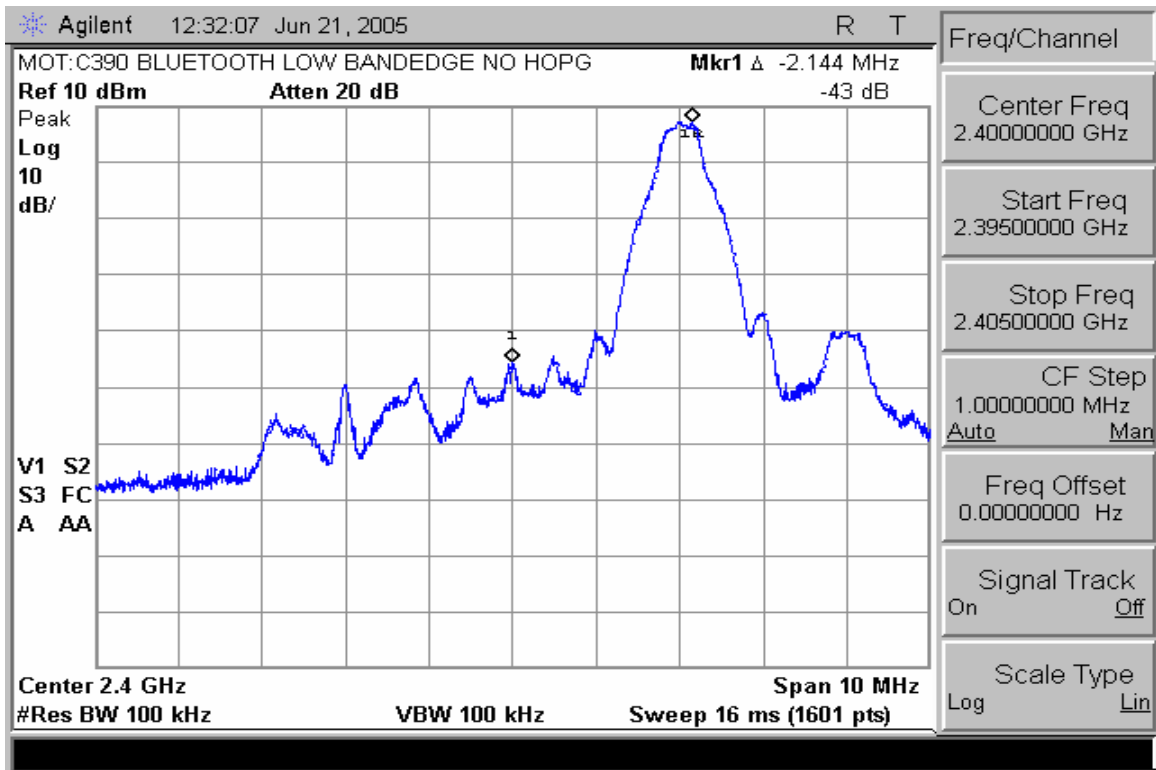
CFR 47 Part 15.247

Measurement Procedure

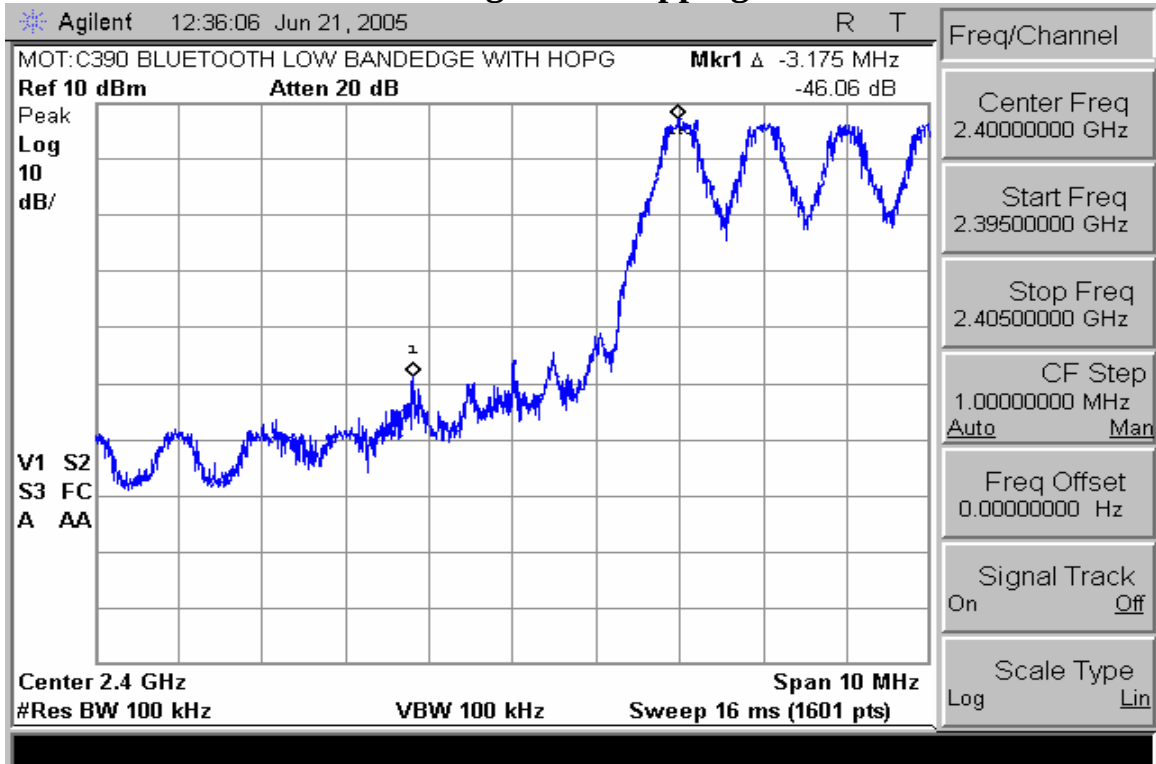
The RF output port of the Equipment-Under-Test is directly coupled to the input of the EMC analyzer through a specialized RF connector and a 10dB passive attenuator. A fully charged battery was used for the supply voltage.

Measurement Results

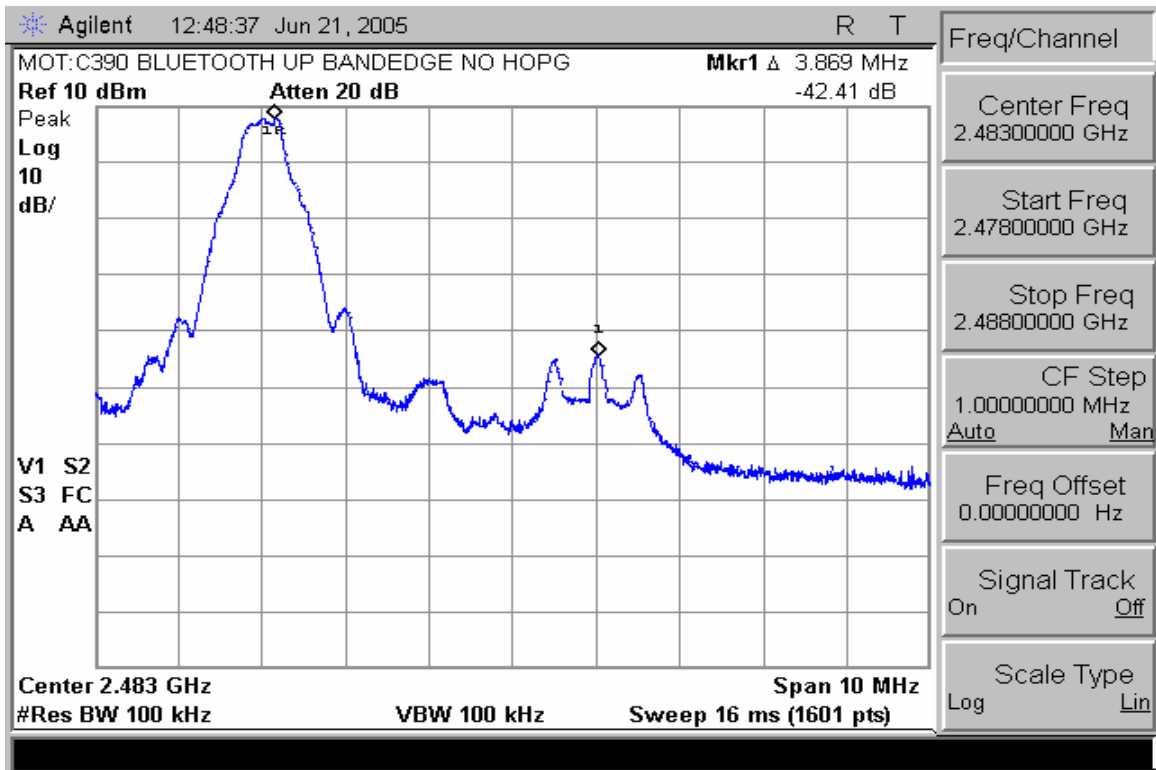
See Attached:



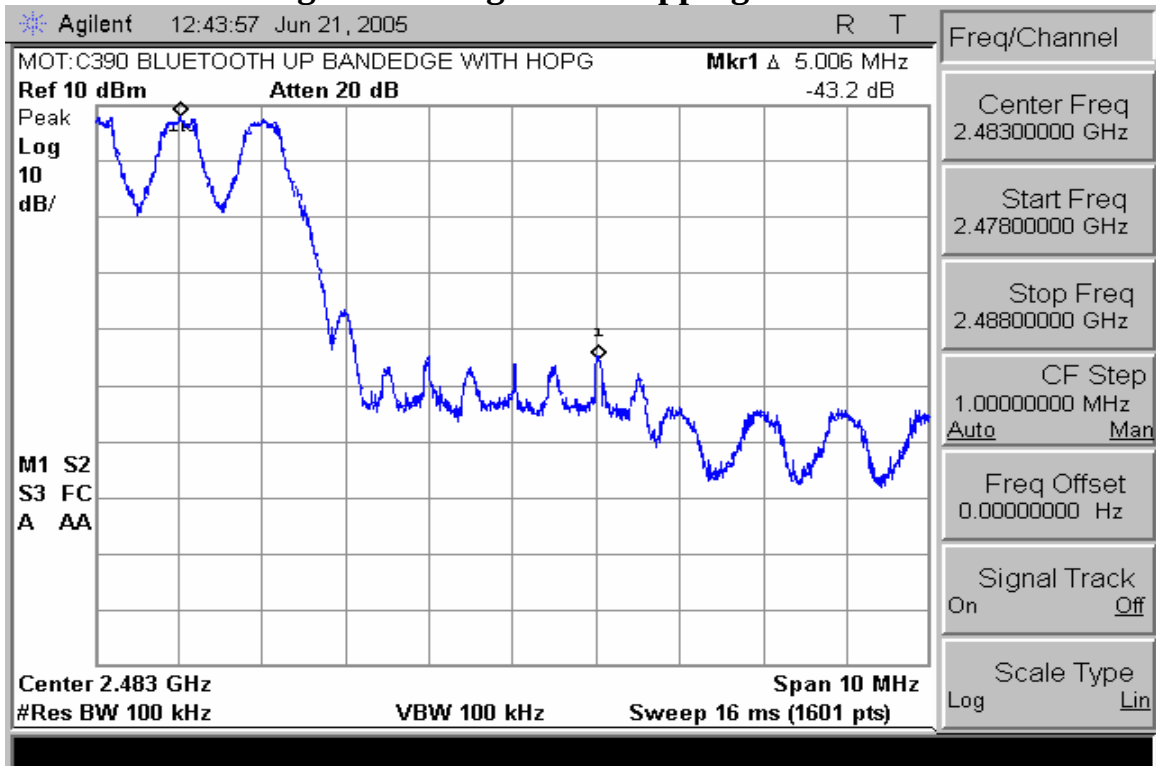
Low Band Edge with Hopping Disabled



Low Band Edge with Hopping Enabled



High Band Edge with Hopping Disabled



High Band Edge with Hopping Enabled

SPURIOUS RF CONDUCTED EMISSIONS

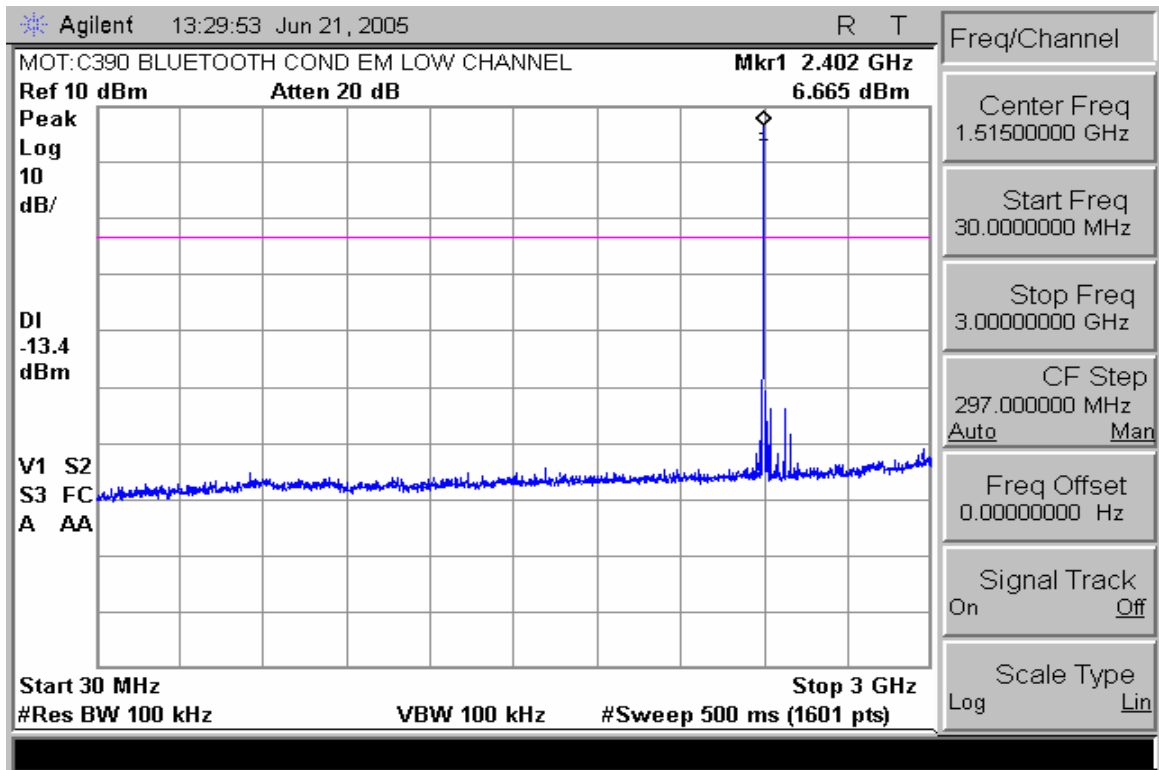
CFR 47 Part 15.247

Measurement Procedure

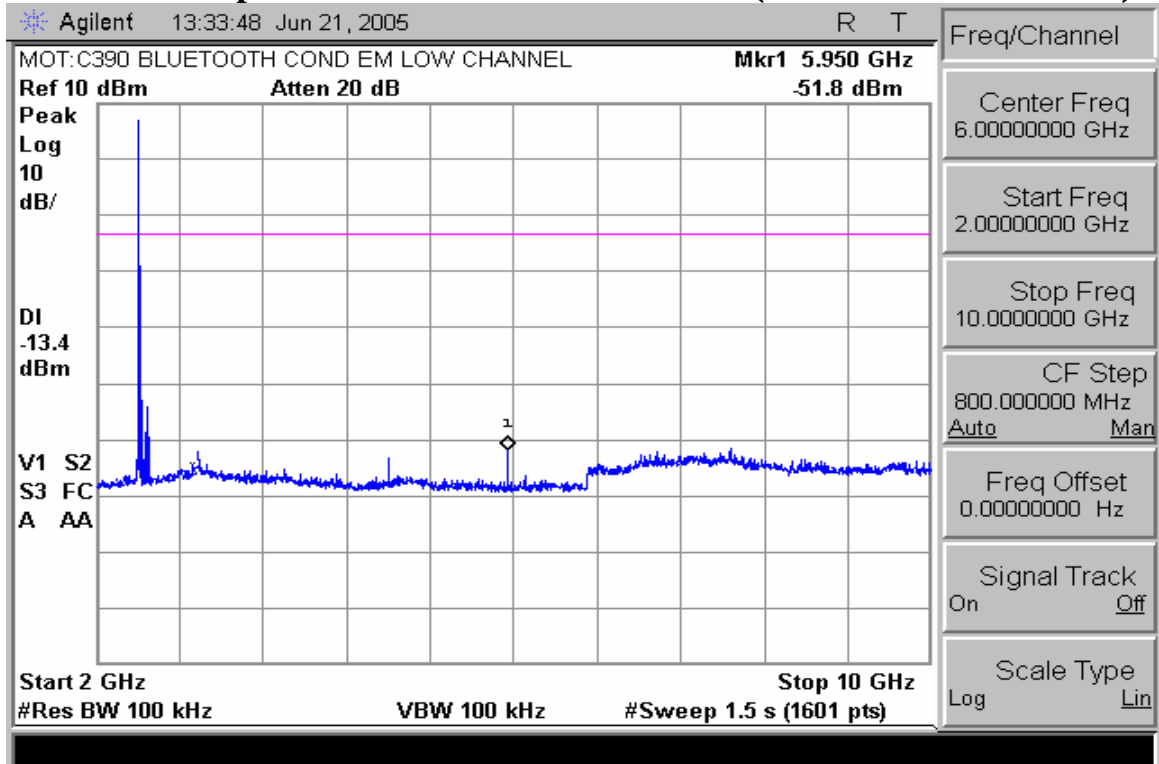
The RF output port of the Equipment-Under-Test is directly coupled to the input of the EMC analyzer through a specialized RF connector and a 10dB passive attenuator. A fully charged battery was used for the supply voltage.

Measurement Results

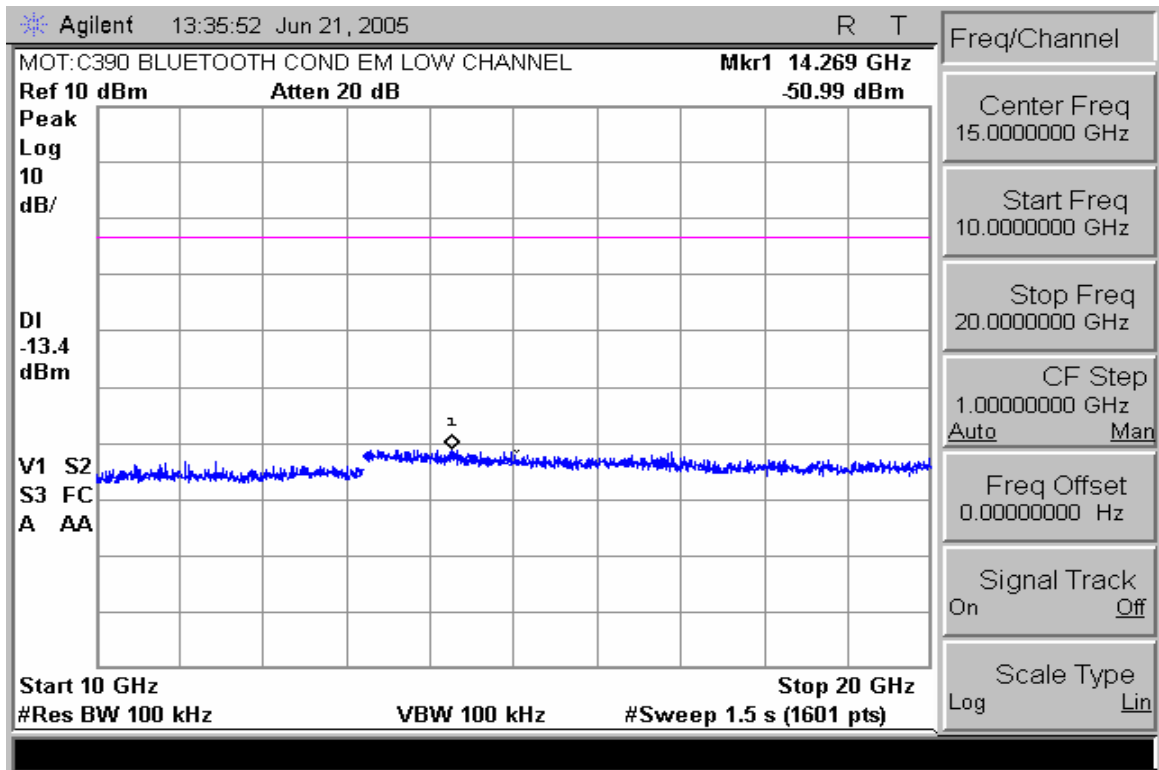
See attached:



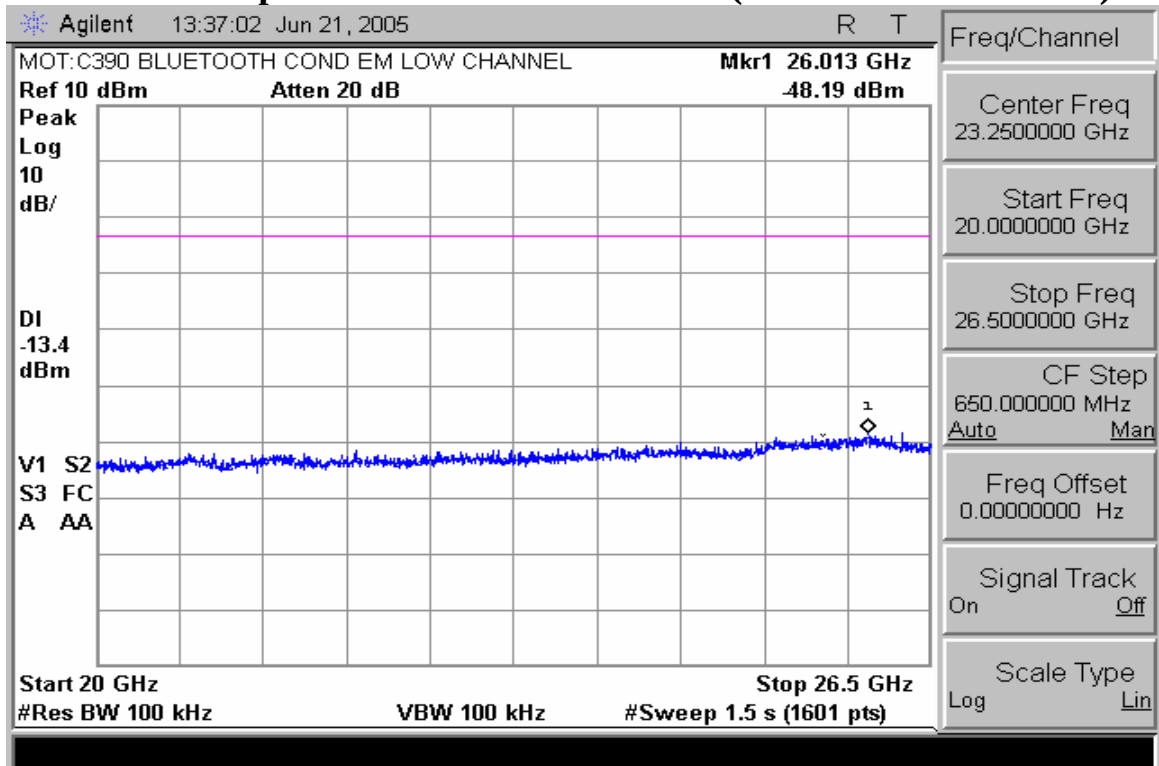
Conducted Spurious Emissions 30-3000MHz (Low Channel Enabled)



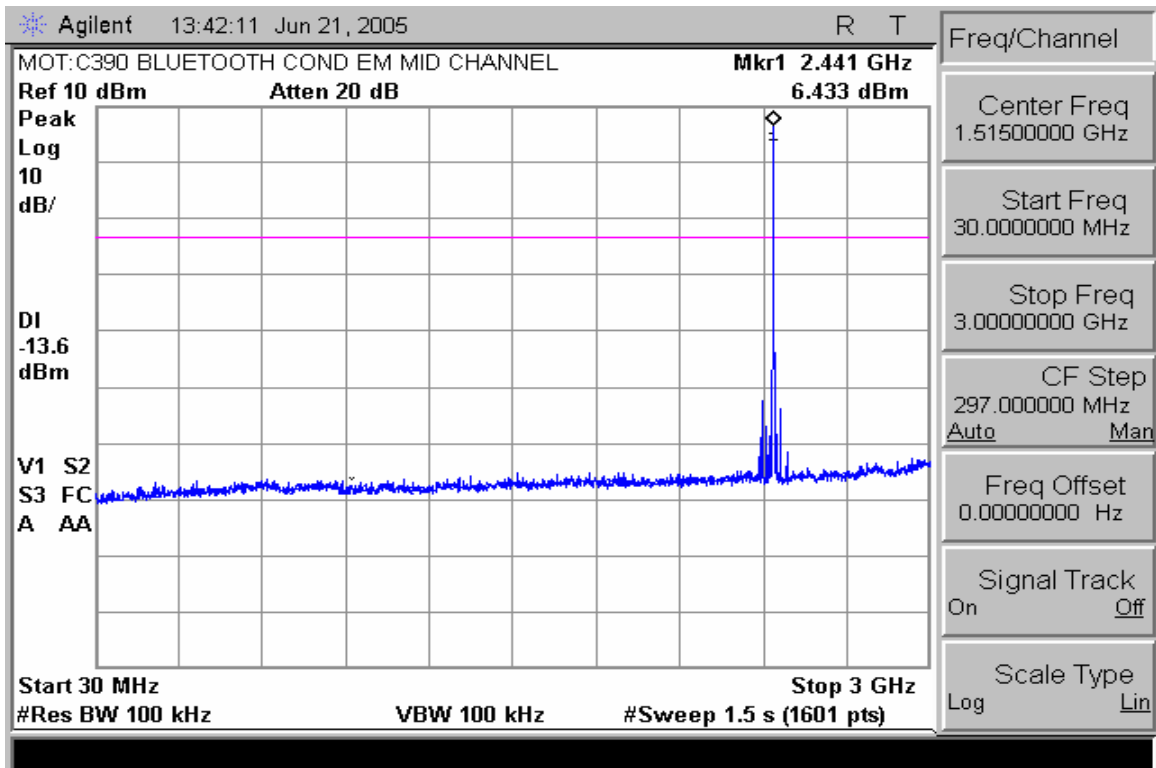
Conducted Spurious Emissions 2-10GHz (Low Channel Enabled)



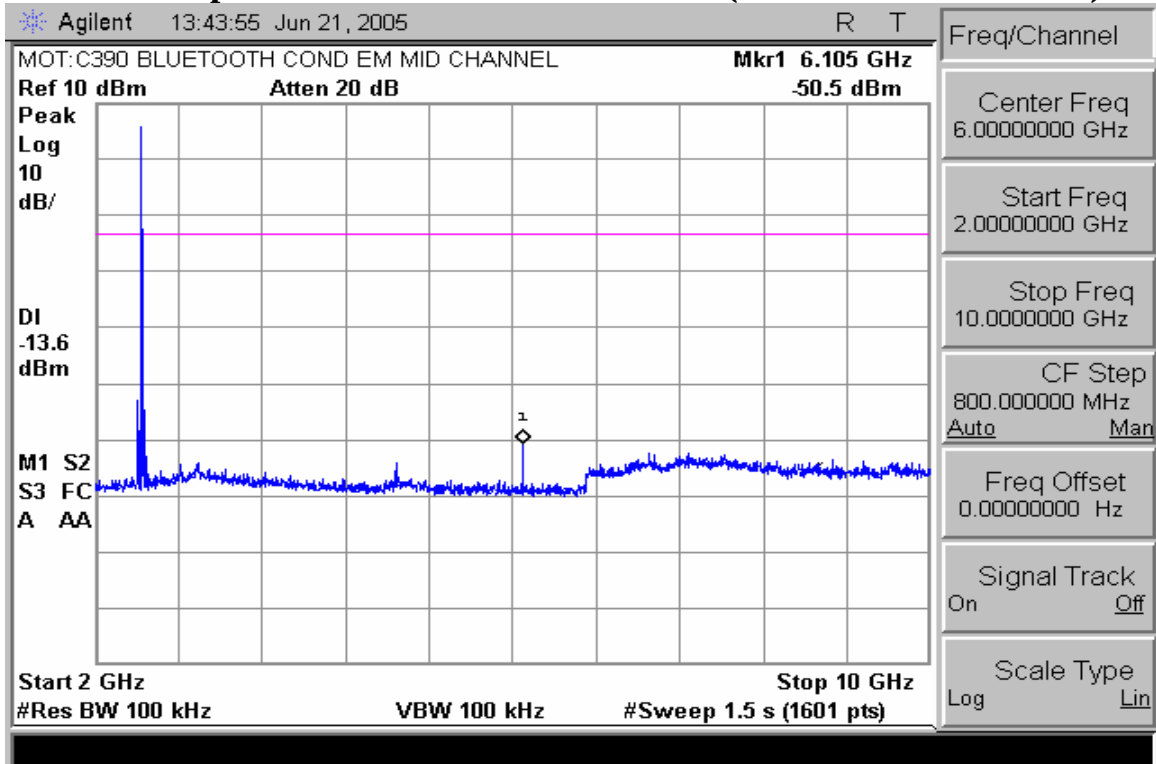
Conducted Spurious Emissions 10-20GHz (Low Channel Enabled)



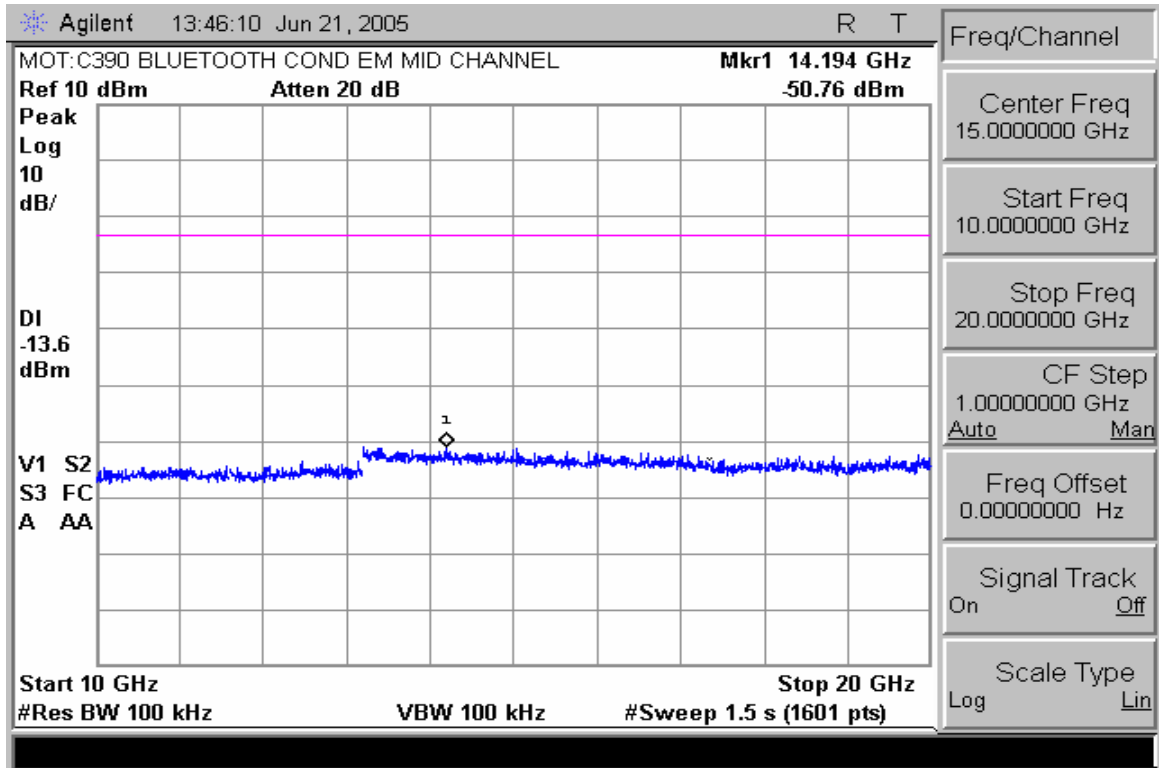
Conducted Spurious Emissions 20-26.5GHz (Low Channel Enabled)



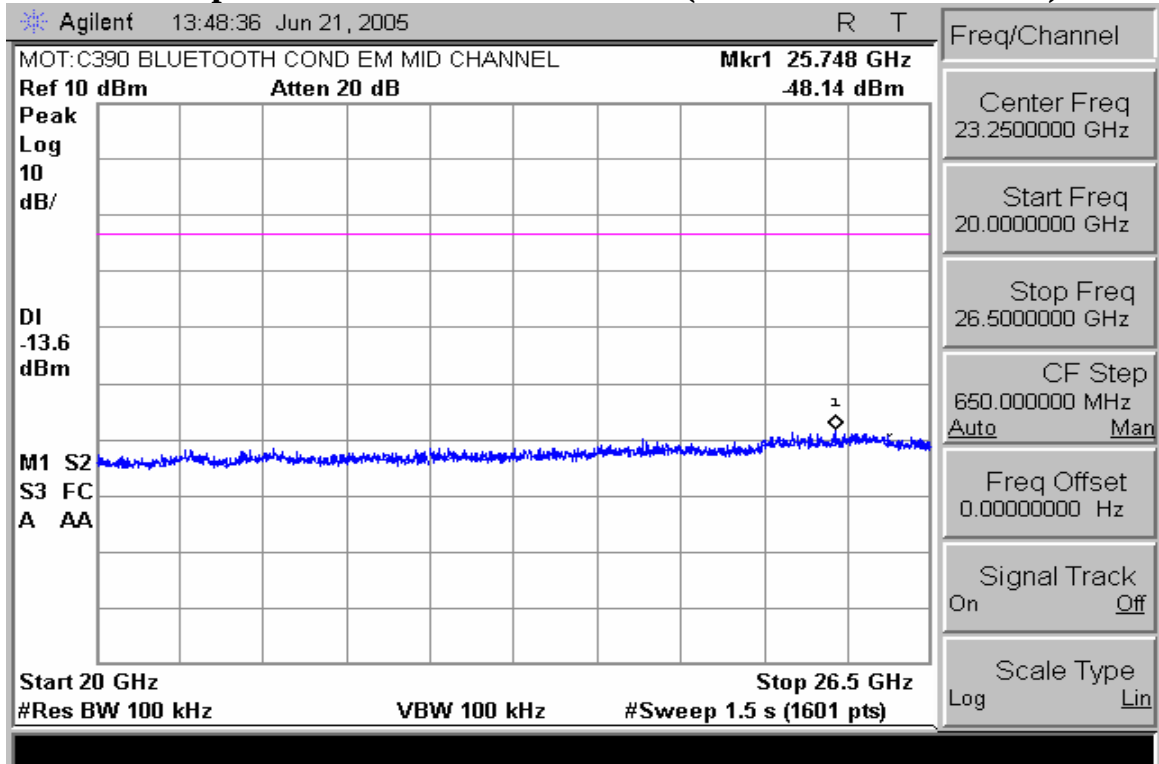
Conducted Spurious Emissions 30-3000MHz (Mid Channel Enabled)



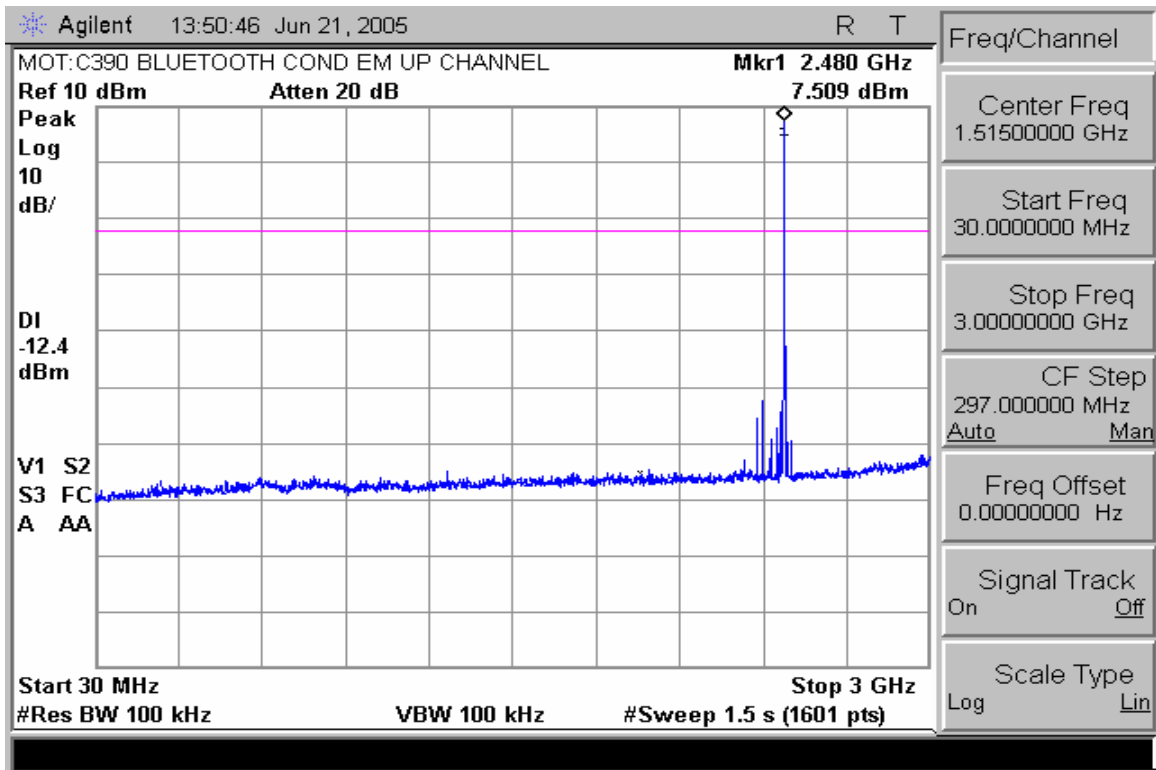
Conducted Spurious Emissions 2-10GHz (Mid Channel Enabled)



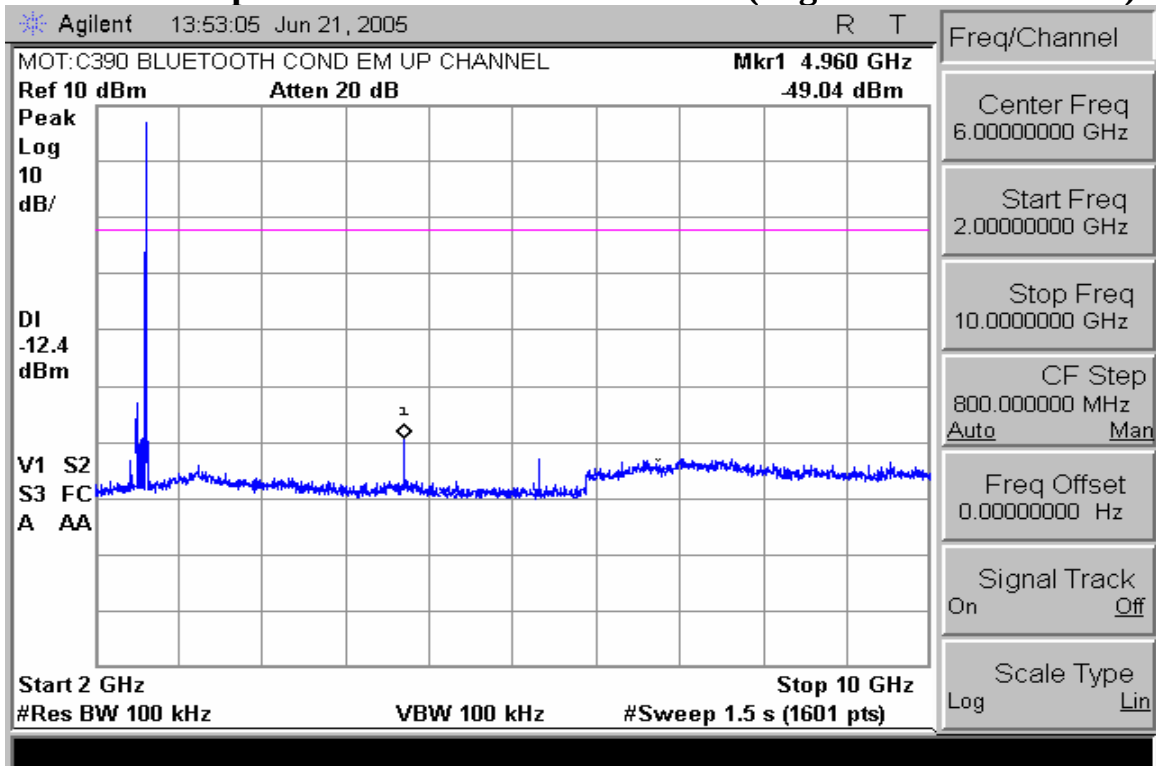
Conducted Spurious Emissions 10-20GHz (Mid Channel Enabled)



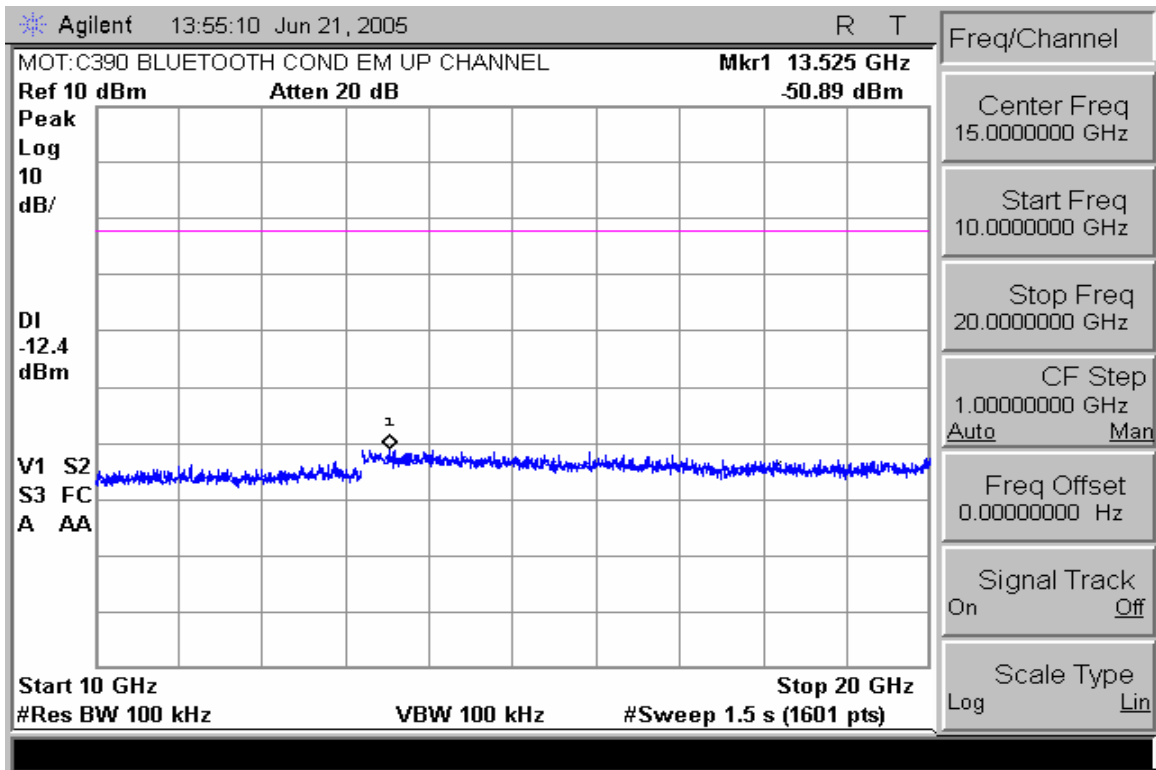
Conducted Spurious Emissions 20-26.5GHz (Mid Chan Enabled)



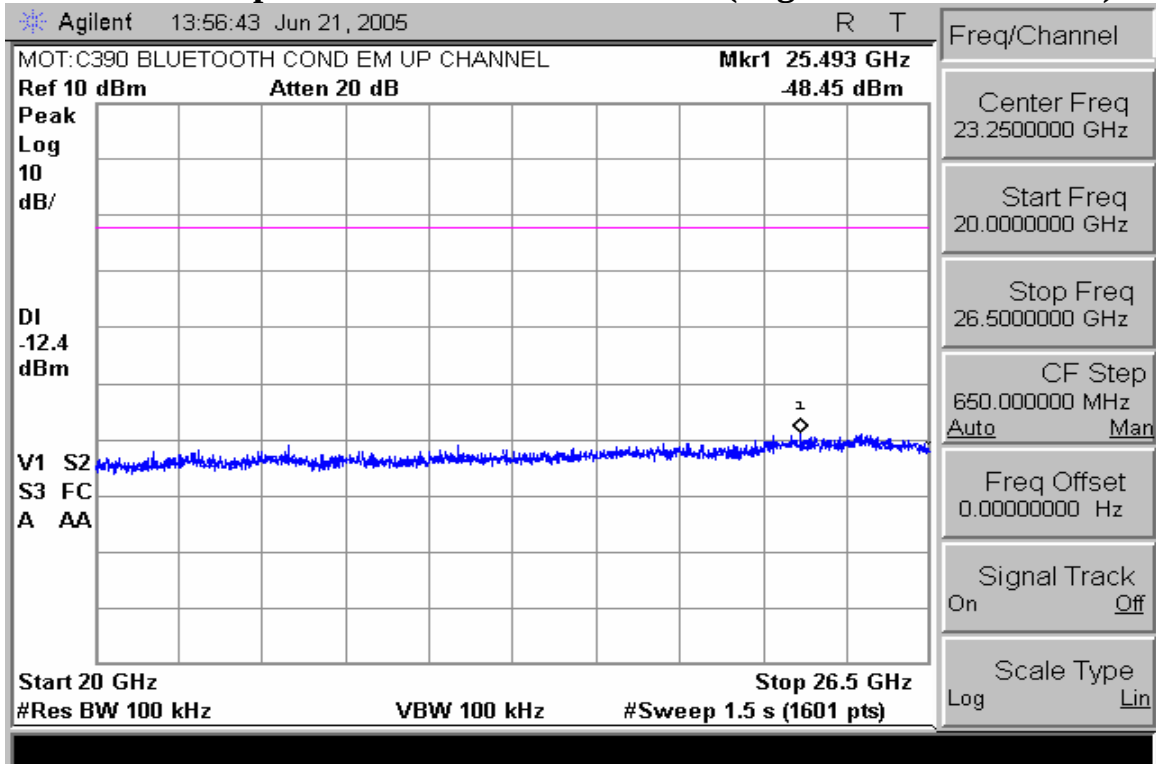
Conducted Spurious Emissions 30-3000MHz (High Channel Enabled)



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