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TEST REPORT

PER FCC PT 15.247 FHSS

Applicant	MOTOROLA MOBILITY, INC.
Address	600 NORTH U.S. HWY 45
	LIBERTYVILLE ILLINOIS 60048-5343 USA
FCC ID	IHDT56NQ2
IC	1090-T56NQ2
Model Number	XT626
Product Description	PORTABLE iDEN PHONE
Date Sample Received	4/26/2012
Date Tested	5/4/2012
Tested By	John A. Day
Approved By	Mario de Aranzeta
Report Number	1064KUT12TestReport_Rev.doc
Test Results	☒ PASS ☐ FAIL

**THE ATTACHED REPORT SHALL NOT BE REPRODUCED EXCEPT IN FULL
WITHOUT THE WRITTEN APPROVAL OF TIMCO ENGINEERING, INC.**



Testing Certificate #0955-01

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GENERAL REMARKS

The attached report shall not be reproduced except in full without the written permission of Timco Engineering Inc.

The test results relate only to the items tested.

Summary

The device under test does:

- ☒ fulfill the general approval requirements as identified in this test report
☐ not fulfill the general approval requirements as identified in this test report

Attestations

This equipment has been tested in accordance with the standards identified in this test report. To the best of my knowledge and belief, these tests were performed using the measurement procedures described in this report.

All instrumentation and accessories used to test products for compliance to the indicated standards are calibrated regularly in accordance with ISO 17025: 2005 requirements.



Testing Certificate # 0955-01

I attest that the necessary measurements were made, under my supervision, at:

Timco Engineering Inc.
849 NW State Road 45
Newberry, FL 32669

Authorized Signatory Name:



Mario de Aranzeta C.E.T.
Compliance Engineer/ Lab. Supervisor

Date: May 18, 2012

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GENERAL INFORMATION

DUT Specification

Applicable Standard	Part 15.247		
DUT Description	PORTABLE iDEN PHONE		
IC	1090-T56NQ2		
FCC ID	IHDT56NQ2		
SN	364PNG04X2, 364PNG04SF (For Antenna Conducted)		
Operating Frequency	TX: (2402 – 2480) MHz		
Number of channels	79		
DUT Power Source	☐ 110–120Vac/50– 60Hz		
	☐ DC Power		
	☒ Battery Operated Exclusively		
Test Item	☐ Prototype	☒ Pre-Production	☐ Production
Type of Equipment	☐ Fixed	☐ Mobile	☒ Portable
Antenna Connector	None		
Antenna	Integral antenna		
AC Adaptor	Model No: FMP5515A Input: 100 – 240 VAC, 50 – 60 Hz, 0.2A Output: 5 V, .75 A		
Test Facility	Timco Engineering Inc. located at 849 NW State Road 45 Newberry, FL 32669 USA.		
Test Conditions	Temperature: 26°C Relative humidity: 50%		
Test Exercise	The DUT was placed in continuous transmit mode of operation.		

Test Supporting Equipment

Supporting Device	Manufacturer	Model / FCC ID	Serial Number
LAPTOP	HP	Compaq 8510W QDS- BRCM1019	CNU8040ZVD

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EMC EQUIPMENT LIST

Device	Manufacturer	Model	Serial Number	Cal/Char Date	Due Date
3-Meter Semi-Anechoic Chamber	Panashield	N/A	N/A	Listed 5/1/12	5/1/14
AC Voltmeter	HP	400FL	2213A14499	CAL 6/12/11	6/12/13
Antenna: Active Loop	ETS-Lindgren	6502	00062529	CAL 9/23/10	9/23/12
Frequency Counter	HP	5385A	2730A03025	CAL 8/17/11	8/17/13
Hygro-Thermometer	Extech	445703	0602	CAL 6/15/11	6/15/13
Modulation Analyzer	HP	8901A	3435A06868	CAL 7/18/11	7/18/13
Digital Multimeter	Fluke	FLUKE-77	35053830	CAL 9/9/11	9/9/13
Power Meter	Boonton Electronics	4531	11793	CAL 11/12/2010	11/12/2012
EMI Receiver	Rohde & Schwarz	ESIB40	100274	CAL 3/16/2012	3/16/2014
Analyzer Tan Tower Preamplifier	HP	8449B-H02	3008A00372	CAL 10/28/11	10/28/13
Analyzer Tan Tower Quasi-Peak Adapter	HP	85650A	3303A01690	CAL 10/28/11	10/28/13
Analyzer Tan Tower RF Preselector	HP	85685A	3221A01400	CAL 10/28/11	10/28/13
Analyzer Tan Tower Spectrum Analyzer	HP	8566B Opt 462	3138A07786 3144A20661	CAL 10/28/11	10/28/13
Antenna	ETS	3117	35923	12/7/2011	12/7/2013
Antenna	Electro metrics	LPA-25	1122	5/04/2011	5/04/2013
Antenna	Electro metrics	BIA-25	1096	5/04/2011	5/04/2013

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TEST PROCEDURES

Radiation Interference: ANSI C63.4-2003 using a spectrum analyzer, a preselector, a quasi-peak adapter, and an appropriate antenna. The analyzer was calibrated in dB above a microvolt at the output of the antenna. The resolution bandwidth was 100 kHz with an appropriate sweep speed and the video bandwidth was 300 kHz up to 1 GHz and 1 MHz with a video BW of 3 MHz above 1 GHz. When an emission was found, the table was rotated to produce the maximum signal strength. The antenna was placed in both the horizontal and vertical planes and the worse case emissions were reported. The spectrum was searched to at least the tenth (10) harmonic of the fundamental.

Formula Of Conversion Factors: The field strength at 3m was established by adding the meter reading of the spectrum analyzer (which is set to read in units of dBμV) to the antenna correction factor supplied by the antenna manufacturer plus the coax loss. The antenna correction factors are stated in terms of dB. The gain of the preselector was accounted for in the spectrum analyzer meter reading.

Example:

Freq (MHz)	Meter Reading	+ ACF	+ CL = FS
33	20 dBμV	+ 10.36 dB	+ 0.5 = 30.86 dBμV/m @ 3m

Power Line Conducted Interference: The procedure used was ANSI C63.4-2003 using a 50uH LISN. Both lines were observed. The bandwidth of the spectrum analyzer was 10 kHz with an appropriate sweep speed. The spectrum was scanned from 0.15 to 30 MHz.

Occupied Bandwidth: A small sample of the transmitter output was fed into the spectrum analyzer and the attached plot was printed. The vertical scale is set to -10 dBm per division.

Bandwidth 6.0dB: The measurements were made with the spectrum analyzer's resolution bandwidth (RBW)=1 MHz and the video bandwidth (VBW) =3 MHz and the span set as shown on plot.

Power Output: The RF power output was measured at the antenna feed point using a peak power meter.

Antenna Conducted Emissions: The RBW=100 kHz, VBW=300 kHz and the span set to 10 MHz and the spectrum was scanned from 30 MHz to the 10th Harmonic of the fundamental. Above 1 GHz the resolution bandwidth was 1 MHz and the VBW = 3 MHz and the span to 50 MHz.

ANSI C63.4-2003 10.1 Measurement Procedures: The DUT was placed on a table 80 cm high and with dimensions of 1m by 1.5m. The DUT was placed in the center of the table (1.5m side). The table used for radiated measurements is capable of continuous rotation.

When an emission was found, the table was rotated to produce the maximum signal strength. At this point, the antenna was raised and lowered from 1m to 4m. The antenna was placed in both the horizontal and vertical planes. Emissions attenuated more than 20 dB below the permissible value are not reported.

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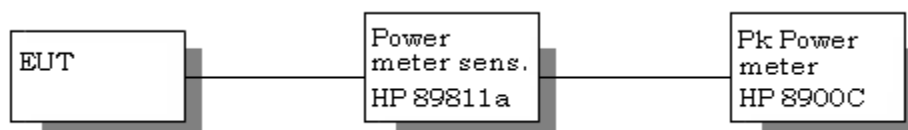
IC: 1090-T56NQ2

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POWER OUTPUT

Rules Part #: 15.247(b)

TEST SET UP:



Harmonics were checked through the 10th harmonic

Test Results:

Frequency MHz	Bluetooth RF Output Power		
	Data Rate / Modulation		
	GFSK	$\pi/4$ -DQPSK	8-DPSK
	1Mbps	2Mbps	3Mbps
2402.00	8.7	8.5	9.1
2441.00	8.9	8.5	9.1
2480.00	8.9	8.8	9.4

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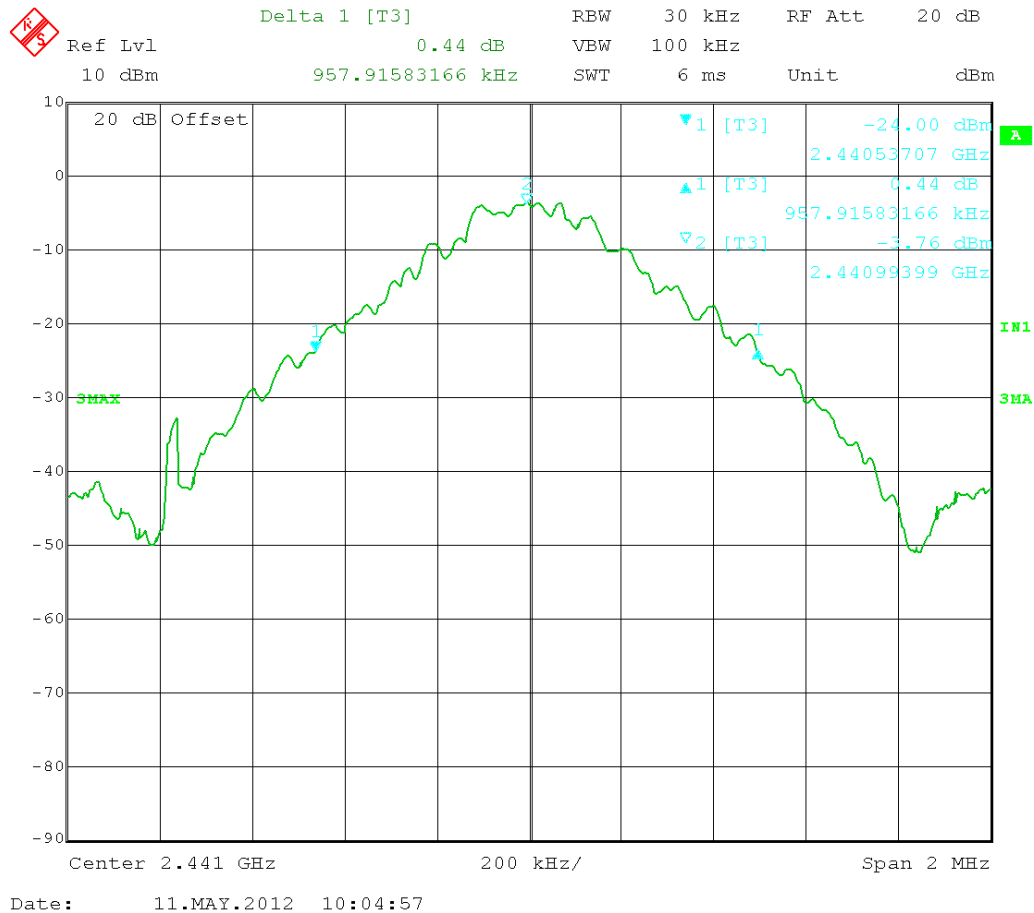
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20 dB OCCUPIED BANDWIDTH

Rules Part No.: 15.247(a)(2)

Test Data: Three places in the band were measured and the worst case reported.
Bluetooth 1 Mbps: 20dB bandwidth = 0.957 MHz

1 Mbps

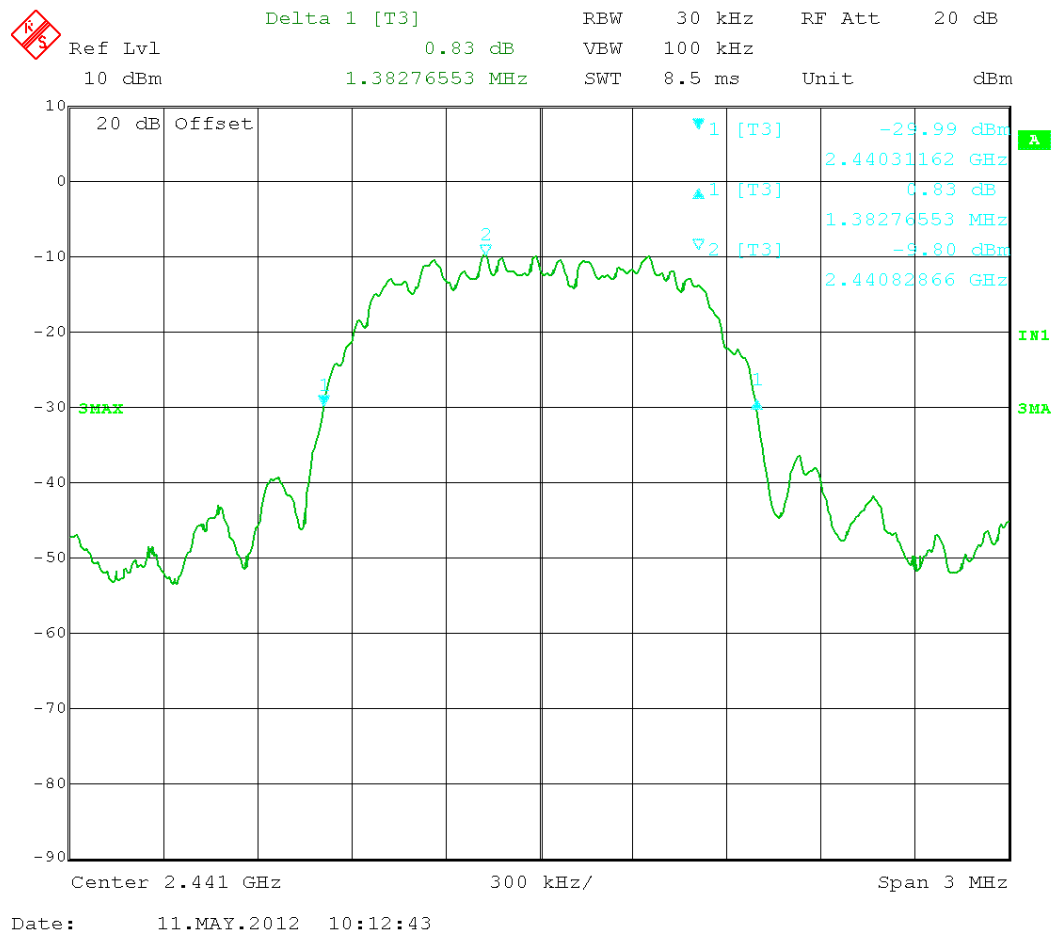


Bluetooth 1Mbps – 20 dB bandwidth

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Test Data continued: Three places in the band were measured and the worst case reported.
Bluetooth 2 Mbps: 20dB bandwidth = 1.38 MHz

2 Mbps

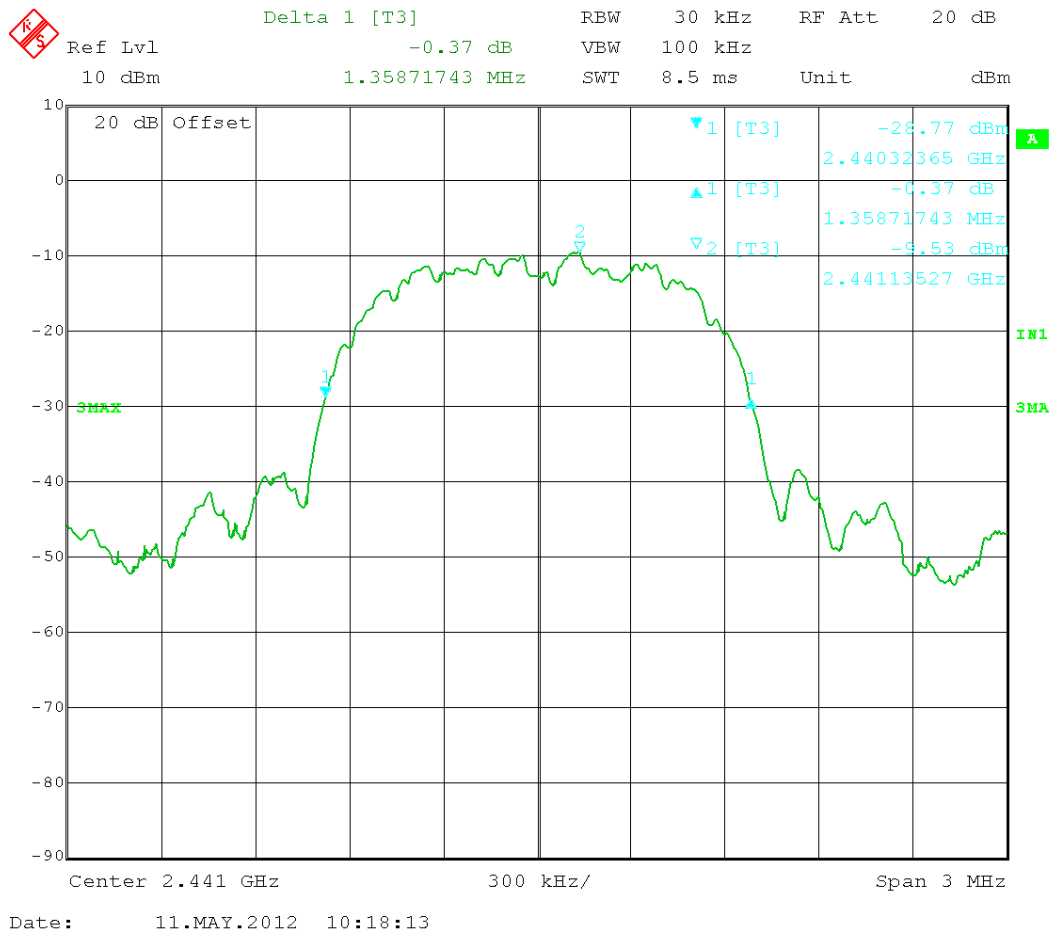


Bluetooth 2Mbps – 20 dB bandwidth

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Test Data continued: Three places in the band were measured and the worst case reported.
Bluetooth 3 Mbps: 20 dB bandwidth = 1.35 MHz

3 Mbps



Bluetooth 3Mbps – 20 dB bandwidth

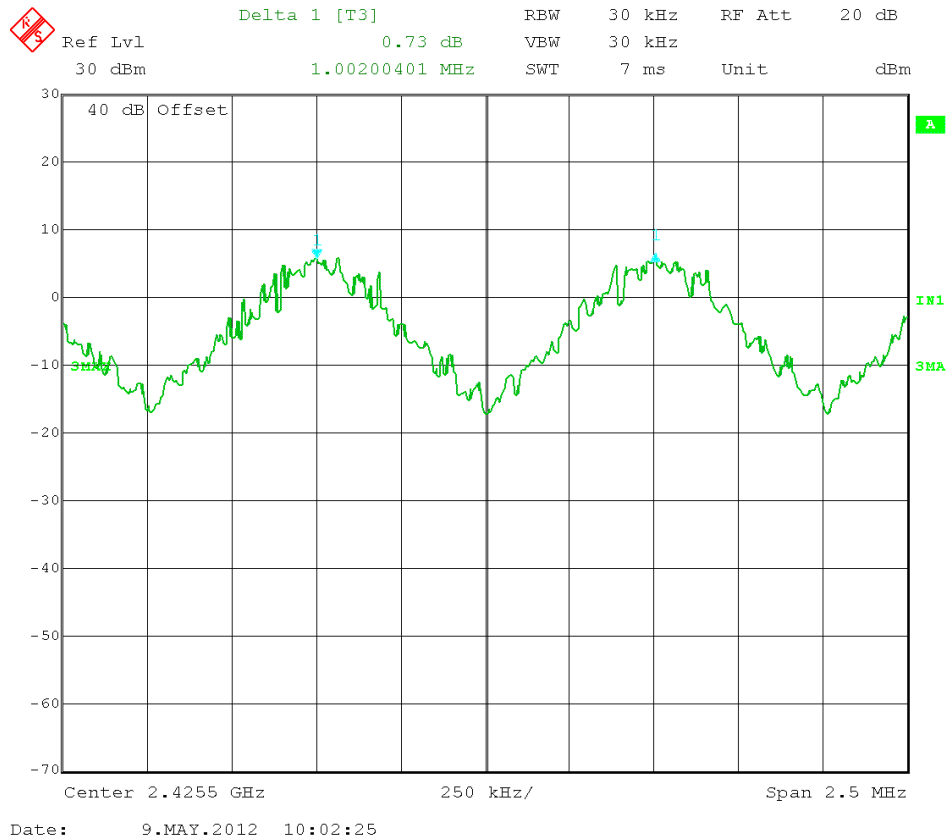
APPLICANT: MOTOROLA MOBILITY, INC.
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CARRIER FREQUENCY SEPARATION

RULES PART NO.: 15.247(a)(2)

REQUIREMENTS: The hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

TEST DATA: See the following plot. 1.00 MHz (Bluetooth 1 Mbps)



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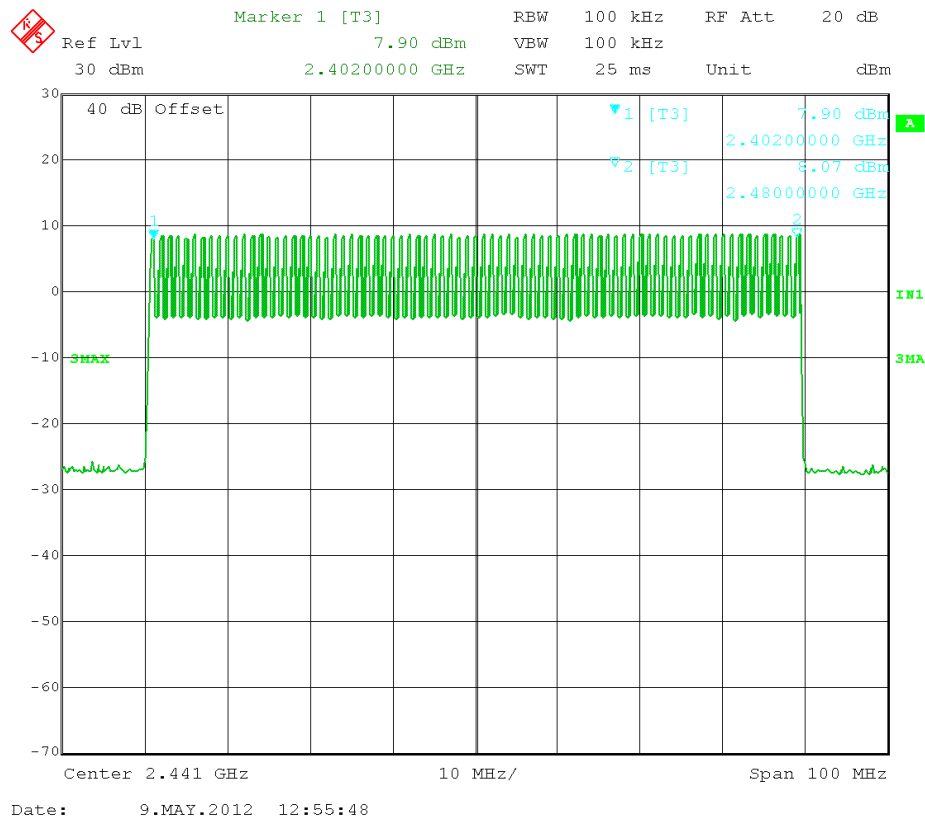
NUMBER OF HOPPING CHANNELS

Rules Part No.: 15.247(a)(1), RSS-210

Requirements:

902-928 MHz	If the 20 dB bandwidth is < 250 kHz, the system shall use at least 50 hopping frequencies.
	If the 20 dB bandwidth is 250 kHz or greater, the system shall use at least 25 hopping frequencies.
2400-2483.5 MHz	At least 15 channels
5725-5850 MHz	At least 75 channels

Test Data: There are 79 hopping channels



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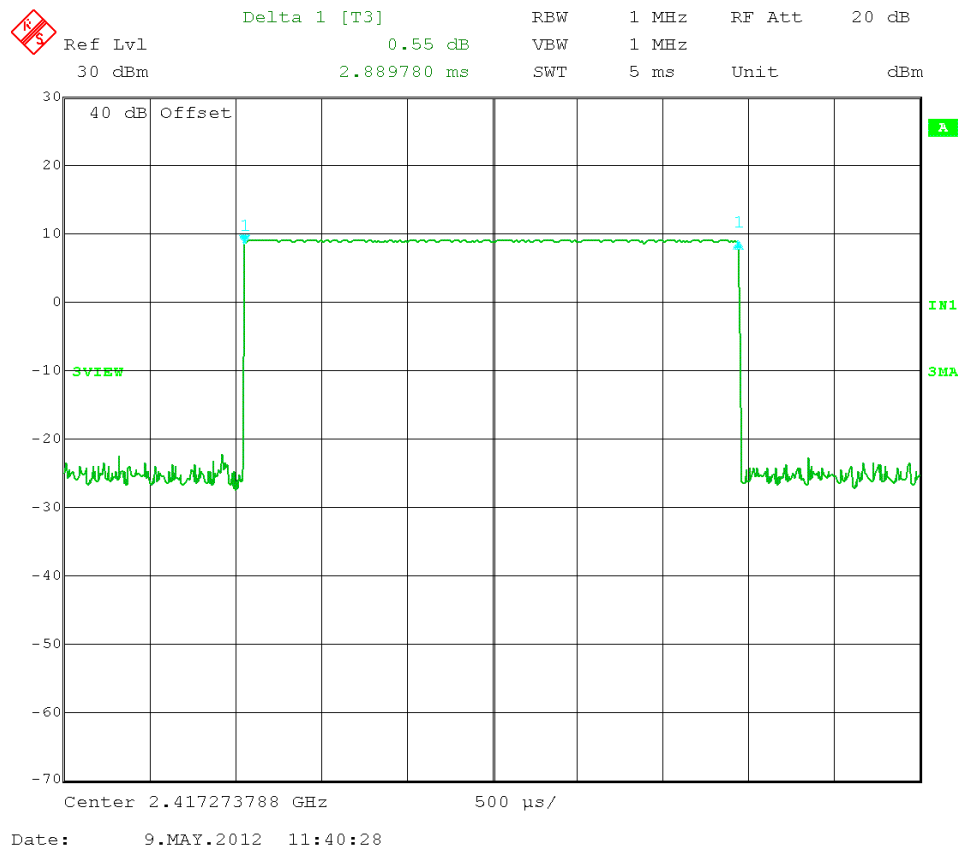
DWELL TIME OF A HOPPING CHANNEL

RULES PART NO.: 15.247(a)(1)(i)

REQUIREMENTS:

2400-2483.5 MHz	< = 0.4 seconds in a 0.4 seconds multiplied the number of hopping channels employed.
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TEST DATA: Three places in the band were measured and the worst case presented. Bluetooth 1 Mbps.



Data Packet	Hop Rate (1/s)	Time slot length (ms)	Dwell Time(ms)	Limits(ms)
DH5	320	2.89	369.9	400

Note: Hop Rate = $1600/5 * 1/s$ for DH5 packets = 320
Dwell Time = time slot length * hop rate * 0.4 s

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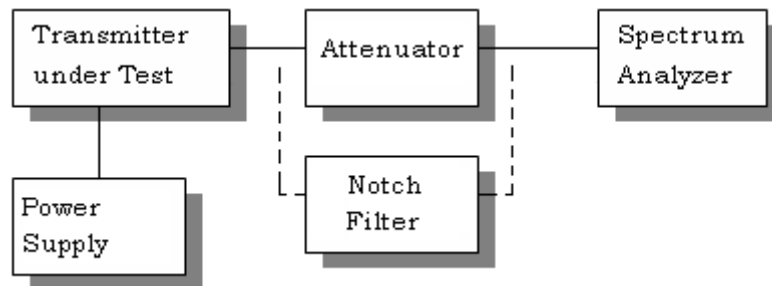
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SPURIOUS EMISSIONS AT ANTENNA TERMINALS

Requirements: Emissions must be at least 20dB down from the highest emission level within the authorized band as measured with a 100 kHz RBW.

15.247(c) Method of Measuring RF Conducted Spurious Emissions



Test Data: All data rates have been tested and the “1 Mbps” is the worst case.

Bluetooth 1Mbps (worst case)

Emission Frequency MHz	dB Below Carrier (dBc)	Emission Frequency MHz	dB Below Carrier (dBc)	Emission Frequency MHz	dB Below Carrier (dBc)
2402.00		2441.00		2480.00	
4804.00	71.6	4882.00	65	4960.00	66.8
7206.00	75.6	7323.00	74.6	7440.00	73.9
9608.00	77.1	9764.00	70.2	9920.00	67.3
12010.00	NF	12205.00	71.7	12400.00	74.3
14412.00	NF	14646.00	NF	14880.00	67.6
16814.00	NF	17087.00	NF	17360.00	67.8
19216.00	NF	19528.00	NF	19840.00	63.8
21618.00	NF	21969.00	NF	22320.00	63.3
24020.00	NF	24410.00	NF	24800.00	NF

Emissions were tested from the lowest frequency generated (or 9 kHz) to the 10th Harmonic

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RADIATION INTERFERENCE

Rules Part No.: 15.247, 15.209

Requirements:

Frequency	Limits
Part 15.209	
9 to 490 kHz	2400/F (kHz) $\mu\text{V/m}$ @ 300 meters
490 to 1705 kHz	24000/F (kHz) $\mu\text{V/m}$ @ 30 meters
1705 kHz to 30 MHz	29.54 dB $\mu\text{V/m}$ @ 30 meters
30 – 88	40.0 dB $\mu\text{V/m}$ @ 3 meters
80 – 216	43.5 dB $\mu\text{V/m}$ @ 3 meters
216 – 960	46.0 dB $\mu\text{V/m}$ @ 3 meters
Above 960	54.0 dB $\mu\text{V/m}$ @ 3 meters
Part 15.247	
Fundamental 902 – 928 MHz	127.37 dB $\mu\text{V/m}$ @ 3 meters
Fundamental 2.4 – 2.4835 MHz	127.37 dB $\mu\text{V/m}$ @ 3 meters
Harmonics	54.0 dB $\mu\text{V/m}$ @ 3 meters

Any emissions that fall in the restricted bands (15.205) must be less than or equal to 54 dB $\mu\text{V/m}$. Spurious emissions not in a restricted band must be 20 dBc. Harmonics were checked through the 10th harmonic.

Test Data: Bluetooth 1Mbps

Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dB μV	Ant. Polarity	Coax Loss dB	Correction Factor dB	Field Strength dB $\mu\text{V/m}$	Margin dB
2,402.00	2,402.00	68.5	H	3.18	32.4	104.08	23.3
2,402.00	2,402.00	69.8	V	3.18	32.4	105.38	22
2,402.00	4,804.00	7	V	4.9	34.38	46.28	7.72
2,402.00	4,804.00	9.2	H	4.9	34.38	48.48	5.52
2,402.00	7,206.00	6.3	H	5.72	36.16	48.18	5.82
2,402.00	7,206.00	7.1	V	5.72	36.16	48.98	5.02
2,402.00	9,608.00	8.4	V	6.78	36.73	51.91	2.09
2,402.00	9,608.00	9.5	H	6.78	36.73	53.01	0.99
2,402.00	12,010.00	6.1	V	7.81	38.81	52.72	1.28
2,402.00	12,010.00	6.4	H	7.81	38.81	53.02	0.98
2,441.00	2,441.00	70.1	H	3.21	32.48	105.79	21.59
2,441.00	2,441.00	70.4	V	3.21	32.48	106.09	21.29
2,441.00	4,882.00	7.5	V	4.94	34.43	46.87	7.13
2,441.00	4,882.00	7.6	H	4.94	34.43	46.97	7.03

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Test Data continued:

Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity	Coax Loss dB	Correction Factor dB	Field Strength dBuV/m	Margin dB
2,441.00	7,323.00	7.4	H	5.79	36.14	49.33	4.67
2,441.00	7,323.00	7.4	V	5.79	36.14	49.33	4.67
2,441.00	9,764.00	7.3	V	6.83	36.92	51.05	2.95
2,441.00	9,764.00	8.5	H	6.83	36.92	52.25	1.75
2,441.00	12,205.00	7	V	7.94	38.96	53.9	0.1
2,480.00	2,480.00	69.9	V	3.24	32.56	105.7	21.68
2,480.00	2,480.00	70	H	3.24	32.56	105.8	21.58
2,480.00	4,960.00	8.9	H	4.98	34.48	48.36	5.64
2,480.00	4,960.00	11.6	V	4.98	34.48	51.06	2.94
2,480.00	7,440.00	7.1	V	5.86	36.11	49.07	4.93
2,480.00	7,440.00	8	H	5.86	36.11	49.97	4.03
2,480.00	9,920.00	7.1	H	6.88	37.1	51.08	2.92
2,480.00	9,920.00	8.1	V	6.88	37.1	52.08	1.92
2,480.00	12,400.00	5.6	V	8.08	39.12	52.8	1.2
2,480.00	12,400.00	6.5	H	8.08	39.12	53.7	0.3

All values are peak unless noted.

Items mark with an * designate a frequency in a restricted band.

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Test Data continued: Bluetooth 2Mbps

Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity	Coax Loss dB	Correction Factor dB	Field Strength dBuV/m	Margin dB
2,402.00	2,402.00	69.8	H	3.18	32.4	105.38	22
2,402.00	2,402.00	69.9	V	3.18	32.4	105.48	21.9
2,402.00	4,804.00	7.6	V	4.9	34.38	46.88	7.12
2,402.00	4,808.00	6.6	H	4.9	34.38	45.88	8.12
2,402.00	7,206.00	6.7	H	5.72	36.16	48.58	5.42
2,402.00	7,206.00	7.4	V	5.72	36.16	49.28	4.72
2,402.00	9,608.00	7.2	V	6.78	36.73	50.71	3.29
2,402.00	9,608.00	8.2	H	6.78	36.73	51.71	2.29
2,402.00	12,010.00	6.3	V	7.81	38.81	52.92	1.08
2,402.00	12,010.00	6.5	H	7.81	38.81	53.12	0.88
2,441.00	2,441.00	67.7	H	3.21	32.48	103.39	23.99
2,441.00	2,441.00	68.3	V	3.21	32.48	103.99	23.39
2,441.00	4,882.00	7.4	V	4.94	34.43	46.77	7.23
2,441.00	4,882.00	8.1	H	4.94	34.43	47.47	6.53
2,441.00	7,323.00	7.1	V	5.79	36.14	49.03	4.97
2,441.00	7,323.00	7.2	H	5.79	36.14	49.13	4.87
2,441.00	9,764.00	7	V	6.83	36.92	50.75	3.25
2,441.00	9,764.00	7.3	H	6.83	36.92	51.05	2.95
2,441.00	12,205.00	7	H	7.94	38.96	53.9	0.1
2,480.00	2,480.00	67.8	H	3.24	32.56	103.6	23.78
2,480.00	2,480.00	68.4	V	3.24	32.56	104.2	23.18
2,480.00	4,960.00	7.4	H	4.98	34.48	46.86	7.14
2,480.00	4,960.00	9.6	V	4.98	34.48	49.06	4.94
2,480.00	7,440.00	8.7	V	5.86	36.11	50.67	3.33
2,480.00	7,440.00	9.1	H	5.86	36.11	51.07	2.93
2,480.00	9,920.00	7.5	H	6.88	37.1	51.48	2.52
2,480.00	9,920.00	8.1	V	6.88	37.1	52.08	1.92
2,480.00	12,400.00	6.7	H	8.08	39.12	53.9	0.1

All values are peak unless noted.

Items mark with an * designate a frequency in a restricted band.

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Test Data continued: Bluetooth 3Mbps

Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity	Coax Loss dB	Correction Factor dB	Field Strength dBuV/m	Margin dB
2,402.00	2,402.00	68.4	V	3.18	32.4	103.98	23.4
2,402.00	2,402.00	69	H	3.18	32.4	104.58	22.8
2,402.00	4,804.00	7.4	H	4.9	34.38	46.68	7.32
2,402.00	4,804.00	7.5	V	4.9	34.38	46.78	7.22
2,402.00	7,206.00	7.1	V	5.72	36.16	48.98	5.02
2,402.00	7,206.00	7.5	H	5.72	36.16	49.38	4.62
2,402.00	9,608.00	7.2	H	6.78	36.73	50.71	3.29
2,402.00	9,608.00	7.2	V	6.78	36.73	50.71	3.29
2,402.00	12,010.00	6.8	V	7.81	38.81	53.42	0.58
2,402.00	12,010.00	6.8	H	7.81	38.81	53.42	0.58
2,441.00	2,441.00	68.4	H	3.21	32.48	104.09	23.29
2,441.00	2,441.00	69.7	V	3.21	32.48	105.39	21.99
2,441.00	4,882.00	7.2	H	4.94	34.43	46.57	7.43
2,441.00	4,882.00	8.1	V	4.94	34.43	47.47	6.53
2,441.00	7,323.00	6.8	H	5.79	36.14	48.73	5.27
2,441.00	7,323.00	7.1	V	5.79	36.14	49.03	4.97
2,441.00	9,764.00	7.2	V	6.83	36.92	50.95	3.05
2,441.00	9,764.00	7.2	H	6.83	36.92	50.95	3.05
2,441.00	12,205.00	7	V	7.94	38.96	53.9	0.1
2,480.00	2,480.00	68.5	V	3.24	32.56	104.3	23.08
2,480.00	2,480.00	68.7	H	3.24	32.56	104.5	22.88
2,480.00	4,960.00	7.2	H	4.98	34.48	46.66	7.34
2,480.00	4,960.00	9.3	V	4.98	34.48	48.76	5.24
2,480.00	7,440.00	6.8	H	5.86	36.11	48.77	5.23
2,480.00	7,440.00	8.1	V	5.86	36.11	50.07	3.93
2,480.00	9,920.00	6.1	H	6.88	37.1	50.08	3.92
2,480.00	9,920.00	7.6	V	6.88	37.1	51.58	2.42
2,480.00	12,400.00	5.5	H	8.08	39.12	52.7	1.3
2,480.00	12,400.00	6.3	V	8.08	39.12	53.5	0.5

All values are peak unless noted.

Items mark with an * designate a frequency in a restricted band.

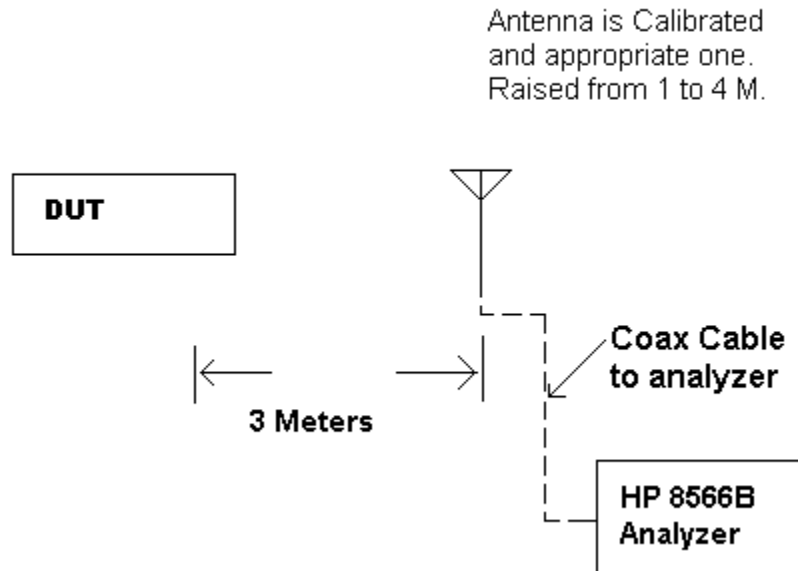
APPLICANT: MOTOROLA MOBILITY, INC.

FCC ID: IHDT56NQ2

IC: 1090-T56NQ2

REPORT: O:\M\MOTOROLA IL LL\1064KUT12\1064KUT12TestReport_Rev.doc

Method of Measuring Radiated Spurious Emissions



METHOD OF MEASUREMENT: The procedure used was ANSI standard C63.4-2003 & the FCC/OET Guidance on Measurements for F.H. spread spectrum systems – DA 00-705 or KDB 558074.

APPLICANT: MOTOROLA MOBILITY, INC.
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REPORT: O:\M\MOTOROLA IL LL\1064KUT12\1064KUT12TestReport_Rev.doc

POWER LINE CONDUCTED INTERFERENCE

Rules Part No.: Part 15.207

Requirements:

Frequency (MHz)	Quasi Peak Limits (dB μ V)	Average Limits (dB μ V)
0.15 – 0.5	66 – 56 *	56 – 46 *
0.5 – 5.0	56	46
5.0 – 30	60	50
* Decrease with logarithm of frequency		

AC adaptor: Model No: FMP5515A

Input: 100 – 240 VAC, 50 – 60 Hz, 0.2A

Output: 5 V, .75 A

Test Data: The following plots represent the emissions read for power line conducted. Both lines were observed.

APPLICANT: MOTOROLA MOBILITY, INC.

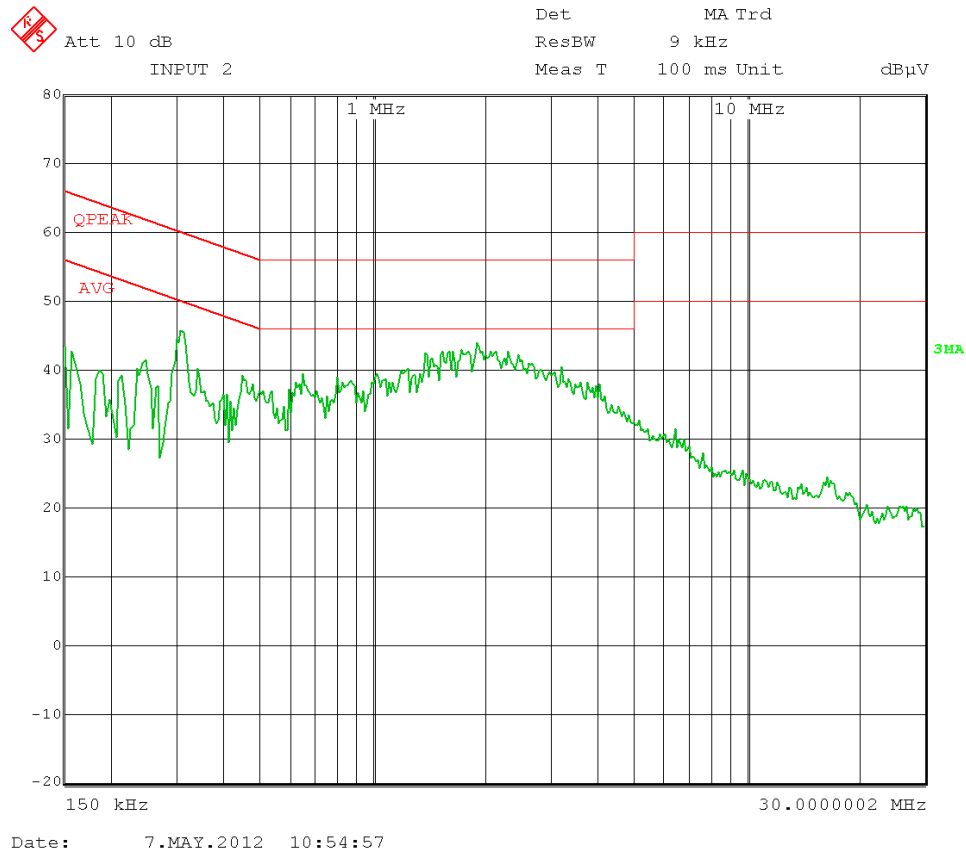
FCC ID: IHDT56NQ2

IC: 1090-T56NQ2

REPORT: O:\M\MOTOROLA IL LL\1064KUT12\1064KUT12TestReport_Rev.doc

Peak

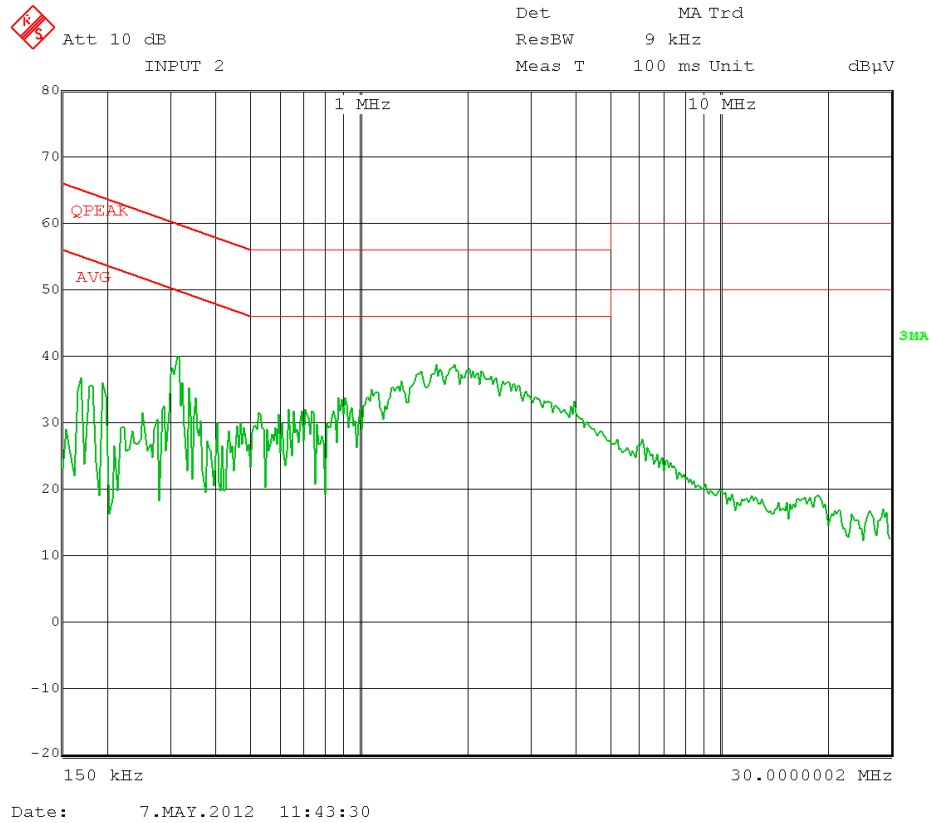
POWERLINE CONDUCTED PLOT – LINE 1



APPLICANT: MOTOROLA MOBILITY, INC.
 FCC ID: IHDT56NQ2
 IC: 1090-T56NQ2
 REPORT: O:\M\MOTOROLA IL LL\1064KUT12\1064KUT12TestReport_Rev.doc

Peak

POWERLINE CONDUCTED PLOT – LINE 2



APPLICANT: MOTOROLA MOBILITY, INC.
 FCC ID: IHDT56NQ2
 IC: 1090-T56NQ2
 REPORT: O:\M\MOTOROLA IL LL\1064KUT12\1064KUT12TestReport_Rev.doc

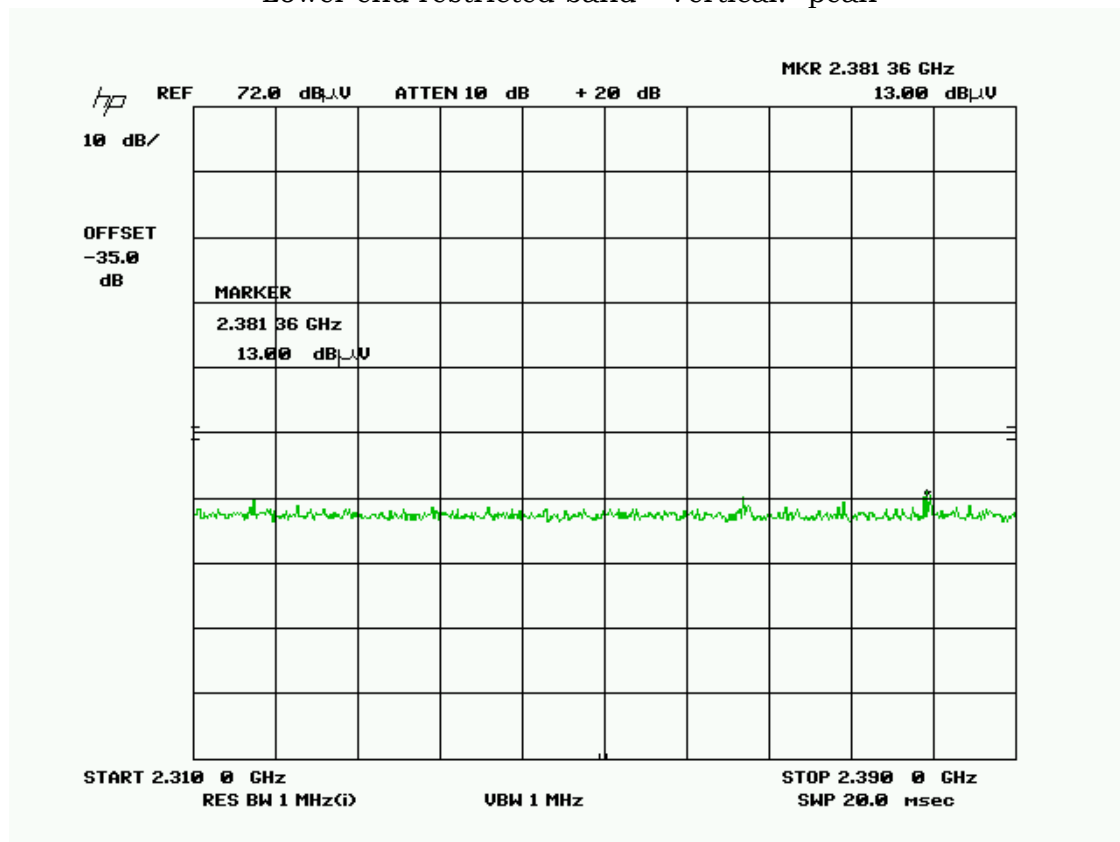
RADIATED SPURIOUS EMISSIONS INTO ADJACENT RESTRICTED BAND

Requirements: Emissions that fall in the restricted bands (15.205). These emissions must be less than or equal to 500 $\mu\text{V/m}$ (54 $\text{dB}\mu\text{V/m}$).

Test Procedure: An in band field strength measurement of the fundamental Emission using the RBW and detector function required by C63.4-2000 and FCC Rules. The procedure was repeated with an average detector and a plot made. The calculated field strength in the adjacent restricted band is presented below.

The result for 1Mbps rate

Lower end restricted band - Vertical.- peak



Tuned Frequency MHz	Emission Frequency MHz	Meter Reading $\text{dB}\mu\text{V}$	Ant. Polarity	Coax Loss dB	Correction Factor dB/m	Field Strength $\text{dB}\mu\text{V/m}$	Margin dB
2,402.00	2,381.40	13	V	3.17	32.46	48.63	5.37

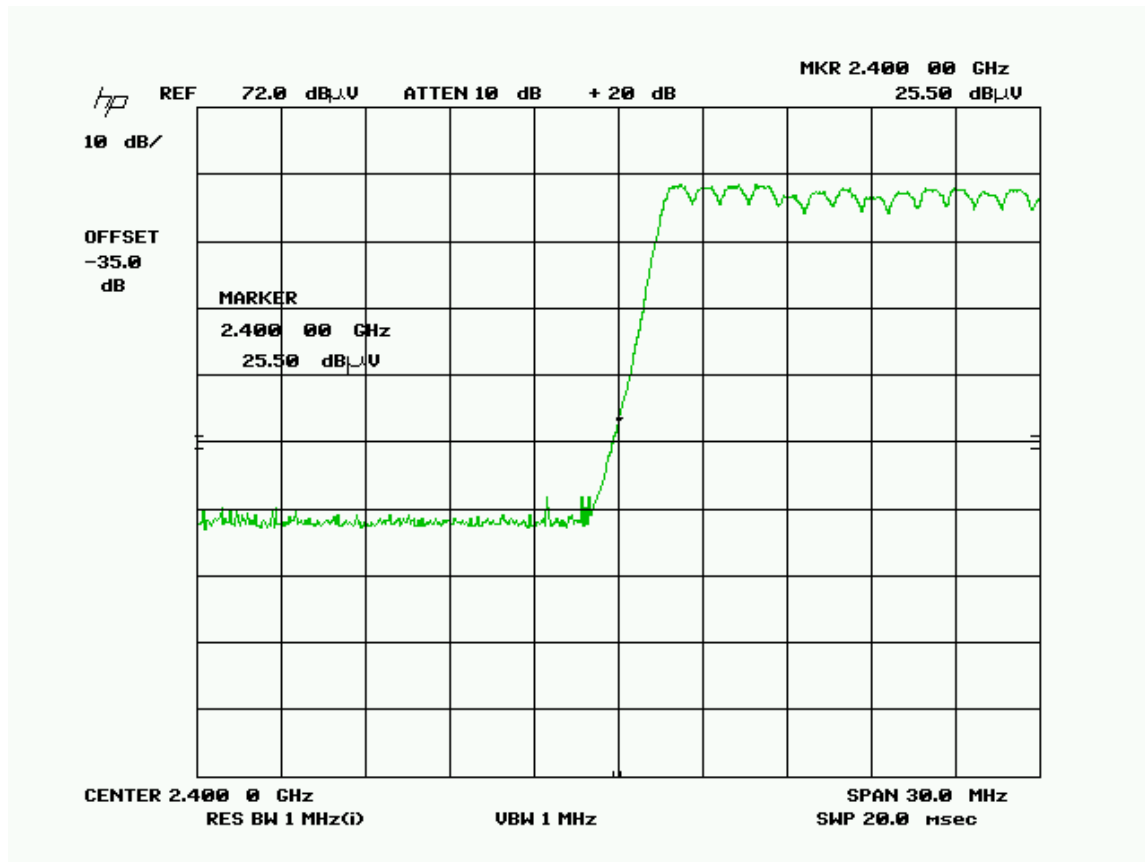
APPLICANT: MOTOROLA MOBILITY, INC.

FCC ID: IHDT56NQ2

IC: 1090-T56NQ2

REPORT: O:\M\MOTOROLA IL LL\1064KUT12\1064KUT12TestReport_Rev.doc

Lower-end bandedge channel - peak



Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity	Detector	Coax Loss dB	Correction Factor dB/m	Field Strength dBuV/m	Margin dB
2,402.00	2,400.00	25.5	V	Peak	3.18	32.48	61.16	12.84
2,402.00	2,400.00	1.7	V	Avg	3.18	32.48	37.36	16.64

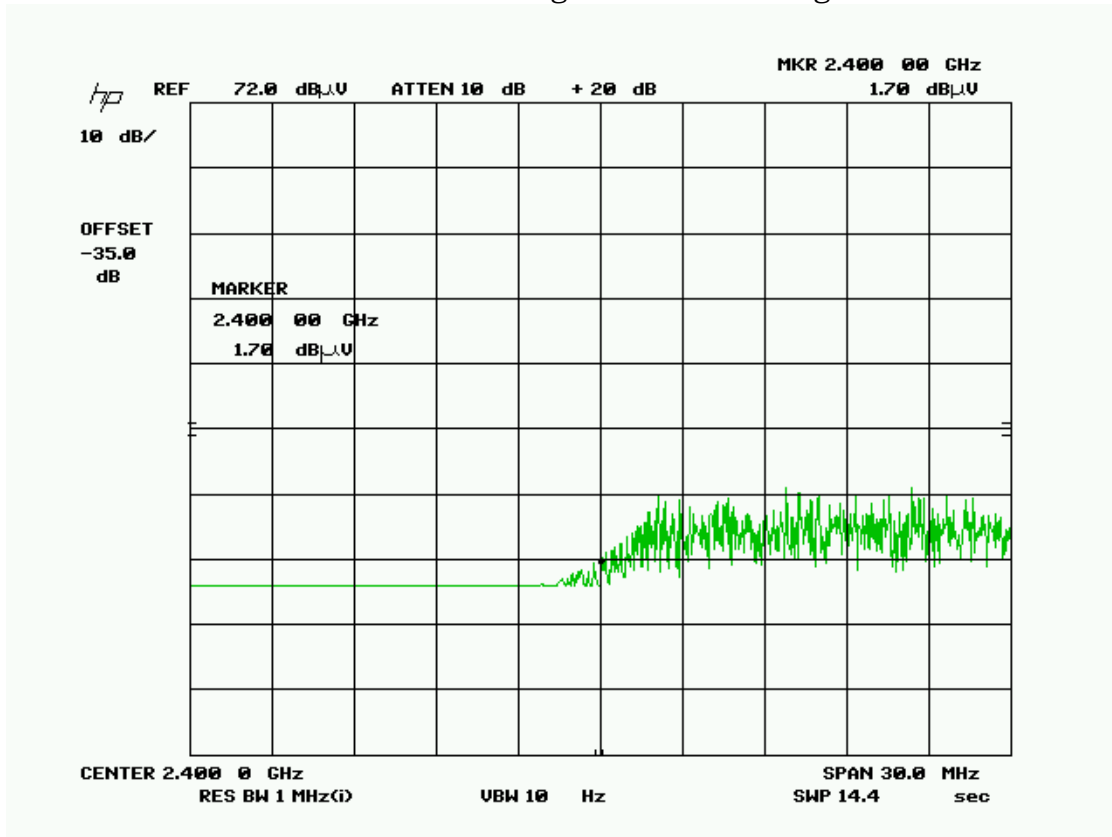
APPLICANT: MOTOROLA MOBILITY, INC.

FCC ID: IHDT56NQ2

IC: 1090-T56NQ2

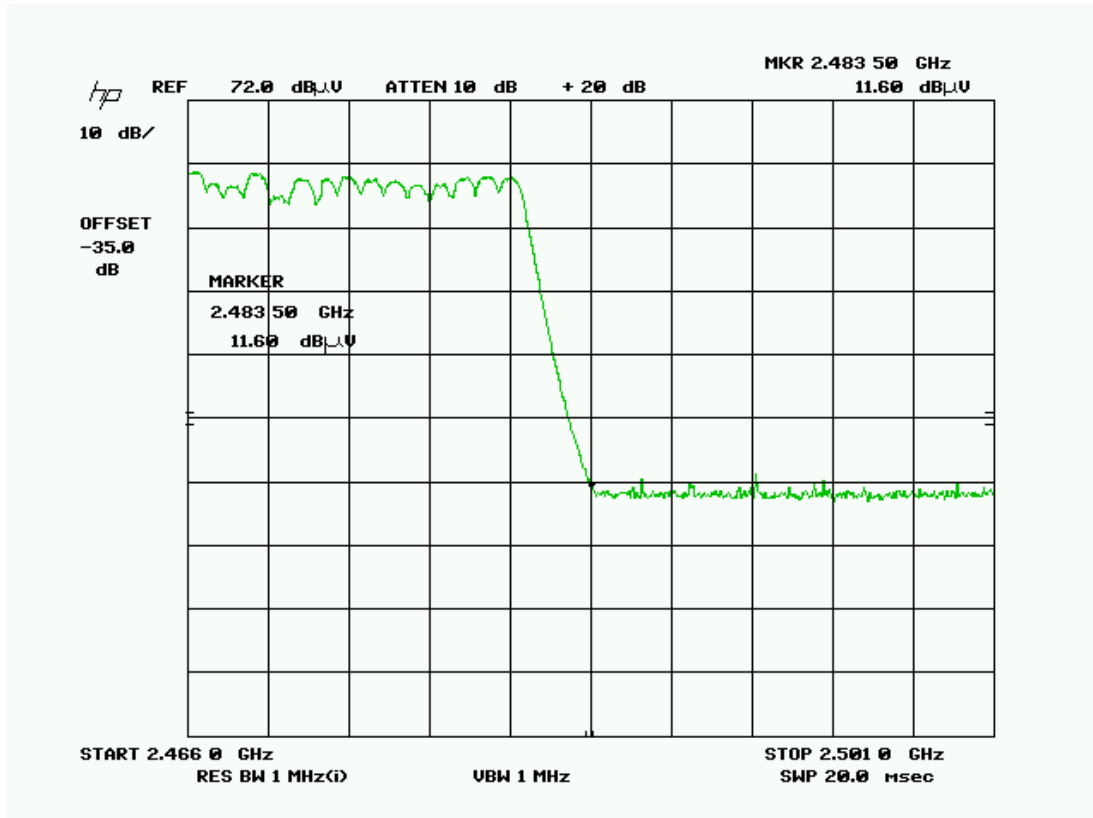
REPORT: O:\M\MOTOROLA IL LL\1064KUT12\1064KUT12TestReport_Rev.doc

Lower-end bandedge channel - average



APPLICANT: MOTOROLA MOBILITY, INC.
 FCC ID: IHDT56NQ2
 IC: 1090-T56NQ2
 REPORT: O:\M\MOTOROLA IL LL\1064KUT12\1064KUT12TestReport_Rev.doc

Upper end restricted bandedge channel - peak



Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity	Coax Loss dB	Correction Factor dB/m	Field Strength dBuV/m	Margin dB
2,480.00	2,483.50	11.6	V	3.24	32.58	47.42	6.58

APPLICANT: MOTOROLA MOBILITY, INC.

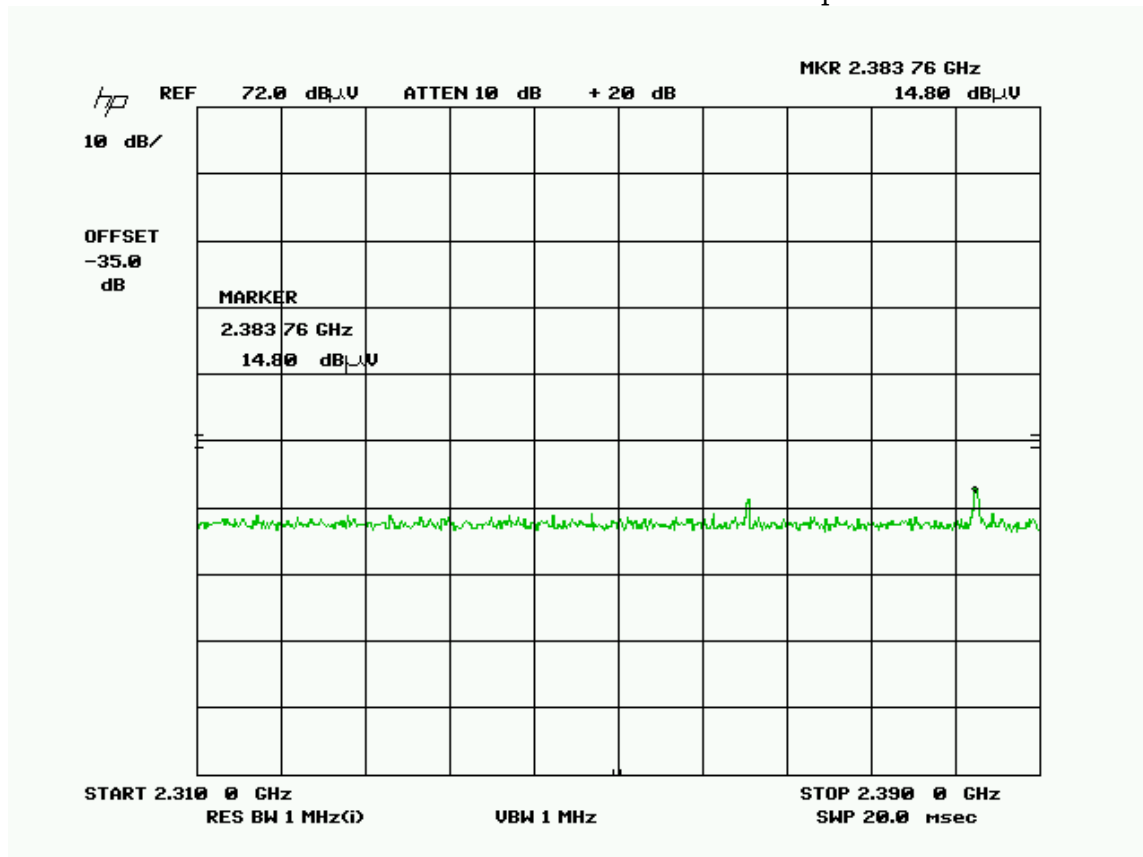
FCC ID: IHDT56NQ2

IC: 1090-T56NQ2

REPORT: O:\M\MOTOROLA IL LL\1064KUT12\1064KUT12TestReport_Rev.doc

The result for 2Mbps rate

Lower end restricted band - Vertical.- peak



Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity	Coax Loss dB	Correction Factor dB/m	Field Strength dBuV/m	Margin dB
2,402.00	2,383.76	14.8	V	3.17	32.46	50.43	3.57

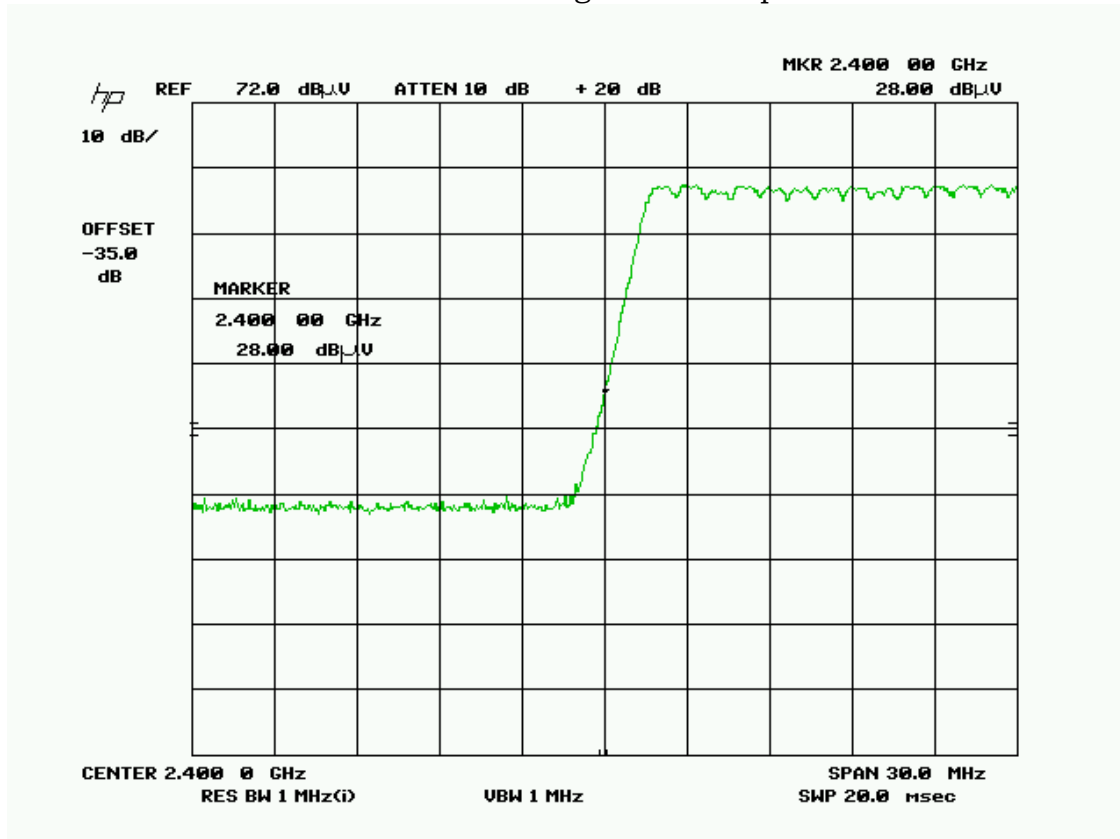
APPLICANT: MOTOROLA MOBILITY, INC.

FCC ID: IHDT56NQ2

IC: 1090-T56NQ2

REPORT: O:\M\MOTOROLA IL LL\1064KUT12\1064KUT12TestReport_Rev.doc

Lower-end bandedge channel - peak



Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBμV	Ant. Polarity	Detector	Coax Loss dB	Correction Factor dB/m	Field Strength dBμV/m	Margin dB
2,402.00	2,400.00	28	V	Peak	3.18	32.48	63.66	10.34
2,402.00	2,400.00	2.2	V	Avg	3.18	32.48	37.86	16.14

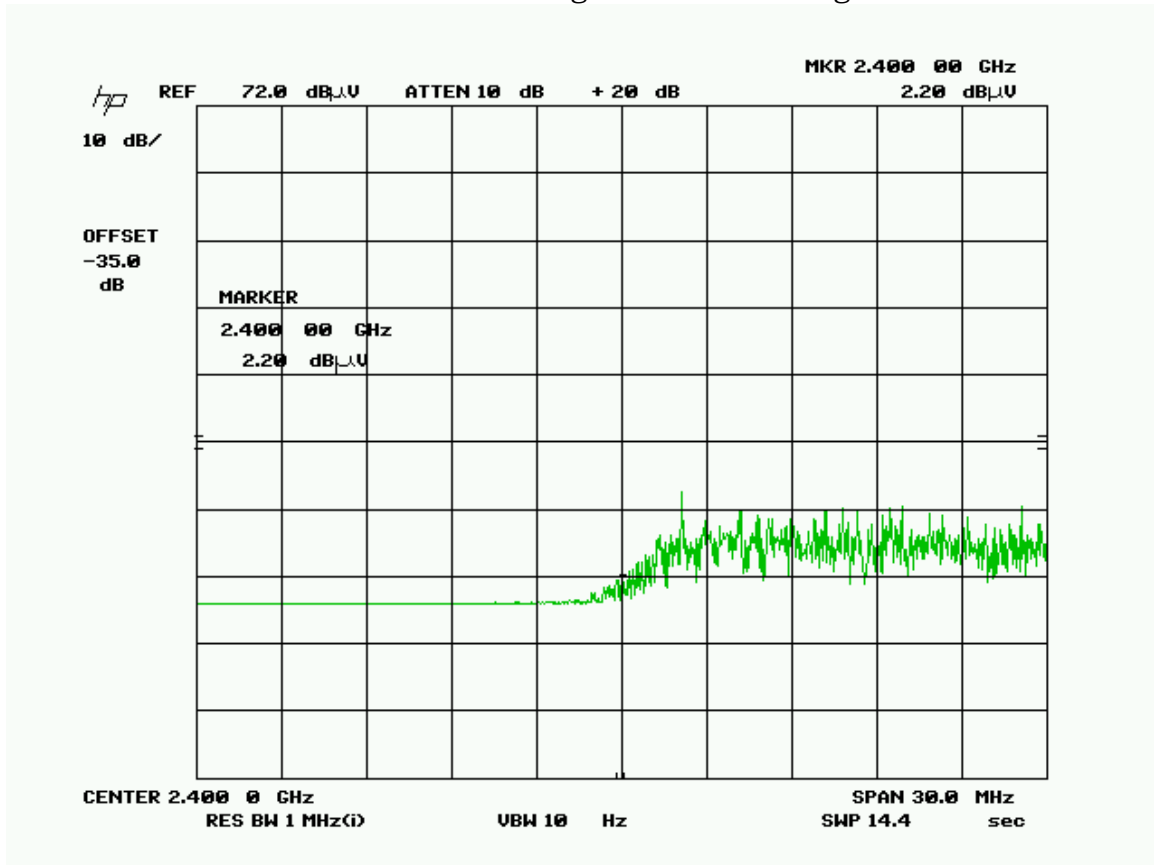
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FCC ID: IHDT56NQ2

IC: 1090-T56NQ2

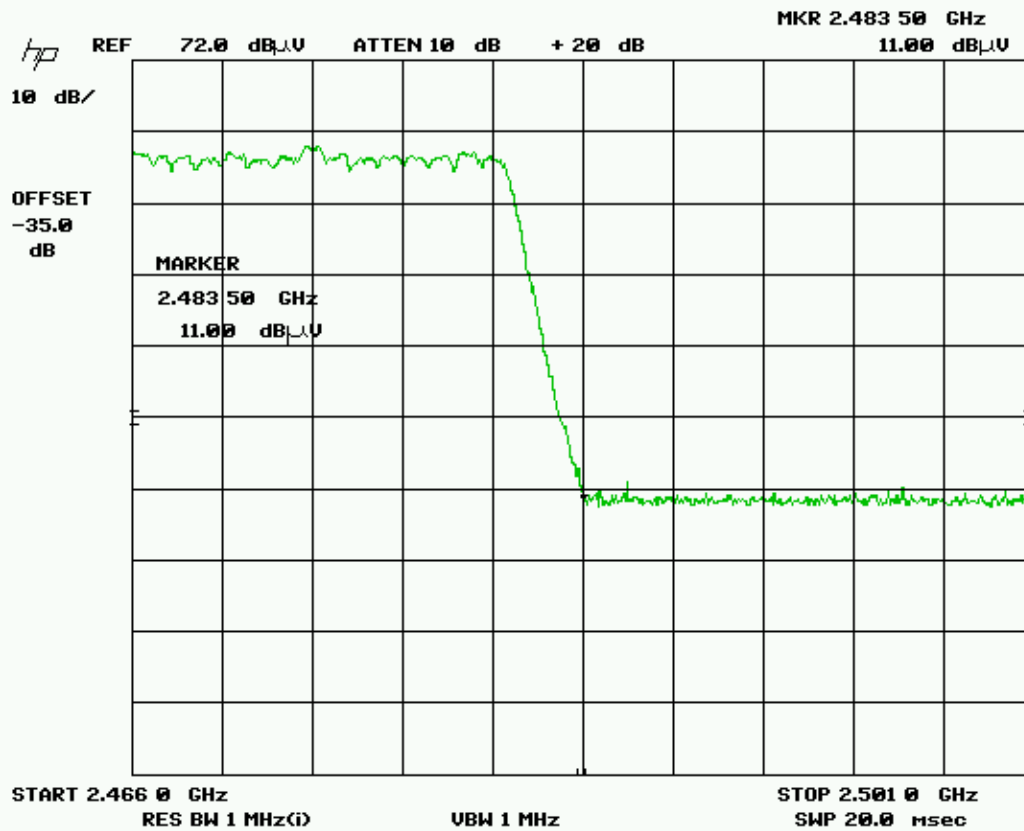
REPORT: O:\M\MOTOROLA IL LL\1064KUT12\1064KUT12TestReport_Rev.doc

Lower-end bandedge channel - average



APPLICANT: MOTOROLA MOBILITY, INC.
 FCC ID: IHDT56NQ2
 IC: 1090-T56NQ2
 REPORT: O:\M\MOTOROLA IL LL\1064KUT12\1064KUT12TestReport_Rev.doc

Upper-end restricted bandedge channel - peak



Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity	Coax Loss dB	Correction Factor dB/m	Field Strength dBuV/m	Margin dB
2,480.00	2,483.50	11	V	3.24	32.58	46.82	7.18

APPLICANT: MOTOROLA MOBILITY, INC.

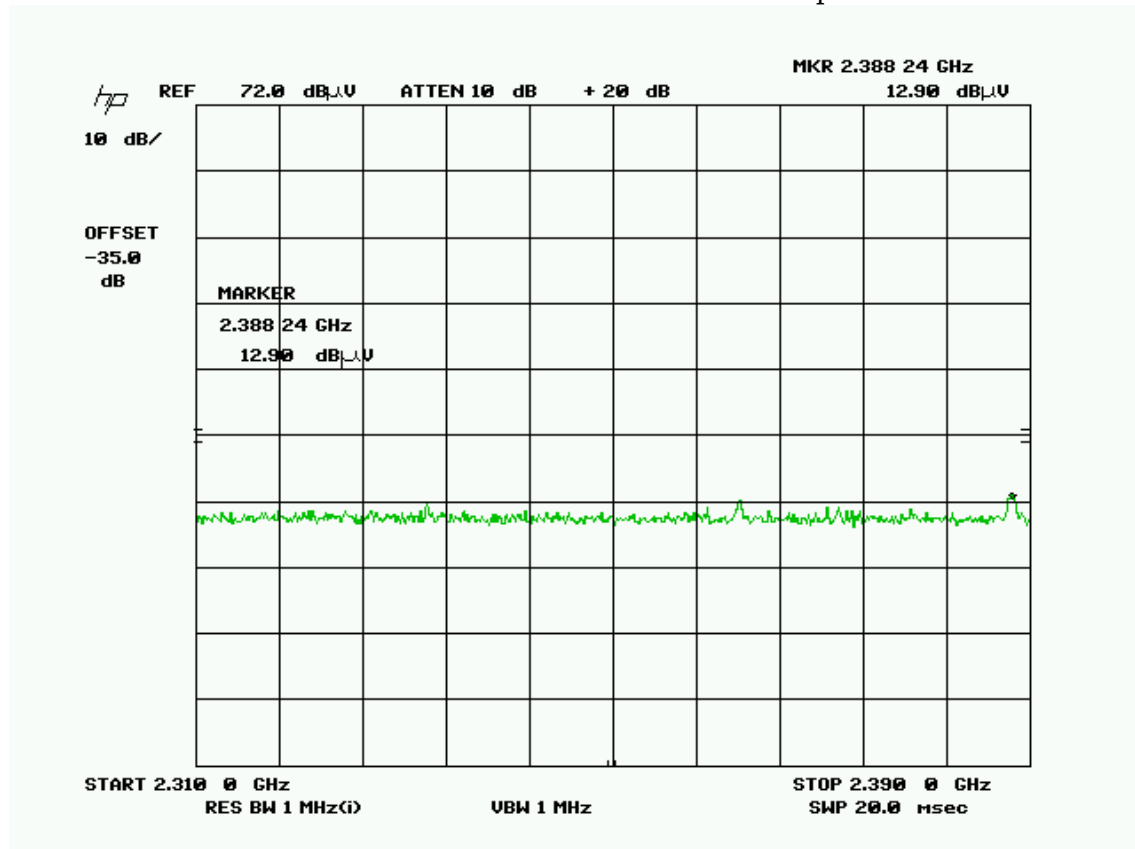
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IC: 1090-T56NQ2

REPORT: O:\M\MOTOROLA IL LL\1064KUT12\1064KUT12TestReport_Rev.doc

The result for 3Mbps rate

Lower end restricted band - Vertical.- peak



Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity	Coax Loss dB	Correction Factor dB/m	Field Strength dBuV/m	Margin dB
2,402.00	2,388.20	12.9	V	3.17	32.47	48.54	5.46

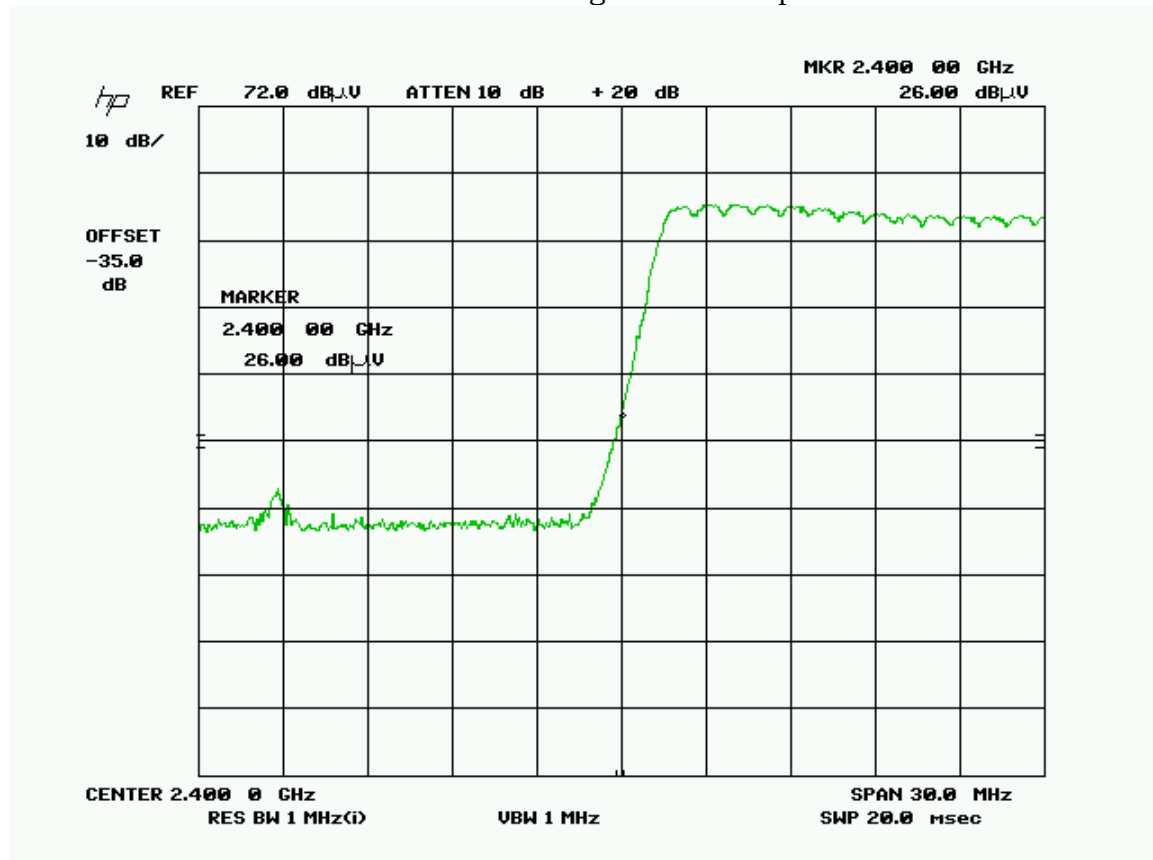
APPLICANT: MOTOROLA MOBILITY, INC.

FCC ID: IHDT56NQ2

IC: 1090-T56NQ2

REPORT: O:\M\MOTOROLA IL LL\1064KUT12\1064KUT12TestReport_Rev.doc

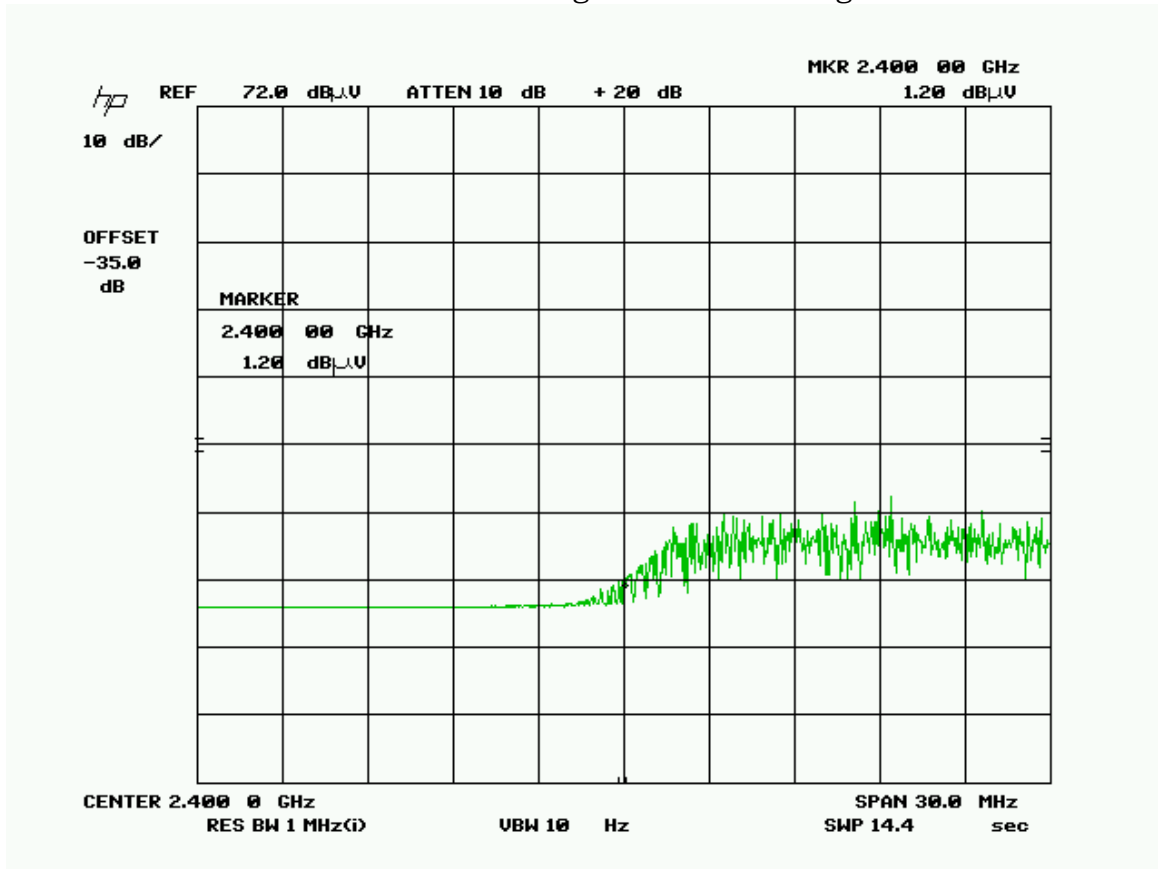
Lower-end bandedge channel – peak



Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBμV	Ant. Polarity	Detector	Coax Loss dB	Correction Factor dB/m	Field Strength dBμV/m	Margin dB
2,402.00	2,400.00	26	V	Peak	3.18	32.48	61.66	12.34
2,402.00	2,400.00	1.2	V	Avg	3.18	32.48	36.86	17.14

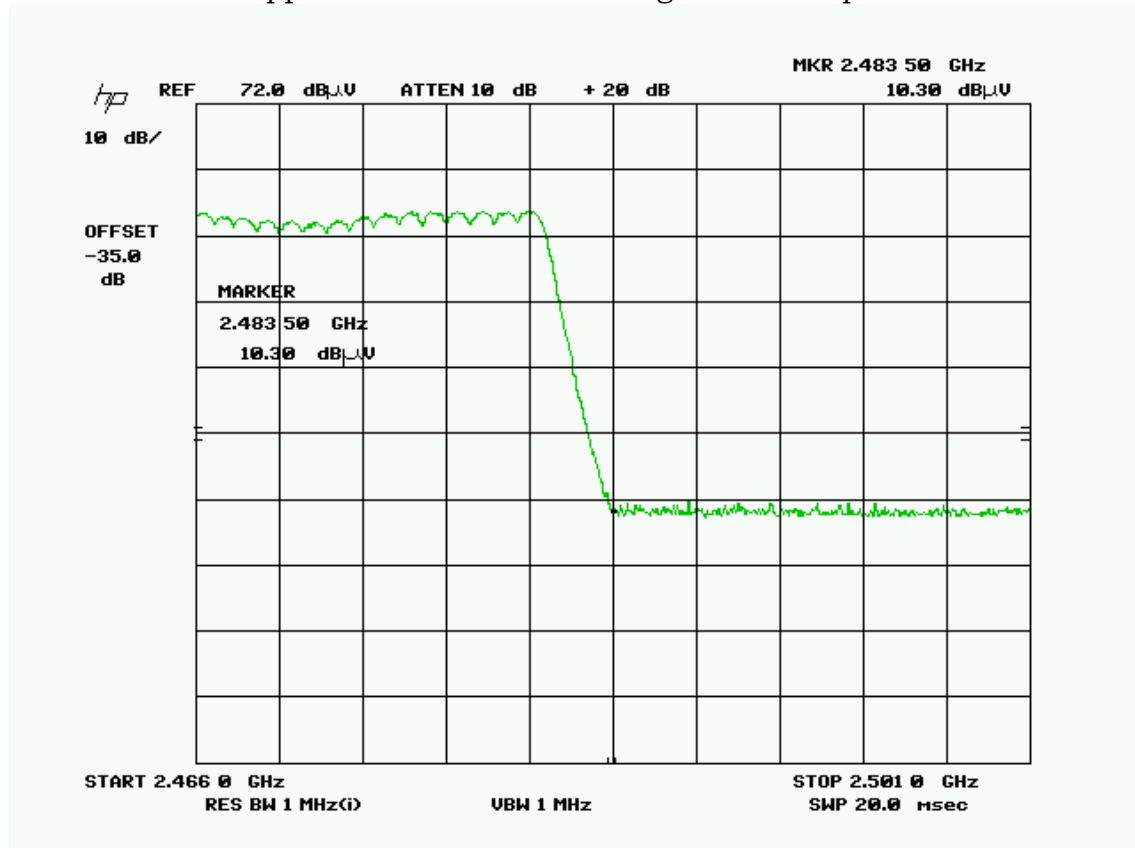
APPLICANT: MOTOROLA MOBILITY, INC.
 FCC ID: IHDT56NQ2
 IC: 1090-T56NQ2
 REPORT: O:\M\MOTOROLA IL LL\1064KUT12\1064KUT12TestReport_Rev.doc

Lower-end bandedge channel - average



APPLICANT: MOTOROLA MOBILITY, INC.
 FCC ID: IHDT56NQ2
 IC: 1090-T56NQ2
 REPORT: O:\M\MOTOROLA IL LL\1064KUT12\1064KUT12TestReport_Rev.doc

Upper-end restricted bandedge channel - peak



Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity	Coax Loss dB	Correction Factor dB/m	Field Strength dBuV/m	Margin dB
2,480.00	2,483.50	10.3	V	3.24	32.58	46.12	7.88

APPLICANT: MOTOROLA MOBILITY, INC.

FCC ID: IHDT56NQ2

IC: 1090-T56NQ2

REPORT: O:\M\MOTOROLA IL LL\1064KUT12\1064KUT12TestReport_Rev.doc

POWER SPECTRAL DENSITY

Rules Part No.: 15.247(d)

Requirements: The peak level measured must be less than +8.0 dBm.

Test Data: SEE THE FOLLOWING PLOTS

1 Mbps



Bluetooth 1Mbps

Three places in the band were measured and the worst case reported.

Correction factor: $BWCF = 10\log(3 \text{ kHz}/100 \text{ kHz}) = -15.2 \text{ dB}$

PSD= 7.1 + (-15.2) = -8.1

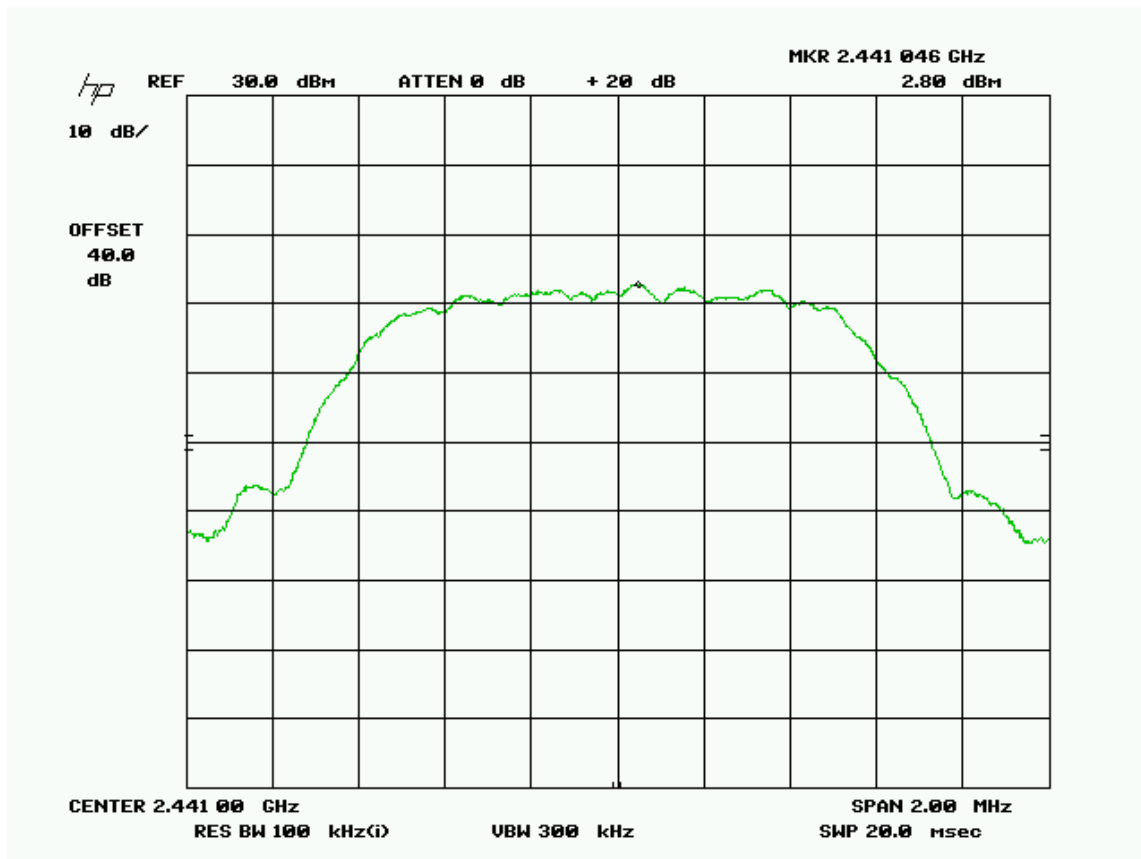
APPLICANT: MOTOROLA MOBILITY, INC.

FCC ID: IHDT56NQ2

IC: 1090-T56NQ2

REPORT: O:\M\MOTOROLA IL LL\1064KUT12\1064KUT12TestReport_Rev.doc

2 Mbps



Bluetooth 2Mbps

Three places in the band were measured and the worst case reported.

Correction factor: $BWCF = 10\log(3 \text{ kHz}/100 \text{ kHz}) = -15.2 \text{ dB}$

$PSD = 2.8 + (-15.2) = -12.4$

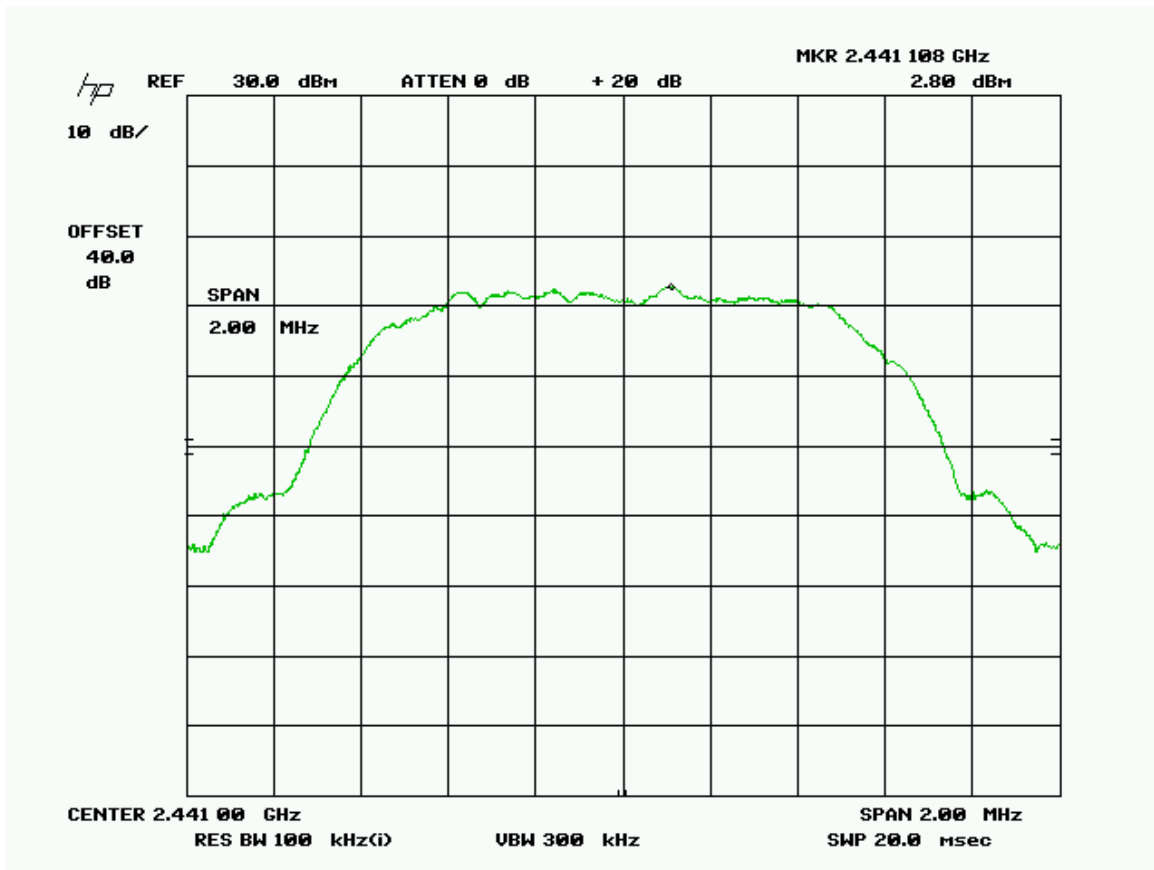
APPLICANT: MOTOROLA MOBILITY, INC.

FCC ID: IHDT56NQ2

IC: 1090-T56NQ2

REPORT: O:\M\MOTOROLA IL LL\1064KUT12\1064KUT12TestReport_Rev.doc

3 Mbps



Bluetooth 3Mbps

Three places in the band were measured and the worst case reported.

Correction factor: $BWCF = 10\log(3\text{ kHz}/100\text{ kHz}) = -15.2\text{ dB}$
 $PSD = 2.8 + (-15.2) = -12.4$

APPLICANT: MOTOROLA MOBILITY, INC.
 FCC ID: IHDT56NQ2
 IC: 1090-T56NQ2
 REPORT: O:\M\MOTOROLA IL LL\1064KUT12\1064KUT12TestReport_Rev.doc