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**COMPLIANCE TEST REPORT  
PER FCC PART 15.247  
AND IC RSS-210**

|                             |  |
|-----------------------------|--|
| <b>Applicant</b>            | MOTOROLA MOBILITY, INC.  |
| <b>Address</b>              | 600 NORTH U.S. HWY 45<br>LIBERTYVILLE ILLINOIS 60048-5343 USA          |
| <b>FCC ID</b>               | IHDP56MH1  |
| <b>Model Number</b>         | H2011B51015A   |
| <b>Product Description</b>  | iDEN ODM PHONE   |
| <b>Date Sample Received</b> | 6/20/2011  |
| <b>Dates Tested</b>         | 7/25/2011  |
| <b>Tested By</b>            | Joe Scoglio  |
| <b>Approved By</b>          | Mario R. de Aranzeta   |
| <b>Report Number</b>        | 1364ET11TestReportODM iDEN TX MODE G                                   |
| <b>Test Results</b>         | <input checked="" type="checkbox"/> PASS <input type="checkbox"/> FAIL |

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



Certificate # 0955-01



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## 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:** 7/23/11



**REPORT SUMMARY**

|                       |   |
|-----------------------|---|
| Disclaimer:           | The test results relate only to the items tested.   |
| Purpose of Test:      | To demonstrate that the DUT is compliant with FCC Pt 15.247 requirements for a DSSS radio.<br>To demonstrate that the DUT is compliant with IC RSS-210 requirements for a DSSS radio. |
| Applicable Standards: | FCC Pt 15.247, ANSI C63.4: 2003, ANSI TIA-603: 2004, FCC Pt 15.109, RSS-210, RSS-GEN  |
| Related Reports:      | Digital Portion Verified  |

**TEST ENVIRONMENT AND TEST SETUP**

|                             |  |
|-----------------------------|--|
| Test Facilities:            | All measurements were made at one or more of the test sites of TIMCO ENGINEERING INC. located at 849 N.W. State Road 45, Newberry, FL 32669. |
| Laboratory Test Conditions: | Temperature: 26°C<br>Humidity: 55%   |
| Test Exercise:              | The DUT was set in continuous transmit mode of operation.  |
| Deviation to the Standards: | There was no deviation from the standard.  |
| Modification to the DUT:    | No modification was made.  |
| Supporting Accessories:     | None   |

**TEST SUPPORTING EQUIPMENT**

| Supporting Device | Manufacturer | Model / FCC ID | Serial Number |
|-------------------|--------------|----------------|---------------|
| N/A               |              |                |               |

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**DUT SPECIFICATION**

|                     |  |  |  |
|---------------------|--|--|--|
| Applicable Standard | Part 15.247  |  |  |
| DUT Description     | iDEN ODM PHONE                                       |  |  |
| FCC ID              | IHDP56MH1  |  |  |
| MODEL NUMBER        | H2011B51015A   |  |  |
| Serial Number       | 364VMLODDH   |  |  |
| Hardware            | P2-8   |  |  |
| Software            | DD6.00.12  |  |  |
| Operating Frequency | TX: 2.402 – 2.480 GHz                                | RX: Same   |  |
| DUT Power Source    | <input type="checkbox"/> 110–120Vac/50– 60Hz         |  |  |
|                     | <input type="checkbox"/> DC Power                    |  |  |
|                     | <input checked="" type="checkbox"/> Battery Operated |  |  |
| Test Item           | <input type="checkbox"/> Prototype                   | <input checked="" type="checkbox"/> Pre-Production | <input type="checkbox"/> Production          |
| Type of Equipment   | <input type="checkbox"/> Fixed                       | <input type="checkbox"/> Mobile                    | <input checked="" type="checkbox"/> Portable |
| Antenna Connector   | None   |  |  |

## EMC EQUIPMENT LIST

| Device                                | Manufacturer       | Model            | Serial Number            | Cal/Char Date     | Due Date |
|---------------------------------------|--------------------|------------------|--------------------------|-------------------|----------|
| 3-Meter Semi-Anechoic Chamber         | Panashield         | N/A              | N/A                      | Listed<br>5/10/10 | 5/10/12  |
| AC Voltmeter                          | HP                 | 400FL            | 2213A14499               | CAL<br>6/12/11    | 6/12/13  |
| Antenna:<br>Dipole Kit                | Electro-Metrics    | TDA-30/1-4       | 153                      | CHAR<br>8/10/09   | 8/10/11  |
| Antenna:<br>Passive Loop              | EMC Test Systems   | EMCO 6512        | 9706-1211                | CAL.<br>8/1/09    | 8/2/11   |
| Frequency Counter                     | HP                 | 5385A            | 2730A03025               | CAL 9/4/09        | 9/4/11   |
| Hygro-Thermometer                     | Extech             | 445703           | 0602                     | CAL<br>6/15/11    | 6/15/13  |
| Modulation Analyzer                   | HP                 | 8901A            | 3435A06868               | CAL<br>8/26/09    | 8/26/11  |
| Digital Multimeter                    | Fluke              | FLUKE-77         | 35053830                 | CAL<br>11/18/09   | 11/18/11 |
| Analyzer Tan Tower Preamplifier       | HP                 | 8449B-H02        | 3008A00372               | CAL<br>11/21/09   | 11/21/11 |
| Analyzer Tan Tower Quasi-Peak Adapter | HP                 | 85650A           | 3303A01690               | CAL<br>11/22/09   | 11/22/11 |
| Analyzer Tan Tower RF Preselector     | HP                 | 85685A           | 3221A01400               | CAL<br>11/21/09   | 11/21/11 |
| Analyzer Tan Tower Spectrum Analyzer  | HP                 | 8566B Opt<br>462 | 3138A07786<br>3144A20661 | CAL<br>11/24/09   | 11/24/11 |
| Temperature Chamber                   | Tenney Engineering | TTRC             | 11717-7                  | CHAR<br>4/25/10   | 4/25/12  |

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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 dBuV) to the antenna correction factor supplied by the antenna manufacturer. 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 dBuV                      + 10.36 dB              + 0.5 = 30.86 dB $\mu$ V/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.

**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.



**RADIATION INTERFERENCE**

**Rules Part No.:** 15.247, 15.209

**Requirements:**

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

**Test Data:**

| Tuned Frequency MHz | Emission Frequency MHz | Meter Reading dB $\mu$ V | Ant. Poly | Coax Loss dB | Correction Factor dB/m | Field Strength dB $\mu$ V/m | Margin dB |
|---------------------|------------------------|--------------------------|-----------|--------------|------------------------|-----------------------------|-----------|
| 2,412.0             | 2,412.00               | 67.6                     | V         | 3.19         | 32.35                  | 103.14                      | 24.24     |
| 2,412.0             | 2,412.00               | 67.9                     | H         | 3.19         | 32.35                  | 103.44                      | 23.94     |
| 2,412.0             | 4,824.00               | 4.9                      | H         | 4.91         | 34.36                  | 44.17                       | 9.83      |
| 2,412.0             | 4,824.00               | 5.0                      | V         | 4.91         | 34.36                  | 44.27                       | 9.73      |
| 2,412.0             | 7,236.00               | 5.7                      | H         | 5.74         | 36.18                  | 47.62                       | 6.38      |
| 2,412.0             | 7,236.00               | 5.8                      | V         | 5.74         | 36.18                  | 47.72                       | 6.28      |
| 2,412.0             | 9,648.00               | 5.7                      | V         | 6.79         | 37.58                  | 50.07                       | 3.93      |
| 2,412.0             | 9,648.00               | 6.0                      | H         | 6.79         | 37.58                  | 50.37                       | 3.63      |
| 2,412.0             | 12,060.00              | 4.2                      | H         | 7.84         | 38.92                  | 50.96                       | 3.04      |
| 2,412.0             | 12,060.00              | 4.3                      | V         | 7.84         | 38.92                  | 51.06                       | 2.94      |
| 2,437.0             | 2,437.00               | 67.8                     | V         | 3.21         | 32.42                  | 103.43                      | 23.95     |
| 2,437.0             | 2,437.00               | 68.6                     | H         | 3.21         | 32.42                  | 104.23                      | 23.15     |
| 2,437.0             | 4,874.00               | 5.6                      | H         | 4.94         | 34.40                  | 44.94                       | 9.06      |
| 2,437.0             | 4,874.00               | 5.8                      | V         | 4.94         | 34.40                  | 45.14                       | 8.86      |
| 2,437.0             | 7,311.00               | 5.3                      | V         | 5.79         | 36.27                  | 47.36                       | 6.64      |
| 2,437.0             | 7,311.00               | 6.0                      | H         | 5.79         | 36.27                  | 48.06                       | 5.94      |
| 2,437.0             | 9,748.00               | 5.5                      | H         | 6.82         | 37.70                  | 50.02                       | 3.98      |
| 2,437.0             | 9,748.00               | 5.9                      | V         | 6.82         | 37.70                  | 50.42                       | 3.58      |
| 2,437.0             | 12,185.00              | 4.5                      | H         | 7.93         | 38.97                  | 51.40                       | 2.60      |
| 2,437.0             | 12,185.00              | 5.2                      | V         | 7.93         | 38.97                  | 52.10                       | 1.90      |

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**TEST DATA CONTD.**

| <b>Tuned Frequency MHz</b> | <b>Emission Frequency MHz</b> | <b>Meter Reading dBμV</b> | <b>Ant. Poly</b> | <b>Coax Loss dB</b> | <b>Correction Factor dB/m</b> | <b>Field Strength dBμV/m</b> | <b>Margin dB</b> |
|----------------------------|-------------------------------|---------------------------|------------------|---------------------|-------------------------------|------------------------------|------------------|
| 2,462.0                    | 2,462.00                      | 65.1                      | V                | 3.22                | 32.49                         | 100.81                       | 26.57            |
| 2,462.0                    | 2,462.00                      | 68.0                      | H                | 3.22                | 32.49                         | 103.71                       | 23.67            |
| 2,462.0                    | 4,924.00                      | 5.6                       | H                | 4.96                | 34.44                         | 45.00                        | 9.00             |
| 2,462.0                    | 4,924.00                      | 5.7                       | V                | 4.96                | 34.44                         | 45.10                        | 8.90             |
| 2,462.0                    | 7,386.00                      | 5.9                       | V                | 5.83                | 36.36                         | 48.09                        | 5.91             |
| 2,462.0                    | 7,386.00                      | 6.2                       | H                | 5.83                | 36.36                         | 48.39                        | 5.61             |
| 2,462.0                    | 9,848.00                      | 5.2                       | H                | 6.85                | 37.82                         | 49.87                        | 4.13             |
| 2,462.0                    | 9,848.00                      | 5.3                       | V                | 6.85                | 37.82                         | 49.97                        | 4.03             |
| 2,462.0                    | 12,310.00                     | 4.8                       | H                | 8.02                | 39.02                         | 51.84                        | 2.16             |
| 2,462.0                    | 12,310.00                     | 5.0                       | V                | 8.02                | 39.02                         | 52.04                        | 1.96             |

\* = 20 dB or more below the limit

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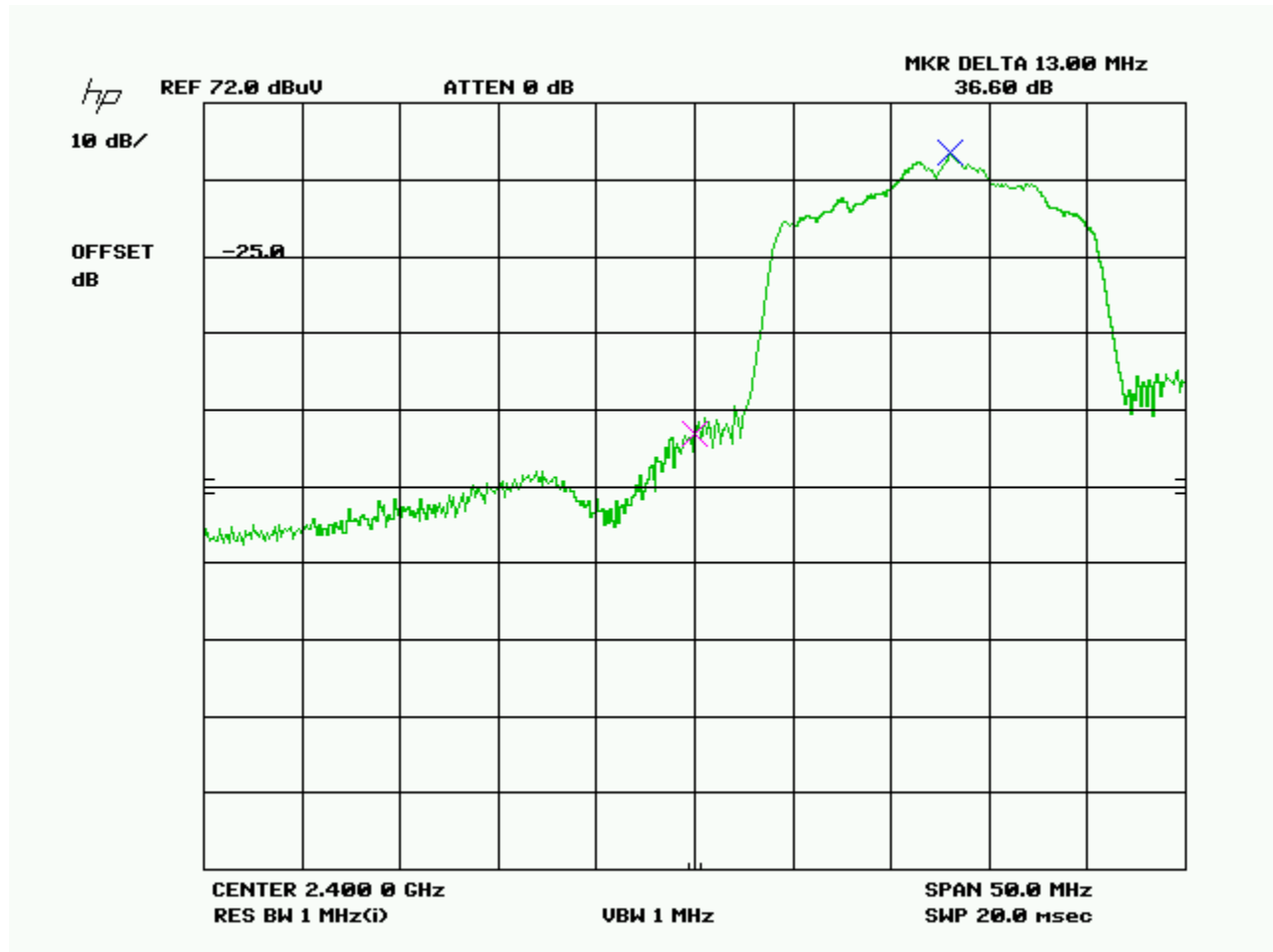
### BAND EDGE COMPLIANCE

**Rules Part No.:** FCC Pt 15.247 (d), RSS-210

**Requirements:** 20 dBc.

**Test Data:**

#### Lower band edge



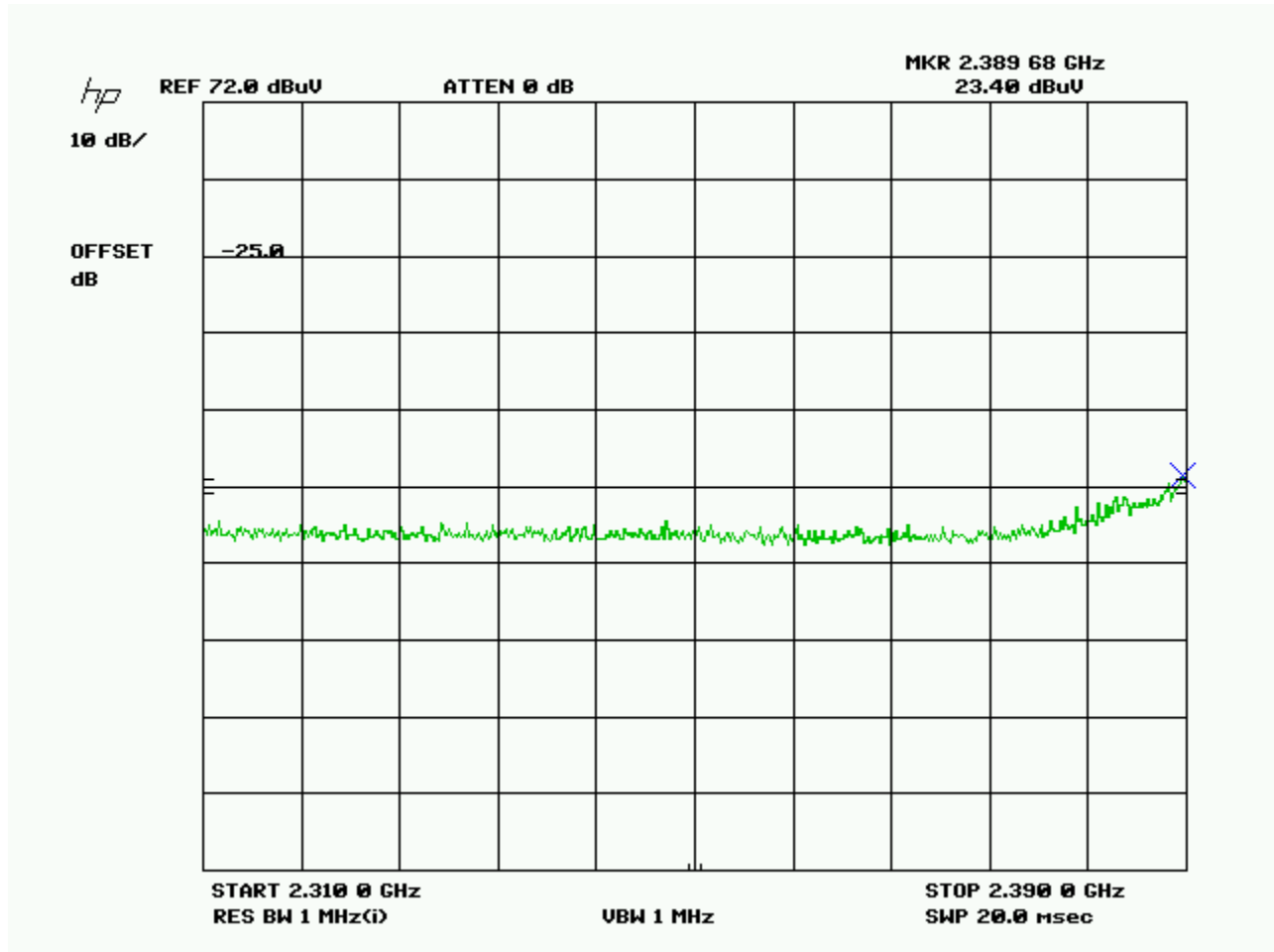
36.6 dBc

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**Lower non-adjacent restricted band - peak**



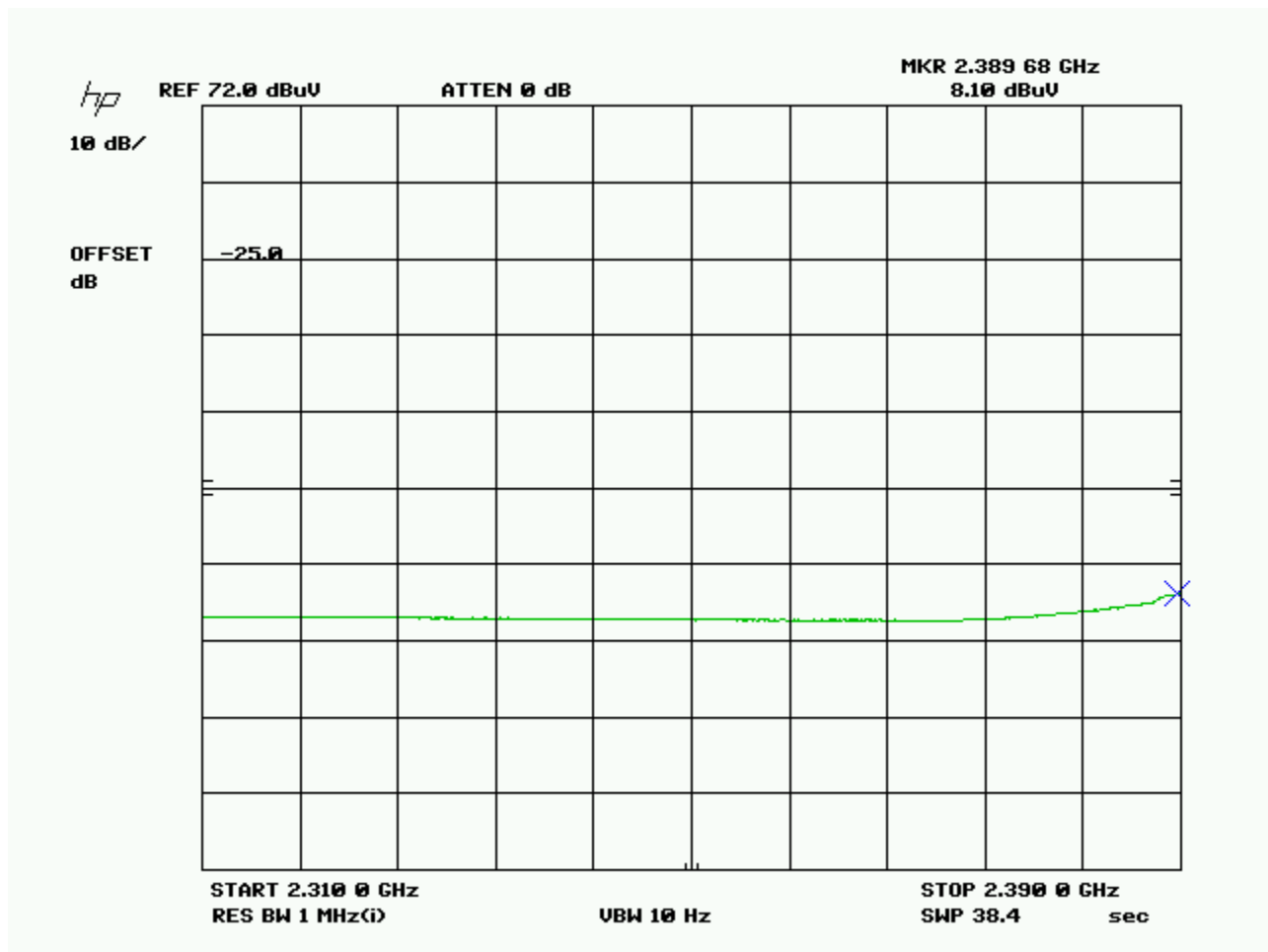
| Tuned Frequency MHz | Emission Frequency MHz | Meter Reading dB $\mu$ V | Ant. Pol | Coax Loss dB | Correction Factor dB/m | Field Strength dB $\mu$ V/m | Margin dB |
|---------------------|------------------------|--------------------------|----------|--------------|------------------------|-----------------------------|-----------|
| 2,412.0             | 2,389.60               | 23.4                     | H        | 3.17         | 32.29                  | 58.86                       | 15.14     |

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**Lower non-adjacent restricted band - average**



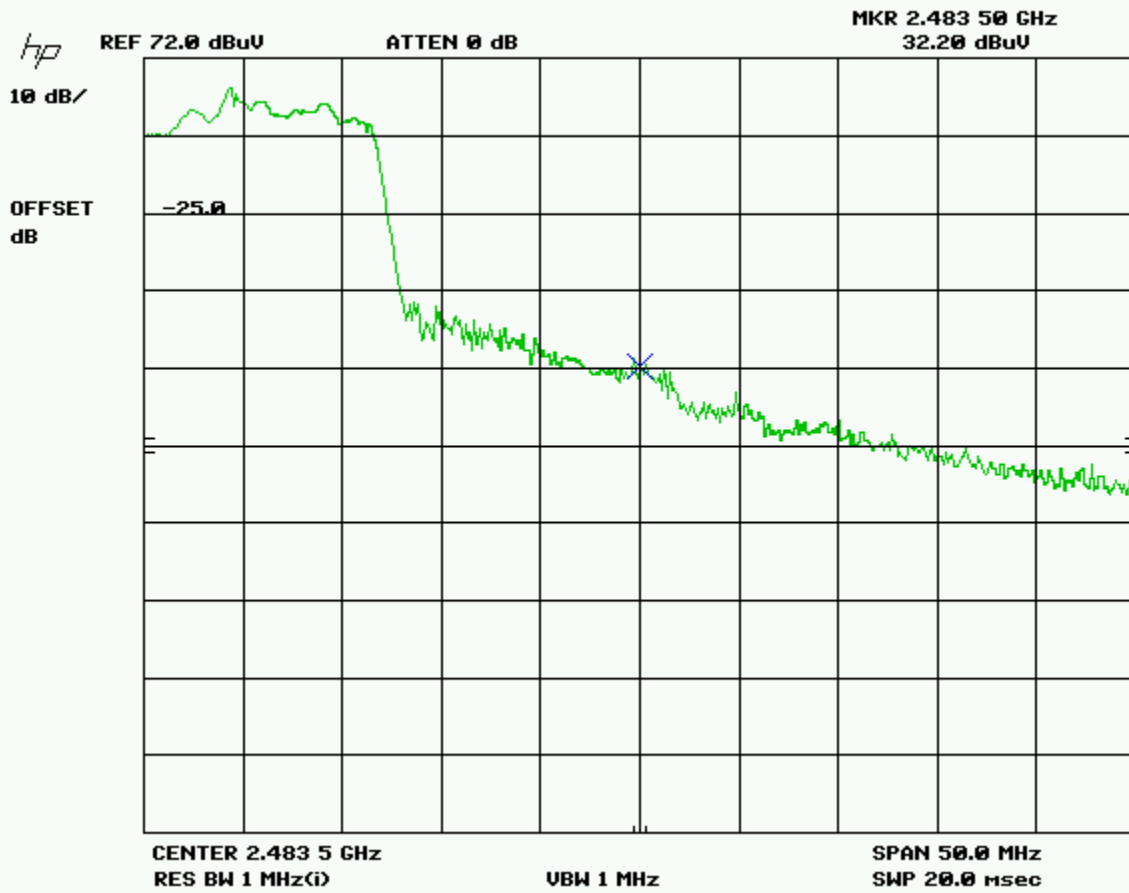
| Tuned Frequency MHz | Emission Frequency MHz | Meter Reading dB $\mu$ V | Ant. Polarity V/H | Coax Loss dB | Correction Factor dB/m | Field Strength dB $\mu$ V/m | Margin dB |
|---------------------|------------------------|--------------------------|-------------------|--------------|------------------------|-----------------------------|-----------|
| 2,412.0             | 2,389.60               | 8.1                      | H                 | 3.17         | 32.29                  | 43.56                       | 10.44     |

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### Upper bandedge - peak



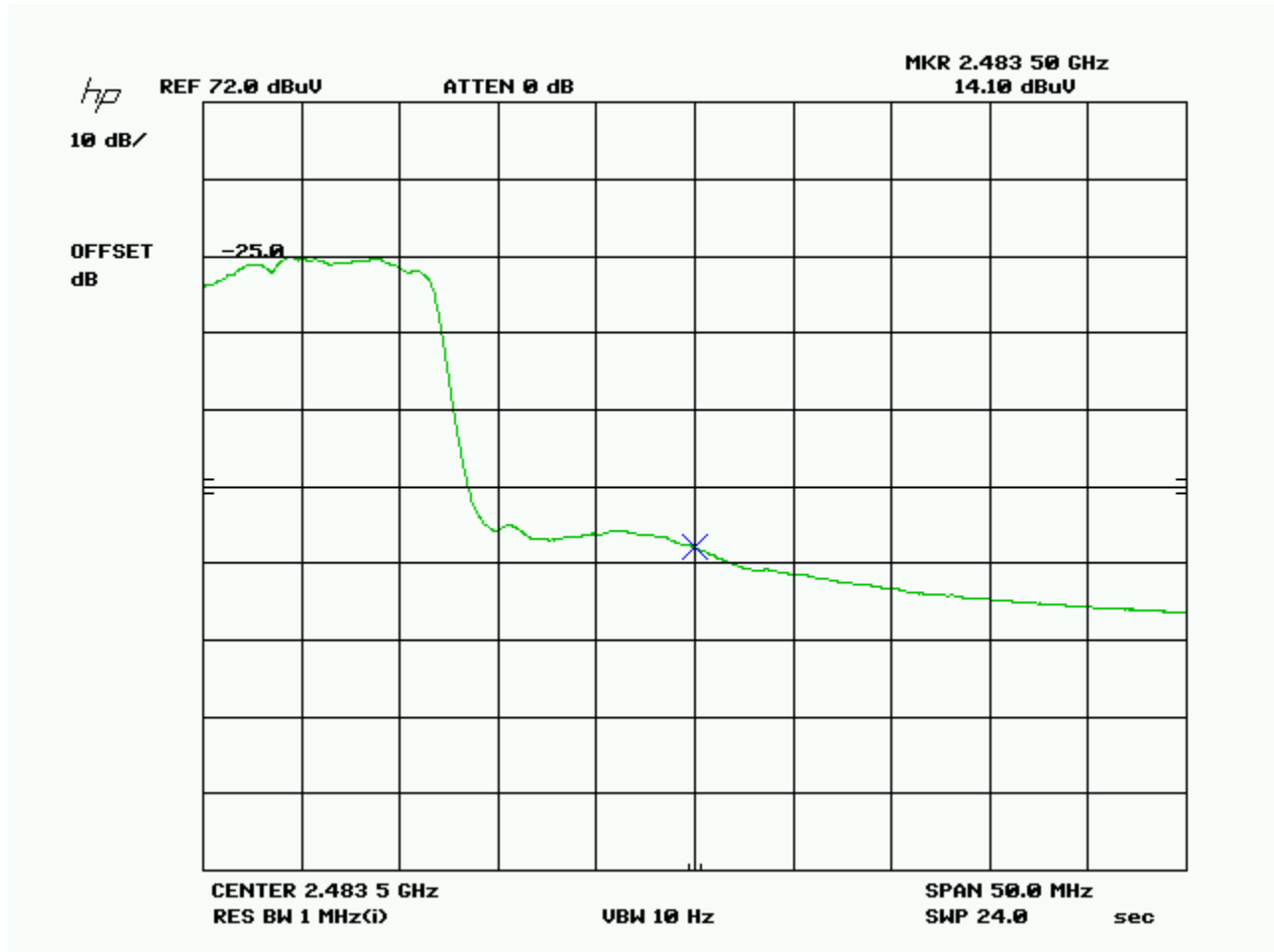
| Tuned Frequency MHz | Emission Frequency MHz | Meter Reading dBμV | Ant. Polarity V/H | Coax Loss dB | Correction Factor dB/m | Field Strength dBμV/m | Margin dB |
|---------------------|------------------------|--------------------|-------------------|--------------|------------------------|-----------------------|-----------|
| 2,462.0             | 2,483.50               | 32.2               | H                 | 3.24         | 32.55                  | 67.99                 | 6.01      |

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### Upper bandedge - average



| Tuned Frequency MHz | Emission Frequency MHz | Meter Reading dBμV | Ant. Polarity V/H | Coax Loss dB | Correction Factor dB/m | Field Strength dBμV/m | Margin dB |
|---------------------|------------------------|--------------------|-------------------|--------------|------------------------|-----------------------|-----------|
| 2,462.0             | 2,483.50               | 14.1               | H                 | 3.24         | 32.55                  | 49.89                 | 4.11      |

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**POWER LINE CONDUCTED INTERFERENCE**


**Rules Part No.:** 15.207

**Requirements:**

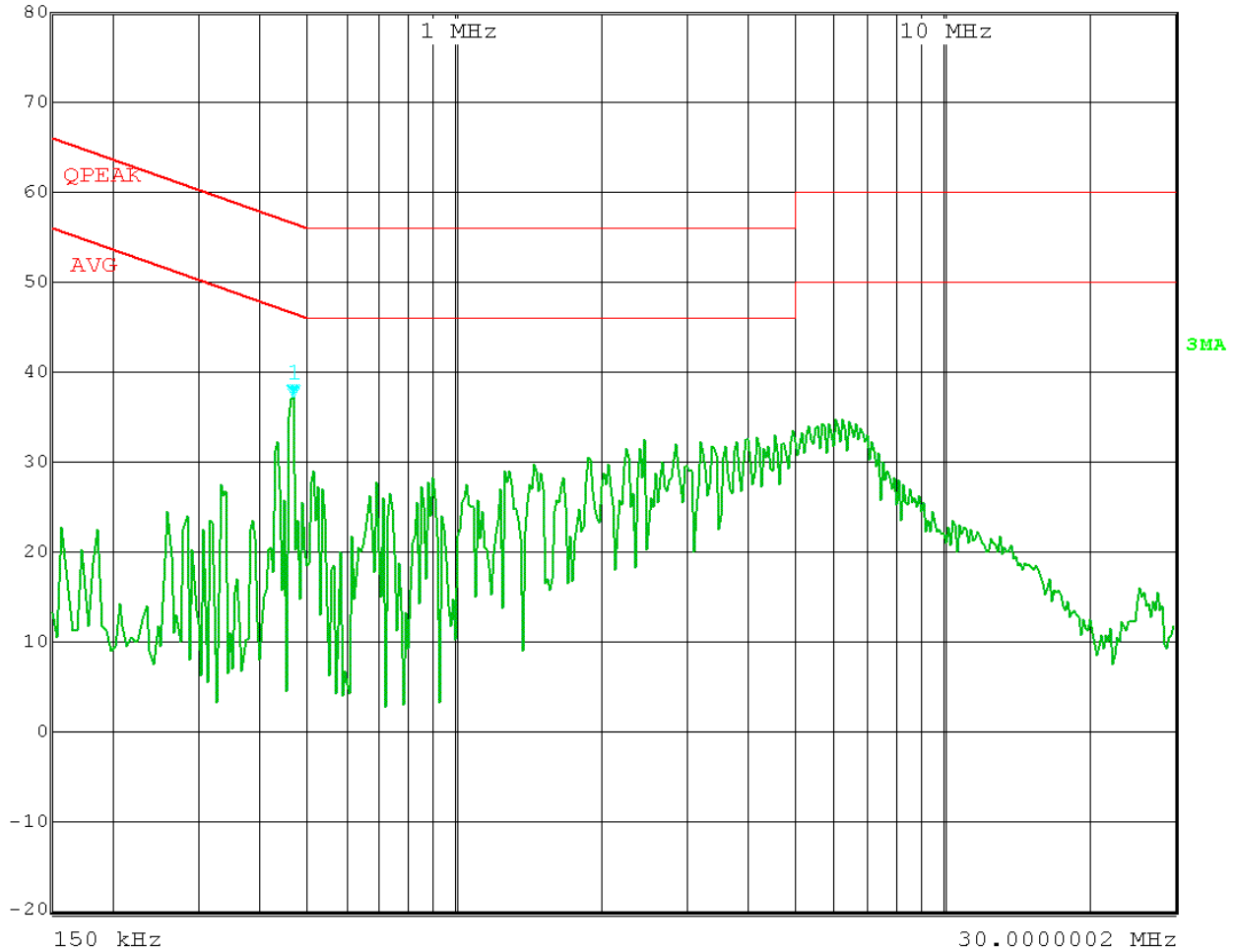
| <b>Frequency<br/>(MHz)</b> | <b>Quasi Peak Limits<br/>(dB<math>\mu</math>V)</b> | <b>Average Limits<br/>(dB<math>\mu</math>V)</b> |
|----------------------------|--|---|
| 0.15 – 0.5                 | 66 – 56  | 56 – 46   |
| 0.5 – 5.0                  | 56   | 46  |
| 5.0 – 30                   | 60   | 50  |

**Test Data:** The attached graphs represent the emissions read for power line conducted for this device. Both lines were observed.

POWERLINE CONDUCTED EMISSIONS - LINE 1

|   |           |                  |        |             |
|---|-----------|------------------|--------|-------------|
|  | Att 10 dB | Marker 1 [T3]    | Det    | QP Trd      |
|   |           | 37.07 dB $\mu$ V | ResBW  | 9 kHz       |
|   | INPUT 2   | 466.0000000 kHz  | Meas T | 100 ms Unit |

dB $\mu$ V




Date: 19.JUL.2011 14:03:32

APPLICANT: MOTOROLA MOBILITY, INC.

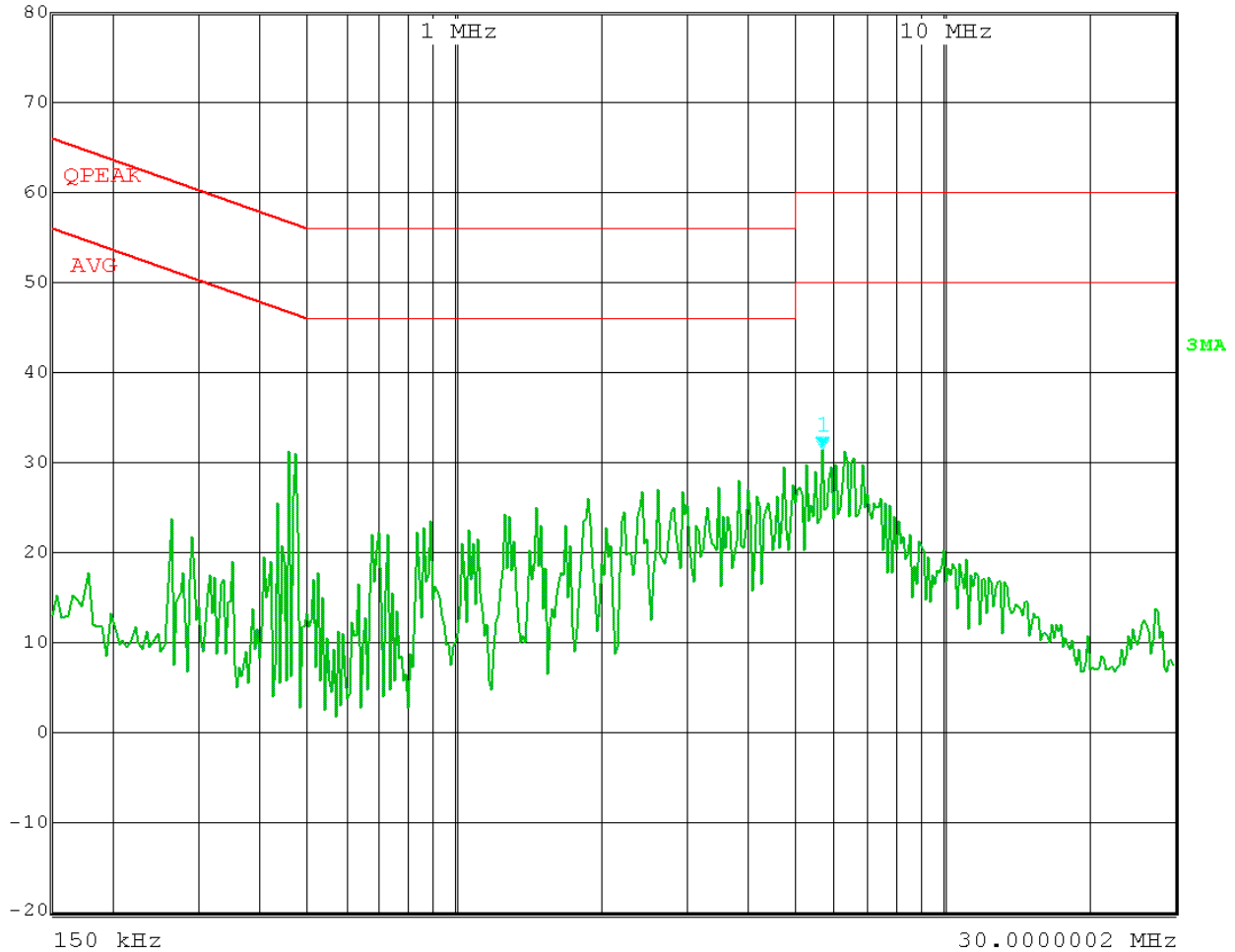
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POWERLINE CONDUCTED EMISSIONS - LINE 2

|   |           |               |        |             |
|---|-----------|---------------|--------|-------------|
|  | Att 10 dB | Marker 1 [T3] | Det    | QP Trd      |
|   | INPUT 2   | 5.7020000 MHz | ResBW  | 9 kHz       |
|   |           |               | Meas T | 100 ms Unit |

dBµV



Date: 19.JUL.2011 14:05:04

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