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## FCC PART 15 B CLASS B and ICES-003 TEST REPORT

<b>Applicant</b>	MOTOROLA MOBILITY LLC
<b>Address</b>	8000 W. SUNRISE BLVD, SUITE A MAIL STOP 52-5JJ PLANTATION FLORIDA 33322 USA
<b>FCC ID</b>	IHDP56NB1
<b>Model Number</b>	H3060241031A
<b>Product Description</b>	i460 FAIRHILL iDEN
<b>Date Sample Received</b>	12/19/2012
<b>Date Tested</b>	1/11/2013
<b>Tested By</b>	JOHN A. DAY
<b>Approved By</b>	JOHN A. DAY
<b>Report Number</b>	3179EUT12TestReport_Rev.doc
<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.**



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 only relate to the item 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:**

John Day  
Testing Technician

**Date:** January/11/2013

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## REPORT SUMMARY

Applicable Rule(s)	Pt 15.109, Pt 15.107, ANSI C63.4: 2003, ICES-003
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## TEST ENVIRONMENT

Test Facility	Timco Engineering, Inc. 849 NW State Road 45 Newberry, FL 32669 USA.
Test Condition in the laboratory	Temperature: 26°C Relative humidity: 50%

## TEST SETUP SUMMARY

Test Setup Diagram/Description	The DUT was placed on the turntable per setup per ANSI C63.4: 2003. A test set up photo is provided for clarification.
Deviation from the standard/procedure	No deviation
Modification of DUT	No modification

## TEST CONFIGURATION

HP Laptop Computer  
Compaq 8510w  
SN. CNU8040ZVD

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**DUT SPECIFICATION**

<b>DUT Description</b>	i460 FAIRHILL iDEN
<b>FCC ID</b>	IHDP56NB1
<b>Model Number</b>	H3060241031A
<b>Serial Number</b>	364BNW1V37
<b>DUT Power Source</b>	<input type="checkbox"/> 110–120Vac/50– 60Hz
	<input checked="" type="checkbox"/> DC Power
	<input type="checkbox"/> Battery Operated Exclusively
<b>Test Item</b>	<input type="checkbox"/> Prototype
	<input checked="" type="checkbox"/> Pre-Production
	<input type="checkbox"/> Production
<b>Type of Equipment</b>	<input type="checkbox"/> Fixed
	<input type="checkbox"/> Mobile
	<input checked="" type="checkbox"/> Portable
<b>Laboratory Test Conditions</b>	Temperature: 26°C Humidity: 55%
<b>Modifications to DUT:</b>	<input checked="" type="checkbox"/> No <input type="checkbox"/> Yes (explanation below)

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## TEST EQUIPMENT LIST

Device	Manufacturer	Model	Serial Number	Cal/Char Date	Due Date
3/10-Meter OATS	TEI	N/A	N/A	12/31/11	12/31/13
3-Meter OATS	TEI	N/A	N/A	12/31/11	12/31/13
3-Meter Semi-Anechoic Chamber	Panashield	N/A	N/A	12/31/11	12/31/13
Analyzer Tan Tower Preamplifier	HP	8449B-H02	3008A00372	10/28/11	10/28/13
Analyzer Tan Tower Quasi-Peak Adapter	HP	85650A	3303A01690	10/28/11	10/28/13
Analyzer Tan Tower RF Preselector	HP	85685A	3221A01400	10/28/11	10/28/13
Analyzer Tan Tower Spectrum Analyzer	HP	8566B Opt 462	3138A07786 3144A20661	10/28/11	10/28/13
Antenna: Biconnical	Eaton	94455-1	1057	05/31/11	05/31/13
Antenna: Biconnical	Eaton	94455-1	1096	05/04/11	05/04/13
Antenna: Biconnical	Electro-Metrics	BIA-25	1171	06/13/12	06/13/14
Antenna: Log-Periodic	Eaton	96005	1243	05/31/11	05/31/13
Antenna: Log-Periodic	Electro-Metrics	LPA-25	1122	05/04/11	05/04/13
LISN	Electro-Metrics	ANS-25/2	2604	10/28/11	10/28/13
LISN	Electro-Metrics	EM-7820	2682	02/01/11	02/01/13
Signal Generator	HP	8640B	2308A21464	02/23/12	02/23/14

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## TEST PROCEDURES

**Power line conducted Emission:** The test procedure used was ANSI C63.4-2003. The spectrum was scanned from 0.15 to 30 MHz.

**Radiation Interference:** The test procedure used was ANSI C63.4-2003 using a spectrum analyzer with preselector. The resolution bandwidth used was 100 kHz with an appropriate sweep speed. The analyzer was calibrated in dB above a microvolt at the output of the antenna. The video bandwidth was always greater than or equal to the RBW.

The unit under test was placed on a table 80 cm high and with dimensions of 1m by 1.5m. 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. The frequency was scanned from 30 MHz to 1.0 GHz. The DUT was measured in three (3) orthogonal planes when necessary.

**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/m	+0.40 dB	=30.76 dBμV/m @ 3m

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**RADIATED SPURIOUS EMISSIONS**

**Rules Part No.:** 15.109, ICES-003

**Requirements:**

Frequency MHz	Limits
30 – 88	40.0 dB $\mu$ V/m measured @ 3 meters
88 – 216	43.5 dB $\mu$ V/m measured @ 3 meters
216 – 960	46.0 dB $\mu$ V/m measured @ 3 meters
Above 960	54.0 dB $\mu$ V/m measured @ 3 meters

**Test Data: iDEN**

Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity	Coax Loss dB	Correction Factor dB/m	Field Strength dBuV/m	Margin dB
56.20	14.4	H	0.52	10.65	25.57	14.43
56.20	26.9	V	0.52	10.65	38.07	1.93
71.50	14.7	H	0.57	8.11	23.38	16.62
71.50	18.5	V	0.57	8.11	27.18	12.82
96.20	13.4	V	0.64	10.13	24.17	19.33
96.20	14.8	H	0.64	10.13	25.57	17.93
120.40	14.6	V	0.67	13.38	28.65	14.85
120.40	22.4	H	0.67	13.38	36.45	7.05
144.40	11.8	V	0.69	13.30	25.79	17.71
144.40	19.0	H	0.69	13.30	32.99	10.51
161.90	8.9	V	0.75	14.71	24.36	19.14
161.90	16.2	H	0.75	14.71	31.66	11.84
168.40	12.1	V	0.77	15.31	28.18	15.32
168.40	22.3	H	0.77	15.31	38.38	5.12
181.00	13.4	V	0.82	16.66	30.88	12.62
181.00	17.7	H	0.82	16.66	35.18	8.32
242.40	19.4	V	0.98	11.30	31.68	14.32
242.40	24.3	H	0.98	11.30	36.58	9.42
321.60	18.7	H	1.12	13.48	33.30	12.70
321.60	20.2	V	1.12	13.48	34.80	11.20
404.00	12.0	H	1.20	14.88	28.08	17.92
404.00	17.5	V	1.20	14.88	33.58	12.42
432.00	8.8	H	1.23	16.34	26.37	19.63
432.00	14.4	V	1.23	16.34	31.97	14.03
566.40	13.8	V	1.50	18.04	33.34	12.66
566.40	15.8	H	1.50	18.04	35.34	10.66
665.60	11.8	V	1.67	19.72	33.19	12.81
665.60	16.3	H	1.67	19.72	37.69	8.31
807.20	11.5	H	1.90	21.98	35.38	10.62
807.20	13.0	V	1.90	21.98	36.88	9.12

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**POWER LINE CONDUCTED INTERFERENCE**

**Rules Part No.:** Part 15.107, ICES-003

**Requirements:**

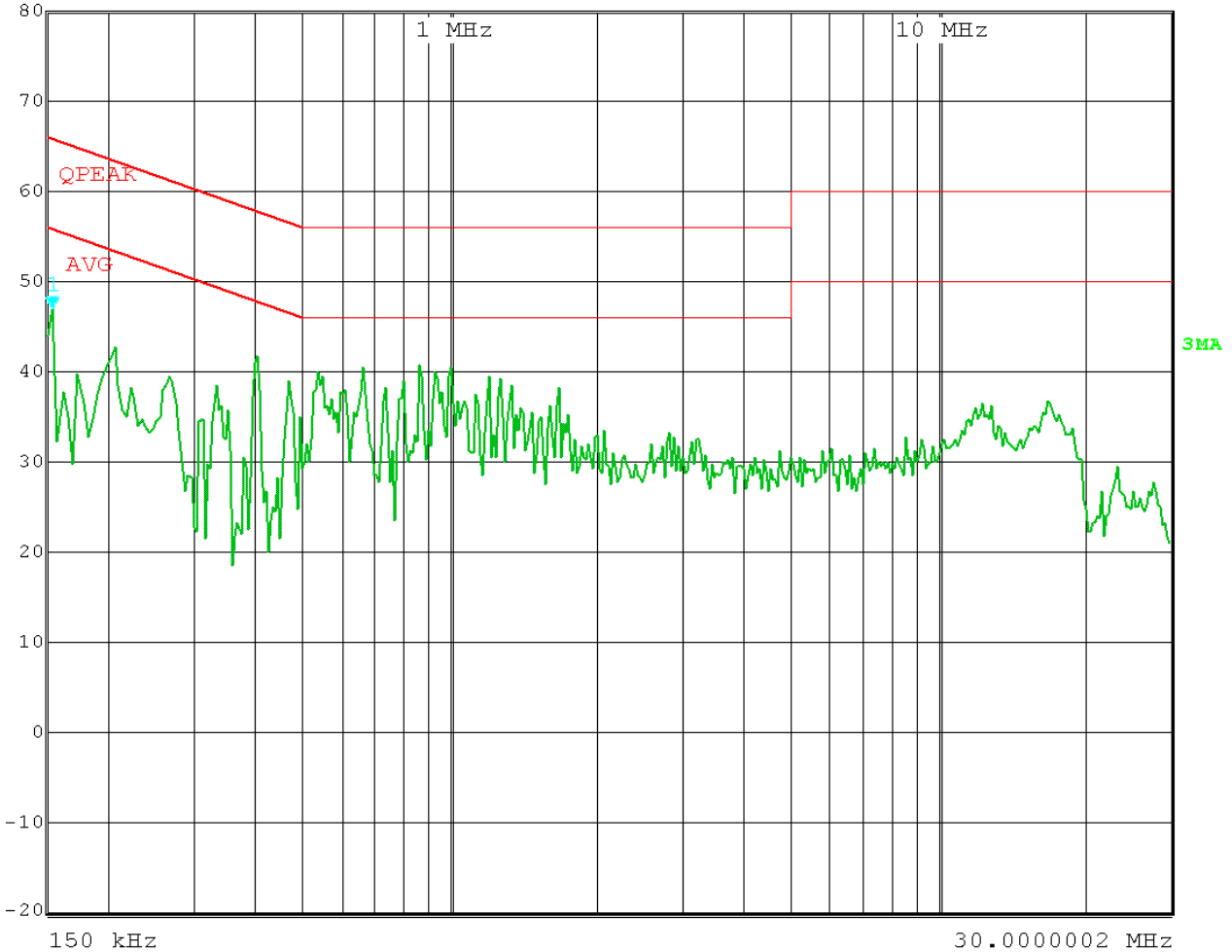
Frequency (MHz)	Quasi Peak Limits (dBμV)	Average Limits (dBμV)
0.15 – 0.5	66 – 56 *	56 – 46 *
0.5 – 5.0	56	46
5.0 – 30	60	50
* Decrease with logarithm of frequency		

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

POWERLINE CONDUCTED EMISSIONS – LINE 1



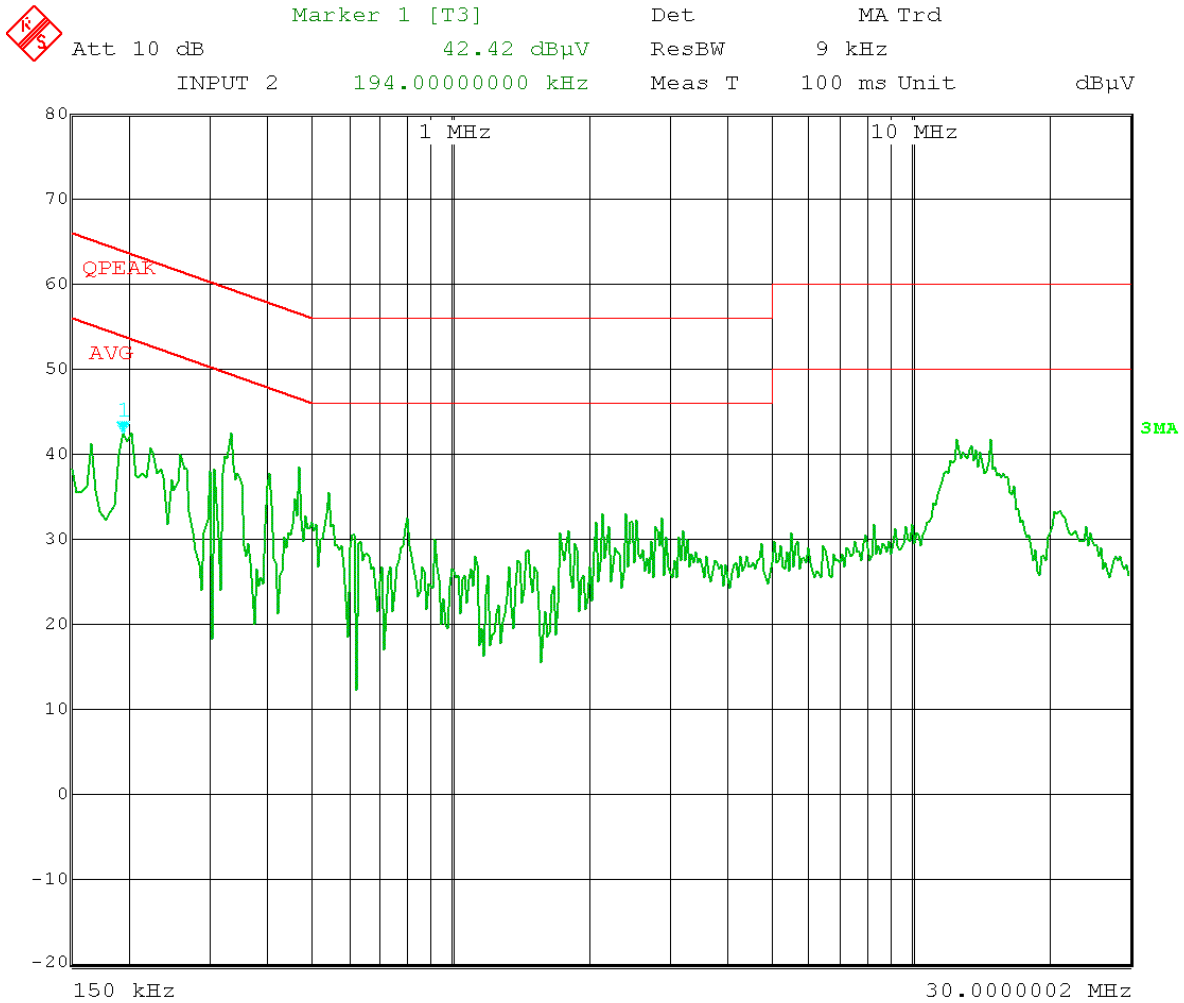
Marker 1 [T3]      Det      MA Trd  
 Att 10 dB      46.87 dBµV      ResBW      9 kHz  
 INPUT 2      154.00000000 kHz      Meas T      100 ms Unit      dBµV



Date: 15.JAN.2013 13:37:05

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POWERLINE CONDUCTED EMISSIONS – LINE 2



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