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## FCC Part 15 Subparts B and C

Applicant	MOTOROLA, INC.
Address	600 NORTH US HWY 45 LIBERTYVILLE IL 60048 USA
Model Number FCC ID	H98XAH6JR5AN IHDT56HG2
Product Description	COBIA i290
Date Sample Received	7/30/2007
Date Tested	8/6/2007
Tested By	RICHARD BLOCK
Approved By	RICHARD BLOCK
Report Number	2694AUT7TestReport.doc
Total Pages	24
Test Results	<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

## TABLE OF CONTENTS

STATEMENT OF COMPLIANCE.....	3
GENERAL INFORMATION .....	4
TEST EQUIPMENT LIST.....	5
TEST PROCEDURES .....	6
RADIATED SPURIOUS EMISSIONS.....	7
METHOD OF MEASURING RADIATED SPURIOUS EMISSIONS .....	13
RADIATED SPURIOUS EMISSIONS INTO ADJACENT RESTRICTED BAND.....	14
BLUETOOTH MODULATION TEST.....	18
POWER LINE CONDUCTED INTERFERENCE.....	19
RADIATED EMISSIONS TEST SET UP PHOTO .....	22
POWERLINE CONDUCTED EMISSIONS TEST SET UP PHOTO.....	23
DUT EXTERNAL PHOTOS.....	24

APPLICANT: MOTOROLA, INC.  
FCC ID: IHDT56HG2  
MODEL: H98XAH6JR5AN  
REPORT: W:\M\MOTOROLA\_Libertyville\_II\2694AUT7\2694AUT7 TestReport.doc

## STATEMENT OF COMPLIANCE

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

I attest that the necessary measurements were made by me or under my supervision, at TIMCO ENGINEERING, INC. located at 849 N.W. State Road 45, Newberry, Florida 32669 USA.



Certificate #0955-01

**Authorized by:** Richard Block

**Authorized Signature:** <*Richard Block*>

**Function:** Engineer

**Date:** August 6, 2007

APPLICANT: MOTOROLA, INC.

FCC ID: IHDT56HG2

MODEL: H98XAH6JR5AN

REPORT: W:\M\MOTOROLA\_Libertyville\_II\2694AUT7\2694AUT7 TestReport.doc

## GENERAL INFORMATION

The test results relate only to the items tested.	
<b>DUT Description</b>	COBIA i290
<b>Model Number</b>	H98XAH6JR5AN
<b>FCC ID</b>	IHDT56HG2
<b>Trade Name</b>	MOTOROLA
<b>DUT Power Source</b>	<input type="checkbox"/> 110–120Vac/50– 60Hz
	<input type="checkbox"/> DC Power
	<input checked="" 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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FCC ID: IHDT56HG2

MODEL: H98XAH6JR5AN

REPORT: W:\M\MOTOROLA\_Libertyville\_II\2694AUT7\2694AUT7 TestReport.doc

## TEST EQUIPMENT LIST

Device	Manufacturer	Model	Serial Number	Cal/Char Date	Due Date
3/10-Meter OATS	TEI	N/A	N/A	Listed 3/20/07	3/19/10
3-Meter OATS	TEI	N/A	N/A	Listed 1/11/06	1/10/09
3-Meter Semi-Anechoic Chamber	Panashield	N/A	N/A	Listed 5/11/07	5/10/10
Antenna: Biconnical	Eaton	94455-1	1057	CAL 12/12/05	12/12/07
Antenna: Biconnical	Eaton	94455-1	1096	CAL 10/11/06	10/11/08
Analyzer Tan Tower Quasi-Peak Adapter	HP	85650A	3303A01690	CAL 12/8/05	12/8/07
Analyzer Tan Tower RF Preselector	HP	85685A	3221A01400	CAL 12/7/05	12/7/07
Analyzer Tan Tower Spectrum Analyzer	HP	8568B Opt 462	3138A07786 3144A20661	CAL 12/7/05	12/7/07
LISN	Electro-Metrics	ANS-25/2	2604	CAL 10/5/06	10/5/08
Antenna: Log-Periodic	Eaton	96005	1243	CAL 12/14/05	12/14/07

APPLICANT: MOTOROLA, INC.

FCC ID: IHDT56HG2

MODEL: H98XAH6JR5AN

REPORT: W:\M\MOTOROLA\_Libertyville\_II\2694AUT7\2694AUT7 TestReport.doc

**TEST PROCEDURES**

**RADIATION INTERFERENCE:** The test procedures used were DA 00-705 and ANSI C63.4 – 2003 using a spectrum analyzer with a preselector. The bandwidth (RBW) of the spectrum analyzer was 100kHz up to 1GHz and 1.0MHz above 1GHz with an appropriate sweep speed. The VBW above 1.0GHz was = 3.0MHz for Peak measurement and 10Hz for linear Average measurement. The analyzer was calibrated in dB above a microvolt at the output of the antenna.

**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 in dB/m. 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/m	+0.40 dB	=30.36 dBuV/m @ 3m

**POWER OUTPUT:** The RF power output was measured at the antenna feed point using a peak power meter.

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 FCC ID: IHDT56HG2  
 MODEL: H98XAH6JR5AN  
 REPORT: W:\M\MOTOROLA\_Libertyville\_II\2694AUT7\2694AUT7 TestReport.doc

## RADIATED SPURIOUS EMISSIONS

**FCC RULES PART:** 15.247(c), 15.205, and 15.209

### REQUIREMENTS:

Emission Frequency (MHz)	Field Strength		At Distance (m)	Detector Type
	( $\mu\text{V}/\text{m}$ )	( $\text{dB}\mu\text{V}/\text{m}$ )		
0.009 – 0.490	2400/f (kHz)	67.6 / kHz	300	AV (9-90 kHz, 110-490 kHz) QP (others)
0.490 – 1.705	24000/f (kHz)	87.6 / kHz	30	QP
1.705 – 30.0	30	29.5	30	QP
30 – 88	100	40	3	QP
88 – 216	150	43.5	3	QP
216 – 960	200	46	3	QP
> 960	500	54	3	AV (> 1GHz)

Emissions that fall in the restricted bands, as listed in part 15.205, must be less than 54dBuV/m based on an average detector. The provisions of part 15.35 apply: The peak limit is 20dB above the average limit. Emissions that fall outside the restricted band must be attenuated by at least 20dB below the fundamental emission based on a 100kHz RBW.

### TEST DATA - Bluetooth Hopping:

Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Pol	Coax Loss dB	Correction Factor dB/m	Field Strength dBuV/m	Margin dB
806.0	1,612.00	16.5	V	2.59	28.87	47.96	6.04
806.0	1,612.00	17.7	H	2.59	28.87	49.16	4.84
806.0	3,224.00	11.4	V	3.80	33.24	48.44	5.56
806.0	3,224.00	12.6	H	3.80	33.24	49.64	4.36
806.0	4,030.00	8.2	V	4.52	33.72	46.44	7.56
806.0	4,030.00	9.5	H	4.52	33.72	47.74	6.26
806.0	4,836.00	8.3	V	4.92	34.37	47.59	6.41
806.0	4,836.00	8.9	H	4.92	34.37	48.19	5.81
806.0	5,642.00	3.4	V	5.19	35.27	43.86	10.14
806.0	5,642.00	4.7	H	5.19	35.27	45.16	8.84
806.0	6,448.00	3.4	V	5.43	36.06	44.89	9.11
806.0	6,448.00	4.2	H	5.43	36.06	45.69	8.31
806.0	7,254.00	3.5	H	5.75	36.20	45.45	8.55
806.0	7,254.00	4.1	V	5.75	36.20	46.05	7.95

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FCC ID: IHDT56HG2

MODEL: H98XAH6JR5AN

REPORT: W:\M\MOTOROLA\_Libertyville\_II\2694AUT7\2694AUT7 TestReport.doc

**TEST DATA CONTD.**

Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Pol	Coax Loss dB	Correction Factor dB/m	Field Strength dBuV/m	Margin dB
806.0	8,060.00	4.2	H	6.22	36.30	46.72	7.28
806.0	8,060.00	4.5	V	6.22	36.30	47.02	6.98
806.0	8,866.00	5.5	H	6.55	36.67	48.72	5.28
806.0	8,866.00	5.7	V	6.55	36.67	48.92	5.08
806.0	9,672.00	4.9	V	6.80	37.61	49.31	4.69
806.0	9,672.00	5.0	H	6.80	37.61	49.41	4.59
806.0	10,478.00	4.5	V	7.14	38.19	49.83	4.17
806.0	10,478.00	5.1	H	7.14	38.19	50.43	3.57
806.0	11,284.00	4.1	H	7.51	38.46	50.07	3.93
806.0	11,284.00	4.2	V	7.51	38.46	50.17	3.83
806.0	12,090.00	4.5	H	7.86	38.94	51.30	2.70
806.0	12,090.00	4.7	V	7.86	38.94	51.50	2.50
806.0	12,896.00	4.0	H	8.43	39.58	52.01	1.99
806.0	12,896.00	4.0	V	8.43	39.58	52.01	1.99
806.0	13,702.00	5.1	V	8.78	39.38	53.26	0.74
806.0	13,702.00	5.4	H	8.78	39.38	53.56	0.44
816.0	1,632.00	14.3	V	2.61	28.99	45.90	8.10
816.0	1,632.00	15.9	H	2.61	28.99	47.50	6.50
816.0	3,264.00	12.4	V	3.84	33.25	49.49	4.51
816.0	3,264.00	14.2	H	3.84	33.25	51.29	2.71
816.0	4,080.00	4.2	H	4.54	33.76	42.50	11.50
816.0	4,080.00	5.7	H	4.54	33.76	44.00	10.00
816.0	4,080.00	5.7	V	4.54	33.76	44.00	10.00
816.0	4,896.00	4.0	V	4.95	34.42	43.37	10.63
816.0	4,896.00	7.1	H	4.95	34.42	46.47	7.53
816.0	5,712.00	2.7	V	5.21	35.35	43.26	10.74
816.0	5,712.00	2.7	H	5.21	35.35	43.26	10.74
816.0	6,528.00	4.6	H	5.46	36.09	46.15	7.85
816.0	6,528.00	5.1	V	5.46	36.09	46.65	7.35
816.0	7,344.00	4.3	V	5.81	36.31	46.42	7.58
816.0	7,344.00	4.9	H	5.81	36.31	47.02	6.98
816.0	8,160.00	3.0	V	6.26	36.30	45.56	8.44
816.0	8,160.00	4.6	H	6.26	36.30	47.16	6.84
816.0	8,976.00	3.8	H	6.59	36.78	47.17	6.83
816.0	8,976.00	4.0	V	6.59	36.78	47.37	6.63
816.0	9,792.00	4.6	H	6.84	37.75	49.19	4.81
816.0	9,792.00	4.8	V	6.84	37.75	49.39	4.61
816.0	10,608.00	3.8	H	7.20	38.24	49.24	4.76
816.0	10,608.00	4.4	V	7.20	38.24	49.84	4.16
816.0	11,424.00	3.7	V	7.57	38.48	49.75	4.25
816.0	11,424.00	3.7	H	7.57	38.48	49.75	4.25
816.0	12,240.00	4.4	H	7.97	39.00	51.37	2.63
816.0	12,240.00	4.7	V	7.97	39.00	51.67	2.33

APPLICANT: MOTOROLA, INC.

FCC ID: IHDT56HG2

MODEL: H98XAH6JR5AN

REPORT: W:\M\MOTOROLA\_Libertyville\_II\2694AUT7\2694AUT7 TestReport.doc

**TEST DATA CONTD.**

Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Pol	Coax Loss dB	Correction Factor dB/m	Field Strength dBuV/m	Margin dB
816.0	13,056.00	3.8	H	8.52	39.65	51.97	2.03
816.0	13,056.00	4.5	V	8.52	39.65	52.67	1.33
816.0	13,872.00	4.1	H	8.85	39.45	52.40	1.60
816.0	13,872.00	4.1	V	8.85	39.45	52.40	1.60
825.0	1,650.00	16.4	H	2.62	29.10	48.12	5.88
825.0	1,650.00	17.7	V	2.62	29.10	49.42	4.58
825.0	3,300.00	14.2	H	3.87	33.26	51.33	2.67
825.0	3,300.00	14.2	V	3.87	33.26	51.33	2.67
825.0	4,125.00	6.5	H	4.56	33.80	44.86	9.14
825.0	4,125.00	7.4	V	4.56	33.80	45.76	8.24
825.0	4,950.00	7.7	V	4.98	34.46	47.14	6.86
825.0	4,950.00	8.2	H	4.98	34.46	47.64	6.36
825.0	5,775.00	4.2	V	5.23	35.43	44.86	9.14
825.0	5,775.00	6.0	H	5.23	35.43	46.66	7.34
825.0	6,600.00	3.5	V	5.48	36.06	45.04	8.96
825.0	6,600.00	3.5	H	5.48	36.06	45.04	8.96
825.0	7,425.00	4.4	H	5.86	36.41	46.67	7.33
825.0	7,425.00	4.8	V	5.86	36.41	47.07	6.93
825.0	8,250.00	4.2	H	6.30	36.30	46.80	7.20
825.0	8,250.00	6.7	V	6.30	36.30	49.30	4.70
825.0	9,075.00	4.4	H	6.62	36.89	47.91	6.09
825.0	9,075.00	5.5	V	6.62	36.89	49.01	4.99
825.0	9,900.00	5.7	V	6.87	37.88	50.45	3.55
825.0	9,900.00	6.1	H	6.87	37.88	50.85	3.15
825.0	10,725.00	4.5	V	7.26	38.29	50.05	3.95
825.0	10,725.00	5.1	H	7.26	38.29	50.65	3.35
825.0	11,550.00	4.5	V	7.62	38.54	50.66	3.34
825.0	11,550.00	4.8	H	7.62	38.54	50.96	3.04
825.0	12,375.00	4.2	H	8.06	39.05	51.31	2.69
825.0	12,375.00	4.6	V	8.06	39.05	51.71	2.29
825.0	13,200.00	3.3	H	8.58	39.54	51.42	2.58
825.0	13,200.00	3.8	V	8.58	39.54	51.92	2.08
825.0	14,025.00	4.5	V	8.91	39.56	52.97	1.03
825.0	14,025.00	4.8	H	8.91	39.56	53.27	0.73

**NOTES: The spectrum was investigated for harmonics and spurious emissions up to the 10<sup>th</sup> harmonic.**

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 REPORT: W:\M\MOTOROLA\_Libertyville\_II\2694AUT7\2694AUT7 TestReport.doc

**TEST DATA - Bluetooth Fixed**

Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Pol	Coax Loss dB	Correction Factor dB/m	Field Strength dBuV/m	Margin dB
2,441.0	1,577.00	11.9	H	2.56	28.66	43.12	10.88
2,441.0	1,577.00	12.8	V	2.56	28.66	44.02	9.98
2,441.0	1,650.00	15.9	H	2.62	29.10	47.62	6.38
2,441.0	1,650.00	17.0	V	2.62	29.10	48.72	5.28
2,441.0	2,475.00	7.8	V	3.23	32.53	43.56	10.44
2,441.0	2,475.00	9.5	H	3.23	32.53	45.26	8.74
2,441.0	3,154.00	4.6	H	3.74	33.23	41.57	12.43
2,441.0	3,154.00	4.8	V	3.74	33.23	41.77	12.23
2,441.0	3,277.00	4.6	H	3.85	33.26	41.71	12.29
2,441.0	3,277.00	5.3	V	3.85	33.26	42.41	11.59
2,441.0	3,300.00	13.9	V	3.87	33.26	51.03	2.97
2,441.0	3,300.00	14.5	H	3.87	33.26	51.63	2.37
2,441.0	4,125.00	7.1	H	4.56	33.80	45.46	8.54
2,441.0	4,125.00	10.3	V	4.56	33.80	48.66	5.34
2,441.0	4,731.00	3.4	V	4.87	34.28	42.55	11.45
2,441.0	4,731.00	3.7	H	4.87	34.28	42.85	11.15
2,441.0	4,950.00	7.8	V	4.98	34.46	47.24	6.77
2,441.0	4,950.00	8.2	H	4.98	34.46	47.64	6.37
2,441.0	5,775.00	1.6	H	5.23	35.43	42.26	11.74
2,441.0	5,775.00	7.6	V	5.23	35.43	48.26	5.74
2,441.0	6,308.00	3.8	V	5.39	35.95	45.14	8.86
2,441.0	6,308.00	4.1	H	5.39	35.95	45.44	8.56
2,441.0	6,554.00	3.9	V	5.47	36.08	45.45	8.55
2,441.0	6,554.00	4.5	H	5.47	36.08	46.05	7.95
2,441.0	6,600.00	3.2	H	5.48	36.06	44.74	9.26
2,441.0	6,600.00	3.7	V	5.48	36.06	45.24	8.76
2,441.0	7,425.00	4.8	V	5.86	36.41	47.07	6.94
2,441.0	7,425.00	5.6	H	5.86	36.41	47.87	6.14
2,441.0	7,885.00	3.8	H	6.13	36.35	46.28	7.72
2,441.0	7,885.00	3.9	V	6.13	36.35	46.38	7.62
2,441.0	8,250.00	3.4	H	6.30	36.30	46.00	8.00
2,441.0	8,250.00	3.9	V	6.30	36.30	46.50	7.50
2,441.0	9,462.00	4.3	V	6.74	37.35	48.39	5.61
2,441.0	9,462.00	4.6	H	6.74	37.35	48.69	5.31
2,441.0	9,831.00	5.8	H	6.85	37.80	50.45	3.55
2,441.0	9,831.00	5.8	V	6.85	37.80	50.45	3.55
2,441.0	11,039.00	4.4	H	7.42	38.41	50.23	3.77
2,441.0	11,039.00	5.8	V	7.42	38.41	51.63	2.37
2,441.0	12,616.00	2.5	V	8.23	39.24	49.97	4.03
2,441.0	12,616.00	4.3	H	8.23	39.24	51.77	2.23
2,441.0	13,108.00	3.1	H	8.54	39.61	51.25	2.75
2,441.0	13,108.00	3.1	V	8.54	39.61	51.25	2.75
2,402.0	1,616.00	12.6	H	2.59	28.90	44.09	9.91

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FCC ID: IHDT56HG2

MODEL: H98XAH6JR5AN

REPORT: W:\M\MOTOROLA\_Libertyville\_II\2694AUT7\2694AUT7 TestReport.doc

**TEST DATA CONTD.- Bluetooth Fixed**

Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Pol	Coax Loss dB	Correction Factor dB/m	Field Strength dBuV/m	Margin dB
2,402.0	1,616.00	13.8	V	2.59	28.90	45.29	8.71
2,402.0	1,650.00	16.3	V	2.62	29.10	48.02	5.98
2,402.0	1,650.00	16.8	H	2.62	29.10	48.52	5.48
2,402.0	2,475.00	8.1	H	3.23	32.53	43.86	10.14
2,402.0	2,475.00	8.9	V	3.23	32.53	44.66	9.34
2,402.0	3,232.00	4.9	H	3.81	33.25	41.96	12.04
2,402.0	3,232.00	5.3	V	3.81	33.25	42.36	11.64
2,402.0	3,266.00	6.1	H	3.84	33.25	43.19	10.81
2,402.0	3,266.00	6.8	V	3.84	33.25	43.89	10.11
2,402.0	3,300.00	13.8	H	3.87	33.26	50.93	3.07
2,402.0	3,300.10	12.7	V	3.87	33.26	49.83	4.17
2,402.0	4,125.00	7.6	H	4.56	33.80	45.96	8.04
2,402.0	4,125.10	8.6	V	4.56	33.80	46.96	7.04
2,402.0	4,848.00	2.9	V	4.92	34.38	42.20	11.80
2,402.0	4,848.00	4.2	H	4.92	34.38	43.50	10.50
2,402.0	4,950.00	7.4	V	4.98	34.46	46.84	7.17
2,402.0	4,950.00	7.9	H	4.98	34.46	47.34	6.67
2,402.0	5,775.00	2.2	H	5.23	35.43	42.86	11.14
2,402.0	5,775.00	8.1	V	5.23	35.43	48.76	5.24
2,402.0	6,464.00	2.9	H	5.44	36.07	44.41	9.59
2,402.0	6,464.00	3.1	V	5.44	36.07	44.61	9.39
2,402.0	6,464.00	4.3	H	5.44	36.07	45.81	8.19
2,402.0	6,532.00	3.5	V	5.46	36.09	45.05	8.95
2,402.0	6,600.00	2.6	H	5.48	36.06	44.14	9.86
2,402.0	6,600.00	3.7	V	5.48	36.06	45.24	8.76
2,402.0	7,425.00	5.1	H	5.86	36.41	47.37	6.64
2,402.0	7,425.00	5.3	V	5.86	36.41	47.57	6.44
2,402.0	8,080.00	4.3	V	6.23	36.30	46.83	7.17
2,402.0	8,080.00	4.7	H	6.23	36.30	47.23	6.77
2,402.0	8,250.00	3.5	H	6.30	36.30	46.10	7.90
2,402.0	8,250.00	4.0	V	6.30	36.30	46.60	7.40
2,402.0	9,696.00	4.7	V	6.81	37.64	49.15	4.85
2,402.0	9,696.00	5.1	H	6.81	37.64	49.55	4.45
2,402.0	9,798.00	4.9	V	6.84	37.76	49.50	4.50
2,402.0	9,798.00	5.0	H	6.84	37.76	49.60	4.40
2,402.0	11,312.00	3.9	V	7.52	38.46	49.88	4.12
2,402.0	11,312.00	4.2	H	7.52	38.46	50.18	3.82
2,402.0	12,928.00	4.5	H	8.45	39.61	52.56	1.44
2,402.0	12,928.00	5.2	V	8.45	39.61	53.26	0.74
2,402.0	13,064.00	3.8	H	8.53	39.65	51.98	2.02
2,402.0	13,064.00	4.1	V	8.53	39.65	52.28	1.72
2480.0	1,650.00	16.5	H	2.62	29.10	48.22	5.78
2,480.0	1,650.00	19.3	V	2.62	29.10	51.02	2.98

APPLICANT: MOTOROLA, INC.

FCC ID: IHDT56HG2

MODEL: H98XAH6JR5AN

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**TEST DATA CONTD.- Bluetooth Fixed**

Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Pol	Coax Loss dB	Correction Factor dB/m	Field Strength dBuV/m	Margin dB
2,480.0	1,655.00	13.8	H	2.62	29.13	45.55	8.45
2,480.0	1,655.00	14.6	V	2.62	29.13	46.35	7.65
2,480.0	2,475.00	7.6	H	3.23	32.53	43.36	10.64
2,480.0	2,475.00	9.2	V	3.23	32.53	44.96	9.04
2,480.0	3,300.00	14.7	V	3.87	33.26	51.83	2.17
2,480.0	3,300.00	15.0	H	3.87	33.26	52.13	1.87
2,480.0	3,305.00	5.3	H	3.87	33.26	42.43	11.57
2,480.0	3,305.00	7.1	V	3.87	33.26	44.23	9.77
2,480.0	3,310.00	4.8	H	3.88	33.26	41.94	12.06
2,480.0	3,310.00	5.5	V	3.88	33.26	42.64	11.36
2,480.0	4,125.00	8.0	H	4.56	33.80	46.36	7.64
2,480.0	4,125.00	10.3	V	4.56	33.80	48.66	5.34
2,480.0	4,950.00	7.4	H	4.98	34.46	46.84	7.17
2,480.0	4,950.00	10.8	V	4.98	34.46	50.24	3.77
2,480.0	4,965.00	5.1	H	4.98	34.47	44.55	9.45
2,480.0	4,965.00	7.0	V	4.98	34.47	46.45	7.55
2,480.0	5,775.00	5.3	H	5.23	35.43	45.96	8.04
2,480.0	5,775.00	9.0	V	5.23	35.43	49.66	4.34
2,480.0	6,600.00	5.5	V	5.48	36.06	47.04	6.96
2,480.0	6,600.00	5.7	H	5.48	36.06	47.24	6.76
2,480.0	6,610.00	4.5	H	5.48	36.06	46.04	7.96
2,480.0	6,610.00	5.1	V	5.48	36.06	46.64	7.36
2,480.0	6,620.00	5.2	H	5.49	36.05	46.74	7.26
2,480.0	6,620.00	5.3	V	5.49	36.05	46.84	7.16
2,480.0	7,425.00	6.3	H	5.86	36.41	48.57	5.44
2,480.0	7,425.00	6.4	V	5.86	36.41	48.67	5.33
2,480.0	8,250.00	4.5	H	6.30	36.30	47.10	6.90
2,480.0	8,250.00	5.7	V	6.30	36.30	48.30	5.70
2,480.0	8,275.00	5.7	V	6.31	36.30	48.31	5.69
2,480.0	8,275.00	7.2	H	6.31	36.30	49.81	4.19
2,480.0	9,915.00	4.9	H	6.87	37.90	49.67	4.33
2,480.0	9,915.00	7.3	V	6.87	37.90	52.07	1.93
2,480.0	9,930.00	5.2	H	6.88	37.92	50.00	4.00
2,480.0	9,930.00	6.1	V	6.88	37.92	50.90	3.10
2,480.0	11,585.00	4.5	H	7.63	38.57	50.70	3.30
2,480.0	11,585.00	5.4	V	7.63	38.57	51.60	2.40
2,404.8	2,404.76	59.5	H	3.18	32.33	95.01	32.37
2,483.5	2,483.50	-4.4	H	3.24	32.55	31.39	22.61
2,483.5	2,483.50	12.0	H	3.24	32.55	47.79	6.21

**NOTES: The spectrum was investigated for harmonics and spurious emissions up to the 10<sup>th</sup> harmonic.**

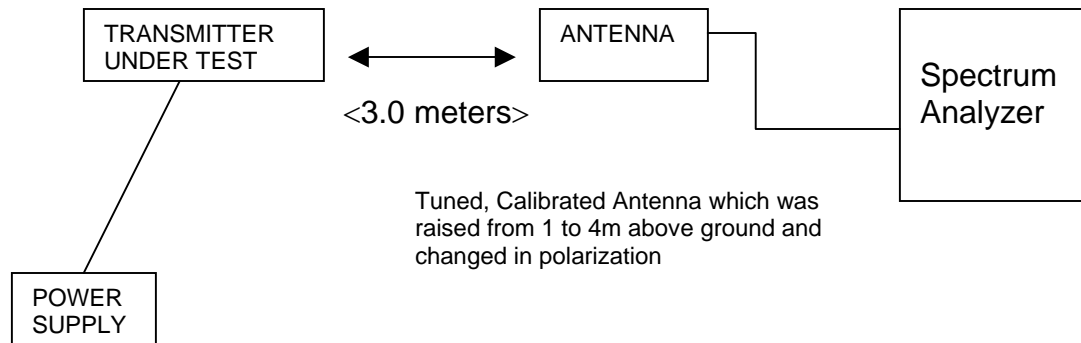
APPLICANT: MOTOROLA, INC.

FCC ID: IHDT56HG2

MODEL: H98XAH6JR5AN

REPORT: W:\M\MOTOROLA\_Libertyville\_II\2694AUT7\2694AUT7 TestReport.doc

## METHOD OF MEASURING RADIATED SPURIOUS EMISSIONS



Equipment placed 80cm above ground on a turntable.

METHOD OF MEASUREMENT: The procedure used was ANSI C63.4-2003. Measurements were made at TIMCO ENGINEERING INC. located at 849 N.W. State Road 45, Newberry, FL 32669.

APPLICANT: MOTOROLA, INC.  
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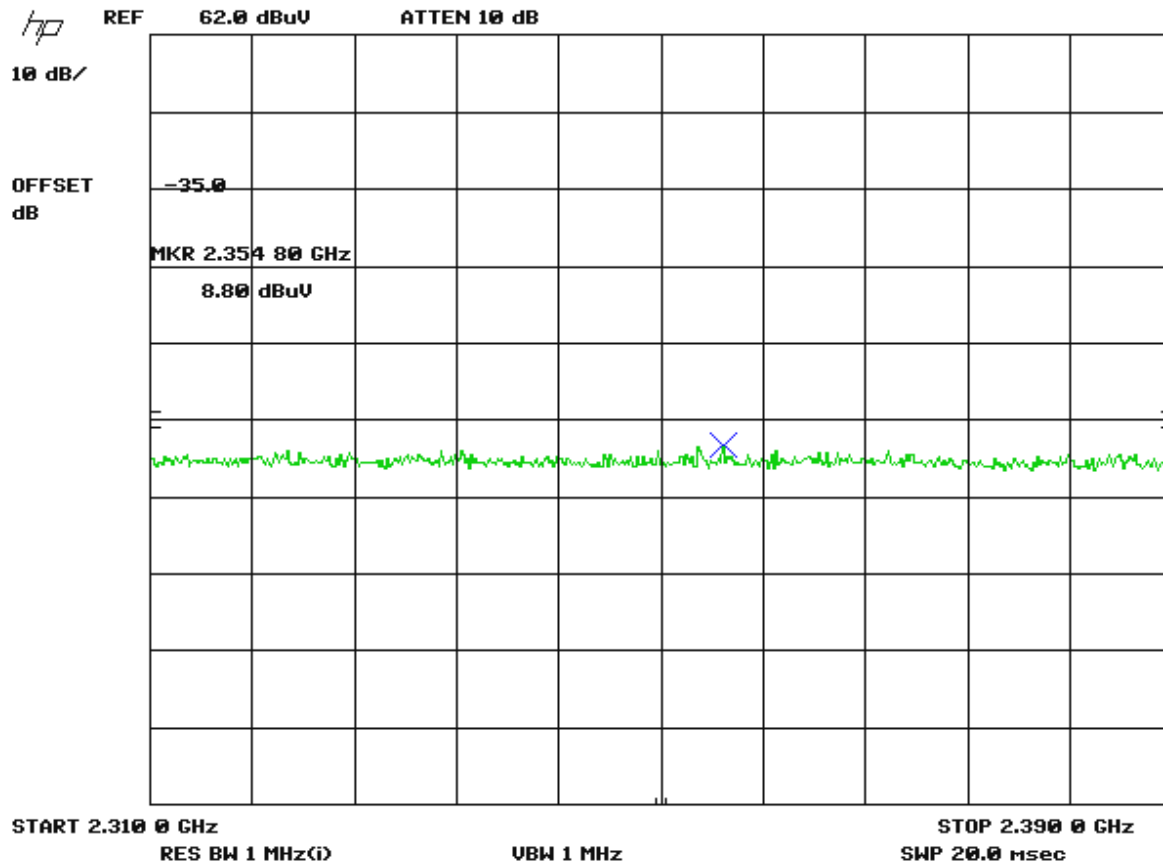
## **RADIATED SPURIOUS EMISSIONS INTO ADJACENT RESTRICTED BAND**

**REQUIREMENTS:** Emissions that fall in the restricted bands (15.205). These emissions must be less than or equal to 500 uV/m (54 dBuV/m). Part 15.35(b) applies in the restricted bands.

**TEST PROCEDURE:** An in band field strength measurement of the fundamental emission using the RBW and detector function required by ANSI C63.4-2003 and the 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.

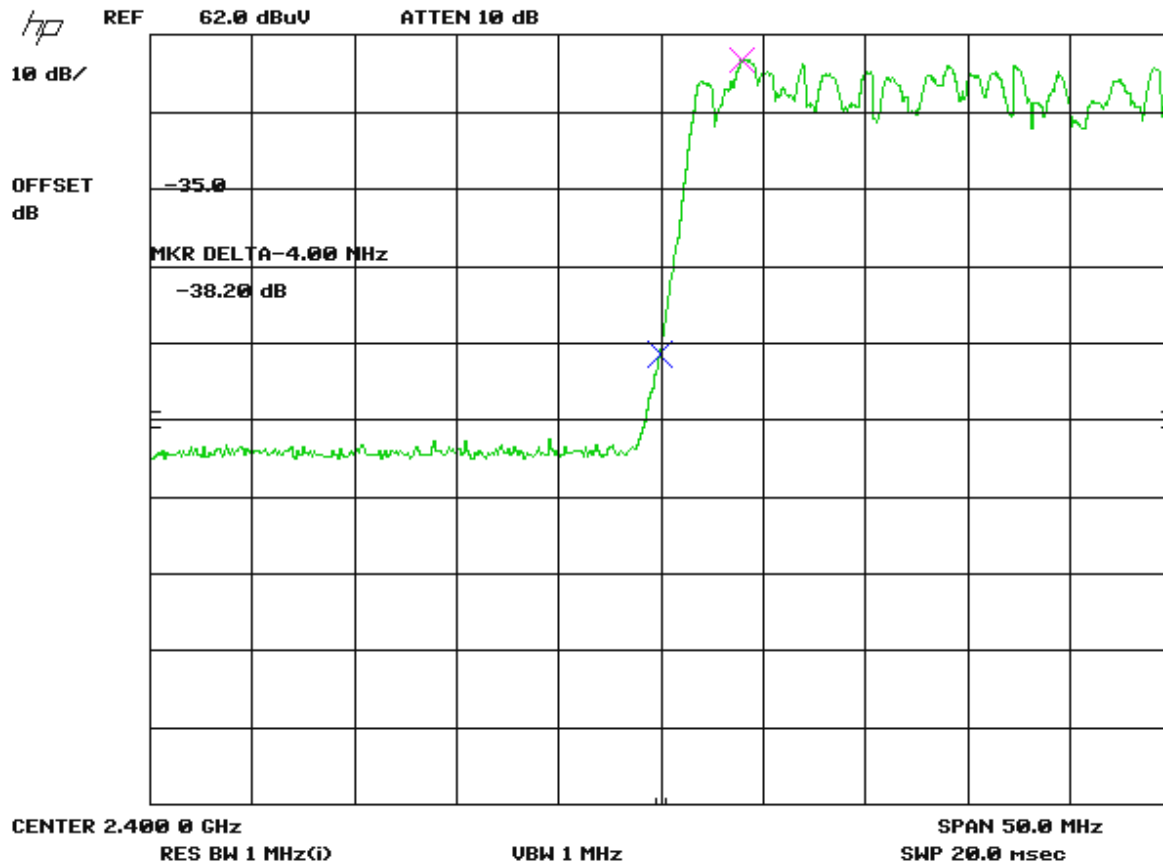
The frequency hopping function was enabled during testing.

APPLICANT: MOTOROLA, INC.  
FCC ID: IHDT56HG2  
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REPORT: W:\M\MOTOROLA\_Libertyville\_II\2694AUT7\2694AUT7 TestReport.doc

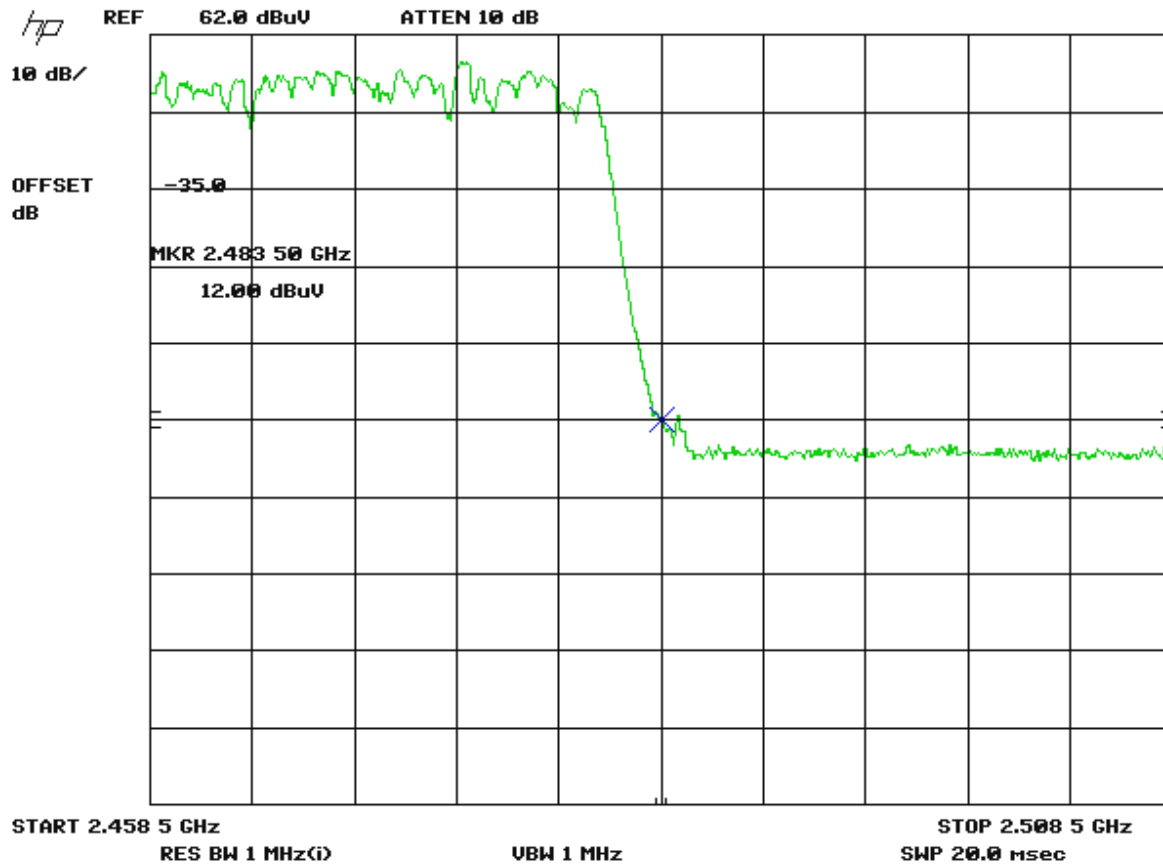


Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity	Coax Loss dB	Correction Factor dB	Field Strength dBuV/m	Margin dB
2,354.8	2,354.80	8.8	H	3.15	32.19	44.14	9.86

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APPLICANT: MOTOROLA, INC.  
 FCC ID: IHDT56HG2  
 MODEL: H98XAH6JR5AN  
 REPORT: W:\M\MOTOROLA\_Libertyville\_II\2694AUT7\2694AUT7 TestReport.doc



Tuned Frequency MHz	Emission Frequency MHz	Meter Reading dBuV	Ant. Polarity	Coax Loss dB	Correction Factor dB	Field Strength dBuV/m	Margin dB
2,483.5	2,483.50	12.0	H	3.24	32.55	47.79	6.21

APPLICANT: MOTOROLA, INC.  
 FCC ID: IHDT56HG2  
 MODEL: H98XAH6JR5AN  
 REPORT: W:\M\MOTOROLA\_Libertyville\_II\2694AUT7\2694AUT7 TestReport.doc

## BLUETOOTH MODULATION TEST

### For TX iDEN 800 MHz band

Bluetooth Signal set to hopping, TX discrete frequency

	Frequency		Code	Peak	Horizontal		Peak	Vertical		Limit	Margin
	Bluetooth	TX			Reading	E-Field		Reading	E-Field		
	MHz	MHz			dBuV	dBuV/m		dBuV	dBuV/m		
fbt-ftx	hopping	806.025	A	1612	17.7	<b>49.16</b>	1612	16.5	<b>47.96</b>	54	<b>4.84</b>
		816.025	B	1632	15.9	<b>47.50</b>	1632	14.3	<b>45.90</b>	54	<b>6.50</b>
		825.025	C	1650	16.4	<b>48.12</b>	1650	17.7	<b>49.42</b>	54	<b>4.58</b>
fbt+ftx	hopping	806.025	D	3224	12.6	<b>49.64</b>	3224	11.4	<b>48.44</b>	54	<b>4.36</b>
		816.025	E	3264	14.2	<b>51.29</b>	3264	12.4	<b>49.49</b>	54	<b>2.71</b>
		825.025	F	3300	14.2	<b>51.33</b>	3300	14.2	<b>51.33</b>	54	<b>2.67</b>

hopping = 2402 to 2480 MHz

### For TX iDEN 800 MHz band

Bluetooth and TX signals set to discrete values

	Frequency		Code	Peak	Horizontal		Peak	Vertical		Limit	Margin
	Bluetooth	TX			Reading	E-Field		Reading	E-Field		
	MHz	MHz			dBuV	dBuV/m		dBuV	dBuV/m		
fbt-ftx	2441	825.025	G	1616	12.6	<b>44.09</b>	1616	13.8	<b>45.29</b>	54	<b>8.71</b>
	2402	825.025	H	1577	11.9	<b>43.12</b>	1577	12.8	<b>44.02</b>	54	<b>9.98</b>
	2480	825.025	I	1655	13.8	<b>45.55</b>	1655	14.6	<b>46.35</b>	54	<b>7.65</b>
fbt+ftx	2441	825.025	G	3266	6.1	<b>43.19</b>	3266	6.8	<b>43.89</b>	54	<b>10.11</b>
	2402	825.025	H	3277	4.6	<b>41.71</b>	3277	5.3	<b>42.41</b>	54	<b>11.59</b>
	2480	825.025	I	3305	5.3	<b>42.43</b>	3305	7.1	<b>44.23</b>	54	<b>9.77</b>

APPLICANT: MOTOROLA, INC.

FCC ID: IHDT56HG2

MODEL: H98XAH6JR5AN

REPORT: W:\M\MOTOROLA\_Libertyville\_II\2694AUT7\2694AUT7 TestReport.doc

## POWER LINE CONDUCTED INTERFERENCE

**Rules Part No.:** Part 15.107 Class B

**Requirements:**

Frequency (MHz)	Quasi Peak Limits (dBuV)	Average Limits (dBuV)
0.15 – 0.5	66 – 56	56 – 46
0.5 – 5.0	56	46
5.0 – 30	60	50

**Test Procedure:** ANSI Standard C63.4-2003. The spectrum was scanned from 0.15 to 30 MHz.

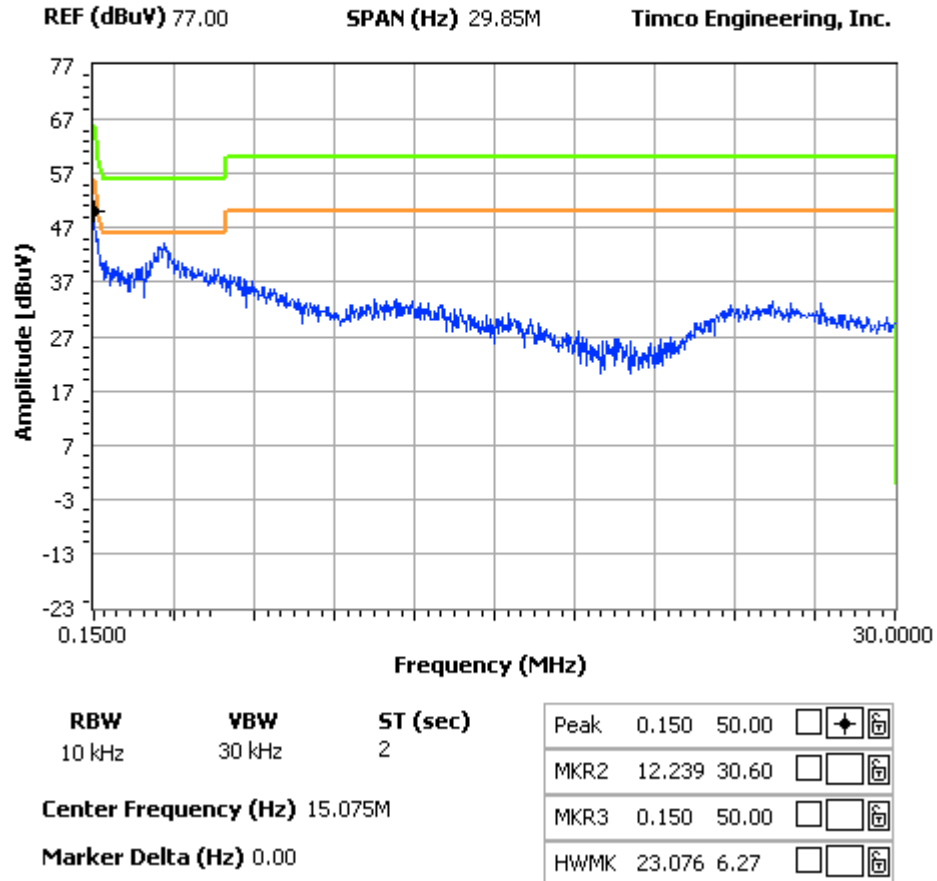
**Test Data:** The attached plots represent the power line conducted emissions. Both sides of the line were observed.

APPLICANT: MOTOROLA, INC.  
FCC ID: IHDT56HG2  
MODEL: H98XAH6JR5AN  
REPORT: W:\M\MOTOROLA\_Libertyville\_II\2694AUT7\2694AUT7 TestReport.doc

**NOTES:**

POWERLINE CONDUCTED -- LINE 1  
 MOTOROLA, INC. -- FCC ID: IHDT56HG2

**FCC 15.107 Mask Class B**

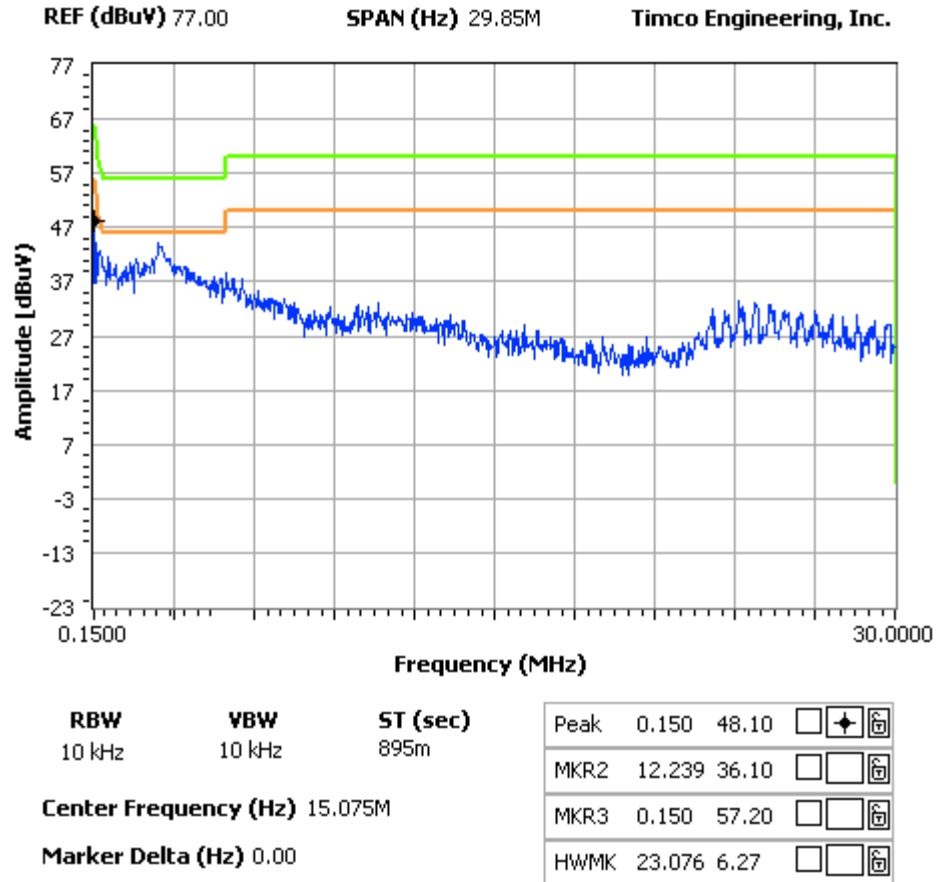


APPLICANT: MOTOROLA, INC.  
 FCC ID: IHDT56HG2  
 MODEL: H98XAH6JR5AN  
 REPORT: W:\M\MOTOROLA\_Libertyville\_II\2694AUT7\2694AUT7 TestReport.doc

**NOTES:**

POWERLINE CONDUCTED -- LINE 2  
 MOTOROLA, INC. -- FCC ID: IHDT56HG2

**FCC 15.107 Mask Class B**



APPLICANT: MOTOROLA, INC.  
 FCC ID: IHDT56HG2  
 MODEL: H98XAH6JR5AN  
 REPORT: W:\M\MOTOROLA\_Libertyville\_II\2694AUT7\2694AUT7 TestReport.doc

**RADIATED EMISSIONS TEST SET UP PHOTO**



APPLICANT: MOTOROLA, INC.

FCC ID: IHDT56HG2

MODEL: H98XAH6JR5AN

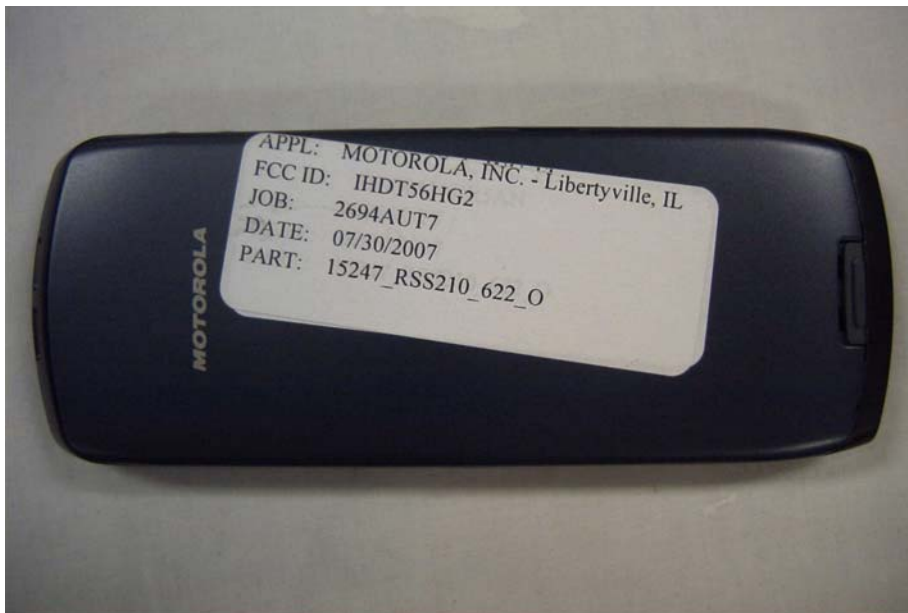
REPORT: W:\M\MOTOROLA\_Libertyville\_II\2694AUT7\2694AUT7 TestReport.doc

**POWERLINE CONDUCTED EMISSIONS TEST SET UP PHOTO**



APPLICANT: MOTOROLA, INC.  
FCC ID: IHDT56HG2  
MODEL: H98XAH6JR5AN  
REPORT: W:\M\MOTOROLA\_Libertyville\_II\2694AUT7\2694AUT7 TestReport.doc

**DUT EXTERNAL PHOTOS**



APPLICANT: MOTOROLA, INC.  
FCC ID: IHDT56HG2  
MODEL: H98XAH6JR5AN  
REPORT: W:\M\MOTOROLA\_Libertyville\_Il\2694AUT7\2694AUT7 TestReport.doc