



1250 Peterson Dr., Wheeling, IL 60090

Company: Motorola, Inc.
Model Tested: 5400SM
Report Number: 12941

FCC Rules and Regulations / Unintentional Radiators

Class B Digital Devices

Part 15, Subpart B, Sections 15.107a & 15.109a

THE FOLLOWING "**MEETS**" THE ABOVE TEST SPECIFICATION

Formal Name: Canopy 5400

Kind of Equipment: Wireless Digital FSK Transceiver

Test Configuration: The Canopy Radio (AP/SM/BH) is connected to a 24V power supply via Ethernet cable. (Tested at 120 vac, 60 Hz)

Model Number(s): 54XXxx

Model(s) Tested: 5400SM

Serial Number(s): 0A003E51550E

Date of Tests: February 2, 2007

Test Conducted For: Motorola, Inc.
1299 E. Algonquin Road
Schaumburg, Illinois 60196

NOTICE: "This test report relates only to the items tested and must not be used by the client to claim product endorsement by NVLAP, NIST, or any agency of the U.S. Government". Please see the "Additional Description of Equipment Under Test" page listed inside of this report.

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1250 Peterson Dr., Wheeling, IL 60090

Company: Motorola, Inc.
Model Tested: 5400SM
Report Number: 12941

SIGNATURE PAGE

Report By:

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Test Engineer
EMC-001375-NE

Reviewed By:

William Stumpf
OATS Manager

Approved By:

Brian Mattson
General Manager

Company Official:

Motorola, Inc.



1250 Peterson Dr., Wheeling, IL 60090

Company: Motorola, Inc.
Model Tested: 5400SM
Report Number: 12941

TABLE OF CONTENTS

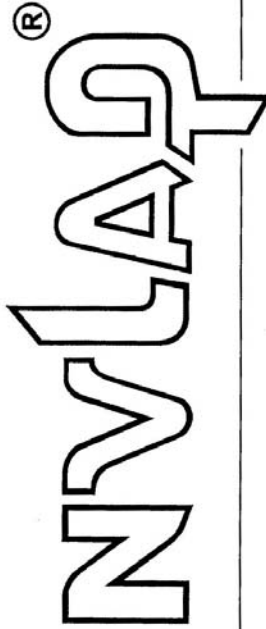
i.	Cover Page	1
ii.	Signature Page	2
iii.	Table of Contents	3
iv.	NVLAP Certificate of Accreditation	4
1.0	Summary of Test Report	5
2.0	Introduction	5
3.0	Object	5
4.0	Test Facility	5
5.0	Test Equipment	5
6.0	Power Line Conducted Emission Measurements	6
7.0	Radiated Emission Measurements	6
8.0	Description of Test Sample	7
9.0	Modifications made to EUT for EMC Compliance	8
10.0	Special Test Conditions	8
11.0	Photo Information and Test Set-Up	9
12.0	Radiated Photos Taken During Testing	10
12.0	Power Line Conducted Photos Taken During Testing	12
14.0	Conclusion	13
	TABLE 1 – EQUIPMENT LIST	14
	Appendix A – Power Line Conducted Data and Charts Taken During Testing	16
	Appendix B – Radiated Data and Charts Taken During Testing	21



1250 Peterson Dr., Wheeling, IL 60090

Company: Motorola, Inc.
Model Tested: 5400SM
Report Number: 12941

United States Department of Commerce
National Institute of Standards and Technology



Certificate of Accreditation to ISO/IEC 17025:1999

NVLAP LAB CODE: 100276-0

D.L.S. Electronic Systems, Inc.
Wheeling, IL

is recognized by the National Voluntary Laboratory Accreditation Program for conformance with criteria set forth in
NIST Handbook 150:2001 and all requirements of ISO/IEC 17025:1999.
Accreditation is granted for specific services, listed on the Scope of Accreditation, for:

ELECTROMAGNETIC COMPATIBILITY AND TELECOMMUNICATIONS

2006-10-01 through 2007-09-30

Effective dates



Sally S. Buce
For the National Institute of Standards and Technology

NVLAP-01C (REV. 2005-05-19)



1250 Peterson Dr., Wheeling, IL 60090

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Model Tested: 5400SM
Report Number: 12941

1.0 SUMMARY OF TEST REPORT

It was found that the Canopy 5400, Model Number(s) 5400SM, "meets" the radio interference Power Line Conducted and Radiated emission requirements of FCC "Rules and Regulations", Part 15, Subpart B, Sections 15.107a & 15.109a for Unintentional Radiators, Class B digital devices.

2.0 INTRODUCTION

On February 2, 2007, a series of radio frequency interference measurements was performed on Canopy 5400, Model Number(s) 5400SM, Serial Number: 0A003E51550E. All tests were performed according to the procedures of the FCC as stated in the American National Standards Institute, ANSI C63.4-2003. These test procedures were performed by personnel of D.L.S. Electronic Systems, Inc. who are responsible to Donald L. Sweeney, Senior EMC Engineer.

3.0 OBJECT

The purpose of this series of tests was to determine if the test sample could meet the radio frequency emission requirements of the FCC Rules and Regulations, Part 15, Subpart B, Sections 15.107a & 15.109a for Unintentional Radiators, Class B digital devices.

4.0 TEST FACILITY

All emission tests were performed at D.L.S. Electronic Systems, Inc. according to the American National Standards Institute, ANSI C63.4-2003.

D.L.S. Electronic Systems, Inc. is a full service EMC/Safety Testing Laboratory accredited to ISO 17025. NVLAP Certificate and Scope can be viewed at <http://www.dlsemc.com/certificate>. Our facilities are registered with the FCC, Industry Canada, and VCCI.

5.0 TEST EQUIPMENT (Bandwidths and Detector Function)

A list of the test equipment used can be found in Table 1. All primary equipment was calibrated against known reference standards with a verified traceable path to NIST.



1250 Peterson Dr., Wheeling, IL 60090

Company: Motorola, Inc.
Model Tested: 5400SM
Report Number: 12941

6.0 POWER LINE CONDUCTED EMISSION MEASUREMENTS

Power Line Conducted emissions were measured in accordance with the American National Standards Institute, ANSI C63.4-2003. Plots and tabular data can be viewed in Appendix A of this test report.

All test measurements were made at a screen room temperature of **71°F** at **28%** relative humidity.

7.0 RADIATED EMISSION MEASUREMENTS

All tests were performed according to the procedures of ANSI C63.4-2003. Plots and tabular data can be viewed in Appendix B of this test report.

NOTE:

FCC Part 15.33b states that measurements shall be made up to the 5th harmonic of the highest clock or timing frequency of the EUT. The highest timing frequency in the Canopy 5400 is 5.705 GHz. Therefore measurements were made up to 30 GHz.

NOTE:

All radiated emissions measurements were made at a test room temperature of **70°F** at **22%** relative humidity.



1250 Peterson Dr., Wheeling, IL 60090

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Model Tested: 5400SM
Report Number: 12941

8.0 DESCRIPTION OF TEST SAMPLE:

8.1 Description:

The Canopy 5400 Super Advanced Logic Wireless Digital FSK Radio is designed for use in the 5.4GHz Band (5495MHz-5705MHz) with 11 separate 20MHz channels. The radio works in conjunction with a 24vDC power supply. It has DFS capability. Canopy is a point to multi-point wireless Ethernet distribution system. The back hauls (BH) are point to point links used for connecting multi-point access points (AP) to wired Ethernet feeds (Internet Service Providers points of presence, ISP POP).

8.2 PHYSICAL DIMENSIONS OF EQUIPMENT UNDER TEST

Length: 2.75" x Width: 8" x Height: 0.6" x

8.3 INTERNAL CLOCK FREQUENCIES:

20 MHz, 25 MHz

8.4 DESCRIPTION OF ALL CIRCUIT BOARDS:

Radio

84-71276n02 iss.P1

Power Supply

ACPSSW-02



1250 Peterson Dr., Wheeling, IL 60090

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Report Number: 12941

9.0 MODIFICATIONS MADE TO EUT FOR EMC COMPLIANCE:

There were no additional descriptions noted at the time of test.

10.0 SPECIAL TEST CONDITIONS:

I certify that the above, combined with paragraph 9.0, describes the equipment tested and that the equipment will be manufactured as stated.

By: _____
Signature Title

For: _____
Company Date



1250 Peterson Dr., Wheeling, IL 60090

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Model Tested: 5400SM
Report Number: 12941

11.0 PHOTO INFORMATION AND TEST SET-UP

Item 0 Canopy 5400

Model Number: 5400SM, Serial Number: 0A003E51550E

Item 1 Phihong AC Power Supply

Model Number: PSA-11R-240(MOT)

Serial Number: I34808466A2

Item 2 Non-shielded Ethernet CAT 5 Cable. 1m



1250 Peterson Dr., Wheeling, IL 60090

Company: Motorola, Inc.
Model Tested: 5400SM
Report Number: 12941

12.0 RADIATED PHOTOS TAKEN DURING TESTING

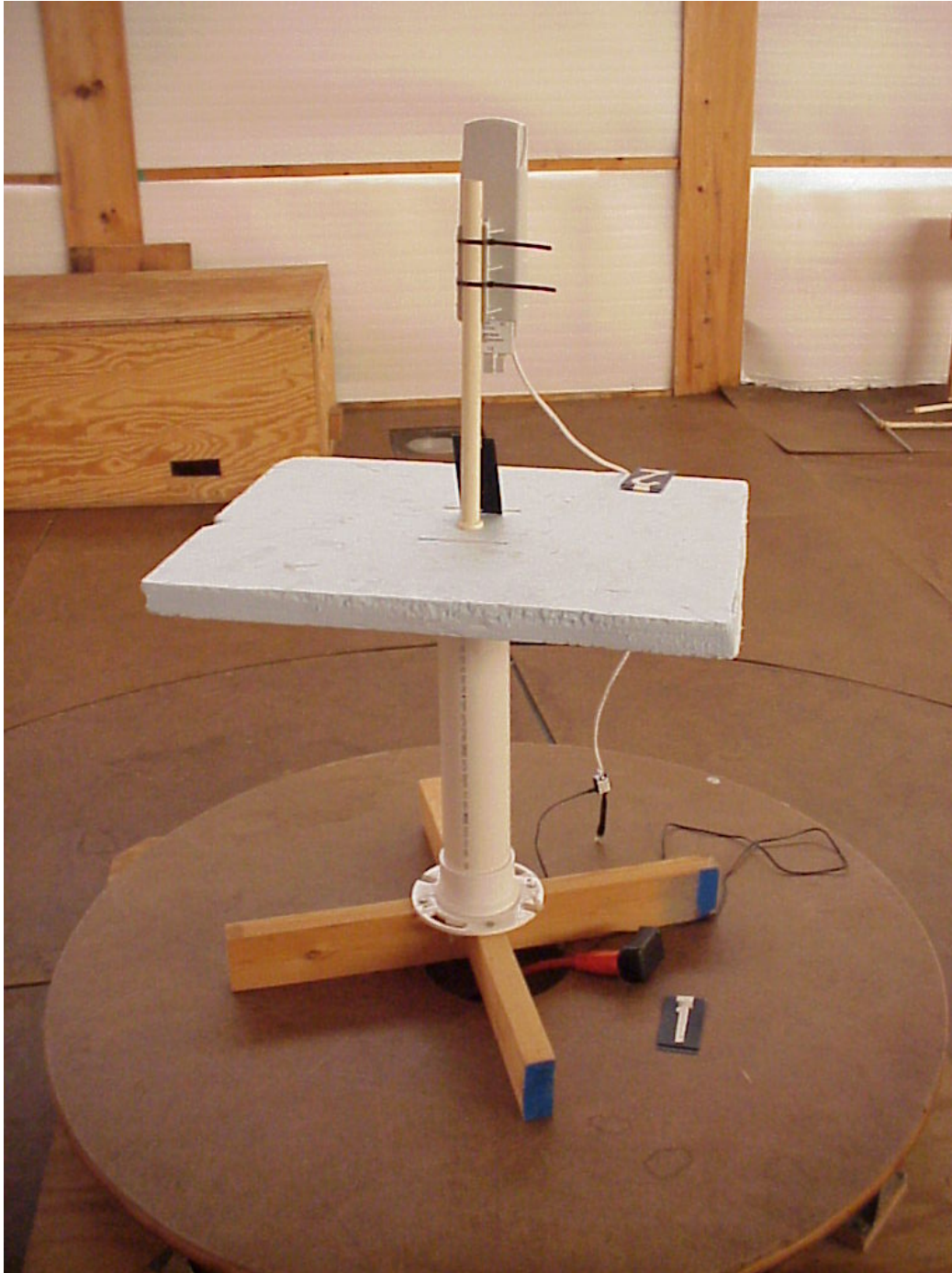




1250 Peterson Dr., Wheeling, IL 60090

Company: Motorola, Inc.
Model Tested: 5400SM
Report Number: 12941

12.0 RADIATED PHOTOS TAKEN DURING TESTING (CON'T)

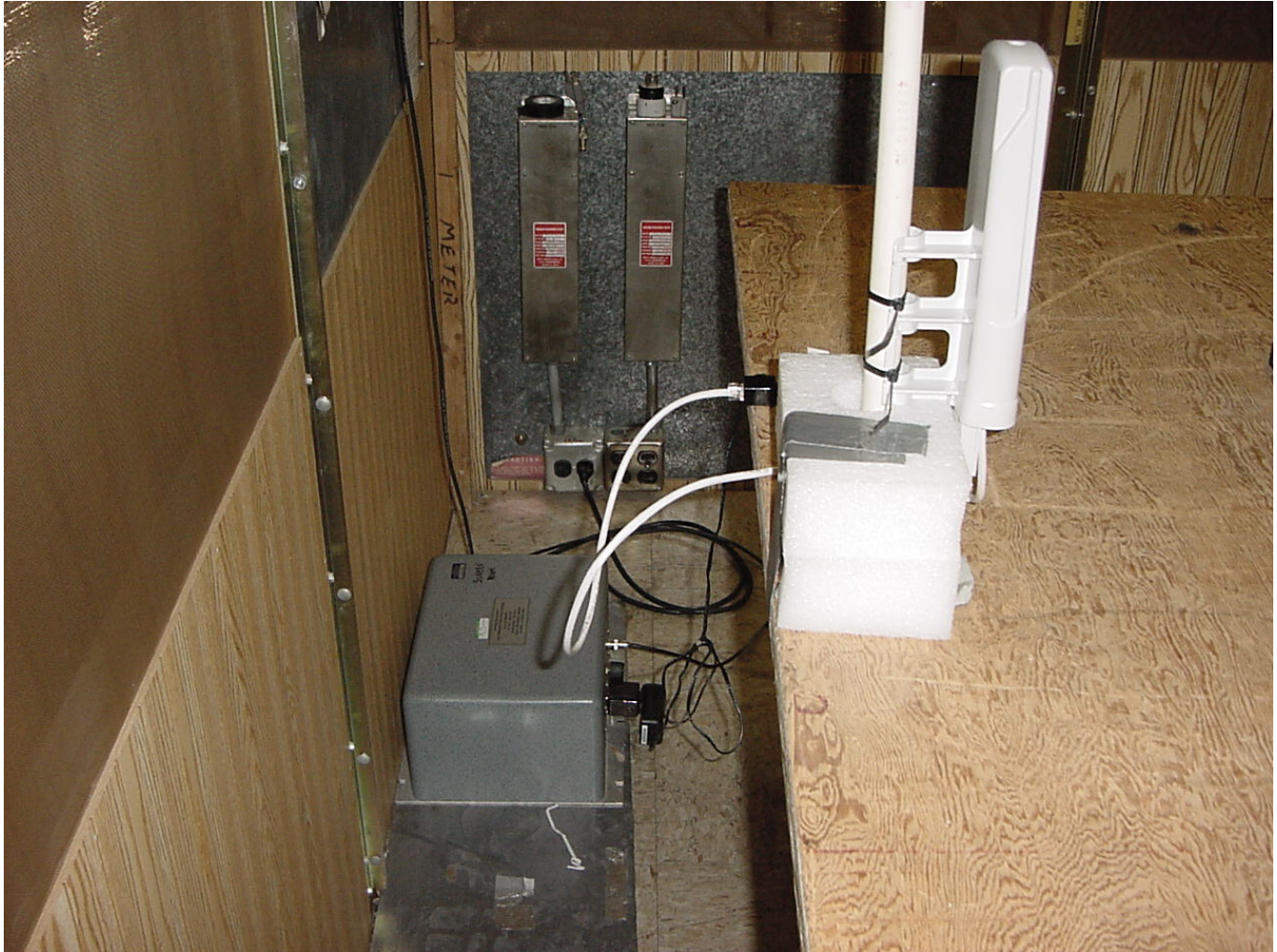




1250 Peterson Dr., Wheeling, IL 60090

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Report Number: 12941

12.0 POWER LINE CONDUCTED PHOTOS TAKEN DURING TESTING





1250 Peterson Dr., Wheeling, IL 60090

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Report Number: 12941

14.0 CONCLUSION

It was found that the Canopy 5400, Model Number(s) 5400SM **"meets"** the radio interference Power Line Conducted and Radiated emission requirements of FCC Rules and Regulations, Part 15, Subpart B, Sections 15.107a & 15.109a for Unintentional Radiators, Class B digital devices.



1250 Peterson Dr., Wheeling, IL 60090

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Model Tested: 5400SM
Report Number: 12941

TABLE 1 – EQUIPMENT LIST

Test Equipment	Manufacturer	Model Number	Serial Number	Frequency Range	Cal Due Dates
Spectrum Analyzer	Hewlett/ Packard	8566B	2240A002041	100 Hz – 22 GHz	12/07
Quasi-Peak Adapter	Hewlett/ Packard	85650A	2043A00121	10 kHz – 1 GHz	12/07
Spectrum Analyzer	Hewlett/ Packard	8566B	2421A00452	100 Hz – 22 GHz	9/07
Quasi-Peak Adapter	Hewlett/ Packard	85650A	2043A00450	10 kHz – 1 GHz	9/07
Spectrum Analyzer	Hewlett/ Packard	8591A	3009A00700	9 kHz – 1.8 GHz	3/07
Receiver	Rohde & Schwarz	ESI 26	837491/010	20 Hz – 26 GHz	1/07
Receiver	Rohde & Schwarz	ESI 40	837808/006	20 Hz – 40 GHz	10/07
Receiver	Rohde & Schwarz	ESI 40	837808/005	20 Hz – 40 GHz	2/07
Antenna	EMCO	3104C	00054891	20 MHz – 200 MHz	2/07
Antenna	Electrometrics	LPA-25	1114	200 MHz – 1 GHz	2/07
Antenna	EMCO	3104C	00054892	20 MHz – 200 MHz	3/07

All primary equipment is calibrated against known reference standards with a verified traceable path to NIST.



1250 Peterson Dr., Wheeling, IL 60090

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Report Number: 12941

TABLE 1 – EQUIPMENT LIST

Test Equipment	Manufacturer	Model Number	Serial Number	Frequency Range	Cal Due Dates
Antenna	Electrometrics	3146	1205	200 MHz – 1 GHz	3/07
Antenna	EMCO	3104C	97014785	20 MHz – 200 MHz	2/07
Antenna	EMCO	3146	97024895	200 MHz – 1 GHz	2/07
Antenna	EMCO	3115	2479	1 GHz – 18 GHz	4/07
Antenna	EMCO	3115	99035731	1 GHz – 18 GHz	4/07
Antenna	Rohde & Schwarz	HUF-Z1	829381001	20 MHz – 1 GHz	2/07
Antenna	Rohde & Schwarz	HUF-Z1	829381005	20 MHz – 1 GHz	2/07
LISN	Solar	8012-50-R-24-BNC	8305116	10 MHz – 30 MHz	8/07
LISN	Solar	8012-50-R-24-BNC	814548	10 MHz – 30 MHz	8/07
LISN	Solar	9252-50-R-24-BNC	961019	10 MHz – 30 MHz	12/07
LISN	Solar	9252-50-R-24-BNC	971612	10 MHz – 30 MHz	11/07
LISN	Solar	9252-50-R-24-BNC	92710620	10 MHz – 30 MHz	7/07

All primary equipment is calibrated against known reference standards with a verified traceable path to NIST.



1250 Peterson Dr., Wheeling, IL 60090

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APPENDIX A

“POWER LINE CONDUCTED DATA

AND

CHARTS TAKEN DURING TESTING”

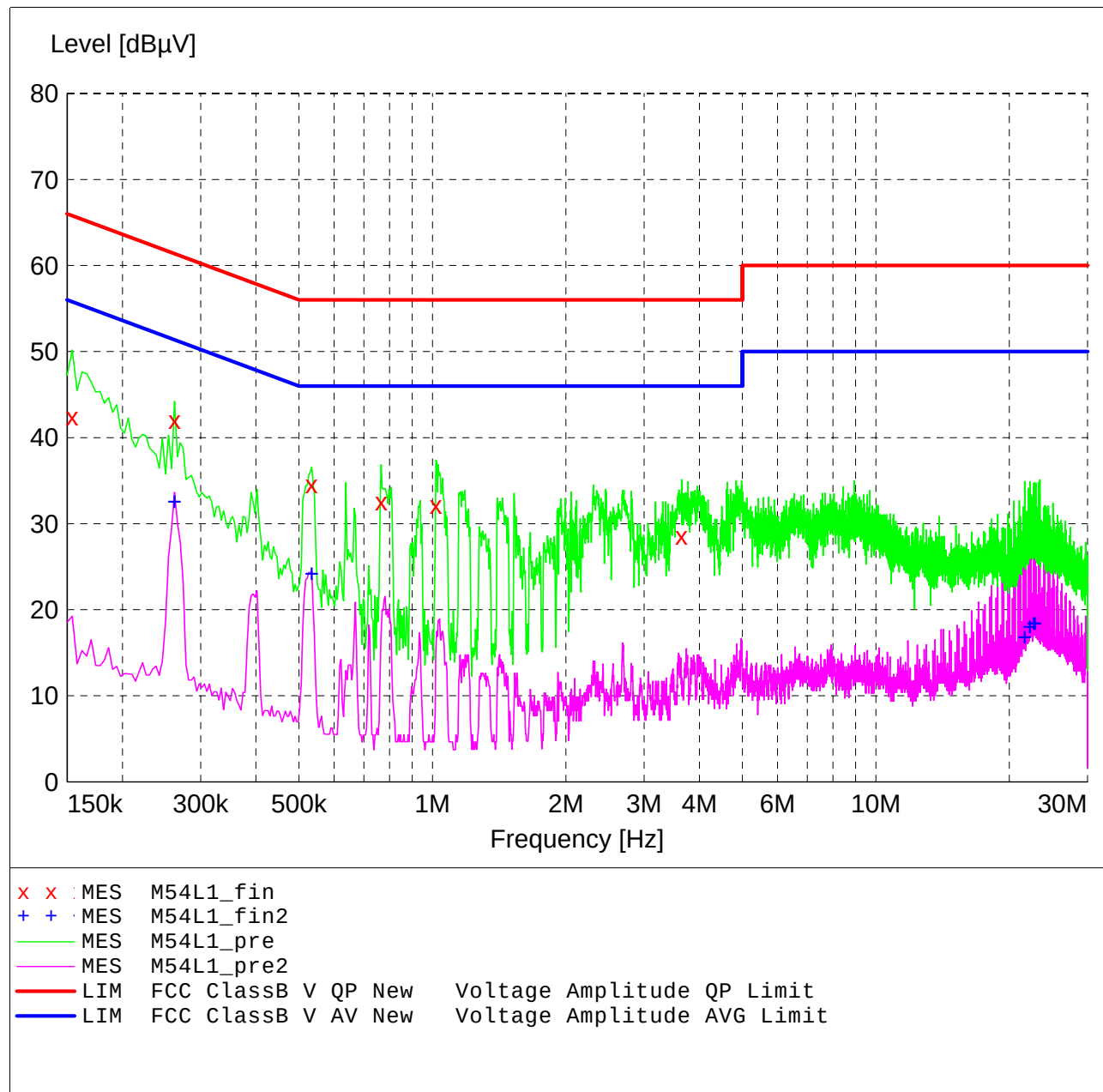
FCC Part 15 Class B

Voltage Mains Test

EUT: Canopy 5400
Manufacturer: Motorola
Operating Condition: 71 deg. F, 28% R.H.
Test Site: DLS O.F. Site 1 (Screenroom)
Operator: Craig Brandt
Test Specification: 120 V 60 Hz
Comment: Line 1
Date: 02-02-2007

SCAN TABLE: "Line Cond Scrn RmFin"

Short Description:		Line Conducted Emissions					Transducer
Start	Stop	Step	Detector	Meas. Time	IF Bandw.		
Frequency	Frequency	Width					
150.0 kHz	30.0 MHz	4.0 kHz	QuasiPeak	2.0 s	9 kHz	LISN DLS#128	
			CISPR AV				



MEASUREMENT RESULT: "M54L1_fin"

2/2/2007 2:38PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.154000	42.40	11.4	66	23.4	QP	---	---
0.262000	42.00	10.6	61	19.4	QP	---	---
0.534000	34.60	10.3	56	21.4	QP	---	---
0.766000	32.60	10.2	56	23.4	QP	---	---
1.018000	32.20	10.2	56	23.8	QP	---	---
3.646000	28.60	10.4	56	27.4	QP	---	---

MEASUREMENT RESULT: "M54L1_fin2"

2/2/2007 2:38PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.262000	32.60	10.6	51	18.8	CAV	---	---
0.534000	24.20	10.3	46	21.8	CAV	---	---
21.654000	16.80	11.5	50	33.2	CAV	---	---
22.254000	18.00	11.5	50	32.0	CAV	---	---
22.702000	18.40	11.5	50	31.6	CAV	---	---
22.850000	18.40	11.5	50	31.6	CAV	---	---

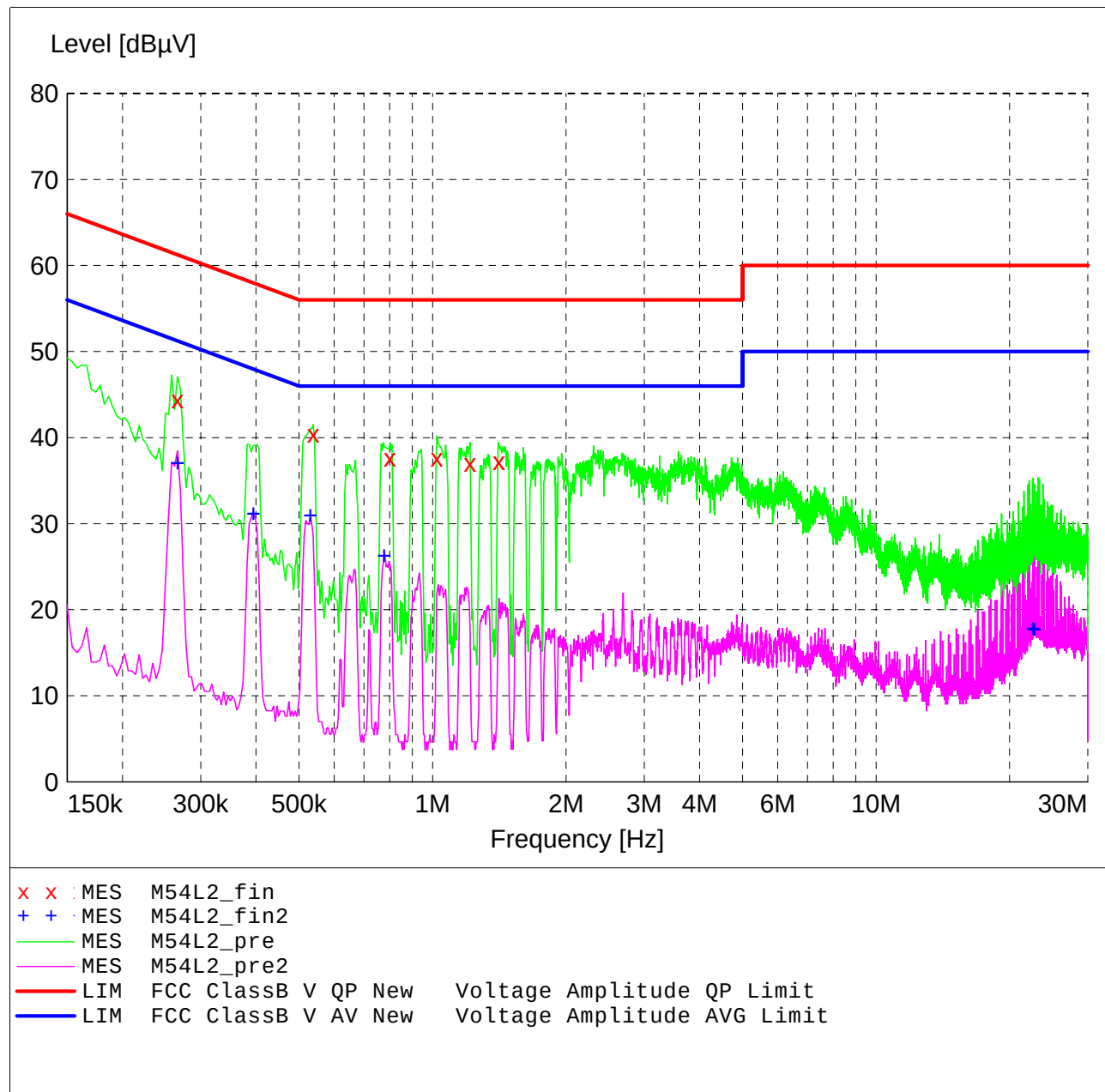
FCC Part 15 Class B

Voltage Mains Test

EUT: Canopy 5400
Manufacturer: Motorola
Operating Condition: 71 deg. F, 28% R.H.
Test Site: DLS O.F. Site 1 (Screenroom)
Operator: Craig Brandt
Test Specification: 120 V 60 Hz
Comment: Line 2
Date: 02-02-2007

SCAN TABLE: "Line Cond Scrn RmFin"

Short Description:			Line Conducted Emissions				Transducer
Start	Stop	Step	Detector	Meas. Time	IF Bandw.		
Frequency 150.0 kHz	Frequency 30.0 MHz	Width 4.0 kHz	QuasiPeak CISPR AV	2.0 s	9 kHz	LISN DLS#128	



MEASUREMENT RESULT: "M54L2_fin"

2/2/2007 2:43PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.266000	44.40	10.6	61	16.8	QP	---	---
0.538000	40.50	10.3	56	15.5	QP	---	---
0.802000	37.70	10.2	56	18.3	QP	---	---
1.022000	37.70	10.2	56	18.3	QP	---	---
1.214000	37.10	10.2	56	18.9	QP	---	---
1.410000	37.30	10.2	56	18.7	QP	---	---

MEASUREMENT RESULT: "M54L2_fin2"

2/2/2007 2:43PM

Frequency MHz	Level dBμV	Transd dB	Limit dBμV	Margin dB	Detector	Line	PE
0.266000	37.10	10.6	51	14.1	CAV	---	---
0.394000	31.20	10.4	48	16.8	CAV	---	---
0.530000	31.00	10.3	46	15.0	CAV	---	---
0.778000	26.30	10.2	46	19.7	CAV	---	---
22.590000	17.80	11.5	50	32.2	CAV	---	---
22.738000	17.70	11.5	50	32.3	CAV	---	---



1250 Peterson Dr., Wheeling, IL 60090

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Model Tested: 5400SM
Report Number: 12941

APPENDIX B

“RADIATED DATA

AND

CHARTS TAKEN DURING TESTING”

FCC Part 15 Class B

Electric Field Strength

EUT: Canopy 5400
Manufacturer: Motorola
Operating Condition: 70 deg. F; 22% R.H.
Test Site: DLS O.F. Site 3
Operator: Craig Brandt
Test Specification: 120 V 60 Hz
Comment: Transmit and receive; Low, mid, and high channels
Date: 02-02-2007

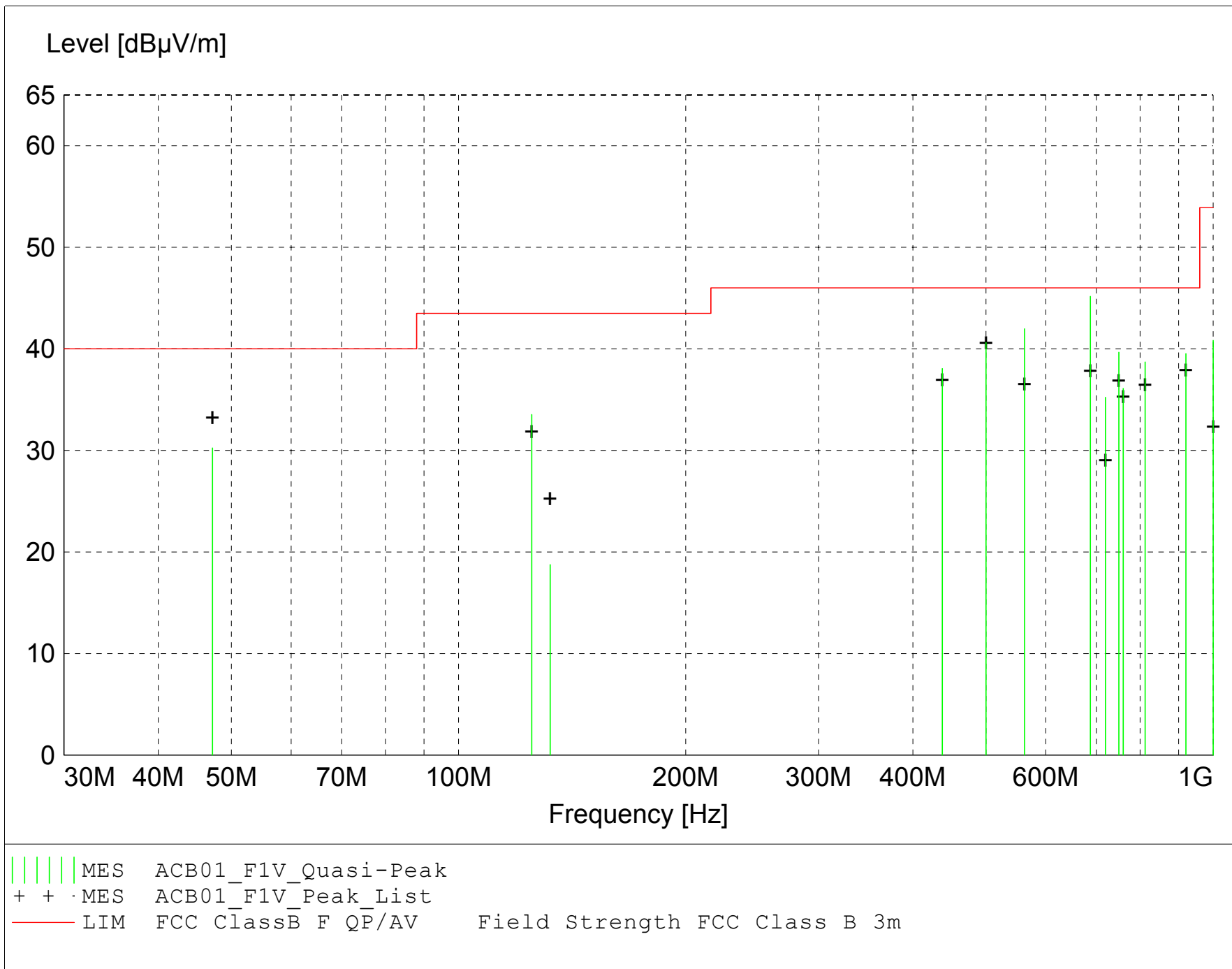
TEXT: "Site 3 MidV 3M"

Short Description: Test Set-up Vert30-1000MHz
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/005

Antennas ---
Biconical -- EMCO 3104C SN: 9701-4785
Log Periodic -- EMCO 3146 SN: 9702-4895

Pre-Amp --- Rohde&Schwarz TS-PR10 SN: 032001/005

TEST SET-UP: EUT Measured at 3 Meters with VERTICAL Antenna Polarization



MEASUREMENT RESULT: "ACB01_F1V_Final"

2/2/2007 1:34PM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
687.500000	43.86	20.64	-19.3	45.2	46.0	0.8	1.30	225	QUASI-PEAK	None
562.500000	44.15	18.28	-20.4	42.0	46.0	4.0	1.40	135	QUASI-PEAK	None
500.000000	43.82	17.49	-20.7	40.6	46.0	5.4	1.00	225	QUASI-PEAK	None
750.000000	37.15	20.76	-18.2	39.7	46.0	6.3	1.10	225	QUASI-PEAK	None
920.000000	35.27	22.32	-18.1	39.5	46.0	6.5	1.00	200	QUASI-PEAK	None
812.500000	36.92	20.89	-19.1	38.7	46.0	7.3	1.00	180	QUASI-PEAK	None
437.500000	43.15	16.00	-21.1	38.1	46.0	7.9	1.00	225	QUASI-PEAK	None
47.195000	42.97	11.40	-24.1	30.2	40.0	9.8	1.00	340	QUASI-PEAK	broadband
760.000000	33.75	20.78	-18.4	36.1	46.0	9.9	1.80	170	QUASI-PEAK	None
125.025000	44.17	12.52	-23.2	33.5	43.5	10.0	1.00	180	QUASI-PEAK	None
720.000000	33.32	20.56	-18.7	35.2	46.0	10.8	1.20	225	QUASI-PEAK	None
1000.000000	34.04	23.65	-16.9	40.8	53.9	13.1	1.40	180	QUASI-PEAK	None
132.225000	29.53	12.33	-23.1	18.8	43.5	24.7	1.00	180	QUASI-PEAK	None

FCC Part 15 Class B

Electric Field Strength

EUT: Canopy 5400
Manufacturer: Motorola
Operating Condition: 70 deg. F; 22% R.H.
Test Site: DLS O.F. Site 3
Operator: Craig Brandt
Test Specification: 120 V 60 Hz
Comment: Transmit and receive; Low, mid, and high channels
Date: 02-02-2007

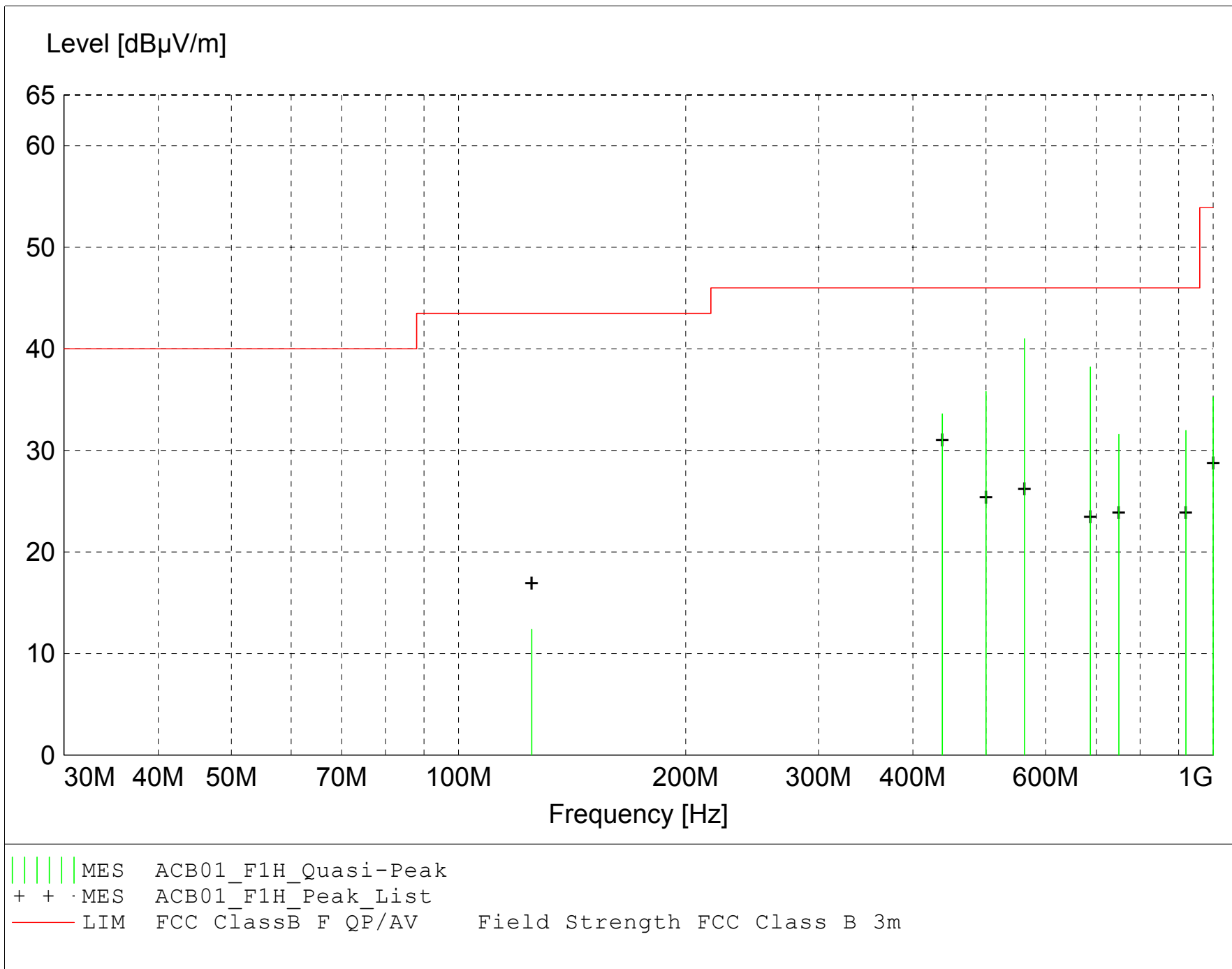
TEXT: "Site 3 MidH 3M"

Short Description: Test Set-up Horz30-1000MHz
TEST EQUIPMENT: Receiver --- Rohde&Schwarz ESI 40 SN: 837808/005

Antennas ---
Biconical -- EMCO 3104C SN: 9701-4785
Log Periodic -- EMCO 3146 SN: 9702-4895

Pre-Amp --- Rohde&Schwarz TS-PR10 SN: 032001/005

TEST SET-UP: EUT Measured at 3 Meters with HORIZONTAL Antenna Polarization



MEASUREMENT RESULT: "ACB01_F1H_Final"

2/2/2007 1:52PM

Frequency	Level	Antenna	System	Total	Limit	Margin	Height	EuT	Final	Comment
MHz	dBμV	Factor	Loss	Level			Ant.	Angle	Detector	
		dBμV/m	dB	dBμV/m	dBμV/m	dB	m	deg		
562.500000	43.16	18.28	-20.4	41.0	46.0	5.0	1.60	190	QUASI-PEAK	None
687.500000	36.92	20.64	-19.3	38.2	46.0	7.8	1.00	20	QUASI-PEAK	None
500.000000	39.00	17.49	-20.7	35.8	46.0	10.2	2.30	315	QUASI-PEAK	None
437.500000	38.70	16.00	-21.1	33.6	46.0	12.4	2.30	45	QUASI-PEAK	None
920.000000	27.69	22.32	-18.1	32.0	46.0	14.0	1.00	190	QUASI-PEAK	None
750.000000	29.09	20.76	-18.2	31.6	46.0	14.4	1.00	10	QUASI-PEAK	None
1000.000000	28.44	23.65	-16.9	35.2	53.9	18.7	1.00	315	QUASI-PEAK	None
125.010000	23.03	12.52	-23.2	12.4	43.5	31.1	3.10	45	QUASI-PEAK	None



1250 Peterson Dr., Wheeling, IL 60090

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Radiated Spurious Emissions 1 GHz to 30 GHz

Tested at a 3 Meter Distance – 1 GHz to 18 GHz / Tested at a 1 Meter Distance – 18 GHz to 30 GHz

EUT: Canopy 5400
Manufacturer: Motorola
Operating Condition: 71 deg F; 24% R.H.
Test Site: Site 3
Operator: Craig Brandt
Test Specification: FCC Part 15.109
Comment: Receive mode
Date: 02/01/2007
Notes: (1) All other emissions at least 20 dB under the limit.

Channel: Low – 5495 MHz

Frequency (GHz)	Measurement Type	Ant. Pol.	Level (dBuV)	Antenna Factor (dB/m)	System Loss (dB)	Total Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Comment
1.080	Average	Vert	59.24	24.56	-38.7	45.1	54	8.9	
1.080	Max Peak	Vert	66.53	24.56	-38.7	52.4	74	21.6	
1.080	Average	Horz	Noise Floor						
1.080	Max Peak	Horz	Noise Floor						
1.200	Average	Vert	62.08	24.80	-39.2	47.7	54	6.3	
1.200	Max Peak	Vert	65.45	24.80	-39.2	51.1	74	22.9	
1.200	Average	Horz	Noise Floor						
1.200	Max Peak	Horz	Noise Floor						
1.240	Average	Vert	60.25	24.88	-39.1	46.0	54	8.0	
1.240	Max Peak	Vert	62.39	24.88	-39.1	48.1	74	25.9	
1.240	Average	Horz	Noise Floor						
1.240	Max Peak	Horz	Noise Floor						
1.360	Average	Vert	58.43	25.12	-38.8	44.7	54	9.3	
1.360	Max Peak	Vert	60.97	25.12	-38.8	47.3	74	26.7	
1.360	Average	Horz	59.88	25.12	-38.8	46.2	54	7.8	
1.360	Max Peak	Horz	62.12	25.12	-38.8	48.4	74	25.6	



1250 Peterson Dr., Wheeling, IL 60090

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Radiated Spurious Emissions 1 GHz to 30 GHz

Tested at a 3 Meter Distance – 1 GHz to 18 GHz / Tested at a 1 Meter Distance – 18 GHz to 30 GHz

EUT: Canopy 5400
Manufacturer: Motorola
Operating Condition: 71 deg F; 24% R.H.
Test Site: Site 3
Operator: Craig Brandt
Test Specification: FCC Part 15.109
Comment: Receive mode
Date: 02/01/2007
Notes: (1) All other emissions at least 20 dB under the limit.

Channel: Low – 5495 MHz

Frequency (GHz)	Measurement Type	Ant. Pol.	Level (dBuV)	Antenna Factor (dB/m)	System Loss (dB)	Total Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Comment
1.520	Average	Vert	57.00	25.48	-39.1	43.4	54	10.6	
1.520	Max Peak	Vert	59.82	25.48	-39.1	46.2	74	27.8	
1.520	Average	Horz	Noise Floor						
1.520	Max Peak	Horz	Noise Floor						
5.215	Average	Vert	42.98	33.79	-36.6	40.2	54	13.8	
5.215	Max Peak	Vert	50.74	33.79	-36.6	47.9	74	26.1	
5.215	Average	Horz	Noise Floor						
5.215	Max Peak	Horz	Noise Floor						
7.823	Average	Vert	44.11	36.69	-36.9	43.9	54	10.1	
7.823	Max Peak	Vert	51.88	36.69	-36.9	51.7	74	22.3	
7.823	Average	Horz	43.38	36.69	-36.9	43.2	54	10.8	
7.823	Max Peak	Horz	51.51	36.69	-36.9	51.3	74	22.7	
15.645	Average	Vert	38.52	37.51	-34.5	41.5	54	12.5	
15.645	Max Peak	Vert	49.52	37.51	-34.5	52.5	74	21.5	
15.645	Average	Horz	39.89	37.51	-34.5	42.9	54	11.1	
15.645	Max Peak	Horz	50.08	37.51	-34.5	53.1	74	20.9	



1250 Peterson Dr., Wheeling, IL 60090

Company: Motorola, Inc.
 Model Tested: 5400SM
 Report Number: 12941

Radiated Spurious Emissions 1 GHz to 30 GHz

Tested at a 3 Meter Distance – 1 GHz to 18 GHz / Tested at a 1 Meter Distance – 18 GHz to 30 GHz

EUT: Canopy 5400
Manufacturer: Motorola
Operating Condition: 71 deg F; 24% R.H.
Test Site: Site 3
Operator: Craig Brandt
Test Specification: FCC Part 15.109
Comment: Receive mode
Date: 02/01/2007
Notes: (1) All other emissions at least 20 dB under the limit.

Channel: Mid – 5580 MHz

Frequency (GHz)	Measurement Type	Ant. Pol.	Level (dBuV)	Antenna Factor (dB/m)	System Loss (dB)	Total Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Comment
1.160	Average	Vert	58.17	24.72	-39.1	43.8	54	10.2	
1.160	Max Peak	Vert	60.46	24.72	-39.1	46.0	74	28.0	
1.160	Average	Horz	Noise Floor						
1.160	Max Peak	Horz	Noise Floor						
1.200	Average	Vert	62.64	24.80	-39.2	48.3	54	5.7	
1.200	Max Peak	Vert	64.12	24.80	-39.2	49.8	74	24.2	
1.200	Average	Horz	Noise Floor						
1.200	Max Peak	Horz	Noise Floor						
1.240	Average	Vert	59.79	24.88	-39.1	45.5	54	8.5	
1.240	Max Peak	Vert	61.61	24.88	-39.1	47.4	74	26.6	
1.240	Average	Horz	Noise Floor						
1.240	Max Peak	Horz	Noise Floor						
1.360	Average	Vert	Noise Floor						
1.360	Max Peak	Vert	Noise Floor						
1.360	Average	Horz	60.37	25.12	-38.8	46.7	54	7.3	
1.360	Max Peak	Horz	62.52	25.12	-38.8	48.8	74	25.2	



1250 Peterson Dr., Wheeling, IL 60090

Company: Motorola, Inc.
Model Tested: 5400SM
Report Number: 12941

Radiated Spurious Emissions 1 GHz to 30 GHz

Tested at a 3 Meter Distance – 1 GHz to 18 GHz / Tested at a 1 Meter Distance – 18 GHz to 30 GHz

EUT: Canopy 5400
Manufacturer: Motorola
Operating Condition: 71 deg F; 24% R.H.
Test Site: Site 3
Operator: Craig Brandt
Test Specification: FCC Part 15.109
Comment: Receive mode
Date: 02/01/2007
Notes: (1) All other emissions at least 20 dB under the limit.

Channel: Mid – 5580 MHz

Frequency (GHz)	Measurement Type	Ant. Pol.	Level (dBuV)	Antenna Factor (dB/m)	System Loss (dB)	Total Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Comment
2.160	Average	Vert	51.48	27.75	-38.5	40.7	54	13.3	
2.160	Max Peak	Vert	55.93	27.75	-38.5	45.1	74	28.9	
2.160	Average	Horz	Noise Floor						
2.160	Max Peak	Horz	Noise Floor						
5.300	Average	Vert	45.61	33.94	-36.5	43.0	54	11.0	
5.300	Max Peak	Vert	51.76	33.94	-36.5	49.2	74	24.8	
5.300	Average	Horz	Noise Floor						
5.300	Max Peak	Horz	Noise Floor						
7.950	Average	Vert	47.45	36.77	-36.5	47.8	54	6.2	
7.950	Max Peak	Vert	53.50	36.77	-36.5	53.8	74	20.2	
7.950	Average	Horz	47.50	36.77	-36.5	47.8	54	6.2	
7.950	Max Peak	Horz	53.90	36.77	-36.5	54.2	74	19.8	
15.900	Average	Vert	38.67	37.00	-33.7	42.0	54	12.0	
15.900	Max Peak	Vert	49.25	37.00	-33.7	52.6	74	21.4	
15.900	Average	Horz	38.13	37.00	-33.7	41.5	54	12.5	
15.900	Max Peak	Horz	48.83	37.00	-33.7	52.2	74	21.8	



1250 Peterson Dr., Wheeling, IL 60090

Company: Motorola, Inc.
Model Tested: 5400SM
Report Number: 12941

Radiated Spurious Emissions 1 GHz to 30 GHz

Tested at a 3 Meter Distance – 1 GHz to 18 GHz

Tested at a 1 Meter Distance – 18 GHz to 30 GHz

EUT: Canopy 5400
Manufacturer: Motorola
Operating Condition: 71 deg F; 24% R.H.
Test Site: Site 3
Operator: Craig Brandt
Test Specification: FCC Part 15.109
Comment: Receive mode
Date: 02/01/2007
Notes: (1) All other emissions at least 20 dB under the limit.

Channel: High – 5705 MHz

Frequency (GHz)	Measurement Type	Ant. Pol.	Level (dBuV)	Antenna Factor (dB/m)	System Loss (dB)	Total Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Comment
1.160	Average	Vert	58.30	24.72	-39.1	43.9	54	10.1	
1.160	Max Peak	Vert	60.46	24.72	-39.1	46.0	74	28.0	
1.160	Average	Horz	Noise Floor						
1.160	Max Peak	Horz	Noise Floor						
1.200	Average	Vert	62.55	24.80	-39.2	48.2	54	5.8	
1.200	Max Peak	Vert	63.99	24.80	-39.2	49.6	74	24.4	
1.200	Average	Horz	Noise Floor						
1.200	Max Peak	Horz	Noise Floor						
1.240	Average	Vert	59.95	24.88	-39.1	45.7	54	8.3	
1.240	Max Peak	Vert	61.87	24.88	-39.1	47.6	74	26.4	
1.240	Average	Horz	Noise Floor						
1.240	Max Peak	Horz	Noise Floor						
1.360	Average	Vert	Noise Floor						
1.360	Max Peak	Vert	Noise Floor						
1.360	Average	Horz	60.27	25.12	-38.8	46.6	54	7.4	
1.360	Max Peak	Horz	62.52	25.12	-38.8	48.8	74	25.2	



1250 Peterson Dr., Wheeling, IL 60090

Company: Motorola, Inc.
Model Tested: 5400SM
Report Number: 12941

Radiated Spurious Emissions 1 GHz to 30 GHz

Tested at a 3 Meter Distance – 1 GHz to 18 GHz / Tested at a 1 Meter Distance – 18 GHz to 30 GHz

EUT: Canopy 5400
Manufacturer: Motorola
Operating Condition: 71 deg F; 24% R.H.
Test Site: Site 3
Operator: Craig Brandt
Test Specification: FCC Part 15.109
Comment: Receive mode
Date: 02/01/2007
Notes: (1) All other emissions at least 20 dB under the limit.

Channel: High – 5705 MHz

Frequency (GHz)	Measurement Type	Ant. Pol.	Level (dBuV)	Antenna Factor (dB/m)	System Loss (dB)	Total Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Comment
5.985	Average	Vert	49.97	34.40	-36.7	47.7	54	6.3	
5.985	Max Peak	Vert	55.39	34.40	-36.7	53.1	74	20.9	
5.985	Average	Horz	45.23	34.40	-36.7	43.0	54	11.0	
5.985	Max Peak	Horz	52.69	34.40	-36.7	50.4	74	23.6	
11.970	Average	Vert	39.44	39.85	-34.3	45.0	54	9.0	
11.970	Max Peak	Vert	49.80	39.85	-34.3	55.4	74	18.6	
11.970	Average	Horz	38.24	39.85	-34.3	43.8	54	10.2	
11.970	Max Peak	Horz	49.80	39.85	-34.3	55.4	74	18.6	