



EMC Emission - TEST REPORT

Test Report File No. : **WC701422 Rev B** Date of issue: 27 April 2007

Model / Serial No. : OSU-2510-R / 0049X057SCCX00789496

Product Name : Expedience 2.496-2.690 GHz OSU

Product Type : BRS/EBS Outdoor Subscriber Unit (OSU)

Applicant : Motorola Incorporated Nextnet Wireless Product Group

Manufacturer : Motorola Incorporated Nextnet Wireless Product Group

License Holder : Motorola Incorporated Nextnet Wireless Product Group

Address : 299 Johnson Avenue
Suite 120
Waseca, MN 56093

Test Result : **Positive** **Negative**

Test Project Number Reference(s) : **WC701422 Rev B**

Total pages including Appendices **54**

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Sign Explanations:

- not applicable
- applicable

R E V I S I O N R E C O R D

REVISION	TOTAL NUMBER OF PAGES	DATE	DESCRIPTION
	59	10 April 2007	Initial Release
A	58	20 April 2007	Revisions include: <ul style="list-style-type: none"> ▪ Page 4: Corrected margin of compliance and updated equipment list. ▪ Appendix A: Revised data.
B		27 April 2007	Revisions include: <ul style="list-style-type: none"> ▪ Page 4: Updated test summary information. ▪ Appendix A: Revised data.

EMISSIONS TEST REGULATIONS :

The emissions tests were performed according to following regulations:

- | | | |
|---|---|---|
| <input type="checkbox"/> - EN 50081-1 / 1991 | <input type="checkbox"/> - Group 1 | <input type="checkbox"/> - Group 2 |
| <input type="checkbox"/> - EN 55011 / 1991 | <input type="checkbox"/> - Class A | <input type="checkbox"/> - Class B |
| <input type="checkbox"/> - EN 55013 / 1990 | | |
|
 | | |
| <input type="checkbox"/> - EN 55014 / 1987 | <input type="checkbox"/> - Household appliances and similar | |
| | <input type="checkbox"/> - Portable tools | |
| | <input type="checkbox"/> - Semiconductor devices | |
|
 | | |
| <input type="checkbox"/> - EN 55014 / A2:1990 | <input type="checkbox"/> - Household appliances and similar | |
| <input type="checkbox"/> - EN 55014 / 1993 | <input type="checkbox"/> - Portable tools | |
| | <input type="checkbox"/> - Semiconductor devices | |
|
 | | |
| <input type="checkbox"/> - EN 55015 / 1987 | | |
| <input type="checkbox"/> - EN 55015 / A1:1990 | | |
| <input type="checkbox"/> - EN 55015 / 1993 | | |
| <input type="checkbox"/> - EN 55022 / 1987 | <input type="checkbox"/> - Class A | <input type="checkbox"/> - Class B |
| <input type="checkbox"/> - EN 55022 / 1991 | <input type="checkbox"/> - Class A | <input type="checkbox"/> - Class B |
|
 | | |
| <input type="checkbox"/> - BS | | |
| <input type="checkbox"/> - VCCI | <input type="checkbox"/> - Class A | <input type="checkbox"/> - Class B |
|
 | | |
| <input checked="" type="checkbox"/> - FCC Part 15 Subpart B | <input type="checkbox"/> - Class A | <input checked="" type="checkbox"/> - Class B |
| <input type="checkbox"/> - FCC Part 15 Subpart C | | |
| <input checked="" type="checkbox"/> - FCC Part 27 Subpart C | | |
|
 | | |
| <input type="checkbox"/> - CISPR 11 (1990) | <input type="checkbox"/> - Group 1 | <input type="checkbox"/> - Group 2 |
| | <input type="checkbox"/> - Class A | <input type="checkbox"/> - Class B |
|
 | | |
| <input type="checkbox"/> - CISPR 22 (1993) | <input type="checkbox"/> - Class A | <input type="checkbox"/> - Class B |
|
 | | |
| <input checked="" type="checkbox"/> - IC RSS-Gen Issue 1 | | |
| <input checked="" type="checkbox"/> - IC RSS-193 Issue 1 | | |

Radiated emission limits - Transmitter, FCC 27.53, IC RSS-193 6.3

Test summary

The requirements are: ■ - MET □ - NOT MET

Minimum margin of compliance is 17 dB at 5.374 GHz. Substitution measurements are shown for all signals within 20 dB of the limit.

Test location

- - Wild River Lab Large Test Site (Open Area Test Site)
- - Wild River Lab Small Test Site (Open Area Test Site)

Test Distance

- - 3 meters
- - 10 meters

Test equipment

TUV ID	Model Number	Manufacturer	Description	Serial Number	Cal Due
3203	EM-6917B	Electro-Metrics	Biconicalog Periodic	106	02-May-07
2690	8566B	Hewlett-Packard	Spectrum Analyzer	2430A00930	12 May 07
2673	85662A	Hewlett-Packard	Analyzer Display	2152A03687	12 May 07
2682	85650A	Hewlett-Packard	Quasi-Peak Adapter	2811A01127	29-Nov-07
2075	3115	EMCO	Ridge Guide Ant. 1-18 GHz	9001-3275	12-Jan-08
3847	ZHL-1042J	Mini-Circuits	Preamplifier 10 - 3000 MHz	0607	Code B
3935	F548B-1	Acronetics	1 – 2 GHz Bandpass Filter	010	Code B
N/A	L2G010G2	Microwave Circuits	Low Pass Filter	85441	Code B
N/A	H04G1862	Acronetics	High Pass Filter	89099	Code B
3333	SME03	Rhode & Schwarz	Signal Generator	100003	07-Jun-07
3236	UHAP-10dB	Schwarzbeck	Dipole Antenna 300-1000	164	N/A
3958	SL18B4020	Phase One Microwave	Preamplifier 1 – 18 GHz	0002	Code B
3056	18N20W-10dB	Inmet	Attenuator	1	Code B
3229	3115	Electro-Mechanics (EMCO)	Ridge Guide Antenna	2483	17-May-07
2687	8568B	Hewlett-Packard	Spectrum Analyzer (C)	2601A02219	04 Aug 07
2675	85662A	Hewlett -Packard	Analyzer Display (C)	2542A11472	04 Aug 07
2662	11970K	Hewlett-Packard	Harm Mixer – 18-26.5 GHz	2332A01170	04 Sep 08
2919	11970U	Hewlett-Packard	Harm Mixer – 40-60 GHz	3003A01395	04 Sep 09
6717	3116	EMCO	Ridge Guide Ant 18-40 GHz	2005	05 Oct 07

Cal Code B = Calibration verification performed internally.

Test limit

-13.0 dBm

Test Data

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Radiated emission limits - Receiver, FCC 15.205, FCC 15.209, IC RSS-Gen 6(a)

Test summary

The requirements are: - MET - NOT MET
 Minimum margin of compliance is 6 dB at 300.0 MHz

Test location

- Wild River Lab Large Test Site (Open Area Test Site)
 - Wild River Lab Small Test Site (Open Area Test Site)

Test Distance

- 3 meters
 - 10 meters

Test equipment

TUV ID	Model Number	Manufacturer	Description	Serial Number	Cal Due
3203	EM-6917B	Electro-Metrics	Biconicalog Periodic	106	02-May-07
2690	8566B	Hewlett-Packard	Spectrum Analyzer	2430A00930	12 May 07
2673	85662A	Hewlett-Packard	Analyzer Display	2152A03687	12 May 07
2682	85650A	Hewlett-Packard	Quasi-Peak Adapter	2811A01127	29-Nov-07
2075	3115	EMCO	Ridge Guide Ant. 1-18 GHz	9001-3275	12 Jan 08
3847	ZHL-1042J	Mini-Circuits	Preamplifier 10 - 3000 MHz	0607	Code B
3958	SL18B4020	Phase One Microwave	Preamplifier 1 – 18 GHz	0002	Code B

Cal Code B = Calibration verification performed internally.

Test limit

Spurious Frequency (MHz)	Field Strength (microvolt/m at 3 metres)
30-88	100
88-216	150
216-960	200
Above 960	500

Test Data

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Conducted emissions - AC power lines - Class B limits, FCC 15.107, IC RSS-Gen 7.2.2

Test summary

The requirements are: - MET - NOT MET
 Minimum margin of compliance is 6 dB at 25.1 MHz

Test location

- Wild River Lab Large Test Site (Open Area Test Site)
- Wild River Lab Small Test Site (Open Area Test Site)

Test equipment

TUV ID	Model Number	Manufacturer	Description	Serial Number	Cal Due
2416	3825/2	Electro-Mechanics (EMCO)	50 Ω LISN	8812-1437	Code B
2534	ESHS-20	Rhode & Schwarz	EMI Receiver	837055/003	22-Mar-08

Cal Code B = Calibration verification performed internally.

Test limit

Frequency of emission (MHz)	Conducted limit (dB μ V)	
	Quasi-peak	Average
0.15–0.5	66 to 56*	56 to 46*
0.5–5	56	46
5–30	60	50

*Decreases with the logarithm of the frequency.

Test Data

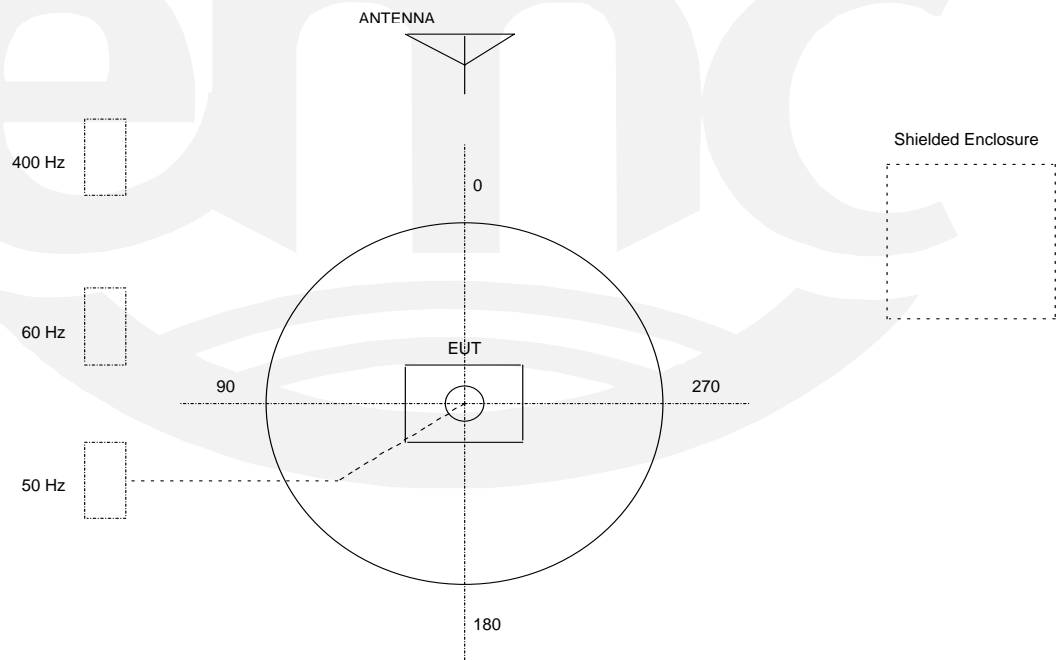
Pages 38 – 43

TEST SETUP FOR EMISSIONS TESTING

WILD RIVER LAB Large Test Site

Notes:

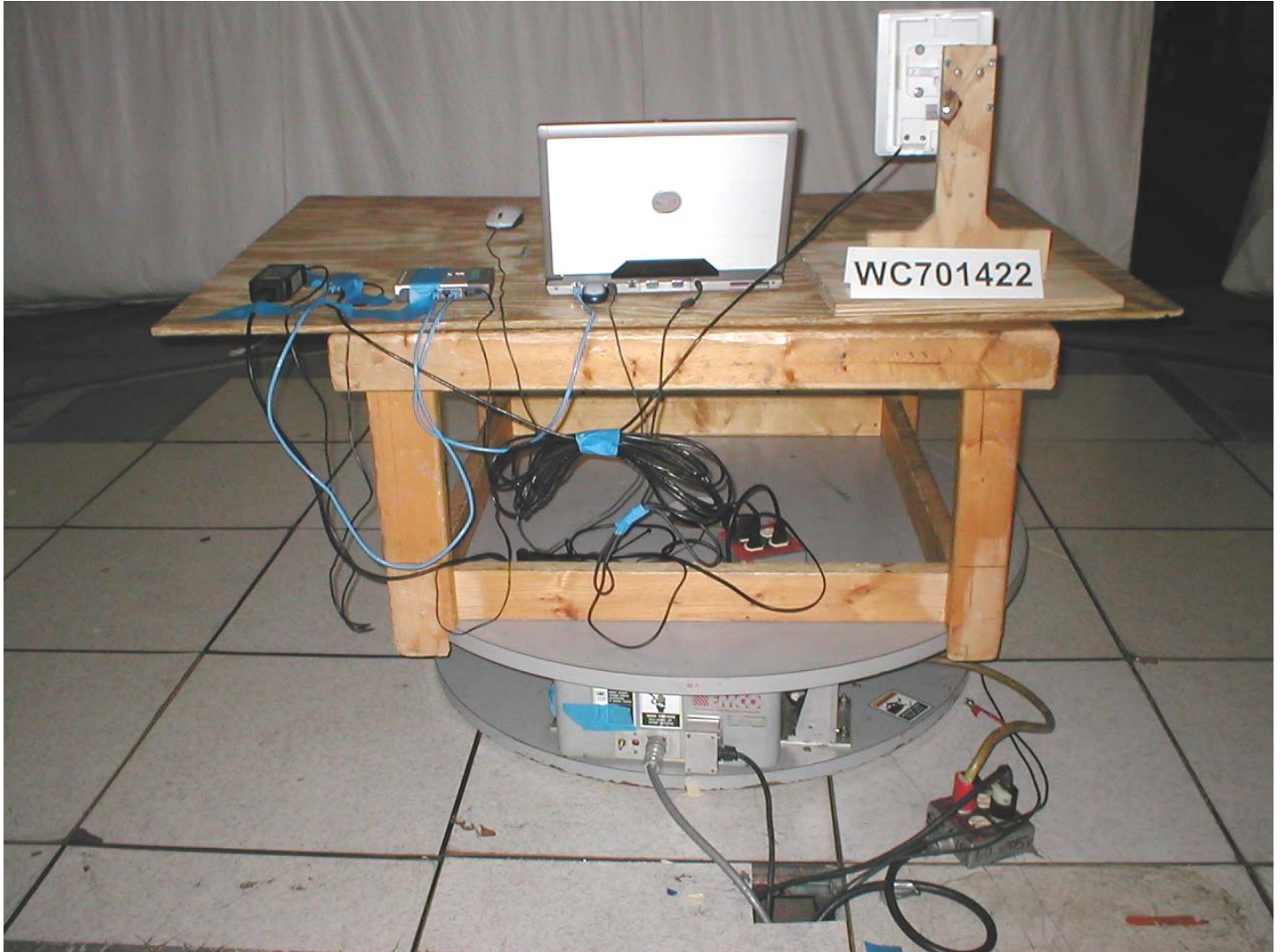
1. Items shown in dotted lines are located on the floor below the test area. It is 5 meters vertically from the ground floor to the test area.
2. 50 Hz, 60 Hz, and 400 Hz are power panels for alternating current.
3. The antenna may be positioned horizontally 3, 10 or 30 meters from the center of the turntable.
4. The circle is a 6.7 meter diameter turntable.
5. A ground plane is in the plane of this sheet.
6. The test sample is shown in the azimuthal position representing zero degrees.



Test setup photo, radiated emissions



Test setup photo, radiated emissions



Test setup photo, conducted emissions on AC mains



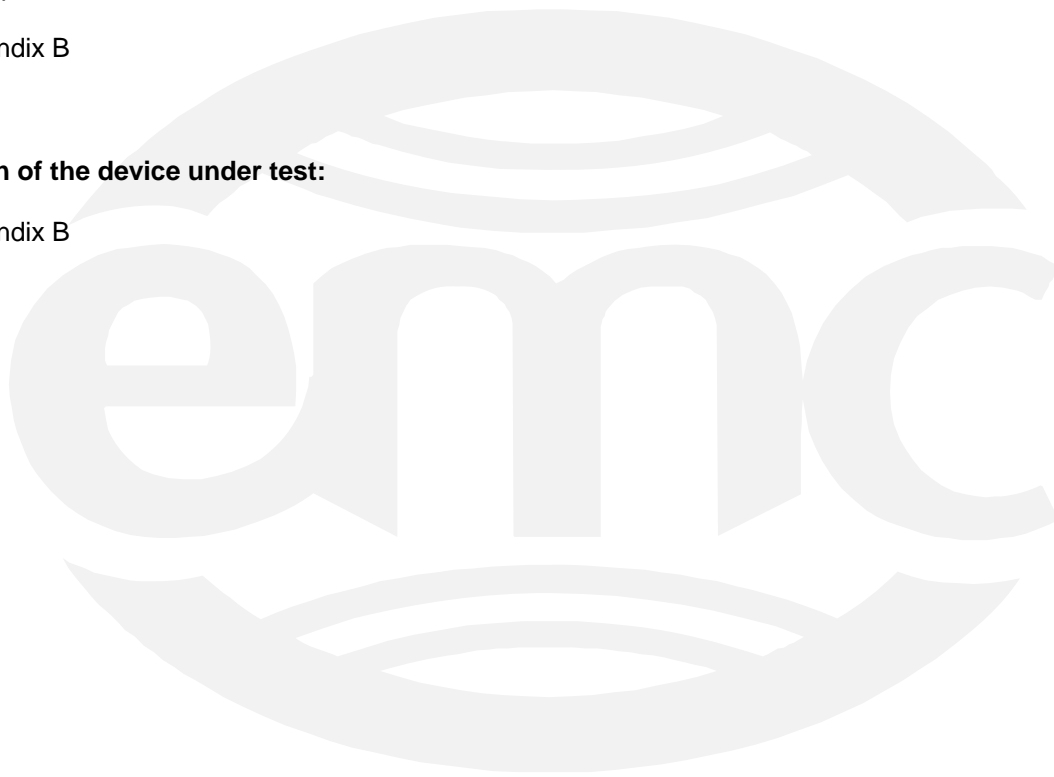
Test Operation Mode:

The device under test was operated under the following conditions during emissions testing:

- Standby
- Test program (H - Pattern)
- Test program (color bar)
- Test program (customer specific)
- Practice operation
- See Appendix B

Configuration of the device under test:

- See Appendix B



DEVIATIONS FROM STANDARD:

None.

GENERAL REMARKS:Modifications required to pass:

None

Test Specification Deviations: Additions to or Exclusions from:

None

As indicated in the Test Plan

SUMMARY:

The requirements according to the technical regulations are

- met

- **not** met.

The device under test does

- fulfill the general approval requirements mentioned on page 3.

- **not** fulfill the general approval requirements mentioned on page 3.

EUT Received Date: 04 April 2007

Condition of EUT: Normal

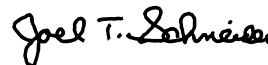
Testing Start Date: 04 April 2007

Testing End Date: 05 April 2007

- TÜV AMERICA INC -



T. K. Swanson
Senior EMC Technician



J. T. Schneider
Senior EMC Engineer

Appendix A

Test Data



RADIATED EMISSIONS



America

Test Report #: WC701422 Run 3 Test Area: LTS

EUT Model #: OSU-2510-R Date: 4/5/2007

EUT Serial #: 0049X057SCCX00789496 EUT Power: 60 Hz 120 VAC Temperature: 23.0 °C

Test Method: FCC B Air Pressure: 99.0 kPa

Customer: Motorola Inc. Rel. Humidity: 35.0 %

EUT Description: BRS/EBS Outdoor Subscriber Unit (OSU)

Notes: _____

Data File Name: 1422.dat Page: 1 of 11

List of measurements for run #: 3

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	FINAL (dBm) substitution	LIMIT (dBm)
Begin scan 1 to 4 GHz						
Configuration 1 - 6.0 MHz Channel Bandwidth: RF Freq = 2499 MHz						
Configuration 2 - 5.5 MHz Channel Bandwidth: RF Freq = 2593 MHz						
Configuration 3 - 5.0 MHz Channel Bandwidth : RF Freq = 2687 MHz						
No significant emissions detected 1 to 4 GHz - configurations 1, 2, and 3						
Begin scan 4 to 35 GHz						
Configuration 3 - 5.0 MHz Channel Bandwidth : RF Freq = 2687 MHz						
maxed						
5.374 GHz	41.56 Av	7.98 / 33.68 / 46.84 / 0.64	37.01	H / 1.30 / 70	n/a	N/a
5.374 GHz	64.5 Pk	7.98 / 33.68 / 46.84 / 0.64	59.95	H / 1.30 / 70	-36	-13
8.06 GHz	41.33 Av	10.52 / 36.75 / 47.01 / 0.08	41.67	H / 1.30 / 70	N/a	N/a
8.06 GHz	56.75 Pk	10.52 / 36.75 / 47.01 / 0.08	57.09	H / 1.30 / 70	-38	-13
5.374 GHz	40.05 Av	7.98 / 33.68 / 46.84 / 0.64	35.5	V / 1.20 / 60	n/a	N/a
5.374 GHz	60.25 Pk	7.98 / 33.68 / 46.84 / 0.64	55.7	V / 1.20 / 60	-40	-13
Configuration 2 - 5.5 MHz Channel Bandwidth: RF Freq = 2593 MHz						
Maxed						
5.185 GHz	41.35 Av	7.77 / 33.44 / 47.04 / 0.73	36.25	V / 1.20 / 60	n/a	N/a
5.185 GHz	61.9 Pk	7.77 / 33.44 / 47.04 / 0.73	56.8	V / 1.20 / 60	-39	-13
7.778 GHz	41.91 Av	10.22 / 36.57 / 47.1 / 0.06	41.66	V / 1.20 / 0	n/a	N/a
7.778 GHz	56.1 Pk	10.22 / 36.57 / 47.1 / 0.06	55.85	V / 1.20 / 0	-40	-13
5.185 GHz	40.35 Av	7.77 / 33.44 / 47.04 / 0.73	35.25	H / 1.30 / 75	n/a	N/a
5.185 GHz	60.65 Pk	7.77 / 33.44 / 47.04 / 0.73	55.55	H / 1.30 / 75	-40	-13

Tested by: T. K. Swanson Thomas K. Swanson
Printed Signature

Reviewed by: J. T. Schneider Joel T. Schneider
Printed Signature

RADIATED EMISSIONS



America

Test Report #: WC701422 Run 3 Test Area: LTS

EUT Model #: OSU-2510-R Date: 4/5/2007

EUT Serial #: 0049X057SCCX00789496 EUT Power: 60 Hz 120 VAC Temperature: 23.0 °C

Test Method: FCC B Air Pressure: 99.0 kPa

Customer: Motorola Inc. Rel. Humidity: 35.0 %

EUT Description: BRS/EBS Outdoor Subscriber Unit (OSU)

Notes: _____

Data File Name: 1422.dat Page: 2 of 11

List of measurements for run #: 3

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	FINAL (dBm) substitution	LIMIT (dBm)
7.778 GHz	41.49 Av	10.22 / 36.57 / 47.1 / 0.06	41.24	H / 1.30 / 70	n/a	N/a
7.778 GHz	56.15 Pk	10.22 / 36.57 / 47.1 / 0.06	55.9	H / 1.30 / 70	-40	-13
Configuration 1 - 6.0 MHz Channel Bandwidth: RF Freq = 2499						
Maxed						
4.997 GHz	41.29 Av	7.66 / 33.19 / 47.24 / 0.83	35.74	H / 1.00 / 80	n/a	N/a
4.997 GHz	57.15 Pk	7.66 / 33.19 / 47.24 / 0.83	51.6	H / 1.00 / 80	-44	-13
7.496 GHz	42.57 Av	9.95 / 36.4 / 47.19 / 0.05	41.77	H / 1.30 / 60	n/a	N/a
7.496 GHz	61.4 Pk	9.95 / 36.4 / 47.19 / 0.05	60.6	H / 1.30 / 60	-35	-13
4.997 GHz	40.95 Av	7.66 / 33.19 / 47.24 / 0.83	35.4	V / 1.30 / 60	n/a	N/a
4.997 GHz	51.45 Pk	7.66 / 33.19 / 47.24 / 0.83	45.9	V / 1.30 / 60	-50	-13
7.496 GHz	41.84 Av	9.95 / 36.4 / 47.19 / 0.05	41.04	V / 1.30 / 60	n/a	N/a
7.496 GHz	55.5 Pk	9.95 / 36.4 / 47.19 / 0.05	54.7	V / 1.30 / 60	-41	-13
end of scan 1 to 35 GHz						
Begin scan 30 to 1000 MHz						
75.018 MHz	37.35 Qp	0.83 / 9.04 / 29.5 / 0.02	17.74	V / 1.00 / 0	-78	-13
87.258 MHz	36.95 Qp	0.9 / 7.6 / 29.52 / 0.03	15.96	V / 1.00 / 0	-80	-13
100.0 MHz	43.7 Qp	0.94 / 8.72 / 29.54 / 0.03	23.85	V / 1.00 / 0	N/a	n/a
109.338 MHz	38.2 Qp	0.97 / 9.54 / 29.55 / 0.03	19.19	V / 1.00 / 0	N/a	n/a
120.0 MHz	37.8 Qp	1.0 / 8.95 / 29.57 / 0.04	18.22	V / 1.00 / 0	N/a	n/a
144.0 MHz	37.4 Qp	1.08 / 9.79 / 29.58 / 0.05	18.75	V / 1.00 / 0	-77	-13
150.0 MHz	48.25 Qp	1.11 / 9.53 / 29.55 / 0.05	29.4	V / 1.00 / 0	N/a	n/a
160.0 MHz	39.05 Qp	1.2 / 8.8 / 29.5 / 0.06	19.61	V / 1.00 / 0	-76	-13
168.0 MHz	38.55 Qp	1.23 / 9.33 / 29.51 / 0.06	19.66	V / 1.00 / 0	N/a	n/a

Tested by: T. K. Swanson

 Printed

Thomas K. Swanson

 Signature

Reviewed by: J. T. Schneider

 Printed

Joel T. Schneider

 Signature

RADIATED EMISSIONS



Test Report #: WC701422 Run 3 Test Area: LTS
 EUT Model #: OSU-2510-R Date: 4/5/2007
 EUT Serial #: 0049X057SCCX00789496 EUT Power: 60 Hz 120 VAC Temperature: 23.0 °C
 Test Method: FCC B Air Pressure: 99.0 kPa
 Customer: Motorola Inc. Rel. Humidity: 35.0 %

EUT Description: BRS/EBS Outdoor Subscriber Unit (OSU)

Notes: _____

Data File Name: 1422.dat

Page: 3 of 11

List of measurements for run #: 3

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	FINAL (dBm) substitution	LIMIT (dBm)
170.048 MHz	32.85 Qp	1.24 / 9.46 / 29.52 / 0.06	14.1	V / 1.00 / 0	-81	-13
200.0 MHz	40.2 Qp	1.36 / 11.0 / 29.56 / 0.07	23.07	V / 1.00 / 0	N/a	n/a
221.214 MHz	37.05 Qp	1.42 / 11.12 / 29.6 / 0.08	20.08	V / 1.00 / 0	N/a	n/a
250.0 MHz	40.3 Qp	1.48 / 11.95 / 29.64 / 0.1	24.19	V / 1.00 / 0	N/a	n/a
300.0 MHz	43.9 Qp	1.71 / 13.39 / 29.72 / 0.11	29.39	V / 1.00 / 0	N/a	n/a
357.954 MHz	33.45 Qp	1.93 / 15.06 / 29.82 / 0.12	20.75	V / 1.00 / 0	N/a	n/a
400.0 MHz	36.7 Qp	2.01 / 15.81 / 29.88 / 0.13	24.76	V / 1.00 / 0	N/a	n/a
415.216 MHz	32.4 Qp	2.02 / 16.13 / 29.91 / 0.13	20.77	V / 1.00 / 0	N/a	n/a
450.0 MHz	34.7 Qp	2.06 / 16.85 / 29.96 / 0.14	23.79	V / 1.00 / 0	N/a	n/a
500.0 MHz	39.0 Qp	2.14 / 17.9 / 30.04 / 0.15	29.15	V / 1.00 / 0	N/a	n/a
550.0 MHz	38.5 Qp	2.28 / 18.37 / 30.12 / 0.16	29.18	V / 1.00 / 0	N/a	n/a
125.0 MHz	40.4 Qp	1.01 / 8.63 / 29.58 / 0.04	20.5	V / 1.00 / 0	N/a	n/a
140.0 MHz	32.25 Qp	1.07 / 9.37 / 29.6 / 0.05	13.14	V / 1.00 / 0	-82	-13
750.03 MHz	38.45 Qp	2.71 / 21.4 / 29.99 / 0.2	32.77	V / 1.00 / 0	N/a	n/a
995.288 MHz	32.1 Qp	3.07 / 22.9 / 29.65 / 0.24	28.65	V / 1.00 / 0	N/a	n/a
999.69 MHz	31.6 Qp	3.07 / 22.87 / 29.65 / 0.24	28.13	V / 1.00 / 0	N/a	n/a
720.03 MHz	31.25 Qp	2.67 / 21.15 / 30.03 / 0.19	25.23	V / 1.00 / 0	N/a	n/a
770.048 MHz	32.25 Qp	2.73 / 21.9 / 29.96 / 0.2	27.12	V / 1.00 / 0	N/a	n/a
780.048 MHz	34.5 Qp	2.74 / 21.8 / 29.95 / 0.2	29.3	V / 1.00 / 0	N/a	n/a
800.034 MHz	36.1 Qp	2.76 / 21.9 / 29.92 / 0.21	31.04	V / 1.00 / 0	N/a	n/a
152.467 MHz	40.55 Qp	1.13 / 9.35 / 29.54 / 0.05	21.55	V / 1.00 / 0	-74	-13
375.026 MHz	34.75 Qp	1.96 / 15.56 / 29.84 / 0.12	22.55	V / 1.00 / 0	N/a	n/a
650.039 MHz	33.6 Qp	2.56 / 19.95 / 30.13 / 0.18	26.16	V / 1.00 / 0	N/a	n/a
720.03 MHz	34.85 Qp	2.67 / 21.15 / 30.03 / 0.19	28.83	V / 1.00 / 270	N/a	n/a
770.048 MHz	34.6 Qp	2.73 / 21.9 / 29.96 / 0.2	29.47	V / 1.00 / 270	N/a	n/a
995.288 MHz	33.3 Qp	3.07 / 22.9 / 29.65 / 0.24	29.85	V / 1.00 / 270	N/a	n/a

Tested by: T. K. Swanson

Printed

Thomas K. Swanson

Signature

Reviewed by: J. T. Schneider

Printed

Joel T. Schneider

Signature

RADIATED EMISSIONS



America

Test Report #: WC701422 Run 3 Test Area: LTS
EUT Model #: OSU-2510-R Date: 4/5/2007
EUT Serial #: 0049X057SCCX00789496 EUT Power: 60 Hz 120 VAC Temperature: 23.0 °C
Test Method: FCC B Air Pressure: 99.0 kPa
Customer: Motorola Inc. Rel. Humidity: 35.0 %

EUT Description: BRS/EBS Outdoor Subscriber Unit (OSU)

Notes: _____

Data File Name: 1422.dat

Page: 4 of 11

List of measurements for run #: 3

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	FINAL (dBm) substitution	LIMIT (dBm)
999.69 MHz	34.05 Qp	3.07 / 22.87 / 29.65 / 0.24	30.58	V / 1.00 / 270	N/a	n/a
750.03 MHz	40.1 Qp	2.71 / 21.4 / 29.99 / 0.2	34.42	V / 1.00 / 180	N/a	n/a
650.039 MHz	36.3 Qp	2.56 / 19.95 / 30.13 / 0.18	28.86	V / 1.00 / 180	N/a	n/a
500.0 MHz	43.05 Qp	2.14 / 17.9 / 30.04 / 0.15	33.2	V / 1.00 / 180	N/a	n/a
450.0 MHz	37.7 Qp	2.06 / 16.85 / 29.96 / 0.14	26.79	V / 1.00 / 180	-69	-13
415.216 MHz	36.3 Qp	2.02 / 16.13 / 29.91 / 0.13	24.67	V / 1.00 / 180	-71	-13
400.0 MHz	40.0 Qp	2.01 / 15.81 / 29.88 / 0.13	28.06	V / 1.00 / 180	N/a	n/a
357.954 MHz	38.5 Qp	1.93 / 15.06 / 29.82 / 0.12	25.8	V / 1.00 / 180	N/a	n/a
300.0 MHz	47.35 Qp	1.71 / 13.39 / 29.72 / 0.11	32.84	V / 1.00 / 180	N/a	n/a
200.0 MHz	42.6 Qp	1.36 / 11.0 / 29.56 / 0.07	25.47	V / 1.00 / 180	N/a	n/a
125.0 MHz	42.95 Qp	1.01 / 8.63 / 29.58 / 0.04	23.05	V / 1.00 / 180	N/a	n/a
100.0 MHz	46.7 Qp	0.94 / 8.72 / 29.54 / 0.03	26.85	V / 1.00 / 180	-69	-13
109.338 MHz	39.3 Qp	0.97 / 9.54 / 29.55 / 0.03	20.29	V / 1.00 / 90	N/a	n/a
720.03 MHz	36.45 Qp	2.67 / 21.15 / 30.03 / 0.19	30.43	V / 1.00 / 90	N/a	n/a
650.039 MHz	40.7 Qp	2.56 / 19.95 / 30.13 / 0.18	33.26	V / 1.00 / 45	N/a	n/a
720.03 MHz	37.9 Qp	2.67 / 21.15 / 30.03 / 0.19	31.88	V / 1.00 / 45	N/a	n/a
995.288 MHz	42.97 Qp	3.07 / 22.9 / 29.65 / 0.24	39.52	V / 1.00 / 45	N/a	n/a
999.69 MHz	43.11 Qp	3.07 / 22.87 / 29.65 / 0.24	39.64	V / 1.00 / 45	N/a	n/a
550.0 MHz	40.2 Qp	2.28 / 18.37 / 30.12 / 0.16	30.88	V / 1.00 / 135	N/a	n/a
357.954 MHz	39.9 Qp	1.93 / 15.06 / 29.82 / 0.12	27.2	V / 1.00 / 135	N/a	n/a
200.0 MHz	45.15 Qp	1.36 / 11.0 / 29.56 / 0.07	28.02	V / 1.00 / 135	-67	-13
150.0 MHz	49.55 Qp	1.11 / 9.53 / 29.55 / 0.05	30.7	V / 1.00 / 225	N/a	n/a
400.0 MHz	41.5 Qp	2.01 / 15.81 / 29.88 / 0.13	29.56	V / 1.00 / 225	-66	-13

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RADIATED EMISSIONS



Test Report #: WC701422 Run 3 Test Area: LTS
 EUT Model #: OSU-2510-R Date: 4/5/2007
 EUT Serial #: 0049X057SCCX00789496 EUT Power: 60 Hz 120 VAC Temperature: 23.0 °C
 Test Method: FCC B Air Pressure: 99.0 kPa
 Customer: Motorola Inc. Rel. Humidity: 35.0 %
 EUT Description: BRS/EBS Outdoor Subscriber Unit (OSU)

Notes: _____

Data File Name: 1422.dat

Page: 5 of 11

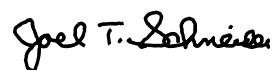
List of measurements for run #: 3

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	FINAL (dBm) substitution	LIMIT (dBm)
550.0 MHz	42.5 Qp	2.28 / 18.37 / 30.12 / 0.16	33.18	V / 1.00 / 225	N/a	n/a
750 Maxed						
750.03 MHz	43.61 Qp	2.71 / 21.4 / 29.99 / 0.2	37.93	V / 1.20 / 170	N/a	n/a
357.954 MHz	40.9 Qp	1.93 / 15.06 / 29.82 / 0.12	28.2	V / 1.20 / 170	N/a	n/a
770.048 MHz	36.55 Qp	2.73 / 21.9 / 29.96 / 0.2	31.42	V / 1.20 / 170	N/a	n/a
500 MHz maxed						
500.0 MHz	45.67 Qp	2.14 / 17.9 / 30.04 / 0.15	35.82	V / 1.00 / 170	N/a	n/a
550 Mzxd						
550.0 MHz	44.09 Qp	2.28 / 18.37 / 30.12 / 0.16	34.77	V / 1.00 / 225	N/a	n/a
995 Mhz maxed						
995.288 MHz	44.86 Qp	3.07 / 22.9 / 29.65 / 0.24	41.41	V / 1.00 / 40	N/a	n/a
999.69 MHz	44.37 Qp	3.07 / 22.87 / 29.65 / 0.24	40.9	V / 1.00 / 40	N/a	n/a
999 maxed above						
300 maxed						
300.0 MHz	47.99 Qp	1.71 / 13.39 / 29.72 / 0.11	33.48	V / 1.00 / 180	N/a	n/a
250.0 MHz	41.8 Qp	1.48 / 11.95 / 29.64 / 0.1	25.69	H / 2.20 / 180	N/a	n/a
750.03 MHz	42.55 Qp	2.71 / 21.4 / 29.99 / 0.2	36.87	H / 1.20 / 180	N/a	n/a
770.048 MHz	36.9 Qp	2.73 / 21.9 / 29.96 / 0.2	31.77	H / 1.20 / 180	N/a	n/a
357.954 MHz	41.6 Qp	1.93 / 15.06 / 29.82 / 0.12	28.9	H / 1.20 / 180	-67	-13

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RADIATED EMISSIONS



Test Report #: WC701422 Run 3 Test Area: LTS
 EUT Model #: OSU-2510-R Date: 4/5/2007
 EUT Serial #: 0049X057SCCX00789496 EUT Power: 60 Hz 120 VAC Temperature: 23.0 °C
 Test Method: FCC B Air Pressure: 99.0 kPa
 Customer: Motorola Inc. Rel. Humidity: 35.0 %

EUT Description: BRS/EBS Outdoor Subscriber Unit (OSU)

Notes: _____

Data File Name: 1422.dat

Page: 6 of 11

List of measurements for run #: 3

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	FINAL (dBm) substitution	LIMIT (dBm)
300.0 MHz	47.0 Qp	1.71 / 13.39 / 29.72 / 0.11	32.49	H / 1.20 / 180	N/a	n/a
750 Maxed						
750.03 MHz	43.92 Qp	2.71 / 21.4 / 29.99 / 0.2	38.24	H / 1.20 / 180	N/a	n/a
750.03 MHz	45.05 Pk	2.71 / 21.4 / 29.99 / 0.2	39.37	H / 1.20 / 180	-56	-13
150.0 MHz	49.9 Qp	1.11 / 9.53 / 29.55 / 0.05	31.05	H / 1.20 / 180	N/a	n/a
250.0 MHz	47.95 Qp	1.48 / 11.95 / 29.64 / 0.1	31.84	H / 1.20 / 180	-64	-13
375.026 MHz	40.3 Qp	1.96 / 15.56 / 29.84 / 0.12	28.1	H / 1.20 / 180	N/a	n/a
650.039 MHz	43.05 Qp	2.56 / 19.95 / 30.13 / 0.18	35.61	H / 1.20 / 180	-60	-13
720.03 MHz	38.75 Qp	2.67 / 21.15 / 30.03 / 0.19	32.73	H / 1.20 / 180	N/a	n/a
109.338 MHz	41.05 Qp	0.97 / 9.54 / 29.55 / 0.03	22.04	H / 1.20 / 90	-73	-13
120.0 MHz	42.1 Qp	1.0 / 8.95 / 29.57 / 0.04	22.52	H / 1.20 / 90	-73	-13
168.0 MHz	40.55 Qp	1.23 / 9.33 / 29.51 / 0.06	21.66	H / 1.20 / 90	N/a	n/a
800.034 MHz	38.4 Qp	2.76 / 21.9 / 29.92 / 0.21	33.34	H / 1.20 / 270	-62	-13
780.048 MHz	39.55 Qp	2.74 / 21.8 / 29.95 / 0.2	34.35	H / 1.20 / 270	N/a	n/a
770.048 MHz	39.0 Qp	2.73 / 21.9 / 29.96 / 0.2	33.87	H / 1.20 / 270	-62	-13
720.03 MHz	40.45 Qp	2.67 / 21.15 / 30.03 / 0.19	34.43	H / 1.20 / 270	N/a	n/a
300.0 MHz	48.25 Qp	1.71 / 13.39 / 29.72 / 0.11	33.74	H / 1.20 / 270	N/a	n/a
150.0 MHz	50.05 Qp	1.11 / 9.53 / 29.55 / 0.05	31.2	H / 1.20 / 270	N/a	n/a
150.0 MHz	53.25 Qp	1.11 / 9.53 / 29.55 / 0.05	34.4	H / 1.20 / 225	N/a	n/a
168.0 MHz	44.1 Qp	1.23 / 9.33 / 29.51 / 0.06	25.21	H / 1.20 / 135	-70	-13
170.048 MHz	38.65 Qp	1.24 / 9.46 / 29.52 / 0.06	19.9	H / 1.20 / 135	-76	-13
221.214 MHz	39.45 Qp	1.42 / 11.12 / 29.6 / 0.08	22.48	H / 1.20 / 135	-73	-13

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RADIATED EMISSIONS



America

Test Report #: WC701422 Run 3 Test Area: LTS

EUT Model #: OSU-2510-R Date: 4/5/2007

EUT Serial #: 0049X057SCCX00789496 EUT Power: 60 Hz 120 VAC Temperature: 23.0 °C

Test Method: FCC B Air Pressure: 99.0 kPa

Customer: Motorola Inc. Rel. Humidity: 35.0 %

EUT Description: BRS/EBS Outdoor Subscriber Unit (OSU)

Notes: _____

Data File Name: 1422.dat Page: 7 of 11

List of measurements for run #: 3

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	FINAL (dBm) substitution	LIMIT (dBm)
375.026 MHz	43.8 Qp	1.96 / 15.56 / 29.84 / 0.12	31.6	H / 1.20 / 45	-64	-13
720 maxed						
720.03 MHz	42.13 Qp	2.67 / 21.15 / 30.03 / 0.19	36.11	H / 1.30 / 265	-59	-13
150 Maxed						
150.0 MHz	55.97 Qp	1.11 / 9.53 / 29.55 / 0.05	37.12	H / 1.80 / 225	N/a	n/a
300 Maxed						
300.0 MHz	49.19 Qp	1.71 / 13.39 / 29.72 / 0.11	34.68	H / 1.20 / 270	N/a	n/a
780 Maxed						
780.048 MHz	40.6 Qp	2.74 / 21.8 / 29.95 / 0.2	35.4	H / 1.20 / 270	N/a	n/a
Configuration 2						
150 maxed						
150.0 MHz	55.49 Qp	1.11 / 9.53 / 29.55 / 0.05	36.64	H / 1.20 / 270	N/a	n/a
150.0 MHz	56.85 Pk	1.11 / 9.53 / 29.55 / 0.05	38.0	H / 1.20 / 270	-57	-13
300 maxed						
300.0 MHz	51.42 Qp	1.71 / 13.39 / 29.72 / 0.11	36.91	H / 1.20 / 270	N/a	n/a
300.0 MHz	52.45 Pk	1.71 / 13.39 / 29.72 / 0.11	37.94	H / 1.20 / 270	-58	-13
780 maxed						
780.048 MHz	40.38 Qp	2.74 / 21.8 / 29.95 / 0.2	35.18	H / 1.20 / 270	N/a	n/a

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RADIATED EMISSIONS



Test Report #: WC701422 Run 3 Test Area: LTS
 EUT Model #: OSU-2510-R Date: 4/5/2007
 EUT Serial #: 0049X057SCCX00789496 EUT Power: 60 Hz 120 VAC Temperature: 23.0 °C
 Test Method: FCC B Air Pressure: 99.0 kPa
 Customer: Motorola Inc. Rel. Humidity: 35.0 %

EUT Description: BRS/EBS Outdoor Subscriber Unit (OSU)

Notes: _____

Data File Name: 1422.dat

Page: 8 of 11

List of measurements for run #: 3

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	FINAL (dBm) substitution	LIMIT (dBm)
780.048 MHz	41.8 Pk	2.74 / 21.8 / 29.95 / 0.2	36.6	H / 1.20 / 270	-59	-13
750 maxed						
750.03 MHz	42.07 Qp	2.71 / 21.4 / 29.99 / 0.2	36.39	H / 1.20 / 270	N/a	n/a
750.03 MHz	44.3 Pk	2.71 / 21.4 / 29.99 / 0.2	38.62	H / 1.20 / 270	N/a	n/a
125.0 MHz	44.05 Qp	1.01 / 8.63 / 29.58 / 0.04	24.15	V / 1.00 / 180	-71	-13
Maxed						
995.288 MHz	45.49 Qp	3.07 / 22.9 / 29.65 / 0.24	42.04	V / 1.10 / 35	N/a	n/a
995.288 MHz	49.3 Pk	3.07 / 22.9 / 29.65 / 0.24	45.85	V / 1.10 / 35	N/a	n/a
999.69 MHz	45.21 Qp	3.07 / 22.87 / 29.65 / 0.24	41.74	V / 1.10 / 35	N/a	n/a
999.69 MHz	49.2 Pk	3.07 / 22.87 / 29.65 / 0.24	45.73	V / 1.10 / 35	-50	-13
750 maxed						
750.03 MHz	43.44 Qp	2.71 / 21.4 / 29.99 / 0.2	37.76	V / 1.30 / 180	N/a	n/a
750.03 MHz	44.55 Pk	2.71 / 21.4 / 29.99 / 0.2	38.87	V / 1.30 / 180	N/a	N/a
500 maxed						
500.0 MHz	45.38 Qp	2.14 / 17.9 / 30.04 / 0.15	35.53	V / 1.00 / 180	N/a	n/a
500.0 MHz	47.0 Pk	2.14 / 17.9 / 30.04 / 0.15	37.15	V / 1.00 / 180	-58	-13
Maxed						
550.0 MHz	43.66 Qp	2.28 / 18.37 / 30.12 / 0.16	34.34	V / 1.00 / 180	N/a	n/a
550.0 MHz	45.75 Pk	2.28 / 18.37 / 30.12 / 0.16	36.43	V / 1.00 / 180	-59	-13
300.0 MHz	47.44 Qp	1.71 / 13.39 / 29.72 / 0.11	32.93	V / 1.00 / 180	N/a	n/a
300.0 MHz	48.15 Pk	1.71 / 13.39 / 29.72 / 0.11	33.64	V / 1.00 / 180	N/a	N/a

Tested by: T. K. Swanson

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Thomas K. Swanson

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Reviewed by: J. T. Schneider

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Joel T. Schneider

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RADIATED EMISSIONS



America

Test Report #: WC701422 Run 3 Test Area: LTS

EUT Model #: OSU-2510-R Date: 4/5/2007

EUT Serial #: 0049X057SCCX00789496 EUT Power: 60 Hz 120 VAC Temperature: 23.0 °C

Test Method: FCC B Air Pressure: 99.0 kPa

Customer: Motorola Inc. Rel. Humidity: 35.0 %

EUT Description: BRS/EBS Outdoor Subscriber Unit (OSU)

Notes: _____

Data File Name: 1422.dat Page: 9 of 11

List of measurements for run #: 3

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	FINAL (dBm) substitution	LIMIT (dBm)
Configuration 3						
640.028 MHz	34.35 Qp	2.55 / 20.1 / 30.14 / 0.18	27.03	V / 1.00 / 270	-68	-13
700.042 MHz	35.85 Qp	2.63 / 20.7 / 30.06 / 0.19	29.31	V / 1.00 / 270	-66	-13
61.26 MHz	39.55 Qp	0.74 / 11.29 / 29.69 / 0.01	21.9	V / 1.00 / 270	-74	-13
maxed						
500.0 MHz	45.65 Qp	2.14 / 17.9 / 30.04 / 0.15	35.8	V / 1.00 / 170	N/a	N/a
995 Maxed						
995.288 MHz	45.46 Qp	3.07 / 22.9 / 29.65 / 0.24	42.01	V / 1.00 / 270	N/a	n/a
995.288 MHz	49.6 Pk	3.07 / 22.9 / 29.65 / 0.24	46.15	V / 1.00 / 270	-49	-13
maxed						
750.03 MHz	41.03 Qp	2.71 / 21.4 / 29.99 / 0.2	35.35	H / 1.20 / 270	N/a	N/a
No new or higher emissions detected 30 to 1000 MHz						
****Changed to Horizontal dut antenna****						
Maxed						
5.374 GHz	42.39 Av	7.98 / 33.68 / 46.84 / 0.64	37.84	H / 1.20 / 65	n/a	N/a
5.374 GHz	69.55 Pk	7.98 / 33.68 / 46.84 / 0.64	65.0	H / 1.20 / 65	-30	-13
Substitution = -19 dBm sig. Gen - 0.7 dB cable loss - 10.3 dBi antenna gain = -30 dBm						
8.061 GHz	62.25 Pk	10.52 / 36.75 / 47.01 / 0.08	62.59	H / 1.30 / 65	-33	-13
Substitution = -21.3 dBm sig. Gen - 0.8 dB cable loss - 10.9 dBi antenna gain = -33 dBm						

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RADIATED EMISSIONS



America

Test Report #: WC701422 Run 3 Test Area: LTS

EUT Model #: OSU-2510-R Date: 4/5/2007

EUT Serial #: 0049X057SCCX00789496 EUT Power: 60 Hz 120 VAC Temperature: 23.0 °C

Test Method: FCC B Air Pressure: 99.0 kPa

Customer: Motorola Inc. Rel. Humidity: 35.0 %

EUT Description: BRS/EBS Outdoor Subscriber Unit (OSU)

Notes: _____

Data File Name: 1422.dat Page: 10 of 11

List of measurements for run #: 3

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	FINAL (dBm) substitution	LIMIT (dBm)
5.374 GHz	40.65 Av	7.98 / 33.68 / 46.84 / 0.64	36.1	V / 1.70 / 160	N/a	N/a
8.061 GHz	41.93 Av	10.52 / 36.75 / 47.01 / 0.08	42.27	V / 1.60 / 160	N/a	N/a
Configuration 2						
Maxed						
5.185 GHz	40.88 Av	7.77 / 33.44 / 47.04 / 0.73	35.78	V / 1.30 / 0	n/a	N/a
5.185 GHz	60.8 Pk	7.77 / 33.44 / 47.04 / 0.73	55.7	V / 1.30 / 0	n/a	N/a
5.185 GHz	41.32 Av	7.77 / 33.44 / 47.04 / 0.73	36.22	H / 1.40 / 60	n/a	N/a
5.185 GHz	62.9 Pk	7.77 / 33.44 / 47.04 / 0.73	57.8	H / 1.40 / 65	-38	-13
7.778 GHz	41.55 Av	10.22 / 36.57 / 47.1 / 0.06	41.31	H / 1.20 / 310	n/a	N/a
7.778 GHz	53.65 Pk	10.22 / 36.57 / 47.1 / 0.06	53.41	H / 1.20 / 310	-42	-13
Configuration 1						
Maxed						
4.998 GHz	41.06 Av	7.66 / 33.2 / 47.24 / 0.83	35.51	H / 1.60 / 80	n/a	N/a
4.998 GHz	42.55 Pk	7.66 / 33.2 / 47.24 / 0.83	37.0	H / 1.60 / 80	N/a	N/a
7.497 GHz	42.52 Av	9.95 / 36.4 / 47.19 / 0.05	41.72	H / 1.30 / 80	n/a	N/a
7.497 GHz	60.15 Pk	9.95 / 36.4 / 47.19 / 0.05	59.35	H / 1.30 / 80	-36	-13
4.997 GHz	41.57 Av	7.66 / 33.19 / 47.24 / 0.83	36.02	V / 1.30 / 40	n/a	N/a
4.997 GHz	57.3 Pk	7.66 / 33.19 / 47.24 / 0.83	51.75	V / 1.30 / 40	-44	-13
7.496 GHz	42.37 Av	9.95 / 36.4 / 47.19 / 0.05	41.57	V / 1.80 / 70	n/a	N/a
7.496 GHz	59.15 Pk	9.95 / 36.4 / 47.19 / 0.05	58.35	V / 1.80 / 70	n/a	N/a

Tested by: T. K. Swanson
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Thomas K. Swanson
Signature

Reviewed by: J. T. Schneider
Printed

Joel T. Schneider
Signature

RADIATED EMISSIONS



America

Test Report #: WC701422 Run 3 Test Area: LTS

EUT Model #: OSU-2510-R Date: 4/5/2007

EUT Serial #: 0049X057SCCX00789496 EUT Power: 60 Hz 120 VAC Temperature: 23.0 °C

Test Method: FCC B Air Pressure: 99.0 kPa

Customer: Motorola Inc. Rel. Humidity: 35.0 %

EUT Description: BRS/EBS Outdoor Subscriber Unit (OSU)

Notes: _____

Data File Name: <u>1422.dat</u>	Page: <u>11 of 11</u>
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List of measurements for run #: 3

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	FINAL (dBm) substitution	LIMIT (dBm)
Sample substitution - 995 MHz to match 42.0 dBuV/m						
Signal Generator equals -43 dBm						
Cable loss = 4 dB						
Dipole antenna gain = 6.21 dBi						
-43 - 4 + 6.2 = -53.2 dBm						
end of scan 30 to 35000 MHz						

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RADIATED EMISSIONS



Test Report #: WC701422 Run 1 Test Area: LTS
 EUT Model #: OSU-2510-R Date: 4/4/2007
 EUT Serial #: 0049X057SCCX00789496 EUT Power: 60 Hz 120 VAC Temperature: 23.0 °C
 Test Method: FCC B Air Pressure: 99.0 kPa
 Customer: Motorola Inc. Rel. Humidity: 35.0 %

EUT Description: BRS/EBS Outdoor Subscriber Unit (OSU)

Notes: _____

Data File Name: 1422.dat

Page: 1 of 13

List of measurements for run #: 1

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 FCC-B <1GHz 3m	DELTA2 FCC B >1GHz 3m
Receive Mode Configuration 4 - 6.0 MHz Channel Bandwidth: RF Freq = 2499 MHz						
100.0 MHz	40.8 Qp	0.94 / 8.72 / 29.54 / 0.0	20.92	V / 1.00 / 0	-22.58	n/a
109.368 MHz	34.4 Qp	0.97 / 9.54 / 29.55 / 0.0	15.36	V / 1.00 / 0	-28.14	n/a
120.001 MHz	35.95 Qp	1.0 / 8.95 / 29.57 / 0.0	16.33	V / 1.00 / 0	-27.17	n/a
143.988 MHz	32.6 Qp	1.08 / 9.79 / 29.58 / 0.0	13.9	V / 1.00 / 0	-29.6	n/a
150.007 MHz	46.2 Qp	1.11 / 9.53 / 29.55 / 0.0	27.29	V / 1.00 / 0	-16.21	n/a
160.933 MHz	38.65 Qp	1.2 / 8.86 / 29.5 / 0.0	19.21	V / 1.00 / 0	-24.29	n/a
168.0 MHz	41.5 Qp	1.23 / 9.33 / 29.51 / 0.0	22.55	V / 1.00 / 0	-20.95	n/a
170.065 MHz	33.65 Qp	1.24 / 9.46 / 29.52 / 0.0	14.84	V / 1.00 / 0	-28.66	n/a
200.006 MHz	36.6 Qp	1.36 / 11.0 / 29.56 / 0.0	19.4	V / 1.00 / 0	-24.1	n/a
203.986 MHz	37.85 Qp	1.37 / 10.92 / 29.57 / 0.0	20.57	V / 1.00 / 0	-22.93	n/a
210.99 MHz	37.1 Qp	1.4 / 10.83 / 29.58 / 0.0	19.75	V / 1.00 / 0	-23.75	n/a
249.99 MHz	43.2 Qp	1.48 / 11.95 / 29.64 / 0.0	26.99	V / 1.00 / 0	-19.01	n/a
254.126 MHz	38.65 Qp	1.49 / 12.07 / 29.65 / 0.0	22.56	V / 1.00 / 0	-23.44	n/a
300.0 MHz	43.3 Qp	1.71 / 13.39 / 29.72 / 0.0	28.68	V / 1.00 / 0	-17.32	n/a
357.939 MHz	38.55 Qp	1.93 / 15.06 / 29.82 / 0.0	25.73	V / 1.00 / 0	-20.27	n/a
400.0 MHz	38.65 Qp	2.01 / 15.81 / 29.88 / 0.0	26.58	V / 1.00 / 0	-19.42	n/a
415.222 MHz	32.5 Qp	2.02 / 16.13 / 29.91 / 0.0	20.74	V / 1.00 / 0	-25.26	n/a
450.0 MHz	35.1 Qp	2.06 / 16.85 / 29.96 / 0.0	24.05	V / 1.00 / 0	-21.95	n/a
500.0 MHz	40.05 Qp	2.14 / 17.9 / 30.04 / 0.0	30.05	V / 1.00 / 0	-15.95	n/a
515.0 MHz	34.15 Qp	2.19 / 17.7 / 30.07 / 0.0	23.96	V / 1.00 / 0	-22.04	n/a
550.0 MHz	38.4 Qp	2.28 / 18.37 / 30.12 / 0.0	28.93	V / 1.00 / 0	-17.07	n/a
774.09 MHz	27.2 Qp	2.74 / 21.86 / 29.96 / 0.0	21.84	V / 1.00 / 0	-24.16	n/a
778.448 MHz	27.15 Qp	2.74 / 21.82 / 29.95 / 0.0	21.75	V / 1.00 / 0	-24.25	n/a
125.002 MHz	41.5 Qp	1.01 / 8.62 / 29.58 / 0.0	21.56	V / 1.00 / 0	-21.94	n/a

Tested by: T. K. Swanson

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Thomas K. Swanson

Signature

Reviewed by: J. T. Schneider

Printed

Joel T. Schneider

Signature

RADIATED EMISSIONS



Test Report #: WC701422 Run 1 Test Area: LTS
 EUT Model #: OSU-2510-R Date: 4/4/2007
 EUT Serial #: 0049X057SCCX00789496 EUT Power: 60 Hz 120 VAC Temperature: 23.0 °C
 Test Method: FCC B Air Pressure: 99.0 kPa
 Customer: Motorola Inc. Rel. Humidity: 35.0 %
 EUT Description: BRS/EBS Outdoor Subscriber Unit (OSU)

Notes: _____

Data File Name: 1422.dat

Page: 2 of 13

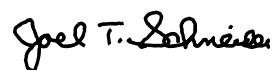
List of measurements for run #: 1

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 FCC-B <1GHz 3m	DELTA2 FCC B >1GHz 3m
140.567 MHz	38.5 Qp	1.07 / 9.43 / 29.59 / 0.0	19.4	V / 1.00 / 0	-24.1	n/a
165.911 MHz	41.05 Qp	1.23 / 9.19 / 29.51 / 0.0	21.95	V / 1.00 / 0	-21.55	n/a
386.576 MHz	32.6 Qp	1.99 / 15.63 / 29.86 / 0.0	20.36	V / 1.00 / 0	-25.64	n/a
375.007 MHz	31.6 Qp	1.96 / 15.56 / 29.84 / 0.0	19.27	V / 1.00 / 0	-26.73	n/a
700.02 MHz	33.95 Qp	2.63 / 20.7 / 30.06 / 0.0	27.22	V / 1.00 / 0	-18.78	n/a
720.006 MHz	30.7 Qp	2.67 / 21.15 / 30.03 / 0.0	24.49	V / 1.00 / 0	-21.51	n/a
750.022 MHz	36.9 Qp	2.71 / 21.4 / 29.99 / 0.0	31.02	V / 1.00 / 0	-14.98	n/a
995.183 MHz	29.05 Qp	3.07 / 22.9 / 29.65 / 0.0	25.36	V / 1.00 / 0	-28.64	n/a
109.368 MHz	35.8 Qp	0.97 / 9.54 / 29.55 / 0.0	16.76	V / 1.00 / 45	-26.74	n/a
120.001 MHz	37.05 Qp	1.0 / 8.95 / 29.57 / 0.0	17.43	V / 1.00 / 45	-26.07	n/a
170.065 MHz	35.0 Qp	1.24 / 9.46 / 29.52 / 0.0	16.19	V / 1.00 / 45	-27.31	n/a
200.006 MHz	38.9 Qp	1.36 / 11.0 / 29.56 / 0.0	21.7	V / 1.00 / 45	-21.8	n/a
386.576 MHz	34.25 Qp	1.99 / 15.63 / 29.86 / 0.0	22.01	V / 1.00 / 45	-23.99	n/a
650.0 MHz	37.1 Qp	2.56 / 19.95 / 30.13 / 0.0	29.48	V / 1.00 / 45	-16.52	n/a
720.006 MHz	30.8 Qp	2.67 / 21.15 / 30.03 / 0.0	24.59	V / 1.00 / 45	-21.41	n/a
995.286 MHz	37.4 Qp	3.07 / 22.9 / 29.65 / 0.0	33.71	V / 1.00 / 45	-20.29	n/a
221.763 MHz	37.25 Qp	1.42 / 11.14 / 29.6 / 0.0	20.21	V / 1.00 / 45	-25.79	n/a
62.586 MHz	38.7 Qp	0.75 / 11.08 / 29.67 / 0.0	20.85	V / 1.00 / 45	-19.15	n/a
100.0 MHz	43.15 Qp	0.94 / 8.72 / 29.54 / 0.0	23.27	V / 1.00 / 90	-20.23	n/a
120.001 MHz	38.8 Qp	1.0 / 8.95 / 29.57 / 0.0	19.18	V / 1.00 / 90	-24.32	n/a
165.911 MHz	42.3 Qp	1.23 / 9.19 / 29.51 / 0.0	23.2	V / 1.00 / 90	-20.3	n/a
170.065 MHz	36.45 Qp	1.24 / 9.46 / 29.52 / 0.0	17.64	V / 1.00 / 90	-25.86	n/a
200.006 MHz	40.05 Qp	1.36 / 11.0 / 29.56 / 0.0	22.85	V / 1.00 / 90	-20.65	n/a
375.007 MHz	34.95 Qp	1.96 / 15.56 / 29.84 / 0.0	22.62	V / 1.00 / 90	-23.38	n/a
386.576 MHz	36.3 Qp	1.99 / 15.63 / 29.86 / 0.0	24.06	V / 1.00 / 90	-21.94	n/a

Tested by: T. K. Swanson
 Printed


 Signature

Reviewed by: J. T. Schneider
 Printed


 Signature

RADIATED EMISSIONS



Test Report #: WC701422 Run 1 Test Area: LTS
 EUT Model #: OSU-2510-R Date: 4/4/2007
 EUT Serial #: 0049X057SCCX00789496 EUT Power: 60 Hz 120 VAC Temperature: 23.0 °C
 Test Method: FCC B Air Pressure: 99.0 kPa
 Customer: Motorola Inc. Rel. Humidity: 35.0 %

EUT Description: BRS/EBS Outdoor Subscriber Unit (OSU)

Notes: _____

Data File Name: 1422.dat

Page: 3 of 13

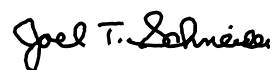
List of measurements for run #: 1

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 FCC-B <1GHz 3m	DELTA2 FCC B >1GHz 3m
400.0 MHz	39.95 Qp	2.01 / 15.81 / 29.88 / 0.0	27.88	V / 1.00 / 90	-18.12	n/a
450.0 MHz	37.5 Qp	2.06 / 16.85 / 29.96 / 0.0	26.45	V / 1.00 / 90	-19.55	n/a
120.001 MHz	42.65 Qp	1.0 / 8.95 / 29.57 / 0.0	23.03	V / 1.00 / 180	-20.47	n/a
249.99 MHz	45.15 Qp	1.48 / 11.95 / 29.64 / 0.0	28.94	V / 1.00 / 180	-17.06	n/a
357.939 MHz	42.35 Qp	1.93 / 15.06 / 29.82 / 0.0	29.53	V / 1.00 / 180	-16.47	n/a
386.576 MHz	41.6 Qp	1.99 / 15.63 / 29.86 / 0.0	29.36	V / 1.00 / 180	-16.64	n/a
400.0 MHz	42.1 Qp	2.01 / 15.81 / 29.88 / 0.0	30.03	V / 1.00 / 180	-15.97	n/a
415.222 MHz	37.95 Qp	2.02 / 16.13 / 29.91 / 0.0	26.19	V / 1.00 / 180	-19.81	n/a
430.046 MHz	35.15 Qp	2.04 / 16.44 / 29.93 / 0.0	23.69	V / 1.00 / 180	-22.31	n/a
450.0 MHz	39.7 Qp	2.06 / 16.85 / 29.96 / 0.0	28.65	V / 1.00 / 180	-17.35	n/a
550.0 MHz	43.25 Qp	2.28 / 18.37 / 30.12 / 0.0	33.78	V / 1.00 / 270	-12.22	n/a
995.286 MHz	41.93 Qp	3.07 / 22.9 / 29.65 / 0.0	38.24	V / 1.00 / 270	-15.76	n/a
254.126 MHz	40.3 Qp	1.49 / 12.07 / 29.65 / 0.0	24.21	V / 1.00 / 270	-21.79	n/a
300.0 MHz	44.55 Qp	1.71 / 13.39 / 29.72 / 0.0	29.93	V / 1.00 / 270	-16.07	n/a
500.0 MHz	41.7 Qp	2.14 / 17.9 / 30.04 / 0.0	31.7	V / 1.00 / 225	-14.3	n/a
200.006 MHz	41.45 Qp	1.36 / 11.0 / 29.56 / 0.0	24.25	V / 1.00 / 135	-19.25	n/a
249.99 MHz	45.9 Qp	1.48 / 11.95 / 29.64 / 0.0	29.69	V / 1.00 / 135	-16.31	n/a
400.0 MHz	44.05 Qp	2.01 / 15.81 / 29.88 / 0.0	31.98	V / 1.00 / 135	-14.02	n/a
221.763 MHz	40.3 Qp	1.42 / 11.14 / 29.6 / 0.0	23.26	V / 3.00 / 0	-22.74	n/a
249.99 MHz	40.6 Qp	1.48 / 11.95 / 29.64 / 0.0	24.39	V / 3.00 / 0	-21.61	n/a
550 MHz maxed						

Tested by: T. K. Swanson
 Printed


 Signature

Reviewed by: J. T. Schneider
 Printed


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RADIATED EMISSIONS



America

Test Report #: WC701422 Run 1 Test Area: LTS

EUT Model #: OSU-2510-R Date: 4/4/2007

EUT Serial #: 0049X057SCCX00789496 EUT Power: 60 Hz 120 VAC Temperature: 23.0 °C

Test Method: FCC B Air Pressure: 99.0 kPa

Customer: Motorola Inc. Rel. Humidity: 35.0 %

EUT Description: BRS/EBS Outdoor Subscriber Unit (OSU)

Notes: _____

Data File Name: 1422.dat Page: 4 of 13

List of measurements for run #: 1

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 FCC-B <1GHz 3m	DELTA2 FCC B >1GHz 3m
550.0 MHz	44.4 Qp	2.28 / 18.37 / 30.12 / 0.0	34.93	V / 1.00 / 275	-11.07	n/a
400 MHz maxed						
400.024 MHz	44.19 Qp	2.01 / 15.81 / 29.88 / 0.0	32.12	V / 1.00 / 120	-13.88	n/a
500 MHz maxed						
500.0 MHz	43.88 Qp	2.14 / 17.9 / 30.04 / 0.0	33.88	V / 1.00 / 200	-12.12	n/a
750 MHz maxed						
750.022 MHz	37.39 Qp	2.71 / 21.4 / 29.99 / 0.0	31.51	V / 1.00 / 0	-14.49	n/a
300.0 MHz	47.19 Qp	1.71 / 13.39 / 29.72 / 0.0	32.57	H / 3.00 / 90	-13.43	n/a
120.001 MHz	43.0 Qp	1.0 / 8.95 / 29.57 / 0.0	23.38	H / 3.00 / 270	-20.12	n/a
300 MHz maxed						
300.0 MHz	48.66 Qp	1.71 / 13.39 / 29.72 / 0.0	34.04	H / 2.80 / 90	-11.96	n/a
100.0 MHz	44.6 Qp	0.94 / 8.72 / 29.54 / 0.0	24.72	H / 2.80 / 90	-18.78	n/a
109.368 MHz	40.0 Qp	0.97 / 9.54 / 29.55 / 0.0	20.96	H / 2.80 / 90	-22.54	n/a
120.001 MHz	44.7 Qp	1.0 / 8.95 / 29.57 / 0.0	25.08	H / 2.80 / 90	-18.42	n/a
125.002 MHz	43.95 Qp	1.01 / 8.62 / 29.58 / 0.0	24.01	H / 2.80 / 90	-19.49	n/a
Configuration 5 - 5.5 MHz Channel Bandwidth: RF Freq = 2593 MHz						
760.042 MHz	34.95 Qp	2.72 / 21.65 / 29.98 / 0.0	29.35	V / 1.00 / 0	-16.65	n/a
31.753 MHz	35.6 Qp	0.45 / 20.62 / 30.11 / 0.0	26.56	V / 1.00 / 0	-13.44	n/a

Tested by: T. K. Swanson
Printed

Thomas K. Swanson
Signature

Reviewed by: J. T. Schneider
Printed

Joel T. Schneider
Signature

RADIATED EMISSIONS



Test Report #: WC701422 Run 1 Test Area: LTS
 EUT Model #: OSU-2510-R Date: 4/4/2007
 EUT Serial #: 0049X057SCCX00789496 EUT Power: 60 Hz 120 VAC Temperature: 23.0 °C
 Test Method: FCC B Air Pressure: 99.0 kPa
 Customer: Motorola Inc. Rel. Humidity: 35.0 %

EUT Description: BRS/EBS Outdoor Subscriber Unit (OSU)

Notes: _____

Data File Name: 1422.dat

Page: 5 of 13

List of measurements for run #: 1

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 FCC-B <1GHz 3m	DELTA2 FCC B >1GHz 3m
78.749 MHz	40.3 Qp	0.86 / 8.43 / 29.51 / 0.0	20.08	V / 1.00 / 0	-19.92	n/a
700.02 MHz	35.65 Qp	2.63 / 20.7 / 30.06 / 0.0	28.92	V / 1.00 / 90	-17.08	n/a
720.024 MHz	35.9 Qp	2.67 / 21.15 / 30.03 / 0.0	29.69	V / 1.00 / 90	-16.31	n/a
430.046 MHz	37.2 Qp	2.04 / 16.44 / 29.93 / 0.0	25.74	V / 1.00 / 180	-20.26	n/a
999.679 MHz	40.47 Qp	3.07 / 22.87 / 29.65 / 0.0	36.76	V / 1.00 / 180	-17.24	n/a
31.753 MHz	37.15 Qp	0.45 / 20.62 / 30.11 / 0.0	28.11	V / 1.00 / 270	-11.89	n/a
31 MHz maxed						
31.753 MHz	37.68 Qp	0.45 / 20.62 / 30.11 / 0.0	28.64	V / 1.00 / 270	-11.36	n/a
700.02 MHz	37.15 Qp	2.63 / 20.7 / 30.06 / 0.0	30.42	V / 1.00 / 315	-15.58	n/a
750.022 MHz	39.8 Qp	2.71 / 21.4 / 29.99 / 0.0	33.92	V / 1.00 / 315	-12.08	n/a
995.286 MHz	45.37 Qp	3.07 / 22.9 / 29.65 / 0.0	41.68	V / 1.00 / 315	-12.32	n/a
999.679 MHz	44.75 Qp	3.07 / 22.87 / 29.65 / 0.0	41.04	V / 1.00 / 315	-12.96	n/a
750 MHz maxed						
750.022 MHz	41.18 Qp	2.71 / 21.4 / 29.99 / 0.0	35.3	V / 1.00 / 0	-10.7	n/a
300 MHz maxed						
300.0 MHz	46.09 Qp	1.71 / 13.39 / 29.72 / 0.0	31.47	V / 1.00 / 0	-14.53	n/a
150.007 MHz	46.3 Qp	1.11 / 9.53 / 29.55 / 0.0	27.39	H / 3.00 / 0	-16.11	n/a
120.001 MHz	46.2 Qp	1.0 / 8.95 / 29.57 / 0.0	26.58	H / 3.00 / 270	-16.92	n/a

Tested by: T. K. Swanson

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Thomas K. Swanson

Signature

Reviewed by: J. T. Schneider

Printed

Joel T. Schneider

Signature

RADIATED EMISSIONS



Test Report #: WC701422 Run 1 Test Area: LTS
 EUT Model #: OSU-2510-R Date: 4/4/2007
 EUT Serial #: 0049X057SCCX00789496 EUT Power: 60 Hz 120 VAC Temperature: 23.0 °C
 Test Method: FCC B Air Pressure: 99.0 kPa
 Customer: Motorola Inc. Rel. Humidity: 35.0 %
 EUT Description: BRS/EBS Outdoor Subscriber Unit (OSU)

Notes: _____

Data File Name: 1422.dat

Page: 6 of 13

List of measurements for run #: 1

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 FCC-B <1GHz 3m	DELTA2 FCC B >1GHz 3m
300 MHz maxed						
300.0 MHz	47.25 Qp	1.71 / 13.39 / 29.72 / 0.0	32.63	H / 2.50 / 90	-13.37	n/a
Configuration 6 - 5.0 MHz Channel Bandwidth: RF Freq = 2687 MHz						
840.048 MHz	33.6 Qp	2.8 / 21.88 / 29.87 / 0.0	28.41	V / 1.00 / 0	-17.59	n/a
168.0 MHz	40.35 Qp	1.23 / 9.33 / 29.51 / 0.0	21.4	V / 1.00 / 0	-22.1	n/a
750.022 MHz	40.4 Qp	2.71 / 21.4 / 29.99 / 0.0	34.52	V / 1.00 / 0	-11.48	n/a
770.032 MHz	35.05 Qp	2.73 / 21.9 / 29.96 / 0.0	29.72	V / 1.00 / 0	-16.28	n/a
780.046 MHz	35.65 Qp	2.74 / 21.8 / 29.95 / 0.0	30.24	V / 1.00 / 0	-15.76	n/a
790.036 MHz	34.65 Qp	2.75 / 21.7 / 29.93 / 0.0	29.17	V / 1.00 / 0	-16.83	n/a
800.037 MHz	35.95 Qp	2.76 / 21.9 / 29.92 / 0.0	30.69	V / 1.00 / 0	-15.31	n/a
960.052 MHz	33.8 Qp	3.04 / 22.6 / 29.7 / 0.0	29.74	V / 1.00 / 0	-24.26	n/a
139.21 MHz	37.65 Qp	1.06 / 9.28 / 29.6 / 0.0	18.4	V / 1.00 / 0	-25.1	n/a
720.024 MHz	36.95 Qp	2.67 / 21.15 / 30.03 / 0.0	30.74	V / 1.00 / 180	-15.26	n/a
247.244 MHz	41.4 Qp	1.47 / 11.87 / 29.64 / 0.0	25.11	V / 1.00 / 180	-20.89	n/a
244.988 MHz	40.7 Qp	1.47 / 11.81 / 29.64 / 0.0	24.34	V / 1.00 / 180	-21.66	n/a
139.21 MHz	39.35 Qp	1.06 / 9.28 / 29.6 / 0.0	20.1	V / 1.00 / 270	-23.4	n/a
750 MHz maxed						
750.022 MHz	41.34 Qp	2.71 / 21.4 / 29.99 / 0.0	35.46	V / 1.00 / 0	-10.54	n/a
780.046 MHz	35.7 Qp	2.74 / 21.8 / 29.95 / 0.0	30.29	V / 1.00 / 0	-15.71	n/a
790.036 MHz	34.6 Qp	2.75 / 21.7 / 29.93 / 0.0	29.12	V / 1.00 / 0	-16.88	n/a
840.048 MHz	33.9 Qp	2.8 / 21.88 / 29.87 / 0.0	28.71	V / 1.00 / 0	-17.29	n/a

Tested by: T. K. Swanson

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Thomas K. Swanson

Signature

Reviewed by: J. T. Schneider

Printed

Joel T. Schneider

Signature

RADIATED EMISSIONS



America

Test Report #: WC701422 Run 1 Test Area: LTS

EUT Model #: OSU-2510-R Date: 4/4/2007

EUT Serial #: 0049X057SCCX00789496 EUT Power: 60 Hz 120 VAC Temperature: 23.0 °C

Test Method: FCC B Air Pressure: 99.0 kPa

Customer: Motorola Inc. Rel. Humidity: 35.0 %

EUT Description: BRS/EBS Outdoor Subscriber Unit (OSU)

Notes: _____

Data File Name: 1422.dat Page: 7 of 13

List of measurements for run #: 1

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 FCC-B <1GHz 3m	DELTA2 FCC B >1GHz 3m
960.052 MHz	33.95 Qp	3.04 / 22.6 / 29.7 / 0.0	29.89	V / 1.00 / 0	-24.11	n/a
139.21 MHz	43.25 Qp	1.06 / 9.28 / 29.6 / 0.0	24.0	H / 3.00 / 0	-19.5	n/a
150.007 MHz	46.8 Qp	1.11 / 9.53 / 29.55 / 0.0	27.89	H / 3.00 / 0	-15.61	n/a
244.988 MHz	42.35 Qp	1.47 / 11.81 / 29.64 / 0.0	25.99	H / 3.00 / 0	-20.01	n/a
120.001 MHz	46.45 Qp	1.0 / 8.95 / 29.57 / 0.0	26.83	H / 3.00 / 270	-16.67	n/a
150 MHz maxed						
150.007 MHz	48.79 Qp	1.11 / 9.53 / 29.55 / 0.0	29.88	H / 1.70 / 0	-13.62	n/a
750 MHz maxed						
750.022 MHz	43.95 Pk	2.71 / 21.4 / 29.99 / 0.0	38.07	V / 1.00 / 0	-7.93*	n/a
750.022 MHz	41.01 Qp	2.71 / 21.4 / 29.99 / 0.0	35.13	V / 1.00 / 0	-10.87	n/a
550 MHz maxed						
550.0 MHz	43.99 Qp	2.28 / 18.37 / 30.12 / 0.0	34.52	V / 1.00 / 270	-11.48	n/a
550.0 MHz	46.2 Pk	2.28 / 18.37 / 30.12 / 0.0	36.73	V / 1.00 / 270	-9.27*	n/a
300 MHz						
300.0 MHz	54.1 Qp	1.71 / 13.39 / 29.72 / 0.0	39.48	H / 1.50 / 180	-6.52	n/a
300.0 MHz	54.35 Pk	1.71 / 13.39 / 29.72 / 0.0	39.73	H / 1.50 / 180	-6.27*	n/a
139.21 MHz	44.45 Qp	1.06 / 9.28 / 29.6 / 0.0	25.2	H / 1.50 / 180	-18.3	n/a
249.99 MHz	48.85 Qp	1.48 / 11.95 / 29.64 / 0.0	32.64	H / 1.50 / 180	-13.36	n/a
250 MHz maxed						
250.008 MHz	49.86 Qp	1.48 / 11.95 / 29.64 / 0.0	33.65	H / 1.50 / 180	-12.35	n/a

Tested by: T. K. Swanson

 Printed

Thomas K. Swanson

 Signature

Reviewed by: J. T. Schneider

 Printed

Joel T. Schneider

 Signature

RADIATED EMISSIONS



America

Test Report #: WC701422 Run 1 Test Area: LTS

EUT Model #: OSU-2510-R Date: 4/4/2007

EUT Serial #: 0049X057SCCX00789496 EUT Power: 60 Hz 120 VAC Temperature: 23.0 °C

Test Method: FCC B Air Pressure: 99.0 kPa

Customer: Motorola Inc. Rel. Humidity: 35.0 %

EUT Description: BRS/EBS Outdoor Subscriber Unit (OSU)

Notes: _____

Data File Name: <u>1422.dat</u>	Page:	8 of 13
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List of measurements for run #: 1

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 FCC-B <1GHz 3m	DELTA2 FCC B >1GHz 3m
250.008 MHz	50.65 Pk	1.48 / 11.95 / 29.64 / 0.0	34.44	H / 1.50 / 180	-11.56*	n/a
1.3 GHz	59.72 Av	3.68 / 25.08 / 50.67 / 0.0	37.81	V / 1.00 / 0	n/a	-16.19
1.3 GHz	58.05 Pk	3.68 / 25.08 / 50.67 / 0.0	36.14	V / 1.00 / 0	n/a	-17.86*
1.954 GHz	59.48 Av	4.42 / 27.82 / 50.51 / 0.0	41.21	V / 1.00 / 0	n/a	-12.79
1.954 GHz	58.3 Pk	4.42 / 27.82 / 50.51 / 0.0	40.03	V / 1.00 / 0	n/a	-13.97*
1954 Mhz is maxed above						
1.3 GHz	58.26 Av	3.68 / 25.08 / 50.67 / 0.0	36.35	V / 1.00 / 0	n/a	-17.65
1.3 GHz	49.6 Pk	3.68 / 25.08 / 50.67 / 0.0	27.69	V / 1.00 / 0	n/a	-26.31*
2.334 GHz	53.56 Av	4.93 / 28.8 / 50.1 / 0.0	37.19	V / 1.00 / 0	n/a	-16.81
1545 MHz maxed						
1.548 GHz	51.74 Av	3.97 / 25.3 / 50.66 / 0.0	30.36	H / 1.30 / 170	n/a	-23.64
1.557 GHz	54.78 Av	3.98 / 25.35 / 50.65 / 0.0	33.47	H / 1.30 / 170	n/a	-20.53
1.557 GHz	61.35 Pk	3.98 / 25.35 / 50.65 / 0.0	40.04	H / 1.30 / 170	n/a	-13.96*
1.548 GHz	58.8 Pk	3.97 / 25.3 / 50.66 / 0.0	37.42	H / 1.30 / 170	n/a	-16.58*
Configuration 5						
maxed						
1.557 GHz	54.82 Av	3.98 / 25.35 / 50.65 / 0.0	33.51	H / 1.30 / 170	n/a	-20.49
1.557 GHz	63.2 Pk	3.98 / 25.35 / 50.65 / 0.0	41.89	H / 1.30 / 170	n/a	-12.11*
maxed						
1.954 GHz	60.17 Av	4.42 / 27.82 / 50.51 / 0.0	41.9	V / 1.30 / 0	n/a	-12.1
1.954 GHz	58.5 Pk	4.42 / 27.82 / 50.51 / 0.0	40.23	V / 1.30 / 0	n/a	-13.77*

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America

Test Report #: WC701422 Run 1 Test Area: LTS

EUT Model #: OSU-2510-R Date: 4/4/2007

EUT Serial #: 0049X057SCCX00789496 EUT Power: 60 Hz 120 VAC Temperature: 23.0 °C

Test Method: FCC B Air Pressure: 99.0 kPa

Customer: Motorola Inc. Rel. Humidity: 35.0 %

EUT Description: BRS/EBS Outdoor Subscriber Unit (OSU)

Notes: _____

Data File Name: 1422.dat Page: 9 of 13

List of measurements for run #: 1

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 FCC-B <1GHz 3m	DELTA2 FCC B >1GHz 3m
Configuration 4						
maxed						
1.557 GHz	54.95 Av	3.98 / 25.35 / 50.65 / 0.0	33.64	V / 1.30 / 150	n/a	-20.36
1.557 GHz	61.8 Pk	3.98 / 25.35 / 50.65 / 0.0	40.49	V / 1.30 / 150	n/a	-13.51*
maxed						
1.557 GHz	54.79 Av	3.98 / 25.35 / 50.65 / 0.0	33.48	H / 1.30 / 150	n/a	-20.52
1.557 GHz	62.05 Pk	3.98 / 25.35 / 50.65 / 0.0	40.74	H / 1.30 / 150	n/a	-13.26*
2.335 GHz	57.45 Pk	4.93 / 28.8 / 50.1 / 0.0	41.09	H / 1.30 / 150	n/a	-12.91*
2.335 GHz	57.78 Av	4.93 / 28.8 / 50.1 / 0.0	41.42	H / 1.30 / 150	n/a	-12.58
maxed						
2.335 GHz	58.52 Av	4.93 / 28.8 / 50.1 / 0.0	42.16	H / 1.30 / 150	n/a	-11.84
2.335 GHz	56.5 Pk	4.93 / 28.8 / 50.1 / 0.0	40.14	H / 1.30 / 150	n/a	-13.86*
2.335 GHz	57.35 Pk	4.93 / 28.8 / 50.1 / 0.0	40.99	H / 1.30 / 150	n/a	-13.01*
End of scan - 30 to 18000 MHz on each of 3 configurations						

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Test Report #: WC701422 Run 1 Test Area: LTS
 EUT Model #: OSU-2510-R Date: 4/4/2007
 EUT Serial #: 0049X057SCCX00789496 EUT Power: 60 Hz 120 VAC Temperature: 23.0 °C
 Test Method: FCC B Air Pressure: 99.0 kPa
 Customer: Motorola Inc. Rel. Humidity: 35.0 %
 EUT Description: BRS/EBS Outdoor Subscriber Unit (OSU)

Notes: _____

Data File Name: 1422.dat

Page: 10 of 13

Measurement summary for limit1: FCC-B <1GHz 3m (Qp)

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 FCC-B <1GHz 3m
300.0 MHz	54.1 Qp	1.71 / 13.39 / 29.72 / 0.0	39.48	H / 1.50 / 180	-6.52
750.022 MHz	41.34 Qp	2.71 / 21.4 / 29.99 / 0.0	35.46	V / 1.00 / 0	-10.54
550.0 MHz	44.4 Qp	2.28 / 18.37 / 30.12 / 0.0	34.93	V / 1.00 / 275	-11.07
31.753 MHz	37.68 Qp	0.45 / 20.62 / 30.11 / 0.0	28.64	V / 1.00 / 270	-11.36
500.0 MHz	43.88 Qp	2.14 / 17.9 / 30.04 / 0.0	33.88	V / 1.00 / 200	-12.12
995.286 MHz	45.37 Qp	3.07 / 22.9 / 29.65 / 0.0	41.68	V / 1.00 / 315	-12.32
250.008 MHz	49.86 Qp	1.48 / 11.95 / 29.64 / 0.0	33.65	H / 1.50 / 180	-12.35
999.679 MHz	44.75 Qp	3.07 / 22.87 / 29.65 / 0.0	41.04	V / 1.00 / 315	-12.96
150.007 MHz	48.79 Qp	1.11 / 9.53 / 29.55 / 0.0	29.88	H / 1.70 / 0	-13.62
400.024 MHz	44.19 Qp	2.01 / 15.81 / 29.88 / 0.0	32.12	V / 1.00 / 120	-13.88
720.024 MHz	36.95 Qp	2.67 / 21.15 / 30.03 / 0.0	30.74	V / 1.00 / 180	-15.26
800.037 MHz	35.95 Qp	2.76 / 21.9 / 29.92 / 0.0	30.69	V / 1.00 / 0	-15.31
700.02 MHz	37.15 Qp	2.63 / 20.7 / 30.06 / 0.0	30.42	V / 1.00 / 315	-15.58
780.046 MHz	35.7 Qp	2.74 / 21.8 / 29.95 / 0.0	30.29	V / 1.00 / 0	-15.71
770.032 MHz	35.05 Qp	2.73 / 21.9 / 29.96 / 0.0	29.72	V / 1.00 / 0	-16.28
357.939 MHz	42.35 Qp	1.93 / 15.06 / 29.82 / 0.0	29.53	V / 1.00 / 180	-16.47
650.0 MHz	37.1 Qp	2.56 / 19.95 / 30.13 / 0.0	29.48	V / 1.00 / 45	-16.52
386.576 MHz	41.6 Qp	1.99 / 15.63 / 29.86 / 0.0	29.36	V / 1.00 / 180	-16.64
760.042 MHz	34.95 Qp	2.72 / 21.65 / 29.98 / 0.0	29.35	V / 1.00 / 0	-16.65
120.001 MHz	46.45 Qp	1.0 / 8.95 / 29.57 / 0.0	26.83	H / 3.00 / 270	-16.67
790.036 MHz	34.65 Qp	2.75 / 21.7 / 29.93 / 0.0	29.17	V / 1.00 / 0	-16.83
840.048 MHz	33.9 Qp	2.8 / 21.88 / 29.87 / 0.0	28.71	V / 1.00 / 0	-17.29
450.0 MHz	39.7 Qp	2.06 / 16.85 / 29.96 / 0.0	28.65	V / 1.00 / 180	-17.35
139.21 MHz	44.45 Qp	1.06 / 9.28 / 29.6 / 0.0	25.2	H / 1.50 / 180	-18.3
100.0 MHz	44.6 Qp	0.94 / 8.72 / 29.54 / 0.0	24.72	H / 2.80 / 90	-18.78
62.586 MHz	38.7 Qp	0.75 / 11.08 / 29.67 / 0.0	20.85	V / 1.00 / 45	-19.15

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Reviewed by: J. T. Schneider
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Joel T. Schneider
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America

Test Report #: WC701422 Run 1 Test Area: LTS

EUT Model #: OSU-2510-R Date: 4/4/2007

EUT Serial #: 0049X057SCCX00789496 EUT Power: 60 Hz 120 VAC Temperature: 23.0 °C

Test Method: FCC B Air Pressure: 99.0 kPa

Customer: Motorola Inc. Rel. Humidity: 35.0 %

EUT Description: BRS/EBS Outdoor Subscriber Unit (OSU)

Notes: _____

Data File Name: 1422.dat Page: 11 of 13

Measurement summary for limit1: FCC-B <1GHz 3m (Qp)

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA1 FCC-B <1GHz 3m
200.006 MHz	41.45 Qp	1.36 / 11.0 / 29.56 / 0.0	24.25	V / 1.00 / 135	-19.25
125.002 MHz	43.95 Qp	1.01 / 8.62 / 29.58 / 0.0	24.01	H / 2.80 / 90	-19.49
415.222 MHz	37.95 Qp	2.02 / 16.13 / 29.91 / 0.0	26.19	V / 1.00 / 180	-19.81
78.749 MHz	40.3 Qp	0.86 / 8.43 / 29.51 / 0.0	20.08	V / 1.00 / 0	-19.92
244.988 MHz	42.35 Qp	1.47 / 11.81 / 29.64 / 0.0	25.99	H / 3.00 / 0	-20.01
430.046 MHz	37.2 Qp	2.04 / 16.44 / 29.93 / 0.0	25.74	V / 1.00 / 180	-20.26
165.911 MHz	42.3 Qp	1.23 / 9.19 / 29.51 / 0.0	23.2	V / 1.00 / 90	-20.3
247.244 MHz	41.4 Qp	1.47 / 11.87 / 29.64 / 0.0	25.11	V / 1.00 / 180	-20.89
168.0 MHz	41.5 Qp	1.23 / 9.33 / 29.51 / 0.0	22.55	V / 1.00 / 0	-20.95
254.126 MHz	40.3 Qp	1.49 / 12.07 / 29.65 / 0.0	24.21	V / 1.00 / 270	-21.79
515.0 MHz	34.15 Qp	2.19 / 17.7 / 30.07 / 0.0	23.96	V / 1.00 / 0	-22.04
109.368 MHz	40.0 Qp	0.97 / 9.54 / 29.55 / 0.0	20.96	H / 2.80 / 90	-22.54
221.763 MHz	40.3 Qp	1.42 / 11.14 / 29.6 / 0.0	23.26	V / 3.00 / 0	-22.74
203.986 MHz	37.85 Qp	1.37 / 10.92 / 29.57 / 0.0	20.57	V / 1.00 / 0	-22.93
375.007 MHz	34.95 Qp	1.96 / 15.56 / 29.84 / 0.0	22.62	V / 1.00 / 90	-23.38
210.99 MHz	37.1 Qp	1.4 / 10.83 / 29.58 / 0.0	19.75	V / 1.00 / 0	-23.75
140.567 MHz	38.5 Qp	1.07 / 9.43 / 29.59 / 0.0	19.4	V / 1.00 / 0	-24.1
960.052 MHz	33.95 Qp	3.04 / 22.6 / 29.7 / 0.0	29.89	V / 1.00 / 0	-24.11
774.09 MHz	27.2 Qp	2.74 / 21.86 / 29.96 / 0.0	21.84	V / 1.00 / 0	-24.16
778.448 MHz	27.15 Qp	2.74 / 21.82 / 29.95 / 0.0	21.75	V / 1.00 / 0	-24.25
160.933 MHz	38.65 Qp	1.2 / 8.86 / 29.5 / 0.0	19.21	V / 1.00 / 0	-24.29
170.065 MHz	36.45 Qp	1.24 / 9.46 / 29.52 / 0.0	17.64	V / 1.00 / 90	-25.86
143.988 MHz	32.6 Qp	1.08 / 9.79 / 29.58 / 0.0	13.9	V / 1.00 / 0	-29.6
750.022 MHz	43.95 Pk	2.71 / 21.4 / 29.99 / 0.0	38.07	V / 1.00 / 0	-7.93*
550.0 MHz	46.2 Pk	2.28 / 18.37 / 30.12 / 0.0	36.73	V / 1.00 / 270	-9.27*
300.0 MHz	54.35 Pk	1.71 / 13.39 / 29.72 / 0.0	39.73	H / 1.50 / 180	-6.27*
250.008 MHz	50.65 Pk	1.48 / 11.95 / 29.64 / 0.0	34.44	H / 1.50 / 180	-11.56*

Tested by: T. K. Swanson Thomas K. Swanson
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Reviewed by: J. T. Schneider Joel T. Schneider
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RADIATED EMISSIONS



Test Report #: WC701422 Run 1 Test Area: LTS
 EUT Model #: OSU-2510-R Date: 4/4/2007
 EUT Serial #: 0049X057SCCX00789496 EUT Power: 60 Hz 120 VAC Temperature: 23.0 °C
 Test Method: FCC B Air Pressure: 99.0 kPa
 Customer: Motorola Inc. Rel. Humidity: 35.0 %

EUT Description: BRS/EBS Outdoor Subscriber Unit (OSU)

Notes: _____

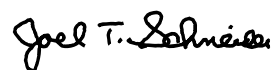
Data File Name: 1422.dat Page: 12 of 13

Measurement summary for limit2: FCC B >1GHz 3m (Av)					
FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	POL / HGT / AZ (m)(DEG)	DELTA2 FCC B >1GHz 3m
2.335 GHz	58.52 Av	4.93 / 28.8 / 50.1 / 0.0	42.16	H / 1.30 / 150	-11.84
1.954 GHz	60.17 Av	4.42 / 27.82 / 50.51 / 0.0	41.9	V / 1.30 / 0	-12.1
1.3 GHz	59.72 Av	3.68 / 25.08 / 50.67 / 0.0	37.81	V / 1.00 / 0	-16.19
2.334 GHz	53.56 Av	4.93 / 28.8 / 50.1 / 0.0	37.19	V / 1.00 / 0	-16.81
1.557 GHz	54.95 Av	3.98 / 25.35 / 50.65 / 0.0	33.64	V / 1.30 / 150	-20.36
1.548 GHz	51.74 Av	3.97 / 25.3 / 50.66 / 0.0	30.36	H / 1.30 / 170	-23.64
1.3 GHz	58.05 Pk	3.68 / 25.08 / 50.67 / 0.0	36.14	V / 1.00 / 0	-17.86*
1.954 GHz	58.5 Pk	4.42 / 27.82 / 50.51 / 0.0	40.23	V / 1.30 / 0	-13.77*
1.557 GHz	63.2 Pk	3.98 / 25.35 / 50.65 / 0.0	41.89	H / 1.30 / 170	-12.11*
1.548 GHz	58.8 Pk	3.97 / 25.3 / 50.66 / 0.0	37.42	H / 1.30 / 170	-16.58*
2.335 GHz	57.45 Pk	4.93 / 28.8 / 50.1 / 0.0	41.09	H / 1.30 / 150	-12.91*

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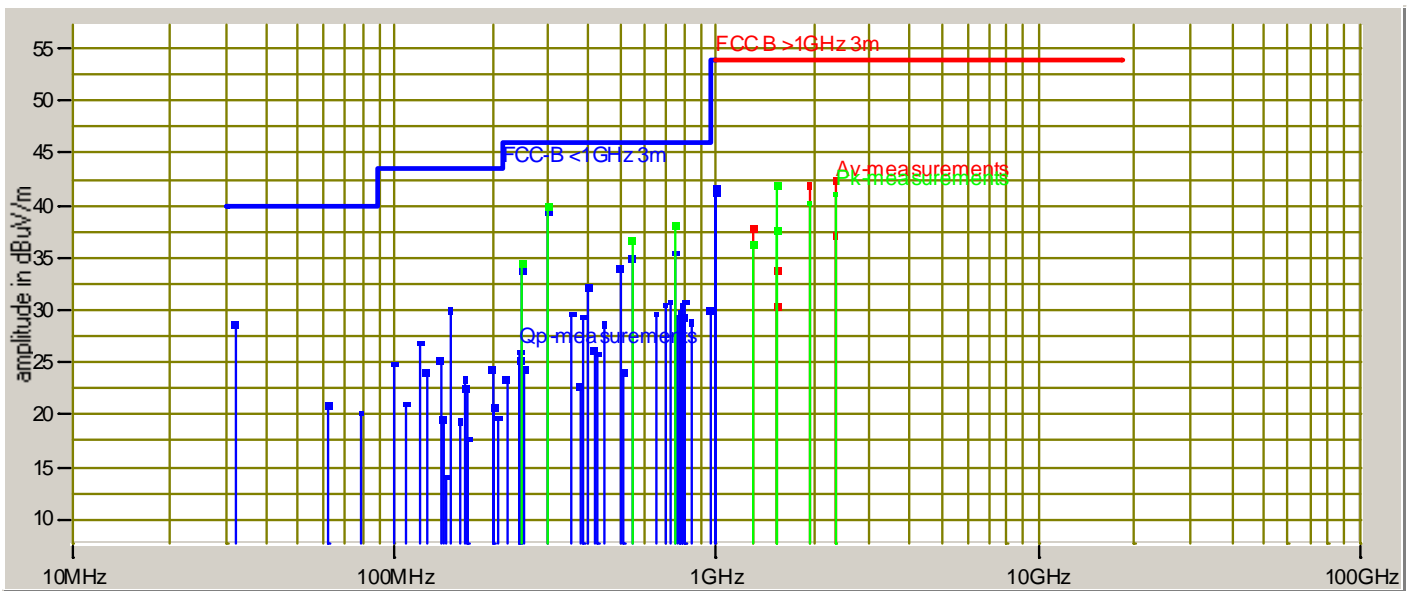
Test Report #: WC701422 Run 1 Test Area: LTS
EUT Model #: OSU-2510-R Date: 4/4/2007
EUT Serial #: 0049X057SCCX00789496 EUT Power: 60 Hz 120 VAC Temperature: 23.0 °C
Test Method: FCC B Air Pressure: 99.0 kPa
Customer: Motorola Inc. Rel. Humidity: 35.0 %

EUT Description: BRS/EBS Outdoor Subscriber Unit (OSU)

Notes: _____

Data File Name: 1422.dat Page: 13 of 13

Graph:



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CONDUCTED EMISSIONS



America

Test Report #: WC701422 Run 2 Test Area: LTS
 EUT Model #: OSU-2510-R Date: 4/4/2007
 EUT Serial #: 0049X057SCCX00789496 EUT Power: 60 Hz 120 VAC Temperature: 23.0 °C
 Test Method: FCC B Air Pressure: 99.0 kPa
 Customer: Motorola Inc. Rel. Humidity: 35.0 %

EUT Description: BRS/EBS Outdoor Subscriber Unit (OSU)

Notes: _____

Data File Name: 1422.dat

Page: 1 of 6

List of measurements for run #: 2

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	EUT Lead	DELTA1 EN55022 B Qp	DELTA2 EN55022 B Avg
Configuration 8 - 5.5 MHz Channel Bandwidth: RF Freq 2593 MHz, Receive Mode						
150.0 kHz	38.04 Qp	0.12 / 0.1 / 0.0 / 0.0	38.26	N	-27.74	n/a
150.0 kHz	9.86 Av	0.12 / 0.1 / 0.0 / 0.0	10.08	N	n/a	-45.92
208.594 kHz	33.56 Qp	0.13 / 0.1 / 0.0 / 0.0	33.79	N	-29.47	n/a
208.594 kHz	6.77 Av	0.13 / 0.1 / 0.0 / 0.0	7.0	N	n/a	-46.26
396.53 kHz	38.52 Qp	0.17 / 0.07 / 0.0 / 0.0	38.76	N	-19.16	n/a
396.53 kHz	30.9 Av	0.17 / 0.07 / 0.0 / 0.0	31.14	N	n/a	-16.78
462.5 kHz	37.32 Qp	0.19 / 0.05 / 0.0 / 0.0	37.55	N	-19.09	n/a
462.5 kHz	31.14 Av	0.19 / 0.05 / 0.0 / 0.0	31.37	N	n/a	-15.27
6.478 MHz	31.45 Qp	0.61 / 0.38 / 0.0 / 0.0	32.44	N	-27.56	n/a
6.478 MHz	31.02 Av	0.61 / 0.38 / 0.0 / 0.0	32.01	N	n/a	-17.99
20.428 MHz	41.13 Qp	1.1 / 0.52 / 0.0 / 0.0	42.74	N	-17.26	n/a
20.428 MHz	41.5 Av	1.1 / 0.52 / 0.0 / 0.0	43.11	N	n/a	-6.89
27.236 MHz	40.12 Qp	1.25 / 0.79 / 0.0 / 0.0	42.16	N	-17.84	n/a
27.236 MHz	39.29 Av	1.25 / 0.79 / 0.0 / 0.0	41.33	N	n/a	-8.67
150.0 kHz	38.32 Qp	0.12 / 0.1 / 0.0 / 0.0	38.54	L1	-27.46	n/a
150.0 kHz	9.48 Av	0.12 / 0.1 / 0.0 / 0.0	9.7	L1	n/a	-46.3
208.594 kHz	33.42 Qp	0.13 / 0.1 / 0.0 / 0.0	33.65	L1	-29.61	n/a
208.594 kHz	6.22 Av	0.13 / 0.1 / 0.0 / 0.0	6.45	L1	n/a	-46.81
396.53 kHz	38.93 Qp	0.17 / 0.07 / 0.0 / 0.0	39.17	L1	-18.75	n/a
396.53 kHz	31.02 Av	0.17 / 0.07 / 0.0 / 0.0	31.26	L1	n/a	-16.66
462.5 kHz	37.34 Qp	0.19 / 0.05 / 0.0 / 0.0	37.57	L1	-19.07	n/a
462.5 kHz	31.14 Av	0.19 / 0.05 / 0.0 / 0.0	31.37	L1	n/a	-15.27
6.478 MHz	30.98 Qp	0.61 / 0.38 / 0.0 / 0.0	31.97	L1	-28.03	n/a

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Joel T. Schneider
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Test Report #: WC701422 Run 2 Test Area: LTS

EUT Model #: OSU-2510-R Date: 4/4/2007

EUT Serial #: 0049X057SCCX00789496 EUT Power: 60 Hz 120 VAC Temperature: 23.0 °C

Test Method: FCC B Air Pressure: 99.0 kPa

Customer: Motorola Inc. Rel. Humidity: 35.0 %

EUT Description: BRS/EBS Outdoor Subscriber Unit (OSU)

Notes: _____

Data File Name: 1422.dat

Page: 2 of 6

List of measurements for run #: 2

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	EUT Lead	DELTA1 EN55022 B Qp	DELTA2 EN55022 B Avg
6.478 MHz	30.28 Av	0.61 / 0.38 / 0.0 / 0.0	31.27	L1	n/a	-18.73
20.428 MHz	41.03 Qp	1.1 / 0.52 / 0.0 / 0.0	42.64	L1	-17.36	n/a
20.428 MHz	41.27 Av	1.1 / 0.52 / 0.0 / 0.0	42.88	L1	n/a	-7.12
27.236 MHz	39.03 Qp	1.25 / 0.79 / 0.0 / 0.0	41.07	L1	-18.93	n/a
27.236 MHz	37.22 Av	1.25 / 0.79 / 0.0 / 0.0	39.26	L1	n/a	-10.74
Configuration 7 - 6.0 MHz Channel Bandwidth: RF Freq = 2499 MHz, Transmit 14.29% Duty Cycle						
150.0 kHz	40.62 Qp	0.12 / 0.1 / 0.0 / 0.0	40.84	L1	-25.16	n/a
150.0 kHz	11.07 Av	0.12 / 0.1 / 0.0 / 0.0	11.29	L1	n/a	-44.71
177.344 kHz	38.66 Qp	0.13 / 0.1 / 0.0 / 0.0	38.89	L1	-25.72	n/a
177.344 kHz	15.67 Av	0.13 / 0.1 / 0.0 / 0.0	15.9	L1	n/a	-38.71
208.594 kHz	35.86 Qp	0.13 / 0.1 / 0.0 / 0.0	36.09	L1	-27.17	n/a
208.594 kHz	8.6 Av	0.13 / 0.1 / 0.0 / 0.0	8.83	L1	n/a	-44.43
396.094 kHz	40.52 Qp	0.17 / 0.07 / 0.0 / 0.0	40.76	L1	-17.17	n/a
396.094 kHz	34.24 Av	0.17 / 0.07 / 0.0 / 0.0	34.48	L1	n/a	-13.45
462.5 kHz	35.01 Qp	0.19 / 0.05 / 0.0 / 0.0	35.24	L1	-21.4	n/a
462.5 kHz	28.43 Av	0.19 / 0.05 / 0.0 / 0.0	28.66	L1	n/a	-17.98
6.345 MHz	33.08 Qp	0.6 / 0.39 / 0.0 / 0.0	34.07	L1	-25.93	n/a
6.345 MHz	32.47 Av	0.6 / 0.39 / 0.0 / 0.0	33.46	L1	n/a	-16.54
20.611 MHz	39.86 Qp	1.1 / 0.52 / 0.0 / 0.0	41.49	L1	-18.51	n/a
20.611 MHz	29.26 Av	1.1 / 0.52 / 0.0 / 0.0	30.89	L1	n/a	-19.11
25.18 MHz	32.96 Qp	1.2 / 0.71 / 0.0 / 0.0	34.87	L1	-25.13	n/a
25.18 MHz	26.38 Av	1.2 / 0.71 / 0.0 / 0.0	28.29	L1	n/a	-21.71
150.0 kHz	40.38 Qp	0.12 / 0.1 / 0.0 / 0.0	40.6	N	-25.4	n/a
150.0 kHz	12.15 Av	0.12 / 0.1 / 0.0 / 0.0	12.37	N	n/a	-43.63

Tested by: T. K. Swanson

 Printed

Thomas K. Swanson

 Signature

Reviewed by: J. T. Schneider

 Printed

Joel T. Schneider

 Signature

CONDUCTED EMISSIONS



America

Test Report #: WC701422 Run 2 Test Area: LTS
 EUT Model #: OSU-2510-R Date: 4/4/2007
 EUT Serial #: 0049X057SCCX00789496 EUT Power: 60 Hz 120 VAC Temperature: 23.0 °C
 Test Method: FCC B Air Pressure: 99.0 kPa
 Customer: Motorola Inc. Rel. Humidity: 35.0 %

EUT Description: BRS/EBS Outdoor Subscriber Unit (OSU)

Notes: _____

Data File Name: 1422.dat

Page: 3 of 6

List of measurements for run #: 2

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	EUT Lead	DELTA1 EN55022 B Qp	DELTA2 EN55022 B Avg
177.344 kHz	38.62 Qp	0.13 / 0.1 / 0.0 / 0.0	38.85	N	-25.76	n/a
177.344 kHz	14.46 Av	0.13 / 0.1 / 0.0 / 0.0	14.69	N	n/a	-39.92
208.594 kHz	36.14 Qp	0.13 / 0.1 / 0.0 / 0.0	36.37	N	-26.89	n/a
208.594 kHz	8.51 Av	0.13 / 0.1 / 0.0 / 0.0	8.74	N	n/a	-44.52
396.094 kHz	40.24 Qp	0.17 / 0.07 / 0.0 / 0.0	40.48	N	-17.45	n/a
396.094 kHz	34.18 Av	0.17 / 0.07 / 0.0 / 0.0	34.42	N	n/a	-13.51
462.5 kHz	35.85 Qp	0.19 / 0.05 / 0.0 / 0.0	36.08	N	-20.56	n/a
462.5 kHz	31.91 Av	0.19 / 0.05 / 0.0 / 0.0	32.14	N	n/a	-14.5
6.345 MHz	33.56 Qp	0.6 / 0.39 / 0.0 / 0.0	34.55	N	-25.45	n/a
6.345 MHz	33.27 Av	0.6 / 0.39 / 0.0 / 0.0	34.26	N	n/a	-15.74
20.611 MHz	39.05 Qp	1.1 / 0.52 / 0.0 / 0.0	40.68	N	-19.32	n/a
20.611 MHz	40.96 Av	1.1 / 0.52 / 0.0 / 0.0	42.59	N	n/a	-7.41
25.18 MHz	34.07 Qp	1.2 / 0.71 / 0.0 / 0.0	35.98	N	-24.02	n/a
25.18 MHz	41.75 Av	1.2 / 0.71 / 0.0 / 0.0	43.66	N	n/a	-6.34
end of scan						

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Printed

Thomas K. Swanson

Signature

Reviewed by: J. T. Schneider

Printed

Joel T. Schneider

Signature

CONDUCTED EMISSIONS



America

Test Report #: WC701422 Run 2 Test Area: LTS
 EUT Model #: OSU-2510-R Date: 4/4/2007
 EUT Serial #: 0049X057SCCX00789496 EUT Power: 60 Hz 120 VAC Temperature: 23.0 °C
 Test Method: FCC B Air Pressure: 99.0 kPa
 Customer: Motorola Inc. Rel. Humidity: 35.0 %

EUT Description: BRS/EBS Outdoor Subscriber Unit (OSU)

Notes: _____

Data File Name: 1422.dat Page: 4 of 6

Measurement summary for limit1: EN55022 B Qp (Qp)

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	EUT Lead	DELTA1 EN55022 B Qp
396.094 kHz	40.52 Qp	0.17 / 0.07 / 0.0 / 0.0	40.76	L1	-17.17
20.428 MHz	41.13 Qp	1.1 / 0.52 / 0.0 / 0.0	42.74	N	-17.26
27.236 MHz	40.12 Qp	1.25 / 0.79 / 0.0 / 0.0	42.16	N	-17.84
20.611 MHz	39.86 Qp	1.1 / 0.52 / 0.0 / 0.0	41.49	L1	-18.51
462.5 kHz	37.34 Qp	0.19 / 0.05 / 0.0 / 0.0	37.57	L1	-19.07
25.18 MHz	34.07 Qp	1.2 / 0.71 / 0.0 / 0.0	35.98	N	-24.02
150.0 kHz	40.62 Qp	0.12 / 0.1 / 0.0 / 0.0	40.84	L1	-25.16
6.345 MHz	33.56 Qp	0.6 / 0.39 / 0.0 / 0.0	34.55	N	-25.45
177.344 kHz	38.66 Qp	0.13 / 0.1 / 0.0 / 0.0	38.89	L1	-25.72
208.594 kHz	36.14 Qp	0.13 / 0.1 / 0.0 / 0.0	36.37	N	-26.89
6.478 MHz	31.45 Qp	0.61 / 0.38 / 0.0 / 0.0	32.44	N	-27.56

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Thomas K. Swanson
 Signature

Reviewed by: J. T. Schneider
 Printed

Joel T. Schneider
 Signature

CONDUCTED EMISSIONS



America

Test Report #: WC701422 Run 2 Test Area: LTS
 EUT Model #: OSU-2510-R Date: 4/4/2007
 EUT Serial #: 0049X057SCCX00789496 EUT Power: 60 Hz 120 VAC Temperature: 23.0 °C
 Test Method: FCC B Air Pressure: 99.0 kPa
 Customer: Motorola Inc. Rel. Humidity: 35.0 %

EUT Description: BRS/EBS Outdoor Subscriber Unit (OSU)

Notes: _____

Data File Name: 1422.dat Page: 5 of 6

Measurement summary for limit2: EN55022 B Avg (Av)

FREQ	LEVEL (dBuV)	CABLE / ANT / PREAMP / ATTEN (dB)	FINAL (dBuV / m)	EUT Lead	DELTA2 EN55022 B Avg
25.18 MHz	41.75 Av	1.2 / 0.71 / 0.0 / 0.0	43.66	N	-6.34
20.428 MHz	41.5 Av	1.1 / 0.52 / 0.0 / 0.0	43.11	N	-6.89
20.611 MHz	40.96 Av	1.1 / 0.52 / 0.0 / 0.0	42.59	N	-7.41
27.236 MHz	39.29 Av	1.25 / 0.79 / 0.0 / 0.0	41.33	N	-8.67
396.094 kHz	34.24 Av	0.17 / 0.07 / 0.0 / 0.0	34.48	L1	-13.45
462.5 kHz	31.91 Av	0.19 / 0.05 / 0.0 / 0.0	32.14	N	-14.5
6.345 MHz	33.27 Av	0.6 / 0.39 / 0.0 / 0.0	34.26	N	-15.74
6.478 MHz	31.02 Av	0.61 / 0.38 / 0.0 / 0.0	32.01	N	-17.99
177.344 kHz	15.67 Av	0.13 / 0.1 / 0.0 / 0.0	15.9	L1	-38.71
150.0 kHz	12.15 Av	0.12 / 0.1 / 0.0 / 0.0	12.37	N	-43.63
208.594 kHz	8.6 Av	0.13 / 0.1 / 0.0 / 0.0	8.83	L1	-44.43

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Thomas K. Swanson
 Signature

Reviewed by: J. T. Schneider
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Joel T. Schneider
 Signature

CONDUCTED EMISSIONS



America

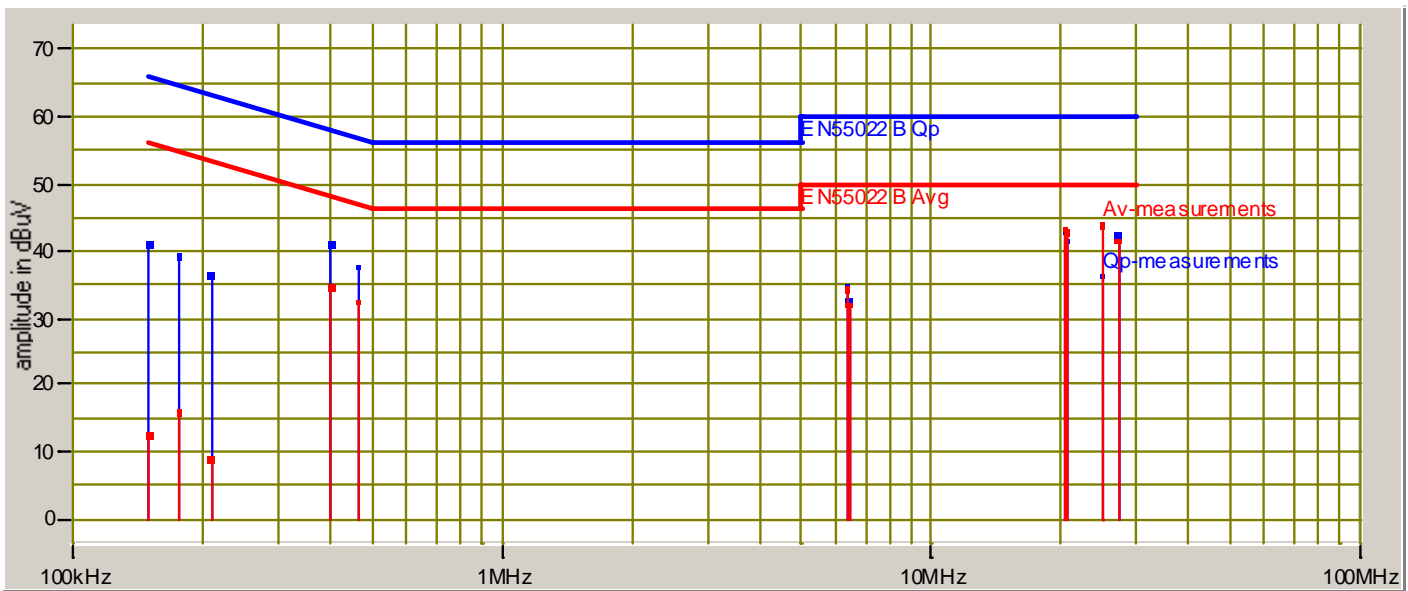
Test Report #: WC701422 Run 2 Test Area: LTS
EUT Model #: OSU-2510-R Date: 4/4/2007
EUT Serial #: 0049X057SCCX00789496 EUT Power: 60 Hz 120 VAC Temperature: 23.0 °C
Test Method: FCC B Air Pressure: 99.0 kPa
Customer: Motorola Inc. Rel. Humidity: 35.0 %

EUT Description: BRS/EBS Outdoor Subscriber Unit (OSU)

Notes: _____

Data File Name: 1422.dat Page: 6 of 6

Graph:



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Printed

Joel T. Schneider
Signature

Appendix B

Constructional Data Form

and

Block Diagram





EMC Test Plan and Constructional Data Form

PLEASE COMPLETE THIS DOCUMENT IN FULL, ENTERING N/A IF THE FIELD IS NOT APPLICABLE. IF TESTING RESULTS IN MODIFICATIONS TO THE EQUIPMENT, PLEASE SUBMIT A REVISED TP/CDF INDICATING THOSE MODIFICATIONS.
NOTE: This information will be input into your test report as shown below. Press the F1 key at any time to get HELP for the current field selected.

Company: Motorola Inc., NextNet Wireless Product Group
 Address: 299 Johnson Ave.
Suite 120
Waseca, MN 56093
 Contact: Tim Blom Position: Section Manager RF Engineering
 Phone: 507-837-3672 Fax: 507-837-1059
 E-mail Address: Tim.Blom@motorola.com

General Equipment Description -- NOTE: This information will be input into your test report as shown below.

EUT Description BRS/EBS Outdoor Subscriber Unit (OSU)
 EUT Name Expedience 2.496-2.690 GHz OSU
 Model No.: OSU-2510-R Serial No.: S/N: 0049X057SCCX00789496
 Product Options: none
 Configurations to be tested: standard

Equipment Modification (If applicable, indicate modifications since EUT was last tested. If modifications are made during this testing, submit revised TP/CDF after testing is complete.)

Modifications since last test: N/A
 Modifications made during test: _____

Test Objective(s): Please indicate the tests to be performed, entering the applicable standard(s) where noted.

- | | |
|--|--|
| <input type="checkbox"/> EMC Directive 89/336/EEC (EMC)
Std: _____ | <input checked="" type="checkbox"/> FCC: Class <input type="checkbox"/> A <input checked="" type="checkbox"/> B Part <u>27</u> |
| <input type="checkbox"/> Machinery Directive 89/392/EEC (EMC)
Std: _____ | <input type="checkbox"/> VCCI: Class <input type="checkbox"/> A <input type="checkbox"/> B |
| <input type="checkbox"/> Medical Device Directive 93/42/EEC (EMC)
Std: _____ | <input type="checkbox"/> BSMI: Class <input type="checkbox"/> A <input type="checkbox"/> B |
| <input type="checkbox"/> Vehicle Directive 72/245/EEC (EMC)
Std: _____ | <input checked="" type="checkbox"/> Canada: Class <input type="checkbox"/> A <input checked="" type="checkbox"/> B |
| <input type="checkbox"/> FDA Reviewers Guidance for Premarket Notification Submissions (EMC) | <input type="checkbox"/> Australia: Class <input type="checkbox"/> A <input type="checkbox"/> B |
| | <input checked="" type="checkbox"/> Other: <u>FCC 2, 15, 27, IC RSS-193</u> |

Third Party Certification, if applicable (*Signature on Page 6 Required)

- | | |
|---|---|
| <input type="checkbox"/> Attestation of Conformity (AoC)* | <input type="checkbox"/> EMC Certification (used with Octagon Mark)* |
| <input type="checkbox"/> Certificate of Conformity (CoC)* | <input type="checkbox"/> Compliance Document* |
| Protection Class (N/A for vehicles) | <input type="checkbox"/> Class I <input type="checkbox"/> Class II <input type="checkbox"/> Class III |
- (Press F1 when field is selected to show additional information on Protection Class.)



EMC Test Plan and Constructional Data Form

- FCC / TCB Certification
- E-Mark Certification

- Industry Canada / FCB Certification
- Taiwan Certification

Attendance

Test will be: Attended by the customer Unattended by the customer

Failure - Complete this section if testing will not be attended by the customer.

If a failure occurs, TÜV America should:

- Call contact listed above, if not available then stop testing. (After hrs phone): _____
- Continue testing to complete test series.
- Continue testing to define corrective action.
- Stop testing.

EUT Specifications and Requirements

Length: 7 " Width: 2" Height: 7.7 " Weight: 3.2 Lb

Power Requirements

Regulations require testing to be performed at typical power ratings in the countries of intended use. (i.e., European power is typically 230 VAC 50 Hz or 400 VAC 50 Hz, single and three phase, respectively)

Voltage: 19.5 VDC (If battery powered, make sure battery life is sufficient to complete testing.)

of Phases: 1

Current (Amps/phase(max)): 1.3 Current (Amps/phase(nominal)): .36

Other: ---

Other Special Requirements

Transmitter radiated emissions to be measured per EIA/TIA 603-C procedure for licensed transmitters. Receiver radiated emissions testing to be performed on ANSI C63.4-2003 clause 5.4 compliant site. Receiver radiated emissions measured with a quasi peak detector compliant to CISPR Publication 16.

Typical Installation and/or Operating Environment

(ie. Hospital, Small Business, Industrial/Factory, etc.)
Residential and Business outdoor configuration

EUT Power Cable

- Permanent OR Removable Length (in meters): 8
- Shielded OR Unshielded
- Not Applicable



EMC Test Plan and Constructional Data Form

America

EUT Interface Ports and Cables																
Type	Analog		Digital		During Test		Qty	Shielding		Termination	Connector Type	Port Termination	Length tested (in meters)	Removable	Permanent	
					Active	Passive		Yes	No							Type
EXAMPLE:																
RS232	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	2	<input checked="" type="checkbox"/>	<input type="checkbox"/>	Foil over braid	Coaxial	Metallized 9-pin D-Sub	Characteristic Impedance	6	<input checked="" type="checkbox"/>	<input type="checkbox"/>
Ethernet	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>	<input type="checkbox"/>	1	<input type="checkbox"/>	<input checked="" type="checkbox"/>	CAT5e	100 ohms	RJ-45	100 ohm	8	<input checked="" type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>
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	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>
	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>		<input type="checkbox"/>	<input type="checkbox"/>						<input type="checkbox"/>	<input type="checkbox"/>

EMC Test Plan and Constructional Data Form

EUT Software.

Revision Level: NextNet Diagnostics Test N Tune s/w: 2.04
 Subscriber operating s/w: 4.3.41
 Loader s/w: 2.13
 NextNet Tool/Diagnostics s/w: 8.02d
 RF ASIC Configuration file: rev2_122006

Description: Operating and test software for OSU product that enables test modes for compliance testing.

Equipment Under Test (EUT) Operating Modes to be Tested -- list the operating modes to be used during test. It is recommended the equipment be tested while operating in a typical operation mode. FCC testing of personal computers and/or peripherals requires that a simple program generate a complete line of upper case H's. Provide a general description of all software, firmware, and PLD algorithms used in the equipment. List all code modules as described above, with the revision level used during testing. Consult with your TÜV Product Service Representative if additional assistance is required.

1. Radiated emissions - transmitter - 14.29% duty cycle, 3 RF channels, 3 channel bandwidths

Requirements per TIA/EIA 603-C-2004 and Industry Canada RSS-193 procedures [absolute power level of -13 dBm and verified using antenna-generator substitution method]

Configuration 1 :: 6.0 MHz channel bandwidth: RF freq = 2499 MHz
 Configuration 2 :: 5.5 MHz channel bandwidth: RF freq = 2593 MHz
 Configuration 3 :: 5.0 MHz channel bandwidth: RF freq = 2687 MHz

Radiated emissions to be measured from 30 MHz to 27 GHz for each configuration.

2. Radiated emissions - receiver - 3 RF channels, 3 channel bandwidths

Requirements per FCC part 15B and Industry Canada RSS-Gen Issue 1, September, 2005 section 6 Table 1

Configuration 4 :: 6.0 MHz channel bandwidth: RF freq = 2499 MHz
 Configuration 5 :: 5.5 MHz channel bandwidth: RF freq = 2593 MHz
 Configuration 6 :: 5.0 MHz channel bandwidth: RF freq = 2687 MHz

Radiated emissions to be measured from 30 MHz to 14 GHz for each configuration.

3. Transmitter and Receiver AC Power Lines Conducted Emissions Limits.

Requirements per FCC part 15B and Industry Canada RSS-Gen Issue 1, September, 2005 section 7.2.2

Configuration 7 :: 6.0 MHz channel bandwidth: RF freq = 2499 MHz, transmit 14.29% duty cycle

Configuration 8 :: 5.5 MHz channel bandwidth: RF freq = 2593 MHz, receive mode



EMC Test Plan and Constructional Data Form

America

Equipment Under Test (EUT) System Components -- List and describe all components which are part of the EUT. For FCC & Taiwan testing a minimum configuration is required. (ie. Mouse, Printer, Monitor, External Disk Drive, Motherboard, etc)

Description	Model #	Serial #	FCC ID #
Residential Subscribe Unit (RSU)	OSU-2510-RV OSU-2510-RH	0049X057SCCX0 0789496	FCC: PHX-OSU2510R IC: 109AM-OSU2510R
OSU Power Supply NN# 420-0050-9000	GT-21097-5024- 4.5	RoHS00900519/0 6	N/A
Ethernet Cable CAT5e 25'	N/A	N/A	N/A

Support Equipment -- List and describe all support equipment which is not part of the EUT. (i.e. peripherals, simulators, etc) This information is required for FCC & Taiwan testing.

Description	Model #	Serial #	FCC ID #
Dell laptop computer	Precision M65	CRFK3B1	N/A
D-link Switch	DSS-5+	DR8615B009993	N/A
Belkin Mouse	F8E814-OPT	057002030	N/A
Lexar Media USB memory stick reader	Part # : RW012 Rev. B	N/A	N/A



EMC Test Plan and Constructional Data Form

America

Oscillator Frequencies			
<i>Frequency</i>	<i>Derived Frequency</i>	<i>Component # / Location</i>	<i>Description of Use</i>
40 MHz	N	Y501	TCXO for main stability
2.135 MHz	N	U5 / 4.2 Vdc Power Supply	power supply switchers
3.186 MHz	N	U1 / 7 Vdc Power Supply	
20 MHz	Y	U500	main clock
2.5 MHz	Y	U221 / Logic	ethernet clock
25 MHz	Y	U210 / Logic	ethernet clock
86.25 MHz	Y	U210 / Logic	data clocks
172.5 MHz	Y	U210 / Logic	uP core clock
3.332 - 3.58666 GHz	N	U500 / Synthesizer	Main RF frequency source (VCO)
5.8333333 / 23.3333333 / 35 / 140 MHz	Y	U210 / Logic	NN Custom ASIC processing clocks (5.0 MHz channel)
6.333333 / 25.3333333 / 38 / 152 MHz	Y	U210 / Logic	NN Custom ASIC processing clocks (5.5 MHz channel)
7 / 28 / 42 / 168 MHz	Y	U210 / Logic	NN Custom ASIC processing clocks (6 MHz channel)

Power Supply			
<i>Manufacturer</i>	<i>Model #</i>	<i>Serial #</i>	<i>Type</i>
Globtek, Inc.	GT-21097-5024-4.5	RoHS0090051 9/06	<input checked="" type="checkbox"/> Switched-mode: (Frequency) 64.7 kHz <input type="checkbox"/> Linear <input type="checkbox"/> Other: _____
			<input type="checkbox"/> Switched-mode: (Frequency) _____ <input type="checkbox"/> Linear <input type="checkbox"/> Other: _____

Power Line Filters		
<i>Manufacturer</i>	<i>Model #</i>	<i>Location in EUT</i>
N/A		



EMC Test Plan and Constructional Data Form

Critical EMI Components (Capacitors, ferrites, etc.)				
<i>Description</i>	<i>Manufacturer</i>	<i>Part # or Value</i>	<i>Qty</i>	<i>Component # / Location</i>
N/A				

EMC Critical Detail -- Describe other EMC Design details used to reduce high frequency noise.

N/A

(PLEASE INSERT "ELECTRONIC SIGNATURE" BELOW IF POSSIBLE)

Authorization Signatures (Signature Required for Certifications checked on pg 1)

/s/ Tim Blom

03/21/2007

Customer authorization to perform tests according to this test plan.

Date

Test Plan/CDF Prepared By (please print)

Date



EMC Block Diagram Form

System Configuration Block Diagram -- Provide a line drawing identifying the EUT, simulators, support equipment, I/O cables, power cables, and any other pertinent components to be used during testing. Use a dashed line to separate the equipment in the testing field versus equipment outside testing field.

** Part 15 test setup for radiated emissions compliance (DoC). **
Test setup per ANSI C63.4-2003

** Parts 2 and 27 test setup for BRS and EBS service rules **
Test setup per TIA-603-C (2004)

Authorization Signatures

/s/ Tim Blom

03/21/2007

Customer authorization to perform tests
according to this test plan.

Date

Test Plan/CDF Prepared By (please print)

Date

Appendix C

Measurement Protocol





MEASUREMENT PROTOCOL

Environmental conditions in the lab, (TUV)

Temperature: 23° C
Relative Humidity: 35 %
Atmospheric pressure: 99.0 kPa

Test Methodology

Emission testing is performed according to the procedures in ANSI C63.4-2003.

Measurement Uncertainty

The test system for conducted emissions is defined as the LISN, tuned receiver or spectrum analyzer, and coaxial cable. The test system has a measurement uncertainty of ±1.8 dB. The test system for radiated emissions is defined as the antenna, the pre-amplifier, the spectrum analyzer and the coaxial cable. The test system has a measurement uncertainty of ±4.8 dB. The equipment comprising the test systems is calibrated on an annual basis.

Justification

The Equipment Under Test (EUT) is configured in a typical user arrangement in accordance with the manufacturer's instructions. A cable is connected to each available port and either terminated with a peripheral into its characteristic impedance or left unterminated. When appropriate, the cables are manually manipulated with respect to each other to obtain maximum emissions from the unit.

Radiated Emissions

The final level, in dBµV/m, equals the reading from the spectrum analyzer (Level dBµV), adding the antenna correction factor and cable loss factor (Factor dB) to it, and subtracting the preamp gain (and duty cycle correction factor, if applicable). This result then has the limit subtracted from it to provide the Delta, which gives the tabular data as shown in the data sheets in Attachment A.

Example:

FREQ (MHz)	LEVEL (dBuV)	CABLE/ANT/PREAMP (dB) (dB/m) (dB)	FINAL (dBuV/m)	POL/HGT/AZ (m) (deg)	DELTA1
60.80	42.5Qp +	1.2 + 10.9 - 25.5 =	29.1	V 1.0 0.0	-10.9

Substitution Method

Per TIA/EIA 603-C-2004, a radiated emission scan was also made, at TUV America's Wild River Lab Large Test Site, with the EUT's antenna replaced with a termination to demonstrate case radiation compliance to the -13 dBm requirement. Radiated emissions from the EUT are measured in the frequency range of 30 to 35000 MHz using a spectrum analyzer and appropriate broadband linearly polarized antennas. Table top equipment is placed on a 1.0 X 1.5 meter non-conducting table 80 centimeters above the ground plane. Floor standing equipment is placed directly on the turntable/ground plane. Interface cables that are closer than 40 centimeters to the ground plane are bundled in the center in a serpentine fashion so they are at least 40 centimeters from the ground plane. Cables to simulators/testers (if used in this test) are routed through the center of the table and to a screen room located outside the test area. The antenna is positioned 3 meters horizontally from the EUT. To locate maximum emissions from the test sample the antenna is varied in height from 1 to 4 meters, measurement scans are made with both horizontal and vertical antenna polarizations and the EUT are rotated 360 degrees. The field strength levels were measured per ANSI C63.4. The EUT is then replaced with a tuned dipole antenna (below 1 GHz) or horn antenna (above 1 GHz). The substitute antenna was placed in the same polarization as the test antenna. A signal generator was used to generate a signal level that matched the highest level measured from the EUT. The signal generator level minus the cable loss from the signal generator to the substitute antenna plus the substitute antenna gain equals the spurious power level.

Test Equipment

All measurement instrumentation is traceable to the National Institute of Standards and Technology and is calibrated according to internal procedure.