

GLOBAL TESTING & CERTIFICATION CENTRE LTD.

**FCC
TEST REPORT**

Appl i cati on No. : 08012343 (Rx)

Rm09, 5/F Wah Wai Ind Ctr, 38-40 Au Pui Wan Street, Fotan Shatin, N. T., Hong Kong
Tel : [852] 23200326 Fax: [852] 23206287

REPORT NO.: 08012343 (RX)

DATE: 25 January, 2008

TABLE OF CONTENTS

Cover Sheet	-----	p. 1
Table of Contents	-----	p. 2
General Details	-----	p. 3 ~ p. 4
Summary of Test Results	-----	p. 5
Radiation Emission Test	-----	p. 6 ~ p. 8
Conducted Emission Test	-----	p. 9 ~ p. 11
Appendix A List of Measurement Equipment	-----	p. 12
Appendix B Test Sample (Photo)	-----	p. 13 ~ p. 18

REPORT NO.: 08012343 (RX)

DATE: 25 January, 2008

APPLICANT: Western Rivers, Inc.

ADDRESS: 1582 North Board Street,
Lexington,
Tennessee 38351.

DATE OF RECEIVED: 11 January, 2008

DATE OF TESTING: 11 January, 2008 to 25 January, 2008

DESCRIPTION OF SAMPLE:

Product: Ni te Stalker

Brand Name: Western Rivers

Model No.: 365

FCC ID: V32WRNS365R

Input Voltage: DC12V with jack or AA x 8pcs

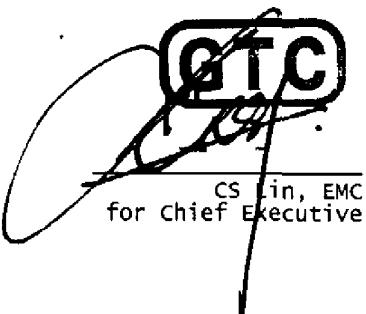
The AC/DC Adaptor used for the tests was provided by GTC Lab. with the following details: Mode Number: TC-1000RS, Input: 120V, 60Hz, Output: 12Vd.c. 1A

Description of EUT Operation The Equipment Under Test (EUT) is a Western Rivers, Inc., Ni te Skal ker

INVESTIGATION REQUESTED: FCC PART 15 SUBPART B

TEST RESULTS: See attached sheets

CONCLUSIONS: The submitted product COMPLIED with the requirements of Federal Communications Commission [FCC] Rules and Regulations Part 15. The tests were performed in accordance with the standards described above and on page 5 in this Test report.


CS Lin, EMC
for Chief Executive

REPORT NO.: 08012343 (RX)

DATE: 25 January, 2008

General Details

Test Laboratory

GLOBAL TESTING & CERTIFICATION CENTRE LTD
EMC Laboratory
Rm09, 5/F Wah Wai Ind Ctr, 38-40 Au Pui Wan Street,
Fotan Shatin, N.T., Hong Kong

Tel ephone: 852 2320 0326
Fax: 852 2320 6287

Applicant Details
Applicant

Western Rivers, Inc.
1582 North Board Street,
Lexington, Tennessee 38351.

Manufacturer

Suga Electronics Limited
Units 1904-1906, 19/F,
Chevalier Commercial Centre,
8 Wang Hoi Road,
Kowloon Bay, Hong Kong

REPORT NO.: 08012343 (RX)

DATE: 25 January, 2008

Technical Details

Investigations Requested

Perform ElectroMagnetic Interference measurement in accordance with FCC 47CFR [Codes of Federal Regulations] Part 15 and ANSI C63.4:2003 for FCC Certification.

Test Standards and Results Summary Tables

EMISSION Results Summary					
Test Condition	Test Requirement	Test Method	Test Result		
			Pass	Failed	N/A
Radiated Emissions, 30MHz to 1GHz	FCC 47CFR 15.109 (Class B)	ANSI C63.4: 2003	<input checked="" type="checkbox"/>	<input type="checkbox"/>	<input type="checkbox"/>
Conducted Emissions on AC, 0.15MHz to 30MHz	FCC 47CFR 15.107 (Class B)	ANSI C63.4: 2003	<input type="checkbox"/>	<input type="checkbox"/>	<input checked="" type="checkbox"/>

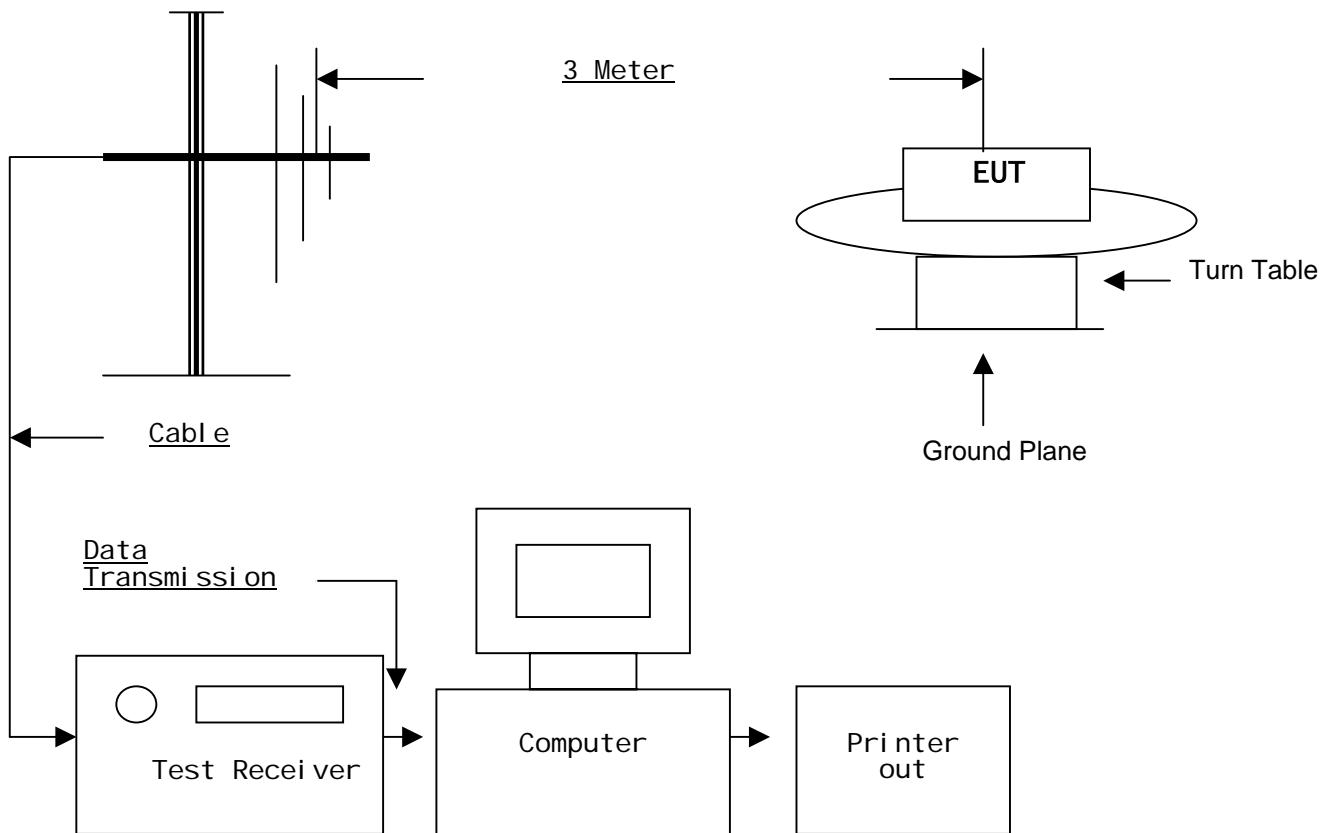
Note: N/A – Not Applicable

Test Results

Emission

Radiation Emission Measurement (30MHz to 1GHz)

Setup diagram:



Test Method:

The sample was placed 0.8m above the ground plane on the OATS*. Measurements in both horizontal and vertical polarities were performed. During the test, each emission was maximized by: having the EUT continuously working, investigated all operating modes, rotated about all 3 axis (X, Y & Z) and considered typical configuration to obtain worst position, manipulating interconnecting cables, rotating turntable, varying antenna height from 1m to 4m in both horizontal and vertical polarizations. The emissions worst-case are shown in Test Results of the following pages.

*. OATS [Open Area Test Site] located at GTC with a metal ground plane filled with the FCC pursuant to section 2.948 of the FCC rules. With Registration Number: 493655

REPORT NO.: 08012343 (RX)

DATE: 25 January, 2008

Radiation Emissions Measurement

Appl. : Western Rivers, Inc.
Model : 365
Operation: Rx and Play Mode

Test Requirement: FCC 47CFR 15.109 Level : Class B
Test Method: ANSI C63.4: 2003
Test Date: 2008-01-15

Limits for Radiated Emissions:

Frequency Range [MHz]	Quasi-Peak Limits [μ V/m]
30-88	100
88-216	150
216-960	200
Above 960	500

The emission limits shown in the above table are based on measurement employing a CISPR quasi-peak detector and above 1000MHz are based on measurements employing an average detector.

Radiated Emissions Quasi-Peak						
Frequency MHz	Measured Level @3m dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Field Strength μ V/m	Limit @3m μ V/m	E-Field Polarity
289.7	18.0	19.4	37.4	74.1	200	Horizontal
390.0	22.0	18.2	40.2	102.3	200	Horizontal
432.0	20.0	18.9	38.9	88.1	200	Horizontal
498.0	< 16.0	20.1	< 36.1	< 63.8	200	Horizontal
714.0	10.0	24.7	34.7	54.3	200	Horizontal
834.0	< 8.0	26.0	< 34.0	< 50.1	200	Horizontal

Remark:

Calculated measurement uncertainty : 30MHz to 1GHz ± 4.1 dB

REPORT NO.: 08012343 (RX)

DATE: 25 January, 2008

Radiation Emissions Measurement

Appl. : Western Rivers, Inc.
Model : 365
Operation: Transfer to PC Mode

Test Requirement: FCC 47CFR 15.109 Level : Class B
Test Method: ANSI C63.4: 2003
Test Date: 2008-01-15

Limits for Radiated Emissions:

Frequency Range [MHz]	Quasi-Peak Limits [μ V/m]
30-88	100
88-216	150
216-960	200
Above 960	500

The emission limits shown in the above table are based on measurement employing a CISPR quasi-peak detector and above 1000MHz are based on measurements employing an average detector.

Radiated Emissions Quasi-Peak						
Frequency MHz	Measured Level @3m dB μ V	Correction Factor dB/m	Field Strength dB μ V/m	Field Strength μ V/m	Limit @3m μ V/m	E-Field Polarity
30.0	< 16.0	18.4	< 34.4	< 52.5	100	Horizontal
150.0	< 16.0	15.1	< 31.1	< 35.9	150	Horizontal
300.0	< 16.0	16.6	< 32.6	< 42.7	200	Horizontal
500.0	< 8.0	20.1	< 28.1	< 25.4	200	Horizontal
700.0	< 8.0	24.6	< 32.6	< 42.7	200	Horizontal
1000.0	< 8.0	27.8	< 35.8	< 61.7	500	Horizontal

Remark:

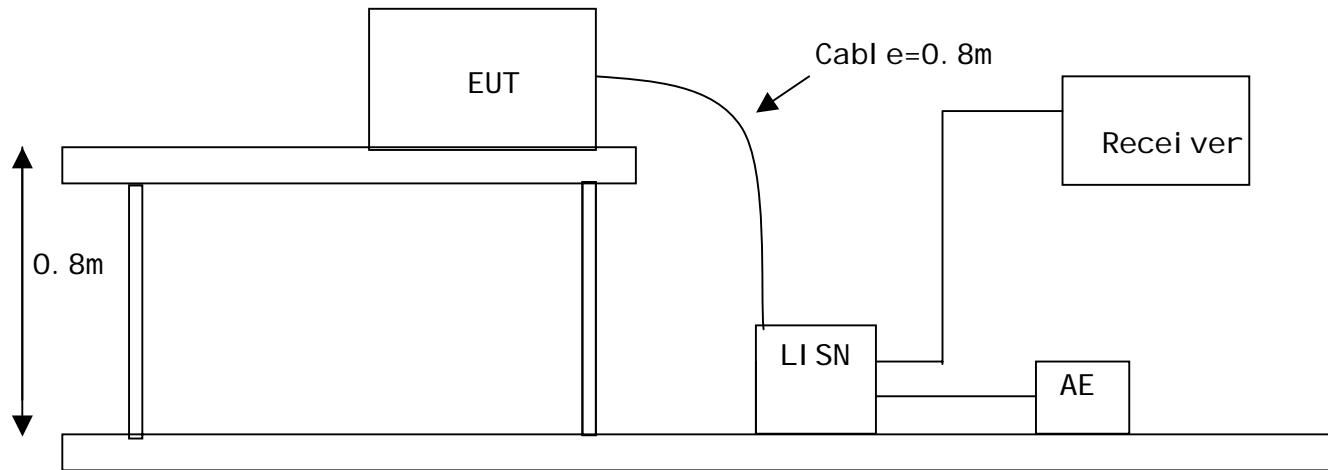
Calculated measurement uncertainty : 30MHz to 1GHz ± 4.1 dB

Test Results

Conducted Emission

Conducted Emission Measurement on AC (0.15MHz to 30MHz)

Setup diagram:



Test Method:

The test was performed in accordance with ANSI C63.4: 2003, with the following: initial measurements were performed in peak and average detection modes on the live line. Any emissions recorded within 25dB of the relevant limit lines were re-measured using quasi-peak and average detection on the live and neutral lines with the worst case recorded in the table of results.

REPORT NO.: 08012343 (RX)

DATE: 25 January, 2008

Conducted Emission on AC (0.15MHz to 30MHz)

Appl. : Western Rivers, Inc.
Model : 365
Operation: Play Mode

Test Requirement: FCC 47CFR 15.107 Level : Class B
Test Method: ANSI C63.4: 2003
Test Date: 2008-01-14

Limits for Conducted Emissions:

Frequency Range [MHz]	Quasi-Peak Limits [dB μ V]	Average [dB μ V]
0.15-0.5	66 to 56*	56 to 46*
0.5-5.0	56	46
5.0-30.0	60	50

*Decreases with the logarithm of the frequency.

Please refer to the following table for individual results.

Final Measurement Results:

Frequency (MHz)	Quasi-Peak		Average		Conductor (Live / Neutral)
	Level (dB μ V)	Limit (dB μ V)	Level (dB μ V)	Limit (dB μ V)	
0.15	40.0	66.0	37.0	56.0	Live
0.21	38.0	63.2	35.0	54.0	
0.44	35.0	57.0	32.0	51.8	
1.54	30.0	56.0	27.0	46.0	
6.30	< 28.0	60.0	< 25.0	46.0	
24.84	35.0	60.0	32.0	50.0	
30.00	< 28.0	60.0	< 25.0	50.0	
0.15	37.0	66.0	37.0	56.0	Neutral
0.21	35.0	63.6	37.0	54.0	
0.44	32.0	57.0	31.0	51.8	
1.54	27.0	56.0	27.0	46.0	
6.30	< 25.0	60.0	< 25.0	46.0	
24.84	32.0	60.0	30.0	50.0	
30.00	< 25.0	60.0	< 25.0	50.0	

Remarks:

Calculated measurement uncertainty: $\pm 3.2\text{dB}$

REPORT NO.: 08012343 (RX)

DATE: 25 January, 2008

Conducted Emission on AC (0.15MHz to 30MHz)

Appl. : Western Rivers, Inc.
Model : 365
Operation: Transfer to PC Mode

Test Requirement: FCC 47CFR 15.107
Test Method: ANSI C63.4: 2003
Test Date: 2008-01-14

Level : Class B

Limits for Conducted Emissions:

Frequency Range [MHz]	Quasi-Peak Limits [dB μ V]	Average [dB μ V]
0.15-0.5	66 to 56*	56 to 46*
0.5-5.0	56	46
5.0-30.0	60	50

*Decreases with the logarithm of the frequency.

Please refer to the following table for individual results.

Final Measurement Results:

Frequency (MHz)	Quasi-Peak		Average		Conductor (Live / Neutral)
	Level (dB μ V)	Limit (dB μ V)	Level (dB μ V)	Limit (dB μ V)	
0.15	43.0	66.0	40.0	56.0	Live
0.20	40.0	63.6	37.0	54.0	
0.44	35.0	57.0	32.0	51.8	
1.59	30.0	56.0	27.0	46.0	
5.05	40.0	60.0	37.0	46.0	
7.21	42.0	60.0	39.0	50.0	
23.88	32.0	60.0	29.0	50.0	
30.00	< 28.0	60.0	< 25.0	50.0	
0.15	45.0	66.0	42.0	56.0	
0.20	40.0	63.6	37.0	54.0	
0.44	35.0	57.0	32.0	51.8	Neutral
1.59	32.0	56.0	29.0	46.0	
5.05	38.0	60.0	35.0	46.0	
7.21	42.0	60.0	39.0	50.0	
23.88	30.0	60.0	27.0	50.0	
30.00	< 28.0	60.0	< 25.0	50.0	

Remarks:

Calculated measurement uncertainty: $\pm 3.2\text{dB}$

REPORT NO.: 08012343 (RX)

DATE: 25 January, 2008

APPENDIX A

LIST OF MEASUREMENT EQUIPMENT

Equip. No.	Equipment	Manufacturer	Model No.	Serial No.	Calibration Date	Due Date
E005	EMI Test Receiver	Rohde & Schwarz	ESVP	893417/019	21 Sep 2007	20 Sep 2008
E003	Spectrum Analyzer with Q/P	Tektronix	2712	B034039	21 Sep 2007	20 Sep 2008
E004	RF Preselector	Tektronix	2706	B010649	21 Sep 2007	20 Sep 2008
E007	EMI Test Receiver	Rohde & Schwarz	ESVP	863112/007	17 Aug 2007	16 Aug 2008
E084	Spectrum Analyzer	Hewlett Packard	HP 8568B	3001A04930	07 Jul 2006	06 Jul 2008
E085	Display of Spectrum Analyzer	Hewlett Packard	HP 85662A	2033A01841	07 Sep 2006	06 Sep 2008
E086	Quasi-Peak Adaptor	Hewlett Packard	HP 85650A	2527A00785	07 Sep 2006	06 Sep 2008
E090	RF Signal Generator	Rohde & Schwarz	SMX	832566/005	04 Mar 2007	03 Mar 2008
E001	Antenna System	Schwarzbeck	D-6917	UHALP9107	04 Mar 2007	03 Mar 2008
E002	Antenna System	Schwarzbeck	VHA9103	VHA91031253	04 Mar 2007	03 Mar 2008
E008	LISN	EMCO	3825/2	1115	20 Sep 2005	19 Sep 2008
E115	Limiter 50 Ohm DC-1800MHz	Hewlett Packard	11867A	-----	04 Mar 2007	03 Mar 2008
E100	Turntable	Chi oce Way	TB1200	51112	-----	-----
E006	RF Signal Generator	Fluke	6060A	3880007	04 Mar 2007	03 Mar 2008
E092	Antenna Tri pole	IT&T	UH800100	A05011	04 Mar 2007	03 Mar 2008
E098	Pre-Amplifier	Hewlett Packard	8447D	2944A09089	04 Mar 2007	03 Mar 2008
E099	Antenna Mast	Schwarzbeck	AM9014	-----	-----	-----
E113	Spectrum Analyzer	Hewlett Packard	HP8566B	2747A05483	07 Sep 2006	06 Sep 2008

REPORT NO.: 08012343 (RX)

DATE: 25 January, 2008

APPENDIX B

Photos of EUT

Front View of the product



Rear View of the product



Component Side View



Copper Side View



REPORT NO.: 08012343 (RX)

DATE: 25 January, 2008

Photos of EUT

Front View of the product



Rear View of the product



Component Side View



Copper Side View

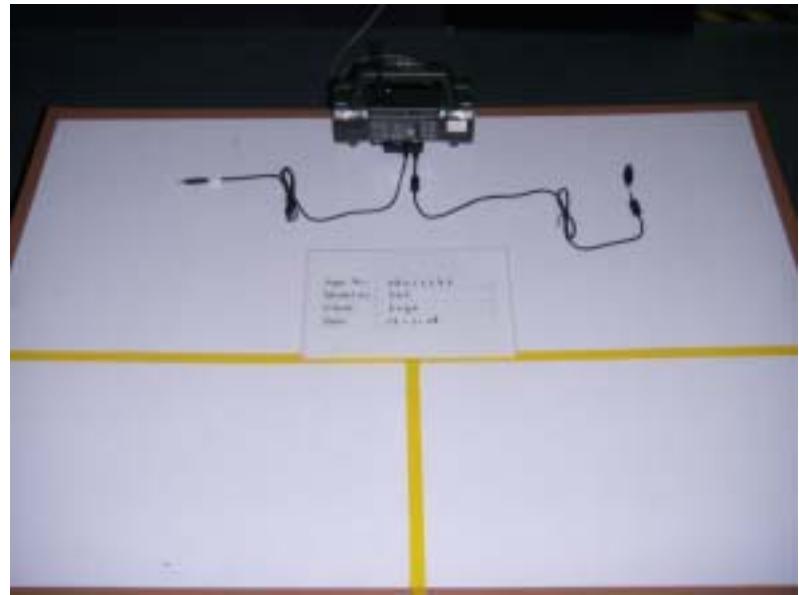


REPORT NO.: 08012343 (RX)

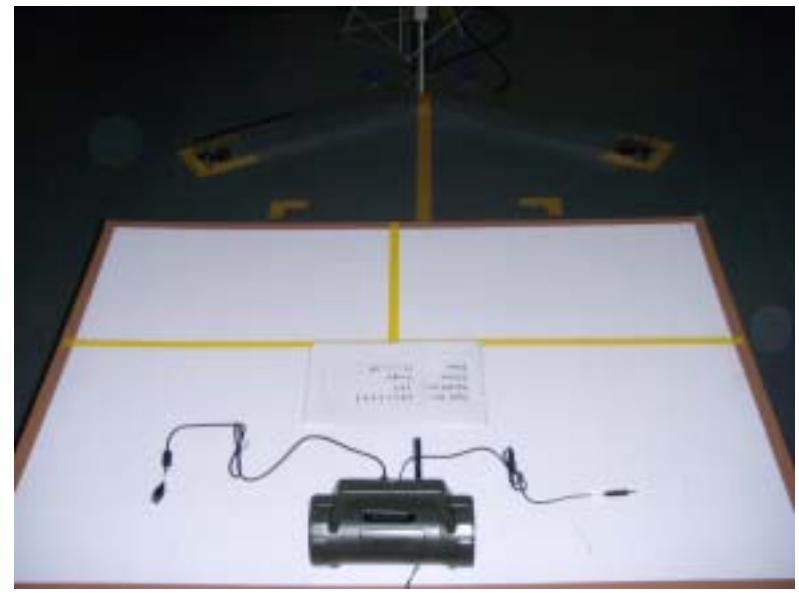
DATE: 25 January, 2008

Photos of EUT

Measurement of Radiated Emission Test Set up



Measurement of Radiated Emission Test Set up



REPORT NO.: 08012343 (RX)

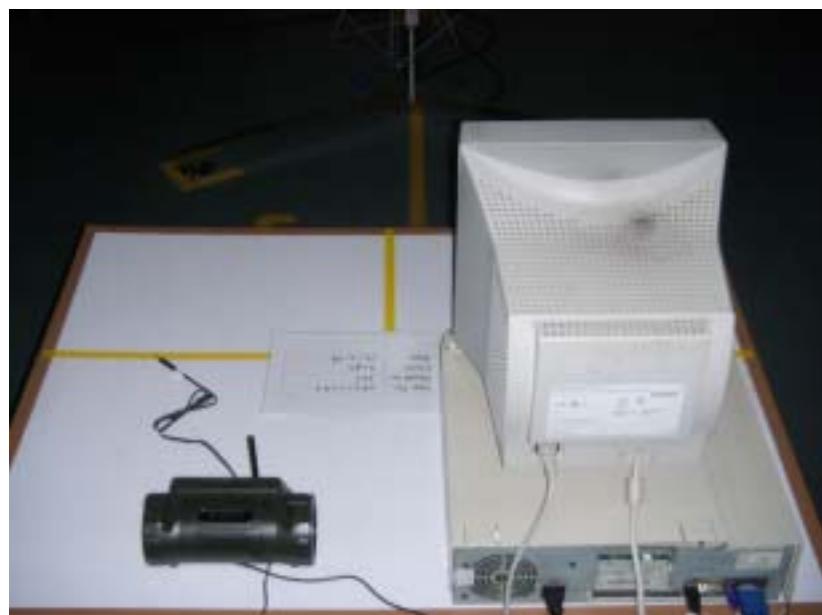
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Photos of EUT

Measurement of Radiated Emission Test Set up



Measurement of Radiated Emission Test Set up



REPORT NO.: 08012343 (RX)

DATE: 25 January, 2008

Photos of EUT

Measurement of Conducted Emission Test Set up



Measurement of Conducted Emission Test Set up



REPORT NO.: 08012343 (RX)

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Photos of EUT

Measurement of Conducted Emission Test Set up



Measurement of Conducted Emission Test Set up



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