MET Laboratories, Inc. *Safety Certification - EMI - Telecom Environmental Simulation*
914 WEST PATAPSCO AVENUE ● BALTIMORE, MARYLAND 21230-3432 ● PHONE (410) 354-3300 ● FAX (410) 354-3313

May 29, 2009

JDSU
1100 Perimeter Park Drive
Morrisville, NC 27560

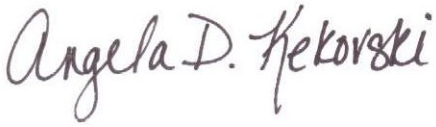
Dear Mike Michel,

Enclosed is the EMC test report for JDSU, RCATS AMP, Model #: RCT006-0000. The measured EIRP data are included for the 1700 MHz and 1900 MHz band.

Thank you for using the services of MET Laboratories, Inc. If you have any questions regarding these results or if MET can be of further service to you, please feel free to contact me.

Sincerely yours,

MET LABORATORIES, INC.



Angela D. Kekovski
Documentation Department

Reference: (\JDSU\ EMC26633-FCC24/27)

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Electromagnetic Compatibility Criteria Test Report

For the

JDSU
RCATS AMP, Model #: RCT006-0000

MET Report: EMC26633-FCC24/27

May 29, 2009

Prepared For:

JDSU
1100 Perimeter Park Drive
Morrisville, NC 27560

Prepared By:
MET Laboratories, Inc.
914 W. Patapsco Avenue
Baltimore, MD 21230

Electromagnetic Compatibility Criteria
Test Report

For the

JDSU
RCATS AMP, Model #: RCT006-0000

Shawn McMillen
Wireless Manager

Angela D. Kekovski
Documentation Department

Len Knight
Electromagnetic Compatibility Lab

Report Status Sheet

Revision	Report Date	Reason for Revision
∅	May 29, 2009	Initial Issue.

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1.0 Requirements Summary

Reference	Description	Compliance
Part 24 and Part 27	EIRP	Meets criteria for original UTStarcom grant (FCC ID: O6Y-UM100)

Table 1. Summary of EMC Testing

Equipment Configuration

1.1 Overview

An EMC evaluation to determine compliance of the JDSU RCATS AMP, Model #: RCT006-0000 with the EIRP requirements of the original UTStarcom grant (FCC ID: O6Y-UM100) was performed. An external antenna was added to the UTStarcom Tri-Band CDMA/EUDO USB modem internal to the RCATS AMP, Model #: RCT006-0000. JDSU should retain a copy of this document which should be kept on file for at least two years after the manufacturing of the RCATS AMP, Model #: RCT006-0000 has been **permanently** discontinued.

The following tests were conducted on a sample of the equipment for the purpose of demonstrating compliance with the RF Power Output (Radiated) requirements of the original UTStarcom grant, in accordance with JDSU, purchase order number 294048913. All tests were conducted using measurement procedure *ANSI/TIA/EIA-603-C (2004)*.

Type of Submission/Rule:	EIRP Measurements
Model(s) Tested:	RCATS AMP, Model #: RCT006-0000
EUT Specifications:	Primary Power: 120 Vac, 60 Hz
	Equipment Frequency Range: 1700 MHz and 1900 MHz
Analysis:	The results obtained relate only to the item(s) tested.
Evaluated by:	Len Knight
Date(s):	May 6, 2009

1.2 Test Site

All testing was performed at MET Laboratories, Inc., 914 W. Patapsco Avenue, Baltimore, MD 21230. All equipment used in making physical determinations is accurate and bears recent traceability to the National Institute of Standards and Technology.

Radiated Emissions measurements were performed in a shielded enclosure. In accordance with §2.948(a)(3), a complete site description is contained at MET Laboratories. In accordance with §2.948(d), MET Laboratories has been accredited by the National Voluntary Laboratory Accreditation Program (Lab Code: 100273-0).

1.3 Description of Test Sample

The EUT is a USB based test platform that tests wireless handset connectivity from the cellular network to the USB interface. This unit is specific to testing the UT Starcom 100C USB data device.

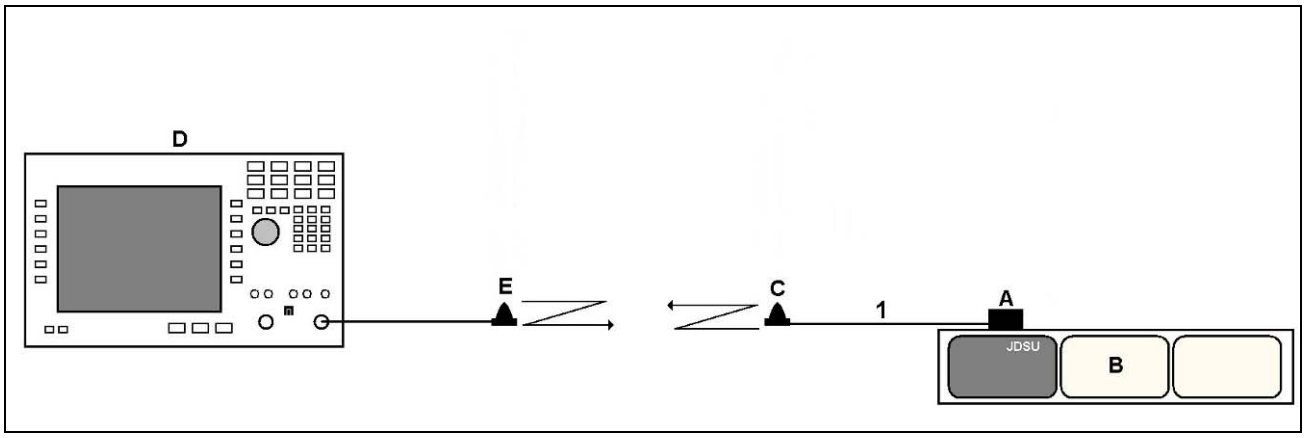

Figure 1. Block Diagram of Test Configuration

2.0 Equipment Configuration

The EUT was set up as outlined in Figure 1.

Ref. ID	Name / Description	Manufacturer	Model Number	Part Number	FCC ID
A	TRI-BAND CDMA/EVDO USB MODEM	UTSTARCOM	N/A	N/A	O6Y-UM100
B	RCATS/AMP	JDSU	N/A	N/A	N/A
C	LOW PROFILE MULTI-BAND ANTENNA	LAIRD	N/A	TRAB806/17103	N/A

Table 2. Equipment Configuration

2.1 Support Equipment

Support equipment necessary for the operation and testing of the EUT is included in the following list.

Ref. ID	Name / Description	Manufacturer	Model Number	Part Number	Serial Number
D	WIRELESS COMMUNICATIONS TEST SET	AGILENT	E5515C	8960 SERIES 10	MY47511358
E	LOW PROFILE MULTI-BAND ANTENNA	LAIRD	N/A	TRAB806/17103	N/A

Table 3. Support Equipment

2.2 Antenna

Ref. ID	Port name on EUT	Cable Description or reason for no cable	Qty.	Length (ft)	Shielded? (Y/N)	Termination
1	Antenna	RG58	1	12	Y	Antenna

2.3 Antenna Information

Specifications	
Part Number	TRAB806/17103
Frequency Range	806-896MHz: Cellular/iDEN 890-960MHz: GSM Europe 1575.42MHz: GPS 1710-1880MHz: 1700 AWS 1710-1880MHz: DCS Europe 1850-1990MHz: PCS 1900-2170Mhz: UMTS 2110-2155MHz: 1700 AWS 2.4-2.5GHz: WiFi
Impedance	50 Ohms
Antenna Gain (Peak)	3dB-MEG 806-896MHz: 5.9dBi 890-960MHz: 5.8dBi 1575.42MHz: 5.1dBi 1710-1880MHz: 4.2dBi 1850-1990MHz: 4.2dBi 1900-2170Mhz: 4.4dBi 2.4-2.5GHz: 3.0dBi
Radiation	Omni
Polarization	Cross Polarized
Ground Plane	Metal Ground Plane Required (6.5" diameter)
Height	2.3"
Width	1.438"
Color	Black
Mount	**NMO Mount Types (Sold Separately)** 3/8" Hole - Roof Mount (17' Coax) 3/4" Hole - Roof Mount (17' Coax) NMO Magnetic Mount (12' Coax) Trunk Mount (14' Coax)

2.4 Mode of Operation

The UTStarcom Tri-Band CDMA/EUDO USB Modem received power through the RCATS AMP, Model #: RCT006-0000 as it would during normal operation.

A call box was used to initiate and establish a call with the cellular modem. The device was configured with "All Up" power control bits in multiple modes. Testing was preformed in both the AWS and the PCS band.

2.5 Modifications

2.5.1 Modifications to EUT

No modifications were made to the EUT.

2.5.2 Modifications to Test Standard

No modifications were made to the test standard.

2.6 Disposition of EUT

The test sample including all support equipment submitted to the Electro-Magnetic Compatibility Lab for testing was returned to JDSU upon completion of testing.

3.0 Electromagnetic Compatibility Criteria

RF Power Output

Test Requirement(s): The intent of these measurements is to measure the EIRP of the transmitter at the 1700 MHz and 1900 MHz band.

Test Procedures:

a) The EUT was located in a 3 m semi anechoic chamber.

b) EIRP power measurements were made by antenna substitution method in accordance with ANSI/TIA/EIA-603-C-2004.

c) Initial field strength measurements were made with the communication link in multiple modes.

d) Only the highest field strengths were recreated through antenna substitution to find maximum EIRP.

Band	Channel	SO2 RC1/1	SO2 RC3/3	SO55 RC1/1	SO55 RC3/3	SO32 RC3/3	1xEvDO Rev.0 FTAP	1xEvDO Rev.0 RTAP	1xEvDO Rev.A FETAP	1xEvDO Rev.A RETAP
PCS CDMA	25	87.97	89.94	87.58	88.37	89.53	**90.2**	89.83	90.12	89.95
	600	85.39	90.22	88.88	90.85	91.37	91.18	**91.75**	90.29	90.77
	1175	83.91	89.78	87.74	89.95	90.32	**90.52**	90.15	89.32	90.41
AWS CDMA	25	87.76	**91.9**	90.36	89.94	91.07	91.22	90.35	90.91	89.21
	425	89.02	91.58	87.88	86.22	87.31	**92.06**	91.84	91.78	91.54
	875	89	89.28	87.22	87.41	87.8	91.51	91.62	91.55	**92.02**

Band	Channel	Frequency (MHz	Measurement (dBuV)	Power into Substitute Antenna (dBm)	Substitute Antenna Gain (dBi)	EIRP
PCS	25	1851.3	90.2	10.39	4.77	15.16
	600	1880	91.75	13.5	4.8	18.3
	1175	1908.8	90.52	12.66	4.68	17.34
AWS	25	1711.3	91.9	10.21	5.04	15.25
	425	1731.3	92.06	8.84	5	13.84
	875	1753.9	92.02	11.29	4.95	16.24

Test Engineer(s): Len Knight

Test Date(s): May 6, 2009

Photograph 1. Test Setup

4.0 Test Equipment

Calibrated test equipment utilized during testing was maintained in a current state of calibration per the requirements of *ANSI/NCSL Z540-1-1994* and *ANSI/ISO/IEC 17025:2000*.

Test Name: Unintentional Radiated Emissions				**Test Date(s): May 6, 2009**	
MET Asset #	**Nomenclature**	**Manufacturer**	**Model**	**Last Cal Date**	**Cal Due Date**
1T4300	SEMI-ANECHOIC CHAMBER # 1	EMC TEST SYSTEMS	NONE	02/17/2006	05/22/2009
1T2665	Horn Antenna	EMCO	3115	05/07/2008	05/07/2009
1T4483	Double Ridge Waveguide Horn	ETS Lindgren	3117	05/07/2008	05/07/2009
1T4612	ESA-E Series Spectrum Analyzer	Agilent	E4407B	02/17/2009	02/17/2010
1T4271	RF Signal Generator	HP	8648C	06/30/2008	06/30/2009
1T4365	Amplifier	MINI CIRCUITS	ZHL-42	Functional Verification	
1T4299	Signal Generator	HP	E4432B	11/12/2008	11/12/2009

Note: Functionally verified test equipment is verified using calibrated instrumentation at the time of testing.

