ENGINEERING TEST REPORT

DRU-1KW
Model: DRU-1KW
FCC ID: 2ACLT-DRU1KW

Applicant:

Unique Broadband Systems Ltd.
400 Spinnaker Way
Vaughan, Ontario
Canada L4K 5Y9

Tested in Accordance With

Federal Communications Commission (FCC)
47 CFR, Parts 2 and 25

UltraTech's File No.: UNBS-005F25

This Test report is Issued under the Authority of
Tri M. Luu
Vice President of Engineering
UltraTech Group of Labs

Date: September 26, 2014

Report Prepared by: Dan Huynh Issued Date: September 26, 2014	Tested by: Hung Trinh Test Dates: February 25, 2014 August 13 - September 3, 2014

- *The results in this Test Report apply only to the sample(s) tested, and the sample tested is randomly selected.*
- *This report must not be used by the client to claim product endorsement by NVLAP or any agency of the US Government.*

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EXHIBIT 1. INTRODUCTION

1.1. SCOPE

Reference:	FCC Parts 2 and 25
Title:	Code of Federal Regulations (CFR), Title 47 –Telecommunication, Part 25 – satellite Communications
Purpose of Test:	To gain FCC Equipment Authorization for Radio operating in Part 25.
Test Procedures:	FCC KDB Publication 971168 D01

1.2. RELATED SUBMITTAL(S)/GRANT(S)

None.

1.3. NORMATIVE REFERENCES

Publication	Year	Title
FCC CFR Parts 0-19, 80-End	2013	Code of Federal Regulations, Title 47 – Telecommunication
ANSI C63.4	2009	American National Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz
FCC KDB Publication 971168 D01 v02r01	2013	Measurement Guidance for Certification of Licensed Digital Transmitters
TIA/EIA 603, Edition D	2010	Land Mobile FM or PM Communications Equipment Measurement and Performance Standards
CISPR 22 & EN 55022	2008-09, Edition 6.0 2006	Information Technology Equipment - Radio Disturbance Characteristics - Limits and Methods of Measurement
CISPR 16-1-1 +A1 +A2	2006 2006 2007	Specification for radio disturbance and immunity measuring apparatus and methods. Part 1-1: Measuring Apparatus
CISPR 16-1-2 +A1 +A2	2003 2004 2006	Specification for radio disturbance and immunity measuring apparatus and methods. Part 1-2: Conducted disturbances

EXHIBIT 2. PERFORMANCE ASSESSMENT

2.1. CLIENT INFORMATION

Applicant	
Name:	Unique Broadband Systems Ltd.
Address:	400 Spinnaker Way Vaughan, Ontario Canada L4K 5Y9
Contact Person:	Ana Maria De Valencia Phone #: 905-669-8533 ext 141 Fax #: 905-669-8516 Email Address: anamariad@uniquesys.com

Manufacturer	
Name:	Unique Broadband Systems Ltd.
Address:	400 Spinnaker Way Vaughan, Ontario Canada L4K 5Y9
Contact Person:	Mr. Catalin Popescu Phone #: 905-669-8533 ext 125 Fax #: 905-669-8516 Email Address: catalinp@uniquesys.com

2.2. EQUIPMENT UNDER TEST (EUT) INFORMATION

The following information (with the exception of the Date of Receipt) has been supplied by the applicant.

Brand Name:	Unique Broadband Systems Ltd.
Product Name:	DRU-1KW
Model Name or Number:	DRU-1KW
Serial Number:	Test Sample
Type of Equipment:	Licensed Non-Broadcast Station Transmitter
Power Supply Requirement:	190 – 264 VAC (208 VAC 60 Hz Nominal)
Transmitting/Receiving Antenna Type:	Non-integral
Primary User Functions of EUT:	SDARS Terrestrial Repeater

2.3. EUT'S TECHNICAL SPECIFICATIONS

Transmitter	
Equipment Type:	Base station (fixed use)
Intended Operating Environment:	Commercial, industrial or business environment
Power Supply Requirement:	190 – 264 VAC (208 VAC 60 Hz Nominal)
RF Output Power Rating:	1000 W, for Low Band (LB)* 1000 W, for High Band (HB)** 2 W, for Low Band Diversity (LBD)
Operating Frequency Range:	2326.250 MHz (LB) 2326.256040 MHz (LBD) 2338.755 MHz (HB)
RF Output Impedance:	50 Ω
Channel Spacing:	N/A
Modulation Employed:	OFDM
Emission Designation:	3M84W1W, 5M00W1W, 22K8W1W
Antenna Connector Type:	WR340 7/8 EIA

*Low Band: 2320.0 – 2332.5 MHz

**High Band: 2332.5 – 2345.0 MHz

2.4. LIST OF EUT'S PORTS

Port Number	EUT's Port Description	Number of Identical Ports	Connector Type	Cable Type (Shielded/Non-shielded)
1	GPS (Low Band Cabinet)	1	N	Shielded
2	HB Sat (High Band Cabinet)	1	N	Shielded
3	Test (Low Band Cabinet)	1	SMA	Shielded
4	Alarm (Low Band Cabinet)	1	Terminal Block	Non-Shielded
5	POTS (Low Band Cabinet)	1	2-wire	Non-Shielded
6	V-SAT (Low Band Cabinet)	1	F	Shielded
7	AC Power (Low Band Cabinet)	1	4-wire (L1, L2, N, G)	Non-Shielded
8	AC Power (High Band Cabinet)	1	4-wire (L1, L2, N, G)	Non-Shielded
9	Output 1	1	WR340	Shielded
10	Output 2	1	WR340 or 7/8 EIA	Shielded

2.5. ANCILLARY EQUIPMENT

None.

EXHIBIT 3. EUT OPERATING CONDITIONS AND CONFIGURATIONS DURING TESTS

3.1. CLIMATE TEST CONDITIONS

The climate conditions of the test environment are as follows:

Temperature:	21°C - 24°C
Humidity:	45% to 58%
Pressure:	102 kPa
Power input source:	208 VAC 60Hz

3.2. OPERATIONAL TEST CONDITIONS & ARRANGEMENT FOR TEST SIGNALS

Operating Modes:	The transmitter was operated in a continuous transmission mode with the carrier modulated as specified in the Test Data.
Special Test Software:	N/A
Special Hardware Used:	N/A
Transmitter Test Antenna:	The EUT is tested with the transmitter antenna port terminated to a 50 Ω Load.

Transmitter Test Signals	
Frequency Band(s):	2326.250 MHz 2326.256040 MHz 2338.755 MHz
Test Frequency(ies):	2326.250 MHz 2326.256040 MHz 2338.755 MHz
Transmitter Wanted Output Test Signals:	
• Transmitter Power (measured maximum output power):	1000 W, for LB and HB 2 W, for LBD
• Normal Test Modulation:	OFDM
• Modulating signal source:	External

EXHIBIT 4. SUMMARY OF TEST RESULTS

4.1. LOCATION OF TESTS

All of the measurements described in this report were performed at Ultratech Group of Labs located in the city of Oakville, Province of Ontario, Canada.

- AC Power Line Conducted Emissions were performed in UltraTech's shielded room, 24'(L) by 16'(W) by 8'(H).
- Radiated Emissions were performed at the Ultratech's 3-10 TDK Semi-Anechoic Chamber situated in the Town of Oakville, province of Ontario. This test site been calibrated in accordance with ANSI C63.4, and found to be in compliance with the requirements of Sec. 2.948 of the FCC Rules. The descriptions and site measurement data of the Oakville 3-10 TDK Semi-Anechoic Chamber has been filed with FCC office (FCC File No.: 91038) and Industry Canada office (Industry Canada File No.: 2049A-3). Expiry Date: 2017-04-02.

4.2. APPLICABILITY & SUMMARY OF EMC EMISSION TEST RESULTS

FCC Section(s)	Test Requirements	Applicability (Yes/No)
2.1046, 25.144(e)(7)(ii) & 25.214(d)(1)	RF Power Output	Yes
2.1049, 25.202(a)(6) & 25.202(f)	Occupied Bandwidth	Yes
2.1051, 2.1057 & 25.202(h)(1)	Spurious Emissions at Antenna Terminal	Yes
2.1053, 2.1057 & 25.202(h)(1)	Field Strength of Spurious Emissions	Yes
2.1055 & 25.202(d)	Frequency Stability	Yes
1.1307 & 1.1310	RF Exposure	See Note 1
Note 1: To be addressed at the time of licensing.		

4.3. MODIFICATIONS INCORPORATED IN THE EUT FOR COMPLIANCE PURPOSES

None.

4.4. DEVIATION OF STANDARD TEST PROCEDURES

None.

EXHIBIT 5. TEST DATA

5.1. RF POWER OUTPUT [§§ 2.1046, 25.144(e)(7)(ii) & 25.214]

5.1.1. Limit(s)

§25.214(d)(1) SDARS terrestrial repeaters must be operated at a power level less than or equal to 12-kW average EIRP, with a maximum peak-to-average power ratio of 13 dB.

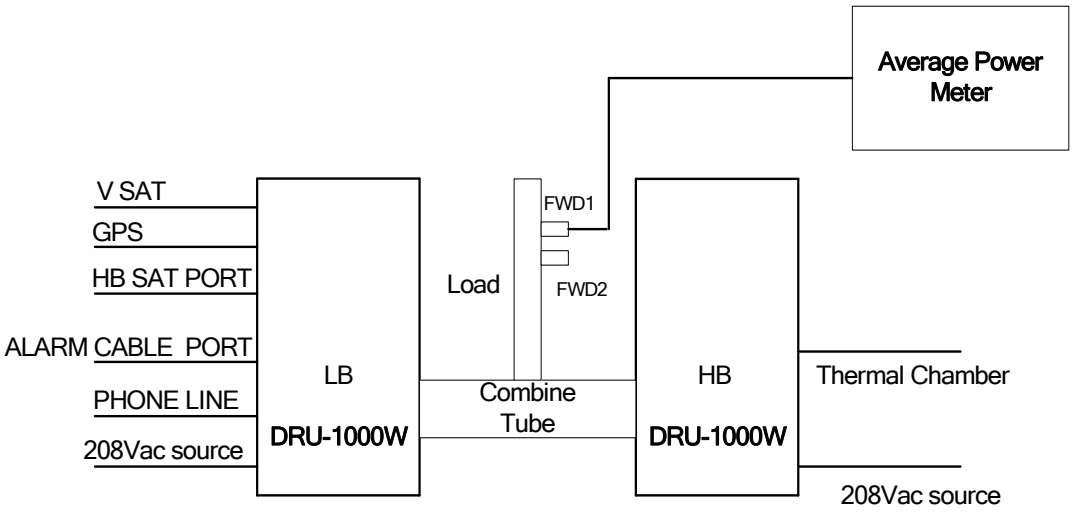
§25.144(e)(7)(ii) In addition to the procedures set forth in subpart J of part 2 of this chapter, power measurements for SDARS repeater transmitters may be made in accordance with a Commission-approved average power technique. Peak-to-average power ratio (PAPR) measurements for SDARS repeater transmitters should be made using either an instrument with complementary cumulative distribution function (CCDF) capabilities to determine that the PAPR will not exceed 13 dB for more than 0.1 percent of the time or another Commission approved procedure. The measurement must be performed using a signal corresponding to the highest PAPR expected during periods of continuous transmission.

5.1.2. Method of Measurements

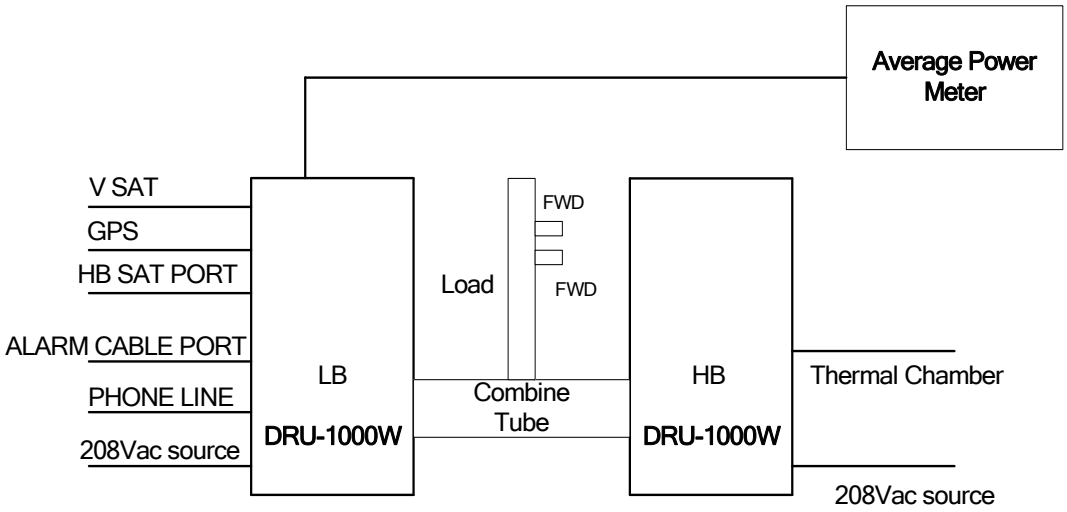
FCC KDB Publication 971168 D01, Sections 5.2.3 and 5.7.1

5.1.3. Test Arrangement

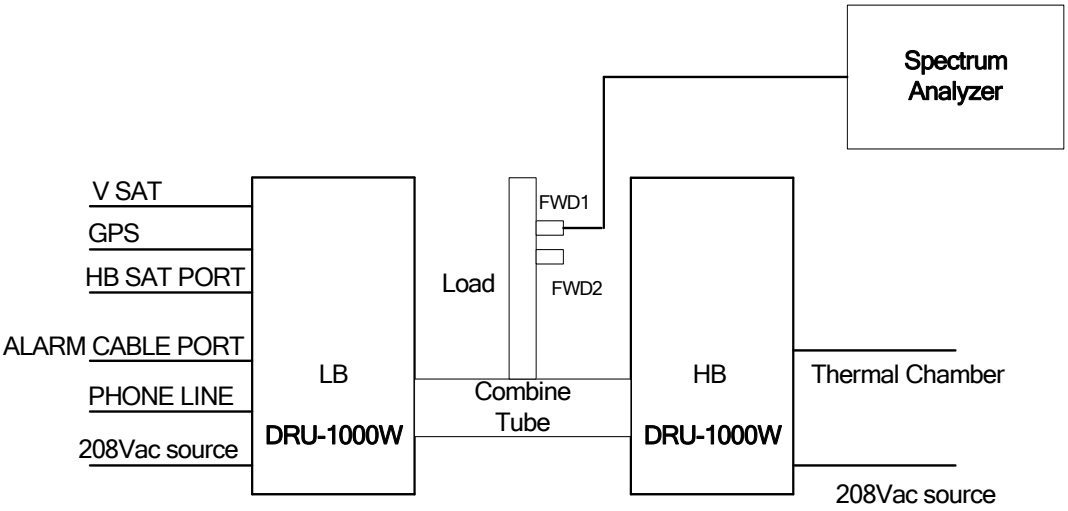
Average Power for LB and HB



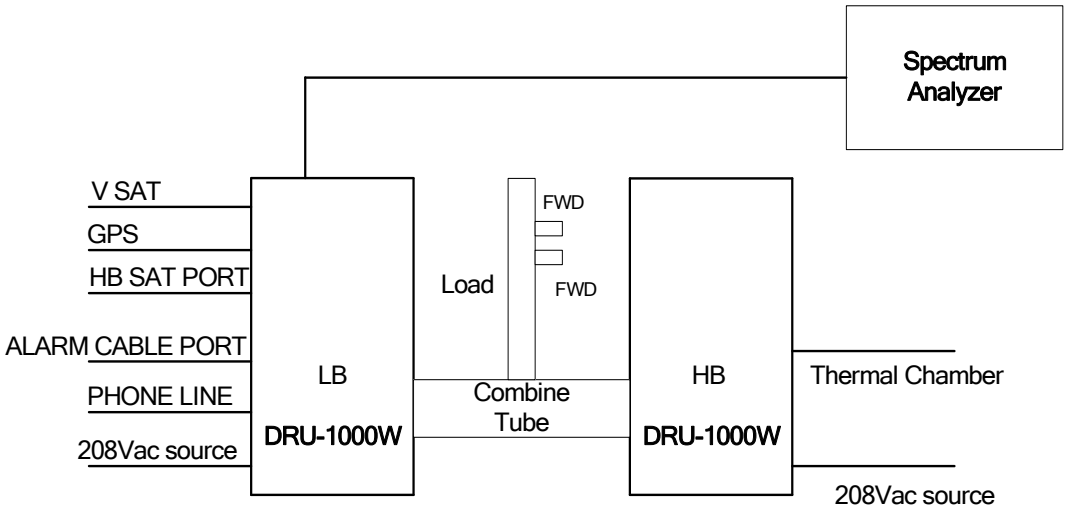
Average Power for LB Diversity



Peak-to-Average Power Ratio for LB and HB



Peak-to-Average Power Ratio for LB Diversity



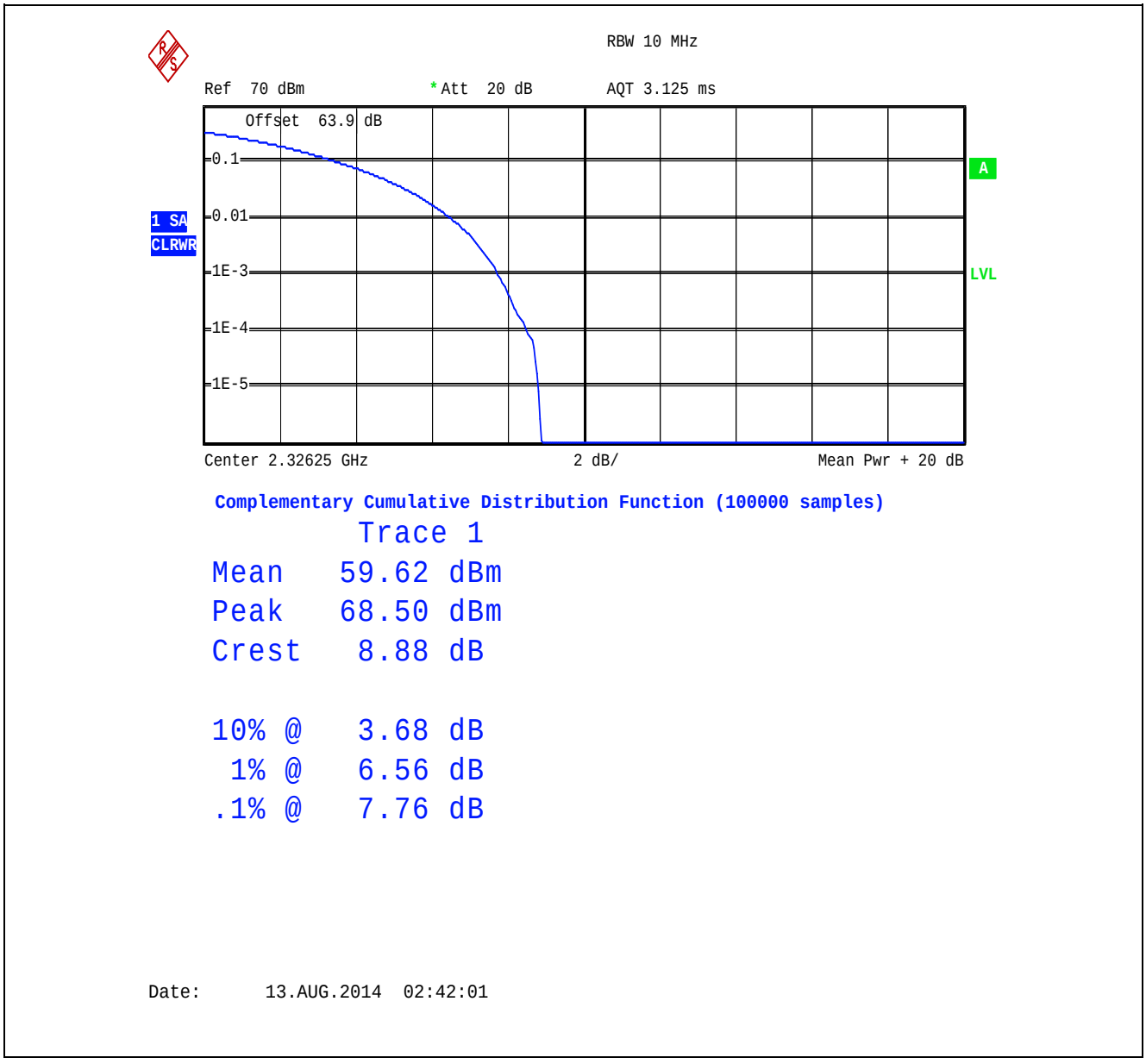
5.1.4. Test Data

5.1.4.1. Average Power

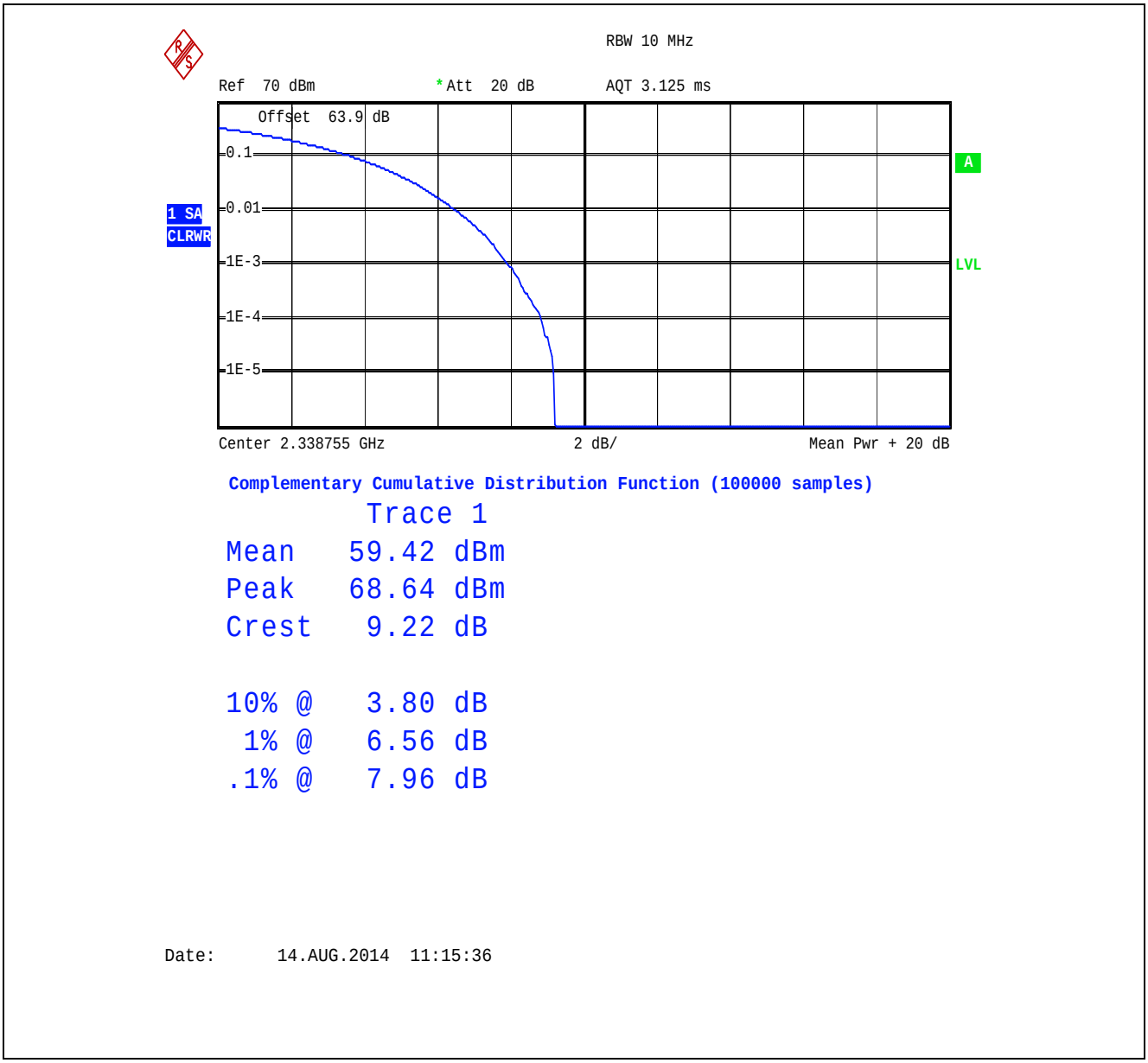
Frequency Band	Frequency (MHz)	Measured Conducted Power Output		Power Output Rating	
		(dBm)	(W)	(dBm)	(W)
LB (2320.0 – 2332.5 MHz)	2326.250	60.03	1006.93	60	1000
LB Diversity (2320.0 – 2332.5 MHz	2326.256040	33.00	2	33	2
HB (2332.5 – 2345.0 MHz)	2338.755	60.06	1013.91	60	1000

5.1.4.2. Peak-to-Average Power Ratio (PAPR)

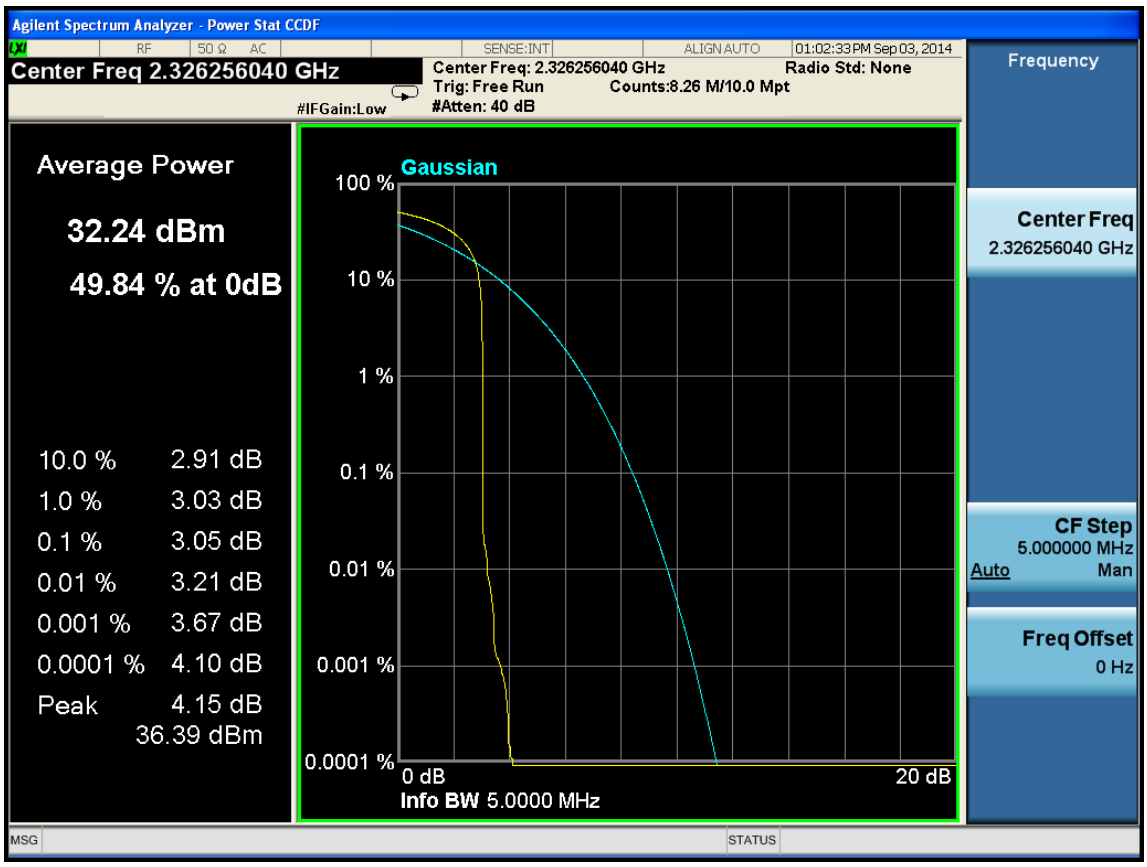
Plot 5.1.4.2.1. Peak-to-Average Power Ratio, LB, 2326.250 MHz, OFDM Modulation, CCDF



Plot 5.1.4.2.2. Peak-to-Average Power Ratio, HB, 2338.755 MHz, OFDM Modulation, CCDF



Plot 5.1.4.2.3. Peak-to-Average Power Ratio, LB Diversity, 2326.256040 MHz, OFDM Modulation, CCDF



5.2. OCCUPIED BANDWIDTH [§§ 2.1049 & 25.202(a)(6)]

5.2.1. Limit(s)

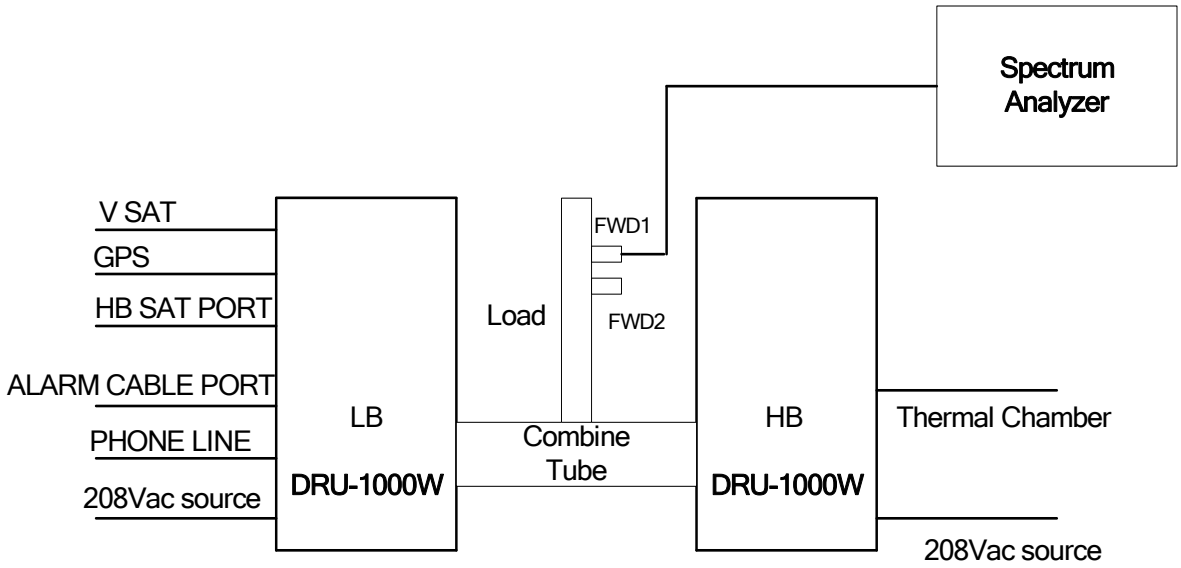
The occupied bandwidth shall be within the authorized frequency band of §25.202(a)(6) under which the equipment is operated.

5.2.2. Method of Measurements

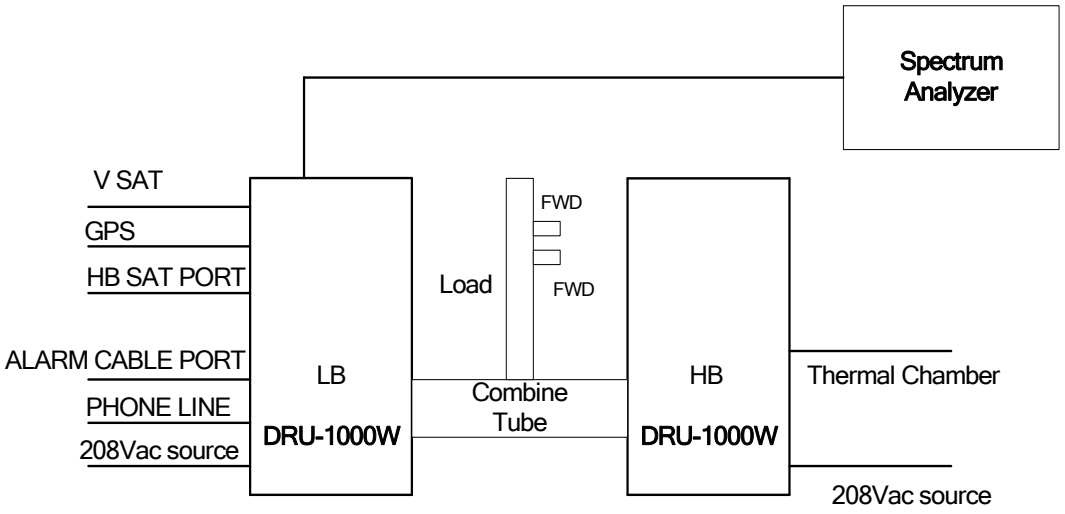
FCC KDB Publication 971168 D01, Section 4.2

5.2.3. Test Arrangement

Occupied Bandwidth for LB and HB



Occupied Bandwidth for LB Diversity



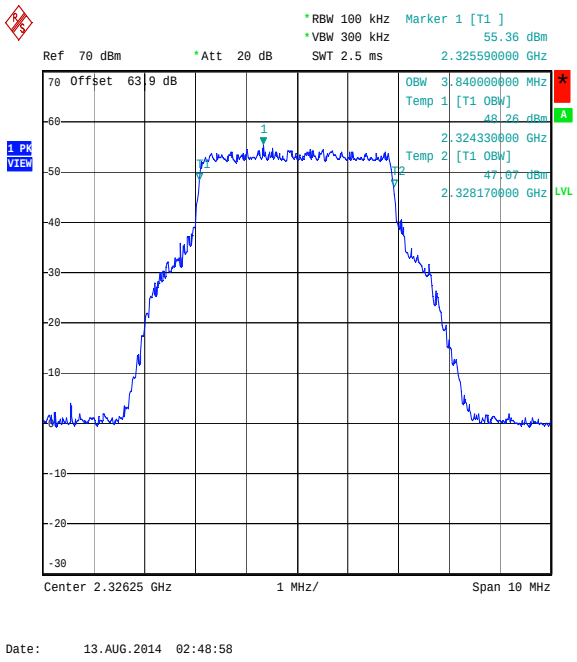
5.2.4. Test Data

Frequency Band	Frequency (MHz)	99% OBW (MHz)
LB (2320.0 – 2332.5 MHz)	2326.250	3.84
HB (2332.5 – 2345.0 MHz)	2338.755	5.00
LBD (2320.0 – 2332.5 MHz)	2326.256040	0.022836

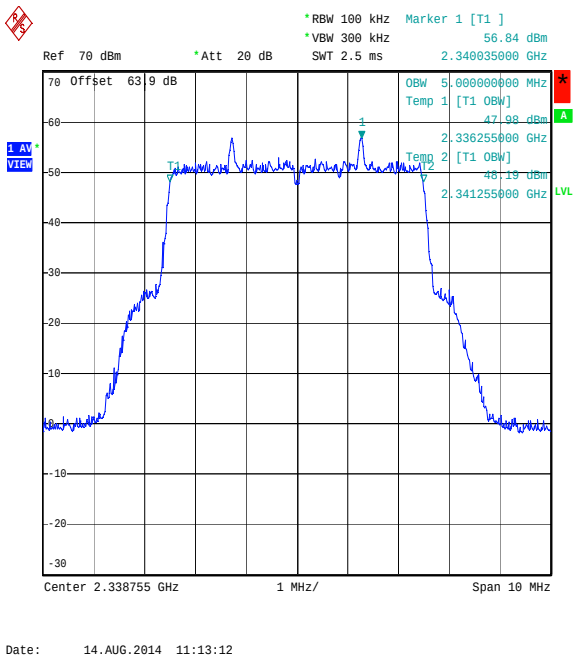
Note: 99% Occupied Bandwidth measurements were conducted using the built-in auto function of the analyzer.

See the following plots for detailed measurements.

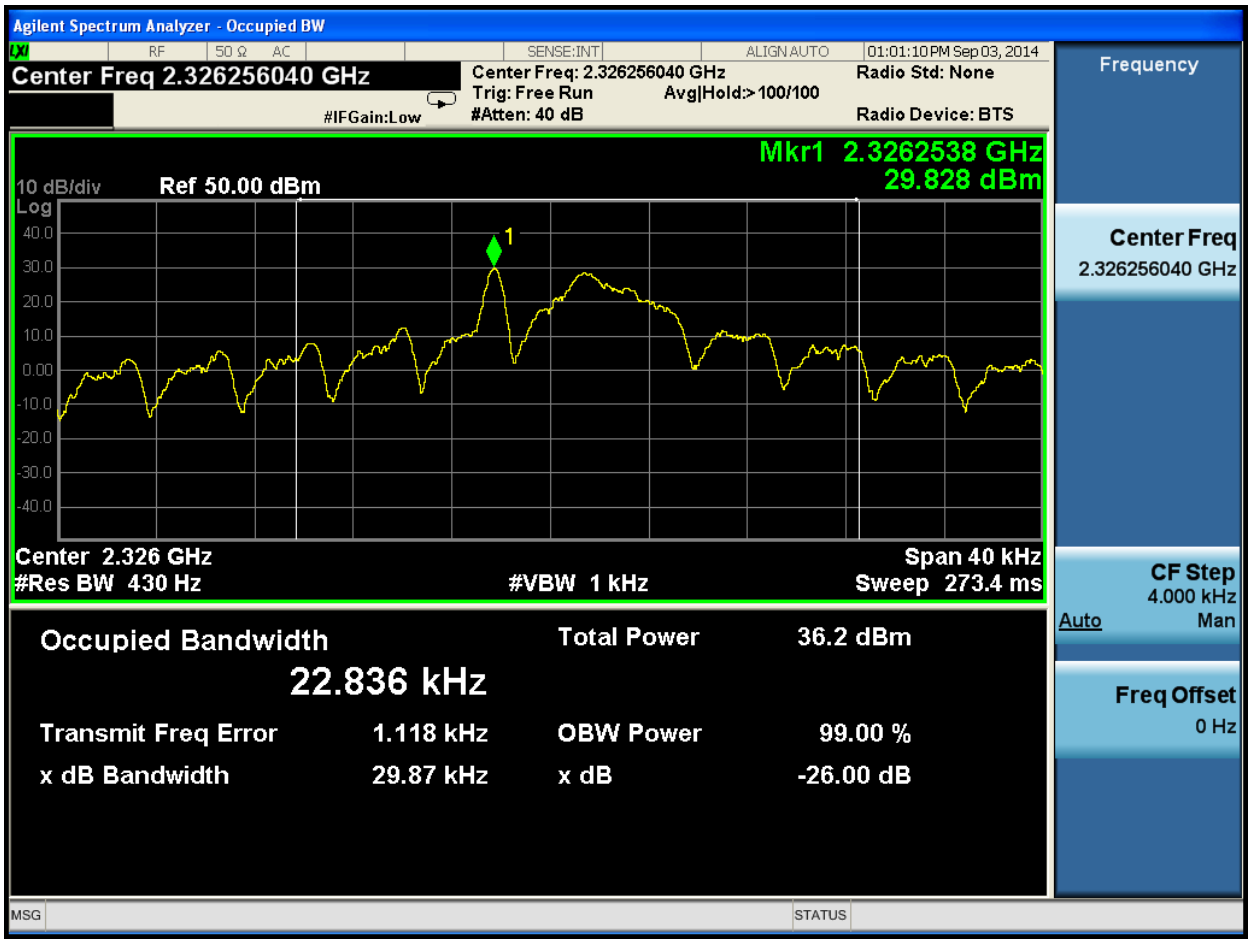
Plot 5.2.4.1.1. 99% Occupied Bandwidth, Low Band, 2326.250 MHz, OFDM Modulation



Plot 5.2.4.1.2. 99% Occupied Bandwidth, High Band, 2338.755 MHz, OFDM Modulation



Plot 5.2.4.1.3. 99% Occupied Bandwidth, LB Diversity 2326.256040 MHz, OFDM Modulation



5.3. TRANSMITTER ANTENNA POWER SPURIOUS/HARMONIC CONDUCTED EMISSIONS [§§ 2.1051, 2.1057 & 25.202]

5.3.1. Limit(s)

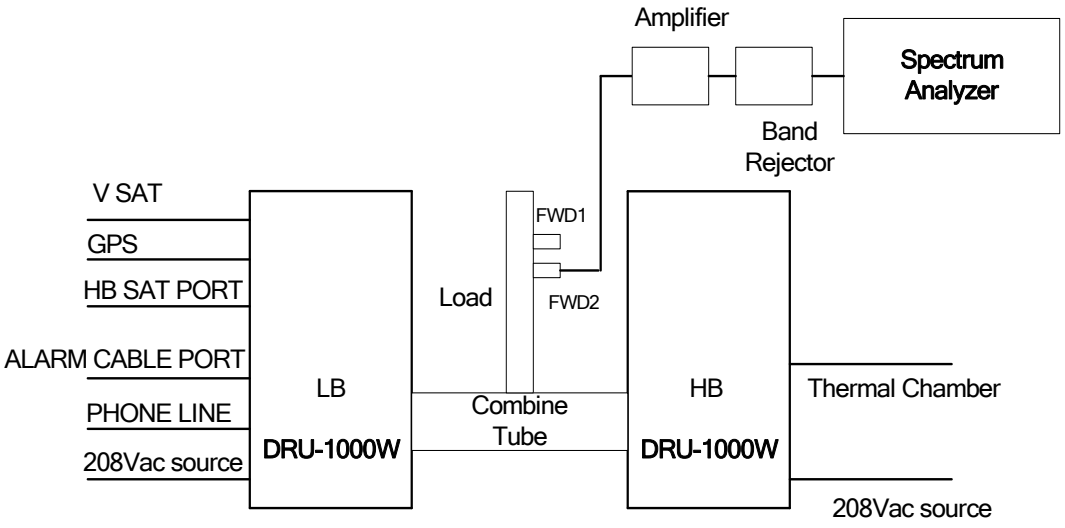
§25.202(h)(1) Any SDARS terrestrial repeater operating at a power level greater than 2-watt average EIRP is required to attenuate its out-of-band emissions below the transmitter power P by a factor of not less than 90 + 10 log (P) dB in a 1-megahertz bandwidth outside the 2320-2345 MHz band, where P is average transmitter output power in watts.

5.3.2. Method of Measurements

FCC KDB Publication 971168 Sections 5.4.1 and 6.0

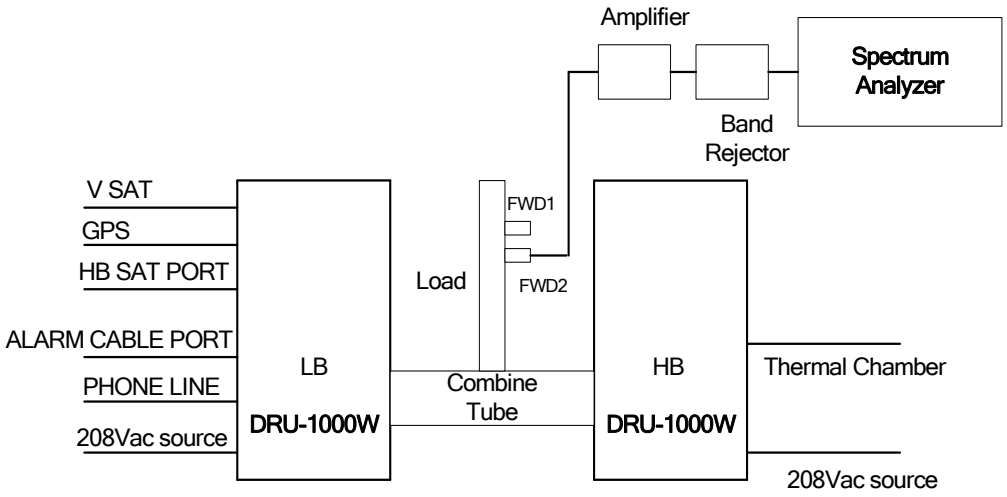
5.3.3. Test Arrangement

Band-Edge Conducted Emission



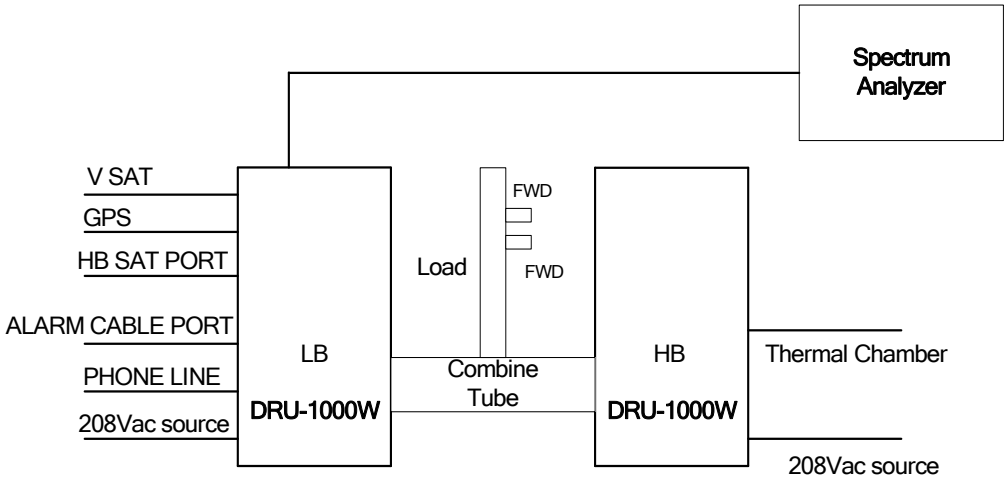
Insertion loss: 9.77dB.

Out of Band Conducted Emission for LB and HB



Insertion loss: 11.77 dB (for 10 MHz to 1 GHz) and 9.77 dB (for 1 to 25 GHz)

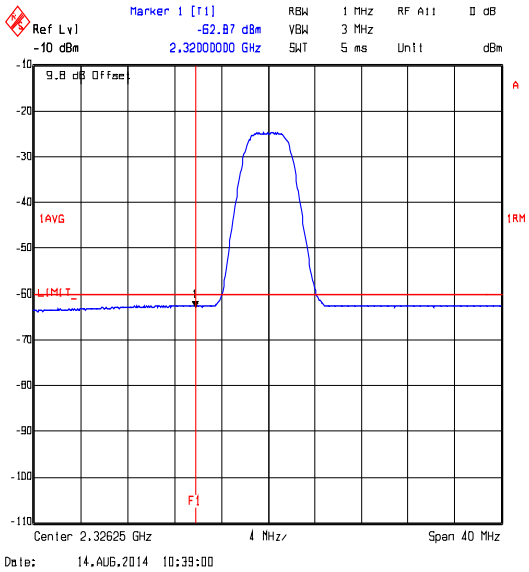
Out of Band Conducted Emission for LBD



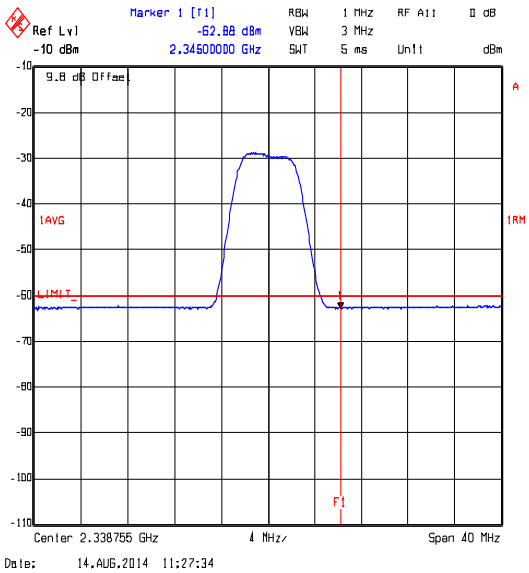
5.3.4. Test Data

5.3.4.1. Band-Edge RF Conducted Emissions

Plot 5.3.4.1.1. Band-Edge RF Conducted Emissions, Low Band, 2326.250 MHz, OFDM Modulation, Average Detector



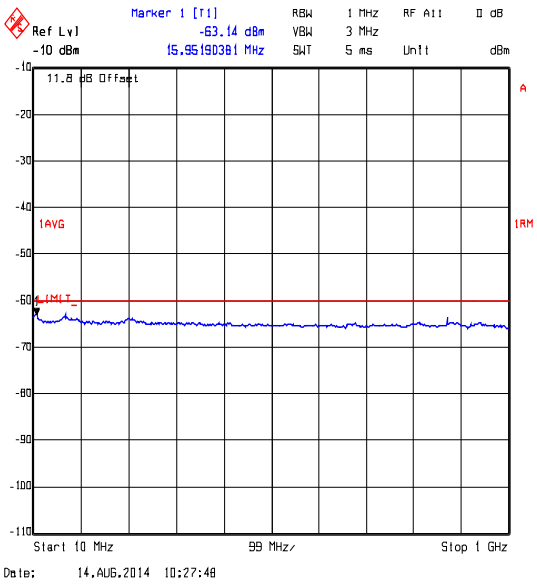
Plot 5.3.4.1.2. Band-Edge RF Conducted Emissions, High Band, 2338.755 MHz, OFDM Modulation, Average Detector



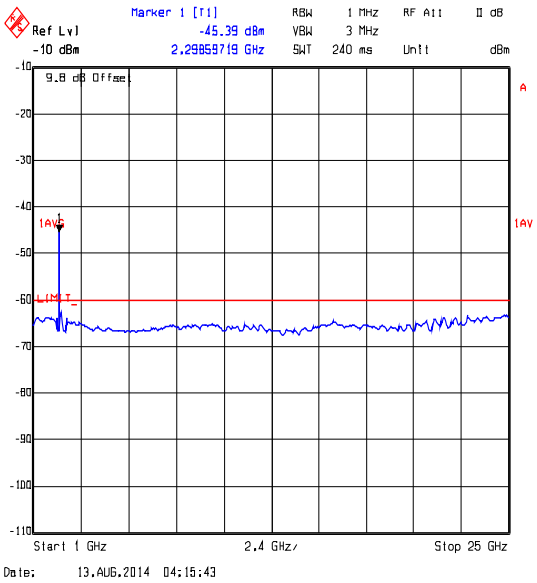
5.3.4.2. Conducted Spurious Emissions

Remark: The following test results are the worst-case measurements.

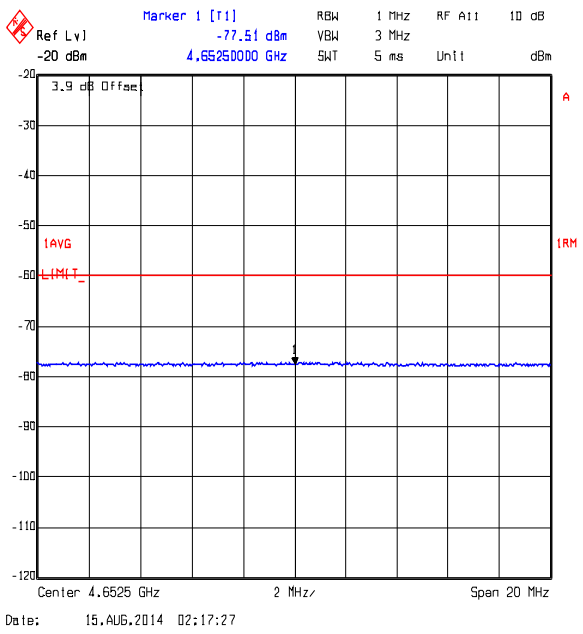
Plot 5.3.4.2.1. Conducted Spurious Emissions for LB, 2326.250 MHz, 10 MHz – 2.5 GHz



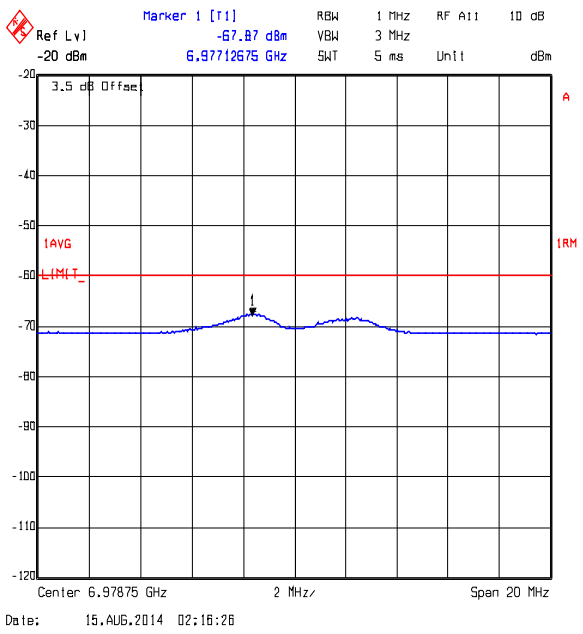
Plot 5.3.4.2.2. Conducted Spurious Emissions for LB, 2326.250 MHz, 2.5 GHz – 25 GHz



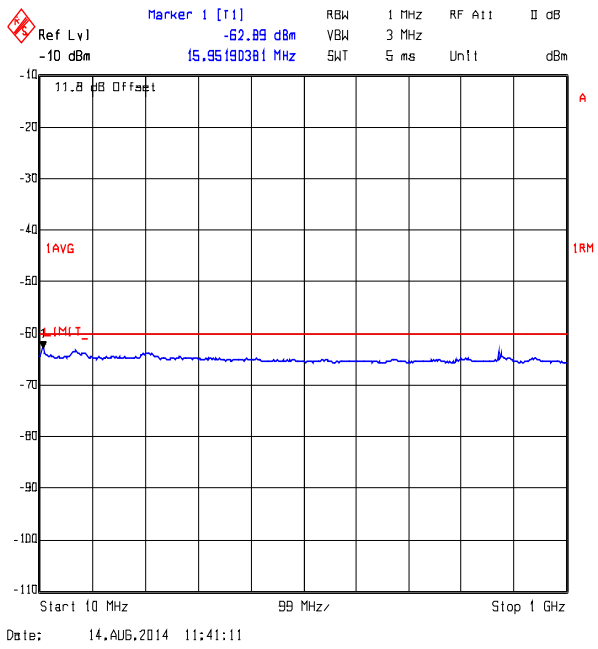
Plot 5.3.4.2.3. Conducted Spurious Emissions for LB, Second Harmonic Check with T-Splitter Connected



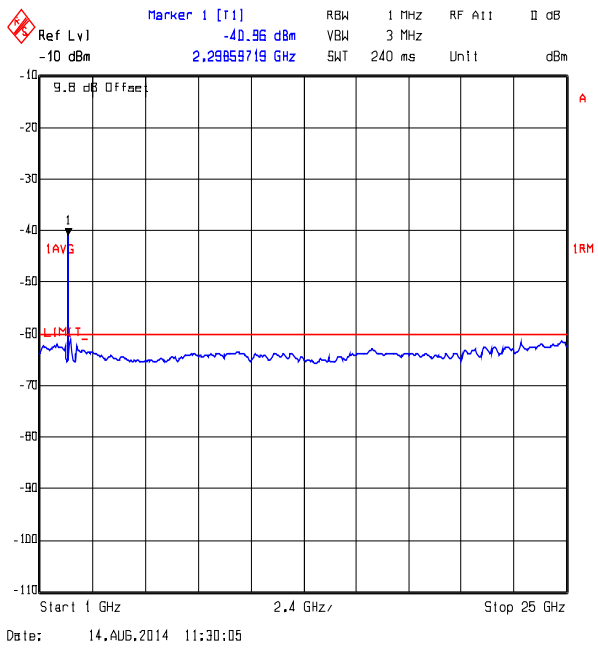
Plot 5.3.4.2.4. Conducted Spurious Emissions for LB, Third Harmonic Check with T-Splitter Connected



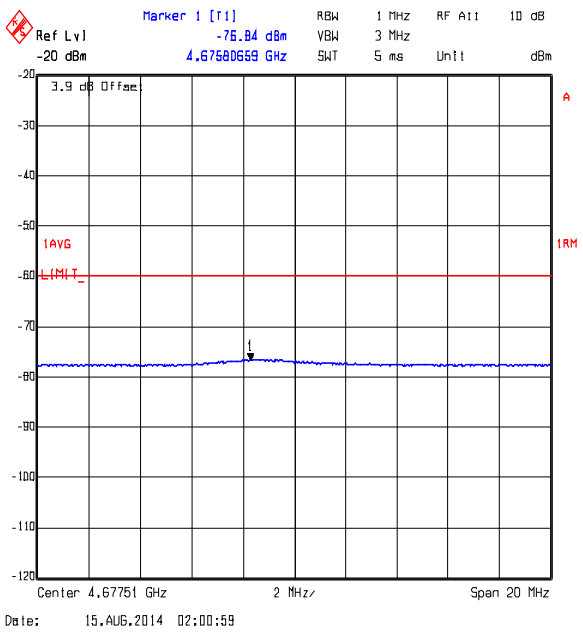
Plot 5.3.4.2.5. Conducted Spurious Emissions for HB, 2338.755 MHz, 10 MHz – 2.5 GHz



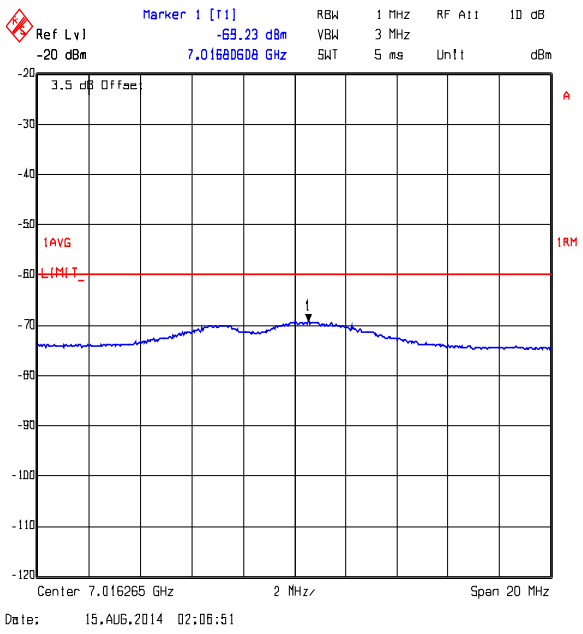
Plot 5.3.4.2.6. Conducted Spurious Emissions for HB, 2338.755 MHz, 2.5 GHz – 25 GHz



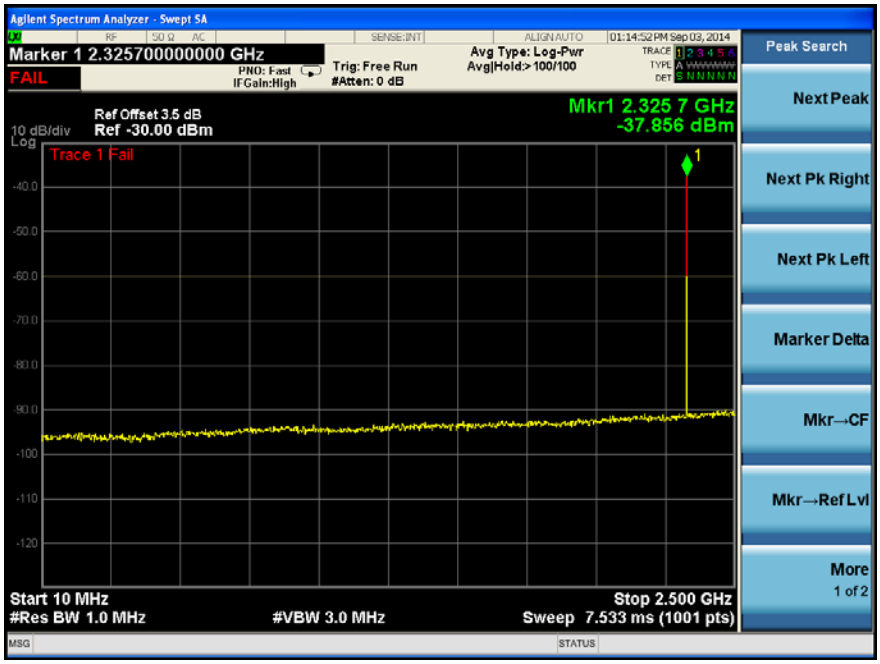
Plot 5.3.4.2.7. Conducted Spurious Emissions for HB, Second Harmonic Check with T-Splitter Connected



Plot 5.3.4.2.8. Conducted Spurious Emissions for HB, Third Harmonic Check with T-Splitter Connected



Plot 5.3.4.2.9. Conducted Spurious Emissions for LB Diversity, 2326.256040 MHz, 10 MHz – 2.5 GHz



Plot 5.3.4.2.10. Conducted Spurious Emissions for LB Diversity, 2326.256040 MHz, 2.5 GHz – 25 GHz

5.4. TRANSMITTER SPURIOUS/HARMONIC RADIATED EMISSIONS [§§ 2.1053, 2.1057 & 25.202(h)(1)]

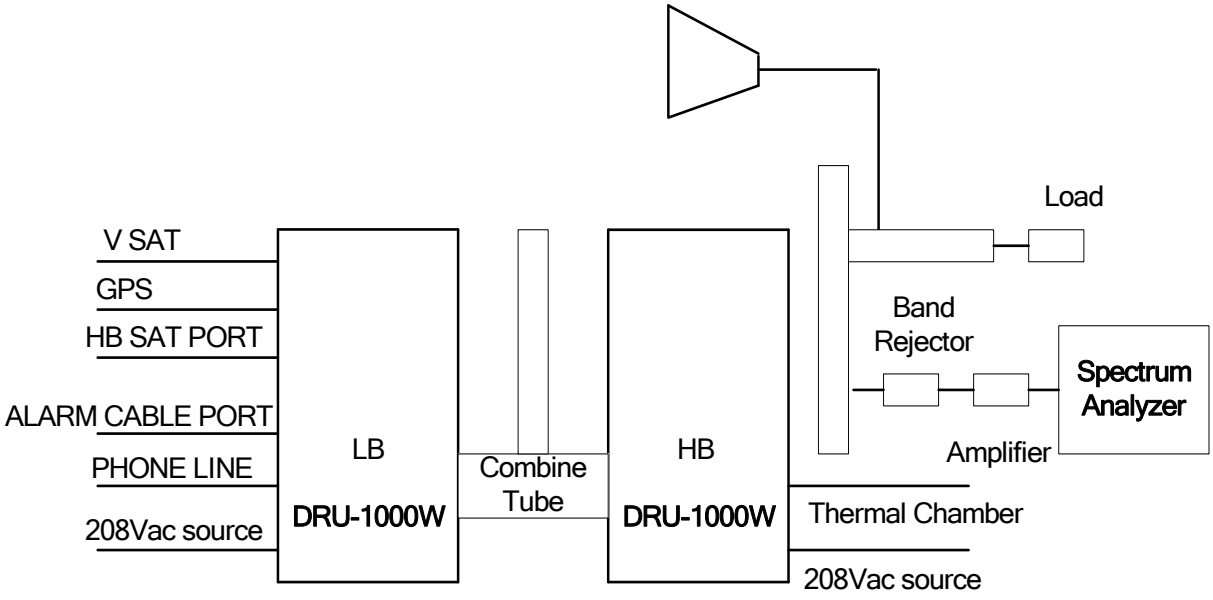
5.4.1. Limits

§25.202(h)(1) Any SDARS terrestrial repeater operating at a power level greater than 2-watt average EIRP is required to attenuate its out-of-band emissions below the transmitter power P by a factor of not less than 90 + 10 log (P) dB in a 1-megahertz bandwidth outside the 2320-2345 MHz band, where P is average transmitter output power in watts.

5.4.2. Method of Measurements

FCC KDB Publication 971168 D01, Sections 5.4.1 and 7.0

5.4.3. Test Arrangement



5.4.4. Test Data

Remarks:

- Initially, the test setup was at 3m distance; but the limit at 3m was below the noise floor. Therefore, the receiving antenna had to move closer at 0.5m, in order to get the limit over the noise floor; and hand measurements were recorded inside the chamber with a spectrum analyzer. The second and third harmonics were detected when the transmitter was turned on. The setup pictures were taken at 3m distance.

- The emissions were scanned from 30 MHz to 10th harmonics; all spurious emissions that are in excess of 20dB below the specified limit shall be recorded.

- Testing was conducted at 2326.250 MHz (LB) and 2338.755 MHz (HB) transmitting at the same time for worst-case final test configuration

Test Frequencies (MHz):	2326.250 MHz (LB) and 2338.755 MHz (HB)					
Limit (dBm):	-60					
Frequency (MHz)	**E-Field at 0.5 m (dBµV/m)**	**EMI Detector (Peak/QP/Avg)**	**Antenna Polarization (H/V)**	***EIRP (dBm)**	**Limit (dBm)**	**Margin (dBm)**
4652.500	49.83	Avg	V	-60.99	-60	-0.99
4652.500	49.54	Avg	H	-61.28	-60	-1.28
4677.510	49.37	Avg	V	-61.45	-60	-1.45
4677.510	47.66	Avg	H	-63.16	-60	-3.16
6978.750	48.73	Avg	V	-62.09	-60	-2.09
6978.750	47.99	Avg	H	-62.83	-60	-2.83
7016.265	46.48	Avg	V	-64.34	-60	-4.34
7016.265	46.64	Avg	H	-64.18	-60	-4.18
*EIRP(dBm) = E (dBµV/m) + 20log(D) - 104.8; where D is the measurement distance in meters						

5.5. FREQUECNY STABILITY [§§ 2.1055 & 25.202]

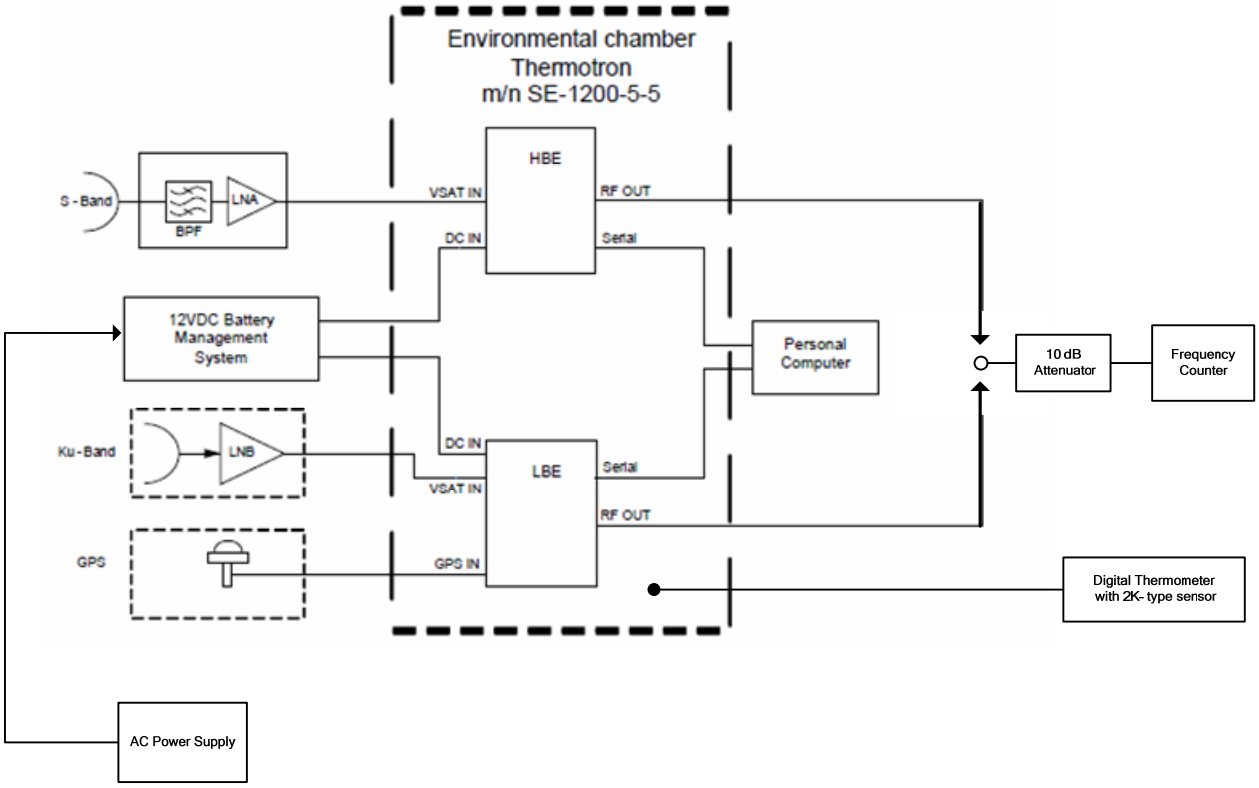
5.5.1. Limit(s)

§ 25.202(d) Frequency tolerance, Earth stations. The carrier frequency of each earth station transmitter authorized in these services shall be maintained within 0.001 percent of the reference frequency.

5.5.2. Method of Measurements

FCC KDB Publication 971168 D01, Section 9.0 or 47 CFR 2.1055

5.5.3. Test Arrangement



5.5.4. Test Data

Remarks:

The DRU-1KW uses the same Low Band Excite (LBE) and High Band Excite (HBE) as the DRU-200W unit. For this reason, the Manufacturer's declared that the Test Data on the Low Band Excite (LBE) and High Band Excite (HBE) for the DRU-200W unit as shown below is valid and representative of the DRU-1KW.

Test was conducted at Unique Broadband Systems Ltd. facility.

It is impracticable to subject the complete EUT to this test because of its physical dimensions, only its frequency determining and stabilizing portions were subject to this test. The Low Band Exciter (LBE) and High Band Exciter (HBE) modules were tested to demonstrate compliance to this requirement.

Manufacturer's declared ambient temperature for the DRU 200 is -20C to +55C. The ambient temperature correspondent inside of the electronics compartment (the hosts of the Exciters) is -10C to +65C.

The manufacturer's declared operating temperature range of LBE and HBE is -10 °C to +65 °C, the LBE and HBE will cease to function outside of the upper and lower temperatures declared by the manufacturer. Testing was conducted within the declared operating temperatures.

Test Unit:	LBE
Center Frequency:	2326.250 MHz
Full Power Level:	200 W
Frequency Tolerance Limit (Worst Case):	0.001 % or 23263 Hz
Max. Frequency Tolerance Measured:	+18 Hz or 0.0000008 %
Input Voltage Rating:	208 VAC

Ambient Temperature (°C)	**Frequency Drift (Hz)**		
	Supply Voltage 208 VAC (Nominal)	**Supply Voltage 176.8 V AC (85% of Nominal)**	**Supply Voltage 239.2 VAC (115% of Nominal)**
-10	+8	--	--
0	+16	--	--
+10	+8	--	--
+20	+8	+8	+7
+30	+18	--	--
+40	+6	--	--
+50	+8	--	--
+60	+18	--	--
+65	+10	--	--

Test Unit:	HBE
Center Frequency:	2338.755 MHz
Full Power Level:	200 W
Frequency Tolerance Limit (Worst Case):	0.001 % or 23388 Hz
Max. Frequency Tolerance Measured:	+8 Hz or 0.0000003 %
Input Voltage Rating:	208 VAC

Ambient Temperature (^{o}C)	**Frequency Drift (Hz)**		
	Supply Voltage 208 VAC (Nominal)	**Supply Voltage 176.8 V AC (85% of Nominal)**	**Supply Voltage 239.2 VAC (115% of Nominal)**
-10	-3	--	--
0	+3	--	--
+10	-5	--	--
+20	+3	+3	+8
+30	+6	--	--
+40	0	--	--
+50	+2	--	--
+60	+3	--	--
+65	+3	--	--

EXHIBIT 6. TEST EQUIPMENT LIST

Test Instruments	Manufacturer	Model No.	Serial No.	Operating Range	Cal. Due Date
Spectrum Analyzer	Rohde & Schwarz	FSP	100646	9 kHz–7 GHz	25 Sep 2014
Wave Guide	UBS	WR340	SX03-51600-01	2.2 – 3.3 GHz	Cal on use
Attenuator (Load)	Apollo	18128-05	CO-29916-1-1	2.2 – 3.3 GHz	Cal on use
PXA Signal Analyzer	Agilent	N9030A	MY49430220	3 Hz–26.5 GHz	24 Jan 2015
Spectrum Analyzer	Rohde & Schwarz	FSEK30	100077	20 Hz – 40 GHz	08 Nov 2014
RF Amplifier	Hewlett Packard	84498	3008A00769	1 – 26.5 GHz	19 Jun 2015
Band-Rejecter	Micro-Tronics	BRM50710	001	Cut off 2.3-2.4 GHz	Cal on use
RF Amplifier	Com Power	PA-103A	161243	10-1000 MHz	10 Jun 2015
Biconi-Log Antenna	ETS Lindgren	3142C	26873	26 – 3000 MHz	14 Apr 2015
Horn Antenna	ETS Lindgren	3115	5955	1 -18 GHz	26 Mar 2015
Horn Antenna	ETS Lindgren	3160-09	00118385	18 -26.5 GHz	4 Aug 2016
High Pass Filter	K & L	11SH10-4000/T12000	4	Cut off 2400 MHz	Cal on use
Power Meter	Hewlett Packard	436A	2016A07747	10 MHz–18 GHz	12 Feb 2015
T Splitter	UBS	-	-	Cut off 2.3-2.4 GHz	Cal on use
Environmental Chamber	THERMOTROW	SE-1200-5-5	26512	180 °C to -40 °C	Cal on use
Power Supply	ELGAR	EW3001-1	9947100118	0-300 VAC, 3000 VA	Cal on use
Frequency Counter	EIP	545A	2683	10Hz-18 GHz	07 Apr 2015
Digital Thermometer	Extech	Easyview 15	30400781	K-type sensor	*16 May 2014

* This equipment was used on February 25, 2014.

EXHIBIT 7. MEASUREMENT UNCERTAINTY

The measurement uncertainties stated were calculated in accordance with the requirements of CISPR 16-4-2 @ IEC:2003 and JCGM 100:2008 (GUM 1995) – Guide to the Expression of Uncertainty in Measurement.

7.1. LINE CONDUCTED EMISSION MEASUREMENT UNCERTAINTY

	Line Conducted Emission Measurement Uncertainty (9 kHz – 30 MHz):	**Measured**	**Limit**
u_c	**Combined standard uncertainty:** $u_c(y) = \sqrt{\sum_{I=1}^{m} u_i^2(y)}$	**± 1.44**	**± 1.8**
U	**Expanded uncertainty U:** $U = 2u_c(y)$	**± 2.89**	**± 3.6**

7.2. RADIATED EMISSION MEASUREMENT UNCERTAINTY

	Radiated Emission Measurement Uncertainty @ 3m, Horizontal (30-1000 MHz):	**Measured (dB)**	**Limit (dB)**
u_c	**Combined standard uncertainty:** $u_c(y) = \sqrt{\sum_{I=1}^{m} u_i^2(y)}$	**± 2.39**	**± 2.6**
U	**Expanded uncertainty U:** $U = 2u_c(y)$	**± 4.79**	**± 5.2**

	Radiated Emission Measurement Uncertainty @ 3m, Vertical (30-1000 MHz):	**Measured (dB)**	**Limit (dB)**
u_c	**Combined standard uncertainty:** $u_c(y) = \sqrt{\sum_{I=1}^{m} u_i^2(y)}$	**± 2.39**	**± 2.6**
U	**Expanded uncertainty U:** $U = 2u_c(y)$	**± 4.78**	**± 5.2**

	Radiated Emission Measurement Uncertainty @ 3 m, Horizontal & Vertical (1 – 18 GHz):	**Measured (dB)**	**Limit (dB)**
u_c	**Combined standard uncertainty:** $u_c(y) = \sqrt{\sum_{I=1}^{m} u_i^2(y)}$	**± 1.87**	**Under consideration**
U	**Expanded uncertainty U:** $U = 2u_c(y)$	**± 3.75**	**Under consideration**