



FCC Part 15, Subpart C, Section 15.247/RSS-210 Issue 8

Test Report

On

Simulated Radiation Detection Instrument

**Radiation Safety & Control
Services, Inc.**

Customer Name:

Customer P.O:

Date of Report Revision:

Test Report No:

Test Start Date:

Test Finish Date:

Test Technician:

Revision Approved By:

Report Revision Prepared By:

141202-3

February 12, 2015

R-5908N, Rev. B

December 11, 2014

December 15, 2014

M. Seamans

S. Wentworth

J. Ramsey

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Technical Information

Report Number:	R-5908N, Rev. B	
Customer:	Radiation Safety & Control Services, Inc.	
Address:	91 Portsmouth Ave. Stratham, NH 03885	
Test Sample:	(2) Simulated Radiation Detection Instruments Consisting of:	
System Components:	Radiation Detection Instrument 1	Radiation Detection Instrument 2
Brand Names:	DMC2000TD	SORTD
Model Numbers:	118001	205001
Serial Numbers:	501014010001, 501014010002	501114010001, 501114010002
Manufactured By:	Radiation Safety & Control Services, Inc.	
Power Requirements:	3 VDC via one disposable lithium coin cell battery	
Frequency Band of Operation:	2405.0 MHz to 2480.0 MHz	
Frequencies Tested (Low, Mid and High):	2405.0, 2440.0, 2480.0 MHz	
Antenna Type:	Monopole (internal)	
Equipment Use:	Radiation Detection Training Device	
FCC ID:	2ADY2DMCTD2K	
IC:	12547A-DMCTD2K	

Test Specification:

FCC Rules and Regulations, Telecommunications, Part 15 Radio Frequency Devices, Subpart C, Intentional Radiators

RSS-210, Issue 8 2010, Low Power License-exempt Radio communication Devices (All Frequency Bands) Category I Equipment

RSS-GEN, Issue 4, 2014, General Requirements and Information for the Certification of Radio communication Equipment

Test Procedure:

ANSI C63.4:2009, Methods of Measurement of Radio Noise Emissions from Low Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz

FCC Guidance for Performing Compliance Measurements on Digital Transmission Systems (DTS) Operating Under 15.247, June 5, 2014



Retlif Testing Laboratories

Report No. R-5908N, Rev. B

EUT Description:

The Simulated Radiation Detection Instruments are used for radiation detection training purposes. Both units are powered by one internal battery 3.3 VDC disposable lithium coin cell battery. The only differences between the DMC2000TD and SORTD units are the location of the display, shape of the external enclosure and location of the single push button. See the Model Family Approval Justification Letter for a further description of these differences. The DMC2000TD was subjected to all test methods specified below. The SORTD was subjected to all methods below with the exception of DTS Bandwidth, Power Output and Power Density.

Tests Performed

The test methods performed on the EUT are shown below:

FCC Part 15, Subpart C	Industry Canada RSS-210 Issue 8	Industry Canada RSS-GEN Issue 4	Test Method
15.247(a)(2)	A8.2(1)	N/A	DTS Bandwidth
15.247(b)(3)	A8.4(4)	N/A	Power Output
15.247(d)	A8.5	N/A	Antenna Terminal Out of Band/ Band Edge Conducted Emissions (30 MHz – 25 GHz)
15.247(d)	A8.5	N/A	Out of Band/Band Edge Radiated Emissions (30 MHz to 25 GHz)
15.247(e)	A8.2(b)	N/A	Power Density
N/A	N/A	7.1.2	Receiver Spurious Emissions

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Report No. R-5908N, Rev. B

General Test Requirements

1. The measurement procedures of ANSI C63.4:2009 and ANSI C63.10: 2013 were utilized as specified in FCC Part 15, Subpart C, Section 15.31(a)(3) and FCC Guidance for Performing Compliance Measurements on Digital Transmission Systems, June 5, 2014.
2. All radiated emissions measurements were performed on an Open Area Test Site (OATS), listed with the FCC, in accordance with FCC Section 15.31(d).
3. All measurements were performed at the specified 3 meter test distance as required by FCC Section 15.31(f).
4. The EUT was rotated throughout 360 degrees for all radiated emissions measurements as specified in FCC Section 15.31(f)(5).
5. All readily accessible EUT controls were adjusted in such a manner as to maximize the level of emissions in accordance with FCC Section 15.31(g).
6. Appropriate accessories were attached to all EUT ports during the performance of radiated emissions measurements as required by FCC Section 15.31(i).
7. The EUT operated over the frequency range of 2405.0 MHz to 2480.0 MHz. Testing was performed with the device operating at 3 frequencies, 1 at the top, 1 in the middle and 1 at the bottom of the range of operation in accordance with FCC Section 15.31(m).
8. The frequency spectrum was investigated from the lowest frequency generated in the device up to the 10th harmonic of the highest fundamental frequency in accordance with FCC Section 15.33(a)(1).
9. The EUT utilizes an internal Monopole Antenna and does not have an external antenna connector/external antenna and is therefore in compliance with 15.203.
10. A temporary antenna connector was installed to facilitate compliance measurements.



Retlif Testing Laboratories

Report No. R-5908N, Rev. B

Certification and Signatures

We certify that this report is a true representation of the results obtained from the tests of the equipment stated. We further certify that the measurements shown in this report were made in accordance with the procedures indicated and vouch for the qualifications of all Retlif Testing Laboratories personnel taking them.



Scott Wentworth
Branch Manager
NVLAP Approved Signatory



Todd Hannemann
Laboratory Supervisor
iNARTE Certified Technician ATL-0255-T

Non-Warranty Provision

The testing services have been performed, findings obtained and reports prepared in accordance with generally accepted laboratory principles and practices. This warranty is in lieu of all others, either expressed or implied.

Non-Endorsement

This test report contains only findings and results arrived at after employing the specific test procedures and standards listed herein. It is not intended to constitute a recommendation, endorsement or certification of the product or material tested. This test report must not be used by the client to claim product endorsement by NVLAP or any agency of the U.S. Government.



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Report No. R-5908N, Rev. B

Revision History

Revisions to this document are listed below; the latest revised document supersedes all previous issues of this document.

Revision	Date	Pages Affected
-	January 26, 2015	Original Release
A	February 3, 2015	Global Changes: <ul style="list-style-type: none">• Document changed from R-5908N to R-5908N, Rev. A 2: <ul style="list-style-type: none">• Revised RSS-GEN from Issue 3, 2010 to Issue 4, 2014 and ANSI C63.4: 2003 to ANSI C63.4: 2009 in Test Specifications 3: <ul style="list-style-type: none">• Revised RSS-GEN from Issue 3 to Issue 4 and Receiver Spurious Emissions Paragraph from 6.1 to 7.1.2 in Test Performed table 4: <ul style="list-style-type: none">• Revised ANSI C63.4 year from 2003 to 2009 in step 1 of General Test Requirements 10: <ul style="list-style-type: none">• Revised Receiver Radiated Spurious Emissions Paragraph from 6.1 to 7.1.2
B	February 12, 2015	Global Changes: <ul style="list-style-type: none">• Document changed from R-5908N, Rev. A to R-5908N, Rev. B 3: <ul style="list-style-type: none">• Expanded on EUT description 11 & 12: <ul style="list-style-type: none">• Updated Out of Band/Band Edge Radiated Emissions & RSS-GEN Receiver Spurious Emissions equipment lists due to retesting 53-61: <ul style="list-style-type: none">• Updated photographs due to retesting 62-80: <ul style="list-style-type: none">• Inserted updated data 92-100: <ul style="list-style-type: none">• Inserted updated photographs due to retesting 102-103: <ul style="list-style-type: none">• Inserted updated data



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Report No. R-5908N, Rev. B

Requirements and Test Results

FCC Section 15.247 (a)(2) - DTS Bandwidth

For systems using digital modulation techniques operating in the 902-928 MHz, 2400-2483.5 MHz, and 5725 – 5850 MHz bands the minimum 6 dB bandwidth shall be at least 500 kHz.

- Results: The minimum 6dB bandwidth measured was 1.573 MHz and the device was found to meet the requirement of 15.247 (a)(2).

FCC Section 15.247 (b)(3) - Power Output

For systems using digital modulation in the 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz bands: 1 Watt. As an alternative to a peak power measurement, compliance with the one Watt limit can be based on a measurement of the maximum conducted output power. Maximum Conducted Output Power is defined as the total transmit power delivered to all antennas and antenna elements averaged across all symbols in the signaling alphabet when the transmitter is operating at its maximum power control level. Power must be summed across all antennas and antenna elements. The average must not include any time intervals during which the transmitter is off or is transmitting at a reduced power level. If multiple modes of operation are possible (e.g.: alternative modulation methods), the maximum conducted output power is the highest total transmit power occurring in any mode.

- Results: The maximum measured peak conducted output power was 0.024 mW. The maximum antenna gain of the monopole antenna is 2.0 dBi. The device was found to meet the power output requirements of 15.247 (b)(3) including de facto EIRP.



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Report No. R-5908N, Rev. B

Requirements and Test Results (con't)

FCC Section 15.247(d) – Unwanted Emissions

Antenna Terminal Out of Band/Band Edge Conducted Emissions

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under Paragraph (b)(3) of Section 15.247, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a) must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).

- **Results:** All measured out of band/band edge conducted emissions were below the specified limits and the device was found to meet the requirements of 15.247 (d).

FCC Section 15.247(d) – Unwanted Emissions

Radiated Spurious Emissions/Restricted Bands/Band Edge

Emissions which fall into restricted bands, as defined in 15.205(a) must comply with the radiated emissions limits specified in 15.209(a) and shown below in Table 1. Emissions emanating from the EUT cabinet and cables must also comply with the radiated emissions limits. Radiated emissions measurements were also performed at the band edges to ensure band edge compliance.

Table 1 - Radiated Emission Limits

Frequency of Emission (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
30 to 88	100	3
88 to 216	150	3
216 to 960	200	3
Above 960	500	3

- **Results:**

All spurious emissions were measured and found to be in compliance with the limits specified in 15.209(a). Band edge emissions were also found to be in compliance with the limits specified in 15.209(a).



Retlif Testing Laboratories

Report No. R-5908N, Rev. B

Requirements and Test Results (con't)

FCC Section 15.247(e) – Power Spectral Density

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density.

- **Results:** The measured peak conducted output power complied with the power spectral density limit and actual power spectral density measurements were not required. The device was found to meet the requirements of 15.247 (e).

FCC Section 15.247(i) – RF Exposure

Transmitters operating under 15.247 must be operated in a manner that ensures the public is not exposed to RF energy levels in excess of the commission's guidelines. Based on the transmitter power and maximum antenna gain the separation distance for acceptable MPE power density levels to meet both the Occupational/Controlled Exposure and the General Population/Uncontrolled Exposure requirements of 1.1310 was calculated. The calculation below uses the more stringent General Population MPE Limits.

$$S = \frac{PG}{4\pi Dsq}$$

D = Minimum Separation Distance in cm

S = Max allowed Power Density in mW/cmsq

Per 1.1310 For Frequency of 2400MHz = 1mW/cmsq

Power = Max Power Input to Antenna = 0.024 mW

Gain = Max Power Gain of Antenna = 2.0 dBi = 1.58 numeric

$$1\text{mW}/\text{cmsq} = \frac{0.024 \times 1.58}{4(3.14) \times Dsq} = \frac{0.0379200}{12.56 \times Dsq}$$

$$Dsq = \frac{0.03792}{12.56 \times 1} = 0.00302$$

$$D = \text{sq. root } 0.00302 = 0.055 \text{ cm}$$

The unit has an internal antenna and the minimum separation distance will always be maintained.



Retlif Testing Laboratories

Report No. R-5908N, Rev. B

Requirements and Test Results (con't)

Requirement:

FCC Section 15.209(a) - Radiated Emission Limits, General Requirements

Except as provided elsewhere in this subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in Table 2.

IC RSS-210, 2.6 - General Field Strength Limits:

Table 2 shows the general field strength limits of unwanted emissions, where applicable, for transmitters operating in accordance with the provisions specified in this RSS.

Table 2 - Radiated Emission Limits

Frequency of Emission (MHz)	Field Strength (microvolts/meter)	Measurement Distance (meters)
30 to 88	100	3
88 to 216	150	3
216 to 960	200	3
Above 960	500	3

- Results:

The field strength of spurious radiated emissions did not exceed the limits specified in Table 2.

Requirement:

IC RSS-Gen, Par. 7.1.2 - Receiver Radiated Spurious Emissions

Spurious emissions from receivers must comply with the radiated emissions limits specified in RSS-Gen, Para. 7.1.2 and shown above in Table 2.

- Results:

No EUT receiver spurious emissions were observed within 10dB of the specified limit.



Retlif Testing Laboratories

Report No. R-5908N, Rev. B

Equipment Lists

FCC Section 15.247(a)(2) – DTS Bandwidth

EN	Manufacturer	Description	Range	Model No.	Cal Date	Due Date
5070	ROHDE & SCHWARZ	EMI TEST RECEIVER	20 Hz - 40 GHz	ESIB40	10/29/2014	10/31/2016
5135	NARDA	10DB ATTENUATOR	DC - 12.4 GHz	757C-10	10/28/2014	10/31/2015

FCC Section 15.247(b)(3) – Power Output

EN	Manufacturer	Description	Range	Model No.	Cal Date	Due Date
5127	BOONTON	POWER METER		4532	3/28/2014	3/31/2015
5129	BOONTON	RF POWER SENSOR	50 MHz - 18 GHz	57518	7/10/2014	7/31/2015
5135	NARDA	10DB ATTENUATOR	DC - 12.4 GHz	757C-10	10/28/2014	10/31/2015

FCC Section 15.247(d) – Antenna Terminal Out of Band/Band Edge Conducted Emissions, 30 MHz to 25 GHz

EN	Manufacturer	Description	Range	Model No.	Cal Date	Due Date
5070	ROHDE & SCHWARZ	EMI TEST RECEIVER	20 Hz - 40 GHz	ESIB40	10/29/2014	10/31/2016
5135	NARDA	10DB ATTENUATOR	DC - 12.4 GHz	757C-10	10/28/2014	10/31/2015

FCC Section 15.247(d) – Out of Band/Band Edge Radiated Emissions

EN	Manufacturer	Description	Range	Model No.	Cal Date	Due Date
1232	AGILENT / HP	PRE-AMPLIFIER	1 - 26.5GHz	8449B	6/24/2014	6/30/2015
3258	EMCO	DOUBLE RIDGED GUIDE ANTENNA	1 GHZ - 18GHZ	3115	9/4/2013	3/31/2015
3427B	ELECTRO-MECHANICS	BICONICAL ANTENNA	20-200 MHZ	3104	7/1/2014	1/31/2016
3430	MCS	HORN ANTENNA	18 GHz - 26.5 GHz	K-5039	No Calibration Required	
4029	RETLIF	OPEN AREA TEST SITE	3 / 10 Meters	RNH	5/15/2013	5/31/2016
7034	EMCO	ANTENNA		3146	8/23/2013	2/28/2015
R462	AGILENT / HP	ANALYZER, SPECTRUM	100 Hz - 26.5 GHz	E7405A	1/8/2015	1/31/2016

FCC Section 15.247(e) – Power Density

EN	Manufacturer	Description	Range	Model No.	Cal Date	Due Date
5127	BOONTON	POWER METER		4532	3/28/2014	3/31/2015
5129	BOONTON	RF POWER SENSOR	50 MHz - 18 GHz	57518	7/10/2014	7/31/2015
5135	NARDA	10DB ATTENUATOR	DC - 12.4 GHz	757C-10	10/28/2014	10/31/2015



Retlif Testing Laboratories

Report No. R-5908N, Rev. B

RSS-GEN Receiver Spurious Emissions

EN	Manufacturer	Description	Range	Model No.	Cal Date	Due Date
1232	AGILENT / HP	PRE-AMPLIFIER	1 - 26.5GHz	8449B	6/24/2014	6/30/2015
3258	EMCO	DOUBLE RIDGED GUIDE ANTENNA	1 GHZ - 18GHZ	3115	9/4/2013	3/31/2015
3427B	ELECTRO-MECHANICS	BICONICAL ANTENNA	20-200 MHZ	3104	7/1/2014	1/31/2016
3430	MCS	HORN ANTENNA	18 GHz - 26.5 GHz	K-5039	No Calibration Required	
4029	RETLIF	OPEN AREA TEST SITE	3 / 10 Meters	RNH	5/15/2013	5/31/2016
7034	EMCO	ANTENNA		3146	8/23/2013	2/28/2015
R462	AGILENT / HP	ANALYZER, SPECTRUM	100 Hz - 26.5 GHz	E7405A	1/8/2015	1/31/2016



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Report No. R-5908N, Rev. B

**Test Photograph(s)
DTS Bandwidth
FCC Section 15.247(a)(2)**



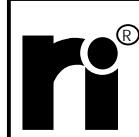
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Report No. R-5908N, Rev. B

**Test Photograph(s)
DTS Bandwidth**



Test Setup



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Report No. R-5908N, Rev. B

**DTS Bandwidth
Test Data**

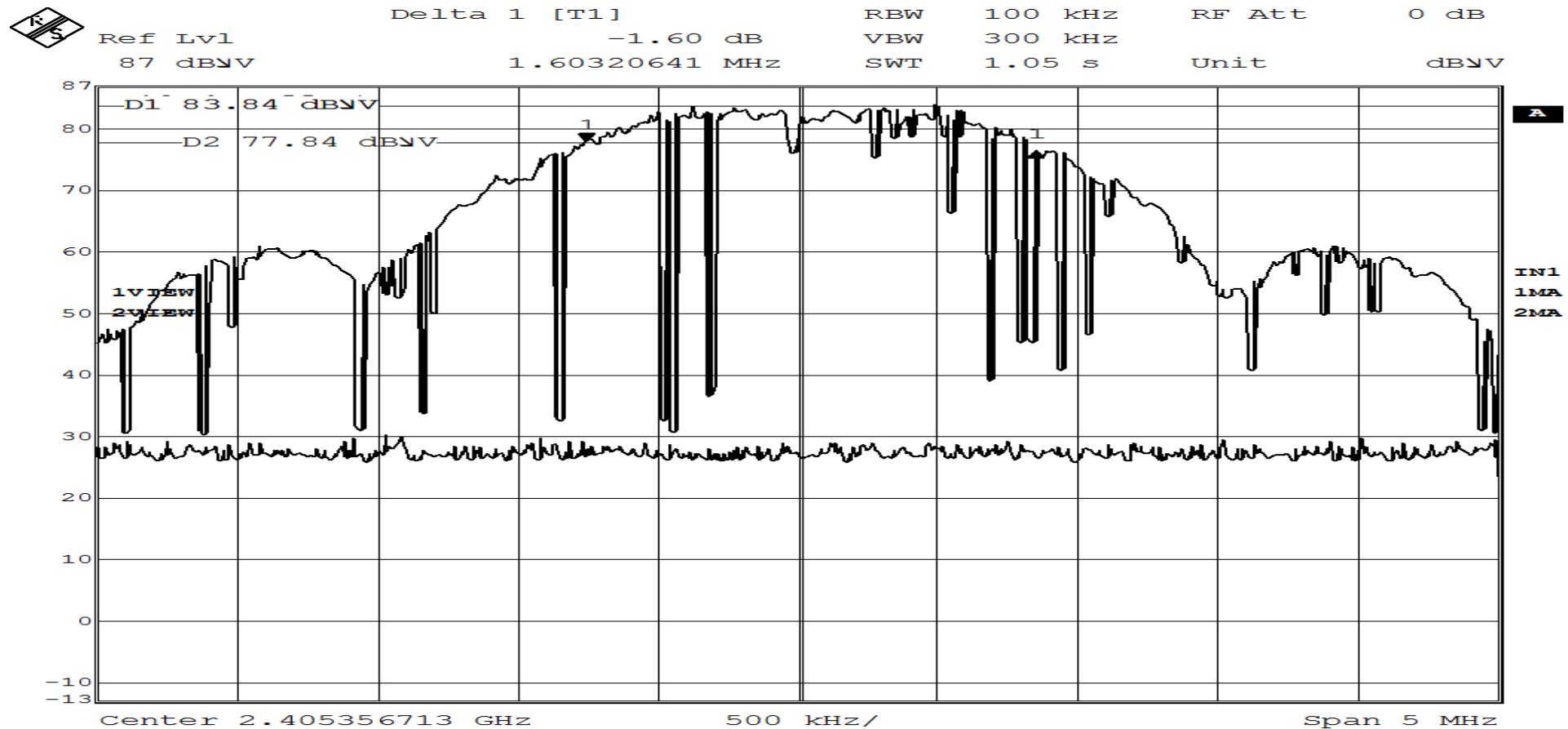


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Report No. R-5908N, Rev. B

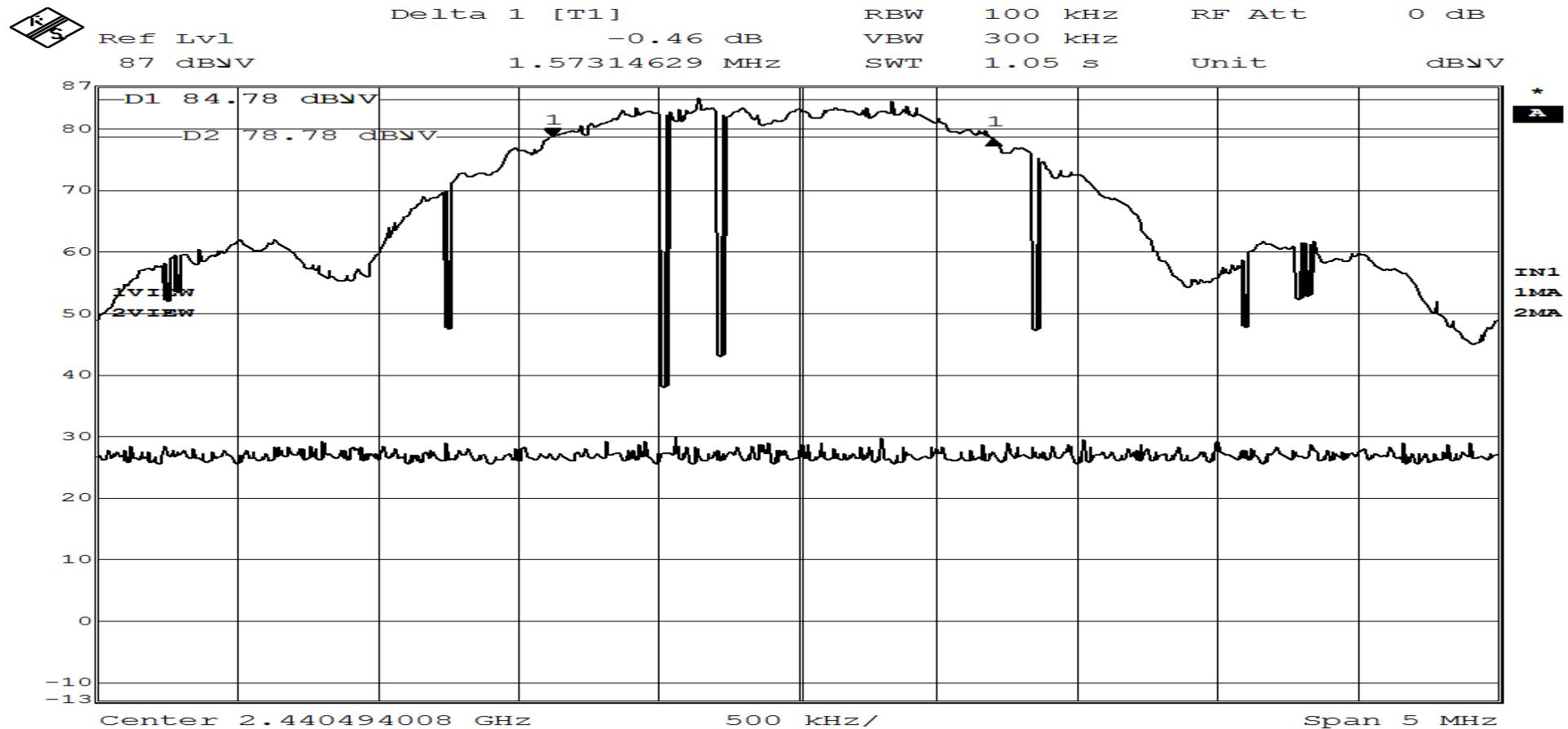
RETLIF TESTING LABORATORIES

Test Method:	DTS Bandwidth		
Customer	Radiation Safety and Control Services, Inc.	Job No.	R-5908N
Test Sample	DMC200TD Simulated Radiation Detection Instrument		
Model Number	118001	Serial No.	501014010001
Operating Mode	Transmitting modulated signal at 2.405 GHz		
Test Specification	FCC Part 15, Subpart C Paragraph: 15.247 (a)(2)		
Technician	M. Seamans	Date	December 11 th , 2014
Climatic Conditions	Temp: 21.6 °C	Relative Humidity:	23.0 %
Notes	DTS Bandwidth: 1.6032 MHz		



RETLIF TESTING LABORATORIES

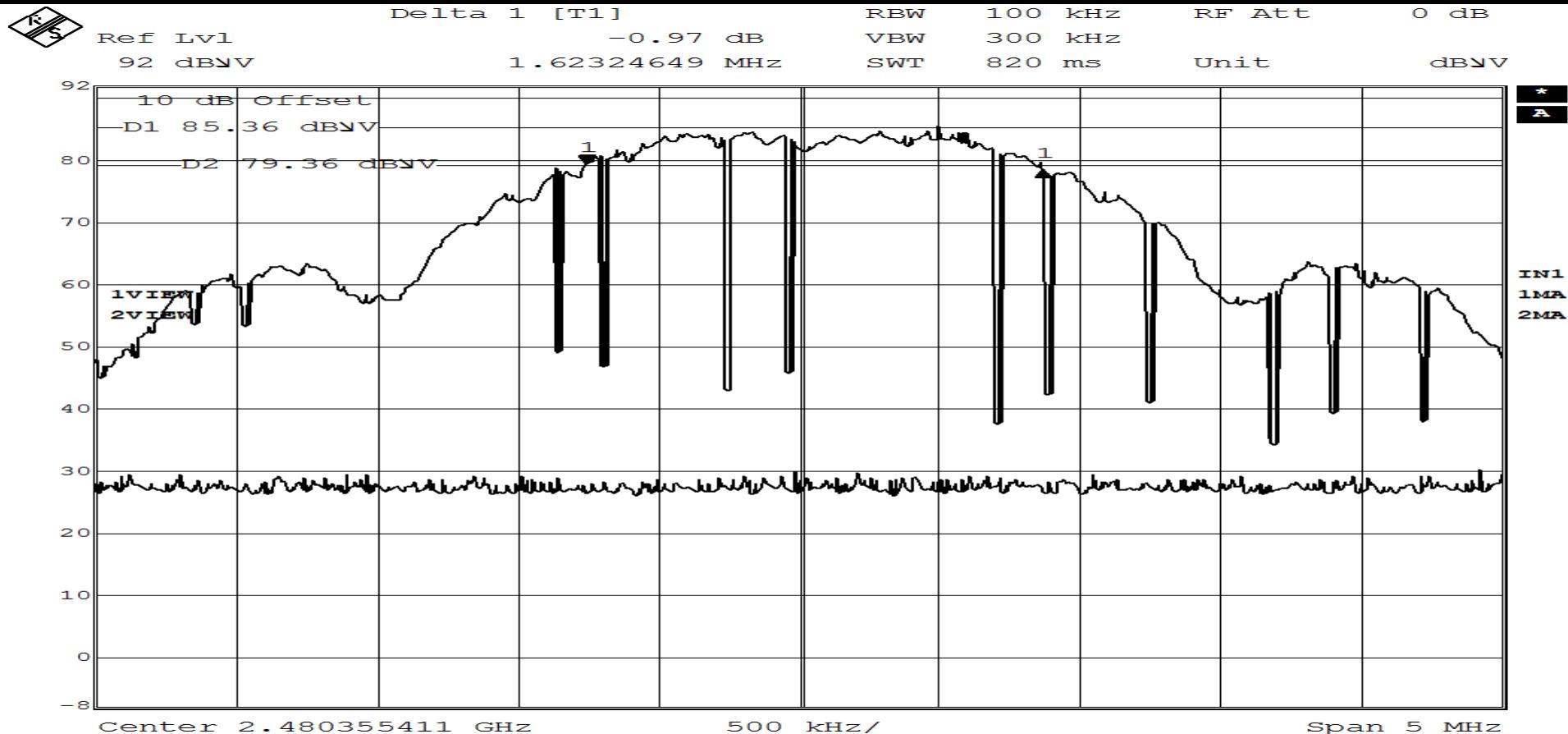
Test Method:	DTS Bandwidth		
Customer	Radiation Safety and Control Services, Inc.	Job No.	R-5908N
Test Sample	DMC200TD Simulated Radiation Detection Instrument		
Model Number	118001	Serial No.	501014010001
Operating Mode	Transmitting modulated signal at 2.440 GHz		
Test Specification	FCC Part 15, Subpart C Paragraph: 15.247 (a)(2)		
Technician	M. Seamans	Date	December 11 th , 2014
Climatic Conditions	Temp: 21.6 °C	Relative Humidity:	23.0 %
Notes	DTS Bandwidth: 1.5731 MHz		



Date: 11. DEC. 2014 10:37:32
Page 2 of 3

RETLIF TESTING LABORATORIES

Test Method:	DTS Bandwidth		
Customer	Radiation Safety and Control Services, Inc.	Job No.	R-5908N
Test Sample	DMC200TD Simulated Radiation Detection Instrument		
Model Number	118001	Serial No.	501014010001
Operating Mode	Transmitting modulated signal at 2.480 GHz		
Test Specification	FCC Part 15, Subpart C Paragraph: 15.247 (a)(2)		
Technician	M. Seamans	Date	December 11 th , 2014
Climatic Conditions	Temp: 21.6 °C Relative Humidity: 23.0 %		
Notes	DTS Bandwidth: 1.6232 MHz		



Date: 11. DEC. 2014 11:21:02
 Page 3 of 3

**Test Photograph(s)
Power Output
FCC Section 15.247(b)(3)**



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Report No. R-5908N, Rev. B

**Test Photograph(s)
Power Output**



Test Setup



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Report No. R-5908N, Rev. B

**Power Output
Test Data**



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Report No. R-5908N, Rev. B

RETLIF TESTING LABORATORIES

EMISSIONS TEST DATA SHEET

TEST DATA SHEET	
Test Method	Peak Power Output
Customer	Radiation Safety and Control Services, Inc.
Job Number	R-5908N
Test Sample	DMC2000TD Simulated Radiation Detection Instrument
Model Number	118001
Serial Number	501014010001
Test Specification	FCC Part 15, Subpart C Paragraph 15.247 (b)(3)
Operating Mode	Transmitting modulated signal
Technician	M. Seamans
Date	December 11 th , 2014

Notes: Measurement method: 9.1.2, PKPM1 Broadband RF Peak Power Meter



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Report No. R-5908N, Rev. B

Test Photograph(s)

Antenna Terminal Out of Band/Band Edge Conducted Emissions, 30 MHz to 25 GHz
FCC Section 15.247(d)



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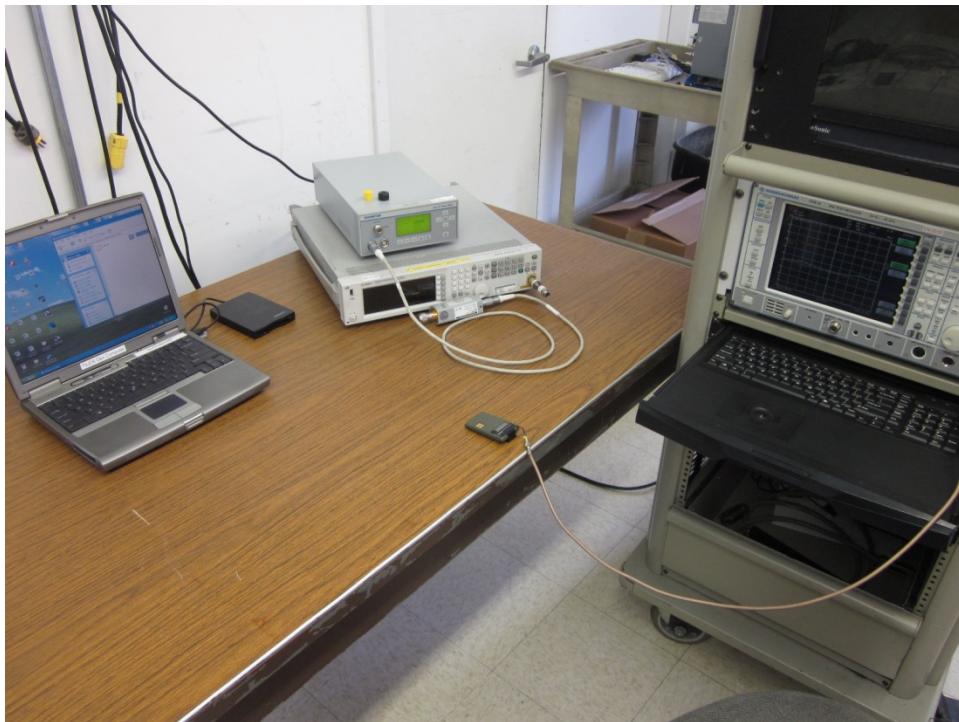
Report No. R-5908N, Rev. B

Test Photograph(s)

Antenna Terminal Out of Band/Band Edge Conducted Emissions, 30 MHz to 25 GHz



Test Setup, DMC2000TD



Test Setup, SORTD



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Report No. R-5908N, Rev. B

**Antenna Terminal Out of Band/Band Edge Conducted Emissions, 30 MHz to 25 GHz
Test Data**



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Report No. R-5908N, Rev. B

**Out of Band Conducted Emissions
DMC2000TD Test Data**

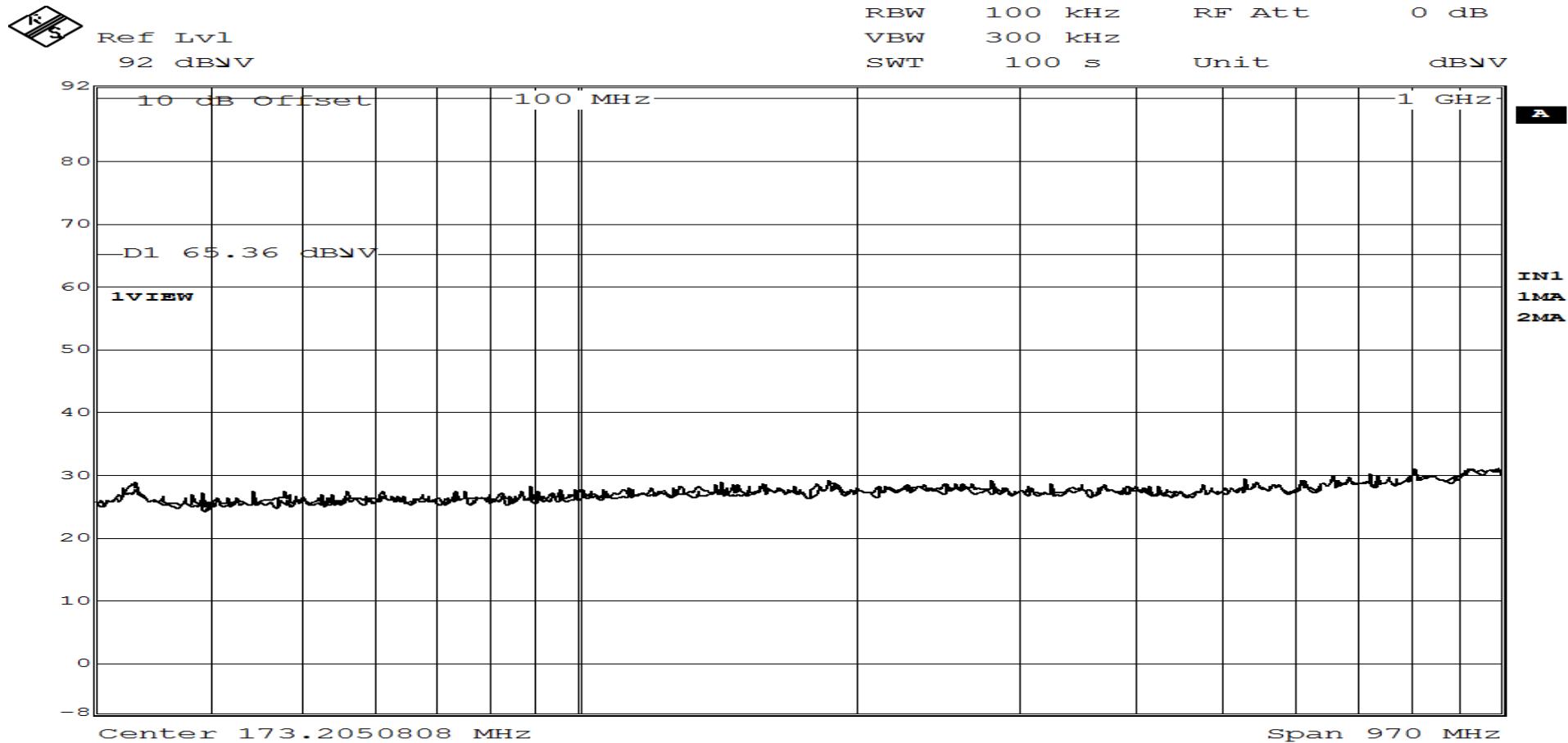


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Report No. R-5908N, Rev. B

RETLIF TESTING LABORATORIES

Test Method:	Out of Band Conducted Emissions 30 MHz to 25 GHz		
Customer	Radiation Safety and Control Services, Inc.	Job No.	R-5908N
Test Sample	DMC2000TD Simulated Radiation Detection Instrument		
Model Number	118001	Serial No.	501014010001
Operating Mode	Transmitting modulated signal at 2.405 GHz		
Test Specification	FCC Part 15, Subpart C Paragraph: 15.247 (d)		
Technician	M. Seamans	Date	December 12 th , 2014
Climatic Conditions	Temp: 22.0 °C	Relative Humidity:	23.0 %
Notes	Limit: 65.36dBuV, Based off of Reference Reading of 85.36dBuV		



Date: 11. DEC. 2014 12:54:35
 Page 1 of 9

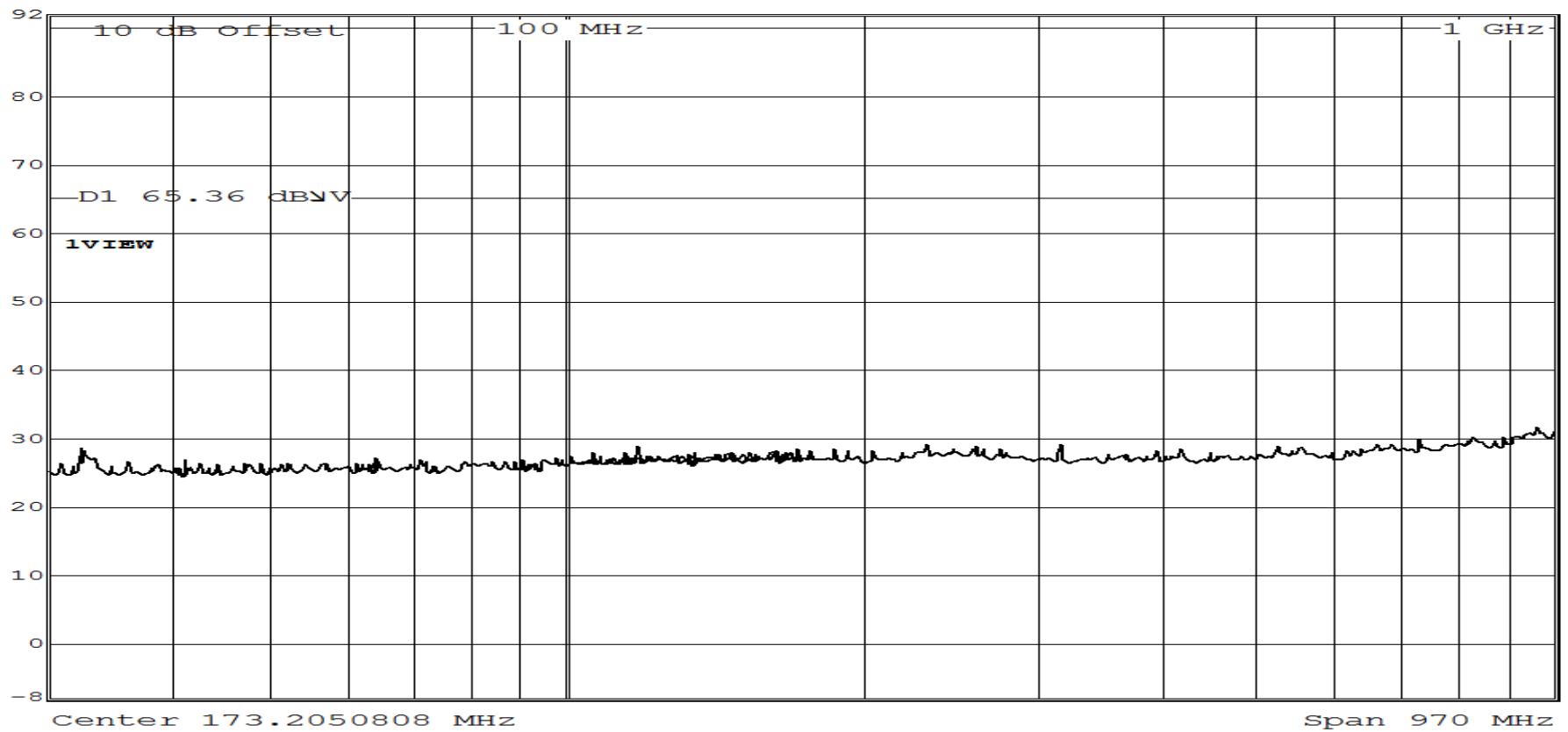
RETLIF TESTING LABORATORIES

Test Method:	Out of Band Conducted Emissions 30 MHz to 25 GHz		
Customer	Radiation Safety and Control Services, Inc.	Job No.	R-5908N
Test Sample	DMC2000TD Simulated Radiation Detection Instrument		
Model Number	118001	Serial No.	501014010001
Operating Mode	Transmitting modulated signal at 2.440 GHz		
Test Specification	FCC Part 15, Subpart C Paragraph: 15.247 (d)		
Technician	M. Seamans	Date	December 12th, 2014
Climatic Conditions	Temp: 22.0 °C Relative Humidity: 23.0 %		
Notes	Limit: 65.36dB _{UV} , Based off of Reference Reading of 85.36dB _{UV}		



Ref Lvl
92 dB_{UV}

RBW 100 kHz
VBW 300 kHz
SWT 100 s Unit 0 dB



A

IN1
1MA
2MA

Date: 11. DEC. 2014 12:05:08
Page 2 of 9

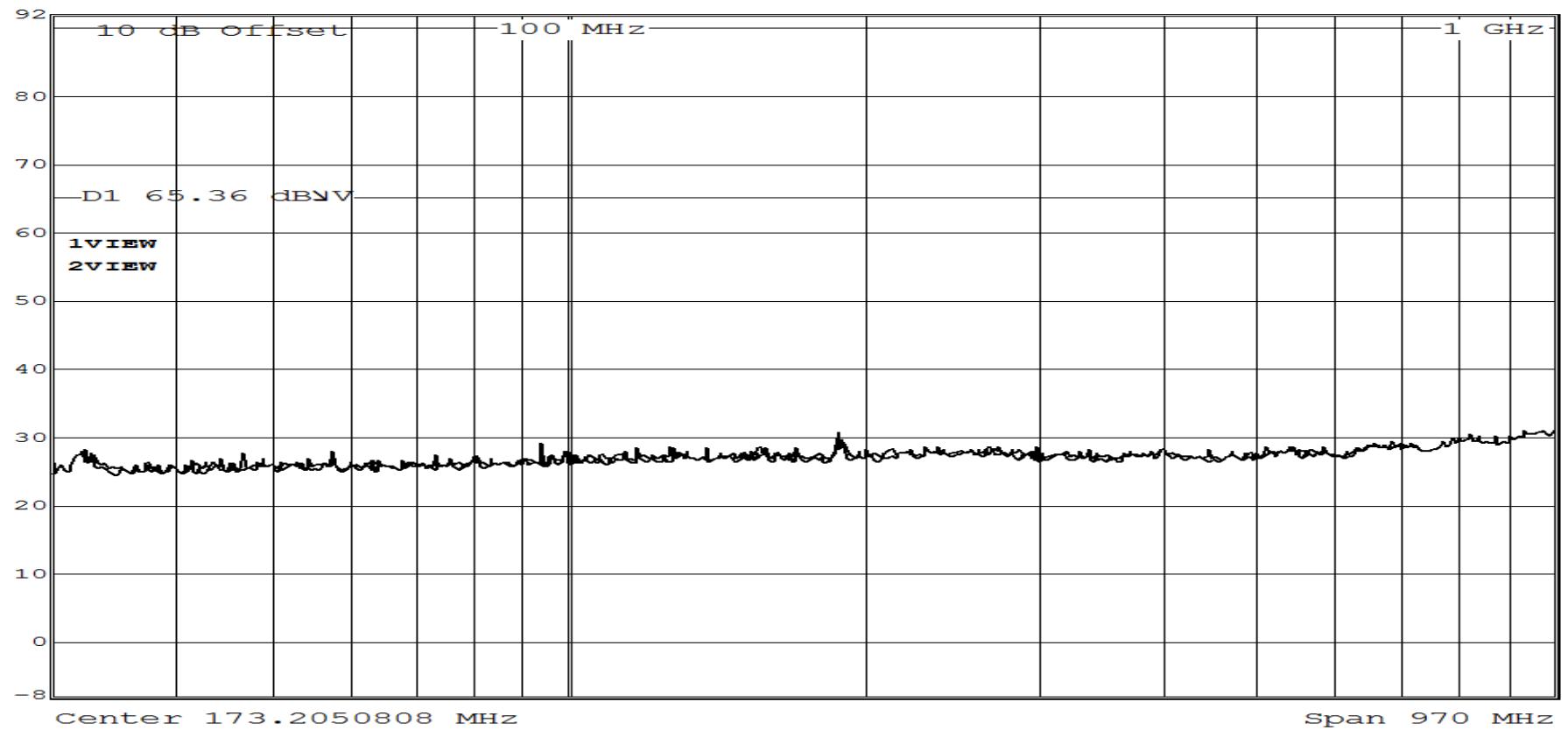
RETLIF TESTING LABORATORIES

Test Method:	Out of Band Conducted Emissions 30 MHz to 25 GHz		
Customer	Radiation Safety and Control Services, Inc.	Job No.	R-5908N
Test Sample	DMC2000TD Simulated Radiation Detection Instrument		
Model Number	118001	Serial No.	501014010001
Operating Mode	Transmitting modulated signal at 2.480 GHz		
Test Specification	FCC Part 15, Subpart C Paragraph: 15.247 (d)		
Technician	M. Seamans	Date	December 12th, 2014
Climatic Conditions	Temp: 22.0 °C Relative Humidity: 23.0 %		
Notes	Limit: 65.36dB _{UV} , Based off of Reference Reading of 85.36dB _{UV}		



Ref Lvl
92 dB_{UV}

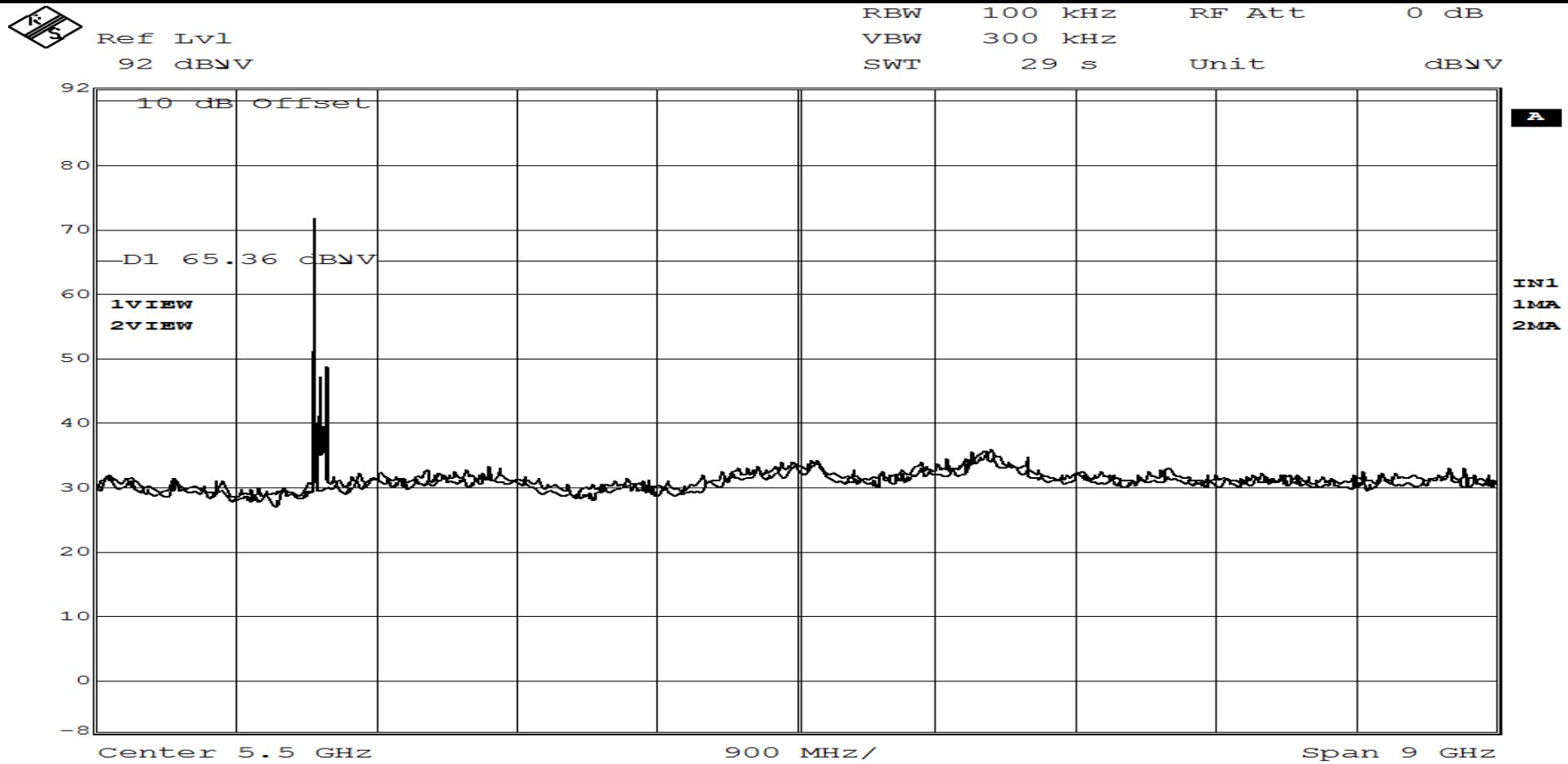
RBW 100 kHz
VBW 300 kHz
SWT 100 s Unit 0 dB
dB_{UV}



Date: 11. DEC. 2014 13:03:29
Page 3 of 9

RETLIF TESTING LABORATORIES

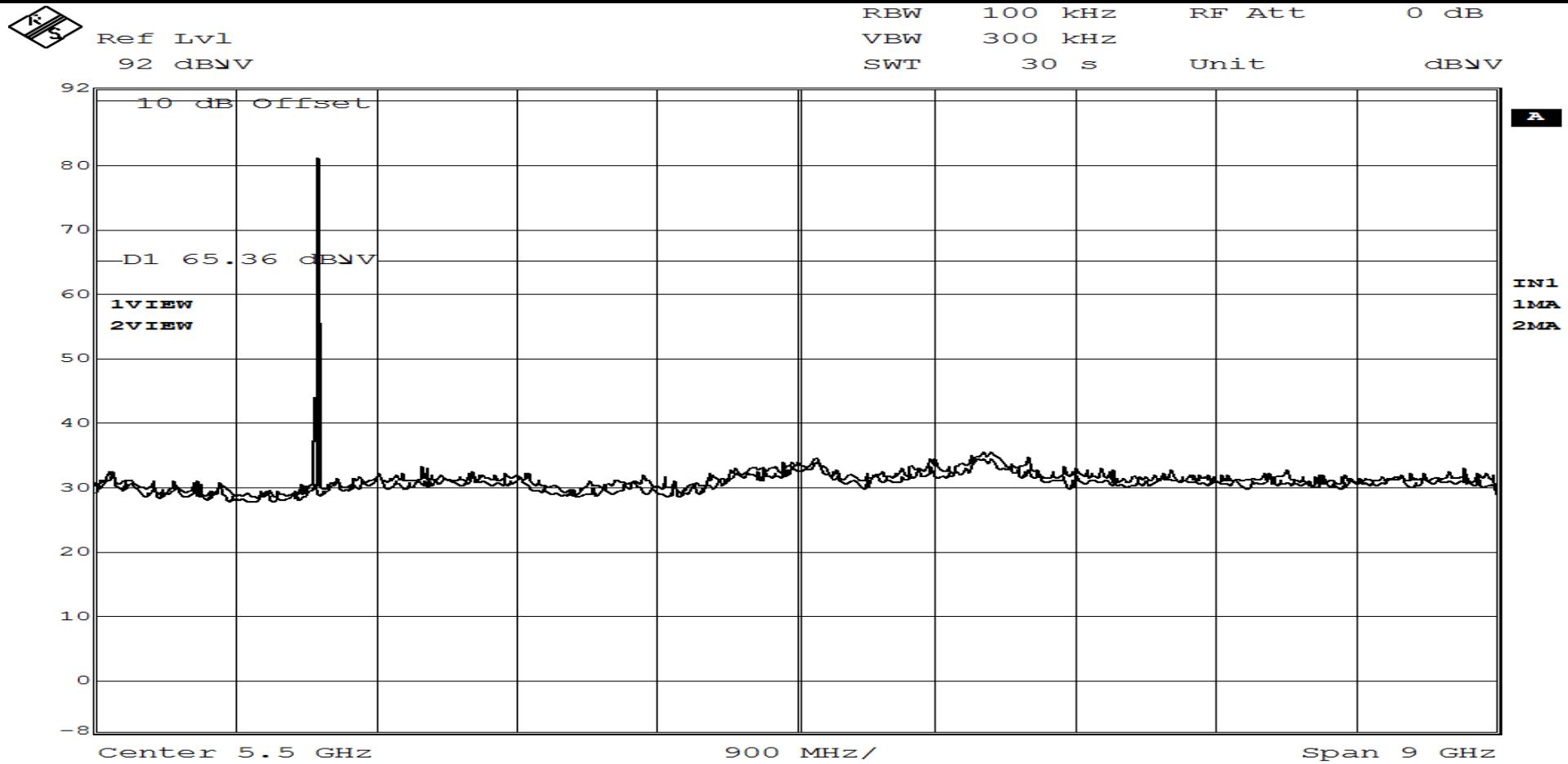
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Test Specification	FCC Part 15, Subpart C Paragraph: 15.247 (d)		
Technician	M. Seamans	Date	December 12th, 2014
Climatic Conditions	Temp: 22.0 °C Relative Humidity: 23.0 %		
Notes	Limit: 65.36dB _{UV} , Based off of Reference Reading of 85.36dB _{UV}		



Date: 11. DEC. 2014 13:24:17
 Page 4 of 9

RETLIF TESTING LABORATORIES

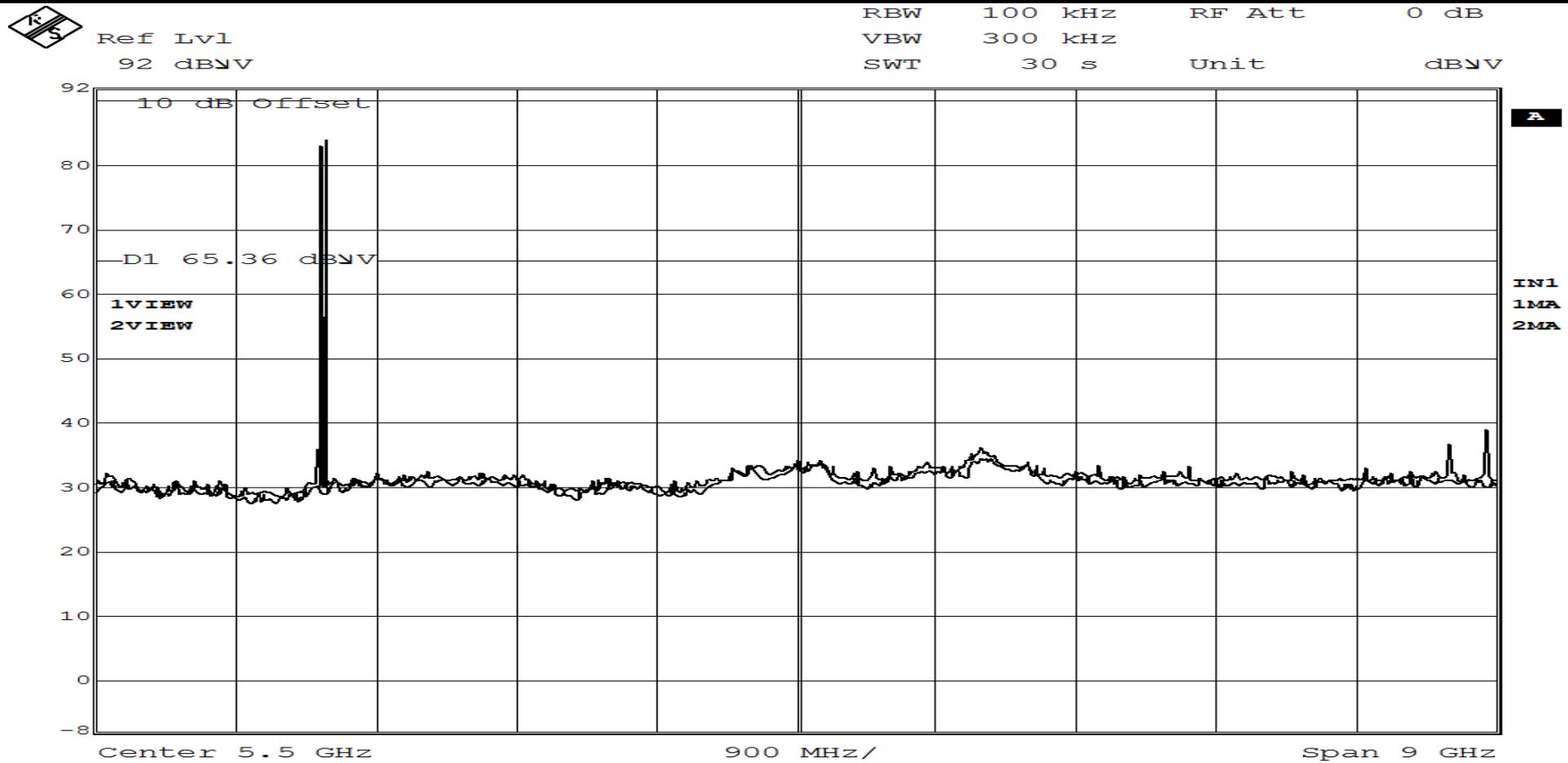
Test Method:	Out of Band Conducted Emissions 30 MHz to 25 GHz		
Customer	Radiation Safety and Control Services, Inc.	Job No.	R-5908N
Test Sample	DMC2000TD Simulated Radiation Detection Instrument		
Model Number	118001	Serial No.	501014010001
Operating Mode	Transmitting modulated signal at 2.440 GHz		
Test Specification	FCC Part 15, Subpart C Paragraph: 15.247 (d)		
Technician	M. Seamans	Date	December 12th, 2014
Climatic Conditions	Temp: 22.0 °C Relative Humidity: 23.0 %		
Notes	Limit: 65.36dB _{UV} , Based off of Reference Reading of 85.36dB _{UV}		



Date: 11. DEC. 2014 13:33:23
 Page 5 of 9

RETLIF TESTING LABORATORIES

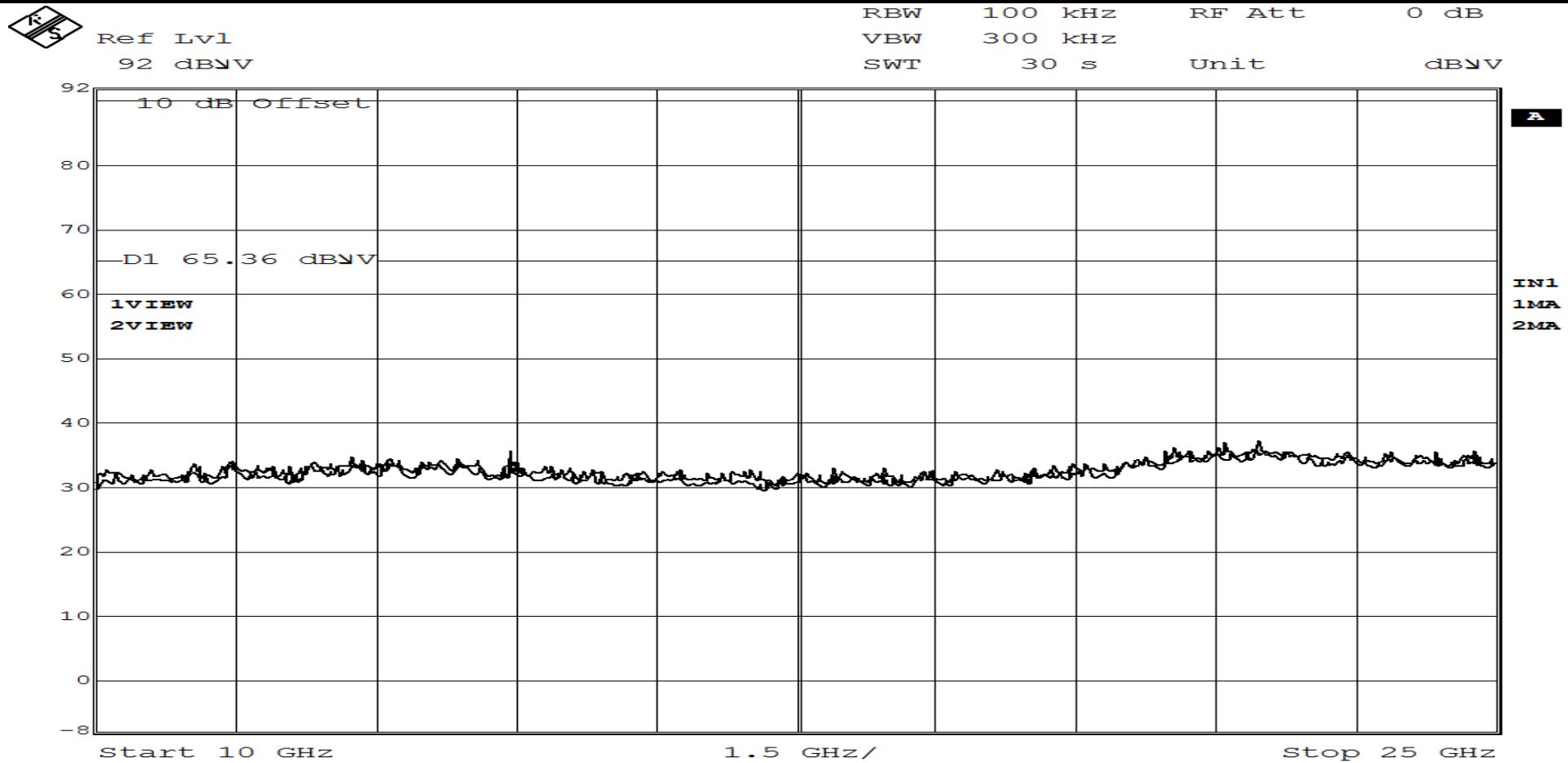
Test Method:	Out of Band Conducted Emissions 30 MHz to 25 GHz		
Customer	Radiation Safety and Control Services, Inc.	Job No.	R-5908N
Test Sample	DMC2000TD Simulated Radiation Detection Instrument		
Model Number	118001	Serial No.	501014010001
Operating Mode	Transmitting modulated signal at 2.480 GHz		
Test Specification	FCC Part 15, Subpart C Paragraph: 15.247 (d)		
Technician	M. Seamans	Date	December 12th, 2014
Climatic Conditions	Temp: 22.0 °C Relative Humidity: 23.0 %		
Notes	Limit: 65.36dB _{UV} , Based off of Reference Reading of 85.36dB _{UV}		



Date: 11. DEC. 2014 13:39:49
Page 6 of 9

RETLIF TESTING LABORATORIES

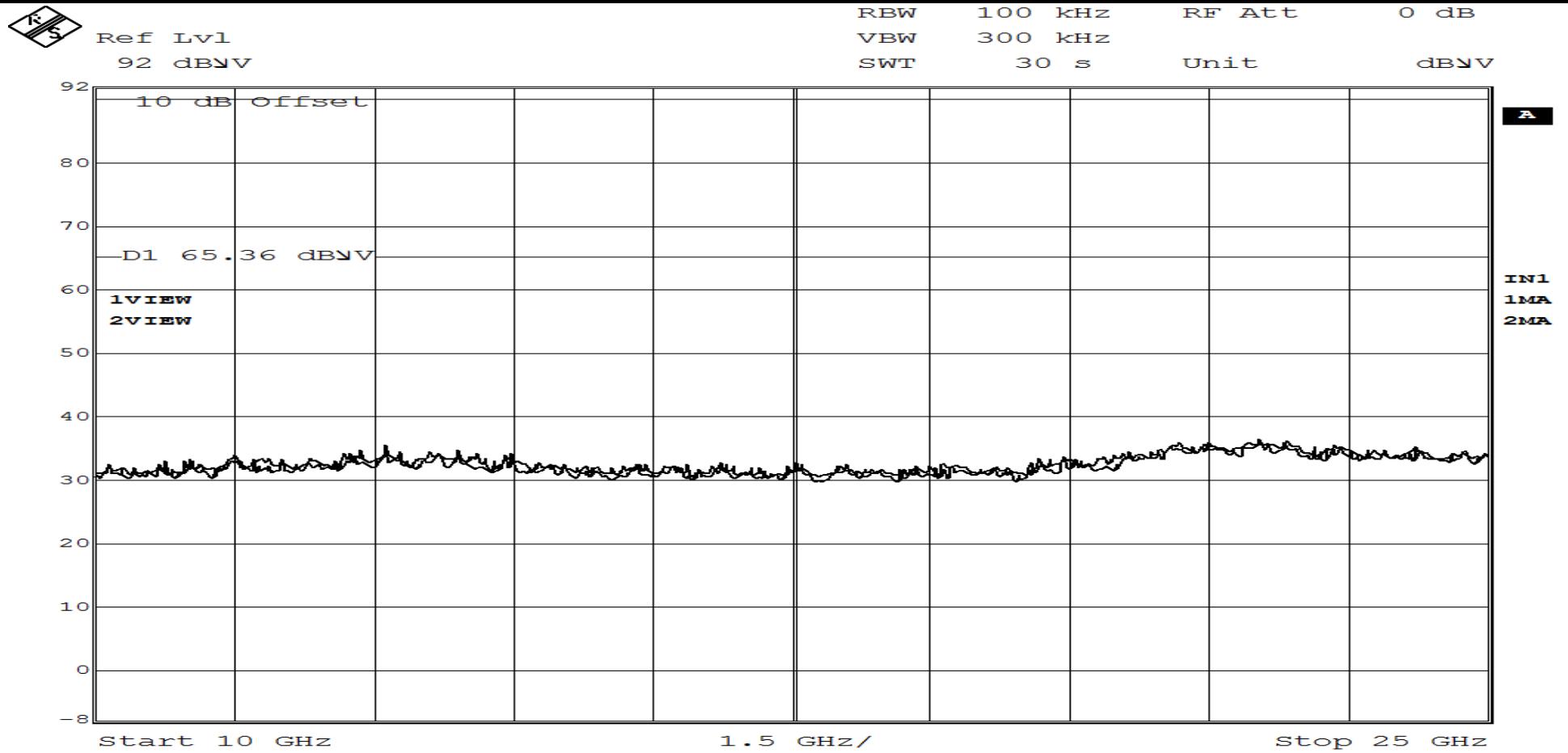
Test Method:	Out of Band Conducted Emissions 30 MHz to 25 GHz		
Customer	Radiation Safety and Control Services, Inc.	Job No.	R-5908N
Test Sample	DMC2000TD Simulated Radiation Detection Instrument		
Model Number	118001	Serial No.	501014010001
Operating Mode	Transmitting modulated signal at 2.405 GHz		
Test Specification	FCC Part 15, Subpart C Paragraph: 15.247 (d)		
Technician	M. Seamans	Date	December 12th, 2014
Climatic Conditions	Temp: 22.0 °C Relative Humidity: 23.0 %		
Notes	Limit: 65.36dB _{UV} , Based off of Reference Reading of 85.36dB _{UV}		



Date: 11.DEC.2014 13:45:13
 Page 7 of 9

RETLIF TESTING LABORATORIES

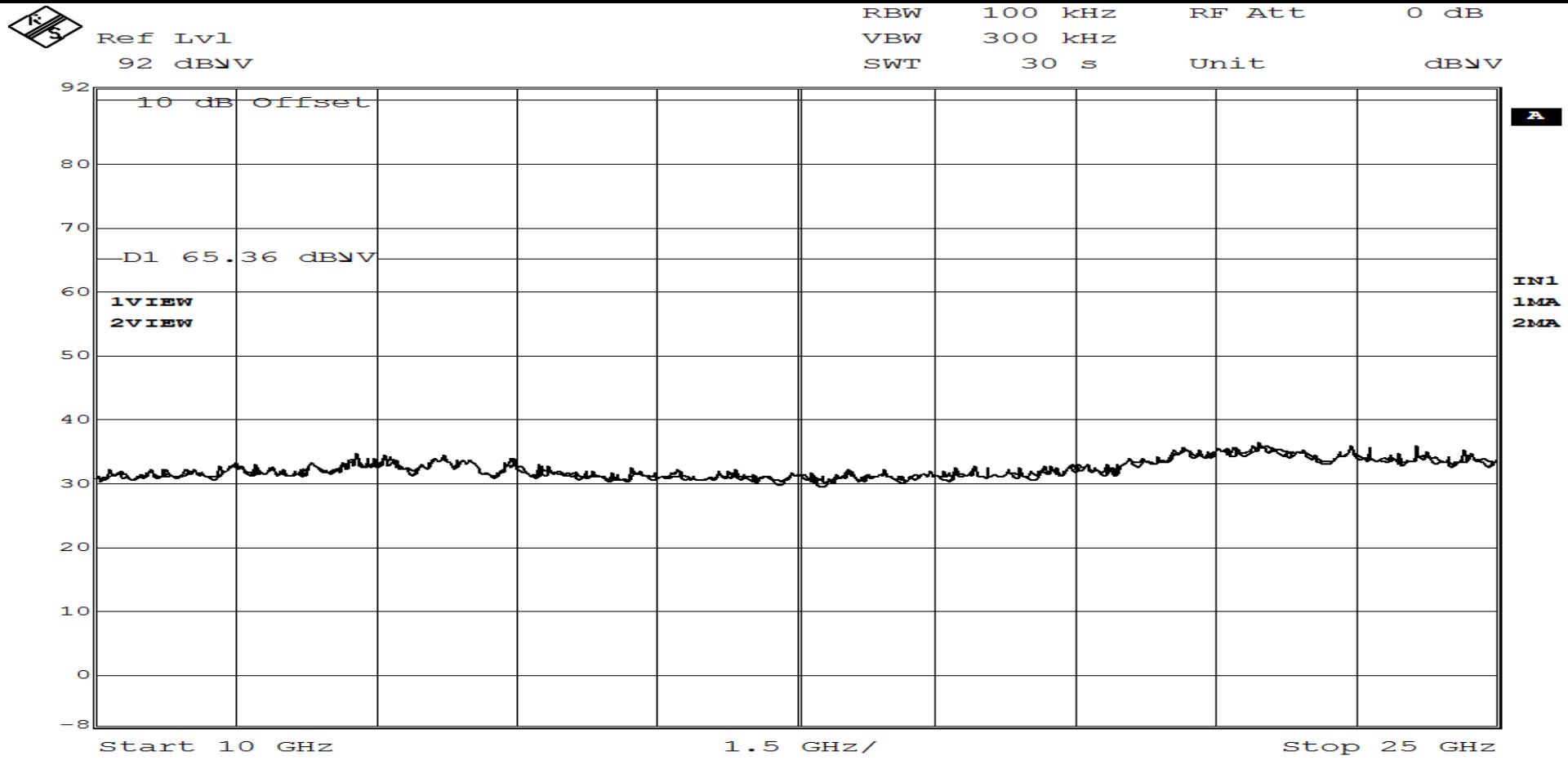
Test Method:	Out of Band Conducted Emissions 30 MHz to 25 GHz		
Customer	Radiation Safety and Control Services, Inc.	Job No.	R-5908N
Test Sample	DMC2000TD Simulated Radiation Detection Instrument		
Model Number	118001	Serial No.	501014010001
Operating Mode	Transmitting modulated signal at 2.440 GHz		
Test Specification	FCC Part 15, Subpart C Paragraph: 15.247 (d)		
Technician	M. Seamans	Date	December 12 th , 2014
Climatic Conditions	Temp: 22.0 °C Relative Humidity: 23.0 %		
Notes	Limit: 65.36dB _{UV} , Based off of Reference Reading of 85.36dB _{UV}		



Date: 11. DEC. 2014 13:49:28
Page 8 of 9

RETLIF TESTING LABORATORIES

Test Method:	Out of Band Conducted Emissions 30 MHz to 25 GHz		
Customer	Radiation Safety and Control Services, Inc.	Job No.	R-5908N
Test Sample	DMC2000TD Simulated Radiation Detection Instrument		
Model Number	118001	Serial No.	501014010001
Operating Mode	Transmitting modulated signal at 2.480 GHz		
Test Specification	FCC Part 15, Subpart C Paragraph: 15.247 (d)		
Technician	M. Seamans	Date	December 12th, 2014
Climatic Conditions	Temp: 22.0 °C Relative Humidity: 23.0 %		
Notes	Limit: 65.36dB _{UV} , Based off of Reference Reading of 85.36dB _{UV}		



Date: 11.DEC.2014 13:55:01
Page 9 of 9

**Out of Band Conducted Emissions
SORTD Test Data**

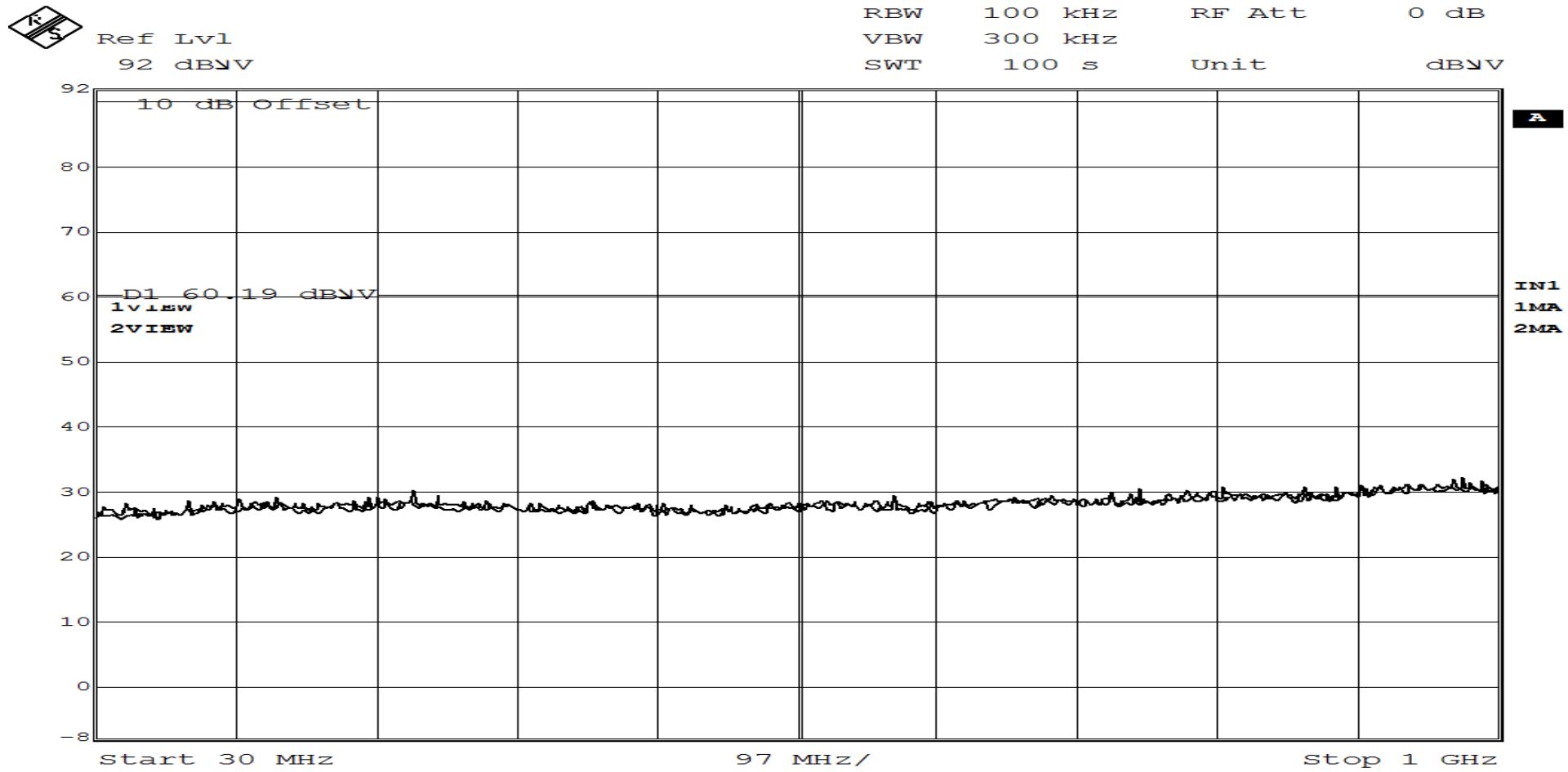


Retlif Testing Laboratories

Report No. R-5908N, Rev. B

RETLIF TESTING LABORATORIES

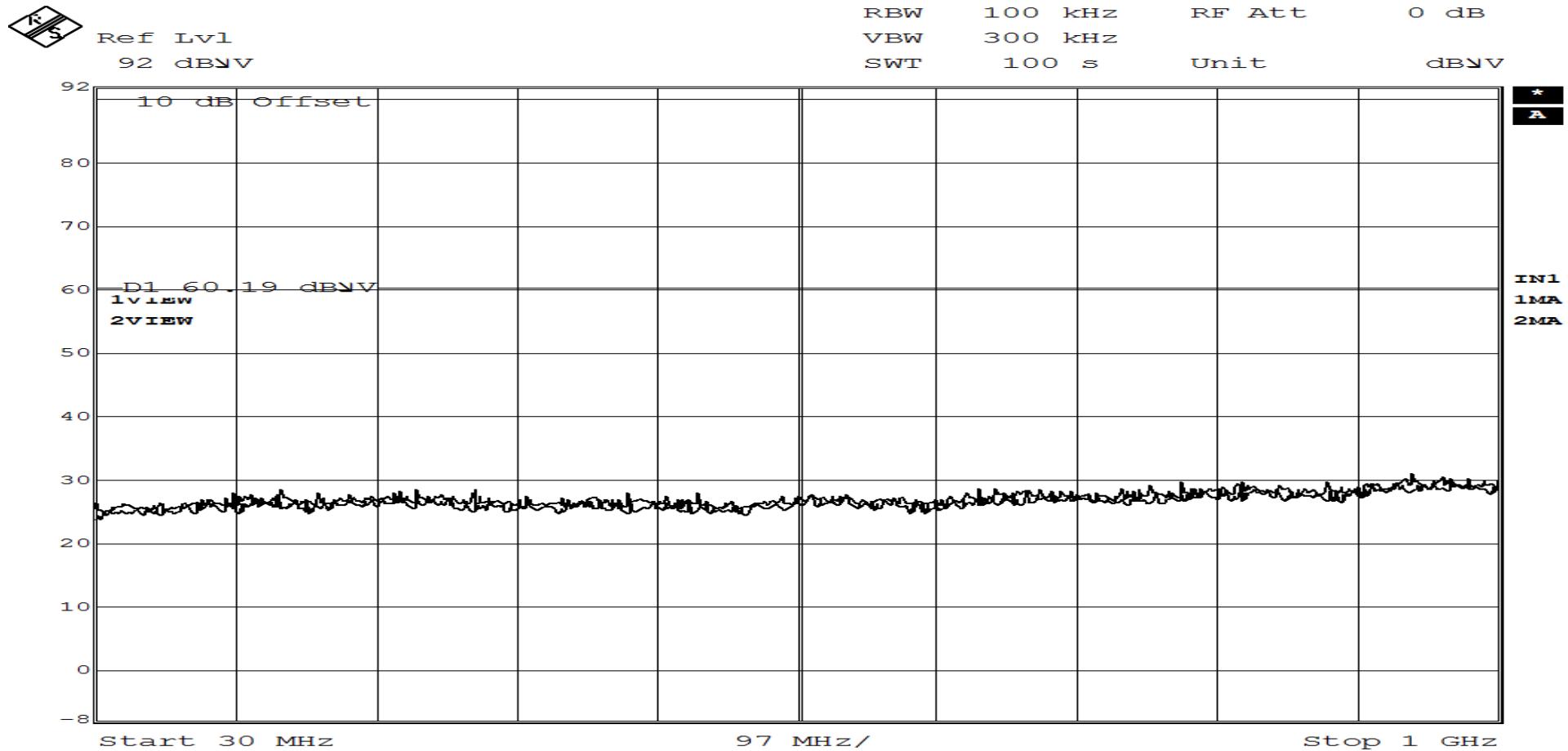
Test Method:	Out of Band Conducted Emissions 30 MHz to 25 GHz		
Customer	Radiation Safety and Control Services, Inc.	Job No.	R-5908N
Test Sample	SORTD Simulated Radiation Detection Instrument		
Model Number	205001	Serial No.	
Operating Mode	Transmitting modulated signal at 2.405 GHz		
Test Specification	FCC Part 15, Subpart C Paragraph: 15.247 (d)		
Technician	M. Seamans	Date	December 12 th , 2014
Climatic Conditions	Temp: 22.0 °C	Relative Humidity:	23.0 %
Notes	Limit: 60.19dB _V , Based off of Reference Reading of 80.19dB _V		



Date: 12 . DEC . 2014 10 : 43 : 14
 Page 1 of 9

RETLIF TESTING LABORATORIES

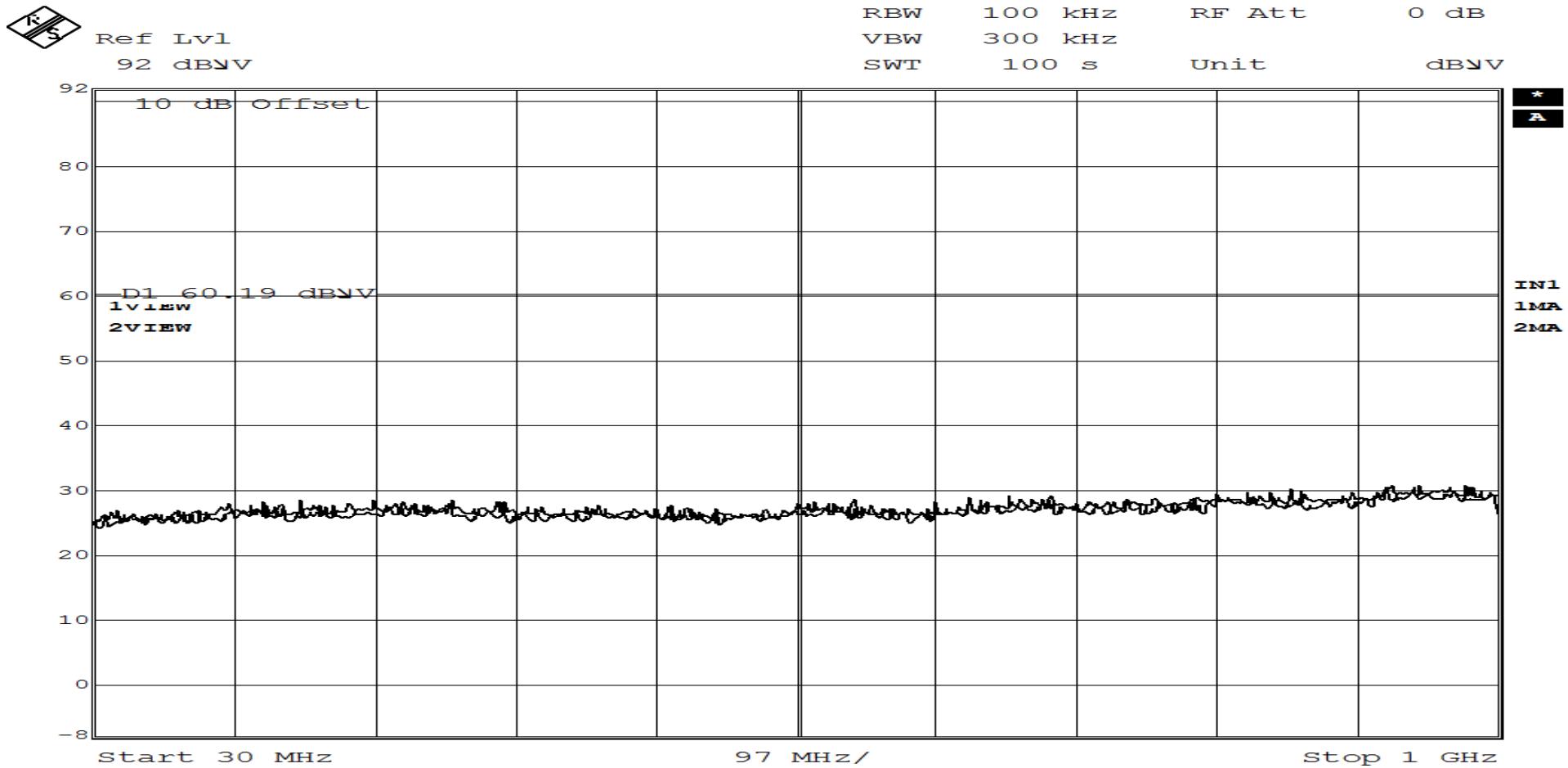
Test Method:	Out of Band Conducted Emissions 30 MHz to 25 GHz		
Customer	Radiation Safety and Control Services, Inc.	Job No.	R-5908N
Test Sample	SORTD Simulated Radiation Detection Instrument		
Model Number	205001	Serial No.	
Operating Mode	Transmitting modulated signal at 2.440 GHz		
Test Specification	FCC Part 15, Subpart C Paragraph: 15.247 (d)		
Technician	M. Seamans	Date	December 12th, 2014
Climatic Conditions	Temp: 22.0 °C	Relative Humidity:	23.0 %
Notes	Limit: 60.19dBuV, Based off of Reference Reading of 80.19dBuV		



Date: 12. DEC. 2014 11:04:18
 Page 2 of 9

RETLIF TESTING LABORATORIES

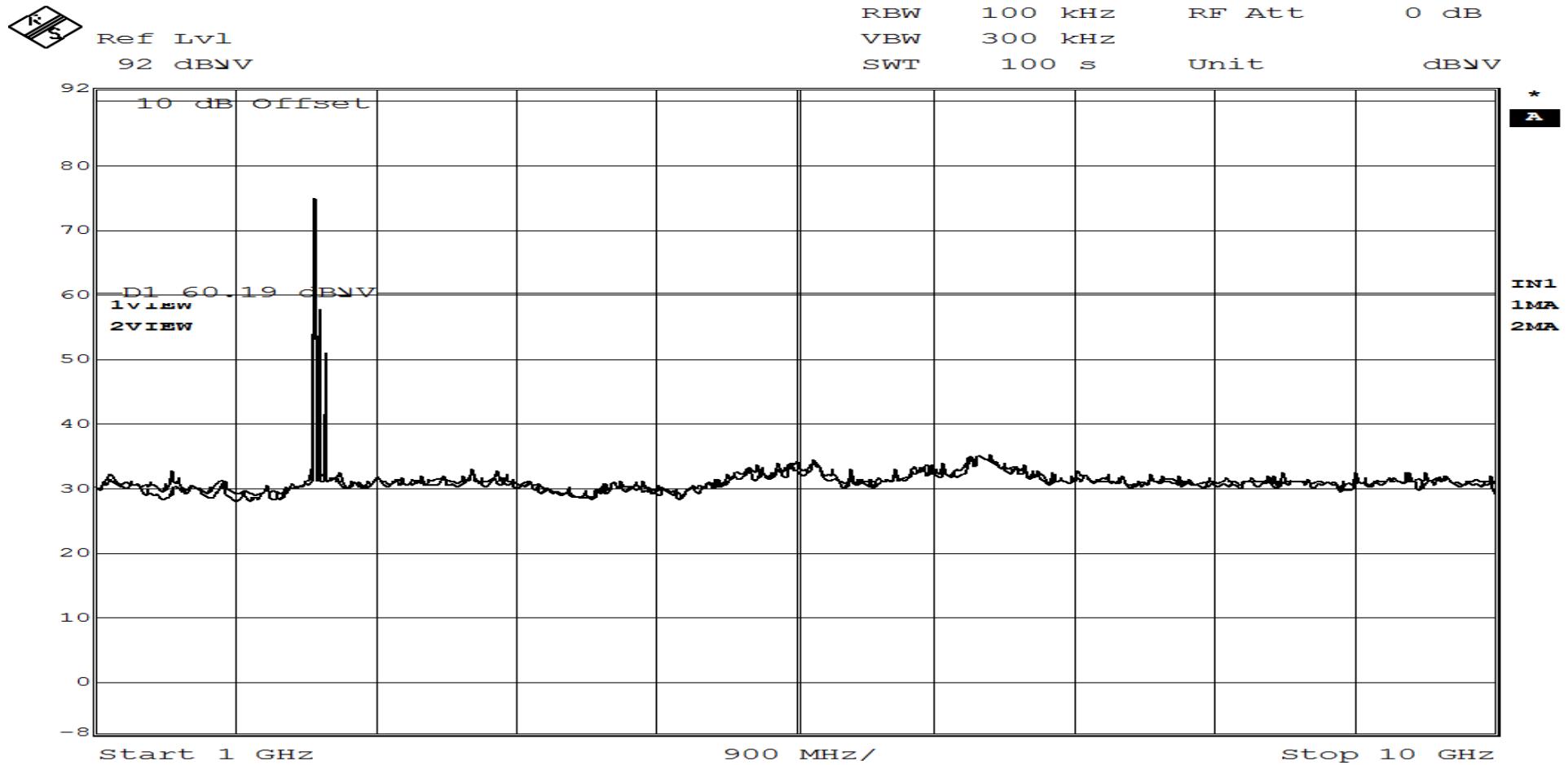
Test Method:	Out of Band Conducted Emissions 30 MHz to 25 GHz		
Customer	Radiation Safety and Control Services, Inc.	Job No.	R-5908N
Test Sample	SORTD Simulated Radiation Detection Instrument		
Model Number	205001	Serial No.	
Operating Mode	Transmitting modulated signal at 2.480 GHz		
Test Specification	FCC Part 15, Subpart C Paragraph: 15.247 (d)		
Technician	M. Seamans	Date	December 12th, 2014
Climatic Conditions	Temp: 22.0 °C	Relative Humidity:	23.0 %
Notes	Limit: 60.19dBuV, Based off of Reference Reading of 80.19dBuV		



Date: 12 . DEC . 2014 11:13:27
 Page 3 of 9

RETLIF TESTING LABORATORIES

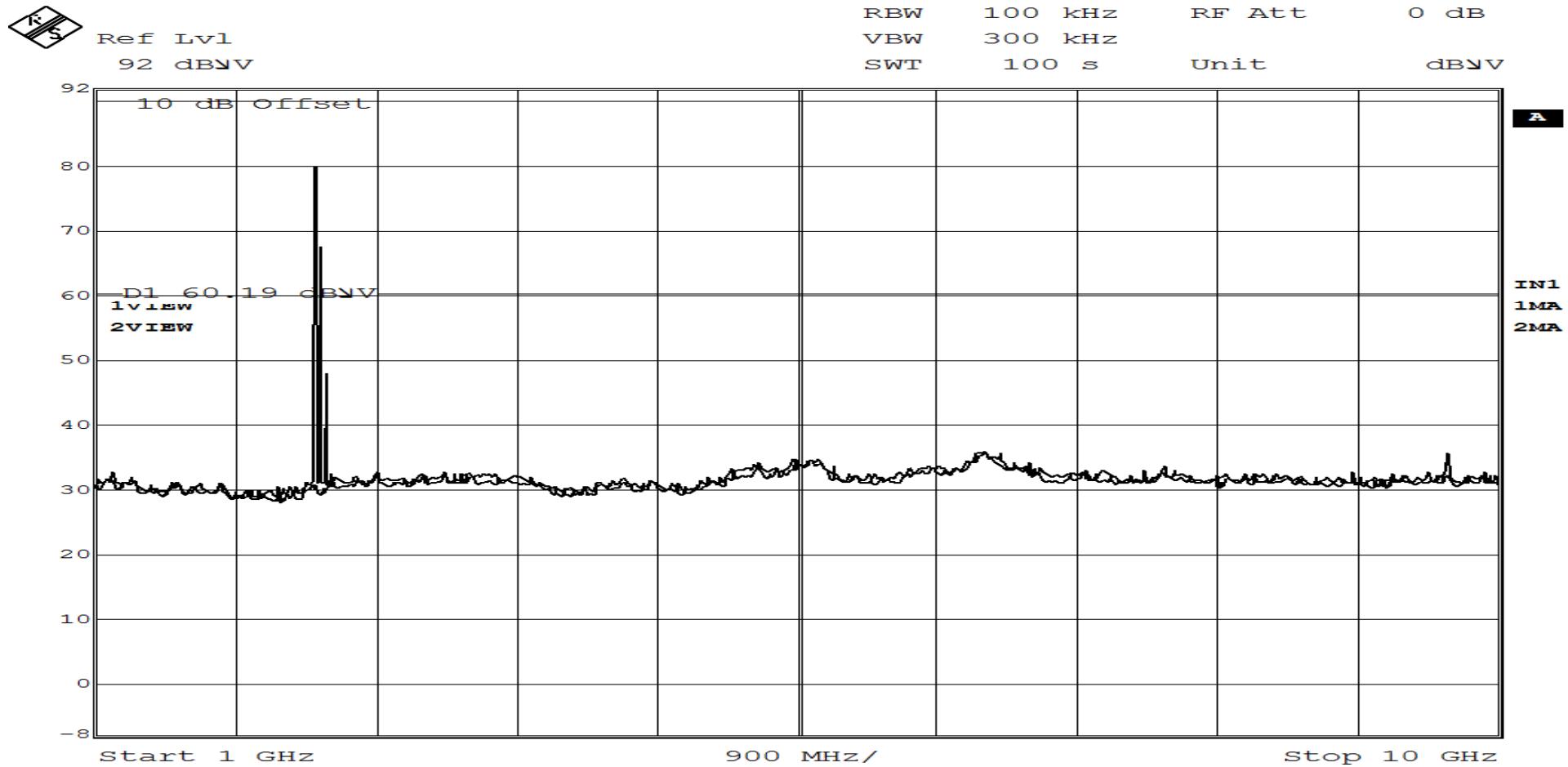
Test Method:	Out of Band Conducted Emissions 30 MHz to 25 GHz		
Customer	Radiation Safety and Control Services, Inc.	Job No.	R-5908N
Test Sample	SORTD Simulated Radiation Detection Instrument		
Model Number	205001	Serial No.	
Operating Mode	Transmitting modulated signal at 2.405 GHz		
Test Specification	FCC Part 15, Subpart C Paragraph: 15.247 (d)		
Technician	M. Seamans	Date	December 12th, 2014
Climatic Conditions	Temp: 22.0 °C	Relative Humidity:	23.0 %
Notes	Limit: 60.19dBuV, Based off of Reference Reading of 80.19dBuV		



Date: 12 . DEC . 2014 11 : 22 : 27
 Page 4 of 9

RETLIF TESTING LABORATORIES

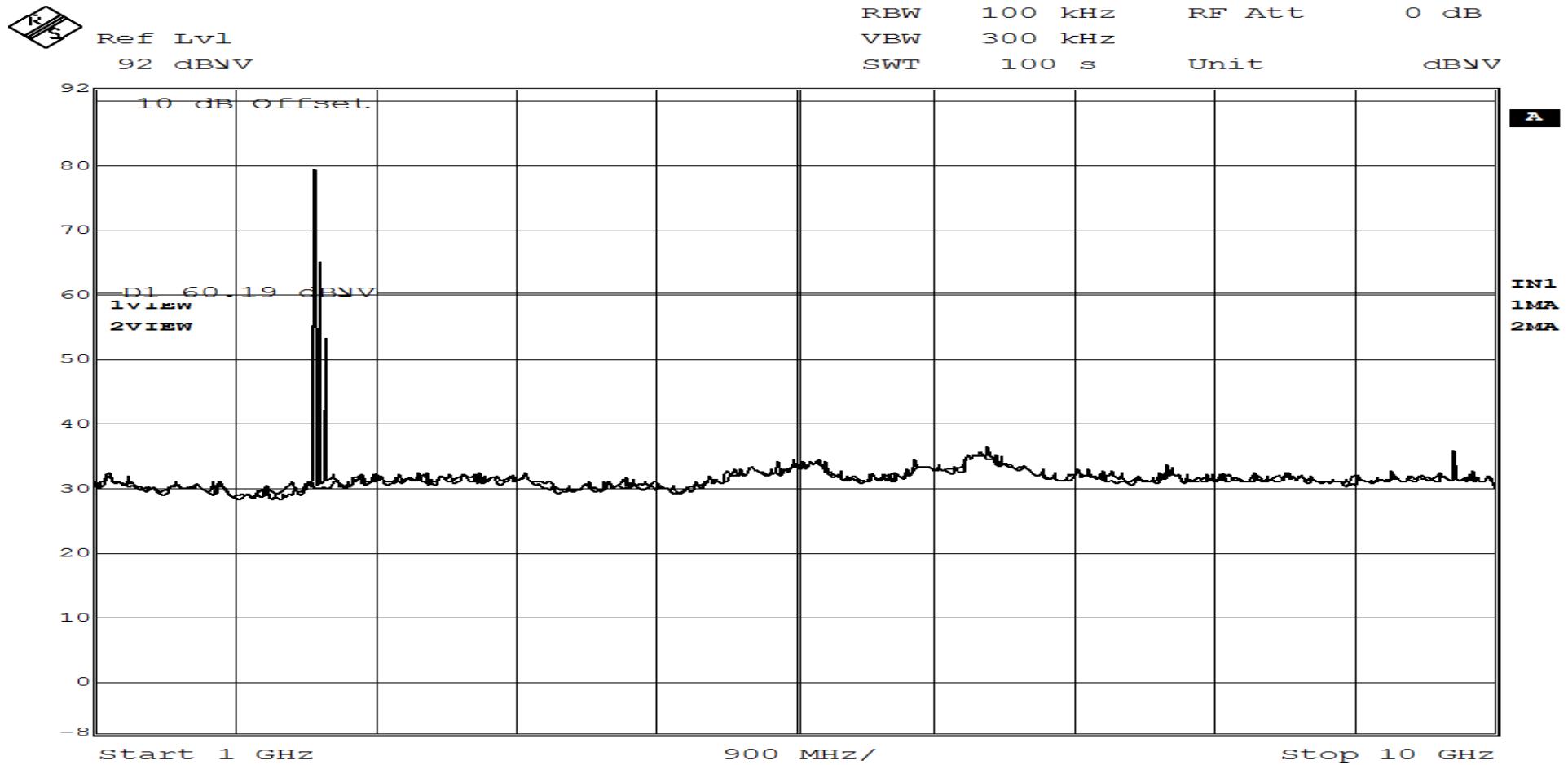
Test Method:	Out of Band Conducted Emissions 30 MHz to 25 GHz		
Customer	Radiation Safety and Control Services, Inc.	Job No.	R-5908N
Test Sample	SORTD Simulated Radiation Detection Instrument		
Model Number	205001	Serial No.	
Operating Mode	Transmitting modulated signal at 2.440 GHz		
Test Specification	FCC Part 15, Subpart C Paragraph: 15.247 (d)		
Technician	M. Seamans	Date	December 12th, 2014
Climatic Conditions	Temp: 22.0 °C	Relative Humidity:	23.0 %
Notes	Limit: 60.19dBuV, Based off of Reference Reading of 80.19dBuV		



Date: 12 . DEC . 2014 11 : 35 : 11
 Page 5 of 9

RETLIF TESTING LABORATORIES

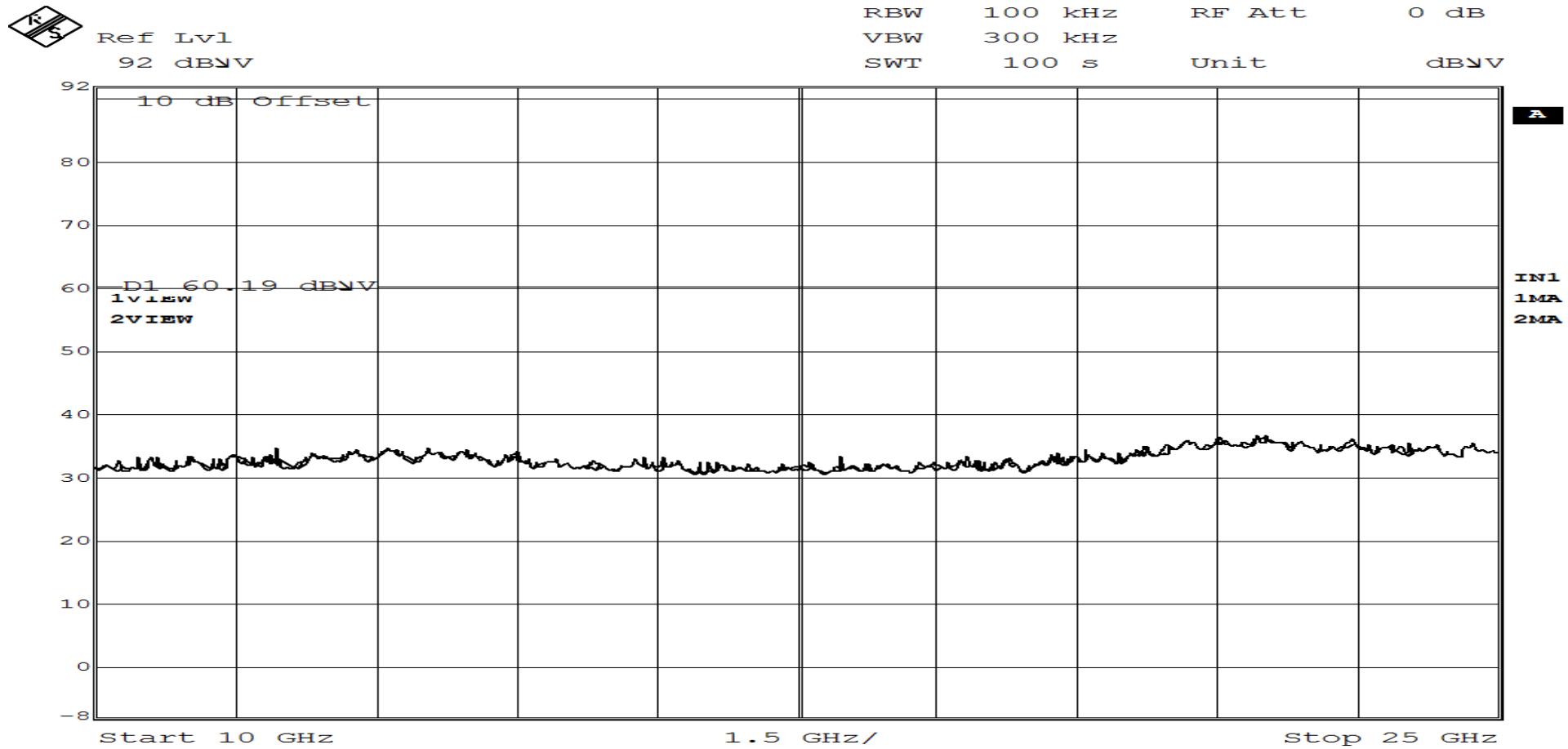
Test Method:	Out of Band Conducted Emissions 30 MHz to 25 GHz		
Customer	Radiation Safety and Control Services, Inc.	Job No.	R-5908N
Test Sample	SORTD Simulated Radiation Detection Instrument		
Model Number	205001	Serial No.	
Operating Mode	Transmitting modulated signal at 2.480 GHz		
Test Specification	FCC Part 15, Subpart C Paragraph: 15.247 (d)		
Technician	M. Seamans	Date	December 12th, 2014
Climatic Conditions	Temp: 22.0 °C	Relative Humidity:	23.0 %
Notes	Limit: 60.19dBuV, Based off of Reference Reading of 80.19dBuV		



Date: 12 . DEC . 2014 11 : 43 : 37
 Page 6 of 9

RETLIF TESTING LABORATORIES

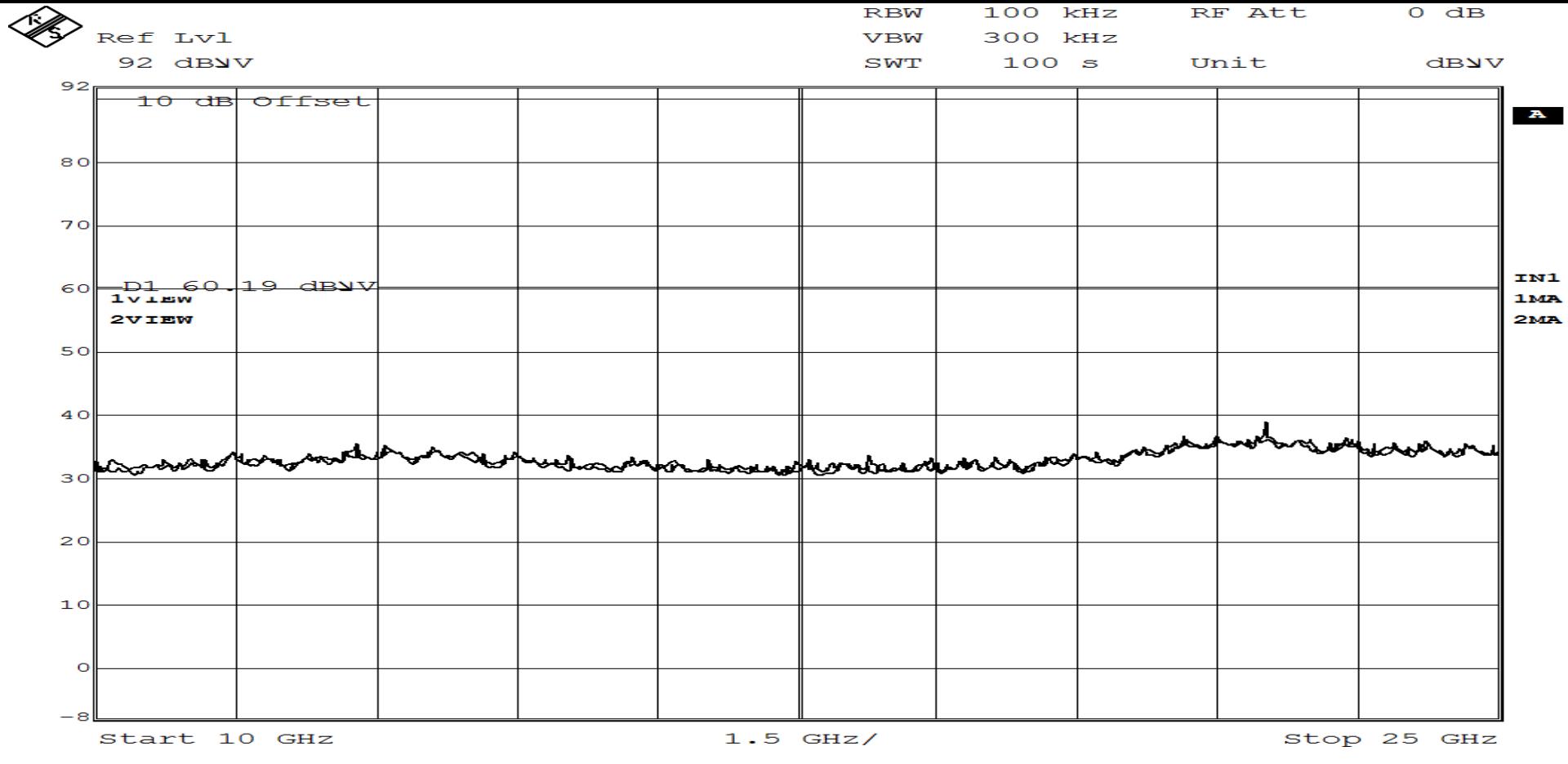
Test Method:	Out of Band Conducted Emissions 30 MHz to 25 GHz		
Customer	Radiation Safety and Control Services, Inc.	Job No.	R-5908N
Test Sample	SORTD Simulated Radiation Detection Instrument		
Model Number	205001	Serial No.	
Operating Mode	Transmitting modulated signal at 2.405 GHz		
Test Specification	FCC Part 15, Subpart C Paragraph: 15.247 (d)		
Technician	M. Seamans	Date	December 12th, 2014
Climatic Conditions	Temp: 22.0 °C	Relative Humidity:	23.0 %
Notes	Limit: 60.19dBuV, Based off of Reference Reading of 80.19dBuV		



Date: 12. DEC. 2014 11:53:43
 Page 7 of 9

RETLIF TESTING LABORATORIES

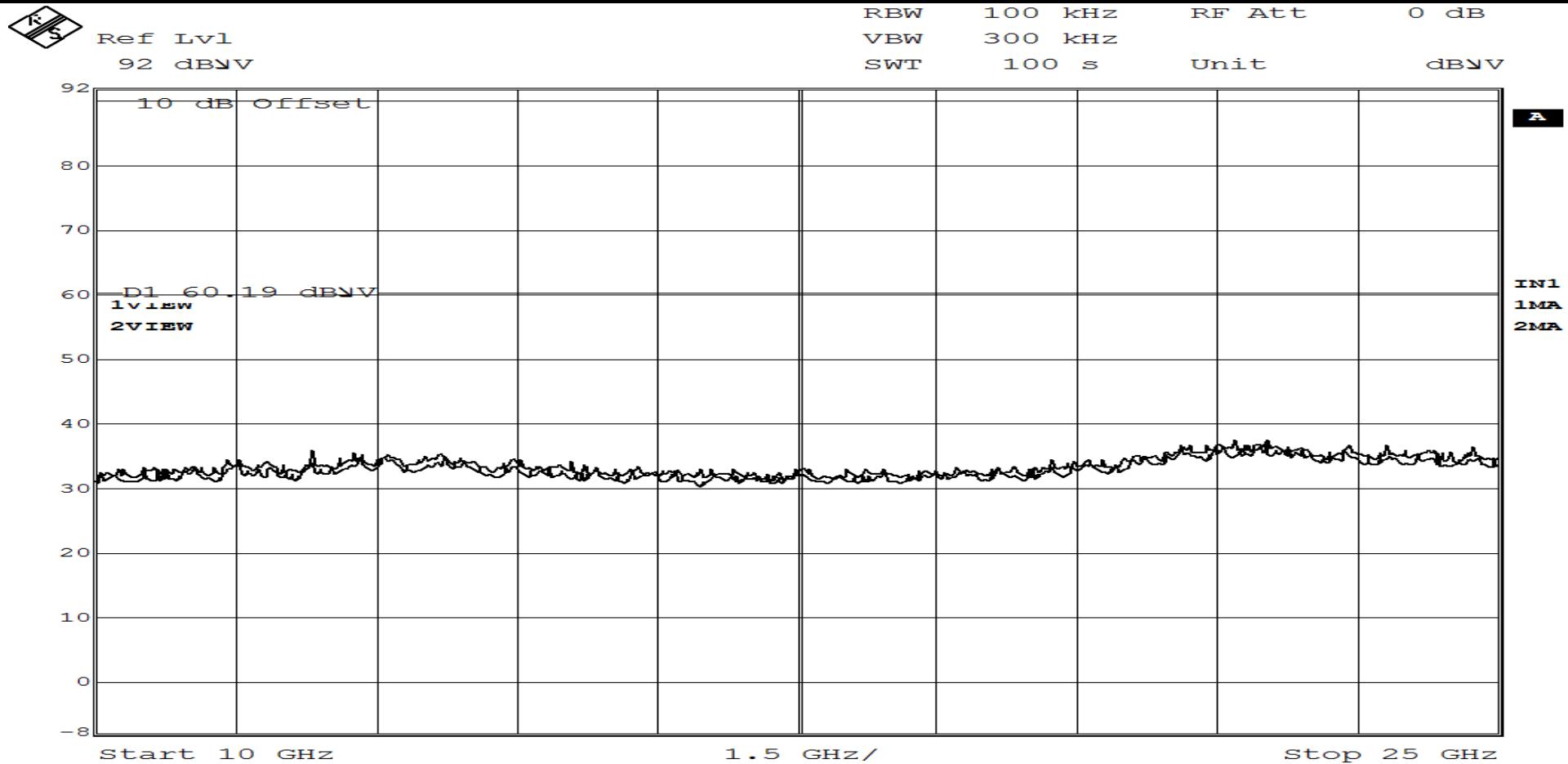
Test Method:	Out of Band Conducted Emissions 30 MHz to 25 GHz		
Customer	Radiation Safety and Control Services, Inc.	Job No.	R-5908N
Test Sample	SORTD Simulated Radiation Detection Instrument		
Model Number	205001	Serial No.	
Operating Mode	Transmitting modulated signal at 2.440 GHz		
Test Specification	FCC Part 15, Subpart C Paragraph: 15.247 (d)		
Technician	M. Seamans	Date	December 12 th , 2014
Climatic Conditions	Temp: 22.0 °C Relative Humidity: 23.0 %		
Notes	Limit: 60.19dB _{UV} , Based off of Reference Reading of 80.19dB _{UV}		



Date: 12. DEC. 2014 12:52:35
Page 8 of 9

RETLIF TESTING LABORATORIES

Test Method:	Out of Band Conducted Emissions 30 MHz to 25 GHz		
Customer	Radiation Safety and Control Services, Inc.	Job No.	R-5908N
Test Sample	SORTD Simulated Radiation Detection Instrument		
Model Number	205001	Serial No.	
Operating Mode	Transmitting modulated signal at 2.480 GHz		
Test Specification	FCC Part 15, Subpart C Paragraph: 15.247 (d)		
Technician	M. Seamans	Date	December 12th, 2014
Climatic Conditions	Temp: 22.0 °C	Relative Humidity:	23.0 %
Notes	Limit: 60.19dB _{UV} , Based off of Reference Reading of 80.19dB _{UV}		



Date: 12.DEC.2014 13:13:32
Page 9 of 9

**Band Edge Conducted
DMC2000TD Test Data**

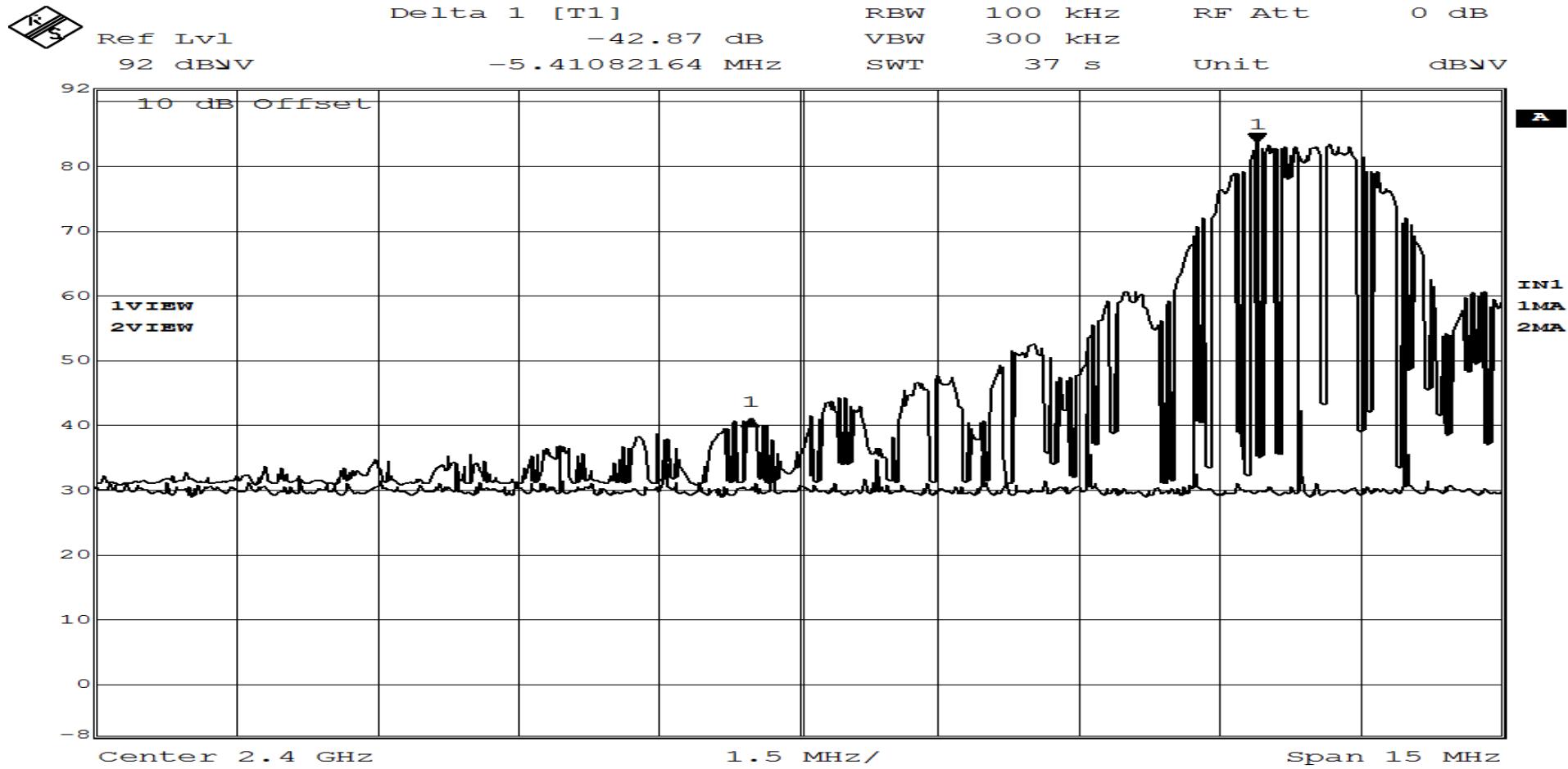


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Report No. R-5908N, Rev. B

RETLIF TESTING LABORATORIES

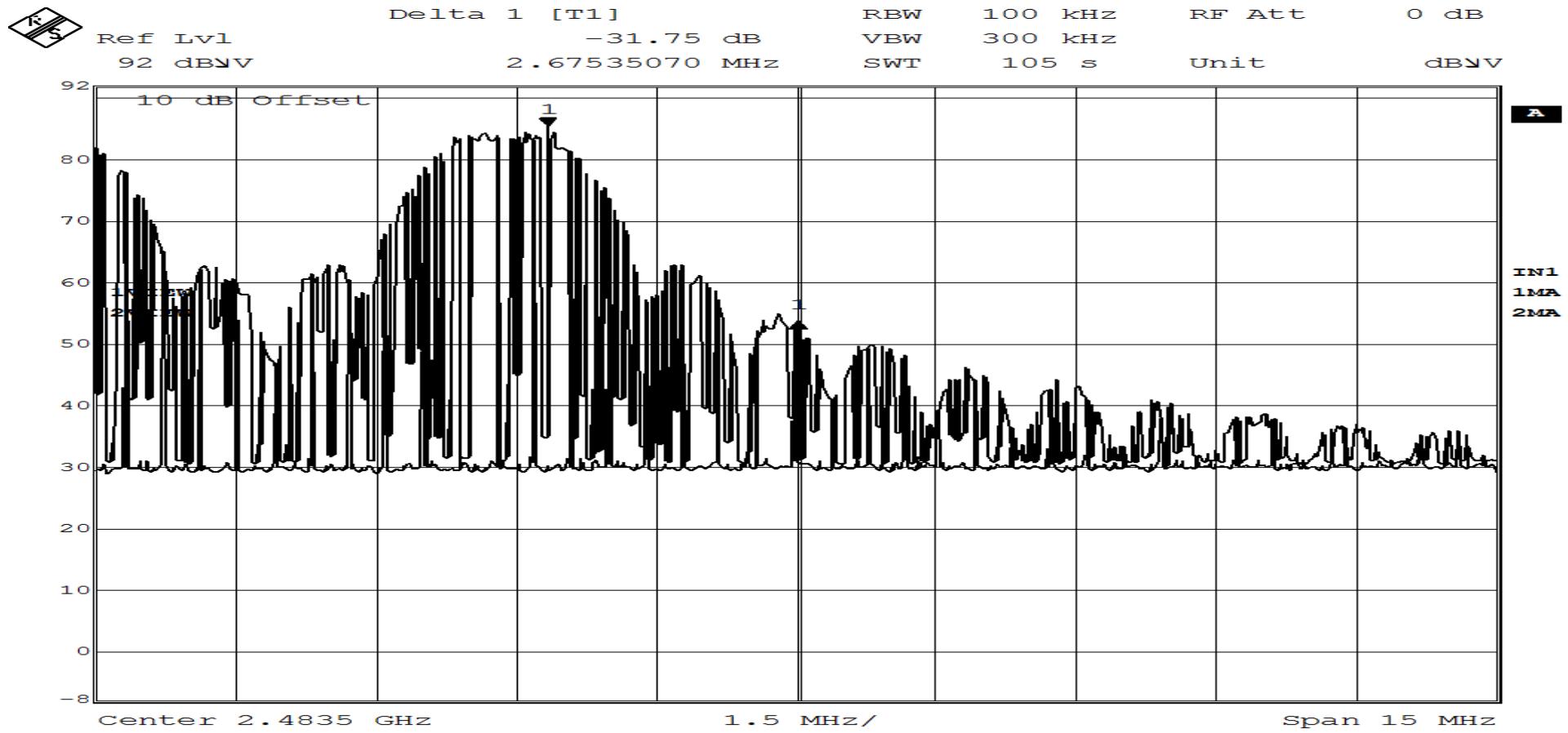
Test Method:	Band Edge Conducted		
Customer	Radiation Safety and Control Services, Inc.	Job No.	R-5908N
Test Sample	DMC2000TD Simulated Radiation Detection Instrument		
Model Number	118001	Serial No.	501014010001
Operating Mode	Transmitting modulated signal		
Test Specification	FCC Part 15, Subpart C Paragraph: 15.247 (d)		
Technician	M. Seamans	Date	December 12 th , 2014
Climatic Conditions	Temp: 22.0 °C Relative Humidity: 23.0 %		
Notes	Lower Band Edge Reading: -42.87dB from Reference Reading		



Date: 11. DEC. 2014 14:48:42
 Page 1 of 2

RETLIF TESTING LABORATORIES

Test Method:	Band Edge Conducted		
Customer	Radiation Safety and Control Services, Inc.	Job No.	R-5908N
Test Sample	DMC2000TD Simulated Radiation Detection Instrument		
Model Number	118001	Serial No.	501014010001
Operating Mode	Transmitting modulated signal		
Test Specification	FCC Part 15, Subpart C Paragraph: 15.247 (d)		
Technician	M. Seamans	Date	December 12th, 2014
Climatic Conditions	Temp: 22.0 °C	Relative Humidity: 23.0 %	
Notes	Upper Band Edge Reading: -31.75 from Reference Reading		



Date: 11.DEC.2014 15:19:45
Page 2 of 2

**Band Edge Conducted
SORTD Test Data**

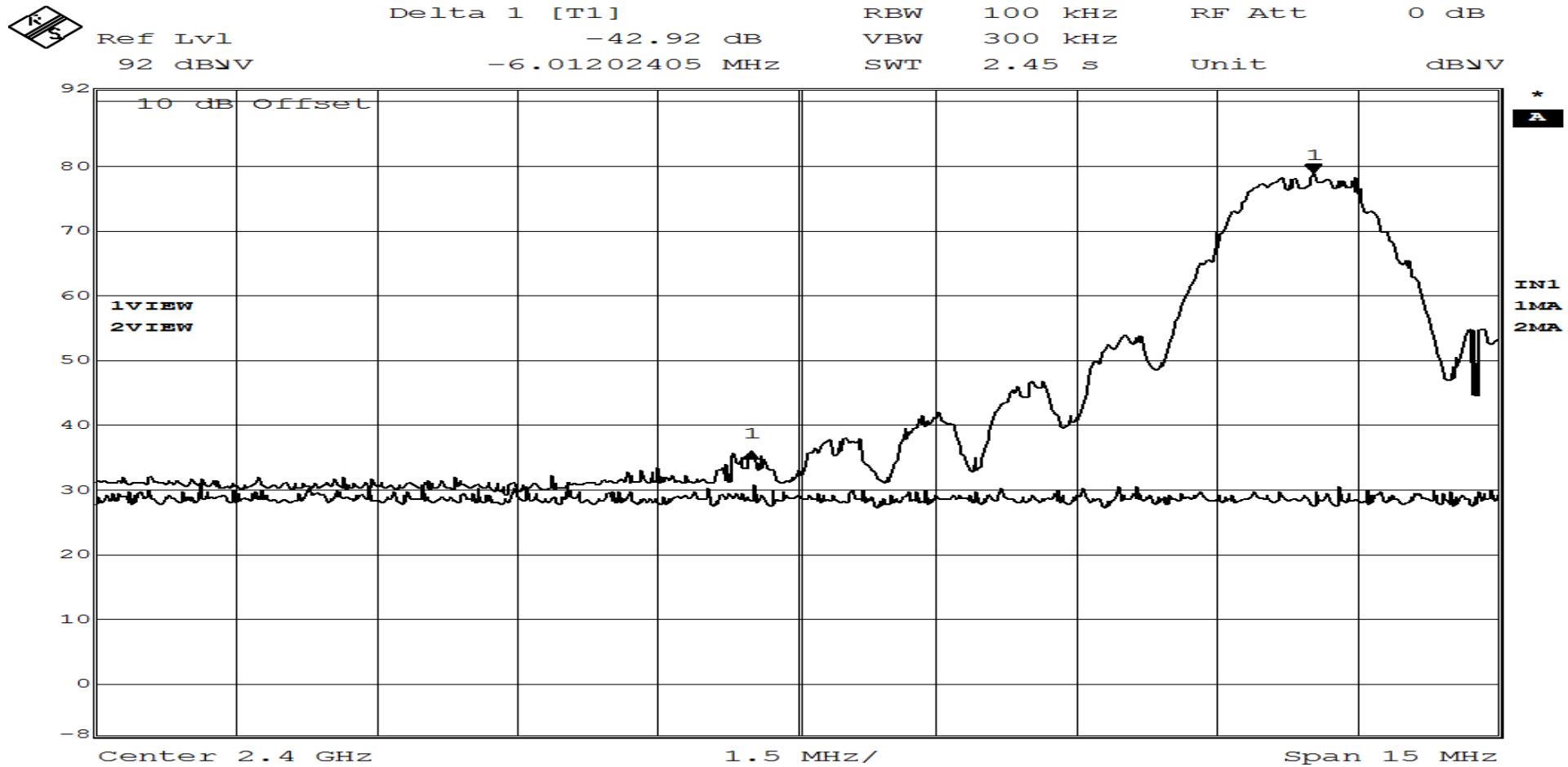


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Report No. R-5908N, Rev. B

RETLIF TESTING LABORATORIES

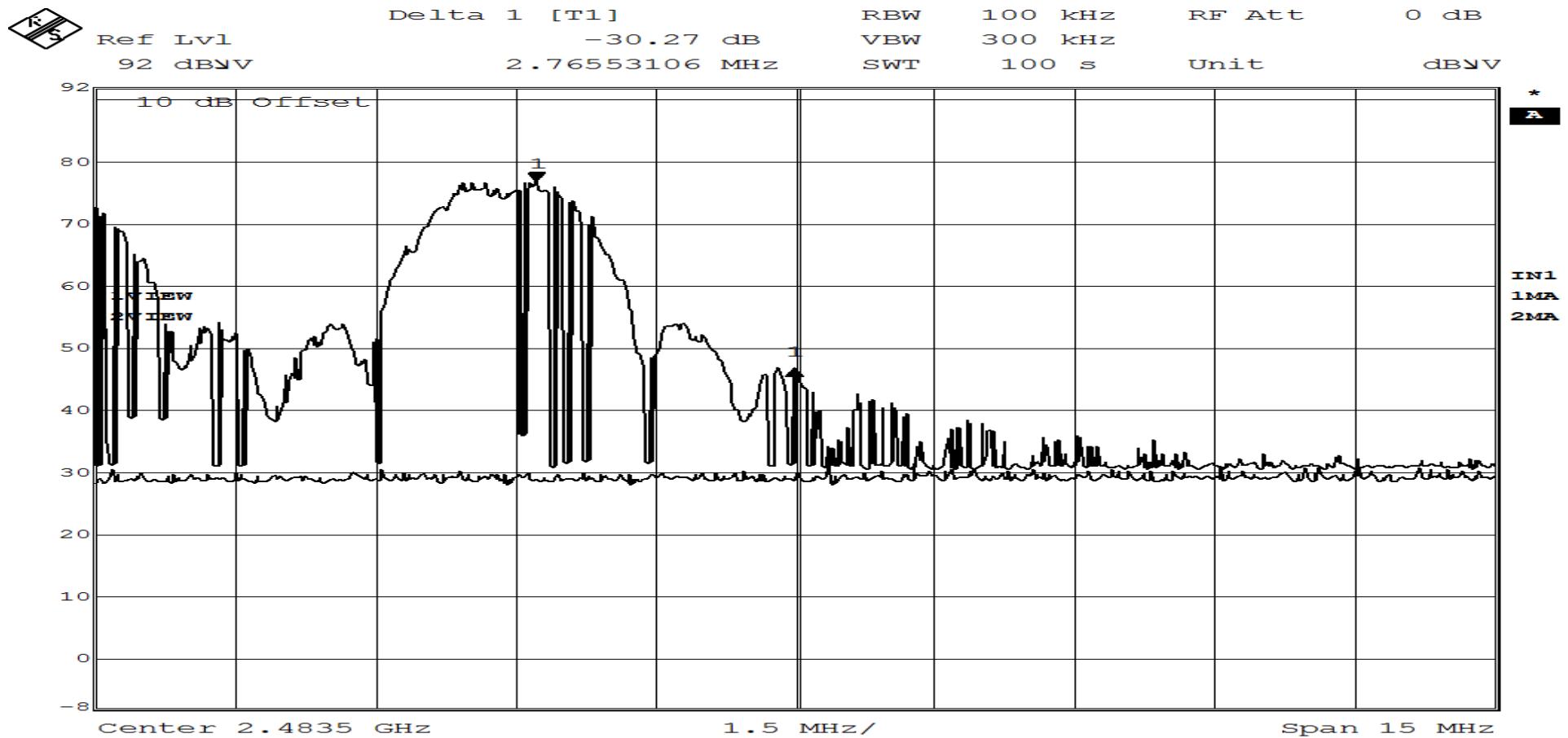
Test Method:	Band Edge Conducted		
Customer	Radiation Safety and Control Services, Inc.	Job No.	R-5908N
Test Sample	SORTD Simulated Radiation Detection Instrument		
Model Number	205001	Serial No.	
Operating Mode	Transmitting modulated signal		
Test Specification	FCC Part 15, Subpart C Paragraph: 15.247 (d)		
Technician	M. Seamans	Date	December 12 th , 2014
Climatic Conditions	Temp: 22.0 °C	Relative Humidity:	23.0 %
Notes	Lower Band Edge Reading: -42.92dB from Reference Reading		



Date: 12 . DEC . 2014 10 : 18 : 03
 Page 1 of 2

RETLIF TESTING LABORATORIES

Test Method:	Band Edge Conducted		
Customer	Radiation Safety and Control Services, Inc.	Job No.	R-5908N
Test Sample	SORTD Simulated Radiation Detection Instrument		
Model Number	205001	Serial No.	
Operating Mode	Transmitting modulated signal		
Test Specification	FCC Part 15, Subpart C Paragraph: 15.247 (d)		
Technician	M. Seamans	Date	December 12th, 2014
Climatic Conditions	Temp: 22.0 °C	Relative Humidity: 23.0 %	
Notes	Upper Band Edge Reading: -30.27 from Reference Reading		



Date: 12.DEC.2014 09:41:14
Page 2 of 2

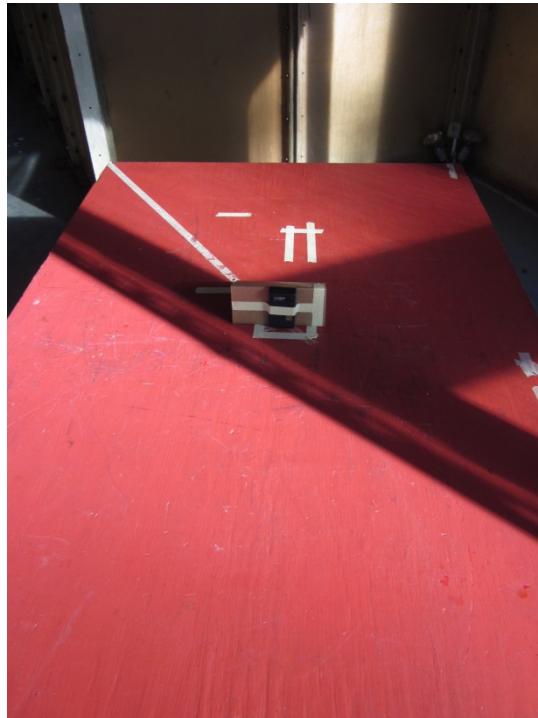
**Test Photograph(s)
Out of Band/Band Edge Radiated Emissions
FCC Section 15.247(d)**



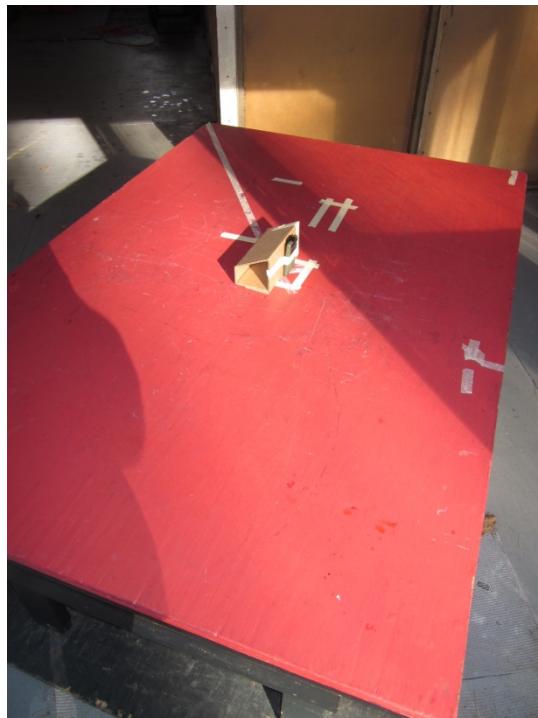
Retlif Testing Laboratories

Report No. R-5908N, Rev. B

Test Photograph(s)
Out of Band/Band Edge Radiated Emissions



Test Setup, DMC2000TD



Test Setup, SORTD



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Report No. R-5908N, Rev. B

Test Photograph(s)
Out of Band/Band Edge Radiated Emissions



30 MHz – 200 MHz, Vertical Polarization, DMC2000TD



30 MHz – 200 MHz, Horizontal Polarization, DMC2000TD



Retlif Testing Laboratories

Report No. R-5908N, Rev. B

Test Photograph(s)
Out of Band/Band Edge Radiated Emissions



30 MHz – 200 MHz, Horizontal Polarization, SORTD



30 MHz – 200 MHz, Vertical Polarization, SORTD



Retlif Testing Laboratories

Report No. R-5908N, Rev. B

Test Photograph(s)
Out of Band/Band Edge Radiated Emissions



200 MHz – 1 GHz, Horizontal Polarization, DMC2000TD



200 MHz – 1 GHz, Vertical Polarization, DMC2000TD



Retlif Testing Laboratories

Report No. R-5908N, Rev. B

Test Photograph(s)
Out of Band/Band Edge Radiated Emissions



200 MHz – 1 GHz, Horizontal Polarization, SORTD



200 MHz – 1 GHz, Vertical Polarization, SORTD



Retlif Testing Laboratories

Report No. R-5908N, Rev. B

Test Photograph(s)
Out of Band/Band Edge Radiated Emissions



1 GHz – 18 GHz, Horizontal Polarization, DMC2000TD



1 GHz – 18 GHz, Vertical Polarization, DMC2000TD



Retlif Testing Laboratories

Report No. R-5908N, Rev. B

Test Photograph(s)
Out of Band/Band Edge Radiated Emissions



1 GHz – 18 GHz, Horizontal Polarization, SORTD



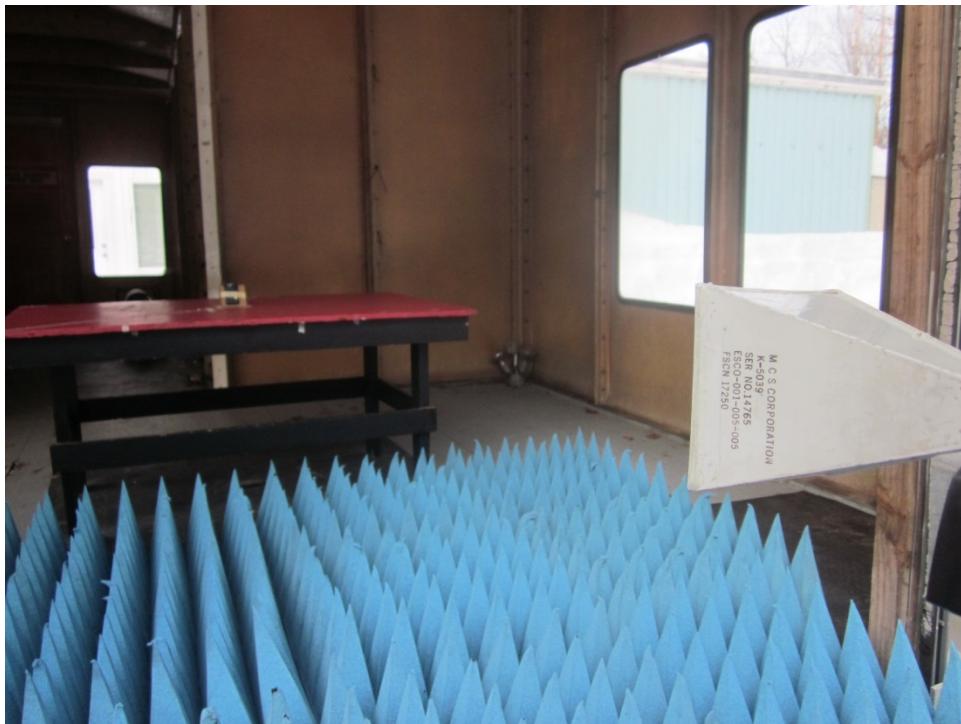
1 GHz – 18 GHz, Vertical Polarization, SORTD



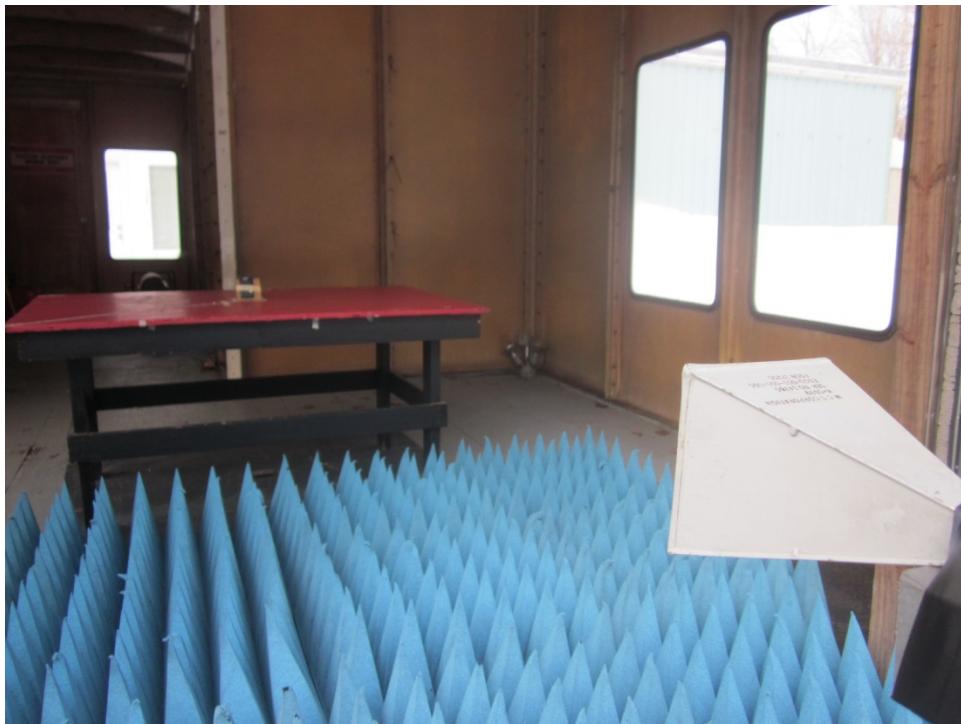
Retlif Testing Laboratories

Report No. R-5908N, Rev. B

Test Photograph(s)
Out of Band/Band Edge Radiated Emissions



18 GHz – 25 GHz, Horizontal Polarization, DMC2000TD



18 GHz – 25 GHz, Vertical Polarization, DMC2000TD



Retlif Testing Laboratories

Report No. R-5908N, Rev. B

Test Photograph(s)
Out of Band/Band Edge Radiated Emissions



18 GHz – 25 GHz, Horizontal Polarization, SORTD



18 GHz – 25 GHz, Vertical Polarization, SORTD



Retlif Testing Laboratories

Report No. R-5908N, Rev. B

**Unwanted Emissions into Restricted Frequency Bands
30 MHz to 25 GHz
Test Data**



Retlif Testing Laboratories

Report No. R-5908N, Rev. B

**Restricted Band Emissions
30 MHz to 25 GHz
DMC2000TD Test Data**



Retlif Testing Laboratories

Report No. R-5908N, Rev. B

RETLIF TESTING LABORATORIES

EMISSIONS TEST DATA SHEET

Test Method	Restricted Band Emissions 30 MHz to 25 GHz	
Customer	Radiation Safety and Control Services, Inc.	
Job Number	R-5908N	
Test Sample	DMC2000TD Simulated Radiation Detection Instrument	
Model Number	118001	
Serial Number	501014010002	
Test Specification	FCC Part 15 Subpart C	Paragraph: 15.247(d)
Operating Mode	Transmitting modulated signal	
Technician	T. Hannemann	
Date	February 11, 2015	
Notes: Test Antenna Distance: 3 meters		Detector: Quasi-Peak <1GHz, Average >1GHz

TEST PARAMETERS

Restricted Band	Measured Frequency	Meter Reading	Correction Factor	Corrected Reading			Converted Reading	Limit at 3M
MHz	MHz	dBuV	dB	dBuV/m			uV/m	uV/m
37.5	-	-	-	-			-	100
	38.00*	11.8	11.2	23			14.13	I
38.25	-	-	-	-			-	100
73	-	-	-	-			-	100
	73.50*	15.3	6.3	21.6			12.02	I
75.2	-	-	-	-			-	100
108	-	-	-	-			-	150
	115.00*	5.8	12.8	18.6			8.51	I
121.94	-	-	-	-			-	150
123	-	-	-	-			-	150
	132.00*	6.5	11.9	18.4			8.32	
138	-	-	-	-			-	150
149.9	-	-	-	-			-	150
	150.00*	3.9	12.8	16.7			6.84	I
150.05	-	-	-	-			-	150
156.5248	-	-	-	-			-	150

No EUT emissions within 10 dB of the specified test limit were observed at the specified test distance throughout the given frequency spectrum. * This emission is not from the EUT. It is a measurement of minimum measurement system sensitivity (Noise Floor).

Data Sheet 1 of 8



Retlif Testing Laboratories

Report No. R-5908N, Rev. B

RETLIF TESTING LABORATORIES

EMISSIONS TEST DATA SHEET

Test Method	Restricted Band Emissions 30 MHz to 25 GHz	
Customer	Radiation Safety and Control Services, Inc.	
Job Number	R-5908N	
Test Sample	DMC2000TD Simulated Radiation Detection Instrument	
Model Number	118001	
Serial Number	501014010002	
Test Specification	FCC Part 15 Subpart C	Paragraph: 15.247(d)
Operating Mode	Transmitting modulated signal	
Technician	T. Hannemann	
Date	February 11, 2015	
Notes: Test Antenna Distance: 3 meters		Detector: Quasi-Peak <1GHz, Average >1GHz

TEST PARAMETERS

Restricted Band	Measured Frequency	Meter Reading	Correction Factor	Corrected Reading			Converted Reading	Limit at 3M
MHz	MHz	dBuV	dB	dBuV/m			uV/m	uV/m
156.52500*	156.52500*	2	14.1	16.1			6.38	1
156.5253	-	-	-	-			-	150
156.7	-	-	-	-			-	150
156.80*	156.80*	2.5	14.1	16.6			6.76	1
156.9	-	-	-	-			-	150
162.0125	-	-	-	-			-	150
164.00*	164.00*	1.1	15.3	16.4			6.61	1
167.17	-	-	-	-			-	150
167.72	-	-	-	-			-	150
170.00*	170.00*	0.9	17	17.9			7.85	1
173.2	-	-	-	-			-	150
240	-	-	-	-			-	200
260.00*	260.00*	-2.9	12.1	9.2			2.88	1
285	-	-	-	-			-	200
322	-	-	-	-			-	200
330.00*	330.00*	-3.2	14.1	10.9			3.51	1

No EUT emissions within 10 dB of the specified test limit were observed at the specified test distance throughout the given frequency spectrum. * This emission is not from the EUT. It is a measurement of minimum measurement system sensitivity (Noise Floor).

Data Sheet 2 of 8



Retlif Testing Laboratories

Report No. R-5908N, Rev. B

RETLIF TESTING LABORATORIES

EMISSIONS TEST DATA SHEET

Test Method	Restricted Band Emissions 30 MHz to 25 GHz	
Customer	Radiation Safety and Control Services, Inc.	
Job Number	R-5908N	
Test Sample	DMC2000TD Simulated Radiation Detection Instrument	
Model Number	118001	
Serial Number	501014010002	
Test Specification	FCC Part 15 Subpart C	Paragraph: 15.247(d)
Operating Mode	Transmitting modulated signal	
Technician	T. Hannemann	
Date	February 11, 2015	
Notes: Test Antenna Distance: 3 meters Detector: Quasi-Peak <1GHz, Average >1GHz		

TEST PARAMETERS

Restricted Band	Measured Frequency	Meter Reading	Correction Factor	Corrected Reading			Converted Reading	Limit at 3M
MHz	MHz	dBuV	dB	dBuV/m			uV/m	uV/m
335.4	-	-	-	-			-	200
399.9	-	-	-	-			-	200
	409.00*	-3.2	15	11.8			3.89	
410	-	-	-	-			-	200
608	-	-	-	-			-	200
	611.00*	-4.2	18.8	14.6			5.37	
614	-	-	-	-			-	200
960	-	-	-	-			-	500
	980.00*	-2	23.1	21.1			11.35	
1240	-	-	-	-			-	500
1300	-	-	-	-			-	500
	-	-	-	-			-	
1427	-	-	-	-			-	500
1435	-	-	-	-			-	500
	-	-	-	-			-	
1646.5	-	-	-	-			-	500

No EUT emissions within 10 dB of the specified test limit were observed at the specified test distance throughout the given frequency spectrum. * This emission is not from the EUT. It is a measurement of minimum measurement system sensitivity (Noise Floor).

Data Sheet 3 of 8



Retlif Testing Laboratories

Report No. R-5908N, Rev. B

RETLIF TESTING LABORATORIES

EMISSIONS TEST DATA SHEET

Test Method	Restricted Band Emissions 30 MHz to 25 GHz	
Customer	Radiation Safety and Control Services, Inc.	
Job Number	R-5908N	
Test Sample	DMC2000TD Simulated Radiation Detection Instrument	
Model Number	118001	
Serial Number	501014010002	
Test Specification	FCC Part 15 Subpart C	Paragraph: 15.247(d)
Operating Mode	Transmitting modulated signal	
Technician	T. Hannemann	
Date	February 11, 2015	
Notes: Test Antenna Distance: 3 meters Detector: Quasi-Peak <1GHz, Average >1GHz		

TEST PARAMETERS

Restricted Band	Measured Frequency	Meter Reading	Correction Factor	Corrected Reading			Converted Reading	Limit at 3M
MHz	MHz	dBuV	dB	dBuV/m			uV/m	uV/m
1660.00	-	-	-	-			-	500.00
	-	-	-	-			-	
1710.00	-	-	-	-			-	500.00
1718.80	-	-	-	-			-	500.00
	-	-	-	-			-	
1722.20	-	-	-	-			-	500.00
2200.00	-	-	-	-			-	500.00
	-	-	-	-			-	
2300.00	-	-	-	-			-	500.00
2310.00	-	-	-	-			-	500.00
	-	-	-	-			-	
2390.00	-	-	-	-			-	500.00
2483.50	-	-	-	-			-	500.00
	-	-	-	-			-	
2500.00	-	-	-	-			-	500.00
2690.00	-	-	-	-			-	500.00

No EUT emissions within 10 dB of the specified test limit were observed at the specified test distance throughout the given frequency spectrum. * This emission is not from the EUT. It is a measurement of minimum measurement system sensitivity (Noise Floor).

Data Sheet 4 of 8



Retlif Testing Laboratories

Report No. R-5908N, Rev. B

RETLIF TESTING LABORATORIES

EMISSIONS TEST DATA SHEET

Test Method	Restricted Band Emissions 30 MHz to 25 GHz	
Customer	Radiation Safety and Control Services, Inc.	
Job Number	R-5908N	
Test Sample	DMC2000TD Simulated Radiation Detection Instrument	
Model Number	118001	
Serial Number	501014010002	
Test Specification	FCC Part 15 Subpart C	Paragraph: 15.247(d)
Operating Mode	Transmitting modulated signal	
Technician	T. Hannemann	
Date	February 11, 2015	
Notes: Test Antenna Distance: 3 meters Detector: Quasi-Peak <1GHz, Average >1GHz		

TEST PARAMETERS

Restricted Band	Measured Frequency	Meter Reading	Correction Factor	Corrected Reading			Converted Reading	Limit at 3M
MHz	MHz	dBuV	dB	dBuV/m			uV/m	uV/m
	-	-	-	-			-	
2900.00	-	-	-	-			-	500.00
3260.00	-	-	-	-			-	500.00
3267.00	-	-	-	-			-	500.00
3332.00	-	-	-	-			-	500.00
3339.00	-	-	-	-			-	500.00
3345.80	-	-	-	-			-	500.00
3358.00	-	-	-	-			-	500.00
3600.00	-	-	-	-			-	500.00
4400.00	-	-	-	-			-	500.00
4500.00	-	-	-	-			-	500.00

EUT emissions observed throughout the given frequency spectrum were recorded and evaluated. Emission levels closest to the limit are listed on this data sheet. * This emission is not from the EUT. It is a measurement of minimum measurement system sensitivity (Noise Floor).

Data Sheet 5 of 8



Retlif Testing Laboratories

Report No. R-5908N, Rev. B

RETLIF TESTING LABORATORIES

EMISSIONS TEST DATA SHEET

Test Method	Restricted Band Emissions 30 MHz to 25 GHz	
Customer	Radiation Safety and Control Services, Inc.	
Job Number	R-5908N	
Test Sample	DMC2000TD Simulated Radiation Detection Instrument	
Model Number	118001	
Serial Number	501014010002	
Test Specification	FCC Part 15 Subpart C	Paragraph: 15.247(d)
Operating Mode	Transmitting modulated signal	
Technician	T. Hannemann	
Date	February 11, 2015	
Notes: Test Antenna Distance: 3 meters Detector: Quasi-Peak <1GHz, Average >1GHz		

TEST PARAMETERS

Restricted Band	Measured Frequency	Meter Reading	Correction Factor	Corrected Reading			Converted Reading	Limit at 3M
MHz	MHz	dBuV	dB	dBuV/m			uV/m	uV/m
	4810.00*	29.70*	0.40	30.10			31.98	
	4880.00*	29.18*	0.40	29.58			30.13	
	4960.00*	29.34*	0.40	29.74			30.69	
5150.00	-	-	-	-			-	500.00
5350.00	-	-	-	-			-	500.00
	-	-	-	-			-	
5460.00	-	-	-	-			-	500.00
7250.00	-	-	-	-			-	500.00
	7320.00*	30.65*	4.55	35.20			57.54	
7750.00	-	-	-	-			-	500.00
8025.00	-	-	-	-			-	500.00
	-	-	-	-			-	
8500.00	-	-	-	-			-	500.00
9000.00	-	-	-	-			-	500.00
	-	-	-	-			-	
9200.00	-	-	-	-			-	500.00

No EUT emissions within 10 dB of the specified test limit were observed at the specified test distance throughout the given frequency spectrum. * This emission is not from the EUT. It is a measurement of minimum measurement system sensitivity (Noise Floor).

Data Sheet 6 of 8



Retlif Testing Laboratories

Report No. R-5908N, Rev. B

RETLIF TESTING LABORATORIES

EMISSIONS TEST DATA SHEET

Test Method	Restricted Band Emissions 30 MHz to 25 GHz	
Customer	Radiation Safety and Control Services, Inc.	
Job Number	R-5908N	
Test Sample	DMC2000TD Simulated Radiation Detection Instrument	
Part Number	118001	
Serial Number	501014010002	
Test Specification	FCC Part 15 Subpart C	Paragraph: 15.247(d)
Operating Mode	Transmitting modulated signal	
Technician	T. Hannemann	
Date	February 11, 2015	
Notes: Test Antenna Distance: 3 meters		Detector: Quasi-Peak <1GHz, Average >1GHz

TEST PARAMETERS

Restricted Band	Measured Frequency	Meter Reading	Correction Factor	Corrected Reading			Converted Reading	Limit at 3M
MHz	MHz	dBuV	dB	dBuV/m			uV/m	uV/m
9300.00	-	-	-	-			-	500.00
	-	-	-	-			-	
9500.00	-	-	-	-			-	500.00
10600.00	-	-	-	-			-	500.00
	12025.00*	30.77*	9.80	40.57			106.78	
	12200.00*	31.23*	9.80	41.03			112.59	
	12400.00*	25.34*	9.80	35.14			57.14	
12700.00	-	-	-	-			-	500.00
13250.00	-	-	-	-			-	500.00
	-	-	-	-			-	
13400.00	-	-	-	-			-	500.00
14470.00	-	-	-	-			-	500.00
	-	-	-	-			-	
14500.00	-	-	-	-			-	500.00
15350.00	-	-	-	-			-	500.00
	-	-	-	-			-	
16200.00	-	-	-	-			-	500.00

No EUT emissions within 10 dB of the specified test limit were observed at the specified test distance throughout the given frequency spectrum. * This emission is not from the EUT. It is a measurement of minimum measurement system sensitivity (Noise Floor).

Data Sheet 7 of 8



Retlif Testing Laboratories

Report No. R-5908N, Rev. B

RETLIF TESTING LABORATORIES

EMISSIONS TEST DATA SHEET

EMISSIONS TEST DATA SHEET		
Test Method	Restricted Band Emissions 30 MHz to 25 GHz	
Customer	Radiation Safety and Control Services, Inc.	
Job Number	R-5908N	
Test Sample	DMC2000TD Simulated Radiation Detection Instrument	
Part Number	118001	
Serial Number	501014010002	
Test Specification	FCC Part 15 Subpart C	Paragraph: 15.247(d)
Operating Mode	Transmitting modulated signal	
Technician	T. Hannemann	
Date	February 11, 2015	
Notes:	Test Antenna Distance: 3 meters Detector: Quasi-Peak <1GHz, Average >1GHz	

TEST PARAMETERS

No EUT emissions within 10 dB of the specified test limit were observed at the specified test distance throughout the given frequency spectrum. * This emission is not from the EUT. It is a measurement of minimum measurement system sensitivity (Noise Floor).

Data Sheet 8 of 8



Retrif Testing Laboratories

Report No. R-5908N, Rev. B

**Restricted Band Emissions
30 MHz to 25 GHz
SORTD Test Data**



Retlif Testing Laboratories

Report No. R-5908N, Rev. B

RETLIF TESTING LABORATORIES

EMISSIONS TEST DATA SHEET

Test Method	Restricted Band Emissions 30 MHz to 25 GHz	
Customer	Radiation Safety and Control Services, Inc.	
Job Number	R-5908N	
Test Sample	SORTD Simulated Radiation Detection Instrument	
Model Number	205001	
Serial Number	501114010002	
Test Specification	FCC Part 15 Subpart C	Paragraph: 15.247(d)
Operating Mode	Transmitting modulated signal	
Technician	T. Hannemann	
Date	February 11, 2015	
Notes: Test Antenna Distance: 3 meters		Detector: Quasi-Peak <1GHz, Average >1GHz

TEST PARAMETERS

Restricted Band	Measured Frequency	Meter Reading	Correction Factor	Corrected Reading			Converted Reading	Limit at 3M
MHz	MHz	dBuV	dB	dBuV/m			uV/m	uV/m
37.5	-	-	-	-			-	100
	38.00*	11.8	11.2	23			14.13	I
38.25	-	-	-	-			-	100
73	-	-	-	-			-	100
	73.50*	15.3	6.3	21.6			12.02	I
75.2	-	-	-	-			-	100
108	-	-	-	-			-	150
	115.00*	5.8	12.8	18.6			8.51	I
121.94	-	-	-	-			-	150
123	-	-	-	-			-	150
	132.00*	6.5	11.9	18.4			8.32	
138	-	-	-	-			-	150
149.9	-	-	-	-			-	150
	150.00*	3.9	12.8	16.7			6.84	I
150.05	-	-	-	-			-	150
156.5248	-	-	-	-			-	150

No EUT emissions within 10 dB of the specified test limit were observed at the specified test distance throughout the given frequency spectrum. * This emission is not from the EUT. It is a measurement of minimum measurement system sensitivity (Noise Floor).

Data Sheet 1 of 8



Retlif Testing Laboratories

Report No. R-5908N, Rev. B

RETLIF TESTING LABORATORIES

EMISSIONS TEST DATA SHEET

Test Method	Restricted Band Emissions 30 MHz to 25 GHz	
Customer	Radiation Safety and Control Services, Inc.	
Job Number	R-5908N	
Test Sample	SORTD Simulated Radiation Detection Instrument	
Model Number	205001	
Serial Number	501114010002	
Test Specification	FCC Part 15 Subpart C	Paragraph: 15.247(d)
Operating Mode	Transmitting modulated signal	
Technician	T. Hannemann	
Date	February 11, 2015	
Notes: Test Antenna Distance: 3 meters		Detector: Quasi-Peak <1GHz, Average >1GHz

TEST PARAMETERS

Restricted Band	Measured Frequency	Meter Reading	Correction Factor	Corrected Reading			Converted Reading	Limit at 3M
MHz	MHz	dBuV	dB	dBuV/m			uV/m	uV/m
156.52500*	156.52500*	2	14.1	16.1			6.38	1
156.5253	-	-	-	-			-	150
156.7	-	-	-	-			-	150
156.80*	156.80*	2.5	14.1	16.6			6.76	1
156.9	-	-	-	-			-	150
162.0125	-	-	-	-			-	150
164.00*	164.00*	1.1	15.3	16.4			6.61	1
167.17	-	-	-	-			-	150
167.72	-	-	-	-			-	150
170.00*	170.00*	0.9	17	17.9			7.85	1
173.2	-	-	-	-			-	150
240	-	-	-	-			-	200
260.00*	260.00*	-2.9	12.1	9.2			2.88	1
285	-	-	-	-			-	200
322	-	-	-	-			-	200
330.00*	330.00*	-3.2	14.1	10.9			3.51	1

No EUT emissions within 10 dB of the specified test limit were observed at the specified test distance throughout the given frequency spectrum. * This emission is not from the EUT. It is a measurement of minimum measurement system sensitivity (Noise Floor).

Data Sheet 2 of 8



Retlif Testing Laboratories

Report No. R-5908N, Rev. B

RETLIF TESTING LABORATORIES

EMISSIONS TEST DATA SHEET

Test Method	Restricted Band Emissions 30 MHz to 25 GHz	
Customer	Radiation Safety and Control Services, Inc.	
Job Number	R-5908N	
Test Sample	SORTD Simulated Radiation Detection Instrument	
Model Number	205001	
Serial Number	501114010002	
Test Specification	FCC Part 15 Subpart C	Paragraph: 15.247(d)
Operating Mode	Transmitting modulated signal	
Technician	T. Hannemann	
Date	February 11, 2015	
Notes: Test Antenna Distance: 3 meters Detector: Quasi-Peak <1GHz, Average >1GHz		

TEST PARAMETERS

Restricted Band	Measured Frequency	Meter Reading	Correction Factor	Corrected Reading			Converted Reading	Limit at 3M
MHz	MHz	dBuV	dB	dBuV/m			uV/m	uV/m
335.4	-	-	-	-			-	200
399.9	-	-	-	-			-	200
	409.00*	-3.2	15	11.8			3.89	
410	-	-	-	-			-	200
608	-	-	-	-			-	200
	611.00*	-4.2	18.8	14.6			5.37	
614	-	-	-	-			-	200
960	-	-	-	-			-	500
	980.00*	-2	23.1	21.1			11.35	
1240	-	-	-	-			-	500
1300	-	-	-	-			-	500
	-	-	-	-			-	
1427	-	-	-	-			-	500
1435	-	-	-	-			-	500
	-	-	-	-			-	
1646.5	-	-	-	-			-	500

No EUT emissions within 10 dB of the specified test limit were observed at the specified test distance throughout the given frequency spectrum. * This emission is not from the EUT. It is a measurement of minimum measurement system sensitivity (Noise Floor).

Data Sheet 3 of 8



Retlif Testing Laboratories

Report No. R-5908N, Rev. B

RETLIF TESTING LABORATORIES

EMISSIONS TEST DATA SHEET

Test Method	Restricted Band Emissions 30 MHz to 25 GHz	
Customer	Radiation Safety and Control Services, Inc.	
Job Number	R-5908N	
Test Sample	SORTD Simulated Radiation Detection Instrument	
Model Number	205001	
Serial Number	501114010002	
Test Specification	FCC Part 15 Subpart C	Paragraph: 15.247(d)
Operating Mode	Transmitting modulated signal	
Technician	T. Hannemann	
Date	February 11, 2015	
Notes: Test Antenna Distance: 3 meters		Detector: Quasi-Peak <1GHz, Average >1GHz

TEST PARAMETERS

Restricted Band	Measured Frequency	Meter Reading	Correction Factor	Corrected Reading			Converted Reading	Limit at 3M
MHz	MHz	dBuV	dB	dBuV/m			uV/m	uV/m
1660.00	-	-	-	-			-	500.00
	-	-	-	-			-	
1710.00	-	-	-	-			-	500.00
1718.80	-	-	-	-			-	500.00
	-	-	-	-			-	
1722.20	-	-	-	-			-	500.00
2200.00	-	-	-	-			-	500.00
	-	-	-	-			-	
2300.00	-	-	-	-			-	500.00
2310.00	-	-	-	-			-	500.00
	-	-	-	-			-	
2390.00	-	-	-	-			-	500.00
2483.50	-	-	-	-			-	500.00
	-	-	-	-			-	
2500.00	-	-	-	-			-	500.00
2690.00	-	-	-	-			-	500.00

No EUT emissions within 10 dB of the specified test limit were observed at the specified test distance throughout the given frequency spectrum. * This emission is not from the EUT. It is a measurement of minimum measurement system sensitivity (Noise Floor).

Data Sheet 4 of 8



Retlif Testing Laboratories

Report No. R-5908N, Rev. B

RETLIF TESTING LABORATORIES

EMISSIONS TEST DATA SHEET

Test Method	Restricted Band Emissions 30 MHz to 25 GHz	
Customer	Radiation Safety and Control Services, Inc.	
Job Number	R-5908N	
Test Sample	SORTD Simulated Radiation Detection Instrument	
Model Number	205001	
Serial Number	501114010002	
Test Specification	FCC Part 15 Subpart C	Paragraph: 15.247(d)
Operating Mode	Transmitting modulated signal	
Technician	T. Hannemann	
Date	February 11, 2015	
Notes: Test Antenna Distance: 3 meters Detector: Quasi-Peak <1GHz, Average >1GHz		

TEST PARAMETERS

Restricted Band	Measured Frequency	Meter Reading	Correction Factor	Corrected Reading			Converted Reading	Limit at 3M
MHz	MHz	dBuV	dB	dBuV/m			uV/m	uV/m
2900.00	-	-	-	-			-	500.00
3260.00	-	-	-	-			-	500.00
3267.00	-	-	-	-			-	500.00
3332.00	-	-	-	-			-	500.00
3339.00	-	-	-	-			-	500.00
3345.80	-	-	-	-			-	500.00
3358.00	-	-	-	-			-	500.00
3600.00	-	-	-	-			-	500.00
4400.00	-	-	-	-			-	500.00
4500.00	-	-	-	-			-	500.00

EUT emissions observed throughout the given frequency spectrum were recorded and evaluated. Emission levels closest to the limit are listed on this data sheet. * This emission is not from the EUT. It is a measurement of minimum measurement system sensitivity (Noise Floor).

Data Sheet 5 of 8



Retlif Testing Laboratories

Report No. R-5908N, Rev. B

RETLIF TESTING LABORATORIES

EMISSIONS TEST DATA SHEET

Test Method	Restricted Band Emissions 30 MHz to 25 GHz	
Customer	Radiation Safety and Control Services, Inc.	
Job Number	R-5908N	
Test Sample	SORTD Simulated Radiation Detection Instrument	
Model Number	205001	
Serial Number	501114010002	
Test Specification	FCC Part 15 Subpart C	Paragraph: 15.247(d)
Operating Mode	Transmitting modulated signal	
Technician	T. Hannemann	
Date	February 11, 2015	
Notes: Test Antenna Distance: 3 meters		Detector: Quasi-Peak <1GHz, Average >1GHz

TEST PARAMETERS

Restricted Band	Measured Frequency	Meter Reading	Correction Factor	Corrected Reading			Converted Reading	Limit at 3M
MHz	MHz	dBuV	dB	dBuV/m			uV/m	uV/m
	4810.00*	29.70*	0.40	30.10			31.98	
	4880.00*	29.18*	0.40	29.58			30.13	
	4960.00*	29.34*	0.40	29.74			30.69	
5150.00	-	-	-	-			-	500.00
5350.00	-	-	-	-			-	500.00
	-	-	-	-			-	
5460.00	-	-	-	-			-	500.00
7250.00	-	-	-	-			-	500.00
	7320.00*	30.65*	4.55	35.20			57.54	
7750.00	-	-	-	-			-	500.00
8025.00	-	-	-	-			-	500.00
	-	-	-	-			-	
8500.00	-	-	-	-			-	500.00
9000.00	-	-	-	-			-	500.00
	-	-	-	-			-	
9200.00	-	-	-	-			-	500.00

No EUT emissions within 10 dB of the specified test limit were observed at the specified test distance throughout the given frequency spectrum. * This emission is not from the EUT. It is a measurement of minimum measurement system sensitivity (Noise Floor).

Data Sheet 6 of 8



Retlif Testing Laboratories

Report No. R-5908N, Rev. B

RETLIF TESTING LABORATORIES

EMISSIONS TEST DATA SHEET

Test Method	Restricted Band Emissions 30 MHz to 25 GHz	
Customer	Radiation Safety and Control Services, Inc.	
Job Number	R-5908N	
Test Sample	SORTD Simulated Radiation Detection Instrument	
Part Number	205001	
Serial Number	501114010002	
Test Specification	FCC Part 15 Subpart C	Paragraph: 15.247(d)
Operating Mode	Transmitting modulated signal	
Technician	T. Hannemann	
Date	February 11, 2015	
Notes: Test Antenna Distance: 3 meters		Detector: Quasi-Peak <1GHz, Average >1GHz

TEST PARAMETERS

Restricted Band	Measured Frequency	Meter Reading	Correction Factor	Corrected Reading			Converted Reading	Limit at 3M
MHz	MHz	dBuV	dB	dBuV/m			uV/m	uV/m
9300.00	-	-	-	-			-	500.00
	-	-	-	-			-	
9500.00	-	-	-	-			-	500.00
10600.00	-	-	-	-			-	500.00
	12025.00*	30.77*	9.80	40.57			106.78	
	12200.00*	31.23*	9.80	41.03			112.59	
	12400.00*	25.34*	9.80	35.14			57.14	
12700.00	-	-	-	-			-	500.00
13250.00	-	-	-	-			-	500.00
	-	-	-	-			-	
13400.00	-	-	-	-			-	500.00
14470.00	-	-	-	-			-	500.00
	-	-	-	-			-	
14500.00	-	-	-	-			-	500.00
15350.00	-	-	-	-			-	500.00
	-	-	-	-			-	
16200.00	-	-	-	-			-	500.00

No EUT emissions within 10 dB of the specified test limit were observed at the specified test distance throughout the given frequency spectrum. * This emission is not from the EUT. It is a measurement of minimum measurement system sensitivity (Noise Floor).

Data Sheet 7 of 8



Retlif Testing Laboratories

Report No. R-5908N, Rev. B

RETLIF TESTING LABORATORIES

EMISSIONS TEST DATA SHEET

EMISSIONS TEST DATA SHEET		
Test Method	Restricted Band Emissions 30 MHz to 25 GHz	
Customer	Radiation Safety and Control Services, Inc.	
Job Number	R-5908N	
Test Sample	SORTD Simulated Radiation Detection Instrument	
Part Number	205001	
Serial Number	501114010002	
Test Specification	FCC Part 15 Subpart C	Paragraph: 15.247(d)
Operating Mode	Transmitting modulated signal	
Technician	T. Hannemann	
Date	February 11, 2015	
Notes:	Test Antenna Distance: 3 meters Detector: Quasi-Peak <1GHz, Average >1GHz	

TEST PARAMETERS

No EUT emissions within 10 dB of the specified test limit were observed at the specified test distance throughout the given frequency spectrum. * This emission is not from the EUT. It is a measurement of minimum measurement system sensitivity (Noise Floor).

Data Sheet 8 of 8



Retrif Testing Laboratories

Report No. R-5908N, Rev. B

**Band Edge Radiated
DMC2000TD Test Data**

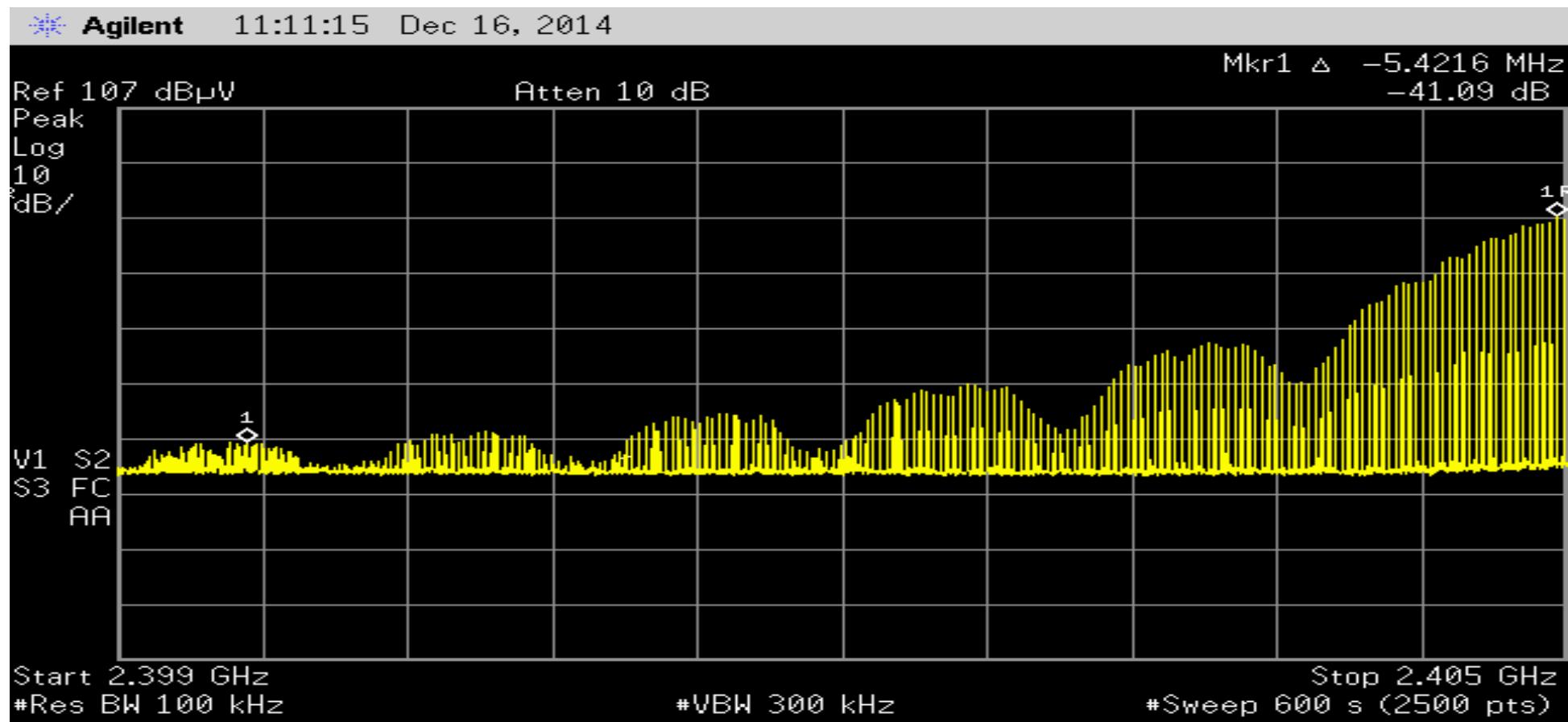


Retlif Testing Laboratories

Report No. R-5908N, Rev. B

RETLIF TESTING LABORATORIES

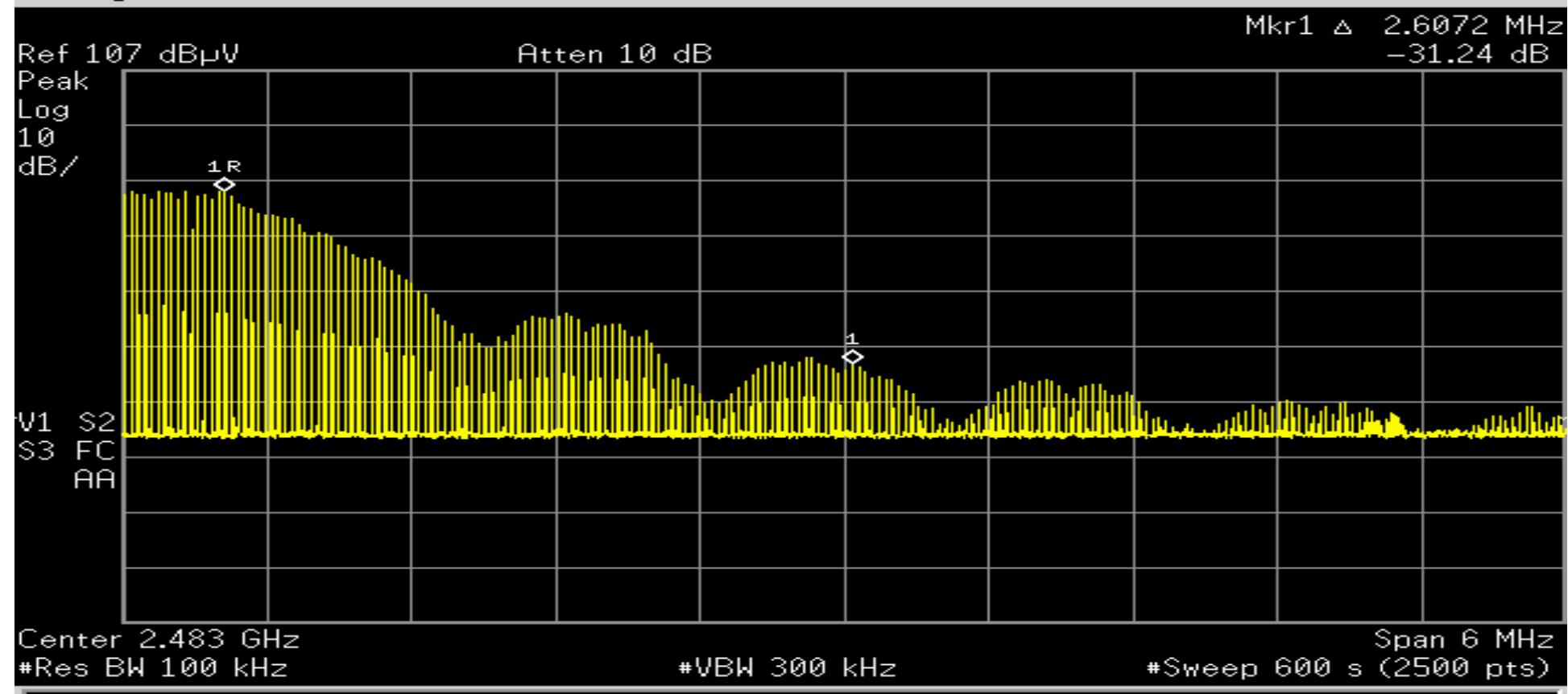
Test Method:	Band Edge Radiated		
Customer	Radiation Safety and Control Services, Inc.	Job No.	R-5908N
Test Sample	DMC2000TD Simulated Radiation Detection Instrument		
Model Number	118001	Serial No.	501014010002
Operating Mode	Transmitting modulated signal		
Test Specification	FCC Part 15, Subpart C Paragraph: 15.247 (d)		
Technician	M. Seamans	Date	December 16 th , 2014
Climatic Conditions	Temp: 1.6 °C	Relative Humidity: 23.0 %	
Notes	Lower Band Edge Reading: -41.09dB from Reference Reading		



RETLIF TESTING LABORATORIES

Test Method:	Band Edge Radiated		
Customer	Radiation Safety and Control Services, Inc.	Job No.	R-5908N
Test Sample	DMC2000TD Simulated Radiation Detection Instrument		
Model Number	118001	Serial No.	501014010002
Operating Mode	Transmitting modulated signal		
Test Specification	FCC Part 15, Subpart C Paragraph: 15.247 (d)		
Technician	M. Seamans	Date	December 16 th , 2014
Climatic Conditions	Temp: 1.6 °C Relative Humidity: 23.0 %		
Notes	Upper Band Edge Reading: -31.24 from Reference Reading		

 **Agilent** 11:40:19 Dec 16, 2014



Data Sheet 2 of 2

**Band Edge Radiated
SORTD Test Data**

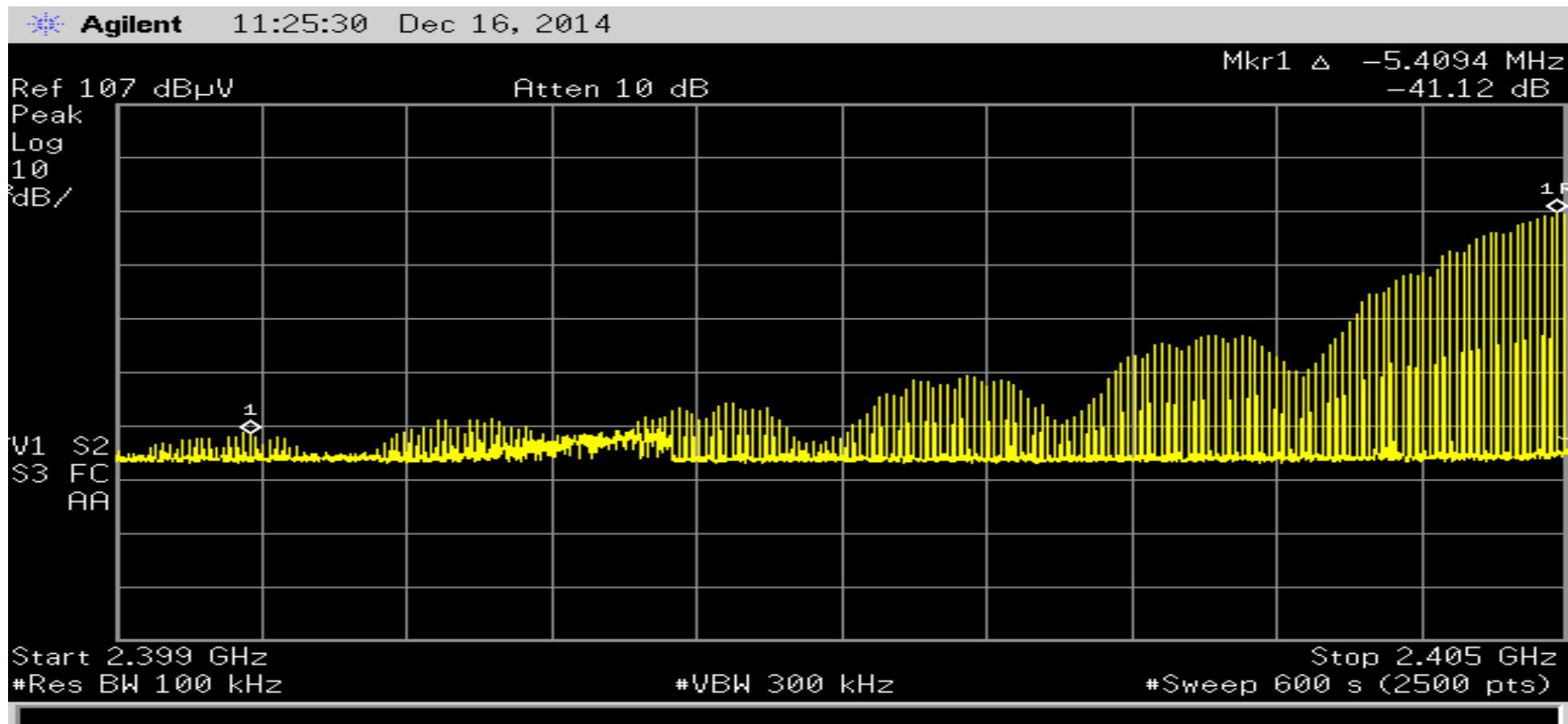


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Report No. R-5908N, Rev. B

RETLIF TESTING LABORATORIES

Test Method:	Band Edge Radiated		
Customer	Radiation Safety and Control Services, Inc.	Job No.	R-5908N
Test Sample	SORTD Simulated Radiation Detection Instrument		
Model Number	205001	Serial No.	501114010002
Operating Mode	Transmitting modulated signal		
Test Specification	FCC Part 15, Subpart C Paragraph: 15.247 (d)		
Technician	M. Seamans	Date	December 16 th , 2014
Climatic Conditions	Temp: 1.6 °C	Relative Humidity: 23.0 %	
Notes	Lower Band Edge Reading: -41.12dB from Reference Reading		

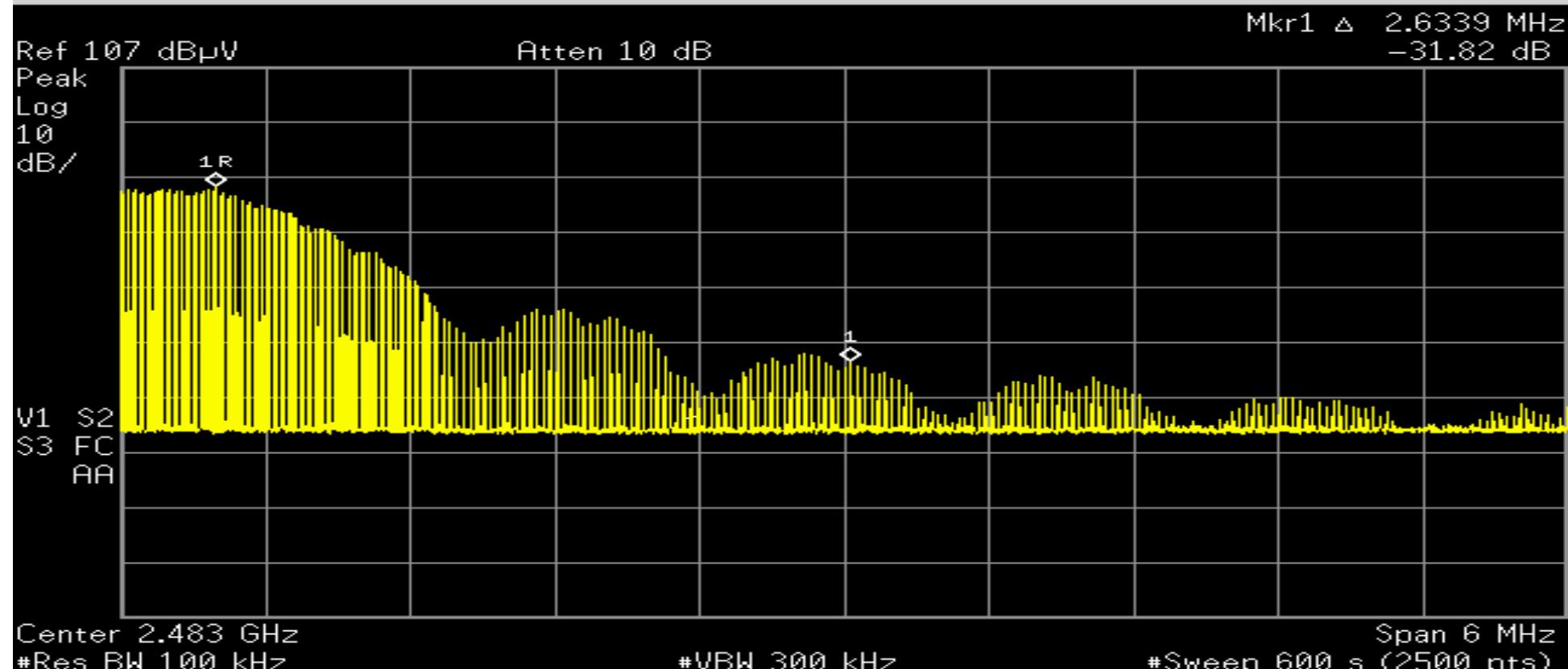


Page 1 of 2

RETLIF TESTING LABORATORIES

Test Method:	Band Edge Radiated		
Customer	Radiation Safety and Control Services, Inc.	Job No.	R-5908N
Test Sample	SORTD Simulated Radiation Detection Instrument		
Model Number	205001	Serial No.	501114010002
Operating Mode	Transmitting modulated signal		
Test Specification	FCC Part 15, Subpart C Paragraph: 15.247 (d)		
Technician	M. Seamans	Date	December 16 th , 2014
Climatic Conditions	Temp: 1.6 °C	Relative Humidity: 23.0 %	
Notes	Upper Band Edge Reading: -31.82dB from Reference Reading		

 **Agilent** 11:54:46 Dec 16, 2014



Data Sheet 2 of 2

**Test Photograph(s)
Power Density
FCC Section 15.247(e)**



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Report No. R-5908N, Rev. B

**Test Photograph(s)
Power Density**



Test Configuration



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Report No. R-5908N, Rev. B

**Power Spectral Density
Test Data**



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Report No. R-5908N, Rev. B

RETLIF TESTING LABORATORIES

EMISSIONS TEST DATA SHEET

EXTENDED TEST DATA SHEET	
Test Method	Power Density
Customer	Radiation Safety and Control Services, Inc.
Job Number	R-5908N
Test Sample	DMC2000TD Simulated Radiation Detection Instrument
Model Number	118001
Serial Number	501014010001
Test Specification	FCC Part 15, Subpart C Paragraph 15.247 (e)
Operating Mode	Transmitting modulated signal
Technician	M. Seamans
Date	December 11 th , 2014

Notes: Measurement method: 9.1.2, PKPM1 Broadband RF Peak Power Meter



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Report No. R-5908N, Rev. B

**Test Photograph(s)
Receiver Spurious Emissions
RSS-GEN**



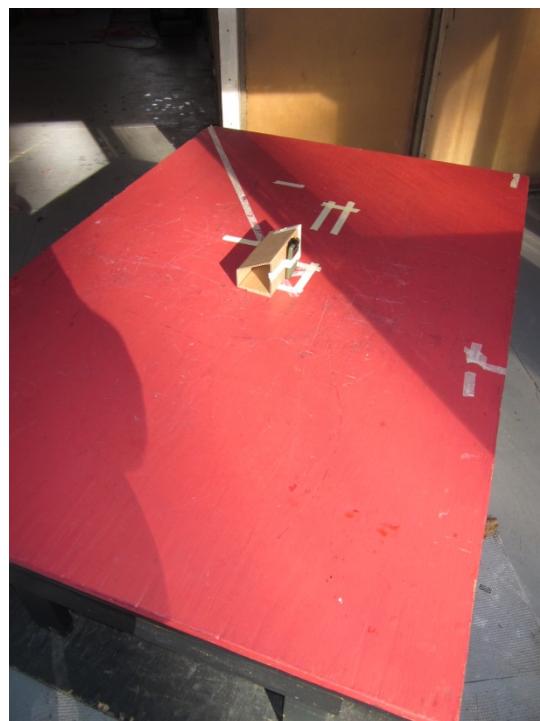
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Report No. R-5908N, Rev. B

**Test Photograph(s)
Receiver Spurious Emissions**



Test Setup, DMC2000TD



Test Setup, SORTD



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**Test Photograph(s)
Receiver Spurious Emissions**



30 MHz – 200 MHz, Horizontal Polarization, DMC2000TD



30 MHz – 200 MHz, Vertical Polarization, DMC2000TD



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Report No. R-5908N, Rev. B

**Test Photograph(s)
Receiver Spurious Emissions**



30 MHz – 200 MHz, Horizontal Polarization, SORTD



30 MHz – 200 MHz, Vertical Polarization, SORTD



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Report No. R-5908N, Rev. B

**Test Photograph(s)
Receiver Spurious Emissions**



200 MHz – 1 GHz, Horizontal Polarization, DMC2000TD



200 MHz – 1 GHz, Vertical Polarization, DMC2000TD



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Report No. R-5908N, Rev. B

**Test Photograph(s)
Receiver Spurious Emissions**



200 MHz – 1 GHz, Horizontal Polarization, SORTD



200 MHz – 1 GHz, Vertical Polarization, SORTD



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Report No. R-5908N, Rev. B

**Test Photograph(s)
Receiver Spurious Emissions**



1 GHz – 18 GHz, Horizontal Polarization, DMC2000TD



1 GHz – 18 GHz, Vertical Polarization, DMC2000TD



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Report No. R-5908N, Rev. B

**Test Photograph(s)
Receiver Spurious Emissions**



1 GHz – 18 GHz, Horizontal Polarization, SORTD



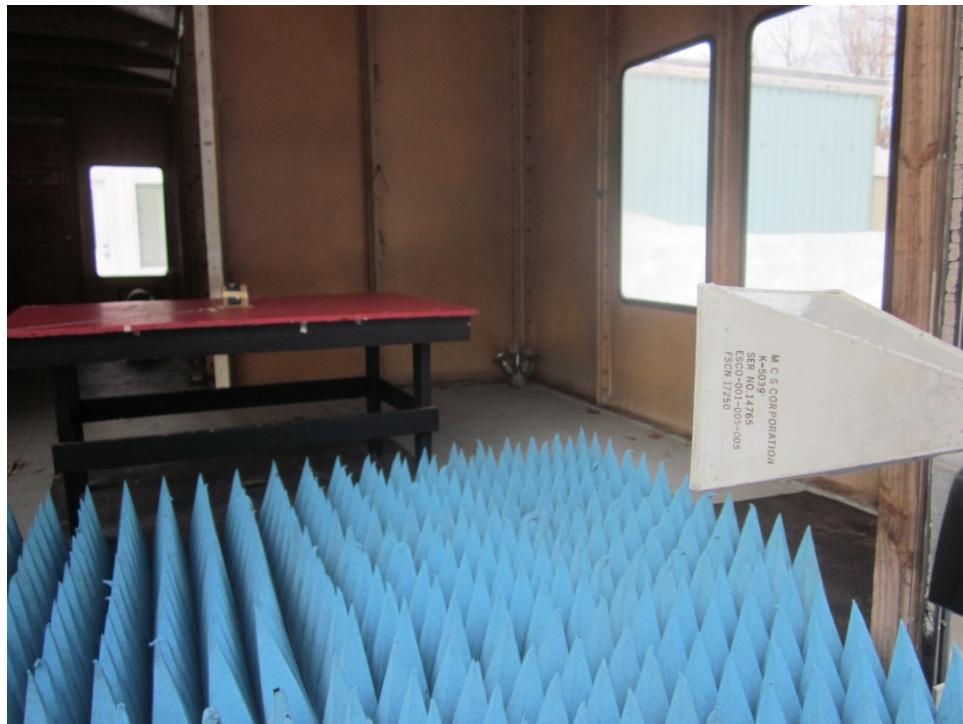
1 GHz – 18 GHz, Vertical Polarization, SORTD



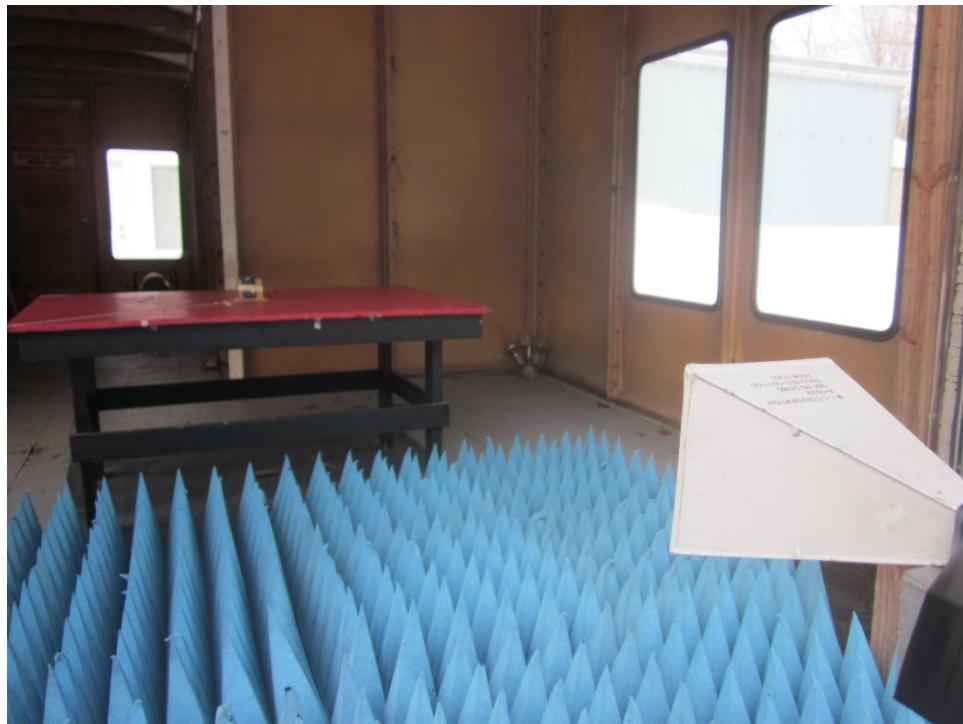
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Report No. R-5908N, Rev. B

**Test Photograph(s)
Receiver Spurious Emissions**



18 GHz – 25 GHz, Horizontal Polarization, DMC2000TD



18 GHz – 25 GHz, Vertical Polarization, DMC2000TD



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Report No. R-5908N, Rev. B

**Test Photograph(s)
Receiver Spurious Emissions**



18 GHz – 25 GHz, Horizontal Polarization, SORTD



18 GHz – 25 GHz, Vertical Polarization, SORTD



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Report No. R-5908N, Rev. B

**Receiver Spurious Emissions
DMC2000TD & SORTD Test Data**



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Report No. R-5908N, Rev. B

RETLIF TESTING LABORATORIES

EMISSIONS TEST DATA SHEET

Test Method	Receiver Spurious Emissions 30 MHz to 25 GHz	
Customer	Radiated Safety and Control Services, Inc.	
Job Number	R-5908N	
Test Sample	DMC2000TD Simulated Radiation Detection Instrument	
Model Number	118001	
Serial Number	501014010002	
Test Specification	RSS-GEN	Paragraph: 6.1
Operating Mode	Standby	
Technician	T. Hannemann	
Date	February 11, 2015	
Notes: Test Antenna Distance: 3 meters Detector: Quasi-Peak <1GHz, Average >1GHz		

TEST PARAMETERS

Test Frequency	Measured Frequency	Meter Reading	Correction Factor	Corrected Reading			Converted Reading	Limit at 3M
MHz	MHz	dBuV	dB	dBuV/m			uV/m	uV/m
30	-	-	-	-			-	100
	38.00*	11.8	11.2	23			14.13	I
	73.50*	15.3	6.3	21.6			12.02	
88	-	-	-	-			-	100
88	-	-	-	-			-	150
	115.00*	5.8	12.8	18.6			8.51	I
	132.00*	6.5	11.9	18.4			8.32	
	150.00*	3.9	12.8	16.7			6.84	
	164.00*	1.1	15.3	16.4			6.61	
216	-	-	-	-			-	150
216	-	-	-	-			-	200
	260.00*	-2.9	12.1	9.2			2.88	
	330.00*	-3.2	14.1	10.9			3.51	
	611.00*	-4.2	18.8	14.6			5.37	
960	-	-	-	-			-	200
960	-	-	-	-			-	500
	4810.00*	29.70*	0.4	30.1			31.99	
	7320.00*	30.65*	4.55	35.15			57.21	I
25000	-	-	-	-			-	500

No EUT emissions within 10 dB of the specified test limit were observed at the specified test distance throughout the given frequency spectrum. * This emission is not from the EUT. It is a measurement of minimum measurement system sensitivity (Noise Floor).

Data Sheet 1 of 2



Retlif Testing Laboratories

Report No. R-5908N, Rev. B

RETLIF TESTING LABORATORIES

EMISSIONS TEST DATA SHEET

Test Method	Receiver Spurious Emissions 30 MHz to 25 GHz		
Customer	Radiated Safety and Control Services, Inc.		
Job Number	R-5908N		
Test Sample	SORTD Simulated Radiation Detection Instrument		
Model Number	205001		
Serial Number	501114010002		
Test Specification	RSS-GEN		Paragraph: 6.1
Operating Mode	Standby		
Technician	T. Hannemann		
Date	February 11, 2015		
Notes: Test Antenna Distance: 3 meters Detector: Quasi-Peak <1GHz, Average >1GHz			

TEST PARAMETERS

Test Frequency	Measured Frequency	Meter Reading	Correction Factor	Corrected Reading			Converted Reading	Limit at 3M
MHz	MHz	dBuV	dB	dBuV/m			uV/m	uV/m
30	-	-	-	-			-	100
	38.00*	11.8	11.2	23			14.13	I
	73.50*	15.3	6.3	21.6			12.02	
88	-	-	-	-			-	100
88	-	-	-	-			-	150
	115.00*	5.8	12.8	18.6			8.51	I
	132.00*	6.5	11.9	18.4			8.32	
	150.00*	3.9	12.8	16.7			6.84	
	164.00*	1.1	15.3	16.4			6.61	
216	-	-	-	-			-	150
216	-	-	-	-			-	200
	260.00*	-2.9	12.1	9.2			2.88	
	330.00*	-3.2	14.1	10.9			3.51	
	611.00*	-4.2	18.8	14.6			5.37	
960	-	-	-	-			-	200
960	-	-	-	-			-	500
	4810.00*	29.70*	0.4	30.1			31.99	
	7320.00*	30.65*	4.55	35.15			57.21	I
25000	-	-	-	-			-	500

No EUT emissions within 10 dB of the specified test limit were observed at the specified test distance throughout the given frequency spectrum. * This emission is not from the EUT. It is a measurement of minimum measurement system sensitivity (Noise Floor).

Data Sheet 2 of 2



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Report No. R-5908N, Rev. B