Certification Application Report
FCC Part 15.247 & Industry Canada RSS-247

Test Lab:	Applicant:
Rhein Tech Laboratories, Inc. 360 Herndon Parkway Suite 1400 Herndon, VA 20170 E-Mail: atcbinfo@rheintech.com Tel: 703-689-0368 Fax: 703-689-2056 www.rheintech.com	Alarm.com 8150 Leesburg Pike Suite 1400 Vienna, VA 22182 Tel: 703-584-7319

FCC ID **IC**	YL6143NK100T 9111A-143NK100T	**Test Report Date**	September 29, 2015
Platform	N/A	**RTL Work Order #**	2015014
Model	ADC-NK-100T	**RTL Quote #**	QRTL15-014B
American National Standard Institute	ANSI C63.10-2013: American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices		
FCC Classification	DTS – Digital Transmission System		
FCC Rule Part(s)/Guidance	FCC Rules Part 15.247: Operation within the bands 902-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz Direct Sequence System (10/01/2014)		
Industry Canada	RSS-247 Issue 1 Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices		
Digital Interface Information	Digital Interface was found to be compliant		

Frequency Range (MHz)	Output Power (W)*	Frequency Tolerance	Emission Designator
912 - 924	0.012	N/A	705KF1D

** power is peak conducted*

I, the undersigned, hereby declare that the equipment tested and referenced in this report conforms to the identified standard(s) as described in this test report. No modifications were made to the equipment during testing in order to achieve compliance with these standards. Furthermore, there was no deviation from, additions to, or exclusions from, the applicable parts of FCC Part 2, FCC Part 15, Industry Canada RSS-247, RSS-Gen, and ANSI C63.10.

Signature: _____ Date: September 29, 2015

Typed/Printed Name: Desmond A. Fraser Position: President

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1 General Information

1.1 Scope

This is an original FCC and Industry Canada certification application request.

1.2 Description of EUT

Equipment Under Test	Image Sensor Transceiver
Model	ADC-NK-100T
Power Supply	AC Adapter (5VDC)
Modulation Type	FSK
Frequency Range	912-924 MHz
Antenna Type	Trace

1.3 Test Facility

The open area test site and conducted measurement facility used to collect the radiated data is located at 360 Herndon Parkway, Suite 1400, Herndon, Virginia 20170. This site has been fully described in a report and approved by the Federal Communications Commission to perform AC line conducted and radiated emissions testing.

1.4 Related Submittal(s)/Grant(s)

This is an original application for Alarm.com Model ADC-NK-100T, FCC ID: YL6143NK100T, IC: 9111A-143NK100T.

Requested grant notes: This device may be collocated with the following module:

FCC ID: RI7CE910-DUAL (IC: 5131A-CE910DUAL)

or

FCC ID: RI7UE910NA (IC: 5131A-UE910NA)

or

FCC ID: RI7HE910NA (IC: 5131A-HE910NA)

1.5 Modifications

No modifications were made to the equipment during testing in order to achieve compliance with these standards.

2 Test Information

2.1 Description of Test Modes

In accordance with FCC 15.31(m), and because the EUT utilizes an operating band greater than 10 MHz, the following frequencies were tested:

Table 2-1: Channels Tested

Channel	Frequency
Low	912
Middle	918
High	924

2.2 Exercising the EUT

The EUT was supplied with test firmware programmed with a high, mid, and low channel for testing. The EUT was tested in all three orthogonal planes in order to determine worst-case emissions. The EUT was provided with software to continuously transmit during testing. The carrier was also checked to verify that information was being transmitted. There were no deviations from the test standard(s) and/or methods. The test results reported relate only to the item tested.

2.3 Test Result Summary

Table 2-2: Test Result Summary – FCC Part 15 Subpart C (Section 15.247) & IC

Test	FCC Reference	IC Reference	Result
AC Power Conducted Emissions	FCC 15.207	IC RSS-Gen 8.8	Pass
Radiated Emissions	FCC 15.209	IC RSS-247 5.5; IC RSS-Gen 6.13/7.1	Pass
Maximum Peak Power Output	FCC 15.247(b)(3)	IC RSS-247 5.4(4), IC RSS-Gen 6.12	Pass
Peak Power Spectral Density	FCC 15.247(e)	IC RSS-247 A8.1(b)	Pass
Antenna Conducted Spurious Emissions	FCC 15.247(d)	IC RSS-247 5.5, IC RSS-Gen 6.13	Pass
Band Edge Measurement	FCC 15.247(d)	IC RSS-247 5.5	Pass
Bandwidth	FCC 15.247(a)(2)	IC RSS-247 A8.1(a)(b)(d)	Pass

2.4 Test System Details

The test samples were received on August 26, 2015. The FCC identifiers for all applicable equipment, plus descriptions of all cables used in the tested system, are identified in the following table.

Table 2-3: Equipment Under Test

Part	Manufacturer	Model	Serial Number	FCC ID	Cable Description	RTL Bar Code
Transceiver (conducted port)	Alarm.com	ADC-NK-100T	N/A	YL6143NK100T	N/A	21753
Transceiver	Alarm.com	ADC-NK-100T	N/A	YL6143NK100T	N/A	21751
Transceiver	Alarm.com	ADC-NK-100T	N/A	YL6143NK100T	N/A	21754
Transceiver	Alarm.com	ADC-NK-100T	N/A	YL6143NK100T	N/A	21740
Transceiver	Alarm.com	ADC-NK-100T	N/A	YL6143NK100T	N/A	21743
Transceiver	Alarm.com	ADC-NK-100T	N/A	YL6143NK100T	N/A	21745
AC Adapter	Alarm.com	YS12-050020U	N/A	N/A	N/A	21190

2.5 Product Variations Included with this Certification

A number of product variations are included with this certification. The product variations are based on different populated or non-populated (audio and/or Ethernet) digital circuitry, and the presence, or lack of presence, of a modularly certified radio (FCC ID: RI7CE910-DUAL or RI7UE910NA or RI7HE910NA).

Additionally, the Zwave transceiver is available in two versions: a 300 series and a 500 series (note that the Zwave test data is contained in a separate DXT report).

Below is a description of the testing performed on various versions to support the product variations included in this certification, referenced by the "RTL Bar Code":

RTL Bar Code	Description
21753	Conducted antenna port DTS testing for Image Sensor
21751	Radiated DTS testing for Image Sensor, Collocation testing: Zwave + Image Sensor + RI7CE910-DUAL
21754	Fully populated version, worst case configuration for radiated and AC line conducted emissions testing
21740	Additional radiated testing of Zwave 500 series to support the "electrically identical" justification between the 300 and 500 series
21743	Collocation testing: Zwave + Image Sensor + RI7HE910NA
21745	Collocation testing: Zwave + Image Sensor + RI7UE910NA

2.6 Configuration of Tested System

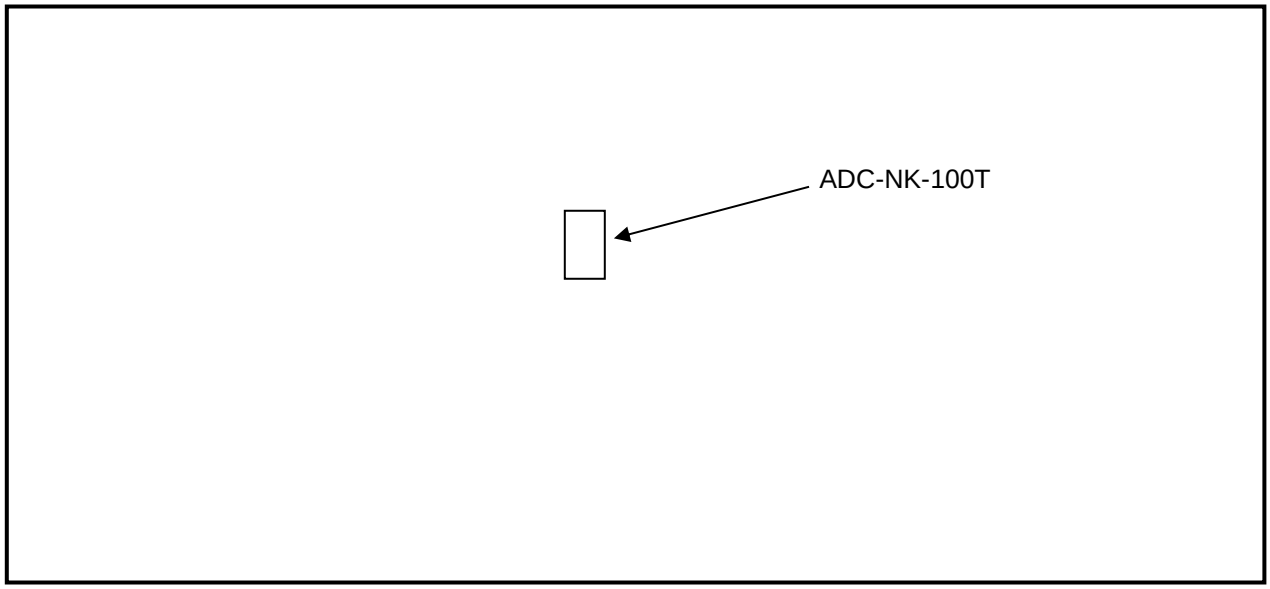


Figure 2-1: Configuration of System Under Test

3 Peak Output Power - 15.247(b)(3); IC RSS-247 5.4(4), RSS-Gen 6.12

3.1 Power Output Test Procedure

A PCB mounted U.FL connector provided a port for measurement using the automated channel power measurement on the spectrum analyzer, for the low, mid, and high channels.

Table 3-1: Power Output Test Equipment

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due Date
901581	Rohde & Schwarz	FSU	Spectrum Analyzer	1166.1660.50	11/13/15

3.2 Peak Output Power Test Data

Table 3-2: Peak Output Power Test Data

Emission Frequency (MHz)	Peak Detector (dBm)	Peak Detector (W)
912	10.8	0.012
918	10.8	0.012
924	10.8	0.012

Measurement uncertainties shown for these tests are expanded Gaussian uncertainties expressed at 95% confidence level using a coverage factor k = 1.96. Measurement uncertainty = 0.5 dB.

Test Personnel:

Dan Baltzell		August 28, 2015
Test Engineer	Signature	Date of Test

4 Peak Power Spectral Density – FCC 15.247(e); IC RSS-247 5.2(2)

4.1 Peak Spectral Density Test Procedure

Digitally modulated systems shall have conducted peak power spectral density of 8 dBm in any 3 kHz band during any time interval of continuous transmission.

Table 4-1: Power Output Test Equipment

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due Date
901581	Rohde & Schwarz	FSU	Spectrum Analyzer	1166.1660.50	11/13/15

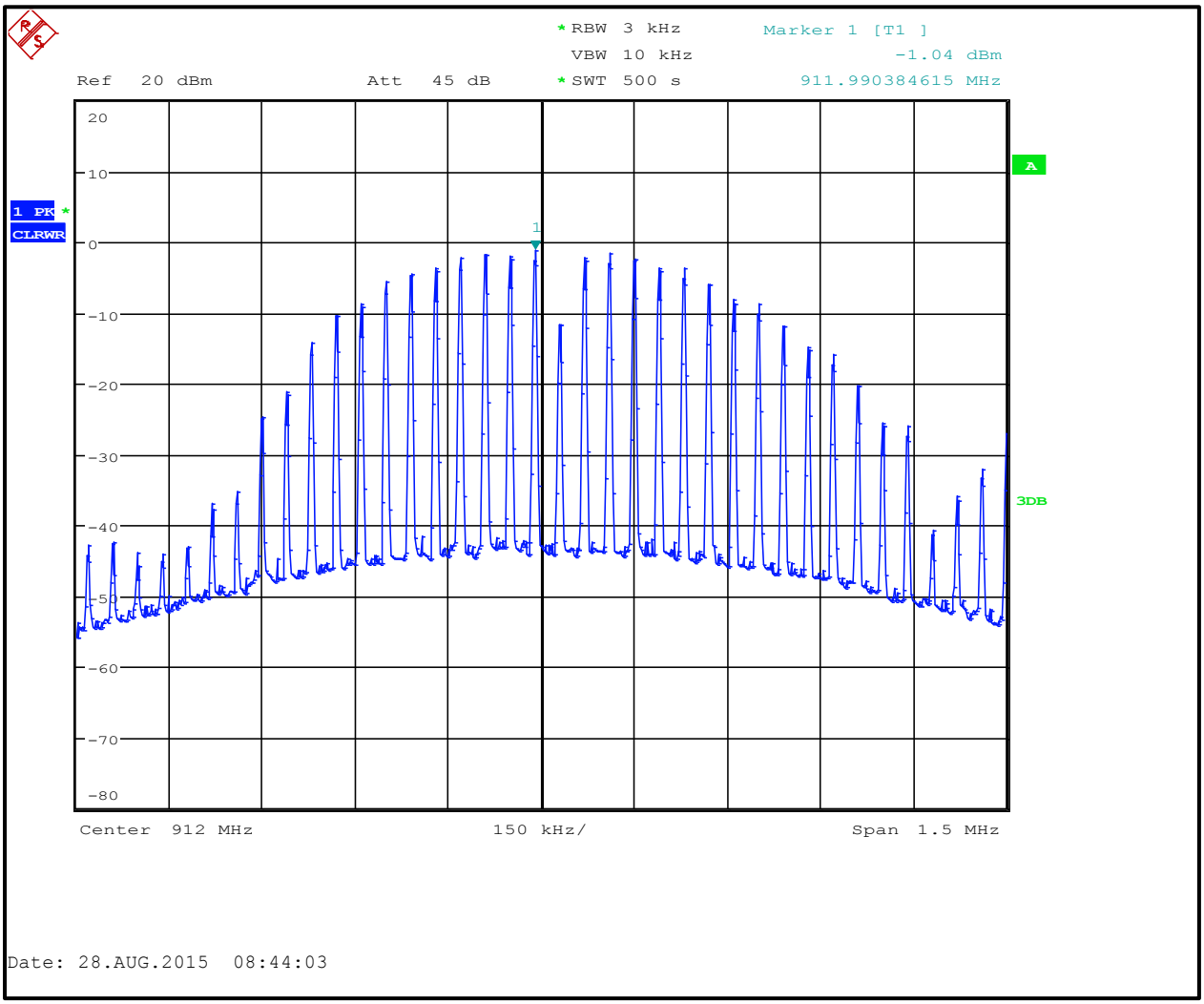
4.2 Peak Spectral Density Test Data

Table 4-2: Peak Spectral Density Test Data

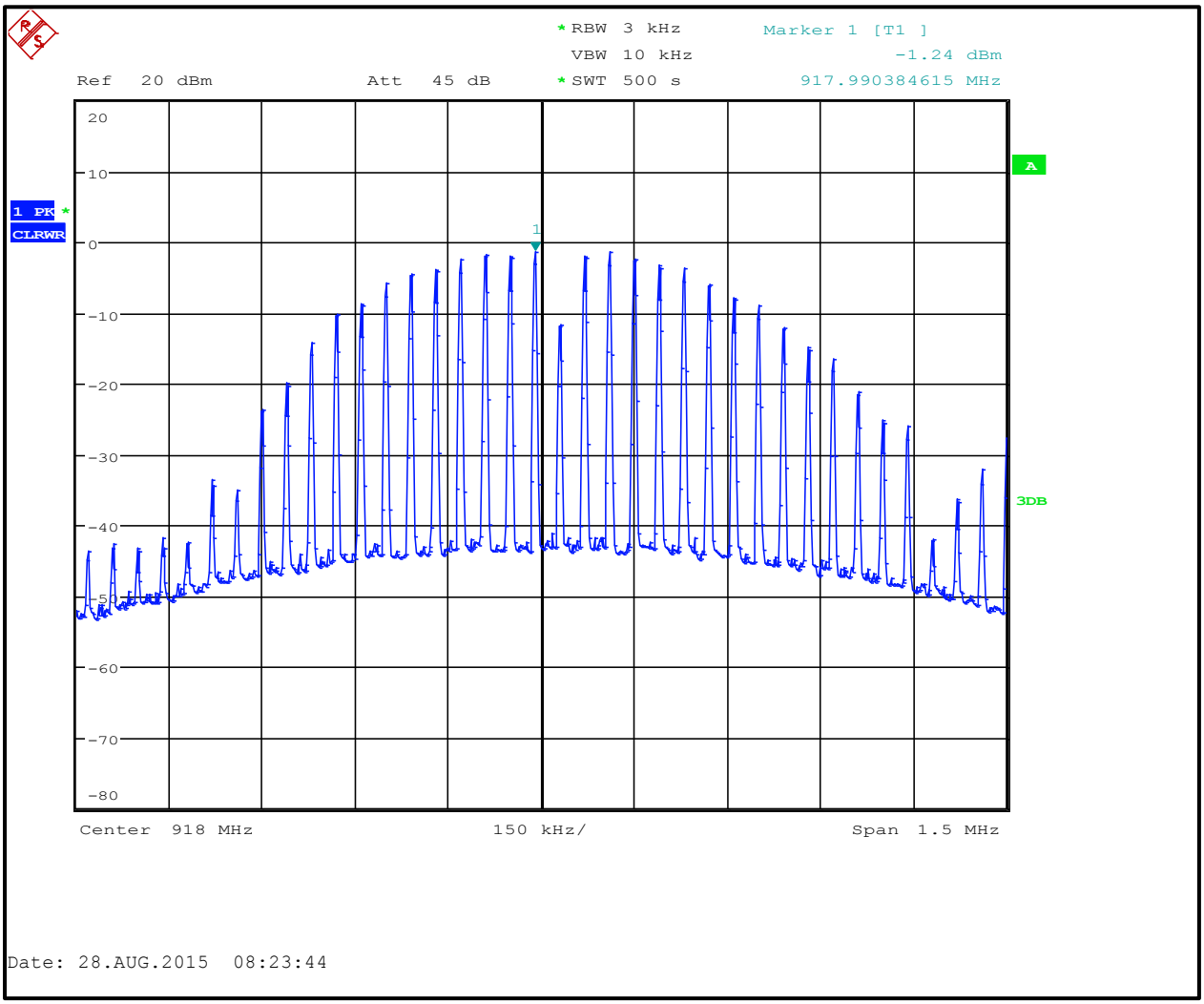
Channels	Frequency (MHz)	Peak Output Power (dBm)
Low	912	-1.0
Mid	918	-1.2
High	924	-1.3

Measurement uncertainties shown for these tests are expanded Gaussian uncertainties expressed at 95% confidence level using a coverage factor k = 1.96. Measurement uncertainty = 0.5 dB.

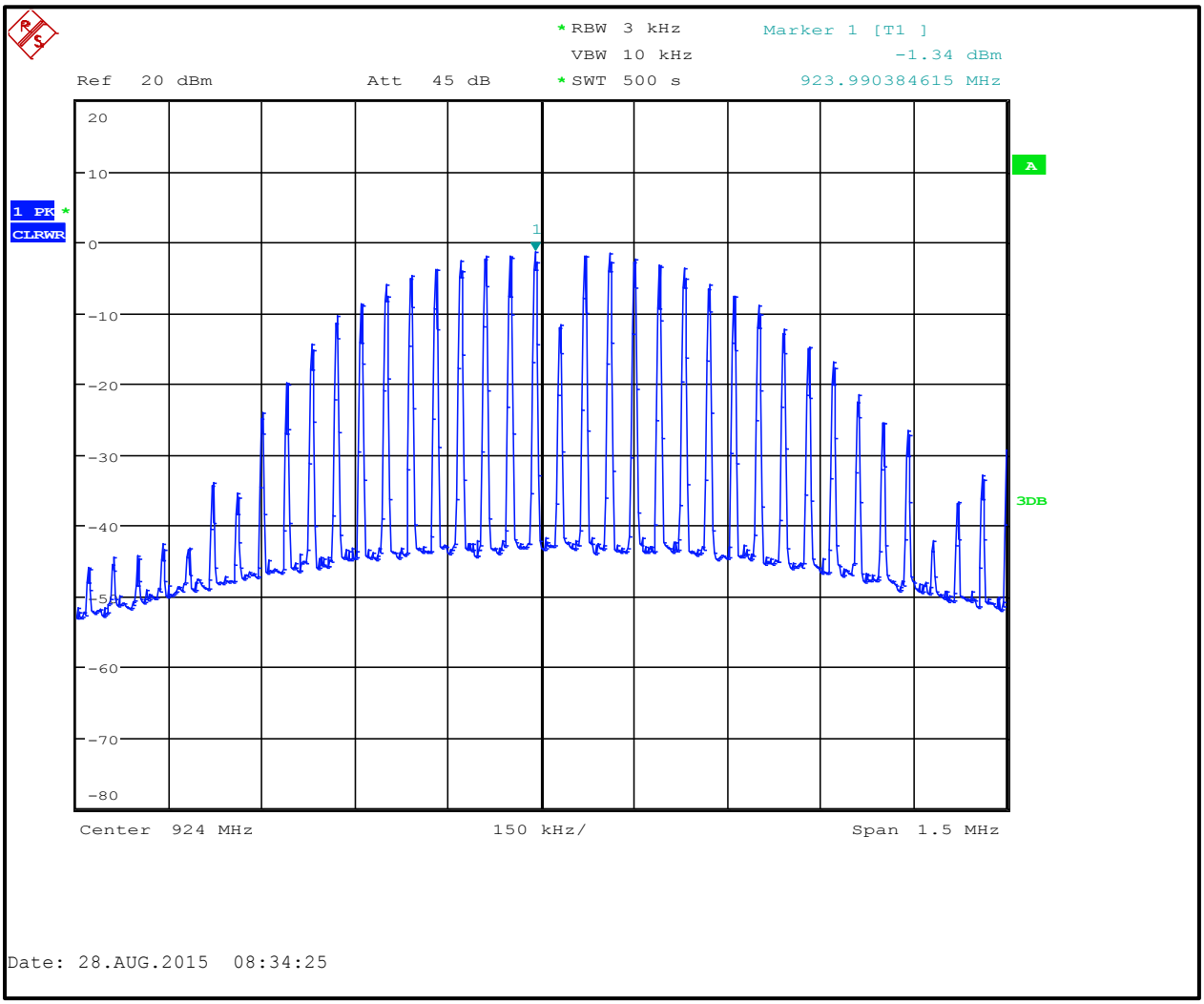
Plot 4-1: Peak Spectral Density – 912 MHz



Plot 4-2: Peak Spectral Density – 918 MHz



Plot 4-3: Peak Spectral Density – 924 MHz



Test Personnel:

Dan Baltzell	Daniel W. Baltzell	August 28, 2015
Test Engineer	Signature	Date of Test

5 Antenna Conducted Spurious Emissions – FCC 15.247(d), RSS-247 5.5

5.1 Antenna Conducted Spurious Emissions Test Procedure

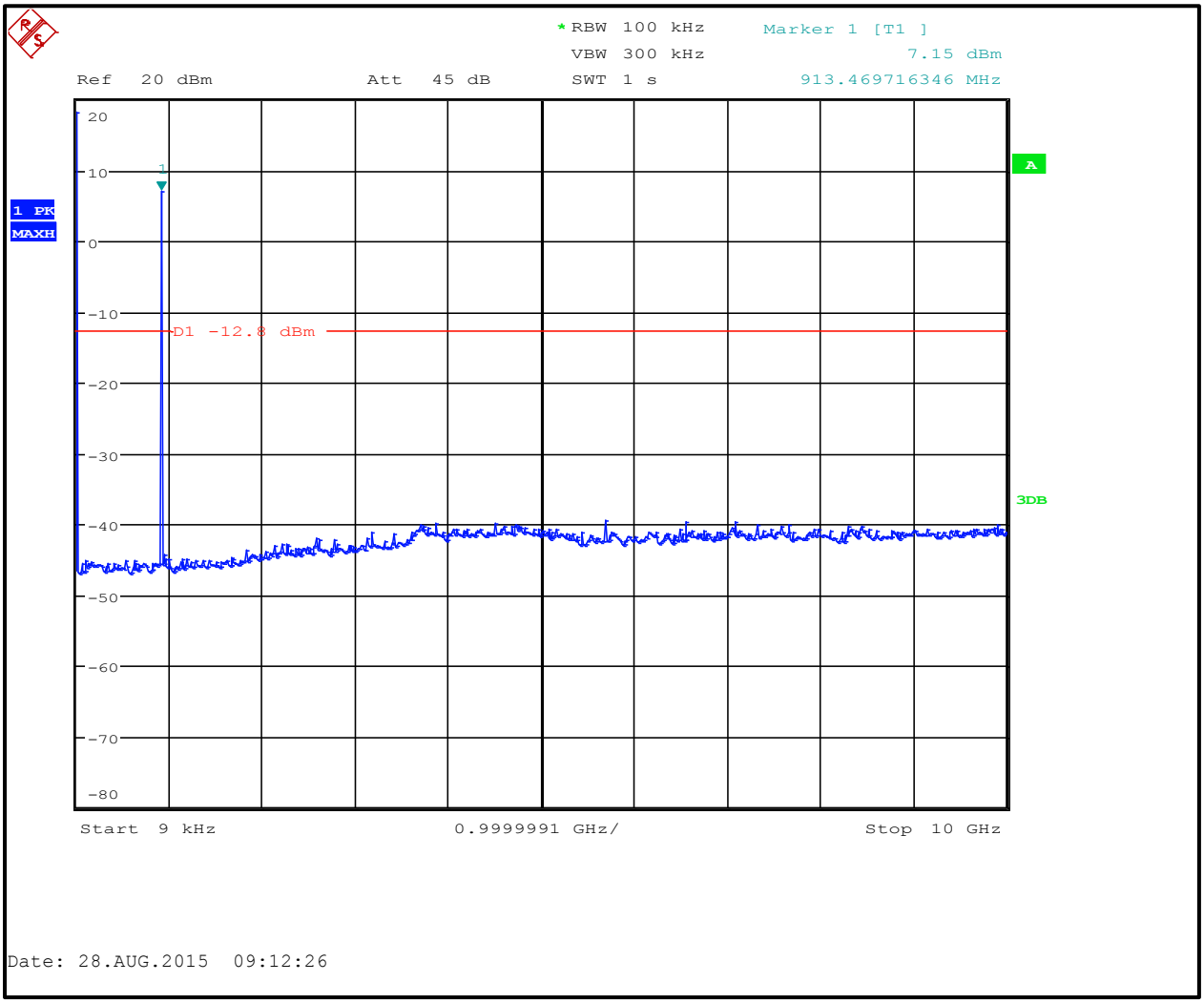
A PCB mounted U.FL connector provided a port for measurement from 9 kHz to the 10th harmonic with the spectrum analyzer, for the low, mid, and high channels.

Table 5-1: Antenna Conducted Spurious Emissions Test Equipment

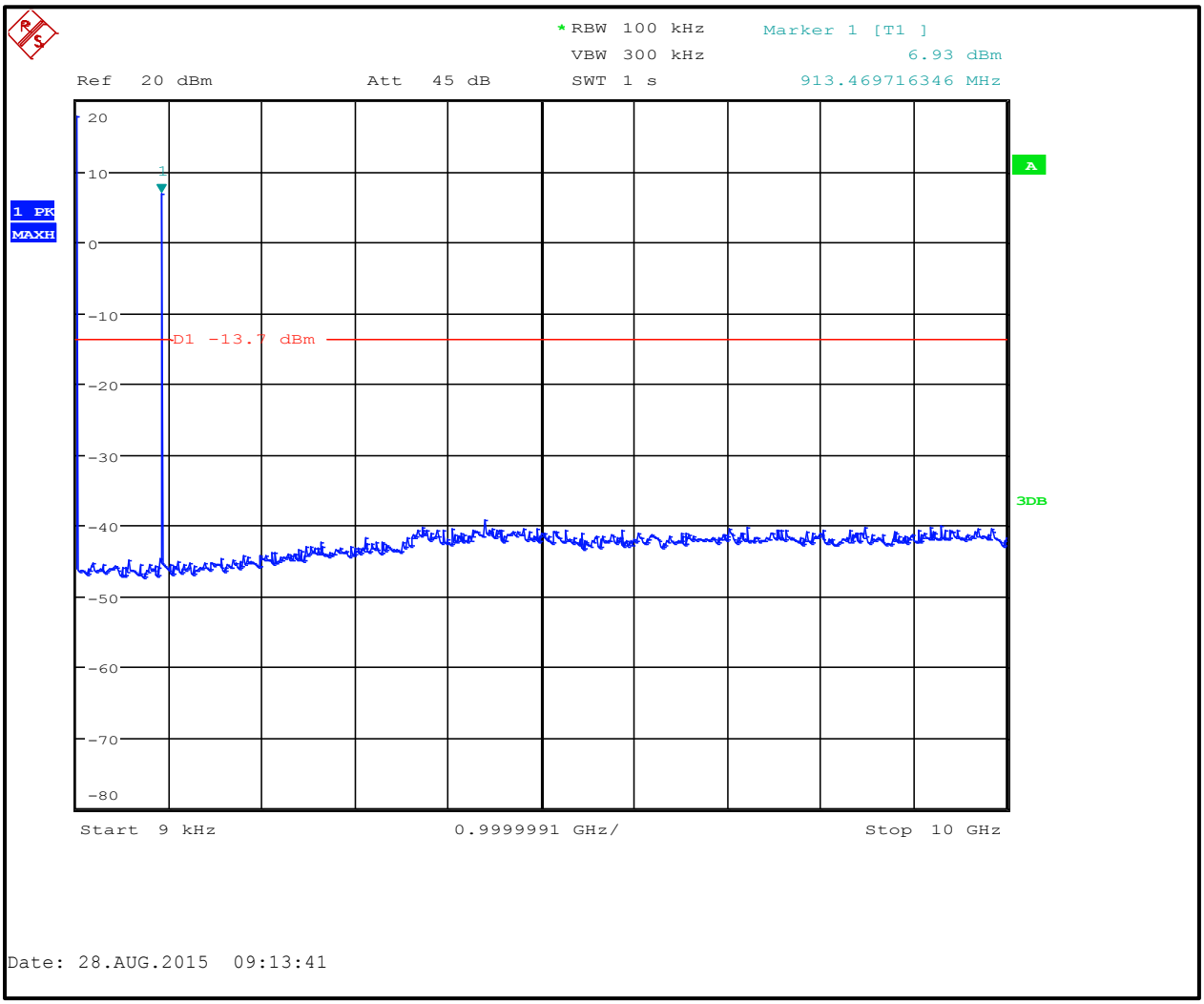
RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due Date
901581	Rohde & Schwarz	FSU	Spectrum Analyzer	1166.1660.50	11/13/15

5.2 Peak Output Power Test Data

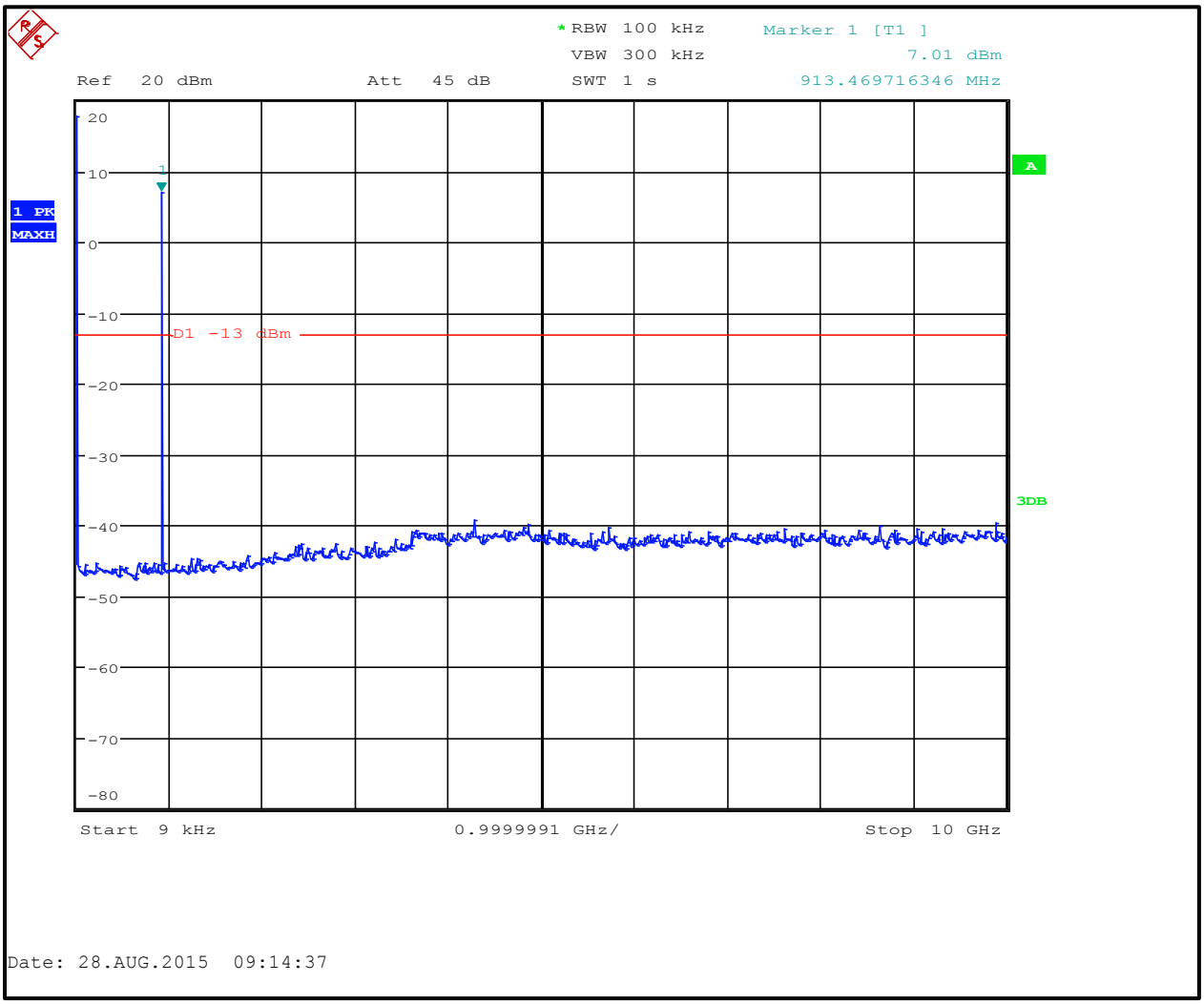
Plot 5-1: Antenna Conducted Spurious Emissions – 912 MHz



Plot 5-2: Antenna Conducted Spurious Emissions – 918 MHz



Plot 5-3: Antenna Conducted Spurious Emissions – 924 MHz



Measurement uncertainties shown for these tests are expanded Gaussian uncertainties expressed at 95% confidence level using a coverage factor k = 1.96. Measurement uncertainty = 0.5 dB.

Test Personnel:

Daniel W. Baltzell		August 28, 2015
EMC Test Engineer	Signature	Date of Test

6 Compliance with the Band Edge – FCC 15.247(d); RSS-247 5.5

6.1 Band Edge Test Procedure

Conducted measurements were taken. The span was set wide enough to capture the peak level of the emission operating on the channel closest to the band edge, as well as any modulation products which fall outside of the authorized band of operation. The spectrum analyzer was set to the following:

RBW > = 1 % of span
VBW > = RBW
Sweep = auto
Detector function = peak
Trace = max hold

The trace was allowed to stabilize. The marker was set on the emission at the band edge. The marker-delta was used to show the delta between the maximum in-band emission and the emission at the band edge, and was compared to the 20 dBc requirement of 15.247(d) (when using peak emissions) or restricted band.

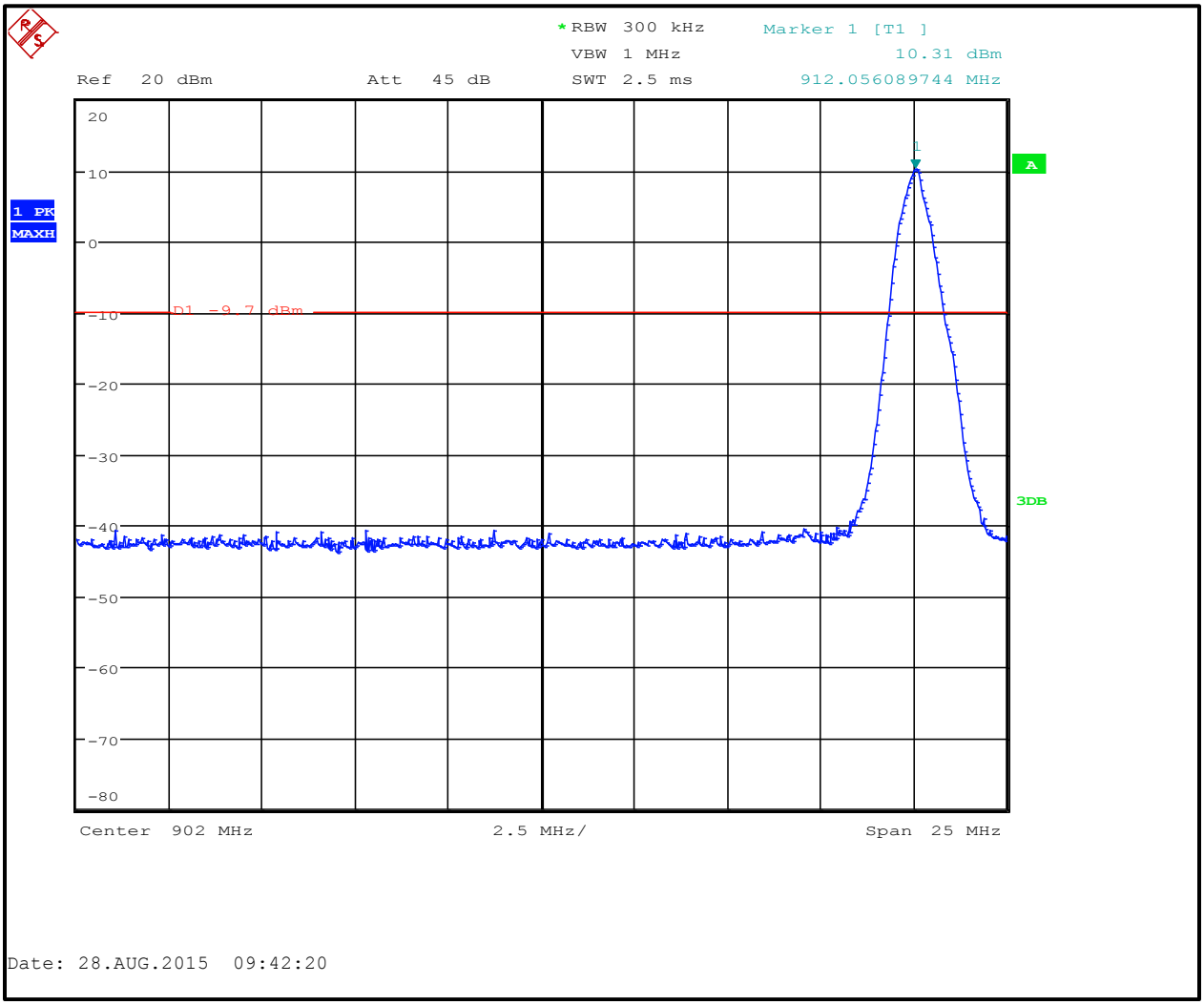
Table 6-1: Band Edge Test Equipment

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due Date
901581	Rohde & Schwarz	FSU	Spectrum Analyzer	1166.1660.50	11/13/15

6.2 Band Edge Test Results

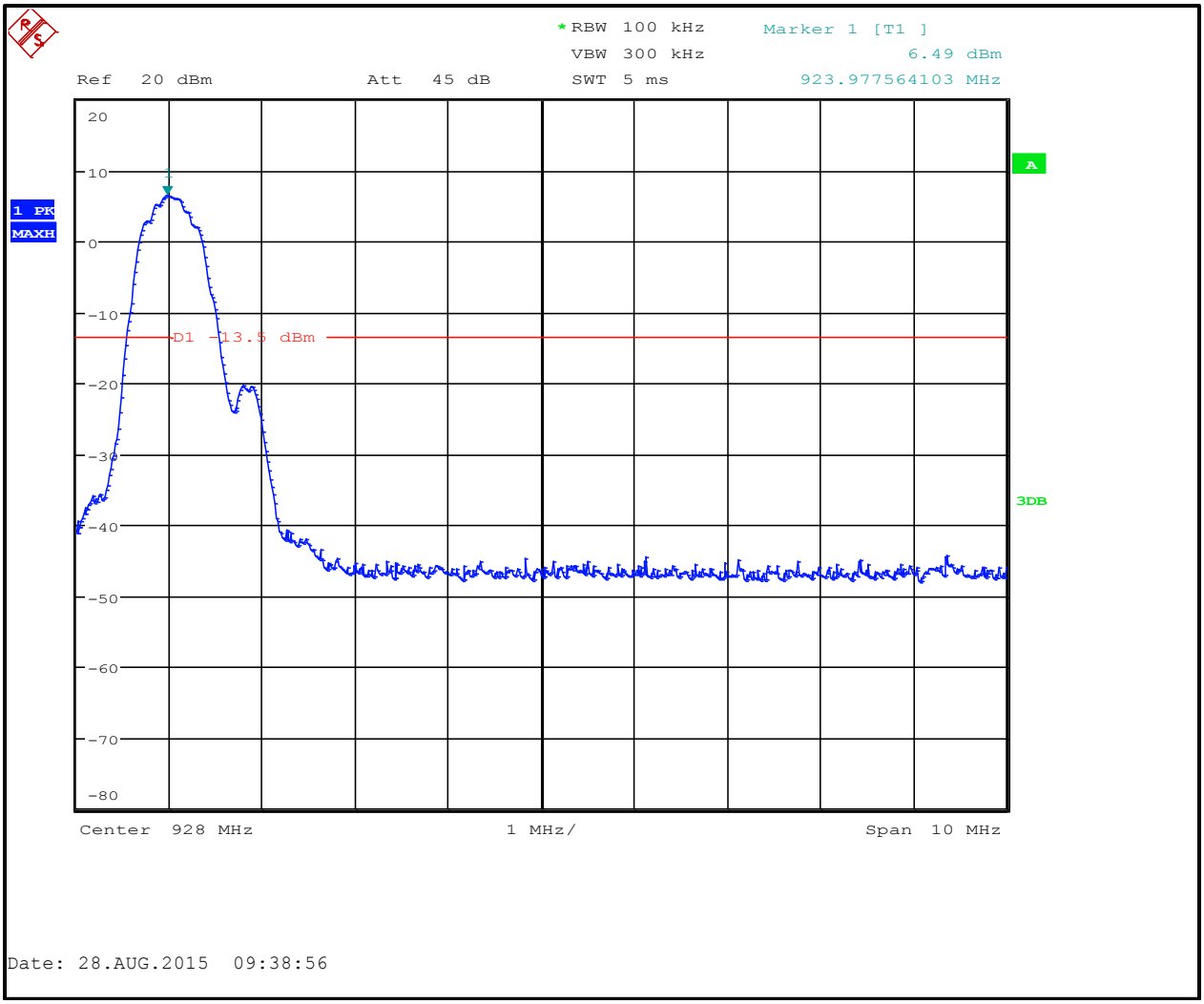
6.2.1 Lower Band Edge – Plot

Plot 6-1: Lower Band Edge



6.2.2 Upper Band Edge

Plot 6-2: Upper Band Edge



Measurement uncertainties shown for these tests are expanded Gaussian uncertainties expressed at 95% confidence level using a coverage factor k = 1.96. Measurement uncertainty = 0.5 dB.

Test Personnel:

Dan Baltzell		August 28, 2015
Test Engineer	Signature	Date of Test

7 Bandwidth – FCC 15.247(a)(2); RSS-247 5.2(1)

7.1 6 dB Bandwidth Test Procedure

The minimum 6 bandwidth per FCC 15.247 (a)(1) and RSS-247 were measured using a 50-ohm spectrum analyzer. The carrier was adjusted on the analyzer so that it was displayed entirely on the spectrum analyzer. The sweep time was set to auto and allowed through several sweeps with the max hold function used in peak detector mode. The resolution bandwidth was set to 100 kHz, and the video bandwidth set at 300 kHz.

Table 7-1: 6 dB Bandwidth Test Equipment

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due Date
901581	Rohde & Schwarz	FSU	Spectrum Analyzer	1166.1660.50	11/13/15

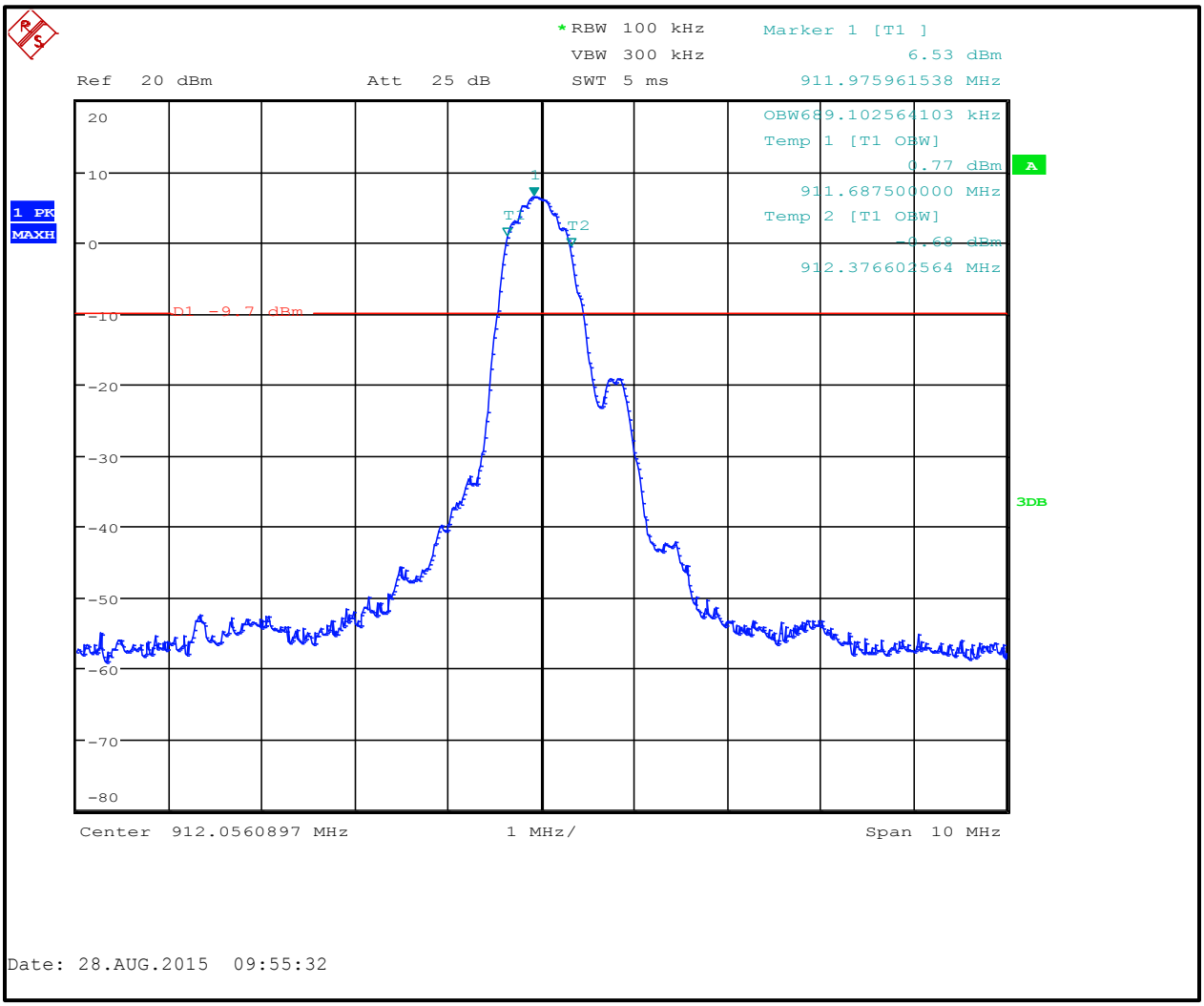
7.2 Bandwidth Test Results

Table 7-2: 6 dB Bandwidth Test Data

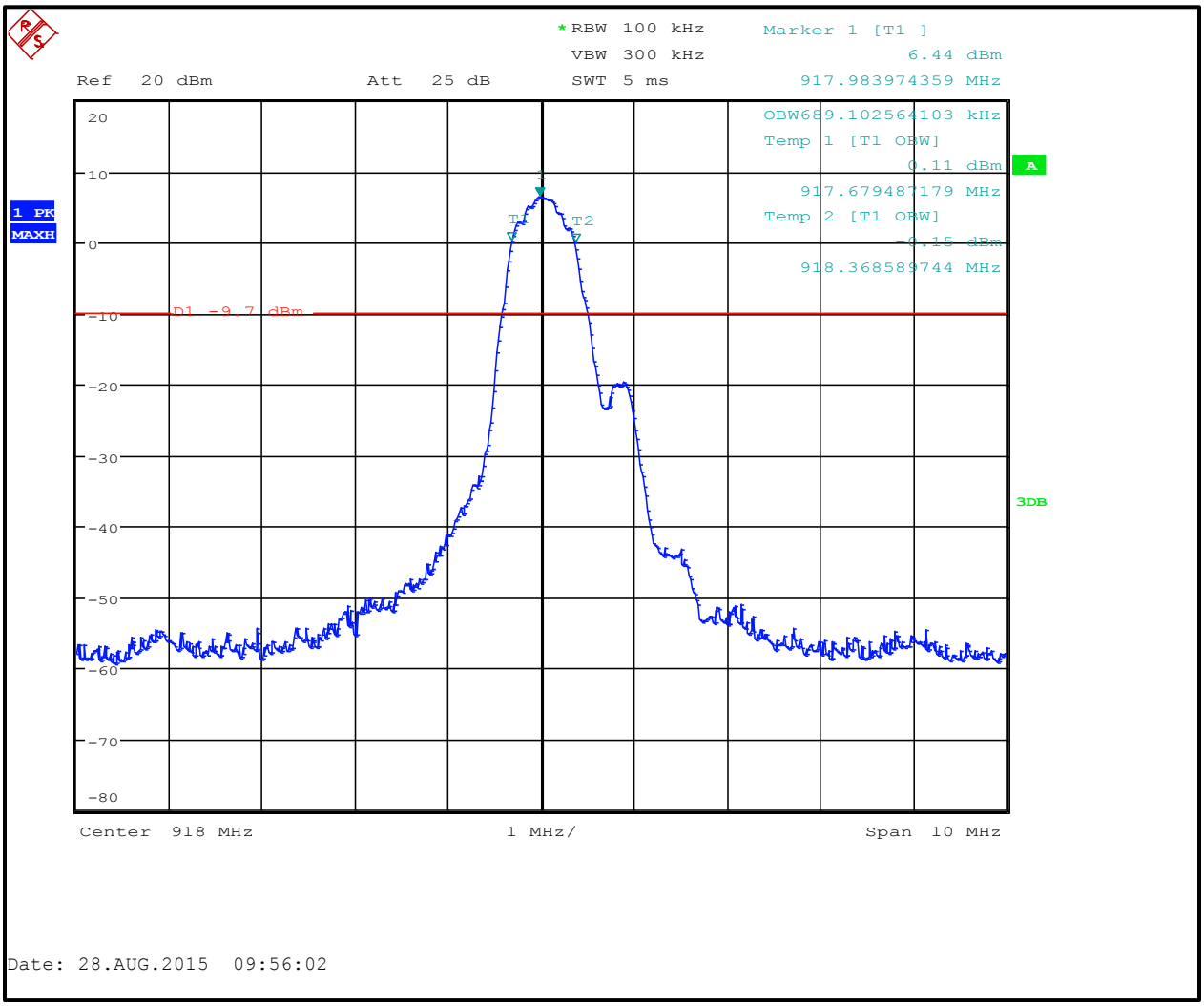
Frequency (MHz)	6 dB Bandwidth (kHz)	Maximum Limit (MHz)	Pass/Fail
912	689.1	0.5	Pass
918	689.1	0.5	Pass
924	705.1	0.5	Pass

Measurement uncertainties shown for these tests are expanded Gaussian uncertainties expressed at 95% confidence level using a coverage factor k = 1.96. Measurement uncertainty = 12 Hz.

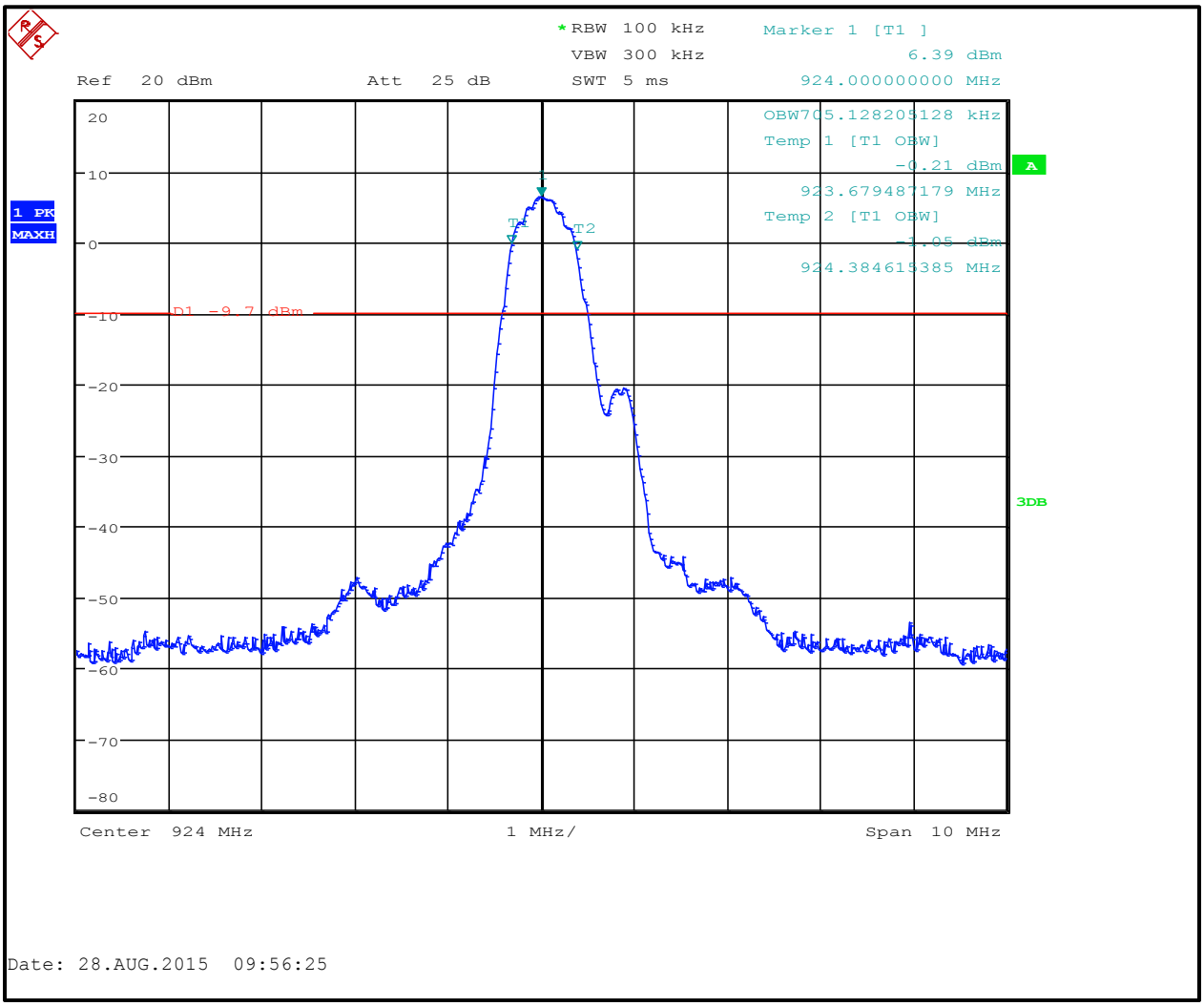
Plot 7-1: 6 dB Bandwidth – 912 MHz



Plot 7-2: 6 dB Bandwidth – 918 MHz



Plot 7-3: 6 dB Bandwidth – 924 MHz



Test Personnel:

Dan Baltzell		August 28, 2015
Test Engineer	Signature	Date of Test

8 Radiated Emissions - 15.209; RSS-247 2.2; RSS-Gen 6.13/7.1

8.1 Limits of Radiated Emissions Measurement

Frequency (MHz)	Field Strength (uV/m)	Measurement Distance (m)
0.009-0.490	2400/f (kHz)	300
0.490-1.705	2400/f (kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

As shown in 15.35(b), for frequencies above 1000 MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20 dB under any circumstances of modulation.

8.2 Radiated Emissions Measurement Test Procedure

Before final measurements of radiated emissions were made on the open-field three/ten meter range, the EUT was scanned indoors at one and three meter distances. This was done in order to determine its emissions spectrum signature. The physical arrangement of the test system and associated cabling was varied in order to determine the effect on the EUT's emissions in amplitude, direction and frequency. This process was repeated during final radiated emissions measurements on the open-field range, at each frequency, in order to ensure that maximum emission amplitudes were attained.

Final radiated emissions measurements were made on the three/ten-meter, open-field test site. The EUT was placed on a nonconductive turntable 0.8 meters above the ground plane. The spectrum was examined from 9 kHz to the 10^{th} harmonic of the highest fundamental transmitter frequency (10 GHz).

At each frequency, the EUT was rotated 360°, and the antenna was raised and lowered from 1 to 4 meters in order to determine the emission's maximum level. Measurements were taken using both horizontal and vertical antenna polarizations. For frequencies between 30 and 1000 MHz, the spectrum analyzer's 6 dB bandwidth was set to 120 kHz, and the analyzer was operated in the CISPR quasi-peak detection mode. For emissions above 1000 MHz, emissions are measured using a VBW of 10 Hz, with a minimum resolution bandwidth of 1 MHz. No video filter less than 10 times the resolution bandwidth was used. The highest emission amplitudes relative to the appropriate limit were measured and recorded in this report.

Table 8-1: Radiated Emissions Test Equipment

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due Date
900878	Rhein Tech Laboratories	AM3-1197-0005	3 meter antenna mast, polarizing	Outdoor Range 1	Not Required
901592	Insulated Wire Inc.	KPS-1503-3600-KPR	SMK RF Cables 20'	NA	9/3/15
901593	Insulated Wire Inc.	KPS-1503-360-KPR	SMK RF Cables 36"	NA	9/3/15
901242	Rhein Tech Laboratories	WRT-000-0003	Wood rotating table	N/A	Not Required
901581	Rohde & Schwarz	FSU	Spectrum Analyzer	1166.1660.50	11/13/15
900772	EMCO	3161-02	Horn Antenna (2 - 4 GHz)	9804-1044	4/9/18
900321	EMCO	3161-03	Horn Antenna (4.0 - 8.2 GHz)	9508-1020	4/9/18
900323	EMCO	3160-07	Horn Antenna (8.2 - 12.4 GHz)	9605-1054	4/9/18
900791	Chase	CBL6111B	Bilog Antenna (30 MHz – 2000 MHz)	N/A	6/11/17

8.3 Radiated Emissions Test Results

8.3.1 Unintentional Radiated Emissions Test Data

Table 8-2: Digital Radiated Emissions Test Data

Temperature: 82°F Humidity: 67%							
Emission Frequency (MHz)	**Test Detector**	**Analyzer Reading (dBuV)**	**Site Correction Factor (dB/m)**	**Emission Level (dBuV/m)**	**Limit (dBuV/m)**	**Margin (dB)**	**Pass/ Fail**
37.648	Qp	-2.5	15.6	13.1	40.0	-26.9	Pass
87.666	Qp	0.9	10.1	11.0	40.0	-29.0	Pass
96.136	Qp	20.4	11.6	32.0	43.5	-11.5	Pass
132.424	Qp	4.8	12.5	17.3	43.5	-26.2	Pass
137.592	Qp	6.0	12.1	18.1	43.5	-25.4	Pass
142.455	Qp	8.5	11.9	20.4	43.5	-23.1	Pass
146.193	Qp	7.5	11.8	19.3	43.5	-24.2	Pass
154.633	Qp	6.3	11.6	17.9	43.5	-25.6	Pass
180.523	Qp	10.4	10.5	20.9	43.5	-22.6	Pass
236.785	Qp	0.4	12.3	12.7	46.0	-33.3	Pass
239.972	Qp	8.0	12.7	20.7	46.0	-25.3	Pass
251.989	Qp	5.7	13.9	19.6	46.0	-26.4	Pass
300.001	Qp	9.3	14.6	23.9	46.0	-22.1	Pass

8.3.2 Spurious/Harmonics Radiated Emissions Test Data

Table 8-3: Peak Radiated Emissions Spurious/Harmonics – 912 MHz

Emission Frequency (MHz)	Peak Analyzer Reading (dBuV) (1 MHz RBW/ 3 MHz VBW)	Site Correction Factor (dB/m)	Peak Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)
2736.0	14.7	25.8	40.5	74.0	-33.5
3648.0	17.5	27.6	45.1	74.0	-28.9
4560.0	12.1	33.6	45.7	74.0	-28.3
7296.0	12.3	35.7	48.0	74.0	-26.0
8208.0	13.5	41.7	55.2	74.0	-18.8
9120.0	12.7	41.9	54.6	74.0	-19.4

Table 8-4: Average Radiated Emissions Spurious/Harmonics – 912 MHz

Emission Frequency (MHz)	Average Analyzer Reading (dBuV) (1 MHz RBW/ 10 Hz VBW)	Site Correction Factor (dB/m)	Average Emission Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)
2736.0	7.3	25.8	33.1	54.0	-20.9
3648.0	9.9	27.6	37.5	54.0	-16.5
4560.0	1.8	33.6	35.4	54.0	-18.6
7296.0	2.0	35.7	37.7	54.0	-16.3
8208.0	2.1	41.7	43.8	54.0	-10.2
9120.0	2.0	41.9	43.9	54.0	-10.1

Table 8-5: Peak Radiated Emissions Spurious/Harmonics - 918 MHz

Emission Frequency (MHz)	Peak Analyzer Reading (dBuV) (1 MHz RBW/ 3 MHz VBW)	Site Correction Factor (dB/m)	Peak Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)
2754.0	15.2	25.8	41.0	74.0	-33.0
3672.0	16.1	27.6	43.7	74.0	-30.3
4590.0	13.1	33.5	46.6	74.0	-27.4
7344.0	11.6	35.7	47.3	74.0	-26.7
8262.0	13.6	41.7	55.3	74.0	-18.7
9180.0	13.7	42.0	55.7	74.0	-18.3

Table 8-6: Average Radiated Emissions Spurious/Harmonics – 918 MHz

Emission Frequency (MHz)	Average Analyzer Reading (dBuV) (1 MHz RBW/ 10 Hz VBW)	Site Correction Factor (dB/m)	Average Emission Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)
2754.0	9.5	25.8	35.3	54.0	-18.7
3672.0	11.5	27.6	39.1	54.0	-14.9
4590.0	1.8	33.5	35.3	54.0	-18.7
7344.0	1.5	35.7	37.2	54.0	-16.8
8262.0	2.4	41.7	44.1	54.0	-9.9
9180.0	2.2	42.0	44.2	54.0	-9.8

Table 8-7: Peak Radiated Emissions Spurious/Harmonics - 924 MHz

Emission Frequency (MHz)	Peak Analyzer Reading (dBuV) (1 MHz RBW/ 3 MHz VBW)	Site Correction Factor (dB/m)	Peak Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)
2772.0	17.1	25.9	43.0	74.0	-31.0
3696.0	18.7	27.7	46.4	74.0	-27.6
4620.0	13.8	33.4	47.2	74.0	-26.8
7392.0	13.7	35.7	49.4	74.0	-24.6
8316.0	14.7	41.8	56.5	74.0	-17.5

Table 8-8: Average Radiated Emissions Spurious/Harmonics – 924 MHz

Emission Frequency (MHz)	Average Analyzer Reading (dBuV) (1 MHz RBW/ 10 Hz VBW)	Site Correction Factor (dB/m)	Average Emission Level (dBuV/m)	Average Limit (dBuV/m)	Average Margin (dB)
2772.0	9.6	25.9	35.5	54.0	-18.5
3696.0	12.8	27.7	40.5	54.0	-13.5
4620.0	2.4	33.4	35.8	54.0	-18.2
7392.0	2.1	35.7	37.8	54.0	-16.2
8316.0	3.1	41.8	44.9	54.0	-9.1

Measurement uncertainty: Measurement uncertainties shown for these tests are expanded uncertainties expressed at 95% confidence level using a coverage factor k = 2. +4.0 dB / -2.65 dB

Test Personnel:

Daniel W. Baltzell		August 29, 2015
Test Engineer	Signature	Date of Test

9 AC Conducted Emissions - FCC 15.207; RSS-Gen 7.2.4: Conducted Limits

9.1 Site and Test Description

The power line conducted emissions measurements were performed in a Series 81 type shielded enclosure manufactured by Rayproof. The EUT was assembled on a wooden table 80 centimeters high. Power was fed to the EUT through a 50-ohm/50 microhenry Line Impedance Stabilization Network (LISN). The EUT LISN was fed power through an A.C. filter box on the outside of the shielded enclosure. The filter box and EUT LISN housing are bonded to the ground plane of the shielded enclosure. A second LISN, the peripheral LISN, provides isolation for the EUT test peripherals. This peripheral LISN was also fed A.C. power. A metal power outlet box, which is bonded to the ground plane and electrically connected to the peripheral LISN, powers the EUT host peripherals.

The spectrum analyzer was connected to the AC line through an isolation transformer. The 50-ohm output of the EUT LISN was connected to the spectrum analyzer input through a Solar 100 kHz high-pass filter. The filter is used to prevent overload of the spectrum analyzer from noise below 100 kHz. Conducted emission levels were measured on each current-carrying line with the spectrum analyzer operating in the CISPR quasi-peak mode (or peak mode if applicable).

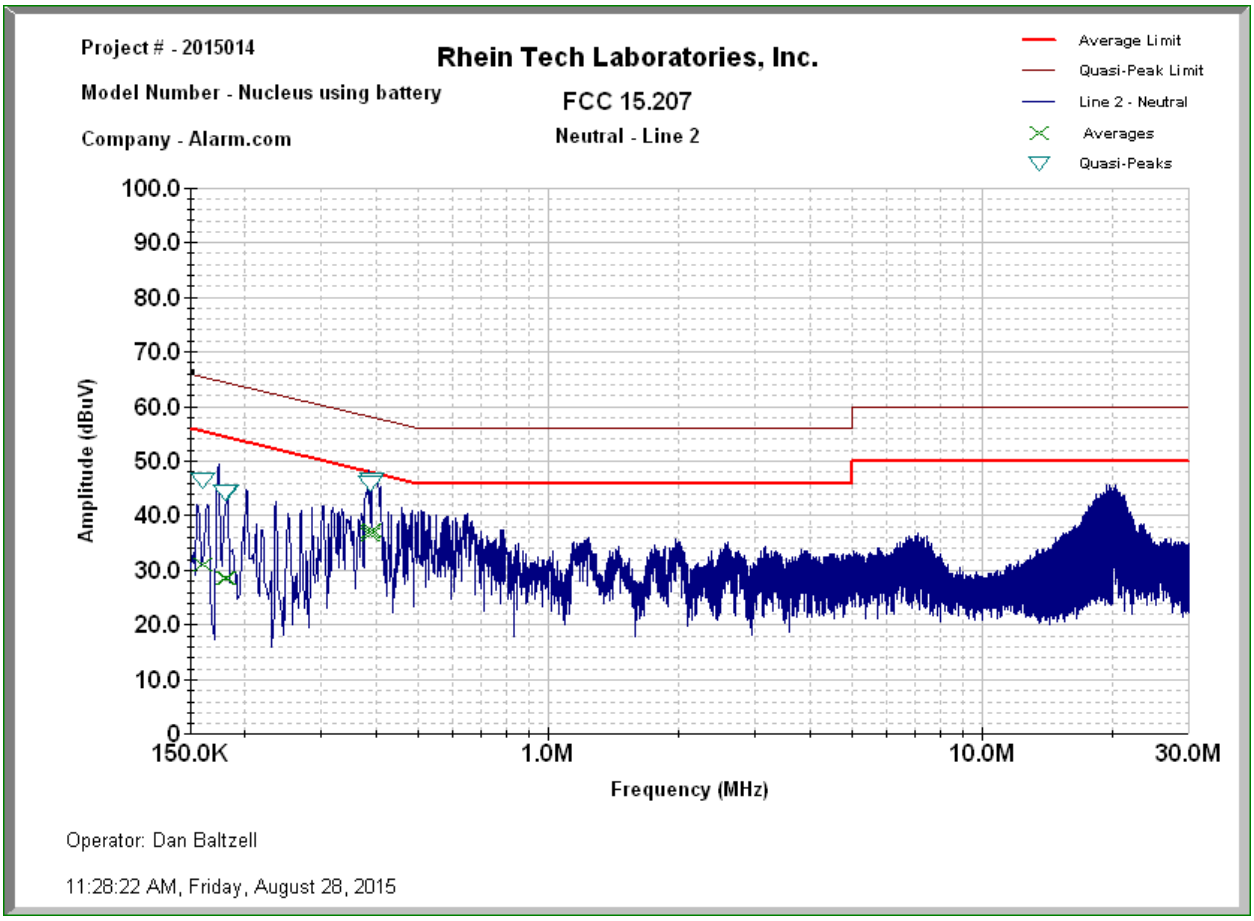
The analyzer's 6 dB bandwidth was set to 9 kHz. Video filter less than 10 times the resolution bandwidth is not used. Average measurements are performed in linear mode using a 10 kHz resolution bandwidth, a 1 Hz video bandwidth, and by increasing the sweep time in order to obtain a calibrated measurement. The emission spectrum was scanned from 150 kHz to 30 MHz. The highest emission amplitudes relative to the appropriate limits were measured and have been recorded.

9.2 Test Limits

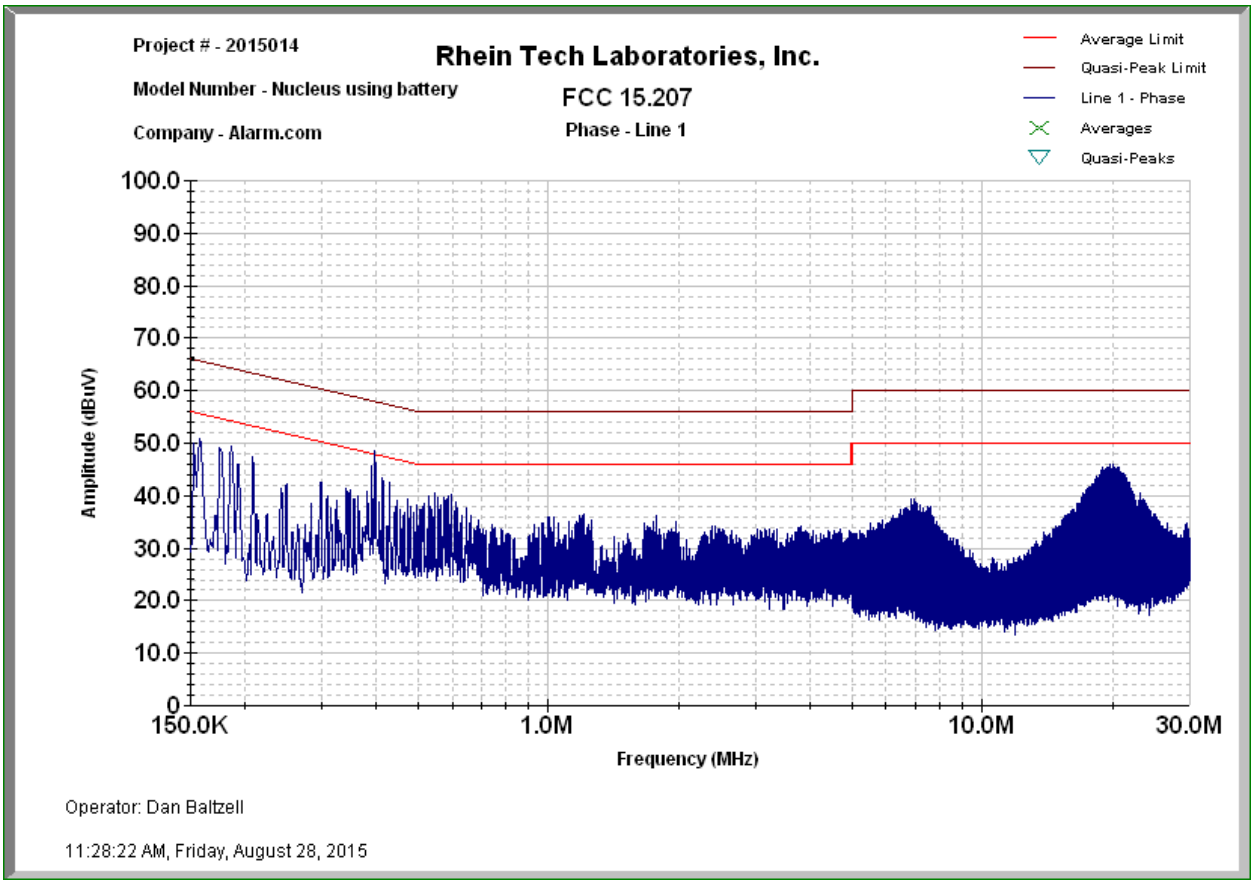
Line-Conducted Emissions		
Limit (dBµV)		
Frequency (MHz)	**Quasi-Peak**	**Average**
0.15 to 0.50	66 to 56	56 to 46
0.50 to 5.00	56	46
5.00 to 30.00	60	50

9.3 Conducted Emissions Test Data

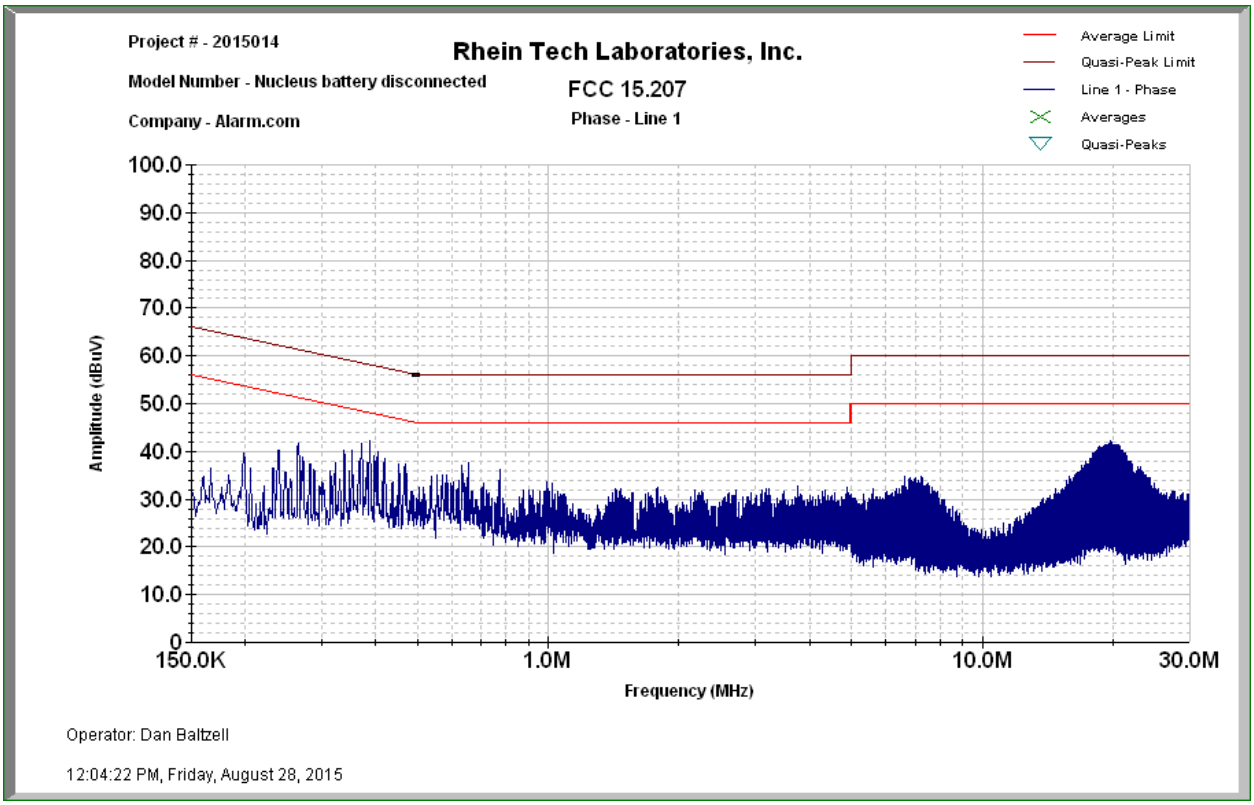
Plot 9-1: Conducted Emissions Transmit - Neutral Side – Charging Battery



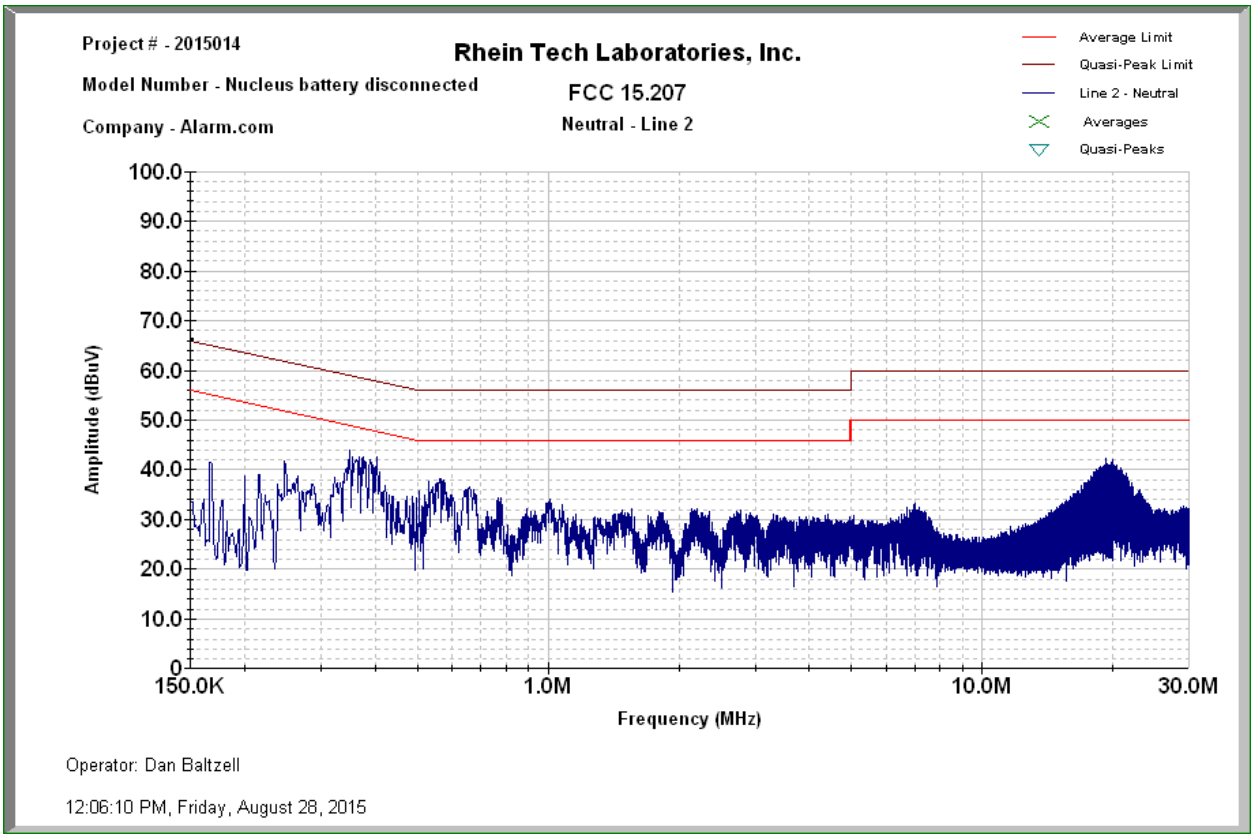
Plot 9-2: Conducted Emissions Transmit - Phase Side – Charging Battery



Plot 9-3: Conducted Emissions Transmit - Neutral Side – Image Sensor Transmitting



Plot 9-4: Conducted Emissions Transmit - Phase Side – Image Sensor Transmitting



Measurement uncertainty: Measurement uncertainties shown for these tests are expanded uncertainties expressed at 95% confidence level using a coverage factor k = 2. ±3.6 dB

Table 9-1: Conducted Emissions Test Equipment

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due Date
901581	Rohde & Schwarz	FSU	Spectrum Analyzer	1166.1660.50	11/13/15
901083	AFJ International	LS16	16A LISN (110 V)	16010020080	3/11/16
N/A	ETS-Lindgren	TILE	Emissions testing software Rev. 7	N/A	N/A

Test Personnel:

Daniel W. Baltzell		August 28, 2015
Test Engineer	Signature	Date of Test

10 Conclusion

The data in this measurement report shows that the EUT as tested, Alarm.com Model ADC-NK-100T, FCC ID: YL6143NK100T, IC: 9111A-143NK100T, complies with the applicable requirements of Parts 2 and 15 of the FCC Rules and Regulations and Industry Canada RSS-247 and RSS-Gen.