RHEIN TECH LABORATORIES, INC.

Engineering Solutions & Electromagnetic Compatibility Services

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

Test Lab:	Applicant:
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FCC ID/ IC:	MQO-HBT1100/ 2570A-HBT1100	**Test Report Date:**	June 8, 2016
Platform:	N/A	**RTL Work Order #:**	2016082
Model Name/ Model Number:	SRX-SL/ HBT1100	**RTL Quote Number:**	QRTL16-082A
American National Standard Institute:	ANSI C63.10-2013: American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices		
FCC Classification:	DSS – Part 15 Spread Spectrum Transmitter		
FCC Rule Part(s):	FCC Rules Part 15.247: Operation within the bands 920-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz Direct Sequence System (10-01-15)		
Industry Canada:	RSS-247 Issue 1: Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSs) and License-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
2402-2480	0.0026	N/A	1M14FXD

** 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, ANSI C63.10, and Industry Canada RSS-247.

Signature: _____ Date: June 8, 2016

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

This/these test(s) is/are accredited under Rhein Tech Laboratories, Inc. ISO/IEC 17025 accreditation issued by the ANSI-ASQ National Accreditation Board. Refer to certificate and scope of accreditation AT-1445.

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1 General Information

1.1 Scope

Applicable Standards:

- FCC Rules Part 15.247: Frequency Hopping, Direct Spread Spectrum and Hybrid Systems that are in operation within the bands of 902-928 MHz, 2400-2483.5 MHz and 5725-5850 MHz.

- Industry Canada RSS-247 Issue 1: Digital Transmission Systems (DTSs), Frequency Hopping Systems (FHSS) and License-Exempt Local Area Network (LE-LAN) Devices

1.2 Description of EUT

Equipment Under Test	Headset
Model Name / Model #	SRX-SL
Power Supply	Internal rechargeable 3.8VDC Li-Ion Battery
Modulation Type	FHSS – Bluetooth
Frequency Range	2402–2480 MHz
Antenna	Internal 2.16 dBi

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.

1.4 Related Submittal(s)/Grant(s)

This is an original certification application for Vocollect by Honeywell Model: SRX-SL, FCC ID: MQO-HBT1100, IC: 2570A-HBT1100.

1.5 Modifications

No modifications were required for compliance.

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: Test Frequencies

Channel	Frequency (MHz)
1	2402
40	2440 or 2441
79	2480

2.2 Exercising the EUT

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, and all modes were investigated and the worst-case mode was used for final testing. 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 RSS-247

Test	FCC Reference	IC Reference	Result
AC Power Conducted Emissions	FCC 15.207	RSS-Gen 8.8	N/A
Radiated Emissions	FCC 15.209	RSS-247 5.5; RSS-Gen 6.13/7.1	Pass
Maximum Peak Power Output	FCC 15.247(b)(1)	RSS-247 5.4(2), RSS-Gen 6.12	Pass
Antenna Conducted Spurious Emissions	FCC 15.247(d)	RSS-247 5.5, RSS-Gen 6.13	Pass
Carrier Frequency Separation	FCC 15.247(a)(1)	RSS-247 5.1(2)	Pass
Band Edge Measurement	FCC 15.247(d)	RSS-247 5.5	Pass
20 dB Bandwidth	FCC 15.247(a)(1)(ii)	RSS-247 5.1(1)	Pass
Hopping Characteristics	FCC 15.247(a)(1)(iii)	IC RSS-247 5.1(4)	Pass
Average Time of Occupancy	FCC 15.247(a)(1)(iii)	IC RSS-247 5.1(4)	Pass

2.4 Test System Details

The test sample was received on April 5, 2016. The FCC identifiers for all applicable equipment, plus descriptions of all cables used in the tested system, are identified in the following tables.

Table 2-3: Equipment Under Test (EUT)

Part	Manufacturer	Model	Serial Number	FCC ID	Cable Description	RTL Bar Code
BT Headset (conducted)	Honeywell	SRX-SL (Cyclone)	6716110047	MQO-HBT1100	N/A	21991
BT Headset	Honeywell	SRX-SL (Cyclone)	6716110017	MQO-HBT1100	N/A	21989
Headset Holder	Honeywell	SRX-SL	N/A	N/A	N/A	21995

Table 2-4: Support Equipment

Part	Manufacturer	Model #	Serial Number	FCC ID	Cable Description	RTL Bar Code
Laptop	Samsung	NP300E5A-A01UB	HJVF93EB903201D	N/A	N/A	901550

2.5 Configuration of Tested System

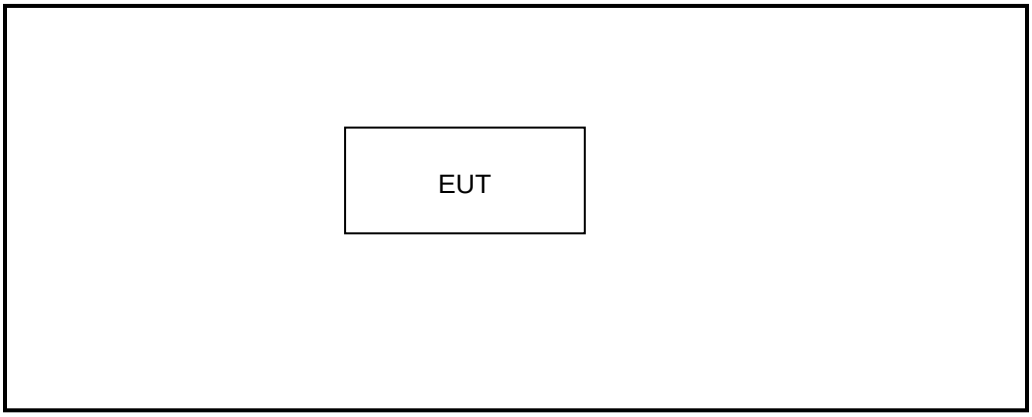


Figure 2-1: Configuration of System Under Test

3 Peak Output Power – FCC 15.247(b)(1); RSS-247 5.4(2); RSS-Gen 6.12

3.1 Power Output Test Procedure

A conducted power measurement of the EUT was taken using a Rhode & Schwarz Analyzer. The following settings were used:

1) Span: Approximately five times the 20 dB bandwidth, centered on a hopping channel (5 MHz used)
2) RBW >20 dB bandwidth of the emission being measured (2 MHz used)
3) VBW ≥RBW (3 MHz used)
4) Sweep: Auto
5) Detector function: Peak.
6) Trace: Max hold. The trace was allowed to stabilize, and the marker-to-peak function was used to set the marker to the peak of the emission.

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	3/22/18

3.2 Power Output Test Data

Table 3-2: Power Output Test Data

Modulation Type	Level Measured 2402 MHz (dBm)	Level Measured 2440 MHz (dBm)	Level Measured 2480 MHz (dBm)
DM1	-2.3	2.6	3.4
DH1	-2.3	3.4	3.4
HV1	-2.4	3.3	3.2
HV2	-2.2	3.4	3.4
HV3	-2.3	3.3	3.3
DM3	-2.3	3.4	3.4
DH3	3.2	3.3	3.3
EV4	3.1	3.4	3.4
EV5	-2.3	3.3	3.3
DM5	-2.4	3.3	3.3
DH5	-2.4	3.2	3.3
2-DH1	-0.4	4.2	4.2
2-EV3	-0.4	4.2	4.2
3-EV3	-0.7	3.9	3.9
3-DH1	-0.7	4.0	4.0
2-DH3	-0.4	4.2	4.2
3-DH3	-0.7	4.0	3.9
2-EV5	-0.5	4.1	4.1
3-EV5	-0.7	3.9	3.9
2-DH5	-0.5	4.1	4.1
3-DH5	-0.8	3.9	3.9

Measurement uncertainty: 0.8 dB. This measurement uncertainty is an expanded uncertainty for 95% confidence level received with a coverage factor k=2.

Test Personnel:

Daniel W. Baltzell		April 6, 2016
Test Engineer	Signature	Date of Test

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

4.1 Band Edge Test Procedure

The transmitter output was connected to its appropriate antenna. Peak (1 MHz RBW/VBW) and average (1 MHz RBW/10 Hz VBW) radiated measurements were taken with a suitable span to encompass the peak of the fundamental. A delta measurement was performed from the highest peak in the restricted band to the peak of the fundamental, and subtracted from the field strength; the result was compared to the limit in the restricted band (54 dBuV/m).

Table 4-1: Band Edge Test Equipment

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due Date
901581	Rohde & Schwarz	FSU	Spectrum Analyzer	1166.1660.50	3/22/18
900878	Rhein Tech Laboratories, Inc.	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	9/4/16
901242	Rhein Tech Laboratories, Inc.	WRT-000-0003	Wood rotating table	N/A	Not Required
900772	EMCO	3161-02	Horn Antenna 2 - 4 GHz	9804-1044	4/9/18

4.2 Restricted Band Edge Test Results

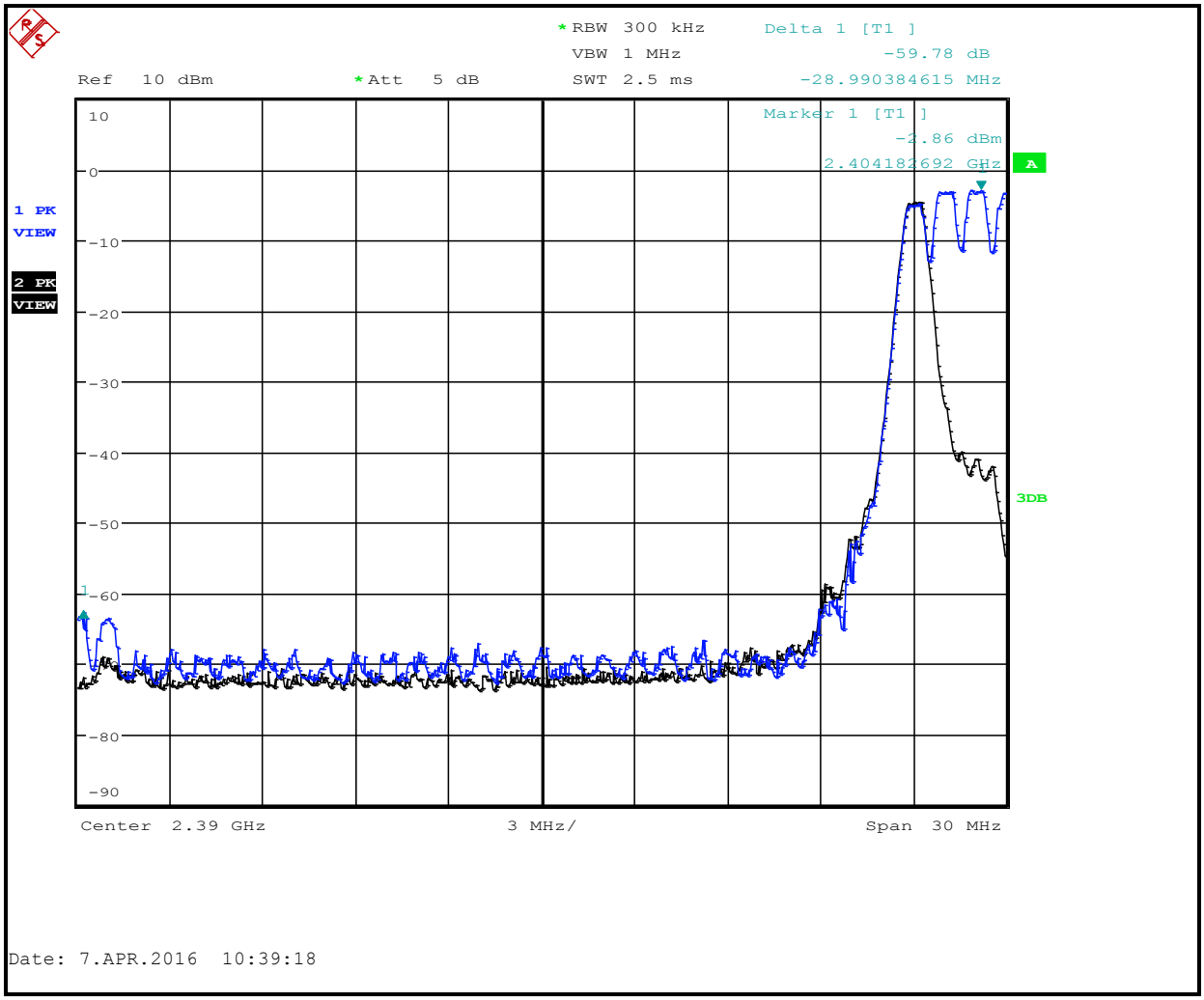
4.2.1 Calculation of Lower Band Edge

93.1 dBuV/m is the average field strength measurement, from which the delta measurement of 59.8 dB is subtracted (reference plots), resulting in a level of 33.3 dB. This level has a margin 20.7 dB below the limit of 54 dBuV/m.

Calculation: 93.1 dBuV/m – 59.8 dB – 54 dBuV/m = -20.7 dB

Peak Field Strength of Upper Band Edge (1 MHz RBW/1 MHz VBW) = 94.3 dBuV/m
Average Field Strength of Upper Band Edge (1 MHz RBW/10 Hz VBW) = 93.1 dBuV/m
Delta measurement = 59.8 dB (note that hopping mode produced worst-case delta)

Plot 4-1: Lower Band Edge - 2402 MHz



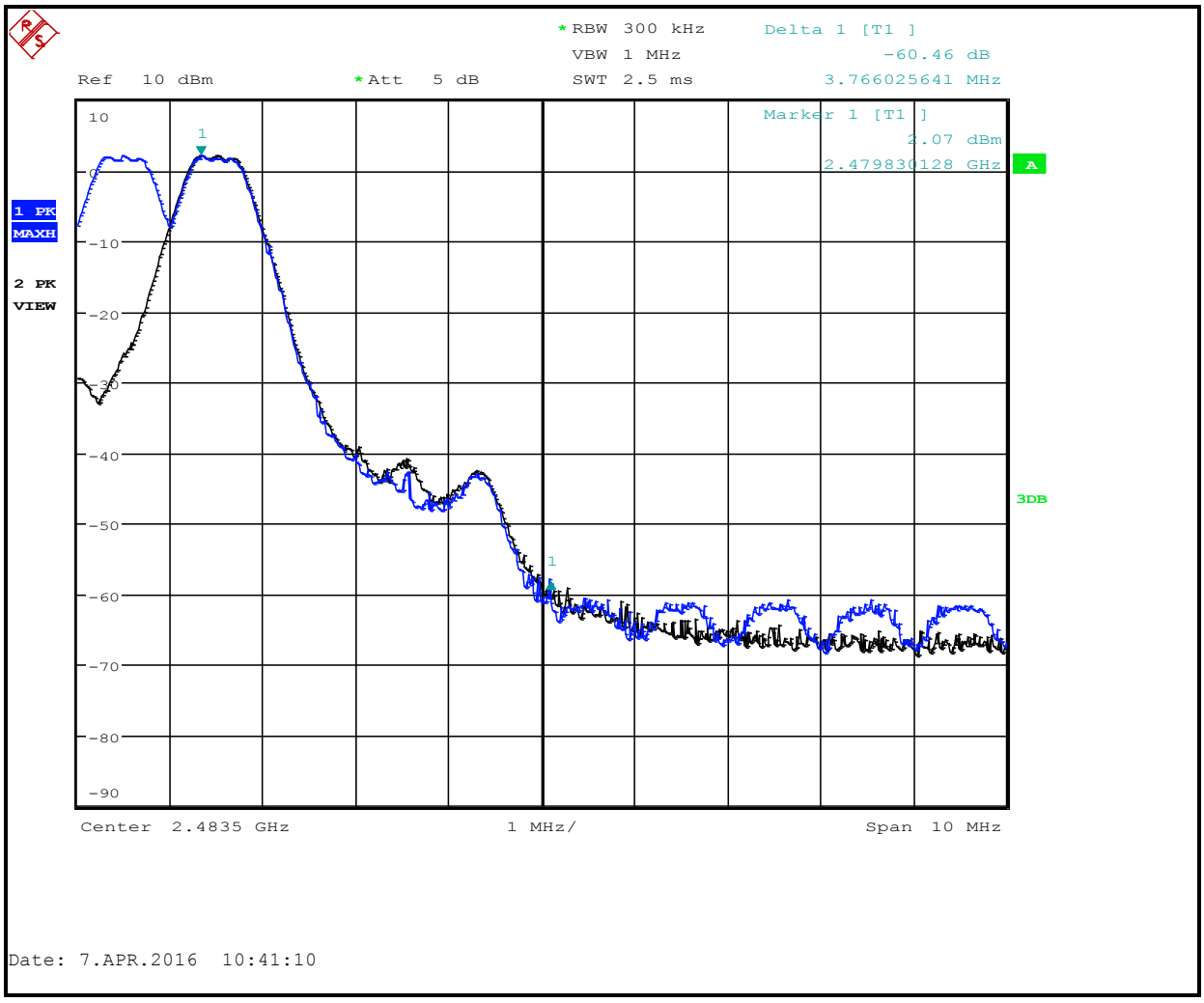
4.2.2 Calculation of Upper Band Edge

98.9 dBuV/m is the average field strength measurement, from which the delta measurement of 60.5 dB is subtracted (reference plots), resulting in a level 38.4 dB. This level has a margin of 15.6 dB below the limit of 54 dBuV/m.

Calculation: 98.9 dBuV/m – 60.5 dB – 54 dBuV/m = -15.6 dB

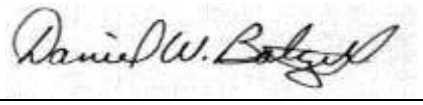
Peak Field Strength of Upper Band Edge (1 MHz RBW/1 MHz VBW) =100.1 dBuV/m
Average Field Strength of Upper Band Edge (1 MHz RBW/10 Hz VBW) = 98.9 dBuV/m
Delta measurement = 60.5 dB

Plot 4-2: Upper Band Edge - 2480 MHz



Measurement uncertainty: 4.7 dB. This measurement uncertainty is an expanded uncertainty for 95% confidence level received with a coverage factor k=2.

Test Personnel:



Daniel W. Baltzell		April 7, 2016
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 Procedures

Antenna spurious emissions per FCC 15.247(d) were measured from the EUT antenna port using a 50-ohm spectrum analyzer with the resolution bandwidth set at 100 kHz, and the video bandwidth set at 100 kHz. The modulated carrier was identified at the following frequencies: 2402 MHz, 2441 MHz and 2480 MHz.

5.2 Antenna Conducted Spurious Emissions Test Results

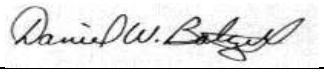
No harmonics or spurs were found within 20 dB (note that we are reporting power as peak) of the carrier level from the carrier to the 10th harmonic of the carrier frequency. Per FCC 15.31(o), no data is being reported.

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	3/22/18

Measurement uncertainty: 0.8 dB. This measurement uncertainty is an expanded uncertainty for 95% confidence level received with a coverage factor k=2.

Test Personnel:

Dan Baltzell		April 7, 2016
Test Engineer	Signature	Date of Test

6 20 dB Bandwidth – FCC 15.247(a)(1)); RSS-247 5.1(1)

6.1 20 dB Bandwidth Test Procedure

The minimum 20 dB bandwidths per FCC 15.247 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. The minimum 20 dB bandwidths were measured using the spectrum analyzer delta marker set 20 dB down from the peak of the carrier. The table below contains the bandwidth measurement results.

Table 6-1: 20 dB Bandwidth Test Equipment

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due Date
901581	Rohde & Schwarz	FSU	Spectrum Analyzer	1166.1660.50	3/22/18

6.2 20 dB Modulated Bandwidth Test Data

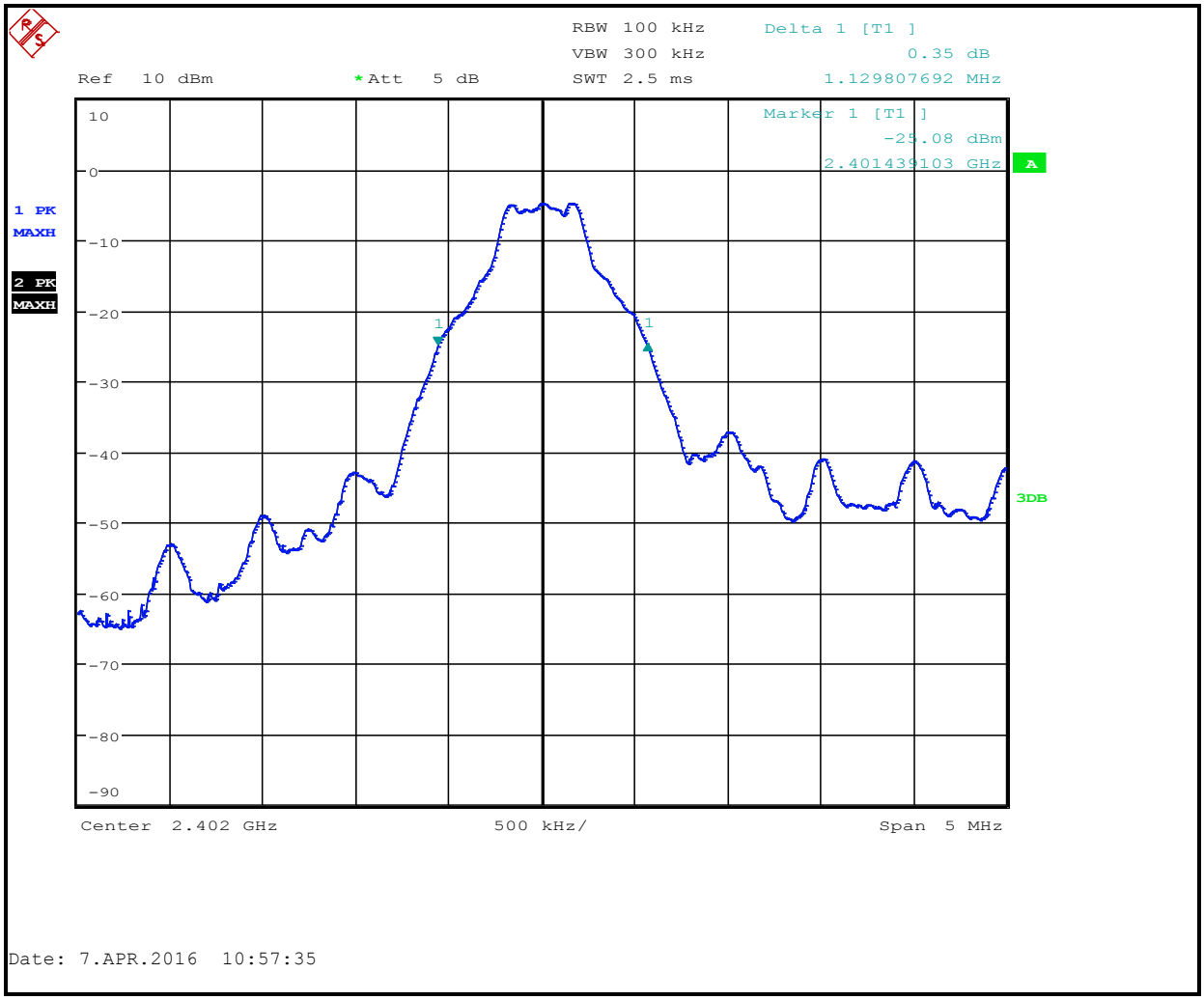
Table 6-2: 20 dB Modulated Bandwidth Test Data

Minimum 20 dB bandwidths

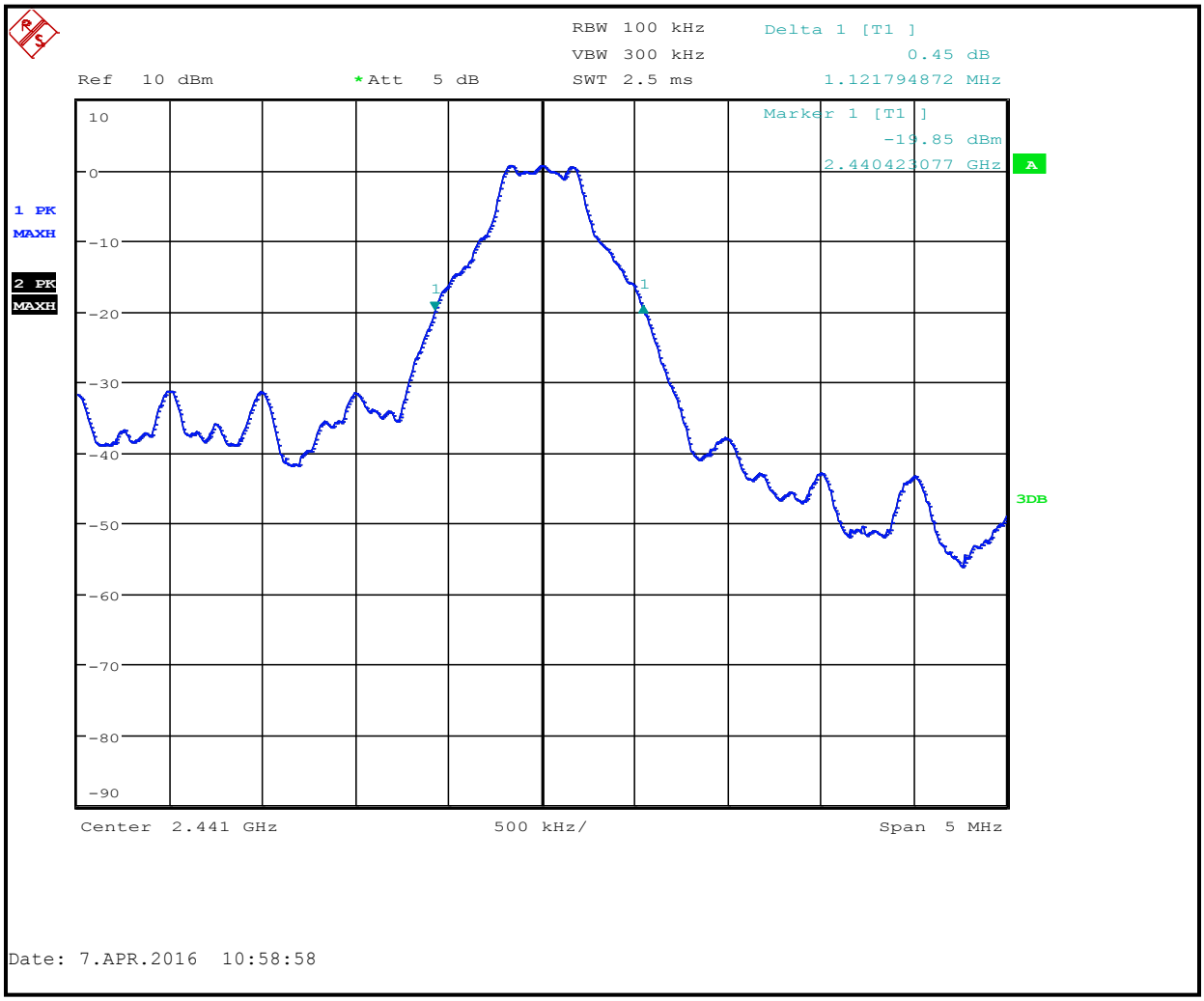
Frequency	20 dB Bandwidth (MHz)
2402	1.13
2441	1.12
2480	1.14

6.3 20 dB Bandwidth Plots

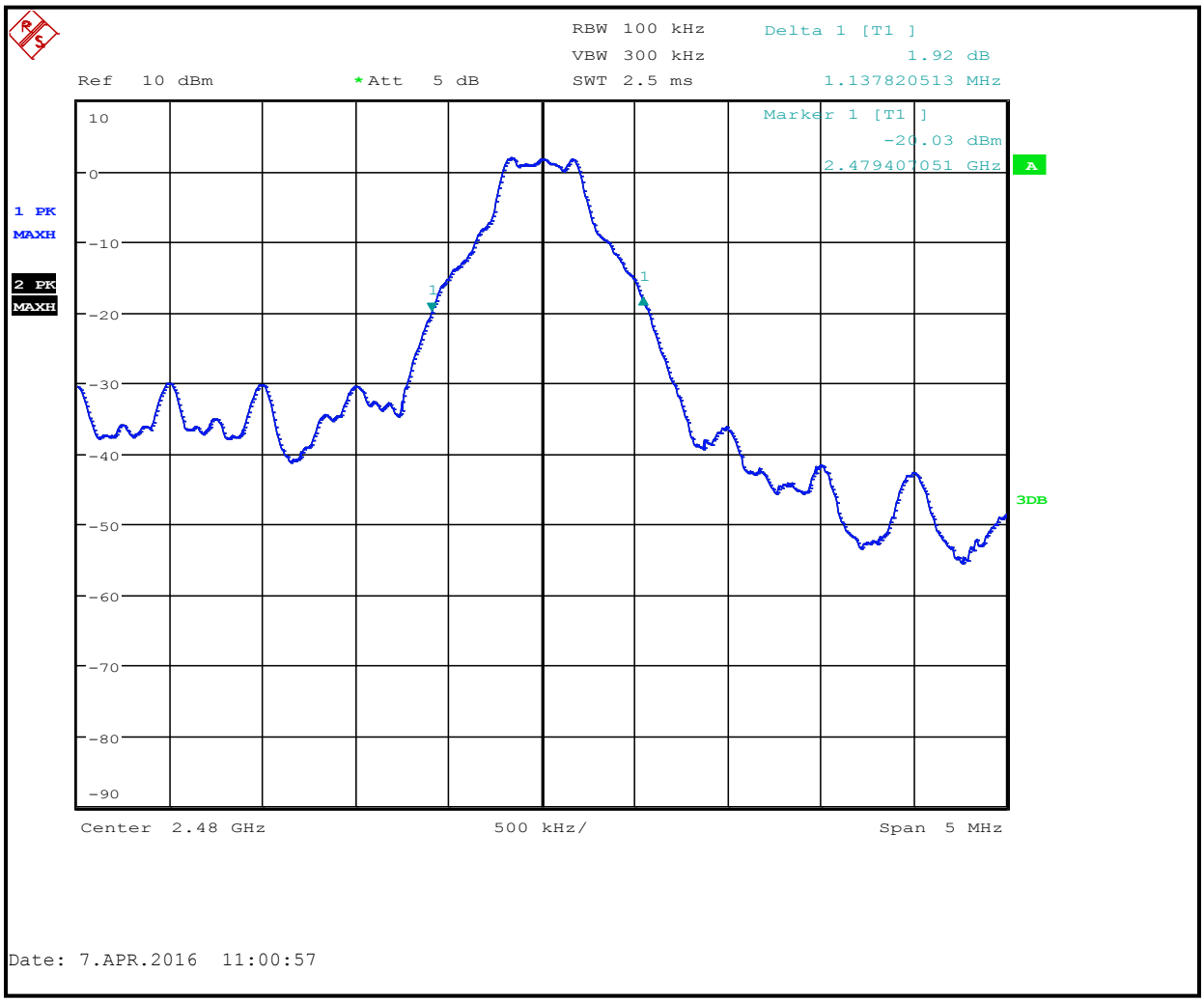
Plot 6-1: 20 dB Bandwidth - 2402 MHz



Plot 6-2: 20 dB Bandwidth - 2441 MHz



Plot 6-3: 20 dB Bandwidth - 2480 MHz



Frequency uncertainty: 1×10^{-6} Hz. This measurement uncertainty is an expanded uncertainty for 95% confidence level received with a coverage factor k=2.

Test Personnel:

Dan Baltzell	Daniel W. Baltzell	April 7, 2016
Test Engineer	Signature	Date of Test

7 Carrier Frequency Separation – FCC 15.247(a)(1); IC RSS-247 5.1(2)

7.1 Carrier Frequency Separation Test Procedure

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater.

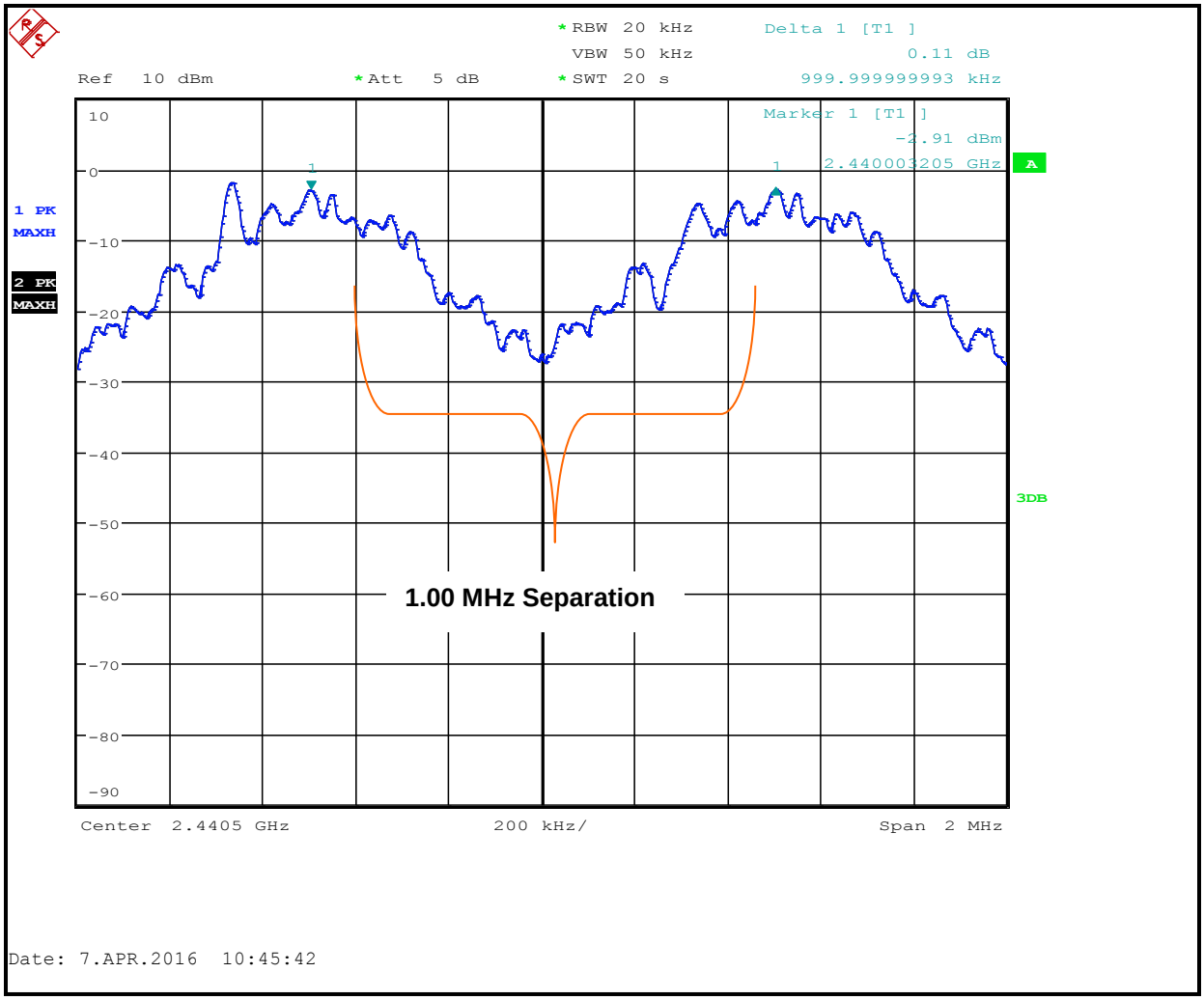
Measured frequency separation = 1.00 MHz

Table 7-1: Carrier Frequency Separation Test Equipment

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due Date
901581	Rohde & Schwarz	FSU	Spectrum Analyzer	1166.1660.50	3/22/18

7.2 Carrier Frequency Separation Test Data

Plot 7-1: Carrier Frequency Separation



Frequency uncertainty: 1×10^{-6} Hz. This measurement uncertainty is an expanded uncertainty for 95% confidence level received with a coverage factor k=2.

Test Personnel:

Dan Baltzell		April 7, 2016
Test Engineer	Signature	Date of Test

8 Hopping Characteristics – FCC 15.247(a)(1)(iii); IC RSS-247 5.1(4)

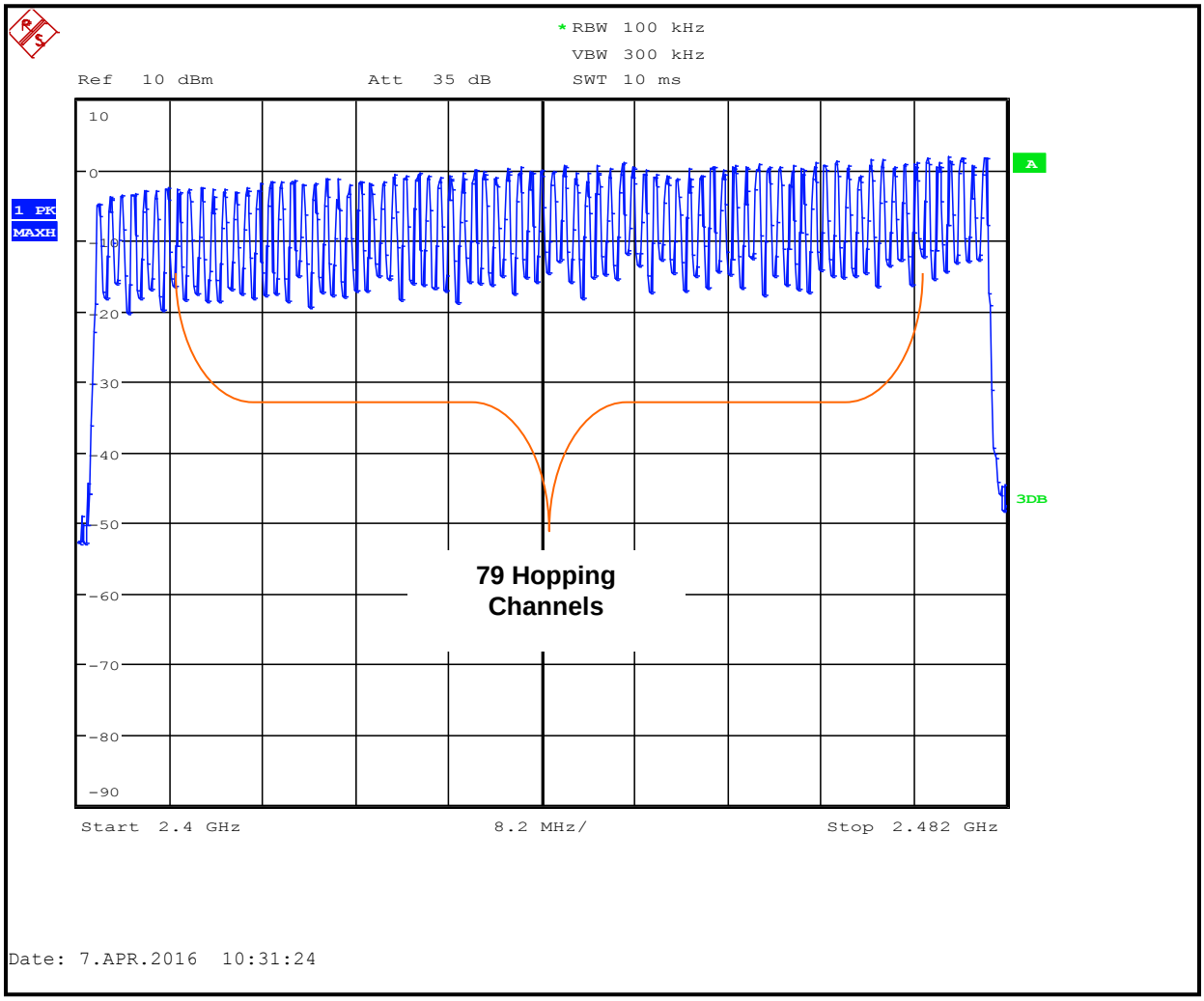
8.1 Hopping Characteristics Test Procedure

Frequency hopping systems in the 2400–2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels is used.

Table 8-1: Hopping Characteristics Test Equipment

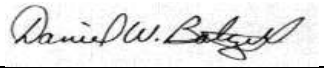
RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due Date
901581	Rohde & Schwarz	FSU	Spectrum Analyzer	1166.1660.50	3/22/18

Plot 8-1: Number of Hopping Frequencies



Frequency uncertainty: 1×10^{-6} Hz. This measurement uncertainty is an expanded uncertainty for 95% confidence level received with a coverage factor k=2.

Test Personnel:

Dan Baltzell		April 7, 2016
Test Engineer	Signature	Date of Test

8.2 Average Time of Occupancy

The spectrum analyzer gate function was used to determine the pulse width using the gate start and stop times, with a zero span to capture a pulse from the device under test. The delta response was used to measure the dwell time for this pulse. The sweep was then set to single sweep for 3.16 s (it was not possible to get a suitable display with a sweep time of 31.6 s).

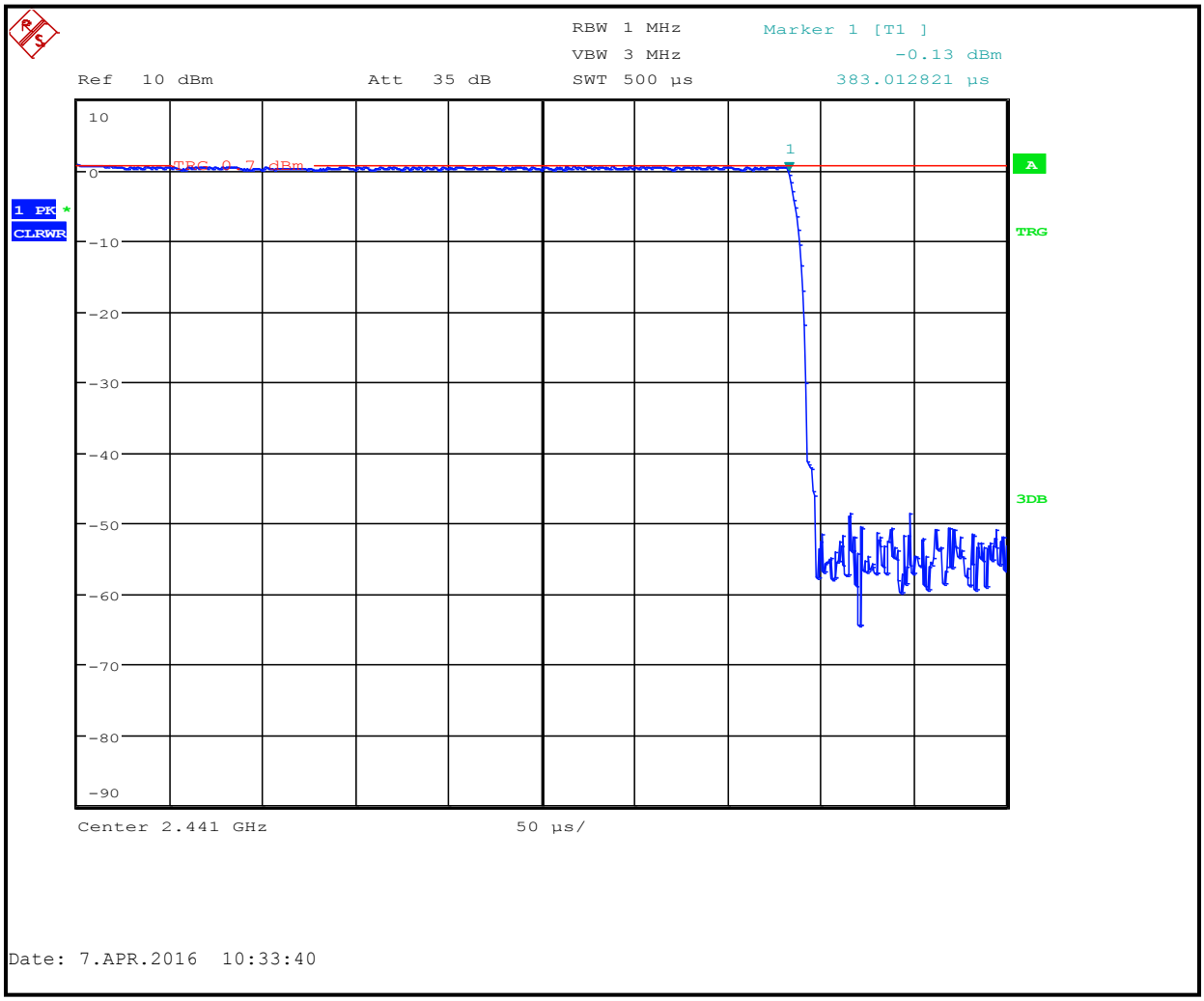
The number of pulses in 3.16 s was 33. Therefore, the number of pulses in a period of 0.4 seconds x 79 hopping channels (31.6 s) would be 330 pulses.

The average time of occupancy in the above period (31.6 s) is equal to 330 pulses x 0.383 ms = 126 ms, which meets the limit as defined by 15.247(a)(1)(iii) of 0.4 seconds.

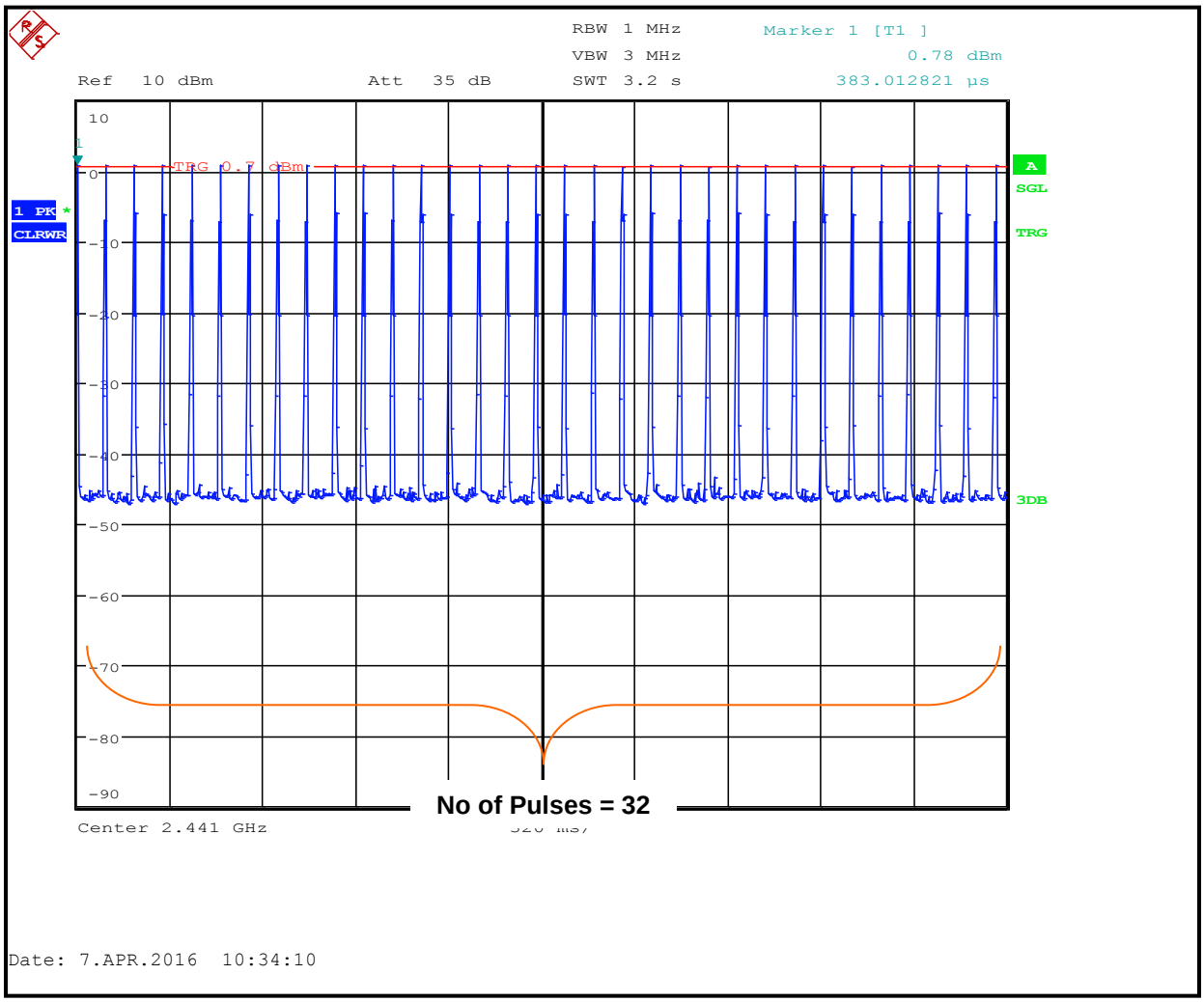
Table 8-2: Average Time of Occupancy Test Equipment

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due Date
901581	Rohde & Schwarz	FSU	Spectrum Analyzer	1166.1660.50	3/22/18

Plot 8-2: Time of Occupancy (Dwell Time)



Plot 8-3: Time of Occupancy (Dwell Time 3.2 Second Sweep)



Number of pulses in 3.16 seconds: 33

Therefore, the number of pulses in the period of 0.4 s x 79 channels would be 330 pulses.

Frequency uncertainty: 1×10^{-6} Hz. This measurement uncertainty is an expanded uncertainty for 95% confidence level received with a coverage factor k=2.

Test Personnel:

Dan Baltzell	Daniel W. Baltzell	April 7, 2016
Test Engineer	Signature	Date of Test

9 Conducted Emissions Measurement Limits – FCC 15.207; RSS-Gen 8.8

Device is battery operated using a non-rechargeable alkaline battery. AC line conducted measurements are not required.

10 Radiated Emissions – FCC 15.209; RSS-247 5.5; RSS-Gen 8.9, 8.10

10.1 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.

10.2 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 (24.8 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 the average detector function 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 10-1: Radiated Emissions Test Equipment

RTL Asset #	Manufacturer	Model	Part Type	Serial Number	Calibration Due Date
900151	Rohde and Schwarz	HFH2-Z2	Loop Antenna (9 kHz - 30 MHz)	827525/019	3/4/17
900878	Rhein Tech Laboratories, Inc.	AM3-1197-0005	3 meter antenna mast, polarizing	Outdoor Range 1	Not Required
901592	Insulated Wire, Inc.	KPS-1503-2400-KPS-09302008	RF cable, 20'	NA	9/4/16
901242	Rhein Tech Laboratories, Inc.	WRT-000-0003	Wood rotating table	N/A	Not Required
900772	EMCO	3161-02	Horn Antenna (2 - 4 GHz)	9804-1044	4/9/18
900321	EMCO	3161-03	Horn Antennas (4 - 8,2 GHz)	9508-1020	4/9/18
900323	EMCO	3160-7	Horn Antennas (8,2 - 12,4 GHz)	9605-1054	4/9/18
900356	EMCO	3160-08	Horn Antenna (12.4 - 18 GHz)	9607-1044	4/9/18
901218	EMCO	3160-09	Horn Antenna (18 - 26.5 GHz)	960281-003	4/14/18
900791	Chase	CBL6111B	Bilog Antenna (30 MHz – 2000 MHz)	N/A	6/11/17
901581	Rohde & Schwarz	FSU	Spectrum Analyzer	1166.1660.50	3/22/18

10.3 Radiated Emissions Test Results

10.3.1 Radiated Emissions Harmonics/Spurious Test Data – Fixed Frequency

Table 10-2: Radiated Emissions Harmonics/Spurious - 2402 MHz Peak

Emission Frequency (MHz)	Peak Analyzer Reading (dBuV) (1 MHz RBW/ VBW)	Site Correction Factor (dB/m)	Peak Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)
4804.0	20.4	33.5	53.9	74.0	-20.1
12010.0	6.8	44.0	50.8	74.0	-23.2
14412.0	5.1	47.9	53.0	74.0	-21.0

Table 10-3: Radiated Emissions Harmonics/Spurious - 2402 MHz Average

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)
4804.0	17.2	33.5	50.7	54.0	-3.3
12010.0	-7.9	44.0	36.1	54.0	-17.9
14412.0	-6.7	47.9	41.2	54.0	-12.8

Table 10-4: Radiated Emissions Harmonics/Spurious - 2441 MHz Peak

Emission Frequency (MHz)	Peak Analyzer Reading (dBuV) (1 MHz RBW/ VBW)	Site Correction Factor (dB/m)	Peak Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)
4882.0	22.5	33.6	56.1	74.0	-17.9
7323.0	10.9	35.7	46.6	74.0	-27.4
12205.0	9.6	44.0	53.6	74.0	-20.4
14646.0	5.7	48.1	53.8	74.0	-20.2

Table 10-5: Radiated Emissions Harmonics/Spurious - 2441 MHz Average

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)
4882.0	17.9	33.6	51.5	54.0	-2.5
7323.0	5.5	35.7	41.2	54.0	-12.8
12205.0	-7.4	44.0	36.6	54.0	-17.4
14646.0	-5.9	48.1	42.2	54.0	-11.8

Table 10-6: Radiated Emissions Harmonics/Spurious - 2480 MHz Peak

Emission Frequency (MHz)	Peak Analyzer Reading (dBuV) (1 MHz RBW/ VBW)	Site Correction Factor (dB/m)	Peak Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)
4960.0	24.9	33.8	58.7	74.0	-15.3
7440.0	21.6	35.8	57.4	74.0	-16.6
12400.0	4.1	44.0	48.1	74.0	-25.9
14880.0	5.0	48.2	53.2	74.0	-20.8
17360.0	4.1	49.2	53.3	74.0	-20.7
19840.0	4.4	53.2	57.6	74.0	-16.4

Table 10-7: Radiated Emissions Harmonics/Spurious - 2480 MHz Average

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)
4960.0	10.1	33.8	43.9	54.0	-10.1
7440.0	10.2	35.8	46.0	54.0	-8.0
12400.0	-7.3	44.0	36.7	54.0	-17.3
14880.0	-6.4	48.2	41.8	54.0	-12.2
17360.0	-7.1	49.2	42.1	54.0	-11.9
19840.0	-7.7	53.2	45.5	54.0	-8.5

10.3.2 Radiated Emissions Harmonics/Spurious Test Data – Hopping

Table 10-8: Radiated Emissions Harmonics/Spurious - Hopping Mode Peak

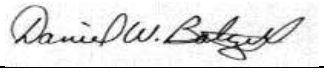
Emission Frequency (MHz)	Peak Analyzer Reading (dBuV) (1 MHz RBW/ VBW)	Site Correction Factor (dB/m)	Peak Emission Level (dBuV/m)	Peak Limit (dBuV/m)	Peak Margin (dB)
4821.234	20.7	33.5	54.2	74.0	-19.8
4863.702	20.9	33.6	54.5	74.0	-19.5
7224.92	-29.0	35.7	6.7	74.0	-67.3
7288.622	6.9	35.7	42.6	74.0	-31.4
7416.026	8.3	35.8	44.1	74.0	-29.9

Table 10-9: Radiated Emissions Harmonics/Spurious - Hopping Mode Average

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)
4821.234	11.8	33.5	45.3	54.0	-8.7
4863.702	11.6	33.6	45.2	54.0	-8.8
7224.92	-1.6	35.7	34.1	54.0	-19.9
7288.622	-0.2	35.7	35.5	54.0	-18.5
7416.026	-1.2	35.8	34.6	54.0	-19.4

Measurement uncertainty: 4.7 dB. This measurement uncertainty is an expanded uncertainty for 95% confidence level received with a coverage factor k=2.

Test Personnel:

Daniel W. Baltzell		April 8, 2016
Test Engineer	Signature	Date of Test

11 Conclusion

The data in this measurement report shows that the EUT as tested, Vocollect by Honeywell Model SRX-SL, FCC ID: MQO-HBT1100, IC: 2570A-HBT1100, complies with all the applicable requirements of Parts 2 and 15 of the FCC Rules and Regulations, and Industry Canada RSS-247 and RSS-Gen.