



FCC PART 15, SUBPART C
ISED C RSS-247, ISSUE 2, FEBRUARY 2017

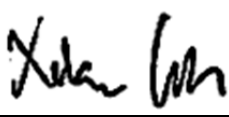
TEST REPORT

For

Trimble Inc.

935 Stewart Drive,
Sunnyvale, CA 94085, USA

FCC ID: JUP-WL18DBMOD
IC: 1756A-WL18DBMOD

Report Type: CIIPC Report	Product Type: Wi-Fi/BT Module
Prepared By: Xiao Lin Test Engineer	
Report Number: R1707201-CIIPC DSS	
Report Date: 2017-10-10	
Reviewed By: Frank Wang RF Engineer	
Bay Area Compliance Laboratories Corp. 1274 Anvilwood Avenue, Sunnyvale, CA 94089, USA Tel: (408) 732-9162 Fax: (408) 732-9164	

Note: This test report is prepared for the customer shown above and for the device described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. This report **must not** be used by the customer to claim product certification, approval, or endorsement by A2LA*, NIST, or any agency of the Federal Government.

* This report may contain data that are not covered by the A2LA accreditation and are marked with an asterisk “*” (Rev. 12)

TABLE OF CONTENTS

1 General Description.....	4
1.1 General Statements	4
1.2 Objective.....	4
1.3 Agent for the Responsible Party	4
1.4 Responsible Party	4
1.5 Related Submittal(s)/Grant(s)	4
1.6 Product Description for Equipment Under Test (EUT)	5
1.7 Test Methodology	5
1.8 Measurement Uncertainty	5
1.9 Test Facility Registrations	6
1.11 Test Facility Accreditations	6
2 System Test Configuration.....	9
2.1 Justification	9
2.2 EUT Exercise Software.....	9
2.3 Equipment Modifications.....	9
2.4 Local Support Equipment	9
2.5 Interface Ports and Cabling.....	9
3 Summary of Test Results	10
4 FCC §15.209, §15.247(d) & ISED RSS-247 §5.5, RSS-Gen §8.9, §8.10 - Spurious Radiated Emissions.....	11
4.1 Applicable Standards	11
4.2 Test Setup	13
4.3 Test Procedure	13
4.4 Corrected Amplitude and Margin Calculation	13
4.5 Test Equipment List and Details.....	14
4.6 Test Environmental Conditions	14
4.7 Summary of Test Results	15
4.8 Radiated Emissions Test Results	16
6 Appendixes	30

DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	R1707201-CIIPC DSS	Original Report	2017-10-05
1	R1707201-CIIPC DSS	Fixed Reviewer's comments	2017-10-10

1 General Description

1.1 General Statements

Bay area Compliance Laboratory Corp. [BACL] hereby makes the following Statements:

- The Unit(s) described in this Test Report were received at BACL's facilities on 19 April 2017 and was in working condition upon arrival. Testing was performed on the Unit(s) described in this Test Report from 19 April 2017 to 19 September 2017.
- The Test Results reported herein apply only to the Unit(s) actually tested, and to substantially identical Units.
- This Test Report must not be used to claim product endorsement by A2LA, or any agency of the U.S. Government, or by any other foreign government.
- This Test Report is the property of BACL, and shall not be reproduced, except in full, without prior written approval of BACL.

1.2 Objective

This CIIPC report is prepared on behalf of *Trimble Inc.*, in accordance with Part 2, Subpart J, Part 15, Subparts B and C and ISSED RSS-247 Issue 2, February 2017.

This project is a Permissive Change II submission for the purpose of changing BT module to add 2 new antennas.

1.3 Agent for the Responsible Party

None

1.4 Responsible Party

Company Name:	Trimble, Inc.
Contact:	Tony Phan
Street Address:	935 Stewart Drive
City/State/Zip:	Sunnyvale, CA 94085.
Country:	USA
Telephone:	+1(408)-481-8491
E-mail:	tony_phan@trimble.com
Website:	http://www.trimble.com/

1.5 Related Submittal(s)/Grant(s)

FCC Part 15, Subpart C, Equipment DTS with FCC ID: JUP-WL18DBMOD, ISSED: 1756A-WL18DBMOD

1.6 Product Description for Equipment Under Test (EUT)

This test and measurement report was prepared on behalf of *Trimble Inc.* and their product: *Wi-Fi/BT module, Model: WL1837MOD FCC ID: JUP-WL18DBMOD, ISED: 1756A-WL18DBMOD* or the “EUT” as referred to in this report. The EUT is a Wi-Fi/BT Module.

Note: Tested product: WL1837MOD.

1.7 Test Methodology

All measurements contained in this report were conducted in accordance with ANSI C63.10-2013 and TIA-603D, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices and Land Mobile FM or PM Communications Equipment Measurement and Performance Standards.

1.8 Measurement Uncertainty

All measurements involve certain levels of uncertainties, especially in the field of EMC. The factors contributing to uncertainties are spectrum analyzer, cable loss, antenna factor calibration, antenna directivity, antenna factor variation with height, antenna phase center variation, antenna factor frequency interpolation, measurement distance variation, site imperfections, mismatch (average), and system repeatability.

Parameter	Measurement uncertainty
Occupied Channel Bandwidth	±5 %
RF output power, conducted	±1.48 dB
Unwanted Emissions, conducted	±1.57 dB
All emissions, radiated	±4.0 dB
AC power line Conducted Emission	±2.0 dB
Temperature	±2 °C
Humidity	±5 %
DC and low frequency voltages	±1 %
Time	±2 %
Duty Cycle	±3 %

1.9 Test Facility Registrations

BACLs test facilities that are used to perform Radiated and Conducted Emissions tests are currently recognized by the Federal Communications Commission as Accredited with NIST Designation Number US1129.

BACL's test facilities that are used to perform Radiated and Conducted Emissions tests are currently registered with Industry Canada under Registration Numbers: 3062A-1, 3062A-2, and 3062A-3.

BACL is a Chinese Taipei Bureau of Standards Metrology and Inspection (BSMI) validated Conformity Assessment Body (CAB), under Appendix B, Phase I Procedures of the APEC Mutual Recognition Arrangement (MRA). BACL's BSMI Lab Code Number is: SL2-IN-E-1002R

BACL's test facilities that are used to perform AC Line Conducted Emissions, Telecommunications Line Conducted Emissions, Radiated Emissions from 30 MHz to 1 GHz, and Radiated Emissions from 1 GHz to 6 GHz are currently recognized as Accredited in accordance with the Voluntary Control Council for Interference [VCCI] Article 15 procedures under Registration Number A-0027.

1.11 Test Facility Accreditations

Bay Area Compliance Laboratories Corp. (BACL) is:

A- An independent, 3rd-Party, Commercial Test Laboratory accredited to ISO/IEC 17025:2005 by A2LA (Test Laboratory Accreditation Certificate Number 3279.02), in the fields of: Electromagnetic Compatibility and Telecommunications. Unless noted by an Asterisk (*) in the Compliance Matrix (See Section 3 of this Test Report), BACL's ISO/IEC 17025:2005 Scope of Accreditation includes all of the Test Method Standards and/or the Product Family Standards detailed in this Test Report..

BACL's ISO/IEC 17025:2005 Scope of Accreditation includes a comprehensive suite of EMC Emissions, EMC Immunity, Radio, RF Exposure, Safety and wireline Telecommunications test methods applicable to a wide range of product categories. These product categories include Central Office Telecommunications Equipment [including NEBS - Network Equipment Building Systems], Unlicensed and Licensed Wireless and RF devices, Information Technology Equipment (ITE); Telecommunications Terminal Equipment (TTE); Medical Electrical Equipment; Industrial, Scientific and Medical Test Equipment; Professional Audio and Video Equipment; Industrial and Scientific Instruments and Laboratory Apparatus; Cable Distribution Systems, and Energy Efficient Lighting.

B- A Product Certification Body accredited to ISO/IEC 17065:2012 by A2LA (Product Certification Body Accreditation Certificate Number 3279.03) to certify

- For the USA (Federal Communications Commission):

- 1- All Unlicensed radio frequency devices within FCC Scopes A1, A2, A3, and A4;
- 2- All Licensed radio frequency devices within FCC Scopes B1, B2, B3, and B4;
- 3- All Telephone Terminal Equipment within FCC Scope C.

- For the Canada (Industry Canada):

- 1- All Scope 1-Licence-Exempt Radio Frequency Devices;
- 2- All Scope 2-Licensed Personal Mobile Radio Services;
- 3- All Scope 3-Licensed General Mobile & Fixed Radio Services;
- 4- All Scope 4-Licensed Maritime & Aviation Radio Services;
- 5- All Scope 5-Licensed Fixed Microwave Radio Services
- 6- All Broadcasting Technical Standards (BETS) in the Category I Equipment Standards List.

- For Singapore (Info-Communications Development Authority (IDA)):

- 1 All Line Terminal Equipment: All Technical Specifications for Line Terminal Equipment – Table 1 of IDA MRA Recognition Scheme: 2011, Annex 2
 2. All Radio-Communication Equipment: All Technical Specifications for Radio-Communication Equipment – Table 2 of IDA MRA Recognition Scheme: 2011, Annex 2
- For the Hong Kong Special Administrative Region:
- 1 All Radio Equipment, per KHCA 10XX-series Specifications;
 - 2 All GMDSS Marine Radio Equipment, per HKCA 12XX-series Specifications;
 - 3 All Fixed Network Equipment, per HKCA 20XX-series Specifications.
- For Japan:
- 1 MIC Telecommunication Business Law (Terminal Equipment):
 - All Scope A1 - Terminal Equipment for the Purpose of Calls;
 - All Scope A2 - Other Terminal Equipment
 - 2 Radio Law (Radio Equipment):
 - All Scope B1 - Specified Radio Equipment specified in Article 38-2-2, paragraph 1, item 1 of the Radio Law
 - All Scope B2 - Specified Radio Equipment specified in Article 38-2-2, paragraph 1, item 2 of the Radio Law
 - All Scope B3 - Specified Radio Equipment specified in Article 38-2-2, paragraph 1, item 3 of the Radio Law

C- A Product Certification Body accredited to ISO/IEC 17065:2012 by A2LA (Product Certification Body Accreditation Certificate Number 3279.01) to certify Products to USA's Environmental Protection Agency (EPA) ENERGY STAR Product Specifications for:

- 1 Electronics and Office Equipment:
 - for Telephony (ver. 3.0)
 - for Audio/Video (ver. 3.0)
 - for Battery Charging Systems (ver. 1.1)
 - for Set-top Boxes & Cable Boxes (ver. 4.1)
 - for Televisions (ver. 6.1)
 - for Computers (ver. 6.0)
 - for Displays (ver. 6.0)
 - for Imaging Equipment (ver. 2.0)
 - for Computer Servers (ver. 2.0)
- 2 Commercial Food Service Equipment
 - for Commercial Dishwashers (ver. 2.0)
 - for Commercial Ice Machines (ver. 2.0)
 - for Commercial Ovens (ver. 2.1)
 - for Commercial Refrigerators and Freezers
- 3 Lighting Products
 - For Decorative Light Strings (ver. 1.5)
 - For Luminaires (including sub-components) and Lamps (ver. 1.2)
 - For Compact Fluorescent Lamps (CFLs) (ver. 4.3)
 - For Integral LED Lamps (ver. 1.4)
- 4 Heating, Ventilation, and AC Products
 - for Residential Ceiling Fans (ver. 3.0)
 - for Residential Ventilating Fans (ver. 3.2)
- 5 Other
 - For Water Coolers (ver. 3.0)

D- A NIST Designated Phase-I and Phase-II Conformity Assessment Body (CAB) for the following economies and regulatory authorities under the terms of the stated MRAs/Treaties:

- Australia: ACMA (Australian Communication and Media Authority) – APEC Tel MRA -Phase I;
- Canada: (Industry Canada - IC) Foreign Certification Body – FCB – APEC Tel MRA -Phase I & Phase II;
- Chinese Taipei (Republic of China – Taiwan):
 - o BSMI (Bureau of Standards, Metrology and Inspection) APEC Tel MRA -Phase I;
 - o NCC (National Communications Commission) APEC Tel MRA -Phase I;
- European Union:
 - o EMC Directive 2014/30/EU US-EU EMC & Telecom MRA CAB (NB)
 - o Radio & Teleterminal Equipment (R&TTE) Directive 1995/5/EC US -EU EMC & Telecom MRA CAB (NB)
 - o Radio Equipment (RE) Directive 2014/53/EU US-EU EMC & Telecom MRA CAB (NB)
 - o Low Voltage Directive (LVD) 2014/35/EU
- Hong Kong Special Administrative Region: (Office of the Telecommunications Authority – OFTA) APEC Tel MRA -Phase I & Phase II
- Israel – US-Israel MRA Phase I
- Republic of Korea (Ministry of Communications - Radio Research Laboratory) APEC Tel MRA -Phase I
- Singapore: (Infocomm Development Authority - IDA) APEC Tel MRA -Phase I & Phase II;
- Japan: VCCI - Voluntary Control Council for Interference US-Japan Telecom Treaty VCCI Side Letter-
- USA:
 - o ENERGY STAR Recognized Test Laboratory – US EPA
 - o Telecommunications Certification Body (TCB) – US FCC
 - o Nationally Recognized Test Laboratory (NRTL) – US OSHA
- Vietnam: APEC Tel MRA -Phase I;

2 System Test Configuration

2.1 Justification

The EUT was configured for testing according to ANSI C63.10-2013 and TIA-603D.

The EUT was tested in a testing mode to represent worst-case results during the final qualification test.

2.2 EUT Exercise Software

The EUT and support equipment were pre-installed with exercising software by *Trimble Inc.* The exercising software was installed on the laptop. CSGSuite, WebGui and Putty were used for configuring Wi-Fi/Bluetooth Module and UHF Module operations.

The software used was provided by *Trimble Navigation Limited*, the software complies with the standard requirements being tested against.

2.3 Equipment Modifications

N/A

2.4 Local Support Equipment

Manufacturer	Description	Model	Serial Number
Dell	Laptop	E6410	28J04Q1

2.5 Interface Ports and Cabling

Cable Descriptions	Length (m)	From	To
DC power/data	2	EUT	AC/DC, PC

3 Summary of Test Results

Results reported relate only to the product tested.

FCC & ISSED Rules	Description of Test	Results
FCC §2.1053, §15.205, §15.209, §15.247(d) ISED RSS-247 §5.5 ISED RSS-Gen §8.9, §8.10	Radiated Spurious Emissions	Compliant

4 FCC §15.209, §15.247(d) & ISEDC RSS-247 §5.5, RSS-Gen §8.9, §8.10 - Spurious Radiated Emissions

4.1 Applicable Standards

As per FCC §15.35(d): Unless otherwise specified, on any frequency or frequencies above 1000 MHz, the radiated emission limits are based on the use of measurement instrumentation employing an average detector function. Unless otherwise specified, measurements above 1000 MHz shall be performed using a minimum resolution bandwidth of 1 MHz.

As Per FCC §15.205(a) and RSS-Gen except as show in paragraph (d) of this section, only spurious emissions are permitted in any of the frequency bands listed below:

MHz	MHz	MHz	GHz
0.090 – 0.110	16.42 – 16.423	960 – 1240	4.5 – 5.15
0.495 – 0.505	16.69475 – 16.69525	1300 – 1427	5.35 – 5.46
2.1735 – 2.1905	25.5 – 25.67	1435 – 1626.5	7.25 – 7.75
4.125 – 4.128	37.5 – 38.25	1645.5 – 1646.5	8.025 – 8.5
4.17725 – 4.17775	73 – 74.6	1660 – 1710	9.0 – 9.2
4.20725 – 4.20775	74.8 – 75.2	1718.8 – 1722.2	9.3 – 9.5
6.215 – 6.218	108 – 121.94	2200 – 2300	10.6 – 12.7
6.26775 – 6.26825	123 – 138	2310 – 2390	13.25 – 13.4
6.31175 – 6.31225	149.9 – 150.05	2483.5 – 2500	14.47 – 14.5
8.291 – 8.294	156.52475 – 156.52525	2690 – 2900	15.35 – 16.2
8.362 – 8.366	156.7 – 156.9	3260 – 3267	17.7 – 21.4
8.37625 – 8.38675	162.0125 – 167.17	3.332 – 3.339	22.01 – 23.12
8.41425 – 8.41475	167.72 – 173.2	3.3458 – 3.358	23.6 – 24.0
12.29 – 12.293	240 – 285	3.600 – 4.400	31.2 – 31.8
12.51975 – 12.52025	322 – 335.4		36.43 – 36.5
12.57675 – 12.57725	399.9 – 410		Above 38.6
13.36 – 13.41	608 – 614		

As per FCC §15.209(a): Except as provided elsewhere in this Subpart, the emissions from an intentional radiator shall not exceed the field strength levels specified in the following table

Frequency (MHz)	Field Strength (micro volts/meter)	Measurement Distance (meters)
0.009 - 0.490	2400/F(kHz)	300
0.490 - 1.705	24000/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

** Except as provided in paragraph (g), fundamental emissions from intentional radiators operating under this Section shall not be located in the frequency bands 54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz.

However, operation within these frequency bands is permitted under other sections of this Part, e.g., Sections 15.231 and 15.241.

As per FCC §15.247 (d), 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 this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

As per ISED RSS-Gen 8.9,

Except when the requirements applicable to a given device state otherwise, emissions from licence-exempt transmitters shall comply with the field strength limits shown in Table 4 or Table 5 below. Additionally, the level of any transmitter emission shall not exceed the level of the transmitter's fundamental emission.

Table 4 – General Field Strength Limits for Licence-Exempt Transmitters at Frequencies Above 30 MHz

Frequency (MHz)	Field Strength ($\mu\text{V/m}$ at 3 metres)
30-88	100
88-216	150
216-960	200
Above 960*	500

* Unless otherwise specified, for all frequencies greater than 1 GHz, the radiated emission limits for license-exempt radio apparatus stated in applicable RSSs (including RSS-Gen) are based on measurements using a linear average detector function having a minimum resolution bandwidth of 1 MHz. If an average limit is specified for the EUT, then the peak emission shall also be measured with instrumentation properly adjusted for such factors as pulse desensitization to ensure the peak emission is less than 20 dB above the average limit.

Note: Transmitting devices are not permitted in restricted frequency bands unless stated otherwise in the specific RSS.

As per ISED RSS-247 §5.5, in any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced 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 that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under Section 5.4(4), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in RSS-Gen is not required.

4.2 Test Setup

The radiated emissions tests were performed in the 5-meter Chamber, using the setup in accordance with ANSI C63.10-2013. The specification used was the FCC 15 Subpart C and ISERC RSS-247 limits.

The spacing between the peripherals was 10 centimeters.

External I/O cables were draped along the edge of the test table and bundle when necessary.

4.3 Test Procedure

For the radiated emissions test, the EUT host, and all support equipment power cords were connected to the AC floor outlet.

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

The EUT was set 3 meter away from the testing antenna, which was varied from 1-4 meter, and the EUT was placed on a turntable, which was 0.8 meter and 1.5 meter above the ground plane for below and above 1000 MHz measurements, the table shall be rotated for 360 degrees to find out the highest emission. The receiving antenna's polarity should be changed between horizontal and vertical.

The spectrum analyzer or receiver was set as:

Below 1000 MHz:

$$\text{RBW} = 100 \text{ kHz} / \text{VBW} = 300 \text{ kHz} / \text{Sweep} = \text{Auto}$$

Above 1000 MHz:

(1) Peak: $\text{RBW} = 1\text{MHz} / \text{VBW} = 1\text{MHz} / \text{Sweep} = \text{Auto}$

(2) Average: $\text{RBW} = 1\text{MHz} / \text{VBW} = 10\text{Hz} / \text{Sweep} = \text{Auto}$

4.4 Corrected Amplitude and Margin Calculation

The Corrected Amplitude (CA) is calculated by adding the Antenna Factor (AF), the Cable Loss (CL), the Attenuator Factor (Atten) and subtracting the Amplifier Gain (Ga) to indicated Amplitude (Ai) reading. The basic equation is as follows:

$$\text{CA} = \text{Ai} + \text{AF} + \text{CL} + \text{Atten} - \text{Ga}$$

For example, a corrected amplitude of 40.3 dBuV/m = Indicated Reading (32.5 dBuV) + Antenna Factor (+23.5dB) + Cable Loss (3.7 dB) + Attenuator (10 dB) - Amplifier Gain (29.4 dB)

The “**Margin**” column of the following data tables indicates the degree of compliance within the applicable limit. For example, a margin of -7 dB means the emission is 7 dB below the maximum limit. The equation for margin calculation is as follows:

$$\text{Margin} = \text{Corrected Amplitude} - \text{Limit}$$

4.5 Test Equipment List and Details

Manufacturer	Description	Model No.	Serial No.	Calibration Date	Calibration Interval
Rohde and Schwarz	Receiver, EMI Test	ESCI 1166.5950K03	100338	2016-02-04	2 years
Agilent	Analyzer, Spectrum	E4440A	US45303156	2017-02-24	1 year
Sunol Sciences	System Controller	SC99V	011003-1	N/R	N/A
Sunol Sciences	Antenna, Biconi-Log	JB3	A020106-2	2015-07-11	27 Months
EMCO	Antenna, Horn	3115	9511-4627	2016-01-28	2 years
Agilent	Amplifier, Pre	8447D	2944A10187	2017-03-13	1 year
IW	AOBOR Hi frequency Co AX Cable	KPS-1501N-3960-KPS	-	2017-04-27	1 year
-	SMA cable	-	C0002	Each time ¹	N/A
-	N-Type Cable	-	C00012	Each time ¹	N/A
-	N-Type Cable	-	C00014	Each time ¹	N/A
Agilent	Pre-Amplifier	8449B	3008A01978	2016-10-06	1 year
Sunol Sciences	Antenna, Horn	DRH-118	A052704	2017-03-27	2 years
A.R.A.	Antenna, Horn	DRG-118/A	1132	2015-09-21	2 years
Vasona	Test software	V6.0 build 11	10400213	N/R	N/R

Note¹: cable and attenuator included in the test set-up will be checked each time before testing.

Statement of Traceability: *BACL attests that all calibrations have been performed per the A2LA requirements, traceable to NIST.*

4.6 Test Environmental Conditions

Temperature:	20-22 °C
Relative Humidity:	44-50 %
ATM Pressure:	102.5 kPa

The testing was performed by Vincent Licata from 2017-09-18 to 2017-09-19 in 5m chamber 3.

4.7 Summary of Test Results

According to the data hereinafter, the EUT complied with FCC Title 47, Part 15C and ISED RSS-247 standard's radiated emissions limits, and had the worst margin of:

Module is connected to the Patch antenna

Mode: Transmitting			
Margin (dB)	Frequency (MHz)	Polarization (Horizontal/Vertical)	channel
-0.4	2483.5	Horizontal	8DPSK, high channel

Module is connected to the embedded antenna

Mode: Transmitting			
Margin (dB)	Frequency (MHz)	Polarization (Horizontal/Vertical)	channel
-0.32	299.9975	Horizontal	GFSK, low channel

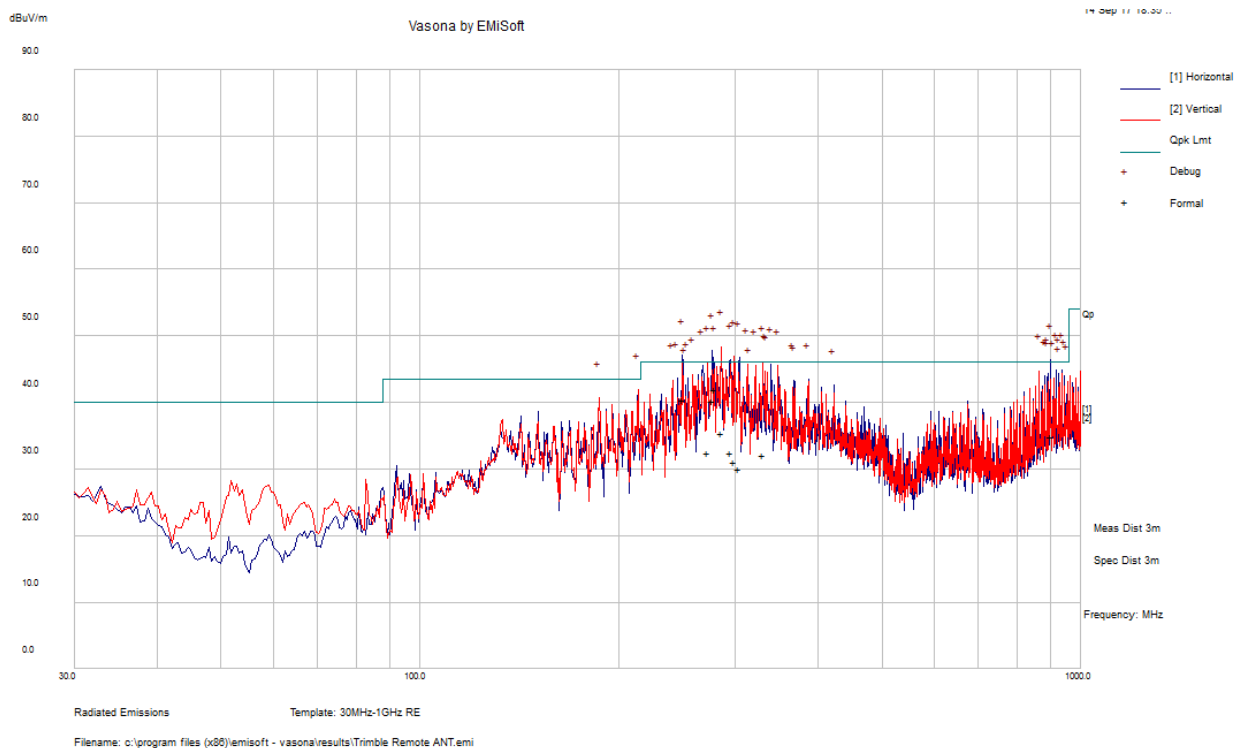
Please refer to the following table and plots for specific test result details

4.8 Radiated Emissions Test Results

1) 30 MHz – 1 GHz Worst Case, Measured at 3 meters

With Patch antenna

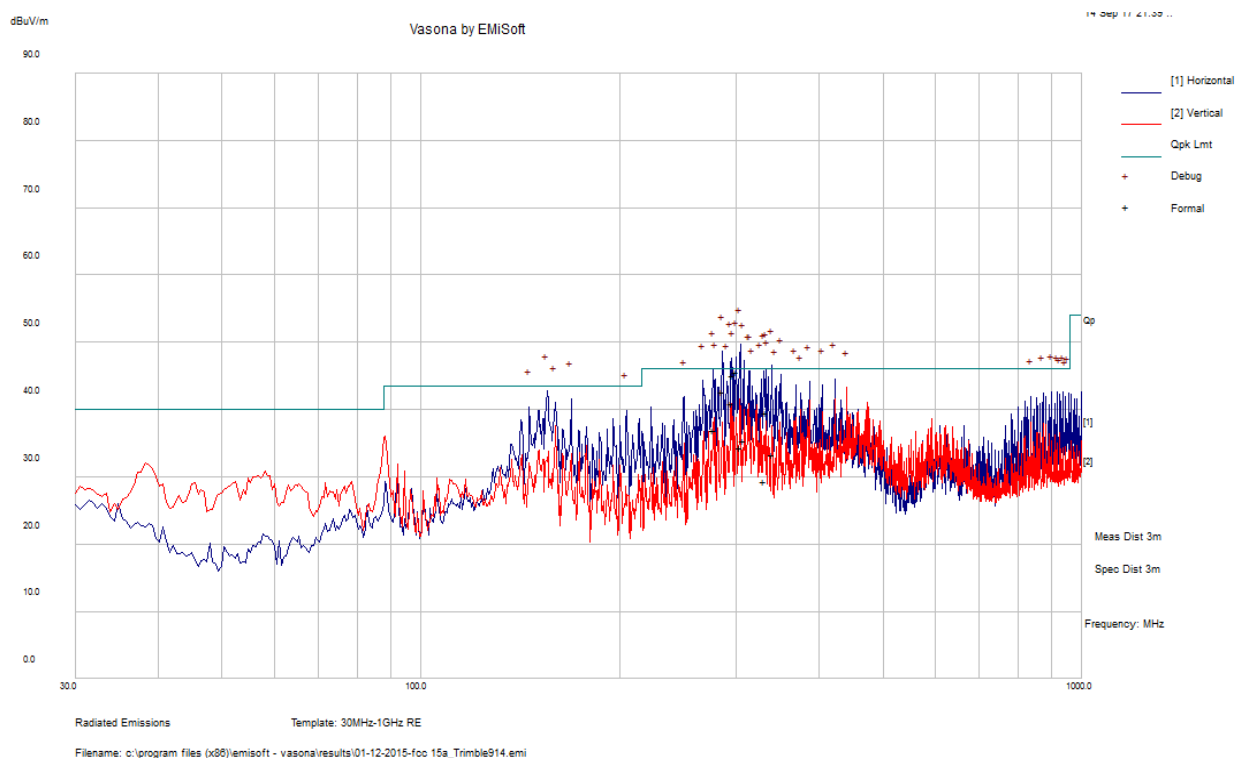
Bluetooth



Frequency (MHz)	Corrected Amplitude (dBμV/m)	Antenna Polarity (H/V)	Antenna Height (cm)	Turntable Azimuth (degrees)	Limit (dBμV/m)	Margin (dB)	Comment
286.2378	35.43	H	108	189	46	-10.57	QP
276.8658	40.21	H	104	105	46	-5.79	QP
250.1073	40.4	H	108	7	46	-5.6	QP
299.109	31.15	H	252	125	46	-14.85	QP
303.92	29.98	V	187	277	46	-16.02	QP
294.9088	32.56	V	111	20	46	-13.44	QP

With Embedded antenna

Bluetooth



Frequency (MHz)	Corrected Amplitude (dBμV/m)	Antenna Polarity (H/V)	Antenna Height (cm)	Turntable Azimuth (degrees)	Limit (dBμV/m)	Margin (dB)	Comment
303.8773	34.43	H	175	359	46	-11.57	QP
285.8833	42.64	H	107	352	46	-3.36	QP
299.9975	45.68	H	108	136	46	-0.32	QP
294.9383	40.88	H	135	168	46	-5.12	QP
308.1008	35.49	H	126	308	46	-10.51	QP
339.3845	33.33	H	317	331	46	-12.67	QP

2) 1–25 GHz Measured at 3 meters

With Patch antenna

GFSK mode

Frequency (MHz)	S.A. Reading (dBμV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre- Amp. (dB)	Cord. Reading (dBμV/m)	FCC/ISED		Comments
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBμV/m)	Margin (dB)	
Low Channel 2402 MHz											
2402	71.21	200	186	H	28.94	6.29	0	106.44	-	-	PK
2402	70.71	200	186	H	28.94	6.29	0	105.94	-	-	AV
2402	64.54	220	242	V	28.93	6.29	0	99.76	-	-	PK
2402	63.97	220	100	V	28.93	6.29	0	99.19	-	-	AV
2390	29.22	0	100	H	28.94	6.24	0	64.40	74.00	-9.60	PK
2390	17.80	0	100	H	28.94	6.24	0	52.98	54.00	-1.02	AV
2390	29.88	0	100	V	28.93	6.24	0	65.05	74.00	-8.95	PK
2390	17.88	0	100	V	28.93	6.24	0	53.04	54.00	-0.96	AV
4804	49.30	173	300	H	32.54	9.35	35.77	55.42	74.00	-18.58	PK
4804	41.56	173	300	H	32.54	9.35	35.77	47.68	54.00	-6.32	AV
4804	49.29	318	100	V	32.56	9.35	35.77	55.43	74.00	-18.57	PK
4804	41.45	318	100	V	32.56	9.35	35.77	47.59	54.00	-6.41	AV
7206	46.53	0	100	H	36.88	12.21	36.38	59.24	74.00	-14.76	PK
7206	34.66	0	100	H	36.88	12.21	36.38	47.37	54.00	-6.63	AV
9608	47.55	0	100	H	37.81	13.82	36.43	62.75	74.00	-11.25	PK
9608	35.35	0	100	H	37.81	13.82	36.43	50.55	54.00	-3.45	AV
Middle Channel 2441 MHz											
2441	69.72	146	100	H	29.19	6.29	0.00	105.20	-	-	PK
2441	69.03	146	100	H	29.19	6.29	0.00	104.51	-	-	AV
2441	63.59	159	100	V	29.19	6.29	0.00	99.07	-	-	PK
2441	60.67	159	100	V	29.19	6.29	0.00	96.15	-	-	AV
4882	50.60	175	258	H	32.70	9.42	36.327	56.38	74.00	-17.62	PK
4882	43.70	175	258	H	32.70	9.42	36.327	49.48	54.00	-4.52	PK
4882	50.20	315	100	V	32.70	9.42	36.327	55.98	74.00	-18.02	PK
4882	43.24	315	100	V	32.70	9.42	36.327	49.02	54.00	-4.98	AV
7323	45.74	0	100	H	36.99	11.68	36.40	58.01	74.00	-15.99	PK
7323	33.35	0	100	H	36.99	11.68	36.40	45.62	54.00	-8.38	AV
9764	46.77	0	100	H	37.82	13.21	36.45	61.34	74.00	-12.66	PK
9764	35.06	0	100	H	37.82	13.21	36.45	49.63	54.00	-4.37	AV

High Channel 2480 MHz											
2480	65.71	120	100	H	29.15	6.35	0.00	101.21	-	-	PK
2480	64.86	120	100	H	29.15	6.35	0.00	100.36	-	-	AV
2480	57.71	153	100	V	29.19	6.35	0.00	93.24	-	-	PK
2480	56.58	153	100	V	29.19	6.35	0.00	92.11	-	-	AV
2483.5	30.20	0	100	H	29.25	6.22	0.00	65.67	74.00	-8.33	PK
2483.5	18.19	0	100	H	29.25	6.22	0.00	53.66	54.00	-0.34	AV
2483.5	30.18	0	100	V	29.18	6.22	0.00	65.58	74.00	-8.42	PK
2483.5	18.10	0	100	V	29.18	6.22	0.00	53.50	54.00	-0.50	AV
4960	51.34	174	250	H	32.70	9.49	36.33	57.20	74.00	-16.80	PK
4960	45.04	174	250	H	32.70	9.49	36.33	50.90	54.00	-3.10	AV
4960	50.58	306	100	V	32.70	9.49	36.33	56.44	74.00	-17.56	PK
4960	43.98	306	100	V	32.70	9.49	36.33	49.84	54.00	-4.16	AV
7440	46.05	0	100	H	37.10	12.30	36.41	59.04	74.00	-14.96	PK
7440	34.12	0	100	H	37.10	12.30	36.41	47.11	54.00	-6.89	AV
9920	46.44	0	100	H	37.98	13.76	36.45	61.73	74.00	-12.27	PK
9920	34.18	0	100	H	37.98	13.76	36.45	49.47	54.00	-4.53	AV

$\pi/4$ -DQPSK mode

Frequency (MHz)	S.A. Reading (dBμV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre- Amp. (dB)	Cord. Reading (dBμV/m)	FCC/ISED		Comments
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBμV/m)	Margin (dB)	
Low Channel 2402 MHz											
2402	69.10	154	120	H	28.94	6.29	0	104.33	-	-	PK
2402	65.52	154	120	H	28.94	6.29	0	100.75	-	-	AV
2402	64.37	138	100	V	28.93	6.29	0	99.59	-	-	PK
2402	60.84	138	100	V	28.93	6.29	0	96.06	-	-	AV
2390	30.03	0	100	H	28.94	6.24	0	65.21	74.00	-8.79	PK
2390	17.83	0	100	H	28.94	6.24	0	53.01	54.00	-0.99	AV
2390	30.28	0	100	V	28.93	6.24	0	65.45	74.00	-8.55	PK
2390	17.86	0	100	V	28.93	6.24	0	53.03	54.00	-0.97	AV
4804	47.69	196	100	H	32.54	9.35	35.77	53.81	74.00	-20.19	PK
4804	38.36	196	100	H	32.54	9.35	35.77	44.48	54.00	-9.52	AV
4804	49.65	315	100	V	32.56	9.35	35.77	55.79	74.00	-18.21	PK
4804	39.59	315	100	V	32.56	9.35	35.77	45.73	54.00	-8.27	AV
7206	46.43	0	100	H	36.88	12.21	36.38	59.14	74.00	-14.86	PK
7206	34.82	0	100	H	36.88	12.21	36.38	47.53	54.00	-6.47	AV
9608	47.51	0	100	H	37.81	13.82	36.43	62.71	74.00	-11.29	PK
9608	35.29	0	100	H	37.81	13.82	36.43	50.49	54.00	-3.51	AV
Middle Channel 2441 MHz											
2441	68.74	158	115	H	29.19	6.29	0.00	104.22	-	-	PK
2441	65.33	158	115	H	29.19	6.29	0.00	100.81	-	-	AV
2441	62.71	142	100	V	29.19	6.29	0.00	98.19	-	-	PK
2441	60.58	142	100	V	29.19	6.29	0.00	96.06	-	-	AV
4882	50.94	175	258	H	32.70	9.42	36.327	56.72	74.00	-17.28	PK
4882	43.01	175	258	H	32.70	9.42	36.327	48.79	54.00	-5.21	PK
4882	50.81	314	100	V	32.70	9.42	36.327	56.59	74.00	-17.41	PK
4882	42.79	314	100	V	32.70	9.42	36.327	48.57	54.00	-5.43	AV
7323	45.32	0	100	H	36.99	11.68	36.40	57.59	74.00	-16.41	PK
7323	33.19	0	100	H	36.99	11.68	36.40	45.46	54.00	-8.54	AV
9764	46.88	0	100	H	37.82	13.21	36.45	61.45	74.00	-12.55	PK
9764	35.04	0	100	H	37.82	13.21	36.45	49.61	54.00	-4.39	AV

High Channel 2480 MHz											
2480	68.96	157	121	H	29.15	6.35	0.00	104.46	-	-	PK
2480	65.50	157	121	H	29.15	6.35	0.00	101.00	-	-	AV
2480	63.07	142	100	V	29.19	6.35	0.00	98.60	-	-	PK
2480	60.83	142	100	V	29.19	6.35	0.00	96.36	-	-	AV
2483.5	29.69	0	100	H	29.25	6.22	0.00	65.16	74.00	-8.84	PK
2483.5	18.10	0	100	H	29.25	6.22	0.00	53.57	54.00	-0.43	AV
2483.5	29.56	0	100	V	29.18	6.22	0.00	64.96	74.00	-9.04	PK
2483.5	18.04	0	100	V	29.18	6.22	0.00	53.44	54.00	-0.56	AV
4960	51.29	172	100	H	32.70	9.49	36.33	57.15	74.00	-16.85	PK
4960	42.97	172	100	H	32.70	9.49	36.33	48.83	54.00	-5.17	AV
4960	50.74	311	100	V	32.70	9.49	36.33	56.60	74.00	-17.40	PK
4960	43.39	311	100	V	32.70	9.49	36.33	49.25	54.00	-4.75	AV
7440	45.89	0	100	H	37.10	12.30	36.41	58.88	74.00	-15.12	PK
7440	34.03	0	100	H	37.10	12.30	36.41	47.02	54.00	-6.98	AV
9920	46.54	0	100	H	37.98	13.76	36.45	61.83	74.00	-12.17	PK
9920	34.11	0	100	H	37.98	13.76	36.45	49.40	54.00	-4.60	AV

8DPSK mode

Frequency (MHz)	S.A. Reading (dBμV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre- Amp. (dB)	Cord. Reading (dBμV/m)	FCC/ISED		Comments
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBμV/m)	Margin (dB)	
Low Channel 2402 MHz											
2402	69.45	155	120	H	28.94	6.29	0	104.68	-	-	PK
2402	65.40	155	120	H	28.94	6.29	0	100.63	-	-	AV
2402	64.94	139	100	V	28.93	6.29	0	100.16	-	-	PK
2402	60.98	139	100	V	28.93	6.29	0	96.20	-	-	AV
2390	29.62	0	100	H	28.94	6.24	0	64.80	74.00	-9.20	PK
2390	17.71	0	100	H	28.94	6.24	0	52.89	54.00	-1.11	AV
2390	29.28	0	100	V	28.93	6.24	0	64.45	74.00	-9.55	PK
2390	17.63	0	100	V	28.93	6.24	0	52.80	54.00	-1.20	AV
4804	49.44	257	100	H	32.54	9.35	35.77	55.56	74.00	-18.44	PK
4804	39.36	257	100	H	32.54	9.35	35.77	45.48	54.00	-8.52	AV
4804	50.17	316	100	V	32.56	9.35	35.77	56.31	74.00	-17.69	PK
4804	40.32	316	100	V	32.56	9.35	35.77	46.46	54.00	-7.54	AV
7206	47.14	0	100	H	36.88	12.21	36.38	59.85	74.00	-14.15	PK
7206	34.90	0	100	H	36.88	12.21	36.38	47.61	54.00	-6.39	AV
9608	47.05	0	100	H	37.81	13.82	36.43	62.25	74.00	-11.75	PK
9608	35.36	0	100	H	37.81	13.82	36.43	50.56	54.00	-3.44	AV
Middle Channel 2441 MHz											
2441	69.26	138	110	H	29.19	6.29	0.00	104.74	-	-	PK
2441	65.18	138	110	H	29.19	6.29	0.00	100.66	-	-	AV
2441	64.72	179	100	V	29.19	6.29	0.00	100.20	-	-	PK
2441	60.66	179	100	V	29.19	6.29	0.00	96.14	-	-	AV
4882	50.93	174	100	H	32.70	9.42	36.327	56.71	74.00	-17.29	PK
4882	43.26	174	100	H	32.70	9.42	36.327	49.04	54.00	-4.96	PK
4882	50.39	312	100	V	32.70	9.42	36.327	56.17	74.00	-17.83	PK
4882	42.78	312	100	V	32.70	9.42	36.327	48.56	54.00	-5.44	AV
7323	45.43	0	100	H	36.99	11.68	36.40	57.70	74.00	-16.30	PK
7323	33.53	0	100	H	36.99	11.68	36.40	45.80	54.00	-8.20	AV
9764	46.57	0	100	H	37.82	13.21	36.45	61.14	74.00	-12.86	PK
9764	35.15	0	100	H	37.82	13.21	36.45	49.72	54.00	-4.28	AV

High Channel 2480 MHz											
2480	68.49	141	100	H	29.15	6.35	0.00	103.99	-	-	PK
2480	64.84	141	100	H	29.15	6.35	0.00	100.34	-	-	AV
2480	64.09	183	100	V	29.19	6.35	0.00	99.62	-	-	PK
2480	60.22	183	100	V	29.19	6.35	0.00	95.75	-	-	AV
2483.5	29.51	0	100	H	29.25	6.22	0.00	64.98	74.00	-9.02	PK
2483.5	18.13	0	100	H	29.25	6.22	0.00	53.60	54.00	-0.40	AV
2483.5	29.79	0	100	V	29.18	6.22	0.00	65.19	74.00	-8.81	PK
2483.5	18.25	0	100	V	29.18	6.22	0.00	53.65	54.00	-0.35	AV
4960	51.01	172	247	H	32.70	9.49	36.33	56.87	74.00	-17.13	PK
4960	43.33	172	247	H	32.70	9.49	36.33	49.19	54.00	-4.81	AV
4960	51.45	307	100	V	32.70	9.49	36.33	57.31	74.00	-16.69	PK
4960	42.77	307	100	V	32.70	9.49	36.33	48.63	54.00	-5.37	AV
7440	46.52	0	100	H	37.10	12.30	36.41	59.51	74.00	-14.49	PK
7440	33.97	0	100	H	37.10	12.30	36.41	46.96	54.00	-7.04	AV
9920	46.69	0	100	H	37.98	13.76	36.45	61.98	74.00	-12.02	PK
9920	34.31	0	100	H	37.98	13.76	36.45	49.60	54.00	-4.40	AV

With Embedded antenna

GFSK mode

Frequency (MHz)	S.A. Reading (dBμV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre- Amp. (dB)	Cord. Reading (dBμV/m)	FCC/ISED		Comments
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBμV/m)	Margin (dB)	
Low Channel 2402 MHz											
2402	66.55	151	100	H	28.94	6.29	0	101.78	-	-	PK
2402	65.94	151	100	H	28.94	6.29	0	101.17	-	-	AV
2402	56.97	223	100	V	28.93	6.29	0	92.19	-	-	PK
2402	55.90	223	100	V	28.93	6.29	0	91.12	-	-	AV
2390	29.26	0	100	H	28.94	6.24	0	64.44	74.00	-9.56	PK
2390	17.84	0	100	H	28.94	6.24	0	53.02	54.00	-0.98	AV
2390	29.57	0	100	V	28.93	6.24	0	64.74	74.00	-9.26	PK
2390	17.92	0	100	V	28.93	6.24	0	53.09	54.00	-0.91	AV
4804	50.31	254	100	H	32.54	9.35	35.77	56.43	74.00	-17.57	PK
4804	42.74	254	100	H	32.54	9.35	35.77	48.86	54.00	-5.14	AV
4804	49.20	281	100	V	32.56	9.35	35.77	55.34	74.00	-18.66	PK
4804	40.69	281	100	V	32.56	9.35	35.77	46.83	54.00	-7.17	AV
7206	46.79	0	100	H	36.88	12.21	36.38	59.50	74.00	-14.50	PK
7206	34.92	0	100	H	36.88	12.21	36.38	47.63	54.00	-6.37	AV
9608	47.17	0	100	H	37.81	13.82	36.43	62.37	74.00	-11.63	PK
9608	35.09	0	100	H	37.81	13.82	36.43	50.29	54.00	-3.71	AV
Middle Channel 2441 MHz											
2441	63.25	307	200	H	29.19	6.29	0.00	98.73	-	-	PK
2441	62.27	307	200	H	29.19	6.29	0.00	97.75	-	-	AV
2441	57.06	145	100	V	29.19	6.29	0.00	92.54	-	-	PK
2441	55.99	145	100	V	29.19	6.29	0.00	91.47	-	-	AV
4882	49.62	263	100	H	32.70	9.42	36.327	55.40	74.00	-18.60	PK
4882	42.18	263	100	H	32.70	9.42	36.327	47.96	54.00	-6.04	PK
4882	49.30	270	100	V	32.70	9.42	36.327	55.08	74.00	-18.92	PK
4882	41.85	270	100	V	32.70	9.42	36.327	47.63	54.00	-6.37	AV
7323	45.21	0	100	H	36.99	11.68	36.40	57.48	74.00	-16.52	PK
7323	33.41	0	100	H	36.99	11.68	36.40	45.68	54.00	-8.32	AV
9764	47.17	0	100	H	37.82	13.21	36.45	61.74	74.00	-12.26	PK
9764	35.07	0	100	H	37.82	13.21	36.45	49.64	54.00	-4.36	AV

High Channel 2480 MHz											
2480	67.01	305	105	H	29.15	6.35	0.00	102.51	-	-	PK
2480	66.19	305	105	H	29.15	6.35	0.00	101.69	-	-	AV
2480	61.37	142	114	V	29.19	6.35	0.00	96.90	-	-	PK
2480	60.49	142	114	V	29.19	6.35	0.00	96.02	-	-	AV
2483.5	29.45	0	100	H	29.25	6.22	0.00	64.92	74.00	-9.08	PK
2483.5	17.96	0	100	H	29.25	6.22	0.00	53.43	54.00	-0.57	AV
2483.5	28.94	0	100	V	29.18	6.22	0.00	64.34	74.00	-9.66	PK
2483.5	17.67	0	100	V	29.18	6.22	0.00	53.07	54.00	-0.93	AV
4960	52.42	264	100	H	32.70	9.49	36.33	58.28	74.00	-15.72	PK
4960	46.39	264	100	H	32.70	9.49	36.33	52.25	54.00	-1.75	AV
4960	51.18	282	100	V	32.70	9.49	36.33	57.04	74.00	-16.96	PK
4960	45.75	282	100	V	32.70	9.49	36.33	51.61	54.00	-2.39	AV
7440	46.01	0	100	H	37.10	12.30	36.41	59.00	74.00	-15.00	PK
7440	35.54	0	100	H	37.10	12.30	36.41	48.53	54.00	-5.47	AV
9920	45.74	0	100	H	37.98	13.76	36.45	61.03	74.00	-12.97	PK
9920	34.37	0	100	H	37.98	13.76	36.45	49.66	54.00	-4.34	AV

$\pi/4$ -DQPSK mode

Frequency (MHz)	S.A. Reading (dBμV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre- Amp. (dB)	Cord. Reading (dBμV/m)	FCC/ISED		Comments
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBμV/m)	Margin (dB)	
Low Channel 2402 MHz											
2402	63.67	305	137	H	28.94	6.29	0	98.90	-	-	PK
2402	60.17	305	137	H	28.94	6.29	0	95.40	-	-	AV
2402	58.31	225	100	V	28.93	6.29	0	93.53	-	-	PK
2402	54.65	225	100	V	28.93	6.29	0	89.87	-	-	AV
2390	29.34	0	100	H	28.94	6.24	0	64.52	74.00	-9.48	PK
2390	17.34	0	100	H	28.94	6.24	0	52.52	54.00	-1.48	AV
2390	29.49	0	100	V	28.93	6.24	0	64.66	74.00	-9.34	PK
2390	17.42	0	100	V	28.93	6.24	0	52.59	54.00	-1.41	AV
4804	47.11	0	100	H	32.54	9.35	35.77	53.23	74.00	-20.77	PK
4804	35.55	0	100	H	32.54	9.35	35.77	41.67	54.00	-12.33	AV
4804	47.74	0	100	V	32.56	9.35	35.77	53.88	74.00	-20.12	PK
4804	35.42	0	100	V	32.56	9.35	35.77	41.56	54.00	-12.44	AV
7206	47.60	0	100	H	36.88	12.21	36.38	60.31	74.00	-13.69	PK
7206	34.87	0	100	H	36.88	12.21	36.38	47.58	54.00	-6.42	AV
9608	47.06	0	100	H	37.81	13.82	36.43	62.26	74.00	-11.74	PK
9608	35.52	0	100	H	37.81	13.82	36.43	50.72	54.00	-3.28	AV
Middle Channel 2441 MHz											
2441	62.48	310	105	H	29.19	6.29	0.00	97.96	-	-	PK
2441	59.60	310	105	H	29.19	6.29	0.00	95.08	-	-	AV
2441	57.94	149	111	V	29.19	6.29	0.00	93.42	-	-	PK
2441	54.39	149	111	V	29.19	6.29	0.00	89.87	-	-	AV
4882	47.11	0	100	H	32.70	9.42	36.327	52.89	74.00	-21.11	PK
4882	35.15	0	100	H	32.70	9.42	36.327	40.93	54.00	-13.07	PK
4882	47.30	0	100	V	32.70	9.42	36.327	53.08	74.00	-20.92	PK
4882	35.10	0	100	V	32.70	9.42	36.327	40.88	54.00	-13.12	AV
7323	45.26	0	100	H	36.99	11.68	36.40	57.53	74.00	-16.47	PK
7323	33.48	0	100	H	36.99	11.68	36.40	45.75	54.00	-8.25	AV
9764	46.70	0	100	H	37.82	13.21	36.45	61.27	74.00	-12.73	PK
9764	35.05	0	100	H	37.82	13.21	36.45	49.62	54.00	-4.38	AV

High Channel 2480 MHz											
2480	64.21	306	105	H	29.15	6.35	0.00	99.71	-	-	PK
2480	60.58	306	105	H	29.15	6.35	0.00	96.08	-	-	AV
2480	58.43	142	113	V	29.19	6.35	0.00	93.96	-	-	PK
2480	54.75	142	113	V	29.19	6.35	0.00	90.28	-	-	AV
2483.5	29.23	305	100	H	29.25	6.22	0.00	64.70	74.00	-9.30	PK
2483.5	17.72	305	100	H	29.25	6.22	0.00	53.19	54.00	-0.81	AV
2483.5	29.19	0	100	V	29.18	6.22	0.00	64.59	74.00	-9.41	PK
2483.5	17.66	0	100	V	29.18	6.22	0.00	53.06	54.00	-0.94	AV
4960	49.24	0	100	H	32.70	9.49	36.33	55.10	74.00	-18.90	PK
4960	36.72	0	100	H	32.70	9.49	36.33	42.58	54.00	-11.42	AV
4960	48.57	0	100	V	32.70	9.49	36.33	54.43	74.00	-19.57	PK
4960	36.09	0	100	V	32.70	9.49	36.33	41.95	54.00	-12.05	AV
7440	46.47	0	100	H	37.10	12.30	36.41	59.46	74.00	-14.54	PK
7440	35.05	0	100	H	37.10	12.30	36.41	48.04	54.00	-5.96	AV
9920	46.05	0	100	H	37.98	13.76	36.45	61.34	74.00	-12.66	PK
9920	34.71	0	100	H	37.98	13.76	36.45	50.00	54.00	-4.00	AV

8DPSK mode

Frequency (MHz)	S.A. Reading (dBμV)	Turntable Azimuth (degrees)	Test Antenna			Cable Loss (dB)	Pre- Amp. (dB)	Cord. Reading (dBμV/m)	FCC/ISED		Comments
			Height (cm)	Polarity (H/V)	Factor (dB/m)				Limit (dBμV/m)	Margin (dB)	
Low Channel 2402 MHz											
2402	58.13	153	100	H	28.94	6.29	0	93.36	-	-	PK
2402	53.55	153	100	H	28.94	6.29	0	88.78	-	-	AV
2402	50.37	230	105	V	28.93	6.29	0	85.59	-	-	PK
2402	45.57	230	105	V	28.93	6.29	0	80.79	-	-	AV
2390	29.07	0	100	H	28.94	6.24	0	64.25	74.00	-9.75	PK
2390	17.26	0	100	H	28.94	6.24	0	52.44	54.00	-1.56	AV
2390	28.73	0	100	V	28.93	6.24	0	63.90	74.00	-10.10	PK
2390	17.11	0	100	V	28.93	6.24	0	52.28	54.00	-1.72	AV
4804	47.32	0	100	H	32.54	9.35	35.77	53.44	74.00	-20.56	PK
4804	35.47	0	100	H	32.54	9.35	35.77	41.59	54.00	-12.41	AV
4804	47.46	0	100	V	32.56	9.35	35.77	53.60	74.00	-20.40	PK
4804	35.63	0	100	V	32.56	9.35	35.77	41.77	54.00	-12.23	AV
7206	46.05	0	100	H	36.88	12.21	36.38	58.76	74.00	-15.24	PK
7206	34.70	0	100	H	36.88	12.21	36.38	47.41	54.00	-6.59	AV
9608	46.91	0	100	H	37.81	13.82	36.43	62.11	74.00	-11.89	PK
9608	35.18	0	100	H	37.81	13.82	36.43	50.38	54.00	-3.62	AV
Middle Channel 2441 MHz											
2441	59.92	313	105	H	29.19	6.29	0.00	95.40	-	-	PK
2441	55.46	313	105	H	29.19	6.29	0.00	90.94	-	-	AV
2441	52.09	225	115	V	29.19	6.29	0.00	87.57	-	-	PK
2441	47.63	225	115	V	29.19	6.29	0.00	83.11	-	-	AV
4882	46.89	0	100	H	32.70	9.42	36.327	52.67	74.00	-21.33	PK
4882	34.69	0	100	H	32.70	9.42	36.327	40.47	54.00	-13.53	PK
4882	46.77	0	100	V	32.70	9.42	36.327	52.55	74.00	-21.45	PK
4882	34.66	0	100	V	32.70	9.42	36.327	40.44	54.00	-13.56	AV
7323	44.84	0	100	H	36.99	11.68	36.40	57.11	74.00	-16.89	PK
7323	33.14	0	100	H	36.99	11.68	36.40	45.41	54.00	-8.59	AV
9764	46.36	0	100	H	37.82	13.21	36.45	60.93	74.00	-13.07	PK
9764	34.88	0	100	H	37.82	13.21	36.45	49.45	54.00	-4.55	AV

High Channel 2441 MHz											
2480	63.83	313	197	H	29.15	6.35	0.00	99.33	-	-	PK
2480	60.02	313	197	H	29.15	6.35	0.00	95.52	-	-	AV
2480	54.48	225	100	V	29.19	6.35	0.00	90.01	-	-	PK
2480	50.48	225	100	V	29.19	6.35	0.00	86.01	-	-	AV
2483.5	28.86	50	100	H	29.25	6.22	0.00	64.33	74.00	-9.67	PK
2483.5	18.07	50	100	H	29.25	6.22	0.00	53.54	54.00	-0.46	AV
2483.5	28.74	0	100	V	29.18	6.22	0.00	64.14	74.00	-9.86	PK
2483.5	18.02	0	100	V	29.18	6.22	0.00	53.42	54.00	-0.58	AV
4960	47.56	0	100	H	32.70	9.49	36.33	53.42	74.00	-20.58	PK
4960	35.38	0	100	H	32.70	9.49	36.33	41.24	54.00	-12.76	AV
4960	47.18	0	100	V	32.70	9.49	36.33	53.04	74.00	-20.96	PK
4960	35.21	0	100	V	32.70	9.49	36.33	41.07	54.00	-12.93	AV
7440	46.26	0	100	H	37.10	12.30	36.41	59.25	74.00	-14.75	PK
7440	34.31	0	100	H	37.10	12.30	36.41	47.30	54.00	-6.70	AV
9920	46.28	0	100	H	37.98	13.76	36.45	61.57	74.00	-12.43	PK
9920	34.36	0	100	H	37.98	13.76	36.45	49.65	54.00	-4.35	AV

6 Appendixes

Please see attachments.

Annex A – FCC and ISED Equipment Labeling Requirement

Annex B – Test Setup Photos

Annex C – EUT photos

---END OF REPORT---