

FCC

RF

TEST REPORT

ISSUED BY
Shenzhen BALUN Technology Co., Ltd.



FOR
Logistic Tray mLog2

ISSUED TO
Megabyte Limited

Unit 507, 5/F, Building 12W, No. 12 Science Park West Avenue, Hong Kong Science Park, Shatin, New Territories, Hong Kong



Tested by: Ye Hongji
Ye Hongji

Date: May 12, 2020

Approved by: Wei Yanquan
(Chief Engineer)

Date: May 12, 2020

Report No.: BL-HK1980249-601
EUT Name: Logistic Tray mLog2
Model Name: mLog2
Brand Name: myndar
Test Standard: 47 CFR Part 15 Subpart C
FCC ID: XEK-MLOG2

Test Conclusion: Pass
Test Date: Aug. 30, 2019 ~ Sep. 03, 2019
Date of Issue: May 12, 2020

NOTE: This test report of test results only related to testing samples, which can be duplicated completely for the legal use with the approval of the applicant; it shall not be reproduced except in full, without the written approval of Shenzhen BALUN Technology Co., Ltd. Any objections should be raised within thirty days from the date of issue. To validate the report, please contact us.

Revision History

Version	Issue Date	Revisions Content
<u>Rev. 01</u>	<u>Nov. 21, 2019</u>	<u>Initial Issue</u>
<u>Rev. 02</u>	<u>Apr. 15, 2020</u>	<u>Update units on page 33 and page37</u> <u>Update descriptions on pages 42 to 47</u> <u>Delete note4 on page 52</u>
<u>Rev. 03</u>	<u>May 12, 2020</u>	<u>Update the channel at section 2.5</u> <u>Technical Information</u>

TABLE OF CONTENTS

1	ADMINISTRATIVE DATA (GENERAL INFORMATION)	5
1.1	Identification of the Testing Laboratory	5
1.2	Identification of the Responsible Testing Location	5
1.3	Laboratory Condition	5
1.4	Announce	5
2	PRODUCT INFORMATION	6
2.1	Applicant Information.....	6
2.2	Manufacturer Information	6
2.3	Factory Information	6
2.4	General Description for Equipment under Test (EUT)	6
2.5	Technical Information	7
2.6	Additional Instructions	8
3	SUMMARY OF TEST RESULTS.....	9
3.1	Test Standards	9
3.2	Verdict	10
4	GENERAL TEST CONFIGURATIONS	11
4.1	Test Environments	11
4.2	Test Equipment List.....	11
4.3	Measurement Uncertainty	13
4.4	Description of Test Setup	13
4.4.1	For Antenna Port Test	13
4.4.2	For AC Power Supply Port Test	14
4.4.3	For Radiated Test (Below 30 MHz)	14
4.4.4	For Radiated Test (30 MHz-1 GHz)	15
4.4.5	For Radiated Test (Above 1 GHz).....	15

4.5	Measurement Results Explanation Example.....	16
4.5.1	For conducted test items:	16
5	TEST ITEMS.....	17
5.1	Antenna Requirements.....	17
5.1.1	Relevant Standards.....	17
5.1.2	Antenna Anti-Replacement Construction	17
5.1.3	Antenna Gain	17
5.2	Number of Hopping Frequencies	18
5.2.1	Limit.....	18
5.2.2	Test Procedure	18
5.2.3	Test Result	18
5.3	Peak Output Power and E.I.R.P.....	19
5.3.1	Test Limit.....	19
5.3.2	Test Setup	19
5.3.3	Test Procedure	19
5.3.4	Test Result	19
5.4	Occupied Bandwidth	20
5.4.1	Limit.....	20
5.4.2	Test Setup	20
5.4.3	Test Procedure	20
5.4.4	Test Result	20
5.5	Carrier Frequency Separation	21
5.5.1	Limit.....	21
5.5.2	Test Setup	21
5.5.3	Test Procedure	21
5.5.4	Test Result	21
5.6	Time of Occupancy (Dwell time)	22
5.6.1	Limit.....	22
5.6.2	Test Setup	22
5.6.3	Test Procedure	22
5.6.4	Test Result	22
5.7	Conducted Spurious Emission & Authorized-band band-edge	23
5.7.1	Limit.....	23

5.7.2	Test Setup	23
5.7.3	Test Procedure	23
5.7.4	Test Result	23
5.8	Conducted Emission	24
5.8.1	Limit.....	24
5.8.2	Test Setup	24
5.8.3	Test Procedure	24
5.8.4	Test Result	24
5.9	Radiated Spurious Emission	25
5.9.1	Limit.....	25
5.9.2	Test Setup	25
5.9.3	Test Procedure	25
5.9.4	Test Result	26
5.10	Band Edge (Restricted-band band-edge).....	27
5.10.1	Limit.....	27
5.10.2	Test Setup	27
5.10.3	Test Procedure	27
5.10.4	Test Result	27
ANNEX A	TEST RESULT	28
A.1	Number of Hopping Frequency	28
A.2	Peak Output Power	30
A.3	20 dB and 99% bandwidth	32
A.4	Hopping Frequency Separation.....	36
A.5	Average Time of Occupancy	38
A.6	Conducted Spurious Emissions & Authorized-band band-edge	40
A.7	Conducted Emissions.....	47
A.8	Radiated Spurious Emission	51
A.9	Band Edge (Restricted-band band-edge).....	75
ANNEX B	TEST SETUP PHOTOS	76
ANNEX C	EUT EXTERNAL PHOTOS	76
ANNEX D	EUT INTERNAL PHOTOS	76

1 ADMINISTRATIVE DATA (GENERAL INFORMATION)

1.1 Identification of the Testing Laboratory

Company Name	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Phone Number	+86 755 6685 0100
Fax Number	+86 755 6182 4271

1.2 Identification of the Responsible Testing Location

Test Location	Shenzhen BALUN Technology Co., Ltd.
Address	Block B, 1st FL, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China
Accreditation Certificate	The laboratory has been listed by Industry Canada to perform electromagnetic emission measurements. The recognition numbers of test site are 11524A-1. The laboratory is a testing organization accredited by FCC as a accredited testing laboratory. The designation number is CN1196. The laboratory is a testing organization accredited by American Association for Laboratory Accreditation (A2LA) according to ISO/IEC 17025. The accreditation certificate is 4344.01. The laboratory is a testing organization accredited by China National Accreditation Service for Conformity Assessment (CNAS) according to ISO/IEC 17025. The accreditation certificate number is L6791.
Description	All measurement facilities used to collect the measurement data are located at Block B, FL 1, Baisha Science and Technology Park, Shahe Xi Road, Nanshan District, Shenzhen, Guangdong Province, P. R. China 518055

1.3 Laboratory Condition

Ambient Temperature	20°C to 25°C
Ambient Relative Humidity	45% to 55%
Ambient Pressure	100 kPa to 102 kPa

1.4 Announce

- (1) The test report reference to the report template version v2.2.
- (2) The test report is invalid if not marked with the signatures of the persons responsible for preparing and approving the test report.
- (3) The test report is invalid if there is any evidence and/or falsification.
- (4) The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein.
- (5) This document may not be altered or revised in any way unless done so by BALUN and all revisions are duly noted in the revisions section.
- (6) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.

2 PRODUCT INFORMATION

2.1 Applicant Information

Applicant	Megabyte Limited
Address	Unit 507, 5/F, Building 12W, No. 12 Science Park West Avenue, Hong Kong Science Park, Shatin, New Territories, Hong Kong

2.2 Manufacturer Information

Manufacturer	Megabyte Limited
Address	Unit 507, 5/F, Building 12W, No. 12 Science Park West Avenue, Hong Kong Science Park, Shatin, New Territories, Hong Kong

2.3 Factory Information

Factory	N/A
Address	N/A

2.4 General Description for Equipment under Test (EUT)

EUT Type	Logistic Tray mLog2
Model Name Under Test	mLog2
Series Model Name	N/A
Description of Model name differentiation	N/A
Hardware Version	N/A
Software Version	N/A
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

2.5 Technical Information

Network and Wireless connectivity	RFID
-----------------------------------	------

The requirement for the following technical information of the EUT was tested in this report:

Modulation Technology	Frequency hopping system	
Modulation Type	RFID	
Product Type	☐ Mobile ☐ Portable ☒ Fix Location	
Frequency Range	The frequency range used is 902 MHz to 928 MHz.	
Number of channel	50	
Tested Channel	0 (902.75 MHz), 25 (915.25 MHz), 49 (927.25 MHz)	
Antenna Type	UHF RFID Antenna	
Antenna Gain	ANT 1	0 dBi (In test items related to antenna gain, the final results reflect this figure.)
	ANT 2	0 dBi (In test items related to antenna gain, the final results reflect this figure.)
Antenna System(MIMO Smart Antenna)	N/A	

All channel was listed on the following table:

Channel number	Freq. (MHz)	Channel number	Freq. (MHz)	Channel number	Freq. (MHz)	Channel number	Freq. (MHz)
0	902.75	13	909.25	26	915.75	39	922.25
1	903.25	14	909.75	27	916.25	40	922.75
2	903.75	15	910.25	28	916.75	41	923.25
3	904.25	16	910.75	29	917.25	42	923.75
4	904.75	17	911.25	30	917.75	43	924.25
5	905.25	18	911.75	31	918.25	44	924.75
6	905.75	19	912.25	32	918.75	45	925.25
7	906.25	20	912.75	33	919.25	46	925.75
8	906.75	21	913.25	34	919.75	47	926.25
9	907.25	22	913.75	35	920.25	48	926.75
10	907.75	23	914.25	36	920.75	49	927.25
11	908.25	24	914.75	37	921.25	-	-
12	908.75	25	915.25	38	921.75	-	-

2.6 Additional Instructions

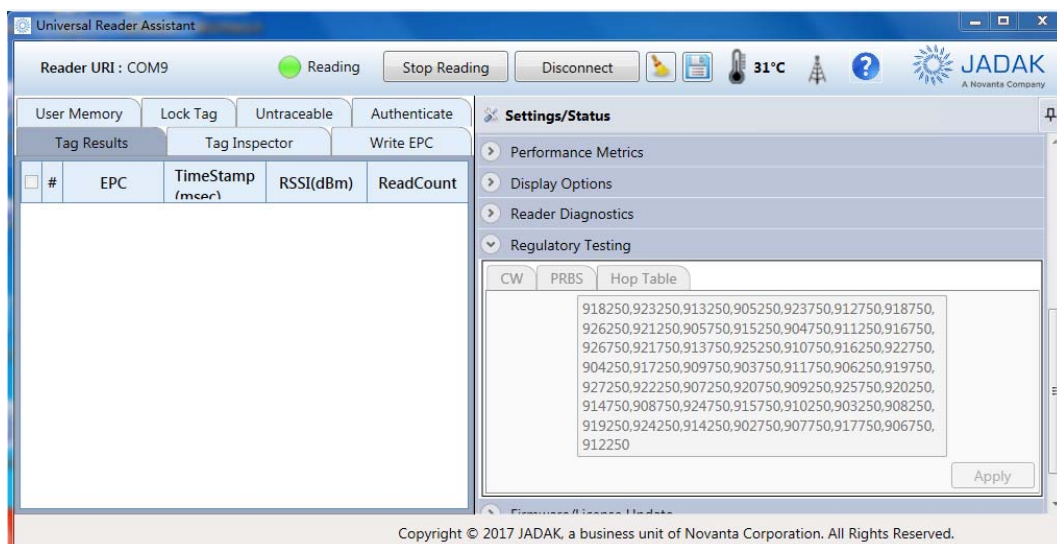
EUT Software Settings:

Mode	☒ Special software is used. The software provided by client to enable the EUT under transmission condition continuously at specific channel frequencies individually.
------	--

During testing, Channel and Power Controlling Software provided by the customer was used to control the operating channel as well as the output power level. The RF output power selection is for the setting of RF output power expected by the customer and is going to be fixed on the firmware of the final end product.

Power level setup in software			
Test Software Version	Universal Reader Assistant		
Support Units (Software installation media)	Description	Manufacturer	Model
	Notebook	ASUS	S300C
Mode	Channel		Soft Set
RFID	ALL		30

Run Software



3 SUMMARY OF TEST RESULTS

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 15, Subpart C	Miscellaneous Wireless Communications Services
2	FCC PUBLIC NOTICE DA 00-705 (Mar. 30, 2000)	Filling and Measurement Guidelines for Frequency Hopping Spread Spectrum Systems
3	ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices
4	KDB Publication 558074 D01v05r02	GUIDANCE FOR COMPLIANCE MEASUREMENTS ON DIGITAL TRANSMISSION SYSTEM, FREQUENCY HOPPING SPREAD SPECTRUM SYSTEM, AND HYBRID SYSTEM DEVICES OPERATING UNDER SECTION 15.247 OF THE FCC RULES

3.2 Verdict

No.	Description	FCC Part No.	Modulation Technology	Channel	Test Result	Verdict	Remark
1	Antenna Requirement	15.203	N/A	N/A	--	Pass	Note ¹
2	Number of Hopping Frequencies	15.247(a)	Frequency hopping system	Hopping Mode	ANNEX A.1	Pass	
3	Peak Output Power	15.247(b)	Frequency hopping system, Hybrid system	Low/Middle/High	ANNEX A.2	Pass	
4	Occupied Bandwidth	15.247(a)	Frequency hopping system, Hybrid system	Low/Middle/High	ANNEX A.3	Pass	
5	Carrier Frequency Separation	15.247(a)	Frequency hopping system, Hybrid system	Hopping Mode	ANNEX A.4	Pass	
6	Time of Occupancy (Dwell time)	15.247(a)	Frequency hopping system, Hybrid system	Hopping Mode	ANNEX A.5	Pass	
7	Conducted Spurious Emission & Authorized-band band-edge	15.247(d)	Frequency hopping system, Hybrid system	Low/Middle/High, Hopping Mode	ANNEX A.6	Pass	
8	Conducted Emission	15.207	Frequency hopping system, Hybrid system	Low/Middle/High	ANNEX A.7	Pass	
9	Radiated Spurious Emission	15.209 15.247(d)	Frequency hopping system, Hybrid system	Low/Middle/High, Hopping Mode	ANNEX A.8	Pass	
10	Band Edge(Restricted-band band-edge)	15.209 15.247(d)	Frequency hopping system, Hybrid system	Low/Middle/High, Hopping Mode	ANNEX A.9	Pass	

Note 1: Please refer to section 5.1

4 GENERAL TEST CONFIGURATIONS

4.1 Test Environments

During the measurement, the normal environmental conditions were within the listed ranges:

Relative Humidity	45% to 55%	
Atmospheric Pressure	100 kPa to 102 kPa	
Temperature	NT (Normal Temperature)	+22°C to +25°C
Working Voltage of the EUT	NV (Normal Voltage)	6.5 V

4.2 Test Equipment List

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer	ROHDE&SCHWARZ	FSV-30	103118	2019.06.13	2020.06.12
Vector Signal Generator	ROHDE&SCHWARZ	SMBV100A	260592	2019.06.13	2020.06.12
Signal Generator	ROHDE&SCHWARZ	SMB100A	177746	2019.08.23	2020.08.22
Switch Unit with OSP-B157	ROHDE&SCHWARZ	OSP120	101270	2019.06.13	2020.06.12
Spectrum Analyzer	AGILENT	E4440A	MY45304434	2018.11.08	2019.11.07
EMI Receiver	ROHDE&SCHWARZ	ESRP	101036	2019.06.13	2020.06.12
LISN	SCHWARZBECK	NSLK 8127	8127-687	2019.06.13	2020.06.12
Bluetooth Tester	ROHDE&SCHWARZ	CBT	101005	2019.06.13	2020.06.12
Power Splitter	KMW	DCPD-LDC	1305003215	--	--
Power Sensor	ROHDE&SCHWARZ	NRP-Z21	103971	2019.06.13	2020.06.12
Attenuator (20 dB)	KMW	ZA-S1-201	110617091	--	--
Attenuator (6 dB)	KMW	ZA-S1-61	1305003189	--	--
DC Power Supply	ROHDE&SCHWARZ	HMP2020	018141664	2019.06.13	2020.06.12
Temperature Chamber	ANGELANTIONI SCIENCE	NTH64-40A	1310	2019.07.02	2020.07.01
Test Antenna-Loop(9 kHz-30 MHz)	SCHWARZBECK	FMZB 1519	1519-037	2017.11.07	2019.11.08
Test Antenna-Bi-Log(30 MHz-3 GHz)	SCHWARZBECK	VULB 9163	9163-624	2018.08.22	2020.08.21
Test Antenna-Horn(1-18 GHz)	SCHWARZBECK	BBHA 9120D	9120D-1148	2019.07.11	2020.07.10
Test Antenna-Horn(15-26.5 GHz)	SCHWARZBECK	BBHA 9170	9170-305	2019.06.21	2020.06.20
Test Antenna-Horn (18-40 GHz)	A-INFO	LB-180400KF	J211060273	N/A	2020.01.06
Anechoic Chamber	RAINFORD	9m*6m*6m	N/A	2019.02.21	2021.02.20
Anechoic Chamber	EMC TECHNOLOGY LTD	21.1m*11.6m*7.35m	N/A	2018.07.19	2020.07.18
Shielded Enclosure	ChangNing	CN-130701	130703	--	--
Signal Generator	ROHDE&SCHWARZ	SMB100A	177746	2019.06.12	2020.06.11
Power Amplifier	OPHIR RF	5225F	1037	2019.02.17	2020.02.16
Power Amplifier	OPHIR RF	5273F	1016	2019.02.17	2020.02.16

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Directional Coupler	Werlantone	C5982-10	109275	N/A	N/A
Directional Coupler	Werlantone	CHP-273E	S00801z-01	N/A	N/A
Feld Strength Meter	Narda	EP601	511WX51129	2019.05.22	2020.05.21
Mouth Simulator	B&K	4227	2423931	2018.11.16	2019.11.15
Sound Calibrator	B&K	4231	2430337	2018.11.16	2019.11.15
Sound Level Meter	B&K	NL-20	00844023	2018.11.16	2019.11.15
Ear Simulator	B&K	4185	2409449	2018.11.16	2019.11.15
Ear Simulator	B&K	4195	2418189	2018.11.16	2019.11.15
Audio analyzer	B&K	UPL 16	100129	2018.11.16	2019.11.15

4.3 Measurement Uncertainty

The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2.

This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

Measurement	Value
Occupied Channel Bandwidth	±4%
RF output power, conducted	±1.4 dB
Power Spectral Density, conducted	±2.5 dB
Unwanted Emissions, conducted	±2.8 dB
All emissions, radiated	±5.4 dB
Temperature	±1°C
Humidity	±4%

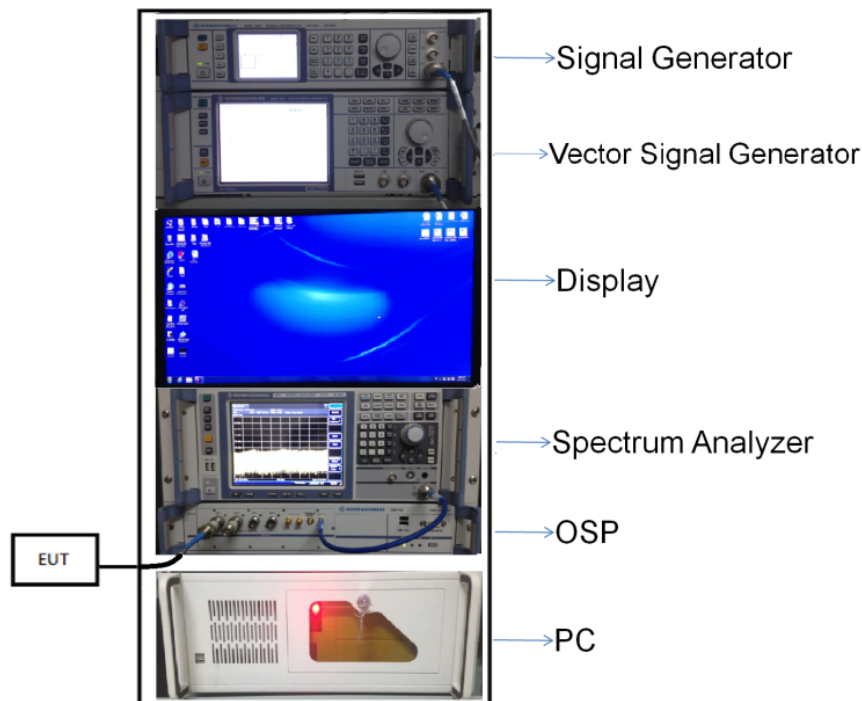
4.4 Description of Test Setup

4.4.1 For Antenna Port Test

Conducted value (dBm) = Measurement value (dBm) + cable loss (dB)

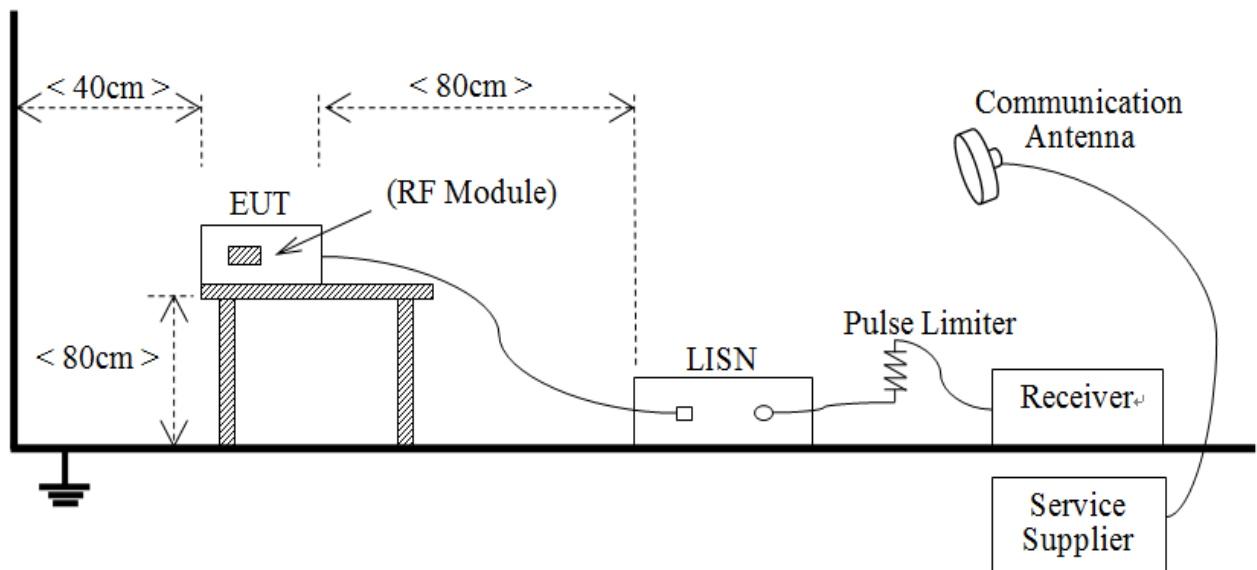
For example: the measurement value is 10 dBm and the cable 0.5dBm used, then the final result of EUT:

Conducted value (dBm) = 10 dBm + 0.5 dB = 10.5 dBm



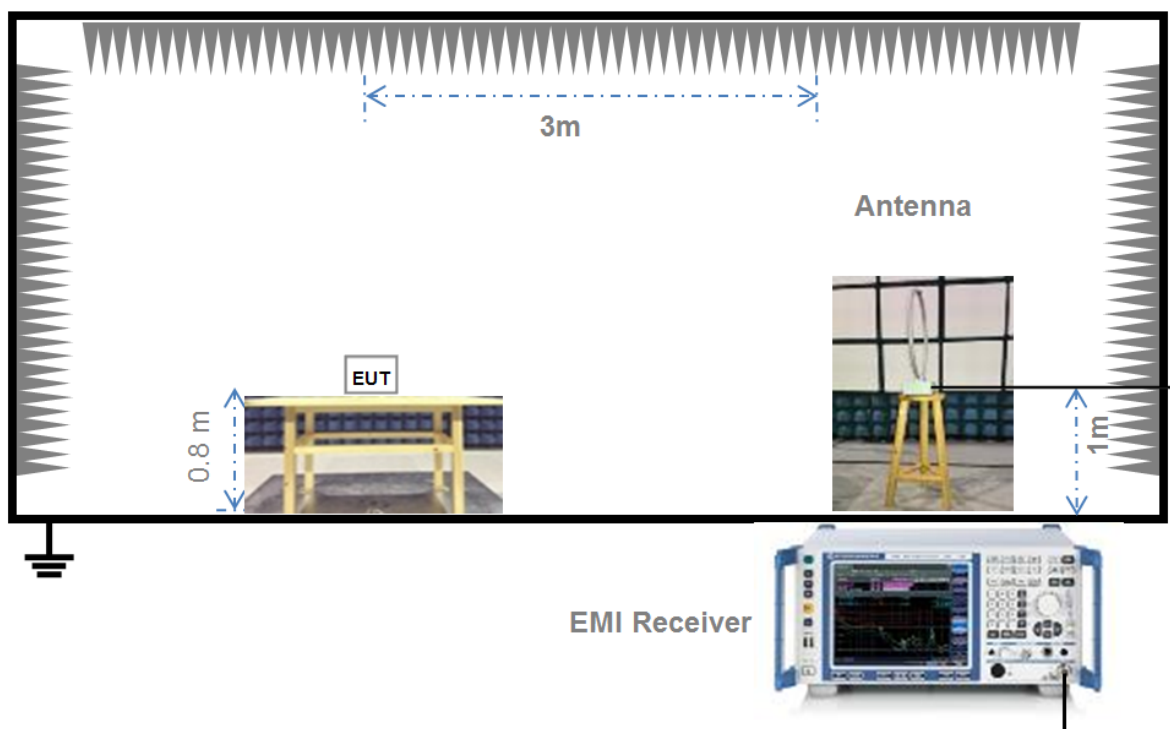
(Diagram 1)

4.4.2 For AC Power Supply Port Test



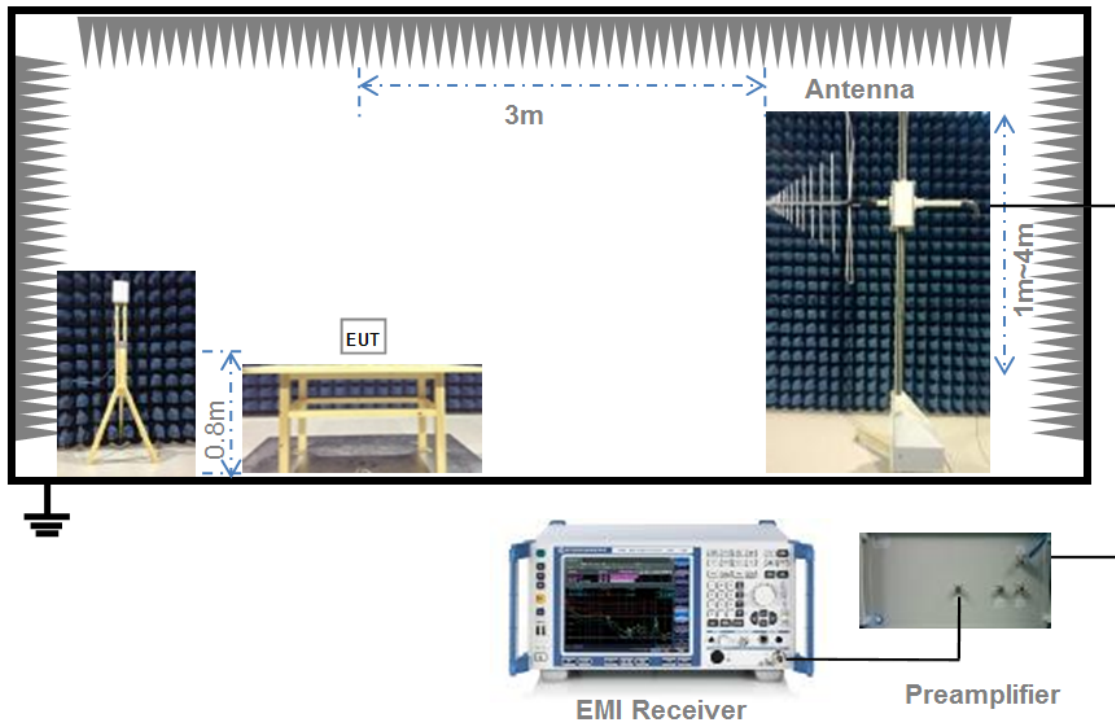
(Diagram 2)

4.4.3 For Radiated Test (Below 30 MHz)



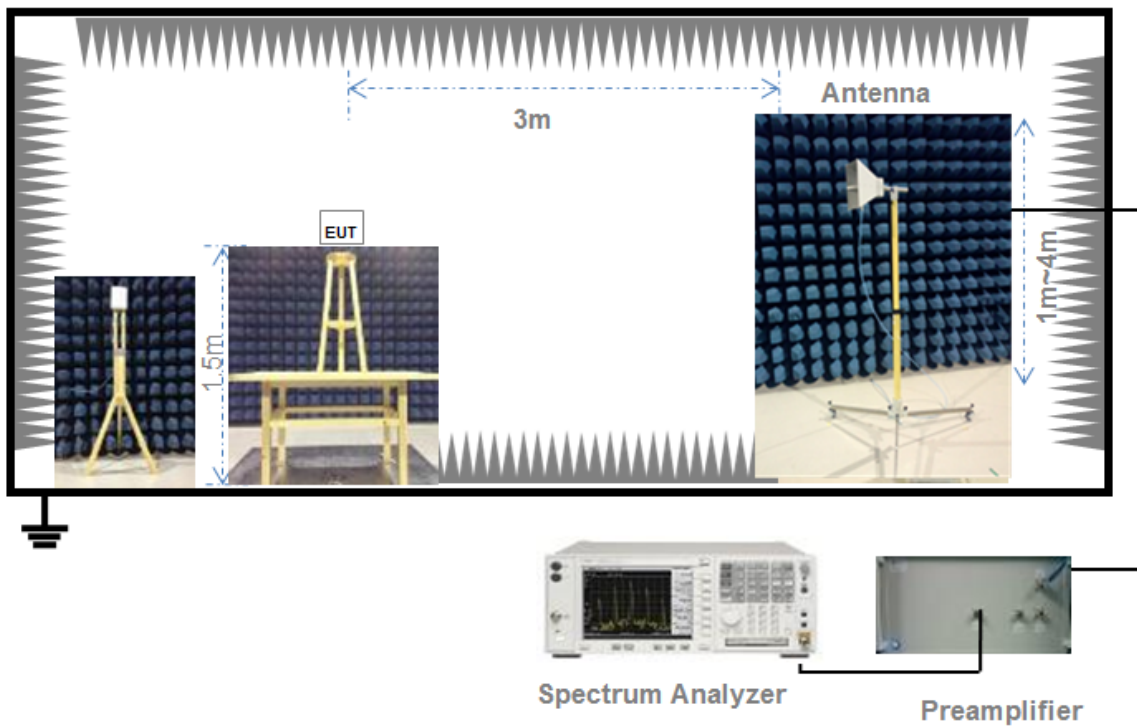
(Diagram 3)

4.4.4 For Radiated Test (30 MHz-1 GHz)



(Diagram 4)

4.4.5 For Radiated Test (Above 1 GHz)



(Diagram 5)

4.5 Measurement Results Explanation Example

4.5.1 For conducted test items:

The offset level is set in the spectrum analyzer to compensate the RF cable loss and attenuator between EUT conducted output port and spectrum analyzer. With the offset compensation, the spectrum analyzer reading level is exactly the EUT RF output level.

The spectrum analyzer offset is derived from RF cable loss and attenuator factor.

Offset = RF cable loss + attenuator factor.

5 TEST ITEMS

5.1 Antenna Requirements

5.1.1 Relevant Standards

FCC §15.203 & 15.247(b); RSS-247, 5.4 (6)

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited. This requirement does not apply to carrier current devices or to devices operated under the provisions of § 15.211, § 15.213, § 15.217, § 15.219, or § 15.221. Further, this requirement does not apply to intentional radiators that must be professionally installed, such as perimeter protection systems and some field disturbance sensors, or to other intentional radiators which, in accordance with § 15.31(d), must be measured at the installation site. However, the installer shall be responsible for ensuring that the proper antenna is employed so that the limits in this part are not exceeded.

If directional gain of transmitting antennas is greater than 6 dBi, the power shall be reduced by the same level in dB comparing to gain minus 6 dBi. For the fixed point-to-point operation, the power shall be reduced by one dB for every 3 dB that the directional gain of the antenna exceeds 6 dBi. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the FCC rule.

5.1.2 Antenna Anti-Replacement Construction

The Antenna Anti-Replacement as following method:

Protected Method	Description
The antenna is embedded in the product	The antenna is welded on the mainboard, can't be replaced by the consumer

Reference Documents	Item
Photo	Please refer to the EUT Photo documents.

5.1.3 Antenna Gain

The antenna peak gain of EUT is less than 6 dBi. Therefore, it is not necessary to reduce maximum peak output power limit.

5.2 Number of Hopping Frequencies

5.2.1 Limit

FCC §15.247(a) (1) (i); RSS-247, 5.1 (4)

For frequency hopping systems operating in the 902-928 MHz band: the system shall use at least 50 hopping frequencies.

Test Setup

See section 4.4.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.2.2 Test Procedure

The EUT must have its hopping function enabled. Use the following spectrum analyzer settings:

Span = the frequency band of operation

RBW $\geq$ 1% of the span

VBW $\geq$ RBW

Sweep = auto

Detector function = peak

Trace = max hold

Allow the trace to stabilize

5.2.3 Test Result

Please refer to ANNEX A.1.

5.3 Peak Output Power and E.I.R.P

5.3.1 Test Limit

FCC § 15.247(b)(1)

For frequency hopping systems operating in the 902-928 MHz band: 1 watt for systems employing at least 50 hopping channels; and, 0.25 watts for systems employing less than 50 hopping channels, but at least 25 hopping channels, as permitted under paragraph (a)(1)(i) of this section.

RSS-247, 5.4 (2)

For FHSs operating in the band 902-928 MHz, the maximum peak conducted output power shall not exceed 1.0 W and the e.i.r.p. shall not exceed 4 W if the hopset uses 75 or more hopping channels; the maximum peak conducted output power shall not exceed 0.125 W and the e.i.r.p. shall not exceed 0.5 W if the hopset uses less than 75 hopping channels (see Section 5.4(5) for exceptions).

5.3.2 Test Setup

See section 4.4.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.3.3 Test Procedure

The Module operates at hopping-off test mode. The lowest, middle and highest channels are selected to perform testing to verify the conducted RF output peak power of the Module.

Use the following spectrum analyzer settings:

Span = approximately 5 times the 20 dB bandwidth, centered on a hopping channel

RBW > the 20 dB bandwidth of the emission being measured

VBW $\geq$ RBW

Sweep = auto

Detector function = peak

Trace = max hold

Allow the trace to stabilize.

5.3.4 Test Result

Please refer to ANNEX A.2.

5.4 Occupied Bandwidth

5.4.1 Limit

FCC §15.247(a)(1)(i); RSS-247, 5.1 (1)

Measurement of the 20dB bandwidth of the modulated signal. The maximum allowed 20 dB bandwidth of the hopping channel is 500 kHz.

5.4.2 Test Setup

See section 4.4.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.4.3 Test Procedure

Use the following spectrum analyzer settings:

Span = approximately 2 to 3 times the 20 dB bandwidth, centered on a hopping channel

RBW = in the range of 1% to 5% of the OBW

VBW $\geq$ RBW

Sweep = auto

Detector function = peak

Trace = max hold

The EUT should be transmitting at its maximum data rate, Allow the trace to stabilize.

5.4.4 Test Result

Please refer to ANNEX A.3.

5.5 Carrier Frequency Separation

5.5.1 Limit

FCC §15.247(a)(1); RSS-247, 5.1 (2)

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.

5.5.2 Test Setup

See section 4.4.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.5.3 Test Procedure

The EUT must have its hopping function enabled. Use the following spectrum analyzer settings:

Span = wide enough to capture the peaks of two adjacent channels

Resolution (or IF) Bandwidth (RBW) $\geq$ 1% of the span

Video (or Average) Bandwidth (VBW) $\geq$ RBW

Sweep = auto

Detector function = peak

Trace = max hold

Allow the trace to stabilize. Use the marker-delta function to determine the separation between the peaks of the adjacent channels.

5.5.4 Test Result

Please refer to ANNEX A.4.

5.6 Time of Occupancy (Dwell time)

5.6.1 Limit

FCC §15.247(a)(1)(i); RSS-247, 5.1 (4)

For frequency hopping systems operating in the 902-928 MHz band: if the 20 dB bandwidth of the hopping channel is less than 250 kHz, the system shall use at least 50 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 20 second period; if the 20 dB bandwidth of the hopping channel is 250 kHz or greater, the system shall use at least 25 hopping frequencies and the average time of occupancy on any frequency shall not be greater than 0.4 seconds within a 10 second period.

5.6.2 Test Setup

See section 4.4.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.6.3 Test Procedure

The lowest, middle and highest channels are selected to perform testing to record the dwell time of each occupation measured in this channel, which is called Pulse Time here.

5.6.4 Test Result

Please refer to ANNEX A.5

5.7 Conducted Spurious Emission & Authorized-band band-edge

5.7.1 Limit

FCC §15.247(d); RSS-247, 5.5

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.

5.7.2 Test Setup

See section 4.4.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.7.3 Test Procedure

Use the following spectrum analyzer settings:

Span = wide enough to capture the peak level of the in-band emission and all spurious emissions (e.g., harmonics) from the lowest frequency generated in the EUT up through the 10th harmonic. Typically, several plots are required to cover this entire span.

RBW = 100 kHz

VBW $\geq$ RBW

Sweep = auto

Detector function = peak

Trace = max hold

Allow the trace to stabilize

5.7.4 Test Result

Please refer to ANNEX A.6 and A.7

5.8 Conducted Emission

5.8.1 Limit

FCC §15.207; RSS-GEN, 8.8

For an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency within the band 150 kHz to 30 MHz shall not exceed the limits in the following table, as measured using a 50 μ H/50 Ω line impedance stabilization network (LISN).

Frequency range (MHz)	Conducted Limit (dB μ V)	
	Quai-peak	Average
0.15 - 0.50	66 to 56	56 to 46
0.50 - 5	56	46
0.50 - 30	60	50

5.8.2 Test Setup

See section 4.4.2 for test setup description for the AC power supply port. The photo of test setup please refer to ANNEX B.

5.8.3 Test Procedure

The maximum conducted interference is searched using Peak (PK), if the emission levels more than the AV and QP limits, and that have narrow margins from the AV and QP limits will be re-measured with AV and QP detectors. Tests for both L phase and N phase lines of the power mains connected to the EUT are performed. Refer to recorded points and plots below.

Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 50/60 Hz and 240 VAC, 50/60 Hz) for which the device is capable of operation. A device rated for 50/60 Hz operation need not be tested at both frequencies provided the radiated and line conducted emissions are the same at both frequencies.

5.8.4 Test Result

Please refer to ANNEX A.7.

5.9 Radiated Spurious Emission

5.9.1 Limit

FCC §15.209&15.247(d); RSS-247, 5.5

Radiated emission outside the frequency band attenuation below the general limits specified in FCC section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in FCC section 15.205(a), must also comply with the radiated emission limits specified in FCC section 15.209(a).

According to FCC section 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 ($\mu\text{V/m}$)	Measurement Distance (m)
0.009 - 0.490	902/F(kHz)	300
0.490 - 1.705	9020/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

Note:

1. Field Strength (dB $\mu\text{V/m}$) = $20 \cdot \log[\text{Field Strength } (\mu\text{V/m})]$.
2. In the emission tables above, the tighter limit applies at the band edges.
3. For Above 1000 MHz, the emission limit in this paragraph is based on measurement instrumentation employing an average detector, measurement using instrumentation with a peak detector function, corresponding to 20dB above the maximum permitted average limit.
4. For above 1000 MHz, limit field strength of harmonics: 54dB $\mu\text{V/m}$ @3m (AV) and 74dB $\mu\text{V/m}$ @3m (PK).

5.9.2 Test Setup

See section 4.4.3 to 4.4.5 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.9.3 Test Procedure

The measurement frequency range is from 9 kHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. Mid channels on all channel bandwidth verified. Only the worst RB size/offset presented.

The power of the EUT transmitting frequency should be ignored.

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz for $f \geq 1$ GHz, 100 kHz for $f < 1$ GHz

VBW $\geq$ RBW

Sweep = auto

Detector function = peak

Trace = max hold

For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported, Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

5.9.4 Test Result

Please refer to ANNEX A.8.

5.10 Band Edge (Restricted-band band-edge)

5.10.1 Limit

FCC §15.209&15.247(d)

Radiated emission outside the frequency band attenuation below the general limits specified in FCC section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in FCC section 15.205(a), must also comply with the radiated emission limits specified in FCC section 15.209(a).

5.10.2 Test Setup

See section 4.4.3 to 4.4.5 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.10.3 Test Procedure

The measurement frequency range is from 9 kHz to the 10th harmonic of the fundamental frequency. The Turn Table is actuated to turn from 0° to 360°, and both horizontal and vertical polarizations of the Test Antenna are used to find the maximum radiated power. Mid channels on all channel bandwidth verified. Only the worst RB size/offset presented.

The power of the EUT transmitting frequency should be ignored.

All Spurious Emission tests were performed in X, Y, Z axis direction. And only the worst axis test condition was recorded in this test report.

Use the following spectrum analyzer settings:

Span = wide enough to fully capture the emission being measured

RBW = 1 MHz for $f \geq 1$ GHz, 100 kHz for $f < 1$ GHz

VBW $\geq$ RBW

Sweep = auto

Detector function = peak

Trace = max hold

For measurement below 1GHz, If the emission level of the EUT measured by the peak detector is 3 dB lower than the applicable limit, the peak emission level will be reported, Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

5.10.4 Test Result

Please refer to ANNEX A.9.

ANNEX A TEST RESULT

A.1 Number of Hopping Frequency

Test Data

ANT 1

Test Mode	Frequency Block (MHz)	Measured Channel Numbers	Min. Limit	Verdict
RFID	902-928	50	50	Pass

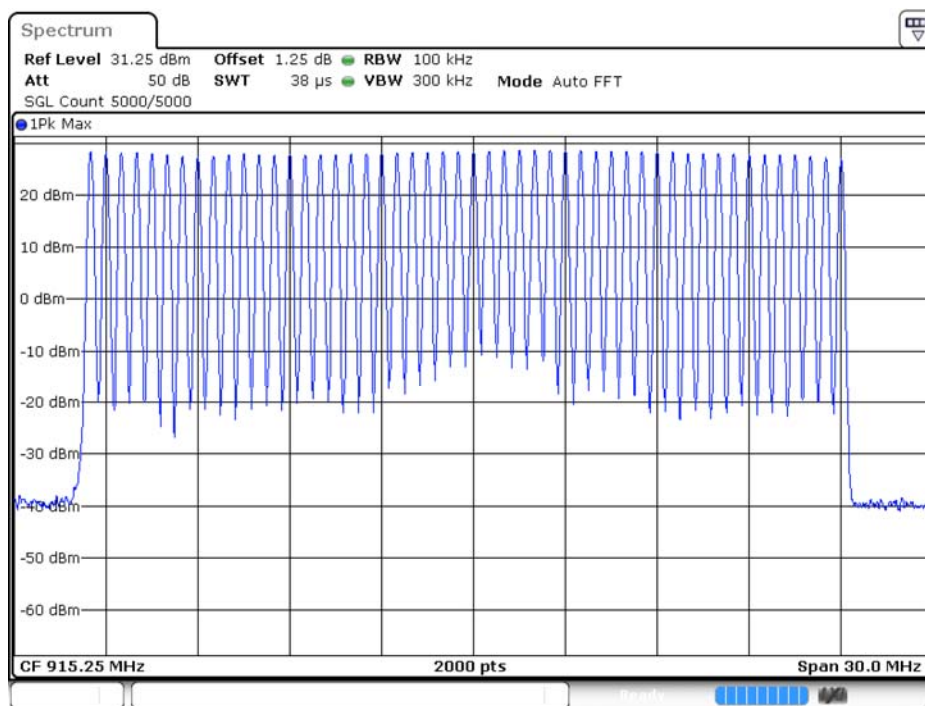
ANT 2

Test Mode	Frequency Block (MHz)	Measured Channel Numbers	Min. Limit	Verdict
RFID	902-928	50	50	Pass

Test plots

ANT 1

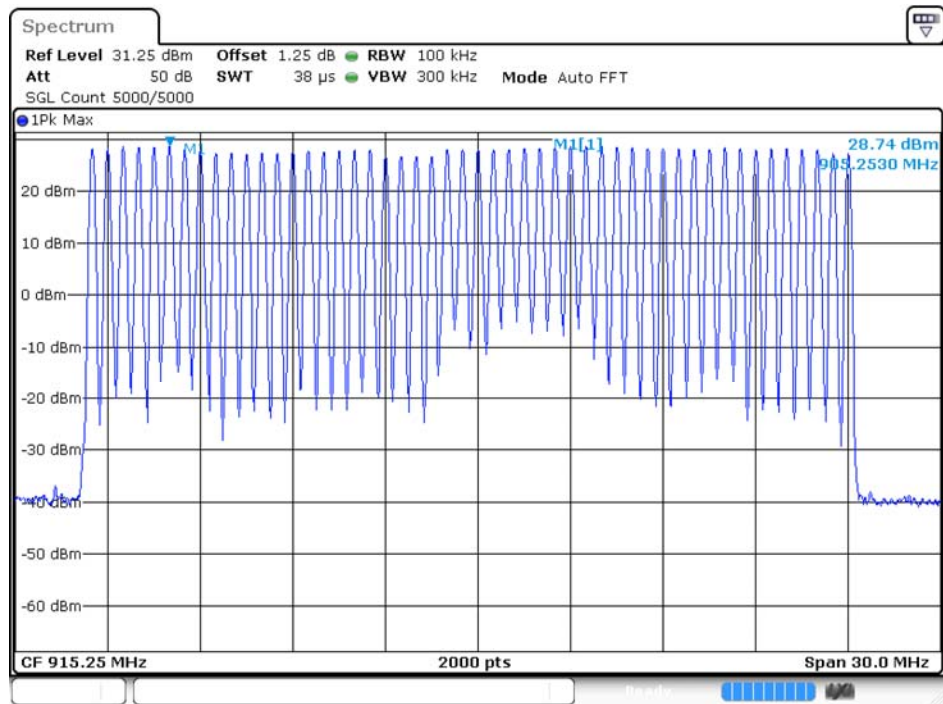
RFID



Date: 2.SEP.2019 09:51:37

ANT 2

RFID



Date: 2.SEP.2019 11:21:07

A.2 Peak Output Power

Peak Power Test Data

ANT 1

Channel	Measured Output Peak Power		Limit		Verdict
	RFID		dBm	mW	
	dBm	mW			
Low	27.02	503.50	30	1000	Pass
Middle	28.17	656.15			Pass
High	26.65	462.38			Pass

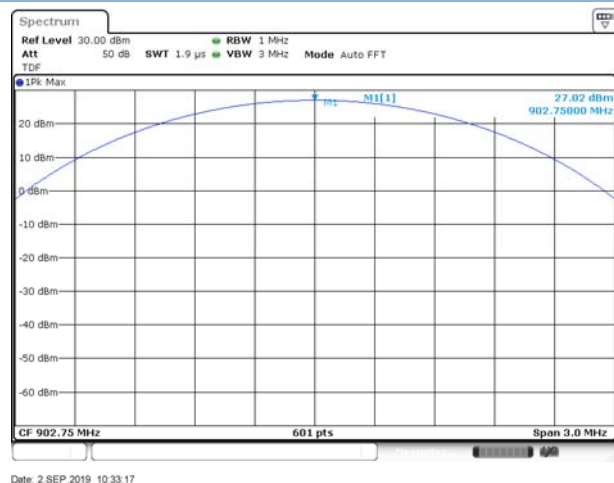
ANT 2

Channel	Measured Output Peak Power		Limit		Verdict
	RFID		dBm	mW	
	dBm	mW			
Low	28.18	657.66	30	1000	Pass
Middle	27.28	534.56			Pass
High	27.27	533.33			Pass

Test plots

ANT 1

LOW CHANNEL



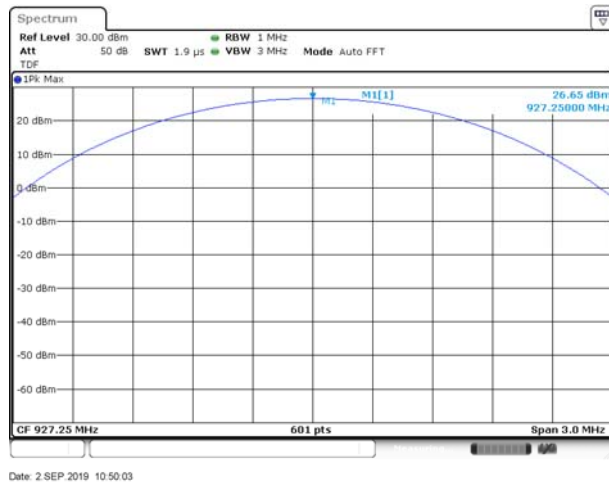
Date: 2 SEP. 2019 10:33:17

MIDDLE CHANNEL



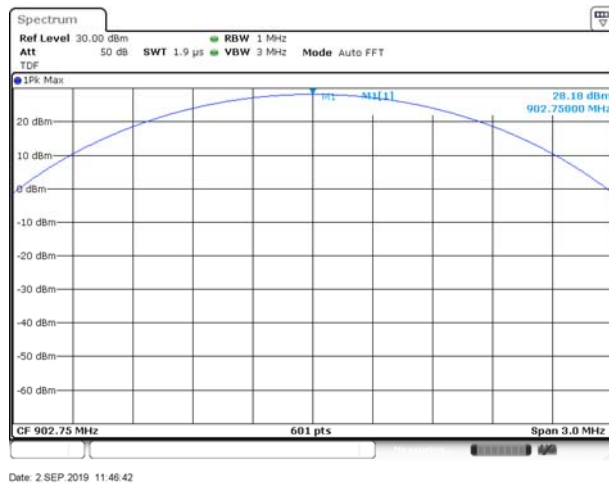
Date: 2 SEP. 2019 10:40:36

HIGH CHANNEL

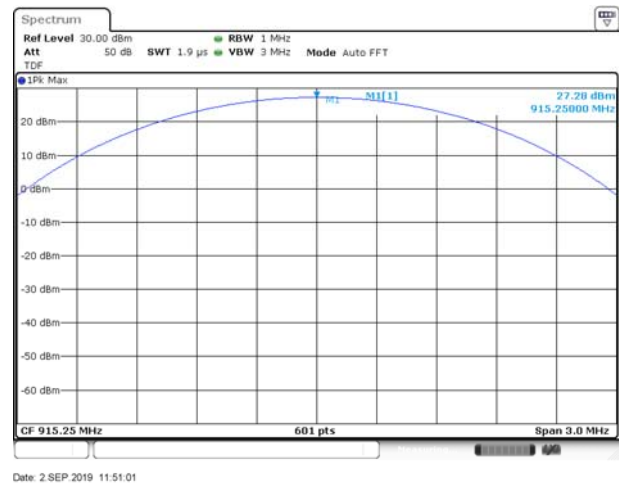


ANT 2

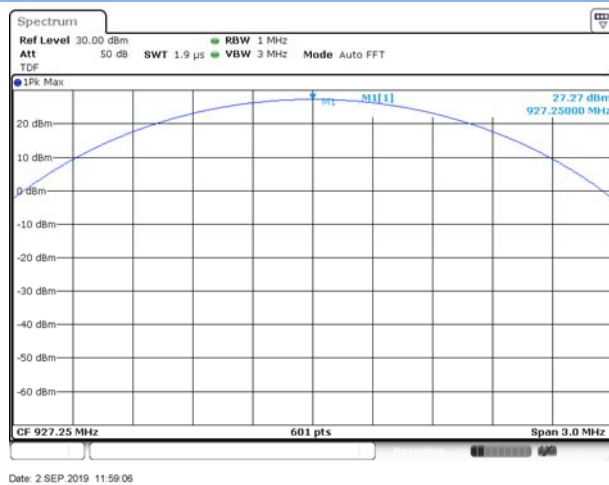
LOW CHANNEL



MIDDLE CHANNEL



HIGH CHANNEL



A.3 20 dB and 99% bandwidth

Test Data

ANT 1

RFID			
Channel	20 dB Bandwidth (MHz)	99% Bandwidth (MHz)	Verdict
Low	0.062866	0.061665	Pass
Middle	0.122314	0.117329	Pass
High	0.057678	0.059115	Pass

ANT 2

RFID			
Channel	20 dB Bandwidth (MHz)	99% Bandwidth (MHz)	Verdict
Low	0.063477	0.064516	Pass
Middle	0.066345	0.065866	Pass
High	0.062012	0.060015	Pass

ANT 1

Test plots (20 dB Bandwidth)

LOW CHANNEL



Date: 2 SEP 2019 10:35:51

MIDDLE CHANNEL



Date: 2 SEP 2019 10:43:02

HIGH CHANNEL



Test plots (99% Bandwidth)

LOW CHANNEL



MIDDLE CHANNEL



HIGH CHANNEL



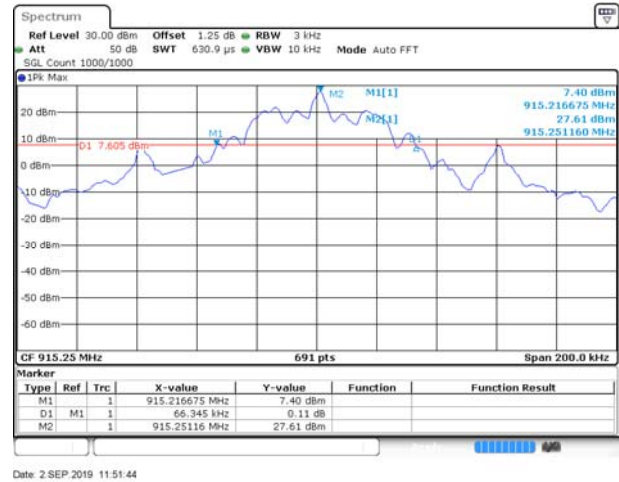
ANT 1

Test plots (20 dB Bandwidth)

LOW CHANNEL



MIDDLE CHANNEL



HIGH CHANNEL



Test plots (99% Bandwidth)

LOW CHANNEL



MIDDLE CHANNEL



HIGH CHANNEL



Date: 2 SEP 2019 11:59:52

A.4 Hopping Frequency Separation

Test Data

ANT 1

Mode	Frequency separation (kHz)	Max 20 dB Bandwidth (MHz)	Verdict
RFID	502.5	0.122314	Pass

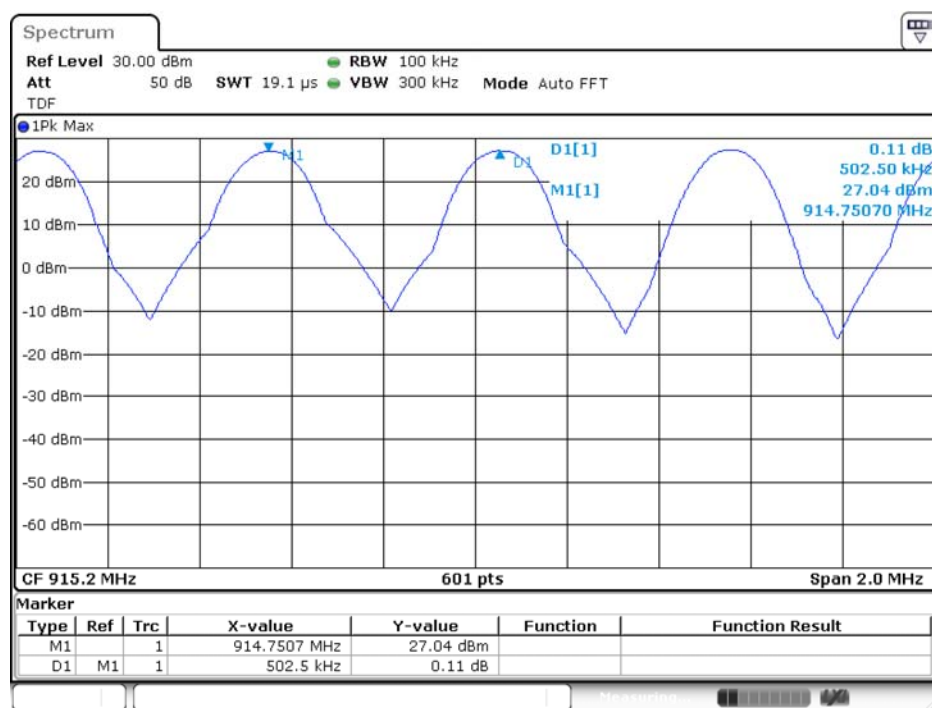
ANT 2

Mode	Frequency separation (kHz)	Max 20 dB Bandwidth (MHz)	Verdict
RFID	503.2	0.066345	Pass

Test Plots

ANT 1

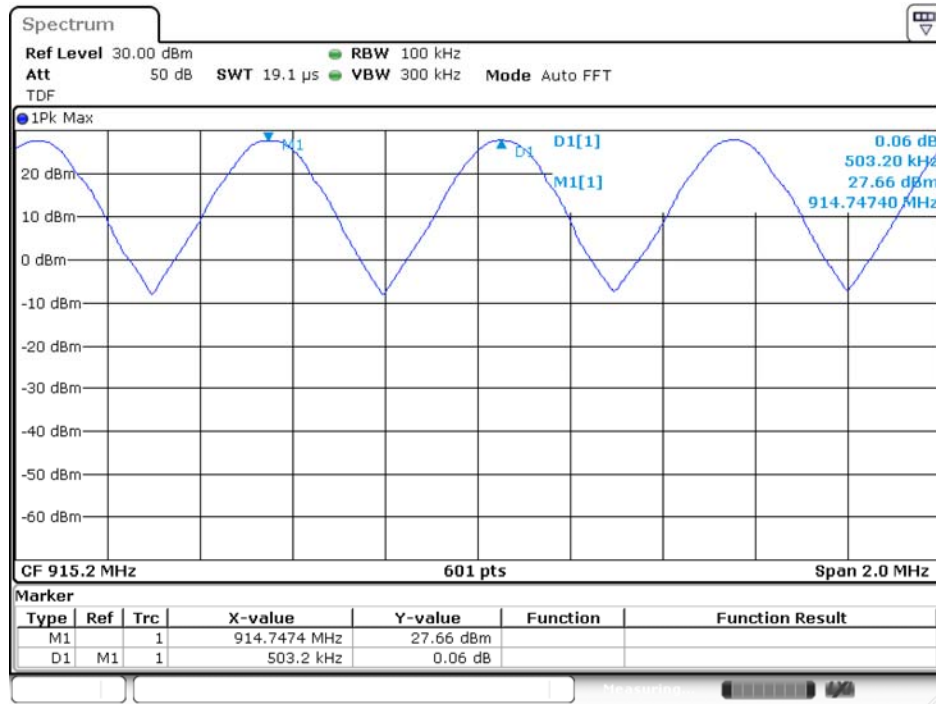
RFID



Date: 2 SEP.2019 09:53:53

ANT 2

RFID



Date: 2.SEP.2019 11:22:46

A.5 Average Time of Occupancy

Test Data

ANT 1

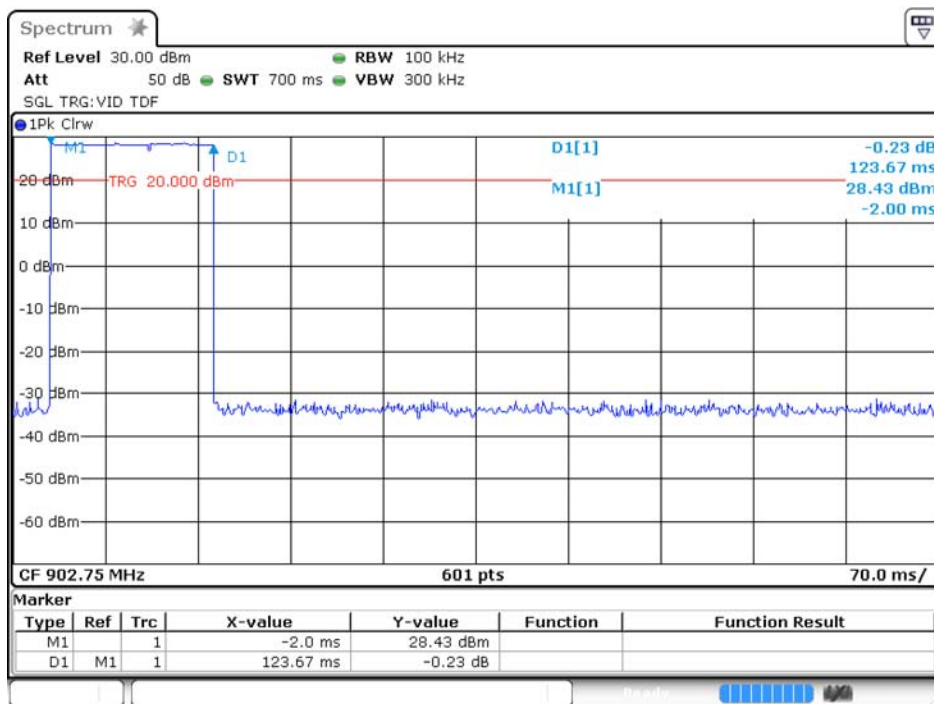
Total of Dwell(ms)	Limit (sec)	Verdict
247.340	0.4	Pass

ANT 2

Total of Dwell(ms)	Limit (sec)	Verdict
252.000	0.4	Pass

ANT 1

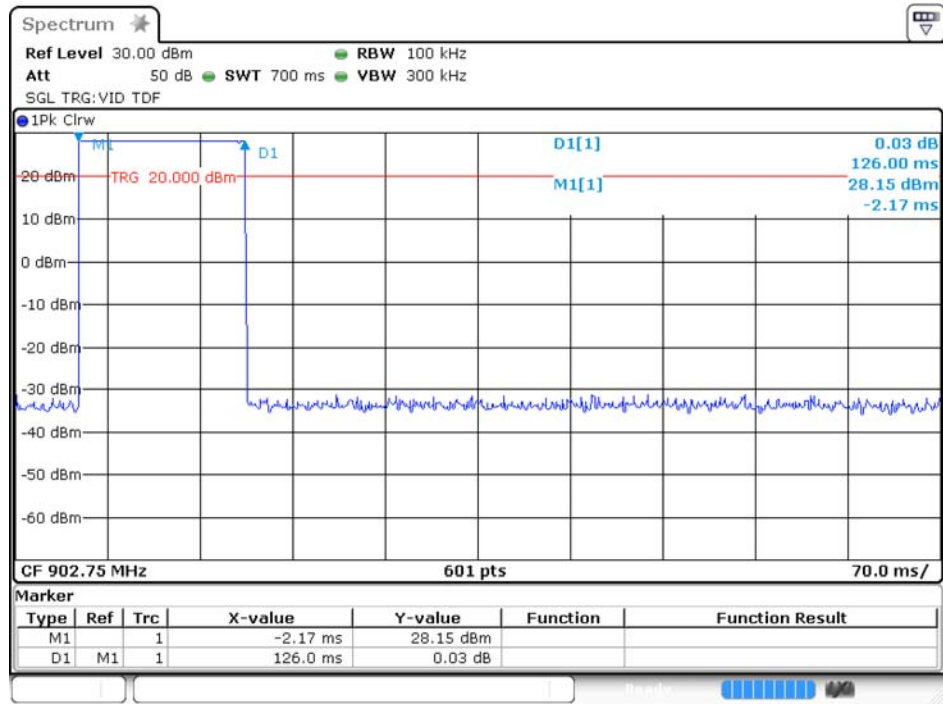
RFID



Date: 2.SEP.2019 10:23:03

ANT 2

RFID



Date: 2.SEP.2019 11:35:20

A.6 Conducted Spurious Emissions & Authorized-band band-edge

Test Data

ANT 1

RFID				
Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low	-18.48	28.37	8.37	Pass
Middle	-18.80	28.16	8.16	Pass
High	-18.05	26.50	6.50	Pass

RFID				
Mode	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Hopping	-17.25	28.49	8.49	Pass

ANT 2

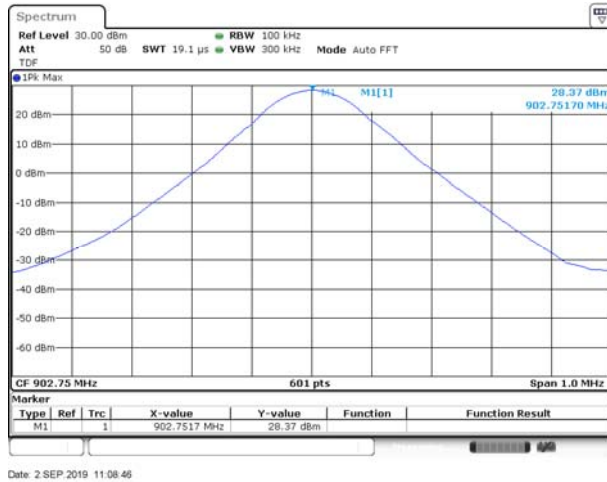
RFID				
Channel	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Low	-18.78	28.17	8.17	Pass
Middle	-18.21	27.58	7.58	Pass
High	-18.45	27.36	7.36	Pass

RFID				
Mode	Measured Max. Out of Band Emission (dBm)	Limit (dBm)		Verdict
		Carrier Level	Calculated 20 dBc Limit	
Hopping	-18.43	28.41	8.41	Pass

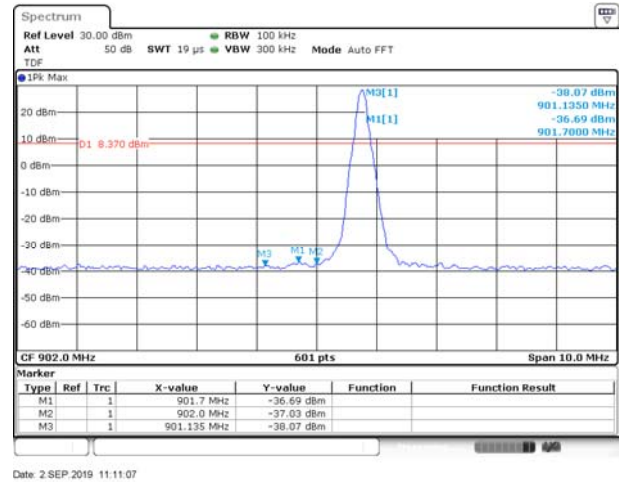
Test Plots

ANT 1

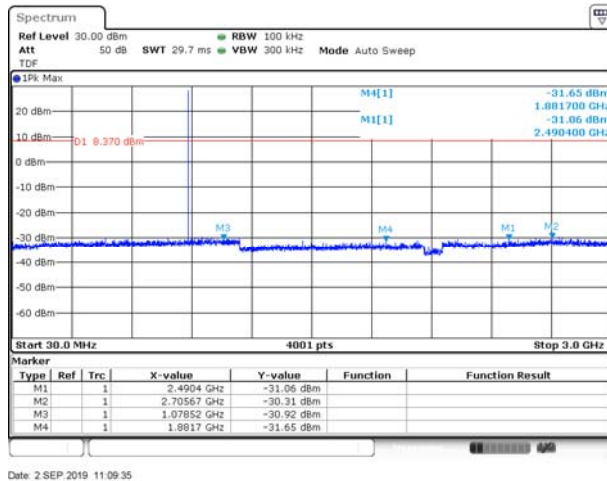
LOW CHANNEL, CARRIER LEVEL



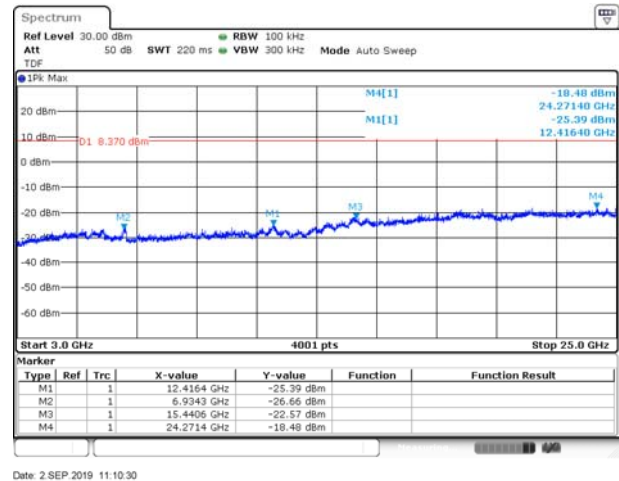
LOW CHANNEL, Band Edge



LOW CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



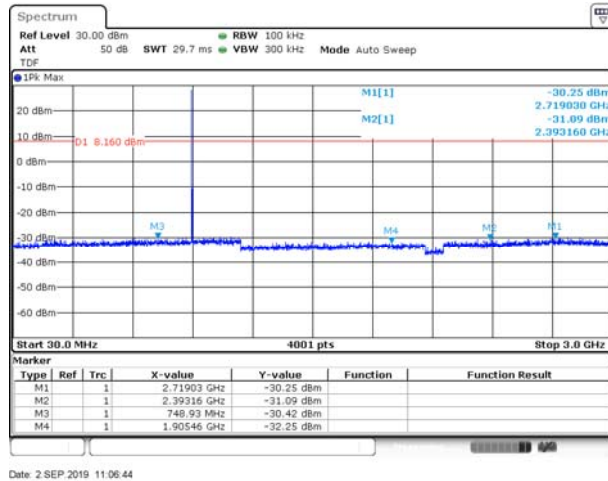
LOW CHANNEL, SPURIOUS 3 GHz ~ 25 GHz



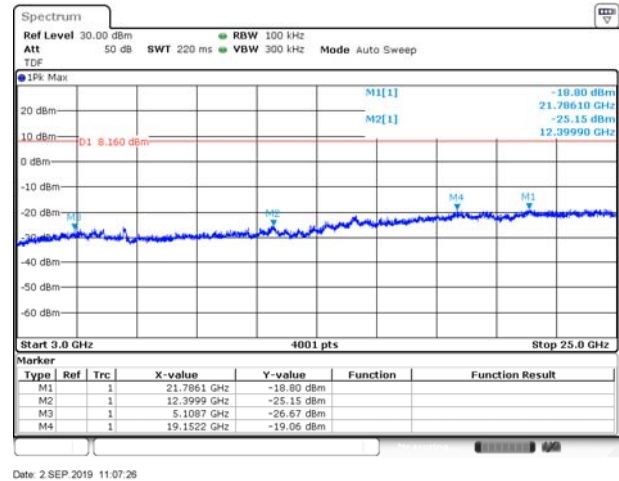
MIDDLE CHANNEL, CARRIER LEVEL



MIDDLE CHANNEL , SPURIOUS 30 MHz ~ 3 GHz



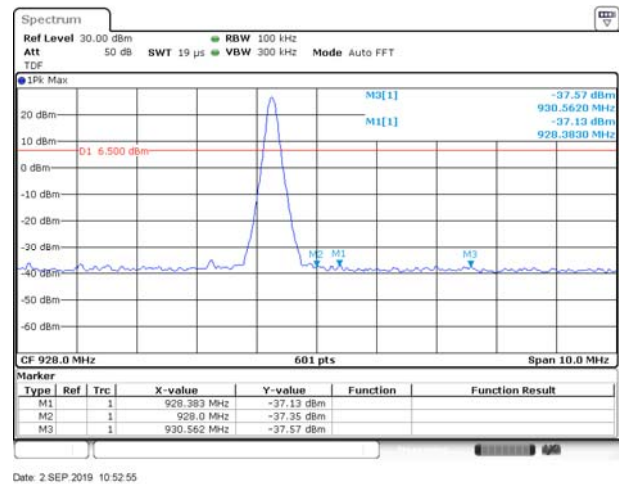
MIDDLE CHANNEL , SPURIOUS 3 GHz ~ 25 GHz



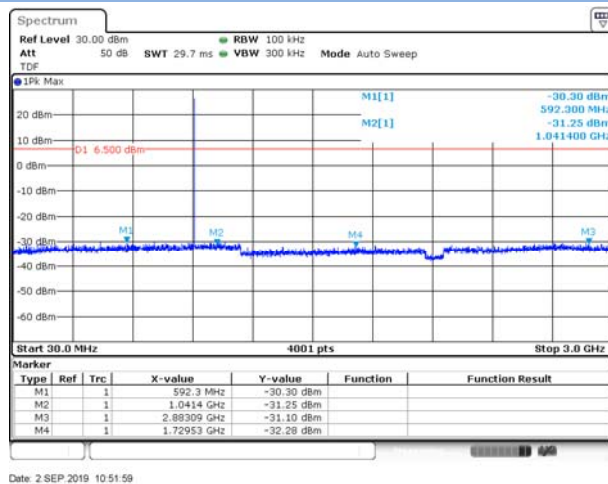
HIGH CHANNEL , CARRIER LEVEL



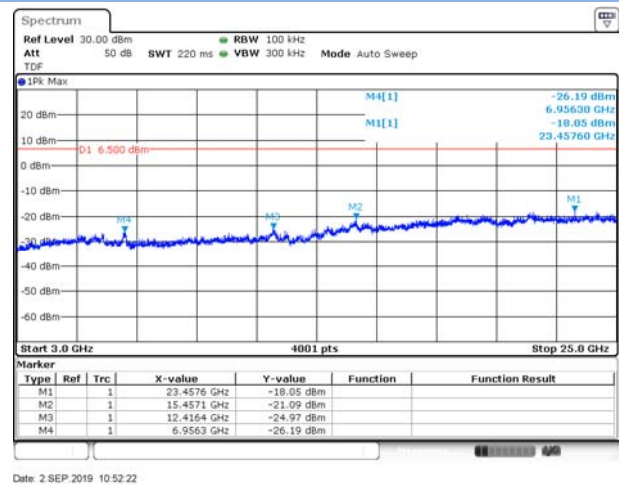
HIGH CHANNEL , BAND EDGE



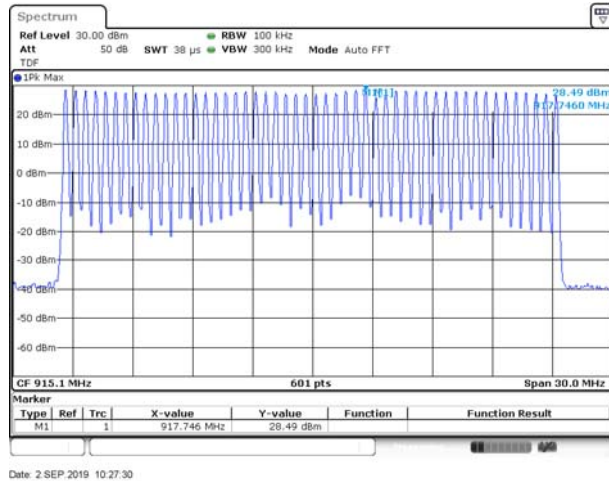
HIGH CHANNEL , SPURIOUS 30 MHz ~ 3 GHz



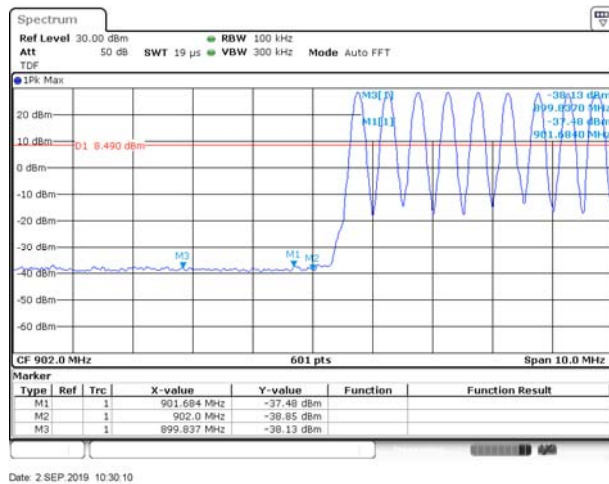
HIGH CHANNEL , SPURIOUS 3 GHz ~ 25 GHz



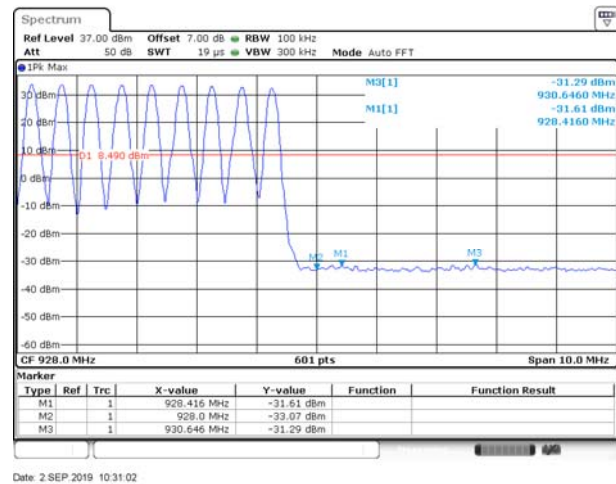
HOPPING, CARRIER LEVEL



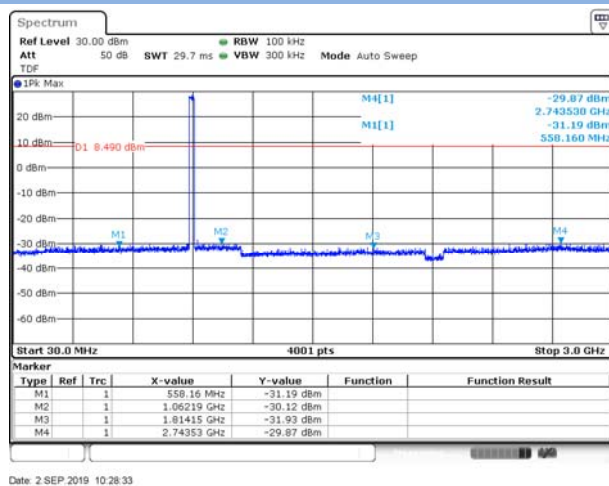
Hopping BAND EDGE (LOW)



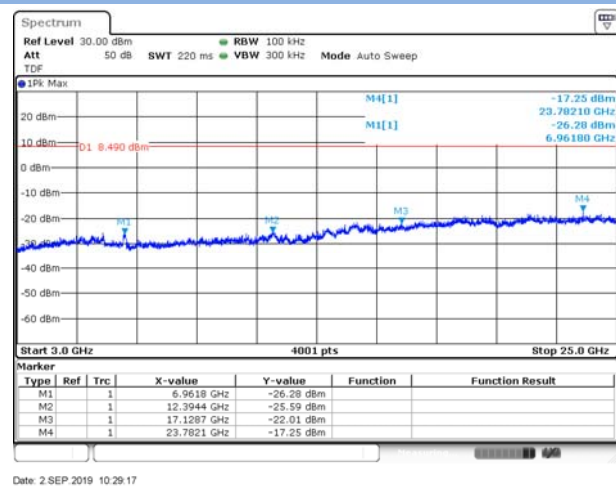
Hopping BAND EDGE (HIGH)



Hopping Mode, SPURIOUS 30 MHz ~ 3 GHz



Hopping Mode, SPURIOUS 3 GHz ~ 25 GHz

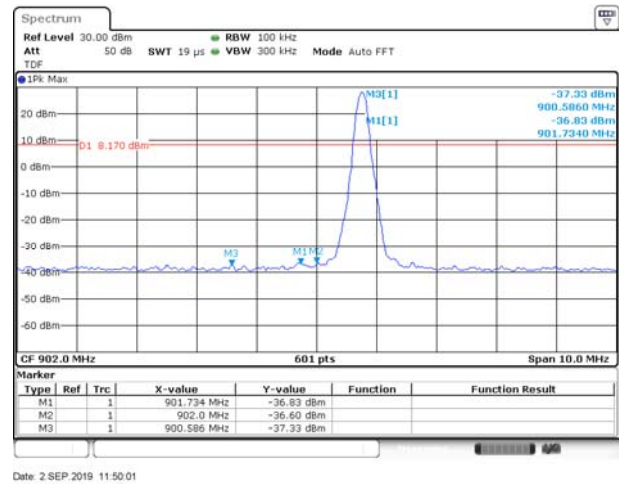


ANT 2

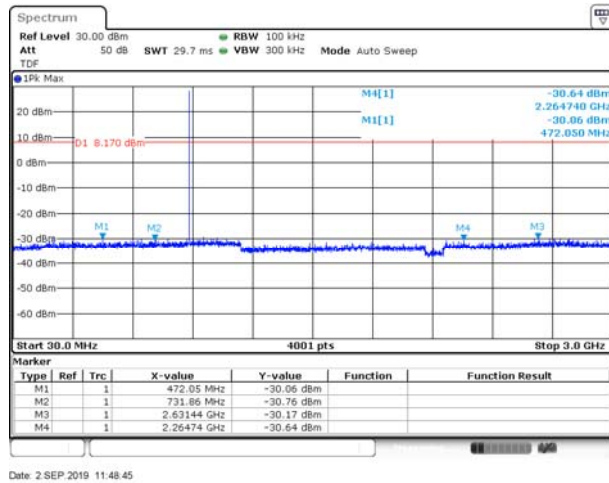
LOW CHANNEL, CARRIER LEVEL



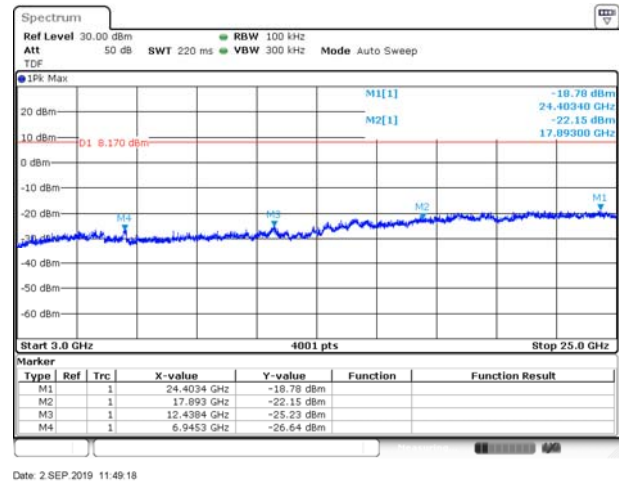
LOW CHANNEL, Band Edge



LOW CHANNEL, SPURIOUS 30 MHz ~ 3 GHz



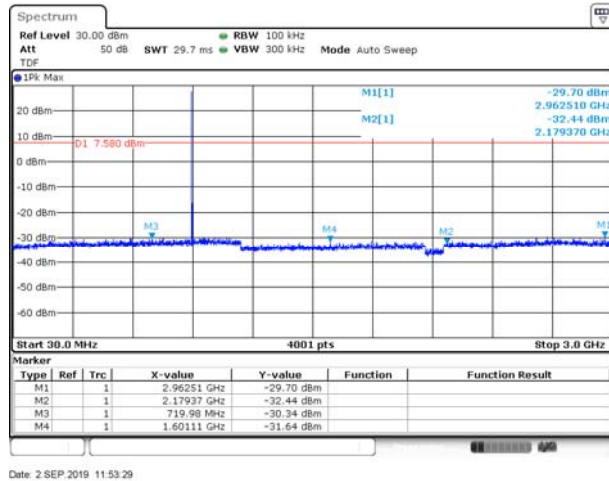
LOW CHANNEL, SPURIOUS 3 GHz ~ 25 GHz



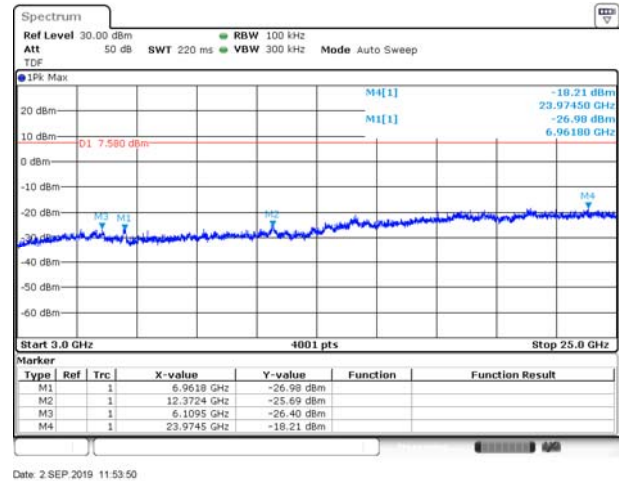
MIDDLE CHANNEL, CARRIER LEVEL



MIDDLE CHANNEL , SPURIOUS 30 MHz ~ 3 GHz



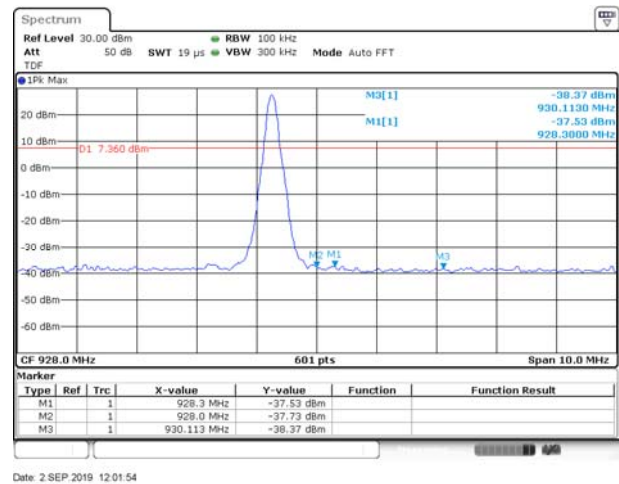
MIDDLE CHANNEL , SPURIOUS 3 GHz ~ 25 GHz



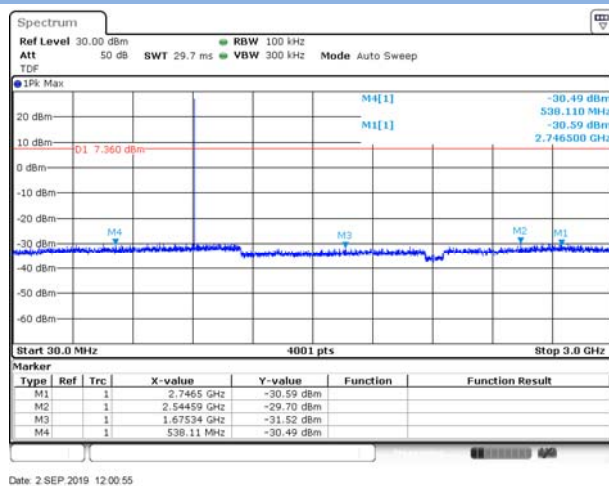
HIGH CHANNEL, CARRIER LEVEL



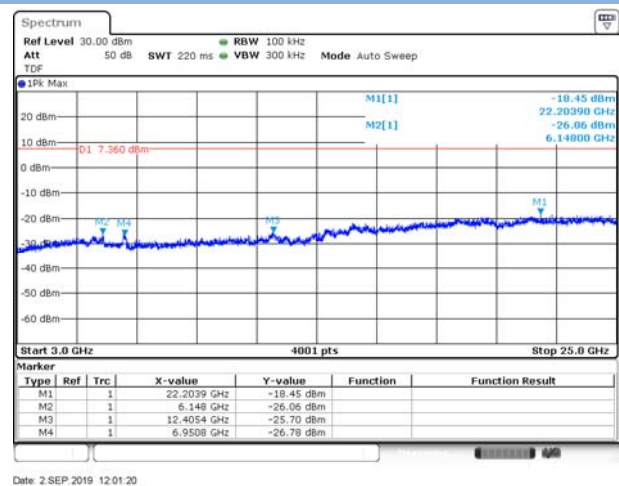
HIGH CHANNEL , BAND EDGE



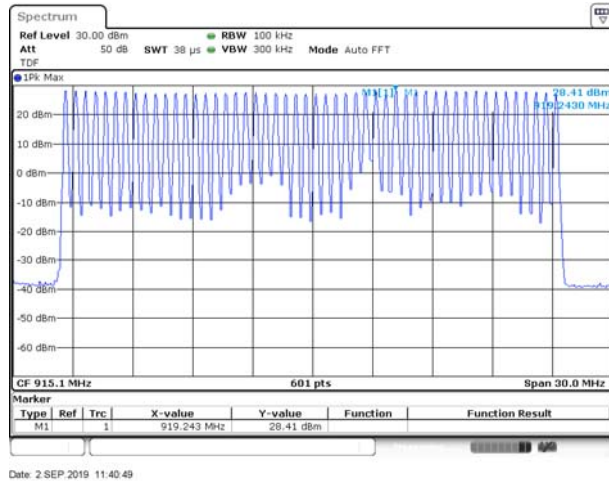
HIGH CHANNEL , SPURIOUS 30 MHz ~ 3 GHz



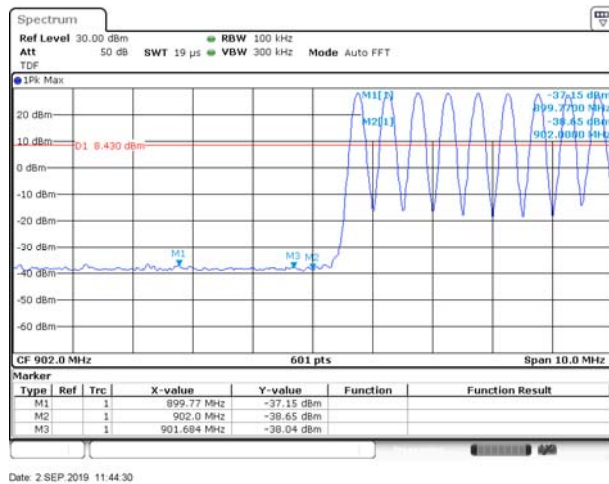
HIGH CHANNEL , SPURIOUS 3 GHz ~ 25 GHz



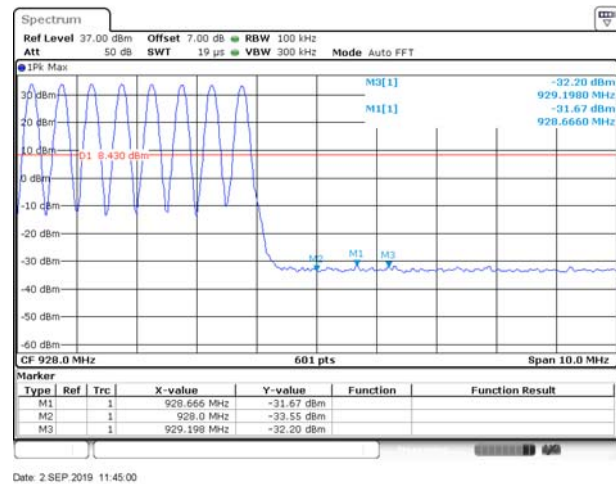
HOPPING, CARRIER LEVEL



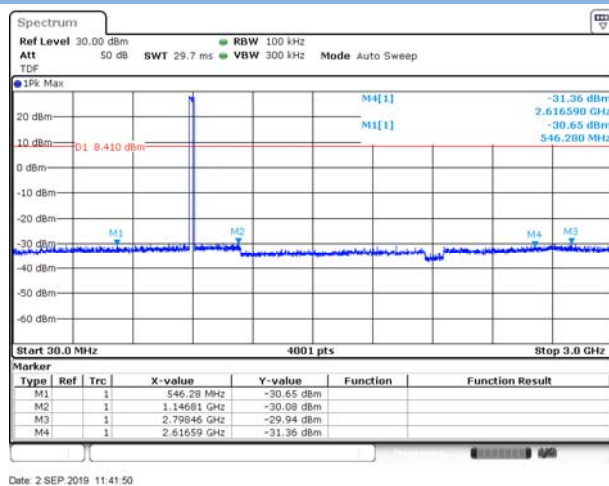
Hopping BAND EDGE (LOW)



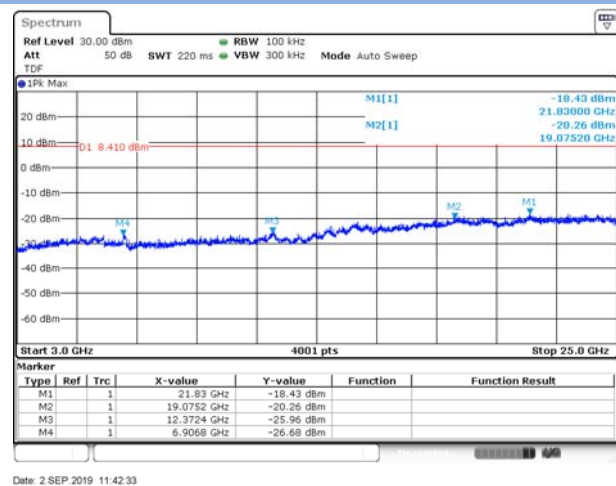
Hopping BAND EDGE (HIGH)



Hopping Mode, SPURIOUS 30 MHz ~ 3 GHz



Hopping Mode, SPURIOUS 3 GHz ~ 25 GHz



A.7 Conducted Emissions

Note¹: The EUT is working in the Normal link mode.

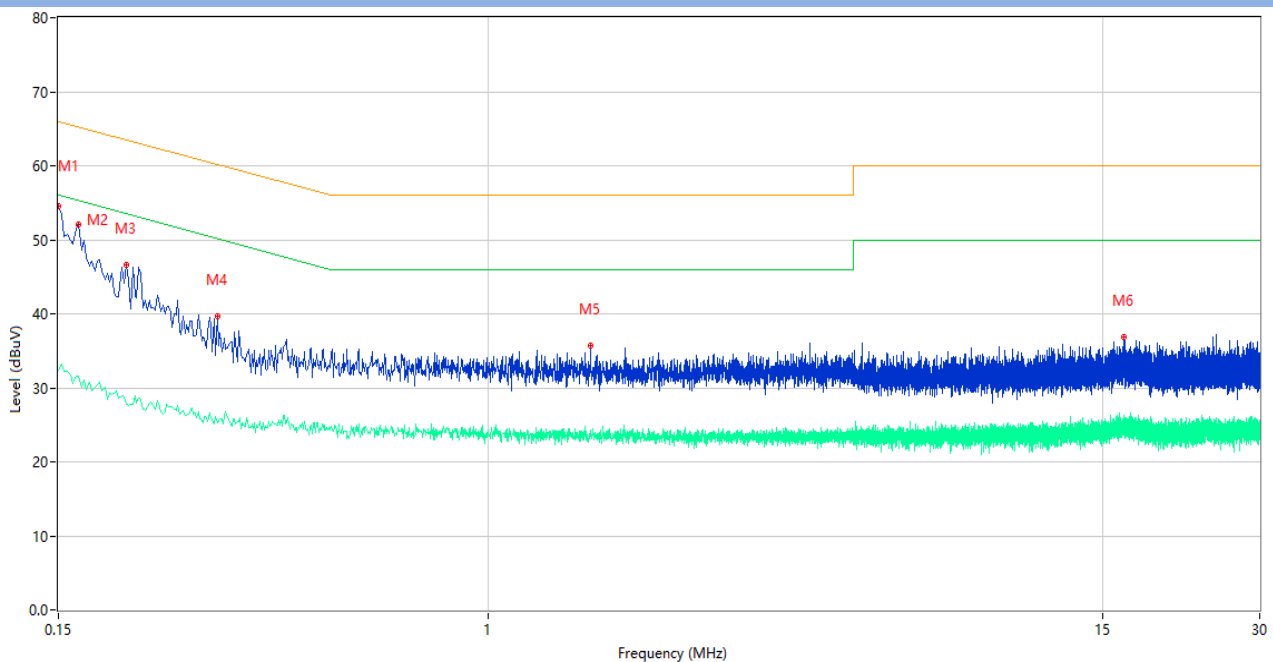
Note²: Devices subject to Part 15 must be tested for all available U.S. voltages and frequencies (such as a nominal 120 VAC, 60 Hz and 240 VAC, 50 Hz) for which the device is capable of operation. So, The configuration 120 VAC, 60 Hz and 240 VAC, 50 Hz were tested respectively, but only the worst configuration (120 VAC, 60 Hz) shown here.

Note³: Results (dBuV) = Original reading level of Spectrum Analyzer (dBuV) + Factor (dB)

Test Data and Plots

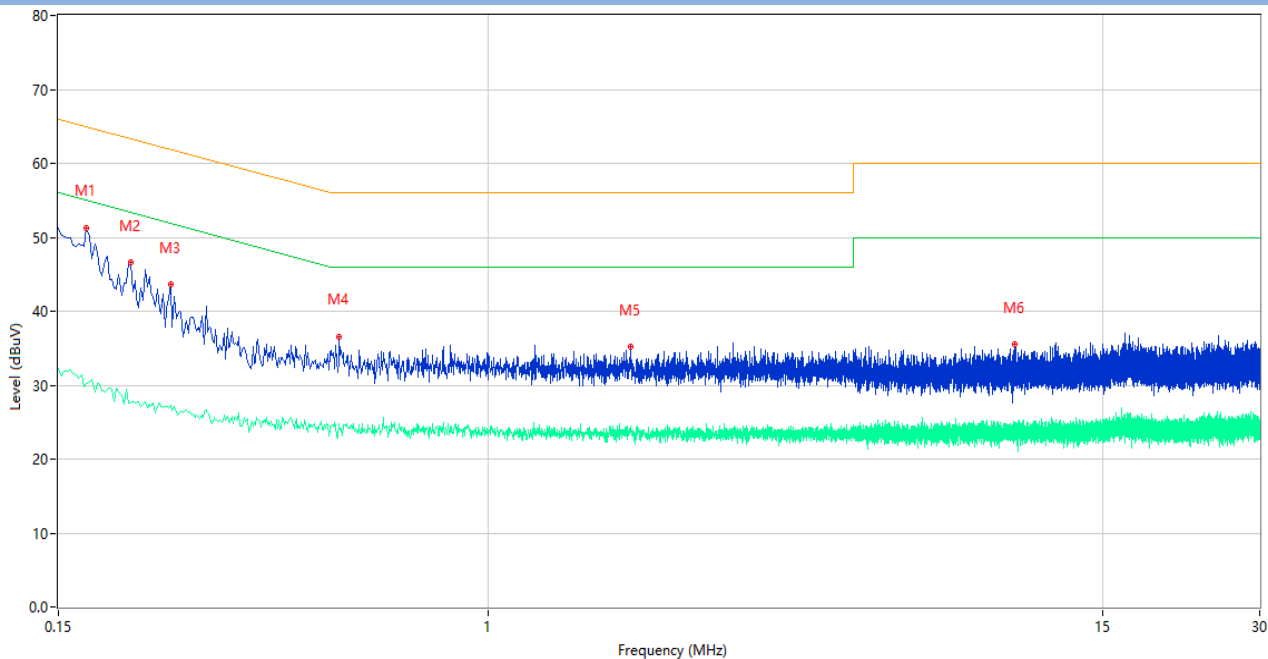
ANT 1

PHASE L



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.150	54.48	10.41	66.00	-11.52	Peak	L	Pass
1**	0.150	32.39	10.41	56.00	-23.61	AV	L	Pass
2	0.164	52.06	10.40	65.26	-13.20	Peak	L	Pass
2**	0.164	31.50	10.40	55.26	-23.76	AV	L	Pass
3	0.202	46.63	10.38	63.53	-16.90	Peak	L	Pass
3**	0.202	27.85	10.38	53.53	-25.68	AV	L	Pass
4	0.302	39.71	10.33	60.19	-20.48	Peak	L	Pass
4**	0.302	25.36	10.33	50.19	-24.83	AV	L	Pass
5	1.570	35.69	10.24	56.00	-20.31	Peak	L	Pass
5**	1.570	24.14	10.24	46.00	-21.86	AV	L	Pass
6	16.498	36.87	10.45	60.00	-23.13	Peak	L	Pass
6**	16.498	26.05	10.45	50.00	-23.95	AV	L	Pass

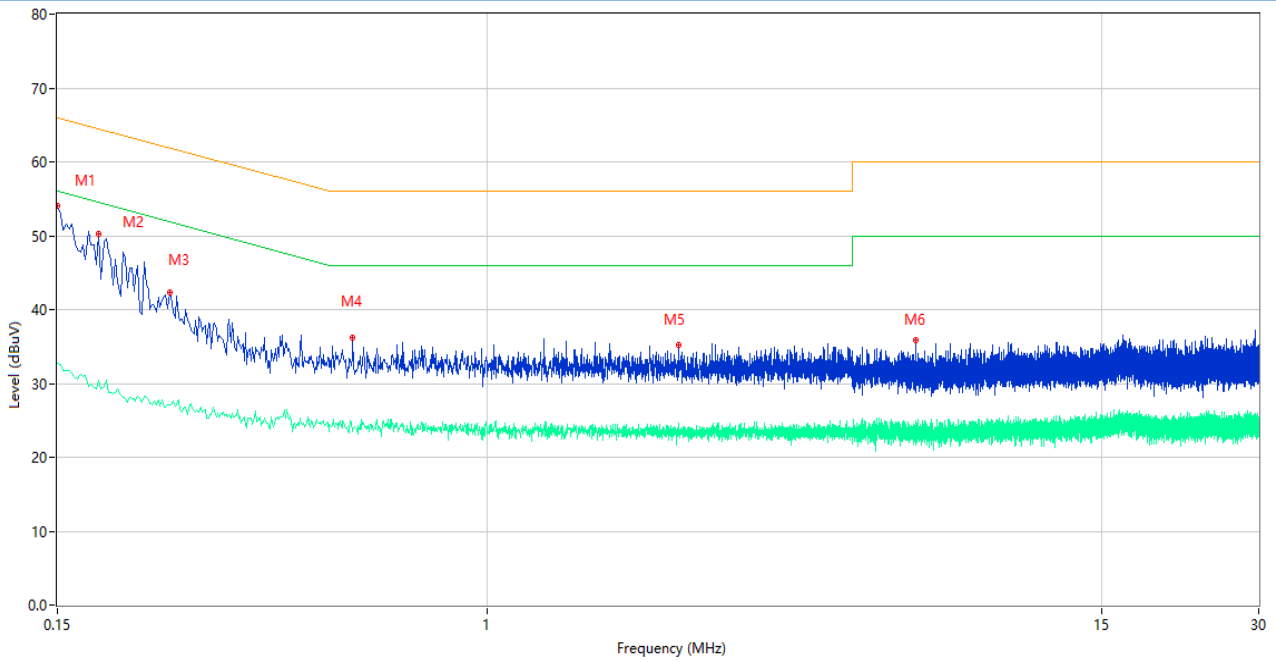
PHASE N



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.170	51.31	10.40	64.96	-13.65	Peak	N	Pass
1**	0.170	30.32	10.40	54.96	-24.64	AV	N	Pass
2	0.206	46.62	10.38	63.37	-16.75	Peak	N	Pass
2**	0.206	27.67	10.38	53.37	-25.70	AV	N	Pass
3	0.246	43.59	10.34	61.89	-18.30	Peak	N	Pass
3**	0.246	27.29	10.34	51.89	-24.60	AV	N	Pass
4	0.518	36.57	10.30	56.00	-19.43	Peak	N	Pass
4**	0.518	24.64	10.30	46.00	-21.36	AV	N	Pass
5	1.872	35.16	10.24	56.00	-20.84	Peak	N	Pass
5**	1.872	23.95	10.24	46.00	-22.05	AV	N	Pass
6	10.160	35.55	10.37	60.00	-24.45	Peak	N	Pass
6**	10.160	22.85	10.37	50.00	-27.15	AV	N	Pass

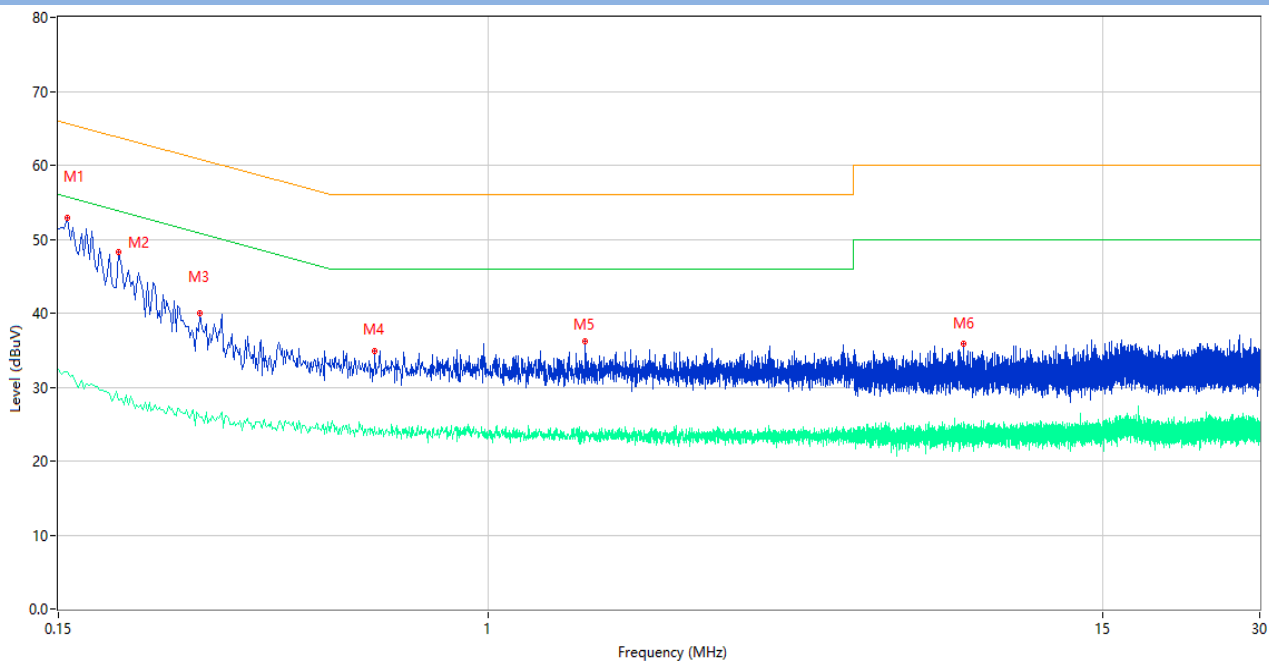
ANT 2

PHASE L



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.150	54.08	10.41	66.00	-11.92	Peak	L	Pass
1**	0.150	32.76	10.41	56.00	-23.24	AV	L	Pass
2	0.180	50.23	10.39	64.49	-14.26	Peak	L	Pass
2**	0.180	30.41	10.39	54.49	-24.08	AV	L	Pass
3	0.246	42.39	10.34	61.89	-19.50	Peak	L	Pass
3**	0.246	27.10	10.34	51.89	-24.79	AV	L	Pass
4	0.552	36.12	10.28	56.00	-19.88	Peak	L	Pass
4**	0.552	23.77	10.28	46.00	-22.23	AV	L	Pass
5	2.320	35.13	10.27	56.00	-20.87	Peak	L	Pass
5**	2.320	23.74	10.27	46.00	-22.26	AV	L	Pass
6	6.602	35.90	10.34	60.00	-24.10	Peak	L	Pass
6**	6.602	23.92	10.34	50.00	-26.08	AV	L	Pass

PHASE N



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Over Limit (dB)	Detector	Line	Verdict
1	0.154	51.47	10.41	65.78	-14.31	Peak	N	Pass
1**	0.154	32.04	10.41	55.78	-23.74	AV	N	Pass
2	0.196	48.20	10.38	63.78	-15.58	Peak	N	Pass
2**	0.196	28.28	10.38	53.78	-25.50	AV	N	Pass
3	0.280	40.00	10.34	60.82	-20.82	Peak	N	Pass
3**	0.280	25.99	10.34	50.82	-24.83	AV	N	Pass
4	0.606	34.89	10.28	56.00	-21.11	Peak	N	Pass
4**	0.606	24.06	10.28	46.00	-21.94	AV	N	Pass
5	1.534	36.12	10.24	56.00	-19.88	Peak	N	Pass
5**	1.534	24.03	10.24	46.00	-21.97	AV	N	Pass
6	8.112	35.86	10.35	60.00	-24.14	Peak	N	Pass
6**	8.112	23.29	10.35	50.00	-26.71	AV	N	Pass

A.8 Radiated Spurious Emission

Note 1: The symbol of “--” in the table which means not application.

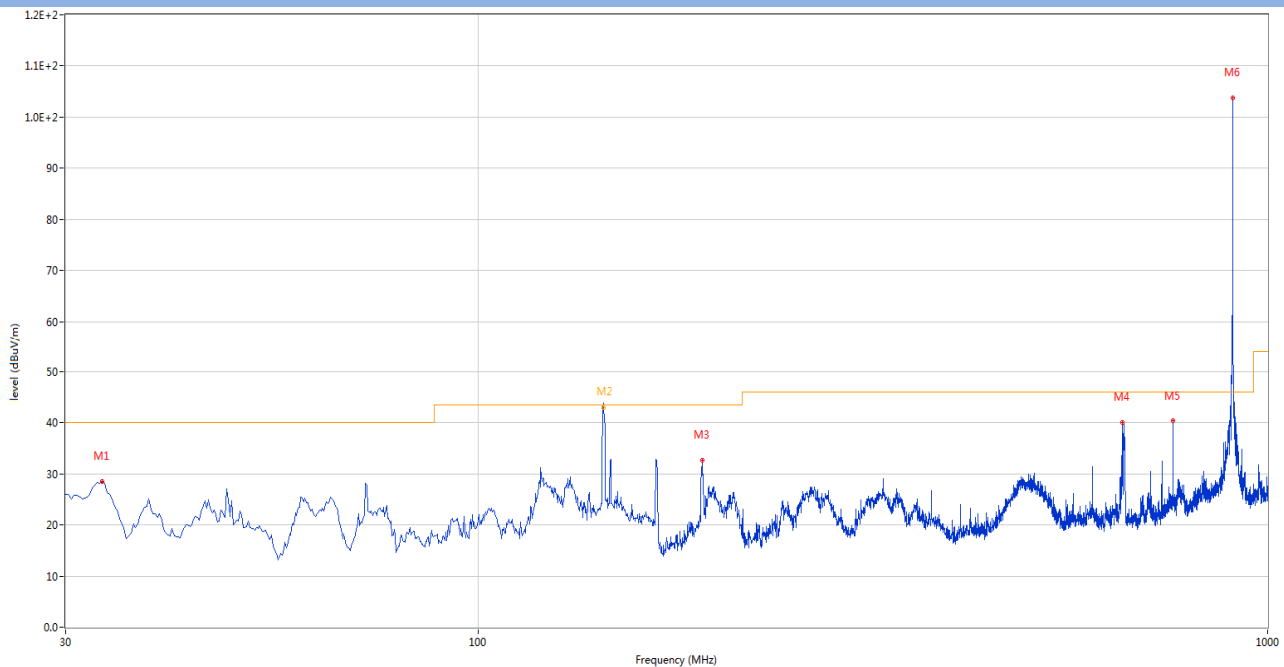
Note 2: For the test data above 1 GHz, according the ANSI C63.10-2013, where limits are specified for both average and peak (or quasi-peak) detector functions, if the peak (or quasi-peak) measured value complies with the average limit, it is unnecessary to perform an average measurement.

Note 3: The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.

Test Data and Plots

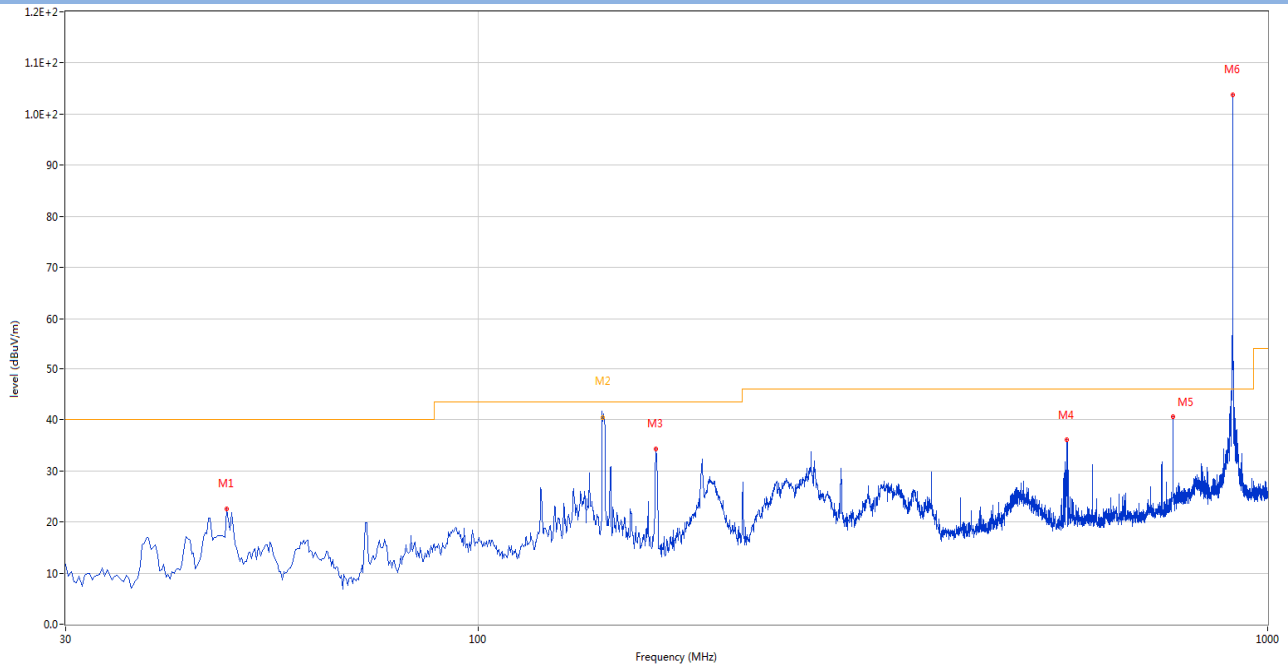
ANT 1

LOW CHANNEL, ANT V



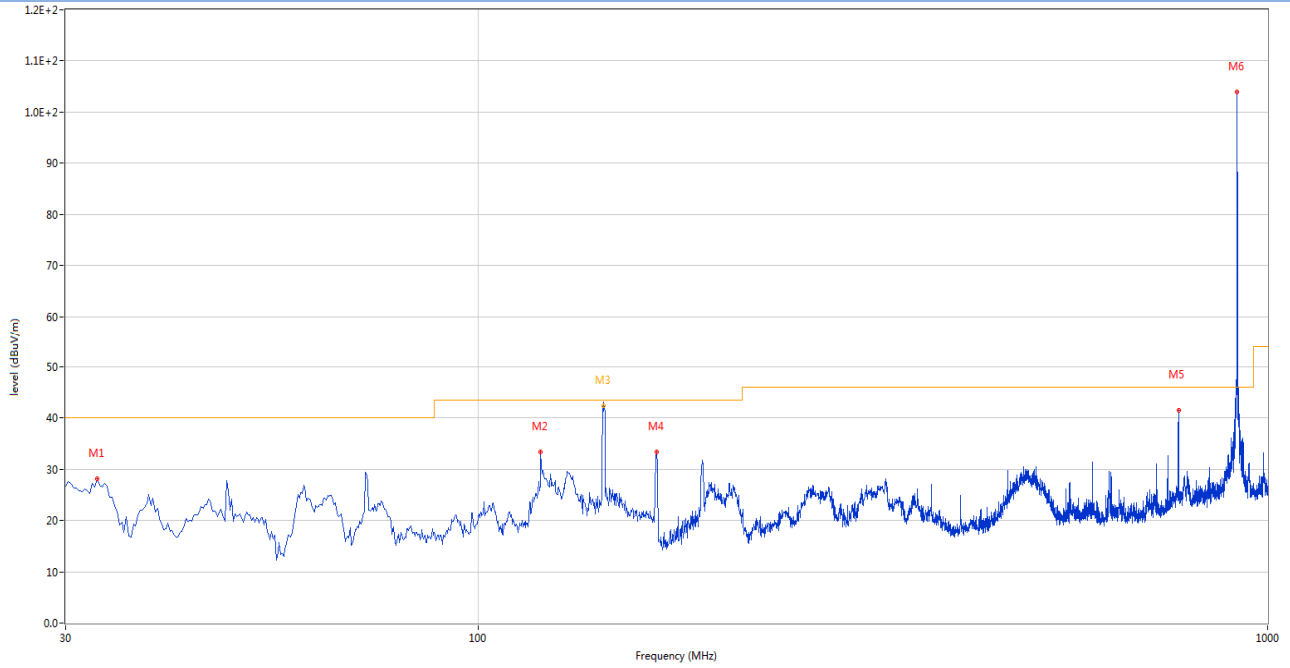
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	33.395	28.57	-26.23	40.0	-11.43	Peak	360.00	200	Vertical	Pass
2	144.028	44.35	-27.70	43.5	0.85	Peak	59.80	101	Vertical	N/A
2*	144.028	42.89	-27.70	43.5	-0.61	QP	59.80	101	Vertical	Pass
3	191.990	32.70	-25.08	43.5	-10.80	Peak	205.60	100	Vertical	Pass
4	654.922	40.03	-13.86	46.0	-5.97	Peak	173.00	200	Vertical	Pass
5	758.713	40.38	-11.83	46.0	-5.62	Peak	143.50	100	Vertical	Pass
6	902.758	103.83	-9.68	46.0	57.83	Peak	360.00	200	Vertical	N/A

LOW CHANNEL, ANT H



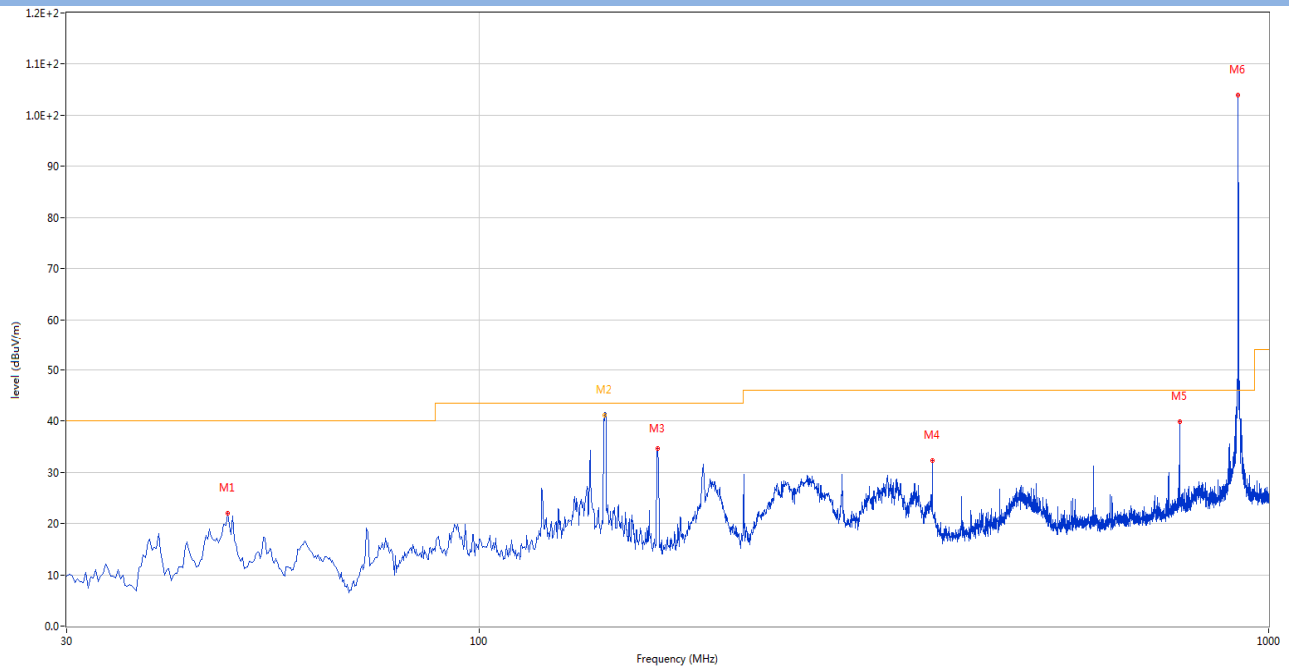
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	47.945	22.53	-22.65	40.0	-17.47	Peak	358.00	200	Horizontal	Pass
2	143.791	44.38	-27.78	43.5	0.88	Peak	153.10	200	Horizontal	N/A
2*	143.791	40.38	-27.78	43.5	-3.12	QP	153.10	200	Horizontal	Pass
3	167.982	34.34	-27.17	43.5	-9.16	Peak	132.30	200	Horizontal	Pass
4	556.710	36.04	-15.46	46.0	-9.96	Peak	123.40	100	Horizontal	Pass
5	758.713	40.58	-11.83	46.0	-5.42	Peak	132.30	200	Horizontal	Pass
6	902.758	103.85	-9.68	46.0	57.85	Peak	6.80	200	Horizontal	N/A

MIDDLE CHANNEL, ANT V



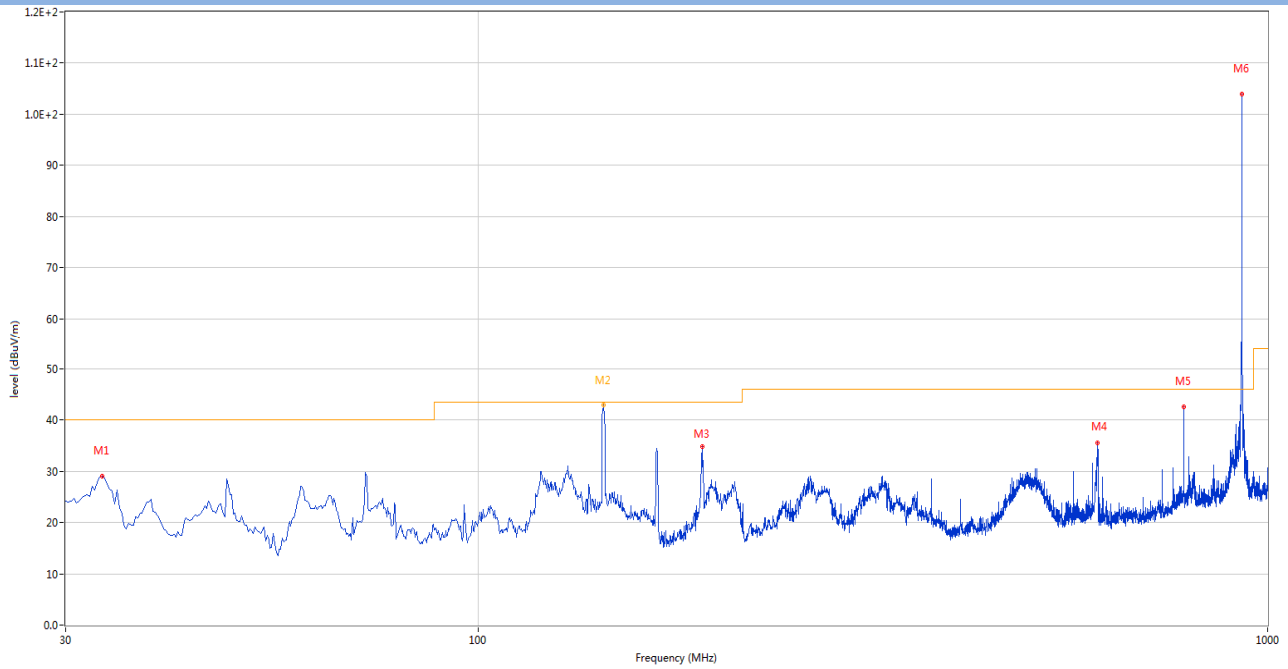
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	32.910	28.09	-26.41	40.0	-11.91	Peak	81.20	100	Vertical	Pass
2	119.967	33.39	-25.81	43.5	-10.11	Peak	81.20	100	Vertical	Pass
3	144.120	44.79	-27.70	43.5	1.29	Peak	81.20	100	Vertical	N/A
3*	144.120	42.44	-27.70	43.5	-1.06	QP	81.20	100	Vertical	Pass
4	168.225	33.35	-27.20	43.5	-10.15	Peak	123.10	100	Vertical	Pass
5	771.322	41.52	-11.64	46.0	-4.48	Peak	39.40	100	Vertical	Pass
6	915.367	103.97	-9.45	46.0	57.97	Peak	81.20	100	Vertical	N/A

MIDDLE CHANNEL, ANT H



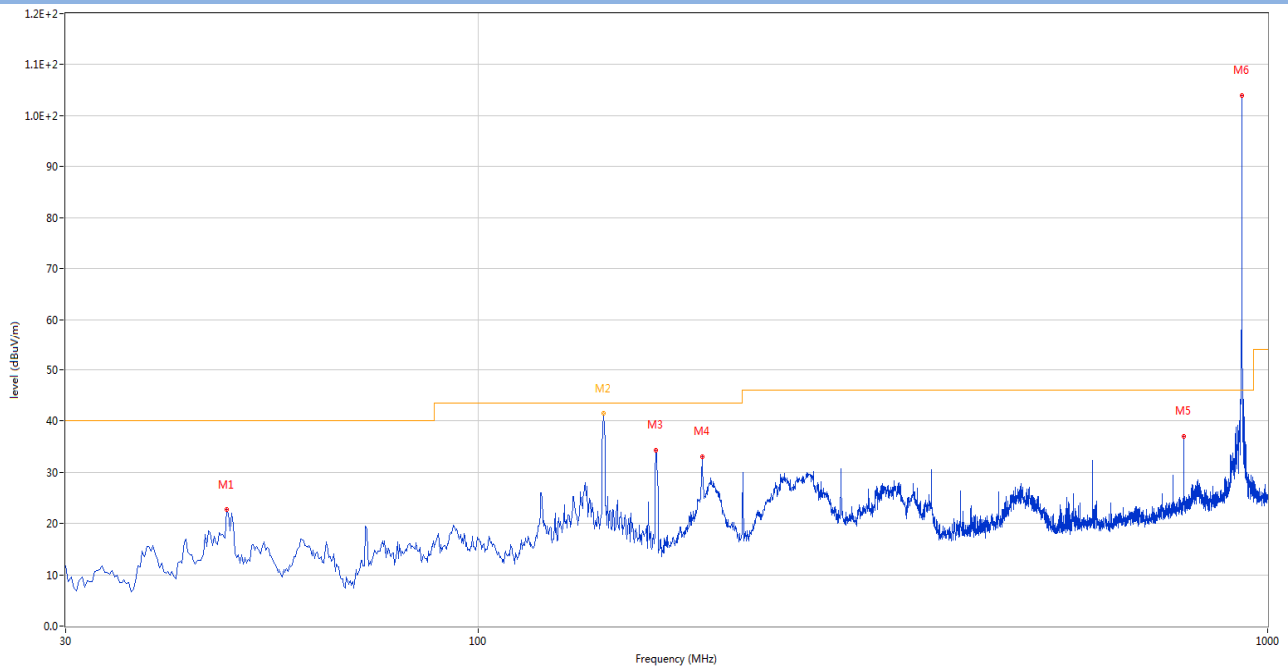
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	47.945	21.94	-22.65	40.0	-18.06	Peak	29.10	200	Horizontal	Pass
2	143.993	42.48	-27.70	43.5	-1.02	Peak	175.00	200	Horizontal	N/A
2*	143.993	41.11	-27.70	43.5	-2.39	QP	175.00	200	Horizontal	Pass
3	168.225	34.67	-27.20	43.5	-8.83	Peak	123.00	100	Horizontal	Pass
4	375.078	32.36	-19.08	46.0	-13.64	Peak	91.80	200	Horizontal	Pass
5	771.322	39.88	-11.64	46.0	-6.12	Peak	153.80	200	Horizontal	Pass
6	915.367	104.01	-9.45	46.0	58.01	Peak	143.80	100	Horizontal	N/A

HIGH CHANNEL, ANT V



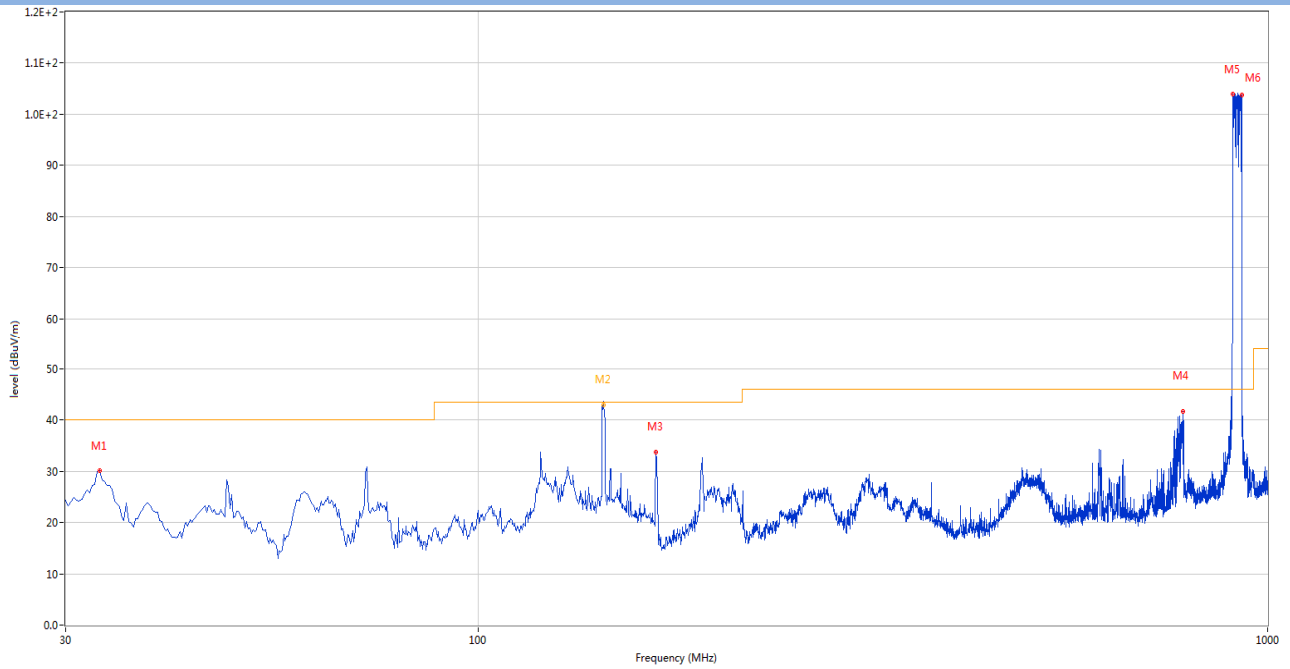
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	33.395	29.07	-26.23	40.0	-10.93	Peak	102.10	100	Vertical	Pass
2	144.038	44.33	-27.70	43.5	0.83	Peak	81.20	100	Vertical	N/A
2*	144.038	42.96	-27.70	43.5	-0.54	QP	81.20	100	Vertical	Pass
3	191.990	34.85	-25.08	43.5	-8.65	Peak	206.60	100	Vertical	Pass
4	609.090	35.50	-14.27	46.0	-10.50	Peak	39.40	100	Vertical	Pass
5	783.205	42.67	-11.94	46.0	-3.33	Peak	39.40	100	Vertical	Pass
6	927.250	103.94	-9.44	46.0	57.94	Peak	122.90	100	Vertical	N/A

HIGH CHANNEL, ANT H



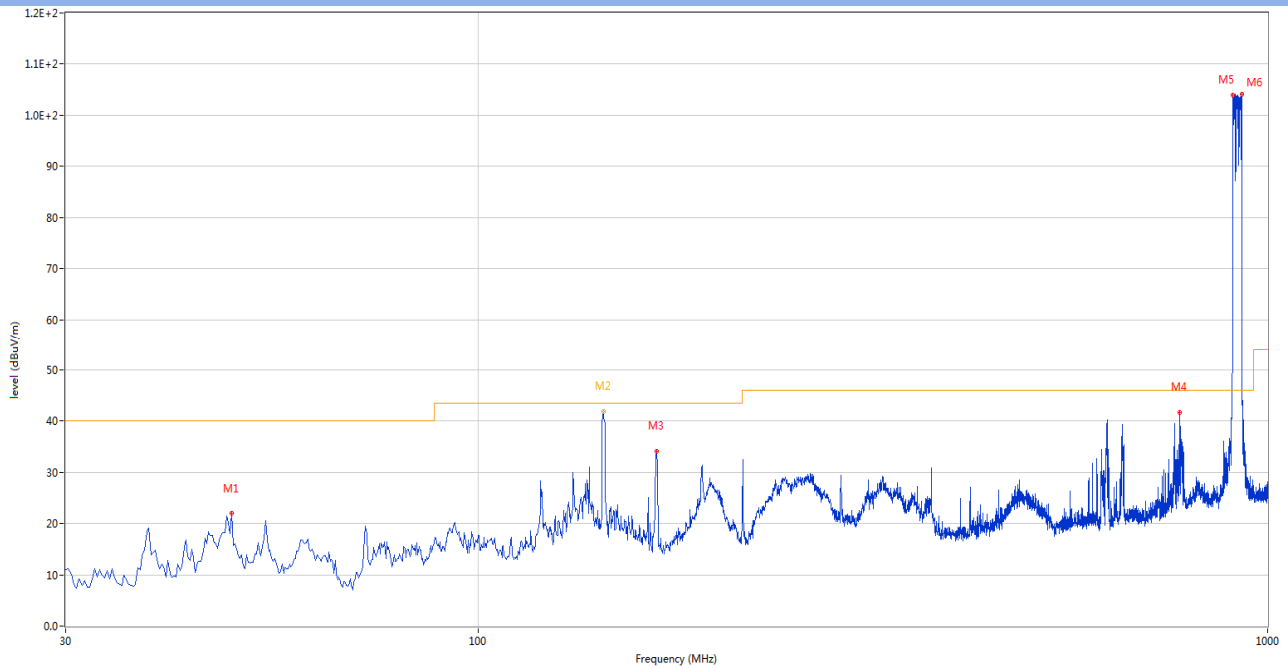
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	47.945	22.69	-22.65	40.0	-17.31	Peak	194.70	200	Horizontal	Pass
2	144.001	42.58	-27.66	43.5	-0.92	Peak	173.70	192	Horizontal	N/A
2*	144.001	41.52	-27.66	43.5	-1.98	QP	173.70	192	Horizontal	Pass
3	167.982	34.33	-27.17	43.5	-9.17	Peak	152.90	200	Horizontal	Pass
4	191.990	32.99	-25.08	43.5	-10.51	Peak	360.00	100	Horizontal	Pass
5	783.205	37.01	-11.94	46.0	-8.99	Peak	152.90	200	Horizontal	Pass
6	927.250	103.95	-9.44	46.0	57.95	Peak	257.60	200	Horizontal	N/A

HOPPING MODE, ANT V



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	33.153	30.07	-26.32	40.0	-9.93	Peak	18.40	100	Vertical	Pass
2	144.060	44.70	-27.70	43.5	1.20	Peak	39.40	106	Vertical	N/A
2*	144.060	43.03	-27.70	43.5	-0.47	QP	39.40	106	Vertical	Pass
3	167.982	33.74	-27.17	43.5	-9.76	Peak	144.00	100	Vertical	Pass
4	781.265	41.65	-12.05	46.0	-4.35	Peak	18.40	100	Vertical	Pass
5	903.242	103.91	-9.52	46.0	57.91	Peak	81.20	100	Vertical	N/A
6	926.765	103.69	-9.20	46.0	57.69	Peak	258.40	200	Vertical	N/A

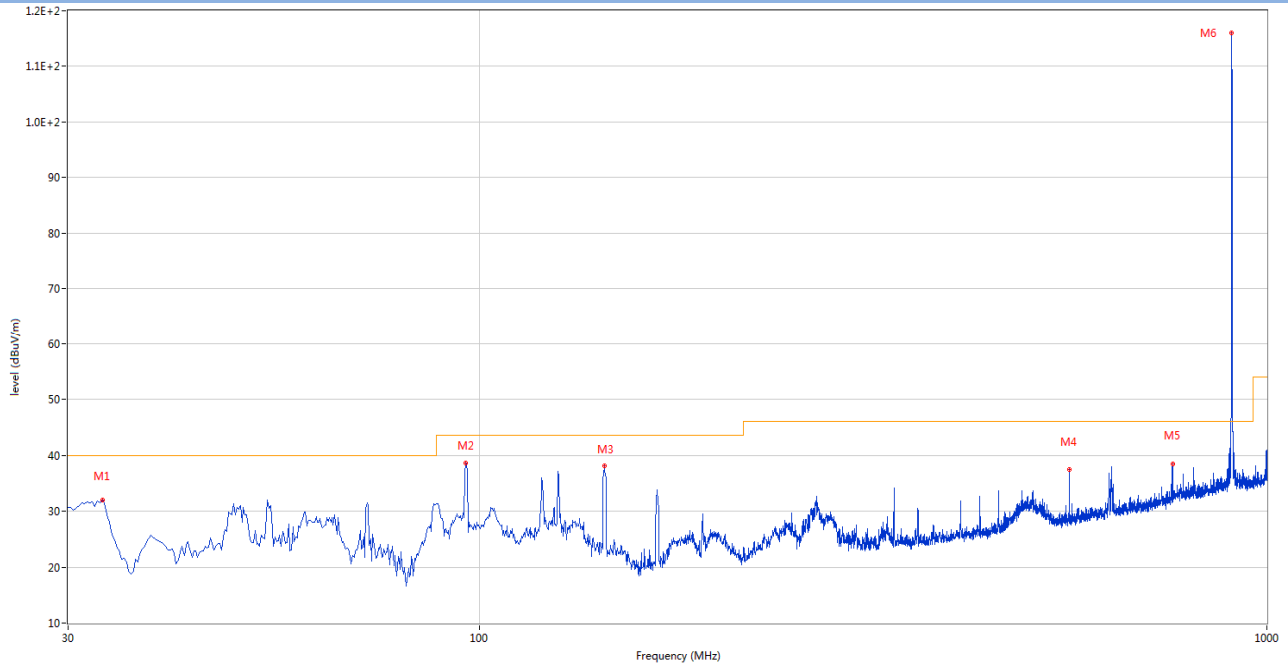
HOPPING MODE, ANT H



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	48.672	21.95	-22.50	40.0	-18.05	Peak	195.00	200	Horizontal	Pass
2	144.010	42.90	-27.70	43.5	-0.60	Peak	168.90	199	Horizontal	N/A
2*	144.010	41.85	-27.70	43.5	-1.65	QP	168.90	199	Horizontal	Pass
3	168.225	34.16	-27.20	43.5	-9.34	Peak	168.90	200	Horizontal	Pass
4	773.263	41.71	-11.82	46.0	-4.29	Peak	148.00	200	Horizontal	Pass
5	903.242	104.01	-9.52	46.0	58.01	Peak	47.20	100	Horizontal	N/A
6	926.765	104.17	-9.20	46.0	58.17	Peak	109.90	100	Horizontal	N/A

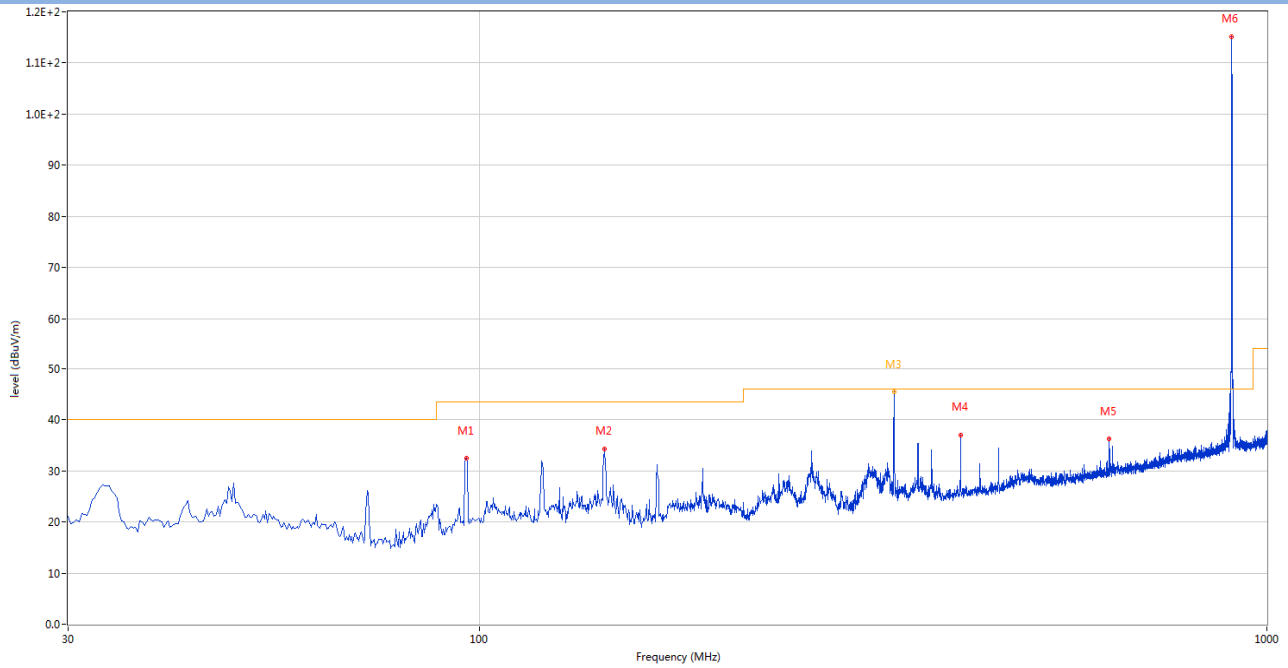
ANT 2

LOW CHANNEL, ANT V



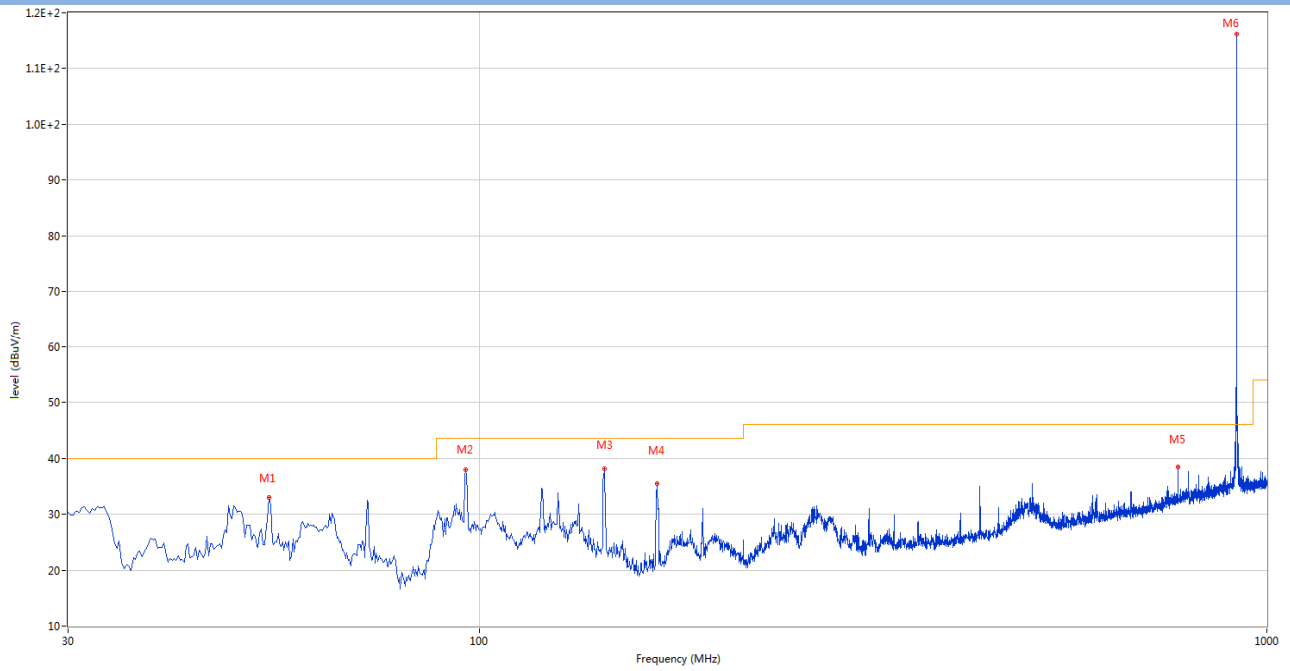
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	33.153	31.93	-26.76	40.0	-8.07	Peak	224.50	100	Vertical	Pass
2	95.960	38.56	-25.18	43.5	-4.94	Peak	37.00	100	Vertical	Pass
3	143.975	38.12	-28.12	43.5	-5.38	Peak	3.50	100	Vertical	Pass
4	560.833	37.44	-15.83	46.0	-8.56	Peak	73.90	100	Vertical	Pass
5	758.713	38.52	-12.64	46.0	-7.48	Peak	354.30	100	Vertical	Pass
6	902.758	116.03	-10.50	46.0	70.03	Peak	0.00	200	Vertical	N/A

LOW CHANNEL, ANT H



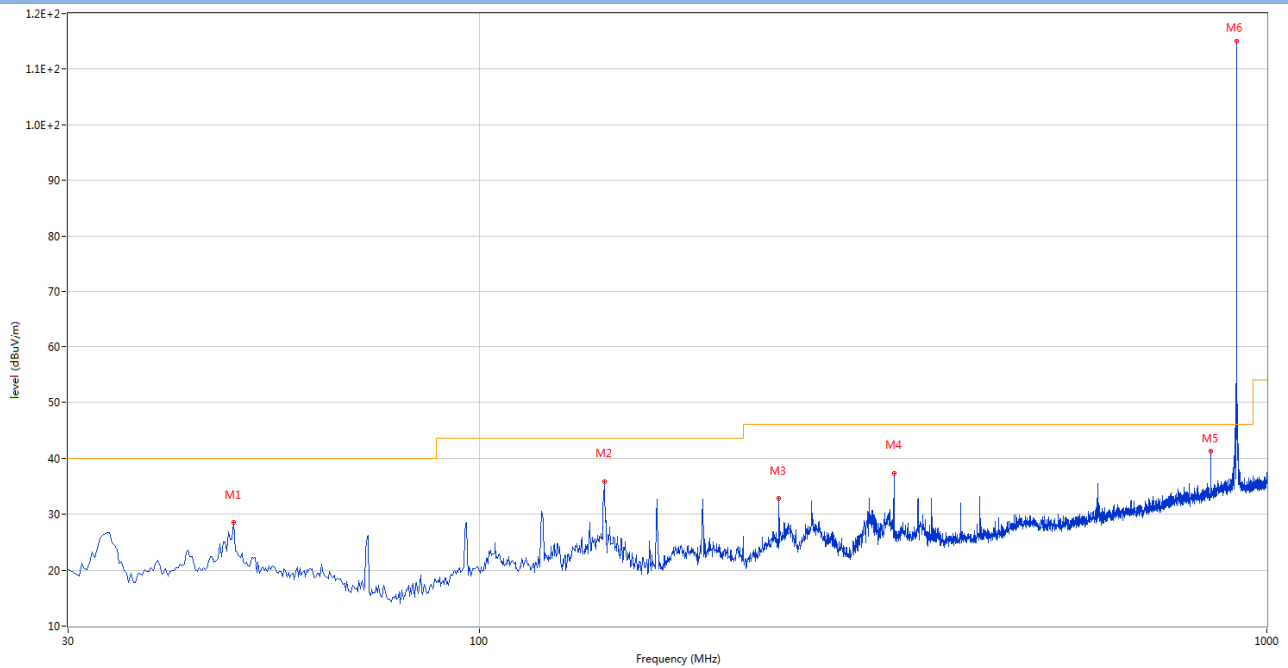
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	96.202	32.49	-25.15	43.5	-11.01	Peak	53.20	200	Horizontal	Pass
2	143.975	34.28	-28.12	43.5	-9.22	Peak	49.70	200	Horizontal	Pass
3	336.000	48.11	-20.86	46.0	2.11	Peak	213.50	101	Horizontal	N/A
3*	336.000	45.47	-20.86	46.0	-0.53	QP	213.50	101	Horizontal	Pass
4	408.542	37.03	-19.05	46.0	-8.97	Peak	223.80	100	Horizontal	Pass
5	630.915	36.19	-14.36	46.0	-9.81	Peak	178.30	200	Horizontal	Pass
6	902.758	115.08	-10.50	46.0	69.08	Peak	273.80	200	Horizontal	N/A

MIDDLE CHANNEL, ANT V



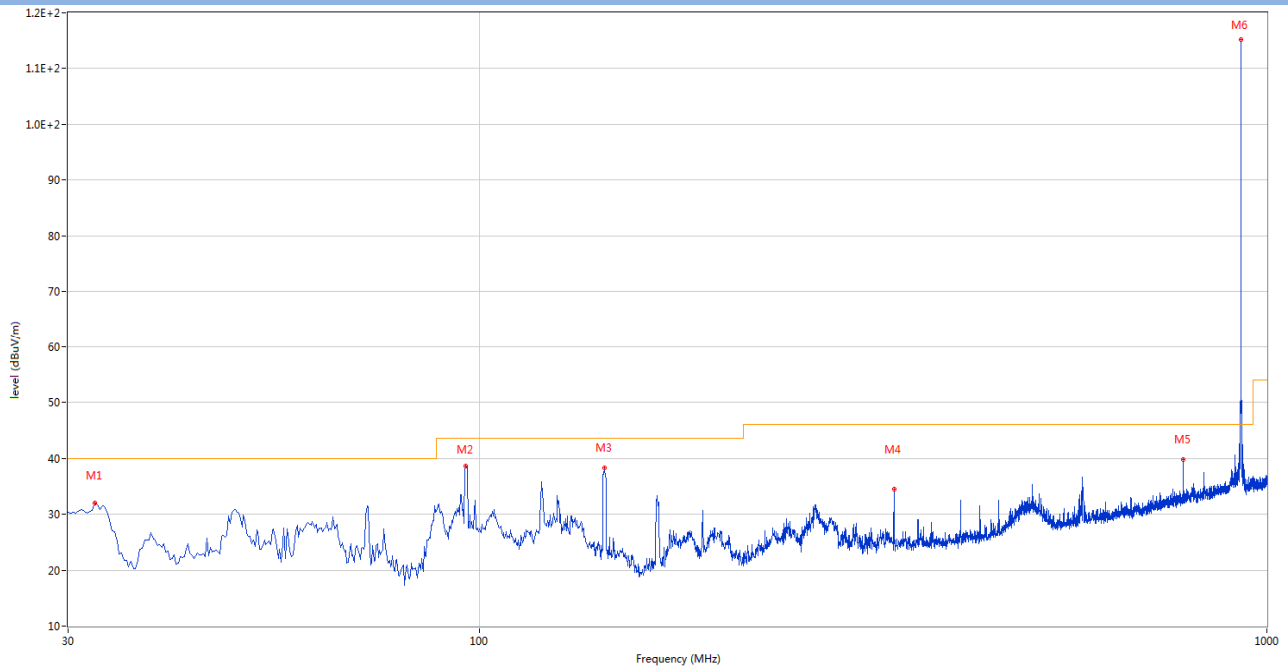
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	54.008	33.04	-23.42	40.0	-6.96	Peak	100.60	100	Vertical	Pass
2	95.960	37.97	-25.18	43.5	-5.53	Peak	233.50	100	Vertical	Pass
3	143.975	38.06	-28.12	43.5	-5.44	Peak	153.20	100	Vertical	Pass
4	167.982	35.53	-27.24	43.5	-7.97	Peak	19.50	100	Vertical	Pass
5	771.322	38.52	-12.36	46.0	-7.48	Peak	360.00	200	Vertical	Pass
6	915.367	116.13	-10.07	46.0	70.13	Peak	3.80	100	Vertical	N/A

MIDDLE CHANNEL, ANT H



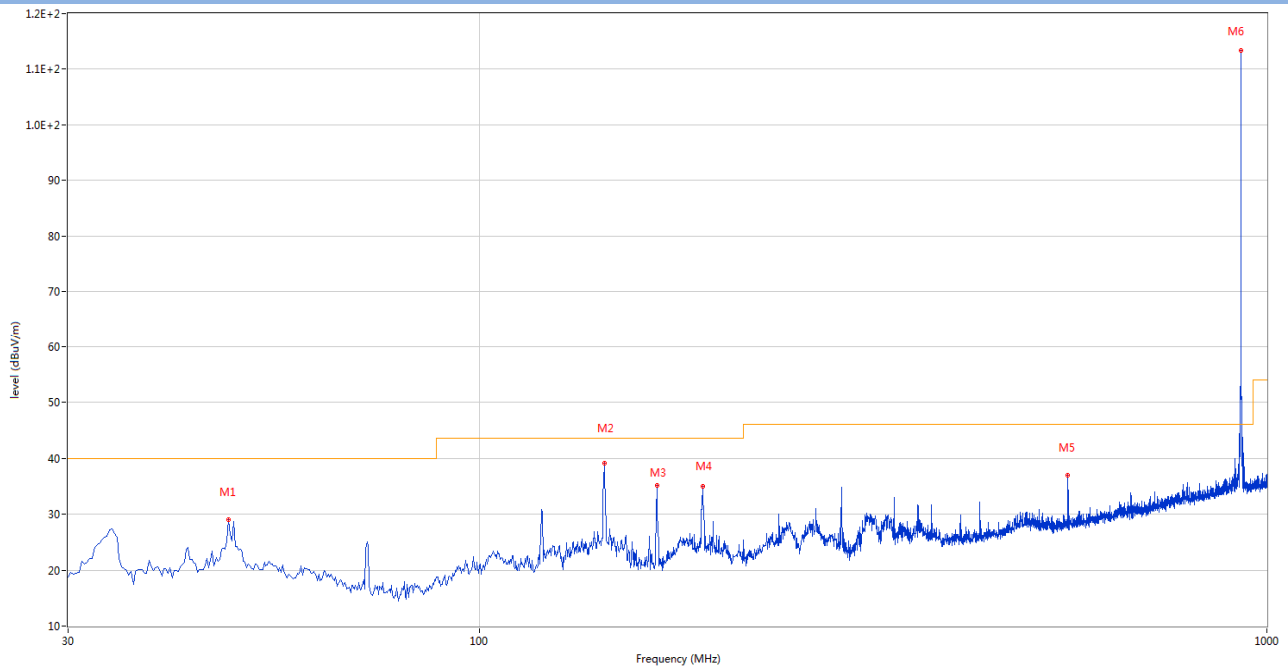
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	48.672	28.51	-23.30	40.0	-11.49	Peak	317.10	100	Horizontal	Pass
2	143.975	35.89	-28.12	43.5	-7.61	Peak	76.60	200	Horizontal	Pass
3	240.005	32.79	-23.41	46.0	-13.21	Peak	110.70	100	Horizontal	Pass
4	336.035	37.34	-20.86	46.0	-8.66	Peak	199.10	100	Horizontal	Pass
5	848.680	41.22	-11.07	46.0	-4.78	Peak	244.90	100	Horizontal	Pass
6	915.367	114.96	-10.07	46.0	68.96	Peak	275.00	200	Horizontal	N/A

HIGH CHANNEL, ANT V



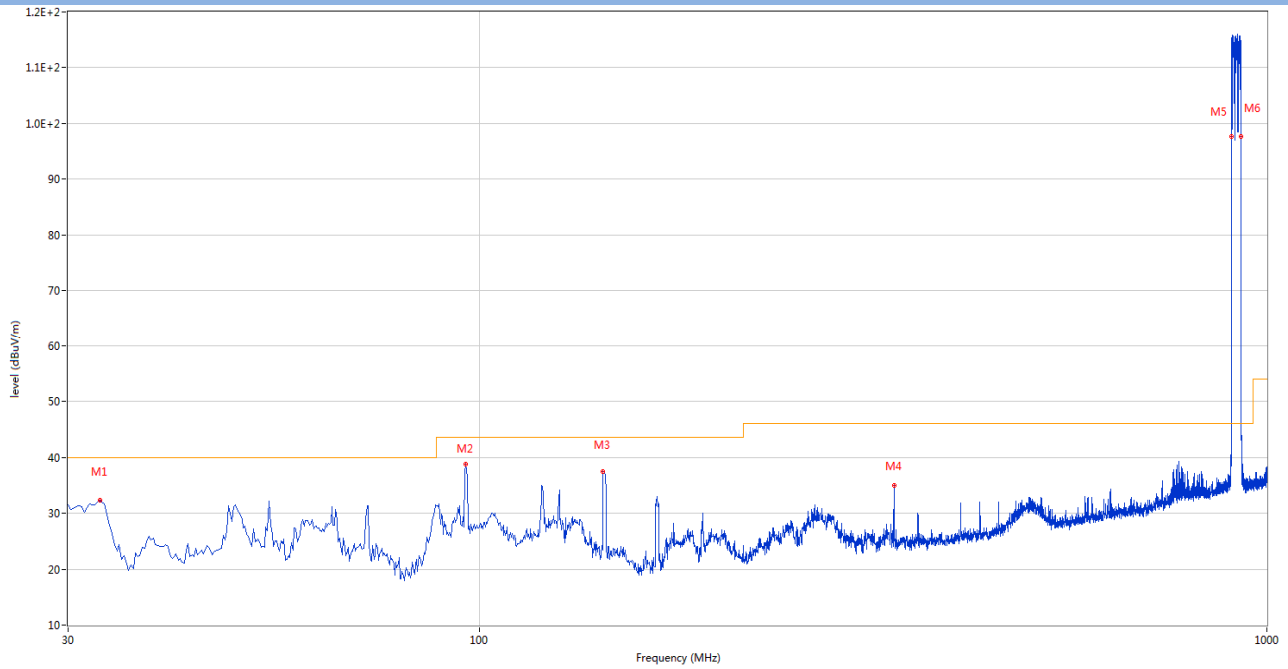
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	32.425	31.95	-27.08	40.0	-8.05	Peak	140.40	100	Vertical	Pass
2	95.960	38.64	-25.18	43.5	-4.86	Peak	0.00	100	Vertical	Pass
3	143.975	38.26	-28.12	43.5	-5.24	Peak	59.70	100	Vertical	Pass
4	336.035	34.51	-20.86	46.0	-11.49	Peak	95.10	100	Vertical	Pass
5	783.205	39.78	-12.19	46.0	-6.22	Peak	130.10	100	Vertical	Pass
6	927.250	115.29	-10.09	46.0	69.29	Peak	35.10	100	Vertical	N/A

HIGH CHANNEL, ANT H



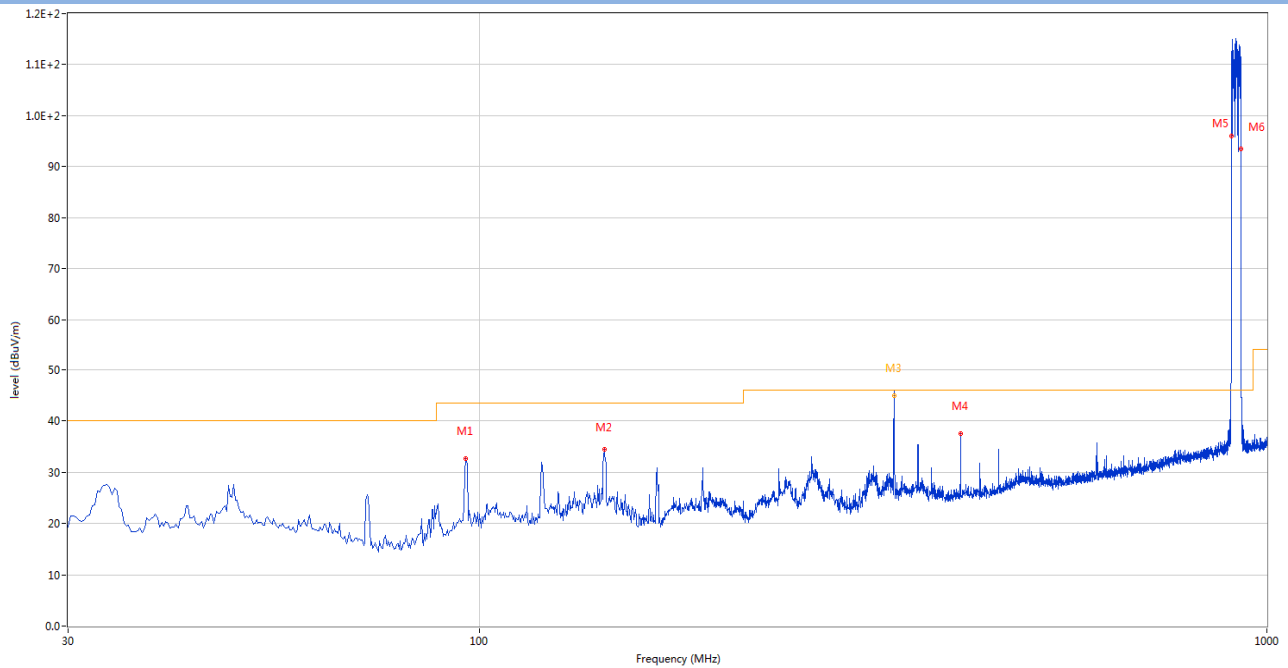
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	47.945	29.10	-23.36	40.0	-10.90	Peak	19.10	200	Horizontal	Pass
2	143.975	39.10	-28.12	43.5	-4.40	Peak	62.40	200	Horizontal	Pass
3	167.982	35.16	-27.24	43.5	-8.34	Peak	75.20	100	Horizontal	Pass
4	191.990	35.00	-25.04	43.5	-8.50	Peak	360.00	200	Horizontal	Pass
5	558.893	36.92	-15.73	46.0	-9.08	Peak	197.40	100	Horizontal	Pass
6	927.250	113.40	-10.09	46.0	67.40	Peak	168.80	200	Horizontal	N/A

HOPPING MODE, ANT V



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	32.910	32.39	-26.87	40.0	-7.61	Peak	236.30	100	Vertical	Pass
2	95.960	38.71	-25.18	43.5	-4.79	Peak	292.60	100	Vertical	Pass
3	143.490	37.40	-28.10	43.5	-6.10	Peak	39.30	100	Vertical	Pass
4	336.035	34.96	-20.86	46.0	-11.04	Peak	102.30	100	Vertical	Pass
5	902.515	97.67	-10.54	46.0	51.67	Peak	0.00	200	Vertical	N/A
6	927.007	97.67	-10.13	46.0	51.67	Peak	0.30	100	Vertical	N/A

HOPPING MODE, ANT H



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	95.960	32.62	-25.18	43.5	-10.88	Peak	46.30	200	Horizontal	Pass
2	143.975	34.49	-28.12	43.5	-9.01	Peak	77.80	200	Horizontal	Pass
3	336.000	47.46	-20.86	46.0	1.46	Peak	212.40	101	Horizontal	N/A
3*	336.000	44.97	-20.86	46.0	-1.03	QP	212.40	101	Horizontal	Pass
4	408.542	37.61	-19.05	46.0	-8.39	Peak	209.20	100	Horizontal	Pass
5	902.515	96.00	-10.54	46.0	50.00	Peak	28.50	200	Horizontal	N/A
6	927.007	93.43	-10.13	46.0	47.43	Peak	43.80	100	Horizontal	N/A

ANT 1

LOW CHANNEL 1 GHz to 10 GHz, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1805.500	26.79	-16.65	54.0	-27.21	AV	194.00	150	Vertical	Pass
1	1805.500	41.96	-16.65	74.0	-32.04	Peak	194.00	150	Vertical	Pass
2**	2708.000	31.89	-11.34	54.0	-22.11	AV	223.00	150	Vertical	Pass
2	2708.000	48.36	-11.34	74.0	-25.64	Peak	223.00	150	Vertical	Pass
3**	3612.000	42.19	-7.78	54.0	-11.81	AV	0.00	150	Vertical	Pass
3	3612.000	44.73	-7.78	74.0	-29.27	Peak	0.00	150	Vertical	Pass
4**	5436.000	34.59	-2.30	54.0	-19.41	AV	335.00	150	Vertical	Pass
4	5436.000	50.87	-2.30	74.0	-23.13	Peak	335.00	150	Vertical	Pass
5**	6294.000	37.35	0.10	54.0	-16.65	AV	193.00	150	Vertical	Pass
5	6294.000	53.15	0.10	74.0	-20.85	Peak	193.00	150	Vertical	Pass
6**	7222.750	48.51	-3.33	54.0	-5.49	AV	179.00	150	Vertical	Pass
6	7222.750	48.85	-3.33	74.0	-25.15	Peak	179.00	150	Vertical	Pass

LOW CHANNEL 1 GHz to 10 GHz, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1803.000	24.29	-16.76	54.0	-29.71	AV	114.00	150	Horizontal	Pass
1	1803.000	40.99	-16.76	74.0	-33.01	Peak	114.00	150	Horizontal	Pass
2**	2708.000	31.62	-11.34	54.0	-22.38	AV	190.00	150	Horizontal	Pass
2	2708.000	48.18	-11.34	74.0	-25.82	Peak	190.00	150	Horizontal	Pass
3**	3612.000	37.99	-7.78	54.0	-16.01	AV	296.00	150	Horizontal	Pass
3	3612.000	44.44	-7.78	74.0	-29.56	Peak	296.00	150	Horizontal	Pass
4**	5416.000	34.85	-2.55	54.0	-19.15	AV	69.00	150	Horizontal	Pass
4	5416.000	50.60	-2.55	74.0	-23.40	Peak	69.00	150	Horizontal	Pass
5**	6287.000	37.38	0.38	54.0	-16.62	AV	260.00	150	Horizontal	Pass
5	6287.000	52.70	0.38	74.0	-21.30	Peak	260.00	150	Horizontal	Pass
6**	7222.750	44.51	-3.33	54.0	-9.49	AV	134.00	150	Horizontal	Pass
6	7222.750	45.97	-3.33	74.0	-28.03	Peak	134.00	150	Horizontal	Pass

MIDDLE CHANNEL 1 GHz to 10 GHz, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1830.500	25.35	-16.50	54.0	-28.65	AV	198.00	150	Vertical	Pass
1	1830.500	40.98	-16.50	74.0	-33.02	Peak	198.00	150	Vertical	Pass
2**	2785.000	32.77	-9.89	54.0	-21.23	AV	286.00	150	Vertical	Pass
2	2785.000	48.17	-9.89	74.0	-25.83	Peak	286.00	150	Vertical	Pass
3**	3662.000	42.15	-6.88	54.0	-11.85	AV	264.00	150	Vertical	Pass
3	3662.000	46.29	-6.88	74.0	-27.71	Peak	264.00	150	Vertical	Pass
4**	4563.000	32.58	-4.36	54.0	-21.42	AV	285.00	150	Vertical	Pass
4	4563.000	48.76	-4.36	74.0	-25.24	Peak	285.00	150	Vertical	Pass
5**	5492.000	44.46	-2.28	54.0	-9.54	AV	175.00	150	Vertical	Pass
5	5492.000	52.83	-2.28	74.0	-21.17	Peak	175.00	150	Vertical	Pass
6**	6408.000	42.18	-0.43	54.0	-11.82	AV	219.00	150	Vertical	Pass
6	6408.000	50.45	-0.43	74.0	-23.55	Peak	219.00	150	Vertical	Pass

MIDDLE CHANNEL 1 GHz to 10 GHz, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1825.500	25.00	-16.33	54.0	-29.00	AV	316.00	150	Horizontal	Pass
1	1825.500	40.66	-16.33	74.0	-33.34	Peak	316.00	150	Horizontal	Pass
2**	2745.500	31.25	-11.00	54.0	-22.75	AV	360.00	150	Horizontal	Pass
2	2745.500	46.84	-11.00	74.0	-27.16	Peak	360.00	150	Horizontal	Pass
3**	3662.000	37.71	-6.88	54.0	-16.29	AV	35.00	150	Horizontal	Pass
3	3662.000	44.88	-6.88	74.0	-29.12	Peak	35.00	150	Horizontal	Pass
4**	5492.000	42.84	-2.28	54.0	-11.16	AV	190.00	150	Horizontal	Pass
4	5492.000	52.21	-2.28	74.0	-21.79	Peak	190.00	150	Horizontal	Pass
5**	6413.000	37.48	-0.23	54.0	-16.52	AV	30.00	150	Horizontal	Pass
5	6413.000	52.97	-0.23	74.0	-21.03	Peak	30.00	150	Horizontal	Pass
6**	7265.500	36.69	-2.64	54.0	-17.31	AV	279.00	150	Horizontal	Pass
6	7265.500	47.99	-2.64	74.0	-26.01	Peak	279.00	150	Horizontal	Pass

HIGH CHANNEL 1 GHz to 10 GHz, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1098.000	22.05	-18.35	54.0	-31.95	AV	185.00	150	Vertical	Pass
1	1098.000	39.43	-18.35	74.0	-34.57	Peak	185.00	150	Vertical	Pass
2**	2537.500	31.15	-11.50	54.0	-22.85	AV	142.00	150	Vertical	Pass
2	2537.500	47.15	-11.50	74.0	-26.85	Peak	142.00	150	Vertical	Pass
3**	3710.000	34.54	-6.27	54.0	-19.46	AV	198.00	150	Vertical	Pass
3	3710.000	44.00	-6.27	74.0	-30.00	Peak	198.00	150	Vertical	Pass
4**	4760.000	36.26	-3.19	54.0	-17.74	AV	109.00	150	Vertical	Pass
4	4760.000	47.10	-3.19	74.0	-26.90	Peak	109.00	150	Vertical	Pass
5**	6743.000	38.08	0.45	54.0	-15.92	AV	186.00	150	Vertical	Pass
5	6743.000	53.54	0.45	74.0	-20.46	Peak	186.00	150	Vertical	Pass
6**	8484.250	38.67	-0.95	54.0	-15.33	AV	83.00	150	Vertical	Pass
6	8484.250	49.14	-0.95	74.0	-24.86	Peak	83.00	150	Vertical	Pass

HIGH CHANNEL 1 GHz to 10 GHz, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1301.000	23.84	-17.09	54.0	-30.16	AV	41.00	150	Horizontal	Pass
1	1301.000	39.77	-17.09	74.0	-34.23	Peak	41.00	150	Horizontal	Pass
2**	2719.500	31.35	-11.04	54.0	-22.65	AV	303.00	150	Horizontal	Pass
2	2719.500	47.74	-11.04	74.0	-26.26	Peak	303.00	150	Horizontal	Pass
3**	4126.000	31.55	-5.55	54.0	-22.45	AV	12.00	150	Horizontal	Pass
3	4126.000	47.77	-5.55	74.0	-26.23	Peak	12.00	150	Horizontal	Pass
4**	5435.000	35.15	-2.35	54.0	-18.85	AV	12.00	150	Horizontal	Pass
4	5435.000	50.50	-2.35	74.0	-23.50	Peak	12.00	150	Horizontal	Pass
5**	6743.000	37.41	0.45	54.0	-16.59	AV	119.00	150	Horizontal	Pass
5	6743.000	53.19	0.45	74.0	-20.81	Peak	119.00	150	Horizontal	Pass
6**	8014.000	37.60	-2.03	54.0	-16.40	AV	217.00	150	Horizontal	Pass
6	8014.000	48.44	-2.03	74.0	-25.56	Peak	217.00	150	Horizontal	Pass

Hopping Channel 1 GHz to 10 GHz, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1807.500	24.74	-16.54	54.0	-29.26	AV	132.00	150	Vertical	Pass
1	1807.500	40.37	-16.54	74.0	-33.63	Peak	132.00	150	Vertical	Pass
2**	2713.000	35.25	-11.00	54.0	-18.75	AV	339.00	150	Vertical	Pass
2	2713.000	48.87	-11.00	74.0	-25.13	Peak	339.00	150	Vertical	Pass
3**	3644.000	47.62	-6.38	54.0	-6.38	AV	165.00	150	Vertical	Pass
3	3644.000	46.76	-6.38	74.0	-27.24	Peak	165.00	150	Vertical	Pass
4**	5465.000	41.80	-2.35	54.0	-12.20	AV	165.00	150	Vertical	Pass
4	5465.000	52.14	-2.35	74.0	-21.86	Peak	165.00	150	Vertical	Pass
5**	6376.000	43.49	-1.64	54.0	-10.51	AV	160.00	150	Vertical	Pass
5	6376.000	50.65	-1.64	74.0	-23.35	Peak	160.00	150	Vertical	Pass
6**	7222.750	43.20	-3.33	54.0	-10.80	AV	138.00	150	Vertical	Pass
6	7222.750	45.60	-3.33	74.0	-28.40	Peak	138.00	150	Vertical	Pass

Hopping Channel 1 GHz to 10 GHz, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1828.000	39.41	-16.50	54.0	-14.59	AV	195.00	150	Horizontal	Pass
1	1828.000	41.19	-16.50	74.0	-32.81	Peak	195.00	150	Horizontal	Pass
2**	2718.500	31.38	-11.04	54.0	-22.62	AV	15.00	150	Horizontal	Pass
2	2718.500	47.57	-11.04	74.0	-26.43	Peak	15.00	150	Horizontal	Pass
3**	3652.000	32.40	-6.35	54.0	-21.60	AV	279.00	150	Horizontal	Pass
3	3652.000	46.66	-6.35	74.0	-27.34	Peak	279.00	150	Horizontal	Pass
4**	4560.000	32.93	-4.33	54.0	-21.07	AV	360.00	150	Horizontal	Pass
4	4560.000	47.70	-4.33	74.0	-26.30	Peak	360.00	150	Horizontal	Pass
5**	5505.000	46.04	-2.23	54.0	-7.96	AV	160.00	150	Horizontal	Pass
5	5505.000	48.40	-2.23	74.0	-25.60	Peak	160.00	150	Horizontal	Pass
6**	7354.000	37.37	-3.48	54.0	-16.63	AV	65.00	150	Horizontal	Pass
6	7354.000	48.12	-3.48	74.0	-25.88	Peak	65.00	150	Horizontal	Pass

ANT 2

LOW CHANNEL 1 GHz to 10 GHz, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1806.000	37.22	-16.58	54.0	-16.78	AV	193.00	150	Vertical	Pass
1	1806.000	41.60	-16.58	74.0	-32.40	Peak	193.00	150	Vertical	Pass
2**	3612.000	42.13	-7.78	54.0	-11.87	AV	18.00	150	Vertical	Pass
2	3612.000	44.89	-7.78	74.0	-29.11	Peak	18.00	150	Vertical	Pass
3**	4515.000	41.08	-4.76	54.0	-12.92	AV	84.00	150	Vertical	Pass
3	4515.000	45.06	-4.76	74.0	-28.94	Peak	84.00	150	Vertical	Pass
4**	5417.000	43.20	-2.65	54.0	-10.80	AV	185.00	150	Vertical	Pass
4	5417.000	51.43	-2.65	74.0	-22.57	Peak	185.00	150	Vertical	Pass
5**	6320.000	44.23	-1.37	54.0	-9.77	AV	169.00	150	Vertical	Pass
5	6320.000	51.07	-1.37	74.0	-22.93	Peak	169.00	150	Vertical	Pass
6**	7222.750	48.08	-3.33	54.0	-5.92	AV	178.00	150	Vertical	Pass
6	7222.750	48.19	-3.33	74.0	-25.81	Peak	178.00	150	Vertical	Pass

LOW CHANNEL 1 GHz to 10 GHz, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1806.000	38.02	-16.58	54.0	-15.98	AV	194.00	150	Horizontal	Pass
1	1806.000	43.27	-16.58	74.0	-30.73	Peak	194.00	150	Horizontal	Pass
2**	3612.000	38.70	-7.78	54.0	-15.30	AV	130.00	150	Horizontal	Pass
2	3612.000	44.81	-7.78	74.0	-29.19	Peak	130.00	150	Horizontal	Pass
3**	4472.000	32.20	-3.99	54.0	-21.80	AV	190.00	150	Horizontal	Pass
3	4472.000	48.01	-3.99	74.0	-25.99	Peak	190.00	150	Horizontal	Pass
4**	5468.000	34.81	-2.39	54.0	-19.19	AV	123.00	150	Horizontal	Pass
4	5468.000	50.23	-2.39	74.0	-23.77	Peak	123.00	150	Horizontal	Pass
5**	6320.000	42.70	-1.37	54.0	-11.30	AV	78.00	150	Horizontal	Pass
5	6320.000	50.61	-1.37	74.0	-23.39	Peak	78.00	150	Horizontal	Pass
6**	7222.750	42.38	-3.33	54.0	-11.62	AV	73.00	150	Horizontal	Pass
6	7222.750	45.70	-3.33	74.0	-28.30	Peak	73.00	150	Horizontal	Pass

MIDDLE CHANNEL 1 GHz to 10 GHz, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1831.000	34.37	-16.51	54.0	-19.63	AV	190.00	150	Vertical	Pass
1	1831.000	41.44	-16.51	74.0	-32.56	Peak	190.00	150	Vertical	Pass
2**	3662.000	41.22	-6.88	54.0	-12.78	AV	225.00	150	Vertical	Pass
2	3662.000	45.61	-6.88	74.0	-28.39	Peak	225.00	150	Vertical	Pass
3**	4577.000	40.67	-4.21	54.0	-13.33	AV	152.00	150	Vertical	Pass
3	4577.000	46.62	-4.21	74.0	-27.38	Peak	152.00	150	Vertical	Pass
4**	5492.000	44.11	-2.28	54.0	-9.89	AV	23.00	150	Vertical	Pass
4	5492.000	52.47	-2.28	74.0	-21.53	Peak	23.00	150	Vertical	Pass
5**	6408.000	44.77	-0.43	54.0	-9.23	AV	193.00	150	Vertical	Pass
5	6408.000	51.03	-0.43	74.0	-22.97	Peak	193.00	150	Vertical	Pass
6**	7312.750	35.96	-3.44	54.0	-18.04	AV	97.00	150	Vertical	Pass
6	7312.750	47.59	-3.44	74.0	-26.41	Peak	97.00	150	Vertical	Pass

MIDDLE CHANNEL 1 GHz to 10 GHz, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1831.000	33.98	-16.51	54.0	-20.02	AV	0.00	150	Horizontal	Pass
1	1831.000	39.88	-16.51	74.0	-34.12	Peak	0.00	150	Horizontal	Pass
2**	2790.000	32.37	-10.03	54.0	-21.63	AV	334.00	150	Horizontal	Pass
2	2790.000	47.31	-10.03	74.0	-26.69	Peak	334.00	150	Horizontal	Pass
3**	3661.000	31.34	-6.90	54.0	-22.66	AV	294.00	150	Horizontal	Pass
3	3661.000	46.83	-6.90	74.0	-27.17	Peak	294.00	150	Horizontal	Pass
4**	5493.000	40.94	-2.46	54.0	-13.06	AV	325.00	150	Horizontal	Pass
4	5493.000	48.96	-2.46	74.0	-25.04	Peak	325.00	150	Horizontal	Pass
5**	6675.000	38.34	0.31	54.0	-15.66	AV	348.00	150	Horizontal	Pass
5	6675.000	53.88	0.31	74.0	-20.12	Peak	348.00	150	Horizontal	Pass
6**	8218.750	37.62	-1.54	54.0	-16.38	AV	243.00	150	Horizontal	Pass
6	8218.750	48.97	-1.54	74.0	-25.03	Peak	243.00	150	Horizontal	Pass

HIGH CHANNEL 1 GHz to 10 GHz, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1838.500	24.58	-16.38	54.0	-29.42	AV	360.00	150	Vertical	Pass
1	1838.500	41.49	-16.38	74.0	-32.51	Peak	360.00	150	Vertical	Pass
2**	2779.000	31.90	-10.27	54.0	-22.10	AV	53.00	150	Vertical	Pass
2	2779.000	47.45	-10.27	74.0	-26.55	Peak	53.00	150	Vertical	Pass
3**	3710.000	34.09	-6.27	54.0	-19.91	AV	277.00	150	Vertical	Pass
3	3710.000	43.48	-6.27	74.0	-30.52	Peak	277.00	150	Vertical	Pass
4**	4622.000	35.97	-4.07	54.0	-18.03	AV	307.00	150	Vertical	Pass
4	4622.000	46.87	-4.07	74.0	-27.13	Peak	307.00	150	Vertical	Pass
5**	6281.000	37.62	0.23	54.0	-16.38	AV	183.00	150	Vertical	Pass
5	6281.000	52.77	0.23	74.0	-21.23	Peak	183.00	150	Vertical	Pass
6**	7552.000	36.97	-2.05	54.0	-17.03	AV	354.00	150	Vertical	Pass
6	7552.000	47.96	-2.05	74.0	-26.04	Peak	354.00	150	Vertical	Pass

HIGH CHANNEL 1 GHz to 10 GHz, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1557.000	23.41	-17.36	54.0	-30.59	AV	123.00	150	Horizontal	Pass
1	1557.000	40.42	-17.36	74.0	-33.58	Peak	123.00	150	Horizontal	Pass
2**	2910.000	33.31	-9.48	54.0	-20.69	AV	241.00	150	Horizontal	Pass
2	2910.000	48.59	-9.48	74.0	-25.41	Peak	241.00	150	Horizontal	Pass
3**	3662.000	31.62	-6.88	54.0	-22.38	AV	7.00	150	Horizontal	Pass
3	3662.000	46.06	-6.88	74.0	-27.94	Peak	7.00	150	Horizontal	Pass
4**	4937.000	33.97	-2.78	54.0	-20.03	AV	59.00	150	Horizontal	Pass
4	4937.000	50.48	-2.78	74.0	-23.52	Peak	59.00	150	Horizontal	Pass
5**	6678.000	38.56	0.29	54.0	-15.44	AV	0.00	150	Horizontal	Pass
5	6678.000	53.86	0.29	74.0	-20.14	Peak	0.00	150	Horizontal	Pass
6**	7936.000	36.84	-2.00	54.0	-17.16	AV	341.00	150	Horizontal	Pass
6	7936.000	48.60	-2.00	74.0	-25.40	Peak	341.00	150	Horizontal	Pass

Hopping Channel 1 GHz to 10 GHz, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1823.500	25.86	-16.44	54.0	-28.14	AV	200.00	150	Vertical	Pass
1	1823.500	40.73	-16.44	74.0	-33.27	Peak	200.00	150	Vertical	Pass
2**	2679.500	31.66	-10.76	54.0	-22.34	AV	9.00	150	Vertical	Pass
2	2679.500	48.04	-10.76	74.0	-25.96	Peak	9.00	150	Vertical	Pass
3**	3700.000	46.63	-5.97	54.0	-7.37	AV	115.00	150	Vertical	Pass
3	3700.000	46.37	-5.97	74.0	-27.63	Peak	115.00	150	Vertical	Pass
4**	4587.000	42.14	-4.17	54.0	-11.86	AV	163.00	150	Vertical	Pass
4	4587.000	47.72	-4.17	74.0	-26.28	Peak	163.00	150	Vertical	Pass
5**	5469.000	43.85	-2.41	54.0	-10.15	AV	115.00	150	Vertical	Pass
5	5469.000	48.93	-2.41	74.0	-25.07	Peak	115.00	150	Vertical	Pass
6**	8233.000	43.87	-1.51	54.0	-10.13	AV	100.00	150	Vertical	Pass
6	8233.000	50.10	-1.51	74.0	-23.90	Peak	100.00	150	Vertical	Pass

Hopping Channel 1 GHz to 10 GHz, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Over Limit (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1**	1824.000	38.96	-16.41	54.0	-15.04	AV	196.00	150	Horizontal	Pass
1	1824.000	41.39	-16.41	74.0	-32.61	Peak	196.00	150	Horizontal	Pass
2**	3648.000	33.01	-6.30	54.0	-20.99	AV	215.00	150	Horizontal	Pass
2	3648.000	46.70	-6.30	74.0	-27.30	Peak	215.00	150	Horizontal	Pass
3**	4585.000	32.57	-4.07	54.0	-21.43	AV	302.00	150	Horizontal	Pass
3	4585.000	48.63	-4.07	74.0	-25.37	Peak	302.00	150	Horizontal	Pass
4**	5486.000	43.09	-2.46	54.0	-10.91	AV	83.00	150	Horizontal	Pass
4	5486.000	50.06	-2.46	74.0	-23.94	Peak	83.00	150	Horizontal	Pass
5**	7303.000	36.15	-3.42	54.0	-17.85	AV	187.00	150	Horizontal	Pass
5	7303.000	48.10	-3.42	74.0	-25.90	Peak	187.00	150	Horizontal	Pass
6**	9142.000	37.48	-0.90	54.0	-16.52	AV	112.00	150	Horizontal	Pass
6	9142.000	48.77	-0.90	74.0	-25.23	Peak	112.00	150	Horizontal	Pass

A.9 Band Edge (Restricted-band band-edge)

Pass

Note: The adjacent to the restricted frequency band (608-614MHz and 960-1240MHz) is far away the fundamental, it is noise only. Please refer to Section A.8 for test data.

ANNEX B TEST SETUP PHOTOS

Please refer the document “BL-HK1980249-AR.PDF”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL-HK1980249-AW.PDF”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL-HK1980249-AI.PDF”.

--END OF REPORT--