FCC RF TEST REPORT

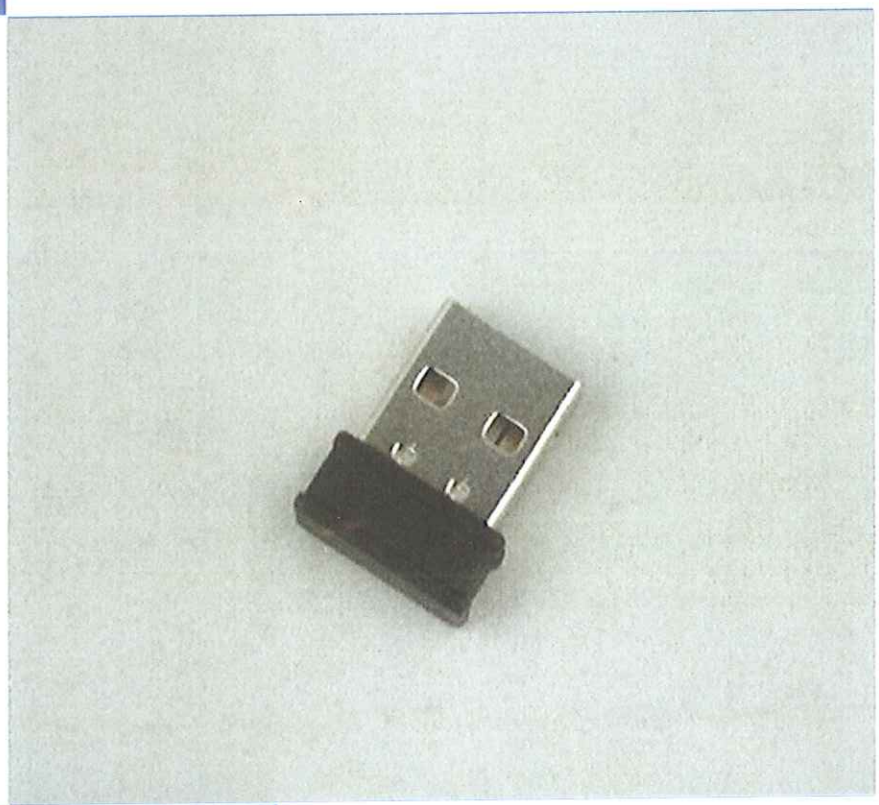
ISSUED BY
Shenzhen BALUN Technology Co., Ltd.

FOR

2.4 GHz Wireless mobile Presenter

ISSUED TO
Guangzhou Maipai Electronics Co., Ltd.

Room 202, No.94, Shinan Road, Xianchong Village, Qiaonan Street, Panyu District of Guangzhou.



Tested by: Cao Shaodong
(Engineer)
Date Nov. 1, 2015

Approved by: Wei Yanquan
(Chief Engineer)
Date Nov. 1, 2015

Report No.:	BL-SZ15A0022-601
EUT Type:	2.4 GHz Wireless mobile Presenter
Model Name:	MP-04 Dongle
Brand Name:	N/A
Test Standard:	47 CFR Part 15 Subpart C
FCC ID:	2AFVEMP-04USB
Test conclusion:	Pass
Test Date:	Oct. 28, 2015 ~ Oct. 31, 2015
Date of Issue:	Nov. 1, 2015

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Revision History

Version	Issue Date	Revisions
Rev. 01	Nov. 1, 2015	Initial Issue

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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 has been listed by US Federal Communications Commission to perform electromagnetic emission measurements. The recognition numbers of test site are 832625. The laboratory has met the requirements of the IAS Accreditation Criteria for Testing Laboratories (AC89), has demonstrated compliance with ISO/IEC Standard 17025:2005. The accreditation certificate number is TL-588. 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 to 25℃
Ambient Relative Humidity	45% - 55%
Ambient Pressure	100 kPa - 102 kPa

1.4 Announce

(1) The test report reference to the report template version v2.1.

(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

Applicant	Guangzhou Maipai Electronics Co., Ltd.
Address	Room 202, No.94, Shinan Road, Xianchong Village, Qiaonan Street, Panyu District of Guangzhou.

2.2 Manufacturer

Manufacturer	Guangzhou Maipai Electronics Co., Ltd.
Address	Room 202, No.94, Shinan Road, Xianchong Village, Qiaonan Street, Panyu District of Guangzhou.

2.3 Factory Information

Factory	N/A
Address	N/A

2.4 General Description for Equipment under Test (EUT)

EUT Type	2.4 GHz Wireless mobile Presenter
Model Name	MP-04
Hardware Version	P/N:MP-04 REV:2.2
Software Version	N/A
Network and Wireless connectivity	2.4G ISM Band, GFSK modulation
Input Voltage	5.0 V
Input Rated Current	11 mA
Input Frequency	N/A

2.5 Ancillary Equipment

Ancillary Equipment 1	Mouse	
	Brand Name	N/A
	Model No.	MP-04
	Rated Voltage	3.0 V

2.6 Technical Information

TX/ RX Operating Range	2403 MHz~2474 MHz
Modulation Type	GFSK
Antenna Type	PCB Antenna
Antenna Gain	0 dBi
About the Product	The equipment is 2.4 GHz Wireless mobile Presenter, it at 2.4 GHz ISM band.

Channel List

Channel Number	Frequency (MHz)
CH0	2403
CH1	2405
CH2	2406
CH3	2410
CH4	2415
CH5	2421
CH6	2430
CH7	2433
CH8	2435
CH9	2444
CH10	2450
CH11	2457
CH12	2460
CH13	2468
CH14	2471
CH15	2474

3 SUMMARY OF TEST RESULTS

3.1 Test Standards

No.	Identity	Document Title
1	47 CFR Part 15, Subpart C (10-1-14 Edition)	Intentional Radiators
3	ANSI C63.4-2014	American National Standard for Standard for Methods of Measurement of Radio-Noise Emissions from Low-Voltage Electrical and Electronic Equipment in the Range of 9 kHz to 40 GHz
4	ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices

3.2 Verdict

No.	Description	FCC Part No.	Test Result	Verdict
1	Antenna Requirement	15.203	--	Pass Note1
2	20 dB Bandwidth	15.215(c)	ANNEX A.1	Pass
3	Conducted Emission	15.207	ANNEX A.2	Pass
4	Radiated Spurious Emission	15.249(a)	ANNEX A.3	Pass
5	Band Edge	15.249(a)	ANNEX A.4	Pass
Note 1: The EUT has a permanently and irreplaceable attached antenna, which complies with the requirement FCC 15.203.				

4 GENERAL TEST CONFIGURATIONS

4.1 Test Environments

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

Relative Humidity	45% - 55%	
Atmospheric Pressure	100 kPa - 102 kPa	
Temperature	NT (Normal Temperature)	-10℃ to +70℃
Working Voltage of the EUT	NV (Normal Voltage)	5.0 V

4.2 Test Equipment List

Description	Manufacturer	Model	Serial No.	Cal. Date	Cal. Due
Spectrum Analyzer	ROHDE&SCHWARZ	FSV-30	103118	2015.07.16	2016.07.15
Vector Signal Generator	ROHDE&SCHWARZ	SMBV100A	177746	2015.07.16	2016.07.15
Signal Generator	ROHDE&SCHWARZ	SMB100A	260592	2015.07.01	2016.06.30
Switch Unit with OSP-B157	ROHDE&SCHWARZ	OSP120	101270	2015.07.16	2016.07.15
Spectrum Analyzer	AGILENT	E4440A	MY45304434	2015.10.18	2016.10.17
EMI Receiver	ROHDE&SCHWARZ	ESRP	101036	2015.07.14	2016.07.13
LISN	SCHWARZBECK	NSLK 8127	8127-687	2015.07.14	2016.07.13
Bluetooth Tester	ROHDE&SCHWARZ	CBT	101005	2015.07.16	2016.07.15
Power Splitter	KMW	DCPD-LDC	1305003215	2015.07.01	2016.06.30
Power Sensor	ROHDE&SCHWARZ	NRP-Z21	103971	2015.07.21	2016.07.20
Attenuator (20 dB)	KMW	ZA-S1-201	110617091	--	--
Attenuator (6 dB)	KMW	ZA-S1-61	1305003189	--	--
DC Power Supply	ROHDE&SCHWARZ	HMP2020	018141664	2015.07.17	2016.07.16
Temperature Chamber	ANGELANTIONI SCIENCE	NTH64-40A	1310	2015.08.07	2016.08.06
Test Antenna-Loop(9 kHz-30 MHz)	SCHWARZBECK	FMZB 1519	1519-037	2015.07.22	2017.07.21
Test Antenna-Bi-Log(30 MHz-3 GHz)	SCHWARZBECK	VULB 9163	9163-624	2015.07.22	2017.07.21
Test Antenna-Horn(1-18 GHz)	SCHWARZBECK	BBHA 9120D	9120D-1148	2015.07.22	2017.07.21
Test Antenna-Horn(15-26.5 GHz)	SCHWARZBECK	BBHA 9170	9170-305	2015.07.22	2017.07.21
Anechoic Chamber	RAINFORD	9m*6m*6m	N/A	2015.02.28	2016.02.27
Shielded Enclosure	ChangNing	CN-130701	130703	--	--

4.3 Test Configurations

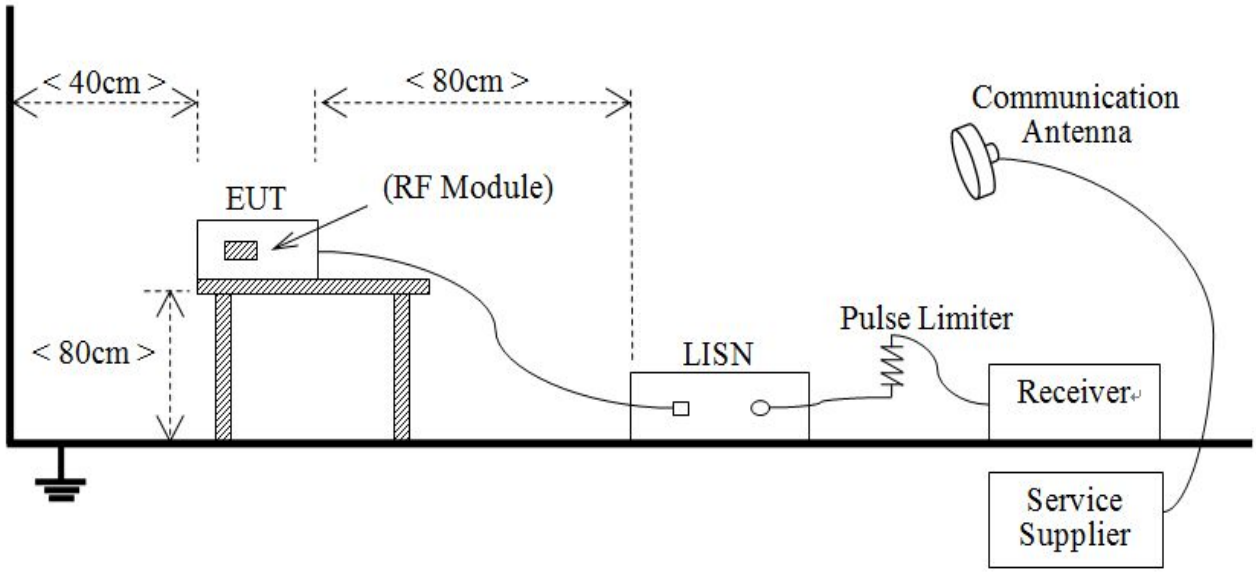
Test Configurations (TC) NO.	Description	
	Signal Description	Operating Frequency
Transmitter		
TC01	GFSK modulation	Ch No. 0/2403 MHz
TC02	GFSK modulation	Ch No. 8/2435 MHz
TC03	GFSK modulation	Ch No. 15/2474 MHz

4.4 Description of Test Setup

4.4.1 For Antenna Port Test

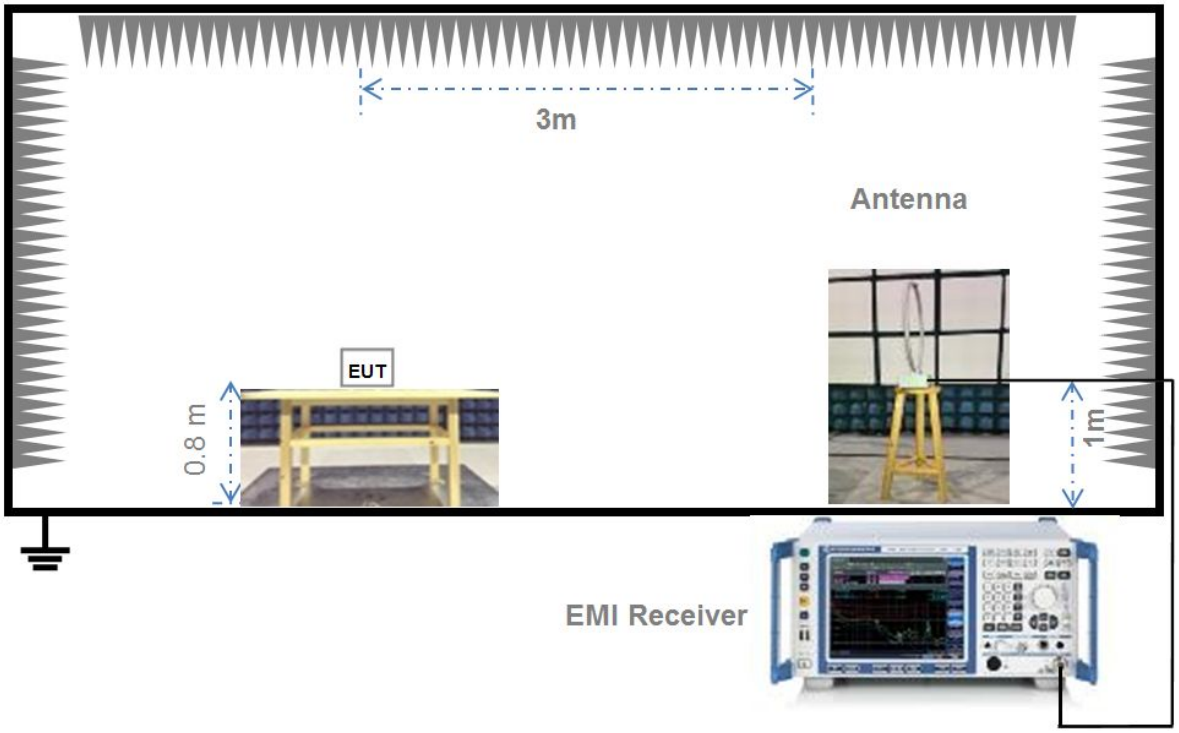
(Diagram 1)

4.4.2 For AC Power Supply Port Test



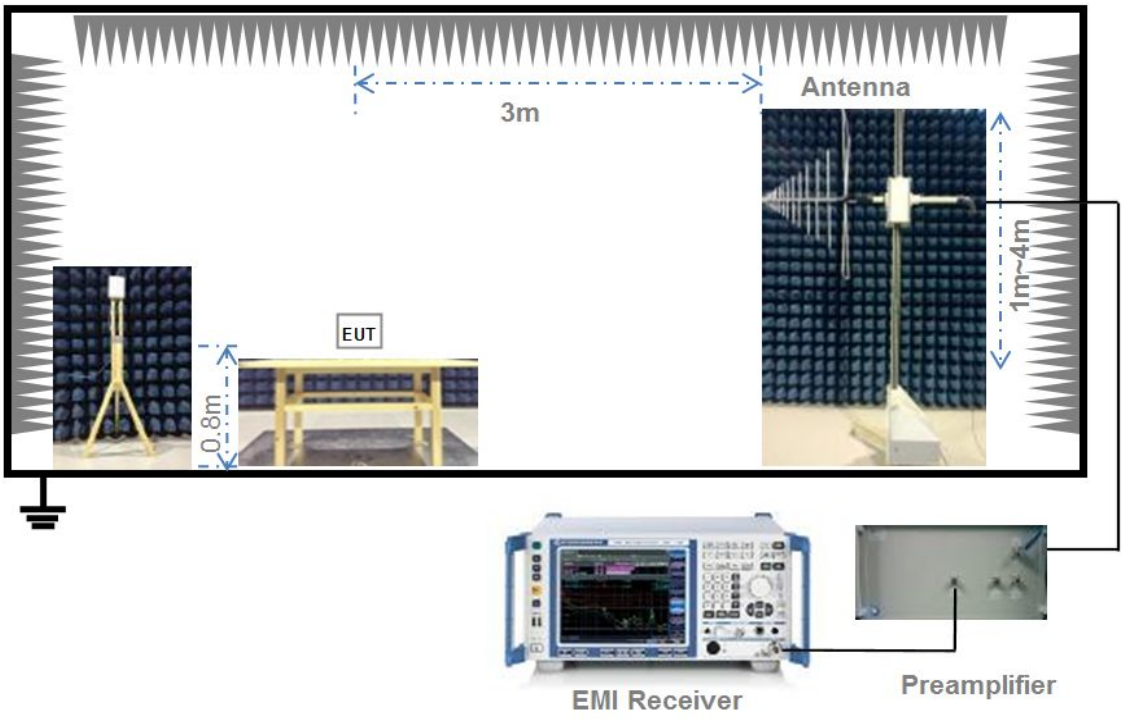
(Diagram 2)

4.4.3 For Radiated Test (Below 30 MHz)



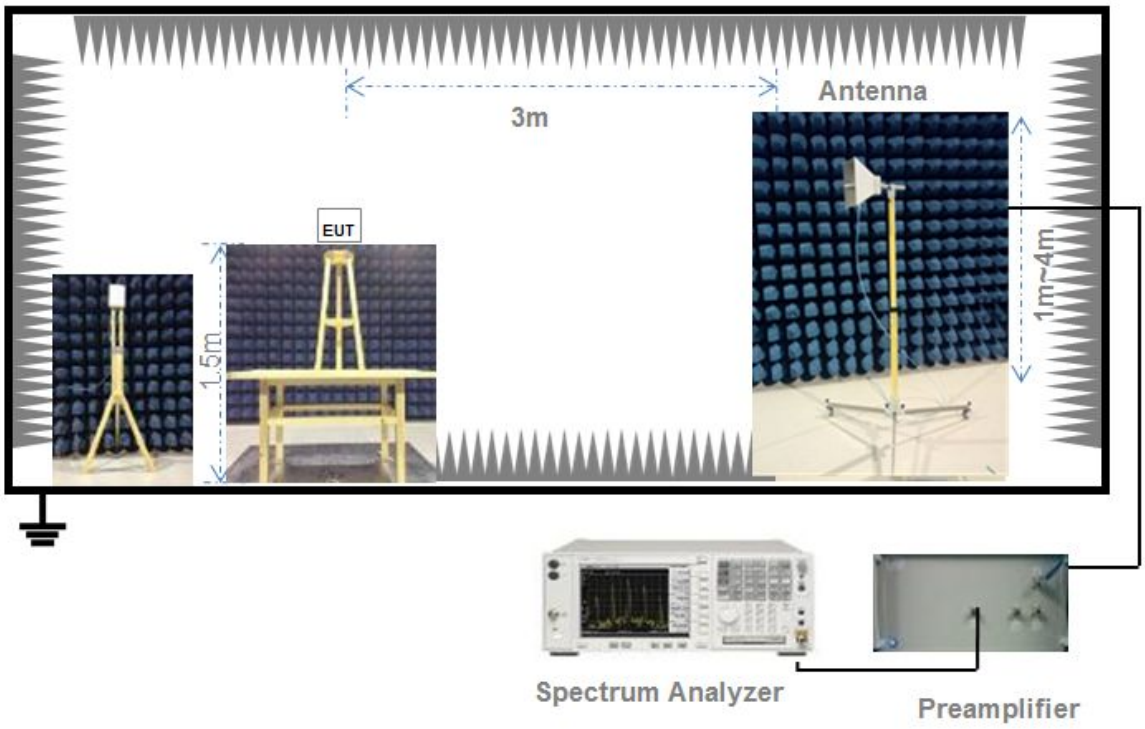
(Diagram 3)

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 Test Conditions

Test Case	Test Conditions		
	Test Env.	Test Setup Note 1	Test Configuration Note 2
20dB Bandwidth	NTNV	Test Setup 1	TC01~TC03
Conducted Emission	NTNV	Test Setup 2	TC01~TC03
Radiated Emission	NTNV	Test Setup 3 Test Setup 4 Test Setup 5	TC01~TC03
Band Edge	NTNV	Test Setup 5	TC01~TC03
Note: 1. Please refer to section 4.4 for test setup details. 2. Please refer to section 4.3 for test configuration details.			

5 TEST ITEMS

5.1 Antenna Requirements

5.1.1 Standard Applicable

FCC §15.203 & 15.247(b)

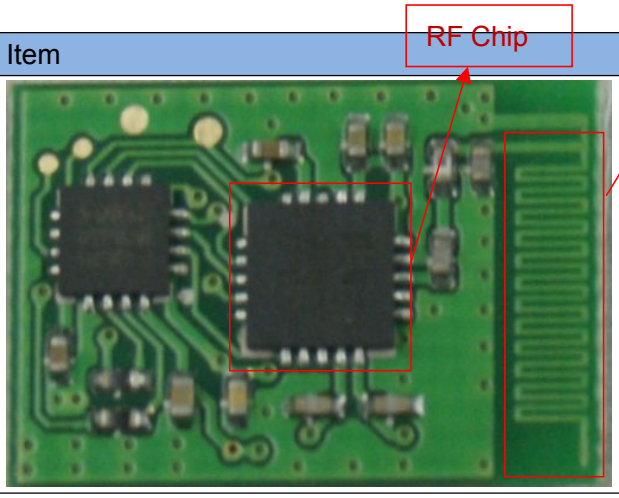
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply 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 An embedded-in	An embedded-in antenna design is used.

Reference Documents	Item
Photo	

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 20 dB Bandwidth

5.2.1 Limit

FCC §15.215(c)

Intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in Subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.

5.2.2 Test Setups

See section 4.1.1 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.2.3 Test Procedure

Use the following spectrum analyzer settings:

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

RBW ≥ 1% of the 20 dB bandwidth

VBW ≥ RBW

Sweep = auto

Detector function = peak

Trace = max hold

5.2.4 Test Result

Please refer to ANNEX A.1.

5.3 Conducted Emission

5.3.1 Limit

FCC §15.207

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 50μH/50Ω line impedance stabilization network (LISN).

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

5.3.2 Test Setups

See section 4.1.1 for test setup description for the AC power supply port. The photo of test setup please refer to ANNEX B.

5.3.3 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.

Note: this device powered by battery, conducted emission at main port is not request.

5.3.4 Test Result

Please refer to ANNEX A.2.

5.4 Radiated Spurious Emission

5.4.1 Limit

FCC §15.249(a)

Except as provided in paragraph (a) of this section, the field strength of emissions from intentional radiators operated within these frequency bands shall comply with the following:

Frequency (MHz)	Field Strength of Fundamental (mV/m)	Field Strength of Harmonics (μV/m)
902-928	50	500
2400-2483.5	50	500
5725-5875	50	500
24000-24250	250	2500

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 (μV/m)	Measurement Distance (m)
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

Note:

1. 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 20 dB above the maximum permitted average limit.

2. For above 1000 MHz, limit field strength of harmonics: 54dBuV/m@3m (AV) and 74dBuV/m@3m (PK).

5.4.2 Test Setups

See section 4.1.2-4.4.5 for test setup description for the antenna port. The photo of test setup please refer to ANNEX B.

5.4.3 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 ≥ 1 GHz, 100 kHz for f < 1 GHz

VBW ≥ RBW
Sweep = auto
Detector function = peak
Trace = max hold

5.4.4 Test Result

Please refer to ANNEX A.3.

5.5 Band Edge

5.5.1 Limit

FCC §15.249(a)

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.

5.5.2 Test Setups

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

Span = wide enough to capture the peak level of the emission operating on the channel closest to the band edge, as well as any modulation products which fall outside of the authorized band of operation

RBW ≥ 1% of the span

VBW ≥ RBW

Sweep = auto

Detector function = peak /AV

Trace = max hold

Allow the trace to stabilize.

E [dBμV/m] =UR + AT + AFactor [dB]; AT =LCable loss [dB]-Gpreamp [dB]

AT: Total correction Factor except Antenna

UR: Receiver Reading

Gpreamp: Preamplifier Gain

AFactor: Antenna Factor at 3m

5.5.4 Test Result

Please refer to ANNEX A.4.

ANNEX A TEST RESULT

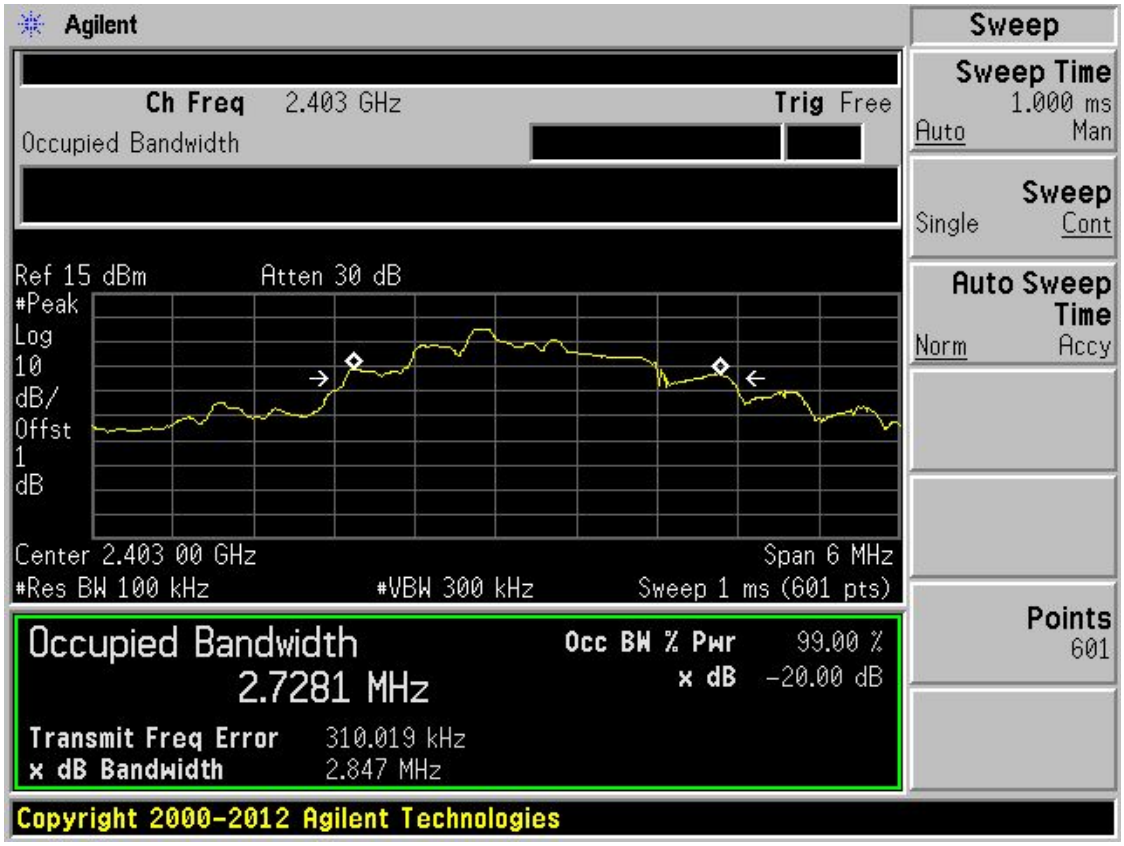
A.1 20dB bandwidth

Test Data

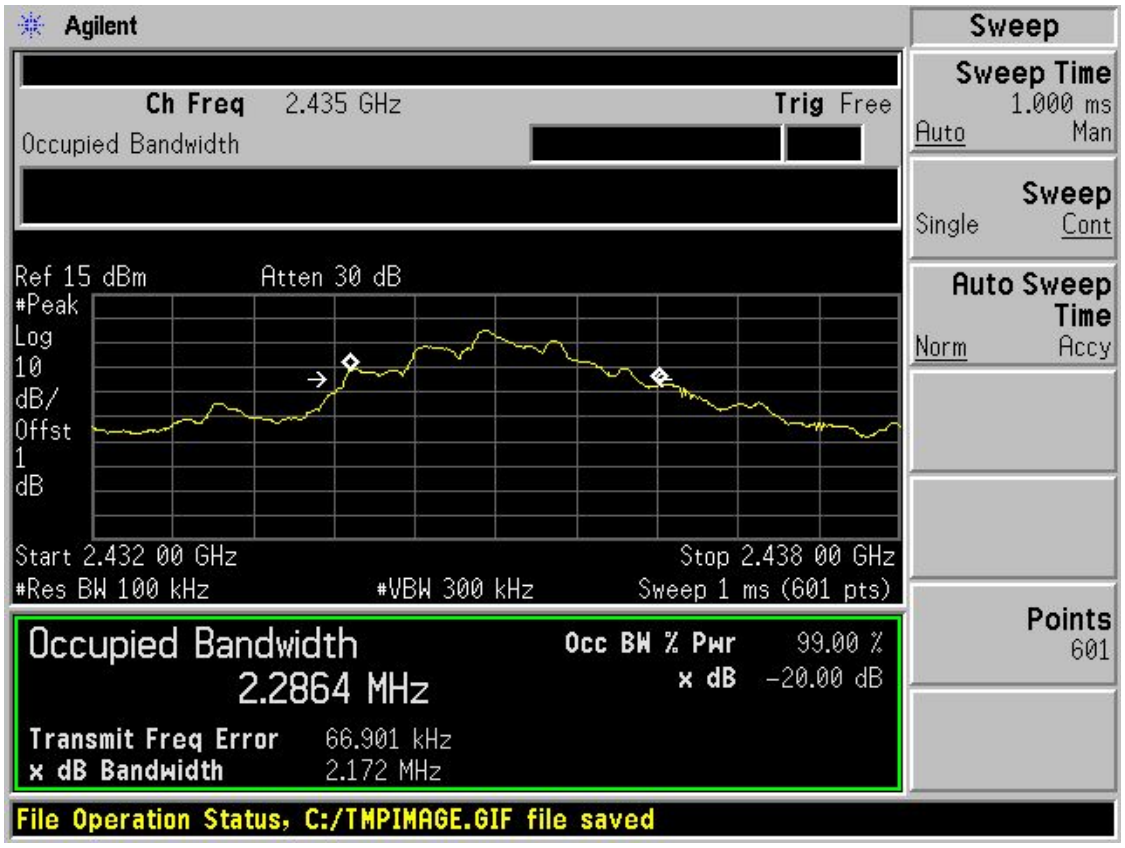
Frequency (MHz)	20 dB Bandwidth (MHz)
2403	2.847
2435	2.172
2474	3.568

Test plots

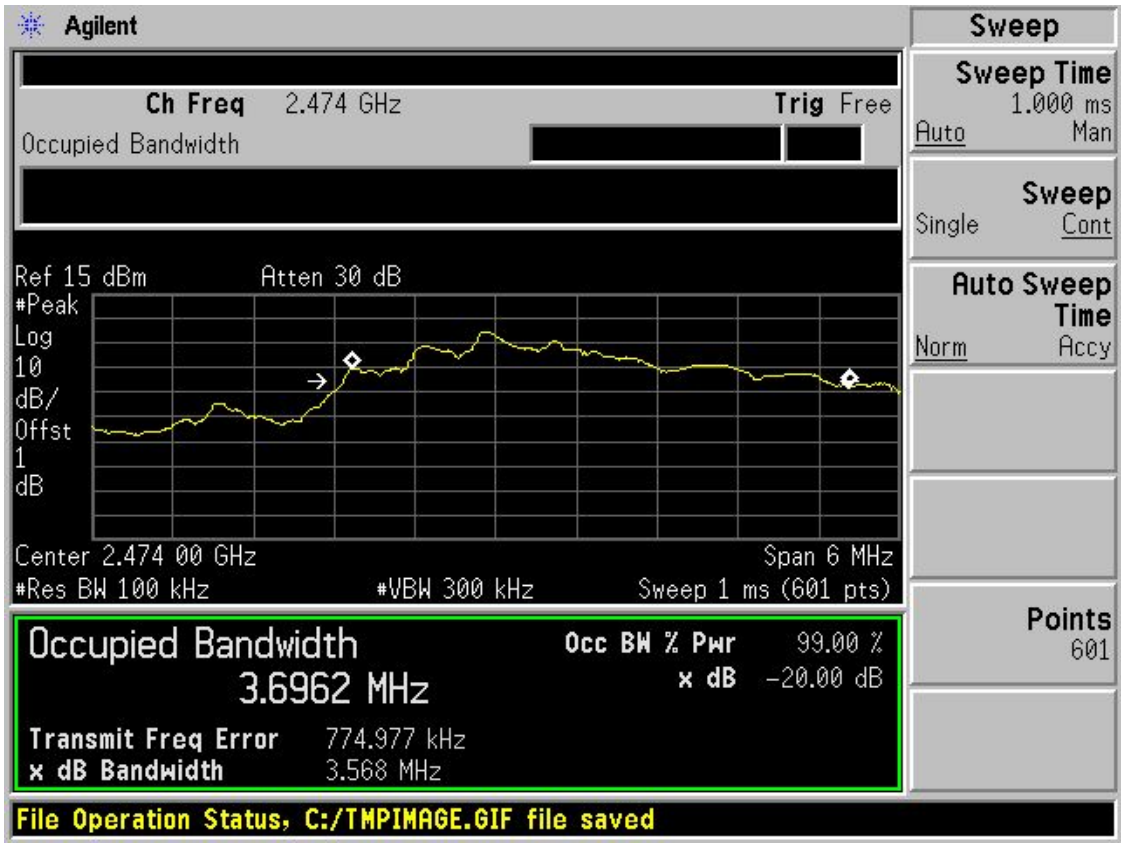
Low Channel



Middle Channel

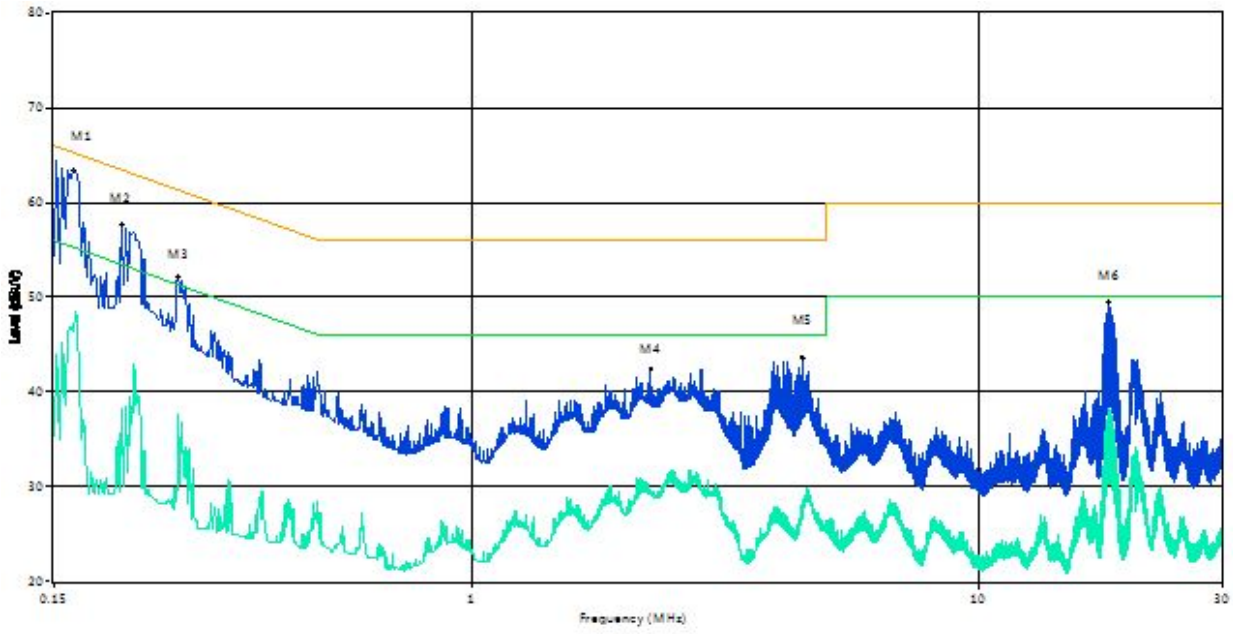


High Channel



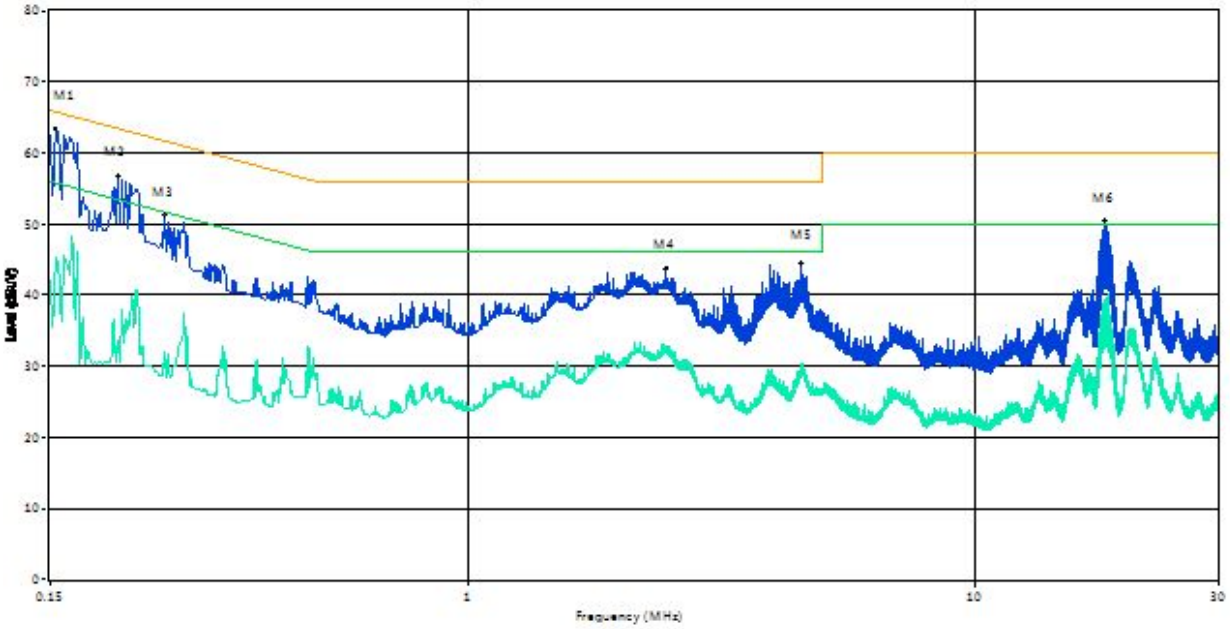
A.2 Conducted Emission

PHASE L



No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.16	63.4	13.00	65.6	2.20	Peak	L Line	Pass
1**	0.16	46.5	13.00	55.6	9.10	AV	L Line	Pass
2	0.20	57.6	13.00	64.5	6.90	Peak	L Line	Pass
2**	0.20	38.2	13.00	54.5	16.30	AV	L Line	Pass
3	0.26	52.2	13.00	62.7	10.50	Peak	L Line	Pass
3**	0.26	37.6	13.00	52.7	15.10	AV	L Line	Pass
4	2.25	42.4	13.00	56.0	13.60	Peak	L Line	Pass
4**	2.25	28.9	13.00	46.0	17.10	AV	L Line	Pass
5	4.47	43.6	13.00	56.0	12.40	Peak	L Line	Pass
5**	4.47	28.4	13.00	46.0	17.60	AV	L Line	Pass
6	17.96	49.5	13.00	60.0	10.50	Peak	L Line	Pass
6**	17.96	37.5	13.00	50.0	12.50	AV	L Line	Pass

PHASE N

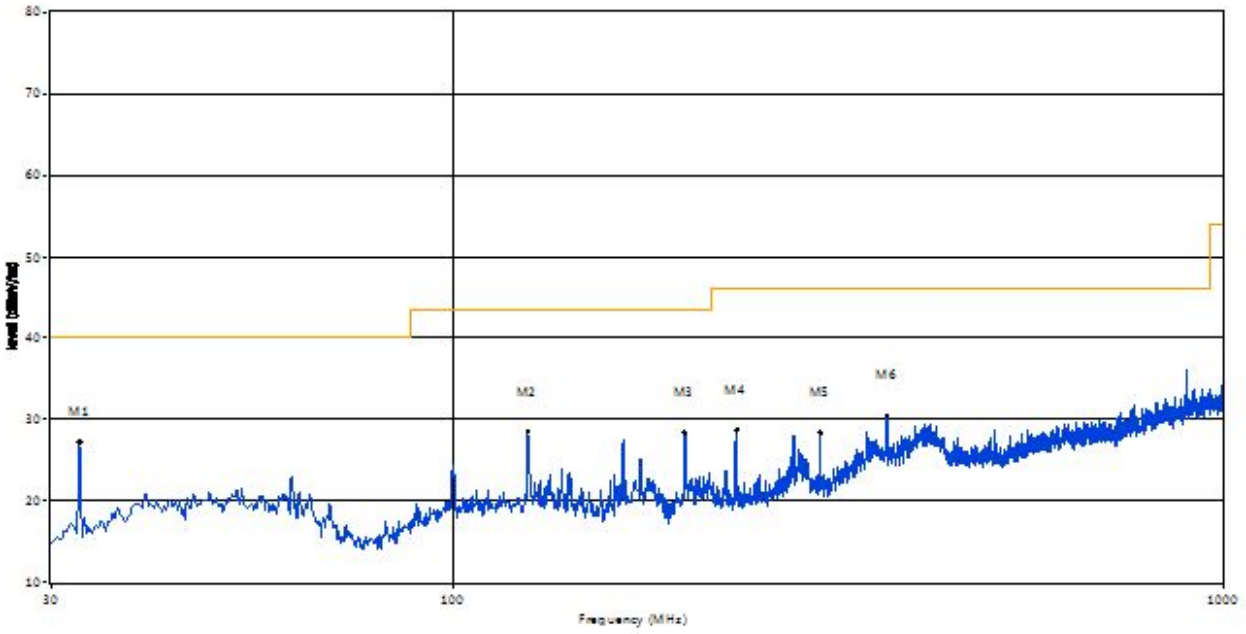


No.	Frequency (MHz)	Results (dBuV)	Factor (dB)	Limit (dBuV)	Margin (dB)	Detector	Line	Verdict
1	0.15	63.5	13.00	65.9	2.40	Peak	N Line	Pass
1**	0.15	45.4	13.00	55.9	10.50	AV	N Line	Pass
2	0.20	56.8	13.00	64.5	7.70	Peak	N Line	Pass
2**	0.20	33.6	13.00	54.5	20.90	AV	N Line	Pass
3	0.25	51.3	13.00	63.1	11.80	Peak	N Line	Pass
3**	0.25	31.9	13.00	53.1	21.20	AV	N Line	Pass
4	2.45	43.7	13.00	56.0	12.30	Peak	N Line	Pass
4**	2.45	32.8	13.00	46.0	13.20	AV	N Line	Pass
5	4.54	44.5	13.00	56.0	11.50	Peak	N Line	Pass
5**	4.54	29.6	13.00	46.0	16.40	AV	N Line	Pass
6	17.94	50.4	13.00	60.0	9.60	Peak	N Line	Pass
6**	17.94	39.4	13.00	50.0	10.60	AV	N Line	Pass

A.3 Radiated Emission

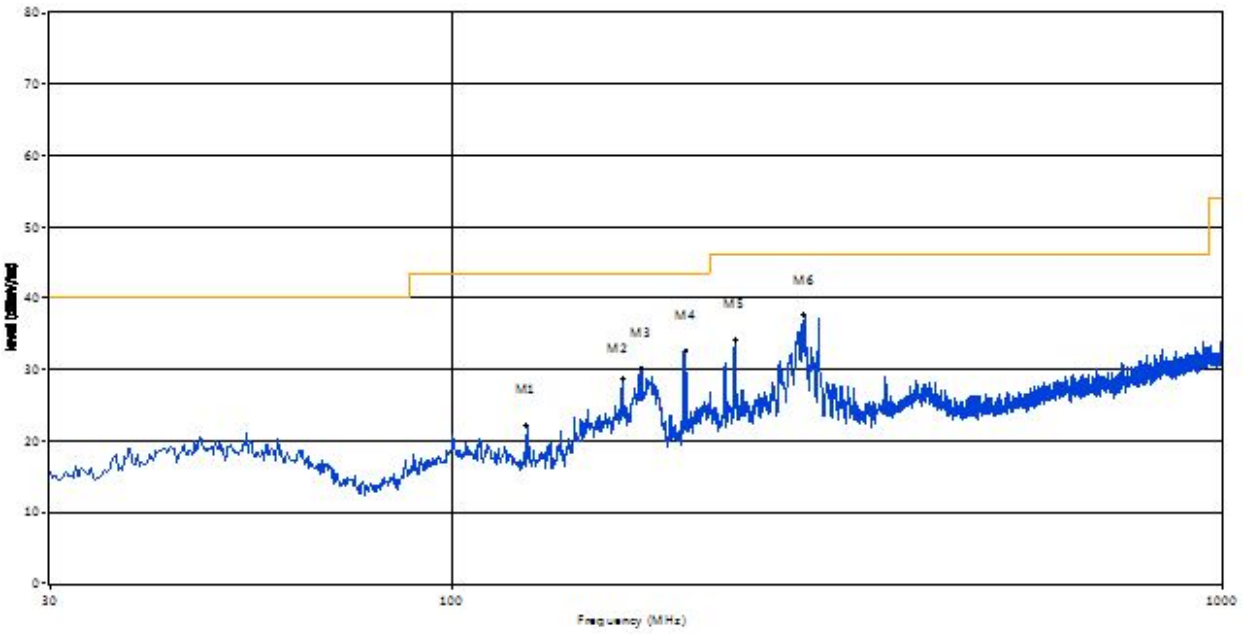
The low frequency, which started from 9 kHz to 30 MHz, was pre-scanned and the result which was 20 dB lower than the limit line per 15.31(o) was not reported.

30 MHz to 1 GHz, ANT V



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	32.67	27.26	-21.86	40.0	12.74	Peak	38.90	100	Vertical	Pass
2	124.79	28.48	-22.47	43.5	15.02	Peak	-0.00	100	Vertical	Pass
3	199.95	28.35	-20.22	43.5	15.15	Peak	94.20	100	Vertical	Pass
4	233.16	28.74	-19.51	46.0	17.26	Peak	110.90	100	Vertical	Pass
5	299.83	28.39	-17.63	46.0	17.61	Peak	327.50	100	Vertical	Pass
6	365.78	30.42	-16.06	46.0	15.58	Peak	359.20	100	Vertical	Pass

30 MHz to 1 GHz, ANT H



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	125.04	22.20	-22.49	43.5	21.30	Peak	304.70	100	Horizontal	Pass
2	166.25	28.71	-22.87	43.5	14.79	Peak	282.90	100	Horizontal	Pass
3	175.95	30.13	-22.33	43.5	13.37	Peak	294.00	100	Horizontal	Pass
4	200.92	32.62	-20.23	43.5	10.88	Peak	288.40	100	Horizontal	Pass
5	233.16	34.26	-19.51	46.0	11.74	Peak	244.30	100	Horizontal	Pass
6	286.74	37.62	-18.09	46.0	8.38	Peak	261.00	100	Horizontal	Pass

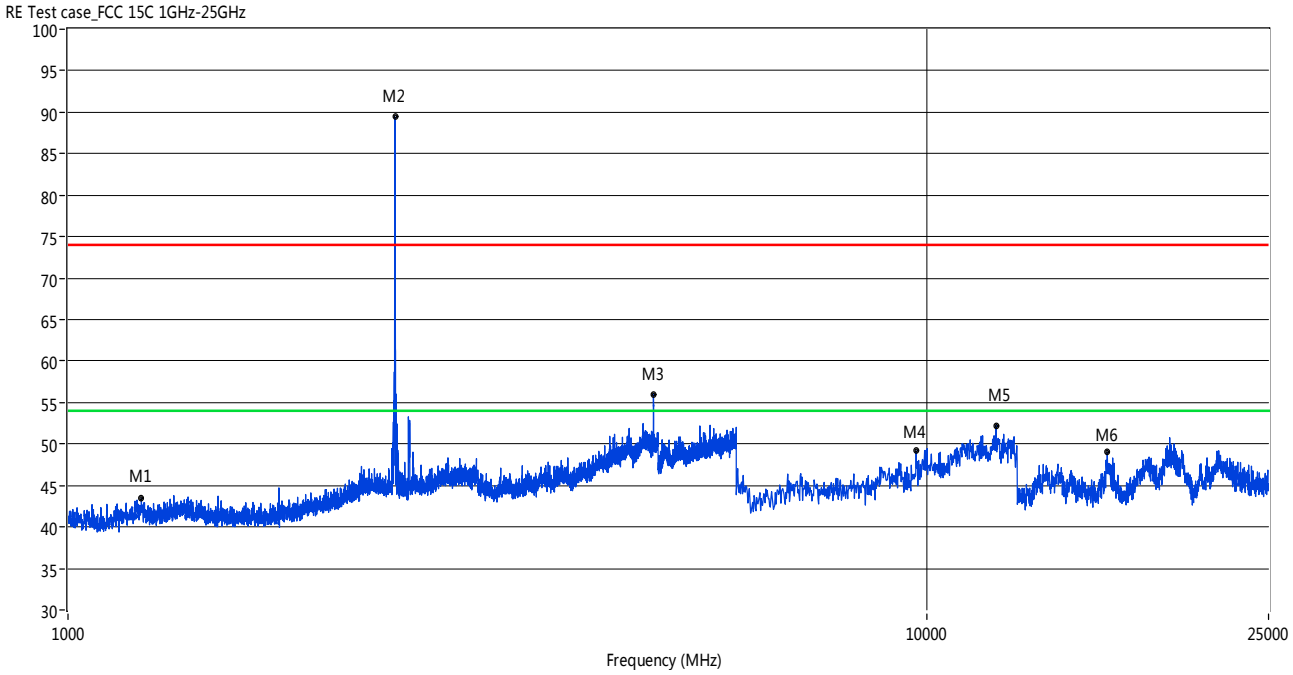
Test Data and Plots(1 GHz ~ 25 GH)

Fre. (MHz)		Pk	AV	Limit-PK	Limit-AV	Degree	Antenna	Verdict
Fundamental	2403.65	89.44	--	114.0	94.0	169.00	Vertical	Pass
Harmonic	N/A	--	--	74.0	54.0	--	Vertical	--
	N/A	--	--	74.0	54.0	--	Vertical	--
Spurious	1217.45	43.44	--	74.0	54.0	5.00	Vertical	Pass
	4805.55	55.96	--	74.0	54.0	5.00	Vertical	Pass
	9717.55	49.17	--	74.0	54.0	79.00	Vertical	Pass
	12042.43	52.24	--	74.0	54.0	300.00	Vertical	Pass
	16223.38	49.01	--	74.0	54.0	292.00	Vertical	Pass
Fundamental	2403.65	93.47	--	114.0	94.0	301.00	Horizontal	Pass
Harmonic	N/A	--	--	74.0	54.0	--	Horizontal	--
	N/A	--	--	74.0	54.0	--	Horizontal	--
Spurious	1349.91	43.72	--	74.0	54.0	330.00	Horizontal	Pass
	4807.05	54.77	--	74.0	54.0	228.00	Horizontal	Pass
	8920.13	47.56	--	74.0	54.0	187.00	Horizontal	Pass
	11615.64	50.65	--	74.0	54.0	51.00	Horizontal	Pass
	21915.14	49.88	--	74.0	54.0	29.00	Horizontal	Pass

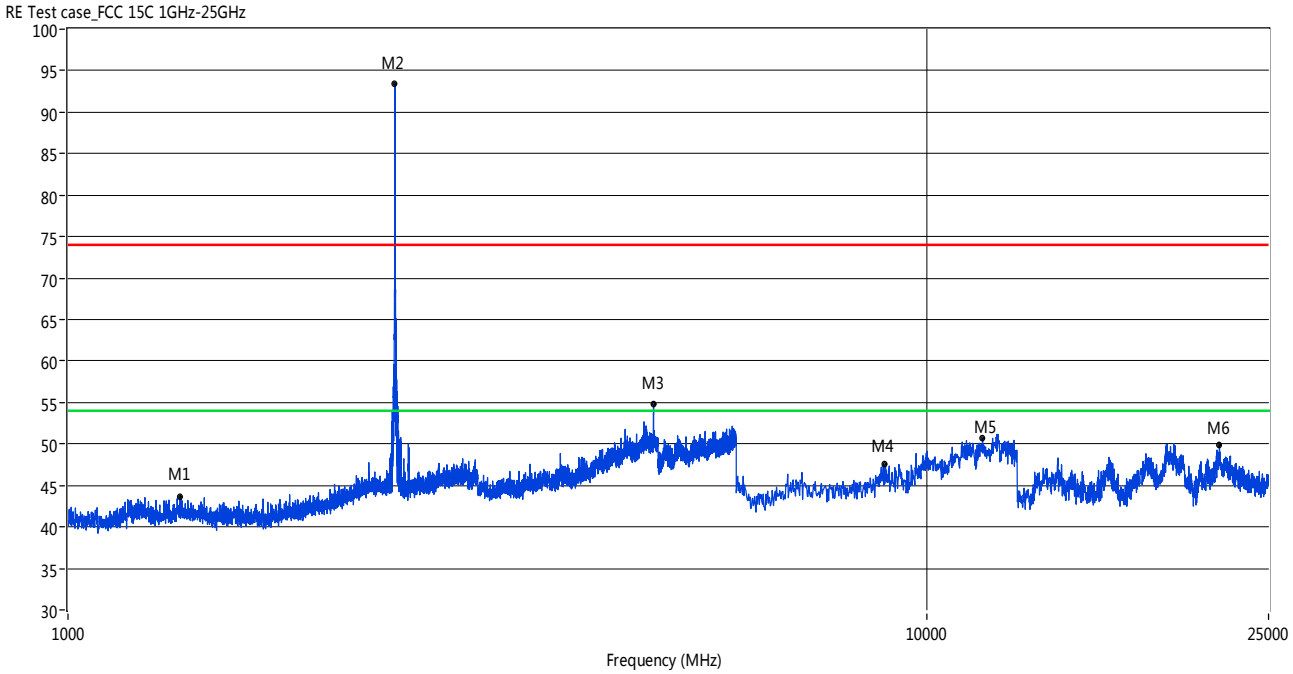
Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin>20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000 MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.

1 GHz to 25 GHz, ANT V, 2403 MHz



1 GHz to 25 GHz, ANT H, 2403 MHz

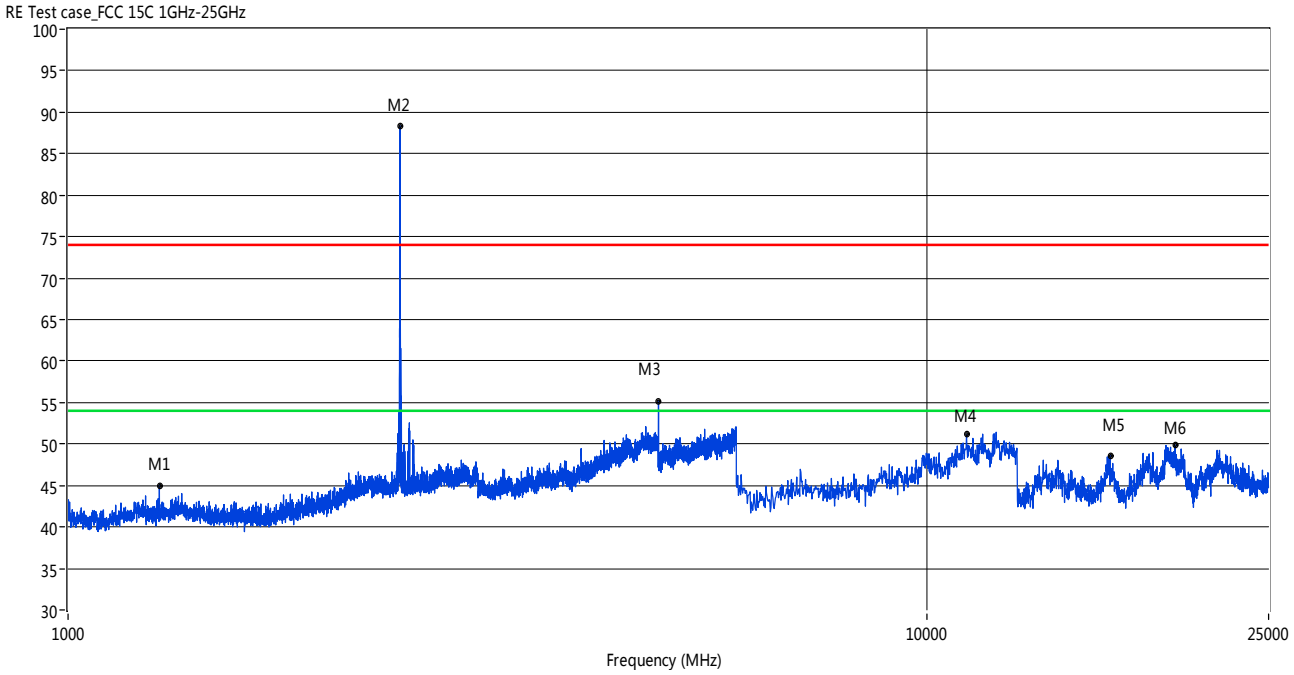


Fre. (MHz)		Pk	AV	Limit-PK	Limit-AV	Degree	Antenna	Verdict
Fundamental	2435.14	88.36	--	114.0	94.0	186.00	Vertical	Pass
Harmonic	N/A	--	--	74.0	54.0	--	Vertical	--
	N/A	--	--	74.0	54.0	--	Vertical	--
Spurious	1277.43	44.97	--	74.0	54.0	190.00	Vertical	Pass
	4869.28	55.21	--	74.0	54.0	330.00	Vertical	Pass
	11121.46	51.15	--	74.0	54.0	138.00	Vertical	Pass
	16348.17	48.63	--	74.0	54.0	83.00	Vertical	Pass
	19449.25	49.91	--	74.0	54.0	129.00	Vertical	Pass
Fundamental	2435.64	92.80	--	114.0	94.0	218.00	Horizontal	Pass
Harmonic	N/A	--	--	74.0	54.0	--	Horizontal	--
	N/A	--	--	74.0	54.0	--	Horizontal	--
Spurious	1356.91	43.76	--	74.0	54.0	218.00	Horizontal	Pass
	4869.28	53.97	--	74.0	54.0	284.00	Horizontal	Pass
	10009.57	49.45	--	74.0	54.0	354.00	Horizontal	Pass
	12289.52	51.70	--	74.0	54.0	250.00	Horizontal	Pass
	21915.14	49.82	--	74.0	54.0	19.00	Horizontal	Pass

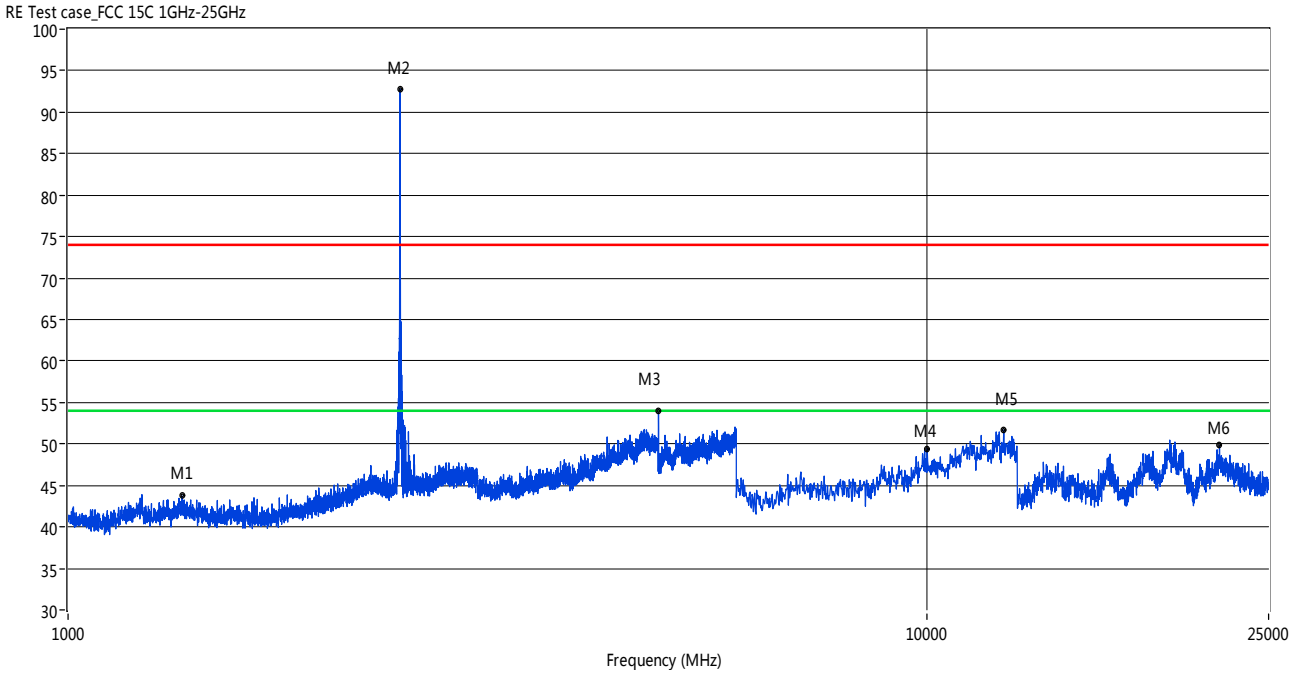
Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin>20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000 MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.

1 GHz to 25 GHz, ANT V, 2435 MHz



1 GHz to 25 GHz, ANT H,2435MHz

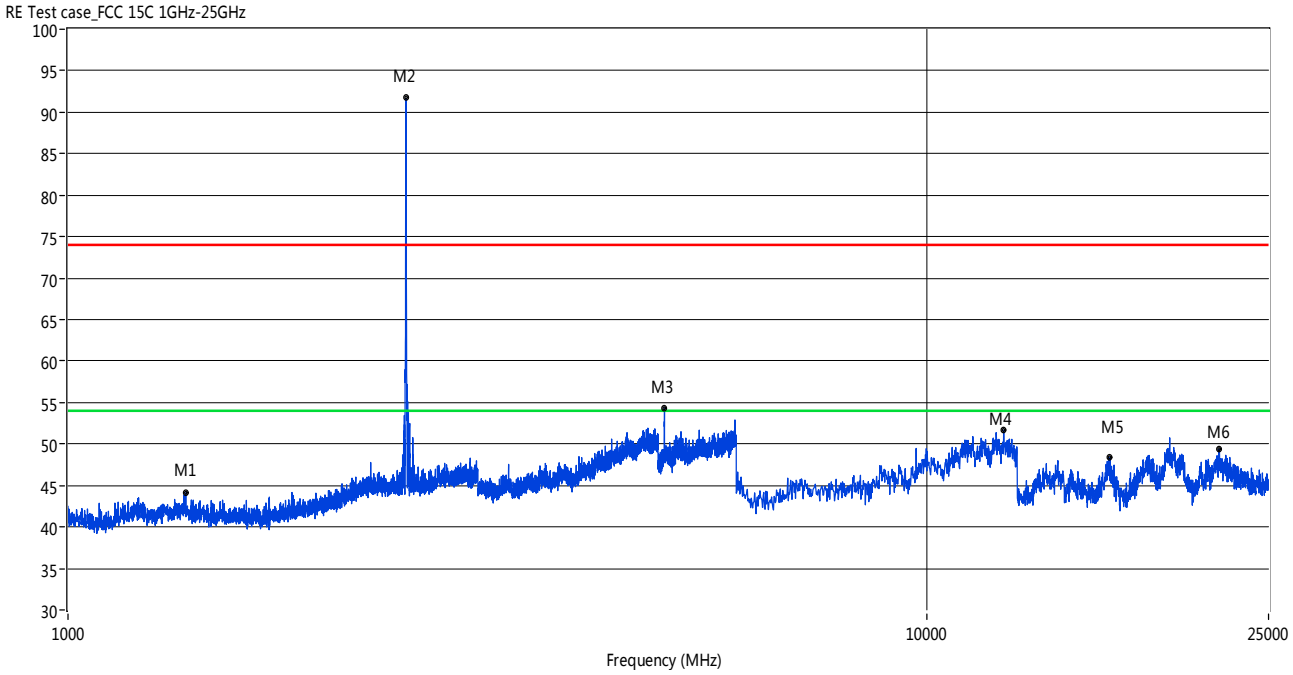


Fre. (MHz)		Pk	AV	Limit-PK	Limit-AV	Degree	Antenna	Verdict
Fundamental	2474.13	91.71	--	114.0	94.0	92.00	Vertical	Pass
Harmonic	N/A	--	--	74.0	54.0	--	Vertical	--
	N/A	--	--	74.0	54.0	--	Vertical	--
Spurious	1370.91	44.12	--	74.0	54.0	189.00	Vertical	Pass
	4949.51	54.38	--	74.0	54.0	137.00	Vertical	Pass
	12289.52	51.68	--	74.0	54.0	206.00	Vertical	Pass
	16296.17	48.36	--	74.0	54.0	355.00	Vertical	Pass
	21875.21	49.37	--	74.0	54.0	42.00	Vertical	Pass
Fundamental	2474.63	94.86	--	114.0	94.0	176.00	Horizontal	Pass
Harmonic	N/A	--	--	74.0	54.0	--	Horizontal	--
	N/A	--	--	74.0	54.0	--	Horizontal	--
Spurious	1308.92	44.32	--	74.0	54.0	291.00	Horizontal	Pass
	4948.01	56.15	--	74.0	54.0	87.00	Horizontal	Pass
	12042.43	51.40	--	74.0	54.0	346.00	Horizontal	Pass
	14216.31	48.26	--	74.0	54.0	45.00	Horizontal	Pass
	19179.70	50.68	--	74.0	54.0	160.00	Horizontal	Pass

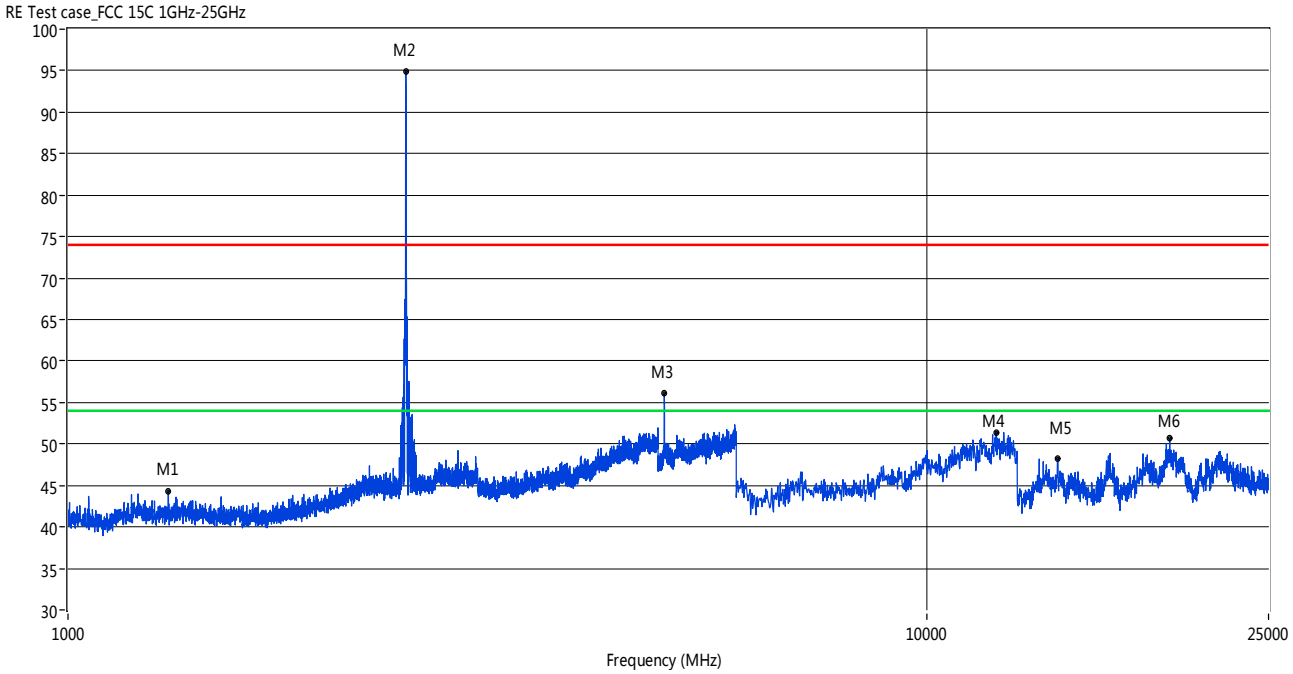
Notes:

1. Measuring frequencies from 1 GHz to the 10th harmonic of highest fundamental frequency.
2. Measurements above show only up to 6 maximum emissions noted, or would be lesser if no specific emissions from the EUT are recorded (ie: margin>20 dB from the applicable limit) and considered that's already beyond the background noise floor.
3. Radiated emissions measured in frequency above 1000 MHz were made with an instrument using Peak detector mode and average detector mode of the emission shown in Actual FS column.

1 GHz to 25 GHz, ANT V, 2474 MHz



1 GHz to 25 GHz, ANT H, 2474 MHz

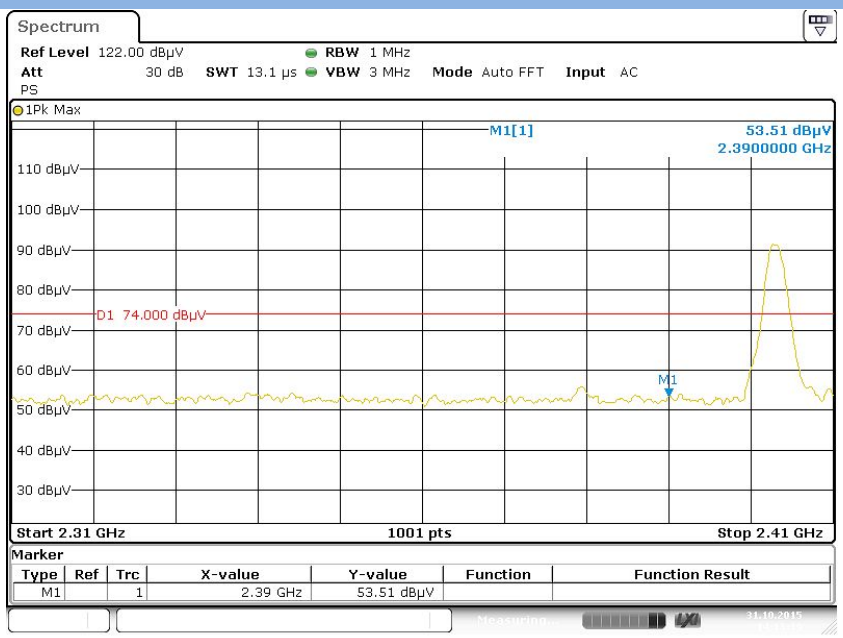


A.4 Band Edge

Test Data and Test Plots

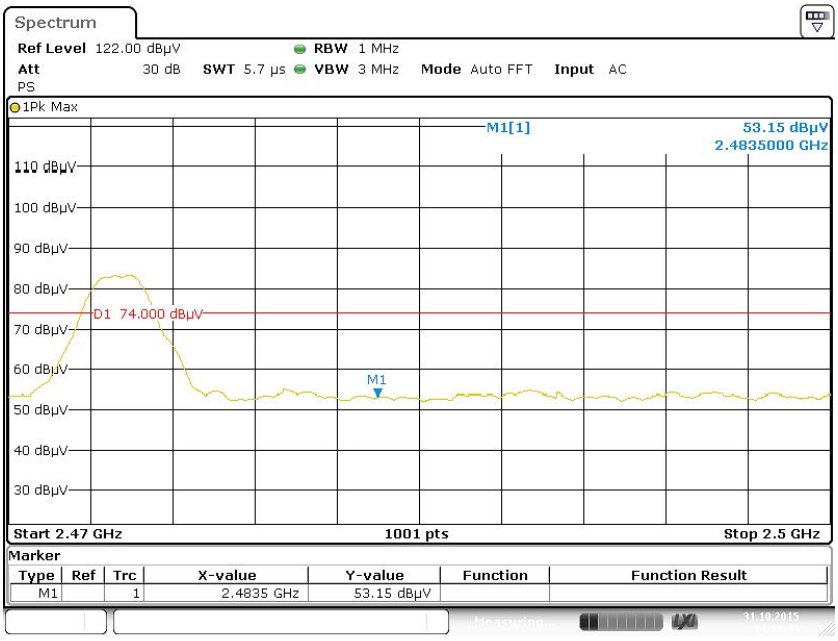
Note 1: The test data all are tested in the vertical and horizontal antenna which the trace is max hold. So these plots have shown the worst case.

Low Channel



Date: 31.OCT.2015 14:13:20

High Channel



Date: 31.OCT.2015 14:11:49

ANNEX B TEST SETUP PHOTOS

Please refer the document “BL-SZ15A0022-AR”.

ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL-SZ15A0022-AW”.

ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL-SZ15A0022-AI”.

--END OF REPORT--