

FCC  
RF  
TEST REPORT

ISSUED BY  
Shenzhen BALUN Technology Co., Ltd.



FOR  
**Handheld transmitter**

ISSUED TO  
inMusic Brands, Inc.

200 Scenic View Drive, Cumberland, RI 02864, U.S.A



Tested by:

Cao Shaocong  
(Engineer)

Date Jun. 14, 2016

Approved by:

Wei Yanquan  
(Chief Engineer)

Date Jun. 14, 2016

Report No.: BL-SZ15C0287-601

EUT Type: Handheld transmitter

Model Name: WS100-MIC

Brand Name: Numark

Test Standard: 47 CFR Part 15 Subpart C

FCC ID: Y4O-WS100

Test conclusion: Pass

Test Date: Apr. 28, 2016 ~ May 5, 2016

Date of Issue: Jun. 14, 2016

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### Revision History

<u>Version</u>	<u>Issue Date</u>	<u>Revisions Content</u>
<u>Rev. 01</u>	<u>Jun. 8, 2016</u>	<u>Initial Issue</u>
<u>Rev. 02</u>	<u>Jun. 14, 2016</u>	<u>Update the test setup for RSE above 1GHz</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 .....	7
2.1	Applicant Information .....	7
2.2	Manufacturer Information .....	7
2.3	Factory Information .....	7
2.4	General Description for Equipment under Test (EUT) .....	7
2.5	Ancillary Equipment .....	7
2.6	Technical Information .....	7
2.7	Additional Instructions .....	8
3	SUMMARY OF TEST RESULTS.....	9
3.1	Test Standards.....	9
3.2	Verdict.....	9
4	GENERAL TEST CONFIGURATIONS.....	10
4.1	Test Environments .....	10
4.2	Test Equipment List .....	10
4.3	Description of Test Setup.....	11
4.3.1	For Antenna Port Test.....	11
4.3.2	For AC Power Supply Port Test .....	11
4.3.3	For Radiated Test (Below 30 MHz) .....	12
4.3.4	For Radiated Test (30 MHz-1 GHz) .....	12
4.3.5	For Radiated Test (Above 1 GHz).....	13

4.4	Test Conditions .....	13
5	TEST ITEMS.....	14
5.1	Antenna Requirements .....	14
5.1.1	Standard Applicable .....	14
5.1.2	Antenna Anti-Replacement Construction .....	14
5.1.3	Antenna Gain .....	14
5.2	20 dB Bandwidth .....	15
5.2.1	Limit.....	15
5.2.2	Test Setups .....	15
5.2.3	Test Procedure.....	15
5.2.4	Test Result .....	15
5.3	AC Conducted Emission .....	16
5.3.1	Limit.....	16
5.3.2	Test Setups .....	16
5.3.3	Test Procedure.....	16
5.3.4	Test Result .....	16
5.4	Radiated Spurious Emission .....	17
5.4.1	Limit.....	17
5.4.2	Test Setups .....	17
5.4.3	Test Procedure.....	17
5.4.4	Test Result .....	18
5.5	Band Edge .....	19
5.5.1	Limit.....	19
5.5.2	Test Setups .....	19
5.5.3	Test Procedure.....	19
5.5.4	Test Result .....	19
ANNEX A	TEST RESULT .....	20
A.1	20dB bandwidth .....	20
A.2	AC Conducted Emission .....	22
A.3	Radiated Emission .....	22

A.4	Band Edge .....	31
ANNEX B	TEST SETUP PHOTOS .....	32
ANNEX C	EUT EXTERNAL PHOTOS .....	32
ANNEX D	EUT INTERNAL PHOTOS .....	32

# 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	<p>The laboratory has been listed by Industry Canada to perform electromagnetic emission measurements. The recognition numbers of test site are 11524A-1.</p> <p>The laboratory has been listed by US Federal Communications Commission to perform electromagnetic emission measurements. The recognition numbers of test site are 832625.</p> <p>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.</p>
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°C
Ambient Relative Humidity	45% - 55%
Ambient Pressure	100 kPa - 102 kPa

## 1.4 Announce

- (1) The test report reference to the report template version v4.3.
- (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	inMusic Brands, Inc.
Address	200 Scenic View Drive, Cumberland, RI 02864, U.S.A

### 2.2 Manufacturer Information

Manufacturer	inMusic Brands, Inc.
Address	200 Scenic View Drive, Cumberland, RI 02864, U.S.A

### 2.3 Factory Information

Factory	inMusic Brands, Inc.
Address	200 Scenic View Drive, Cumberland, RI 02864, U.S.A

### 2.4 General Description for Equipment under Test (EUT)

EUT Type	Handheld transmitter
Model Name Under Test	WS100-MIC
Hardware Version	N/A
Software Version	N/A
Dimensions (Approx.)	N/A
Weight (Approx.)	N/A

### 2.5 Ancillary Equipment

Ancillary Equipment 1	Battery (Transmitter)	
	Brand Name	GoldenPower
	Model No.	GR6M
	Serial No.	N/A
	Capacitance	800 mAh
	Rated Voltage	1.5 V
	Limit Charge Voltage	N/A

### 2.6 Technical Information

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

Modulation Type	FM
Product Type	Portable
Frequency Range	902 MHz to 927 MHz
Tested Channel	Low (902.9 MHz), Middle (913 MHz), High (926.8 MHz)
Antenna Type	PIFA Antenna
Antenna Gain	0 dBi (All involve the antenna gain test item, has been included in the final results)
About the Product	The EUT is a wireless microphone.

## 2.7 Additional Instructions

EUT Software Settings:

Client have set the channel and frequency, open the switch on electricity can transmit signal.



### 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
2	ANSI C63.10-2013	American National Standard for Testing Unlicensed Wireless Devices

#### 3.2 Verdict

No.	Description	FCC Part No.	Test Result	Verdict	Remark
1	Antenna Requirement	15.203	--	Pass	Note1
2	20 dB Bandwidth	15.215(c)	ANNEX A.1	Pass	
3	AC Conducted Emission	15.207	ANNEX A.2	N/A	Note 2
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.

Note 2: The EUT have not AC power supply, and not applicable AC Conducted Emission

## 4 GENERAL TEST CONFIGURATIONS

### 4.1 Test Environments

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

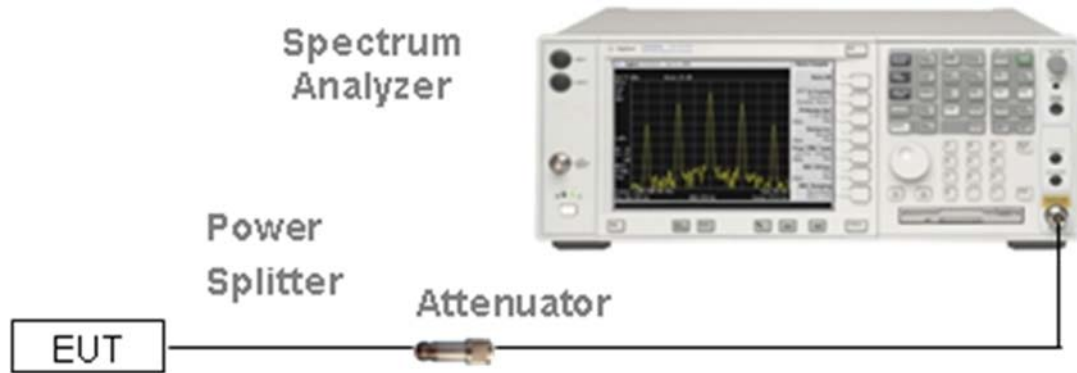
Relative Humidity	45% - 55%	
Atmospheric Pressure	100 kPa - 102 kPa	
Temperature	NT (Normal Temperature)	+22°C to +25°C
Working Voltage of the EUT	NV (Normal Voltage)	3.0 V

### 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	2017.02.27
Shielded Enclosure	ChangNing	CN-130701	130703	--	--

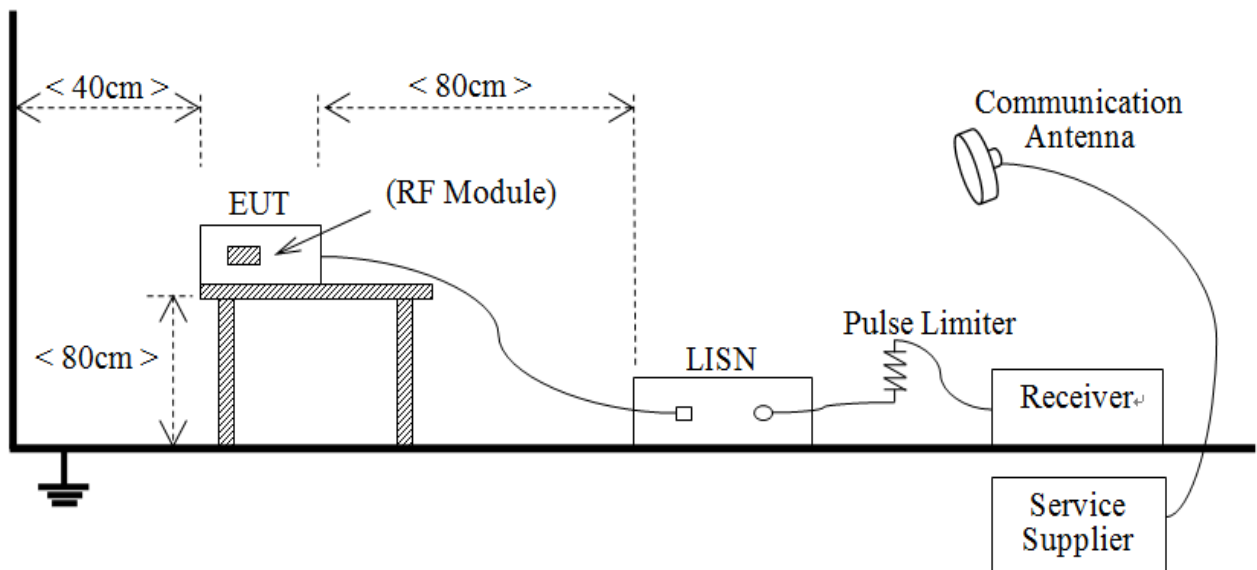
### 4.3 Description of Test Setup

#### 4.3.1 For Antenna Port Test



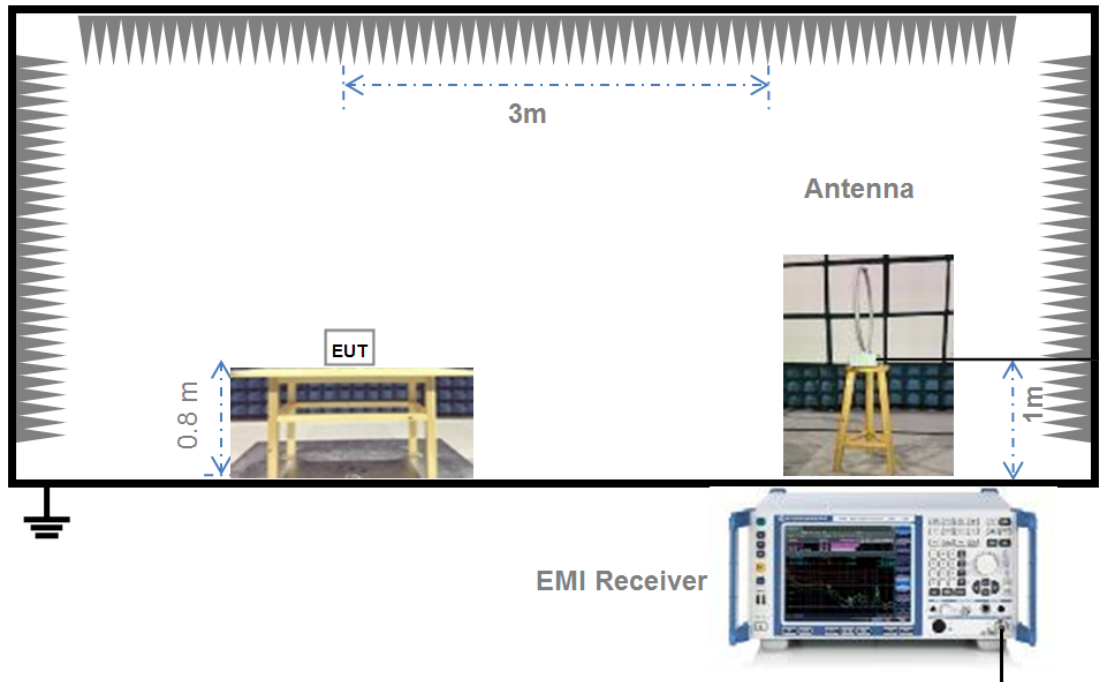
(Diagram 1)

#### 4.3.2 For AC Power Supply Port Test



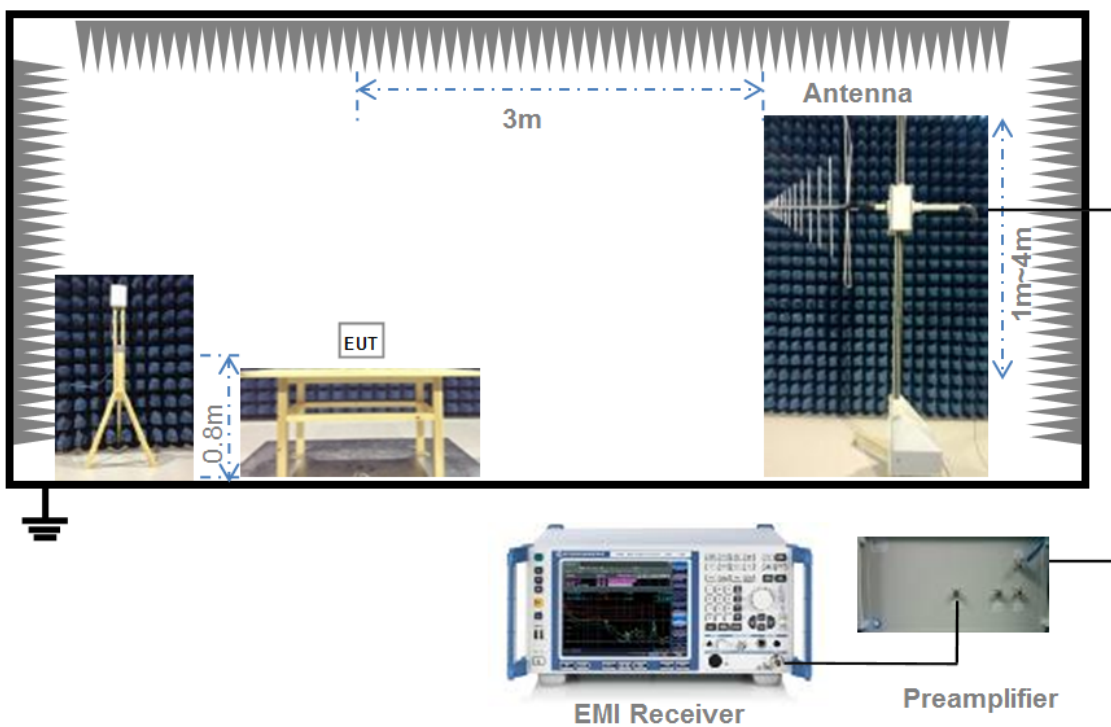
(Diagram 2)

#### 4.3.3 For Radiated Test (Below 30 MHz)



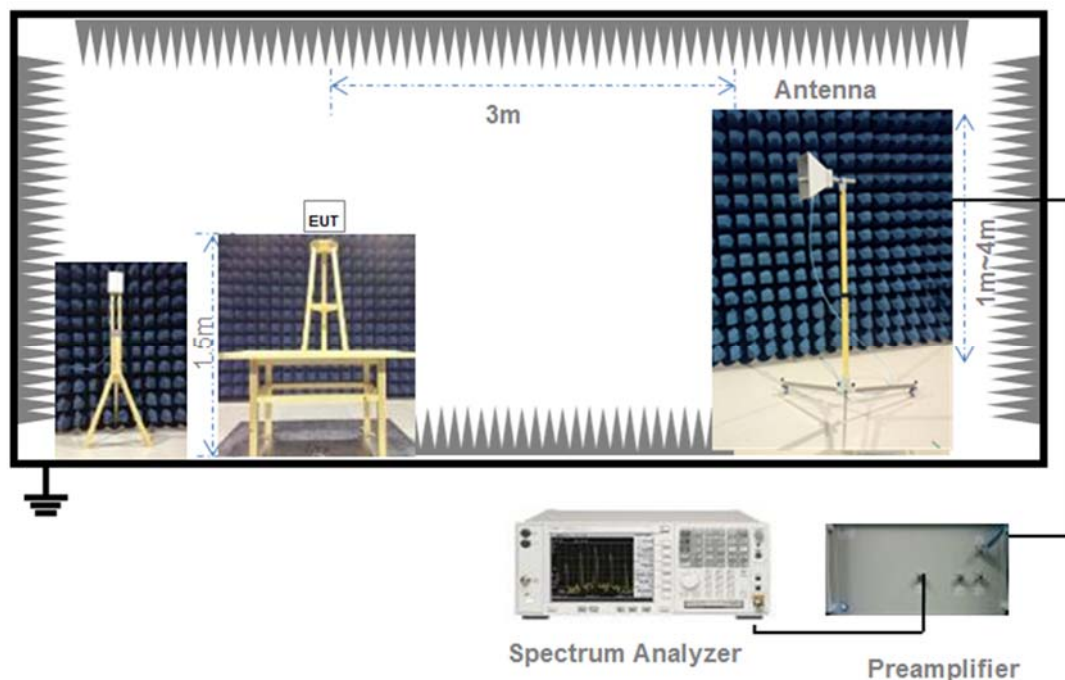
(Diagram 3)

#### 4.3.4 For Radiated Test (30 MHz-1 GHz)



(Diagram 4)

#### 4.3.5 For Radiated Test (Above 1 GHz)



(Diagram 5)

### 4.4 Test Conditions

Test Case	Test Conditions		
	Test Env.	Test Setup <sup>Note 1</sup>	Test Configuration <sup>Note 2</sup>
20dB Bandwidth	NTNV	Test Setup 1	TC01
Conducted Emission	NTNV	Test Setup 2	TC01
Radiated Emission	NTNV	Test Setup 3 Test Setup 4 Test Setup 5	TC01
Band Edge	NTNV	Test Setup 5	TC01
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)

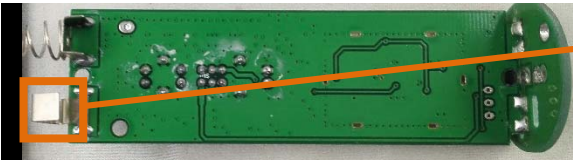
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply 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  $\geq$  1% of the 20 dB bandwidth

VBW  $\geq$  RBW

Sweep = auto

Detector function = peak

Trace = max hold

### 5.2.4 Test Result

Please refer to ANNEX A.1.

## 5.3 AC 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 50 $\mu$ H/50 $\Omega$  line impedance stabilization network (LISN).

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

### 5.3.2 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.

### 5.3.3 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.

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.

### 5.3.4 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  $f \geq 1$  GHz, 100 kHz for  $f < 1$  GHz

VBW  $\geq$  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 4.1.1 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  $\geq$  1% of the span

VBW  $\geq$  RBW

Sweep = auto

Detector function = peak /AV

Trace = max hold

Allow the trace to stabilize.

$E \text{ [dB}\mu\text{V/m]} = UR + AT + A\text{Factor [dB]}; AT = LCable \text{ loss [dB]} - G\text{preamp [dB]}$

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

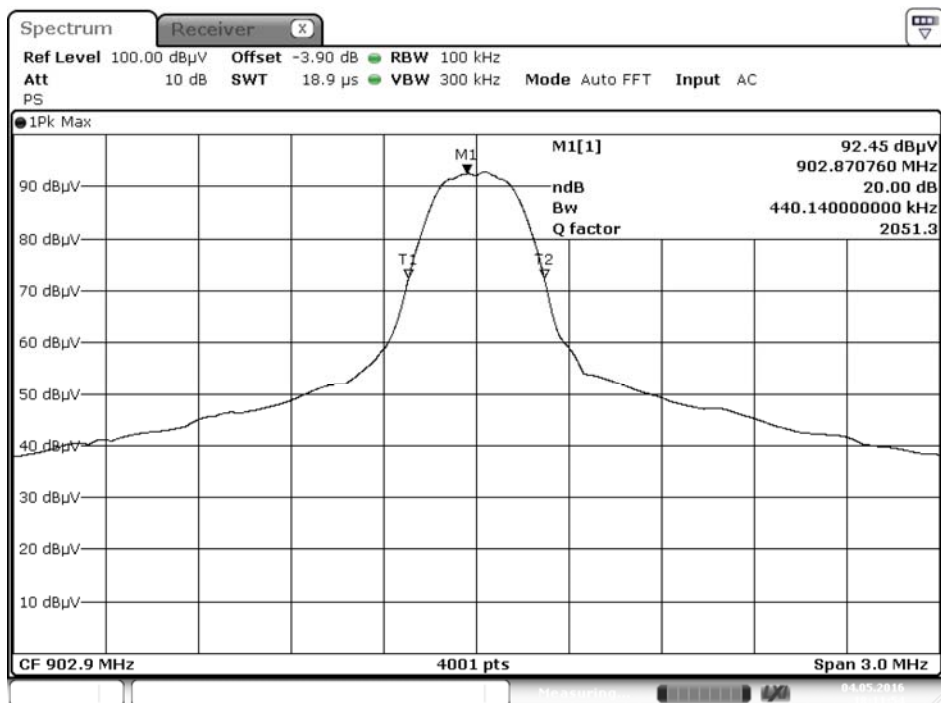
### A.1 20dB bandwidth

#### Test Data

Channel	Frequency (MHz)	20 dB Bandwidth (kHz)
Low	902.9	440.14
Middle	913.0	440.14
High	926.8	438.50

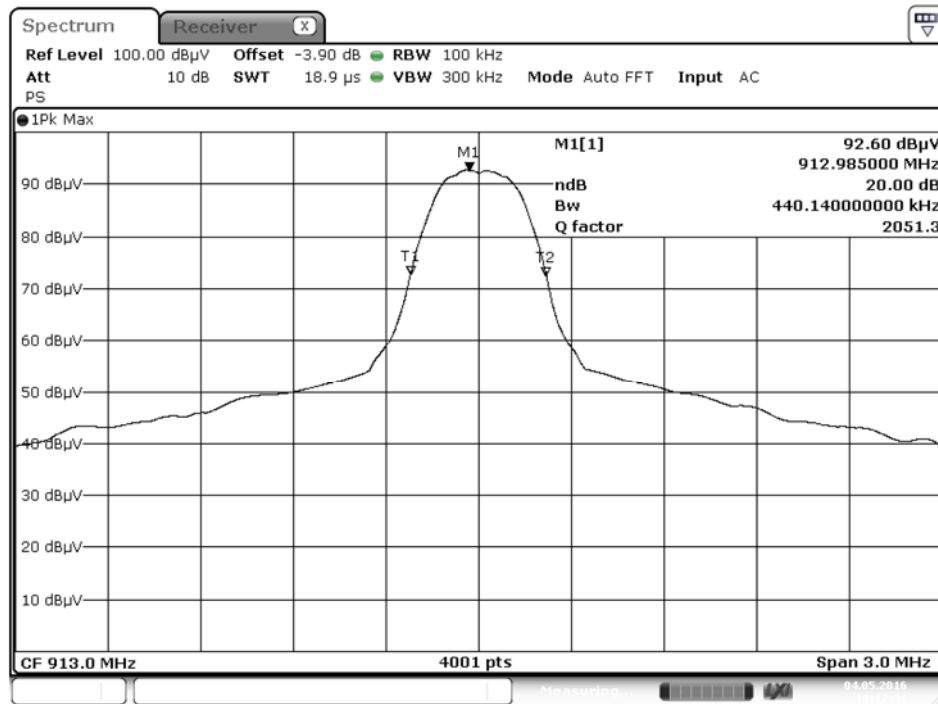
#### Test plots

##### Low Channel

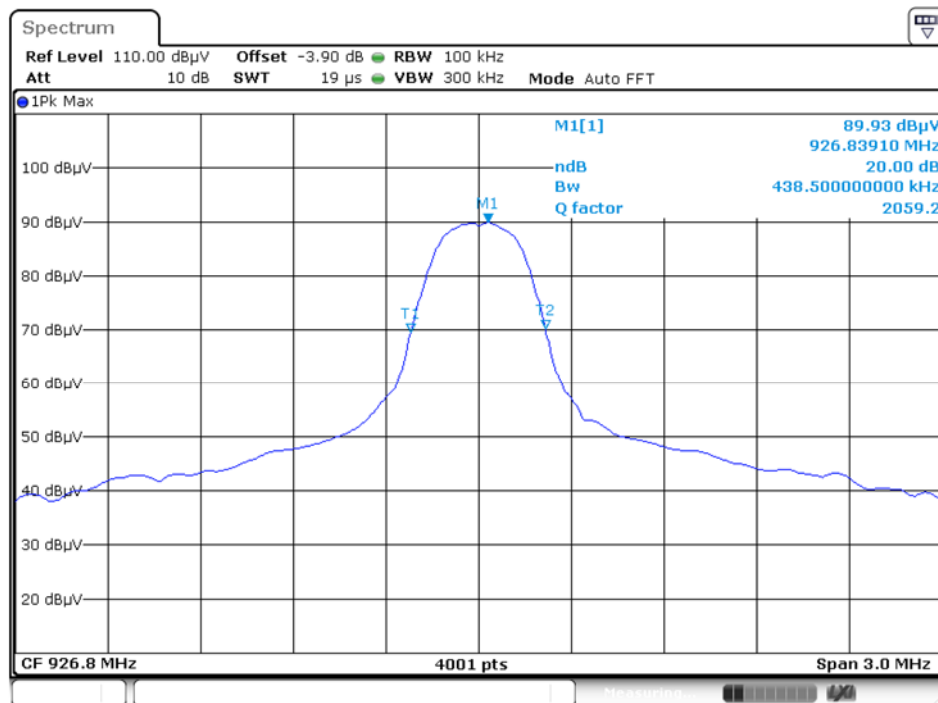


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### Middle Channel



### High Channel



## A.2 AC Conducted Emission

N/A

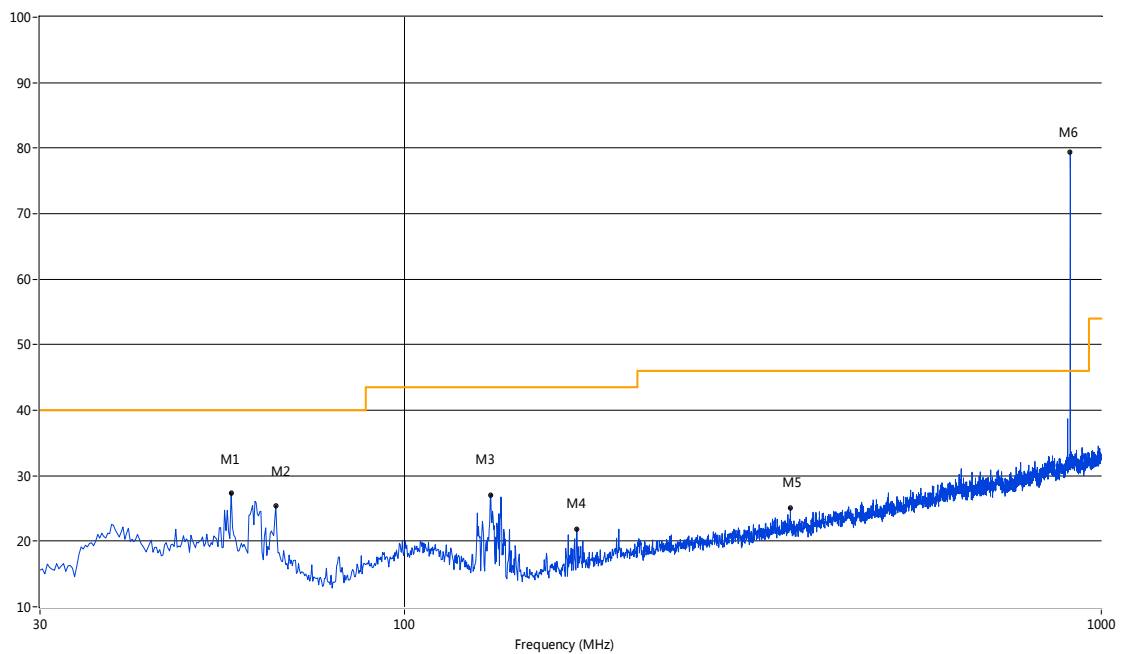
## A.3 Radiated Emission

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.

Note 1: Test Data and Plots (1 GHz ~ 10th Harmonic)

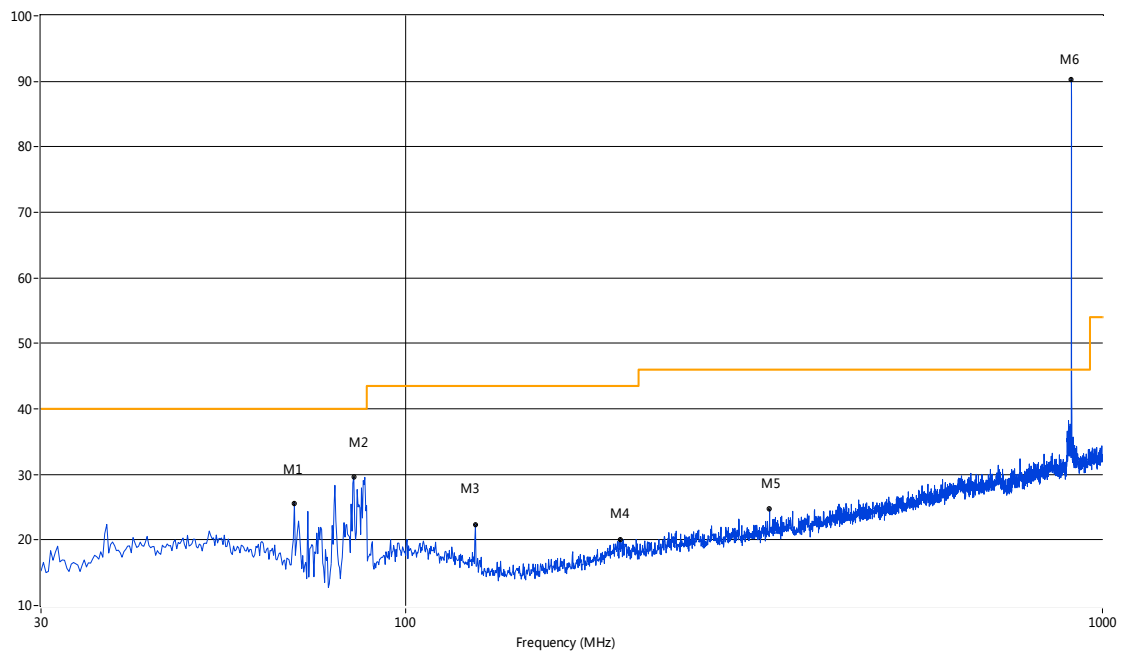
Note 2: The bold frequency is the fundamental.

Low Channel 30 MHz to 1 GHz, ANT V



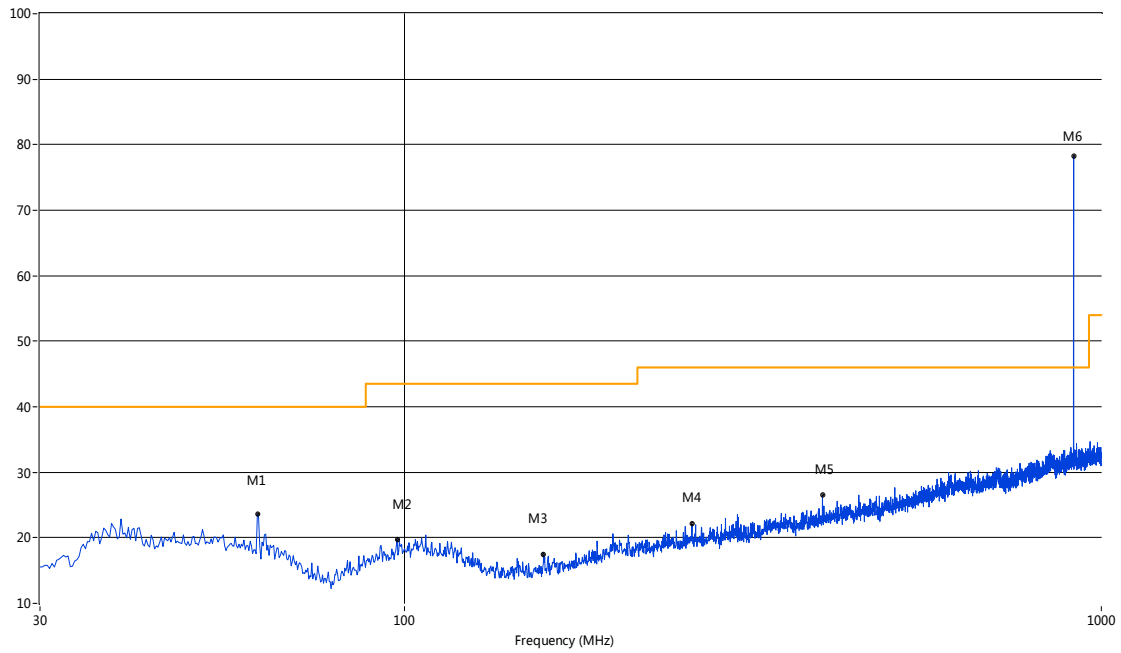
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	56.43	27.40	-19.32	40.0	12.60	Peak	193.70	100	Vertical	Pass
2	65.40	25.44	-20.84	40.0	14.56	Peak	193.70	100	Vertical	Pass
3	133.04	27.03	-23.41	43.5	16.47	Peak	357.30	100	Vertical	Pass
4	176.68	21.80	-22.32	43.5	21.70	Peak	333.30	100	Vertical	Pass
5	358.02	25.06	-16.15	46.0	20.94	Peak	58.10	100	Vertical	Pass
6	<b>902.78</b>	79.36	-5.63	114	34.64	Peak	8.20	100	Vertical	Pass

## Low Channel 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	69.28	25.64	-22.28	40.0	14.36	Peak	0.50	100	Horizontal	Pass
2	84.31	29.58	-23.66	40.0	10.42	Peak	0.50	100	Horizontal	Pass
3	126.01	22.33	-22.67	43.5	21.17	Peak	23.00	100	Horizontal	Pass
4	203.10	20.10	-20.11	43.5	23.40	Peak	233.70	100	Horizontal	Pass
5	333.05	24.70	-16.49	46.0	21.30	Peak	43.00	100	Horizontal	Pass
6	<b>902.78</b>	90.31	-5.63	114	23.69	Peak	309.30	100	Horizontal	Pass

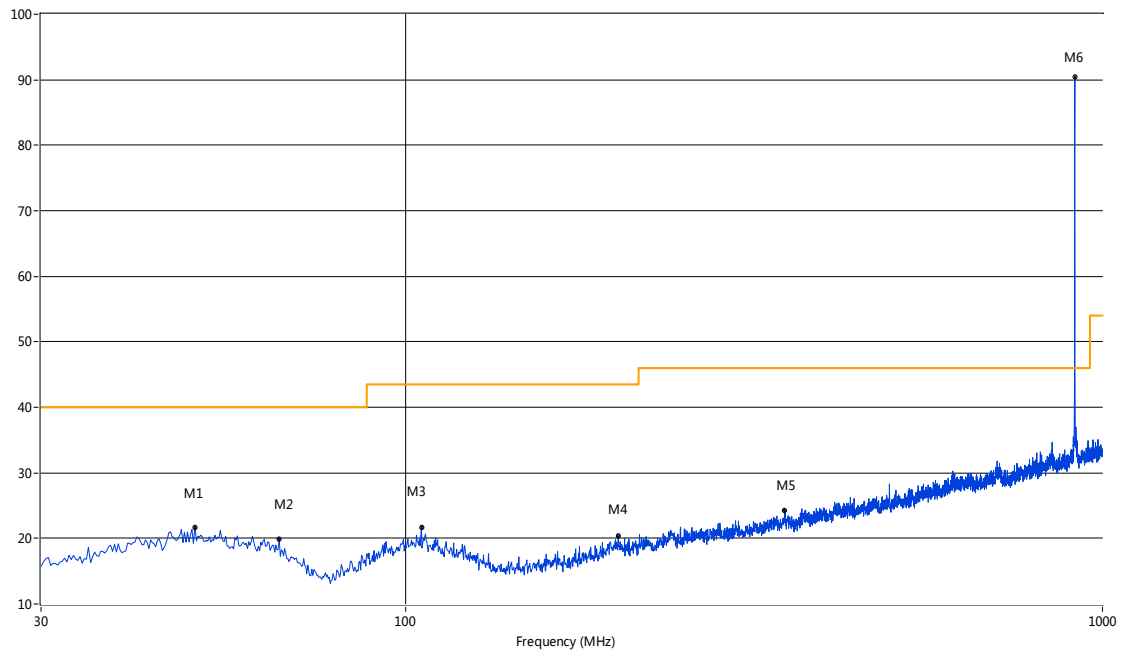
## Middle Channel 30 MHz to 1 GHz, ANT V



No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	61.52	23.58	-20.23	40.0	16.42	Peak	261.40	100	Vertical	Pass
2	97.64	19.74	-20.62	43.5	23.76	Peak	70.30	100	Vertical	Pass
3	158.49	17.45	-23.15	43.5	26.05	Peak	347.30	100	Vertical	Pass
4	258.62	22.08	-18.65	46.0	23.92	Peak	160.90	100	Vertical	Pass
5	398.02	26.50	-15.29	46.0	19.50	Peak	45.50	100	Vertical	Pass
6	<b>912.96</b>	78.23	-5.34	114	35.77	Peak	1.30	100	Vertical	Pass

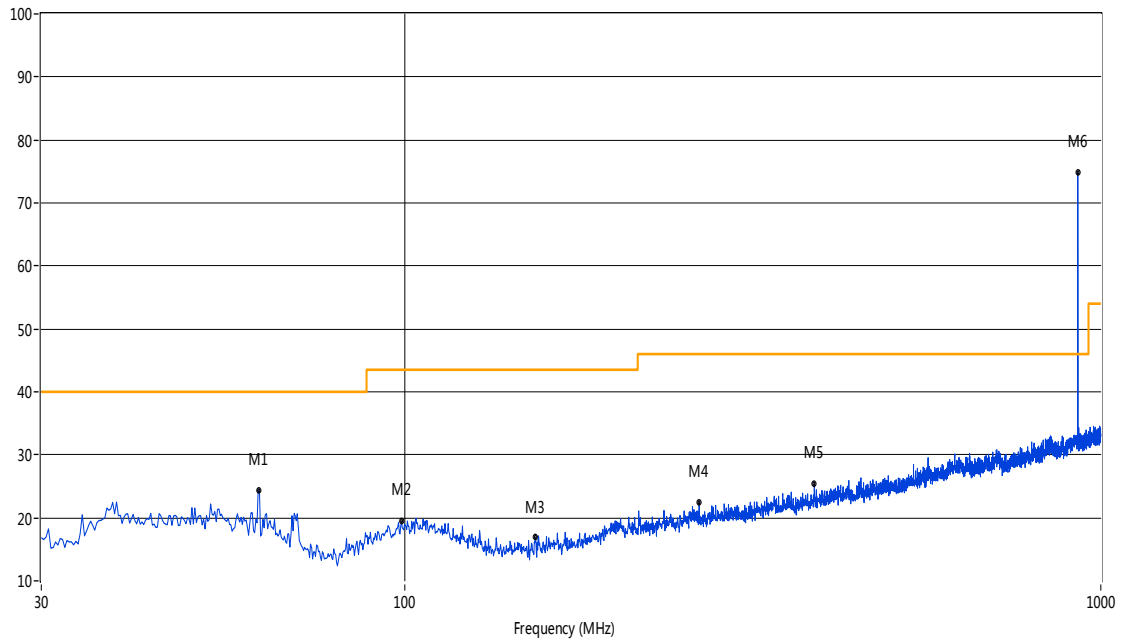


## Middle Channel 30 MHz to 1 GHz, ANT H



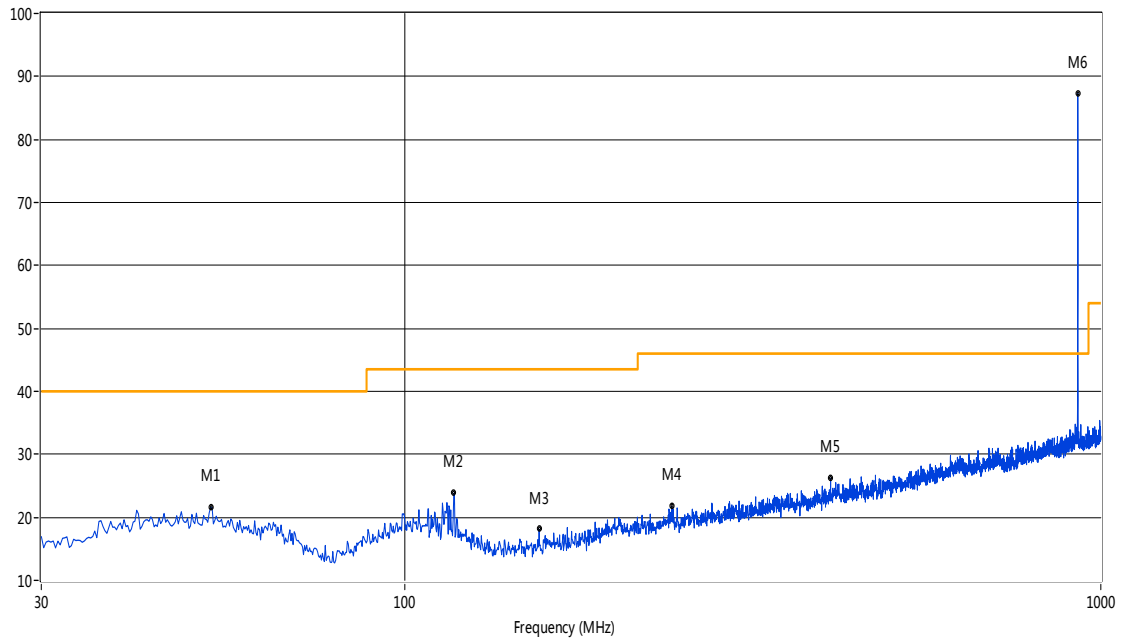
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	49.88	21.75	-18.70	40.0	18.25	Peak	251.30	150	Horizontal	Pass
2	65.88	19.91	-20.93	40.0	20.09	Peak	-0.00	150	Horizontal	Pass
3	105.40	21.66	-20.24	43.5	21.84	Peak	2.80	150	Horizontal	Pass
4	201.89	20.37	-20.13	43.5	23.13	Peak	115.10	100	Horizontal	Pass
5	350.26	24.27	-16.22	46.0	21.73	Peak	351.80	150	Horizontal	Pass
6	<b>912.96</b>	90.44	-5.34	114	23.56	Peak	311.60	100	Horizontal	Pass

## High Channel 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	61.52	24.41	-20.23	40.0	15.59	Peak	224.00	100	Vertical	Pass
2	98.85	19.44	-20.38	43.5	24.06	Peak	159.00	100	Vertical	Pass
3	153.89	16.87	-23.34	43.5	26.63	Peak	324.00	100	Vertical	Pass
4	264.68	22.50	-18.51	46.0	23.50	Peak	241.00	100	Vertical	Pass
5	387.36	25.42	-15.52	46.0	20.58	Peak	181.00	100	Vertical	Pass
6	<b>926.78</b>	74.83	-5.28	114	39.17	Peak	256.00	100	Vertical	Pass

## High Channel 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	52.55	21.63	-18.66	40.0	18.37	Peak	41.00	100	Horizontal	Pass
2	117.52	23.84	-21.37	43.5	19.66	Peak	177.00	100	Horizontal	Pass
3	155.83	18.14	-23.23	43.5	25.36	Peak	241.00	100	Horizontal	Pass
4	241.65	21.80	-19.04	46.0	24.20	Peak	349.00	100	Horizontal	Pass
5	408.93	26.18	-14.89	46.0	19.82	Peak	117.00	100	Horizontal	Pass
6	<b>926.54</b>	87.29	-5.29	114	26.71	Peak	216.00	100	Horizontal	Pass

Note 3 : 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.

#### LOW CHANNEL 1 GHz to 25 GHz, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1421.39	44.60	-4.61	74.0	29.40	Peak	87.00	150	Vertical	Pass
2	1806.30	47.01	-3.61	74.0	26.99	Peak	350.00	150	Vertical	Pass <sup>Note 2</sup>
3	2724.57	50.40	1.69	74.0	23.60	Peak	47.00	150	Vertical	Pass
4	3611.85	50.87	10.03	74.0	23.13	Peak	137.00	150	Vertical	Pass
5	4624.84	51.28	13.06	74.0	22.72	Peak	152.00	150	Vertical	Pass
6	5651.34	51.64	15.71	74.0	22.36	Peak	353.00	150	Vertical	Pass

#### LOW CHANNEL 1 GHz to 25 GHz, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1189.45	44.95	-5.43	74.0	29.05	Peak	199.00	150	Horizontal	Pass
2	1805.80	50.89	-3.60	74.0	23.11	Peak	251.00	150	Horizontal	Pass <sup>Note 2</sup>
3	2307.67	48.33	-0.42	74.0	25.67	Peak	140.00	150	Horizontal	Pass
4	2853.54	51.39	1.97	74.0	22.61	Peak	339.00	150	Horizontal	Pass
5	3611.85	49.62	10.03	74.0	24.38	Peak	243.00	150	Horizontal	Pass
6	4714.82	51.99	13.45	74.0	22.01	Peak	235.00	150	Horizontal	Pass

## MIDDLE CHANNEL 1 GHz to 25 GHz, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1284.93	44.25	-4.86	74.0	29.75	Peak	276.00	150	Vertical	Pass
2	1826.29	48.65	-3.46	74.0	25.35	Peak	0.50	150	Vertical	Pass <sup>Note 2</sup>
3	2247.69	49.09	-0.37	74.0	24.91	Peak	339.40	150	Vertical	Pass
4	2819.55	50.98	2.15	74.0	23.02	Peak	118.10	150	Vertical	Pass
5	3652.34	49.60	10.16	74.0	24.40	Peak	306.70	150	Vertical	Pass
6	4749.31	51.78	13.54	74.0	22.22	Peak	292.50	150	Vertical	Pass

## MIDDLE CHANNEL 1 GHz to 25 GHz, ANT H

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1272.93	44.03	-4.96	74.0	29.97	Peak	8.10	150	Horizontal	Pass
2	1825.79	50.54	-3.46	74.0	23.46	Peak	134.30	150	Horizontal	Pass <sup>Note 2</sup>
3	2411.15	50.75	-0.12	74.0	23.25	Peak	298.50	150	Horizontal	Pass
4	3652.34	50.68	10.16	74.0	23.32	Peak	142.20	150	Horizontal	Pass
5	4704.32	51.78	13.32	74.0	22.22	Peak	91.40	150	Horizontal	Pass
6	5331.17	51.48	14.63	74.0	22.52	Peak	221.40	150	Horizontal	Pass

## HIGH CHANNEL 1 GHz to 25 GHz, ANT V

No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1171.46	44.19	-5.65	74.0	29.81	Peak	263.00	150	Vertical	Pass
2	1460.88	44.43	-4.47	74.0	29.57	Peak	98.50	150	Vertical	Pass
3	1853.79	47.12	-3.06	74.0	26.88	Peak	1.00	150	Vertical	Pass <sup>Note 2</sup>
4	2724.07	52.38	1.63	74.0	21.62	Peak	174.80	150	Vertical	Pass
5	3707.07	49.06	10.51	74.0	24.94	Peak	360.30	150	Vertical	Pass
6	4635.34	52.19	13.10	74.0	21.81	Peak	250.20	150	Vertical	Pass

## HIGH CHANNEL 1 GHz to 25 GHz, ANT H

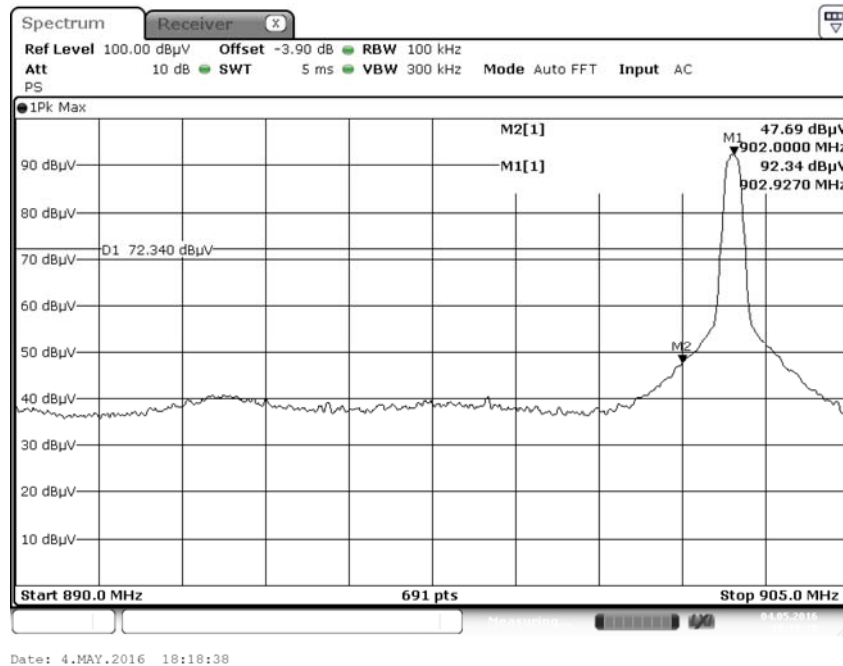
No.	Frequency (MHz)	Results (dBuV/m)	Factor (dB)	Limit (dBuV/m)	Margin (dB)	Detector	Table (o)	Height (cm)	ANT	Verdict
1	1319.42	44.44	-4.83	74.0	29.56	Peak	10.40	150	Horizontal	Pass
2	1854.29	48.64	-3.08	74.0	25.36	Peak	149.70	150	Horizontal	Pass <sup>Note 2</sup>
3	2443.14	50.34	-0.38	74.0	23.66	Peak	67.80	150	Horizontal	Pass
4	3249.69	47.24	9.09	74.0	26.76	Peak	162.50	150	Horizontal	Pass
5	4467.38	51.10	12.45	74.0	22.90	Peak	171.80	150	Horizontal	Pass
6	5655.84	51.73	15.58	74.0	22.27	Peak	59.90	150	Horizontal	Pass

## A.4 Band Edge

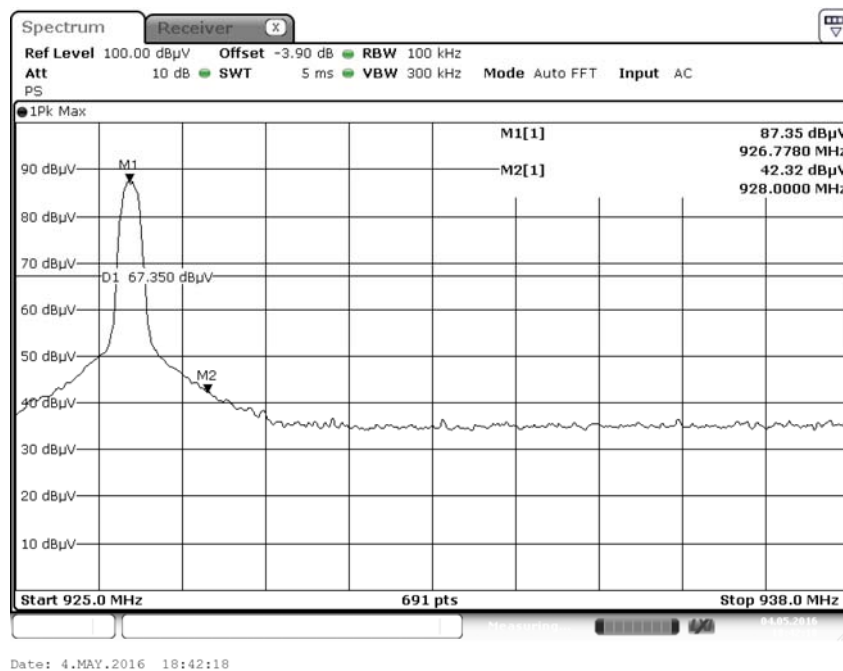
### Test Data and Test Plots

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



#### HIGH CHANNEL



## **ANNEX B TEST SETUP PHOTOS**

Please refer the document “BL-SZ15C0287-AR.PDF”.

## **ANNEX C EUT EXTERNAL PHOTOS**

Please refer the document “BL- SZ15C0287-AW.PDF”.

## **ANNEX D EUT INTERNAL PHOTOS**

Please refer the document “BL- SZ15C0287-AI.PDF”.

--END OF REPORT--