

FCC

RF

TEST REPORT

ISSUED BY  
Shenzhen BALUN Technology Co., Ltd.



FOR  
**Outdoor Keypad**

ISSUED TO  
ONE WORLD TECHNOLOGIES, INC

1428 PEARMAN DAIRY ROAD ANDERSON SOUTH CAROLINA  
29625 USA



Tested by:

Cao Shadong  
(Engineer)

Date

Mar. 3, 2016

Approved by:

Wei Yanquan  
(Chief Engineer)

Date

Mar. 3, 2016

Report No.: BL-SZ1610074-601

EUT Type: Outdoor Keypad

Model Name: GDA300

Brand Name: RYOBI

Test Standard: 47 CFR Part 15 Subpart C

FCC ID: VMZGDA300

Test conclusion: Pass

Test Date: Feb. 28, 2016 ~ Mar. 2, 2016

Date of Issue: Mar. 3, 2016

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### Revision History

| Version | Issue Date   | Revisions Content |
|---------|--------------|-------------------|
| Rev. 01 | Mar. 3, 2016 | 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 | <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 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 Information

|           |                                                              |
|-----------|--------------------------------------------------------------|
| Applicant | ONE WORLD TECHNOLOGIES, INC                                  |
| Address   | 1428 PEARMAN DAIRY ROAD ANDERSON SOUTH CAROLINA 29625<br>USA |

### 2.2 Manufacturer Information

|              |                                                                                                             |
|--------------|-------------------------------------------------------------------------------------------------------------|
| Manufacturer | Techtronic Industries (Dongguan) Co. Ltd.                                                                   |
| Address      | No.1, Chuang Ke Road Hou Jie Town Industrial Park Hou Jie Town,<br>Dongguan City Guang Dong Province 523945 |

### 2.3 Factory Information

|         |                                                                |
|---------|----------------------------------------------------------------|
| Factory | ET Technology (Wuxi) Co., Ltd.                                 |
| Address | No.58 Xiqun road, Meicun industrial zone, Wuxi, Jiangsu, China |

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

|                                           |                |
|-------------------------------------------|----------------|
| EUT Type                                  | Outdoor Keypad |
| Under Test Model Name                     | GDA300         |
| Series Model Name                         | N/A            |
| Description of Model name differentiation | N/A            |
| Hardware Version                          | 1.0            |
| Software Version                          | 1.0            |
| Dimensions (Approx.)                      | N/A            |
| Weight (Approx.)                          | N/A            |
| Network and Wireless connectivity         | 372.21 MHz     |

### 2.5 Ancillary Equipment

|                       |                 |        |
|-----------------------|-----------------|--------|
| Ancillary Equipment 1 | Battery         |        |
|                       | Brand Name      | Vinnic |
|                       | Model No.       | 6F22   |
|                       | Serial No.      | N/A    |
|                       | Capacitance     | 30 mAh |
|                       | Rated Voltage   | 9 V    |
|                       | Extreme Voltage | 9.8 V  |

## 2.6 Technical Information

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

|                    |             |
|--------------------|-------------|
| TX Operating Range | 372.21MHz   |
| Modulation Type    | ASK         |
| Antenna Type       | PCB Antenna |
| Antenna Gain       | 0 dBi       |



### 3 SUMMARY OF TEST RESULTS

#### 3.1 Test Standards

| No. | Identity                                          | Document Title                                                                                                                                                                   |
|-----|---------------------------------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| 1   | 47 CFR Part 15,<br>Subpart C<br>(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              | Note 1      | Pass    |
| 2   | Conducted Emission                      | 15.207              | N/A         | Note 2  |
| 3   | 20 dB Bandwidth                         | 15.231(c)           | ANNEX A.1   | Pass    |
| 4   | Duty Cycle                              | 15.35               | ANNEX A.2   | Pass    |
| 5   | Field Strength of Fundamental Emissions | 15.231(b)           | ANNEX A.3   | Pass    |
| 6   | Radiated Emissions                      | 15.209<br>15.231(b) | ANNEX A.4   | Pass    |
| 7   | Transmitting Time                       | 15.231(a)           | ANNEX A.5   | Pass    |

Note 1: Please refer to section 5.1

Note 2: The EUT is only powered by battery, So the conducted emission test was not applicable.



## 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)     | 9 V            |

### 4.2 Test Equipment List

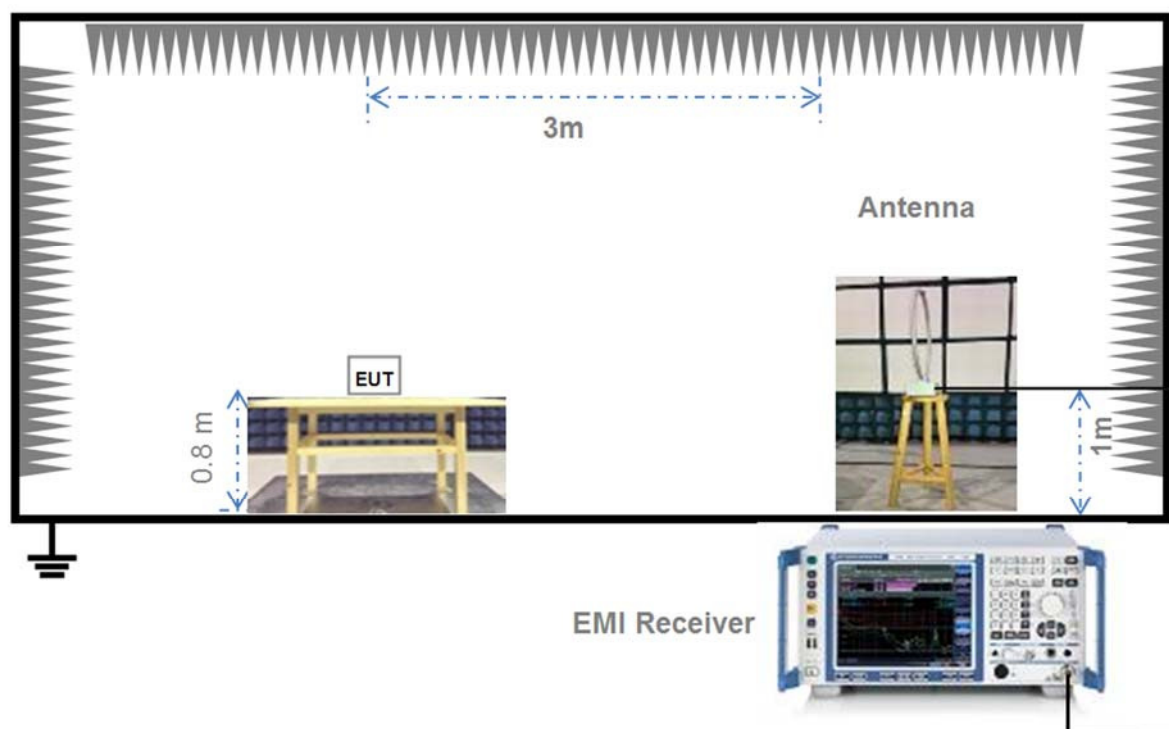
| Description                       | Manufacturer         | Model      | Serial No. | Cal. Date  | Cal. Due   |
|-----------------------------------|----------------------|------------|------------|------------|------------|
| Spectrum Analyzer                 | ROHDE&SCHWARZ        | FSV-30     | 103118     | 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     | 2015.07.16 | 2016.07.15 |
| Switch Unit with OSP-B157         | ROHDE&SCHWARZ        | OSP120     | 101270     | 2015.07.16 | 2016.07.15 |
| Spectrum Analyzer                 | AGILENT              | E4440A     | MY45304434 | 2015.10.15 | 2016.10.14 |
| 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    | 18141664   | 2015.07.17 | 2016.07.16 |
| Temperature Chamber               | ANGELANTIONI SCIENCE | NTH64-40A  | 1310       | 2015.11.20 | 2016.11.19 |
| 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 Test Configurations

| Test Configurations (TC) NO. | Description        |                     |
|------------------------------|--------------------|---------------------|
|                              | Signal Description | Operating Frequency |
| Transmitter                  |                    |                     |
| TC01                         | ASK                | 372.21MHz           |

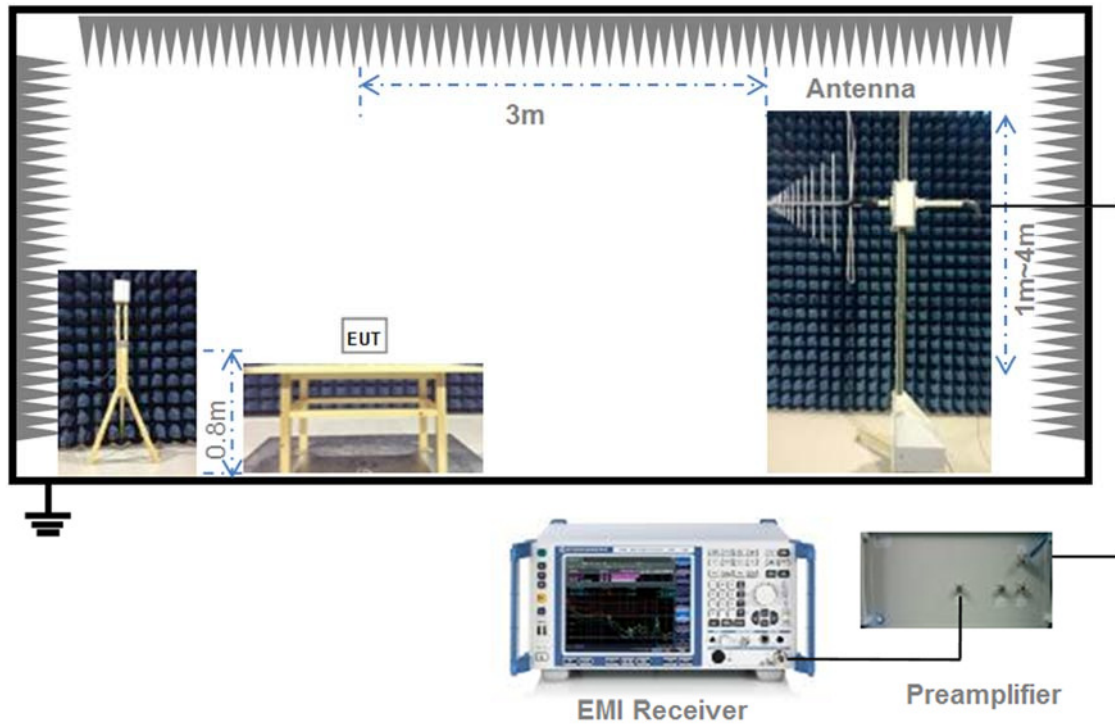
### 4.4 Description of Test Setup

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



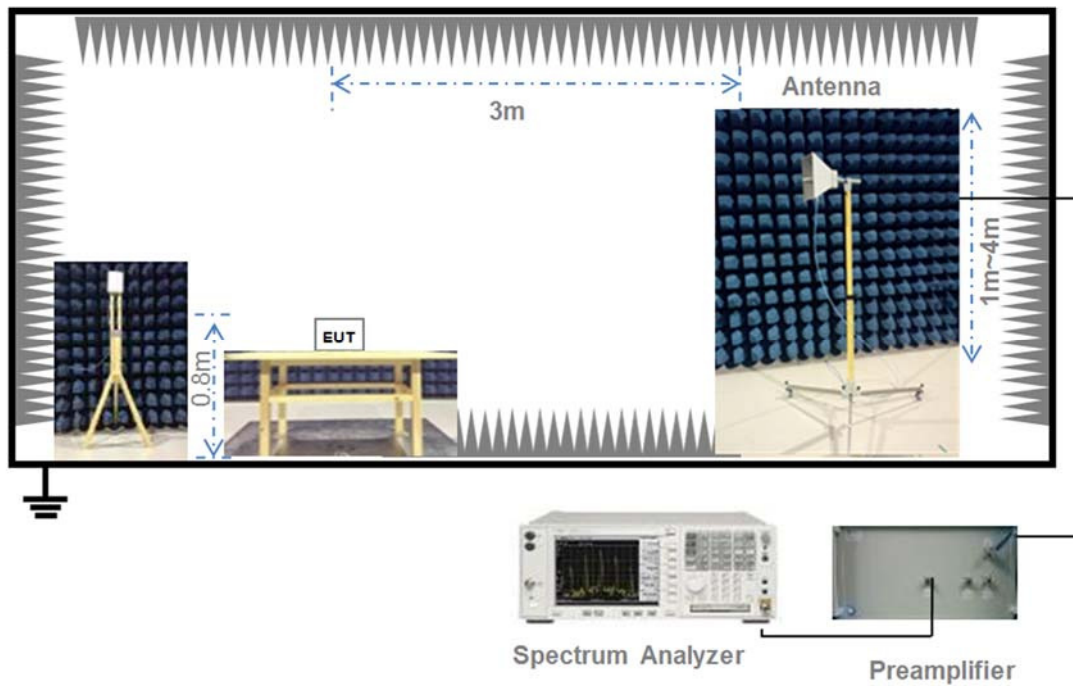
(Diagram 1)

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



(Diagram 2)

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



(Diagram 3)

## 4.5 Test Conditions

| Test Case                                                                                                                         | Test Conditions |                                              |                                      |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------------|----------------------------------------------|--------------------------------------|
|                                                                                                                                   | Test Env.       | Test Setup <sup>Note 1</sup>                 | Test Configuration <sup>Note 2</sup> |
| 20 dB Bandwidth                                                                                                                   | NTNV            | Test Setup 2                                 | TC01                                 |
| Duty Cycle                                                                                                                        | NTNV            | Test Setup 2                                 | TC01                                 |
| Field Strength of Fundamental Emissions                                                                                           | NTNV            | Test Setup 2                                 | TC01                                 |
| Radiated Emissions                                                                                                                | NTNV            | Test Setup 1<br>Test Setup 2<br>Test Setup 3 | TC01                                 |
| Transmitting Time                                                                                                                 | NTNV            | Test Setup 2                                 | TC01                                 |
| Note:<br>1. Please refer to section 4.4 for test setup details.<br>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)

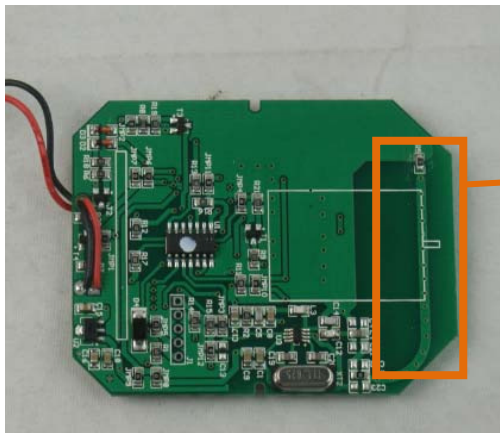
An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply 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 | The antenna is welded on the mainboard, can't be replaced by the consumer |

| 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 §15.231

The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70 MHz and below 900 MHz. For devices operating above 900 MHz, the emission shall be no wider than 0.5% of the center frequency. Bandwidth is determined at the points 20 dB down from the modulated carrier.

### 5.2.2 Test Procedure

Use the following spectrum analyzer settings:

Span = approximately 2 to 3 times the 20 dB bandwidth

RBW = 10 kHz

VBW  $\geq$  30 kHz

Sweep = auto

Detector function = peak

Trace = max hold

### 5.2.3 Test Result

Please refer to ANNEX A.1.

### 5.3 Field Strength of Fundamental Emissions and Radiated Emissions

#### 5.3.1 Limit

FCC §15.231 & §15.209

According to FCC section 15.231(b), In addition to the provisions of §15.205, the field strength of emissions from intentional radiators operated under this section shall not exceed the following:

| Fundamental frequency (MHz) | Field strength of fundamental (microvolts/meter) | Field strength of spurious emissions (microvolts/meter) |
|-----------------------------|--------------------------------------------------|---------------------------------------------------------|
| 40.66-40.70                 | 2250                                             | 225                                                     |
| 70-130                      | 1250                                             | 125                                                     |
| 130-174                     | 1250 to 3750                                     | 125 to 375                                              |
| 174-260                     | 3750                                             | 375                                                     |
| 260-470                     | 3750 to 12500                                    | 375 to 1250                                             |
| Above 470                   | 12500                                            | 1250                                                    |

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) |
|-----------------|-----------------------|
| 0.009 - 0.490   | 2400/F(kHz)           |
| 0.490 - 1.705   | 24000/F(kHz)          |
| 1.705 - 30.0    | 30                    |
| 30 - 88         | 100                   |
| 88 - 216        | 150                   |
| 216 - 960       | 200                   |
| Above 960       | 500                   |

Note:

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

#### 5.3.2 Test Procedure

The measurement frequency range is from 30 MHz 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

### 5.3.3 Test Result

Please refer to ANNEX A.3

## 5.4 Transmitting Time

### 5.4.1 Limit

(1) A manually operated transmitter shall employ a switch that will automatically deactivate the transmitter within not more than 5 seconds of being released.

(2) A transmitter activated automatically shall cease transmission within 5 seconds after activation.

### 5.4.2 Test Procedure

The EUT transmitter was activated, the spectrum analyzer single sweep was triggered while a command on the EUT was activated and plots were captured

### 5.4.3 Test Result

Please refer to ANNEX A.2.

## ANNEX A TEST RESULT

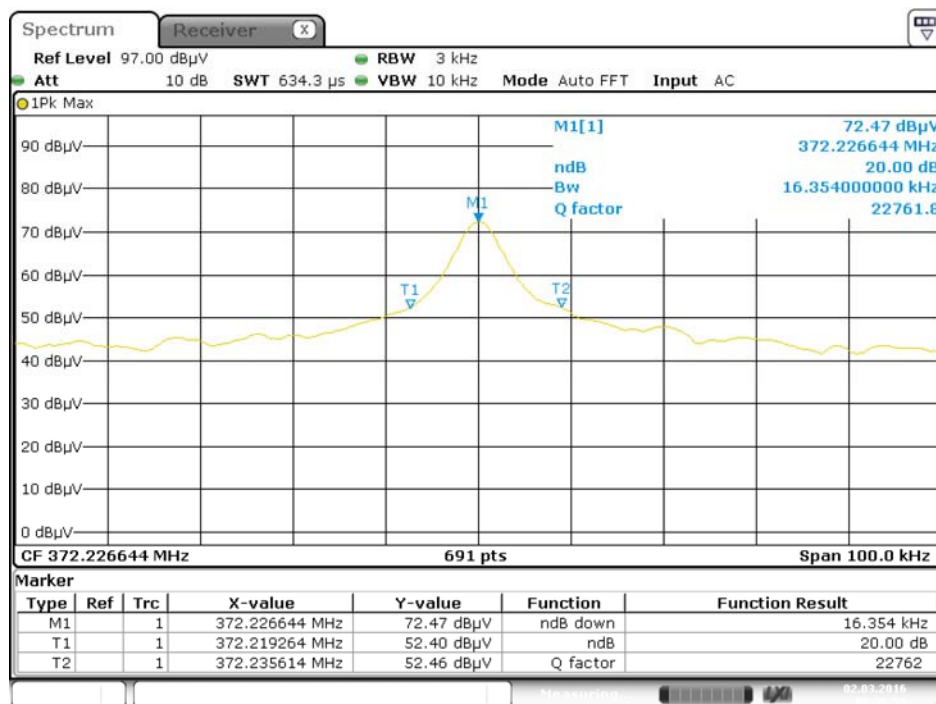
### A.1 20 dB Bandwidth

#### Test Data

| Frequency (MHz) | 20 dB Bandwidth (kHz) | Limit (kHz)                      | Verdict |
|-----------------|-----------------------|----------------------------------|---------|
| 372.21          | 16.354                | $372210 \times 0.25\% = 930.525$ | Pass    |

#### Test plots

##### 20 dB Bandwidth

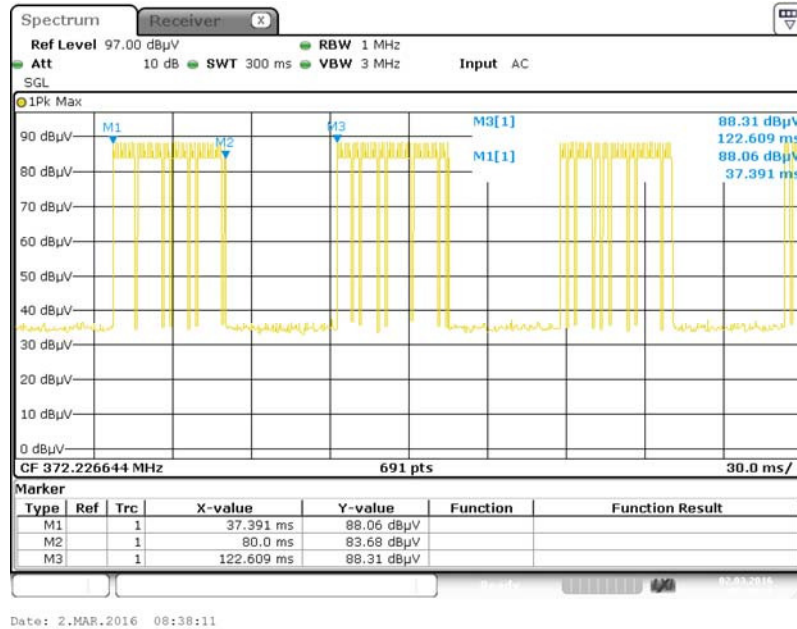


Date: 2.MAR.2016 08:36:59

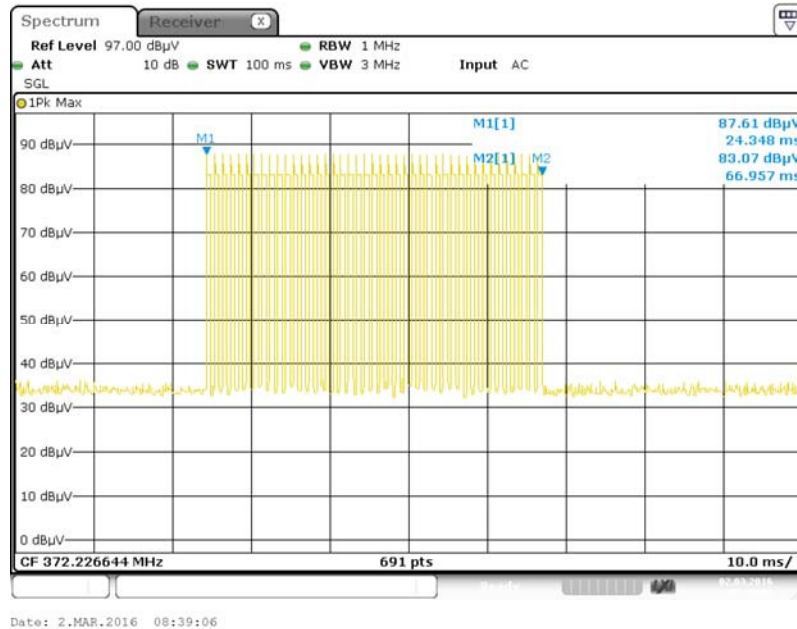
## A.2 Duty cycle

### Test Data and Plot

Ton + Toff



Ton - 1



## Ton - 2



Duty cycle correction factor:  $20 \cdot \log(\text{duty cycle}) = -11.84 \text{ dB}$

### A.3 Field Strength of Fundamental Emissions

#### Test Data

| Field Strength of Fundamental Emissions and Field strength of spurious emissions Value |                         |          |                    |             |            |         |
|----------------------------------------------------------------------------------------|-------------------------|----------|--------------------|-------------|------------|---------|
| Frequency (MHz)                                                                        | Field Strength (dBuV/m) | Detector | Limit @3m (dBuV/m) | Margin (dB) | Antenna    | Verdict |
| 372.21                                                                                 | 77.38                   | PEAK     | 98.5               | 21.12       | Vertical   | Pass    |
|                                                                                        | 88.53                   | PEAK     | 98.5               | 9.97        | Horizontal | Pass    |
|                                                                                        | 65.54                   | AVERAGE  | 78.5               | 12.96       | Vertical   | Pass    |
|                                                                                        | 76.69                   | AVERAGE  | 78.5               | 1.81        | Horizontal | Pass    |

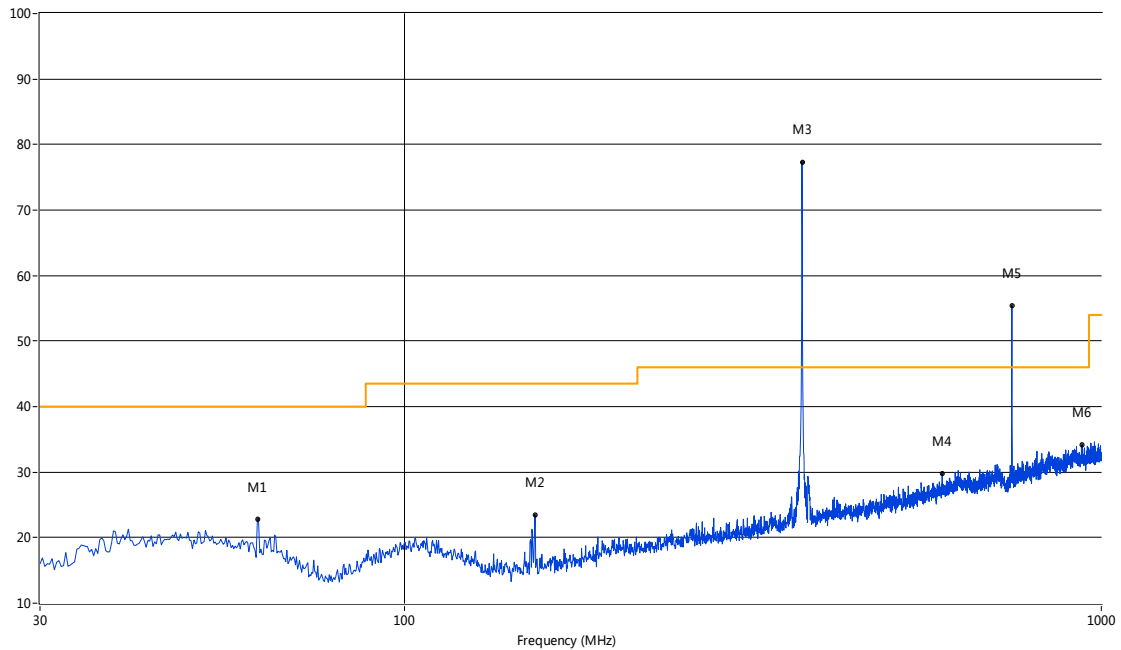
## A.4 Radiated Emissions

Note 1: 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 2: The verdict please refer to the A.3 field strength of fundamental emissions and field strength of spurious emissions value.

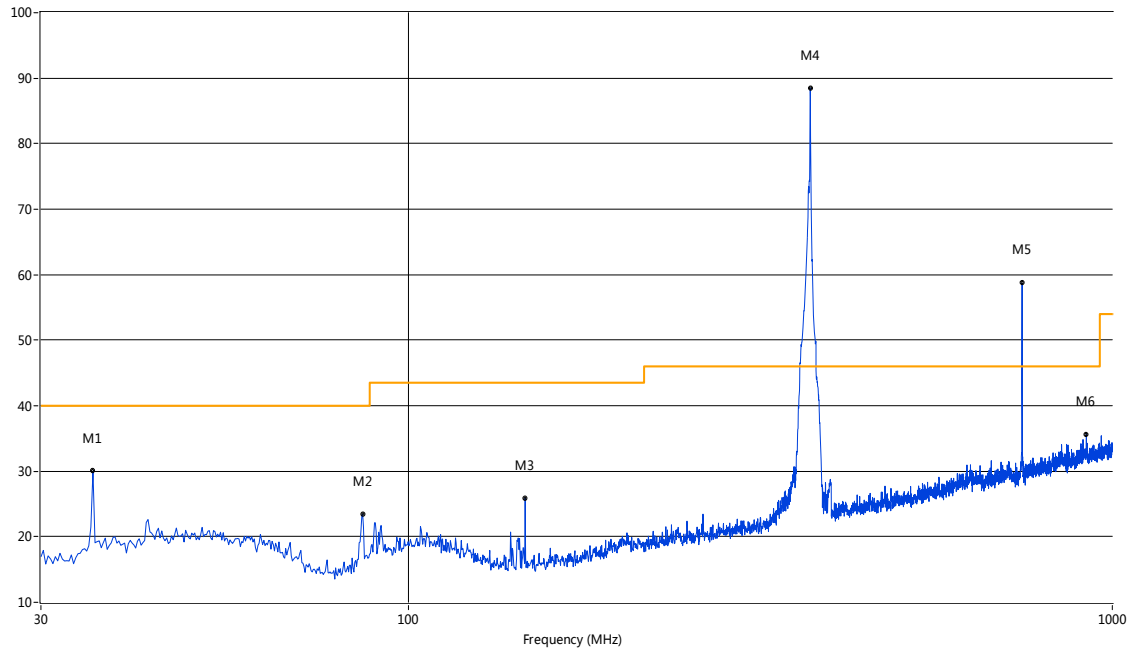
### Test Data and Plots (30 MHz ~ 10th Harmonic)

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           | 22.74            | -20.23      | 40.0           | 17.26       | Peak     | 272.30    | 100         | Vertical | Pass                 |
| 2   | 153.89          | 23.48            | -23.34      | 43.5           | 20.02       | Peak     | 332.30    | 100         | Vertical | Pass                 |
| 3   | 372.21          | 77.38            | -15.97      | 46.0           | -31.38      | Peak     | 247.10    | 100         | Vertical | N/A <sup>Note2</sup> |
| 4   | 591.25          | 29.82            | -10.96      | 46.0           | 16.18       | Peak     | 66.40     | 100         | Vertical | Pass                 |
| 5   | 744.42          | 55.46            | -8.70       | 46.0           | -9.46       | Peak     | 192.20    | 100         | Vertical | N/A <sup>Note2</sup> |
| 6   | 939.39          | 34.14            | -5.14       | 46.0           | 11.86       | Peak     | 152.20    | 100         | Vertical | Pass                 |

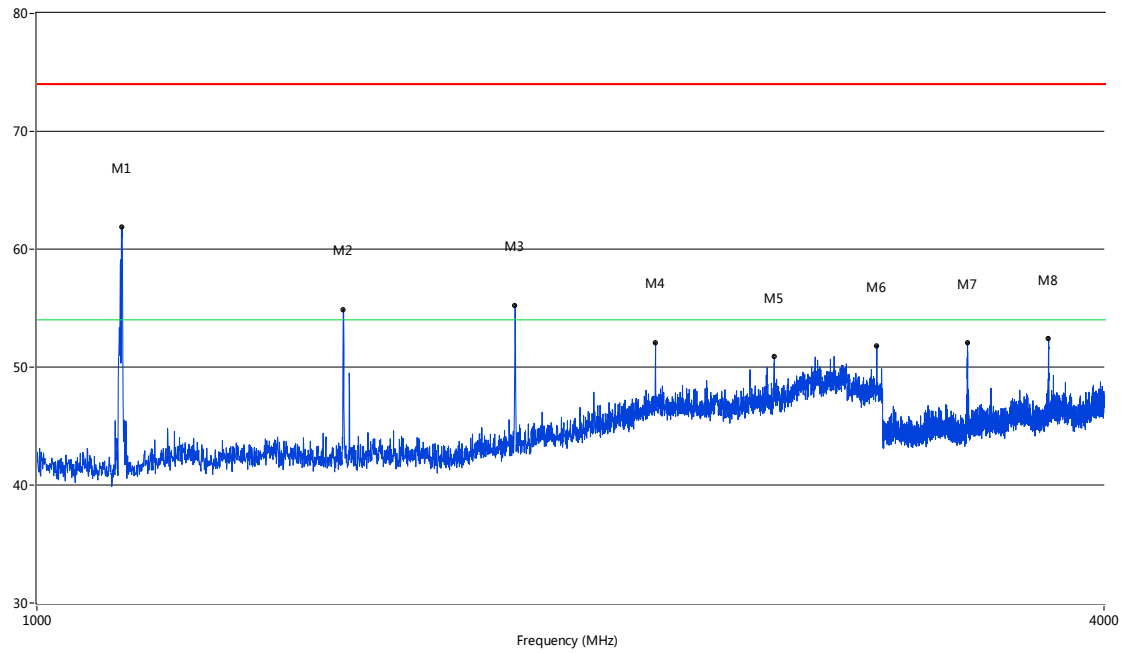
## 30 MHz to 1 GHz, ANT H



| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Margin (dB) | Detector | Table (o) | Height (cm) | ANT        | Verdict              |
|-----|-----------------|------------------|-------------|----------------|-------------|----------|-----------|-------------|------------|----------------------|
| 1   | 35.58           | 30.03            | -21.22      | 40.0           | 9.97        | Peak     | 15.00     | 200         | Horizontal | Pass                 |
| 2   | 86.00           | 23.42            | -23.11      | 40.0           | 16.58       | Peak     | 235.00    | 200         | Horizontal | Pass                 |
| 3   | 146.37          | 25.93            | -23.61      | 43.5           | 17.57       | Peak     | 285.00    | 200         | Horizontal | Pass                 |
| 4   | 372.21          | 88.53            | -15.97      | 46.0           | -42.45      | Peak     | 94.00     | 100         | Horizontal | N/A <sup>Note2</sup> |
| 5   | 744.42          | 58.63            | -8.70       | 46.0           | -12.73      | Peak     | 291.00    | 100         | Horizontal | N/A <sup>Note2</sup> |
| 6   | 918.54          | 35.66            | -5.22       | 46.0           | 10.34       | Peak     | 190.00    | 100         | Horizontal | Pass                 |



## 1 GHz to 4 GHz, ANT V



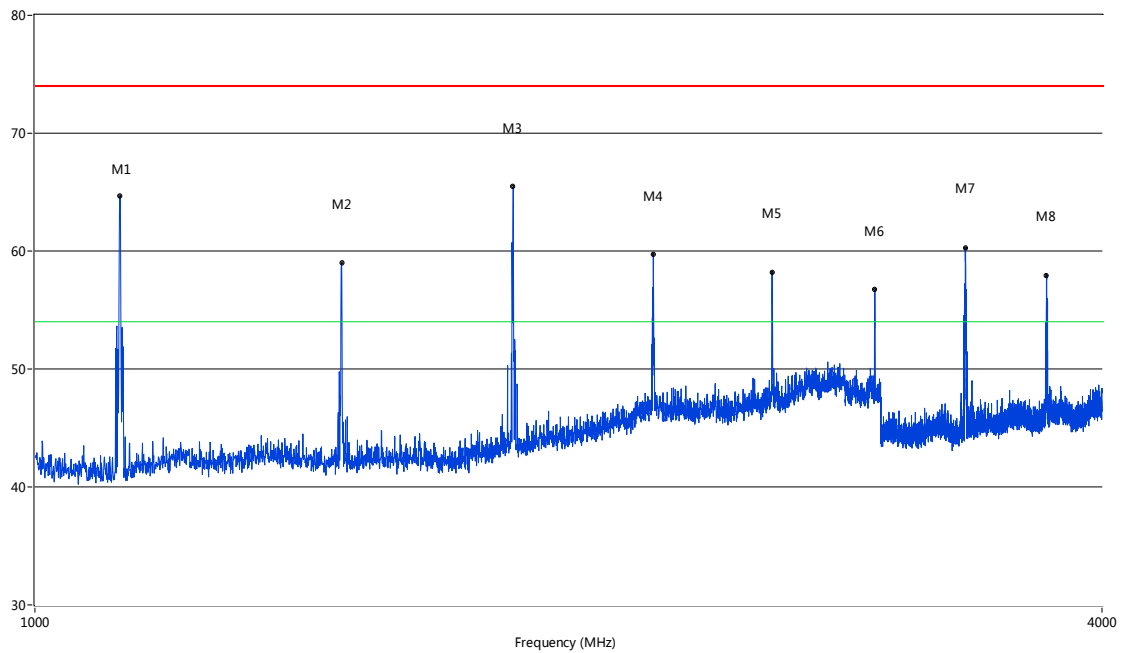
| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Margin (dB) | Detector | Table (o) | Height (cm) | ANT      | Verdict |
|-----|-----------------|------------------|-------------|----------------|-------------|----------|-----------|-------------|----------|---------|
| 1   | 1116.97         | 61.85            | -6.29       | 78.5           | 16.65       | Peak     | 183.00    | 100         | Vertical | Pass    |
| 1*  | 1116.97         | 50.01            | -6.29       | 58.5           | 8.49        | AV       | 183.00    | 100         | Vertical | Pass    |
| 2   | 1488.88         | 54.87            | -4.55       | 78.5           | 23.63       | Peak     | 125.00    | 100         | Vertical | Pass    |
| 2*  | 1488.88         | 43.03            | -4.55       | 58.5           | 15.47       | AV       | 125.00    | 100         | Vertical | Pass    |
| 3   | 1861.28         | 55.27            | -3.06       | 78.5           | 23.23       | Peak     | 356.00    | 100         | Vertical | Pass    |
| 3*  | 1861.28         | 43.43            | -3.06       | 58.5           | 15.07       | AV       | 356.00    | 100         | Vertical | Pass    |
| 4   | 2233.69         | 52.08            | -0.29       | 78.5           | 26.42       | Peak     | 260.00    | 100         | Vertical | Pass    |
| 4*  | 2233.69         | 40.24            | -0.29       | 58.5           | 18.26       | AV       | 260.00    | 100         | Vertical | Pass    |
| 5   | 2606.60         | 50.86            | 0.54        | 78.5           | 27.64       | Peak     | 189.00    | 100         | Vertical | Pass    |
| 5*  | 2606.60         | 39.02            | 0.54        | 58.5           | 19.48       | AV       | 189.00    | 100         | Vertical | Pass    |
| 6   | 2977.51         | 51.80            | 2.17        | 78.5           | 26.7        | Peak     | 355.00    | 100         | Vertical | Pass    |
| 6*  | 2977.51         | 39.96            | 2.17        | 58.5           | 18.54       | AV       | 355.00    | 100         | Vertical | Pass    |
| 7   | 3349.66         | 52.07            | 8.96        | 78.5           | 26.43       | Peak     | 140.00    | 100         | Vertical | Pass    |
| 7*  | 3349.66         | 40.23            | 8.96        | 58.5           | 18.27       | AV       | 140.00    | 100         | Vertical | Pass    |
| 8   | 3722.57         | 52.40            | 10.32       | 78.5           | 26.1        | Peak     | 40.00     | 100         | Vertical | Pass    |
| 8*  | 3722.57         | 44.26            | 10.32       | 58.5           | 14.24       | AV       | 40.00     | 100         | Vertical | Pass    |

## Radiated emissions data for restricted band

| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Margin (dB) | Detector | Table (o) | Height (cm) | ANT      | Verdict |
|-----|-----------------|------------------|-------------|----------------|-------------|----------|-----------|-------------|----------|---------|
| 1   | 1116.97         | 61.85            | -6.29       | 74.0           | 12.15       | Peak     | 183.00    | 100         | Vertical | Pass    |
| 1*  | 1116.97         | 50.01            | -6.29       | 54.0           | 3.99        | AV       | 183.00    | 100         | Vertical | Pass    |
| 2   | 1488.88         | 54.87            | -4.55       | 74.0           | 19.13       | Peak     | 125.00    | 100         | Vertical | Pass    |
| 2*  | 1488.88         | 43.03            | -4.55       | 54.0           | 10.97       | AV       | 125.00    | 100         | Vertical | Pass    |
| 4   | 2233.69         | 52.08            | -0.29       | 74.0           | 21.92       | Peak     | 260.00    | 100         | Vertical | Pass    |

|    |         |       |       |      |       |      |        |     |          |      |
|----|---------|-------|-------|------|-------|------|--------|-----|----------|------|
| 4* | 2233.69 | 40.24 | -0.29 | 54.0 | 13.76 | AV   | 260.00 | 100 | Vertical | Pass |
| 7  | 3349.66 | 52.07 | 8.96  | 74.0 | 21.93 | Peak | 140.00 | 100 | Vertical | Pass |
| 7* | 3349.66 | 40.23 | 8.96  | 54.0 | 13.77 | AV   | 140.00 | 100 | Vertical | Pass |
| 8  | 3722.57 | 52.40 | 10.32 | 74.0 | 21.6  | Peak | 40.00  | 100 | Vertical | Pass |
| 8* | 3722.57 | 44.26 | 10.32 | 54.0 | 9.74  | AV   | 40.00  | 100 | Vertical | Pass |

## 1 GHz to 4 GHz, ANT H



| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Margin (dB) | Detector | Table (o) | Height (cm) | ANT        | Verdict |
|-----|-----------------|------------------|-------------|----------------|-------------|----------|-----------|-------------|------------|---------|
| 1   | 1116.47         | 63.15            | -6.24       | 78.5           | 15.35       | Peak     | 263.00    | 100         | Horizontal | Pass    |
| 1*  | 1116.47         | 51.31            | -6.24       | 58.5           | 7.19        | AV       | 263.00    | 100         | Horizontal | Pass    |
| 2   | 1489.38         | 58.99            | -4.51       | 78.5           | 19.51       | Peak     | 229.00    | 100         | Horizontal | Pass    |
| 2*  | 1489.38         | 47.15            | -4.51       | 58.5           | 11.35       | AV       | 229.00    | 100         | Horizontal | Pass    |
| 3   | 1861.28         | 65.45            | -3.06       | 78.5           | 13.05       | Peak     | 44.00     | 100         | Horizontal | Pass    |
| 3*  | 1861.28         | 53.61            | -3.06       | 58.5           | 4.89        | AV       | 44.00     | 100         | Horizontal | Pass    |
| 4   | 2233.19         | 59.73            | -0.27       | 78.5           | 18.77       | Peak     | 67.00     | 100         | Horizontal | Pass    |
| 4*  | 2233.19         | 47.89            | -0.27       | 58.5           | 10.61       | AV       | 67.00     | 100         | Horizontal | Pass    |
| 5   | 2605.60         | 58.21            | 0.50        | 78.5           | 20.29       | Peak     | 281.00    | 100         | Horizontal | Pass    |
| 5*  | 2605.60         | 46.37            | 0.50        | 58.5           | 12.13       | AV       | 281.00    | 100         | Horizontal | Pass    |
| 6   | 2978.01         | 56.74            | 2.24        | 78.5           | 21.76       | Peak     | 20.00     | 100         | Horizontal | Pass    |
| 6*  | 2978.01         | 44.90            | 2.24        | 58.5           | 13.60       | AV       | 20.00     | 100         | Horizontal | Pass    |
| 7   | 3349.91         | 60.29            | 8.96        | 78.5           | 18.21       | Peak     | 206.00    | 100         | Horizontal | Pass    |
| 7*  | 3349.91         | 48.45            | 8.96        | 58.5           | 10.05       | AV       | 206.00    | 100         | Horizontal | Pass    |
| 8   | 3722.07         | 57.94            | 10.30       | 78.5           | 20.56       | Peak     | 331.00    | 100         | Horizontal | Pass    |
| 8*  | 3722.07         | 46.10            | 10.30       | 58.5           | 12.40       | AV       | 331.00    | 100         | Horizontal | Pass    |

## Radiated emissions data for restricted band

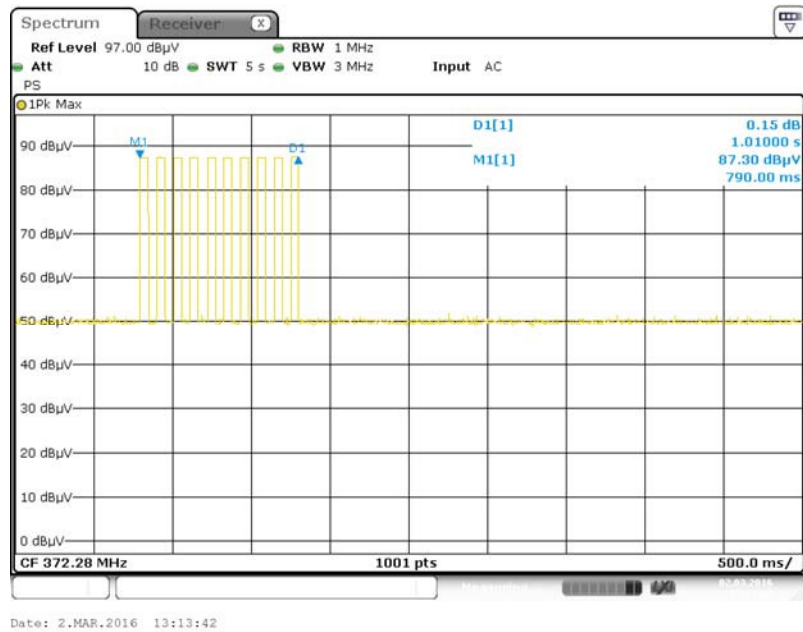
| No. | Frequency (MHz) | Results (dBuV/m) | Factor (dB) | Limit (dBuV/m) | Margin (dB) | Detector | Table (o) | Height (cm) | ANT        | Verdict |
|-----|-----------------|------------------|-------------|----------------|-------------|----------|-----------|-------------|------------|---------|
| 1   | 1116.47         | 63.15            | -6.24       | 74.0           | 10.85       | Peak     | 263.00    | 100         | Horizontal | Pass    |
| 1*  | 1116.47         | 51.31            | -6.24       | 54.0           | 2.69        | AV       | 263.00    | 100         | Horizontal | Pass    |
| 2   | 1489.38         | 58.99            | -4.51       | 74.0           | 15.01       | Peak     | 229.00    | 100         | Horizontal | Pass    |
| 2*  | 1489.38         | 47.15            | -4.51       | 54.0           | 6.85        | AV       | 229.00    | 100         | Horizontal | Pass    |
| 4   | 2233.19         | 59.73            | -0.27       | 74.0           | 14.27       | Peak     | 67.00     | 100         | Horizontal | Pass    |
| 4*  | 2233.19         | 47.89            | -0.27       | 54.0           | 6.11        | AV       | 67.00     | 100         | Horizontal | Pass    |
| 7   | 3349.91         | 60.29            | 8.96        | 74.0           | 13.71       | Peak     | 206.00    | 100         | Horizontal | Pass    |
| 7*  | 3349.91         | 48.45            | 8.96        | 54.0           | 5.55        | AV       | 206.00    | 100         | Horizontal | Pass    |
| 8   | 3722.07         | 57.94            | 10.30       | 74.0           | 16.06       | Peak     | 331.00    | 100         | Horizontal | Pass    |
| 8*  | 3722.07         | 46.10            | 10.30       | 54.0           | 7.90        | AV       | 331.00    | 100         | Horizontal | Pass    |

## A.5 Transmitter Time

### Test Data and Plot

The active time is less than 5 seconds

Active time



## ANNEX B TEST SETUP PHOTOS

Please refer the document “BL-SZ1610074-AR.PDF”.

## ANNEX C EUT EXTERNAL PHOTOS

Please refer the document “BL-SZ1610074-AW.PDF”.

## ANNEX D EUT INTERNAL PHOTOS

Please refer the document “BL-SZ1610074-AI.PDF”.

--END OF REPORT--