

# Test Report

**Applicant:** Boost Auto Parts LLC

**Address of Applicant:** Boost Auto Parts 2948 Kirk Road.Suite 106, #324 Aurora  
Illinois 60502, United States

**Manufacturer/Factory:** Wuxi Keyoung Electronic Technology Co., Ltd

**Address of  
Manufacturer/Factory:** 5-301 Huaqing Creative Park, Huishan Economic Development  
Zone, Wuxi, Jiangsu, China

**Equipment Under Test (EUT)**

Product Name: remote

Model No.: BAP# 9396-FOB, BAP# 5423-FOB

**FCC ID:** 2AQPB-BAP9396

**Applicable standards:** FCC CFR Title 47 Part 15 Subpart C Section 15.231

**Date of sample receipt:** December 27, 2019

**Date of Test:** December 28, 2019-January 16, 2020

**Date of report issued:** March 03, 2020

**Test Result :** PASS \*

\* In the configuration tested, the EUT complied with the standards specified above.

Authorized Signature:



**Robinson Lo**  
**Laboratory Manager**

This results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

## 2 Version

| Version No. | Date           | Description |
|-------------|----------------|-------------|
| 01          | March 03, 2020 | Original    |
|             |                |             |
|             |                |             |
|             |                |             |
|             |                |             |

Prepared By:

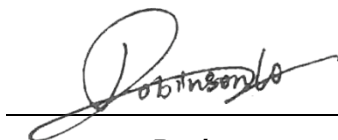


Date:

March 03, 2020

Project Engineer

Check By:



Date:

March 03, 2020

Reviewer

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## 4 Test Summary

| Test Item                                | Section in CFR 47 | Result |
|------------------------------------------|-------------------|--------|
| Antenna Requirement                      | 15.203            | Pass   |
| Conduction Emission                      | 15.207            | N/A    |
| Field strength of the Fundamental Signal | 15.231 (b)        | Pass   |
| Spurious Emissions                       | 15.231 (b)/15.209 | Pass   |
| 20dB Bandwidth                           | 15.231 (c)        | Pass   |
| Dwell Time                               | 15.231 (a)(1)     | Pass   |

*Pass: The EUT complies with the essential requirements in the standard.*

*N/A: Not applicable.*

### 4.1 Measurement Uncertainty

| Test Item                        | Frequency Range | Measurement Uncertainty | Notes |
|----------------------------------|-----------------|-------------------------|-------|
| Radiated Emission                | 30MHz-200MHz    | 3.8039dB                | (1)   |
| Radiated Emission                | 200MHz-1GHz     | 3.9679dB                | (1)   |
| Radiated Emission                | 1GHz-18GHz      | 4.29dB                  | (1)   |
| Radiated Emission                | 18GHz-40GHz     | 3.30dB                  | (1)   |
| AC Power Line Conducted Emission | 0.15MHz ~ 30MHz | 3.44dB                  | (1)   |

Note (1): The measurement uncertainty is for coverage factor of k=2 and a level of confidence of 95%.

## 5 General Information

### 5.1 General Description of EUT

|                                                                                                                                                                                                                                                                                           |                              |
|-------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|------------------------------|
| Product Name:                                                                                                                                                                                                                                                                             | remote                       |
| Model No.:                                                                                                                                                                                                                                                                                | BAP# 9396-FOB, BAP# 5423-FOB |
| Test Model No:                                                                                                                                                                                                                                                                            | BAP# 5423-FOB                |
| Remark: All above models are identical in the same PCB layout, interior structure and electrical circuits. The differences are model name, and the model BAP# 5423-FOB has one more car trunk button than the model BAP# 9396-FOB (this car trunk button does not affect RF performance). |                              |
| Serial No.:                                                                                                                                                                                                                                                                               | NA                           |
| Hardware Version:                                                                                                                                                                                                                                                                         | V5.3                         |
| Software Version:                                                                                                                                                                                                                                                                         | GM2726V310                   |
| Test sample(s) ID:                                                                                                                                                                                                                                                                        | GTS202003000005-1            |
| Sample(s) Status:                                                                                                                                                                                                                                                                         | Engineer sample              |
| Operation Frequency:                                                                                                                                                                                                                                                                      | 315MHz                       |
| Modulation technology:                                                                                                                                                                                                                                                                    | ASK                          |
| Antenna Type:                                                                                                                                                                                                                                                                             | Integral Antenna             |
| Antenna gain:                                                                                                                                                                                                                                                                             | 2.0dBi(declare by applicant) |
| Power supply:                                                                                                                                                                                                                                                                             | DC 3V                        |

## 5.2 Test mode

|                   |                                    |
|-------------------|------------------------------------|
| Transmitting mode | Keep the EUT in transmitting mode. |
|-------------------|------------------------------------|

### Per-test mode.

We have verified the construction and function in typical operation, The EUT was placed on three different polar directions; i.e. X axis, Y axis, Z axis. which only the worst case was shown in this test report and defined as follows:

| 315MHz | Axis                   | X     | Y     | Z     |
|--------|------------------------|-------|-------|-------|
|        | Field Strength(dBuV/m) | 69.25 | 70.48 | 69.44 |

## 5.3 Description of Support Units

None.

## 5.4 Test Facility

The test facility is recognized, certified, or accredited by the following organizations:

- **FCC —Registration No.: 381383**

Global United Technology Services Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in files. Registration 381383.

- **IC —Registration No.: 9079A**

The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 9079A.

- **NVLAP (LAB CODE:600179-0)**

Global United Technology Services Co., Ltd., is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP). LAB CODE:600179-0

## 5.5 Test Location

All tests were performed at:

Global United Technology Services Co., Ltd.  
No.123-128, Tower A, Jinyuan Business Building, No.2, Laodong Industrial Zone,  
Xixiang Road, Baoan District, Shenzhen, Guangdong, China  
Tel: 0755-27798480  
Fax: 0755-27798960

## 5.6 Other Information Requested by the Customer

None.

## 6 Test Instruments list

| Radiated Emission: |                                     |                                |                             |               |                     |                         |
|--------------------|-------------------------------------|--------------------------------|-----------------------------|---------------|---------------------|-------------------------|
| Item               | Test Equipment                      | Manufacturer                   | Model No.                   | Inventory No. | Cal.Date (mm-dd-yy) | Cal.Due date (mm-dd-yy) |
| 1                  | 3m Semi- Anechoic Chamber           | ZhongYu Electron               | 9.2(L)*6.2(W)* 6.4(H)       | GTS250        | July. 03 2015       | July. 02 2020           |
| 2                  | Control Room                        | ZhongYu Electron               | 6.2(L)*2.5(W)* 2.4(H)       | GTS251        | N/A                 | N/A                     |
| 3                  | EMI Test Receiver                   | Rohde & Schwarz                | ESU26                       | GTS203        | June. 26 2019       | June. 25 2020           |
| 4                  | BiConiLog Antenna                   | SCHWARZBECK<br>MESS-ELEKTRONIK | VULB9163                    | GTS214        | June. 26 2019       | June. 25 2020           |
| 5                  | Double -ridged waveguide horn       | SCHWARZBECK<br>MESS-ELEKTRONIK | BBHA 9120 D                 | GTS208        | June. 26 2019       | June. 25 2020           |
| 6                  | Horn Antenna                        | ETS-LINDGREN                   | 3160                        | GTS217        | June. 26 2019       | June. 25 2020           |
| 7                  | EMI Test Software                   | AUDIX                          | E3                          | N/A           | N/A                 | N/A                     |
| 8                  | Coaxial Cable                       | GTS                            | N/A                         | GTS213        | June. 26 2019       | June. 25 2020           |
| 9                  | Coaxial Cable                       | GTS                            | N/A                         | GTS211        | June. 26 2019       | June. 25 2020           |
| 10                 | Coaxial cable                       | GTS                            | N/A                         | GTS210        | June. 26 2019       | June. 25 2020           |
| 11                 | Coaxial Cable                       | GTS                            | N/A                         | GTS212        | June. 26 2019       | June. 25 2020           |
| 12                 | Amplifier(100kHz-3GHz)              | HP                             | 8347A                       | GTS204        | June. 26 2019       | June. 25 2020           |
| 13                 | Amplifier(2GHz-20GHz)               | HP                             | 84722A                      | GTS206        | June. 26 2019       | June. 25 2020           |
| 14                 | Amplifier (18-26GHz)                | Rohde & Schwarz                | AFS33-18002<br>650-30-8P-44 | GTS218        | June. 26 2019       | June. 25 2020           |
| 15                 | Band filter                         | Amindeon                       | 82346                       | GTS219        | June. 26 2019       | June. 25 2020           |
| 16                 | Power Meter                         | Anritsu                        | ML2495A                     | GTS540        | June. 26 2019       | June. 25 2020           |
| 17                 | Power Sensor                        | Anritsu                        | MA2411B                     | GTS541        | June. 26 2019       | June. 25 2020           |
| 18                 | Wideband Radio Communication Tester | Rohde & Schwarz                | CMW500                      | GTS575        | June. 26 2019       | June. 25 2020           |
| 19                 | Splitter                            | Agilent                        | 11636B                      | GTS237        | June. 26 2019       | June. 25 2020           |
| 20                 | Loop Antenna                        | ZHINAN                         | ZN30900A                    | GTS534        | June. 26 2019       | June. 25 2020           |
| 21                 | Breitband hornantenne               | SCHWARZBECK                    | BBHA 9170                   | GTS579        | Oct. 19 2019        | Oct. 18 2020            |
| 22                 | Amplifier                           | TDK                            | PA-02-02                    | GTS574        | Oct. 19 2019        | Oct. 18 2020            |
| 23                 | Amplifier                           | TDK                            | PA-02-03                    | GTS576        | Oct. 19 2019        | Oct. 18 2020            |
| 24                 | PSA Series Spectrum Analyzer        | Rohde & Schwarz                | FSP                         | GTS578        | June. 26 2019       | June. 25 2020           |

| RF Conducted Test: |                                                |              |                  |            |                        |                            |
|--------------------|------------------------------------------------|--------------|------------------|------------|------------------------|----------------------------|
| Item               | Test Equipment                                 | Manufacturer | Model No.        | Serial No. | Cal.Date<br>(mm-dd-yy) | Cal.Due date<br>(mm-dd-yy) |
| 1                  | MXA Signal Analyzer                            | Agilent      | N9020A           | GTS566     | June. 26 2019          | June. 25 2020              |
| 2                  | EMI Test Receiver                              | R&S          | ESCI 7           | GTS552     | June. 26 2019          | June. 25 2020              |
| 3                  | Spectrum Analyzer                              | Agilent      | E4440A           | GTS533     | June. 26 2019          | June. 25 2020              |
| 4                  | MXG vector Signal Generator                    | Agilent      | N5182A           | GTS567     | June. 26 2019          | June. 25 2020              |
| 5                  | ESG Analog Signal Generator                    | Agilent      | E4428C           | GTS568     | June. 26 2019          | June. 25 2020              |
| 6                  | USB RF Power Sensor                            | DARE         | RPR3006W         | GTS569     | June. 26 2019          | June. 25 2020              |
| 7                  | RF Switch Box                                  | Shongyi      | RFSW3003328      | GTS571     | June. 26 2019          | June. 25 2020              |
| 8                  | Programmable Constant Temp & Humi Test Chamber | WEWON        | WHTH-150L-40-880 | GTS572     | June. 26 2019          | June. 25 2020              |

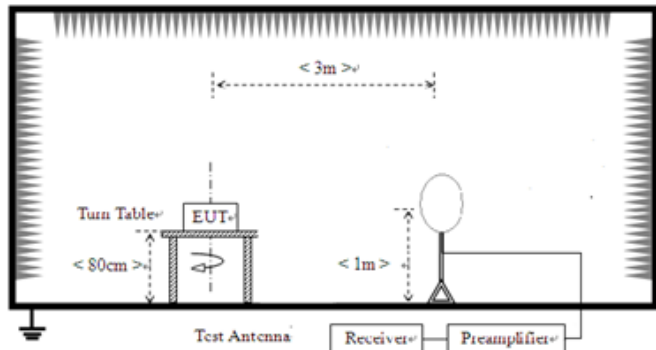
| General used equipment: |                                 |              |           |               |                        |                            |
|-------------------------|---------------------------------|--------------|-----------|---------------|------------------------|----------------------------|
| Item                    | Test Equipment                  | Manufacturer | Model No. | Inventory No. | Cal.Date<br>(mm-dd-yy) | Cal.Due date<br>(mm-dd-yy) |
| 1                       | Humidity/ Temperature Indicator | KTJ          | TA328     | GTS243        | June. 26 2019          | June. 25 2020              |
| 2                       | Barometer                       | ChangChun    | DYM3      | GTS255        | June. 26 2019          | June. 25 2020              |

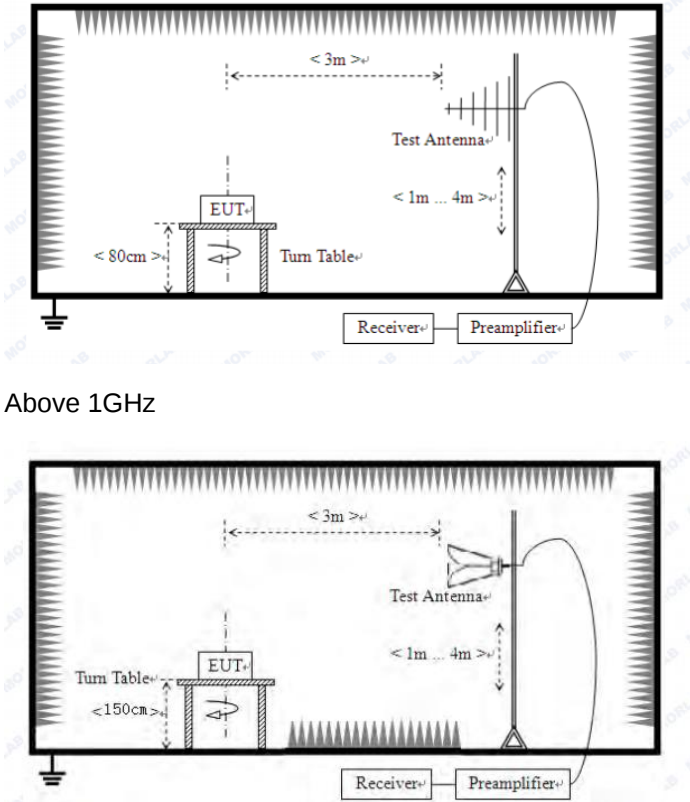
## 7 Test results and Measurement Data

### 7.1 Antenna Requirement

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |                             |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------|
| <b>Standard requirement:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                     | FCC Part15 C Section 15.203 |
| <b>15.203 requirement:</b><br>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, 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. |                             |
| <b>EUT Antenna:</b>                                                                                                                                                                                                                                                                                                                                                                                                                                                              |                             |
| <i>The antenna is integral antenna, the best case gain of the antenna is 2dBi, reference to the appendix II for details</i>                                                                                                                                                                                                                                                                                                                                                      |                             |

## 7.2 Radiated Emission Method

|                                                         |                                                                                                                                                        |                                                                                                 |        |                                                                  |            |  |
|---------------------------------------------------------|--------------------------------------------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------------|--------|------------------------------------------------------------------|------------|--|
| Test Requirement:                                       | FCC Part15 C Section 15.231 (b)& Section 15.209                                                                                                        |                                                                                                 |        |                                                                  |            |  |
| Test Method:                                            | ANSI C63.10:2013                                                                                                                                       |                                                                                                 |        |                                                                  |            |  |
| Test Frequency Range:                                   | 9kHz to 6000MHz                                                                                                                                        |                                                                                                 |        |                                                                  |            |  |
| Test site:                                              | Measurement Distance: 3m                                                                                                                               |                                                                                                 |        |                                                                  |            |  |
| Receiver setup:                                         | Frequency                                                                                                                                              | Detector                                                                                        | RBW    | VBW                                                              | Value      |  |
|                                                         | 9KHz-150KHz                                                                                                                                            | Quasi-peak                                                                                      | 200Hz  | 600Hz                                                            | Quasi-peak |  |
|                                                         | 150KHz-30MHz                                                                                                                                           | Quasi-peak                                                                                      | 9KHz   | 30KHz                                                            | Quasi-peak |  |
|                                                         | 30MHz-1GHz                                                                                                                                             | Quasi-peak                                                                                      | 120KHz | 300KHz                                                           | Quasi-peak |  |
|                                                         | Above 1GHz                                                                                                                                             | Peak                                                                                            | 1MHz   | 3MHz                                                             | Peak       |  |
|                                                         |                                                                                                                                                        | Peak                                                                                            | 1MHz   | 10Hz                                                             | Average    |  |
| Limit:<br>(Field strength of the<br>fundamental signal) | Frequency                                                                                                                                              | Limit (dBuV/m @3m)                                                                              |        | Remark                                                           |            |  |
|                                                         | 315MHz                                                                                                                                                 | 95.63                                                                                           |        | Peak Value                                                       |            |  |
|                                                         |                                                                                                                                                        | 75.63                                                                                           |        | Average Value                                                    |            |  |
| Limit:<br>(Spurious Emissions)                          | Fundamental Frequency<br>(MHz)                                                                                                                         | Field Strength of<br>fundamental<br>(microvolts/meter)                                          |        | Field Strength of<br>Unwanted<br>Emissions<br>(microvolts/meter) |            |  |
|                                                         | 40.66-40.70                                                                                                                                            | 2250                                                                                            |        | 225                                                              |            |  |
|                                                         | 70-130                                                                                                                                                 | 1250                                                                                            |        | 125                                                              |            |  |
|                                                         | 130-174                                                                                                                                                | 1250 to 3750                                                                                    |        | 125 to 1,375**                                                   |            |  |
|                                                         | 174-260                                                                                                                                                | 3750                                                                                            |        | 375                                                              |            |  |
|                                                         | 260-470                                                                                                                                                | 3750 to 12500 **                                                                                |        | 375 to 1250**                                                    |            |  |
|                                                         | Above 470                                                                                                                                              | 12500                                                                                           |        | 1250                                                             |            |  |
|                                                         | Frequency<br>(MHz)                                                                                                                                     | Class B(dBuV/m @3m)                                                                             |        |                                                                  |            |  |
|                                                         |                                                                                                                                                        | Peak                                                                                            |        | Average                                                          |            |  |
|                                                         |                                                                                                                                                        | Above 1000                                                                                      |        | 74 54                                                            |            |  |
|                                                         | Or The maximum permitted unwanted emission level is 20 dB below the maximum permitted fundamental level whichever limit permits higher field strength. |                                                                                                 |        |                                                                  |            |  |
|                                                         | Test setup:                                                                                                                                            | Below 30MHz                                                                                     |        |                                                                  |            |  |
|                                                         |                                                                                                                                                        | <div></div> |        |                                                                  |            |  |
|                                                         | Test setup:                                                                                                                                            | Below 1GHz                                                                                      |        |                                                                  |            |  |
|                                                         |                                                                                                                                                        |                                                                                                 |        |                                                                  |            |  |

|                   |                                                                                                       |
|-------------------|-------------------------------------------------------------------------------------------------------|
|                   |  <p>Above 1GHz</p> |
| Test Instruments: | Refer to section 6.0 for details                                                                      |
| Test mode:        | Refer to section 5.2 for details                                                                      |
| Test environment: | Temp.: 25 °C    Humid.: 50%    Press.: 1 010mbar                                                      |
| Test results:     | Pass                                                                                                  |

## Measurement data:

### 7.2.1 Field Strength of The Fundamental Signal

#### Peak value:

| Frequency (MHz) | Read Level (dBuV) | Antenna Factor (dB/m) | Cable Loss (dB) | Preamplifier Factor (dB) | Level (dBuV/m) | Limit Line (dBuV/m) | Over Limit (dB) | polarization |
|-----------------|-------------------|-----------------------|-----------------|--------------------------|----------------|---------------------|-----------------|--------------|
| 315             | 96.38             | 13.9                  | 2.44            | 37.44                    | 75.28          | 95.63               | -20.35          | Horizontal   |
| 315             | 89.49             | 13.9                  | 2.44            | 37.44                    | 68.39          | 95.63               | -27.24          | Vertical     |

#### Remarks:

- Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor
- PK value under pk limit more than 20dB, then pass for AV value.

## 7.2.2 Spurious Emissions

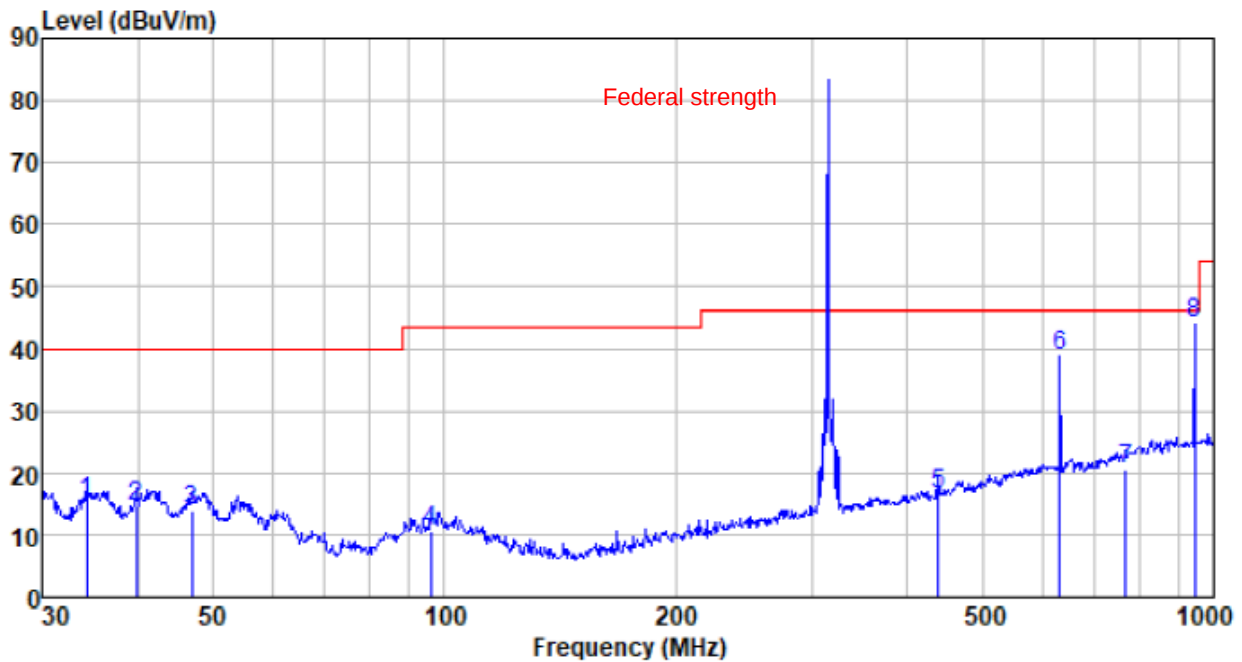
### Measurement data:

#### 9 kHz ~ 30 MHz

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.

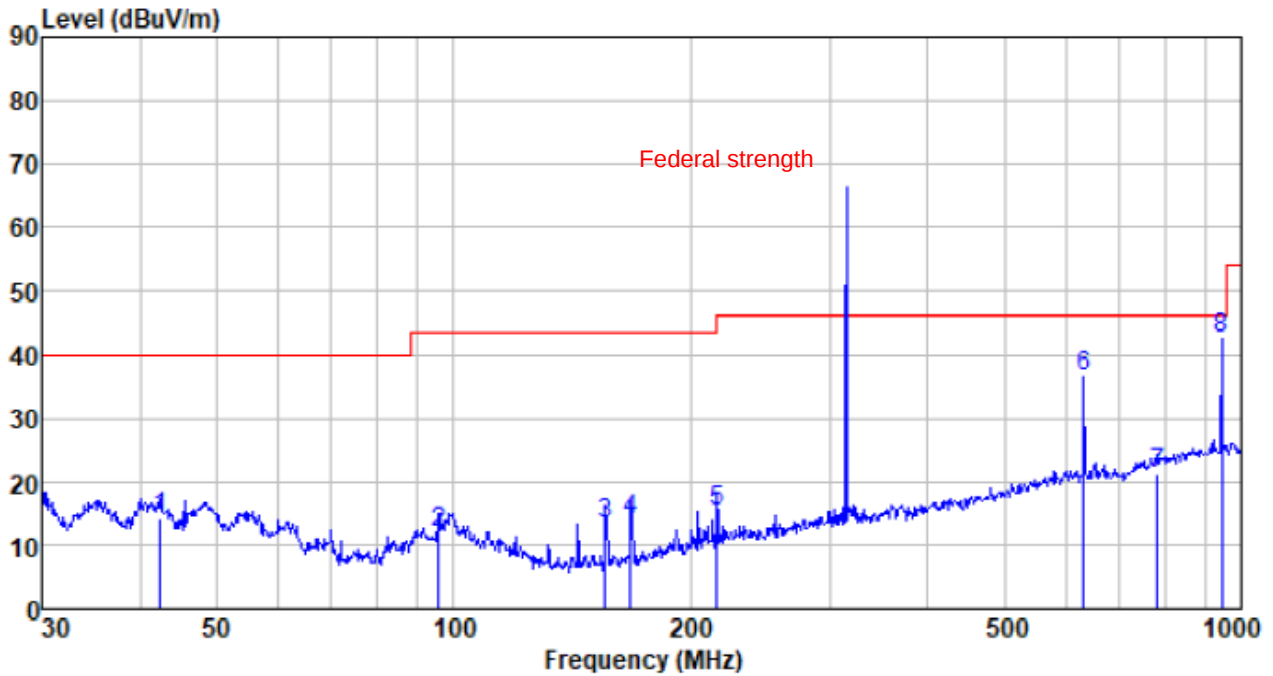
#### Below 1GHz:

|       |                   |               |            |
|-------|-------------------|---------------|------------|
| Mode: | Transmitting mode | Polarization: | Horizontal |
|-------|-------------------|---------------|------------|



| Freq<br>MHz | Reading<br>level<br>dBuV | Antenna<br>factor<br>dB/m | Cable<br>loss<br>dB | Preamp<br>factor<br>dB | level<br>dBuV/m | Limit<br>level<br>dBuV/m | Over<br>limit<br>dB | Remark |
|-------------|--------------------------|---------------------------|---------------------|------------------------|-----------------|--------------------------|---------------------|--------|
| 34.276      | 38.57                    | 11.29                     | 0.60                | 35.31                  | 15.15           | 40.00                    | -24.85              | QP     |
| 39.715      | 37.44                    | 12.17                     | 0.66                | 35.65                  | 14.62           | 40.00                    | -25.38              | QP     |
| 46.995      | 36.94                    | 12.27                     | 0.74                | 36.04                  | 13.91           | 40.00                    | -26.09              | QP     |
| 96.099      | 34.39                    | 11.65                     | 1.16                | 36.69                  | 10.51           | 43.50                    | -32.99              | QP     |
| 438.655     | 34.82                    | 16.16                     | 3.04                | 37.52                  | 16.50           | 46.00                    | -29.50              | QP     |
| 631.688     | 53.21                    | 19.53                     | 3.84                | 37.57                  | 39.01           | 46.00                    | -6.99               | Peak   |
| 768.748     | 33.15                    | 20.84                     | 4.35                | 37.62                  | 20.72           | 46.00                    | -25.28              | QP     |
| 945.440     | 54.16                    | 22.48                     | 5.03                | 37.56                  | 44.11           | 46.00                    | -1.89               | Peak   |

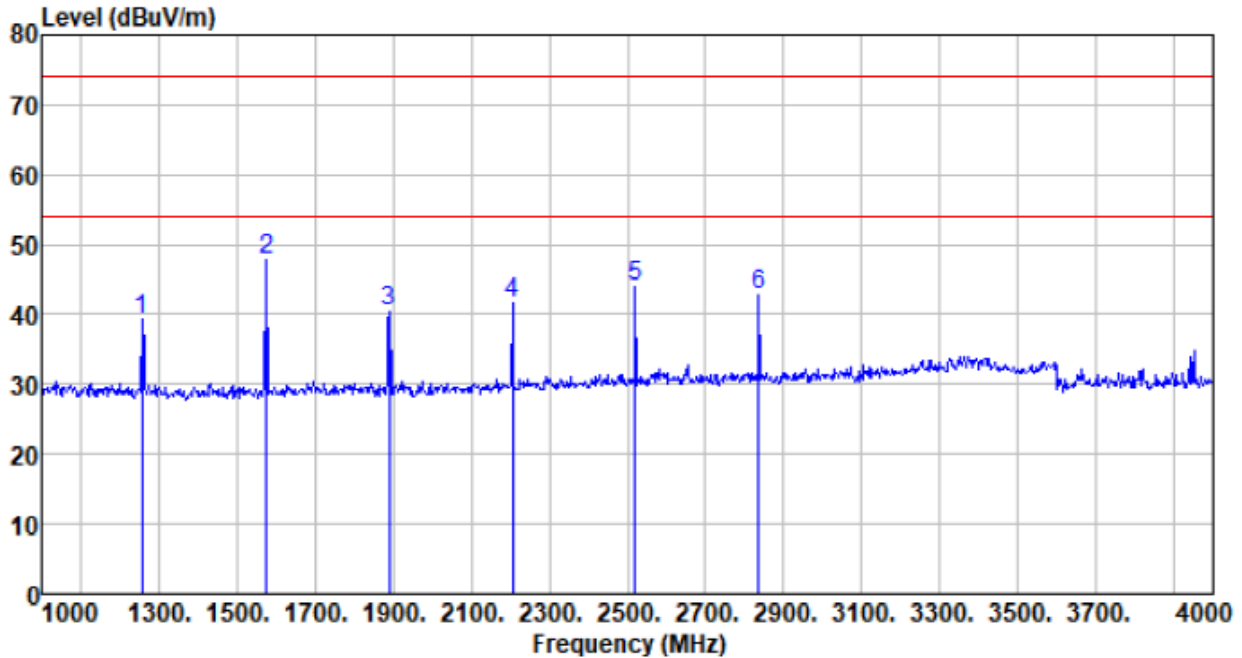
Mode: Transmitting mode Polarization: Vertical



| Freq<br>MHz | Reading<br>level<br>dBuV | Antenna<br>factor<br>dB/m | Cable<br>loss<br>dB | Preamp<br>factor<br>dB | level<br>dBuV/m | Limit<br>level<br>dBuV/m | Over<br>limit<br>dB | Remark |
|-------------|--------------------------|---------------------------|---------------------|------------------------|-----------------|--------------------------|---------------------|--------|
| 42.451      | 37.11                    | 12.23                     | 0.69                | 35.80                  | 14.23           | 40.00                    | -25.77              | QP     |
| 95.762      | 36.05                    | 11.59                     | 1.16                | 36.69                  | 12.11           | 43.50                    | -31.39              | QP     |
| 155.910     | 40.68                    | 8.05                      | 1.60                | 37.11                  | 13.22           | 43.50                    | -30.28              | QP     |
| 167.824     | 41.05                    | 8.46                      | 1.67                | 37.18                  | 14.00           | 43.50                    | -29.50              | QP     |
| 216.024     | 39.69                    | 11.02                     | 1.93                | 37.35                  | 15.29           | 46.00                    | -30.71              | QP     |
| 631.688     | 50.83                    | 19.53                     | 3.84                | 37.57                  | 36.63           | 46.00                    | -9.37               | Peak   |
| 782.345     | 33.31                    | 21.09                     | 4.40                | 37.62                  | 21.18           | 46.00                    | -24.82              | QP     |
| 945.440     | 52.54                    | 22.48                     | 5.03                | 37.56                  | 42.49           | 46.00                    | -3.51               | Peak   |

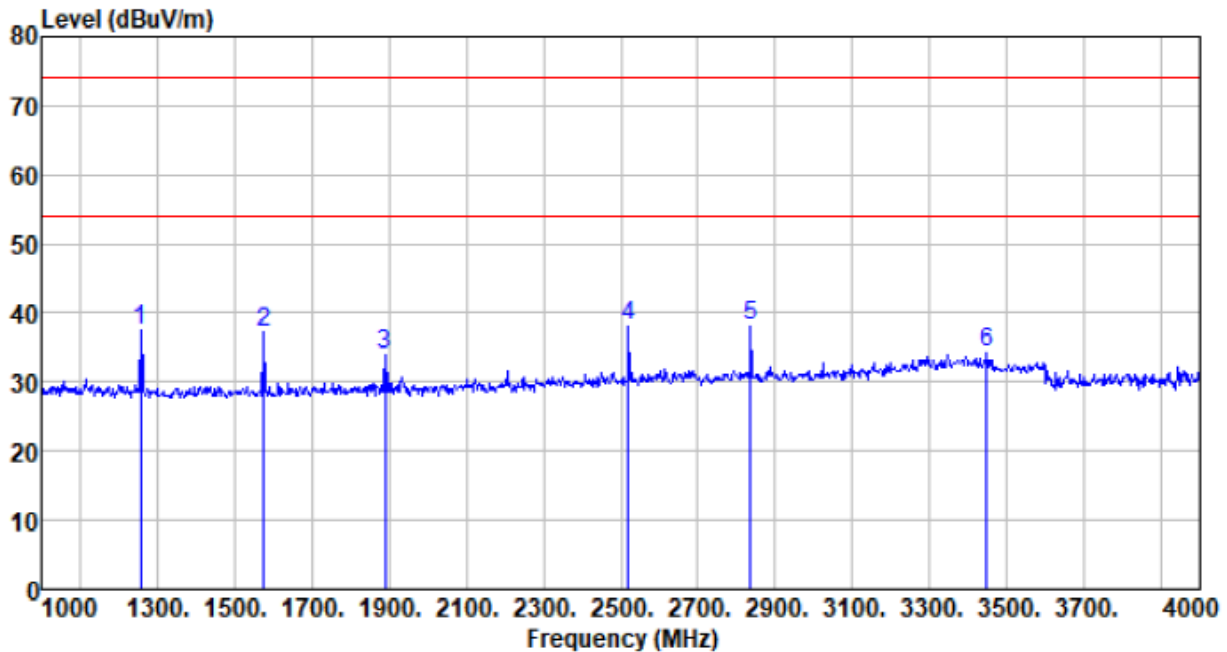
Above 1G:

|       |                   |               |            |
|-------|-------------------|---------------|------------|
| Mode: | Transmitting mode | Polarization: | Horizontal |
|-------|-------------------|---------------|------------|



| Freq<br>MHz | Reading<br>level<br>dBuV | Antenna<br>factor<br>dB/m | Cable<br>loss<br>dB | Preamp<br>factor<br>dB | level<br>dBuV | Limit<br>level<br>dBuV/m | Over<br>limit<br>dB | Remark |
|-------------|--------------------------|---------------------------|---------------------|------------------------|---------------|--------------------------|---------------------|--------|
| 1258.000    | 48.02                    | 24.91                     | 2.17                | 35.96                  | 39.14         | 74.00                    | -34.86              | Peak   |
| 1576.000    | 56.16                    | 25.44                     | 2.32                | 36.22                  | 47.70         | 74.00                    | -26.30              | Peak   |
| 1891.000    | 48.56                    | 25.94                     | 2.51                | 36.43                  | 40.58         | 74.00                    | -33.42              | Peak   |
| 2206.000    | 48.75                    | 26.81                     | 2.69                | 36.69                  | 41.56         | 74.00                    | -32.44              | Peak   |
| 2521.000    | 50.11                    | 27.73                     | 3.03                | 36.96                  | 43.91         | 74.00                    | -30.09              | Peak   |
| 2836.000    | 48.68                    | 28.19                     | 3.25                | 37.19                  | 42.93         | 74.00                    | -31.07              | Peak   |

|       |                   |               |          |
|-------|-------------------|---------------|----------|
| Mode: | Transmitting mode | Polarization: | Vertical |
|-------|-------------------|---------------|----------|

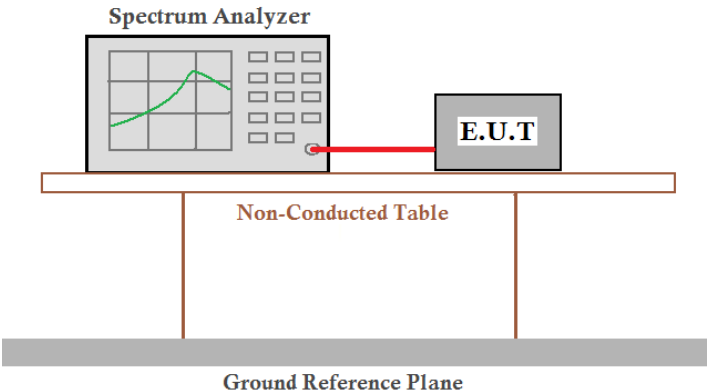


| Freq<br>MHz | Reading<br>level<br>dBuV | Antenna<br>factor<br>dB/m | Cable<br>loss<br>dB | Preamp<br>factor<br>dB | level<br>dBuV | Limit<br>level<br>dBuV/m | Over<br>limit<br>dB | Remark |
|-------------|--------------------------|---------------------------|---------------------|------------------------|---------------|--------------------------|---------------------|--------|
| 1258.000    | 46.37                    | 24.91                     | 2.17                | 35.96                  | 37.49         | 74.00                    | -36.51              | Peak   |
| 1576.000    | 45.51                    | 25.44                     | 2.32                | 36.22                  | 37.05         | 74.00                    | -36.95              | Peak   |
| 1891.000    | 41.96                    | 25.94                     | 2.51                | 36.43                  | 33.98         | 74.00                    | -40.02              | Peak   |
| 2521.000    | 44.24                    | 27.73                     | 3.03                | 36.96                  | 38.04         | 74.00                    | -35.96              | Peak   |
| 2836.000    | 43.93                    | 28.19                     | 3.25                | 37.19                  | 38.18         | 74.00                    | -35.82              | Peak   |
| 3448.000    | 39.61                    | 28.40                     | 3.69                | 37.35                  | 34.35         | 74.00                    | -39.65              | Peak   |

Remarks:

Final Level = Receiver Read level + Antenna Factor + Cable Loss – Preamplifier Factor

### 7.3 20dB Occupy Bandwidth

|                   |                                                                                                                                                                                                                                                                                                                             |
|-------------------|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Requirement: | FCC Part15 C Section 15.231 (c)                                                                                                                                                                                                                                                                                             |
| Test Method:      | ANSI C63.10:2013                                                                                                                                                                                                                                                                                                            |
| Limit:            | The bandwidth of the emission shall be no wider than 0.25% of the center frequency for devices operating above 70 MHz and below 900MHz. 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. |
| Test setup:       |  <p>The diagram illustrates the test setup. A Spectrum Analyzer is connected via a red cable to an Equipment Under Test (E.U.T.). Both are placed on a Non-Conducted Table. Below the table is a Ground Reference Plane.</p>             |
| Test Instruments: | Refer to section 6.0 for details                                                                                                                                                                                                                                                                                            |
| Test mode:        | Refer to section 5.2 for details                                                                                                                                                                                                                                                                                            |
| Test results:     | Pass                                                                                                                                                                                                                                                                                                                        |

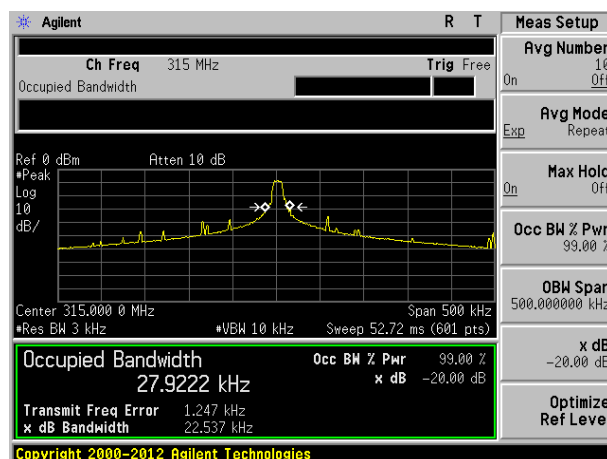
## Measurement Data

| Test Frequency (MHz) | 20dB bandwidth (kHz) | Limit (MHz) | Result |
|----------------------|----------------------|-------------|--------|
| 315                  | 22.537               | 0.7875      | Pass   |

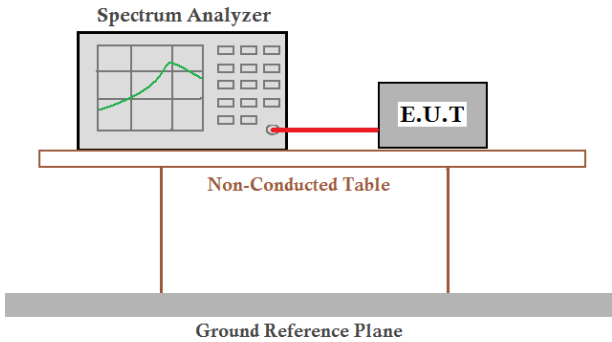
Note: Limit= Fundamental frequency $\times$ 0.25%

$$315 \times 0.25\% = 0.7875 \text{ MHz}$$

Test plot as follows:



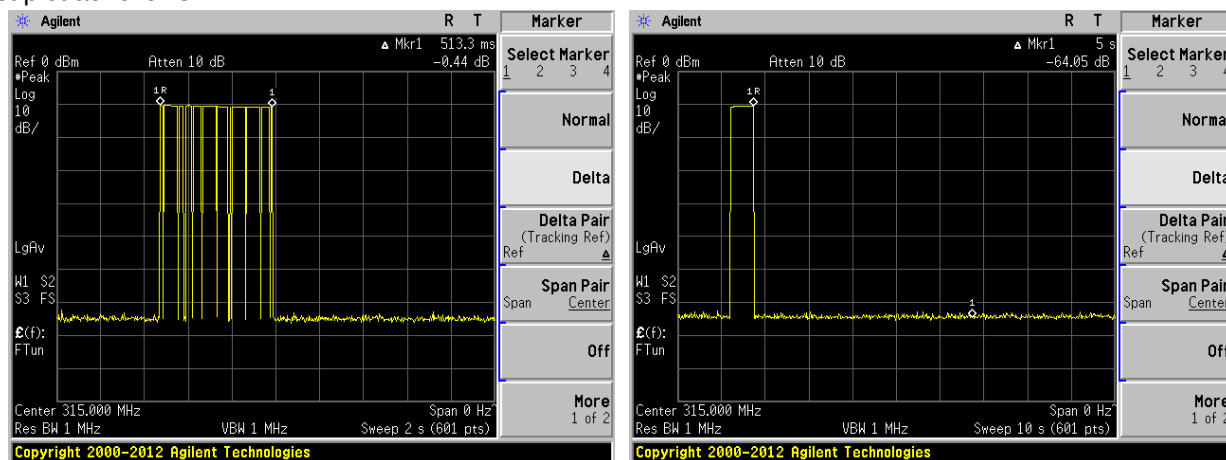
## 7.4 Dwell Time

|                   |                                                                                    |
|-------------------|------------------------------------------------------------------------------------|
| Test Requirement: | FCC Part15 C Section 15.231 (a)1                                                   |
| Test Method:      | ANSI C63.10:2013                                                                   |
| Receiver setup:   | RBW=1000KHz, VBW=1000KHz, span=0Hz, detector: Peak                                 |
| Limit:            | Not more than 5 seconds                                                            |
| Test setup:       |  |
| Test Instruments: | Refer to section 6.0 for details                                                   |
| Test mode:        | Refer to section 5.2 for details                                                   |
| Test results:     | Pass                                                                               |

### Measurement data:

| Frequency (MHz) | Duration of each TX (second) | Limit (second) | Result |
|-----------------|------------------------------|----------------|--------|
| 315             | 0.513                        | <5.0           | Pass   |

Test plot as follows:



## 8 Test Setup Photo

Reference to the **appendix I** for details.

## 9 EUT Constructional Details

Reference to the **appendix II** for details.

----- End -----