**FCC Part15, Subpart B**

# TEST REPORT

*For*

**TOY Receiver**

**MODEL NUMBER: 1350MB**

**FCC ID: G6D1350MB**

**REPORT NUMBER: 4789120737.1**

**ISSUE DATE: September 12, 2019**

*Prepared for*

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**9/F., NEW BRIGHT BUILDING, 11 SHEUNG YUET ROAD, KOWLOON BAY, KOWLOON, HONG KONG.**

*Prepared by*

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Revision History

| Rev. | Issue Date | Revisions | Revised By |
|---|---|---|---|
| V0 | 09/12/2019 | Initial Issue | |

| Summary of Test Results | | | | |
|---|---|---|---|---|
| **Standard** | **Test Item** | **Limit** | **Result** | **Remark** |
| FCC Part15, Subpart B ANSI C63.4-2014 | Conducted Disturbance | Class B | N/A | **NOTE (1) NOTE (2)** |
| | Radiated Disturbance below 1 GHz | Class B | PASS | |
| | Radiated Disturbance above 1 GHz | Class B | N/A | **NOTE (3) NOTE (4)** |

Note:
(1) "N/A" denotes test is not applicable in this Test Report
(2) The product is powered by two pieces of AA battery, no AC port.
(3) If the highest frequency of the internal sources of the EUT is less than 108 MHz, the measurement shall only be made up to 1 GHz. If the highest frequency of the internal sources of the EUT is between 108 MHz and 500 MHz, the measurement shall only be made up to 2 GHz. If the highest frequency of the internal sources of the EUT is between 500 MHz and 1 GHz, measurement shall only be made up to 5 GHz. If the highest frequency of the internal sources of the EUT is above 1 GHz, the measurement shall be made up to 5 times the highest frequency or 40 GHz, whichever is less.
(4) The highest operating frequency of the product is 49.860MHz.

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# 1. ATTESTATION OF TEST RESULTS

**Applicant Information**

| | |
|---|---|
| Company Name: | NEW BRIGHT INDUSTRIAL CO., LTD |
| Address: | 9/F., NEW BRIGHT BUILDING, 11 SHEUNG YUET ROAD, KOWLOON BAY, KOWLOON, HONG KONG. |

**Manufacturer Information**

| | |
|---|---|
| Company Name: | NEW BRIGHT INDUSTRIAL CO., LTD |
| Address: | 9/F., NEW BRIGHT BUILDING, 11 SHEUNG YUET ROAD, KOWLOON BAY, KOWLOON, HONG KONG. |

**EUT Information**

| | |
|---|---|
| EUT Name: | TOY Receiver |
| Model: | 1350MB |
| Brand: | / |
| Sample Status: | Normal |
| Sample ID: | 2444595 |
| Sample Received Date: | July 25, 2019 |
| Date of Tested: | September 12, 2019 |

| APPLICABLE STANDARDS | |
|---|---|
| **STANDARDS** | **TEST RESULTS** |
| **FCC Part15, Subpart B<br>ANSI C63.4-2014** | **PASS** |

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## 2. TEST METHODOLOGY

All tests were performed in accordance with the standard FCC Part15 Subpart B, ANSI C63.4-2014.

## 3. FACILITIES AND ACCREDITATION

| | |
|---|---|
| Accreditation Certificate | **A2LA (Certificate No.: 4102.01)**<br>UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with A2LA.<br>**FCC (FCC Recognized No.: CN1187)**<br>UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. Has been recognized to perform compliance testing on equipment subject to the Commission's Declaration of Conformity (DoC) and Certification rules<br>**IC(Company No.: 21320)**<br>UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been registered and fully described in a report filed with Industry Canada. The Company Number is 21320.<br>**VCCI (Registration No.: G-20019, R-20004, C-20012 and T-20011)**<br>UL Verification Services (Guangzhou) Co., Ltd. Song Shan Lake Branch. has been assessed and proved to be in compliance with VCCI, the Membership No. is 3793.<br>Facility Name:<br>Chamber D, the VCCI registration No. is G-20019 and R-20004<br>Shielding Room B , the VCCI registration No. is C-20012 and T-20011 |

Note: All tests measurement facilities use to collect the measurement data are located at Building 10, Innovation Technology Park, No. 1, Li Bin Road, Song Shan Lake Hi-Tech Development Zone Dongguan, 523808, People's Republic of China

# 4. CALIBRATION AND UNCERTAINTY

## 4.1. Measuring Instrument Calibration

The measuring equipment utilized to perform the tests documented in this report has been calibrated in accordance with the manufacturer's recommendations, and is traceable to recognized national standards.

## 4.2. Measurement Uncertainty

Where relevant, the following measurement uncertainty levels have been estimated for tests performed on the apparatus:

| Test Item | Measurement Frequency Range | K | U(dB) |
|---|---|---|---|
| Conducted emissions from the AC mains power ports | 0.15MHz ~ 30MHz | 2 | 3.62 |
| Radiated emissions | 30MHz ~ 1GHz | 2 | 4.00 |
| Note: This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2. | | | |

# 5. EQUIPMENT UNDER TEST

## 5.1. Description of EUT

| | |
|---|---|
| EUT Name | TOY Receiver |
| Model | 1350MB |
| Power supply | DC 3V |

## 5.2. Test Mode

| Test Mode | Description |
|---|---|
| Mode 1 | Running |
| Mode 2 | Receiving |

## 5.3. EUT Accessory

| Item | Accessory | Brand Name | Model Name | Description |
|---|---|---|---|---|
| 1 | Remote Controller | NEW BRIGHT | G41HHSBP | 49MHz Transmitter |

## 5.4. Support Units or Accessories for System Test

The EUT has been tested as an independent unit together with other necessary accessories or support units. The following support units or accessories were used to form a representative test configuration during the tests.

| Item | Equipment | Mfr/Brand | Model/Type No. | Specification | Series No. |
|---|---|---|---|---|---|
| / | / | / | / | / | / |

The following cables were used to form a representative test configuration during the tests.

| Item | Type of cable | Shielded Type | Ferrite Core | Specification |
|---|---|---|---|---|
| / | / | / | / | / |

# 6. MEASURING EQUIPMENT AND SOFTWARE USED

| Radiated Emissions | | | | | |
|---|---|---|---|---|---|
| Equipment | Manufacturer | Model No. | Serial No. | Last Cal. | Next Cal. |
| MXE EMI Receiver | KESIGHT | N9038A | MY56400036 | Dec. 10, 2018 | Dec. 10, 2019 |
| Hybrid Log Periodic Antenna | TDK | HLP-3003C | 130960 | Sept. 17, 2018 | Sept. 17, 2021 |
| Preamplifier | HP | 8447D | 2944A09099 | Dec. 10, 2018 | Dec. 10, 2019 |
| Software | | | | | |
| Description | | | Manufacturer | Name | Version |
| Test Software for Radiated Emissions | | | Farad | EZ-EMC | Ver. UL-3A1 |

# 7. EMISSION TEST

## 7.1. Conducted Disturbance Measurement

### 7.1.1. Limits of conducted disturbance voltage

| FREQUENCY (MHz) | Class A (dBμV) | | Class B (dBμV) | |
|---|---|---|---|---|
| | Quasi-peak | Average | Quasi-peak | Average |
| 0.15 -0.5 | 79.00 | 66.00 | 66 - 56 * | 56 - 46* |
| 0.50 -5.0 | 73.00 | 60.00 | 56.00 | 46.00 |
| 5.0 -30.0 | 73.00 | 60.00 | 60.00 | 50.00 |

Note:

(1) The tighter limit applies at the band edges.

(2) The limit of " * " marked band means the limitation decreases linearly with the logarithm of the frequency in the range.

The following table is the setting of the receiver

| Receiver Parameters | Setting |
|---|---|
| Attenuation | 10 dB |
| Start Frequency | 0.15 MHz |
| Stop Frequency | 30 MHz |
| IF Bandwidth | 9 kHz |

### 7.1.2. Test Procedure

a. The EUT was placed 0.8 meters from the horizontal ground plane with EUT being connected to the power mains through a line impedance stabilization network (LISN). All other support equipments powered from additional LISN(s). The LISN provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.

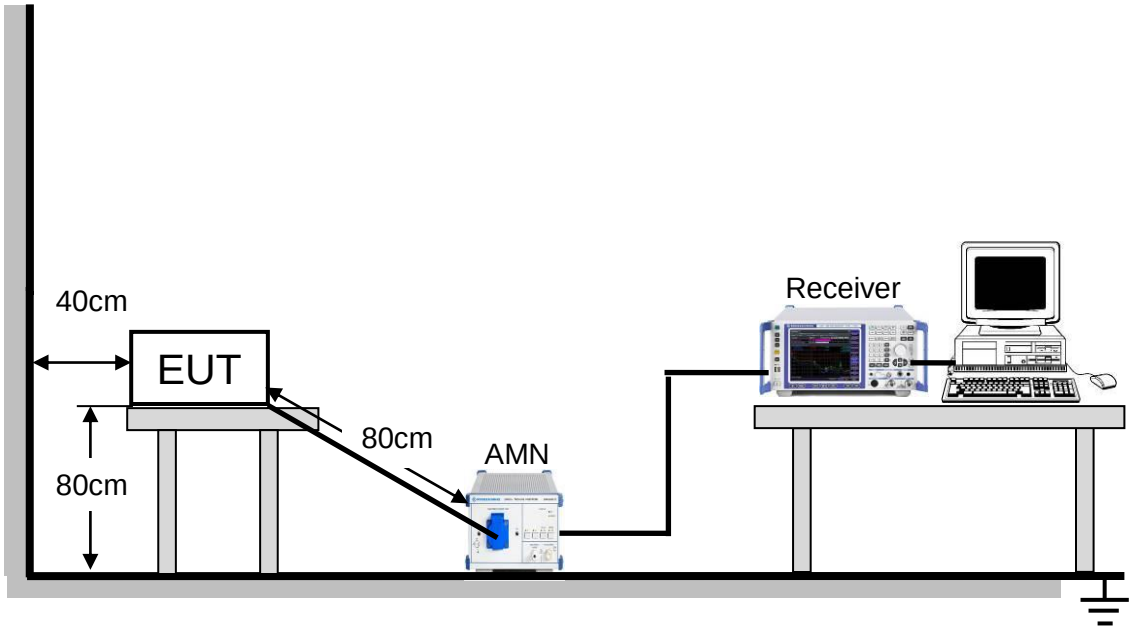
b. Interconnecting cables that hang closer than 40 cm to the ground plane shall be folded back and forth in the center forming a bundle 30 to 40 cm long.

c. I/O cables that are not connected to a peripheral shall be bundled in the center. The end of the cable may be terminated, if required, using the correct terminating impedance. The overall length shall not exceed 1 m.

d. LISN at least 80 cm from nearest part of EUT chassis.

e. For the actual test configuration, please refer to the related Item: Photographs of Test Configuration.

### 7.1.3. Test Setup




For the actual test configuration, please refer to Appendix I: Photographs of Test Configuration.

### 7.1.4. Test Results

N/A
Note: The EUT was powered by two pieces of AA battery, there was no AC port, therefore, this test item is not applicable.

## 7.2. Radiated Disturbance Measurement

### 7.2.1. Limits of radiated disturbance measurement

**Below 1 GHz**
**Measurement Method and Applied Limits:**
**ANSI C63.4:**

| Frequency (MHz) | Class A | | Class B |
|---|---|---|---|
| | Field strength (uV/m) ( at 10m) | Field strength (dBuV/m) (at 3m) | Field strength (dBuV/m) (at 3m) |
| 30 - 88 | 90 | 49.5 | 40 |
| 88 - 216 | 150 | 53.9 | 43.5 |
| 216 - 960 | 210 | 56.9 | 46 |
| Above 960 | 300 | 60 | 54 |

**Above 1 GHz**
**Measurement Method and Applied Limits:**
**ANSI C63.4:**

| Frequency (MHz) | Class A | | | | Class B | |
|---|---|---|---|---|---|---|
| | (dBuV/m) (at 3m) | | (dBuV/m) (at 10m) | | (dBuV/m) (at 3m) | |
| | Peak | Average | Peak | Average | Peak | Average |
| Above 1000 | 80 | 60 | 69.5 | 49.5 | 74 | 54 |

**Frequency Range of Radiated Disturbance Measurement**

| Highest frequency generated or Upper frequency of measurement used in the device or on which the device operates or tunes (MHz) | Range (MHz) |
|---|---|
| Below 1.705 | 30 |
| 1.705 - 108 | 1000 |
| 108 - 500 | 2000 |
| 500 - 1000 | 5000 |
| Above 1000 | $5^{th}$ harmonic of the highest frequency or 40 GHz, whichever is lower |

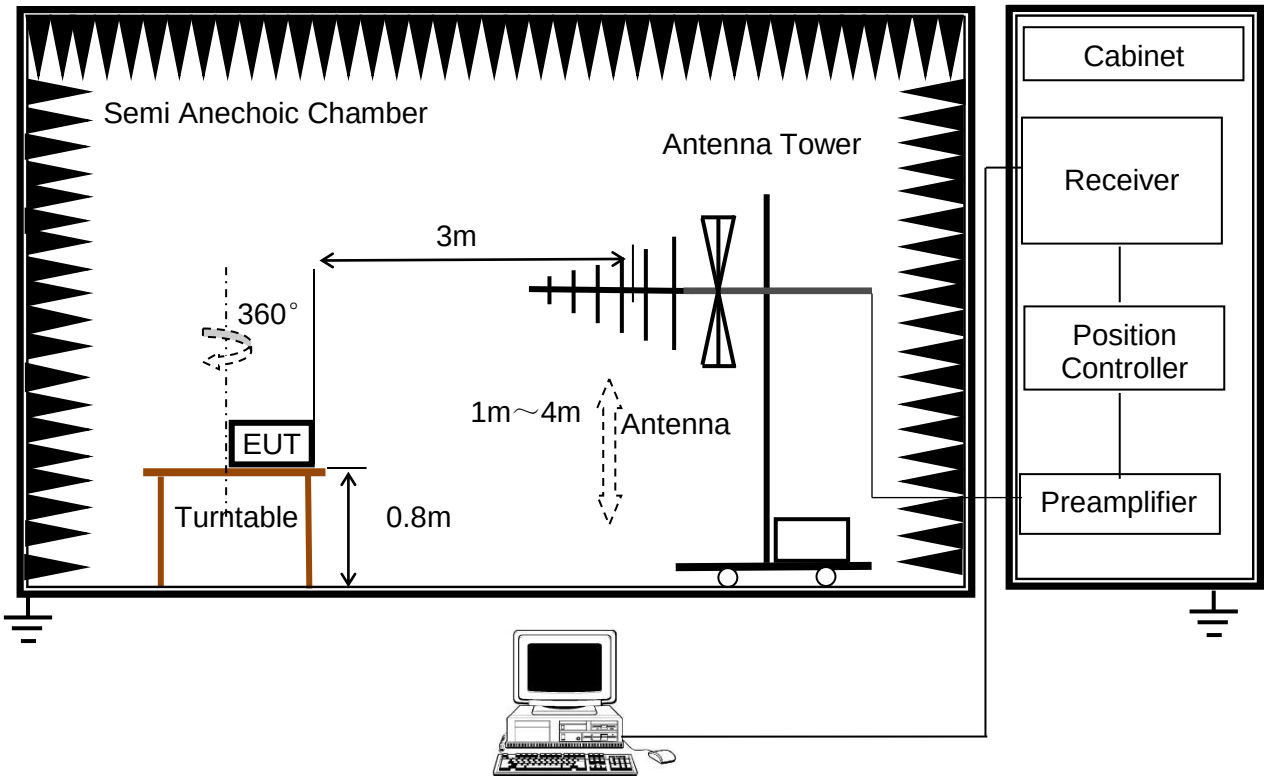
NOTE:
(1) The limit for radiated test was performed according to FCC Part 15, Subpart B;
(2) The tighter limit applies at the band edges;
(3) Emission level (dBuV/m) = 20log Emission level (uV/m),
3m Emission level = 10m Emission level + 20log(10m/3m);

### 7.2.2. Test Procedure

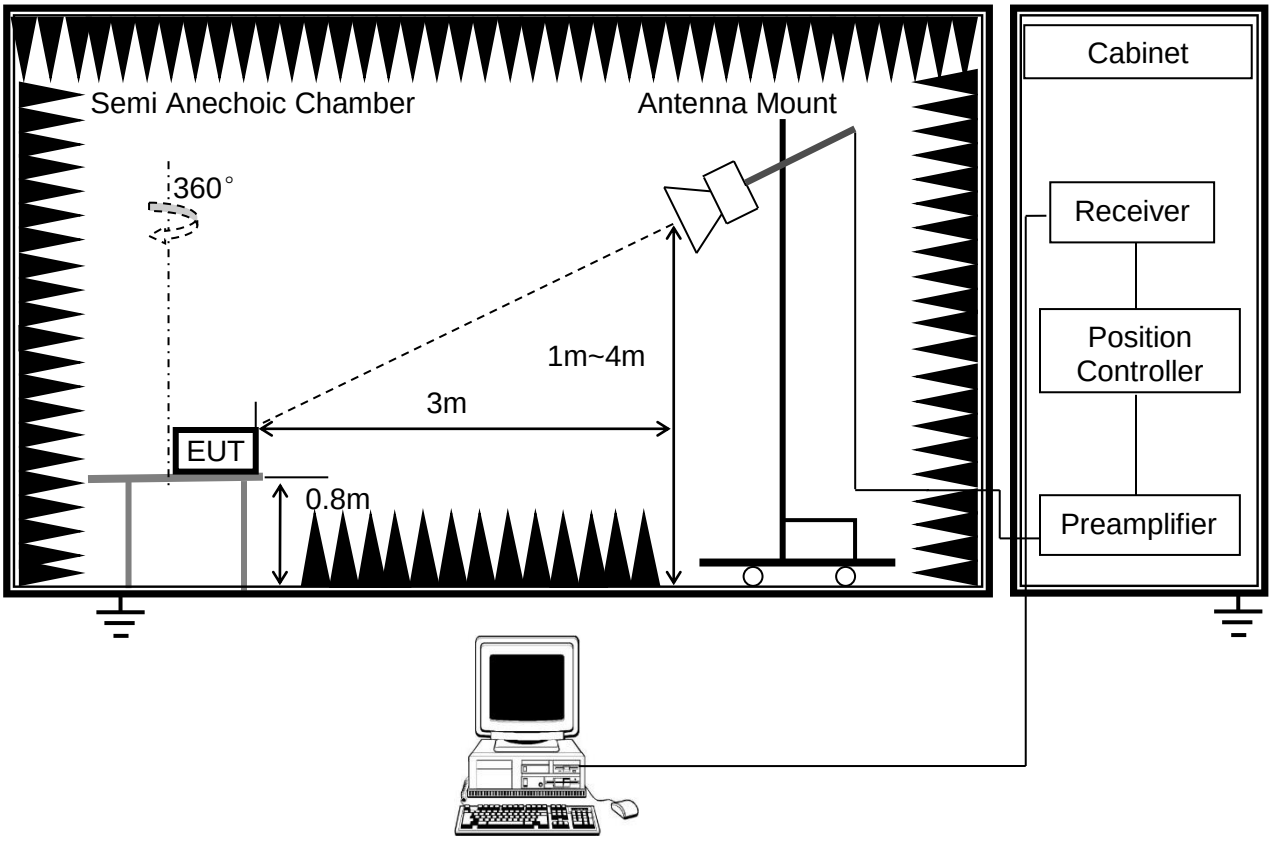
a. The measuring distance of at 3m shall be used for measurements at frequency up to 1GHz.
b. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber. The table was rotated 360 degrees to determine the position of the highest radiation.
c. The height of the equipment or of the substitution antenna shall be 0.8 m; the height of the test antenna shall vary between 1 m to 4 m. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For the actual test configuration, please refer to the related Item:EUT Photographs of Test Configuration.

### 7.2.3. Test Setup

(a) Radiated Disturbance Test Set-Up Frequency 30MHz - 1GHz



(b) Radiated Disturbance Test Set-Up Frequency above 1GHz




For the actual test configuration, please refer to Appendix I: Photographs of Test Configuration.

### 7.2.4. Test Environment

| Radiated Disturbance - below 1 GHz | | Radiated Disturbance - above 1 GHz | |
|---|---|---|---|
| Temperature: | 25℃ | Temperature: | N/A |
| Humidity: | 58% | Humidity: | N/A |
| ATM pressure: | 101kPa | ATM pressure: | N/A |

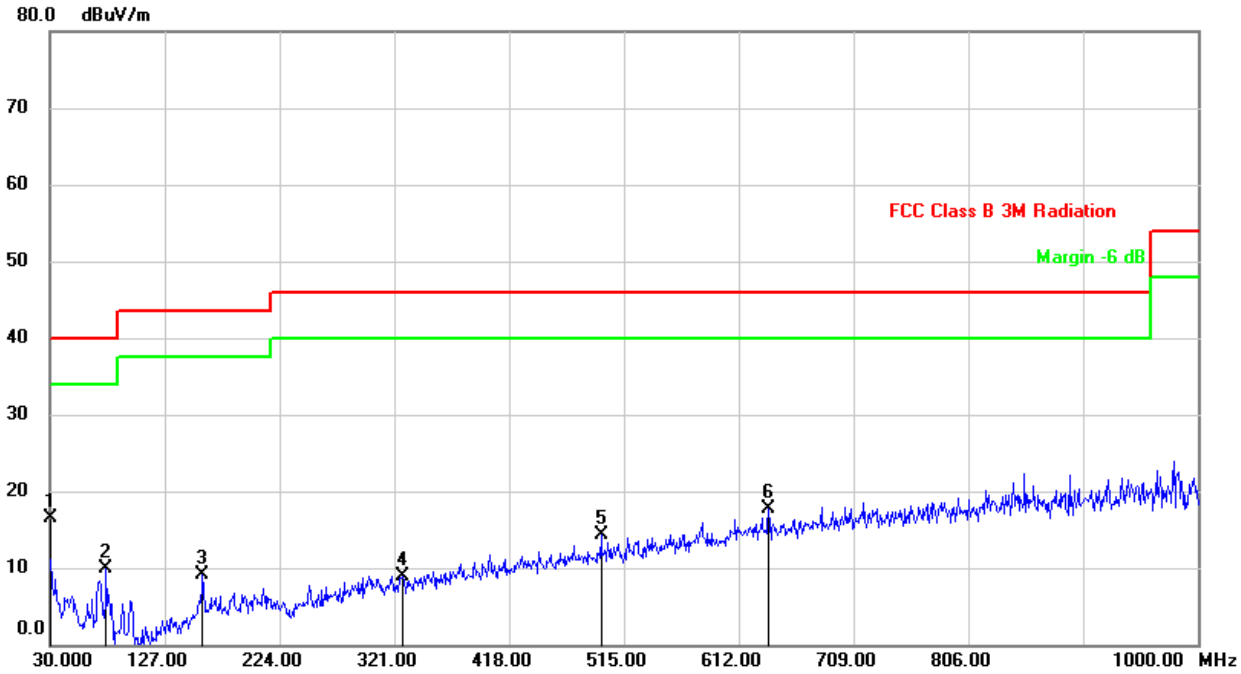
### 7.2.5. Test Mode

| Radiated Disturbance - below 1 GHz | | Radiated Disturbance - above 1 GHz | |
|---|---|---|---|
| Pre-test Mode: | Mode 1 & Mode 2 | Pre-test Mode: | N/A |
| Final Test Mode: | Mode 1 & Mode 2 | Final Test Mode: | N/A |

### 7.2.6. Test Results – below 1GHz

| Test Mode: | Mode 1 |
|---|---|

**Polarization: Vertical**

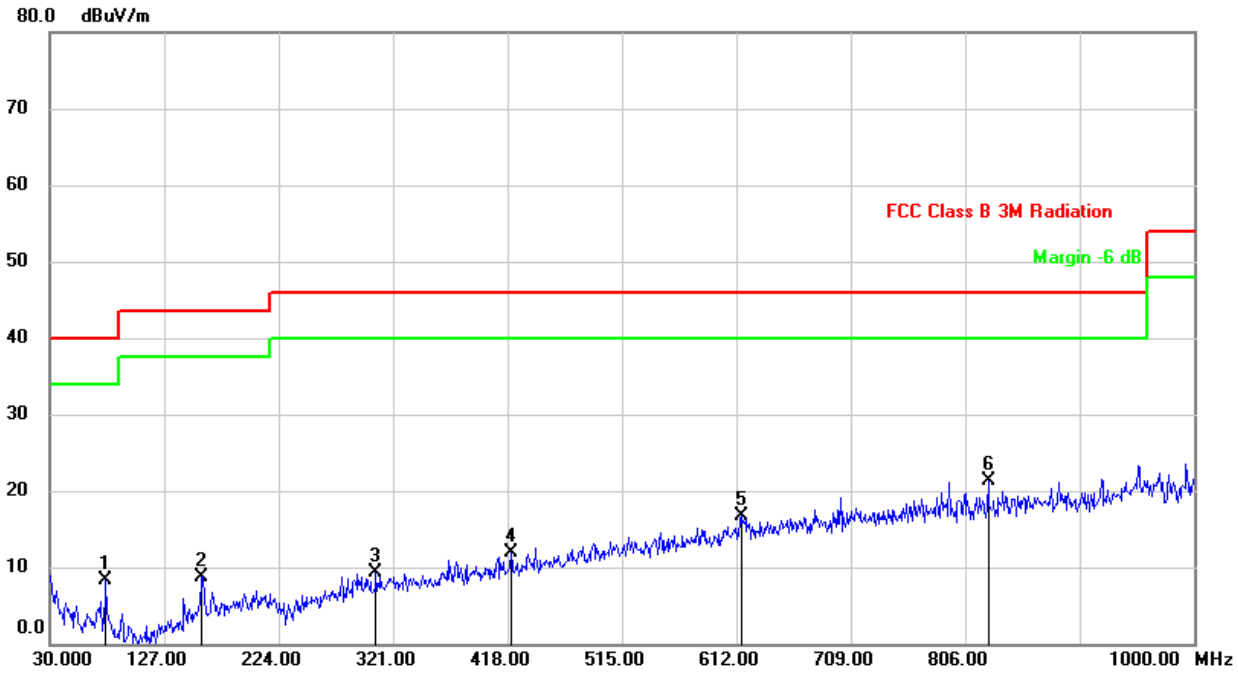



| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1 | 30.0000 | 33.54 | -17.00 | 16.54 | 40.00 | -23.46 | QP |
| 2 | 77.5300 | 30.26 | -20.45 | 9.81 | 40.00 | -30.19 | QP |
| 3 | 159.0100 | 26.87 | -17.81 | 9.06 | 43.50 | -34.44 | QP |
| 4 | 327.7900 | 22.53 | -13.58 | 8.95 | 46.00 | -37.05 | QP |
| 5 | 495.6000 | 24.92 | -10.61 | 14.31 | 46.00 | -31.69 | QP |
| 6 | 637.2199 | 25.43 | -7.76 | 17.67 | 46.00 | -28.33 | QP |

Remark:
Result = Reading +Correct (Amplifier Factor + Cable Loss + Antenna Factor)
Margin = Result - Limit

| Test Mode: | Mode 1 |
|---|---|

**Polarization: Horizontal**

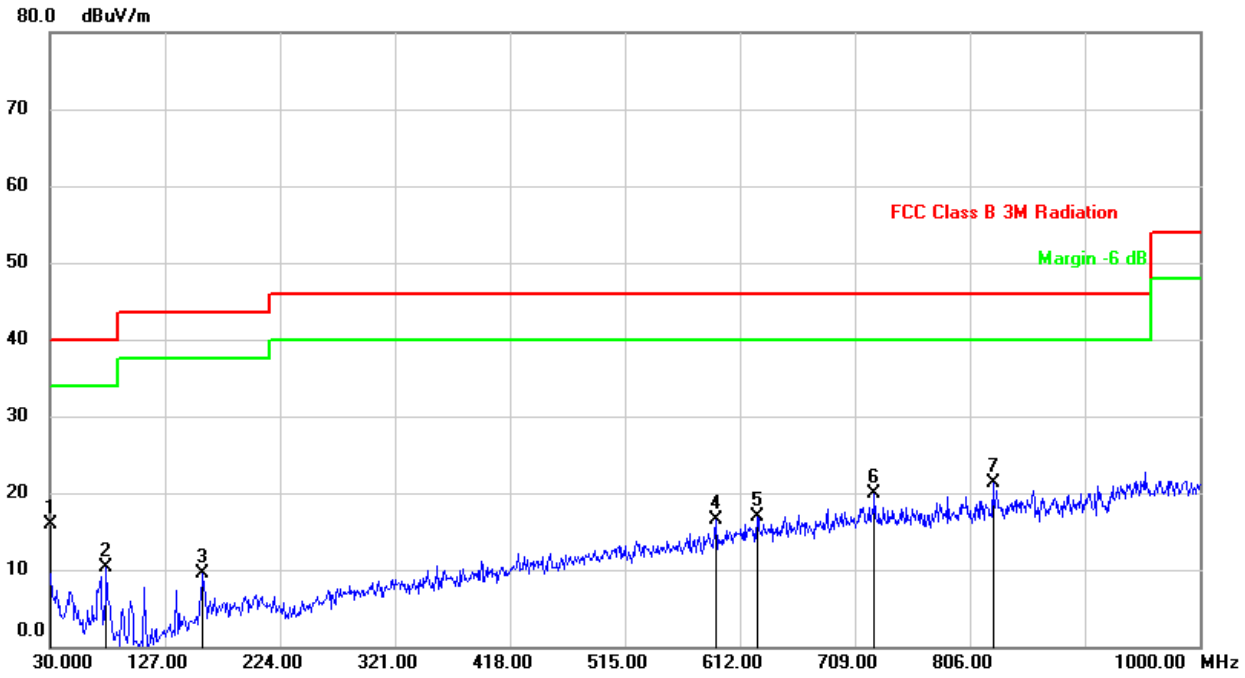



| No. | Frequency | Reading | Correct | Result | Limit | Margin | Remark |
|---|---|---|---|---|---|---|---|
| | (MHz) | (dBuV) | (dB/m) | (dBuV/m) | (dBuV/m) | (dB) | |
| 1 | 77.5300 | 28.72 | -20.45 | 8.27 | 40.00 | -31.73 | QP |
| 2 | 159.0100 | 26.60 | -17.81 | 8.79 | 43.50 | -34.71 | QP |
| 3 | 306.4500 | 23.13 | -13.82 | 9.31 | 46.00 | -36.69 | QP |
| 4 | 420.9100 | 23.81 | -11.94 | 11.87 | 46.00 | -34.13 | QP |
| 5 | 615.8800 | 24.81 | -8.09 | 16.72 | 46.00 | -29.28 | QP |
| 6 | 825.4000 | 26.25 | -4.86 | 21.39 | 46.00 | -24.61 | QP |

Remark:
Result = Reading +Correct (Amplifier Factor + Cable Loss + Antenna Factor)
Margin = Result - Limit

| Test Mode: | Mode 2 |
|---|---|

**Polarization: Vertical**

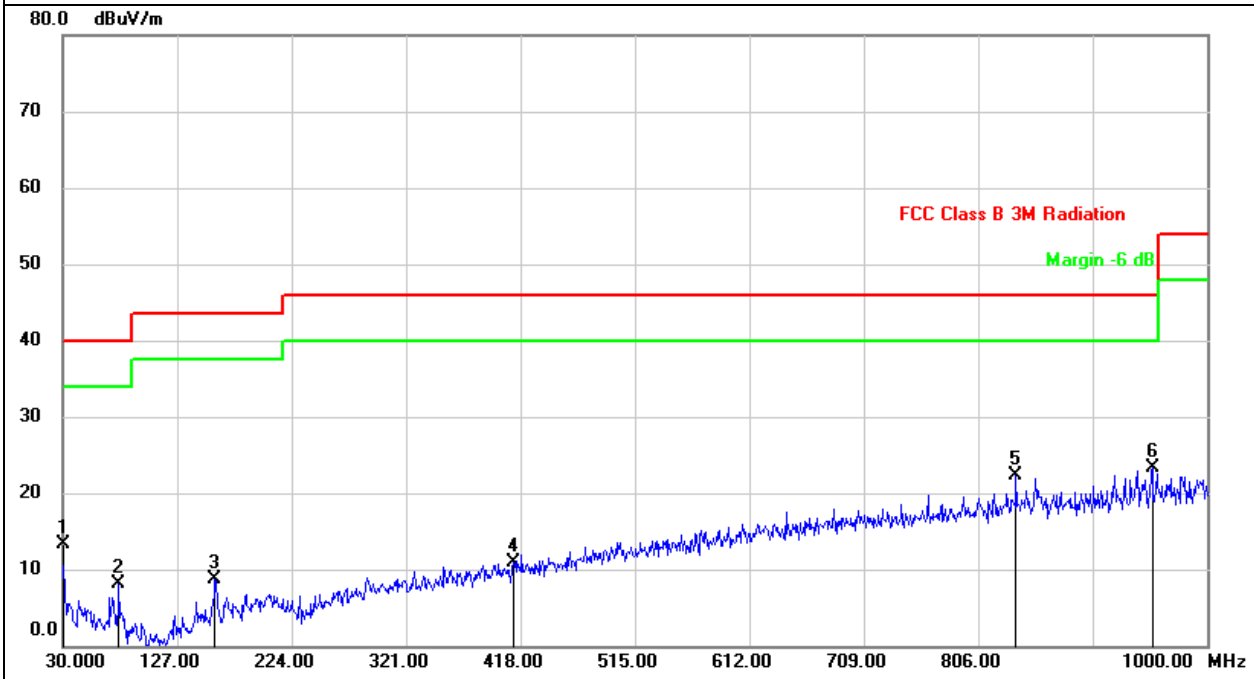



| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1 | 30.0000 | 32.98 | -17.00 | 15.98 | 40.00 | -24.02 | QP |
| 2 | 77.5300 | 30.83 | -20.45 | 10.38 | 40.00 | -29.62 | QP |
| 3 | 159.0100 | 27.38 | -17.81 | 9.57 | 43.50 | -33.93 | QP |
| 4 | 591.6300 | 25.08 | -8.62 | 16.46 | 46.00 | -29.54 | QP |
| 5 | 626.5500 | 24.95 | -7.97 | 16.98 | 46.00 | -29.02 | QP |
| 6 | 725.4900 | 26.03 | -6.18 | 19.85 | 46.00 | -26.15 | QP |
| 7 | 825.4000 | 26.18 | -4.86 | 21.32 | 46.00 | -24.68 | QP |

Remark:
Result = Reading +Correct (Amplifier Factor + Cable Loss + Antenna Factor)
Margin = Result - Limit

| Test Mode: | Mode 2 |
|---|---|

**Polarization: Horizontal**




| No. | Frequency (MHz) | Reading (dBuV) | Correct (dB/m) | Result (dBuV/m) | Limit (dBuV/m) | Margin (dB) | Remark |
|---|---|---|---|---|---|---|---|
| 1 | 30.0000 | 30.23 | -17.00 | 13.23 | 40.00 | -26.77 | QP |
| 2 | 77.5300 | 28.53 | -20.45 | 8.08 | 40.00 | -31.92 | QP |
| 3 | 159.0100 | 26.42 | -17.81 | 8.61 | 43.50 | -34.89 | QP |
| 4 | 412.1800 | 23.06 | -12.11 | 10.95 | 46.00 | -35.05 | QP |
| 5 | 838.0100 | 26.90 | -4.68 | 22.22 | 46.00 | -23.78 | QP |
| 6 | 953.4400 | 26.68 | -3.37 | 23.31 | 46.00 | -22.69 | QP |

Remark:
Result = Reading +Correct (Amplifier Factor + Cable Loss + Antenna Factor)
Margin = Result - Limit

**END OF REPORT**