

TEST REPORT NUMBER: (8525)076-0053(D)

TEST REPORT

|             |                                                                         |         |     |
|-------------|-------------------------------------------------------------------------|---------|-----|
| Applicant:  | Jakks Pacific (HK) Ltd.                                                 | Fax:    | --- |
|             |                                                                         | E-mail: | --- |
| Address :   | 12/F., Wharf T&T Centre, 7 Canton Road, Tsim Sha Tsui Kowloon Hong Kong |         |     |
| Test Date : | 2025-3-31 to 2025-4-8                                                   |         |     |

|                                                                                                         |                                                                         |
|---------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------|
| Manufacturer or Supplier :                                                                              | Jakks Pacific (HK) Ltd.                                                 |
| Address :                                                                                               | 12/F., Wharf T&T Centre, 7 Canton Road, Tsim Sha Tsui Kowloon Hong Kong |
| Sample Description:                                                                                     | Sonic Light up Drifting RC                                              |
| Model number:                                                                                           | 42997                                                                   |
| HVIN                                                                                                    | 42997TX                                                                 |
| Rated Voltage:                                                                                          | DC3V (AA*2)                                                             |
| FCC ID :                                                                                                | OTA42997TX                                                              |
| IC :                                                                                                    | 7783A-42997TX                                                           |
| The submitted sample of the above equipment has been tested according to following standard(s)          |                                                                         |
| 47 CFR Part 15, Subpart C 249<br>RSS-210 Issue 11 June 25, 2024<br>RSS-Gen Issue 5:2018+A1:2019+A2:2021 |                                                                         |
| CONCLUSION: The submitted sample was found to COMPLY with the test requirement                          |                                                                         |

Assistant Manager



Name: Nick Lung  
Date: APR 16 ,2025

/

**TEST REPORT NUMBER: (8525)076-0053(D)****1 Test Summary**

| Test Item                                                | FCC/IC Test Requirement                                                    | Test method                                | Result |
|----------------------------------------------------------|----------------------------------------------------------------------------|--------------------------------------------|--------|
| <b>Antenna Requirement</b>                               | RSS-Gen Section 6.8<br>47 CFR Part 15, Subpart C<br>Section 15.203         | ANSI C63.10-2013                           | PASS   |
| <b>AC Power Line<br/>Conducted Emission</b>              | RSS-Gen Section 8.8<br>47 CFR Part 15, Subpart C<br>Section 15.207         | ANSI C63.10-2013                           | N/A    |
| <b>Field Strength of the<br/>Fundamental Signal</b>      | RSS 210 B 10(a)<br>47 CFR Part 15, Subpart C<br>Section 15.249 (a)         | RSS-Gen section 6.12 &<br>ANSI C63.10-2013 | PASS   |
| <b>Spurious Emissions</b>                                | RSS 210 B 10 (b)<br>47 CFR Part 15, Subpart C<br>Section 15.249 (a)/15.209 | RSS-Gen section 6.13 &<br>ANSI C63.10-2013 | PASS   |
| <b>Restricted bands around<br/>fundamental frequency</b> | RSS 210 B 10 (b)<br>47 CFR Part 15, Subpart C<br>Section 15.249(a)/15.205  | RSS-Gen section 6.13 &<br>ANSI C63.10-2013 | PASS   |
| <b>20dB Occupied<br/>Bandwidth</b>                       | RSS-Gen section 6.7<br>47 CFR Part 15, Subpart C<br>Section 15.215 (c)     | RSS-Gen section 6.7 &<br>ANSI C63.10-2013  | PASS   |
| <b>99% Occupied<br/>Bandwidth</b>                        | RSS-Gen section 6.7                                                        | RSS-Gen section 6.7                        | PASS   |

N/A: Since the EUT is powered by battery, this AC power line conducted emission test should be not applicable

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### **3 General Information**

#### **3.1 Client Information**

|                          |                                                                         |
|--------------------------|-------------------------------------------------------------------------|
| Applicant:               | Jakks Pacific (HK) Ltd.                                                 |
| Address of Applicant:    | 12/F., Wharf T&T Centre, 7 Canton Road, Tsim Sha Tsui Kowloon Hong Kong |
| Manufacturer:            | Jakks Pacific (HK) Ltd.                                                 |
| Address of Manufacturer: | 12/F., Wharf T&T Centre, 7 Canton Road, Tsim Sha Tsui Kowloon Hong Kong |

#### **3.2 General Description of EUT**

|                       |                            |
|-----------------------|----------------------------|
| Name:                 | Sonic Light up Drifting RC |
| Tset Model No.:       | 42997                      |
| HVIN:                 | 42997TX                    |
| Trade Mark :          | N/A                        |
| Software Version:     | TX_V3                      |
| Hardware Version:     | 42997TXV03                 |
| Frequency Range:      | 2410-2470MHz               |
| Test sample SN:       | 7884055421                 |
| EUT Power level:      | Class 0                    |
| Test Software of EUT: | EUT Key                    |
| Modulation Type:      | GFSK                       |
| Number of Channels:   | 21                         |
| Sample Type:          | Portable product           |
| Antenna Type:         | wire antenna               |
| Antenna Gain:         | 2.74dBi                    |

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| Channel | Frequency | Channel | Frequency | Channel | Frequency |
|---------|-----------|---------|-----------|---------|-----------|
| 1       | 2410MHz   | 10      | 2437MHz   | 19      | 2564MHz   |
| 2       | 2413MHz   | 11      | 2440MHz   | 20      | 2467MHz   |
| 3       | 2416MHz   | 12      | 2443MHz   | 21      | 2470MHz   |
| 4       | 2419MHz   | 13      | 2446MHz   |         |           |
| 5       | 2422MHz   | 14      | 2449MHz   |         |           |
| 6       | 2425MHz   | 15      | 2452MHz   |         |           |
| 7       | 2428MHz   | 16      | 2455MHz   |         |           |
| 8       | 2431MHz   | 17      | 2458MHz   |         |           |
| 9       | 2434MHz   | 18      | 2461MHz   |         |           |

**Note:**

In section 15.31(m), regards to the operating frequency range over 10 MHz, the Lowest frequency, the middle frequency, and the highest frequency of channel were selected to perform the test, and the selected channel see below:

| Channel             | Frequency |
|---------------------|-----------|
| The Lowest channel  | 2410MHz   |
| The Middle channel  | 2440MHz   |
| The Highest channel | 2470MHz   |

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### **3.3 Test Environment and Mode**

| <b>Operating Environment:</b> |                                                                                                                                       |
|-------------------------------|---------------------------------------------------------------------------------------------------------------------------------------|
| Temperature:                  | 29 °C                                                                                                                                 |
| Humidity:                     | 59 % RH                                                                                                                               |
| Atmospheric Pressure:         | 1001mbar                                                                                                                              |
| <b>Test mode:</b>             |                                                                                                                                       |
| Test Mode:                    | Use test software (RF test) to set the lowest frequency, the middle frequency and the highest frequency keep transmitting of the EUT. |

### **3.4 Description of Support Units**

The EUT has been tested with associated equipment below.

| Description | Manufacturer | Model No. | Remark | FCC certification |
|-------------|--------------|-----------|--------|-------------------|
| /           | /            | /         | /      | /                 |

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### 3.5 Statement of the measurement uncertainty

The data and results referenced in this document are true and accurate.

The reader is cautioned that there may be errors within the calibration limits of the equipment and facilities.

The measurement uncertainty was calculated for all measurements listed in this test report acc. to CISPR 16 - 4 „Specification for radio disturbance and immunity measuring apparatus and methods – Part 4: Uncertainty in EMC Measurements“ and is documented in the **Shenzhen Huaxia Testing Technology Co., Ltd.** quality system acc. to DIN EN ISO/IEC 17025.

Furthermore, component and process variability of devices similar to that tested may result in additional deviation. The manufacturer has the sole responsibility of continued compliance of the device.

Hereafter the best measurement capability for **CQA** laboratory is reported:

| No. | Item                               | Uncertainty        |
|-----|------------------------------------|--------------------|
| 1   | Radiated Emission (Below 1GHz)     | 5.12dB             |
| 2   | Radiated Emission (Above 1GHz)     | 4.60dB             |
| 3   | Conducted Disturbance (0.15~30MHz) | 3.34dB             |
| 4   | Radio Frequency                    | $3 \times 10^{-8}$ |
| 5   | Duty cycle                         | 0.6 %              |
| 6   | Occupied Bandwidth                 | 1.1%               |
| 7   | RF conducted power                 | 0.86dB             |
| 8   | RF power density                   | 0.74               |
| 9   | Conducted Spurious emissions       | 0.86dB             |
| 10  | Temperature test                   | 0.8℃               |
| 11  | Humidity test                      | 2.0%               |
| 12  | Supply voltages                    | 0.5 %              |
| 13  | time                               | 0.6 %.             |
| 14  | Frequency Error                    | 5.5 Hz             |

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### 3.6 Test Location

All tests were performed at:

Shenzhen Huaxia Testing Technology Co., Ltd.

1F., Block A of Tongsheng Technology Building, Huahui Road, Dalang Street, Longhua District, Shenzhen, China

### 3.7 Testers and auditors

The tester in this report is Timo Lei, *Timo Lei*

The auditor of this report is Lewis Zhou, *Lewis Zhou*

The test site is: Shenzhen Huaxia Testing Technology Co., Ltd.

### 3.8 Test Facility

- **ISED No.: 22984**

Shenzhen Huaxia Testing Technology Co., Ltd., Shenzhen EMC Laboratory is recognized by Innovation, Science and Economic Development Canada to test to Canadian radio equipment requirements

- **A2LA (Certificate No. 4742.01)**

Shenzhen Huaxia Testing Technology Co., Ltd., Shenzhen EMC Laboratory is accredited by the American Association for Laboratory Accreditation(A2LA). Certificate No. 4742.01.

- **FCC Registration No.: 522263**

Shenzhen Huaxia Testing Technology 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 our files. Registration No.:522263

- **CAB identifier:CN0055**

Shenzhen Huaxia Testing Technology Co., Ltd.CAB identifier No.:CN0055

### 3.9 Deviation from Standards

None.

### 3.10 Abnormalities from Standard Conditions

None.

### 3.11 Other Information Requested by the Customer

None.



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### 3.12 Equipment List

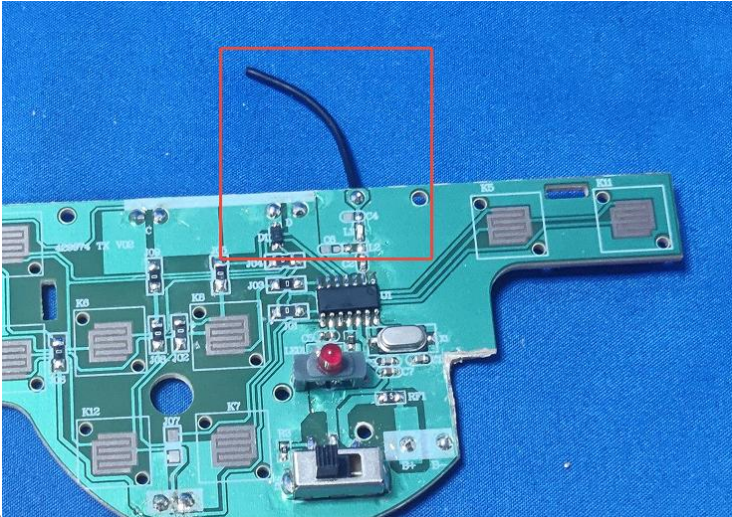
| Test Equipment             | Manufacturer | Model No.              | Instrument No. | Calibration Date | Calibration Due Date |
|----------------------------|--------------|------------------------|----------------|------------------|----------------------|
| EMI Test Receiver          | R&S          | ESR7                   | CQA-005        | 2024/9/2         | 2025/9/1             |
| Spectrum analyzer          | R&S          | FSU26                  | CQA-038        | 2024/9/2         | 2025/9/1             |
| Preamplifier               | MITEQ        | AFS4-00010300-18-10P-4 | CQA-035        | 2024/9/2         | 2025/9/1             |
| Preamplifier               | MITEQ        | AMF-6D-02001800-29-20P | CQA-036        | 2024/9/2         | 2025/9/1             |
| Loop antenna               | Schwarzbeck  | FMZB1516               | CQA-060        | 2023/9/8         | 2026/9/7             |
| Bilog Antenna              | R&S          | HL562                  | CQA-011        | 2024/9/4         | 2025/9/3             |
| Horn Antenna               | R&S          | HF906                  | CQA-012        | 2023/11/01       | 2026/10/31           |
| Horn Antenna               | Schwarzbeck  | BBHA 9170              | CQA-088        | 2023/9/7         | 2026/9/6             |
| Coaxial Cable (Above 1GHz) | CQA          | N/A                    | C019           | 2024/9/2         | 2025/9/1             |
| Coaxial Cable (Below 1GHz) | CQA          | N/A                    | C020           | 2024/9/2         | 2025/9/1             |
| Antenna Connector          | CQA          | RFC-01                 | CQA-080        | 2024/9/2         | 2025/9/1             |
| RF cable(9KHz~40GHz)       | CQA          | RF-01                  | CQA-079        | 2024/9/2         | 2025/9/1             |
| Power divider              | MIDWEST      | PWD-2533-02-SMA-79     | CQA-067        | 2024/9/2         | 2025/9/1             |

#### Note:

The temporary antenna connector is soldered on the PCB board in order to perform conducted tests and this temporary antenna connector is listed in the equipment list.

4 Test results and Measurement Data

4.1 Antenna Requirement

|                                                                                                                                                                                                                      |                                                                 |
|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|-----------------------------------------------------------------|
| Standard requirement:                                                                                                                                                                                                | RSS-Gen Section 6.8<br>47 CFR Part 15, Subpart C Section 15.203 |
| EUT Antenna:                                                                                                                                                                                                         | Please refer to the photos Appendix B                           |
| <p>The antenna is soldered on the PCB, no need to consider replacement. best case gain</p> <div></div> <p>Antenna is 2.74dBi.</p> |                                                                 |

**TEST REPORT NUMBER: (8525)076-0053(D)****4.2 Radiated Emission**

|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                            |                                  |                 |               |                          |
|-----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|--------------------------------------------------------------------------------------------|----------------------------------|-----------------|---------------|--------------------------|
| Test Requirement:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                   | RSS 210 Issue 11 June 25, 2024 B 10 (b)<br>47 CFR Part 15, Subpart C Section 15.205/15.209 |                                  |                 |               |                          |
| Test Method:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | ANSI C63.10 & RSS-Gen section 6.12/6.13                                                    |                                  |                 |               |                          |
| Test Site:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                          | Measurement Distance: 3m (Semi-Anechoic Chamber)                                           |                                  |                 |               |                          |
| Receiver Setup:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Frequency                                                                                  | Detector                         | RBW             | VBW           | Remark                   |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.009MHz-0.090MHz                                                                          | Peak                             | 10kHz           | 30KHz         | Peak                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.009MHz-0.090MHz                                                                          | Average                          | 10kHz           | 30KHz         | Average                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.090MHz-0.110MHz                                                                          | Quasi-peak                       | 10kHz           | 30KHz         | Quasi-peak               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.110MHz-0.490MHz                                                                          | Peak                             | 10kHz           | 30KHz         | Peak                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.110MHz-0.490MHz                                                                          | Average                          | 10kHz           | 30KHz         | Average                  |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.490MHz -30MHz                                                                            | Quasi-peak                       | 10kHz           | 30kHz         | Quasi-peak               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 30MHz-1GHz                                                                                 | Quasi-peak                       | 100 kHz         | 300KHz        | Quasi-peak               |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Above 1GHz                                                                                 | Peak                             | 1MHz            | 3MHz          | Peak                     |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                            | Peak                             | 1MHz            | 10Hz          | Average                  |
| Note: For fundamental frequency, RBW=5MHz, VBW=5MHz, Peak detector is for PK value, RMS detector is for Average value.                                                                                                                                                                                                                                                                                                                                                                                                                              |                                                                                            |                                  |                 |               |                          |
| Limit:<br>(Spurious Emissions and band edge)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        | Frequency                                                                                  | Field strength (microvolt/meter) | Limit (dBuV/m ) | Remark        | Measurement distance (m) |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.009MHz-0.490MHz                                                                          | 2400/F(kHz)                      | -               | -             | 300                      |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 0.490MHz-1.705MHz                                                                          | 24000/F(kHz)                     | -               | -             | 30                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 1.705MHz-30MHz                                                                             | 30                               | -               | -             | 30                       |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 30MHz-88MHz                                                                                | 100                              | 40.0            | Quasi-peak    | 3                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 88MHz-216MHz                                                                               | 150                              | 43.5            | Quasi-peak    | 3                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 216MHz-960MHz                                                                              | 200                              | 46.0            | Quasi-peak    | 3                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 960MHz-1GHz                                                                                | 500                              | 54.0            | Quasi-peak    | 3                        |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | Above 1GHz                                                                                 | 500                              | 54.0            | Average       | 3                        |
| Note: 1) 15.35(b), Unless otherwise specified, the limit on peak radio frequency emissions is 20dB above the maximum permitted average emission limit applicable to the equipment under test. This peak limit applies to the total peak emission level radiated by the device.<br>2) Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in Section 15.209, whichever is the lesser attenuation. |                                                                                            |                                  |                 |               |                          |
| Limit:<br>(Field strength of the fundamental signal)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                | Frequency                                                                                  | Limit (dBuV/m @3m)               |                 | Remark        |                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     | 2400MHz-2483.5MHz                                                                          | 94.0                             |                 | Average Value |                          |
|                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                     |                                                                                            | 114.0                            |                 | Peak Value    |                          |
| Test Setup:                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |                                                                                            |                                  |                 |               |                          |

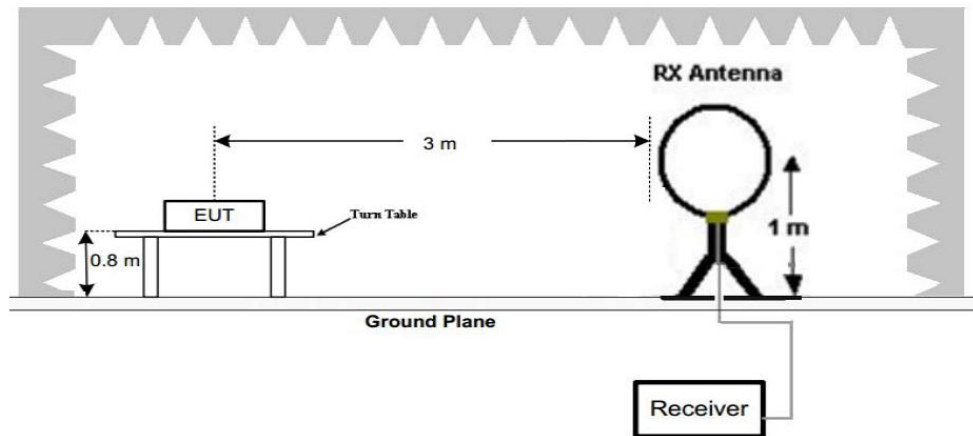


Figure 1. Below 30MHz

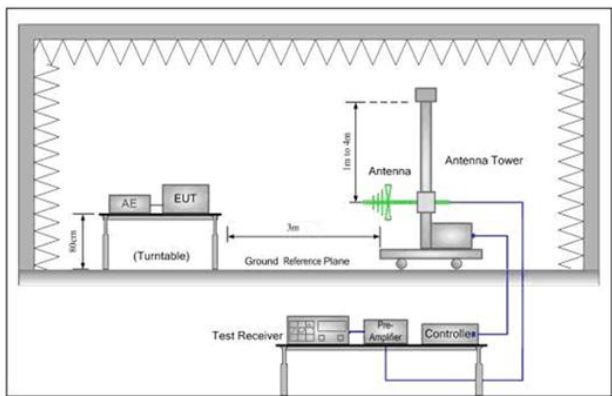


Figure 2. 30MHz to 1GHz

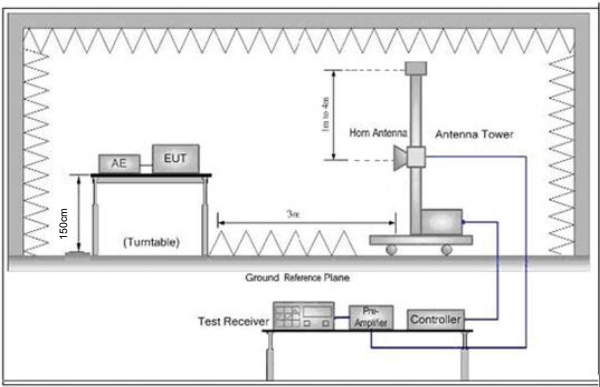


Figure 3. Above 1 GHz

Test Procedure:

- a. 1) Below 1G: The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.  
2) Above 1G: The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter semi-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.  
Note: For the radiated emission test above 1GHz:  
Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
- b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
- e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode.
- f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-

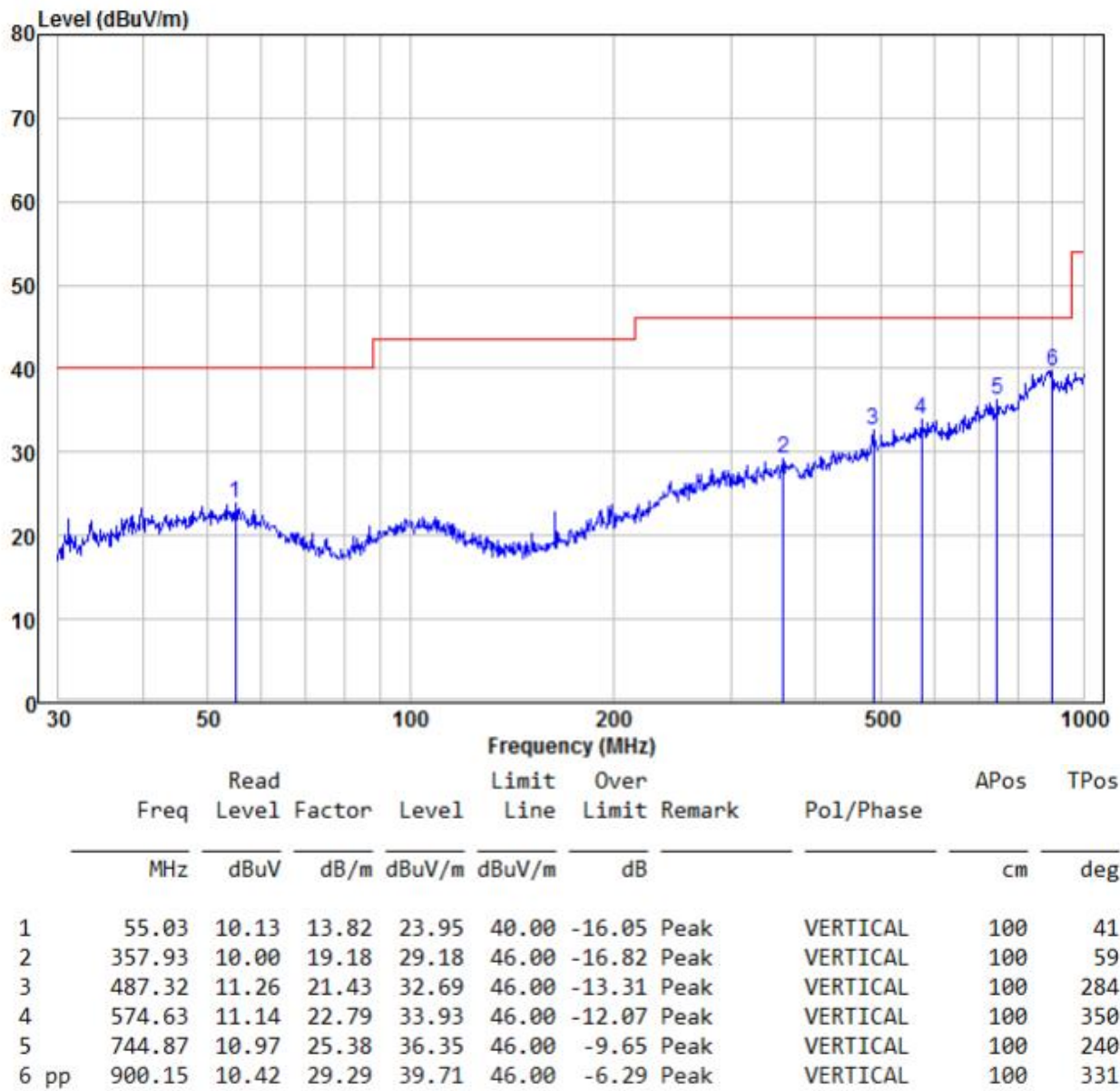
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|                        |                                                                                                                                                                                                                                                                                                                                                                                                                                                    |
|------------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
|                        | <p>tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet.</p> <p>g. Test the EUT in the lowest channel,the middle channel,the Highest channel</p> <p>h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode,And found the X axis positioning which it is worse case.</p> <p>i. Repeat above procedures until all frequencies measured was complete.</p> |
| Exploratory Test Mode: | Transmitting with GFSK at lowest, middle and highest channel.                                                                                                                                                                                                                                                                                                                                                                                      |
| Final Test Mode:       | <p>Pretest the EUT at Transmitting mode, For below 1GHz part, through pre-scan, the worst case is the lowest channel.</p> <p>Only the worst case is recorded in the report.</p>                                                                                                                                                                                                                                                                    |
| Test Voltage:          | DC3.0V (AA*2)                                                                                                                                                                                                                                                                                                                                                                                                                                      |
| Test Results:          | Pass                                                                                                                                                                                                                                                                                                                                                                                                                                               |

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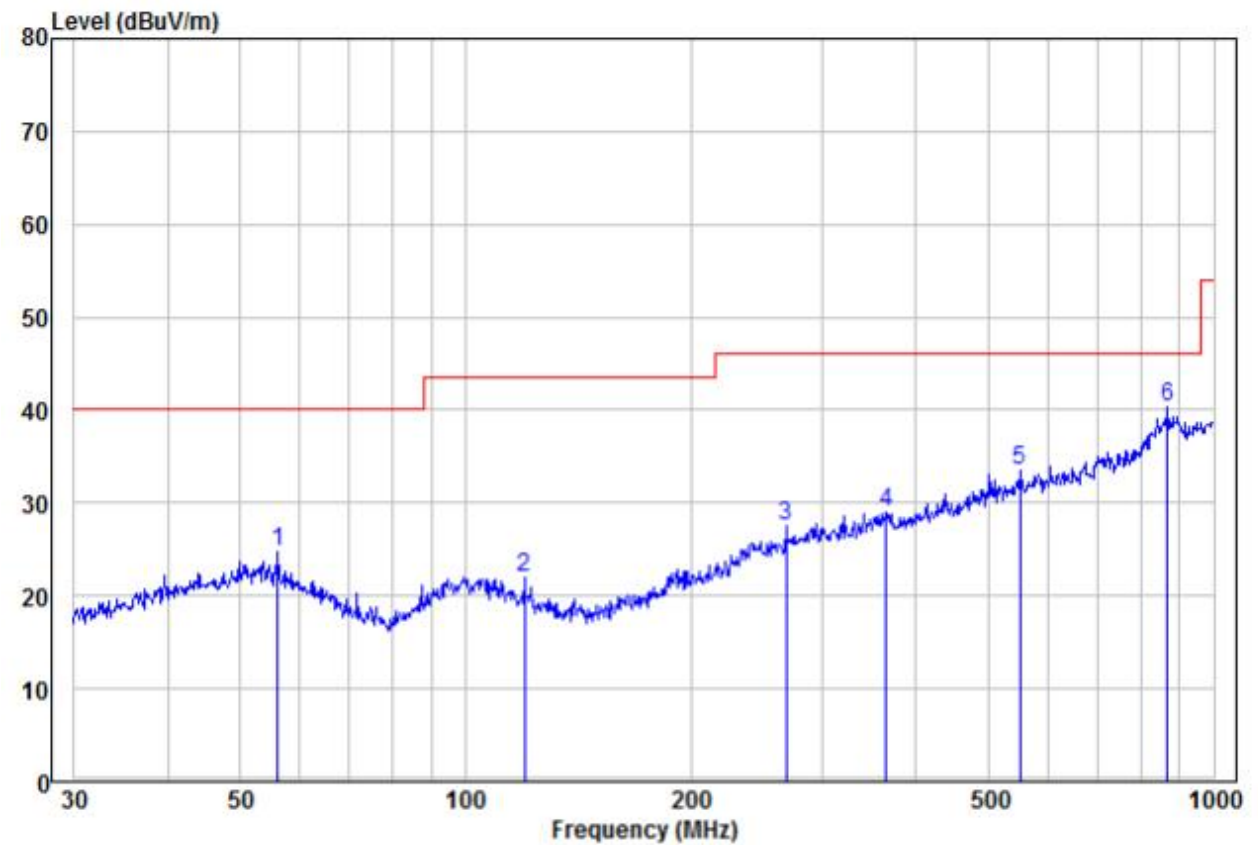
Measurement Data

|                             |                               |          |
|-----------------------------|-------------------------------|----------|
| 30MHz~1GHz (the worst case) |                               |          |
| Test mode:                  | Transmitting (Lowest channel) | Vertical |



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|                             |                               |            |
|-----------------------------|-------------------------------|------------|
| 30MHz~1GHz (the worst case) |                               |            |
| Test mode:                  | Transmitting (Lowest channel) | Horizontal |



|      | Freq   | Read Level | Factor | Level  | Limit Line | Over Limit | Remark | Pol/Phase  | APos | TPos |
|------|--------|------------|--------|--------|------------|------------|--------|------------|------|------|
|      | MHz    | dBuV       | dB/m   | dBuV/m | dBuV/m     | dB         |        |            | cm   | deg  |
| 1    | 56.20  | 11.07      | 13.60  | 24.67  | 40.00      | -15.33     | Peak   | HORIZONTAL | 100  | 79   |
| 2    | 119.86 | 10.69      | 11.24  | 21.93  | 43.50      | -21.57     | Peak   | HORIZONTAL | 100  | 172  |
| 3    | 268.49 | 10.54      | 16.89  | 27.43  | 46.00      | -18.57     | Peak   | HORIZONTAL | 100  | 265  |
| 4    | 365.54 | 9.55       | 19.37  | 28.92  | 46.00      | -17.08     | Peak   | HORIZONTAL | 100  | 236  |
| 5    | 550.95 | 11.06      | 22.33  | 33.39  | 46.00      | -12.61     | Peak   | HORIZONTAL | 100  | 54   |
| 6 pp | 869.13 | 11.05      | 29.34  | 40.39  | 46.00      | -5.61      | Peak   | HORIZONTAL | 100  | 210  |

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| Above 1GHz |               |        |                |               |        |               |           |                |             |
|------------|---------------|--------|----------------|---------------|--------|---------------|-----------|----------------|-------------|
| Test mode: | Transmitting  |        |                | Test channel: |        | Lowest        |           | Antenna Height | Table Angle |
| Frequency  | Meter Reading | Factor | Emission Level | Limits        | Over   | Detector Type | Ant. Pol. |                |             |
| (MHz)      | (dBμV)        | (dB)   | (dBμV/m)       | (dBμV/m)      | (dB)   |               | H/V       |                |             |
| 2390       | 62.25         | -9.2   | 53.05          | 74            | -20.95 | Peak          | H         | 1.5            | 35          |
| 2390       | 43.83         | -9.2   | 34.63          | 54            | -19.37 | AVG           | H         | 1.5            | 251         |
| 2400       | 62.33         | -9.39  | 52.94          | 74            | -21.06 | Peak          | H         | 1.5            | 252         |
| 2400       | 45.81         | -9.39  | 36.42          | 54            | -17.58 | AVG           | H         | 1.5            | 351         |
| 2410       | 100.99        | -9.33  | 91.66          | 114           | -22.34 | peak          | H         | 1.5            | 351         |
| 2410       | 97.82         | -9.33  | 88.49          | 94            | -5.51  | AVG           | H         | 1.5            | 255         |
| 4820       | 57.59         | -4.28  | 53.31          | 74            | -20.69 | peak          | H         | 1.5            | 2           |
| 4820       | 40.93         | -4.28  | 36.65          | 54            | -17.35 | AVG           | H         | 1.5            | 120         |
| 7230       | 50.85         | 1.13   | 51.98          | 74            | -22.02 | peak          | H         | 1.5            | 241         |
| 7230       | 36.52         | 1.13   | 37.65          | 54            | -16.35 | AVG           | H         | 1.5            | 111         |
| 2390       | 62.06         | -9.2   | 52.86          | 74            | -21.14 | peak          | V         | 1.5            | 44          |
| 2390       | 46.14         | -9.2   | 36.94          | 54            | -17.06 | AVG           | V         | 1.5            | 104         |
| 2400       | 61.63         | -9.39  | 52.24          | 74            | -21.76 | peak          | V         | 1.5            | 54          |
| 2400       | 43.94         | -9.39  | 34.55          | 54            | -19.45 | AVG           | V         | 1.5            | 273         |
| 2410       | 96.63         | -9.33  | 87.30          | 114           | -26.70 | peak          | V         | 1.5            | 340         |
| 2410       | 91.90         | -9.33  | 82.57          | 94            | -11.43 | AVG           | V         | 1.5            | 264         |
| 4820       | 55.41         | -4.28  | 51.13          | 74            | -22.87 | peak          | V         | 1.5            | 279         |
| 4820       | 41.15         | -4.28  | 36.87          | 54            | -17.13 | AVG           | V         | 1.5            | 32          |
| 7230       | 52.37         | 1.13   | 53.50          | 74            | -20.50 | peak          | V         | 1.5            | 128         |
| 7230       | 38.41         | 1.13   | 39.54          | 54            | -14.46 | AVG           | V         | 1.5            | 212         |



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| Test mode: |               | Transmitting |                | Test channel: |        | Middle        |           | Antenna Height | Table Angle |
|------------|---------------|--------------|----------------|---------------|--------|---------------|-----------|----------------|-------------|
| Frequency  | Meter Reading | Factor       | Emission Level | Limits        | Over   | Detector Type | Ant. Pol. |                |             |
| (MHz)      | (dBμV)        | (dB)         | (dBμV/m)       | (dBμV/m)      | (dB)   |               | H/V       |                |             |
| 2440       | 98.56         | -9.37        | 89.19          | 114           | -24.81 | peak          | H         | 1.5            | 173         |
| 2440       | 98.30         | -9.37        | 88.93          | 94            | -5.07  | AVG           | H         | 1.5            | 12          |
| 4880       | 57.37         | -4.14        | 53.23          | 74            | -20.77 | peak          | H         | 1.5            | 302         |
| 4880       | 42.86         | -4.14        | 38.72          | 54            | -15.28 | AVG           | H         | 1.5            | 179         |
| 7320       | 50.82         | 0.56         | 51.38          | 74            | -22.62 | peak          | H         | 1.5            | 253         |
| 7320       | 37.09         | 0.56         | 37.65          | 54            | -16.35 | AVG           | H         | 1.5            | 206         |
| 2440       | 94.72         | -9.37        | 85.35          | 114           | -28.65 | peak          | V         | 1.5            | 140         |
| 2440       | 92.55         | -9.37        | 83.18          | 94            | -10.82 | AVG           | V         | 1.5            | 283         |
| 4880       | 56.28         | -4.14        | 52.14          | 74            | -21.86 | peak          | V         | 1.5            | 71          |
| 4880       | 41.83         | -4.14        | 37.69          | 54            | -16.31 | AVG           | V         | 1.5            | 330         |
| 7320       | 51.29         | 0.56         | 51.85          | 74            | -22.15 | peak          | V         | 1.5            | 339         |
| 7320       | 36.97         | 0.56         | 37.53          | 54            | -16.47 | AVG           | V         | 1.5            | 147         |

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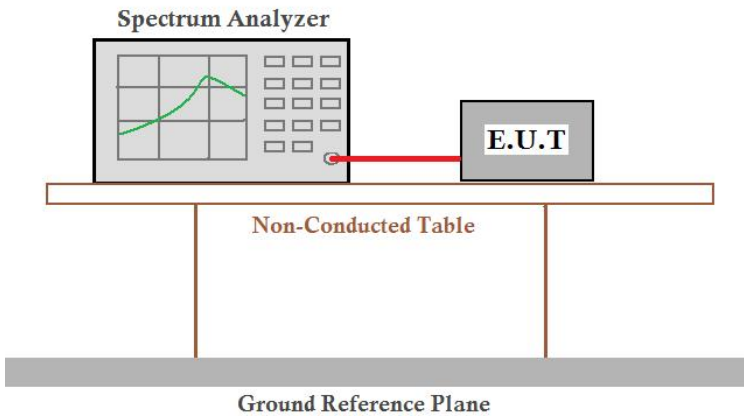
| Test mode: |               | Transmitting |                | Test channel: |        | Highest       |           | Antenna Height | Table Angle |
|------------|---------------|--------------|----------------|---------------|--------|---------------|-----------|----------------|-------------|
| Frequency  | Meter Reading | Factor       | Emission Level | Limits        | Over   | Detector Type | Ant. Pol. |                |             |
| (MHz)      | (dBμV)        | (dB)         | (dBμV/m)       | (dBμV/m)      | (dB)   |               | H/V       |                |             |
| 2470       | 97.91         | -9.23        | 88.68          | 114           | -25.32 | peak          | H         | 1.5            | 218         |
| 2470       | 96.23         | -9.23        | 87.00          | 94            | -7.00  | AVG           | H         | 1.5            | 93          |
| 2483.5     | 62.30         | -9.29        | 53.01          | 74            | -20.99 | Peak          | H         | 1.5            | 116         |
| 2483.5     | 43.19         | -9.29        | 33.90          | 54            | -20.10 | AVG           | H         | 1.5            | 225         |
| 4940       | 55.12         | -4.03        | 51.09          | 74            | -22.91 | peak          | H         | 1.5            | 77          |
| 4940       | 42.12         | -4.03        | 38.09          | 54            | -15.91 | AVG           | H         | 1.5            | 4           |
| 7410       | 50.96         | 1.68         | 52.64          | 74            | -21.36 | peak          | H         | 1.5            | 30          |
| 7410       | 35.88         | 1.68         | 37.56          | 54            | -16.44 | AVG           | H         | 1.5            | 166         |
| 2470       | 97.62         | -9.23        | 88.39          | 114           | -25.61 | peak          | V         | 1.5            | 146         |
| 2470       | 94.64         | -9.23        | 85.41          | 94            | -8.59  | AVG           | V         | 1.5            | 143         |
| 2483.5     | 62.20         | -9.29        | 52.91          | 74            | -21.09 | peak          | V         | 1.5            | 118         |
| 2483.5     | 44.12         | -9.29        | 34.83          | 54            | -19.17 | AVG           | V         | 1.5            | 51          |
| 4940       | 56.21         | -4.03        | 52.18          | 74            | -21.82 | peak          | V         | 1.5            | 105         |
| 4940       | 40.67         | -4.03        | 36.64          | 54            | -17.36 | AVG           | V         | 1.5            | 352         |
| 7410       | 53.30         | 1.68         | 54.98          | 74            | -19.02 | peak          | V         | 1.5            | 44          |
| 7410       | 38.31         | 1.68         | 39.99          | 54            | -14.01 | AVG           | V         | 1.5            | 72          |

## Remark:

- 1) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:  
Final Test Level = Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor
- 2) Scan from 9kHz to 25GHz, The disturbance above 8GHz and below 30MHz was very low, and the above harmonics were the highest point could be found when testing, so only the above harmonics had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported .

## TEST REPORT NUMBER: (8525)076-0053(D)

### 4.3 20dB Bandwidth

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Requirement: | RSS-Gen Issue 5:2018+A1:2019+A2:2021 section 6.7<br>47 CFR Part 15, Subpart C Section 15.215 (c)                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Test Method:      | ANSI C63.10:2013 & RSS-Gen Section 6.7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                         |
| Test Setup:       |  <p>The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. Both are placed on a Non-Conducted Table, which is supported by two vertical legs. Below the table is a Ground Reference Plane.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Test Mode:        | Transmitting with GFSK at lowest, middle and highest channel.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Test Procedure:   | <p>The following conditions shall be observed for measuring the occupied bandwidth and x dB bandwidth:</p> <p>A: The transmitter shall be operated at its maximum carrier power measured under normal test conditions.</p> <p>B: The span of the spectrum analyzer shall be set large enough to capture all products of the modulation process, including the emission skirts, around the carrier frequency, but small enough to avoid having other emissions (e.g. on adjacent channels) within the span.</p> <p>C: The detector of the spectrum analyzer shall be set to "Sample". However, a peak, or peak hold, may be used in place of the sampling detector since this usually produces a wider bandwidth than the actual bandwidth (worst-case measurement). Use of a peak hold (or "Max Hold") may be necessary to determine the occupied / x dB bandwidth if the device is not transmitting continuously.</p> <p>D: The resolution bandwidth (RBW) shall be in the range of 1% to 5% of the actual occupied / x dB bandwidth and the video bandwidth (VBW) shall not be smaller than three times the RBW value. Video averaging is not permitted.</p> |
| Limit:            | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Test Results:     | Pass                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

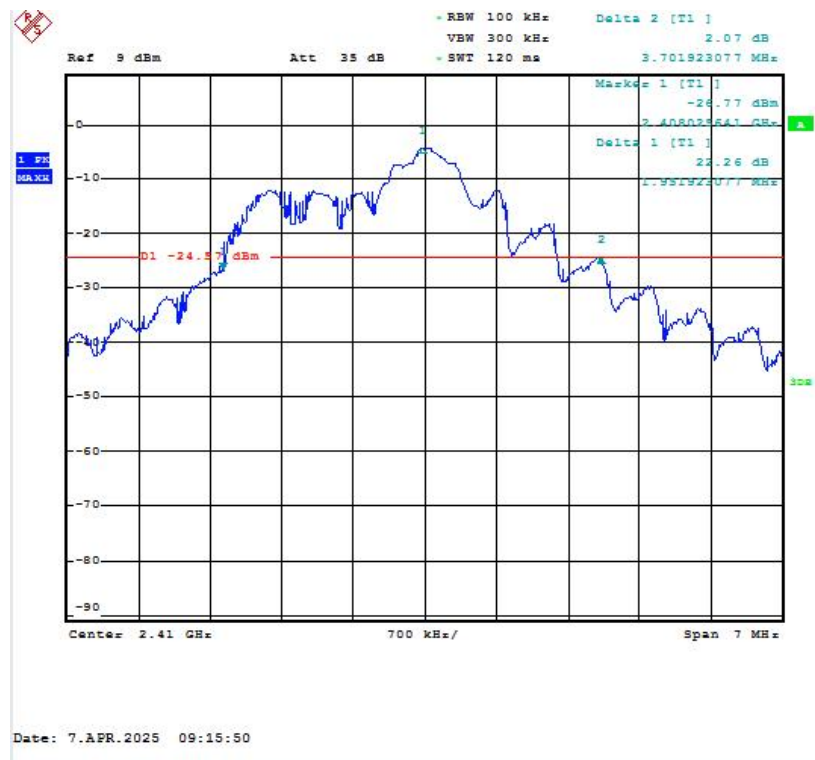
#### Measurement Data

| Test channel | 20dB bandwidth (MHz) | Results |
|--------------|----------------------|---------|
| Lowest       | 3.701                | Pass    |
| Middle       | 2.793                | Pass    |
| Highest      | 1.466                | Pass    |

TEST REPORT NUMBER: (8525)076-0053(D)

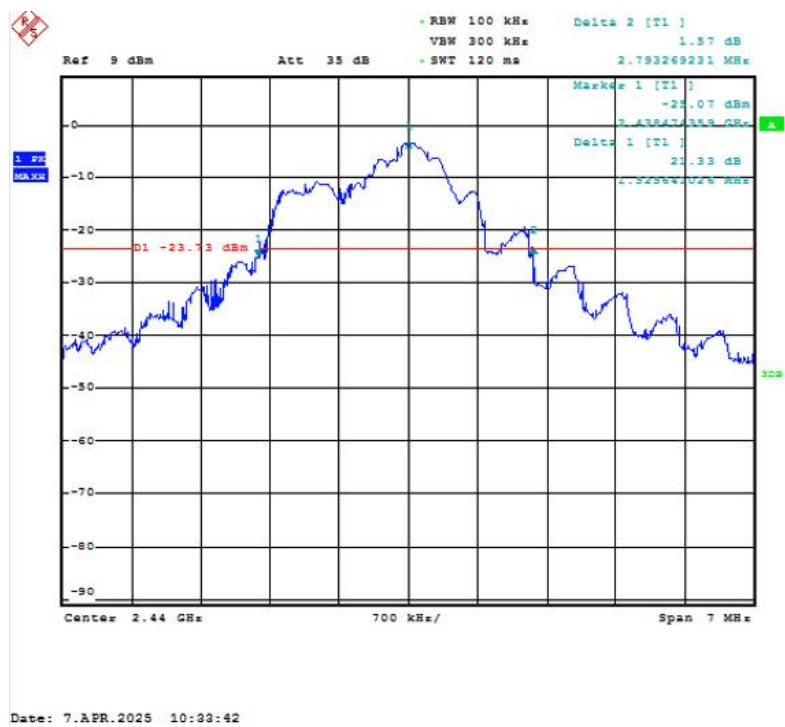
Test plot as follows:

|               |        |
|---------------|--------|
| Test channel: | Lowest |
|---------------|--------|

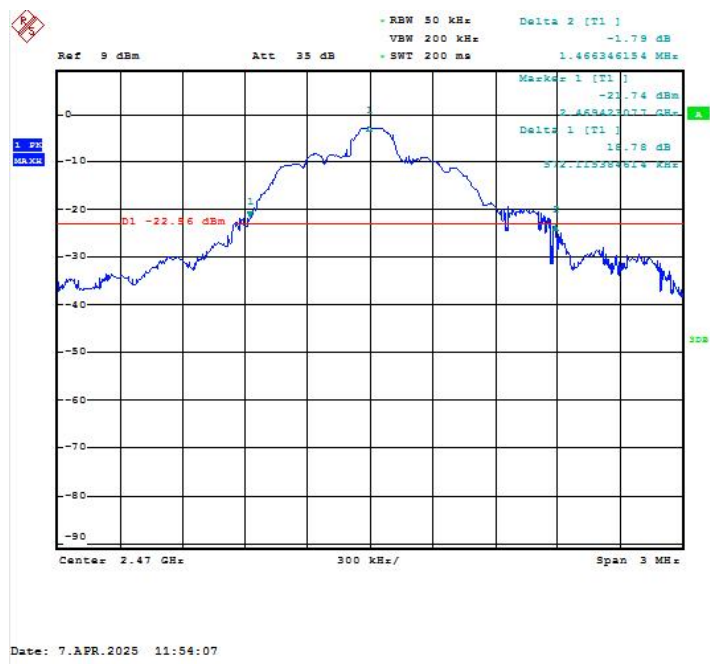


TEST REPORT NUMBER: (8525)076-0053(D)

Test channel: Middle

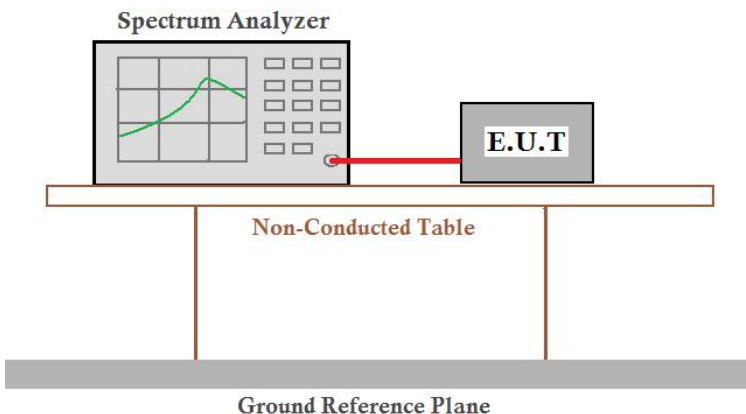


Test channel: Highest



## TEST REPORT NUMBER: (8525)076-0053(D)

### 4.4 99% Occupy Bandwidth

|                   |                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                |
|-------------------|----------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------------|
| Test Requirement: | RSS-Gen Issue 5:2018+A1:2019+A2:2021 Section 6.7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Test Method:      | RSS-Gen Issue 5:2018+A1:2019+A2:2021 Section 6.7                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                               |
| Test Setup:       |  <p>The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T. (Equipment Under Test) via a red cable. Both are placed on a Non-Conducted Table, which is supported by two vertical legs. Below the table is a Ground Reference Plane.</p>                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                        |
| Test Mode:        | Transmitting with GFSK at lowest, middle and highest channel.                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                  |
| Test Procedure:   | <p>The following conditions shall be observed for measuring the occupied bandwidth and x dB bandwidth:</p> <p>A: The transmitter shall be operated at its maximum carrier power measured under normal test conditions.</p> <p>B: The span of the spectrum analyzer shall be set large enough to capture all products of the modulation process, including the emission skirts, around the carrier frequency, but small enough to avoid having other emissions (e.g. on adjacent channels) within the span.</p> <p>C: The detector of the spectrum analyzer shall be set to "Sample". However, a peak, or peak hold, may be used in place of the sampling detector since this usually produces a wider bandwidth than the actual bandwidth (worst-case measurement). Use of a peak hold (or "Max Hold") may be necessary to determine the occupied / x dB bandwidth if the device is not transmitting continuously.</p> <p>D: The resolution bandwidth (RBW) shall be in the range of 1% to 5% of the actual occupied / x dB bandwidth and the video bandwidth (VBW) shall not be smaller than three times the RBW value. Video averaging is not permitted.</p> |
| Limit:            | N/A                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                            |
| Test Results:     | Pass                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                                           |

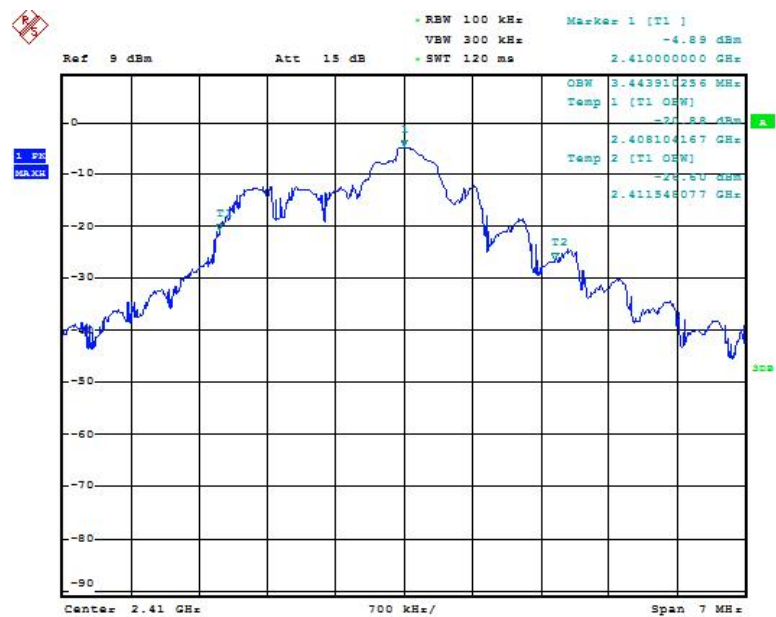
#### Measurement Data

| Test channel | 99% Occupy Bandwidth (MHz) | Results |
|--------------|----------------------------|---------|
| Lowest       | 3.443                      | Pass    |
| Middle       | 2.647                      | Pass    |
| Highest      | 1.182                      | Pass    |

TEST REPORT NUMBER: (8525)076-0053(D)

Test plot as follows:

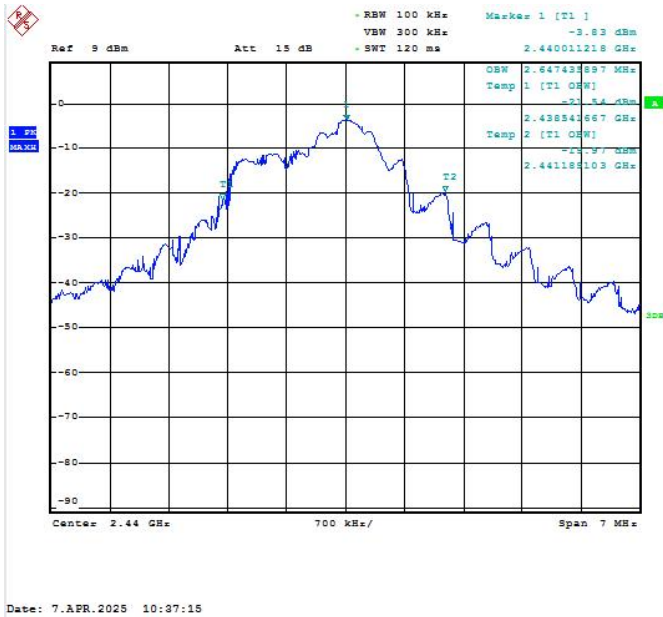
|               |        |
|---------------|--------|
| Test channel: | Lowest |
|---------------|--------|



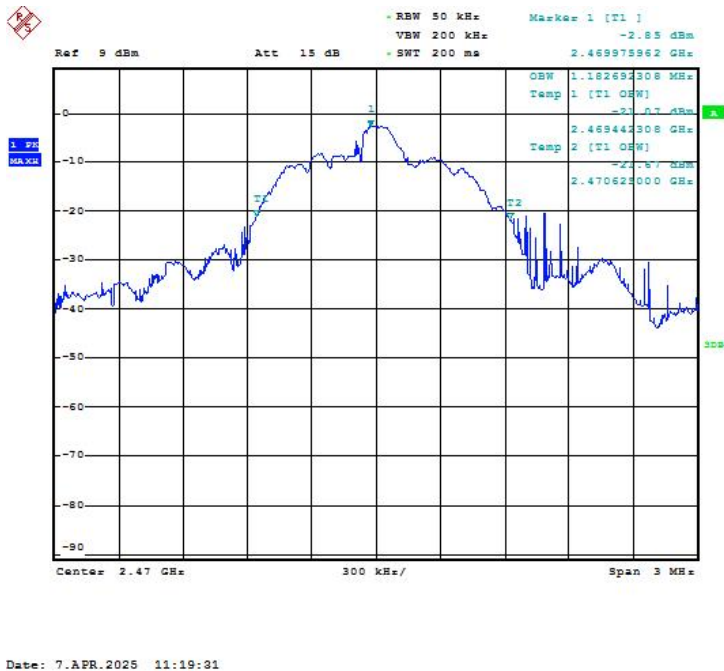
Date: 7.APR.2025 09:12:05

TEST REPORT NUMBER: (8525)076-0053(D)

Test channel: Middle



Test channel: Highest





**TEST REPORT NUMBER: (8525)076-0053(D)**

## **5 Photographs**

Please refer to the photos Appendix A

### **5.1 EUT Constructional Details**

Please refer to the photos Appendix B

\*\*\* END OF REPORT \*\*\*