

Test report No:

2650429R.702

## MIC Test Report

|                                             |                                                                                                                   |
|---------------------------------------------|-------------------------------------------------------------------------------------------------------------------|
| Product Name                                | LED Floor Lamp                                                                                                    |
| Trademark                                   | PHILIPS; hue                                                                                                      |
| Model and /or type reference                | 929003555501; 929004417401                                                                                        |
| Applicant's name / address                  | Signify Netherlands B.V.<br>High Tech Campus 48 5656 AE Eindhoven THE NETHERLANDS                                 |
| Test method requested, standard             | Article 2 paragraph 1 item (19)<br>ARIB STD-T66 V3.7 (2014-10)                                                    |
| Verdict Summary                             | IN COMPLIANCE                                                                                                     |
| Documented by (name / position & signature) | Jun Xu/ Project Engineer<br>   |
| Approved by (name / position & signature)   | Frank He/Technical Manager<br> |
| Date of issue                               | 2026-06-11                                                                                                        |
| Report template No                          | Template_STD-T66-RF-V1.0                                                                                          |

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## COMPETENCES AND GUARANTEES

DEKRA is a testing laboratory competent to carry out the tests described in this report.

In order to assure the traceability to other national and international laboratories, DEKRA has a calibration and maintenance program for its measurement equipment.

DEKRA guarantees the reliability of the data presented in this report, which is the result of the measurements and the tests performed to the item under test on the date and under the conditions stated in the report and it is based on the knowledge and technical facilities available at DEKRA at the time of performance of the test.

DEKRA is liable to the client for the maintenance of the confidentiality of all information related to the item under test and the results of the test.

The results presented in this Test Report apply only to the particular item under test established in this document.

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## GENERAL CONDITIONS

|                      |                                                                        |
|----------------------|------------------------------------------------------------------------|
| Test Location        | No. 99, Hongye Road, Suzhou Industrial Park Suzhou, 215006, P.R. China |
| Date(receive sample) | May. 30, 2022                                                          |
| Date (start test)    | Jun. 05, 2022                                                          |
| Date (finish test)   | Jun. 19, 2022                                                          |

1. This report is only referred to the item that has undergone the test.
2. This report does not constitute or imply on its own an approval of the product by the Certification Bodies or Competent Authorities.
3. This document is only valid if complete; no partial reproduction can be made without previous written permission of DEKRA.
4. This test report cannot be used partially or in full for publicity and/or promotional purposes without previous written permission of DEKRA.

## ENVIRONMENTAL CONDITIONS

The climatic conditions during the tests are within the limits specified by the manufacturer for the operation of the EUT and the test equipment. The climatic conditions during the tests were within the following limits:

|                       |               |
|-----------------------|---------------|
| Ambient temperature   | 15 °C - 35 °C |
| Relative Humidity air | 45% - 85%     |

If explicitly required in the basic standard or applied product / product family standard the climatic values are recorded and documented separately in this test report.

## POSSIBLE TEST CASE VERDICTS

|                                         |                 |
|-----------------------------------------|-----------------|
| Test case does not apply to test object | N/A             |
| Test object does meet requirement       | P (Pass) / PASS |
| Test object does not meet requirement   | F (Fail) / FAIL |
| Not measured                            | N/M             |

## ABBREVIATIONS

For the purposes of the present document, the following abbreviations apply:

|       |                               |
|-------|-------------------------------|
| EUT   | : Equipment Under Test        |
| QP    | : Quasi-Peak                  |
| CAV   | : CISPR Average               |
| AV    | : Average                     |
| CDN   | : Coupling Decoupling Network |
| SAC   | : Semi-Anechoic Chamber       |
| OATS  | : Open Area Test Site         |
| BW    | : Bandwidth                   |
| AM    | : Amplitude Modulation        |
| PM    | : Pulse Modulation            |
| HCP   | : Horizontal Coupling Plane   |
| VCP   | : Vertical Coupling Plane     |
| $U_N$ | : Nominal voltage             |
| Tx    | : Transmitter                 |
| Rx    | : Receiver                    |
| N/A   | : Not Applicable              |
| N/M   | : Not Measured                |

## DOCUMENT HISTORY

| Report No.   | Version | Description              | Issued Date |
|--------------|---------|--------------------------|-------------|
| 2650429R.702 | V1.0    | Initial issue of report. | 2026-06-09  |
|              |         |                          |             |
|              |         |                          |             |
|              |         |                          |             |
|              |         |                          |             |
|              |         |                          |             |
|              |         |                          |             |

## REMARKS AND COMMENTS

1. The equipment under test (EUT) does meet the essential requirements of the stated standard(s)/test(s).
2. These test results on a sample of the device are for the purpose of demonstrating Compliance with with ARIB STD-T66.
3. The measurement result is considered in conformance with the requirement if it is within the prescribed limit, It is not necessary to account the uncertainty associated with the measurement result.
4. The test results presented in this report relate only to the object tested.
5. The test report shall not be reproduced without the written approval of DEKRA Testing and Certification (Suzhou) Co., Ltd.
6. This report will not be used for social proof function in China market.
7. DEKRA declines any responsibility with the following test data provided by customer that may affect the validity of result:
  - Chapter 1.1 General Description of the Item(s);
  - Chapter 1.2 Antenna Information;
  - Chapter 1.3 Channel List.

## USED EQUIPMENT

Output Power and Output Power Tolerance / Spread Bandwidth and Spread Factor / Occupied Bandwidth / Frequency Tolerance / Transmitter Spurious Emissions / Receiver Spurious Emissions / TR8

| Instrument                 | Manufacturer | Model No.    | Serial No. | Cal. Date  | Next Cal. Date | Calibration Body | Calibration Method |
|----------------------------|--------------|--------------|------------|------------|----------------|------------------|--------------------|
| 4TX MIMO Power Sensor      | Keysight     | X8750A       | MY59400102 | 2022.03.16 | 2023.03.15     | CEPREI           | c                  |
| DC Power Supply            | IDRC         | CD-035-020PR | 977272     | N/A        | N/A            | CEPREI           | c                  |
| MXA Signal Analyzer        | Keysight     | N9020A       | MY56060147 | 2021.07.11 | 2022.07.10     | CEPREI           | c                  |
| Spectrum Analyzer          | Agilent      | N9010A       | MY48030494 | 2021.07.11 | 2022.07.10     | CEPREI           | c                  |
| Signal Analyzer            | R&S          | FSV          | 104212     | 2021.11.18 | 2022.11.17     | CEPREI           | c                  |
| Temperature/Humidity Meter | RTS          | RTS-8S       | RF08       | 2021.07.09 | 2022.07.08     | CEPREI           | c                  |

### Calibration Method:

(a) Calibration conducted by the National Institute of Information and Communications Technology (NICT) in Japan (hereinafter referred to as "NICT") or a designated calibration agency under Article 102-18 paragraph (1) in JRL.

(b) Correction conducted pursuant to the provisions of Article 135 or Article 144 of the Measurement Act (Act No. 51 of 1992).

(c) Calibration conducted in countries except Japan, which shall be equivalent to the calibration conducted by the NICT or a designated calibration agency under Article 102-18 paragraph (1).

(d) Calibration, etc. conducted by using measuring instruments and other equipment listed in the right column of appended table No. 3, which shall have been given any type of calibration, etc. listed above from (a) to (c).

the calibration corresponds to C described above.

From TBL Article 87, paragraph 1, item 2

Notice: Calibration duration for above equipments is 1 year.

CEPREI : China ceprei laboratory calibration & testing centre.

DEKRA : DEKRA Testing and Certification (Suzhou) Co., Ltd.

GRGTEST: Grg Metrology&Test (WuXi) Co.,Ltd.

## UNCERTAINTY

Uncertainties have been calculated according to the DEKRA internal document. The reported expanded uncertainties are based on a standard uncertainty multiplied by a coverage factor of  $k=2$ , providing a level of confidence of approximately 95%. The Uncertainties is comply with standard required as below.

| Test item                               | Uncertainty         |
|-----------------------------------------|---------------------|
| Output Power and Output Power Tolerance | $\pm 1.27\text{dB}$ |
| Spread Bandwidth and Spread Factor      | $\pm 150\text{Hz}$  |
| Occupied Bandwidth                      | $\pm 1.27\text{dB}$ |
| Frequency Tolerance                     | $\pm 150\text{Hz}$  |
| Transmitter Spurious Emissions          | $\pm 1.27\text{dB}$ |
| Receiver Spurious Emissions             | $\pm 1.27\text{dB}$ |
| Carrier Sensing                         | $\pm 1.27\text{dB}$ |

## 1 GENERAL INFORMATION

### 1.1 General Description of the Item(s)

|                                                                                                                    |                                                                                           |
|--------------------------------------------------------------------------------------------------------------------|-------------------------------------------------------------------------------------------|
| Product Name .....                                                                                                 | LED Floor Lamp                                                                            |
| Model No. ....                                                                                                     | 929003555501; 929004417401                                                                |
| Manufacturer .....                                                                                                 | Signify Netherlands B.V.                                                                  |
| Manufacturer Address.....                                                                                          | High Tech Campus 48 5656 AE Eindhoven THE NETHERLANDS                                     |
| Model differences .....                                                                                            | The applicant declares that everything is identical except for the color of the exterior. |
| Note: This report is based on test report 2250861R-RF-JP-P01V03, with the addition of model number "929004417401". |                                                                                           |

|                              |                 |
|------------------------------|-----------------|
| Wireless specification.....  | Zigbee          |
| Operating frequency range(s) | 2400~2483.5 MHz |
| Type of Modulation.....      | O-QPSK          |
| Data Rate .....              | 250kbps         |
| Number of channel .....      | 16              |
| Declared power .....         | 5.5mW/MHz       |

|                          |                                     |                                             |
|--------------------------|-------------------------------------|---------------------------------------------|
| Rated power supply ..... | Voltage and Frequency               |                                             |
|                          | <input type="checkbox"/>            | AC: 220 – 240 V, 50/60 Hz                   |
|                          | <input checked="" type="checkbox"/> | AC: 100-120V, 50/60Hz                       |
|                          | <input type="checkbox"/>            | Battery: 3.7-4.2V, Charging voltage is 5.0V |
|                          | <input type="checkbox"/>            | DC:3Vdc                                     |
|                          | <input type="checkbox"/>            | PoE: 48V                                    |

## 1.2 Antenna Information

|                                   |                                     |              |                                         |
|-----------------------------------|-------------------------------------|--------------|-----------------------------------------|
| Antenna model / type number ..... | N/A                                 |              |                                         |
| Antenna serial number .....       | N/A                                 |              |                                         |
| Antenna Delivery .....            | <input checked="" type="checkbox"/> | 1TX + 1RX    |                                         |
|                                   | <input type="checkbox"/>            | 2TX + 2RX    |                                         |
|                                   | <input type="checkbox"/>            | Others:..... |                                         |
| Antenna technology .....          | <input checked="" type="checkbox"/> | SISO         |                                         |
|                                   | <input type="checkbox"/>            | MIMO         | <input type="checkbox"/> CDD            |
|                                   |                                     |              | <input type="checkbox"/> Beam-forming   |
| Antenna Type .....                | <input type="checkbox"/>            | External     | <input type="checkbox"/> Dipole         |
|                                   |                                     |              | <input type="checkbox"/> Sectorized     |
|                                   | <input checked="" type="checkbox"/> | Internal     | <input type="checkbox"/> PIFA           |
|                                   |                                     |              | <input checked="" type="checkbox"/> PCB |
|                                   |                                     |              | <input type="checkbox"/> Dipole         |
|                                   |                                     |              | <input type="checkbox"/> Others.....    |
| Antenna Gain .....                | 4.7 dBi                             |              |                                         |

### 1.3 Channel List

| Working Frequency of Each Channel: For Zigbee |           |         |           |         |           |         |           |
|-----------------------------------------------|-----------|---------|-----------|---------|-----------|---------|-----------|
| Channel                                       | Frequency | Channel | Frequency | Channel | Frequency | Channel | Frequency |
| 11                                            | 2405 MHz  | 12      | 2410 MHz  | 13      | 2415 MHz  | 14      | 2420 MHz  |
| 15                                            | 2425 MHz  | 16      | 2430 MHz  | 17      | 2435 MHz  | 18      | 2440 MHz  |
| 19                                            | 2445 MHz  | 20      | 2450 MHz  | 21      | 2455 MHz  | 22      | 2460 MHz  |
| 23                                            | 2465 MHz  | 24      | 2470 MHz  | 25      | 2475 MHz  | 26      | 2480 MHz  |

Note: The general description of the Item(s), antenna information, model list and channel list in clause 1 are provided and confirmed by the client.

## 2 DESCRIPTION OF TEST SETUP

### 2.1 Operating mode(s) used for tests

During the tests the following operating mode(s) has(have) been used.

|           |                           |
|-----------|---------------------------|
| Test Mode | Mode1: Transmit by Zigbee |
|           | Mode2: Receive by Zigbee  |

### 2.2 Accessories Information

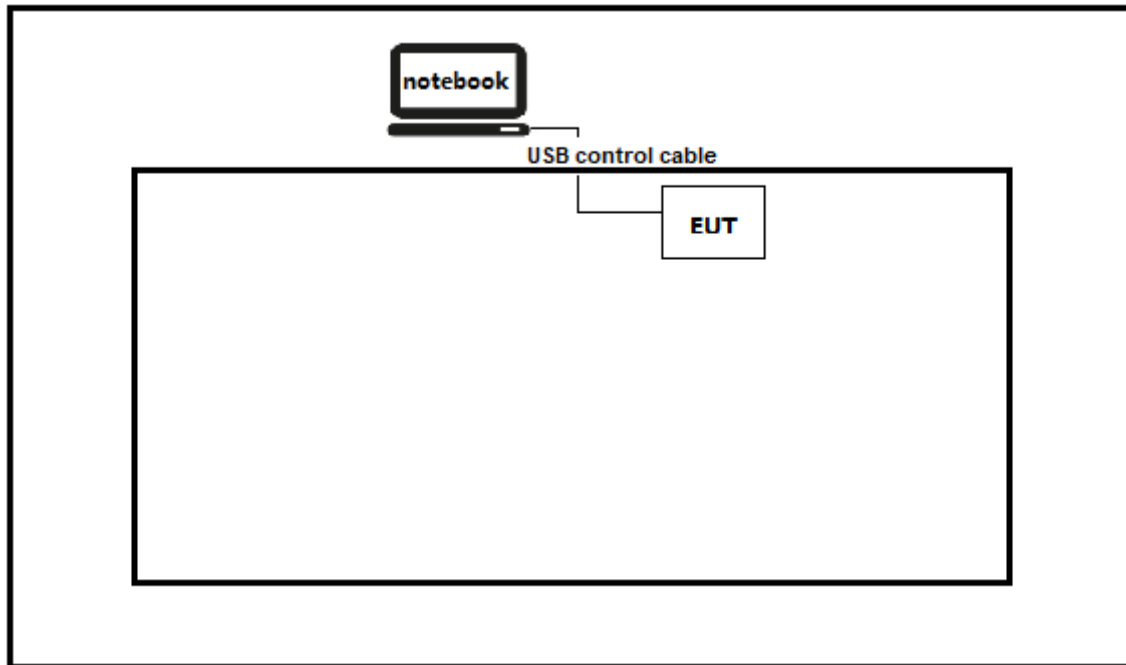
| Accessories Information | Brand/model name | Cable                       |                                     |                          |
|-------------------------|------------------|-----------------------------|-------------------------------------|--------------------------|
|                         |                  | Length used during test [m] | Attached during test                | Shielded                 |
| USB-serial Cable        | N/A              | 1m                          | <input checked="" type="checkbox"/> | <input type="checkbox"/> |

### 2.3 Auxiliary equipment / Test software for the EUT

| Auxiliary equipment | Type / Version | Manufacturer | Supplied by |
|---------------------|----------------|--------------|-------------|
| N/A                 | N/A            | N/A          | N/A         |
| software            | Type / Version | Manufacturer | Supplied by |
| N/A                 | N/A            | N/A          | N/A         |

## 2.4 Test Configuration / Block diagram used for tests

Test setup Diagram- Conducted test



## 2.5 Testing process

|   |                                           |
|---|-------------------------------------------|
| 1 | Setup the EUT as shown in Section 2.4     |
| 2 | Execute the test program.                 |
| 3 | Configure the test mode and test channel. |
| 4 | Verify that the EUT works properly.       |

## 2.6 Test Voltage

### Power supply voltage fluctuation test

| Voltage Fluctuation Test | Normal Voltage | High Voltage Normal Voltage +10% of | Low Voltage Normal Voltage -10% of |
|--------------------------|----------------|-------------------------------------|------------------------------------|
| Input To EUT             | DC 120V        | DC 132V                             | DC 108V                            |
| Test Result              | 3.30V          | 3.30V                               | 3.30V                              |
| Voltage Variation        | Reference      | 0%                                  | 0%                                 |

**Note:**

Changing the supply voltage of the EUT will not change the voltage of the RF module.

During the input supply voltage to the EUT from the external power source is varied by +/- 10%, if output voltage had been confirmed that the fluctuation of power supply to the RF circuit of EUT (excluding power source) is equal to or less than +/-1%. Exempt extremely high and low supply voltage condition test, EUT only operated in normal voltage to test all regulations.

### 3 VERDICT SUMMARY SECTION

This chapter presents an overview of standards and results. Refer to the next chapters for details of measured test results and applied test levels.

#### 3.1 Standards

| Standard     | Year | Description                                                                |
|--------------|------|----------------------------------------------------------------------------|
| ARIB STD-T66 | 2014 | SECOND GENERATION LOW POWER DATA COMMUNICATION SYSTEM/ WIRELESS LAN SYSTEM |
| --           | --   | --                                                                         |
| --           | --   | --                                                                         |
| --           | --   | --                                                                         |

#### 3.2 Deviation(s) from the Standard(s) / Test Specification(s)

No deviation

### 3.3 Overview of results

| Test Item – ARIB STD-T66                |                      |                |         |        |
|-----------------------------------------|----------------------|----------------|---------|--------|
| Performed Test Item                     | Normative References | Test Performed | Verdict | Remark |
| Output Power and Output Power Tolerance | ARIB STD-T66         | Yes            | PASS    | ---    |
| Spread Bandwidth and Spread Factor      | ARIB STD-T66         | N/A            | N/A     | ---    |
| Occupied Bandwidth                      | ARIB STD-T66         | Yes            | PASS    |        |
| Frequency Tolerance                     | ARIB STD-T66         | Yes            | PASS    |        |
| Transmitter Spurious Emissions          | ARIB STD-T66         | Yes            | PASS    |        |
| Receiver Spurious Emissions             | ARIB STD-T66         | Yes            | PASS    | ---    |

## 4 TEST RESULTS

### 4.1 Output Power and Output Power Tolerance

**VERDICT: PASS**

#### 4.1.1 Limit

**Standard**

ARIB STD-T66

**Output Power**

- |                                     |                                                                       |
|-------------------------------------|-----------------------------------------------------------------------|
| <input type="checkbox"/>            | Channel Power of DSSS, the limit should $\leq 10\text{mW/MHz}$        |
| <input type="checkbox"/>            | Channel Power of FHSS, the limit should $\leq 3\text{mW/MHz}$         |
| <input type="checkbox"/>            | Channel Power of OFDM                                                 |
| <input type="checkbox"/>            | Nominal Bandwidth = 20MHz, the limit should $\leq 10\text{mW/MHz}$    |
| <input type="checkbox"/>            | Nominal Bandwidth = 40MHz, the limit should $\leq 5\text{mW/MHz}$     |
| <input checked="" type="checkbox"/> | Channel Power of other situation, the limit should $\leq 10\text{mW}$ |

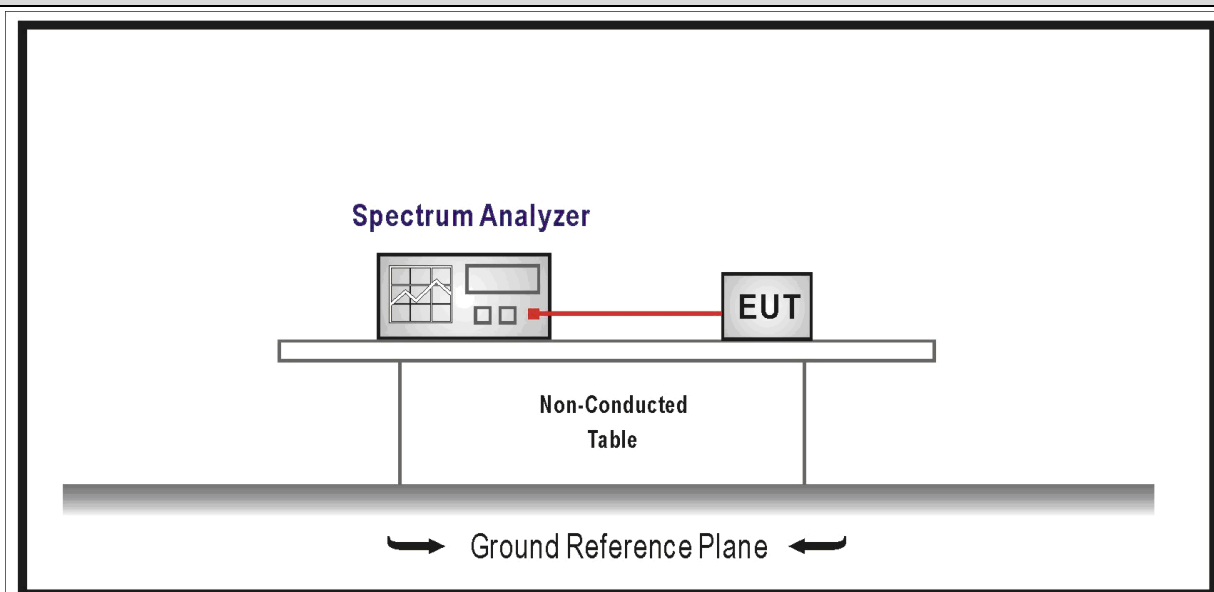
**E.I.R.P.**

- |                                     |                               |
|-------------------------------------|-------------------------------|
| <input checked="" type="checkbox"/> | Undirected: 12.14dBm or less  |
| <input type="checkbox"/>            | Directional: 22.14dBm or less |

**Output Power Tolerance**

- |                                     |                                      |
|-------------------------------------|--------------------------------------|
| <input checked="" type="checkbox"/> | Output Power Tolerance: +20% to -80% |
|-------------------------------------|--------------------------------------|

#### 4.1.2 Test Set up



#### 4.1.3 Test Procedure

##### References Rule

|                                     |              |
|-------------------------------------|--------------|
| <input checked="" type="checkbox"/> | ARIB STD-T66 |
|-------------------------------------|--------------|

##### Step 1

A spectrum analyzer or similar device shall be used to observe a sample of the modulated transmitter's radio frequency power output.

1. A sample detector function must be used.
2. A measurement instrument with an integrated 1MHz power bandwidth function may be used to automate the test process.
3. Connect the power meter to the IF output of the spectrum analyzer.
4. Set zero span of spectrum analyzer and 'Maximum Hold' than test result will show in power.

#### 4.1.4 Test Data

| Mode   | Frequency<br>(MHz) | Conducted Output<br>Power<br>(dBm) | Conducted Output<br>Power Limit<br>(dBm/MHz) | EIRP<br>(dBm) | EIRP Limit<br>(dBm/MHz) |
|--------|--------------------|------------------------------------|----------------------------------------------|---------------|-------------------------|
| Mode 1 | 2405               | 7.29                               | 10                                           | 11.99         | 12.14                   |
| Mode 1 | 2440               | 7.19                               | 10                                           | 11.89         | 12.14                   |
| Mode 1 | 2480               | 7.18                               | 10                                           | 11.88         | 12.14                   |

EIRP = Conducted Output Power + Antenna Gain

| Mode   | Frequency<br>(MHz) | Declared<br>Output Power<br>(mW) | Output Power<br>(mW) | Tolerance<br>(%) | Limit        |
|--------|--------------------|----------------------------------|----------------------|------------------|--------------|
| Mode 1 | 2405               | 5.5                              | 5.36                 | -2.58            | +20% to -80% |
| Mode 1 | 2440               | 5.5                              | 5.24                 | -4.80            | +20% to -80% |
| Mode 1 | 2480               | 5.5                              | 5.22                 | -5.02            | +20% to -80% |

Note: Deviation = (Output Power - Declared Output Power) / Declared Output Power \* 100%

## 4.2 Spread Bandwidth and Spread Factor

**VERDICT:** N/A

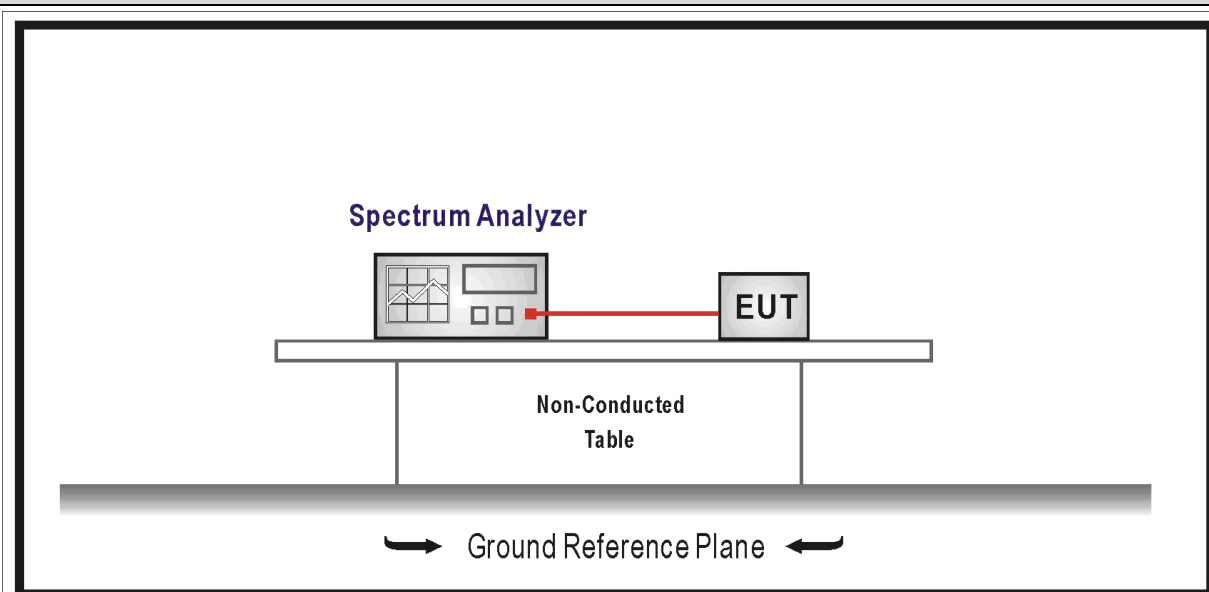
### 4.2.1 Limit

**Standard**

ARIB STD-T66

Spread Bandwidth  $\geq 500$  kHzSpread Factor  $\geq 5$  for 2400 – 2483.5 MHz,  $\geq 10$  for 2471 – 2497 MHz

### 4.2.2 Test Setup



### 4.2.3 Test Procedure

**References Rule**
☒ ARIB STD-T66

**Step 1**

A spectrum analyzer or similar device shall be used to observe a sample of the modulated transmitter's radio frequency power output.

1. A positive peak detector function must be used.
2. A measurement instrument with an integrated 90% power bandwidth function may be used to automate the test process
3. AThe measurement instrument bandwidth and span must be set sufficiently with, and, the scan time set sufficiently slow, to ensure all major modulation products are captured. Note that the measurement bandwidth should also be set sufficiently narrow to avoid adding significant error to the test result
4. 'Maximum Hold' mode may be used to accumulate the measurement result over several scans provided the emission is repetitive in nature.

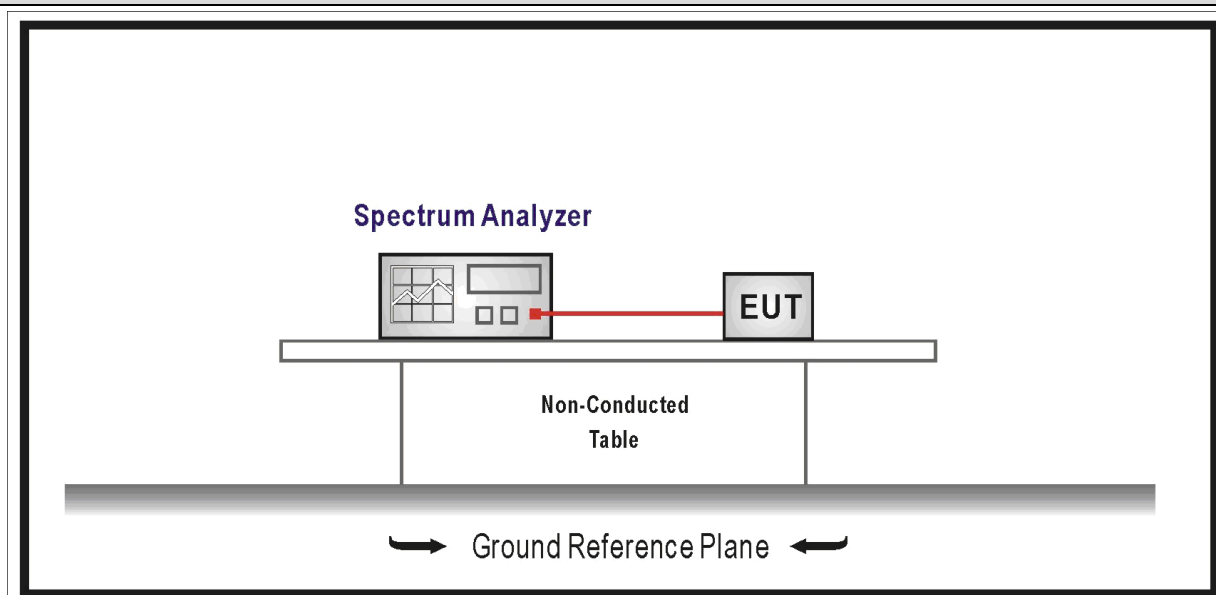
#### 4.2.4 Test Data

**N/A:** This test item is applicable to FHSS device and other DSSS spread spectrum device.

**4.3 Occupied Bandwidth****VERDICT: PASS****4.3.1 Limit****Standard**

ARIB STD-T66

- |                                     |                                                                  |
|-------------------------------------|------------------------------------------------------------------|
| <input type="checkbox"/>            | Channel Power of DSSS, the limit should $\leq 26$ MHz            |
| <input type="checkbox"/>            | Channel Power of FHSS, the limit should $\leq 83.5$ MHz          |
| <input type="checkbox"/>            | Channel Power of OFDM                                            |
| <input type="checkbox"/>            | Nominal Bandwidth=20MHz, the limit should $\leq 26$ MHz          |
| <input type="checkbox"/>            | Nominal Bandwidth=40MHz, the limit should $\leq 38$ MHz          |
| <input checked="" type="checkbox"/> | Channel Power of other situation, the limit should $\leq 26$ MHz |

**4.3.2 Test Setup**

### 4.3.3 Test Procedure

#### References Rule

|                                     |              |
|-------------------------------------|--------------|
| <input checked="" type="checkbox"/> | ARIB STD-T66 |
|-------------------------------------|--------------|

#### Step 1

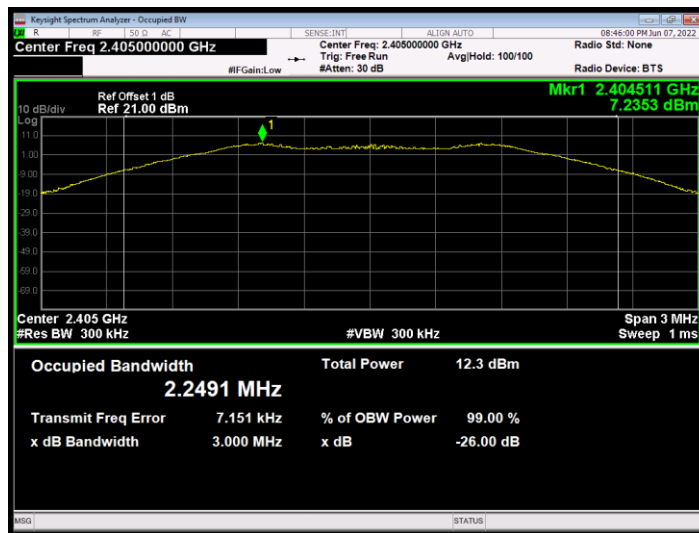
A spectrum analyzer or similar device shall be used to observe a sample of the modulated transmitter's radio frequency power output.

1. A positive peak detector function must be used.
2. A measurement instrument with an integrated 99% power bandwidth function may be used to automate the test process.
3. The measurement instrument bandwidth and span must be set sufficiently with, and, the scan time set sufficiently slow, to ensure all major modulation products are captured. Note that the measurement bandwidth should also be set sufficiently narrow to avoid adding significant error to the test result.
4. 'Maximum Hold' mode may be used to accumulate the measurement result over several scans provided the emission is repetitive in nature.

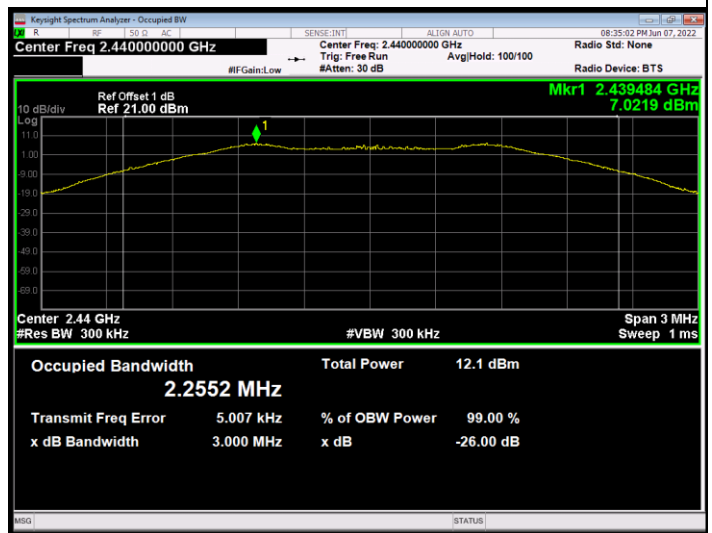
#### 4.3.4 Test Data

| Mode   | Channel No. | Frequency (MHz) | 99% Bandwidth (MHz) | Limit (MHz) |
|--------|-------------|-----------------|---------------------|-------------|
| Mode 1 | 00          | 2405            | 2.249               | $\leq 26$   |
| Mode 1 | 18          | 2440            | 2.255               | $\leq 26$   |
| Mode 1 | 26          | 2480            | 2.261               | $\leq 26$   |

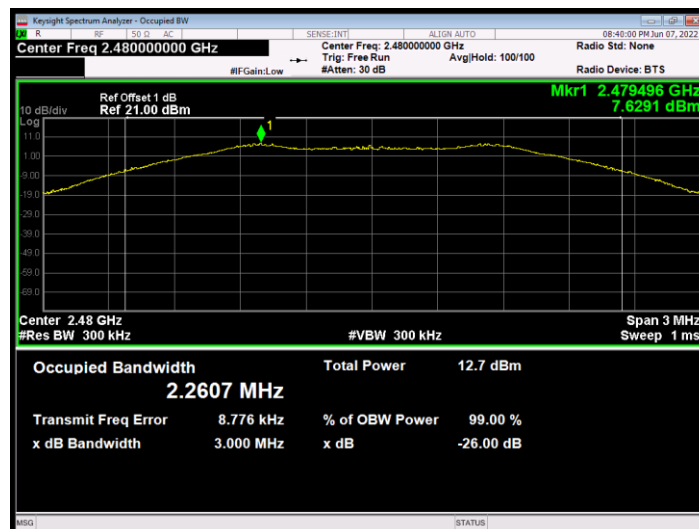
Mode 1 2405MHz



Mode 1 2440MHz



Mode 1 2480MHz



#### 4.4 Frequency Tolerance

VERDICT: PASS

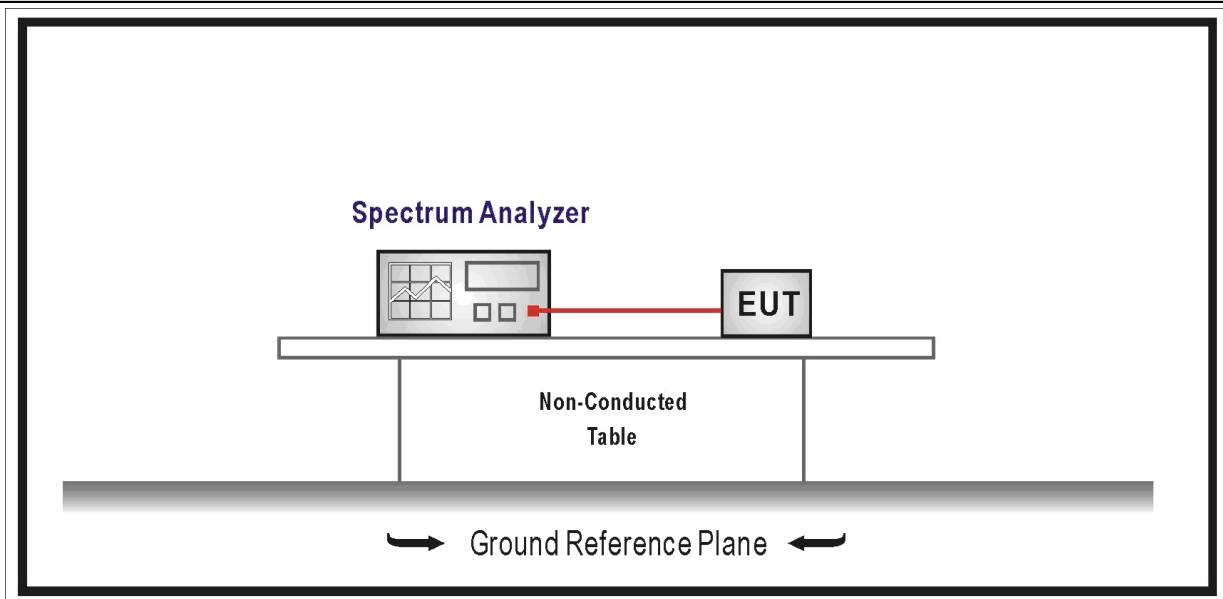
##### 4.4.1 Limit

Standard

ARIB STD-T66

$\leq \pm 50$  ppm

##### 4.4.2 Test Setup



#### 4.4.3 Test Procedure

##### References Rule

|                                     |              |
|-------------------------------------|--------------|
| <input checked="" type="checkbox"/> | ARIB STD-T66 |
|-------------------------------------|--------------|

##### Step 1

A spectrum analyzer or similar device shall be used to observe a sample of the modulated transmitter's radio frequency power output.

1. A positive peak detector function must be used.
2. The measurement instrument bandwidth and span must be set sufficiently with, and, the scan time set sufficiently slow, to ensure all major modulation products are captured. Note that the measurement bandwidth should also be set sufficiently narrow to avoid adding significant error to the test result.
3. 'Maximum Hold' mode may be used to accumulate the measurement result over several scans provided the emission is repetitive in nature.

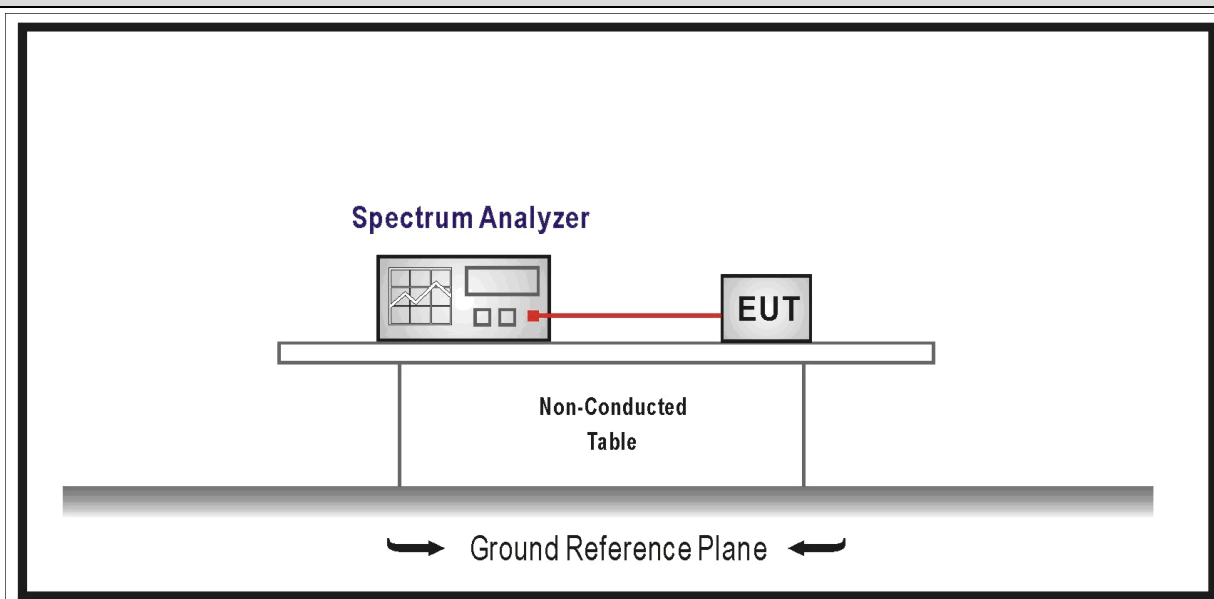
#### 4.4.4 Test Data

| Channel No. | Frequency<br>(MHz) | Reading Value<br>(MHz) | Tolerance<br>(ppm) | Limit<br>(ppm) |
|-------------|--------------------|------------------------|--------------------|----------------|
| 00          | 2405               | 2405.006               | 2.49               | $\cong \pm 50$ |
| 18          | 2440               | 2440.005               | 2.05               | $\cong \pm 50$ |
| 26          | 2480               | 2480.007               | 2.82               | $\cong \pm 50$ |

**4.5 Transmitter Spurious Emission****VERDICT: PASS****4.5.1 Limit****Standard**

ARIB STD-T66

|                                     |                                                             |
|-------------------------------------|-------------------------------------------------------------|
| <input checked="" type="checkbox"/> | Frequency between 10 – 2387 MHz, $\leq 2.5\mu\text{W}$      |
| <input checked="" type="checkbox"/> | Frequency between 2387 – 2400 MHz, $\leq 25\mu\text{W}$     |
| <input checked="" type="checkbox"/> | Frequency between 2483.5 – 2496.5 MHz, $\leq 25\mu\text{W}$ |
| <input checked="" type="checkbox"/> | Frequency between 2496.5 – 12750, $\leq 2.5\mu\text{W}$     |

**4.5.2 Test Setup**

#### 4.5.3 Test Procedure

##### References Rule

|                                     |              |
|-------------------------------------|--------------|
| <input checked="" type="checkbox"/> | ARIB STD-T66 |
|-------------------------------------|--------------|

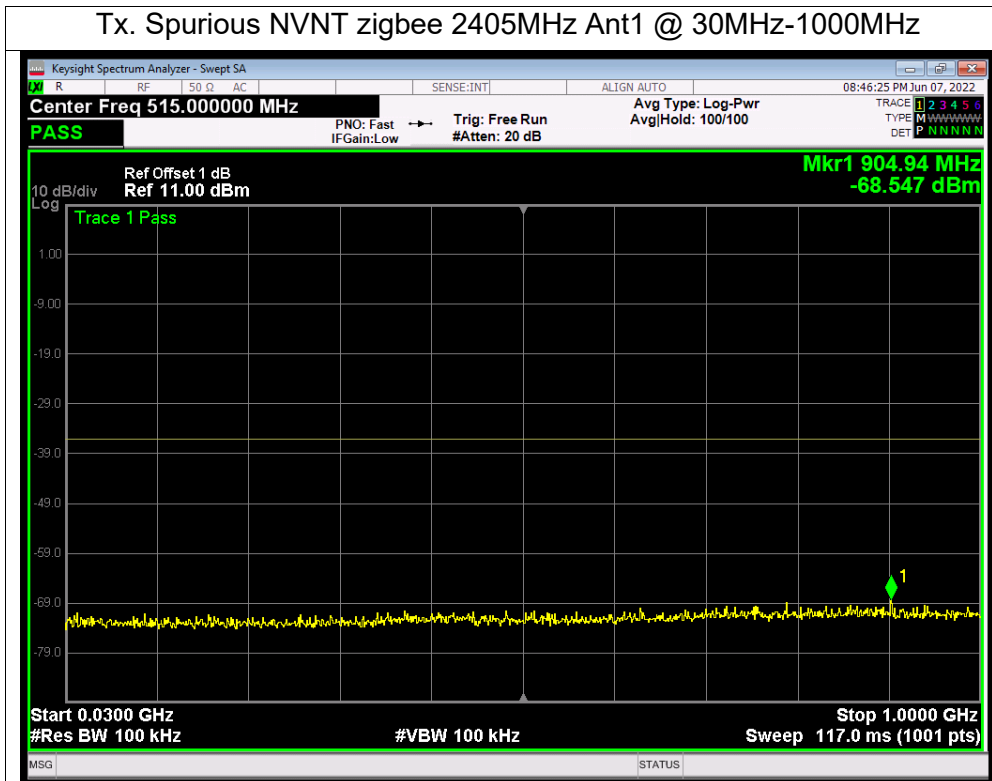
##### Step 1

A spectrum analyzer or similar device shall be used to observe a sample of the modulated transmitter's radio frequency power output.

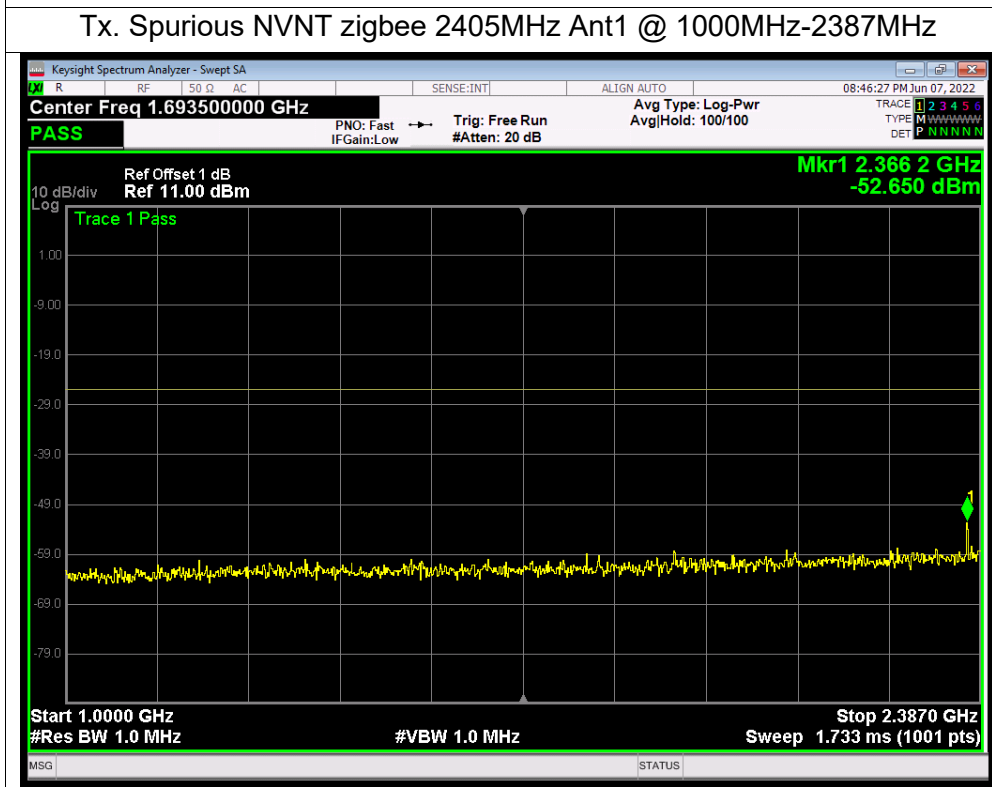
1. A positive peak detector function must be used.
2. A measurement instrument with an integrated 99% power bandwidth function may be used to automate the test process.
3. The measurement instrument bandwidth and span must be set sufficiently with, and, the scan time set sufficiently slow, to ensure all major modulation products are captured. Note that the measurement bandwidth should also be set sufficiently narrow to avoid adding significant error to the test result.
4. 'Maximum Hold' mode may be used to accumulate the measurement result over several scans provided the emission is repetitive in nature.

#### 4.5.4 Test Data

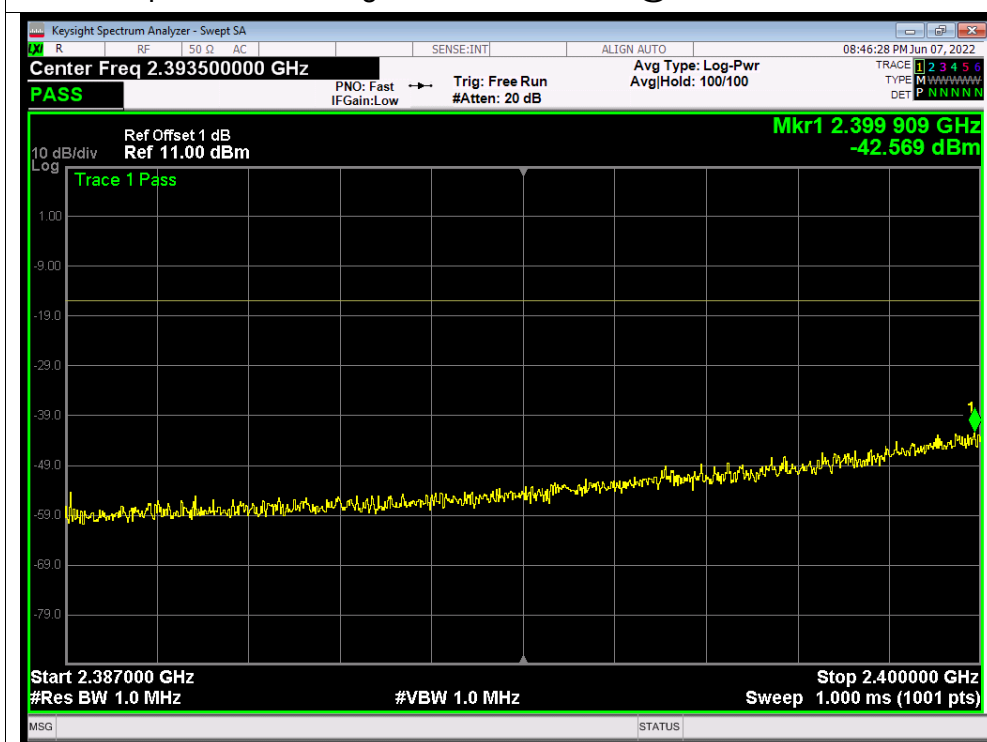
##### Tx. Spurious NVNT zigbee 2405MHz Ant1 @ 30MHz-1000MHz



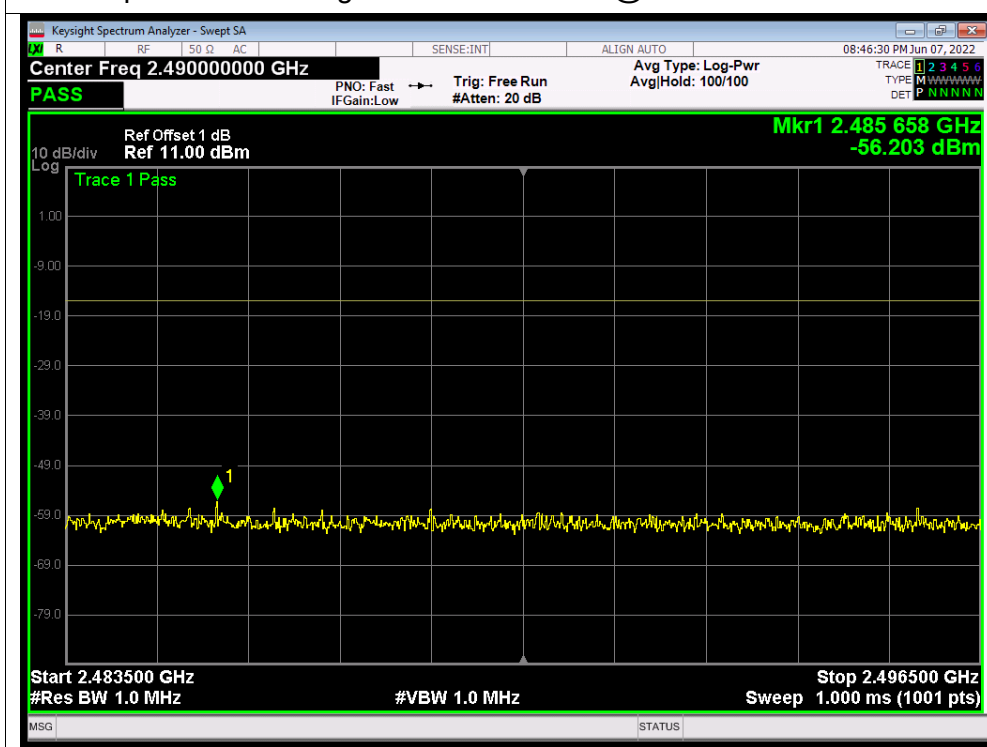
##### Tx. Spurious NVNT zigbee 2405MHz Ant1 @ 1000MHz-2387MHz



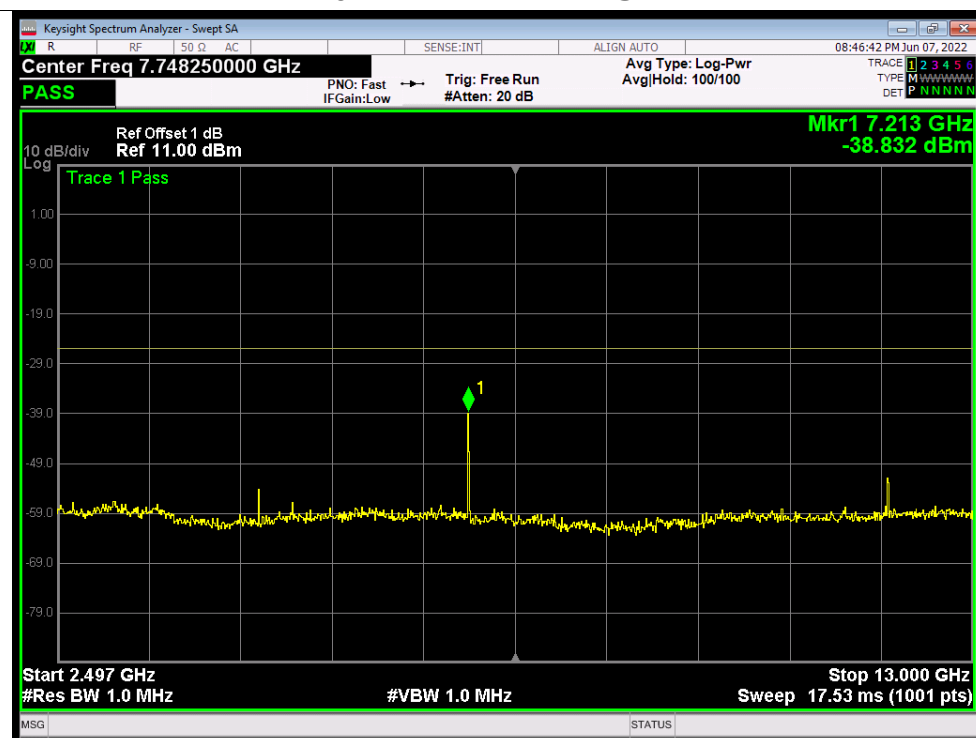
**Tx. Spurious NVNT zigbee 2405MHz Ant1 @ 2387MHz-2400MHz**



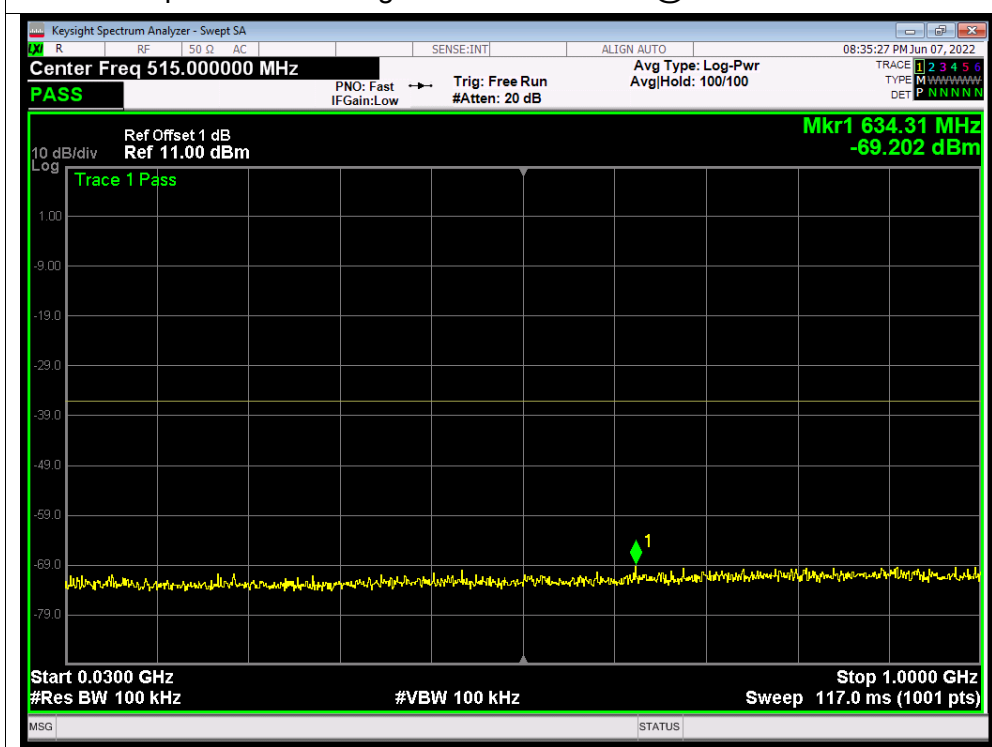
**Tx. Spurious NVNT zigbee 2405MHz Ant1 @ 2483.5MHz-2496.5MHz**



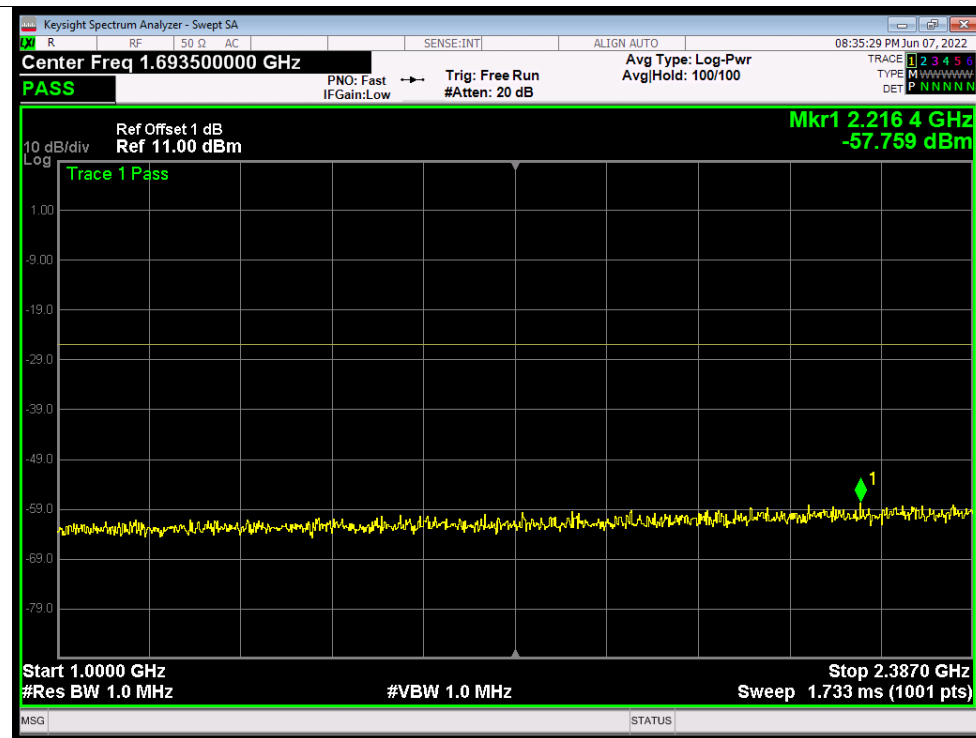
## Tx. Spurious NVNT zigbee 2405MHz Ant1 @ 2496.5MHz-13000MHz



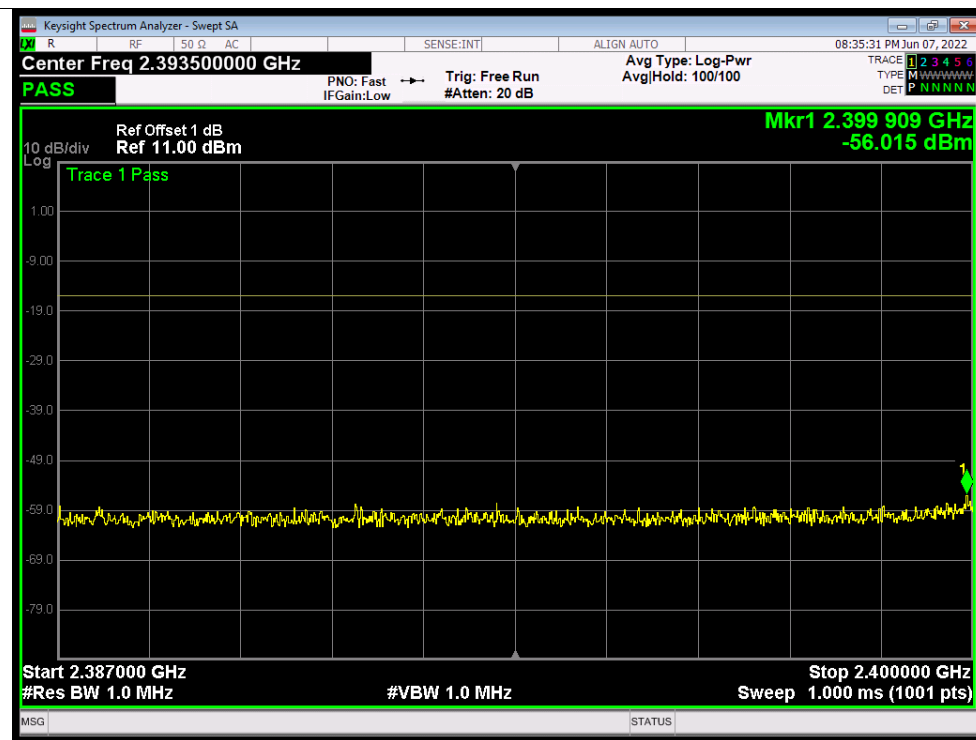
## Tx. Spurious NVNT zigbee 2440MHz Ant1 @ 30MHz-1000MHz



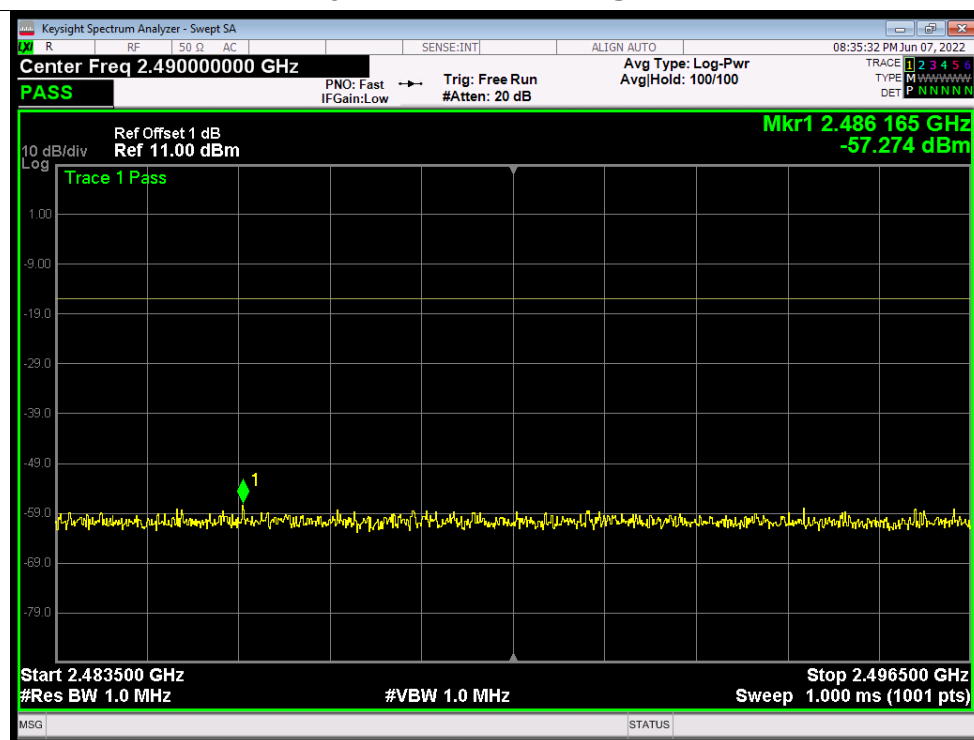
**Tx. Spurious NVNT zigbee 2440MHz Ant1 @ 1000MHz-2387MHz**



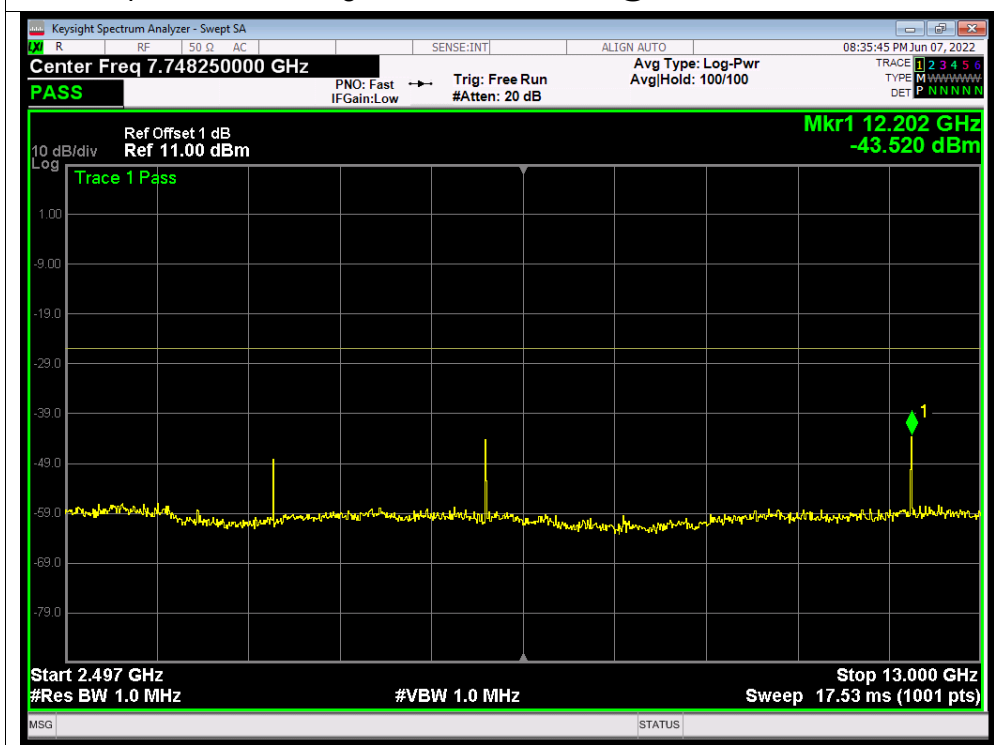
**Tx. Spurious NVNT zigbee 2440MHz Ant1 @ 2387MHz-2400MHz**



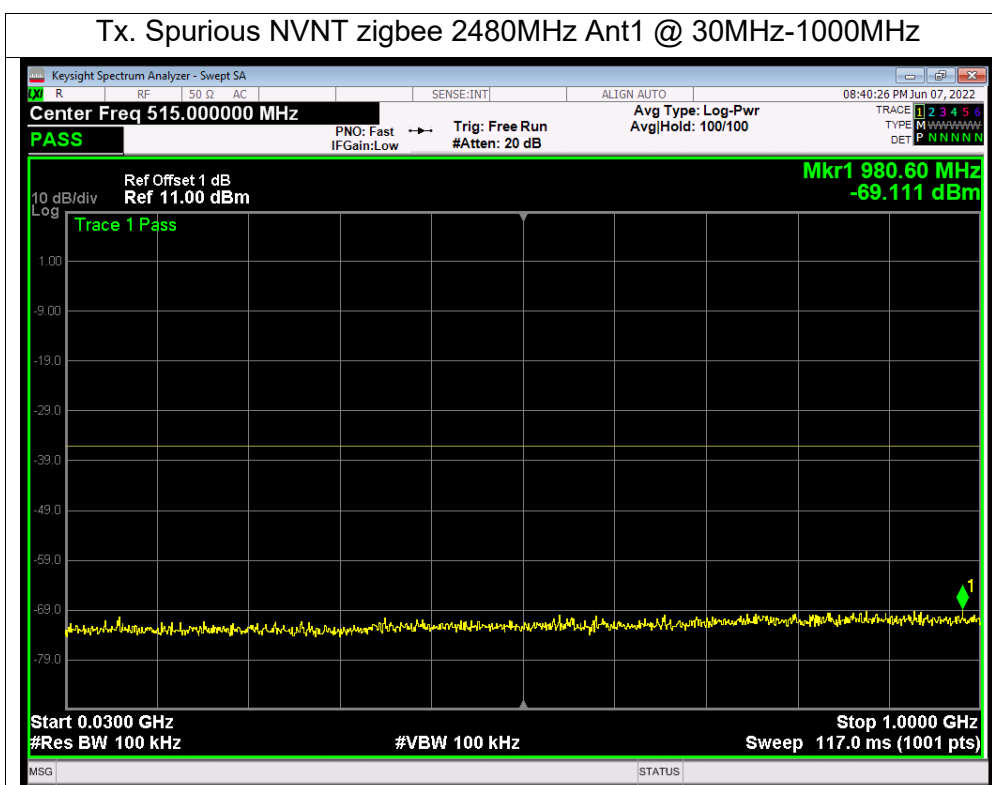
**Tx. Spurious NVNT zigbee 2440MHz Ant1 @ 2483.5MHz-2496.5MHz**



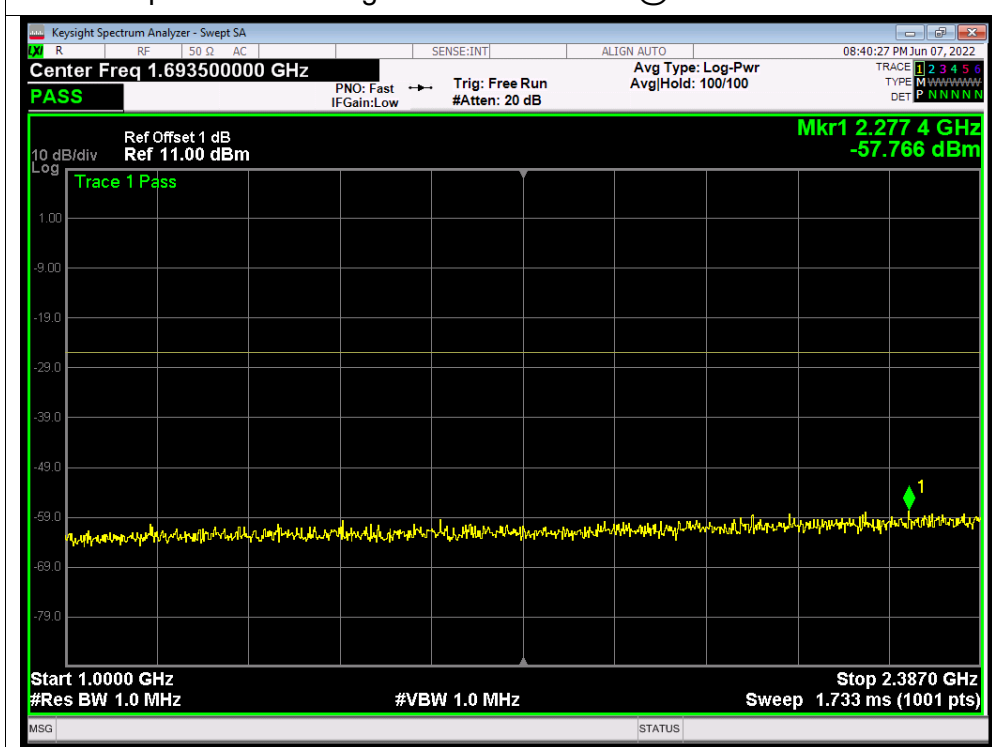
**Tx. Spurious NVNT zigbee 2440MHz Ant1 @ 2496.5MHz-13000MHz**



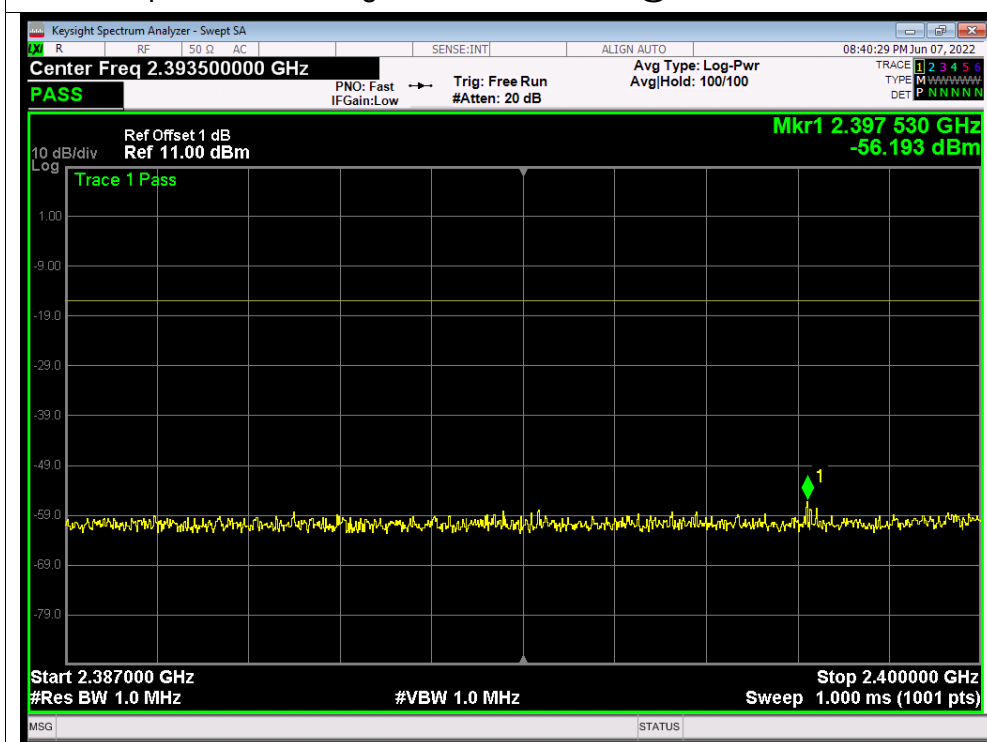
**Tx. Spurious NVNT zigbee 2480MHz Ant1 @ 30MHz-1000MHz**



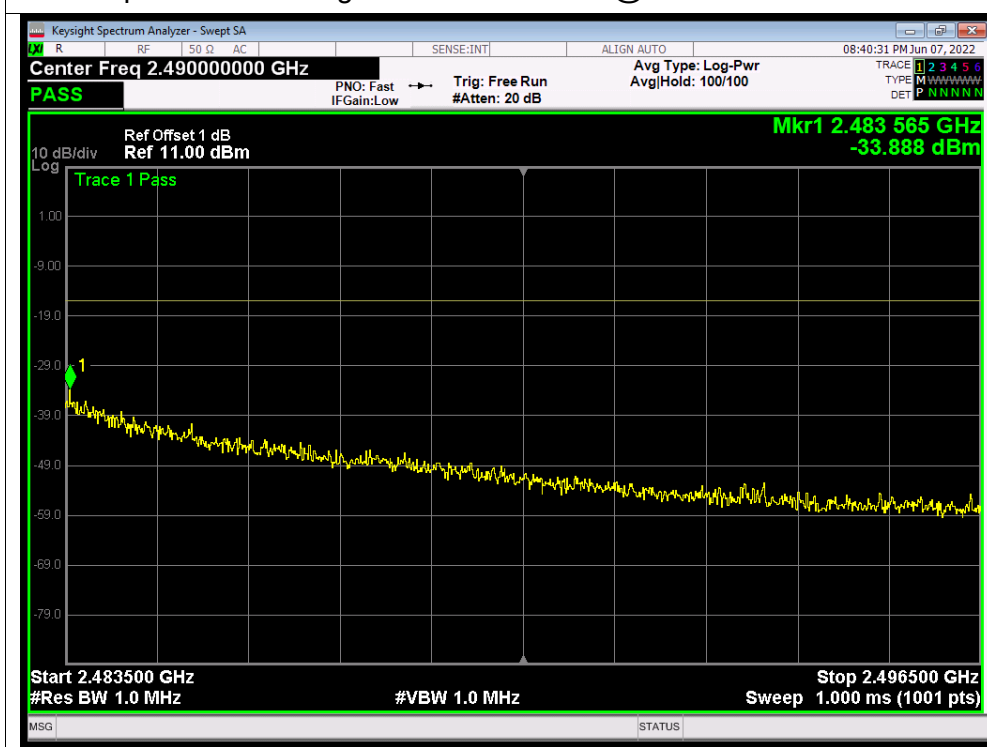
**Tx. Spurious NVNT zigbee 2480MHz Ant1 @ 1000MHz-2387MHz**

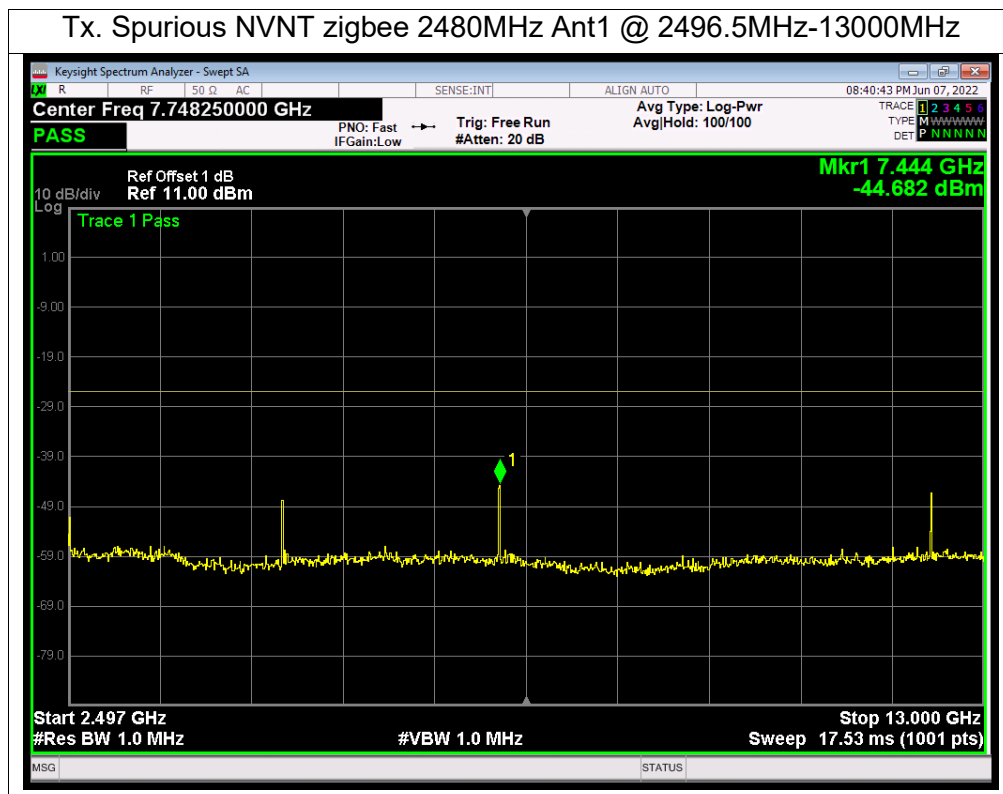


Tx. Spurious NVNT zigbee 2480MHz Ant1 @ 2387MHz-2400MHz



Tx. Spurious NVNT zigbee 2480MHz Ant1 @ 2483.5MHz-2496.5MHz





**4.6 Receiver Spurious Emission****VERDICT: PASS****4.6.1 Limit****Standard**

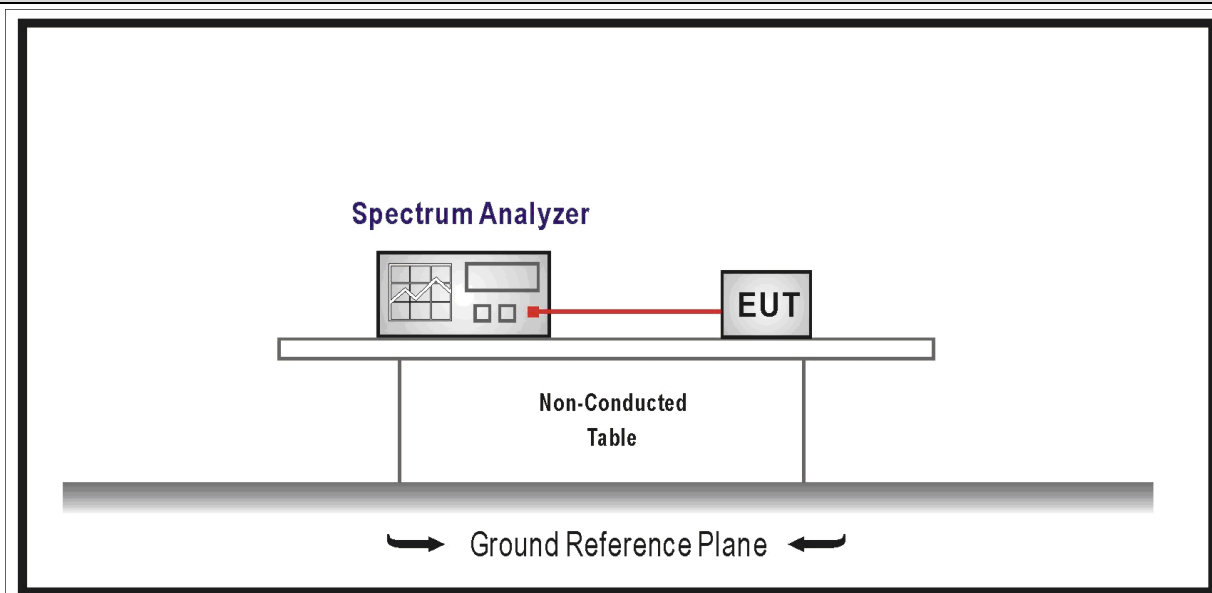
ARIB STD-T66

&lt;= 4nW for 10 – 1000 MHz

&lt;= 20nW for 1000 – 3000 MHz

&lt;= 20nW for 3000 – 8000 MHz

&lt;= 20nW for 8000 – 12750 MHz

**4.6.2 Test Setup****4.6.3 Test Procedure****References Rule**☒ ARIB STD-T66**Step 1**

A spectrum analyzer or similar device shall be used to observe a sample of the modulated transmitter's radio frequency power output.

1. A positive peak detector function must be used.
2. The measurement instrument bandwidth and span must be set sufficiently with, and the scan time set sufficiently slowly, to ensure all major modulation products are captured. Note that
3. The measurement bandwidth should also be set sufficiently narrow to avoid adding significant error to the test result.
4. 'Maximum Hold' mode may be used to accumulate the measurement result over several scans provided the emission is repetitive in nature.

#### 4.6.4 Test Data

Note: The data of receiver spurious emissions is the noise base, so no receive data was showed.

## 4.7 Interference Prevention Function Measurement

**VERDICT: PASS**

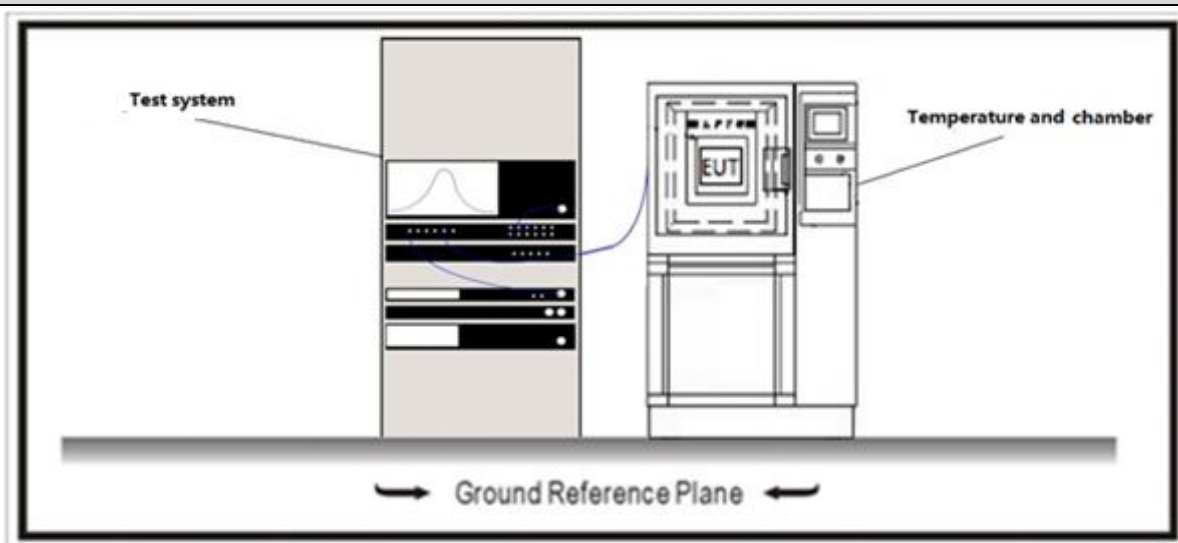
### 4.7.1 Limit

#### Standard

ARIB STD-T66

The one automatically to transmit and to receive identification code with the wireless equipment of the wireless station used in the same premises.

### 4.7.2 Test Setup



### 4.7.3 Test Procedure

#### References Rule

|                                     |              |
|-------------------------------------|--------------|
| <input checked="" type="checkbox"/> | ARIB STD-T66 |
|-------------------------------------|--------------|

#### Step 1

1. Establish communication between EUT and auxiliary equipment, auxiliary must have an ability to parse and display the identifier code.
2. When the test equipment has the function of automatically transmitting the identification code.
  - A. The test equipment sends the identification code specified in the equipment rules.
  - B. Check the identification code sent by the demodulator.
3. When the test equipment has the function of automatically receiving the identification code.
  - A. The opposite device transmits the identification code specified in the device rules.
  - B. Verify that a dedicated fixture is used to communicate with the test equipment.
  - C. Send a code from the counter that differs from the identification code specified in the equipment rules.
  - D. Verify that the test equipment stops transmitting or displays a different ID.
4. If the encoding specified in the device rules is the same as the demodulated encoding, recoded as "Good", otherwise record as "No".

#### 4.7.4 Test Data

|                 |   |                                              |
|-----------------|---|----------------------------------------------|
| Test Item       | : | Interference Prevention Function Measurement |
| Test Site       | : | TR8                                          |
| Test Mode       | : | Mode: Normal Mode                            |
| EUT MAC Address | : | IEEE 802.15.4                                |

## 5 CONFORMING THE STRUCTURE THAT IS DIFFICULT TO OPEN

| The Radio Equipment:                |                                       |
|-------------------------------------|---------------------------------------|
| <input type="checkbox"/>            | Use Special Screw                     |
| <input type="checkbox"/>            | Metal Shielding is Soldered           |
| <input type="checkbox"/>            | Use Ball Grid Array (BGA)             |
| <input type="checkbox"/>            | RF module/Chip Pins > 20              |
| <input checked="" type="checkbox"/> | RF module/Chip Pins distance < 1.5 mm |

The high-frequency section and modulation section (except for the antenna system) are not capable of being opened easily.

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## 6 SETUP PHOTO AND EUT PHOTO

Remark: The test setup photo and EUT Photo please see appendix.

\_\_\_\_\_ The End\_\_\_\_\_