

# TEST REPORT

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Address: Group 1, Sanyang Village, Sanyang Town, Jingshan City,  
Jingmen City, Hubei Province, China  
Report Number: 2401T49731E-RF-00  
FCC ID: 2BFYM-TWS023

## Test Standard (s)

FCC PART 15.247

## Sample Description

Product Type: TRUE WIRELESS EARBUDS  
Model No.: PATW-1033-WH  
Multiple Model(s) No.: TWS023, PATW-1033-BK, PATW-1033-PK, PATW-1033-BL,  
PATW-1032-PK, PATW-1032-BK, PATW-1032-PR,  
PATW-1032-GR  
Trade Mark: Prime Audio  
Date Received: 2024-05-23  
Issue Date: 2024-06-28

Test Result:	Pass▲
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▲ In the configuration tested, the EUT complied with the standards above.

## Prepared and Checked By:

*Wills Yu*

Wills Yu  
RF Engineer

## Approved By:

*Michelle Zeng*

Michelle Zeng  
RF Supervisor

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DOCUMENT REVISION HISTORY

Revision Number	Report Number	Description of Revision	Date of Revision
0	2401T49731E-RF-00	Original Report	2024-06-28

## GENERAL INFORMATION

### Product Description for Equipment under Test (EUT)

UPC Number	195207097202, 195207097219, 195207097226, 195207097233, 195207097196, 195207097141, 195207097158, 195207097165, 195207097172, 195207097189
SKU Number	9155668&9155657
Frequency Range	2402~2480MHz
Transmit Peak Power	5.02 dBm
Modulation Technique	Bluetooth: GFSK, $\pi/4$ -DQPSK, 8DPSK
Antenna Specification <sup>#</sup>	2.499 dBi (provided by the applicant)
Voltage Range	DC 3.7V from battery
Sample serial number	2LX2-3 for Radiated Emissions Test 2LX2-1 for RF Conducted Test (Assigned by BACL, Shenzhen)
Sample/EUT Status	Good condition
Adapter Information	N/A

Note

1: The multiple models are electrically identical with the test model except for appearance color. Please refer to the declaration letter<sup>#</sup> for more detail, which was provided by manufacturer.

2. The left earbuds and right earbuds are the same in schematics, so left earbuds is selected for full test, and perform the test item of “Conducted Output Power” for right earbuds

### Objective

This test report is in accordance with Part 2-Subpart J, Part 15-Subparts A and C of the Federal Communication Commission rules.

The tests were performed in order to determine compliance with FCC Part 15, Subpart C, section 15.203, 15.205, 15.209 and 15.247 rules.

### Test Methodology

All measurements contained in this report were conducted with ANSI C63.10-2013, American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.

All emissions measurement was performed at Bay Area Compliance Laboratories Corp. (Shenzhen). The radiated testing was performed at an antenna-to-EUT distance of 3 meters.

Each test item follows test standards and with no deviation.

## Measurement Uncertainty

Parameter		Uncertainty
Occupied Channel Bandwidth		±5%
RF output power, conducted		0.72 dB(k=2, 95% level of confidence)
AC Power Lines Conducted Emissions	9kHz-150kHz	3.94dB(k=2, 95% level of confidence)
	150kHz-30MHz	3.84dB(k=2, 95% level of confidence)
Radiated Emissions	9kHz - 30MHz	3.30dB(k=2, 95% level of confidence)
	30MHz~200MHz (Horizontal)	4.48dB(k=2, 95% level of confidence)
	30MHz~200MHz (Vertical)	4.55dB(k=2, 95% level of confidence)
	200MHz~1000MHz (Horizontal)	4.85dB(k=2, 95% level of confidence)
	200MHz~1000MHz (Vertical)	5.05dB(k=2, 95% level of confidence)
	1GHz - 6GHz	5.35dB(k=2, 95% level of confidence)
	6GHz - 18GHz	5.44dB(k=2, 95% level of confidence)
	18GHz - 40GHz	5.16dB(k=2, 95% level of confidence)
Temperature		±1°C
Humidity		±1%
Supply voltages		±0.4%

*Note: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval. Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.*

## Test Facility

The Test site used by Bay Area Compliance Laboratories Corp. (Shenzhen) to collect test data is located on the 5F(B-West) , 6F, 7F, the 3rd Phase of Wan Li Industrial Building D, Shihua Rd, FuTian Free Trade Zone, Shenzhen, China.

The lab has been recognized as the FCC accredited lab under the KDB 974614 D01 and is listed in the FCC Public Access Link (PAL) database, FCC Registration No.: 715558, the FCC Designation No.: CN5045.

## SYSTEM TEST CONFIGURATION

### Description of Test Configuration

The system was configured for testing in an engineering mode.

Channel	Frequency (MHz)	Channel	Frequency (MHz)
0	2402	40	2442
1	2403	41	2443
2	2404	42	2444
...	...	...	...
...	...	...	...
36	2438	75	2477
37	2439	76	2478
38	2440	77	2479
39	2441	78	2480

EUT was tested with Channel 0, 39 and 78.

### EUT Exercise Software

Exercise Software <sup>#</sup>	BT.Tool v 1.1.2
Power Level <sup>#</sup>	5

### Special Accessories

No special accessory.

### Equipment Modifications

No modification was made to the EUT tested.

### Support Equipment List and Details

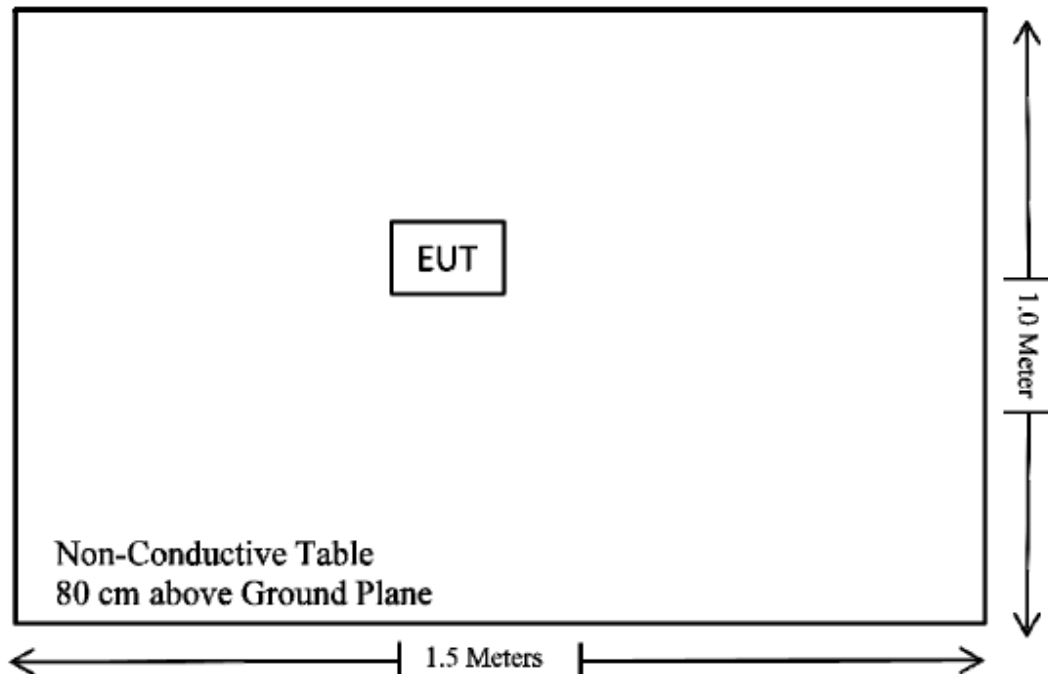
Manufacturer	Description	Model	Serial Number
/	/	/	/

### External I/O Cable

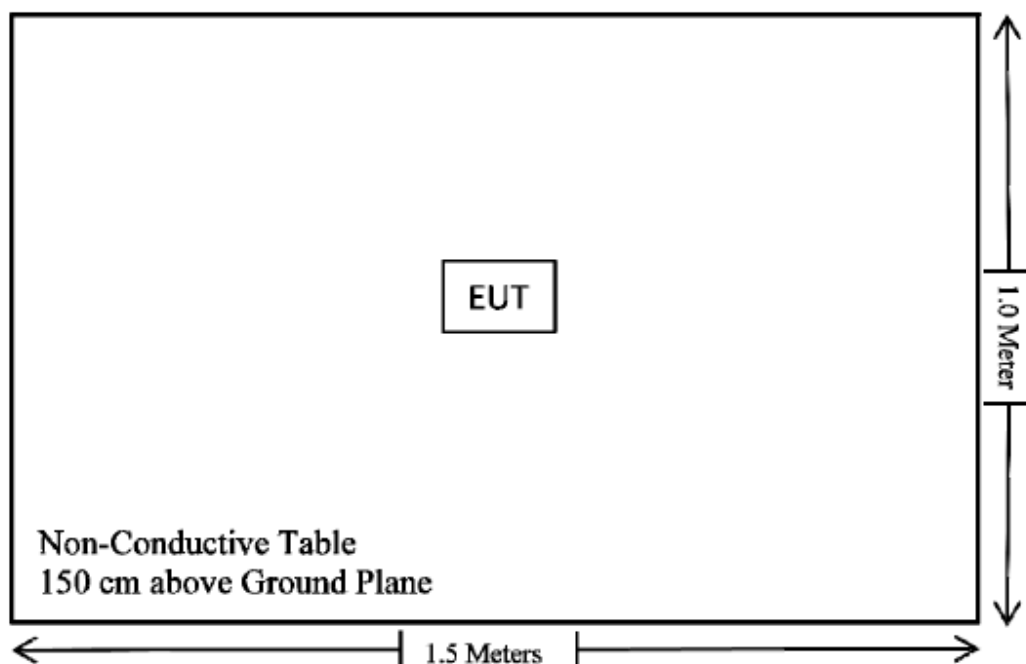
Cable Description	Length (m)	From Port	To
/	/	/	/

### Block Diagram of Test Setup

For Radiated Emissions below 1GHz:



For Radiated Emissions above 1GHz:



**SUMMARY OF TEST RESULTS**

FCC Rules	Description of Test	Result
FCC §15.203	Antenna Requirement	PASS
FCC §15.207(a)	AC Line Conducted Emissions	Not Applicable
FCC §15.205, §15.209, §15.247(d)	Radiated Spurious Emission	PASS
FCC §15.247(a)(1)	20 dB Emission Bandwidth	PASS
FCC §15.247(a)(1)	Channel Separation	PASS
FCC §15.247(a)(1)(iii)	Number of Hopping Frequency	PASS
FCC §15.247(a)(1)(iii)	Time of Occupancy (dwell time)	PASS
FCC §15.247(b)(1)	Maximum Conducted Output Power	PASS
FCC §15.247(d)	100 kHz Bandwidth of Frequency Band Edge	PASS
FCC §1.1307&§2.1093&§15.247 (i)	RF Exposure	PASS

Not Applicable: The EUT is powered by battery, so not required for the test item



**TEST EQUIPMENT LIST**

Manufacturer	Description	Model	Serial Number	Calibration Date	Calibration Due Date
<b>Radiated Emission Test</b>					
Sonoma instrument	Pre-amplifier	310N	186238	2023/06/08	2024/06/07
Rohde & Schwarz	EMI Test Receiver	ESR3	102455	2024/01/16	2025/01/15
Sunol Sciences	Broadband Antenna	JB1	A040904-1	2023/07/20	2026/07/19
BACL	Active Loop Antenna	1313-1A	4031911	2024/05/14	2027/05/13
Unknown	Cable	Chamber Cable 1	F-03-EM236	2023/08/03	2024/08/02
Unknown	Cable	Chamber Cable 4	EC-007	2023/08/03	2024/08/02
Rohde&Schwarz	Spectrum Analyzer	FSV40	101605	2024/03/27	2025/03/26
COM-POWER	Pre-amplifier	PA-122	181919	2023/06/29	2024/06/28
Schwarzbeck	Horn Antenna	BBHA9120D(1201)	1143	2023/07/26	2026/07/25
Unknown	RF Cable	KMSE	0735	2023/10/08	2024/10/08
Unknown	RF Cable	UFA147	219661	2023/10/08	2024/10/07
Unknown	RF Cable	XH750A-N	J-10M	2023/10/08	2024/10/07
SNSD	2.4G Band Reject filter	BSF2402-2480MN-0898-001	2.4G filter	2023/08/03	2024/08/02
Audix	EMI Test software	E3	19821b(V9)	NCR	NCR
A.H.System	Pre-amplifier	PAM-1840VH	190	2023/08/02	2024/08/01
Electro-Mechanics Co	Horn Antenna	3116	9510-2270	2023/09/18	2026/09/17
<b>RF Conducted Test</b>					
Rohde&Schwarz	Spectrum Analyzer	FSV40-N	102259	2024/01/16	2025/01/15
MARCONI	10dB Attenuator	6534/3	2942	2023/07/04	2024/07/03

**\* Statement of Traceability:** Bay Area Compliance Laboratories Corp. (Shenzhen) attests that all calibrations have been performed in accordance to requirements that traceable to National Primary Standards and International System of Units (SI).

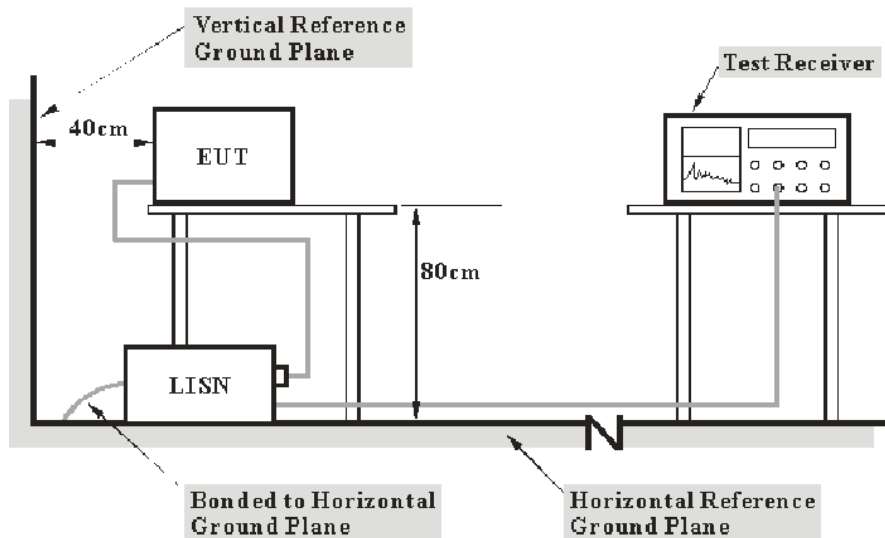
## REQUIREMENTS AND TEST PROCEDURES

### AC Line Conducted Emissions

#### Applicable Standard

FCC §15.207(a)

#### EUT Setup



Note: 1. Support units were connected to second LISN.  
2. Both of LISNs (AMN) 80 cm from EUT and at the least 80 cm from other units and other metal planes support units.

The measurement procedure of EUT setup is according with ANSI C63.10-2013. The related limit was specified in FCC Part 15.207.

The spacing between the peripherals was 10cm.

#### EMI Test Receiver Setup

The EMI test receiver was set to investigate the spectrum from 150 kHz to 30MHz.

During the conducted emission test, the EMI test receiver was set with the following configurations:

Frequency Range	IF B/W
150 kHz – 30 MHz	9 kHz

#### Test Procedure

Maximizing procedure was performed on the six (6) highest emissions of the EUT.

All final data was recorded in the Quasi-peak and average detection mode.

**Factor & Over Limit Calculation**

The factor is calculated by adding LISN VDF (Voltage Division Factor) and Cable Loss. The basic equation is as follows:

$$\text{Factor} = \text{LISN VDF} + \text{Cable Loss}$$

The “**Over limit**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, an Over limit of -7dB means the emission is 7 dB below the limit. The equation for calculation is as follows:

$$\begin{aligned}\text{Over Limit} &= \text{Level} - \text{Limit} \\ \text{Level} &= \text{Read Level} + \text{Factor}\end{aligned}$$

Note: The term "cable loss" refers to the combination of a cable and a 10dB transient limiter (attenuator).

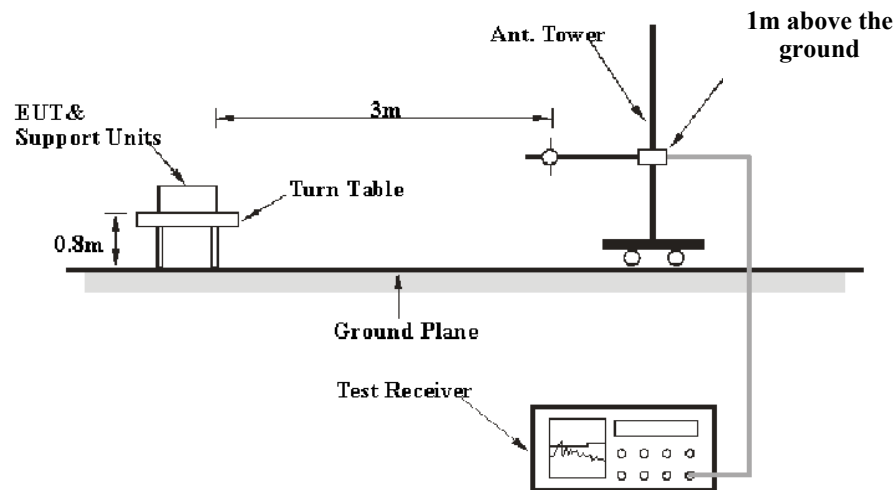
## Radiated Emissions

### Applicable Standard

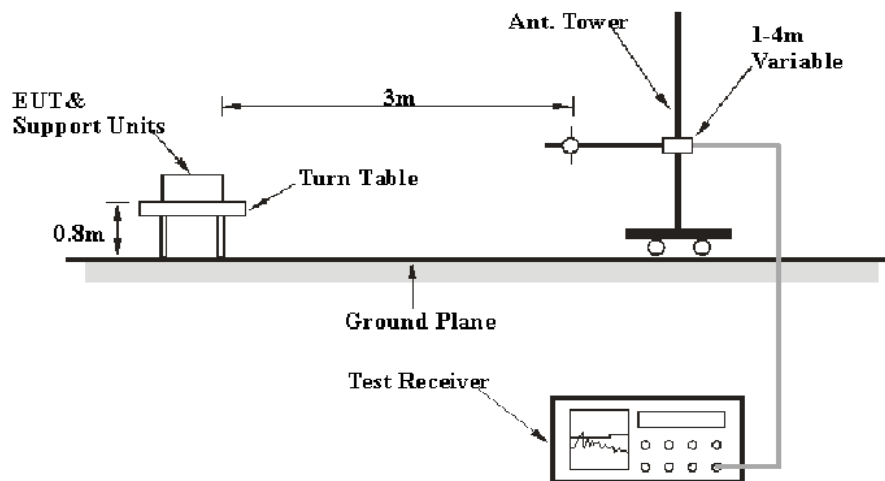
FCC §15.205; §15.209; §15.247(d)

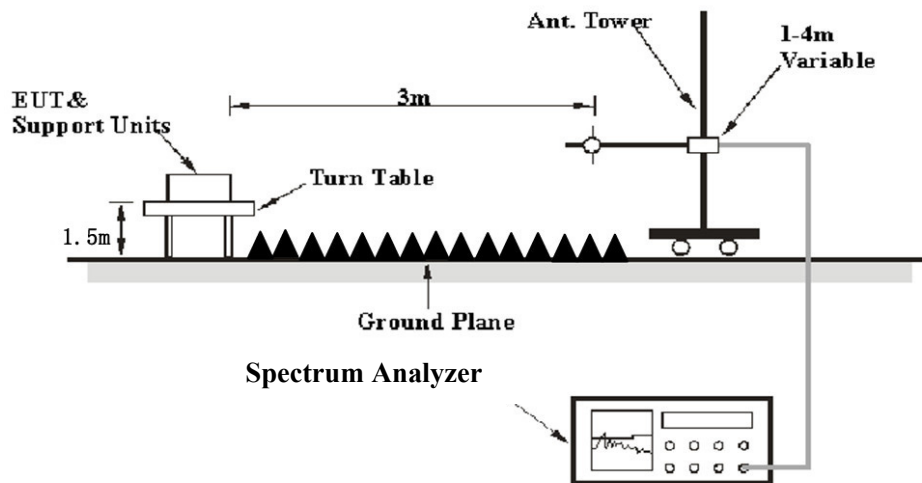
### EUT Setup

9 kHz-30MHz:



30MHz-1GHz:



**Above 1GHz:**

The radiated emission tests were performed in the 3meters, using the setup accordance with the ANSI C63.10-2013. The specification used was the FCC 15.209 and FCC 15.247 limits.

**EMI Test Receiver & Spectrum Analyzer Setup**

The EMI test receiver & Spectrum Analyzer Setup were set with the following configurations:

Frequency Range	RBW	Video B/W	IF B/W	Measurement
9 kHz – 150 kHz	/	/	200Hz	QP
	300Hz	1 kHz	/	PK
150 kHz – 30 MHz	/	/	9 kHz	QP
	10 kHz	30 kHz	/	PK
30MHz – 1000 MHz	/	/	120kHz	QP
	100 kHz	300 kHz	/	PK
Above 1 GHz	Harmonics & Band Edge			
	1MHz	3 MHz	/	PK
	Average Emission Level=Peak Emission Level+20*log(Duty cycle)			
	Other Emissions			
	1MHz	3 MHz	/	PK
	1MHz	10 Hz	/	Average

For Duty cycle measurement:

Use the duty cycle factor correction factor method per 15.35(c).

Duty cycle=On time/100milliseconds, On time= $N_1 \cdot L_1 + N_2 \cdot L_2 + \dots + N_{n-1} \cdot L_{n-1} + N_n \cdot L_n$ ,

Where  $N_1$  is number of type 1 pulses,  $L_1$  is length of type 1 pulse, etc.

**Test Procedure**

Maximizing procedure was performed on the highest emissions to ensure that the EUT complied with all installation combinations.

All final data was recorded in Quasi-peak detection mode except for the frequency bands 9–90 kHz, 110–490 kHz and above 1000 MHz, average detection modes for frequency bands 9–90 kHz and 110–490 kHz, peak and average detection modes for frequencies above 1 GHz.

For 9 kHz-30MHz, the report shall list the six emissions with the smallest margin relative to the limit, for each of the three antenna orientations (parallel, perpendicular, and ground-parallel) unless the margin is greater than 20 dB

If the maximized peak measured value complies with under the QP/Average limit more than 6dB, then it is unnecessary to perform an QP/Average measurement.

All emissions under the average limit and under the noise floor have not recorded in the report.

**Factor & Over Limit/Margin Calculation**

The Factor is calculated by adding the Antenna Factor and Cable Loss, and subtracting the Amplifier Gain. The basic equation is as follows:

$$\text{Factor} = \text{Antenna Factor} + \text{Cable Loss} - \text{Amplifier Gain}$$

The “**Over Limit/Margin**” column of the following data tables indicates the degree of compliance with the applicable limit. For example, an Over Limit/margin of -7dB means the emission is 7dB below the limit. The equation for calculation is as follows:

$$\begin{aligned}\text{Over Limit/Margin} &= \text{Level/Corrected Amplitude} - \text{Limit} \\ \text{Level / Corrected Amplitude} &= \text{Read Level} + \text{Factor}\end{aligned}$$

## Channel Separation Test

### Applicable Standard

Frequency hopping systems shall have hopping channel carrier frequencies separated by a minimum of 25 kHz or the 20 dB bandwidth of the hopping channel, whichever is greater. Alternatively, frequency hopping systems operating in the 2400-2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater provided the systems operate with an output power no greater than 125 mW. The system shall hop to channel frequencies that are selected at the system hopping rate from a pseudo randomly ordered list of hopping frequencies. Each frequency must be used equally on the average by each transmitter. The system receivers shall have input bandwidths that match the hopping channel bandwidths of their corresponding transmitters and shall shift frequencies in synchronization with the transmitted signals.

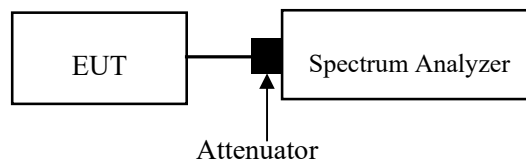
### Test Procedure

Test Method: ANSI C63.10-2013 Clause 7.8.2

The EUT shall have its hopping function enabled. Use the following spectrum analyzer settings:

- a) Span: Wide enough to capture the peaks of two adjacent channels.
- b) RBW: Start with the RBW set to approximately 30% of the channel spacing; adjust as necessary to best identify the center of each individual channel.
- c) Video (or average) bandwidth (VBW)  $\geq$  RBW.
- d) Sweep: Auto.
- e) Detector function: Peak.
- f) Trace: Max hold.
- g) Allow the trace to stabilize.

Use the marker-delta function to determine the separation between the peaks of the adjacent channels. Compliance of an EUT with the appropriate regulatory limit shall be determined.



Note: The limit is  $\frac{2}{3} \times 20$  dB bandwidth

## 20 dB Emission Bandwidth

### Applicable Standard

Alternatively, frequency hopping systems operating in the 2400–2483.5 MHz band may have hopping channel carrier frequencies that are separated by 25 kHz or two-thirds of the 20 dB bandwidth of the hopping channel, whichever is greater, provided the systems operate with an output power no greater than 125 mW.

### Test Procedure

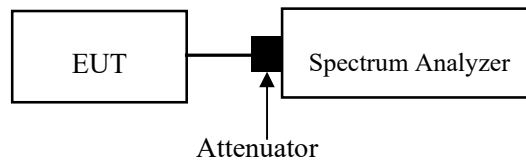
Test Method: ANSI C63.10-2013 Clause 7.8.7 & Clause 6.9.2

- a) The spectrum analyzer center frequency is set to the nominal EUT channel center frequency. The span range for the EMI receiver or spectrum analyzer shall be between two times and five times the OBW.
- b) The nominal IF filter bandwidth (3 dB RBW) shall be in the range of 1% to 5% of the OBW and video bandwidth (VBW) shall be approximately three times RBW, unless otherwise specified by the applicable requirement.
- c) Set the reference level of the instrument as required, keeping the signal from exceeding the maximum input mixer level for linear operation. In general, the peak of the spectral envelope shall be more than  $[10 \log (\text{OBW}/\text{RBW})]$  below the reference level.
- d) Steps a) through c) might require iteration to adjust within the specified tolerances.
- e) The dynamic range of the instrument at the selected RBW shall be more than 10 dB below the target “–xx dB down” requirement; that is, if the requirement calls for measuring the –20 dB OBW, the instrument noise floor at the selected RBW shall be at least 30 dB below the reference value.
- f) Set detection mode to peak and trace mode to max hold.
- g) Determine the reference value: Set the EUT to transmit an un-modulated carrier or modulated signal, as applicable. Allow the trace to stabilize. Set the spectrum analyzer marker to the highest level of the displayed trace (this is the reference value).
- h) Determine the “–xx dB down amplitude” using  $[(\text{reference value}) - \text{xx}]$ . Alternatively, this calculation may be made by using the marker-delta function of the instrument.
- i) If the reference value is determined by an un-modulated carrier, then turn the EUT modulation on, and either clear the existing trace or start a new trace on the spectrum analyzer and allow the new trace to stabilize. Otherwise, the trace from step g) shall be used for step j).



j) Place two markers, one at the lowest frequency and the other at the highest frequency of the envelope of the spectral display, such that each marker is at or slightly below the “-xx dB down amplitude” determined in step h). If a marker is below this “-xx dB down amplitude” value, then it shall be as close as possible to this value. The occupied bandwidth is the frequency difference between the two markers. Alternatively, set a marker at the lowest frequency of the envelope of the spectral display, such that the marker is at or slightly below the “-xx dB down amplitude” determined in step h). Reset the marker-delta function and move the marker to the other side of the emission until the delta marker amplitude is at the same level as the reference marker amplitude. The marker-delta frequency reading at this point is the specified emission bandwidth.

k) The occupied bandwidth shall be reported by providing plot(s) of the measuring instrument display; the plot axes and the scale units per division shall be clearly labeled. Tabular data may be reported in addition to the plot(s).



## Quantity of Hopping Channel Test

### Applicable Standard

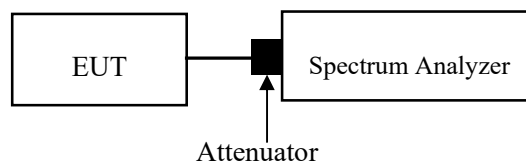
Frequency hopping systems in the 2400–2483.5 MHz band shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.

### Test Procedure

Test Method: ANSI C63.10-2013 Clause 7.8.3

- a) Span: The frequency band of operation. Depending on the number of channels the device supports, it may be necessary to divide the frequency range of operation across multiple spans, to allow the individual channels to be clearly seen.
- b) RBW: To identify clearly the individual channels, set the RBW to less than 30% of the channel spacing or the 20 dB bandwidth, whichever is smaller.
- c) VBW  $\geq$  RBW.
- d) Sweep: Auto.
- e) Detector function: Peak.
- f) Trace: Max hold.

It might prove necessary to break the span up into sub ranges to show clearly all of the hopping frequencies. Compliance of an EUT with the appropriate regulatory limit shall be determined for the number of hopping channels.



## Time of Occupancy (Dwell Time)

### Applicable Standard

Frequency hopping systems in the 2400-2483.5 MHz shall use at least 15 channels. The average time of occupancy on any channel shall not be greater than 0.4 seconds within a period of 0.4 seconds multiplied by the number of hopping channels employed. Frequency hopping systems may avoid or suppress transmissions on a particular hopping frequency provided that a minimum of 15 channels are used.

### Test Procedure

Test Method: ANSI C63.10-2013 Clause 7.8.4

The EUT shall have its hopping function enabled. Use the following spectrum analyzer settings:

- a) Span: Zero span, centered on a hopping channel.
- b) RBW shall be  $\leq$  channel spacing and where possible RBW should be set  $\gg 1 / T$ , where T is the expected dwell time per channel.
- c) Sweep: As necessary to capture the entire dwell time per hopping channel; where possible use a video trigger and trigger delay so that the transmitted signal starts a little to the right of the start of the plot. The trigger level might need slight adjustment to prevent triggering when the system hops on an adjacent channel; a second plot might be needed with a longer sweep time to show two successive hops on a channel.
- d) Detector function: Peak.
- e) Trace: Max hold.

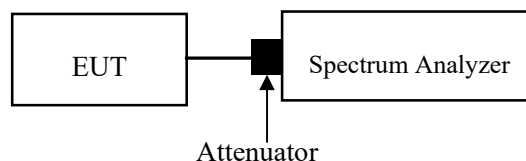
Use the marker-delta function to determine the transmit time per hop. If this value varies with different modes of operation (data rate, modulation format, number of hopping channels, etc.), then repeat this test for each variation in transmit time.

Repeat the measurement using a longer sweep time to determine the number of hops over the period specified in the requirements. The sweep time shall be equal to, or less than, the period specified in the requirements. Determine the number of hops over the sweep time and calculate the total number of hops in the period specified in the requirements, using the following equation:

$$\begin{aligned} &(\text{Number of hops in the period specified in the requirements}) = (\text{number of hops on spectrum analyzer}) \\ &\times (\text{period specified in the requirements} / \text{analyzer sweep time}) \end{aligned}$$

The average time of occupancy is calculated from the transmit time per hop multiplied by the number of hops in the period specified in the requirements. If the number of hops in a specific time varies with different modes of operation (data rate, modulation format, number of hopping channels, etc.), then repeat this test for each variation.

The measured transmit time and time between hops shall be consistent with the values described in the operational description for the EUT.



## Peak Output Power Measurement

### Applicable Standard

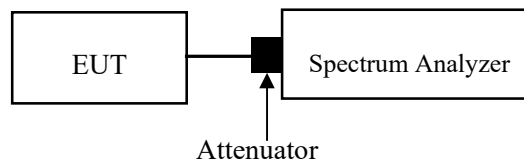
According to §15.247(b) (1), for frequency hopping systems operating in the 2400–2483.5 MHz band employing at least 75 non-overlapping hopping channels, and all frequency hopping systems in the 5725–5850 MHz band: 1 watt. And for all other frequency hopping systems in the 2400–2483.5 MHz band: 0.125 watts.

### Test Procedure

Test Method: ANSI C63.10-2013 Clause 7.8.5

This is an RF-conducted test to evaluate maximum peak output power. Use a direct connection between the antenna port of the unlicensed wireless device and the spectrum analyzer, through suitable attenuation. The hopping shall be disabled for this test:

- a) Use the following spectrum analyzer settings:
  - 1) Span: Approximately five times the 20 dB bandwidth, centered on a hopping channel.
  - 2) RBW > 20 dB bandwidth of the emission being measured.
  - 3) VBW  $\geq$  RBW.
  - 4) Sweep: Auto.
  - 5) Detector function: Peak.
  - 6) Trace: Max hold.
- b) Allow trace to stabilize.
- c) Use the marker-to-peak function to set the marker to the peak of the emission.
- d) The indicated level is the peak output power, after any corrections for external attenuators and cables.



## Band Edges

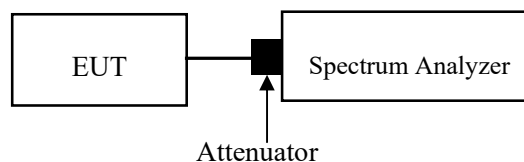
### Applicable Standard

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b)(3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in §15.205(a), must also comply with the radiated emission limits specified in §15.209(a) (see §15.205(c)).

### Test Procedure

Test Method: ANSI C63.10-2013 Clause 7.8.6 & Clause 6.10

1. Check the calibration of the measuring instrument using either an internal calibrator or a known signal from an external generator.
2. Remove the antenna from the EUT and then connect to a low loss RF cable from the antenna port to a EMI test receiver, then turn on the EUT and make it operate in transmitting mode. Then set it to Low Channel and High Channel within its operating range, and make sure the instrument is operated in its linear range.
3. Set RBW of spectrum analyzer to 100 kHz with a convenient frequency span including 100 kHz bandwidth from band edge.
4. Measure the highest amplitude appearing on spectral display and set it as a reference level. Plot the graph with marking the highest point and edge frequency.
5. Repeat above procedures until all measured frequencies were complete.

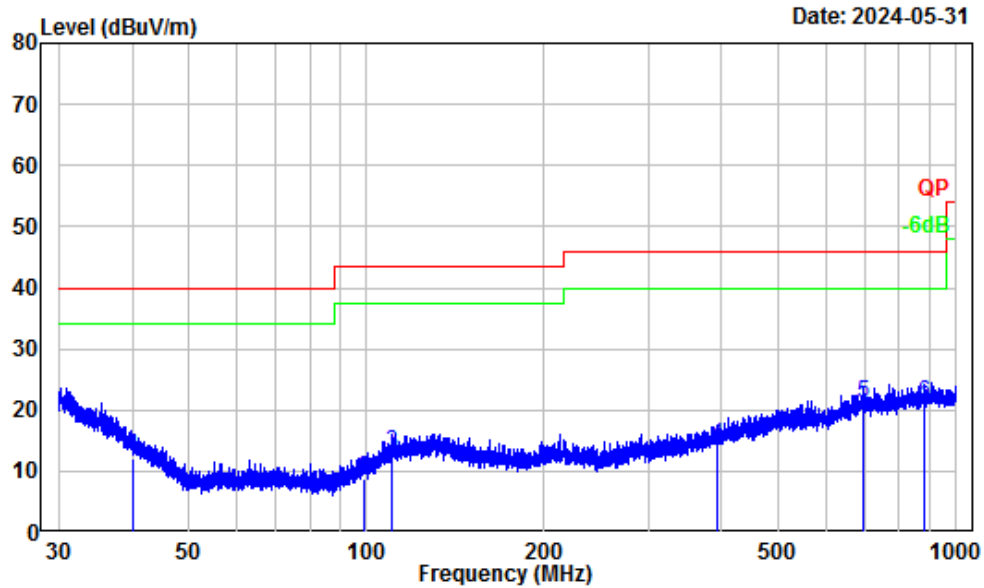


TEST DATA AND RESULTS

Radiated Emissions

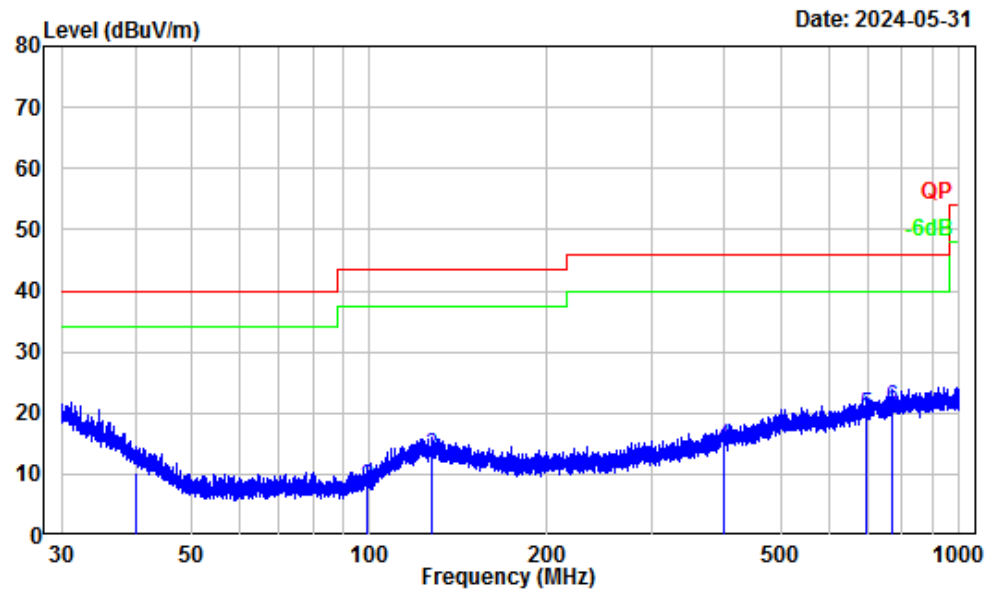
Environmental Conditions

Temperature (°C)	26~26.5	Relative Humidity (%)	49~50
ATM Pressure (kPa):	101	Test engineer:	Anson Su &Sadow Tan
Test date:	2024.05.31~2024.06.06		
EUT operation mode:	Below 1GHz: Transmitting (Maximum output power mode EDR(8DPSK), Low channel Above 1GHz: Transmitting(Maximum output power mode EDR(8DPSK)		
Note:	1. For the radiated spurious emission below 30MHz, the emissions are 20dB below the limit or the noise floor which are not recorded. 2. After pre-scan in the X, Y and Z axes of orientation, the worst case Z axis was recorded.		

**Below 1GHz:**

Site : Chamber A  
Condition : 3m Horizontal  
Project Number: 2401T49731E-RF  
Test Mode : BT  
Tester : Anson Su

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	40.01	-11.53	23.63	12.10	40.00	-27.90	QP
2	99.09	-15.69	24.30	8.61	43.50	-34.89	QP
3	110.42	-13.04	25.98	12.94	43.50	-30.56	QP
4	392.27	-10.81	25.13	14.32	46.00	-31.68	QP
5	695.94	-6.22	27.24	21.02	46.00	-24.98	QP
6	880.63	-4.58	25.77	21.19	46.00	-24.81	QP



Site : Chamber A  
Condition : 3m Vertical  
Project Number: 2401T49731E-RF  
Test Mode : BT  
Tester : Anson Su

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	40.15	-13.11	23.45	10.34	40.00	-29.66	QP
2	99.09	-17.13	24.88	7.75	43.50	-35.75	QP
3	127.78	-12.60	25.57	12.97	43.50	-30.53	QP
4	399.73	-10.81	25.22	14.41	46.00	-31.59	QP
5	694.11	-6.64	26.35	19.71	46.00	-26.29	QP
6	768.07	-5.81	26.70	20.89	46.00	-25.11	QP



**Above 1GHz:**

Frequency (MHz)	Receiver		Polar (H/V)	Factor (dB/m)	Corrected Amplitude (dBμV/m)	Limit (dBμV/m)	Margin (dB)
	Reading (dBμV)	PK/Ave					
8DPSK							
Low Channel 2402MHz							
2338.89	54.33	PK	H	-3.17	51.16	74	-22.84
2385.08	54.15	PK	V	-3.17	50.98	74	-23.02
4804	70.23	PK	H	1.69	71.92	74	-2.08
4804	65.20	PK	V	1.69	66.89	74	-7.11
Middle Channel 2441MHz							
4882	69.43	PK	H	1.69	71.12	74	-2.88
4882	64.01	PK	V	1.69	65.70	74	-8.30
High Channel 2480MHz							
2483.55	70.62	PK	H	-3.17	67.45	74	-6.55
2483.60	63.23	PK	V	-3.17	60.06	74	-13.94
4960	69.56	PK	H	2.77	72.33	74	-1.67
4960	63.68	PK	V	2.77	66.45	74	-7.55

Note:

Factor = Antenna factor (RX) + Cable Loss – Amplifier Factor

Corrected Amplitude/Level = Factor + Reading

Margin = Corrected Amplitude/Level - Limit

The other spurious emission which is in the noise floor level was not recorded.

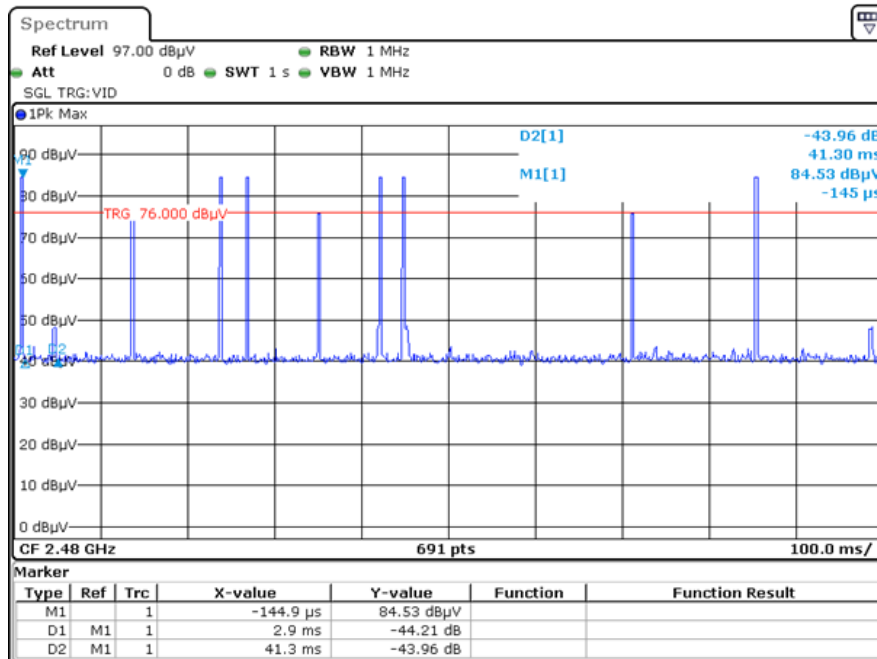
Field Strength of Average							
Frequency (MHz)	Peak Measurement @3m (dBμV/m)	Polar (H/V)	Duty Cycle Correction Factor (dB)	Average Level (dBμV/m)	Limit (dBμV/m)	Margin (dB)	Comment
Low Channel 2402MHz							
2338.89	51.16	H	-24.73	26.43	54	-27.57	Bandedge
2385.08	50.98	V	-24.73	26.25	54	-27.75	Bandedge
4804	71.92	H	-24.73	47.19	54	-6.81	Harmonic
4804	66.89	V	-24.73	42.16	54	-11.84	Harmonic
Middle Channel 2441MHz							
4882	71.12	H	-24.73	46.39	54	-7.61	Harmonic
4882	65.70	V	-24.73	40.97	54	-13.03	Harmonic
High Channel 2480MHz							
2483.55	67.45	H	-24.73	42.72	54	-11.28	Bandedge
2483.60	60.06	V	-24.73	35.33	54	-18.67	Bandedge
4960	72.33	H	-24.73	47.60	54	-6.40	Harmonic
4960	66.45	V	-24.73	41.72	54	-12.28	Harmonic

Note: Average level= Peak level + Duty Cycle Corrected Factor

Worst case duty cycle:

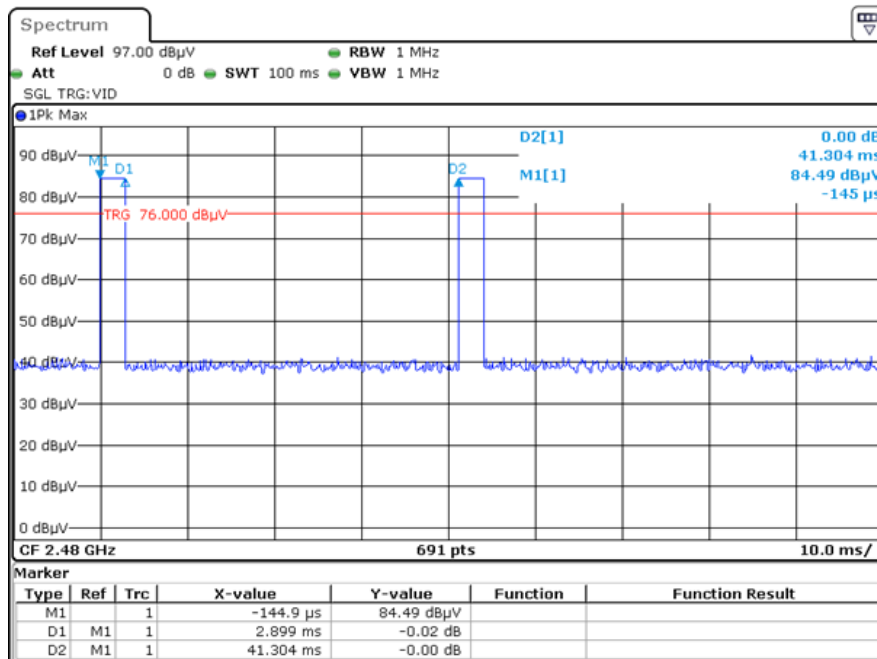
Duty cycle =  $T_{on}/100ms = 2.899*2/100=0.05798$

Duty Cycle Corrected Factor =  $20\lg(\text{Duty cycle}) = 20\lg 0.05798 = -24.73$



ProjectNo.: 2401T49731E-RF Tester: Sadow Tan

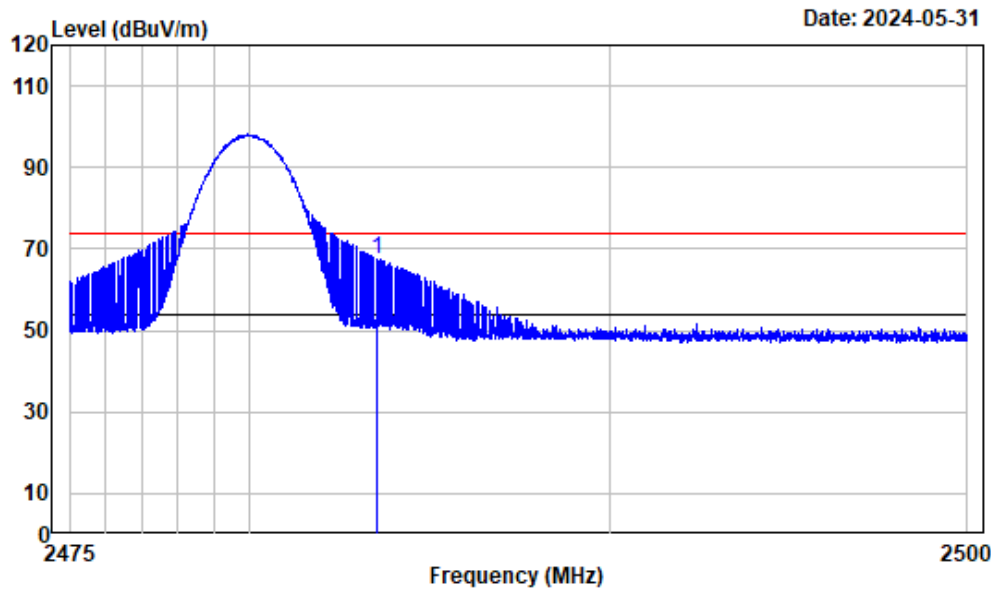
Date: 31.MAY.2024 11:32:32



ProjectNo.: 2401T49731E-RF Tester: Sadow Tan

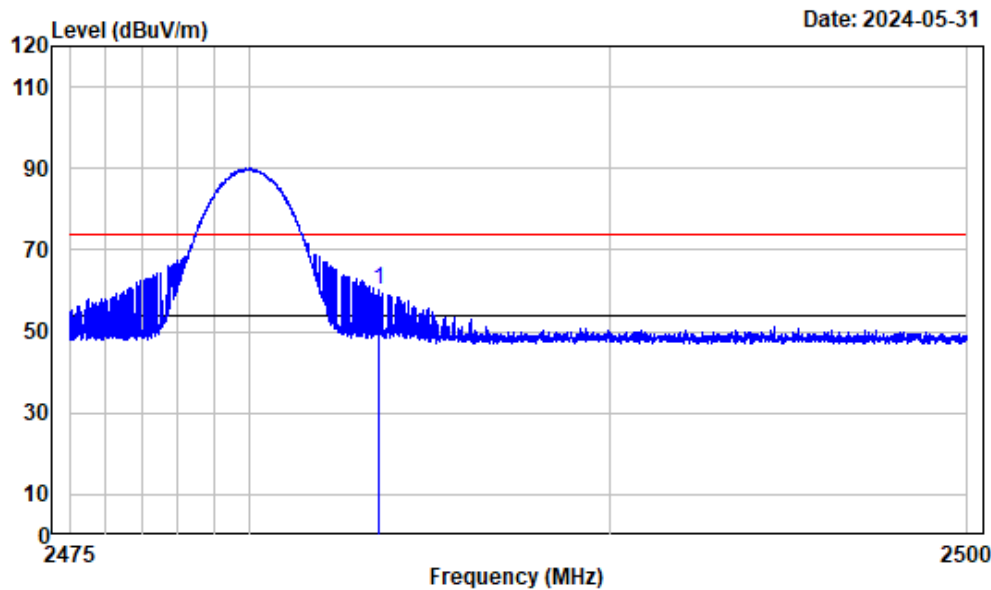
Date: 31.MAY.2024 11:31:39

Test plots



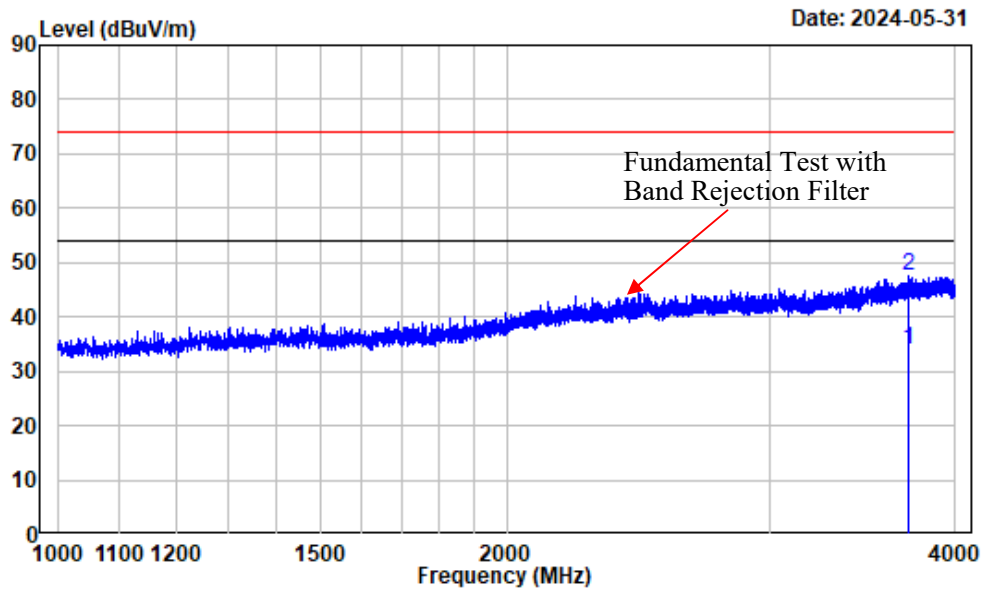
Condition : Horizontal  
Project No.: 2401T49731E-RF  
Tester : Sadow Tan  
Note : BT\_3DH5\_2480

		Read		Limit	Over	Remark
Freq		Factor	Level	Level	Line	
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB
1	2483.535	-3.17	70.62	67.45	74.00	-6.55 peak



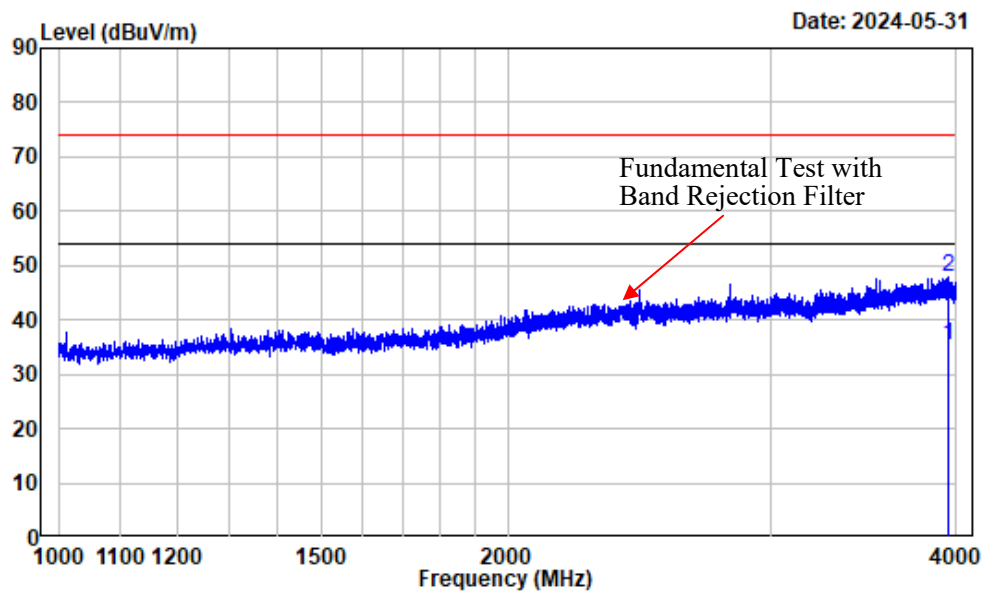
Condition : Vertical  
Project No.: 2401T49731E-RF  
Tester : Sadow Tan  
Note : BT\_3DH5\_2480

		Read		Limit	Over	Remark
Freq	Factor	Level	Level	Line	Limit	
MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1 2483.601	-3.17	63.23	60.06	74.00	-13.94	peak



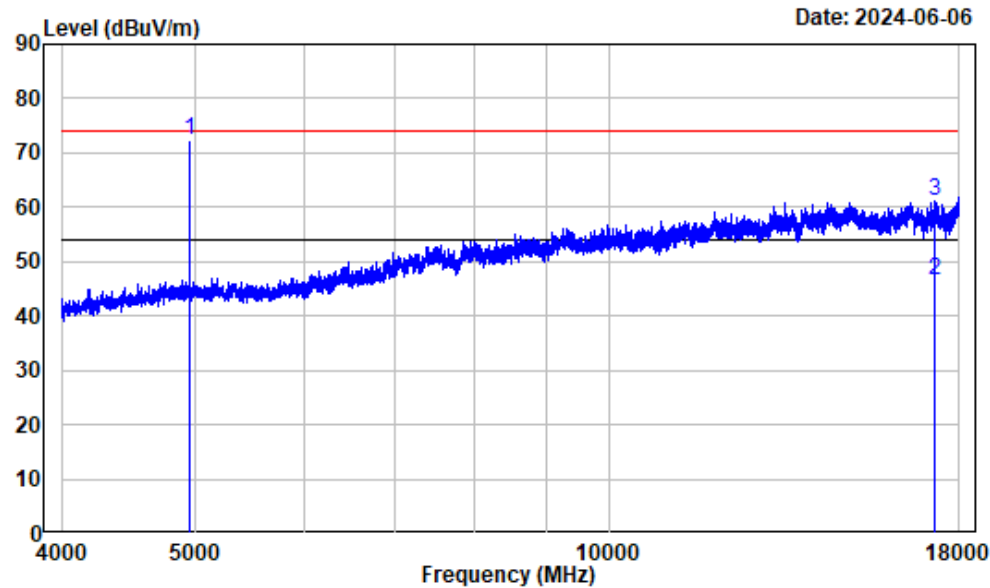
Condition : Horizontal  
 Project No.: 2401T49731E-RF  
 Tester : Sadow Tan  
 Note : BT\_3DH5\_2480

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	3721.375	-1.04	34.92	33.88	54.00	-20.12	average
2	3721.375	-1.04	48.42	47.38	74.00	-26.62	peak



Condition : Vertical  
Project No.: 2401T49731E-RF  
Tester : Sadow Tan  
Note : BT\_3DH5\_2480

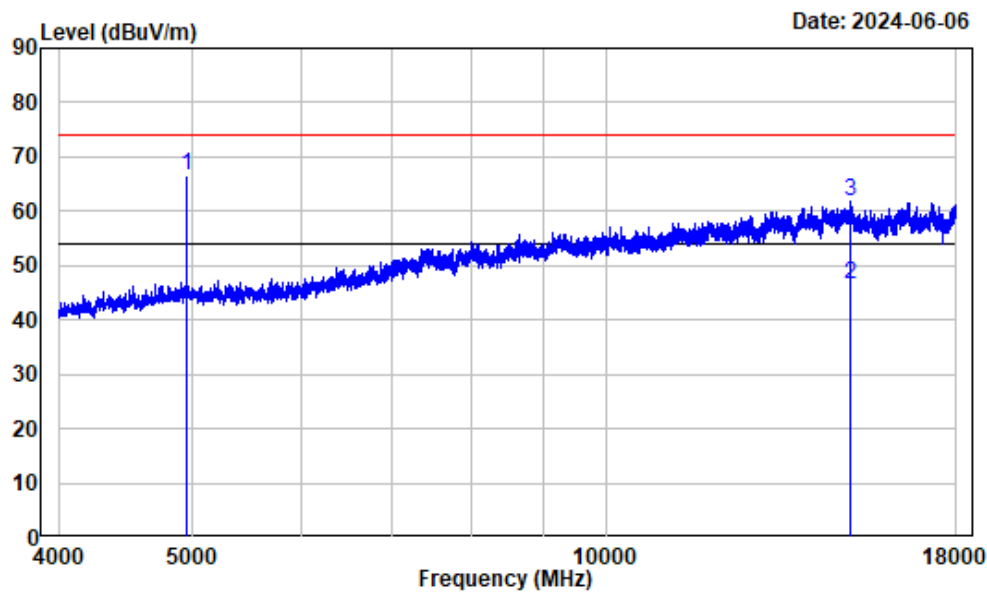
	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	3949.000	-0.18	35.42	35.24	54.00	-18.76	average
2	3949.000	-0.18	47.95	47.77	74.00	-26.23	peak



Condition : Horizontal  
Project No.: 2401T49731E-RF  
Tester : Sadow Tan  
Note : BT\_3DH5\_2480

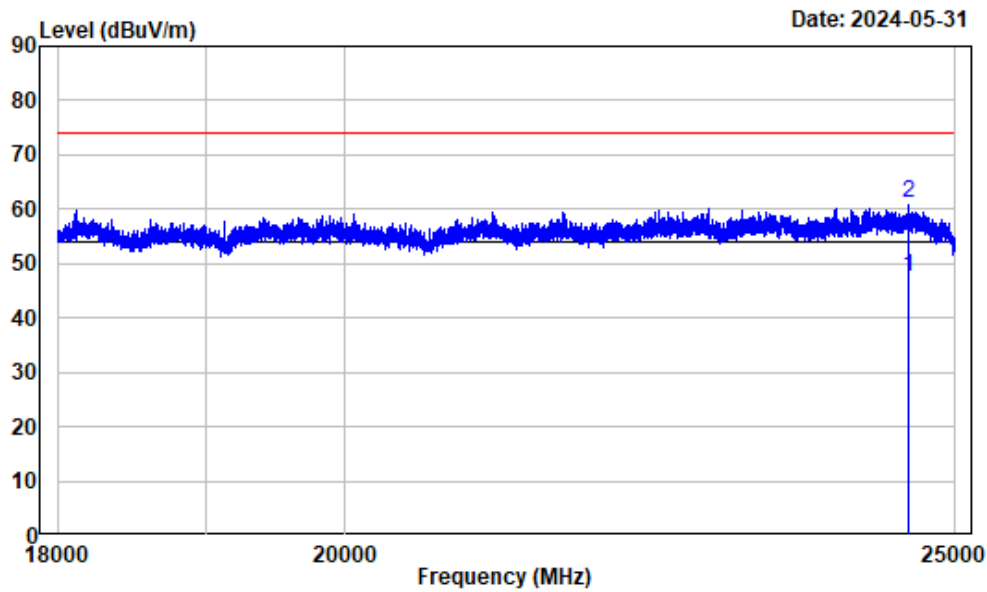
	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	4960.000	2.77	69.56	72.33	74.00	-1.67	Peak
2	17272.000	19.14	27.41	46.55	74.00	-27.45	Average
3	17272.000	19.14	42.06	61.20	74.00	-12.80	Peak





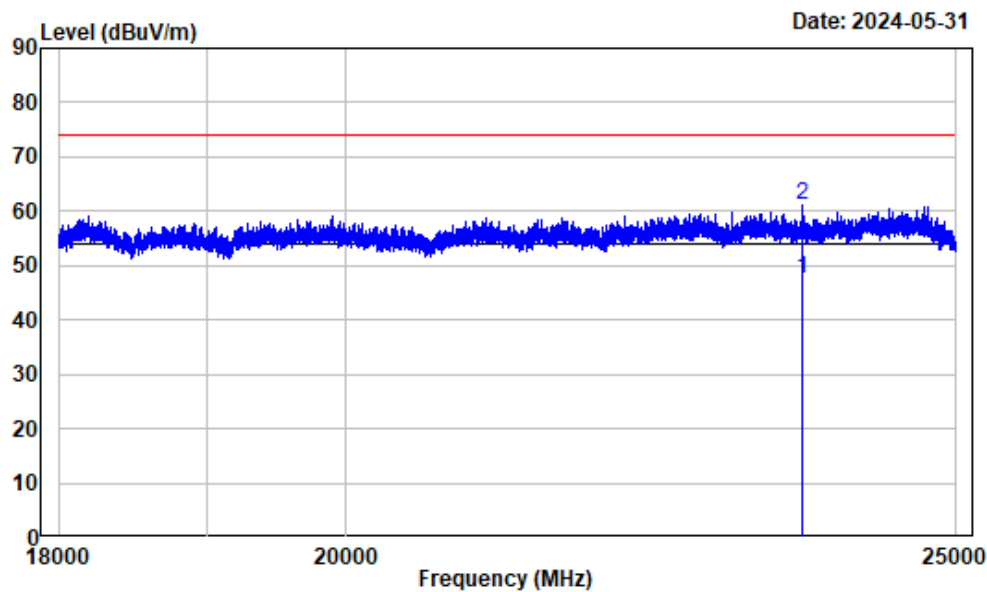
Condition : Vertical  
Project No.: 2401T49731E-RF  
Tester : Sadow Tan  
Note : BT\_3DH5\_2480

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	4960.000	2.77	63.68	66.45	74.00	-7.55	Peak
2	15058.250	16.05	30.35	46.40	54.00	-7.60	Average
3	15058.250	16.05	45.66	61.71	74.00	-12.29	Peak



Condition : Horizontal  
Project No.: 2401T49731E-RF  
Tester : Sadow Tan  
Note : BT\_3DH5\_2480

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	24575.630	18.90	28.67	47.57	54.00	-6.43	Average
2	24575.630	18.90	42.28	61.18	74.00	-12.82	Peak



Condition : Vertical  
Project No.: 2401T49731E-RF  
Tester : Sadow Tan  
Note : BT\_3DH5\_2480

	Freq	Factor	Read Level	Level	Limit Line	Over Limit	Remark
	MHz	dB/m	dBuV	dBuV/m	dBuV/m	dB	
1	23629.750	17.54	29.91	47.45	54.00	-6.55	Average
2	23629.750	17.54	43.46	61.00	74.00	-13.00	Peak

20 dB Emission Bandwidth

Test Information:

Serial No.:	2LX2-1	Test Date:	2024/05/31~2024/06/07
Test Site:	RF	Test Mode:	Transmitting
Tester:	Bamboo Zhan	Test Result:	N/A

Environmental Conditions:

Temperature: (°C)	24.5~25.1	Relative Humidity: (%)	49~52	ATM Pressure: (kPa)	101
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BDR

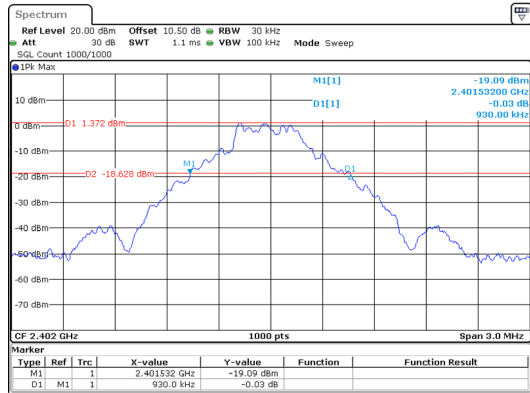
Mode	Value (MHz)
GFSK_Low	0.930
GFSK_Middle	0.927
GFSK_High	0.927

EDR

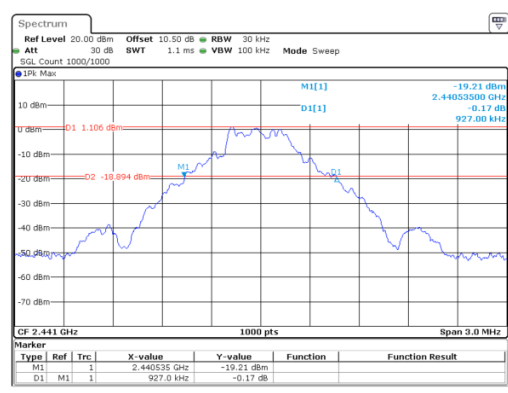
Mode	Value (MHz)
$\pi/4$ -DQPSK_Low	1.254
$\pi/4$ -DQPSK_Middle	1.248
$\pi/4$ -DQPSK_High	1.254
8DPSK_Low	1.215
8DPSK_Middle	1.215
8DPSK_High	1.215

BDR

GFSK\_Low 0.930 MHz

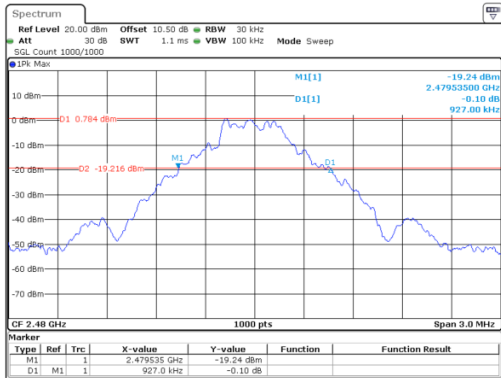


GFSK\_Middle 0.927 MHz

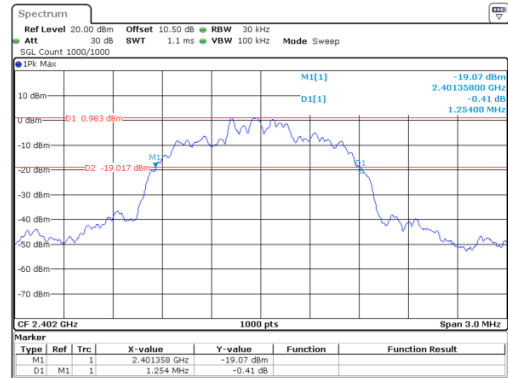


EDR

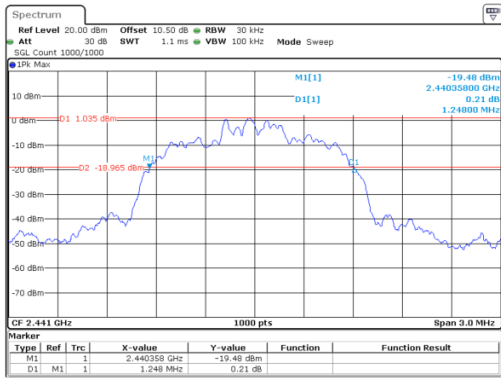
GFSK\_High 0.927 MHz



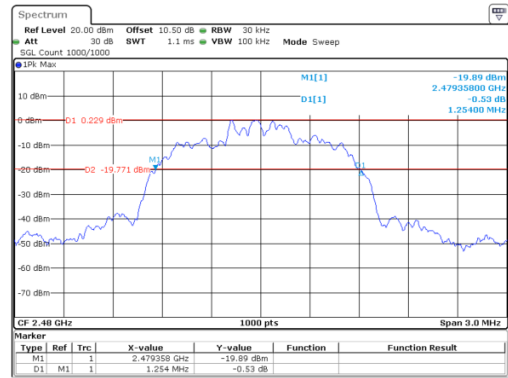
$\pi/4$ -DQPSK\_Low 1.254 MHz



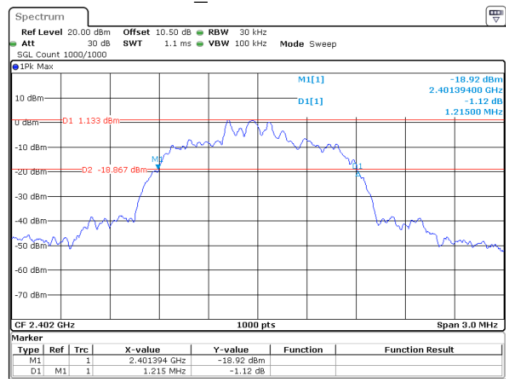
$\pi/4$ -DQPSK\_Middle 1.248 MHz



$\pi/4$ -DQPSK\_High 1.254 MHz

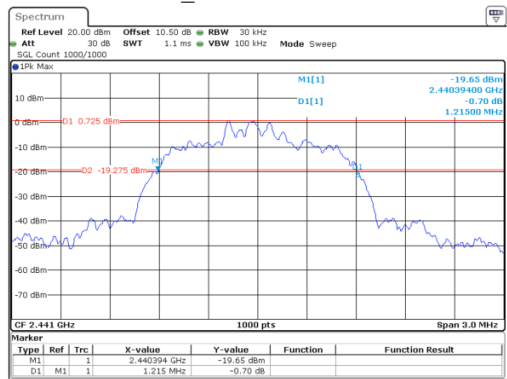


8DPSK\_Low 1.215 MHz



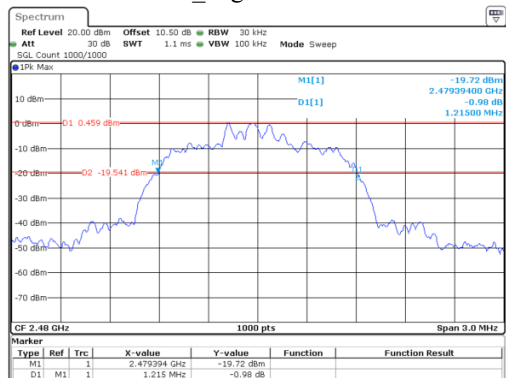
ProjectNo.:2401T49731E-RF Tester:Bamboo Zhan  
Date: 31.MAY.2024 13:10:31

8DPSK\_Middle 1.215 MHz



ProjectNo.:2401T49731E-RF Tester:Bamboo Zhan  
Date: 31.MAY.2024 13:10:10

8DPSK\_High 1.215 MHz



ProjectNo.:2401T49731E-RF Tester:Bamboo Zhan  
Date: 31.MAY.2024 13:11:26

Channel Separation

Test Information:

Serial No.:	2LX2-1	Test Date:	2024/05/31~2024/06/07
Test Site:	RF	Test Mode:	Transmitting
Tester:	Bamboo Zhan	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	24.5~25.1	Relative Humidity: (%)	49~52	ATM Pressure: (kPa)	101
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BDR

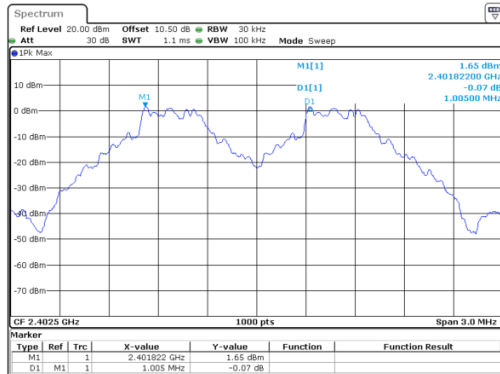
Mode	Value (MHz)	Limit (MHz)	Result
GFSK_Low	1.005	0.620	Pass
GFSK_Middle	1.002	0.618	Pass
GFSK_High	1.002	0.618	Pass

EDR

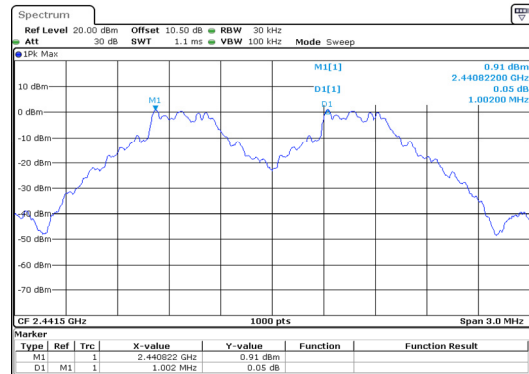
Mode	Value (MHz)	Limit (MHz)	Result
$\pi/4$ -DQPSK_Low	1.005	0.836	Pass
$\pi/4$ -DQPSK_Middle	1.005	0.832	Pass
$\pi/4$ -DQPSK_High	0.999	0.836	Pass
8DPSK_Low	1.005	0.810	Pass
8DPSK_Middle	0.999	0.810	Pass
8DPSK_High	1.002	0.810	Pass

## BDR

GFSK\_Low 1.005 MHz

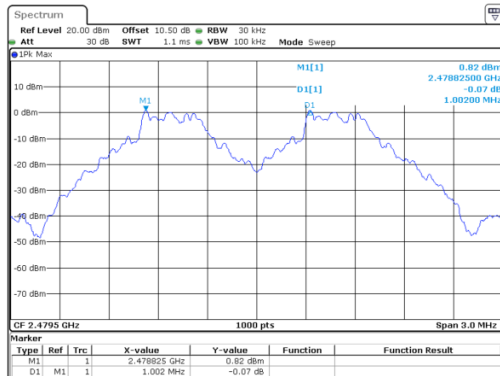
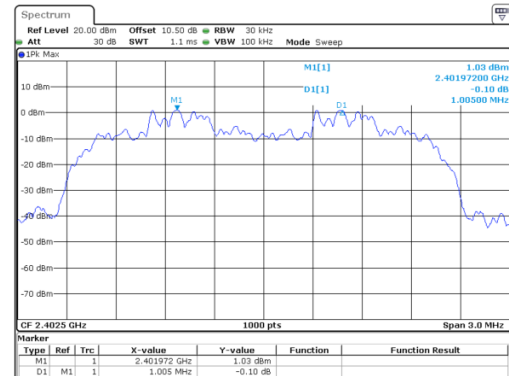
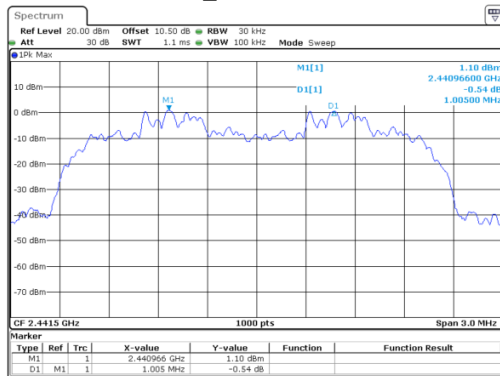
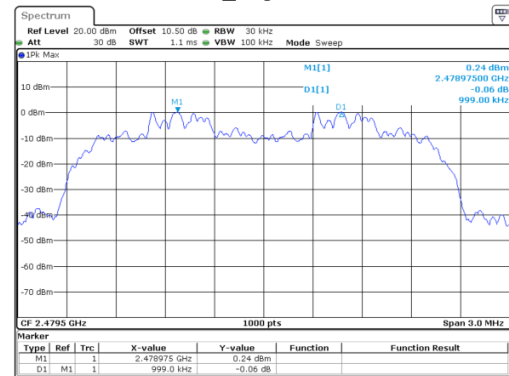


GFSK\_Middle 1.002MHz



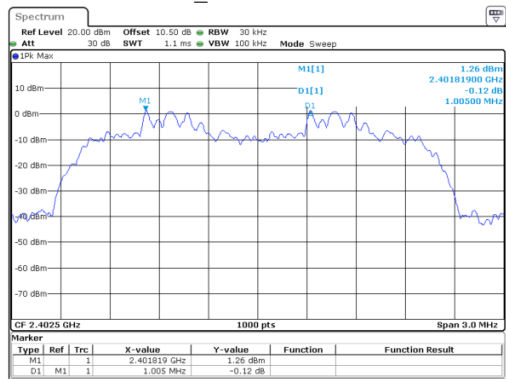
## EDR

GFSK\_High 1.002 MHz

 $\pi/4$ -DQPSK\_Low 1.005 MHz $\pi/4$ -DQPSK\_Middle 1.005 MHz $\pi/4$ -DQPSK\_High 0.999 MHz

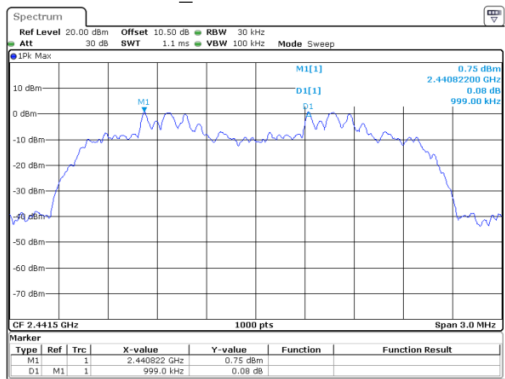


8DPSK\_Low 1.005 MHz



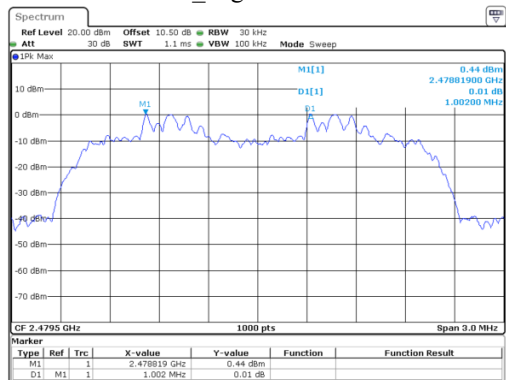
ProjectNo.:2401T49731E-RF Tester:Bamboo Zhan  
Date: 31.MAY.2024 13:09:36

8DPSK\_Middle 0.999 MHz



ProjectNo.:2401T49731E-RF Tester:Bamboo Zhan  
Date: 31.MAY.2024 13:11:01

8DPSK\_High 1.002 MHz



ProjectNo.:2401T49731E-RF Tester:Bamboo Zhan  
Date: 31.MAY.2024 13:13:05

Number of Hopping Frequency

Test Information:

Serial No.:	2LX2-1	Test Date:	2024/05/31
Test Site:	RF	Test Mode:	Transmitting
Tester:	Bamboo Zhan	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25.1	Relative Humidity: (%)	49	ATM Pressure: (kPa)	101
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BDR

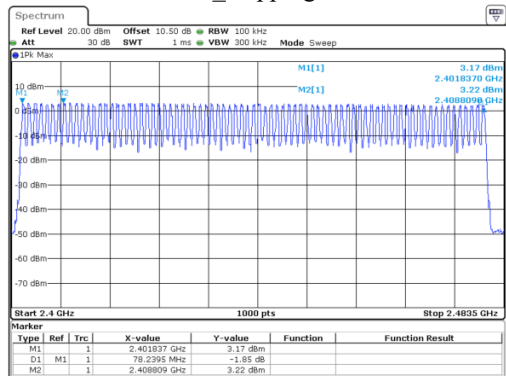
Mode	Value	Limit	Result
GFSK_Hopping	79	15	Pass

EDR

Mode	Value	Limit	Result
$\pi/4$ -DQPSK_Hopping	79	15	Pass
8DPSK_Hopping	79	15	Pass

BDR

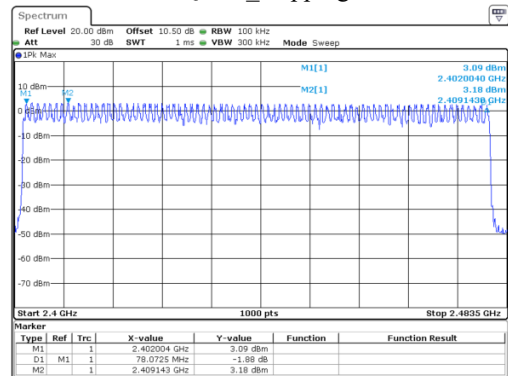
GFSK\_Hopping 79



ProjectNo.:2401T49731E-RF Tester:Bamboo Zhan  
Date: 31.MAY.2024 11:53:41

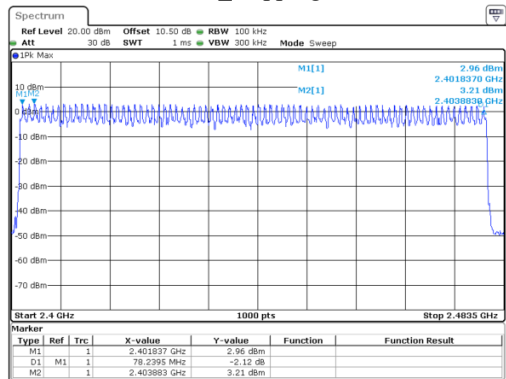
EDR

$\pi/4$ -DQPSK\_Hopping 79



ProjectNo.:2401T49731E-RF Tester:Bamboo Zhan  
Date: 31.MAY.2024 13:05:21

8DPSK\_Hopping 79



ProjectNo.:2401T49731E-RF Tester:Bamboo Zhan  
Date: 31.MAY.2024 13:16:32

Time of Occupancy (dwell time)

Test Information:

Serial No.:	2LX2-1	Test Date:	2024/05/31
Test Site:	RF	Test Mode:	Transmitting
Tester:	Bamboo Zhan	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25.1	Relative Humidity: (%)	49	ATM Pressure: (kPa)	101
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BDR

Mode	Pulse width (ms)	Dwell time (s)	Limit (s)	Result
GFSK_Hopping_DH1	0.414	0.132	0.400	Pass
GFSK_Hopping_DH3	1.674	0.268	0.400	Pass
GFSK_Hopping_DH5	2.930	0.313	0.400	Pass

EDR

Mode	Pulse width (ms)	Dwell time (s)	Limit (s)	Result
$\pi/4$ -DQPSK_Hopping_2DH1	0.425	0.136	0.400	Pass
$\pi/4$ -DQPSK_Hopping_2DH3	1.680	0.269	0.400	Pass
$\pi/4$ -DQPSK_Hopping_2DH5	2.940	0.314	0.400	Pass
8DPSK_Hopping_3DH1	0.426	0.136	0.400	Pass
8DPSK_Hopping_3DH3	1.680	0.269	0.400	Pass
8DPSK_Hopping_3DH5	2.940	0.314	0.400	Pass

Note:

DH1:Dwell time=Pulse time (ms) × (1600/2/79) ×31.6 s

DH3:Dwell time=Pulse time (ms) × (1600/4/79) ×31.6 s

DH5:Dwell time=Pulse time (ms) × (1600/6/79) ×31.6 s

2DH1: Dwell time=Pulse time (ms) × (1600/2/79) ×31.6 s

2DH3: Dwell time=Pulse time (ms) × (1600/4/79) ×31.6 s

2DH5: Dwell time=Pulse time (ms) × (1600/6/79) ×31.6 s

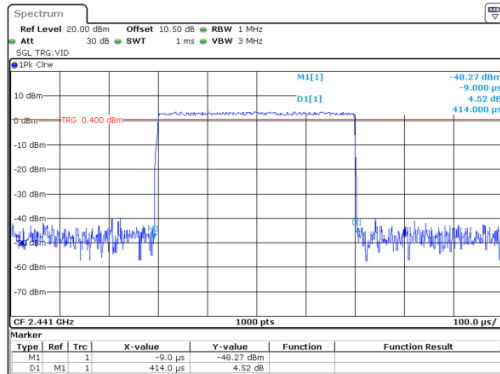
3DH1: Dwell time=Pulse time (ms) × (1600/2/79) ×31.6 s

3DH3: Dwell time=Pulse time (ms) × (1600/4/79) ×31.6 s

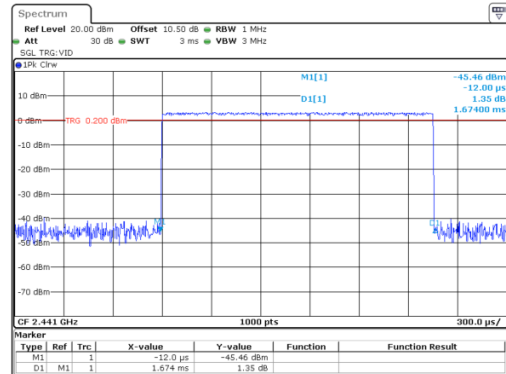
3DH5: Dwell time=Pulse time (ms) × (1600/6/79) ×31.6 s

## BDR

GFSK\_Hopping\_DH1 0.414ms

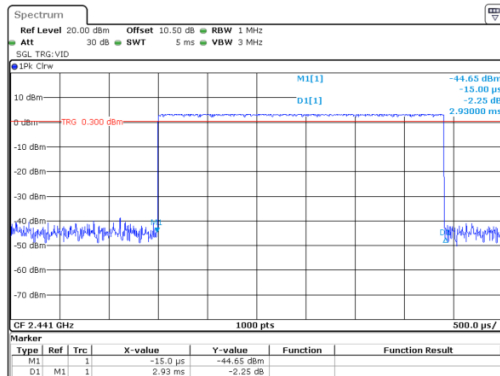
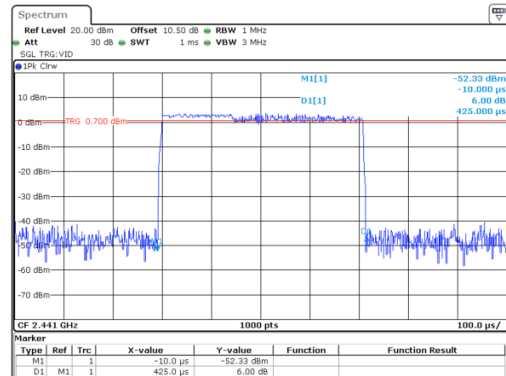
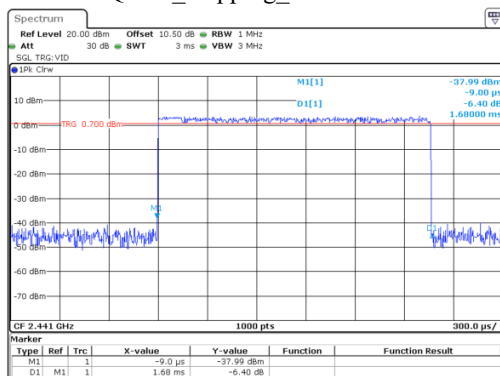
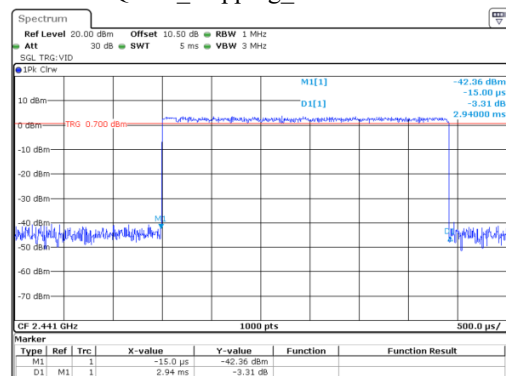


GFSK\_Hopping\_DH3 1.674ms

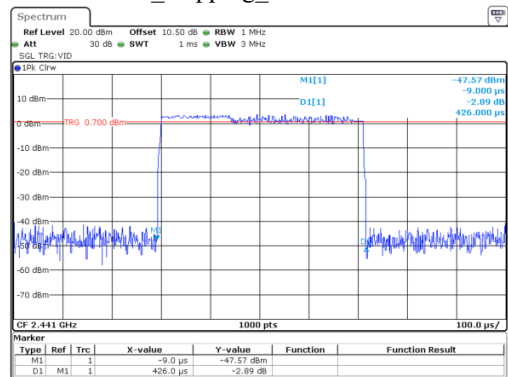


## EDR

GFSK\_Hopping\_DH5 2.930ms

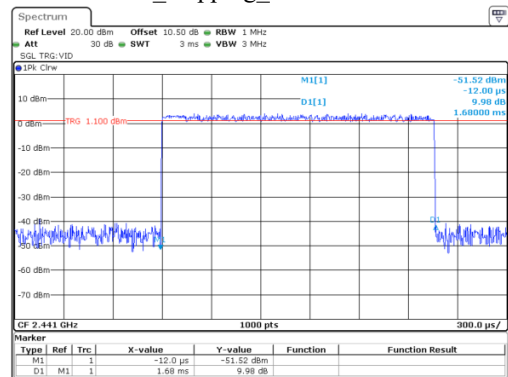
 $\pi/4$ -DQPSK\_Hopping\_2DH1 0.425ms $\pi/4$ -DQPSK\_Hopping\_2DH3 1.680ms $\pi/4$ -DQPSK\_Hopping\_2DH5 2.940ms

8DPSK\_Hopping\_3DH1 0.426ms



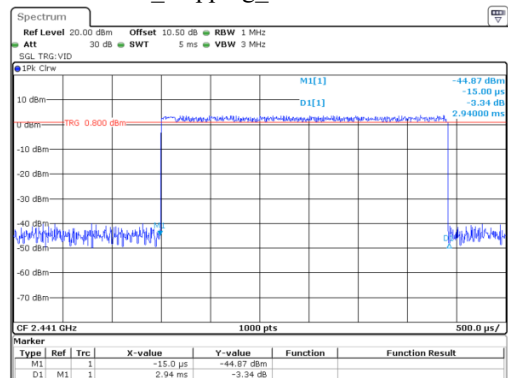
ProjectNo.:2401T49731E-RF Tester:Banboo Zhan  
Date: 31.MAY.2024 13:16:56

8DPSK\_Hopping\_3DH3 1.680ms



ProjectNo.:2401T49731E-RF Tester:Banboo Zhan  
Date: 31.MAY.2024 13:17:33

8DPSK\_Hopping\_3DH5 2.940ms



ProjectNo.:2401T49731E-RF Tester:Banboo Zhan  
Date: 31.MAY.2024 13:18:09

Maximum Conducted Output Power

Test Information:

Serial No.:	2LX2-1	Test Date:	2024/06/03
Test Site:	RF	Test Mode:	Transmitting
Tester:	Bamboo Zhan	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	24.5~25.7	Relative Humidity: (%)	41~52	ATM Pressure: (kPa)	101
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For Right earbuds

BDR

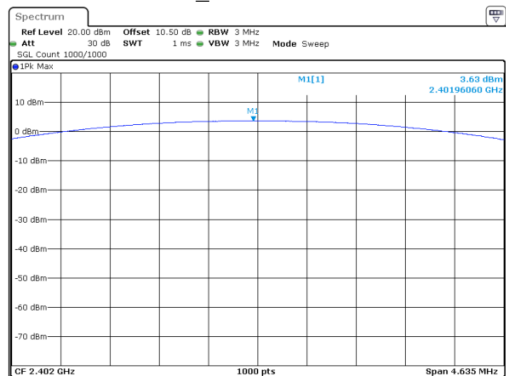
Mode	Value (dBm)	Limit (dBm)	Result
GFSK_Low	3.63	21.00	Pass
GFSK_Middle	3.11	21.00	Pass
GFSK_High	2.83	21.00	Pass

EDR

Mode	Value (dBm)	Limit (dBm)	Result
$\pi/4$ -DQPSK_Low	4.19	21.00	Pass
$\pi/4$ -DQPSK_Middle	3.71	21.00	Pass
$\pi/4$ -DQPSK_High	3.39	21.00	Pass
8DPSK_Low	5.01	21.00	Pass
8DPSK_Middle	4.52	21.00	Pass
8DPSK_High	4.24	21.00	Pass

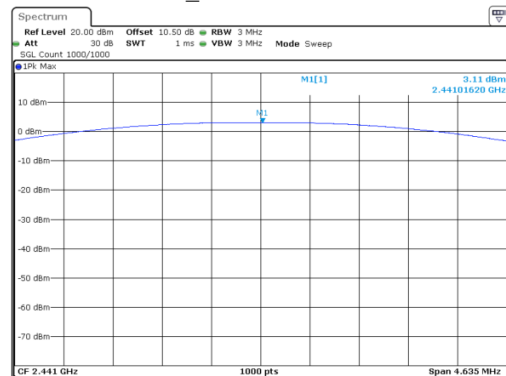
BDR

GFSK\_Low 3.63 dBm



ProjectNo.:2401T49731E-RF Tester:Bamboo Zhan  
Date: 3.JUN.2024 10:07:43

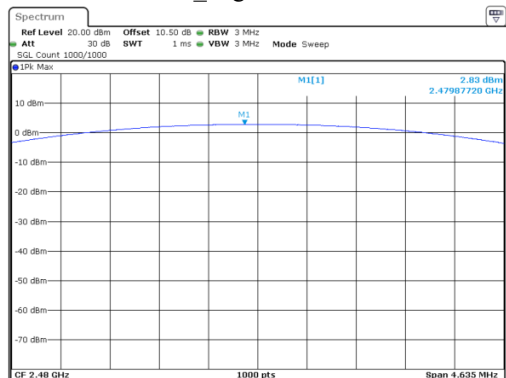
GFSK\_Middle 3.11 dBm



ProjectNo.:2401T49731E-RF Tester:Bamboo Zhan  
Date: 3.JUN.2024 10:08:13

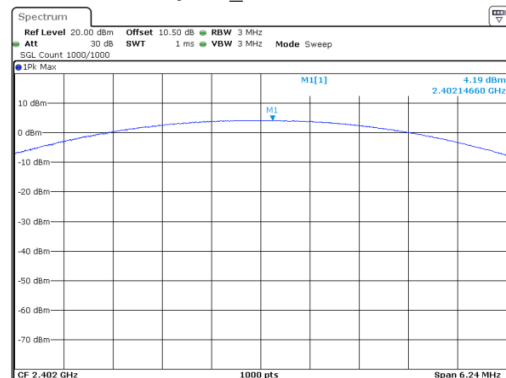
EDR

GFSK\_High 2.83 dBm



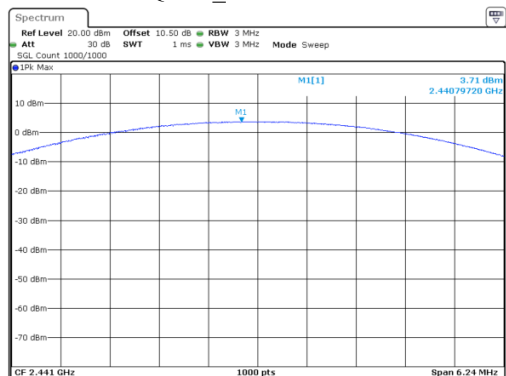
ProjectNo.:2401T49731E-RF Tester:Bamboo Zhan  
Date: 3.JUN.2024 10:08:17

$\pi/4$ -DQPSK\_Low 4.19 dBm



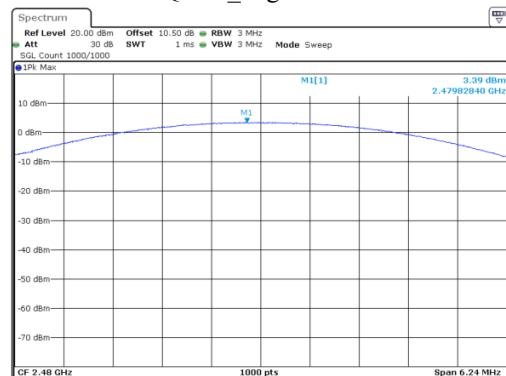
ProjectNo.:2401T49731E-RF Tester:Bamboo Zhan  
Date: 3.JUN.2024 10:09:05

$\pi/4$ -DQPSK\_Middle 3.71 dBm



ProjectNo.:2401T49731E-RF Tester:Bamboo Zhan  
Date: 3.JUN.2024 10:09:14

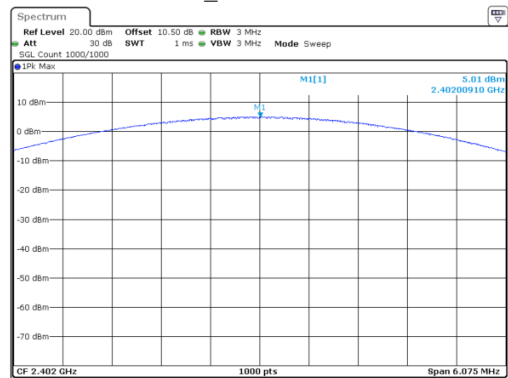
$\pi/4$ -DQPSK\_High 3.39 dBm



ProjectNo.:2401T49731E-RF Tester:Bamboo Zhan  
Date: 3.JUN.2024 10:10:01

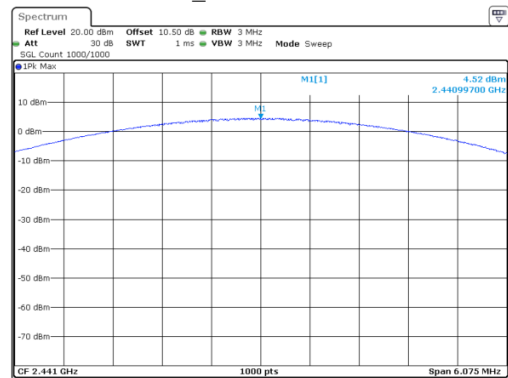


8DPSK\_Low 5.01 dBm



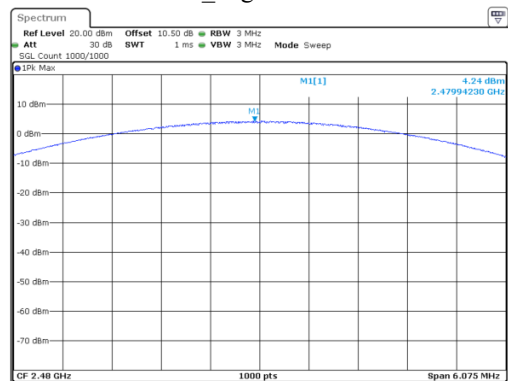
ProjectNo.:2401T49731E-RF Tester:Bamboo Zhan  
Date: 3.JUN.2024 10:10:29

8DPSK\_Middle 4.52 dBm



ProjectNo.:2401T49731E-RF Tester:Bamboo Zhan  
Date: 3.JUN.2024 10:10:58

8DPSK\_High 4.24 dBm



ProjectNo.:2401T49731E-RF Tester:Bamboo Zhan  
Date: 3.JUN.2024 10:11:23

**For Left earbuds****BDR**

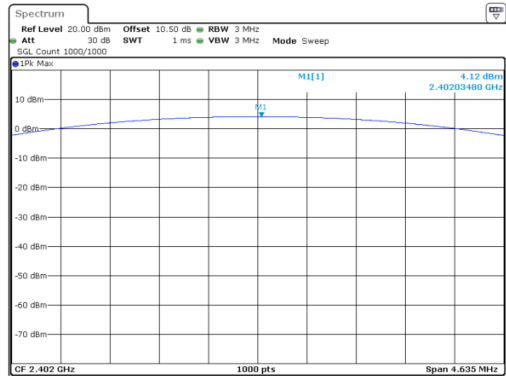
Mode	Value (dBm)	Limit (dBm)	Result
GFSK_Low	4.12	21.00	Pass
GFSK_Middle	3.50	21.00	Pass
GFSK_High	3.09	21.00	Pass

**EDR**

Mode	Value (dBm)	Limit (dBm)	Result
$\pi/4$ -DQPSK_Low	4.85	21.00	Pass
$\pi/4$ -DQPSK_Middle	4.26	21.00	Pass
$\pi/4$ -DQPSK_High	3.86	21.00	Pass
8DPSK_Low	5.02	21.00	Pass
8DPSK_Middle	4.39	21.00	Pass
8DPSK_High	4.01	21.00	Pass

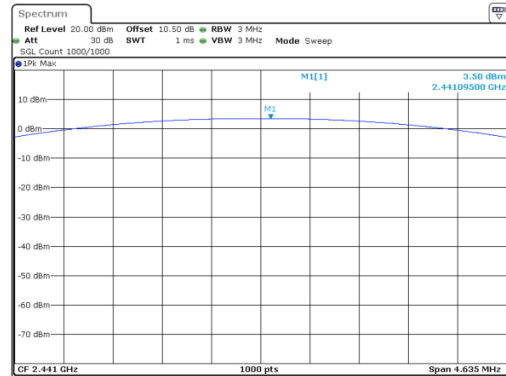
BDR

GFSK\_Low 4.12 dBm



ProjectNo.:2401T49731E-RF Tester:Bamboo Zhan  
Date: 3.JUN.2024 16:18:59

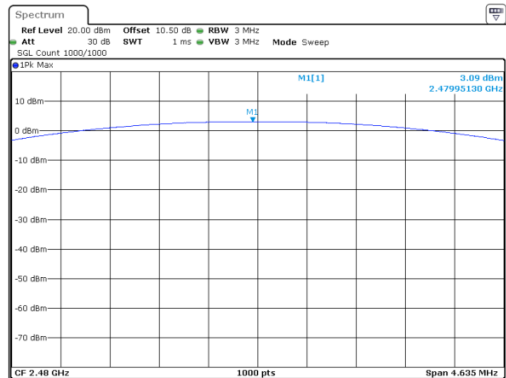
GFSK\_Middle 3.50 dBm



ProjectNo.:2401T49731E-RF Tester:Bamboo Zhan  
Date: 3.JUN.2024 16:19:31

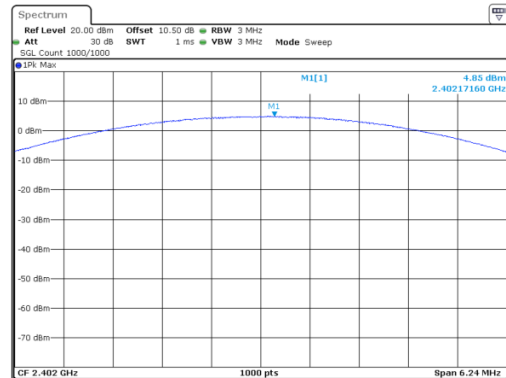
EDR

GFSK\_High 3.09 dBm



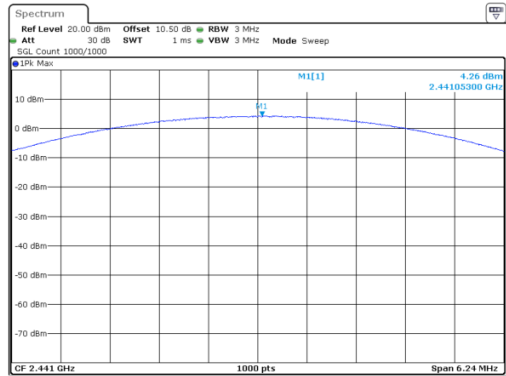
ProjectNo.:2401T49731E-RF Tester:Bamboo Zhan  
Date: 3.JUN.2024 16:21:32

$\pi/4$ -DQPSK\_Low 4.85 dBm



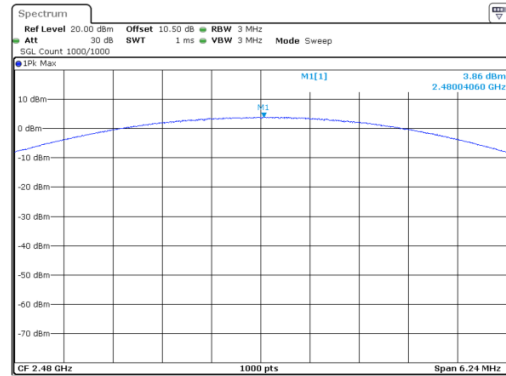
ProjectNo.:2401T49731E-RF Tester:Bamboo Zhan  
Date: 3.JUN.2024 16:21:02

$\pi/4$ -DQPSK\_Middle 4.26 dBm



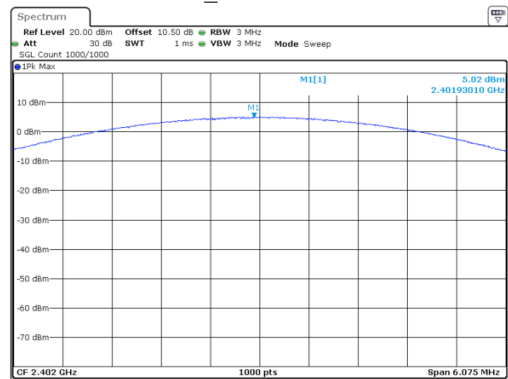
ProjectNo.:2401T49731E-RF Tester:Bamboo Zhan  
Date: 3.JUN.2024 16:21:30

$\pi/4$ -DQPSK\_High 3.86 dBm



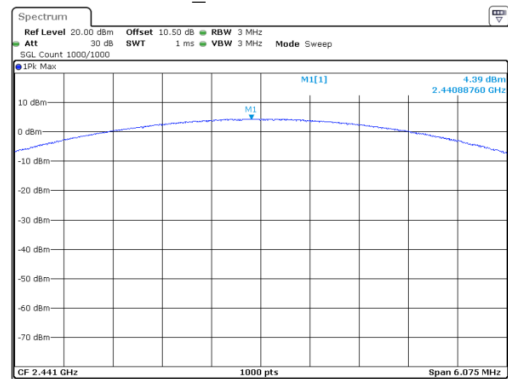
ProjectNo.:2401T49731E-RF Tester:Bamboo Zhan  
Date: 3.JUN.2024 16:21:56

8DPSK\_Low 5.02 dBm



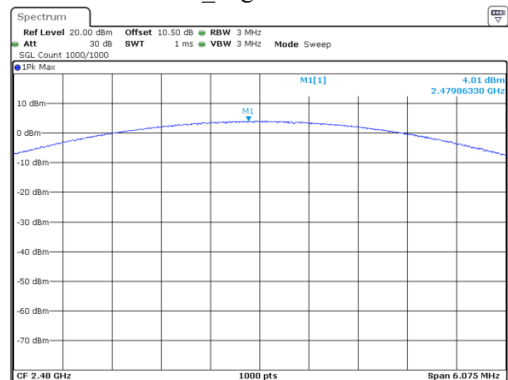
ProjectNo.:2401T49731E-RF Tester:Banboo Zhan  
Date: 3.JUN.2024 16:22:30

8DPSK\_Middle 4.39 dBm



ProjectNo.:2401T49731E-RF Tester:Banboo Zhan  
Date: 3.JUN.2024 16:22:59

8DPSK\_High 4.01 dBm



ProjectNo.:2401T49731E-RF Tester:Banboo Zhan  
Date: 3.JUN.2024 16:23:27

100 kHz Bandwidth of Frequency Band Edge

Test Information:

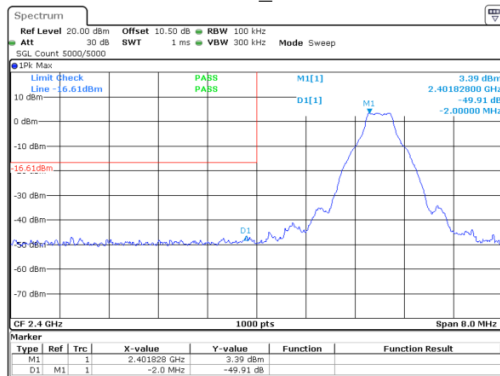
Serial No.:	2LX2-1	Test Date:	2024/05/31
Test Site:	RF	Test Mode:	Transmitting
Tester:	Bamboo Zhan	Test Result:	Pass

Environmental Conditions:

Temperature: (°C)	25.1	Relative Humidity: (%)	49	ATM Pressure: (kPa)	101
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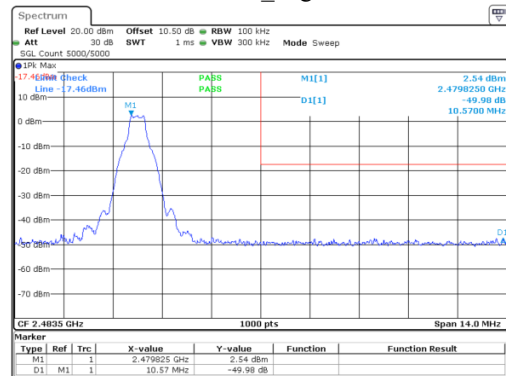
## BDR

## GFSK\_Low



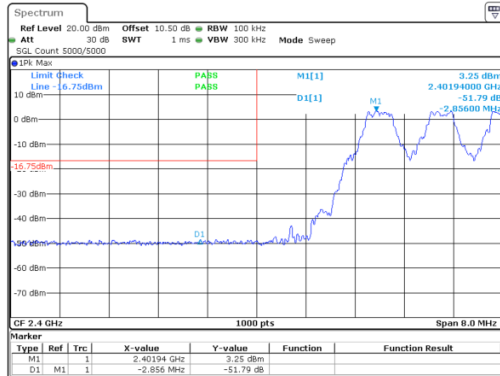
ProjectNo.:2401T49731E-RF Tester:Bamboo Zhan  
Date: 31.MAY.2024 11:46:44

## GFSK\_High



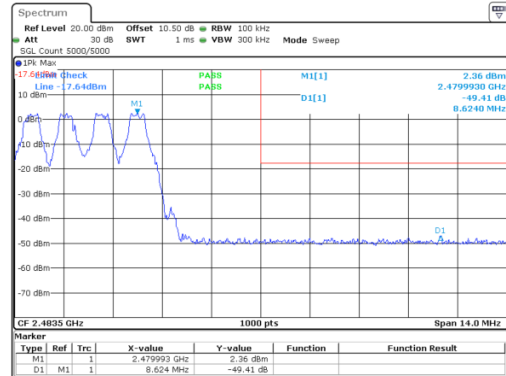
ProjectNo.:2401T49731E-RF Tester:Bamboo Zhan  
Date: 31.MAY.2024 11:50:20

## GFSK\_Hopping\_Lower



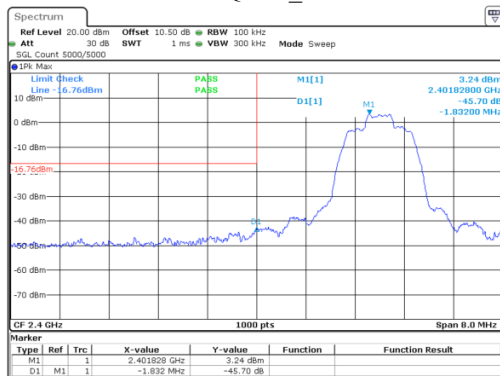
ProjectNo.:2401T49731E-RF Tester:Bamboo Zhan  
Date: 31.MAY.2024 11:52:20

## GFSK\_Hopping\_Upper

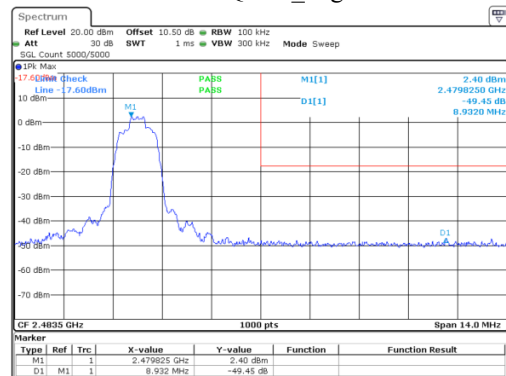


ProjectNo.:2401T49731E-RF Tester:Bamboo Zhan  
Date: 31.MAY.2024 11:53:13

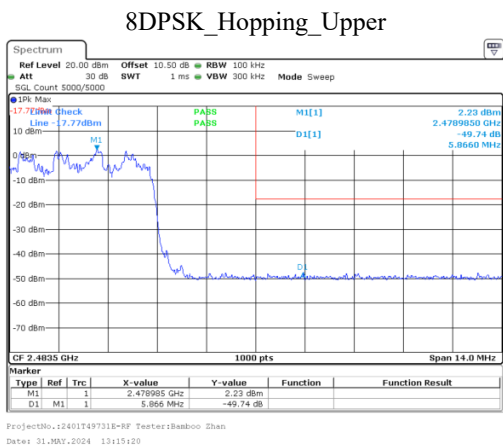
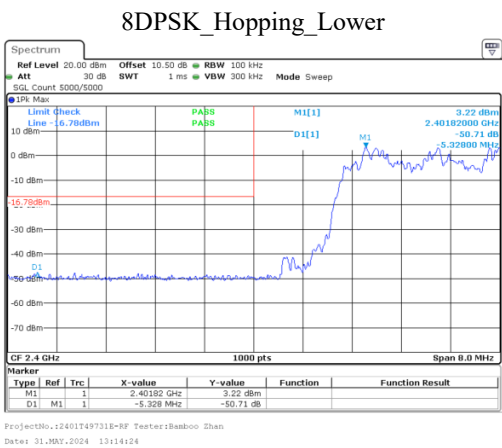
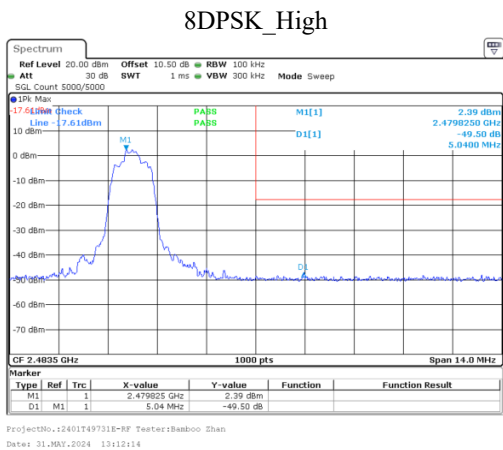
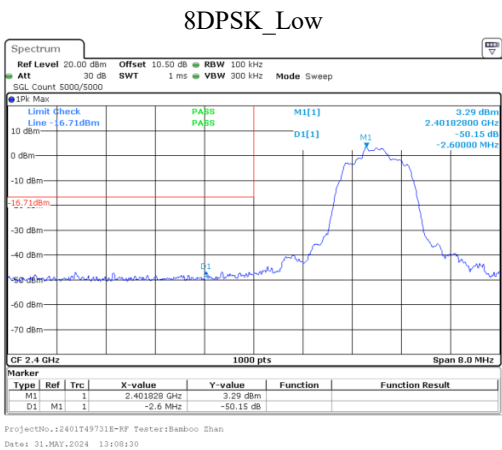
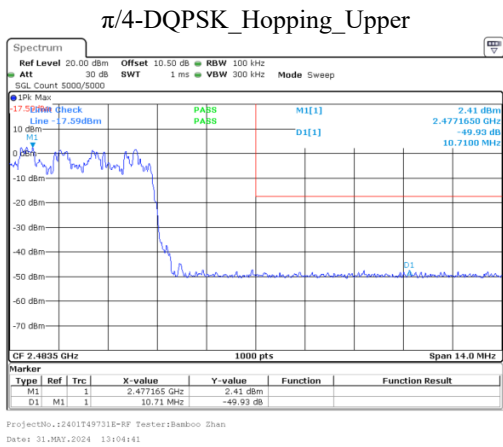
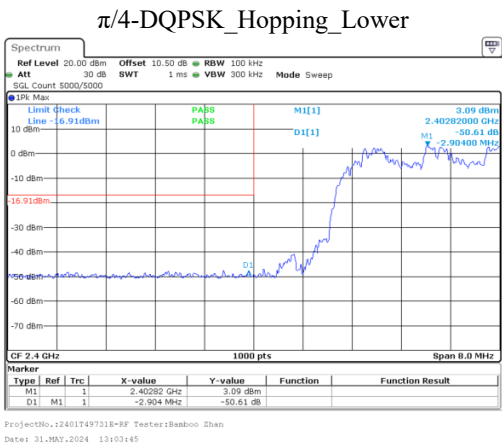
## EDR

 $\pi/4$ -DQPSK\_Low

ProjectNo.:2401T49731E-RF Tester:Bamboo Zhan  
Date: 31.MAY.2024 11:57:15

 $\pi/4$ -DQPSK\_High

ProjectNo.:2401T49731E-RF Tester:Bamboo Zhan  
Date: 31.MAY.2024 13:01:43



## RF EXPOSURE EVALUATION

### Applicable Standard

According to FCC §2.1093 and §1.1307(b) (1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

According to KDB 447498 D01 General RF Exposure Guidance

The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances  $\leq 50$  mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW}) / (\text{min. test separation distance, mm})] \cdot [\sqrt{f(\text{GHz})}] \leq 3.0$  for 1-g SAR and  $\leq 7.5$  for 10-g extremity SAR, where

1.  $f(\text{GHz})$  is the RF channel transmit frequency in GHz.
2. Power and distance are rounded to the nearest mW and mm before calculation.
3. The result is rounded to one decimal place for comparison.
4. When the minimum test separation distance is  $< 5$  mm, a distance of 5 mm is applied to determine SAR test Exclusion.

### Measurement Result

For worst case:

Mode	Frequency (MHz)	Max tune-up conducted power <sup>#</sup> (dBm)	Max tune-up conducted power <sup>#</sup> (mW)	Distance (mm)	Calculated value	Threshold (1-g SAR)	SAR Test Exclusion
BT	2402-2480	5.50	3.55	5	1.1	3	Yes

**Result: Compliant**



## ANTENNA REQUIREMENT

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### Applicable Standard

According to FCC § 15.203, an intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section. The manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

### Antenna Connector Construction

The EUT has an internal antenna arrangement, which was permanently attached, the antenna gain<sup>#</sup> is 2.499 dBi, fulfill the requirement of this section. Please refer to the EUT photos.

**Result: Compliant**

## **EUT PHOTOGRAPHS**

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Please refer to the attachment 2401T49731E-RF External photo and 2401T49731E-RF Internal photo.

## **TEST SETUP PHOTOGRAPHS**

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Please refer to the attachment 2401T49731E-RF-00 Test Setup photo.

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