

# **RF Test Report**

Linklike (Shenzhen) Technology Co., Ltd. **Applicant Name:** 

RM 1709, BLK C, Zhantao Technology BLDG, Minzhi Avenue, Minzhi Address:

ST, Longhua DIST, Shenzhen, China

**EUT Name:** LINKLIKE LY2 **Brand Name:** LINKLIKE Model Number: LNLY2

**Issued By** 

BTF Testing Lab (Shenzhen) Co., Ltd. **Company Name:** 

F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park,

Tantou Community, Songgang Street, Bao'an District, Shenzhen, Address:

China

Report Number: BTF240318R00401 Test Standards: 47 CFR Part 15.247

Pass **Test Conclusion:** 

FCC ID: 2AR3E-LNLY2

Test Date: 2024-03-18 to 2024-03-26

Date of Issue: 2024-03-27

Prepared By:

Chris Liu / Project Enginee

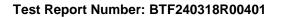
2024-03-27 Date:

Approved By:

Ryan.CJ / EMC Manager

2024-03-27 Date:

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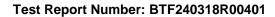
Revision History			
Version	Issue Date	Revisions Content	
R_V0	2024-03-27	Original	
Note: Once the revision has been made, then previous versions reports are invalid.			



### **Table of Contents**

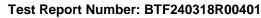
1	INTR	ODUCTION	5
	1.1	Identification of Testing Laboratory	5
	1.2	Identification of the Responsible Testing Location	5
	1.3	Announcement	5
2	PRO	DUCT INFORMATION	6
	2.1	Application Information	6
	2.2	Manufacturer Information	
	2.3	Factory Information	
	2.4	General Description of Equipment under Test (EUT)	
	2.5	Technical Information	
3	SUM	MARY OF TEST RESULTS	7
	3.1	Test Standards	7
	3.2	Uncertainty of Test	
	3.3	Summary of Test Result	7
4	TEST	Γ CONFIGURATION	8
	4.1	Test Equipment List	8
	4.2	Test Auxiliary Equipment	
	4.3	Test Modes	10
5	EVAI	LUATION RESULTS (EVALUATION)	11
	5.1	Antenna requirement	11
		5.1.1 Conclusion:	
6	RΔD	IO SPECTRUM MATTER TEST RESULTS (RF)	
•		· · ·	
	6.1	Conducted Emission at AC power line	
		6.1.1 E.U.T. Operation: 6.1.2 Test Setup Diagram:	
		6.1.3 Test Data:	
	6.2	Occupied Bandwidth	
	0.2	6.2.1 E.U.T. Operation:	
		6.2.2 Test Setup Diagram:	
		6.2.3 Test Data:	
	6.3	Maximum Conducted Output Power	
		6.3.1 E.U.T. Operation:	
		6.3.2 Test Setup Diagram:	
		6.3.3 Test Data:	
	6.4	Channel Separation	19
		6.4.1 E.U.T. Operation:	
		6.4.2 Test Setup Diagram:	
		6.4.3 Test Data:	
	6.5	Number of Hopping Frequencies	
		6.5.1 E.U.T. Operation:	
		6.5.2 Test Setup Diagram:	
		6.5.3 Test Data:	
	6.6	Dwell Time	
		6.6.1 E.U.T. Operation:	
		6.6.2 Test Setup Diagram: 6.6.3 Test Data:	
	6.7	Emissions in non-restricted frequency bands	
	0.7	6.7.1 E.U.T. Operation:	
		6.7.2 Test Setup Diagram:	
		C. I. C.	2-7

Page 3 of 93





		6.7.3	Test Data:	24
	6.8	Band	edge emissions (Radiated)	2
			E.U.T. Operation:	
		6.8.2	Test Setup Diagram: Test Data:	25
		6.8.3	Test Data:	
	6.9	Emiss	sions in frequency bands (below 1GHz)	27
			E.U.T. Operation:	
		6.9.2	Test Setup Diagram:	27
			Test Data:	
	6.10	Emis	ssions in frequency bands (above 1GHz)	30
		6.10.1	1 E.U.T. Operation:	30
		6.10.2	2 Test Setup Diagram:	30
			3 Test Data:	
7	TEST	Γ SETU	JP PHOTOS	
8			TRUCTIONAL DETAILS (EUT PHOTOS)	
ΔΡΡΙ	ENDIX			30





### 1 Introduction

### 1.1 Identification of Testing Laboratory

Company Name: BTF Testing Lab (Shenzhen) Co., Ltd.	
Address:	F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China
Phone Number:	+86-0755-23146130
Fax Number:	+86-0755-23146130

### 1.2 Identification of the Responsible Testing Location

		<u> </u>
Company Name: BTF Testing Lab (Shenzhen) Co., Ltd.		BTF Testing Lab (Shenzhen) Co., Ltd.
Address: F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tar Community, Songgang Street, Bao'an District, Shenzhen, China		
Phone Number: +86-0755-23146130		+86-0755-23146130
Fax Number: +86-0755- FCC Registration Number: 518915 Designation Number: CN1330		+86-0755-23146130
		518915
		CN1330

#### 1.3 Announcement

- (1) The test report reference to the report template version v0.
- (2) The test report is invalid if not marked with the signatures of the persons responsible for preparing, reviewing and approving the test report.
- (3) The test report is invalid if there is any evidence and/or falsification.
- (4) This document may not be altered or revised in any way unless done so by BTF and all revisions are duly noted in the revisions section.
- (5) Content of the test report, in part or in full, cannot be used for publicity and/or promotional purposes without prior written approval from the laboratory.
- (6) The laboratory is only responsible for the data released by the laboratory, except for the part provided by the applicant.





### 2 Product Information

### 2.1 Application Information

Company Name:	Linklike (Shenzhen) Technology Co., Ltd.
Address:	RM 1709, BLK C, Zhantao Technology BLDG, Minzhi Avenue, Minzhi ST, Longhua DIST, Shenzhen, China

### 2.2 Manufacturer Information

Company Name: Linklike (Shenzhen) Technology Co., Ltd.		Linklike (Shenzhen) Technology Co., Ltd.
	Address:	RM 1709, BLK C, Zhantao Technology BLDG, Minzhi Avenue, Minzhi ST, Longhua DIST, Shenzhen, China

### 2.3 Factory Information

Company Name: Linklike (Shenzhen) Technology Co., Ltd.		Linklike (Shenzhen) Technology Co., Ltd.	
	Address:	RM 1709, BLK C, Zhantao Technology BLDG, Minzhi Avenue, Minzhi ST,	
	Address.	Longhua DIST, Shenzhen, China	

## 2.4 General Description of Equipment under Test (EUT)

EUT Name:	LINKLIKE LY2
Test Model Number:	LNLY2
Hardware Version:	N/A
Software Version:	N/A

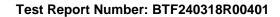
### 2.5 Technical Information

Power Supply:	DC 5V 0.3A from adaptor or 3.7V from battery	
Operation Frequency:	2402MHz to 2480MHz	
Number of Channels:	79	
Modulation Type:	GFSK, π/4 DQPSK, 8DPSK	
Antenna Type:	Ceramic antenna	
Antenna Gain <sup>#</sup> :	1.71dBi	
NI-4-	•	

#### Note:

#: The antenna gain provided by the applicant, and the laboratory will not be responsible for the accumulated calculation results which covers the information provided by the applicant.

Bluetooth Version: 5.3





### 3 Summary of Test Results

#### 3.1 Test Standards

The tests were performed according to following standards: 47 CFR Part 15.247: Operation within the bands 902-928 MHz, 2400-2483.5 MHz, and 5725-5850 MHz

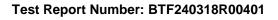
### 3.2 Uncertainty of Test

Item	Measurement Uncertainty
Conducted Emission (150 kHz-30 MHz)	±2.64dB
Occupied Bandwidth	±69kHz
Transmitter Power, Conducted	±0.87dB
Conducted Spurious Emissions	±0.95dB
Radiated Spurious Emissions (above 1GHz)	1-6GHz: ±3.94dB 6-18GHz: ±4.16dB
Radiated Spurious Emissions (30M - 1GHz)	±4.12dB

The following measurement uncertainty levels have been estimated for tests performed on the EUT as specified in CISPR 16-4-2. This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.

### 3.3 Summary of Test Result

Item	Standard	Requirement	Result
Antenna requirement	47 CFR Part 15.247	47 CFR 15.203	Pass
Conducted Emission at AC power line	47 CFR Part 15.247	47 CFR 15.207(a)	Pass
Occupied Bandwidth	47 CFR Part 15.247	47 CFR 15.215(c)	Pass
Maximum Conducted Output Power	47 CFR Part 15.247	47 CFR 15.247(b)(1)	Pass
Channel Separation	47 CFR Part 15.247	47 CFR 15.247(a)(1)	Pass
Number of Hopping Frequencies	47 CFR Part 15.247	47 CFR 15.247(a)(1)(iii)	Pass
Dwell Time	47 CFR Part 15.247	47 CFR 15.247(a)(1)(iii)	Pass
Emissions in non-restricted frequency bands	47 CFR Part 15.247	47 CFR 15.247(d), 15.209, 15.205	Pass
Band edge emissions (Radiated)	47 CFR Part 15.247	47 CFR 15.247(d), 15.209, 15.205	Pass
Emissions in frequency bands (below 1GHz)	47 CFR Part 15.247	47 CFR 15.247(d), 15.209, 15.205	Pass
Emissions in frequency bands (above 1GHz)	47 CFR Part 15.247	47 CFR 15.247(d), 15.209, 15.205	Pass





# **Test Configuration**

## **Test Equipment List**

Conducted Emission at AC power line							
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date		
Pulse Limiter	SCHWARZBECK	VTSD 9561-F	00953	1	1		
Coaxial Switcher	SCHWARZBECK	CX210	CX210	1	1		
V-LISN	SCHWARZBECK	NSLK 8127	01073	2023-11-16	2024-11-15		
LISN	AFJ	LS16/110VAC	16010020076	2023-11-26	2024-11-15		
EMI Receiver	ROHDE&SCHWA RZ	ESCI3	101422	2023-11-15	2024-11-14		

**Occupied Bandwidth** 

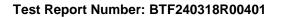
**Maximum Conducted Output Power** 

**Channel Separation** 

Number of Hopping Frequencies

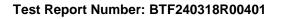
**Dwell Time** 

Emissions in non-restricted frequency bands							
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date		
RFTest software	/	V1.00	1	/	1		
RF Control Unit	Techy	TR1029-1	1	/	1		
RF Sensor Unit	Techy	TR1029-2	1	1	1		
Programmable constant temperature and humidity box	ZZCKONG	ZZ-K02A	20210928007	2023-11-16	2024-11-15		
Adjustable Direct Current Regulated Power Supply	Dongguan Tongmen Electronic Technology Co., LTD	etm-6050c	20211026123	1	1		
WIDEBAND RADIO COMMNUNICATION TESTER	Rohde & Schwarz	CMW500	161997	2023-11-16	2024-11-15		
MXA Signal Analyzer	KEYSIGHT	N9020A	MY50410020	2023-11-16	2024-11-15		





Band edge emissions	(Padiated)								
Emissions in frequen		GHz)							
Emissions in frequency bands (above 1GHz)									
Equipment	Manufacturer	Model No	Inventory No	Cal Date	Cal Due Date				
Coaxial cable Multiflex 141	Schwarzbeck	N/SMA 0.5m	517386	1	1				
Preamplifier	SCHWARZBECK	BBV9744	00246	1	1				
RE Cable	REBES Talent	UF1-SMASMAM-1 0m	21101566	1	1				
RE Cable	REBES Talent	UF2-NMNM-10m	21101570	1	1				
RE Cable	REBES Talent	UF1-SMASMAM-1 m	21101568	1	1				
RE Cable	REBES Talent	UF2-NMNM-1m	21101576	1	1				
RE Cable	REBES Talent	UF2-NMNM-2.5m	21101573	1	1				
POSITIONAL CONTROLLER	SKET	PCI-GPIB	1	1	1				
Horn Antenna	SCHWARZBECK	BBHA9170	01157	2023-11-13	2024-11-12				
EMI TEST RECEIVER	ROHDE&SCHWA RZ	ESCI7	101032	2023-11-16	2024-11-15				
SIGNAL ANALYZER	ROHDE&SCHWA RZ	FSQ40	100010	2023-11-16	2024-11-15				
POSITIONAL CONTROLLER	SKET	PCI-GPIB	1	1	1				
Broadband Preamplilifier	SCHWARZBECK	BBV9718D	00008	1	1				
Horn Antenna	SCHWARZBECK	BBHA9120D	2597	2022-05-22	2024-05-21				
EZ_EMC	Frad	FA-03A2 RE+	1	1	1				
POSITIONAL CONTROLLER	SKET	PCI-GPIB	1	1	1				
Log periodic antenna	SCHWARZBECK	VULB 9168	01328	2023-11-13	2024-11-12				



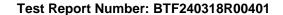


# 4.2 Test Auxiliary Equipment

Title	Manufacturer	Model No.	Serial No.
Adapter	Huawei	HW-059200CHQ	1

### **Test Modes**

No.	Test Modes	Description
TM1	TX-GFSK	Keep the EUT in continuously transmitting mode (non-hopping) with
I IVI I	(Non-Hopping)	GFSK modulation.
TM2	TX-Pi/4DQPSK	Keep the EUT in continuously transmitting mode (non-hopping) with
I IVIZ	(Non-Hopping)	Pi/4DQPSK modulation.
TM3	TX-8DPSK	Keep the EUT in continuously transmitting mode (non-hopping) with
TIVIS	(Non-Hopping)	8DPSK modulation.
TM4	TX-GFSK (Hopping)	Keep the EUT in continuously transmitting mode (hopping) with GFSK
1 1014	TX-GF3K (Hopping)	modulation,.
TM5	TX-Pi/4DQPSK	Keep the EUT in continuously transmitting mode (hopping) with
TIVIO	(Hopping)	Pi/4DQPSK modulation.
TM6	TX-8DPSK (Hopping)	Keep the EUT in continuously transmitting mode (hopping) with 8DPSK
1 1010	TX 6B1 GIX (Hopping)	modulation.





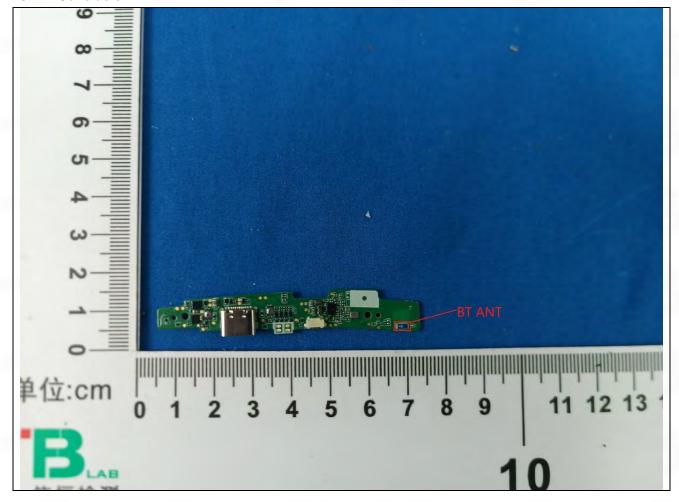
# 5 Evaluation Results (Evaluation)

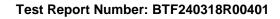
### 5.1 Antenna requirement

Test Requirement:

Refer to 47 CFR Part 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.

#### 5.1.1 Conclusion:







# 6 Radio Spectrum Matter Test Results (RF)

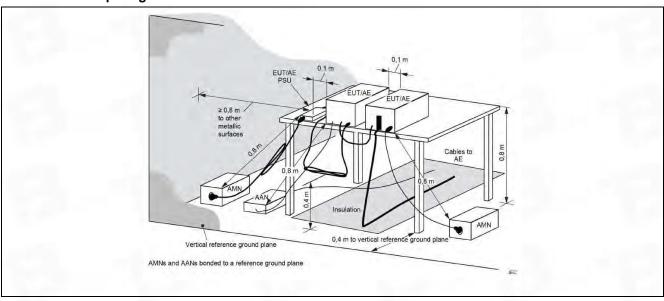
## 6.1 Conducted Emission at AC power line

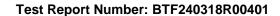
Test Requirement:	Refer to 47 CFR 15.207(a), Except as shown in paragraphs (b)and (c)of this section, for an intentional radiator that is designed to be connected to the public utility (AC) power line, the radio frequency voltage that is conducted back onto the AC power line on any frequency or frequencies, within the band 150 kHz to 30 MHz, shall not exceed the limits in the following table, as measured using a 50 µH/50 ohms line impedance stabilization network (LISN).						
Test Method:	ANSI C63.10-2013 section 6.2						
	Frequency of emission (MHz)	Conducted limit (dBµV)					
		Quasi-peak	Average				
Test Limit:	0.15-0.5	66 to 56*	56 to 46*				
Test Littit.	0.5-5	56	46				
	5-30	60	50				
	*Decreases with the logarithm of the frequency.						
Droodure	Refer to ANSI C63.10-2013 section 6.2, standard test method for ac power-line						
Procedure:	conducted emissions from unlicen	sed wireless devices					

### 6.1.1 E.U.T. Operation:

Operating Environment:		
Temperature:	22.1 °C	
Humidity:	49.9 %	
Atmospheric Pressure:	1010 mbar	

### 6.1.2 Test Setup Diagram:

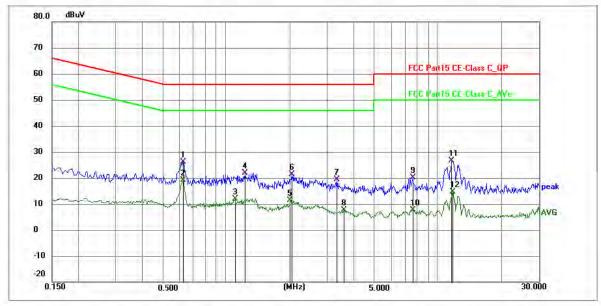




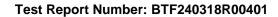


#### 6.1.3 Test Data:

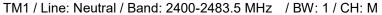
TM1 / Line: Line / Band: 2400-2483.5 MHz / BW: 1 / CH: M

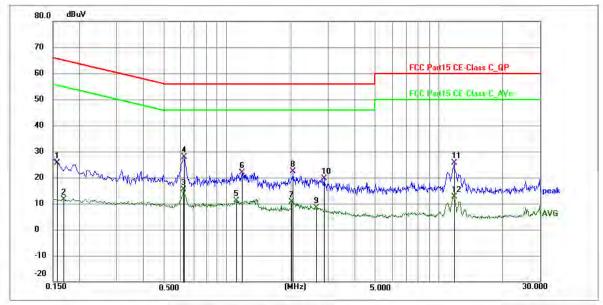


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.6270	15.60	10.64	26.24	56.00	-29.76	QP	Р	
2 *	0.6270	8.57	10.64	19.21	46.00	-26.79	AVG	Р	
3	1.1040	1.20	10.66	11.86	46.00	-34.14	AVG	Р	
4	1.2255	11.23	10.66	21.89	56.00	-34.11	QP	Р	
5	2.0040	0.76	10.68	11.44	46.00	-34.56	AVG	Р	
6	2.0400	10.72	10.68	21.40	56.00	-34.60	QP	Р	
7	3.3450	8.68	10.65	19.33	56.00	-36.67	QP	Р	
8	3.5880	-3.13	10.64	7.51	46.00	-38.49	AVG	Р	
9	7.6020	9.38	10.80	20.18	60.00	-39.82	QP	Р	
10	7.6245	-3.05	10.80	7.75	50.00	-42.25	AVG	Р	
11	11.6790	15.71	10.86	26.57	60.00	-33.43	QP	Р	
12	11.8050	3.77	10.87	14.64	50.00	-35.36	AVG	P	

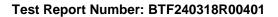








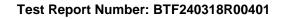
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1565	15.27	10.46	25.73	65.65	-39.92	QP	Р	
2	0.1680	1.25	10.49	11.74	55.06	-43.32	AVG	Р	
3	0.6225	4.70	10.64	15.34	46.00	-30.66	AVG	Р	
4 *	0.6270	17.27	10.64	27.91	56.00	-28.09	QP	Р	
5	1.1040	0.56	10.66	11.22	46.00	-34.78	AVG	Р	
6	1.1849	11.11	10.66	21.77	56.00	-34.23	QP	Р	
7	2.0130	-0.12	10.68	10.56	46.00	-35.44	AVG	Р	in the second se
8	2.0535	11.60	10.68	22.28	56.00	-33.72	QP	Р	
9	2.6250	-2.29	10.67	8.38	46.00	-37.62	AVG	Р	
10	2.8815	9.01	10.68	19.69	56.00	-36.31	QP	Р	
11	11.8275	14.77	10.87	25.64	60.00	-34.36	QP	Р	
12	11.8275	1.79	10.87	12.66	50.00	-37.34	AVG	Р	





### 6.2 Occupied Bandwidth

Test Requirement:	47 CFR 15.215(c)
rest requirement.	ANSI C63.10-2013, section 7.8.7, For occupied bandwidth measurements, use the
Test Method:	procedure in 6.9.2. KDB 558074 D01 15.247 Meas Guidance v05r02
Test Limit:	Refer to 47 CFR 15.215(c), intentional radiators operating under the alternative provisions to the general emission limits, as contained in §§ 15.217 through 15.257 and in subpart E of this part, must be designed to ensure that the 20 dB bandwidth of the emission, or whatever bandwidth may otherwise be specified in the specific rule section under which the equipment operates, is contained within the frequency band designated in the rule section under which the equipment is operated.
	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 (OBW/RBW)] below the reference level. Specific guidance is given in 4.1.5.2. 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 unmodulated carrier or modulated signal, as applicable. Allow the trace to stabilize. Set the spectrum
Procedure:	analyzer marker to the highest level of the displayed trace (this is the reference value).  h) Determine the "-xx dB down amplitude" using [(reference value) - 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 unmodulated 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).

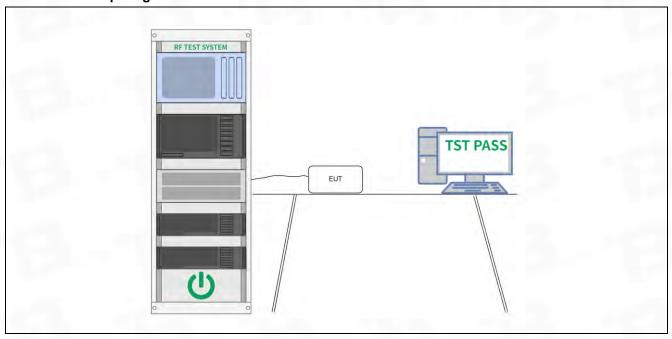




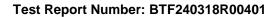
### 6.2.1 E.U.T. Operation:

Operating Environment:		
Temperature:	22.9 °C	
Humidity:	53.5 %	
Atmospheric Pressure:	1010 mbar	

### 6.2.2 Test Setup Diagram:



#### 6.2.3 Test Data:





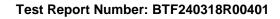
# 6.3 Maximum Conducted Output Power

Test Requirement:	47 CFR 15.247(b)(1)
Test Method:	ANSI C63.10-2013, section 7.8.5
Test Method.	KDB 558074 D01 15.247 Meas Guidance v05r02
Test Limit:	Refer to 47 CFR 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. For all other frequency hopping systems in the 2400-2483.5 MHz band: 0.125 watts.
Procedure:	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 >= 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.  e) A plot of the test results and setup description shall be included in the test report.  NOTE—A peak responding power meter may be used, where the power meter and sensor system video bandwidth is greater than the occupied bandwidth of the unlicensed wireless device, rather than a spectrum analyzer.

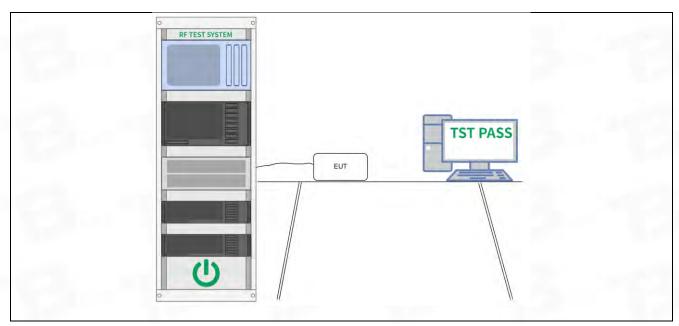
### 6.3.1 E.U.T. Operation:

Operating Environment:				
Temperature: 22.9 °C				
Humidity:	53.5 %			
Atmospheric Pressure:	1010 mbar			

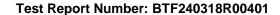
### 6.3.2 Test Setup Diagram:







6.3.3 Test Data:





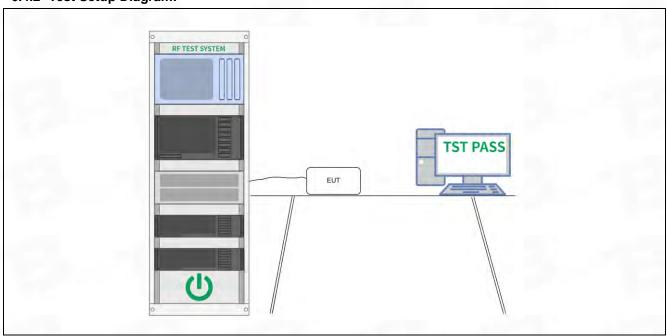
### 6.4 Channel Separation

Test Requirement:	47 CFR 15.247(a)(1)
Test Method:	ANSI C63.10-2013, section 7.8.2
Test Method.	KDB 558074 D01 15.247 Meas Guidance v05r02
Test Limit:	Refer to 47 CFR 15.247(a)(1), 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.
Procedure:	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) ≥ 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. A plot of the data shall be included in the test report.

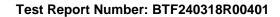
### 6.4.1 E.U.T. Operation:

<u> </u>	
Operating Environment:	
Temperature:	22.9 °C
Humidity:	53.5 %
Atmospheric Pressure:	1010 mbar

### 6.4.2 Test Setup Diagram:



#### 6.4.3 Test Data:





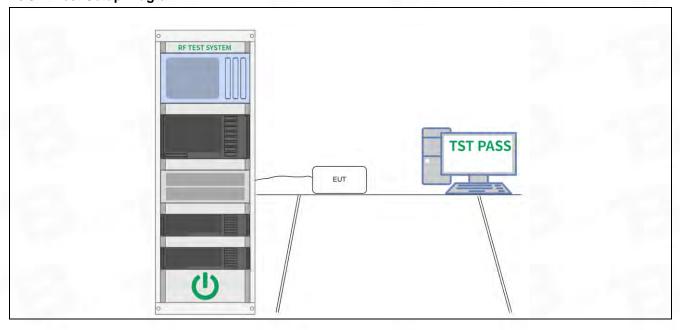
### 6.5 Number of Hopping Frequencies

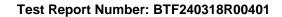
Test Requirement:	47 CFR 15.247(a)(1)(iii)					
Test Method:	ANSI C63.10-2013, section 7.8.3 KDB 558074 D01 15.247 Meas Guidance v05r02					
Test Limit:	Refer to 47 CFR 15.247(a)(1)(iii), Fequency hopping systems in the 2400-2483.5 MHz band shall use at least 15 channels. The average time of occupancy 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.					
Procedure:	The EUT shall have its hopping function enabled. Use the following spectrum analyzer settings:  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 ≥ RBW. d) Sweep: Auto. e) Detector function: Peak. f) Trace: Max hold. g) Allow the trace to stabilize. It might prove necessary to break the span up into subranges 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. A plot of the data shall be included in the test report.					

### 6.5.1 E.U.T. Operation:

Operating Environment:	
Temperature:	22.9 °C
Humidity:	53.5 %
Atmospheric Pressure:	1010 mbar

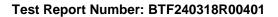
### 6.5.2 Test Setup Diagram:







#### 6.5.3 Test Data:





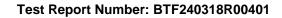
### 6.6 Dwell Time

Test Requirement:	47 CFR 15.247(a)(1)(iii)
	ANSI C63.10-2013, section 7.8.4
Test Method:	KDB 558074 D01 15.247 Meas Guidance v05r02
Test Limit:	Refer to 47 CFR 15.247(a)(1)(iii), Fequency 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.
Procedure:	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 <= channel spacing and where possible RBW should be set >> 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. The sweep time and calculate the total number of hops in the period specified in the requirements, using the following equation: (Number of hops in the period specified in the requirements) = (number of hops on spectrum analyzer) × (period specified in the requirements / analyzer sweep time)  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.

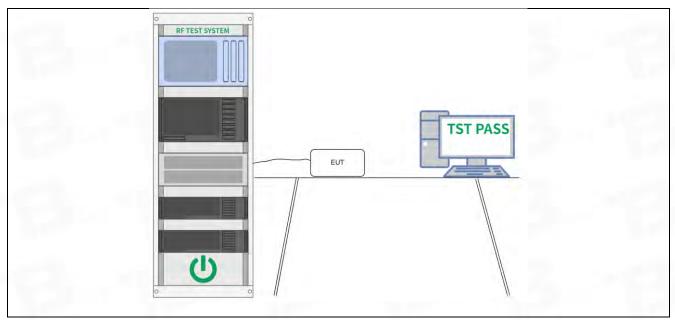
### 6.6.1 E.U.T. Operation:

Operating Environment:	
Temperature:	22.9 °C
Humidity:	53.5 %
Atmospheric Pressure:	1010 mbar

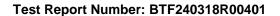
### 6.6.2 Test Setup Diagram:







6.6.3 Test Data:





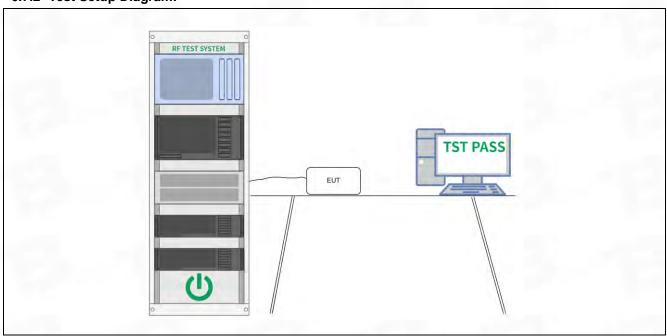
### 6.7 Emissions in non-restricted frequency bands

Test Requirement:	47 CFR 15.247(d), 15.209, 15.205
Test Method:	ANSI C63.10-2013 section 7.8.8
rest Method.	KDB 558074 D01 15.247 Meas Guidance v05r02
Test Limit:	Refer to 47 CFR 15.247(d), 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.
Procedure:	Conducted spurious emissions shall be measured for the transmit frequency, per 5.5 and 5.6, and at the maximum transmit powers.  Connect the primary antenna port through an attenuator to the spectrum analyzer input; in the results, account for all losses between the unlicensed wireless device output and the spectrum analyzer. The instrument shall span 30 MHz to 10 times the operating frequency in GHz, with a resolution bandwidth of 100 kHz, video bandwidth of 300 kHz, and a coupled sweep time with a peak detector. The band 30 MHz to the highest frequency may be split into smaller spans, as long as the entire spectrum is covered.

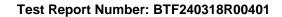
### 6.7.1 E.U.T. Operation:

·	
Operating Environment:	
Temperature:	22.9 °C
Humidity:	53.5 %
Atmospheric Pressure:	1010 mbar

### 6.7.2 Test Setup Diagram:



### 6.7.3 Test Data:





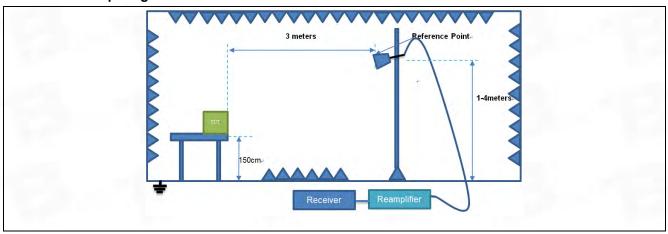
### 6.8 Band edge emissions (Radiated)

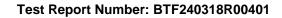
	Refer to 47 CFR 15.247(d), In addition, radiated emissions which fall in the						
Test Requirement:	restricted bands, as defined in § 15.205(a), must also comply with the radiated						
		§ 15.209(a)(see § 15.205(c)).`					
Test Method:	ANSI C63.10-2013 section 6						
rest wethou.	KDB 558074 D01 15.247 M	eas Guidance v05r02					
	Frequency (MHz)	Field strength	Measurement				
		(microvolts/meter)	distance				
			(meters)				
	0.009-0.490	2400/F(kHz)	300				
	0.490-1.705	24000/F(kHz)	30				
	1.705-30.0	30	30				
	30-88	100 **	3				
	88-216	150 **	3				
	216-960	200 **	3				
Test Limit:	Above 960	500	3				
Tool Limit.	** Except as provided in paragraph (g), fundamental emissions from intentional						
	radiators operating under this section shall not be located in the frequency bands						
	54-72 MHz, 76-88 MHz, 174-216 MHz or 470-806 MHz. However, operation within						
	these frequency bands is permitted under other sections of this part, e.g., §§						
	15.231 and 15.241.						
	In the emission table above, the tighter limit applies at the band edges.						
	The emission limits shown in the above table are based on measurements						
	employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz,						
	110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands						
are based on measurements employing an average detector.							
Procedure:	ANSI C63.10-2013 section 6.10.5.2						

### 6.8.1 E.U.T. Operation:

Operating Environment:			
Temperature: 22.7 °C			
Humidity:	48.5 %		
Atmospheric Pressure:	1010 mbar		

### 6.8.2 Test Setup Diagram:







#### 6.8.3 Test Data:

#### TM1 / Polarization: Horizontal / Band: 2400-2483.5 MHz / BW: 1 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1 *	2310.000	65.58	-30.59	34.99	74.00	-39.01	peak	Р
2	2390.000	65.03	-30.49	34.54	74.00	-39.46	peak	Р

#### TM1 / Polarization: Vertical / Band: 2400-2483.5 MHz / BW: 1 / CH: L

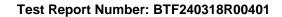
No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1 *	2310.000	65.23	-30.59	34.64	74.00	-39.36	peak	Р
2	2390.000	65.12	-30.49	34.63	74.00	-39.37	peak	Р

#### TM1 / Polarization: Horizontal / Band: 2400-2483.5 MHz / BW: 1 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1 *	2483.500	66.44	-30.39	36.05	74.00	-37.95	peak	Р
2	2500.000	65.18	-30.37	34.81	74.00	-39.19	peak	Р

#### TM1 / Polarization: Vertical / Band: 2400-2483.5 MHz / BW: 1 / CH: H

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1 *	2483.500	66.37	-30.39	35.98	74.00	-38.02	peak	Р
2	2500.000	66.22	-30.37	35.85	74.00	-38.15	peak	Р





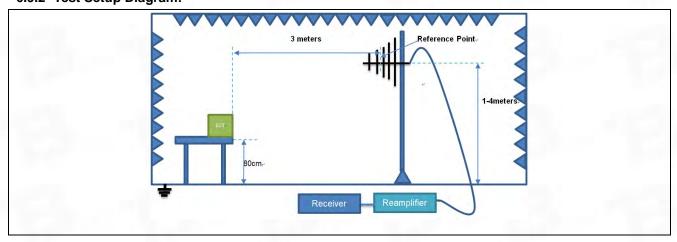
## 6.9 Emissions in frequency bands (below 1GHz)

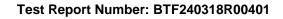
	, ,							
		, In addition, radiated emissions						
Test Requirement:		d in § 15.205(a), must also comp	ly with the radiated					
		§ 15.209(a)(see § 15.205(c)).`						
Test Method:	ANSI C63.10-2013 section							
- Took Mouriou.	KDB 558074 D01 15.247 Meas Guidance v05r02							
	Frequency (MHz)	Field strength	Measurement					
		(microvolts/meter)	distance					
			(meters)					
	0.009-0.490	2400/F(kHz)	300					
	0.490-1.705	24000/F(kHz)	30					
	1.705-30.0	30	30					
	30-88	100 **	3					
	88-216	150 **	3					
	216-960	200 **	3					
Test Limit:	Above 960	500	3					
1 001 2		ragraph (g), fundamental emissi						
		his section shall not be located ir						
		'4-216 MHz or 470-806 MHz. Ho						
		ermitted under other sections of	this part, e.g., §§					
	15.231 and 15.241.							
		e, the tighter limit applies at the b						
		in the above table are based on						
	employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz,							
	110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands							
	are based on measurements employing an average detector.							
Procedure:	ANSI C63.10-2013 section	6.6.4						

### 6.9.1 E.U.T. Operation:

Operating Environment:	
Temperature:	22.7 °C
Humidity:	48.5 %
Atmospheric Pressure:	1010 mbar

### 6.9.2 Test Setup Diagram:

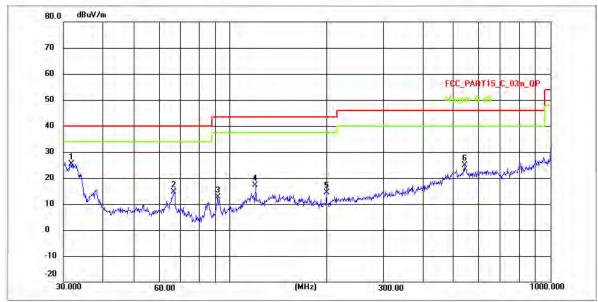




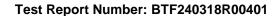


#### 6.9.3 Test Data:

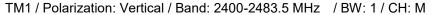
TM1 / Polarization: Horizontal / Band: 2400-2483.5 MHz / BW: 1 / CH: M

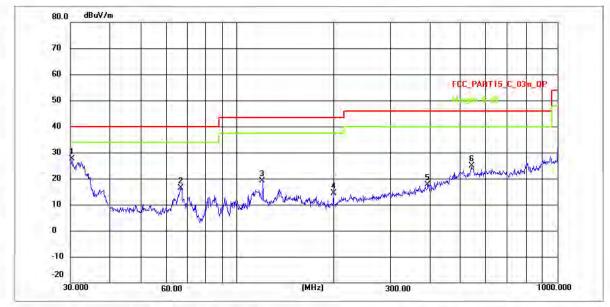


No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1 *	32.0667	43.99	-18.51	25.48	40.00	-14.52	QP	Р
2	66.4989	32.64	-18.13	14.51	40.00	-25.49	QP	Р
3	91.6554	28.47	-15.81	12.66	43.50	-30.84	QP	P
4	120.0659	31.73	-14.52	17.21	43.50	-26.29	QP	P
5	199.9856	31.92	-17.48	14.44	43.50	-29.06	QP	Р
6	539.4775	36.72	-11.89	24.83	46.00	-21.17	QP	Р

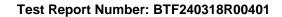








No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1 *	30.4238	46.60	-19.00	27.60	40.00	-12.40	QP	Р
2	66.3825	36.46	-20.05	16.41	40.00	-23.59	QP	Р
3	120.0659	33.16	-14.13	19.03	43.50	-24.47	QP	P
4	199.9856	30.64	-16.20	14.44	43.50	-29.06	QP	P
5	392.7831	30.64	-12.98	17.66	46.00	-28.34	QP	Р
6	539.4775	36.37	-11,54	24.83	46.00	-21.17	QP	Р





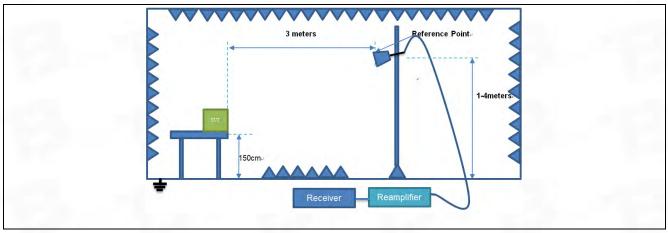
## 6.10 Emissions in frequency bands (above 1GHz)

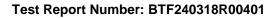
	In addition, radiated emiss	ions which fall in the restricted	hands as defined in 8				
Test Requirement:		ply with the radiated emission li					
rest requirement.	15.209(a)(see § 15.205(c)		initis specified in §				
	ANSI C63.10-2013 section 6.6.4						
Test Method:		2013 section 6.6.4 201 15.247 Meas Guidance v05r02					
	Frequency (MHz) Field strength Measurem						
	Trequency (WIT12)	(microvolts/meter)	distance				
		(microvoits/meter)					
	0.000.0.400	0400/5(1-11-)	(meters)				
	0.009-0.490	2400/F(kHz)	300				
	0.490-1.705	24000/F(kHz)	30				
	1.705-30.0	30	30				
	30-88	100 **	3				
	88-216	150 **	3				
	216-960	200 **	3				
Test Limit:	Above 960	500	3				
1 Cot Limit.	** Except as provided in p	aragraph (g), fundamental emi	ssions from intentional				
	radiators operating under	this section shall not be located	d in the frequency bands				
	54-72 MHz, 76-88 MHz, 1	74-216 MHz or 470-806 MHz. I	However, operation within				
	these frequency bands is	permitted under other sections	of this part, e.g., §§				
	15.231 and 15.241.						
	In the emission table above, the tighter limit applies at the band edges.						
	The emission limits shown in the above table are based on measurements						
	employing a CISPR quasi-peak detector except for the frequency bands 9–90 kHz,						
	110–490 kHz and above 1000 MHz. Radiated emission limits in these three bands						
	are based on measurements employing an average detector.						
Procedure:	ANSI C63.10-2013 section						

### 6.10.1 E.U.T. Operation:

Operating Environment:							
Temperature:	22.7 °C						
Humidity:	48.5 %						
Atmospheric Pressure:	1010 mbar						

### 6.10.2Test Setup Diagram:







#### 6.10.3Test Data:

TM1 / Polarization: Horizontal / Band: 2400-2483.5 MHz / BW: 1 / CH: L

	No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
	1	4804.000	66.53	-27.60	38.93	74.00	-35.07	peak	Р
ſ	2	7206.000	68.48	-25.10	43.38	74.00	-30.62	peak	Р
ſ	3	9608.000	71.01	-23.44	47.57	74.00	-26.43	peak	Р

#### TM1 / Polarization: Vertical / Band: 2400-2483.5 MHz / BW: 1 / CH: L

No.	Frequency (MHz)	Reading (dBuV)	Factor (dB/m)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	P/F
1	4804.000	65.27	-27.60	37.67	74.00	-36.33	peak	Р
2	7206.000	68.27	-25.10	43.17	74.00	-30.83	peak	Р
3	9608.000	72.06	-23.44	48.62	74.00	-25.38	peak	Р

#### TM1 / Polarization: Horizontal / Band: 2400-2483.5 MHz / BW: 1 / CH: M

ı		Frequency	Reading	Factor	Level	Limit	Margin		D.I.E.
	No.	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)	Detector	P/F
	1	4882.000	67.09	-27.73	39.36	74.00	-34.64	peak	Р
	2	7323.000	69.04	-24.84	44.20	74.00	-29.80	peak	Р
	3	9764.000	71.57	-23.74	47.83	74.00	-26.17	peak	Р

#### TM1 / Polarization: Vertical / Band: 2400-2483.5 MHz / BW: 1 / CH: M

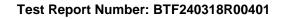
	No.	Frequency	Reading	Factor	Level	Limit	Margin	Detector	P/F
		(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		
	1	4882.000	65.83	-27.73	38.10	74.00	-35.90	peak	Р
	2	7323.000	68.83	-24.84	43.99	74.00	-30.01	peak	Р
	3	9764.000	72.62	-23.74	48.88	74.00	-25.12	peak	Р

#### TM1 / Polarization: Horizontal / Band: 2400-2483.5 MHz / BW: 1 / CH: H

		_		_				
No.	Frequency	Reading	Factor	Level	Limit	Margin	Detector	P/F
NO.	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		
1	4960.000	67.55	-27.37	40.18	74.00	-33.82	peak	Р
2	7440.000	69.50	-24.68	44.82	74.00	-29.18	peak	Р
3	9920.000	72.03	-23.99	48.04	74.00	-25.96	peak	Р

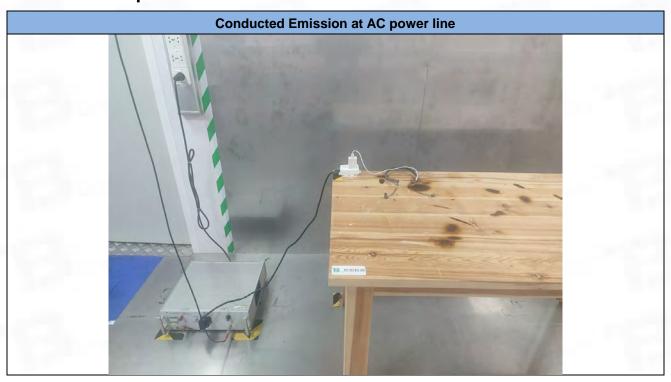
#### TM1 / Polarization: Vertical / Band: 2400-2483.5 MHz / BW: 1 / CH: H

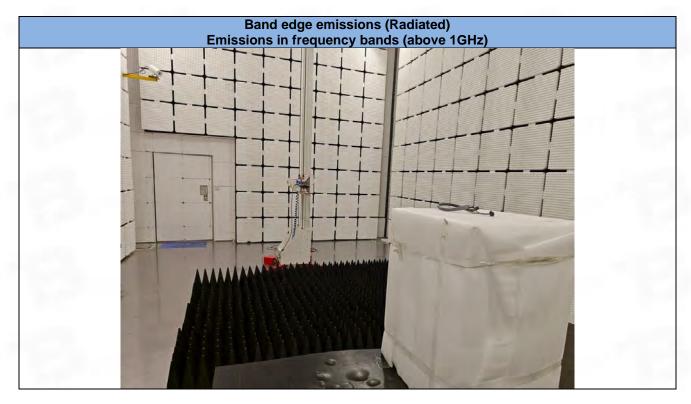
No.	Frequency	Reading	Factor	Level	Limit	Margin	Detector	P/F
NO.	(MHz)	(dBuV)	(dB/m)	(dBuV/m)	(dBuV/m)	(dB)		
1	4960.000	66.23	-27.37	38.86	74.00	-35.14	peak	Р
2	7440.000	69.23	-24.68	44.55	74.00	-29.45	peak	Р
3	9920.000	73.02	-23.99	49.03	74.00	-24.97	peak	Р

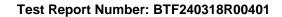




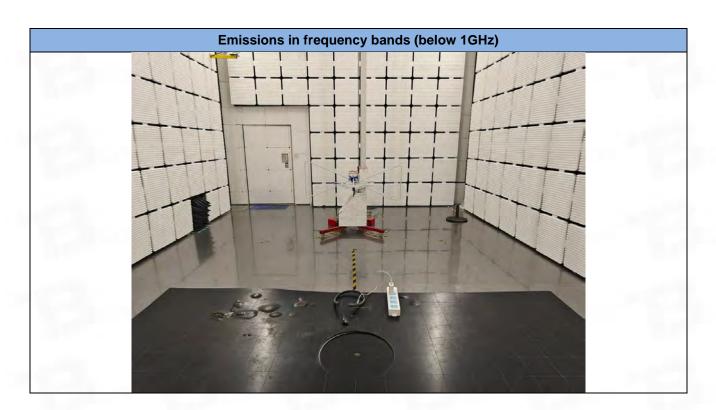
# 7 Test Setup Photos





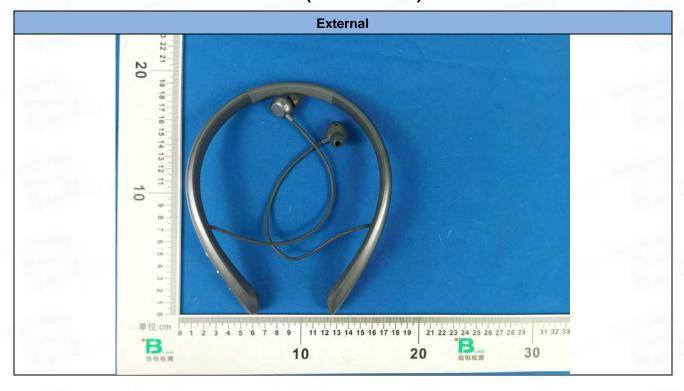


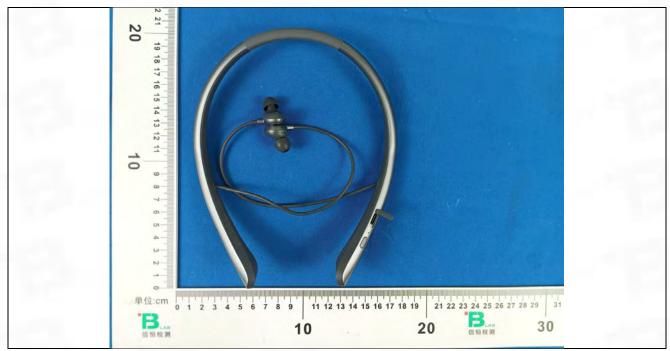


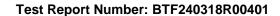




# 8 EUT Constructional Details (EUT Photos)



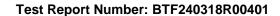






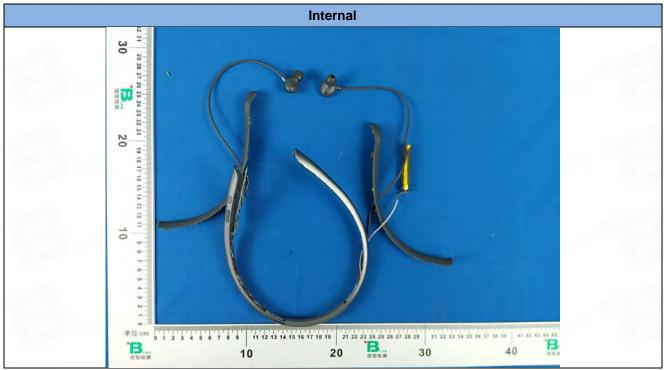




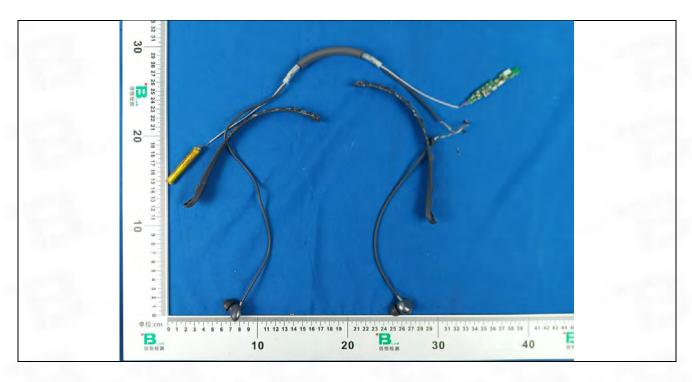


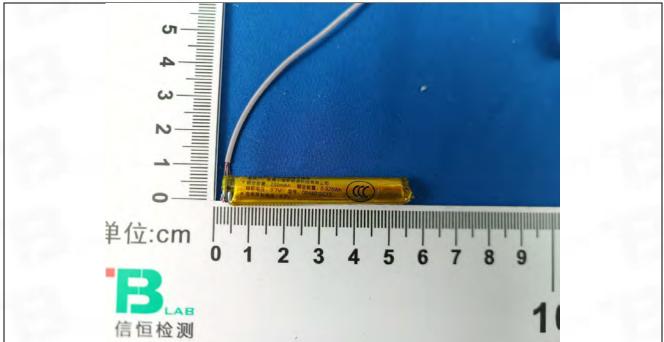


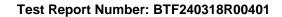




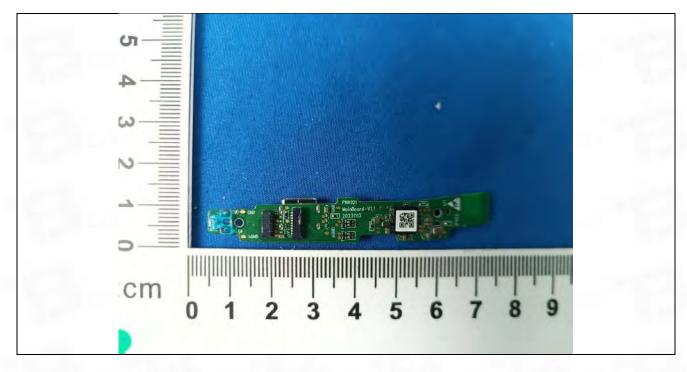


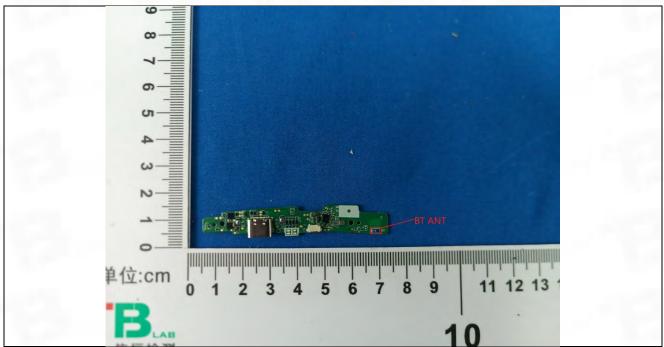


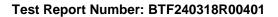






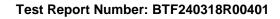








# **Appendix**

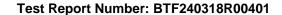




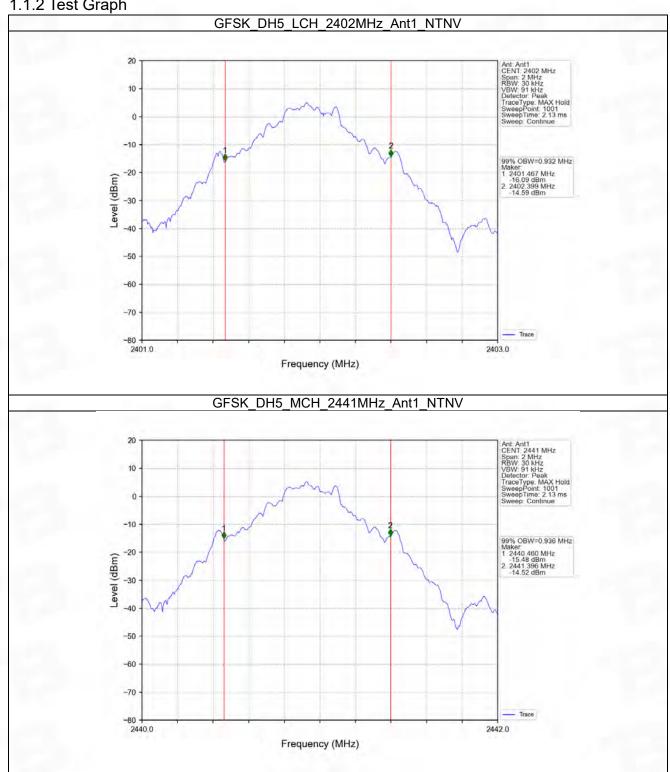
## 1. Bandwidth

## 1.1 OBW

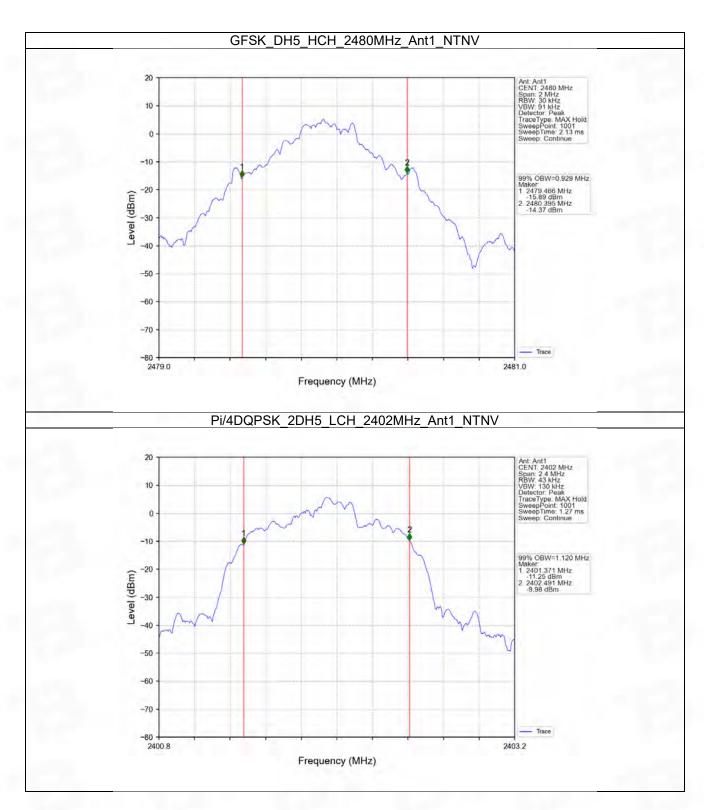
T.T. Toot Toodit								
Mode	TX	Frequency	Packet	ANT	99% Occupied E	Verdict		
	Type	(MHz)	Type	AINI	Result	Limit	Verdict	
	SISO	2402	DH5	1	0.932	1	Pass	
GFSK		2441	DH5	1	0.936	1	Pass	
		2480	DH5	1	0.929	1	Pass	
	SISO	2402	2DH5	1	1.120	1	Pass	
Pi/4DQPSK		2441	2DH5	1	1.121	/	Pass	
		2480	2DH5	1	1.123	1	Pass	
8DPSK	SISO	2402	3DH5	1	1.138	1	Pass	
		2441	3DH5	1	1.135	1	Pass	
		2480	3DH5	1	1.137	1	Pass	

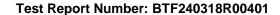




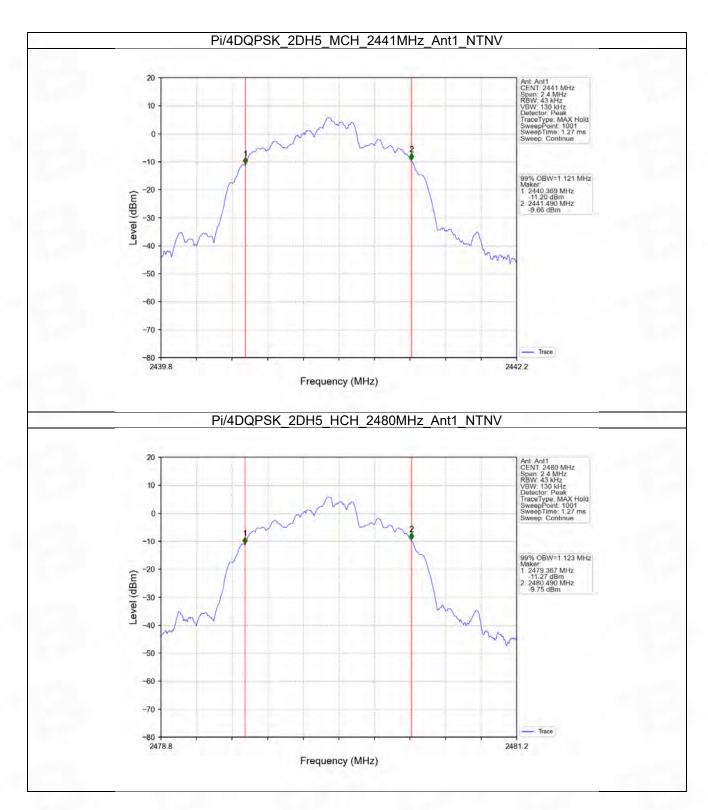




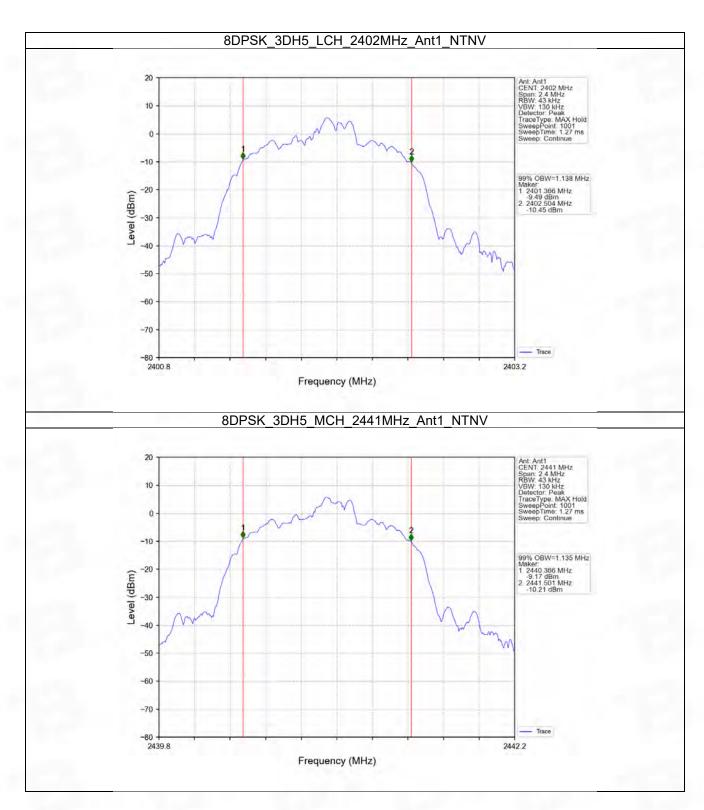


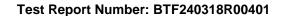




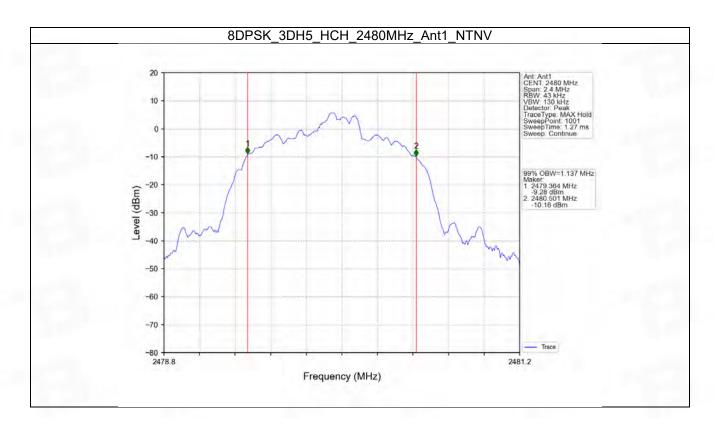


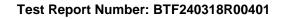








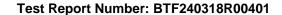




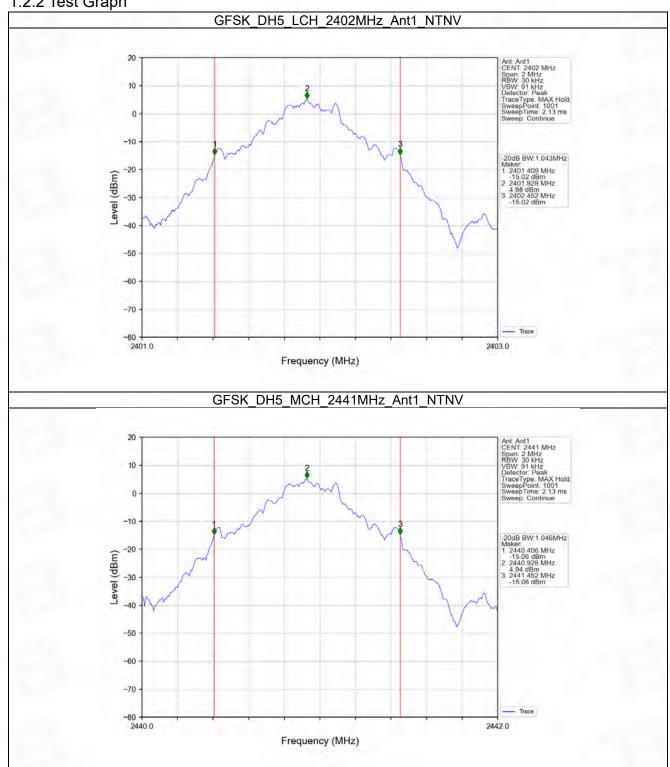


## 1.2 20dB BW

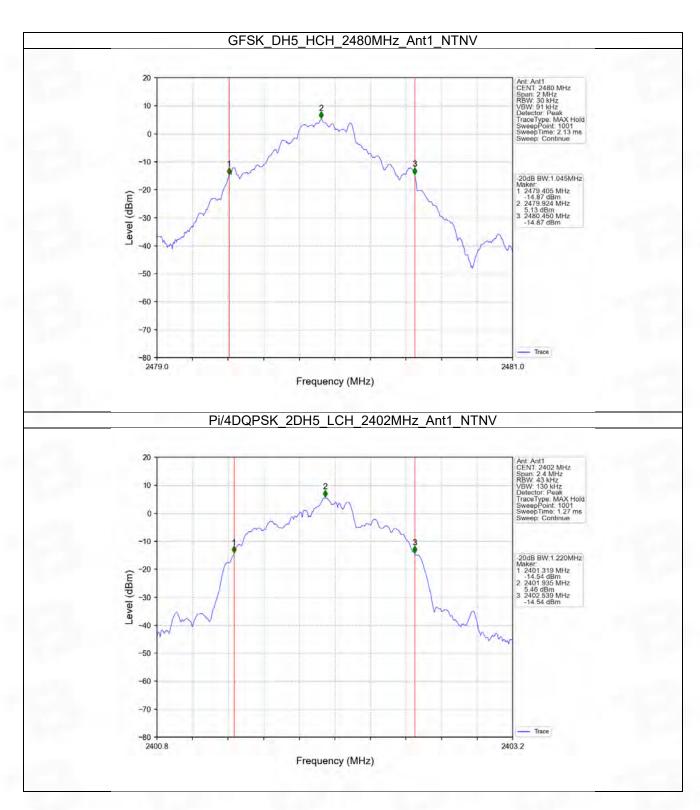
Mode	TX	Frequency	Packet ANT		20dB Band	Verdict	
	Type	(MHz)	Туре	ANI	Result	Limit	Verdict
GFSK		2402	DH5	1	1.043	/	Pass
	SISO	2441	DH5	1	1.046	1	Pass
		2480	DH5	1	1.045	1	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	1.220	1	Pass
		2441	2DH5	1	1.215	/	Pass
		2480	2DH5	1	1.215	/	Pass
8DPSK	SISO	2402	3DH5	1	1.241	/	Pass
		2441	3DH5	1	1.241	/	Pass
		2480	3DH5	1	1.240	1	Pass

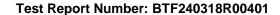




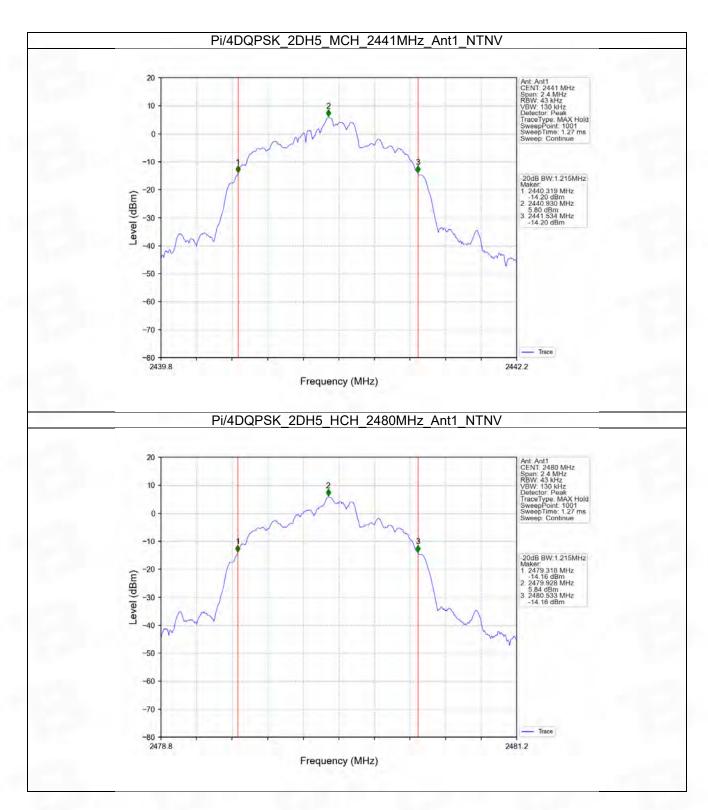




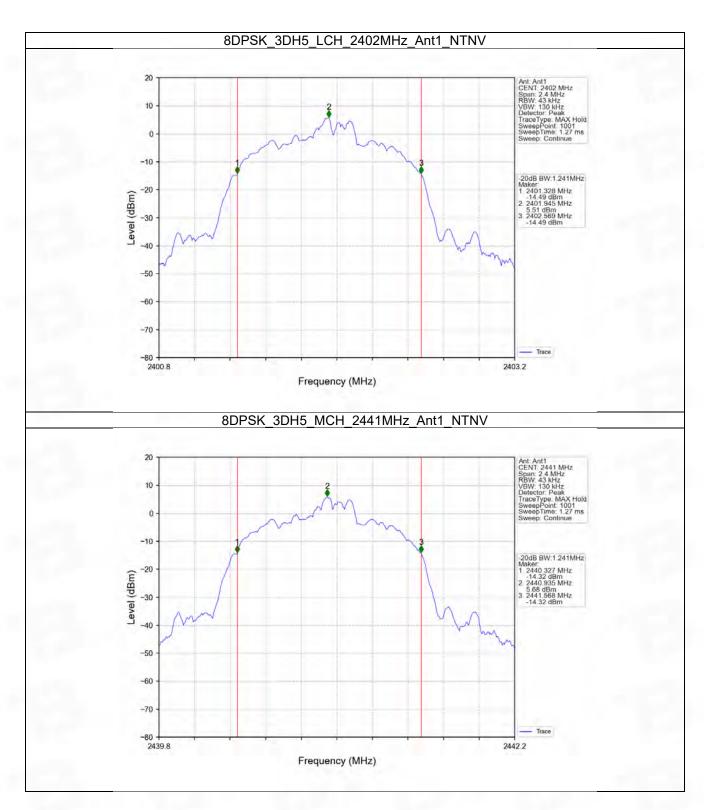


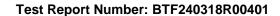




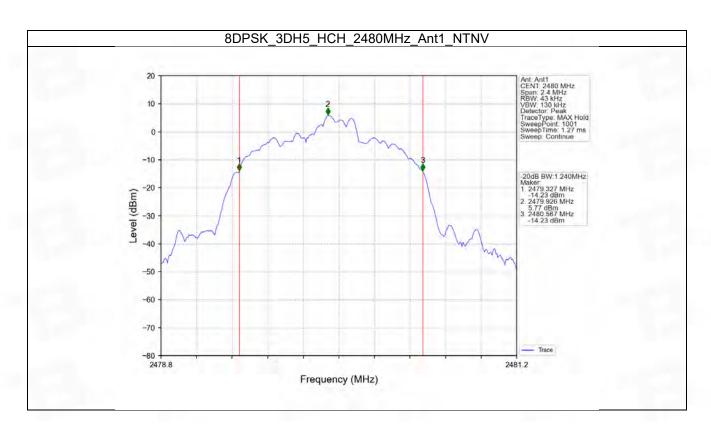


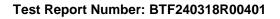










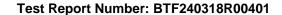




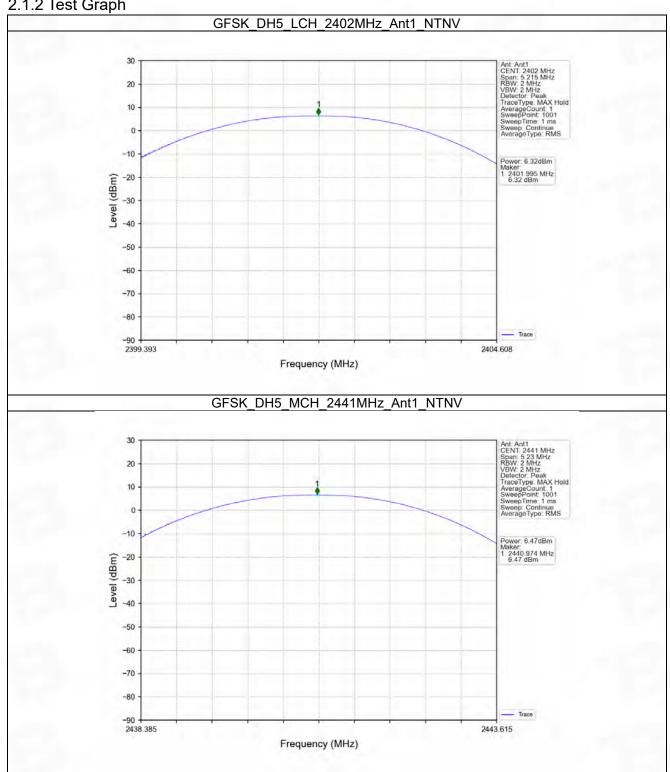
## 2. Maximum Conducted Output Power

## 2.1 Power

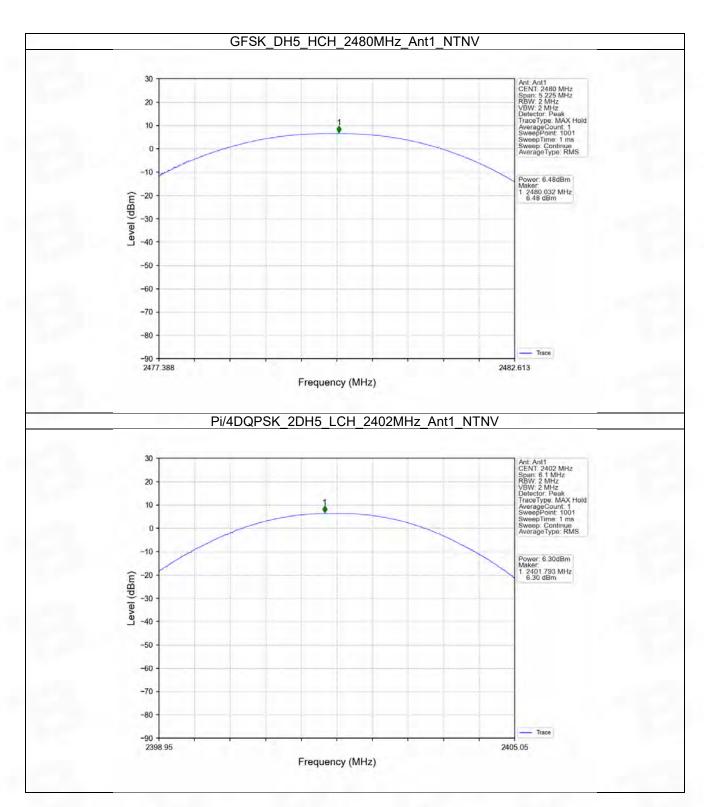
Mode	TX Type	Frequency (MHz)	Packet Type	Maximum Peak Cond (dB	Verdict			
				ANT1	Limit			
		2402	DH5	6.32	<=20.97	Pass		
GFSK	SISO	2441	DH5	6.47	<=20.97	Pass		
		2480	DH5	6.48	<=20.97	Pass		
	SISO	2402	2DH5	6.30	<=20.97	Pass		
Pi/4DQPSK		SISO	2441	2DH5	6.44	<=20.97	Pass	
		2480	2DH5	6.47	<=20.97	Pass		
	SISO	2402	3DH5	6.33	<=20.97	Pass		
8DPSK		2441	3DH5	6.49	<=20.97	Pass		
		2480	3DH5	6.47	<=20.97	Pass		
Note1: Antenna Gain: Ant1: 1.71dBi;								

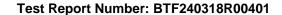




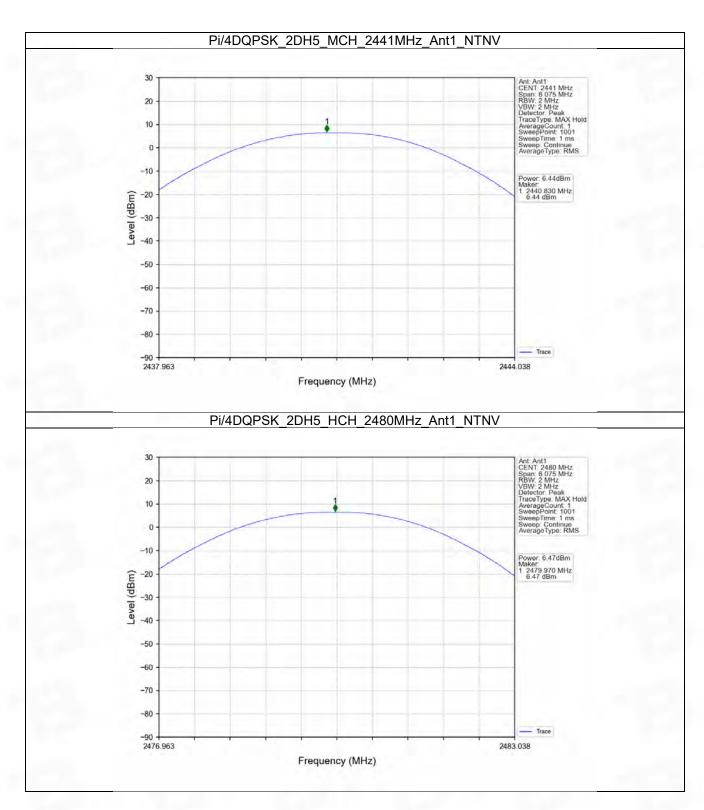


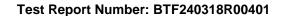




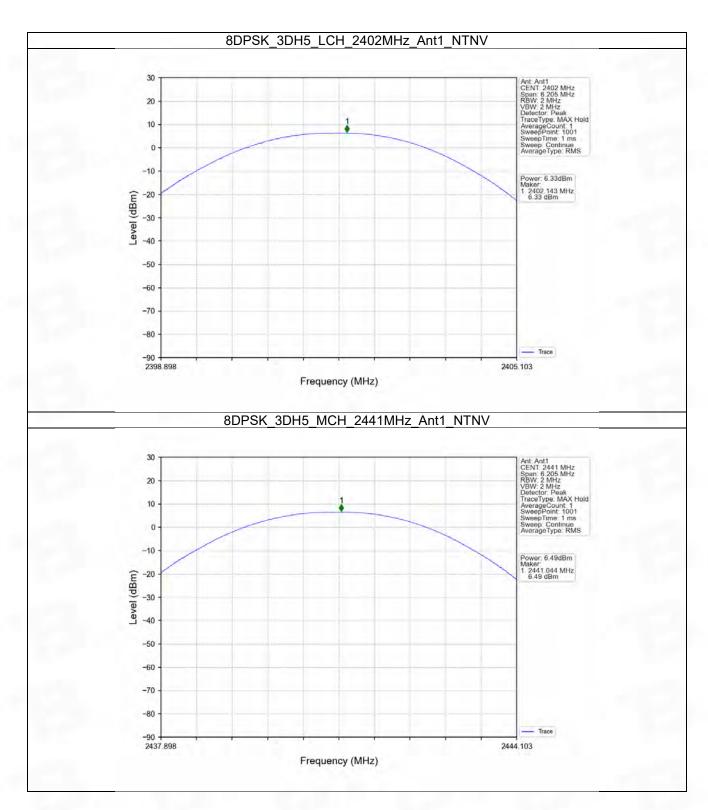


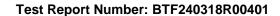






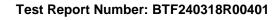










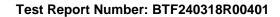




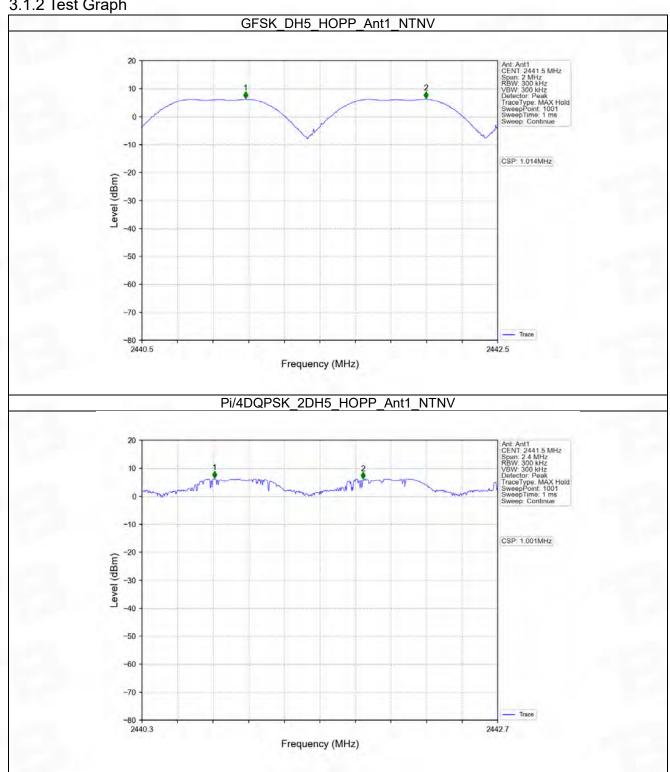
# 3. Carrier Frequency Separation

## 3.1 Ant1

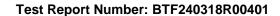
Ant1									
Mode	TX	Frequency	Packet	Channel Separation	20dB Bandwidth	Limit	Verdict		
	Type	(MHz)	Type	(MHz)	(MHz)	(MHz)			
GFSK	SISO	HOPP	DH5	1.014	1.046	>=0.697	Pass		
Pi/4DQPSK	SISO	HOPP	2DH5	1.001	1.220	>=0.813	Pass		
8DPSK	SISO	HOPP	3DH5	1.006	1.241	>=0.827	Pass		



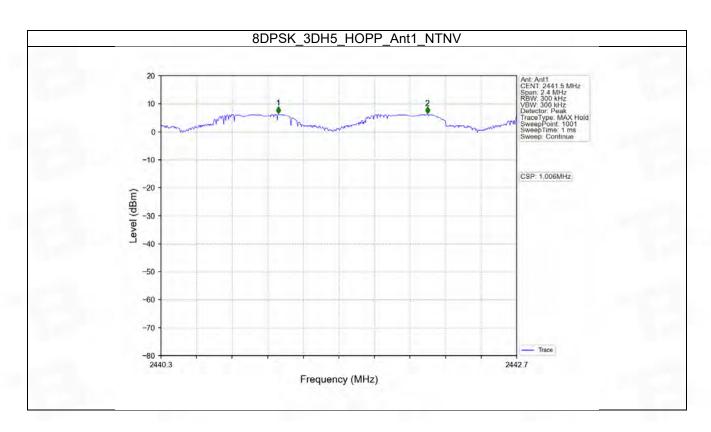


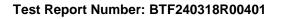


F101, 201 and 301, Building 1, Block 2, Tantou Industrial Park, Tantou Community, Songgang Street, Bao'an District, Shenzhen, China







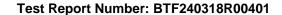




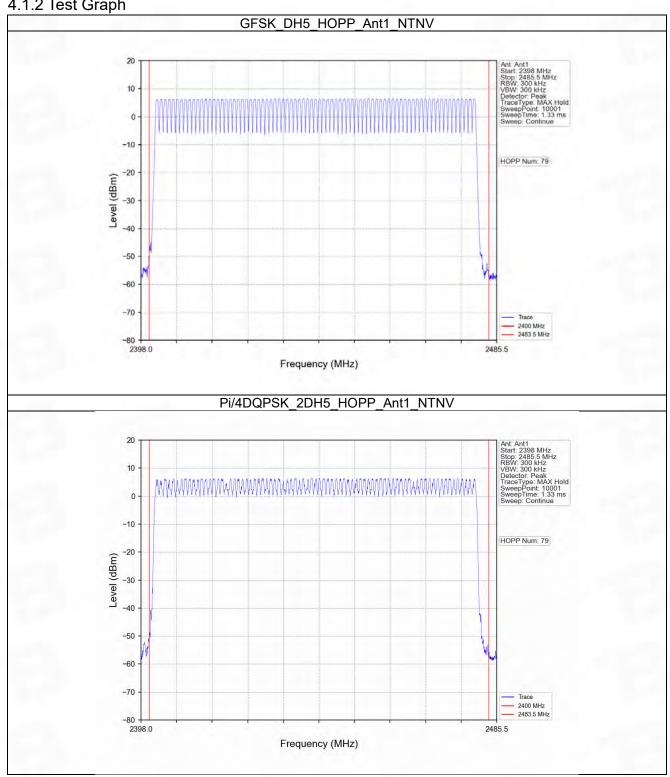
## 4. Number of Hopping Frequencies

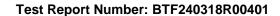
## 4.1 HoppNum

Mode	TX Frequency		Packet	Num of Hoppin	Verdict	
Mode	Туре	(MHz)	Туре	ANT1	ANT1 Limit	
GFSK	SISO	HOPP	DH5	79	>=15	Pass
Pi/4DQPSK	SISO	HOPP	2DH5	79	>=15	Pass
8DPSK	SISO	HOPP	3DH5	79	>=15	Pass

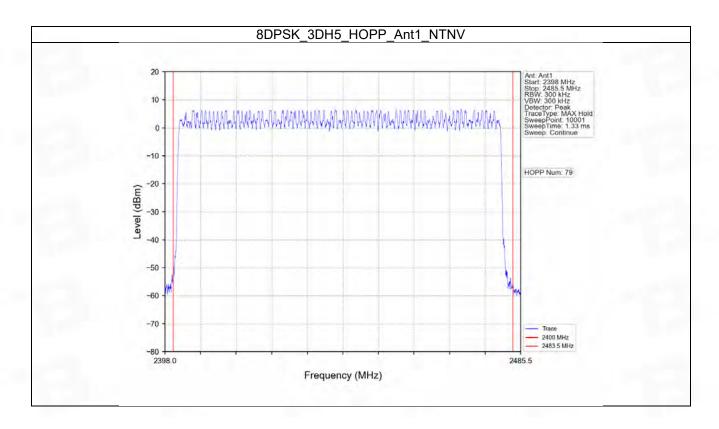


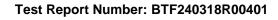










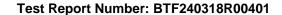




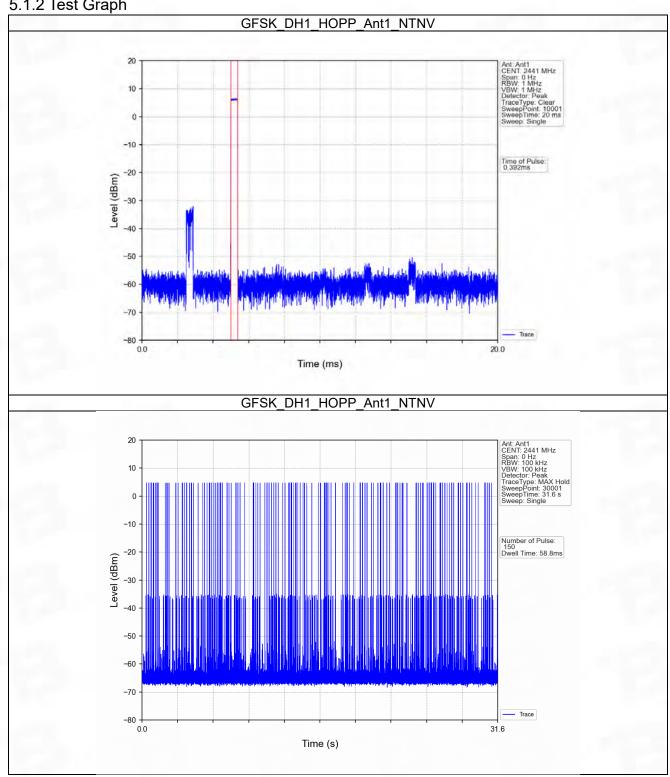
# 5. Time of Occupancy (Dwell Time)

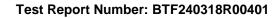
## 5.1 Ant1

	Ant1										
Mode	TX Type	Frequency (MHz)	Packet Type	Duration of Single Pulse (ms)	Observation Period (s)	Num of Pulse in Observation Period	Dwell Time (ms)	Limit (ms)	Verdict		
GFSK SIS		SISO HOPP	DH1	0.392	31.600	150	58.800	<=400	Pass		
	SISO		DH3	1.658	31.600	110	182.380	<=400	Pass		
			DH5	2.896	31.600	76	220.096	<=400	Pass		
		HOPP	2DH1	0.400	31.600	168	67.200	<=400	Pass		
Pi/4DQPSK	SISO		2DH3	1.664	31.600	112	186.368	<=400	Pass		
			2DH5	2.900	31.600	82	237.800	<=400	Pass		
		SO HOPP	3DH1	0.412	31.600	170	70.040	<=400	Pass		
8DPSK	SISO		3DH3	1.662	31.600	113	187.806	<=400	Pass		
			3DH5	2.900	31.600	82	237.800	<=400	Pass		

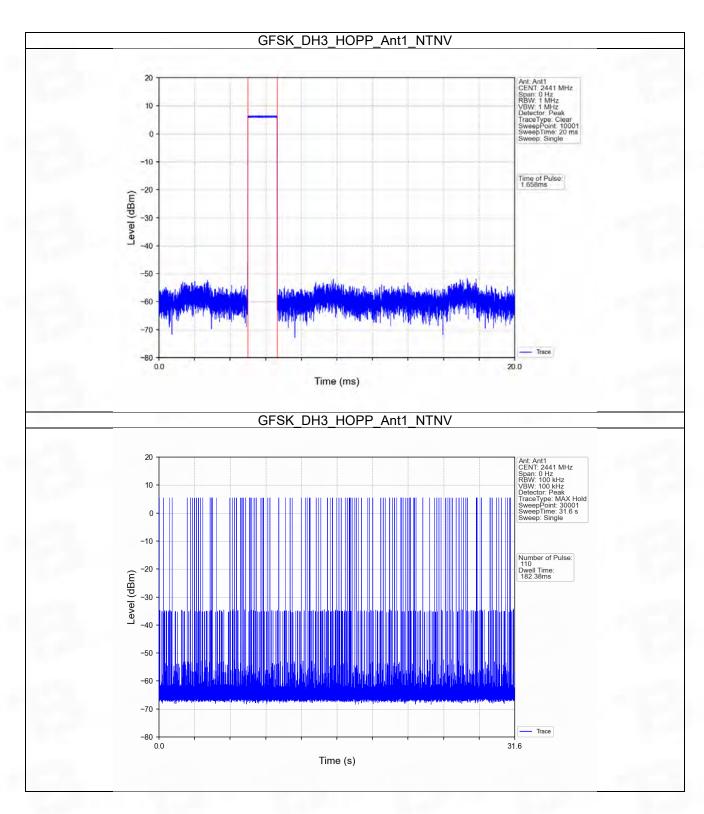


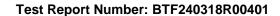




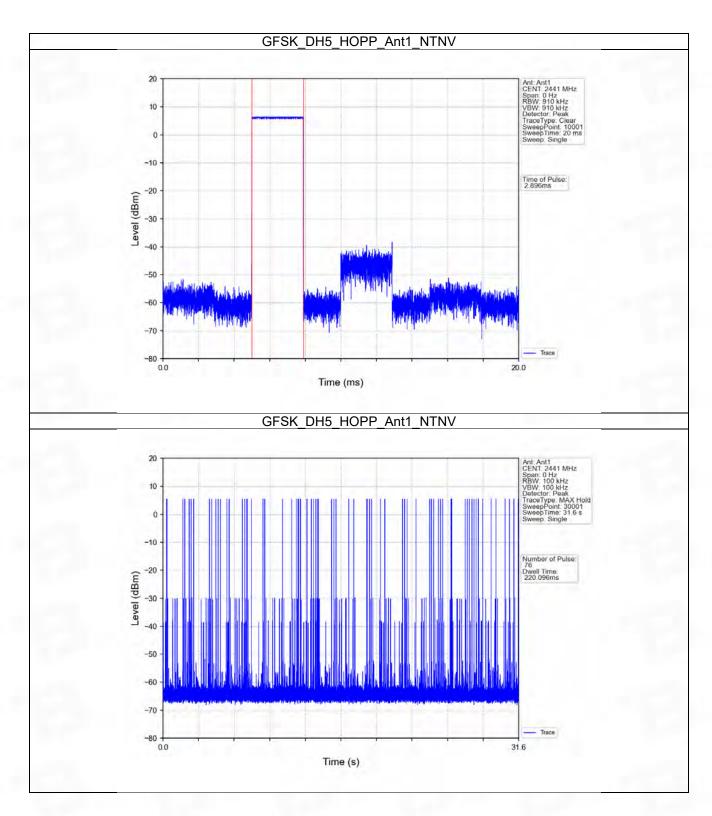


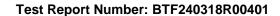




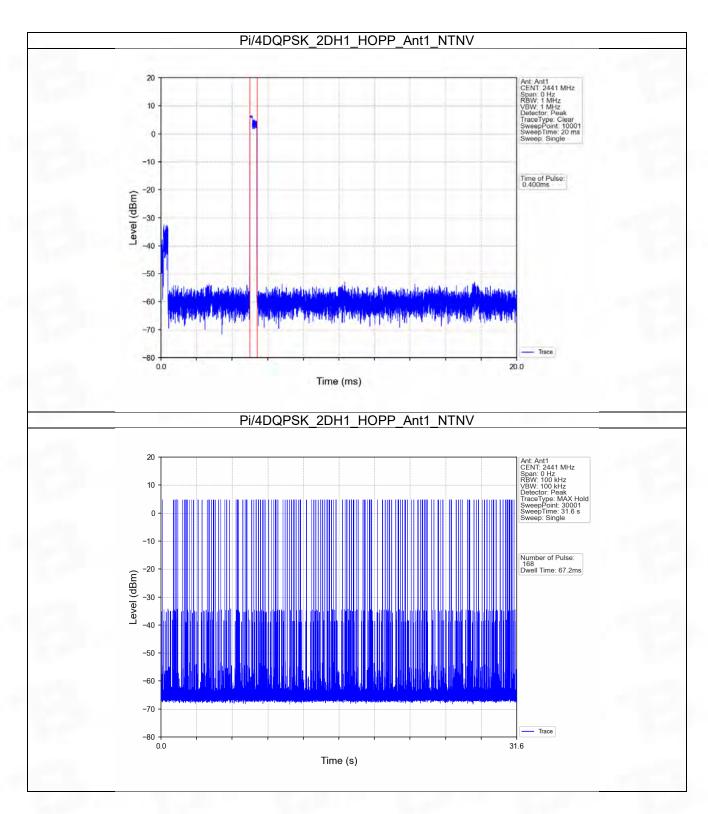




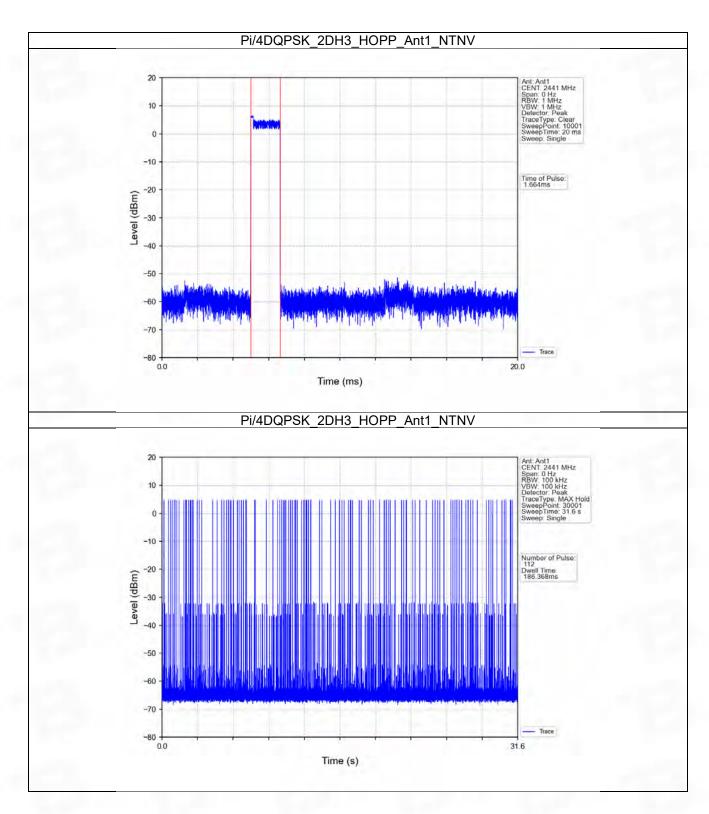




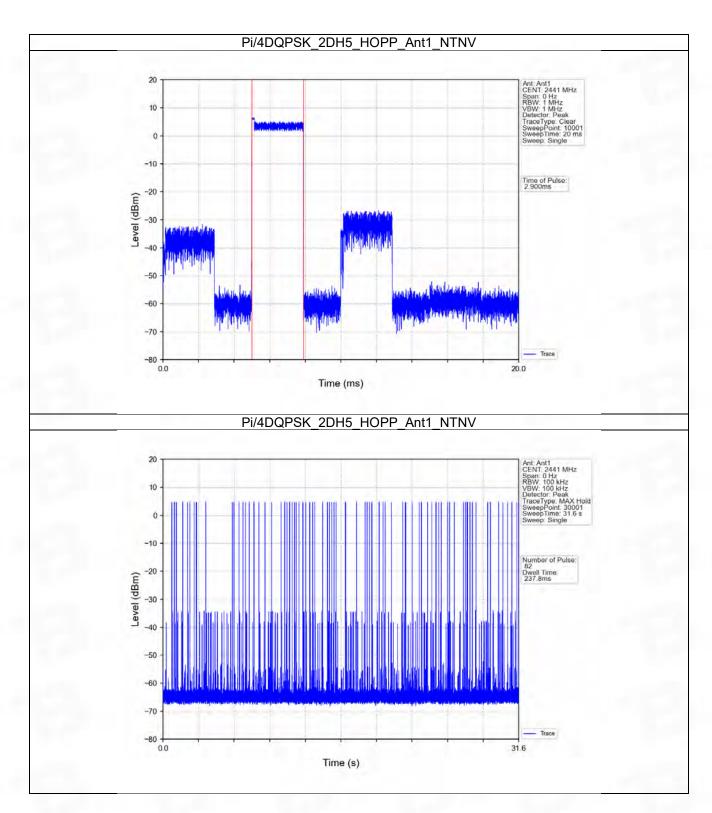


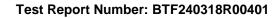




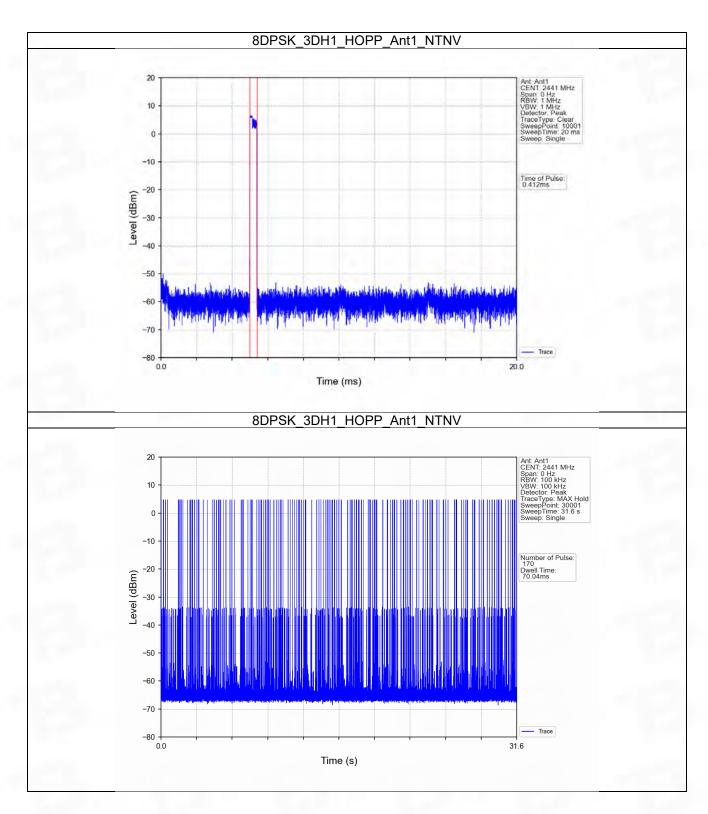


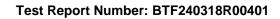




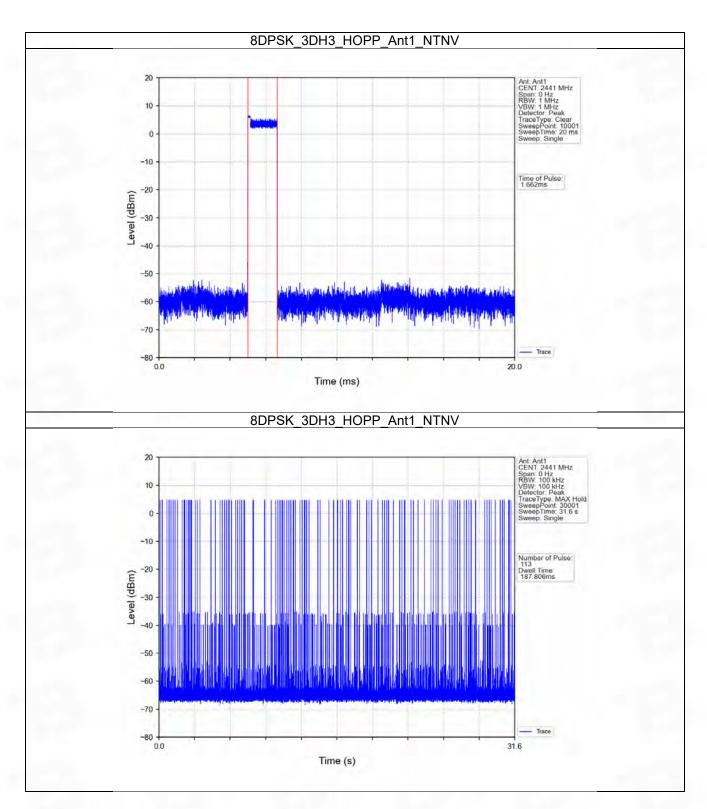


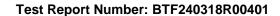




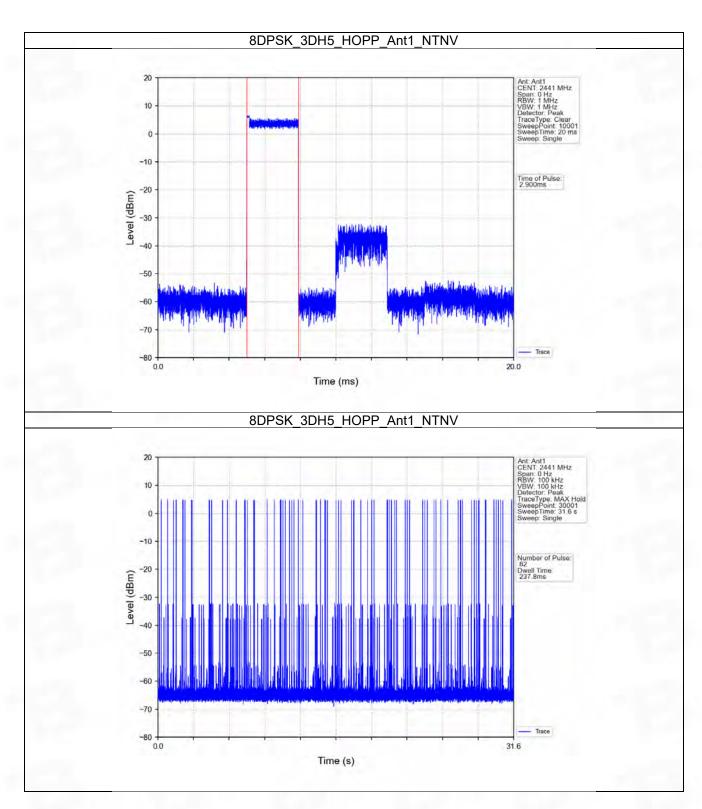


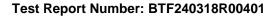














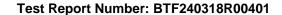
# 6. Unwanted Emissions In Non-restricted Frequency Bands

#### 6.1 Ref

#### 6.1.1 Test Result

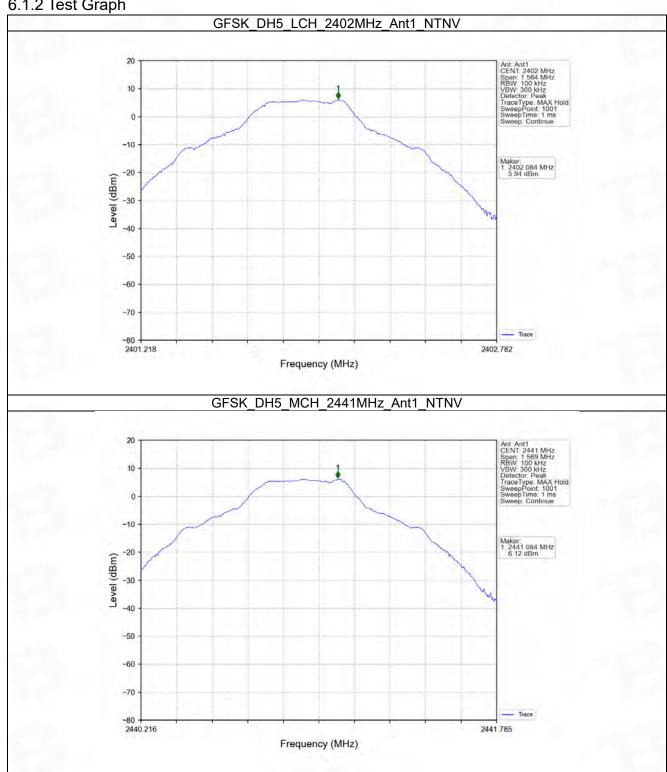
Mode	TX Type	Frequency (MHz)	Packet Type	ANT	Level of Reference (dBm)
GFSK		2402	DH5	1	5.94
	SISO	2441	DH5	1	6.12
		2480	DH5	1	6.10
Pi/4DQPSK	SISO	2402	2DH5	1	5.90
		2441	2DH5	1	5.98
		2480	2DH5	1	6.10
8DPSK	SISO	2402	3DH5	1	5.98
		2441	3DH5	1	6.15
		2480	3DH5	1	6.09

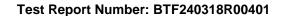
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.



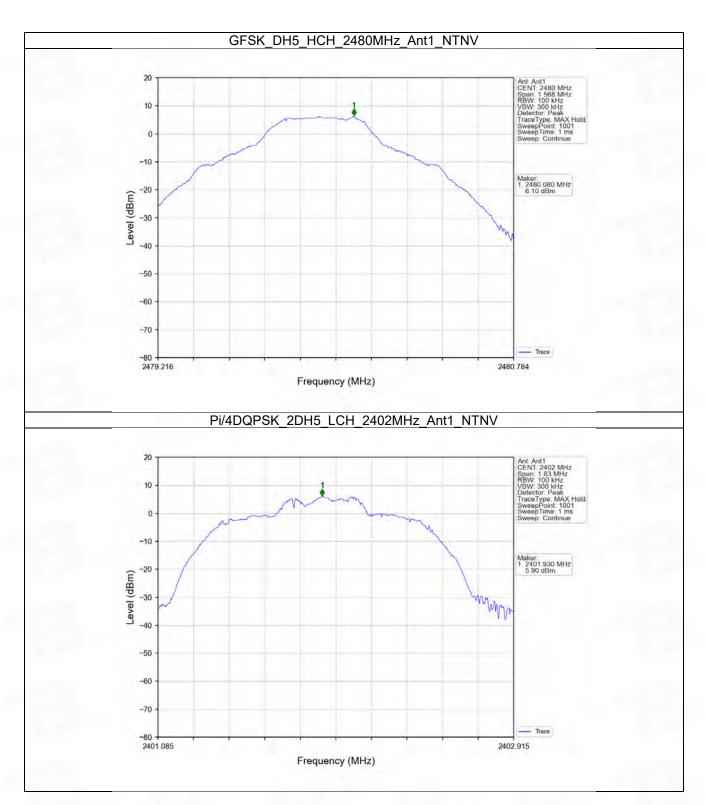


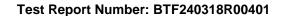
6.1.2 Test Graph



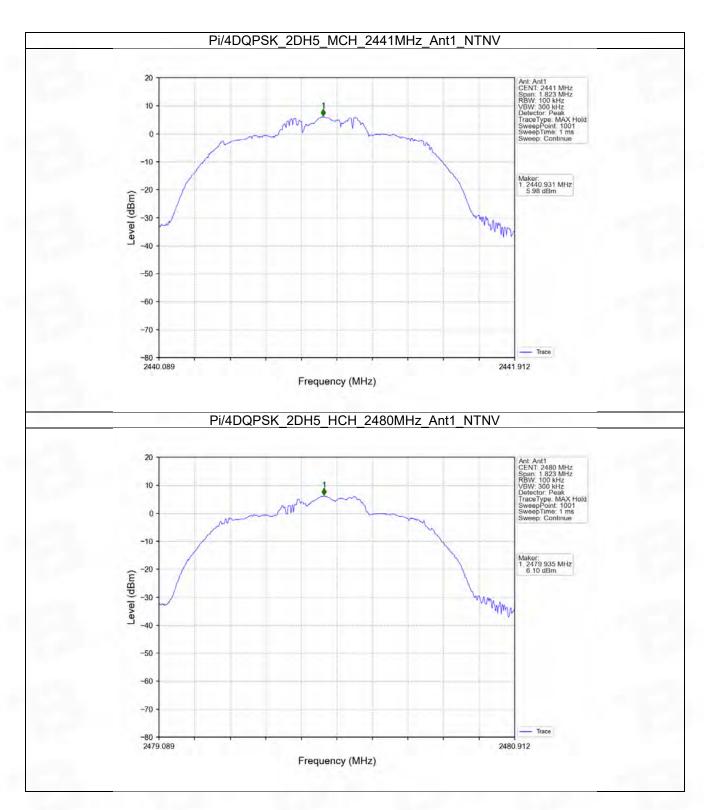


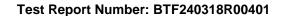




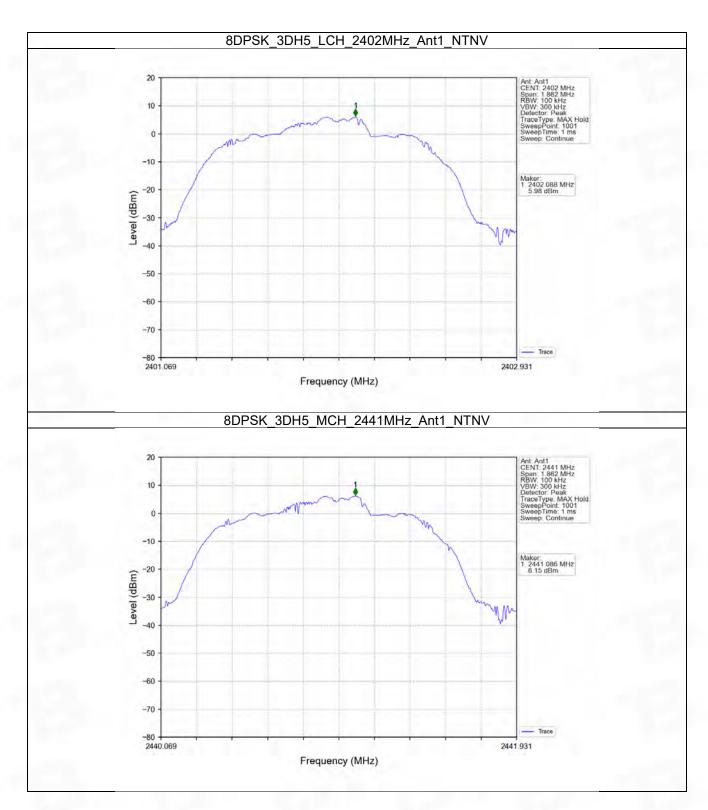


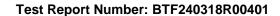




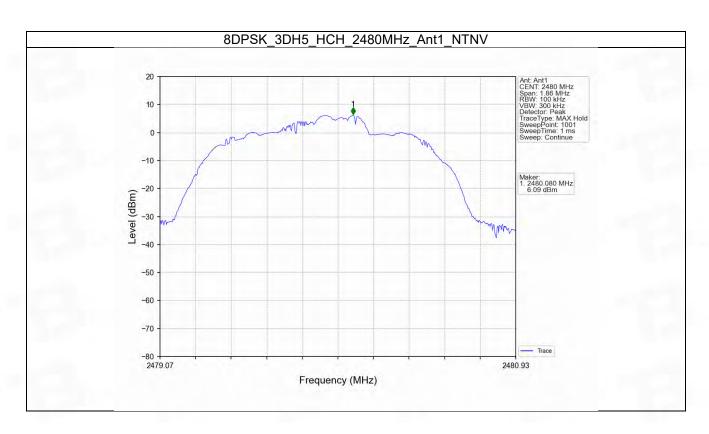


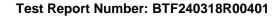












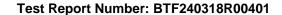


### 6.2 CSE

### 6.2.1 Test Result

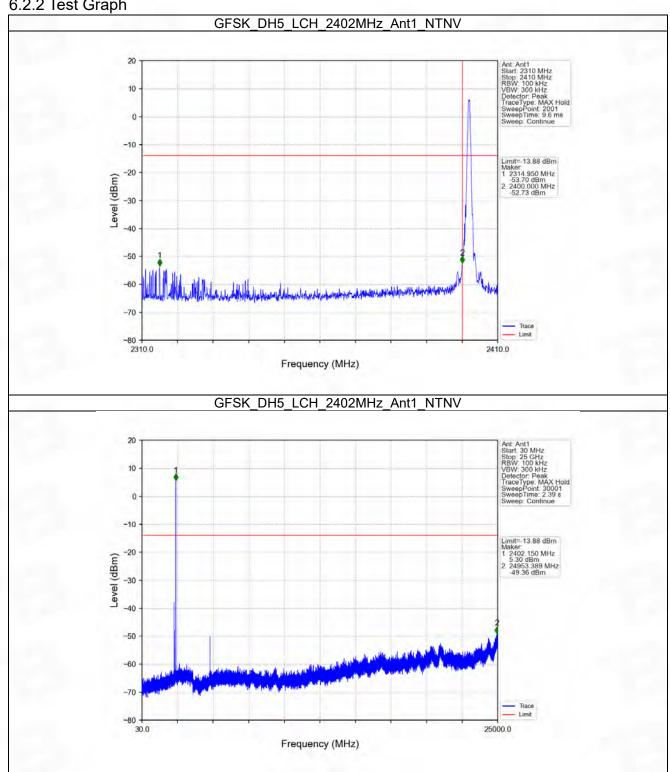
Mode	TX	Frequency	Packet ANT		Level of Reference	Limit	Verdict
	Type	(MHz)	Type	ANI	(dBm)	(dBm)	verdict
GFSK	SISO	2402	DH5	1	6.12	-13.88	Pass
		2441	DH5	1	6.12	-13.88	Pass
		2480	DH5	1	6.12	-13.88	Pass
		HOPP	DH5	1	6.12	-13.88	Pass
					6.12	-13.88	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	6.10	-13.90	Pass
		2441	2DH5	1	6.10	-13.90	Pass
		2480	2DH5	1	6.10	-13.90	Pass
		HOPP	2DH5	1	6.10	-13.90	Pass
					6.10	-13.90	Pass
8DPSK	SISO	2402	3DH5	1	6.15	-13.85	Pass
		2441	3DH5	1	6.15	-13.85	Pass
		2480	3DH5	1	6.15	-13.85	Pass
		НОРР	3DH5	1	6.15	-13.85	Pass
					6.15	-13.85	Pass

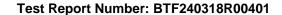
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.



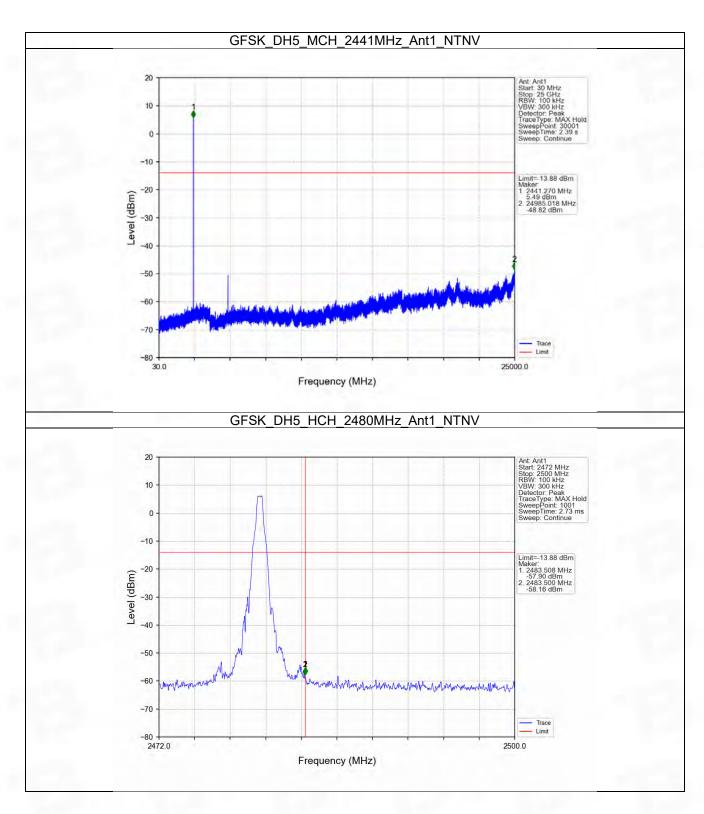


6.2.2 Test Graph

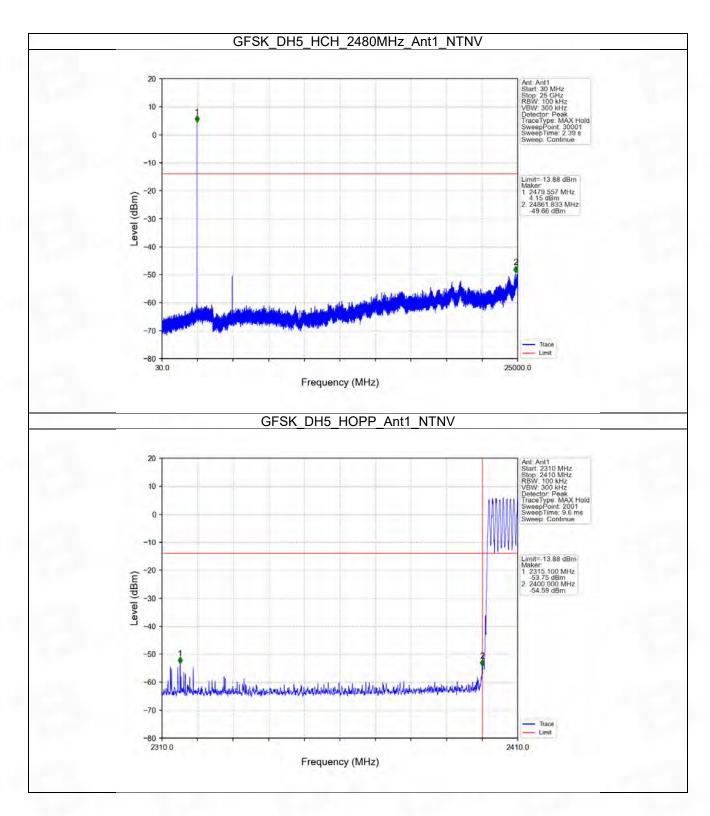


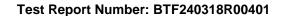




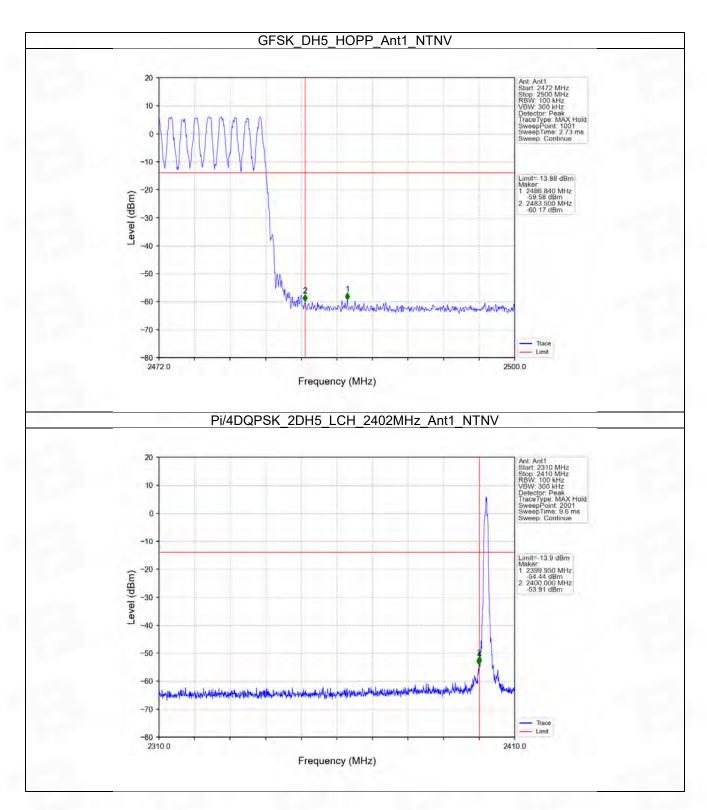




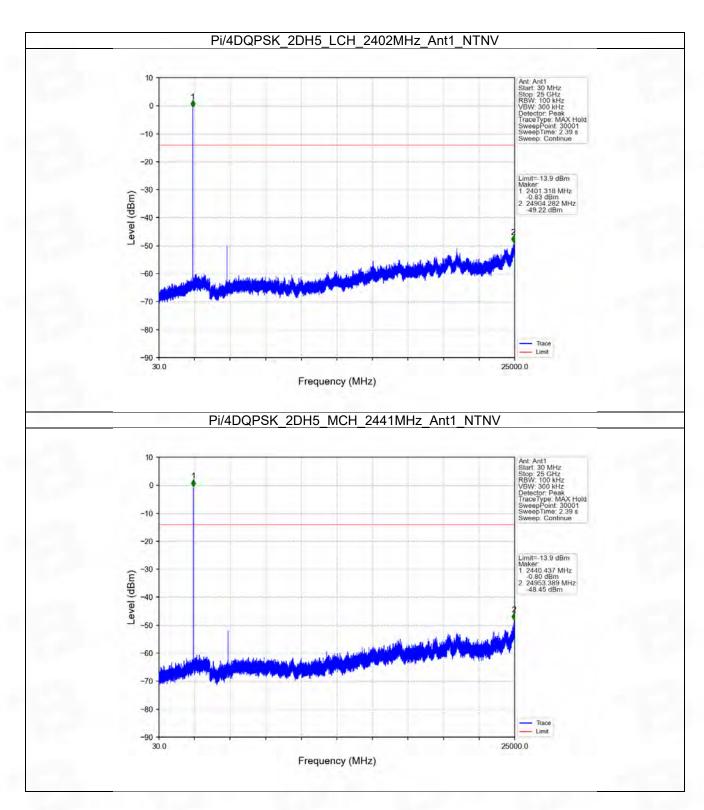


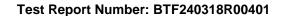




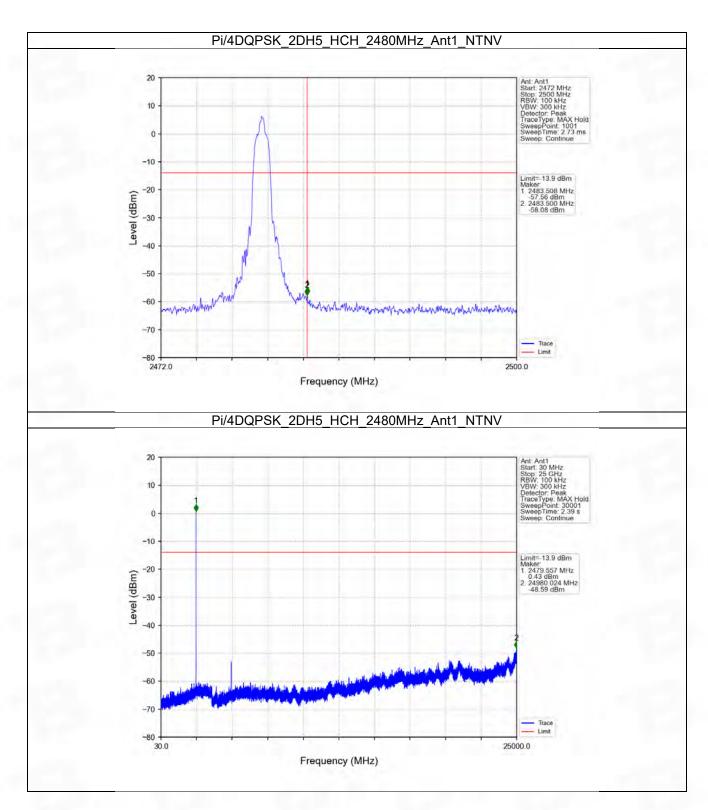


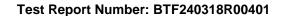




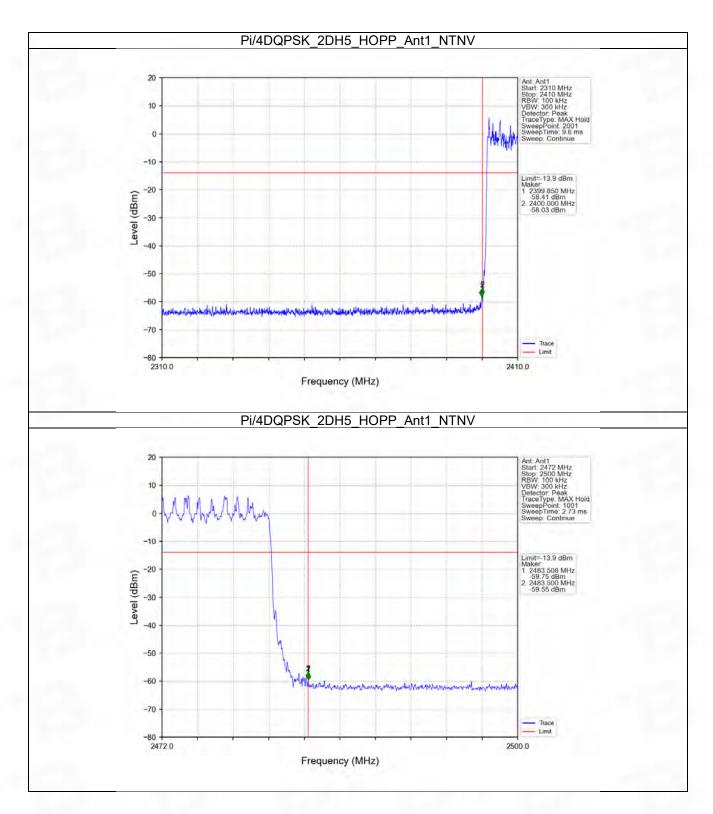


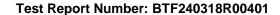




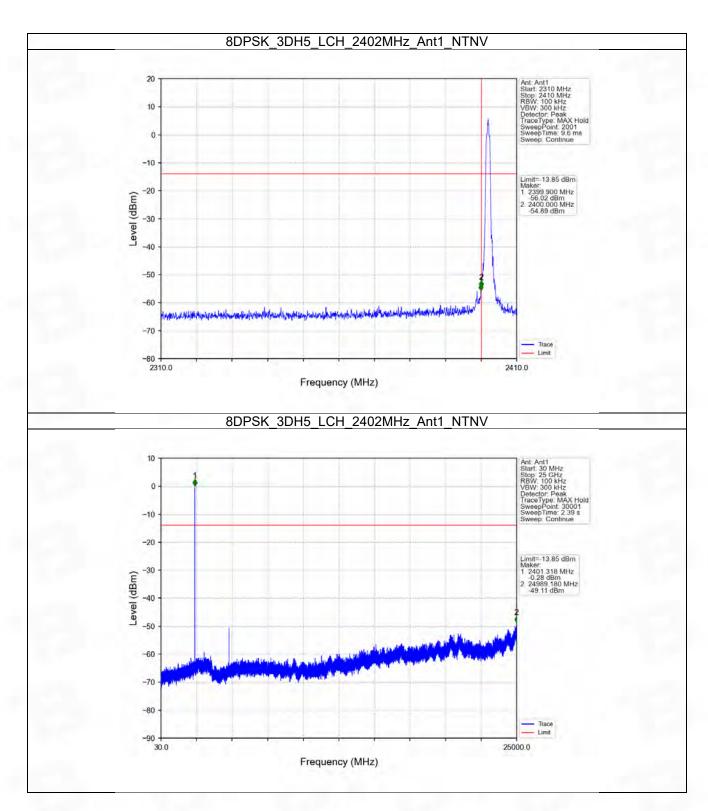


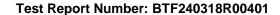




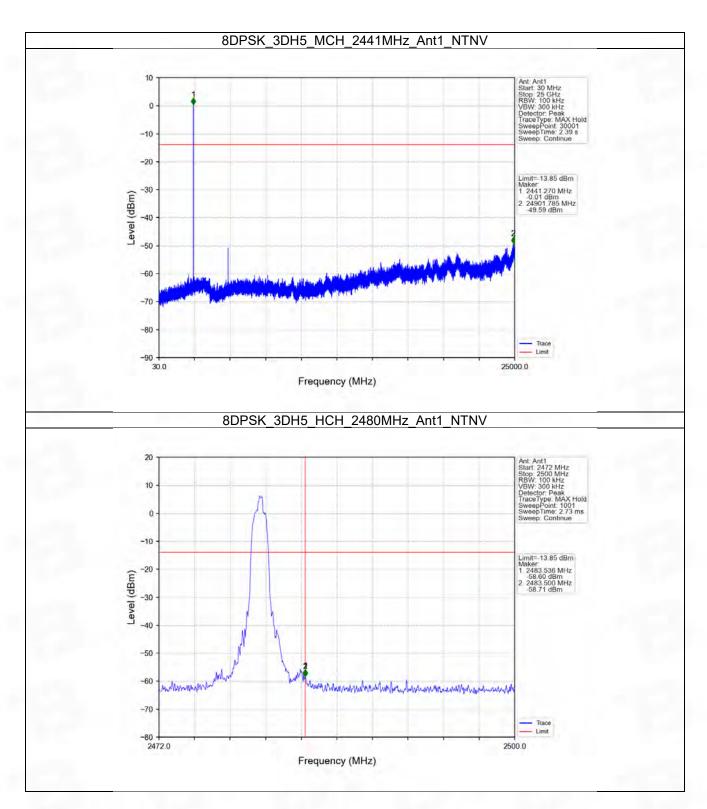




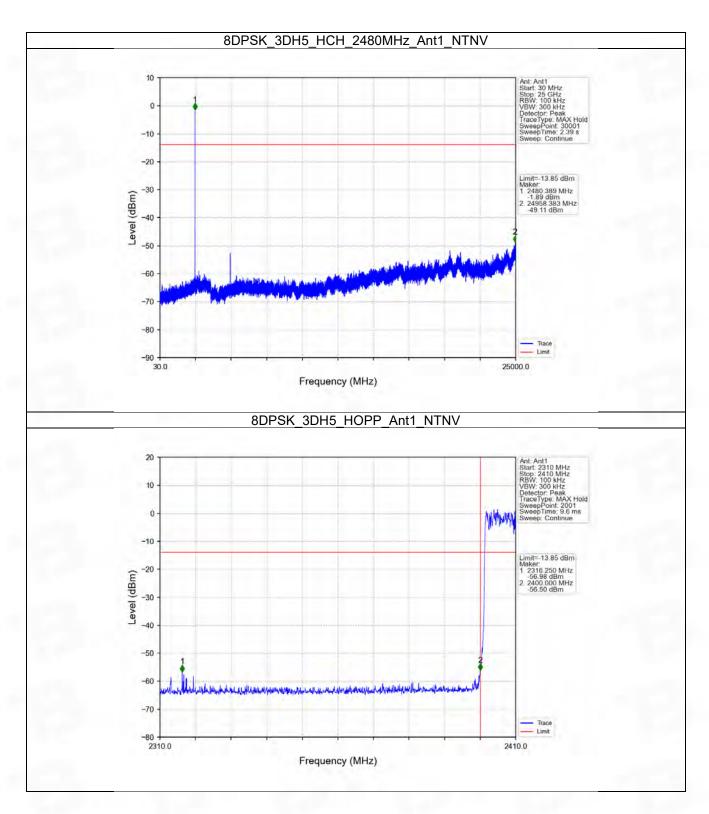


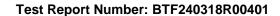




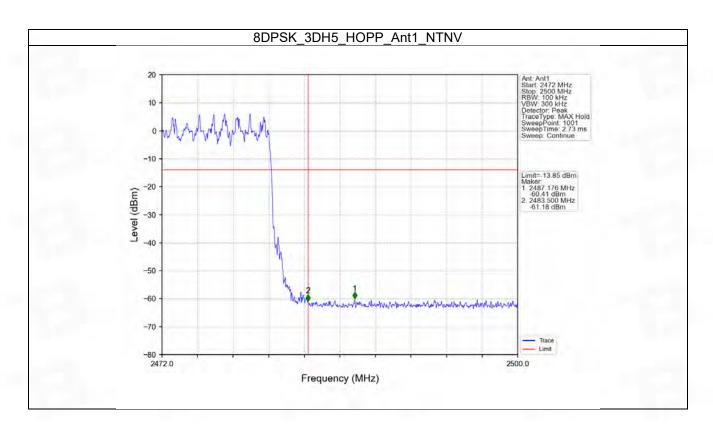


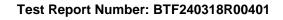












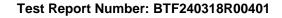


# 7. Form731

## 7.1 Form731

### 7.1.1 Test Result

Lower Freq (MHz)	High Freq (MHz)	MAX Power (W)	MAX Power (dBm)
2402	2480	0.0045	6.49







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-- END OF REPORT --