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Report Template Version: V03 Report Template Revision Date: Mar.1st, 2017

Test Report

Report No. : Applicant: Address of Applicant:	CQASZ20211001781E GANZHOU DEHUIDA TECHNOLOGY CO., LTD Dehuida Science and Technology Park, Huoyanshan Road, Anyuan District, Ganzhou City, Jiangxi Province. P.R China.		
Equipment Under Test (E			
Product:	LED Speaker		
All Model No.:	AAGRY100076371, AABLU100076371, AALAV100076371, AAYLW100076371		
Test Model No.:	AAGRY100076371		
Brand Name:	onn.		
FCC ID:	2AO5X-BM1020		
Standards:	47 CFR Part 15, Subpart C		
Date of Receipt:	2021-10-19		
Date of Test:	2021-10-19 to 2021-10-28		
Date of Issue:	2021-11-03		
Test Result :	PASS*		

lewis zhou (Lewis Zhou) Tested By: Rook Huan **Reviewed By:** (Rock Huang) Approved By: (Jack ai)

* In the configuration tested, the EUT complied with the standards specified above.

The test report is effective only with both signature and specialized stamp, The result(s) shown in this report refer only to the sample(s) tested. Without written approval of CQA, this report can't be reproduced except in full.



Version

Revision History Of Report

Report No.	Version	Description	Issue Date
CQASZ20211001781E	Rev.01	Initial report	2021-11-03



1 Test Summary

Test Item	Test Item Test Requirement		Result	
Antenna Requirement	47 CFR Part 15, Subpart C Section 15.203/15.247 (c)	ANSI C63.10 (2013)	PASS	
AC Power Line Conducted Emission	47 CFR Part 15, Subpart C Section 15.207	ANSI C63.10 (2013)	PASS	
Conducted Peak Output Power	47 CFR Part 15, Subpart C Section 15.247 (b)(1)	ANSI C63.10 (2013)	PASS	
20dB Occupied Bandwidth	47 CFR Part 15, Subpart C Section 15.247 (a)(1)	ANSI C63.10 (2013)	PASS	
Carrier Frequencies Separation	47 CFR Part 15, Subpart C Section 15.247 (a)(1)	ANSI C63.10 (2013)	PASS	
Hopping Channel Number	47 CFR Part 15, Subpart C Section 15.247 (a)(1)	ANSI C63.10 (2013)	PASS	
Dwell Time	47 CFR Part 15, Subpart C Section 15.247 (a)(1)	ANSI C63.10 (2013)	PASS	
Pseudorandom Frequency Hopping Sequence	47 CFR Part 15, Subpart C Section 15.247(b)(4)&TCB Exclusion List (7 July 2002)	ANSI C63.10 (2013)	PASS	
Band-edge for RF Conducted Emissions	47 CFR Part 15, Subpart C Section 15.247(d)	ANSI C63.10 (2013)	PASS	
RF Conducted Spurious Emissions	47 CFR Part 15, Subpart C Section 15.247(d)	ANSI C63.10 (2013)	PASS	
Radiated Spurious emissions	47 CFR Part 15, Subpart C Section 15.205/15.209	ANSI C63.10 (2013)	PASS	
Restricted bands around fundamental frequency (Radiated Emission)	47 CFR Part 15, Subpart C Section 15.205/15.209	ANSI C63.10 (2013)	PASS	



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3 General Information

3.1 Client Information

Applicant:	GANZHOU DEHUIDA TECHNOLOGY CO., LTD
Address of Applicant:	Dehuida Science and Technology Park, Huoyanshan Road, Anyuan District, Ganzhou City, Jiangxi Province. P.R China.
Manufacturer:	GANZHOU DEHUIDA TECHNOLOGY CO., LTD
Address of Manufacturer:	Dehuida Science and Technology Park, Huoyanshan Road, Anyuan District, Ganzhou City, Jiangxi Province. P.R China.
Factory:	GANZHOU DEHUIDA TECHNOLOGY CO., LTD
Address of Factory:	Dehuida Science and Technology Park, Huoyanshan Road, Anyuan District, Ganzhou City, Jiangxi Province. P.R China.

3.2 General Description of EUT

Product Name:	LED Speaker				
All Model No.:	AAGRY100076371, AABLU100076371, AALAV100076371,				
	AAYLW100076371				
Test Model No.:	AAGRY100076371				
Trade Mark:	onn.				
Hardware Version:	V5.3				
Software Version:	D4A3				
Operation Frequency:	2402MHz~2480MHz				
Bluetooth Version:	V5.0				
Modulation Technique:	Frequency Hopping Spread Spectrum(FHSS)				
Modulation Type:	GFSK, π/4DQPSK				
Transfer Rate:	1Mbps/2Mbps				
Number of Channel:	79				
Hopping Channel Type:	Adaptive Frequency Hopping systems				
Product Type:	□ Mobile				
Test Software of EUT:	Signaling fixed frequency				
Antenna Type:	PCB antenna				
Antenna Gain:	-0.58 dBi				
Power Supply:	lithium battery:DC3.7V 1500mAh, Charge by DC5.0V				

Note:

Model No.: AAGRY100076371, AABLU100076371, AALAV100076371, AAYLW100076371 Only the model AAGRY100076371 was tested, since the electrical circuit design, layout, co mponents used and internal wiring were identical for the above models, with difference bein g color of appearance and model name.



Operation Frequency each of channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
0	2402MHz	20	2422MHz	40	2442MHz	60	2462MHz
1	2403MHz	21	2423MHz	41	2443MHz	61	2463MHz
2	2404MHz	22	2424MHz	42	2444MHz	62	2464MHz
3	2405MHz	23	2425MHz	43	2445MHz	63	2465MHz
4	2406MHz	24	2426MHz	44	2446MHz	64	2466MHz
5	2407MHz	25	2427MHz	45	2447MHz	65	2467MHz
6	2408MHz	26	2428MHz	46	2448MHz	66	2468MHz
7	2409MHz	27	2429MHz	47	2449MHz	67	2469MHz
8	2410MHz	28	2430MHz	48	2450MHz	68	2470MHz
9	2411MHz	29	2431MHz	49	2451MHz	69	2471MHz
10	2412MHz	30	2432MHz	50	2452MHz	70	2472MHz
11	2413MHz	31	2433MHz	51	2453MHz	71	2473MHz
12	2414MHz	32	2434MHz	52	2454MHz	72	2474MHz
13	2415MHz	33	2435MHz	53	2455MHz	73	2475MHz
14	2416MHz	34	2436MHz	54	2456MHz	74	2476MHz
15	2417MHz	35	2437MHz	55	2457MHz	75	2477MHz
16	2418MHz	36	2438MHz	56	2458MHz	76	2478MHz
17	2419MHz	37	2439MHz	57	2459MHz	77	2479MHz
18	2420MHz	38	2440MHz	58	2460MHz	78	2480MHz
19	2421MHz	39	2441MHz	59	2461MHz		

Note:

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

Channel	Frequency
The Lowest channel	2402MHz
The Middle channel	2441MHz
The Highest channel	2480MHz



3.3 Additional Instructions

EUT Test Software Settings:					
Mode:	 Special software is used. Through engineering command into the engineering mode. engineering command: *#*#3646633#*#* 				
EUT Power level:	Class2 (Power level is built-in set para selected)	meters and cannot be changed and			
Use test software to set the low	vest frequency, the middle frequency and	I the highest frequency keep			
transmitting of the EUT.					
Mode	Channel	Frequency(MHz)			
	СН0	2402			
DH1/DH3/DH5	СН39	2441			
	CH78	2480			
	СН0	2402			
2DH1/2DH3/2DH5 CH39 2441					
	CH78	2480			

Run Software:

FCC Assist 1.0.0	.2			-	×
の田					
串口设置			周五 10月 22 11:33:18 2021		 -
AB C COME (USE	-SERIAL CHIMA	• (TEST BR/EDR		
波特车 9600			mode:TX		
		-	channel:0		
数据位 8		•	transmit power:10		
核验位 Bane		-	package type:2-DH1 hopping:OFF		
傳止位 1		٠	data types:Pn9		
·流 拉 HaFlow		*	配置数据发送成功!		
	关闭		周五 10月 22 11:33:19 2021		
	×:40		TEST BR/EDR		
BR/EIR BLE			moderTX		
NODE	77		channel:0 transmit power:10		
			package type:2-DH1		
Channel			hopping:OFF		
Transmit_Power	10	*	data types:Pn9		
Facket_Type	2-001		配置数据发送成功!		
Mopping	OFF		周五 10月 22 11:34:31 2021		
Data_Types	Pa9		TEST BR/EDR mode:TX		
			mode:1X channel:39		
Send co	afigur ation.		transmit power:10		
			package type:2-DH1		
			hopping:OFF		
			data types:Pn9		
			配置数据发送成功		
					_
			清除日志		



3.4 Test Environment

Operating Environment	Operating Environment:			
Temperature:	26 °C			
Humidity:	57 % RH			
Atmospheric Pressure:	100.9mbar			
Test Mode:	Use test software to set the lowest frequency, the middle frequency and the highest frequency keep transmitting of the EUT.			

3.5 Description of Support Units

The EUT has been tested with associated equipment below.

Description	Manufacturer	Model No.	Remark	FCC certification
/	1	/	/	1



3.6 Statement of the measurement uncertainty

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

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

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

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

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

Hereafter the best measurement capability for CQA laboratory is reported:

(1)This uncertainty represents an expanded uncertainty expressed at approximately the 95% confidence level using a coverage factor of k=2.



3.7 Test Location

Shenzhen Huaxia Testing Technology Co., Ltd,

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

3.8 Test Facility

The test facility is recognized, certified, or accredited by the following organizations: **IC Registration No.: 22984-1**

The 3m Semi-anechoic chamber of Shenzhen Huaxia Testing Technology Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing

• A2LA (Certificate No. 4742.01)

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

• FCC Registration No.: 522263

Shenzhen Huaxia Testing Technology Co., Ltd., Shenzhen EMC Laboratory has been registered and fully described in a report filed with the (FCC) Federal Communications Commission. The acceptance letter from the FCC is maintained in our files. Registration No.:522263

3.9 Abnormalities from Standard Conditions

None.

3.10Other Information Requested by the Customer

None.



3.11 Equipment List

Test Equipment	Manufacturer	Model No.	Instrument No.	Calibration Date	Calibration Due Date
EMI Test Receiver	R&S	ESR7	CQA-005	2021/9/10	2022/9/9
Spectrum analyzer	R&S	FSU26	CQA-038	2021/9/10	2022/9/9
Preamplifier	MITEQ	AFS4-00010300-18-10P- 4	CQA-035	2021/9/10	2022/9/9
Preamplifier	MITEQ	AMF-6D-02001800-29- 20P	CQA-036	2021/9/10	2022/9/9
Loop antenna	Schwarzbeck	FMZB1516	CQA-087	2021/9/16	2024/9/15
Bilog Antenna	R&S	HL562	CQA-011	2021/9/16	2024/9/15
Horn Antenna	R&S	HF906	CQA-012	2021/9/16	2024/9/15
Horn Antenna	Schwarzbeck	BBHA 9170	CQA-088	2021/9/16	2024/9/15
Coaxial Cable (Above 1GHz)	CQA	N/A	C019	2021/9/10	2022/9/9
Coaxial Cable (Below 1GHz)	CQA	N/A	C020	2021/9/10	2022/9/9
Antenna Connector	CQA	RFC-01	CQA-080	2021/9/10	2022/9/9
RF cable(9KHz~40GHz)	CQA	RF-01	CQA-079	2021/9/10	2022/9/9
Power divider	MIDWEST	PWD-2533-02-SMA-79	CQA-067	2021/9/10	2022/9/9
EMI Test Receiver	R&S	ESPI3	CQA-013	2021/9/10	2022/9/9
LISN	R&S	ENV216	CQA-003	2021/9/10	2022/9/9
Coaxial cable	CQA	N/A	CQA-C009	2021/9/10	2022/9/9



4 Test results and Measurement Data

4.1 Antenna Requirement

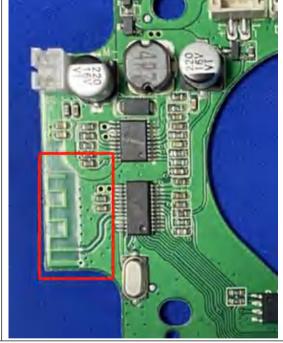
15.203 requirement:

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, 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.

15.247(b) (4) requirement:

The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

EUT Antenna:



The antenna is PCB antenna. The best case gain of the antenna is -0.58dBi.





4.2 Conducted Emissions

 Conducted Emissio	5115				
Test Requirement:	47 CFR Part 15C Section 15.207				
Test Method:	ANSI C63.10: 2013				
Test Frequency Range:	150kHz to 30MHz				
Limit:		Limit (c	lBuV)		
	Frequency range (MHz)	Quasi-peak	Average		
	0.15-0.5	66 to 56*	56 to 46*		
	0.5-5	56	46		
	5-30	60	50		
	* Decreases with the logarithn	n of the frequency.			
Test Procedure:	 The mains terminal distur- room. The EUT was connected to Impedance Stabilization N- impedance. The power cal connected to a second LIS reference plane in the sam measured. A multiple sock power cables to a single LI exceeded. The tabletop EUT was place ground reference plane. An placed on the horizontal gr The test was performed wi of the EUT shall be 0.4 m for vertical ground reference plane. The LISN unit under test and bondect mounted on top of the group between the closest points the EUT and associated eet In order to find the maximut equipment and all of the in ANSI C63.10: 2013 on con 	b AC power source thro etwork) which provides bles of all other units of SN 2, which was bonde he way as the LISN 1 for et outlet strip was used ISN provided the rating ced upon a non-metalling of floor-standing ar round reference plane, th a vertical ground ref from the vertical ground ref from the vertical ground ref a of the vertical ground ref of the LISN 1 and the quipment was at least 0 im emission, the relative terface cables must be	bugh a LISN 1 (Line a $30\Omega/50\mu$ H + 5Ω linear f the EUT were d to the ground or the unit being d to connect multiple g of the LISN was not c table 0.8m above the rangement, the EUT was erence plane. The rear d reference plane. The e horizontal ground om the boundary of the e plane for LISNs his distance was EUT. All other units of 0.8 m from the LISN 2. re positions of		
Test Setup:	Shielding Room	AE IIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIIII	Test Receiver		

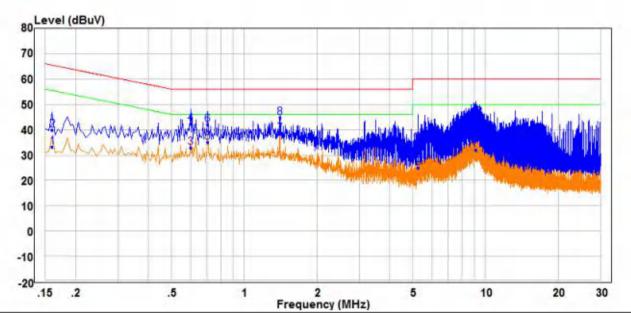


Test Mode:	TX mode
Test Voltage:	AC 120V/60Hz
Test Results:	Pass



Measurement Data

Live line:



Freq	Read Level	Factor	Level	Limit Line	Over Limit	Remark	Pol/Phase
MHz	dBuV	dB	dBuV	dBuV	dB		
0.160	23.64	9.49	33.13	55.46	-22.33	Average	Line
0.160	30.53	9.49	40.02	65.46	-25.44	QP	Line
0.600	23.26	9.70	32.96	46.00	-13.04	Average	Line
0.600	32.56	9.70	42.26	56.00	-13.74	QP	Line
0.705	25.10	9.87	34.97	46.00	-11.03	Average	Line
0.705	32.23	9.87	42.10	56.00	-13.90	QP	Line
1.405	28.80	9.53	38.33	46.00	-7.67	Average	Line
1.405	35.33	9.53	44.86	56.00	-11.14	QP	Line
5.265	15.25	9.73	24.98	50.00	-25.02	Average	Line
5.265	24.85	9.73	34,58	60.00	-25.42	QP	Line
9.145	22.37	9.77	32.14	50.00	-17,86	Average	Line
9.145	34.95	9.77	44.72	60.00	-15.28	QP	Line
	MHz 0.160 0.600 0.600 0.705 0.705 1.405 1.405 5.265 5.265 9.145	Freq Level MHz dBuV 0.160 23.64 0.160 30.53 0.600 23.26 0.600 32.56 0.705 25.10 0.705 32.23 1.405 28.80 1.405 35.33 5.265 15.25 5.265 24.85 9.145 22.37	Freq Level Factor MHz dBuV dB 0.160 23.64 9.49 0.160 30.53 9.49 0.600 23.26 9.70 0.600 32.56 9.70 0.705 25.10 9.87 0.705 32.23 9.87 1.405 28.80 9.53 1.405 35.33 9.53 5.265 15.25 9.73 5.265 24.85 9.73 9.145 22.37 9.77	FreqLevelFactorLevelMHzdBuVdBdBuV0.16023.649.4933.130.16030.539.4940.020.60023.269.7032.960.60032.569.7042.260.70525.109.8734.970.70532.239.8742.101.40528.809.5338.331.40535.339.5344.865.26515.259.7324.989.14522.379.7732.14	Freq Level Factor Level Line MHz dBuV dB dBuV dBuV dBuV 0.160 23.64 9.49 33.13 55.46 0.160 30.53 9.49 40.02 65.46 0.600 23.26 9.70 32.96 46.00 0.600 32.56 9.70 42.26 56.00 0.705 25.10 9.87 34.97 46.00 0.705 32.23 9.87 42.10 56.00 0.705 32.23 9.87 42.10 56.00 1.405 28.80 9.53 38.33 46.00 1.405 35.33 9.53 44.86 56.00 5.265 15.25 9.73 24.98 50.00 5.265 24.85 9.73 34.58 60.00 9.145 22.37 9.77 32.14 50.00	FreqLevelFactorLevelLineLimitMHzdBuVdBdBuVdBuVdBdBuVdB0.16023.649.4933.1355.46-22.330.16030.539.4940.0265.46-25.440.60023.269.7032.9646.00-13.040.60032.569.7042.2656.00-13.740.70525.109.8734.9746.00-11.030.70532.239.8742.1056.00-13.901.40528.809.5338.3346.00-7.671.40535.339.5344.8656.00-11.145.26515.259.7324.9850.00-25.025.26524.859.7334.5860.00-25.429.14522.379.7732.1450.00-17.86	FreqLevelFreqLevelLineLimitRemarkMHzdBuVdBdBuVdBuVdBdBuVdB0.16023.649.4933.1355.46-22.33Average0.16030.539.4940.0265.46-25.44QP0.60023.269.7032.9646.00-13.04Average0.60032.569.7042.2656.00-13.74QP0.70525.109.8734.9746.00-11.03Average0.70532.239.8742.1056.00-13.90QP1.40528.809.5338.3346.00-7.67Average1.40535.339.5344.8656.00-11.14QP5.26515.259.7324.9850.00-25.02Average5.26524.859.7334.5860.00-25.42QP9.14522.379.7732.1450.00-17.86Average

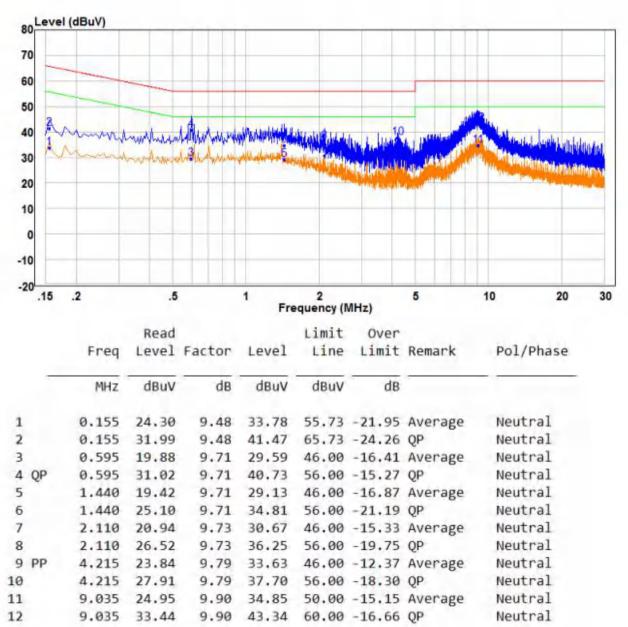
Remark:

1. The following Quasi-Peak and Average measurements were performed on the EUT:

- 2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.
- 3. If the Peak value under Average limit, the Average value is not recorded in the report.



Neutral line:



Remark:

- 1. The following Quasi-Peak and Average measurements were performed on the EUT:
- 2. Final Test Level =Receiver Reading + LISN Factor + Cable Loss.
- 3. If the Peak value under Average limit, the Average value is not recorded in the report.



4.3 Conducted Peak Output Power

Test Requirement:	47 CFR Part 15C Section 15.247 (b)(1)
Test Method:	ANSI C63.10:2013
Test Setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane
	Remark: Offset=Cable loss+ attenuation factor.
Limit:	21dBm
Exploratory Test Mode:	Non-hopping transmitting with all kind of modulation and all kind of data type
Final Test Mode:	Through Pre-scan, find the DH5 of data type is the worst case of GFSK modulation type, 2-DH5 of data type is the worst case of π /4DQPSK modulation type Only the worst case is recorded in the report.
Test Results:	Pass

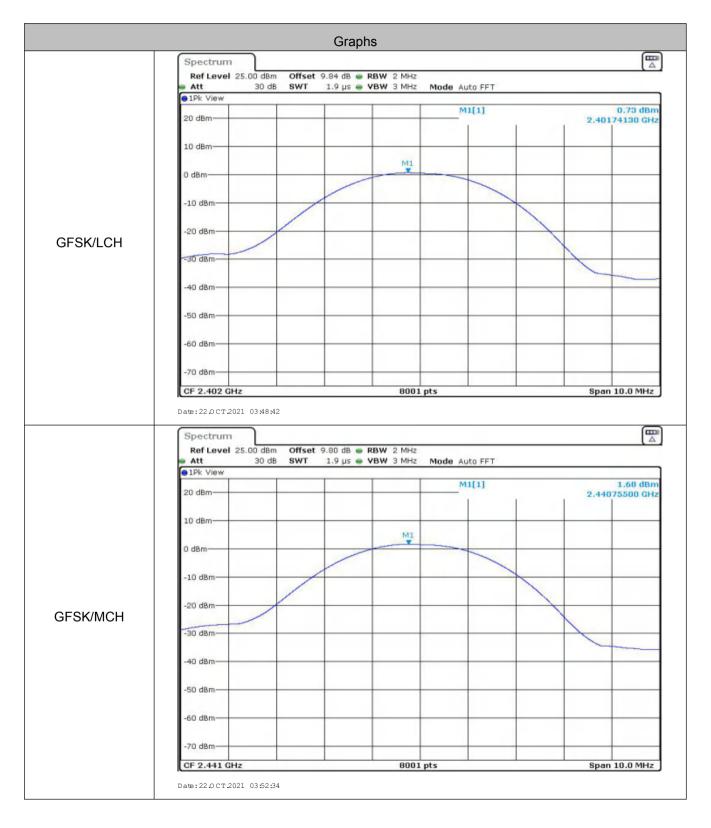


Measurement Data

	GFSK mode						
Test channel	Peak Output Power (dBm)	Limit (dBm)	Result				
Lowest	0.730	21.00	Pass				
Middle	1.680	21.00	Pass				
Highest	2.060	21.00	Pass				
	π/4DQPSK me	ode					
Test channel	Peak Output Power (dBm)	Limit (dBm)	Result				
Lowest	1.290	21.00	Pass				
Middle	2.230	21.00	Pass				
Highest	2.530	21.00	Pass				



Test plot as follows:





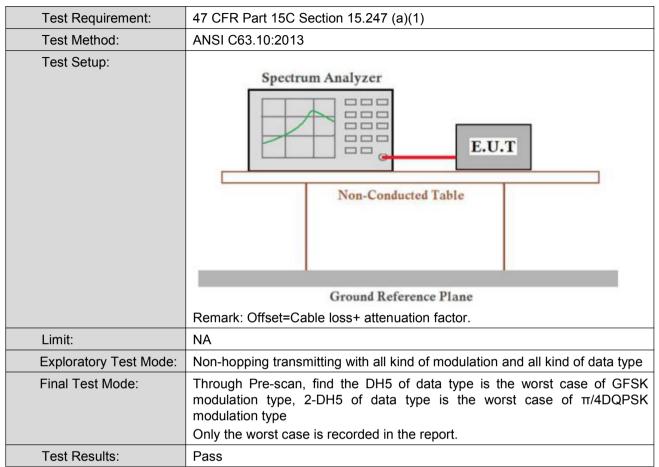
	Spectrum				
	Ref Level 25.00 dBm Offs Att 30 dB SW 1Pk View 30 dB SW	set 9.80 dB 🖷 RBW 2 MH Τ 1.9 μs 🖷 VBW 3 MH			
	20 dBm		M1[1]		2.06 dBm 2.47973750 GHz
	10 dBm				
	0 dBm	MI			
	-10 dBm				
	-20 dBm				
GFSK/HCH	-30 dBm				
	-40 dBm				
	-50 dBm			+ +	
	-60 dBm				
	-70 dBm				
	10 0011				
	CF 2.48 GHz Date: 22.0 CT.2021 03:56:08 Spectrum Ref Level 25.00 dBm Offs	set 9.84 dB 🖷 RBW 2 MH;			Span 10.0 MHz
	CF 2.48 GHz Date: 22.0 CT 2021 03:56:08	set 9.84 dB 🖷 RBW 2 MH;	: Mode Auto FFT		
	CF 2.48 GHz Date: 22.0 CT 2021 03:56:08 Spectrum Ref Level 25.00 dBm Off: Att 30 dB SW	set 9.84 dB 🖷 RBW 2 MH;	:		1.29 dBm
	CF 2.48 GHz Date: 22.0 CT 2021 03:56:08 Spectrum Ref Level 25.00 dBm Offs Att 30 dB SW 1Pk View	set 9.84 dB ● RBW 2 MH: T 1.9 µs ● VBW 3 MH:	: Mode Auto FFT		1.29 dBm
	CF 2.48 GHz Date: 22.0 CT 2021 03:56:08 Spectrum Ref Level 25.00 dBm Offs Att 30 dB SW 1Pk View 20 dBm	set 9.84 dB 🖷 RBW 2 MH;	: Mode Auto FFT		1.29 dBm
	CF 2.48 GHz Date: 22.0 CT 2021 03:56:08 Spectrum Ref Level 25.00 dBm Off: Att 30 dB SW 10 Hk View 20 dBm 10 dBm 0 dBm -10 dBm -10 dBm	set 9.84 dB ● RBW 2 MH: T 1.9 µs ● VBW 3 MH:	: Mode Auto FFT		1.29 dBm
r/4DQPSK/LCH	CF 2.48 GHz Date: 22.0 CT 2021 03:56:08 Spectrum Ref Level 25.00 dBm Off: Att 30 dB SW 10 HR View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -20 dBm	set 9.84 dB ● RBW 2 MH: T 1.9 µs ● VBW 3 MH:	: Mode Auto FFT		Span 10.0 MHz
1/4DQPSK/LCH	CF 2.48 GHz Date: 22.0 CT 2021 03:56:08 Spectrum Ref Level 25.00 dBm Off: Att 30 dB SW 10 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm	set 9.84 dB ● RBW 2 MH: T 1.9 µs ● VBW 3 MH:	: Mode Auto FFT		1.29 dBm
1/4DQPSK/LCH	CF 2.48 GHz Date: 22.0 CT.2021 03:56:08 Spectrum Ref Level 25.00 dBm Off: Att 30 dB SW 10 dBm 10 dBm 0 dBm -10 dBm -20 dBm -40 dBm -40 dBm	set 9.84 dB ● RBW 2 MH: T 1.9 µs ● VBW 3 MH:	: Mode Auto FFT		1.29 dBm
1/4DQPSK/LCH	CF 2.48 GHz Date: 22.0 CT 2021 03:56:08 Spectrum Ref Level 25.00 dBm Off: Att 30 dB SW 10 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm	set 9.84 dB ● RBW 2 MH: T 1.9 µs ● VBW 3 MH:	: Mode Auto FFT		1.29 dBm
t/4DQPSK/LCH	CF 2.48 GHz Date: 22.0 CT.2021 03:56:08 Spectrum Ref Level 25.00 dBm Offs Att 30 dB SW ● 1Pk View 20 dBm 0 10 dBm 0 dBm -10 dBm -0 dBm -20 dBm -30 dBm -40 dBm -50 dBm -50 dBm -50 dBm	set 9.84 dB ● RBW 2 MH: T 1.9 µs ● VBW 3 MH:	: Mode Auto FFT		1.29 dBm



	Spectrum								
		dBm Offset 30 dB SWT	9.80 dB 👄 1 1.9 µs 👄 1	RBW 2 MHz VBW 3 MHz	Mode A	uto FFT			
	1Pk View 20 dBm	_			M	1[1]		2.440	2.23 dBm 68250 GHz
	10 dBm	_	_						
	0 dBm			M1					
	-10 dBm								
	-20 dBm								
r/4DQPSK/MCH	-30 dBm				_				
	-40 dBm								
	-50 dBm	_							
	-60 dBm								
	-70 dBm		_						
	CF 2.441 GHz Date: 22.0 CT 2021 04 Spectrum Ref Level 25.00	dBm Offset	: 9.80 dB 🕳 1		pts			Span	10.0 MHz
	Date: 22 D CT 2021 04				Mode A			Span	
	Date: 22.0 CT.2021 04 Spectrum Ref Level 25.00 Att	dBm Offset		RBW 2 MHz	Mode A	uto FFT 1[1]			2.53 dBm
	Date: 22.0 CT.2021 04 Spectrum Ref Level 25.00 Att 3 1Pk View	dBm Offset		RBW 2 MHz VBW 3 MHz	Mode A				2.53 dBm
	Date: 22.0 CT.2021 04 Spectrum Ref Level 25.00 Att 3 1Pk View 20 dBm	dBm Offset		RBW 2 MHz	Mode A				2.53 dBm
	Date: 22.0 CT.2021 04 Spectrum Ref Level 25.00 Att 3 10 dBm 10 dBm	dBm Offset		RBW 2 MHz VBW 3 MHz	Mode A				2.53 dBm
1/4DQPSK/HCH	Date: 22.0 CT.2021 04 Spectrum Ref Level 25.00 Att 3 10 dBm 0 dBm 0 dBm	dBm Offset		RBW 2 MHz VBW 3 MHz	Mode A				2.53 dBm
1/4DQPSK/HCH	Date: 22.0 CT.2021 04 Spectrum Ref Level 25.00 Att 3 10 dBm 10 dBm -10 dBm	dBm Offset		RBW 2 MHz VBW 3 MHz	Mode A				2.53 dBm
1/4DQPSK/HCH	Date: 22.0 CT.2021 04 Spectrum Ref Level 25.00 Att 3 • 1Pk View 20 dBm 10 dBm -10 dBm -20 dBm	dBm Offset		RBW 2 MHz VBW 3 MHz	Mode A				2.53 dBm
1/4DQPSK/HCH	Date: 22.0 CT.2021 04 Spectrum Ref Level 25.00 Att 3 • 1Pk View 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm	dBm Offset		RBW 2 MHz VBW 3 MHz	Mode A				2.53 dBm
1/4DQPSK/HCH	Date: 22.0 CT.2021 04 Spectrum Ref Level 25.00 Att 3 • 1Pk View 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm -40 dBm	dBm Offset		RBW 2 MHz VBW 3 MHz	Mode A				2.53 dBm
r/4DQPSK/HCH	Date: 22.0 CT.2021 04 Spectrum Ref Level 25.00 Att 3 • 1Pk View 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm -30 dBm -50 dBm	dBm Offset		RBW 2 MHz VBW 3 MHz	Mode At			2,479	



4.4 20dB Occupy Bandwidth



Measurement Data

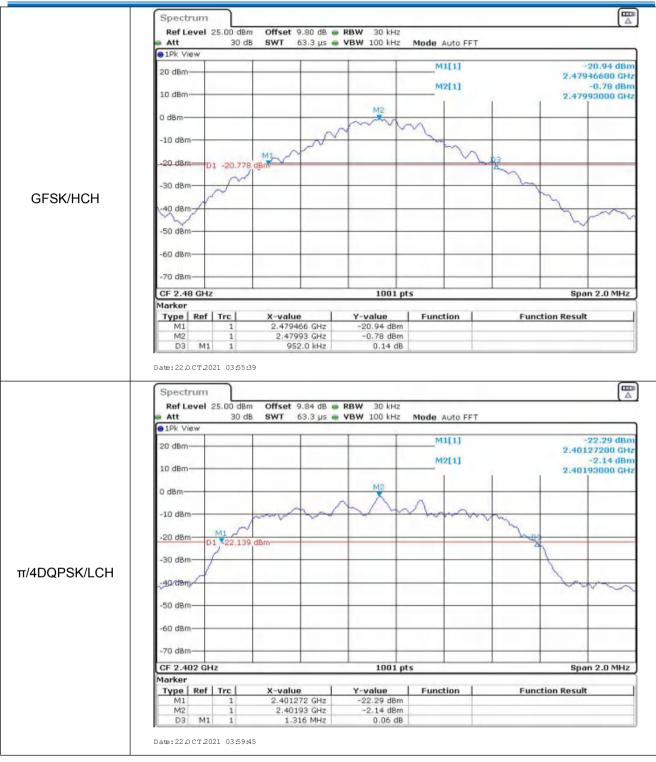
Test channel	20dB Occupy Bandwidth (MHz)			
rest channel	GFSK	π/4DQPSK		
Lowest	0.952	1.316		
Middle	0.954	1.318		
Highest	0.952	1.318		



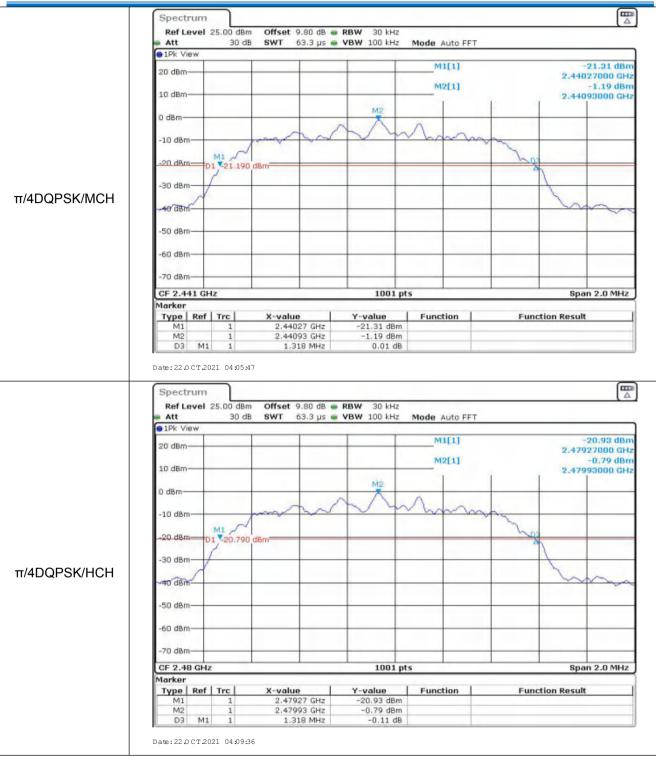
Test plot as follows:













4.5 Carrier Frequencies Separation

Test Requirement:	47 CFR Part 15C Section 15.247 (a)(1)			
Test Method:	ANSI C63.10:2013			
Test Setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane			
	Remark: Offset=Cable loss+ attenuation factor.			
Limit:	2/3 of the 20dB bandwidth			
	Remark: the transmission power is less than 0.125W.			
Exploratory Test Mode:	Hopping transmitting with all kind of modulation and all kind of data type			
Final Test Mode:	Hopping transmitting with all kind of modulation and all kind of data type Through Pre-scan, find the DH5 of data type is the worst case of GFSK modulation type, 2-DH5 of data type is the worst case of π /4DQPSK modulation type Only the worst case is recorded in the report.			
Test Results:	Pass			



Measurement Data

GFSK mode						
Test channel	Carrier Frequencies Separation (MHz)	Limit (MHz)	Result			
Lowest	1.000	≥0.636	Pass			
Middle	1.000	≥0.636	Pass			
Highest	1.000	≥0.636	Pass			
	π/4DQPSK mode					
Test channel	Carrier Frequencies Separation (MHz)	Limit (MHz)	Result			
Lowest	1.000	≥0.879	Pass			
Middle	1.000	≥0.879	Pass			
Highest	1.154	≥0.879	Pass			

Mada	20dB bandwidth (MHz)	Limit (MHz)	
Mode	(worse case)	(Carrier Frequencies Separation)	
GFSK	0.954	0.636	
π/4DQPSK	1.318	0.879	



Test plot as follows:





	Spectrum	dam Officiat 0	00 d0 - 00W 100	kus.				
	Ref Level 25.00 Att 3 1Pk View		.80 dB 👄 RBW 100 8.9 μs 👄 VBW 300		Auto FFT			
	20 dBm				1[1] 1[1]			1.70 dBm 92789 GHz 0.06 dB
	10 dBm		11		D1		1.	00000 MHz
	U dBm		\sim					
	-10 dBm			1		1	5	
GFSK/HCH	-20 dBm						1	
	-40 dBm							-
	-50 dBm							
	-60 dBm							
	-70 dBm							
	Stort 2.478 GHz Date: 22.0 CT 2021 04	:26:24		25 pts			Stop :	2.481 GHz
	Date: 22 DCT.2021 04	dBm Offset 9	.84 dB e RBW 100 8.9 μs e VBW 300	kHz kHz Mode	Auto FFT		Stop :	
	Date: 22.0 CT.2021 04 Spectrum Ref Level 25.00 Att 3 1Pk View 20 dBm	dBm Offset 9	.84 dB 🕳 RBW 100	kHz kHz Mode	Auto FFT 1[1] 1[1]		2.401	0.47 dBm 77885 GHz -0.02 dB
	Date: 22.0 CT.2021 04 Spectrum Ref Level 25.00 Att 3 1Pk View 20 dBm 10 dBm	dBm Offset 9	.84 dB 🕳 RBW 100	kHz kHz Mode	1[1]		2.401	0.47 dBm 77885 GHz
	Date: 22.0 CT.2021 04 Spectrum Ref Level 25.00 Att 3 Pk View 20 dBm 10 dBm 0 dBm	dBm Offset 9 0 dB SWT 1	.84 dB 🕳 RBW 100	kHz Mode kHz Mode M	1[1]		2.401	0.47 dBm 77885 GHz -0.02 dB
	Date: 22.0 CT.2021 04 Spectrum Ref Level 25.00 Att 3 1Pk View 20 dBm 10 dBm	dBm Offset 9 0 dB SWT 1	.84 dB 🕳 RBW 100	kHz Mode kHz Mode M	1[1]		2.401	0.47 dBm 77885 GHz -0.02 dB
1/4DQPSK/LCH	Date: 22.0 CT.2021 04 Spectrum Ref Level 25.00 Att 3 10 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm	dBm Offset 9 0 dB SWT 1	.84 dB 🕳 RBW 100	kHz Mode kHz Mode M	1[1]		2.401	0.47 dBm 77885 GHz -0.02 dB
1/4DQPSK/LCH	Date: 22.0 CT.2021 04 Spectrum Ref Level 25.00 Att 3 10 dBm 10 dBm 10 dBm -10 dBm -20 dBm	dBm Offset 9 0 dB SWT 1	.84 dB 🕳 RBW 100	kHz Mode kHz Mode M	1[1]		2.401	0.47 dBm 77885 GHz -0.02 dB
1/4DQPSK/LCH	Date: 22.0 CT.2021 04	dBm Offset 9 0 dB SWT 1	.84 dB 🕳 RBW 100	kHz Mode kHz Mode M	1[1]		2.401	0.47 dBm 77885 GHz -0.02 dB
t/4DQPSK/LCH	Date: 22.0 CT.2021 04 Spectrum Ref Level 25.00 Att 3 10 dBm 10 dBm 10 dBm -10 dBm -20 dBm -30 dBm -40 dBm	dBm Offset 9 0 dB SWT 1	.84 dB 🕳 RBW 100	kHz Mode kHz Mode M	1[1]		2.401	0.47 dBm 77885 GHz -0.02 dB
t/4DQPSK/LCH	Date: 22.0 CT.2021 04 Spectrum Ref Level 25.00 Att 3 10 dBm 10 dBm 10 dBm -10 dBm -20 dBm -30 dBm -30 dBm -30 dBm -30 dBm -30 dBm -40 dBm -40 dBm	dBm Offset 9 0 dB SWT 1	.84 dB 🕳 RBW 100	kHz Mode kHz Mode M	1[1]		2.401	0.47 dBm 77885 GHz -0.02 dB



	Ref Level 25.00	dam Officiat C C) dB 🖷 RBW 100 k	<u> </u>			
	Att 30		9 µs 🖷 VBW 300 k		FT		
	1Pk View 20 dBm			M1[1]		2.440	1.37 dBm 77885 GHz 0.04 dB
	10 dBm			UILI		1.	00000 MHz
	-0-dBm-	M1	~	01	~	-	n
	-10 dBm				-		
/4DQPSK/MCH	-20 dBm						
	-30 dBm						
	-40 dBm						
	-50 dBm						
	-60 dBm						
	-70 dBm					-	
	Start 2.44 GHz Date: 22.0 CT.2021 04: Spectrum Ref Level 25.00			5 pts		Stop :	2.443 GHz
	Date: 22.0 CT.2021 04:	dBm Offset 9.80	62 0 dB e RBW 100 k 9 μs e VBW 300 k	Hz	FT	Stop :	
	Date: 22.0 CT.2021 04: Spectrum Ref Level 25.00 Att 30	dBm Offset 9.80) dB 🖷 RBW 100 k	Hz Hz Mode Auto F	FT		1.88 dBm
	Date: 22.0 CT.2021 04: Spectrum Ref Level 25.00 Att 30 1Pk View	dBm Offset 9.80) dB 🖷 RBW 100 k	Hz Hz Mode Auto F	FT	2.478	1.88 dBm 77404 GHz -0.09 dB
	Date: 22.0 CT.2021 04: Spectrum Ref Level 25.00 Att 30 1Pk View 20 dBm	dBm Offset 9.80) dB 🖷 RBW 100 k	Hz Hz Mode Auto F		2.478	1.88 dBm 177404 GHz -0.09 dB
	Date: 22.0 CT.2021 04: Spectrum Ref Level 25.00 Att 30 1Pk View 20 dBm 10 dBm	dBm Offset 9.80 0 dB SWT 18.9) dB 🖷 RBW 100 k	Hz Hz Mode Auto F M1[1] D1[1]		2.478	1.88 dBm 177404 GHz -0.09 dB
	Date: 22.0 CT.2021 04: Spectrum Ref Level 25.00 Att 30 1Pk View 20 dBm 10 dBm	dBm Offset 9.80 0 dB SWT 18.9) dB 🖷 RBW 100 k	Hz Hz Mode Auto F M1[1] D1[1]		2.478	1.88 dBm 77404 GHz -0.09 dB
1/4DQPSK/HCH	Date: 22.0 CT.2021 04: Spectrum Ref Level 25.00 Att 30 1Pk View 20 dBm 10 dBm -10 dBm	dBm Offset 9.80 0 dB SWT 18.9) dB 🖷 RBW 100 k	Hz Hz Mode Auto F M1[1] D1[1]		2.478	1.88 dBm 77404 GHz -0.09 dB
1/4DQPSK/HCH	Date: 22.0 CT.2021 04: Spectrum Ref Level 25.00 Att 30 1Pk View 20 dBm 10 dBm -10 dBm -20 dBm	dBm Offset 9.80 0 dB SWT 18.9) dB 🖷 RBW 100 k	Hz Hz Mode Auto F M1[1] D1[1]		2.478	1.88 dBm 77404 GHz -0.09 dB
1/4DQPSK/HCH	Date: 22.0 CT.2021 04: Spectrum Ref Level 25.00 Att 30 1Pk View 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm	dBm Offset 9.80 0 dB SWT 18.9) dB 🖷 RBW 100 k	Hz Hz Mode Auto F M1[1] D1[1]		2.478	1.88 dBm 77404 GHz -0.09 dB
1/4DQPSK/HCH	Date: 22.0 CT.2021 04: Spectrum Ref Level 25.00 Att 30 10 dBm 10 dBm -10 dBm -20 dBm -30 dBm -40 dBm	dBm Offset 9.80 0 dB SWT 18.9) dB 🖷 RBW 100 k	Hz Hz Mode Auto F M1[1] D1[1]		2.478	1.88 dBm
t/4DQPSK/HCH	Date: 22.0 CT.2021 04: Spectrum Ref Level 25.00 Att 31 10 dBm 10 dBm -10 dBm -20 dBm -30 dBm -30 dBm -50 dBm	dBm Offset 9.80 0 dB SWT 18.9) dB 🖷 RBW 100 k	Hz Hz Mode Auto F M1[1] D1[1]		2.478	1.88 dBm 177404 GHz -0.09 dB



4.6 Hopping Channel Number

Test Requirement:	47 CFR Part 15C Section 15.247 (a)(1)			
· ·				
Test Method: Test Setup:	ANSI C63.10:2013 Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane Remark: Offset=Cable loss+ attenuation factor.			
Limit:	At least 15 channels			
Exploratory Test Mode:	hopping transmitting with all kind of modulation and all kind of data type			
Final Test Mode:	Through Pre-scan, find the DH5 of data type is the worst case of GFSK modulation type, 2-DH5 of data type is the worst case of π /4DQPSK modulation type Only the worst case is recorded in the report.			
Test Results:	Pass			

Measurement Data

Mode	Hopping channel numbers	Limit
GFSK	79	≥15
π/4DQPSK	79	≥15



Test plot as follows:





4.7 Dwell Time

Test Requirement:	47 CFR Part 15C Section 15.247 (a)(1)			
Test Method:	ANSI C63.10:2013			
Test Setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane			
Test Mode:	Remark: Offset=Cable loss+ attenuation factor. Hopping transmitting with all kind of modulation and all kind of data type.			
Limit:	0.4 Second			
Test Results:	Pass			



Measurement Data

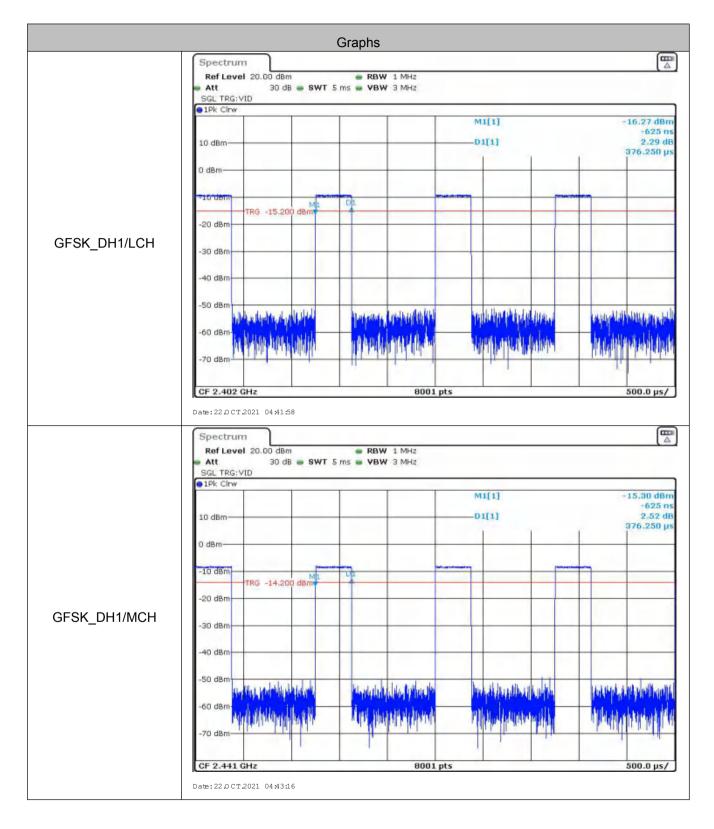
Mode	Packet	Channel	Burst Width [ms/hop/ch]	Dwell Time[s]	Limit (second)
GFSK	DH1	LCH	0.38	0.122	≤0.4
GFSK	DH1	МСН	0.38	0.122	≤0.4
GFSK	DH1	НСН	0.38	0.122	≤0.4
π/4DQPSK	2DH1	LCH	0.39	0.125	≤0.4
π/4DQPSK	2DH1	MCH	0.39	0.125	≤0.4
π/4DQPSK	2DH1	НСН	0.39	0.125	≤0.4
GFSK	DH3	LCH	1.63	0.261	≤0.4
GFSK	DH3	МСН	1.63	0.261	≤0.4
GFSK	DH3	НСН	1.63	0.261	≤0.4
π/4DQPSK	2DH3	LCH	1.64	0.262	≤0.4
π/4DQPSK	2DH3	MCH	1.64	0.262	≤0.4
π/4DQPSK	2DH3	НСН	1.64	0.262	≤0.4
GFSK	DH5	LCH	2.88	0.307	≤0.4
GFSK	DH5	МСН	2.88	0.307	≤0.4
GFSK	DH5	НСН	2.88	0.307	≤0.4
π/4DQPSK	2DH5	LCH	2.88	0.307	≤0.4
π/4DQPSK	2DH5	MCH	2.88	0.307	≤0.4
π/4DQPSK	2DH5	НСН	2.88	0.307	≤0.4

Remark:

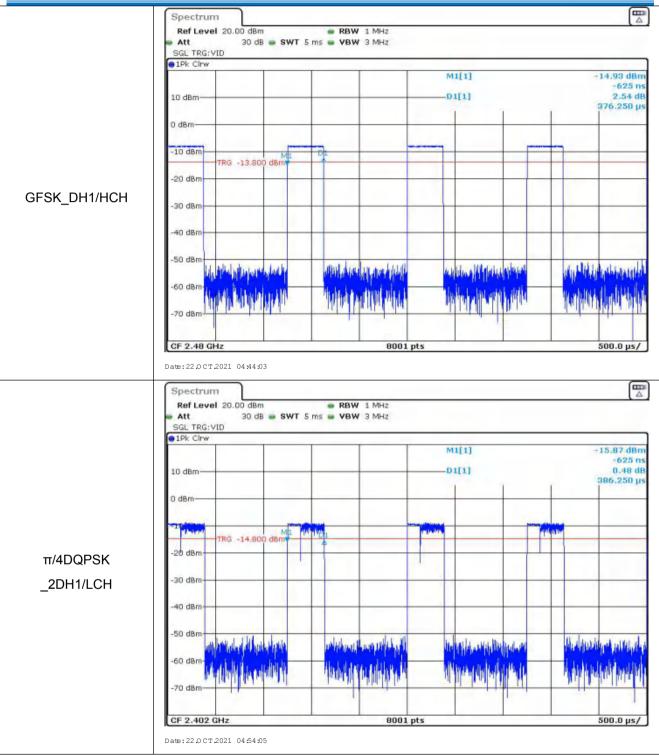
The test period: T= 0.4 Second/Channel x 79 Channel = 31.6 s DH1/2DH1 Dwell time = Burst Width(ms)*(1600/ (2*79))*31.6 DH3/2DH3 Dwell time = Burst Width (ms)*(1600/ (4*79))*31.6 DH5/2DH5 Dwell time = Burst Width (ms)*(1600/ (6*79))*31.6



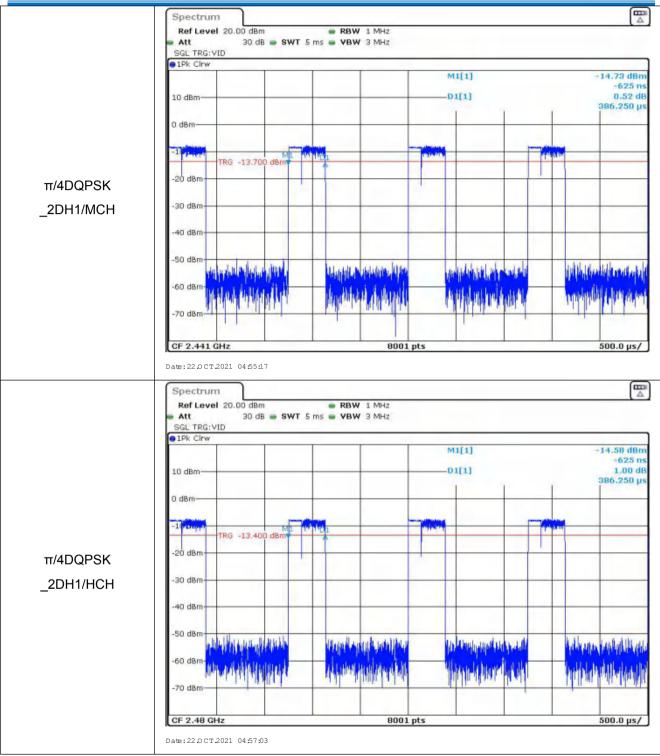
Test plot as follows:











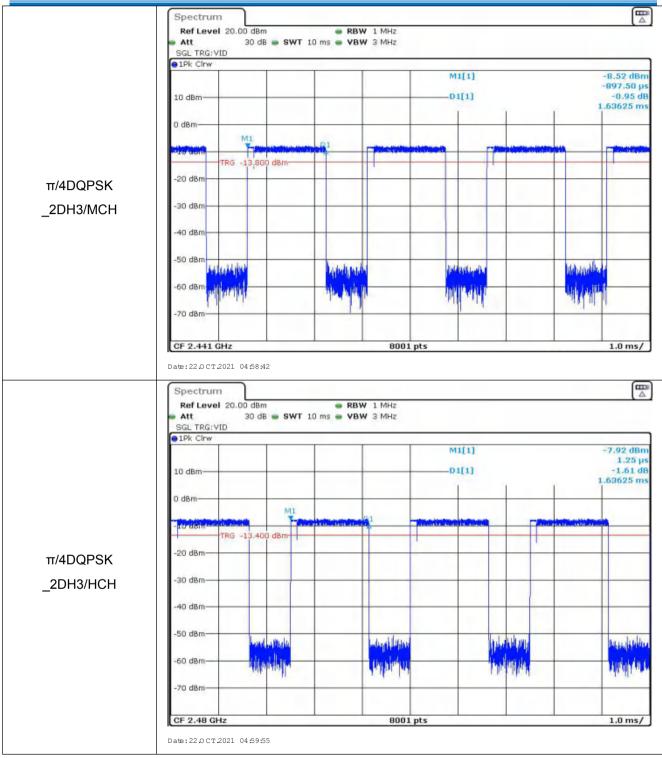


	Spectrum				E
	Ref Level 3		e RBW 1 MHz		(2
	SGL TRG: VID	30 dB - SWT 10 m	s 🖷 VBW 3 MHz		
	1Pk Clrw				
				M1[1]	-9.32 dBr
	10 dBm			D1[1]	1.25 μ -0.47 d
				1 1 1	1.63000 m
	0 dBm				
		MI	DI		
	-10 dBm				New Property in
	-20 dBm	RG -15.200 dBm			
GFSK_DH3/LCH	-30 dBm				
	-40 dBm				
	-50 dBm-				
	SO GOM	destilition to ft	MARKED AND	dependent of the	with quarter to
	-60 d8m-	<mark>น เป็นปีนั้น เ</mark>	walking hills	tinicini	data da
		and the second sec	Linksha	Aladra I.	all, di ti
	-70 dBm				
	CF 2.402 GH	z	8001 pts		1.0 ms/
	Date: 22.0 CT.20.	21 04:44:59			
	Spectrum Ref Level 2 Att	20.00 dBm 30 dB = SWT 10 ms	 RBW 1 MHz VBW 3 MHz 		
	Spectrum Ref Level 3	20.00 dBm 30 dB = SWT 10 ms			
	Spectrum Ref Level 2 Att SGL TRG: VID	20.00 dBm 30 dB = SWT 10 ms		M1[1]	-9.58 dBi
	Spectrum Ref Level 2 Att SGL TRG: VID	20.00 dBm 30 dB = SWT 10 ms		M1[1] D1[1]	-9.58 dBr 0.00000000 0.14 d
	Spectrum Ref Level 2 Att SGL TRG: VID 1Pk Clrw 10 dBm	20.00 dBm 30 dB = SWT 10 ms			-9.58 dBr 0.00000000 0.14 d
	Spectrum Ref Level 2 Att SGL TRG: VID 1Pk Clrw	20.00 dBm 30 dB = SWT 10 ms			-9.58 dBr 0.00000000 0.14 d
	Spectrum Ref Level 2 Att SGL TRG:VID 1Pk Clrw 10 dBm 0 dBm	20.00 dBm 30 dB = SWT 10 ms			-9.58 dBi 0.00000000 0.14 d
	Spectrum Ref Level : Att SGL TRG:VID 1Pk Clrw 10 dBm 0 dBm	20.00 dBm 30 dB SWT 10 m;			-9.58 dBi 0.00000000 0.14 d
	Spectrum Ref Level : Att SGL TRG:VID 1Pk Clrw 10 dBm 0 dBm	20.00 dBm 30 dB SWT 10 m			-9.58 dBr 0.00000000 0.14 d
GFSK DH3/MCH	Spectrum Ref Level 2 Att SGL TRG:VID 1Pk Clrw 10 dBm 0 dBm -10 dBm -20 dBm	20.00 dBm 30 dB SWT 10 m			-9.58 dBr 0.00000000 0.14 d 1.63125 m
GFSK_DH3/MCH	Spectrum Ref Level 2 Att SGL TRG:VID 1Pk Clrw 10 dBm 0 dBm	20.00 dBm 30 dB SWT 10 m			-9.58 dBr 0.00000000 0.14 d
GFSK_DH3/MCH	Spectrum Ref Level 3 Att SGL TRG:VID 1Pk Clrw 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm	20.00 dBm 30 dB SWT 10 m			-9.58 dBi 0.00000000 0.14 d
GFSK_DH3/MCH	Spectrum Ref Level 2 Att SGL TRG:VID 1Pk Clrw 10 dBm 0 dBm -10 dBm -20 dBm	20.00 dBm 30 dB SWT 10 m			-9.58 dBr 0.00000000 0.14 d
GFSK_DH3/MCH	Spectrum Ref Level 3 Att SGL TRG:VID 1Pk Clrw 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm	20.00 dBm 30 dB SWT 10 m; M1 RG -14.200 dBm	s • VBW 3 MHz	D1[1]	-9.58 dBr 0.00000000 0.14 d 1.63125 m
GFSK_DH3/MCH	Spectrum Ref Level 3 Att SGL TRG:VID 1Pk Clrw 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -30 dBm	20.00 dBm 30 dB SWT 10 m			-9.58 dBr 0.00000000 0.14 d
GFSK_DH3/MCH	Spectrum Ref Level 3 Att SGL TRG:VID 1Pk Clrw 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm	20.00 dBm 30 dB SWT 10 m; M1 RG -14.200 dBm	s • VBW 3 MHz	D1[1]	-9.58 dBr 0.00000000 0.14 d 1.63125 m
GFSK_DH3/MCH	Spectrum Ref Level 3 Att SGL TRG:VID 1Pk Clrw 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm	20.00 dBm 30 dB SWT 10 m; M1 RG -14.200 dBm	s • VBW 3 MHz	D1[1]	-9.58 dBr 0.00000000 0.14 d 1.63125 m
GFSK_DH3/MCH	Spectrum Ref Level 3 Att SGL TRG:VID 1Pk Clrw 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -30 dBm	20.00 dBm 30 dB SWT 10 m; M1 RG -14.200 dBm	s • VBW 3 MHz	D1[1]	-9.58 dBr 0.00000000 0.14 d 1.63125 m
GFSK_DH3/MCH	Spectrum Ref Level 3 Att SGL TRG:VID 1Pk Clrw 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm	20.00 dBm 30 dB SWT 10 ms M1 RG -14-200 dBm	s • VBW 3 MHz	D1[1]	-9.58 dBr 0.00000000 0.14 d 1.63125 m



	Spectrum	1			
	Ref Level 20		RBW 1 MHz		
	SGL TRG:VID	30 dB 🥃 SWT 10 ms	s 🖷 ARM 3 WHS		
	1Pk Clrw				
				M1[1]	-7.91 dBr 1.25 μ
	10 dBm			D1[1]	-0.48 d
				1 1	1.63000 m
	0 dBm	MI			
	-10 dBm-		D1		
		-13.800 d8m			
	-20 dBm				
GFSK_DH3/HCH					
_	-30 dBm				
	-40 dBm				
	-50 dBm-	A Dia Hual	a data loa	Lauresbury	Laking Asl
	-60 dBm-	de la compañía de	a la serie de la s	and the first state	
	00 0011	Joan Manual da.	LA CALIFORNIA STATE	A REAL POINT OF THE PARTY OF TH	
	-70 dBm				
	CF 2.48 GHz		8001 pts		1.0 ms/
	Date: 22.0 CT.2021	04:48:14			[m]
	Spectrum Ref Level 20	1	 RBW 1 MHz BW 3 MHz 		
	Spectrum Ref Level 20	.00 dBm			
	Spectrum Ref Level 20 Att SGL TRG:VID	.00 dBm		M1[1]	-9.41 dBr
	Spectrum Ref Level 20 Att SGL TRG:VID	.00 dBm		M1[1] —D1[1]	-9.41 dBr 0.0000000 -1.23 d
	Spectrum Ref Level 20 Att SGL TRG:VID 1Pk Clrw 10 dBm	.00 dBm			-9.41 dBr 0.0000000 -1.23 d
	Spectrum Ref Level 20 Att SGL TRG:VID 1Pk Clrw	.00 dBm 30 dB - SWT 10 ms			-9.41 dBr 0.0000000 -1.23 d
	Spectrum Ref Level 20 Att SGL TRG:VID 1Pk Clrw 10 dBm	.00 dBm			-9.41 dBr 0.00000000 -1.23 d 1.63625 m
	Spectrum Ref Level 20 Att SGL TRG:VID 1Pk Cirw 10 dBm 0 dBm	.00 dBm 30 dB - SWT 10 ms			-9.41 dBr 0.0000000 -1.23 d
π/4DQPSK	Spectrum Ref Level 20 Att SGL TRG:VID 1Pk Cirw 10 dBm 0 dBm	.00 dBm 30 dB SWT 10 ms			-9.41 dBr 0.0000000 -1.23 d
π/4DQPSK	Spectrum Ref Level 20 Att SGL TRG:VID 1Pk Cirw 10 dBm 0 dBm TRG -20 dBm	.00 dBm 30 dB SWT 10 ms			-9.41 dBr 0.0000000 -1.23 d
π/4DQPSK _2DH3/LCH	Spectrum Ref Level 20 Att SGL TRG:VID 1Pk Clrw 10 dBm 0 dBm TRG	.00 dBm 30 dB SWT 10 ms			-9.41 dBr 0.0000000 -1.23 d
	Spectrum Ref Level 20 Att SGL TRG:VID 1Pk Cirw 10 dBm 0 dBm TRG -20 dBm	.00 dBm 30 dB SWT 10 ms			-9.41 dBr 0.0000000 -1.23 d
	Spectrum Ref Level 20 Att SGL TRG:VID 1Pk Clrw 10 dBm 0 dBm -20 dBm -30 dBm -40 dBm	.00 dBm 30 dB SWT 10 ms			-9.41 dBr 0.0000000 -1.23 d
	Spectrum Ref Level 20 Att SGL TRG:VID 1Pk Clrw 10 dBm 0 dBm 7RG -20 dBm -30 dBm	00 dBm 30 dB = SWT 10 ms	s • VBW 3 MHz		-9.41 dBr 0.00000000 -1.23 d 1.63625 m
	Spectrum Ref Level 20 Att SGL TRG:VID 1Pk Clrw 10 dBm 0 dBm -20 dBm -30 dBm -40 dBm	.00 dBm 30 dB SWT 10 ms			-9.41 dBr 0.00000000 -1.23 d 1.63625 m
	Spectrum Ref Level 20 Att SGL TRG:VID 1Pk Clrw 10 dBm 0 dBm 	00 dBm 30 dB = SWT 10 ms	s • VBW 3 MHz		-9.41 dBr 0.00000000 -1.23 d 1.63625 m
	Spectrum Ref Level 20 Att SGL TRG:VID 1Pk Clrw 10 dBm 0 dBm -20 dBm -30 dBm -40 dBm	00 dBm 30 dB = SWT 10 ms	s • VBW 3 MHz		-9.41 dBr 0.00000000 -1.23 d 1.63625 m
	Spectrum Ref Level 20 Att SGL TRG:VID 1Pk Clrw 10 dBm 0 dBm 	00 dBm 30 dB = SWT 10 ms	s • VBW 3 MHz		-9.41 dBr 0.00000000 -1.23 d 1.63625 m







	Spectrum				
	Ref Level 20.		RBW 1 MHz		
	SGL TRG: VID	30 dB 👄 SWT 15 ms (WBW 3 MHz		
	• 1Pk Clrw				
				M1[1]	-9.36 dB
	10 dBm			D1[1]	-0.40 d
				1 1 1	2.87812 m
	0 dBm				
		M1	DI		1 hourses
	-10 d8m		and a loss to day to a loss to a los		at 30 pines and 10 percent
	-20 dBm	-15.300 dBm			
	-20 dbm				
GFSK_DH5/LCH	-30 dBm				
	-40 dBm-				
	-50 dBm	traidly	mpille.	1 Miles	ala
	-60 dBm-		dia di		
		Intell	de la state		- Pro-
	-70 dBm				
	CF 2.402 GHz		8001 pts		1.5 ms
	Date: 22.0 CT.2021 Spectrum Ref Level 20.	.00 dBm	8001 pts		
	Date: 22.0 CT 2021 Spectrum Ref Level 20. Att SGL TRG: VID	1	BW 1 MHz		
	Date: 22 D CT.2021 Spectrum Ref Level 20.	.00 dBm	BW 1 MHz	M1[1]	
	Date: 22.0 CT.2021 Spectrum Ref Level 20. Att SGL TRG:VID 1Pk Clrw	.00 dBm	BW 1 MHz	M1[1]	-8.25 dB 1.88
	Date: 22.0 CT 2021 Spectrum Ref Level 20. Att SGL TRG: VID	.00 dBm	BW 1 MHz	M1[1] —D1[1]	-8.25 dB 1.88 -0.75 d
	Date: 22.0 CT.2021 Spectrum Ref Level 20. Att SGL TRG:VID IPk Clrw 10 dBm	.00 dBm	BW 1 MHz		-8.25 dB 1.88 -0.75 d
	Date: 22.0 CT.2021 Spectrum Ref Level 20. Att SGL TRG:VID 1Pk Clrw	.00 dBm	• RBW 1 MHz • VBW 3 MHz		-8.25 dB 1.88 -0.75 d
	Date: 22 0 CT 2021 Spectrum Ref Level 20. Att SGL TRG: VID 10 dBm 0 dBm -10 dBm	.00 dBm 30 dB • SWT 15 ms	BW 1 MHz		-8.25 dB 1.88 -0.75 d
	Date: 22 O CT.2021 Spectrum Ref Level 20. Att SGL TRG:VID ID dBm 0 dBm -10 dBm TRG	.00 dBm 30 dB = SWT 15 ms	• RBW 1 MHz • VBW 3 MHz		-8.25 dB 1.88 -0.75 d
	Date: 22 0 CT 2021 Spectrum Ref Level 20. Att SGL TRG: VID 10 dBm 0 dBm -10 dBm	.00 dBm 30 dB • SWT 15 ms	• RBW 1 MHz • VBW 3 MHz		-8.25 dB 1.88 -0.75 d
GFSK_DH5/MCH	Date: 22 O CT 2021 Spectrum Ref Level 20. Att SGL TRG:VID ID dBm 0 dBm -10 dBm TRG -20 dBm	.00 dBm 30 dB • SWT 15 ms	• RBW 1 MHz • VBW 3 MHz		-8.25 dB 1.88 -0.75 d
GFSK_DH5/MCH	Date: 22 O CT.2021 Spectrum Ref Level 20. Att SGL TRG:VID ID dBm 0 dBm -10 dBm TRG	.00 dBm 30 dB • SWT 15 ms	• RBW 1 MHz • VBW 3 MHz		-8.25 dB 1.88 -0.75 d
GFSK_DH5/MCH	Date: 22 O CT 2021 Spectrum Ref Level 20. Att SGL TRG:VID ID dBm 0 dBm -10 dBm TRG -20 dBm	.00 dBm 30 dB • SWT 15 ms	• RBW 1 MHz • VBW 3 MHz		-8.25 dB 1.88 -0.75 d
GFSK_DH5/MCH	Date: 22 0 CT 2021 Spectrum Ref Level 20. Att SGL TRG: VID 10 dBm 10 dBm 10 dBm -10 dBm -20 dBm -30 dBm -30 dBm	.00 dBm 30 dB • SWT 15 ms	• RBW 1 MHz • VBW 3 MHz		-8.25 dB 1.88 -0.75 d
GFSK_DH5/MCH	Date: 22 0 CT 2021 Spectrum Ref Level 20. Att SGL TRG: VID 10 dBm 10 dBm 10 dBm -10 dBm -20 dBm -30 dBm -30 dBm	.00 dBm 30 dB • SWT 15 ms	PBW 1 MHz VBW 3 MHz	D1[1]	-8.25 dB 1.88 -0.75 c 2.87812 n
GFSK_DH5/MCH	Date: 22.0 CT 2021 Spectrum Ref Level 20. Att SGL TRG: VID 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -50 dBm -50 dBm	.00 dBm 30 dB • SWT 15 ms	• RBW 1 MHz • VBW 3 MHz	D1[1]	-8.25 dB 1.88 -0.75 c 2.87812 n
GFSK_DH5/MCH	Date: 22 0 CT 2021 Spectrum Ref Level 20. Att SGL TRG: VID 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm	.00 dBm 30 dB • SWT 15 ms	PBW 1 MHz VBW 3 MHz	D1[1]	-8.25 dB 1.88 -0.75 c 2.87812 n
GFSK_DH5/MCH	Date: 22.0 CT 2021 Spectrum Ref Level 20. Att SGL TRG: VID 10 dBm 0 dBm 10 dBm -10 dBm -20 dBm -30 dBm -30 dBm -60 dB	.00 dBm 30 dB • SWT 15 ms	PBW 1 MHz VBW 3 MHz	D1[1]	-8.25 dB 1.88 -0.75 c 2.87812 n
GFSK_DH5/MCH	Date: 22.0 CT 2021 Spectrum Ref Level 20. Att SGL TRG: VID 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -50 dBm -50 dBm -50 dBm	.00 dBm 30 dB • SWT 15 ms	PBW 1 MHz VBW 3 MHz	D1[1]	1.5 ms/
GFSK_DH5/MCH	Date: 22.0 CT 2021 Spectrum Ref Level 20. Att SGL TRG: VID 10 dBm 0 dBm 10 dBm -10 dBm -20 dBm -30 dBm -30 dBm -60 dB	.00 dBm 30 dB • SWT 15 ms	PBW 1 MHz VBW 3 MHz	D1[1]	-8.25 dB 1.88 j -0.75 c 2.87812 m



	Spectrum				
	Ref Level 20	0.00 dBm 30 dB = SWT 15 ms	RBW 1 MHz		(5
	SGL TRG: VID	30 GB - 3W1 15 HIS	WEW S MILZ		
	1Pk Clrw			M1[1]	-7.93 dBn
	10 dBm			D1[1]	0.00000000 -0.44 df
				1 1	2.87812 m
	0 dBm	ML	-		
	-10 dBm-		D1		
	-20 dBm	-13.800 dBm			
GFSK_DH5/HCH	-20 0011				
GI SK_DHS/HCH	-30 dBm				
	-40 dBm				
	-50 dBm	los ath	Present in	ladena	and a d
	-60 dBm-	Vipla	per type	the feet	a the
	-70 dBm				
	CF 2.48 GHz Date: 22.0 CT 2021 Spectrum Ref Level 20	1	8001 pts		1.5 ms/
	Date: 22.0 CT.2021 Spectrum Ref Level 20 Att SGL TRG: VID	1	RBW 1 MHz		1.5 ms/
	Date: 22.0 CT 2021 Spectrum Ref Level 20 Att).00 dBm	RBW 1 MHz	M1[1]	-9.33 dBn
	Date: 22.0 CT.2021 Spectrum Ref Level 20 Att SGL TRG: VID 1Pk Clrw).00 dBm	RBW 1 MHz	M1[1]	
	Date: 22.0 CT.2021 Spectrum Ref Level 20 Att SGL TRG: VID IPk Clnw 10 dBm).00 dBm	RBW 1 MHz		-9.33 dBn 1.68 µ -1.32 dl
	Date: 22.0 CT.2021 Spectrum Ref Level 20 Att SGL TRG: VID 1Pk Clrw	0.00 dBm 30 dB SWT 15 ms	RBW 1 MHz	M1[1]	-9.33 dBn 1.68 µ -1.32 dl
	Date: 22.0 CT.2021 Spectrum Ref Level 20 Att SGL TRG:VID 1Pk Clrw 10 dBm 0 dBm	0.00 dBm 30 dB ● SWT 15 ms	RBW 1 MHz	M1[1]	-9.33 dBr 1.88 µ -1.32 d 2.88375 m
	Date: 22.0 CT.2021 Spectrum Ref Level 20 Att SGL TRG:VID 1Pk Clrw 10 dBm 0 dBm	0.00 dBm 30 dB • SWT 15 ms	• RBW 1 MHz • VBW 3 MHz	M1[1] 	-9.33 dBn 1.88 µ -1.32 dI 2.88375 m
π/4DQPSK	Date: 22.0 CT.2021 Spectrum Ref Level 20 Att SGL TRG:VID IPk Clnw 10 dBm 0 dBm TRG -20 dBm	0.00 dBm 30 dB ● SWT 15 ms	• RBW 1 MHz • VBW 3 MHz	M1[1] 	-9.33 dBn 1.88 µ -1.32 di 2.88375 m
π/4DQPSK _2DH5/LCH	Date: 22.0 CT.2021 Spectrum Ref Level 20 Att SGL TRG:VID IPk Clnw 10 dBm 0 dBm TRG	0.00 dBm 30 dB ● SWT 15 ms	• RBW 1 MHz • VBW 3 MHz	M1[1] 	-9.33 dBn 1.88 µ -1.32 di 2.88375 m
	Date: 22.0 CT.2021 Spectrum Ref Level 20 Att SGL TRG:VID IPk Clnw 10 dBm 0 dBm TRG -20 dBm	0.00 dBm 30 dB ● SWT 15 ms	• RBW 1 MHz • VBW 3 MHz	M1[1] 	-9.33 dBn 1.88 µ -1.32 dI 2.88375 m
	Date: 22 OCT 2021 Spectrum Ref Level 20 Att SGL TRG: VID 10 dBm 0 dBm 0 dBm 7RG -20 dBm -30 dBm -40 dBm	0.00 dBm 30 dB ● SWT 15 ms M1 Strength 5 -14.800 dBm	• RBW 1 MHz • VBW 3 MHz	M1[1] 	-9.33 dBn 1.88 p -1.32 dl 2.88375 m
	Date: 22.0 CT.2021 Spectrum Ref Level 20 Att SGL TRG: VID 10 dBm 10 dBm 0 dBm -20 dBm -30 dBm -40 dBm -50 dBm	0.00 dBm 30 dB ● SWT 15 ms	• RBW 1 MHz • VBW 3 MHz	M1[1] D1[1]	-9.33 dBn 1.88 µ -1.32 dl 2.88375 m
	Date: 22 OCT 2021 Spectrum Ref Level 20 Att SGL TRG: VID 10 dBm 0 dBm 0 dBm 7RG -20 dBm -30 dBm -40 dBm	0.00 dBm 30 dB ● SWT 15 ms M1 Strength 5 -14.800 dBm	• RBW 1 MHz • VBW 3 MHz	M1[1] 	-9.33 dBr 1.88 p -1.32 d 2.88375 m
	Date: 22.0 CT.2021 Spectrum Ref Level 20 Att SGL TRG: VID 10 dBm 10 dBm 0 dBm -20 dBm -30 dBm -40 dBm -50 dBm	0.00 dBm 30 dB • SWT 15 ms M1 	• RBW 1 MHz • VBW 3 MHz	M1[1] D1[1]	-9.33 dBr 1.88 µ -1.32 d 2.88375 m
	Date: 22 OCT 2021 Spectrum Ref Level 20 Att SGL TRG: VID	M1 M1 5 -14.800 dBm	• RBW 1 MHz • VBW 3 MHz	M1[1] D1[1]	-9.33 dBr 1.88 µ -1.32 dl 2.88375 m



	Spectrum	1			
	Ref Level 20.		BW 1 MHz		
	SGL TRG: VID	30 dB 🥃 SWT 15 ms	WBW 3 MHz		
	● 1Pk Clrw				
				M1[1]	-8.28 dB
	10 dBm-			D1[1]	-1.17 0
				TTT	2.88375 n
	0 dBm-				
		M1	01		
	TRG	-13.800 dBm	Aller Aller		
	-20 dBm-				
π/4DQPSK					
_2DH5/MCH	-30 dBm				
_	1000				
	-40 dBm				
	-50 dBm-				
		shiph tear	havelisti	Ldiab	Pints.
	-60 dBm-	i, addag	A Print	a failing a	i kaj s
	70 10-1		10.1		
	-70 dBm				
			8001 pts		
					1.5 ms
	CF 2.441 GHz	05:01:27	0001 pr3		
	Date: 22.0 CT.2021 Spectrum Ref Level 20.	.00 dBm	RBW 1 MHz		
	Date: 22.0 CT 2021 Spectrum Ref Level 20. Att SGL TRG: VID	1	RBW 1 MHz		
	Date: 22 D CT 2021 Spectrum Ref Level 20. Att	.00 dBm	RBW 1 MHz	M1[1]	
	Date: 22 O CT 2021 Spectrum Ref Level 20. Att SGL TRG: VID 1Pk Clrw	.00 dBm	RBW 1 MHz	M1[1]	-7.89 dB -136.88
	Date: 22.0 CT 2021 Spectrum Ref Level 20. Att SGL TRG: VID	.00 dBm	RBW 1 MHz	M1[1] —D1[1]	-7.89 dB -136.88 -1.12 (
	Date: 22.0 CT 2021 Spectrum Ref Level 20. Att SGL TRG: VID 1Pk Clrw 10 dBm	.00 dBm	RBW 1 MHz		-7.89 dB -136.88 -1.12 (
	Date: 22 O CT 2021 Spectrum Ref Level 20. Att SGL TRG: VID 1Pk Clrw	.00 dBm	RBW 1 MHz		-7.89 dB -136.88 -1.12 (
	Date: 22.0 CT 2021 Spectrum Ref Level 20. Att SGL TRG:VID 10 dBm 0 dBm 210 bBm	00 dBm 30 dB SWT 15 ms	RBW 1 MHz VBW 3 MHz		-7.89 dB -136.88 -1.12 (
	Date: 22 0 CT 2021 Spectrum Ref Level 20. Att SGL TRG: VID 1Pk Cinw 10 dBm 0 dBm 210'0Bm TRG	00 dBm 30 dB SWT 15 ms	RBW 1 MHz VBW 3 MHz		-7.89 dB -136.88 -1.12 (2.88375 n
π/4DQPSK	Date: 22.0 CT 2021 Spectrum Ref Level 20. Att SGL TRG:VID 10 dBm 0 dBm 210 bBm	00 dBm 30 dB SWT 15 ms	RBW 1 MHz VBW 3 MHz		-7.89 dB -136.88 -1.12 (2.88375 n
	Date: 22 0 CT 2021 Spectrum Ref Level 20. Att SGL TRG:VID IPk Cinw 10 dBm 0 dBm 210 dBm TRG -20 dBm	00 dBm 30 dB SWT 15 ms	RBW 1 MHz VBW 3 MHz		-7.89 dB -136.88 -1.12 (2.88375 n
π/4DQPSK _2DH5/HCH	Date: 22 0 CT 2021 Spectrum Ref Level 20. Att SGL TRG: VID 1Pk Cinw 10 dBm 0 dBm 210'0Bm TRG	00 dBm 30 dB SWT 15 ms	RBW 1 MHz VBW 3 MHz		-7.89 dB -136.88 -1.12 (2.88375 n
	Date: 22 0 CT 2021 Spectrum Ref Level 20. Att SGL TRG:VID IPk Cinw 10 dBm 0 dBm 210 dBm TRG -20 dBm	00 dBm 30 dB SWT 15 ms	RBW 1 MHz VBW 3 MHz		-7.89 dB -136.88 -1.12 (2.88375 n
	Date: 22.0 CT 2021 Spectrum Ref Level 20. Att SGL TRG:VID 10 dBm 0 dBm 0 dBm -20 dBm -30 dBm -40 dBm -40 dBm	00 dBm 30 dB • SWT 15 ms	RBW 1 MHz VBW 3 MHz		-7.89 dB -136.88 -1.12 (2.88375 n
	Date: 22.0 CT 2021 Spectrum Ref Level 20. Att SGL TRG:VID 10 dBm 0 dBm 0 dBm -20 dBm -20 dBm -30 dBm	00 dBm 30 dB SWT 15 ms	RBW 1 MHz VBW 3 MHz		-7.89 dB -136.89 -1.12 c 2.88375 n
	Date: 22.0 CT 2021 Spectrum Ref Level 20. Att SGL TRG:VID 10 dBm 0 dBm 0 dBm -20 dBm -30 dBm -40 dBm -40 dBm	.00 dBm 30 dB ■ SWT 15 ms	RBW 1 MHz VBW 3 MHz		
	Date: 22.0 CT 2021 Spectrum Ref Level 20. Att SGL TRG:VID 10 dBm 0 dBm 0 dBm -10 dBm -20 dBm -30 dBm -30 dBm -50 dBm	00 dBm 30 dB • SWT 15 ms	RBW 1 MHz VBW 3 MHz		-7.89 dB -136.89 -1.12 c 2.88375 n
	Date: 22.0 CT 2021 Spectrum Ref Level 20. Att SGL TRG:VID 10 dBm 0 dBm 0 dBm -10 dBm -20 dBm -30 dBm -30 dBm -50 dBm	.00 dBm 30 dB ■ SWT 15 ms	RBW 1 MHz VBW 3 MHz		-7.89 dB -136.88 -1.12 c 2.88375 n
	Date: 22.0 CT 2021 Spectrum Ref Level 20. Att SGL TRG:VID 10 dBm 0 dBm 0 dBm 270 dBm -20 dBm -30 dBm -40 dBm -50 dBm -60 dBm	.00 dBm 30 dB ■ SWT 15 ms	RBW 1 MHz VBW 3 MHz		-7.89 dB -136.88 -1.12 c 2.88375 n



4.8 Band-edge for RF Conducted Emissions

Test Requirement:	47 CFR Part 15C Section 15.247 (d)
Test Method:	ANSI C63.10:2013
Test Setup:	Spectrum Analyzer E.U.T Non-Conducted Table Ground Reference Plane Remark: Offset=cable loss+ attenuation factor.
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum 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.
Exploratory Test Mode:	Hopping and Non-hopping transmitting with all kind of modulation and all kind of data type
Final Test Mode:	Through Pre-scan, find the DH5 of data type is the worst case of GFSK modulation type, 2-DH5 of data type is the worst case of π /4DQPSK modulation type Only the worst case is recorded in the report.
Test Results:	Pass

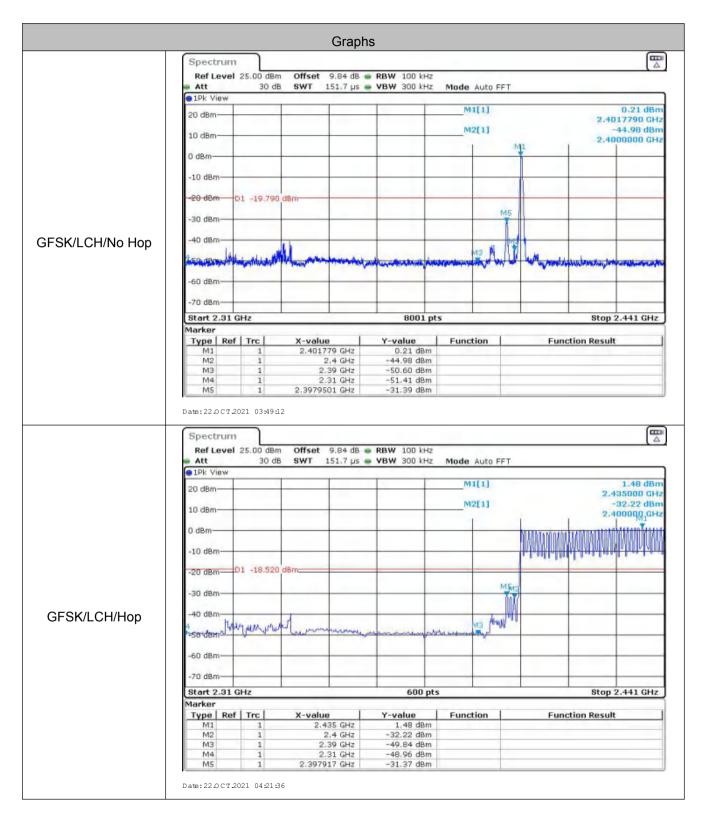


Mode	Test Channel	Frequency [MHz]	Frequency Hopping	Emission Level [dBm]	Limit [dBm]	Result
			Off	-44.980	-19.79	PASS
GFSK	LCH	2400	On	-32.220	-18.52	PASS
			Off	-46.420	-18.3	PASS
GFSK	HCH	2483.5	On	-47.540	-18.3	PASS
			Off	-44.300	-19.42	PASS
π/4DQPSK	LCH	2400	On	-33.700	-18.29	PASS
			Off	-48.520	-18.08	PASS
π/4DQPSK	HCH	2483.5	On	-48.620	-18.51	PASS



Report No.: CQASZ20211001781E

Test plot as follows:





	Spectrum	1						
	Ref Level			RBW 100		Mode Auto F	ЕT	
	1Pk View	30 GE	5 51011 /5.0 μ		KHZ	Mode Auto F	FI	
	20 dBm-			-		M1[1]		1.70 dBm
						M2[1]		2.47992290 GHz -46.42 dBm
	10 dBm			MI		1	Í.	2.48350000 GHz
	0 dBm				-			
	-10 dBm	_			-			
		01 -18.300	dBro	11				
	-20 dBmD	1 -10-300	GBIN					
	-30 dBm			1	+			
GFSK/HCH/No Hop	-40 dBm			1.1.	M4			
			M	AUL	May		M3	
	ANSID CELOSIMICAN	all when the stand of the second	the second second	W MALLY O	AN LOW	Aufterstangen aufter auto	and the second and and	adation to minimation to the second
	-60 d8m			-	-		-	
	-70 dBm							
	CF 2.4835 0	247		80	001 pts			Span 60.0 MHz
	Marker	3112		00	or pes			apan ooto mnz
	Type Ref M1	Trc 1	X-value 2.4799229 GH:	Y-value	dBm	Function	Fun	ction Result
	M2	1	2.4835 GH	-46,42	dBm			
	M3	1	2.5 GH 2.4844225 GH					
	M4		2.4044223 GH					
	Date: 22.0 CT.20	021 03:56:3	38					
	Date: 22.0 CT.20 Spectrum Ref Level Att	021 03:56:3	38 n Offset 9.80 di		kHz	Mode Auto F	FT	μ Δ
	Date: 22 D CT 20 Spectrum Ref Level Att 1Pk View	021 03:56:3 25.00 dBm	38 n Offset 9.80 di	• • RBW 100	kHz	Mode Auto F	FT	1.70 dBm
	Date: 22 D CT 20 Spectrum Ref Level Att 1Pk View 20 dBm	021 03:56:3 25.00 dBm	38 n Offset 9.80 di	• • RBW 100	kHz		FT	
	Date: 22 D CT 20 Spectrum Ref Level Att 1Pk View	021 03:56:3 25.00 dBm	38 n Offset 9.80 di	• • RBW 100	kHz	M1[1]	FT	1.70 dBm 2.4790500 GH2
	Date: 22 D CT 20 Spectrum Ref Level Att 1Pk View 20 dBm	021 03:56:3 25.00 dBm	38 n Offset 9.80 di	• RBW 100	kHz	M1[1]	FT	1.70 dBm 2.4790500 GHz -47.54 dBm
	Date: 22.0 CT.20 Spectrum Ref Level Att 1Pk View 20 dBm 10 dBm 0 dBm	25.00 dBm 30 dB	38 Offset 9.80 di SWT 75.8 μ	B RBW 100 B VBW 300	kHz	M1[1]	FT	1.70 dBm 2.4790500 GHz -47,54 dBm
	Date: 22.0 CT 20 Spectrum Ref Level Att 1 Pk View 20 dBm 10 dBm 0 dBm	25.00 dBm 30 dE	38 Offset 9.80 di SWT 75.8 μ	• RBW 100	kHz	M1[1]	FT	1.70 dBm 2.4790500 GHz -47.54 dBm
	Date: 22.0 CT.20 Spectrum Ref Level Att 1Pk View 20 dBm 10 dBm 0 dBm	25.00 dBm 30 dB	38 Offset 9.80 di SWT 75.8 μ	B RBW 100 B VBW 300	kHz	M1[1]	FT	1.70 dBm 2.4790500 GHz -47,54 dBm
	Date: 22.0 CT 20 Spectrum Ref Level Att 1 Pk View 20 dBm 10 dBm 0 dBm	25.00 dBm 30 dE	38 Offset 9.80 di SWT 75.8 μ	B RBW 100 B VBW 300	kHz	M1[1]	FT	1.70 dBm 2.4790500 GHz -47,54 dBm
GFSK/HCH/Hop	Date: 22.0 CT.20 Spectrum Ref Level Att 1Pk View 20 dBm 10 dBm 10 dBm -10 dBm -20 dBm -30 dBm	25.00 dBm 30 dE	38 Offset 9.80 di SWT 75.8 μ	MI	kHz kHz	M1[1]	FT	1.70 dBm 2.4790500 GHz -47,54 dBm
GFSK/HCH/Hop	Date: 22.0 CT.20 Spectrum Ref Level Att 1 Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm	25.00 dBm 30 dE	38 Offset 9.80 di SWT 75.8 μ	MI	kHz kHz	M1[1]	FT	1.70 dBm 2.4790500 GHz -47,54 dBm
GFSK/HCH/Hop	Date: 22.0 CT.20 Spectrum Ref Level Att 1Pk View 20 dBm 10 dBm 10 dBm -10 dBm -20 dBm -30 dBm	25.00 dBm 30 dE	38 Offset 9.80 di SWT 75.8 μ	MI	kHz	M1[1]		1.70 dBm 2.4790500 GHz -47,54 dBm
GFSK/HCH/Hop	Date: 22.0 CT.20 Spectrum Ref Level Att 1 Pk View 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm -40 dBm	25.00 dBm 30 dE	38 Offset 9.80 di SWT 75.8 μ	MI	kHz kHz	M1[1]		1.70 dBm 2.4790500 GHz -47,54 dBm
GFSK/HCH/Hop	Date: 22.0 CT.20 Spectrum Ref Level Att 1 Pk View 20 dBm 10 dBm -10 dBm -10 dBm -30 dBm -30 dBm -30 dBm -60 dBm	25.00 dBm 30 dE	38 Offset 9.80 di SWT 75.8 μ	MI	kHz kHz	M1[1]		1.70 dBm 2.4790500 GHz -47,54 dBm
GFSK/HCH/Hop	Date: 22.0 CT 20 Spectrum Ref Level Att 1 Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -30 dBm -50 dBm -60 dBm	25.00 dBm 30 db	38 Offset 9.80 di SWT 75.8 μ	RBW 100 VBW 300 M1	kHz kHz	M1[1]		1.70 dBm 2.4790500 GHz -47,54 dBm 2.4835000 GHz
GFSK/HCH/Hop	Date: 22.0 CT.20 Spectrum Ref Level Att 1 Pk View 20 dBm 10 dBm -10 dBm -10 dBm -30 dBm -30 dBm -30 dBm -60 dBm	25.00 dBm 30 db	38 Offset 9.80 di SWT 75.8 μ	RBW 100 VBW 300 M1	kHz kHz	M1[1]		1.70 dBm 2.4790500 GHz -47,54 dBm
GFSK/HCH/Hop	Date: 22.0 CT.20 Spectrum Ref Level Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -20 dBm -30 dBm -40 dBm -40 dBm -60 dBm -60 dBm -70 dBm CF 2.4835 0 Marker Type Ref	21 03:56:3 25.00 dBm 30 dB 30	а Offset 9.80 di a SWT 75.8 µ dBm	RBW 100 VBW 300 M1 M1 M1 M1 M1 M1 M1 M1 M1 M1	kHz kHz	M1[1]	annal sa sula	1.70 dBm 2.4790500 GHz -47,54 dBm 2.4835000 GHz
GFSK/HCH/Hop	Date: 22.0 CT.20 Ref Level Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -30 dBm -30 dBm -60 dBm -60 dBm -60 dBm -70 dBm CF 2.4835 O Marker Type Ref M1 M2	25.00 dBm 30 dt 30 dt 31 -18.300 3Hz Trc 1 1	а в Offset 9.80 di в SWT 75.8 µ в SWT 75.8 µ в общеение в общеение х-value 2.47905 GH: 2.4835 GH:	RBW 100 VBW 300 M1 M1 6 7-valu 1.70 -47.54	kHz kHz 00 pts	M1[1]	annal sa sula	1.70 dBm 2.4790500 GHz -47.54 dBm 2.4835000 GHz
GFSK/HCH/Hop	Date: 22.0 CT.20 Ref Level Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -30 dBm -30 dBm -50 dBm -50 dBm -70 dBm -70 dBm CF 2.4835 C Marker Type Ref M1	25.00 dBm 30 dB 30 dB 30 dB 30 dB 30 dB 30 dB 30 dB 31 -18.300 31 -18.300 3Hz 1 Trc 1 1	а Offset 9.80 di 3 SWT 75.8 µ dBm dBm x-value 2,47905 GH:	RBW 100 VBW 300 M1 <pm1< p=""> M1 M1 M1 M1 M1 M1<!--</td--><td>kHz kHz dBm dBm dBm</td><td>M1[1]</td><td>annal sa sula</td><td>1.70 dBm 2.4790500 GHz -47.54 dBm 2.4835000 GHz</td></pm1<>	kHz kHz dBm dBm dBm	M1[1]	annal sa sula	1.70 dBm 2.4790500 GHz -47.54 dBm 2.4835000 GHz



	Spectrum									
	Ref Level	25.00 dBn 30 df			RBW 100 kHz VBW 300 kHz	Mode Auto	FFT			
	1Pk View 20 dBm	_	-		-	M1[1]			2.40	0.58 dBm 17790 GHz
	10 dBm	_		_		M2[1]			-	44.30 dBm 00000 GHz
	0 dBm-	-			+ +		M	1		
	-10 dBm									
		01 -19,420) dBm-				M5			
π/4DQPSK/LCH/No	-30 dBm						As			
Нор	4 60 dBm	Ac stanlowned	- denter		the subject data a men	13 A	J	and the stand of	Antikan of the	No. Port Mark Contraction
	-60 dBm-						_			
	-70 dBm						_			
	Start 2.31 0 Marker				8001 pt	5				2.441 GHz
	Type Ref M1 M2	1 1	X-value 2.40177 2.		Y-value 0.58 dBm -44.30 dBm	Function	-	Fund	tion Result	
	M3	1	2.3	89 GHz 81 GHz	-50.32 dBm -49.25 dBm					
	M4						-			
	M4 M5 Date: 22.0 CT.2 Spectrum	1	2.397950		-31.45 dBm					
	M5 Date: 22.0 CT 2	1	2.397950 44 m Offset 9	9.84 dB		Mode Auto	FFT			1.71 dBm 32810 GHz
	M5 Date: 22.0 CT.2 Spectrum Ref Level Att 1Pk View 20 dBm 10 dBm	1 021 04:00× 25.00 dBn	2.397950 44 m Offset 9	9.84 dB	-31.45 dBm RBW 100 kHz		FFT		-	1.71 dBm 32910 GHz 33.70 dBm
	M5 Date: 22.0 CT.2 Spectrum Ref Level Att 1 Pk View 20 dBm 10 dBm 0 dBm	1 021 04:00× 25.00 dBn	2.397950 44 m Offset 9	9.84 dB	-31.45 dBm RBW 100 kHz	M1[1]		Muyrun	-	1.71 dBn 32810 GH; 33.70 dBn 00000 GH;
	M5 Date: 22.0 CT.2 Spectrum Ref Level Att 1 Pk View 20 dBm 10 dBm -10 dBm	1 021 04:00× 25.00 dBn	2.397950 44 B SWT 1:	9.84 dB	-31.45 dBm RBW 100 kHz	M1[1]		Willing	2.4	1.71 dBm 32810 GHz 33.70 dBm 00000 GHz
	M5 Date: 22.0 CT.2 Spectrum Ref Level Att 1Pk View 20 dBm 10 dBm -10 dBm	1 021 04:00: 25.00 dBn 30 dl	2.397950 44 B SWT 1:	9.84 dB	-31.45 dBm RBW 100 kHz	M1[1]	M	www.	2.4	1.71 dBm 32810 GHz 33.70 dBm 00000 GHz
:/4DQPSK/LCH/Hop	M5 Date: 22.0 CT.2 Spectrum Ref Level Att 10 dBm 10 dBm -10 dBm -20 dBm	1 021 04:00: 25.00 dBn 30 dl	2.397950 44 m Offset 6 B SWT 1 dBm	9.84 dB = 51.7 µs =	-31.45 dBm RBW 100 kHz	M1[1]	MErr	Munn	2.4	1.71 dBm 32810 GHz 33.70 dBm 00000 GHz
r/4DQPSK/LCH/Hop	M5 Date: 22.0 CT.2 Spectrum Ref Level • Att • 1Pk View 20 dBm • 10 dBm • 10 dBm • 20 dBm • 30 dBm	1 021 04:00: 25.00 dBn 30 dl	2.397950 44 B SWT 1:	9.84 dB = 51.7 µs =	-31.45 dBm RBW 100 kHz	M1[1]	MErr	Munn	2.4	1.71 dBm 32810 GHz 33.70 dBm 00000 GHz
t/4DQPSK/LCH/Hop	M5 Date: 22.0 CT.2 Spectrum Ref Level Att 10 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -60 dBm	1 021 04:00: 25.00 dBn 30 dl	2.397950 44 m Offset 6 B SWT 1 dBm	9.84 dB = 51.7 µs =	-31.45 dBm RBW 100 kHz	M1[1]	MErr	Munnu	2.4	1.71 dBm 32810 GHz 33.70 dBm 00000 GHz
τ/4DQPSK/LCH/Hop	M5 Date: 22.0 CT.2 Spectrum Ref Level Att 10 dBm 10 dBm 10 dBm -10 dBm -20 dBm -30 dBm -40 dBm	1 021 04:00: 25.00 dBn 30 db	2.397950 44 m Offset 6 B SWT 1 dBm	9.84 dB = 51.7 µs =	-31.45 dBm RBW 100 kHz	M1[1] M2[1]	MErr	Willyrwi	2.4 what it what it what it was a set of the	1.71 dBm 32810 GHz 33.70 dBm 00000 GHz
r/4DQPSK/LCH/Hop	M5 Date: 22.0 CT.2 Spectrum Ref Level Att 1 Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -30 dBm -30 dBm -30 dBm -30 dBm -30 dBm -30 dBm -40 dBm -70 dBm Start 2.31 C Marker Type Ref	1 021 04:00: 25.00 dBn 30 df 01 -18.290 Ub). s 3Hz	2.397950 44 m Offset 6 B SWT 1 dBm dBm x-value	9.84 dB = 51.7 µs =	-31.45 dBm	M1[1] M2[1]	MErr		2.4 what it what it what it was a set of the	1.71 dBm 32810 GHz 33.70 dBm 00000 GHz
τ/4DQPSK/LCH/Hop	M5 Date: 22.0 CT.2 Spectrum Ref Level Att 10 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -30 dBm -40 dBm -60 dBm -70 dBm Start 2.31 C Marker	1 021 04:00: 25.00 dBm 30 dt 01 -18.290	2.397950 44 b SWT 1 b dBm b dB	9.84 dB = 51.7 µs =	-31.45 dBm	M1[1] M2[1]	MErr		2.4 Juli Mult	32810 GHz 33.70 dBm 00000 GHz



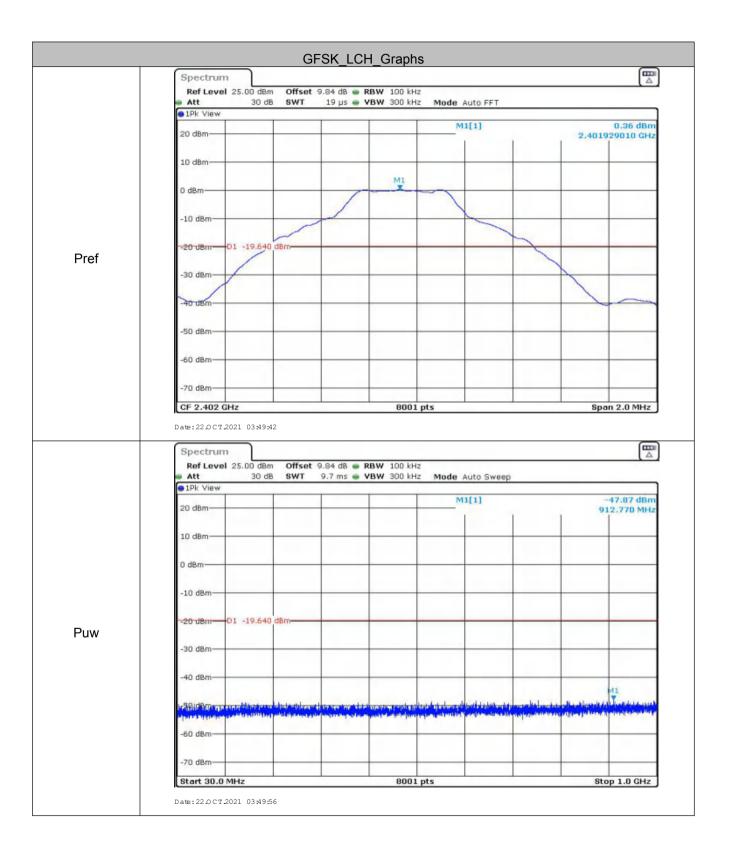
	Spectrum	1					
		25.00 dBr					1-
	Att 1Pk View	30 d	B SWT 75.8 µs (• VBW 300 kHz	Mode Auto FFT		
				1 1	M1[1]		1.92 dBm
	20 dBm						2.47977300 GHz
	10 dBm				M2[1]		-48.52 dBm 2.48350000 GHz
	0 dBm			MI			
	o ubm						
	-10 dBm-						
	-20 dBm-	D1 -18.080) dBm				
π/4DQPSK/HCH/No	-30 dBm			A WW			
L La se	-40 dBm			111			
Нор	EQ dam d		M	We with		M3	
	sustantial Echestra	and the second states	and the second second		and the second	result of the Provide State	where a second state of the second
	-60 dBm					-	
	-70 dBm						
	CF 2.4835	GHz		8001 pt	s		Span 60.0 MHz
	Marker	Grit		ooox pe			opan oolo mite
	Type Re		2.479773 GHz	Y-value 1.92 dBm	Function	Fund	tion Result
	M1 M2	1	2.4835 GHz	-48.52 dBm			
		1	0.5.011-	-50.78 dBm			
	M3		2.5 GHz				
	M4 Date:22.0CT.	1 2021 04:10:	2.48392 GHz	-44.53 dBm			
	M4 Date: 22.0CT. Spectrum Ref Level Att	1 2021 04:10:	2.48392 GHz	-44.53 dBm	Mode Auto FFT		(m) A
	M4 Date: 22,0 CT. Spectrum Ref Leve Att 1Pk View	1 2021 04:10: 25.00 dBr	2.48392 GHz	-44.53 dBm	Mode Auto FFT M1[1]		1.49 dBm
	M4 Date: 22.0CT. Spectrum Ref Level Att	1 2021 04:10: 25.00 dBr	2.48392 GHz	-44.53 dBm	M1[1]		1,49 dBm 2,4767500 GHz
	M4 Date: 22,0 CT. Spectrum Ref Leve Att 1Pk View	1 2021 04:10: 25.00 dBr	2.48392 GHz	-44.53 dBm RBW 100 kHz VBW 300 kHz			1.49 dBm
	M4 Date: 22.0 CT. Spectrum Ref Level Att 1Pk View 20 dBm 10 dBm	1 2021 04:10: 1 25.00 dBr 30 d	2.48392 GHz 34 m Offset 9.80 dB 6 B SWT 75.8 μs 6	-44.53 dBm RBW 100 kHz VBW 300 kHz M1	M1[1]	1 1	1:49 dBm 2:4767500 GHz ~48:62 dBm
	M4 Date: 22.0 CT. Spectrum Ref Level Att 1Pk View 20 dBm	1 2021 04:10: 1 25.00 dBr 30 d	2.48392 GHz	-44.53 dBm RBW 100 kHz VBW 300 kHz	M1[1]	1	1:49 dBm 2:4767500 GHz ~48:62 dBm
	M4 Date: 22.0 CT. Spectrum Ref Level Att 1Pk View 20 dBm 10 dBm	1 2021 04:10: 1 25.00 dBr 30 d	2.48392 GHz 34 m Offset 9.80 dB 6 B SWT 75.8 μs 6	-44.53 dBm RBW 100 kHz VBW 300 kHz M1	M1[1]		1:49 dBm 2:4767500 GHz ~48:62 dBm
	M4 Date: 22.0 CT. Spectrum Ref Level Att 1Pk View 20 dBm 10 dBm -10 dBm	1 2021 04:10: 1 25.00 dBr 30 d	2.48392 GHz 34 m Offset 9.80 dB в 8 SWT 75.8 µs	-44.53 dBm RBW 100 kHz VBW 300 kHz M1	M1[1]		1:49 dBm 2:4767500 GHz ~48:62 dBm
	M4 Date: 22.0 CT. Spectrum Ref Level Att 1Pk View 20 dBm 10 dBm -10 dBm -20 dBm	1 2021 04:10: 1 25.00 dBr 30 d	2.48392 GHz 34 m Offset 9.80 dB в 8 SWT 75.8 µs	-44.53 dBm RBW 100 kHz VBW 300 kHz M1	M1[1]		1:49 dBm 2:4767500 GHz ~48:62 dBm
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π/4DQPSK/HCH/Hop	M4 Date: 22.0 CT. Spectrum Ref Level Att 10 dBm 10 dBm -10 dBm -20 dBm -30 dBm -40 dBm	1 2021 04:10: 1 25.00 dBr 30 d	2.48392 GHz 34 m Offset 9.80 dB в 8 SWT 75.8 µs	-44.53 dBm	M1[1]		1:49 dBm 2:4767500 GHz ~48:62 dBm
π/4DQPSK/HCH/Hop	M4 Date: 22.0 CT. Spectrum Ref Level Att 10 dBm 10 dBm -10 dBm -20 dBm -30 dBm	1 2021 04:10: 1 25.00 dBr 30 d	2.48392 GHz 34 m Offset 9.80 dB в 8 SWT 75.8 µs	-44.53 dBm	M1[1]	M3	1:49 dBm 2:4767500 GHz ~48:62 dBm
π/4DQPSK/HCH/Hop	M4 Date: 22.0 CT. Spectrum Ref Level Att 10 dBm 10 dBm -10 dBm -20 dBm -30 dBm -40 dBm	1 2021 04:10: 1 25.00 dBr 30 d	2.48392 GHz 34 m Offset 9.80 dB в 8 SWT 75.8 µs	-44.53 dBm	M1[1]	M3	1:49 dBm 2:4767500 GHz ~48:62 dBm
π/4DQPSK/HCH/Hop	M4 Date: 22.0 CT. Spectrum Ref Level Att 1Pk View 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm -30 dBm -50 dBm -60 dBm	1 2021 04:10: 1 25.00 dBr 30 d	2.48392 GHz 34 m Offset 9.80 dB в 8 SWT 75.8 µs	-44.53 dBm	M1[1]	M3	1:49 dBm 2:4767500 GHz ~48:62 dBm
π/4DQPSK/HCH/Hop	M4 Date : 22.0 CT. Spectrum Ref Level Att 10 dBm 10 dBm -20 dBm -20 dBm -30 dBm -50 dBm -50 dBm -70 dBm	1 2021 04:10: 25.00 dBr 30 d	2.48392 GHz 34 m Offset 9.80 dB в 8 SWT 75.8 µs	-44.53 dBm	M1[1] M2[1]	M3	1.49 dBm 2.4767500 GHz -48.62 dBm 2.4835000 GHz 2.4835000 GHz
π/4DQPSK/HCH/Hop	M4 Date: 22.0 CT. Spectrum Ref Level Att 1Pk View 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm -30 dBm -50 dBm -60 dBm	1 2021 04:10: 25.00 dBr 30 d	2.48392 GHz 34 m Offset 9.80 dB в 8 SWT 75.8 µs	-44.53 dBm	M1[1] M2[1]	M3	1:49 dBm 2:4767500 GHz ~48:62 dBm
π/4DQPSK/HCH/Hop	M4 Date: 22.0 CT. Spectrum Ref Level Att 10 dBm 10 dBm -10 dBm -20 dBm -30 dBm -30 dBm -50 dBm -60 dBm -70 dBm CF 2.4835 Marker Type Re	1 2021 04:10: 1 25.00 dBr 30 d	2.48392 GHz	-44.53 dBm	M1[1] M2[1]	9,429,429,429,429,429,429,429,429,429,42	1.49 dBm 2.4767500 GHz -48.62 dBm 2.4835000 GHz 2.4835000 GHz
π/4DQPSK/HCH/Hop	M4 Date: 22.0 CT. Spectrum Ref Level Att 1Pk View 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm -30 dBm -50 dBm -60 dBm -70 dBm CF 2.4835 Marker	1 2021 04:10: 1 25.00 dBr 30 dl	2.48392 GHz	-44.53 dBm	M1[1] M2[1]	9,429,429,429,429,429,429,429,429,429,42	1.49 dBm 2.4767500 GHz -48.62 dBm 2.4835000 GHz 2.4835000 GHz
π/4DQPSK/HCH/Hop	M4 Date: 22.0 CT. Ref Level Att 1Pk View 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm -30 dBm -50 dBm -60 dBm -70 dBm CF 2.4835 Marker Type M1	1 2021 04:10: 25.00 dBr 30 d D1 -18.510 GHz f Trc 1	2.48392 GHz	-44.53 dBm	M1[1] M2[1]	9,429,429,429,429,429,429,429,429,429,42	1.49 dBm 2.4767500 GHz -48.62 dBm 2.4835000 GHz 2.4835000 GHz



4.9 Spurious RF Conducted Emissions

Test Requirement:	47 CFR Part 15C Section 15.247 (d)
•	ANSI C63.10:2013
Test Method: Test Setup:	ANSI C63.10:2013
	Remark: Offset=cable loss+ attenuation factor.
Limit:	In any 100 kHz bandwidth outside the frequency band in which the spread spectrum 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.
Exploratory Test Mode:	Non-hopping transmitting with all kind of modulation and all kind of data type
Final Test Mode:	Through Pre-scan, find the DH5 of data type is the worst case of GFSK modulation type, 2-DH5 of data type is the worst case of π /4DQPSK modulation type
Test Results:	Pass







Att		Mfset 9.84 dB 👄 🕅 WT 110 ms 👄		de Auto Sweep		
●1Pk View				M1[1]		-0.31
20 dBm				_		40160
				M2[1]		43.89
10 dBm						
	MI					
0 dBm						
-10 dBm-						
-	D1 -19.640 dBm-					
-20 dBm-	-D1 -19.640 dBm					
-30 dBm						
-30 dBm-						
-40 dBm-						
-40 0611		M2				
En date	The second states	Bandy Barrister Ballette	And the state of the state of the	the address of	when the start will be start as	44
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about to			1000			
-60 dBm						
-70 dBm-						
Start 1.0	GHz	1	8001 pts		Stor	12.0
Spectrur Ref Leve	el 25.00 dBm O	ffset 9.84 dB ●	RBW 100 kHz	de Auto Sween		
Spectrur	m el 25.00 dBm O 30 dB S	ffset 9.84 dB ● WT 130 ms ●	RBW 100 kHz VBW 300 kHz Mo	de Auto Sweep		
Spectrur Ref Leve Att 1Pk View	m el 25.00 dBm O 30 dB S	9ffset 9.84 dB ● WT 130 ms ●	RBW 100 kHz VBW 300 kHz Moo	de Auto Sweep		
Spectrur Ref Leve	m el 25.00 dBm O 30 dB S	Hffset 9.84 dB ● WT 130 ms ●	RBW 100 kHz VBW 300 kHz Mor			43.49
Spectrur Ref Leve Att 1Pk View 20 dBm-	m el 25.00 dBm O 30 dB S	Hffset 9.84 d8 ● 1 WT 130 ms ●	RBW 100 kHz VBW 300 kHz Mor			
Spectrur Ref Leve Att 1Pk View	m el 25.00 dBm O 30 dB S	ffset 9.84 d8 ● WT 130 ms ●	RBW 100 kHz VBW 300 kHz Mor			
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Spectrur Ref Leve Att 1Pk View 20 dBm-	m el 25.00 dBm O 30 dB S	ffset 9.84 d8 ● WT 130 ms ●	RBW 100 kHz VBW 300 kHz Mor			
Spectrum Ref Leve Att 1Pk View 20 dBm- 10 dBm- 0 dBm-	m el 25.00 dBm O 30 dB S	9.84 d8 ● WT 130 ms ●	RBW 100 kHz VBW 300 kHz Mor			
Spectrum Ref Leve Att 1Pk View 20 dBm- 10 dBm-	m el 25.00 dBm O 30 dB S	9.84 d8 ● WT 130 ms ●	RBW 100 kHz VBW 300 kHz Mor			
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Spectrum Ref Leve Att 1Pk View 20 dBm- 10 dBm- 0 dBm-	m el 25.00 dBm O 30 dB S	WT 130 ms	RBW 100 kHz VBW 300 kHz Mor			
Spectrum Ref Leve Att 1Pk View 20 dBm 10 dBm -10 dBm -10 dBm -20 dBm	m el 25.00 dBm O 30 dB S	WT 130 ms	RBW 100 kHz VBW 300 kHz Mor			
Spectrum Ref Leve Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm	m el 25.00 dBm O 30 dB S	WT 130 ms	RBW 100 kHz VBW 300 kHz Mor			
Spectrum Ref Leve Att 1Pk View 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm	m el 25.00 dBm O 30 dB S	WT 130 ms	RBW 100 kHz VBW 300 kHz Mor			
Spectrum Ref Leve Att 1Pk View 20 dBm 10 dBm -10 dBm -10 dBm -20 dBm	m el 25.00 dBm O 30 dB S	WT 130 ms	RBW 100 kHz VBW 300 kHz Mor			
Spectrum Ref Leve Att 1Pk View 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm	m el 25.00 dBm O 30 dB S	WT 130 ms	VBW 300 kHz Mo			
Spectrum Ref Leve Att 1Pk View 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm	m el 25.00 dBm O 30 dB S	WT 130 ms	VBW 300 kHz Mo			
Spectrum Ref Leve Att 1Pk View 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm	m el 25.00 dBm O 30 dB S	WT 130 ms	VBW 300 kHz Mo			
Spectrum Ref Leve Att 1Pk View 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm	m el 25.00 dBm O 30 dB S	WT 130 ms	VBW 300 kHz Mo			
Spectrum Ref Leve Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm	m el 25.00 dBm O 30 dB S	WT 130 ms	VBW 300 kHz Mo			
Spectrum Ref Leve Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm	m el 25.00 dBm O 30 dB S	WT 130 ms	VBW 300 kHz Mo			
Spectrum Ref Leve Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -40 dBm -60 dBm	m el 25.00 dBm O 30 dB S' 01 -19.640 dBm	WT 130 ms	VBW 300 kHz Mo			



		GFSK_MC	H_Graphs			
	Spectrum Ref Level 25.00 dBm	Offset 9.80 dB 👄 F		7 10/01		
	Att 30 dB IPk View	SWT 19 µs 🖷 🕅	/BW 300 kHz N	lode Auto FFT		
				M1[1]		1.34 dBm
	20 dBm-				2.	140929260 GHz
	10 dBm					
	10 dbm		M1			
	0 dBm		- I			_
	-10 dBm-	1				
	-20 d8m 01 -18.660 d	1Bm				
Pref	-20 0011					
	-30 dBm					
	-40 dBm					-
	-50 dBm					
	-60 dBm					
	-70 dBm					
	CF 2.441 GHz		8001 pts			Span 2.0 MHz
	Date:22.0CT.2021 03:53:03					
						Ē
	Spectrum Ref Level 25.00 dBm	Offset 9.80 dB 🕳 F	RBW 100 kHz			
	Spectrum Ref Level 25.00 dBm Att 30 dB	Offset 9.80 dB 🕳 F	RBW 100 kHz VBW 300 kHz M	lode Auto Sweep		
	Spectrum Ref Level 25.00 dBm Att 30 dB 1Pk View	Offset 9.80 dB 🕳 F	RBW 100 kHz YBW 300 kHz N	1ode Auto Sweep M1[1]		-47.34 dBm
	Spectrum Ref Level 25.00 dBm Att 30 dB	Offset 9.80 dB 🕳 F	NBW 100 kHz NBW 300 kHz N		1	
	Spectrum Ref Level 25.00 dBm Att 30 dB 1Pk View 20 dBm	Offset 9.80 dB 🕳 F	88W 100 kHz 78W 300 kHz M			-47.34 dBm
	Spectrum Ref Level 25.00 dBm Att 30 dB 1Pk View	Offset 9.80 dB 🕳 F	RBW 100 kHz /BW 300 kHz M			-47.34 dBm
	Spectrum Ref Level 25.00 dBm Att 30 dB 1Pk View 20 dBm	Offset 9.80 dB 🕳 F	RBW 100 kHz VBW 300 kHz M			-47.34 dBm
	Spectrum Ref Level 25.00 dBm Att 30 dB 1Pk View 20 dBm 10 dBm 0 dBm	Offset 9.80 dB 🕳 F	RBW 100 kHz VBW 300 kHz N			-47.34 dBm
	Spectrum Ref Level 25.00 dBm Att 30 dB 1Pk View 20 dBm 10 dBm	Offset 9.80 dB 🕳 F	8BW 100 kHz /BW 300 kHz M			-47.34 dBm
	Spectrum Ref Level 25.00 dBm Att 30 dB 1Pk View 20 dBm 10 dBm 0 dBm	Offset 9.80 dB • F SWT 9.7 ms • V	RBW 100 kHz /BW 300 kHz M			-47.34 dBm
Puw	Spectrum Ref Level 25.00 dBm Att 30 dB 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm	Offset 9.80 dB • F SWT 9.7 ms • V	RBW 100 kHz VBW 300 kHz M			-47.34 dBm
Puw	Spectrum Ref Level 25.00 dBm Att 30 dB 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm	Offset 9.80 dB • F SWT 9.7 ms • V	RBW 100 kHz /BW 300 kHz M			-47.34 dBm
Puw	Spectrum Ref Level 25.00 dBm Att 30 dB 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm	Offset 9.80 dB • F SWT 9.7 ms • V	RBW 100 kHz /BW 300 kHz M			-47.34 dBm
Puw	Spectrum Ref Level 25.00 dBm Att 30 dB 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm	Offset 9.80 dB • F SWT 9.7 ms • V	RBW 100 kHz N			-47.34 dBm
Puw	Spectrum Ref Level 25.00 dBm Att 30 dB IPk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm	Offset 9.80 dB • F SWT 9.7 ms • Y	/BW 300 kHz N	M1[1]		-47.34 dBm 953.870 MHz
Puw	Spectrum Ref Level 25.00 dBm Att 30 dB 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm	Offset 9.80 dB • F SWT 9.7 ms • V	/BW 300 kHz N	M1[1]		-47.34 dBm 953.870 MHz
Puw	Spectrum Ref Level 25.00 dBm Att 30 dB IPk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm	Offset 9.80 dB • F SWT 9.7 ms • Y	/BW 300 kHz N	M1[1]		-47.34 dBm 953.870 MHz
Puw	Spectrum Ref Level 25.00 dBm Att 30 dB 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -60 dBm	Offset 9.80 dB • F SWT 9.7 ms • Y	/BW 300 kHz N	M1[1]		-47.34 dBm 953.870 MHz
Puw	Spectrum Ref Level 25.00 dBm Att 30 dB 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm	Offset 9.80 dB • F SWT 9.7 ms • Y	/BW 300 kHz N	M1[1]		-47.34 dBm 953.870 MHz



Att	el 25.00 dBn 30 dB			RBW 100 kHz /BW 300 kHz		Auto Sweep			
1Pk View					1.1040	into oncep			
20 dBm-					M	1[1]			0.86
20 0011					M	2[1]			.44150
10 dBm									.88162
10 0011									
0 dBm	MI								
-10 dBm-									_
-20 dBm-	D1 -18.660	dBm							-
-30 dBm-									-
-40 dBm-			M2						-
		R. L. allelle	Alle in the second		Willel				
159.d8mm		and the second second of	Conceptor allocation	tanit a production	and the state of t	and the set	and the same	the literature	
Article States	appropriate and the				of the state		annana ta adda.	dation of the set	
-60 dBm-	-								-
-70 dBm-	-								-
Start 1.0	GHz			8001	pts			Stor	12.0
Spectrue Ref Leve	el 25.00 dBn	Offset 9		RBW 100 kHz		Auto Sween			
Spectru	m el 25.00 dBn 30 dB	Offset 9		RBW 100 kHz /BW 300 kHz		Auto Sweep			
Spectrui Ref Leve Att	m el 25.00 dBn 30 dB	Offset 9			Mode	Auto Sweep			
Spectrue Ref Leve	m el 25.00 dBn 30 dB	Offset 9			Mode				
Spectrum Ref Leve Att 1Pk View 20 dBm-	m el 25.00 dBn 30 dB	Offset 9			Mode				
Spectrui Ref Leve Att	m el 25.00 dBn 30 dB	Offset 9			Mode				
Spectrum Ref Leve Att 1Pk View 20 dBm- 10 dBm-	m el 25.00 dBn 30 dB	Offset 9			Mode				
Spectrum Ref Leve Att 1Pk View 20 dBm-	m el 25.00 dBn 30 dB	Offset 9			Mode				
Spectrum Ref Leve Att 1Pk View 20 dBm- 10 dBm-	m el 25.00 dBn 30 dB	Offset 9			Mode				
Spectrum Ref Levo Att 1Pk View 20 dBm 10 dBm 0 dBm	m el 25.00 dBn 30 dB	Offset 9			Mode				-44.64
Spectrum Ref Levi Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm	m el 25.00 dBn 30 dB	9 Offset 9 3 SWT 1			Mode				
Spectrum Ref Levo Att 1Pk View 20 dBm 10 dBm 0 dBm	n den 30 den	9 Offset 9 3 SWT 1			Mode				
Spectrum Ref Levi Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm	n den 30 den	9 Offset 9 3 SWT 1			Mode				
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Spectrum Ref Levi Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm	n den 30 den	9 Offset 9 3 SWT 1			Mode	1[1]			
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Spectrum Ref Levi Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm	n den 30 den	9 Offset 9 3 SWT 1			Mode	1[1]			
Spectrum Ref Levi Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm	n den 30 den	9 Offset 9 3 SWT 1			Mode	1[1]		19	
Spectrum Ref Levi Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm	n den 30 den	9 Offset 9 3 SWT 1			Mode	1[1]		19	
Spectrum Ref Levi Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -40 dBm	n den 30 den	9 Offset 9 3 SWT 1			Mode	1[1]		19	
Spectrum Ref Levi Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -40 dBm	n den 30 den	9 Offset 9 3 SWT 1			Mode	1[1]		19	
Spectrum Ref Levi Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -40 dBm -60 dBm	D1 -18.660	9 Offset 9 3 SWT 1			ModeM	1[1]		19	

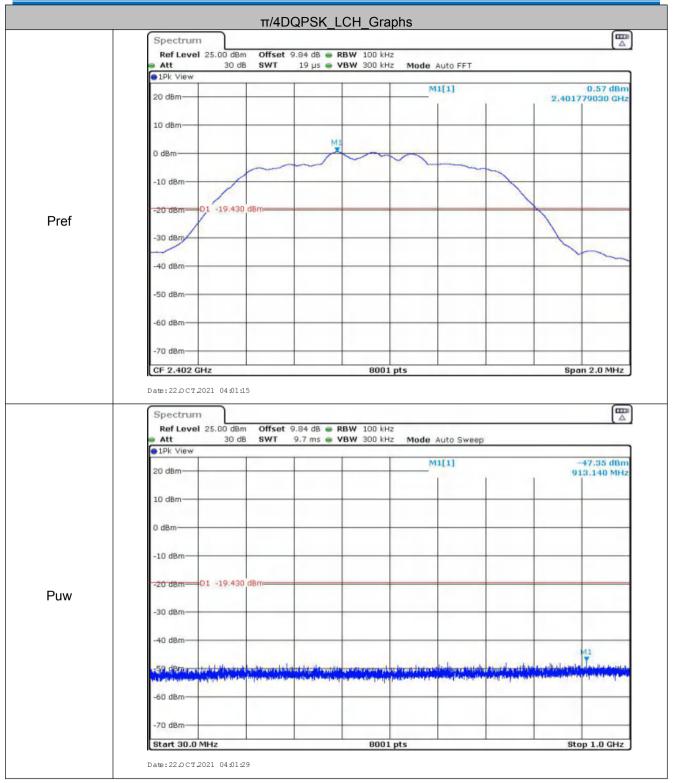


	GFSK_HC	H_Graphs	
	Spectrum Ref Level 25.00 dBm Offset 9.80 dB • 1	RBW 100 kHz	
		/BW 300 kHz Mode Auto FFT	
	• 1Pk View	M1[1]	1.73 dBm
	20 dBm		2.479928010 GHz
	10 dBm		
	0 dBm	M1	
	-10 dBm		
Pref	-20 dBm D1 -18.270 dBm		
FIEI	-30 dBm		
	-30 0811		
	-40 dBm		
	-50 dBm		+ +
	22.22		
	-60 dBm		
	-70 dBm		
	CF 2.48 GHz		Span 2.0 MHz
	of 2110 dife	8001 pts	oput 210 Mile
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	Spectrum Ref Level 25.00 dBm Offset 9.80 dB • 1	RBW 100 kHz	
	Spectrum Ref Level 25.00 dBm Offset 9.80 dB • 1 • Att 30 dB SWT 9.7 ms • 1	RBW 100 kHz /BW 300 kHz Mode Auto Sweep	
	Spectrum Ref Level 25.00 dBm Offset 9.80 dB • 1 Att 30 dB SWT 9.7 ms • 1 1Pk View	RBW 100 kHz /BW 300 kHz Mode Auto Sweep M1[1]	-47.23 dBm
	Spectrum Ref Level 25.00 dBm Offset 9.80 dB • 1 • Att 30 dB SWT 9.7 ms • 1	/BW 300 kHz Mode Auto Sweep	
	Spectrum Ref Level 25.00 dBm Offset 9.80 dB I Att 30 dB SWT 9.7 ms I Att 30 dB SWT 9.7 ms I Att 20 dBm I Att	/BW 300 kHz Mode Auto Sweep	~47.23 dBm
	Spectrum Ref Level 25.00 dBm Offset 9.80 dB • 1 Att 30 dB SWT 9.7 ms • 1 1Pk View	/BW 300 kHz Mode Auto Sweep	~47.23 dBm
	Spectrum Ref Level 25.00 dBm Offset 9.80 dB I Att 30 dB SWT 9.7 ms I Att 30 dB SWT 9.7 ms I Att 20 dBm I Att	/BW 300 kHz Mode Auto Sweep	~47.23 dBm
	Spectrum Ref Level 25.00 dBm Offset 9.80 dB Image: 10 dBm Att 30 dB SWT 9.7 ms Image: 10 dBm 10 dBm 10 dBm Image: 10 dBm	/BW 300 kHz Mode Auto Sweep	~47.23 dBm
	Spectrum Ref Level 25.00 dBm Offset 9.80 dB Image: 10 dBm Att 30 dB SWT 9.7 ms Image: 10 dBm 10 dBm 10 dBm Image: 10 dBm	/BW 300 kHz Mode Auto Sweep	~47.23 dBm
	Spectrum Ref Level 25.00 dBm Offset 9.80 dB I Att 30 dB SWT 9.7 ms V IPk View 20 dBm 10 dBm 10 dBm 10 dBm 10 dBm 0 dBm 0 dBm 10 dBm 10 dBm	/BW 300 kHz Mode Auto Sweep	~47.23 dBm
Puw	Spectrum Ref Level 25.00 dBm Offset 9.80 dB Image: 10 dBm Att 30 dB SWT 9.7 ms Image: 10 dBm 10 dBm 0 dBm Image: 10 dBm Image: 10 dBm Image: 10 dBm	/BW 300 kHz Mode Auto Sweep	~47.23 dBm
Puw	Spectrum Ref Level 25.00 dBm Offset 9.80 dB I Att 30 dB SWT 9.7 ms V IPk View 20 dBm 10 dBm 10 dBm 10 dBm 10 dBm 0 dBm 0 dBm 10 dBm 10 dBm	/BW 300 kHz Mode Auto Sweep	~47.23 dBm
Puw	Spectrum Ref Level 25.00 dBm Offset 9.80 dB Image: second	/BW 300 kHz Mode Auto Sweep	~47.23 dBm
Puw	Spectrum Ref Level 25.00 dBm Offset 9.80 dB Image: second	/BW 300 kHz Mode Auto Sweep	-47.23 dBm 980.420 MHz
Puw	Spectrum Ref Level 25.00 dBm Offset 9.80 dB I Att 30 dB SWT 9.7 ms I IPk View 20 dBm I I I I 10 dBm I I I I I I 10 dBm I <	/BW 300 kHz Mode Auto Sweep	-47.23 dBm 980.420 MHz
Puw	Spectrum Ref Level 25.00 dBm Offset 9.80 dB I Att 30 dB SWT 9.7 ms I IPk View 20 dBm I I I I 10 dBm I I I I I I 10 dBm I I I I I I I -10 dBm I	/BW 300 kHz Mode Auto Sweep	-47.23 dBm 980.420 MHz
Puw	Spectrum Ref Level 25.00 dBm Offset 9.80 dB I Att 30 dB SWT 9.7 ms I IPk View 20 dBm I <thi< th=""> <thi< th=""> <thi< th=""></thi<></thi<></thi<>	/BW 300 kHz Mode Auto Sweep	-47.23 dBm 980.420 MHz
Puw	Spectrum Ref Level 25.00 dBm Offset 9.80 dB I Att 30 dB SWT 9.7 ms I IPk View 20 dBm I I I I 10 dBm I I I I I I 10 dBm I <	/BW 300 kHz Mode Auto Sweep	-47.23 dBm 980.420 MHz
Puw	Spectrum Ref Level 25.00 dBm Offset 9.80 dB I Att 30 dB SWT 9.7 ms I IPk View 20 dBm I <thi< th=""> <thi< th=""> <thi< th=""></thi<></thi<></thi<>	/BW 300 kHz Mode Auto Sweep	-47.23 dBm 980.420 MHz
Puw	Spectrum Ref Level 25.00 dBm Offset 9.80 dB I Att 30 dB SWT 9.7 ms I IPk View 20 dBm I I I I 10 dBm I I I I I I 10 dBm I <	/BW 300 kHz Mode Auto Sweep	-47.23 dBm 980.420 MHz



Att	30 dB SW	T 110 ms 🖷 VB	W 300 kHz Mod	e Auto Sweep		
●1Pk View				M1[1]		0.97
20 dBm						48000
101.107				M2[1]		43.15
10 dBm						
0.40	MI					
0 dBm						
-10 dBm				_		
-20 dBm-	D1 -18.270 dBm					
-30 dBm		-		-		-
-40 dBm		M2				
no do est	and the best	mundana an manada	Station of the local day	a shind to re-	and the state of the	1. mill
-50,d8m	States States States	the state of the state of the state of the		Party of Charles and a second	Sealing and Provide States	Astantia
-60 dBm						
-70 dBm		_		_		
Start 1.0 G			8001 pts			12.0
Spectrun	.2021 03:57:35	set 9.80 d8 ● RB T 130 ms ● VB		e Auto Sweep		
Spectrun Ref Leve	2021 03:57:35		W 100 kHz			
Spectrun Ref Leve	2021 03:57:35		W 100 kHz	e Auto Sweep M1[1]		
Spectrum Ref Leve Att	2021 03:57:35		W 100 kHz			
Spectrum Ref Leve Att	2021 03:57:35		W 100 kHz			
Spectrum Ref Leve Att 1Pk View 20 dBm	2021 03:57:35		W 100 kHz			
Spectrum Ref Leve Att 1Pk View 20 dBm	2021 03:57:35		W 100 kHz			
Spectrum Ref Leve Att 1Pk View 20 dBm 10 dBm 0 dBm	2021 03:57:35		W 100 kHz			
Spectrum Ref Leve Att 1Pk View 20 dBm	2021 03:57:35		W 100 kHz			43.89
Spectrum Ref Leve Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm	2021 03:57:35		W 100 kHz			
Spectrum Ref Leve Att 1Pk View 20 dBm 10 dBm 0 dBm	2021 03:57:35		W 100 kHz			
Spectrum Ref Leve Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm	2021 03:57:35		W 100 kHz			
Spectrum Ref Leve Att 1Pk View 20 dBm 10 dBm -10 dBm -20 dBm	2021 03:57:35		W 100 kHz			
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Spectrum Ref Leve Att 1Pk View 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm	2021 03:57:35		W 100 kHz			
Spectrum Ref Level Att 1 Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm	2021 03:57:35		W 100 kHz			
Spectrum Ref Leve Att 1Pk View 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm	2021 03:57:35		W 100 kHz			
Spectrum Ref Level Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -40 dBm	2021 03:57:35		W 100 kHz			
Spectrum Ref Level Att 1 Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm	2021 03:57:35		W 100 kHz			

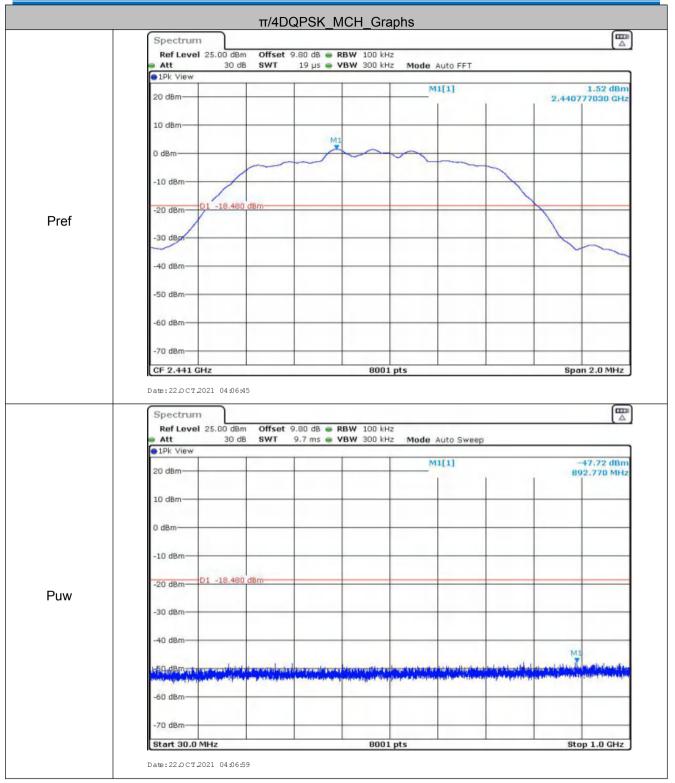






Att	25.00 dBm 30 dB			RBW 100 kH VBW 300 kH		Auto Sweep			
●1Pk View									
20 dBm					M	1[1]			-3.80
20 0011					M	2[1]			43.41
10 dBm			_						7836
10 dBm									
0 dBm	MT.								
-10 dBm-									
-20 d8m	D1 -19.430 d	Bm							
-30 dBm				-					-
-40 dBm				M2					-
		-	i di co	Hand and	All Martin				
-50 dBmor	and placed at the	of the substant	The state of the state	date produced	and the states	in the balance	der the alling all	In the second second	ALL PARTY
and the state		- HW- COLOR			and the second	de l'asserties lange	and the state of the second	State Ba. Ba	1000
-60 dBm									-
-70 dBm								_	
Start 1.0 (GHz			8001	pts	_		Stop	12.0
Spectrun Ref Leve	n I 25.00 dBm	Offset 9	.84 dB 🖷 🖡	RBW 100 kH	z				
Spectrum Ref Leve	n	Offset 9 SWT 1	.84 dB 🕳 🖡 130 ms 🖷 V	RBW 100 kH VBW 300 kH	z z Mode	Auto Sweep			
Spectrum Ref Leve	n I 25.00 dBm	Offset 9 SWT 1	.84 dB 👄 🖡 130 ms 🖷 V	RBW 100 kH VBW 300 kH	z Mode				44.31
Spectrum Ref Leve	n I 25.00 dBm	Offset 9 SWT 1	.84 dB 🕳 🖡 130 ms 🖷 🎙	RBW 100 kH VBW 300 kH	z Mode	Auto Sweep			
Spectrum Ref Leve Att	n I 25.00 dBm	Offset 9 SWT 1	.84 dB 🕳 🖡 130 ms 🖷 V	RBW 100 kH VBW 300 kH	z Mode				
Spectrum Ref Leve Att	n I 25.00 dBm	Offset 9 SWT 1	.84 dB 👄 🖡 130 ms 🖷 V	RBW 100 kH VBW 300 kH	z Mode				
Spectrum Ref Leve Att 1Pk View 20 dBm	n I 25.00 dBm	Offset 9 SWT 1	.84 dB ● F 30 ms ● V	RBW 100 kH VBW 300 kH	z Mode				
Spectrum Ref Leve Att 1Pk View 20 dBm- 10 dBm-	n I 25.00 dBm	Offset 9 SWT 1	.84 dB ● F 30 ms ● V	RBW 100 kH VBW 300 kH	z Mode				
Spectrum Ref Leve Att 1Pk View 20 dBm	n I 25.00 dBm	Offset 9 SWT 1	.84 dB 👄 🖡 130 ms 🖷 N	RBW 100 kH	z Mode				
Spectrum Ref Leve Att 1Pk View 20 dBm- 10 dBm- 0 dBm-	n I 25.00 dBm	Offset 9 SWT 1	.84 dB 👄 🖡 130 ms 🖷 N	RBW 100 kH	z Mode				
Spectrum Ref Leve Att 1Pk View 20 dBm- 10 dBm-	n I 25.00 dBm	Offset 9 SWT 1	.84 dB 👄 🖡 130 ms 🖷 N	RBW 100 kH VBW 300 kH	z Mode				44.31
Spectrum Ref Leve Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm	n 30 dB	SWT 1	.84 dB 👄 🖡 130 ms 🖷 N	RBW 100 kH VBW 300 kH	z Mode				
Spectrum Ref Leve Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm	n I 25.00 dBm	SWT 1	.84 dB 🕳 🖡 130 ms 🖷 🕅	88W 100 kH VBW 300 kH	z Mode				
Spectrum Ref Leve Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm	n 30 dB	SWT 1	.84 dB 🕳 🖡 130 ms 🖷 🕅	88W 100 kH VBW 300 kH	z Mode				
Spectrum Ref Leve Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm	n 30 dB	SWT 1	.84 dB 🕳 🖡	88W 100 kH VBW 300 kH	z Mode				
Spectrum Ref Leve Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm	n 30 dB	SWT 1	.84 dB 🕳 🖡	88W 100 kH VBW 300 kH	z Mode				
Spectrum Ref Leve Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm	n 30 dB	SWT 1	.84 dB 🕳 🖡	88W 100 kH VBW 300 kH	z Mode				
Spectrum Ref Leve Att 1Pk View 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm	n 30 dB	SWT 1	.84 dB • 1	RBW 100 kH	z Mode				
Spectrum Ref Leve Att 1Pk View 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm	n 30 dB	SWT 1	.84 dB • 1	RBW 100 kH VBW 300 kH	z Mode				
Spectrum Ref Leve Att 1Pk View 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm	n 30 dB	SWT 1		RBW 100 kH	z Mode				
Spectrum Ref Leve Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm	n 30 dB	SWT 1	.84 dB • 1	RBW 100 kH	z Mode				
Spectrum Ref Leve Att 1Pk View 20 dBm 10 dBm -10 dBm -20 dBm -30 dBm	n 30 dB	SWT 1	.84 dB	RBW 100 kH	z Mode				
Spectrum Ref Leve Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -40 dBm -60 dBm	n 30 dB	SWT 1	.84 dB	RBW 100 kH	z Mode				
Spectrum Ref Leve Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm	n 30 dB	SWT 1			z Mode				
Spectrum Ref Leve Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -40 dBm -60 dBm	n 30 dB 30 dB	SWT 1		88W 100 kH VBW 300 kH	z Mode				

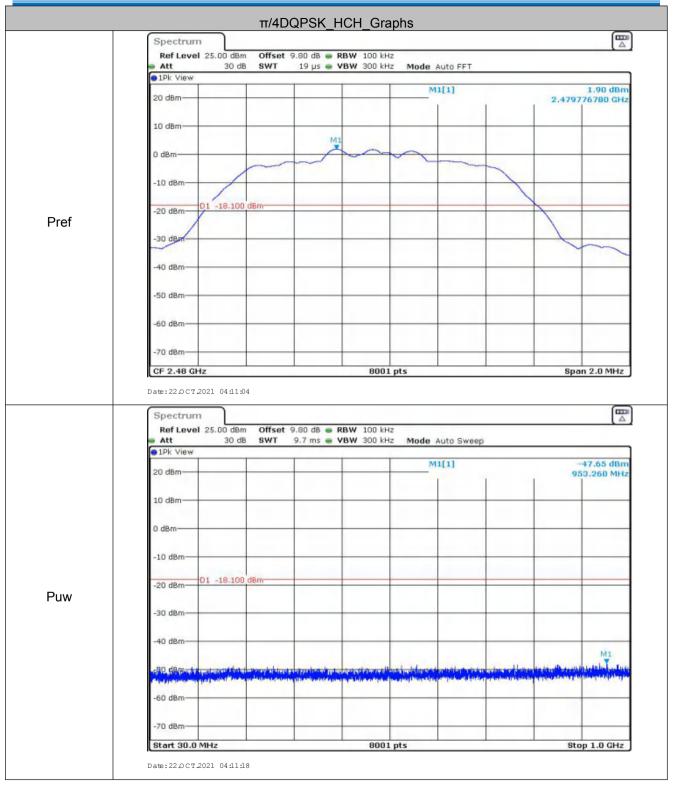






1Pk Yiew		WT 110 ms 🖷		Mode Auto Sweep		
20 dBm-				M1[1]		-4.15 2.44150
20 0011				M2[1]		-43,86
10 dBm						6.70488
0 dBm	MI					-
	T					
-10 dBm-						-
	in the second second					
-20 dBm-	D1 -18.480 dBm-					-
-30 dBm-						-
-40 dBm-			M12			
FO JOA	1. 10.000	mail and the south and the	table filtered to it will store	The state of the terms of	the second second second	And all and
-50,d8m-		Terrange particulation	and the second s		Contraction of the second s	and have be
-60 dBm-						
-00 0011						
-70 dBm-						_
The second						
Start 1.0	GHz		8001 pt	S	Sto	op 12.0
Spectru Ref Lev	el 25.00 dBm Of	ffset 9.80 dB 🖷	RBW 100 kHz			
Spectru Ref Lev	m el 25.00 dBm Of 30 dB SN	ffset 9.80 dB ● ₩T 130 ms ●	RBW 100 kHz VBW 300 kHz	Mode Auto Sweep		
Spectrue Ref Leve Att	m el 25.00 dBm Of 30 dB SN	ffset 9.80 dB ● ₩T 130 ms ●	RBW 100 kHz VBW 300 kHz			-43.26
Spectru Ref Lev	m el 25.00 dBm Of 30 dB SN	ffset 9.80 dB ● ₩T 130 ms ●	RBW 100 kHz YBW 300 kHz	Mode Auto Sweep	1	
Spectrum Ref Levie Att 1Pk View 20 dBm-	m el 25.00 dBm Of 30 dB SN	ffset 9.80 dB ● WT 130 ms ●	RBW 100 kHz VBW 300 kHz		1	
Spectrue Ref Leve Att 1Pk View	m el 25.00 dBm Of 30 dB SN	ffset 9.80 dB ● WT 130 ms ●	RBW 100 kHz VBW 300 kHz		1	
Spectrum Ref Leve Att 1Pk View 20 dBm- 10 dBm-	m el 25.00 dBm Of 30 dB SN	ffset 9.80 dB ● ₩T 130 ms ●	RBW 100 kHz VBW 300 kHz		1.	
Spectrue Ref Leve Att 1Pk View 20 dBm—	m el 25.00 dBm Of 30 dB SN	ffset 9.80 dB ● ₩T 130 ms ●	RBW 100 kHz VBW 300 kHz		1	
Spectrum Ref Levo Att 1Pk View 20 dBm 10 dBm 0 dBm	m el 25.00 dBm Of 30 dB SN	ffset 9.80 dB ● ₩T 130 ms ●	RBW 100 kHz VBW 300 kHz		1	
Spectrum Ref Leve Att 1Pk View 20 dBm- 10 dBm-	m el 25.00 dBm Of 30 dB SN	ffset 9.80 dB ● WT 130 ms ●	RBW 100 kHz VBW 300 kHz		1	
Spectrum Ref Levi Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm	m el 25.00 dBm O 30 dB S1	WT 130 ms 🖷	RBW 100 kHz VBW 300 kHz			
Spectrum Ref Levo Att 1Pk View 20 dBm 10 dBm 0 dBm	m el 25.00 dBm Of 30 dB SN	WT 130 ms 🖷	RBW 100 kHz VBW 300 kHz			
Spectrum Ref Levi Att 1Pk View 20 dBm 10 dBm -10 dBm -10 dBm -20 dBm	m el 25.00 dBm O 30 dB S1	WT 130 ms 🖷	RBW 100 kHz VBW 300 kHz			
Spectrum Ref Levi Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm	m el 25.00 dBm O 30 dB S1	WT 130 ms 🖷	RBW 100 kHz VBW 300 kHz		1	-43.26
Spectrum Ref Levi Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm	m el 25.00 dBm O 30 dB S1	WT 130 ms 🖷	RBW 100 kHz VBW 300 kHz			
Spectrum Ref Levi Att 1Pk View 20 dBm 10 dBm -10 dBm -10 dBm -20 dBm	m el 25.00 dBm O 30 dB SN	WT 130 ms 🖷	RBW 100 kHz VBW 300 kHz		1	
Spectrum Ref Levi Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm	m el 25.00 dBm O 30 dB SN	WT 130 ms 🖷	RBW 100 kHz VBW 300 kHz			
Spectrum Ref Levi Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm	m el 25.00 dBm O 30 dB SN	WT 130 ms 🖷	RBW 100 kHz VBW 300 kHz			
Spectrum Ref Levi Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -40 dBm	m el 25.00 dBm O 30 dB SN	WT 130 ms 🖷	RBW 100 kHz VBW 300 kHz			
Spectrum Ref Levi Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm	m el 25.00 dBm O 30 dB SN	WT 130 ms 🖷	RBW 100 kHz VBW 300 kHz			
Spectrum Ref Levi Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -40 dBm -60 dBm	m el 25.00 dBm O 30 dB SN	WT 130 ms 🖷	RBW 100 kHz VBW 300 kHz			
Spectrum Ref Levi Att 1Pk View 20 dBm 10 dBm 0 dBm -10 dBm -20 dBm -30 dBm -40 dBm -40 dBm	m el 25.00 dBm O 30 dB SN	WT 130 ms 🖷	RBW 100 kHz VBW 300 kHz			







Report No.: CQASZ20211001781E

20 dBm M1[1] M2[1] 10 dBm M2[1]	-3.93 2.4800 -43.58
10 dBm	
	6.9331
0 dBm MI	
-10 dBm	
01 -18.100 dBm	
-20 dBm	
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Remark:

Pre test 9kHz to 25GHz, find the highest point when testing, so only the worst data were shown in the test report. Per FCC Part 15.33 (a) and 15.31 (o) ,The amplitude of spurious emissions from intentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this part.



4.10Other requirements Frequency Hopping Spread Spectrum System

Test Requirement:	47 CFR Part 15C Section 15.247 (a)(1), (h) requirement:
rate from a Pseudorandom of on the average by each trans	nnel frequencies that are selected at the system hopping ordered list of hopping frequencies. Each frequency must be used equally smitter. The system receivers shall have input bandwidths that match the s of their corresponding transmitters and shall shift frequencies in asmitted signals.
channels during each transn receiver, must be designed t transmitter be presented with employing short transmissio	spectrum systems are not required to employ all available hopping nission. However, the system, consisting of both the transmitter and the to comply with all of the regulations in this section should the h a continuous data (or information) stream. In addition, a system n bursts must comply with the definition of a frequency hopping system missions over the minimum number of hopping channels specified in
the system to recognize othe independently chooses and The coordination of frequence	ence within a frequency hopping spread spectrum system that permits er users within the spectrum band so that it individually and adapts its hopsets to avoid hopping on occupied channels is permitted. cy hopping systems in any other manner for the express purpose of ccupancy of individual hopping frequencies by multiple transmitters is
Compliance for section 15	.247(a)(1)
-	alo-two addition stage. And the result is fed back to the input of the first with the first ONE of 9 consecutive ONEs; i.e. the shift register is initialized ages: 9 sequence: $2^9 - 1 = 511$ bits
Linear Feedback S	hift Register for Generation of the PRBS sequence
An example of Pseudorando	om Frequency Hopping Sequence as follow: 7 64 8 73 16 75 1 10 10 10 10 10 10 10 10 10 10 10 10 10 1
According to Bluetooth Correlation bandwidths that match the	y on the average by each transmitter. e Specification, Bluetooth receivers are designed to have input and IF hopping channel bandwidths of any Bluetooth transmitters and shift on with the transmitted signals.
Compliance for section 15.	.247(g)
pseudorandom hopping freq	re Specification, the Bluetooth system transmits the packet with the quency with a continuous data and the short burst transmission from the ansmitted under the frequency hopping system with the pseudorandom



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Compliance for section 15.247(h)

According to Bluetooth Core specification, the Bluetooth system incorporates with an adaptive system to detect other user within the spectrum band so that it individually and independently to avoid hopping on the occupied channels.

According to the Bluetooth Core specification, the Bluetooth system is designed not have the ability to coordinated with other FHSS System in an effort to avoid the simultaneous occupancy of individual hopping frequencies by multiple transmitter.

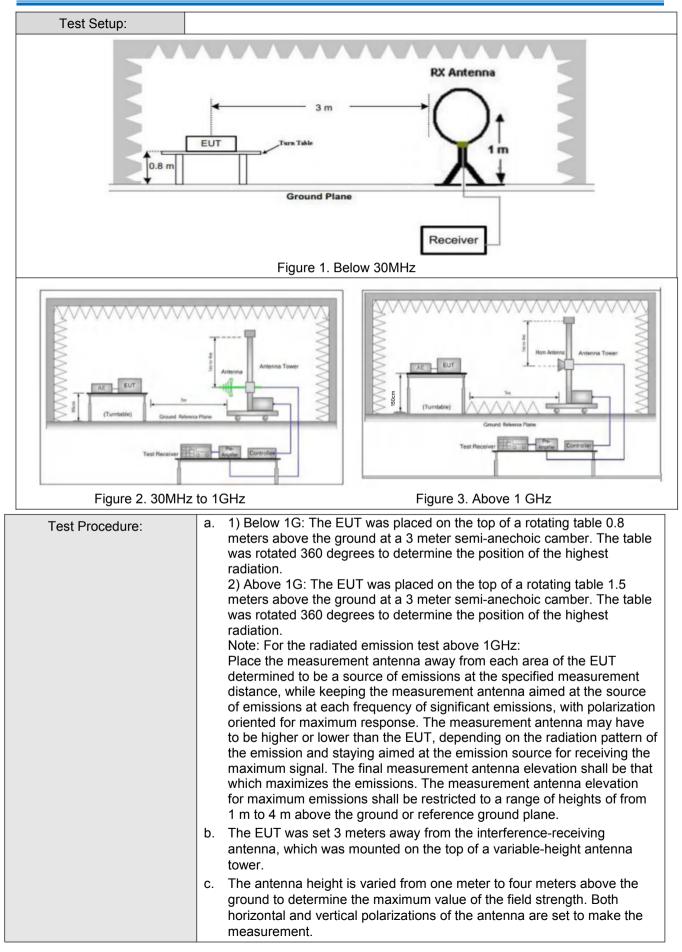


4.11 Radiated Spurious Emission & Restricted bands

Test Requirement:	47 CFR Part 15C Section 15.209 and 15.205									
Test Method:	ANSI C63.10: 2013									
Test Site:	Measurement Distance	Measurement Distance: 3m (Semi-Anechoic Chamber)								
Receiver Setup:	Frequency Detector RBW VBW Remar									
	0.009MHz-0.090MH	z	Peak	10kHz	z 30kHz	Peak]			
	0.009MHz-0.090MH	z	Average	10kHz	z 30kHz	Average				
	0.090MHz-0.110MH	z	Quasi-peak	10kHz	z 30kHz	Quasi-peak				
	0.110MHz-0.490MH	z	Peak	10kHz	z 30kHz	Peak				
	0.110MHz-0.490MH	z	Average	10kHz	z 30kHz	Average				
	0.490MHz -30MHz		Quasi-peak	10kHz	z 30kHz	Quasi-peak				
	30MHz-1GHz		Peak	100 k⊢	lz 300kHz	Peak				
	Above 1GHz		Peak	1MHz	: 3MHz	Peak				
	Above TGHZ		Peak	1MHz	: 10Hz	Average				
Limit:	Frequency		eld strength crovolt/meter)	Limit (dBuV/m)	Remark	Measureme distance (n				
	0.009MHz-0.490MHz	2	400/F(kHz)	-	-	300				
	0.490MHz-1.705MHz	24	1000/F(kHz)	-	-	30				
	1.705MHz-30MHz		30	-	-	30				
	30MHz-88MHz		100	40.0	Quasi-peak	3				
	88MHz-216MHz		150	43.5	Quasi-peak	3				
	216MHz-960MHz		200	46.0	Quasi-peak	3				
	960MHz-1GHz		500	54.0	Quasi-peak	3				
	Above 1GHz		500	54.0	Average	3				
	Note: 15.35(b), Unless emissions is 20dE applicable to the e peak emission lev	8 ab equi	ove the maxim	um perm est. This p	itted average	emission limit				









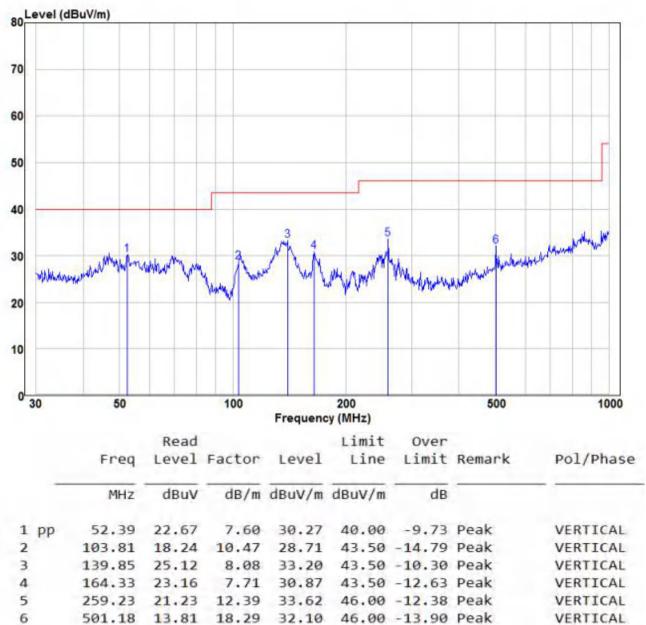
	 d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters (for the test frequency of below 30MHz, the antenna was tuned to heights 1 meter) and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. e. The test-receiver system was set to Peak Detect Function and Specified Bandwidth with Maximum Hold Mode. f. If the emission level of the EUT in peak mode was 10dB lower than the limit specified, then testing could be stopped and the peak values of the EUT would be reported. Otherwise the emissions that did not have 10dB margin would be re-tested one by one using peak, quasi-peak or average method as specified and then reported in a data sheet. g. Test the EUT in the lowest channel (2402MHz),the middle channel (2441MHz),the Highest channel (2480MHz) h. The radiation measurements are performed in X, Y, Z axis positioning for Transmitting mode, and found the X axis positioning which it is the worst case. i. Repeat above procedures until all frequencies measured was complete.
Exploratory Test Mode:	Non-hopping transmitting mode with all kind of modulation and all kind of data type Transmitting mode, Charging mode.
Final Test Mode:	Through Pre-scan, find the DH5 of data type and GFSK modulation is the worst case. Pretest the EUT at Transmitting mode and Charging mode, found the Transmitting mode which it is worse case For below 1GHz part, through pre-scan, the worst case is the lowest channel. Only the worst case is recorded in the report.
Test Results:	Pass



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4.11.1 Radiated Emission below 1GHz





Remark:

The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

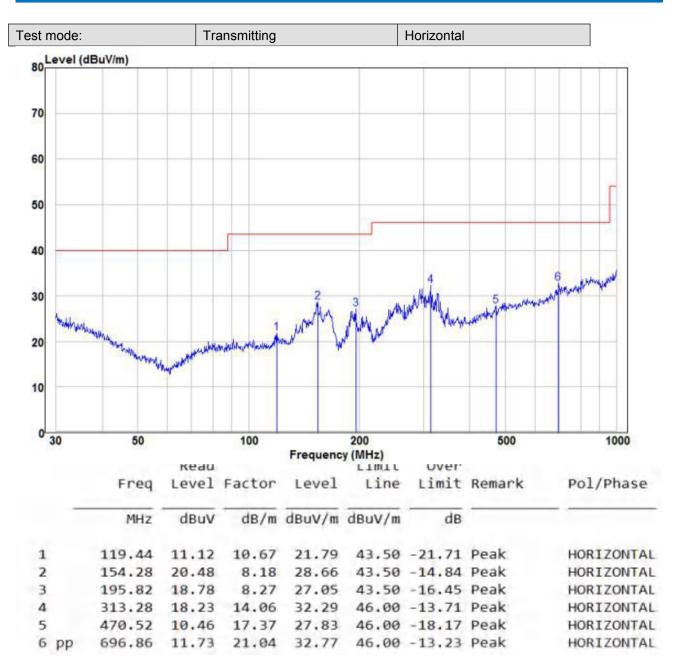
Factor= Antenna Factor + Cable Factor – Preamplifier Factor,

Level = Read Level + Factor,

Over Limit=Level-Limit Line.



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Remark:

The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Factor= Antenna Factor + Cable Factor - Preamplifier Factor,

Level = Read Level + Factor,

Over Limit=Level-Limit Line.



4.11.2 Transmitter Emission above 1GHz

Worse case	mode:	GFSK(DH	5)	Test chann	el:	Lowest	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)		H/V
2390	54.68	-9.2	45.48	74	-28.52	Peak	н
2400	54.88	-9.39	45.49	74	-28.51	Peak	Н
4804	53.78	-4.33	49.45	74	-24.55	Peak	Н
7206	49.59	1.01	50.60	74	-23.40	Peak	Н
2390	53.74	-9.2	44.54	74	-29.46	Peak	V
2400	56.92	-9.39	47.53	74	-26.47	Peak	V
4804	52.94	-4.33	48.61	74	-25.39	Peak	V
7206	48.96	1.01	49.97	74	-24.03	Peak	V

Worse case	mode:	GFSK(DH	5)	Test chann	el:	Middle	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)		H/V
4882	51.49	-4.11	47.38	74	-26.62	peak	Н
7323	48.80	1.51	50.31	74	-23.69	peak	Н
4882	52.65	-4.11	48.54	74	-25.46	peak	V
7323	50.39	1.51	51.90	74	-22.10	peak	V

Worse case mode:		GFSK(DH5)		Test channel:		Highest	
Frequency	Meter Reading	Factor	Emission Level	Limits	Over	Detector Type	Ant. Pol.
(MHz)	(dBµV)	(dB)	(dBµV/m)	(dBµV/m)	(dB)		H/V
2483.5	55.91	-9.29	46.62	74	-27.38	Peak	н
4960	51.56	-4.04	47.52	74	-26.48	Peak	Н
7440	49.49	1.57	51.06	74	-22.94	Peak	Н
2483.5	54.30	-9.29	45.01	74	-28.99	Peak	v
4960	50.76	-4.04	46.72	74	-27.28	Peak	V
7440	51.20	1.57	52.77	74	-21.23	Peak	V

Remark:

1) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level =Receiver Reading + Antenna Factor + Cable Factor – Preamplifier Factor

2) Scan from 9kHz to 25GHz, the disturbance above 10GHz and below 30MHz was very low. As shown in this section, for frequencies above 1GHz, the field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation. So, only the peak measurements were shown in the report.



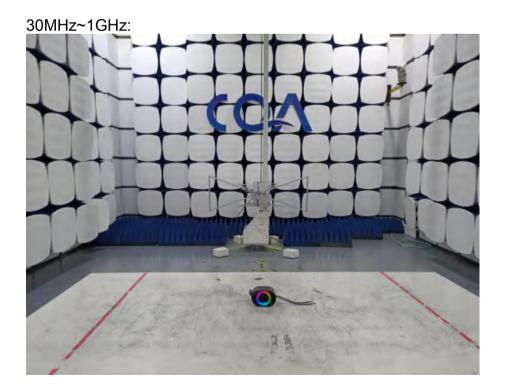
5

Photographs - EUT Test Setup

5.1 Radiated Emission

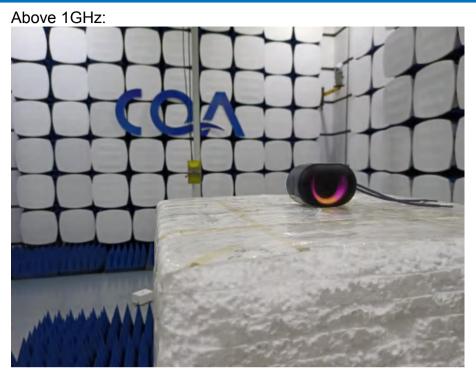
9KHz~30MHz:







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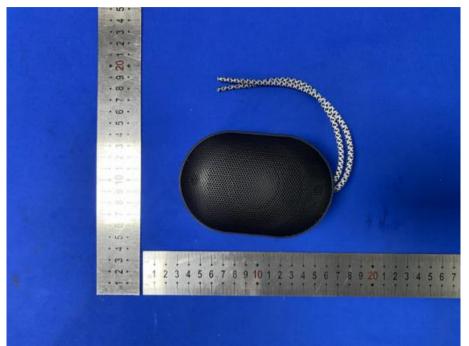


5.2 Conducted Emission





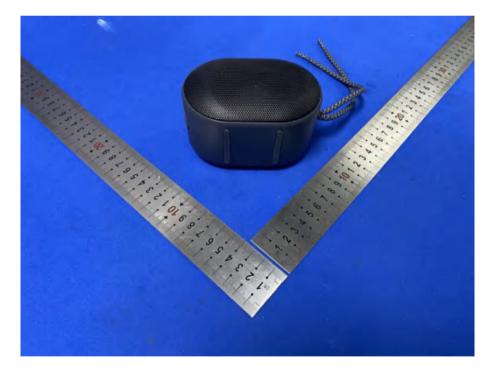
6 Photographs - EUT Constructional Details





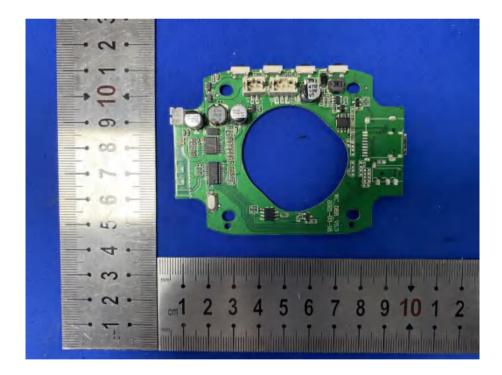








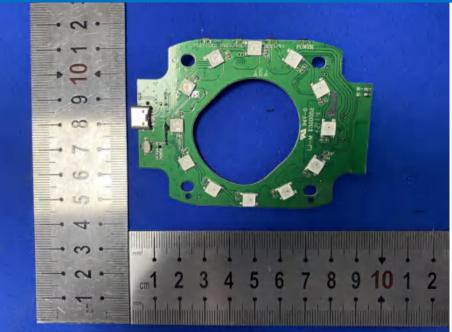














. The End