

TEST Report

Applicant: Shenzhen Ruizu Digital Technology Co., Ltd

Address of Applicant: 6/F, Building D, KeShang Mei park, Chongqing Road, Fuyong, Bao'an District, shenzhen,China

Manufacturer : Shenzhen Ruizu Digital Technology Co., Ltd

Address of Manufacturer : 6/F, Building D, KeShang Mei park, Chongqing Road, Fuyong, Bao'an District, shenzhen,China

Equipment Under Test (EUT)

Product Name: Mp3 music player

Model No.: A19X

Trade Mark: N/A

FCC ID: 2AQWYA19X

Applicable standards: FCC CFR Title 47 Part 15 Subpart C Section 15.247

Date of sample receipt: Mar.11,2021

Date of Test: Mar.11,2021- Mar.18,2021

Date of report issued: Mar.18,2021

Test Result : PASS *

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

Authorized Signature:

Robinson Lo

Laboratory Manager

This results shown in this test report refer only to the sample(s) tested, this test report cannot be reproduced, except in full, without prior written permission of the company. The report would be invalid without specific stamp of test institute and the signatures of compiler and approver.

2 Version

Version No.	Date	Description
00	Mar. 18, 2021	Original

Tested/ Prepared By

Date:

Mar. 18, 2021

Project Engineer

Check By:

Date:

Mar. 18, 2021

Reviewer

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4 Test Summary

Test Item	Section in CFR 47	Result
Antenna Requirement	15.203/15.247 (c)	Pass
AC Power Line Conducted Emission	15.207	Pass
Conducted Peak Output Power	15.247 (b)(1)	Pass
20dB Occupied Bandwidth	15.247 (a)(1)	Pass
Carrier Frequencies Separation	15.247 (a)(1)	Pass
Hopping Channel Number	15.247 (a)(1)	Pass
Dwell Time	15.247 (a)(1)	Pass
Pseudorandom Frequency Hopping Sequence	15.247(b)(4)	Pass
Radiated Emission	15.205/15.209	Pass
Band Edge	15.247(d)	Pass

Remarks:

1. Pass: The EUT complies with the essential requirements in the standard.
2. Test according to ANSI C63.10:2013

Measurement Uncertainty

Test Item	Frequency Range	Measurement Uncertainty	Notes
Radiated Emission	30MHz-200MHz	3.8039dB	(1)
Radiated Emission	200MHz-1GHz	3.9679dB	(1)
Radiated Emission	1GHz-18GHz	4.29dB	(1)
Radiated Emission	18GHz-40GHz	3.30dB	(1)
AC Power Line Conducted Emission	0.15MHz ~ 30MHz	3.44dB	(1)

Note (1): The measurement uncertainty is for coverage factor of k=2 and a level of confidence of 95%.

5 General Information

5.1 General Description of EUT

Product Name:	Mp3 music player
Model No.:	A19X
Series model:	A17X, A02(S), A16T, A65X, A02(S)T
Test sample(s) ID:	GTSL202103000118-1(Engineer sample) GTSL202103000118-2(Normal sample)
Operation Frequency:	2402MHz~2480MHz
Channel numbers:	79
Channel separation:	1MHz
Modulation type:	GFSK, $\pi/4$ -DQPSK, 8-DPSK
Antenna Type:	PCB Antenna
Antenna gain:	2.67 dBi
Power supply:	DC 3.7V From Battery and DC 5V From External circuit
Adapter Information (auxiliary test equipment supplied by test Lab)	Mode: CD122 Input: AC100-240V, 50/60Hz, 500mA Output: DC 5V, 2A

Operation Frequency each of channel							
Channel	Frequency	Channel	Frequency	Channel	Frequency	Channel	Frequency
1	2402MHz	21	2422MHz	41	2442MHz	61	2462MHz
2	2403MHz	22	2423MHz	42	2443MHz	62	2463MHz
3	2404MHz	23	2424MHz	43	2444MHz	63	2464MHz
4	2405MHz	24	2425MHz	44	2445MHz	64	2465MHz
5	2406MHz	25	2426MHz	45	2446MHz	65	2466MHz
6	2407MHz	26	2427MHz	46	2447MHz	66	2467MHz
7	2408MHz	27	2428MHz	47	2448MHz	67	2468MHz
8	2409MHz	28	2429MHz	48	2449MHz	68	2469MHz
9	2410MHz	29	2430MHz	49	2450MHz	69	2470MHz
10	2411MHz	30	2431MHz	50	2451MHz	70	2471MHz
11	2412MHz	31	2432MHz	51	2452MHz	71	2472MHz
12	2413MHz	32	2433MHz	52	2453MHz	72	2473MHz
13	2414MHz	33	2434MHz	53	2454MHz	73	2474MHz
14	2415MHz	34	2435MHz	54	2455MHz	74	2475MHz
15	2416MHz	35	2436MHz	55	2456MHz	75	2476MHz
16	2417MHz	36	2437MHz	56	2457MHz	76	2477MHz
17	2418MHz	37	2438MHz	57	2458MHz	77	2478MHz
18	2419MHz	38	2439MHz	58	2459MHz	78	2479MHz
19	2420MHz	39	2440MHz	59	2460MHz	79	2480MHz
20	2421MHz	40	2441MHz	60	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

5.2 Test mode

Transmitting mode	Keep the EUT in continuously transmitting mode.
<i>Remark: During the test, the test voltage was tuned from 85% to 115% of the nominal rated supply voltage, and found that the worst case was under the nominal rated supply condition. So the report just shows that condition's data.</i>	

5.3 Description of Support Units

None.

5.4 Deviation from Standards

None.

5.5 Abnormalities from Standard Conditions

None.

5.6 Test Facility

The test facility is recognized, certified, or accredited by the following organizations: ● FCC —Registration No.: 381383 Global United Technology Services 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 files. Registration 381383. ● IC —Registration No.: 9079A The 3m Semi-anechoic chamber of Global United Technology Services Co., Ltd. has been registered by Certification and Engineering Bureau of Industry Canada for radio equipment testing with Registration No.: 9079A ● NVLAP (LAB CODE:600179-0) Global United Technology Services Co., Ltd., is accredited by the National Voluntary Laboratory Accreditation Program (NVLAP). LAB CODE:600179-0

5.7 Test Location

All tests were performed at:
Global United Technology Services Co., Ltd. Address: No. 123-128, Tower A, Jinyuan Business Building, No.2, Laodong Industrial Zone, Xixiang Road, Baoan District, Shenzhen, Guangdong, China 518102 Tel: 0755-27798480 Fax: 0755-27798960

5.8 Additional Instructions

Test Software	Special AT test command provided by manufacturer to Keep the EUT in continuously transmitting mode and hopping mode
Power level setup	Default

6 Test Instruments list

Radiated Emission:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	3m Semi- Anechoic Chamber	ZhongYu Electron	9.2(L)*6.2(W)* 6.4(H)	GTS250	July. 02 2020	July. 01 2025
2	Control Room	ZhongYu Electron	6.2(L)*2.5(W)* 2.4(H)	GTS251	N/A	N/A
3	EMI Test Receiver	Rohde & Schwarz	ESU26	GTS203	June. 25 2020	June. 24 2021
4	BiConiLog Antenna	SCHWARZBECK MESS-ELEKTRONIK	VULB9163	GTS214	June. 25 2020	June. 24 2021
5	Double -ridged waveguide horn	SCHWARZBECK MESS-ELEKTRONIK	BBHA 9120 D	GTS208	June. 25 2020	June. 24 2021
6	Horn Antenna	ETS-LINDGREN	3160	GTS217	June. 25 2020	June. 24 2021
7	EMI Test Software	FARAD	EZ-EMC	N/A	N/A	N/A
8	Coaxial Cable	GTS	N/A	GTS213	June. 25 2020	June. 24 2021
9	Coaxial Cable	GTS	N/A	GTS211	June. 25 2020	June. 24 2021
10	Coaxial cable	GTS	N/A	GTS210	June. 25 2020	June. 24 2021
11	Coaxial Cable	GTS	N/A	GTS212	June. 25 2020	June. 24 2021
12	Amplifier(100kHz-3GHz)	HP	8347A	GTS204	June. 25 2020	June. 24 2021
13	Amplifier(2GHz-20GHz)	HP	84722A	GTS206	June. 25 2020	June. 24 2021
14	Amplifier (18-26GHz)	Rohde & Schwarz	AFS33-18002 650-30-8P-44	GTS218	June. 25 2020	June. 24 2021
15	Band filter	Amindeon	82346	GTS219	June. 25 2020	June. 24 2021
16	Power Meter	Anritsu	ML2495A	GTS540	June. 25 2020	June. 24 2021
17	Power Sensor	Anritsu	MA2411B	GTS541	June. 25 2020	June. 24 2021
18	Wideband Radio Communication Tester	Rohde & Schwarz	CMW500	GTS575	June. 25 2020	June. 24 2021
19	Splitter	Agilent	11636B	GTS237	June. 25 2020	June. 24 2021
20	Loop Antenna	ZHINAN	ZN30900A	GTS534	June. 25 2020	June. 24 2021
21	Breitband hornantenne	SCHWARZBECK	BBHA 9170	GTS579	Oct. 18 2020	Oct. 17 2021
22	Amplifier	TDK	PA-02-02	GTS574	Oct. 18 2020	Oct. 17 2021
23	Amplifier	TDK	PA-02-03	GTS576	Oct. 18 2020	Oct. 17 2021
24	PSA Series Spectrum Analyzer	Rohde & Schwarz	FSP	GTS578	June. 25 2020	June. 24 2021

Conducted Emission						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Shielding Room	ZhongYu Electron	7.3(L)x3.1(W)x2.9(H)	GTS252	May.15 2019	May.14 2022
2	EMI Test Receiver	R&S	ESCI 7	GTS552	June. 25 2020	June. 24 2021
3	Coaxial Switch	ANRITSU CORP	MP59B	GTS225	June. 25 2020	June. 24 2021
4	ENV216 2-L-V-NETZNACHB.DE	ROHDE&SCHWARZ	ENV216	GTS226	June. 25 2020	June. 24 2021
5	Coaxial Cable	GTS	N/A	GTS227	N/A	N/A
6	EMI Test Software	FARAD	EZ-EMC	N/A	N/A	N/A
7	Thermo meter	KTJ	TA328	GTS233	June. 25 2020	June. 24 2021
8	Absorbing clamp	Elektronik-Feinmechanik	MDS21	GTS229	June. 25 2020	June. 24 2021
9	ISN	SCHWARZBECK	NTFM 8158	GTD565	June. 25 2020	June. 24 2021

RF Conducted Test:						
Item	Test Equipment	Manufacturer	Model No.	Serial No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	MXA Signal Analyzer	Agilent	N9020A	GTS566	June. 25 2020	June. 24 2021
2	EMI Test Receiver	R&S	ESCI 7	GTS552	June. 25 2020	June. 24 2021
3	Spectrum Analyzer	Agilent	E4440A	GTS533	June. 25 2020	June. 24 2021
4	MXG vector Signal Generator	Agilent	N5182A	GTS567	June. 25 2020	June. 24 2021
5	ESG Analog Signal Generator	Agilent	E4428C	GTS568	June. 25 2020	June. 24 2021
6	USB RF Power Sensor	DARE	RPR3006W	GTS569	June. 25 2020	June. 24 2021
7	RF Switch Box	Shongyi	RFSW3003328	GTS571	June. 25 2020	June. 24 2021
8	Programmable Constant Temp & Humi Test Chamber	WEWON	WHTH-150L-40-880	GTS572	June. 25 2020	June. 24 2021
9	Power Sensor	Agilent	E9300A	GTS589	June. 25 2020	June. 24 2021
10	Spectrum analyzer	Agilent	N9020A	GTS591	June. 25 2020	June. 24 2021

General used equipment:						
Item	Test Equipment	Manufacturer	Model No.	Inventory No.	Cal.Date (mm-dd-yy)	Cal.Due date (mm-dd-yy)
1	Humidity/ Temperature Indicator	KTJ	TA328	GTS243	June. 25 2020	June. 24 2021
2	Barometer	ChangChun	DYM3	GTS255	June. 25 2020	June. 24 2021

7 Test results and Measurement Data

7.1 Antenna requirement

Standard requirement:	FCC Part15 C Section 15.203 /247(c)
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(c) (1)(i) requirement: (i) Systems operating in the 2400-2483.5 MHz band that is used exclusively for fixed. Point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum conducted output power of the intentional radiator is reduced by 1 dB for every 3 dB that the directional gain of the antenna exceeds 6dBi.	
E.U.T Antenna:	
<i>The antenna is PCB ANT, the best case gain of the is 2.67 dBi, reference to the appendix II for details</i>	

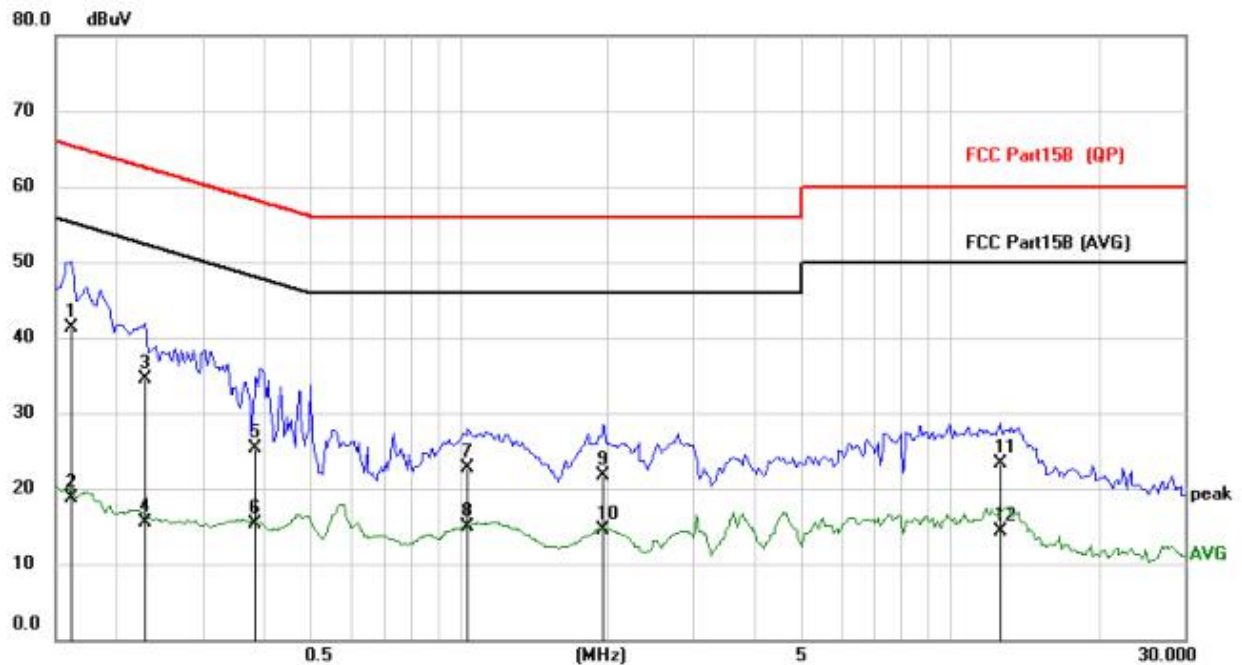
7.2 Conducted Emissions

Test Requirement:	FCC Part15 C Section 15.207						
Test Method:	ANSI C63.10:2013						
Test Frequency Range:	150KHz to 30MHz						
Class / Severity:	Class B						
Receiver setup:	RBW=9KHz, VBW=30KHz, Sweep time=auto						
Limit:	Frequency range (MHz)		Limit (dBuV)				
			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 logarithm of the frequency.							
Test setup:	Reference Plane <i>Remark:</i> E.U.T: Equipment Under Test LISN: Line Impedance Stabilization Network Test table height=0.8m						
Test procedure:	1. The E.U.T and simulators are connected to the main power through a line impedance stabilization network (L.I.S.N.). This provides a 50ohm/50uH coupling impedance for the measuring equipment. 2. The peripheral devices are also connected to the main power through a LISN that provides a 50ohm/50uH coupling impedance with 50ohm termination. (Please refer to the block diagram of the test setup and photographs). 3. Both sides of A.C. line are checked for maximum conducted interference. In order to find the maximum emission, the relative positions of equipment and all of the interface cables must be changed according to ANSI C63.10:2013 on conducted measurement.						
Test Instruments:	Refer to section 6.0 for details						
Test mode:	Refer to section 5.2 for details						
Test environment:	Temp.:	25 °C	Humid.:	52%	Press.:	1012mbar	
Test voltage:	AC 120V, 60Hz						
Test results:	Pass						

Remark: Both high and low voltages have been tested to show only the worst low voltage test data.

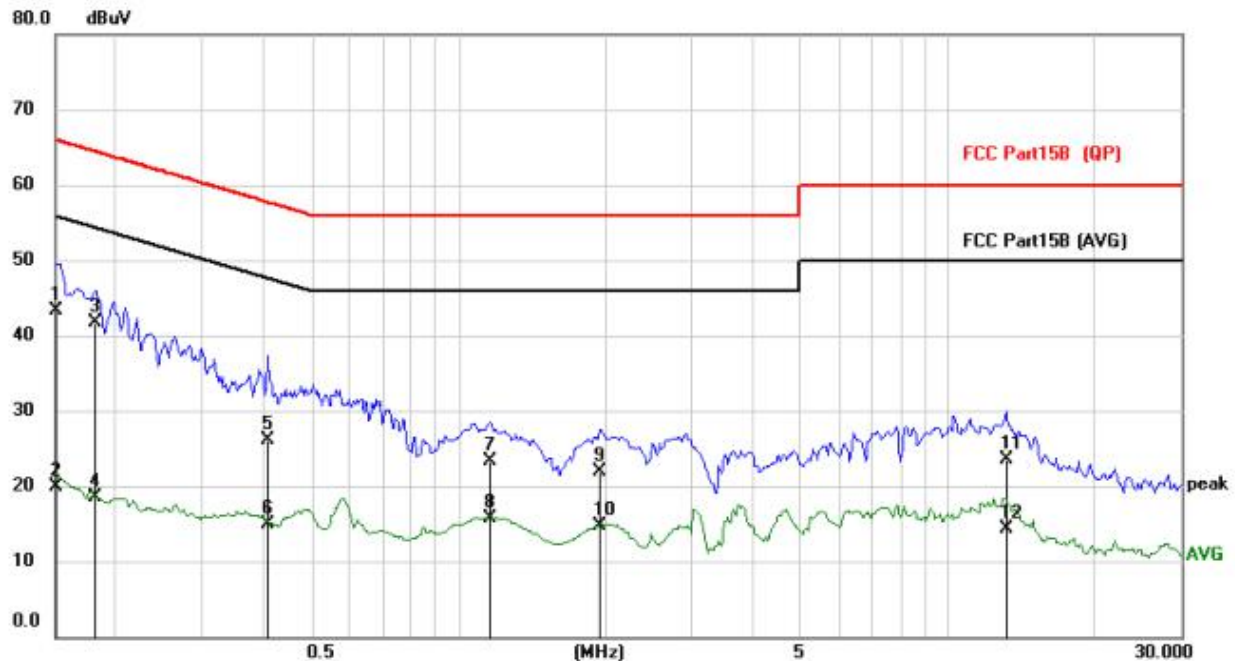
Measurement data:

Line:



No.	Mk.	Freq.	Reading Level	Correct Factor	Measurement	Limit	Over		
		MHz	dBuV	dB	dBuV	dBuV	dB	Detector	Comment
1	*	0.1617	30.46	10.92	41.38	65.38	-24.00	QP	
2		0.1617	7.76	10.92	18.68	55.38	-36.70	AVG	
3		0.2280	23.62	10.92	34.54	62.52	-27.98	QP	
4		0.2280	4.64	10.92	15.56	52.52	-36.96	AVG	
5		0.3840	14.34	10.92	25.26	58.19	-32.93	QP	
6		0.3840	4.32	10.92	15.24	48.19	-32.95	AVG	
7		1.0392	11.87	10.92	22.79	56.00	-33.21	QP	
8		1.0392	3.95	10.92	14.87	46.00	-31.13	AVG	
9		1.9674	10.81	10.96	21.77	56.00	-34.23	QP	
10		1.9674	3.57	10.96	14.53	46.00	-31.47	AVG	
11		12.5979	11.96	11.41	23.37	60.00	-36.63	QP	
12		12.5979	2.84	11.41	14.25	50.00	-35.75	AVG	

Neutral:

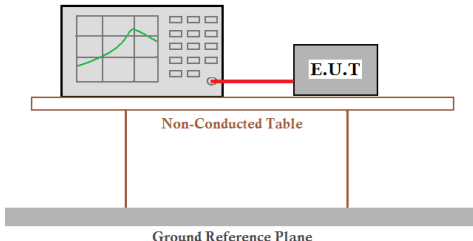


No.	Mk.	Freq. MHz	Reading Level dBuV	Correct Factor dB	Measure- ment dBuV	Limit dBuV	Over dB	Detector	Comment
1	*	0.1500	32.45	10.92	43.37	66.00	-22.63	QP	
2		0.1500	9.08	10.92	20.00	56.00	-36.00	AVG	
3		0.1812	30.76	10.92	41.68	64.43	-22.75	QP	
4		0.1812	7.60	10.92	18.52	54.43	-35.91	AVG	
5		0.4074	15.11	10.92	26.03	57.70	-31.67	QP	
6		0.4074	4.02	10.92	14.94	47.70	-32.76	AVG	
7		1.1640	12.44	10.92	23.36	56.00	-32.64	QP	
8		1.1640	4.75	10.92	15.67	46.00	-30.33	AVG	
9		1.9479	10.99	10.96	21.95	56.00	-34.05	QP	
10		1.9479	3.66	10.96	14.62	46.00	-31.38	AVG	
11		13.1517	12.07	11.43	23.50	60.00	-36.50	QP	
12		13.1517	2.96	11.43	14.39	50.00	-35.61	AVG	

Notes:

1. An initial pre-scan was performed on the line and neutral lines with peak detector.
2. Quasi-Peak and Average measurement were performed at the frequencies with maximized peak emission.
3. Final Level = Receiver Read level + LISN Factor + Cable Los

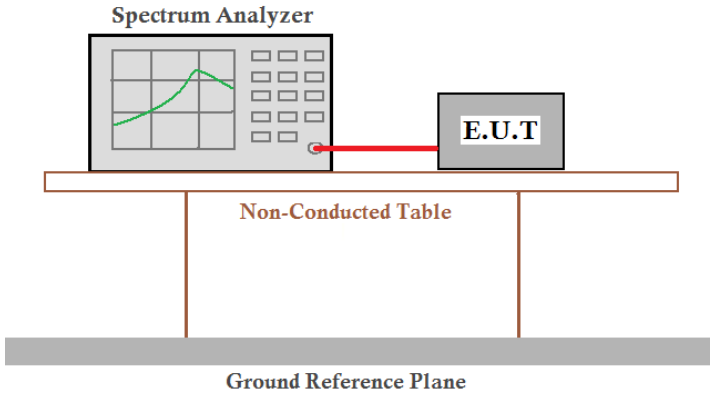
7.3 Conducted Peak Output Power

Test Requirement:	FCC Part15 C Section 15.247 (b)(3)					
Test Method:	ANSI C63.10:2013					
Limit:	30dBm(for GFSK),20.97dBm(for EDR)					
Test setup:	Power sensor and Spectrum analyzer  Non-Conducted Table Ground Reference Plane					
Test Instruments:	Refer to section 6.0 for details					
Test mode:	Refer to section 5.2 for details					
Test results:	Pass					
Test environment:	Temp.:	25 °C	Humid.:	52%	Press.:	1012mbar

Measurement Data

Mode	Test channel	Peak Output Power (dBm)	Limit (dBm)	Result
GFSK	Lowest	-1.73	30.00	Pass
	Middle	-2.18		
	Highest	-2.81		
$\pi/4$ -DQPSK	Lowest	0.64	20.97	Pass
	Middle	0.15		
	Highest	-0.51		
8-DPSK	Lowest	0.46	20.97	Pass
	Middle	-0.09		
	Highest	-0.81		

7.4 20dB Emission Bandwidth

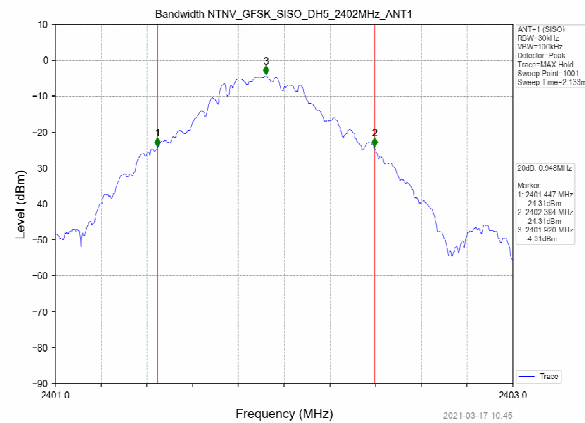
Test Requirement:	FCC Part15 C Section 15.247 (a)(2)					
Test Method:	ANSI C63.10:2013					
Limit:	N/A					
Test setup:						
Test Instruments:	Refer to section 6.0 for details					
Test mode:	Refer to section 5.2 for details					
Test results:	Pass					
Test environment:	Temp.:	25 °C	Humid.:	52%	Press.:	1012mbar

Measurement Data

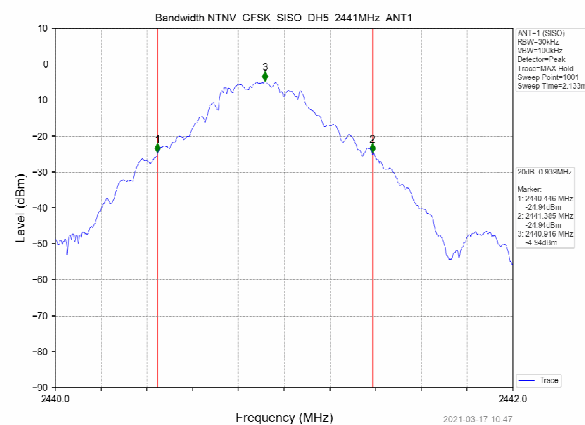
Mode	Test channel	20dB Emission Bandwidth (MHz)	Result
GFSK	Lowest	0.948	Pass
	Middle	0.939	
	Highest	0.948	
$\pi/4$ -DQPSK	Lowest	1.320	Pass
	Middle	1.322	
	Highest	1.321	
8-DPSK	Lowest	1.313	Pass
	Middle	1.316	
	Highest	1.302	

Test plot as follows:

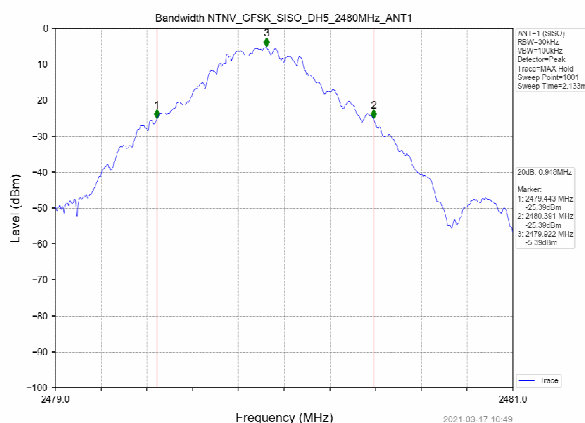
Test mode:	GFSK mode
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Lowest channel



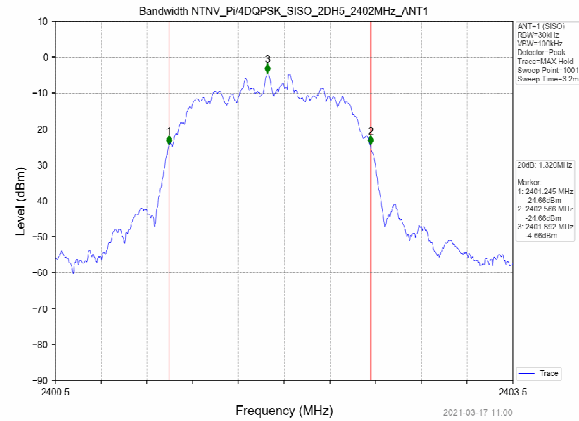
Middle channel



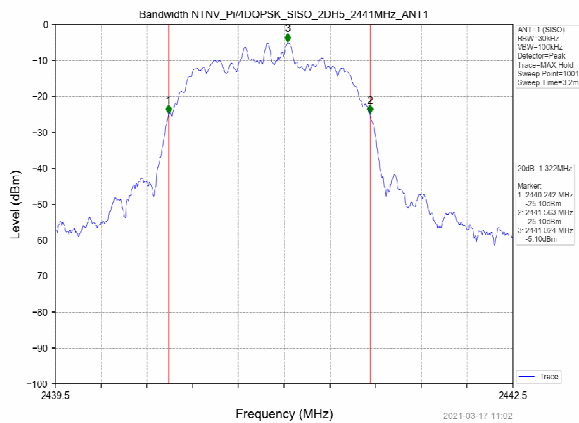
Highest channel

Test mode:

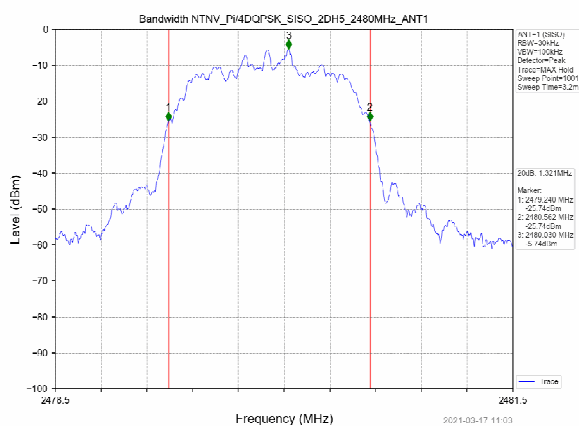
$\pi/4$ -DQPSK mode



Lowest channel



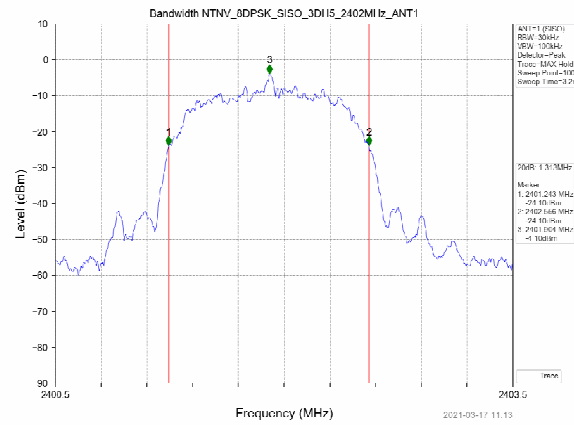
Middle channel



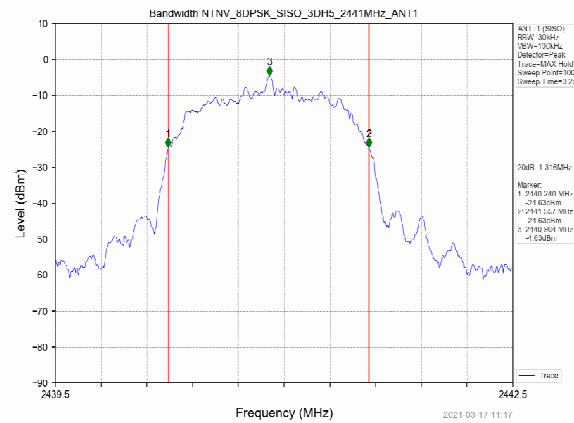
Highest channel

Test mode:

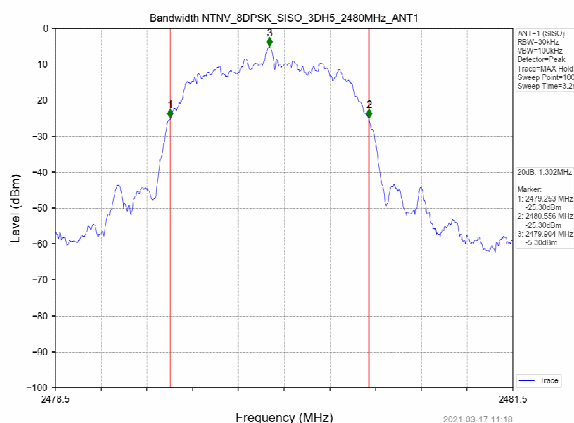
8-DPSK mode



Lowest channel

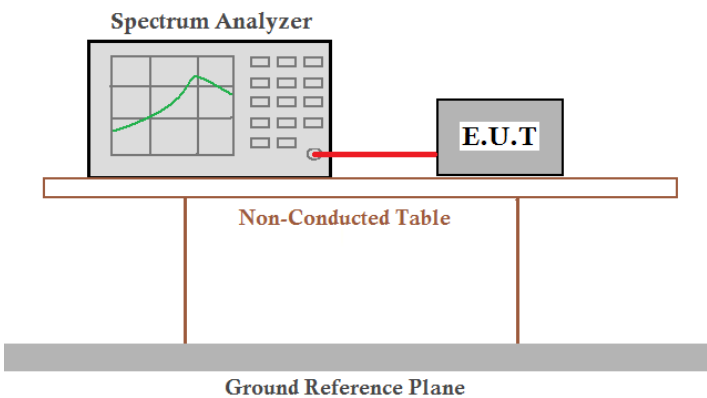


Middle channel



Highest channel

7.5 Frequencies Separation

Test Requirement:	FCC Part15 C Section 15.247 (a)(1)					
Test Method:	ANSI C63.10:2013					
Receiver setup:	RBW=100KHz, VBW=300KHz, detector=Peak					
Limit:	GFSK: 20dB bandwidth $\pi/4$ -DQPSK & 8DSK: 0.025MHz or 2/3 of the 20dB bandwidth (whichever is greater)					
Test setup:						
Test Instruments:	Refer to section 6.0 for details					
Test mode:	Refer to section 5.2 for details					
Test results:	Pass					
Test environment:	Temp.:	25 °C	Humid.:	52%	Press.:	1012mbar

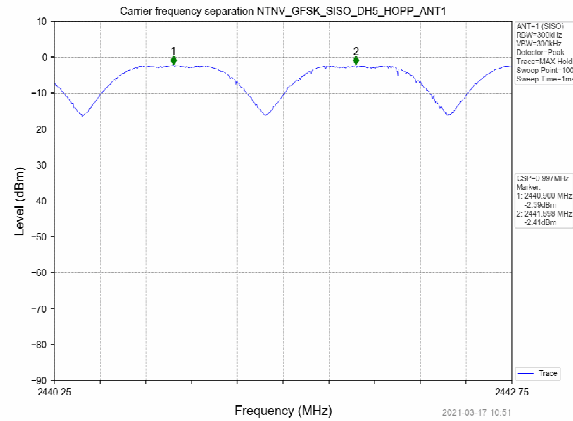
Measurement Data

Mode	Test channel	Frequencies Separation (MHz)	Limit (kHz)	Result
GFSK	Middle	0.997	25KHz or 2/3*20dB bandwidth	Pass
$\pi/4$ -DQPSK	Middle	1.005	25KHz or 2/3*20dB bandwidth	Pass
8-DPSK	Middle	1.002	25KHz or 2/3*20dB bandwidth	Pass

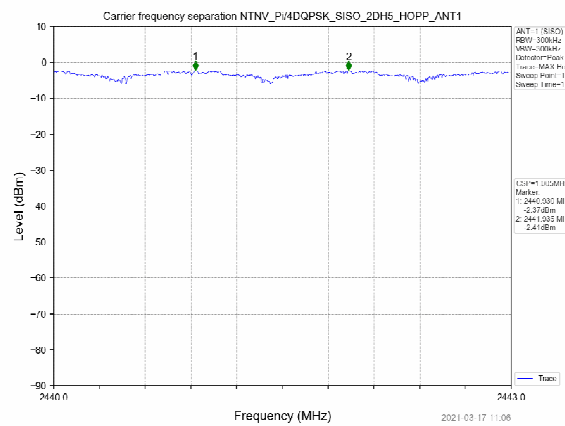
Remark: We have tested all mode at high, middle and low channel, and recorded worst case at middle

Test plot as follows:

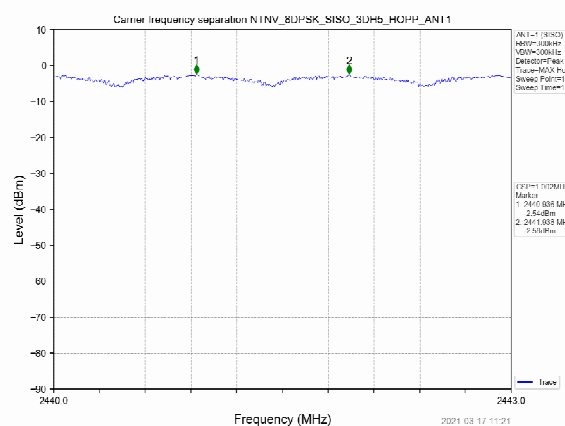
Modulation mode:	GFSK
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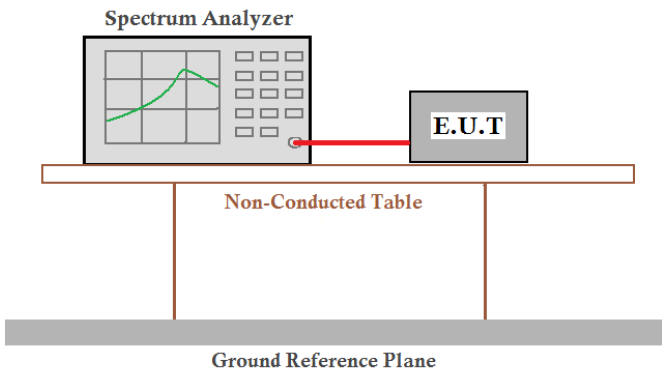
Test mode:	$\pi/4$ -DQPSK
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Test mode:	8-DPSK
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7.6 Hopping Channel Number

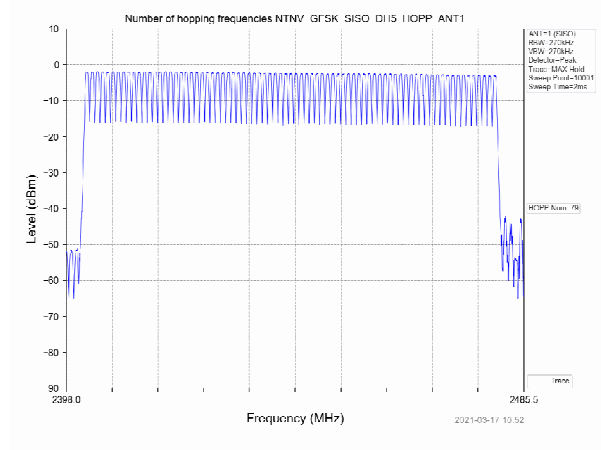
Test Requirement:	FCC Part15 C Section 15.247 (a)(1)					
Test Method:	ANSI C63.10:2013					
Receiver setup:	RBW=100kHz, VBW=300kHz, Frequency range=2400MHz-2483.5MHz, Detector=Peak					
Limit:	15 channels					
Test setup:						
Test Instruments:	Refer to section 6.0 for details					
Test mode:	Refer to section 5.2 for details					
Test results:	Pass					
Test environment:	Temp.:	25 °C	Humid.:	52%	Press.:	1012mbar

Measurement Data:

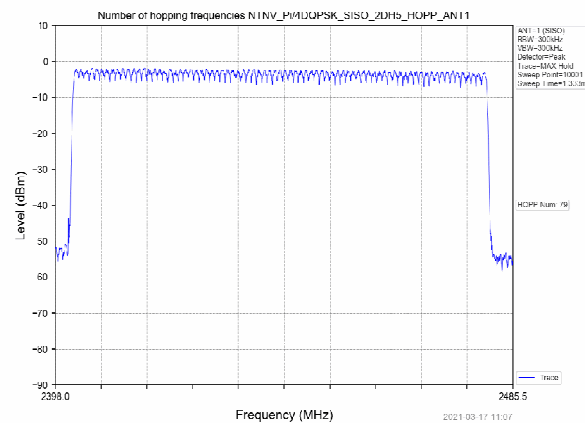
Mode	Hopping channel numbers	Limit	Result
GFSK	79	≥15	Pass
$\pi/4$ -DQPSK	79		Pass
8-DPSK	79		Pass

Test plot as follows:

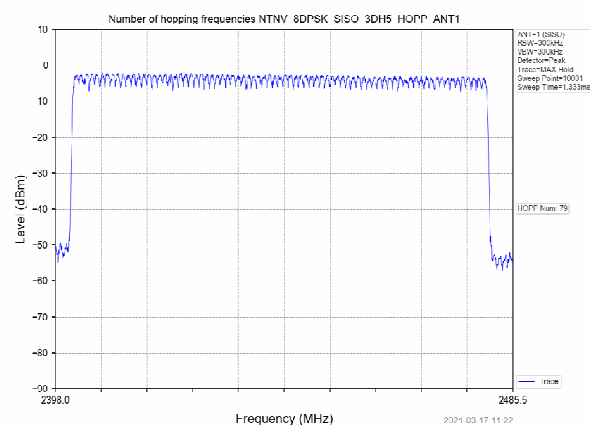
Test mode:	GFSK
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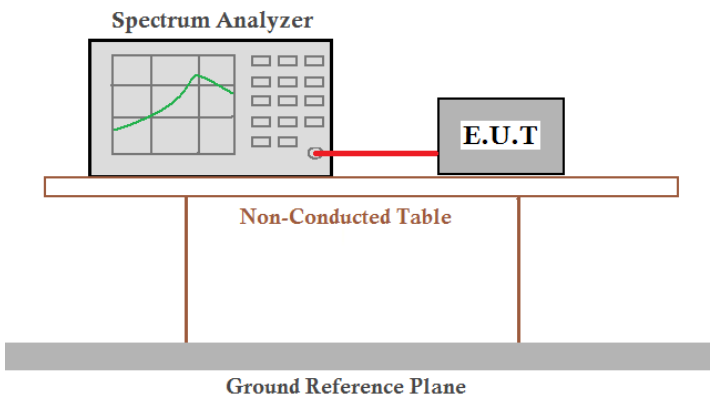
Test mode:	$\pi/4$ -DQPSK
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Test mode:	8-DPSK
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7.7 Dwell Time

Test Requirement:	FCC Part15 C Section 15.247 (a)(1)					
Test Method:	ANSI C63.10:2013					
Receiver setup:	RBW=1MHz, VBW=1MHz, Span=0Hz, Detector=Peak					
Limit:	0.4 Second					
Test setup:	 The diagram illustrates the test setup. A Spectrum Analyzer is connected to an E.U.T (Equipment Under Test) via a red cable. Both the Spectrum Analyzer and the E.U.T are placed on a Non-Conducted Table. The table is supported by a Ground Reference Plane.					
Test Instruments:	Refer to section 6.0 for details					
Test mode:	Refer to section 5.2 for details					
Test results:	Pass					
Test environment:	Temp.:	25 °C	Humid.:	52%	Press.:	1012mbar

Measurement Data

GFSK mode:

Frequency	Packet	Pulse time (ms)	Dwell time(ms)	Limit(ms)	Result
2441MHz	DH1	0.395	126.400	400	Pass
2441MHz	DH3	1.651	269.113	400	Pass
2441MHz	DH5	2.789	281.689	400	Pass

Note: We have tested all mode at high, middle and low channel, and recorded worst case at middle channel.

Dwell time = Pulse time (ms) $\times$ (1600 $\div$ 2 $\div$ 79) $\times$ 31.6 Second for DH1, 2-DH1

Dwell time = Pulse time (ms) $\times$ (1600 $\div$ 4 $\div$ 79) $\times$ 31.6 Second for DH3, 2-DH3

Dwell time = Pulse time (ms) $\times$ (1600 $\div$ 6 $\div$ 79) $\times$ 31.6 Second for DH5, 2-DH5

$\pi/4$ -DQPSK mode:

Frequency	Packet	Pulse time (ms)	Dwell time(ms)	Limit(ms)	Result
2441MHz	2DH1	0.407	130.240	400	Pass
2441MHz	2DH3	1.660	252.320	400	Pass
2441MHz	2DH5	2.908	322.788	400	Pass

Note: We have tested all mode at high, middle and low channel, and recorded worst case at middle channel.

Dwell time = Pulse time (ms) $\times$ (1600 $\div$ 2 $\div$ 79) $\times$ 31.6 Second for DH1, 2-DH1

Dwell time = Pulse time (ms) $\times$ (1600 $\div$ 4 $\div$ 79) $\times$ 31.6 Second for DH3, 2-DH3

Dwell time = Pulse time (ms) $\times$ (1600 $\div$ 6 $\div$ 79) $\times$ 31.6 Second for DH5, 2-DH5

8-DPSK mode:

Frequency	Packet	Pulse time (ms)	Dwell time(ms)	Limit(ms)	Result
2441MHz	3DH1	0.409	130.880	400	Pass
2441MHz	3DH3	1.660	260.620	400	Pass
2441MHz	3DH5	2.911	294.011	400	Pass

Note: We have tested all mode at high, middle and low channel, and recorded worst case at middle channel.

Dwell time = Pulse time (ms) $\times$ (1600 $\div$ 2 $\div$ 79) $\times$ 31.6 Second for DH1, 2-DH1, 3-DH1

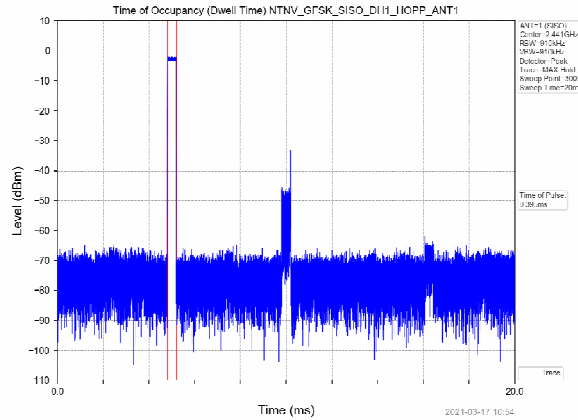
Dwell time = Pulse time (ms) $\times$ (1600 $\div$ 4 $\div$ 79) $\times$ 31.6 Second for DH3, 2-DH3, 3-DH3

Dwell time = Pulse time (ms) $\times$ (1600 $\div$ 6 $\div$ 79) $\times$ 31.6 Second for DH5, 2-DH5, 3-DH5

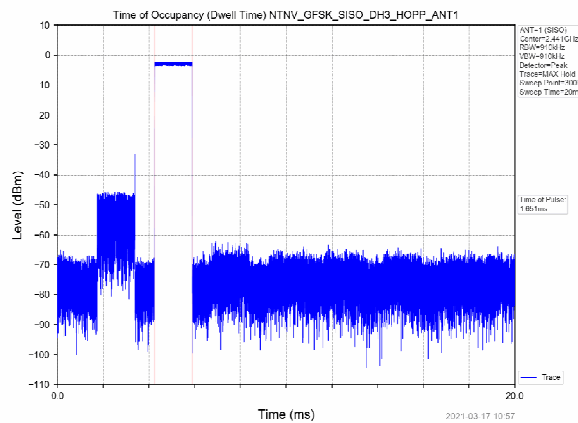
Test plot as follows:

GFSK mode:

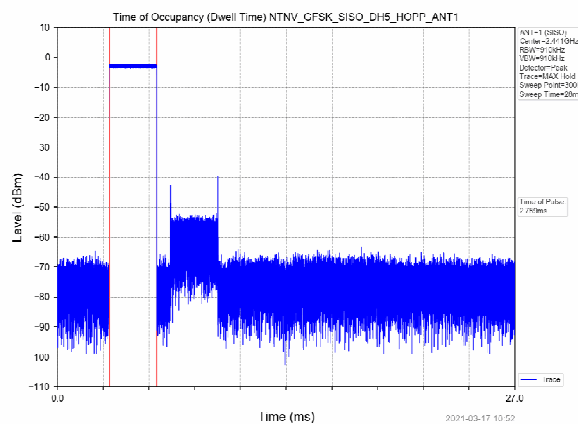
Test channel:	2441MHz
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DH1



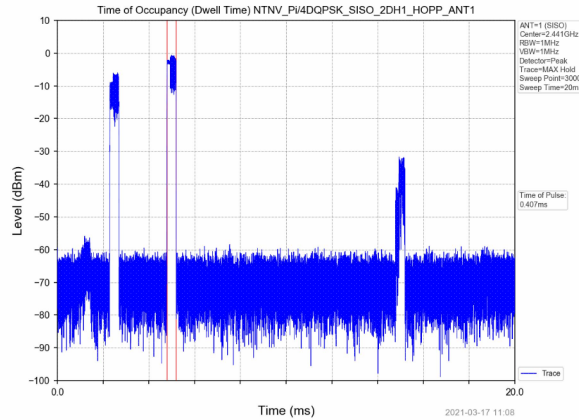
DH3



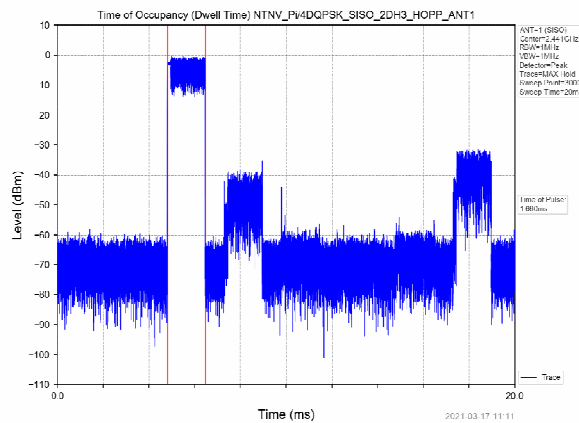
DH5

$\pi/4$ -DQPSK mode:

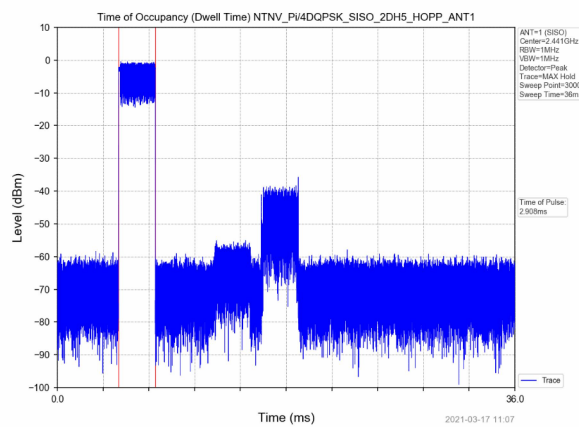
Test channel:	2441MHz
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DH1



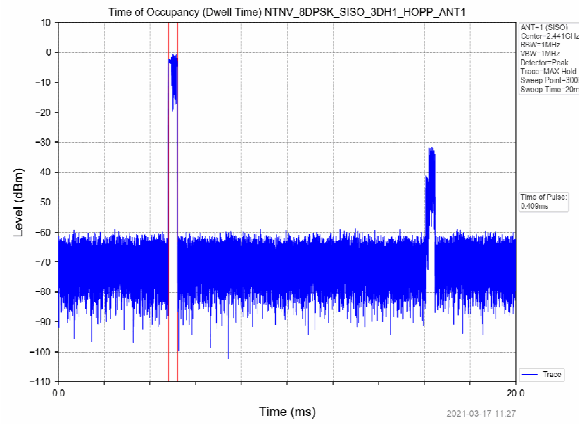
DH3



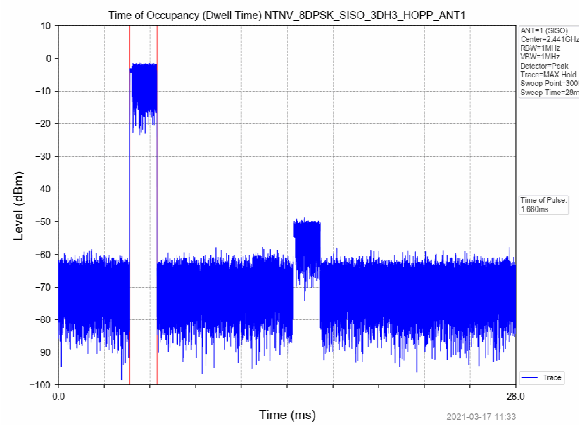
DH5

8-DPSK mode:

Test channel:	2441MHz
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DH1



DH3

