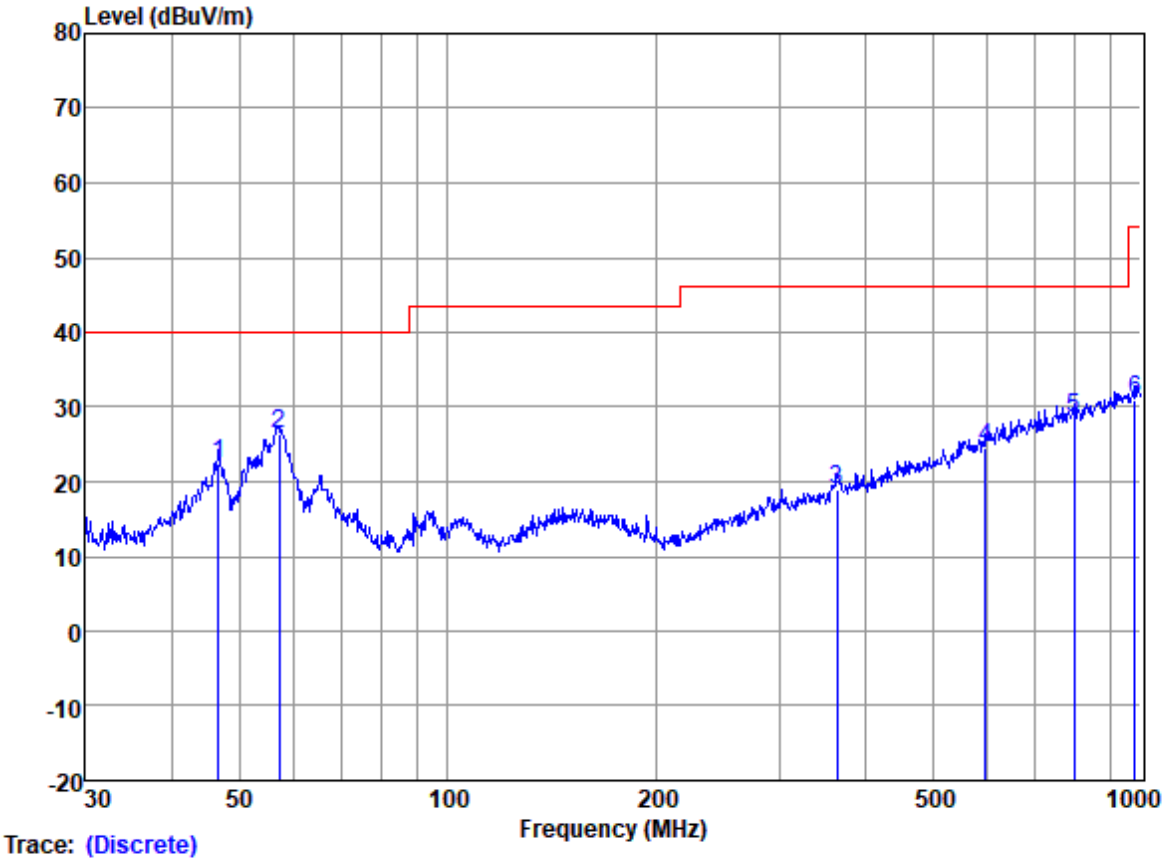
Test Mode: 04



Trace: (Discrete)

Site : SGS
Job :
Model :
Power :
Test Mode :

	Freq	Read Level	Anterna Factor	Cable Loss	Preamp Factor	Measured Level	Limit Line	Over Limit	Pol/ Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dBuV		
1	46.67	34.58	13.93	1.13	27.17	22.47	40.00	-17.53	VERTICAL	QP
2	56.99	38.81	13.65	1.21	27.16	26.51	40.00	-13.49	VERTICAL	QP
3	364.26	27.49	14.98	3.73	27.15	19.05	46.00	-26.95	VERTICAL	QP
4	595.13	27.99	19.70	5.10	28.20	24.59	46.00	-21.41	VERTICAL	QP
5	798.98	27.91	22.60	6.17	28.03	28.65	46.00	-17.35	VERTICAL	QP
6	979.18	27.13	24.10	7.31	27.69	30.85	54.00	-23.15	VERTICAL	QP

7.11 Radiated Spurious Emissions (Above 1GHz)

Test Requirement 47 CFR Part 15, Subpart C 15.205 & 15.209
Test Method: ANSI C63.10 (2013) Section 6.4,6.5,6.6
Limit:

Frequency(MHz)	Field strength(microvolts/meter)	Measurement distance(meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3
Remark: The emission limits shown in the above table are based on measurements employing a CISPR quasi-peak detector except for the frequency bands 9-90kHz, 110-490kHz and above 1000 MHz. Radiated emission limits in these three bands are based on measurements employing an average detector, 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.		

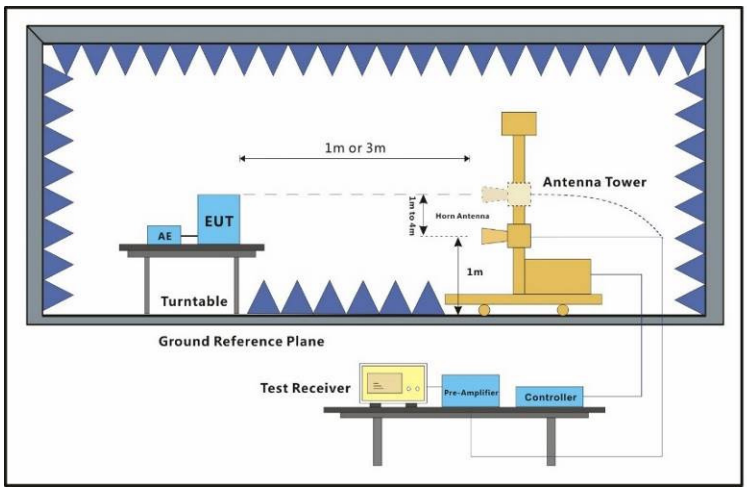
7.11.1 E.U.T. Operation

Operating Environment:
Temperature: 23.7 °C Humidity: 49.1 % RH Atmospheric Pressure: 1008 mbar

7.11.2 Test Mode Description

Pre-scan / Final test	Mode Code	Description
Pre-scan	00	TX_non-Hop mode(Left earbud)_Keep the EUT in continuously transmitting mode with GFSK modulation, pi/4DQPSK modulation, 8DPSK modulation. All modes have been tested and only the data of worst case is recorded in the report.
Final test	01	Charge + TX_non-Hop mode(Left earbud)__Keep the EUT in charging and continuously transmitting mode with GFSK modulation, pi/4DQPSK modulation, 8DPSK modulation. All modes have been tested and only the data of worst case is recorded in the report.
Pre-scan	03	TX_non-Hop mode(Right earbud)_Keep the EUT in continuously transmitting mode with GFSK modulation, pi/4DQPSK modulation, 8DPSK modulation. All modes have been tested and only the data of worst case is recorded in the report.
Final test	04	Charge + TX_non-Hop mode(Right earbud)__Keep the EUT in charging and continuously transmitting mode with GFSK modulation, pi/4DQPSK modulation, 8DPSK modulation. All modes have been tested and only the data of worst case is recorded in the report.

7.11.3 Test Setup Diagram



7.11.4 Measurement Procedure and Data

a. For above 1GHz, the EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter fully-anechoic chamber. The table was rotated 360 degrees to determine the position of the highest radiation.

b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.

c. The antenna height is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.

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 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, the middle channel, the Highest channel.

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.

Remark:

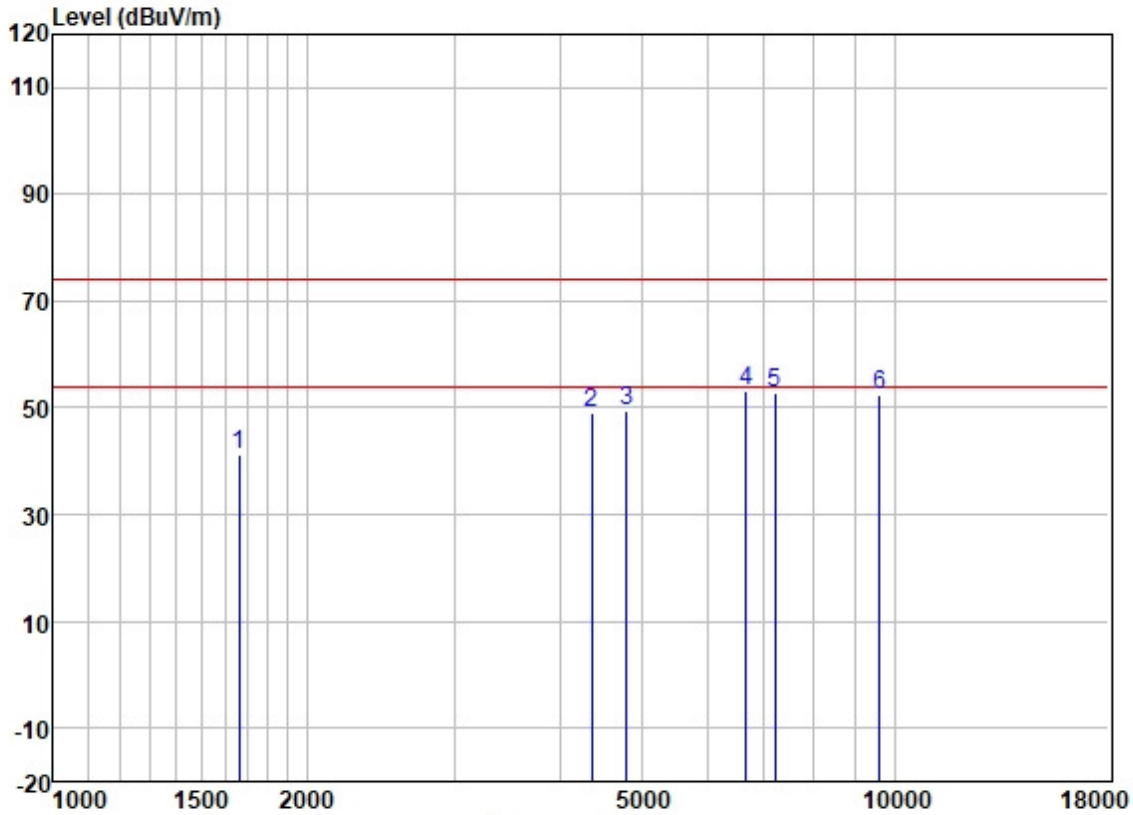
1) The field strength is calculated by adding the Antenna Factor, Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

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

2) Scan from 1GHz to 25GHz, the disturbance above 18GHz was very low. The points marked on above plots are the highest emissions could be found when testing, so only above points had been displayed. The amplitude of spurious emissions from the radiator which are attenuated more than 20dB below the limit need not be reported.

3) 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. For the emissions whose peak level is lower than the average limit, only the peak measurement is shown in the report.

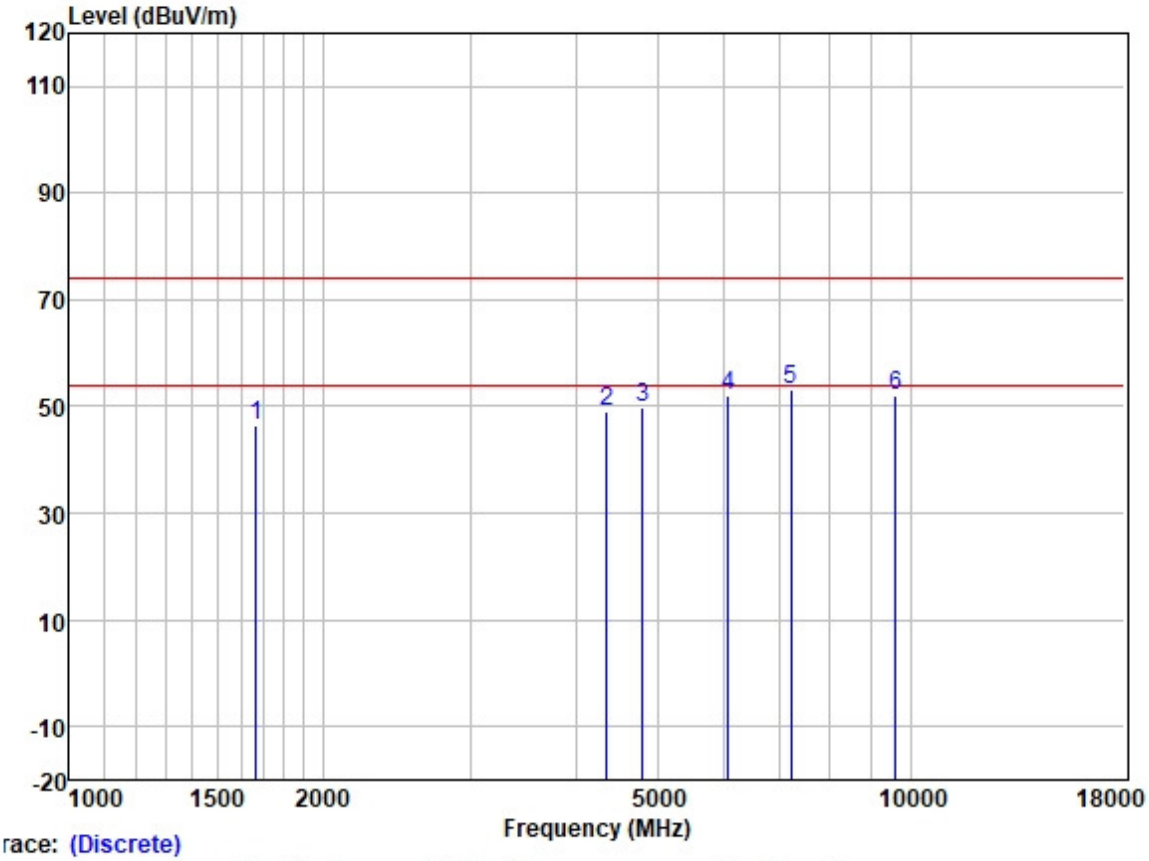
Test Mode: 01; Polarity: Horizontal; Modulation:GFSK; ; Channel:Low



race: (Discrete)

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1663.137	50.62	25.65	2.80	37.91	41.16	74.00	-32.84	HORIZONTAL	Peak
2	4367.058	50.43	30.62	4.68	36.81	48.92	74.00	-25.08	HORIZONTAL	Peak
3	4804.000	49.47	31.42	5.40	36.83	49.46	74.00	-24.54	HORIZONTAL	Peak
4	6659.763	50.09	34.29	5.83	37.06	53.15	74.00	-20.85	HORIZONTAL	Peak
5	7206.000	48.58	35.54	5.98	37.38	52.72	74.00	-21.28	HORIZONTAL	Peak
6	9608.000	44.30	38.37	7.07	37.42	52.32	74.00	-21.68	HORIZONTAL	Peak

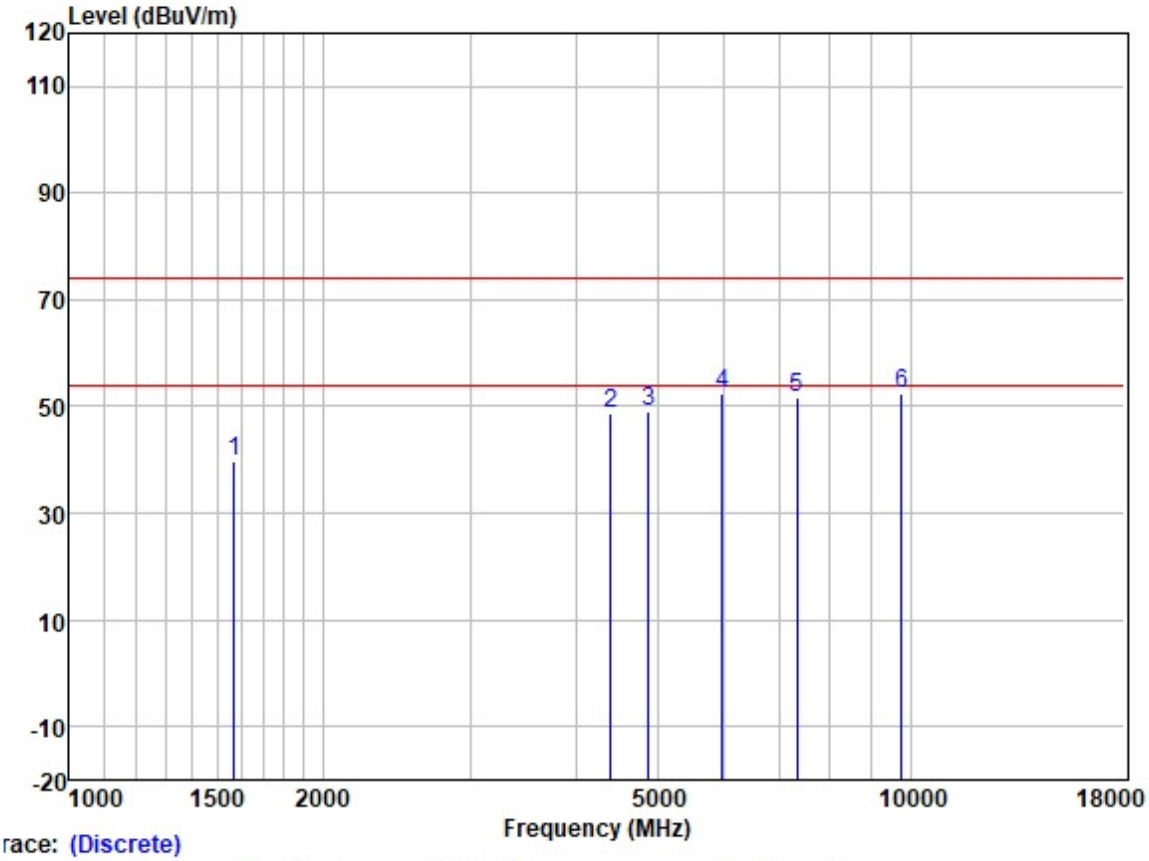
Test Mode: 01; Polarity: Vertical; Modulation:GFSK; ; Channel:Low



race: (Discrete)

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1667.951	55.83	25.66	2.80	37.91	46.38	74.00	-27.62	VERTICAL	Peak
2	4354.454	50.76	30.59	4.68	36.81	49.22	74.00	-24.78	VERTICAL	Peak
3	4804.000	49.86	31.42	5.40	36.83	49.85	74.00	-24.15	VERTICAL	Peak
4	6071.417	50.35	32.57	6.16	36.91	52.17	74.00	-21.83	VERTICAL	Peak
5	7206.000	48.85	35.54	5.98	37.38	52.99	74.00	-21.01	VERTICAL	Peak
6	9608.000	44.02	38.37	7.07	37.42	52.04	74.00	-21.96	VERTICAL	Peak

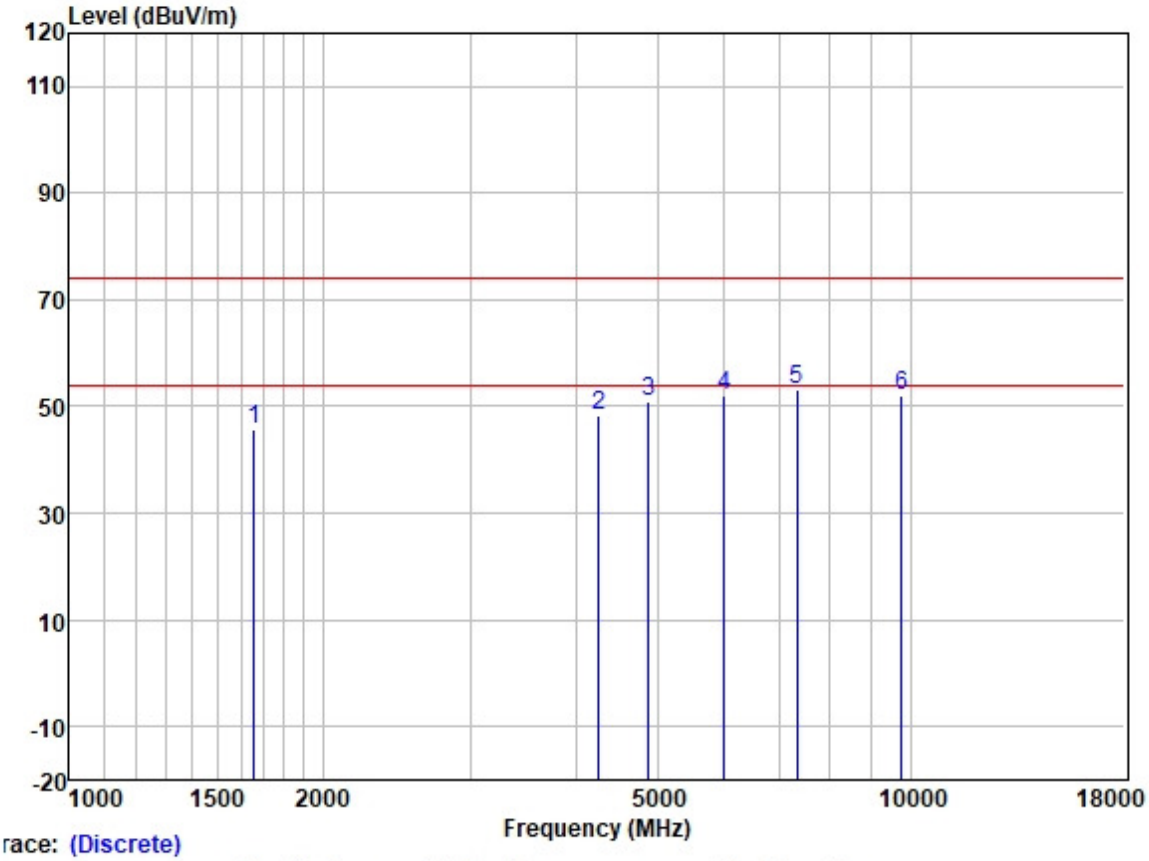
Test Mode: 01; Polarity: Horizontal; Modulation:GFSK; ; Channel:middle



race: (Discrete)

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1569.721	49.55	25.55	2.80	38.00	39.90	74.00	-34.10	HORIZONTAL	Peak
2	4405.090	50.20	30.68	4.70	36.81	48.77	74.00	-25.23	HORIZONTAL	Peak
3	4882.000	48.69	31.56	5.52	36.84	48.93	74.00	-25.07	HORIZONTAL	Peak
4	5967.033	50.95	32.37	6.10	36.90	52.52	74.00	-21.48	HORIZONTAL	Peak
5	7323.000	47.08	36.00	6.13	37.43	51.78	74.00	-22.22	HORIZONTAL	Peak
6	9764.000	44.13	38.50	7.02	37.41	52.24	74.00	-21.76	HORIZONTAL	Peak

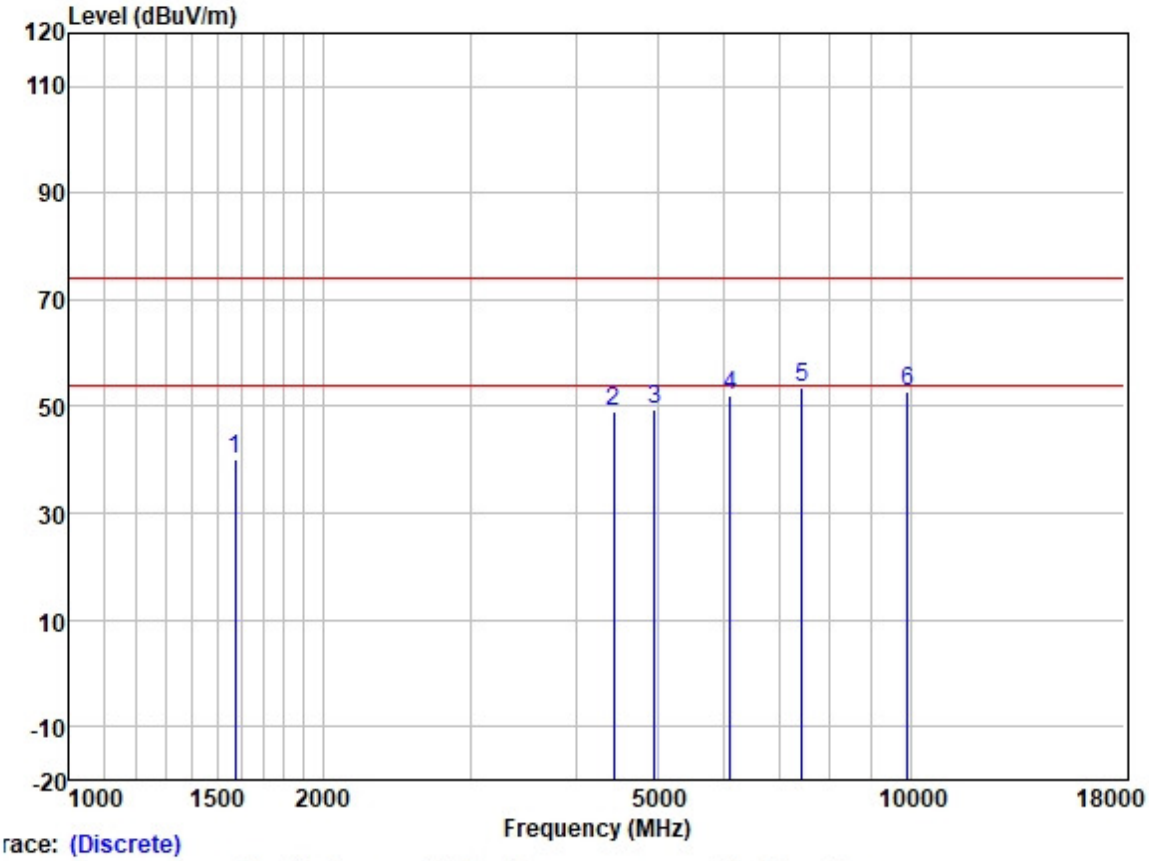
Test Mode: 01; Polarity: Vertical; Modulation:GFSK; ; Channel:middle



race: (Discrete)

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1658.337	55.18	25.65	2.80	37.93	45.70	74.00	-28.30	VERTICAL	Peak
2	4254.921	50.23	30.34	4.62	36.81	48.38	74.00	-25.62	VERTICAL	Peak
3	4882.000	50.68	31.56	5.52	36.84	50.92	74.00	-23.08	VERTICAL	Peak
4	6001.626	50.53	32.40	6.20	36.90	52.23	74.00	-21.77	VERTICAL	Peak
5	7323.000	48.34	36.00	6.13	37.43	53.04	74.00	-20.96	VERTICAL	Peak
6	9764.000	43.93	38.50	7.02	37.41	52.04	74.00	-21.96	VERTICAL	Peak

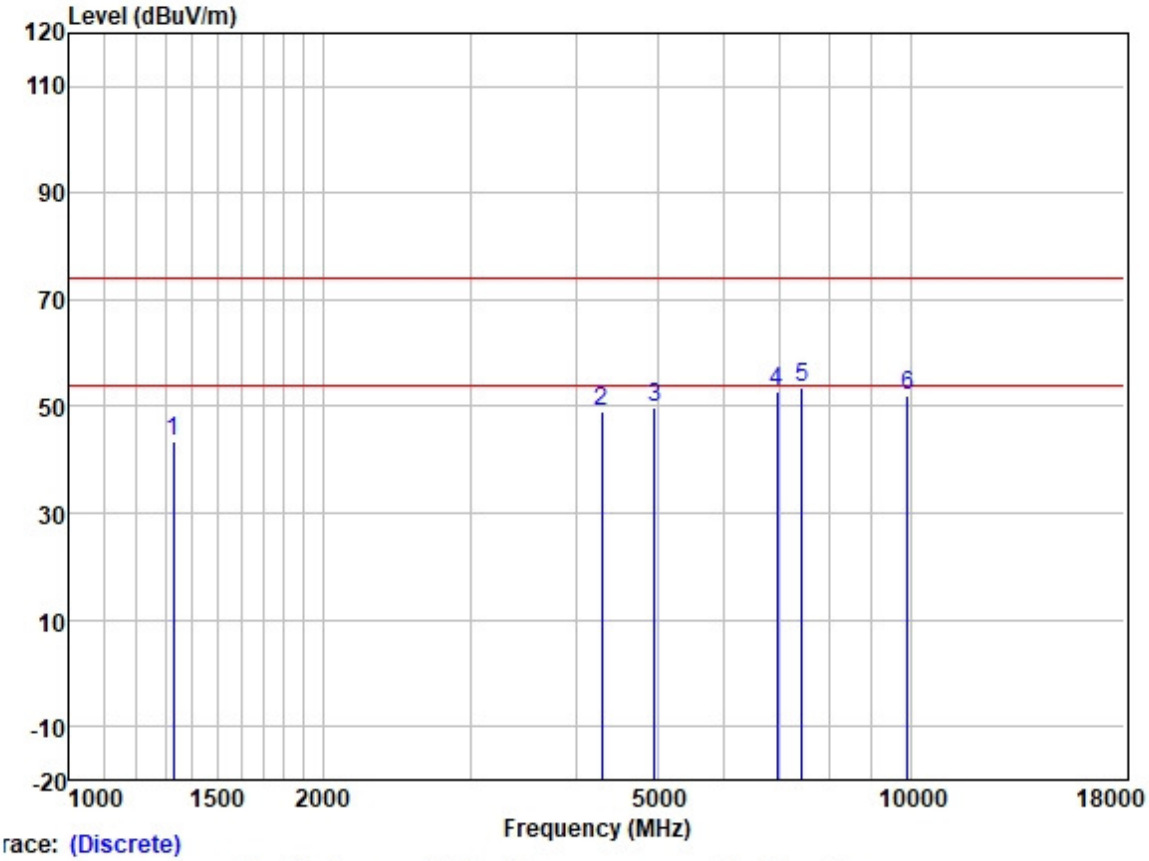
Test Mode: 01; Polarity: Horizontal; Modulation:GFSK; ; Channel:High



race: (Discrete)

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1574.265	49.73	25.56	2.80	38.00	40.09	74.00	-33.91	HORIZONTAL	Peak
2	4443.453	50.14	30.73	4.83	36.81	48.89	74.00	-25.11	HORIZONTAL	Peak
3	4960.000	49.10	31.65	5.65	36.84	49.56	74.00	-24.44	HORIZONTAL	Peak
4	6106.616	50.02	32.66	6.14	36.92	51.90	74.00	-22.10	HORIZONTAL	Peak
5	7440.000	48.59	36.27	6.22	37.47	53.61	74.00	-20.39	HORIZONTAL	Peak
6	9920.000	44.68	38.65	6.96	37.40	52.89	74.00	-21.11	HORIZONTAL	Peak

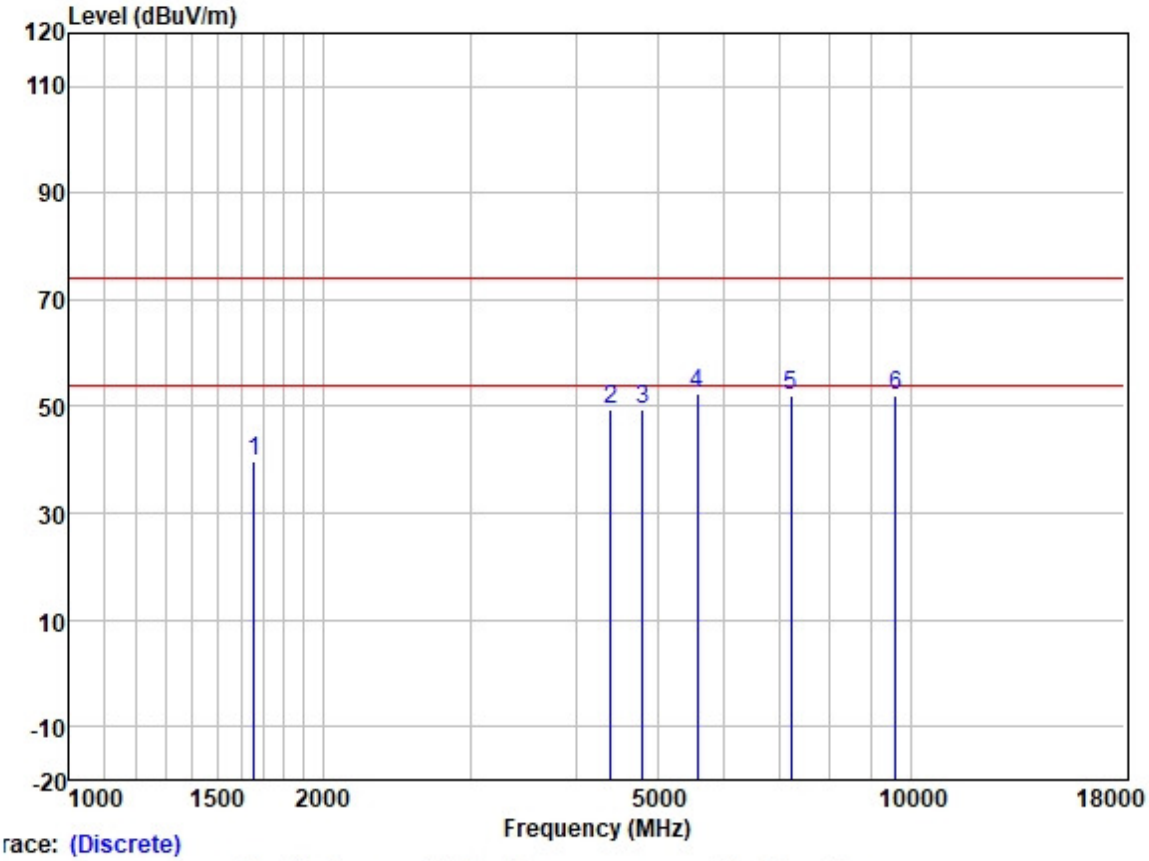
Test Mode: 01; Polarity: Vertical; Modulation:GFSK; ; Channel:High



race: (Discrete)

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1331.288	54.03	25.28	2.60	38.29	43.62	74.00	-30.38	VERTICAL	Peak
2	4291.977	50.87	30.45	4.64	36.81	49.15	74.00	-24.85	VERTICAL	Peak
3	4960.000	49.29	31.65	5.65	36.84	49.75	74.00	-24.25	VERTICAL	Peak
4	6934.778	49.09	34.92	5.81	37.19	52.63	74.00	-21.37	VERTICAL	Peak
5	7440.000	48.50	36.27	6.22	37.47	53.52	74.00	-20.48	VERTICAL	Peak
6	9920.000	43.90	38.65	6.96	37.40	52.11	74.00	-21.89	VERTICAL	Peak

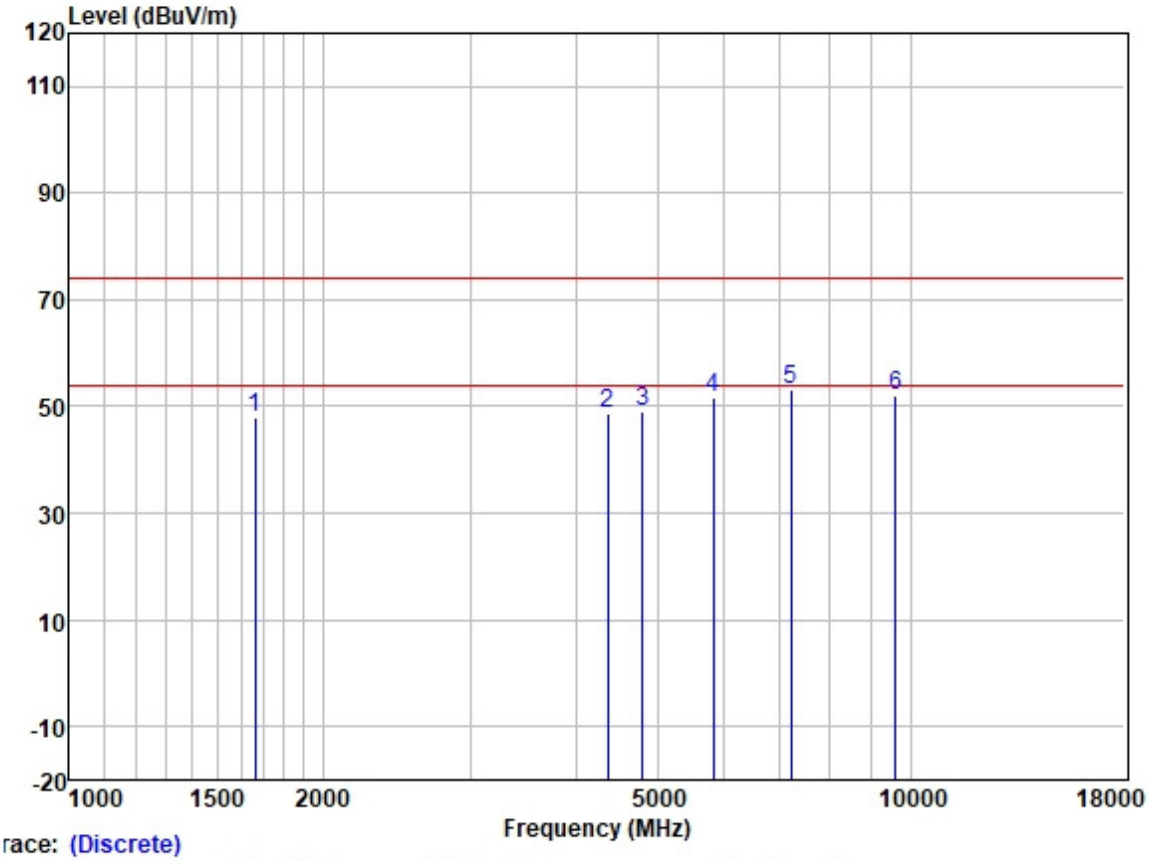
Test Mode: 04; Polarity: Horizontal; Modulation:GFSK; ; Channel:Low



race: (Discrete)

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1658.337	49.24	25.65	2.80	37.93	39.76	74.00	-34.24	HORIZONTAL	Peak
2	4405.090	50.96	30.68	4.70	36.81	49.53	74.00	-24.47	HORIZONTAL	Peak
3	4804.000	49.59	31.42	5.40	36.83	49.58	74.00	-24.42	HORIZONTAL	Peak
4	5583.251	51.13	31.87	6.32	36.89	52.43	74.00	-21.57	HORIZONTAL	Peak
5	7206.000	48.02	35.54	5.98	37.38	52.16	74.00	-21.84	HORIZONTAL	Peak
6	9608.000	44.14	38.37	7.07	37.42	52.16	74.00	-21.84	HORIZONTAL	Peak

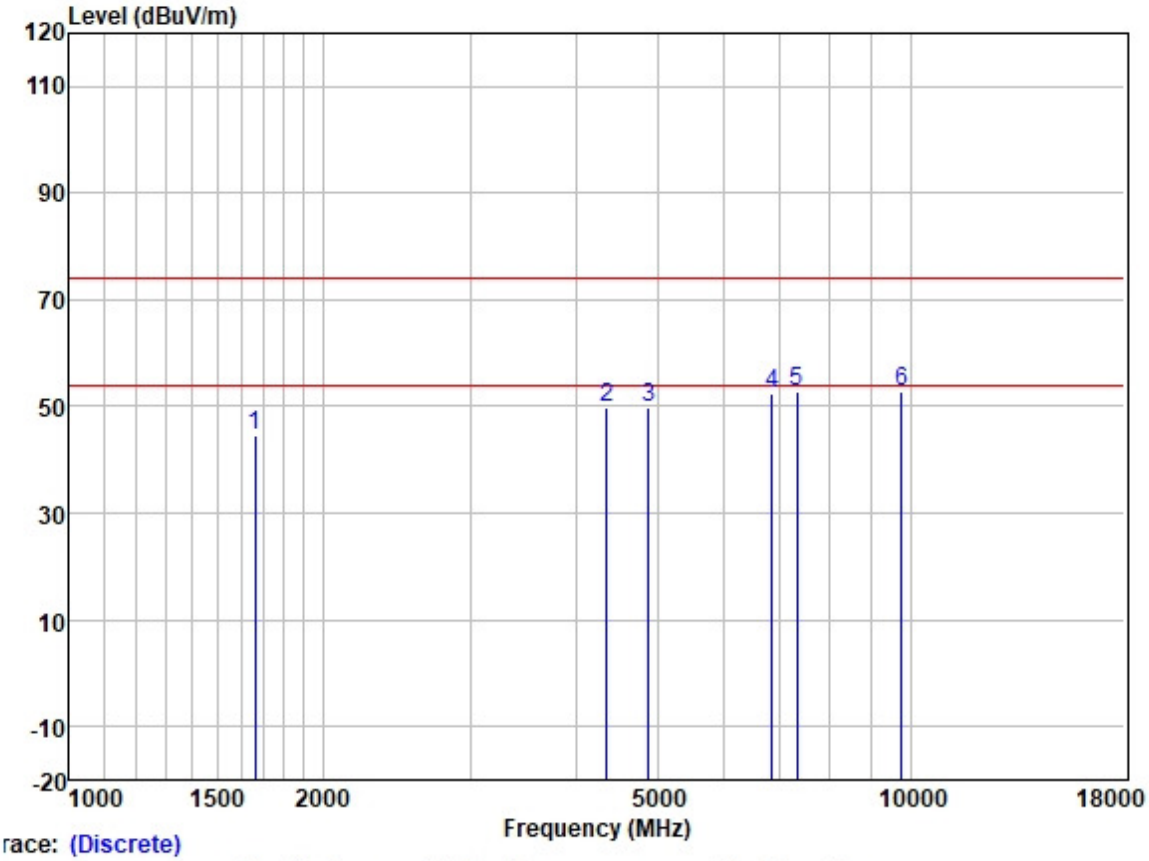
Test Mode: 04; Polarity: Vertical; Modulation:GFSK; ; Channel:Low



race: (Discrete)

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1663.137	57.31	25.65	2.80	37.91	47.85	74.00	-26.15	VERTICAL	Peak
2	4367.058	50.22	30.62	4.68	36.81	48.71	74.00	-25.29	VERTICAL	Peak
3	4804.000	49.02	31.42	5.40	36.83	49.01	74.00	-24.99	VERTICAL	Peak
4	5830.640	50.35	32.23	6.04	36.90	51.72	74.00	-22.28	VERTICAL	Peak
5	7206.000	49.02	35.54	5.98	37.38	53.16	74.00	-20.84	VERTICAL	Peak
6	9608.000	44.01	38.37	7.07	37.42	52.03	74.00	-21.97	VERTICAL	Peak

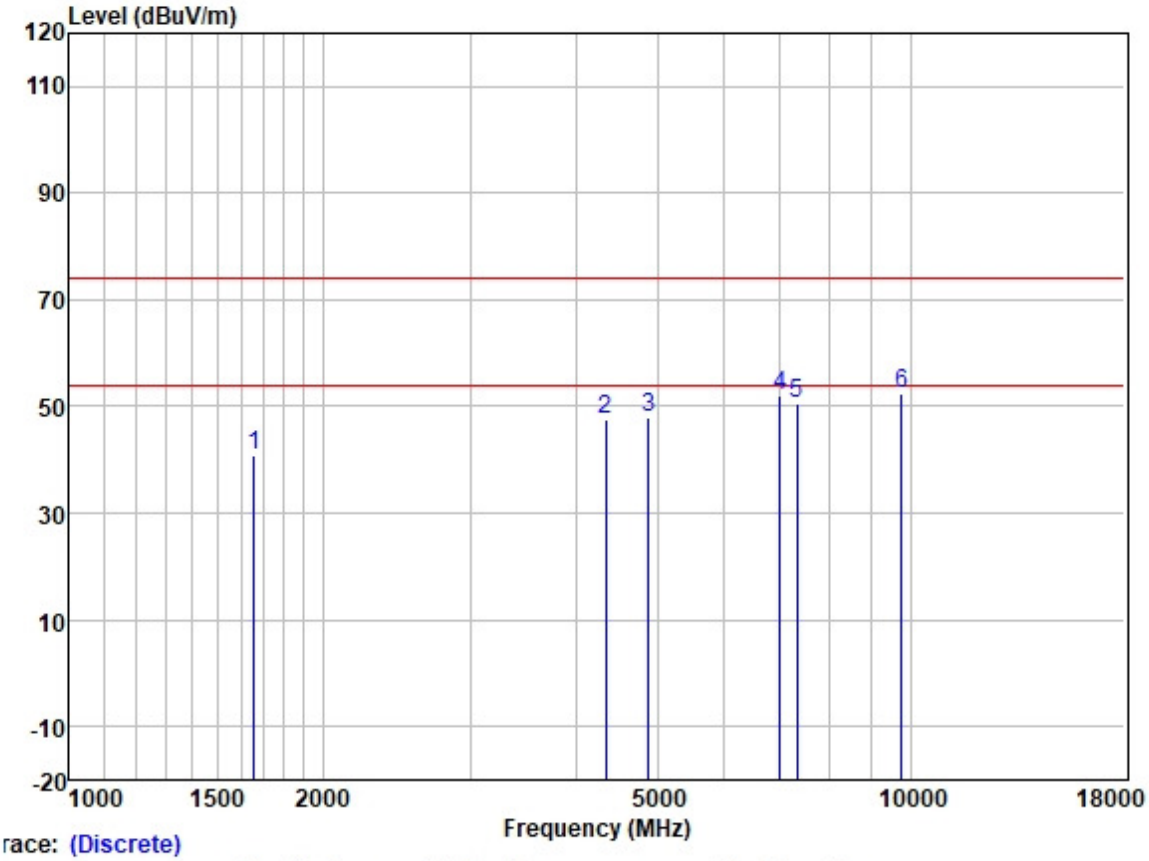
Test Mode: 04; Polarity: Horizontal; Modulation:GFSK; ; Channel:middle



race: (Discrete)

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1663.137	53.98	25.65	2.80	37.91	44.52	74.00	-29.48	HORIZONTAL	Peak
2	4354.454	51.20	30.59	4.68	36.81	49.66	74.00	-24.34	HORIZONTAL	Peak
3	4882.000	49.46	31.56	5.52	36.84	49.70	74.00	-24.30	HORIZONTAL	Peak
4	6855.063	49.08	34.78	5.82	37.15	52.53	74.00	-21.47	HORIZONTAL	Peak
5	7323.000	48.02	36.00	6.13	37.43	52.72	74.00	-21.28	HORIZONTAL	Peak
6	9764.000	44.66	38.50	7.02	37.41	52.77	74.00	-21.23	HORIZONTAL	Peak

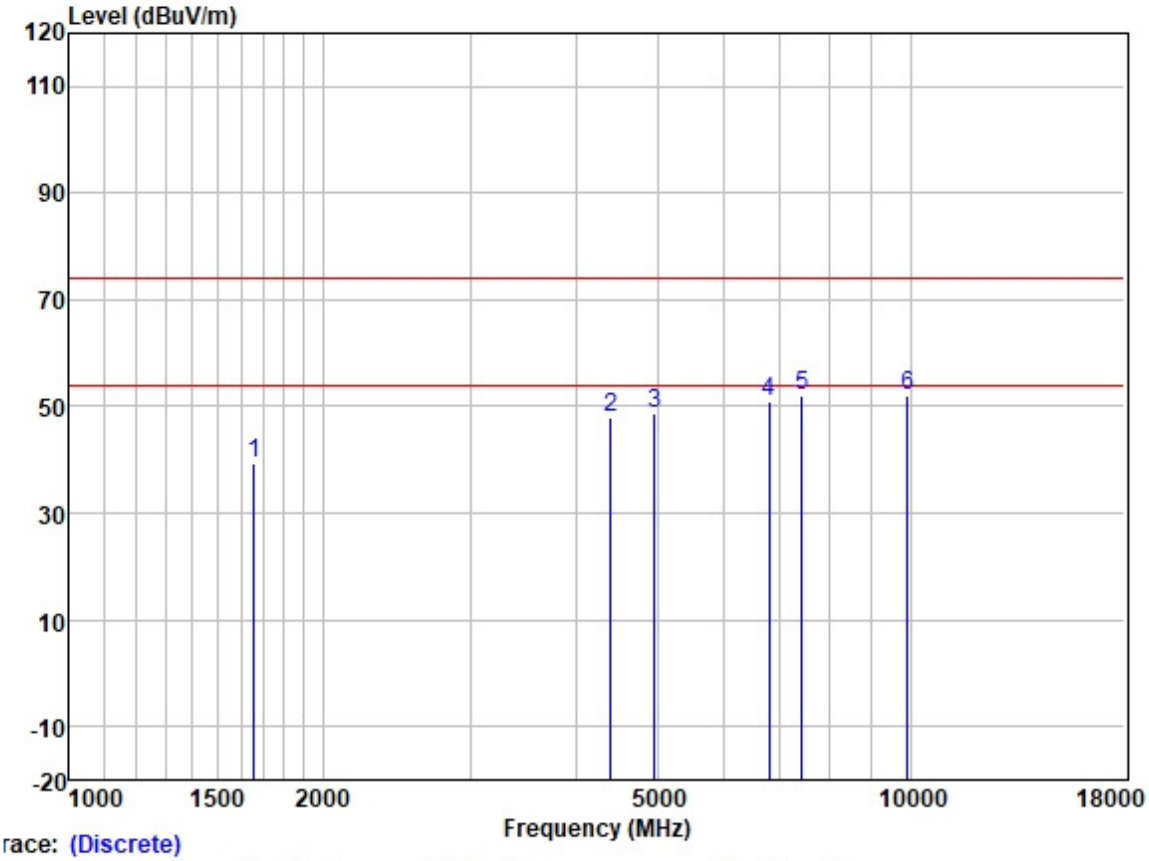
Test Mode: 04; Polarity: Vertical; Modulation:GFSK; ; Channel:middle



race: (Discrete)

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1658.337	50.27	25.65	2.80	37.93	40.79	74.00	-33.21	VERTICAL	Peak
2	4341.886	49.27	30.57	4.67	36.81	47.70	74.00	-26.30	VERTICAL	Peak
3	4882.000	47.89	31.56	5.52	36.84	48.13	74.00	-25.87	VERTICAL	Peak
4	6995.172	48.67	35.00	5.81	37.25	52.23	74.00	-21.77	VERTICAL	Peak
5	7323.000	45.96	36.00	6.13	37.43	50.66	74.00	-23.34	VERTICAL	Peak
6	9764.000	44.37	38.50	7.02	37.41	52.48	74.00	-21.52	VERTICAL	Peak

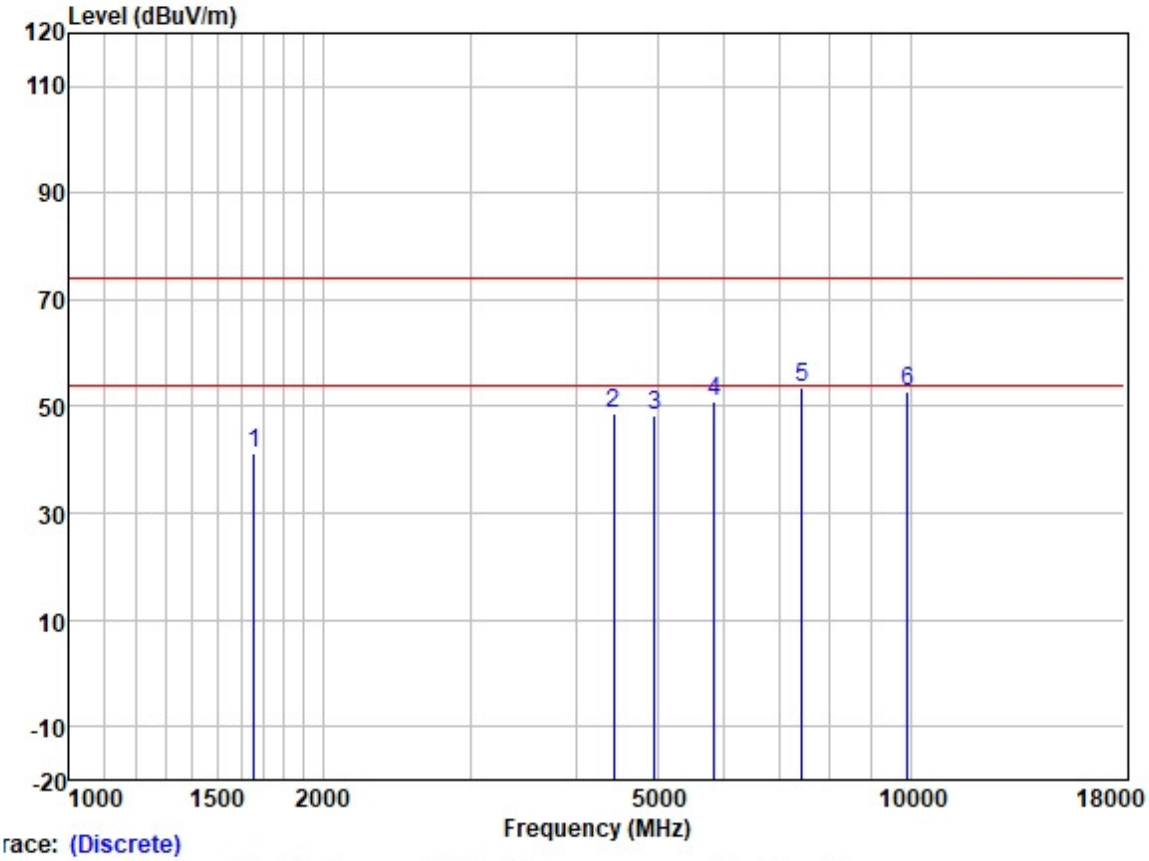
Test Mode: 04; Polarity: Horizontal; Modulation:GFSK; ; Channel:High



race: (Discrete)

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1658.337	48.79	25.65	2.80	37.93	39.31	74.00	-34.69	HORIZONTAL	Peak
2	4405.090	49.51	30.68	4.70	36.81	48.08	74.00	-25.92	HORIZONTAL	Peak
3	4960.000	48.06	31.65	5.65	36.84	48.52	74.00	-25.48	HORIZONTAL	Peak
4	6795.879	47.50	34.66	5.82	37.12	50.86	74.00	-23.14	HORIZONTAL	Peak
5	7440.000	47.03	36.27	6.22	37.47	52.05	74.00	-21.95	HORIZONTAL	Peak
6	9920.000	43.95	38.65	6.96	37.40	52.16	74.00	-21.84	HORIZONTAL	Peak

Test Mode: 04; Polarity: Vertical; Modulation:GFSK; ; Channel:High



race: (Discrete)

	Freq	Read Level	Antenna Factor	Cable Loss	Preamp Factor	Level	Limit Line	Over Limit	Pol/Phase	Remark
	MHz	dBuV	dB/m	dB	dB	dBuV/m	dBuV/m	dB		
1	1658.337	50.64	25.65	2.80	37.93	41.16	74.00	-32.84	VERTICAL	Peak
2	4443.453	49.76	30.73	4.83	36.81	48.51	74.00	-25.49	VERTICAL	Peak
3	4960.000	47.90	31.65	5.65	36.84	48.36	74.00	-25.64	VERTICAL	Peak
4	5847.517	49.64	32.25	6.00	36.90	50.99	74.00	-23.01	VERTICAL	Peak
5	7440.000	48.53	36.27	6.22	37.47	53.55	74.00	-20.45	VERTICAL	Peak
6	9920.000	44.57	38.65	6.96	37.40	52.78	74.00	-21.22	VERTICAL	Peak

8 Test Setup Photo

Refer to Appendix - Test Setup Photo for GZCR2109021076AT

SGS-CSTC Standards Technical Services Co., Ltd. Guangzhou Branch Testing Center, EEC Laboratory.
No.198 Kezhu Road, Scientech Park, Guangzhou Economic & Technology Development District, Guangzhou, China 510663 t (86-20) 82155555 f (86-20) 82075058 www.sgsgroup.com.cn
中国·广州·经济技术开发区科学城科珠路198号 邮编: 510663 t (86-20) 82155555 f (86-20) 82075058 sgs.china@sgs.com

9 EUT Constructional Details (EUT Photos)

Refer to Appendix – External and Internal Photos for GZCR2109021076AT

10 Appendix

Left earbud

1. Bandwidth

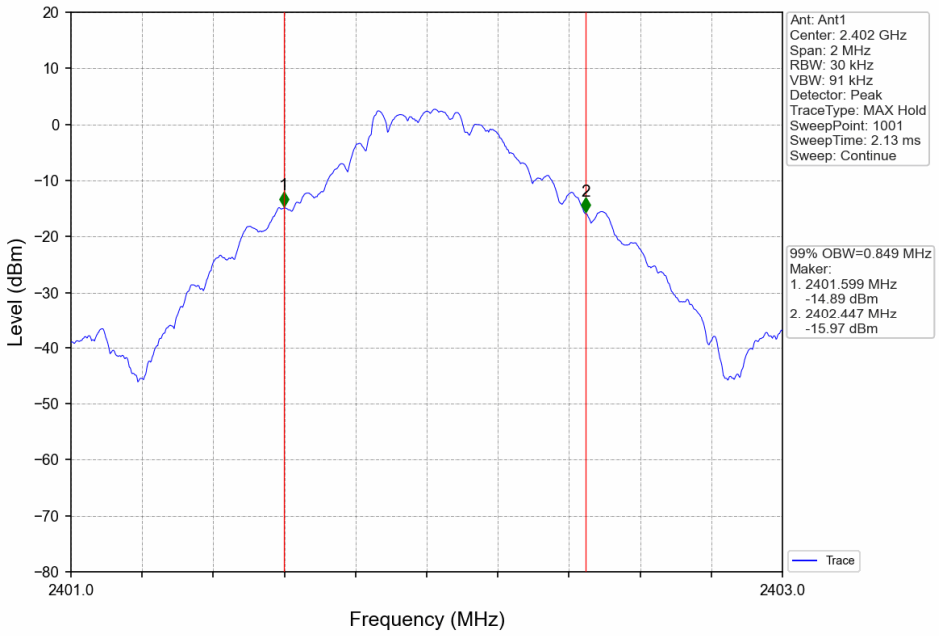
1.1 OBW

1.1.1 Test Result

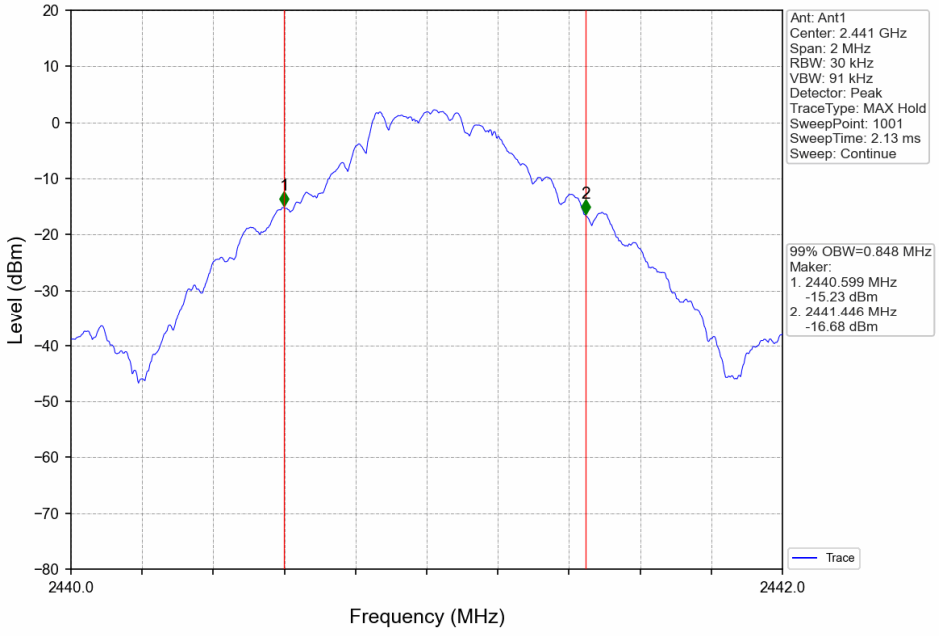
Mode	TX Type	Frequency (MHz)	Packet Type	Ant	99% Occupied Bandwidth (MHz) Result	Verdict
GFSK	SISO	2402	DH5	1	0.849	Pass
		2441	DH5	1	0.848	Pass
		2480	DH5	1	0.852	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	1.176	Pass
		2441	2DH5	1	1.175	Pass
		2480	2DH5	1	1.173	Pass
8DPSK	SISO	2402	3DH5	1	1.190	Pass
		2441	3DH5	1	1.187	Pass
		2480	3DH5	1	1.185	Pass

1.1.2 Test Graph

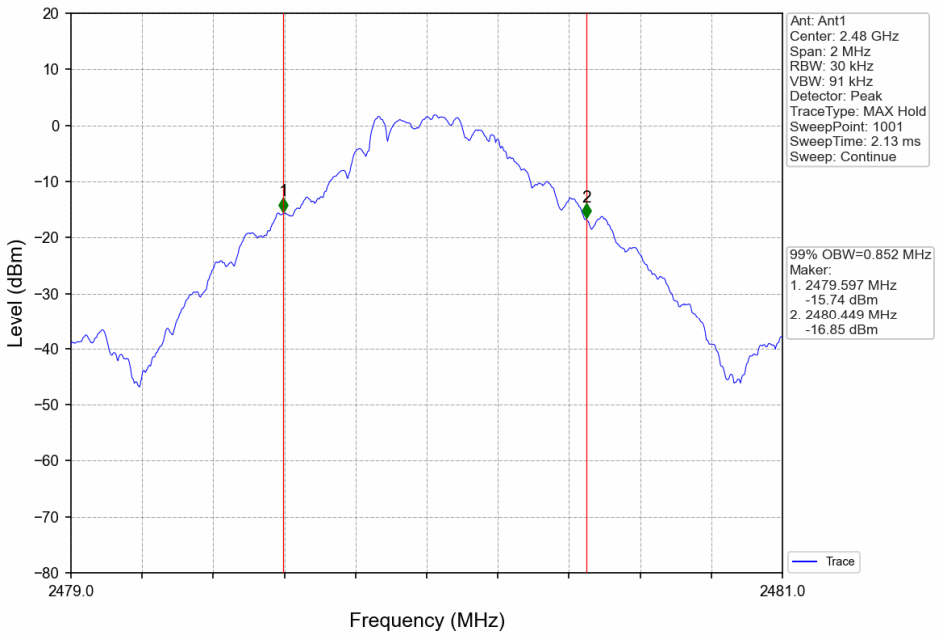
GFSK_DH5_LCH_2402MHz_Ant1_NTNV



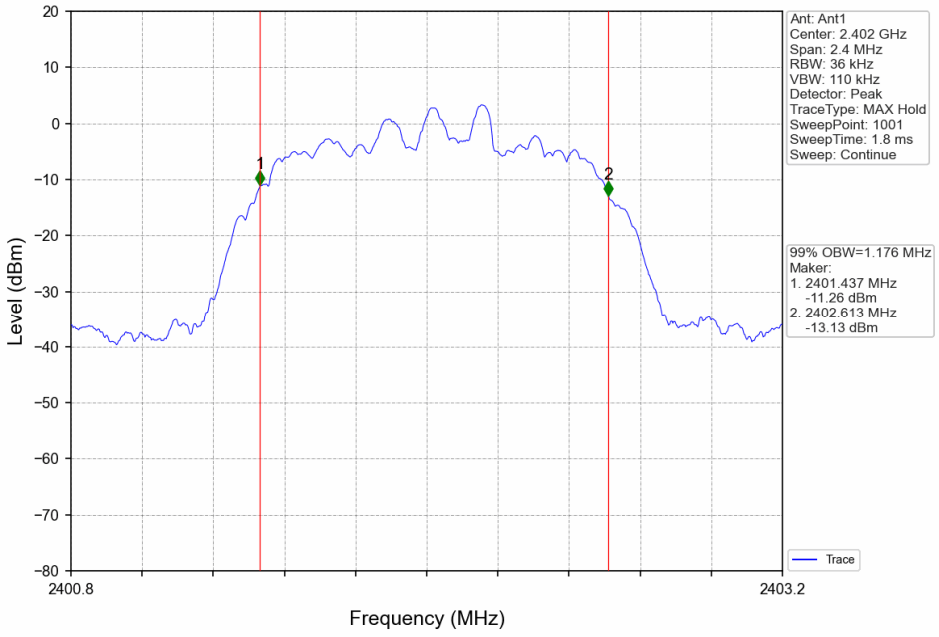
GFSK_DH5_MCH_2441MHz_Ant1_NTNV



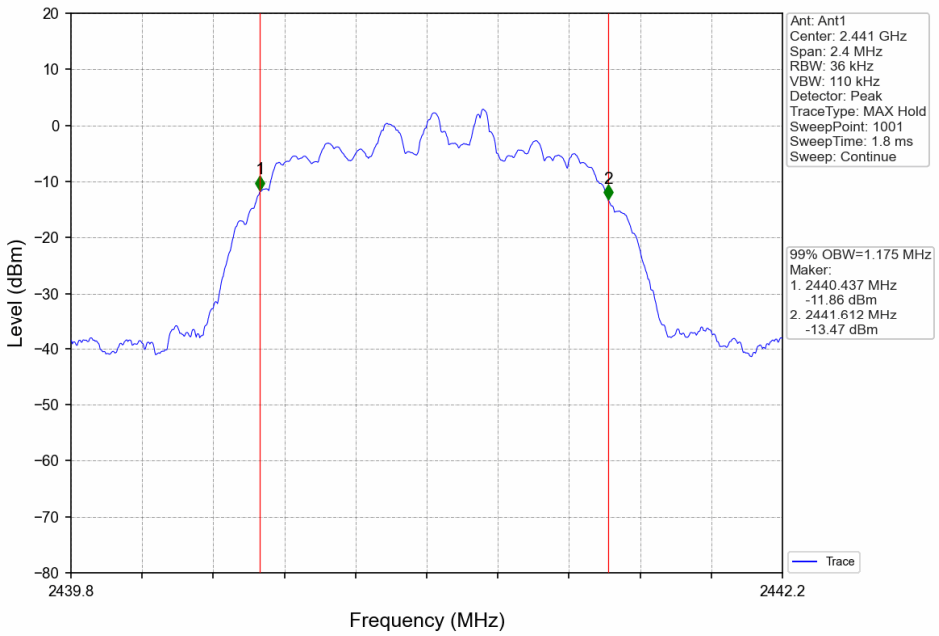
GFSK_DH5_HCH_2480MHz_Ant1_NTNV



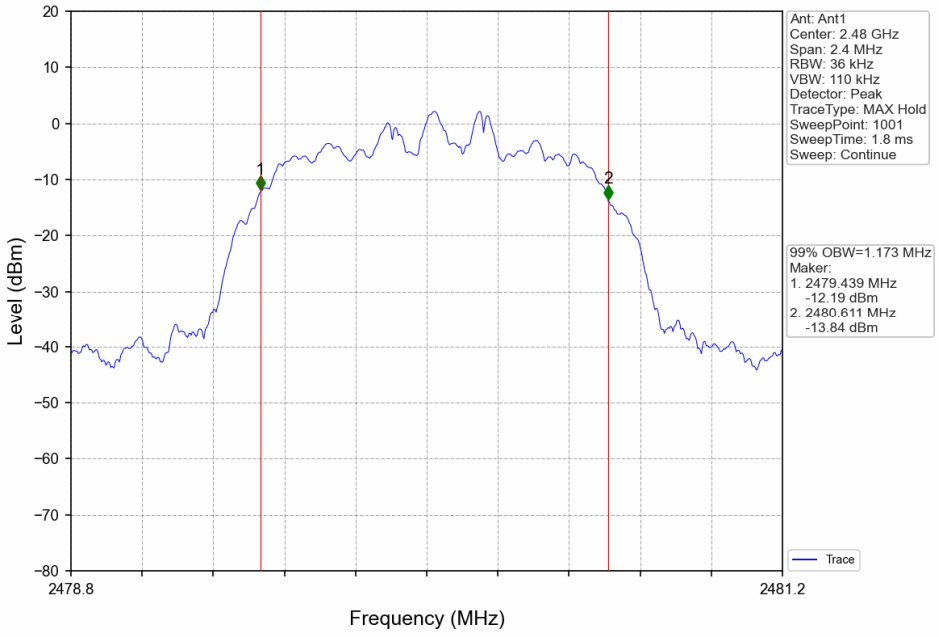
Pi/4DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV



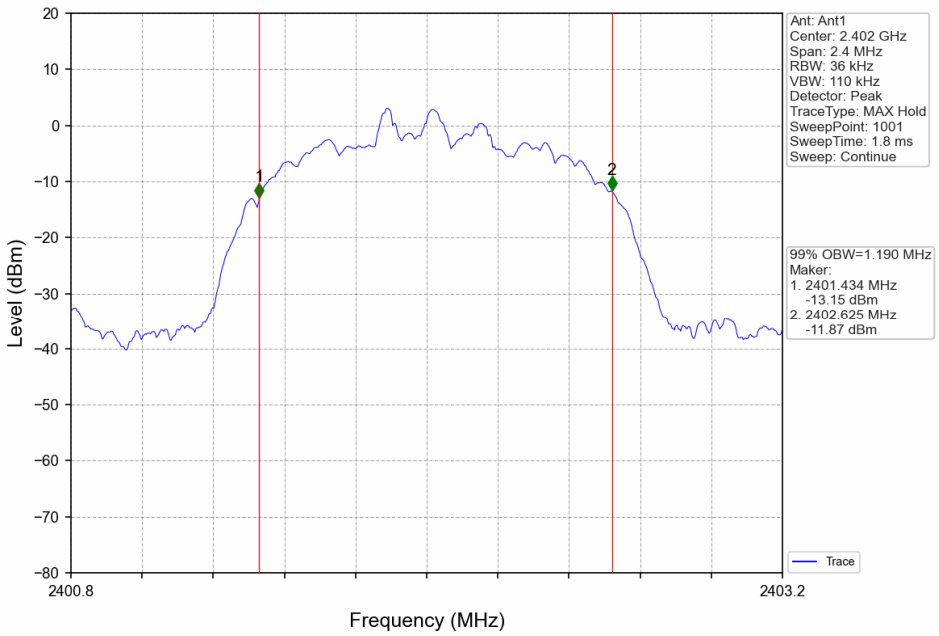
Pi/4DQPSK_2DH5_MCH_2441MHz_Ant1_NTNV



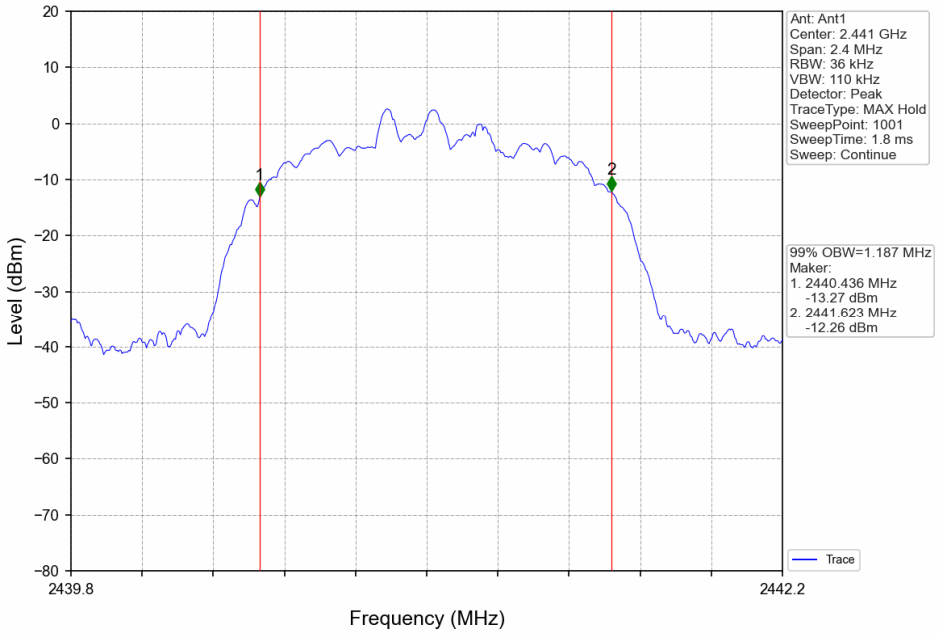
Pi/4DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV



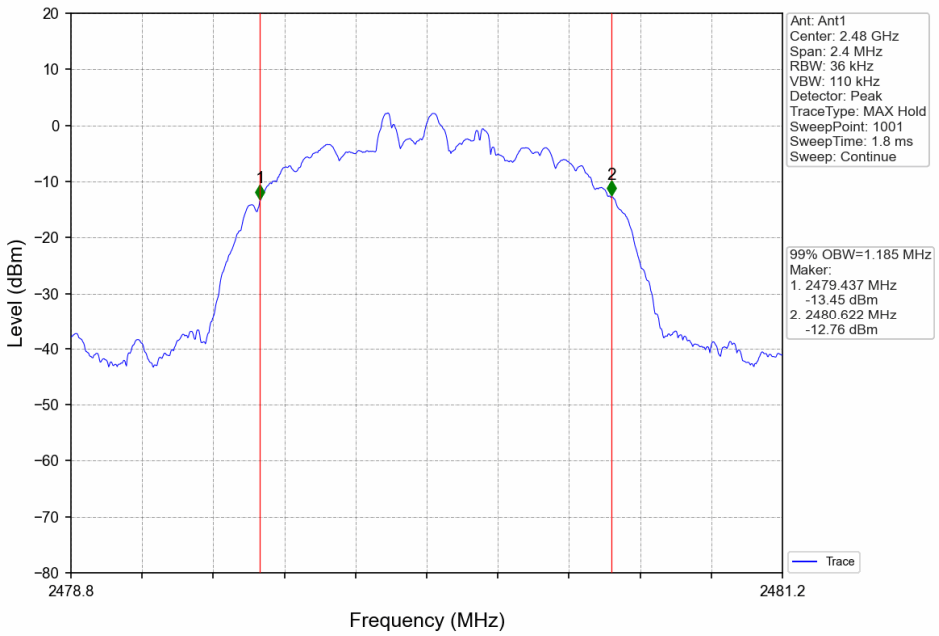
8DPSK_3DH5_LCH_2402MHz_Ant1_NTNV



8DPSK_3DH5_MCH_2441MHz_Ant1_NTNV



8DPSK_3DH5_HCH_2480MHz_Ant1_NTNV



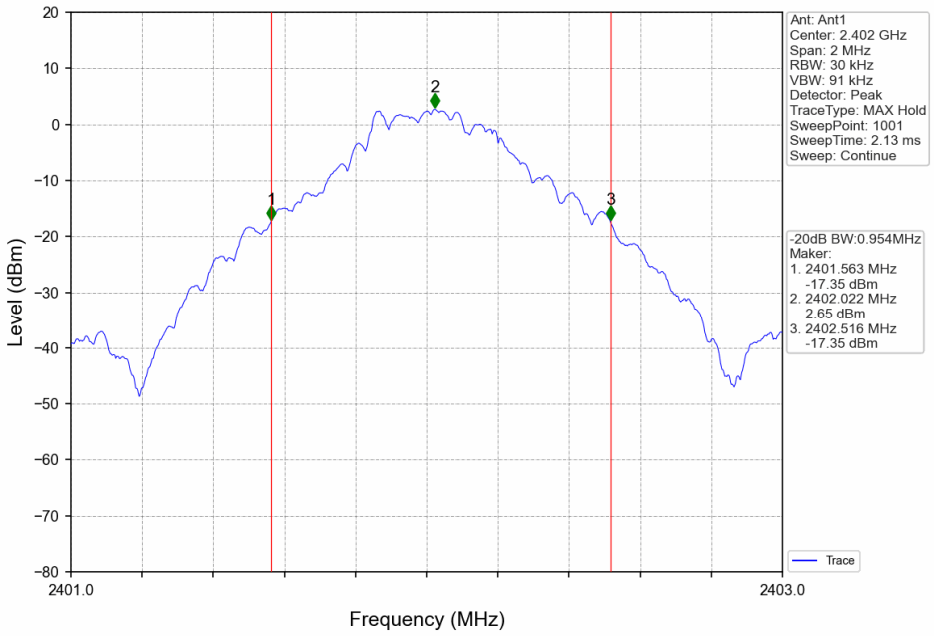
1.2 20dB BW

1.2.1 Test Result

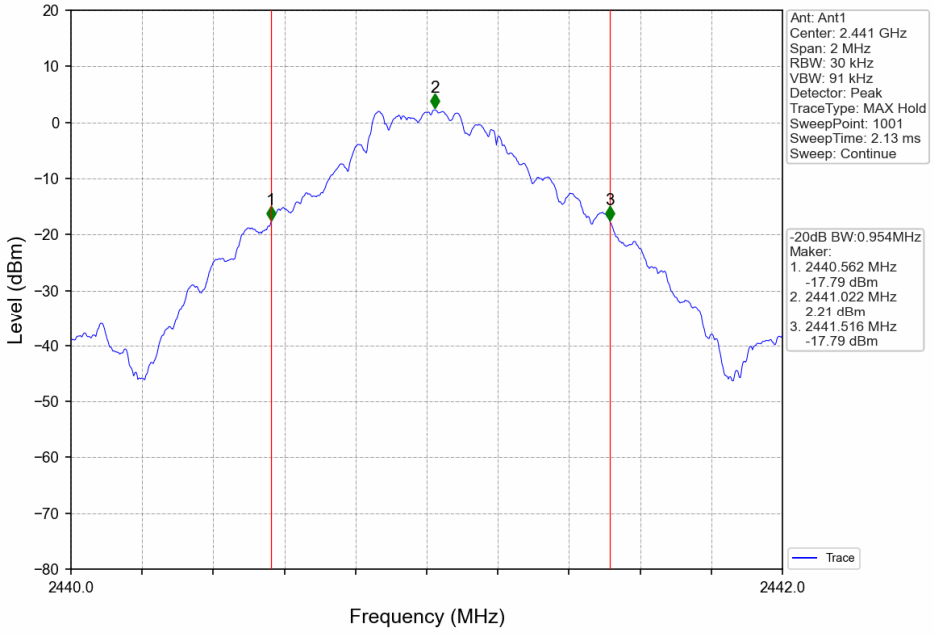
Mode	TX Type	Frequency (MHz)	Packet Type	Ant	20dB Bandwidth (MHz)	Verdict
					Result	
GFSK	SISO	2402	DH5	1	0.954	Pass
		2441	DH5	1	0.954	Pass
		2480	DH5	1	0.954	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	1.315	Pass
		2441	2DH5	1	1.313	Pass
		2480	2DH5	1	1.316	Pass
8DPSK	SISO	2402	3DH5	1	1.311	Pass
		2441	3DH5	1	1.309	Pass
		2480	3DH5	1	1.307	Pass

1.2.2 Test Graph

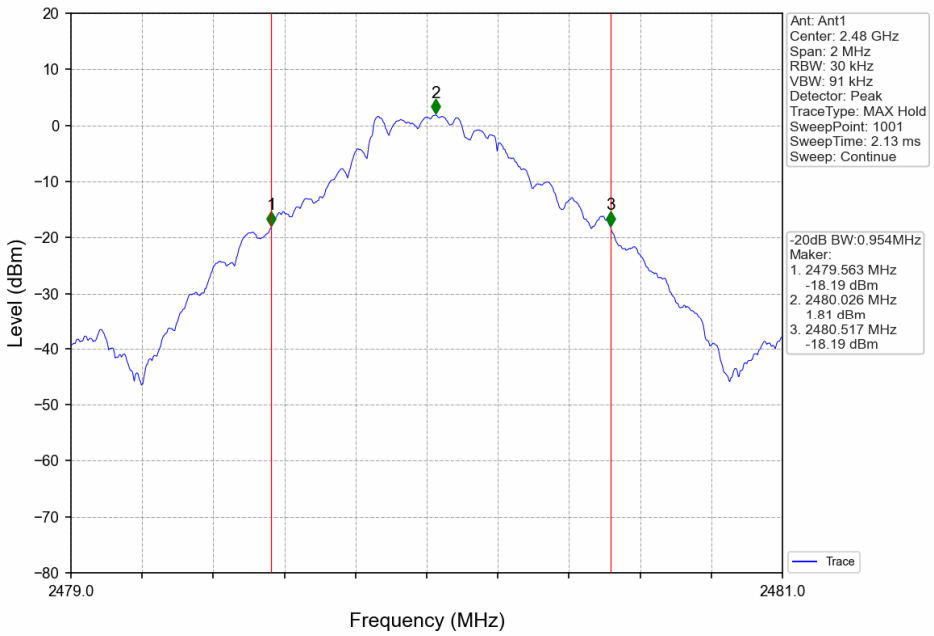
GFSK_DH5_LCH_2402MHz_Ant1_NTNV



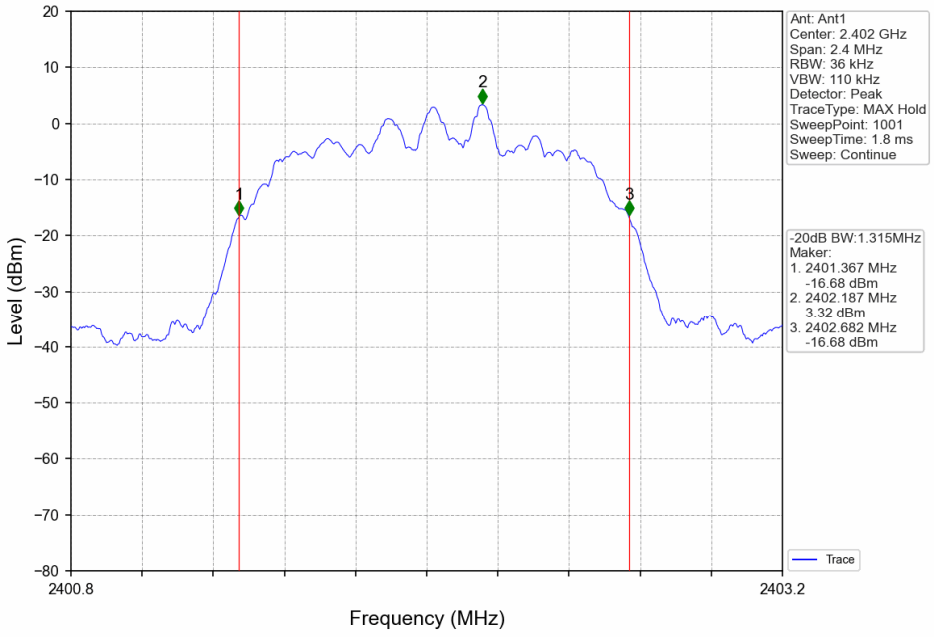
GFSK_DH5_MCH_2441MHz_Ant1_NTNV



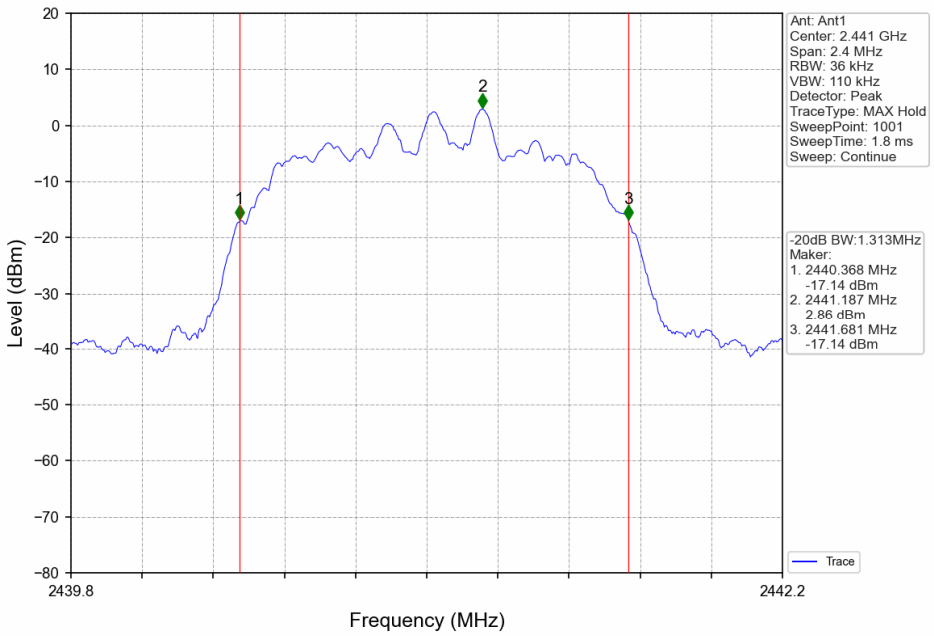
GFSK_DH5_HCH_2480MHz_Ant1_NTNV



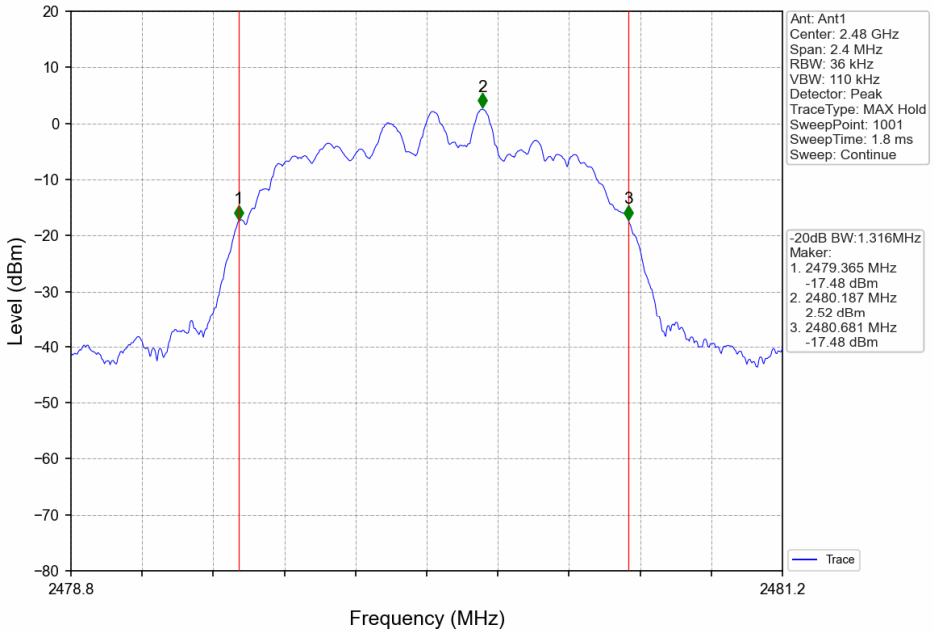
Pi/4DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV



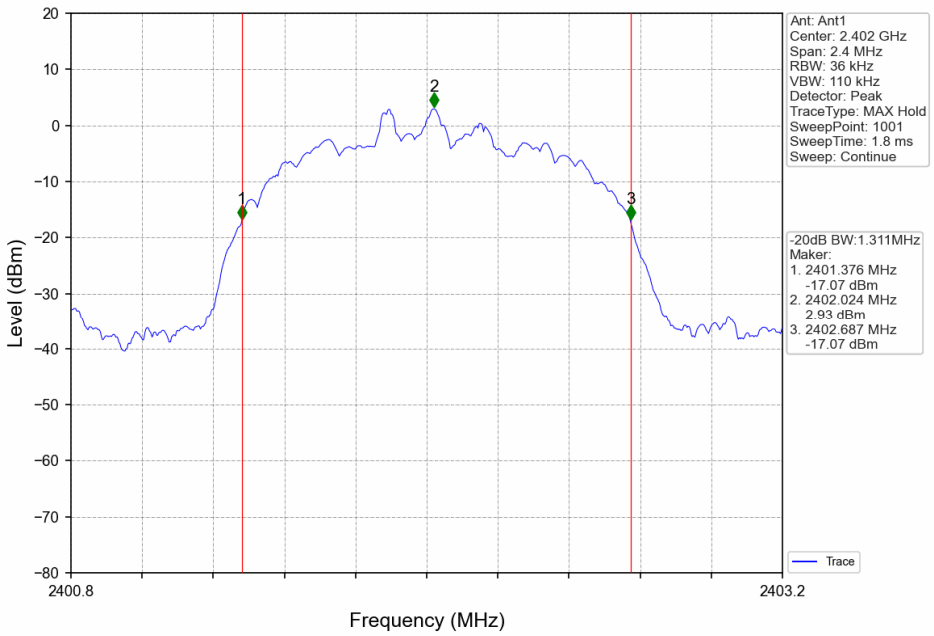
Pi/4DQPSK_2DH5_MCH_2441MHz_Ant1_NTNV



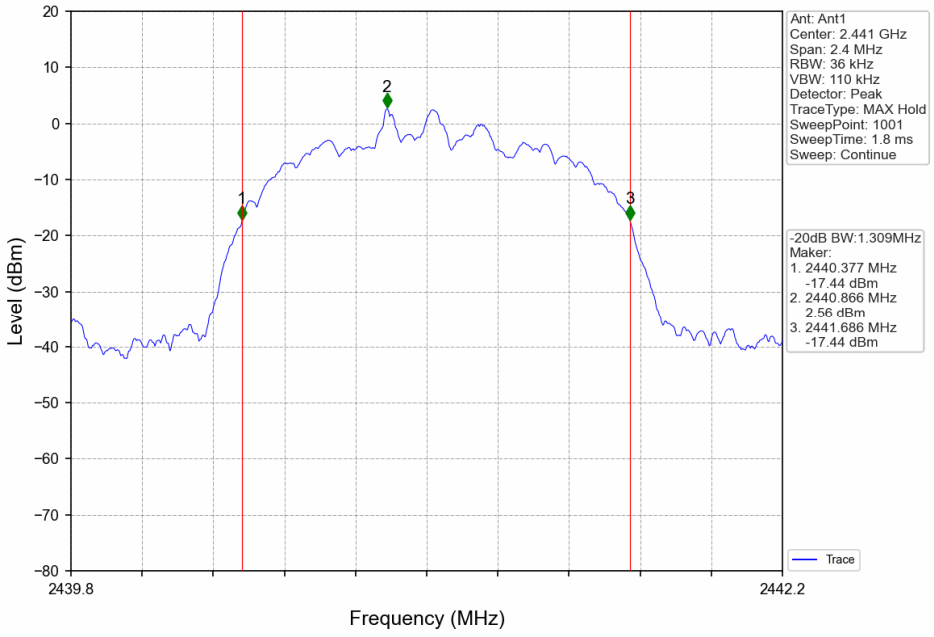
Pi/4DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV



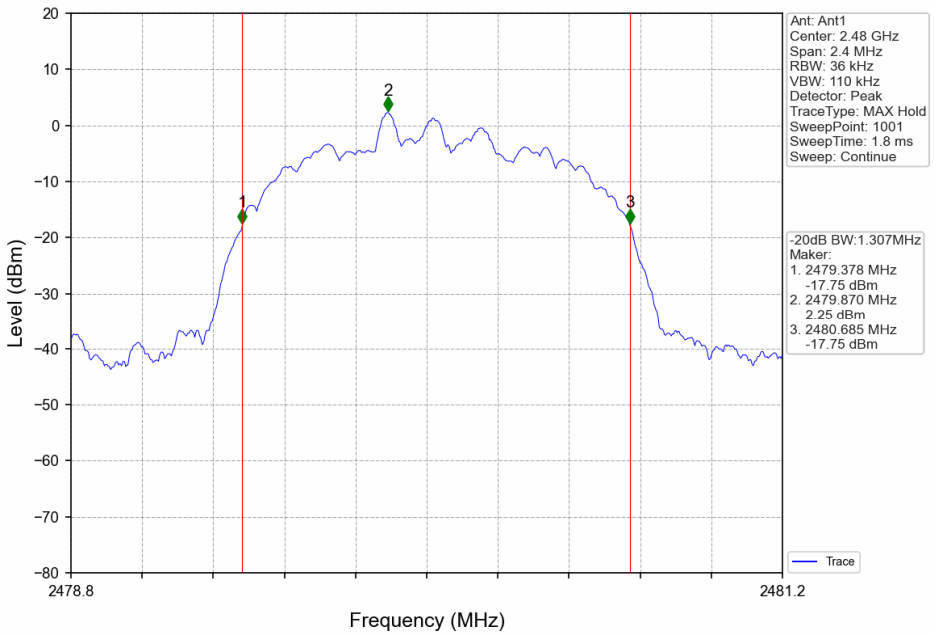
8DPSK_3DH5_LCH_2402MHz_Ant1_NTNV



8DPSK_3DH5_MCH_2441MHz_Ant1_NTNV



8DPSK_3DH5_HCH_2480MHz_Ant1_NTNV



2. Maximum Conducted Output Power

2.1 Power

2.1.1 Test Result

Mode	TX Type	Frequency (MHz)	Packet Type	Maximum Peak Conducted Output Power (dBm)		Verdict
				Ant1	Limit	
GFSK	SISO	2402	DH5	4.93	<=20.97	Pass
		2441	DH5	4.46	<=20.97	Pass
		2480	DH5	4.12	<=20.97	Pass
Pi/4DQPSK	SISO	2402	2DH5	5.51	<=20.97	Pass
		2441	2DH5	5.14	<=20.97	Pass
		2480	2DH5	4.89	<=20.97	Pass
8DPSK	SISO	2402	3DH5	5.75	<=20.97	Pass
		2441	3DH5	5.42	<=20.97	Pass
		2480	3DH5	5.18	<=20.97	Pass
Note1: Antenna Gain: Ant1: 1.8dBi;						

3. Carrier Frequency Separation

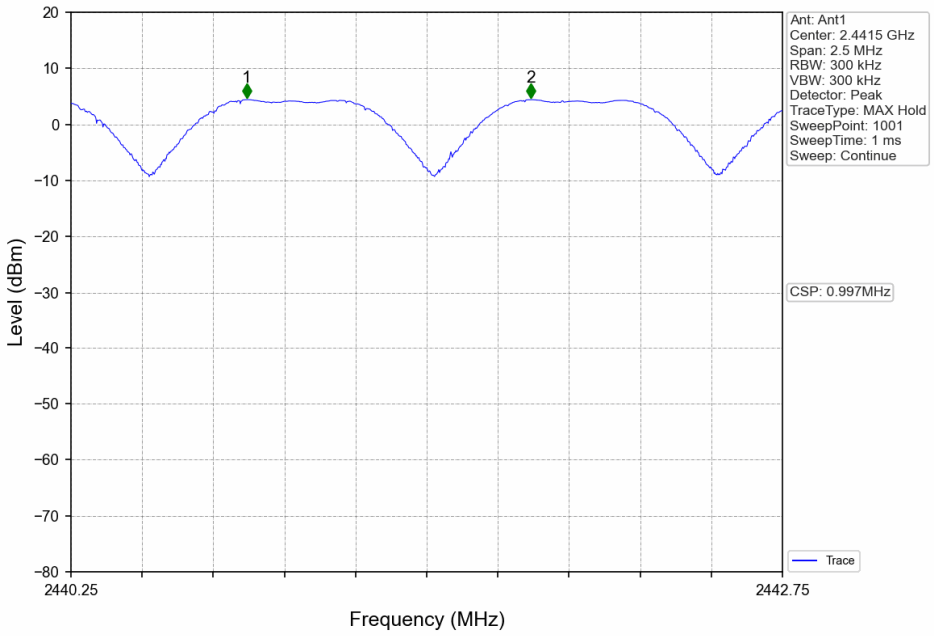
3.1 Ant1

3.1.1 Test Result

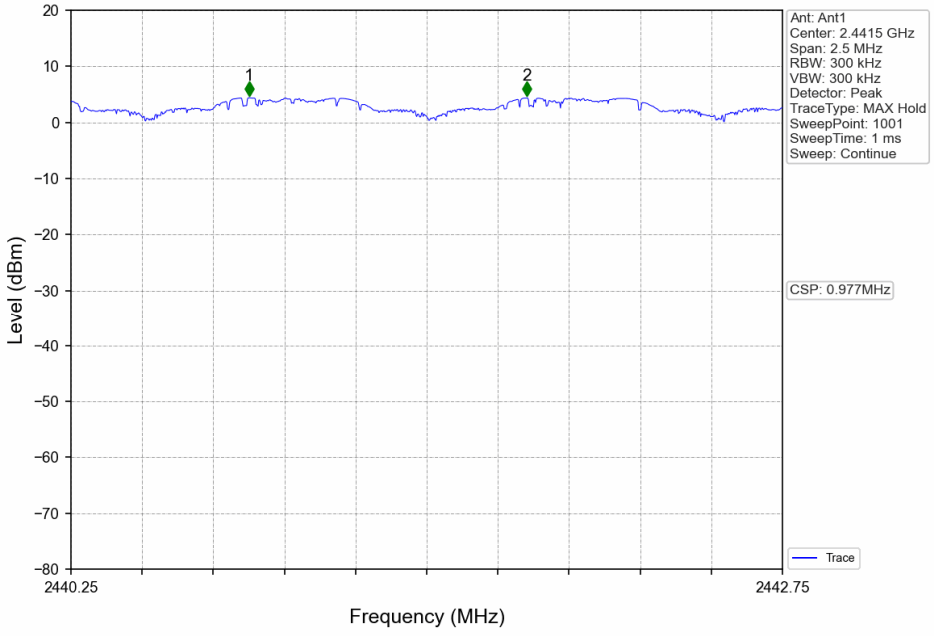
Ant1							
Mode	TX Type	Frequency (MHz)	Packet Type	Channel Separation (MHz)	20dB Bandwidth (MHz)	Limit (MHz)	Verdict
GFSK	SISO	HOPP	DH5	0.997	0.954	>=0.954	Pass
Pi/4DQPSK	SISO	HOPP	2DH5	0.977	1.316	>=0.877	Pass
8DPSK	SISO	HOPP	3DH5	1.000	1.311	>=0.874	Pass

3.1.2 Test Graph

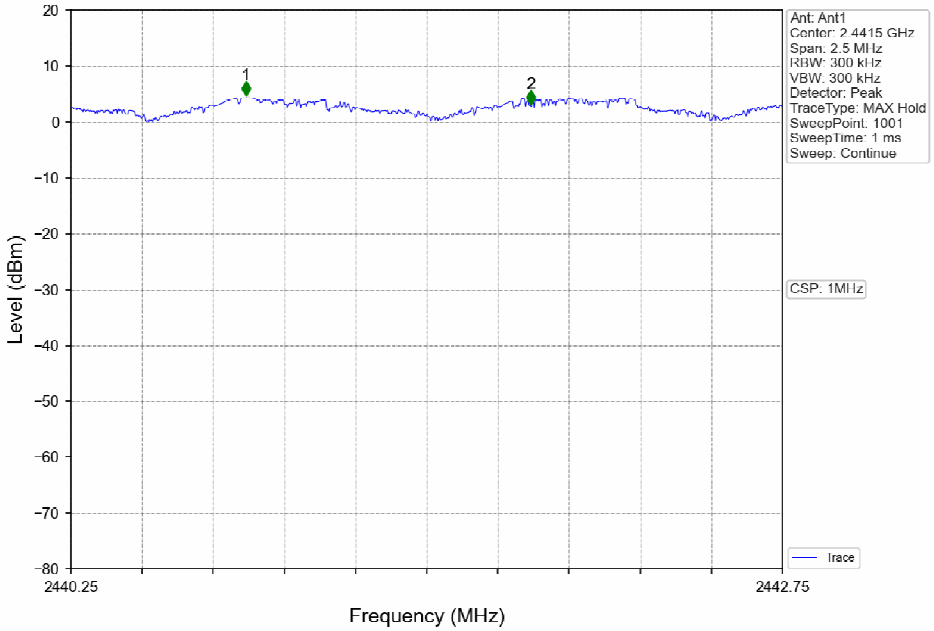
GFSK_DH5_HOPP_Ant1_NTNV



Pi/4DQPSK_2DH5_HOPP_Ant1_NTNV



8DPSK_3DH5_HOPP_Ant1_NTNV



4. Number of Hopping Frequencies

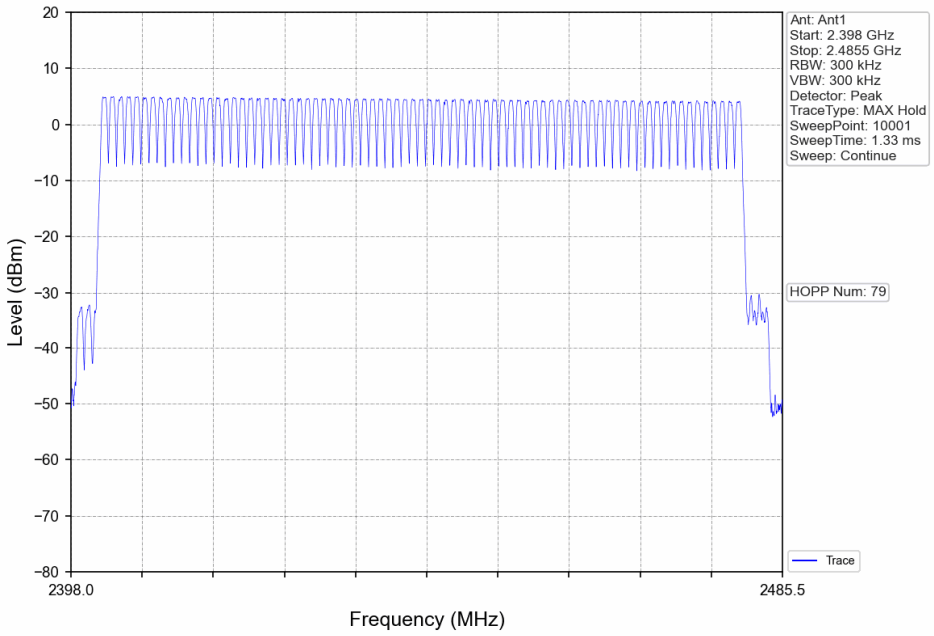
4.1 HoppNum

4.1.1 Test Result

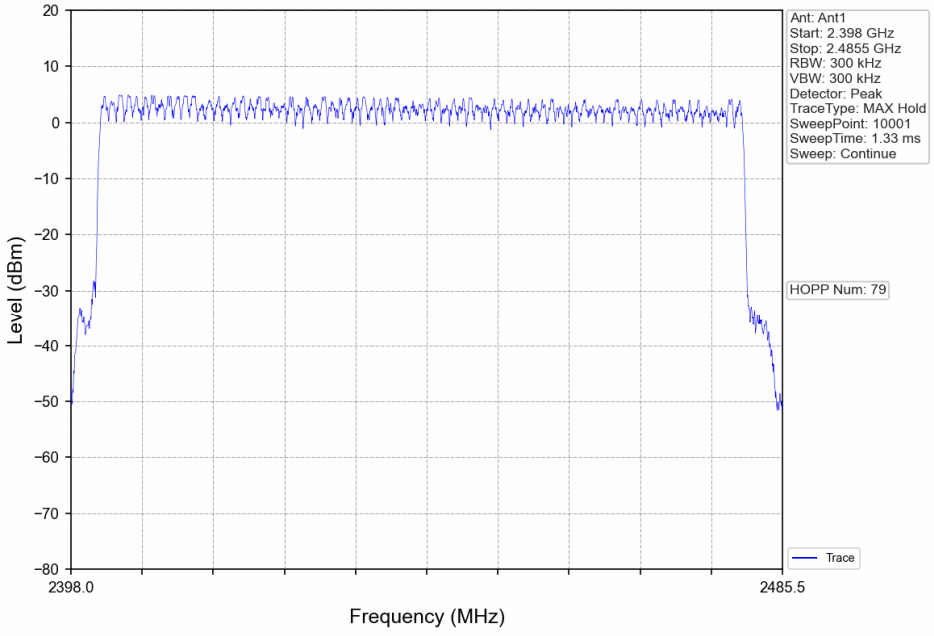
Mode	TX Type	Frequency (MHz)	Packet Type	Num of Hopping Frequencies		Verdict
				Ant1	Limit	
GFSK	SISO	HOPP	DH5	79	>=15	Pass
Pi/4DQPSK	SISO	HOPP	2DH5	79	>=15	Pass
8DPSK	SISO	HOPP	3DH5	79	>=15	Pass

4.1.2 Test Graph

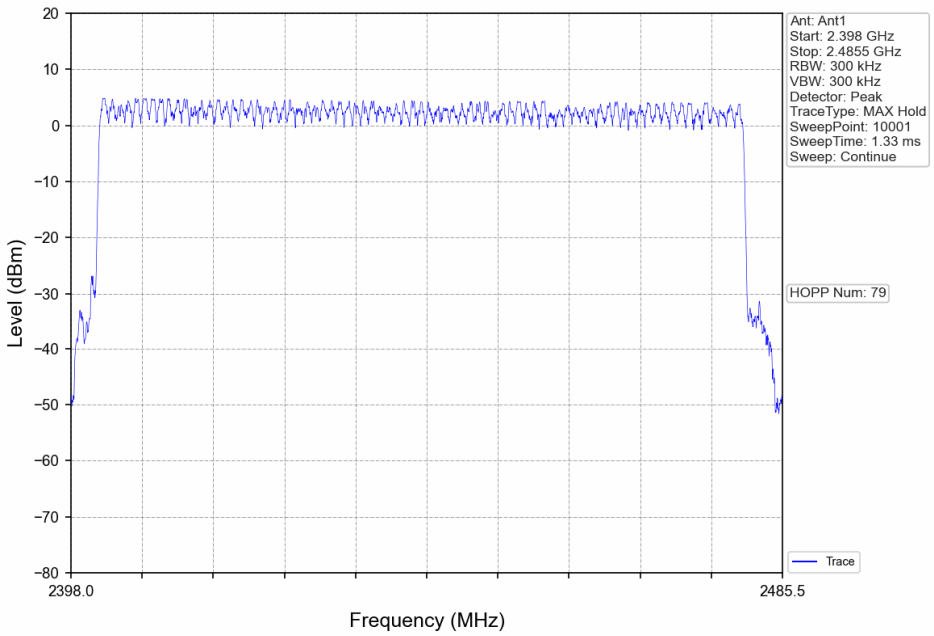
GFSK_DH5_HOPP_Ant1_NTNV



Pi/4DQPSK_2DH5_HOPP_Ant1_NTNV



8DPSK_3DH5_HOPP_Ant1_NTNV



5. Time of Occupancy (Dwell Time)

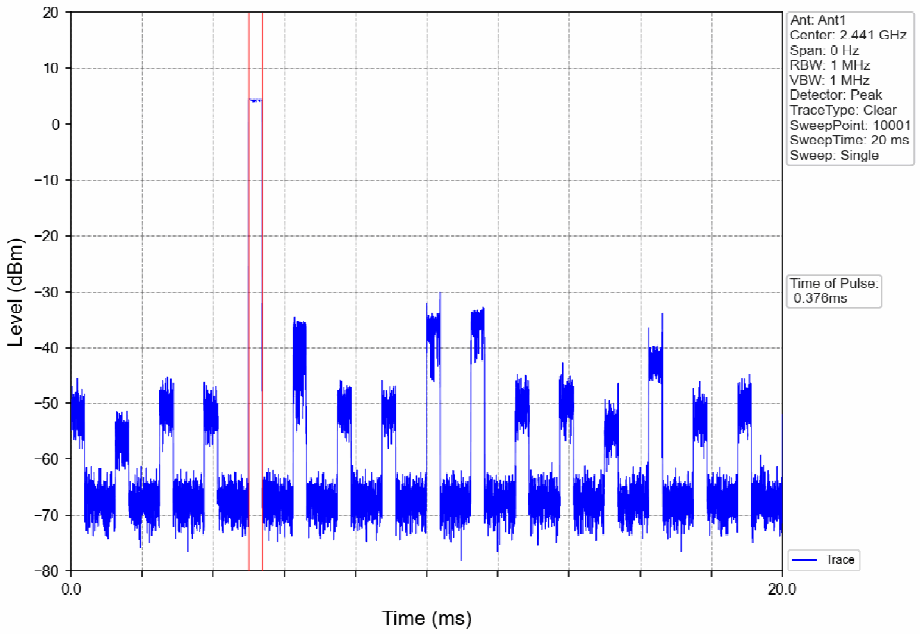
5.1 Ant1

5.1.1 Test Result

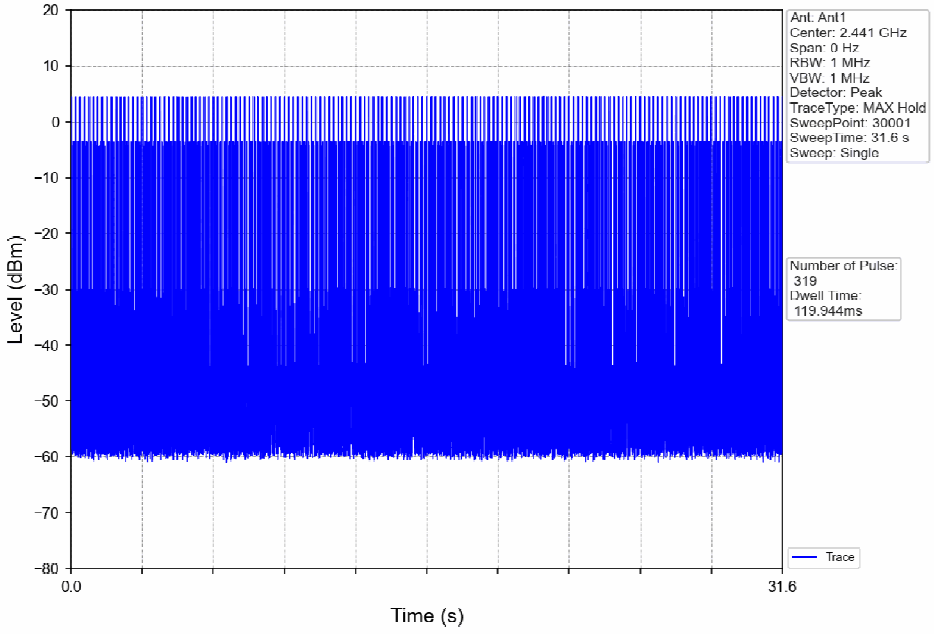
Ant1									
Mode	TX Type	Frequency (MHz)	Packet Type	Duration of Single Pulse (ms)	Observation Period (s)	Num of Pulse in Observation Period	Dwell Time (ms)	Limit (ms)	Verdict
GFSK	SISO	HOPP	DH1	0.376	31.600	319	119.944	<=400	Pass
			DH3	1.634	31.600	157	256.538	<=400	Pass
			DH5	2.880	31.600	104	299.520	<=400	Pass
Pi/4DQPSK	SISO	HOPP	2DH1	0.388	31.600	320	124.160	<=400	Pass
			2DH3	1.640	31.600	157	257.480	<=400	Pass
			2DH5	2.888	31.600	113	326.344	<=400	Pass
8DPSK	SISO	HOPP	3DH1	0.388	31.600	320	124.160	<=400	Pass
			3DH3	1.638	31.600	158	258.804	<=400	Pass
			3DH5	2.890	31.600	102	294.780	<=400	Pass

5.1.2 Test Graph

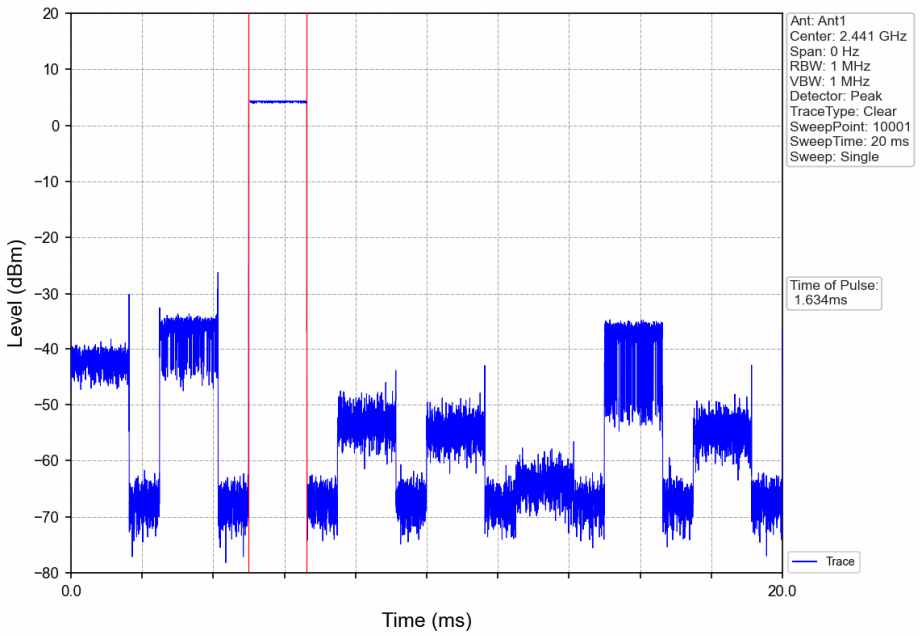
GFSK_DH1_HOPP_Ant1_NTNV



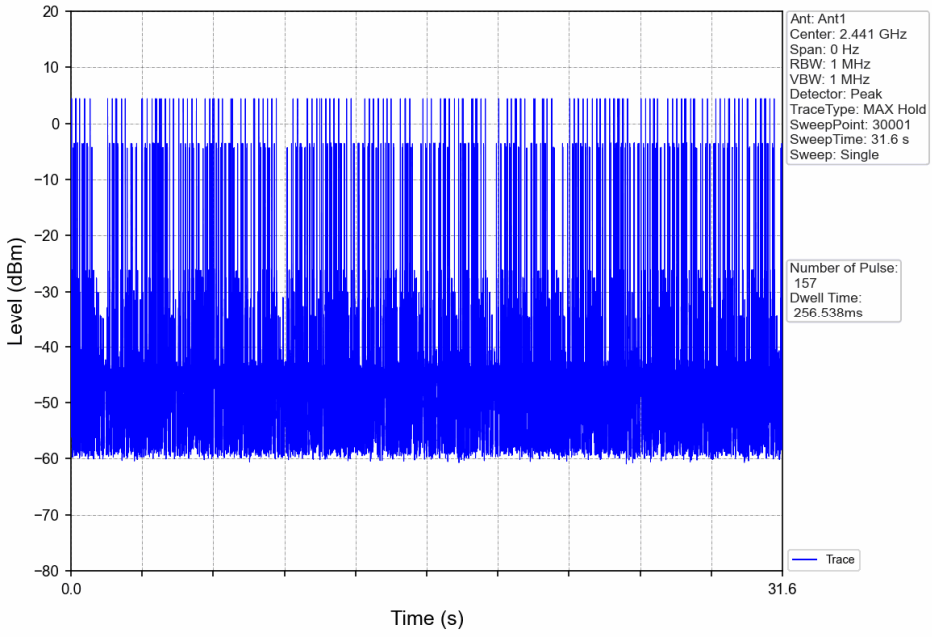
GFSK_DH1_HOPP_Ant1_NTNV



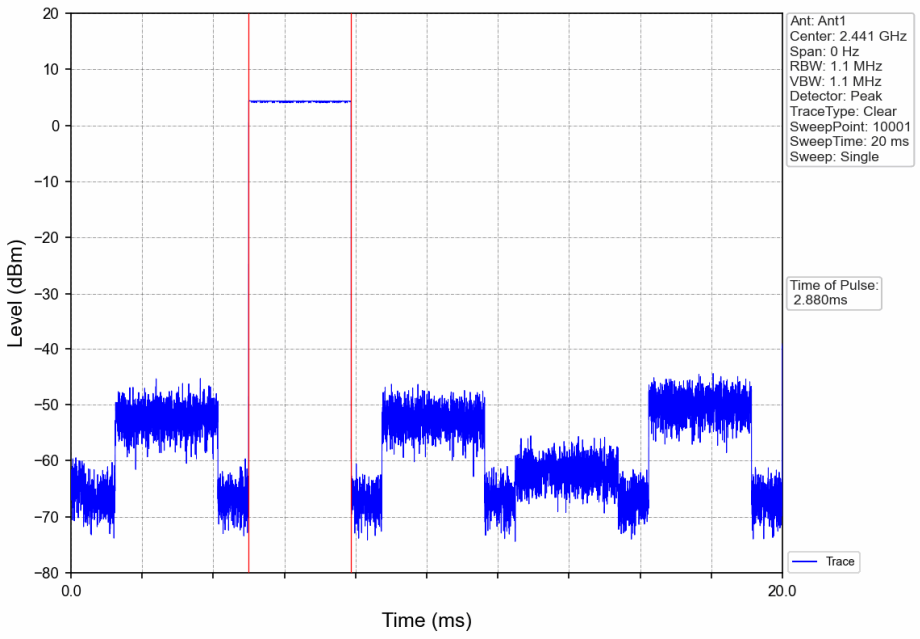
GFSK_DH3_HOPP_Ant1_NTNV



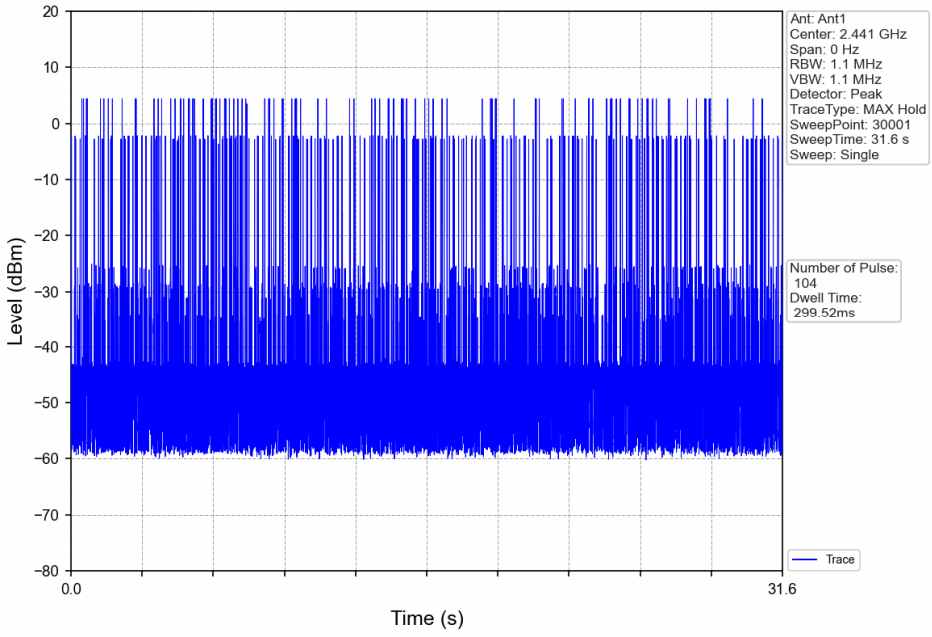
GFSK_DH3_HOPP_Ant1_NTNV



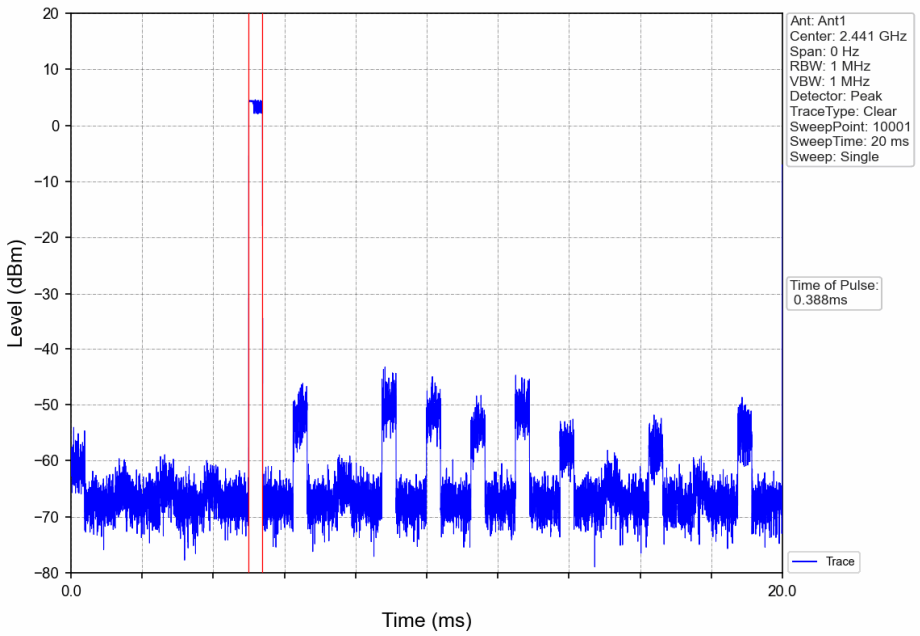
GFSK_DH5_HOPP_Ant1_NTNV



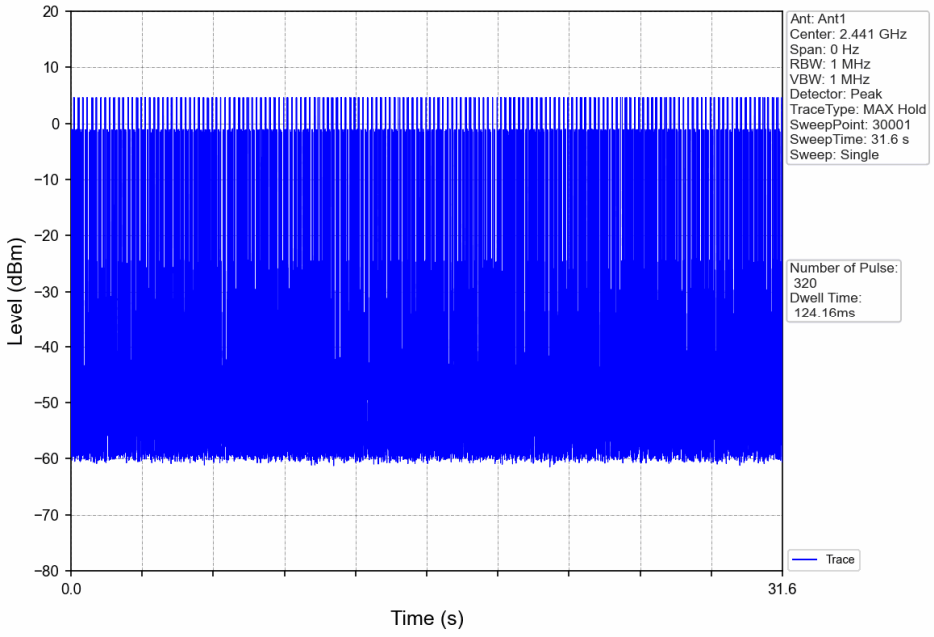
GFSK_DH5_HOPP_Ant1_NTNV



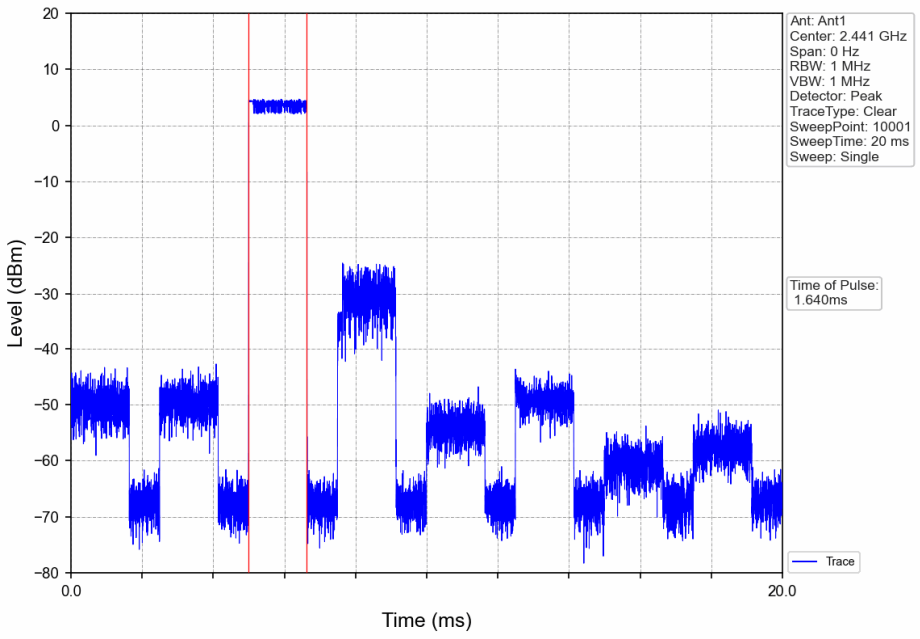
Pi/4DQPSK_2DH1_HOPP_Ant1_NTNV



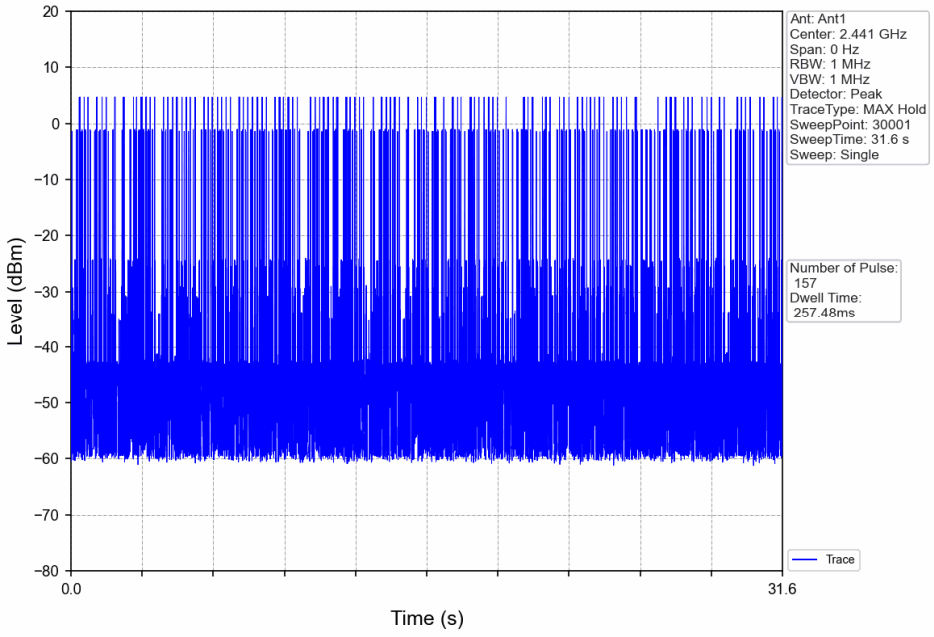
Pi/4DQPSK_2DH1_HOPP_Ant1_NTNV



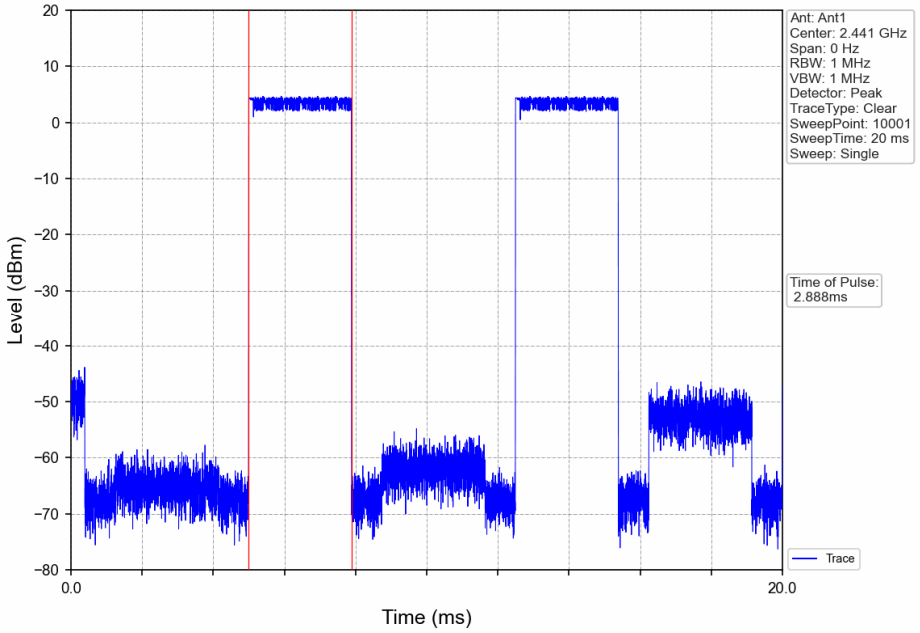
Pi/4DQPSK_2DH3_HOPP_Ant1_NTNV



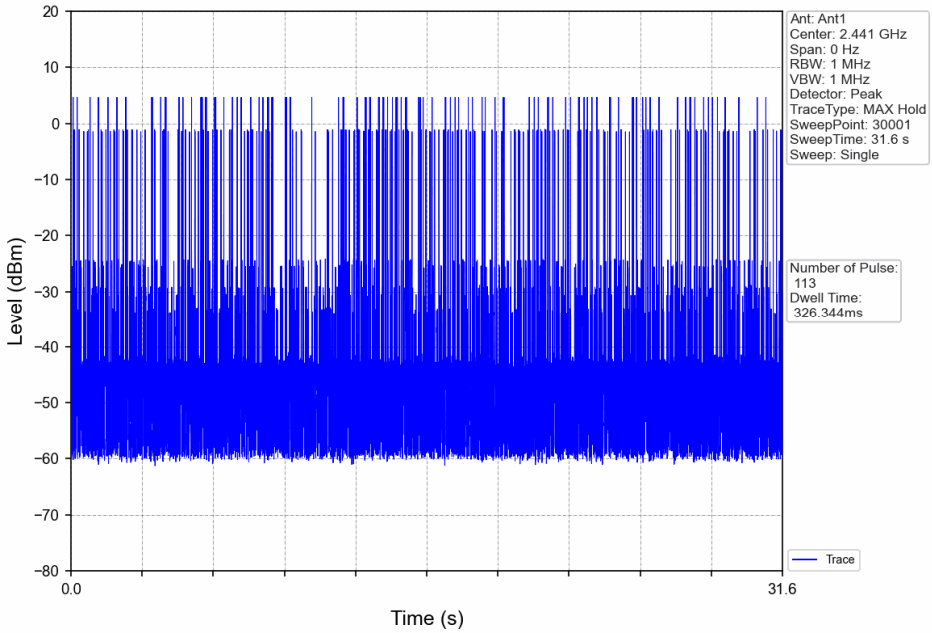
Pi/4DQPSK_2DH3_HOPP_Ant1_NTNV



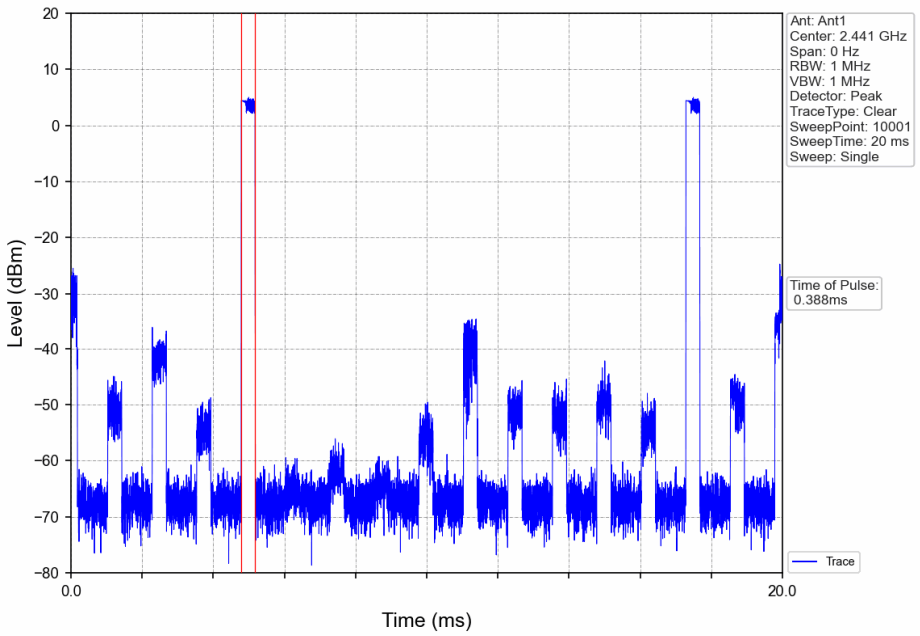
Pi/4DQPSK_2DH5_HOPP_Ant1_NTNV



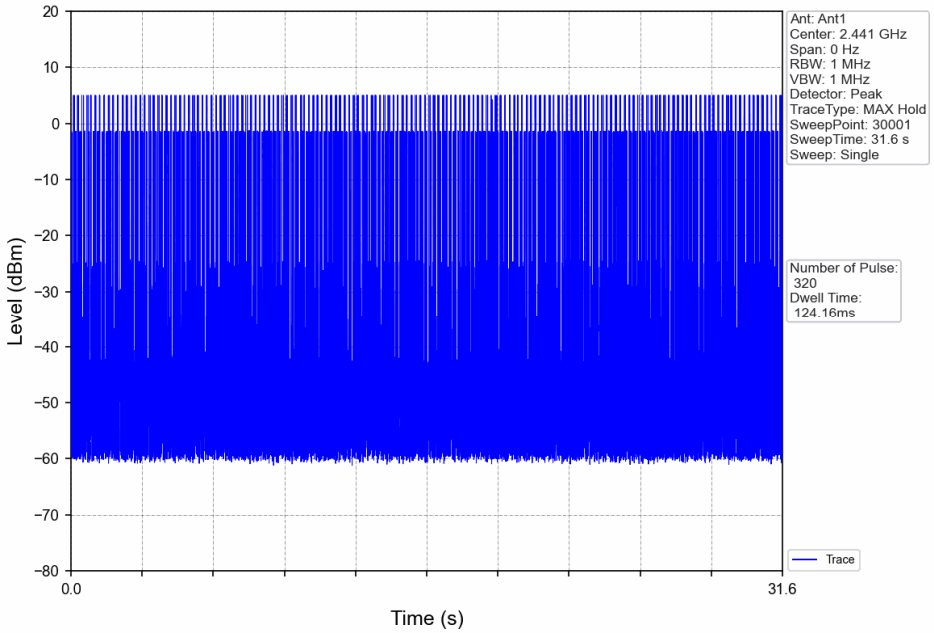
Pi/4DQPSK_2DH5_HOPP_Ant1_NTNV



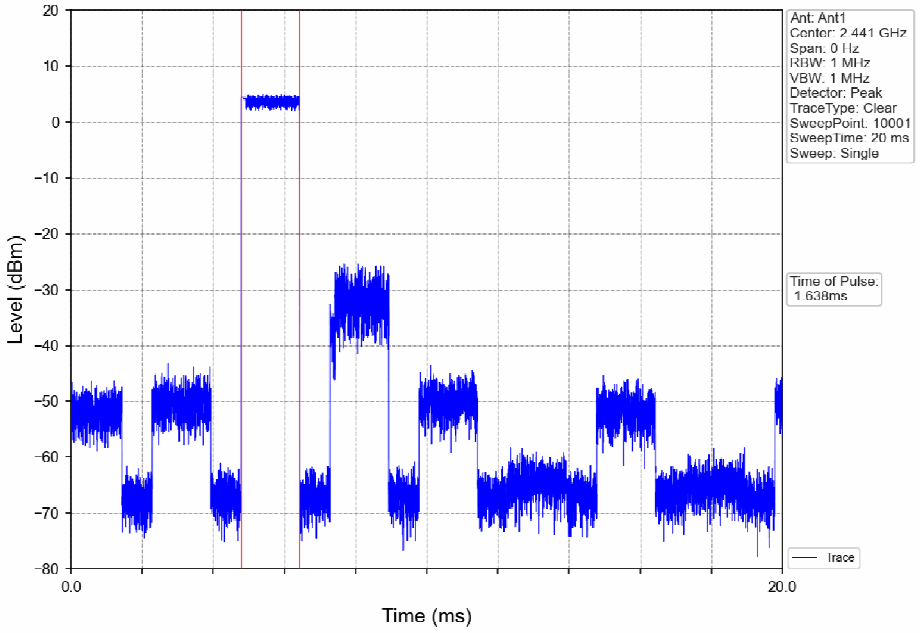
8DPSK_3DH1_HOPP_Ant1_NTNV



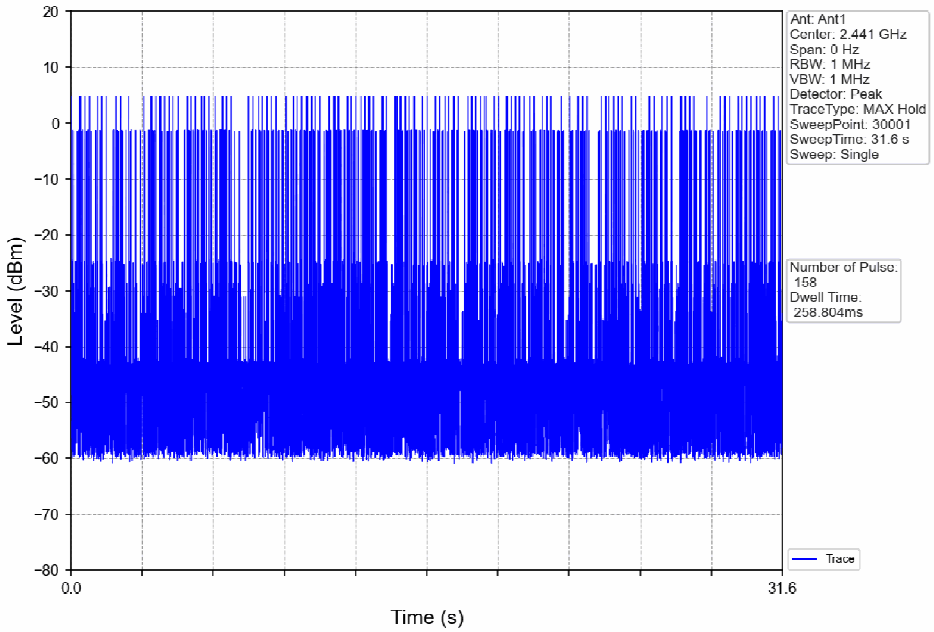
8DPSK_3DH1_HOPP_Ant1_NTNV



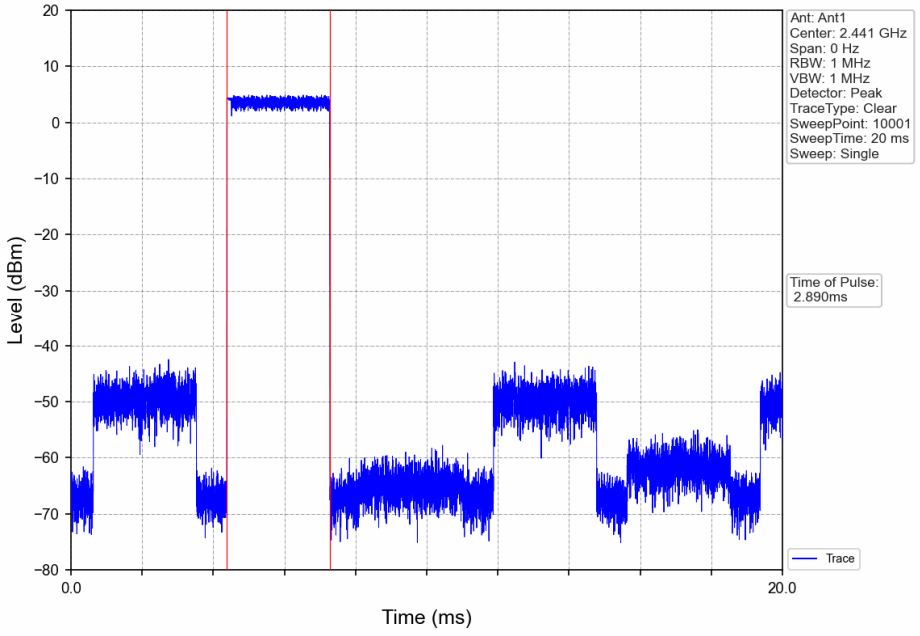
8DPSK_3DH3_HOPP_Ant1_NTNV



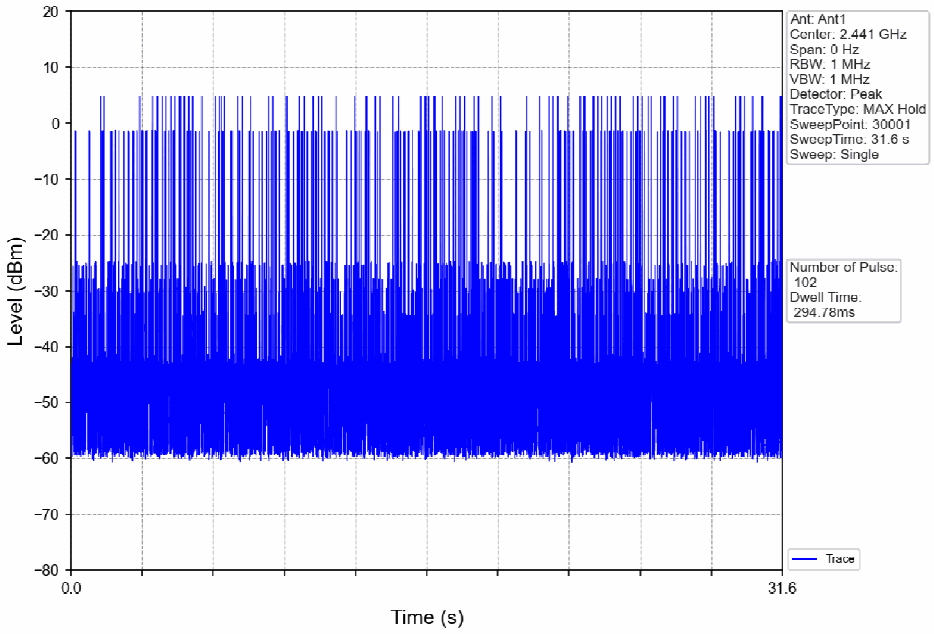
8DPSK_3DH3_HOPP_Ant1_NTNV



8DPSK_3DH5_HOPP_Ant1_NTNV



8DPSK_3DH5_HOPP_Ant1_NTNV



6. Unwanted Emissions In Non-restricted Frequency Bands

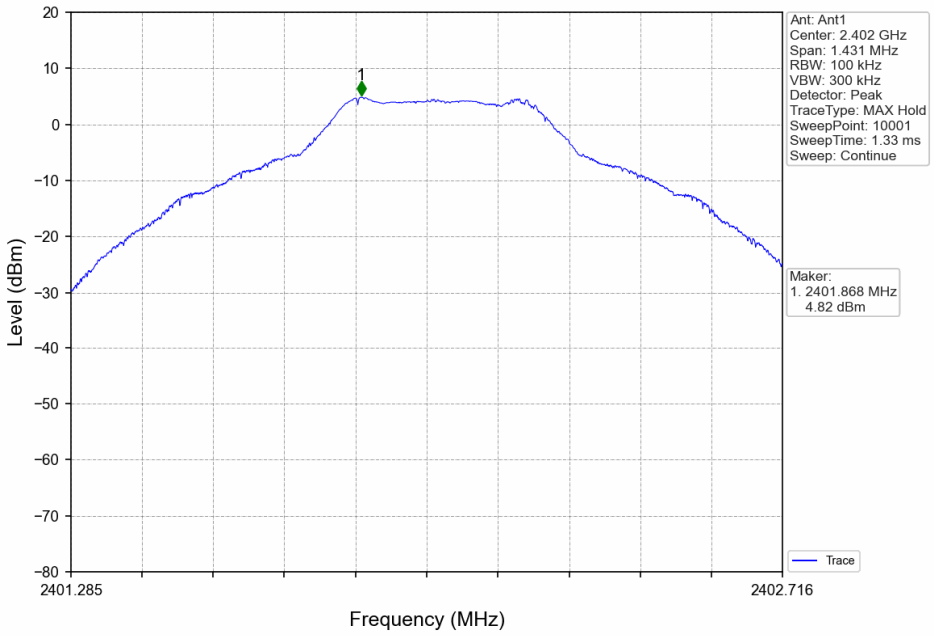
6.1 Ref

6.1.1 Test Result

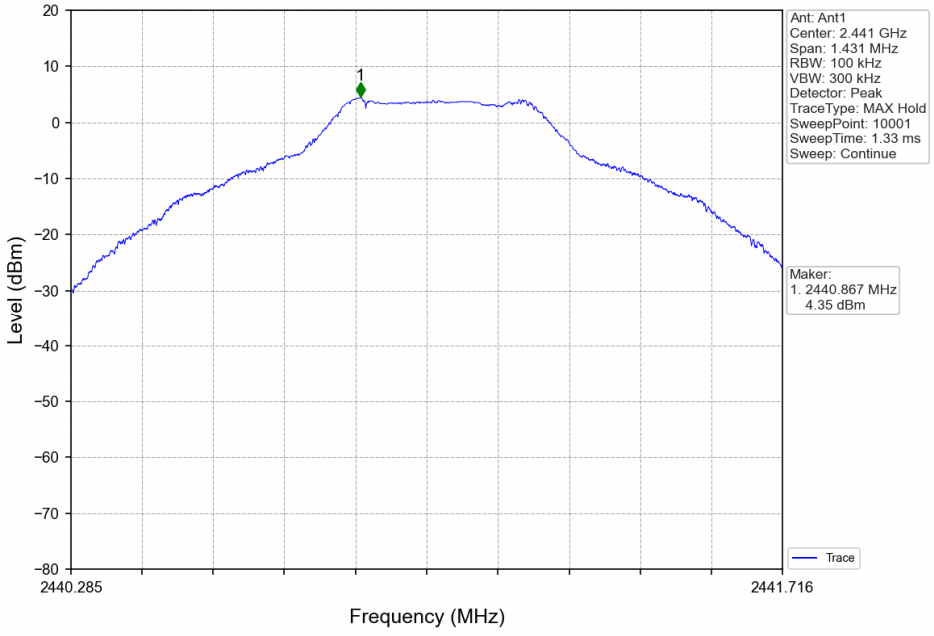
Mode	TX Type	Frequency (MHz)	Packet Type	Ant	Level of Reference (dBm)
GFSK	SISO	2402	DH5	1	4.82
		2441	DH5	1	4.35
		2480	DH5	1	4.00
Pi/4DQPSK	SISO	2402	2DH5	1	4.71
		2441	2DH5	1	4.24
		2480	2DH5	1	3.93
8DPSK	SISO	2402	3DH5	1	4.74
		2441	3DH5	1	4.33
		2480	3DH5	1	4.03
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.					

6.1.2 Test Graph

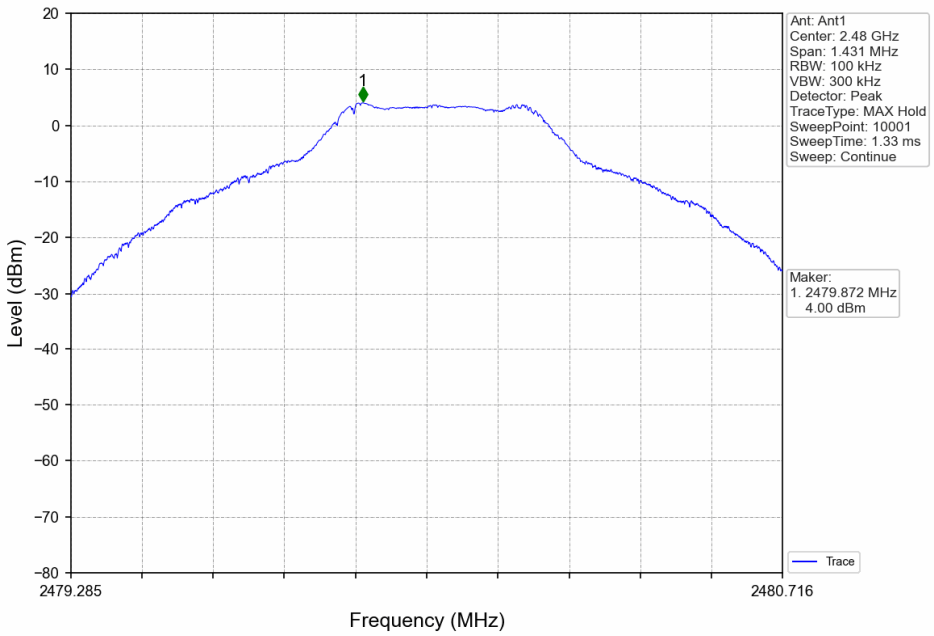
GFSK_DH5_LCH_2402MHz_Ant1_NTNV



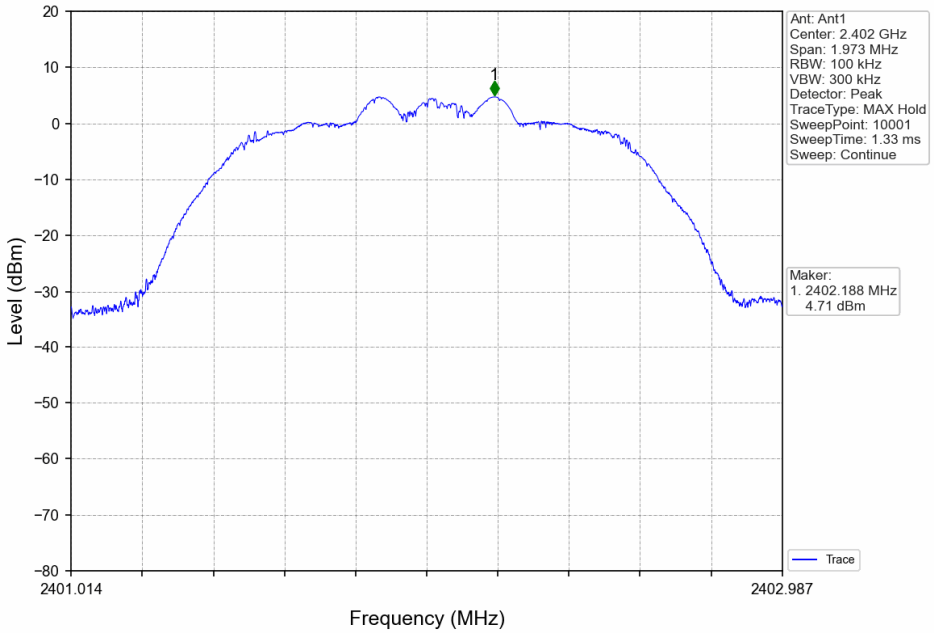
GFSK_DH5_MCH_2441MHz_Ant1_NTNV



GFSK_DH5_HCH_2480MHz_Ant1_NTNV



Pi/4DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV



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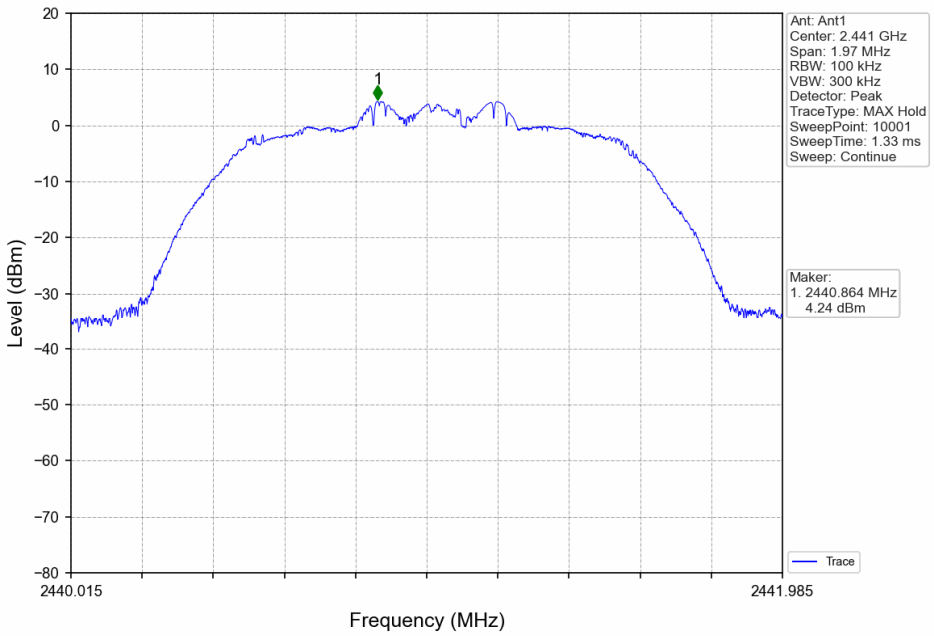
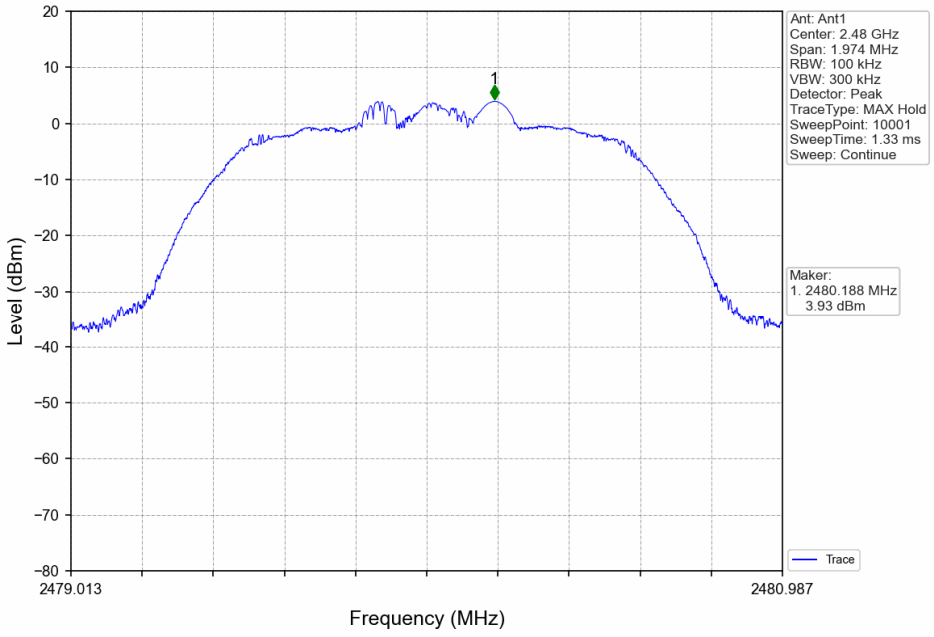
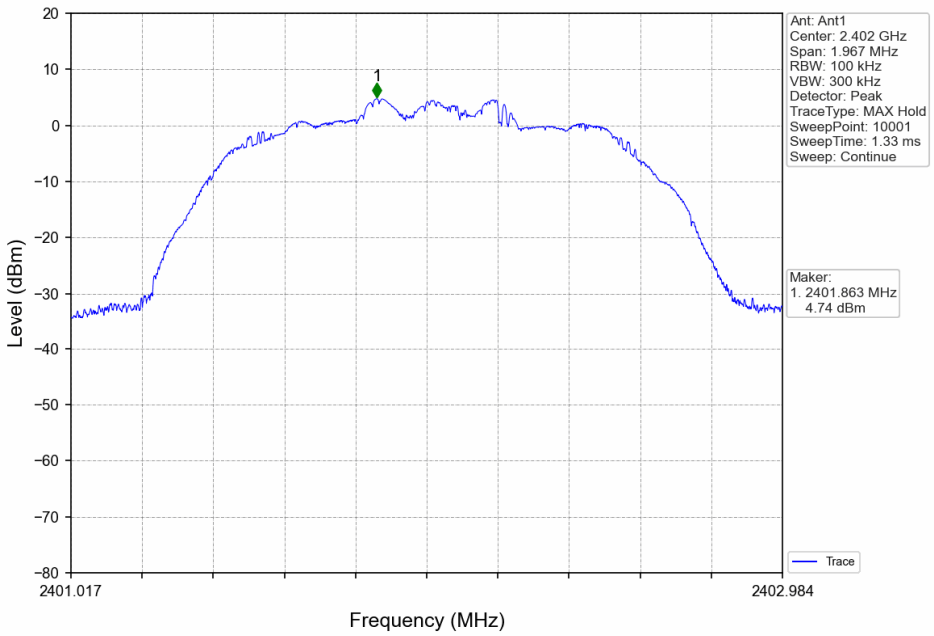


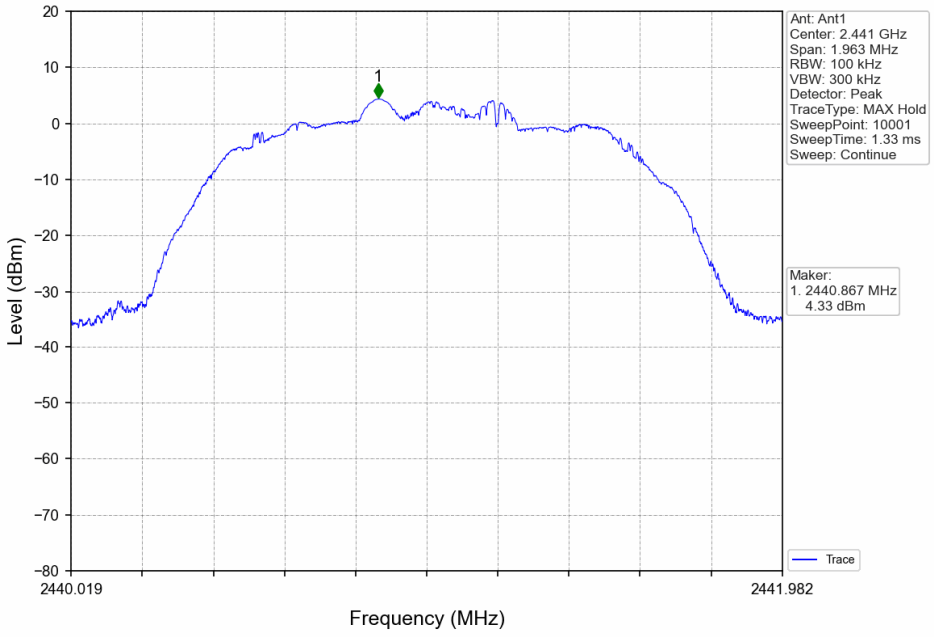
Pi/4DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV



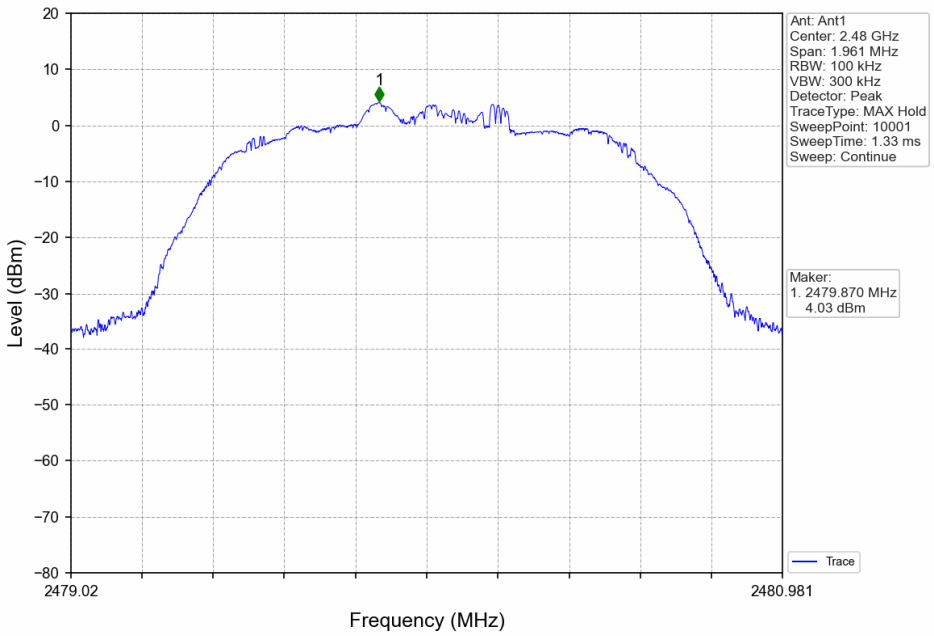
8DPSK_3DH5_LCH_2402MHz_Ant1_NTNV



8DPSK_3DH5_MCH_2441MHz_Ant1_NTNV



8DPSK_3DH5_HCH_2480MHz_Ant1_NTNV



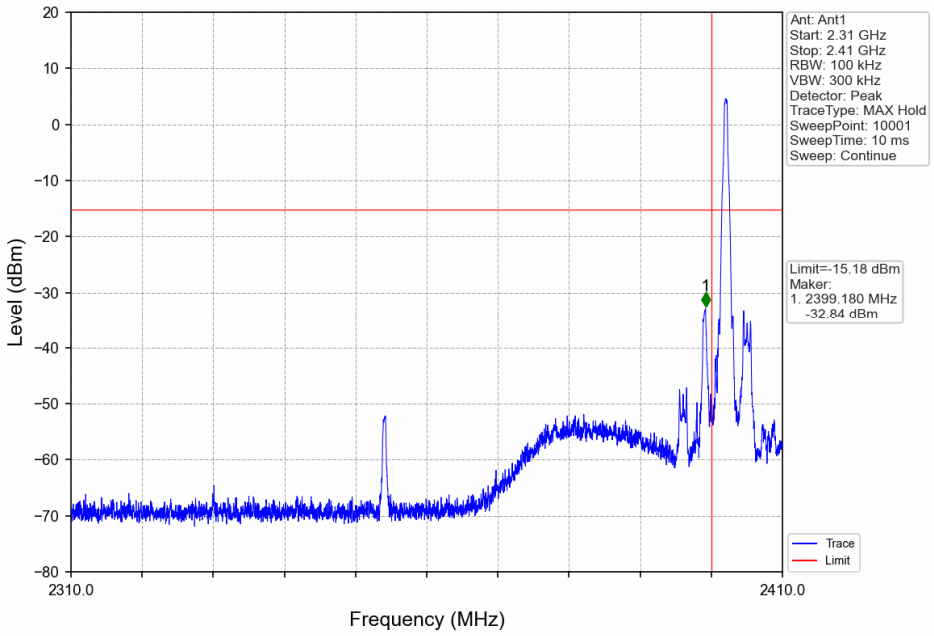
6.2 CSE

6.2.1 Test Result

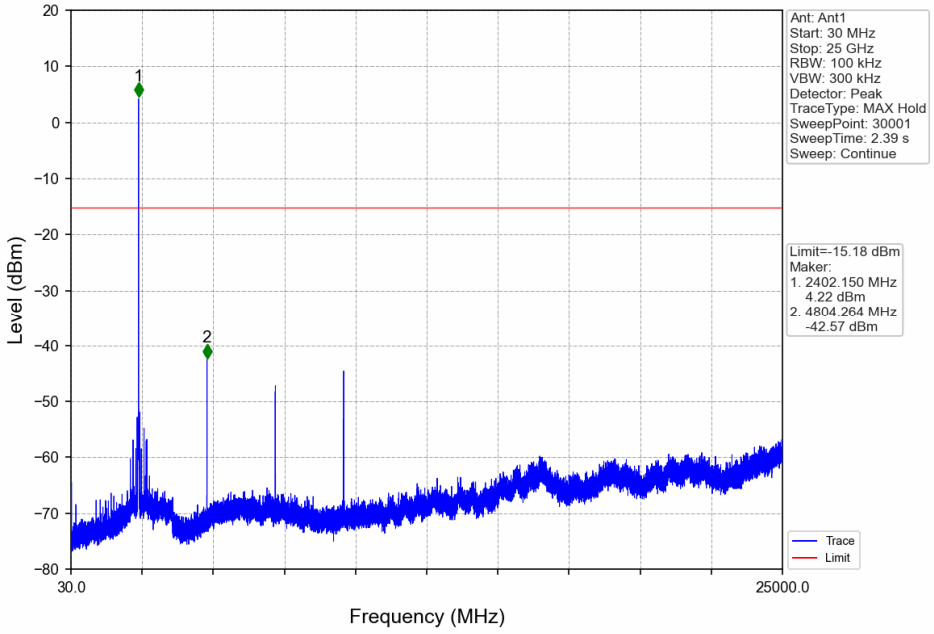
Mode	TX Type	Frequency (MHz)	Packet Type	Ant	Level of Reference (dBm)	Limit (dBm)	Verdict
GFSK	SISO	2402	DH5	1	4.82	-15.18	Pass
		2441	DH5	1	4.82	-15.18	Pass
		2480	DH5	1	4.82	-15.18	Pass
		HOPP	DH5	1	4.82	-15.18	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	4.71	-15.29	Pass
		2441	2DH5	1	4.71	-15.29	Pass
		2480	2DH5	1	4.71	-15.29	Pass
		HOPP	2DH5	1	4.71	-15.29	Pass
8DPSK	SISO	2402	3DH5	1	4.74	-15.26	Pass
		2441	3DH5	1	4.74	-15.26	Pass
		2480	3DH5	1	4.74	-15.26	Pass
		HOPP	3DH5	1	4.74	-15.26	Pass
Note1: Refer to FCC Part 15.247 (d) and ANSI C63.10-2013, the channel contains the maximum PSD level was used to establish the reference level.							

6.2.2 Test Graph

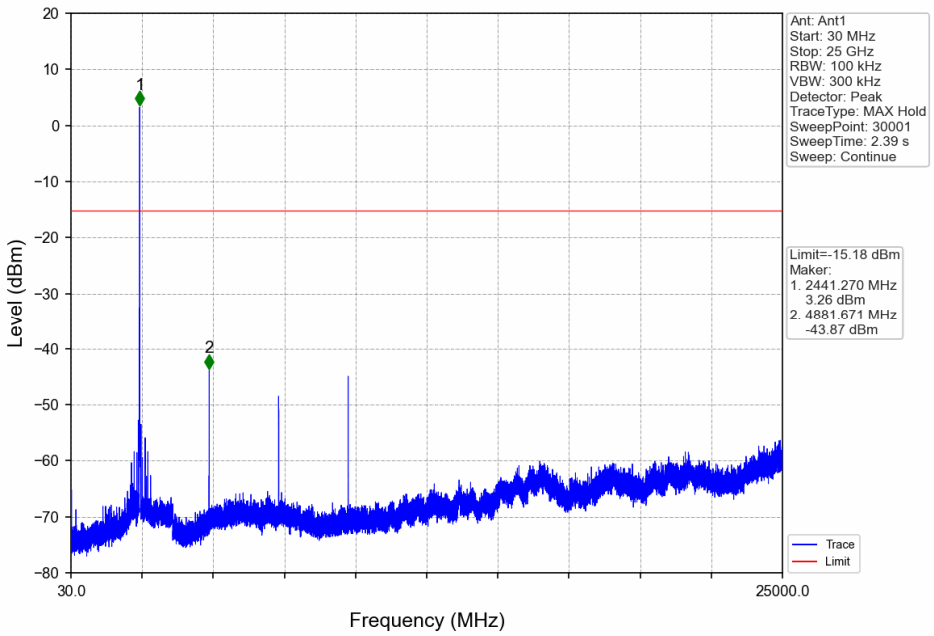
GFSK_DH5_LCH_2402MHz_Ant1_NTNV



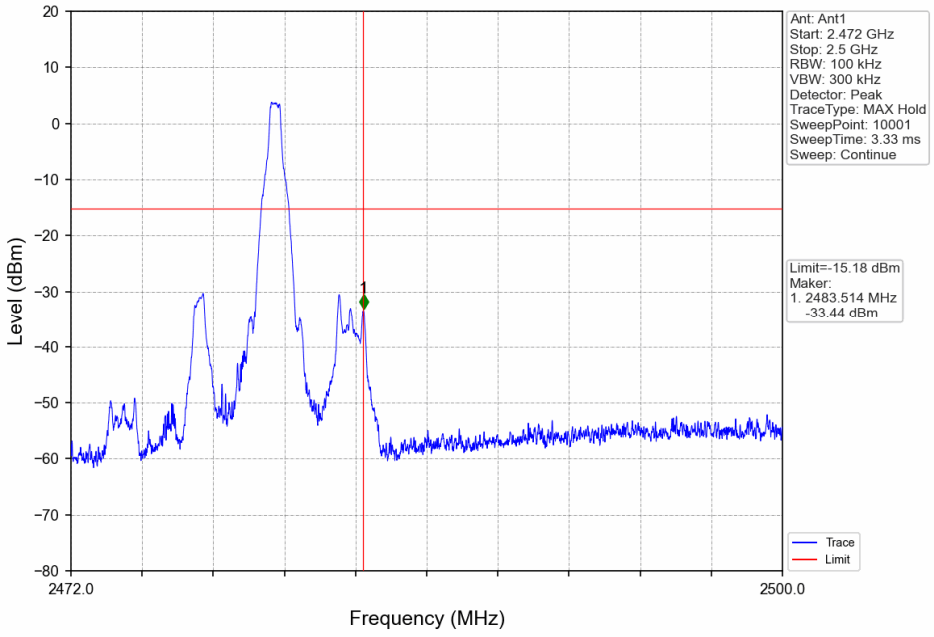
GFSK_DH5_LCH_2402MHz_Ant1_NTNV



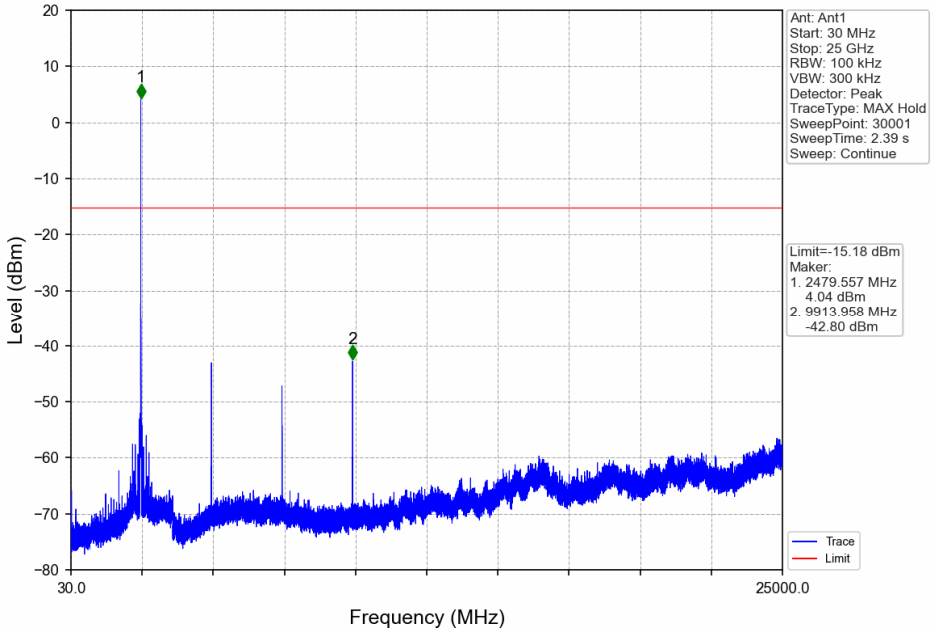
GFSK_DH5_MCH_2441MHz_Ant1_NTNV



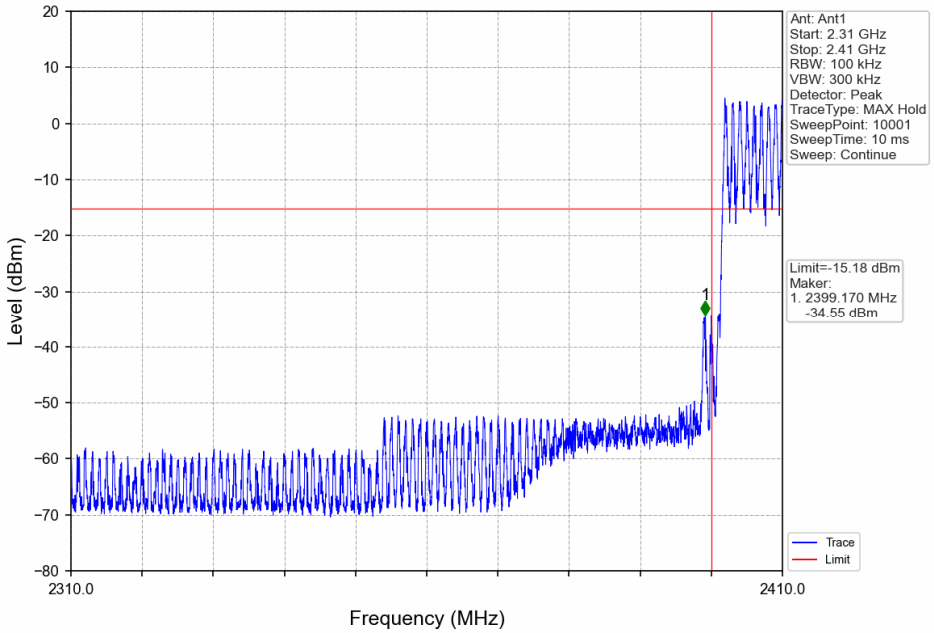
GFSK_DH5_HCH_2480MHz_Ant1_NTNV



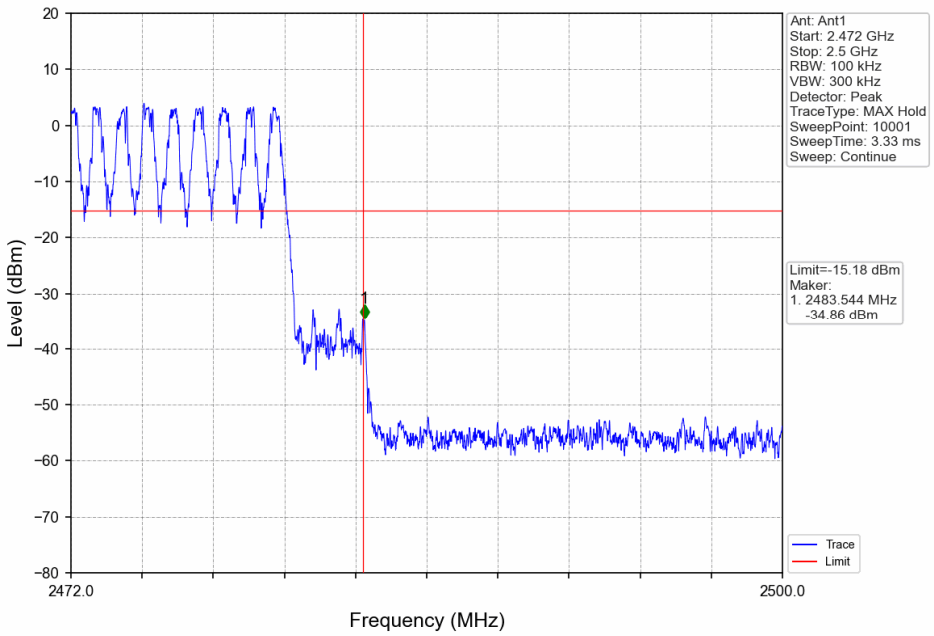
GFSK_DH5_HCH_2480MHz_Ant1_NTNV



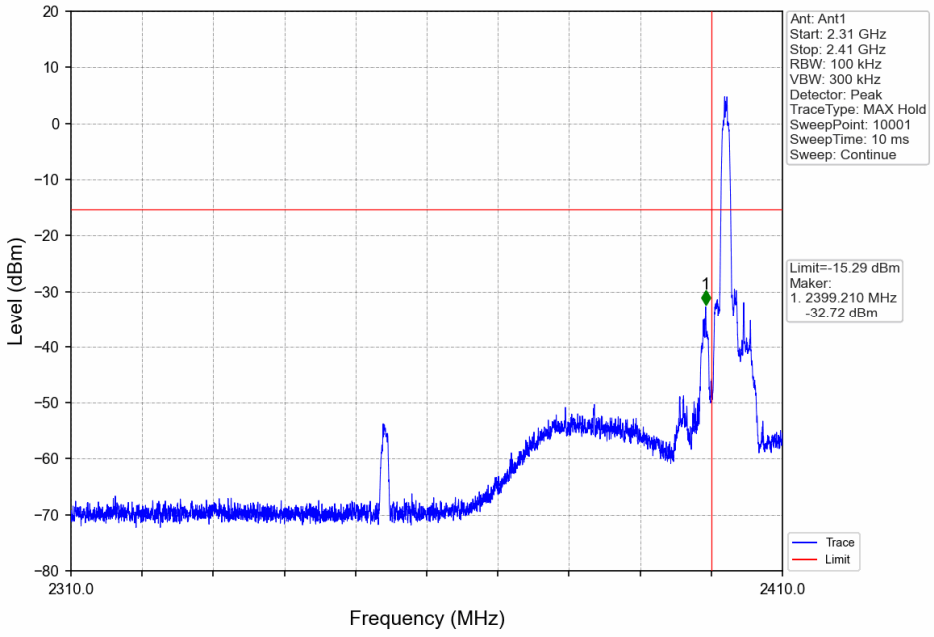
GFSK_DH5_HOPP_Ant1_NTNV



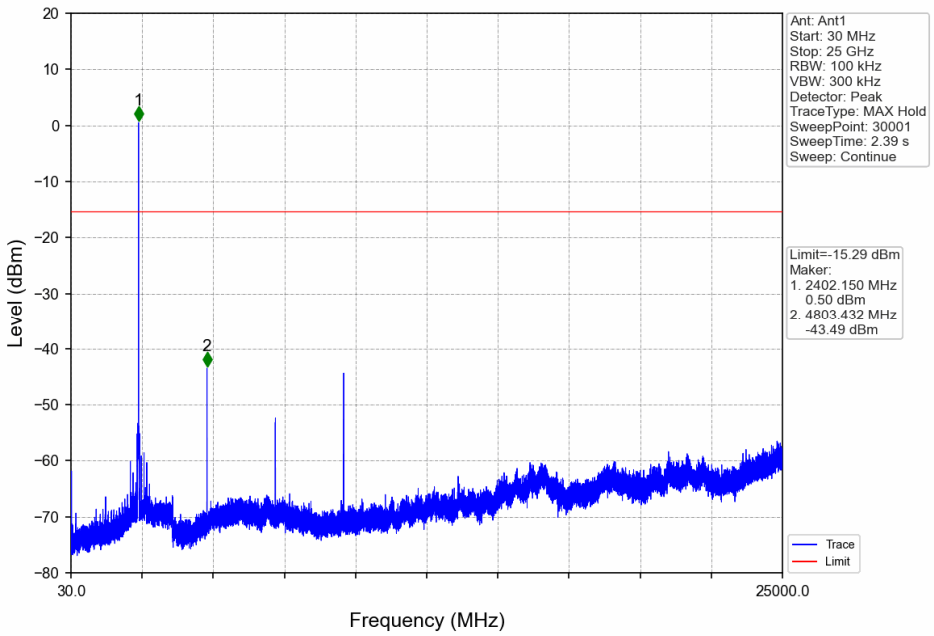
GFSK_DH5_HOPP_Ant1_NTNV



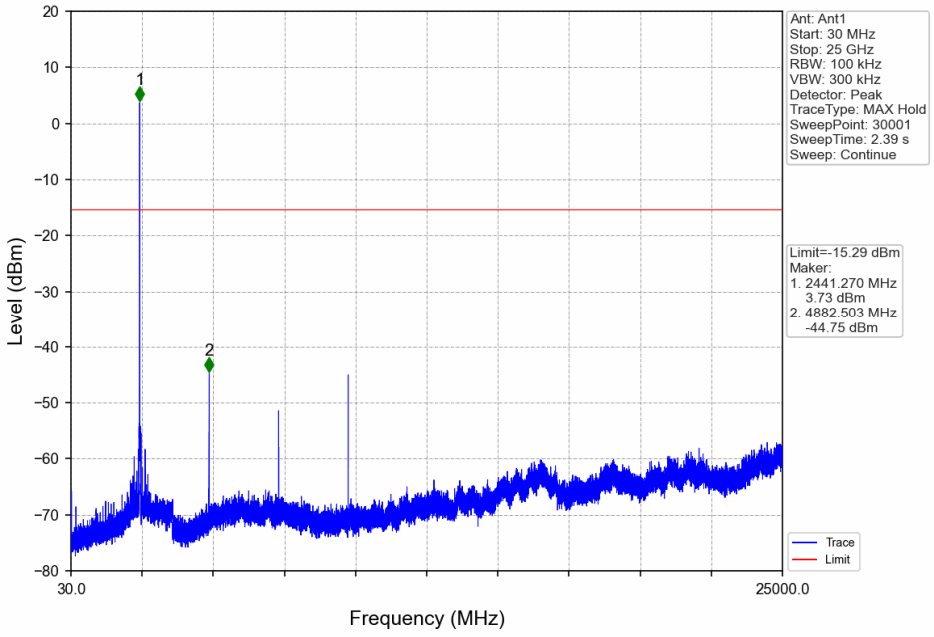
Pi/4DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV



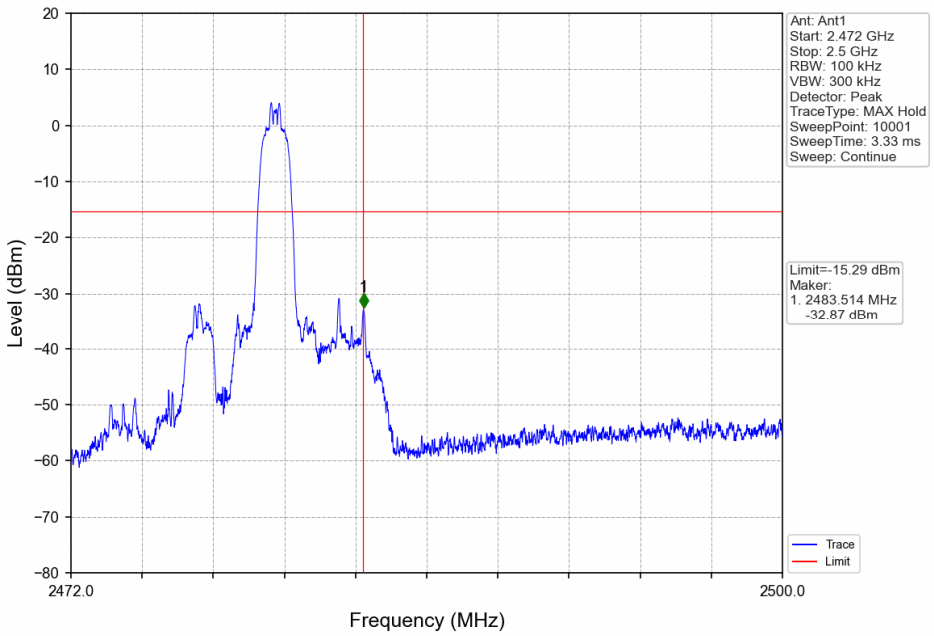
Pi/4DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV



Pi/4DQPSK_2DH5_MCH_2441MHz_Ant1_NTNV



Pi/4DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV



Pi/4DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV