

Appendix A

RF Test Data for BR_EDR(Conducted Measurement)

Product Name: Retro Record Player Wireless Speaker with Clock
Trade Mark: ETECH
Test Model: EBT6-XP1115

Environmental Conditions

Temperature:	24.6°C
Relative Humidity:	51.4%
ATM Pressure:	101Kpa
Test Engineer:	Simba Huang
Supervised by:	Seal Chen

Contents

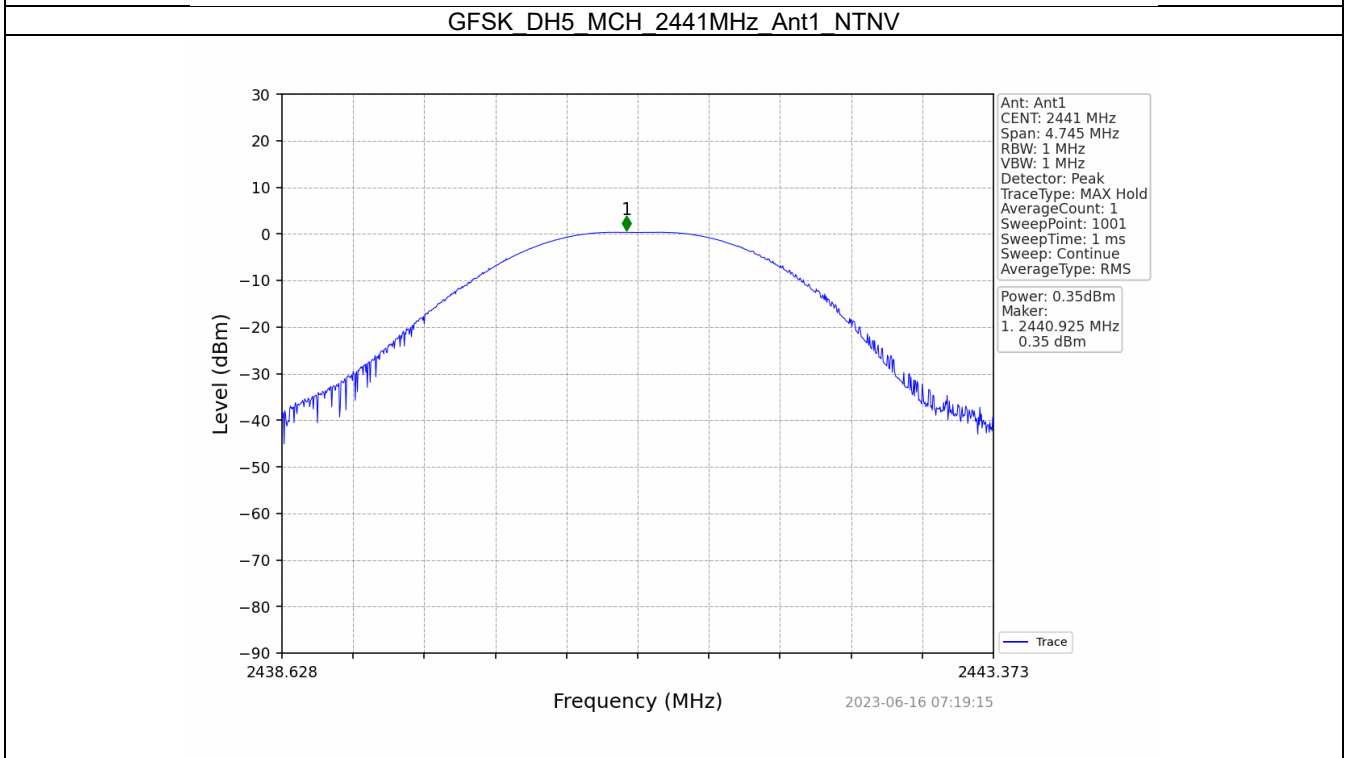
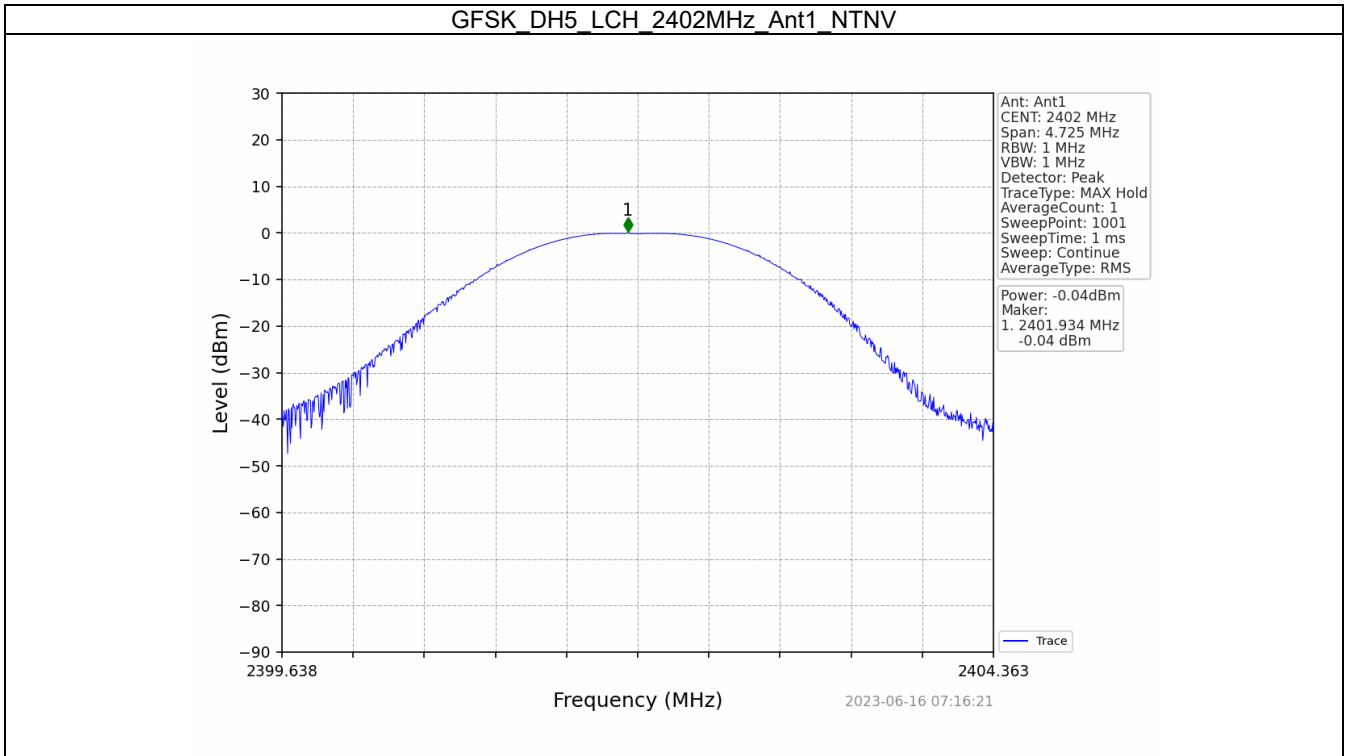
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1 Maximum Conducted Peak Output Power

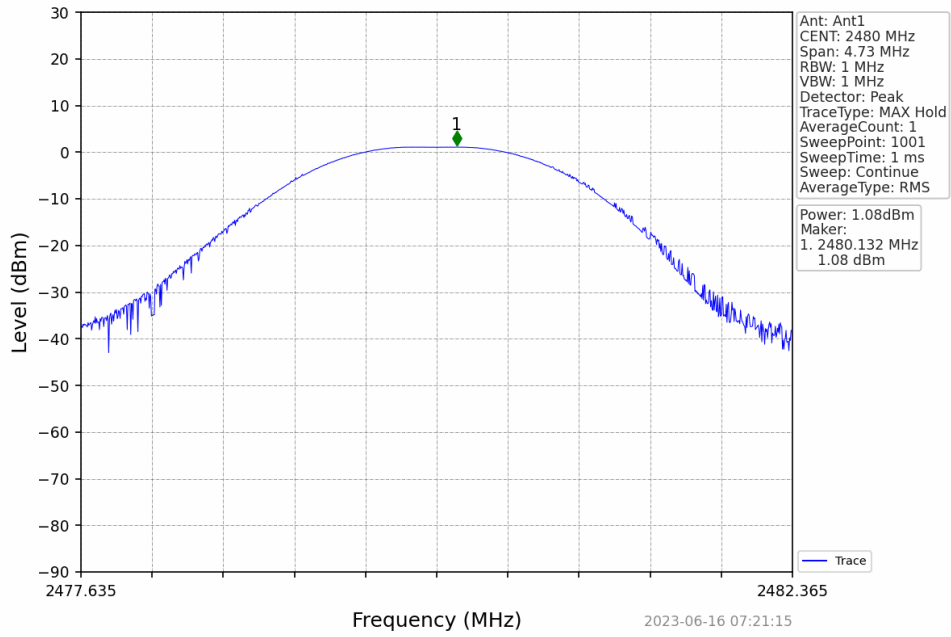
1.1 Test Result

Mode	Channel.	Maximum Peak Output Power [dBm]	Limit [dBm]	Verdict
GFSK	LCH	-0.04	<=30	Pass
	MCH	0.35	<=30	Pass
	HCH	1.08	<=30	Pass
Pi/4DQPSK	LCH	2.49	<=20.97	Pass
	MCH	3.19	<=20.97	Pass
	HCH	3.94	<=20.97	Pass
8DPSK	LCH	3.01	<=20.97	Pass
	MCH	3.73	<=20.97	Pass
	HCH	4.44	<=20.97	Pass

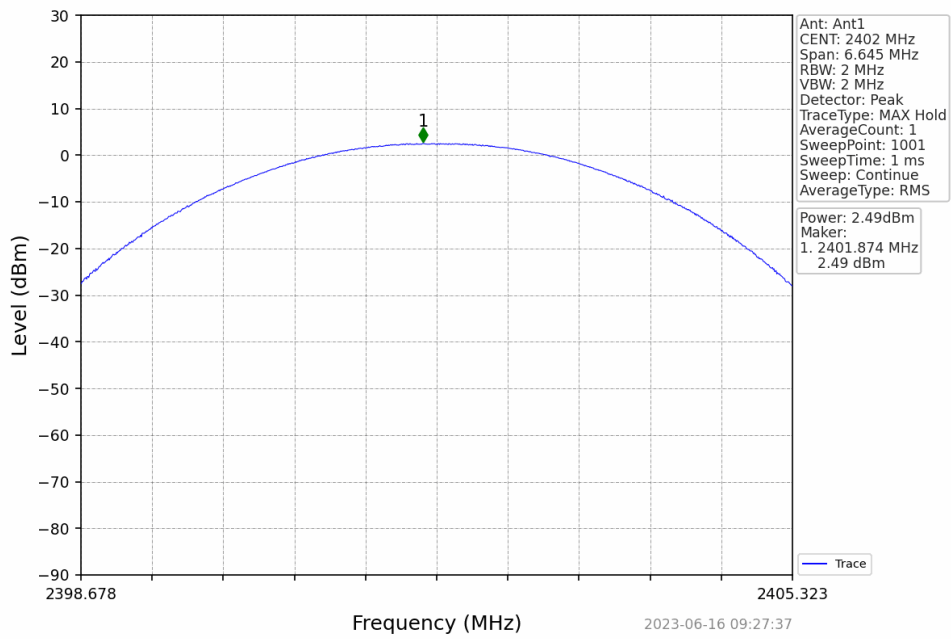
1.2 Test Graphs



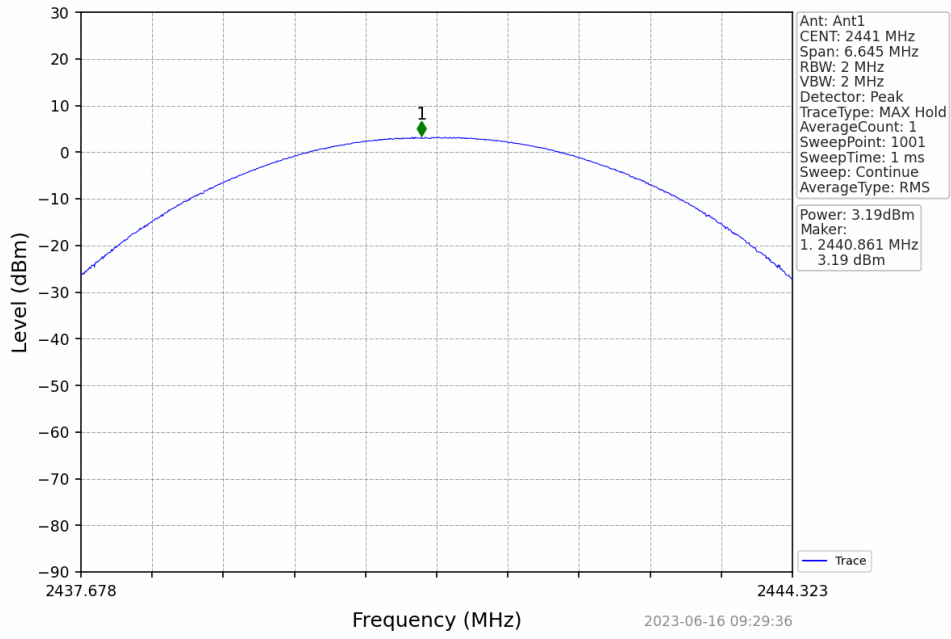
GFSK_DH5_HCH_2480MHz_Ant1_NTNV



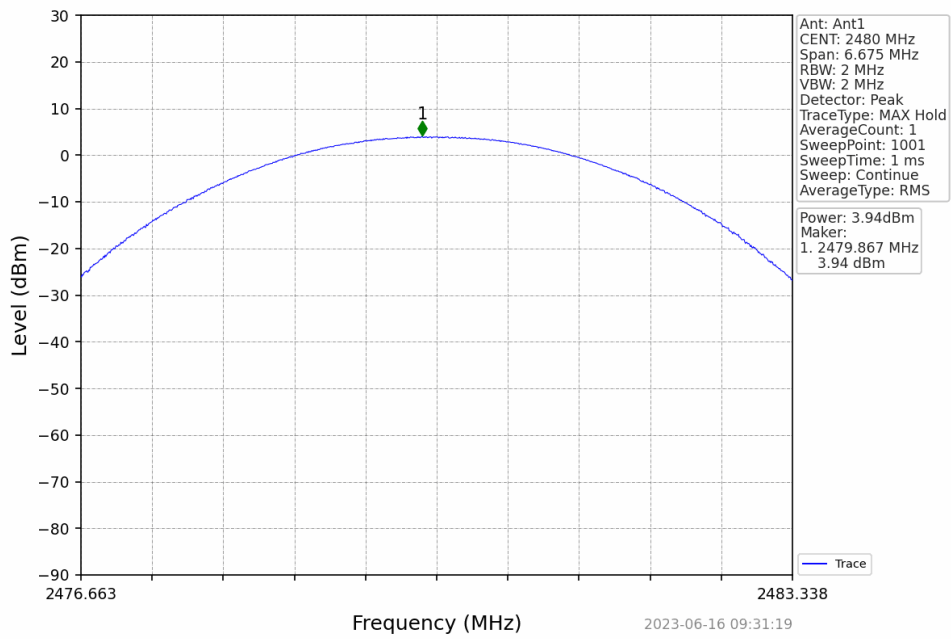
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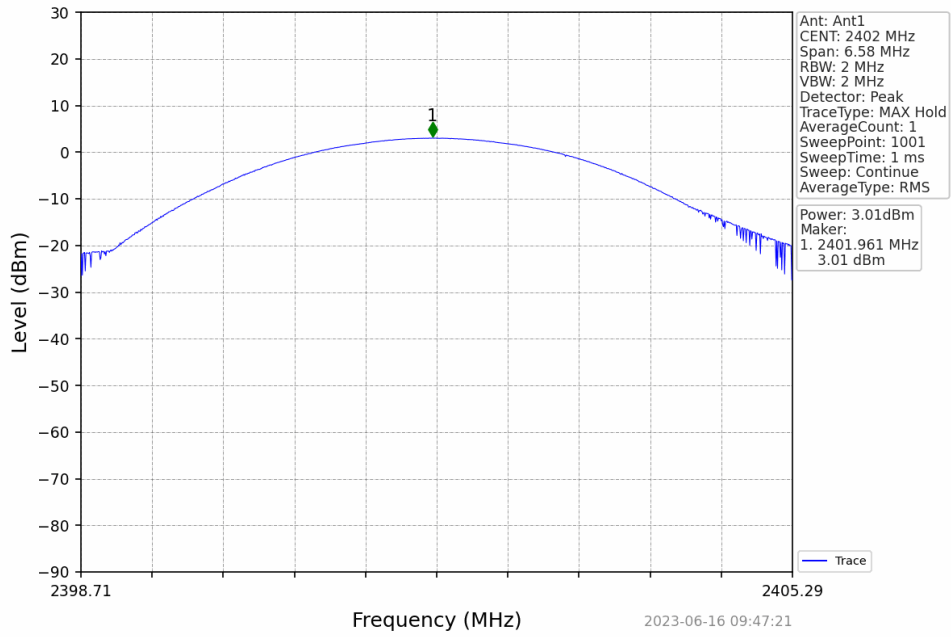
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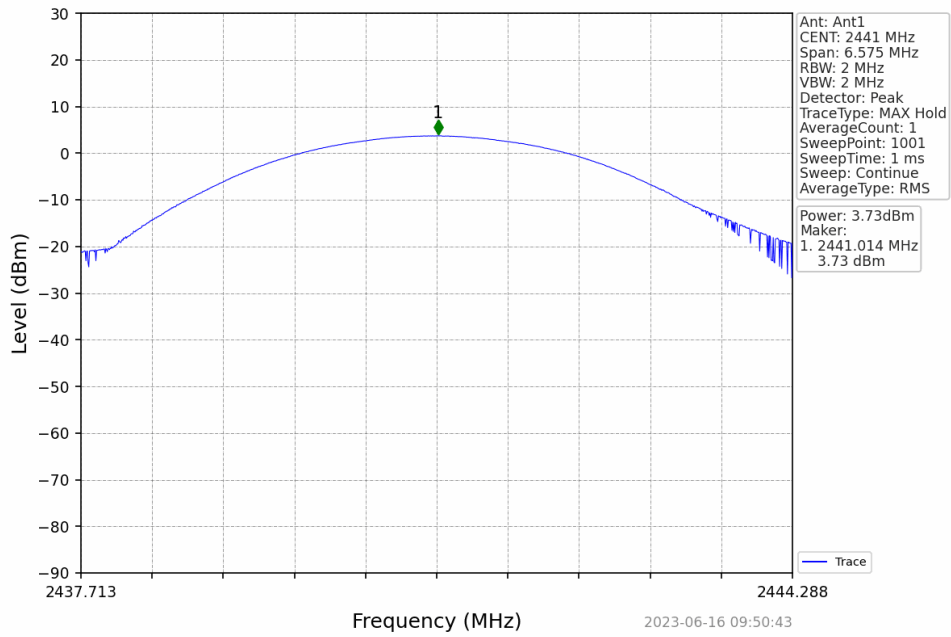
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8DPSK_3DH5_LCH_2402MHz_Ant1_NTNV

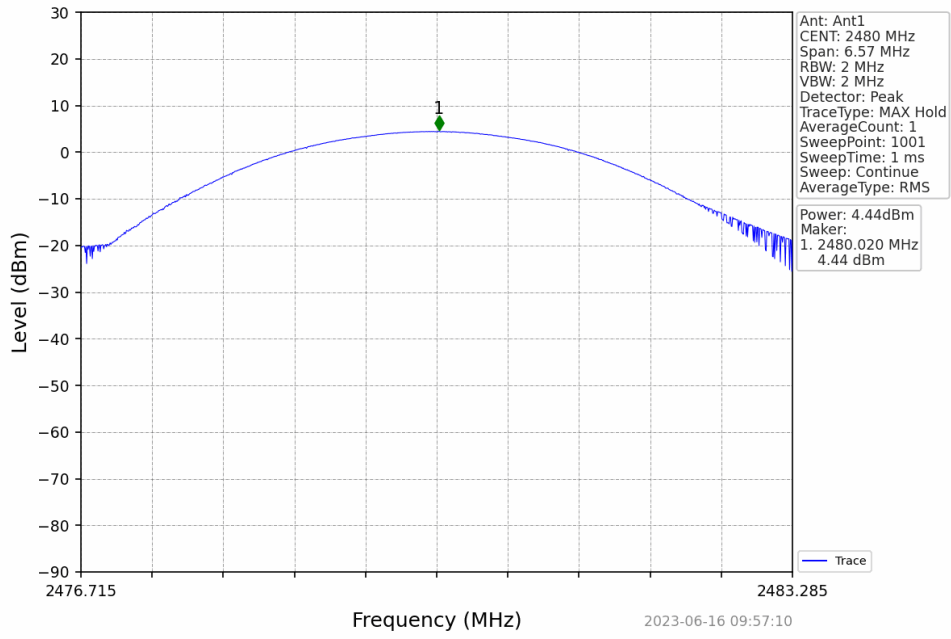


8DPSK_3DH5_MCH_2441MHz_Ant1_NTNV





8DPSK_3DH5_HCH_2480MHz_Ant1_NTNV

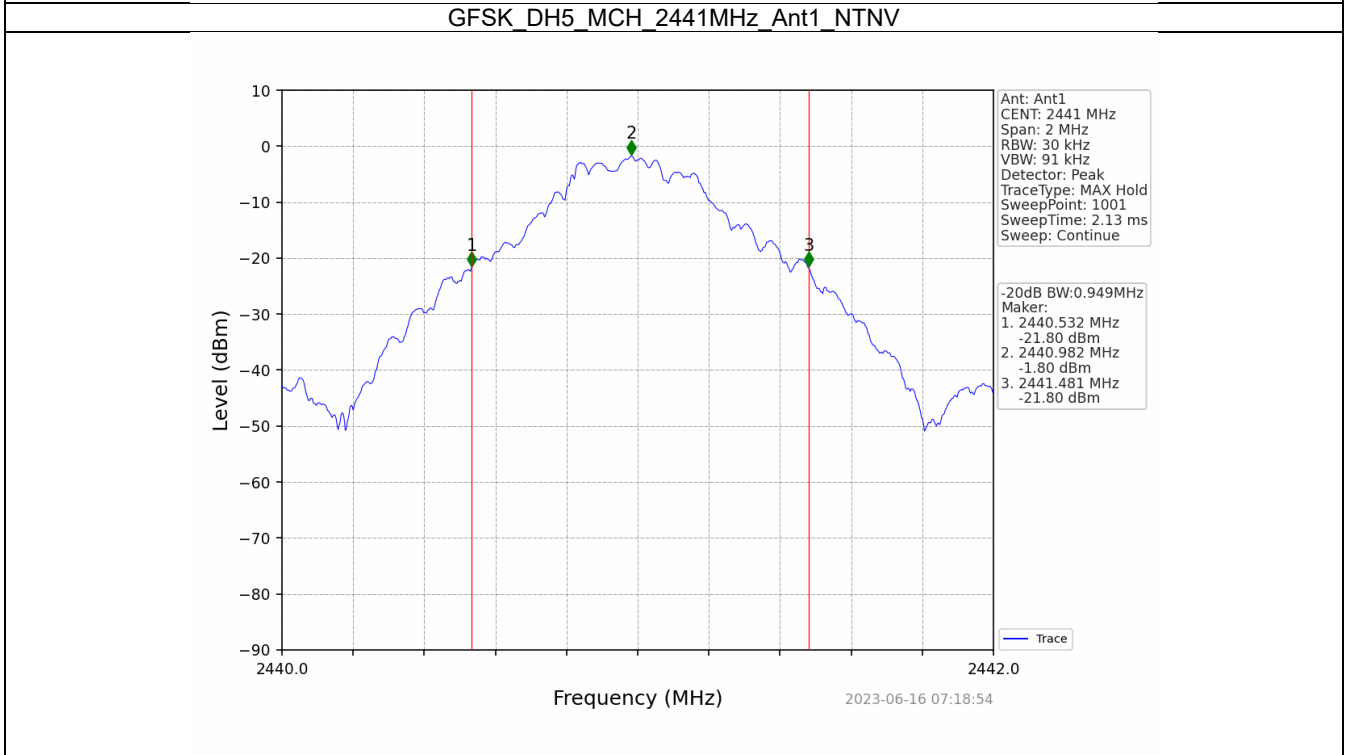
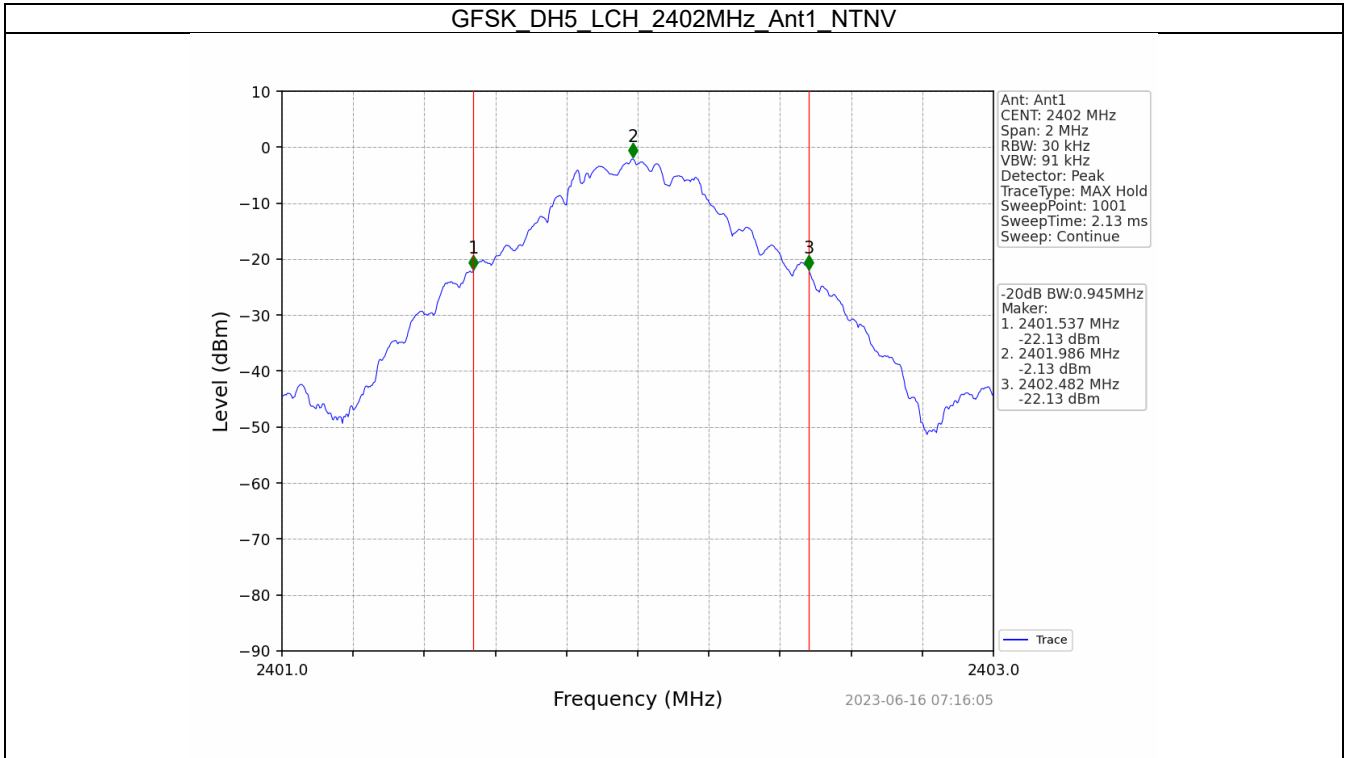


2 20dB Bandwidth

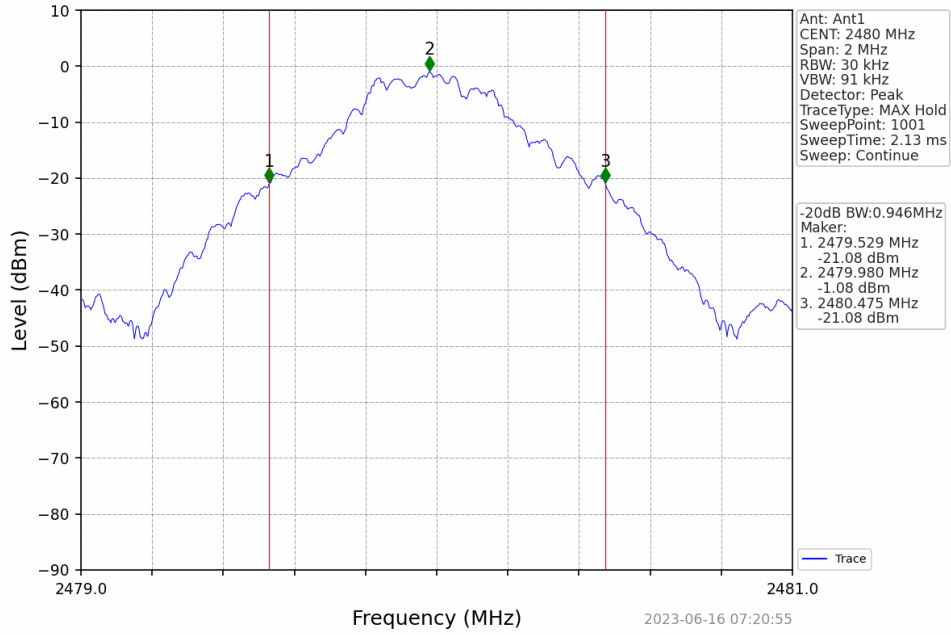
2.1 Test Result

Mode	Channel.	20dB Bandwidth [MHz]	Limit [MHz]	Verdict
GFSK	LCH	0.945	Not Specified	Pass
	MCH	0.949	Not Specified	Pass
	HCH	0.946	Not Specified	Pass
Pi/4DQPSK	LCH	1.329	Not Specified	Pass
	MCH	1.329	Not Specified	Pass
	HCH	1.335	Not Specified	Pass
8DPSK	LCH	1.316	Not Specified	Pass
	MCH	1.315	Not Specified	Pass
	HCH	1.314	Not Specified	Pass

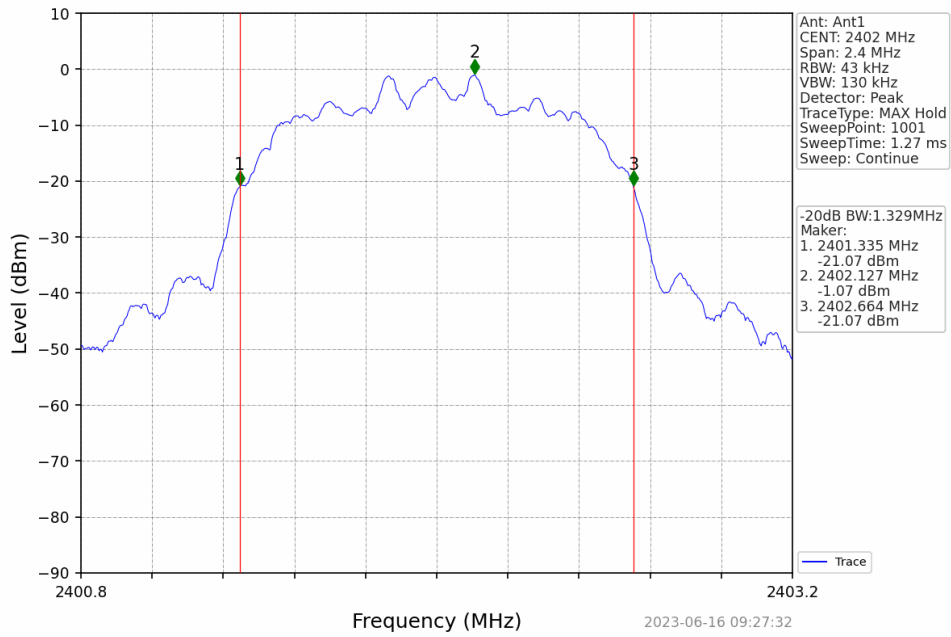
2.2 Test Graphs



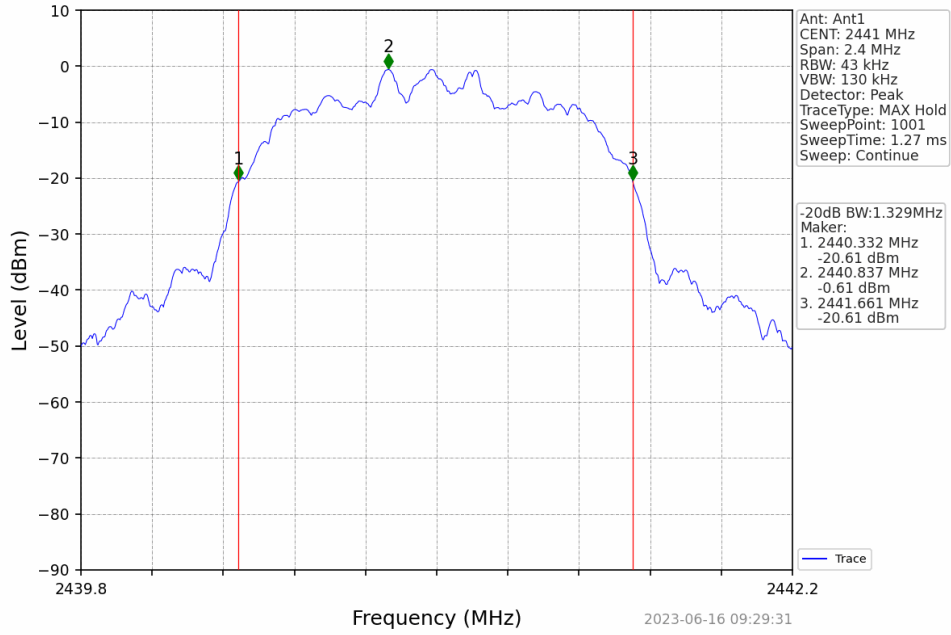
GFSK_DH5_HCH_2480MHz_Ant1_NTNV



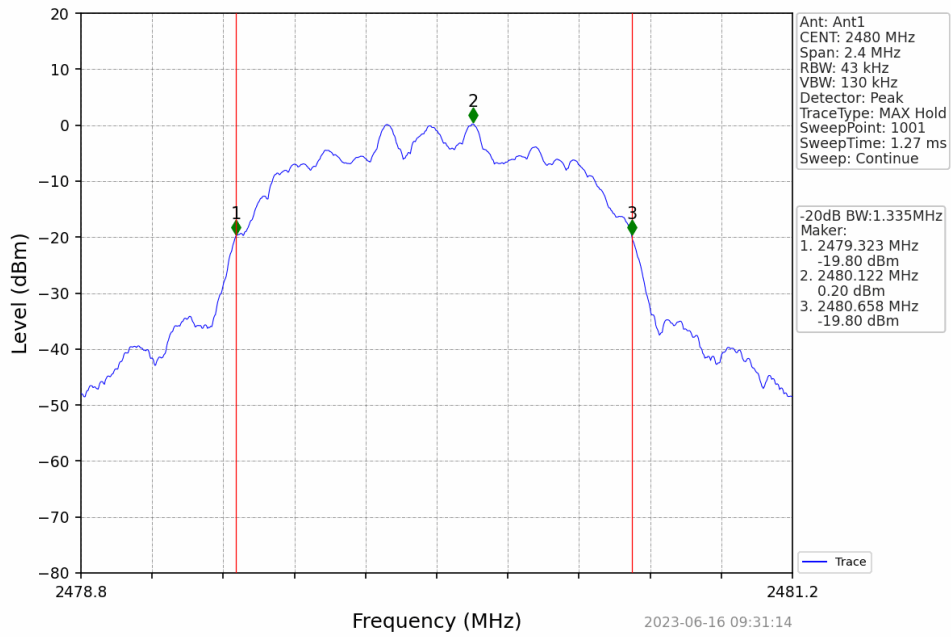
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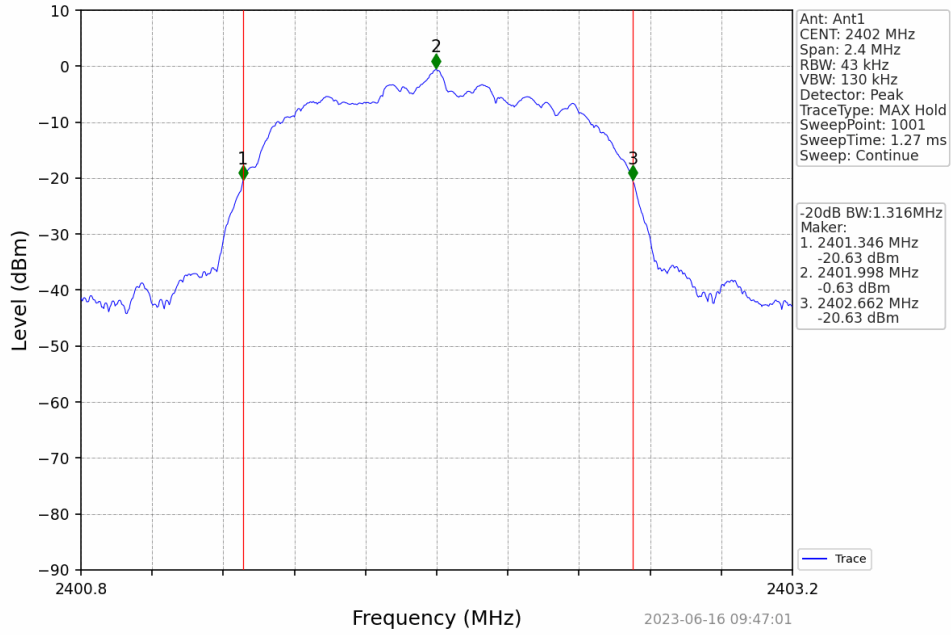
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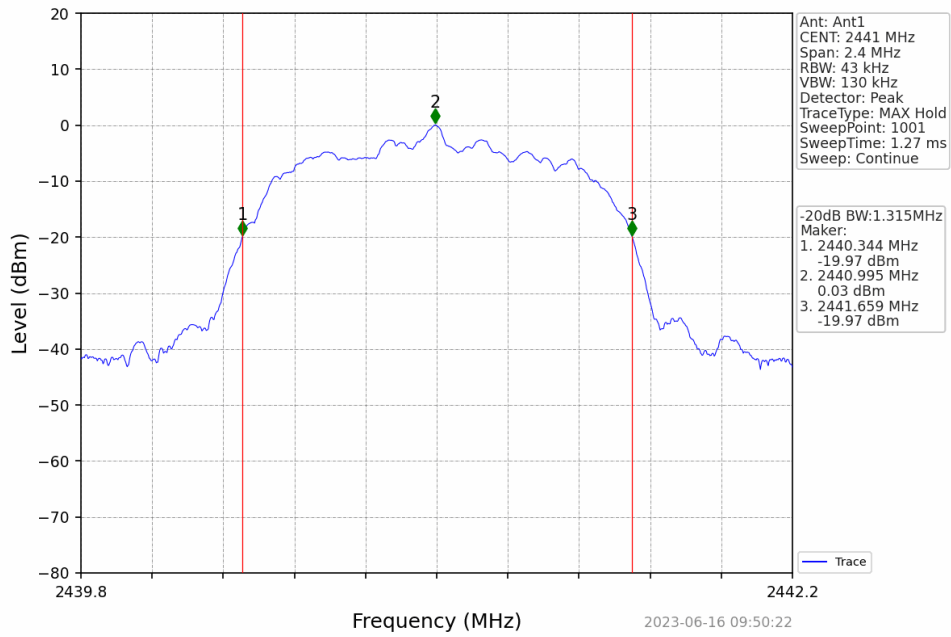
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8DPSK 3DH5_LCH_2402MHz_Ant1_NTNV

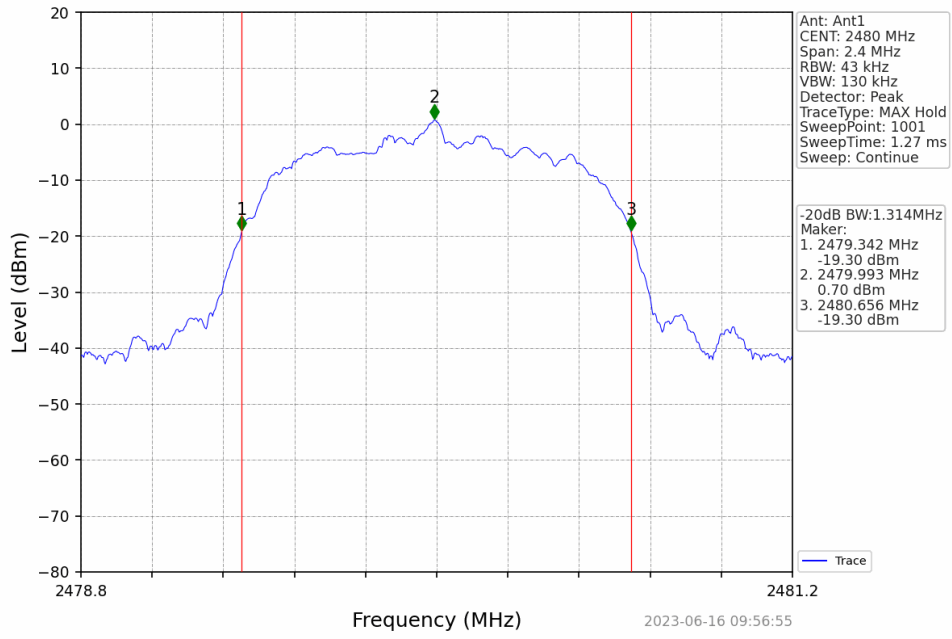


8DPSK 3DH5_MCH_2441MHz_Ant1_NTNV





8DPSK_3DH5_HCH_2480MHz_Ant1_NTNV

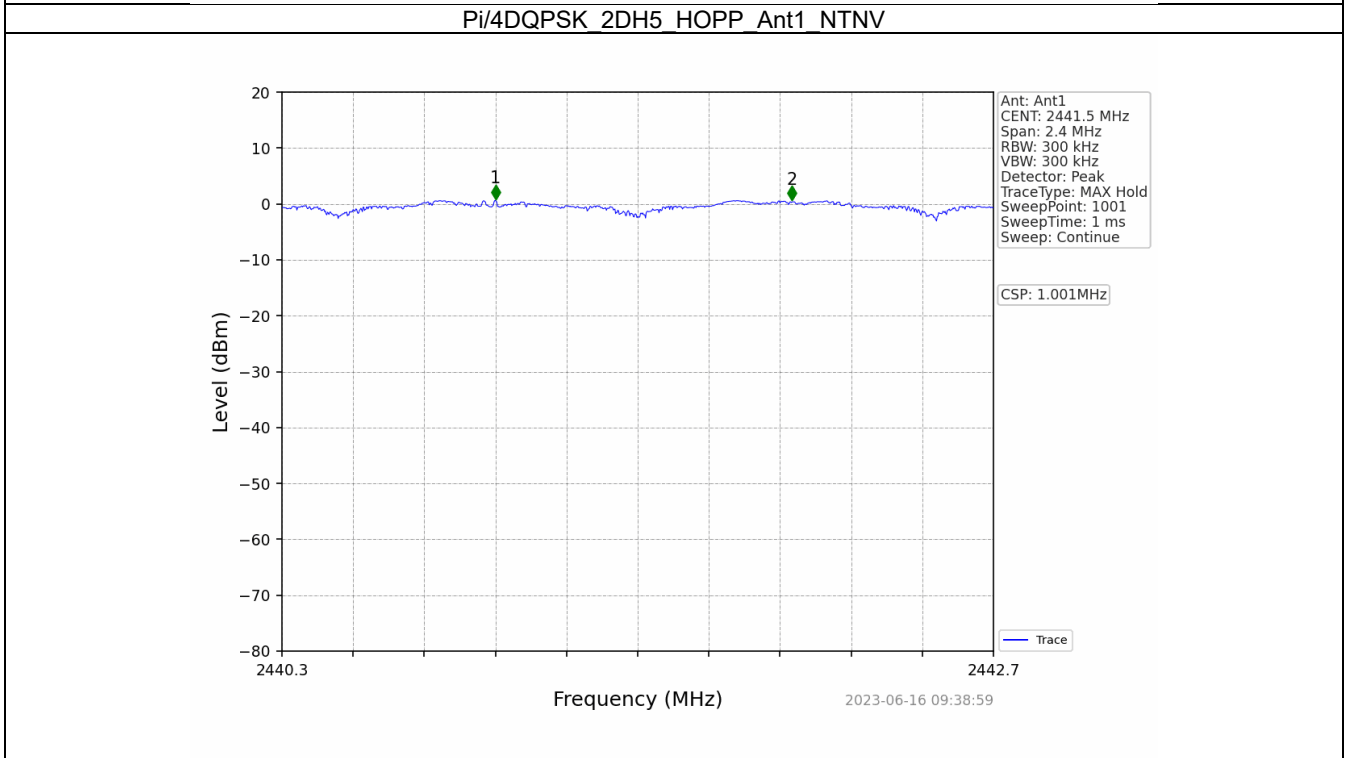
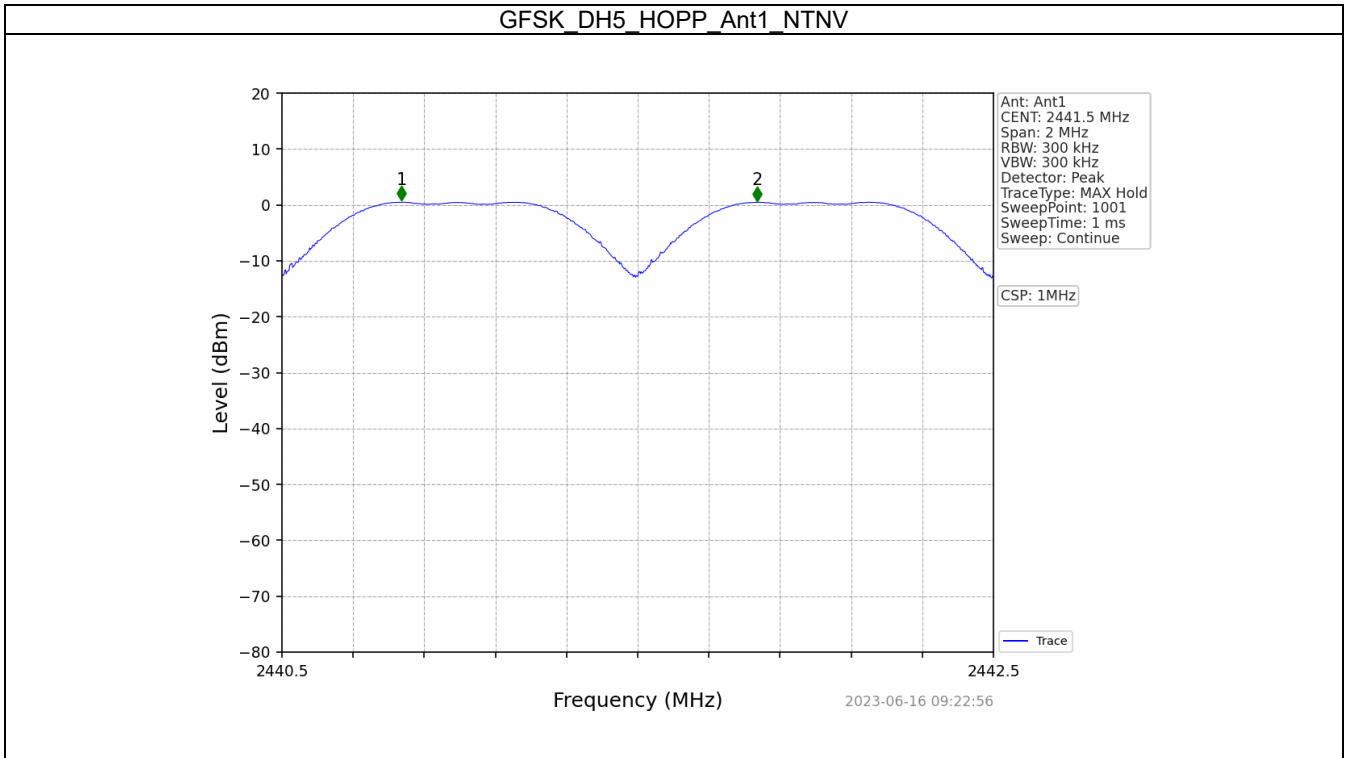


3 Carrier Frequency Separation

3.1 Test Result

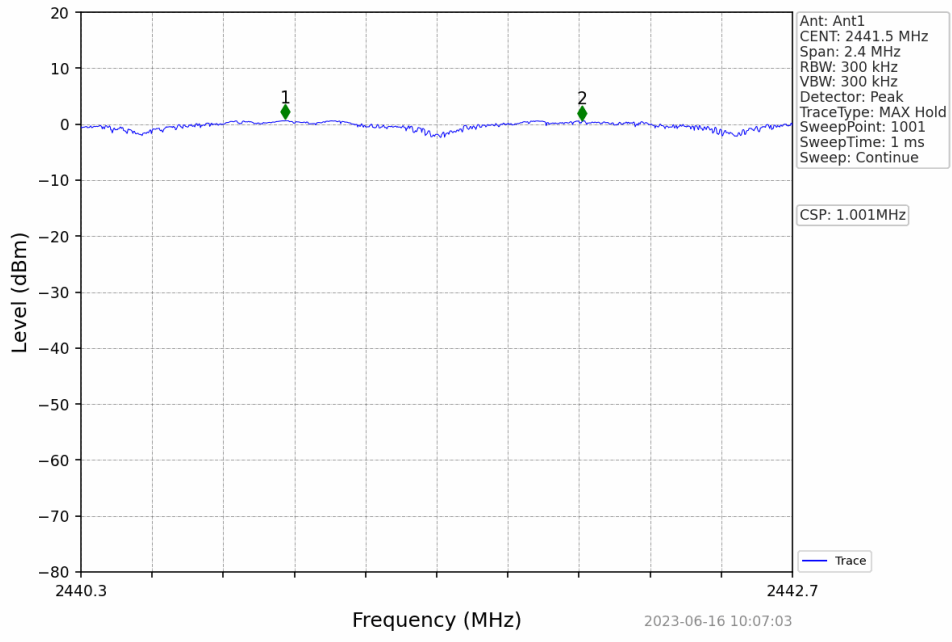
Mode	Channel.	Carrier Frequency Separation [MHz]	Limit [MHz]	Verdict
GFSK	MCH	1.000	≥ 0.949	Pass
Pi/4DQPSK	MCH	1.001	≥ 0.890	Pass
8DPSK	MCH	1.001	≥ 0.877	Pass

3.2 Test Graphs





8DPSK 3DH5_HOPP_Ant1_NTNV

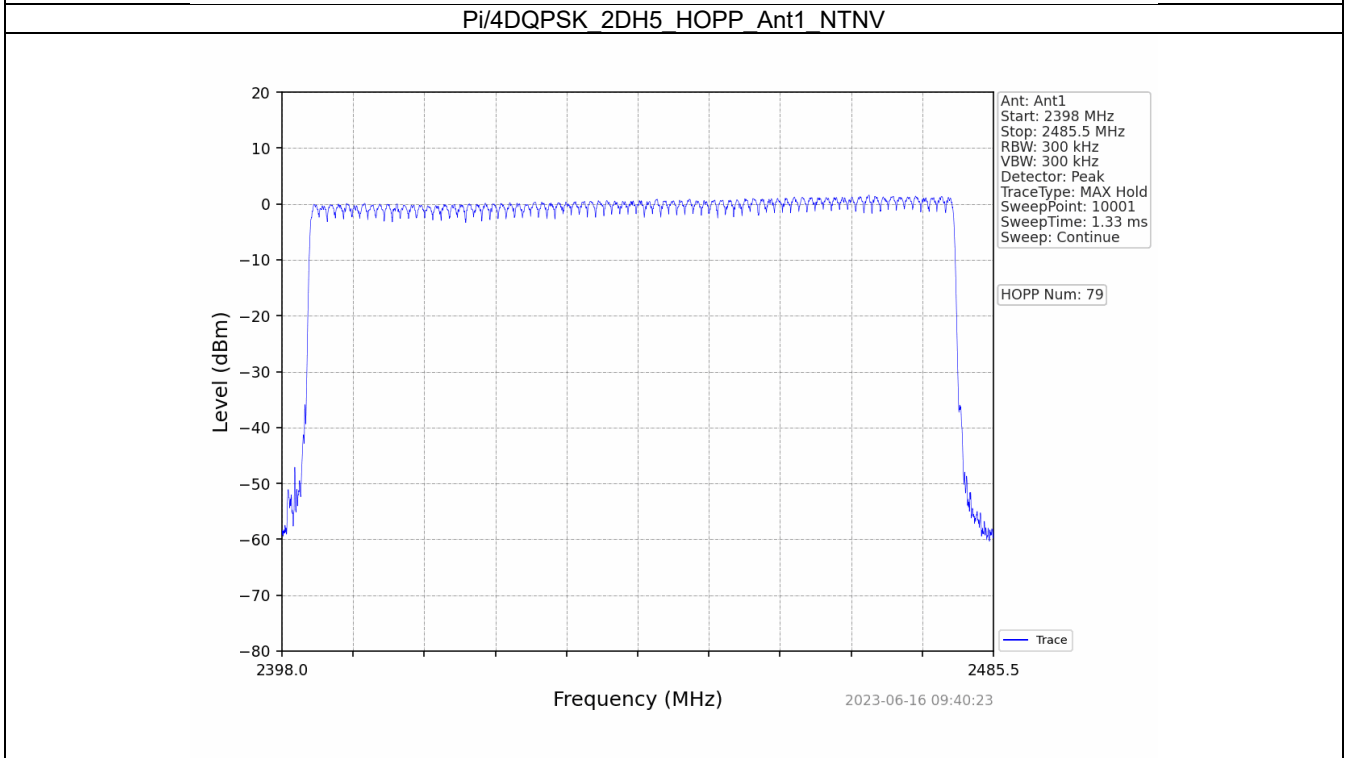
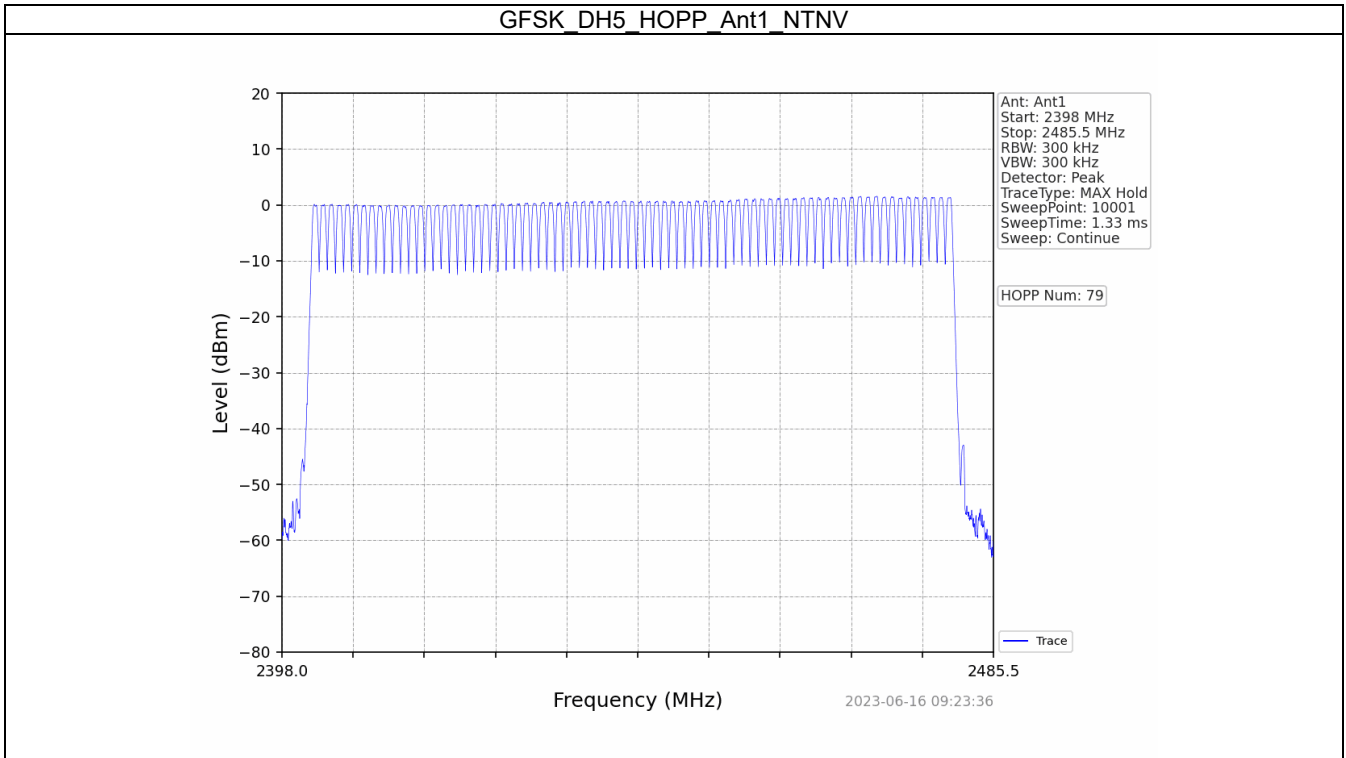


4 Hopping Channel Number

4.1 Test Result

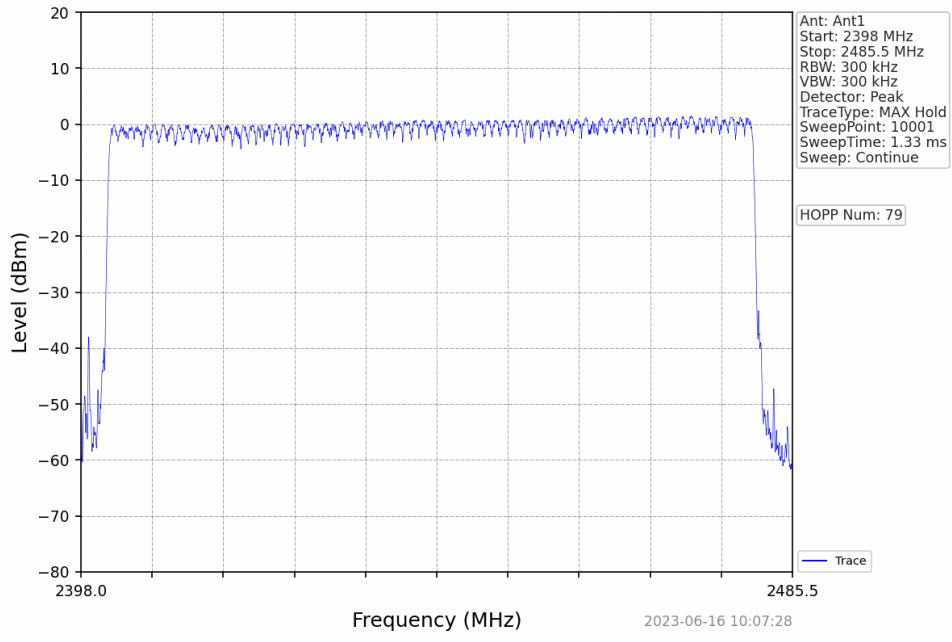
Mode	Channel.	Number of Hopping Channel [N]	Limit [N]	Verdict
GFSK	Hop	79	≥ 15	PASS
Pi/4DQPSK	Hop	79	≥ 15	PASS
8DPSK	Hop	79	≥ 15	PASS

4.2 Test Graphs





8DPSK 3DH5_HOPP_Ant1_NTNV

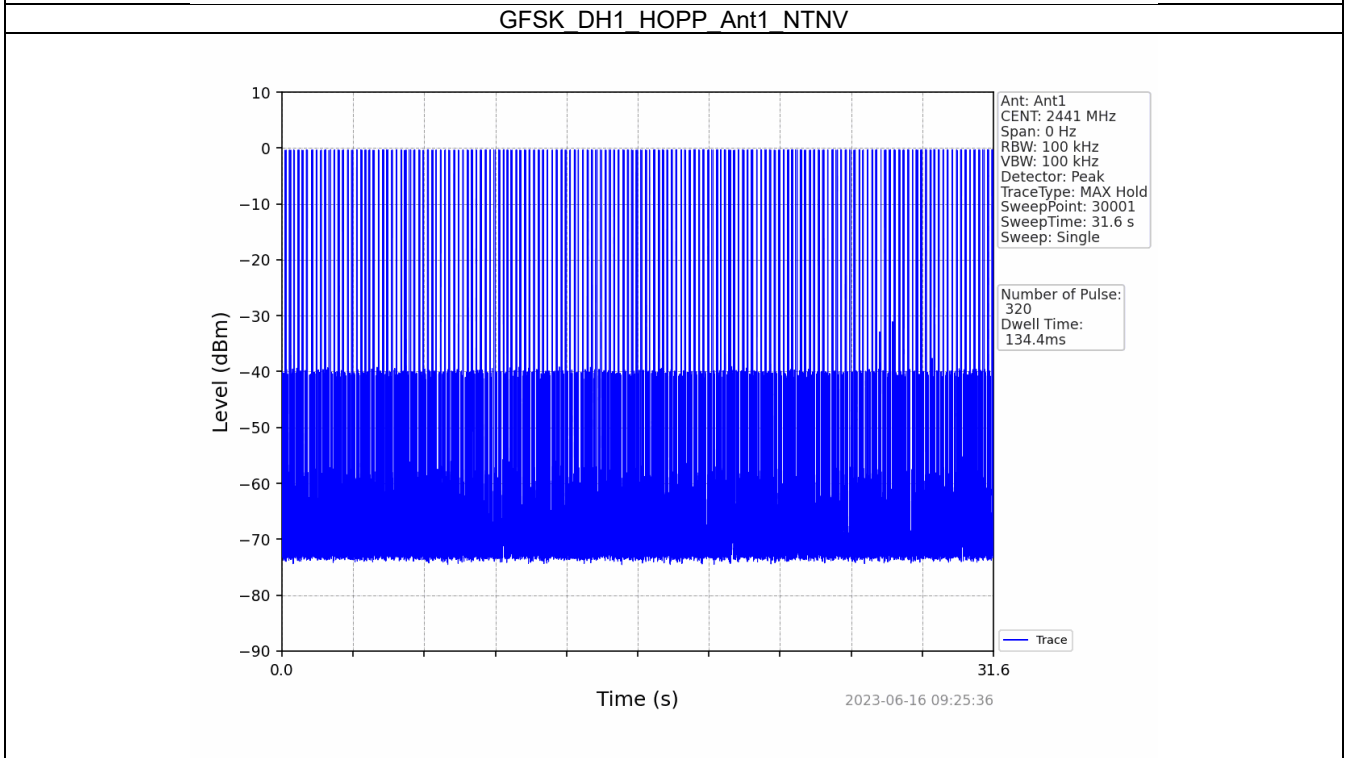
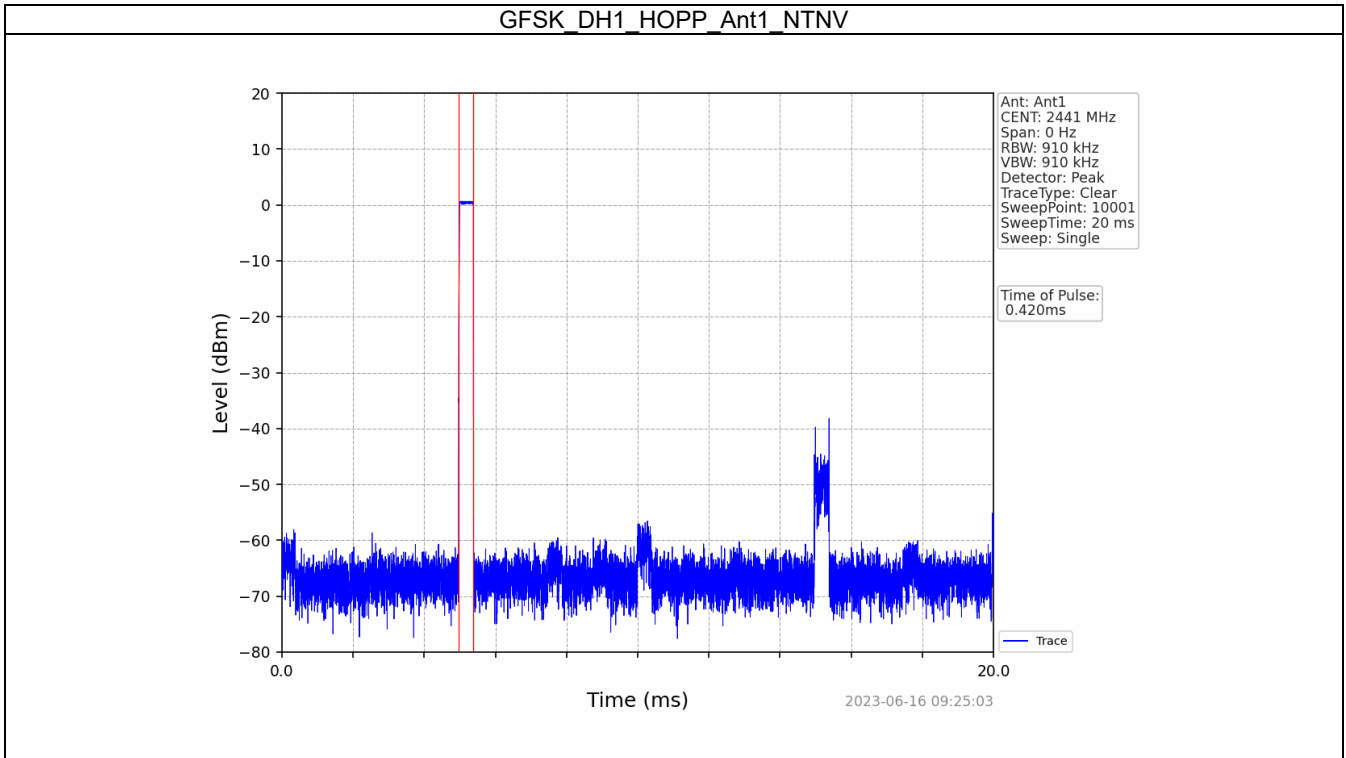


5 Dwell Time

5.1 Test Result

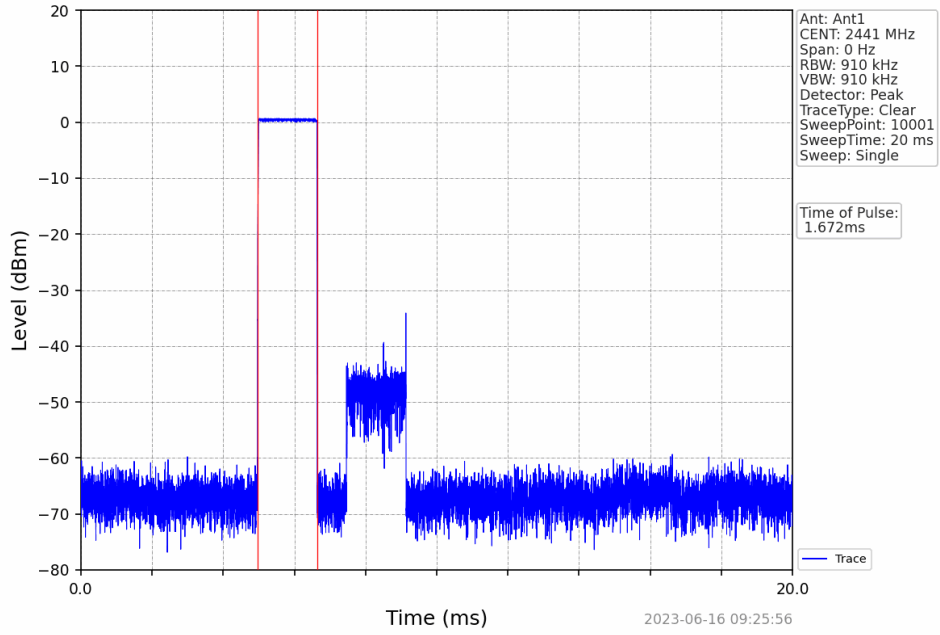
Mode	Packet	Channel	Duration of Single Pulse (ms)	Observation Period (s)	Num of Pulse in Observation Period	Dwell Time[ms]	Limit [s]	Verdict
GFSK	DH5	LCH	0.420	31.600	320	134.400	0.4	Pass
		MCH	1.672	31.600	157	262.504	0.4	Pass
		HCH	2.924	31.600	94	274.856	0.4	Pass
Pi/4DQ PSK	2DH5	LCH	0.424	31.600	320	135.680	0.4	Pass
		MCH	1.678	31.600	158	265.124	0.4	Pass
		HCH	2.930	31.600	98	287.140	0.4	Pass
8DPSK	3DH5	LCH	0.428	31.600	320	136.960	0.4	Pass
		MCH	1.682	31.600	158	265.756	0.4	Pass
		HCH	2.928	31.600	107	313.296	0.4	Pass

5.2 Test Graphs

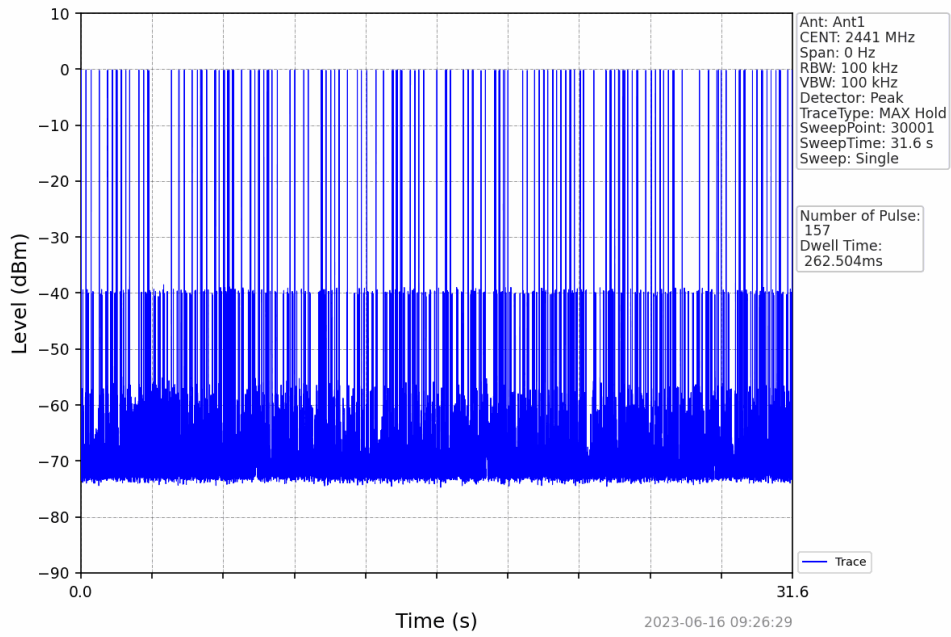




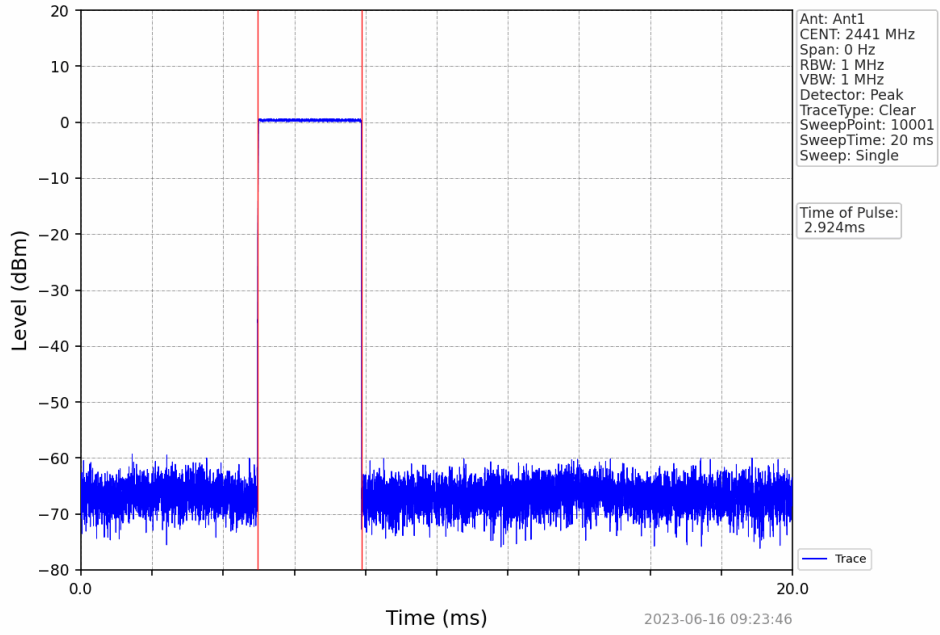
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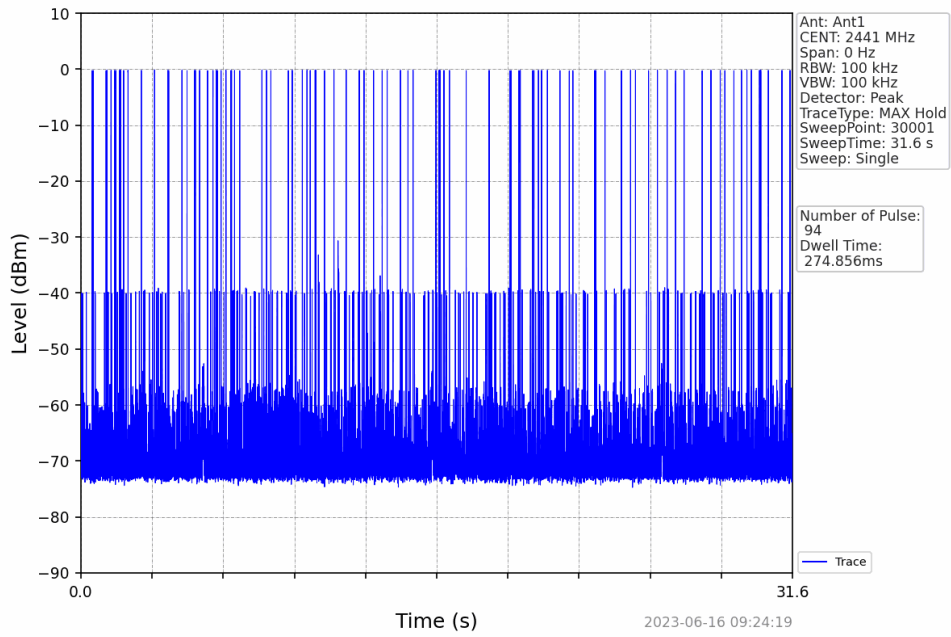
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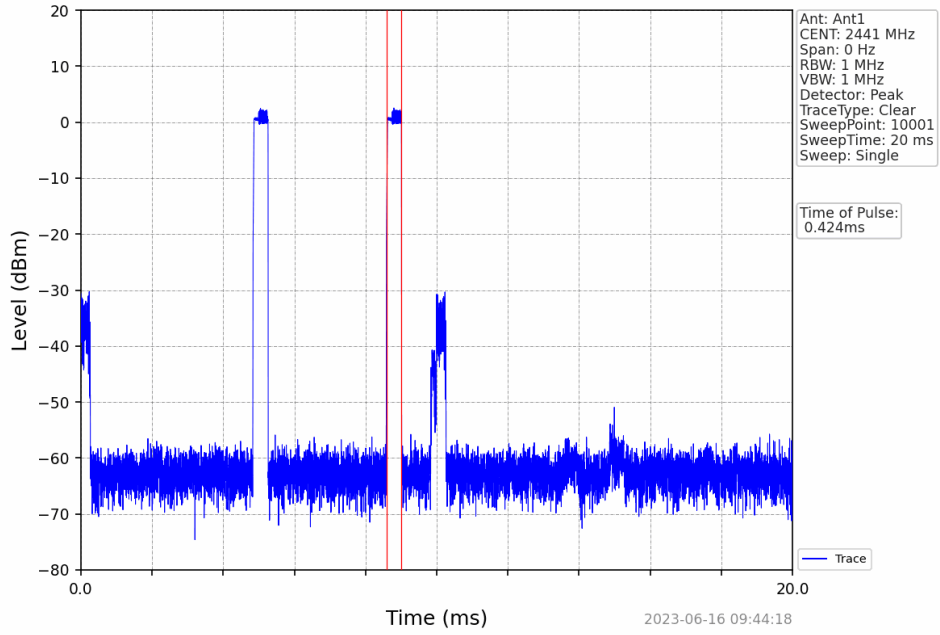
GFSK_DH5_HOPP_Ant1_NTNV



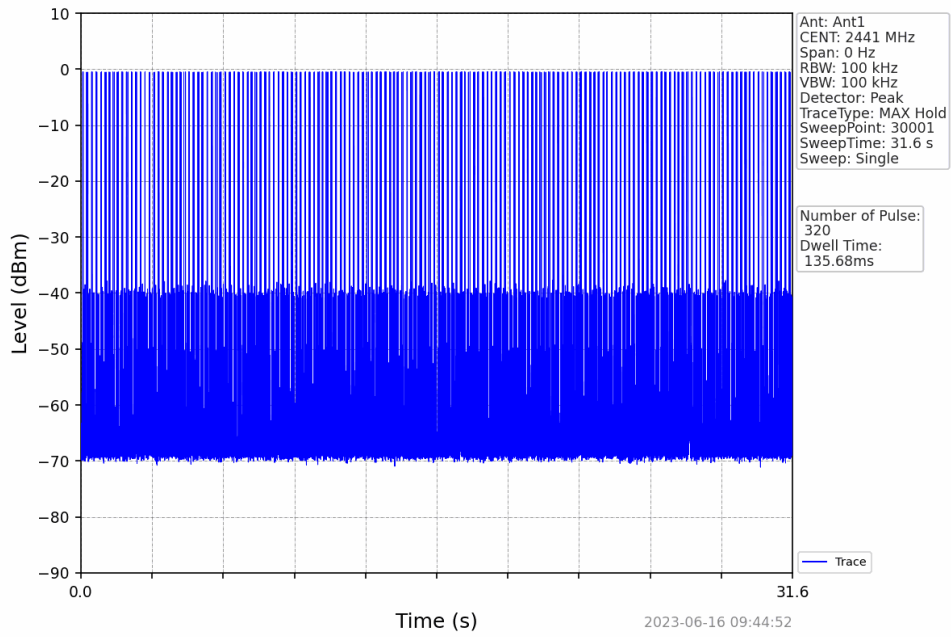
GFSK_DH5_HOPP_Ant1_NTNV



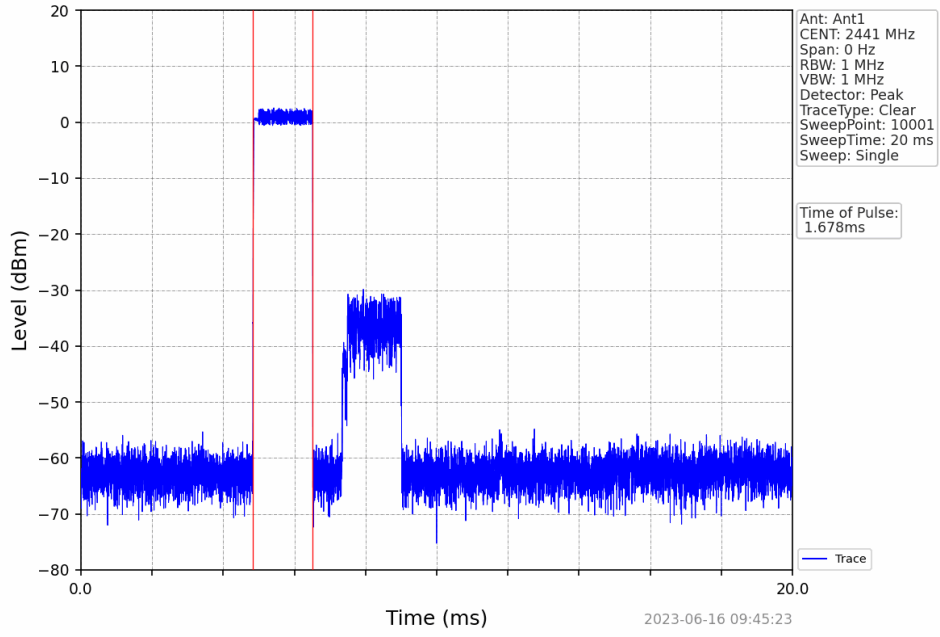
Pi/4DQPSK_2DH1_HOPP_Ant1_NTNV



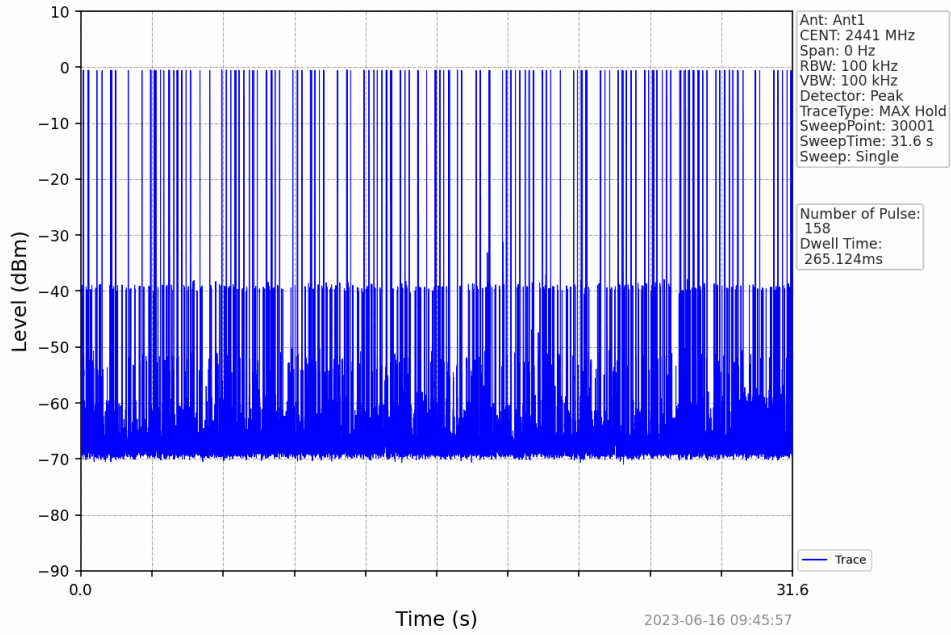
Pi/4DQPSK_2DH1_HOPP_Ant1_NTNV



Pi/4DQPSK_2DH3_HOPP_Ant1_NTNV

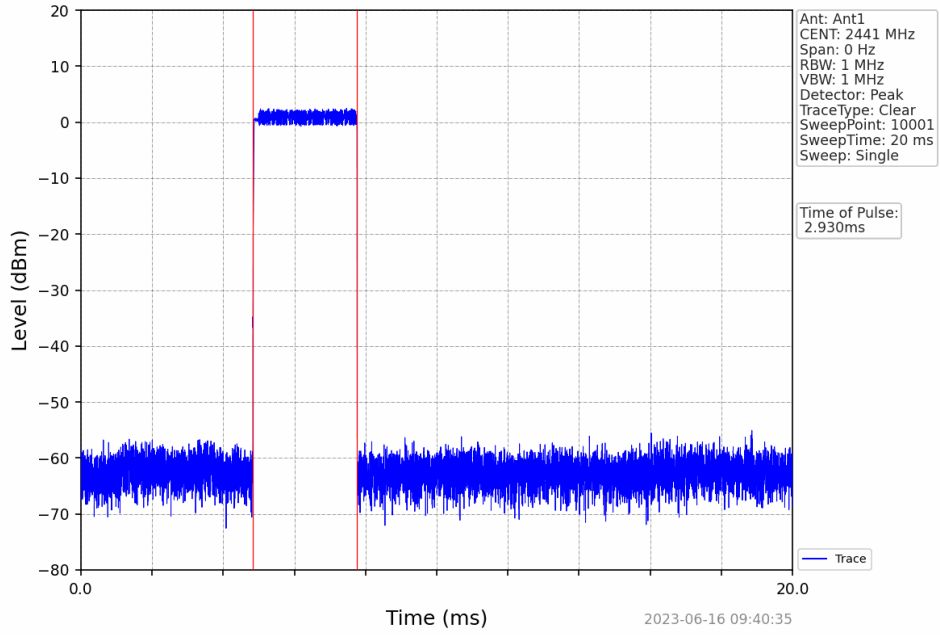


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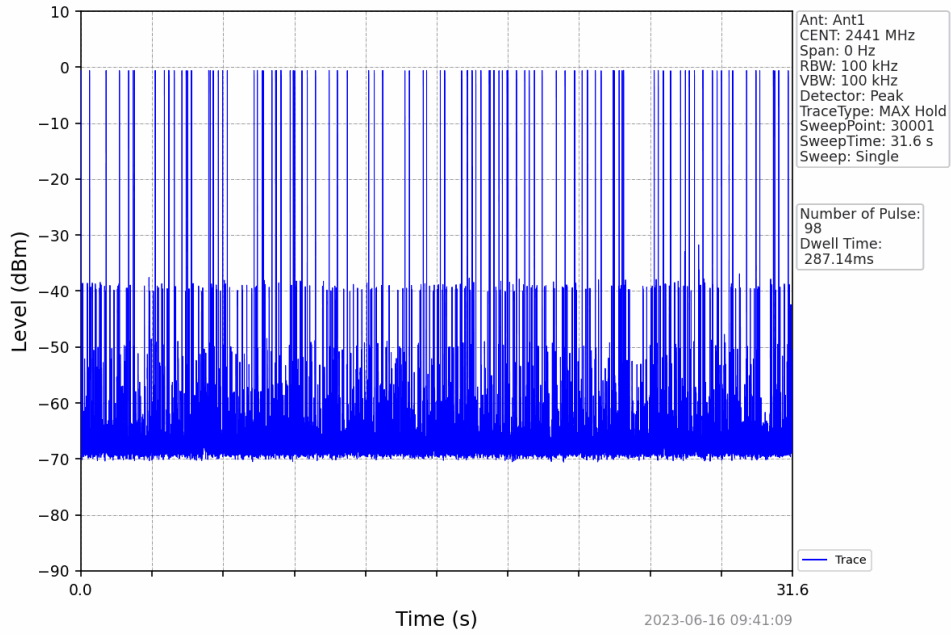




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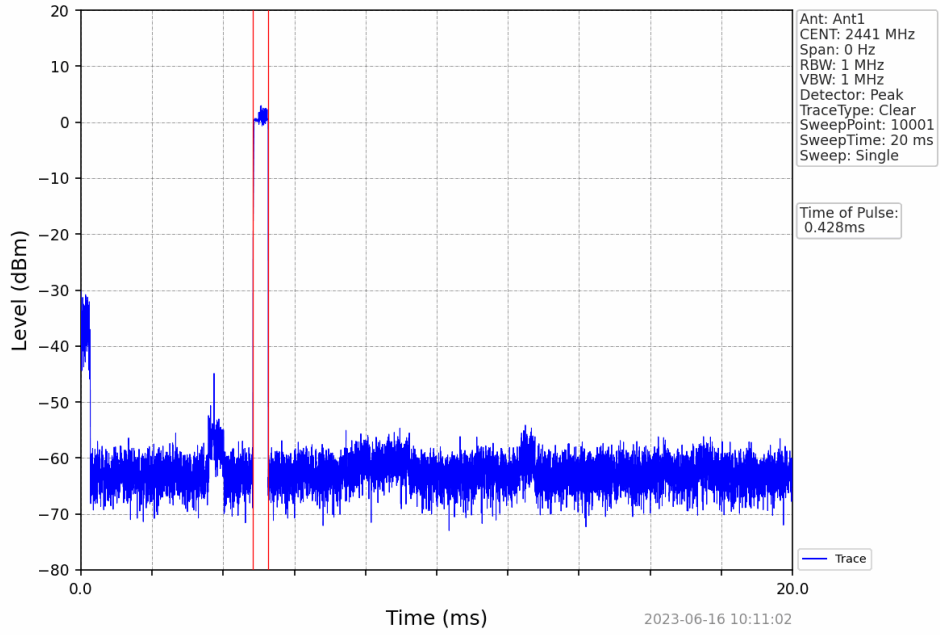


Pi/4DQPSK_2DH5_HOPP_Ant1_NTNV

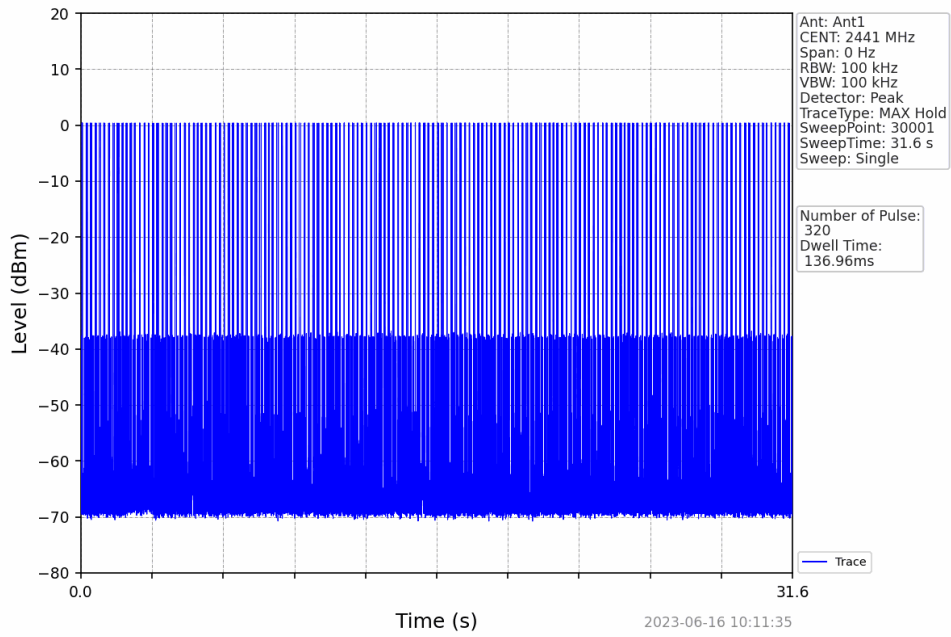




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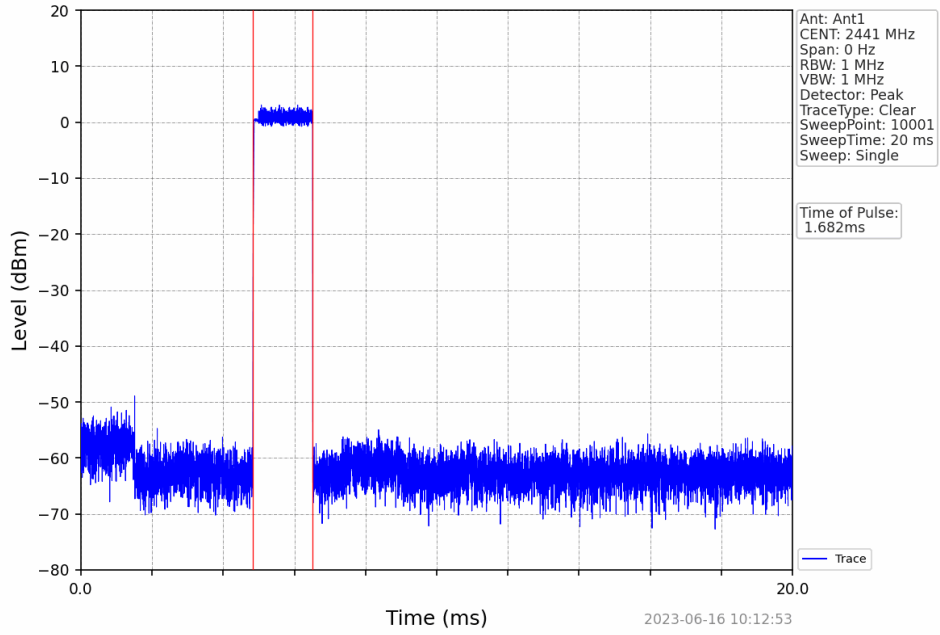


8DPSK 3DH1_HOPP_Ant1_NTNV

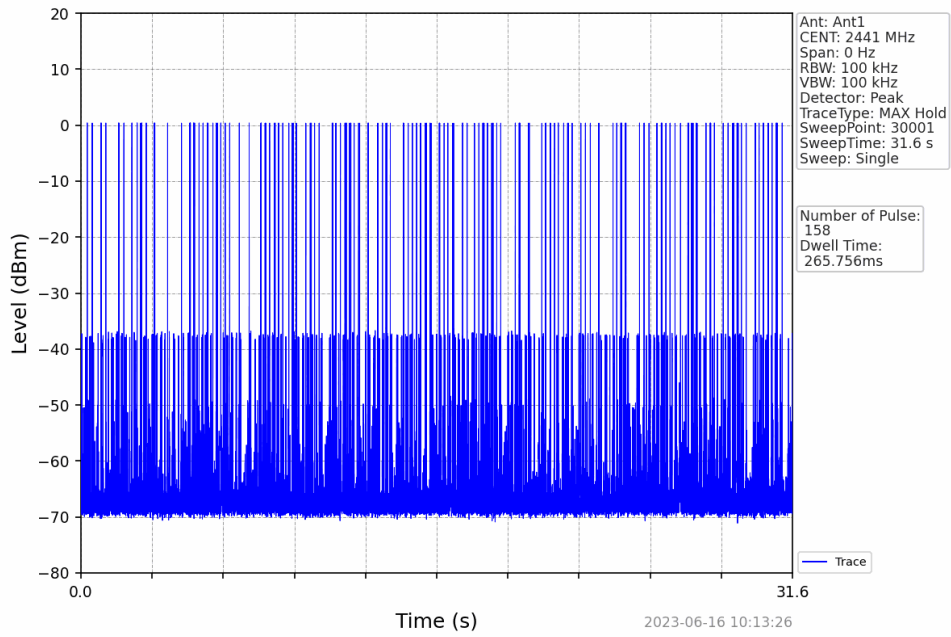




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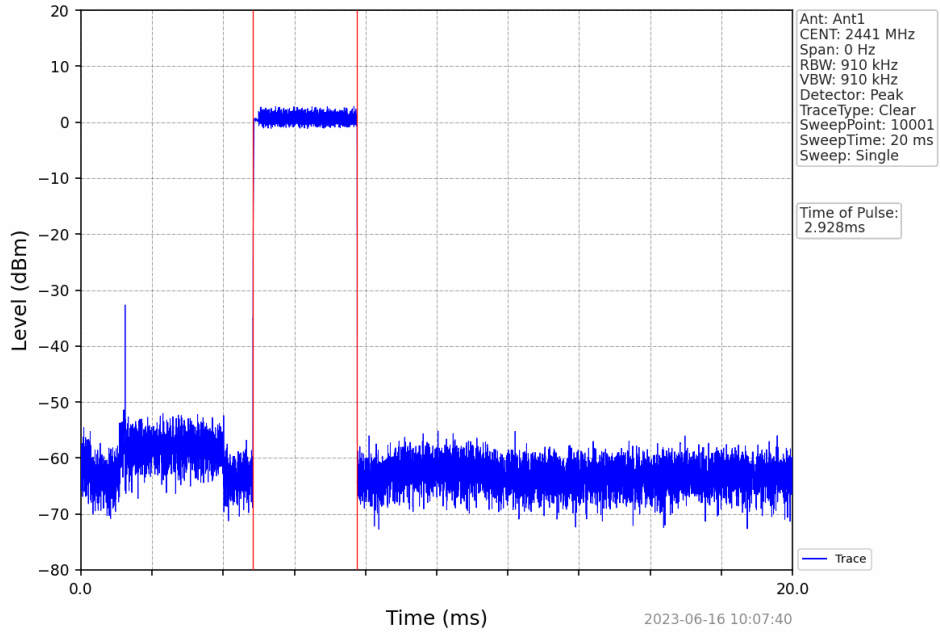


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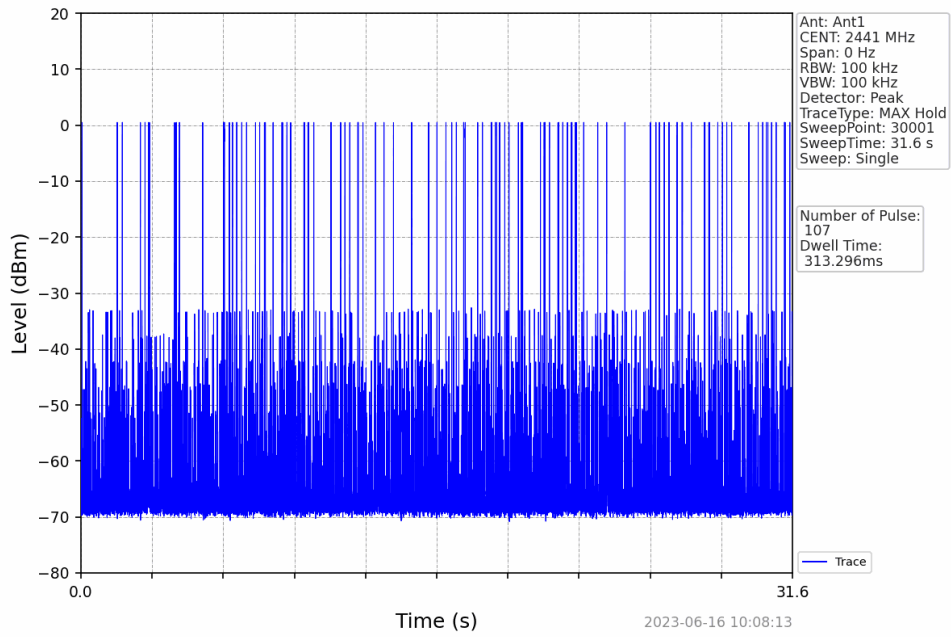




8DPSK_3DH5_HOPP_Ant1_NTNV



8DPSK_3DH5_HOPP_Ant1_NTNV

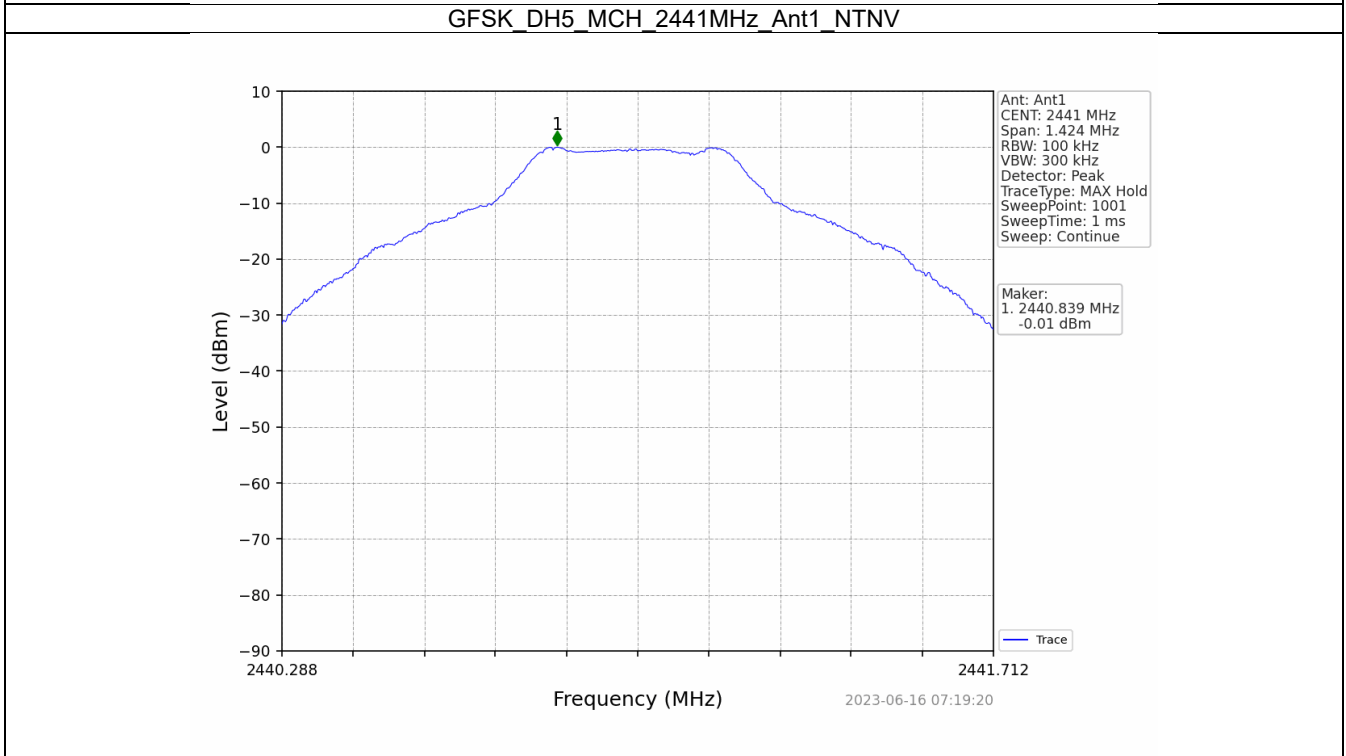
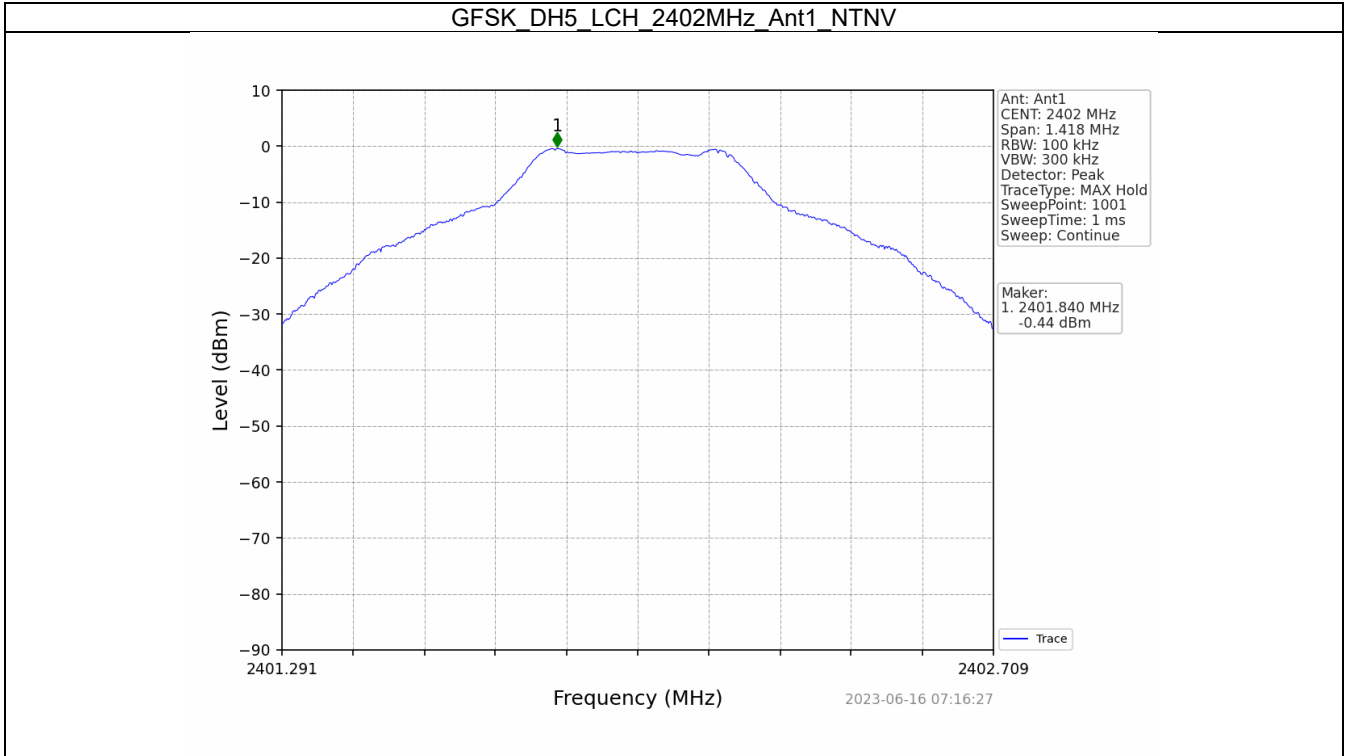


6 Conducted Spurious Emissions and Band Edges Test

6.1 Test Result

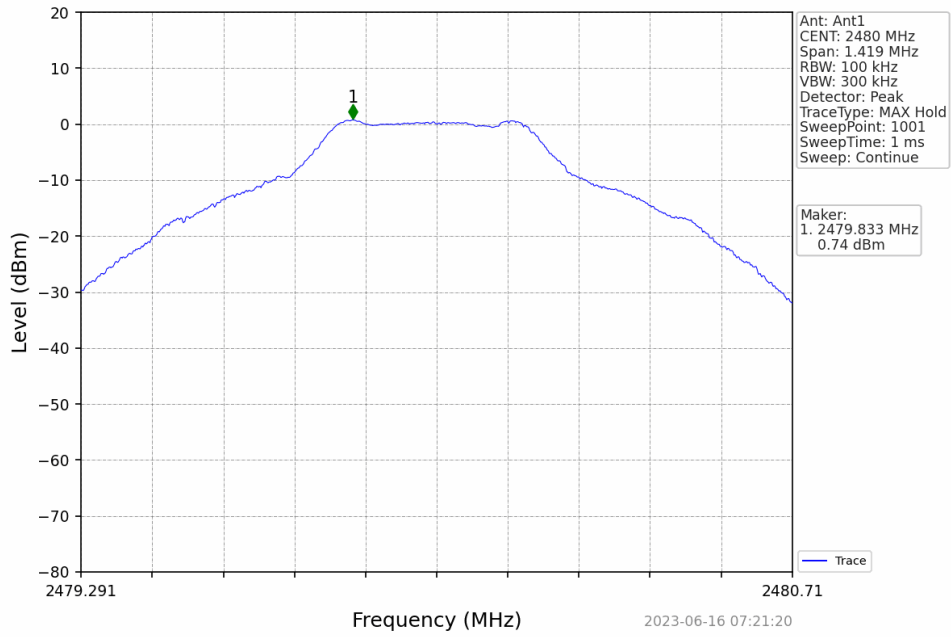
Mode	Channel	Max. Level [dBc]	Limit [dBc]	Verdict
GFSK	LCH	-0.44	-20	Pass
	MCH	-0.01	-20	Pass
	HCH	0.74	-20	Pass
Pi/4DQPSK	LCH	-0.15	-20	Pass
	MCH	0.45	-20	Pass
	HCH	1.14	-20	Pass
8DPSK	LCH	-0.07	-20	Pass
	MCH	0.31	-20	Pass
	HCH	1.23	-20	Pass

6.2 Test Graphs

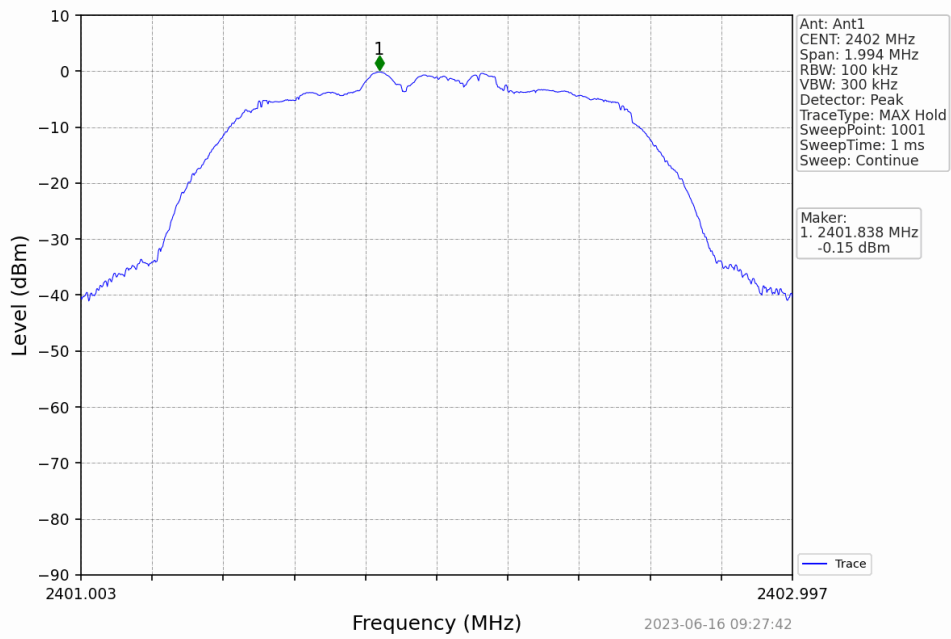




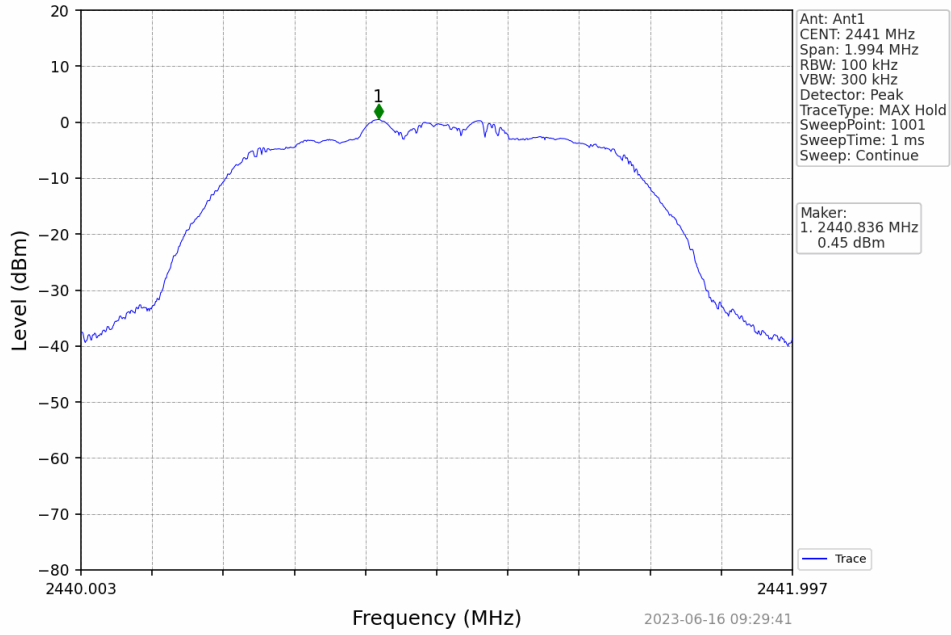
GFSK_DH5_HCH_2480MHz_Ant1_NTNV



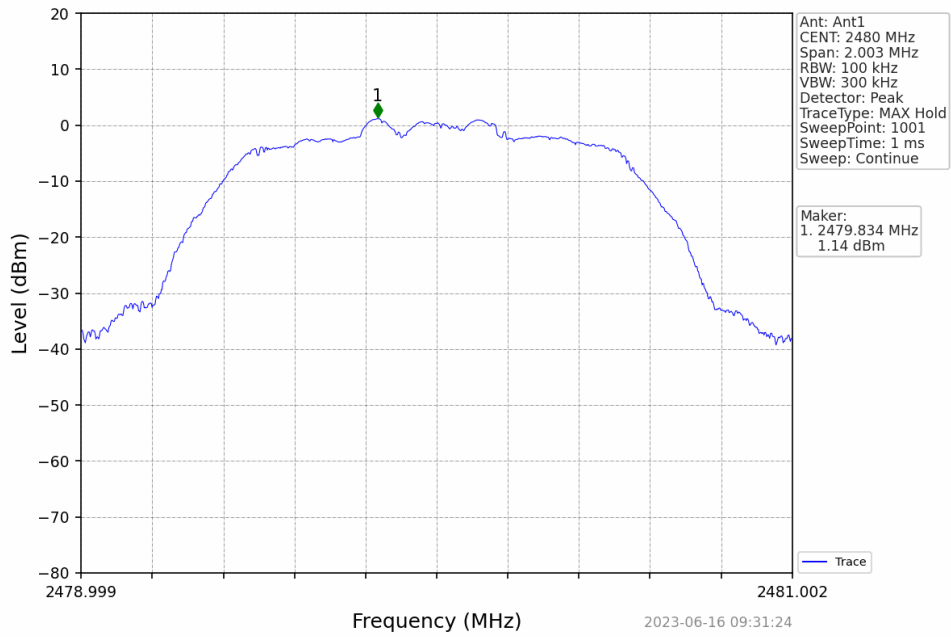
Pi/4DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV



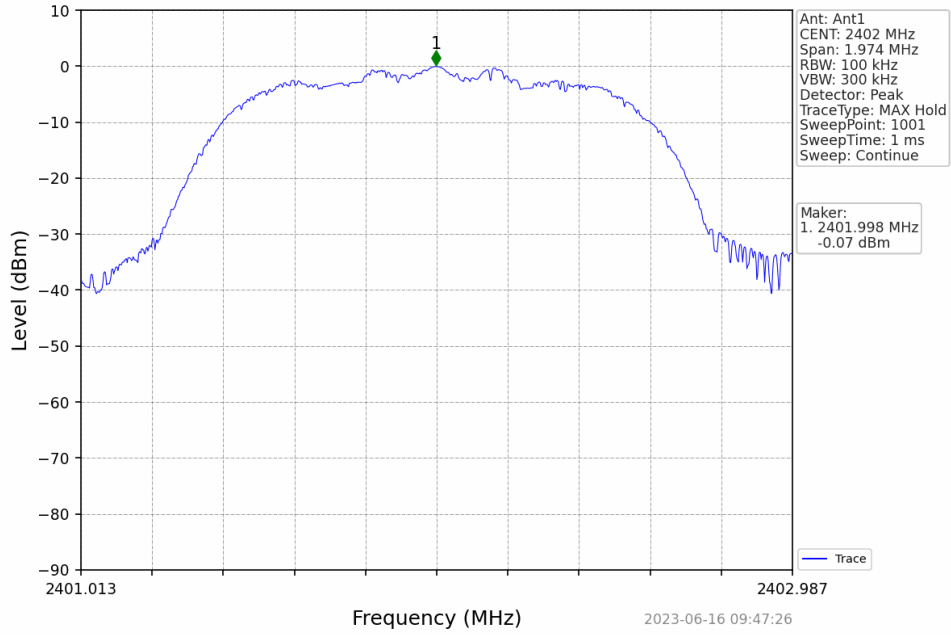
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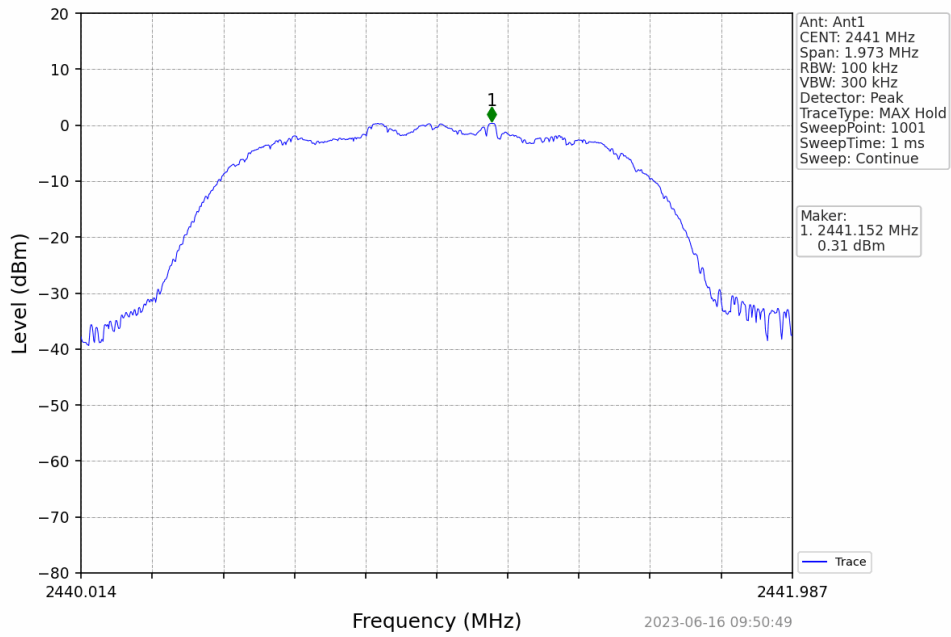
Pi/4DQPSK_2DH5_HCH_2480MHz_Ant1_NTNV



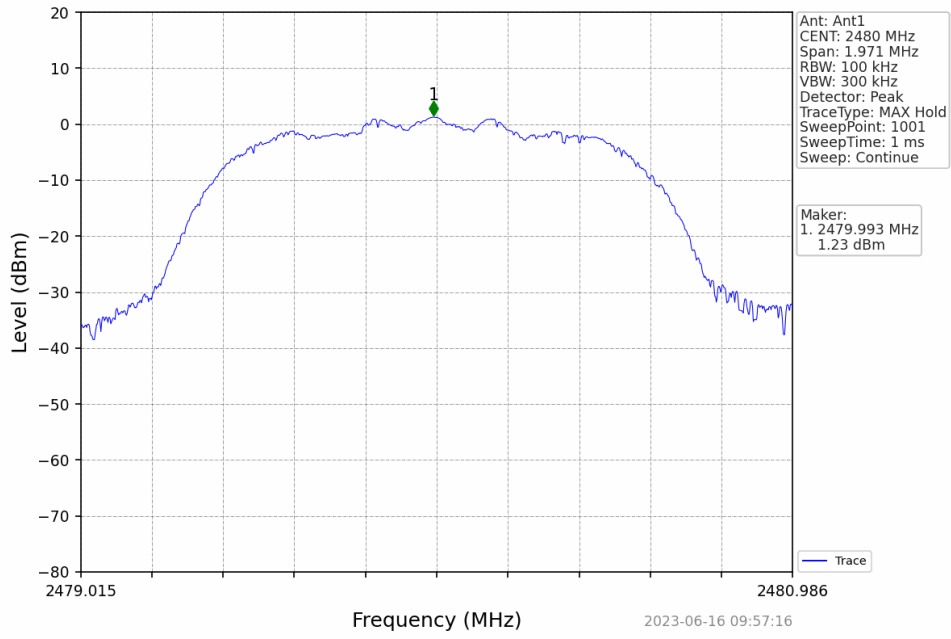
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8DPSK_3DH5_MCH_2441MHz_Ant1_NTNV



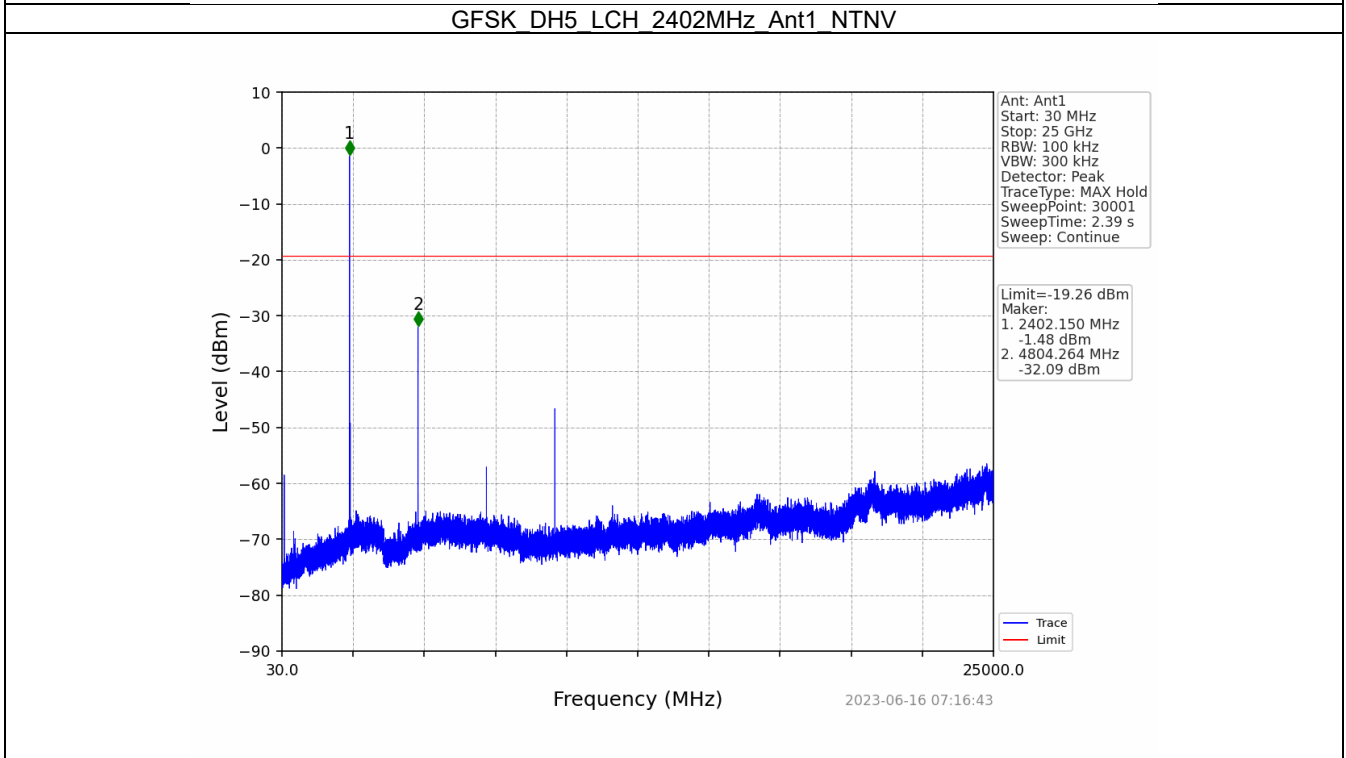
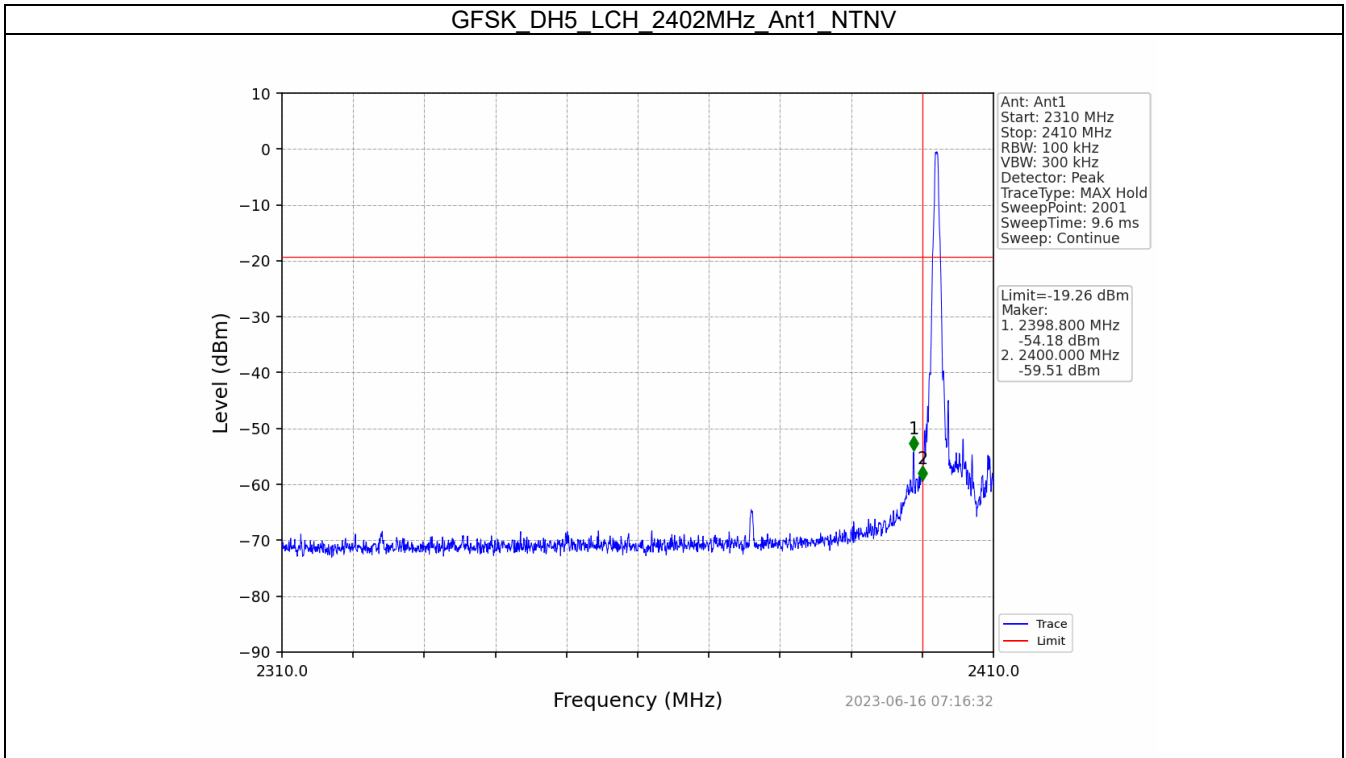
8DPSK_3DH5_HCH_2480MHz_Ant1_NTNV



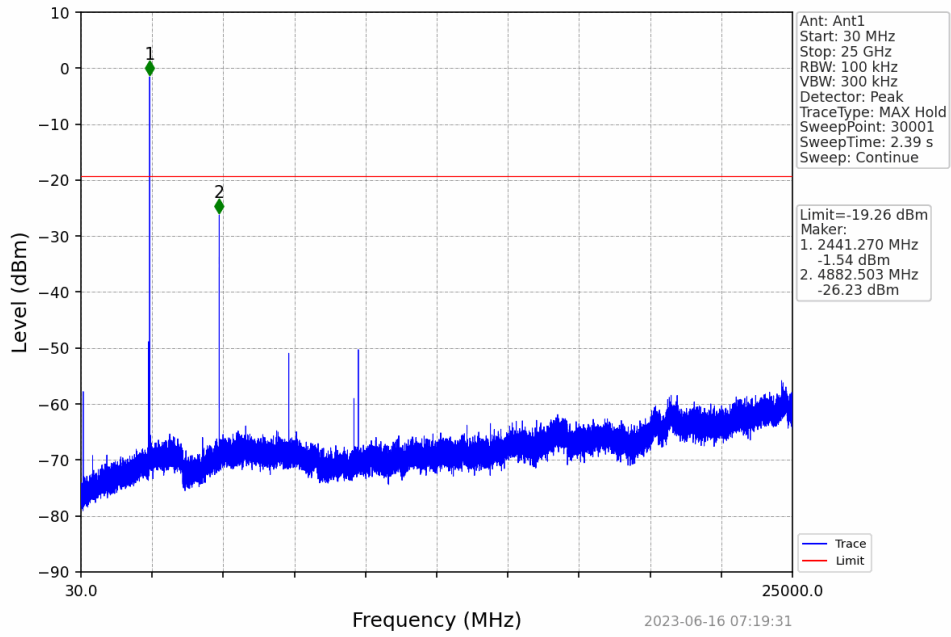
6.3 Conducted Spurious Emission

Mode	Channel	Carrier Frequency [MHz]	Frequency Hopping	Max Spurious Level [dBc]	Limit [dBc]	Verdict
GFSK	LCH	2402	Off	0.74	-19.26	Pass
	MCH	2440	On	0.74	-19.26	Pass
	HCH	2480	Off	0.74	-19.26	Pass
	HCH	HOPP	On	0.74	-19.26	Pass
Pi/4DQPSK	LCH	2402	Off	1.14	-18.86	Pass
	MCH	2440	On	1.14	-18.86	Pass
	HCH	2480	Off	1.14	-18.86	Pass
	HCH	HOPP	On	1.14	-18.86	Pass
8DPSK	LCH	2402	Off	1.23	-18.77	Pass
	MCH	2440	On	1.23	-18.77	Pass
	HCH	2480	Off	1.23	-18.77	Pass
	HCH	HOPP	On	1.23	-18.77	Pass

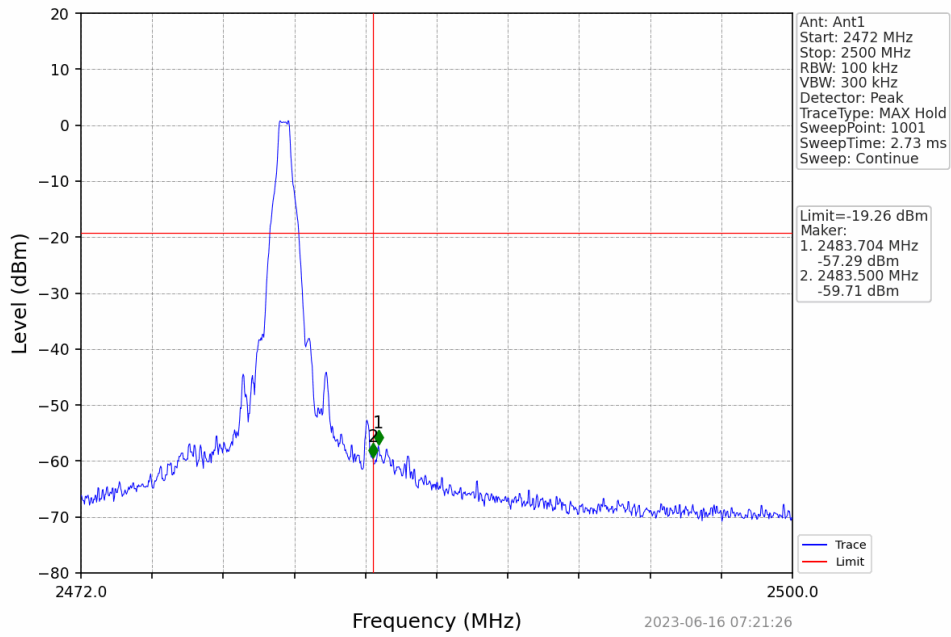
6.4 Test Graphs



GFSK_DH5_MCH_2441MHz_Ant1_NTNV

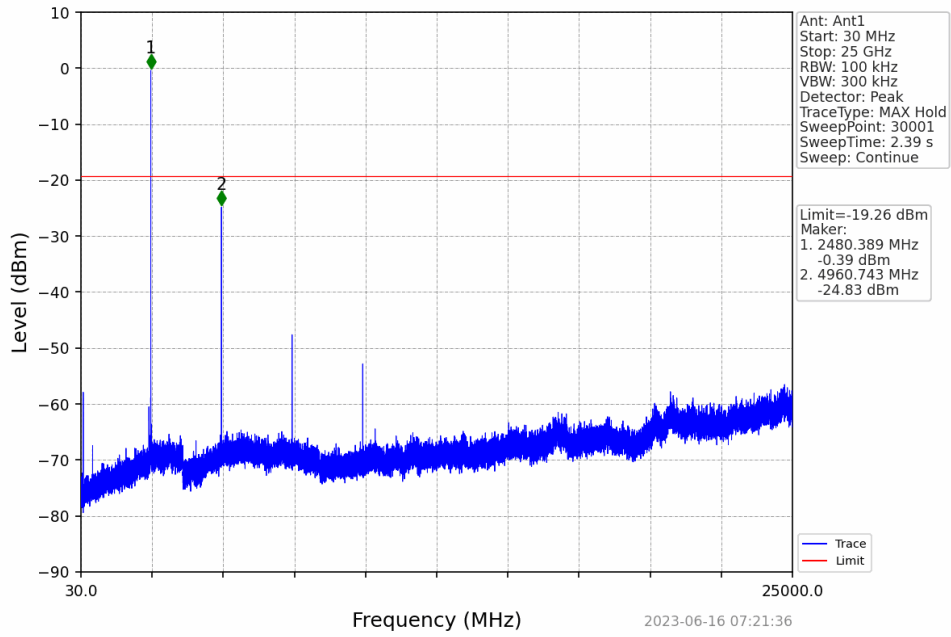


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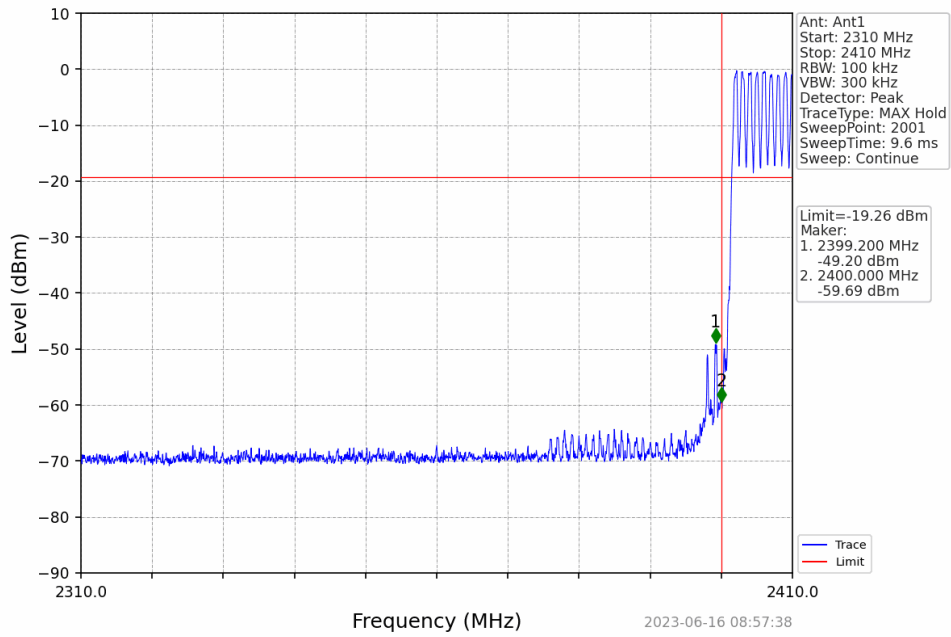




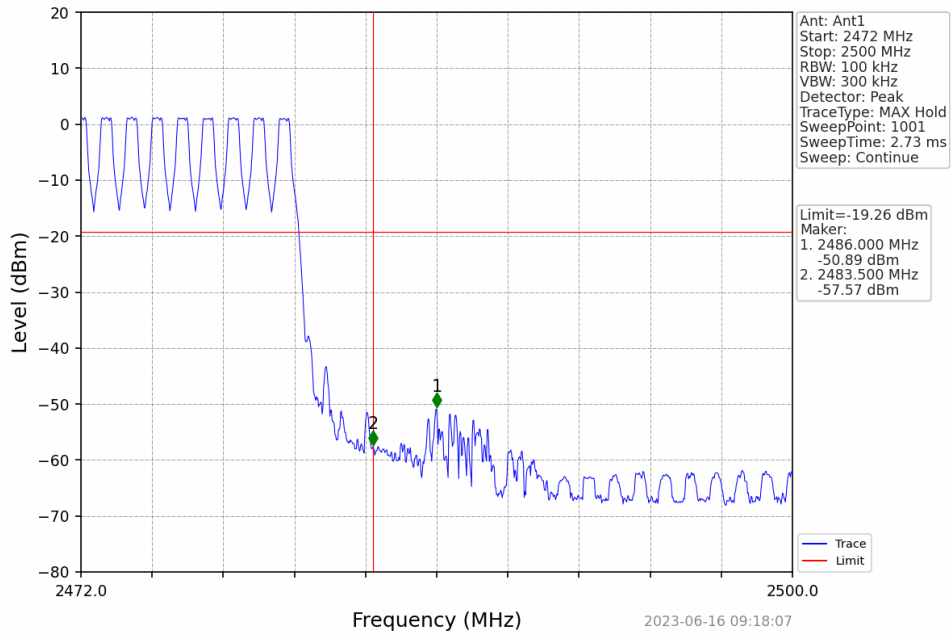
GFSK_DH5_HCH_2480MHz_Ant1_NTNV



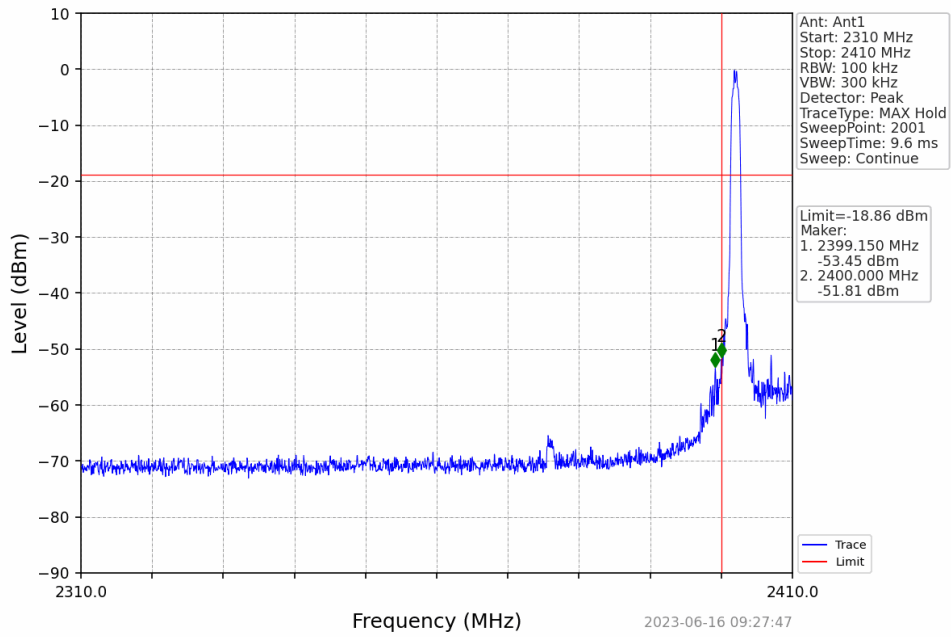
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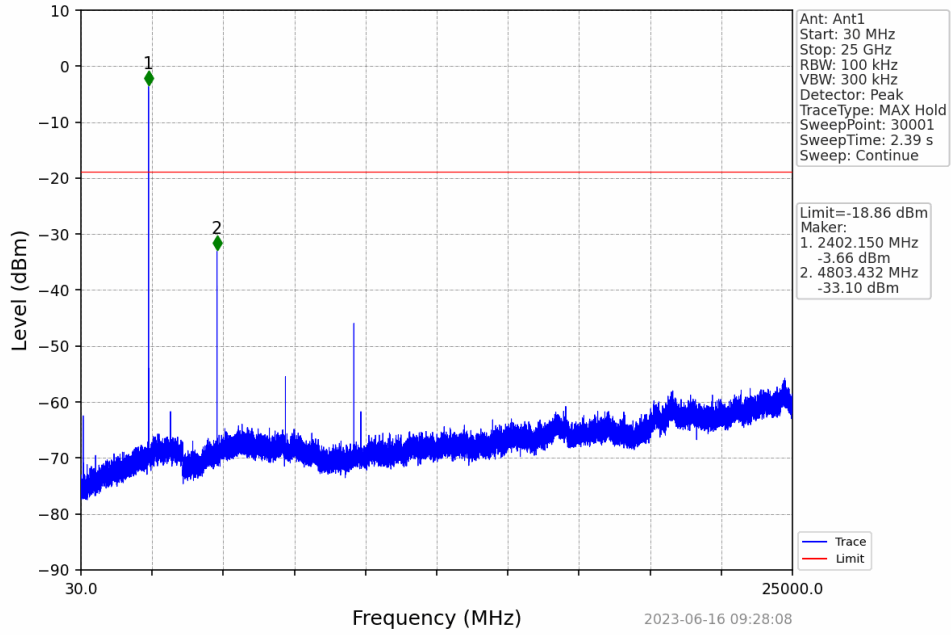
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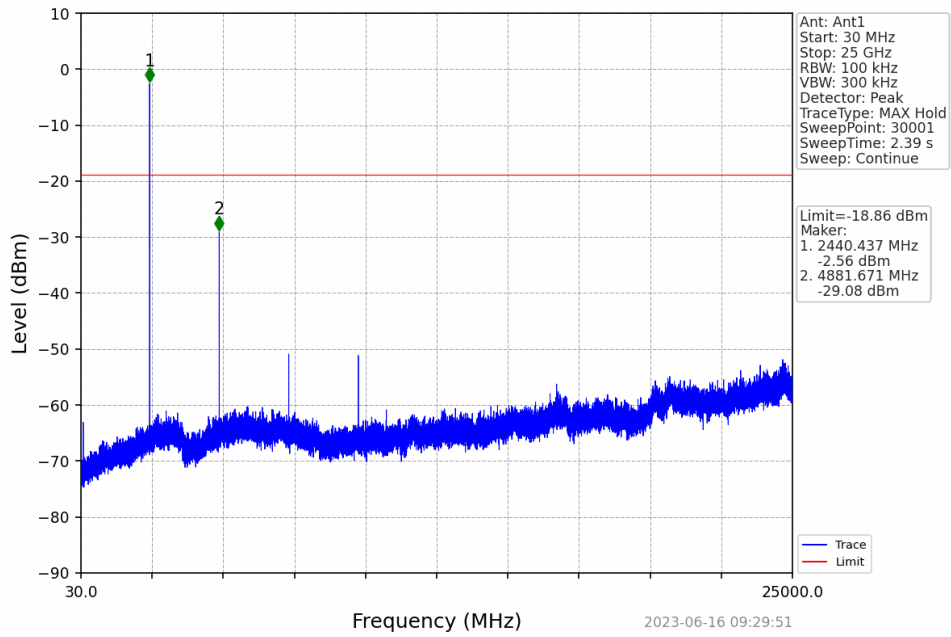
Pi/4DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV



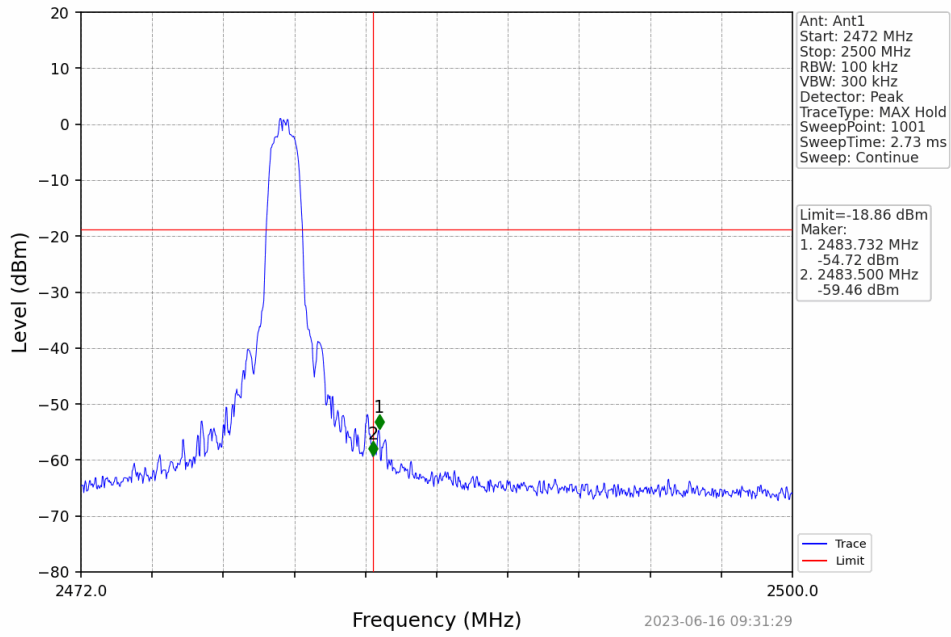
Pi/4DQPSK_2DH5_LCH_2402MHz_Ant1_NTNV



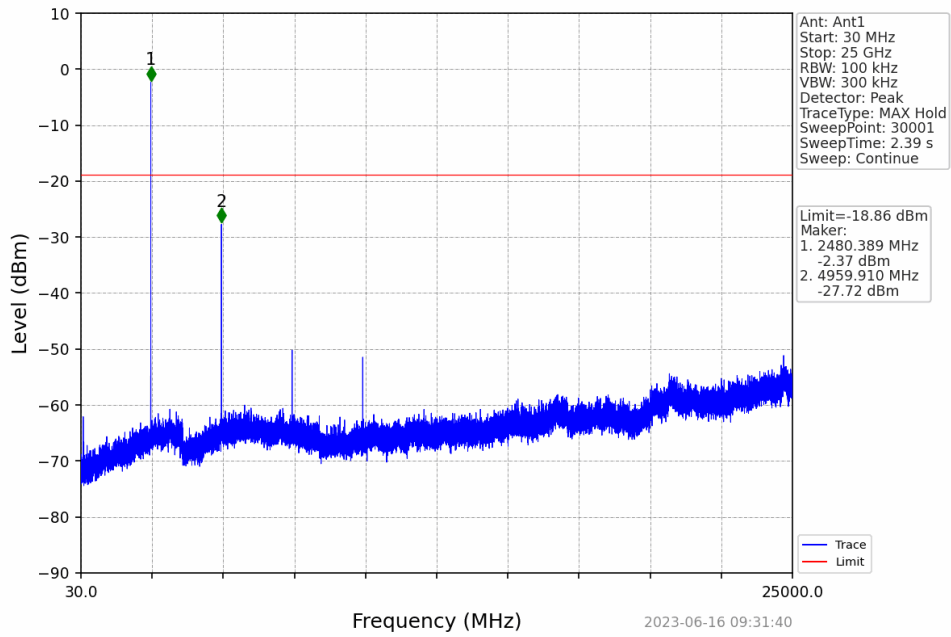
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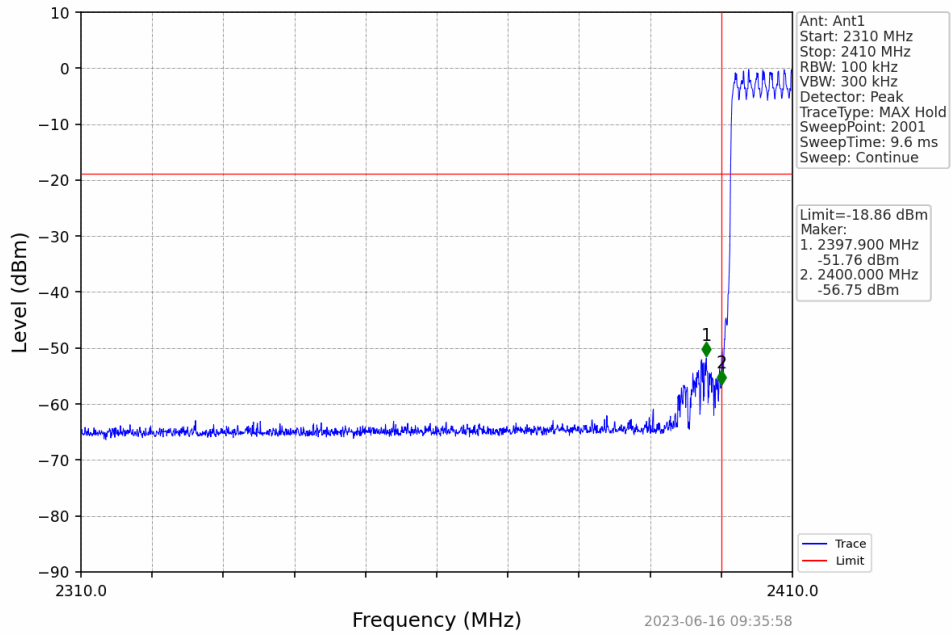
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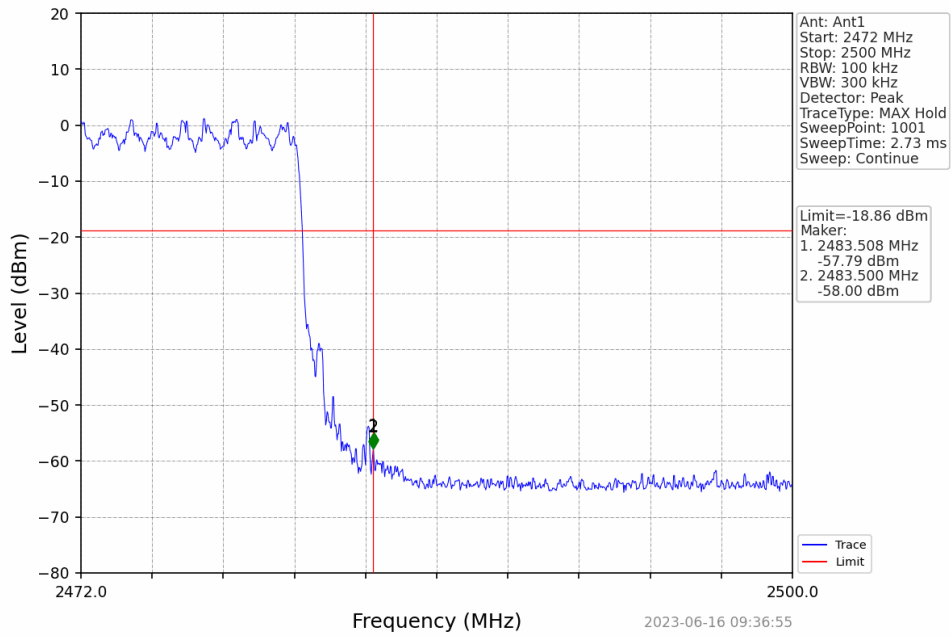
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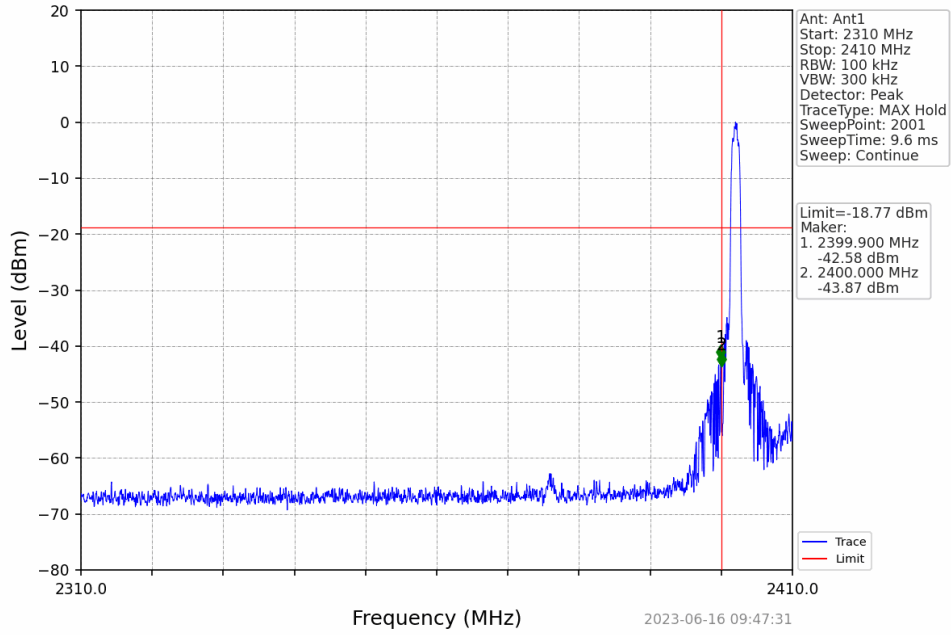
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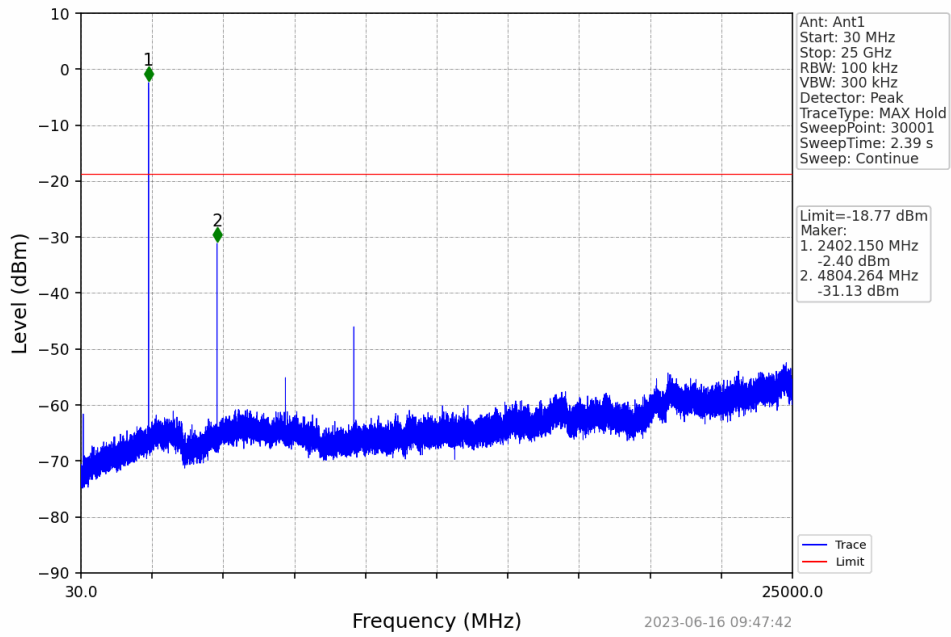
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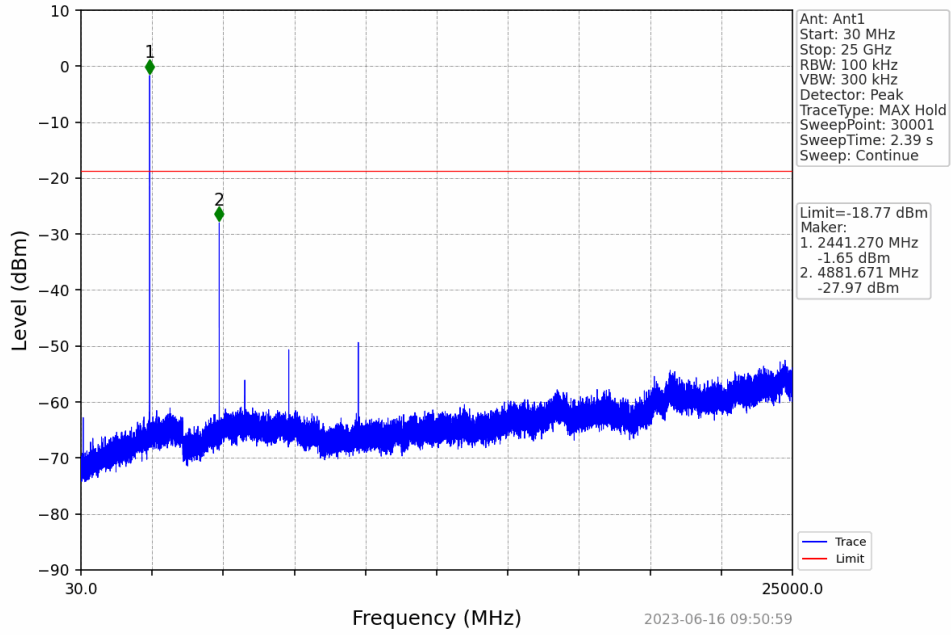
8DPSK 3DH5_LCH_2402MHz_Ant1_NTNV



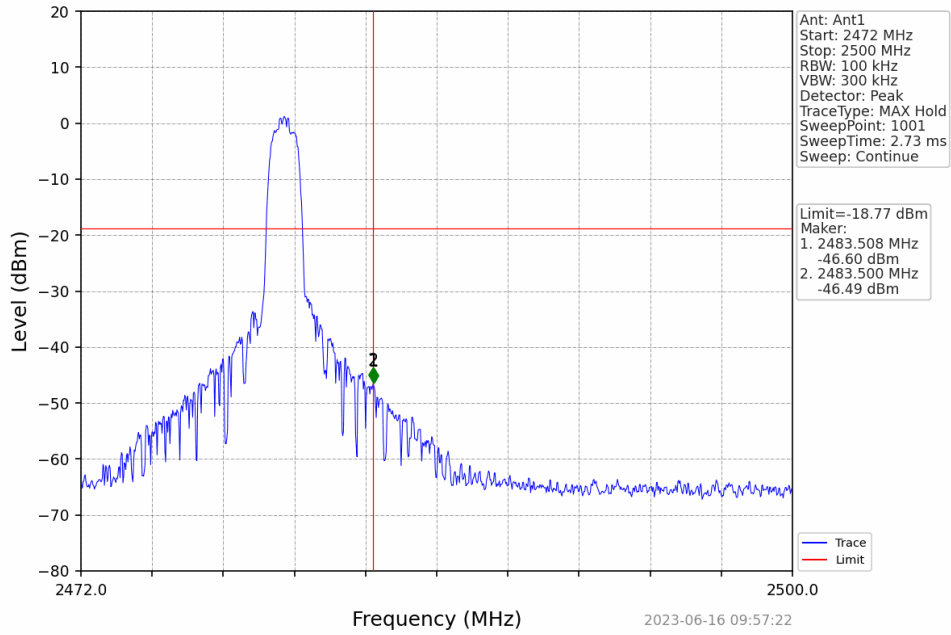
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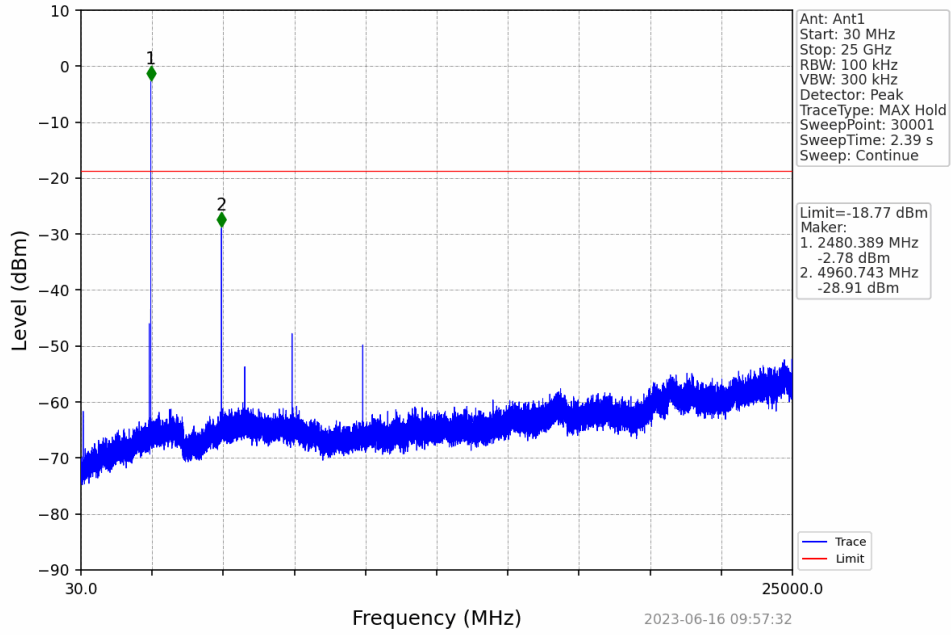
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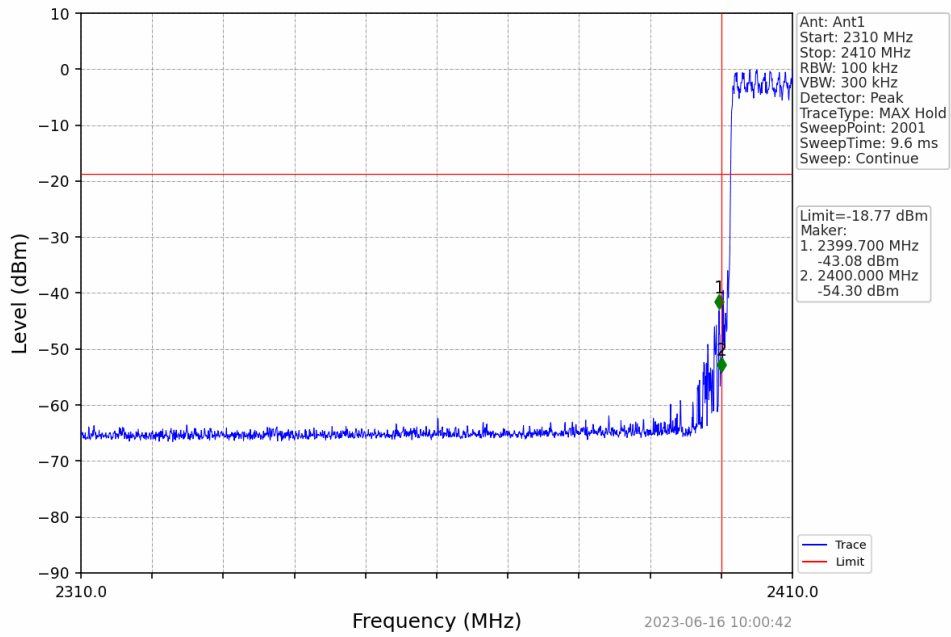
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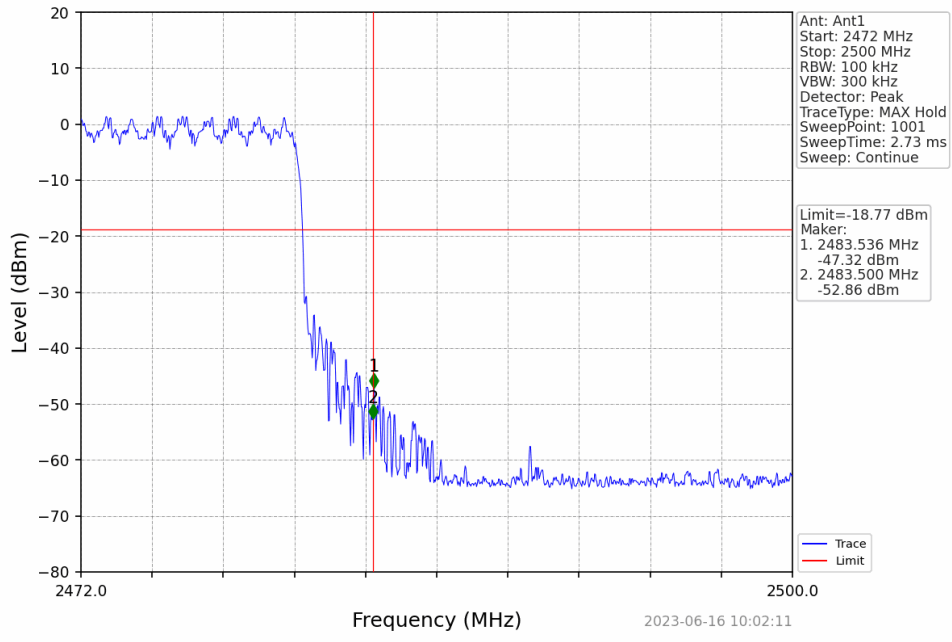
8DPSK_3DH5_HCH_2480MHz_Ant1_NTNV



8DPSK_3DH5_HOPP_Ant1_NTNV



8DPSK 3DH5_HOPP_Ant1_NTNV



7 Restrict-band Band-edge Test

7.1 Test Result

Test Mode: GFKS										
Pol.	Frequen cy (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/ m)	Margin (dB)	Detect or Type	Result
Low Channel: 2402MHz										
H	2390.00	45.74	29.15	3.41	34.01	44.29	74.00	-29.71	PK	PASS
H	2400.00	62.93	29.16	3.43	34.01	61.51	74.00	-12.49	PK	PASS
V	2390.00	46.56	29.15	3.41	34.01	45.11	74.00	-28.89	PK	PASS
V	2400.00	65.28	29.16	3.43	34.01	63.86	74.00	-10.14	PK	PASS
H	2390.00	35.64	29.15	3.41	34.01	34.19	54.00	-19.81	AV	PASS
H	2400.00	47.05	29.16	3.43	34.01	45.63	54.00	-8.37	AV	PASS
V	2390.00	35.79	29.15	3.41	34.01	34.34	54.00	-19.66	AV	PASS
V	2400.00	48.97	29.16	3.43	34.01	47.55	54.00	-6.45	AV	PASS
High Channel: 2480MHz										
H	2483.50	48.18	29.28	3.53	34.03	46.96	74.00	-27.04	PK	PASS
H	2500.00	46.81	29.30	3.56	34.03	45.64	74.00	-28.36	PK	PASS
V	2483.50	49.50	29.28	3.53	34.03	48.28	74.00	-25.72	PK	PASS
V	2500.00	48.08	29.30	3.56	34.03	46.91	74.00	-27.09	PK	PASS
H	2483.50	38.50	29.28	3.53	34.03	37.28	54.00	-16.72	AV	PASS
H	2500.00	36.10	29.30	3.56	34.03	34.93	54.00	-19.07	AV	PASS
V	2483.50	39.95	29.28	3.53	34.03	38.73	54.00	-15.27	AV	PASS
V	2500.00	36.26	29.30	3.56	34.03	35.09	54.00	-18.91	AV	PASS

Test Mode: π/4-DQPSK										
Pol.	Frequen cy (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/ m)	Margin (dB)	Detect or Type	Result
Low Channel: 2402MHz										
H	2390.00	45.83	29.15	3.41	34.01	44.38	74.00	-29.62	PK	PASS
H	2400.00	63.04	29.16	3.43	34.01	61.62	74.00	-12.38	PK	PASS
V	2390.00	46.66	29.15	3.41	34.01	45.21	74.00	-28.79	PK	PASS
V	2400.00	65.39	29.16	3.43	34.01	63.97	74.00	-10.03	PK	PASS
H	2390.00	35.71	29.15	3.41	34.01	34.26	54.00	-19.74	AV	PASS
H	2400.00	47.13	29.16	3.43	34.01	45.71	54.00	-8.30	AV	PASS
V	2390.00	35.87	29.15	3.41	34.01	34.42	54.00	-19.58	AV	PASS
V	2400.00	49.06	29.16	3.43	34.01	47.64	54.00	-6.36	AV	PASS
High Channel: 2480MHz										
H	2483.50	48.29	29.28	3.53	34.03	47.07	74.00	-26.94	PK	PASS
H	2500.00	46.90	29.30	3.56	34.03	45.73	74.00	-28.28	PK	PASS
V	2483.50	49.62	29.28	3.53	34.03	48.40	74.00	-25.60	PK	PASS
V	2500.00	48.18	29.30	3.56	34.03	47.01	74.00	-27.00	PK	PASS
H	2483.50	38.58	29.28	3.53	34.03	37.36	54.00	-16.65	AV	PASS
H	2500.00	36.16	29.30	3.56	34.03	34.99	54.00	-19.02	AV	PASS
V	2483.50	40.03	29.28	3.53	34.03	38.81	54.00	-15.19	AV	PASS
V	2500.00	36.32	29.30	3.56	34.03	35.15	54.00	-18.85	AV	PASS



Test Mode: 8-DPSK										
Pol.	Frequen cy (MHz)	Meter Reading (dBuV)	Pre-amplifier (dB)	Cable Loss (dB)	Antenna Factor (dB/m)	Emission level (dBuV/m)	Limit (dBuV/ m)	Margin (dB)	Detect or Type	Result
Low Channel: 2402MHz										
H	2390.00	45.81	29.15	3.41	34.01	44.36	74.00	-29.64	PK	PASS
H	2400.00	63.02	29.16	3.43	34.01	61.60	74.00	-12.40	PK	PASS
V	2390.00	46.64	29.15	3.41	34.01	45.19	74.00	-28.81	PK	PASS
V	2400.00	65.37	29.16	3.43	34.01	63.95	74.00	-10.05	PK	PASS
H	2390.00	35.70	29.15	3.41	34.01	34.25	54.00	-19.75	AV	PASS
H	2400.00	47.11	29.16	3.43	34.01	45.69	54.00	-8.31	AV	PASS
V	2390.00	35.85	29.15	3.41	34.01	34.40	54.00	-19.60	AV	PASS
V	2400.00	49.04	29.16	3.43	34.01	47.62	54.00	-6.38	AV	PASS
High Channel: 2480MHz										
H	2483.50	48.27	29.28	3.53	34.03	47.05	74.00	-26.95	PK	PASS
H	2500.00	46.88	29.30	3.56	34.03	45.71	74.00	-28.29	PK	PASS
V	2483.50	49.60	29.28	3.53	34.03	48.38	74.00	-25.62	PK	PASS
V	2500.00	48.16	29.30	3.56	34.03	46.99	74.00	-27.01	PK	PASS
H	2483.50	38.56	29.28	3.53	34.03	37.34	54.00	-16.66	AV	PASS
H	2500.00	36.14	29.30	3.56	34.03	34.97	54.00	-19.03	AV	PASS
V	2483.50	40.02	29.28	3.53	34.03	38.80	54.00	-15.20	AV	PASS
V	2500.00	36.31	29.30	3.56	34.03	35.14	54.00	-18.86	AV	PASS

Remark:

1. Emission Level = Meter Reading + Antenna Factor + Cable Loss – Pre-amplifier, Margin= Emission Level - Limit

.....End.....