Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: BUSKING AMP

Test Model: BA-10PRO

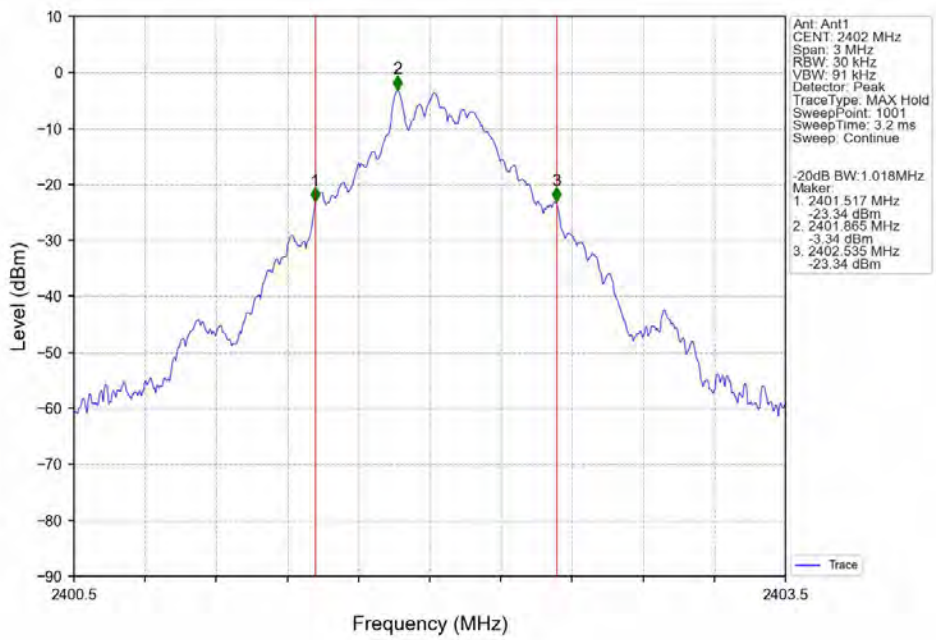
Environmental Conditions

Temperature:	24.6°C
Relative Humidity:	53.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Can Kun
Supervised by:	Nick Peng

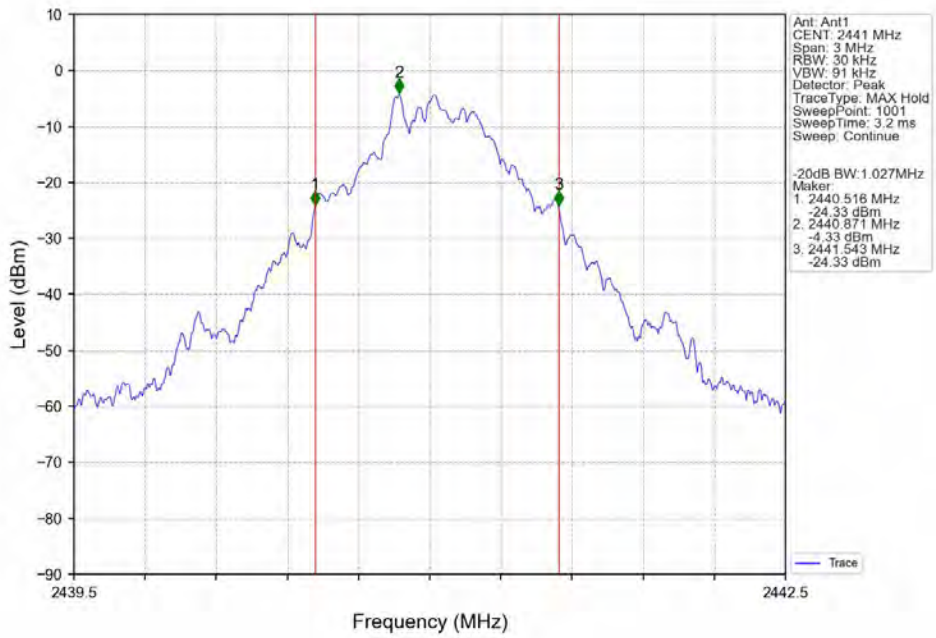
A.1 -20dB Bandwidth

Mode	TX Type	Frequency (MHz)	Packet Type	ANT	20dB Bandwidth (MHz)		Verdict
					Result	Limit	
GFSK	SISO	2402	DH5	1	1.018	/	Pass
		2441	DH5	1	1.027	/	Pass
		2480	DH5	1	2.163	/	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	1.290	/	Pass
		2441	2DH5	1	1.291	/	Pass
		2480	2DH5	1	2.174	/	Pass
8DPSK	SISO	2402	3DH5	1	1.216	/	Pass
		2441	3DH5	1	1.213	/	Pass
		2480	3DH5	1	2.173	/	Pass

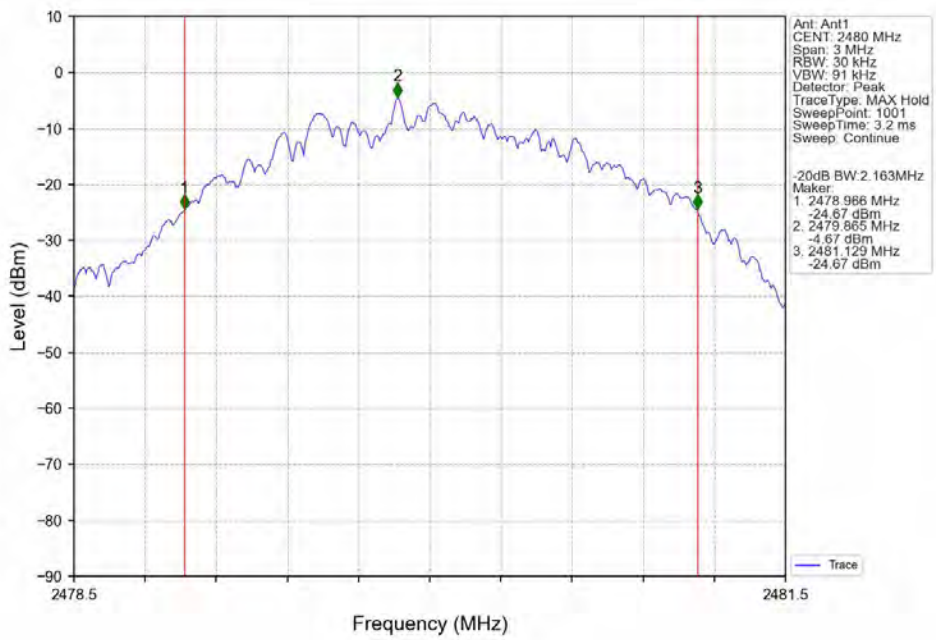
GFSK_DH5_LCH_2402MHz_ANT1_NTNV



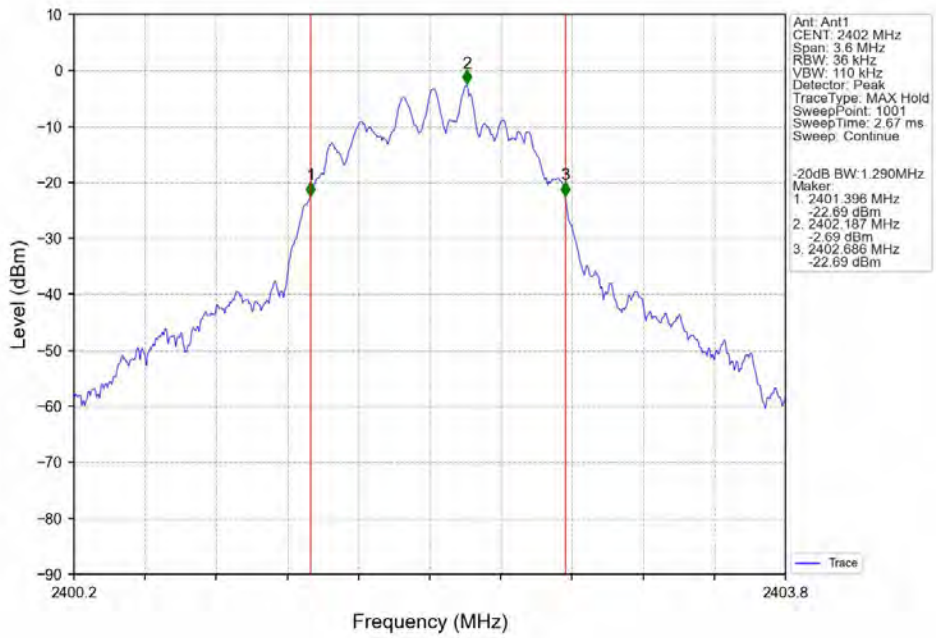
GFSK_DH5_MCH_2441MHz_ANT1_NTNV



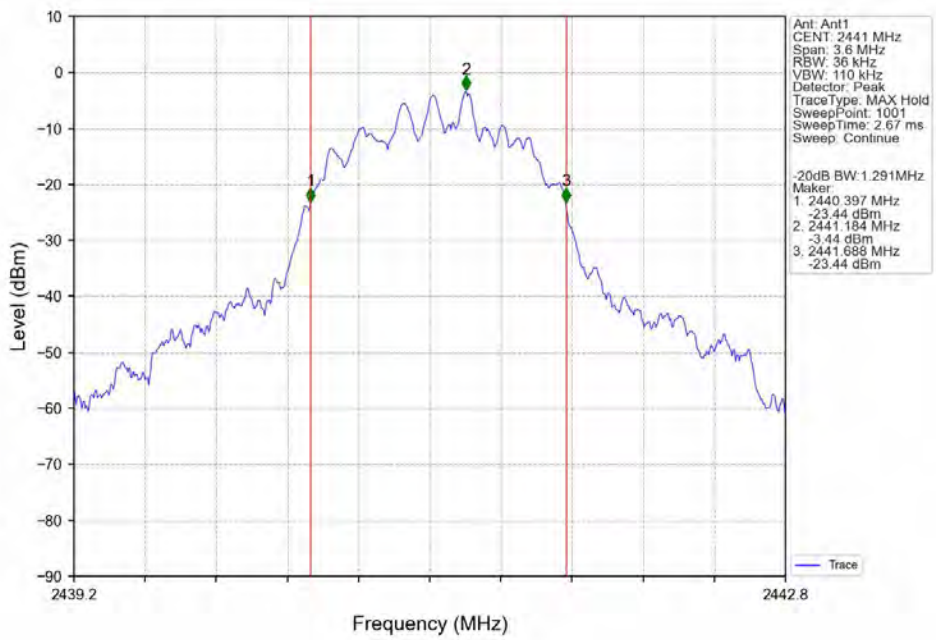
GFSK_DH5_HCH_2480MHz_ANT1_NTNV



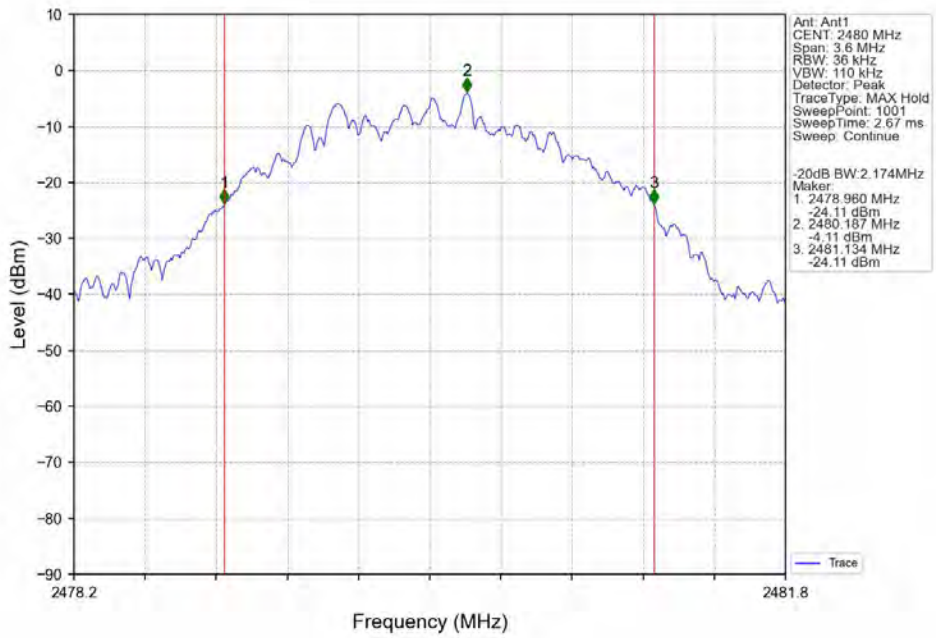
Pi/4DQPSK_2DH5_LCH_2402MHz_ANT1_NTNV



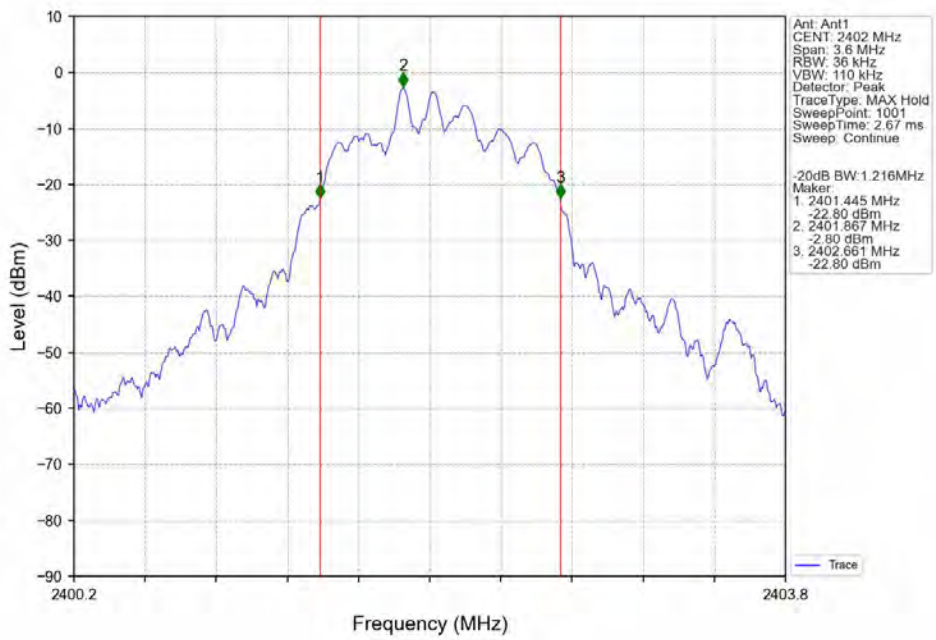
Pi/4DQPSK_2DH5_MCH_2441MHz_ANT1_NTNV



Pi/4DQPSK_2DH5_HCH_2480MHz_ANT1_NTNV



8DPSK_3DH5_LCH_2402MHz_ANT1_NTNV



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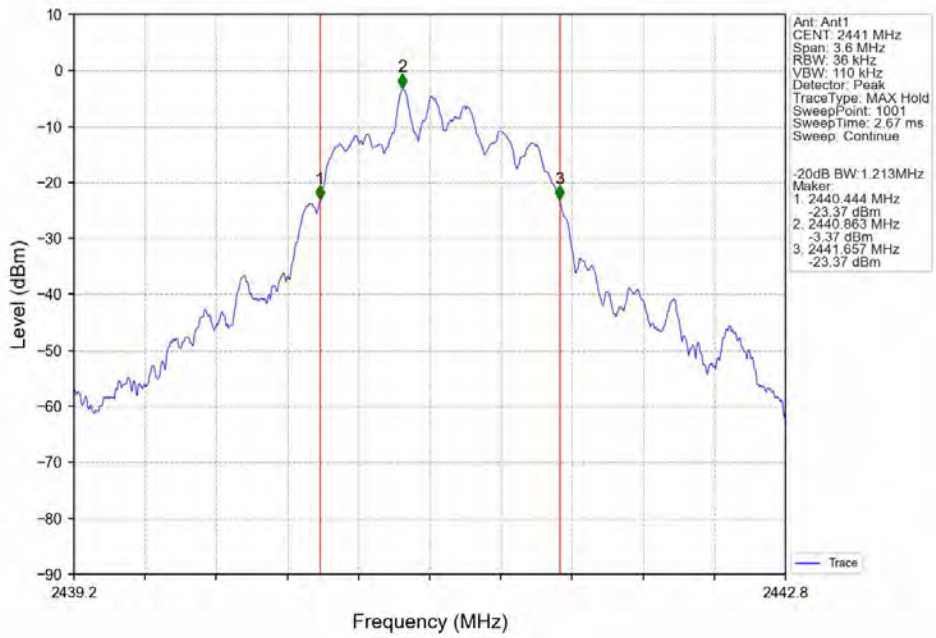
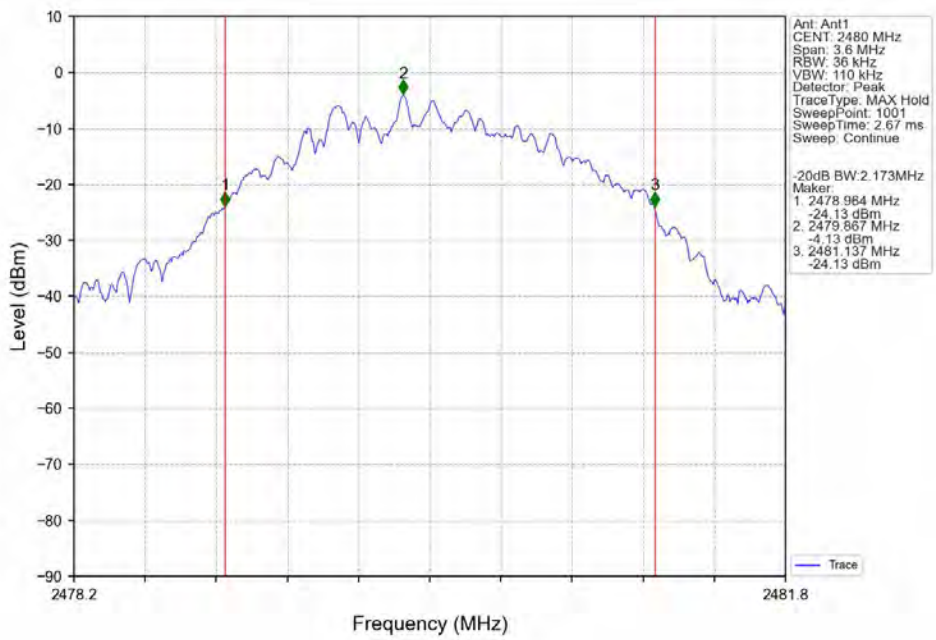


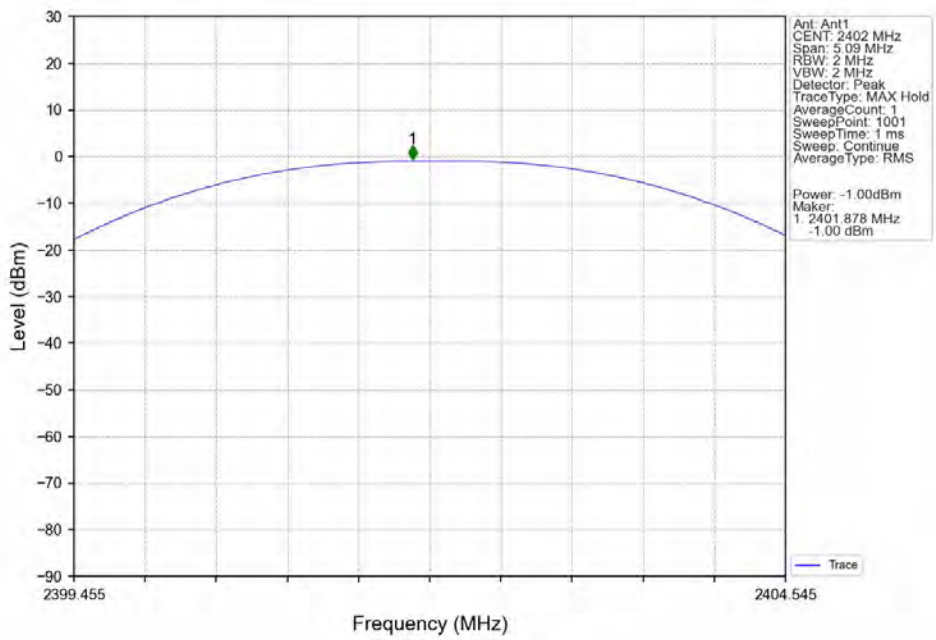
8DPSK_3DH5_HCH_2480MHz_ANT1_NTNV



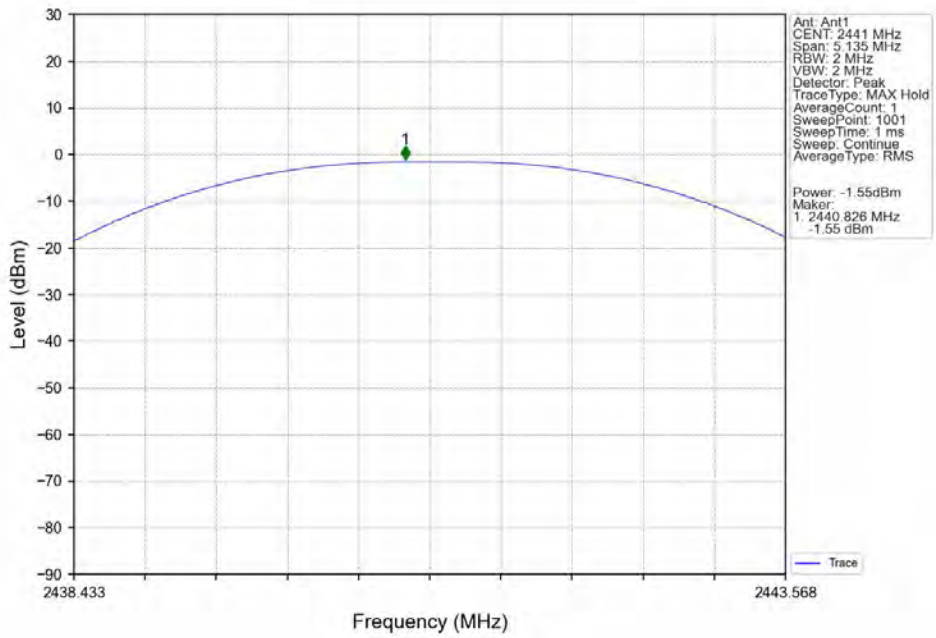
A.2 Maximum Conducted Output Power

Mode	TX Type	Frequency (MHz)	Packet Type	Maximum Peak Conducted Output Power (dBm)		Verdict
				ANT1	Limit	
GFSK	SISO	2402	DH5	-1.00	<=21	Pass
		2441	DH5	-1.55	<=21	Pass
		2480	DH5	-0.36	<=21	Pass
Pi/4DQPSK	SISO	2402	2DH5	-0.18	<=21	Pass
		2441	2DH5	-0.72	<=21	Pass
		2480	2DH5	-0.36	<=21	Pass
8DPSK	SISO	2402	3DH5	0.11	<=21	Pass
		2441	3DH5	-0.45	<=21	Pass
		2480	3DH5	-0.37	<=21	Pass

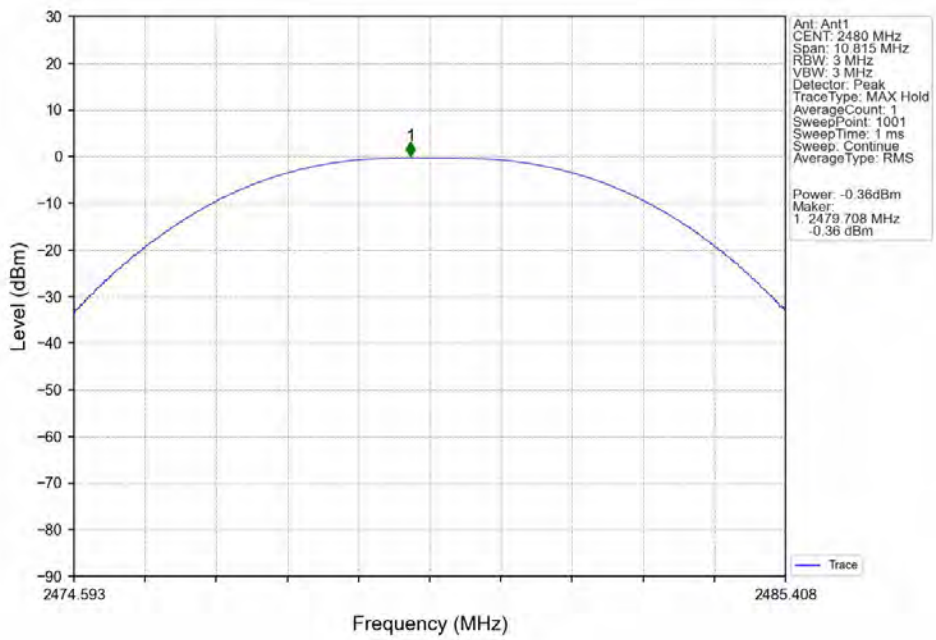
GFSK_DH5_LCH_2402MHz_ANT1_NTNV



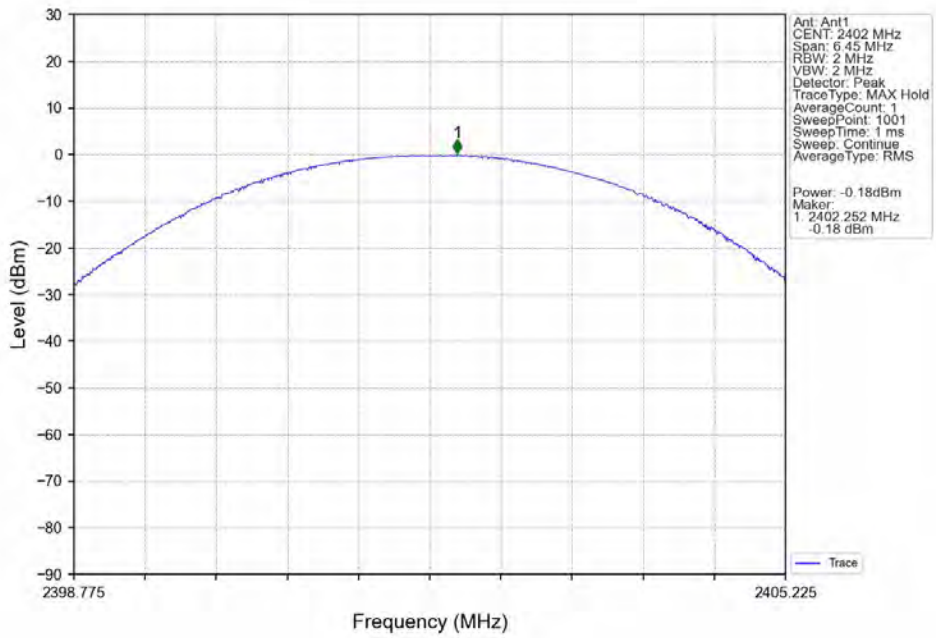
GFSK_DH5_MCH_2441MHz_ANT1_NTNV



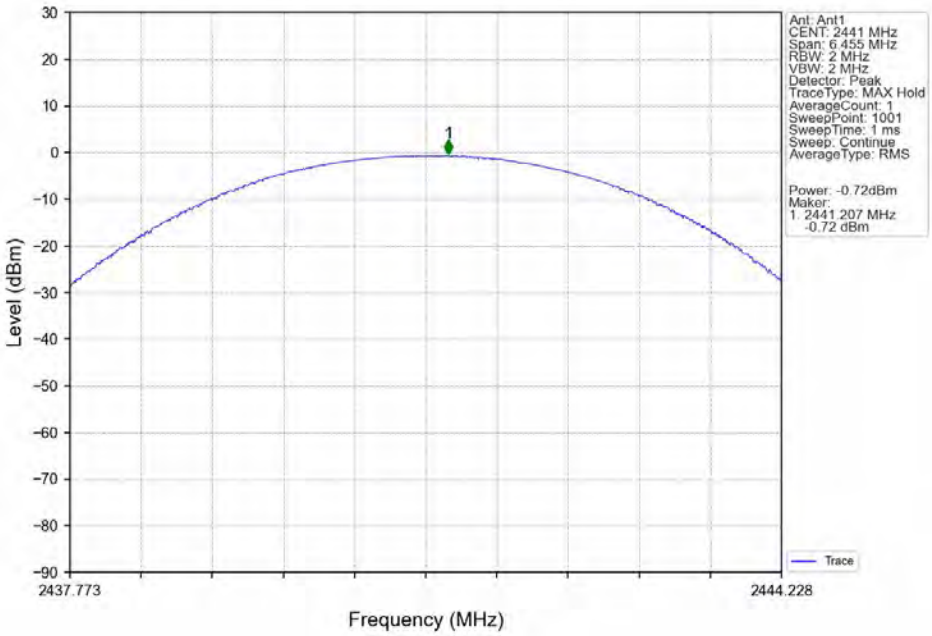
GFSK_DH5_HCH_2480MHz_ANT1_NTNV



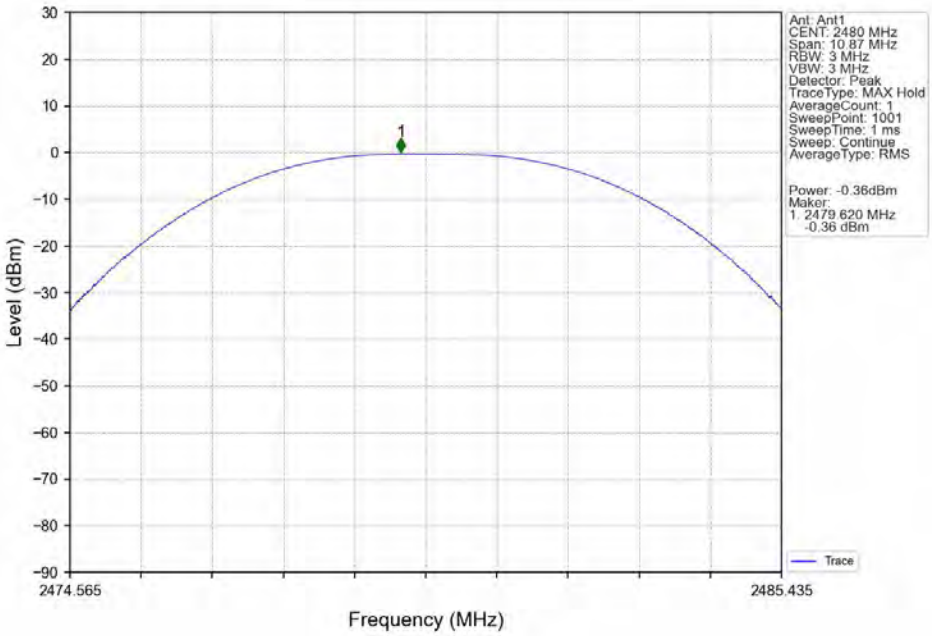
Pi/4DQPSK_2DH5_LCH_2402MHz_ANT1_NTNV



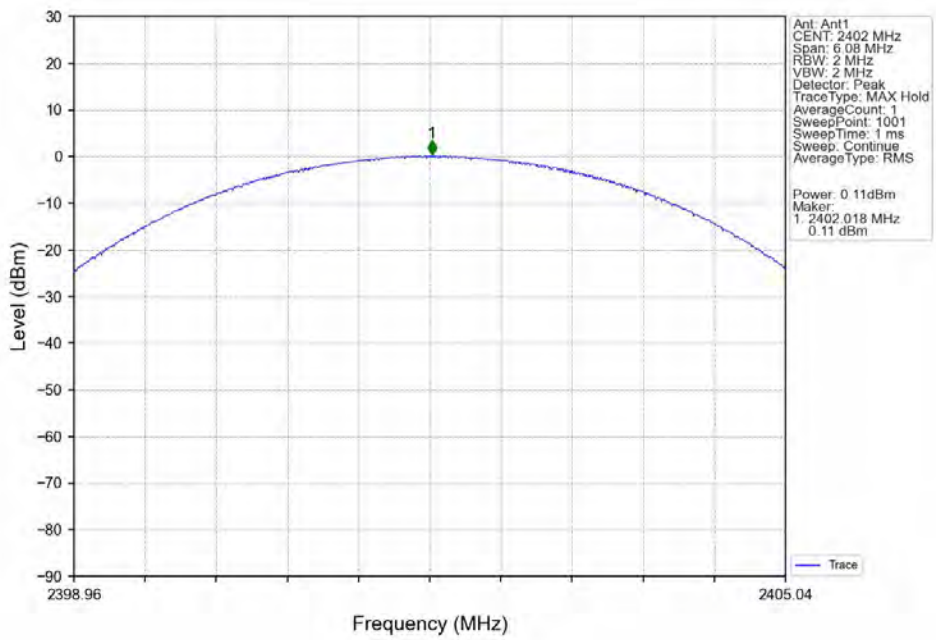
Pi/4DQPSK_2DH5_MCH_2441MHz_ANT1_NTNV



Pi/4DQPSK_2DH5_HCH_2480MHz_ANT1_NTNV



8DPSK_3DH5_LCH_2402MHz_ANT1_NTNV



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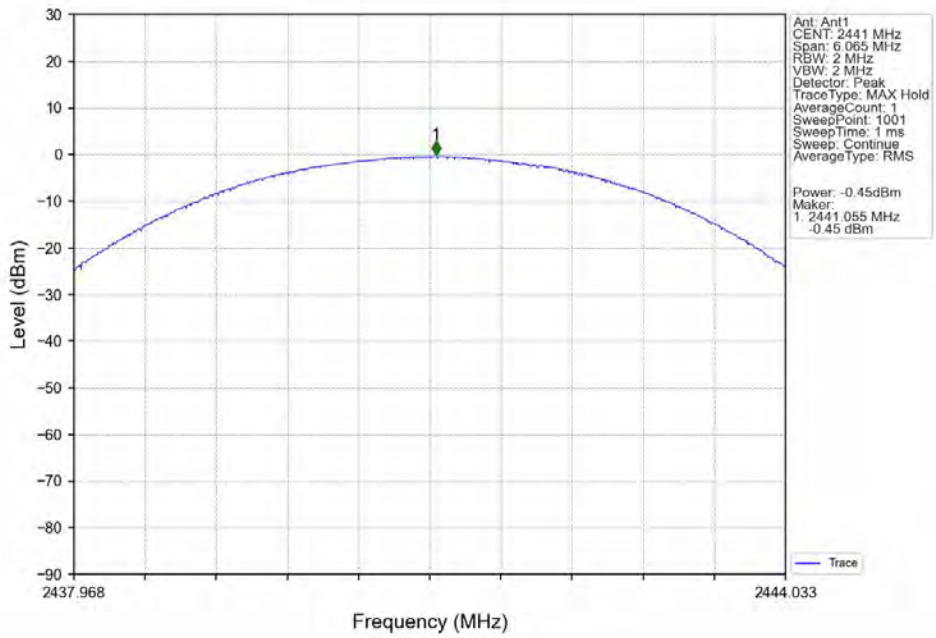

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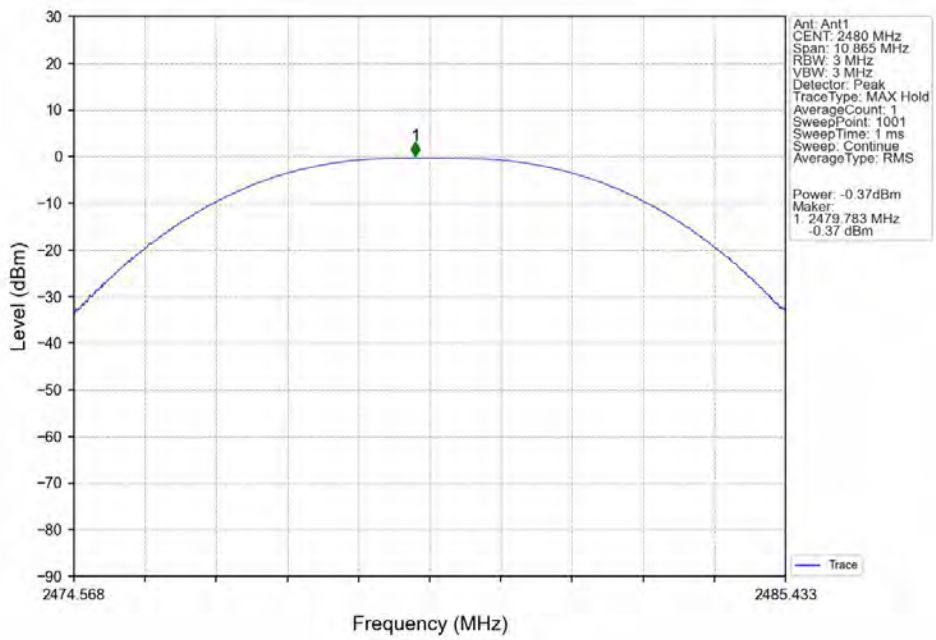
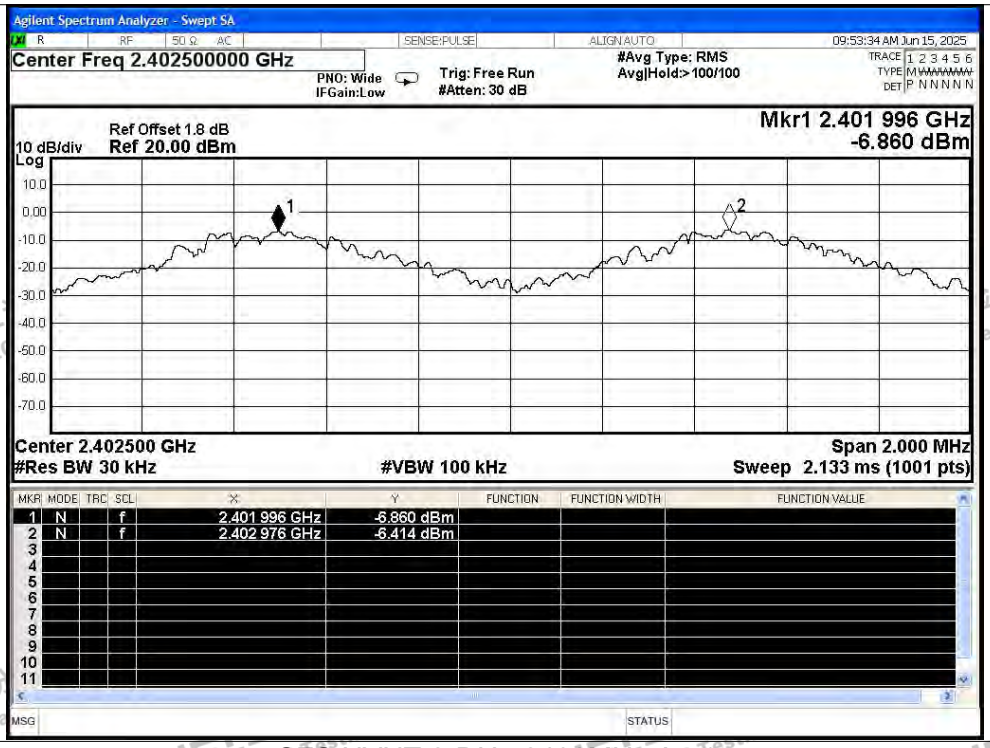


A.3 Carrier Frequency Separation

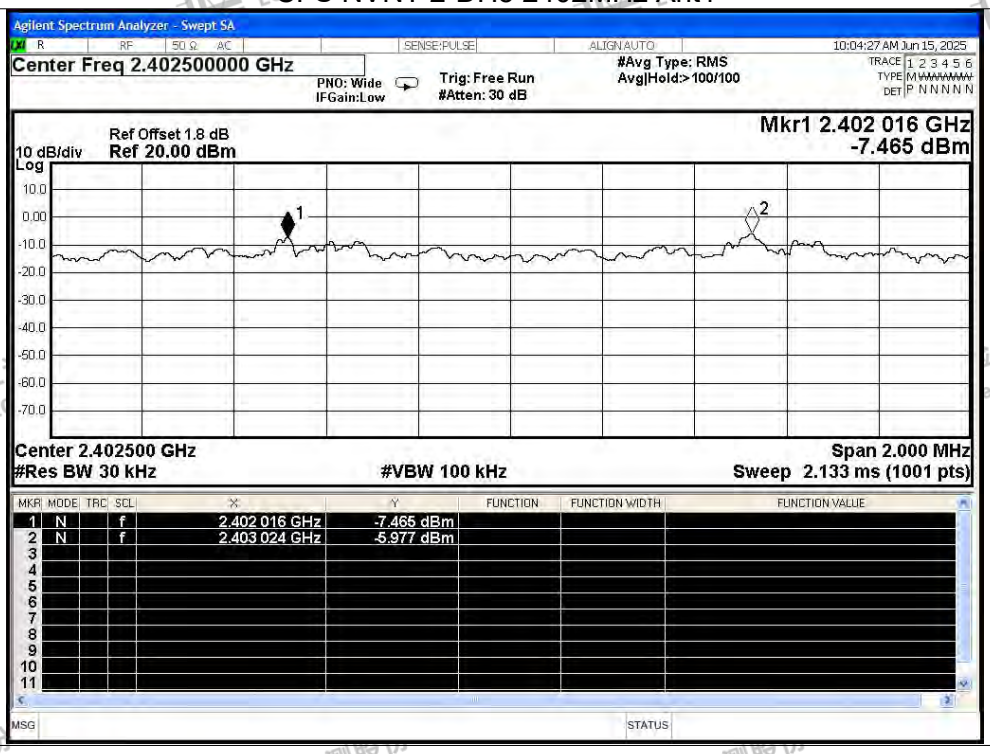
Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
DH5	Ant1	2401.996	2402.976	0.98	0.681	Pass
2DH5	Ant1	2402.016	2403.024	1.008	0.857	Pass
3DH5	Ant1	2402.018	2403.166	1.148	0.863	Pass

Test Graphs

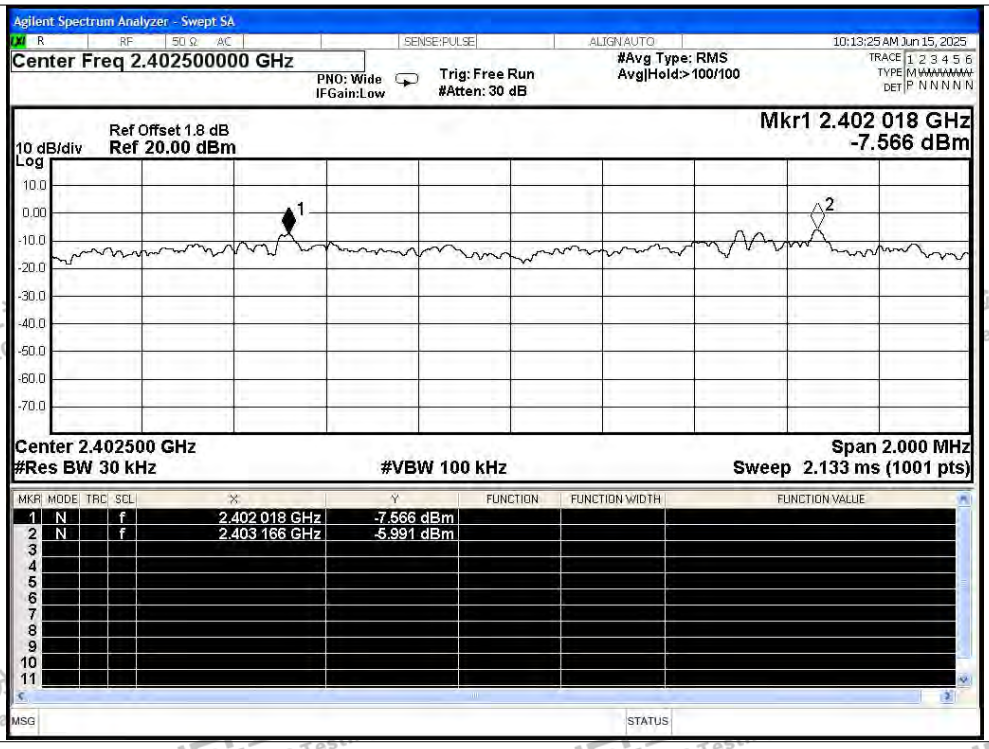
CFS NVNT 1-DH5 2402MHz Ant1



CFS NVNT 2-DH5 2402MHz Ant1



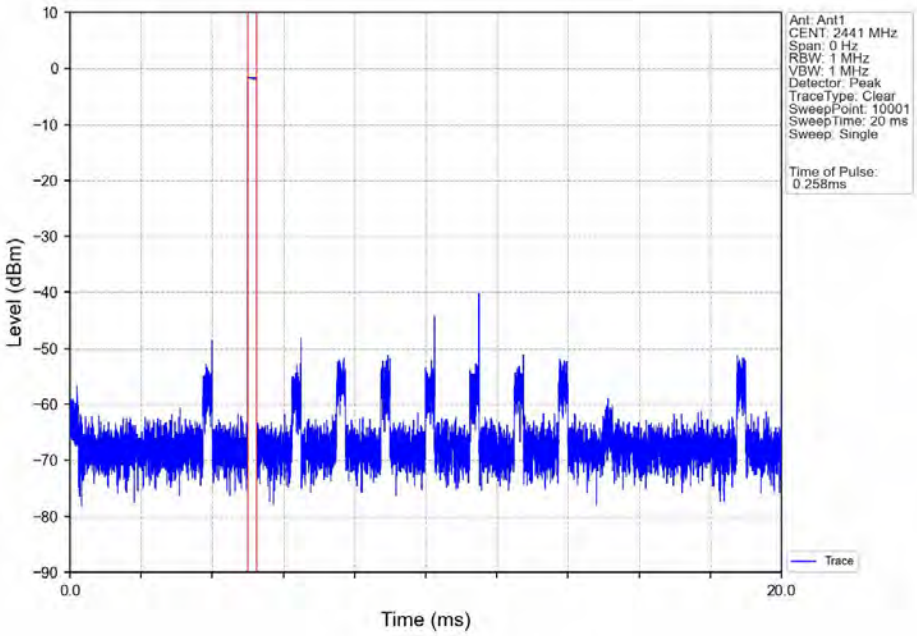
CFS NVNT 3-DH5 2402MHz Ant1



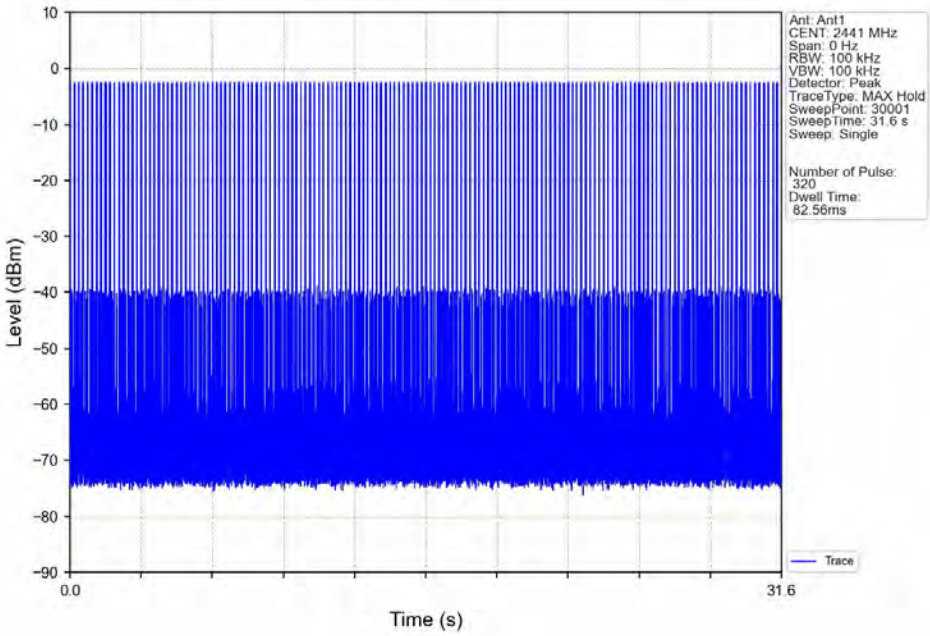
A.4 Time of Occupancy (Dwell Time)

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	DH5	0.258	31.600	320	82.560	<=400	Pass
Pi/4DQPSK	SISO	HOPP	2DH5	0.254	31.600	316	80.264	<=400	Pass
8DPSK	SISO	HOPP	3DH5	0.256	31.600	317	81.152	<=400	Pass

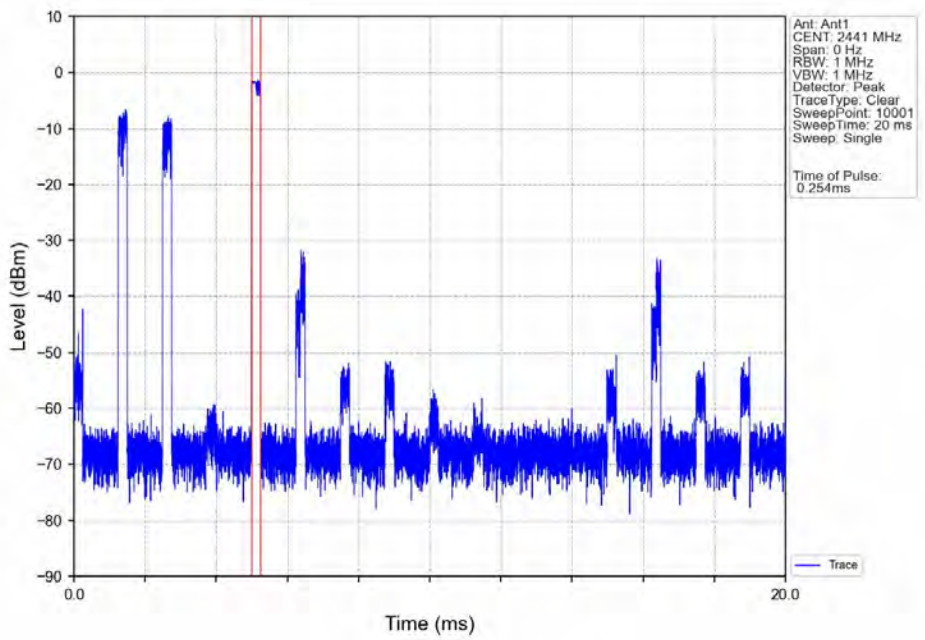
GFSK_DH5_HOPP_ANT1_NTNV



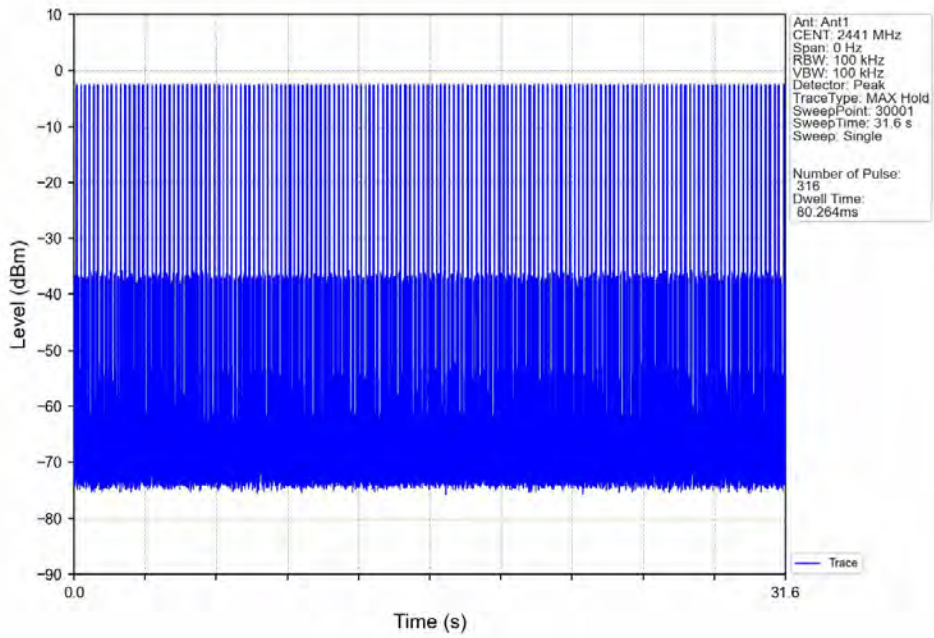
GFSK_DH5_HOPP_ANT1_NTNV



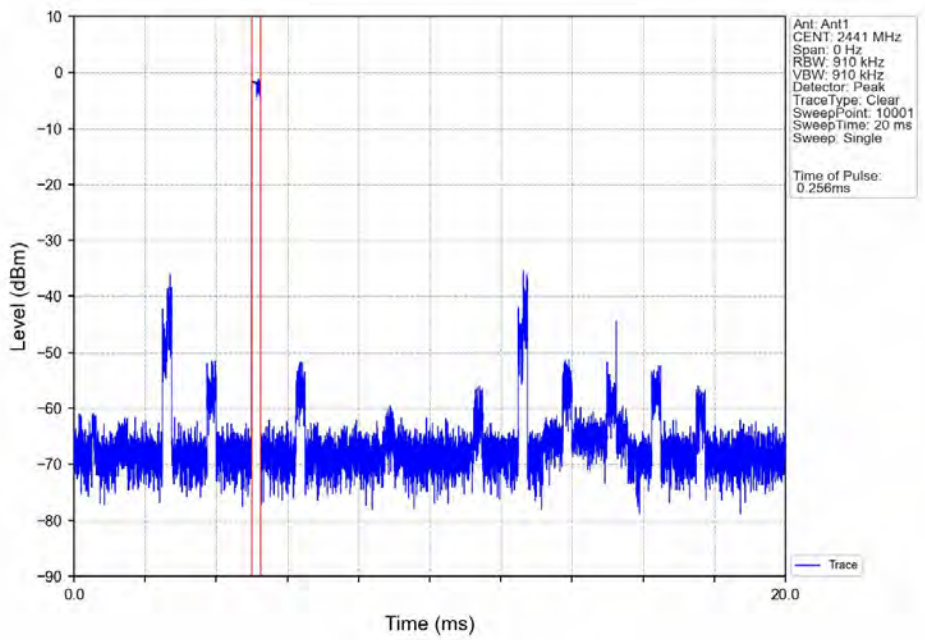
Pi/4DQPSK_2DH5_HOPP_ANT1_NTNV



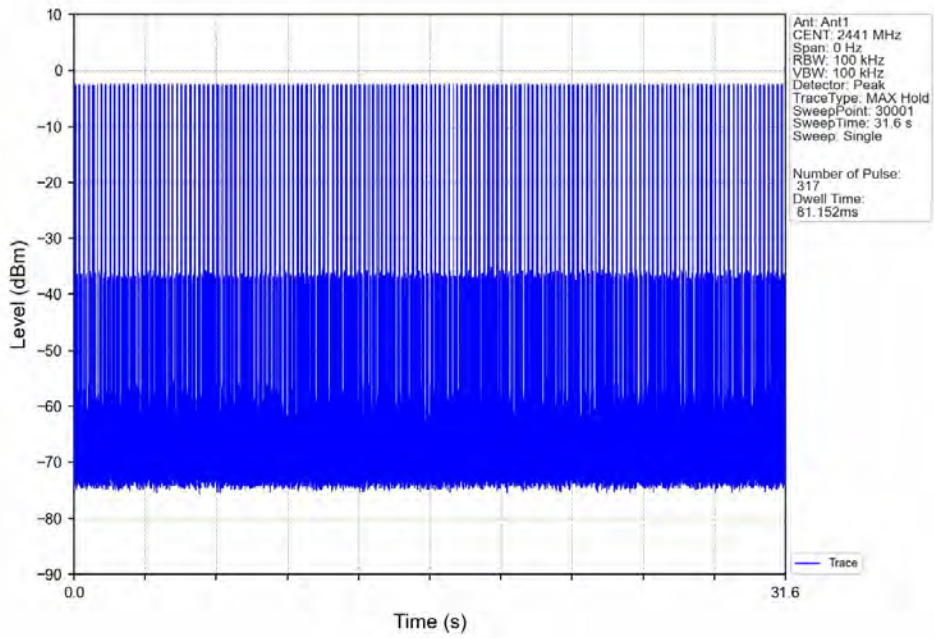
Pi/4DQPSK_2DH5_HOPP_ANT1_NTNV



8DPSK_3DH5_HOPP_ANT1_NTNV



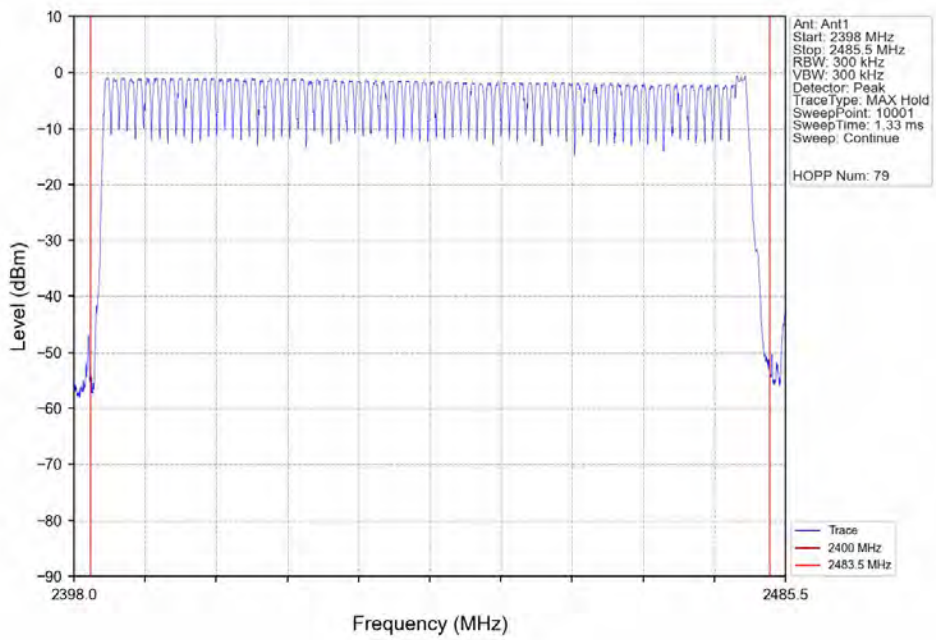
8DPSK_3DH5_HOPP_ANT1_NTNV



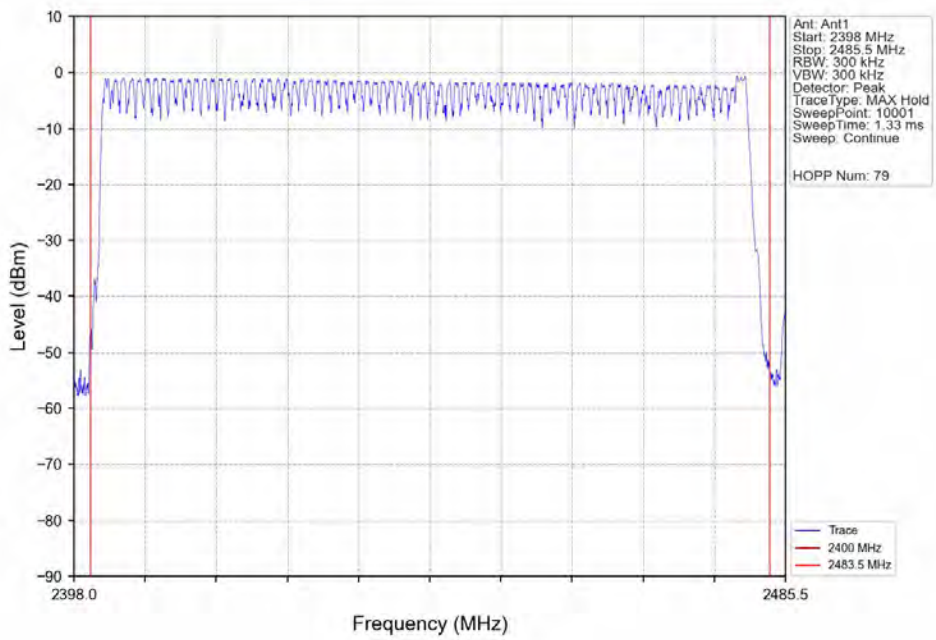
A.5 Number of Hopping Frequencies

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

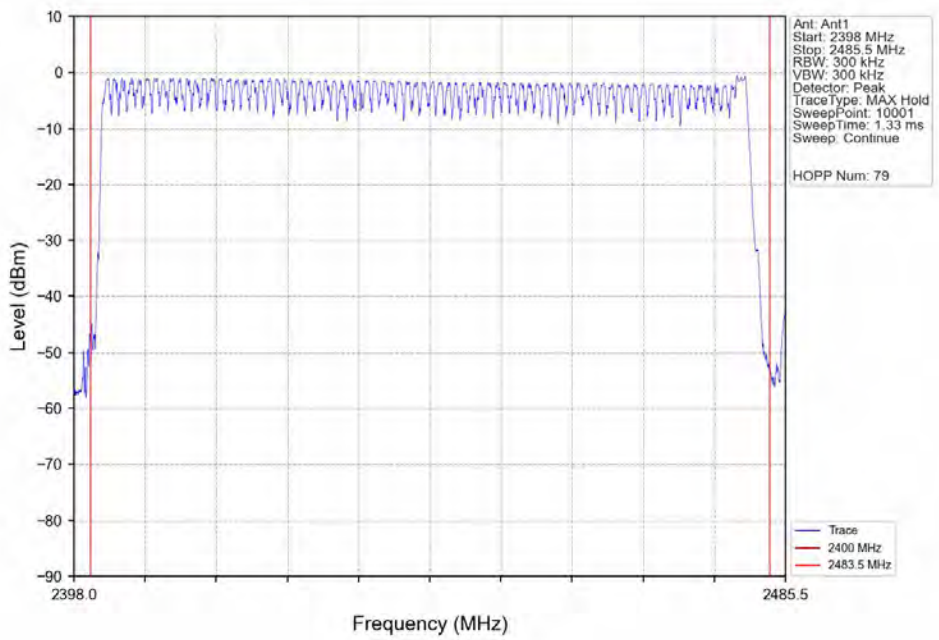
GFSK_DH5_HOPP_ANT1_NTNV



Pi/4DQPSK_2DH5_HOPP_ANT1_NTNV



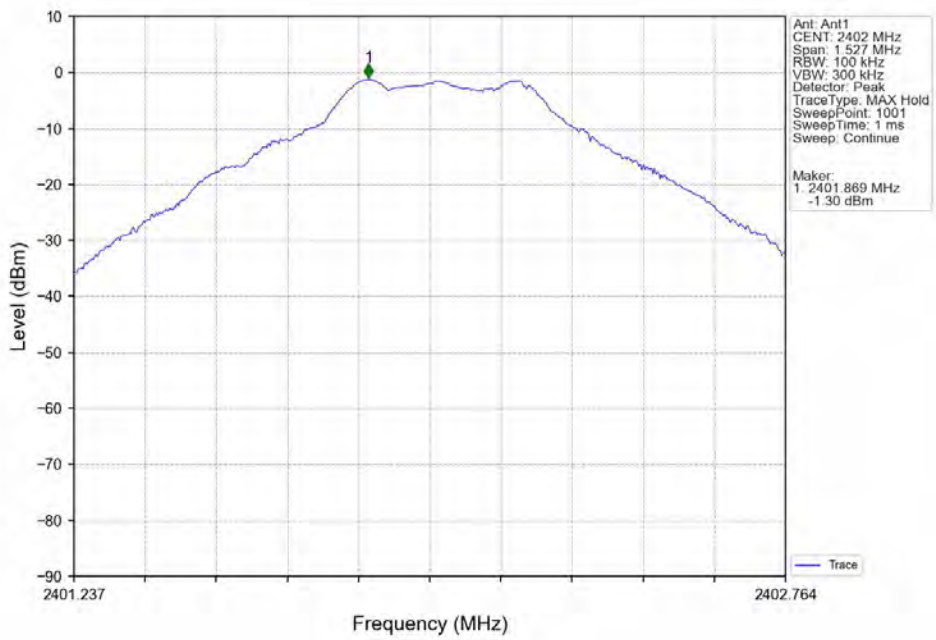
8DPSK_3DH5_HOPP_ANT1_NTNV



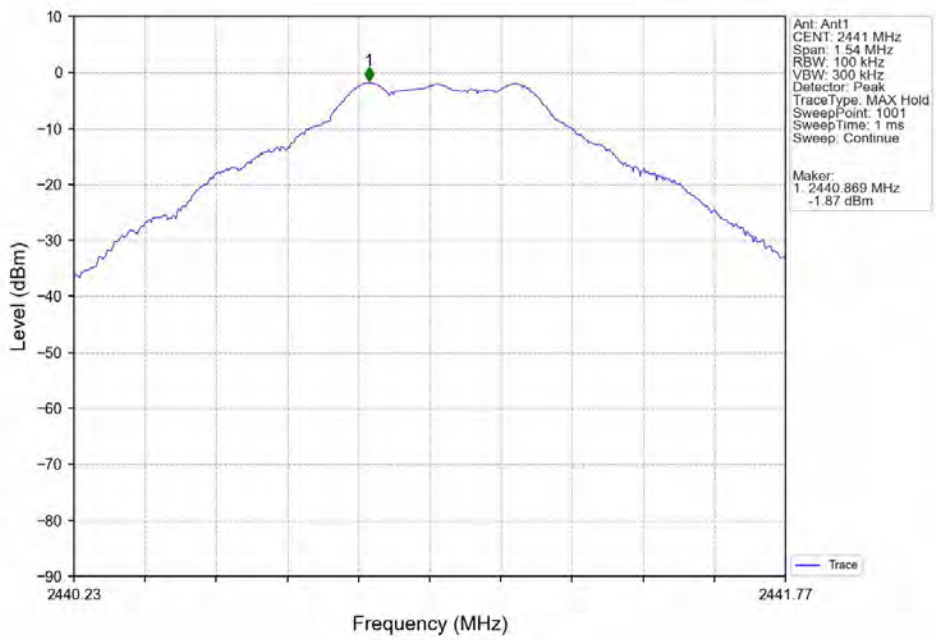
A.6 Band Edge

Mode	TX Type	Frequency (MHz)	Packet Type	ANT	Level of Reference (dBm)	Limit (dBm)	Verdict
GFSK	SISO	2402	DH5	1	-1.30	-21.30	Pass
		2441	DH5	1	-1.87	-21.87	Pass
		2480	DH5	1	-0.90	-20.90	Pass
		HOPP	DH5	1	-0.72	-20.72	Pass
					-0.72	-20.72	Pass
Pi/4DQPSK	SISO	2402	2DH5	1	-1.28	-21.28	Pass
		2441	2DH5	1	-1.88	-21.88	Pass
		2480	2DH5	1	-0.91	-20.91	Pass
		HOPP	2DH5	1	-0.78	-20.78	Pass
					-0.78	-20.78	Pass
8DPSK	SISO	2402	3DH5	1	-1.32	-21.32	Pass
		2441	3DH5	1	-1.91	-21.91	Pass
		2480	3DH5	1	-0.91	-20.91	Pass
		HOPP	3DH5	1	-0.77	-20.77	Pass
					-0.77	-20.77	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.							

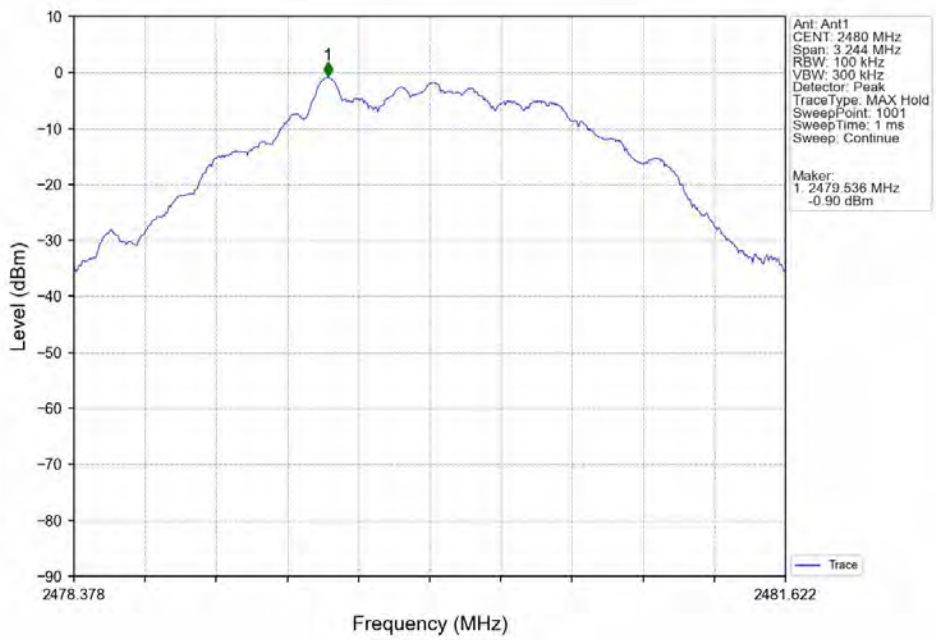
GFSK_DH5_LCH_2402MHz_ANT1_NTNV



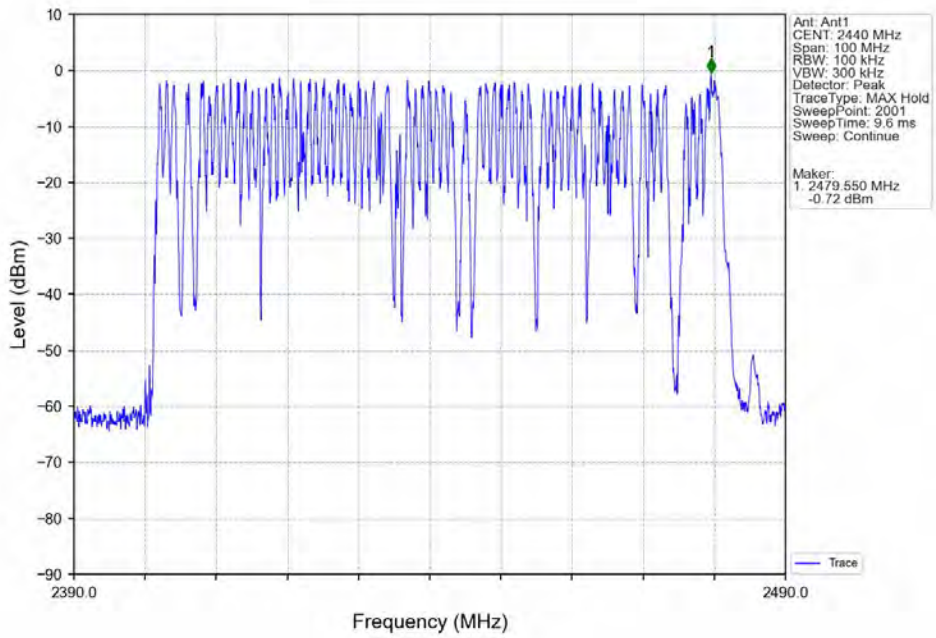
GFSK_DH5_MCH_2441MHz_ANT1_NTNV



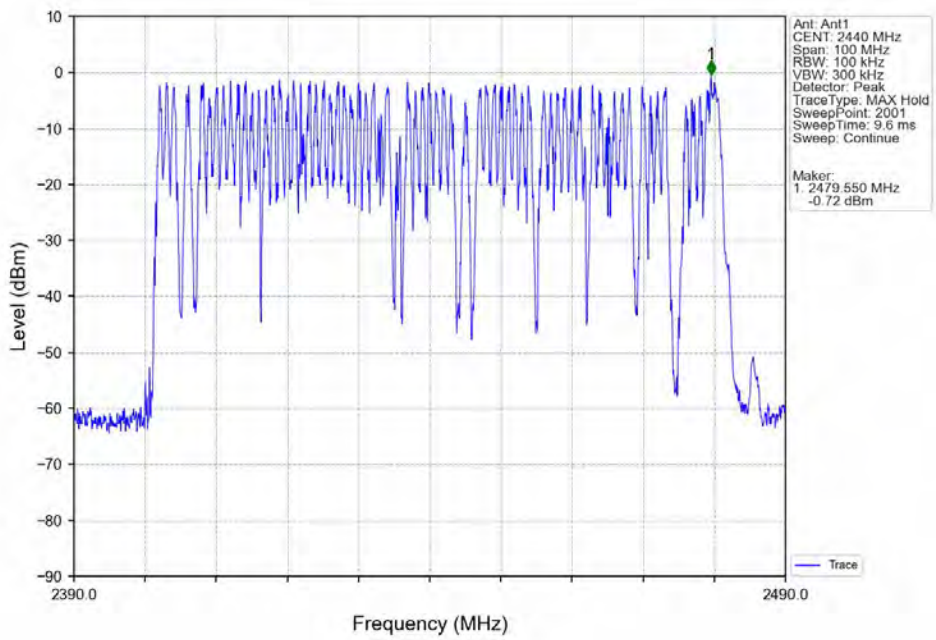
GFSK_DH5_HCH_2480MHz_ANT1_NTNV



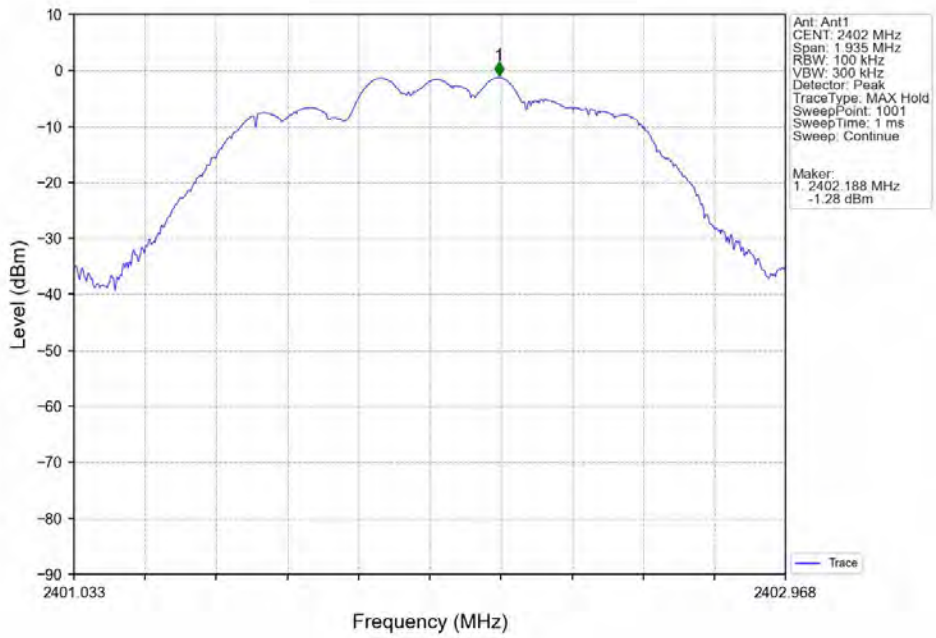
GFSK_DH5_HOPP_ANT1_NTNV



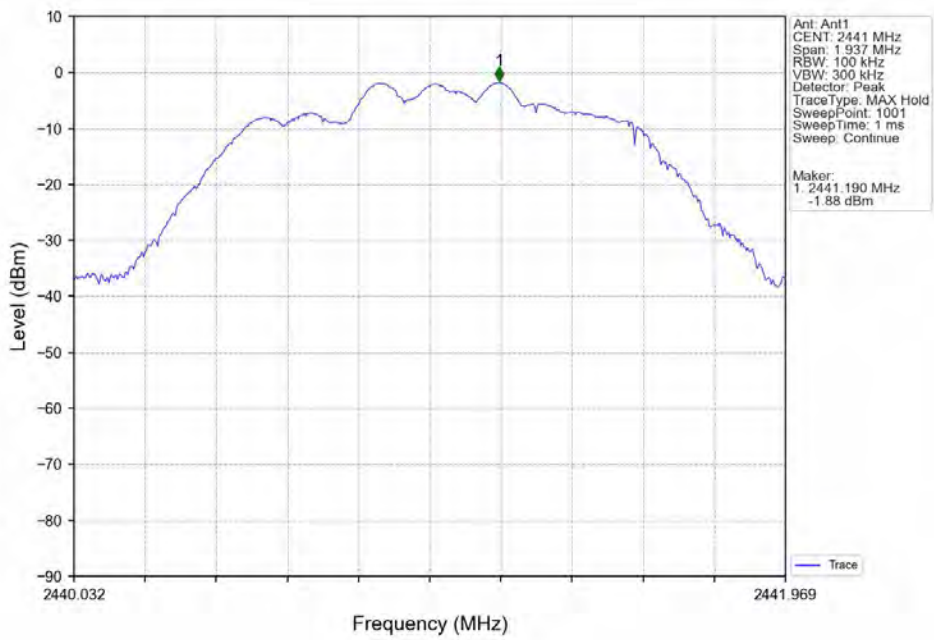
GFSK_DH5_HOPP_ANT1_NTNV



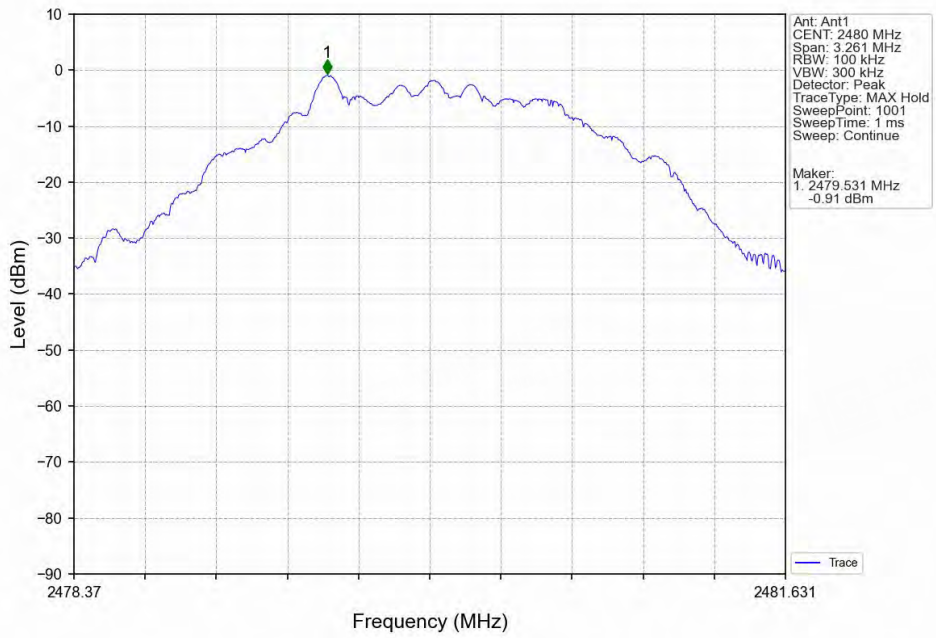
Pi/4DQPSK_2DH5_LCH_2402MHz_ANT1_NTNV



Pi/4DQPSK_2DH5_MCH_2441MHz_ANT1_NTNV



Pi/4DQPSK_2DH5_HCH_2480MHz_ANT1_NTNV



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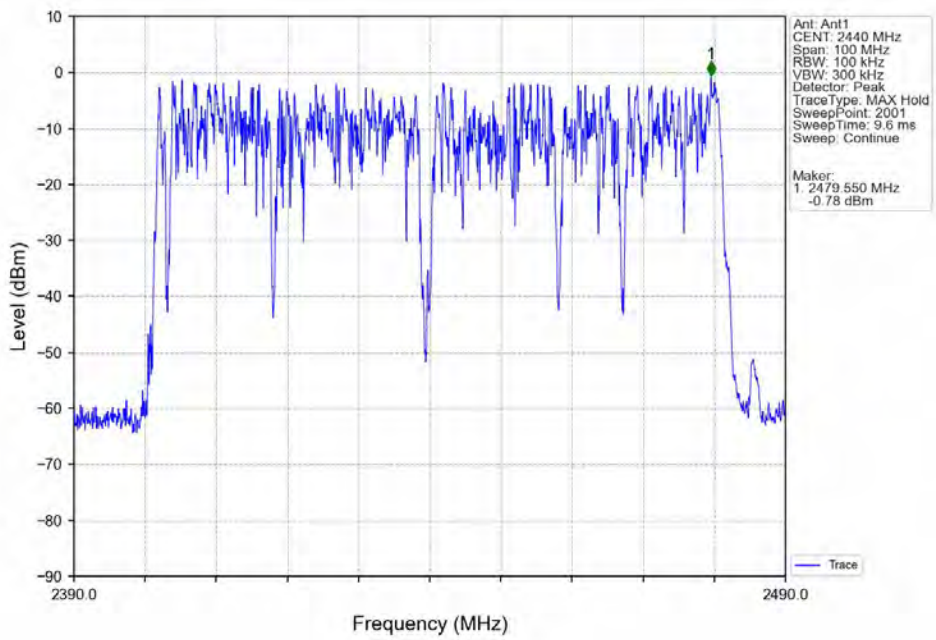

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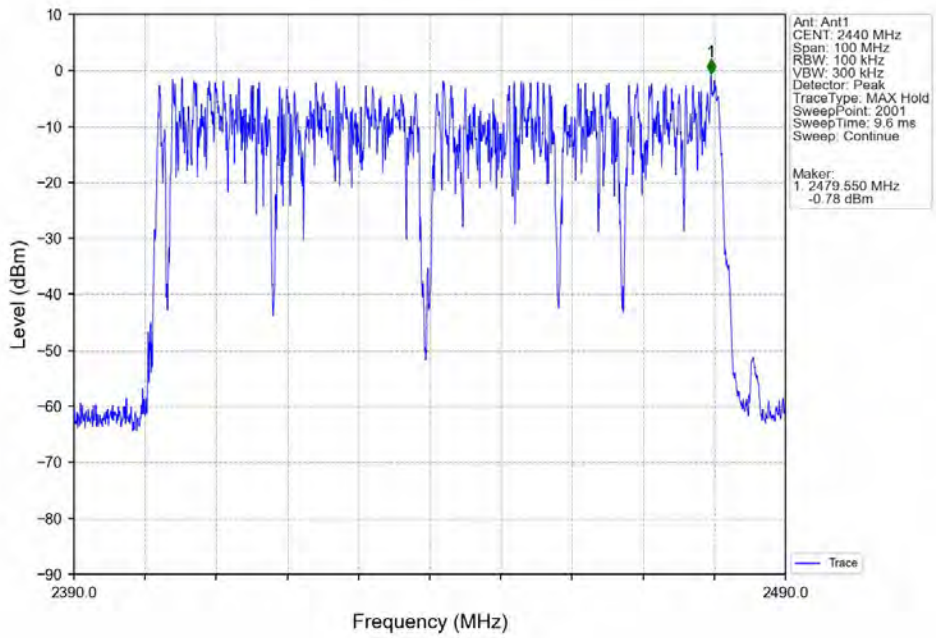
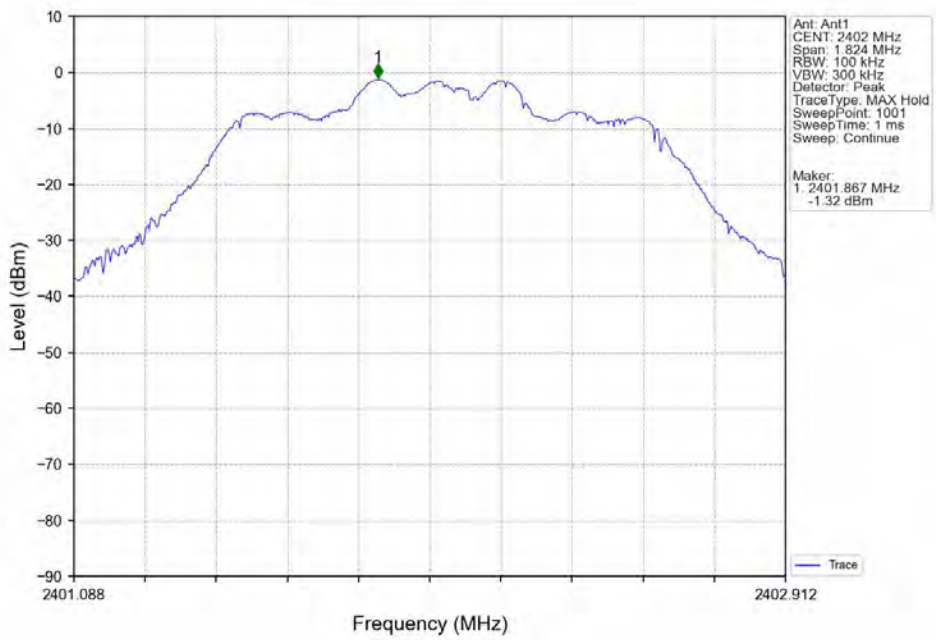
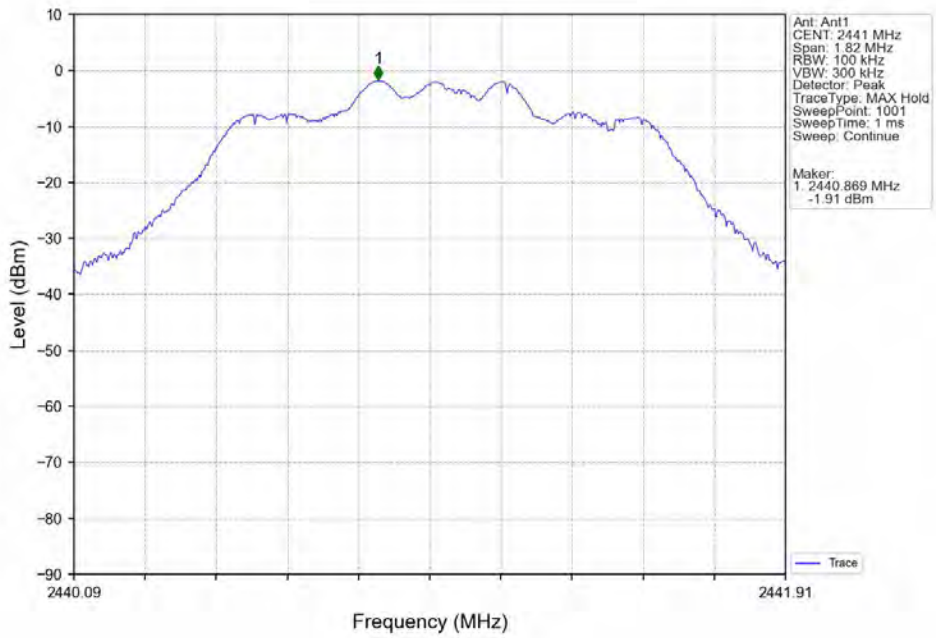


8DPSK_3DH5_LCH_2402MHz_ANT1_NTNV



8DPSK_3DH5_MCH_2441MHz_ANT1_NTNV



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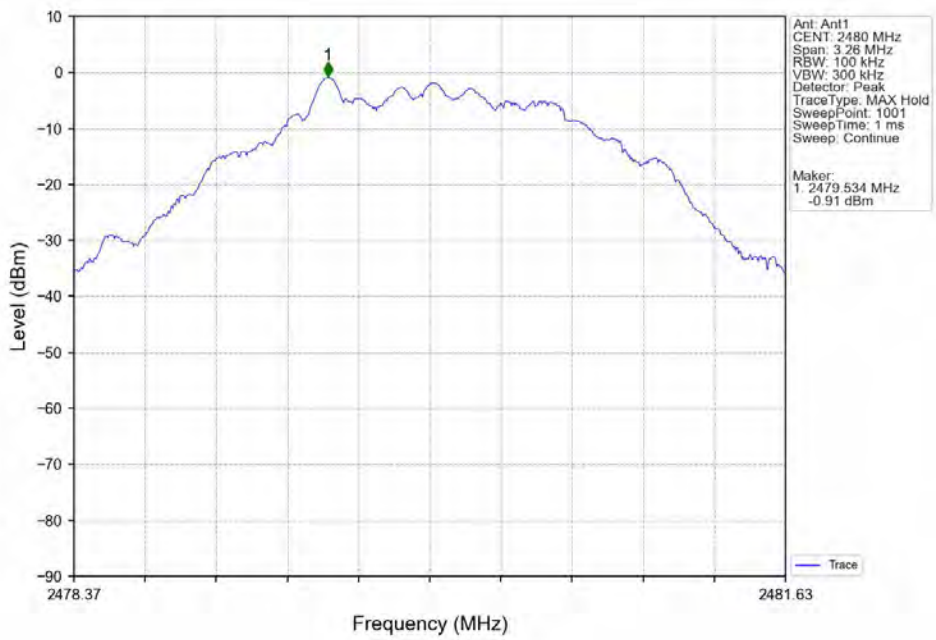

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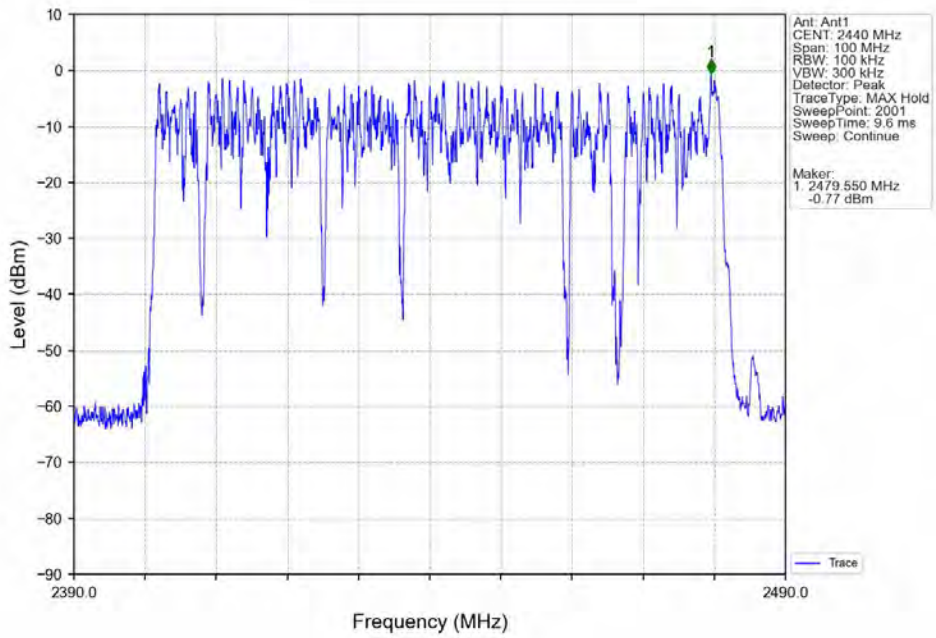

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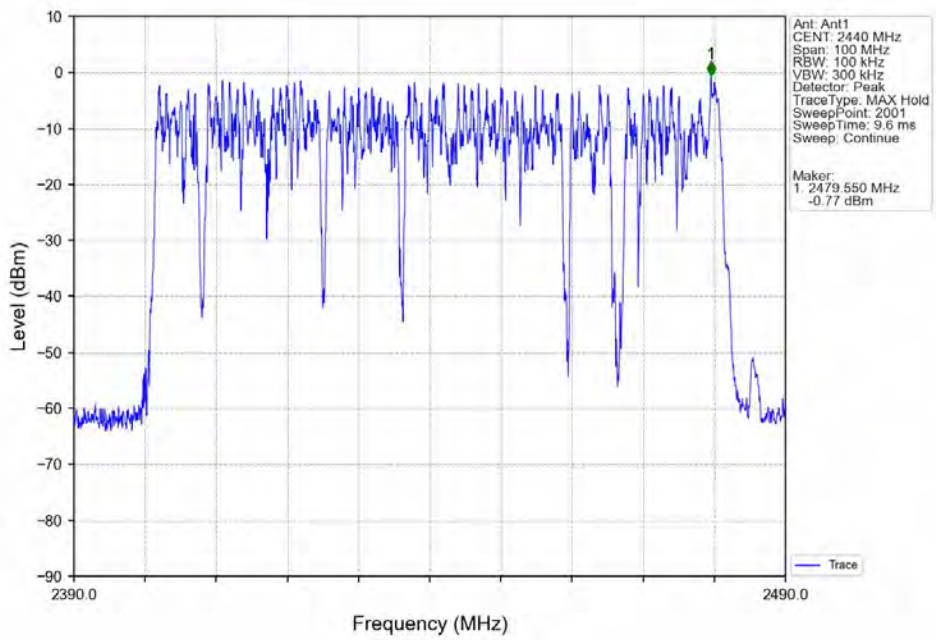
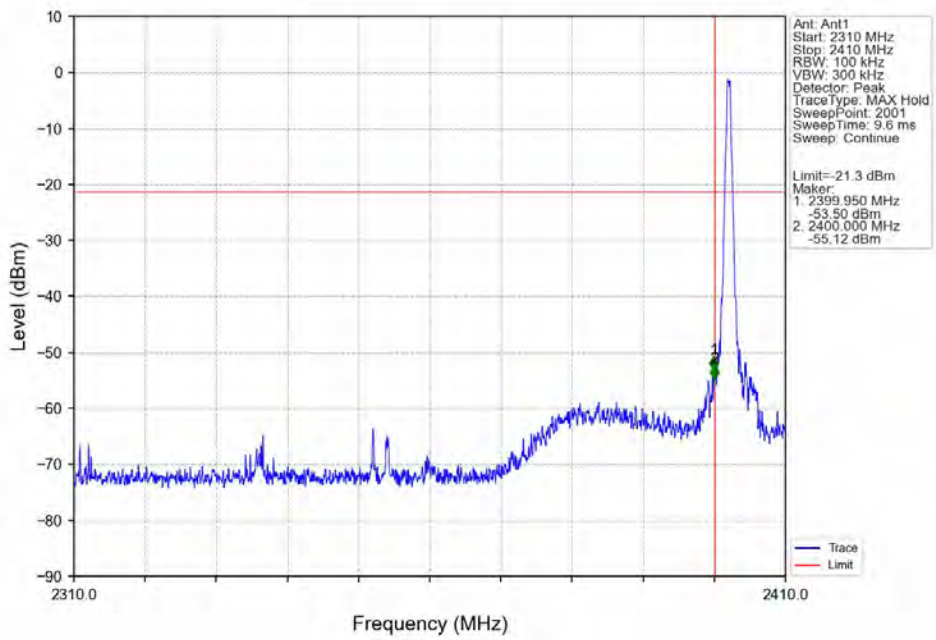


GFSK_DH5_LCH_2402MHz_ANT1_NTNV



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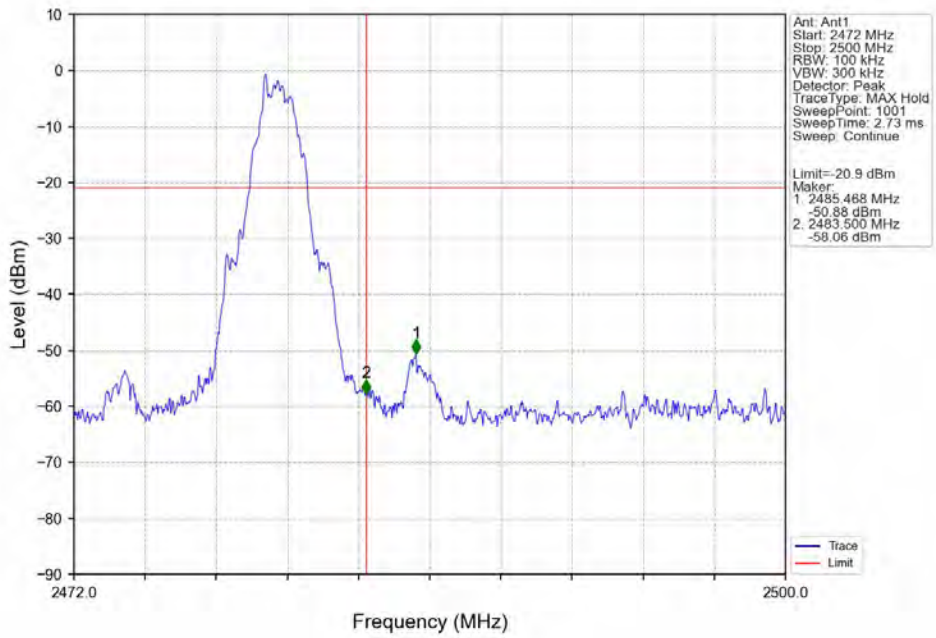

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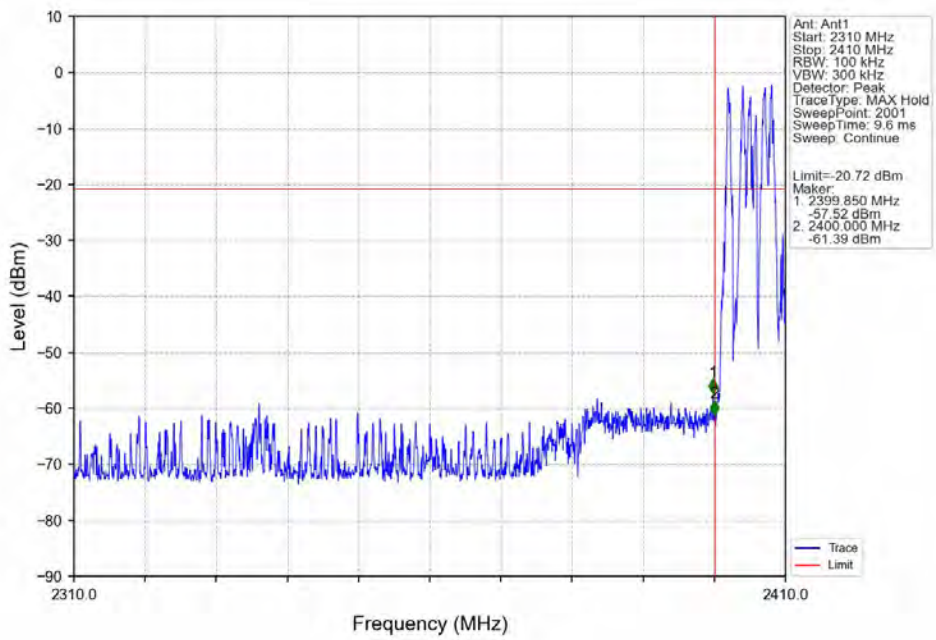

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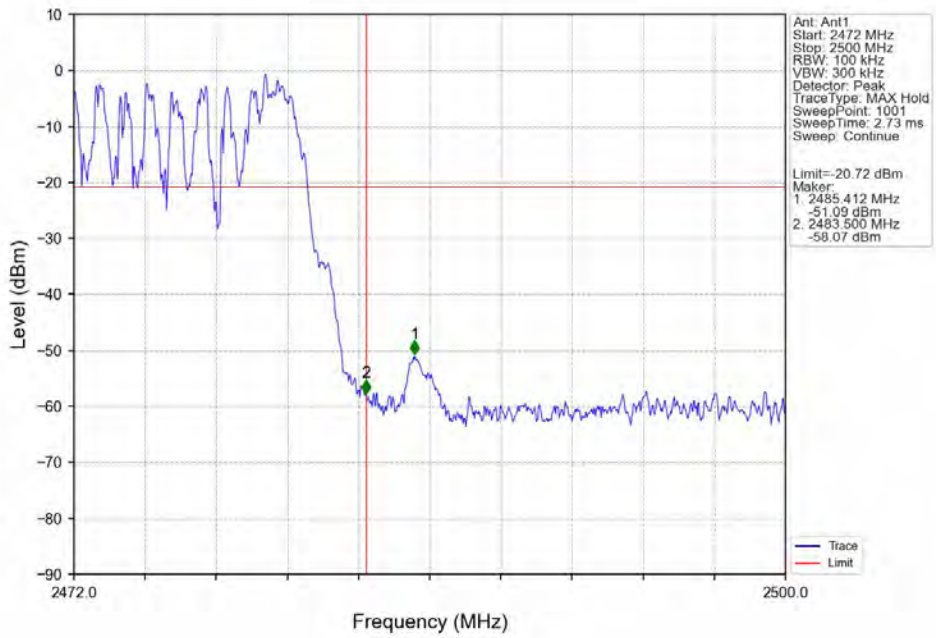

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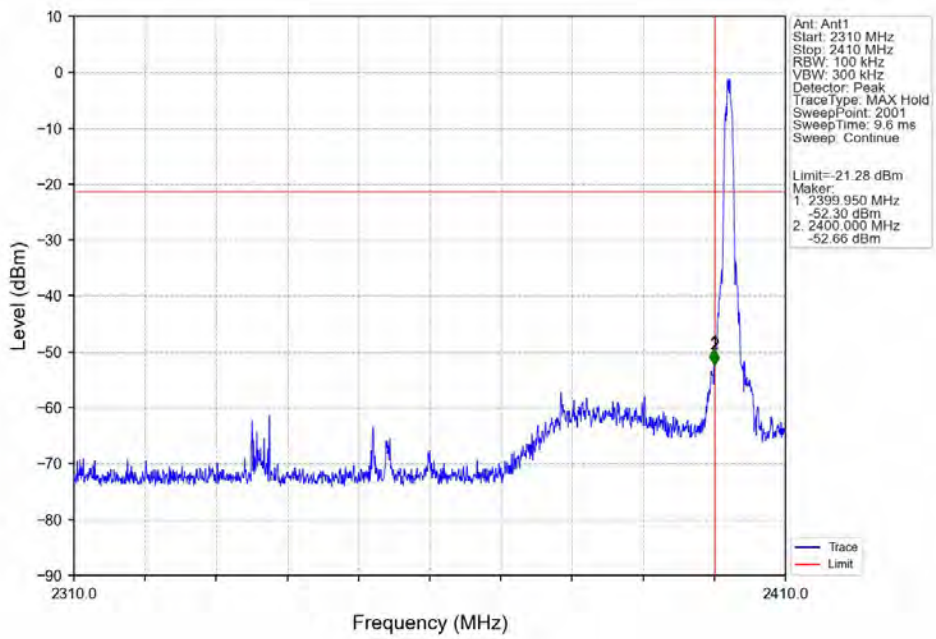

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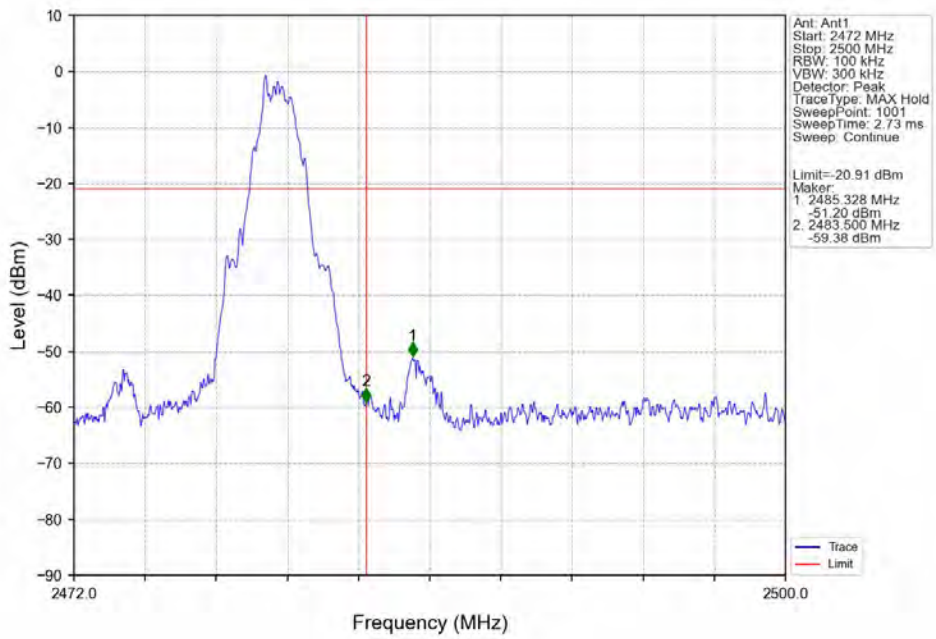

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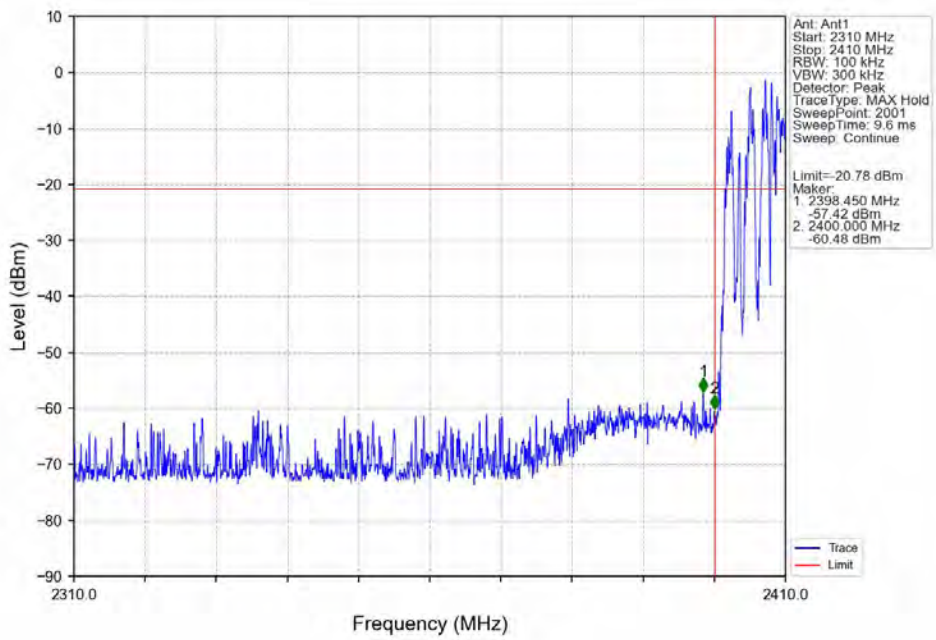

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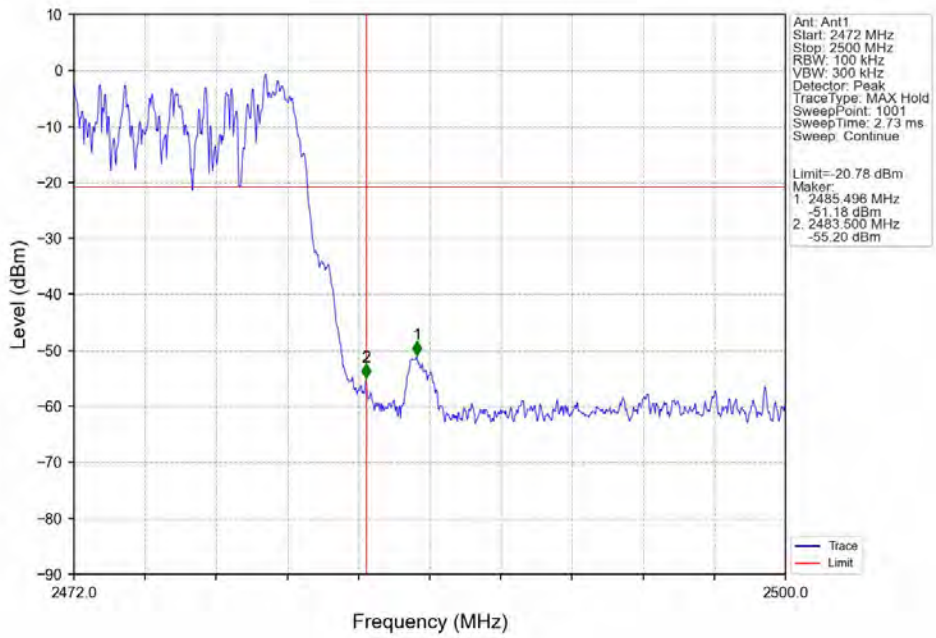
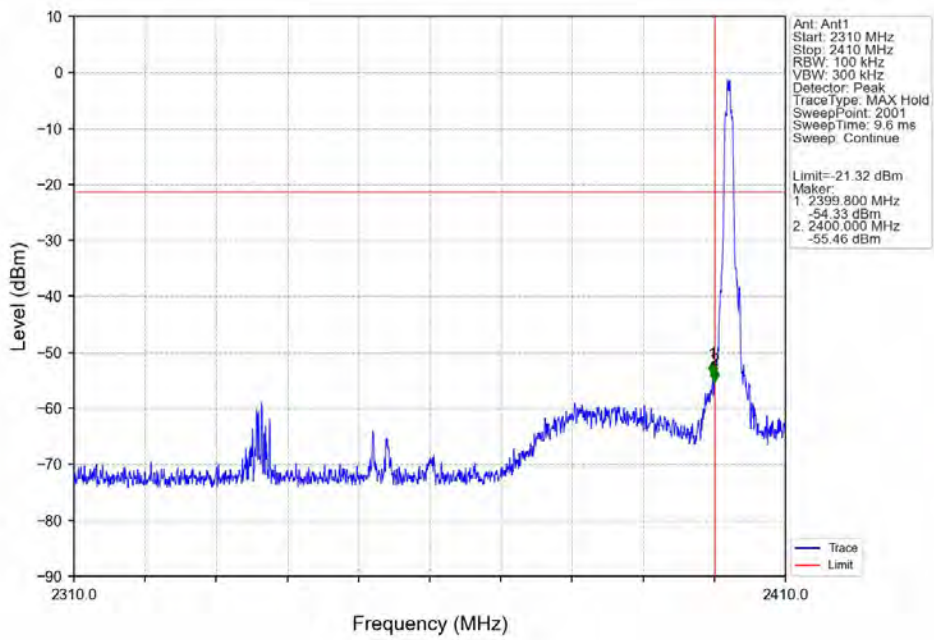
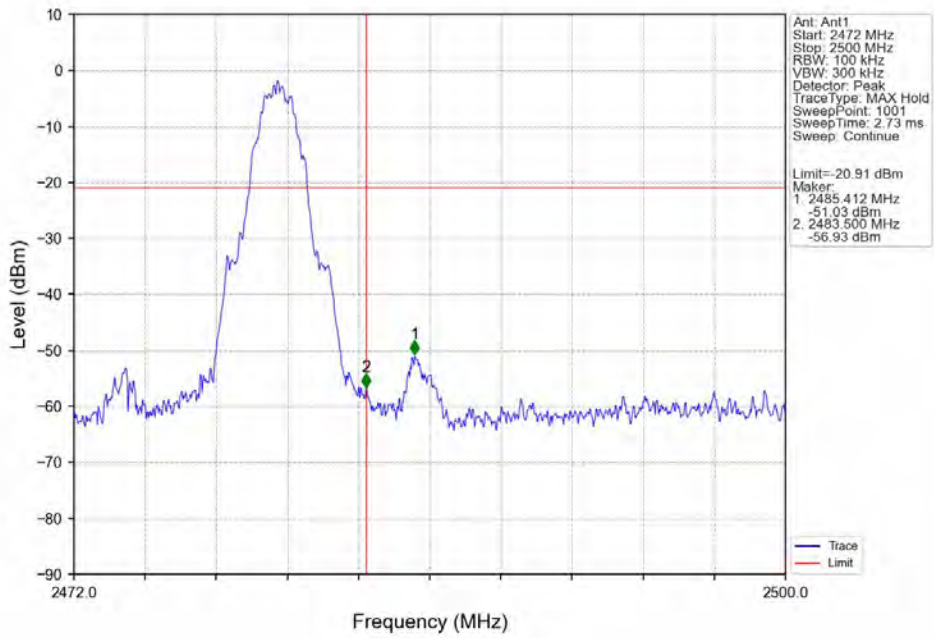


8DPSK_3DH5_LCH_2402MHz_ANT1_NTNV



8DPSK_3DH5_HCH_2480MHz_ANT1_NTNV



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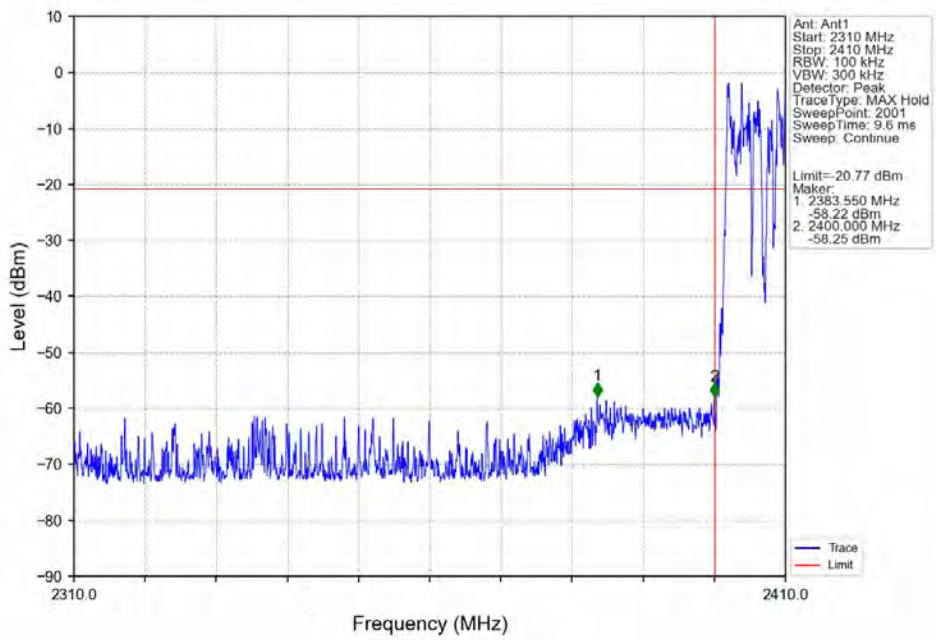

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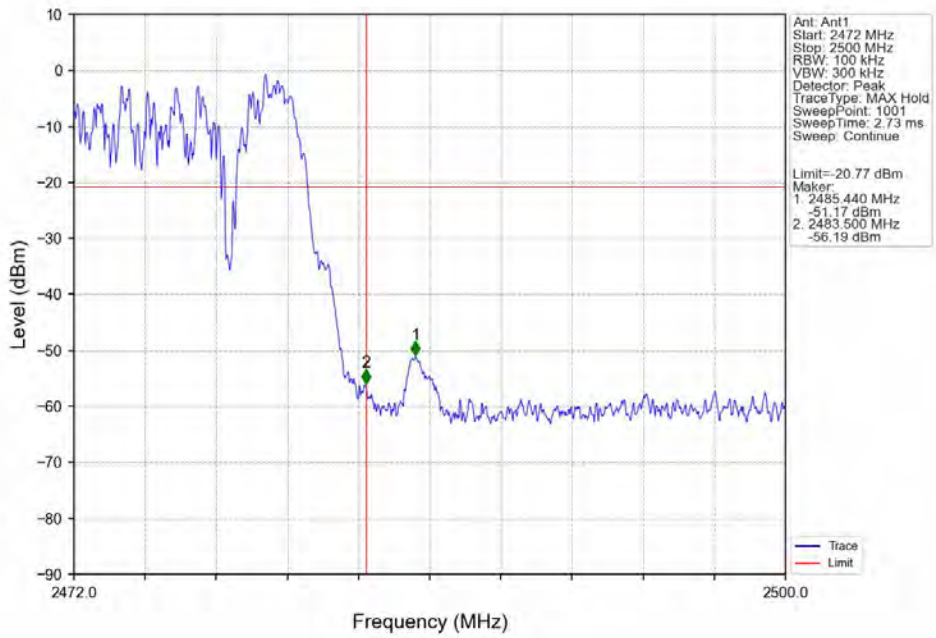
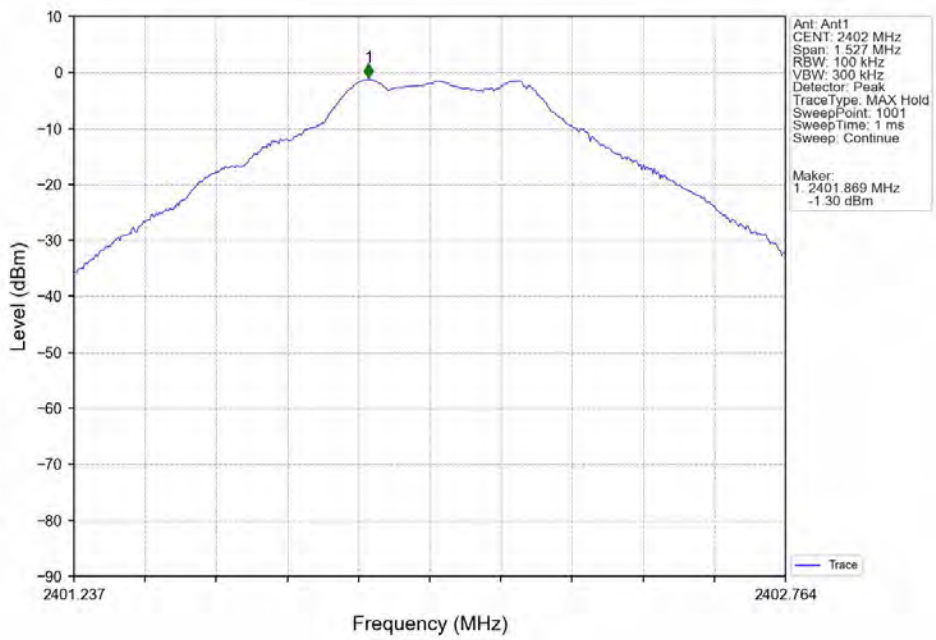


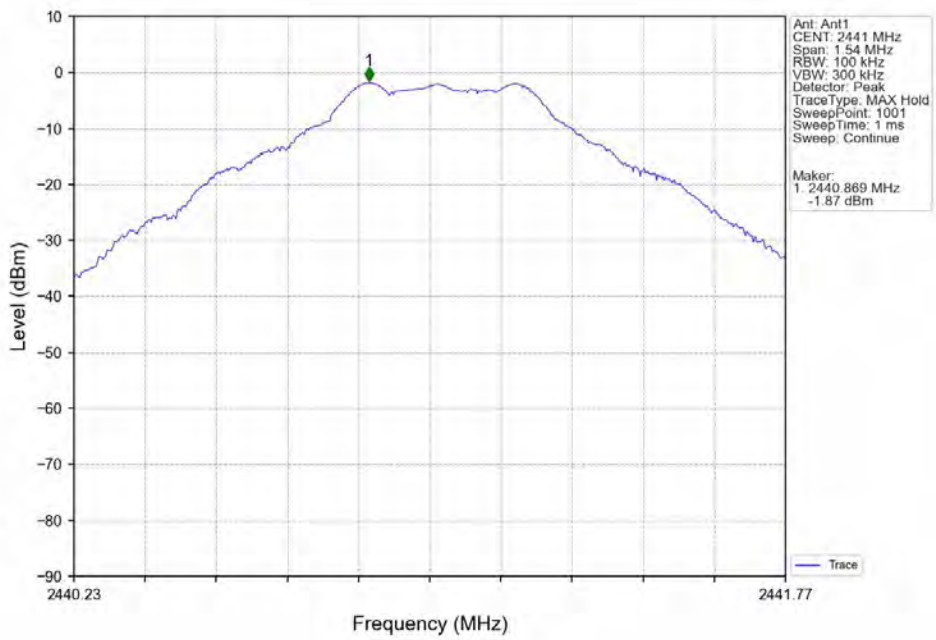
A.7 Conducted RF Spurious Emission

Mode	TX Type	Frequency (MHz)	Packet Type	ANT	Level of Reference (dBm)
GFSK	SISO	2402	DH5	1	-1.30
		2441	DH5	1	-1.87
		2480	DH5	1	-0.90
		HOPP	DH5	1	-0.72
					-0.72
Pi/4DQPSK	SISO	2402	2DH5	1	-1.28
		2441	2DH5	1	-1.88
		2480	2DH5	1	-0.91
		HOPP	2DH5	1	-0.78
					-0.78
8DPSK	SISO	2402	3DH5	1	-1.32
		2441	3DH5	1	-1.91
		2480	3DH5	1	-0.91
		HOPP	3DH5	1	-0.77
					-0.77
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.					

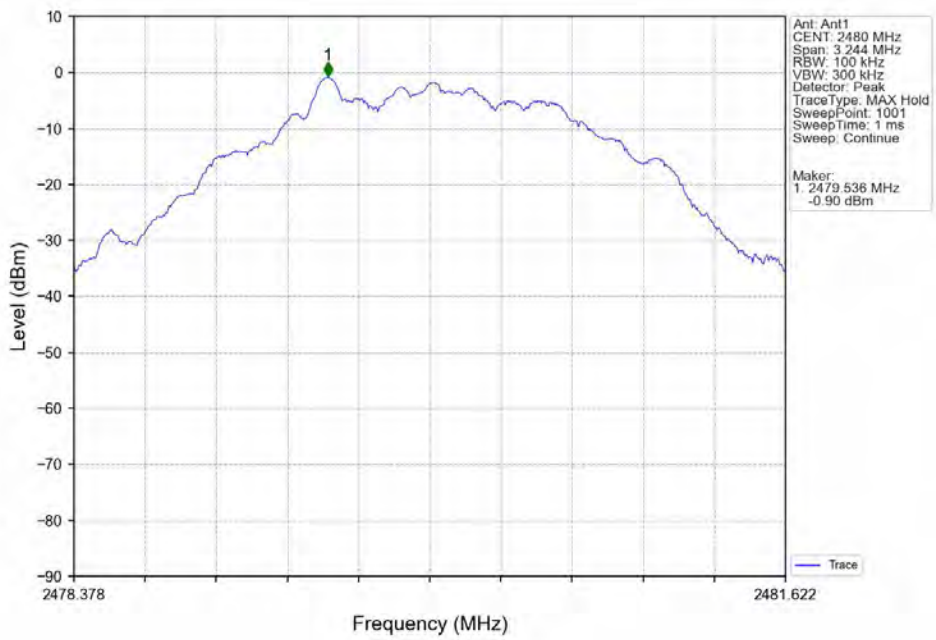
GFSK_DH5_LCH_2402MHz_ANT1_NTNV



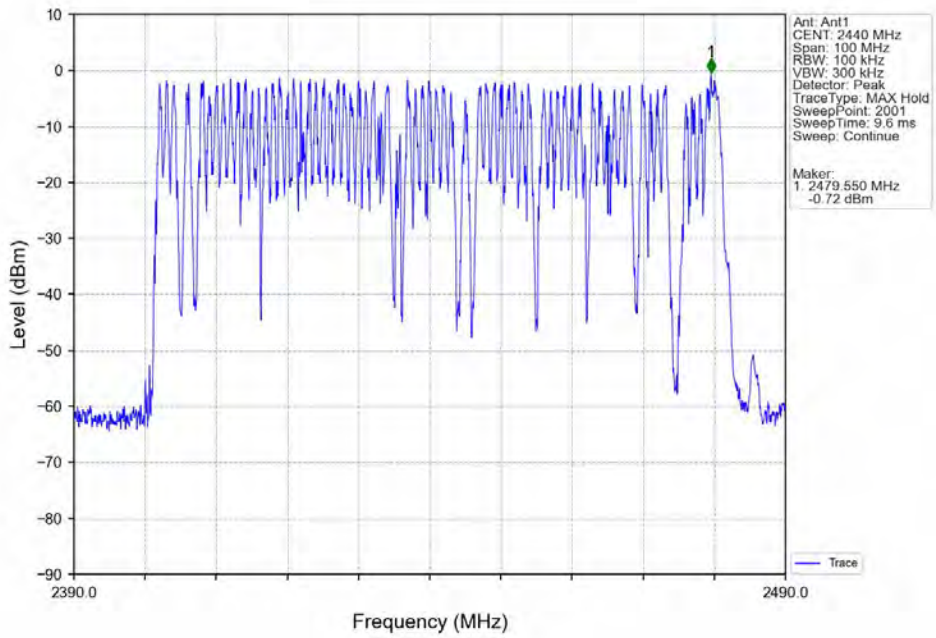
GFSK_DH5_MCH_2441MHz_ANT1_NTNV



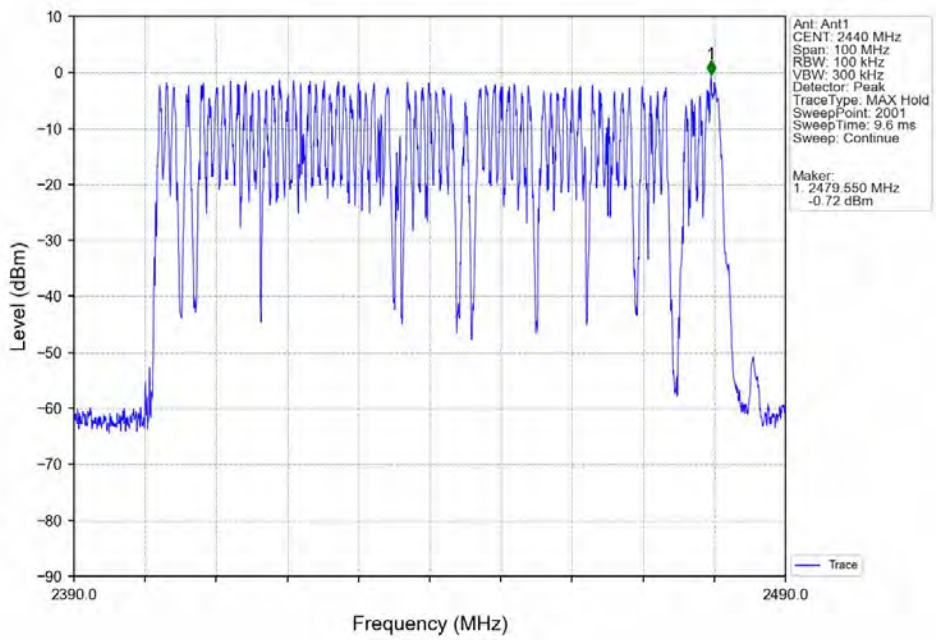
GFSK_DH5_HCH_2480MHz_ANT1_NTNV



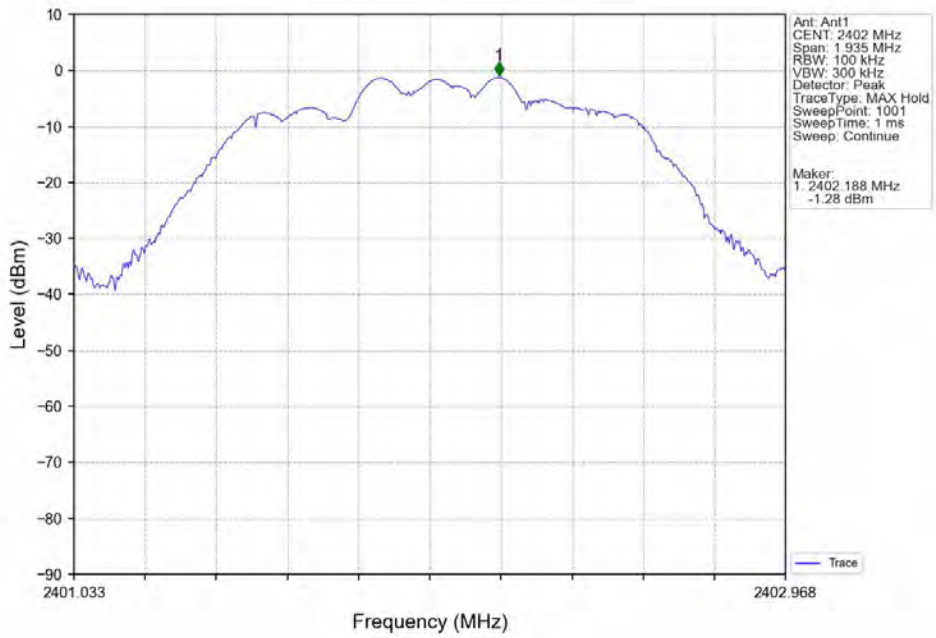
GFSK_DH5_HOPP_ANT1_NTNV



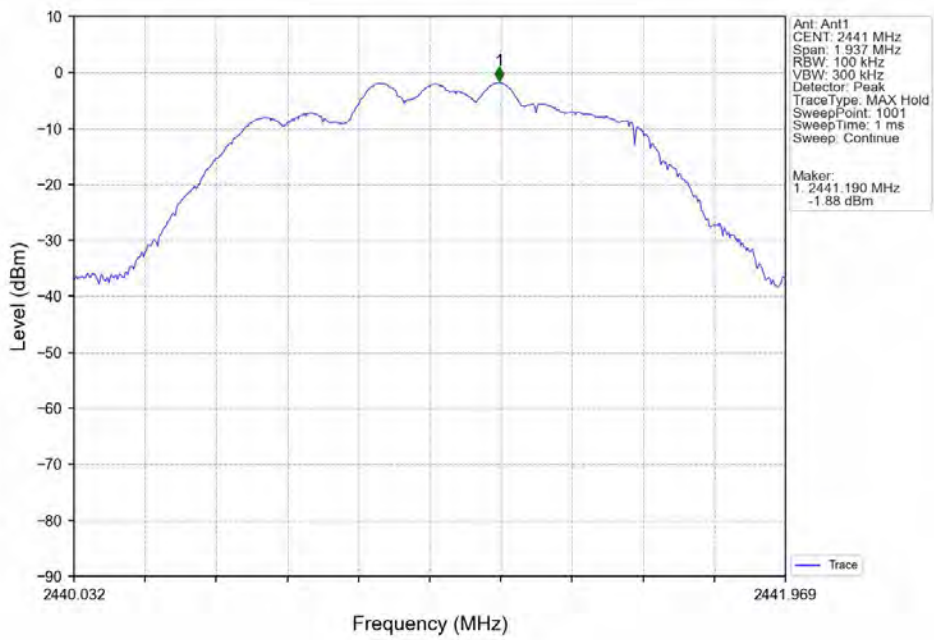
GFSK_DH5_HOPP_ANT1_NTNV



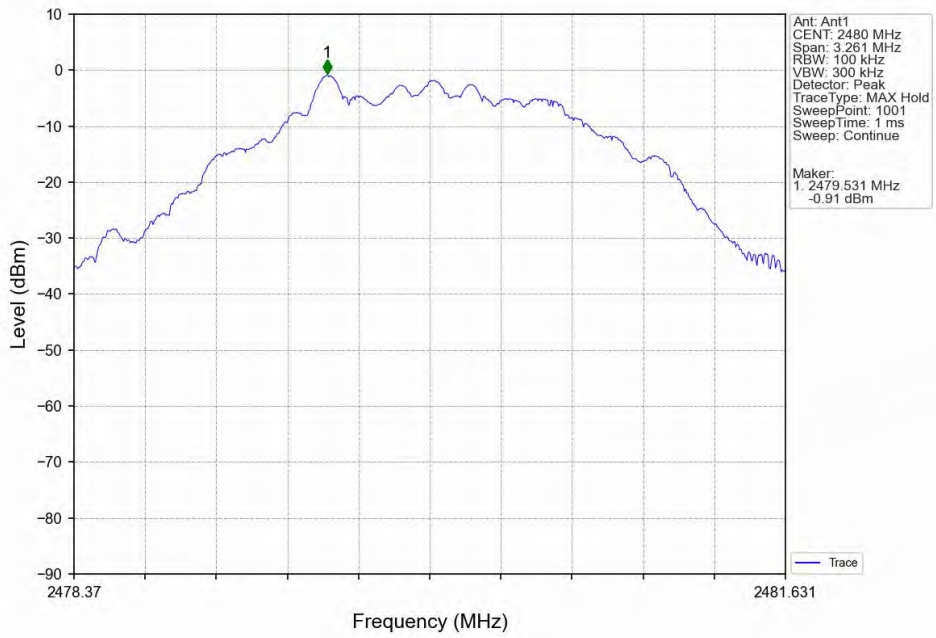
Pi/4DQPSK_2DH5_LCH_2402MHz_ANT1_NTNV



Pi/4DQPSK_2DH5_MCH_2441MHz_ANT1_NTNV



Pi/4DQPSK_2DH5_HCH_2480MHz_ANT1_NTNV



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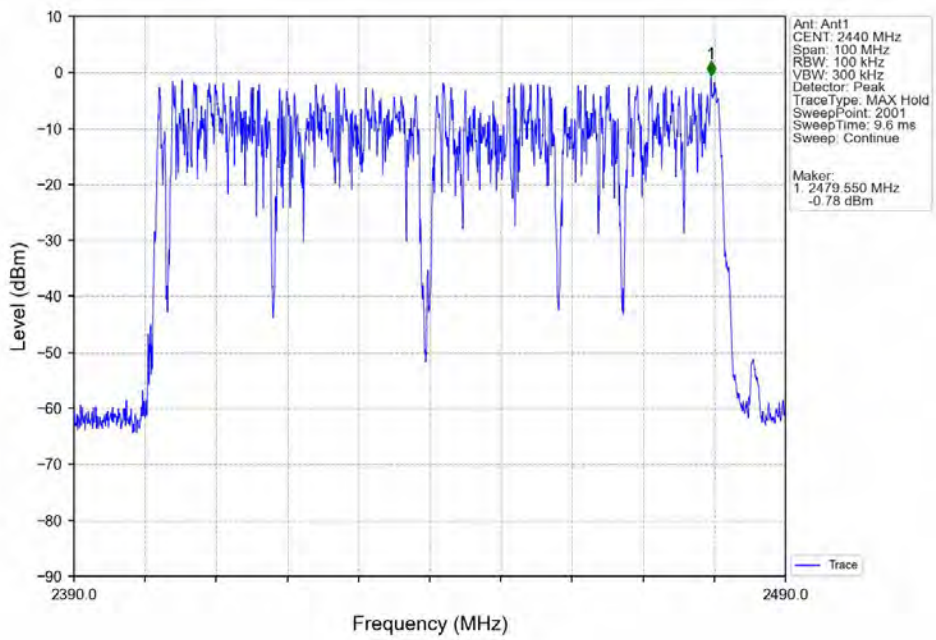
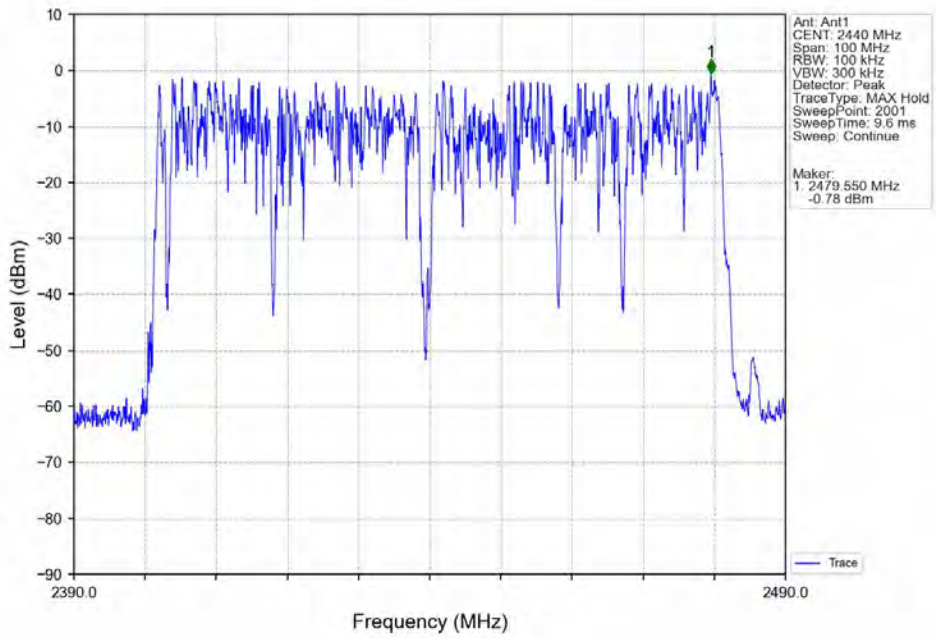
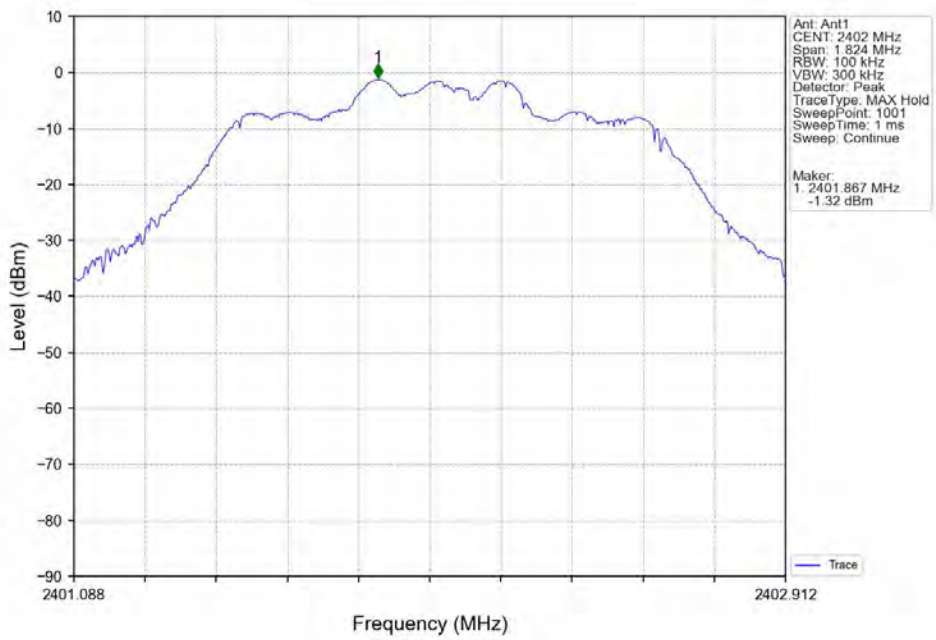


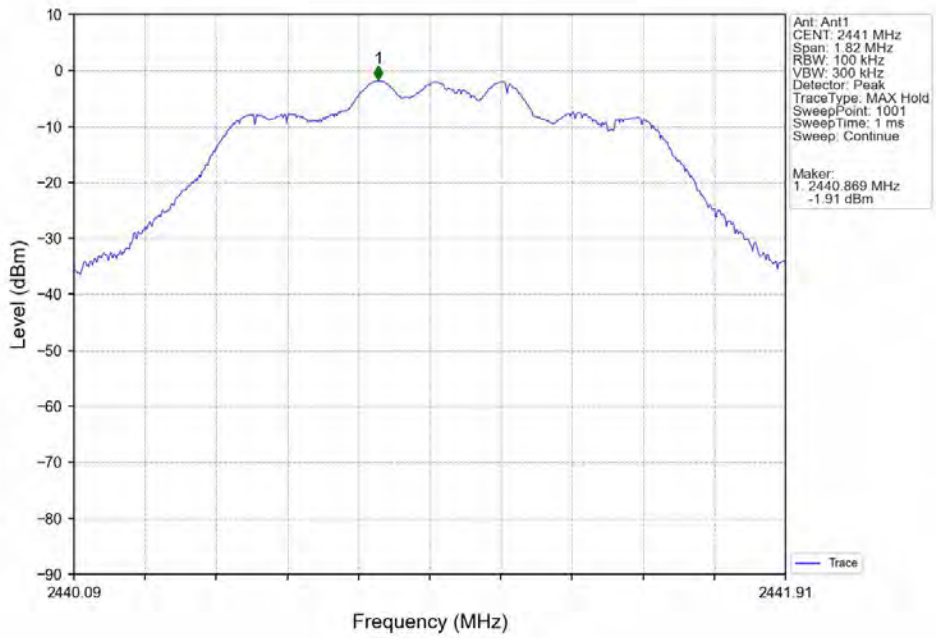
Pi/4DQPSK_2DH5_HOPP_ANT1_NTNV



8DPSK_3DH5_LCH_2402MHz_ANT1_NTNV



8DPSK_3DH5_MCH_2441MHz_ANT1_NTNV



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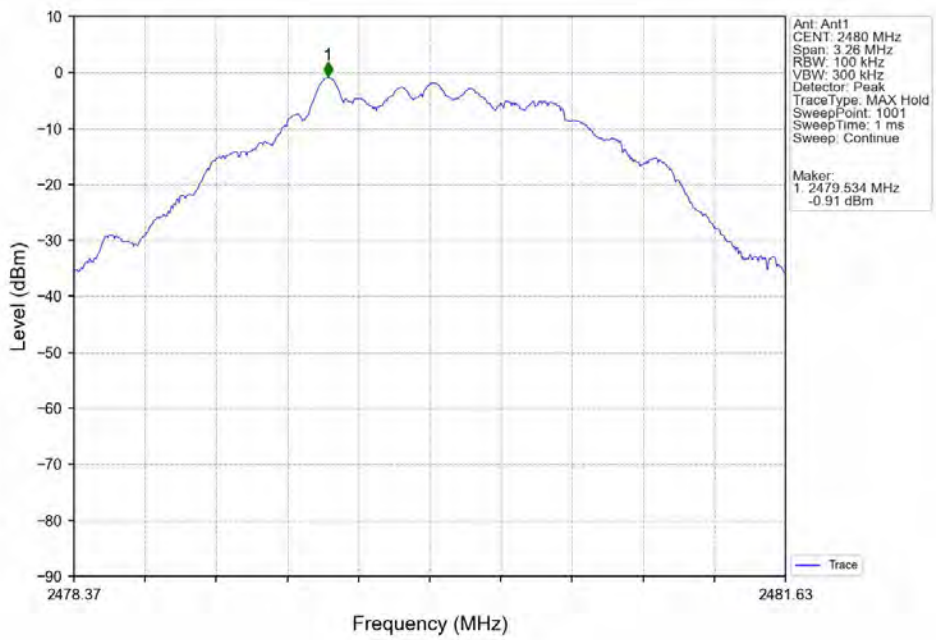

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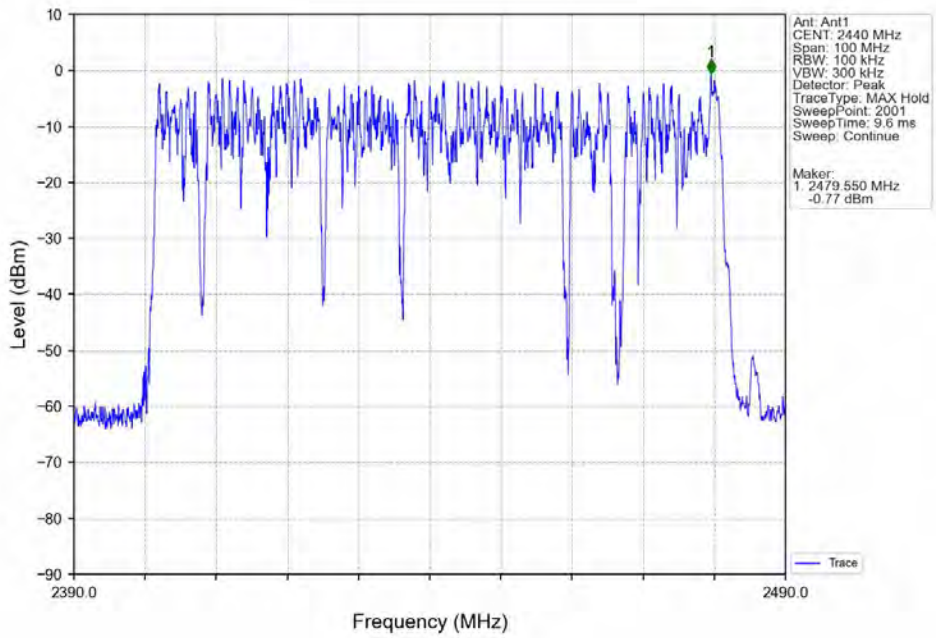

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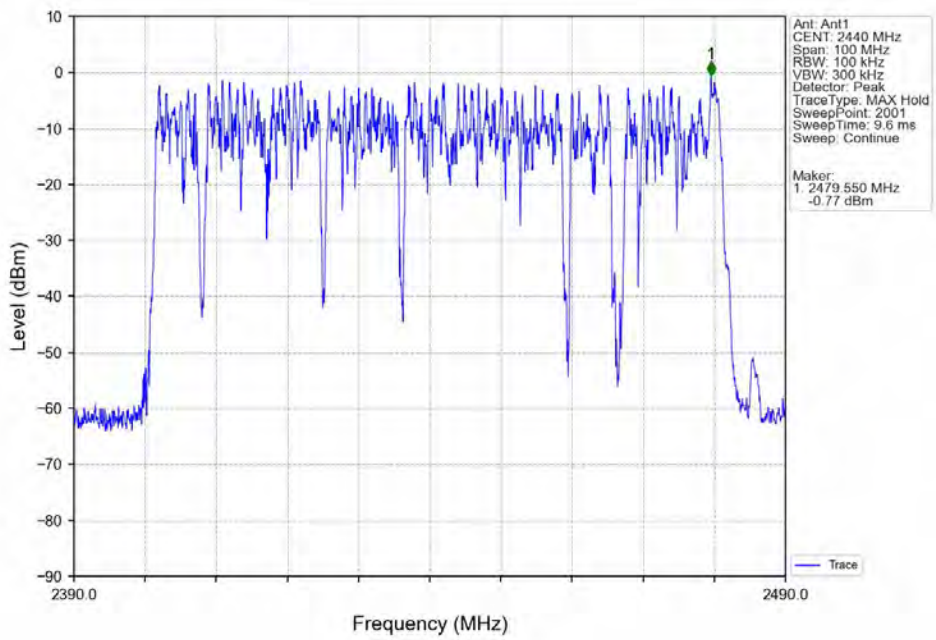
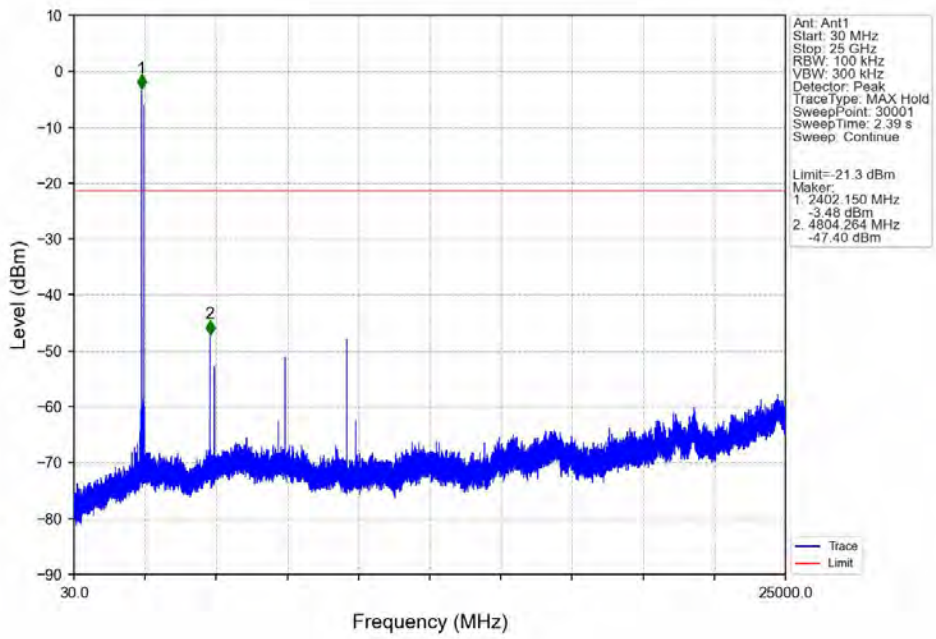
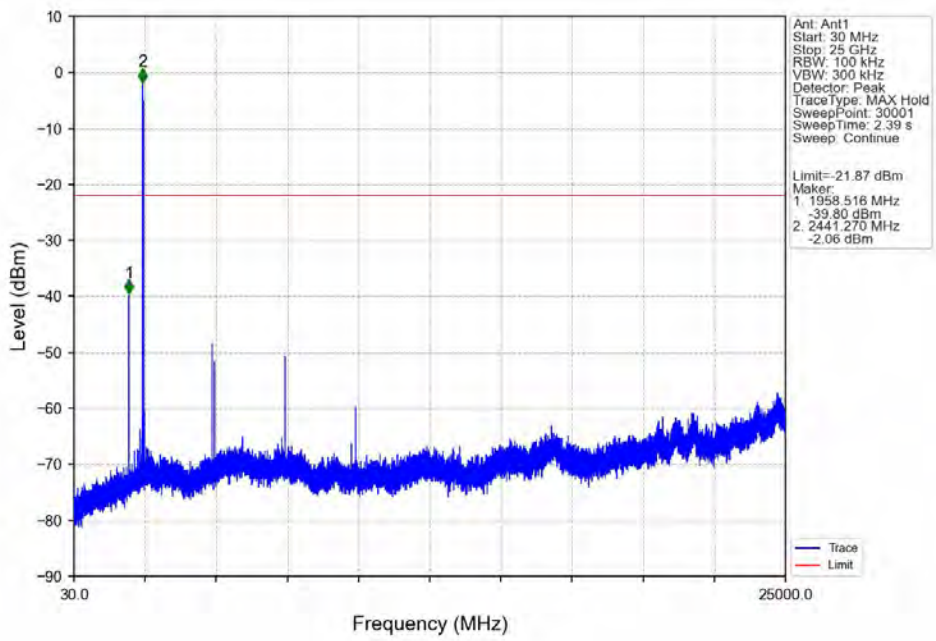


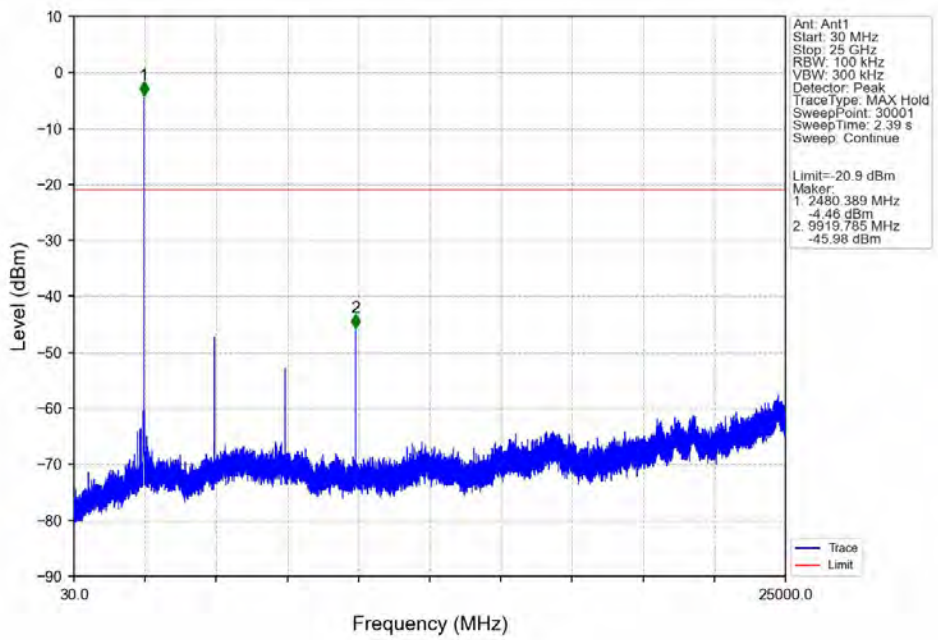
GFSK_DH5_LCH_2402MHz_ANT1_NTNV



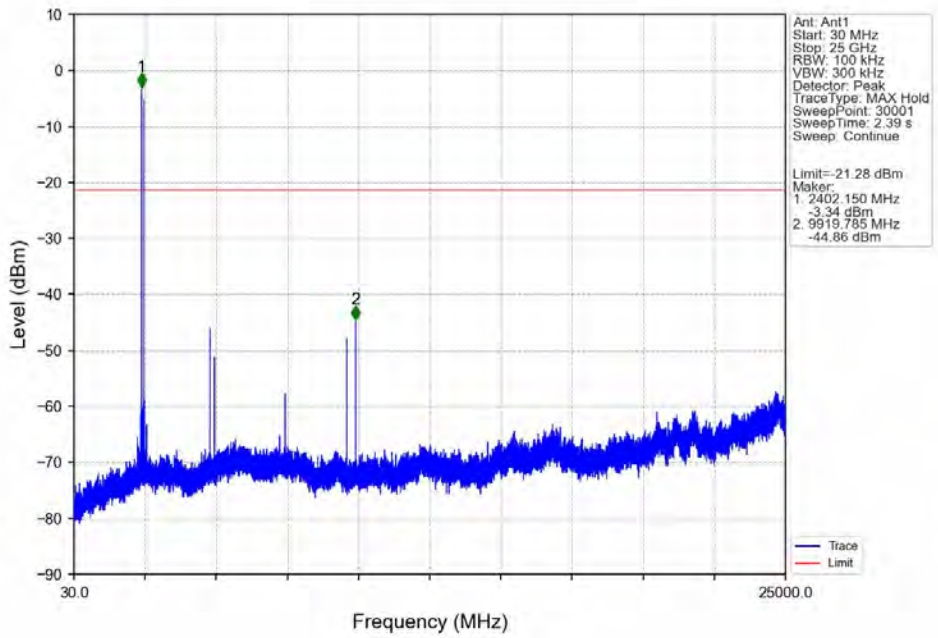
GFSK_DH5_MCH_2441MHz_ANT1_NTNV



GFSK_DH5_HCH_2480MHz_ANT1_NTNV



Pi/4DQPSK_2DH5_LCH_2402MHz_ANT1_NTNV



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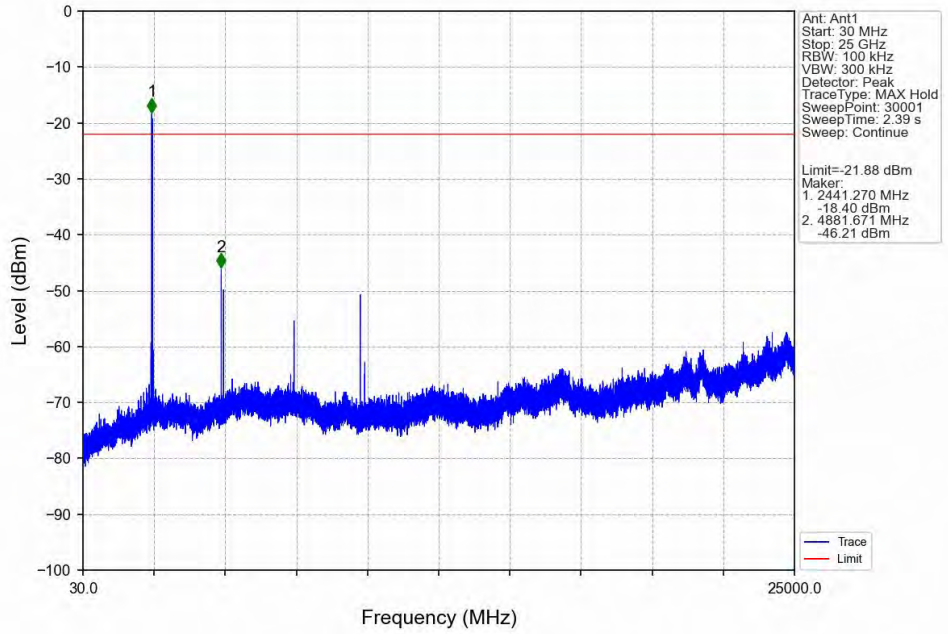

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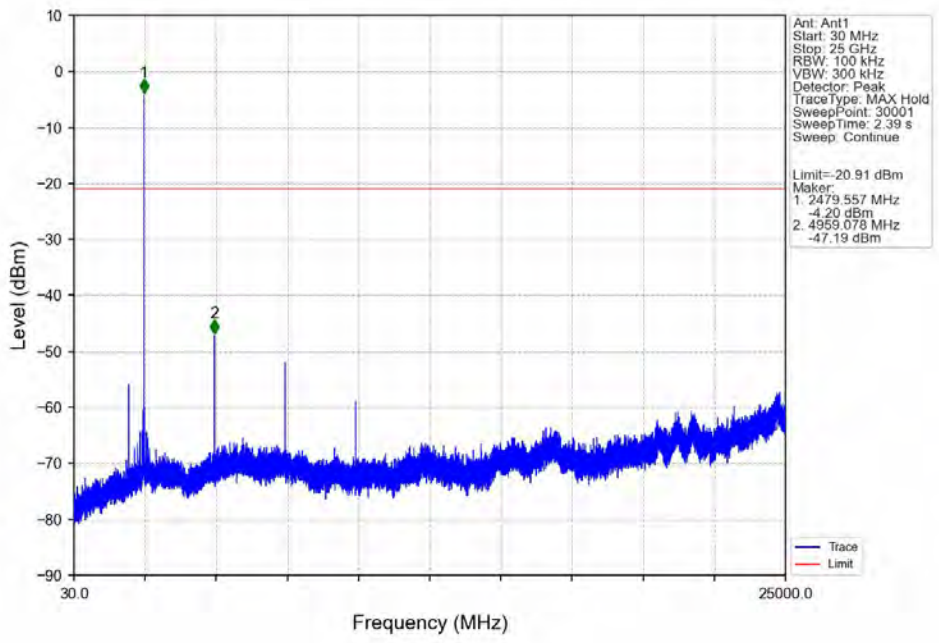
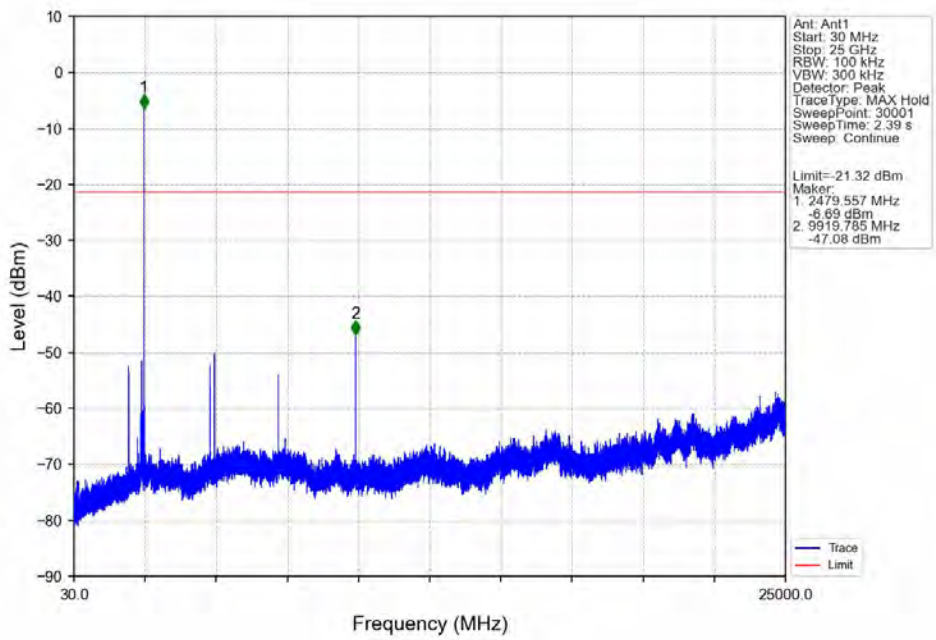


8DPSK_3DH5_LCH_2402MHz_ANT1_NTNV



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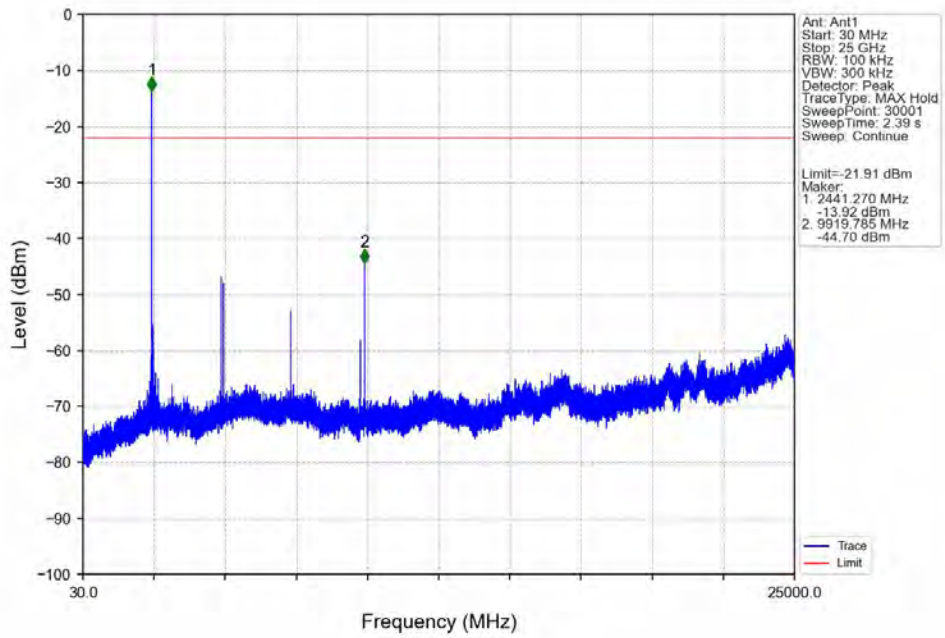
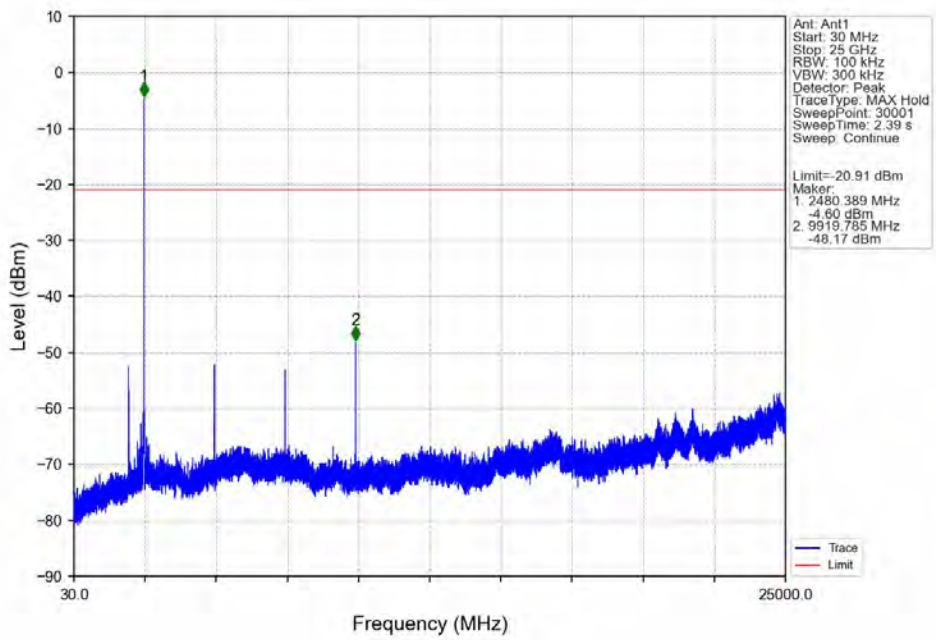


8DPSK_3DH5_HCH_2480MHz_ANT1_NTNV

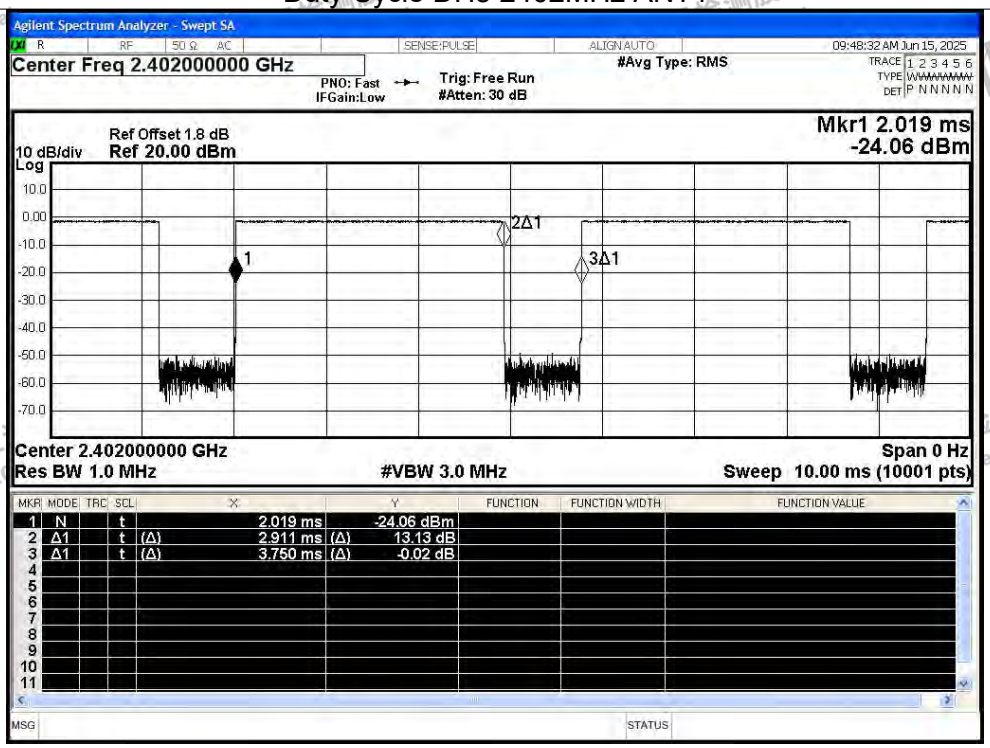


A.8 Duty Cycle

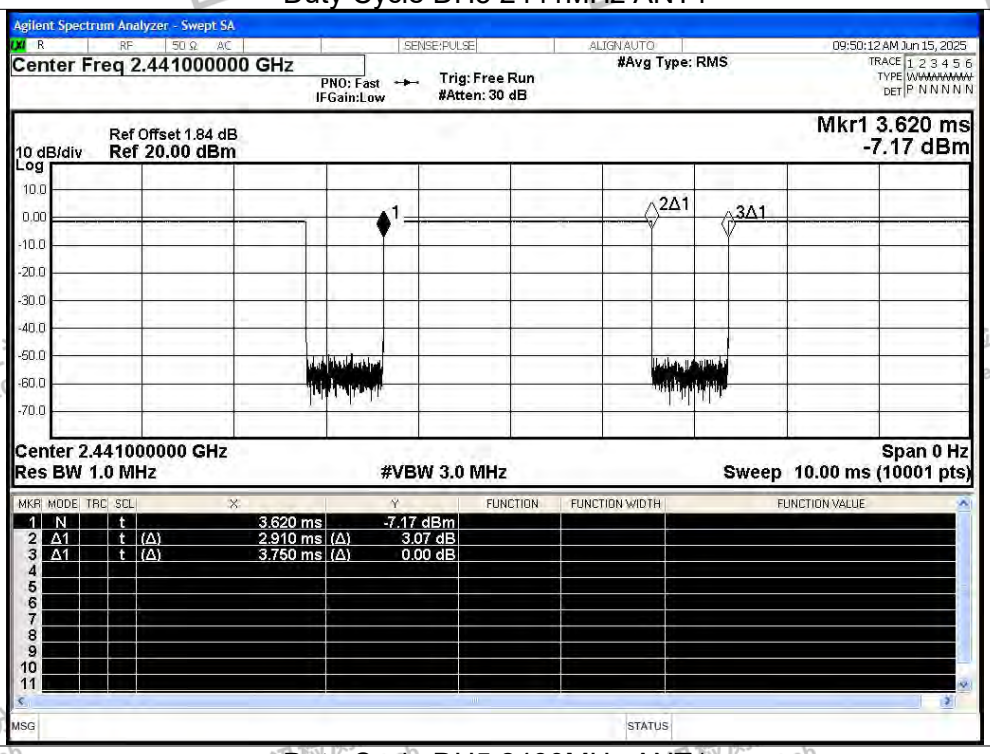
Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
DH5	2402	ANT1	77.63	1.1	0.34
DH5	2441	ANT1	77.6	1.1	0.34
DH5	2480	ANT1	77.6	1.1	0.34
2DH5	2402	ANT1	77.33	1.12	0.34
2DH5	2441	ANT1	77.28	1.12	0.35
2DH5	2480	ANT1	77.28	1.12	0.35
3DH5	2402	ANT1	77.28	1.12	0.35
3DH5	2441	ANT1	77.28	1.12	0.35
3DH5	2480	ANT1	77.28	1.12	0.35

Test Graphs

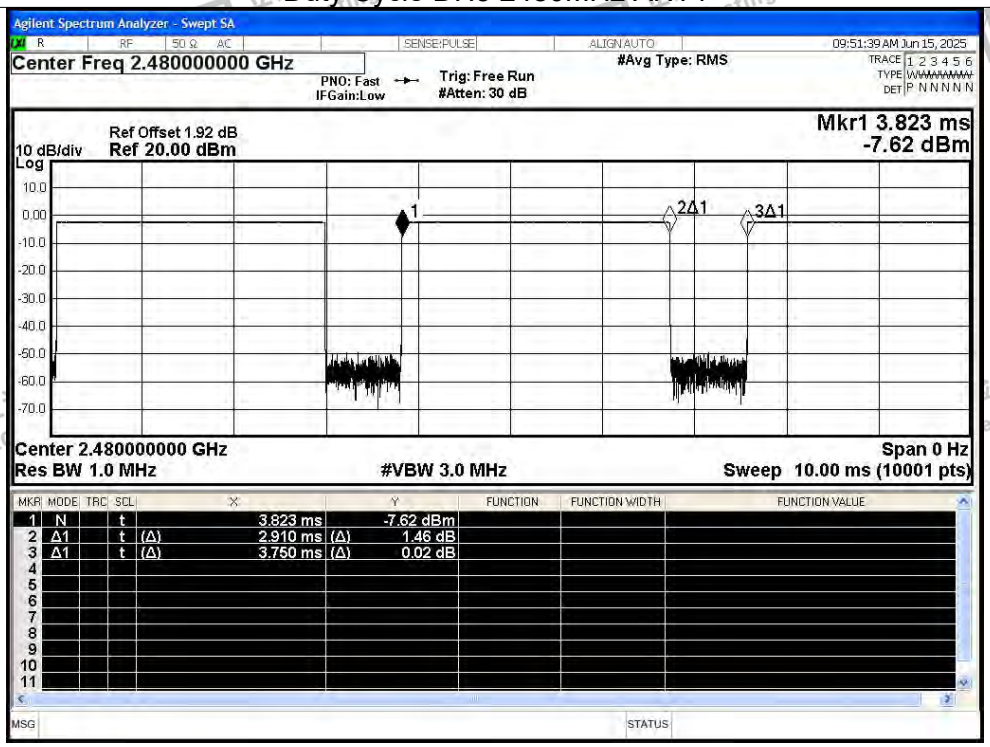
Duty Cycle DH5 2402MHz ANT1



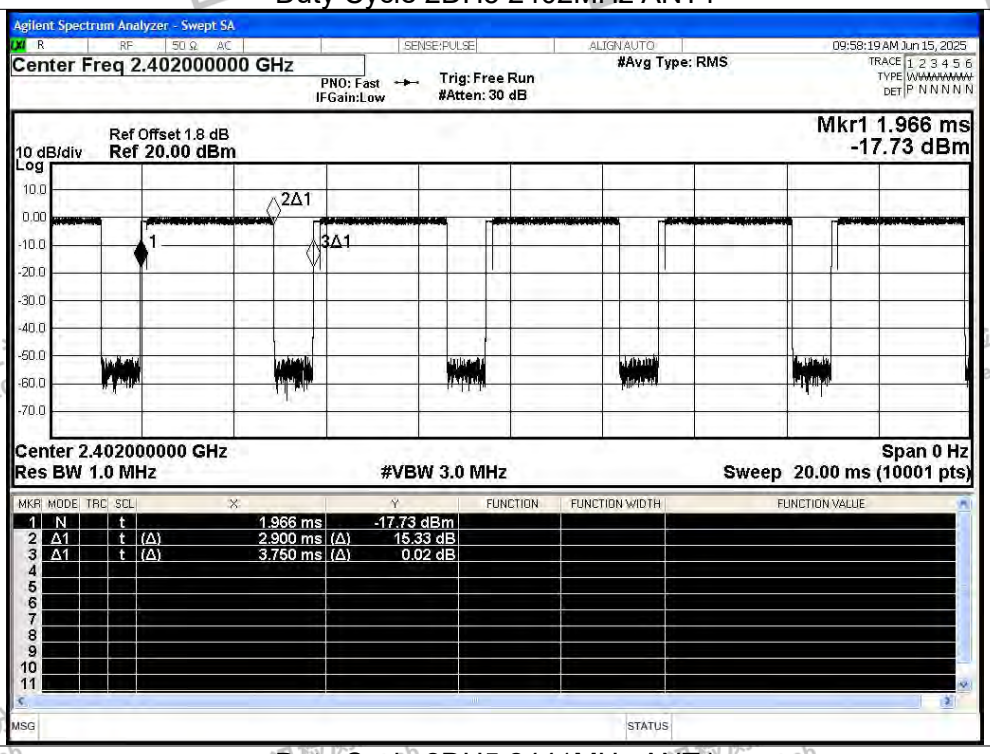
Duty Cycle DH5 2441MHz ANT1



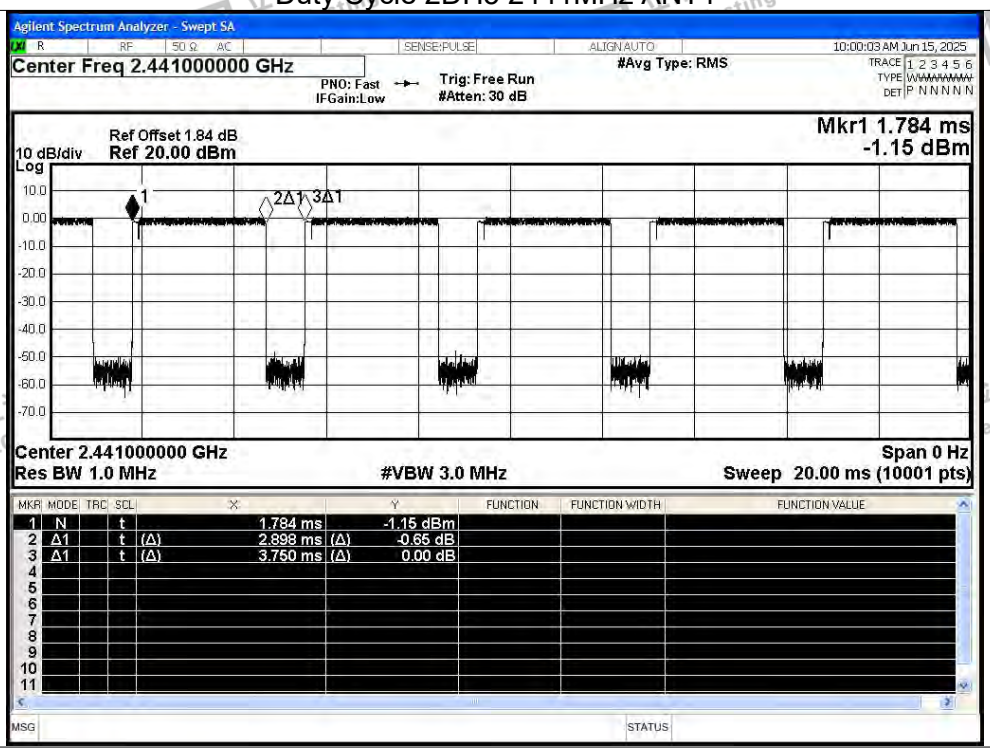
Duty Cycle DH5 2480MHz ANT1



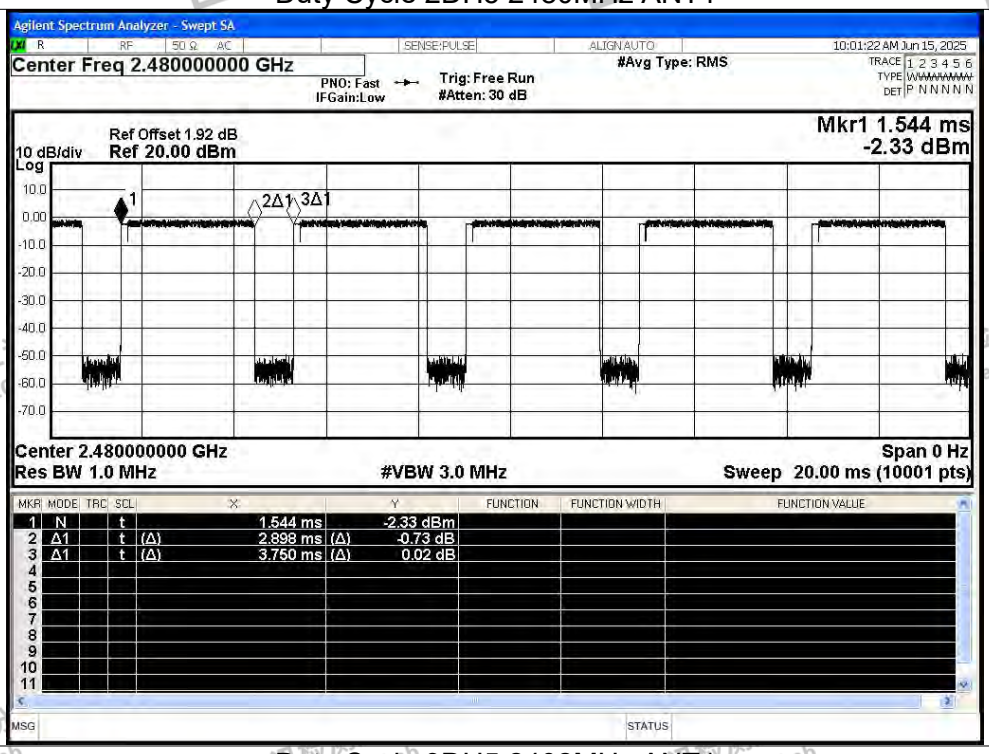
Duty Cycle 2DH5 2402MHz ANT1



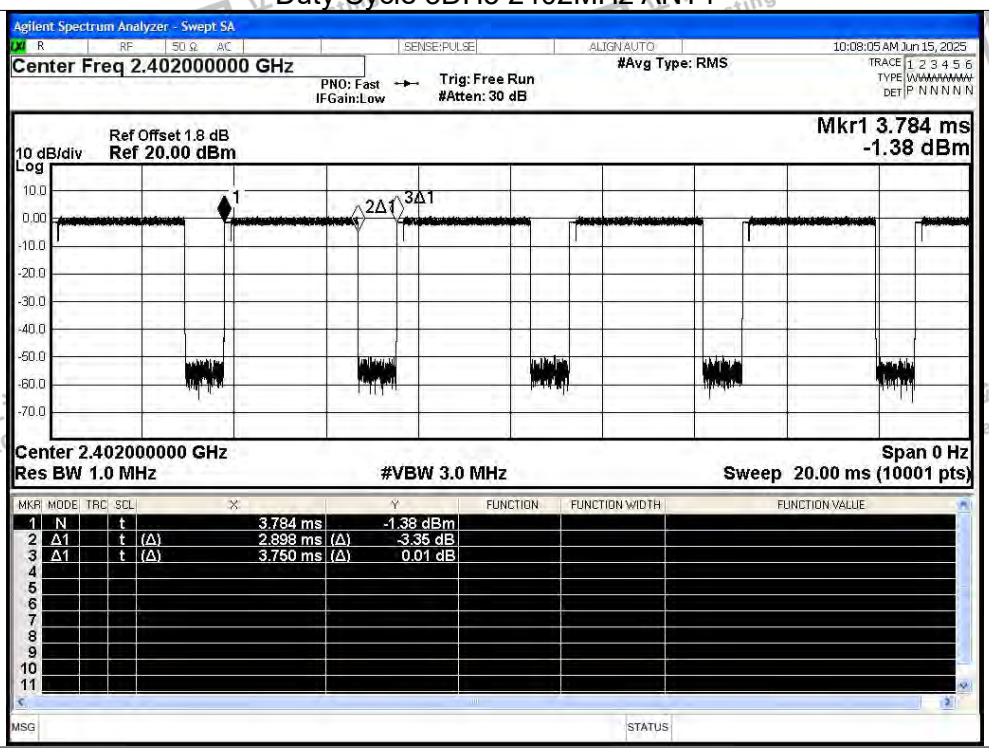
Duty Cycle 2DH5 2441MHz ANT1



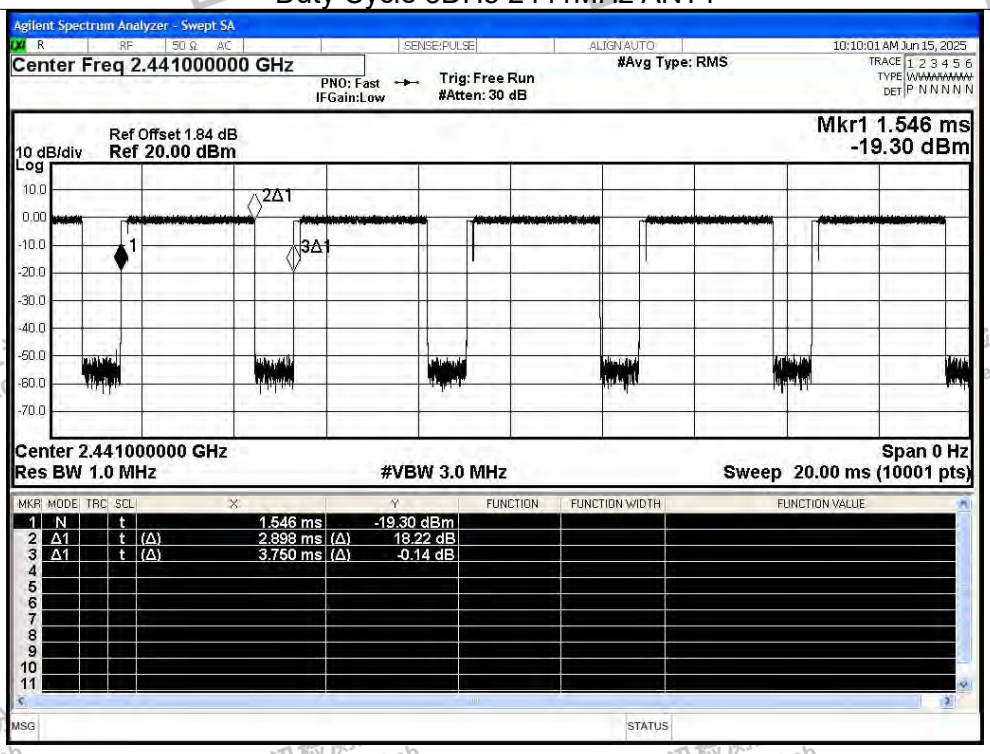
Duty Cycle 2DH5 2480MHz ANT1



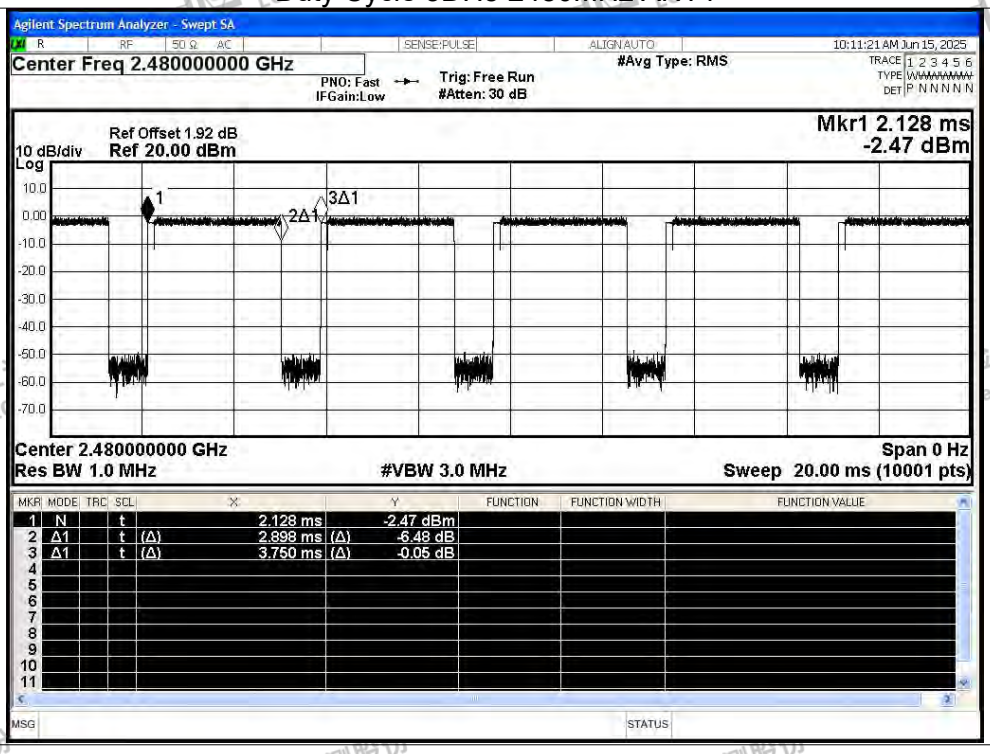
Duty Cycle 3DH5 2402MHz ANT1



Duty Cycle 3DH5 2441MHz ANT1



Duty Cycle 3DH5 2480MHz ANT1

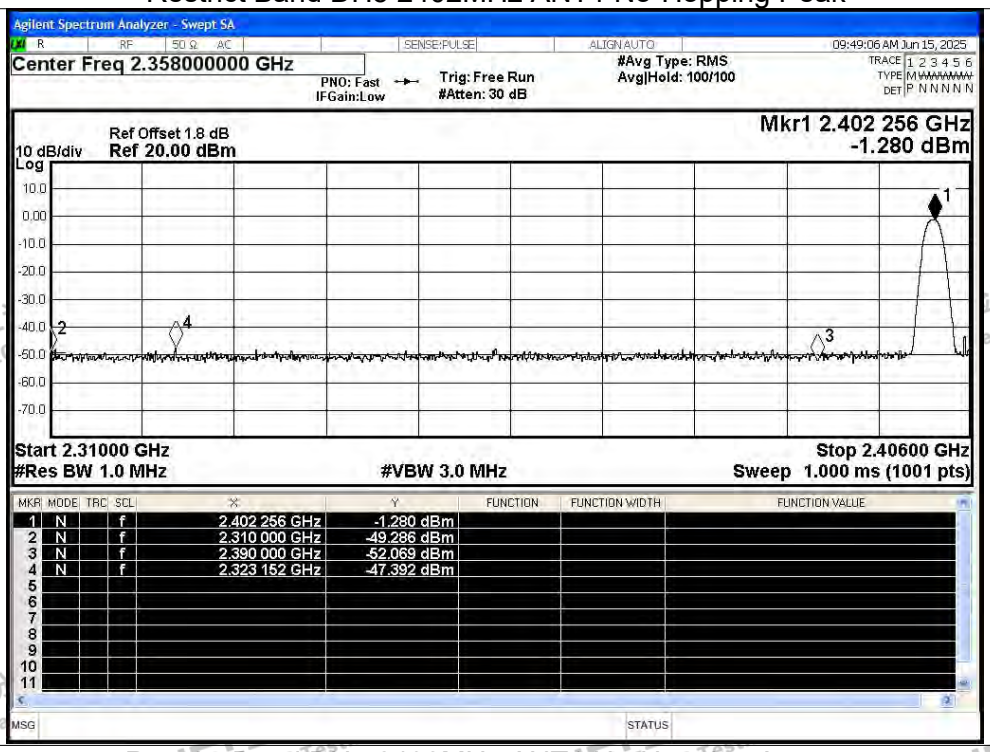


A.9 Restrict Band

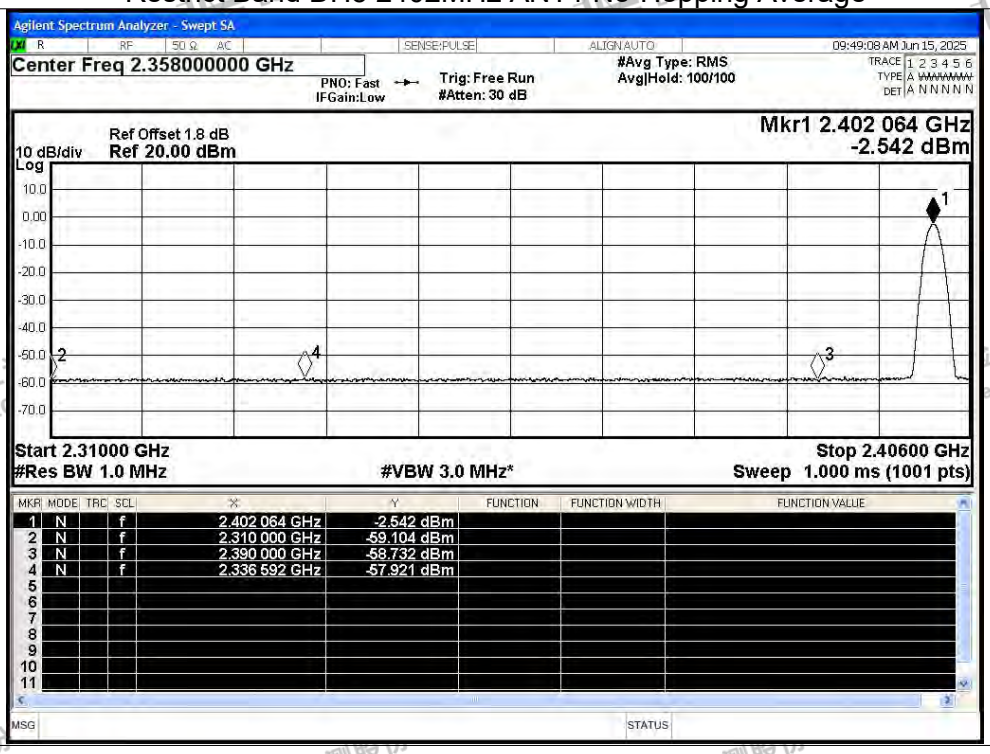
Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
DH5	2402	ANT1	No-Hopping	2310	-49.29	2	-	47.97	Peak	74	Pass
DH5	2402	ANT1	No-Hopping	2310	-59.1	2	1.1	39.26	Average	54	Pass
DH5	2402	ANT1	No-Hopping	2323.152	-47.39	2	-	49.87	Peak	74	Pass
DH5	2402	ANT1	No-Hopping	2336.592	-57.92	2	1.1	40.44	Average	54	Pass
DH5	2402	ANT1	No-Hopping	2390	-52.07	2	-	45.19	Peak	74	Pass
DH5	2402	ANT1	No-Hopping	2390	-58.73	2	1.1	39.63	Average	54	Pass
DH5	2480	ANT1	No-Hopping	2483.5	-48.92	2	-	48.34	Peak	74	Pass
DH5	2480	ANT1	No-Hopping	2483.5	-57.52	2	1.1	40.84	Average	54	Pass
DH5	2480	ANT1	No-Hopping	2486.584	-46.54	2	-	50.72	Peak	74	Pass
DH5	2480	ANT1	No-Hopping	2499.952	-57.17	2	1.1	41.19	Average	54	Pass
DH5	2480	ANT1	No-Hopping	2500	-51.89	2	-	45.37	Peak	74	Pass
DH5	2480	ANT1	No-Hopping	2500	-58.25	2	1.1	40.11	Average	54	Pass
2DH5	2402	ANT1	No-Hopping	2310	-51.5	2	-	45.76	Peak	74	Pass
2DH5	2402	ANT1	No-Hopping	2310	-58.88	2	1.12	39.5	Average	54	Pass
2DH5	2402	ANT1	No-Hopping	2328.624	-47.98	2	-	49.28	Peak	74	Pass
2DH5	2402	ANT1	No-Hopping	2366.16	-57.97	2	1.12	40.41	Average	54	Pass
2DH5	2402	ANT1	No-Hopping	2390	-51.56	2	-	45.7	Peak	74	Pass
2DH5	2402	ANT1	No-Hopping	2390	-58.87	2	1.12	39.51	Average	54	Pass
2DH5	2480	ANT1	No-Hopping	2483.5	-50.13	2	-	47.13	Peak	74	Pass
2DH5	2480	ANT1	No-Hopping	2483.5	-57.93	2	1.12	40.45	Average	54	Pass
2DH5	2480	ANT1	No-Hopping	2483.728	-45.48	2	-	51.78	Peak	74	Pass
2DH5	2480	ANT1	No-Hopping	2483.848	-57.2	2	1.12	41.18	Average	54	Pass
2DH5	2480	ANT1	No-Hopping	2500	-49.3	2	-	47.96	Peak	74	Pass
2DH5	2480	ANT1	No-Hopping	2500	-58.68	2	1.12	39.7	Average	54	Pass
3DH5	2402	ANT1	No-Hopping	2310	-51.84	2	-	45.42	Peak	74	Pass
3DH5	2402	ANT1	No-Hopping	2310	-58.66	2	1.12	39.72	Average	54	Pass
3DH5	2402	ANT1	No-Hopping	2383.152	-47.83	2	-	49.43	Peak	74	Pass
3DH5	2402	ANT1	No-Hopping	2316.336	-57.87	2	1.12	40.51	Average	54	Pass
3DH5	2402	ANT1	No-Hopping	2390	-50.31	2	-	46.95	Peak	74	Pass
3DH5	2402	ANT1	No-Hopping	2390	-58.28	2	1.12	40.1	Average	54	Pass
3DH5	2480	ANT1	No-Hopping	2483.5	-49.52	2	-	47.74	Peak	74	Pass
3DH5	2480	ANT1	No-Hopping	2483.5	-57.32	2	1.12	41.06	Average	54	Pass
3DH5	2480	ANT1	No-Hopping	2485.528	-46.19	2	-	51.07	Peak	74	Pass
3DH5	2480	ANT1	No-Hopping	2483.512	-57.32	2	1.12	41.06	Average	54	Pass
3DH5	2480	ANT1	No-Hopping	2500	-49.93	2	-	47.33	Peak	74	Pass
3DH5	2480	ANT1	No-Hopping	2500	-57.84	2	1.12	40.54	Average	54	Pass

Test Graphs

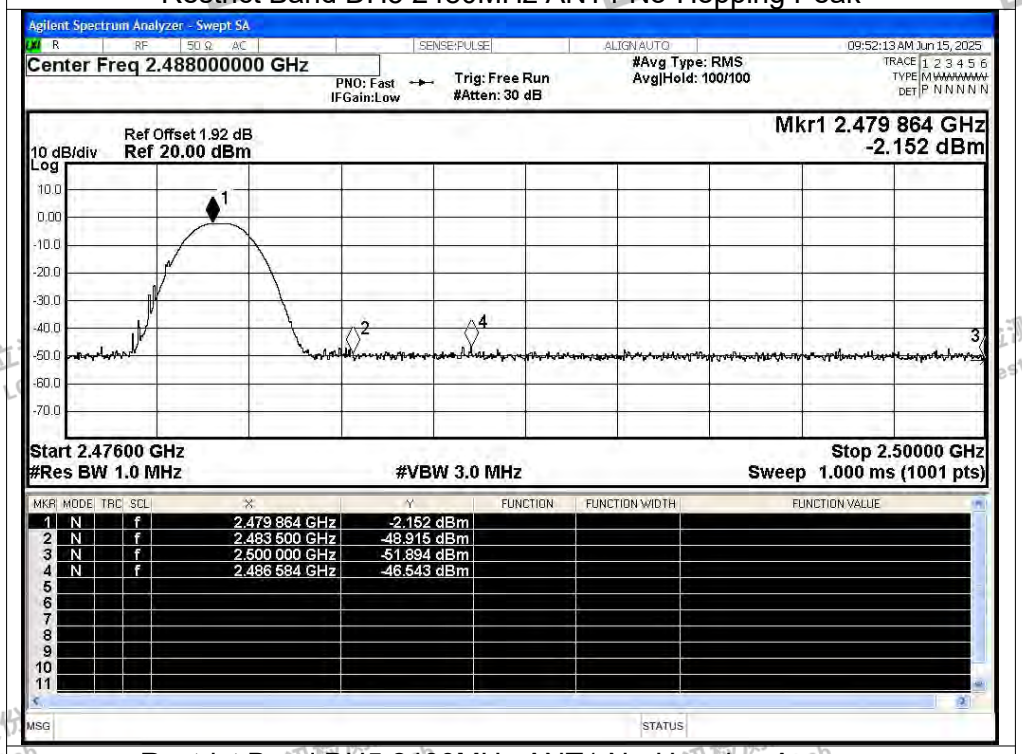
Restrict Band DH5 2402MHz ANT1 No-Hopping Peak



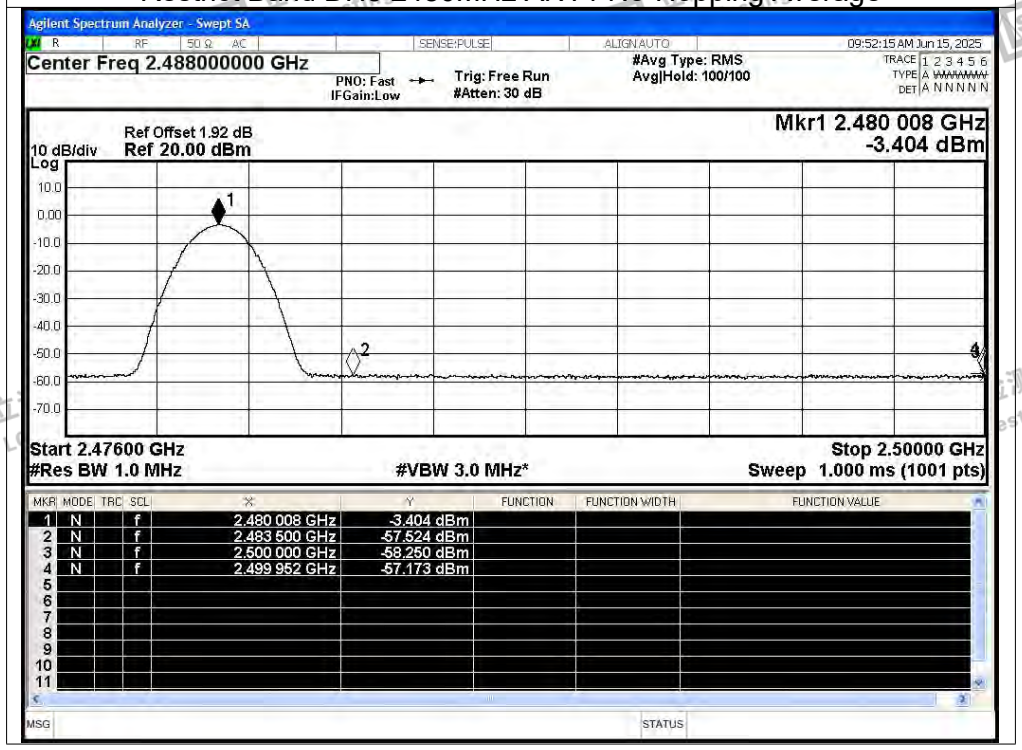
Restrict Band DH5 2402MHz ANT1 No-Hopping Average



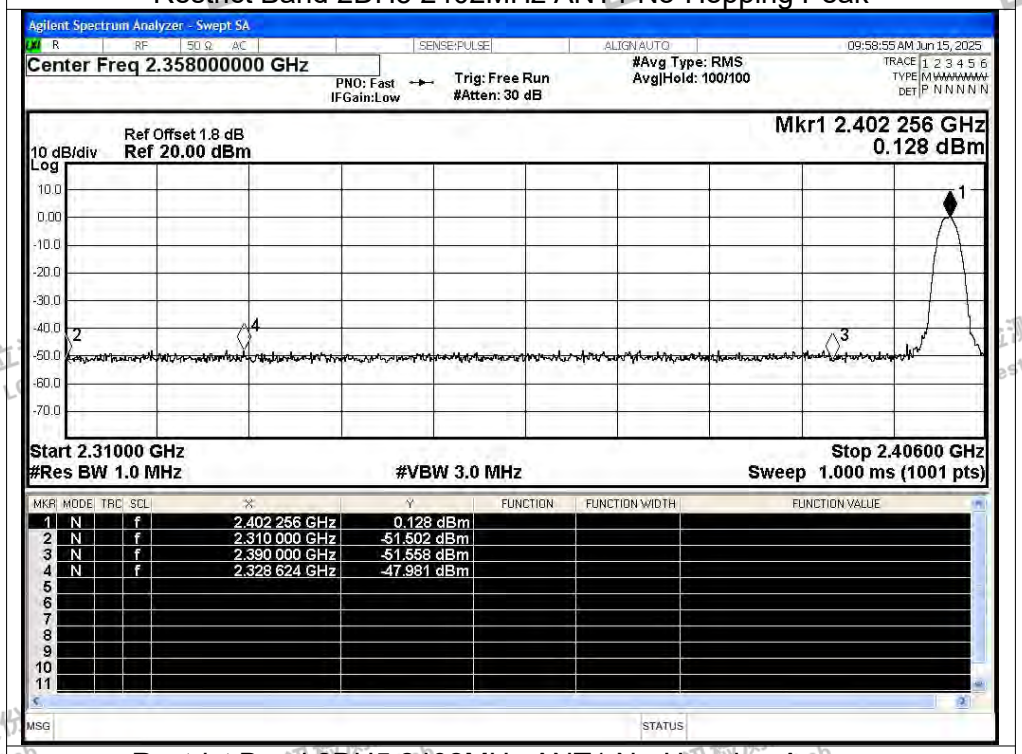
Restrict Band DH5 2480MHz ANT1 No-Hopping Peak



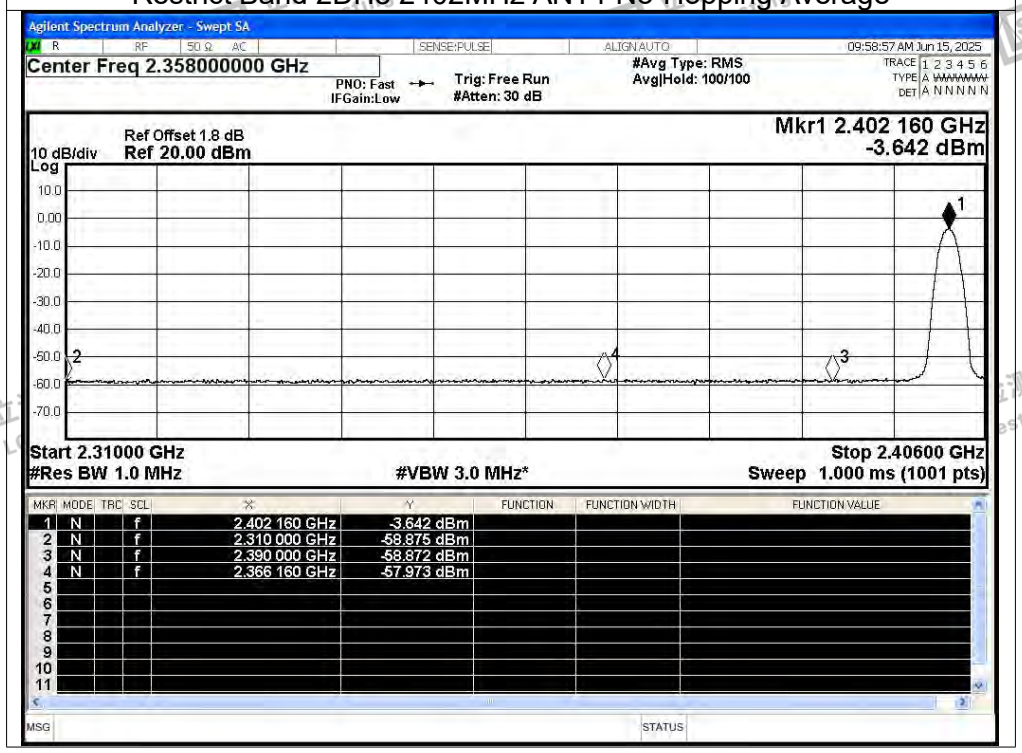
Restrict Band DH5 2480MHz ANT1 No-Hopping Average



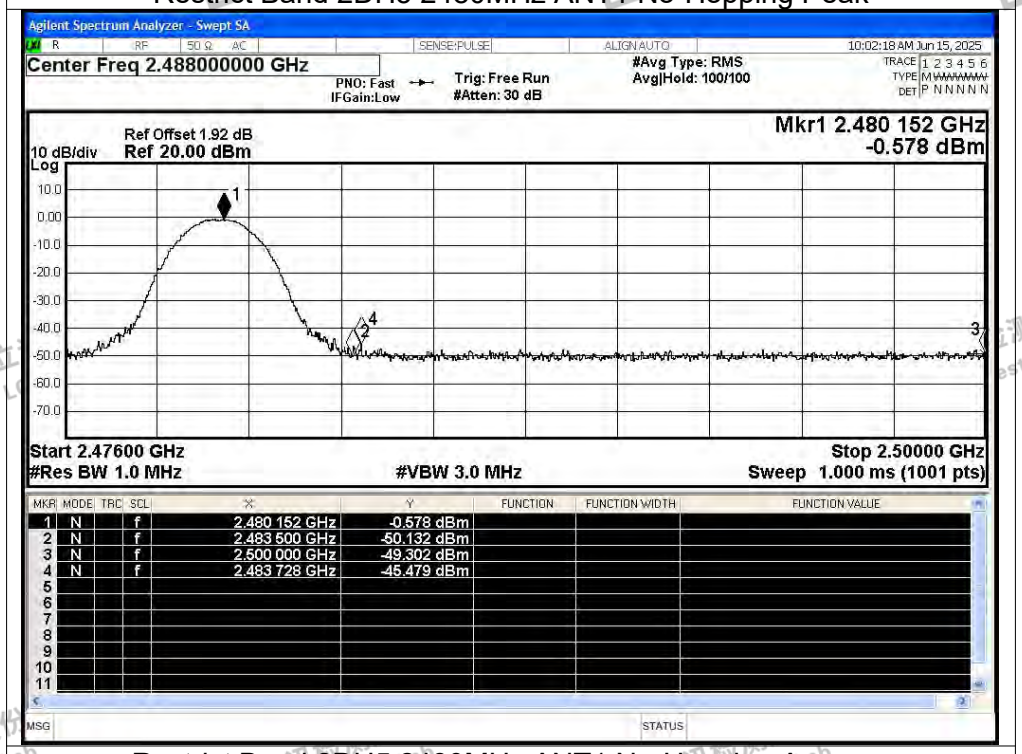
Restrict Band 2DH5 2402MHz ANT1 No-Hopping Peak



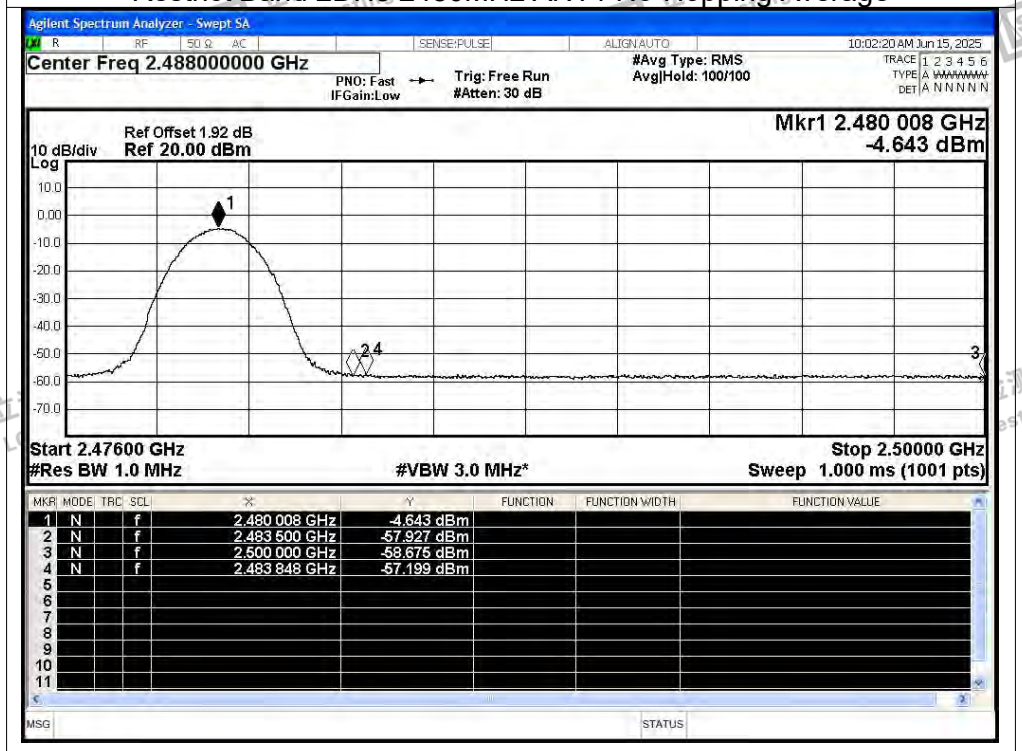
Restrict Band 2DH5 2402MHz ANT1 No-Hopping Average



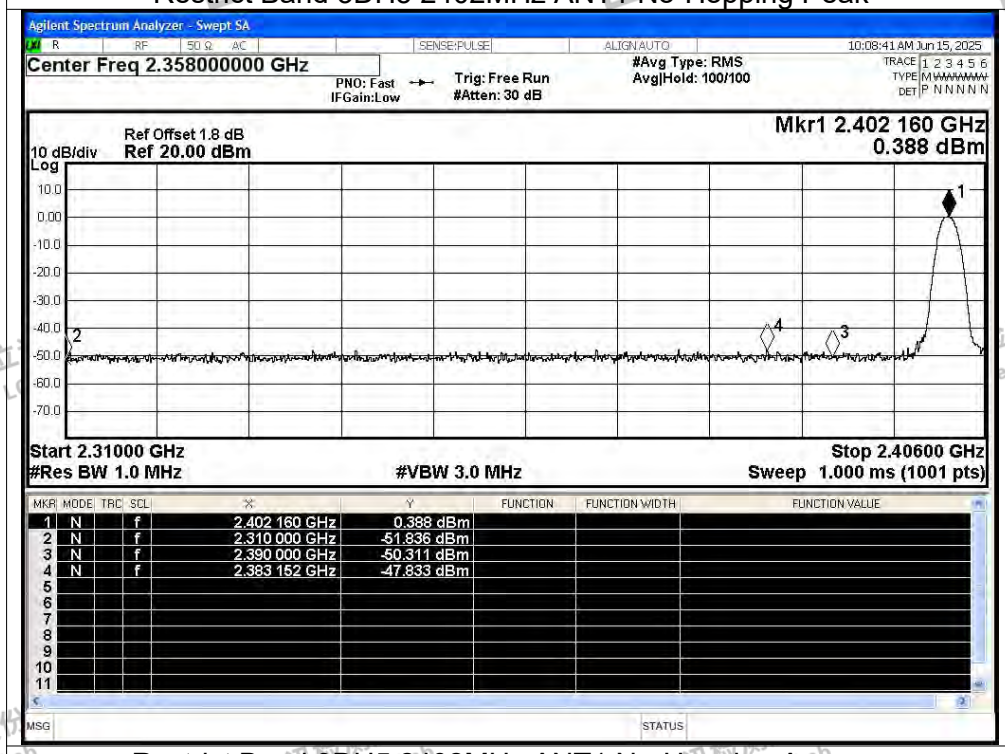
Restrict Band 2DH5 2480MHz ANT1 No-Hopping Peak



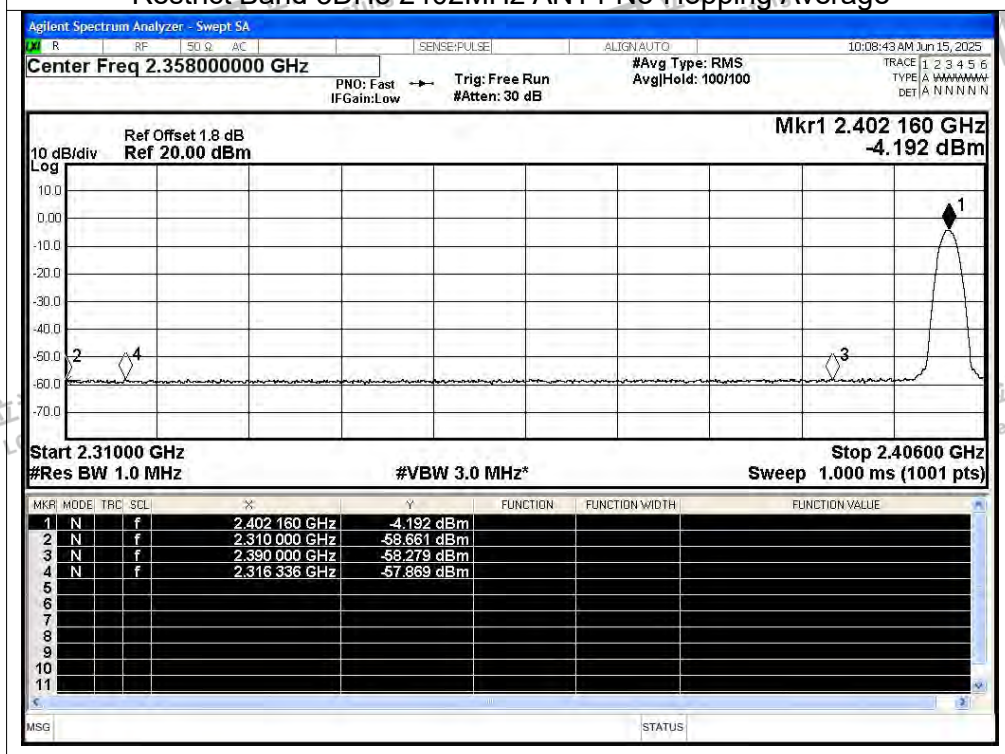
Restrict Band 2DH5 2480MHz ANT1 No-Hopping Average



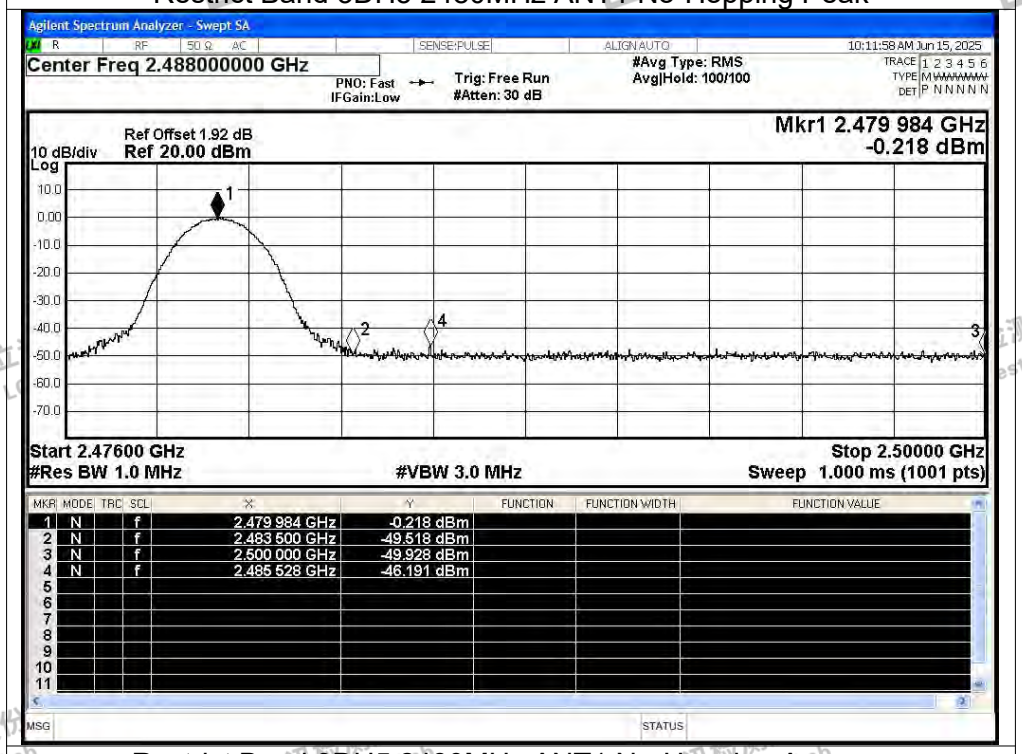
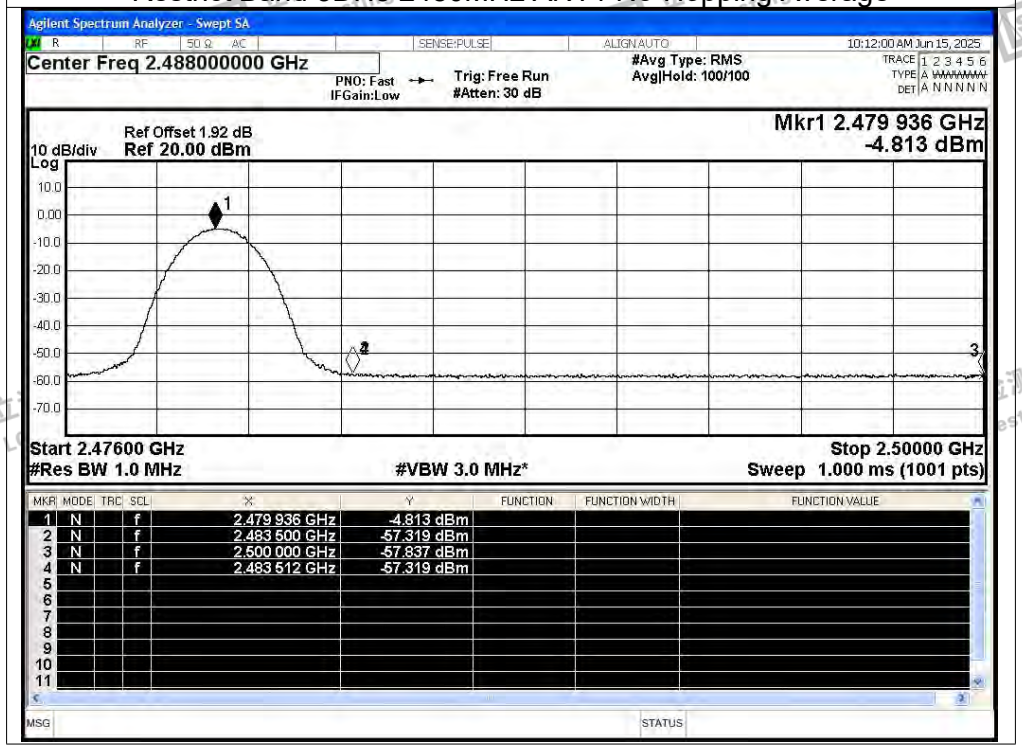
Restrict Band 3DH5 2402MHz ANT1 No-Hopping Peak



Restrict Band 3DH5 2402MHz ANT1 No-Hopping Average



Restrict Band 3DH5 2480MHz ANT1 No-Hopping Peak



Restrict Band 3DH5 2480MHz ANT1 No-Hopping Average