



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: bluetooth headband

Test Model: BHW-HG-MH-1

Environmental Conditions

Temperature:	23.5℃
Relative Humidity:	52.2%
ATM Pressure:	100.0 kPa
Test Engineer:	 Mark Chen
Supervised by:	 Li Huan



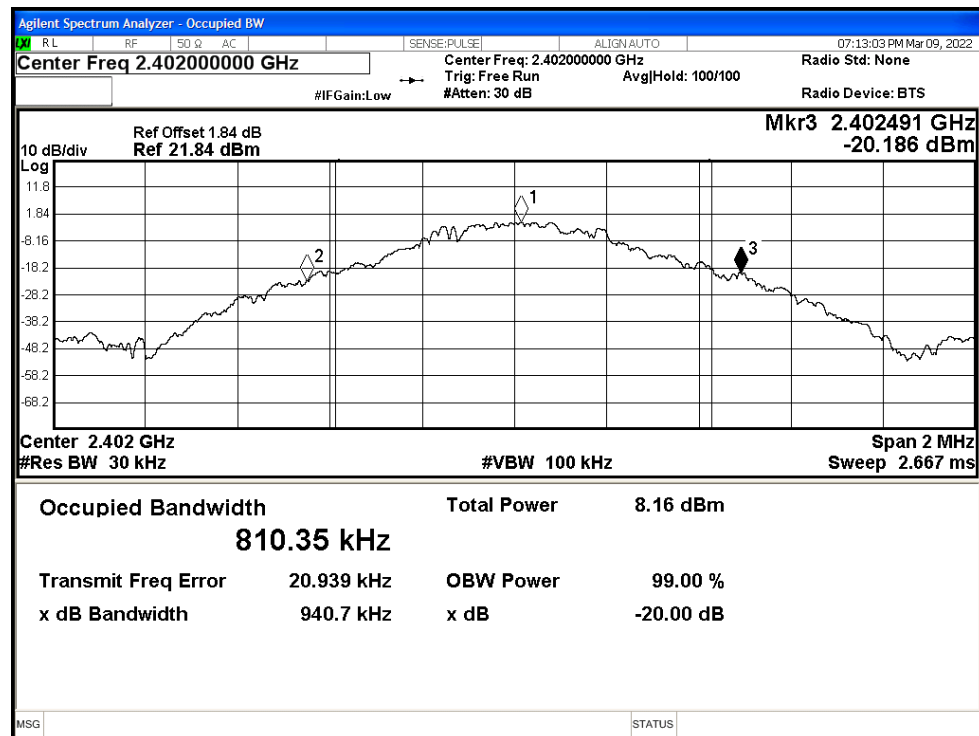
A.1 -20dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	0.941	No Limit	Pass
NVNT	1-DH5	2441	Ant1	0.942	No Limit	Pass
NVNT	1-DH5	2480	Ant1	0.936	No Limit	Pass
NVNT	2-DH5	2402	Ant1	1.276	No Limit	Pass
NVNT	2-DH5	2441	Ant1	1.275	No Limit	Pass
NVNT	2-DH5	2480	Ant1	1.28	No Limit	Pass
NVNT	3-DH5	2402	Ant1	1.247	No Limit	Pass
NVNT	3-DH5	2441	Ant1	1.277	No Limit	Pass
NVNT	3-DH5	2480	Ant1	1.268	No Limit	Pass



Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1

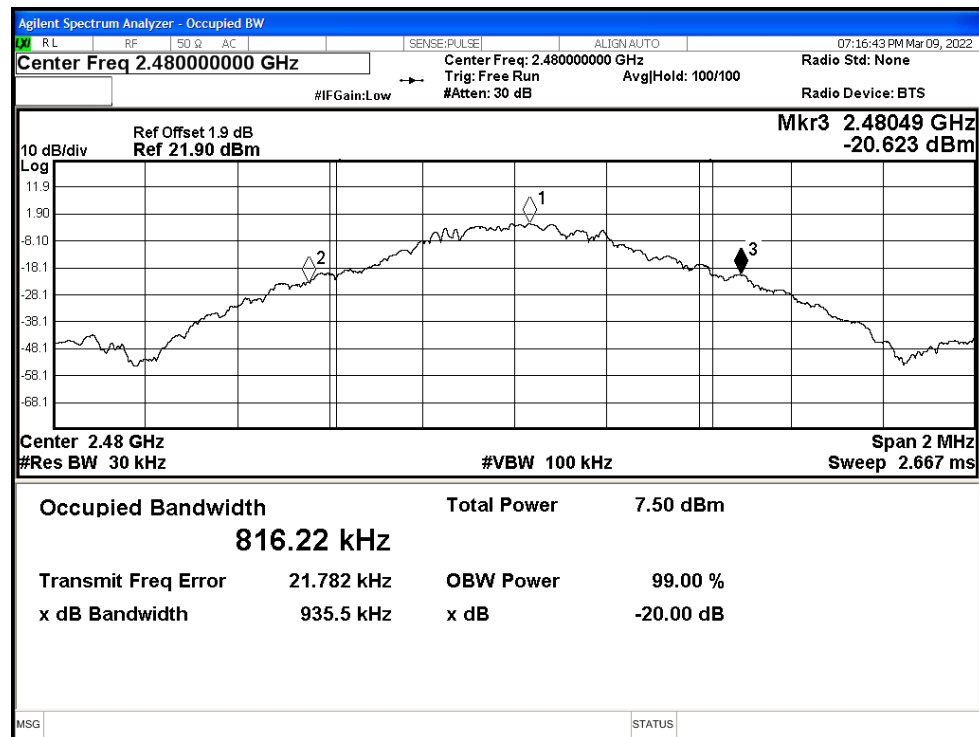


-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1

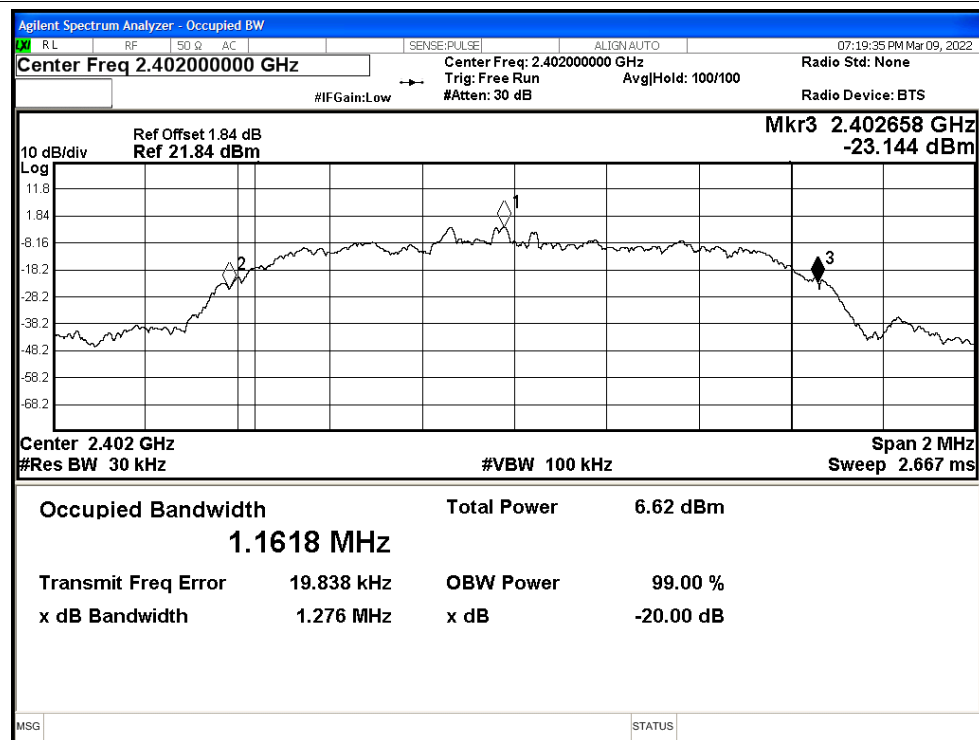




-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1

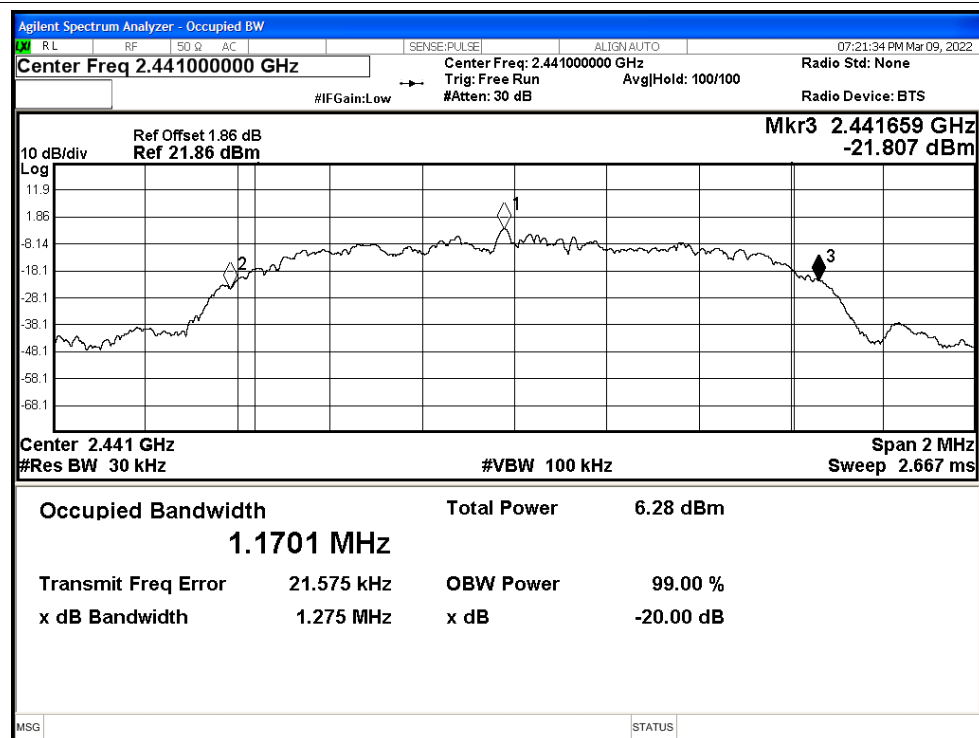


-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1

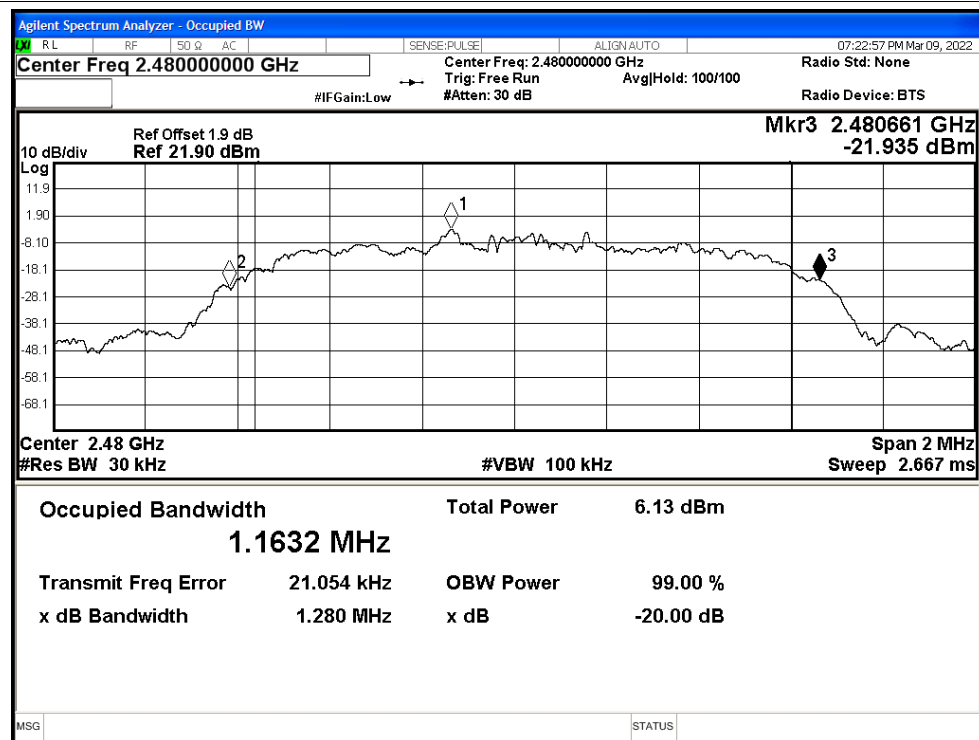




-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1

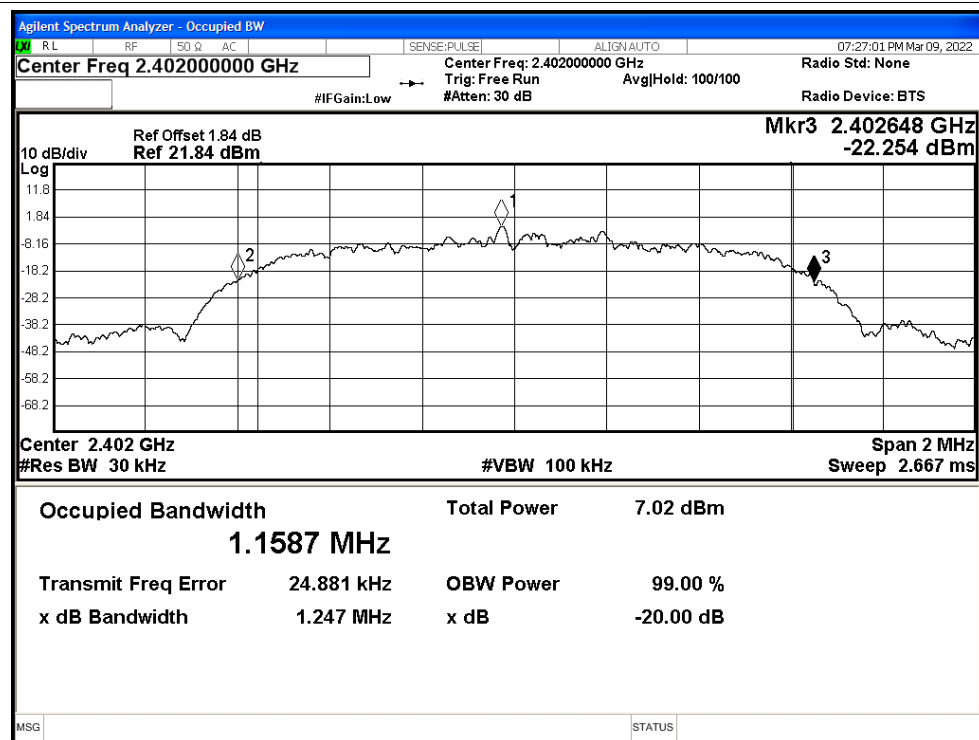


-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1

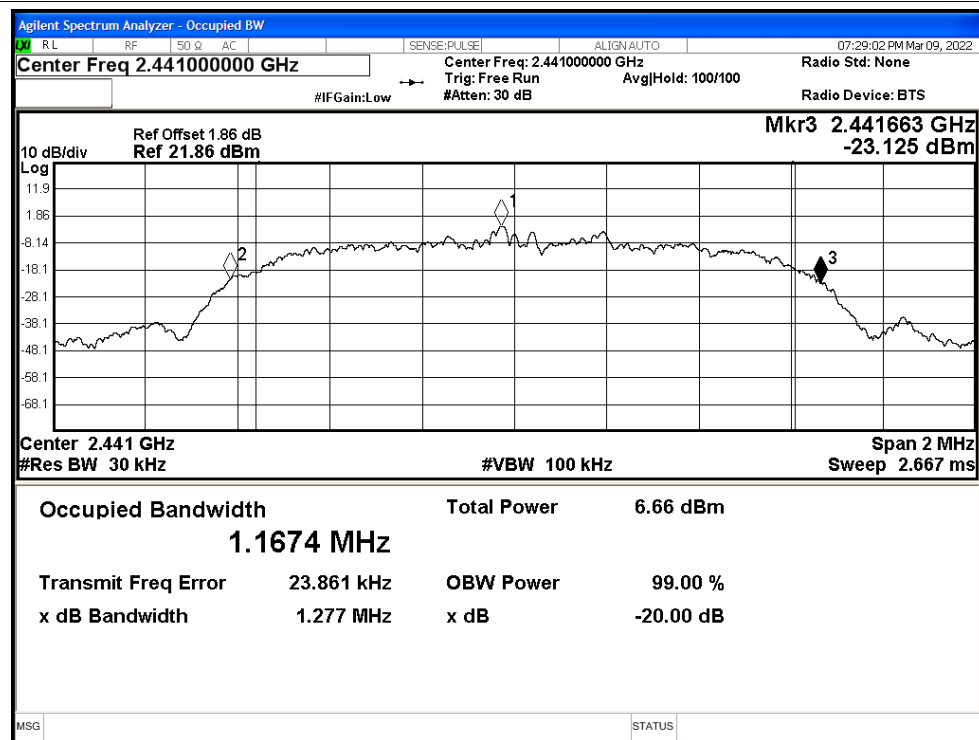


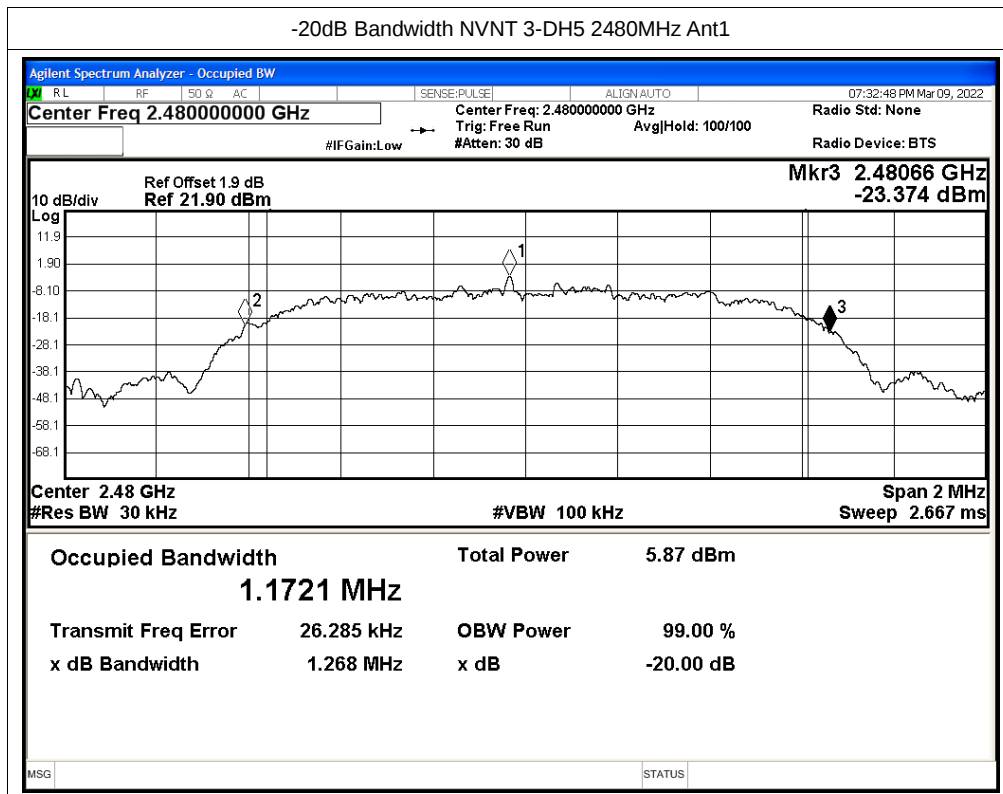


-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1







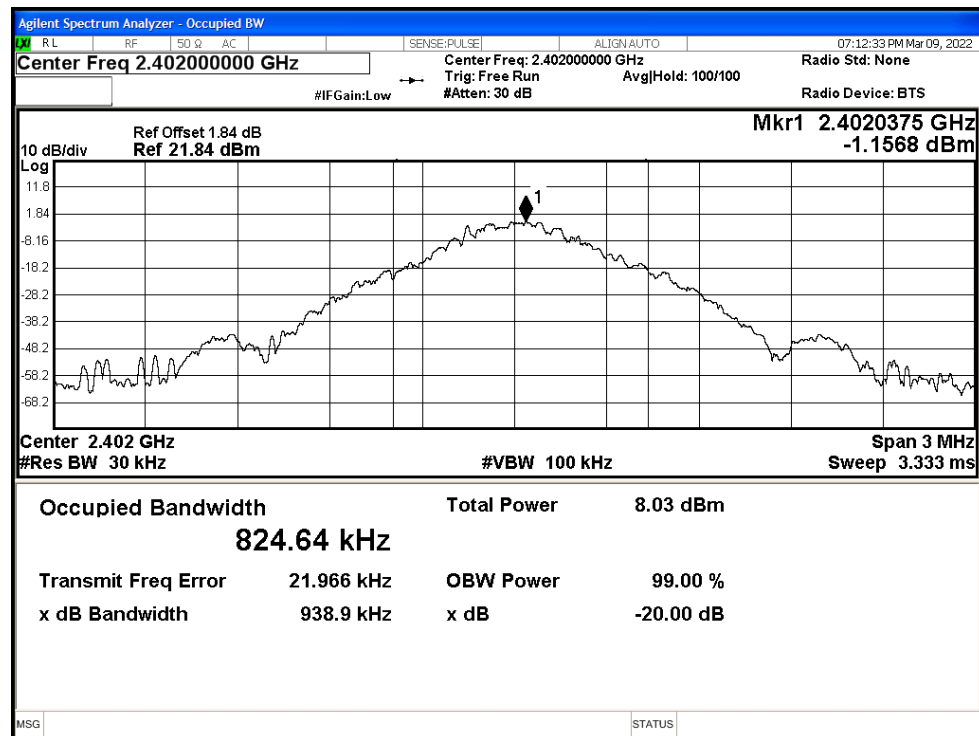
A.2 Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH5	2402	Ant1	0.825
NVNT	1-DH5	2441	Ant1	0.825
NVNT	1-DH5	2480	Ant1	0.825
NVNT	2-DH5	2402	Ant1	1.17
NVNT	2-DH5	2441	Ant1	1.164
NVNT	2-DH5	2480	Ant1	1.169
NVNT	3-DH5	2402	Ant1	1.146
NVNT	3-DH5	2441	Ant1	1.162
NVNT	3-DH5	2480	Ant1	1.165



Test Graphs

OBW NVNT 1-DH5 2402MHz Ant1

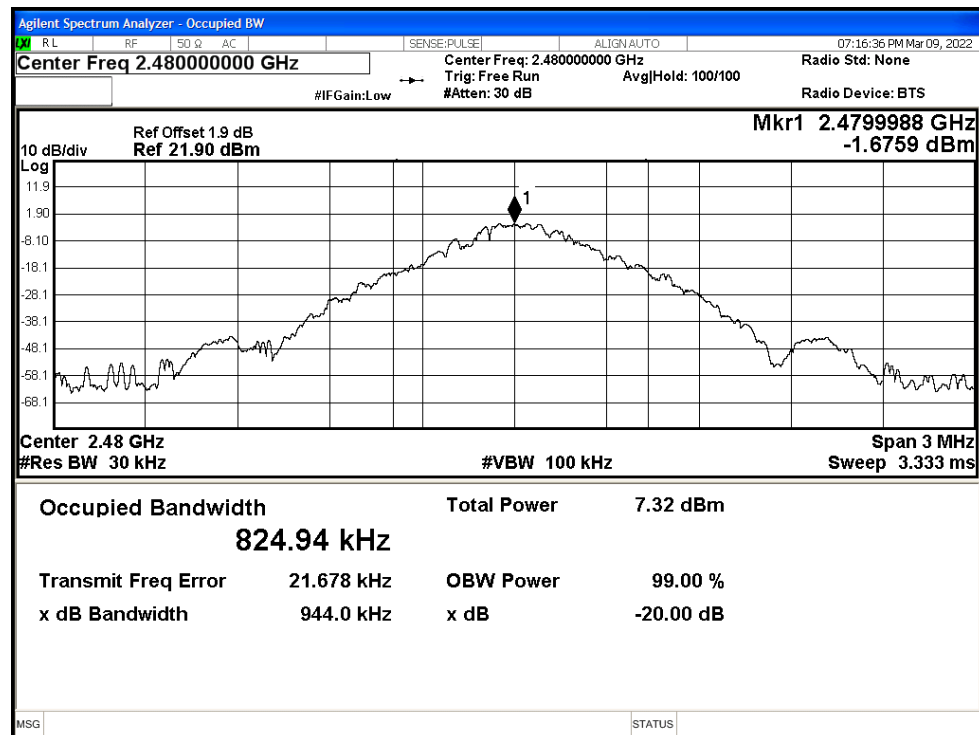


OBW NVNT 1-DH5 2441MHz Ant1

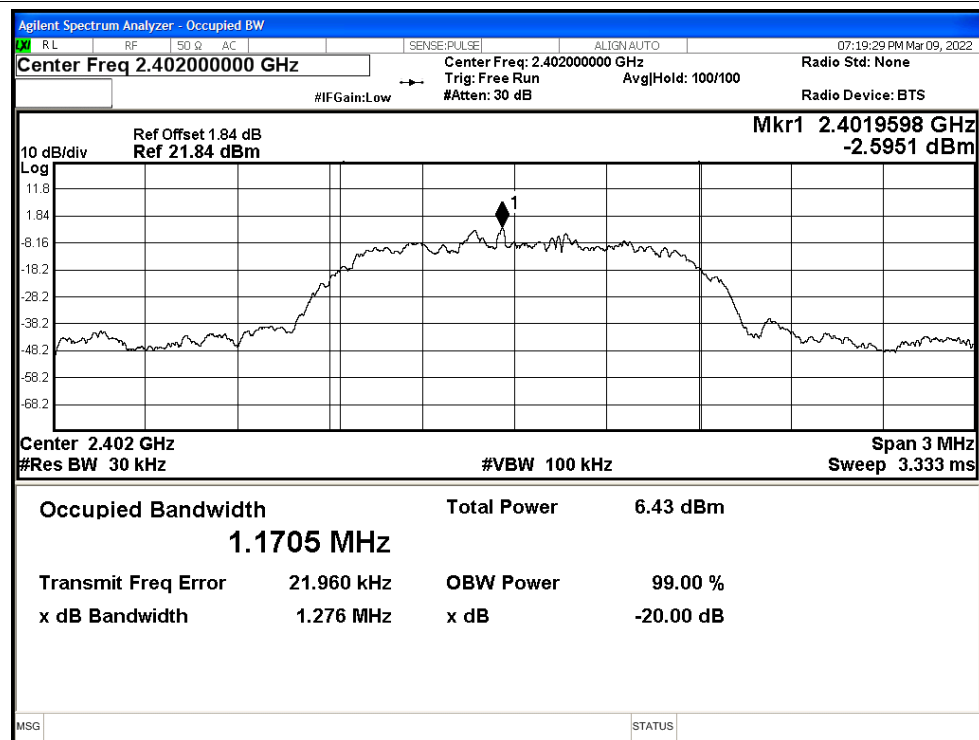




OBW NVNT 1-DH5 2480MHz Ant1

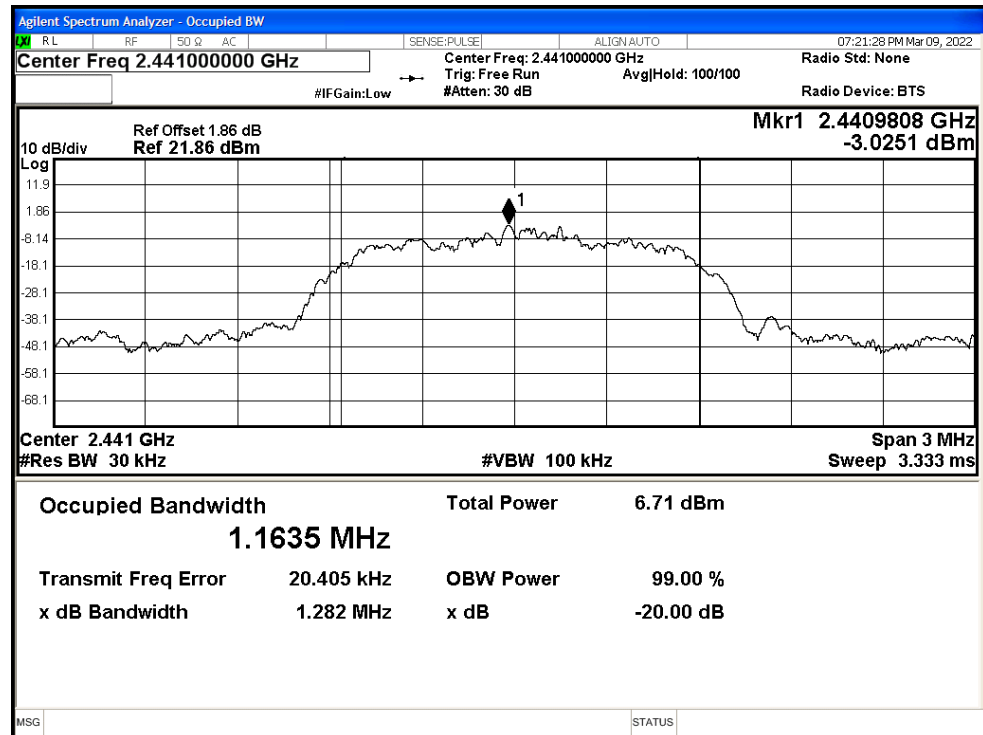


OBW NVNT 2-DH5 2402MHz Ant1

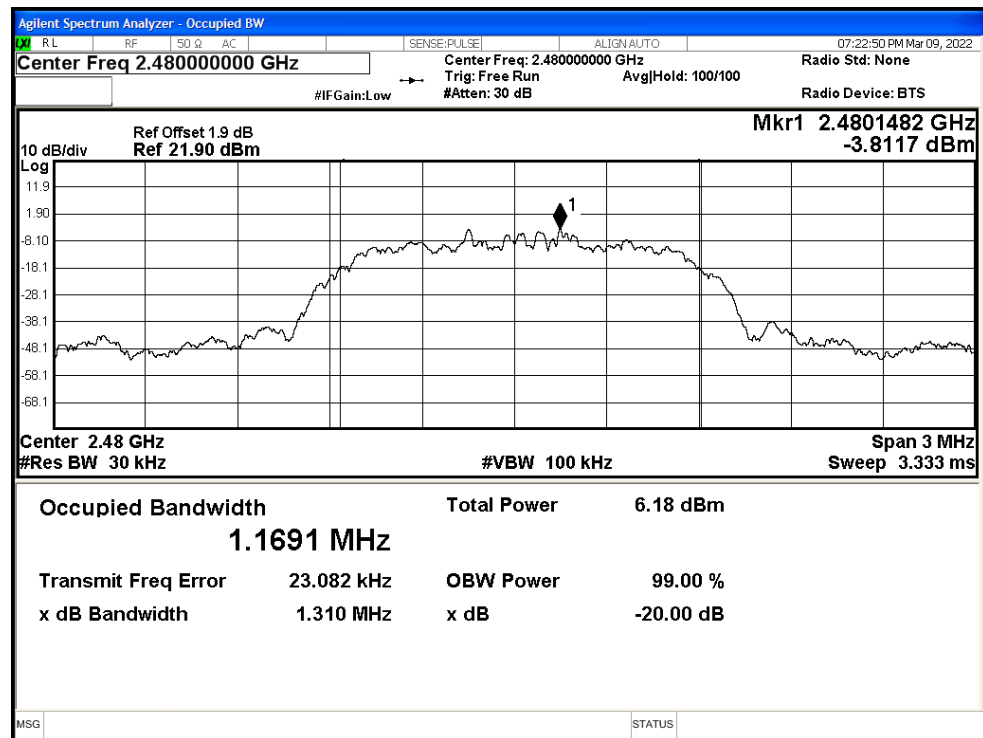




OBW NVNT 2-DH5 2441MHz Ant1

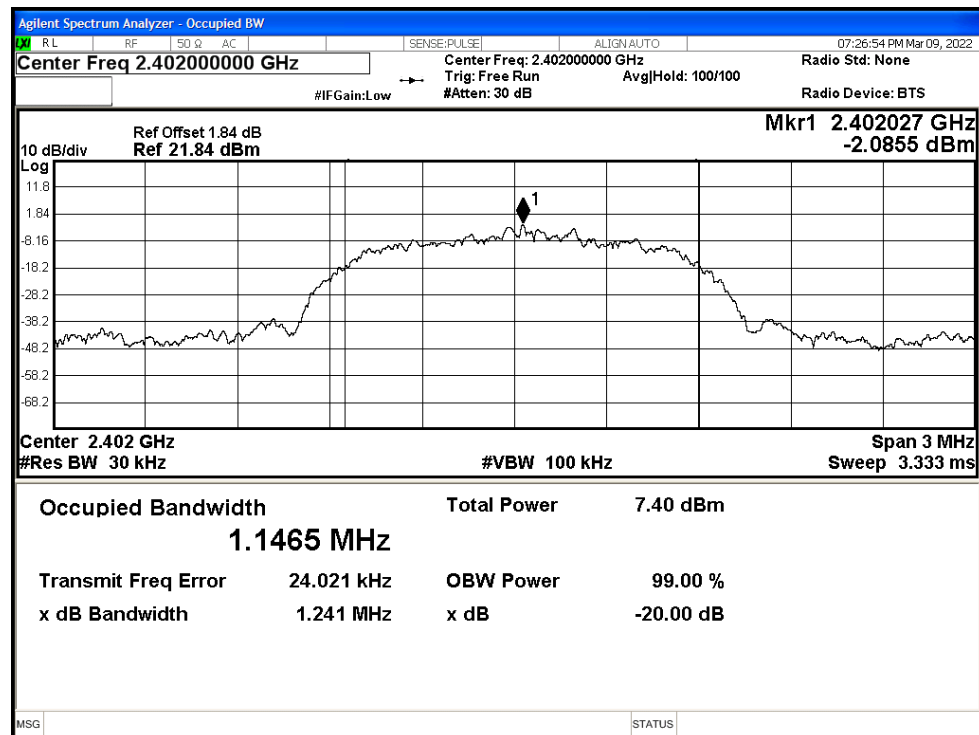


OBW NVNT 2-DH5 2480MHz Ant1

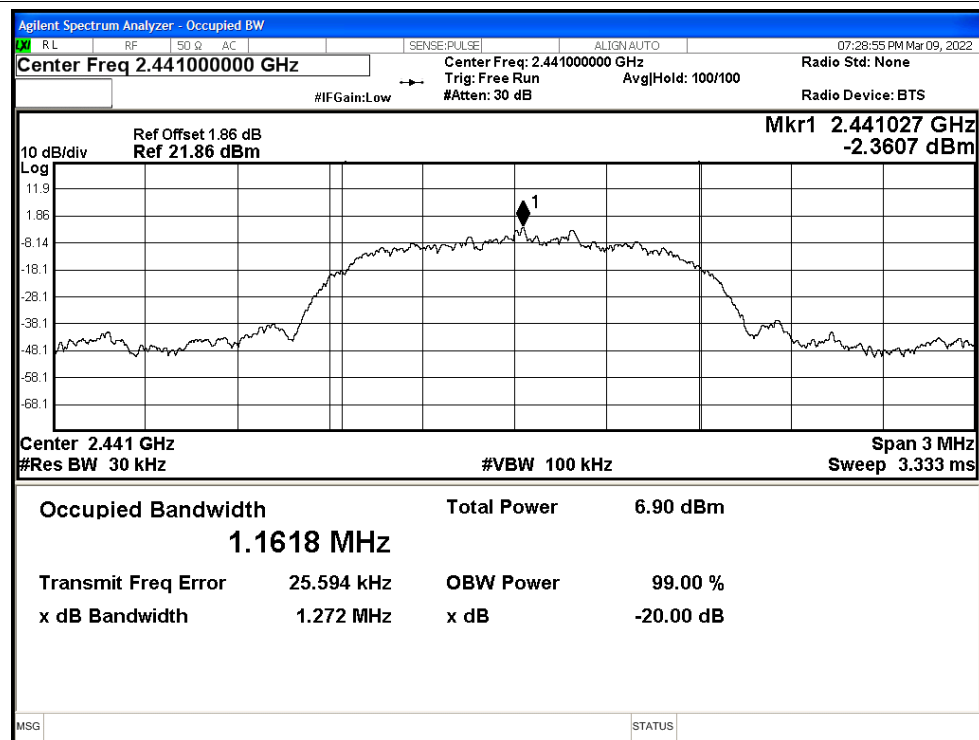


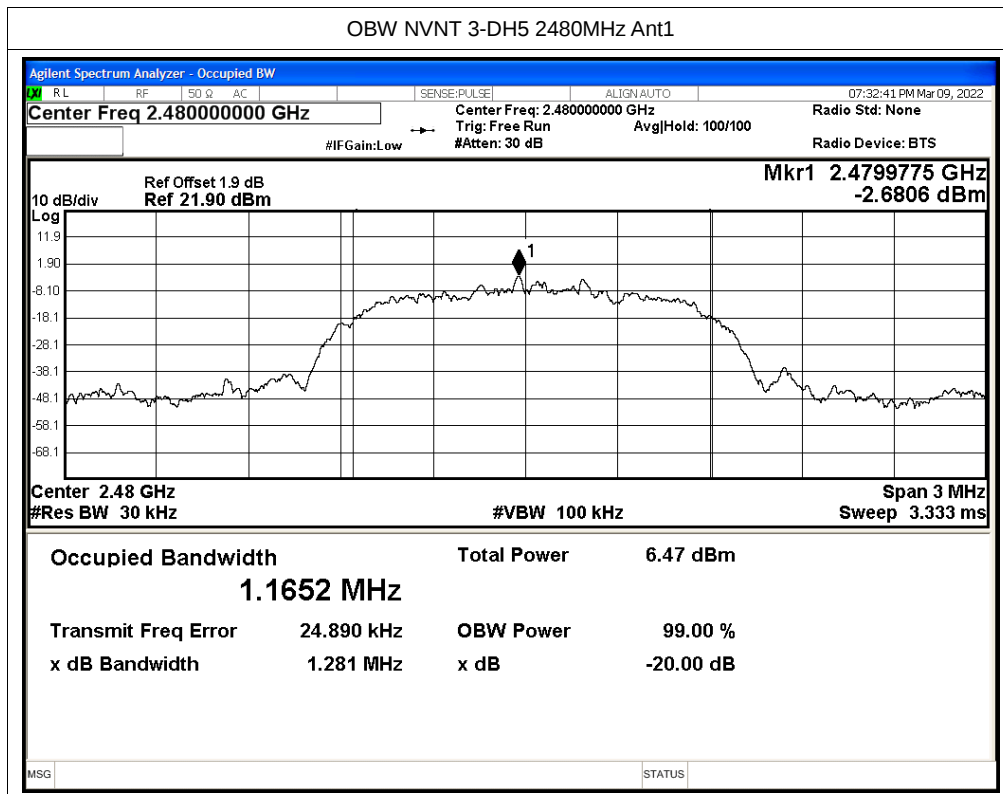


OBW NVNT 3-DH5 2402MHz Ant1



OBW NVNT 3-DH5 2441MHz Ant1







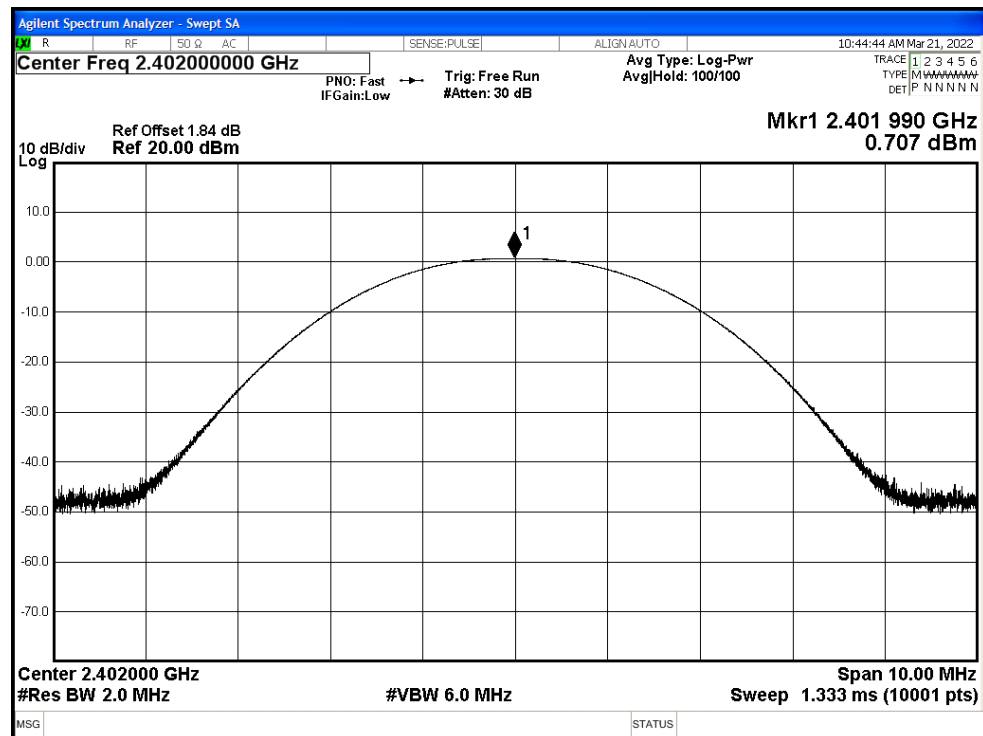
A.3 Maximum Peak Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	0.71	0	0.71	21	Pass
NVNT	1-DH5	2441	Ant1	1.35	0	1.35	21	Pass
NVNT	1-DH5	2480	Ant1	1.95	0	1.95	21	Pass
NVNT	2-DH5	2402	Ant1	0.55	0	0.55	21	Pass
NVNT	2-DH5	2441	Ant1	1.11	0	1.11	21	Pass
NVNT	2-DH5	2480	Ant1	1.78	0	1.78	21	Pass
NVNT	3-DH5	2402	Ant1	0.63	0	0.63	21	Pass
NVNT	3-DH5	2441	Ant1	1.25	0	1.25	21	Pass
NVNT	3-DH5	2480	Ant1	1.84	0	1.84	21	Pass

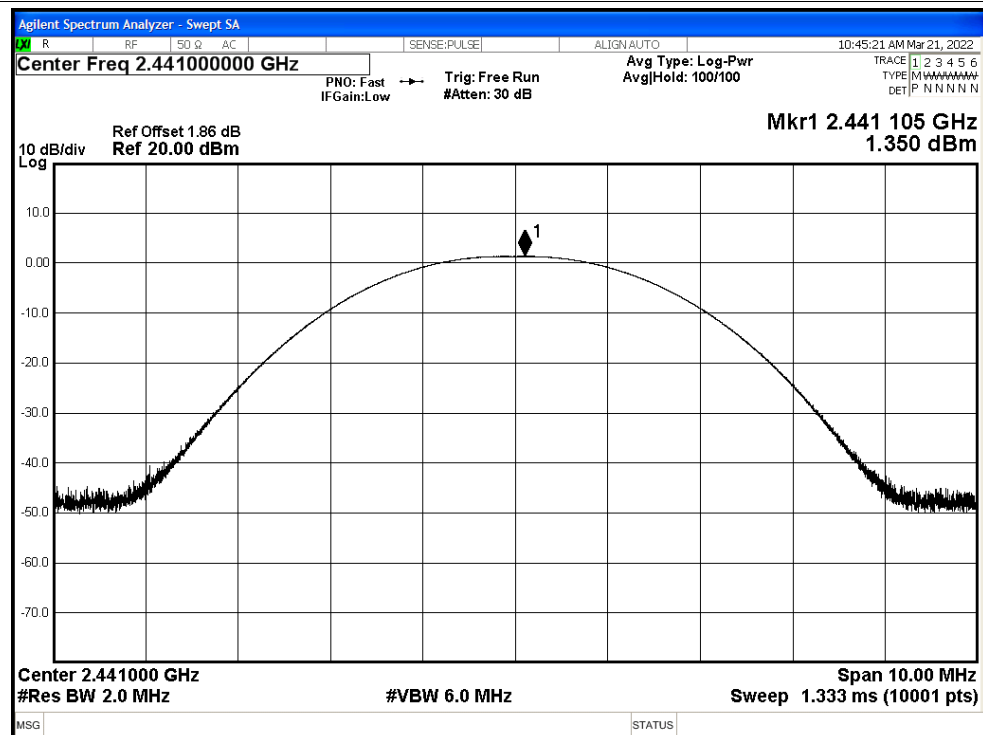


Test Graphs

Power NVNT 1-DH5 2402MHz Ant1

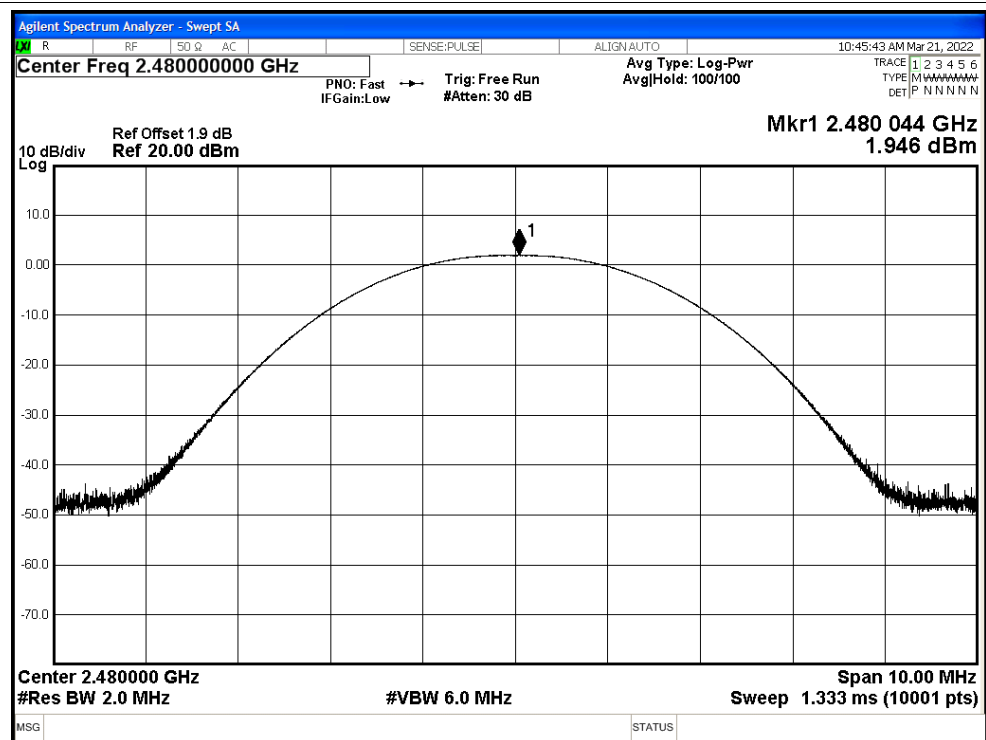


Power NVNT 1-DH5 2441MHz Ant1

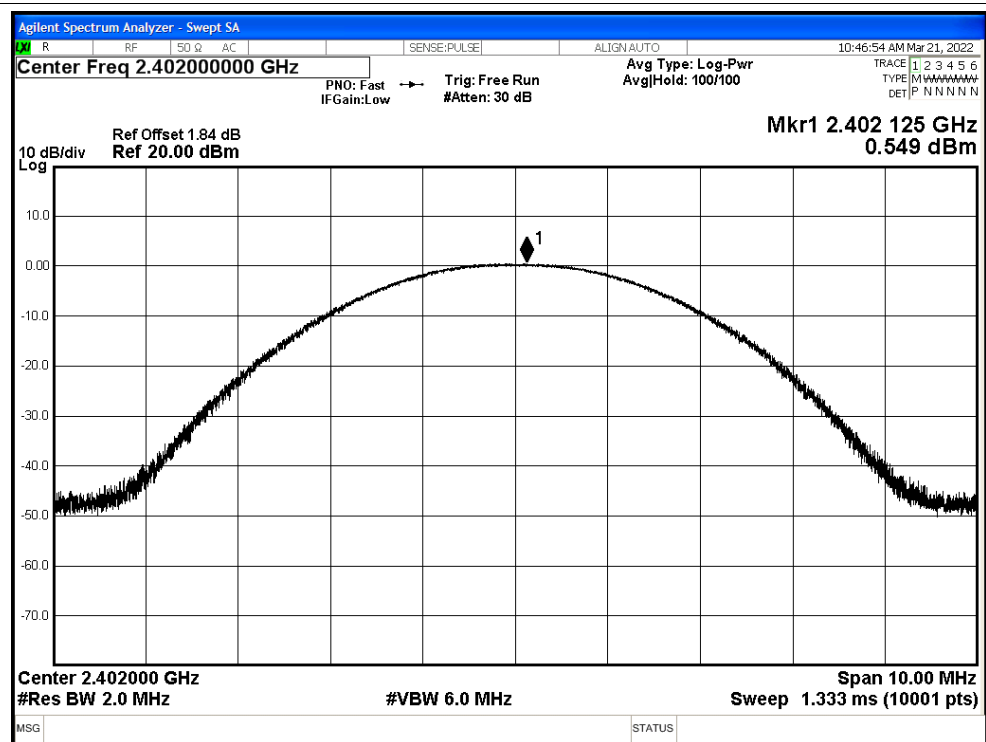




Power NVNT 1-DH5 2480MHz Ant1

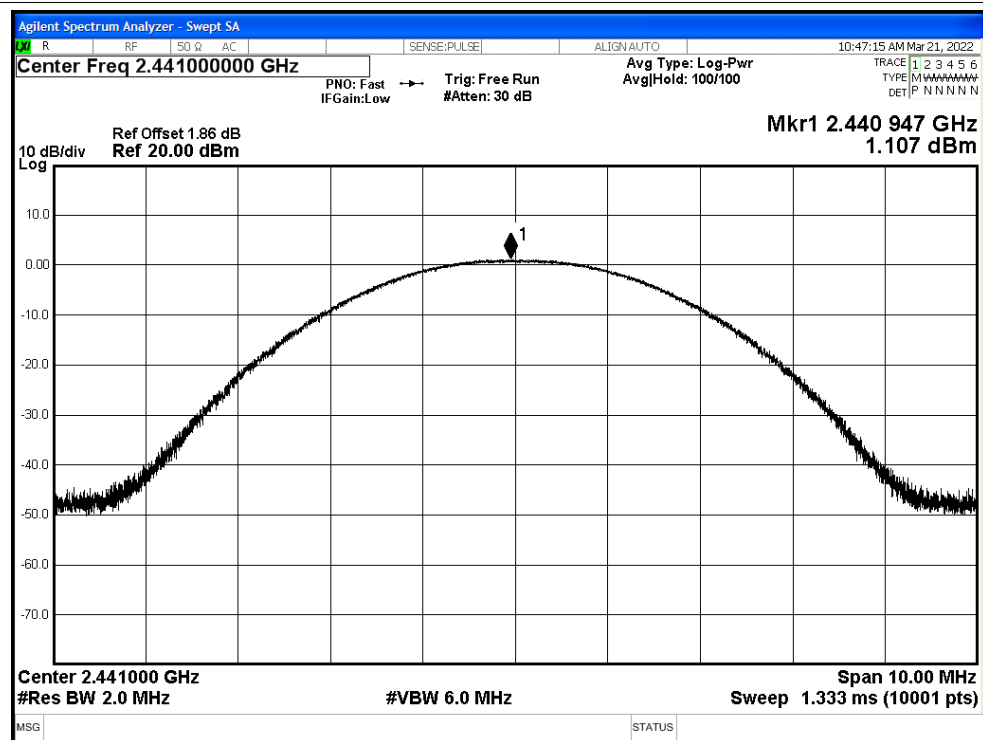


Power NVNT 2-DH5 2402MHz Ant1

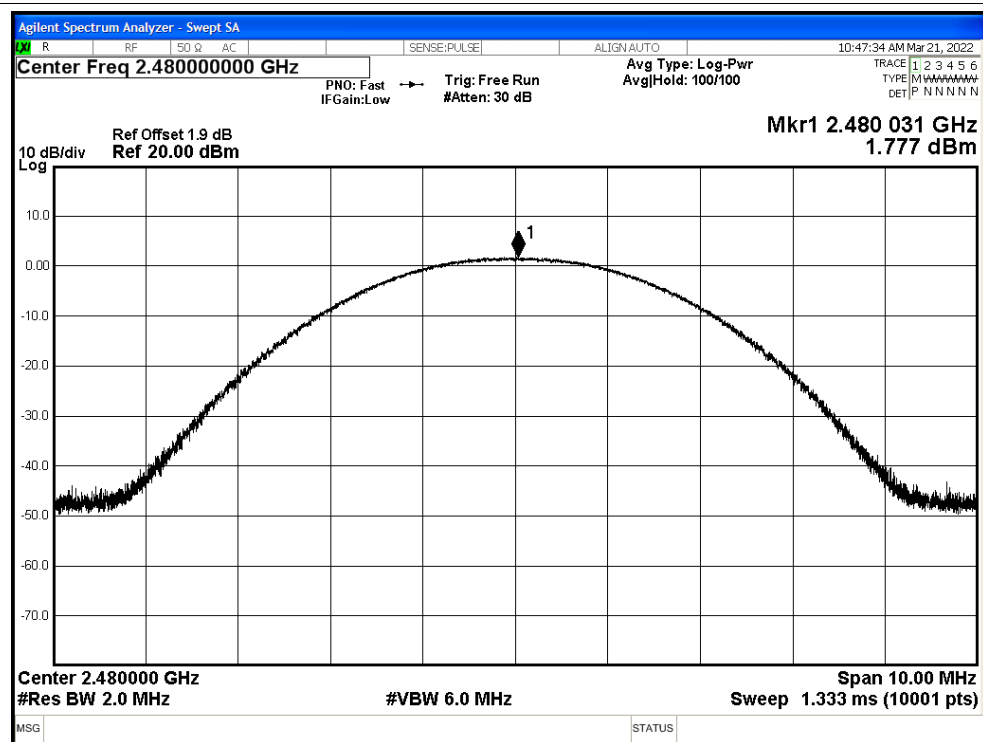




Power NVNT 2-DH5 2441MHz Ant1

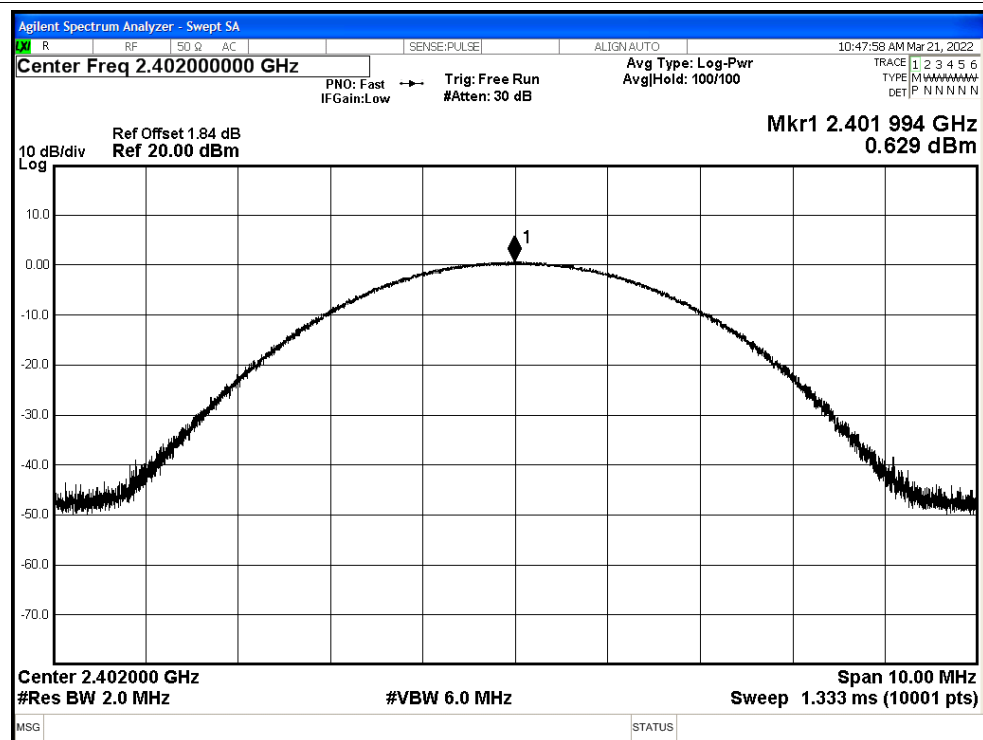


Power NVNT 2-DH5 2480MHz Ant1

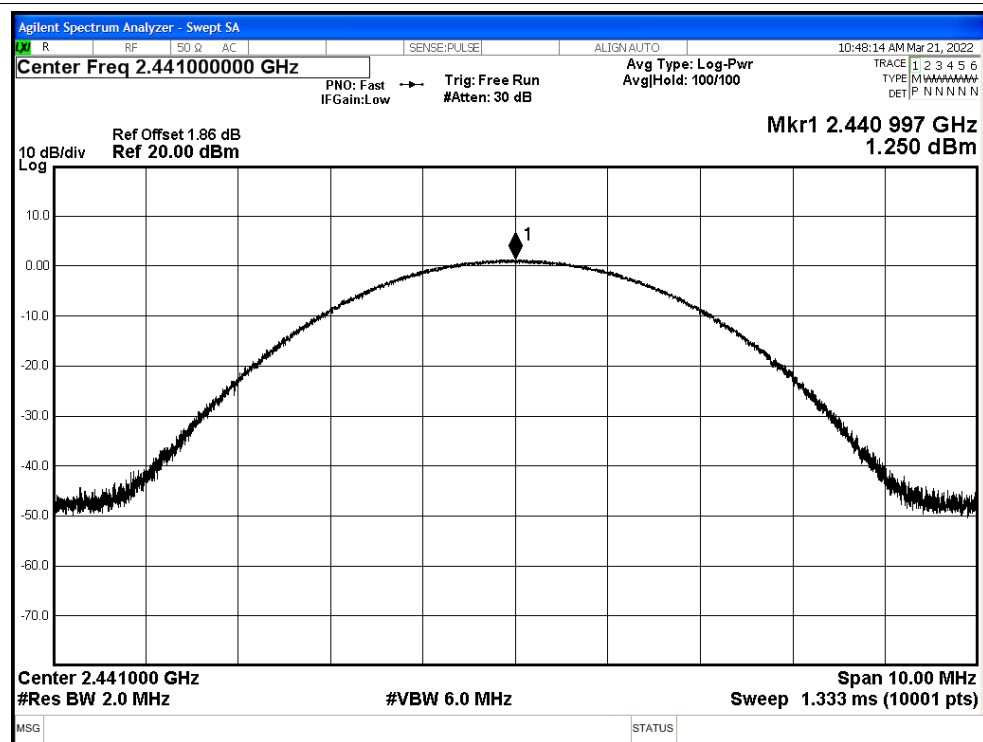


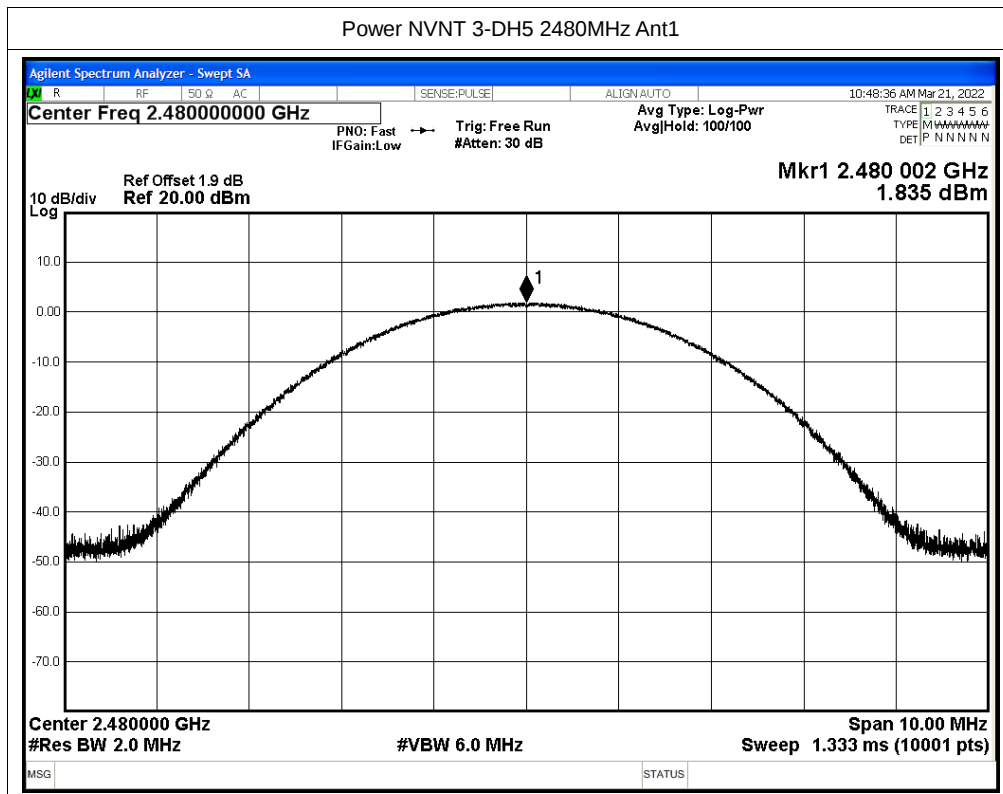


Power NVNT 3-DH5 2402MHz Ant1



Power NVNT 3-DH5 2441MHz Ant1







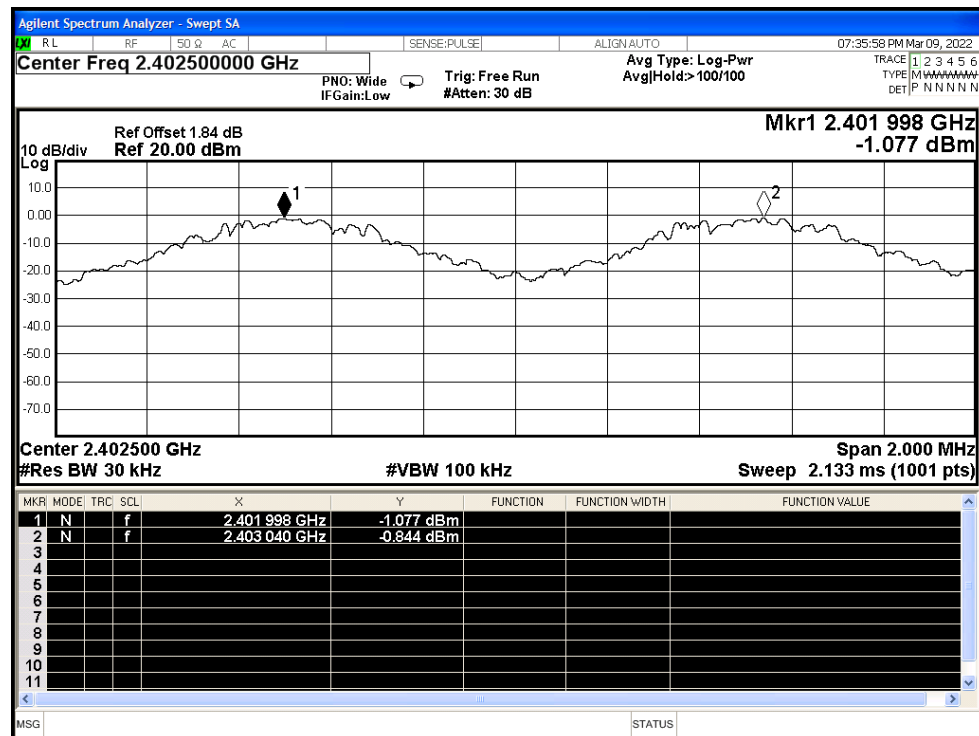
A.4 Carrier Frequencies Separation

Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2401.998	2403.04	1.042	0.627	Pass
NVNT	1-DH5	Ant1	2441.018	2442.006	0.988	0.628	Pass
NVNT	1-DH5	Ant1	2479.03	2480.018	0.988	0.624	Pass
NVNT	2-DH5	Ant1	2401.972	2402.968	0.996	0.851	Pass
NVNT	2-DH5	Ant1	2440.852	2442.028	1.176	0.85	Pass
NVNT	2-DH5	Ant1	2478.948	2479.998	1.05	0.853	Pass
NVNT	3-DH5	Ant1	2402.012	2402.98	0.968	0.831	Pass
NVNT	3-DH5	Ant1	2441.006	2442.004	0.998	0.851	Pass
NVNT	3-DH5	Ant1	2479.024	2480.016	0.992	0.845	Pass

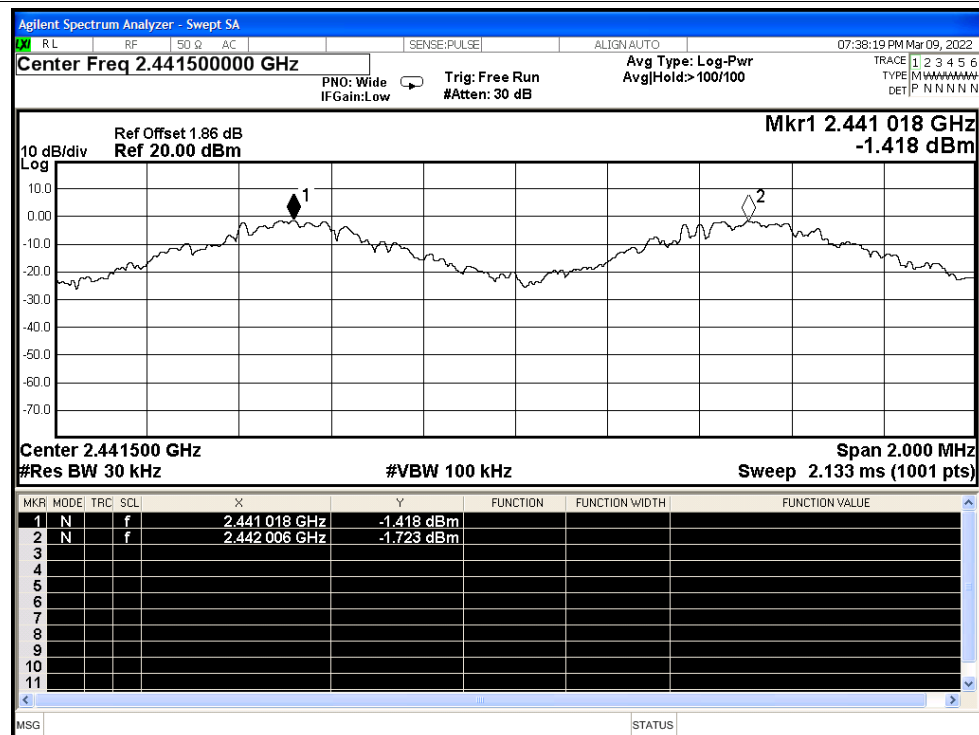


Test Graphs

CFS NVNT 1-DH5 2402MHz Ant1

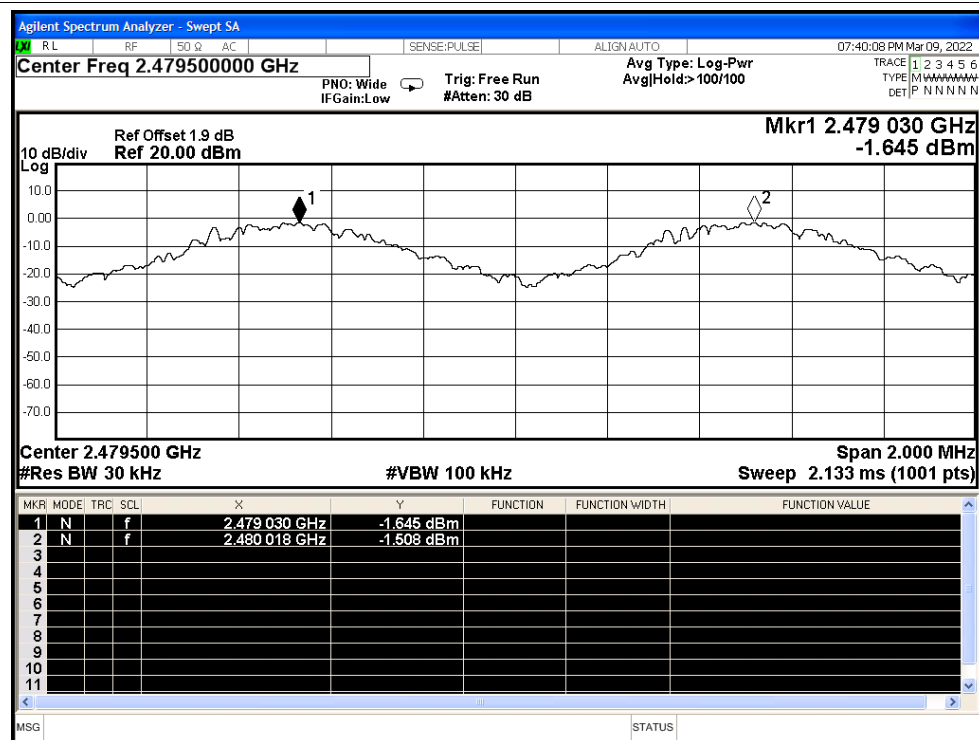


CFS NVNT 1-DH5 2441MHz Ant1

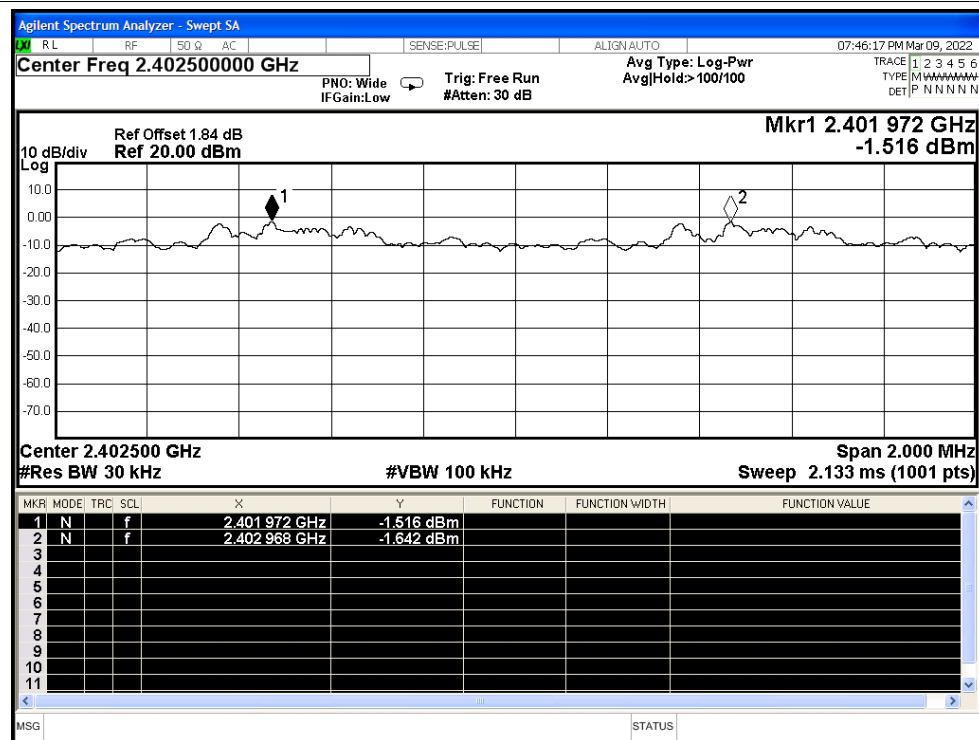




CFS NVNT 1-DH5 2480MHz Ant1

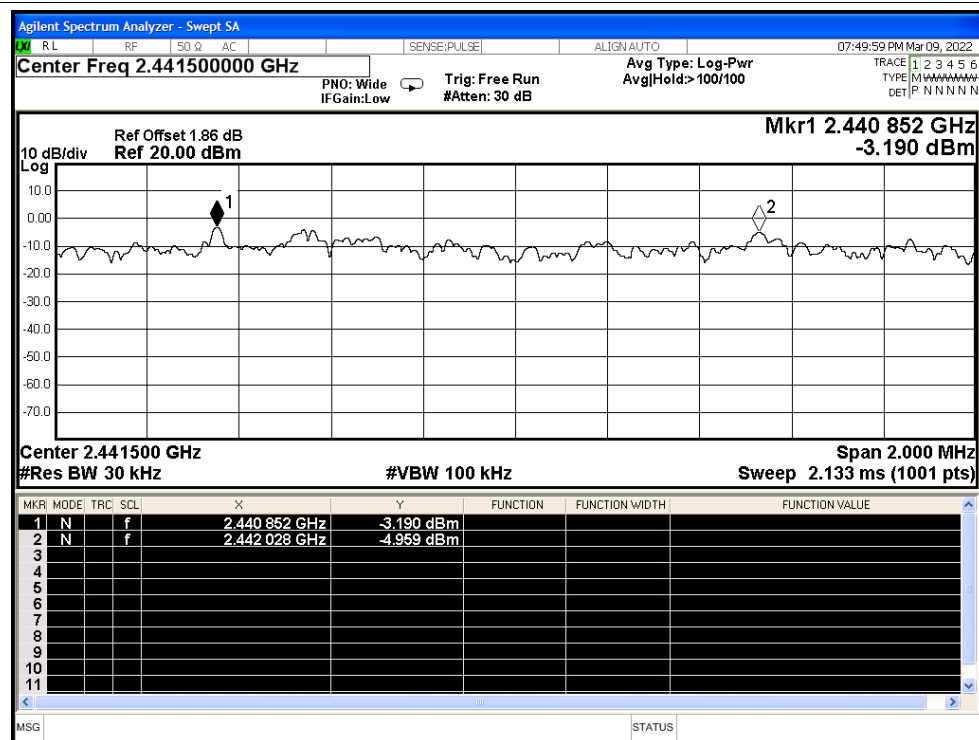


CFS NVNT 2-DH5 2402MHz Ant1

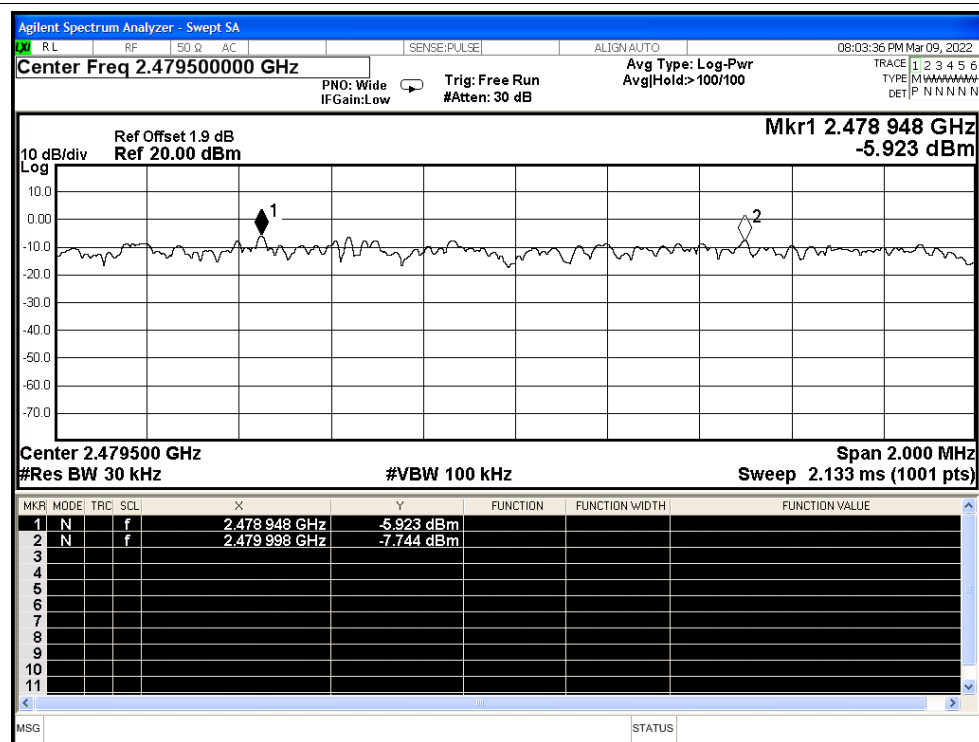




CFS NVNT 2-DH5 2441MHz Ant1

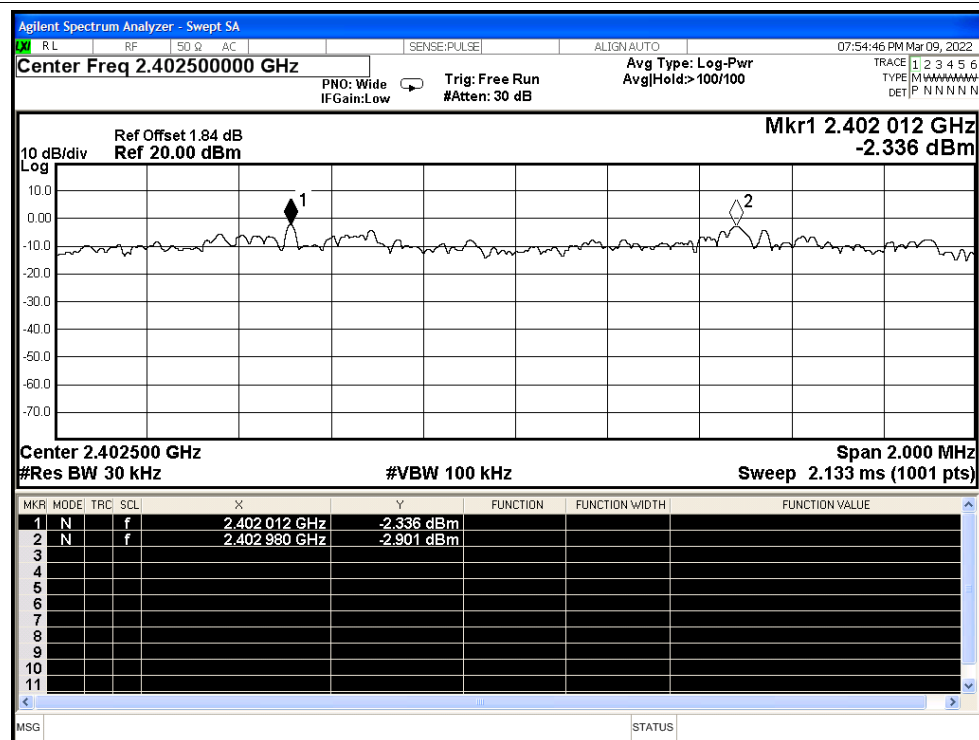


CFS NVNT 2-DH5 2480MHz Ant1

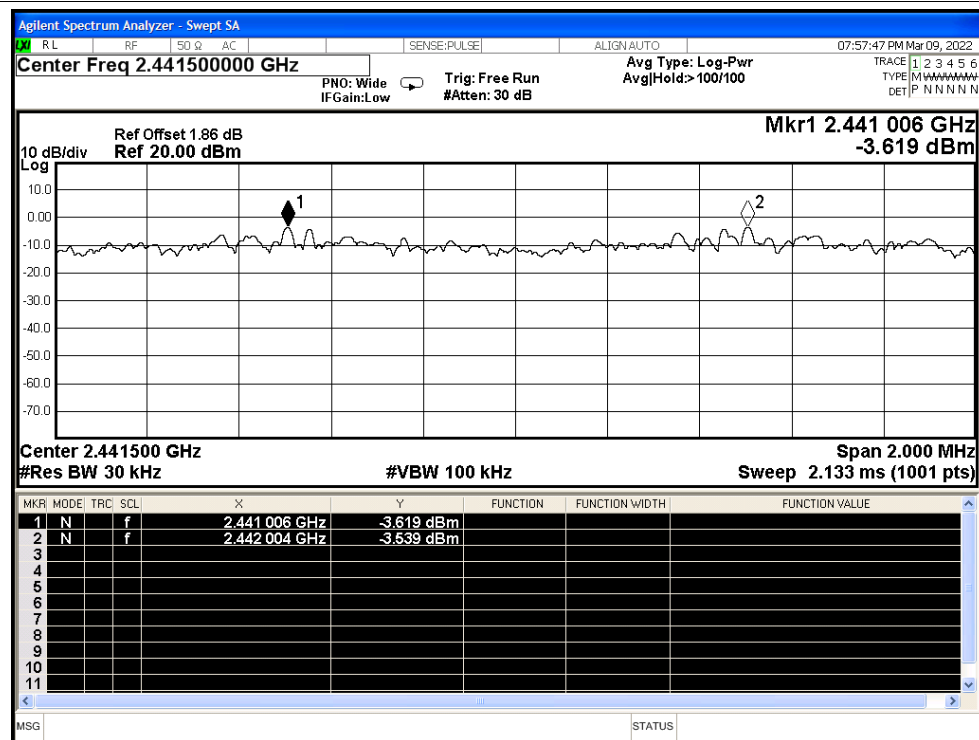


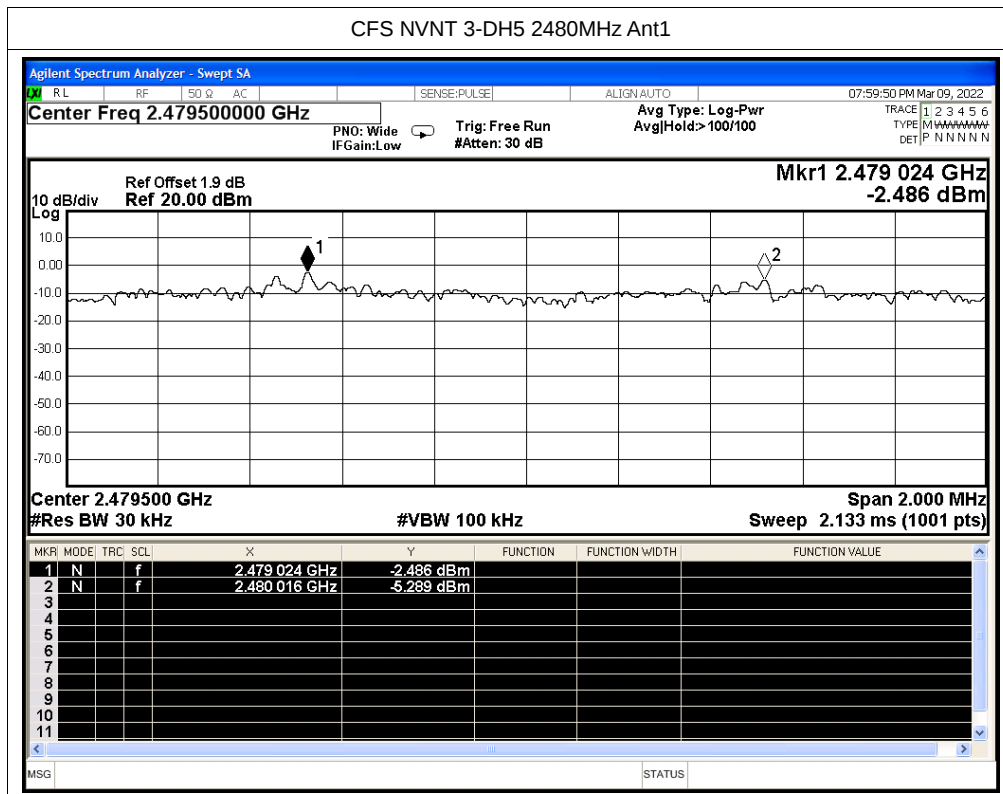


CFS NVNT 3-DH5 2402MHz Ant1



CFS NVNT 3-DH5 2441MHz Ant1







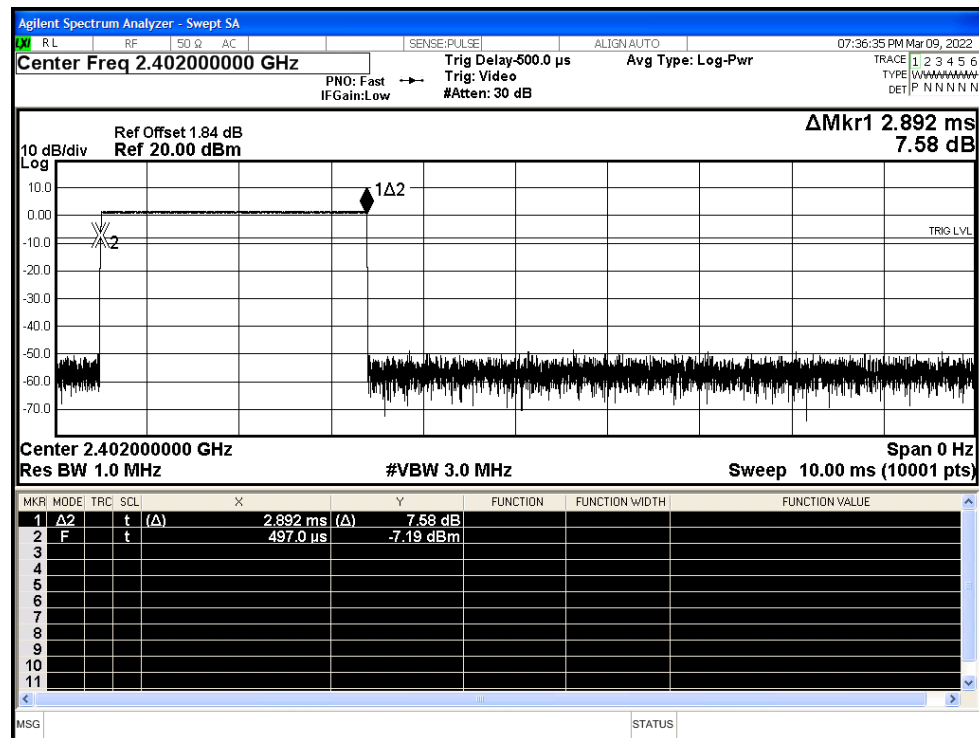
A.5 Dwell Time

Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH5	2402	Ant1	2.892	364.392	126	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.893	358.732	124	31600	400	Pass
NVNT	1-DH5	2480	Ant1	2.892	286.308	99	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.898	312.984	108	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.894	324.128	112	31600	400	Pass
NVNT	2-DH5	2480	Ant1	2.898	312.984	108	31600	400	Pass
NVNT	3-DH5	2402	Ant1	2.898	341.964	118	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.897	301.288	104	31600	400	Pass
NVNT	3-DH5	2480	Ant1	2.897	269.421	93	31600	400	Pass

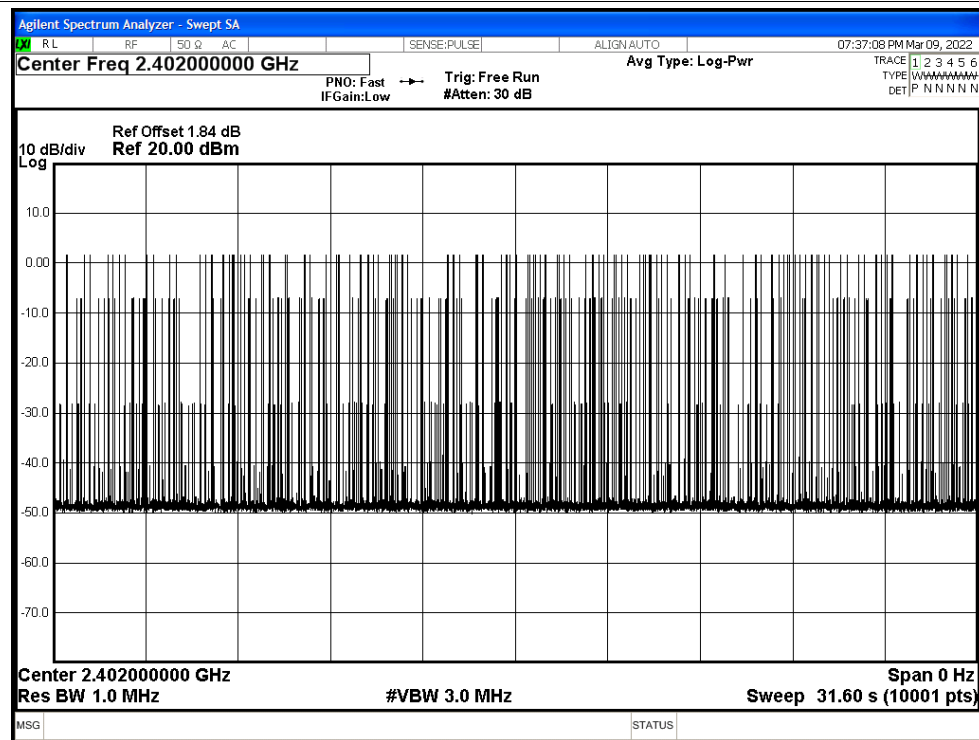


Test Graphs

Dwell NVNT 1-DH5 2402MHz Ant1 One Burst

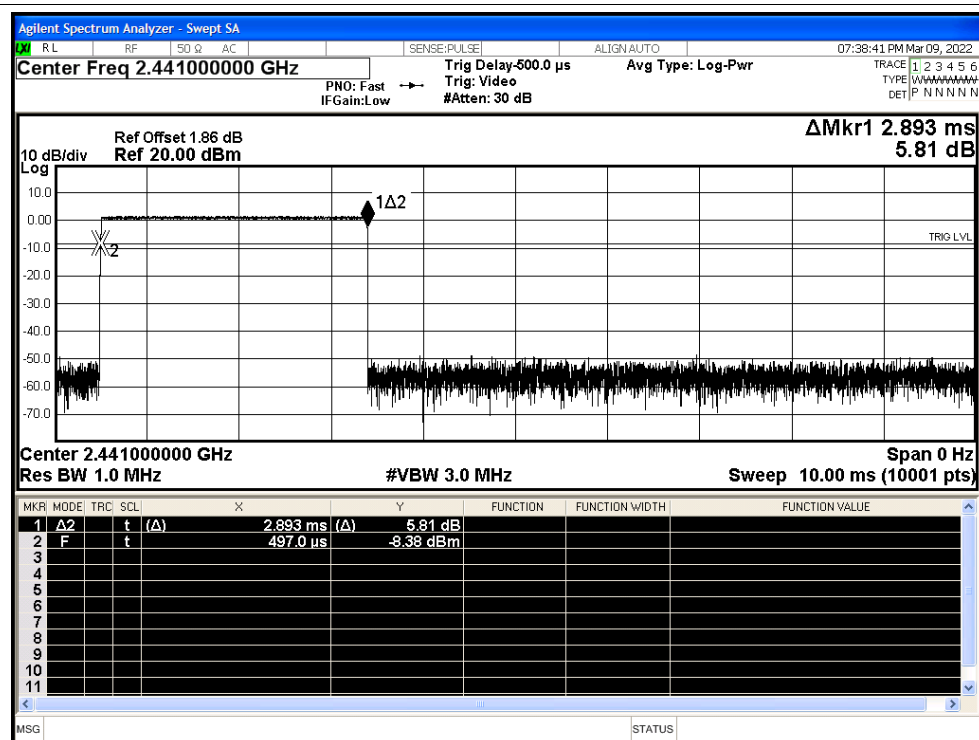


Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated

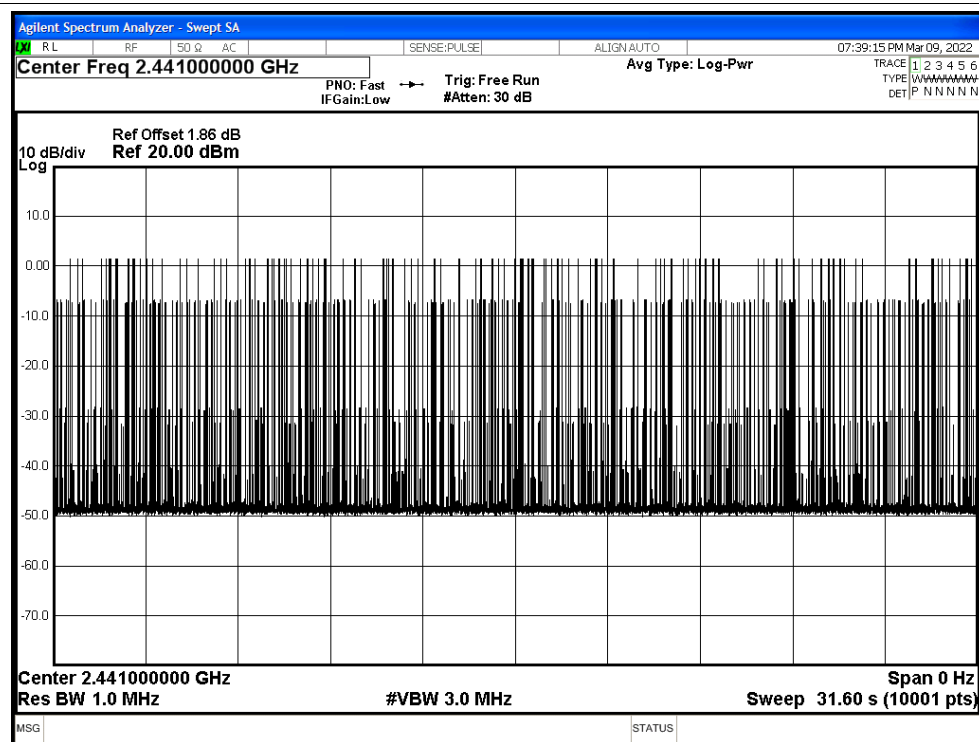




Dwell NVNT 1-DH5 2441MHz Ant1 One Burst

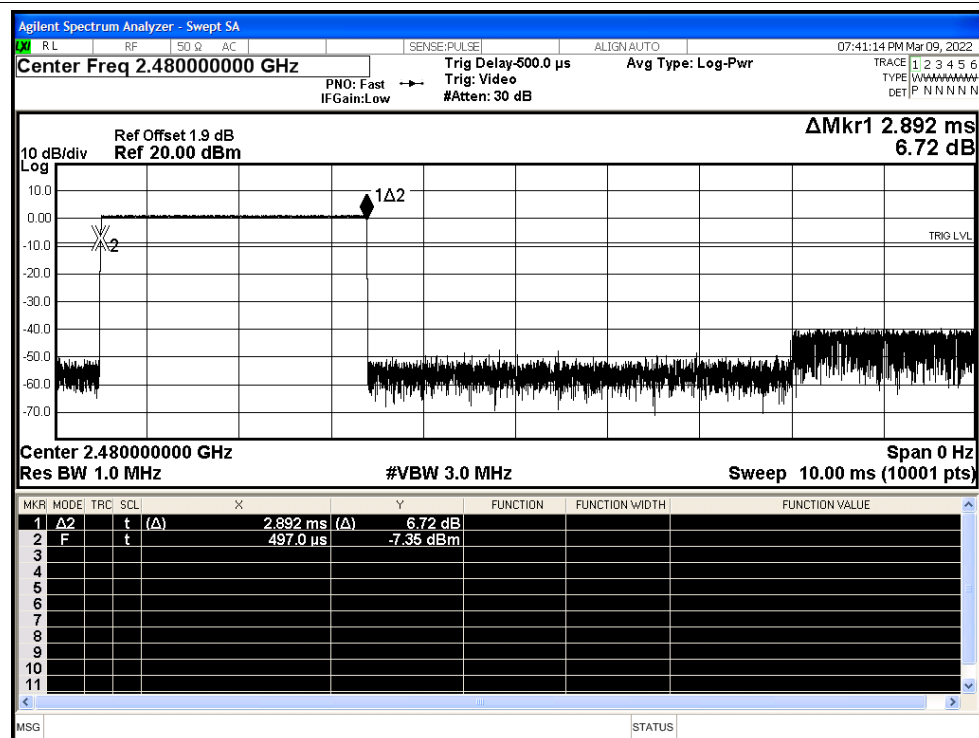


Dwell NVNT 1-DH5 2441MHz Ant1 Accumulated

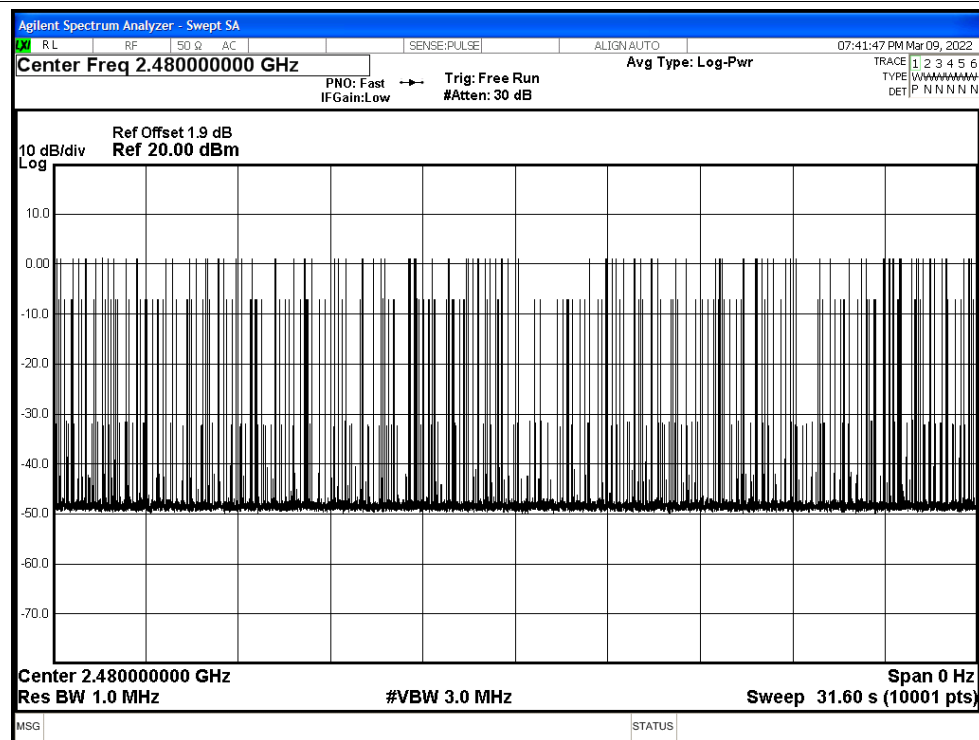




Dwell NVNT 1-DH5 2480MHz Ant1 One Burst

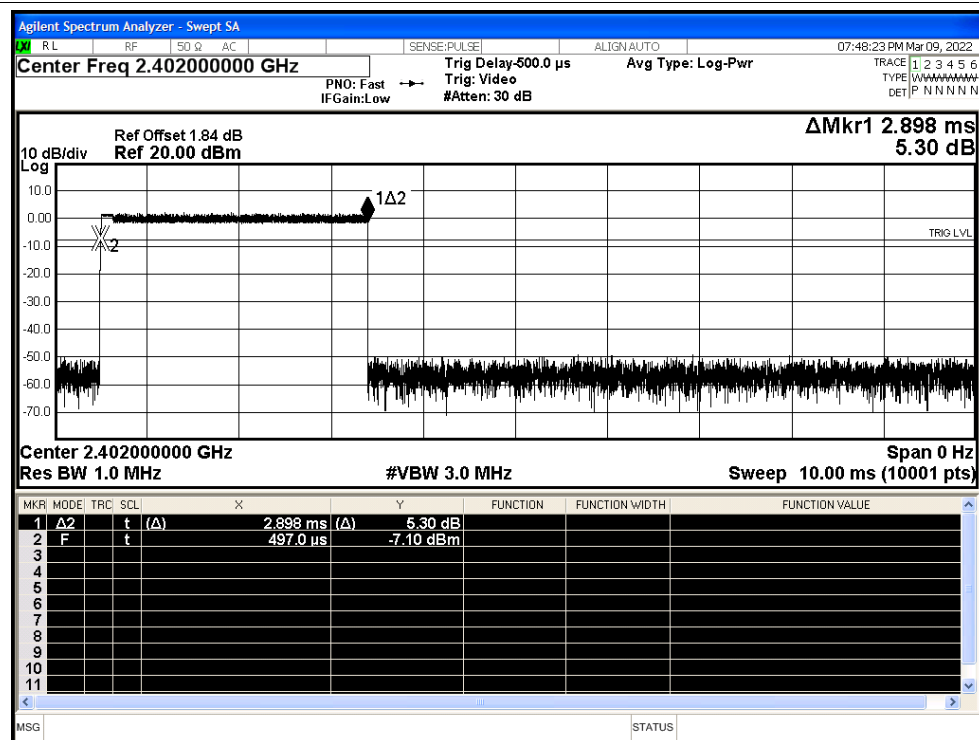


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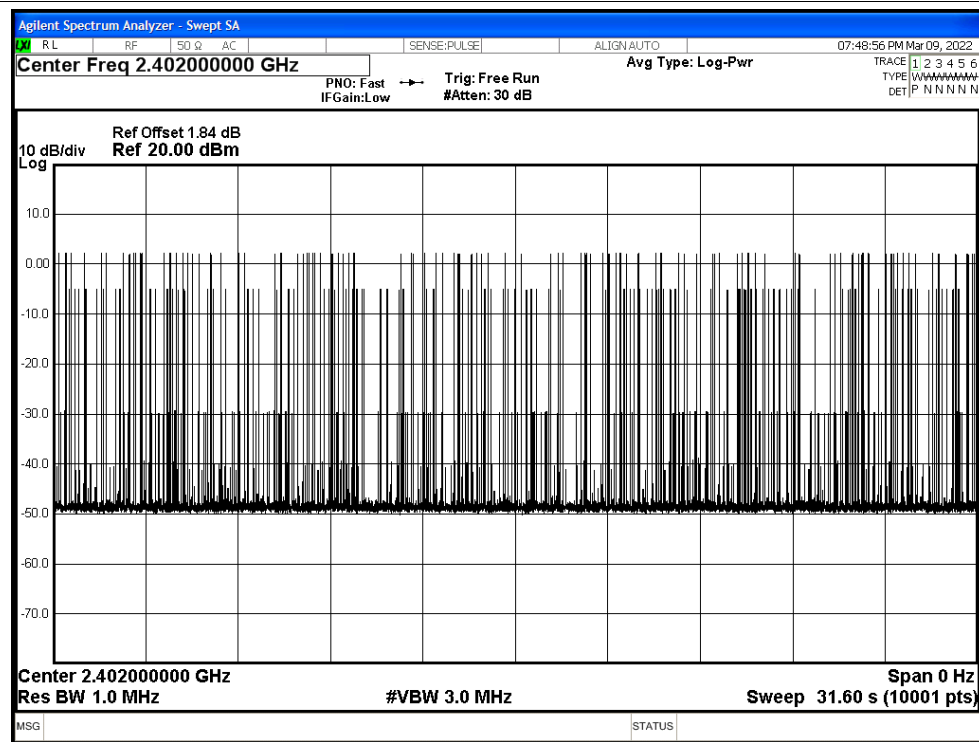




Dwell NVNT 2-DH5 2402MHz Ant1 One Burst

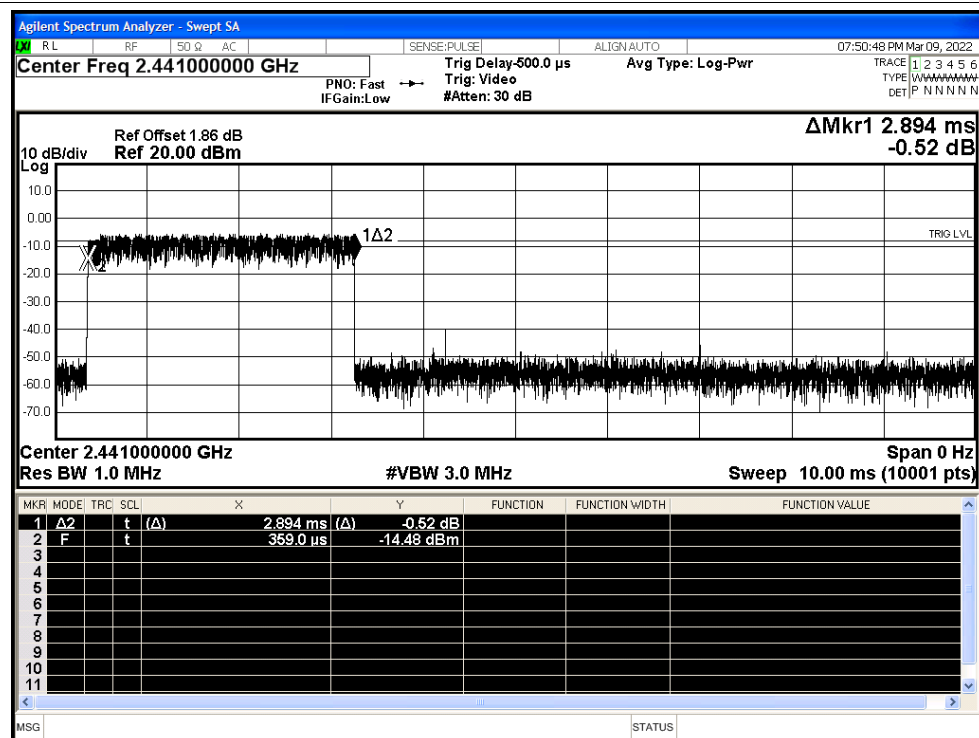


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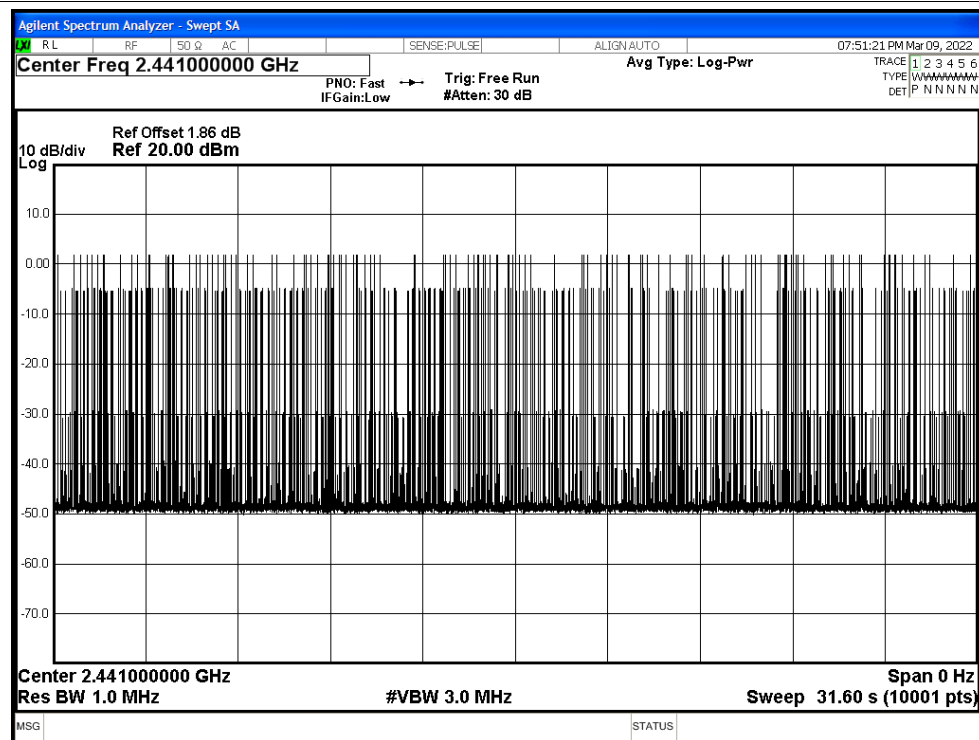




Dwell NVNT 2-DH5 2441MHz Ant1 One Burst

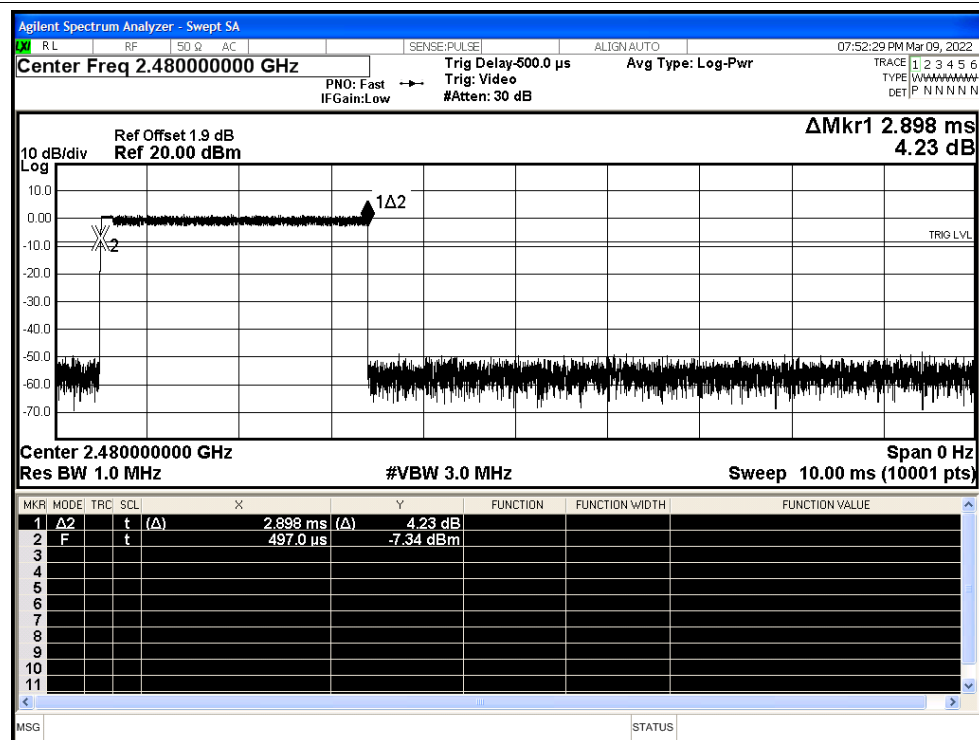


Dwell NVNT 2-DH5 2441MHz Ant1 Accumulated

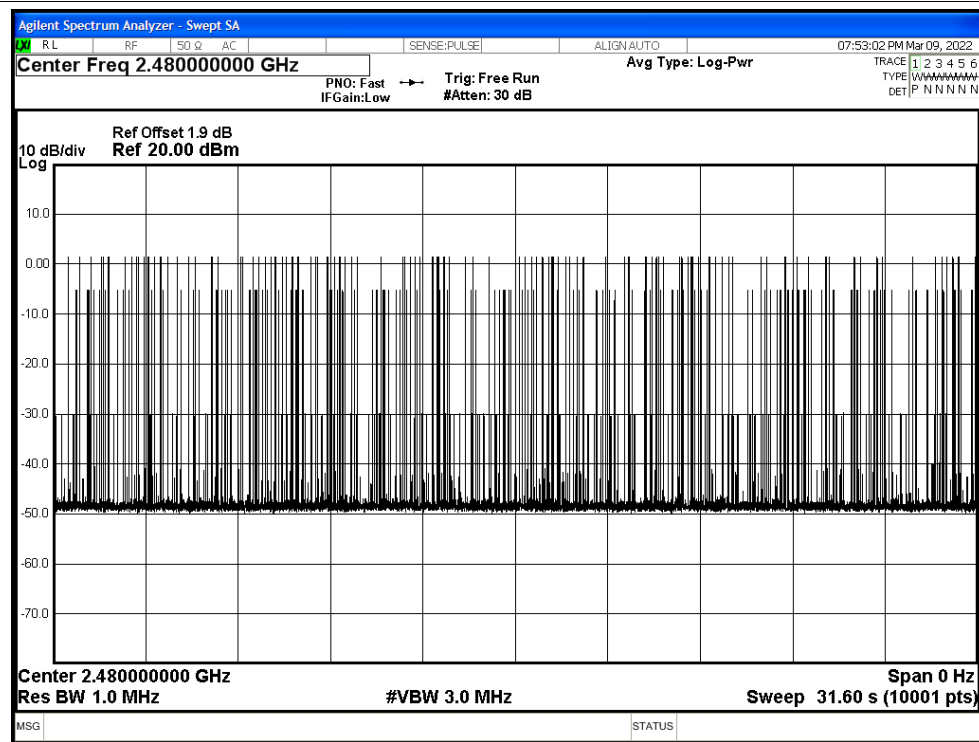




Dwell NVNT 2-DH5 2480MHz Ant1 One Burst

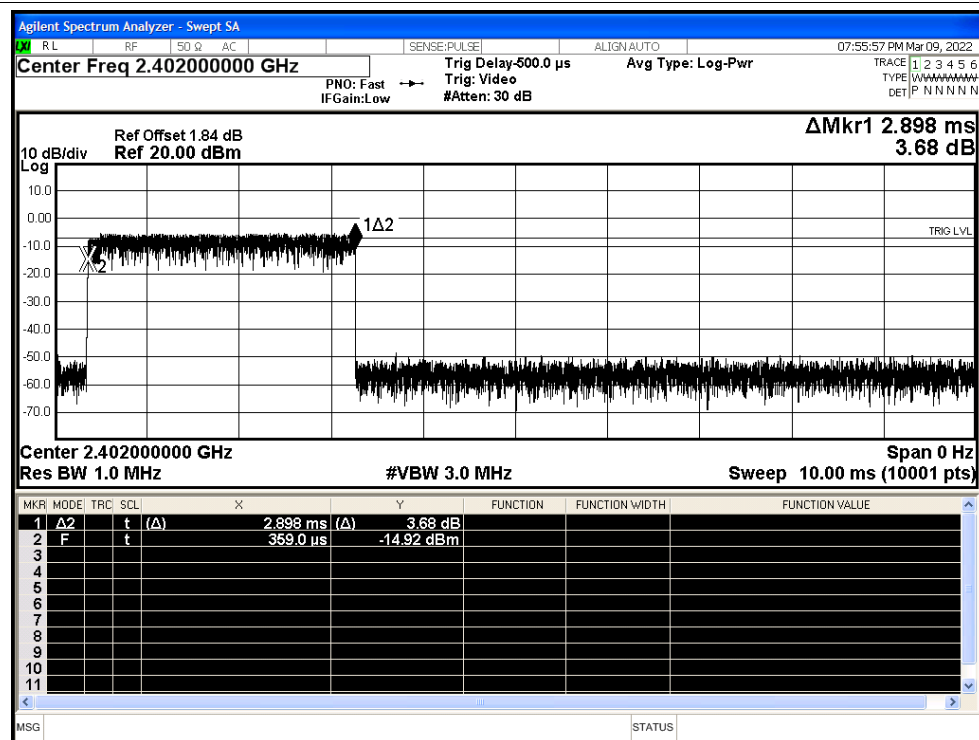


Dwell NVNT 2-DH5 2480MHz Ant1 Accumulated

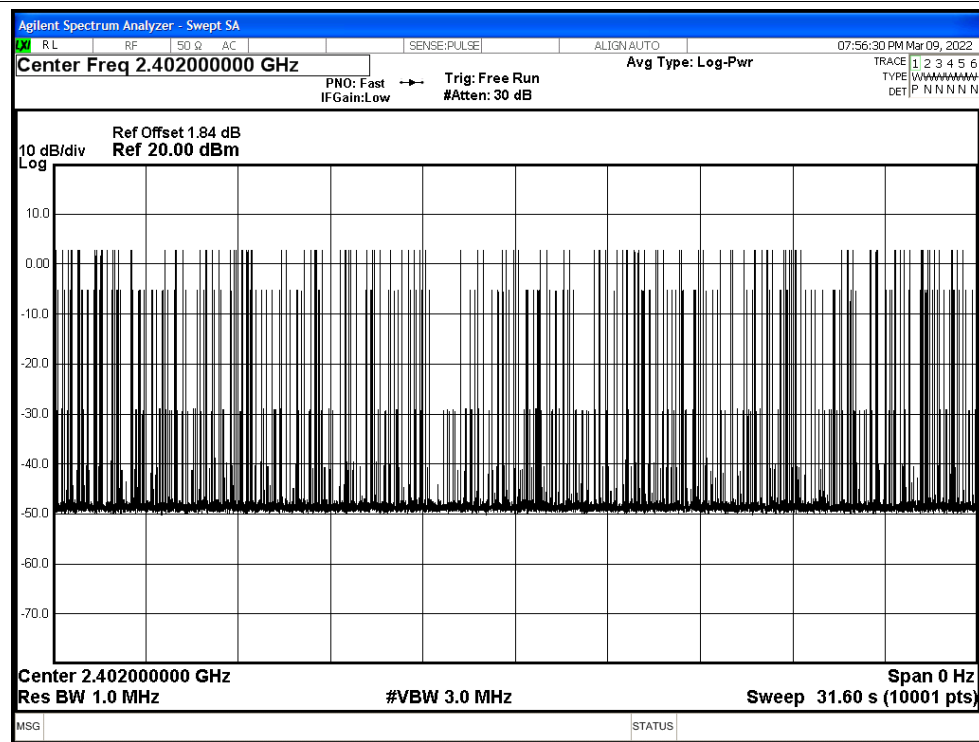




Dwell NVNT 3-DH5 2402MHz Ant1 One Burst

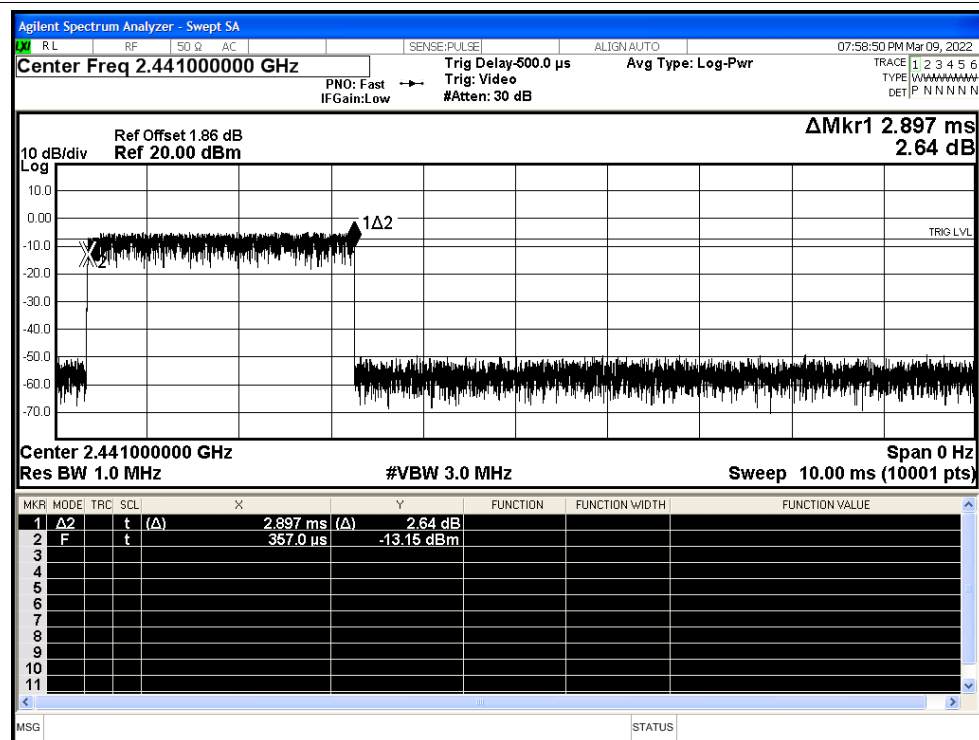


Dwell NVNT 3-DH5 2402MHz Ant1 Accumulated

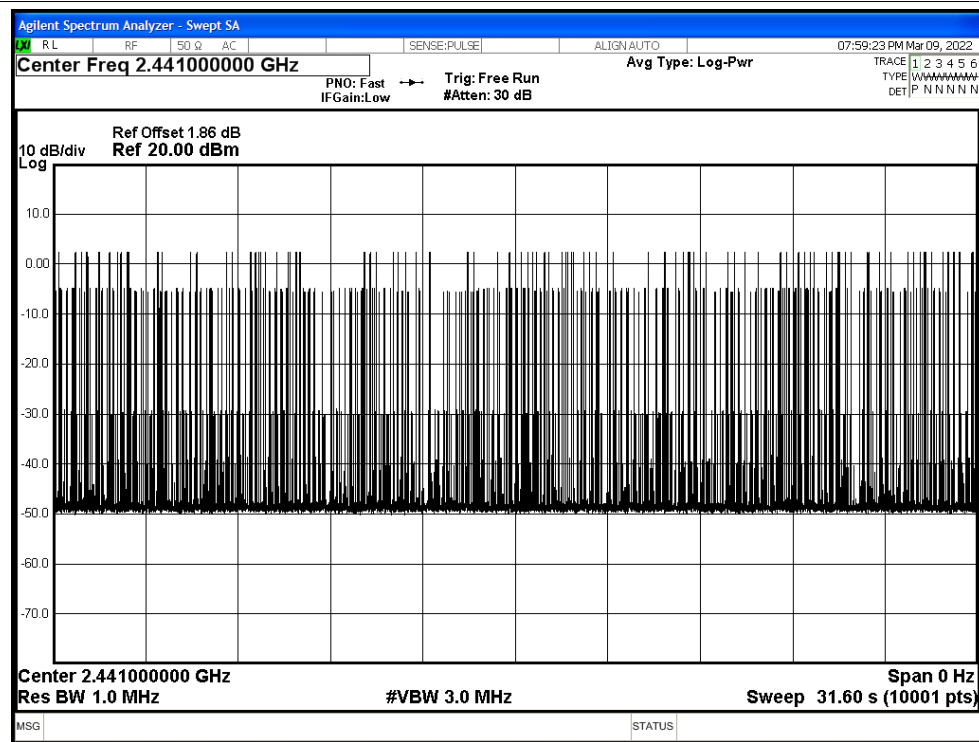




Dwell NVNT 3-DH5 2441MHz Ant1 One Burst

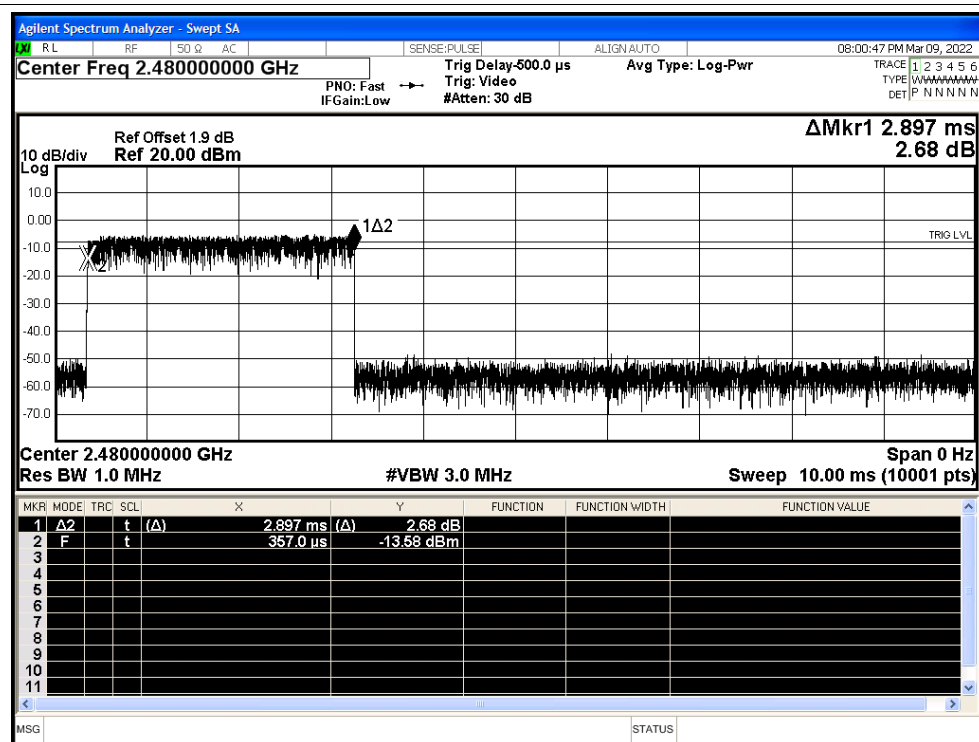


Dwell NVNT 3-DH5 2441MHz Ant1 Accumulated

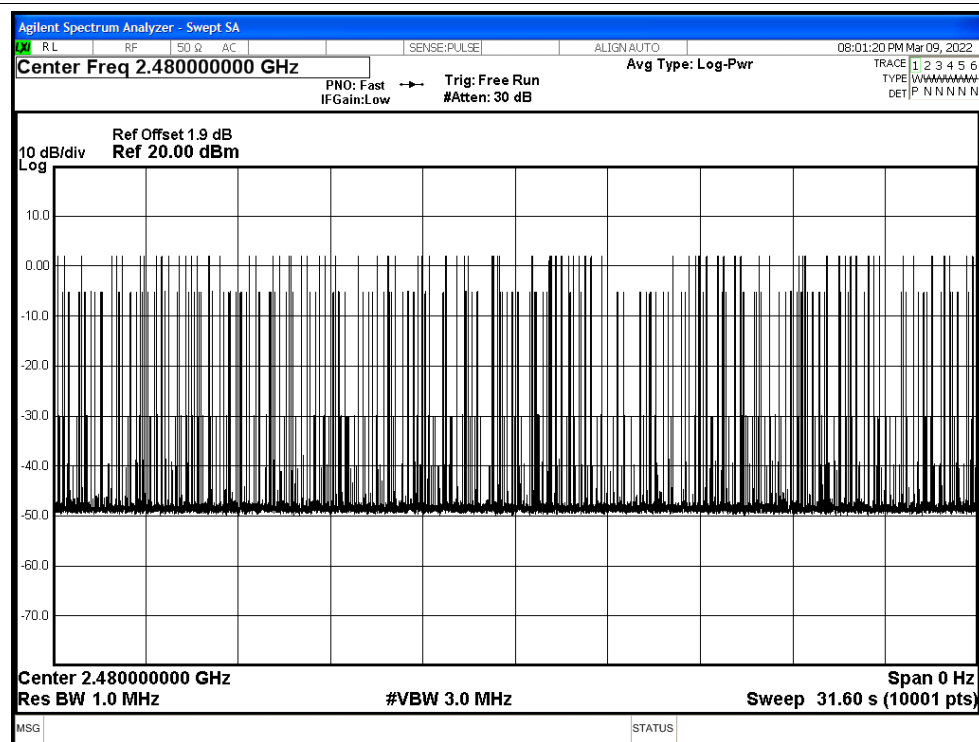




Dwell NVNT 3-DH5 2480MHz Ant1 One Burst



Dwell NVNT 3-DH5 2480MHz Ant1 Accumulated





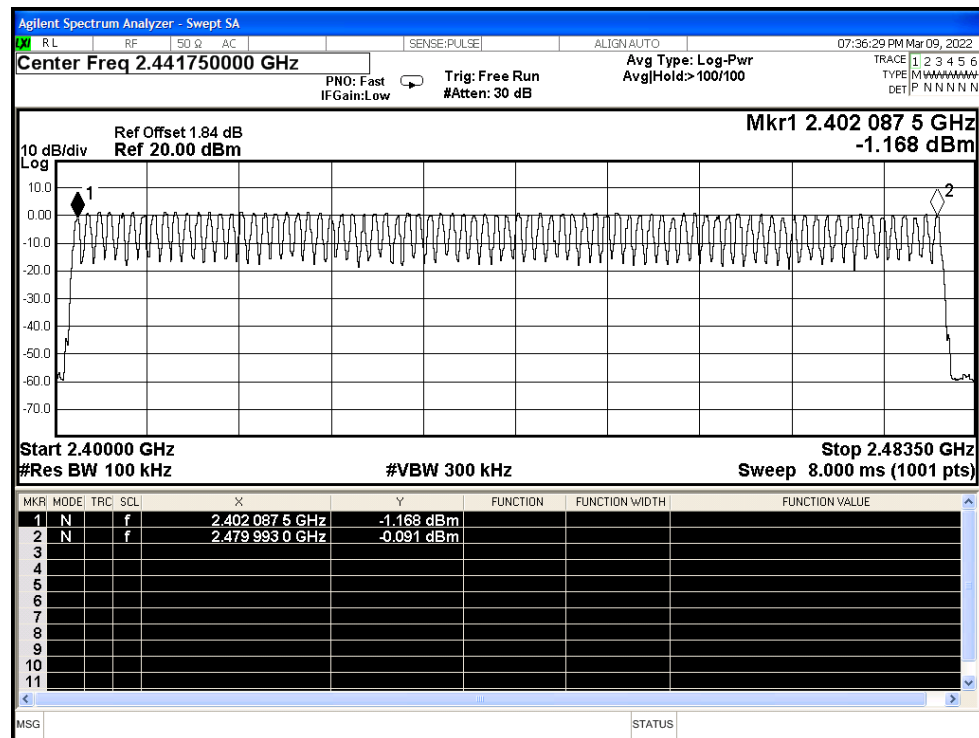
A.6 Number of Hopping Channel

Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant1	79	15	Pass
NVNT	2-DH5	Ant1	79	15	Pass
NVNT	3-DH5	Ant1	79	15	Pass

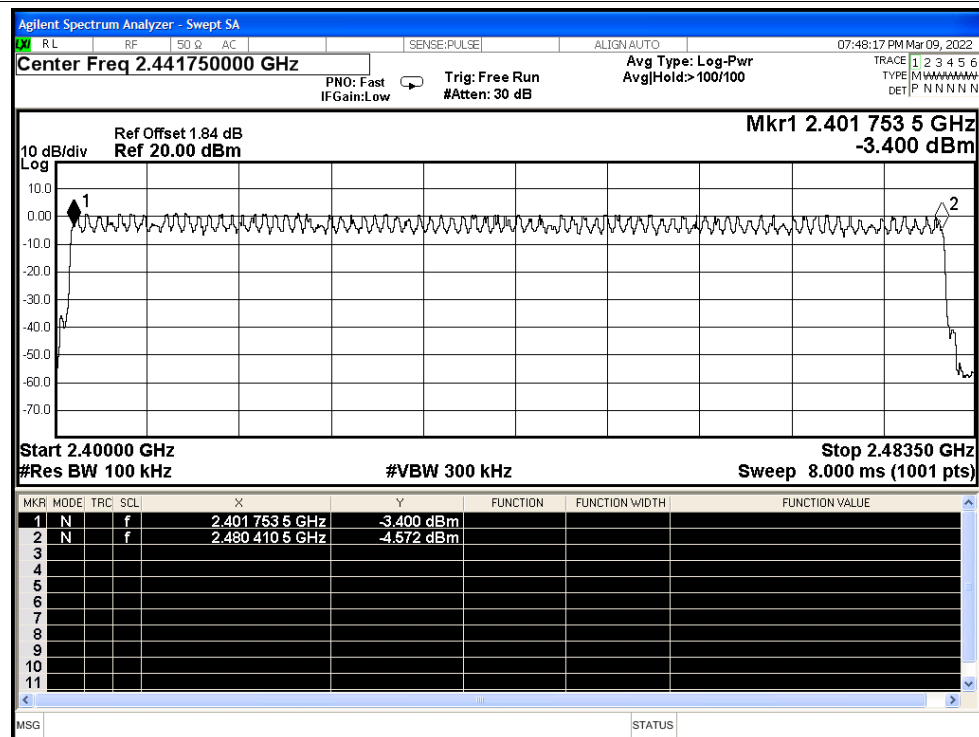


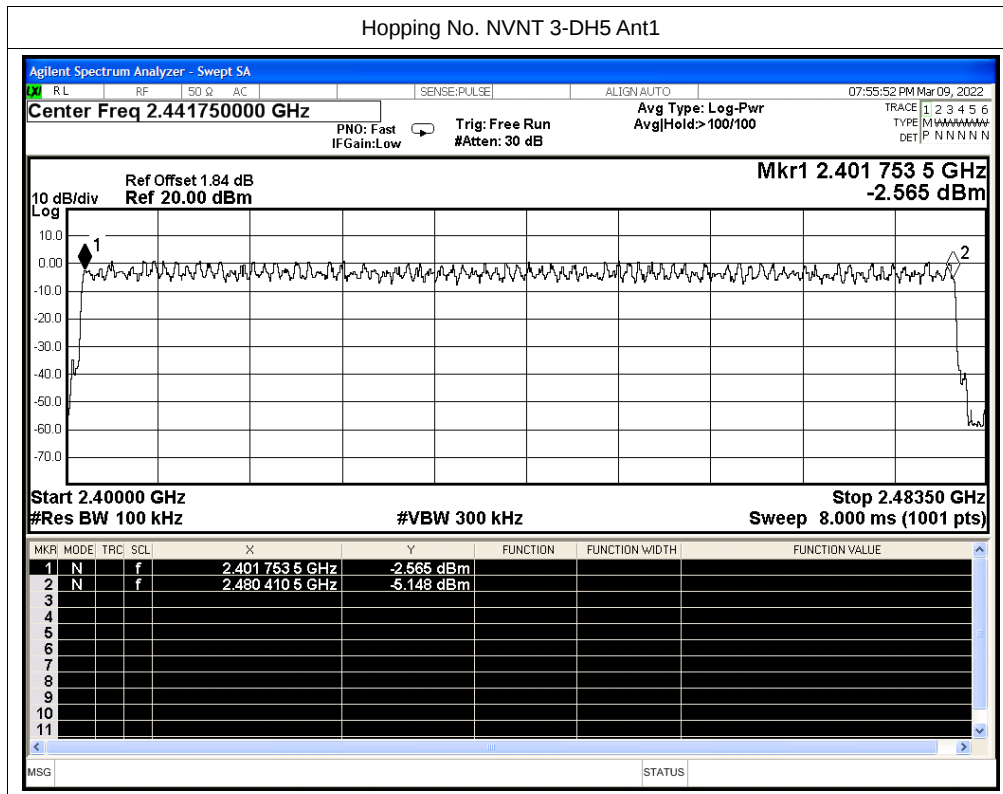
Test Graphs

Hopping No. NVNT 1-DH5 Ant1



Hopping No. NVNT 2-DH5 Ant1







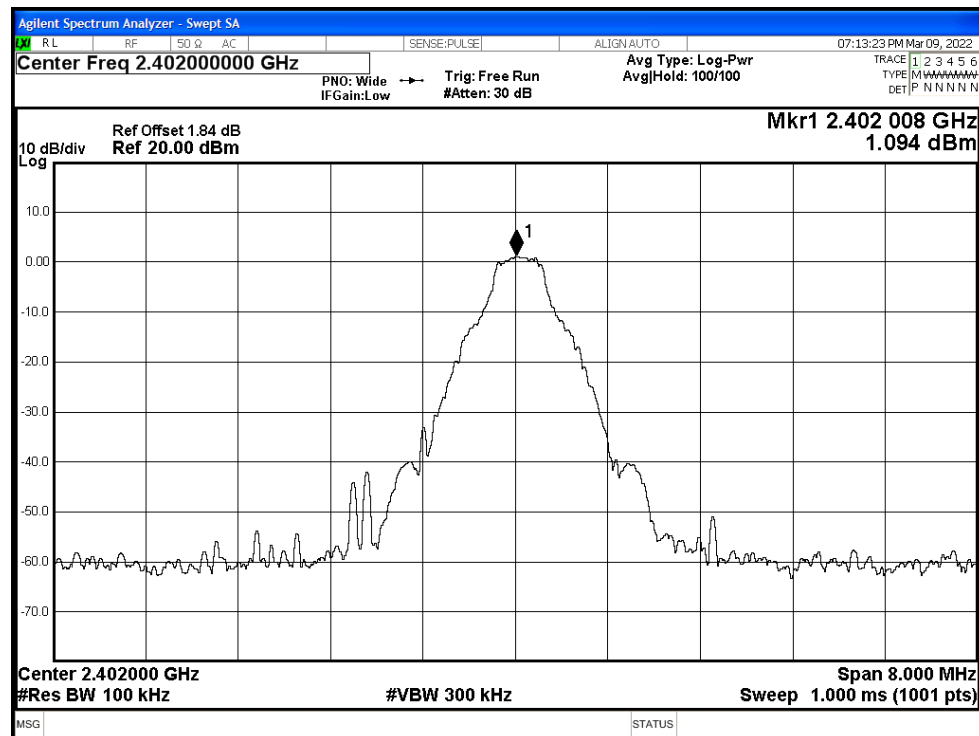
A.7 Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-53.98	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-57.77	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-52.4	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-57.38	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-51.94	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-56.72	-20	Pass

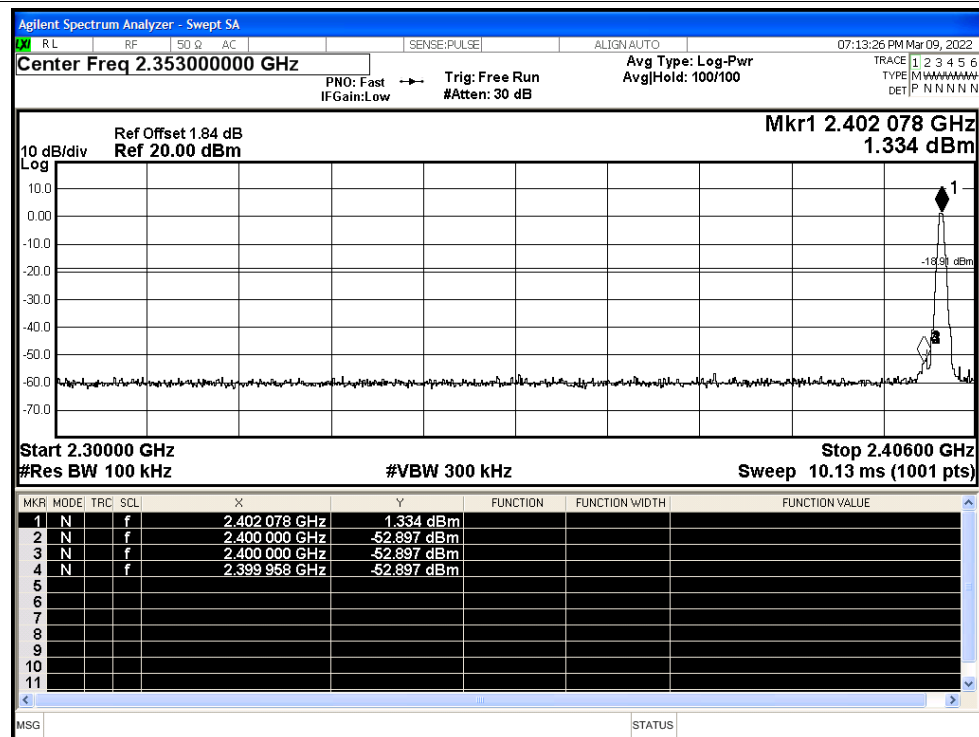


Test Graphs

Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Ref

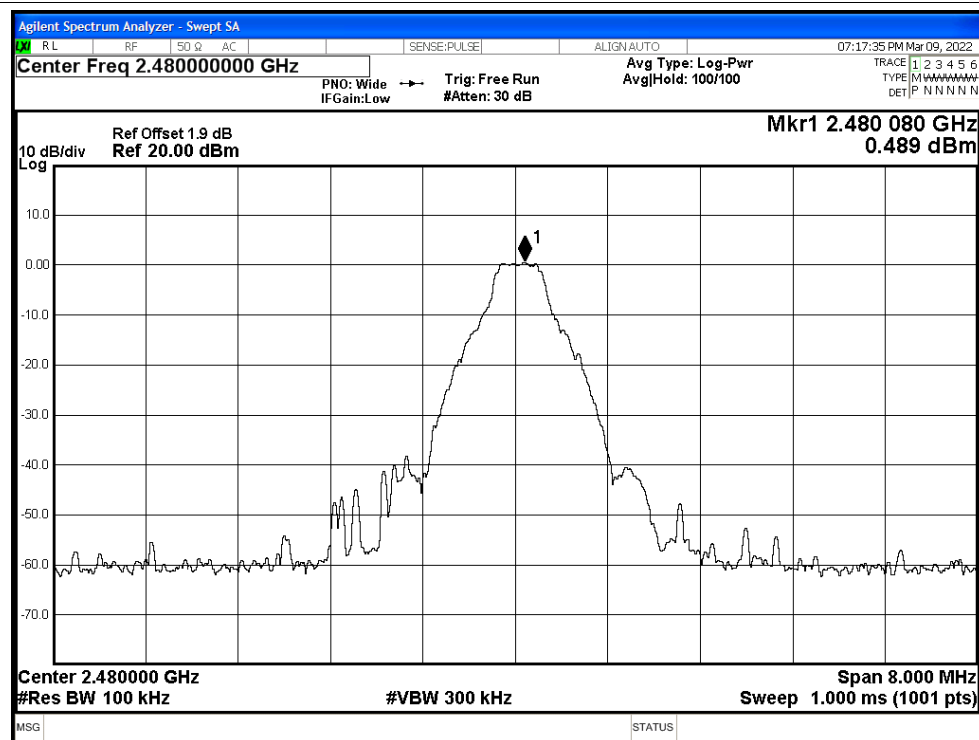


Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission

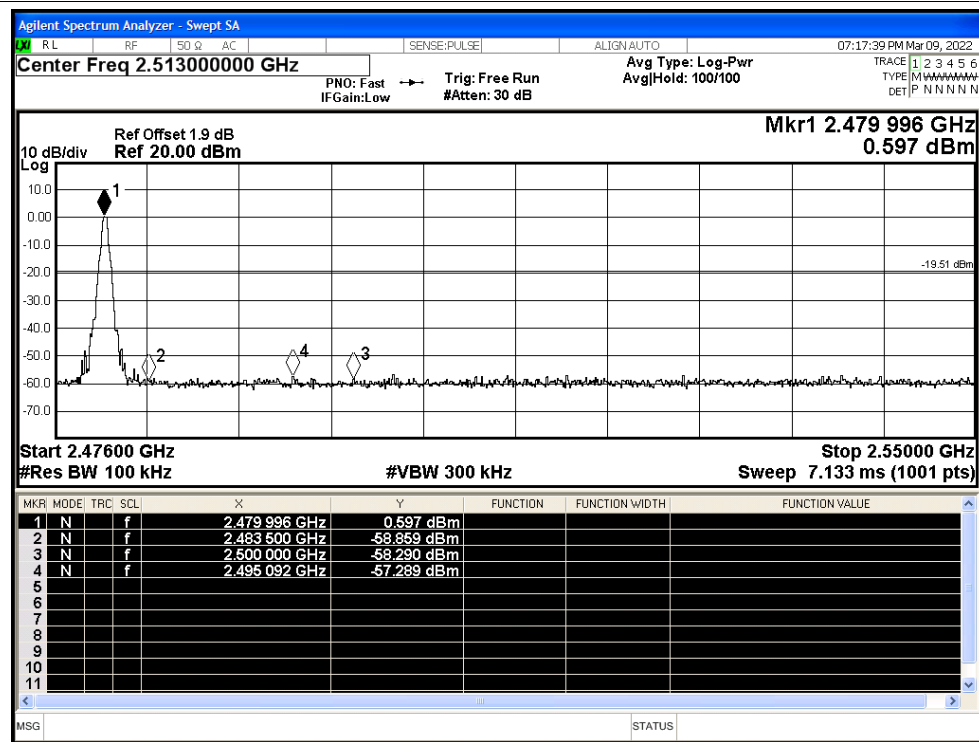




Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref

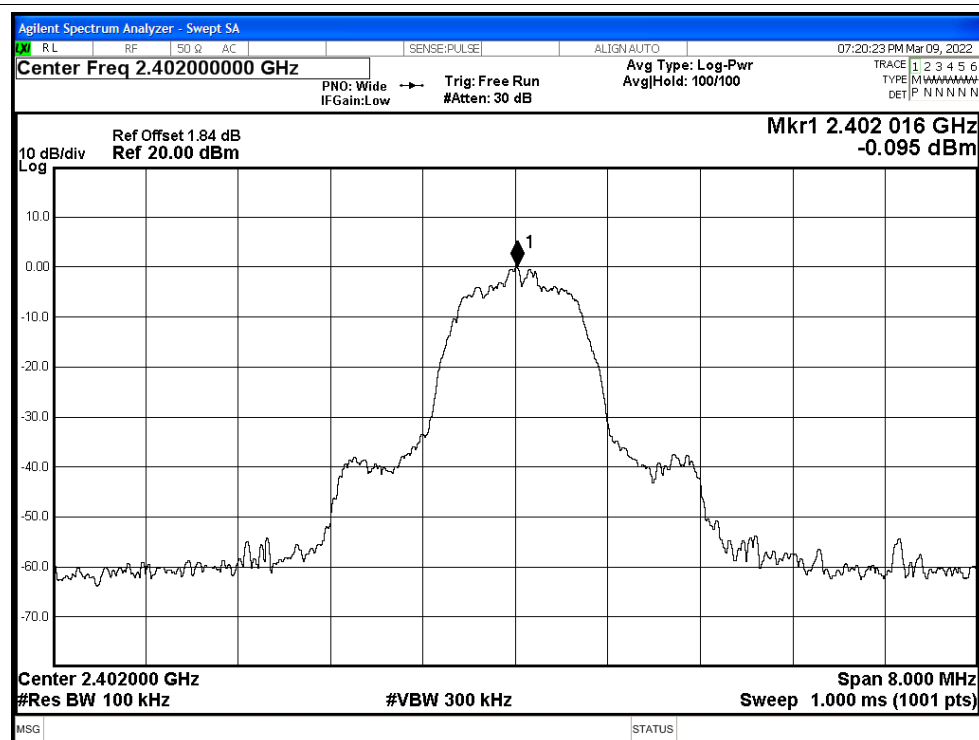


Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission

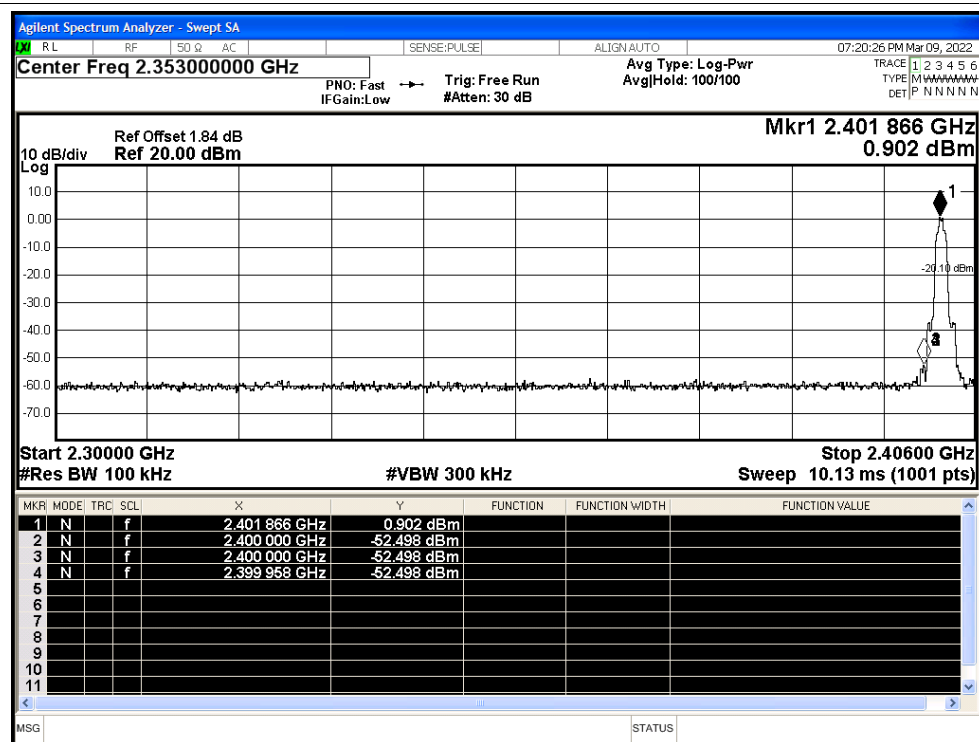




Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref

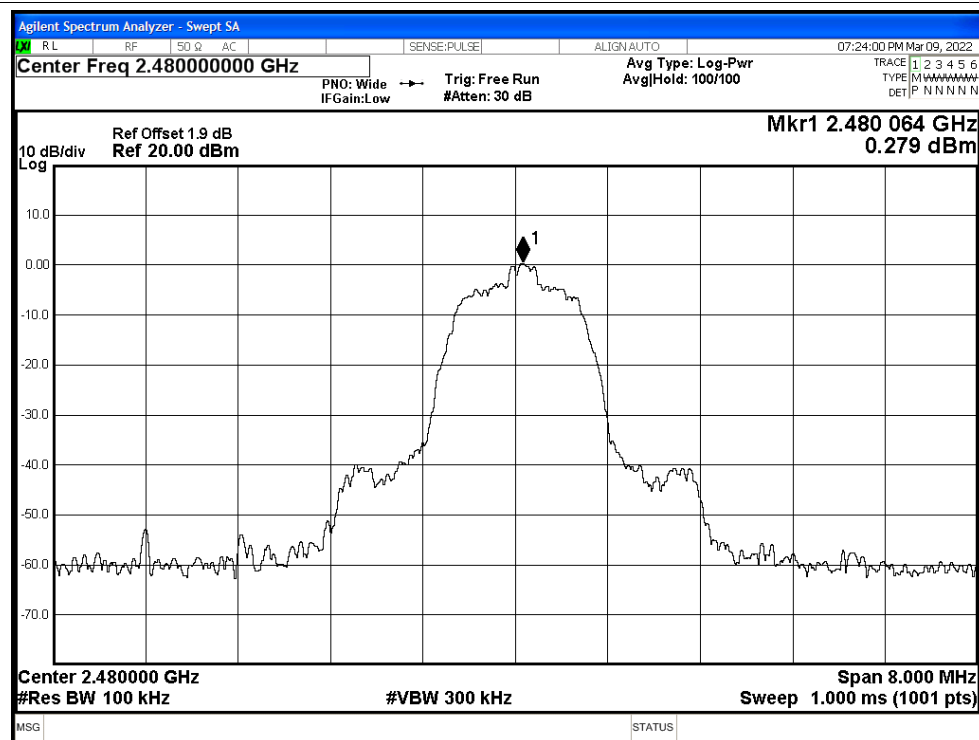


Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission

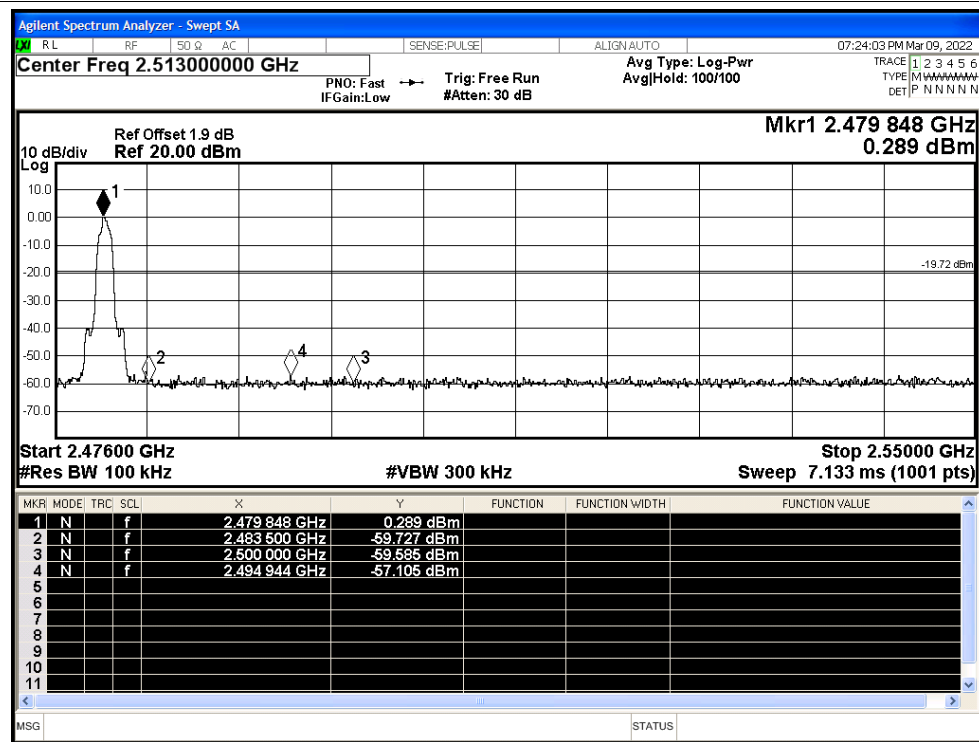




Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref

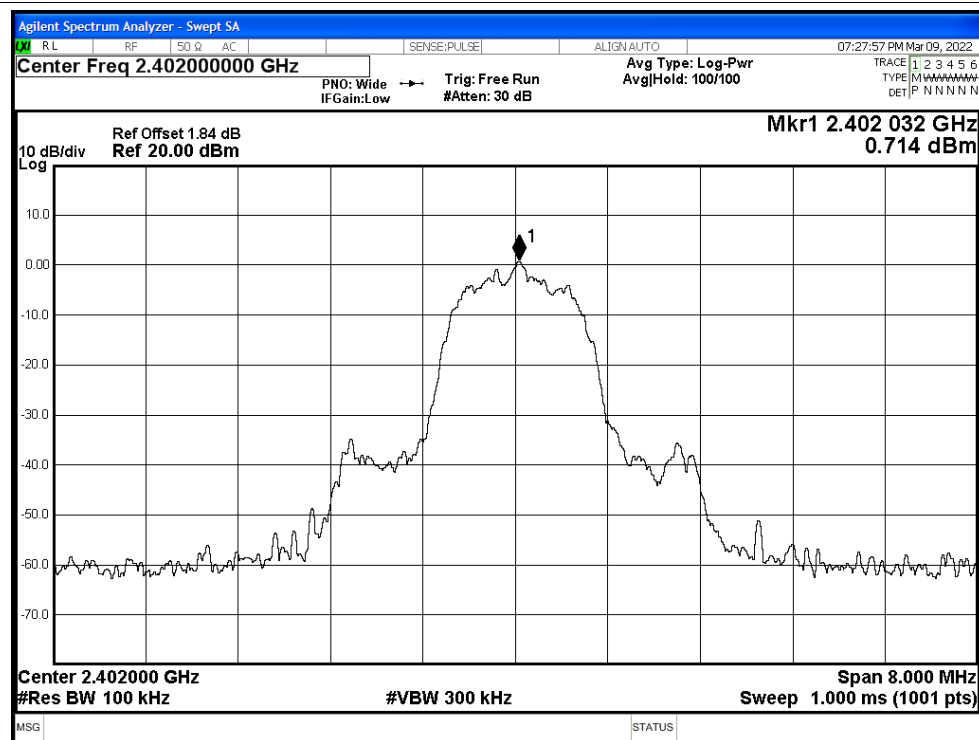


Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Emission

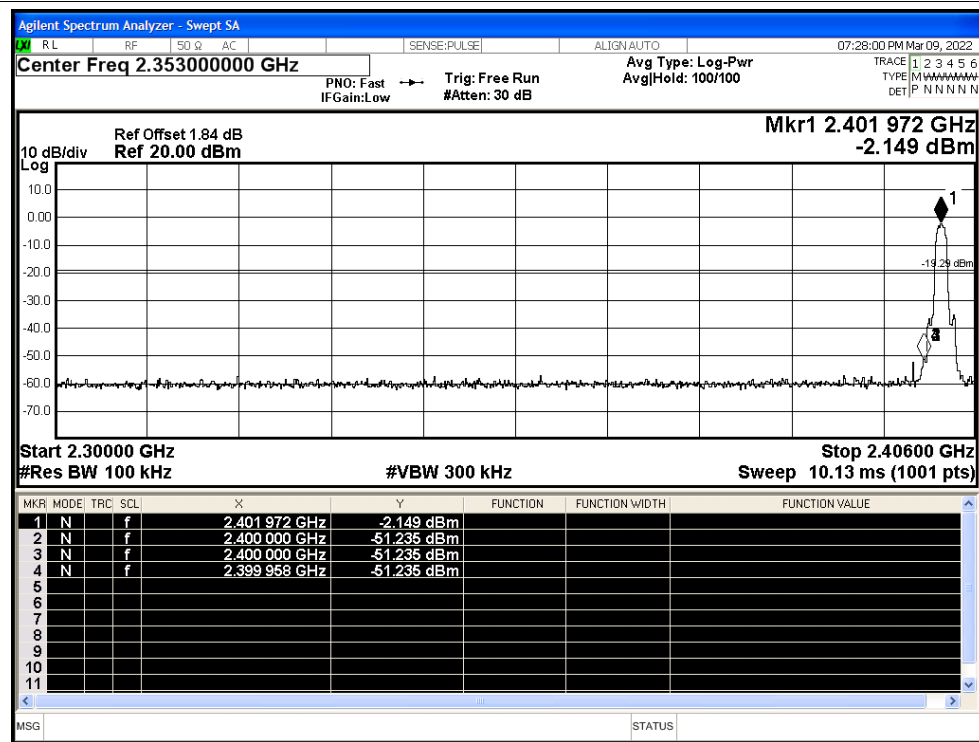




Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref

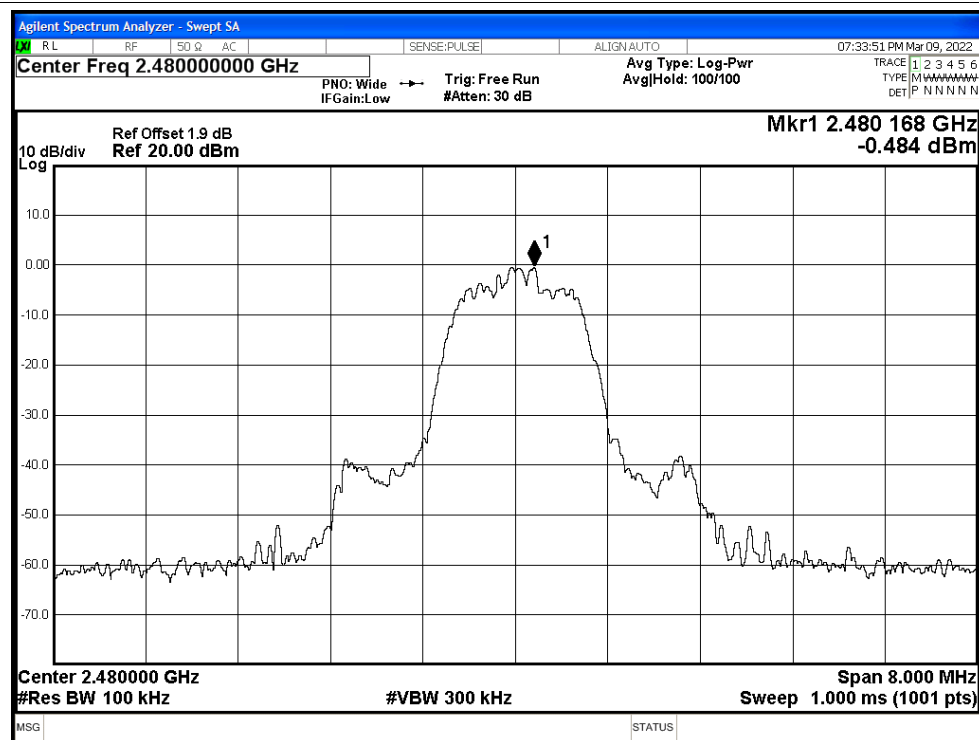


Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Emission

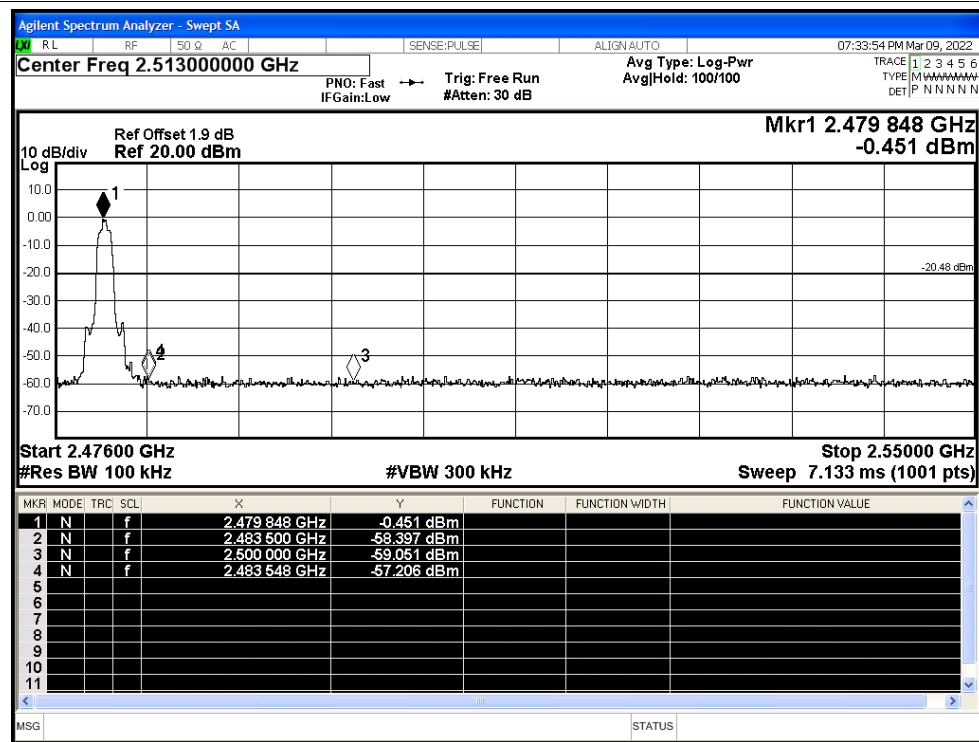




Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Ref



Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Emission





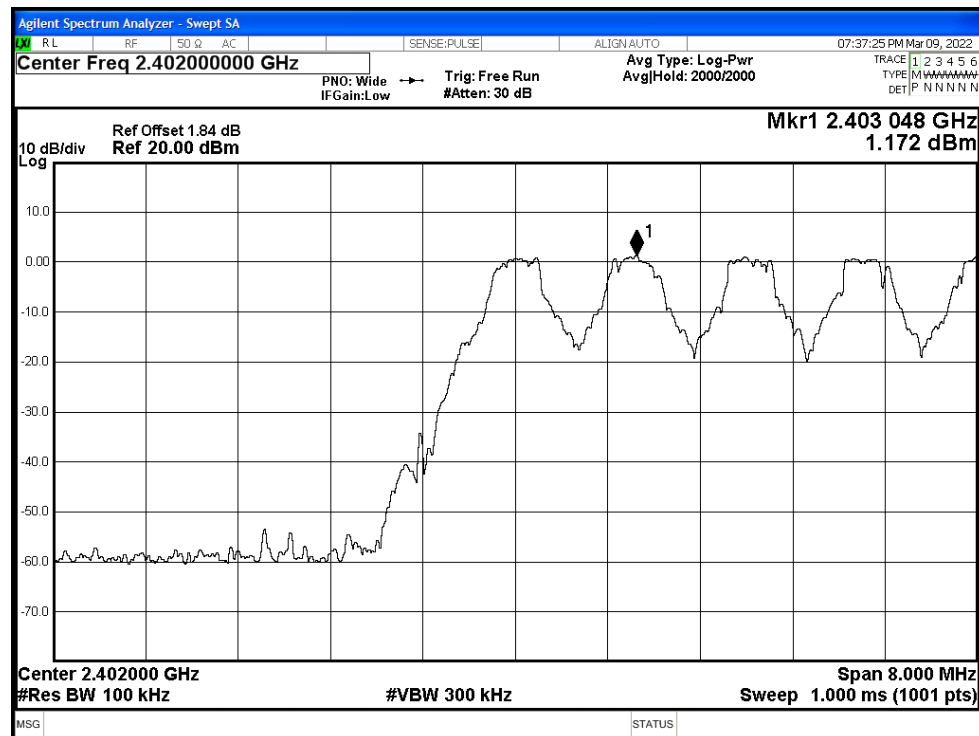
(Hopping)

Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-57.13	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-56.91	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-55.78	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-56.96	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-56.9	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-56.65	-20	Pass

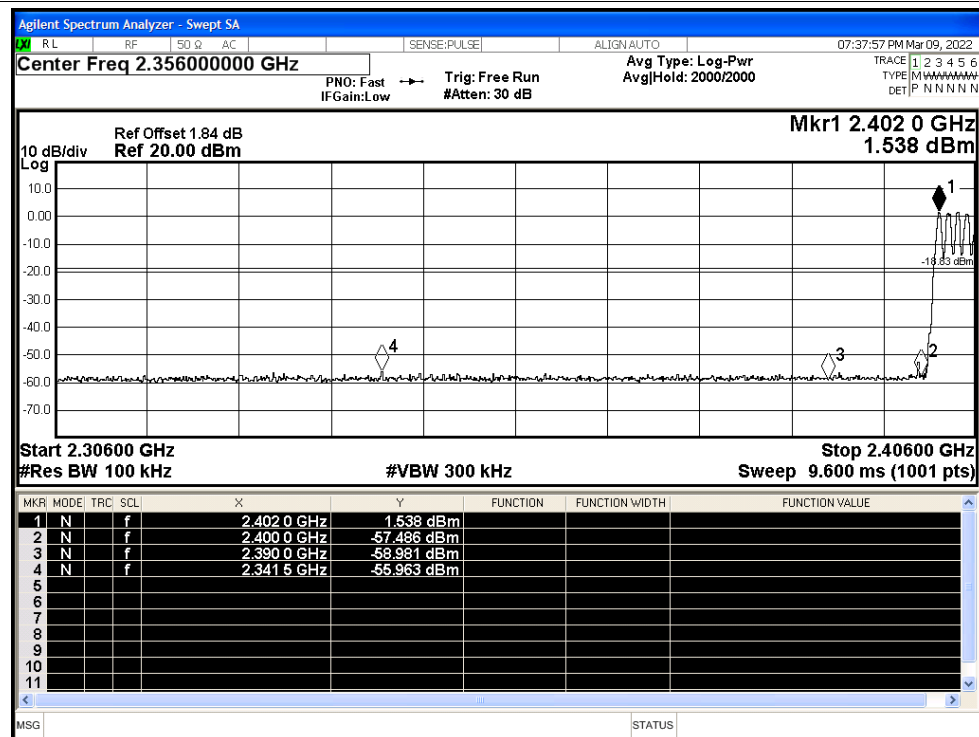


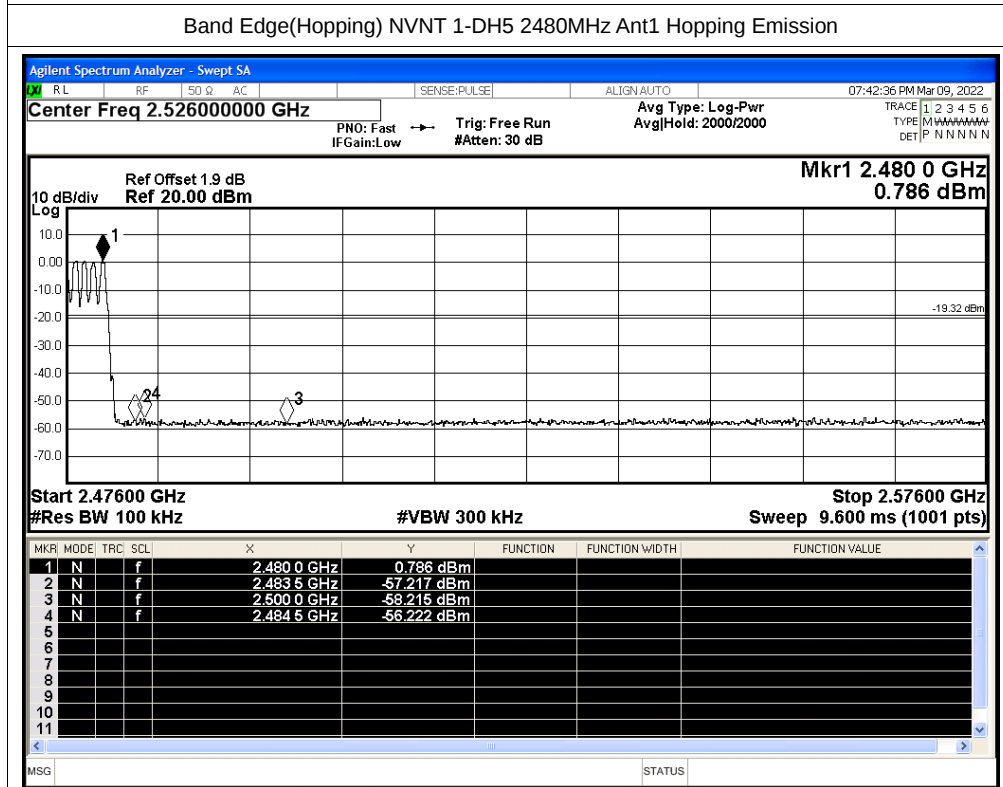
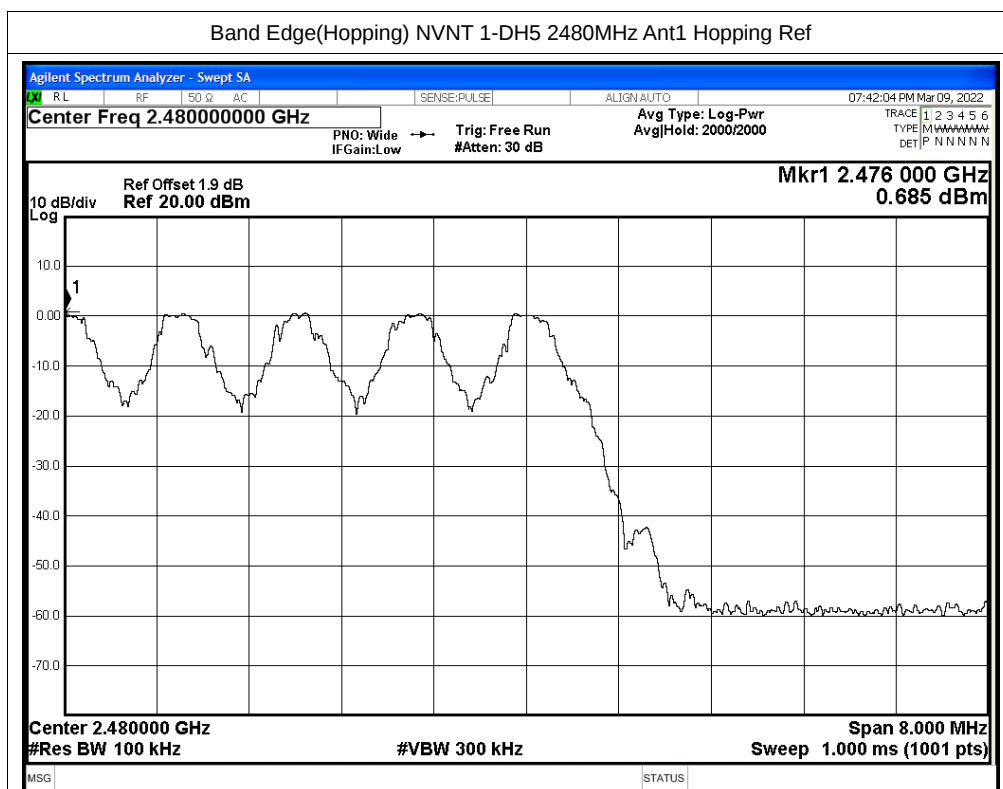
Test Graphs

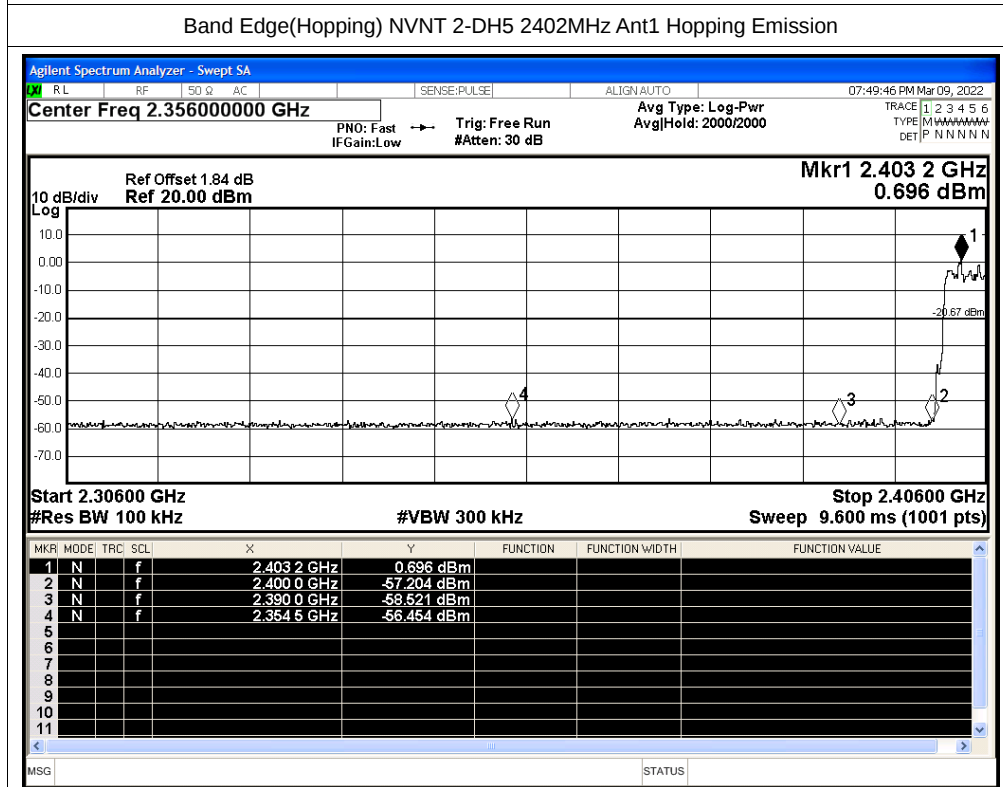
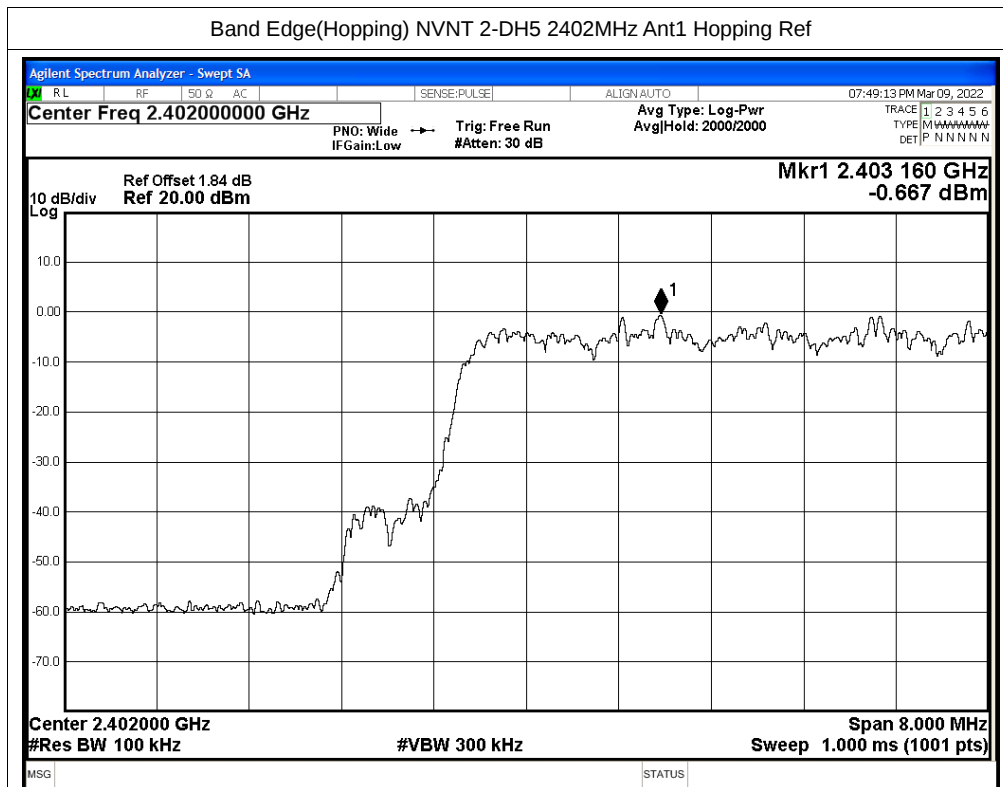
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Ref



Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission

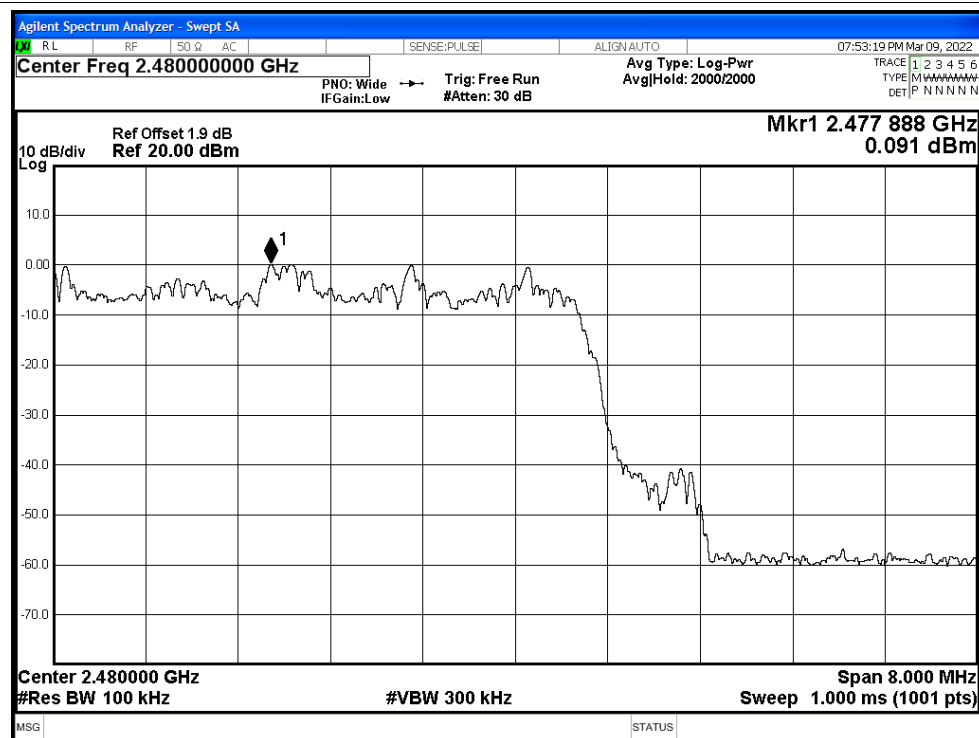




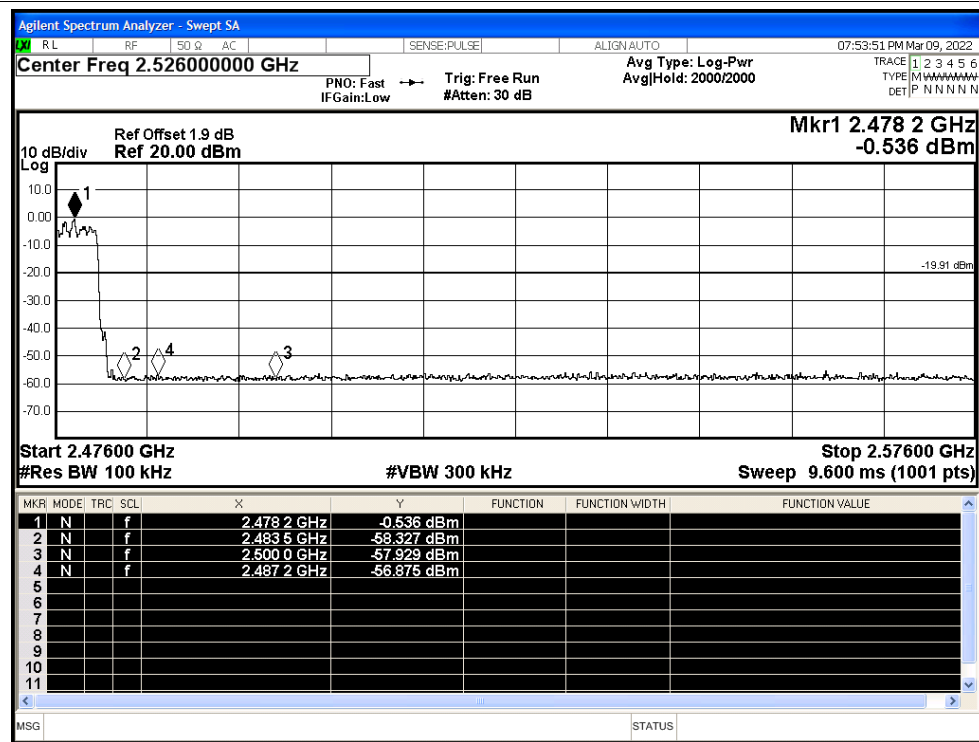


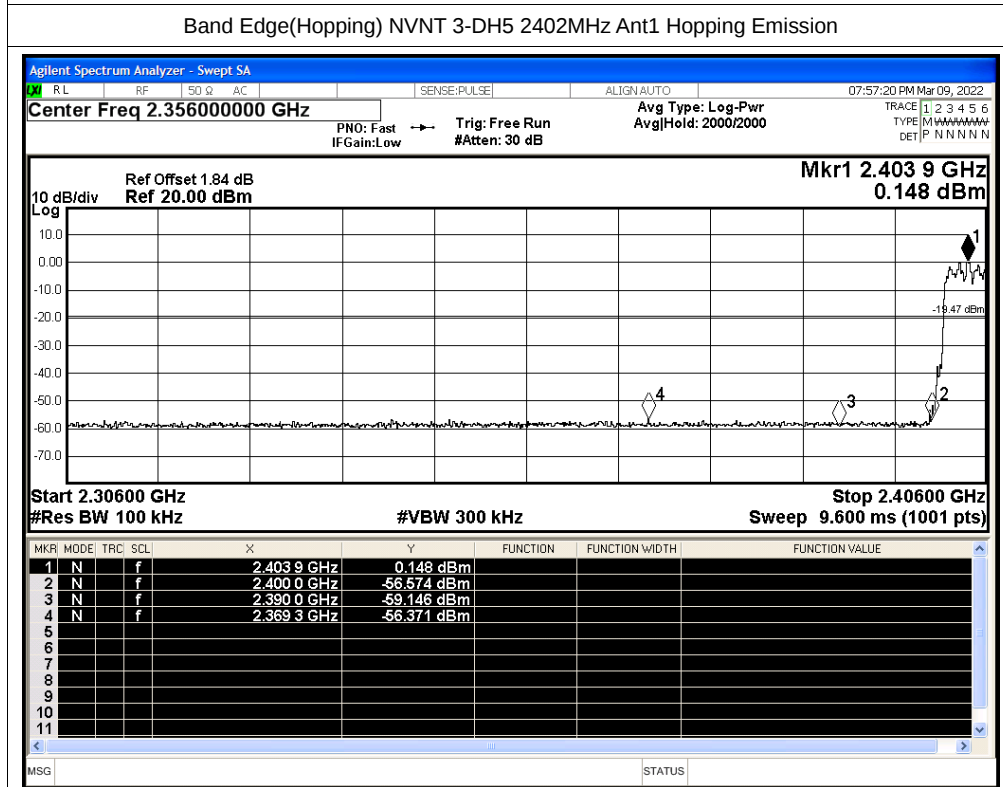
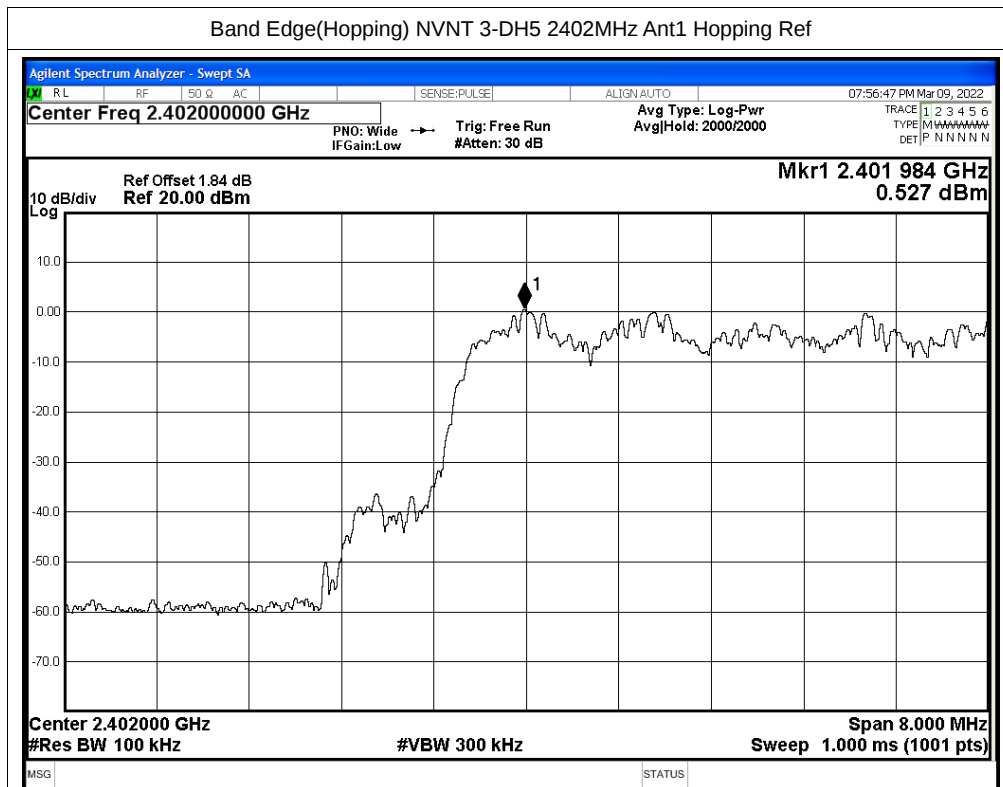


Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Ref



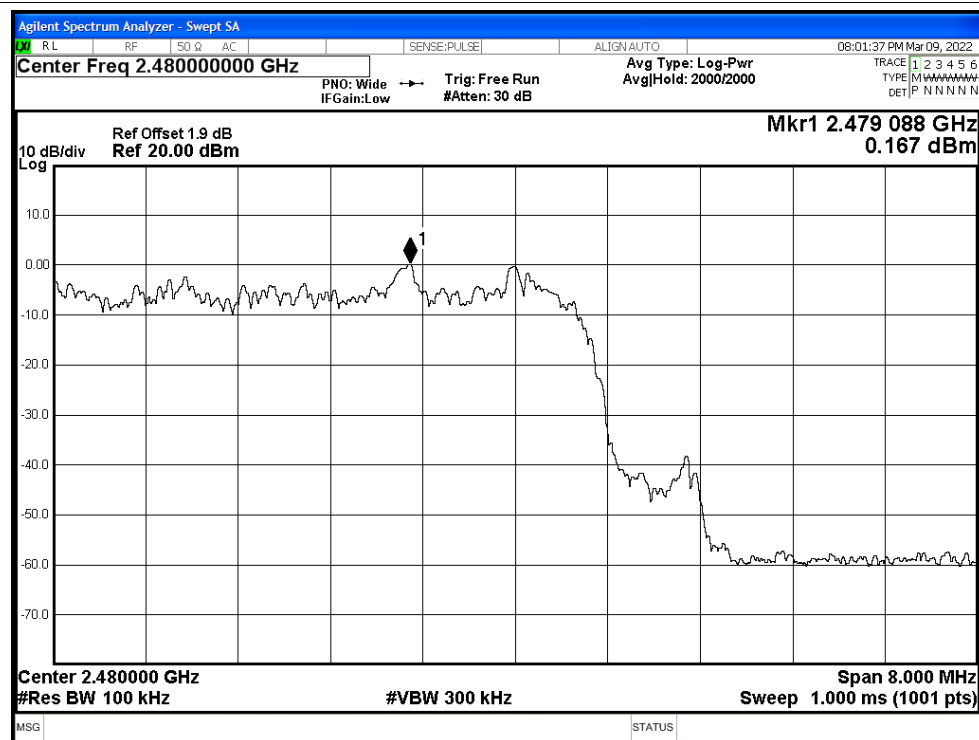
Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Emission



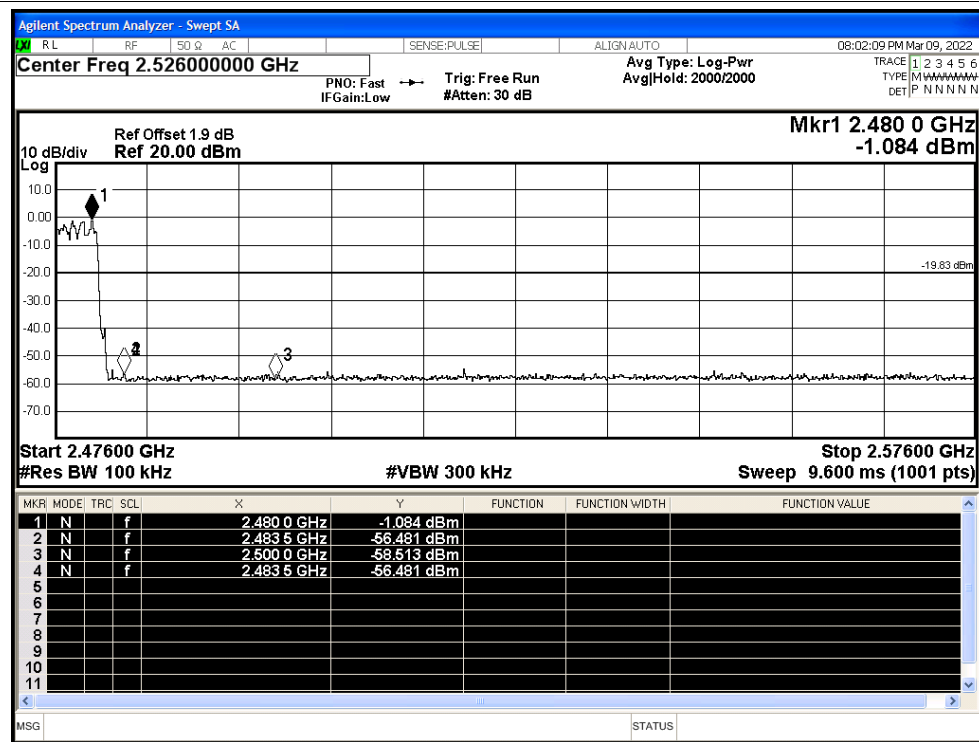




Band Edge(Hopping) NVNT 3-DH5 2480MHz Ant1 Hopping Ref



Band Edge(Hopping) NVNT 3-DH5 2480MHz Ant1 Hopping Emission





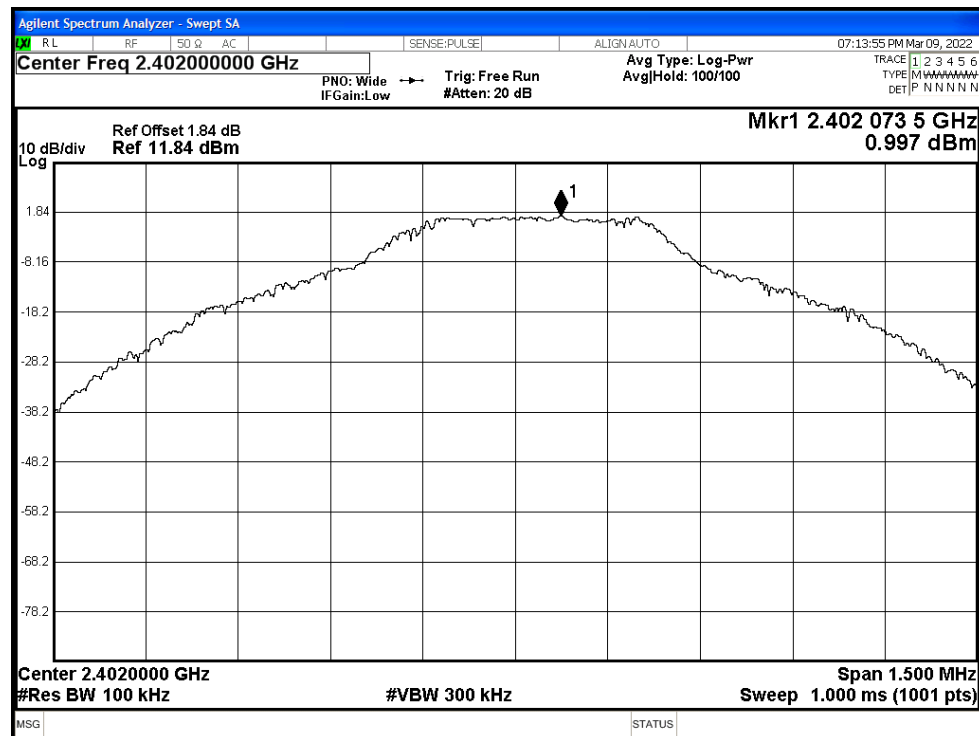
A.8 Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-43.96	-20	Pass
NVNT	1-DH5	2441	Ant1	-44.29	-20	Pass
NVNT	1-DH5	2480	Ant1	-47.42	-20	Pass
NVNT	2-DH5	2402	Ant1	-44.73	-20	Pass
NVNT	2-DH5	2441	Ant1	-46.47	-20	Pass
NVNT	2-DH5	2480	Ant1	-48.88	-20	Pass
NVNT	3-DH5	2402	Ant1	-48.73	-20	Pass
NVNT	3-DH5	2441	Ant1	-45.05	-20	Pass
NVNT	3-DH5	2480	Ant1	-47.92	-20	Pass

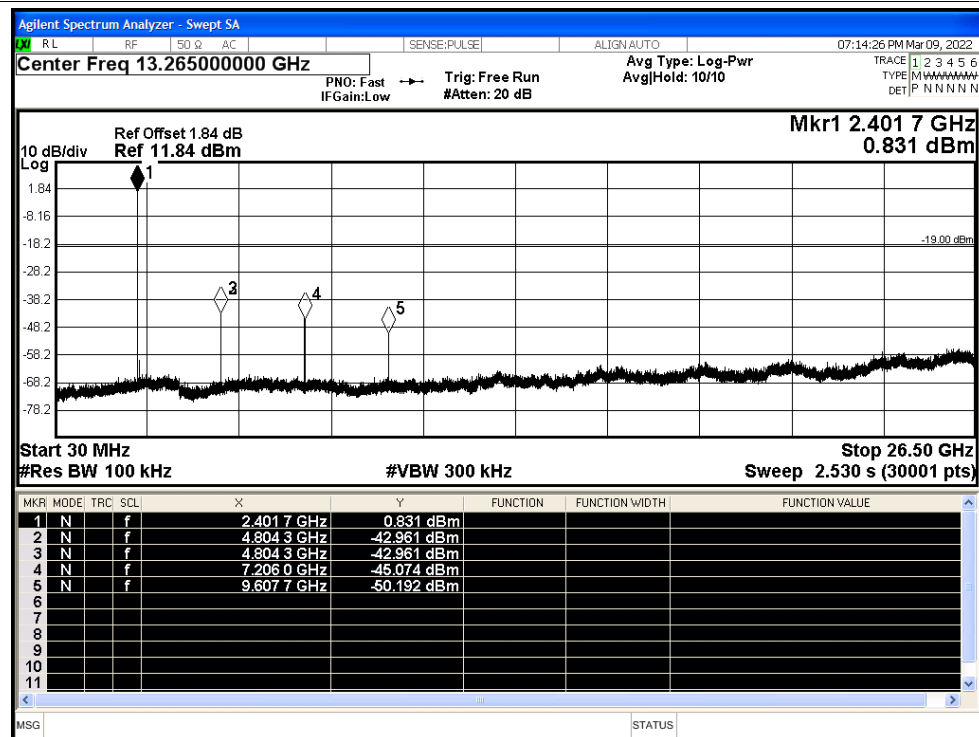


Test Graphs

Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref

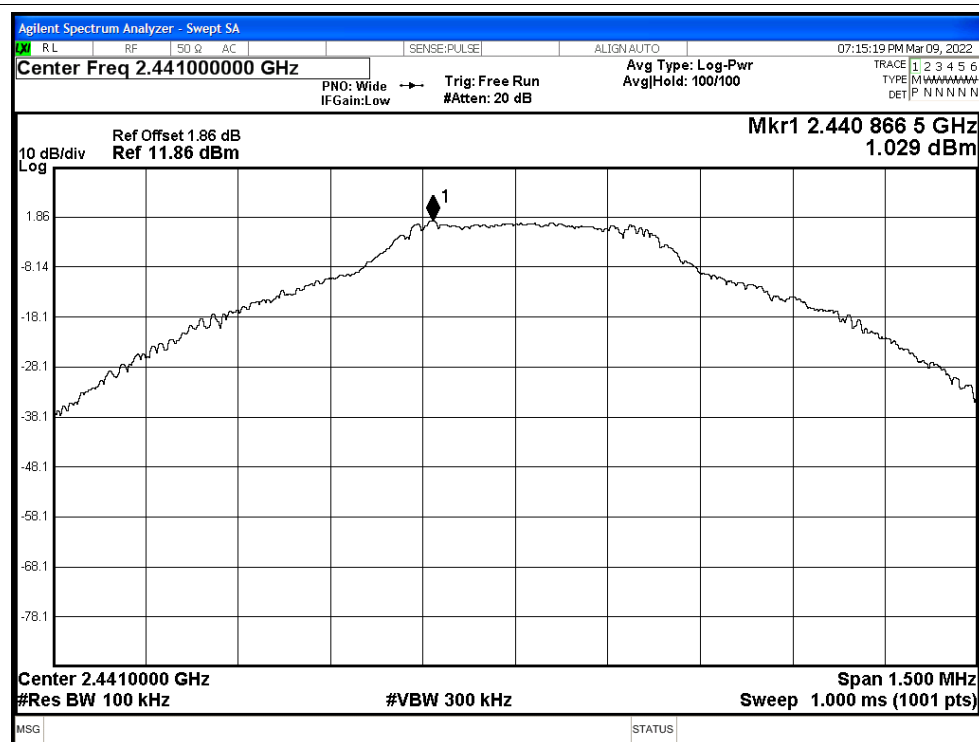


Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission

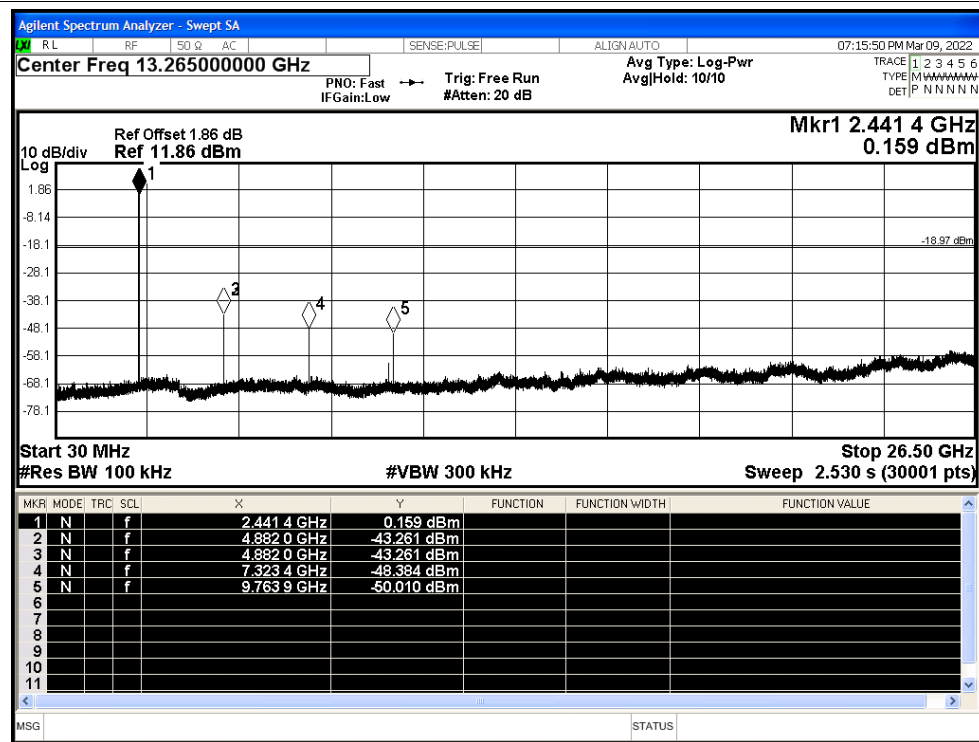




Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref

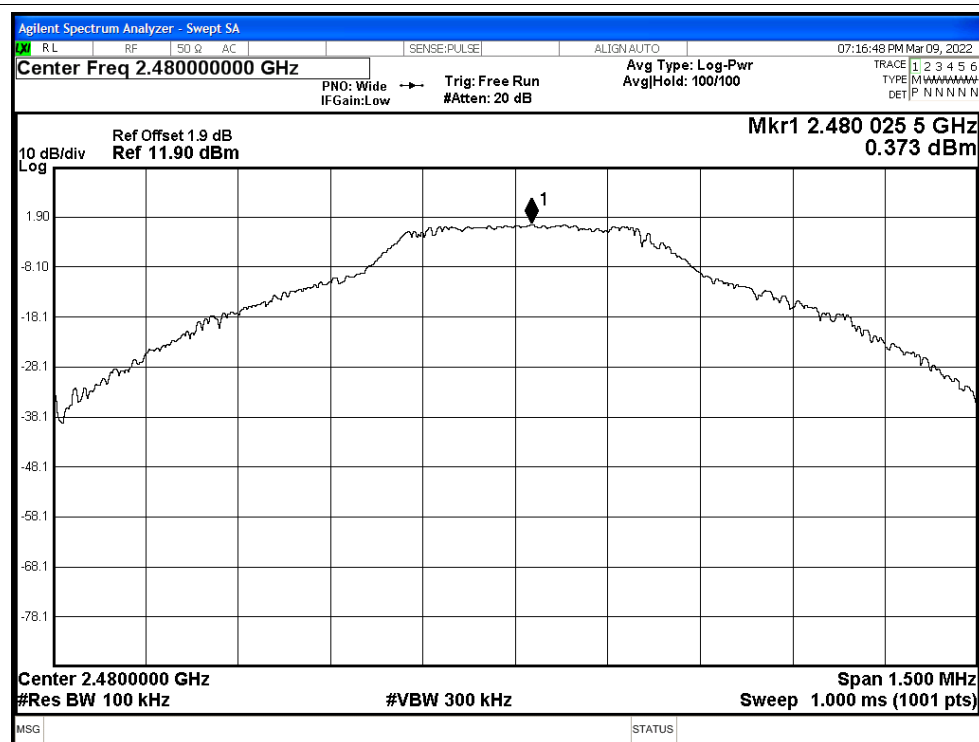


Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission

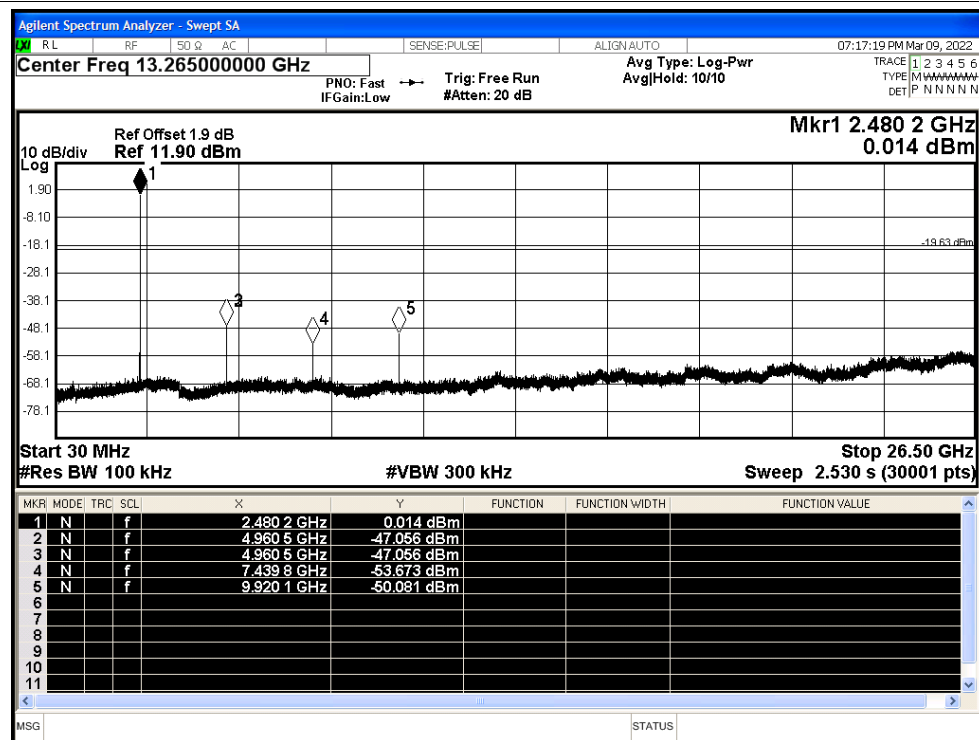




Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref

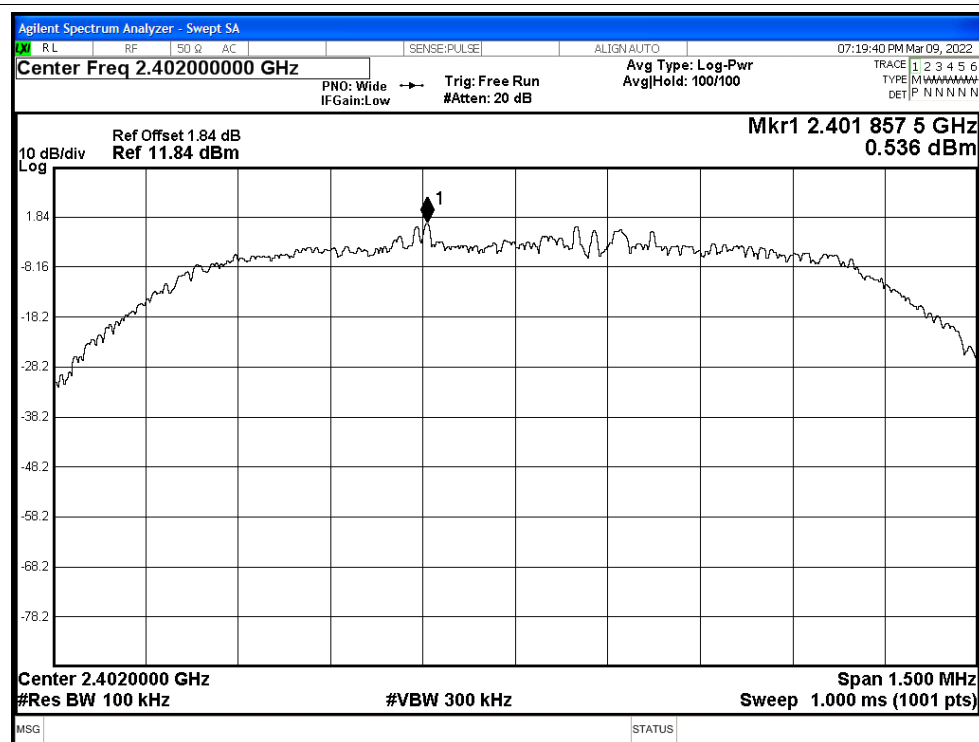


Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission

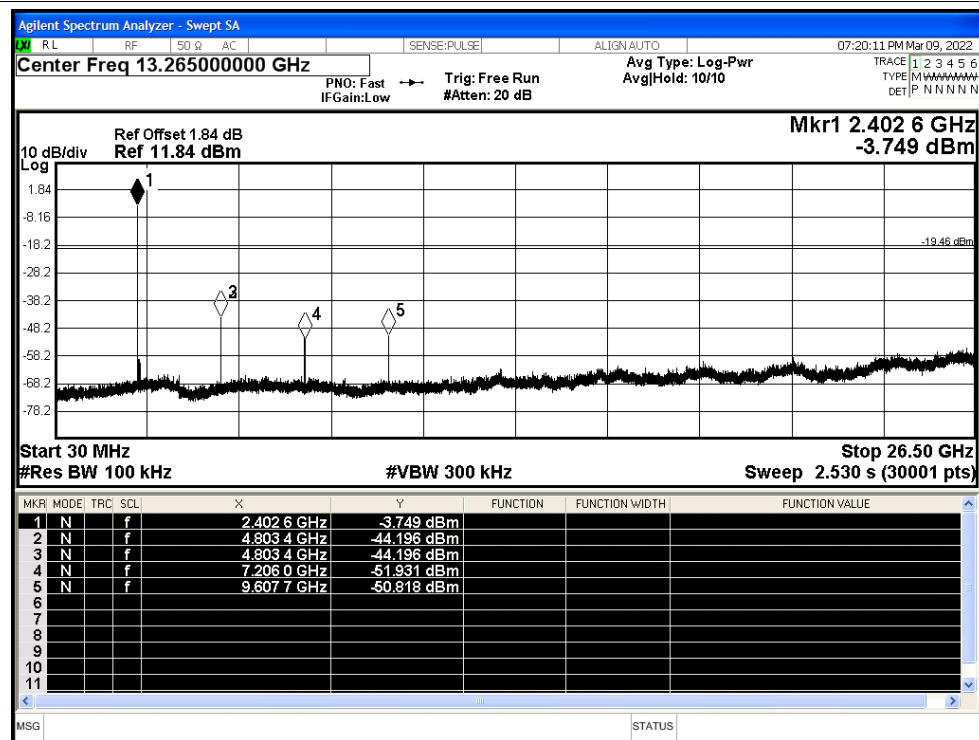




Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref

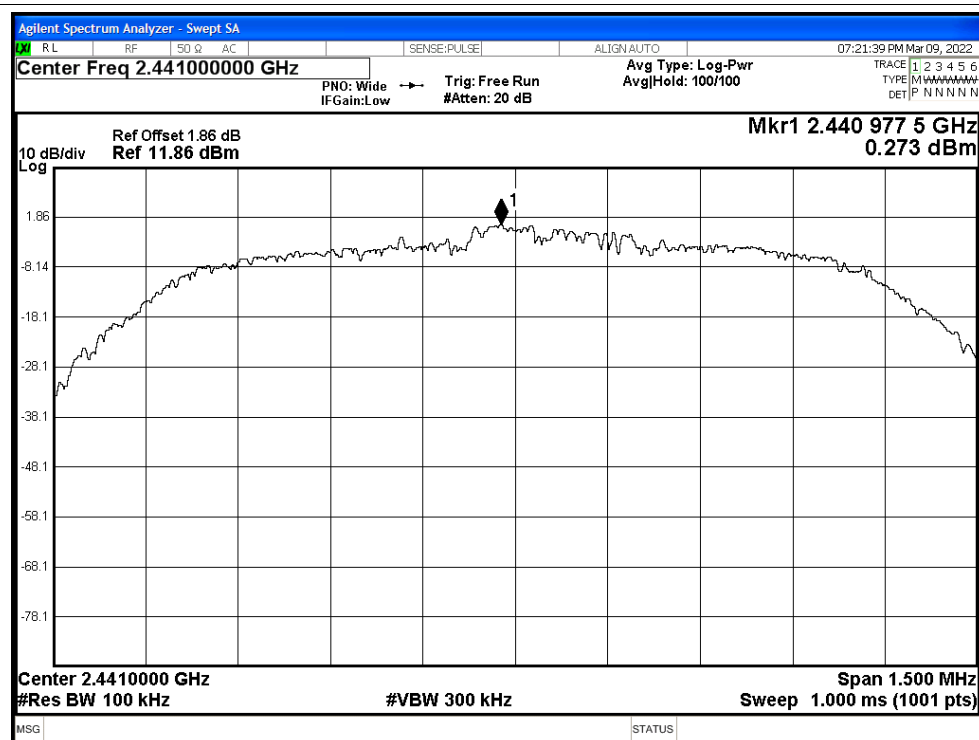


Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Emission

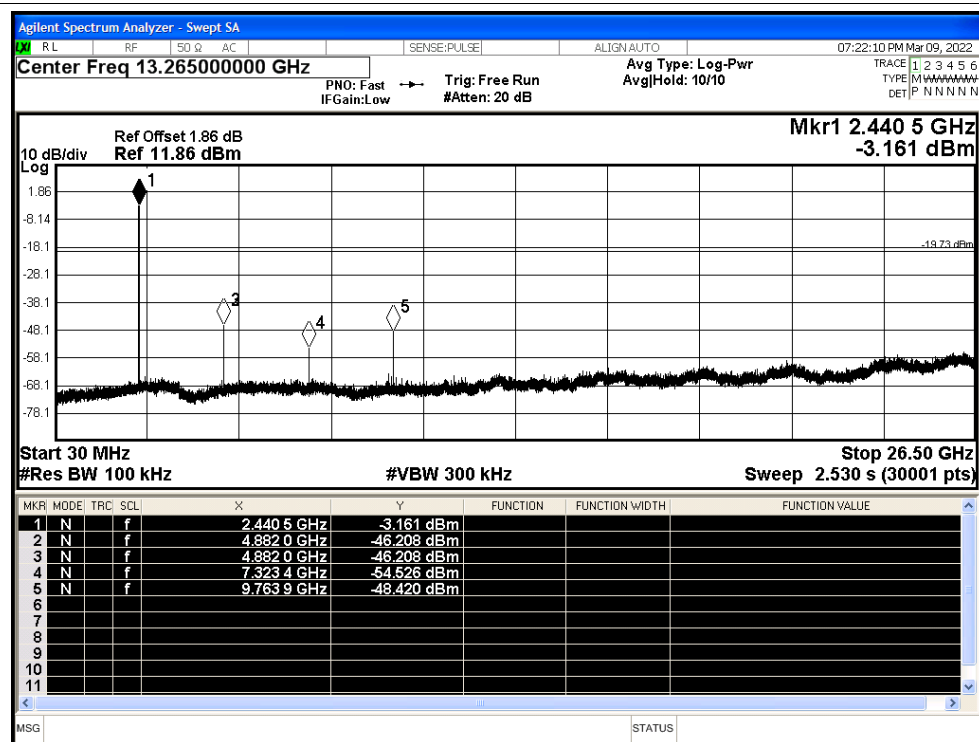




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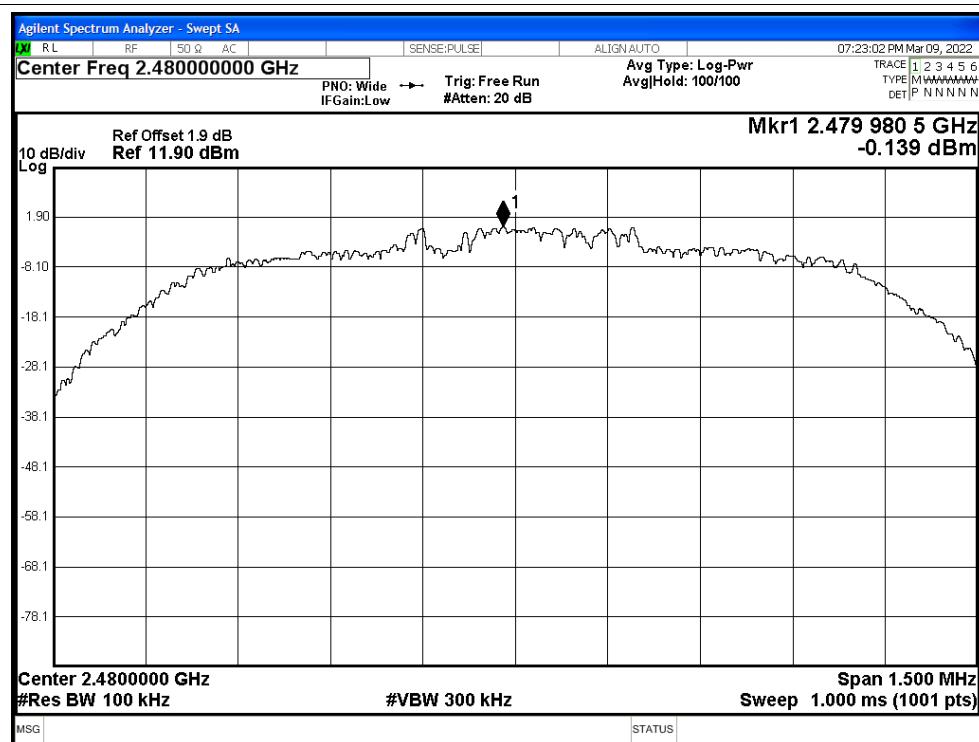


Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Emission

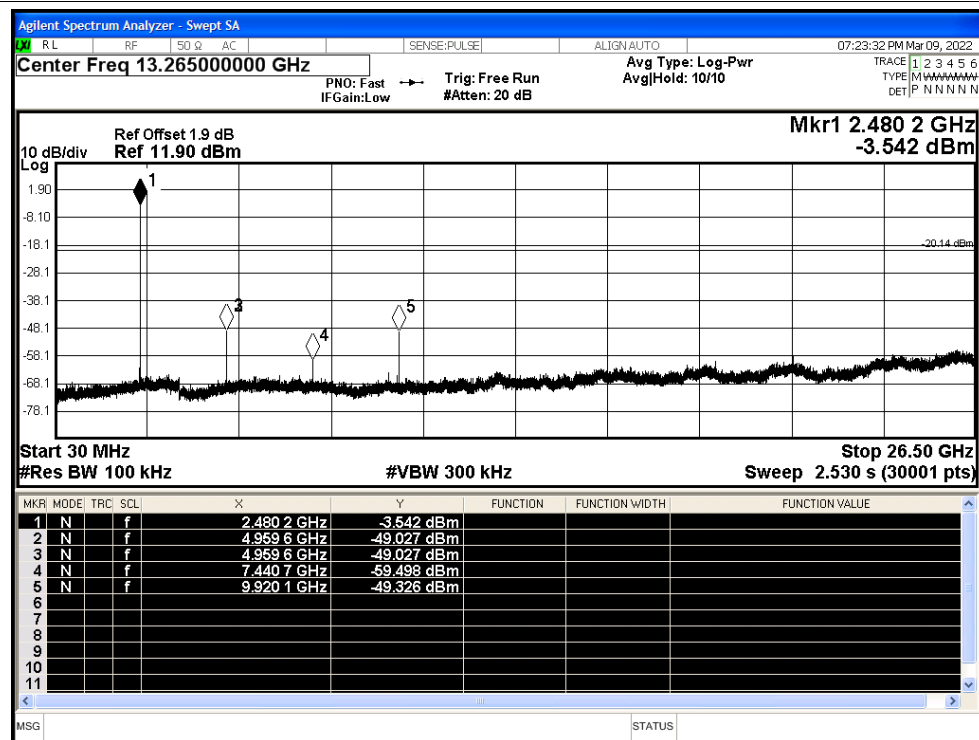




Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Ref

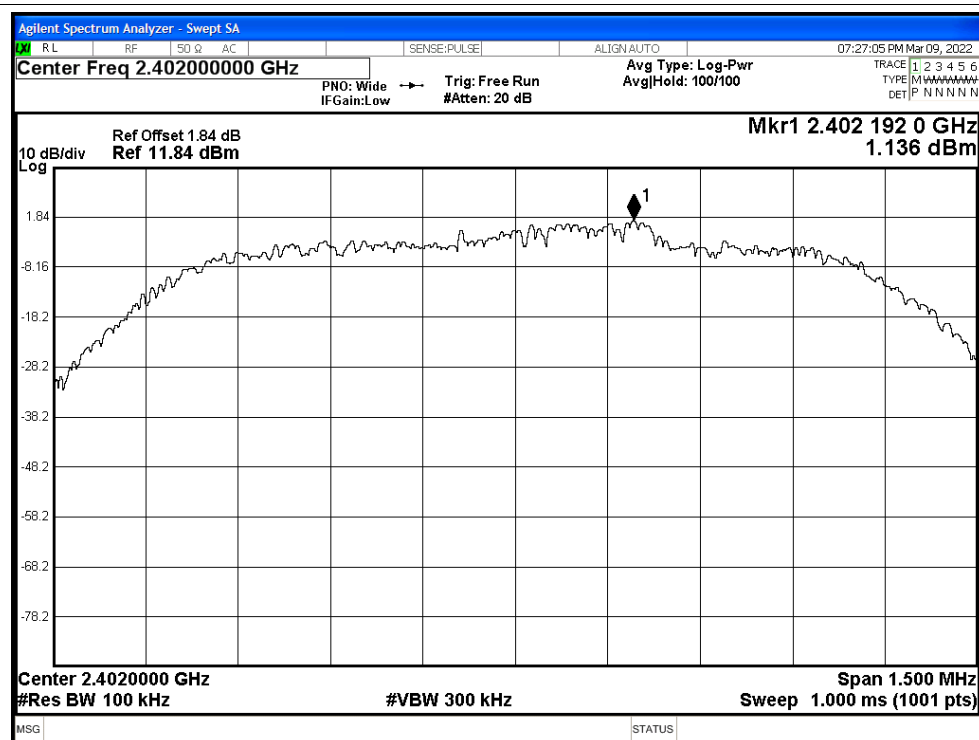


Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Emission

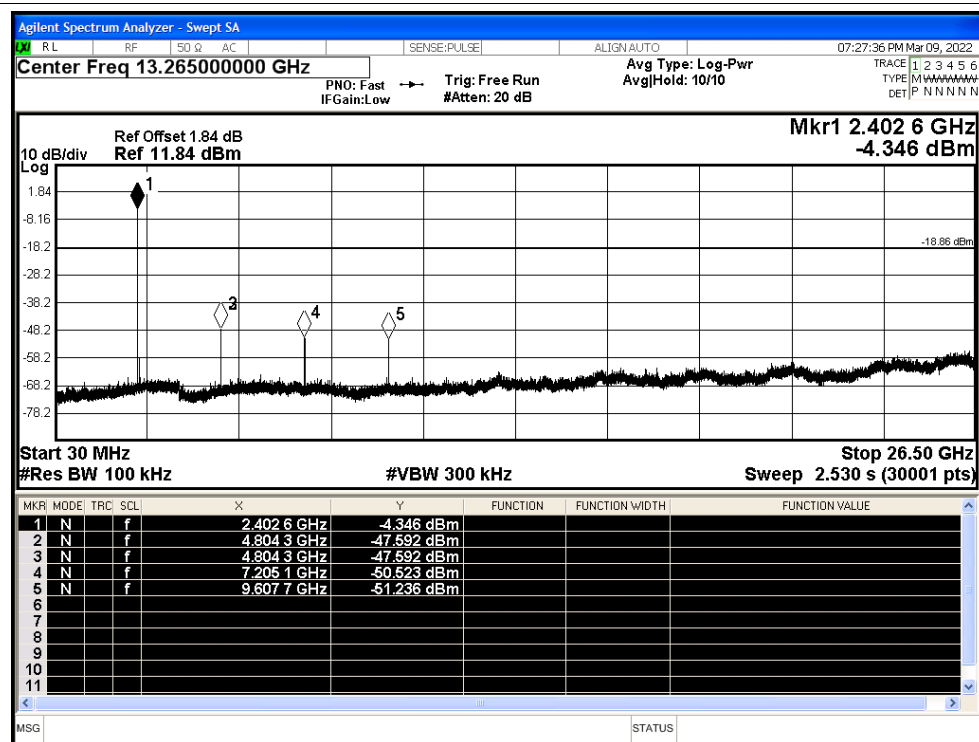




Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Ref

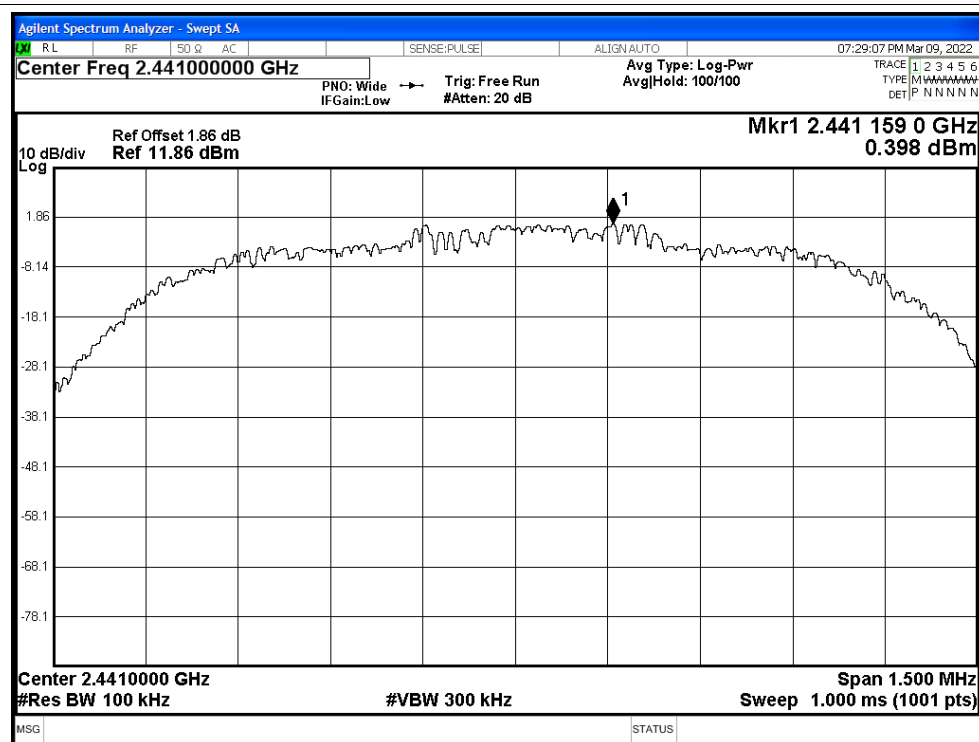


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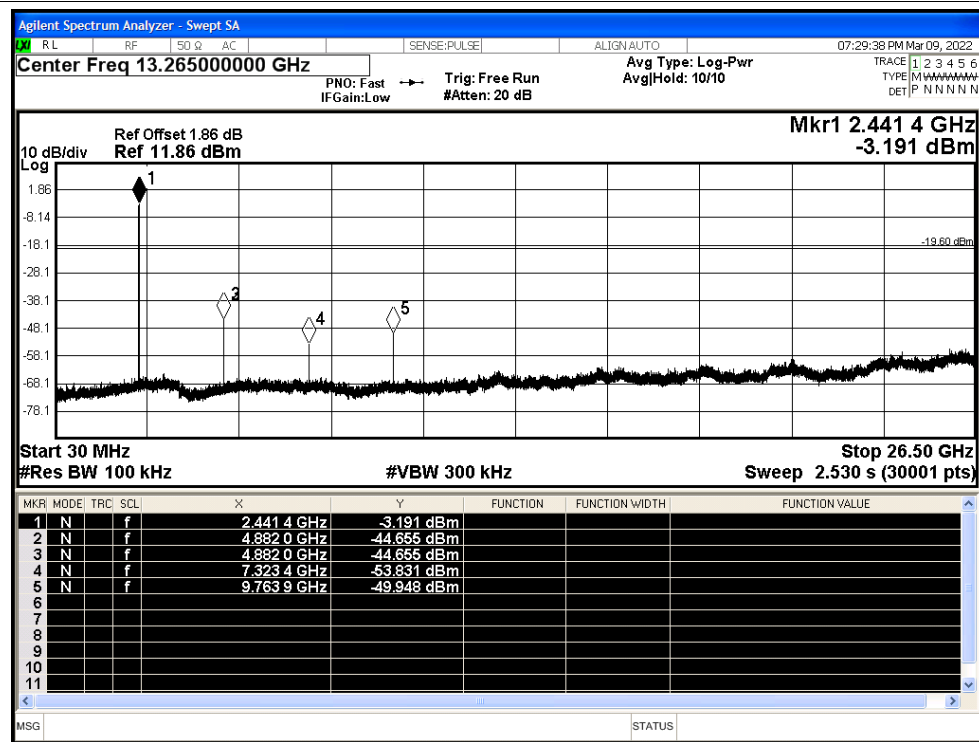




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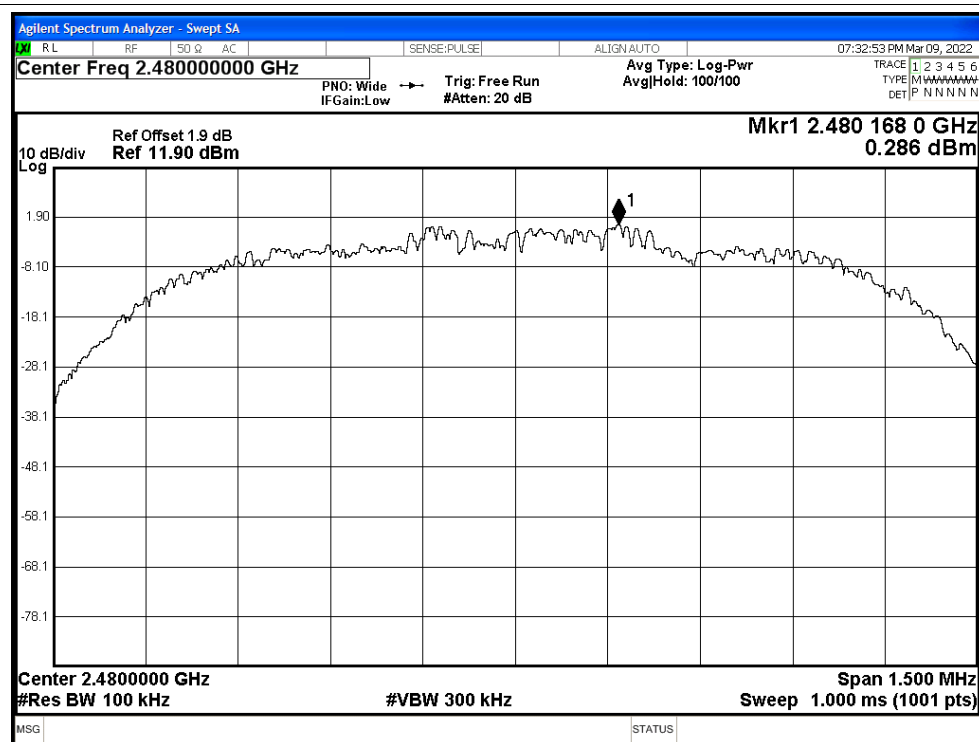


Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Emission

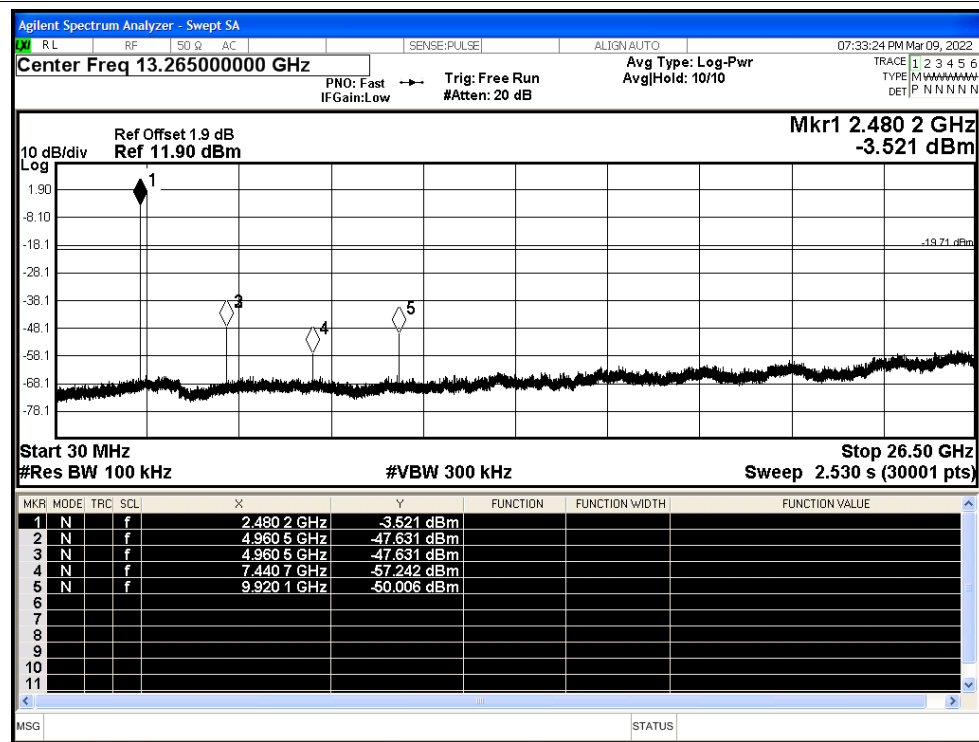




Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Emission





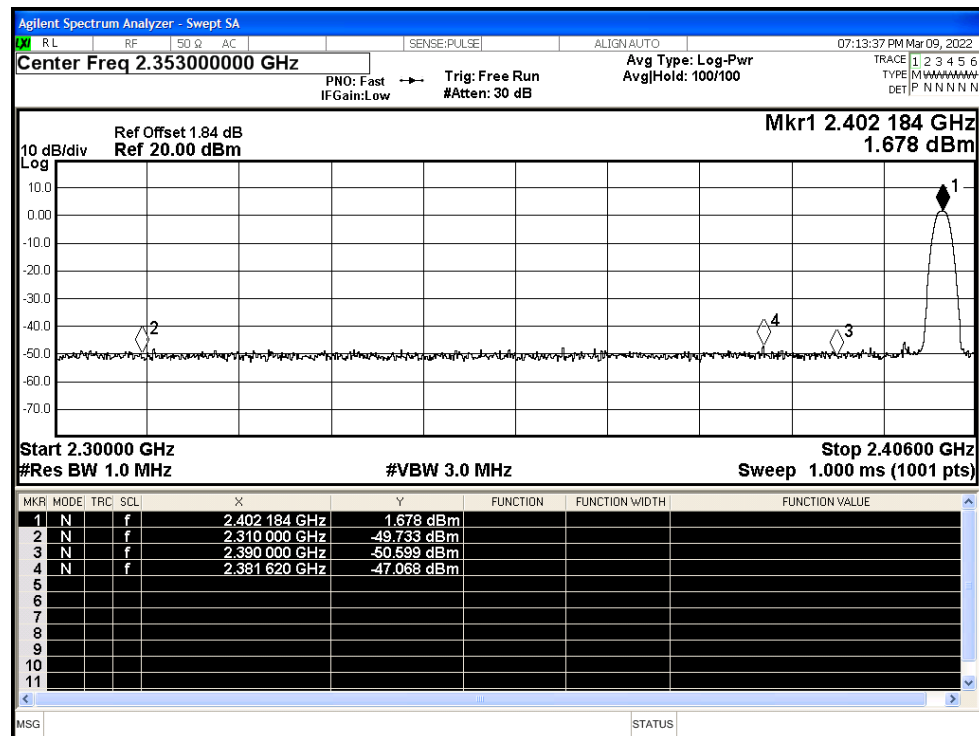
A.9 Restrict Band

Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-51.67	2	45.59	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-60.74	2	36.52	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2381.62	-47.06	2	50.2	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2389.994	-60.15	2	37.11	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-50.92	2	46.34	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-60.14	2	37.12	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-46.75	2	50.51	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-59.37	2	37.89	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.548	-46.75	2	50.51	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.548	-59.37	2	37.89	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-50.68	2	46.58	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-59.99	2	37.27	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-51.25	2	46.01	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-60.68	2	36.58	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2327.03	-47.8	2	49.46	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2384.906	-60.17	2	37.09	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-51.25	2	46.01	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-60.3	2	36.96	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-50.77	2	46.49	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-59.91	2	37.35	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2484.51	-47.94	2	49.32	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2484.658	-59.75	2	37.51	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-49.24	2	48.02	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-60.13	2	37.13	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-49.54	2	47.72	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-60.72	2	36.54	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2368.794	-47.7	2	49.56	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2375.366	-60.11	2	37.15	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-50.28	2	46.98	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-60.42	2	36.84	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-50.32	2	46.94	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-59.73	2	37.53	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2493.834	-47.26	2	50	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.548	-59.73	2	37.53	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-51.29	2	45.97	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-59.86	2	37.4	Average	54	Pass

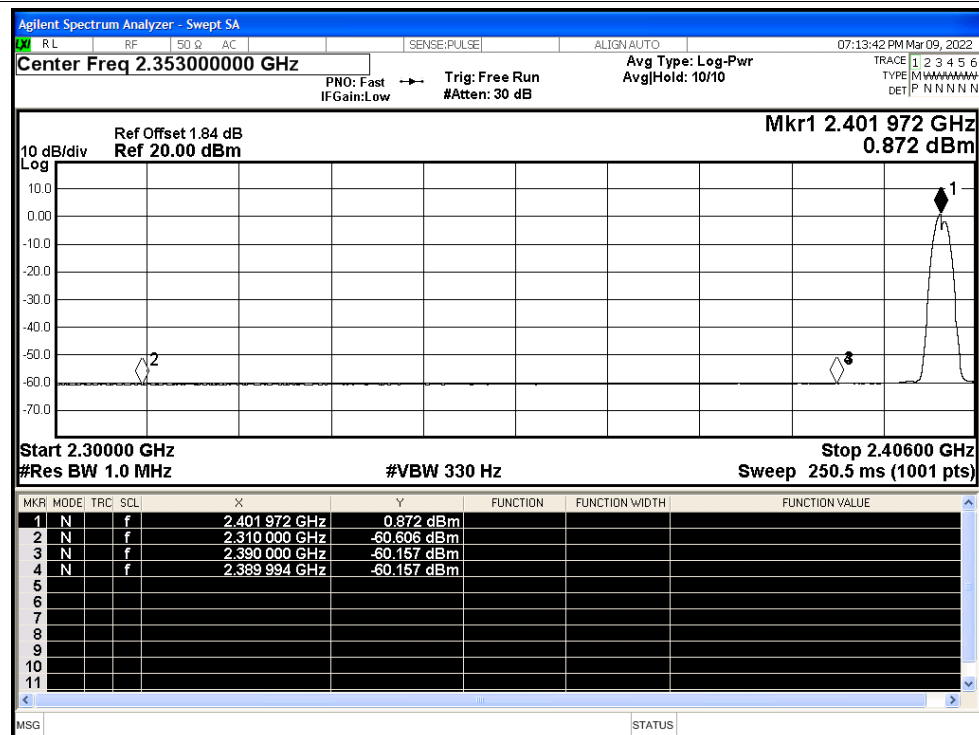


Test Graphs

Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Peak

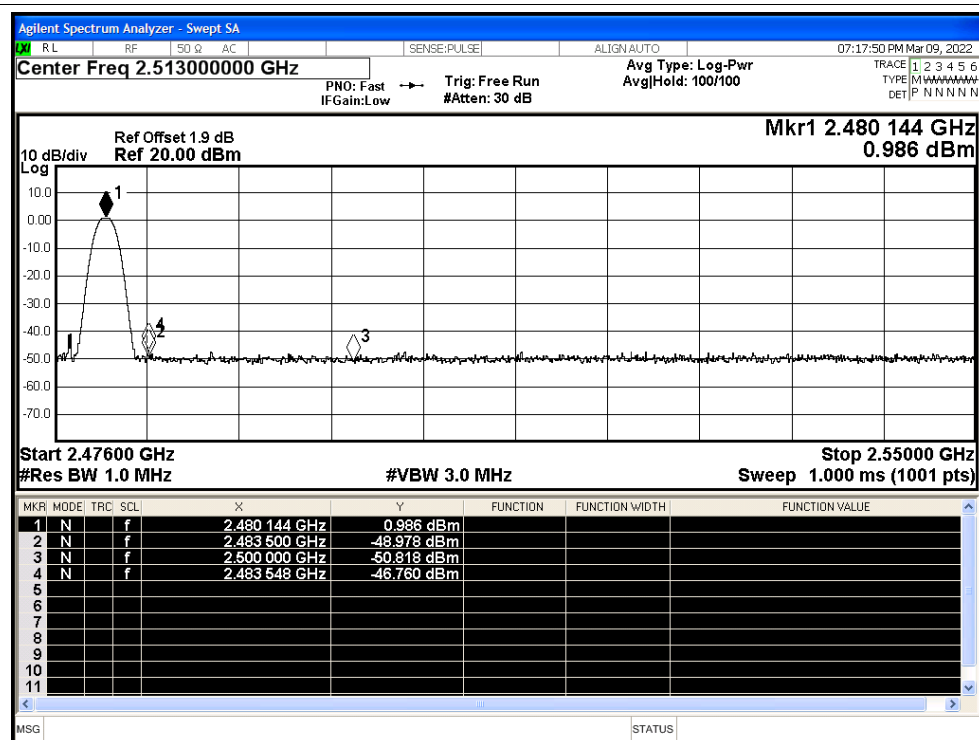


Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Average

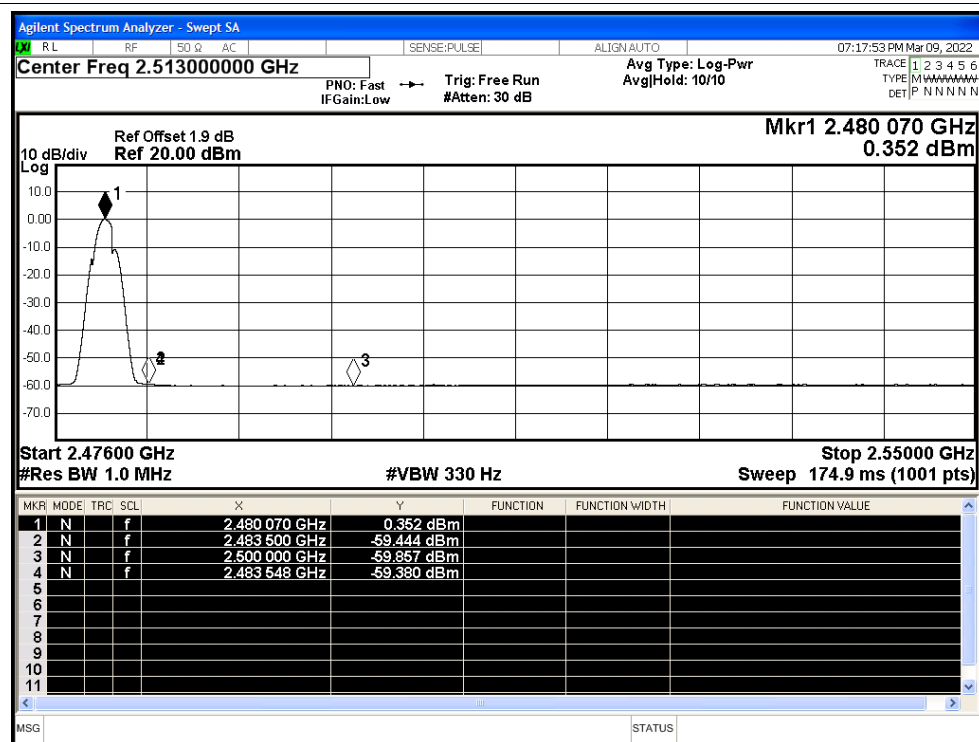




Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Peak

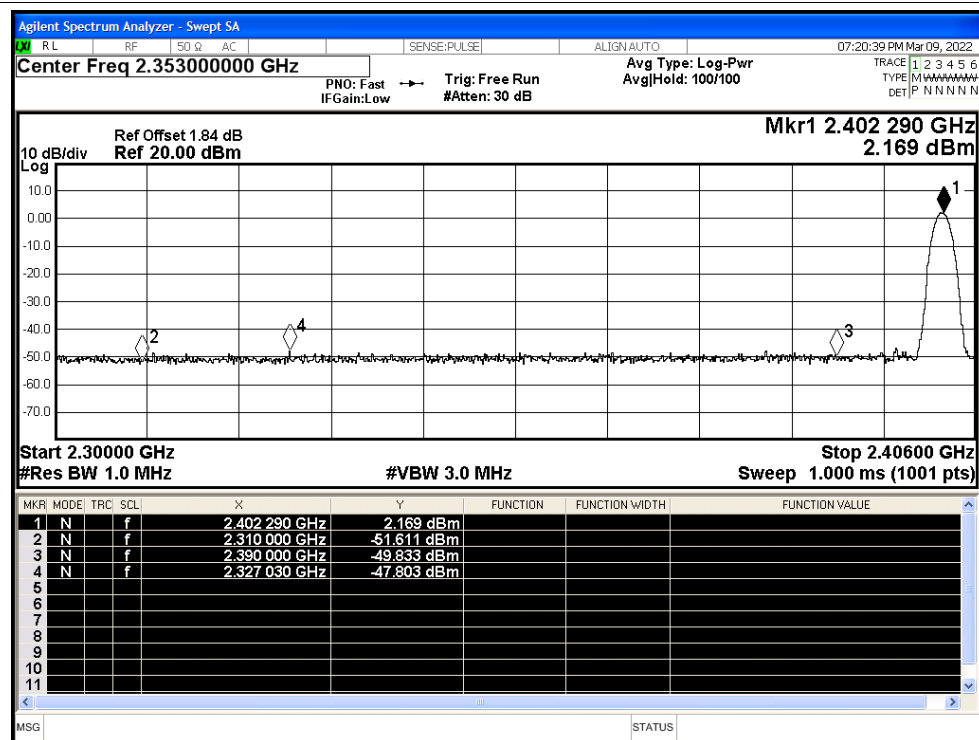


Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Average

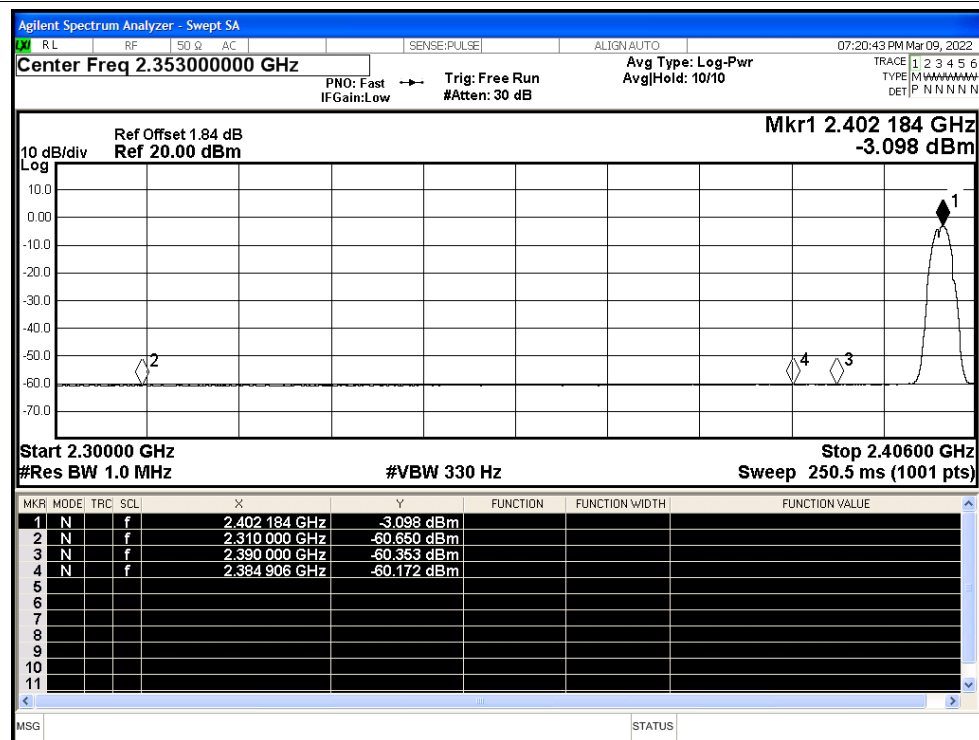




Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Peak

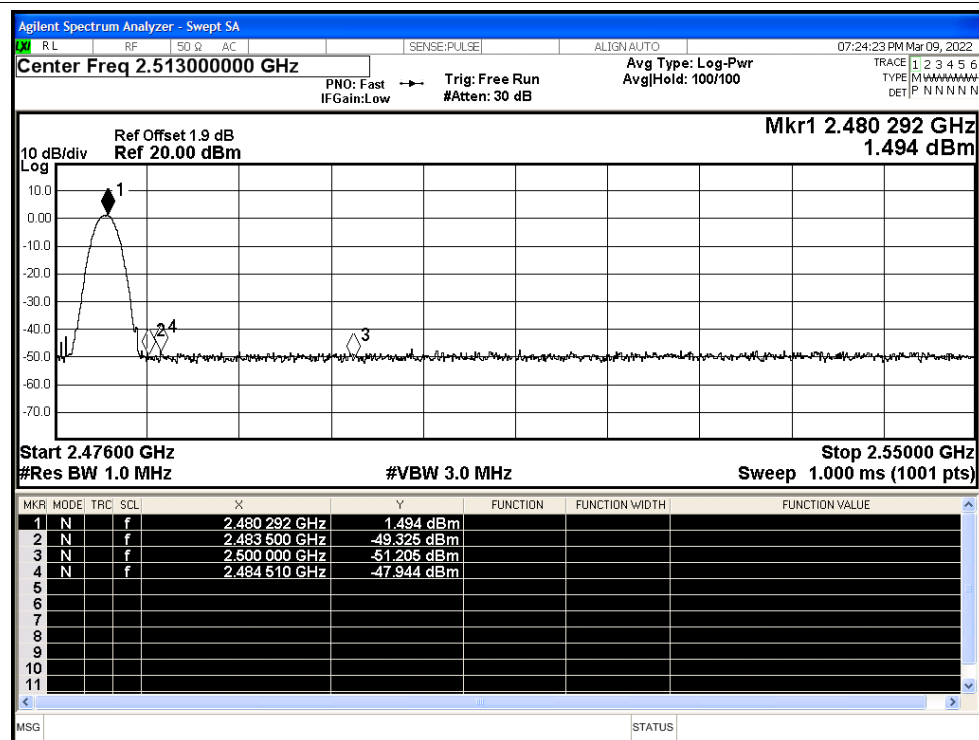


Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Average

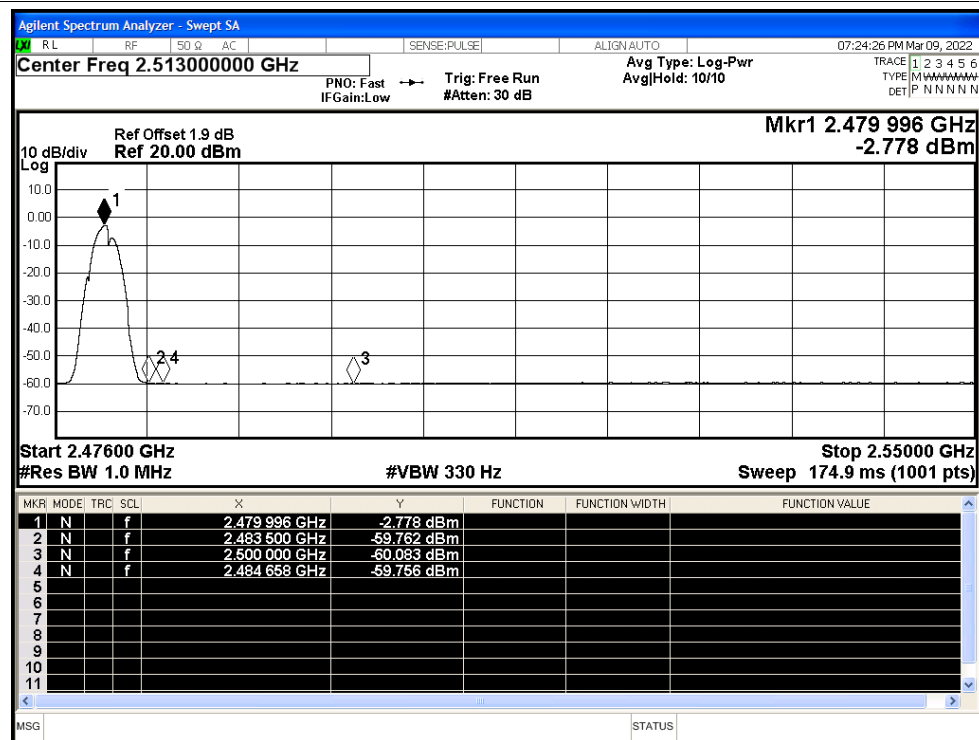




Restrict Band NVNT 2-DH5 2480MHz Ant1 No-Hopping Peak

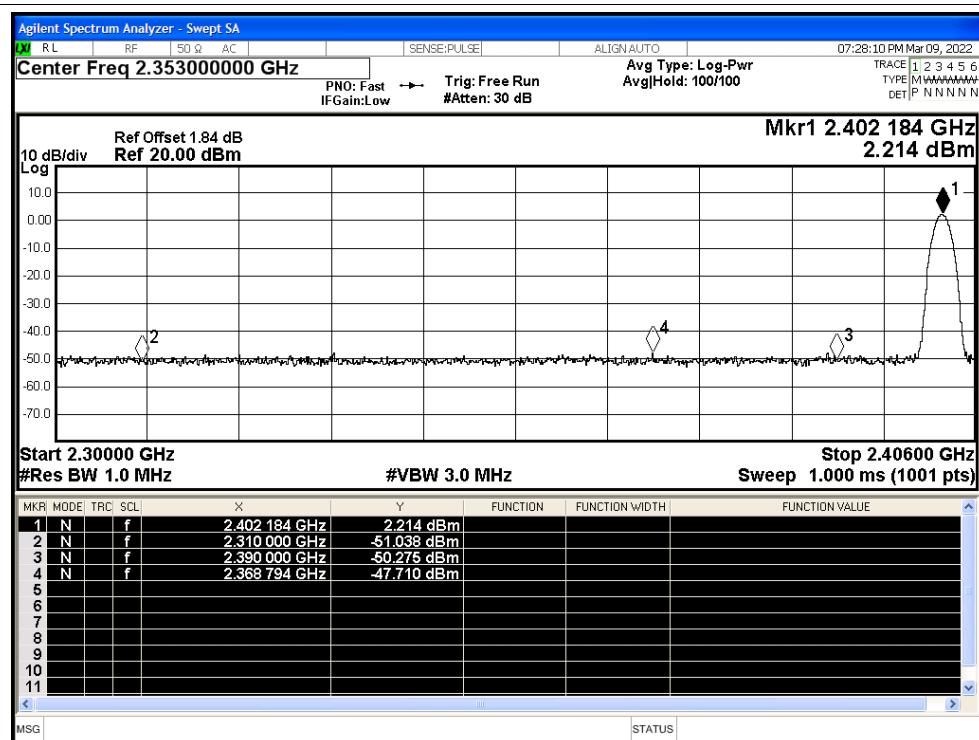


Restrict Band NVNT 2-DH5 2480MHz Ant1 No-Hopping Average

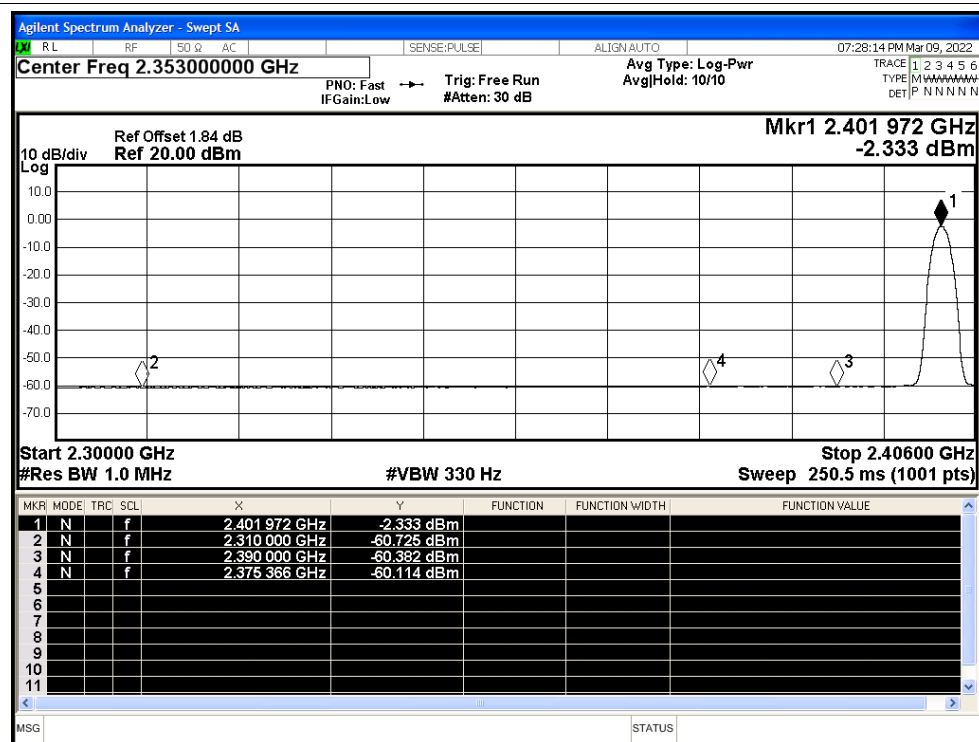




Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Peak

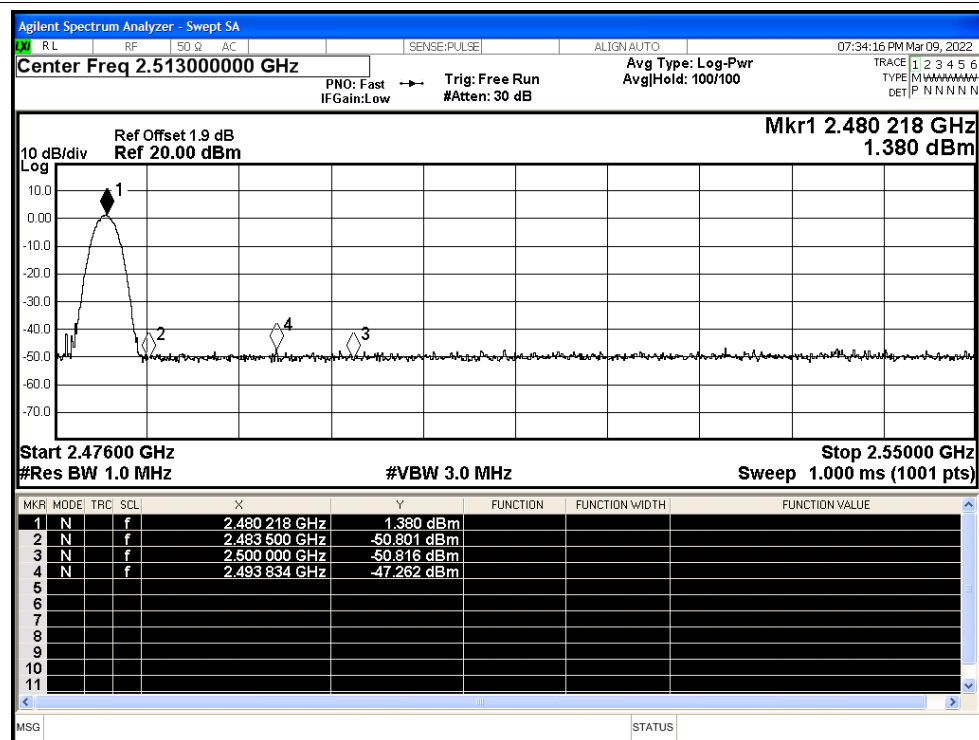


Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Average





Restrict Band NVNT 3-DH5 2480MHz Ant1 No-Hopping Peak



Restrict Band NVNT 3-DH5 2480MHz Ant1 No-Hopping Average

