



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Karaoke Microphone & Wireless Speaker

Test Model: 121399

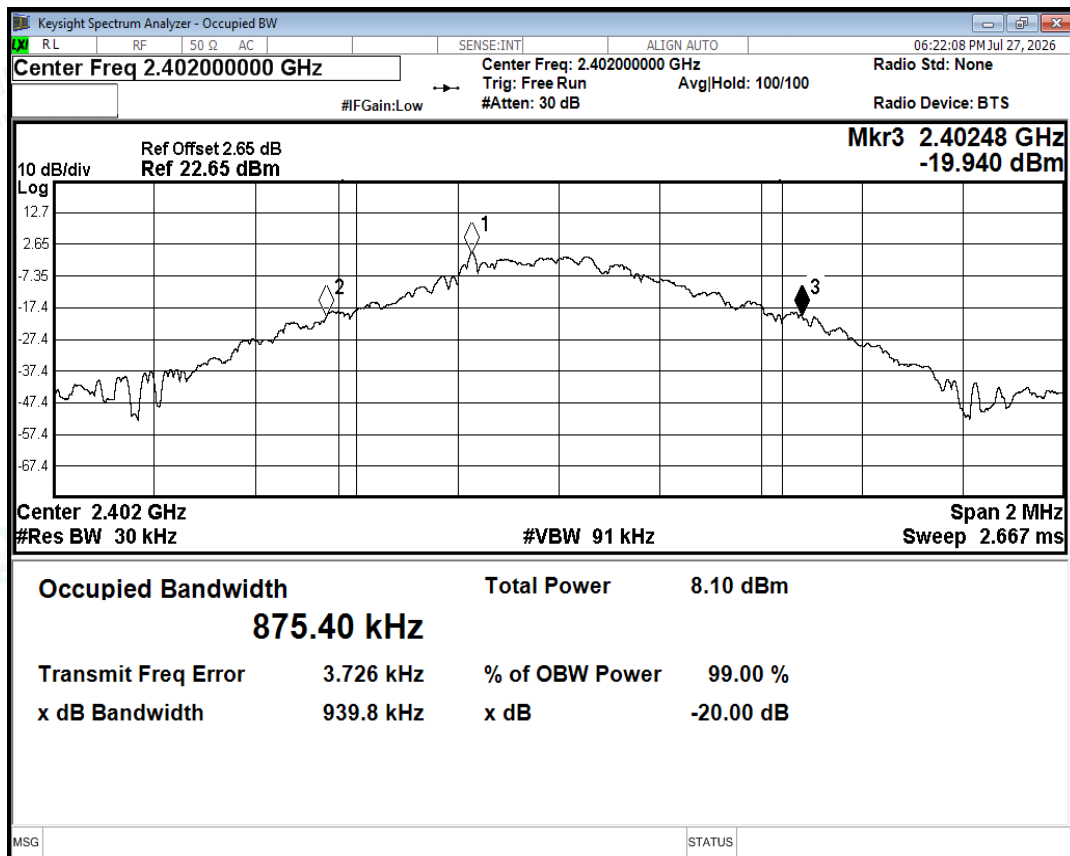
Environmental Conditions

Temperature:	24.6°C
Relative Humidity:	53.9%
ATM Pressure:	100.0 kPa
Test Engineer:	Jerry Chu
Supervised by:	Can Kun

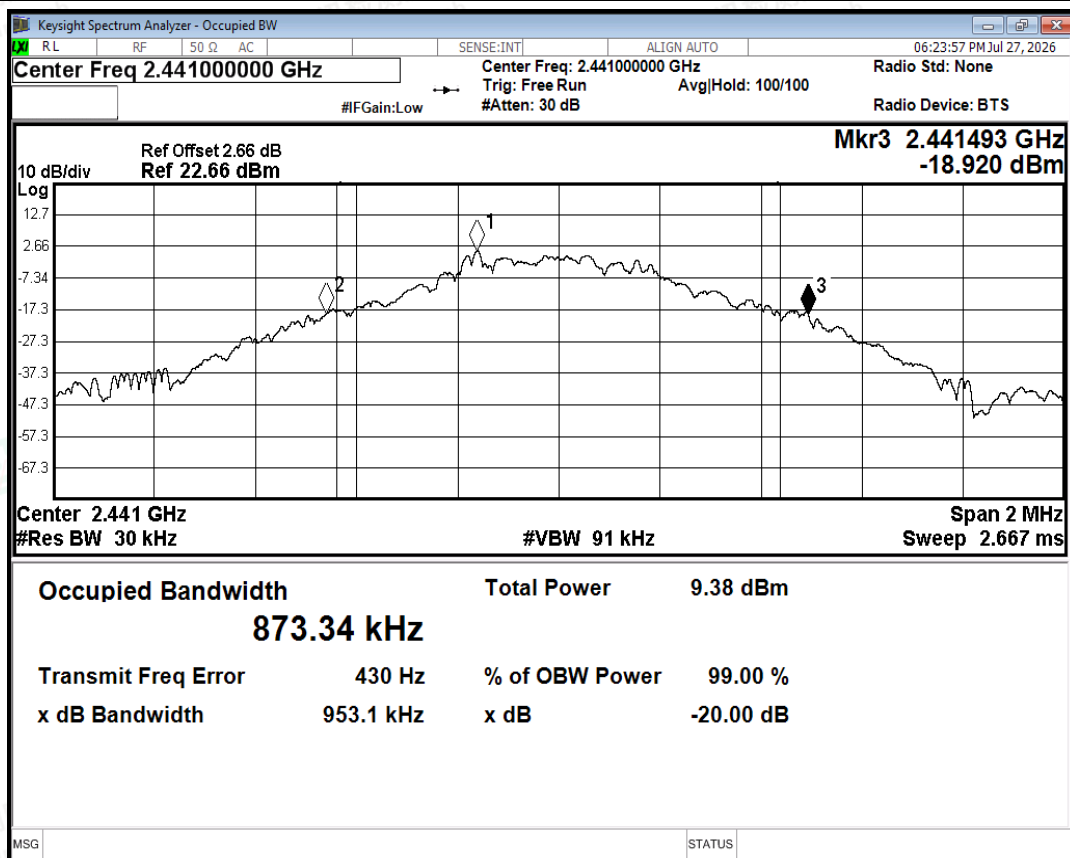


A.1 -20dB Bandwidth

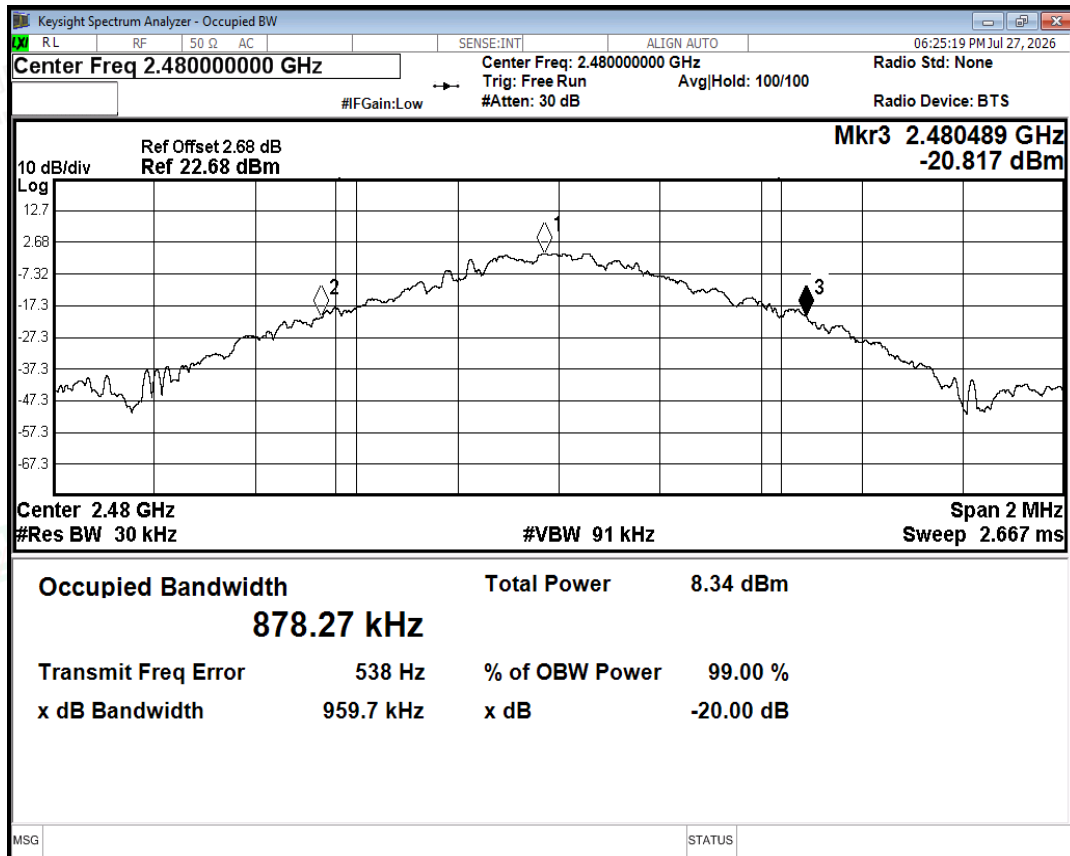
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	0.9398	0	Pass
NVNT	1-DH5	2441	Ant1	0.9531	0	Pass
NVNT	1-DH5	2480	Ant1	0.9597	0	Pass
NVNT	2-DH5	2402	Ant1	1.315	0	Pass
NVNT	2-DH5	2441	Ant1	1.28	0	Pass
NVNT	2-DH5	2480	Ant1	1.286	0	Pass
NVNT	3-DH5	2402	Ant1	1.294	0	Pass
NVNT	3-DH5	2441	Ant1	1.308	0	Pass
NVNT	3-DH5	2480	Ant1	1.297	0	Pass



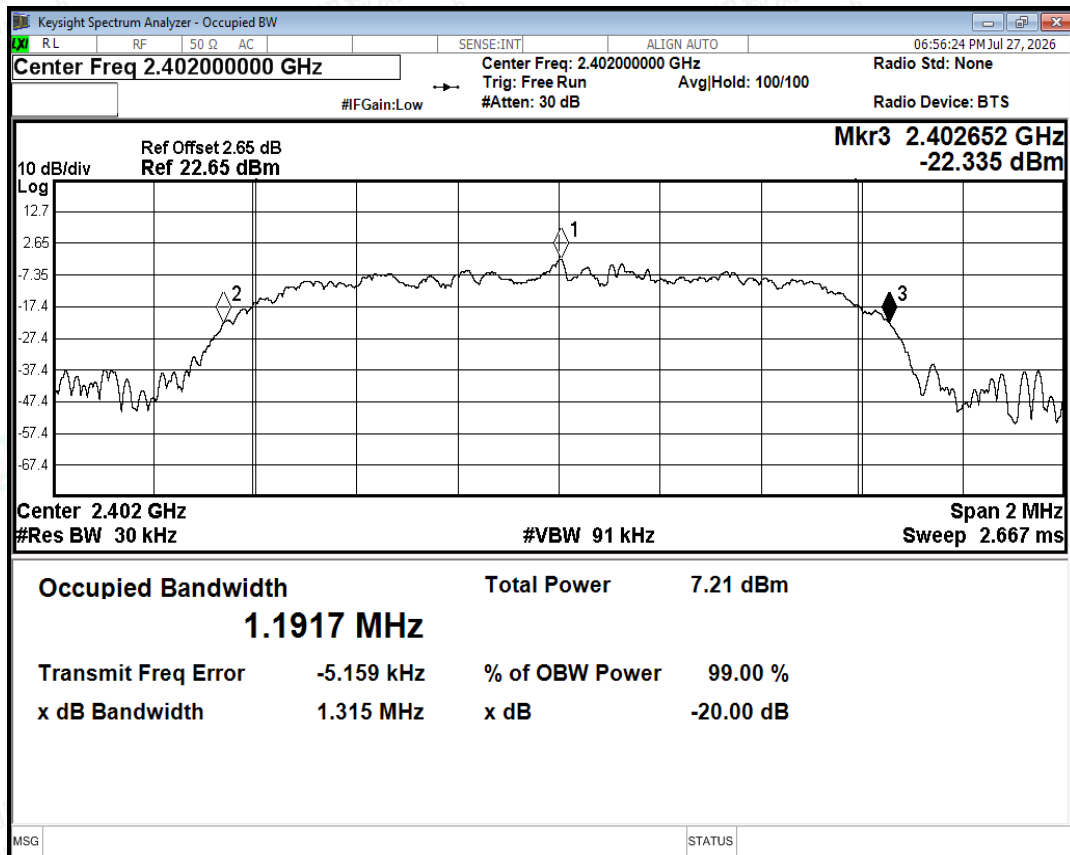
-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1



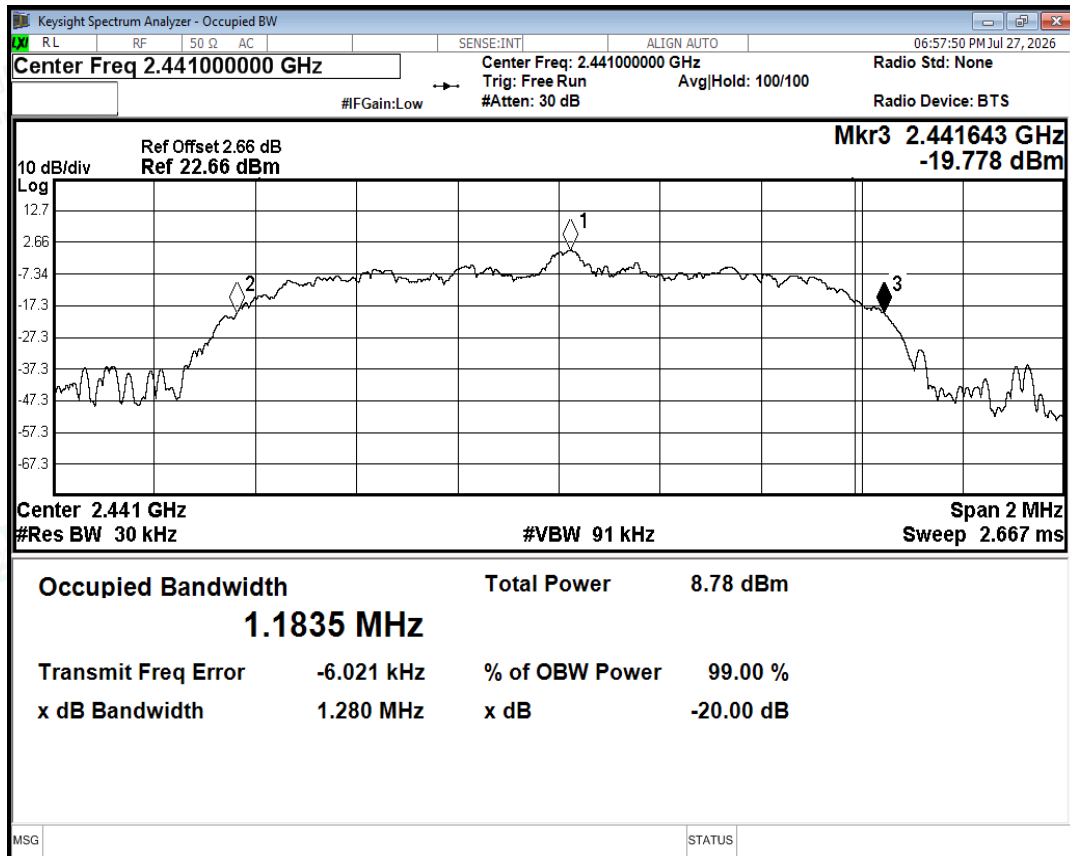
-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1



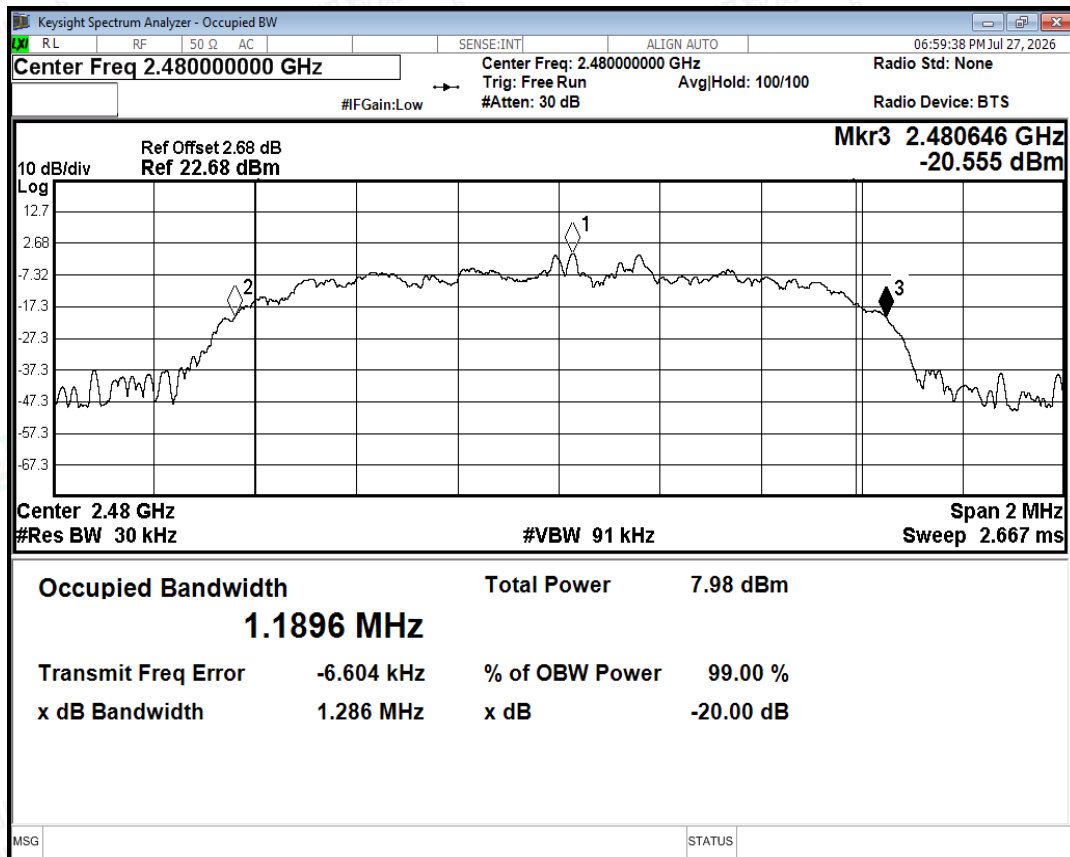
-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1



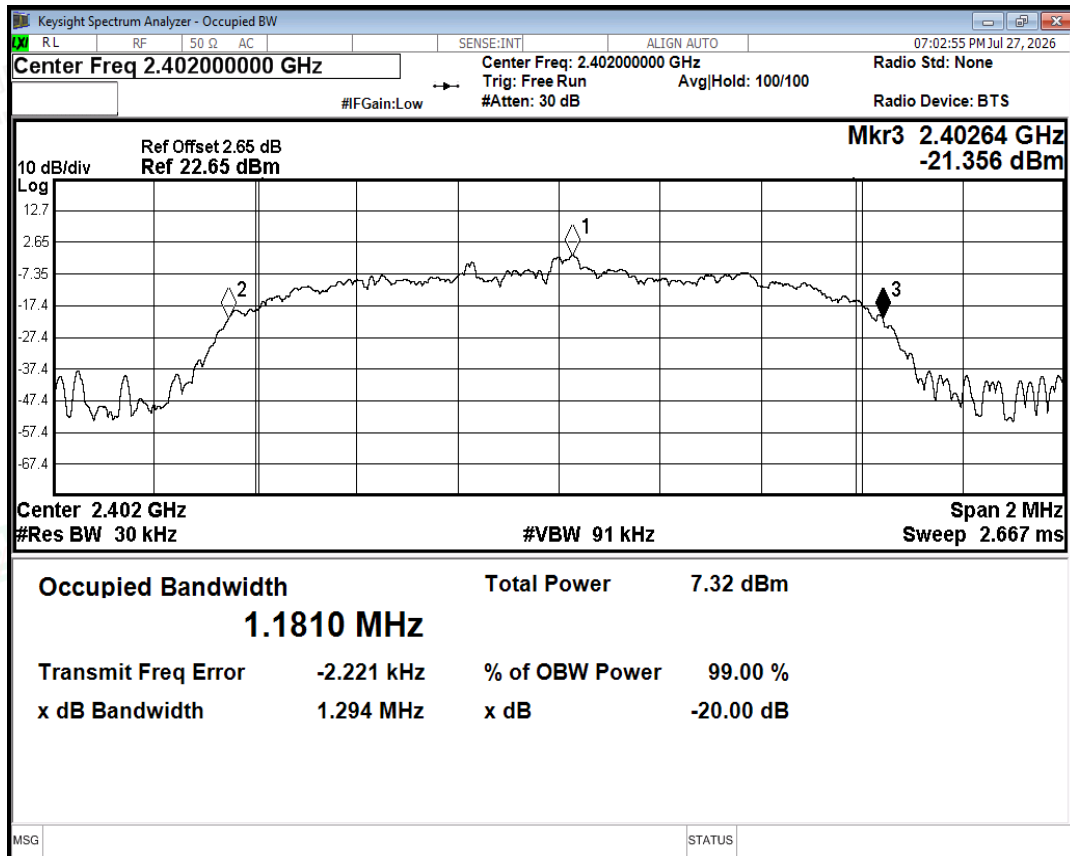
-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1



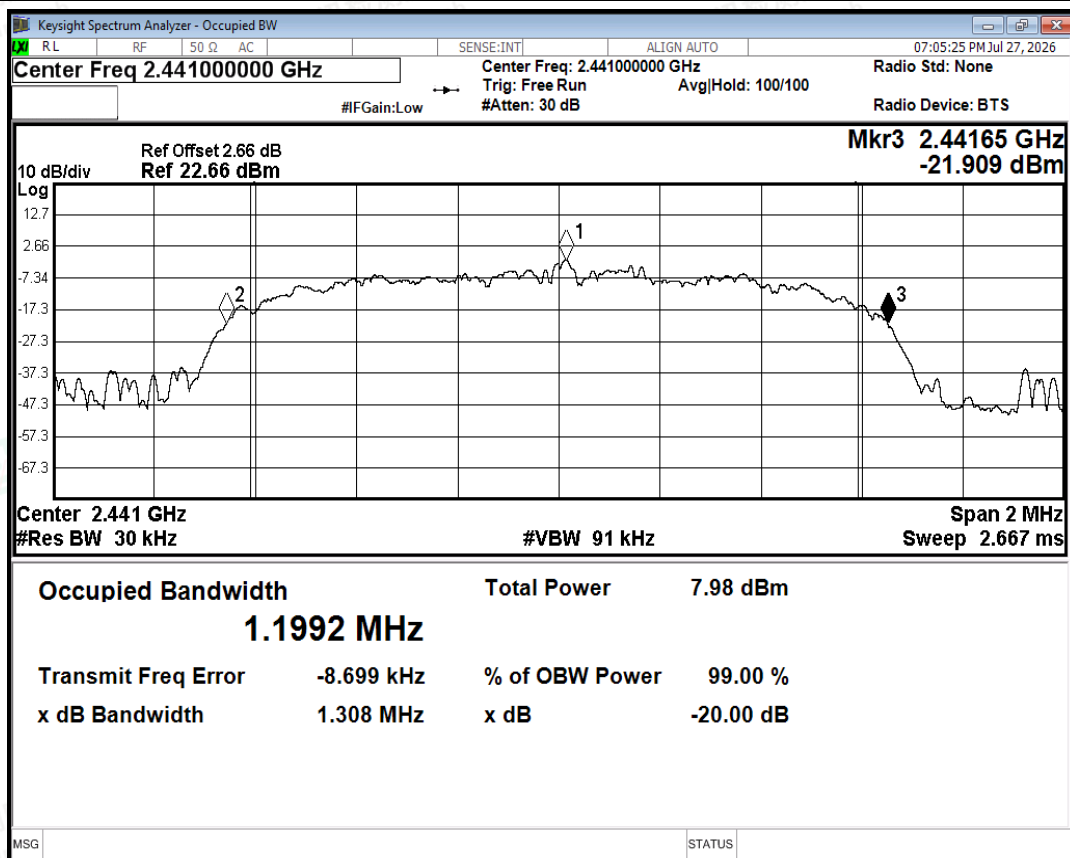
-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1



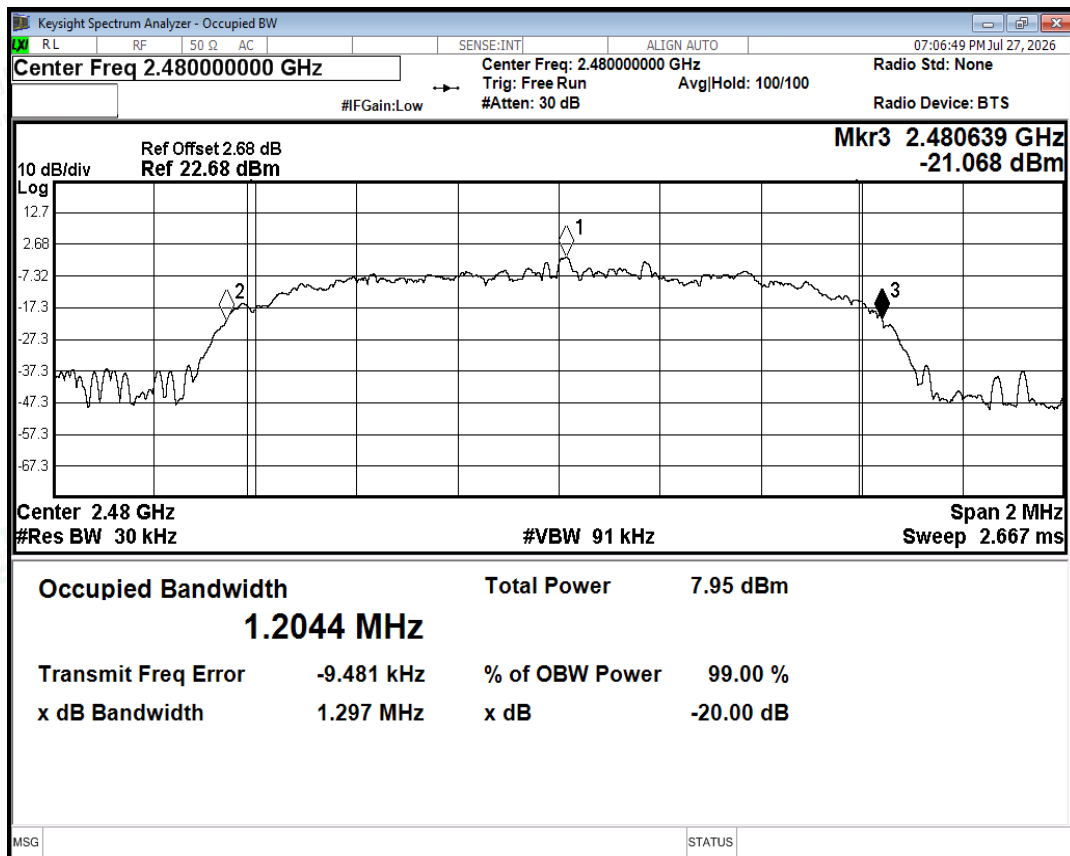
-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1

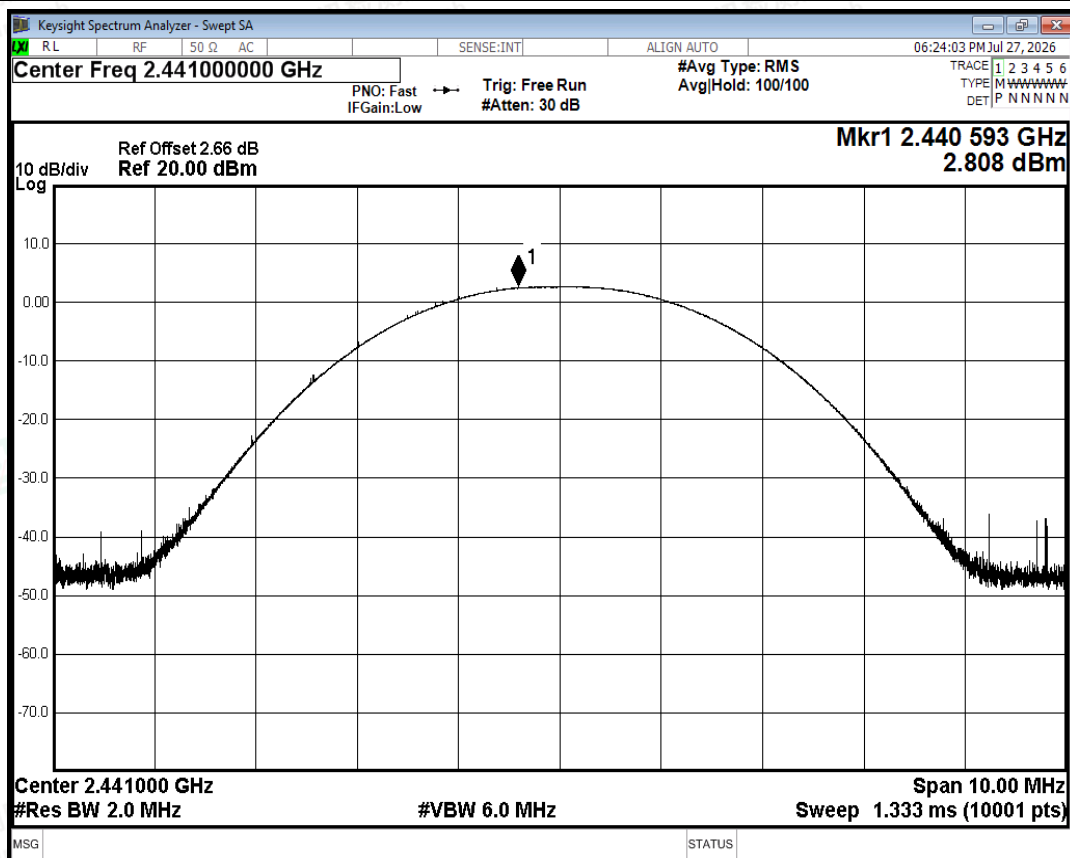
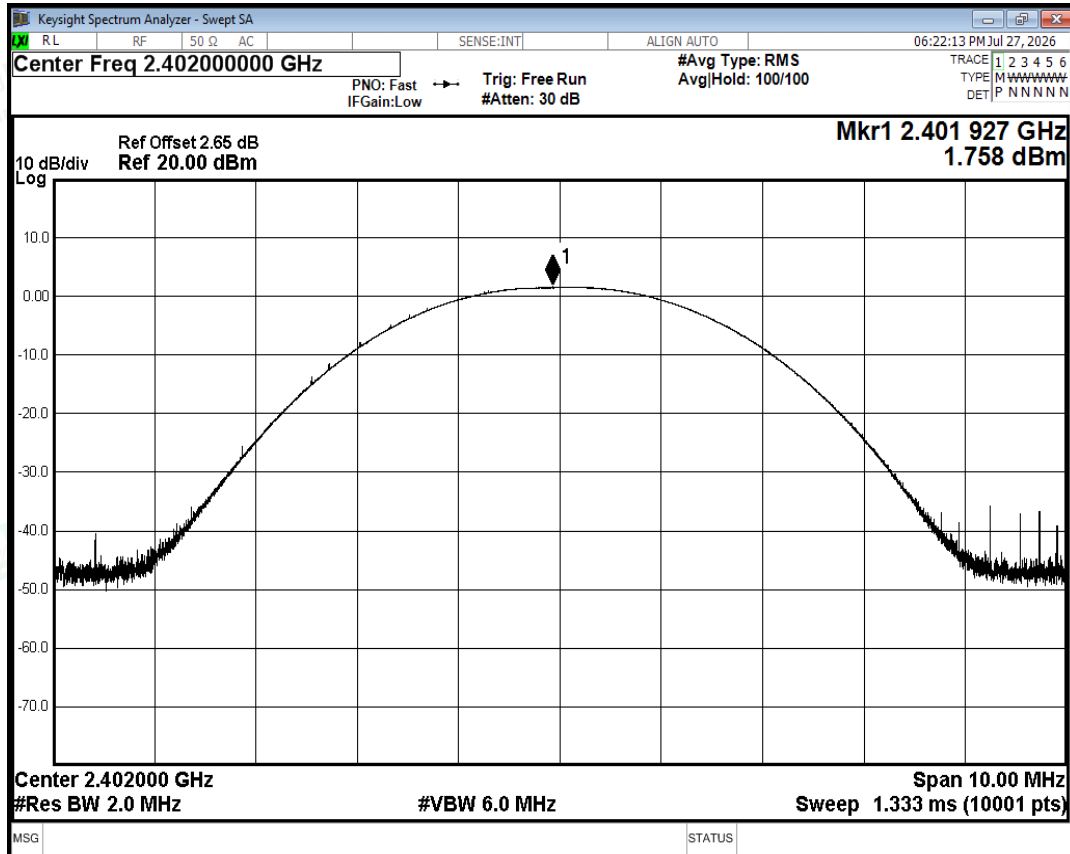


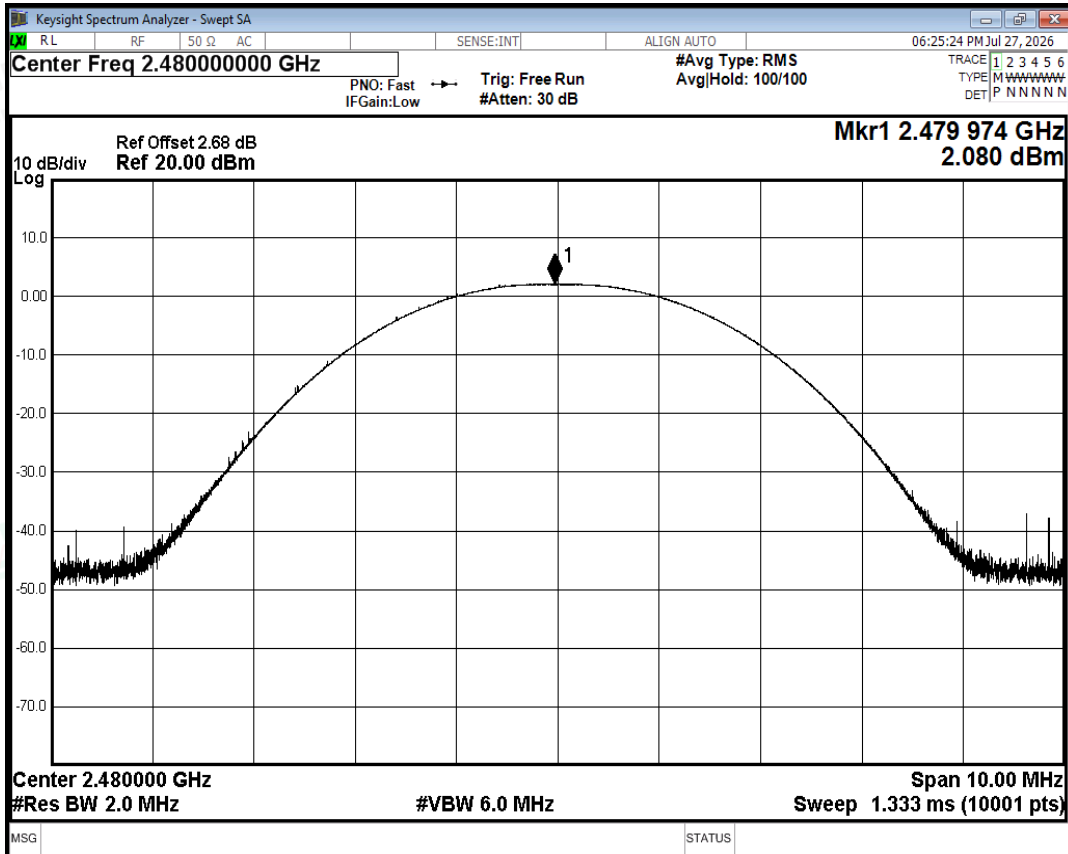
-20dB Bandwidth NVNT 3-DH5 2480MHz Ant1



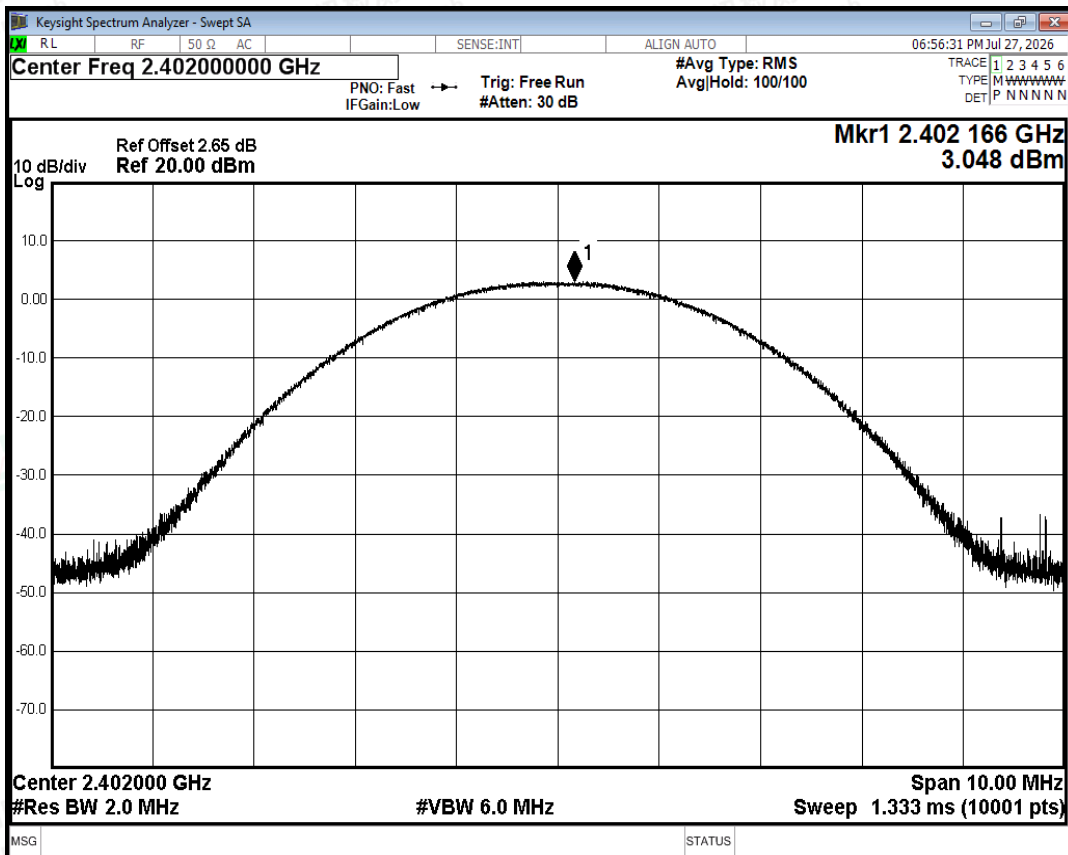
A.2 Maximum Peak Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit Conducted(dBm)	Verdict
NVNT	1-DH5	2402	Ant1	1.76	30	Pass
NVNT	1-DH5	2441	Ant1	2.81	30	Pass
NVNT	1-DH5	2480	Ant1	2.08	30	Pass
NVNT	2-DH5	2402	Ant1	3.05	30	Pass
NVNT	2-DH5	2441	Ant1	4.05	30	Pass
NVNT	2-DH5	2480	Ant1	3.27	30	Pass
NVNT	3-DH5	2402	Ant1	2.82	30	Pass
NVNT	3-DH5	2441	Ant1	3.78	30	Pass
NVNT	3-DH5	2480	Ant1	3.56	30	Pass

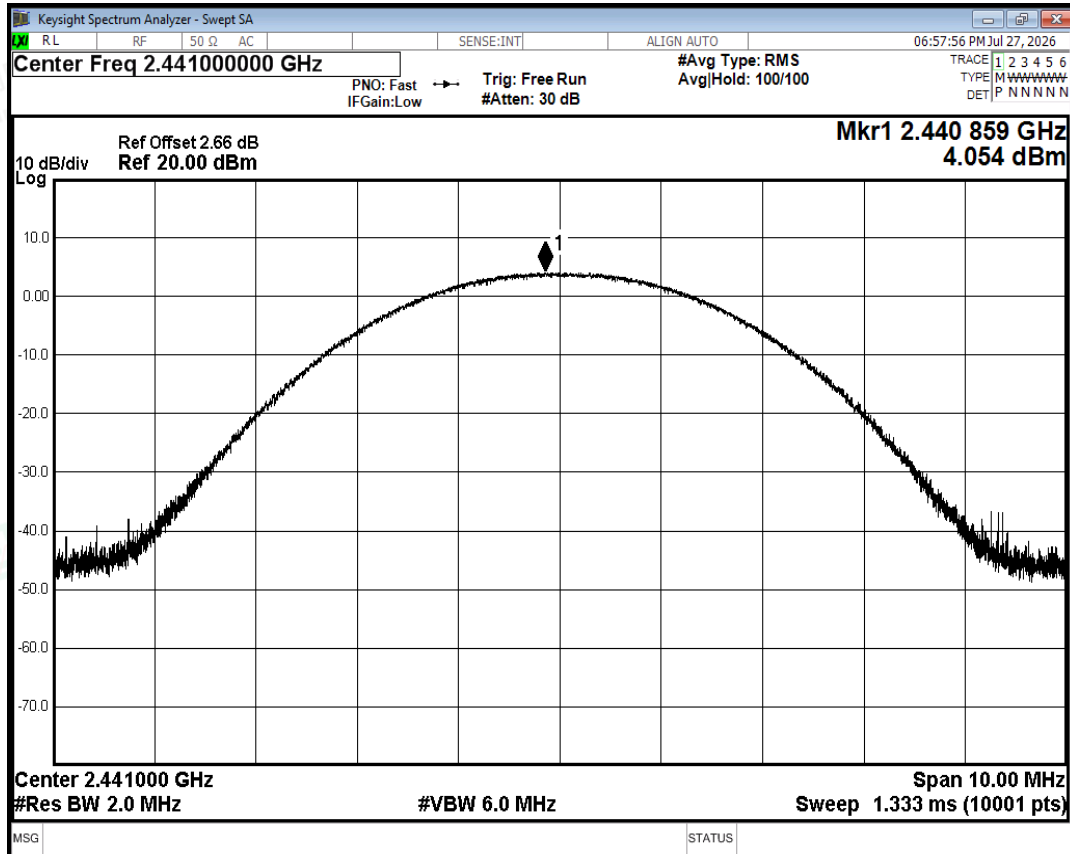




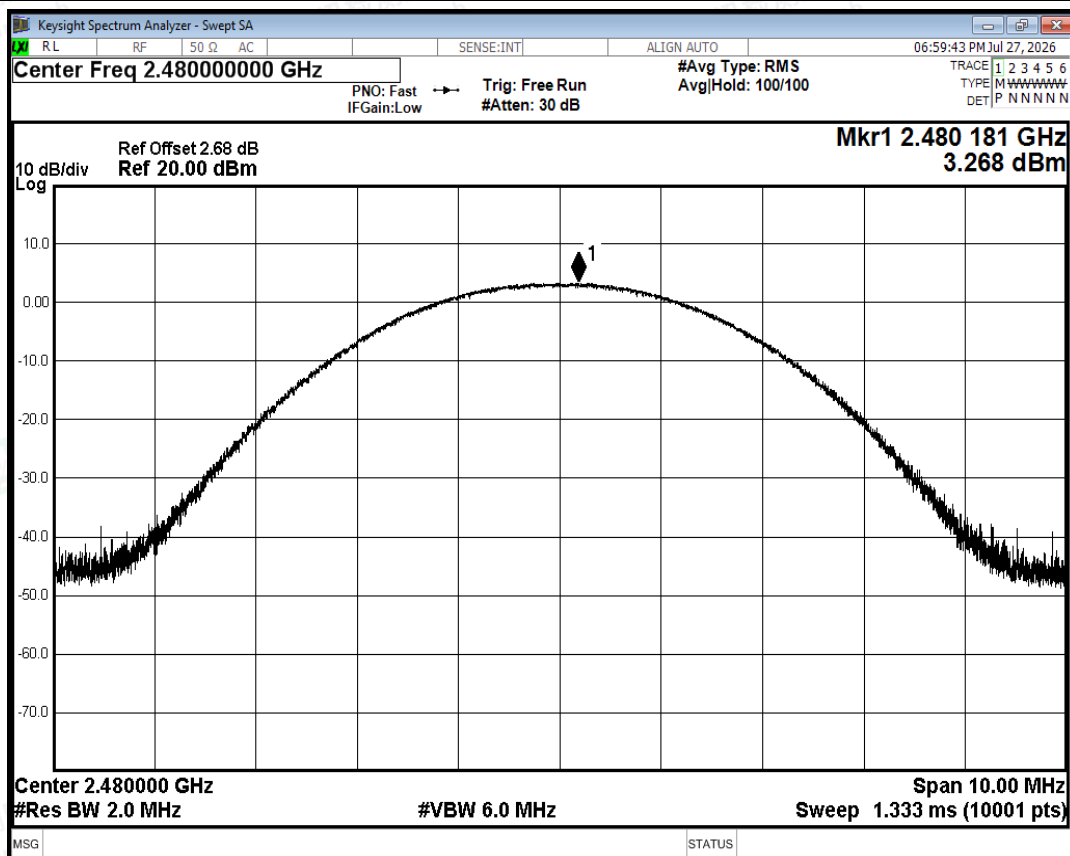
Peak Power NVNT 1-DH5 2480MHz Ant1



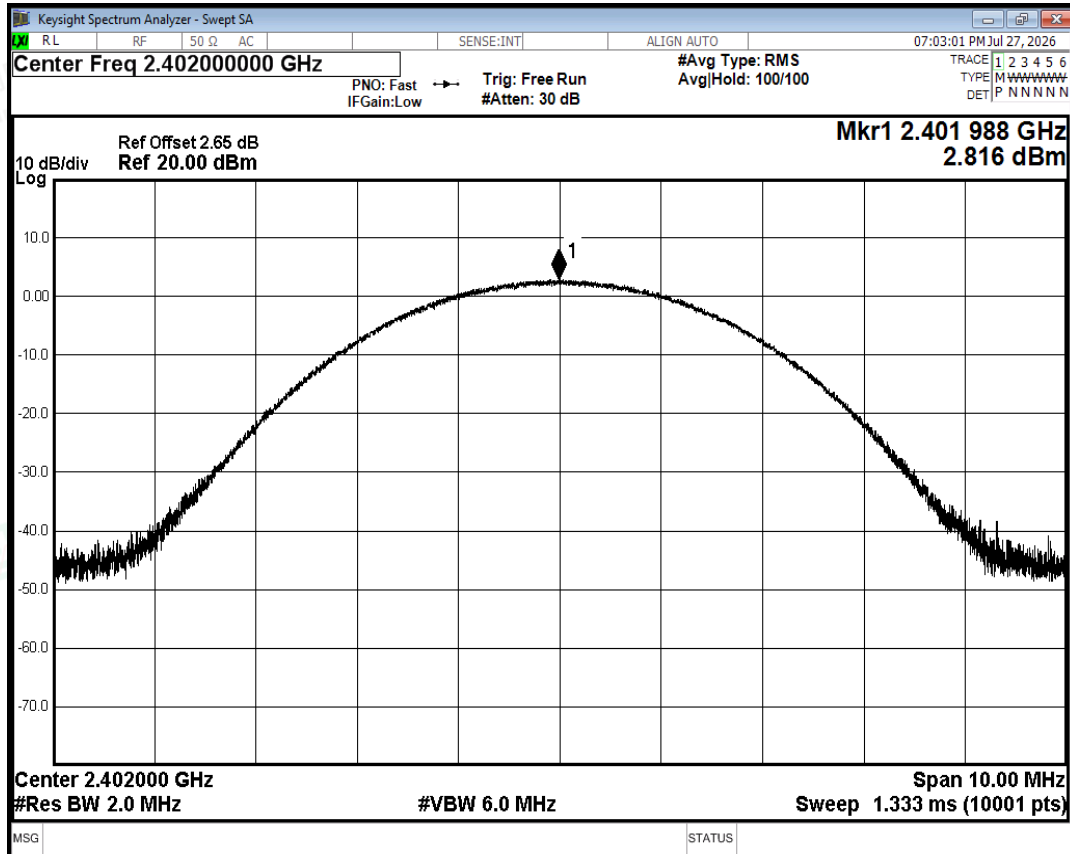
Peak Power NVNT 2-DH5 2402MHz Ant1



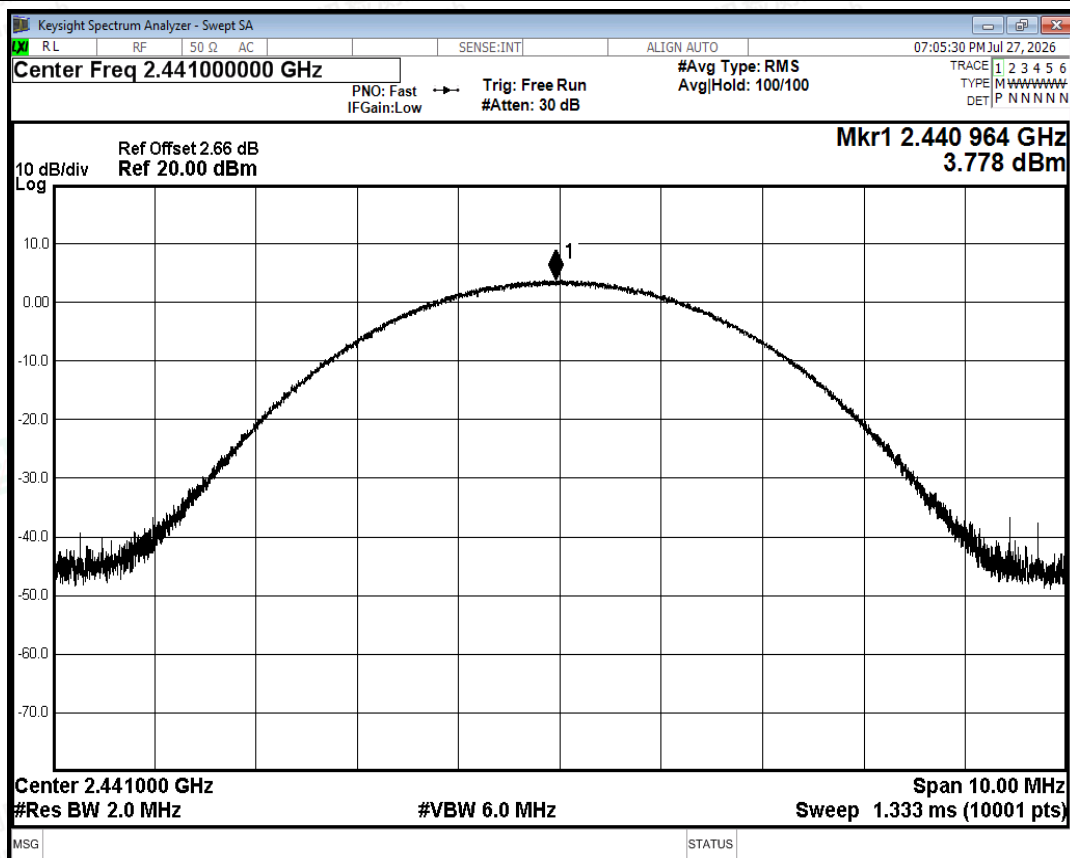
Peak Power NVNT 2-DH5 2441MHz Ant1



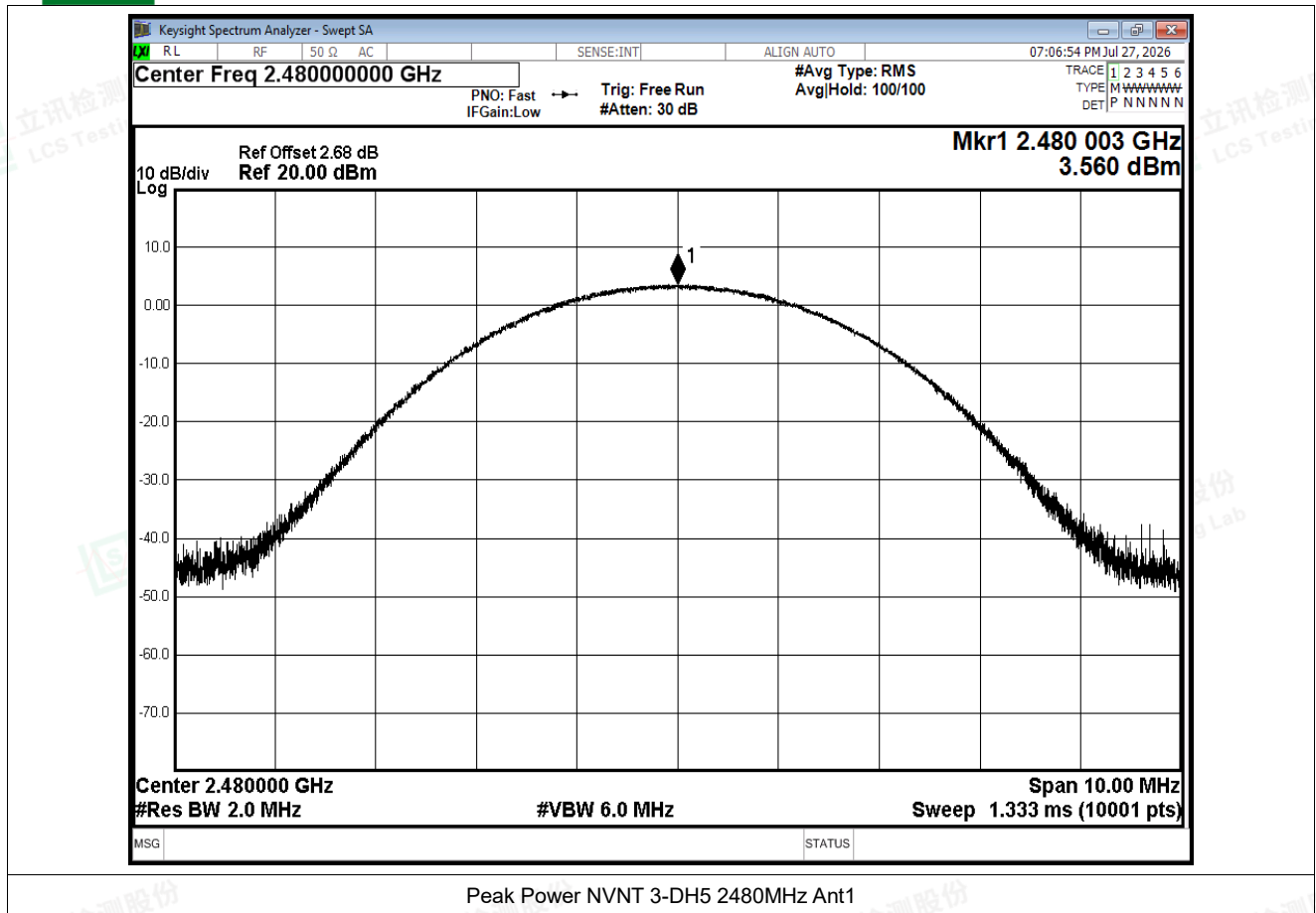
Peak Power NVNT 2-DH5 2480MHz Ant1



Peak Power NVNT 3-DH5 2402MHz Ant1



Peak Power NVNT 3-DH5 2441MHz Ant1

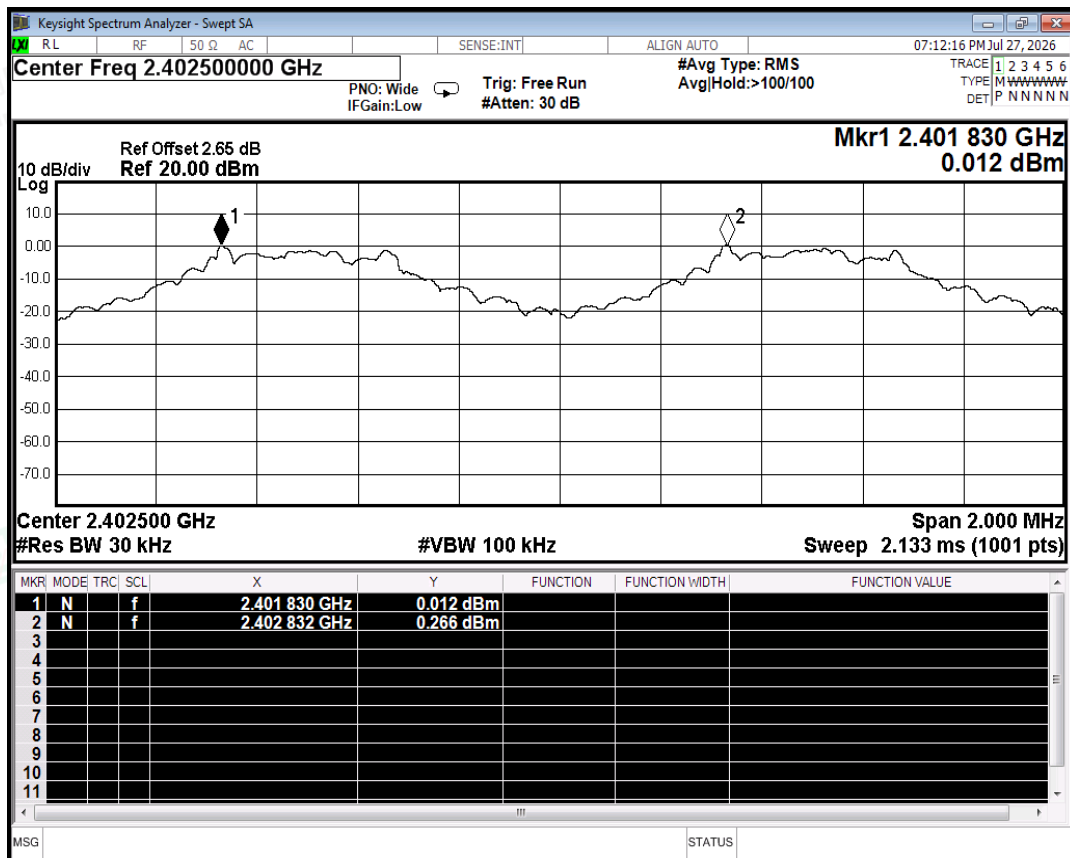




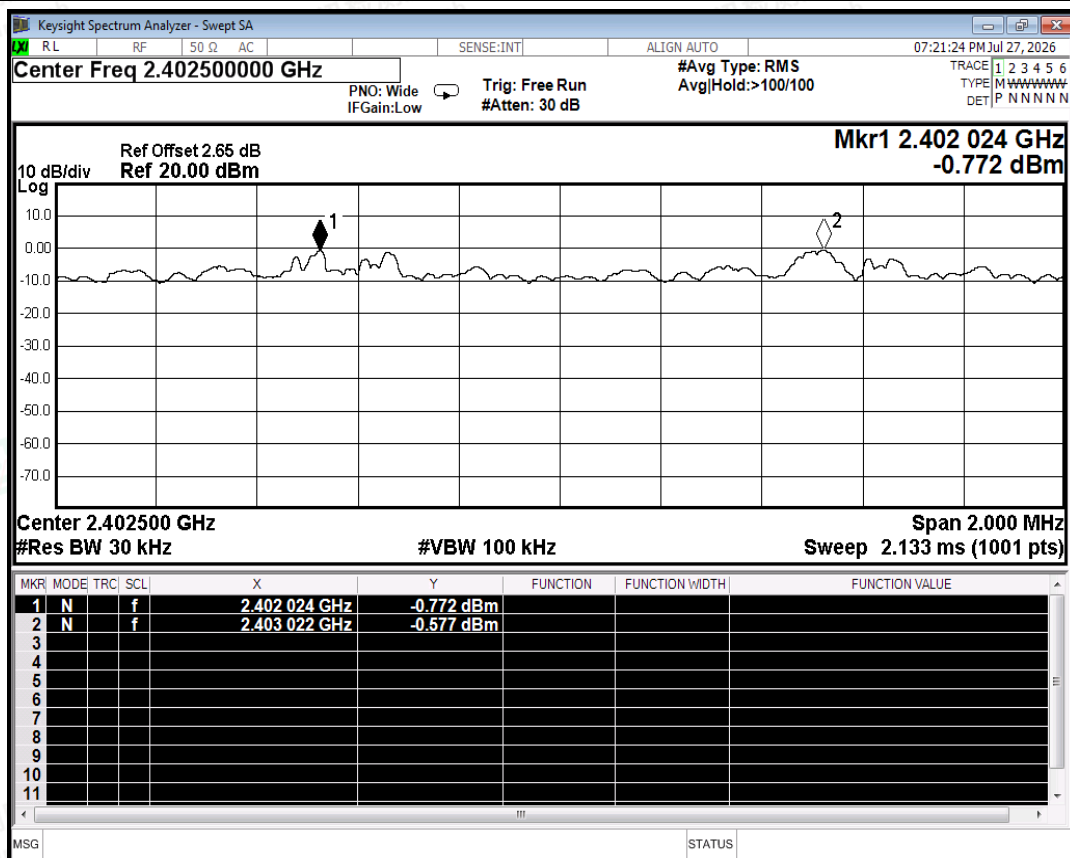
A.3 Carrier Frequencies Separation

Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2401.83	2402.832	1.002	0.640	Pass
NVNT	2-DH5	Ant1	2402.024	2403.022	0.998	0.877	Pass
NVNT	3-DH5	Ant1	2402.02	2403.02	1	0.872	Pass

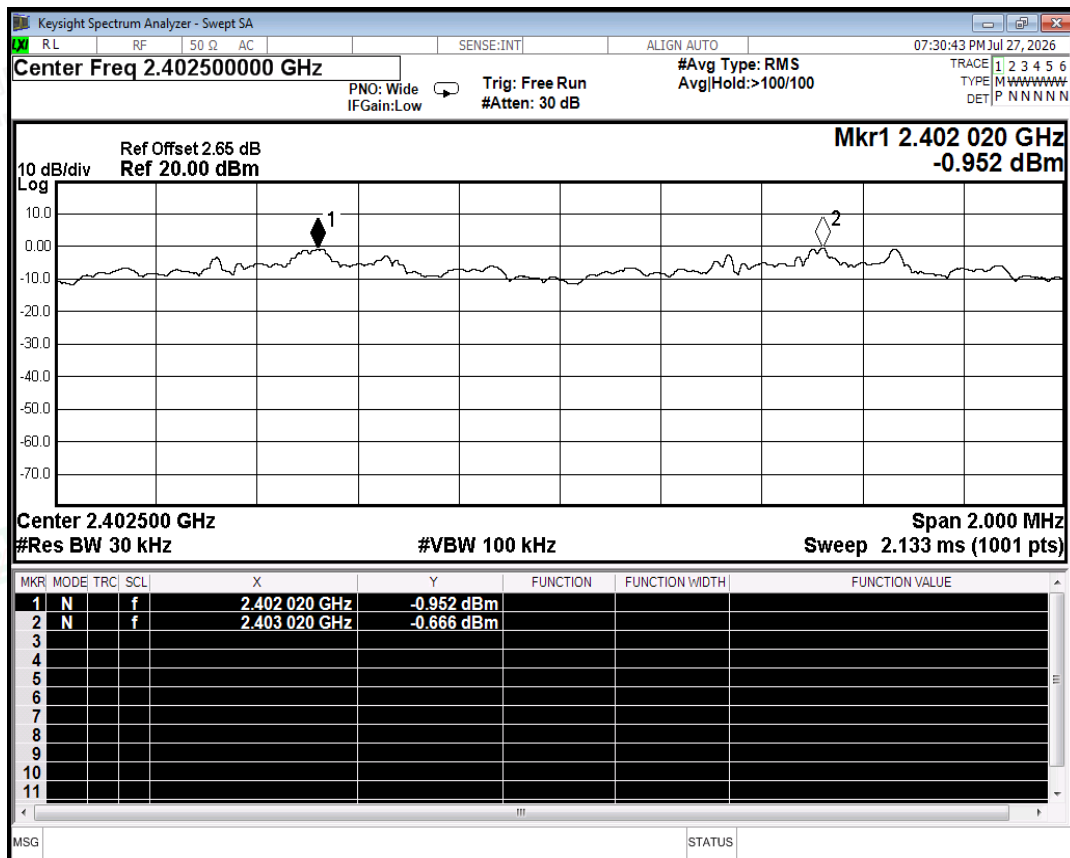




CFS NVNT 1-DH5 2402MHz Ant1



CFS NVNT 2-DH5 2402MHz Ant1

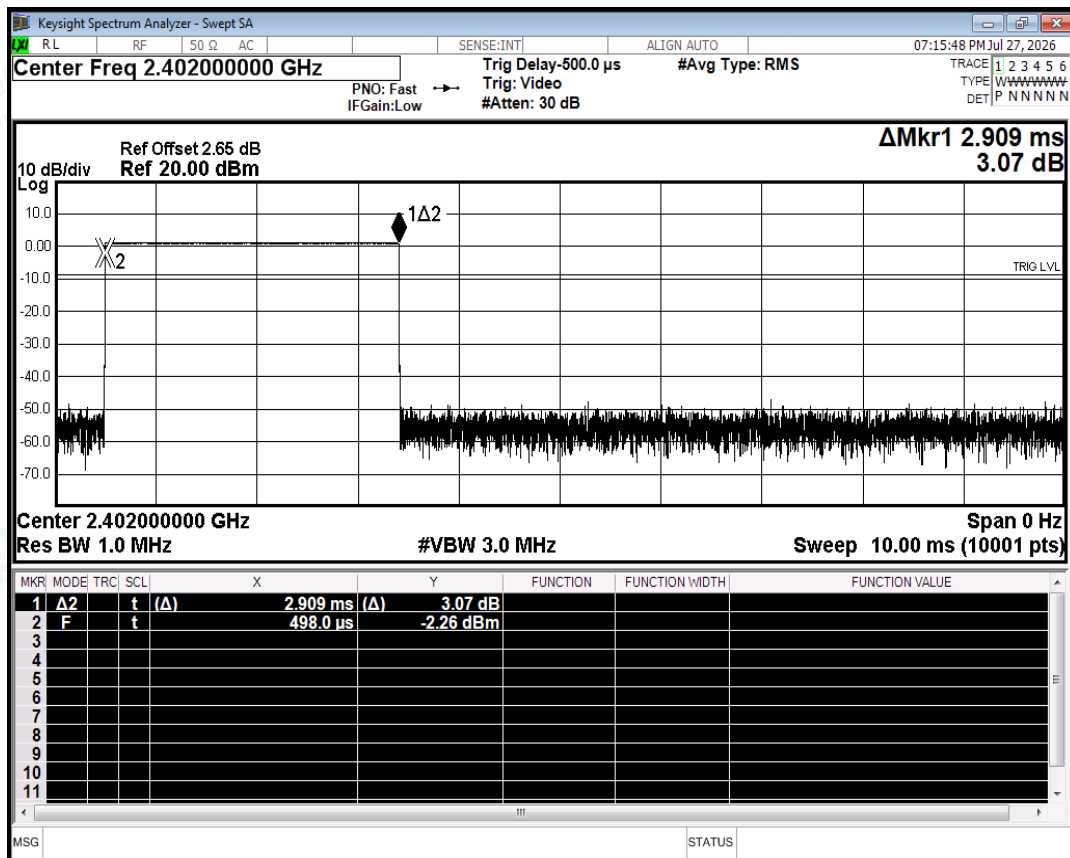


CFS NVNT 3-DH5 2402MHz Ant1

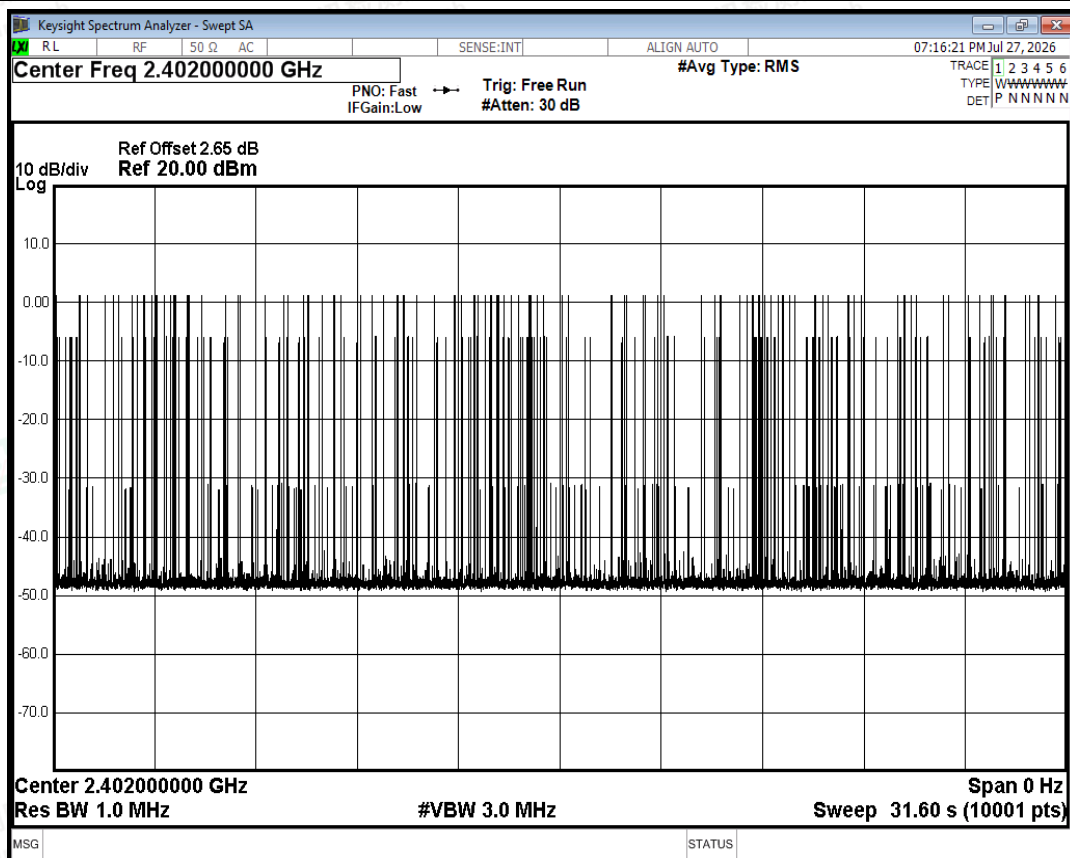


A.4 Dwell Time

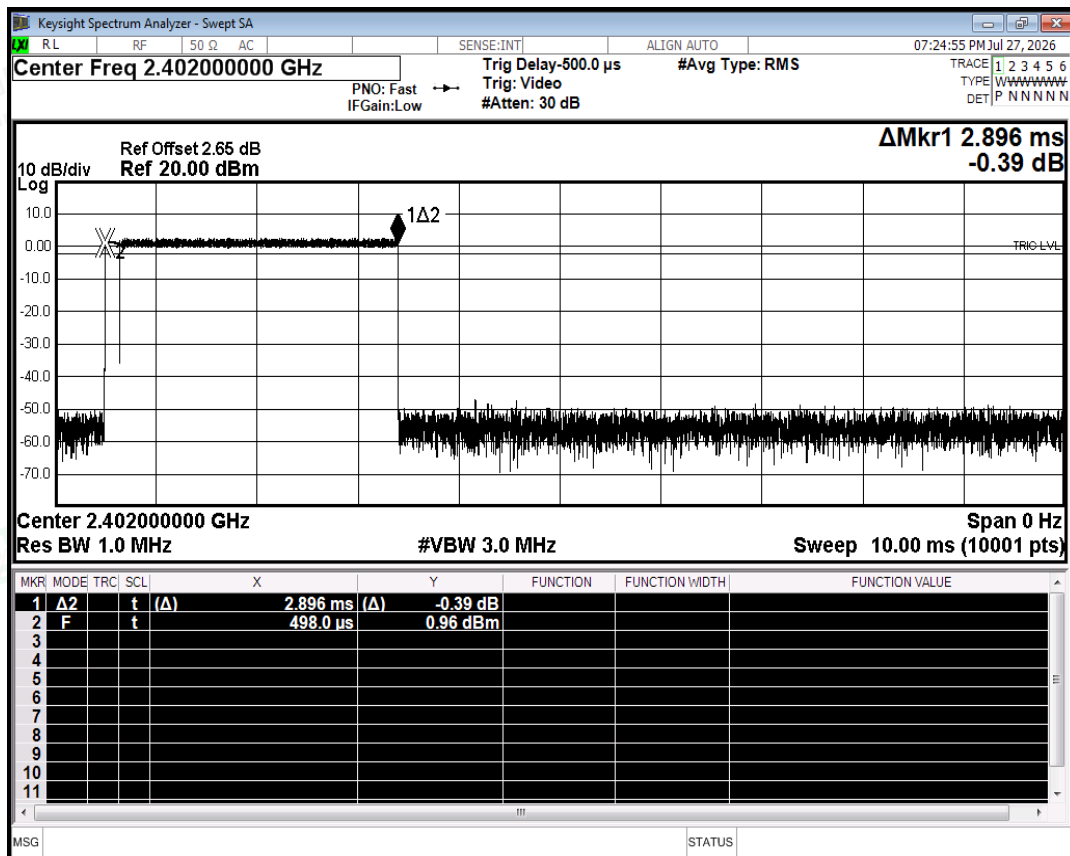
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH5	2402	Ant1	2.909	305.445	105	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.896	306.976	106	31600	400	Pass
NVNT	3-DH5	2402	Ant1	2.896	306.976	106	31600	400	Pass



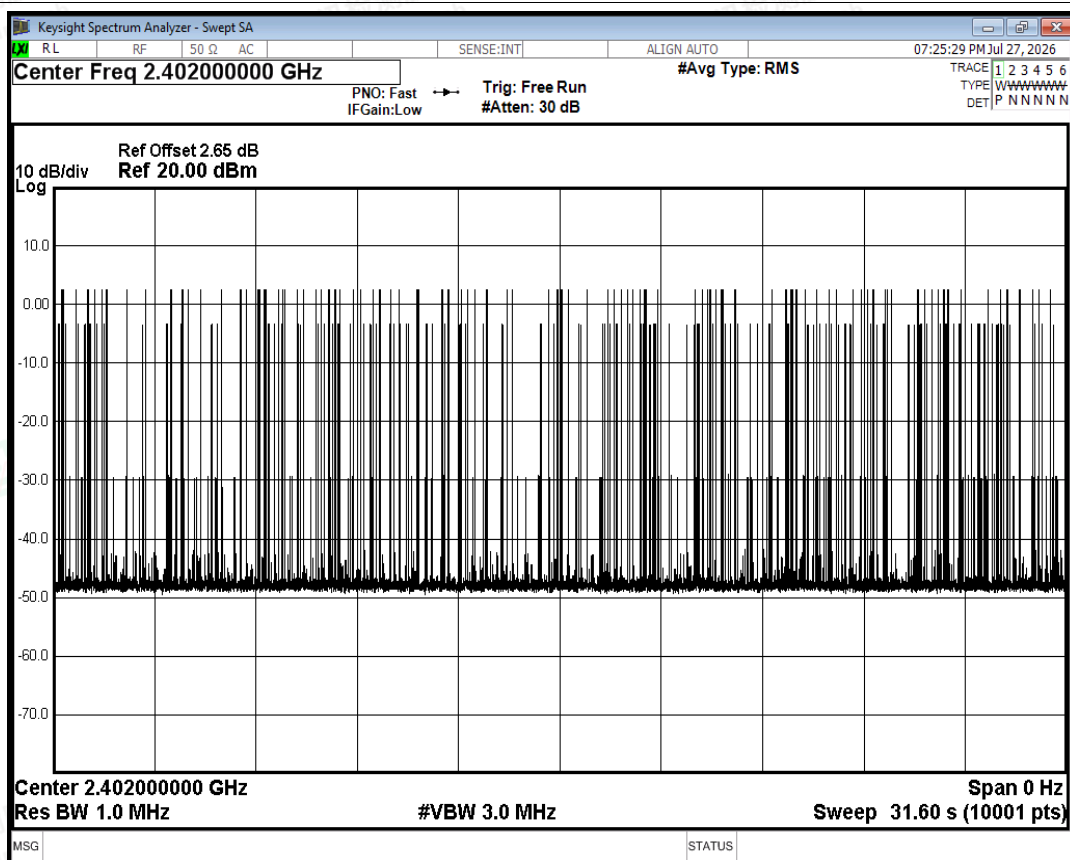
Dwell NVNT 1-DH5 2402MHz Ant1 One Burst



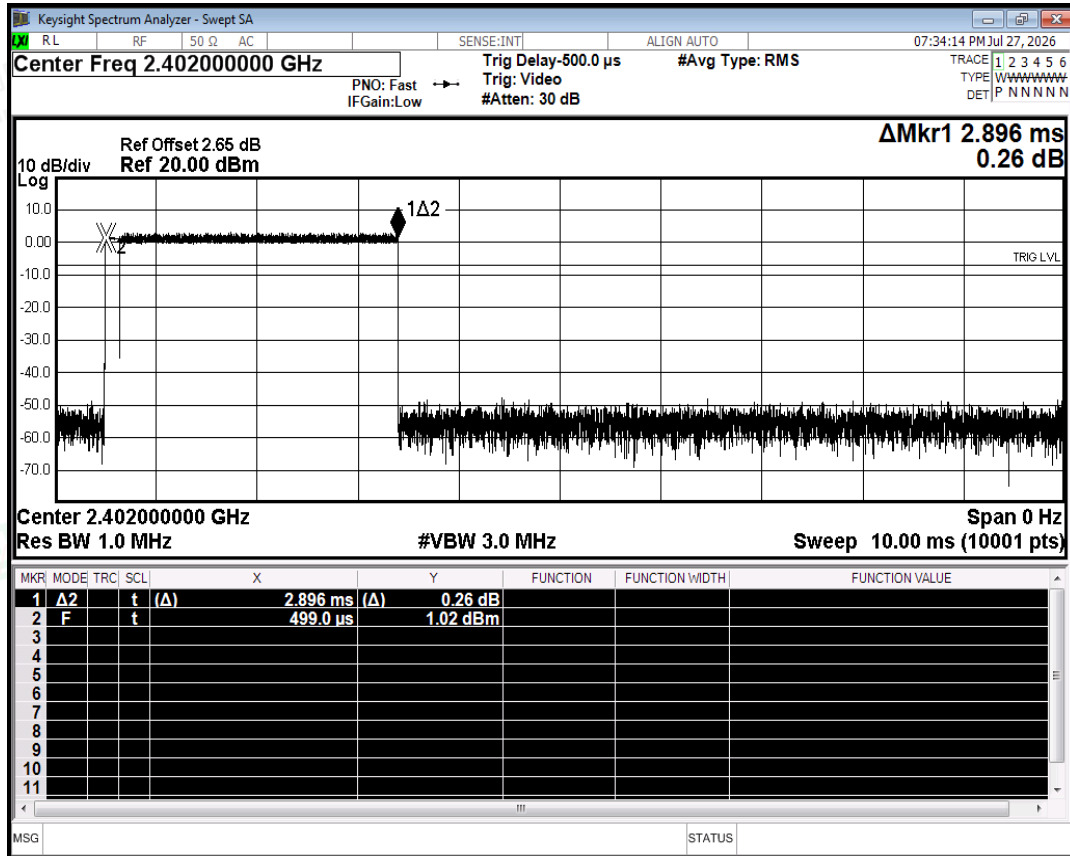
Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated



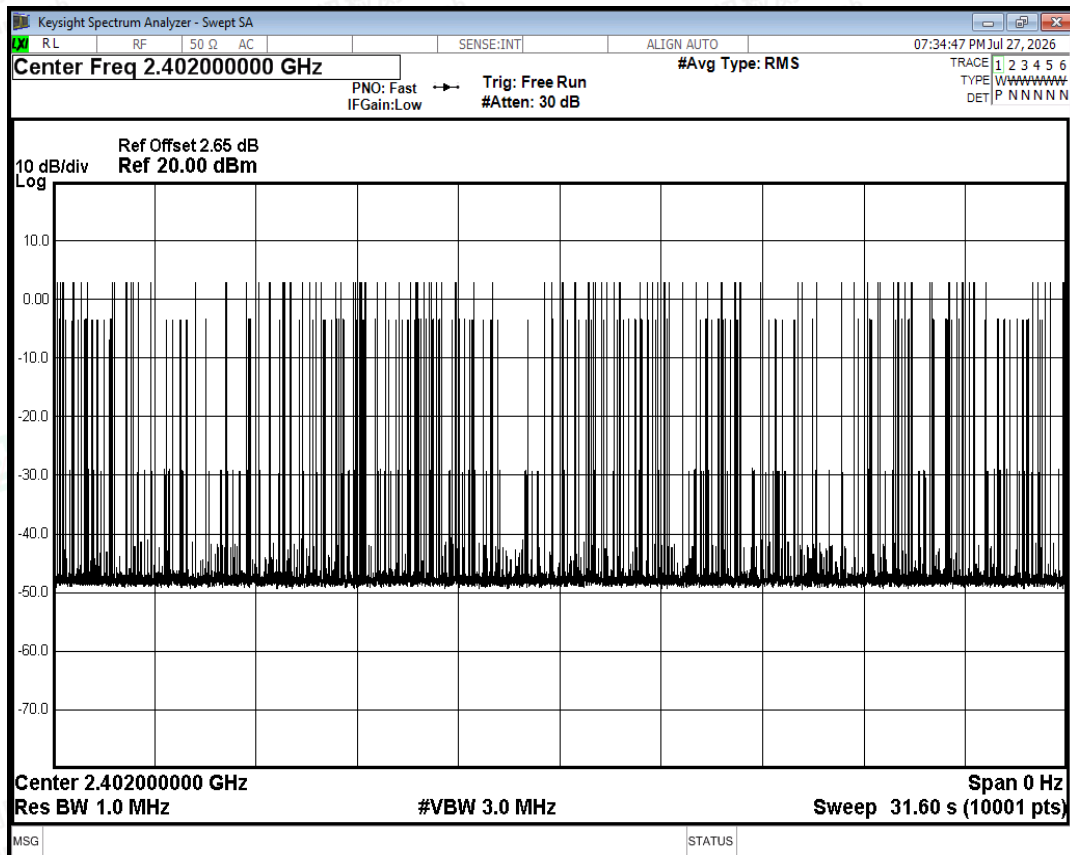
Dwell NVNT 2-DH5 2402MHz Ant1 One Burst



Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated



Dwell NVNT 3-DH5 2402MHz Ant1 One Burst

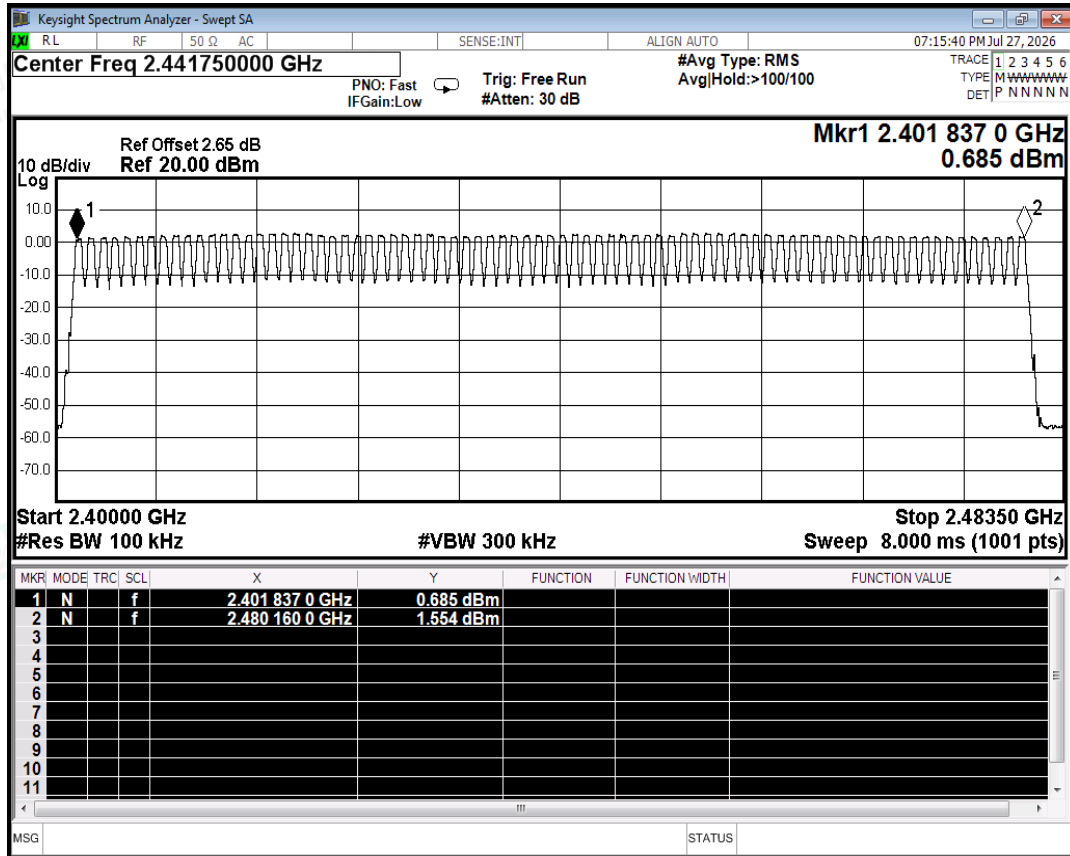


Dwell NVNT 3-DH5 2402MHz Ant1 Accumulated

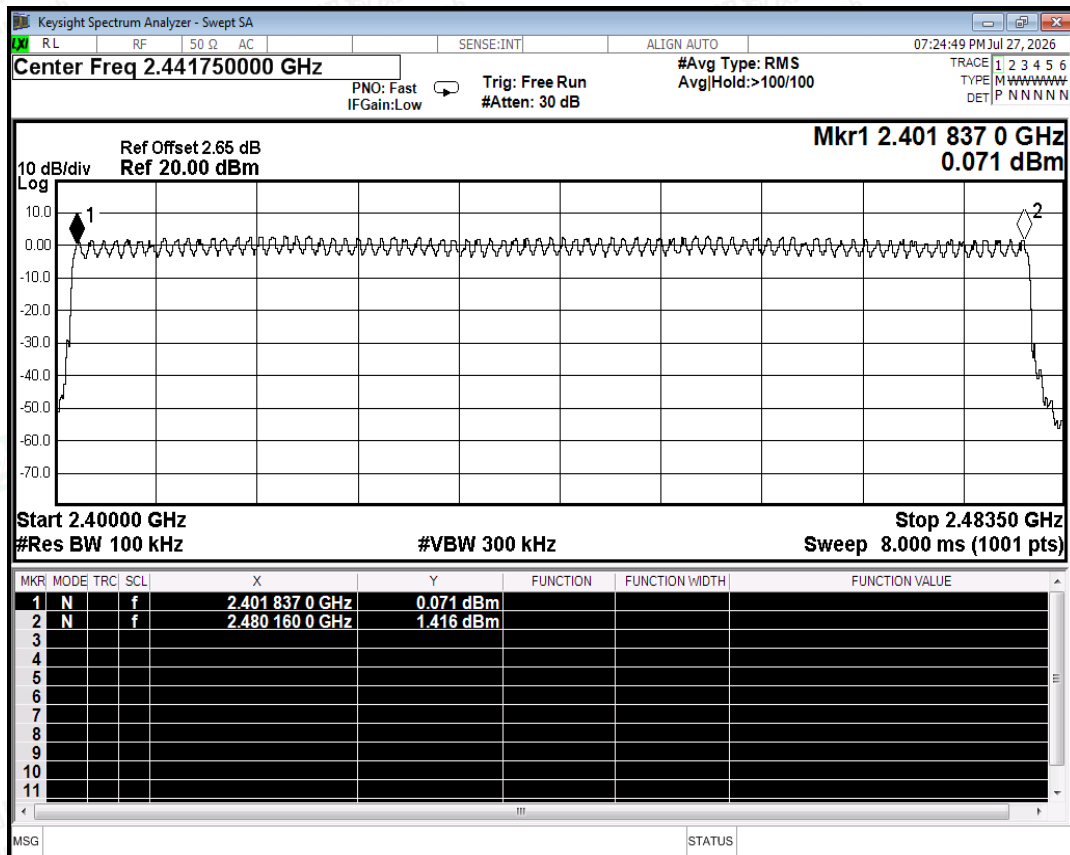


A.5 Number of Hopping Channel

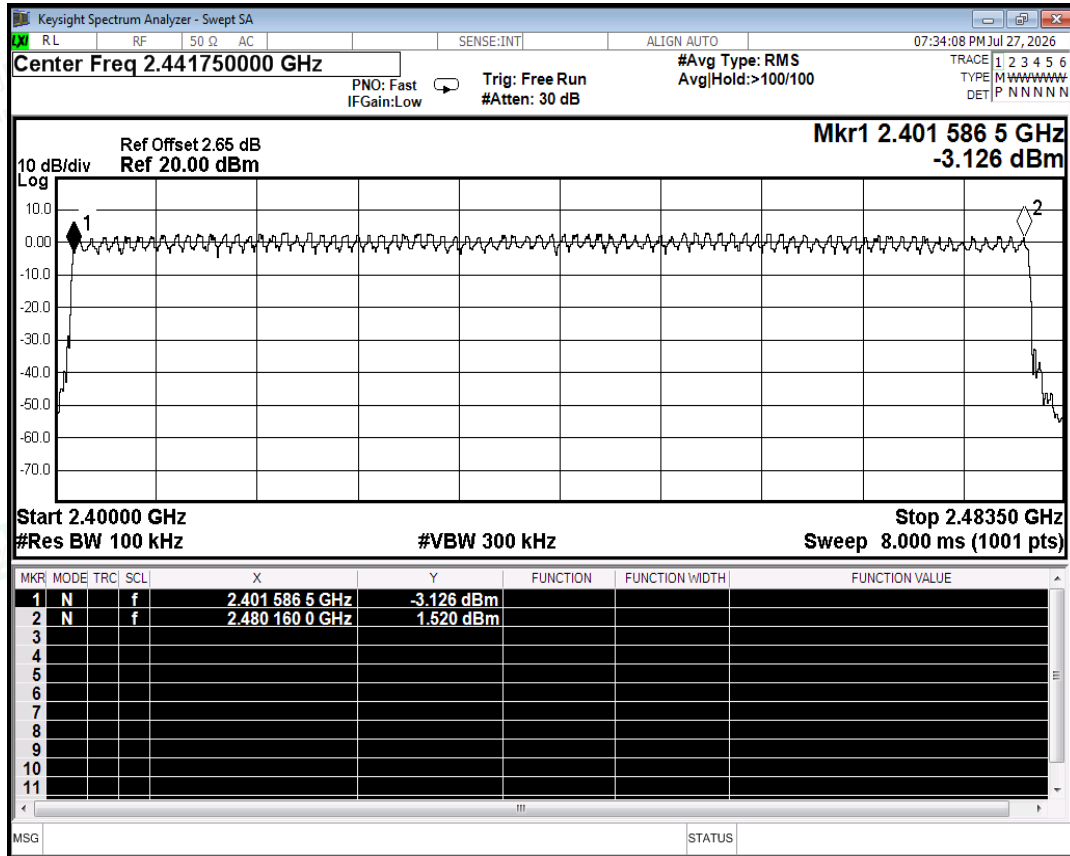
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant1	79	15	Pass
NVNT	2-DH5	Ant1	79	15	Pass
NVNT	3-DH5	Ant1	79	15	Pass



Hopping No. NVNT 1-DH5 2402MHz Ant1



Hopping No. NVNT 2-DH5 2402MHz Ant1

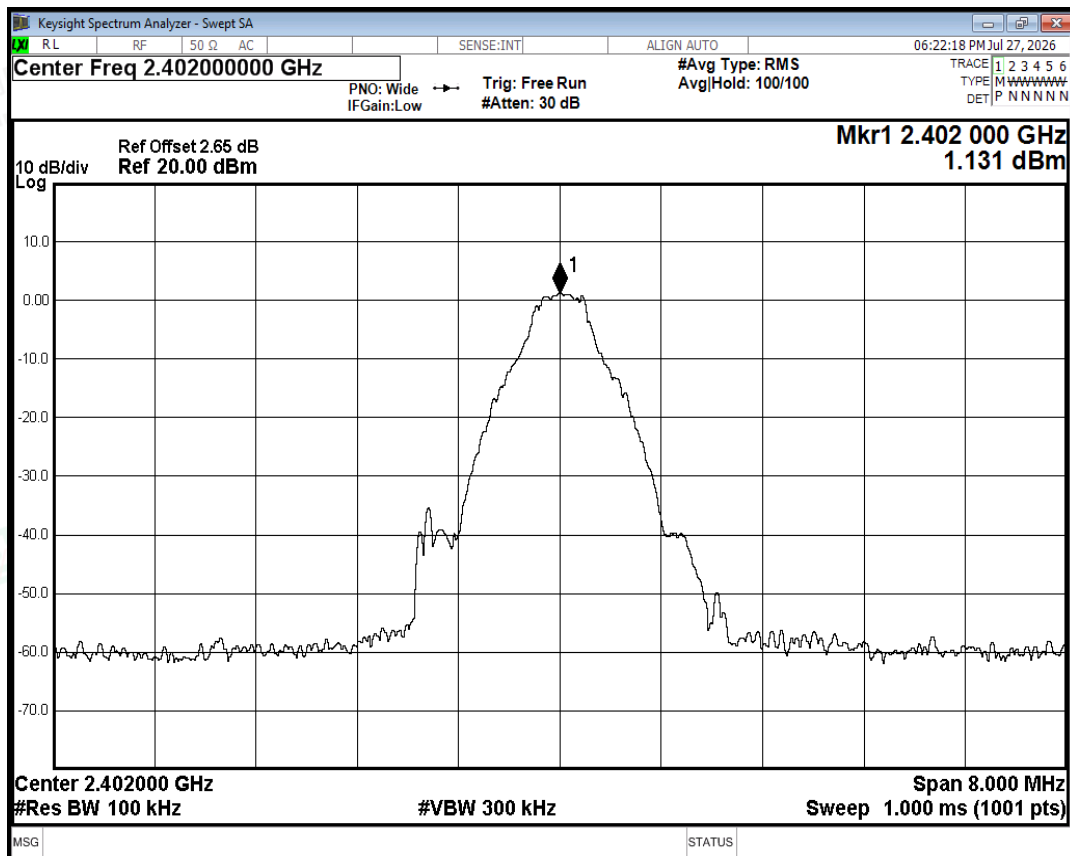


Hopping No. NVNT 3-DH5 2402MHz Ant1

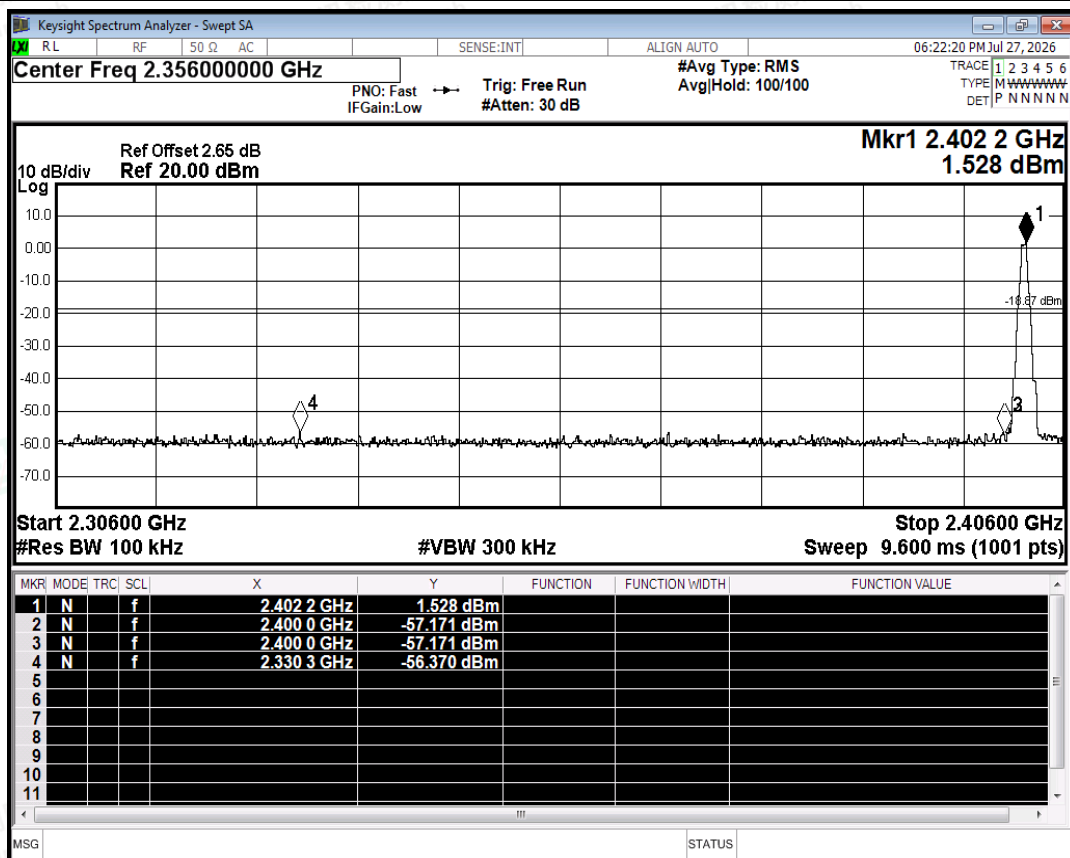


A.6 Band Edge

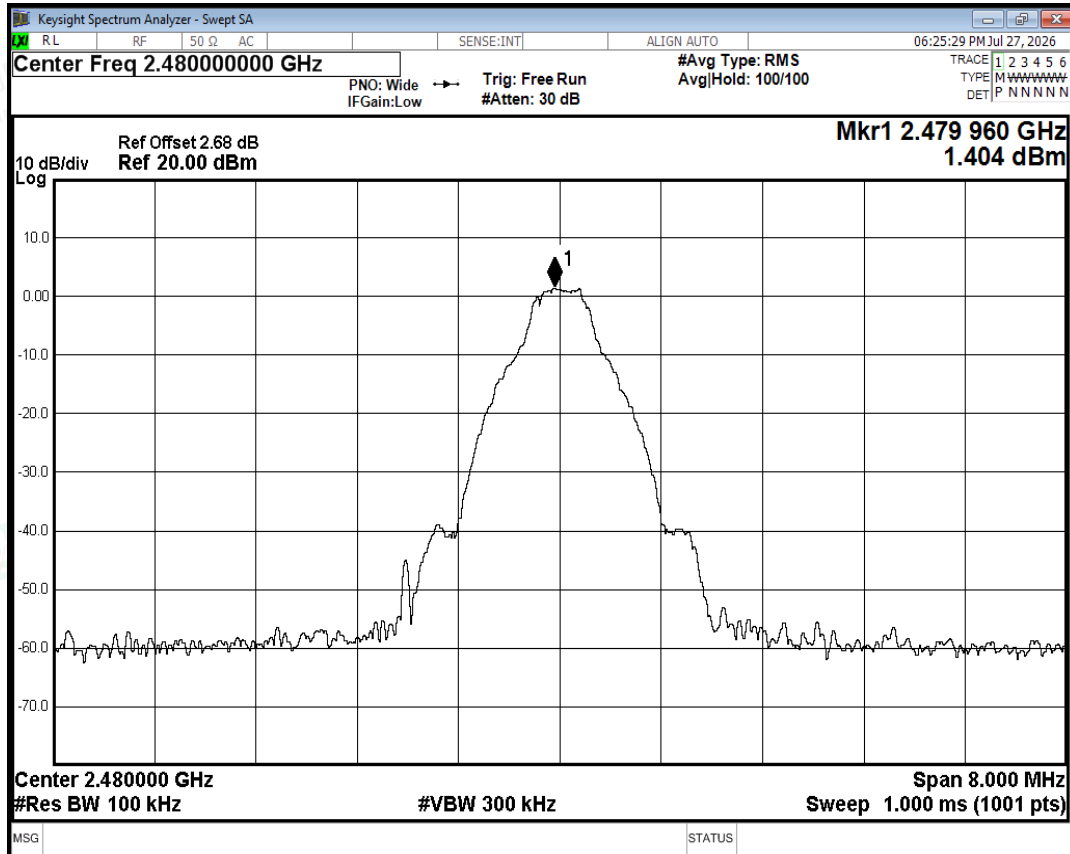
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-57.5	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-57.23	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-53.56	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-55.77	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-53.65	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-53.2	-20	Pass



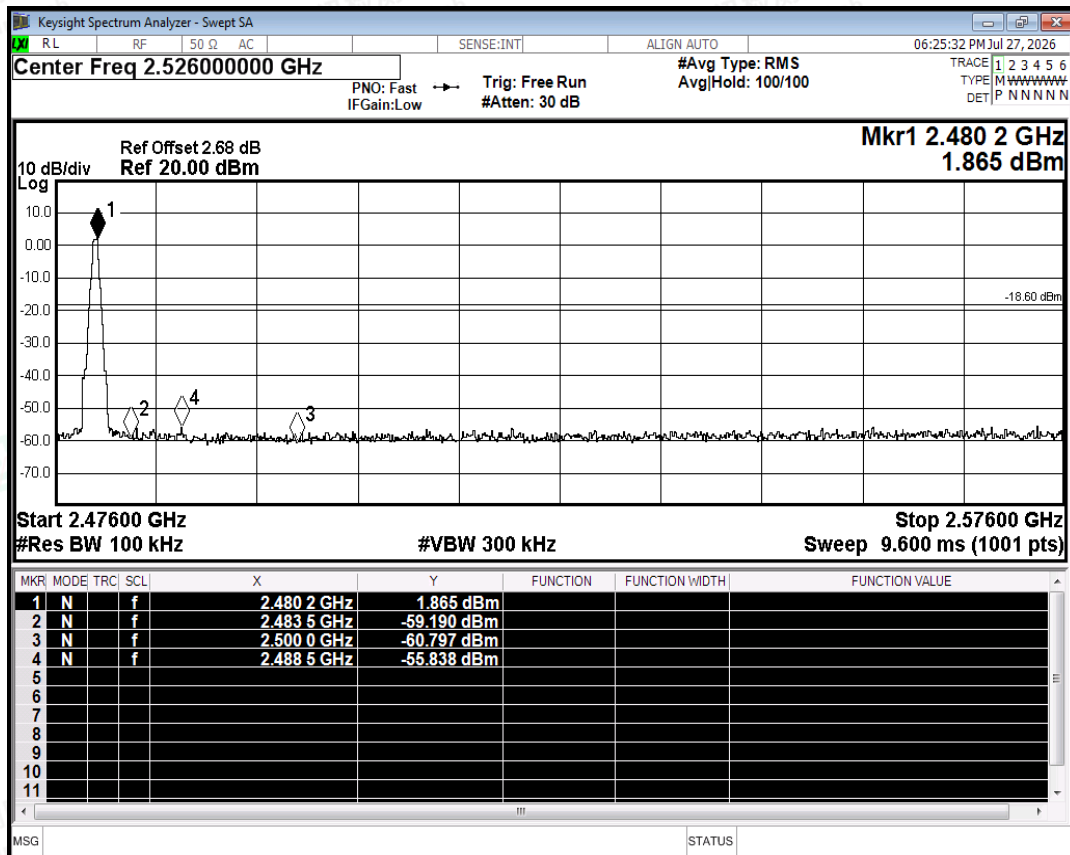
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Ref



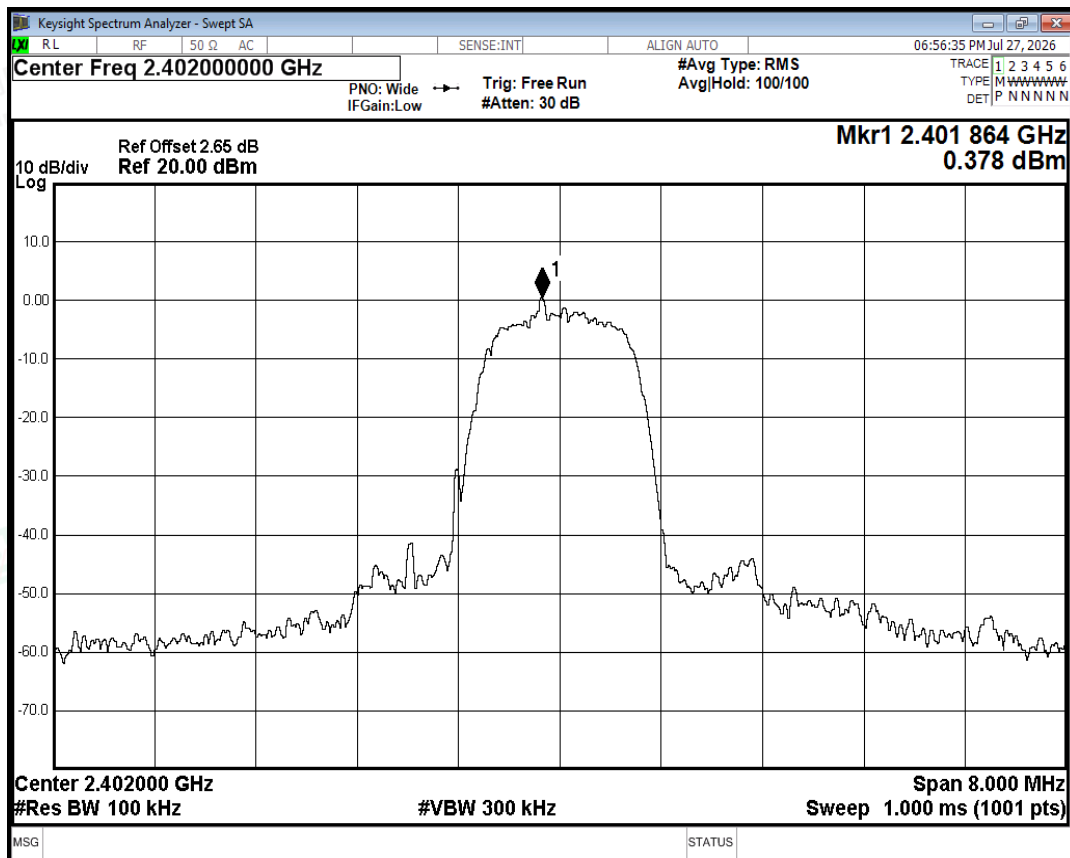
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission



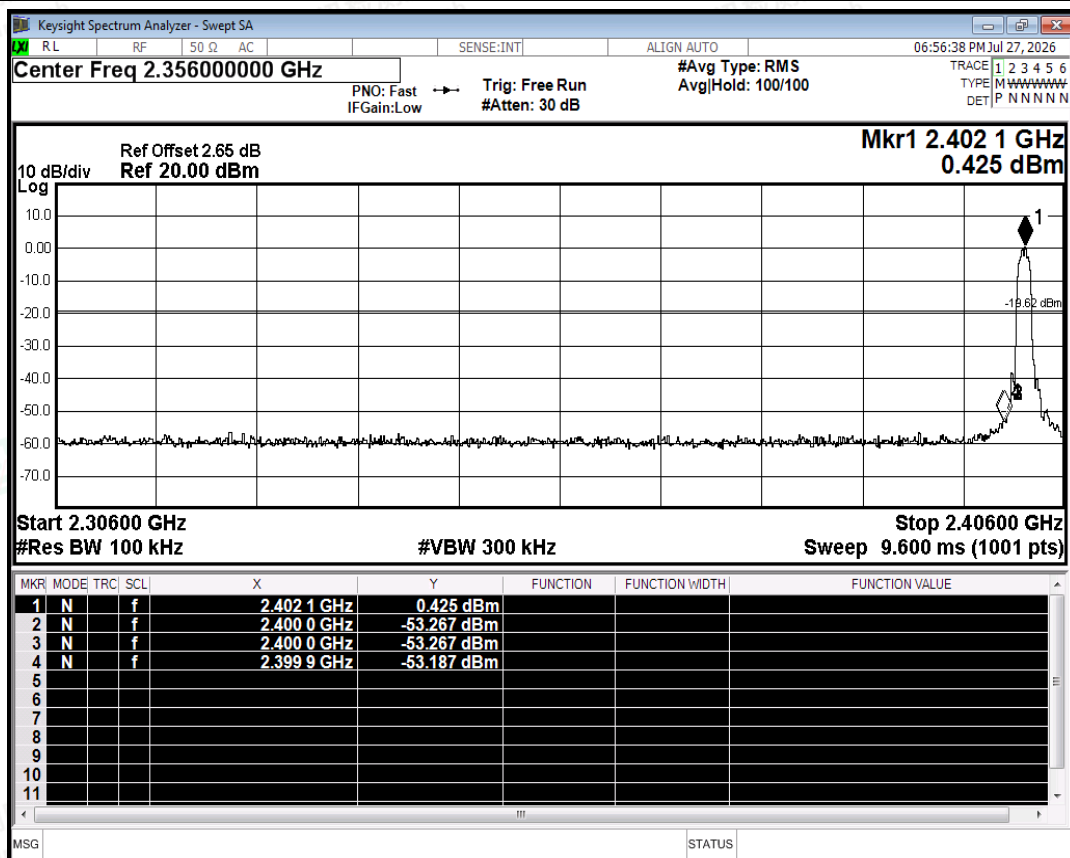
Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref



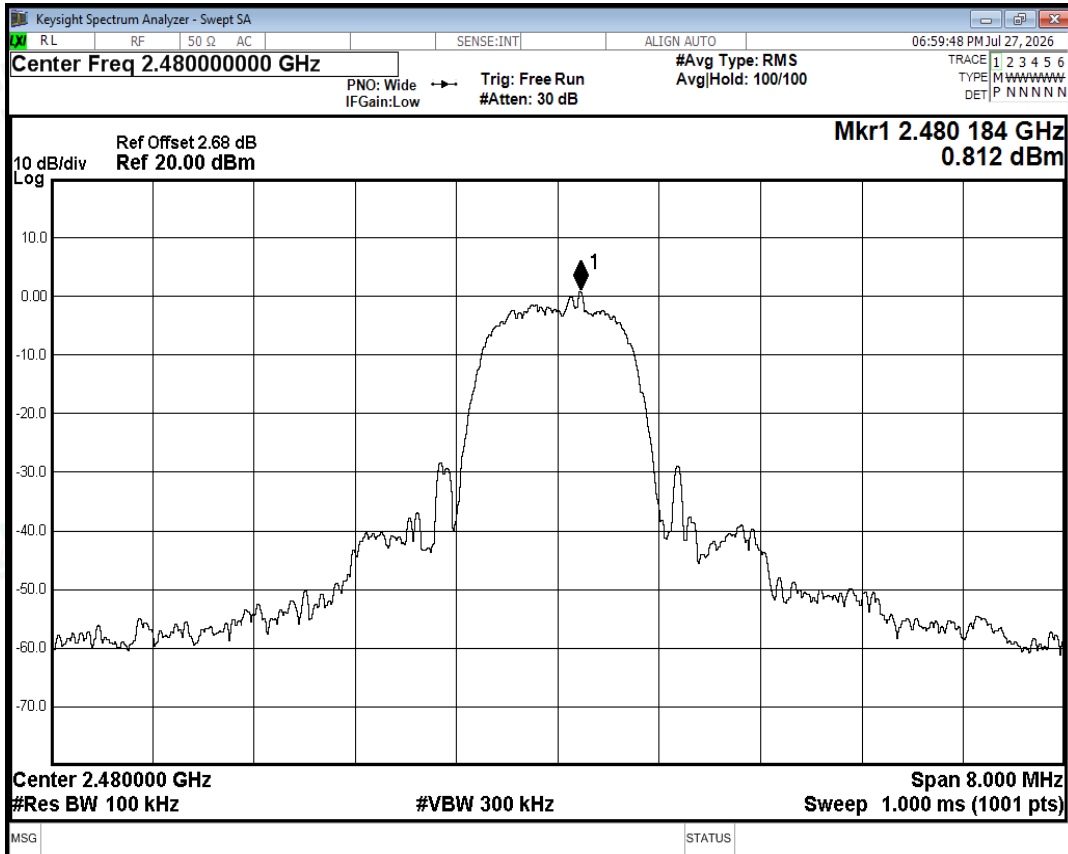
Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission



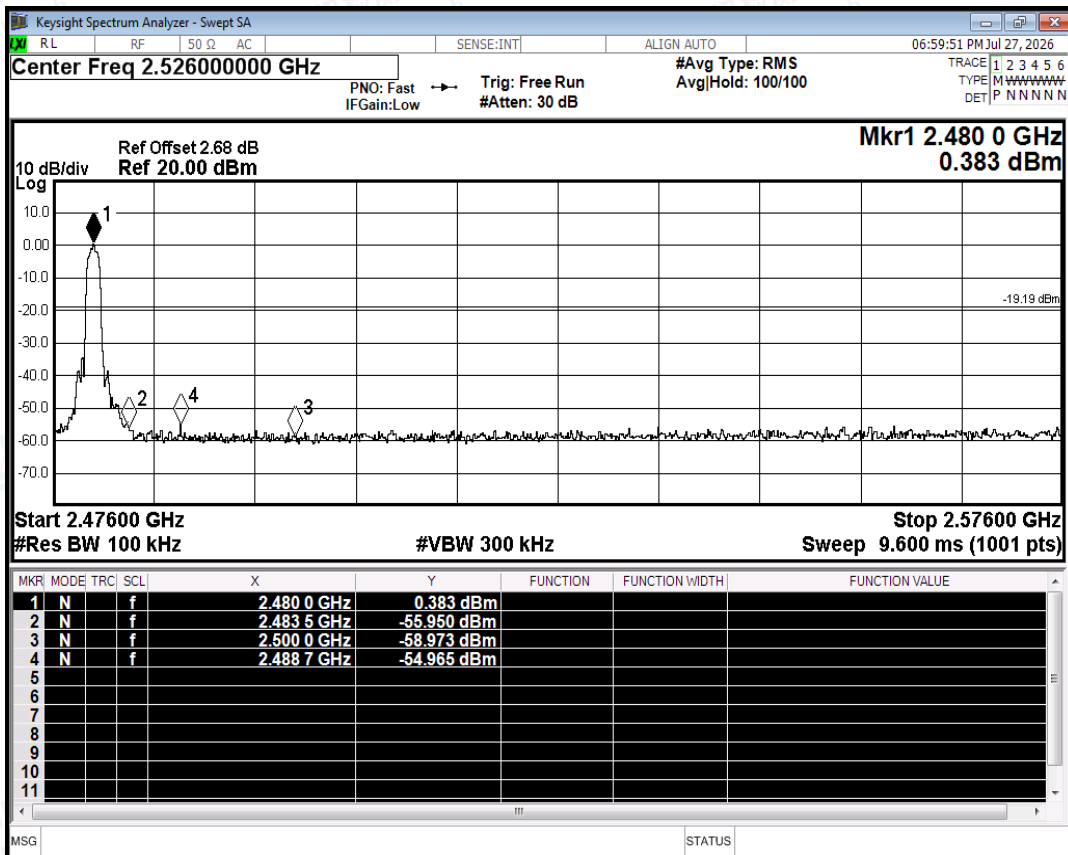
Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref



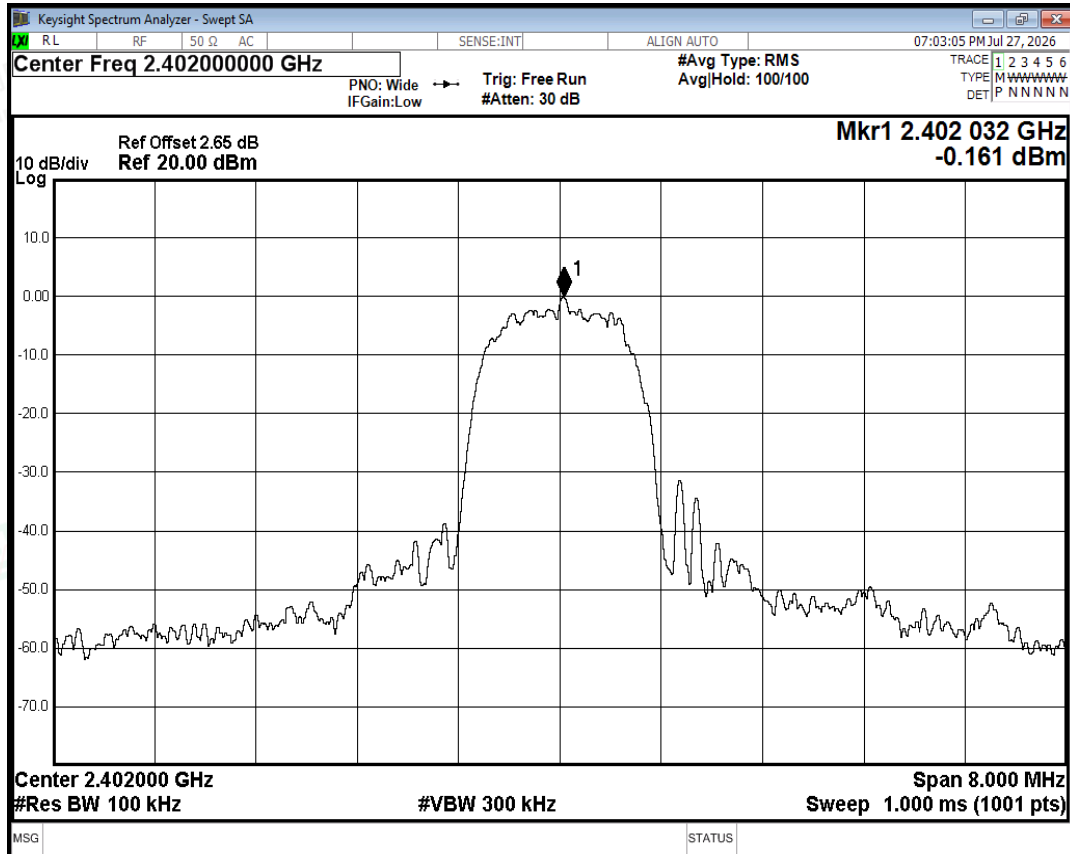
Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission



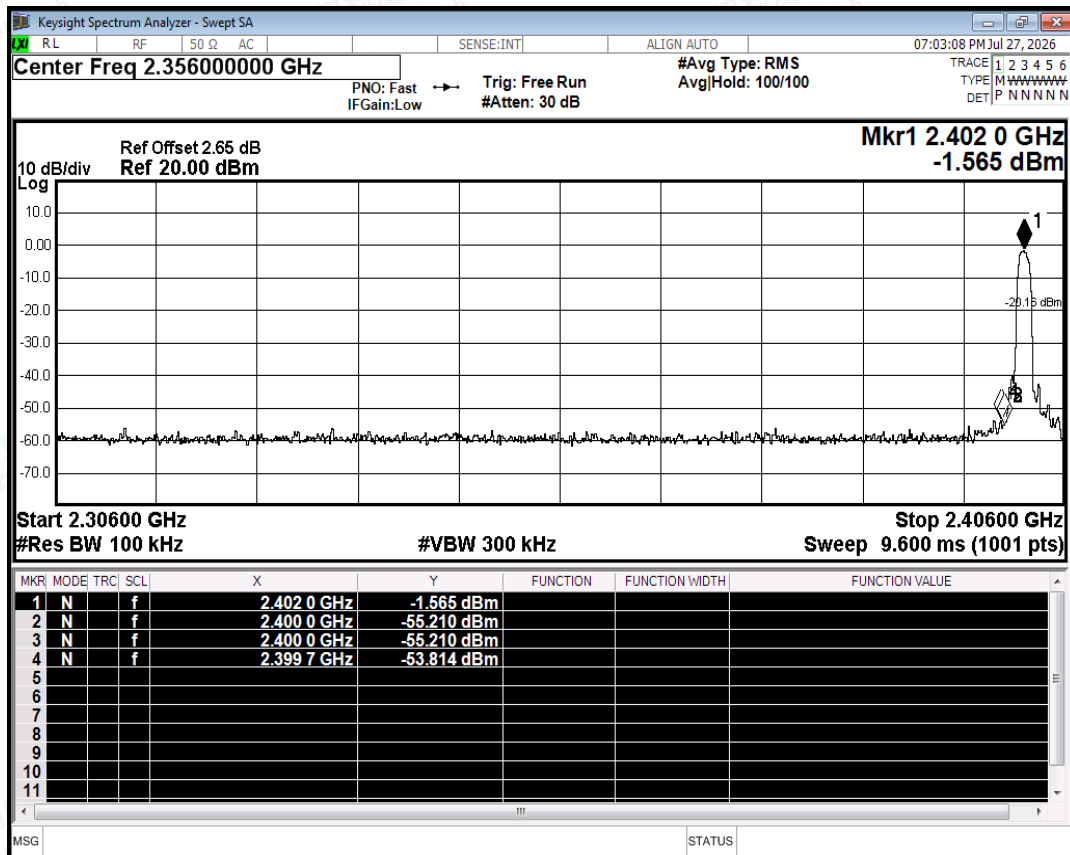
Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref



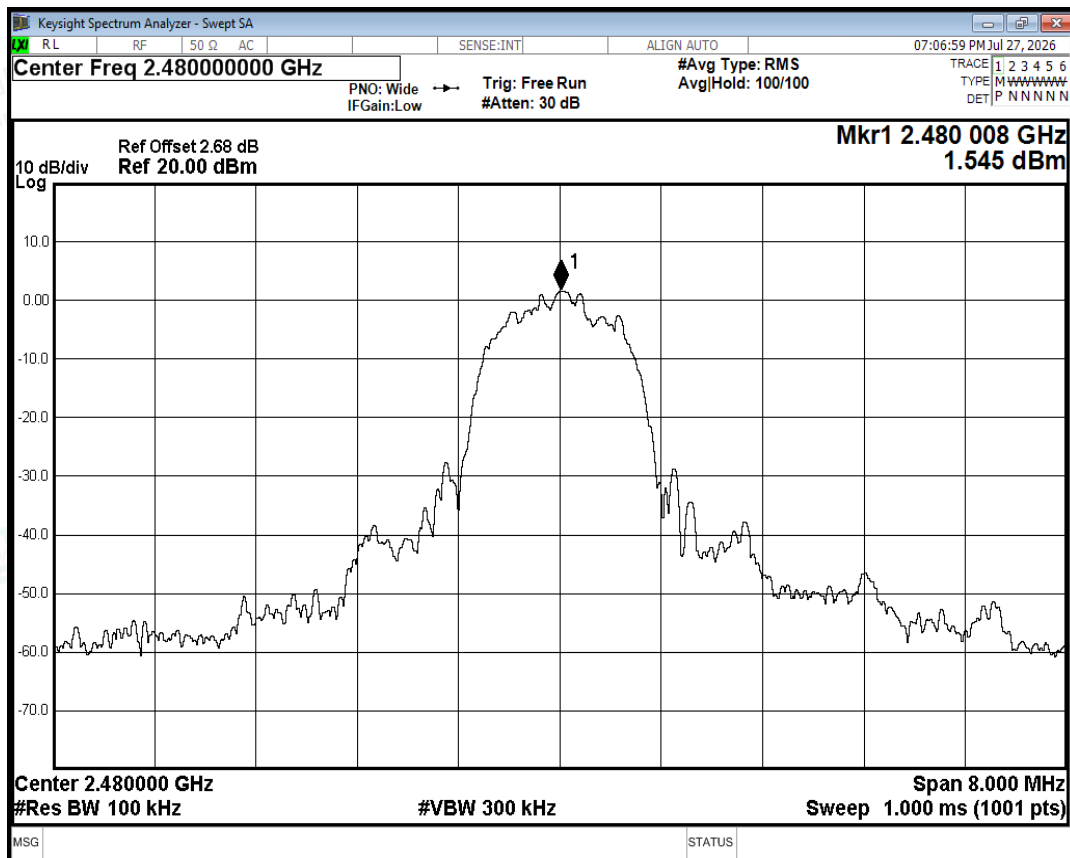
Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Emission



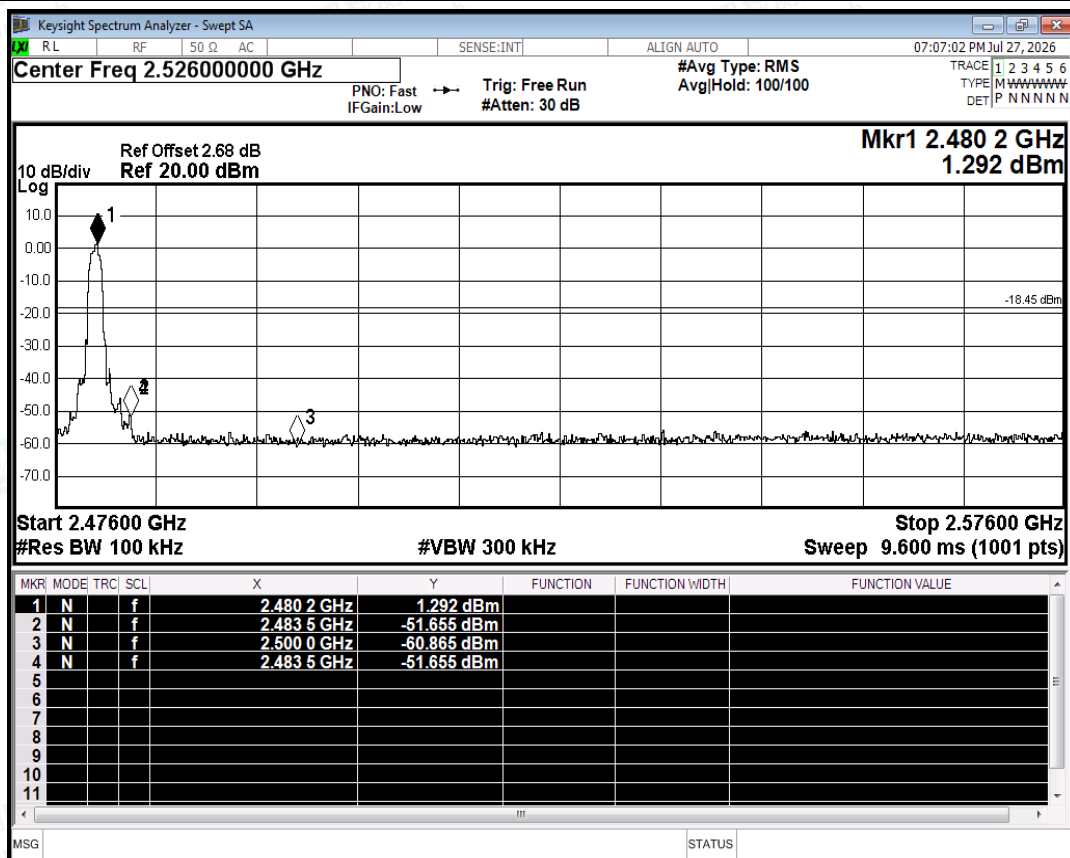
Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref



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



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

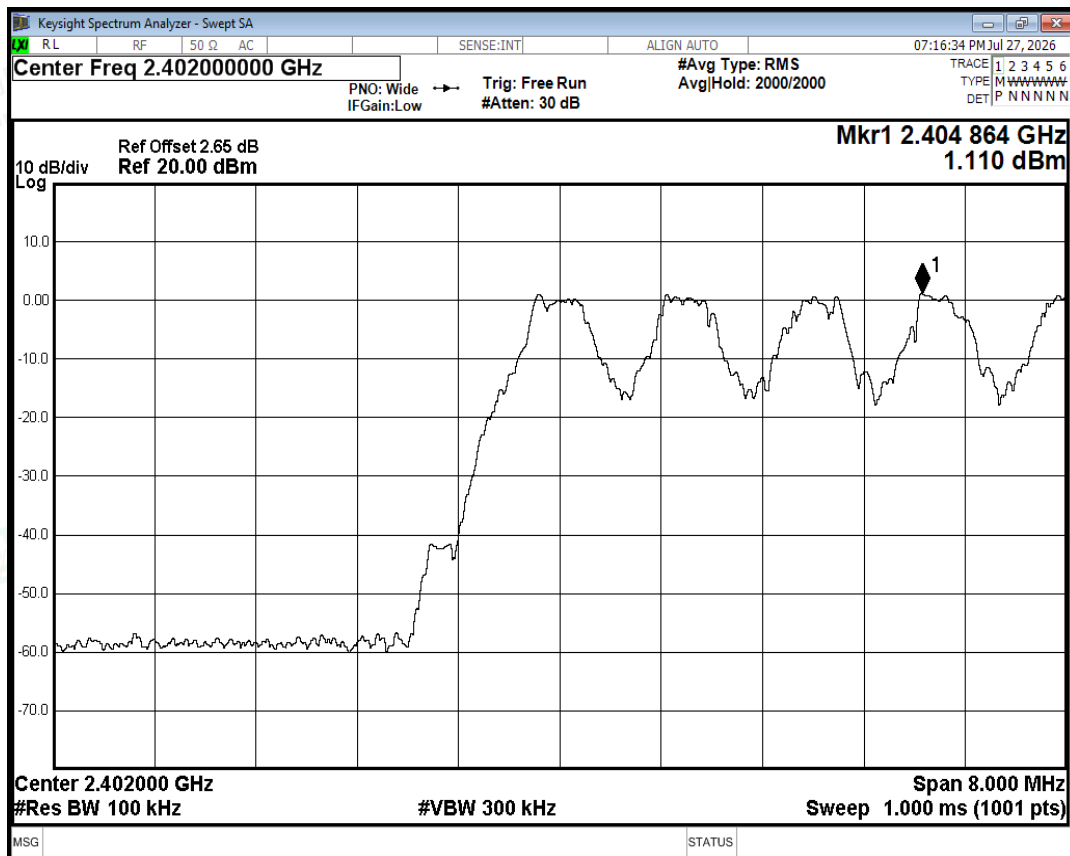


Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Emission

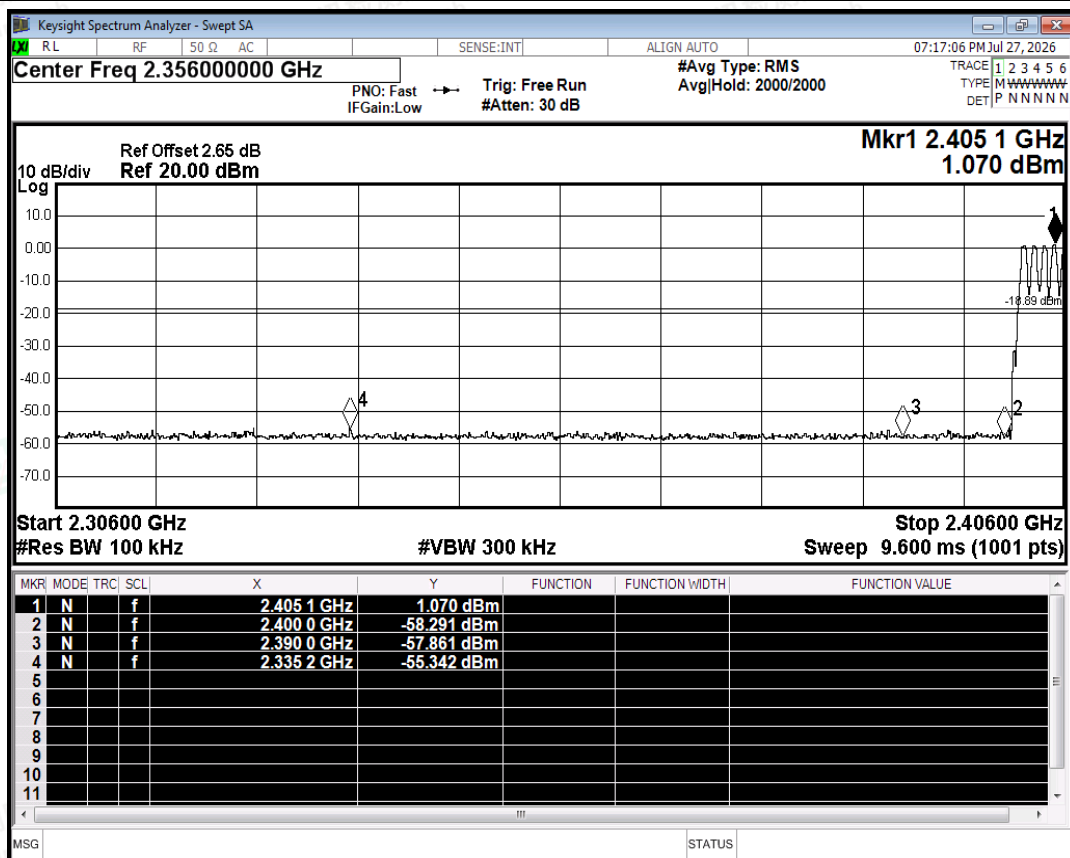


(Hopping)

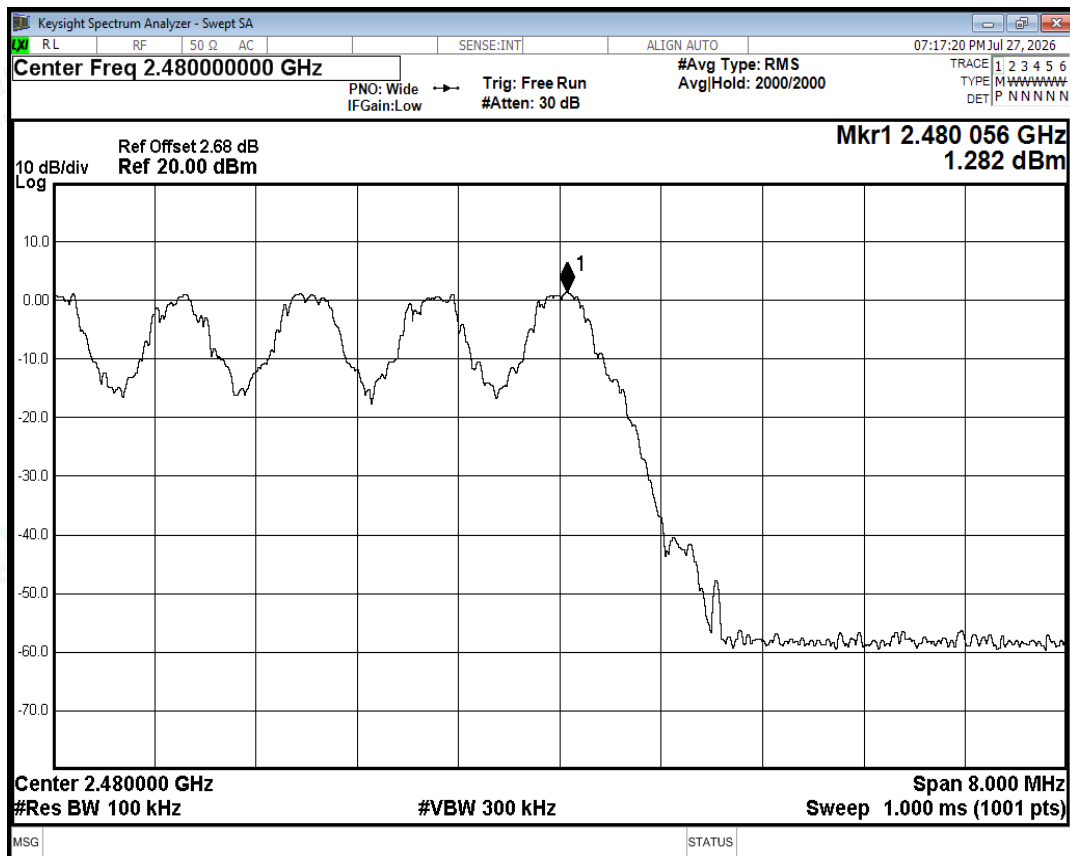
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-56.45	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-57.2	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-56.42	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-56.56	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-57.07	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-56.26	-20	Pass



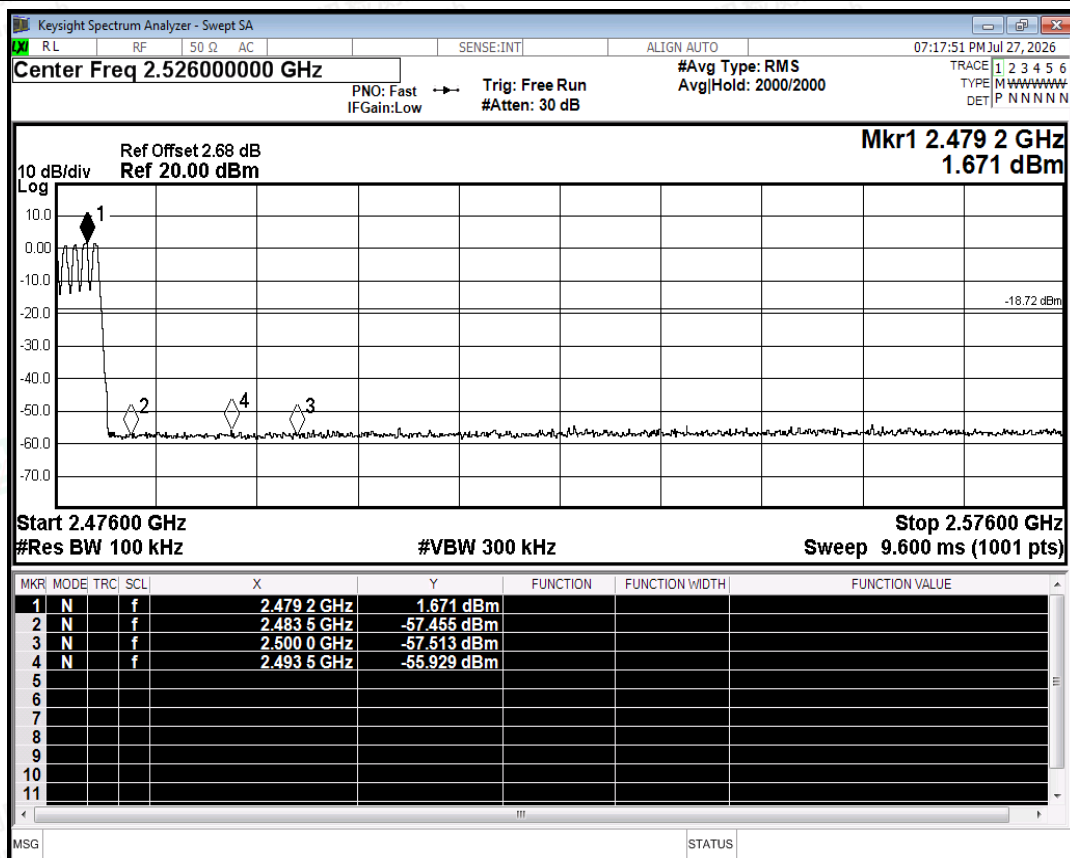
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Ref



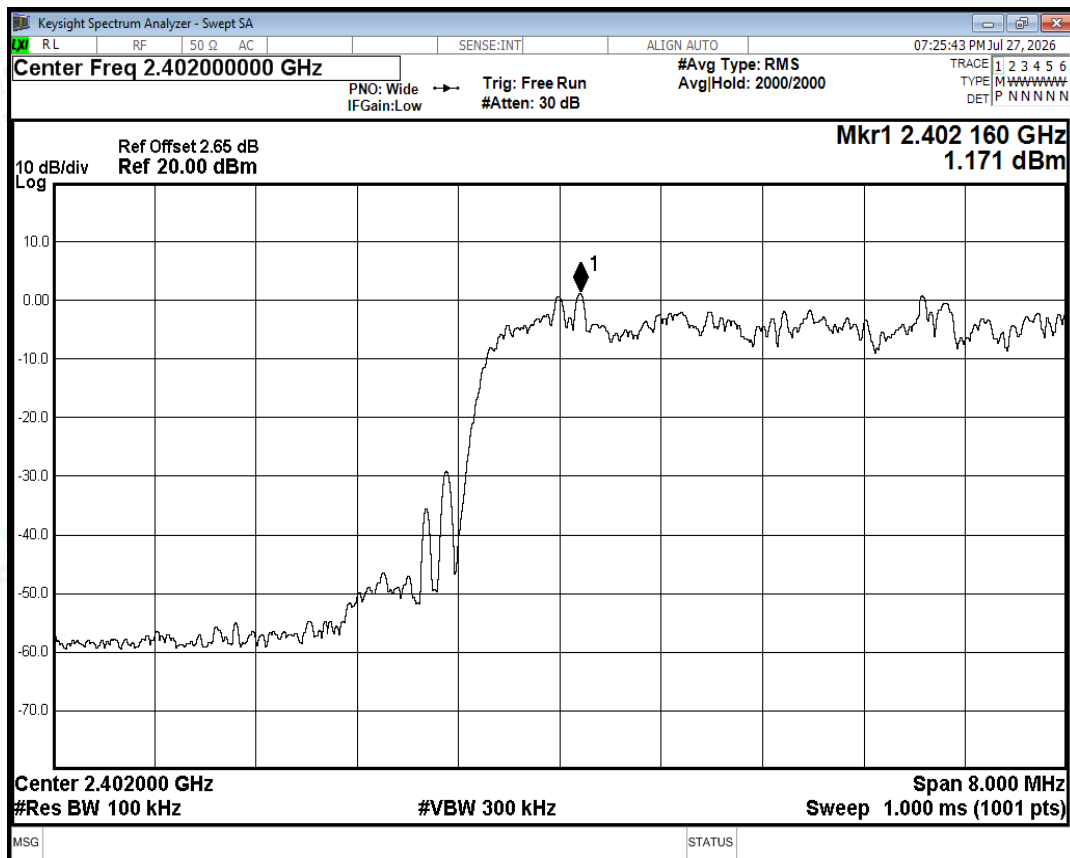
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission



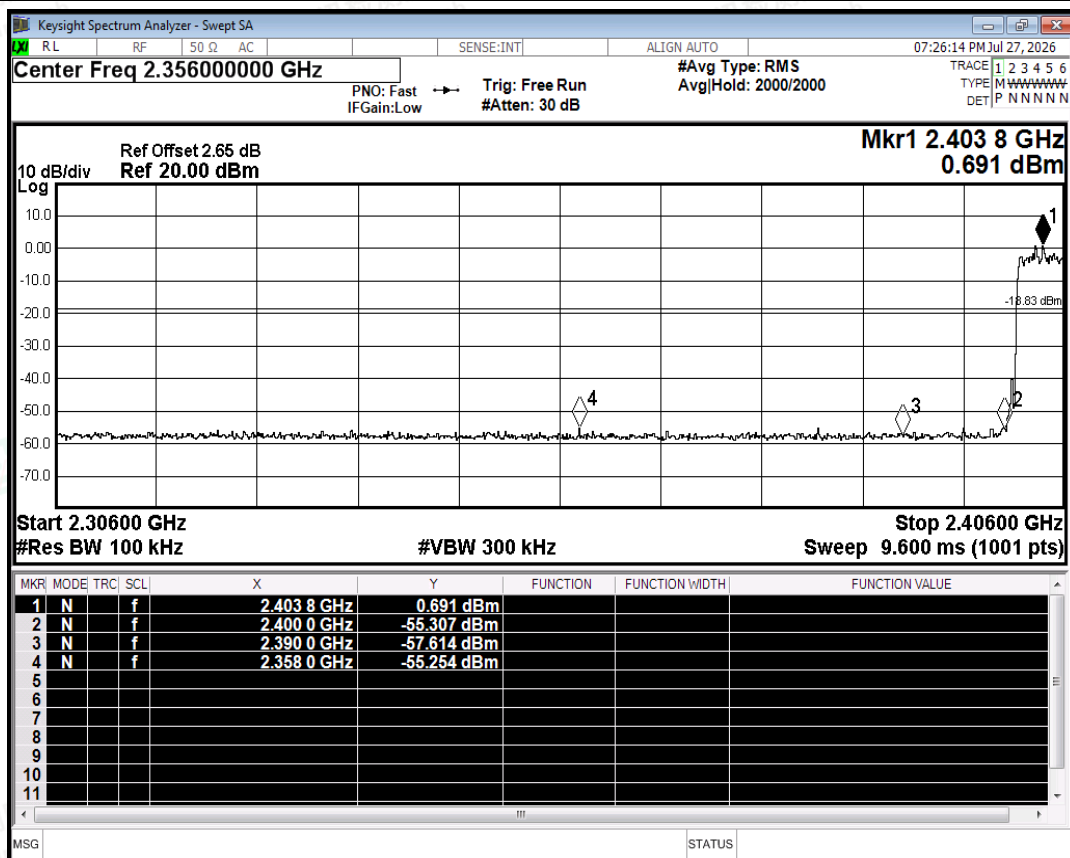
Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref



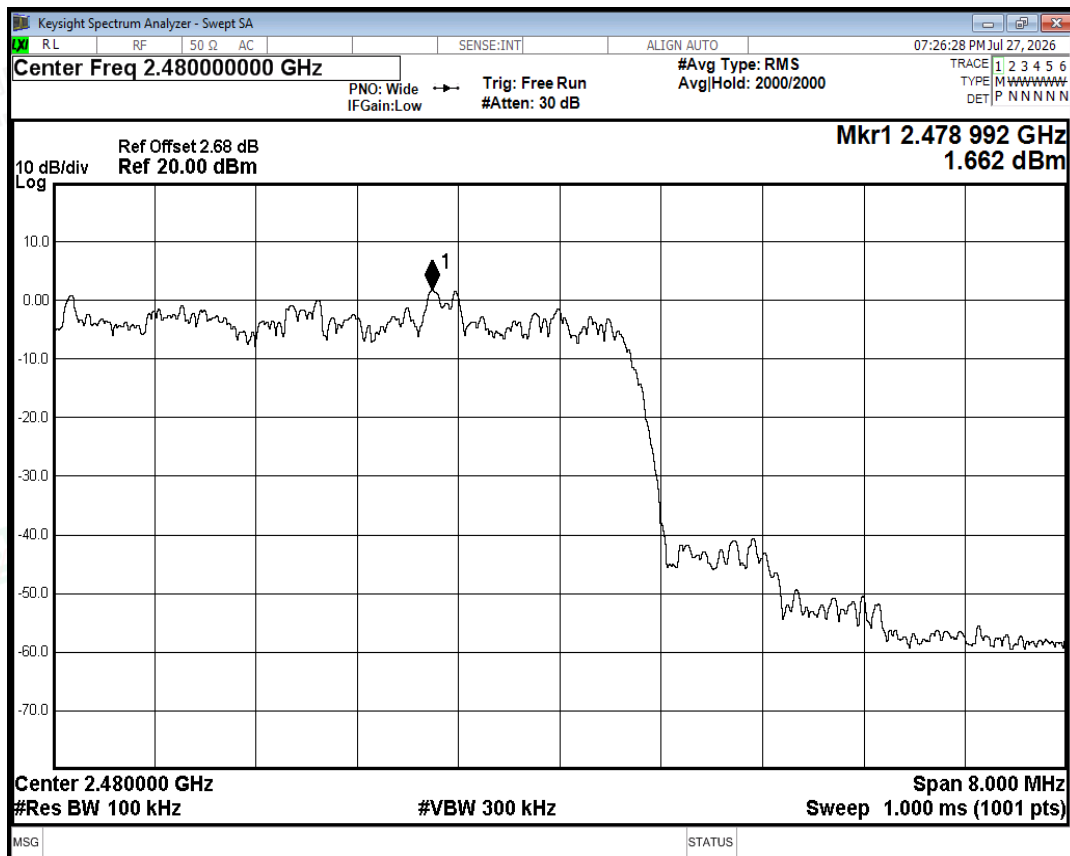
Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Emission



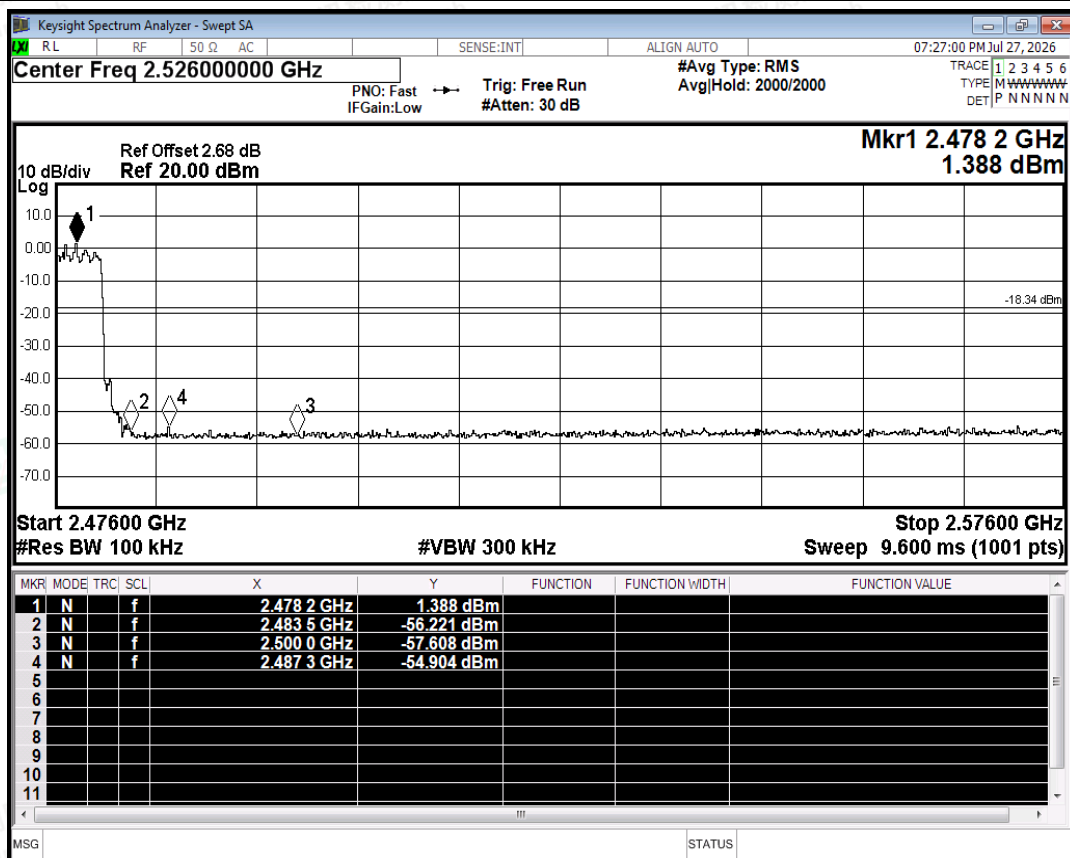
Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Ref



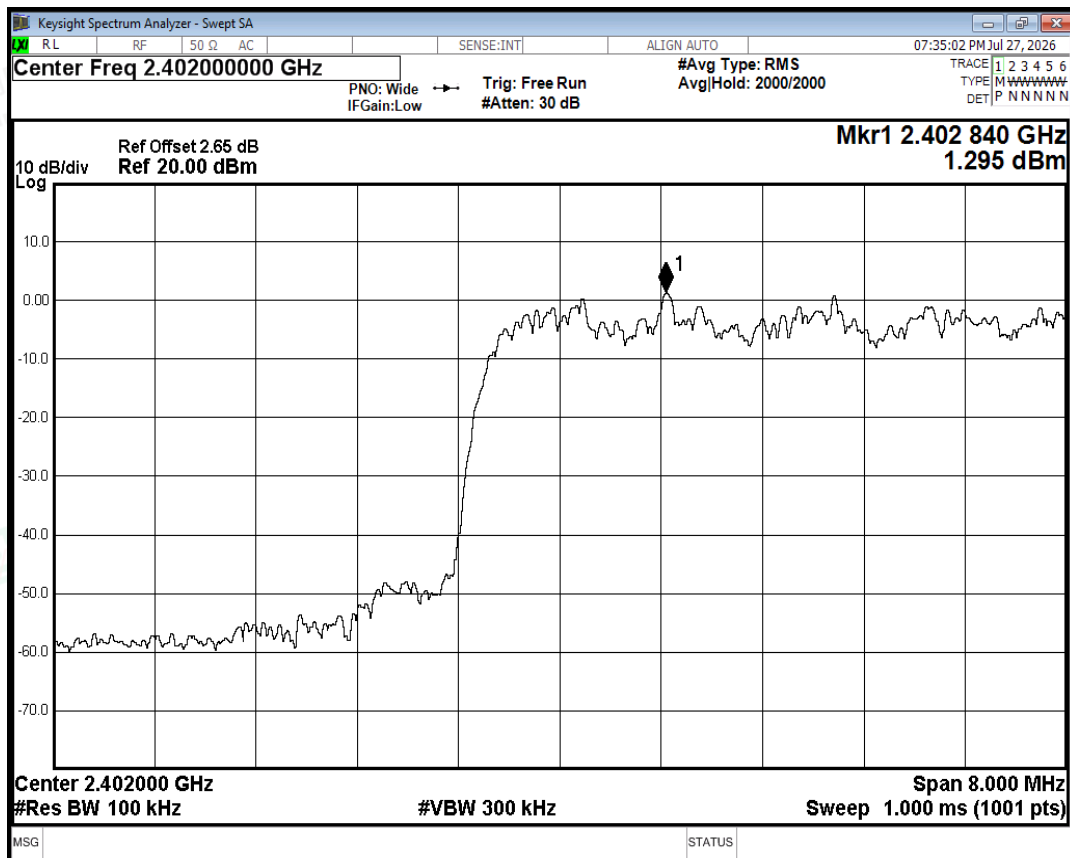
Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Emission



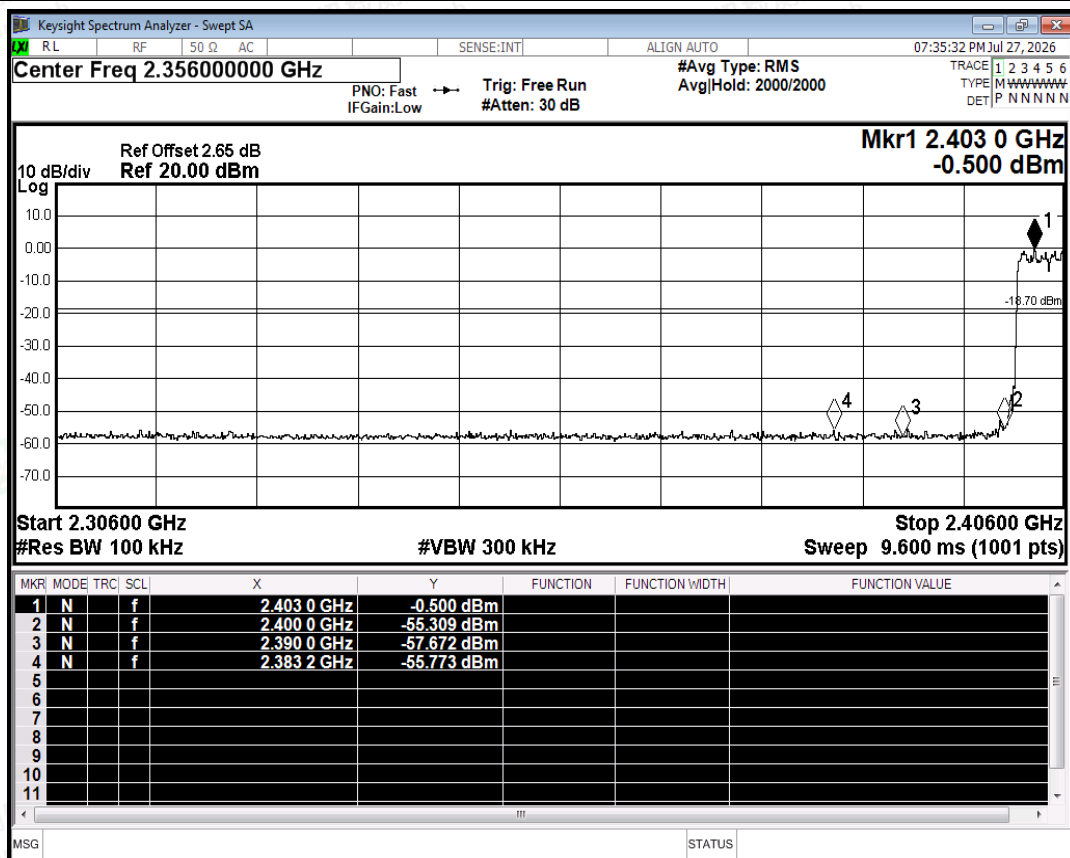
Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Ref



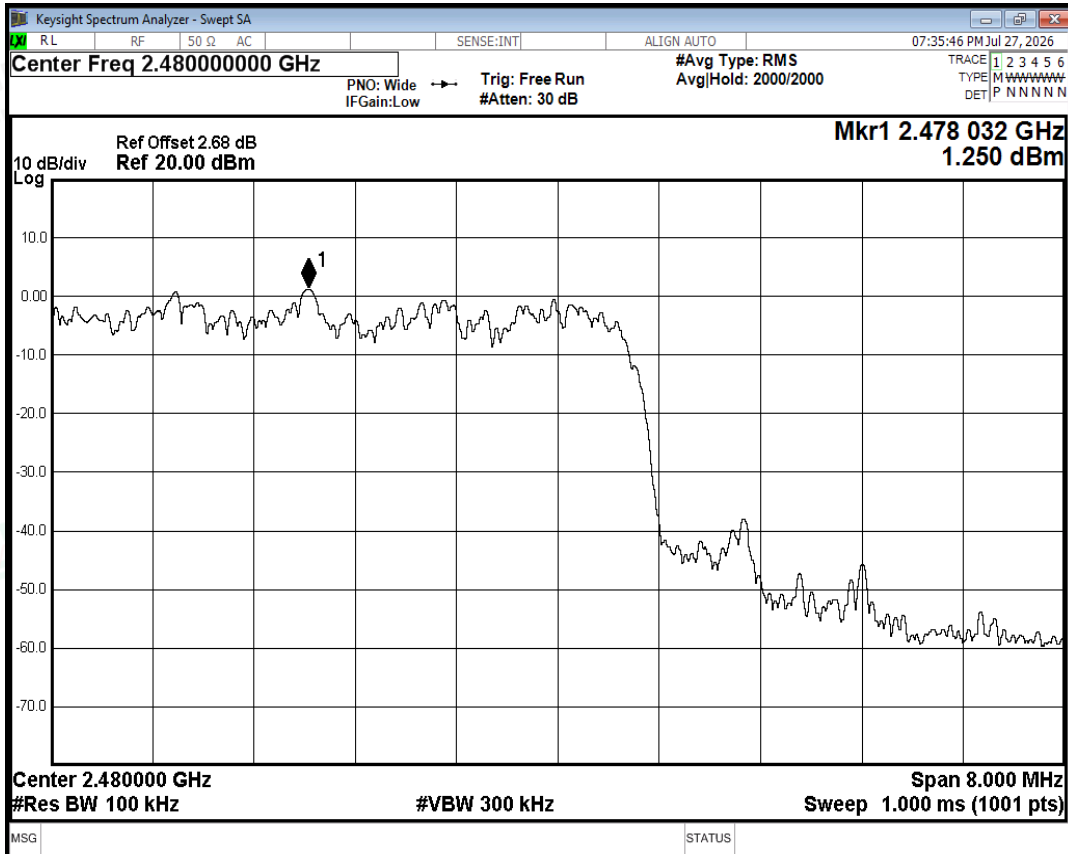
Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Emission



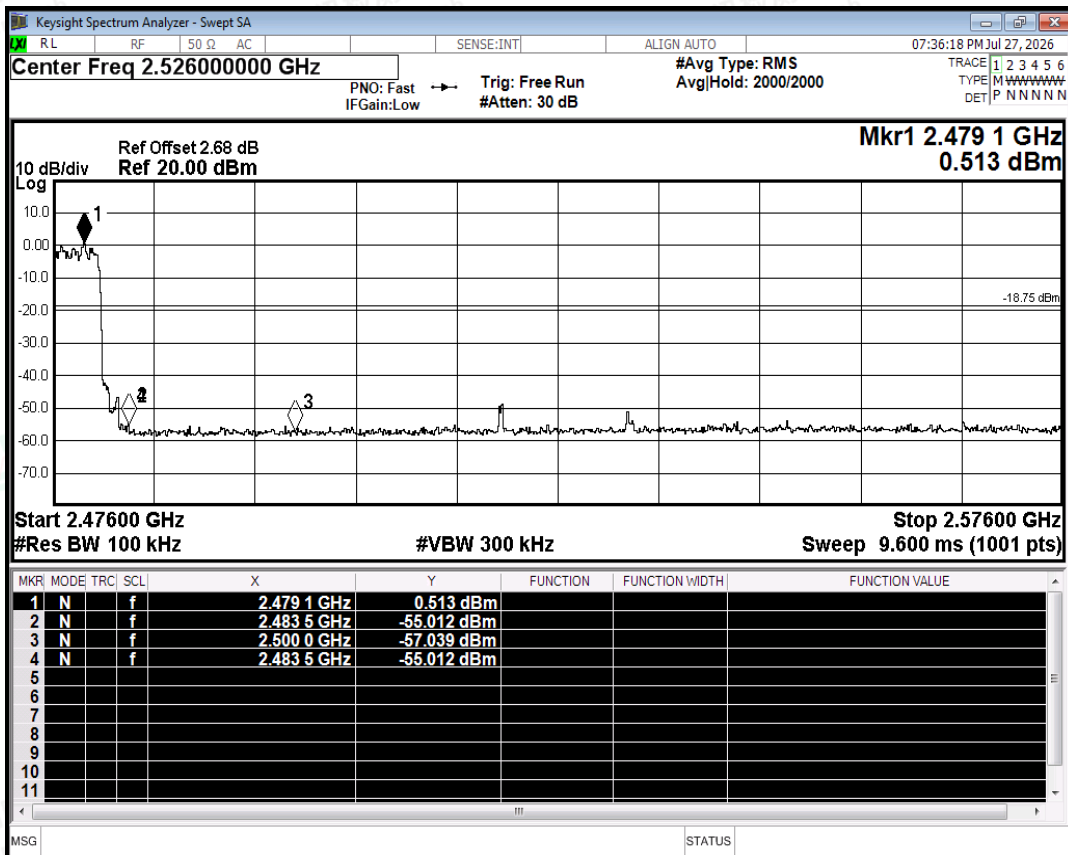
Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Ref



Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Emission



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

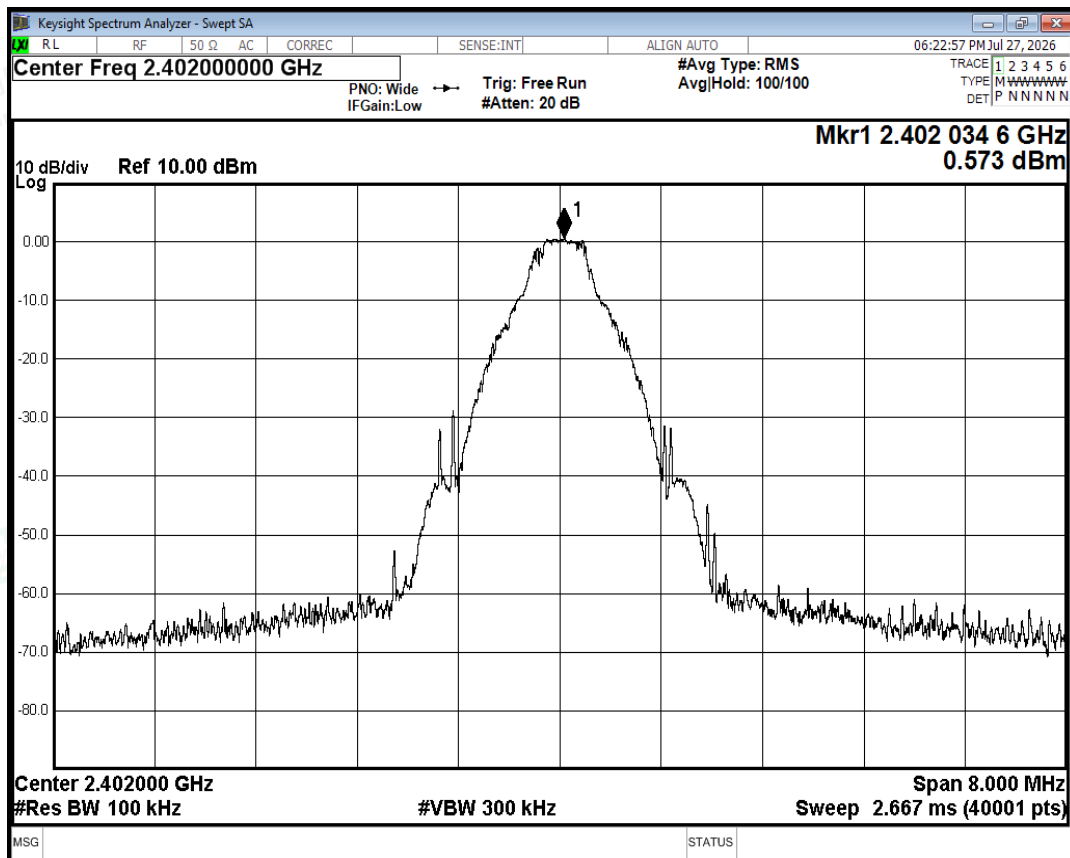


Band Edge(Hopping) NVNT 3-DH5 2480MHz Ant1 Hopping Emission

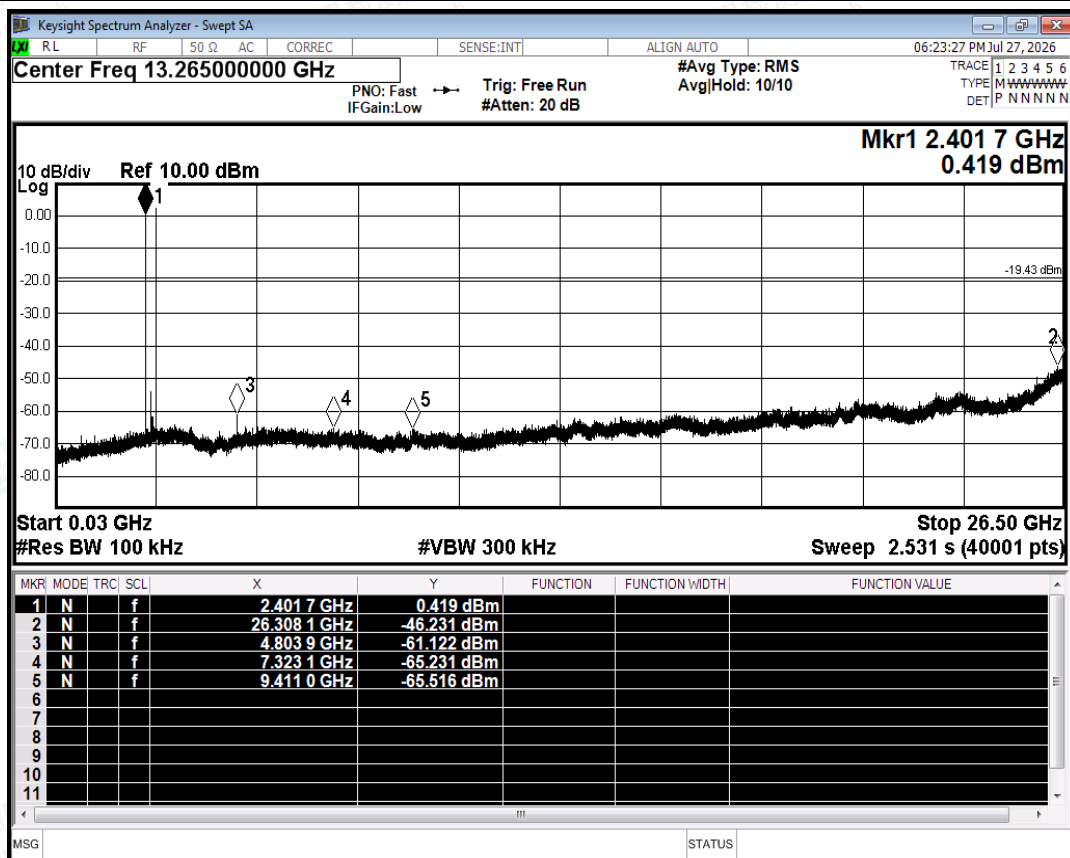


A.7 Conducted RF Spurious Emission

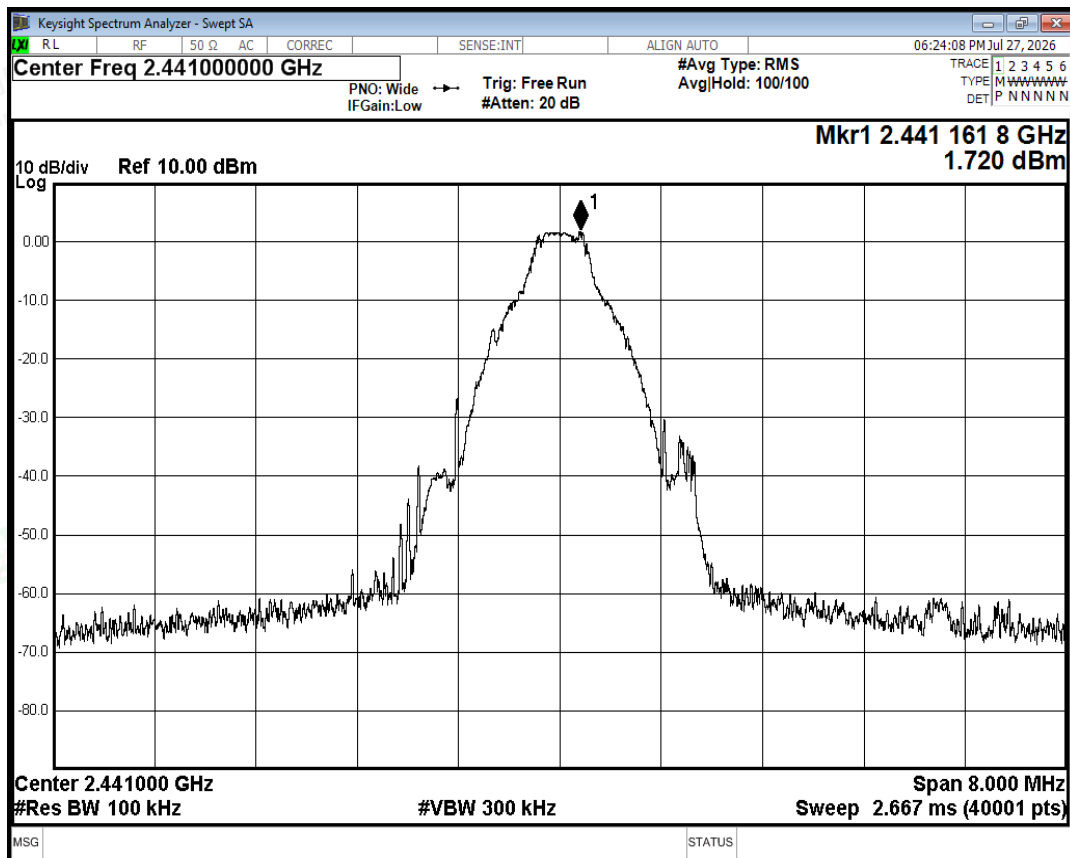
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-46.8	-20	Pass
NVNT	1-DH5	2441	Ant1	-47.92	-20	Pass
NVNT	1-DH5	2480	Ant1	-48.2	-20	Pass
NVNT	2-DH5	2402	Ant1	-46.29	-20	Pass
NVNT	2-DH5	2441	Ant1	-48.61	-20	Pass
NVNT	2-DH5	2480	Ant1	-46.67	-20	Pass
NVNT	3-DH5	2402	Ant1	-47.11	-20	Pass
NVNT	3-DH5	2441	Ant1	-48.25	-20	Pass
NVNT	3-DH5	2480	Ant1	-45.75	-20	Pass



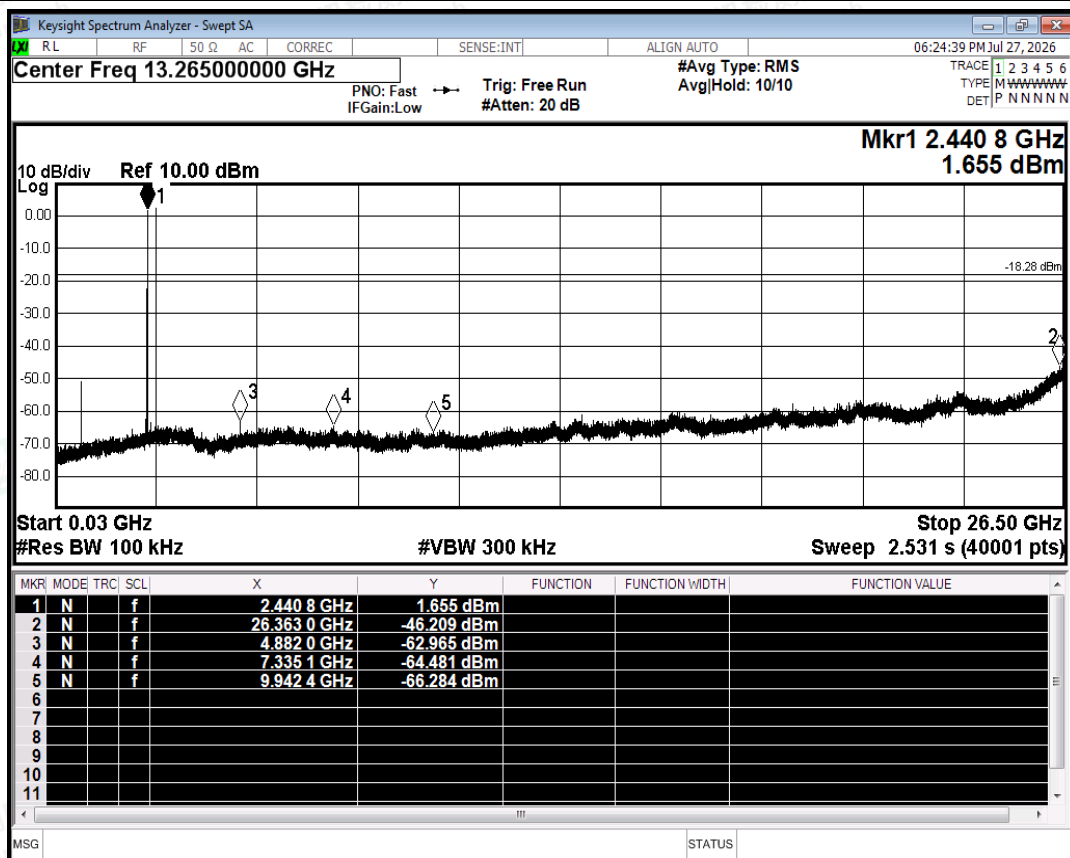
Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref



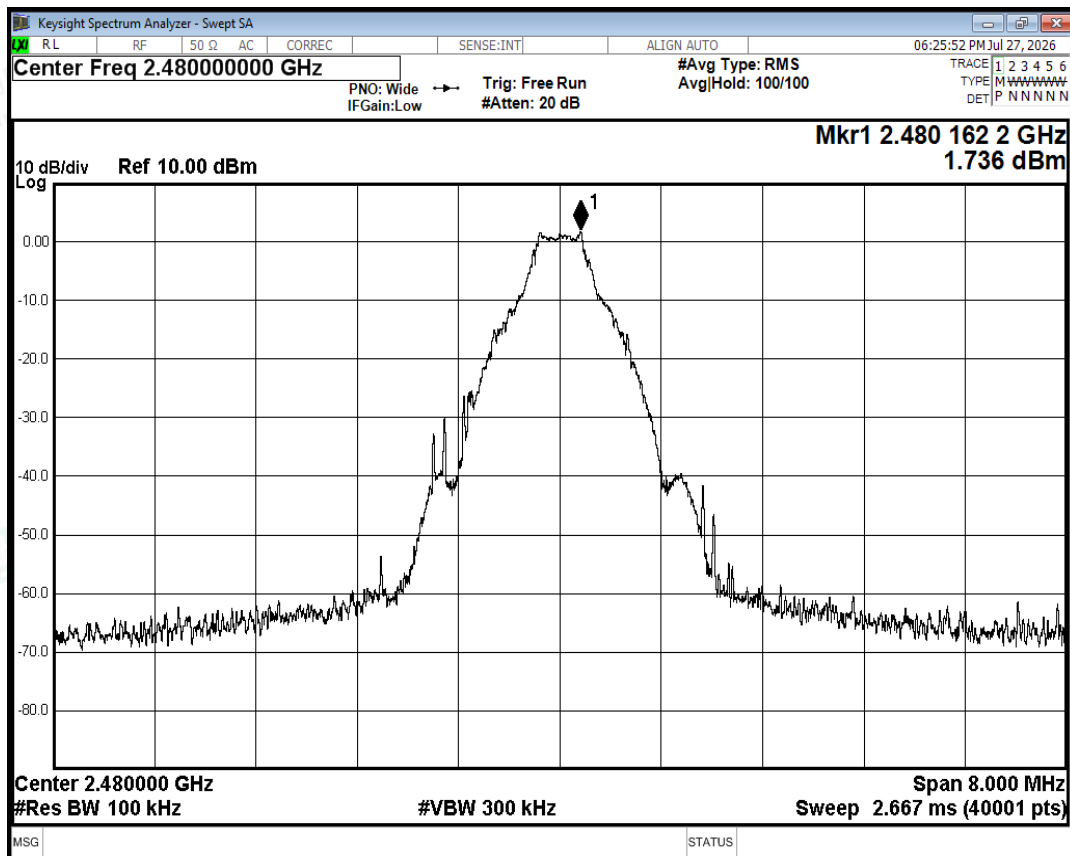
Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission



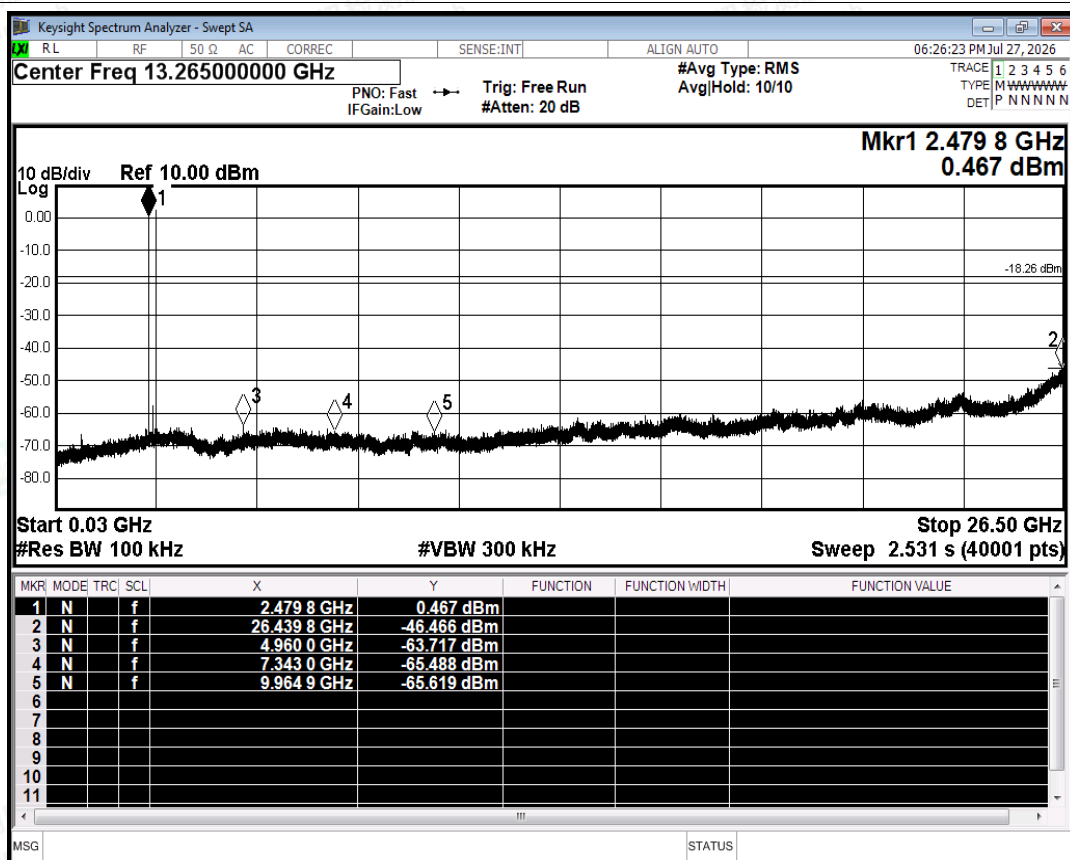
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref



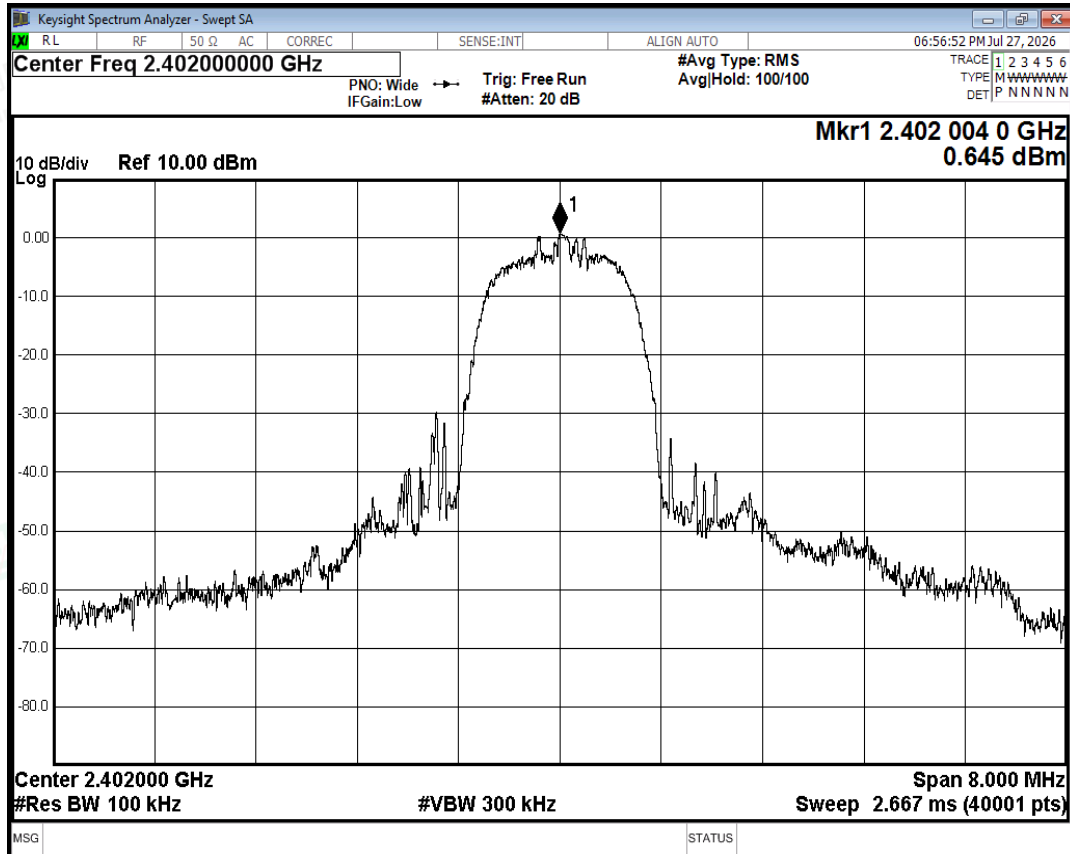
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission



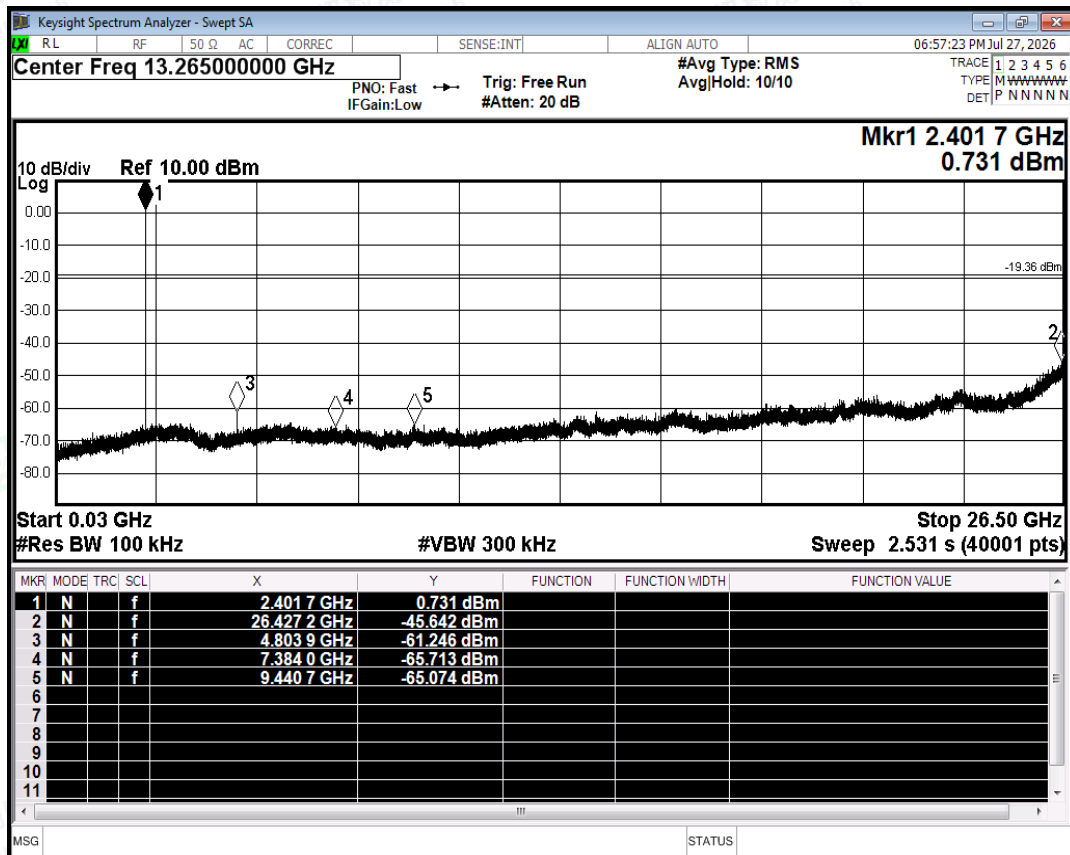
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref



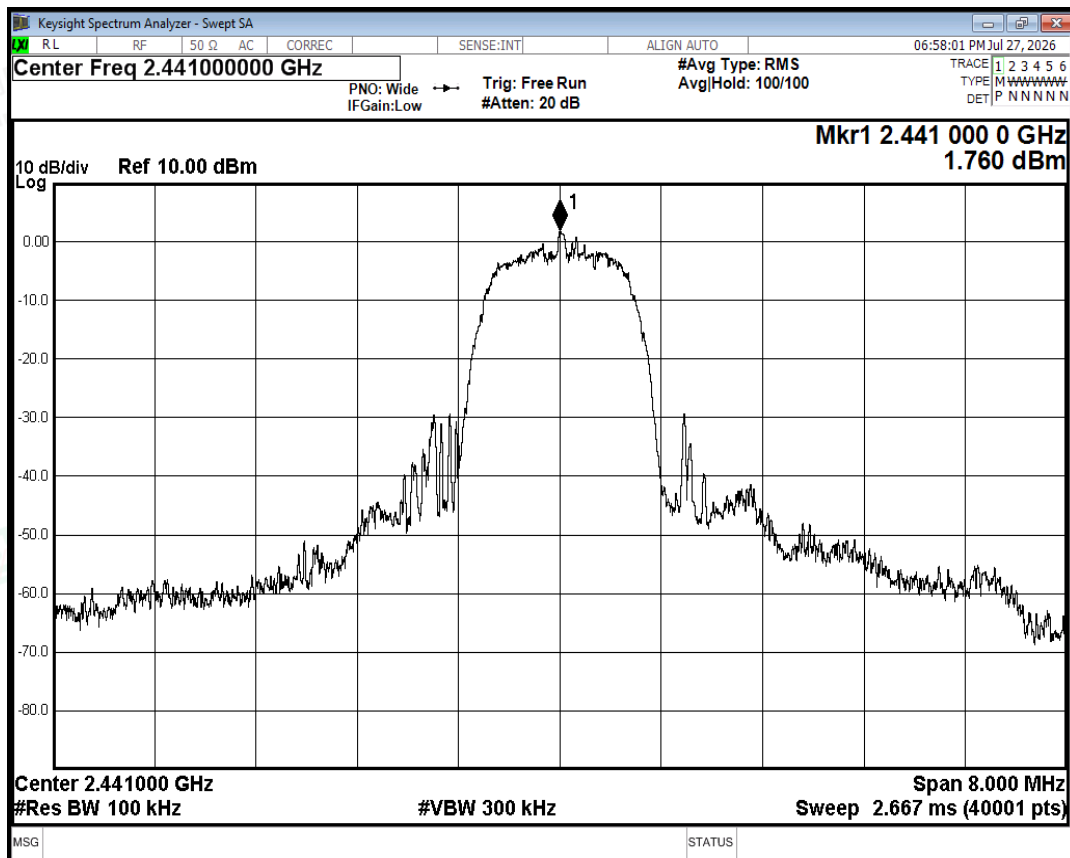
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission



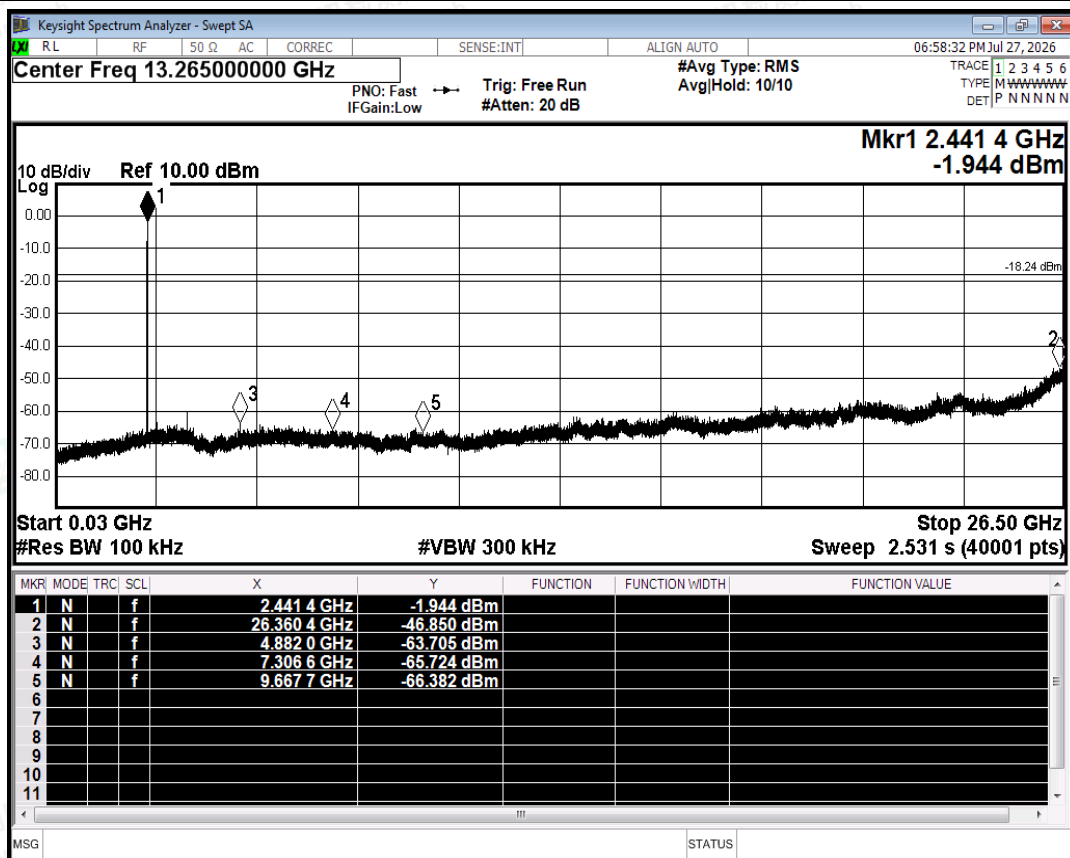
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref



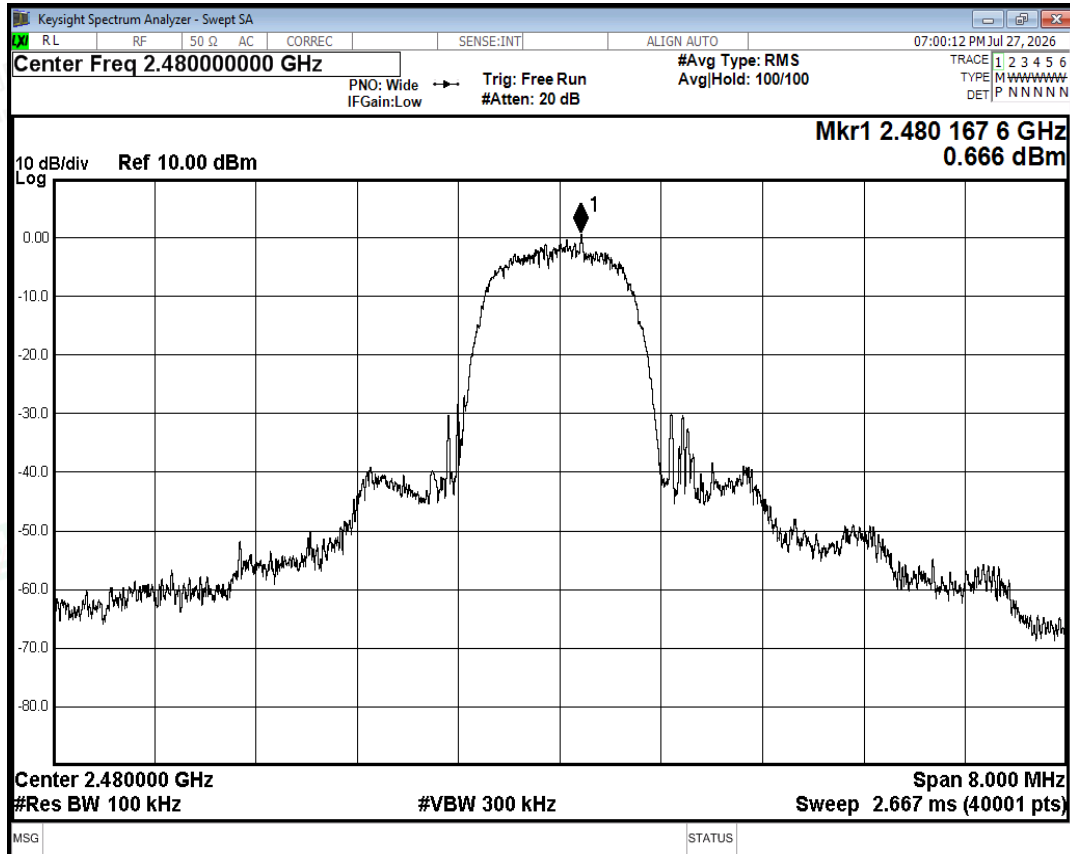
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Emission



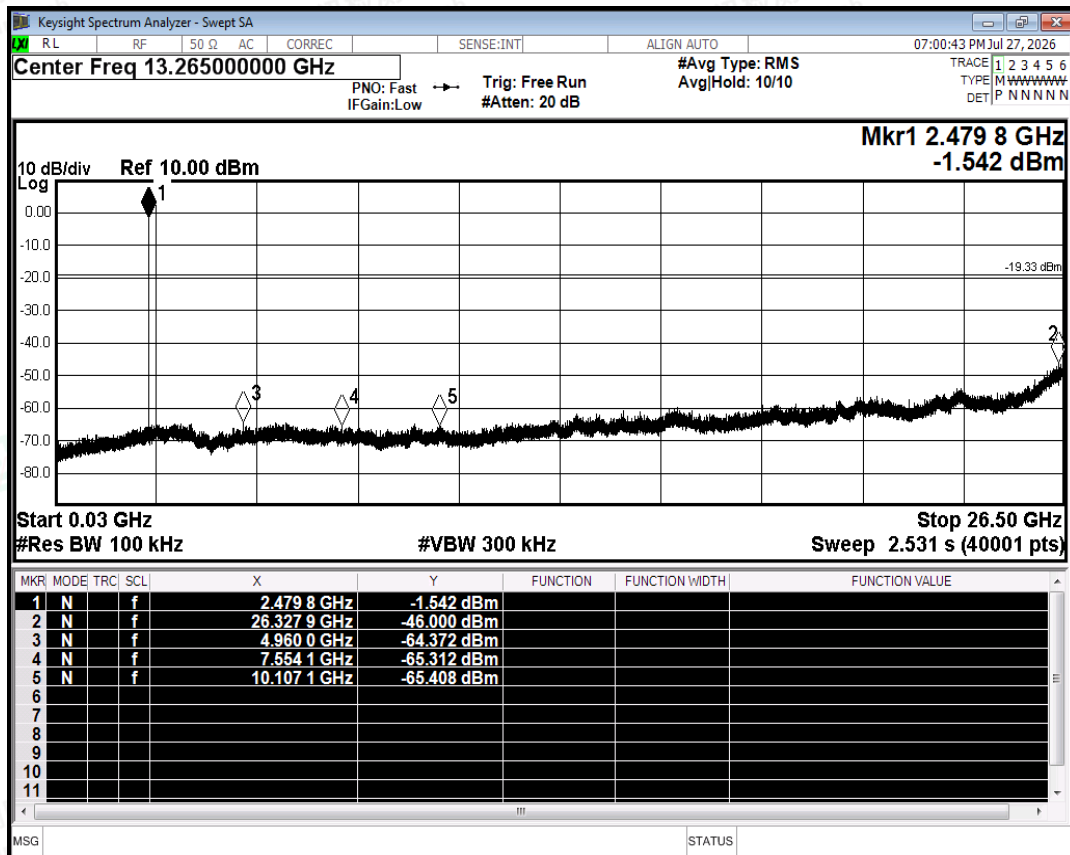
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Ref



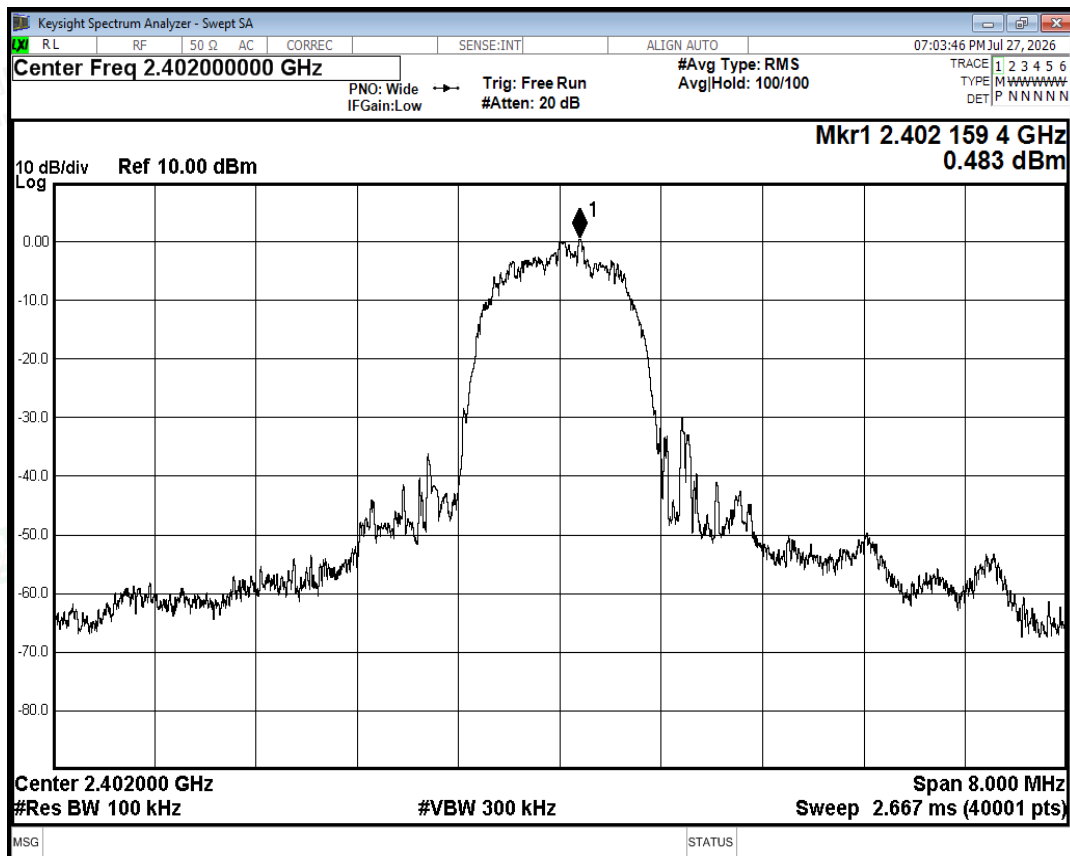
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Emission



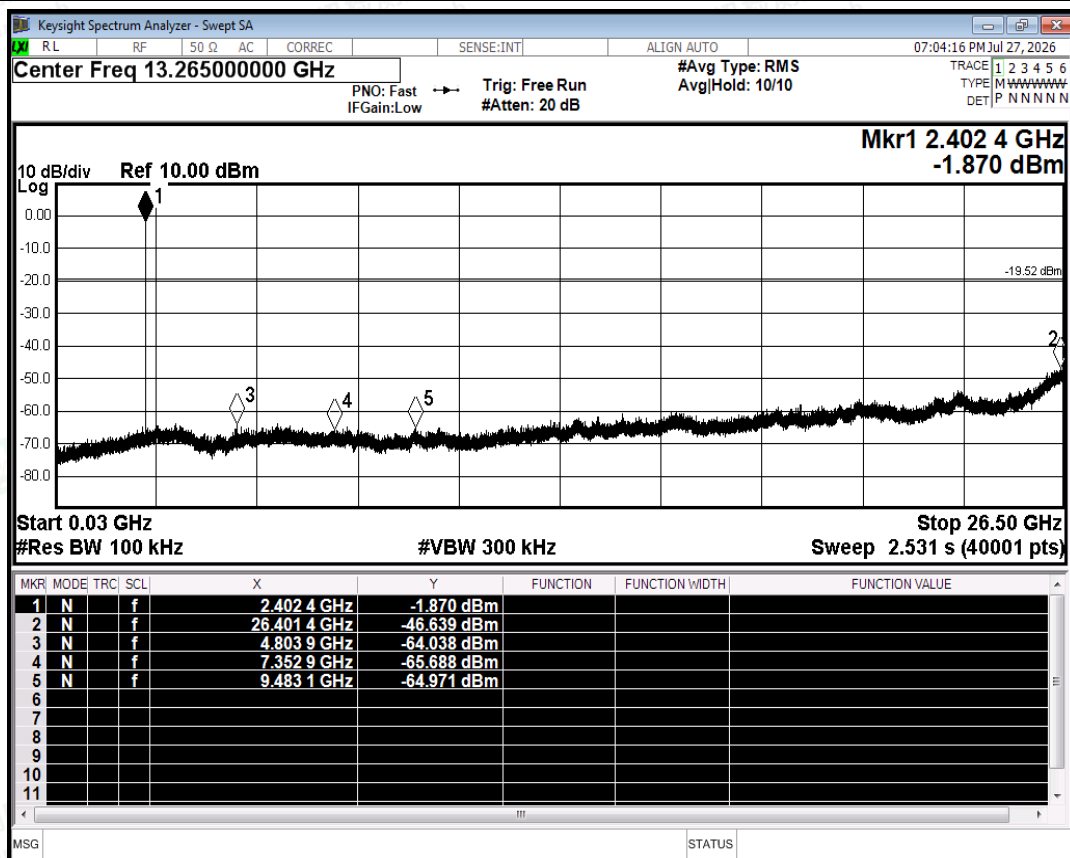
Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Ref



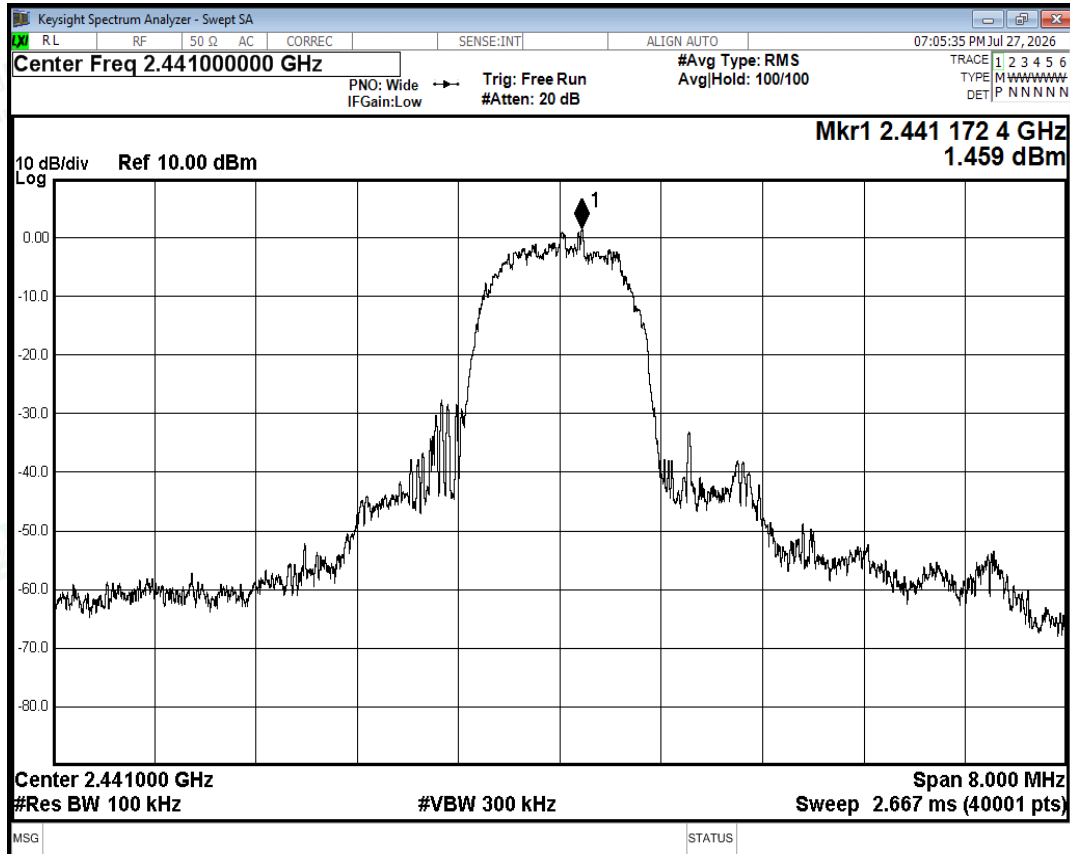
Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Emission



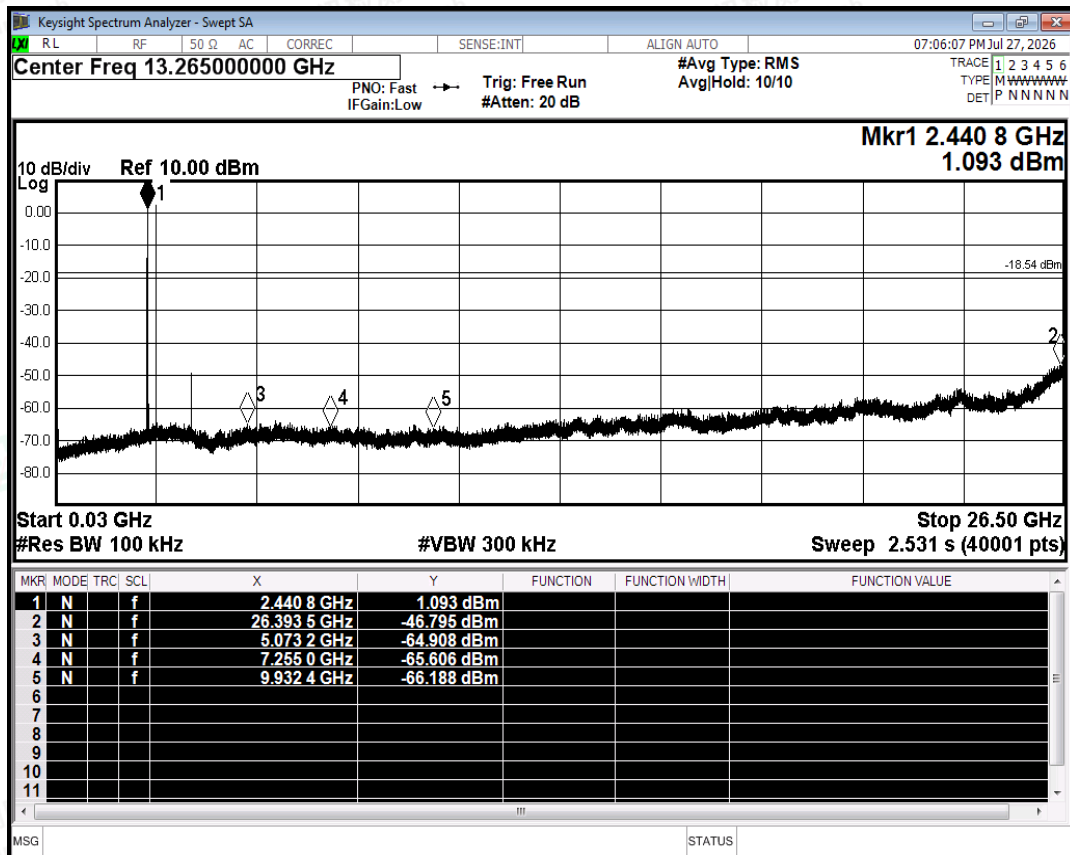
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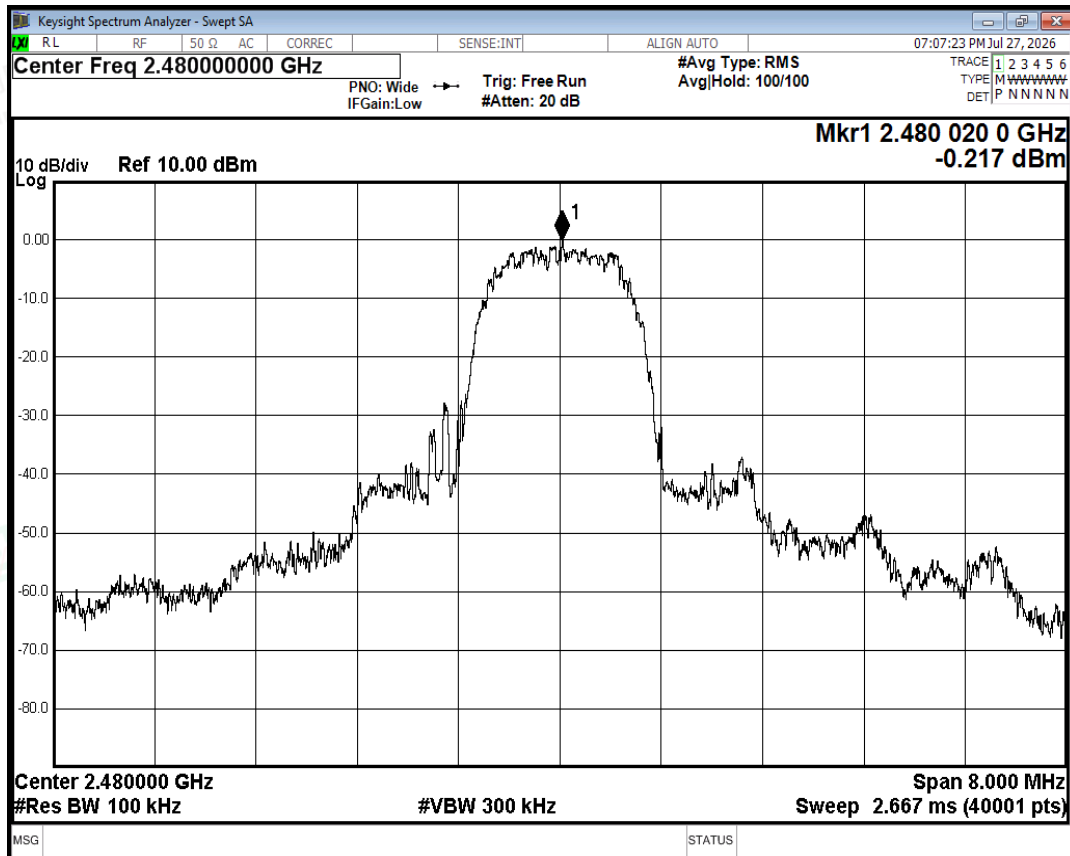
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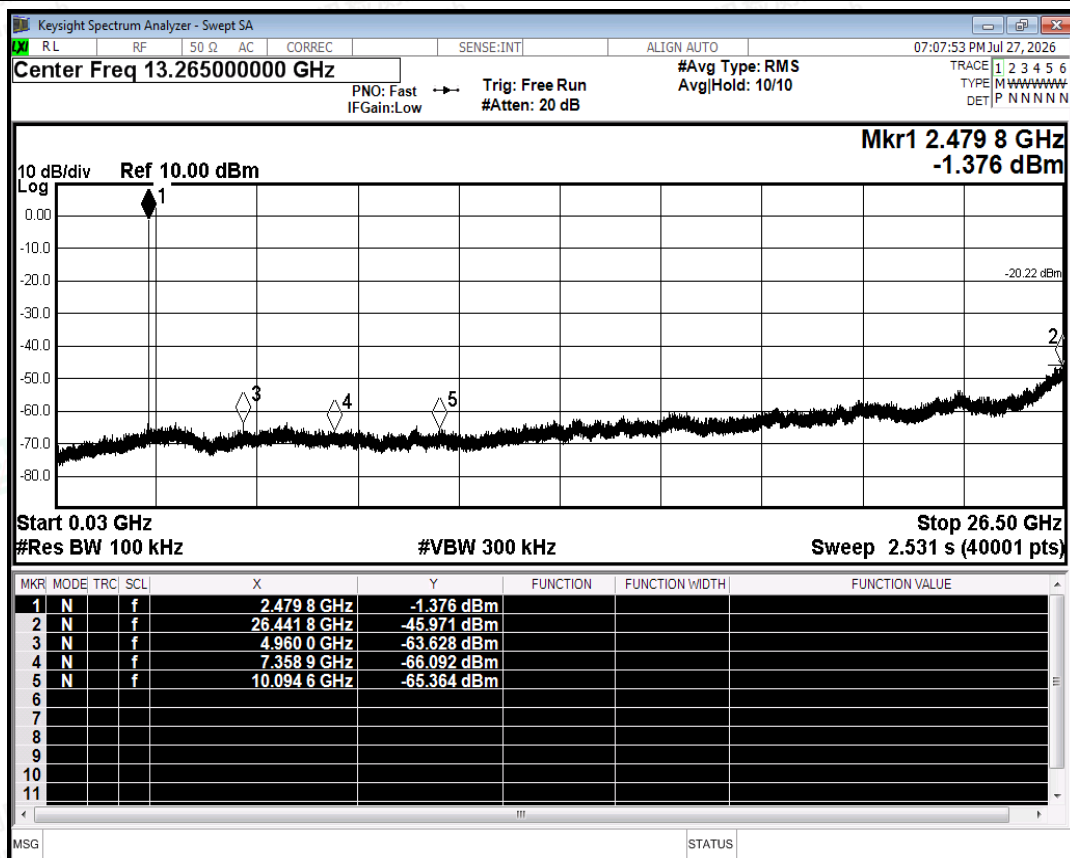
Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Ref



Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Ref

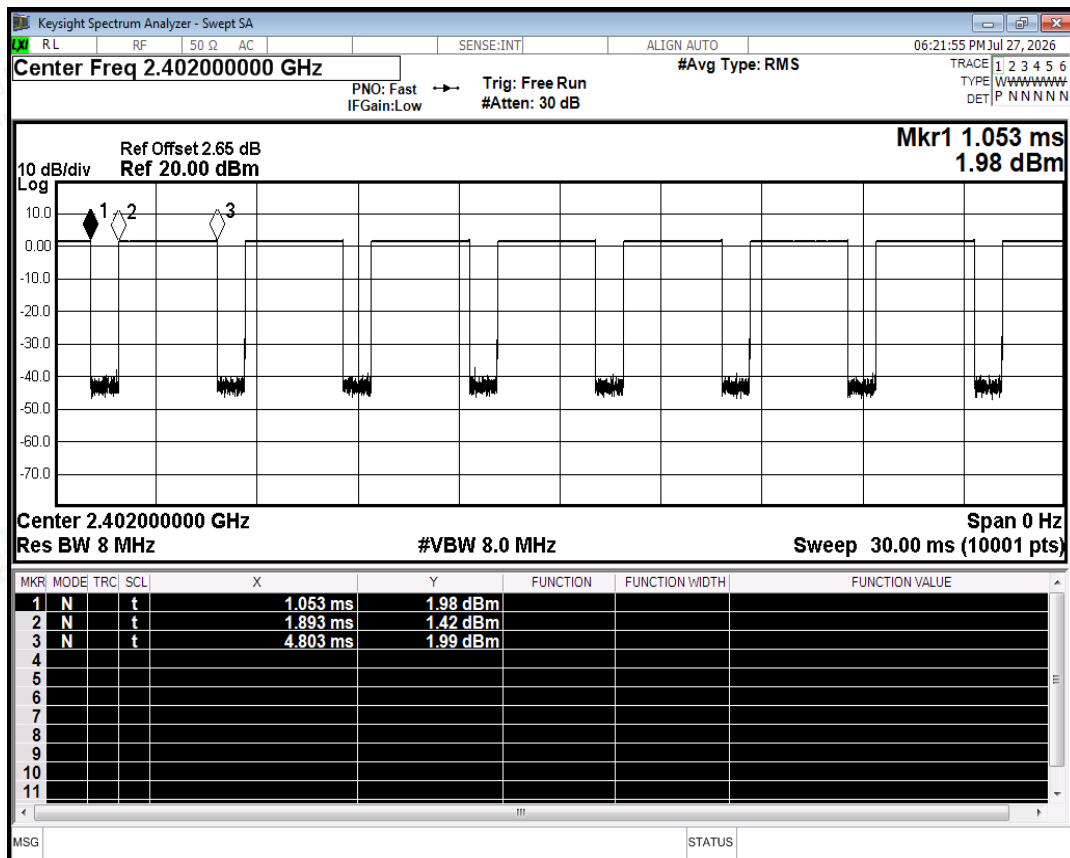


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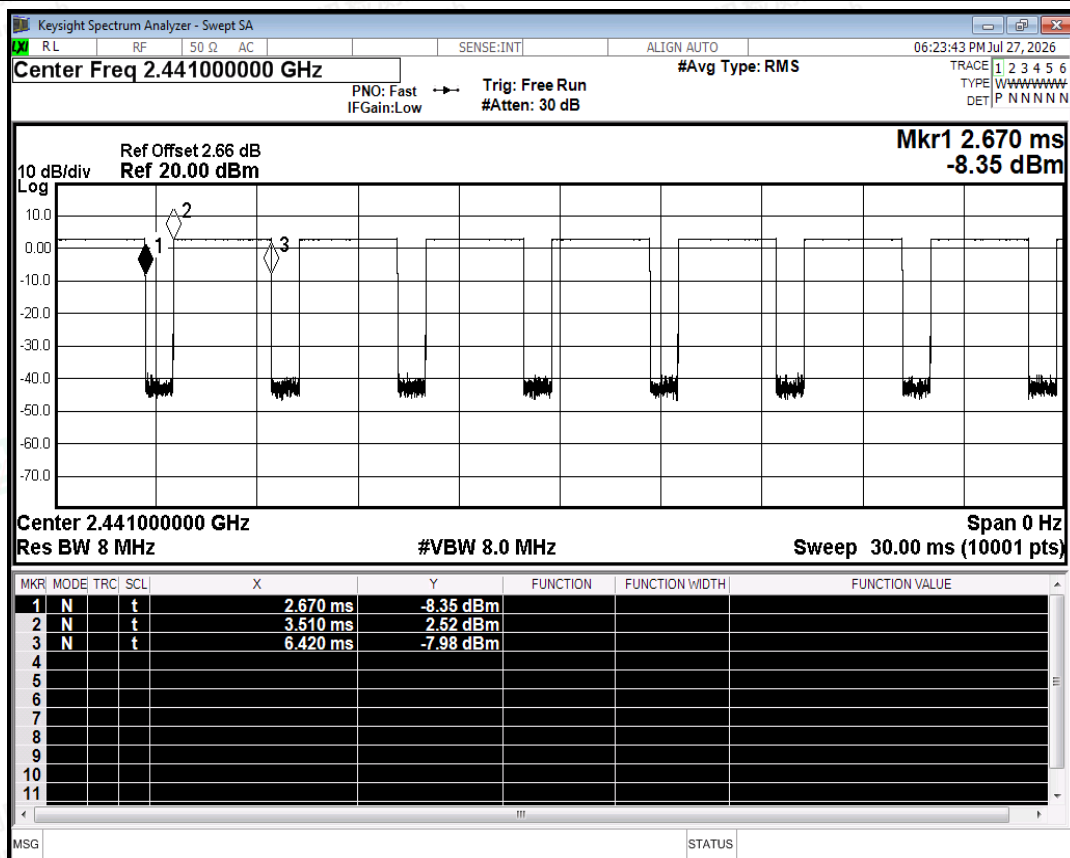


A.8 Duty Cycle

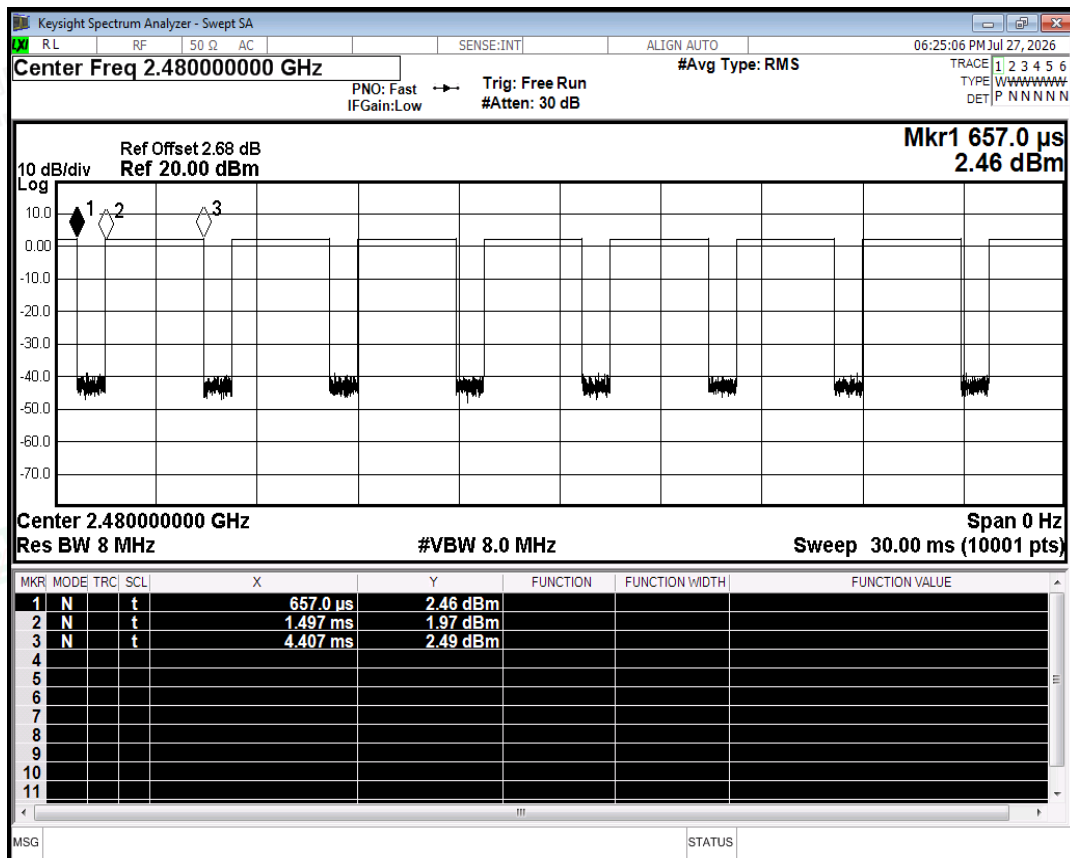
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH5	2402	Ant1	77.6	1.1	0.34
NVNT	1-DH5	2441	Ant1	77.6	1.1	0.34
NVNT	1-DH5	2480	Ant1	77.6	1.1	0.34
NVNT	2-DH5	2402	Ant1	77.36	1.11	0.34
NVNT	2-DH5	2441	Ant1	77.28	1.12	0.35
NVNT	2-DH5	2480	Ant1	77.28	1.12	0.35
NVNT	3-DH5	2402	Ant1	77.2	1.12	0.35
NVNT	3-DH5	2441	Ant1	77.2	1.12	0.35
NVNT	3-DH5	2480	Ant1	77.2	1.12	0.35



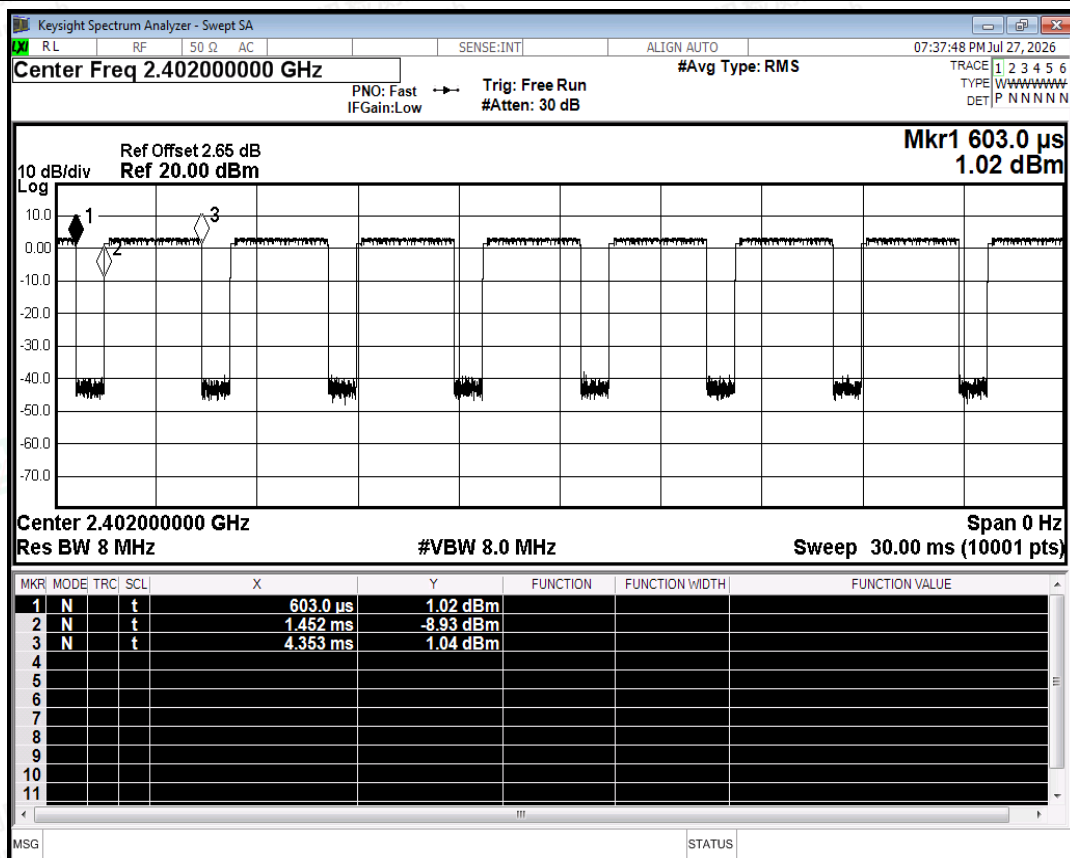
Duty Cycle NVNT 1-DH5 2402MHz Ant1



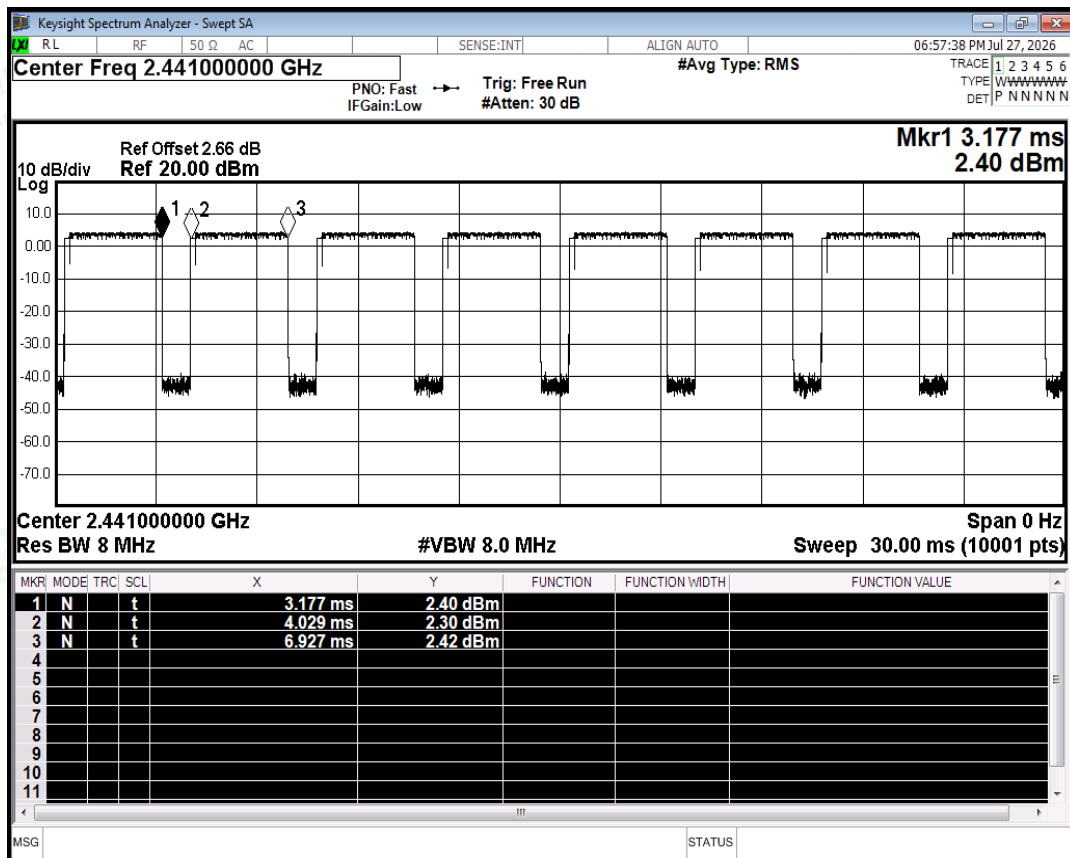
Duty Cycle NVNT 1-DH5 2441MHz Ant1



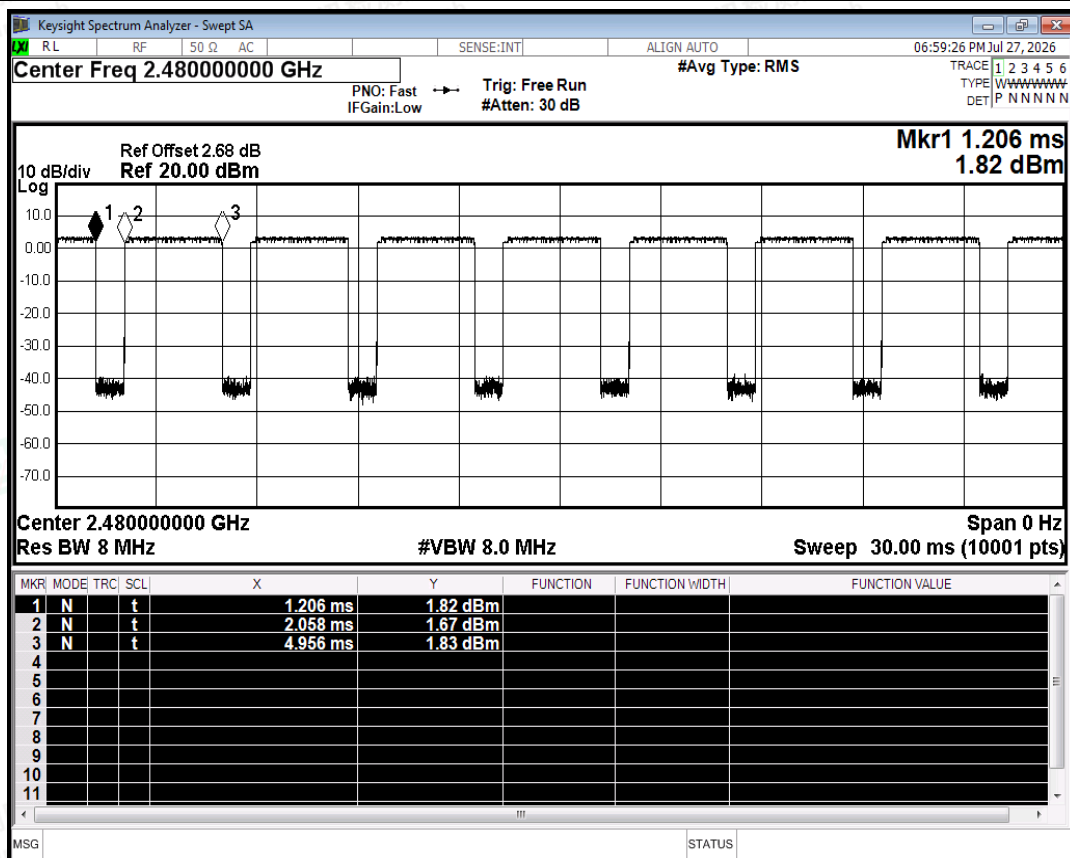
Duty Cycle NVNT 1-DH5 2480MHz Ant1



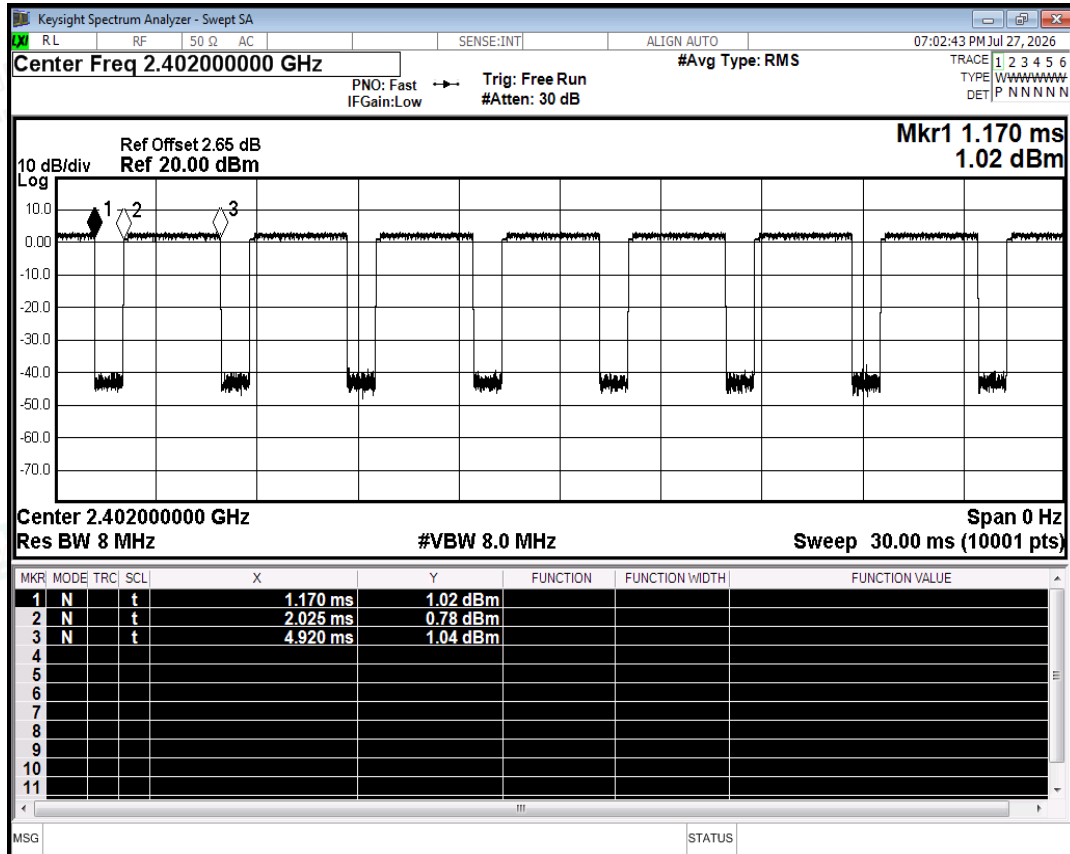
Duty Cycle NVNT 2-DH5 2402MHz Ant1



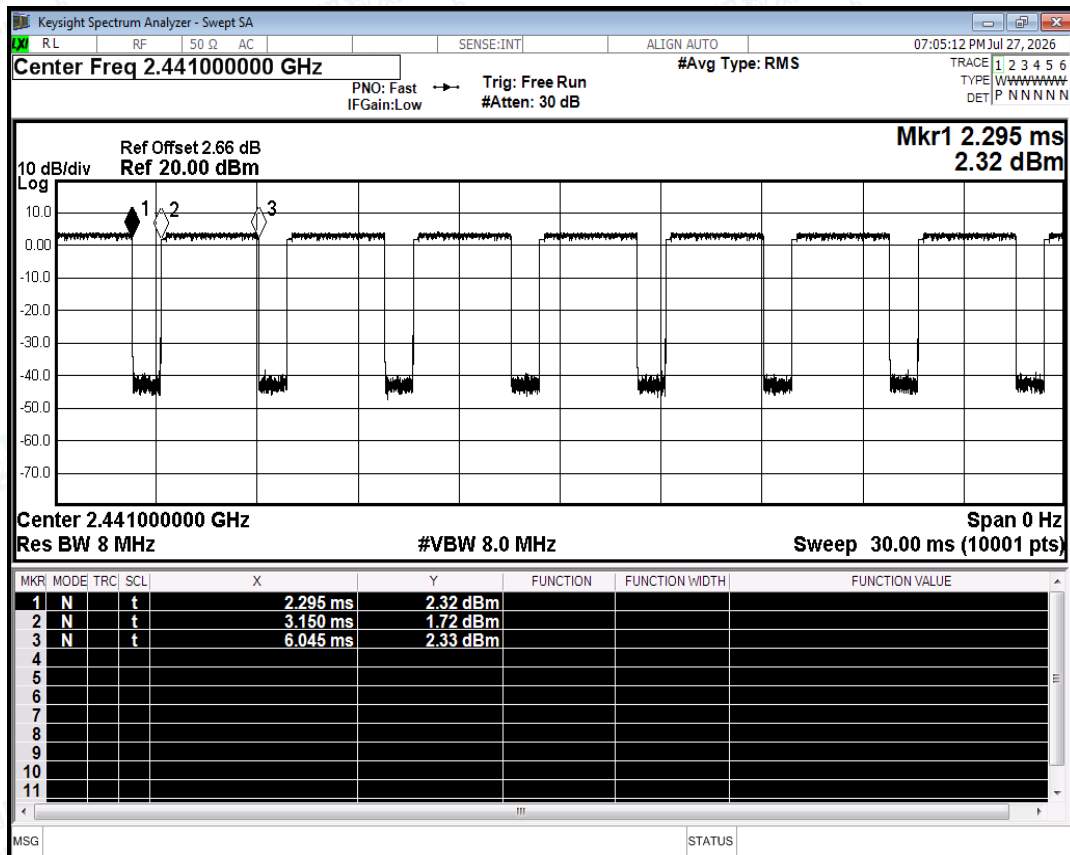
Duty Cycle NVNT 2-DH5 2441MHz Ant1



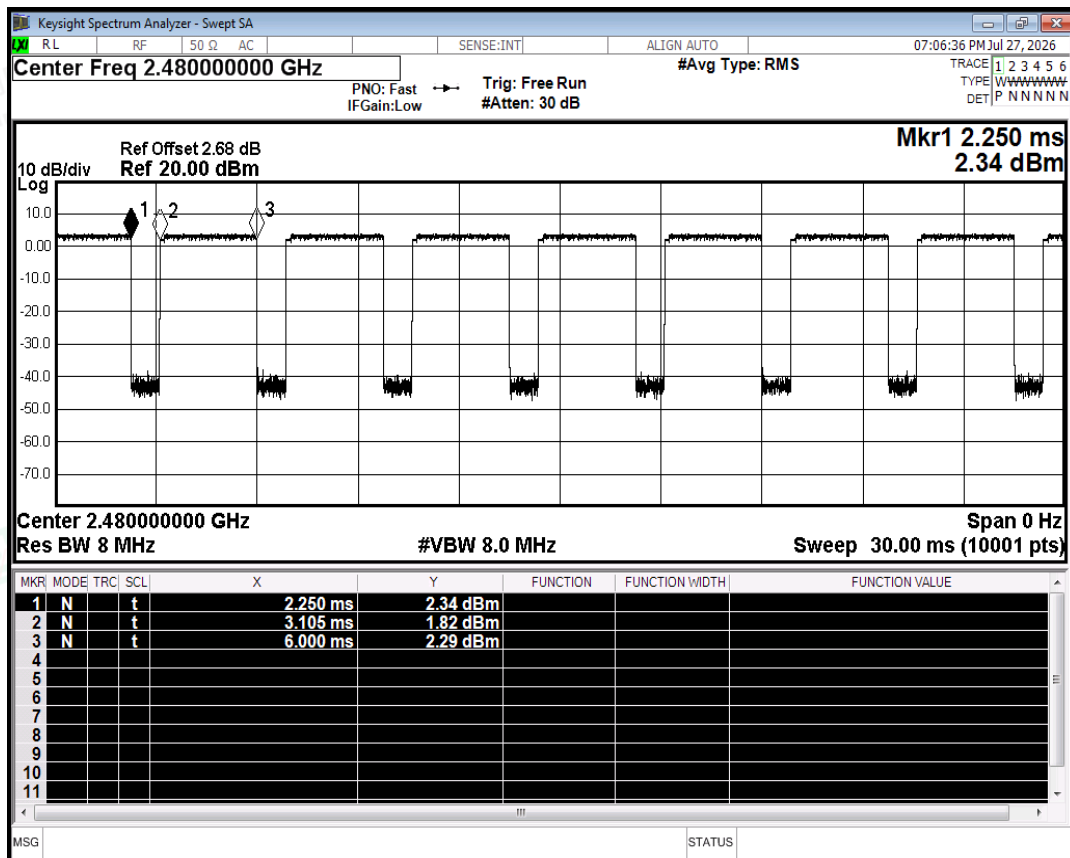
Duty Cycle NVNT 2-DH5 2480MHz Ant1



Duty Cycle NVNT 3-DH5 2402MHz Ant1



Duty Cycle NVNT 3-DH5 2441MHz Ant1

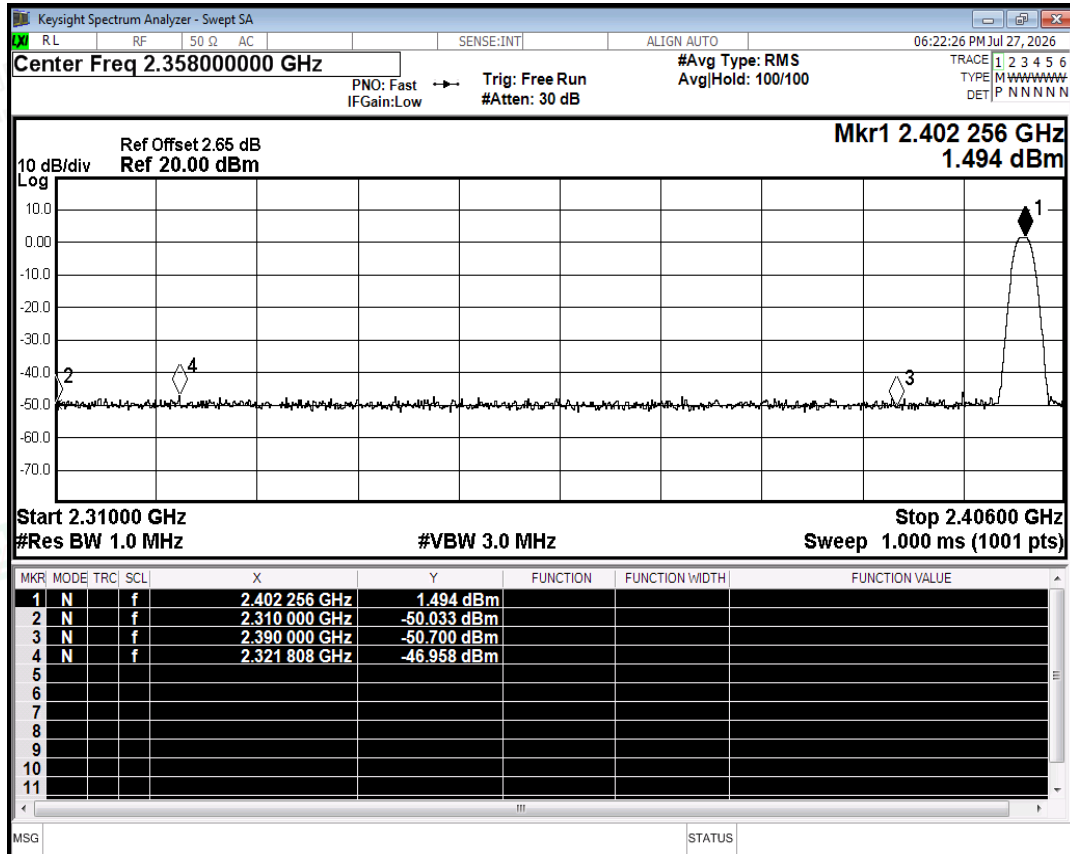


Duty Cycle NVNT 3-DH5 2480MHz Ant1

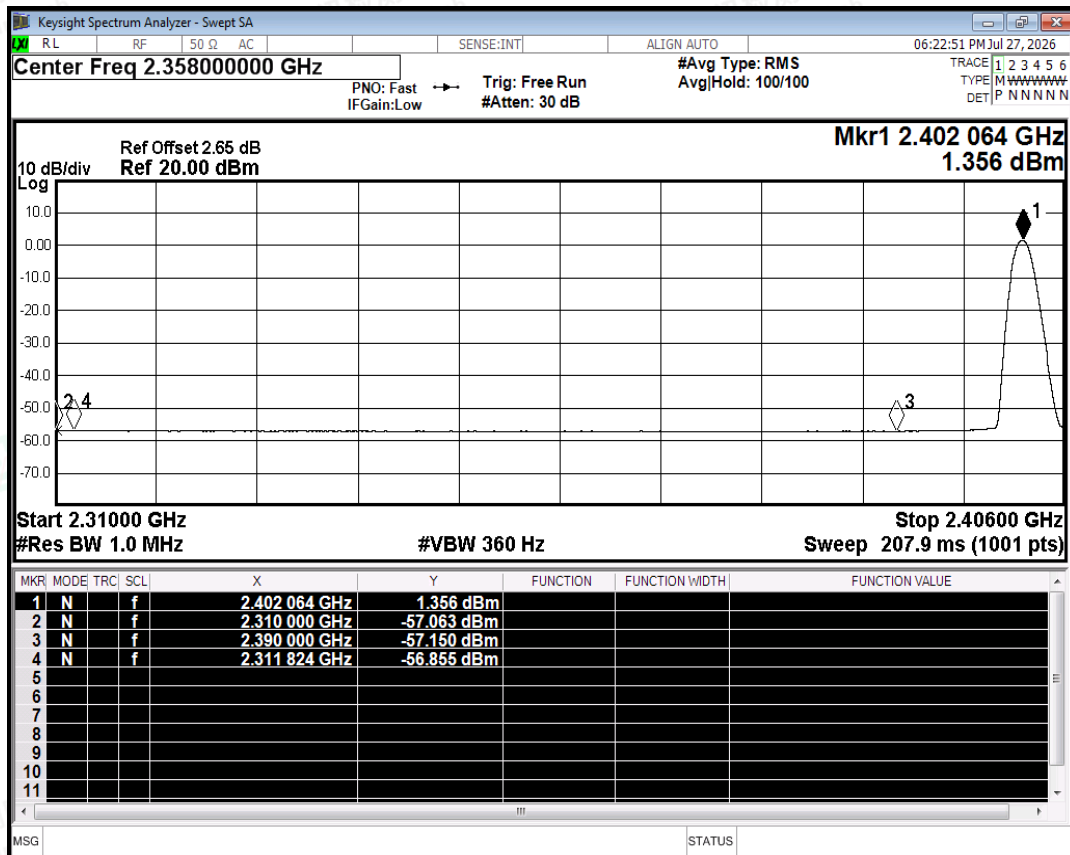


A.9 Restrict Band

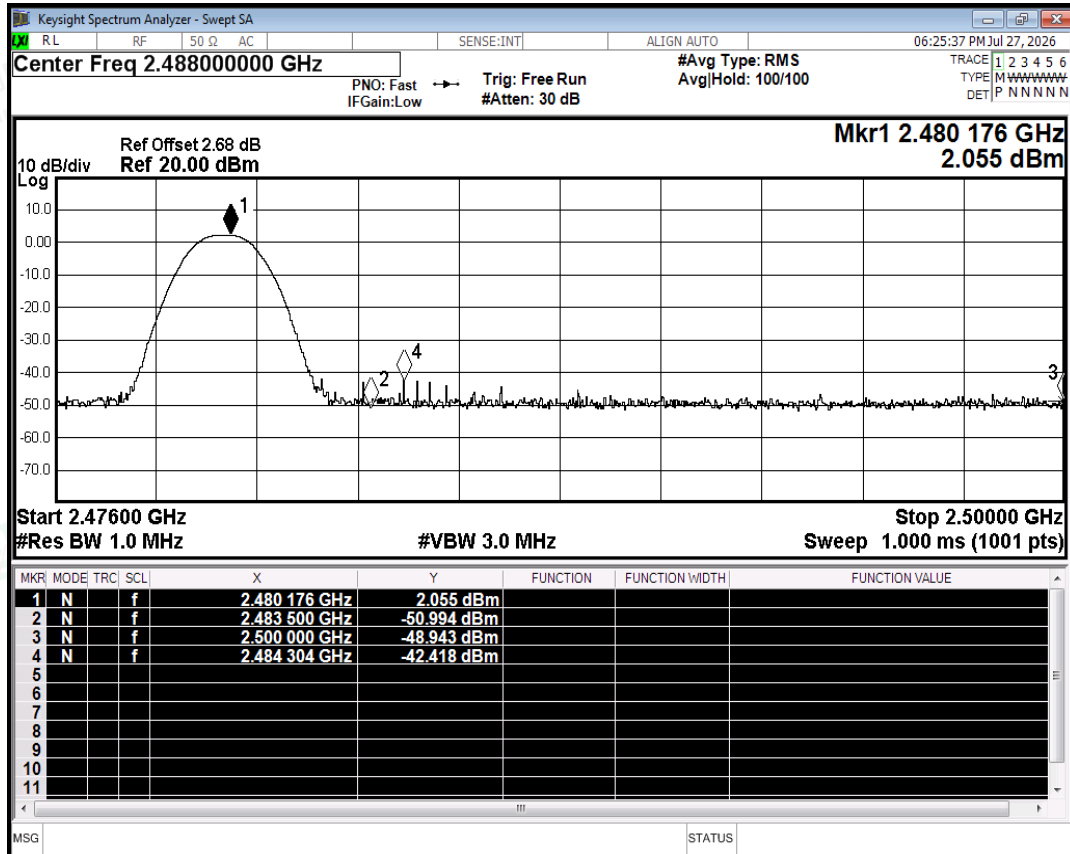
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-50.03	2	47.23	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-57.06	2	40.2	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2321.808	-46.95	2	50.31	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2311.824	-56.85	2	40.41	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-49.64	2	47.62	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-57.16	2	40.1	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-50.99	2	46.27	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-54.82	2	42.44	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2484.304	-42.41	2	54.85	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.512	-54.82	2	42.44	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-48.94	2	48.32	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-56.98	2	40.28	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-50.2	2	47.06	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-57.05	2	40.21	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2311.92	-46.88	2	50.38	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310.192	-56.94	2	40.32	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-50.8	2	46.46	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-57.1	2	40.16	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-43.21	2	54.05	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-52.53	2	44.73	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.656	-42.53	2	54.73	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.512	-52.53	2	44.73	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-50.52	2	46.74	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-56.8	2	40.46	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-50.22	2	47.04	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-56.93	2	40.33	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2363.664	-46.27	2	50.99	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2320.368	-56.86	2	40.4	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-49.59	2	47.67	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-57.13	2	40.13	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-44.77	2	52.49	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-52.02	2	45.24	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2484.304	-41.72	2	55.54	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.512	-52.02	2	45.24	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-50.19	2	47.07	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-56.94	2	40.32	Average	54	Pass



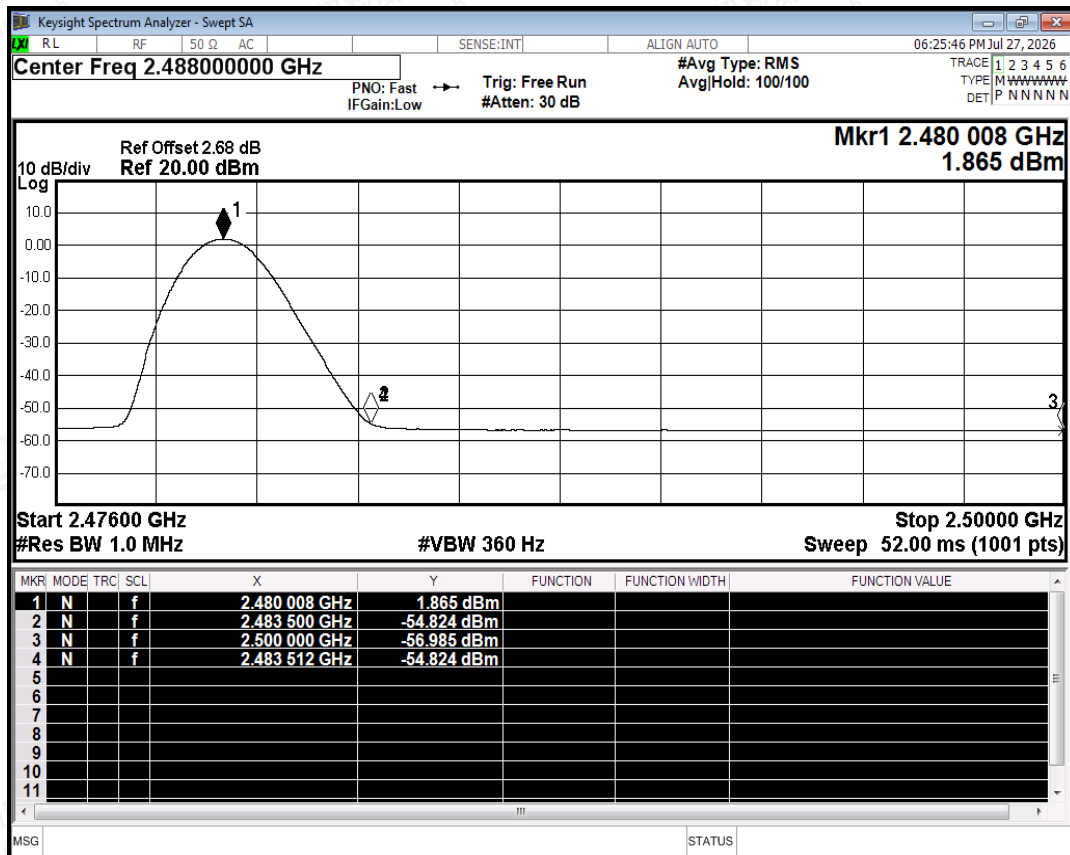
Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Peak



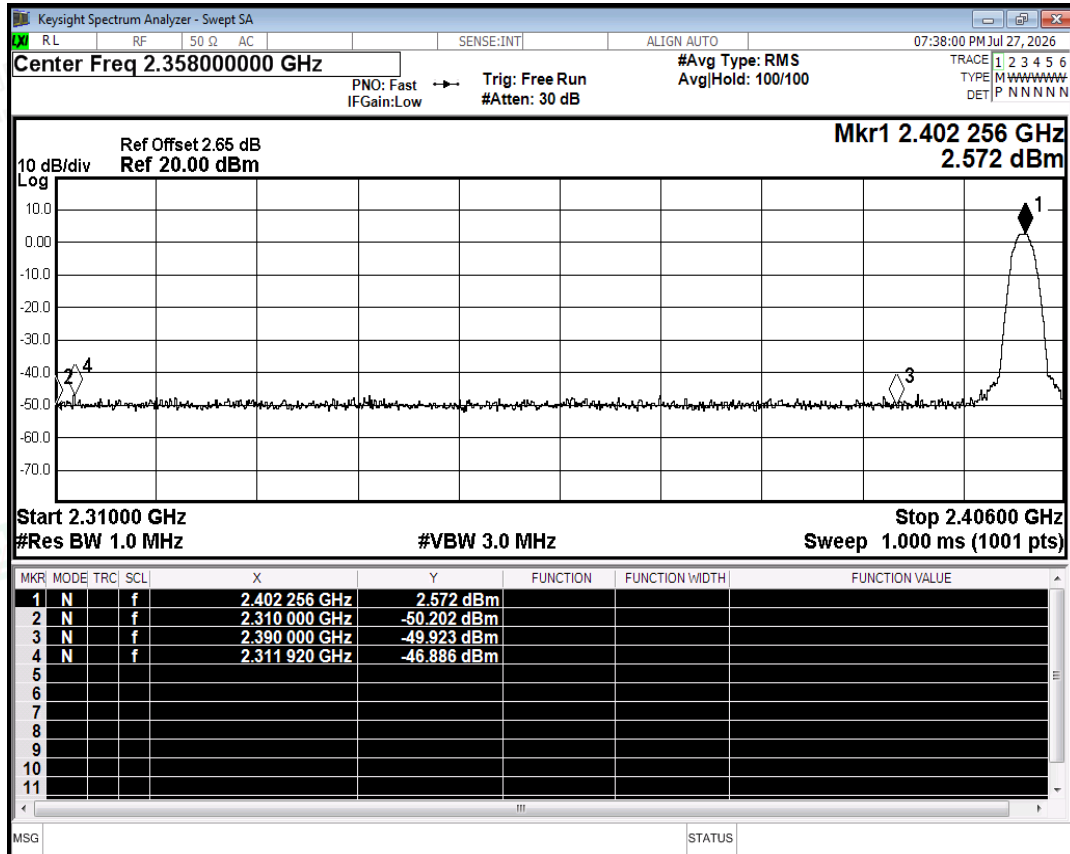
Restrict Band NVNT 1-DH5 2402MHz Ant1 No-Hopping Average



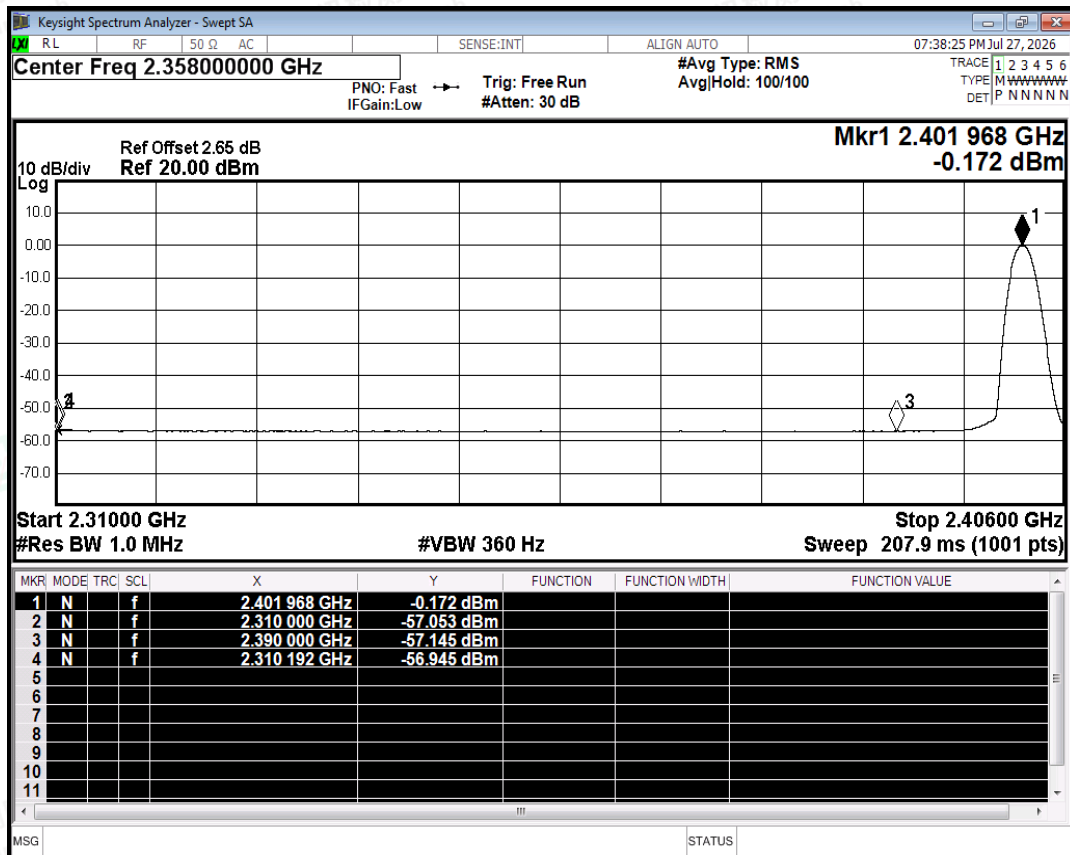
Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Peak



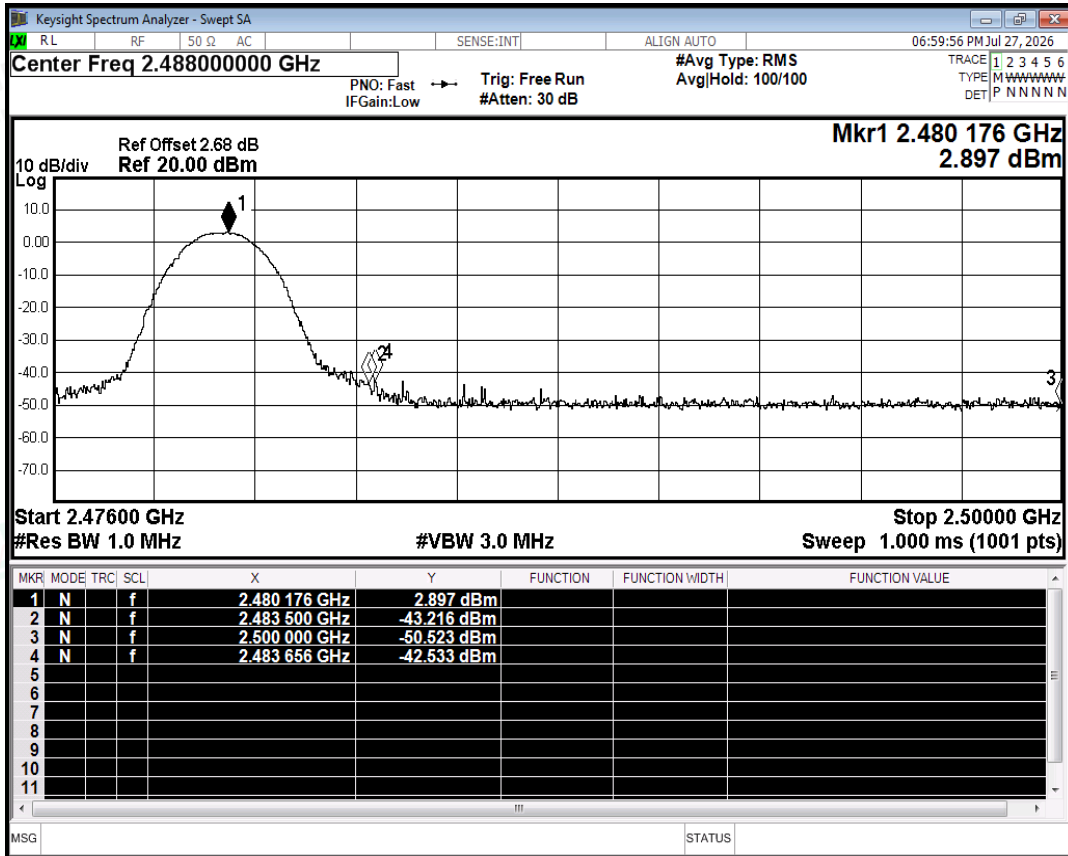
Restrict Band NVNT 1-DH5 2480MHz Ant1 No-Hopping Average



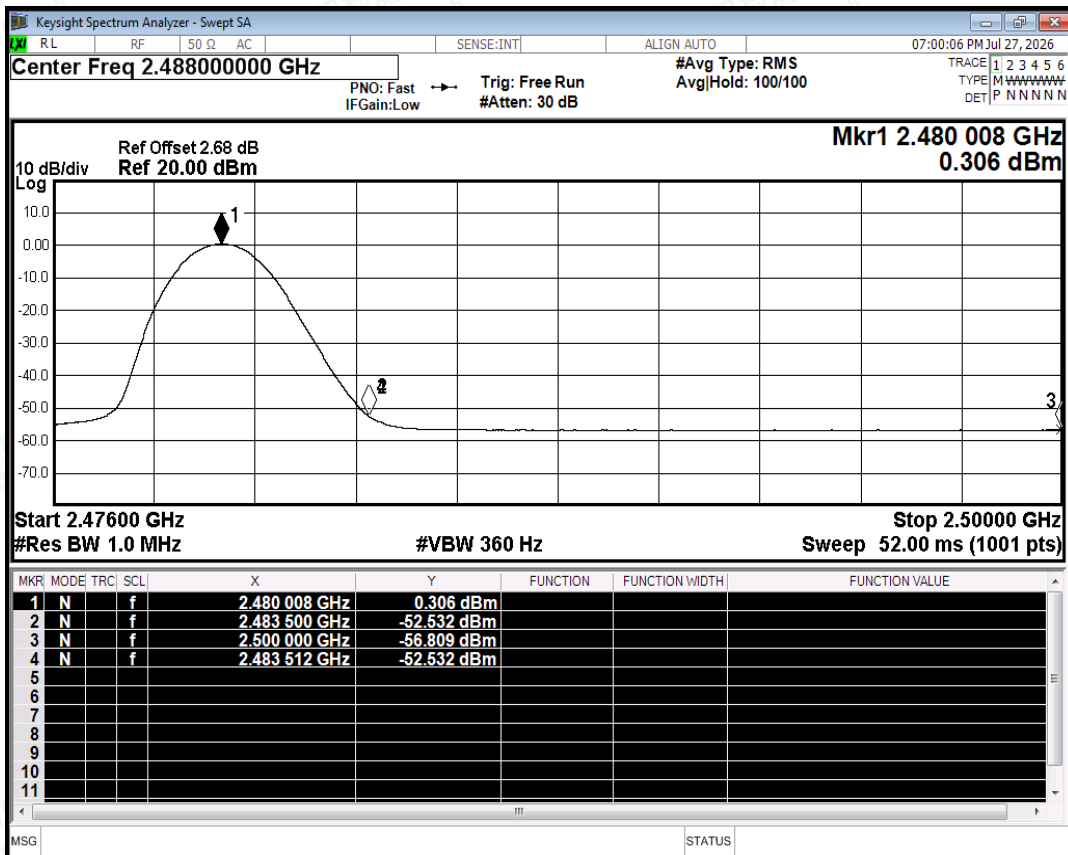
Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Peak



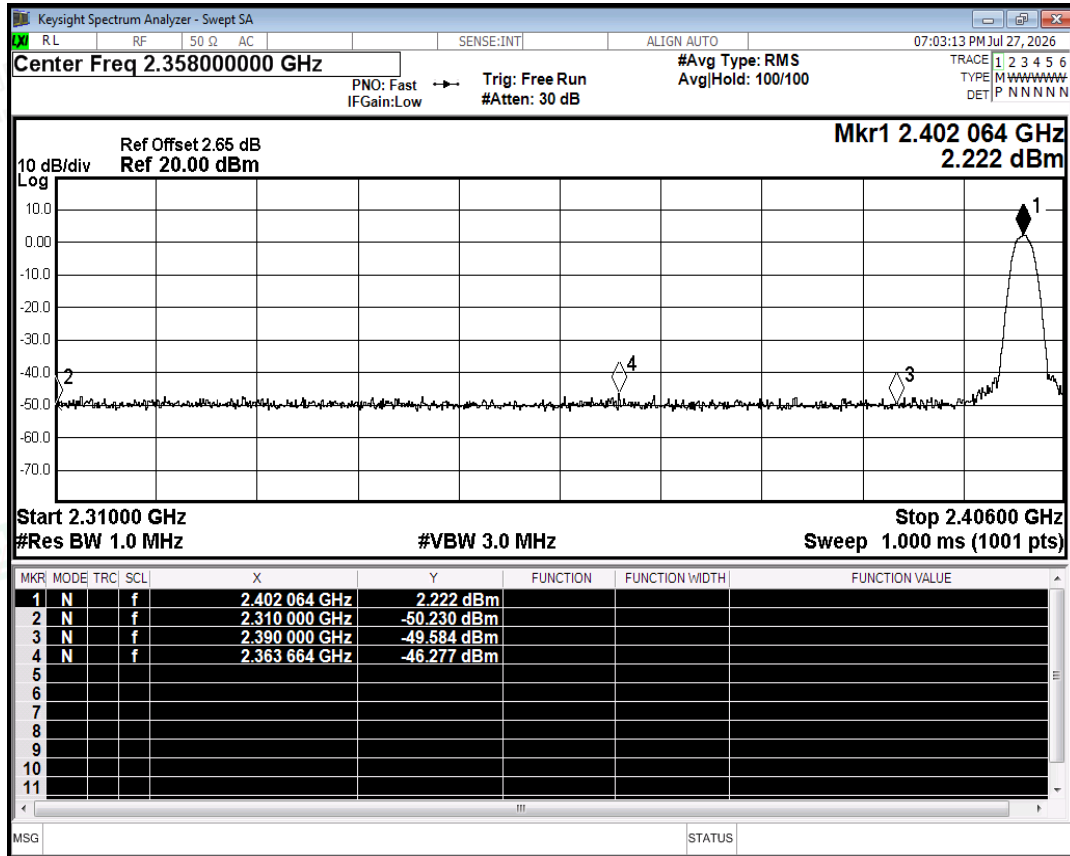
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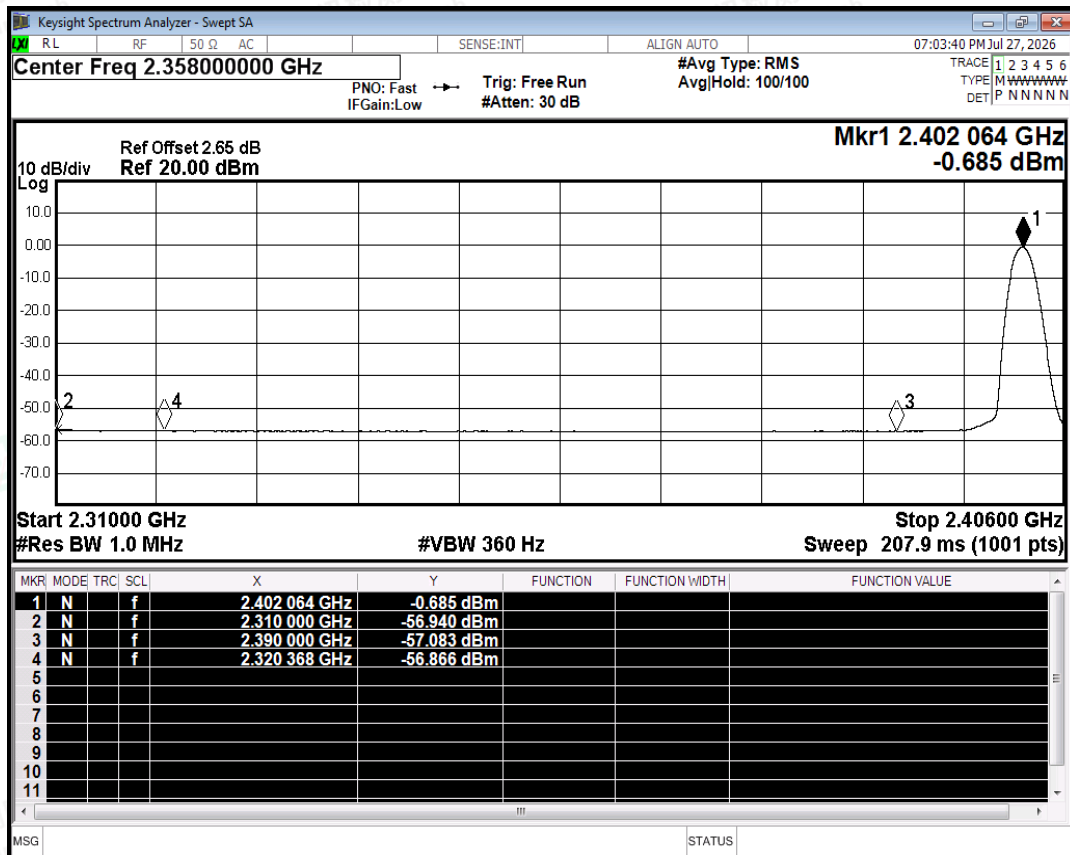
Restrict Band NVNT 2-DH5 2480MHz Ant1 No-Hopping Peak



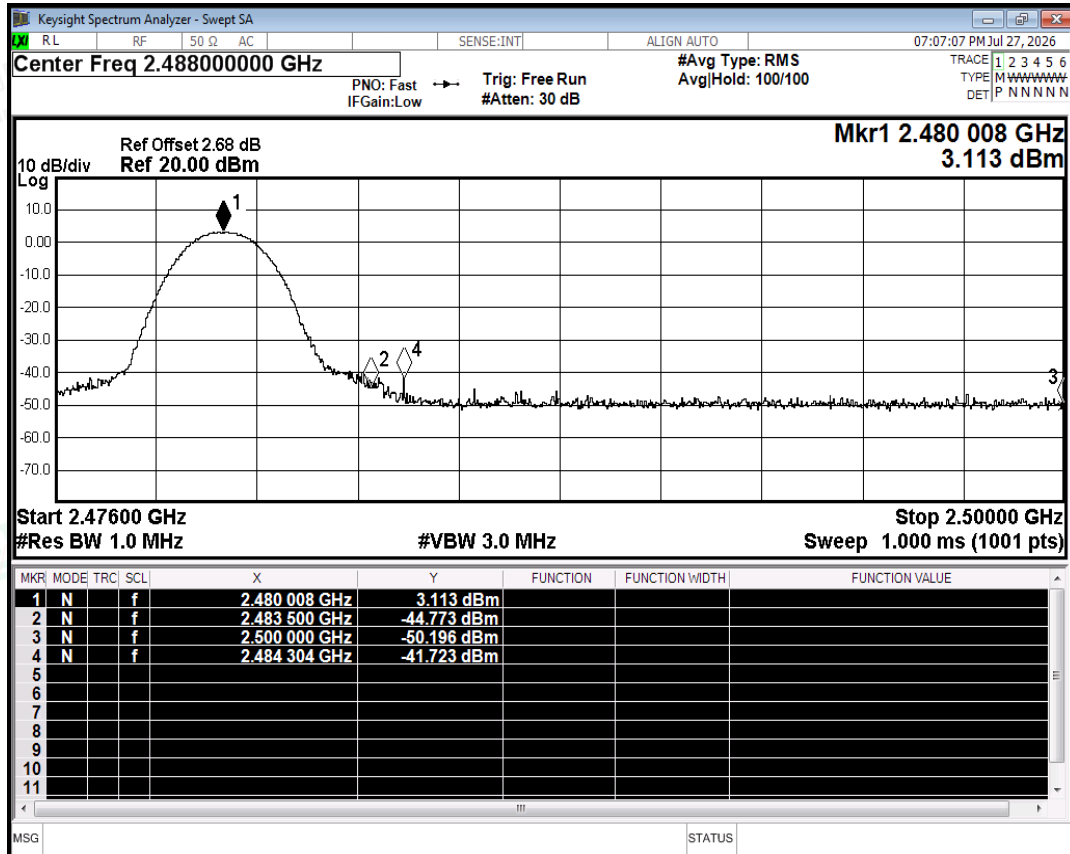
Restrict Band NVNT 2-DH5 2480MHz Ant1 No-Hopping Average



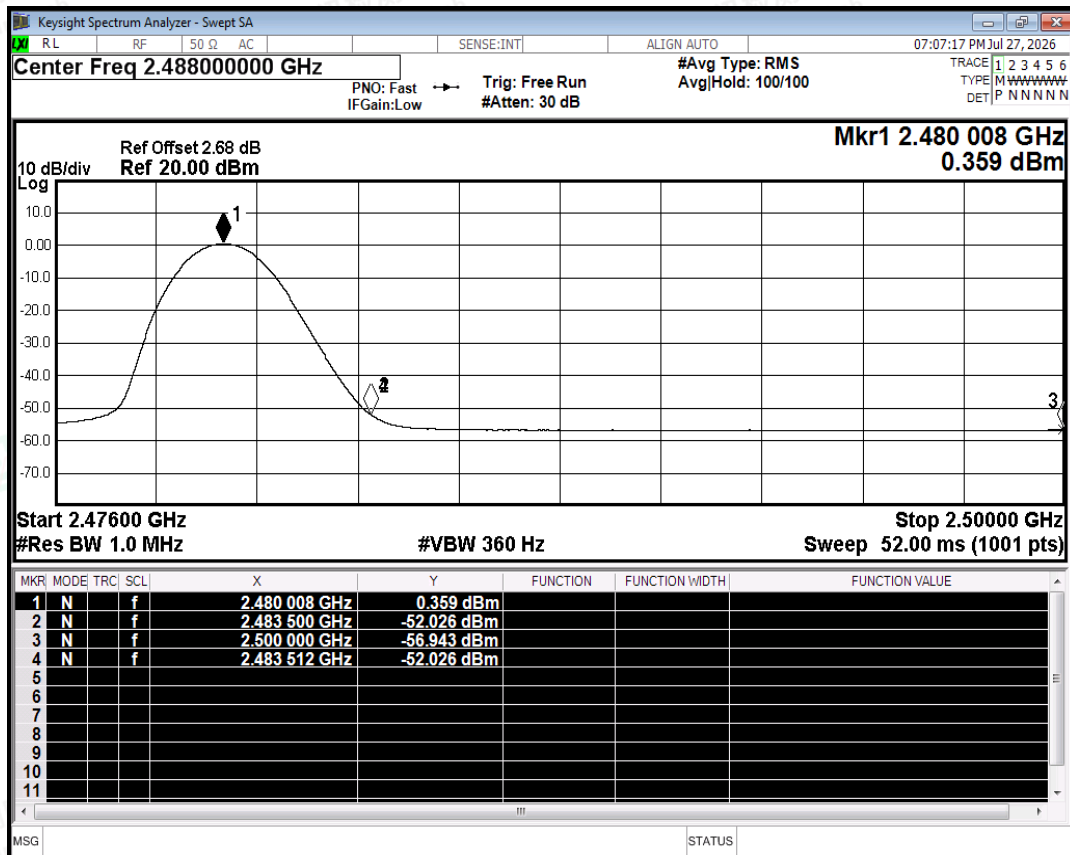
Restrict Band NVNT 3-DH5 2402MHz Ant1 No-Hopping Peak



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