



Appendix A

RF Test Data for BT (Conducted Measurement)

Product Name: Rechargeable Karaoke Speaker

Test Model: Nova

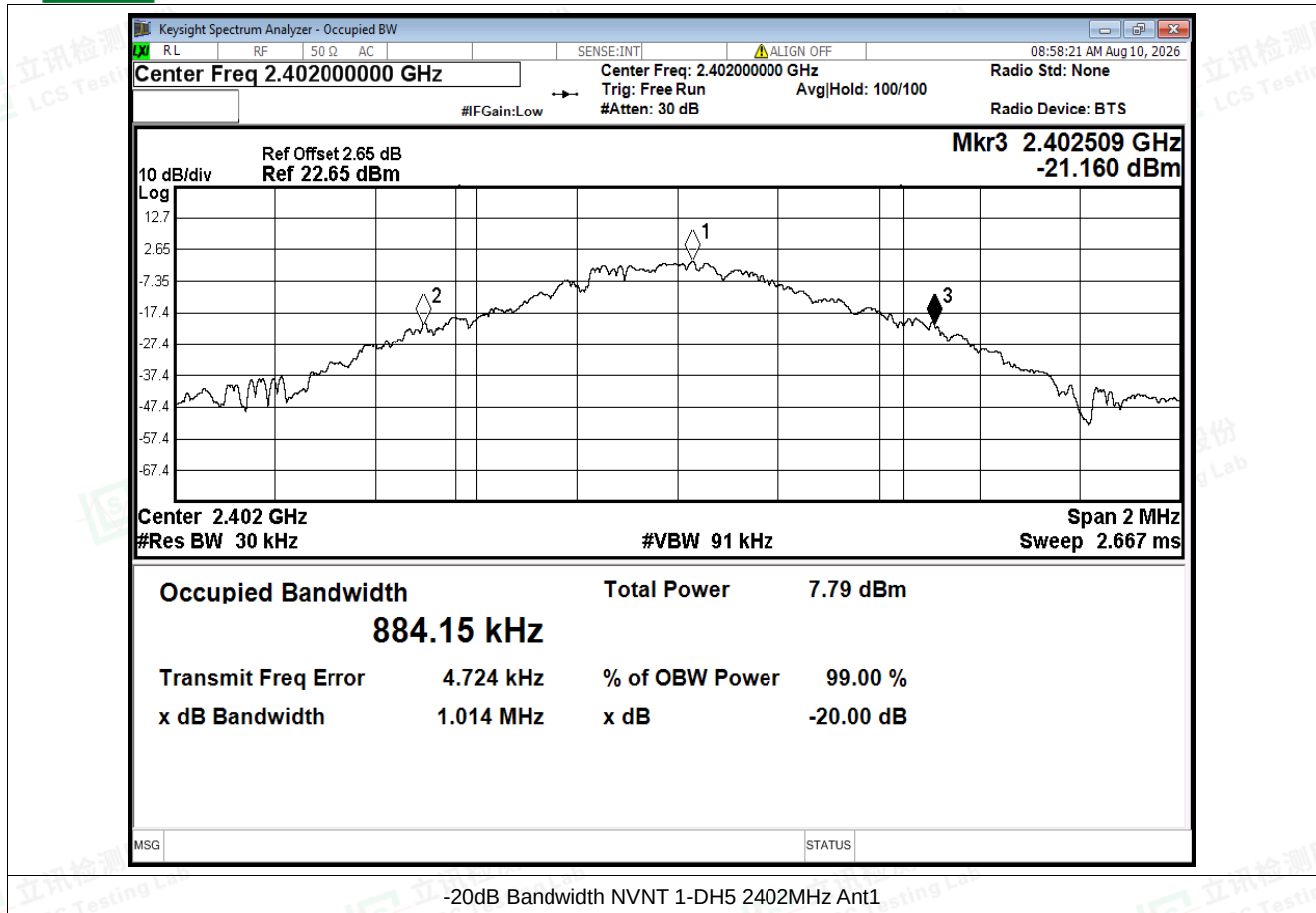
Environmental Conditions

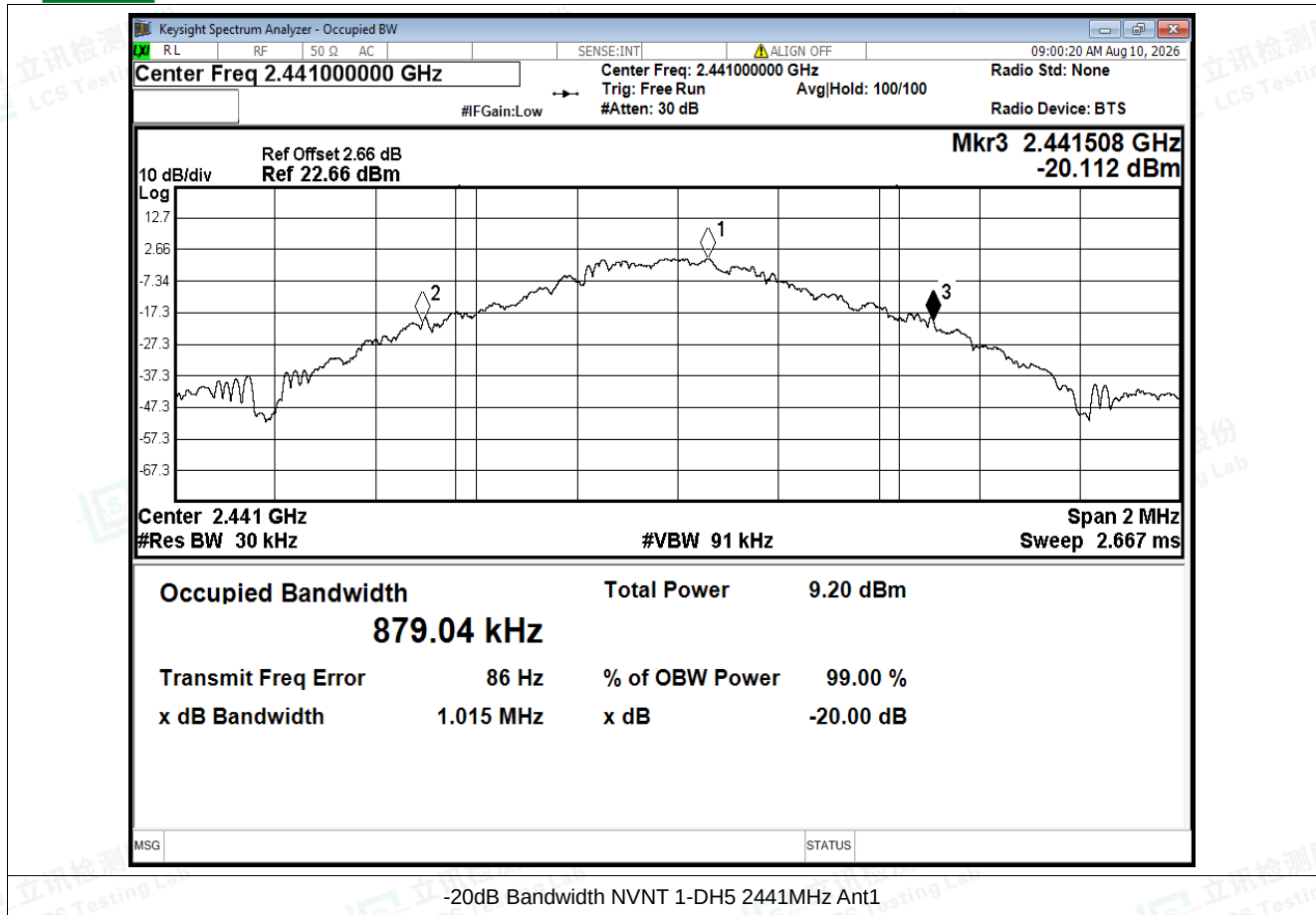
Temperature:	24.6°C
Relative Humidity:	53.9%
ATM Pressure:	100.0 kPa
Test Engineer:	Jerry Chu
Supervised by:	Can Kun

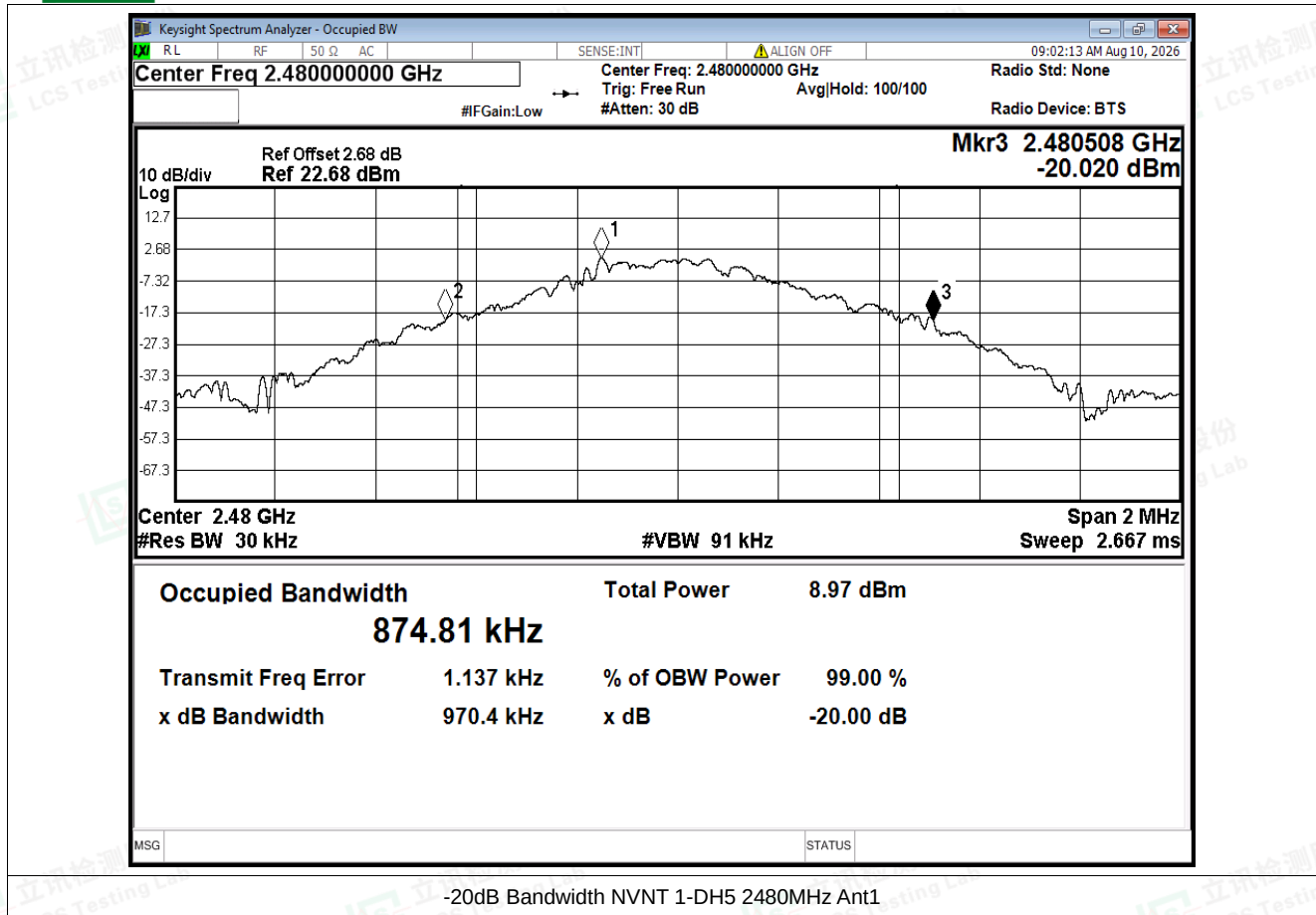


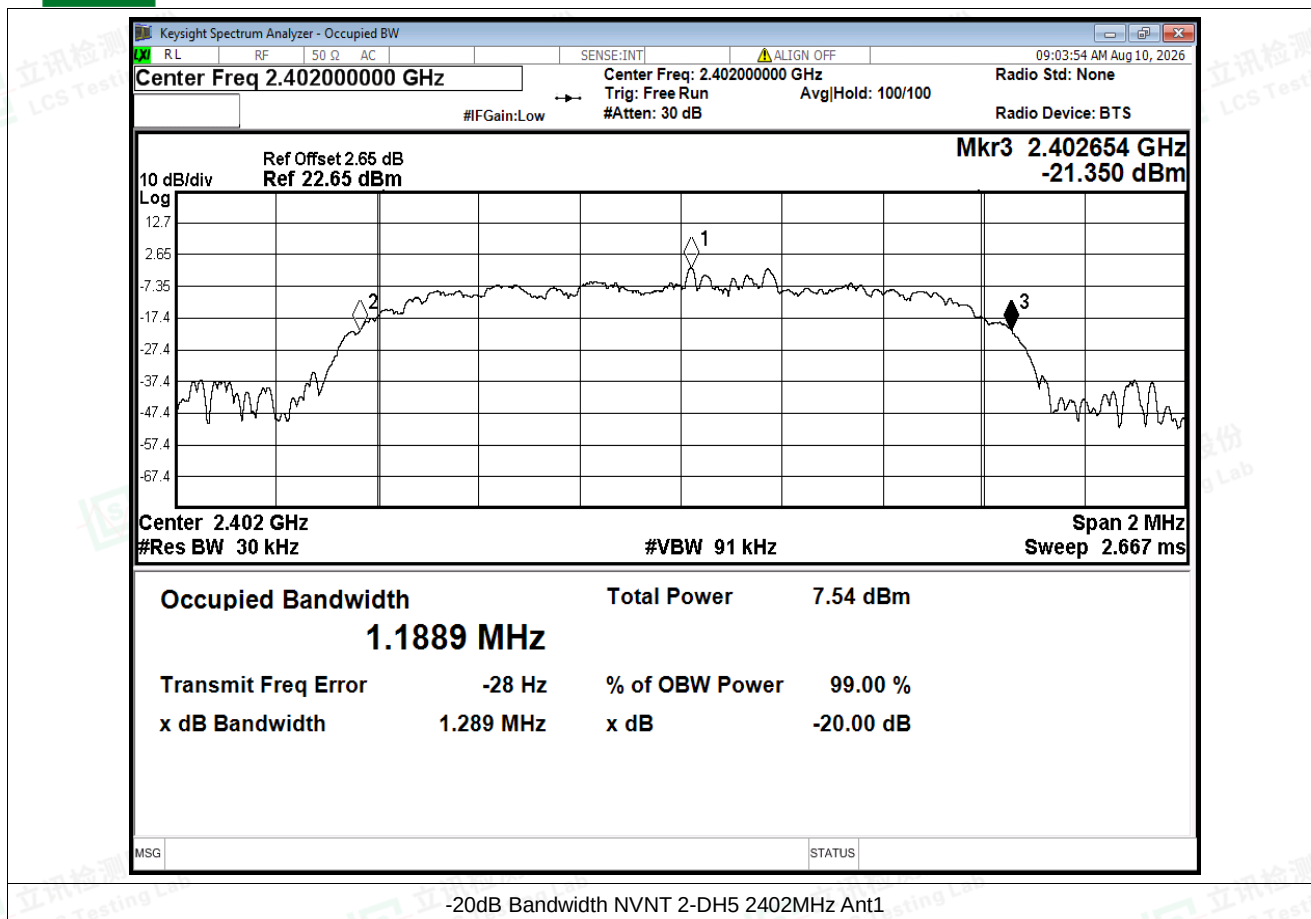
A.1 -20dB Bandwidth

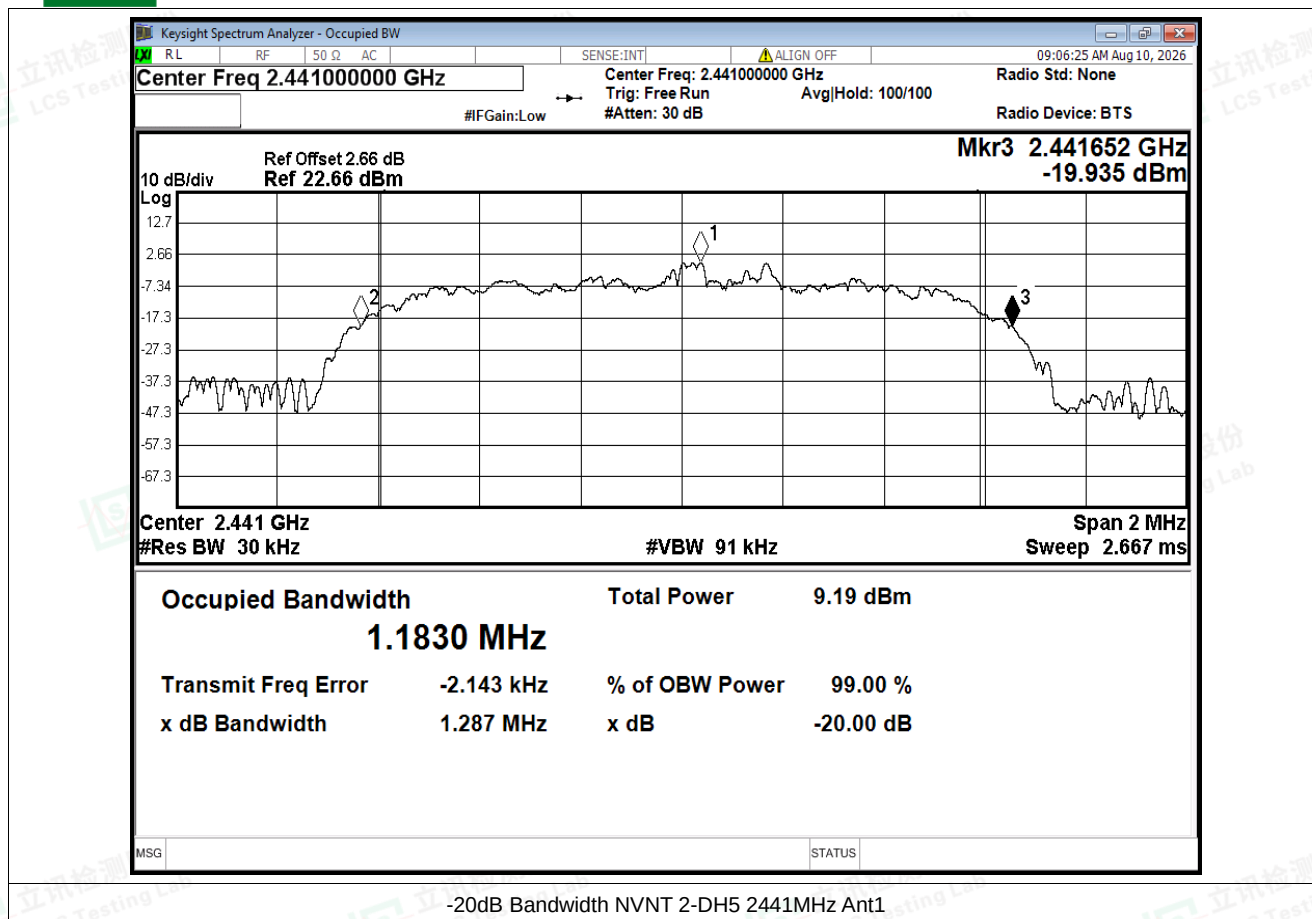
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	1.014	---	Pass
NVNT	1-DH5	2441	Ant1	1.015	---	Pass
NVNT	1-DH5	2480	Ant1	0.9704	---	Pass
NVNT	2-DH5	2402	Ant1	1.289	---	Pass
NVNT	2-DH5	2441	Ant1	1.287	---	Pass
NVNT	2-DH5	2480	Ant1	1.287	---	Pass
NVNT	3-DH5	2402	Ant1	1.296	---	Pass
NVNT	3-DH5	2441	Ant1	1.297	---	Pass
NVNT	3-DH5	2480	Ant1	1.285	---	Pass

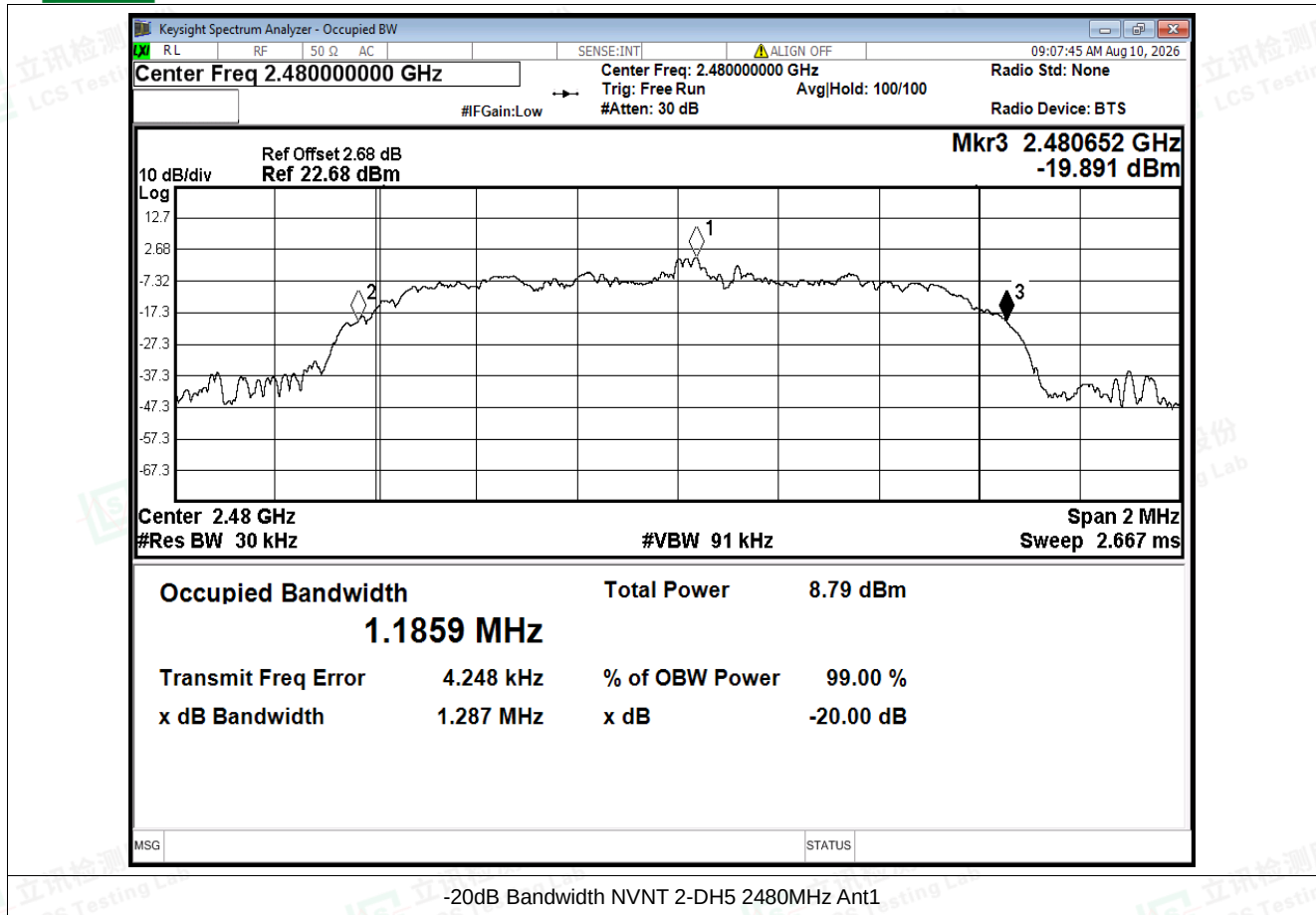


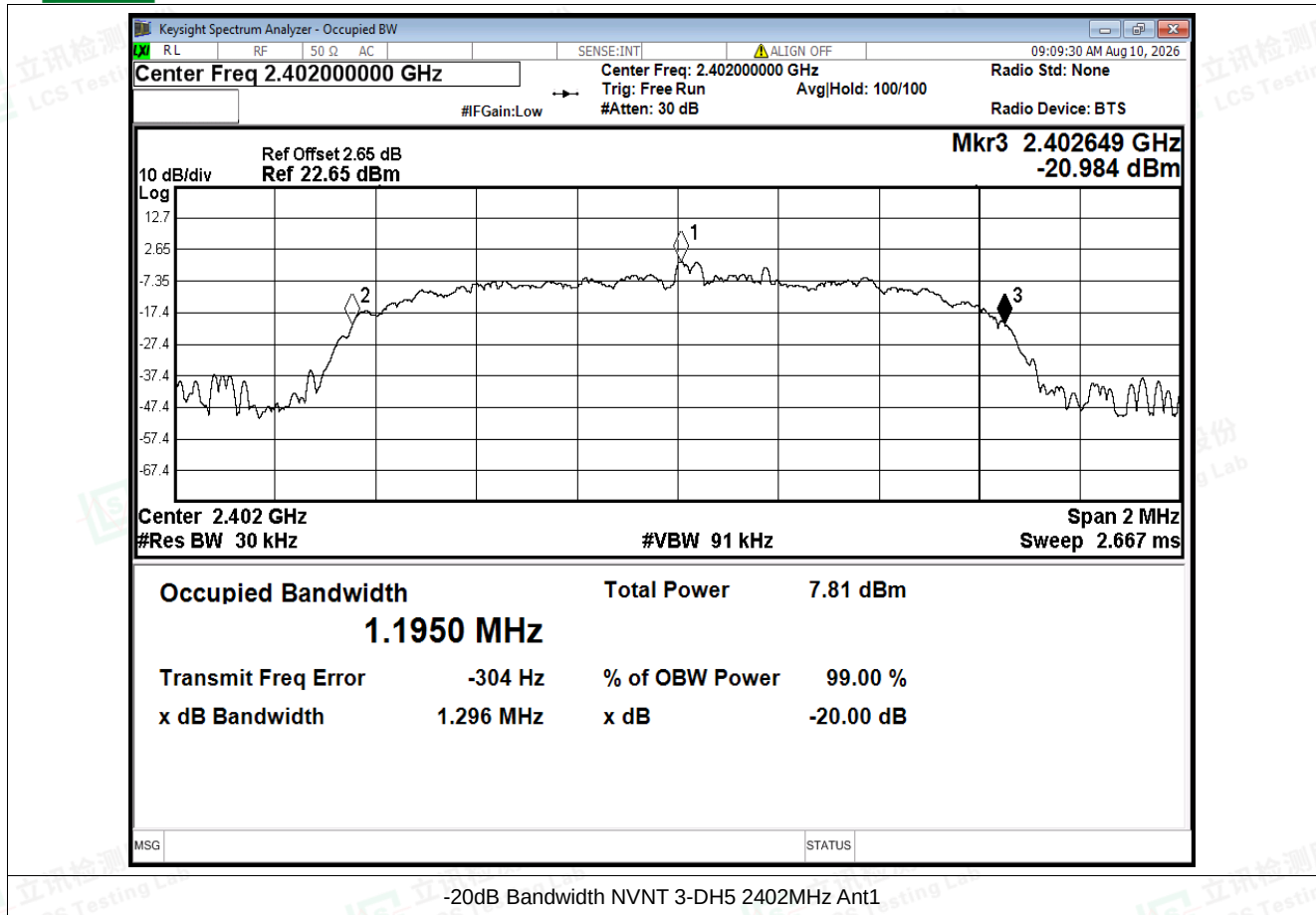


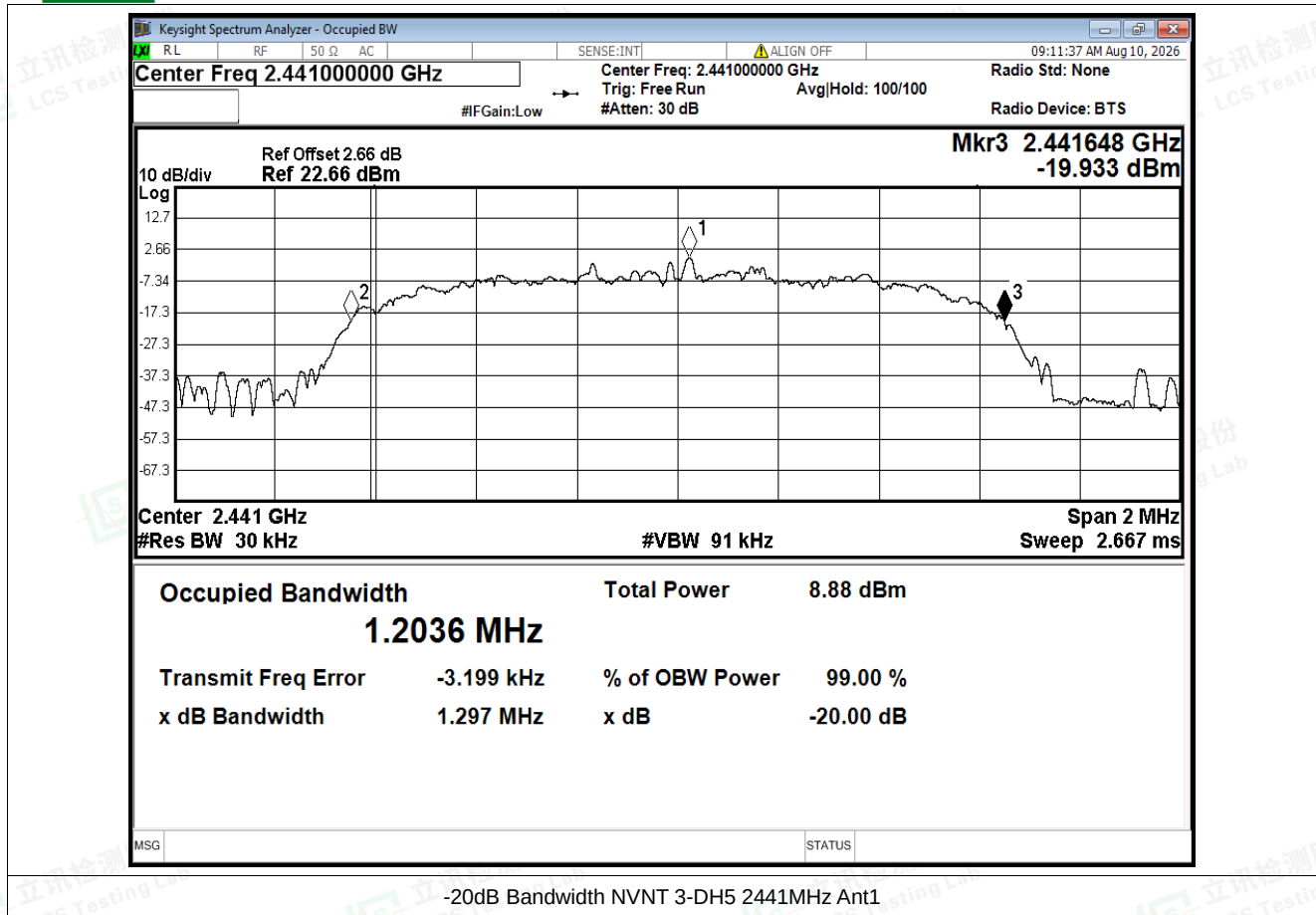


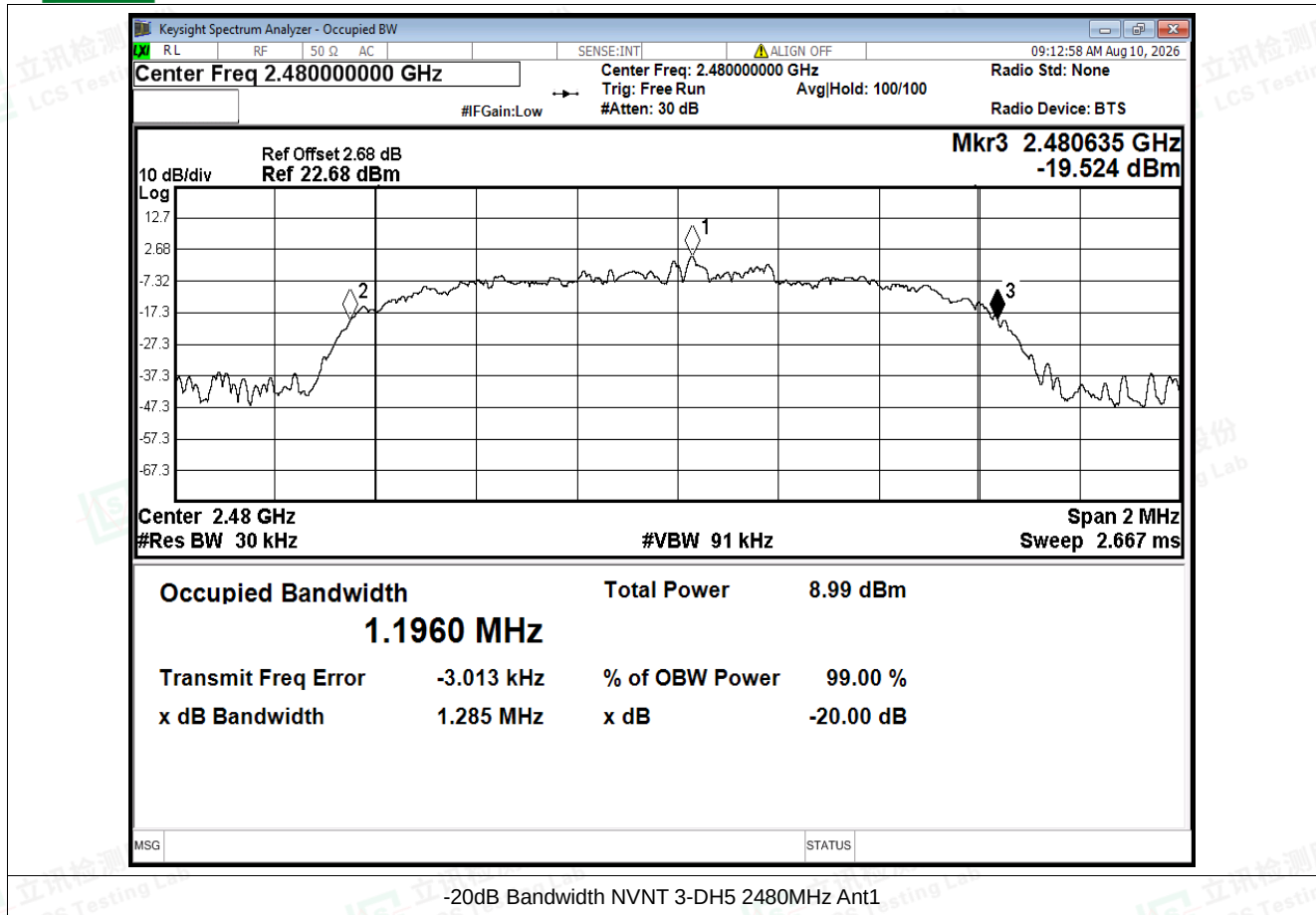








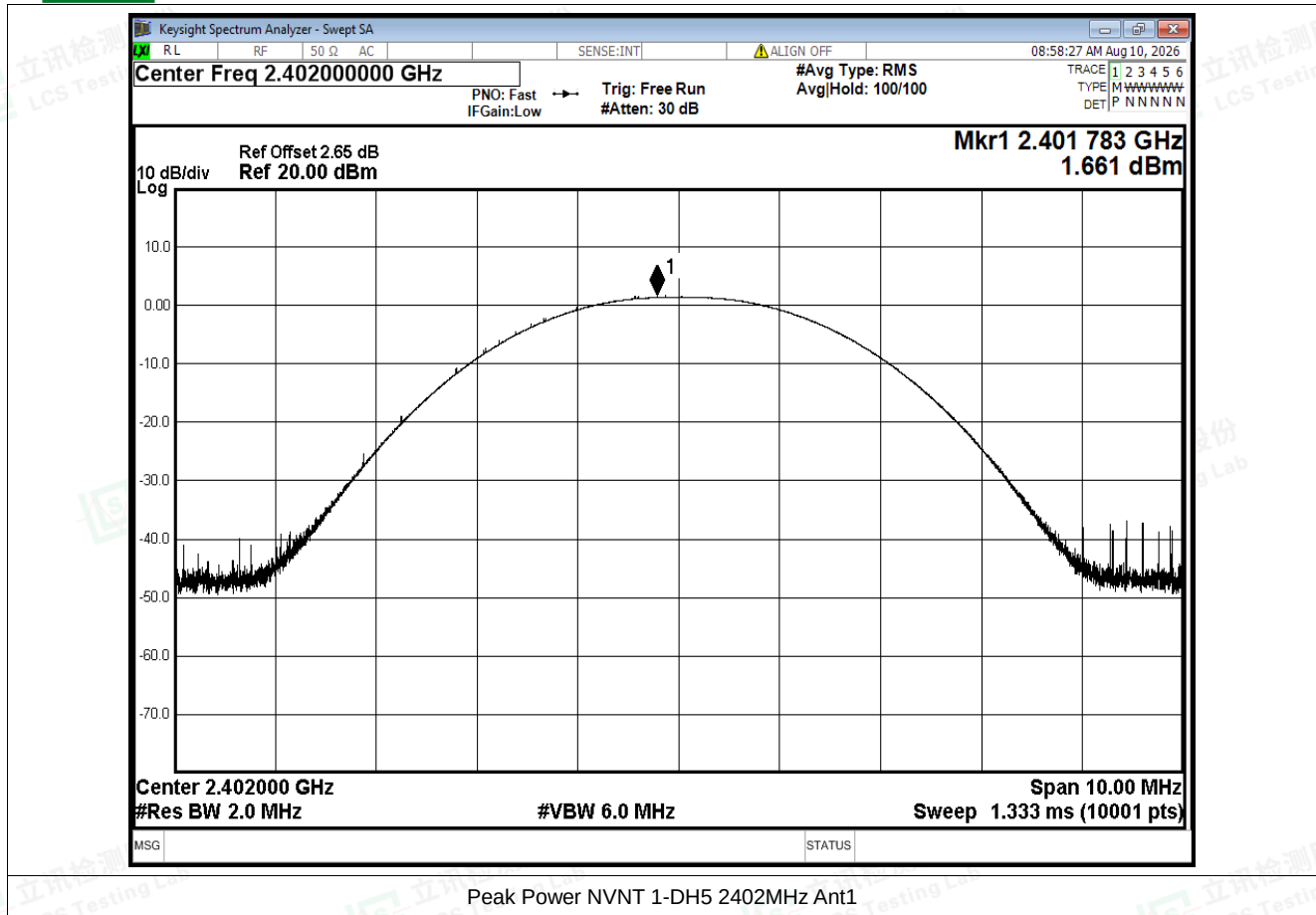


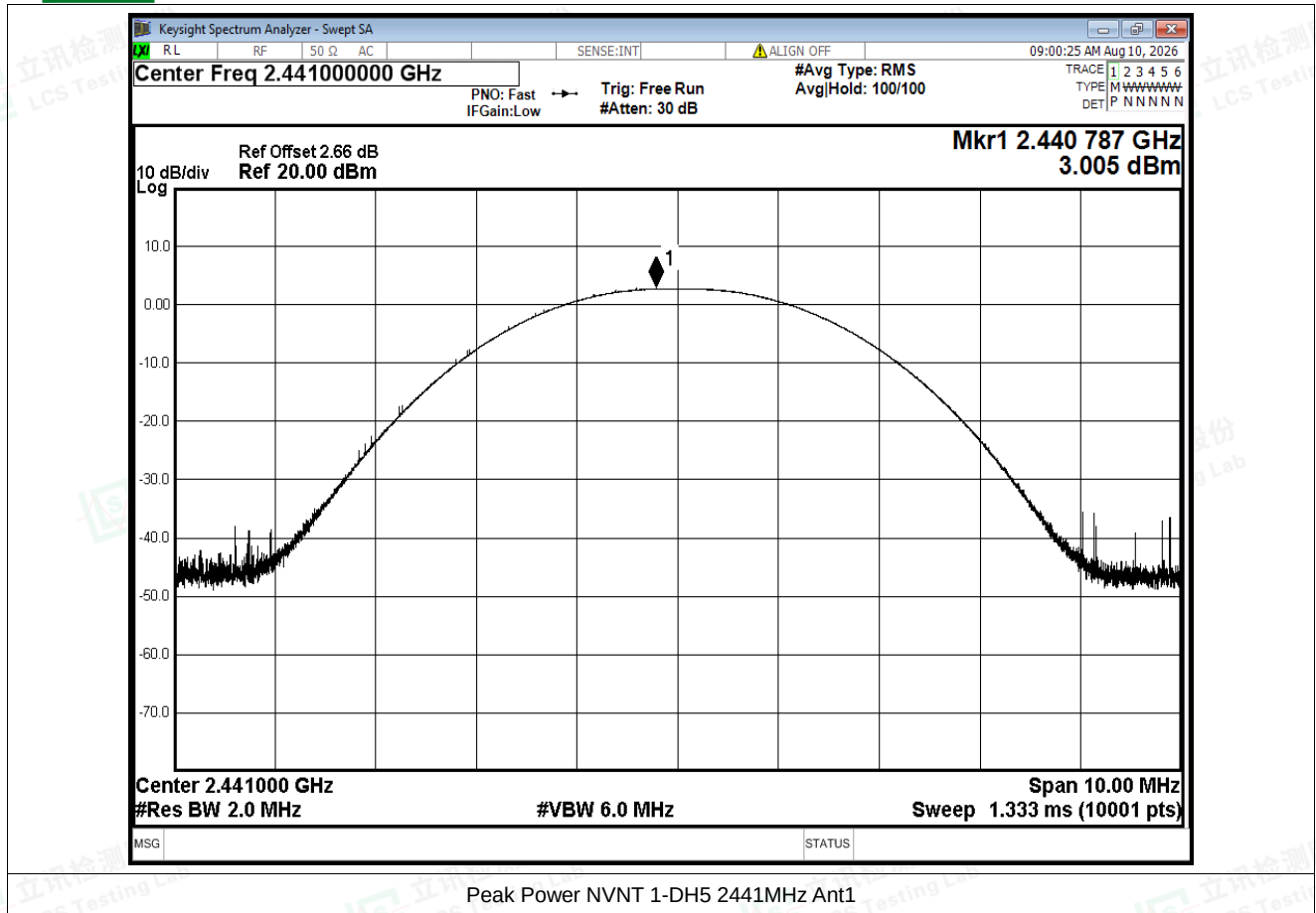


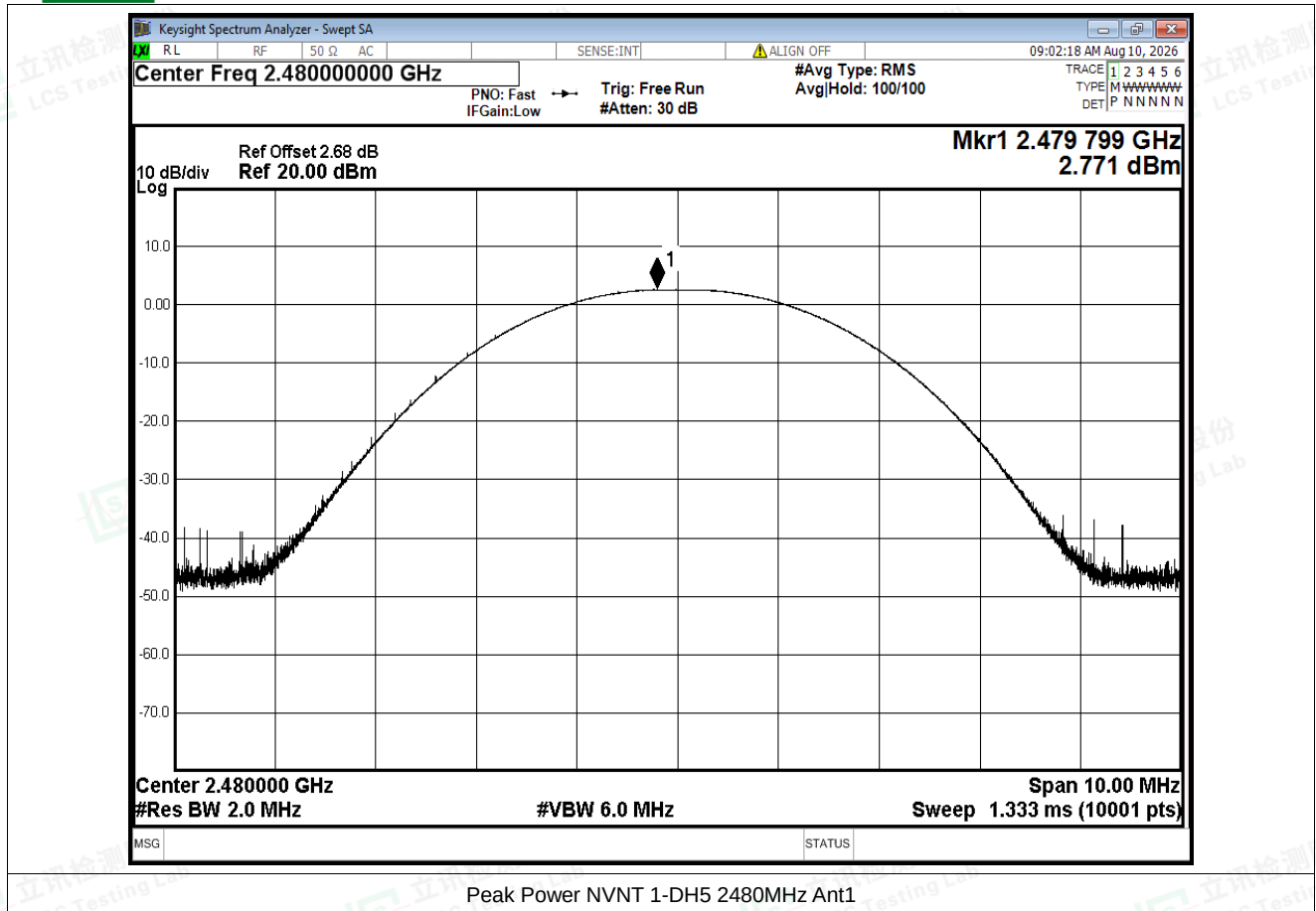


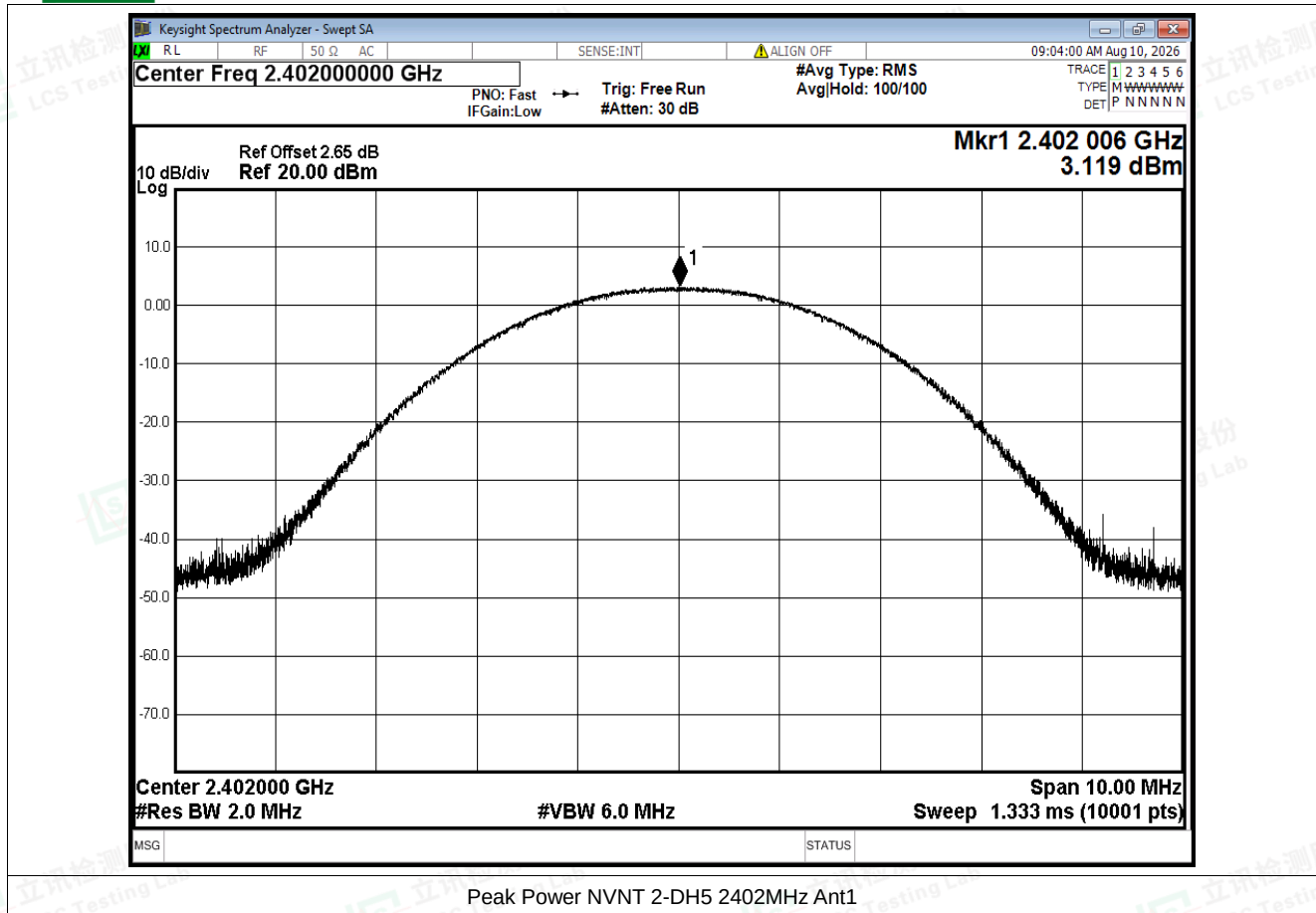
A.2 Maximum Peak Conducted Output Power

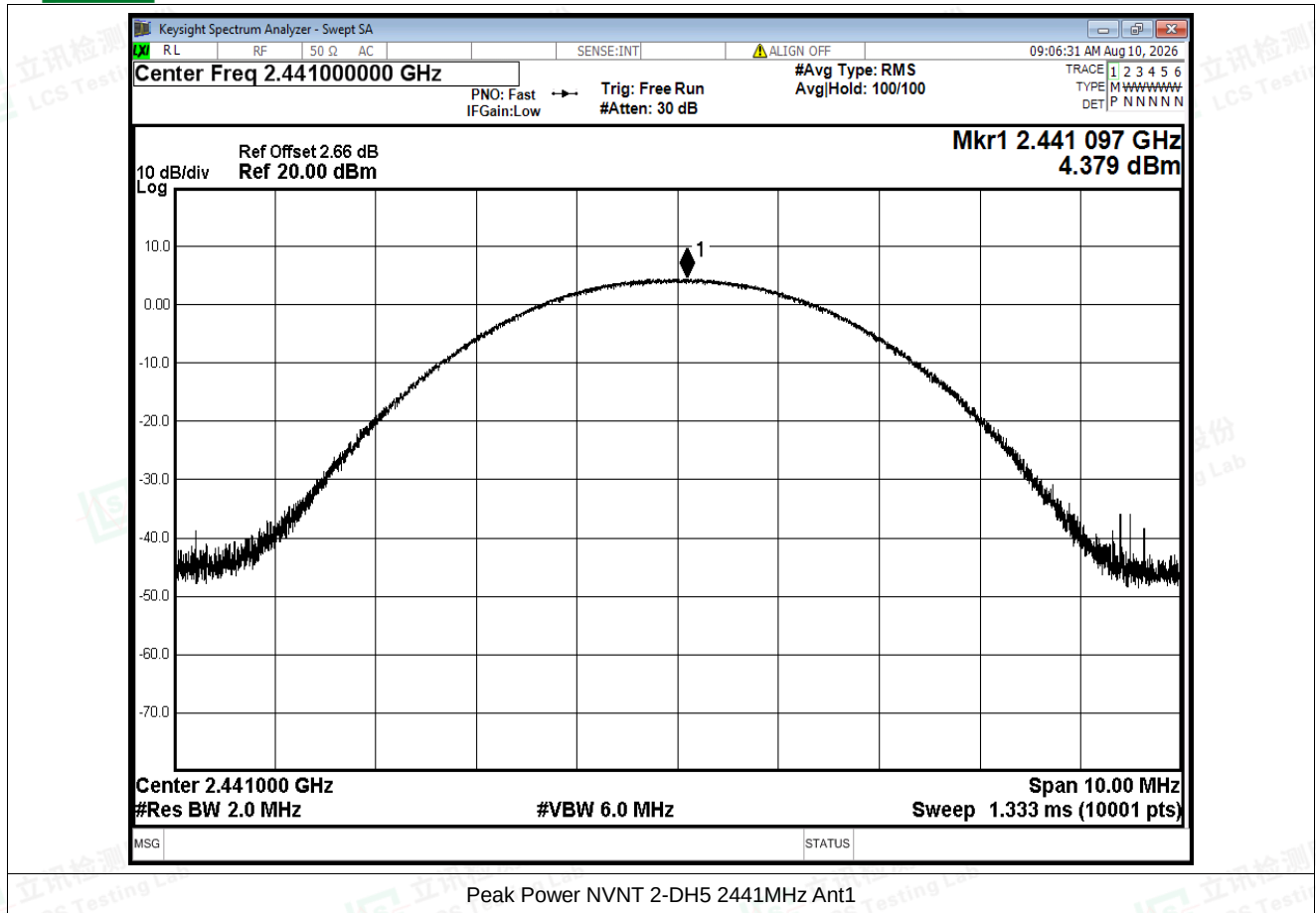
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit Conducted(dBm)	Verdict
NVNT	1-DH5	2402	Ant1	1.66	30	Pass
NVNT	1-DH5	2441	Ant1	3.01	30	Pass
NVNT	1-DH5	2480	Ant1	2.77	30	Pass
NVNT	2-DH5	2402	Ant1	3.12	30	Pass
NVNT	2-DH5	2441	Ant1	4.38	30	Pass
NVNT	2-DH5	2480	Ant1	4.03	30	Pass
NVNT	3-DH5	2402	Ant1	3.4	30	Pass
NVNT	3-DH5	2441	Ant1	4.67	30	Pass
NVNT	3-DH5	2480	Ant1	4.29	30	Pass

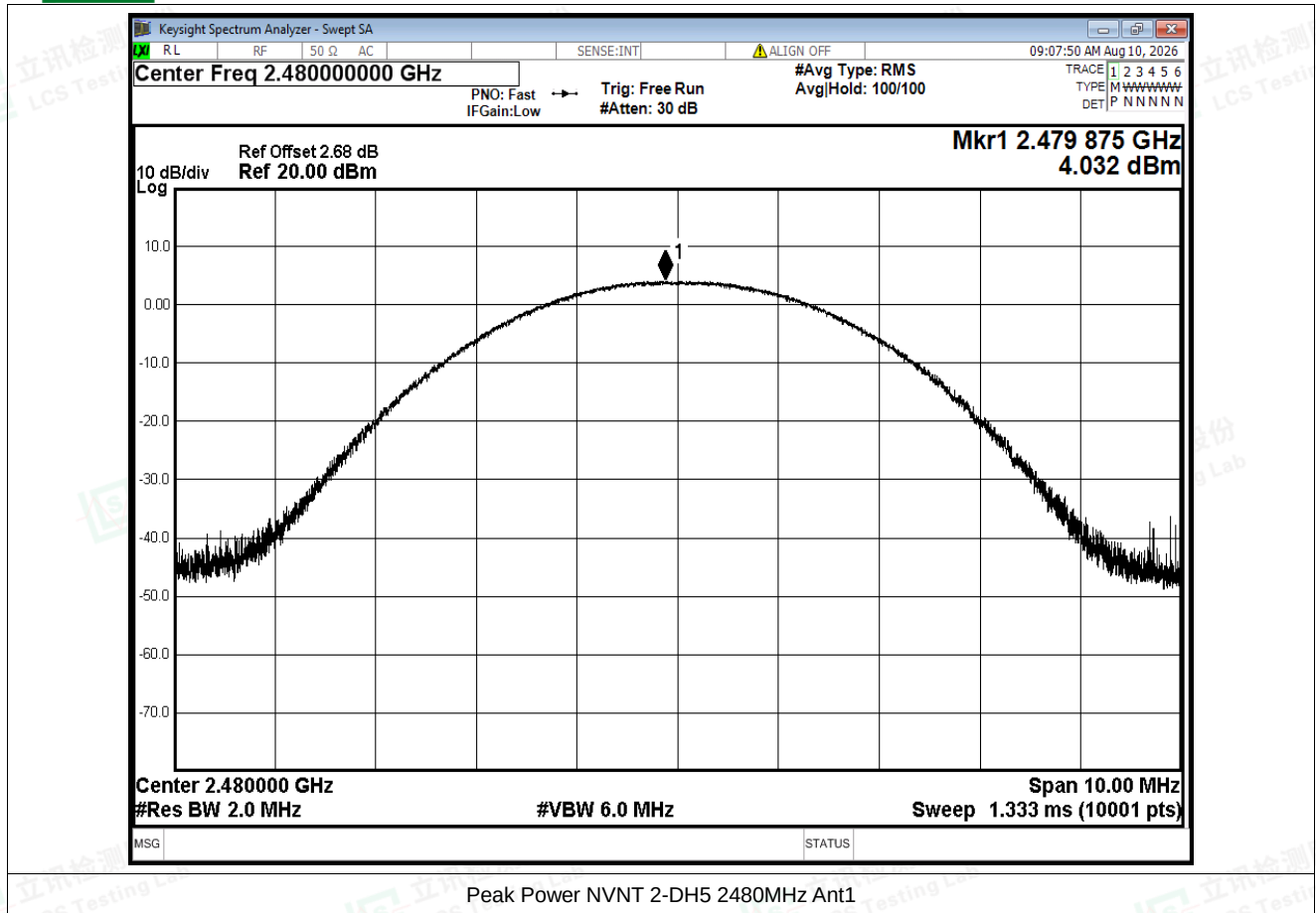


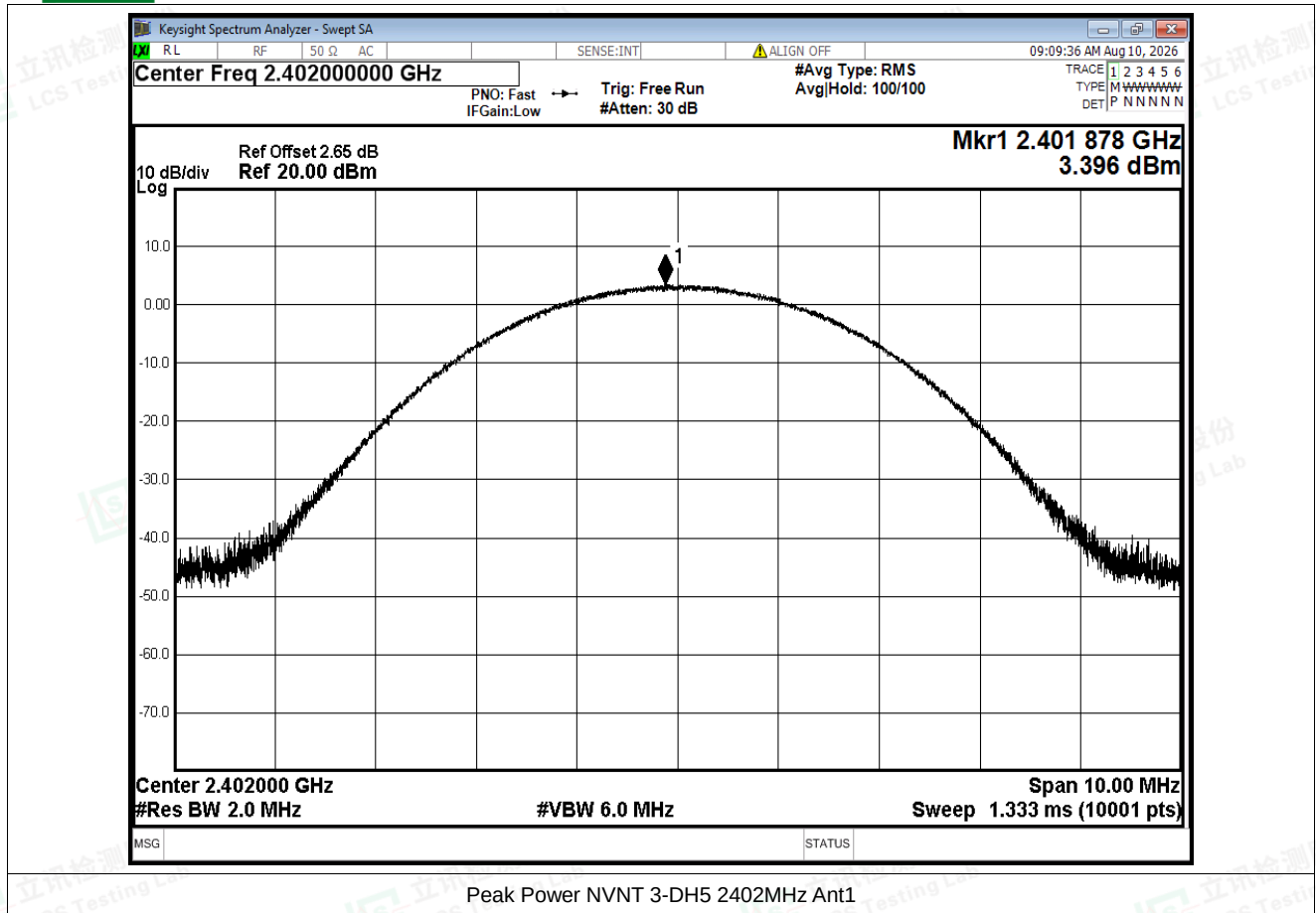


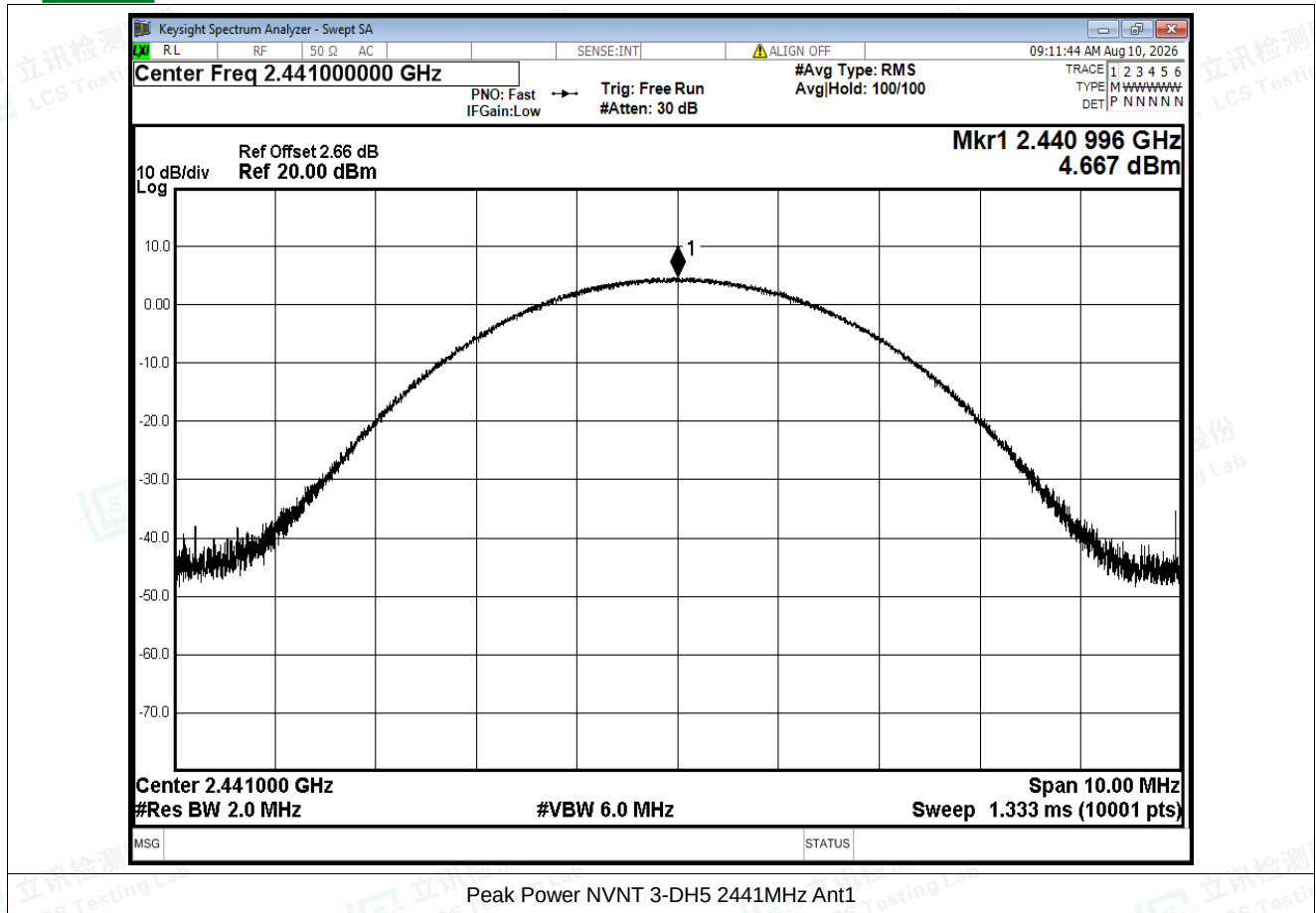


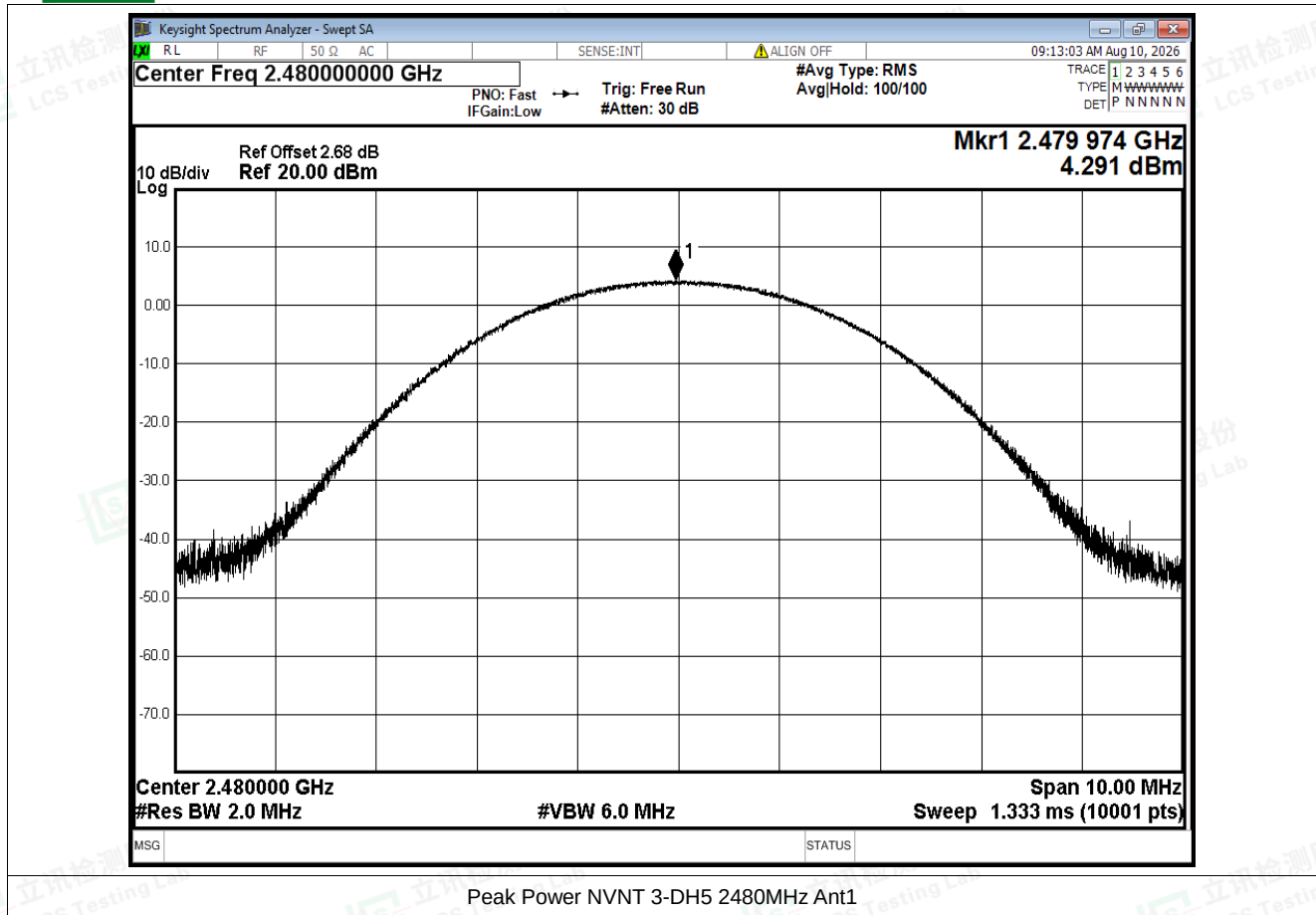








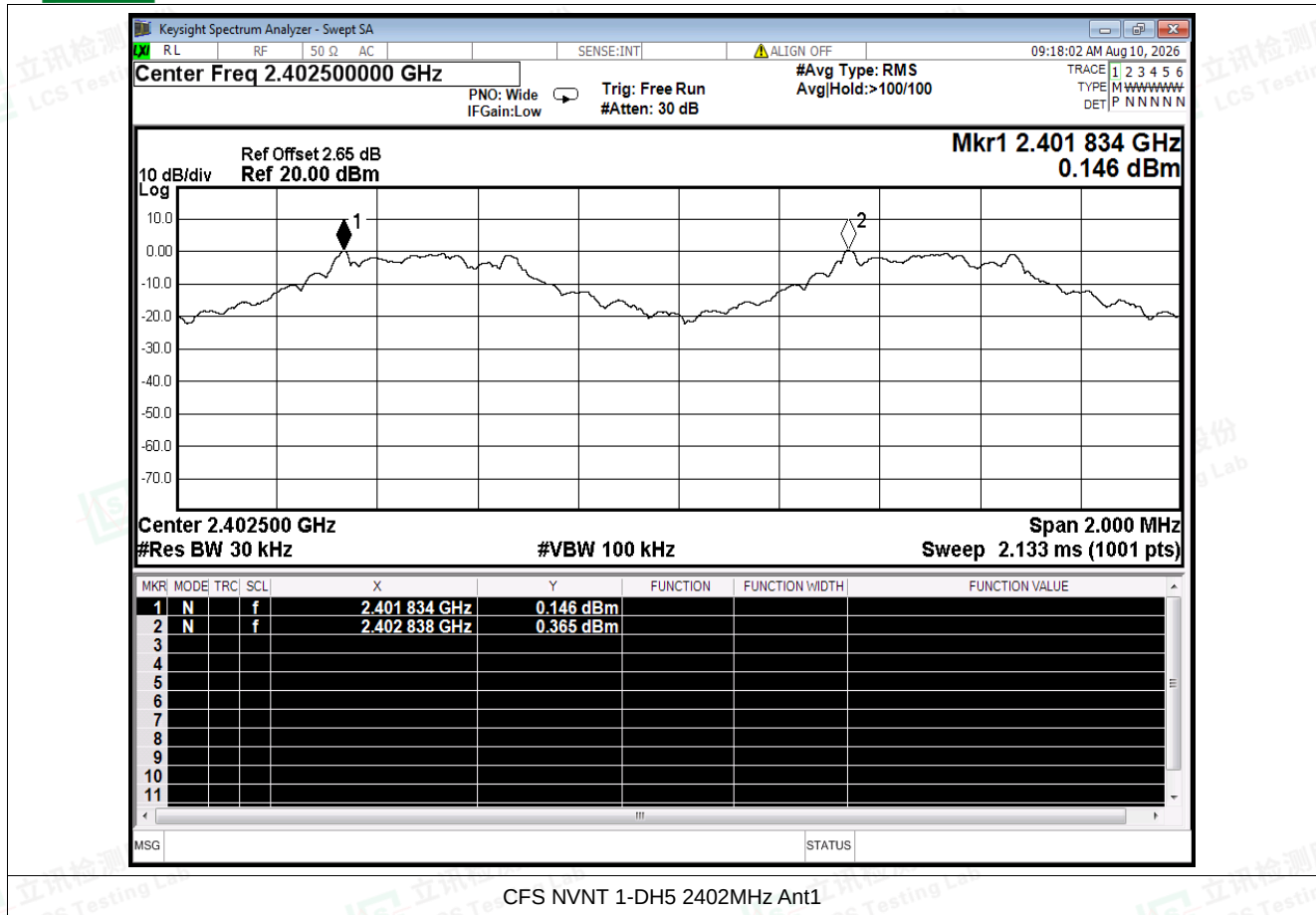


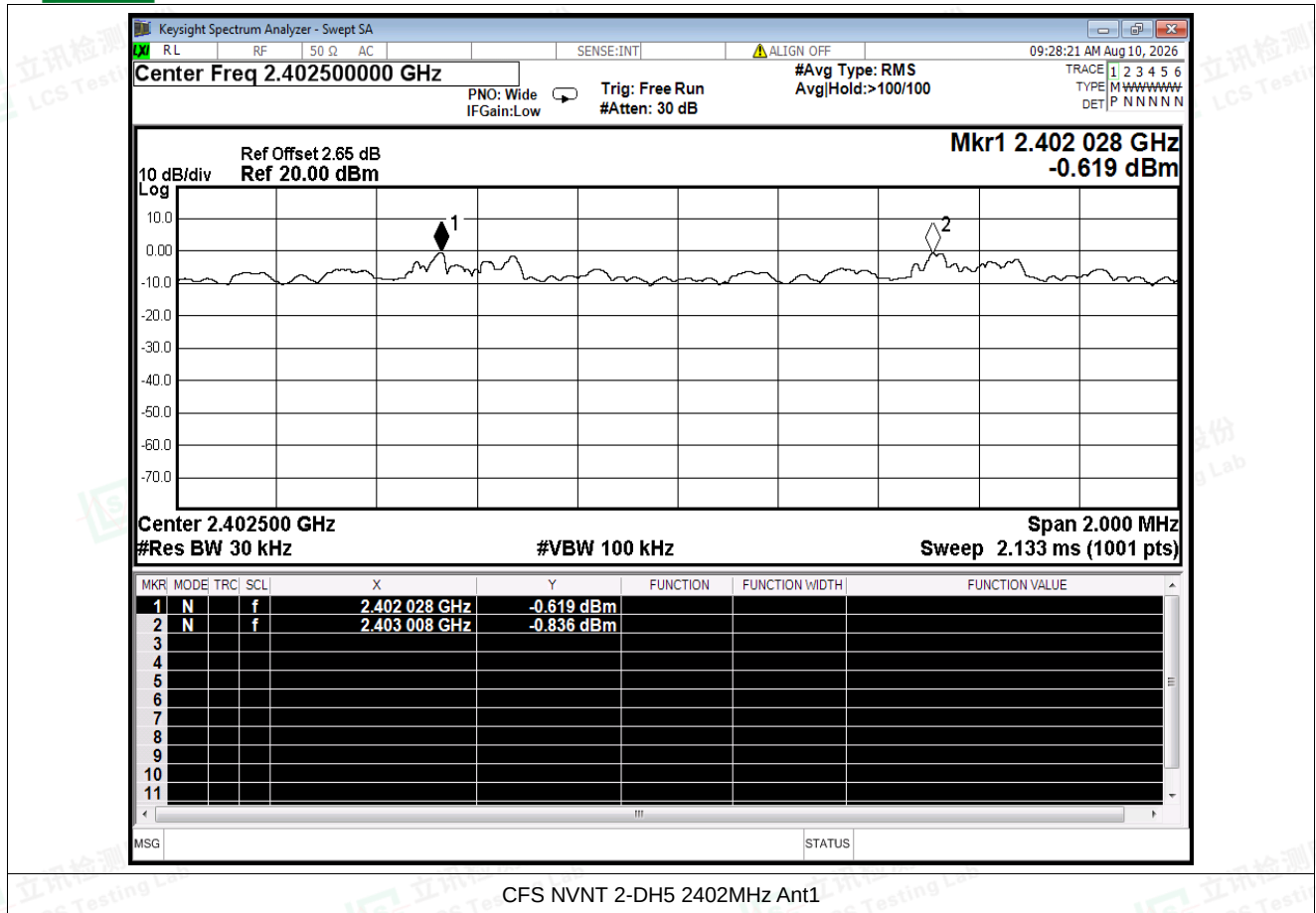


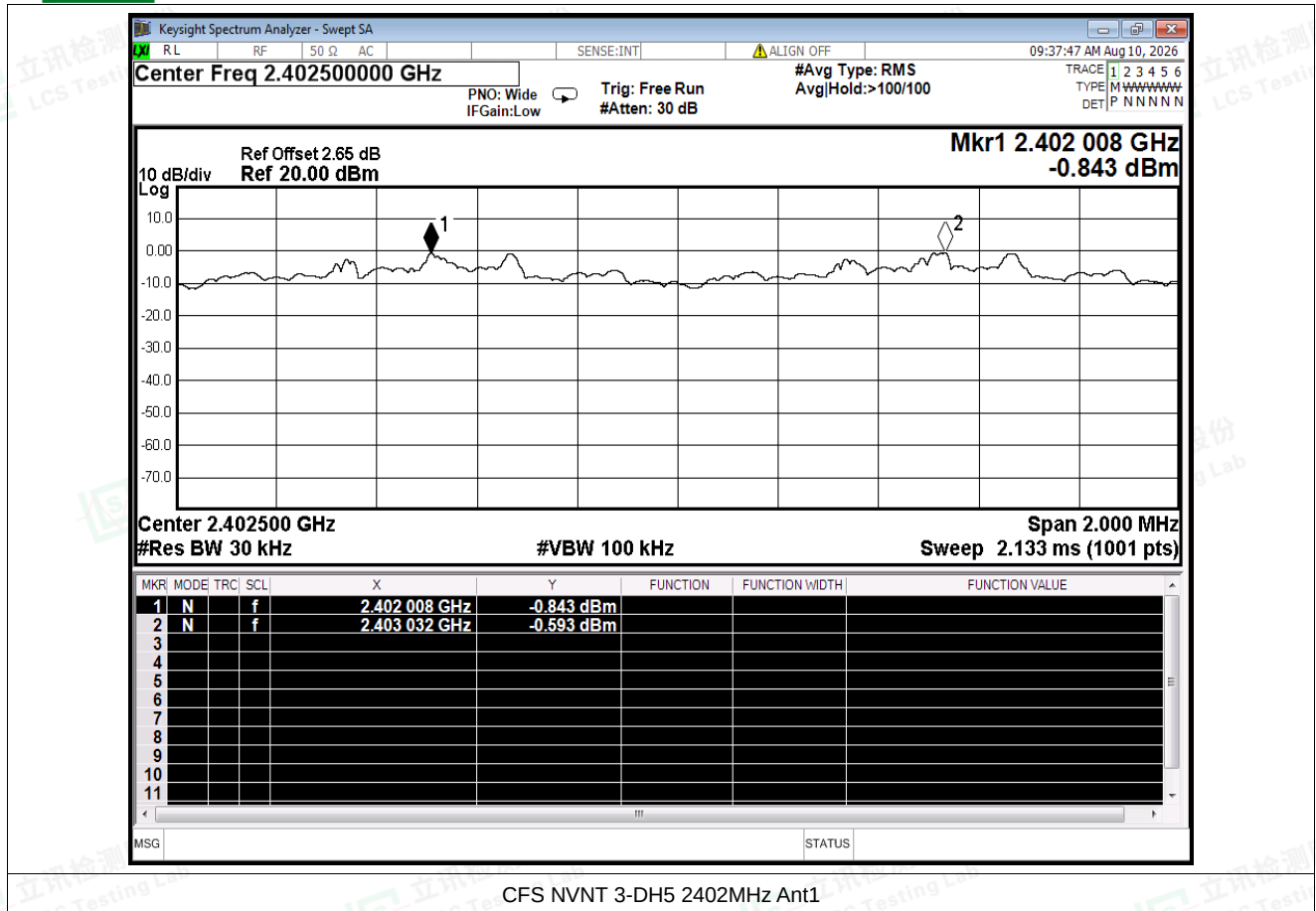


A.3 Carrier Frequencies Separation

Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2401.834	2402.838	1.004	0.677	Pass
NVNT	2-DH5	Ant1	2402.028	2403.008	0.98	0.859	Pass
NVNT	3-DH5	Ant1	2402.008	2403.032	1.024	0.865	Pass



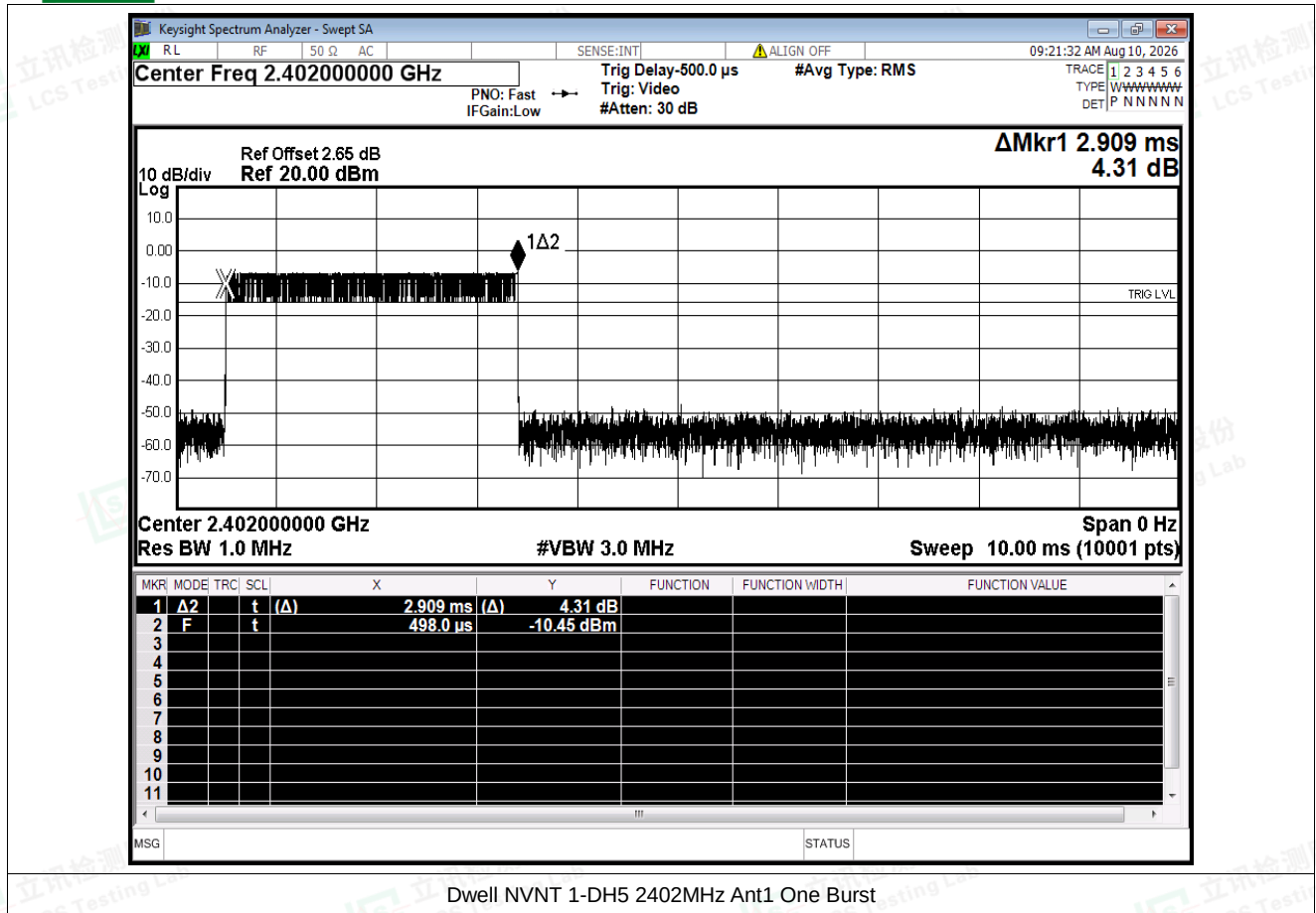


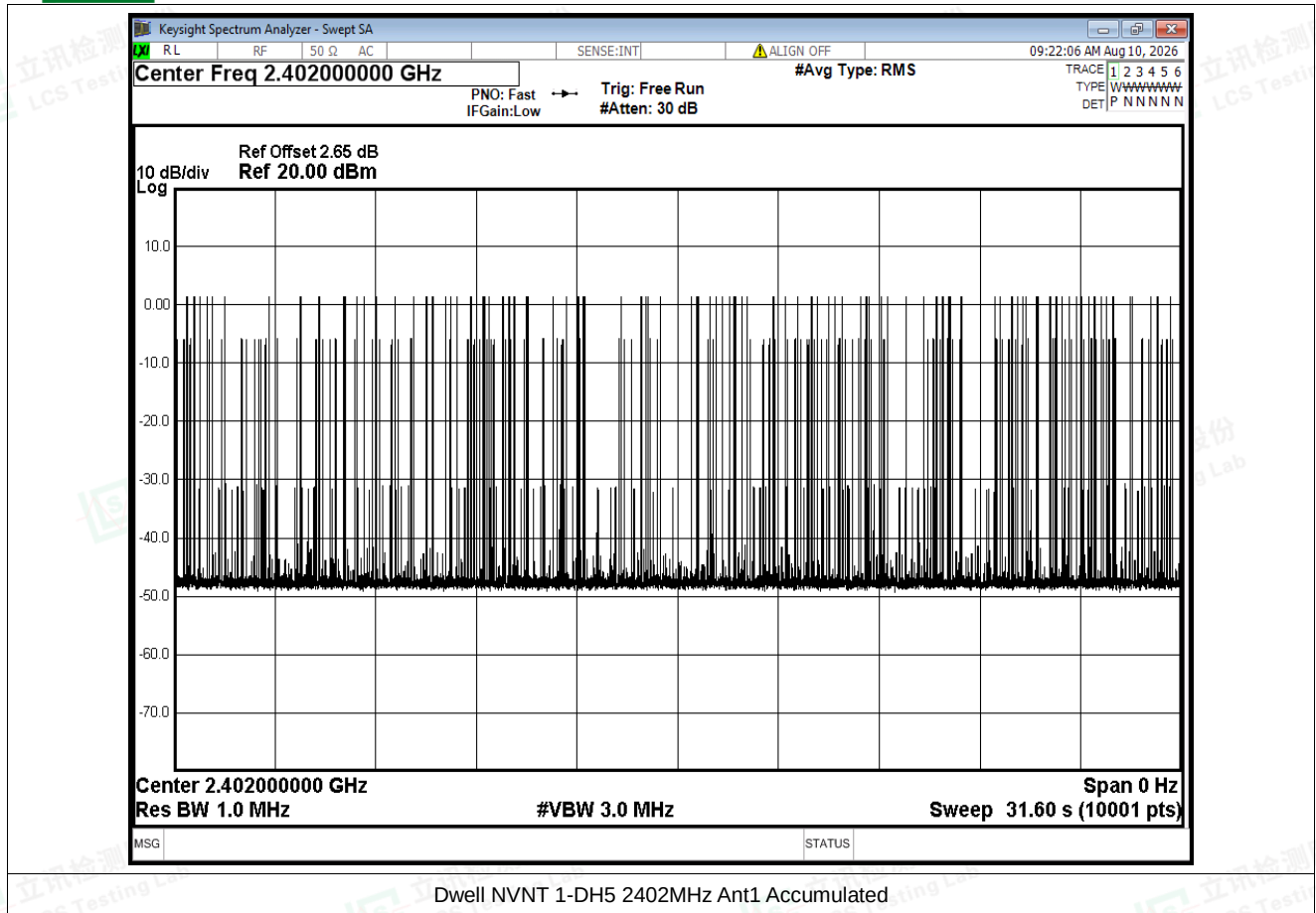


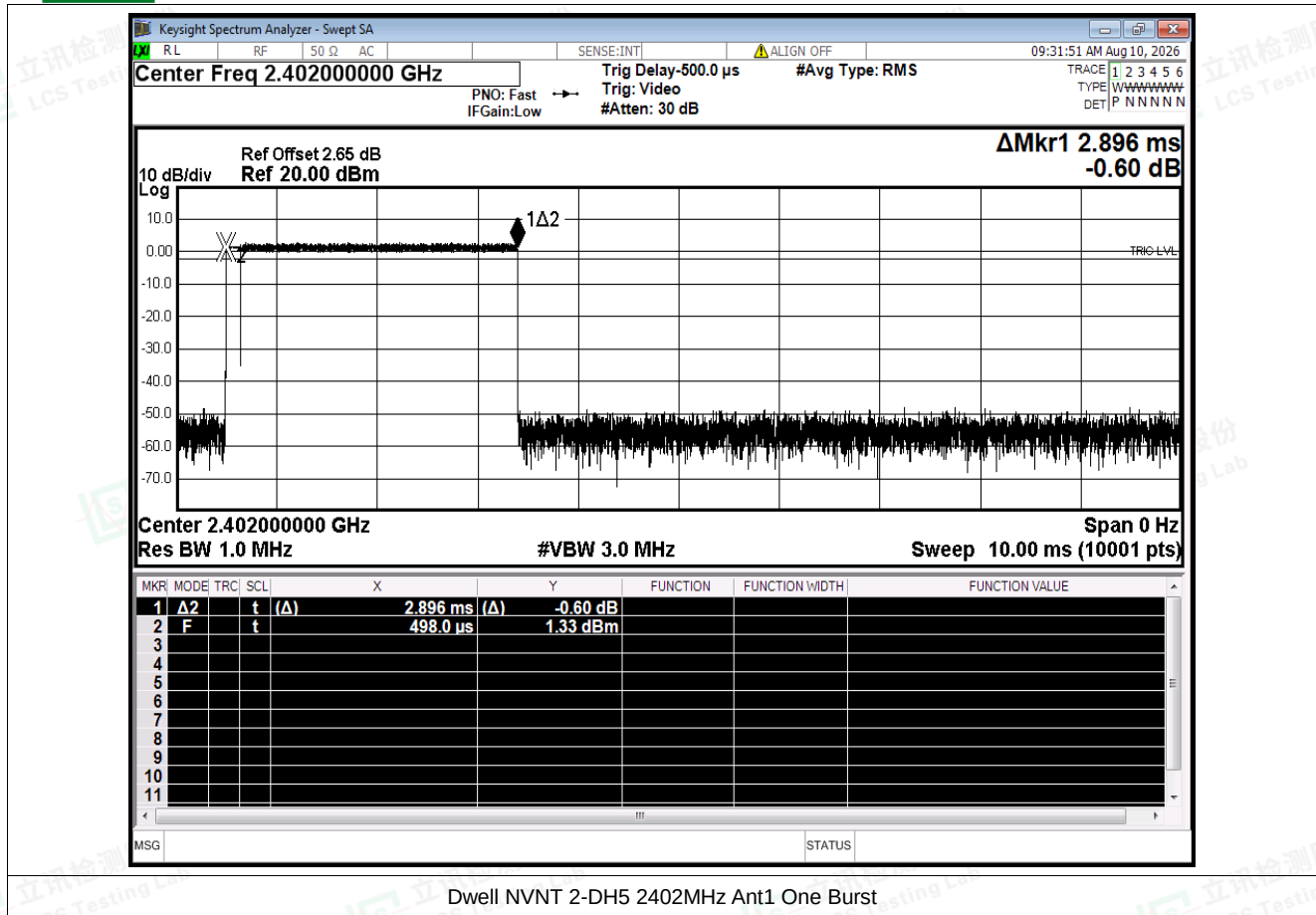


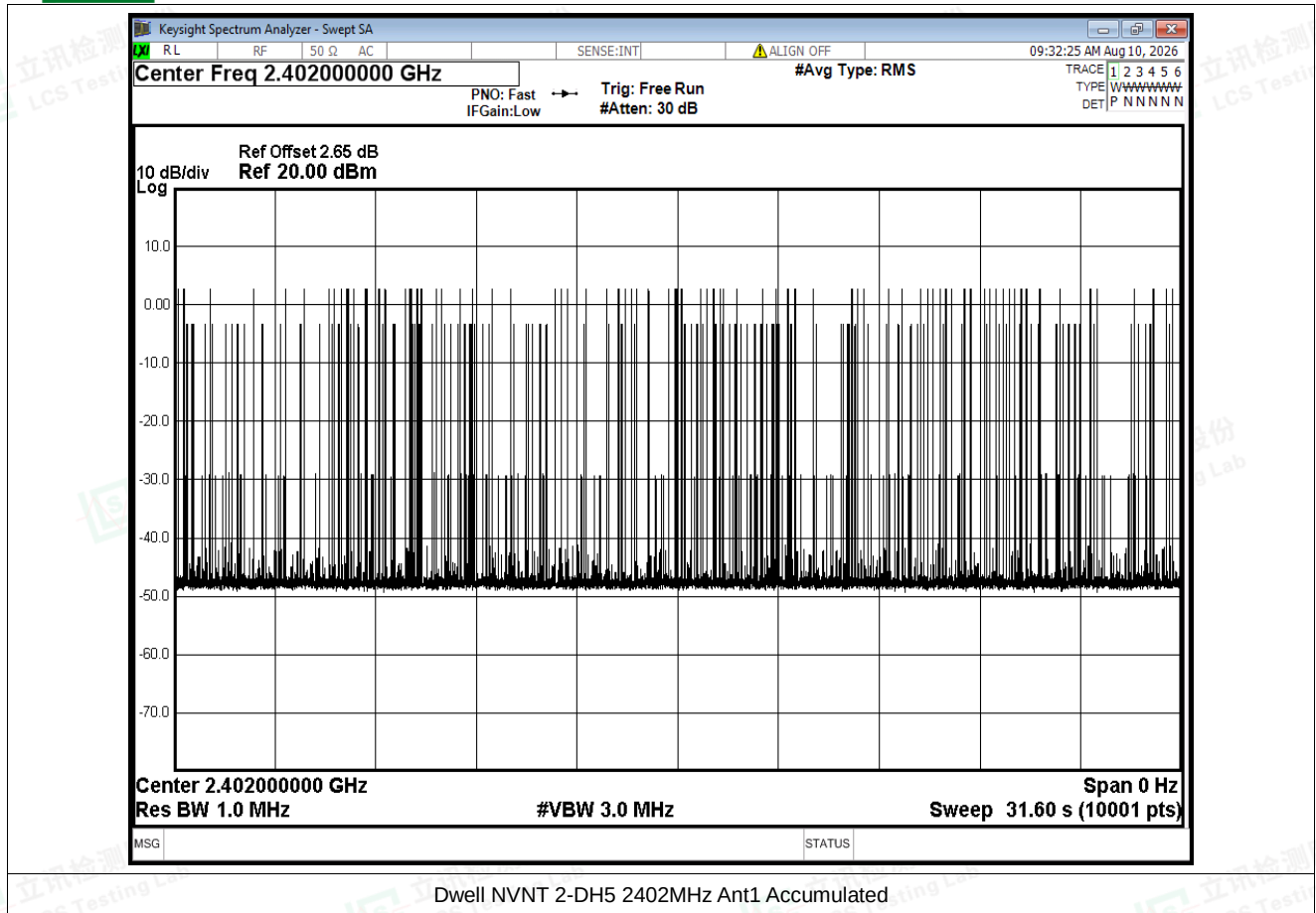
A.4 Dwell Time

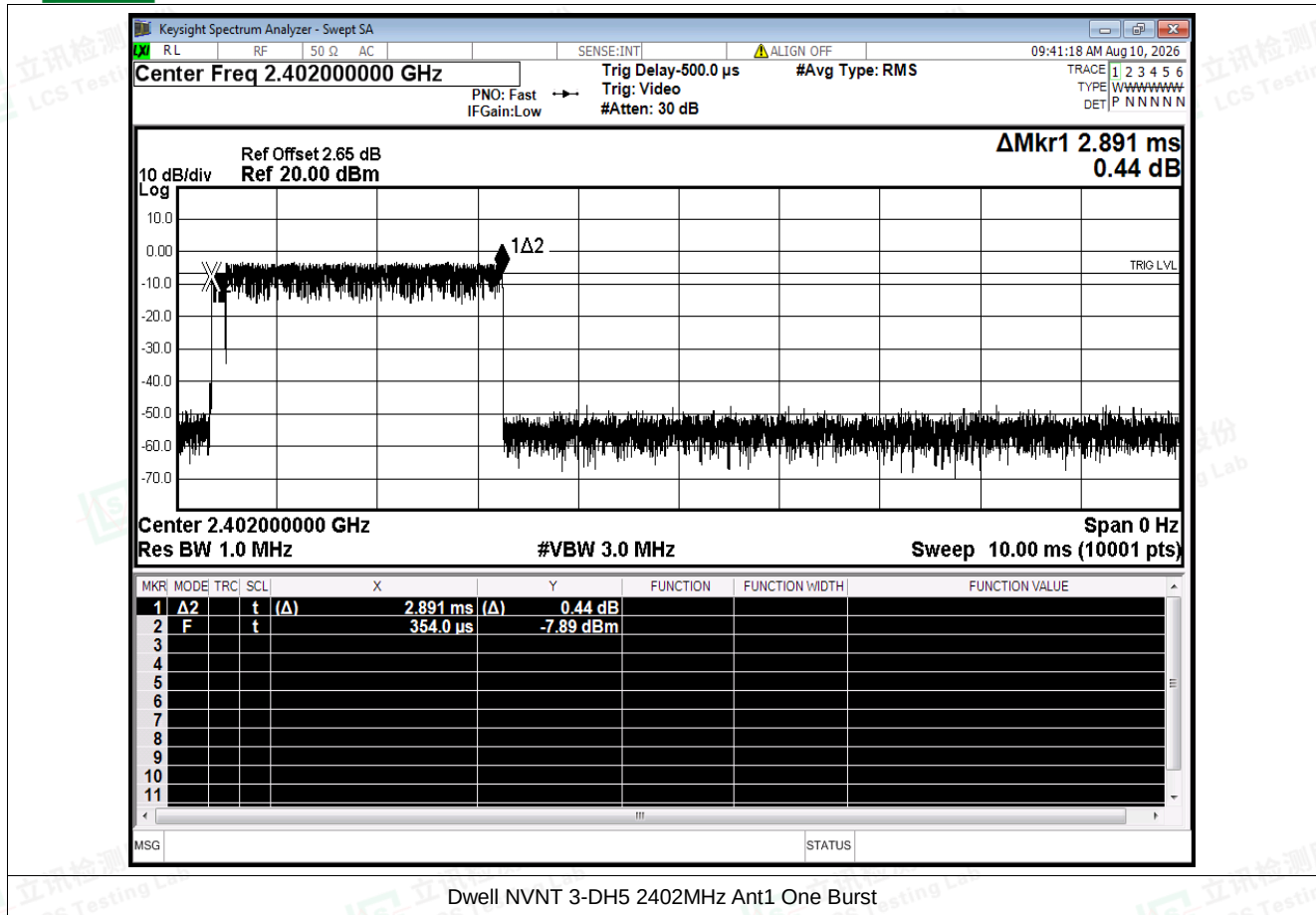
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH5	2402	Ant1	2.909	319.99	110	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.896	275.12	95	31600	400	Pass
NVNT	3-DH5	2402	Ant1	2.891	291.991	101	31600	400	Pass

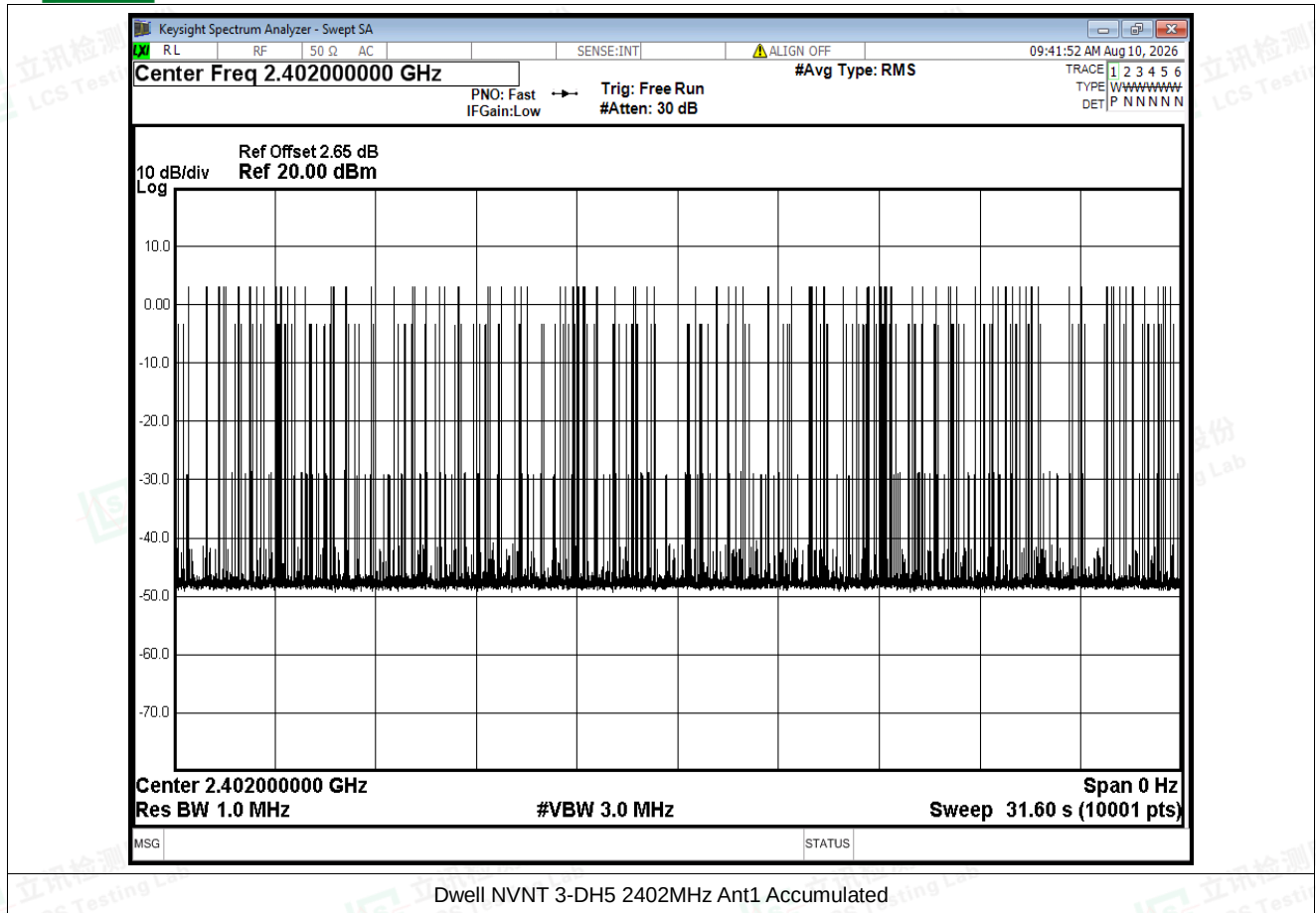








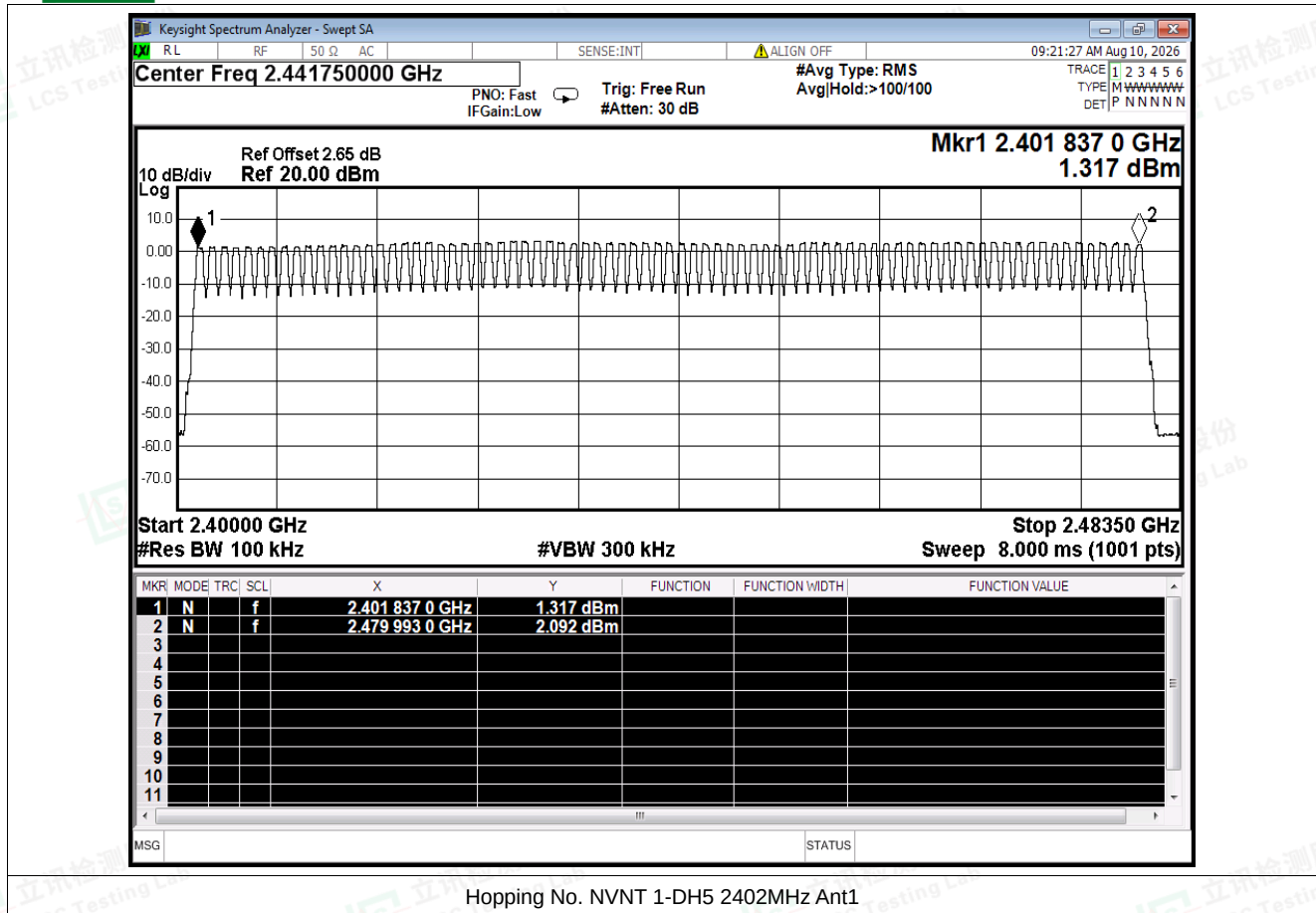


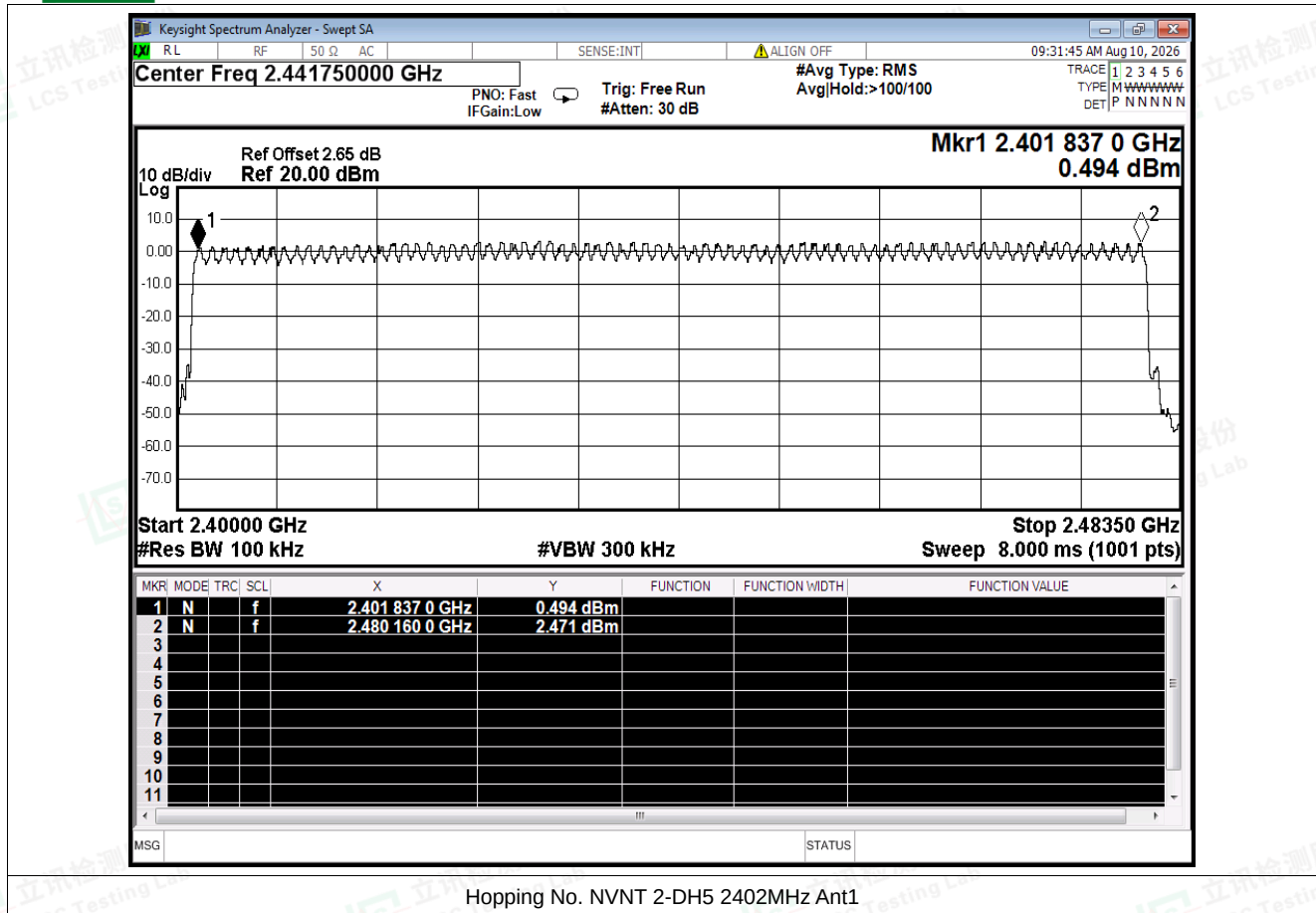


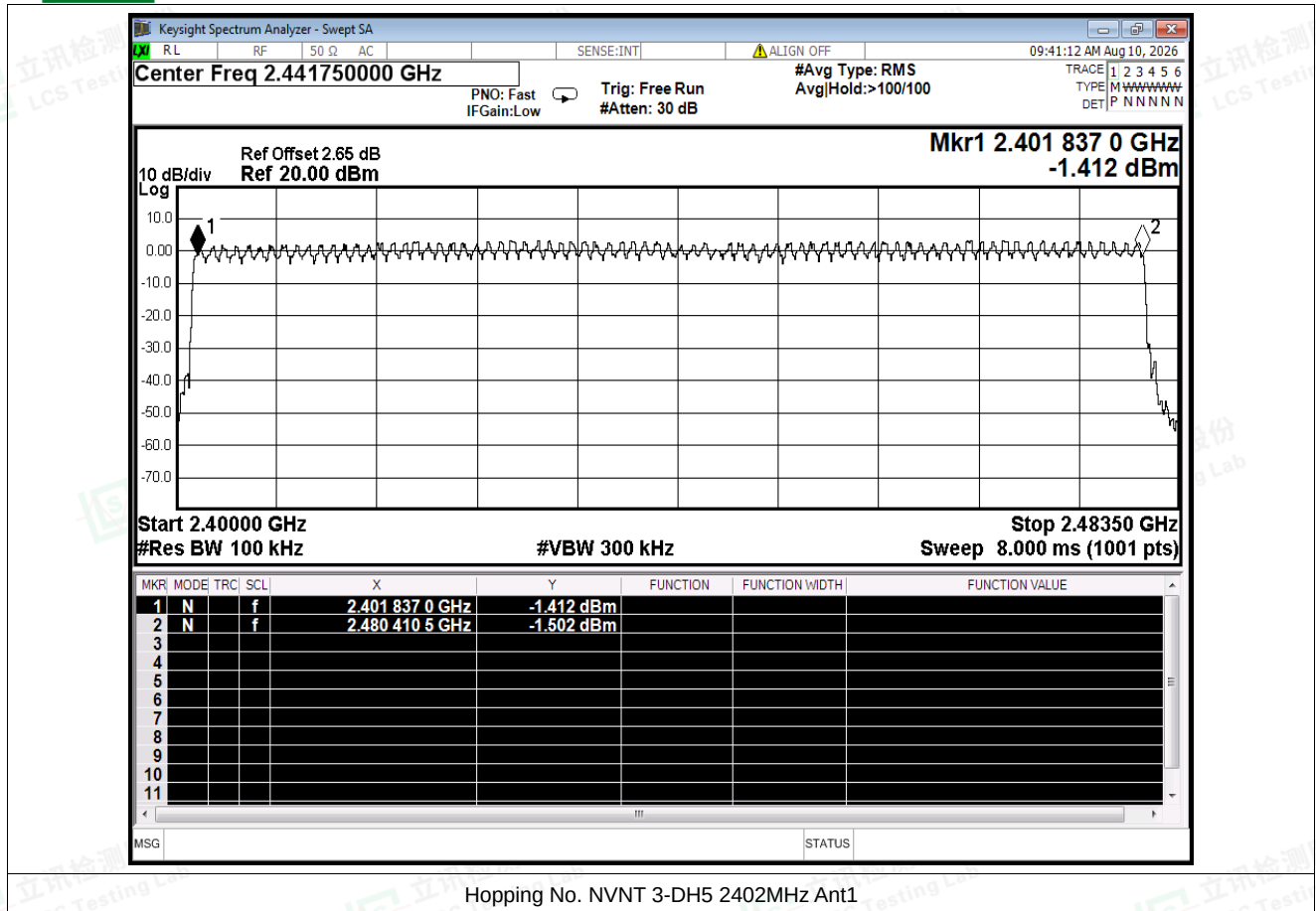


A.5 Number of Hopping Channel

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



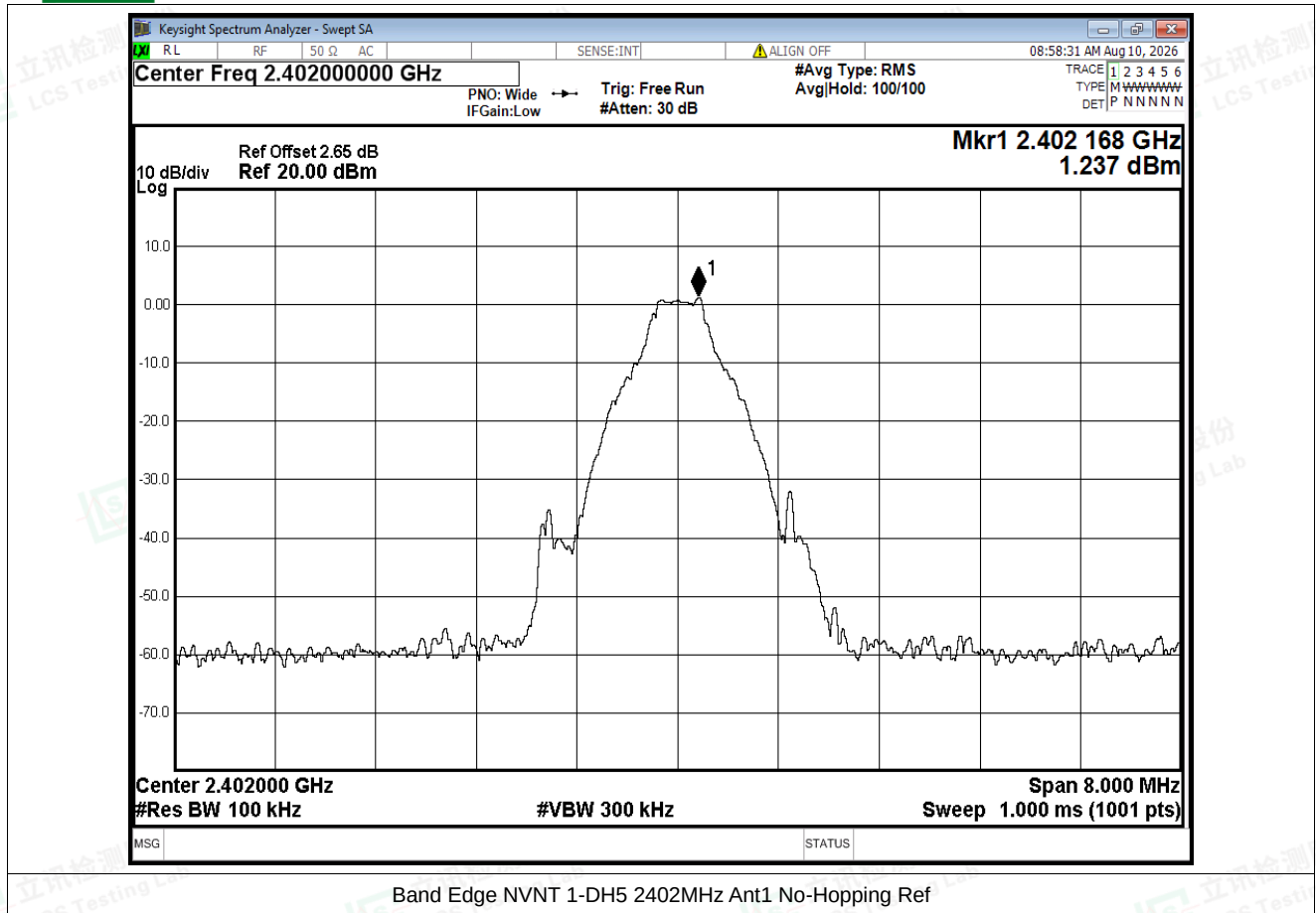


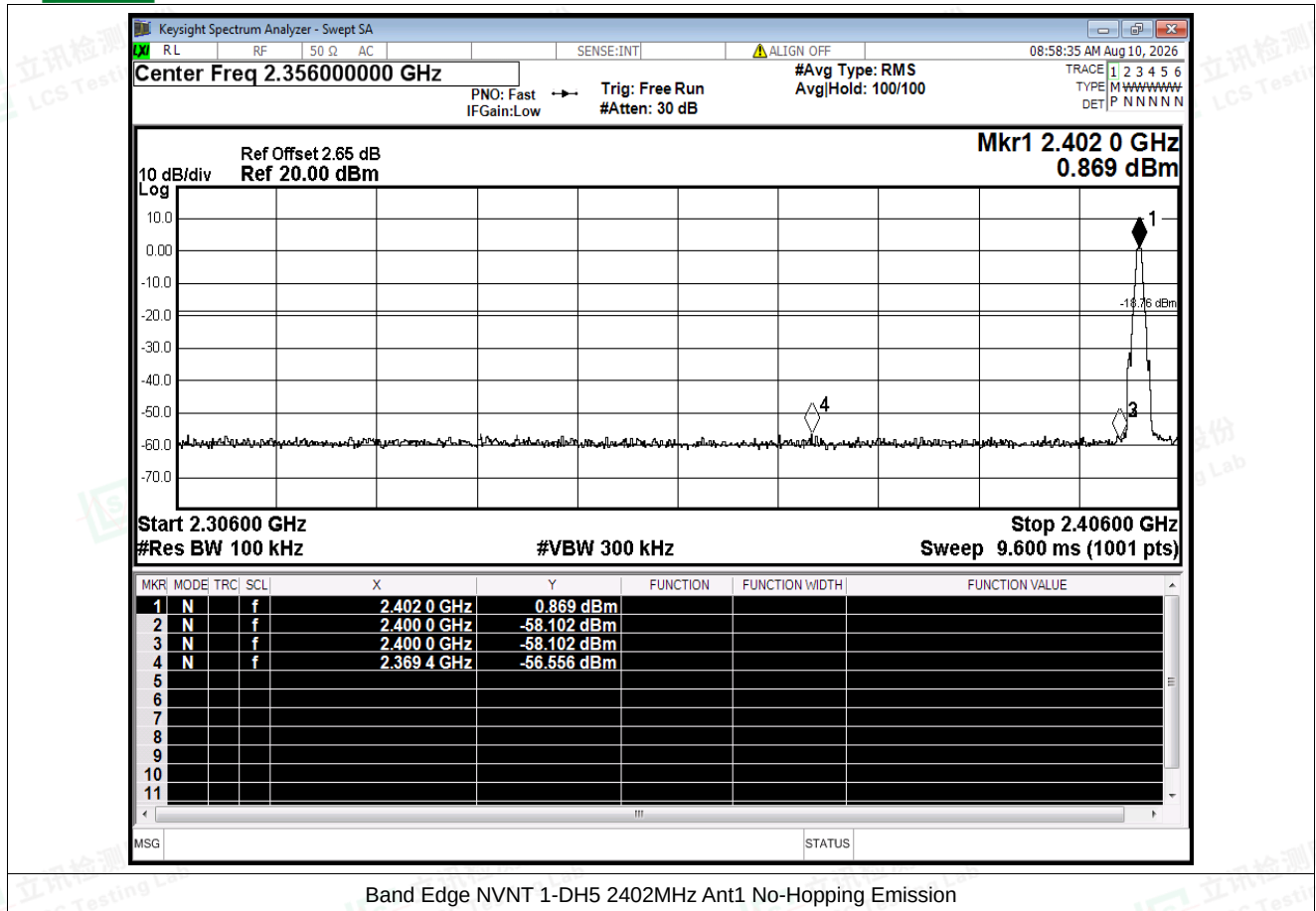


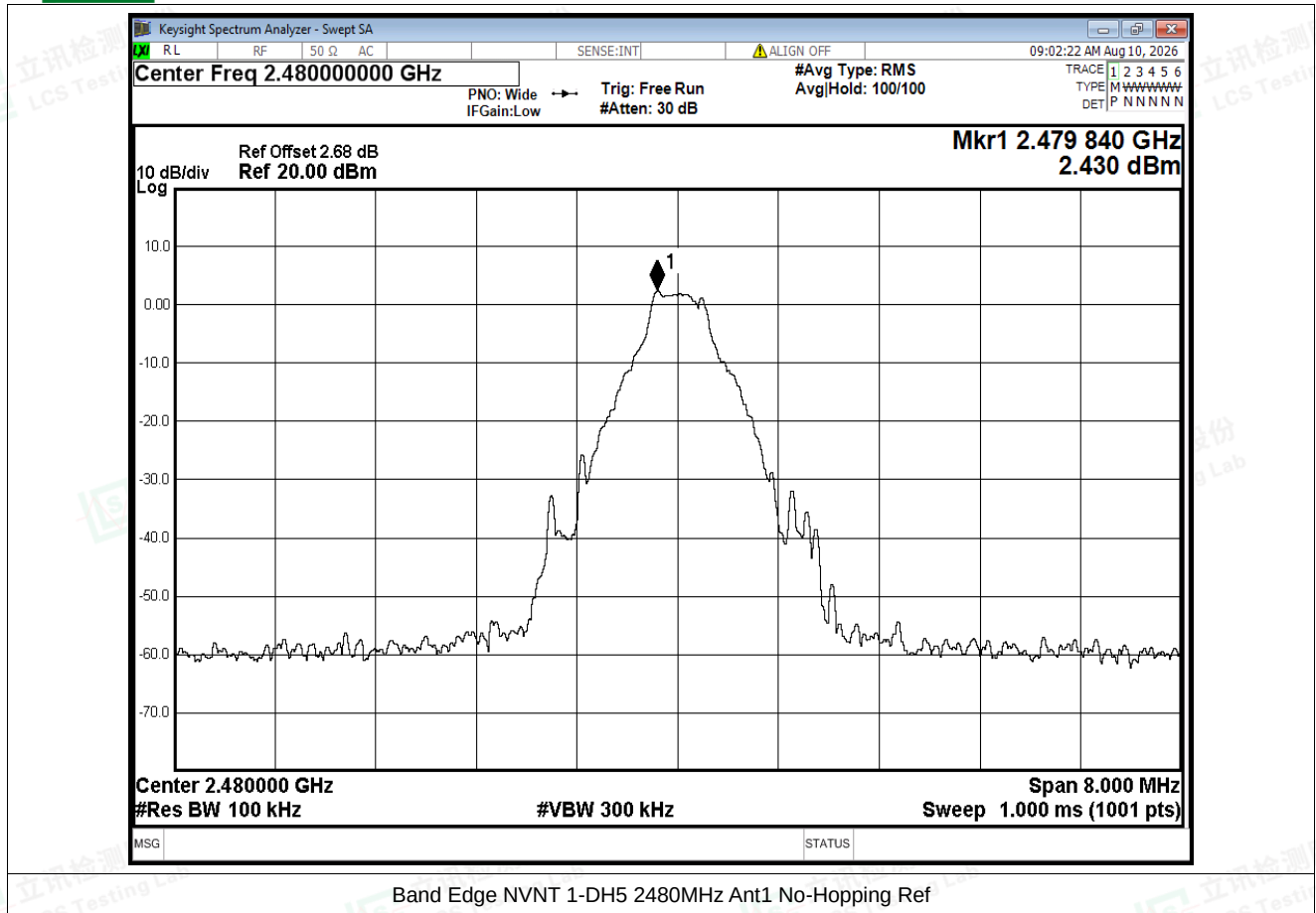


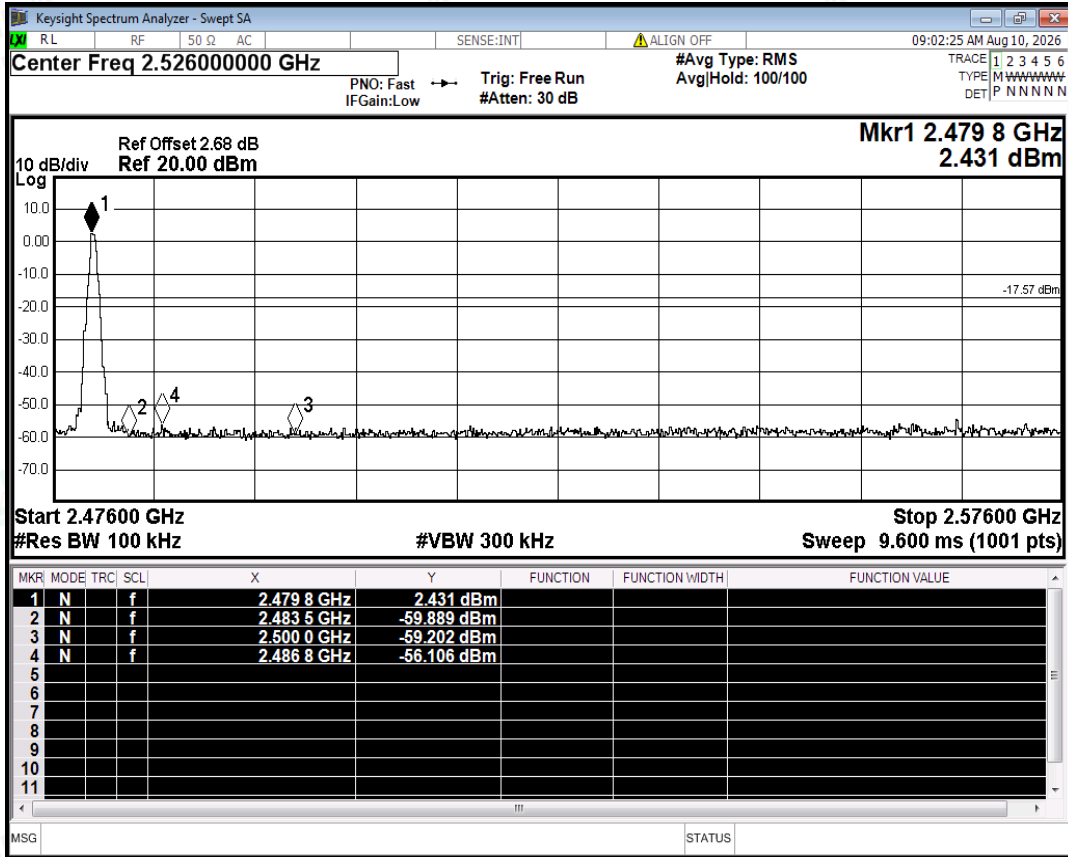
A.6 Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-57.79	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-58.53	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-51.93	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-54.57	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-54.93	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-55.51	-20	Pass

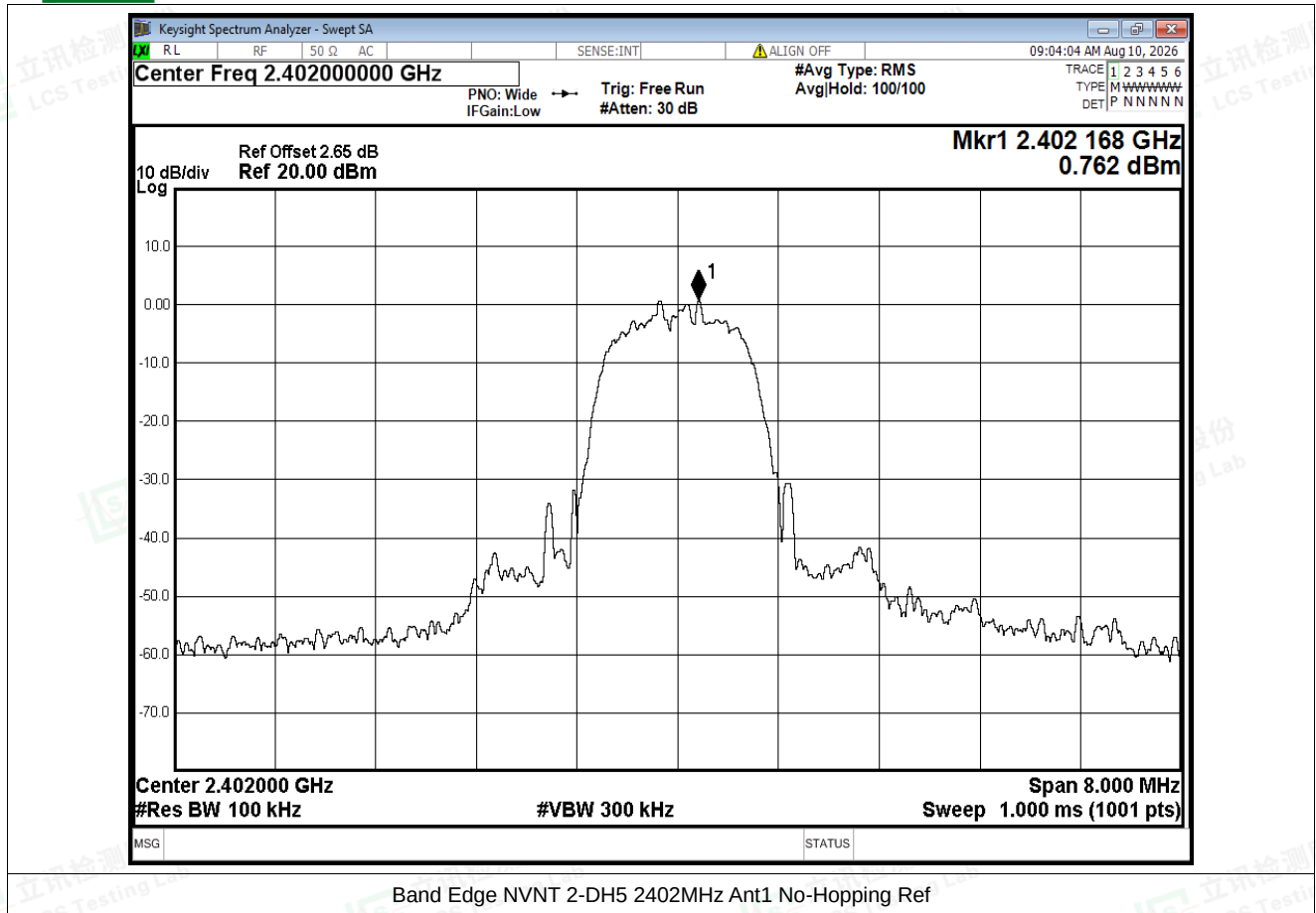


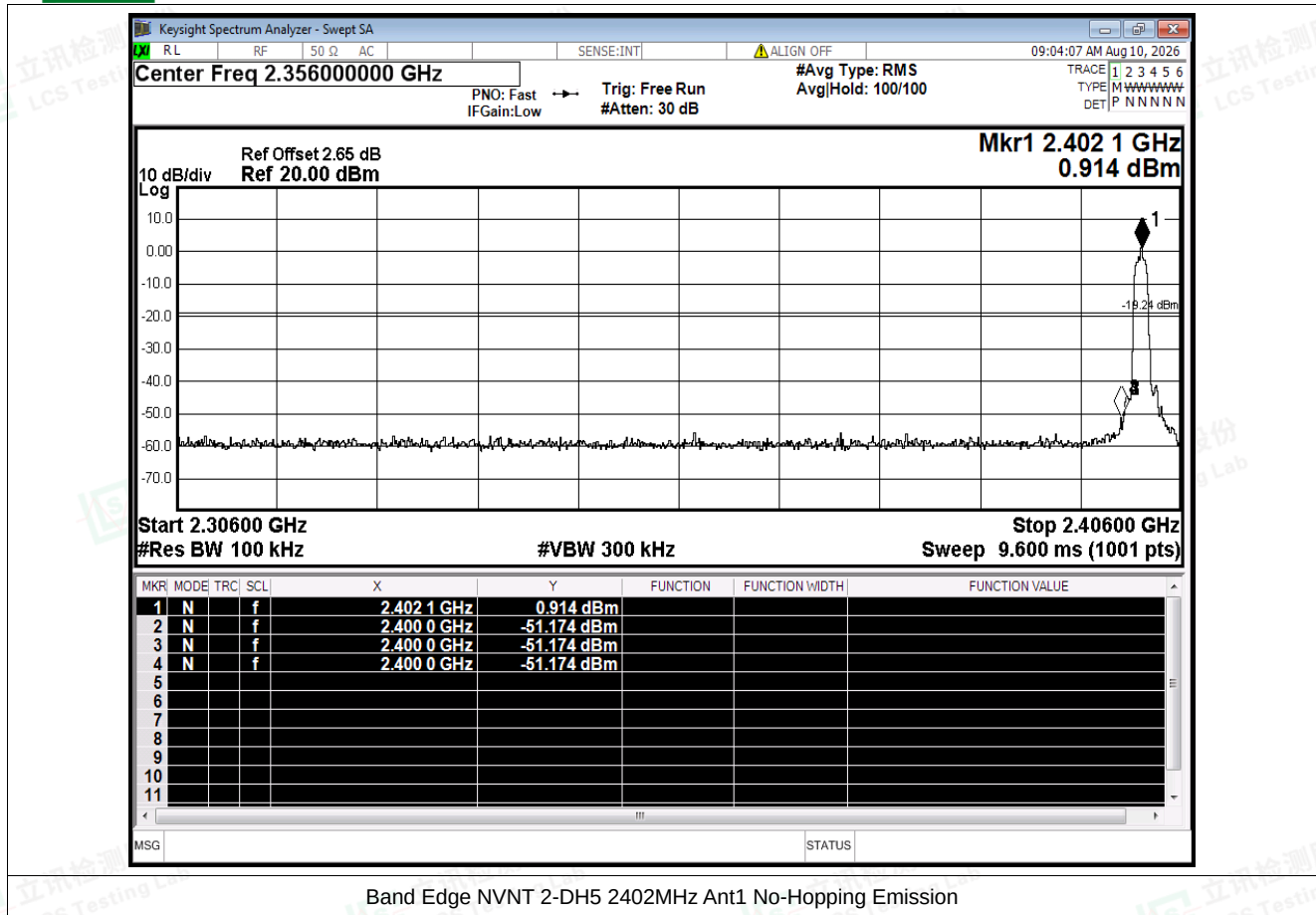


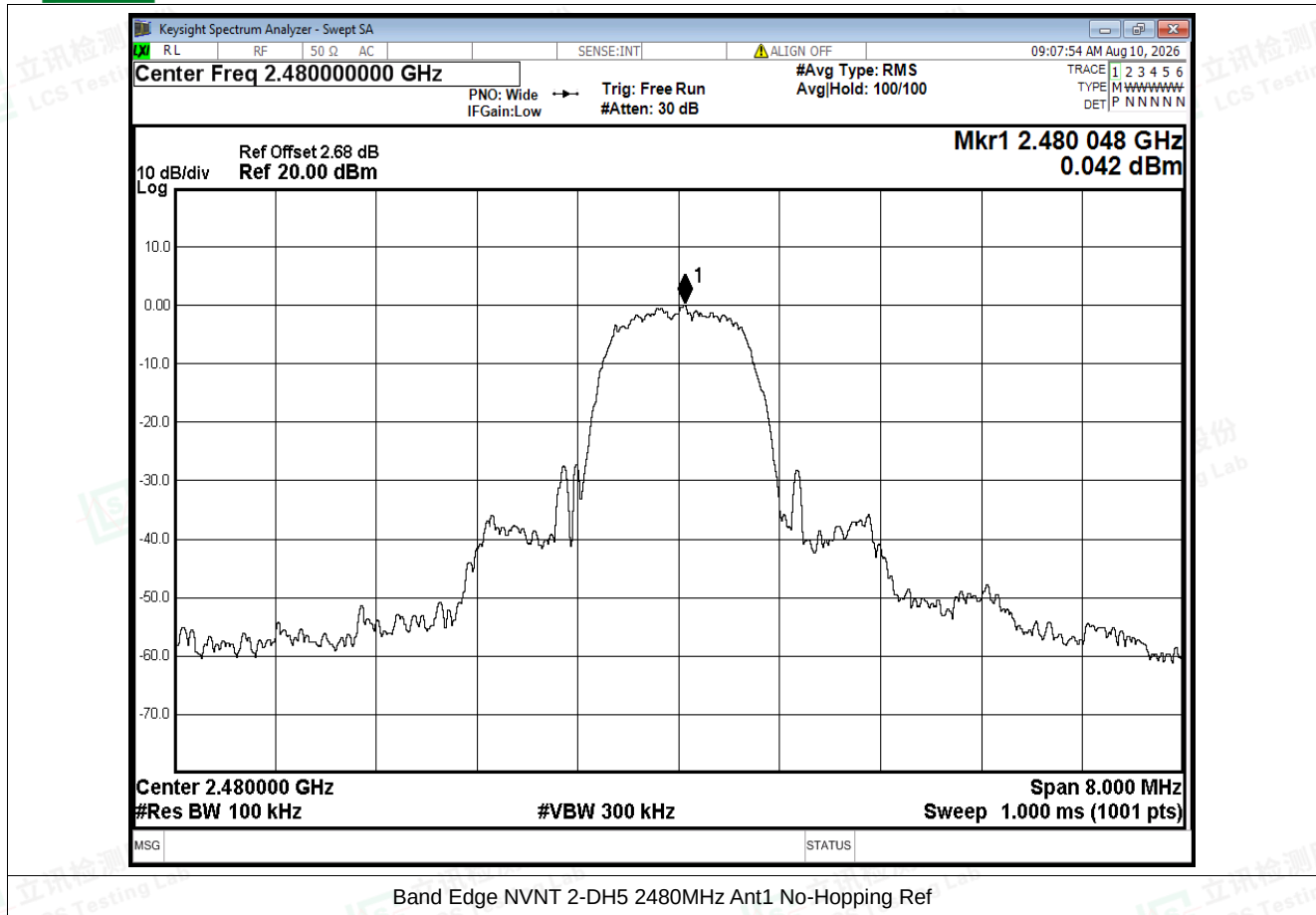


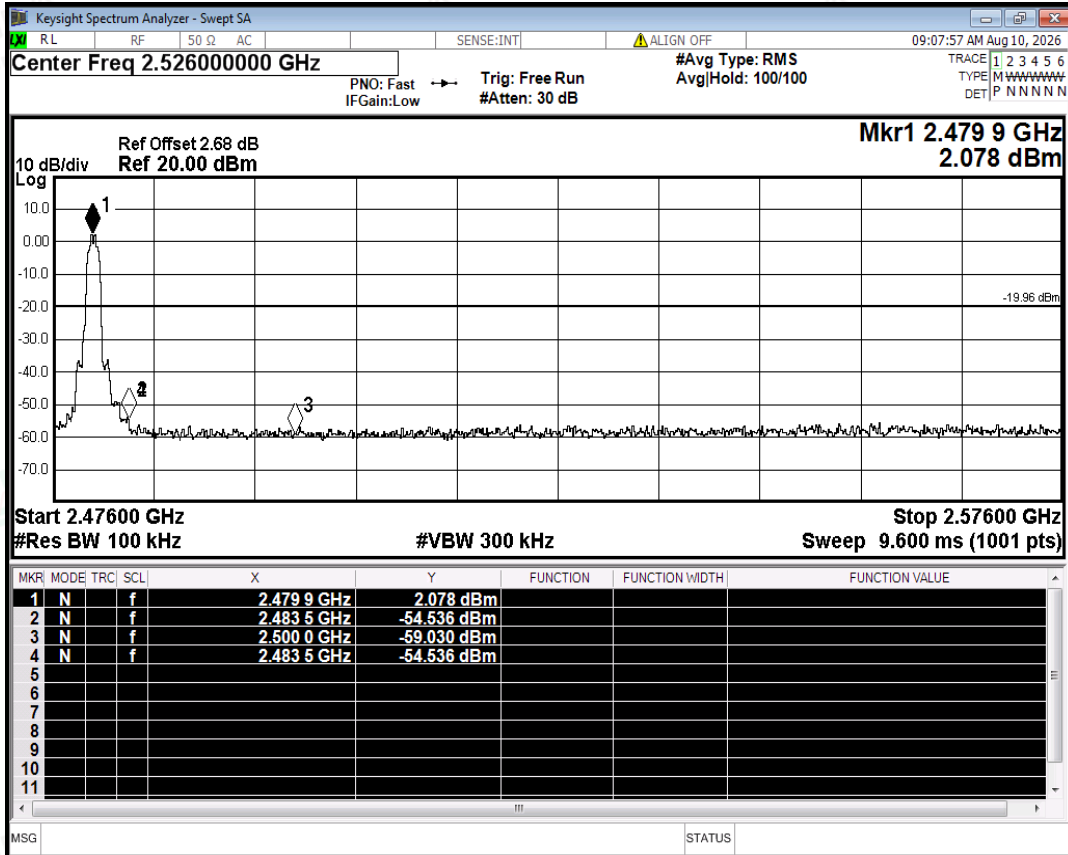


Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission

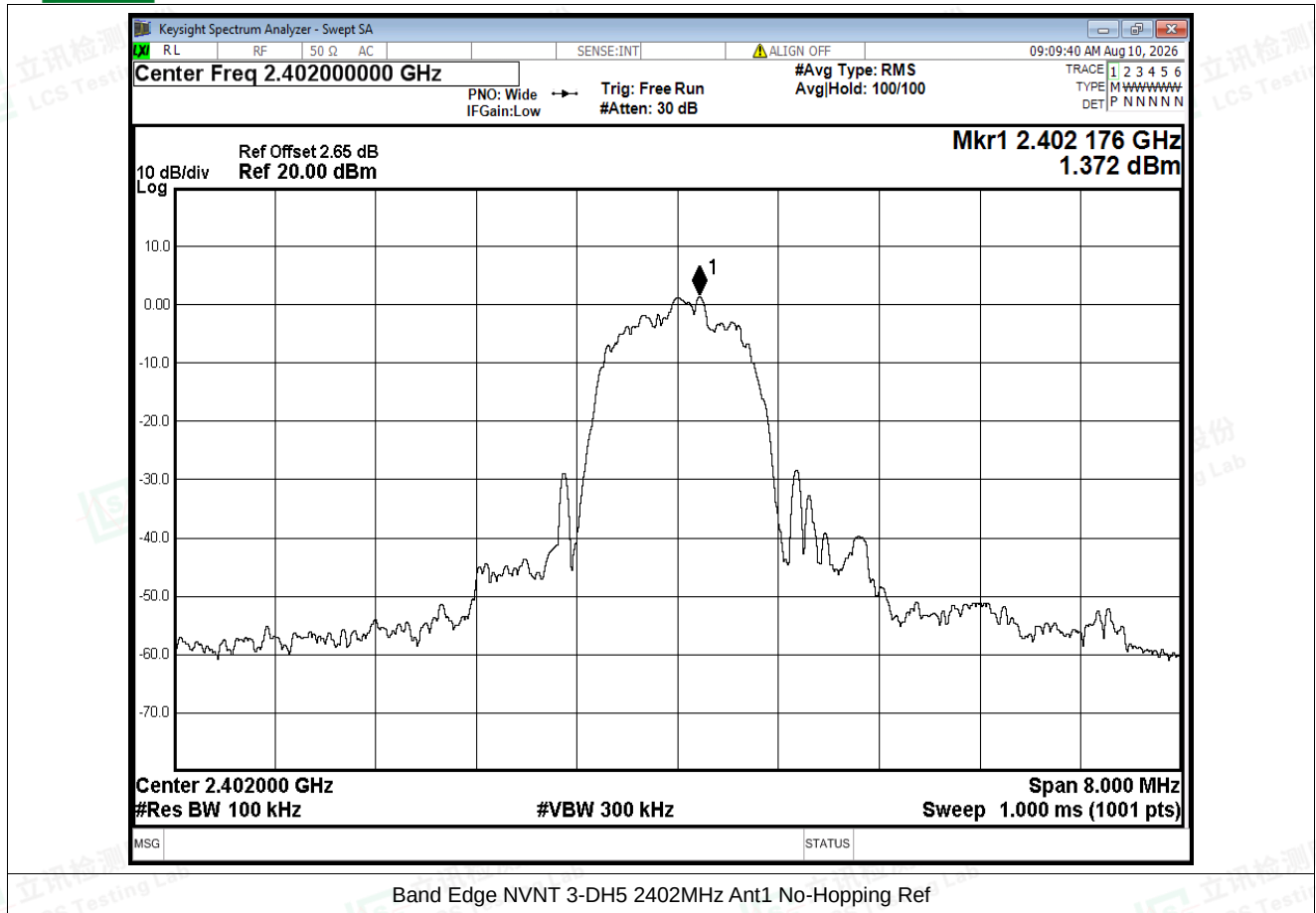


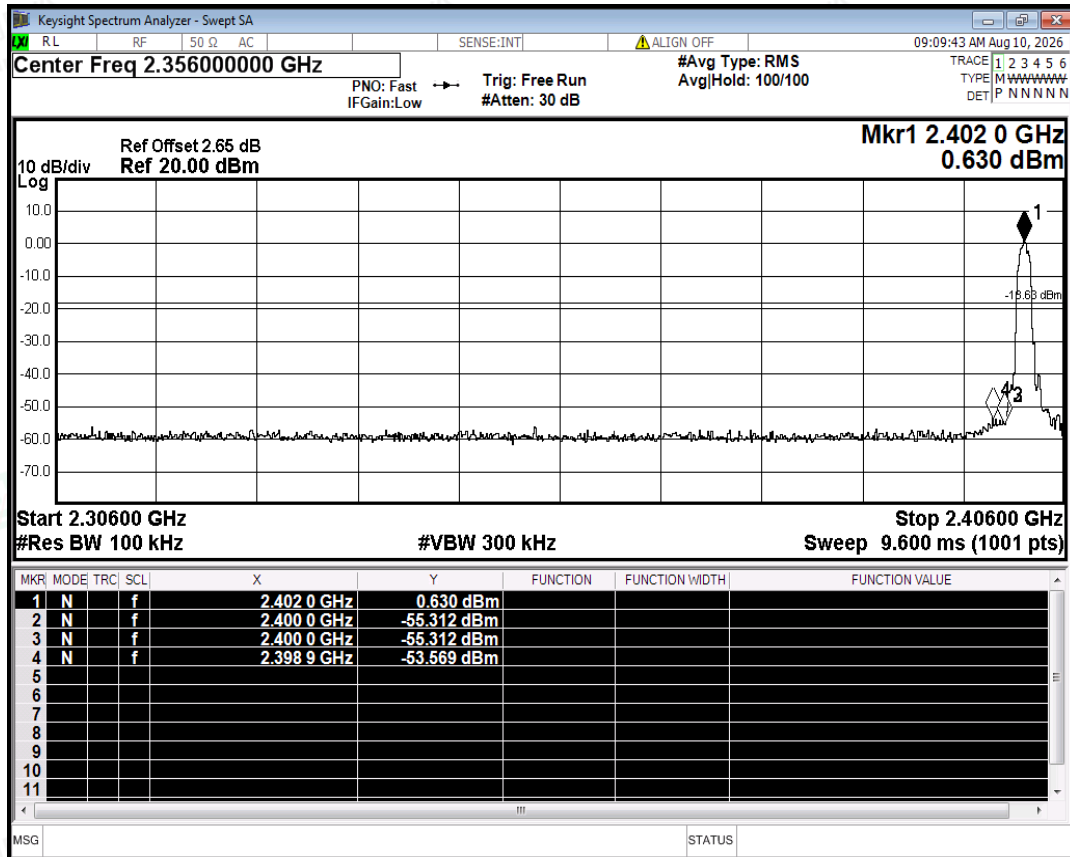




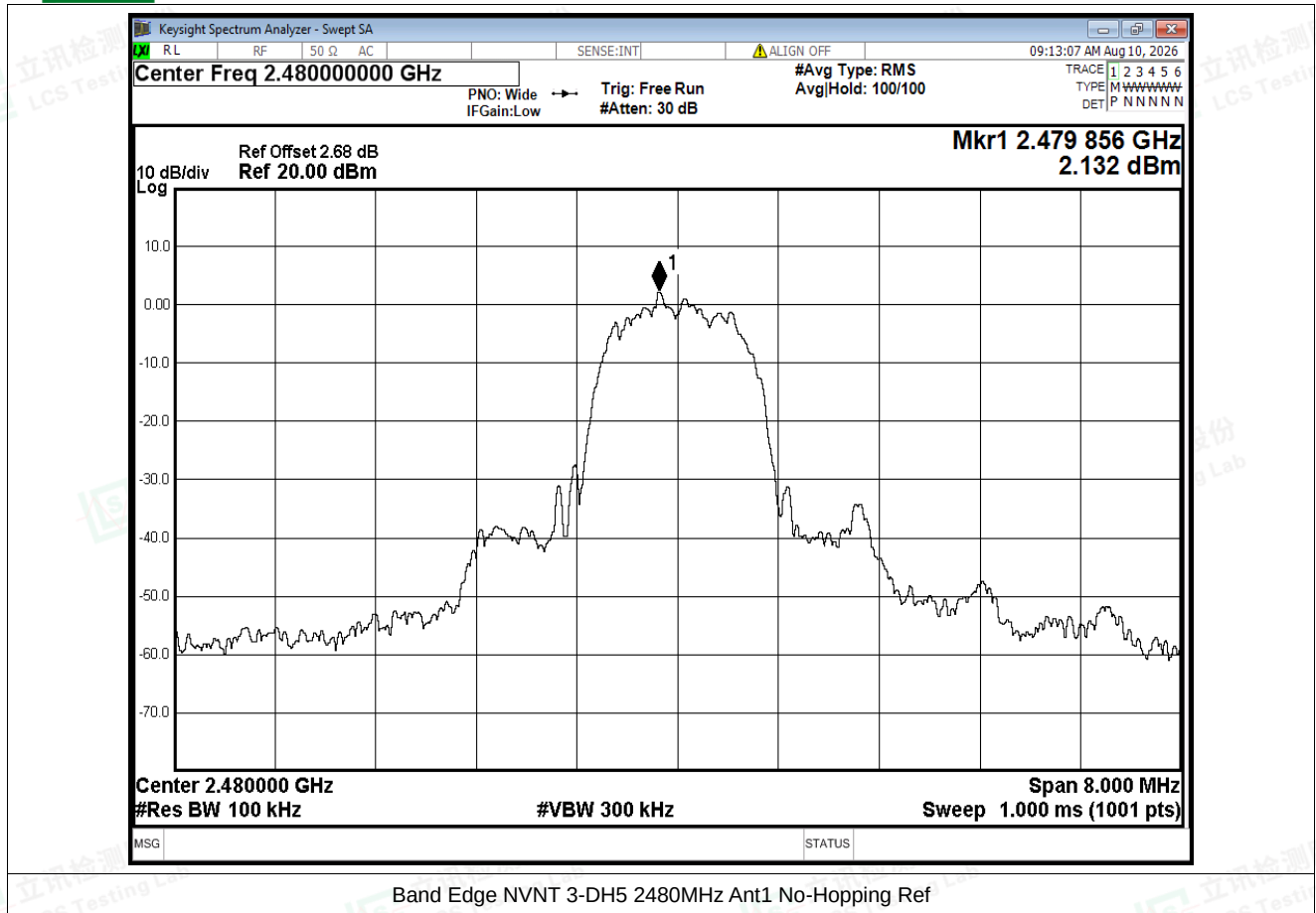


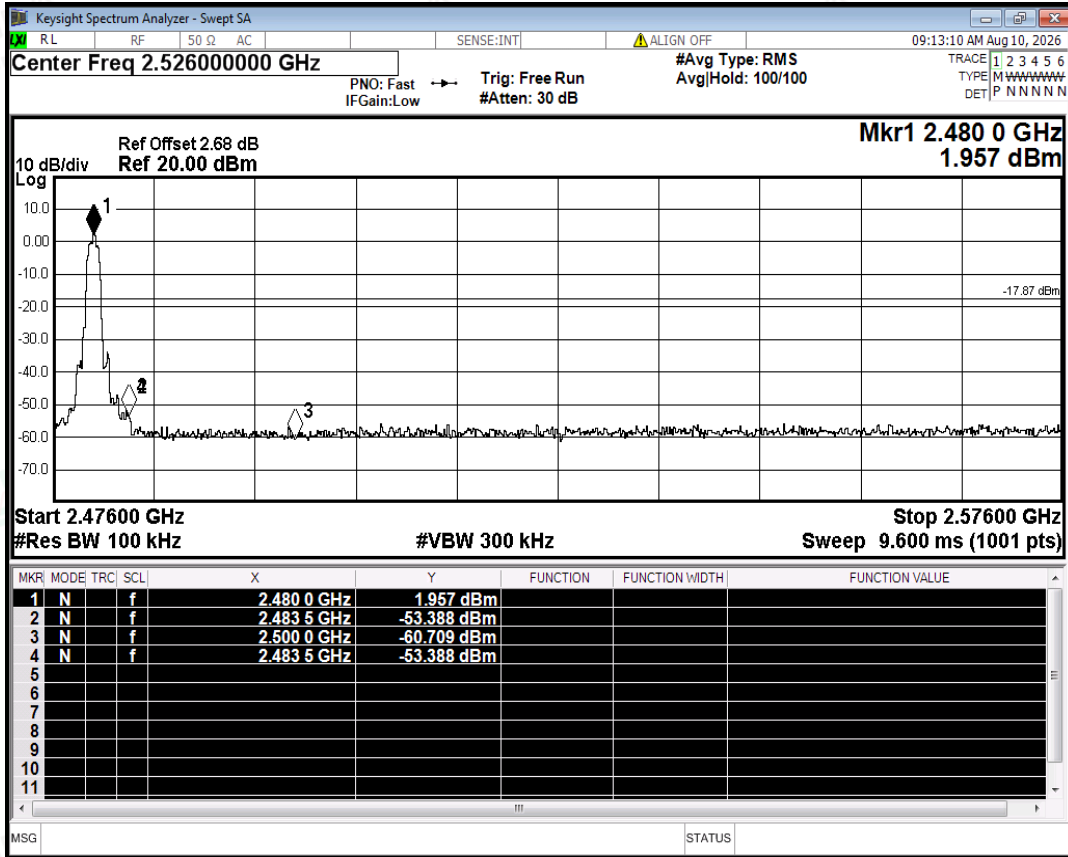
Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Emission





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



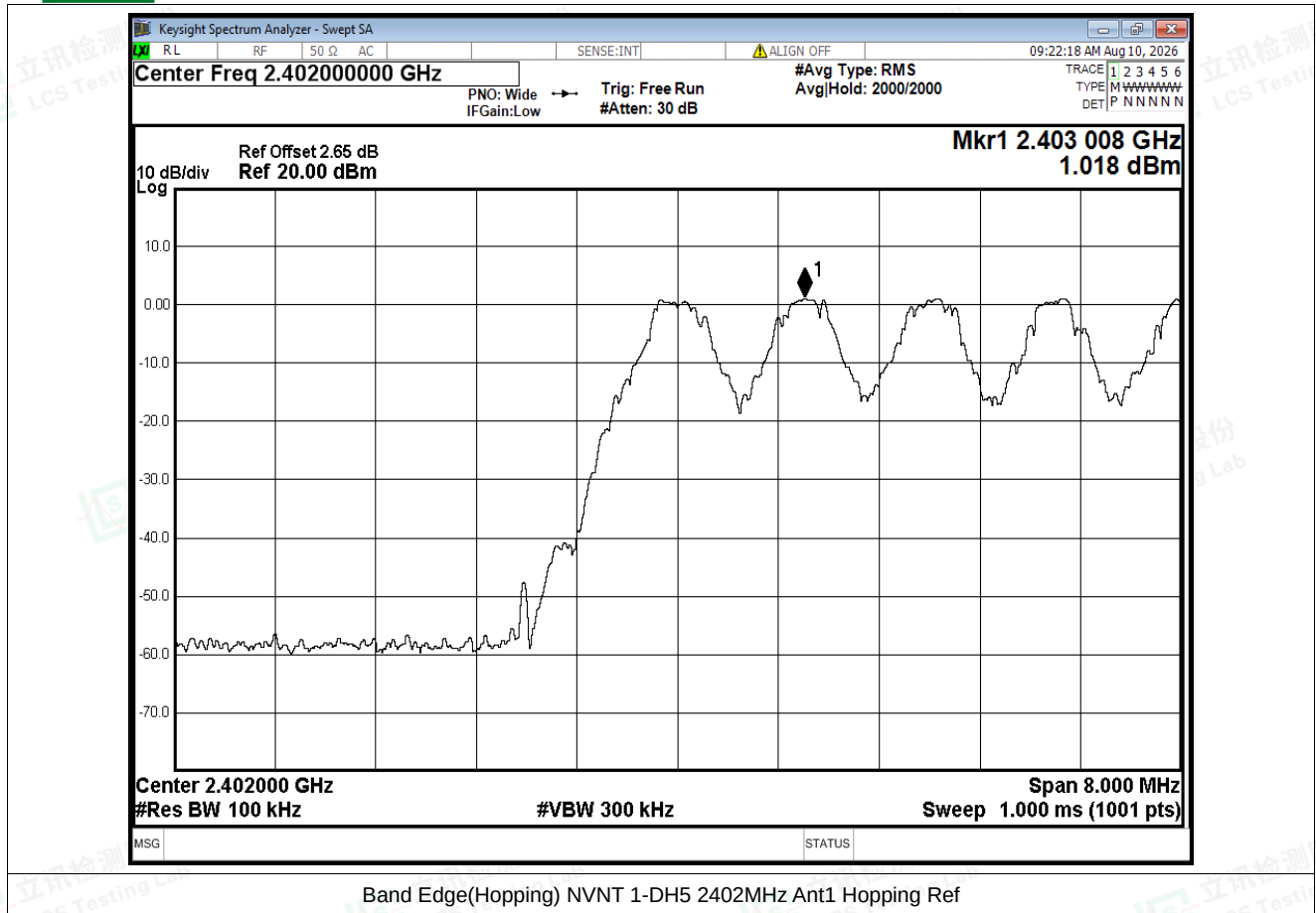


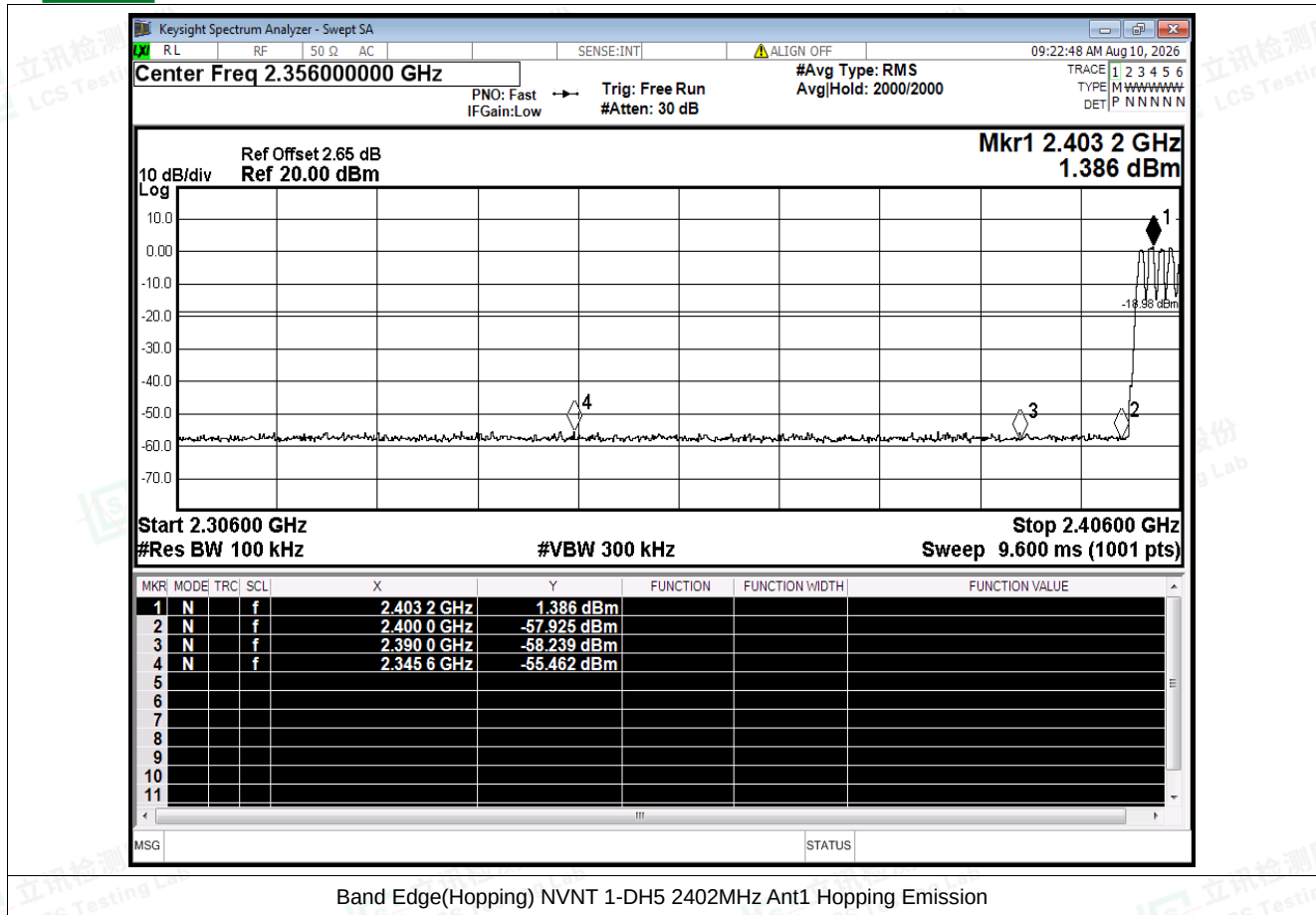
Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Emission

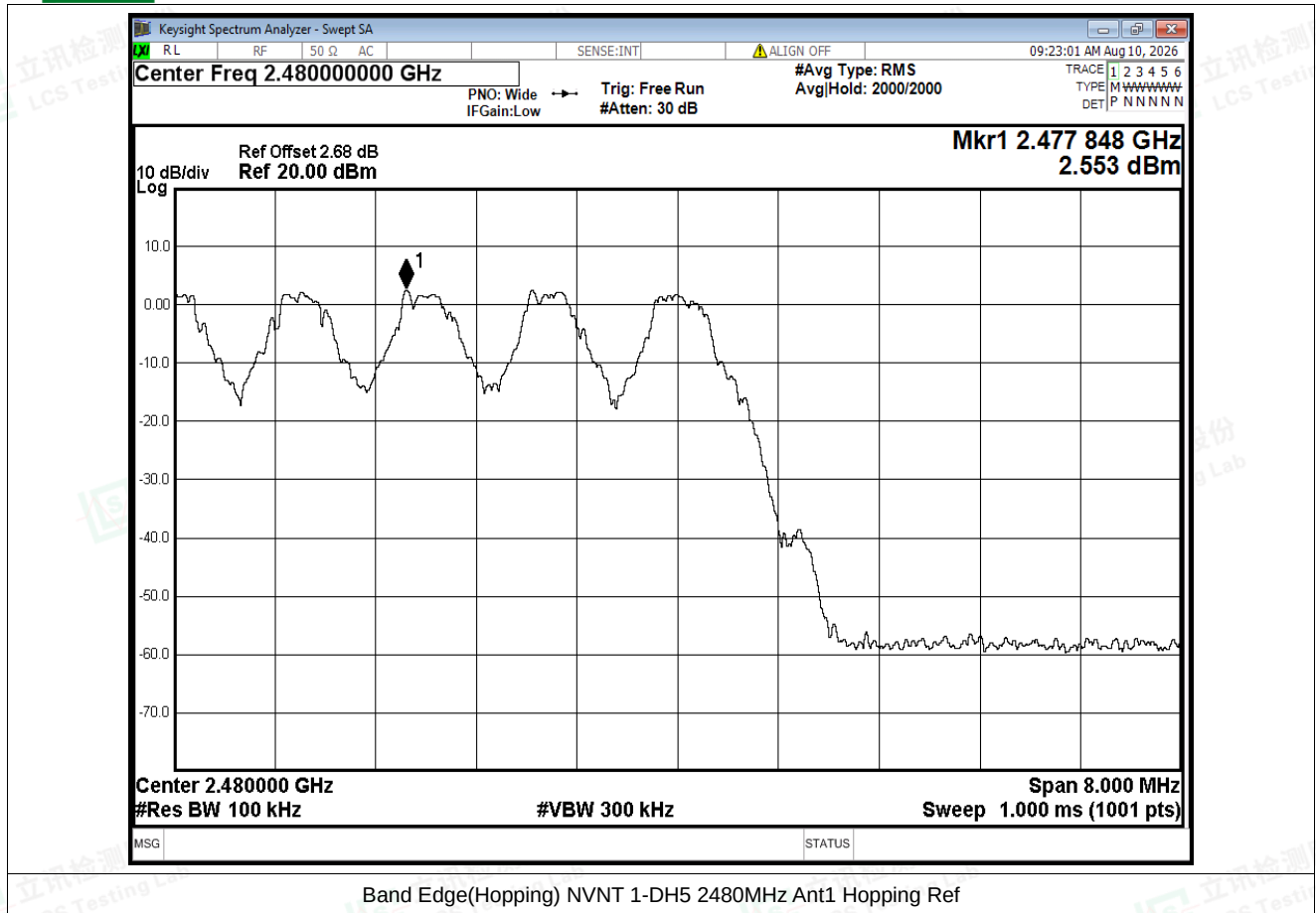


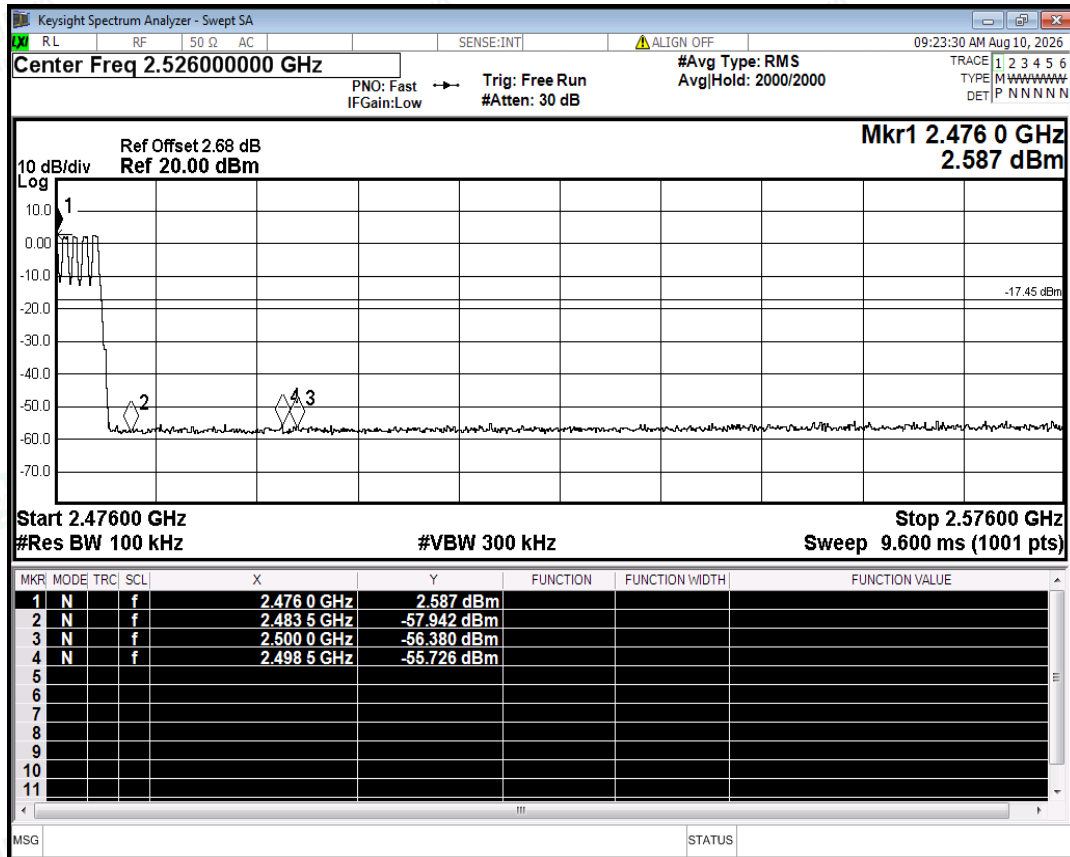
(Hopping)

Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-56.48	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-58.27	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-56.82	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-58.09	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-56.44	-20	Pass
NVNT	3-DH5	2480	Ant1	Hopping	-57.49	-20	Pass

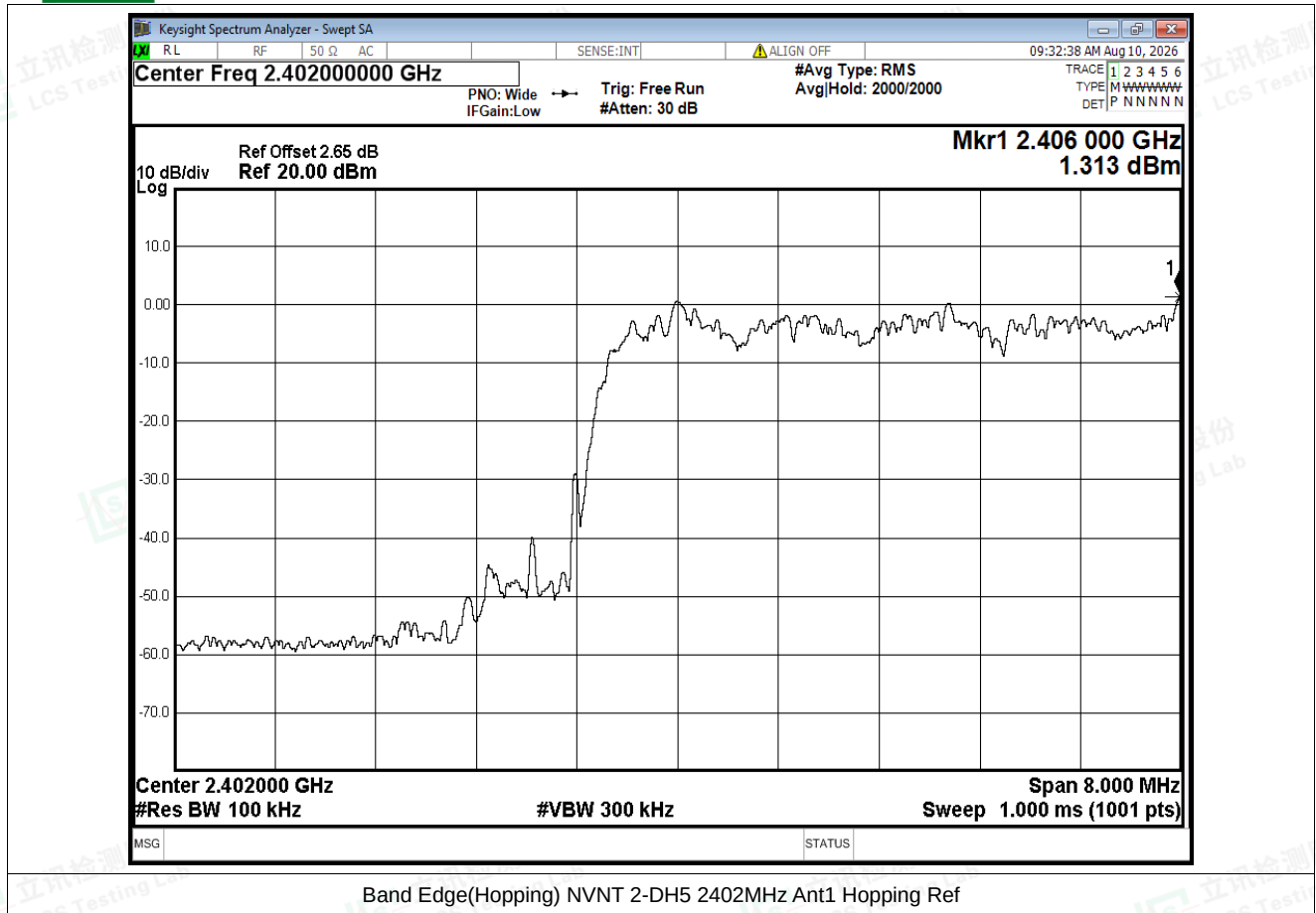


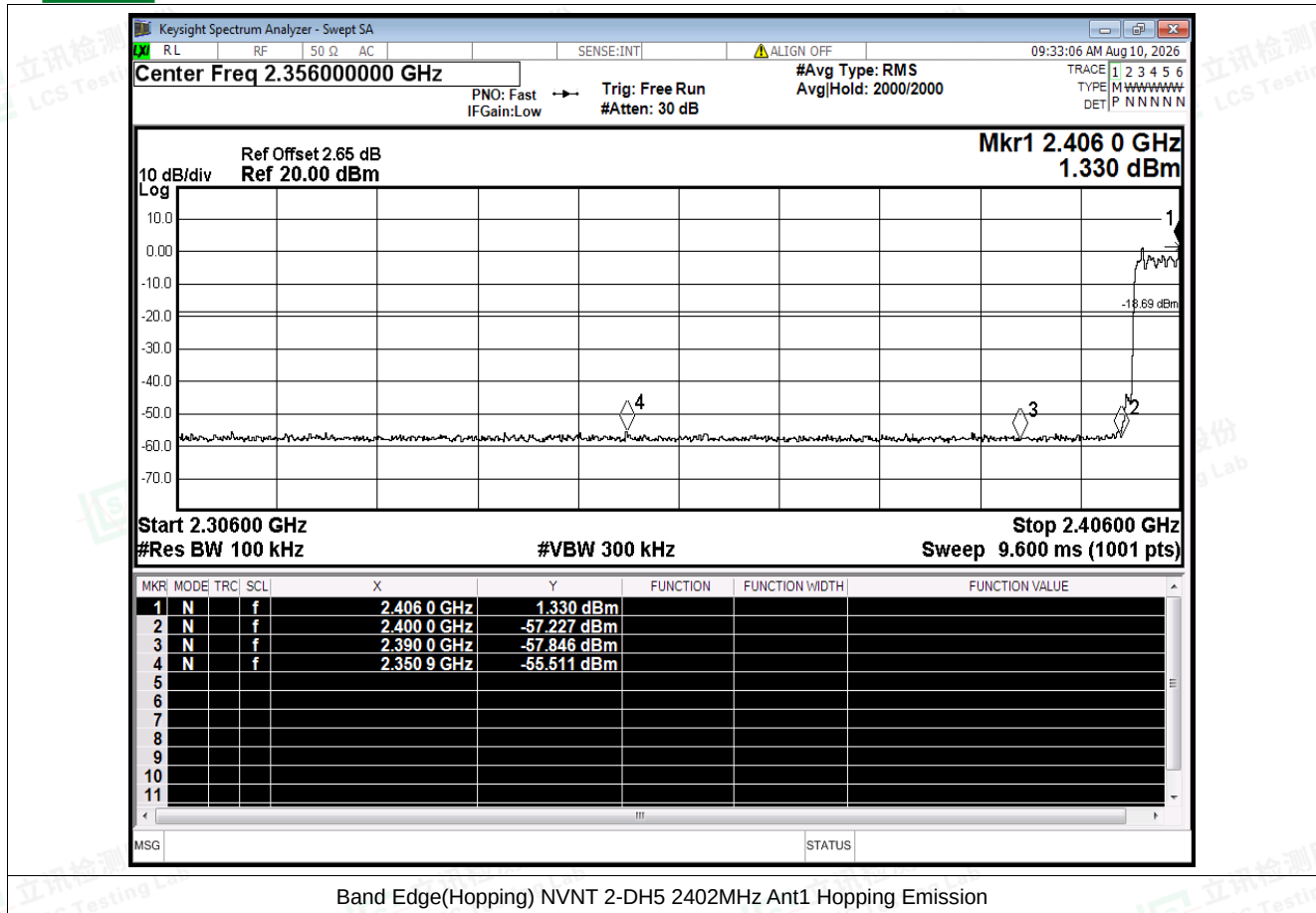


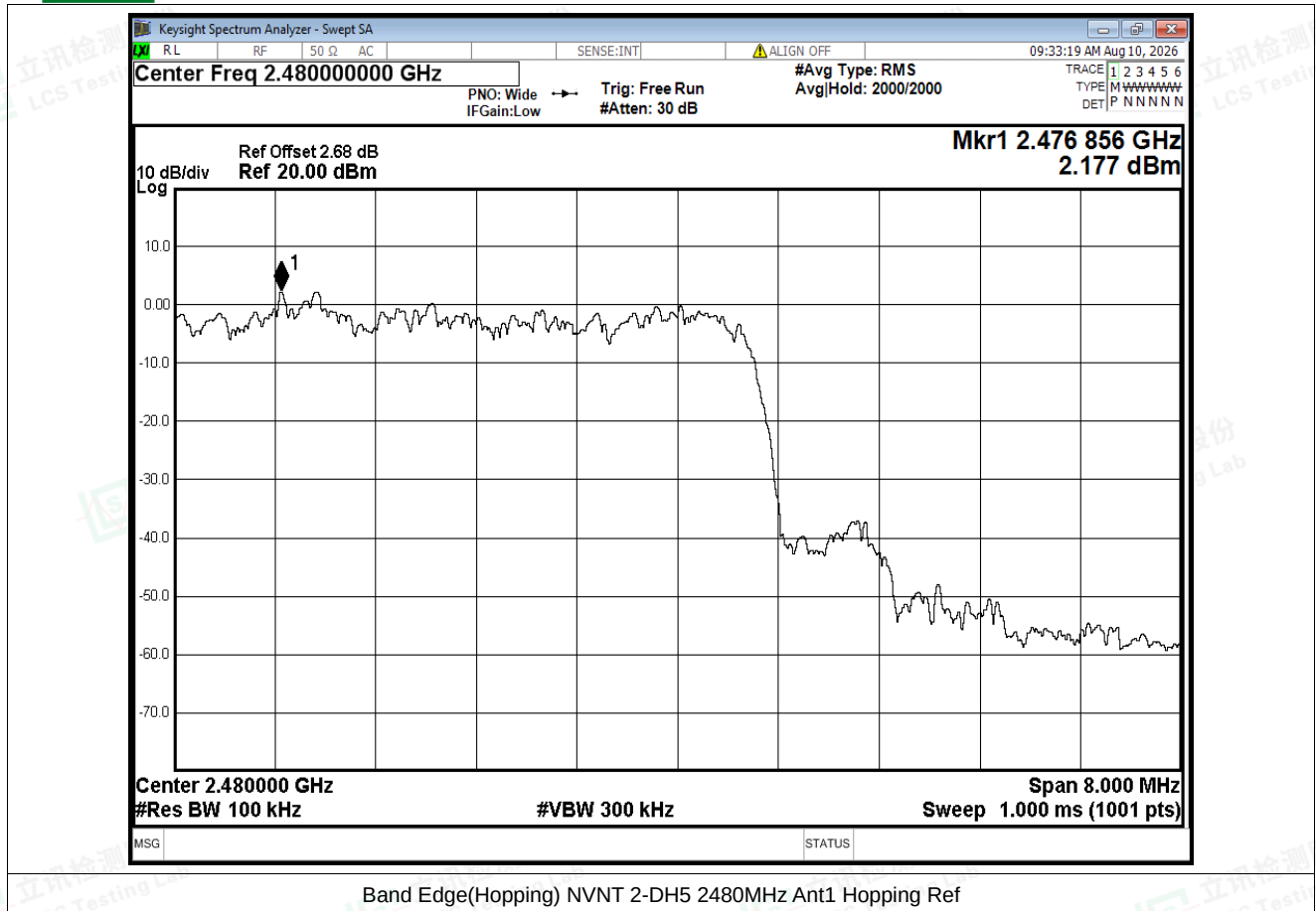


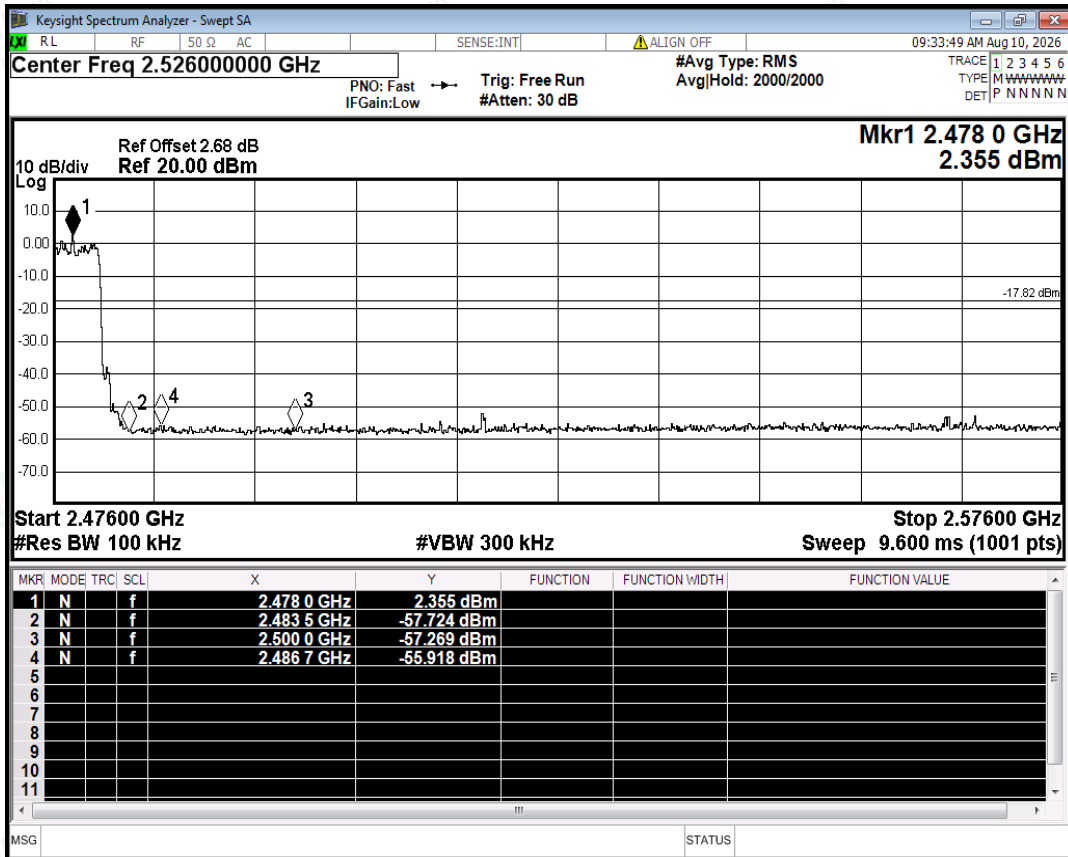


Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Emission

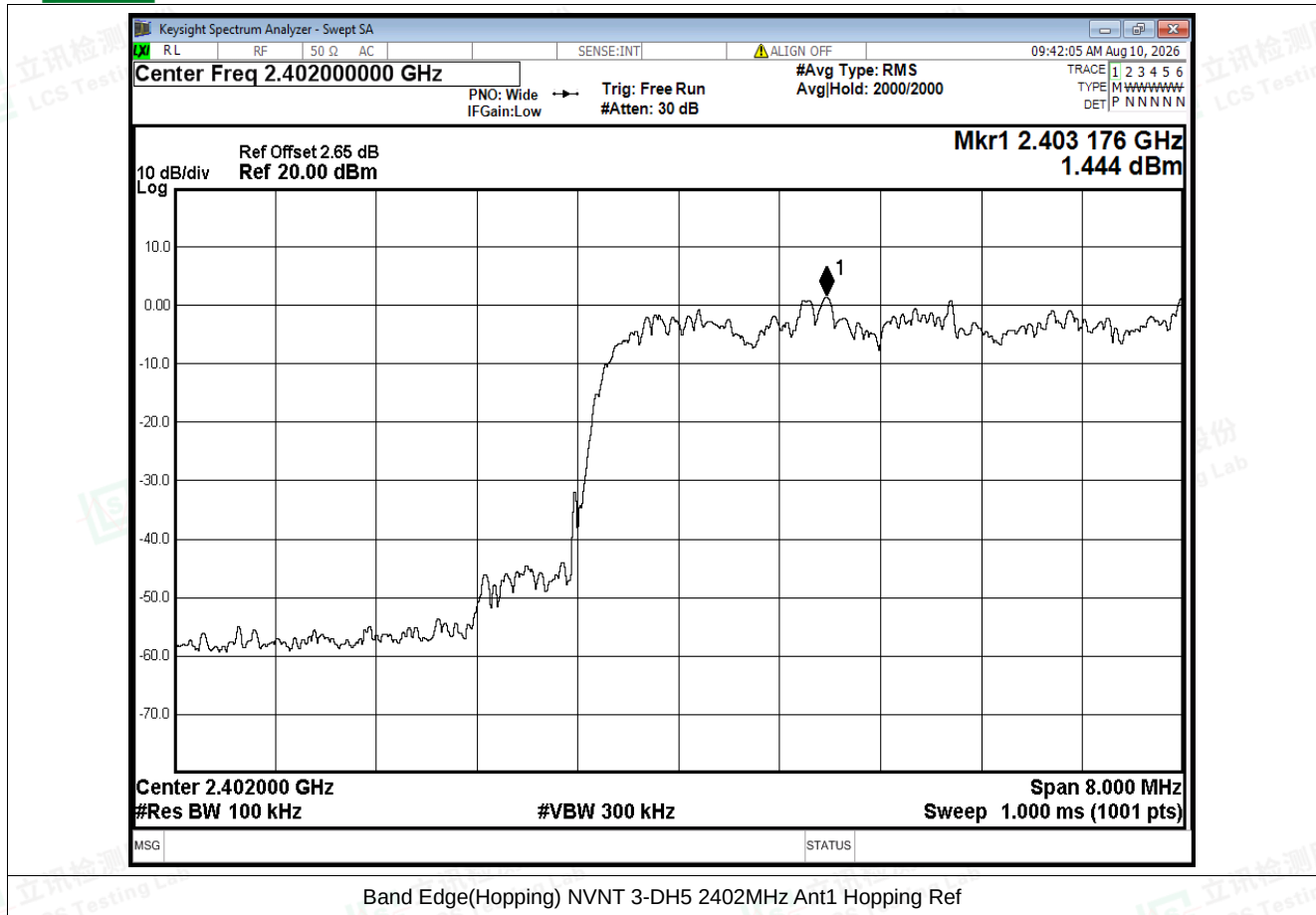


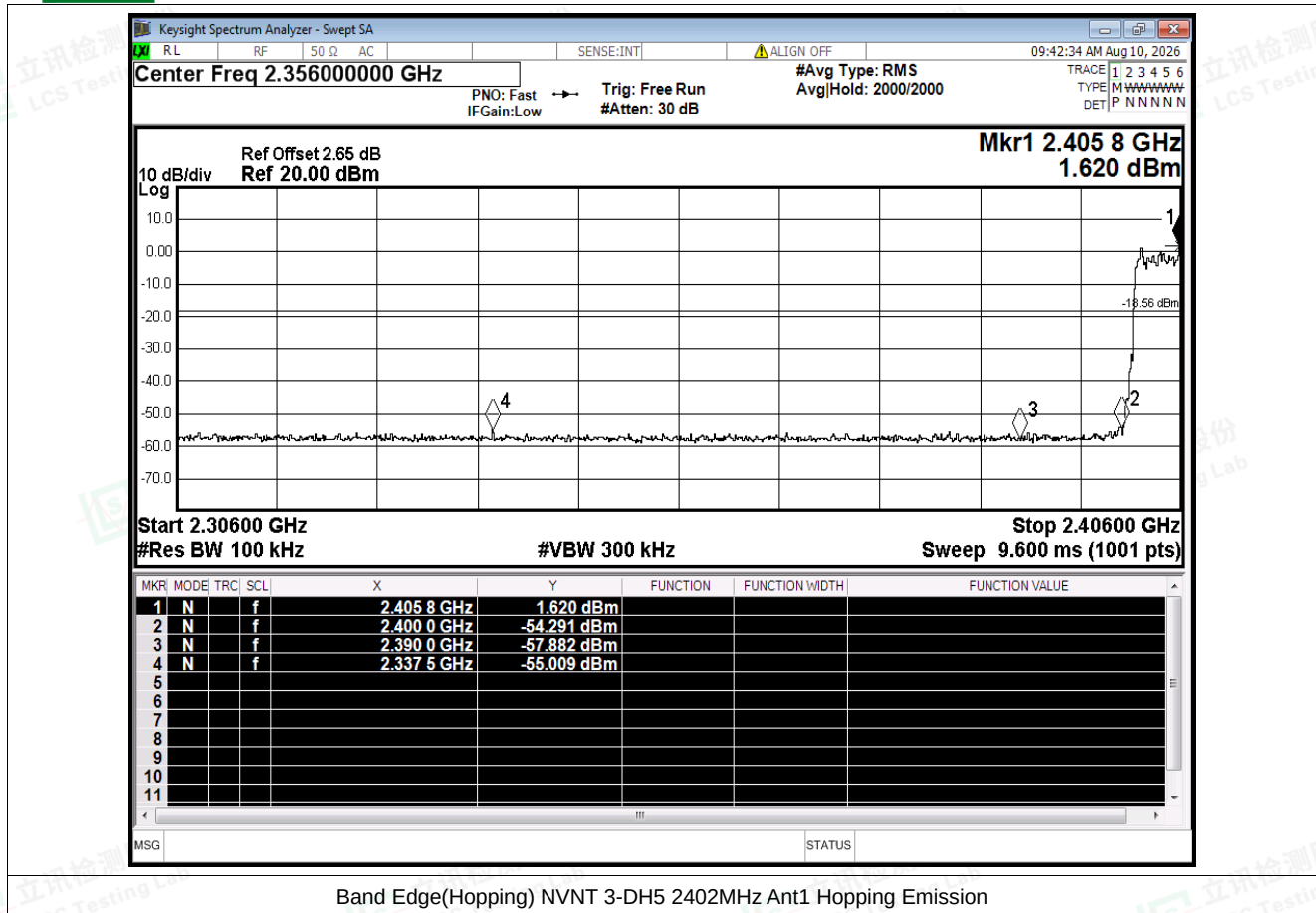


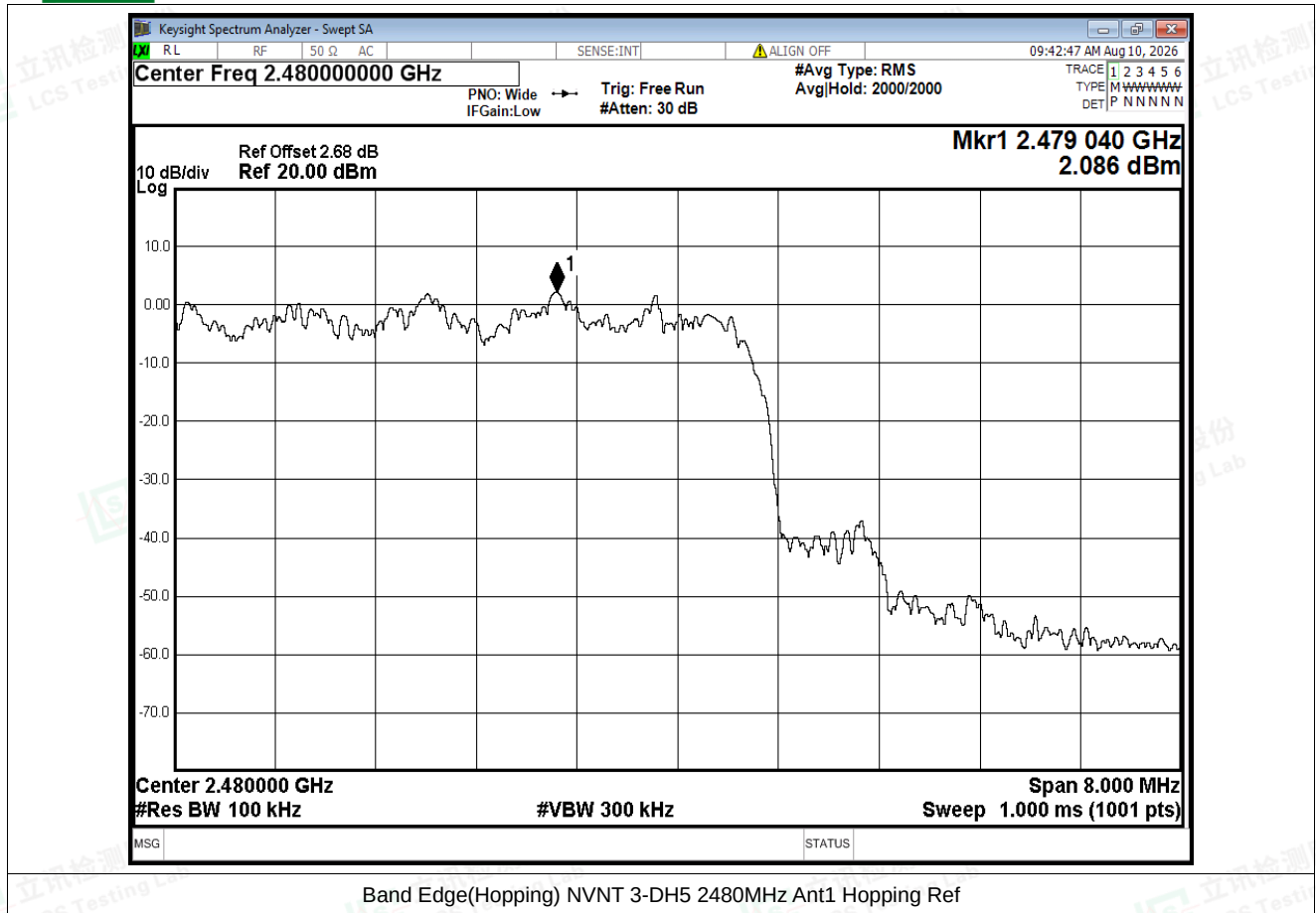


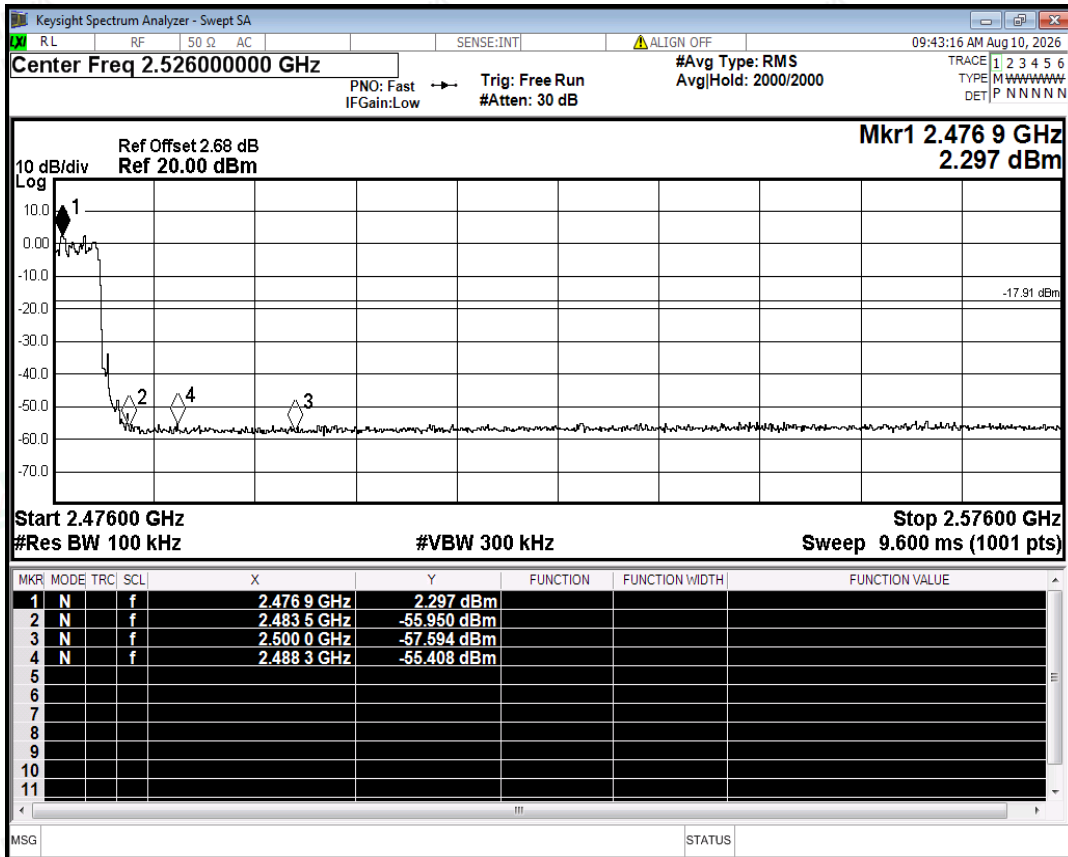


Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Emission







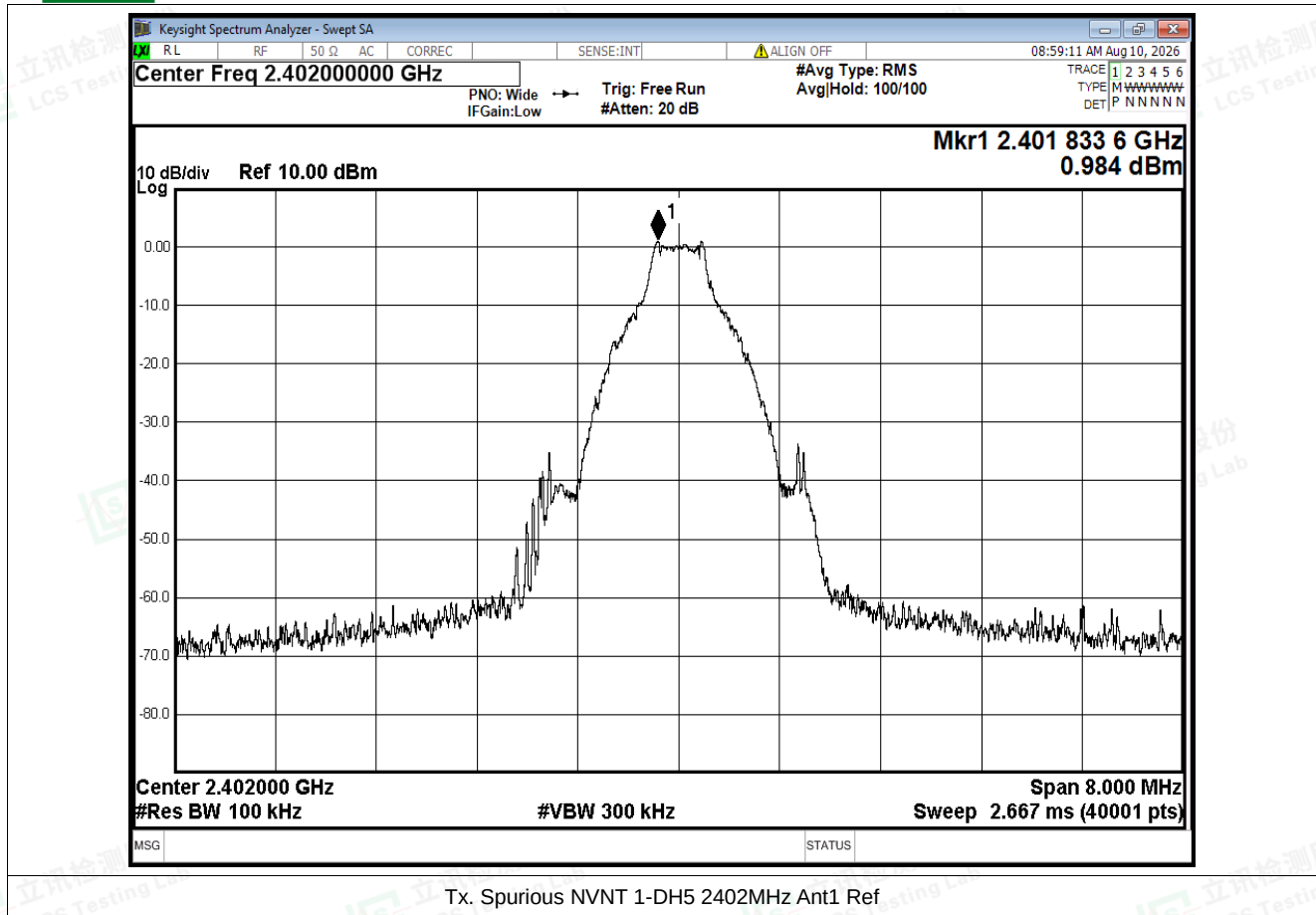


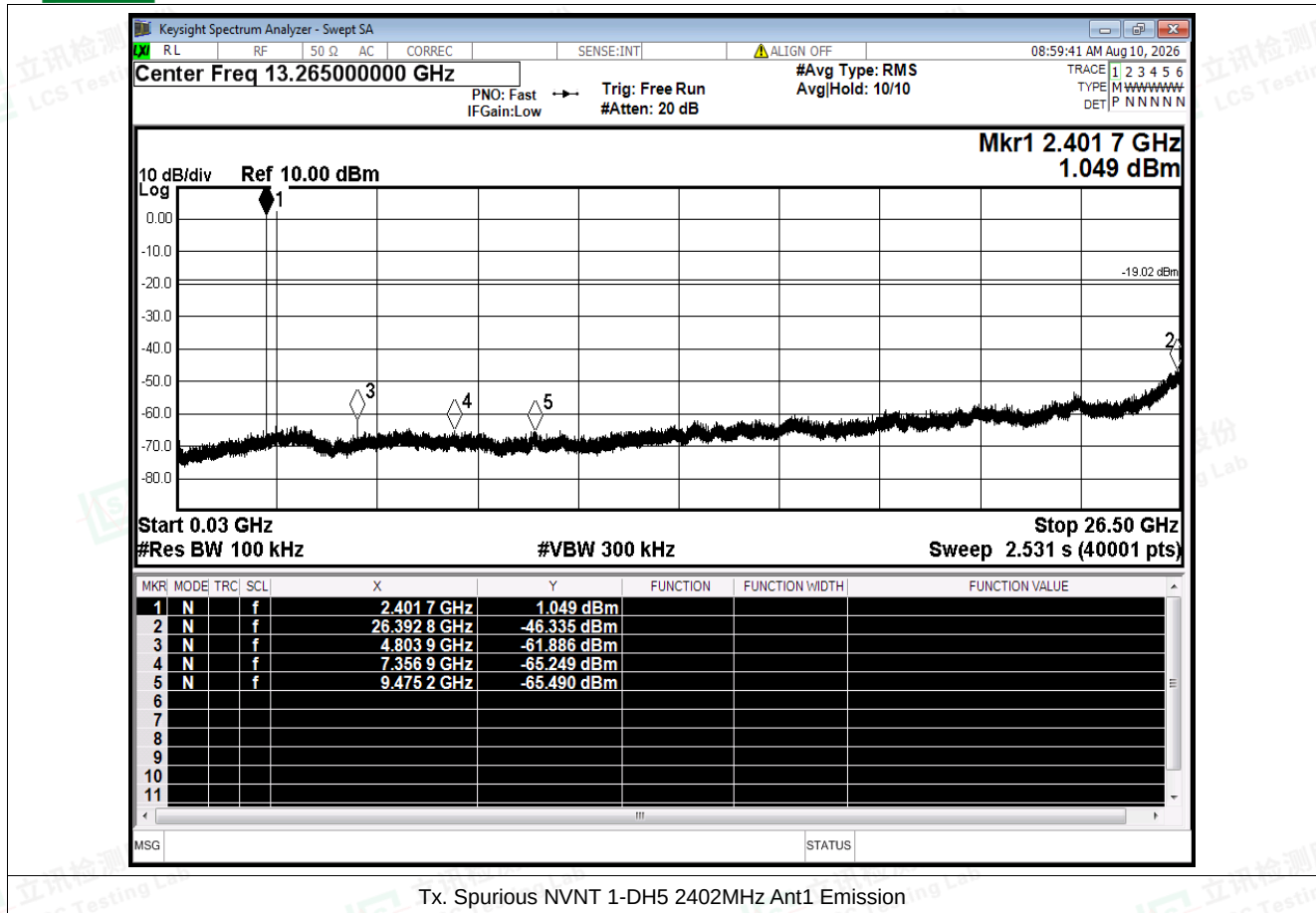
Band Edge(Hopping) NVNT 3-DH5 2480MHz Ant1 Hopping Emission

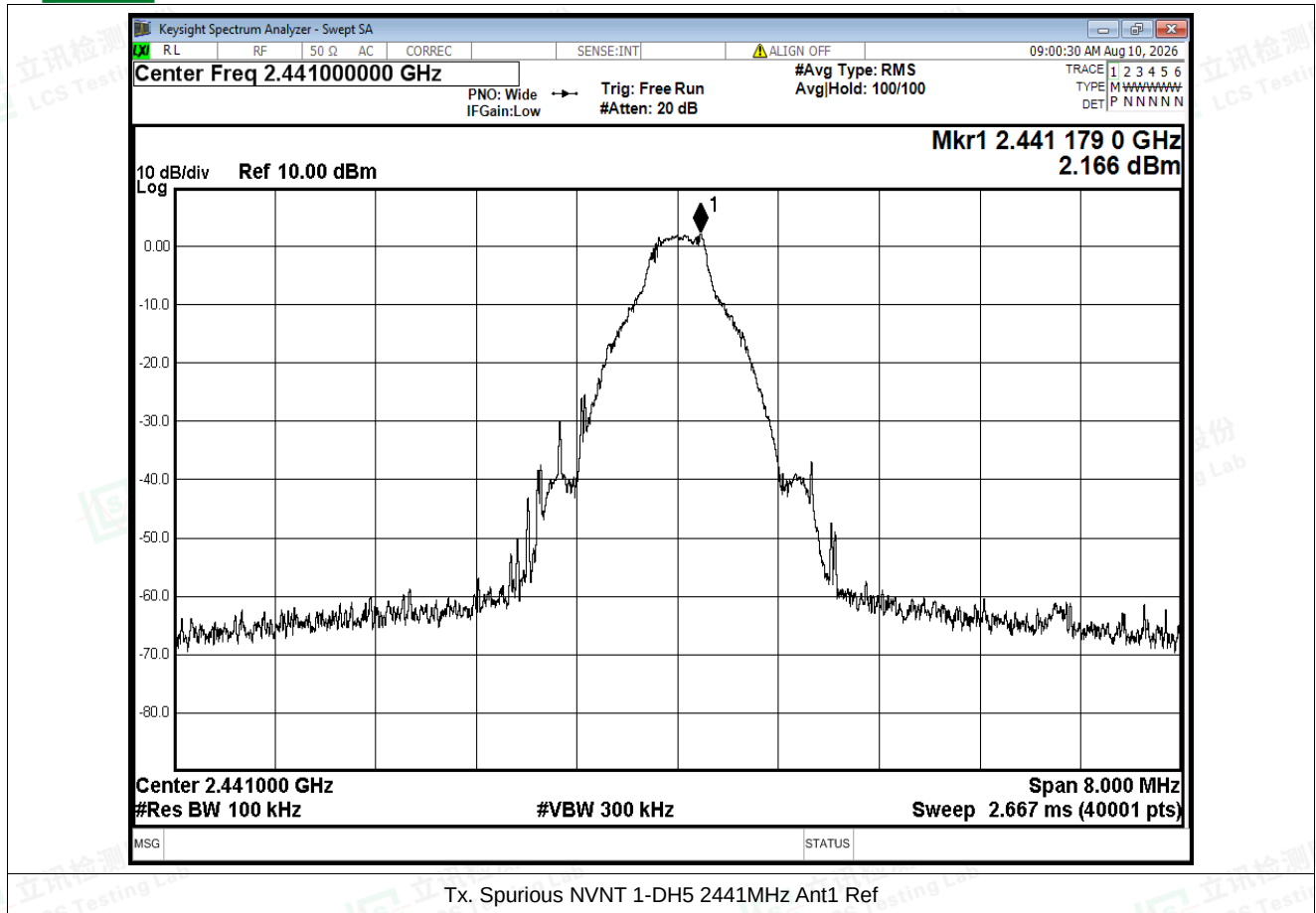


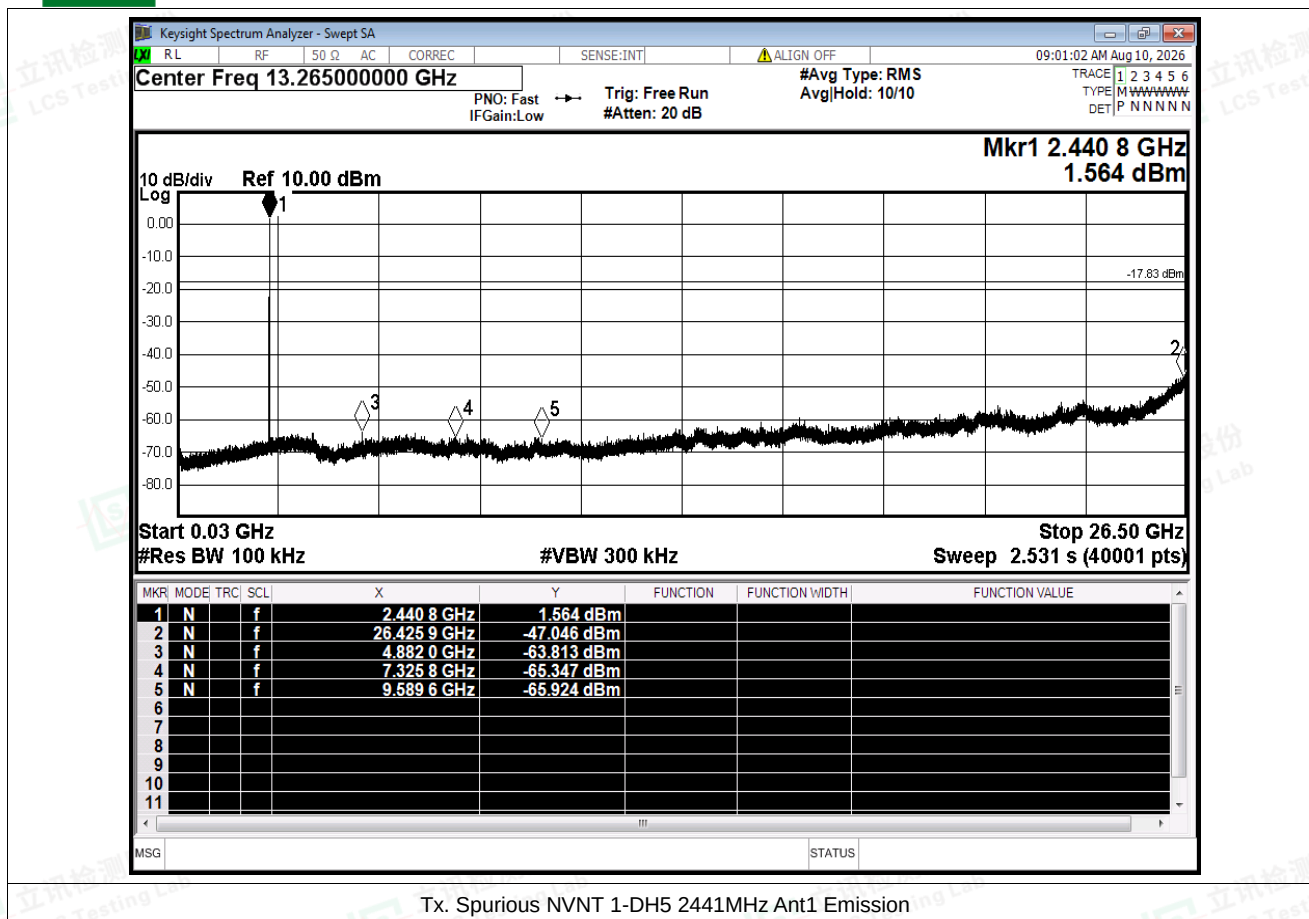
A.7 Conducted RF Spurious Emission

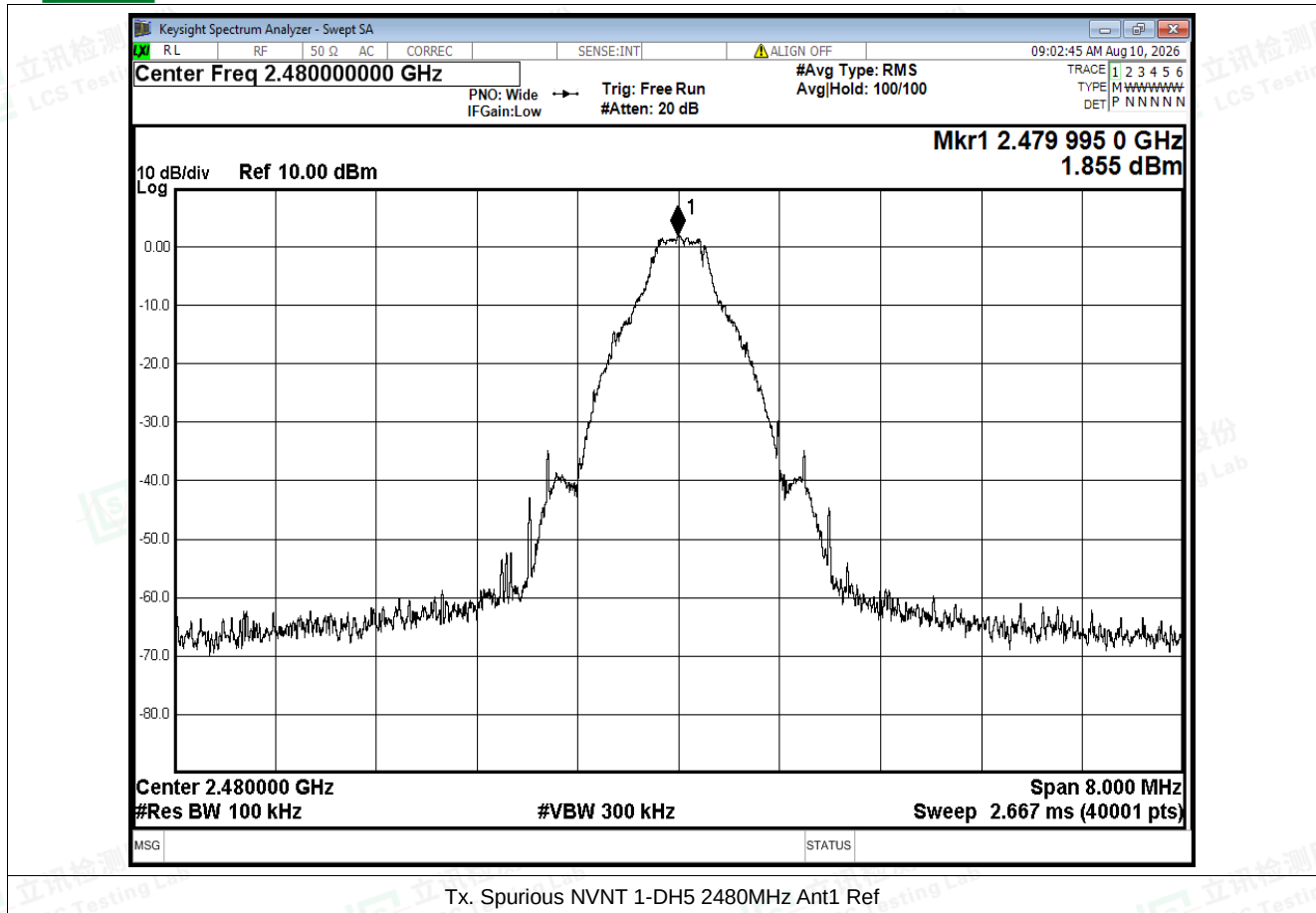
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-47.31	-20	Pass
NVNT	1-DH5	2441	Ant1	-49.21	-20	Pass
NVNT	1-DH5	2480	Ant1	-48.72	-20	Pass
NVNT	2-DH5	2402	Ant1	-47.56	-20	Pass
NVNT	2-DH5	2441	Ant1	-48.17	-20	Pass
NVNT	2-DH5	2480	Ant1	-49.18	-20	Pass
NVNT	3-DH5	2402	Ant1	-46.95	-20	Pass
NVNT	3-DH5	2441	Ant1	-49.15	-20	Pass
NVNT	3-DH5	2480	Ant1	-48.79	-20	Pass

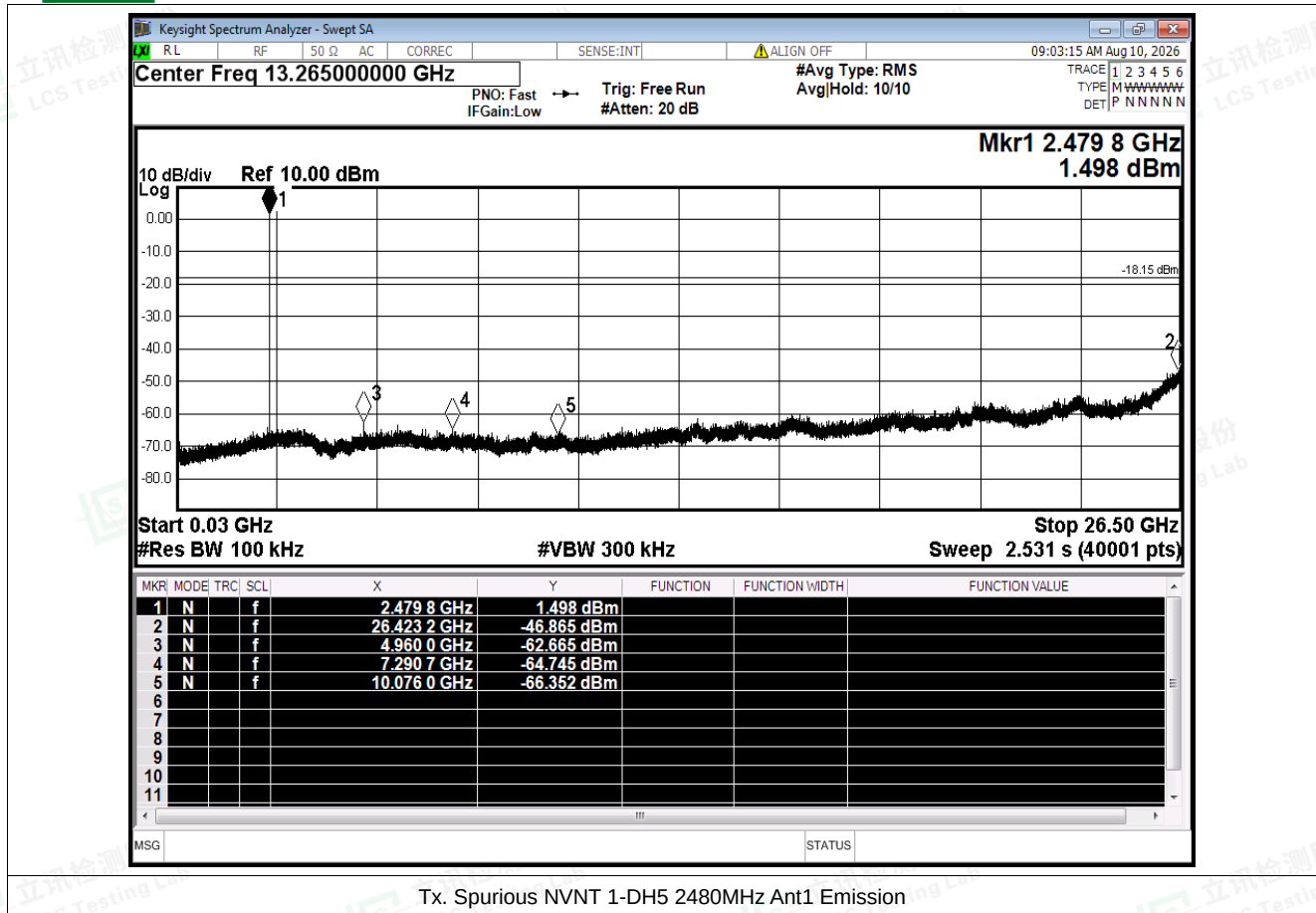


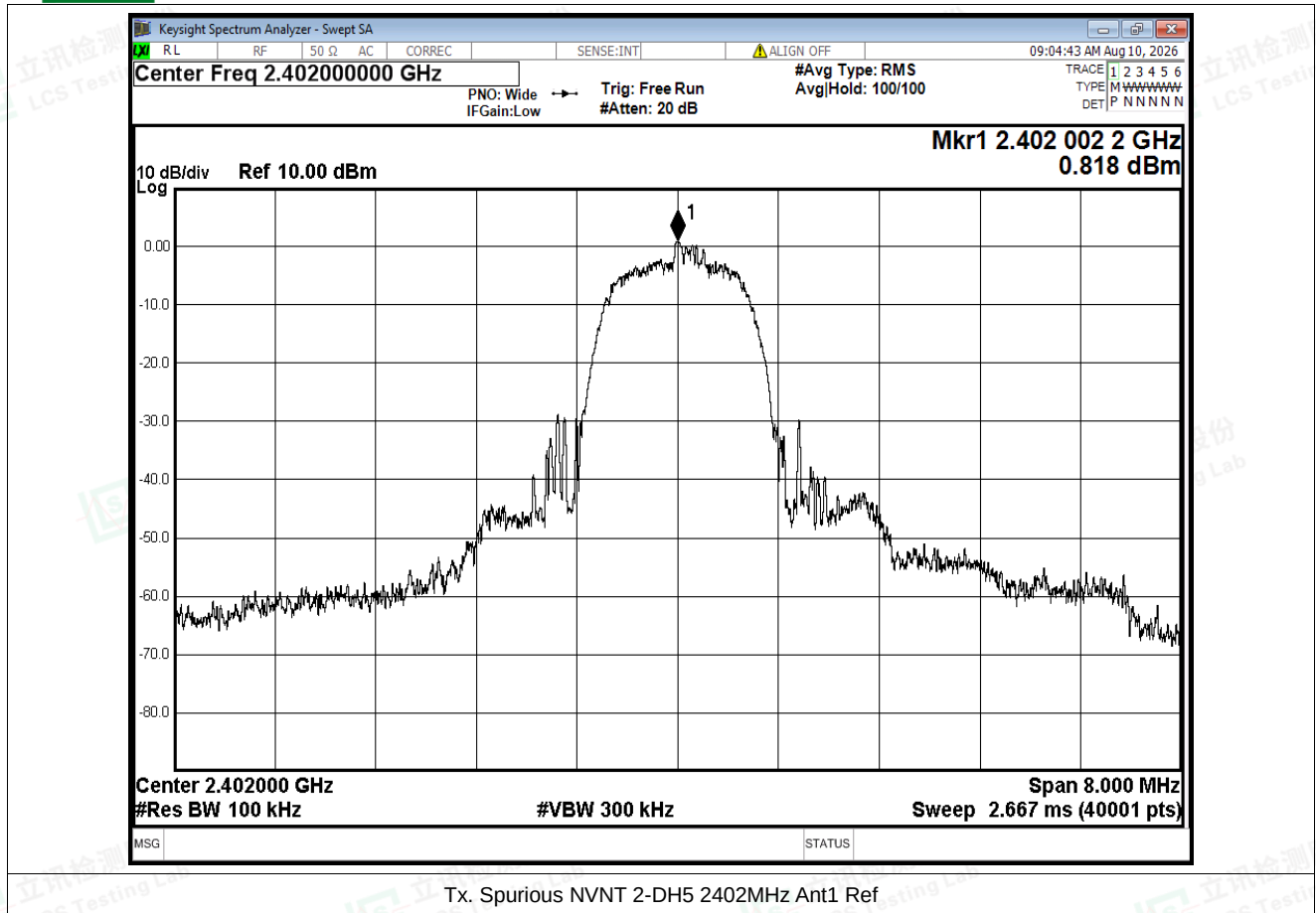


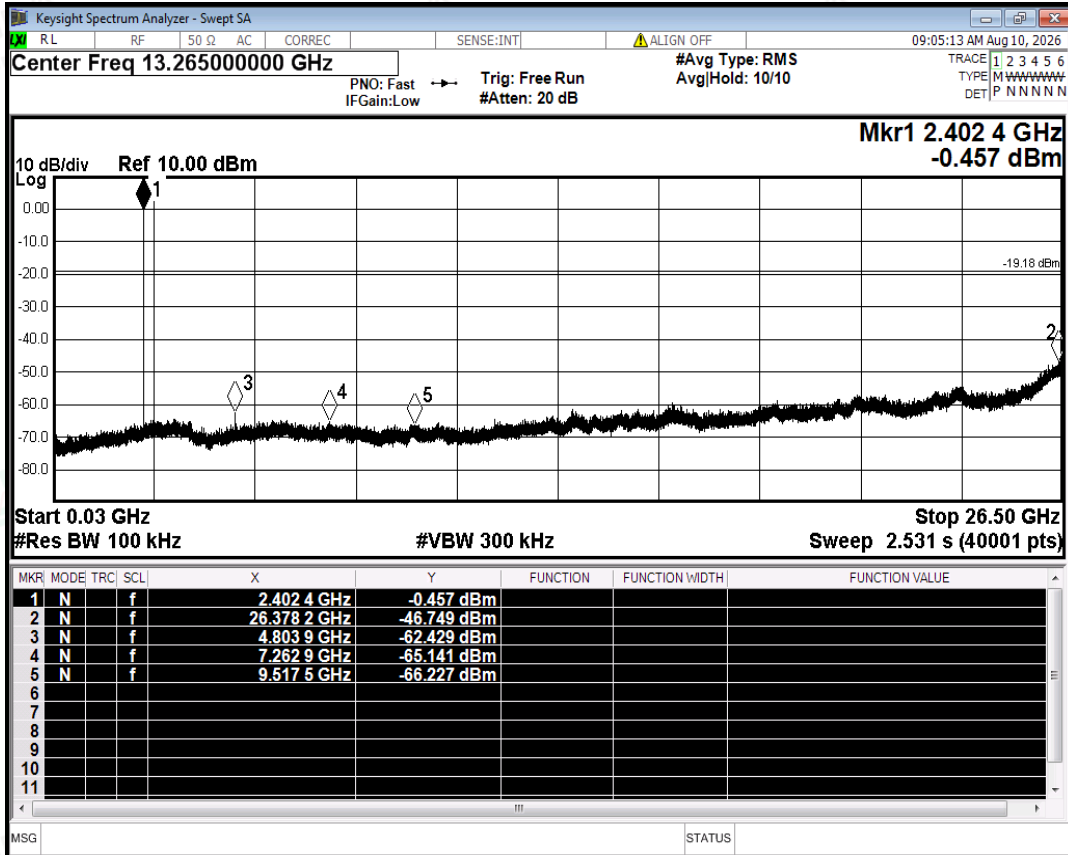




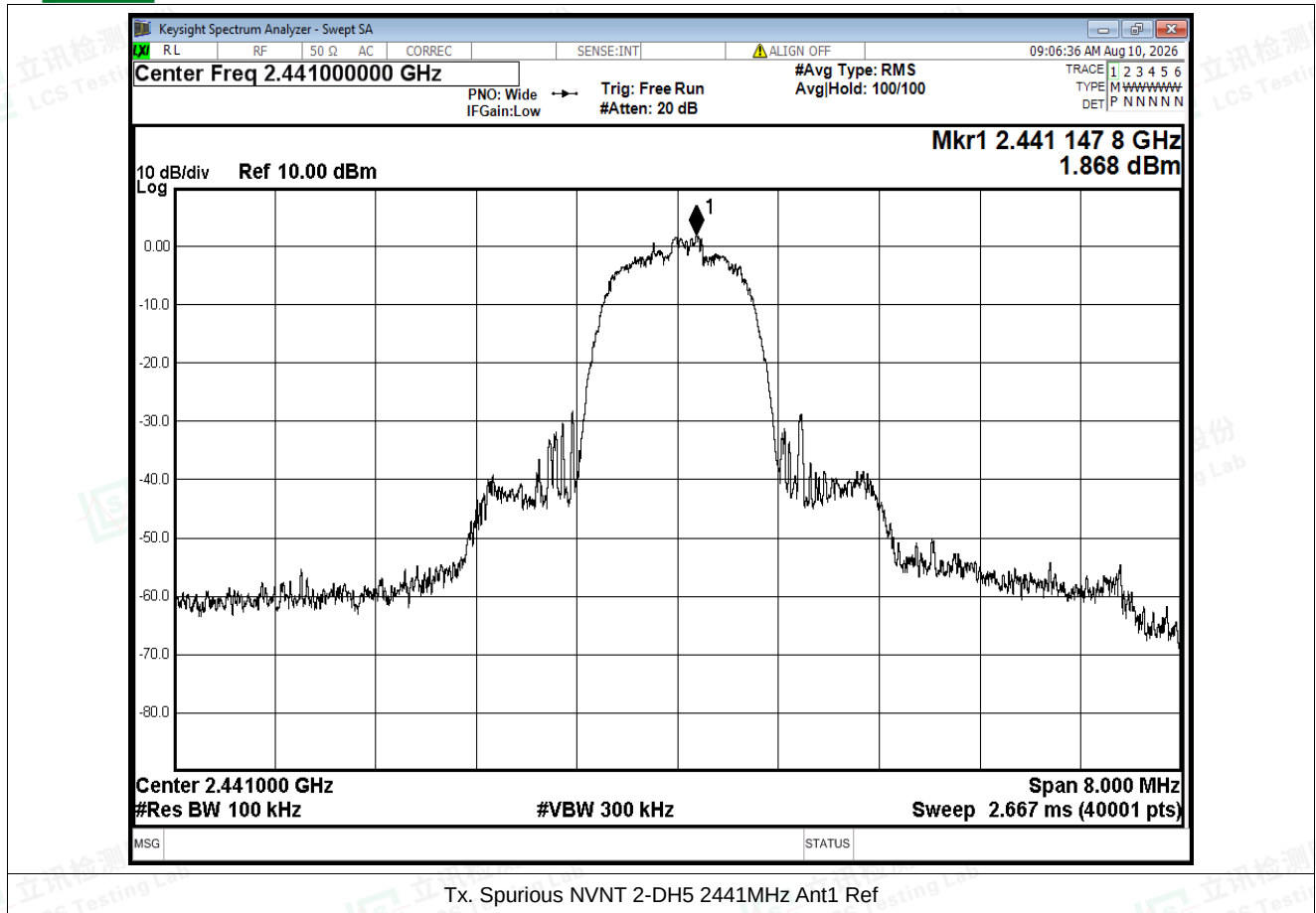


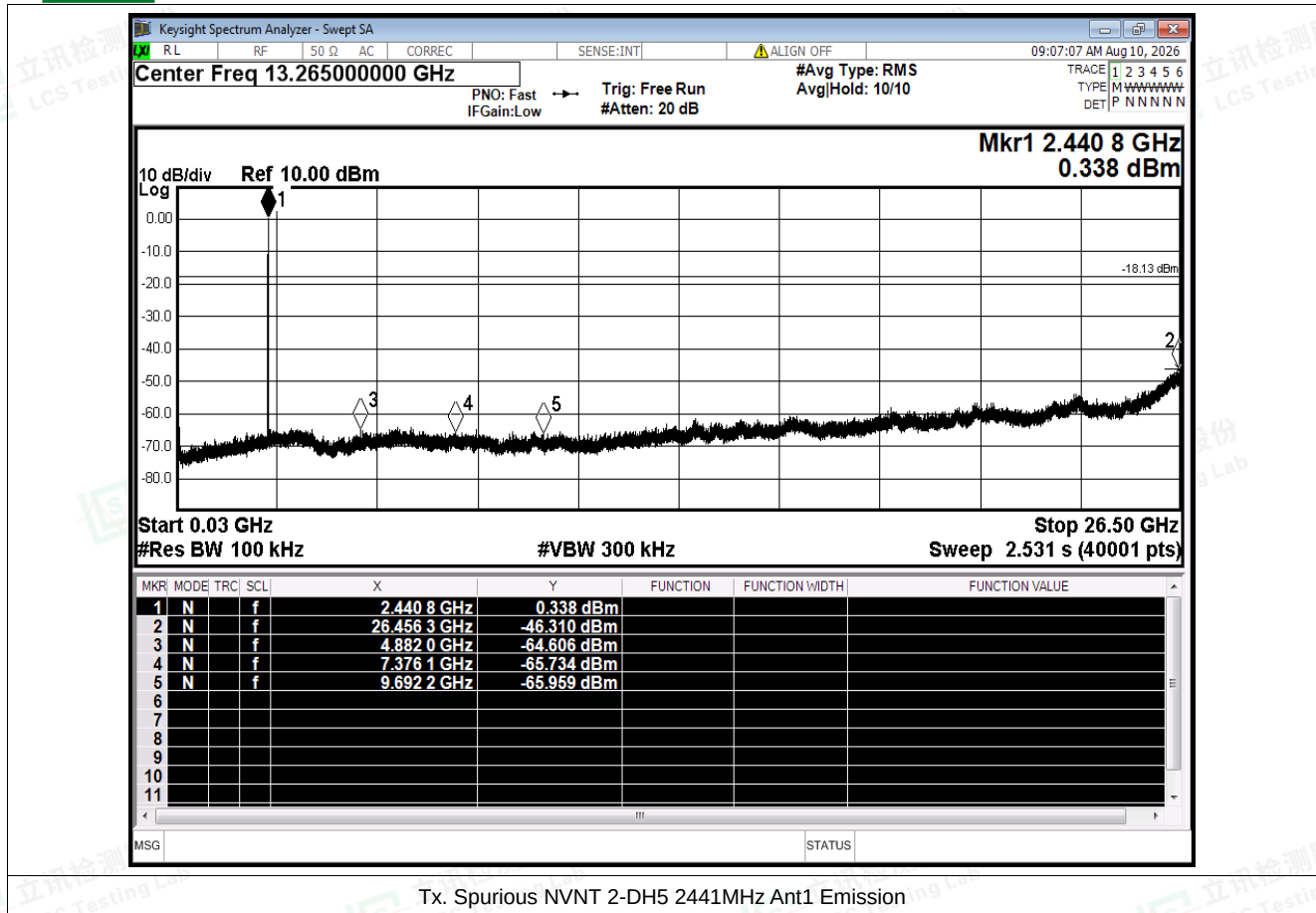


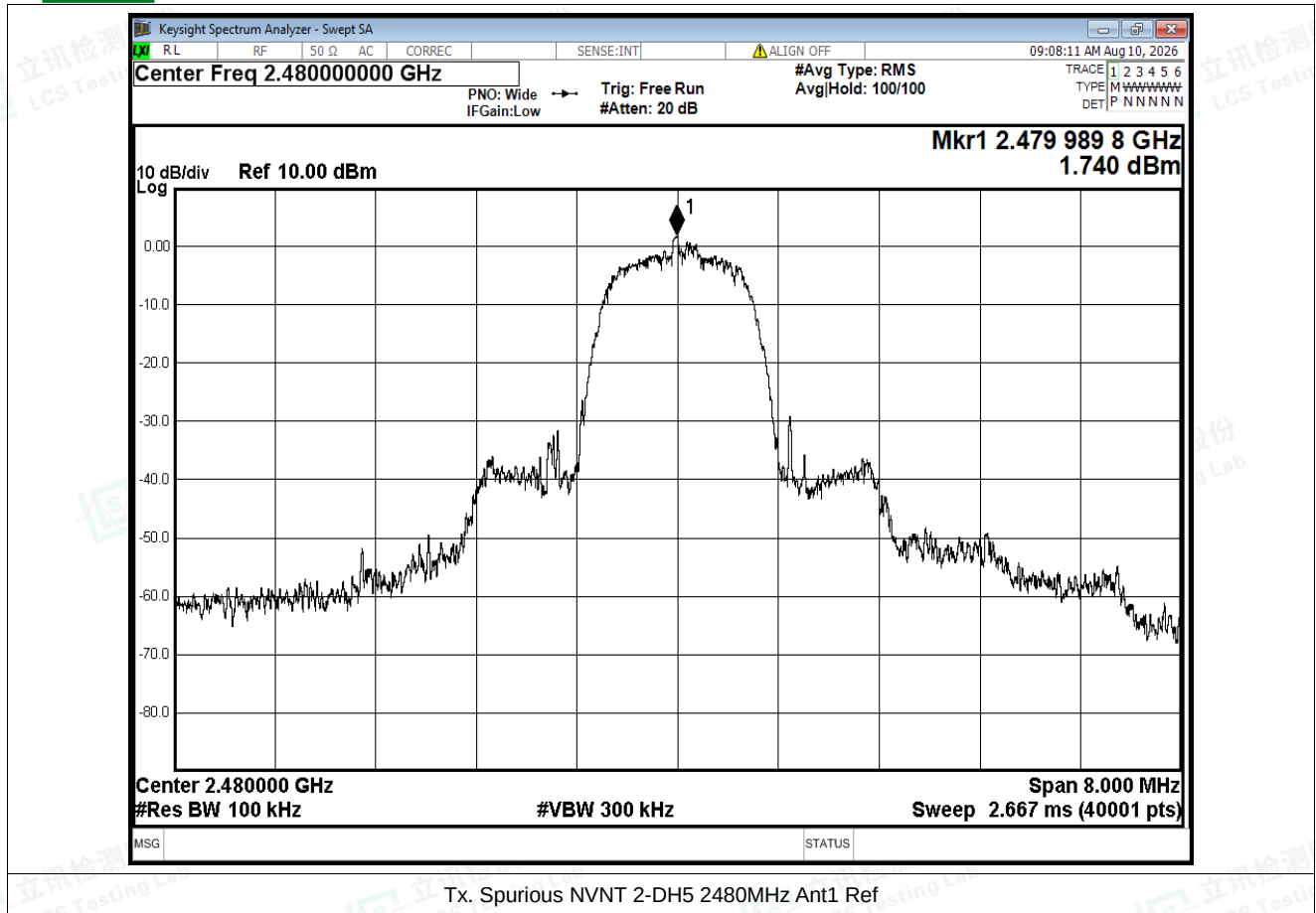


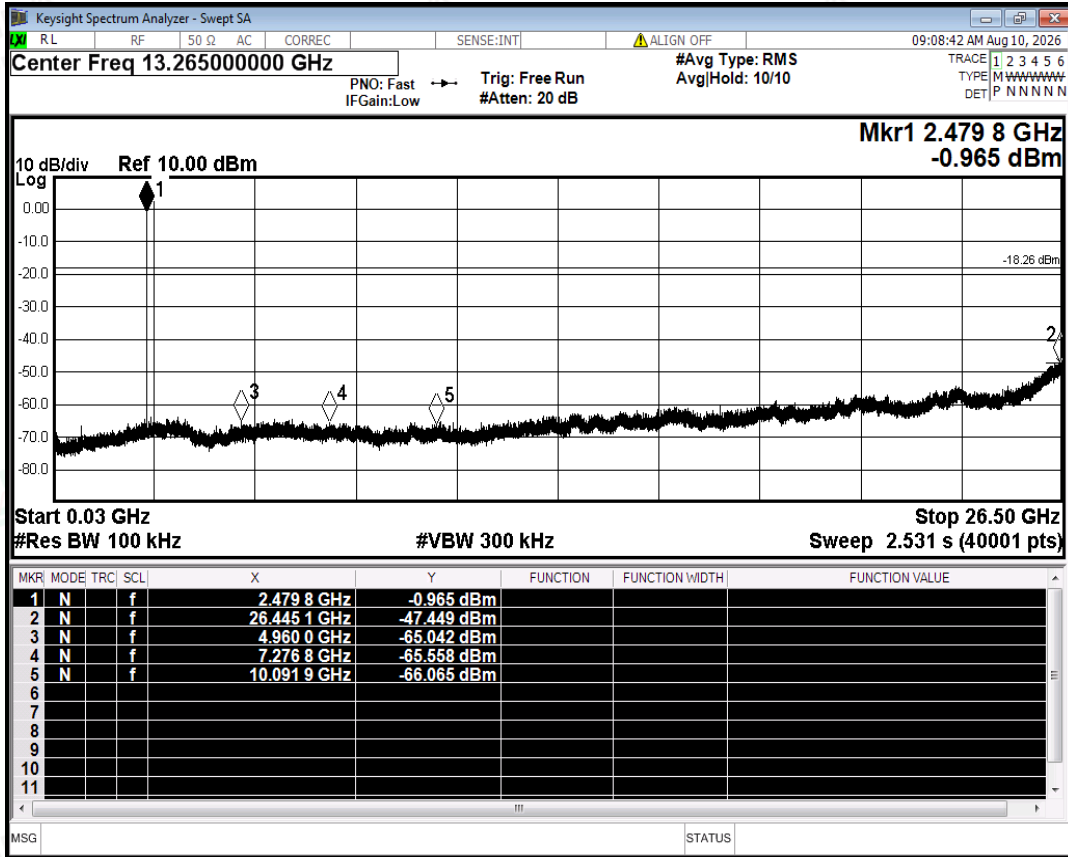


Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Emission

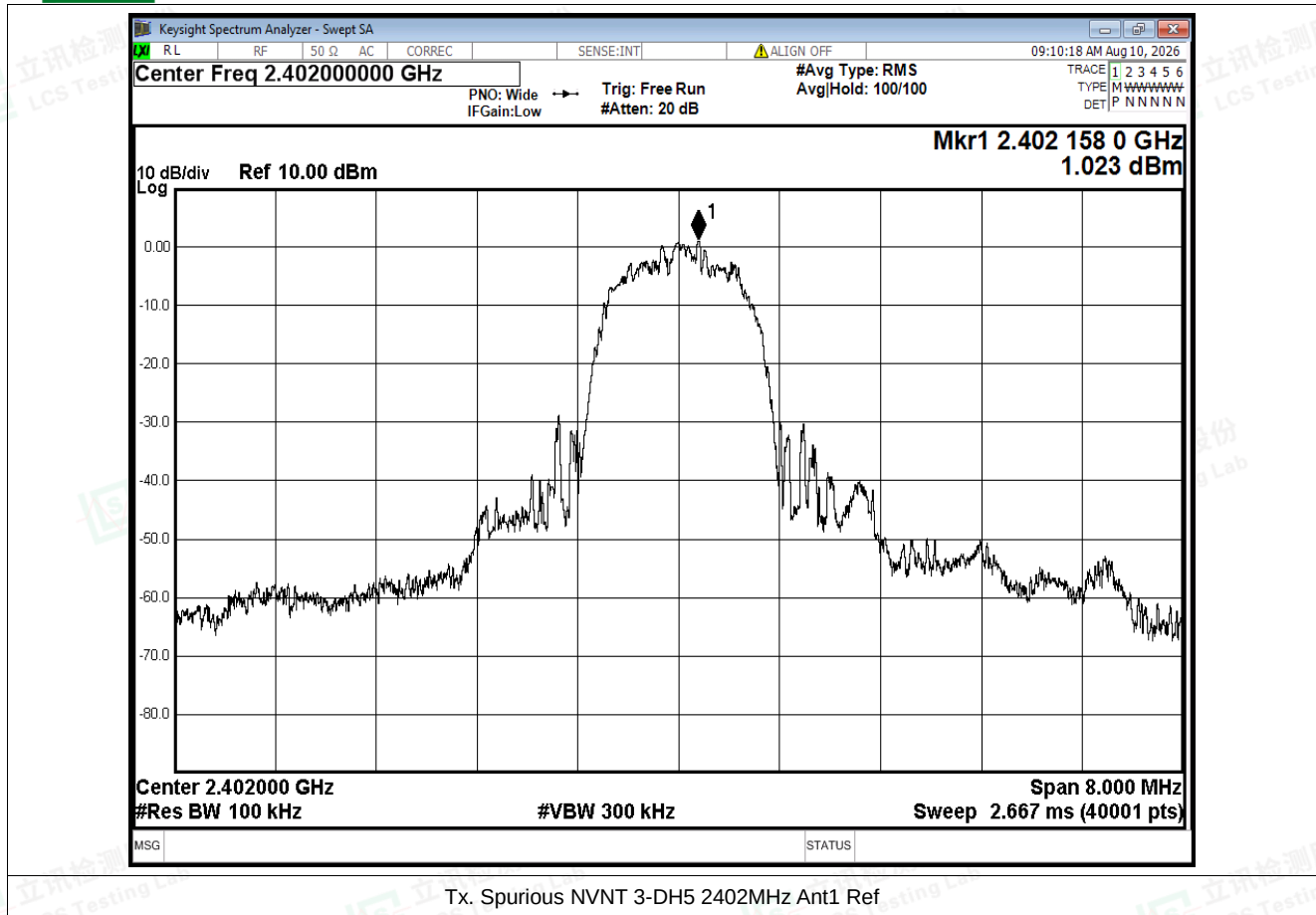


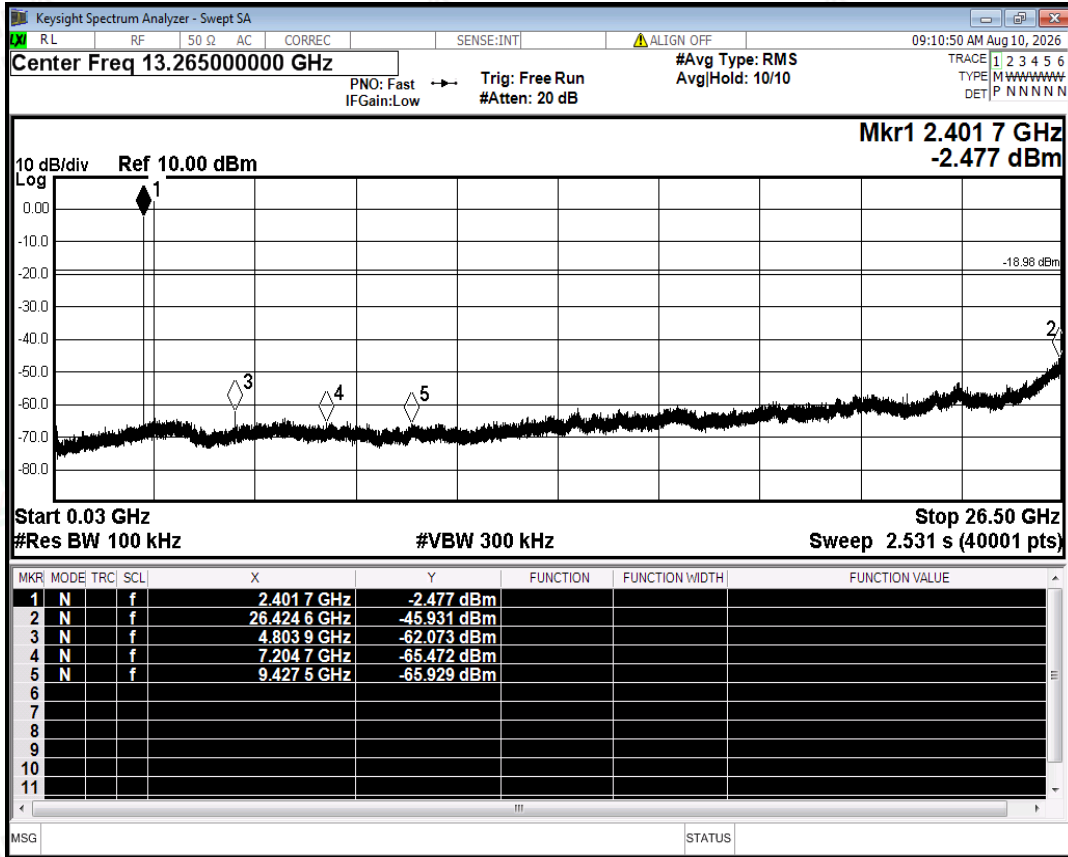




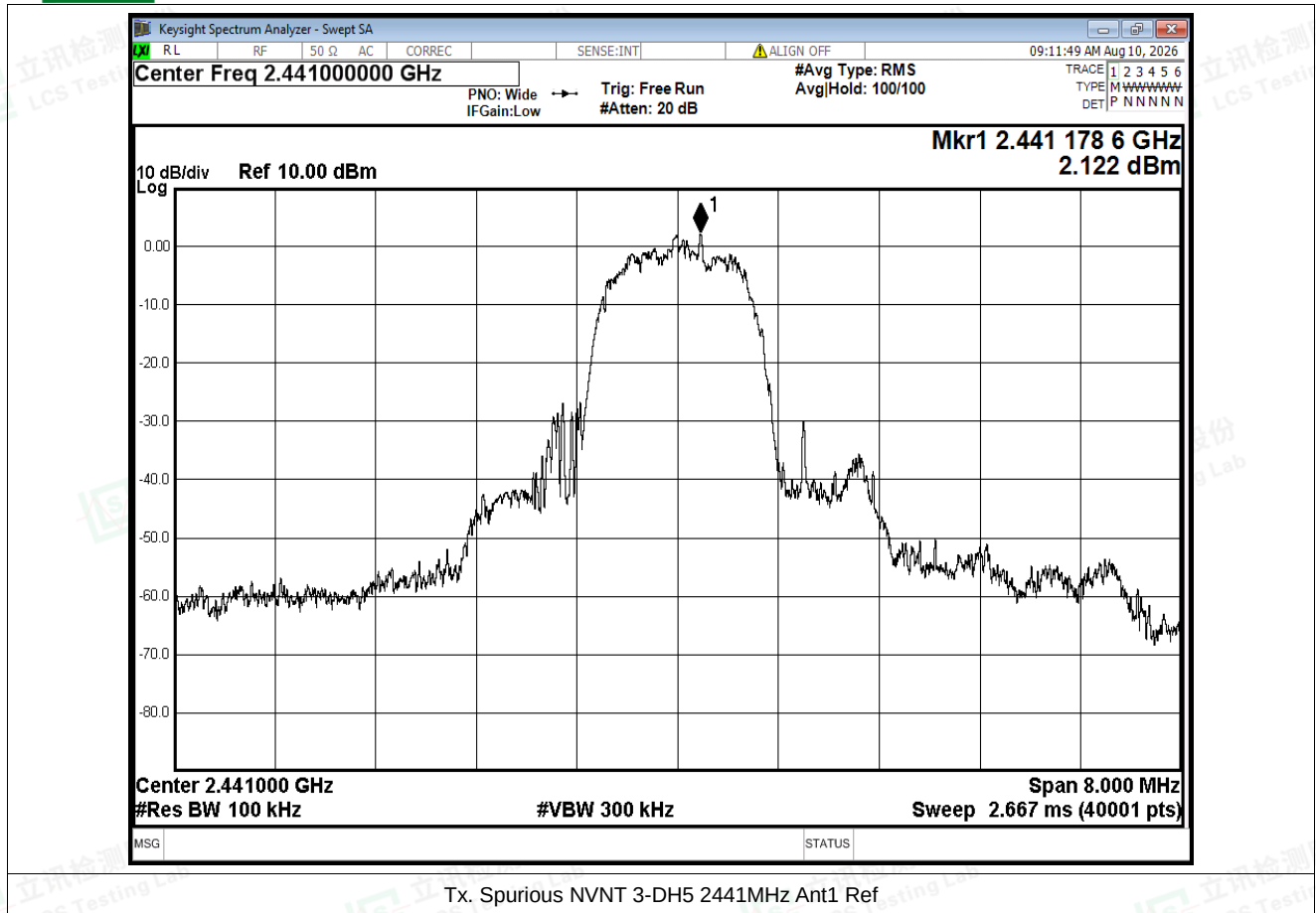


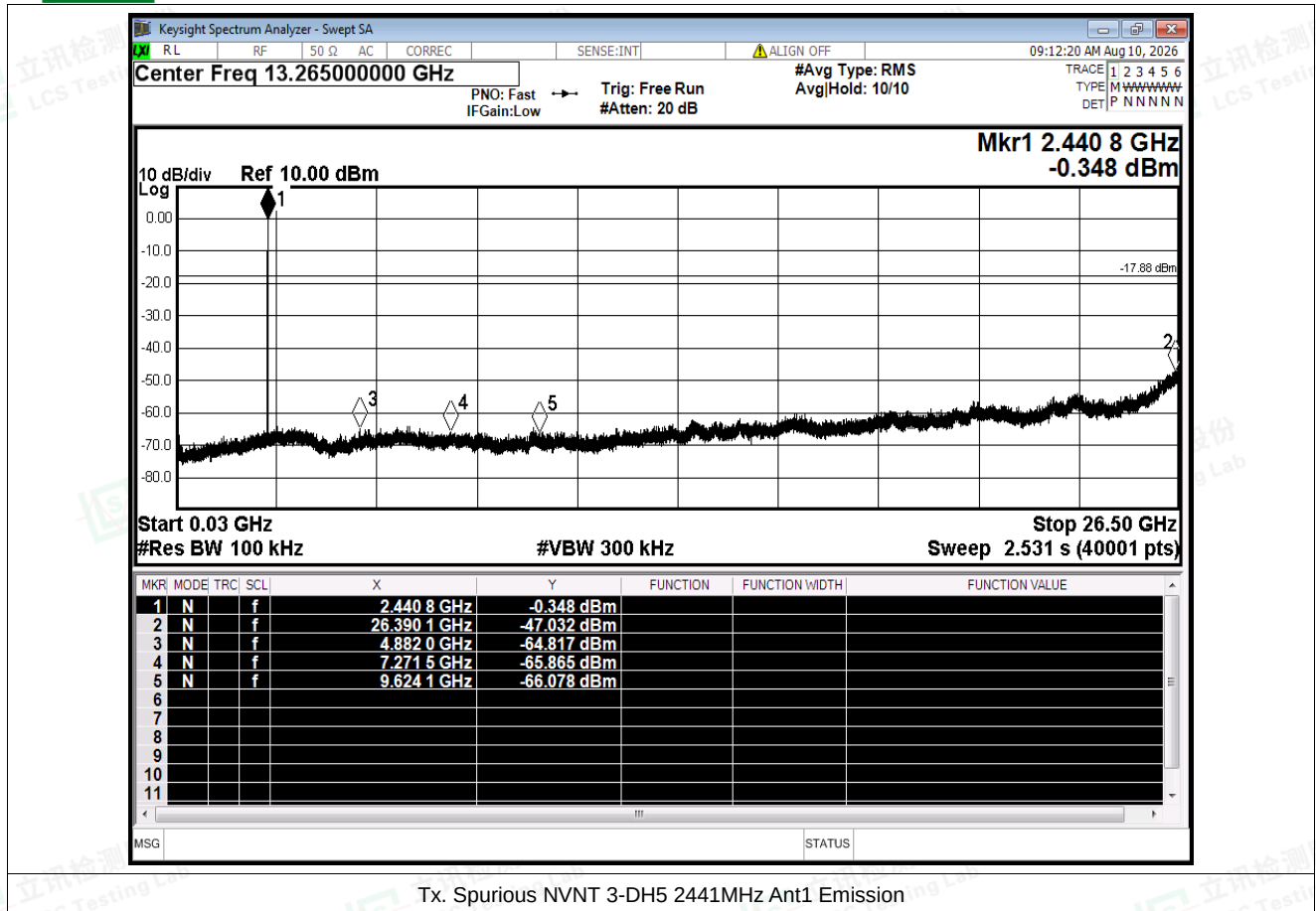
Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Emission

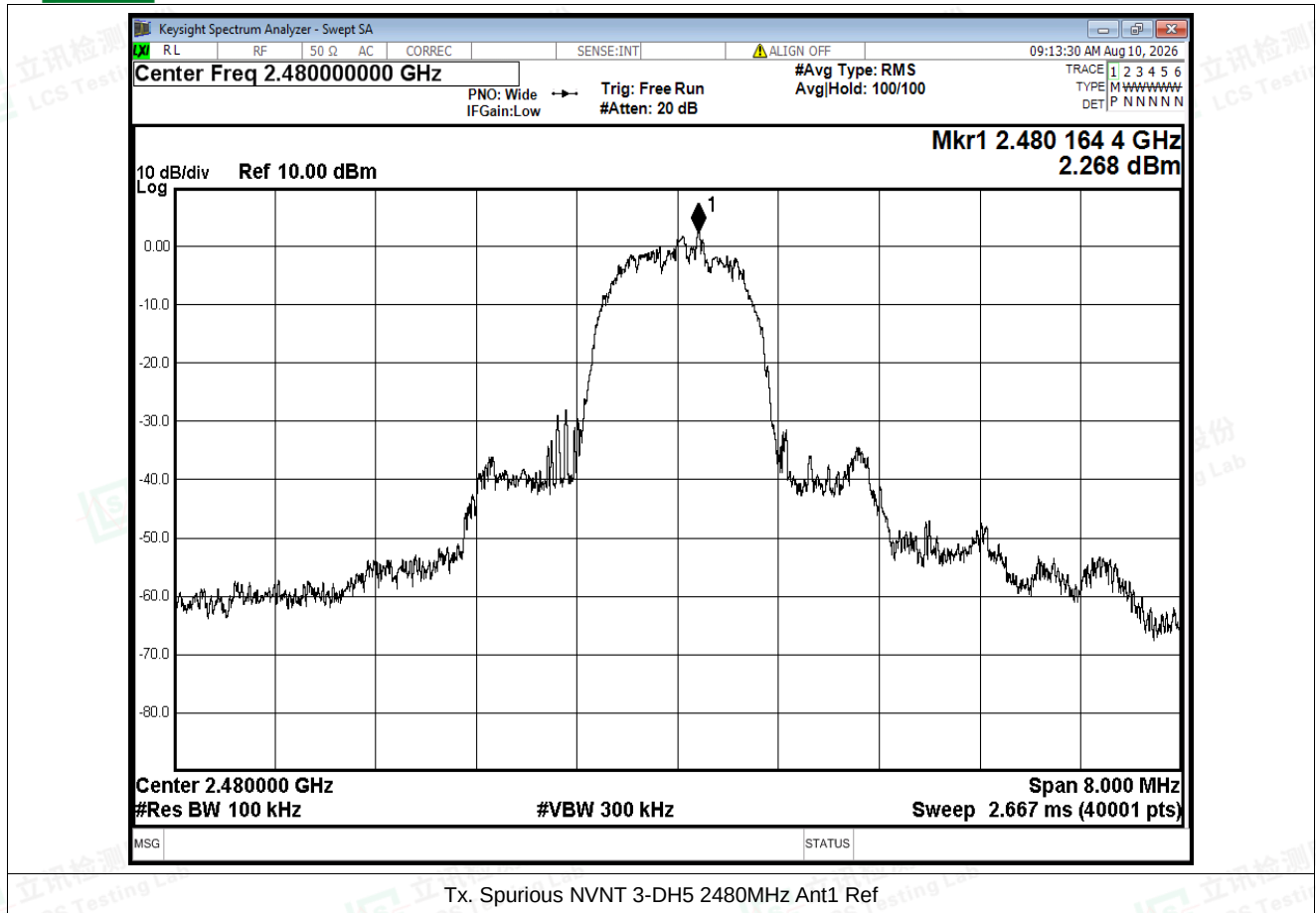


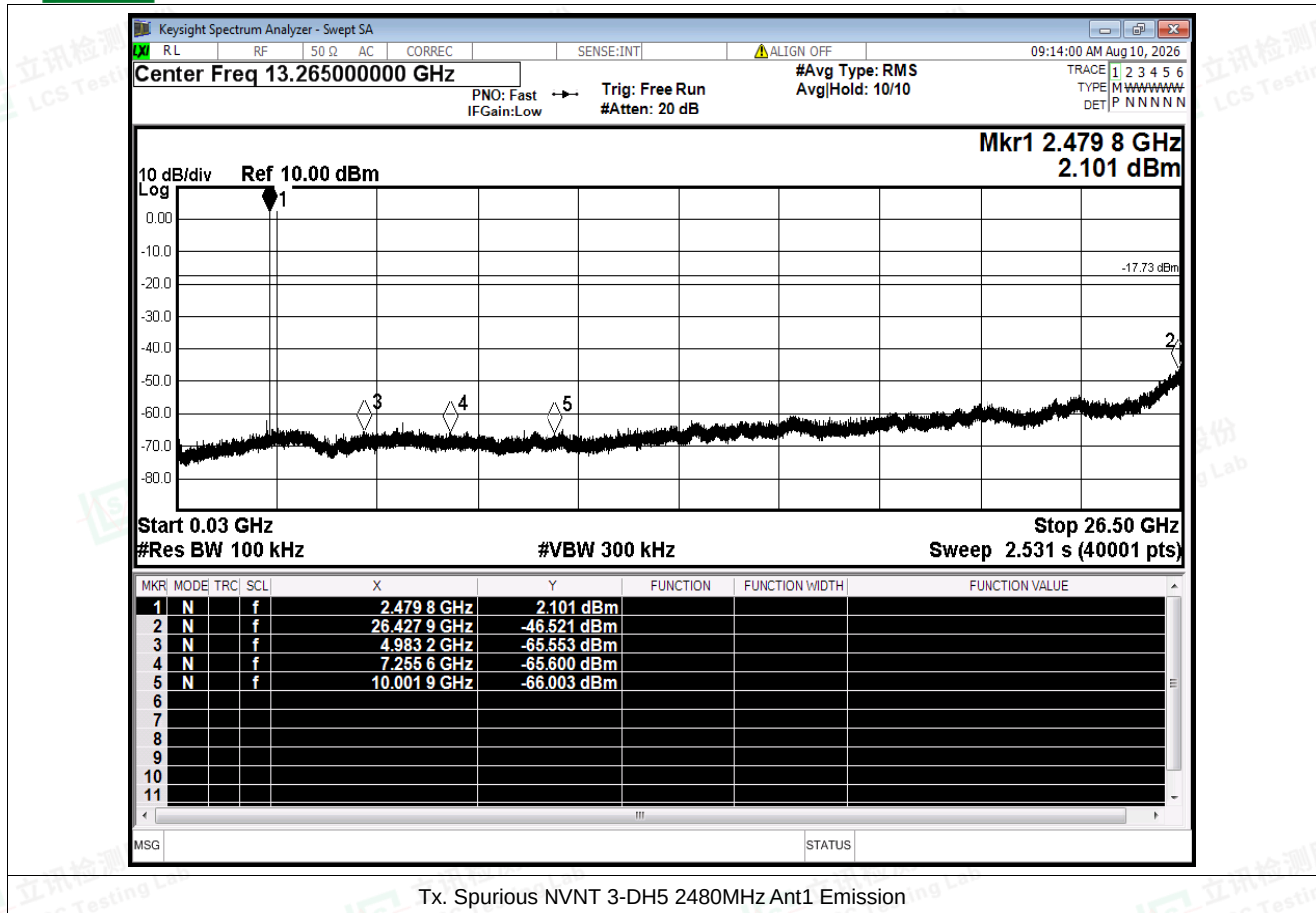


Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Emission





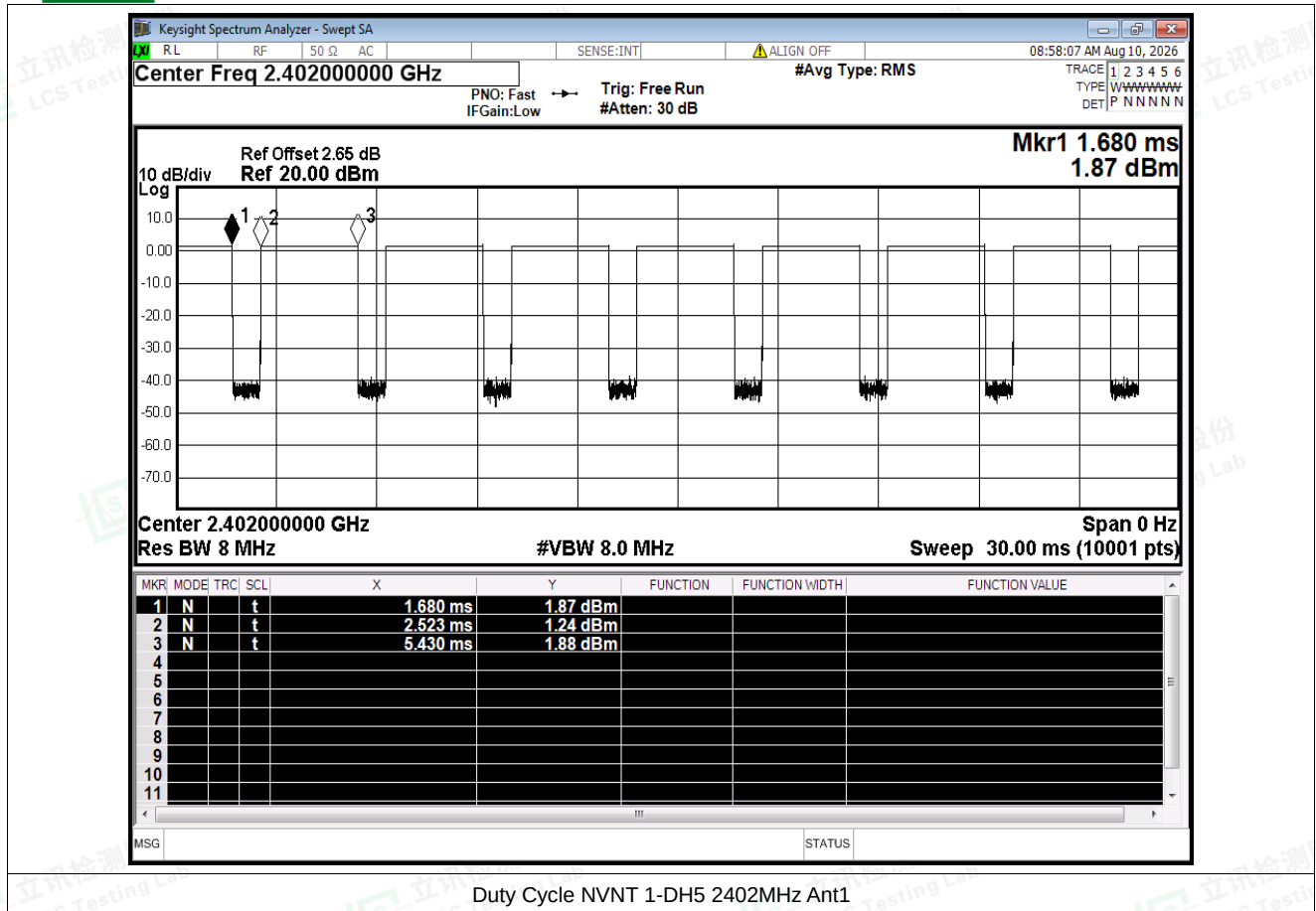


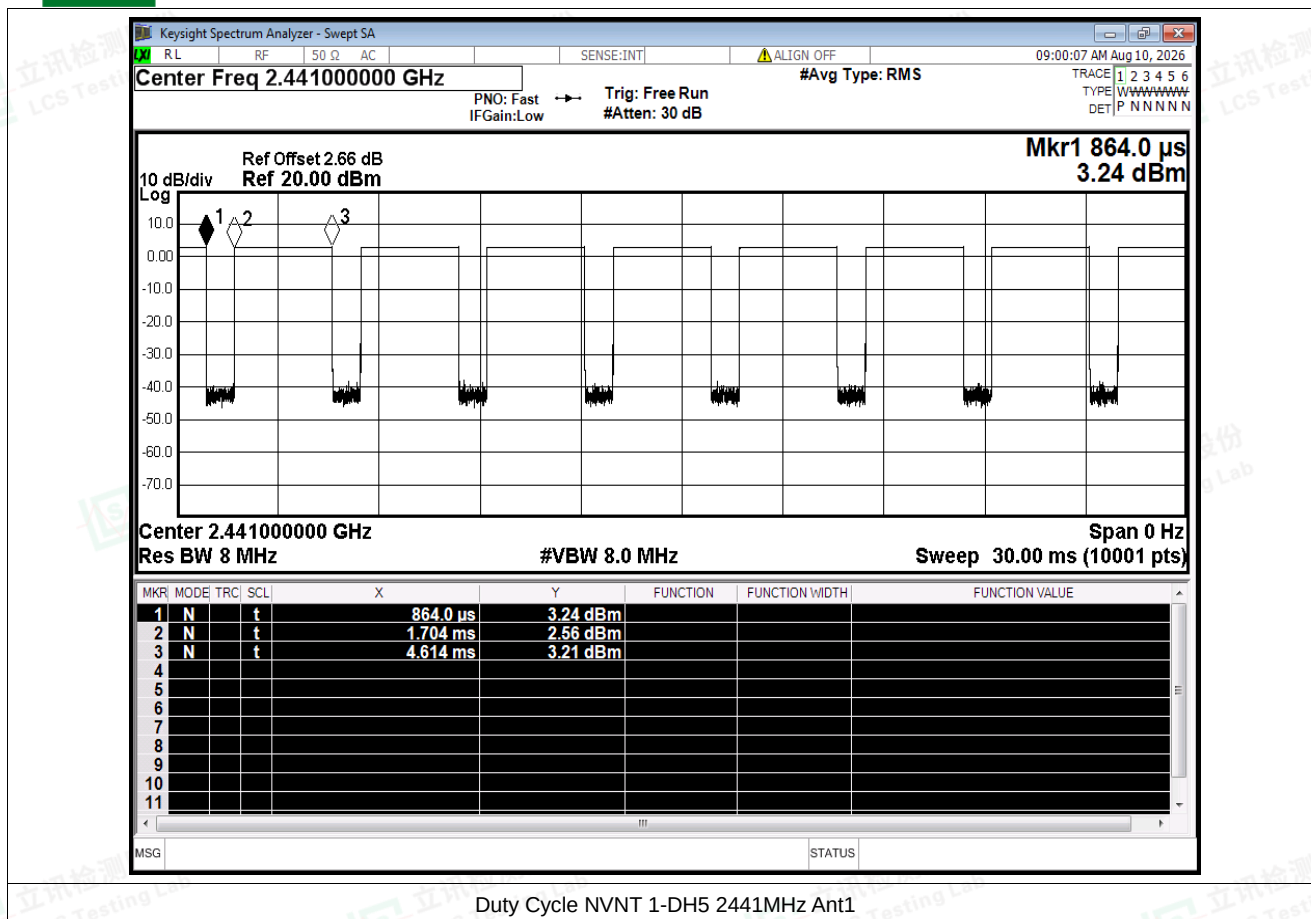


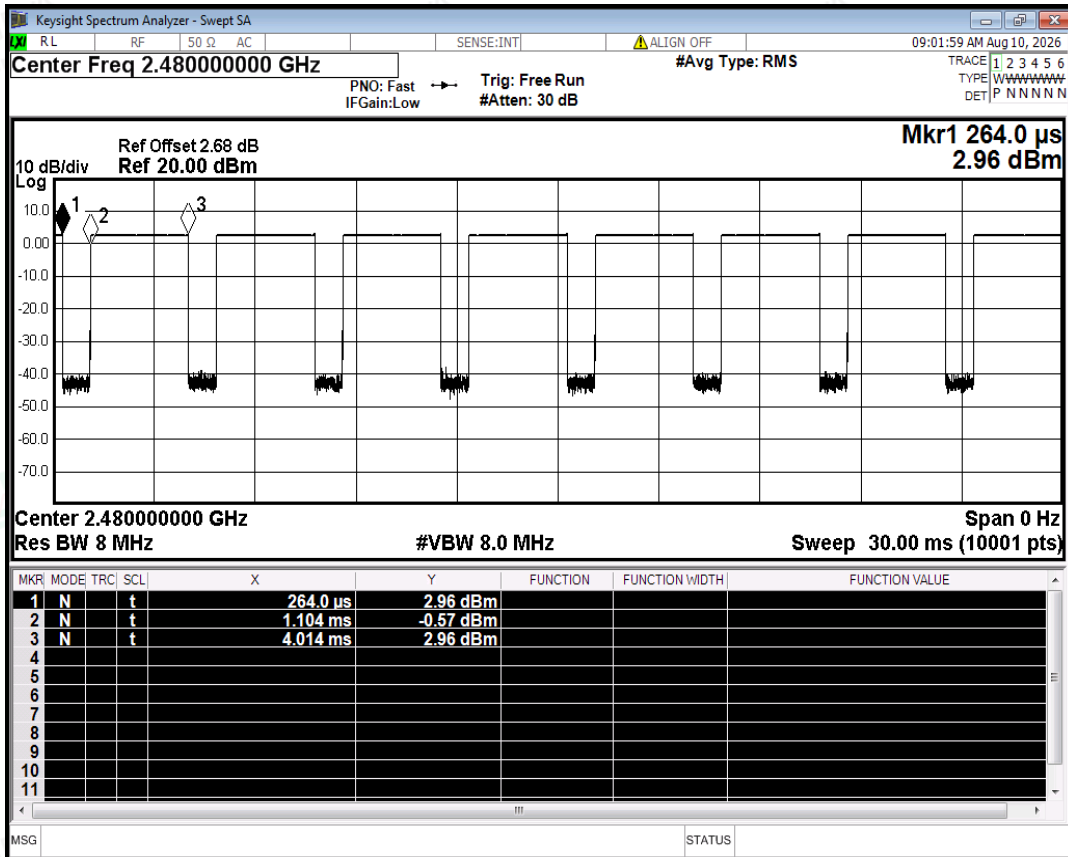


A.8 Duty Cycle

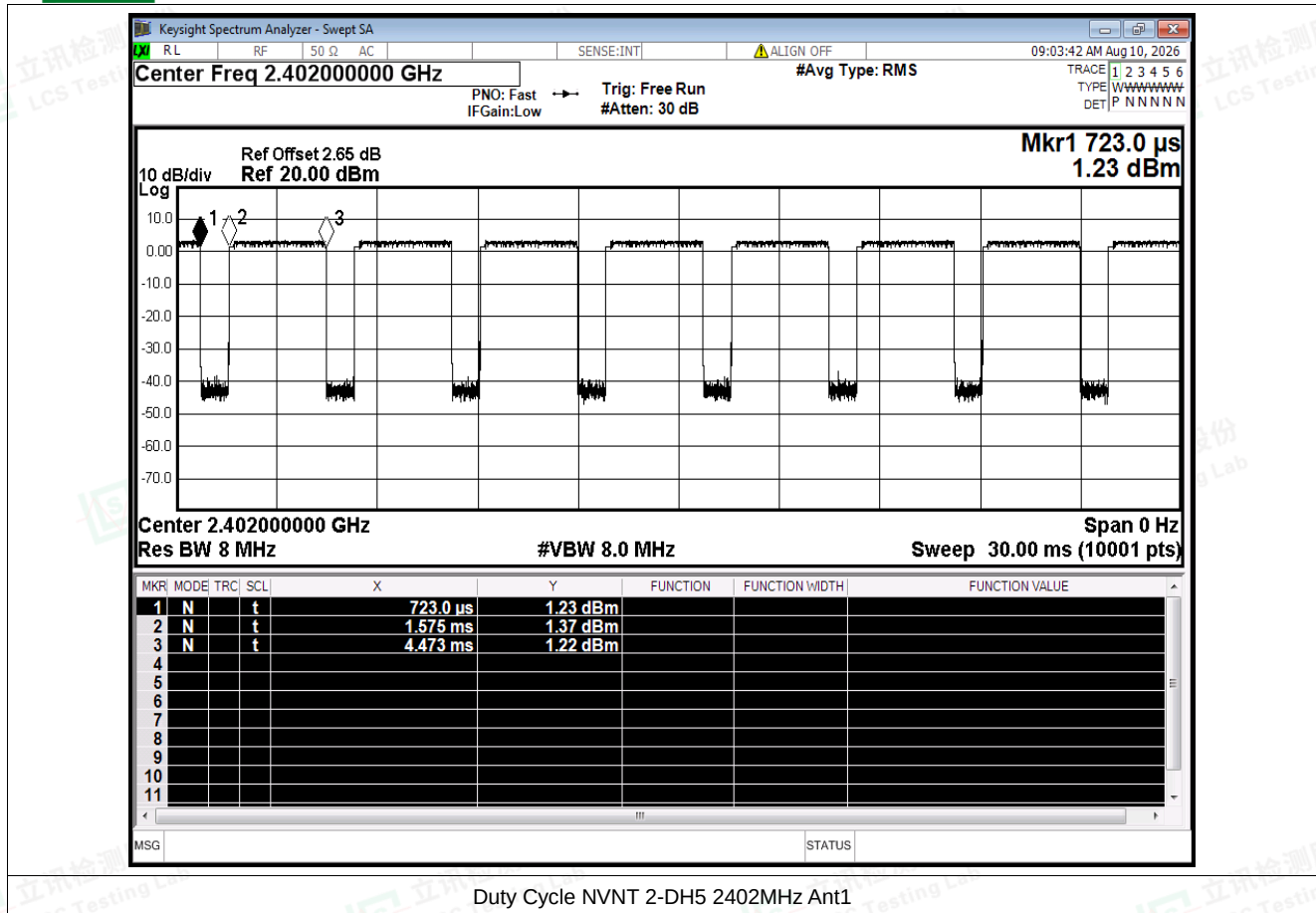
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH5	2402	Ant1	77.52	1.11	0.34
NVNT	1-DH5	2441	Ant1	77.6	1.1	0.34
NVNT	1-DH5	2480	Ant1	77.6	1.1	0.34
NVNT	2-DH5	2402	Ant1	77.28	1.12	0.35
NVNT	2-DH5	2441	Ant1	77.28	1.12	0.35
NVNT	2-DH5	2480	Ant1	13.94	8.56	7.25
NVNT	3-DH5	2402	Ant1	77.28	1.12	0.35
NVNT	3-DH5	2441	Ant1	77.28	1.12	0.35
NVNT	3-DH5	2480	Ant1	77.28	1.12	0.35

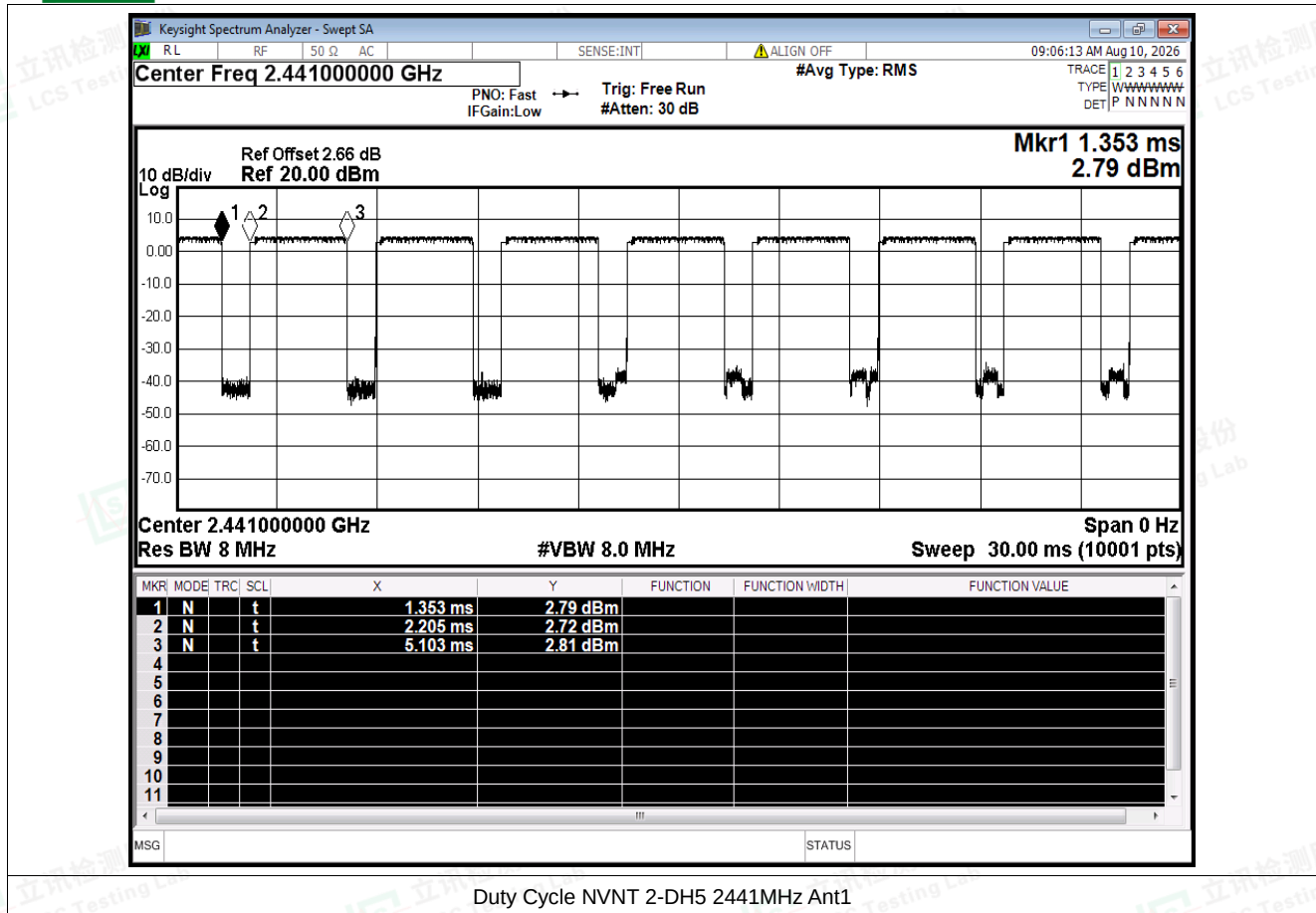


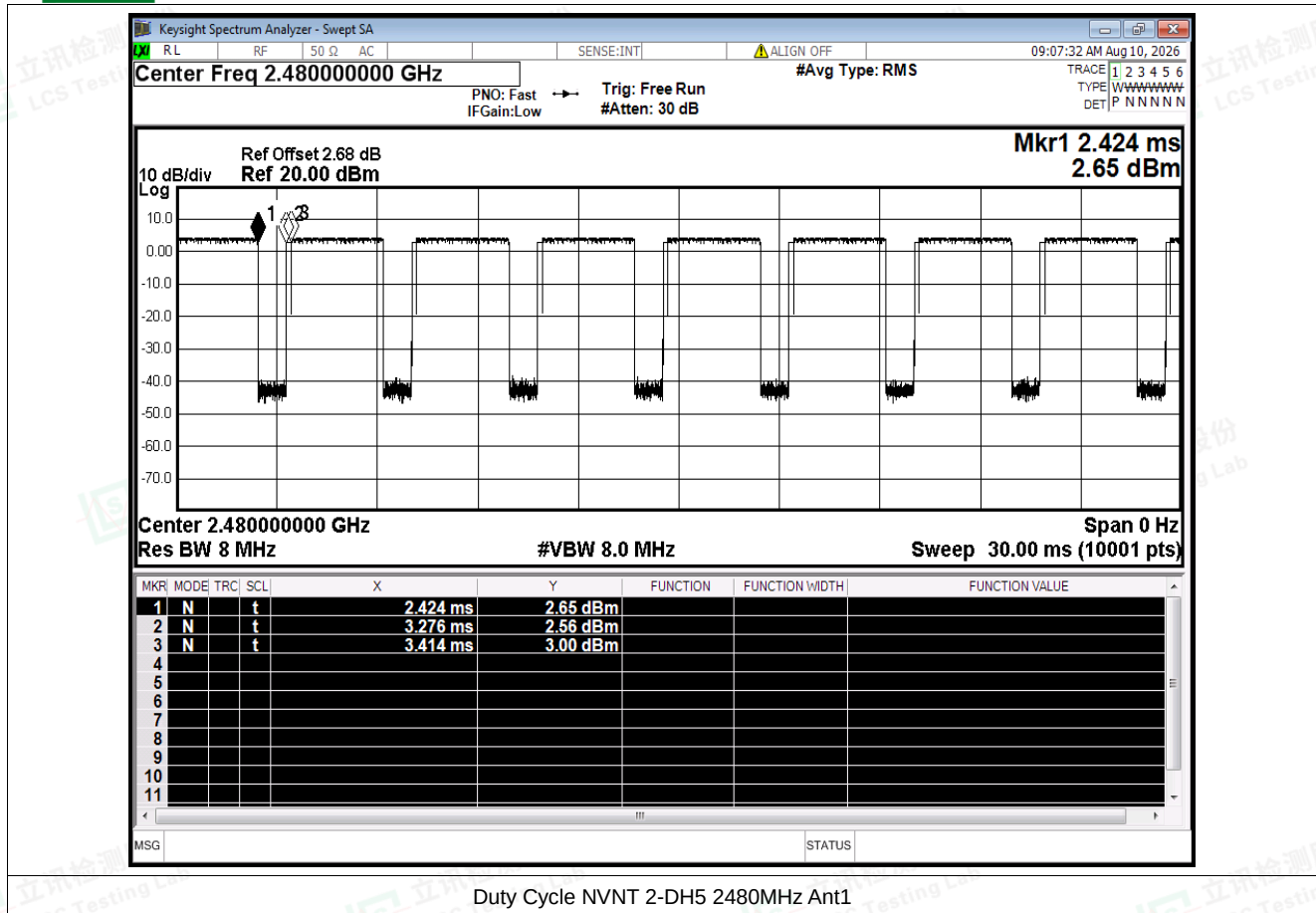


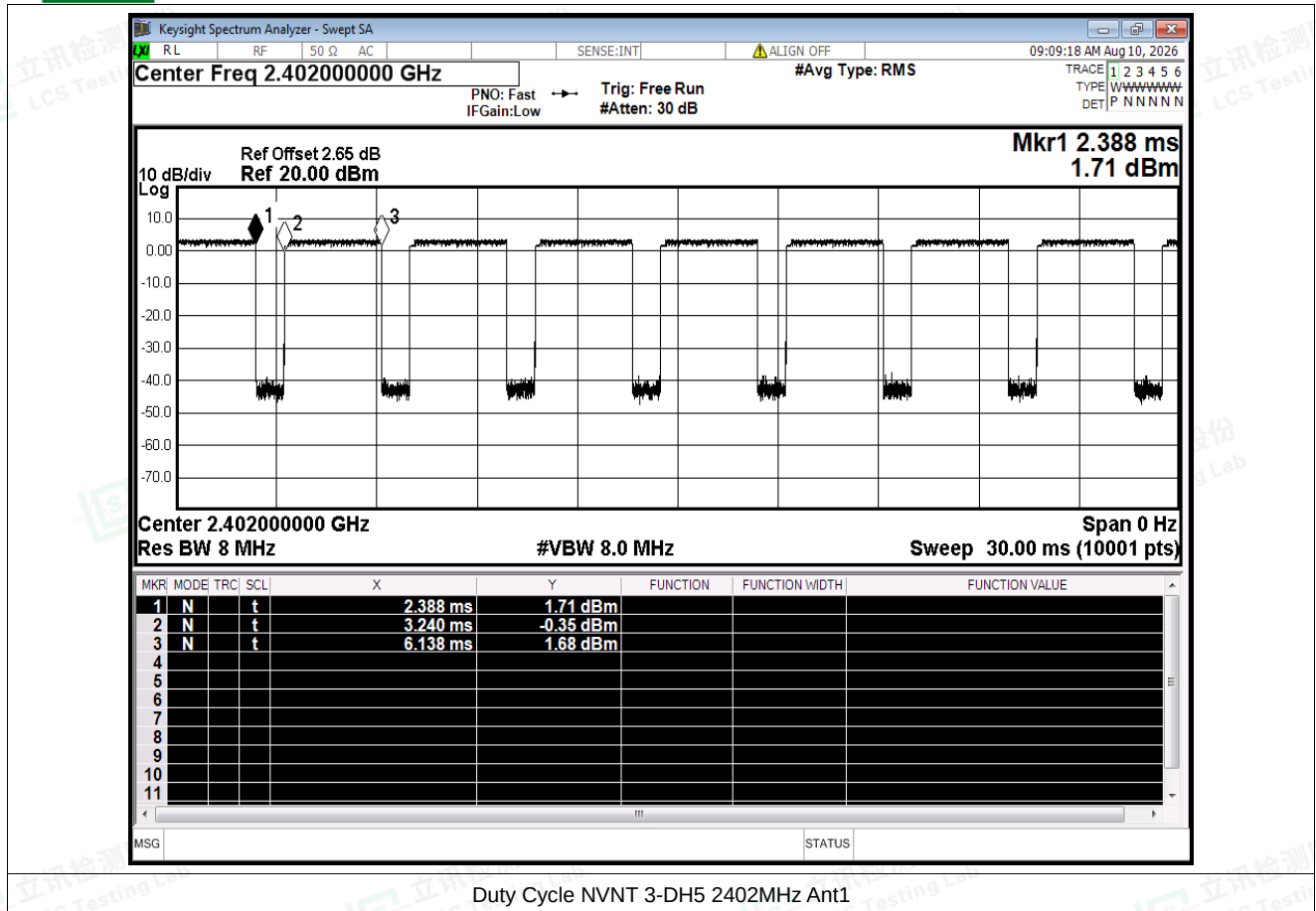


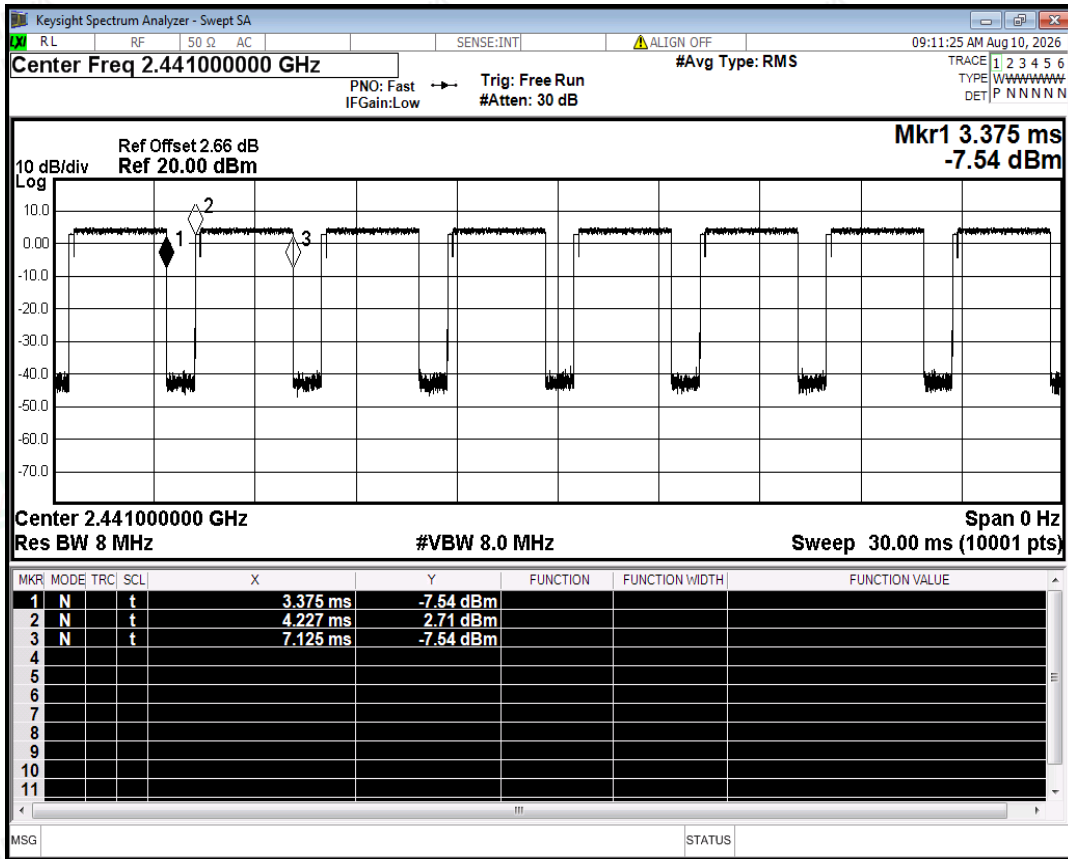
Duty Cycle NVNT 1-DH5 2480MHz Ant1



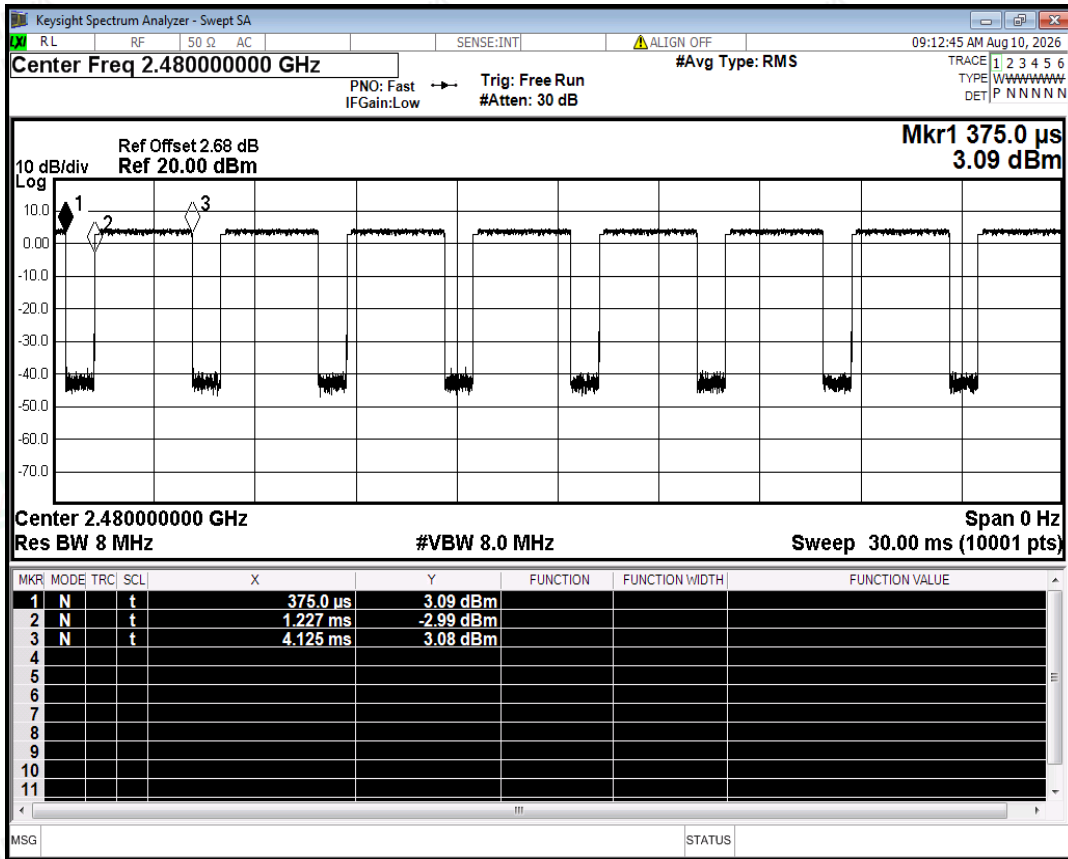








Duty Cycle NVNT 3-DH5 2441MHz Ant1

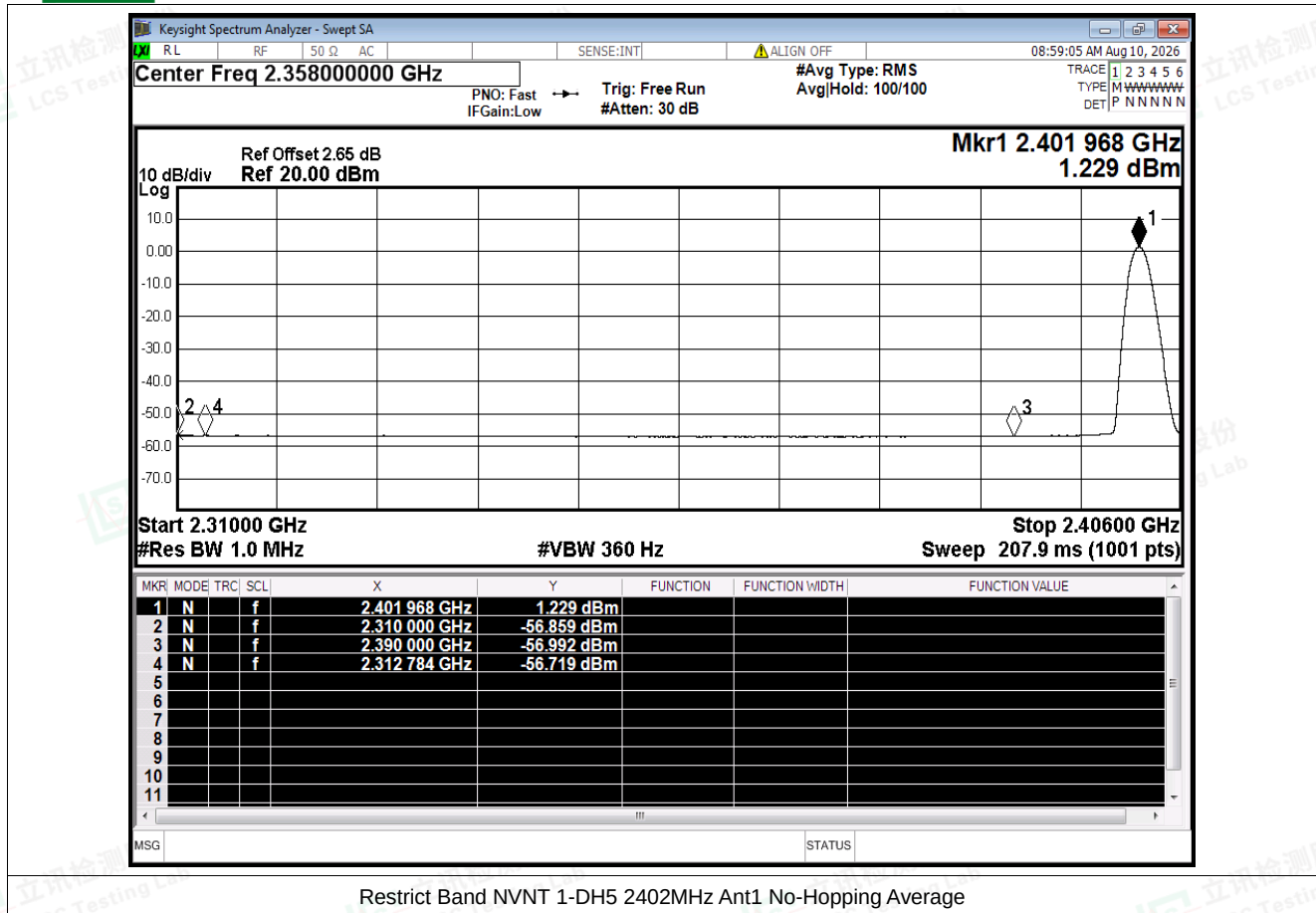


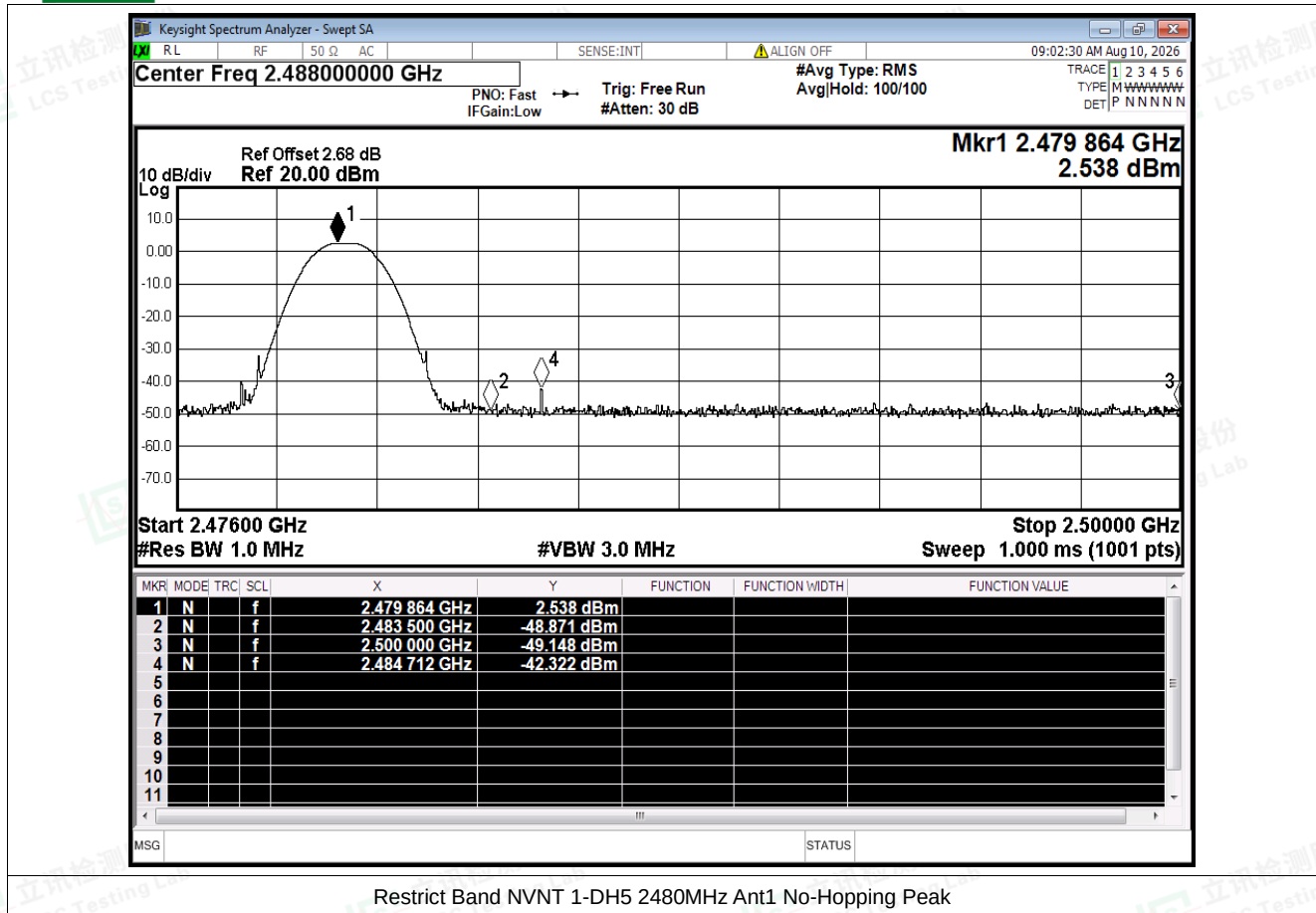
Duty Cycle NVNT 3-DH5 2480MHz Ant1

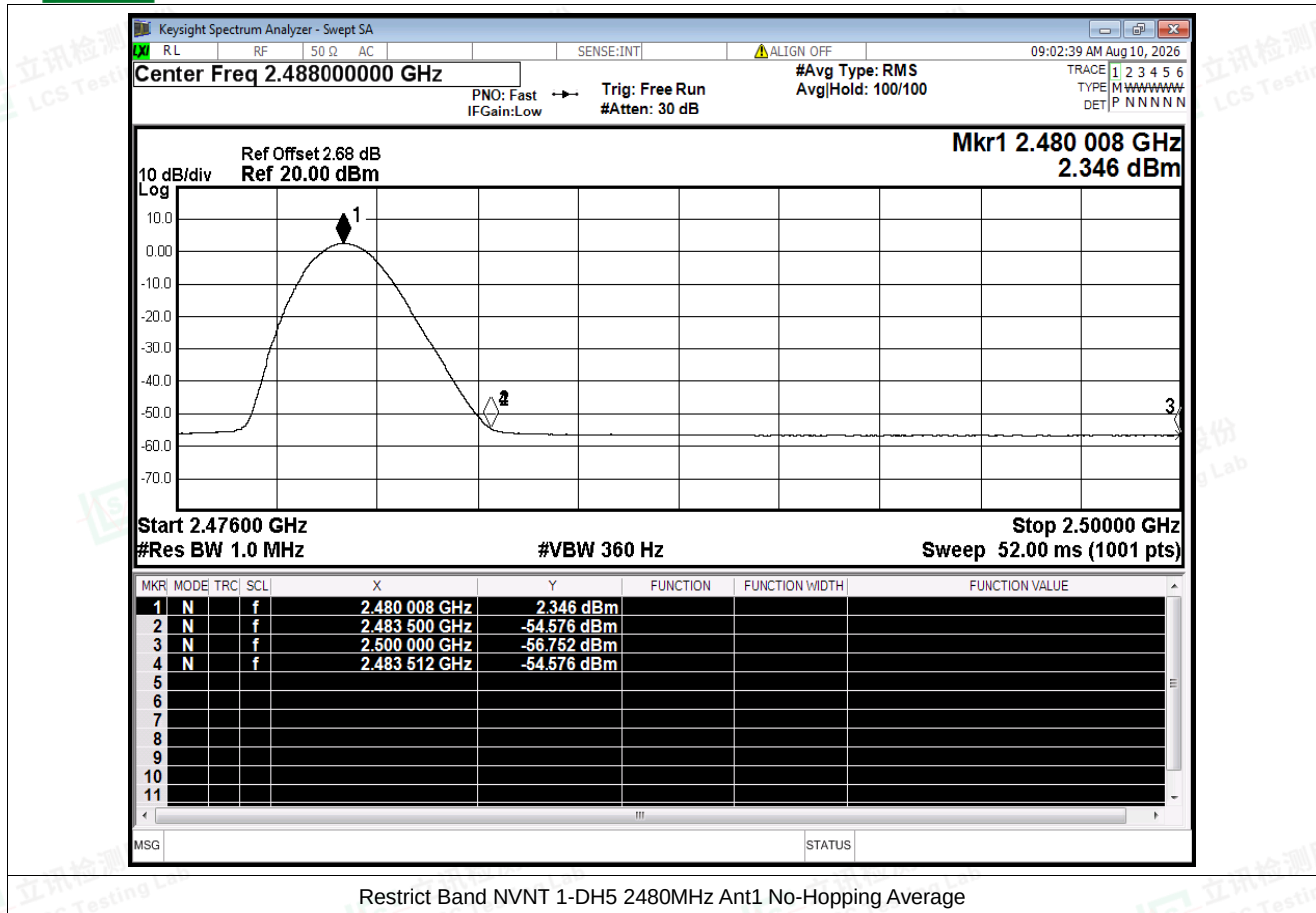


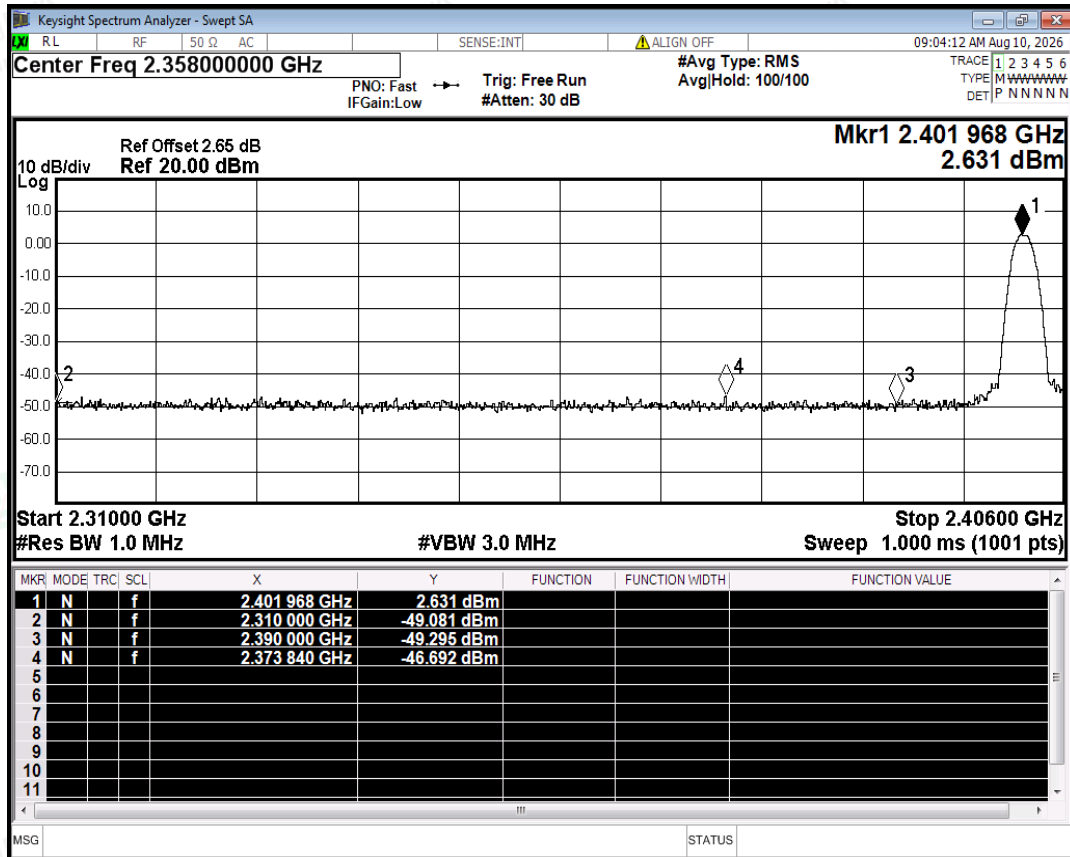
A.9 Restrict Band

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	-49.19	2	48.07	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2310	-56.85	2	40.41	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2363.76	-46.42	2	50.84	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2312.784	-56.71	2	40.55	Average	54	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-48.91	2	48.35	Peak	74	Pass
NVNT	1-DH5	2402	Ant1	No-Hopping	2390	-56.91	2	40.35	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-48.87	2	48.39	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.5	-54.57	2	42.69	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2484.712	-42.32	2	54.94	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2483.512	-54.57	2	42.69	Average	54	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-49.14	2	48.12	Peak	74	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	2500	-56.75	2	40.51	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-49.08	2	48.18	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2310	-56.85	2	40.41	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2373.84	-46.69	2	50.57	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2340.816	-56.71	2	40.55	Average	54	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-49.89	2	47.37	Peak	74	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	2390	-56.99	2	40.27	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-43.89	2	53.37	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.5	-50.7	2	46.56	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.56	-42.1	2	55.16	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2483.512	-50.7	2	46.56	Average	54	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-49.27	2	47.99	Peak	74	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	2500	-55.55	2	41.71	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-49.98	2	47.28	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310	-56.82	2	40.44	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2312.016	-47.01	2	50.25	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2310.384	-56.75	2	40.51	Average	54	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-50.34	2	46.92	Peak	74	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	2390	-56.95	2	40.31	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-43.71	2	53.55	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.5	-51.49	2	45.77	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.704	-42.75	2	54.51	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2483.512	-51.49	2	45.77	Average	54	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-48.91	2	48.35	Peak	74	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	2500	-56.83	2	40.43	Average	54	Pass

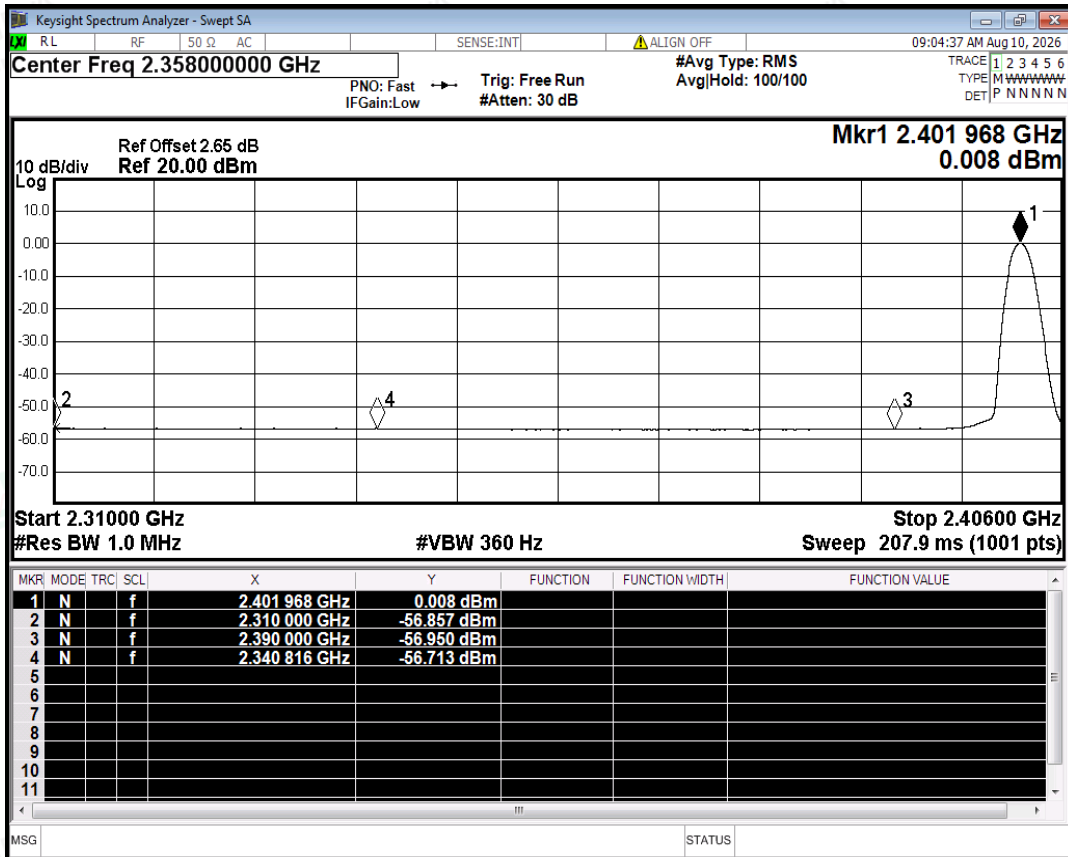




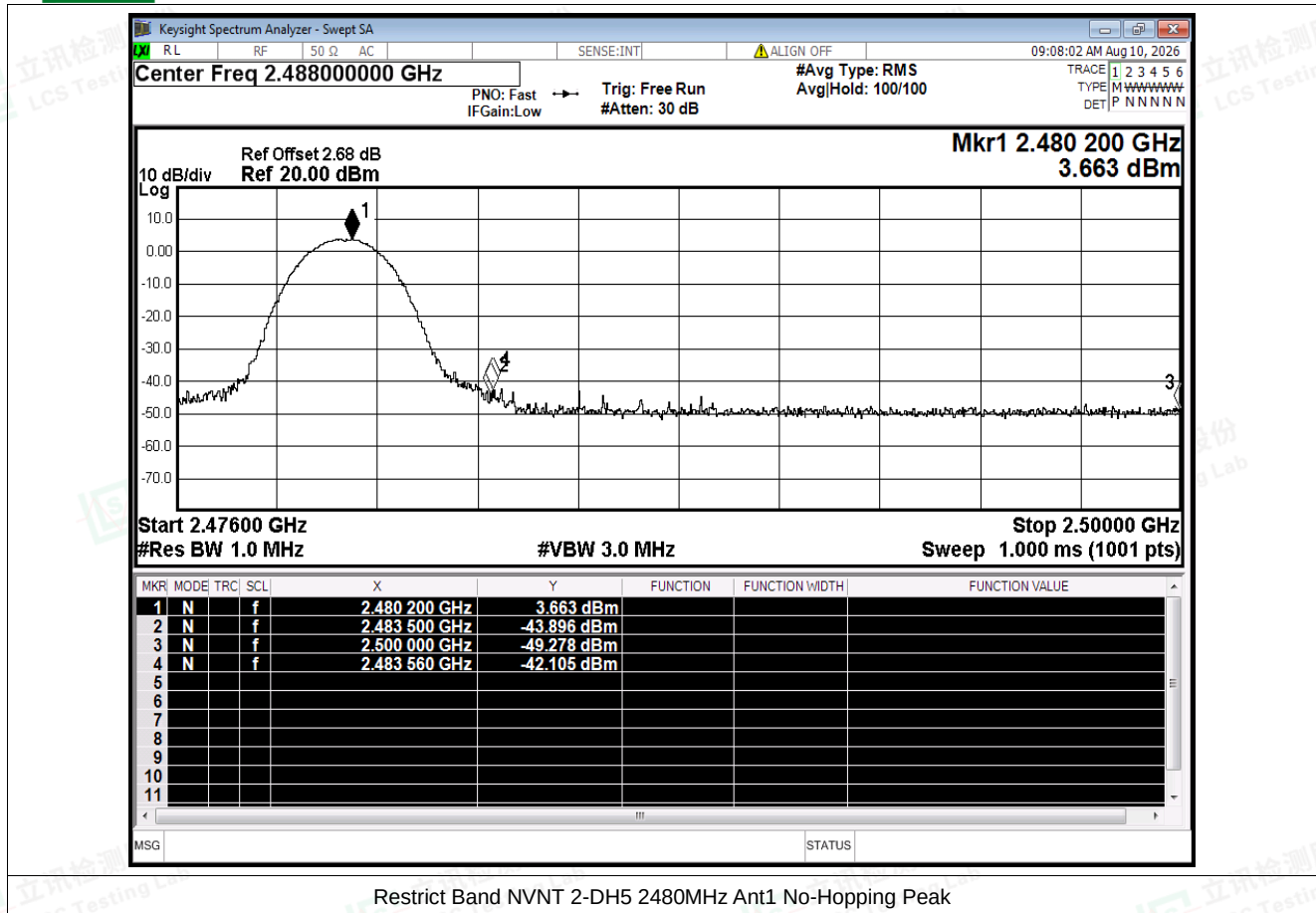


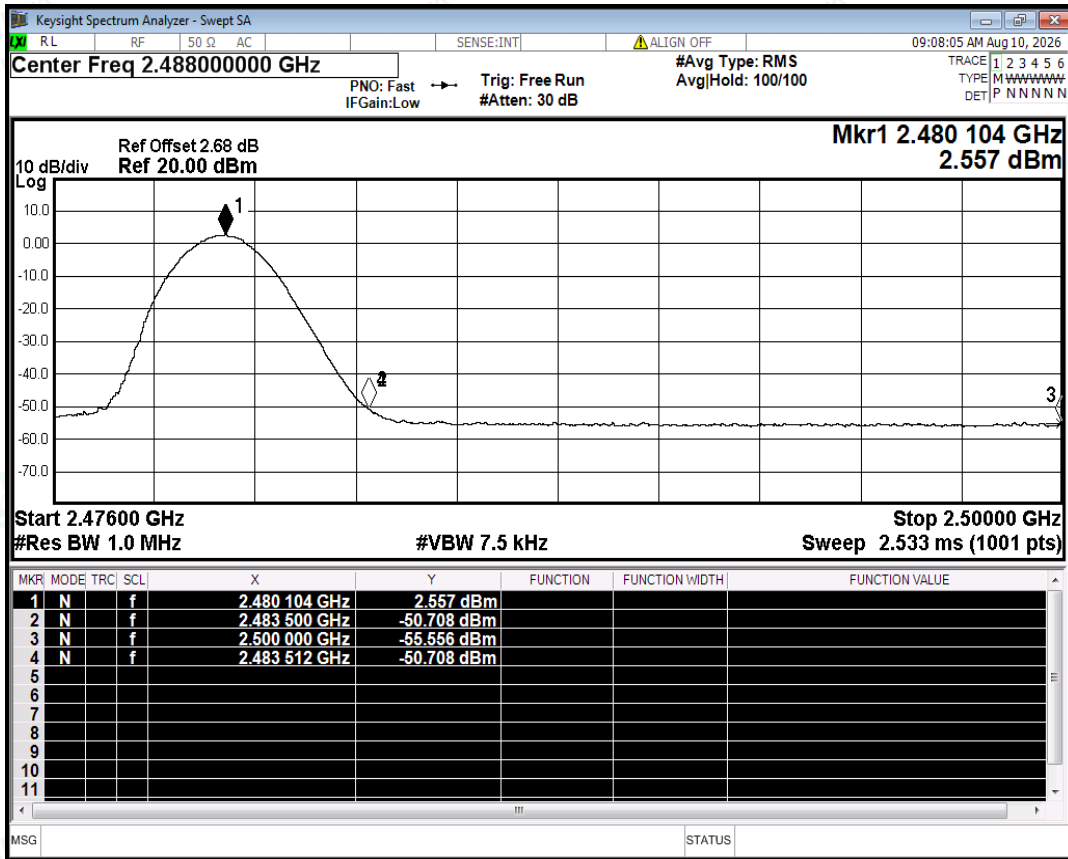


Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Peak

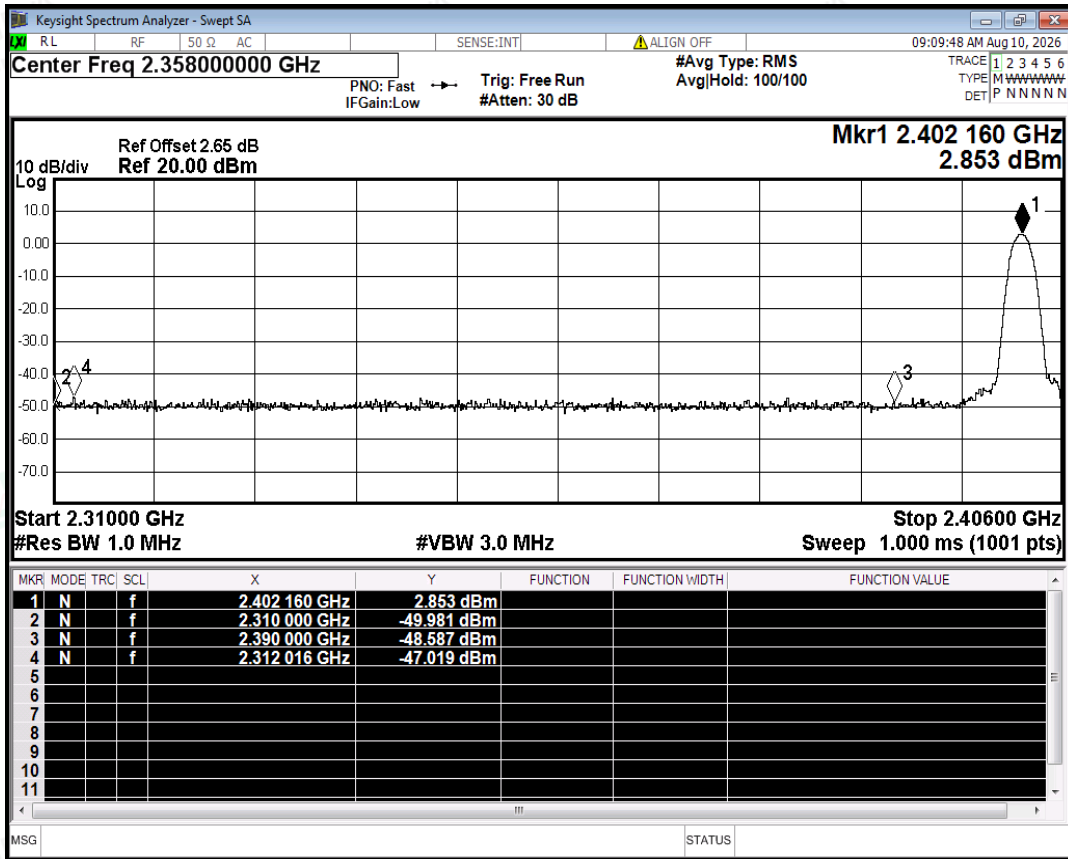


Restrict Band NVNT 2-DH5 2402MHz Ant1 No-Hopping Average

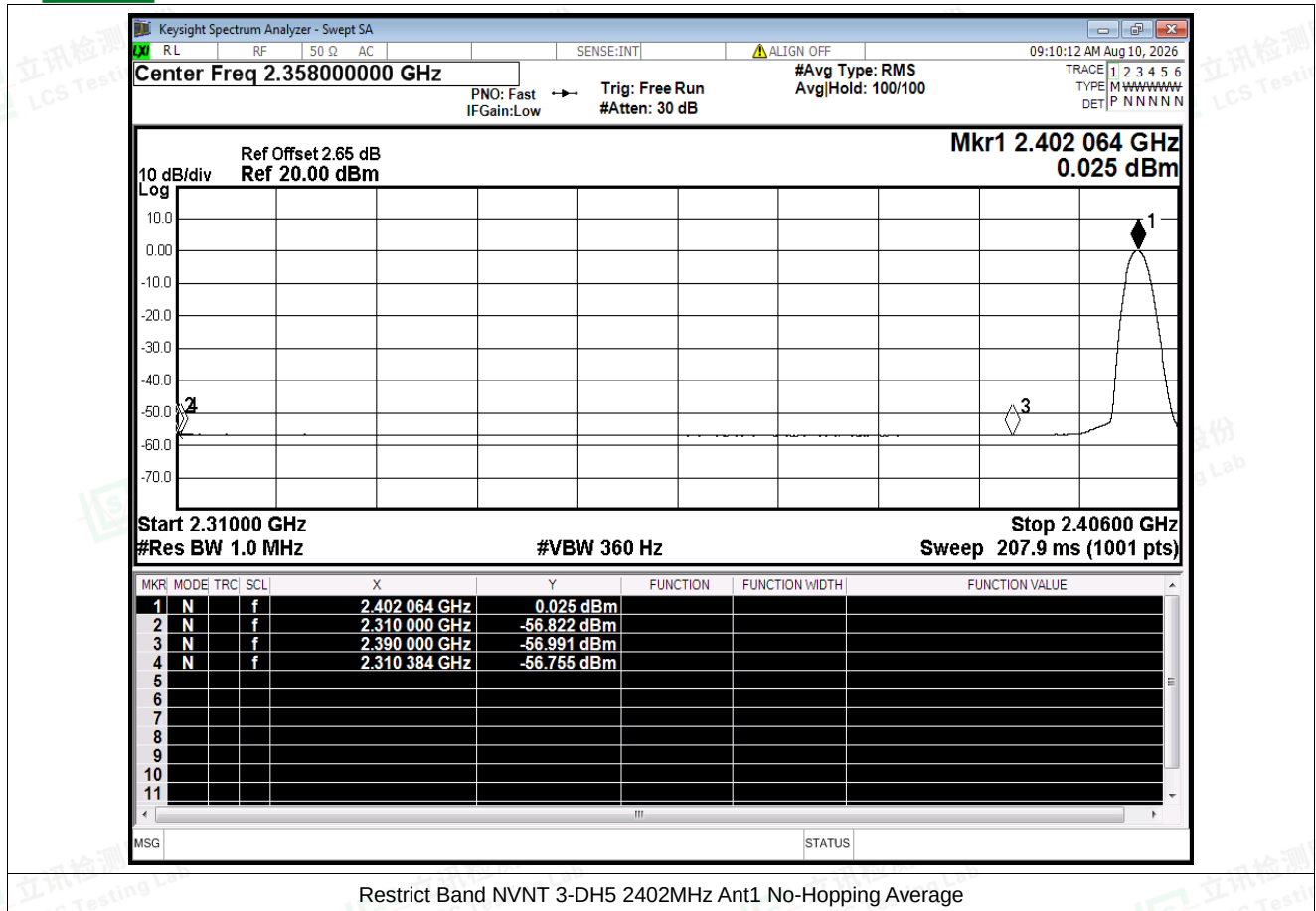


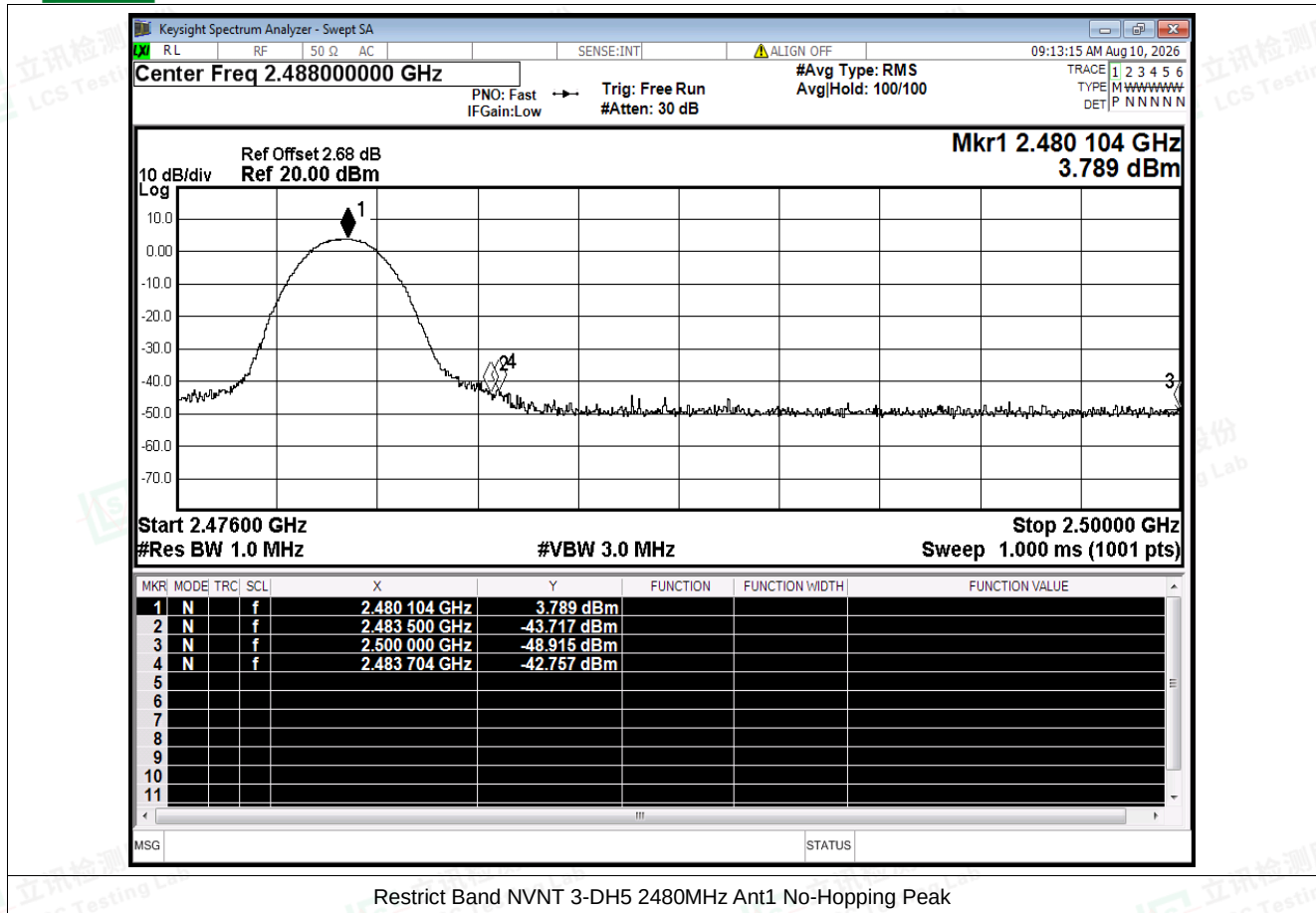


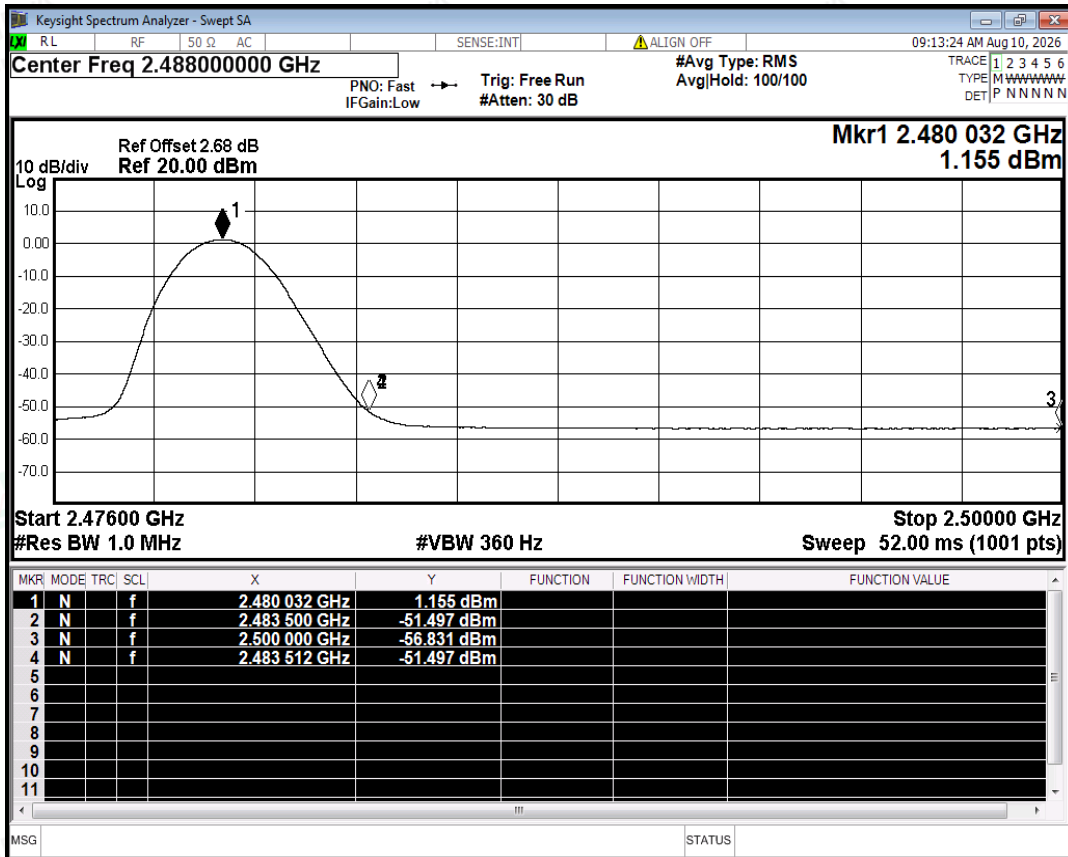
Restrict Band NVNT 2-DH5 2480MHz Ant1 No-Hopping Average



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







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