

RF Test Data for Bluetooth (Conducted Measurements)

General Description of EUT	
Product Name:	Kids Karaoke
Test Model:	KA06
Sample ID:	HC-C-202407-0102-01-02
Environmental Conditions	
Temperature:	25℃
Relative Humidity:	55%
Test Voltage:	DC 3.7V
Test Engineer:	Jolin Lee
Note: For a more detailed features description, please refer to the report TBR-C-202407-0102-5 The report only show the worst case data.	

Contents

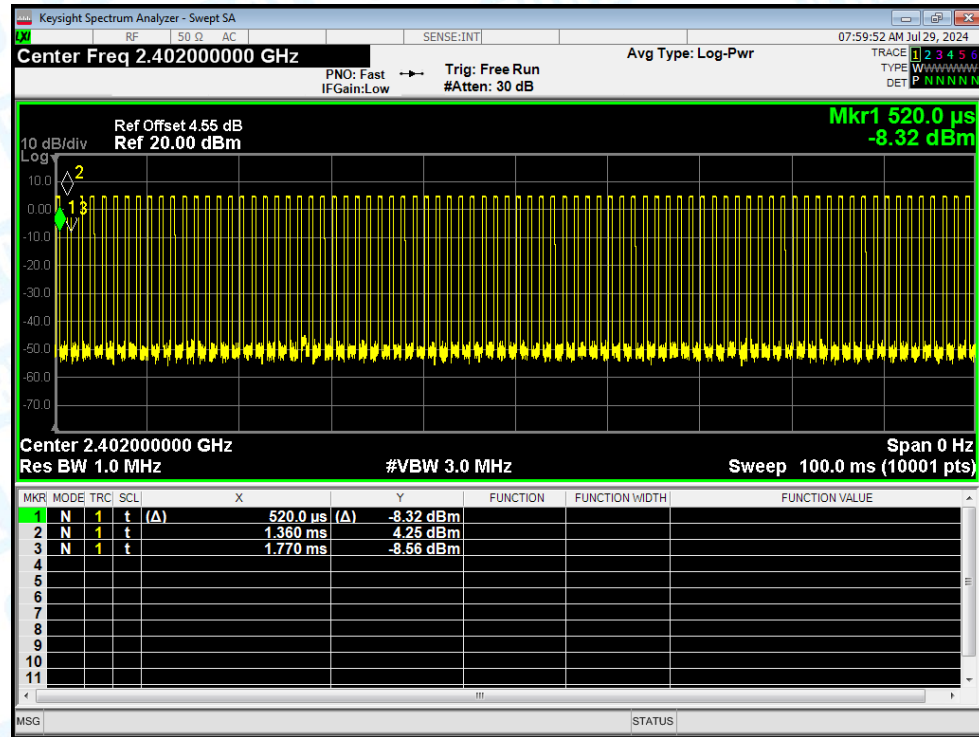
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1.Duty Cycle

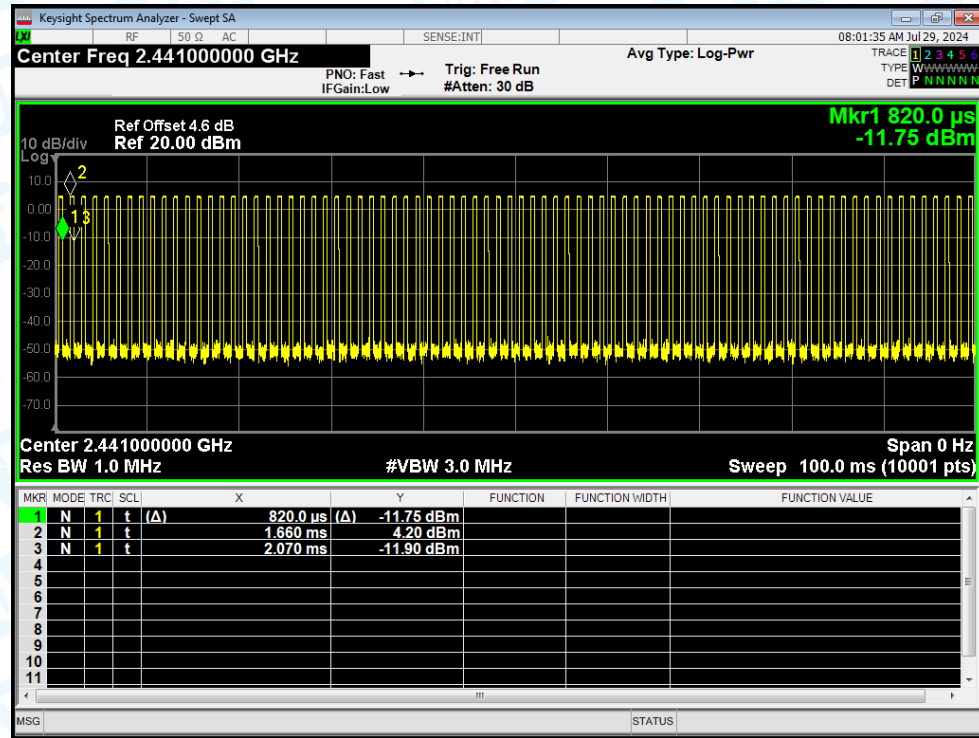
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH1	2402	Ant1	32.8	4.84	2.44
NVNT	1-DH1	2441	Ant1	32.8	4.84	2.44
NVNT	1-DH1	2480	Ant1	32	4.95	2.5
NVNT	2-DH1	2402	Ant1	33.6	4.74	2.38
NVNT	2-DH1	2441	Ant1	33.6	4.74	2.38
NVNT	2-DH1	2480	Ant1	33.6	4.74	2.38
NVNT	3-DH1	2402	Ant1	33.6	4.74	2.38
NVNT	3-DH1	2441	Ant1	33.6	4.74	2.38
NVNT	3-DH1	2480	Ant1	33.6	4.74	2.38

Test Graphs

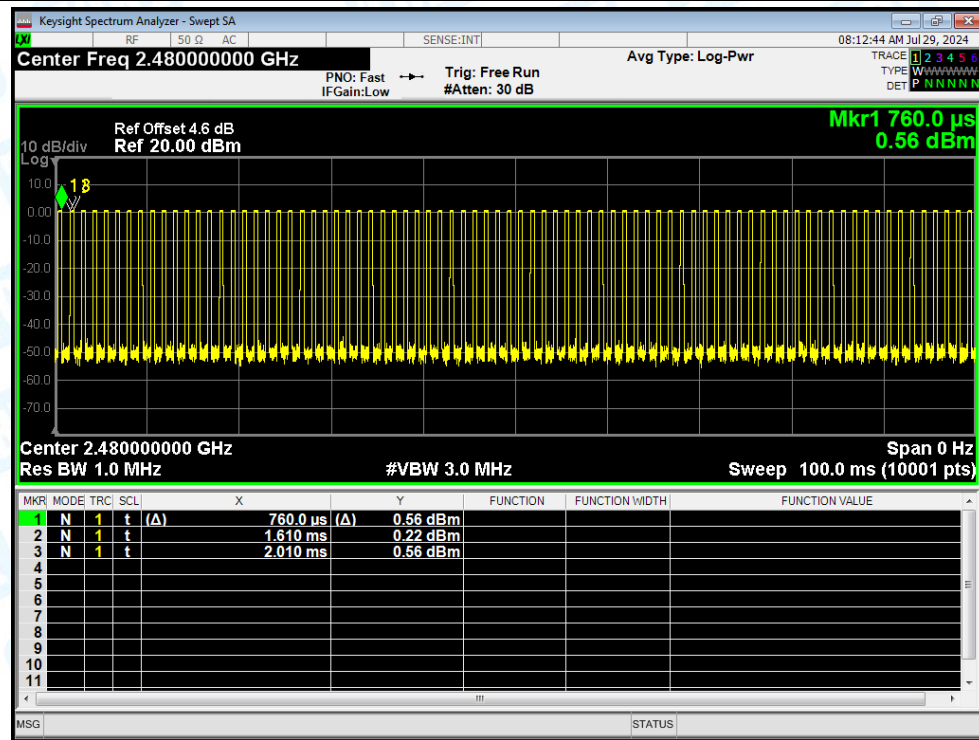
Duty Cycle NVNT 1-DH1 2402MHz Ant1



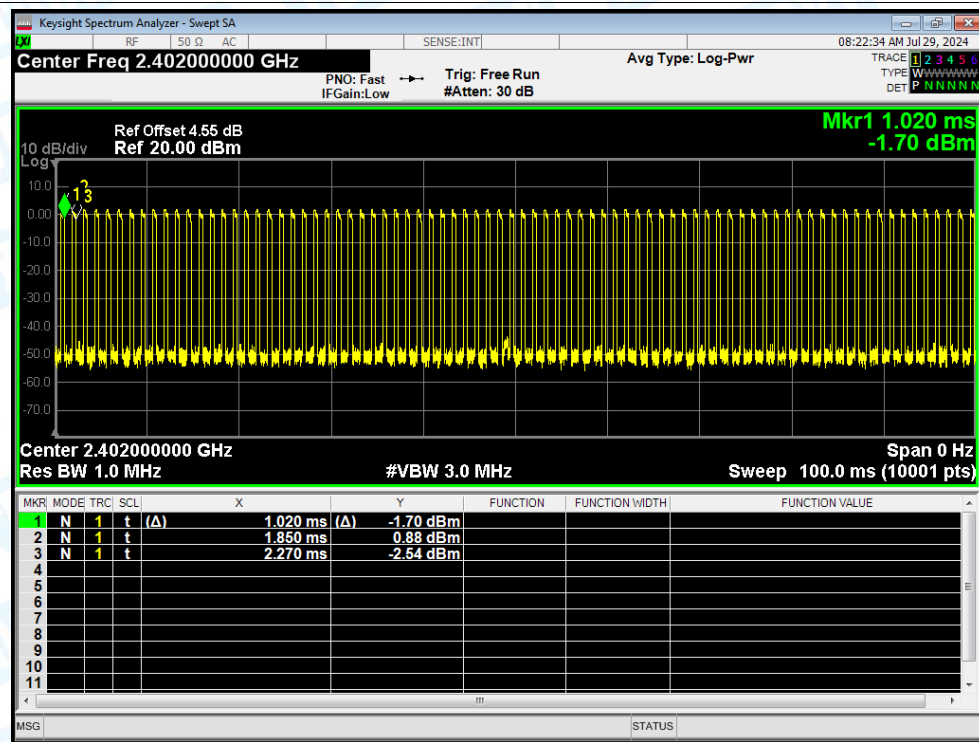
Duty Cycle NVNT 1-DH1 2441MHz Ant1



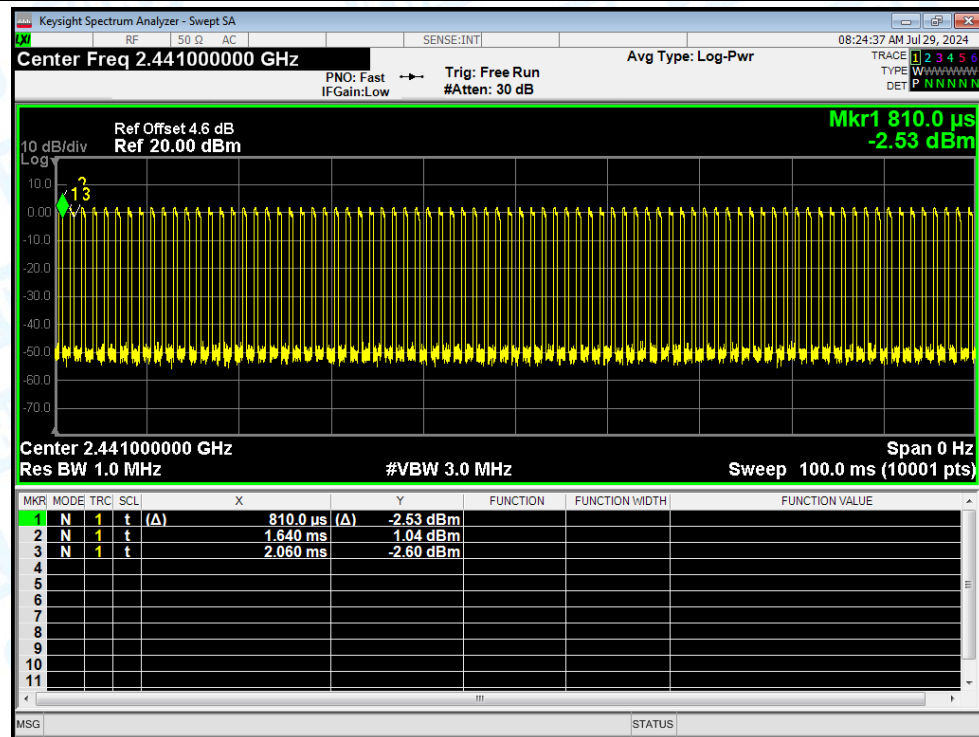
Duty Cycle NVNT 1-DH1 2480MHz Ant1



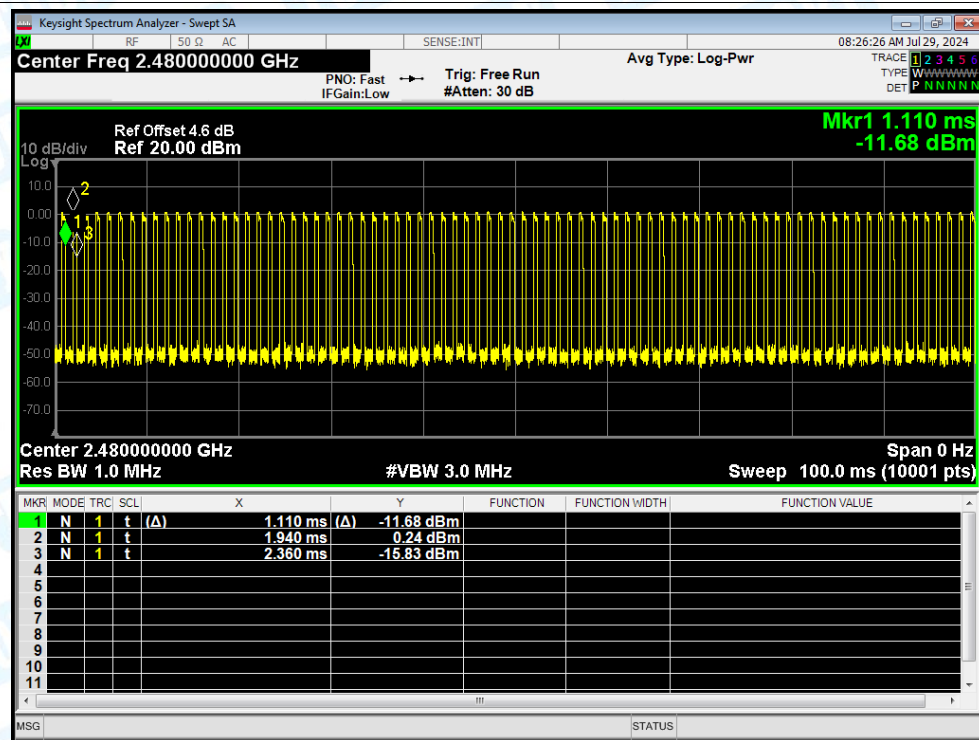
Duty Cycle NVNT 2-DH1 2402MHz Ant1



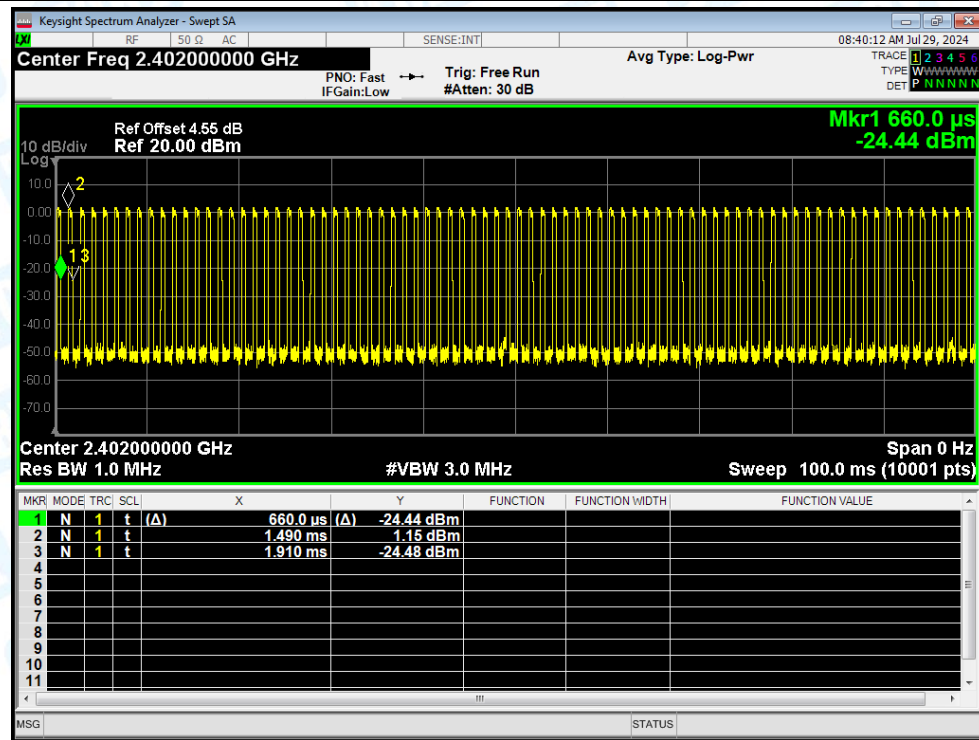
Duty Cycle NVNT 2-DH1 2441MHz Ant1



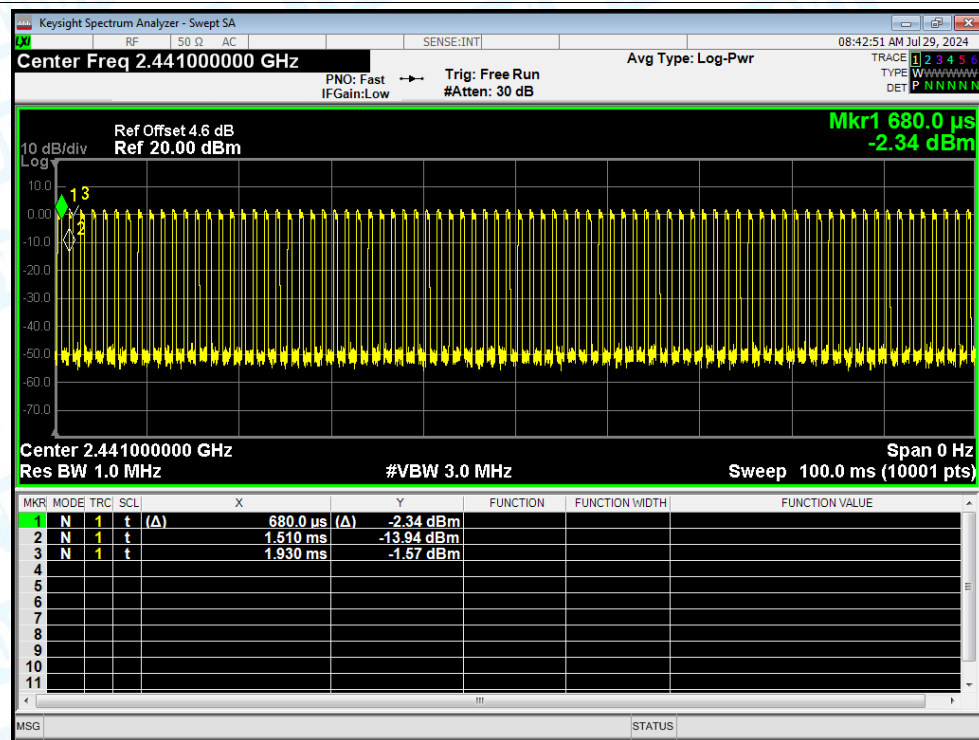
Duty Cycle NVNT 2-DH1 2480MHz Ant1

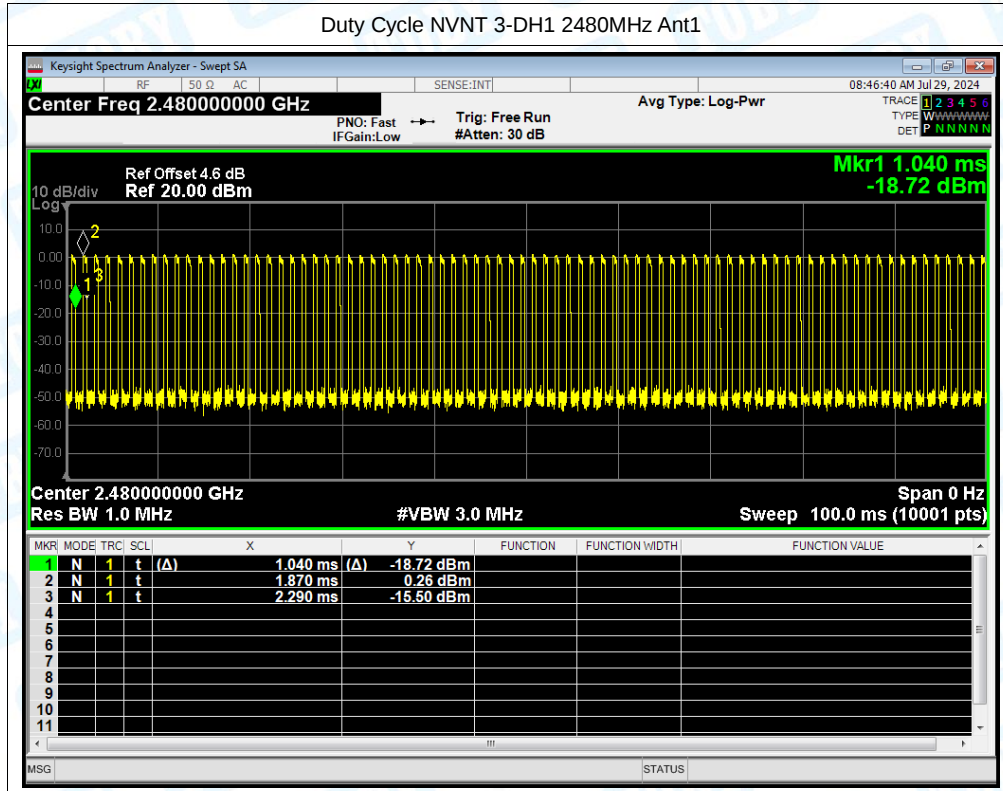


Duty Cycle NVNT 3-DH1 2402MHz Ant1



Duty Cycle NVNT 3-DH1 2441MHz Ant1



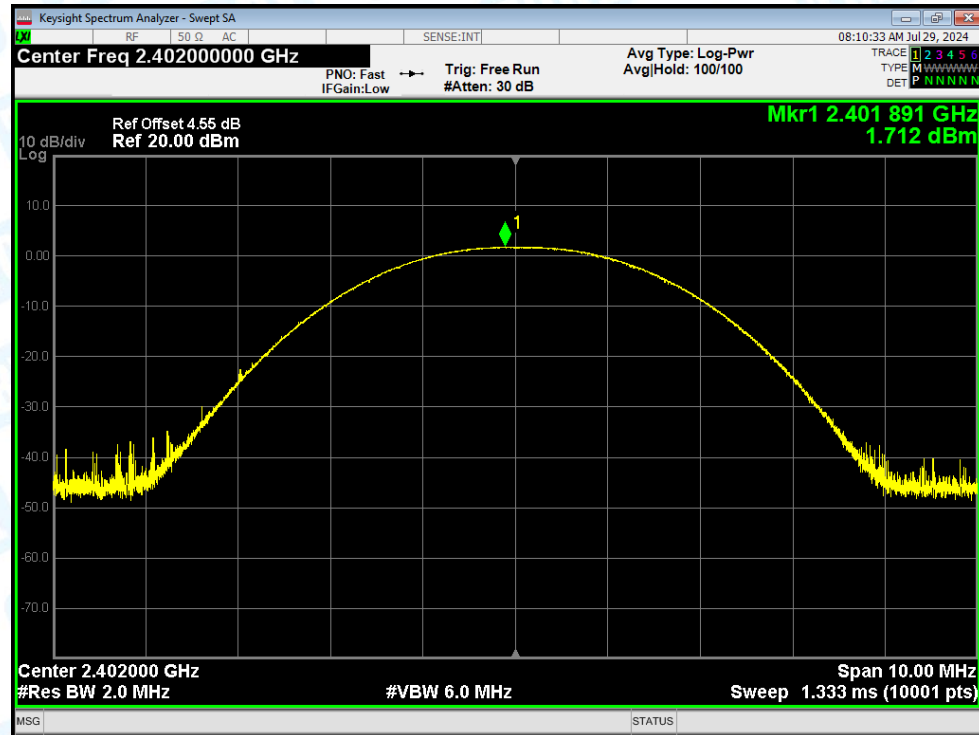


2.Maximum Conducted Output Power

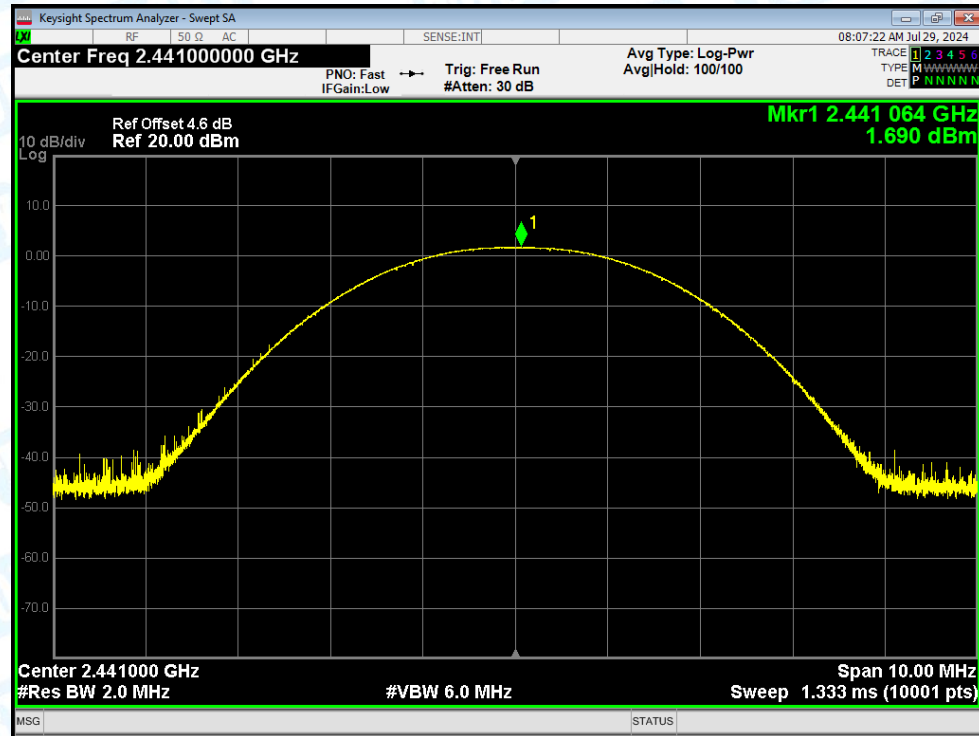
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	1.712	21	Pass
NVNT	1-DH1	2441	Ant1	1.69	21	Pass
NVNT	1-DH1	2480	Ant1	0.862	21	Pass
NVNT	2-DH1	2402	Ant1	1.784	21	Pass
NVNT	2-DH1	2441	Ant1	1.72	21	Pass
NVNT	2-DH1	2480	Ant1	0.93	21	Pass
NVNT	3-DH1	2402	Ant1	1.785	21	Pass
NVNT	3-DH1	2441	Ant1	1.716	21	Pass
NVNT	3-DH1	2480	Ant1	0.907	21	Pass

Test Graphs

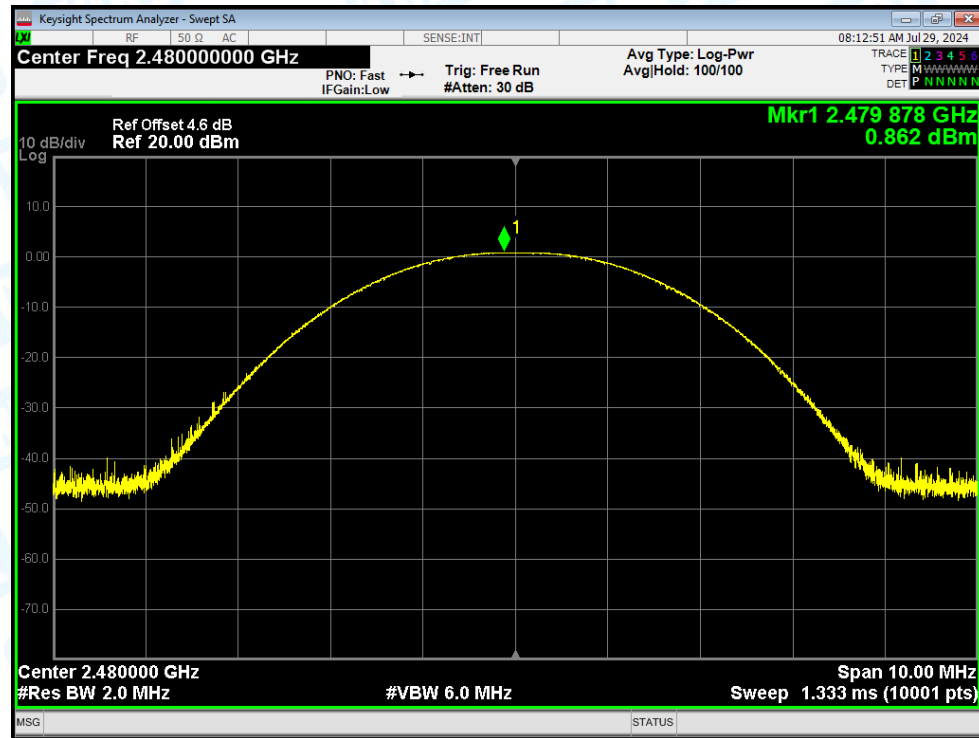
Power NVNT 1-DH1 2402MHz Ant1



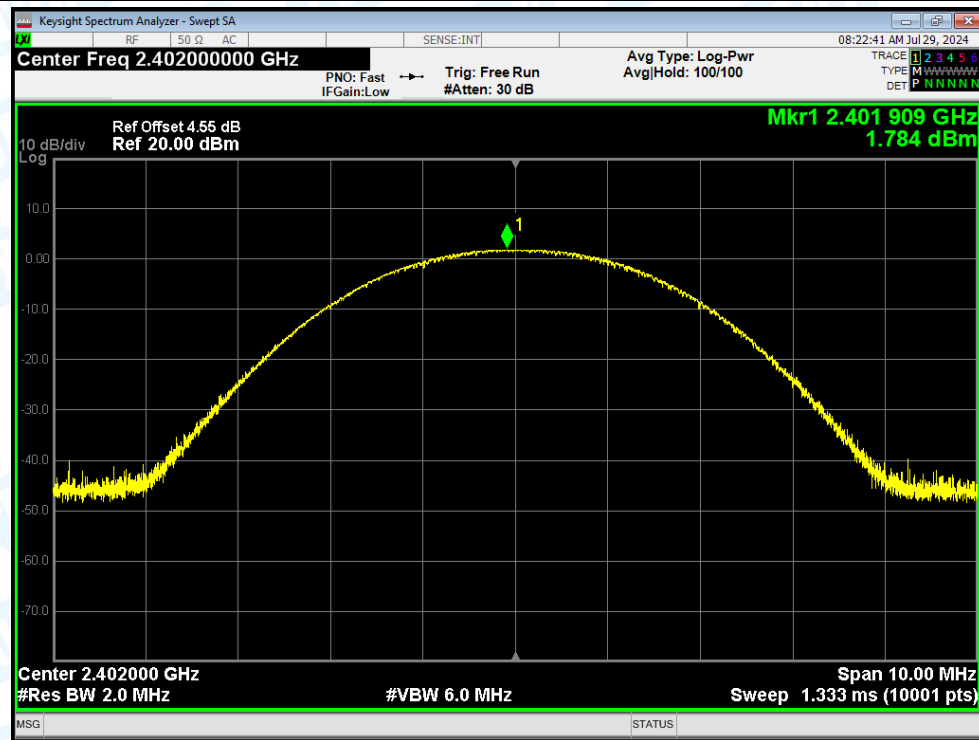
Power NVNT 1-DH1 2441MHz Ant1



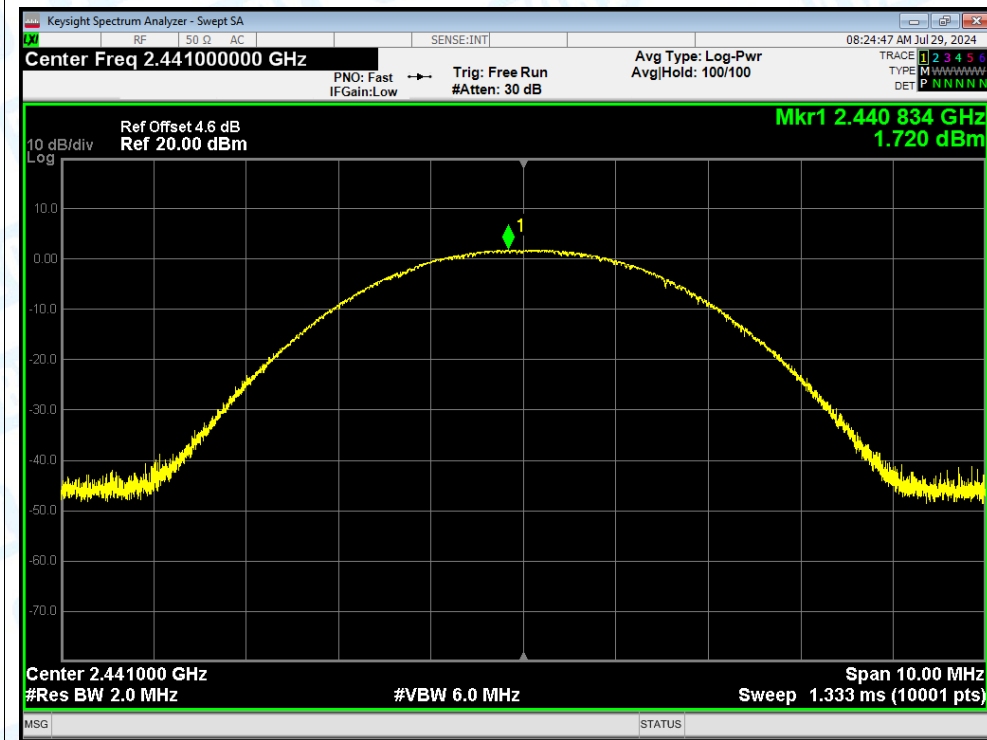
Power NVNT 1-DH1 2480MHz Ant1



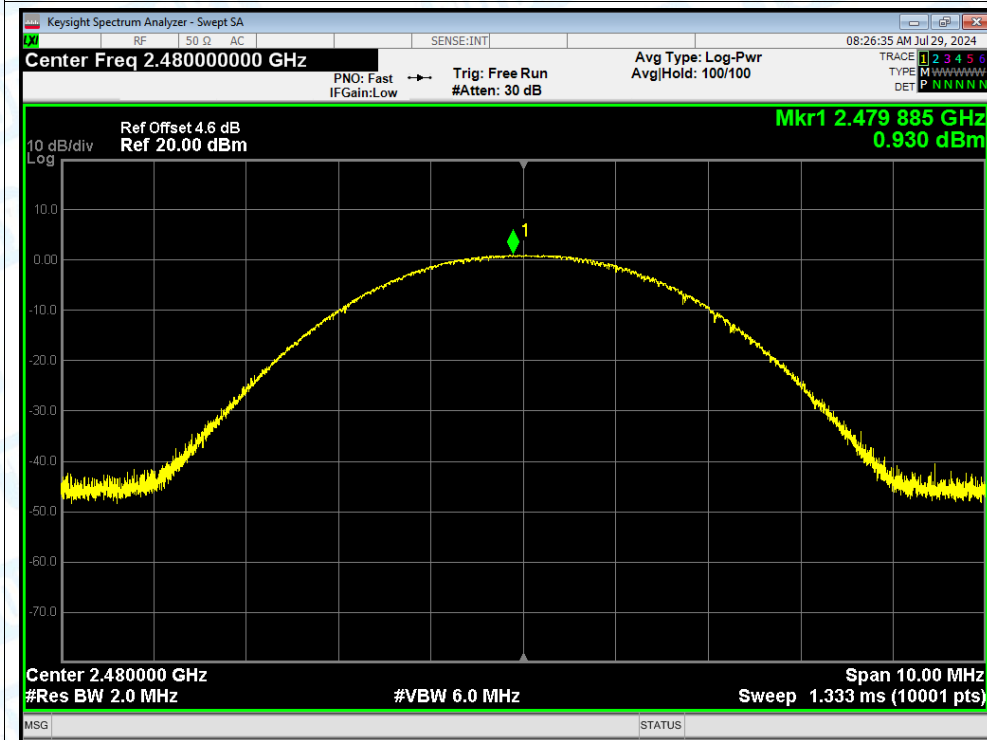
Power NVNT 2-DH1 2402MHz Ant1



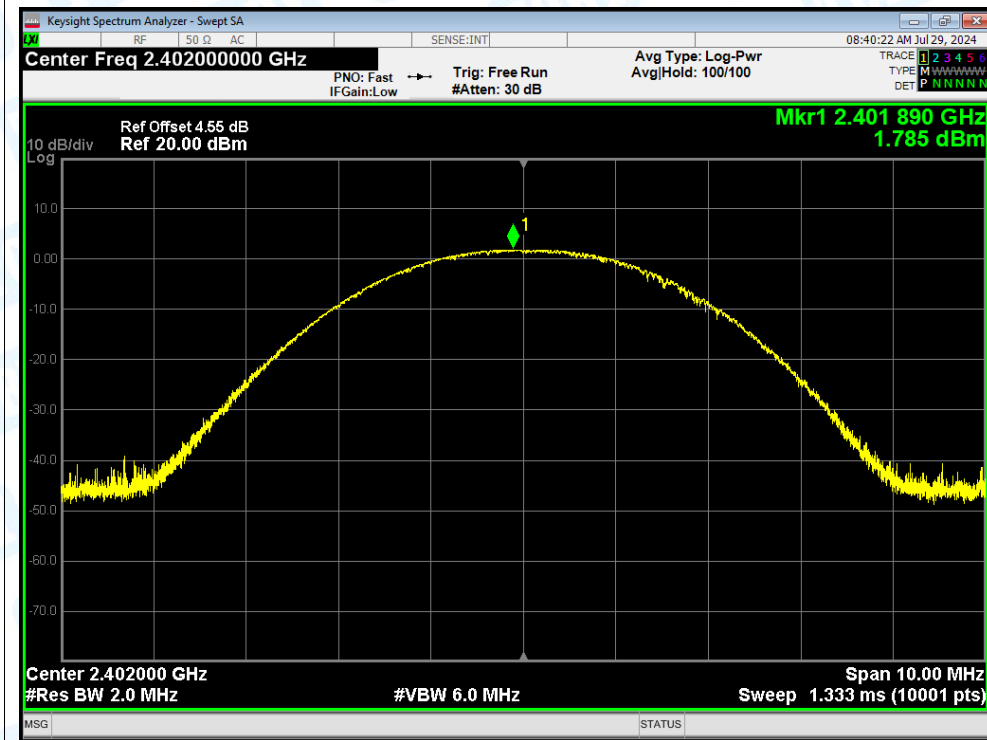
Power NVNT 2-DH1 2441MHz Ant1



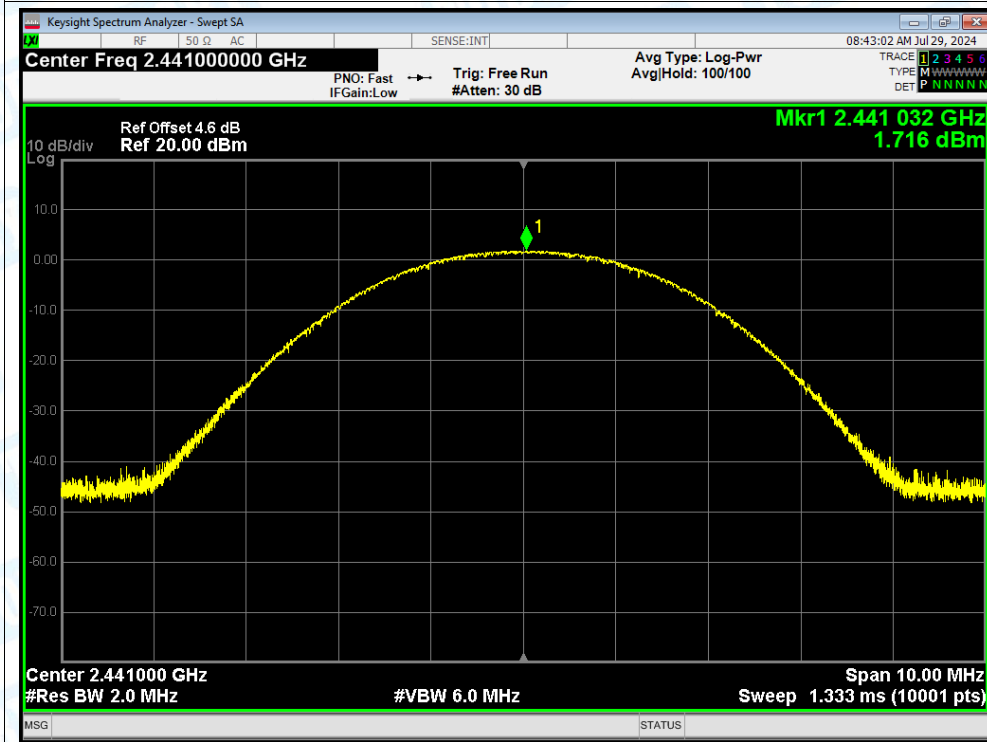
Power NVNT 2-DH1 2480MHz Ant1

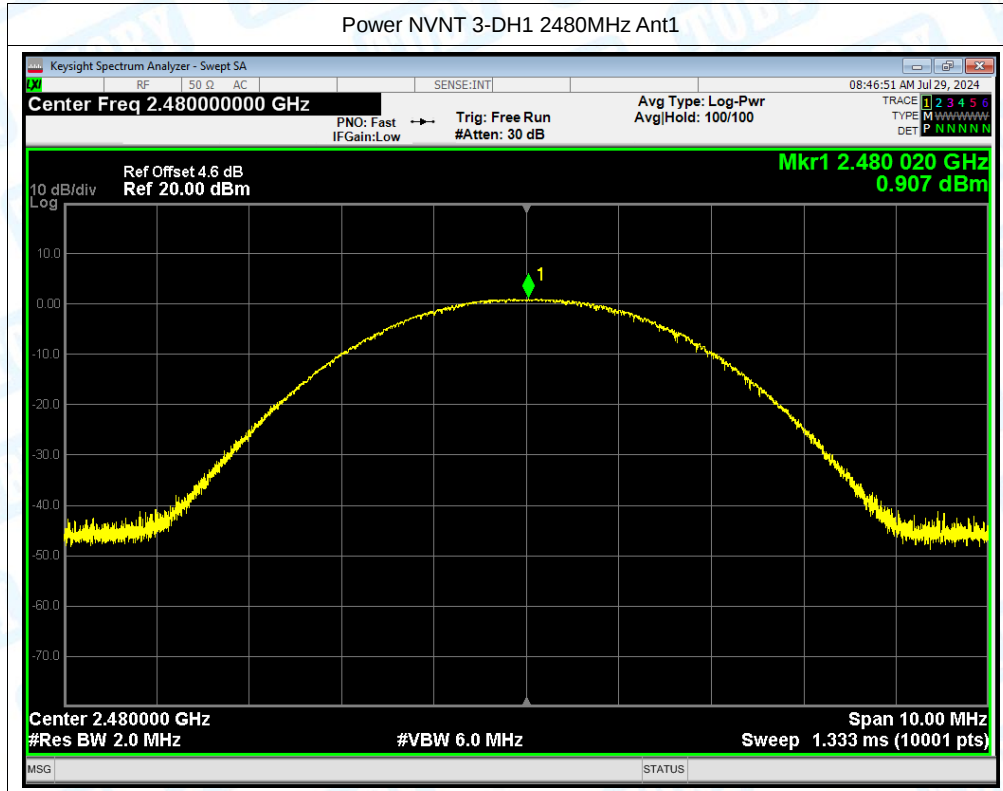


Power NVNT 3-DH1 2402MHz Ant1



Power NVNT 3-DH1 2441MHz Ant1



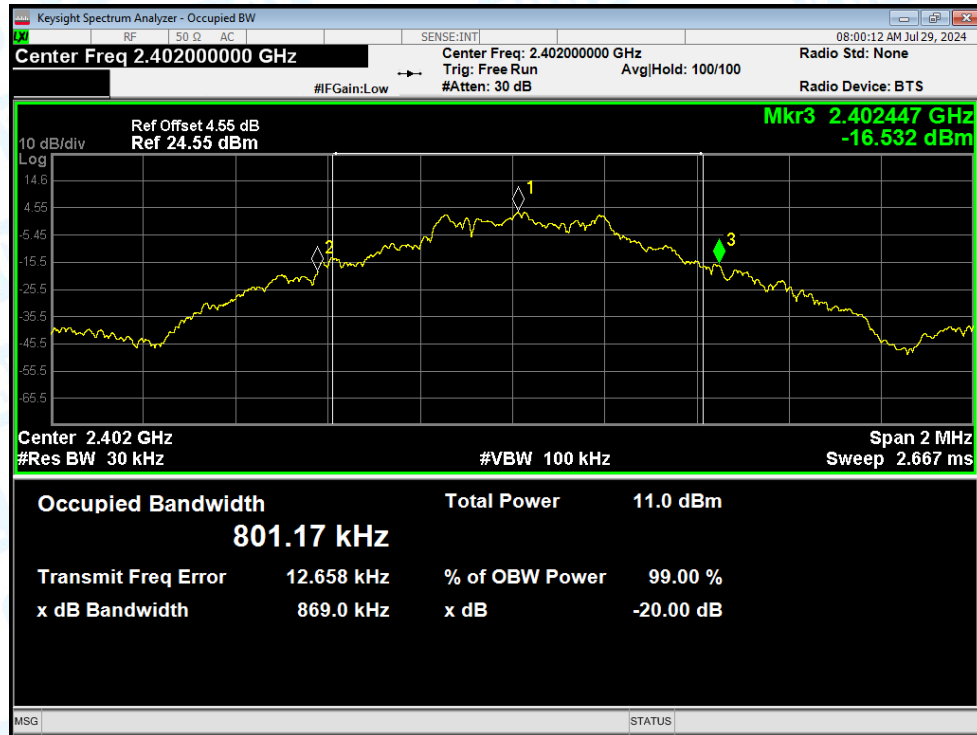


3.-20dB Bandwidth

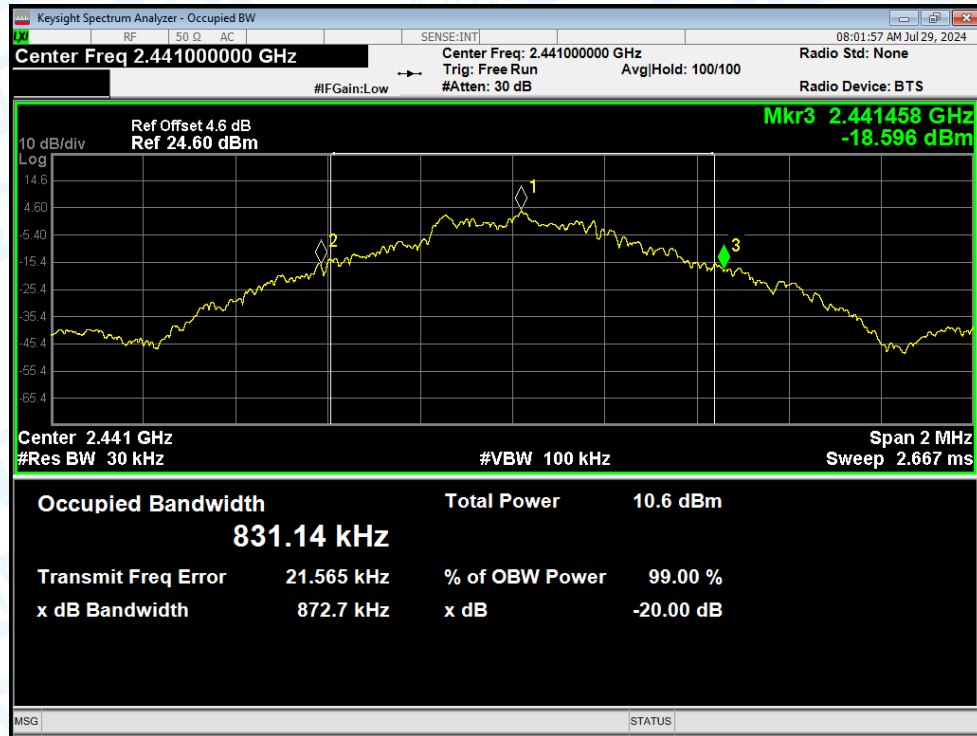
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	0.87	0	Pass
NVNT	1-DH1	2441	Ant1	0.87	0	Pass
NVNT	1-DH1	2480	Ant1	0.87	0	Pass
NVNT	2-DH1	2402	Ant1	1.17	0	Pass
NVNT	2-DH1	2441	Ant1	1.14	0	Pass
NVNT	2-DH1	2480	Ant1	1.21	0	Pass
NVNT	3-DH1	2402	Ant1	1.17	0	Pass
NVNT	3-DH1	2441	Ant1	1.15	0	Pass
NVNT	3-DH1	2480	Ant1	1.17	0	Pass

Test Graphs

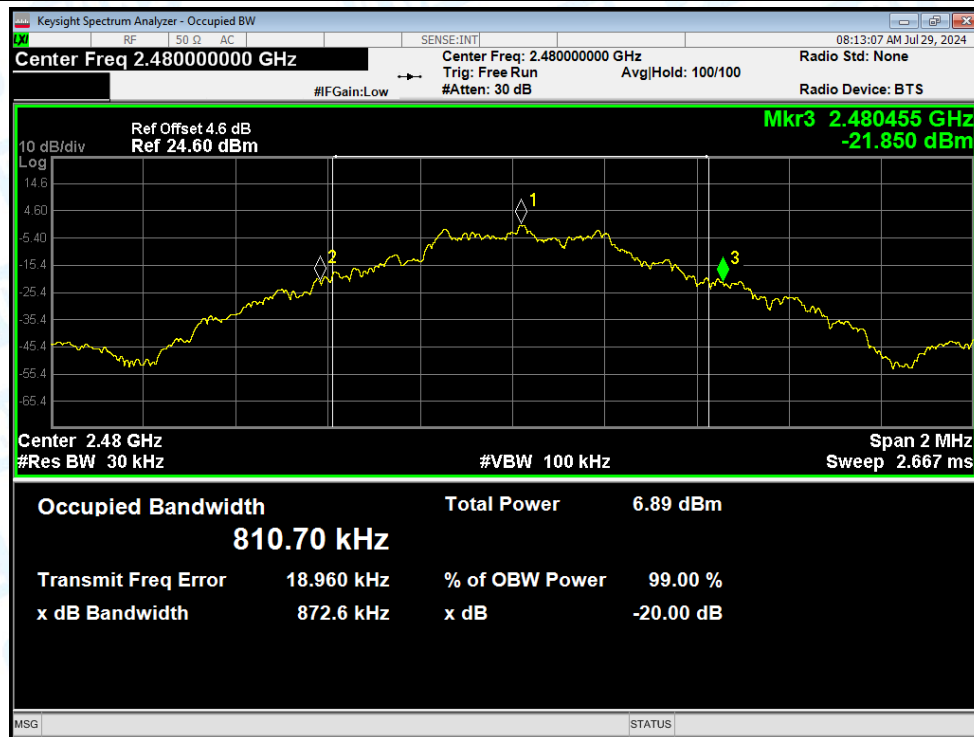
-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



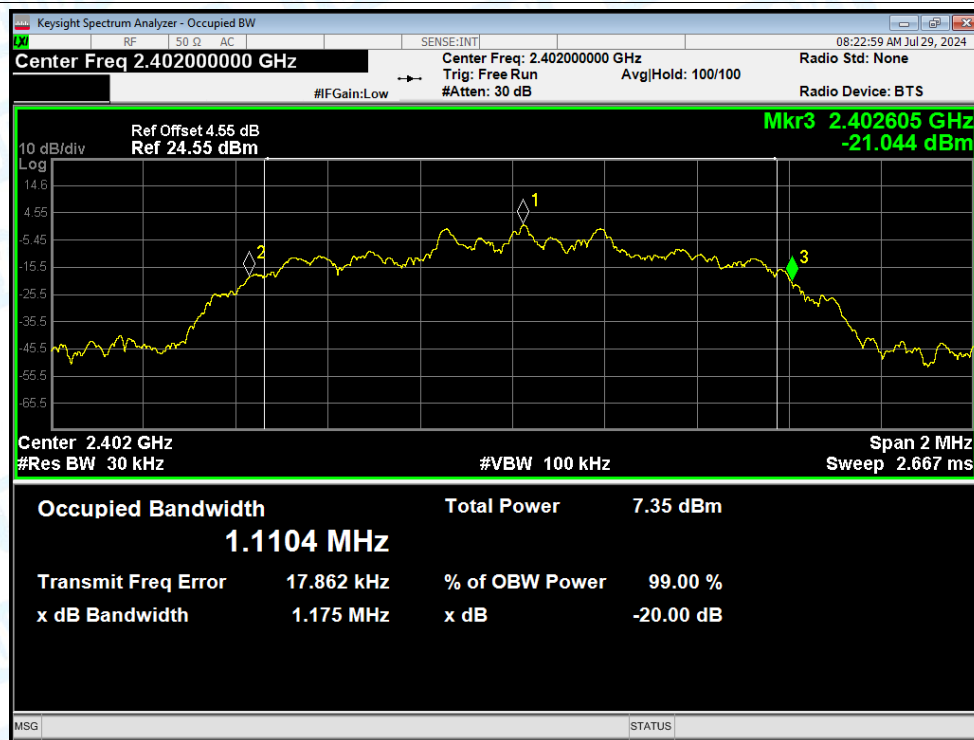
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



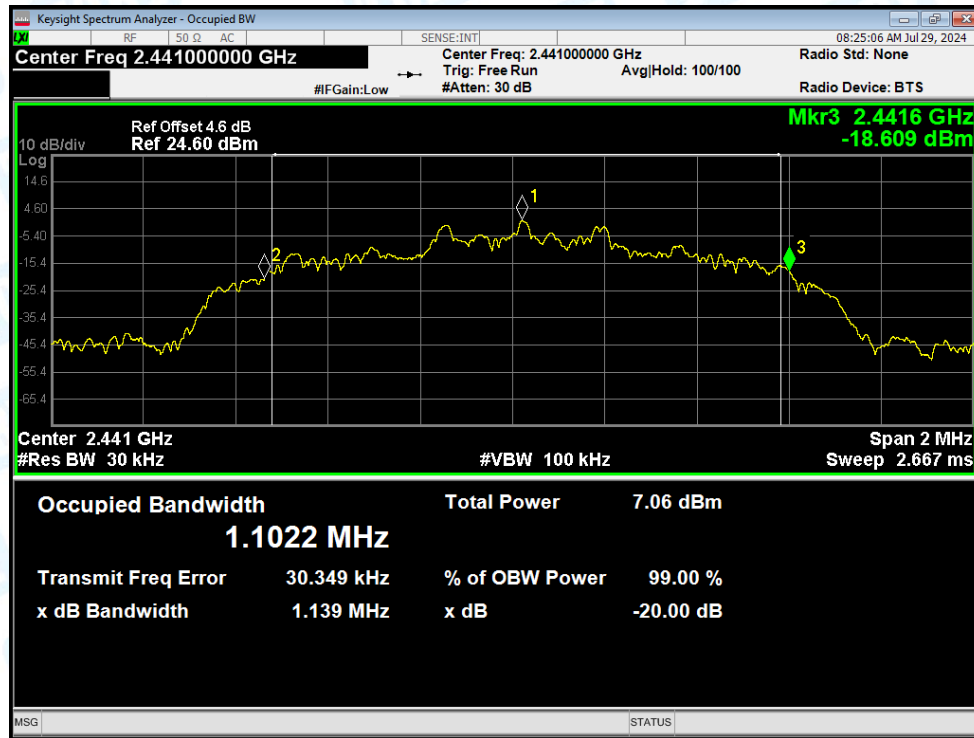
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



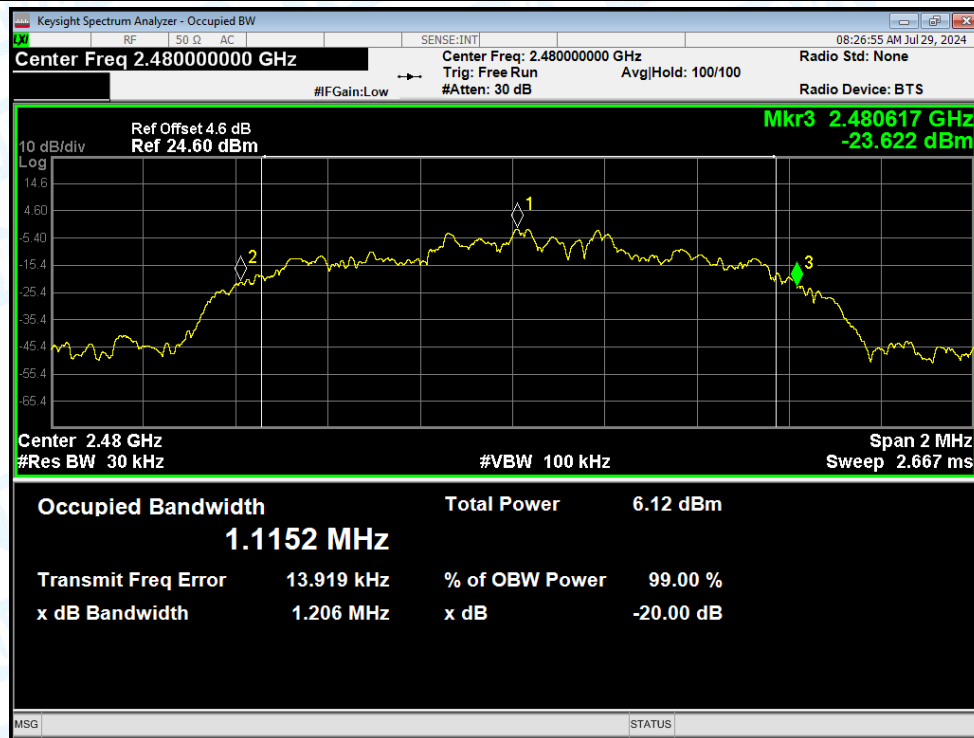
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



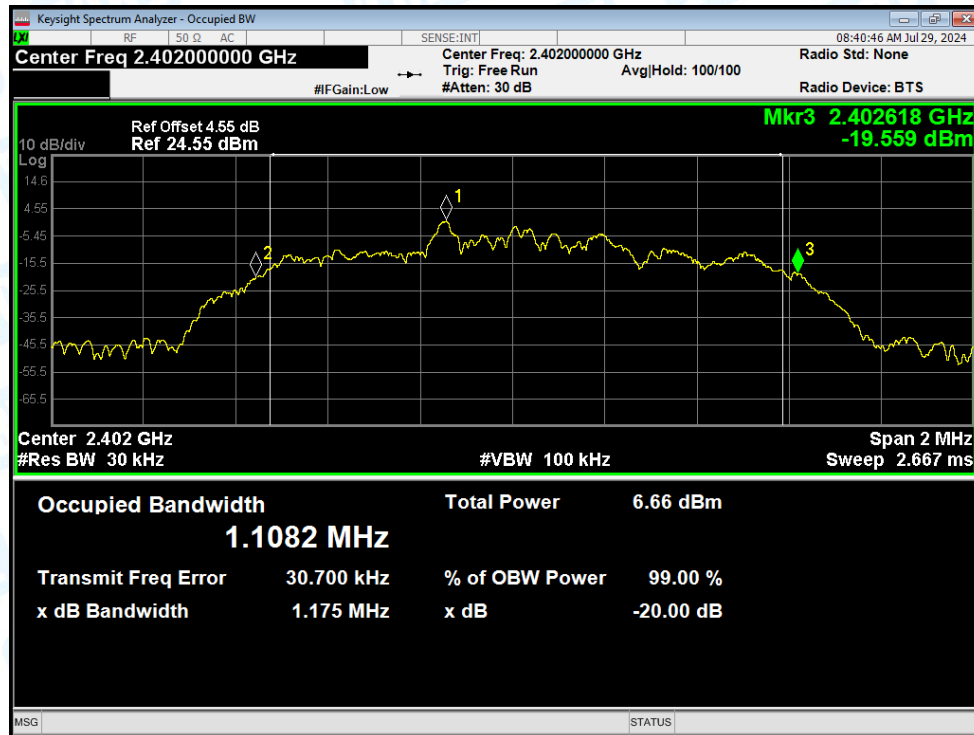
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



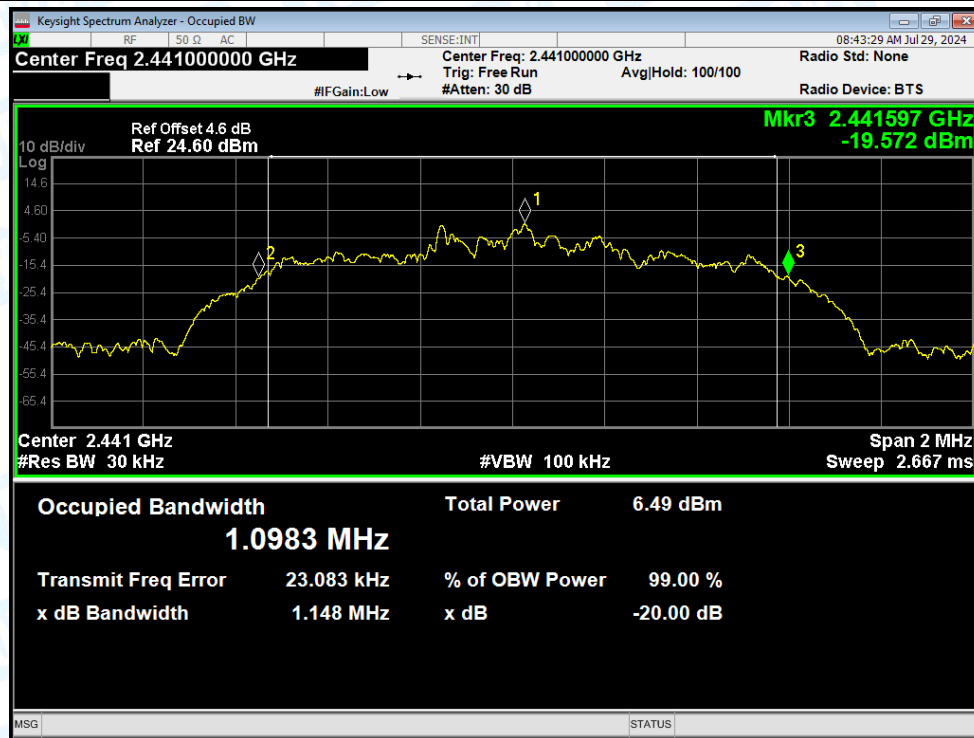
-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

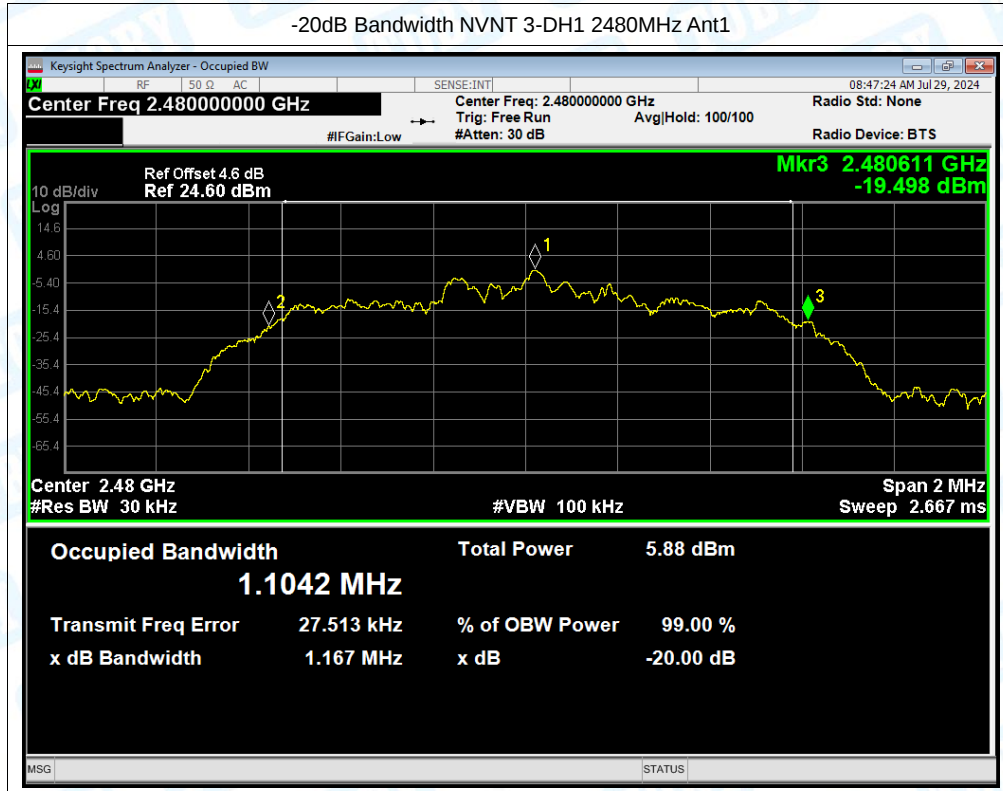


-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



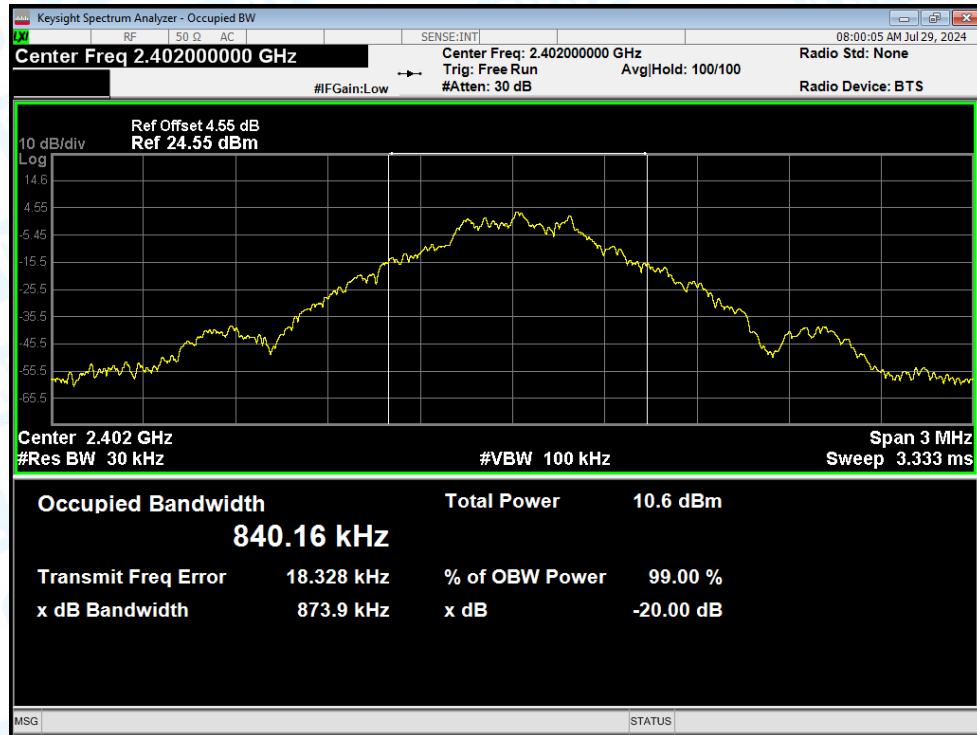


4.Occupied Channel Bandwidth

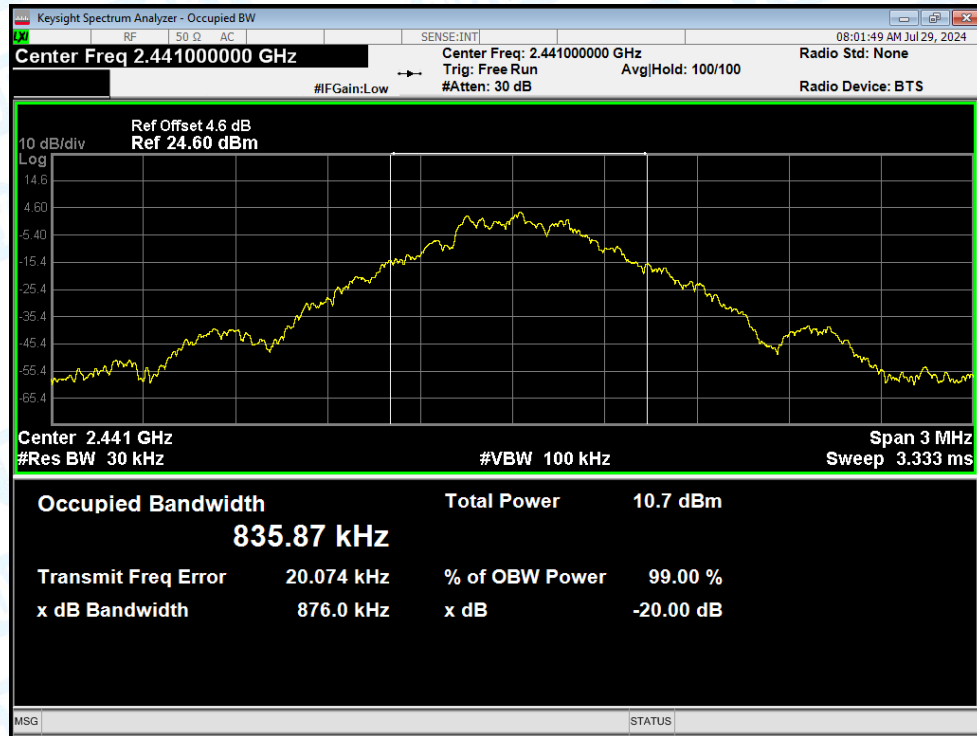
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.84
NVNT	1-DH1	2441	Ant1	0.836
NVNT	1-DH1	2480	Ant1	0.825
NVNT	2-DH1	2402	Ant1	1.11
NVNT	2-DH1	2441	Ant1	1.1
NVNT	2-DH1	2480	Ant1	1.127
NVNT	3-DH1	2402	Ant1	1.105
NVNT	3-DH1	2441	Ant1	1.101
NVNT	3-DH1	2480	Ant1	1.113

Test Graphs

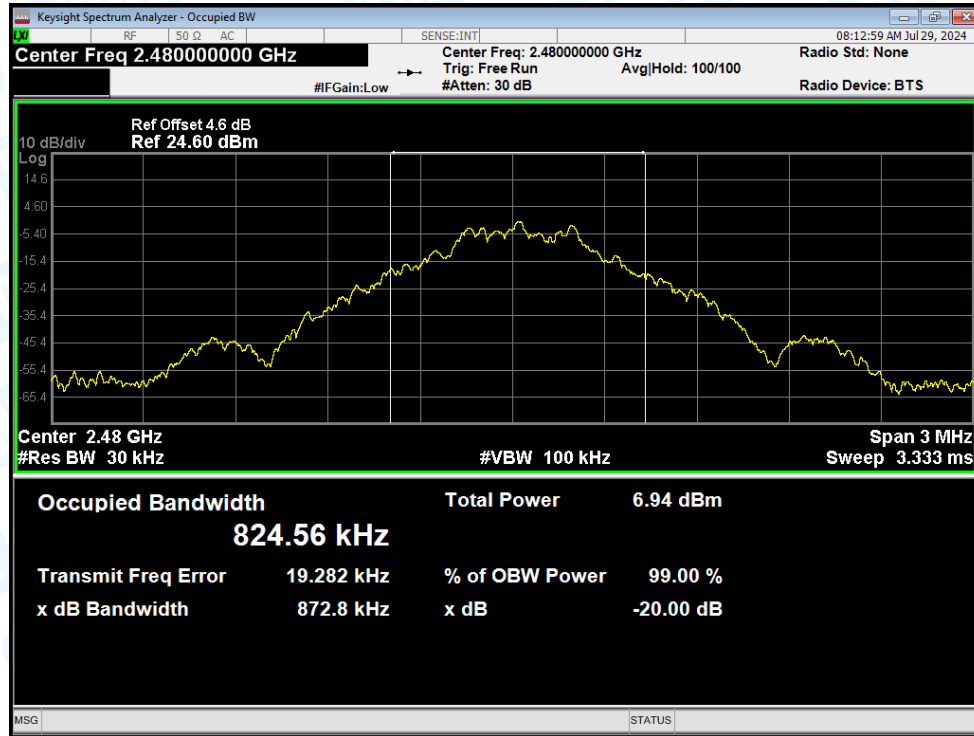
OBW NVNT 1-DH1 2402MHz Ant1



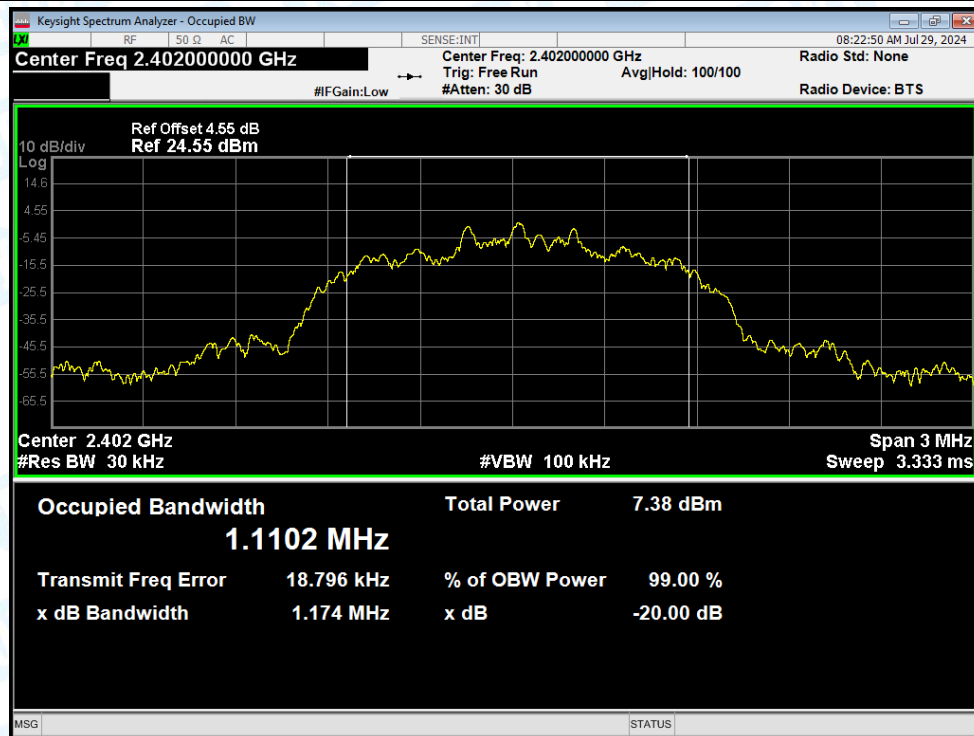
OBW NVNT 1-DH1 2441MHz Ant1



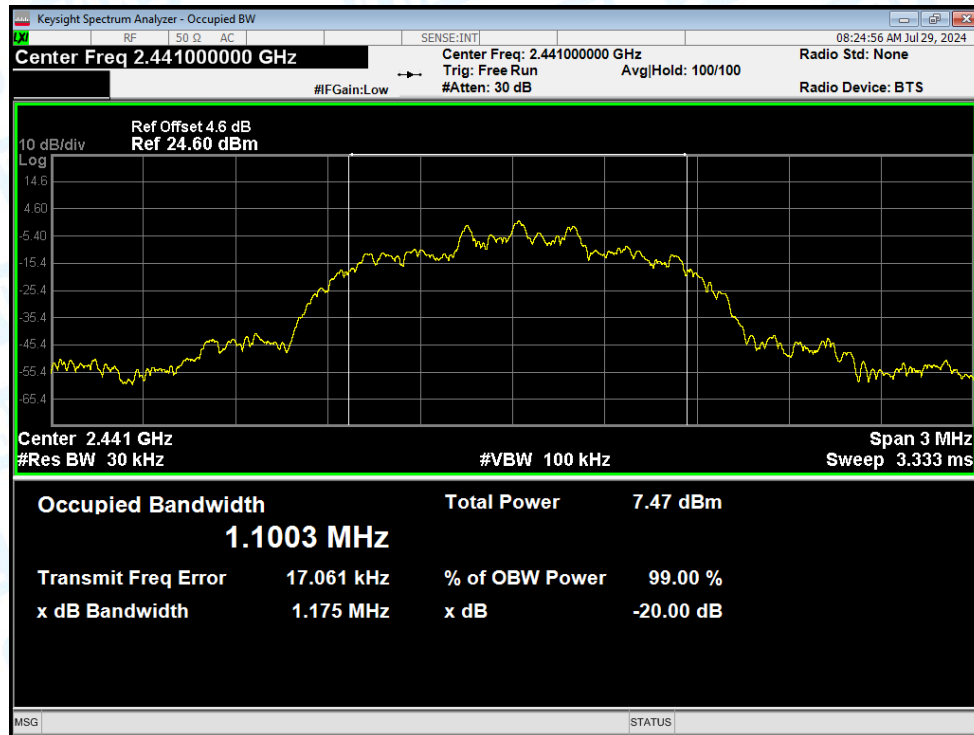
OBW NVNT 1-DH1 2480MHz Ant1



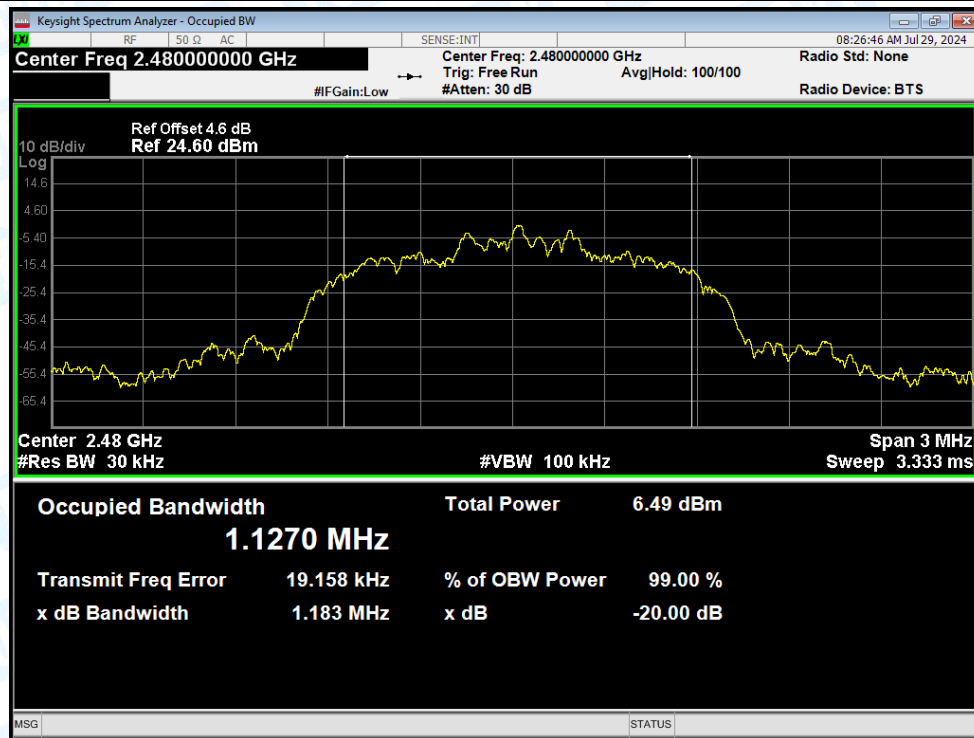
OBW NVNT 2-DH1 2402MHz Ant1



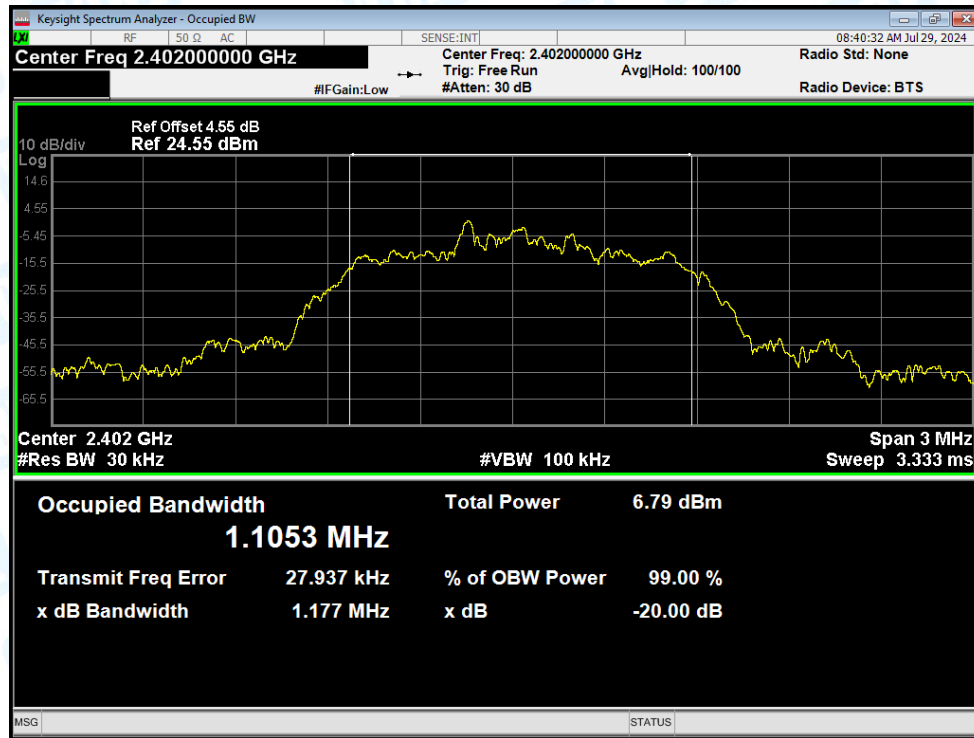
OBW NVNT 2-DH1 2441MHz Ant1



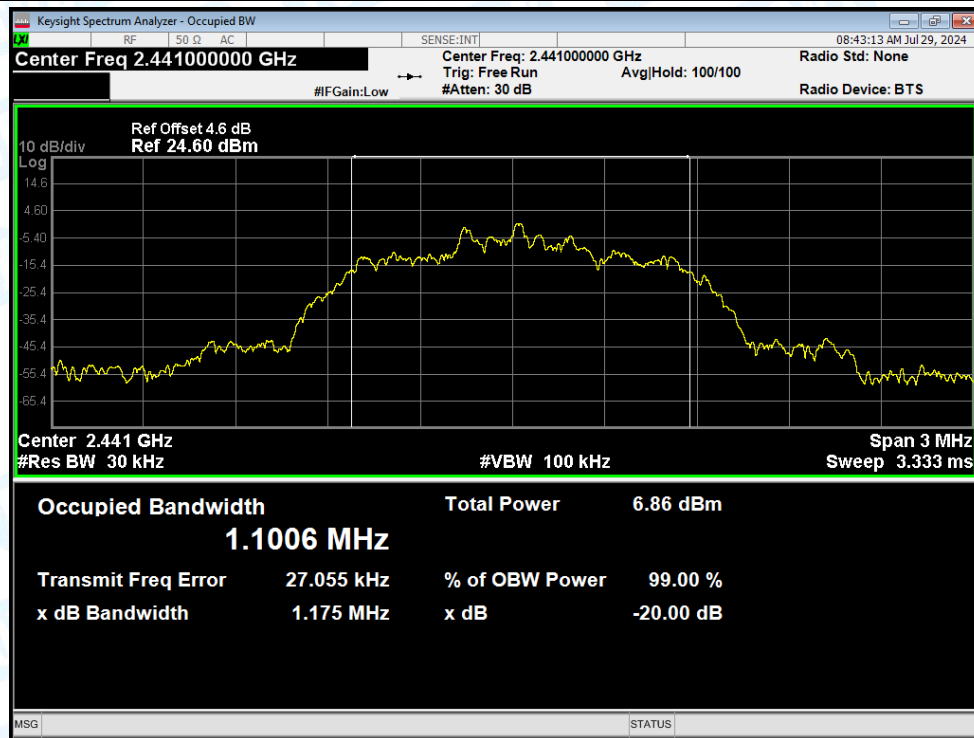
OBW NVNT 2-DH1 2480MHz Ant1

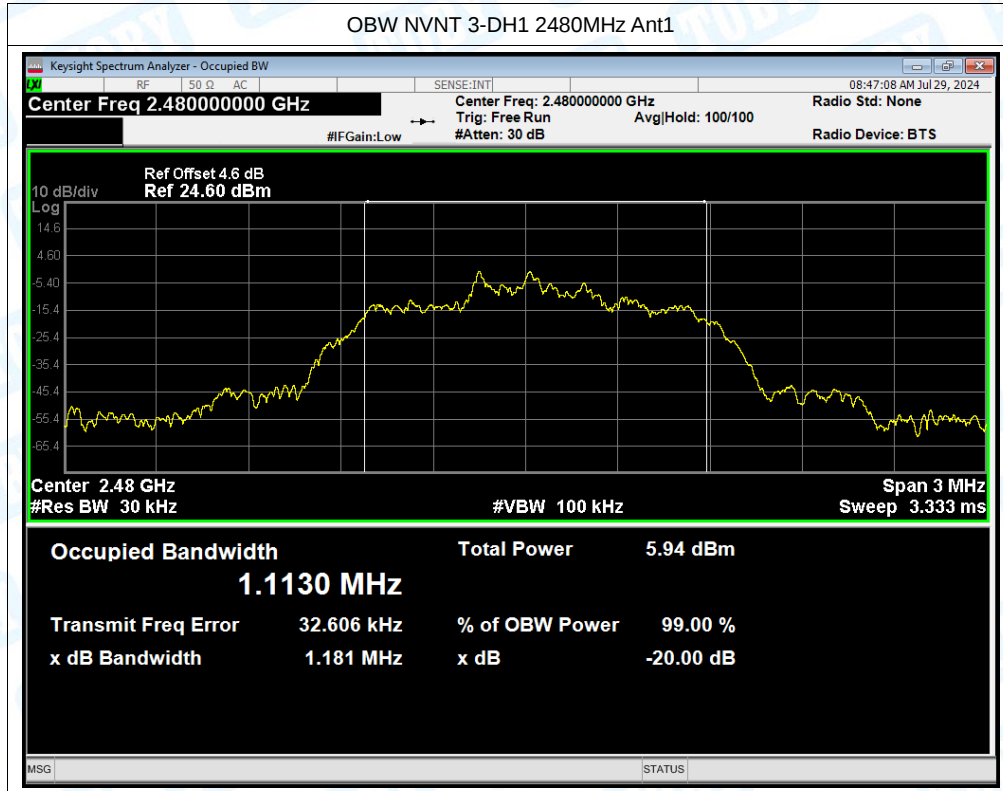


OBW NVNT 3-DH1 2402MHz Ant1



OBW NVNT 3-DH1 2441MHz Ant1



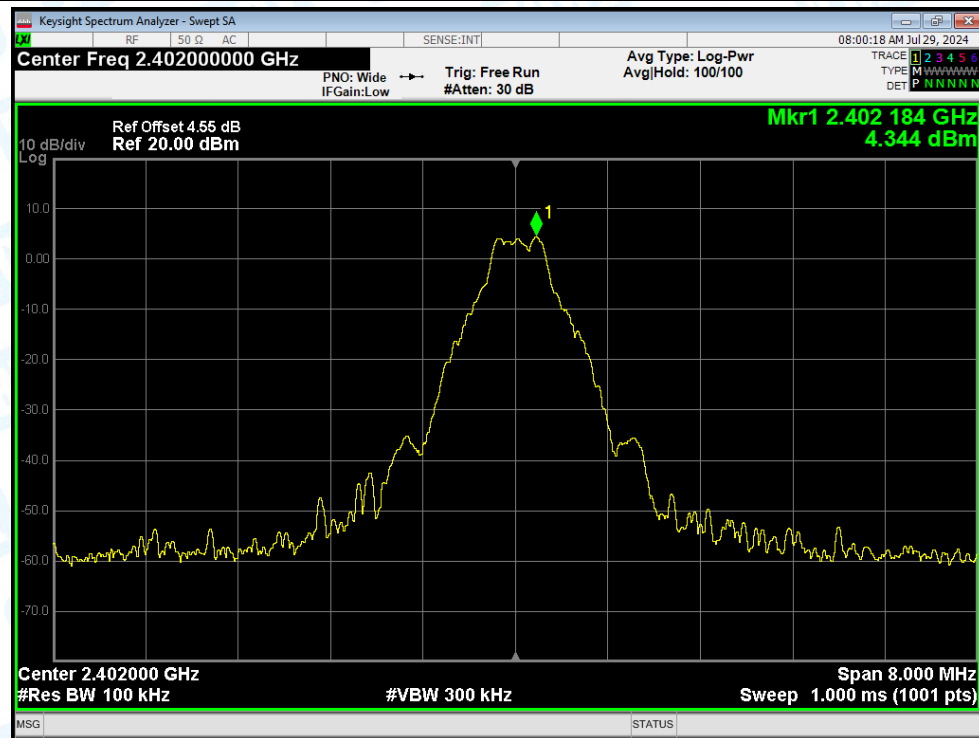


5.Band Edge

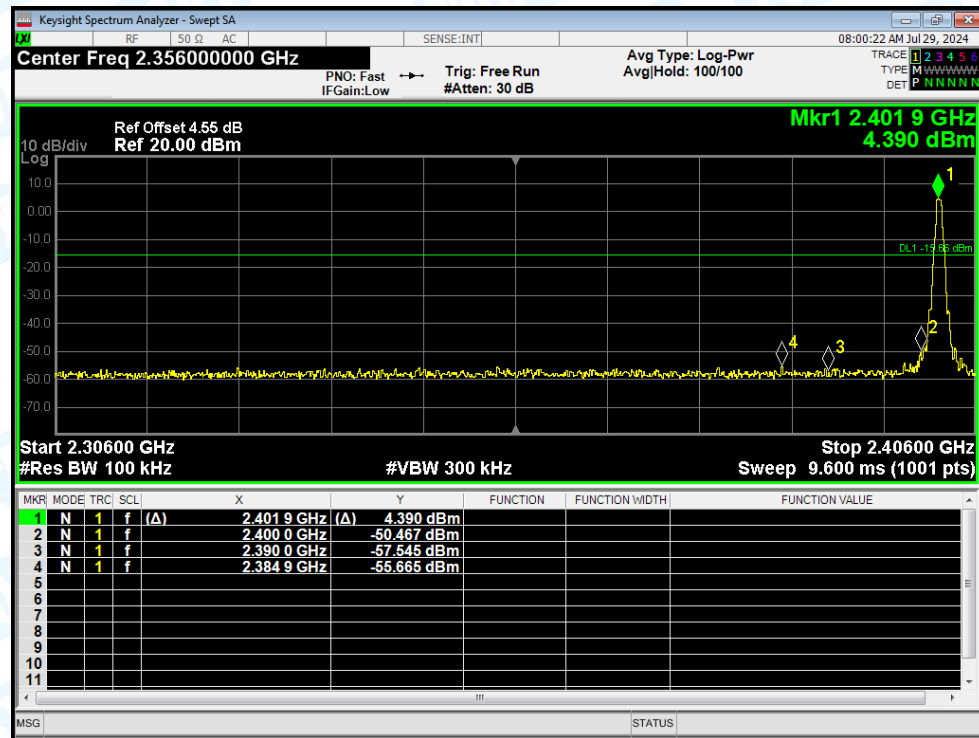
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-60.01	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-55.68	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-56.51	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-54.27	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-56.39	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-55.18	-20	Pass

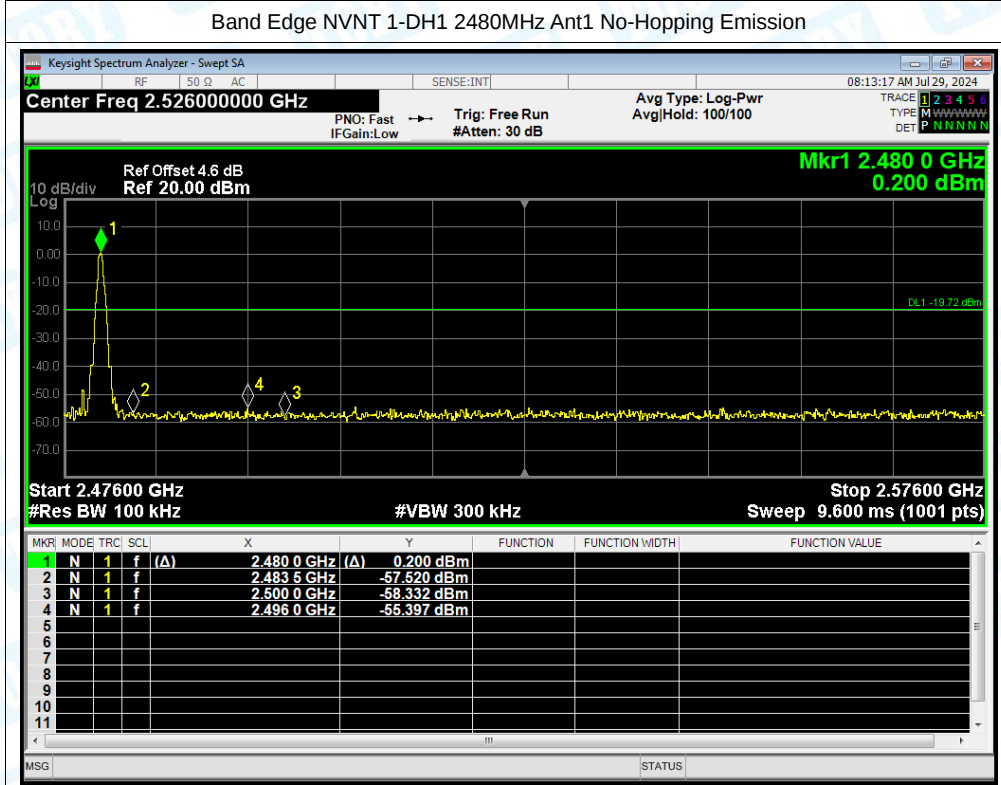
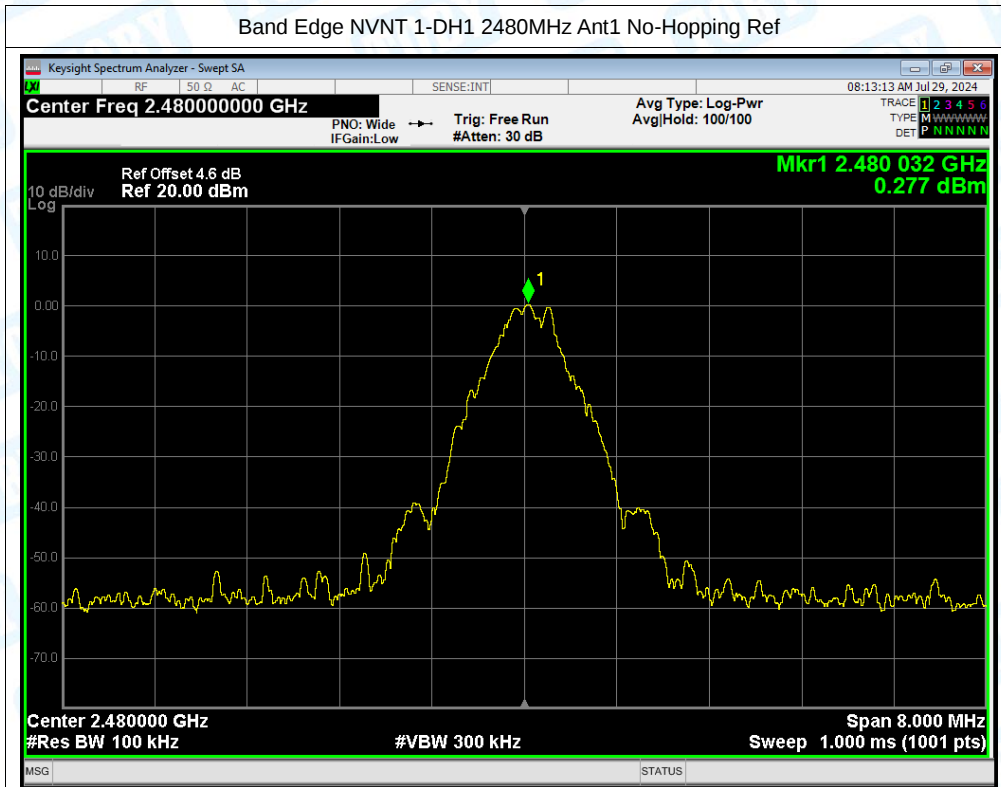
Test Graphs

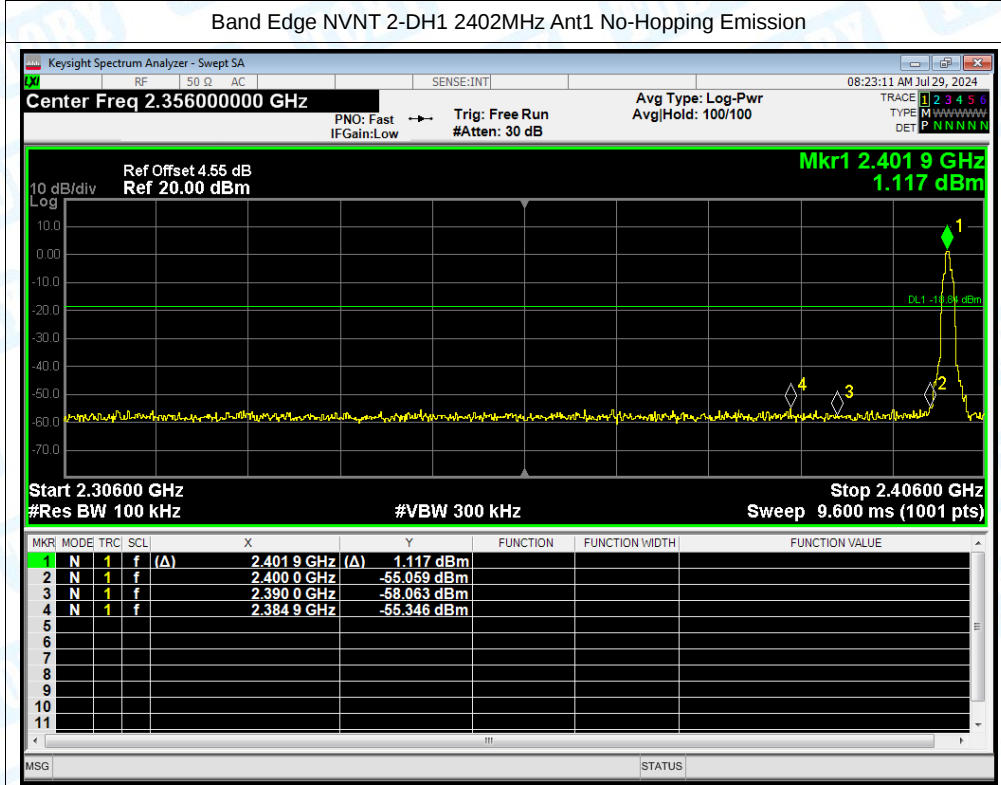
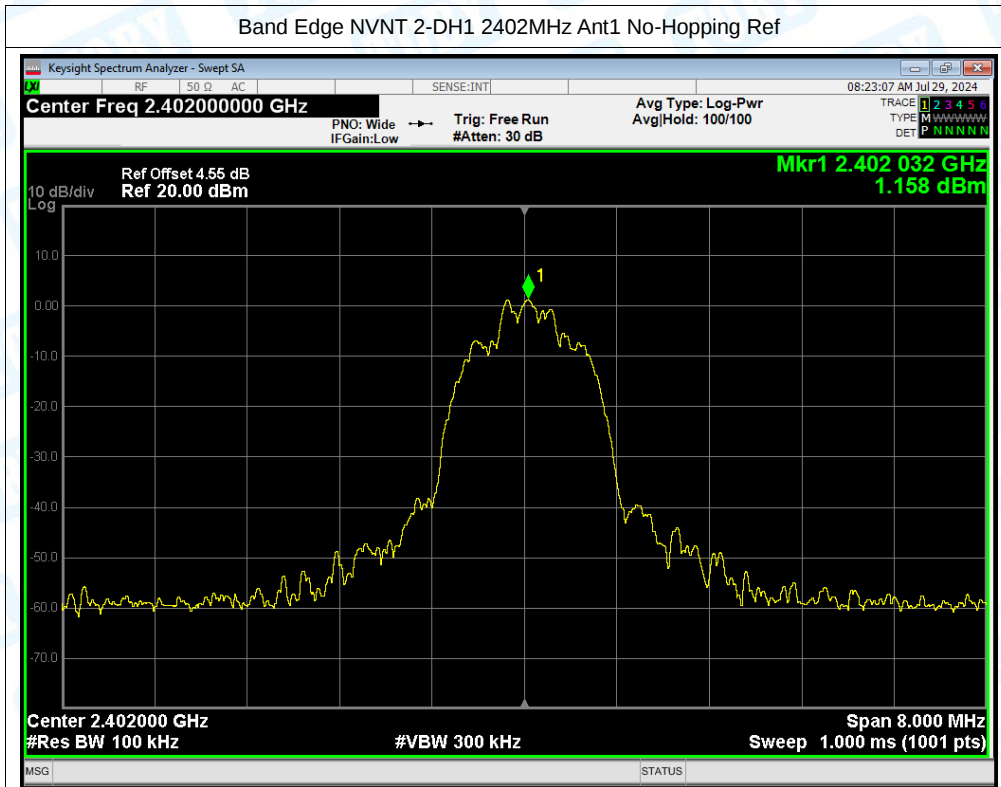
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref



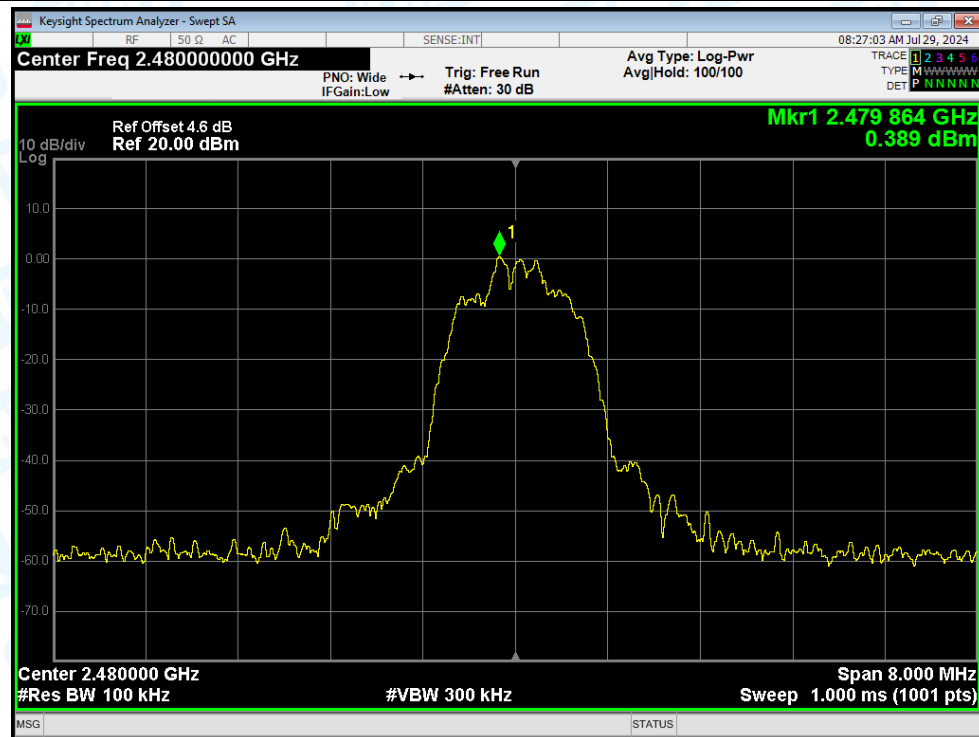
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission



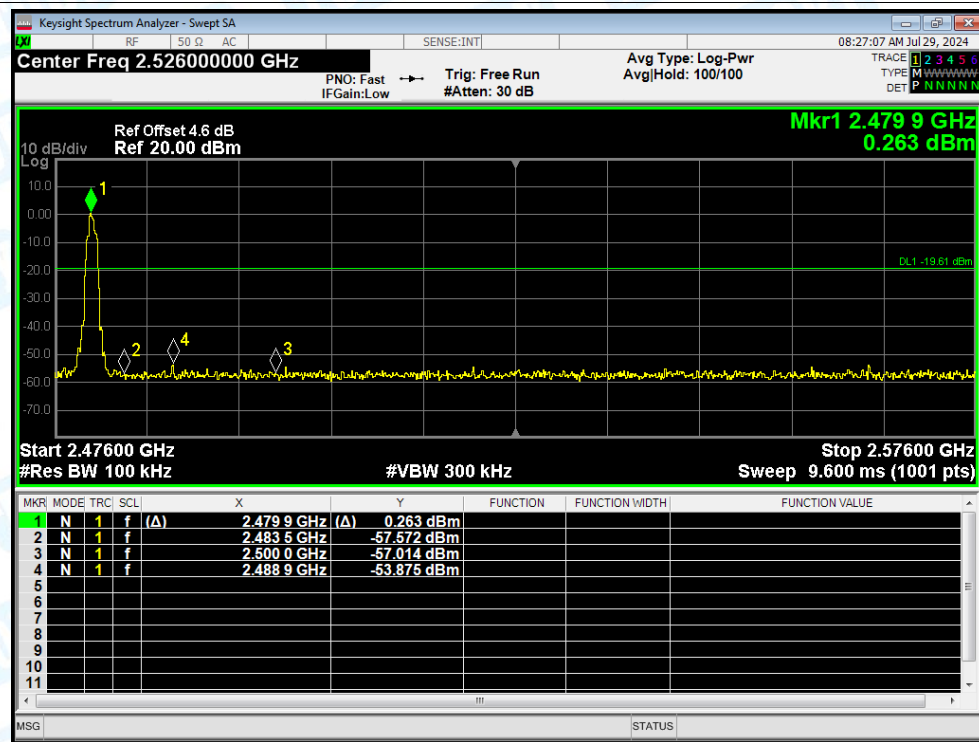




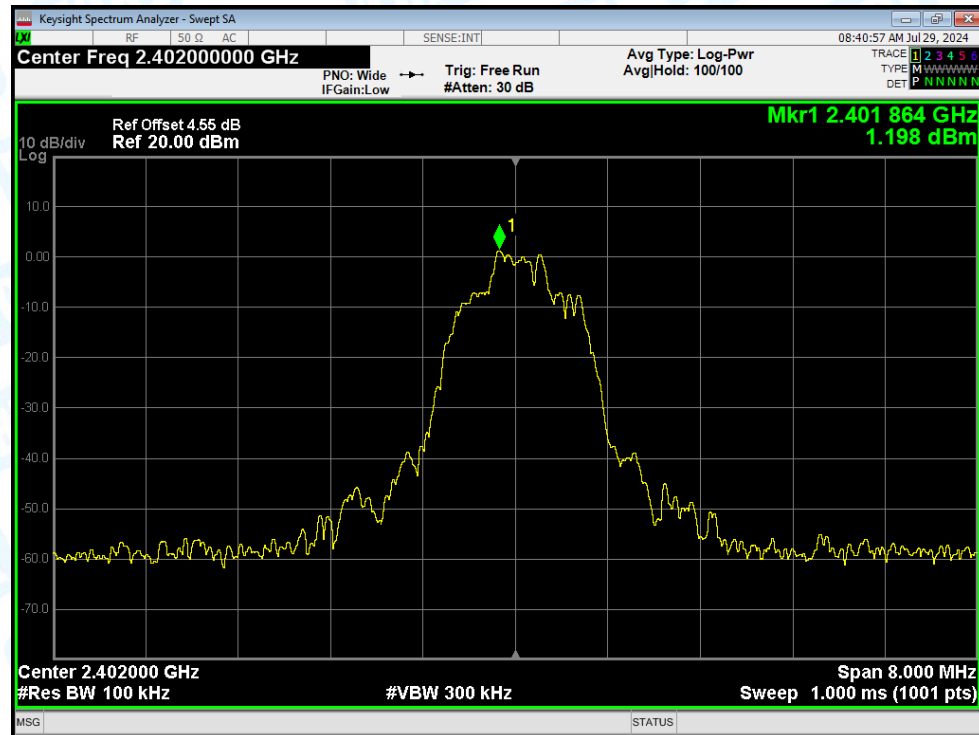
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Ref



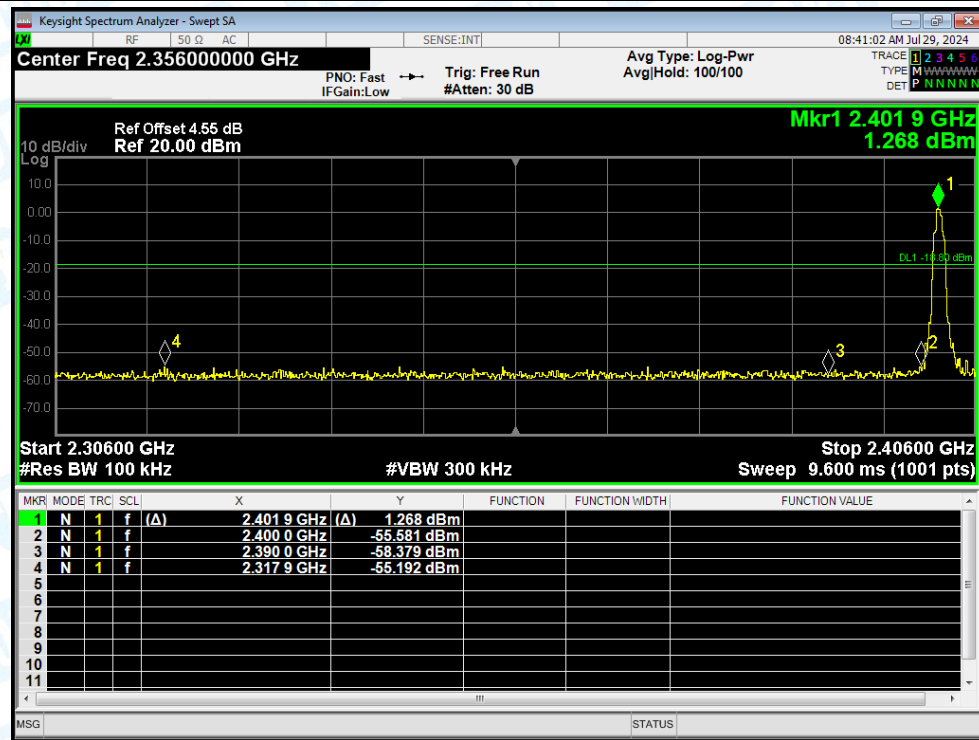
Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Emission

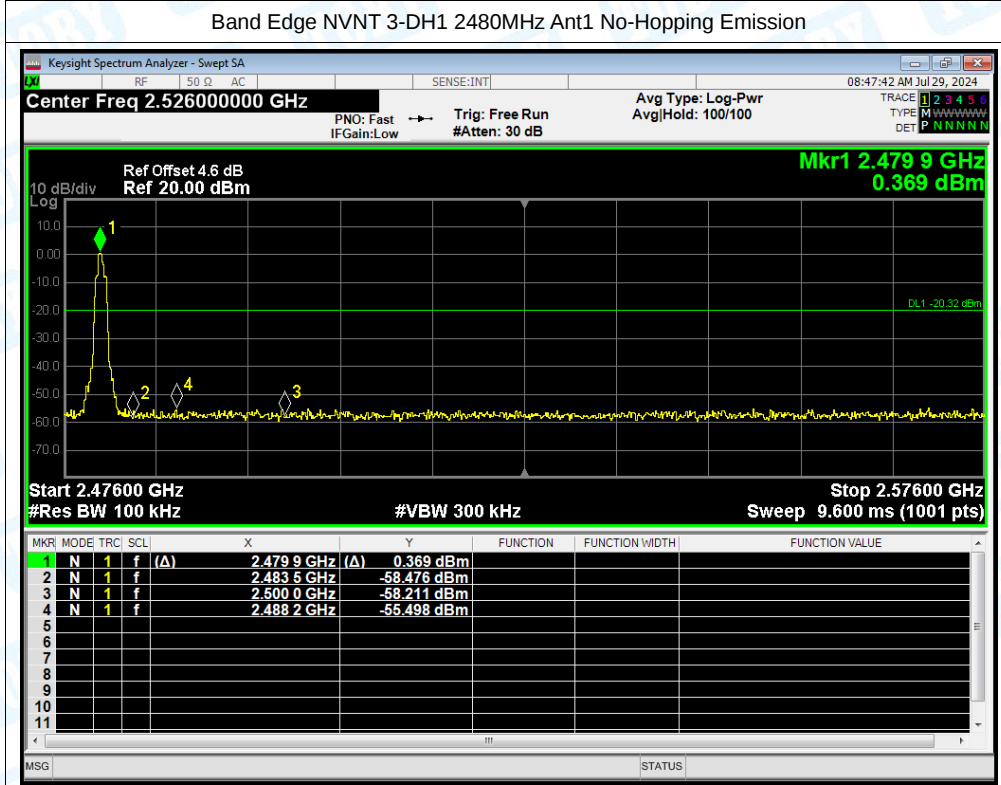
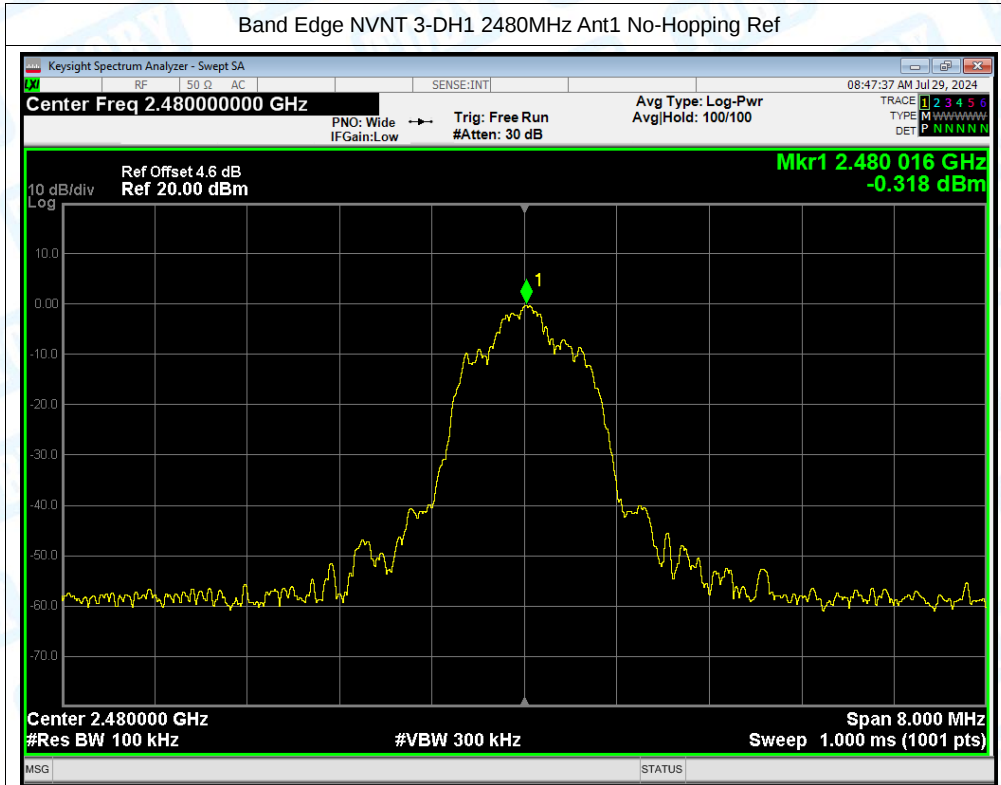


Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Ref



Band Edge NVNT 3-DH1 2402MHz Ant1 No-Hopping Emission



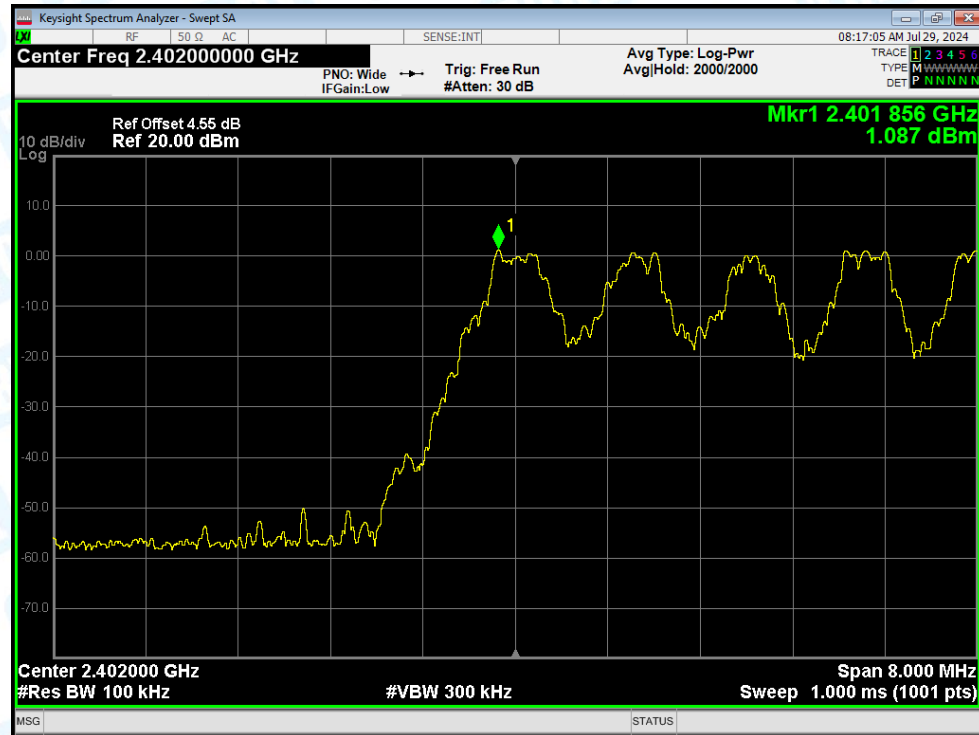


6. Band Edge(Hopping)

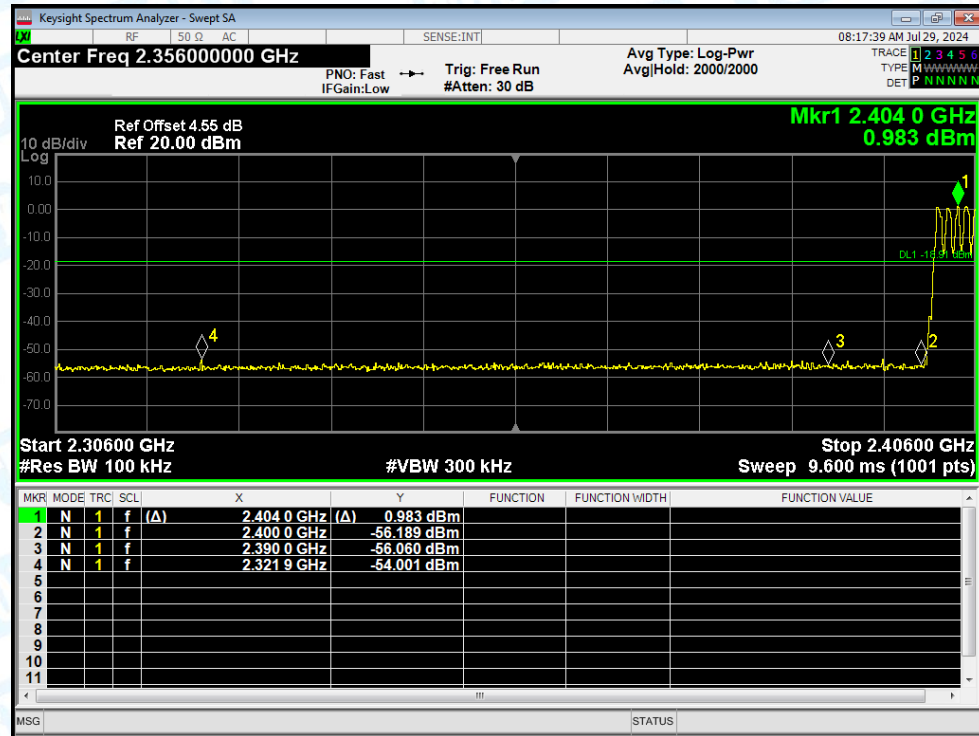
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-55.09	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-54.62	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-54.98	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-53.87	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-55.23	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-54.93	-20	Pass

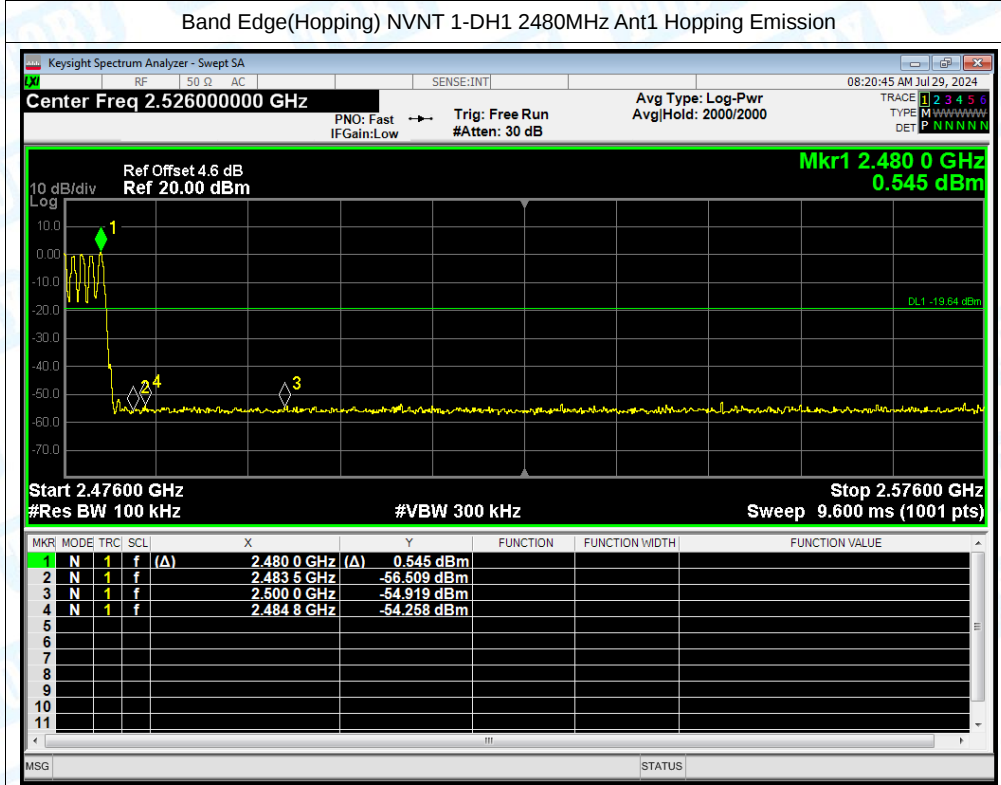
Test Graphs

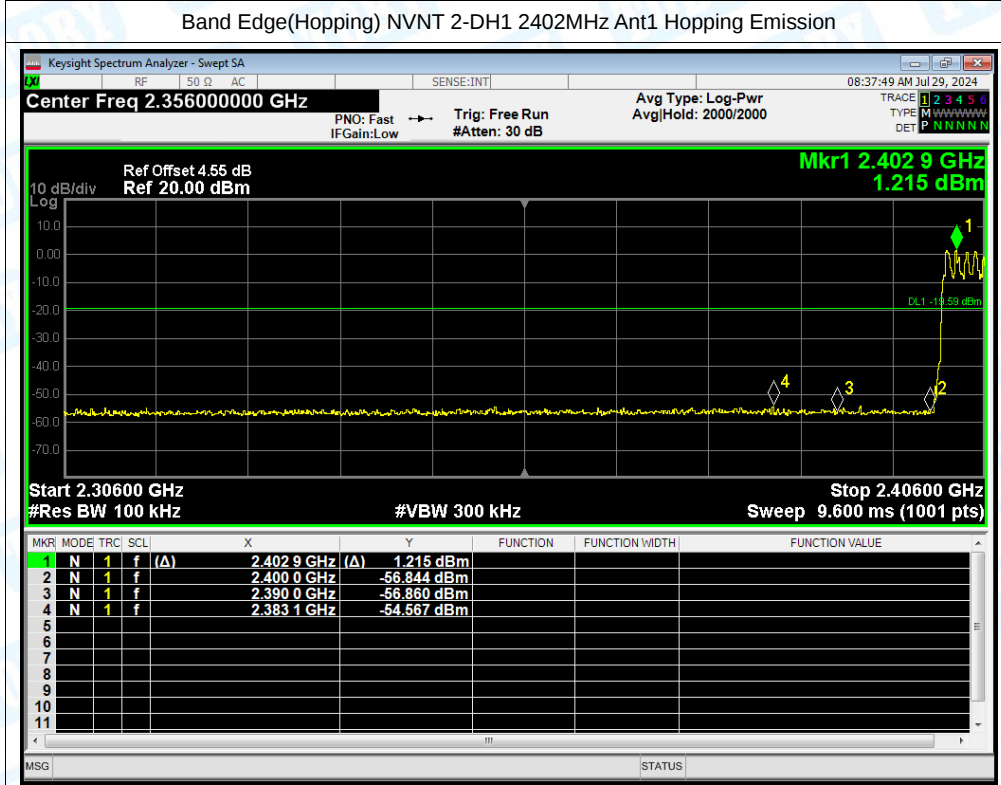
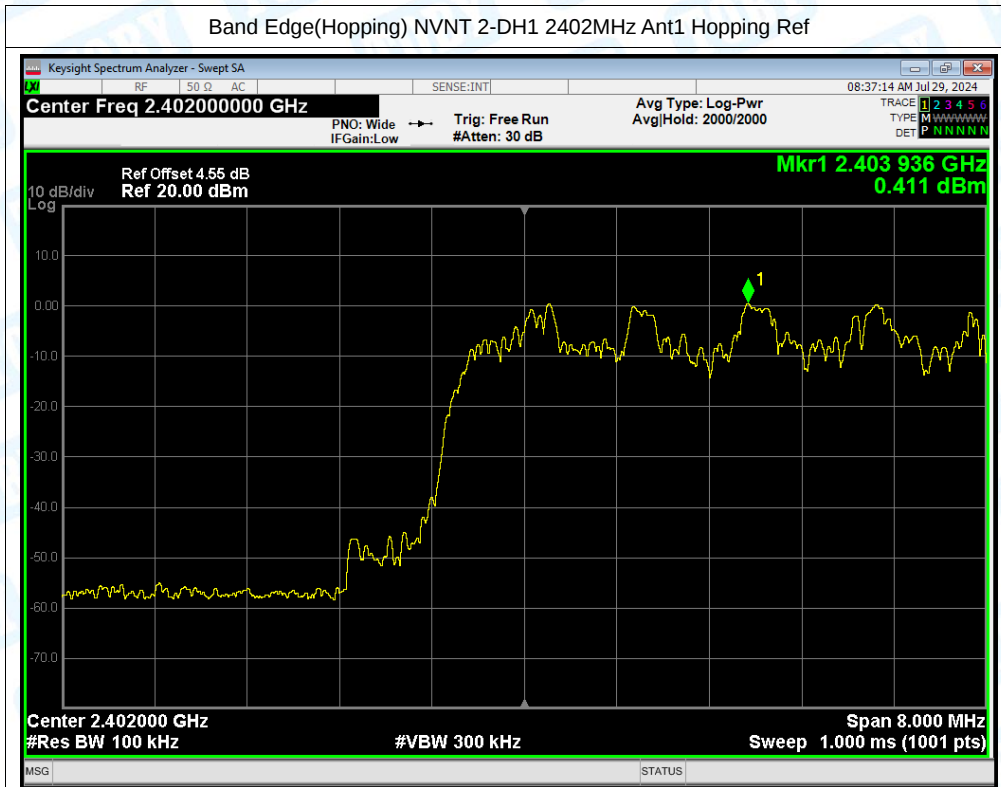
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Ref

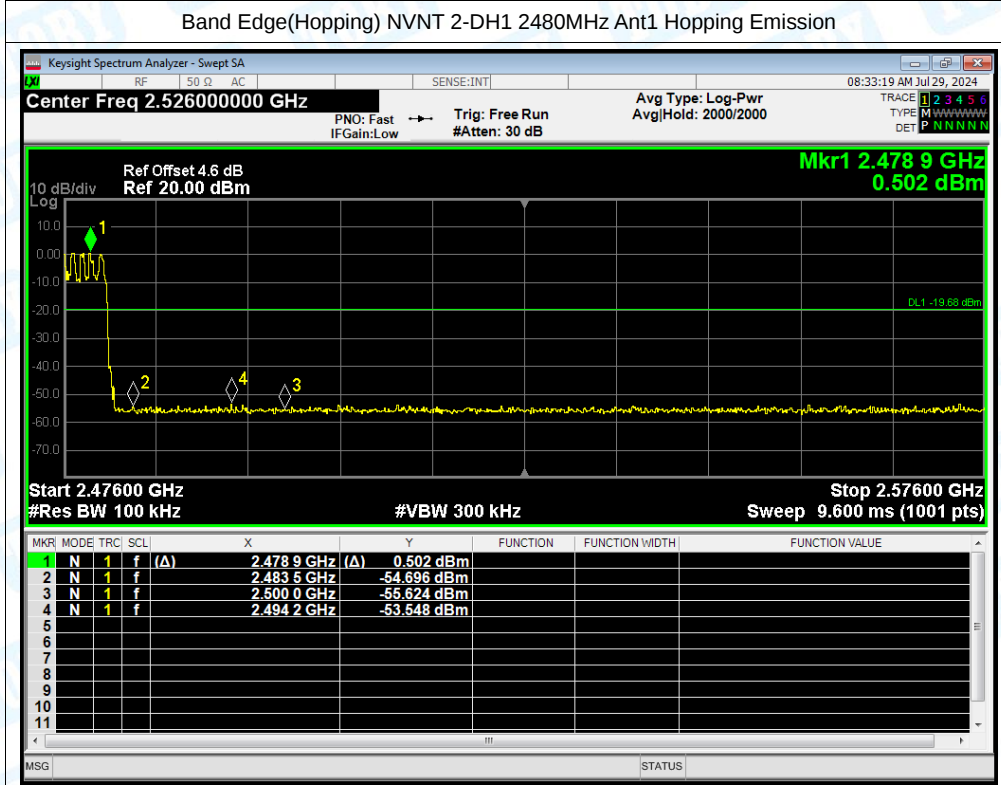


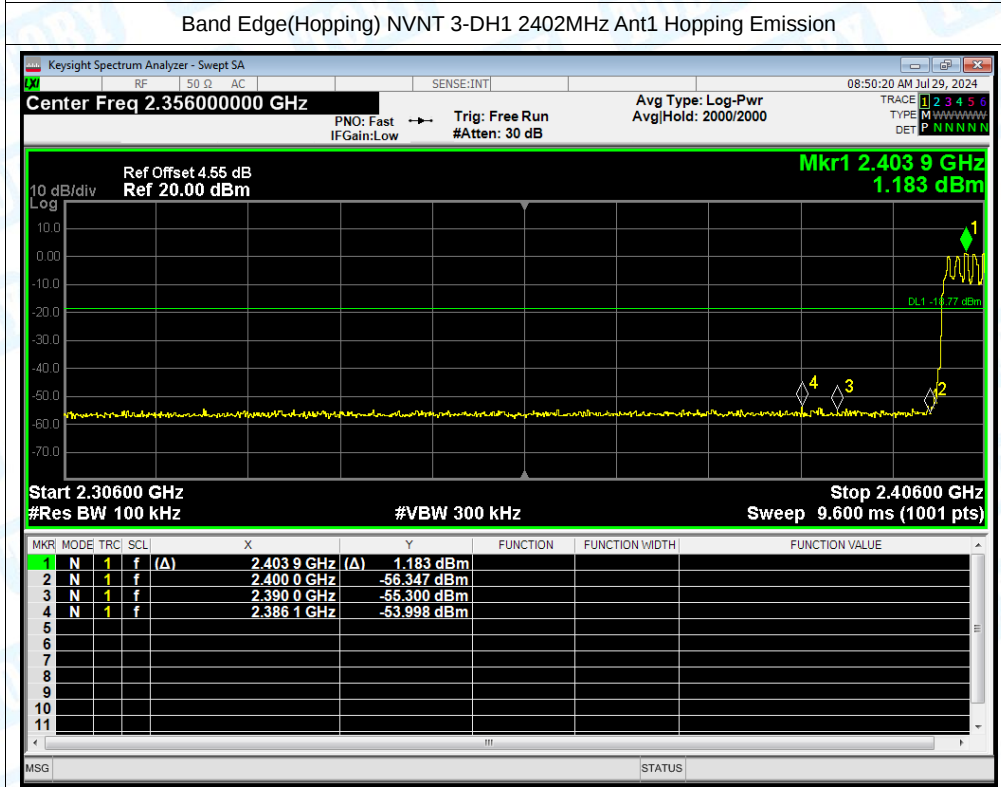
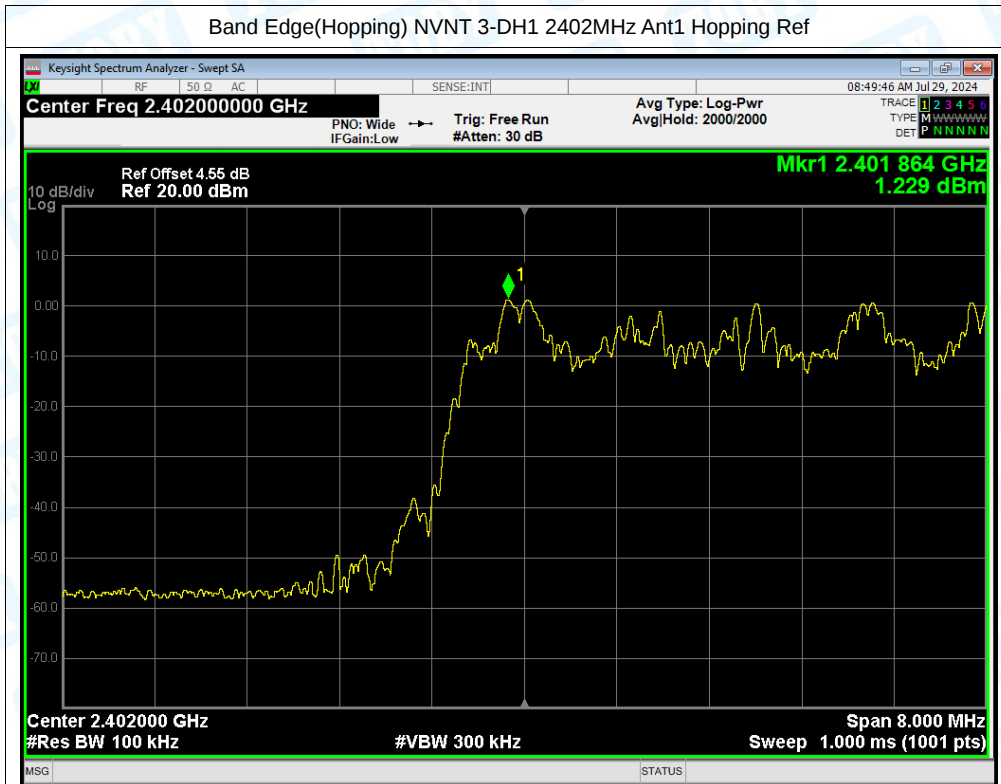
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission

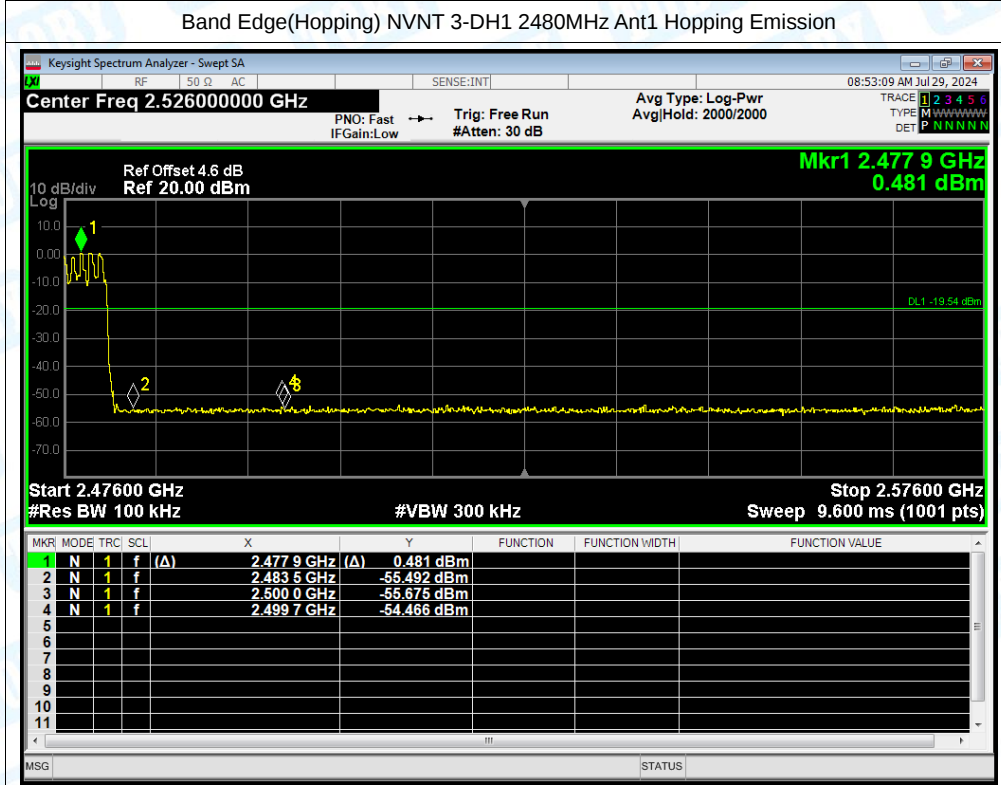
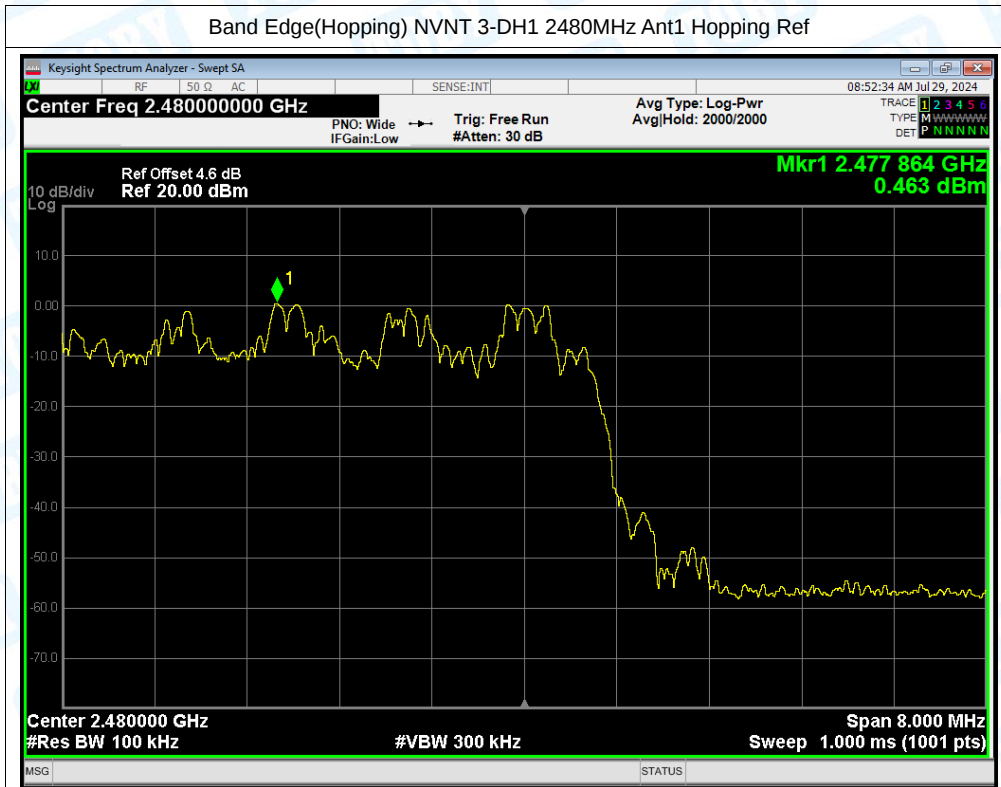












7. Conducted RF Spurious Emission

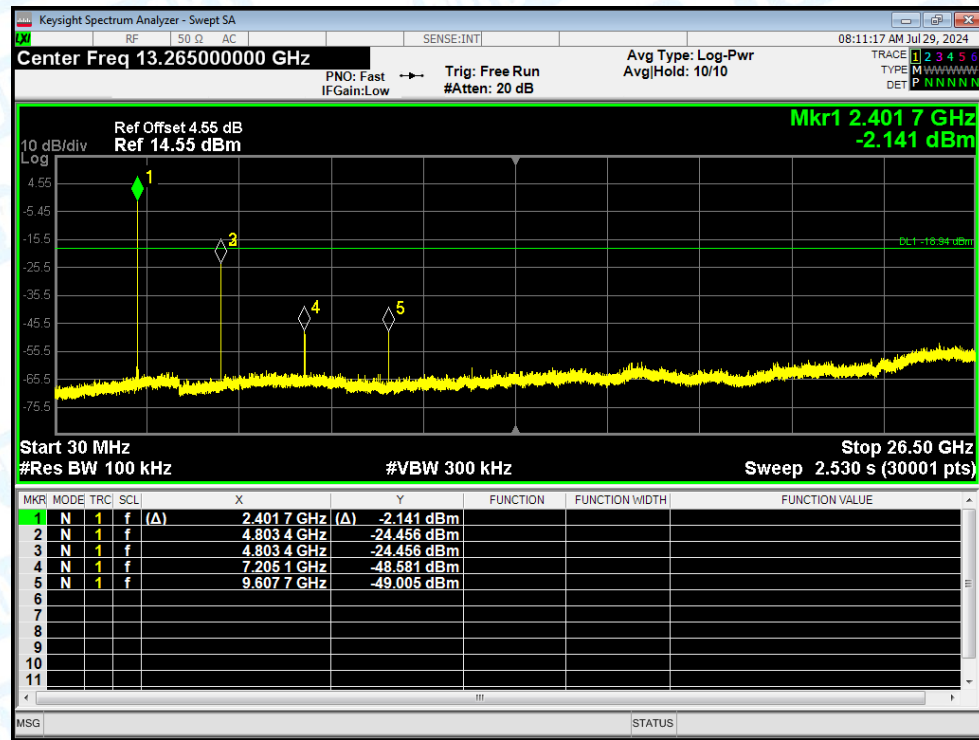
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-25.52	-20	Pass
NVNT	1-DH1	2441	Ant1	-26.96	-20	Pass
NVNT	1-DH1	2480	Ant1	-25.9	-20	Pass
NVNT	2-DH1	2402	Ant1	-31.08	-20	Pass
NVNT	2-DH1	2441	Ant1	-24.1	-20	Pass
NVNT	2-DH1	2480	Ant1	-31.05	-20	Pass
NVNT	3-DH1	2402	Ant1	-24.21	-20	Pass
NVNT	3-DH1	2441	Ant1	-23.85	-20	Pass
NVNT	3-DH1	2480	Ant1	-23.29	-20	Pass

Test Graphs

Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



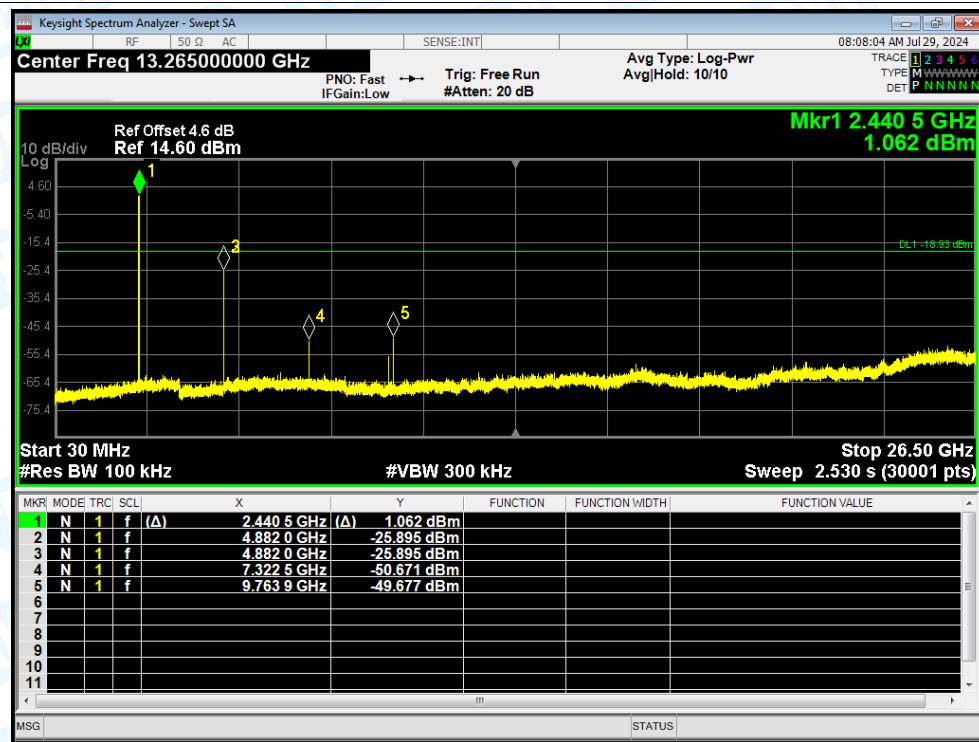
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



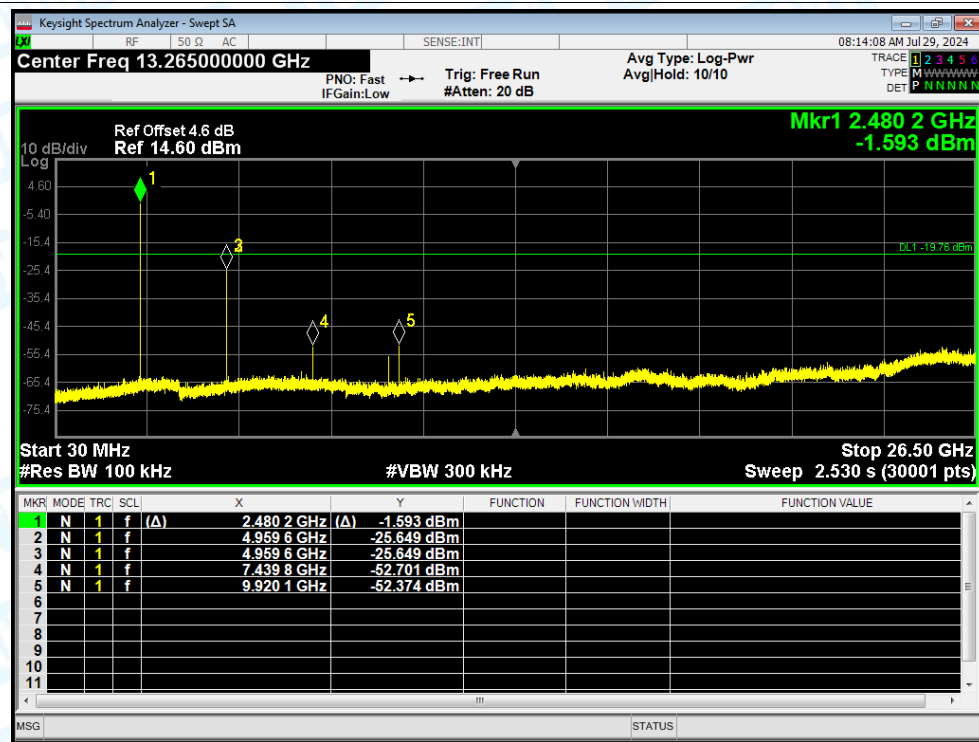
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



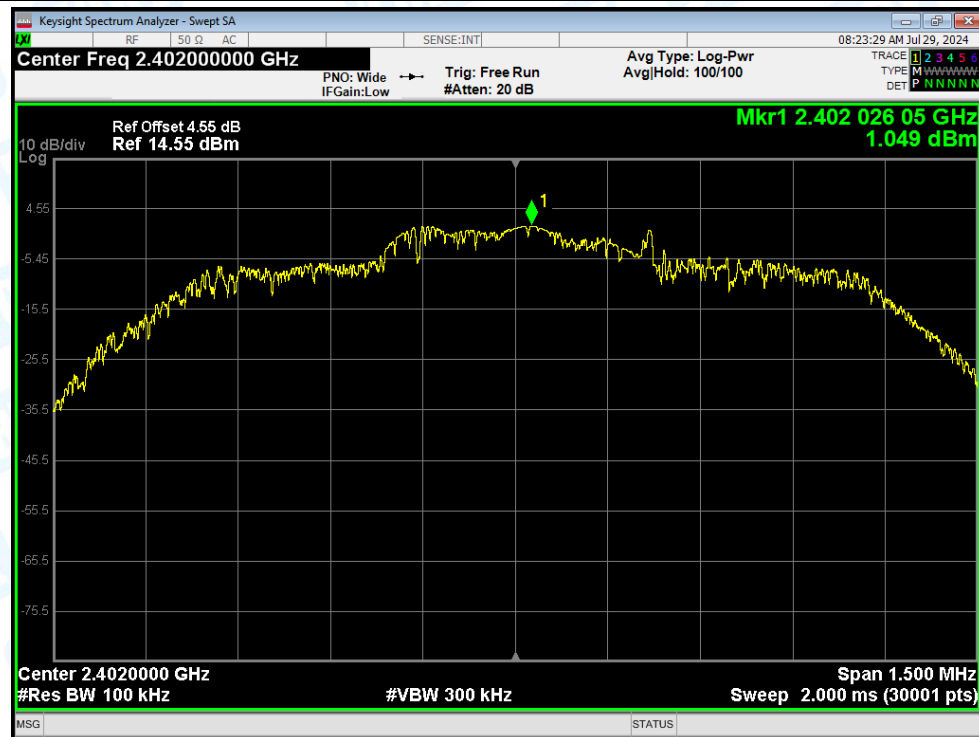
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



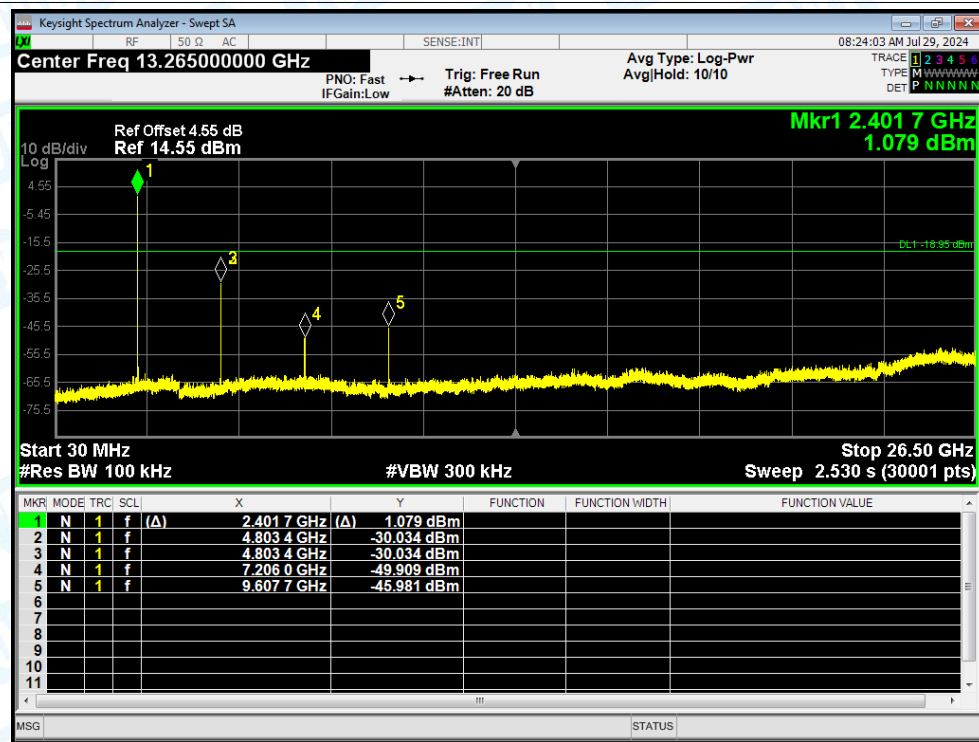
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



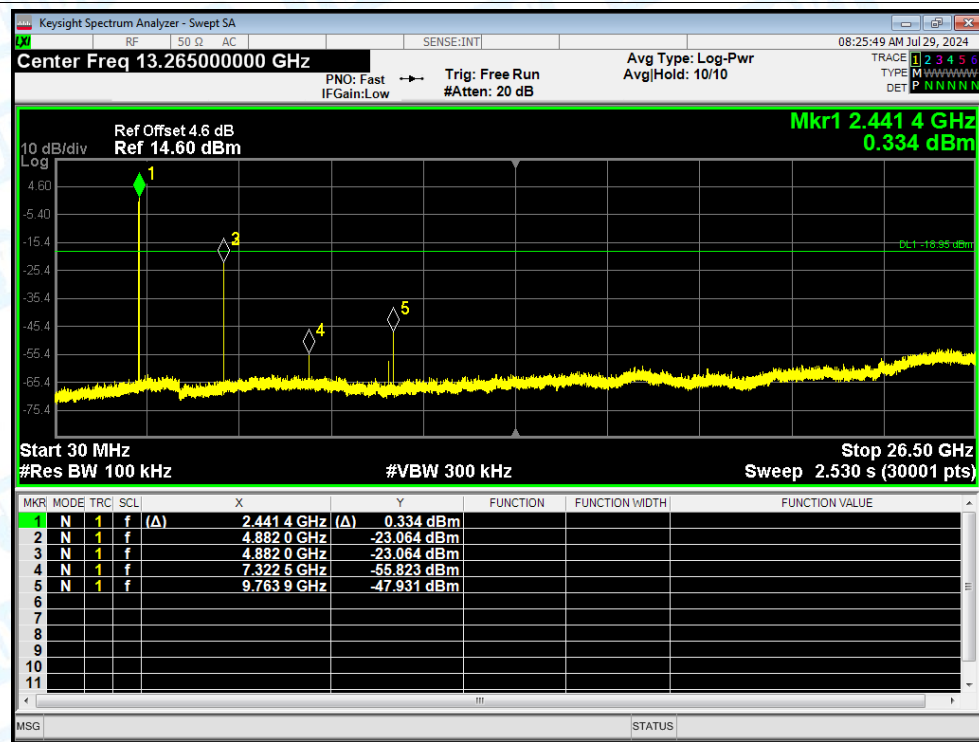
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



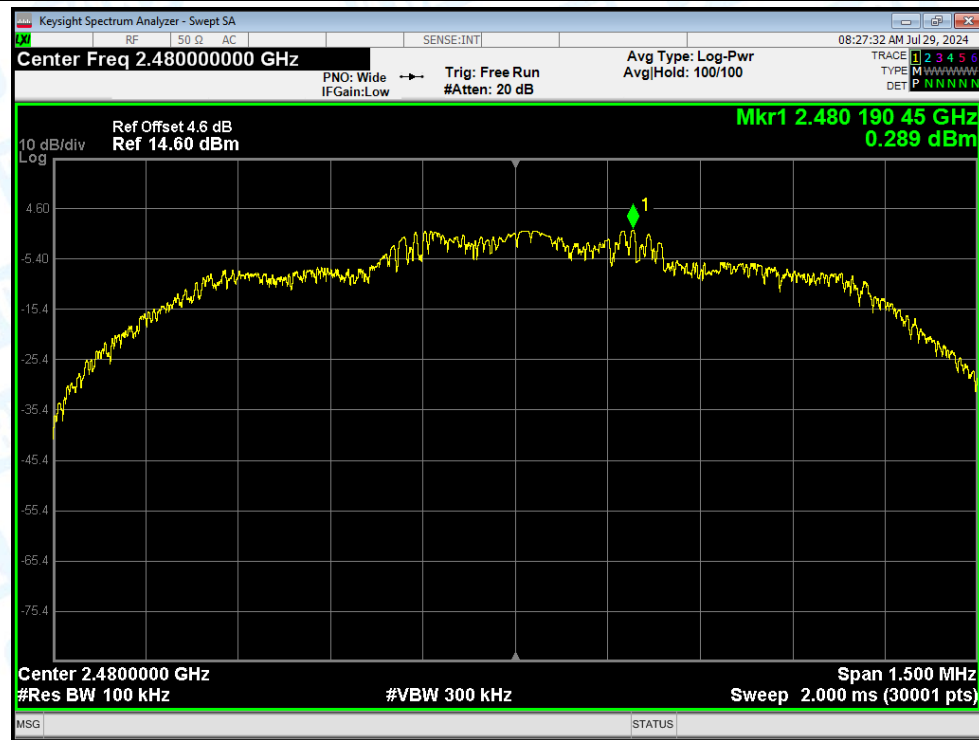
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref



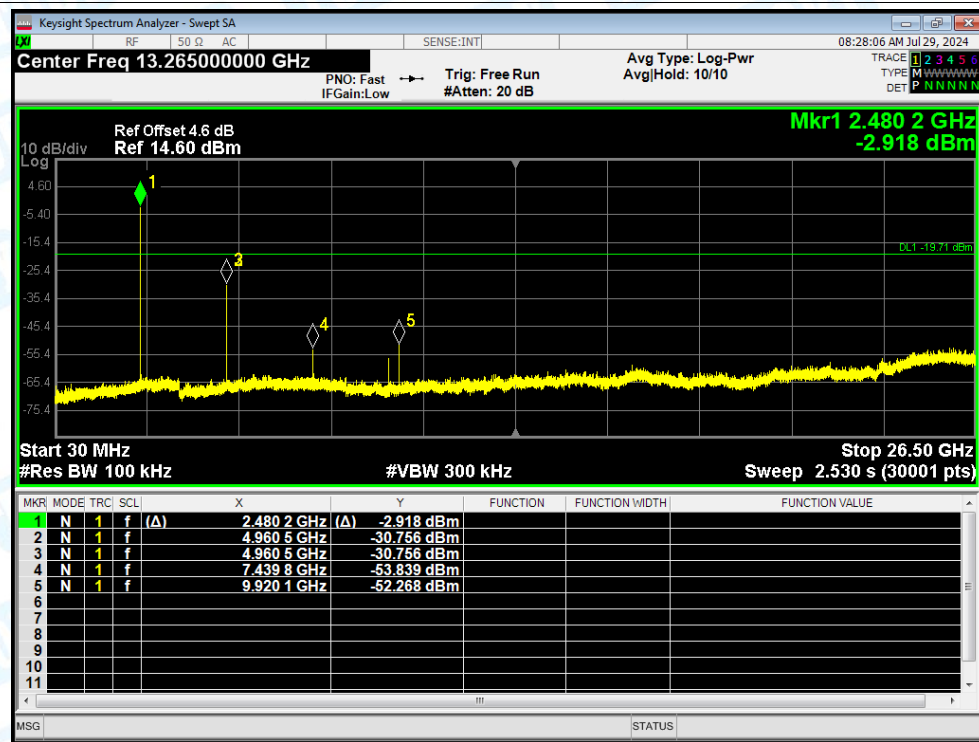
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



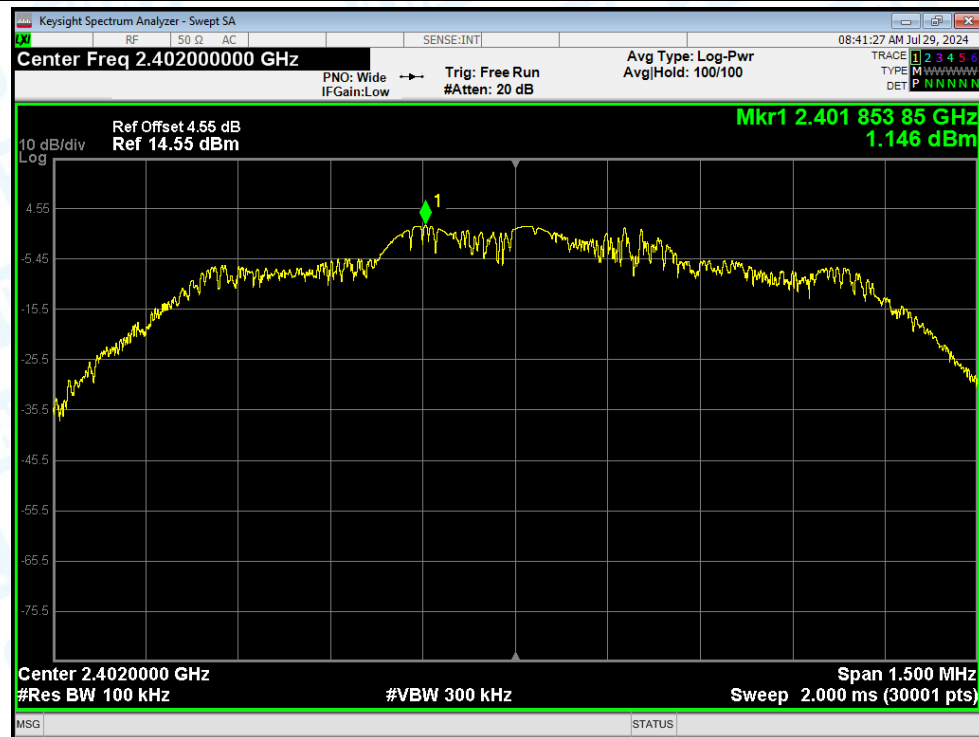
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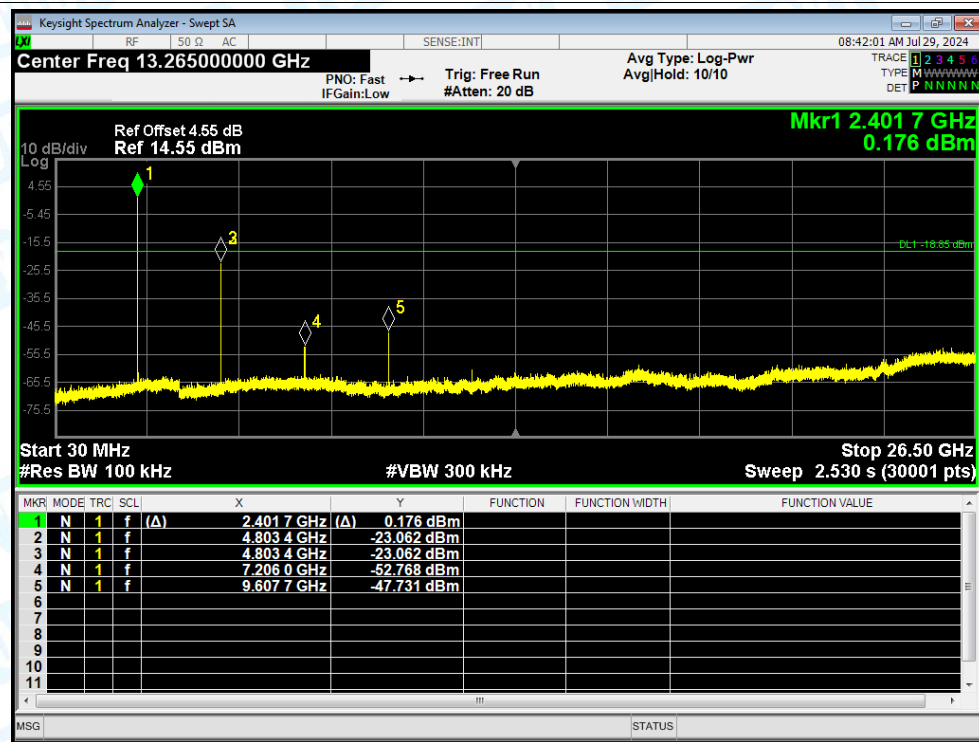
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Ref



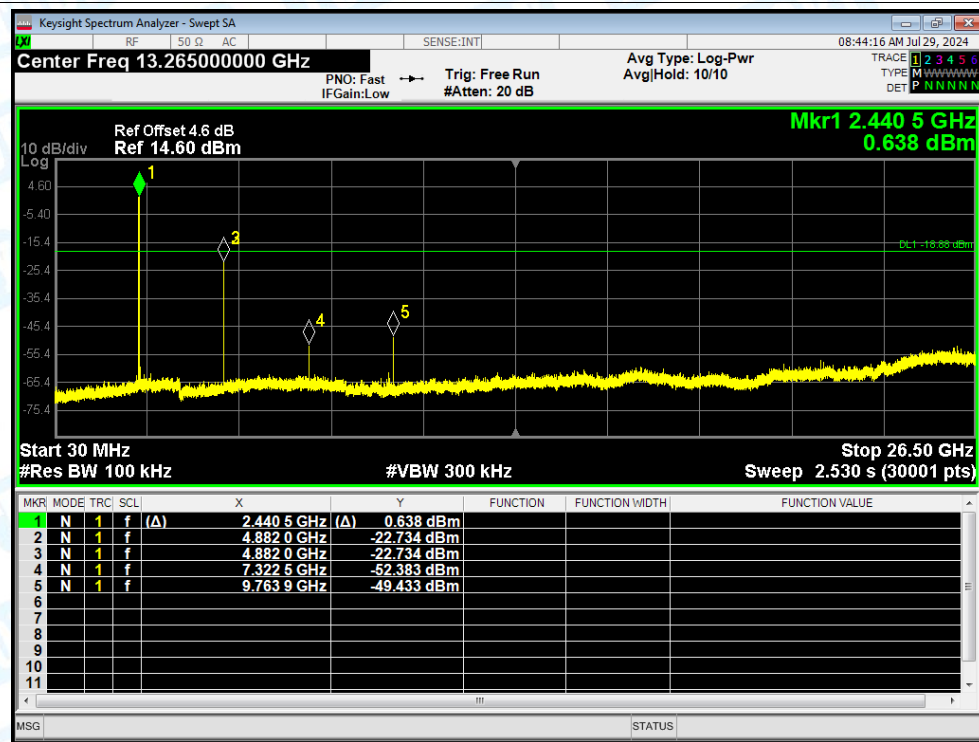
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Ref



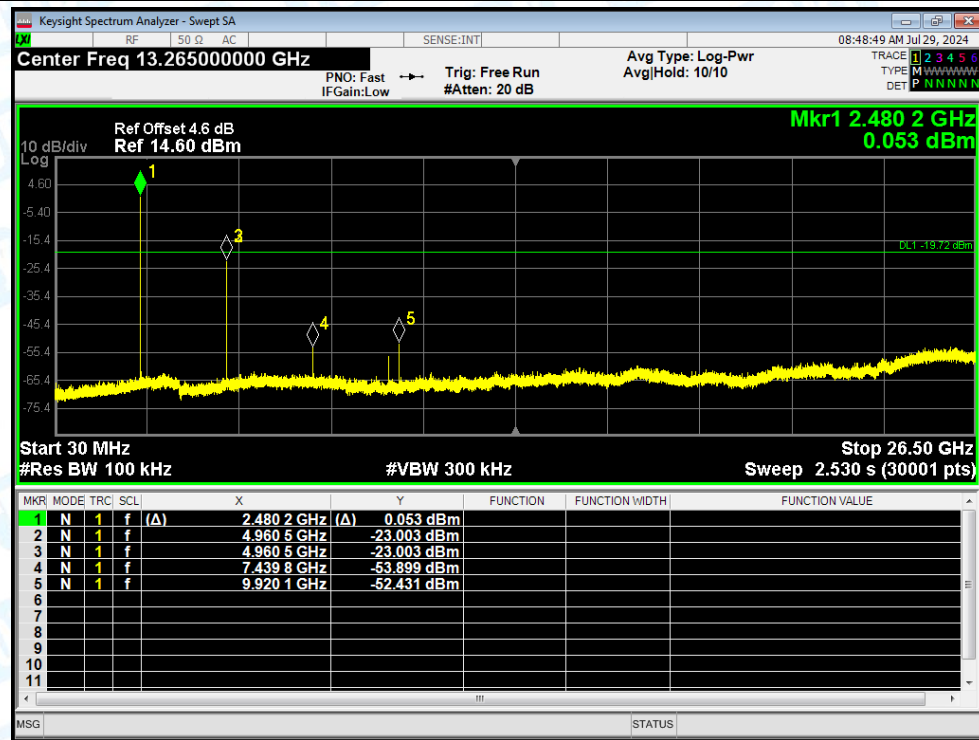
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission

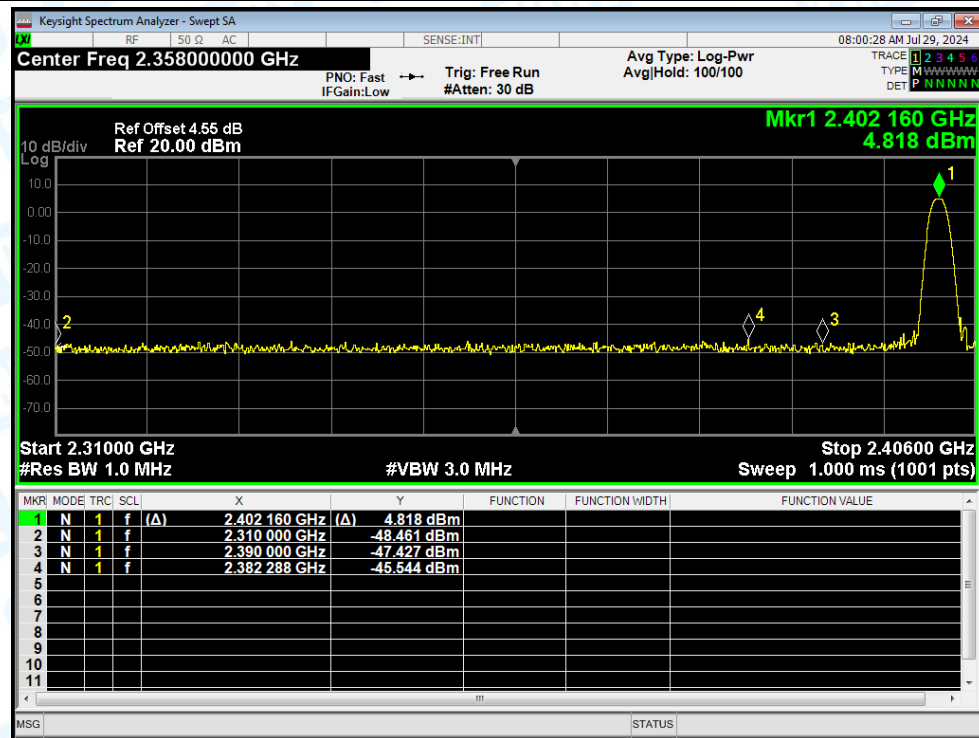


8.Restrict Band

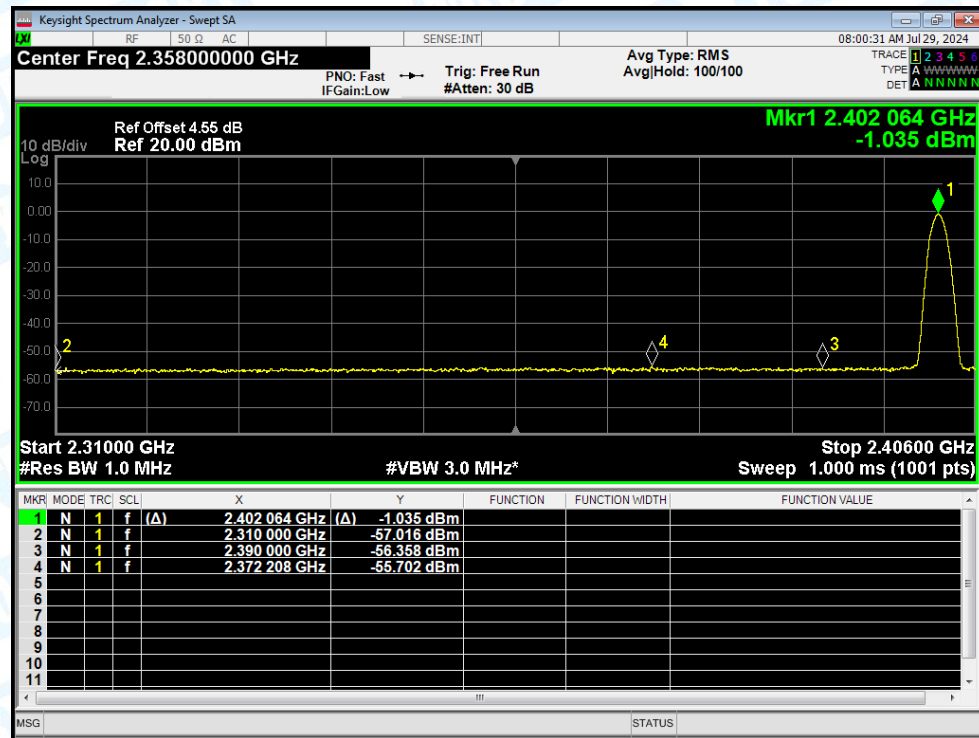
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-48.46	3	-	49.8	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-57.02	3	4.84	46.08	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2382.288	-45.54	3	-	52.72	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2372.208	-55.7	3	4.84	47.4	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-47.43	3	-	50.83	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-56.36	3	4.84	46.74	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-48.51	3	-	49.75	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-56.3	3	4.95	46.91	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2489.104	-44.77	3	-	53.49	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2484.568	-55.19	3	4.95	48.02	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-48.91	3	-	49.35	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-56.37	3	4.95	46.84	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-48.64	3	-	49.62	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-56.97	3	4.74	46.03	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2330.928	-45.22	3	-	53.04	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2380.272	-55.76	3	4.74	47.24	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-47.67	3	-	50.59	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-56.24	3	4.74	46.76	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-46.48	3	-	51.78	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-55.85	3	4.74	47.15	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2484.736	-44.04	3	-	54.22	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.752	-55.14	3	4.74	47.86	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-47.28	3	-	50.98	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-56.13	3	4.74	46.87	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-49.94	3	-	48.32	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-57.09	3	4.74	45.91	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2382	-44.67	3	-	53.59	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2370.288	-55.76	3	4.74	47.24	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-49.21	3	-	49.05	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-56.58	3	4.74	46.42	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-48.48	3	-	49.78	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-56.22	3	4.74	46.78	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2498.776	-45.27	3	-	52.99	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2487.832	-55.21	3	4.74	47.79	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-48.23	3	-	50.03	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-56.17	3	4.74	46.83	Average	54	Pass

Test Graphs

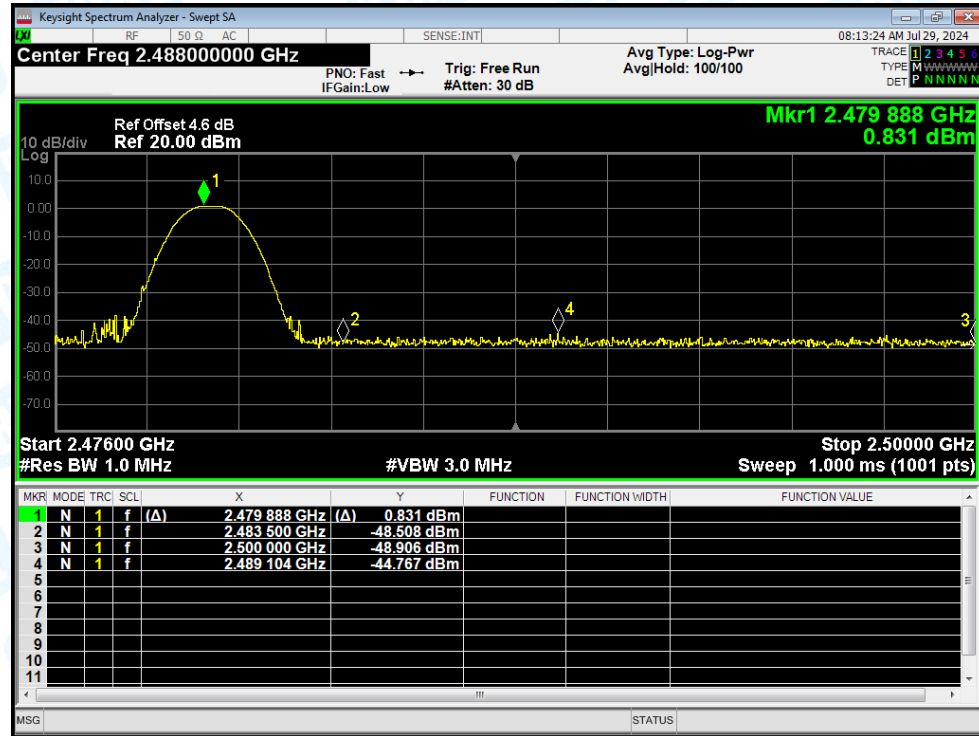
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Peak



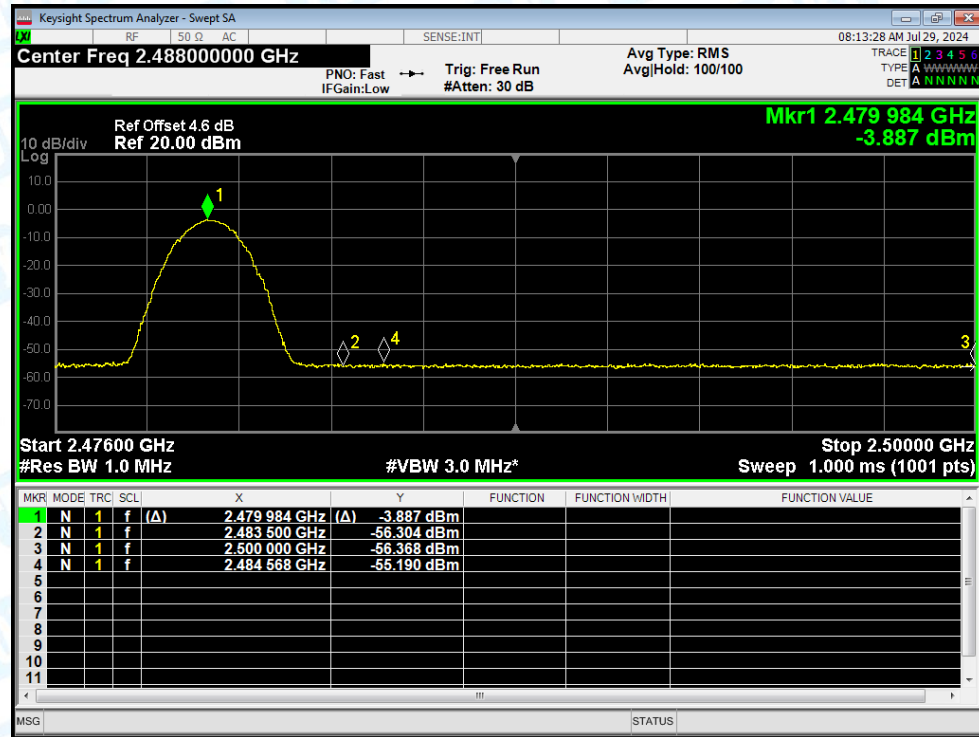
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Average



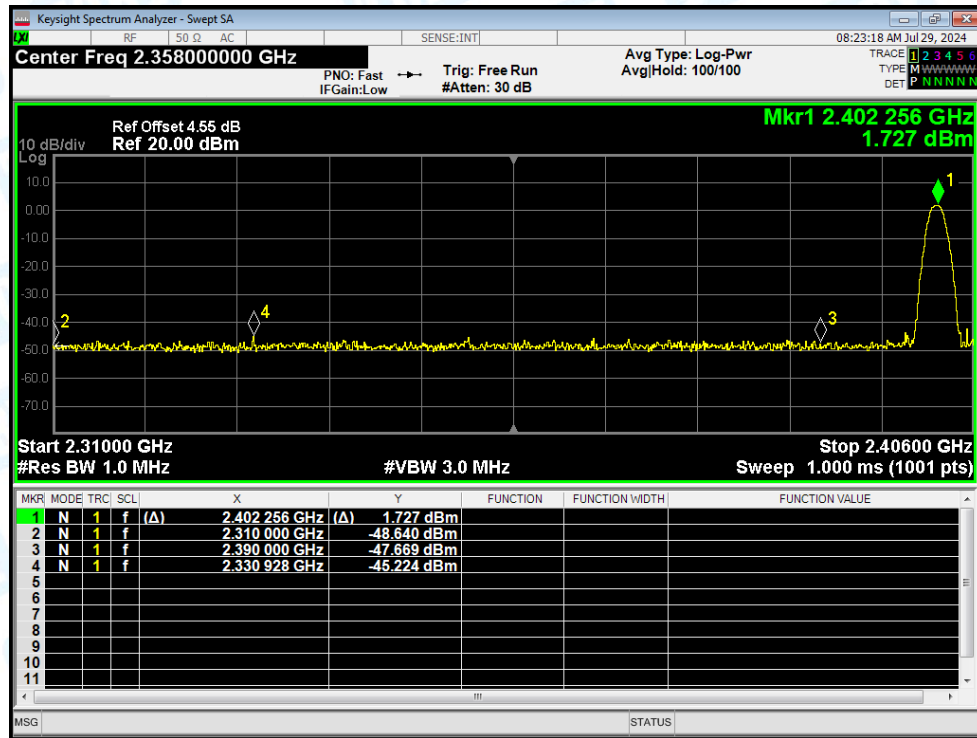
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Peak



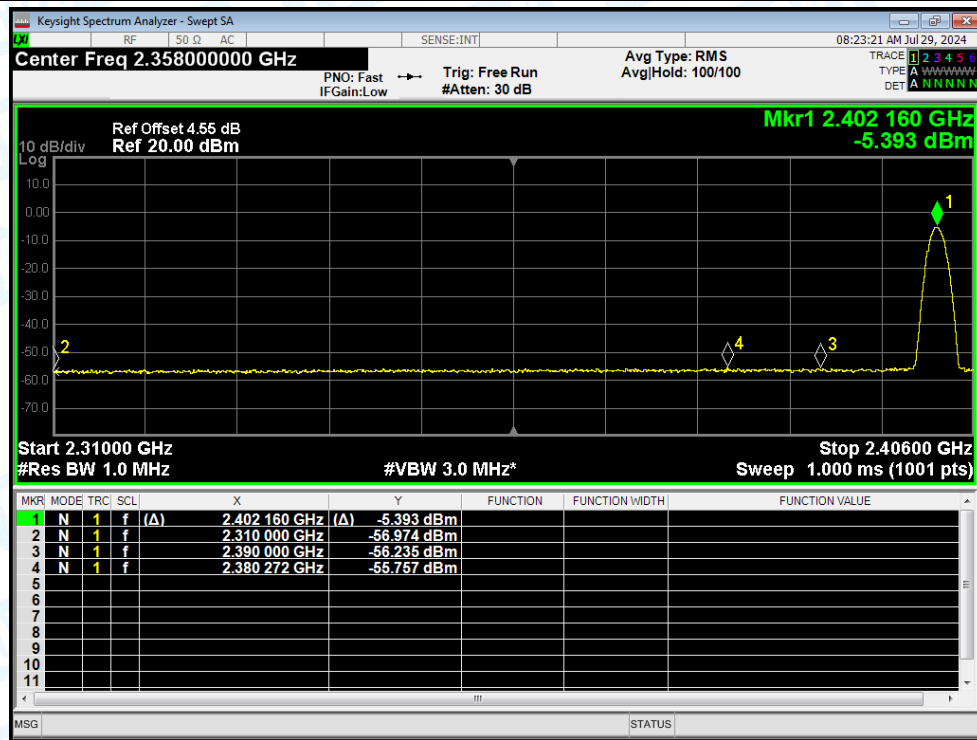
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Average



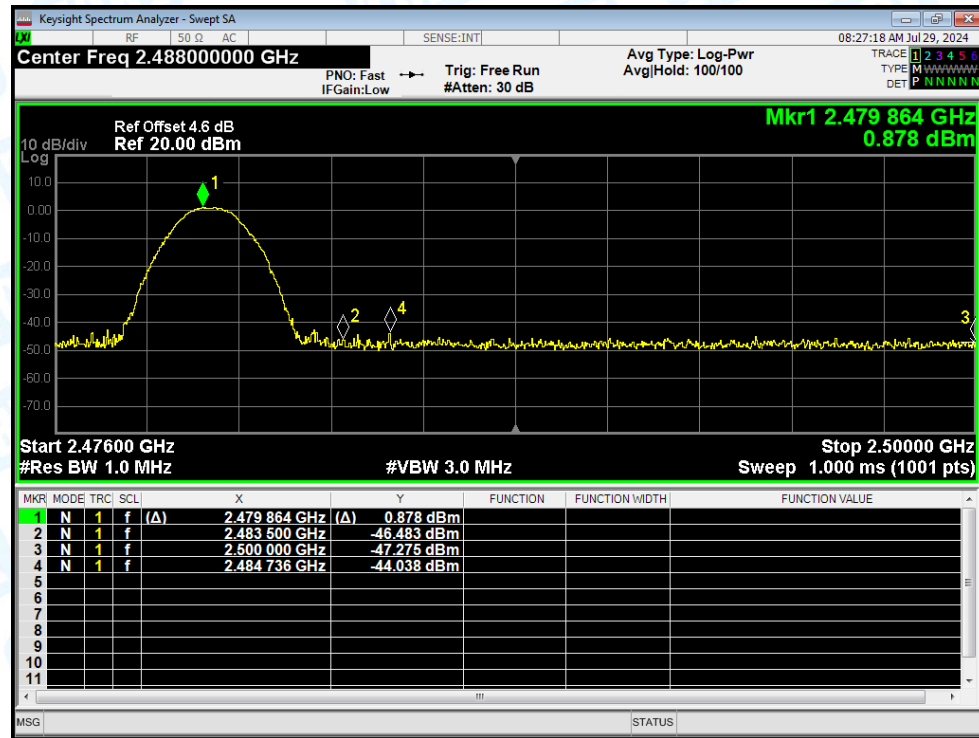
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Peak



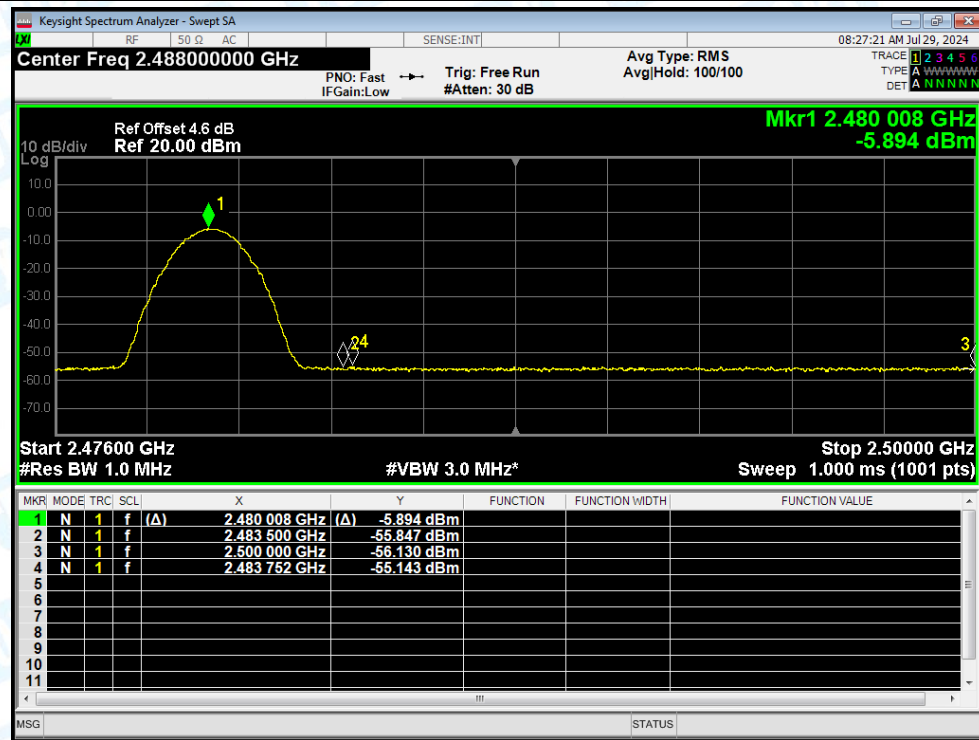
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Average



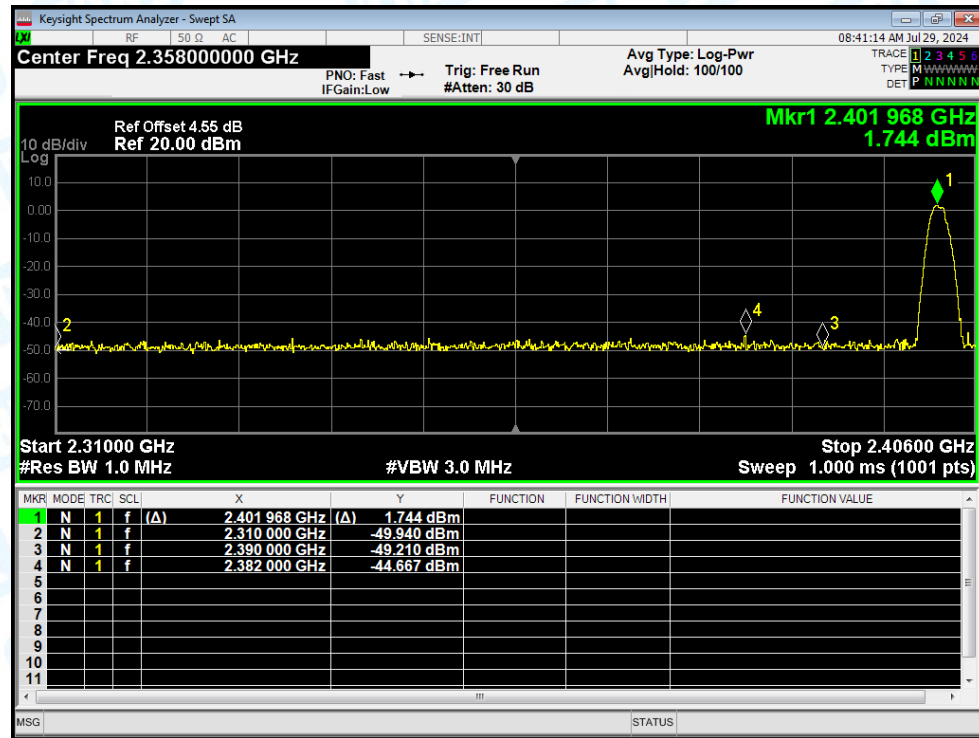
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Peak



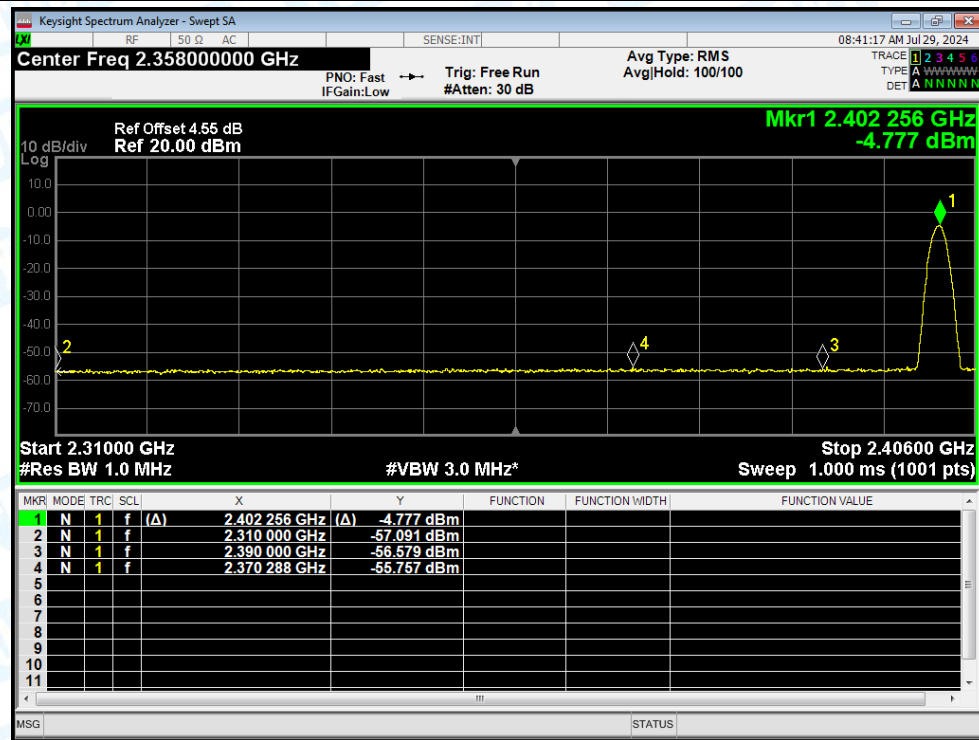
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Average



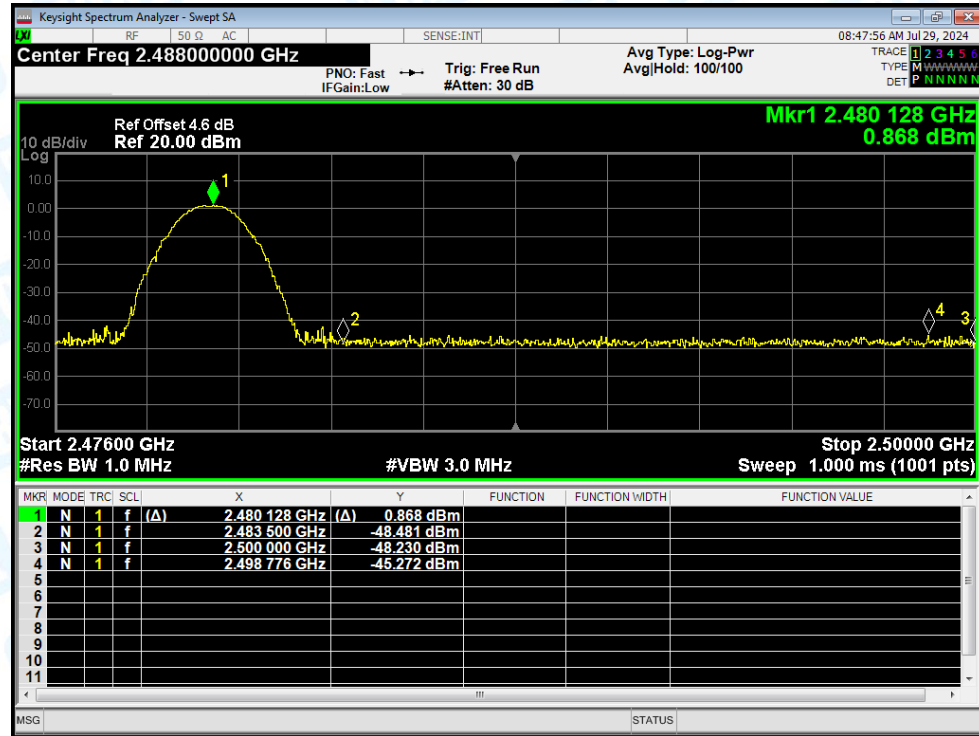
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Peak



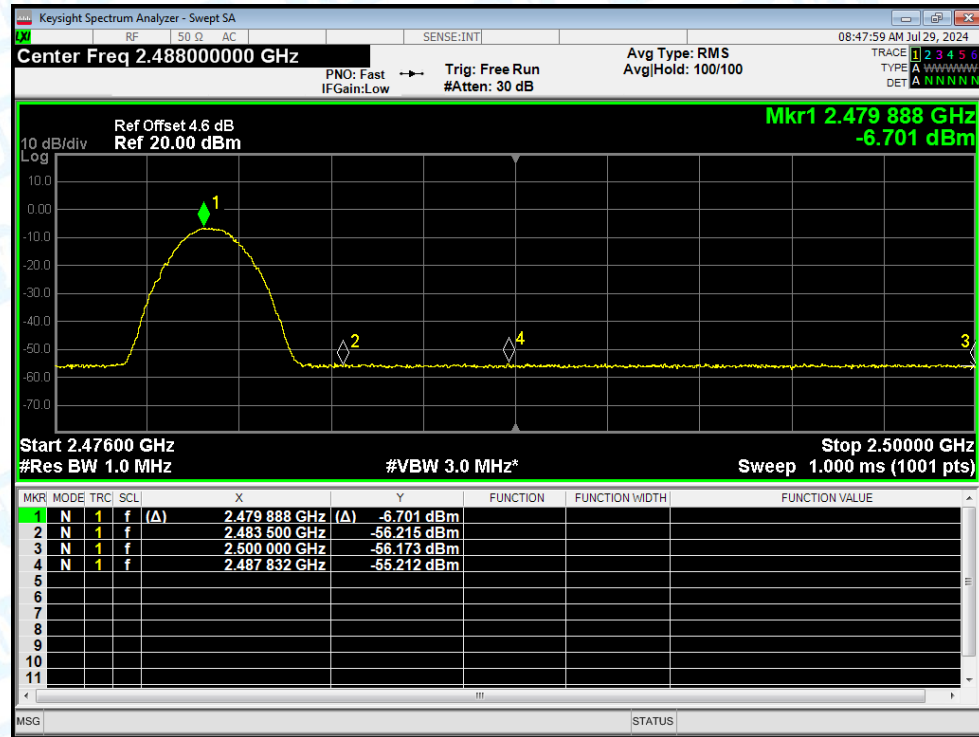
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Average



Restrict Band NVNT 3-DH1 2480MHz Ant1 No-Hopping Peak



Restrict Band NVNT 3-DH1 2480MHz Ant1 No-Hopping Average

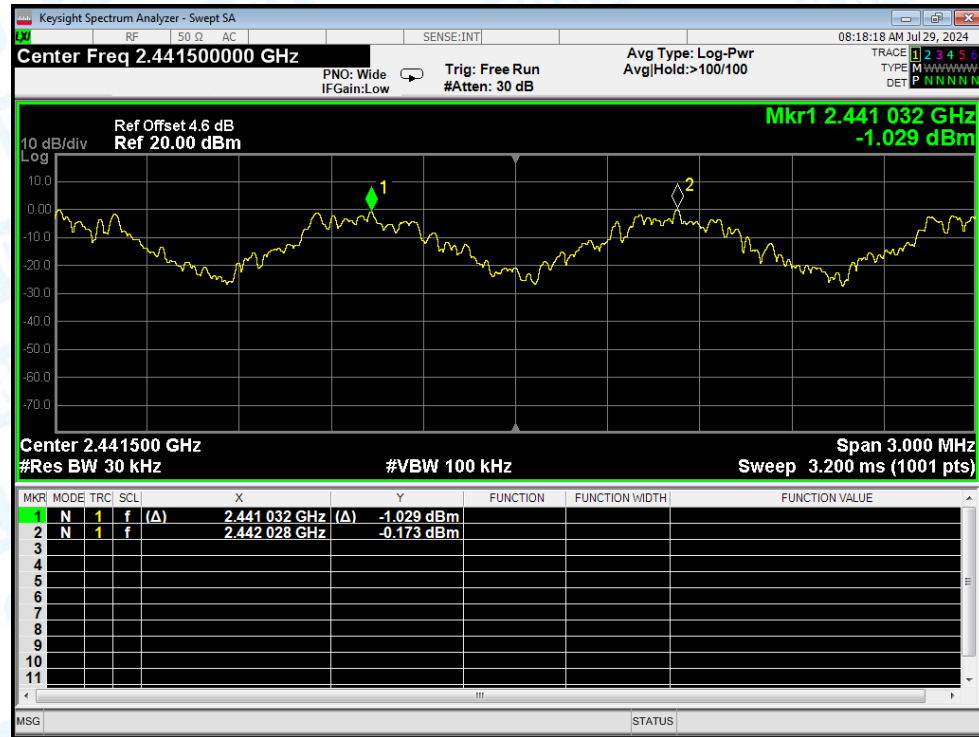


9.Carrier Frequencies Separation

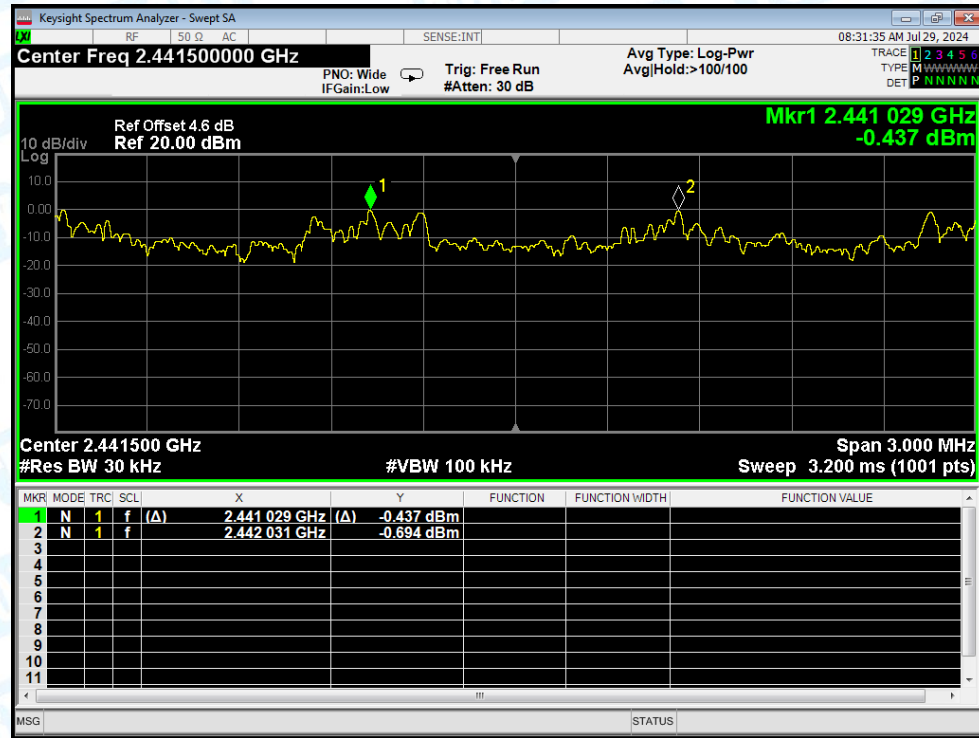
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2441.032	2442.028	0.996	0.58	Pass
NVNT	2-DH1	Ant1	2441.029	2442.031	1.002	0.76	Pass
NVNT	3-DH1	Ant1	2440.846	2442.022	1.176	0.767	Pass

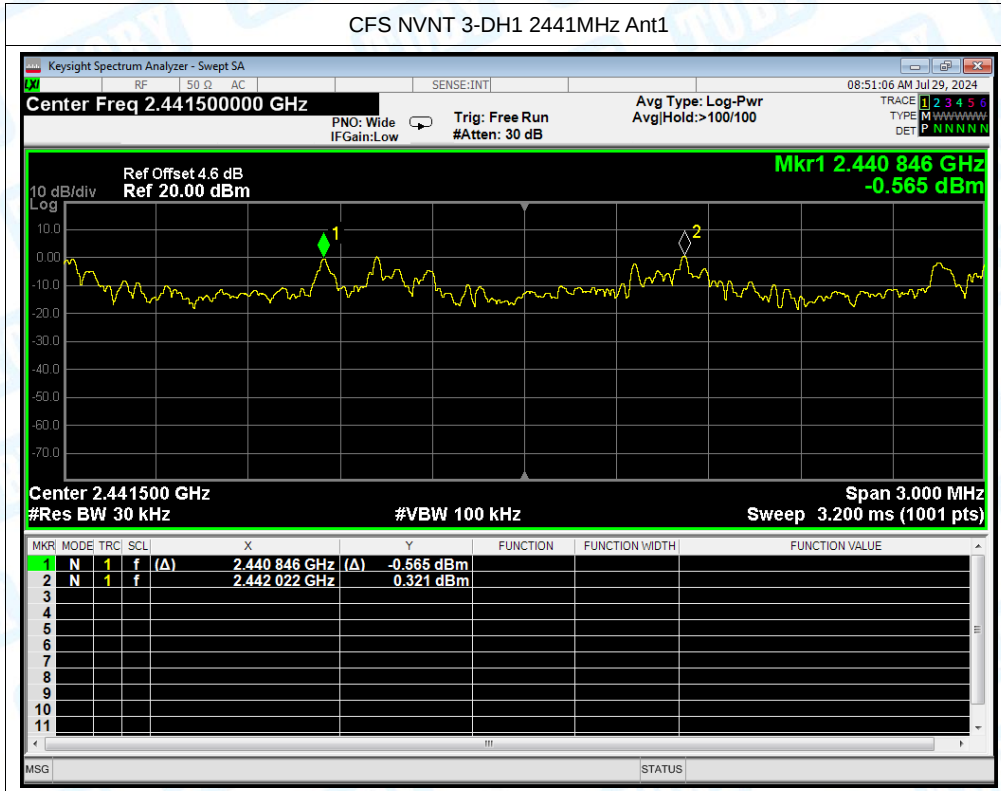
Test Graphs

CFS NVNT 1-DH1 2441MHz Ant1



CFS NVNT 2-DH1 2441MHz Ant1



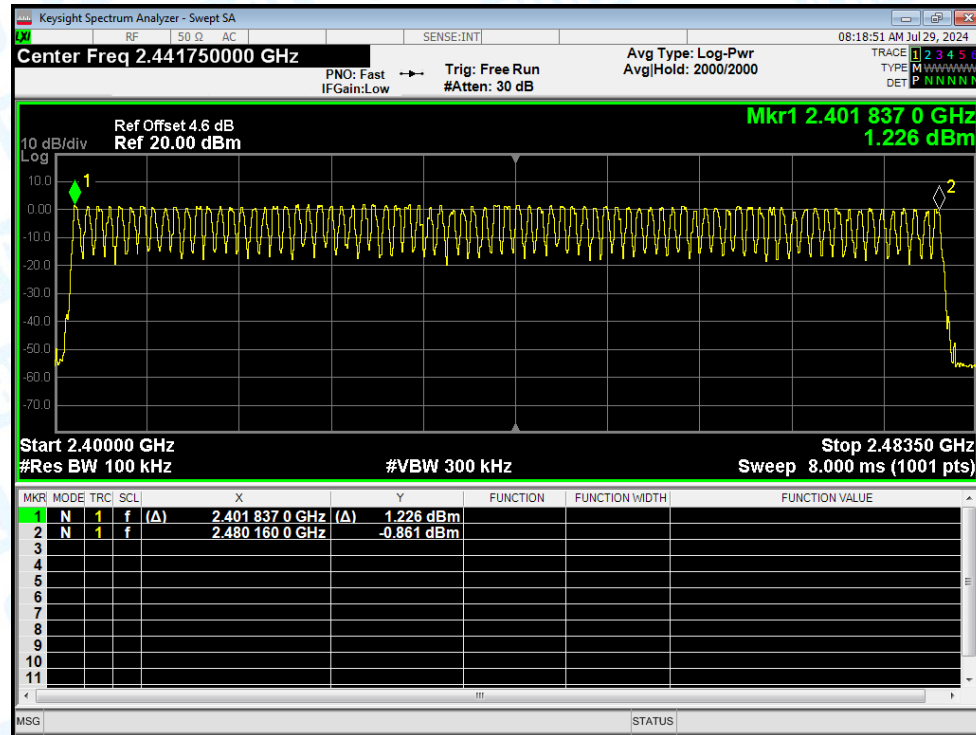


10.Number of Hopping Channel

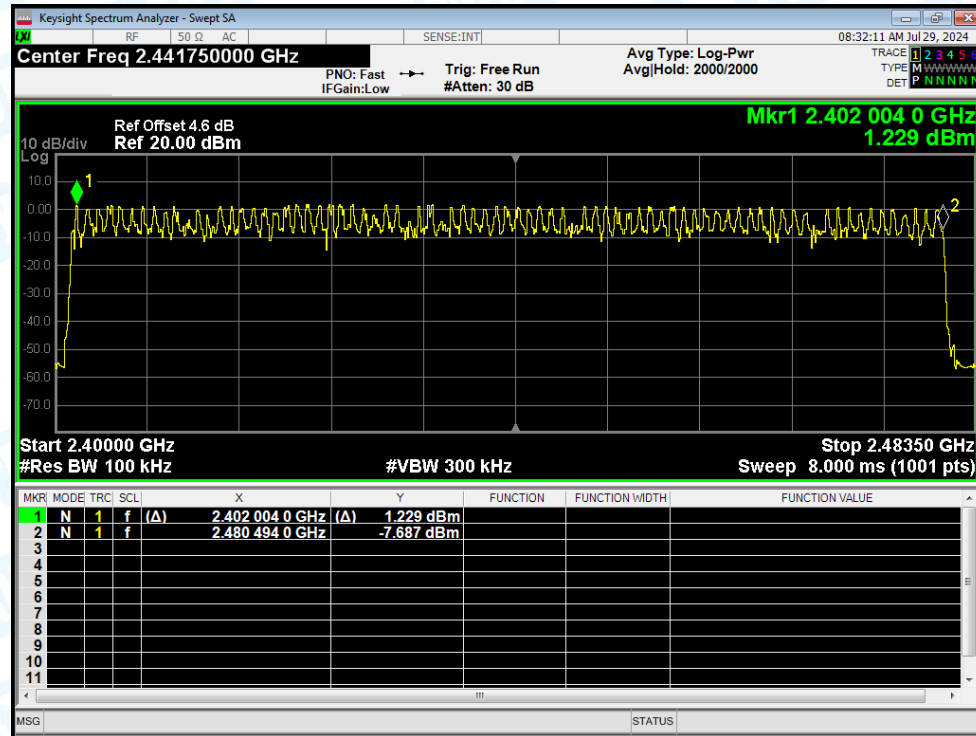
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass
NVNT	3-DH1	Ant1	79	15	Pass

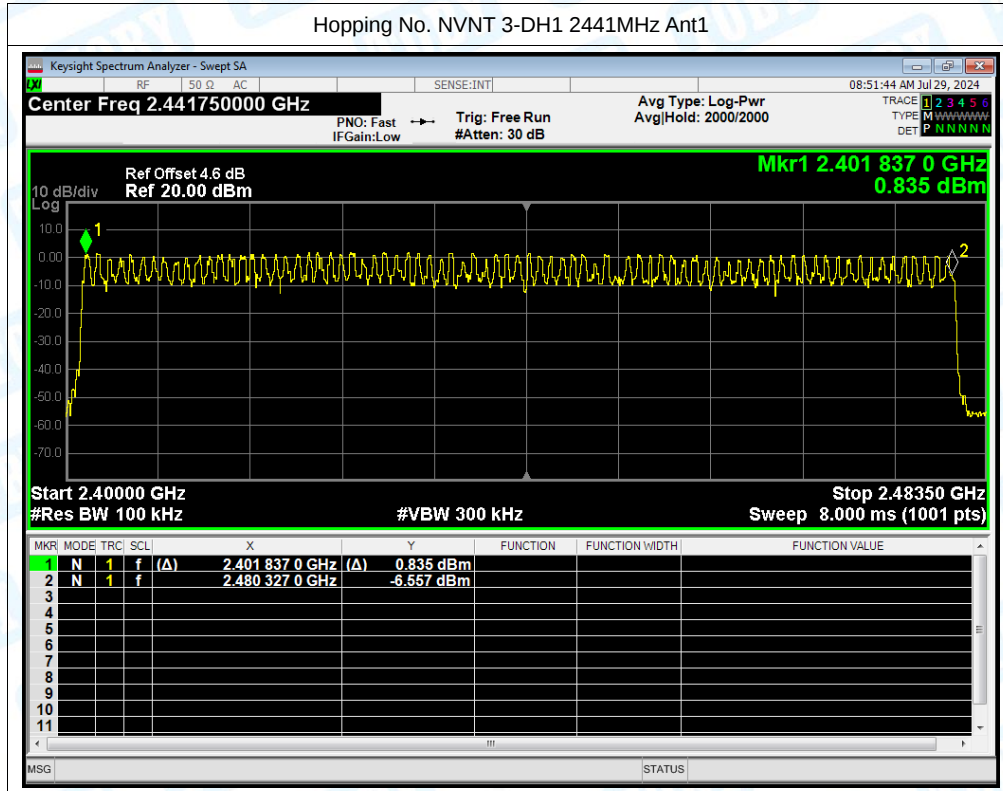
Test Graphs

Hopping No. NVNT 1-DH1 2441MHz Ant1



Hopping No. NVNT 2-DH1 2441MHz Ant1



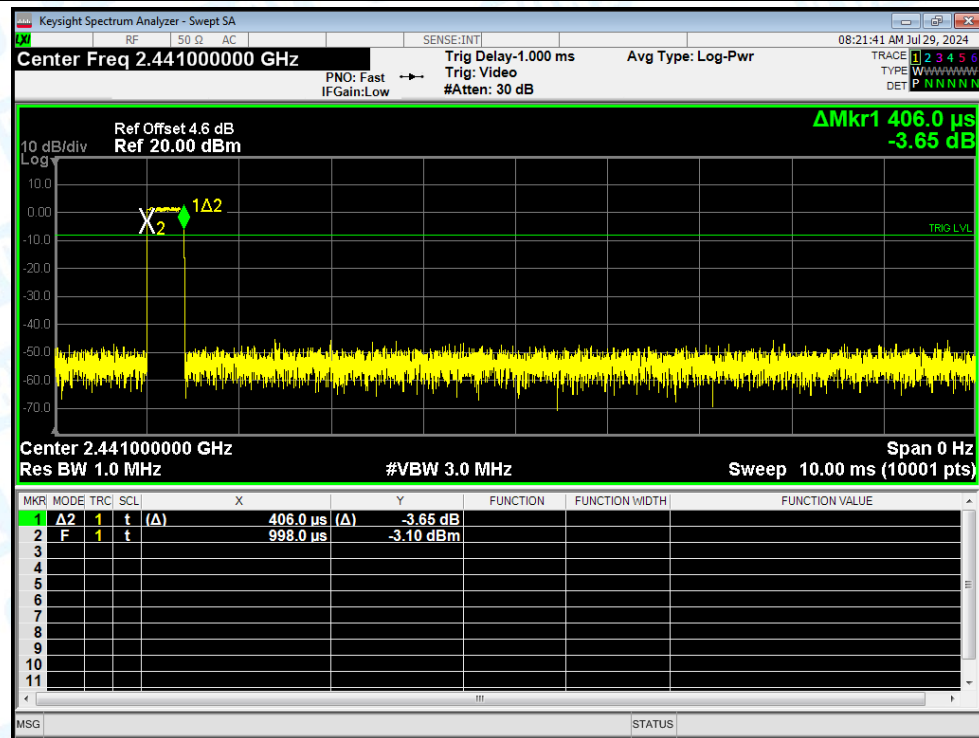


11.Dwell Time

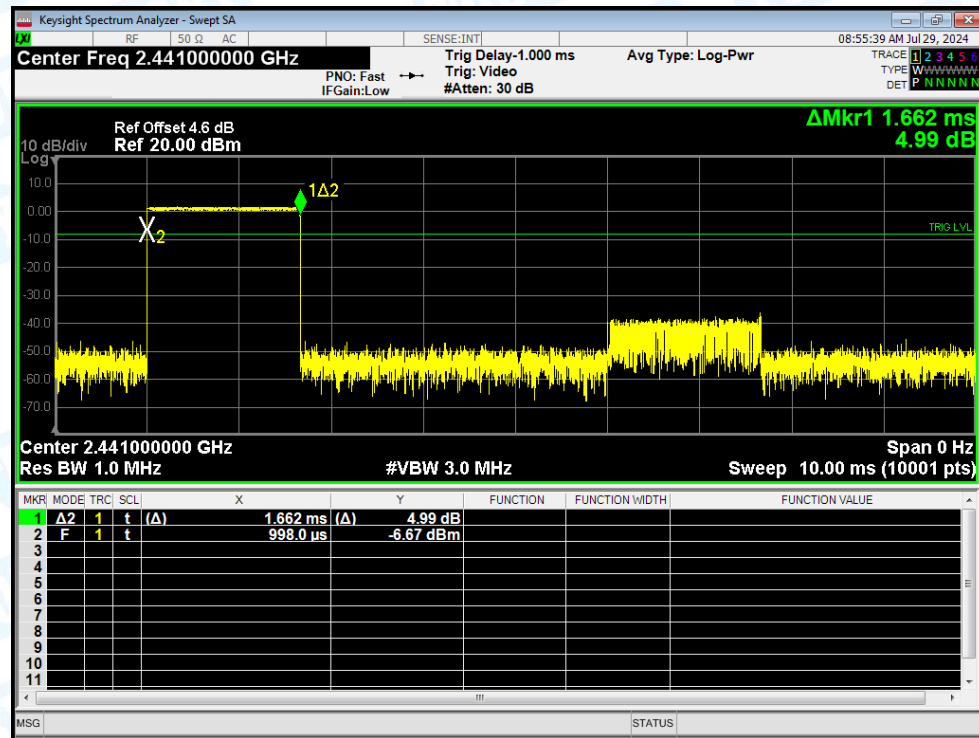
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.406	129.92	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.662	265.92	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.911	310.507	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.415	132.8	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.668	266.88	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.916	311.04	31600	400	Pass
NVNT	3-DH1	2441	Ant1	0.416	133.12	31600	400	Pass
NVNT	3-DH3	2441	Ant1	1.665	266.4	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.916	311.04	31600	400	Pass

Test Graphs

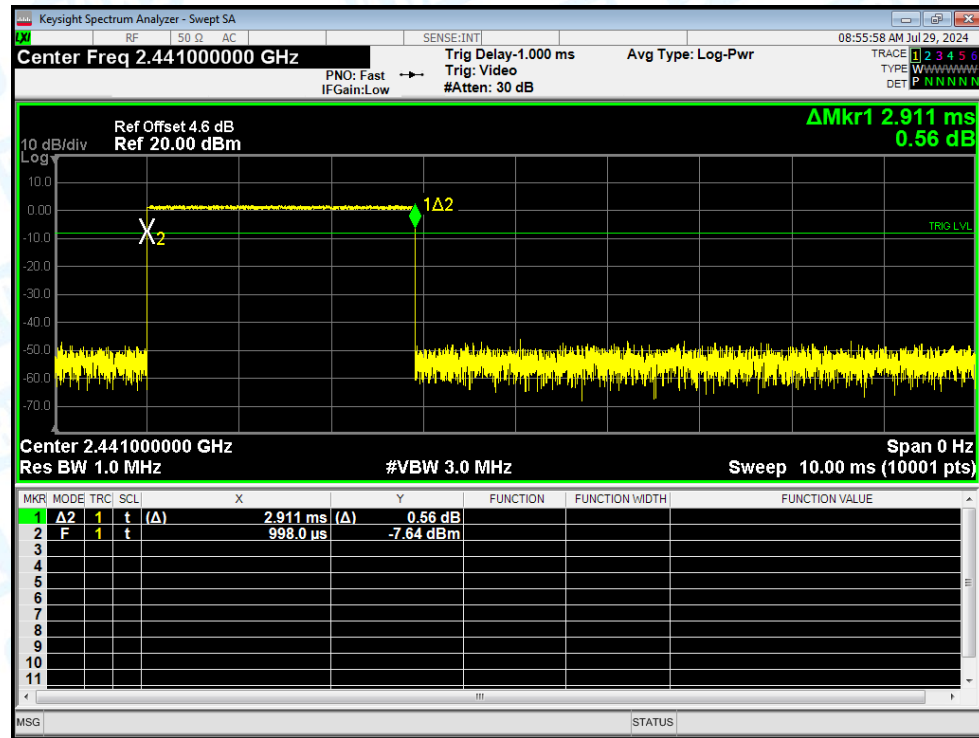
Dwell NVNT 1-DH1 2441MHz Ant1



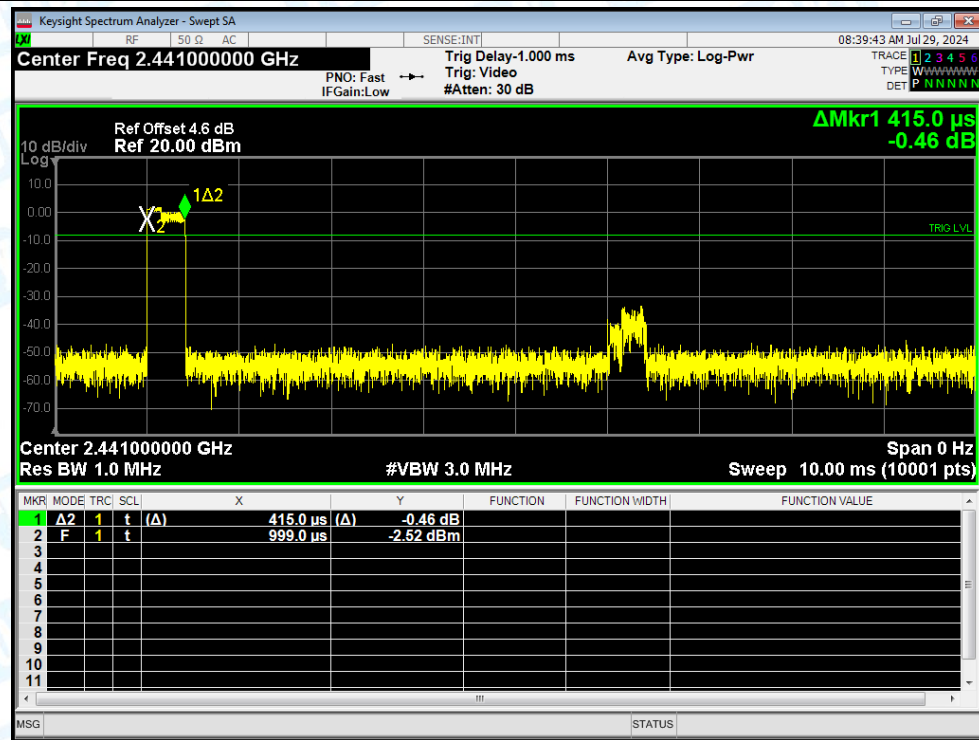
Dwell NVNT 1-DH3 2441MHz Ant1



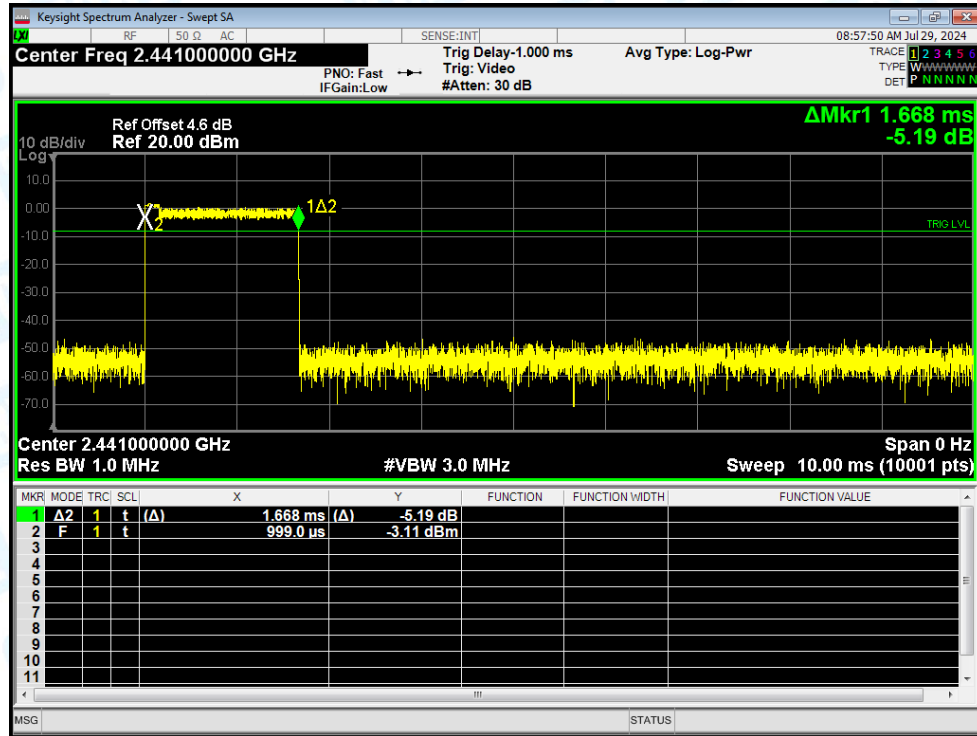
Dwell NVNT 1-DH5 2441MHz Ant1



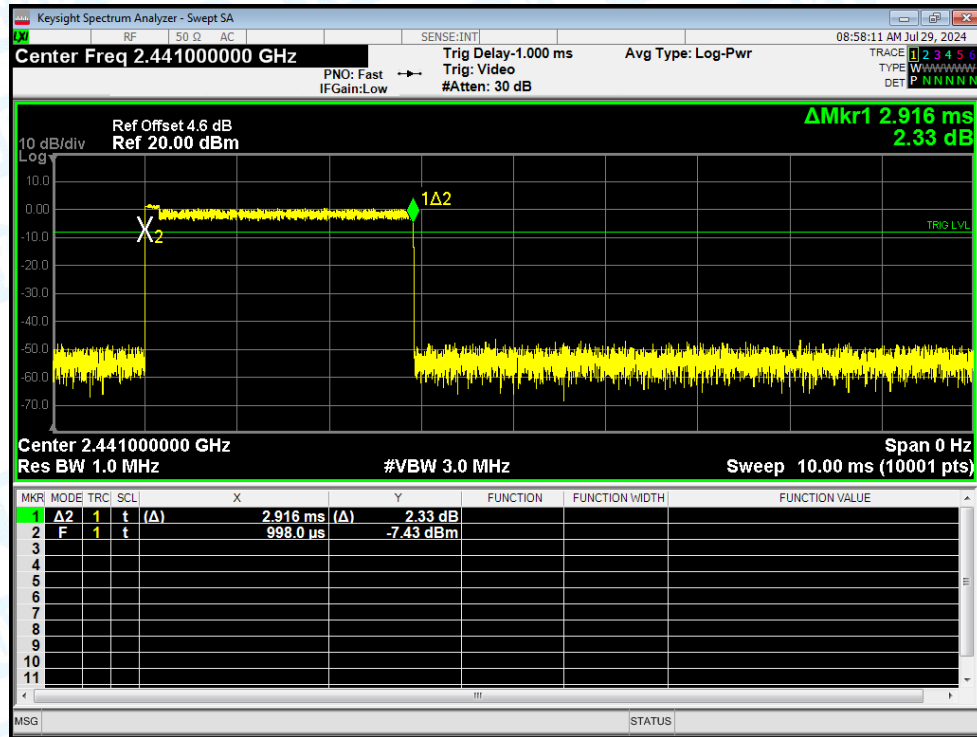
Dwell NVNT 2-DH1 2441MHz Ant1



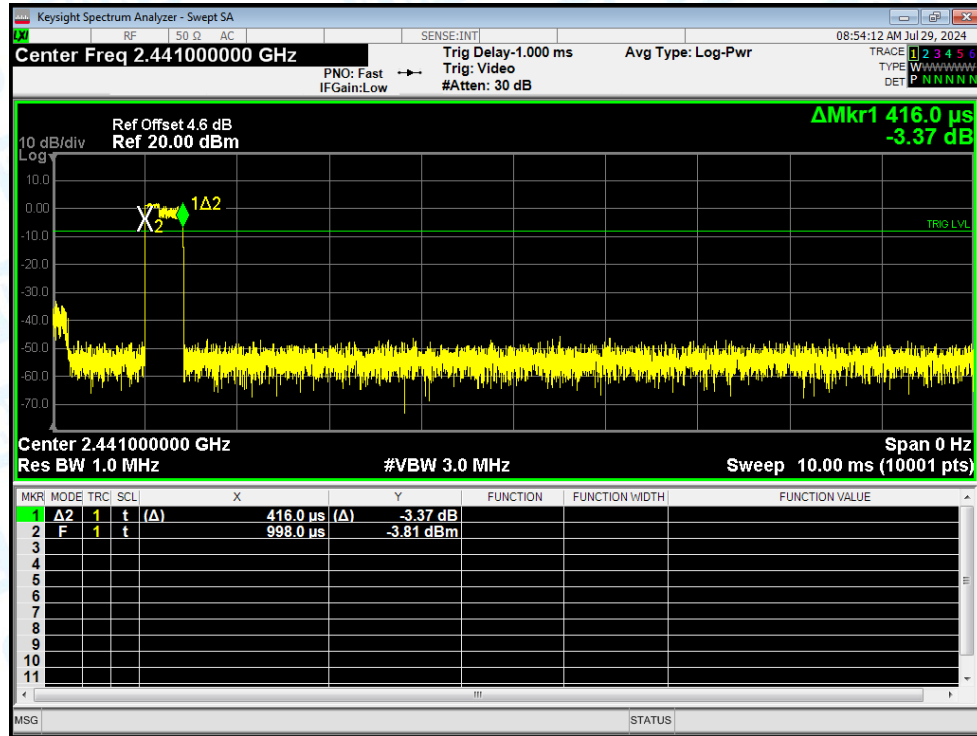
Dwell NVNT 2-DH3 2441MHz Ant1



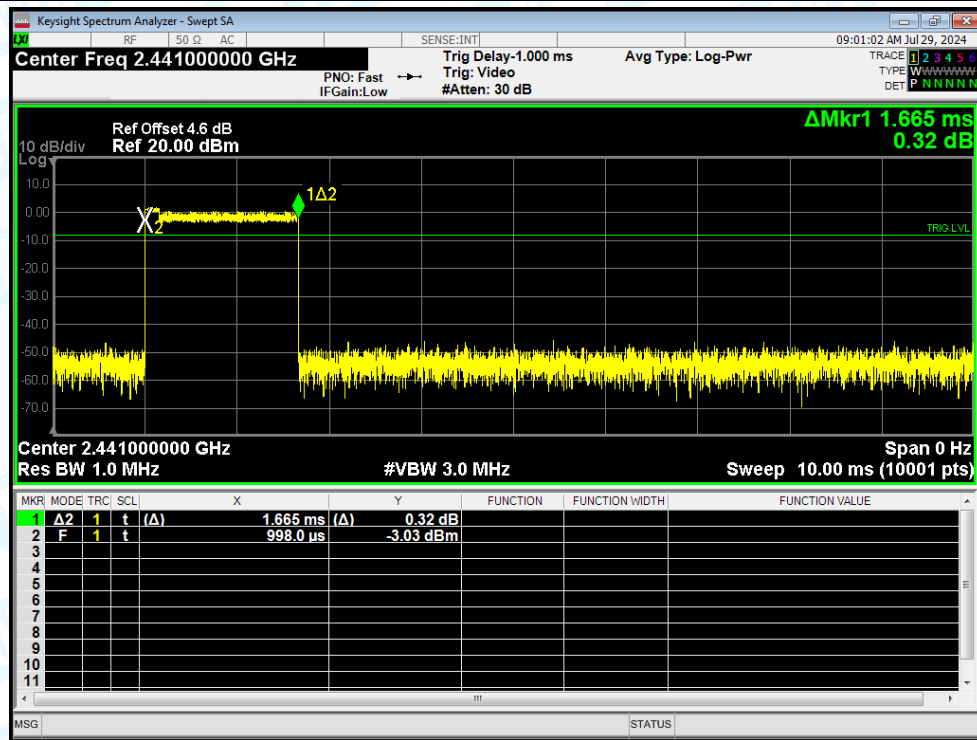
Dwell NVNT 2-DH5 2441MHz Ant1

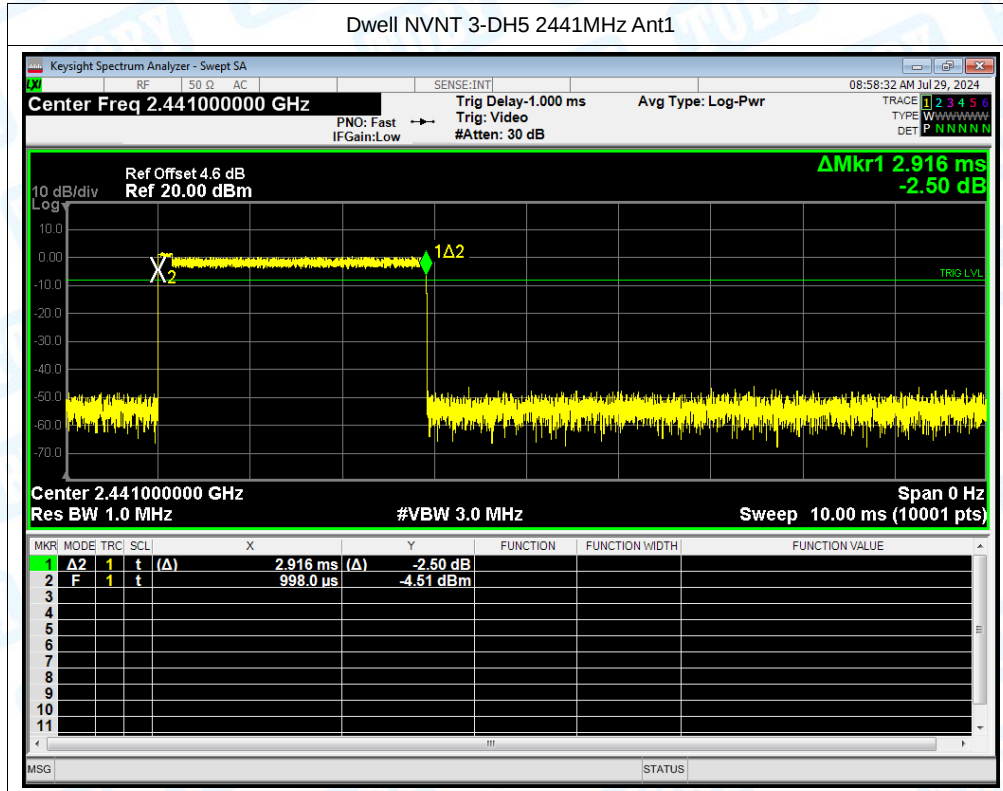


Dwell NVNT 3-DH1 2441MHz Ant1



Dwell NVNT 3-DH3 2441MHz Ant1





-----END OF REPORT-----