

RF Test Data for Bluetooth(BDR+EDR) (Conducted Measurements)

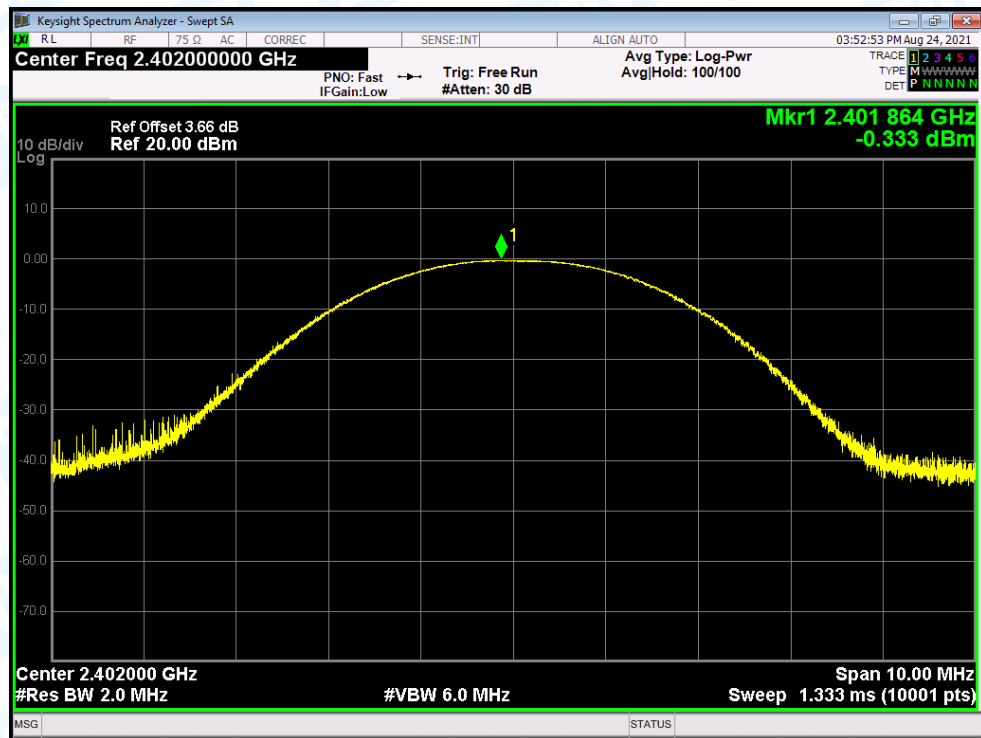
General Description of EUT	
Product Name:	Wireless Headphone
Test Model:	E5
Sample ID:	20210815-02-2#
Environmental Conditions	
Temperature:	23.8℃
Relative Humidity:	48%
Test Voltage:	DC 5V
Test Engineer:	HeJingchang
Note: For a more detailed features description, please refer to the report TB-RF183370.	

1. Maximum Conducted Output Power

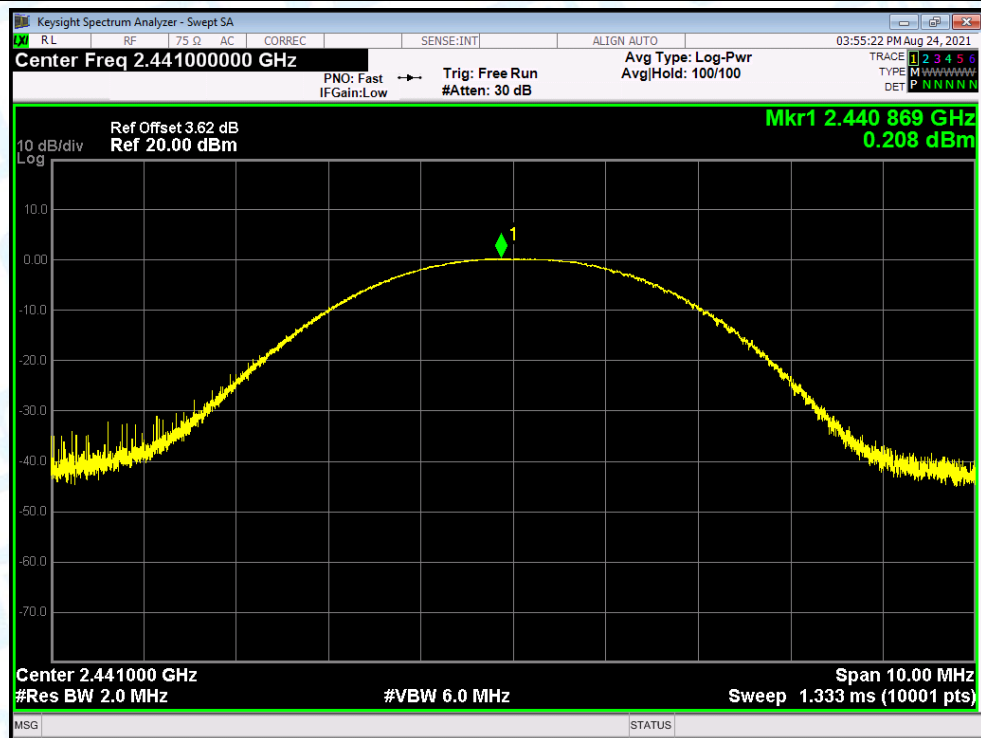
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	-0.333	-0.333	21	Pass
NVNT	1-DH1	2441	Ant1	0.208	0.208	21	Pass
NVNT	1-DH1	2480	Ant1	-0.297	-0.297	21	Pass
NVNT	2-DH1	2402	Ant1	0.758	0.758	21	Pass
NVNT	2-DH1	2441	Ant1	1.168	1.168	21	Pass
NVNT	2-DH1	2480	Ant1	0.636	0.636	21	Pass
NVNT	3-DH1	2402	Ant1	1.412	1.412	21	Pass
NVNT	3-DH1	2441	Ant1	1.706	1.706	21	Pass
NVNT	3-DH1	2480	Ant1	1.161	1.161	21	Pass

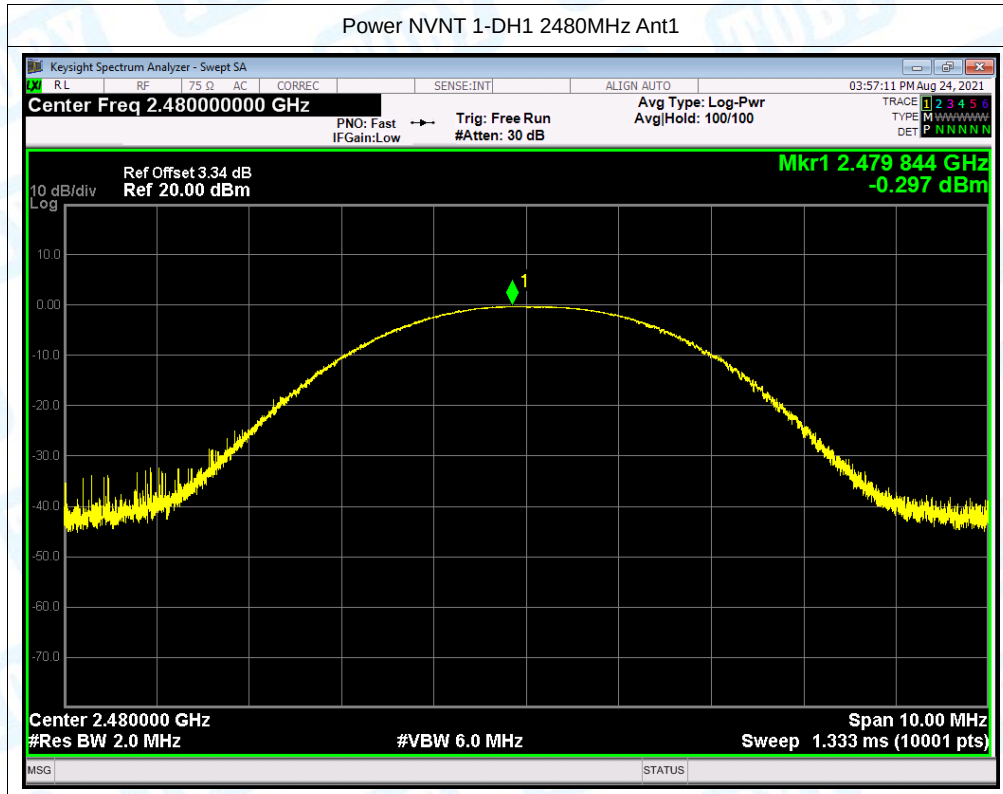
Test Graphs

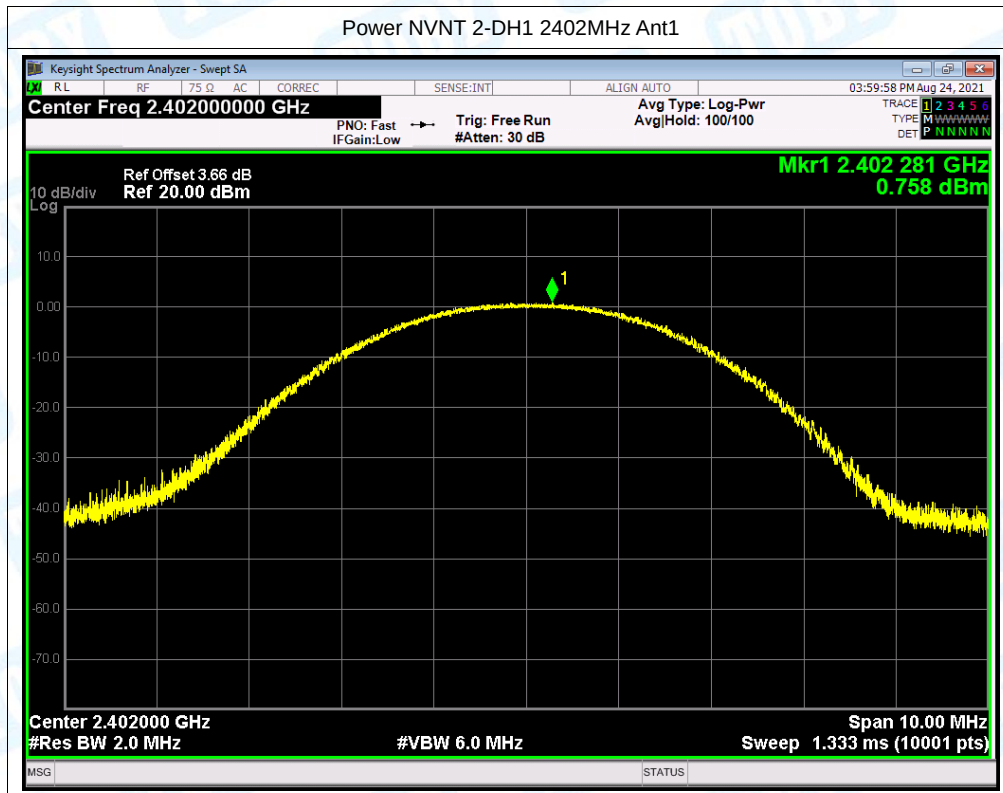
Power NVNT 1-DH1 2402MHz Ant1

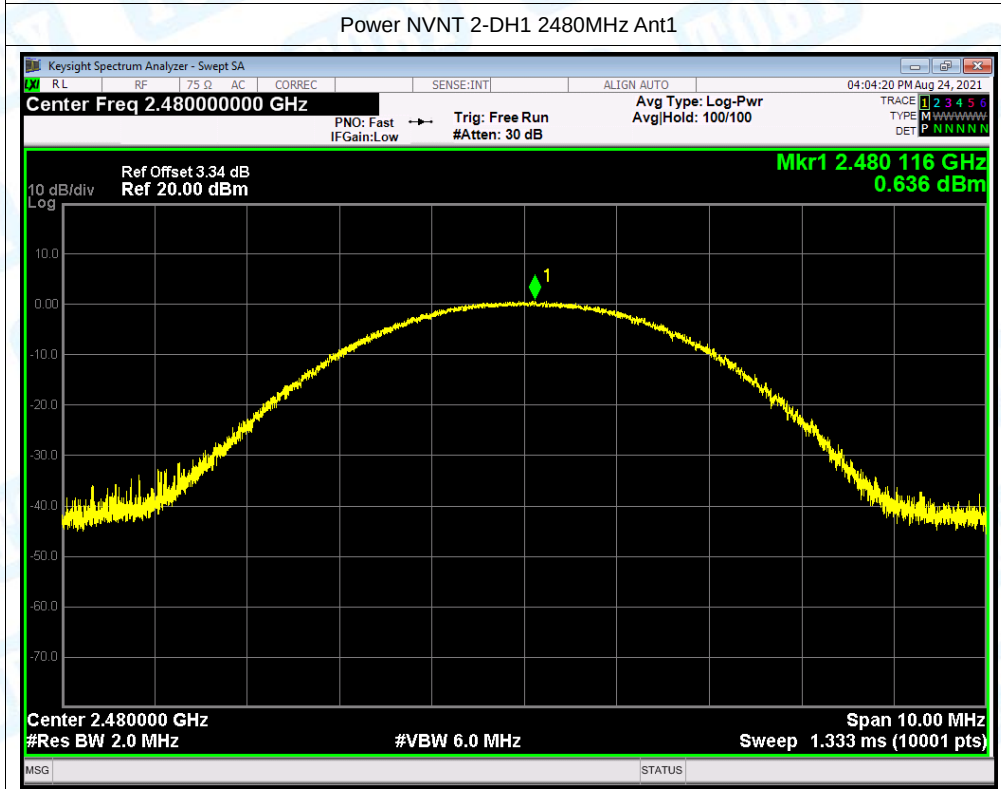
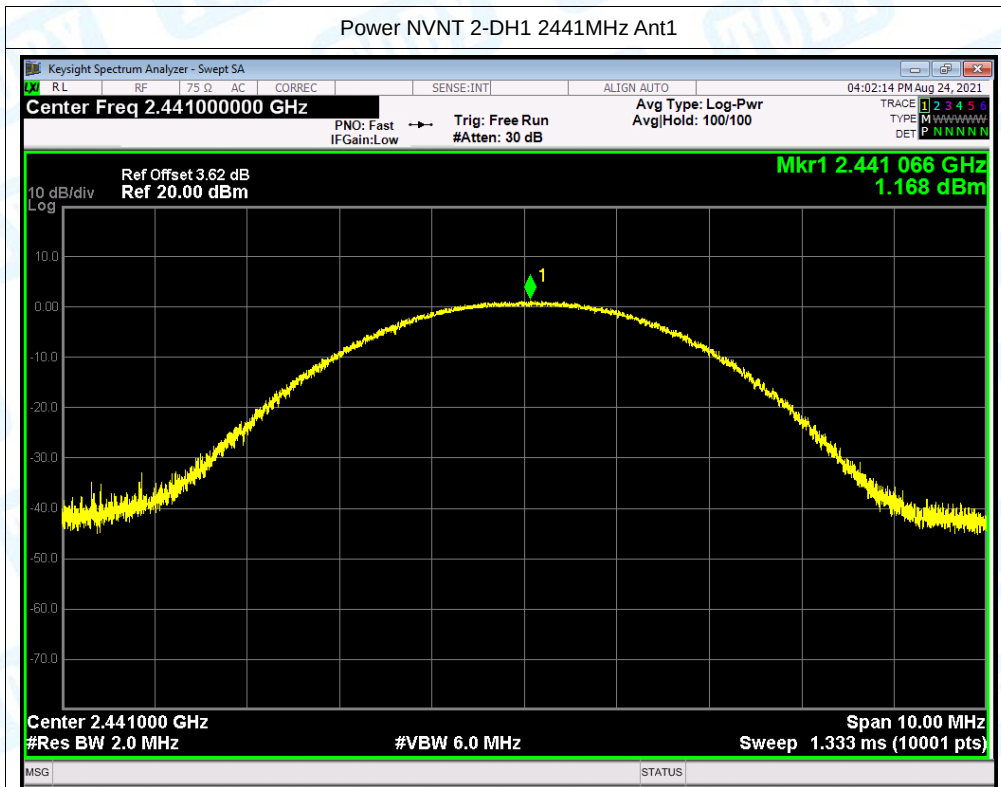


Power NVNT 1-DH1 2441MHz Ant1

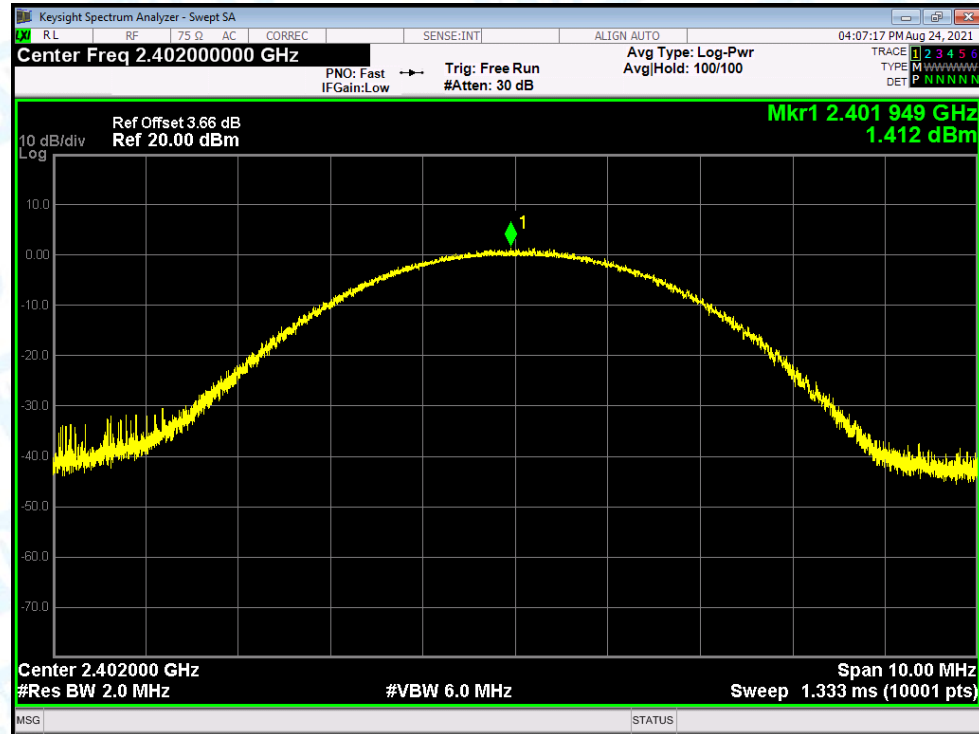




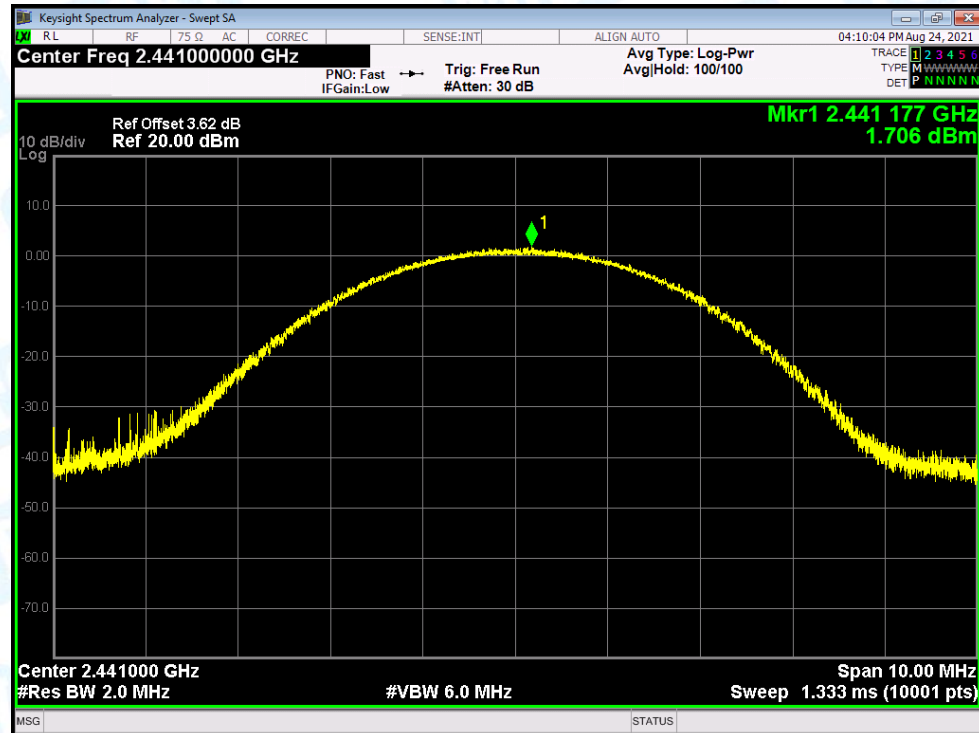


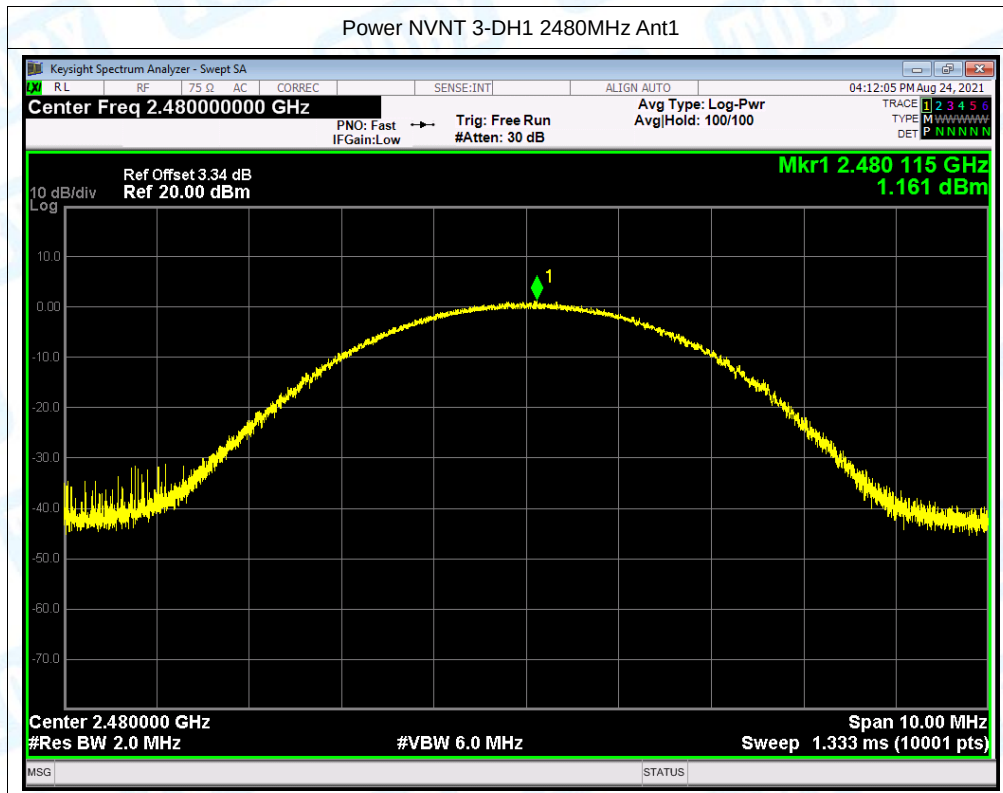


Power NVNT 3-DH1 2402MHz Ant1



Power NVNT 3-DH1 2441MHz Ant1



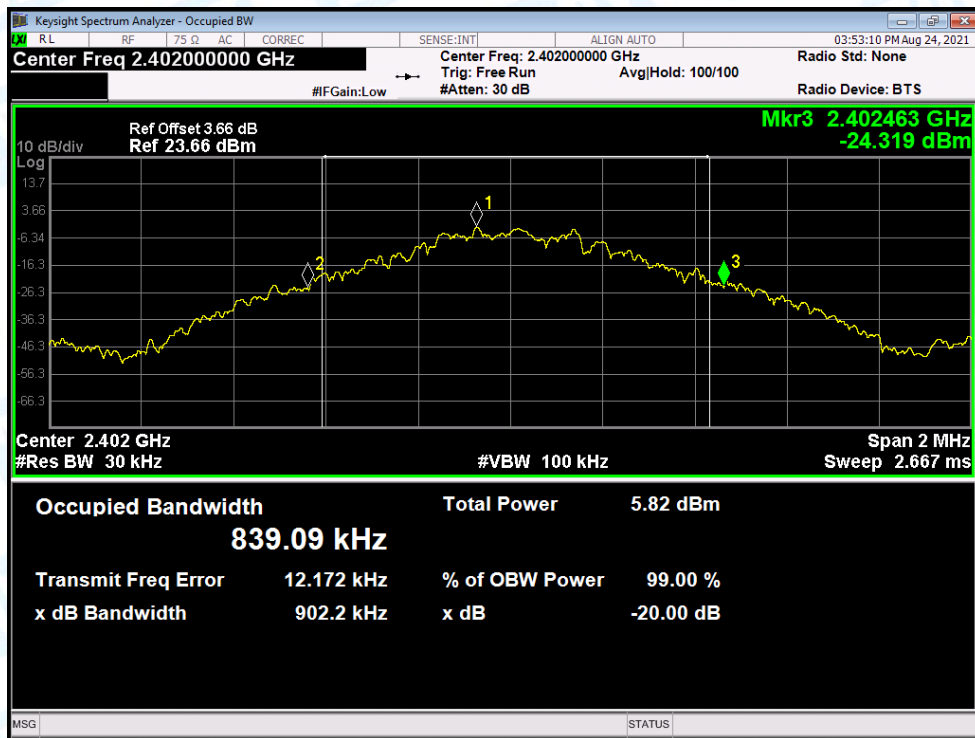


2. -20dB Bandwidth

Condition	Mode	Frequency (MHz)	-20 dB Bandwidth (MHz)	99% OBW (MHz)	2/3 *20dB BW (MHz)
NVNT	1-DH1	2402	0.902	0.83909	0.601
NVNT	1-DH1	2441	0.933	0.85357	0.622
NVNT	1-DH1	2480	0.955	0.86509	0.637
NVNT	2-DH1	2402	1.333	1.2145	0.889
NVNT	2-DH1	2441	1.311	1.1880	0.874
NVNT	2-DH1	2480	1.282	1.2013	0.855
NVNT	3-DH1	2402	1.278	1.1881	0.852
NVNT	3-DH1	2441	1.293	1.2027	0.862
NVNT	3-DH1	2480	1.311	1.2066	0.874

Test Graphs

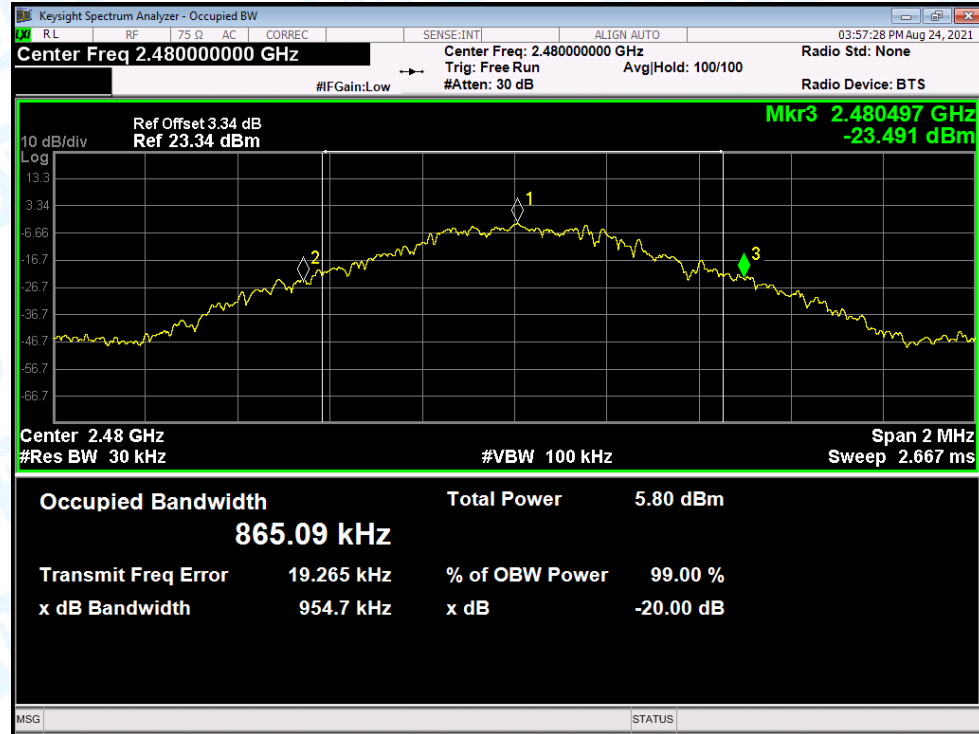
-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



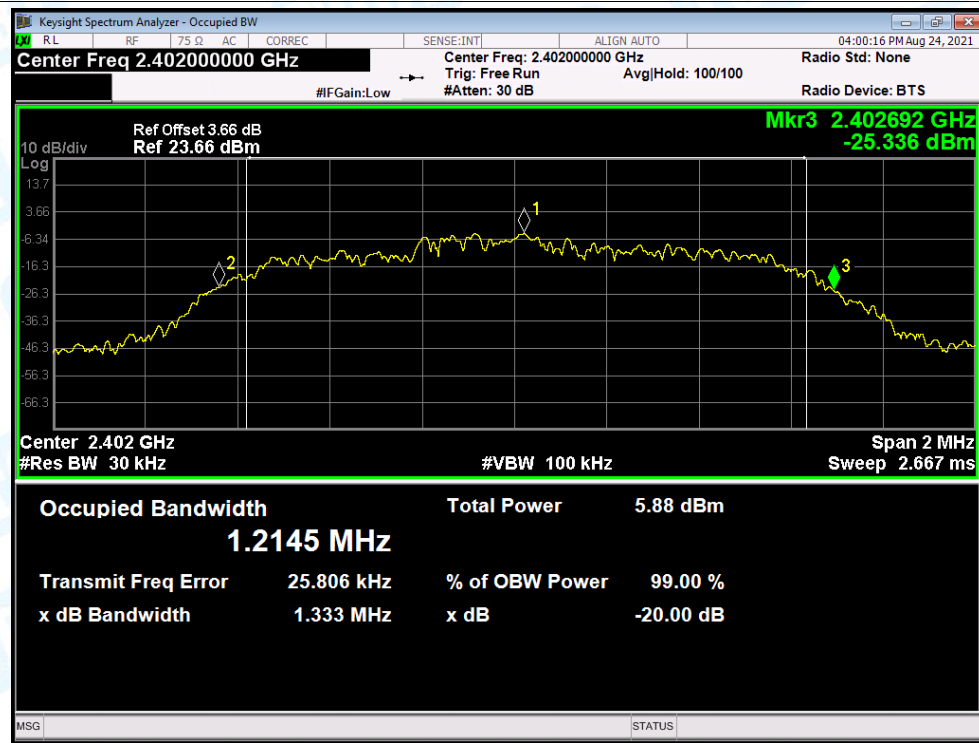
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



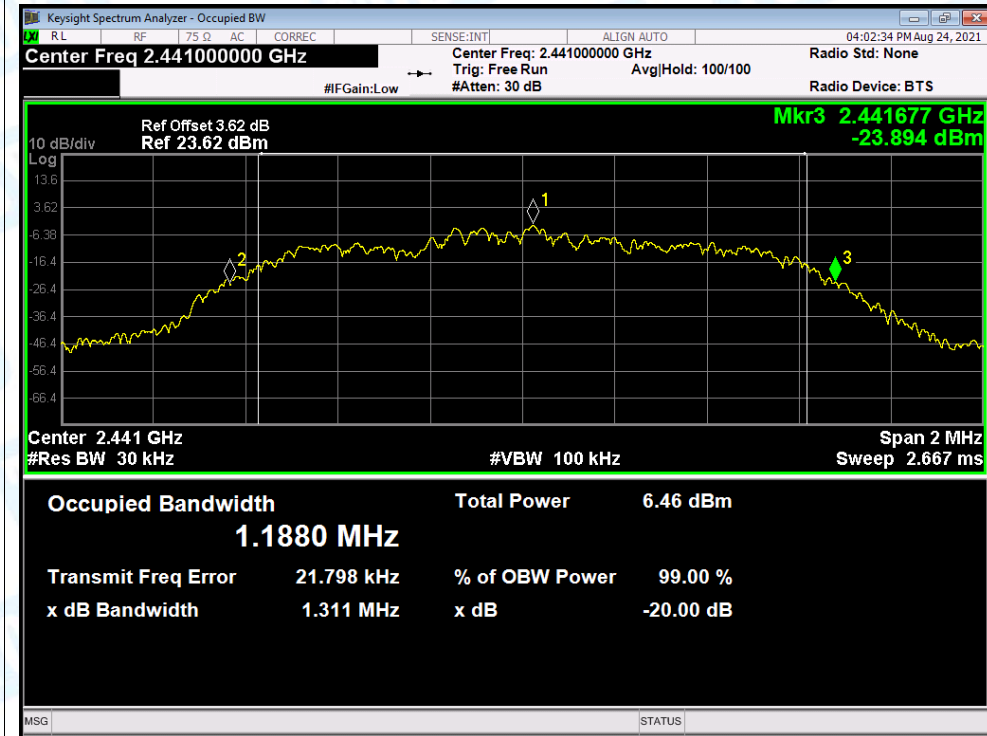
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



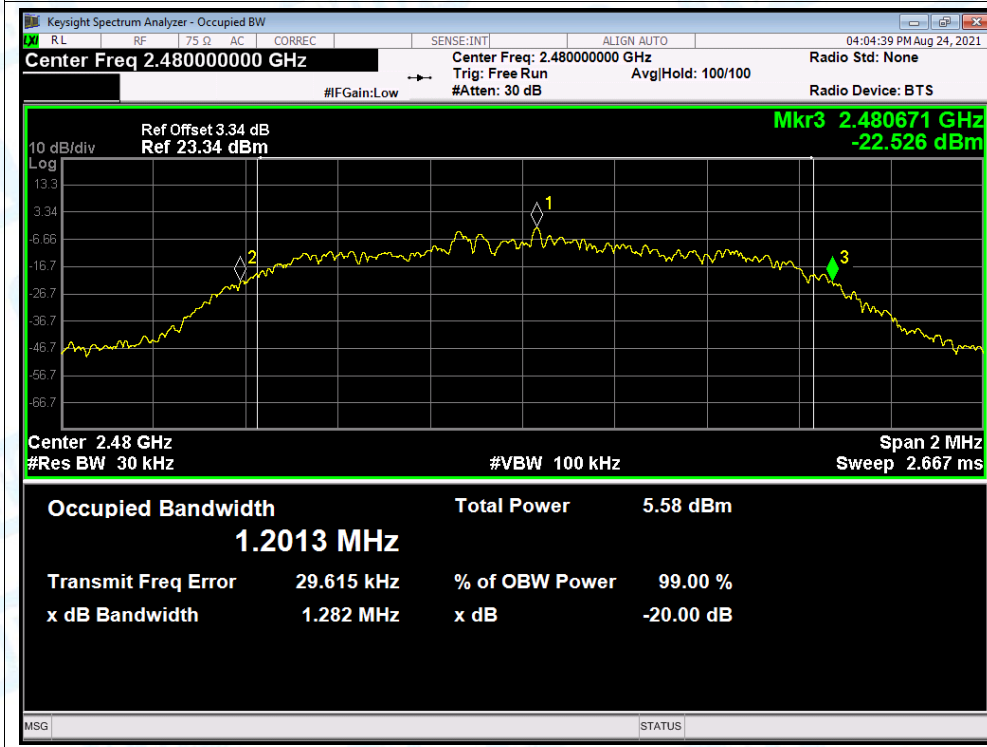
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



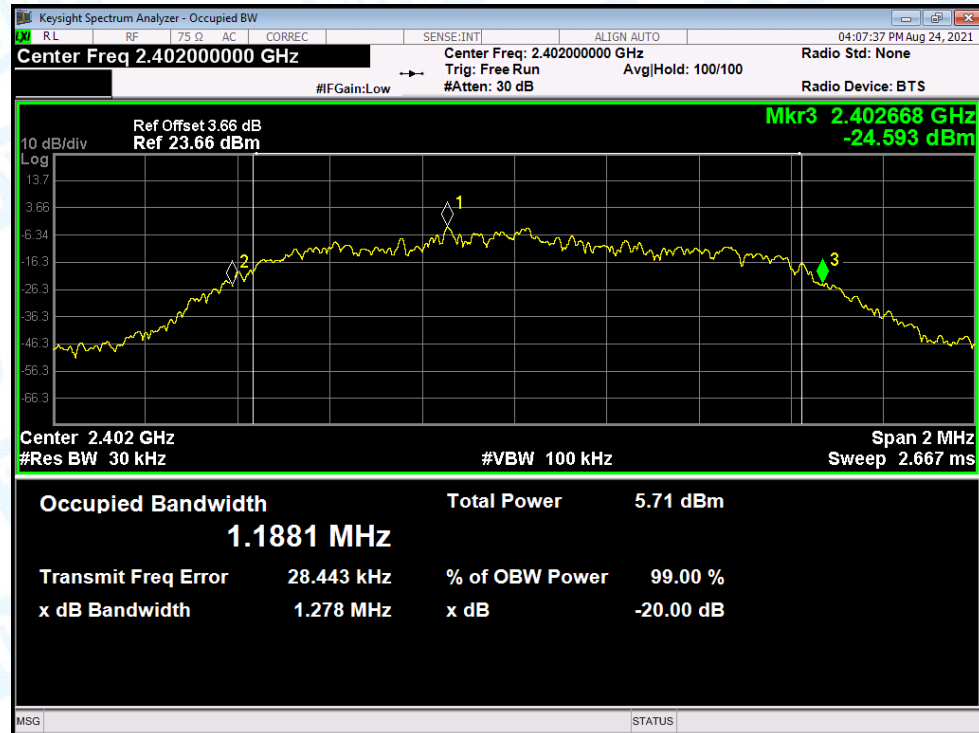
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



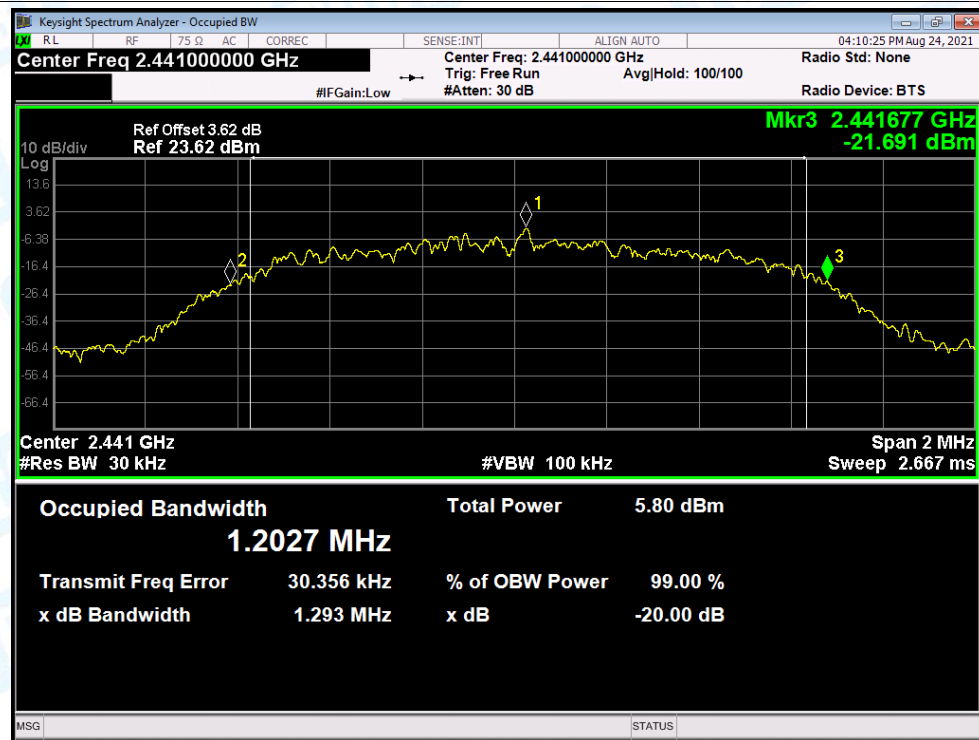
-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

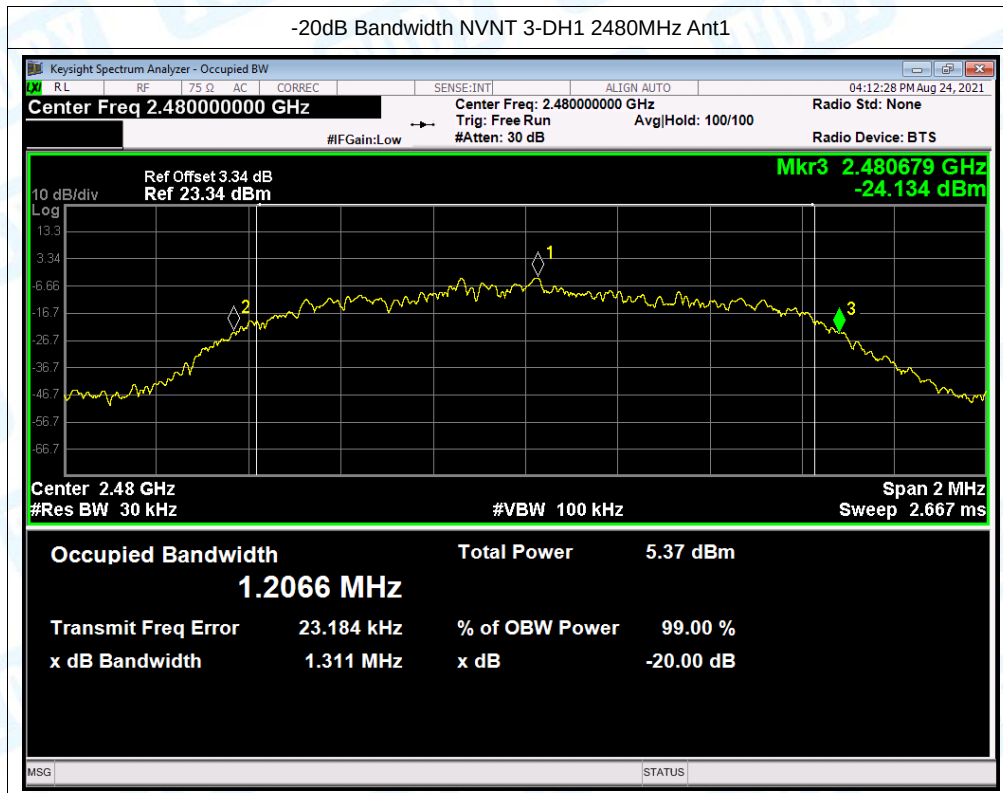


-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



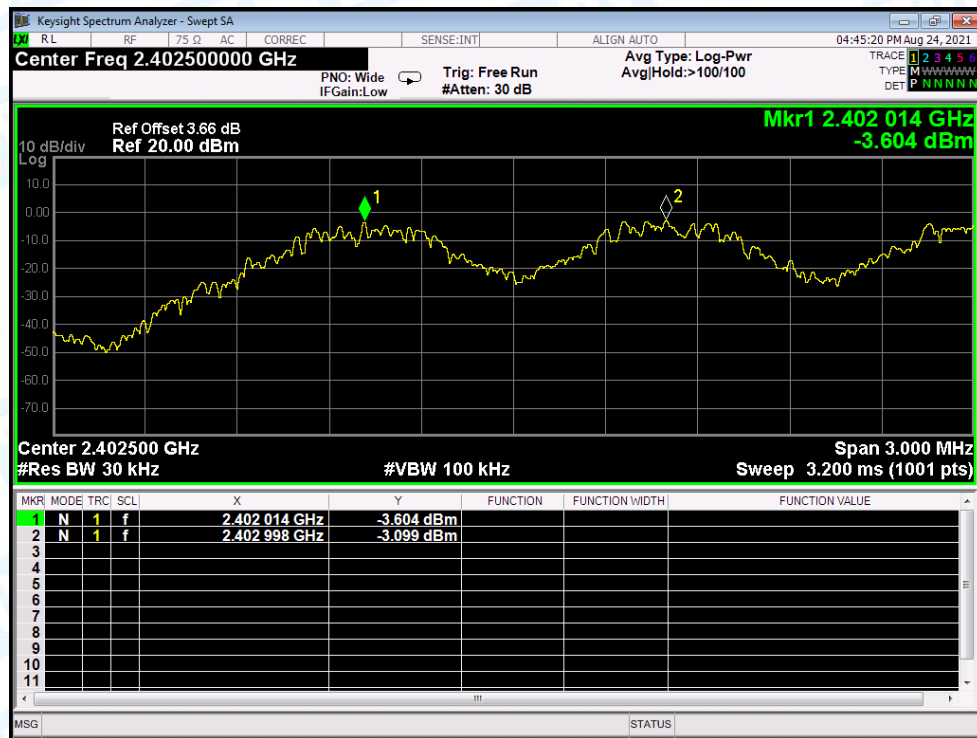


3. Carrier Frequencies Separation

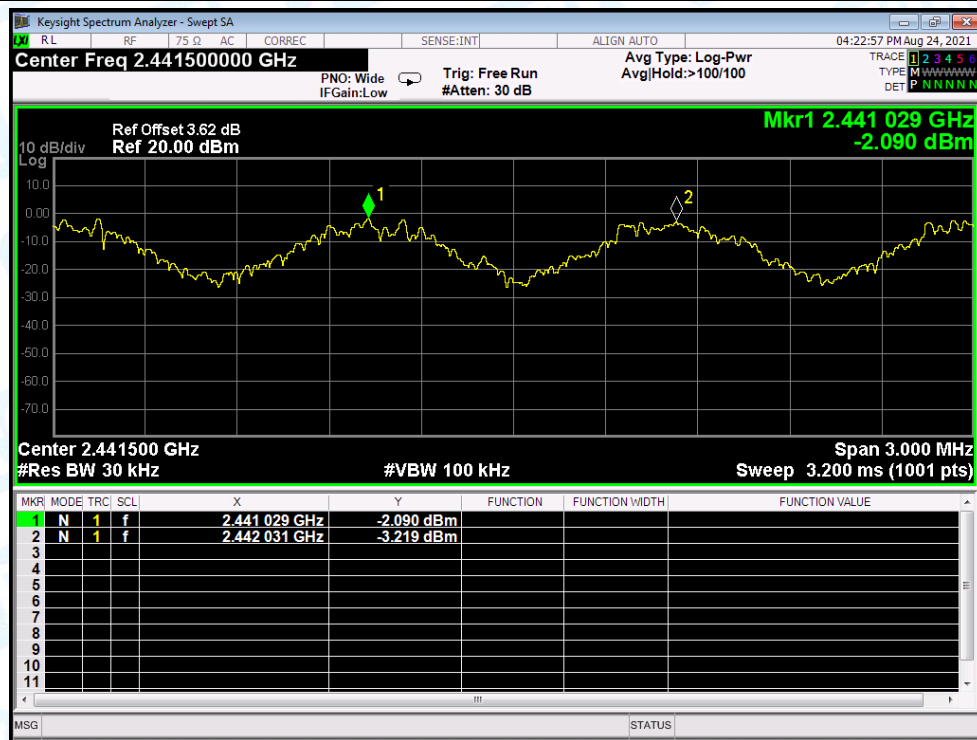
Condition	Mode	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	2402.014	2402.998	0.984	0.601	Pass
NVNT	1-DH1	2441.029	2442.031	1.002	0.622	Pass
NVNT	1-DH1	2479.035	2480.001	0.966	0.637	Pass
NVNT	2-DH1	2401.933	2402.911	0.978	0.889	Pass
NVNT	2-DH1	2440.93	2442.046	1.116	0.874	Pass
NVNT	2-DH1	2479.035	2480.034	0.999	0.855	Pass
NVNT	3-DH1	2401.963	2403.004	1.041	0.852	Pass
NVNT	3-DH1	2441.002	2441.995	0.993	0.862	Pass
NVNT	3-DH1	2478.855	2480.043	1.188	0.874	Pass

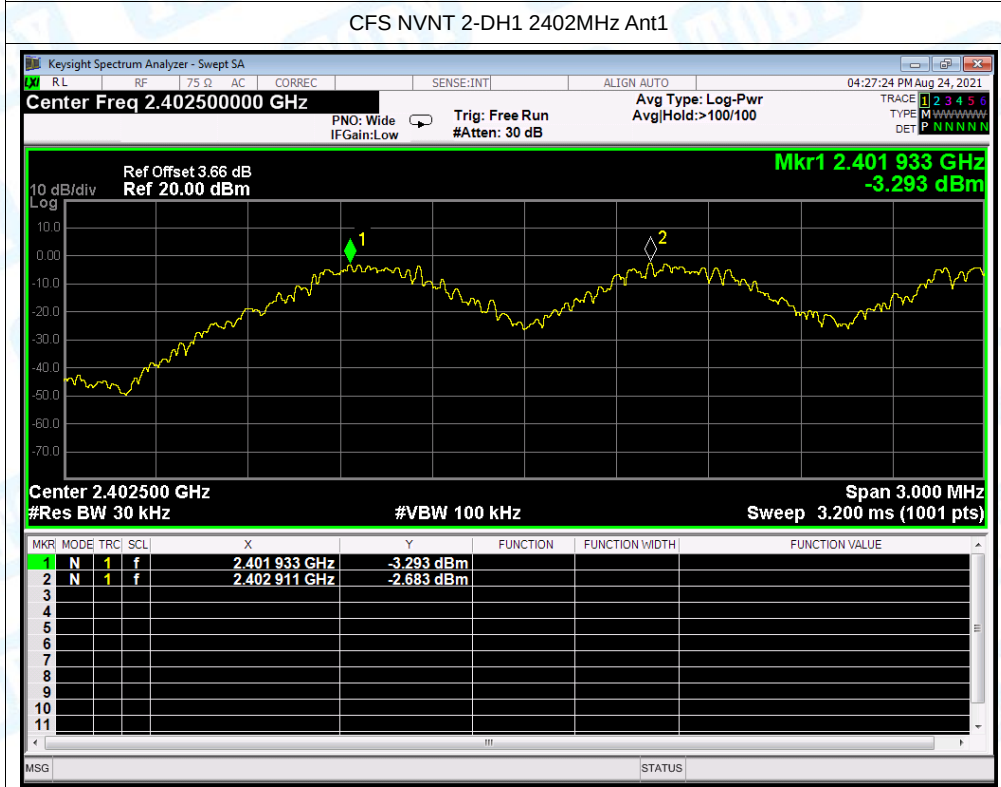
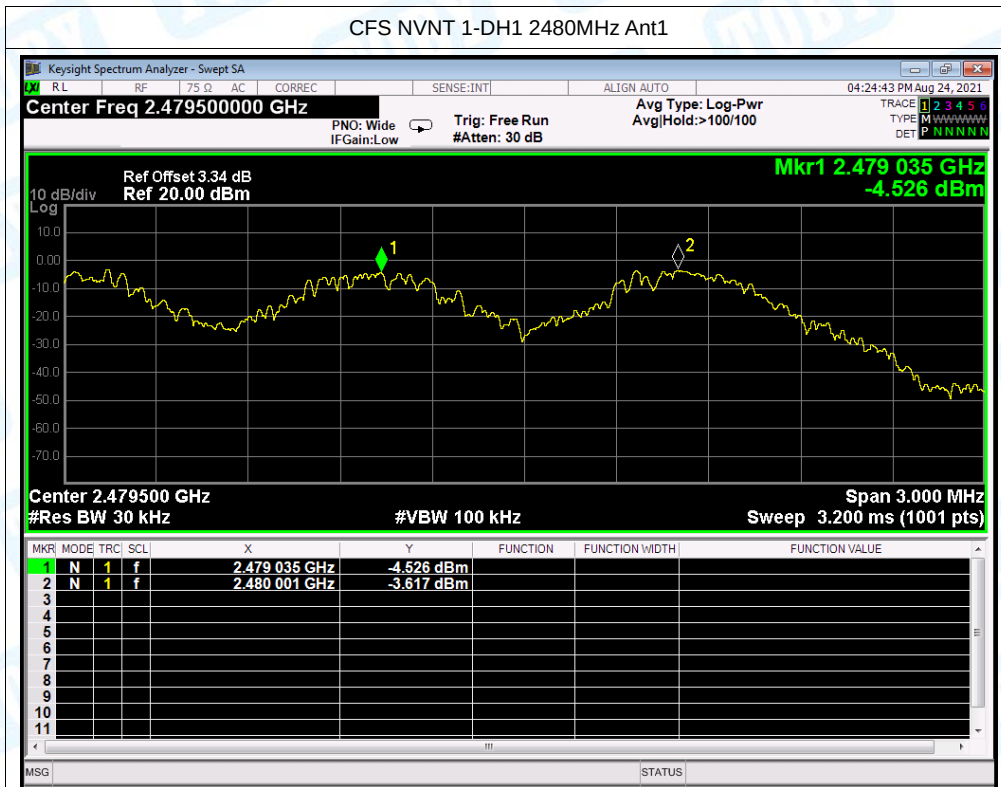
Test Graphs

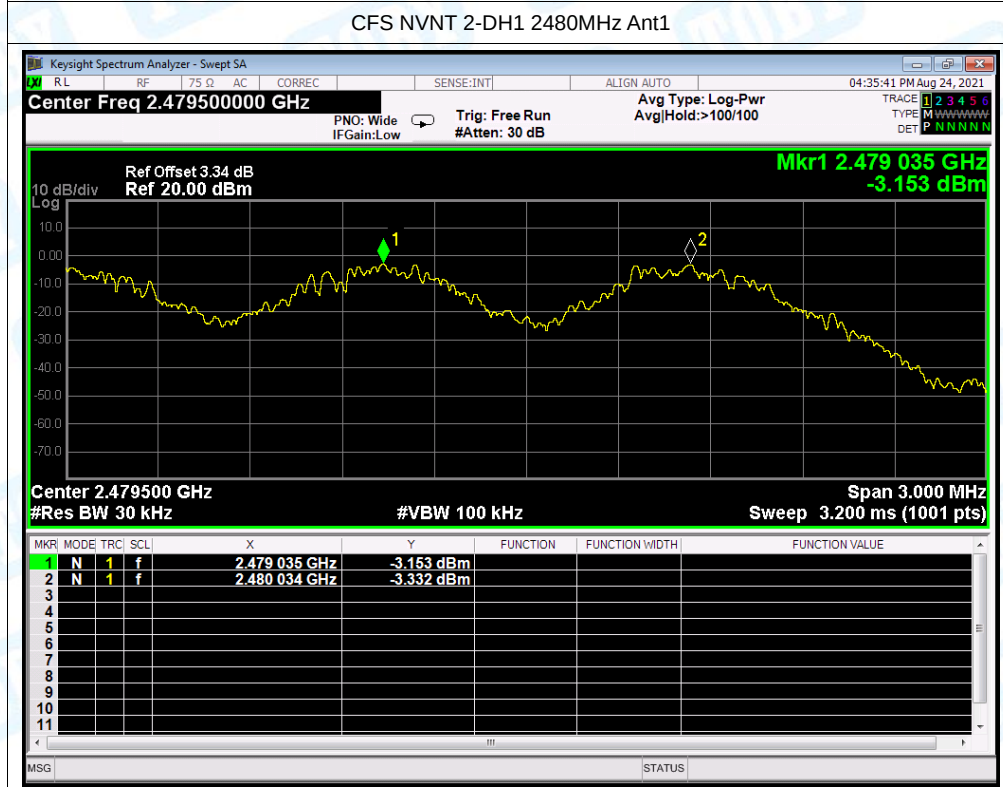
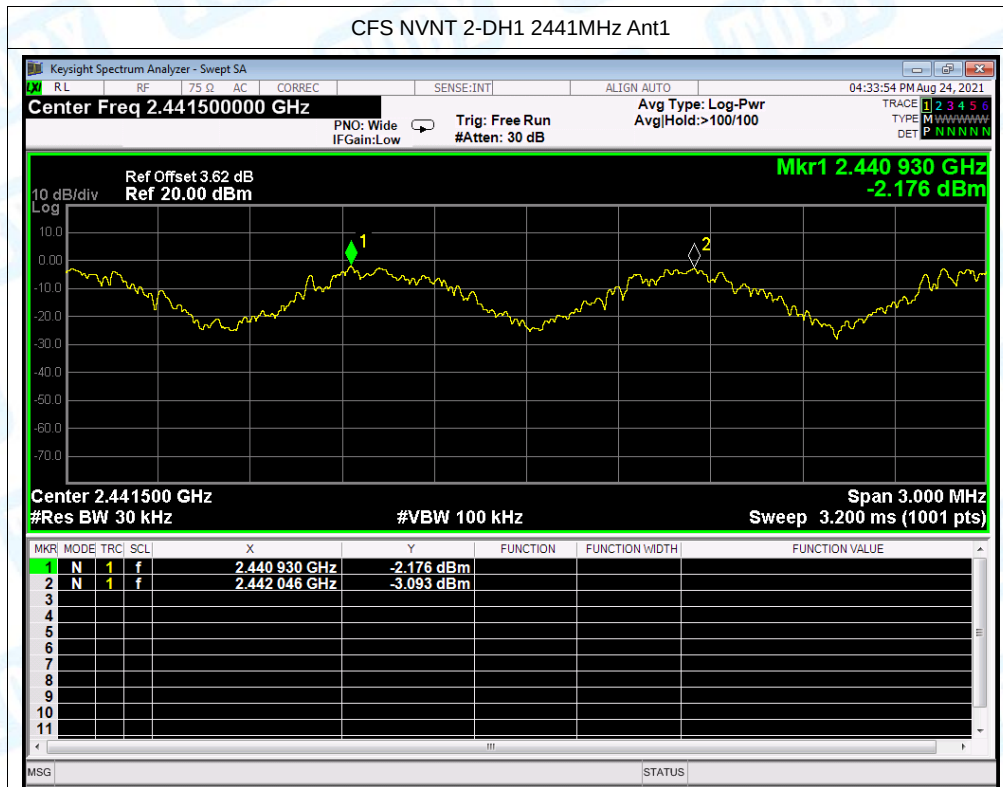
CFS NVNT 1-DH1 2402MHz Ant1

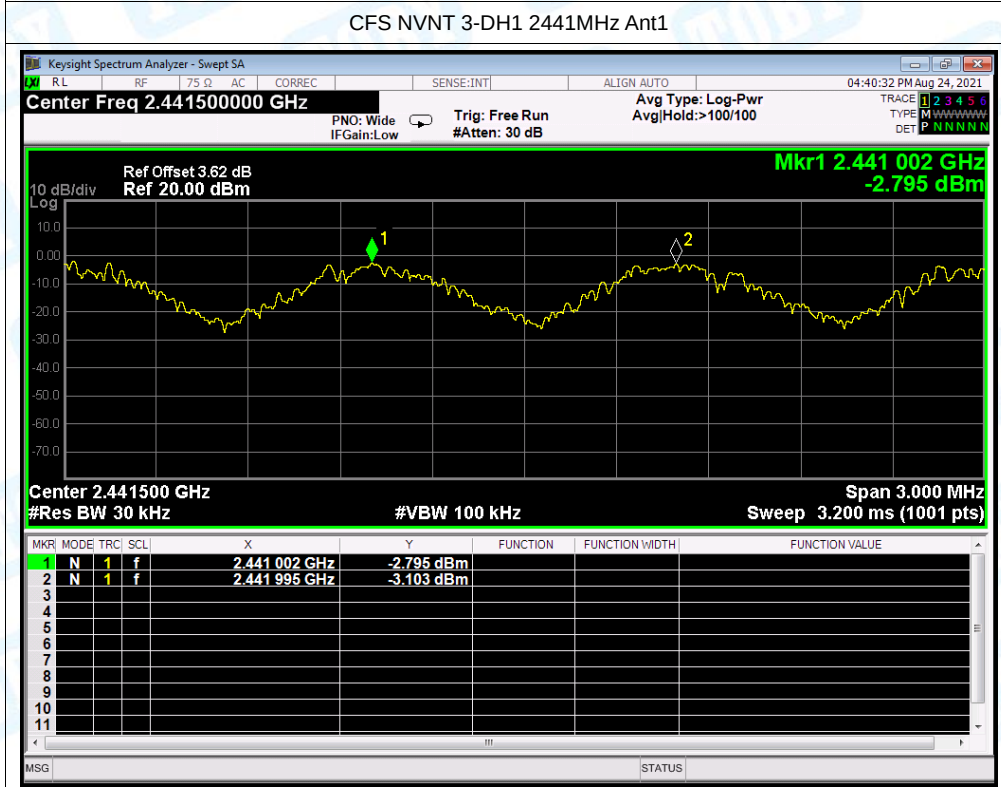
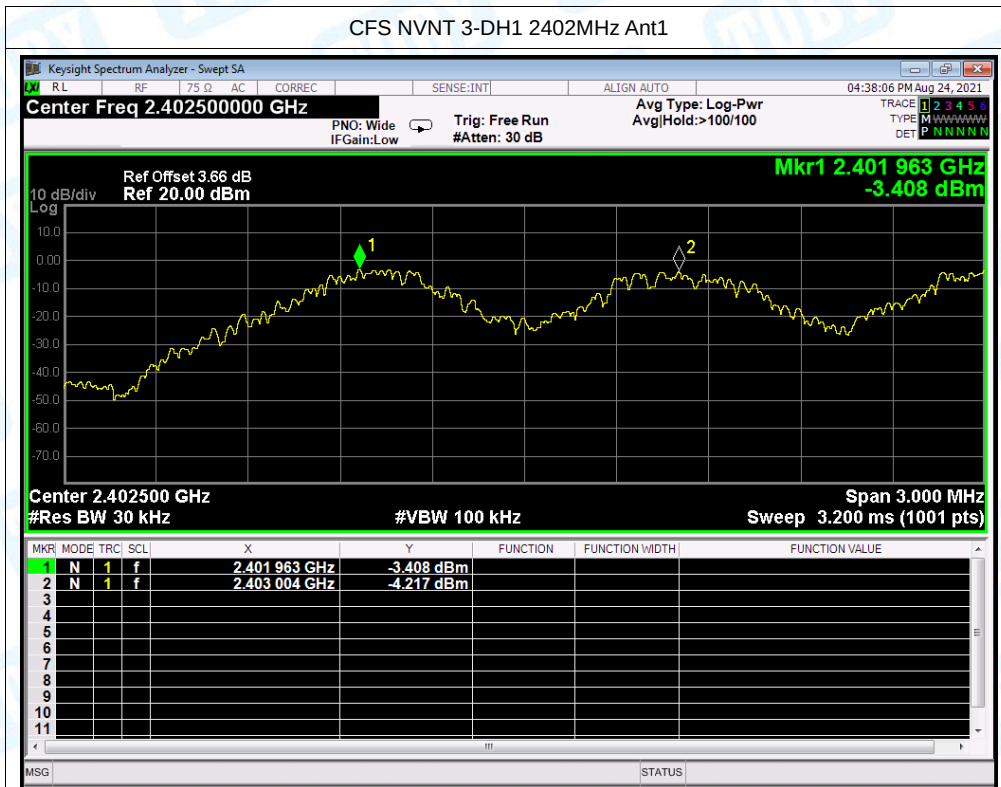


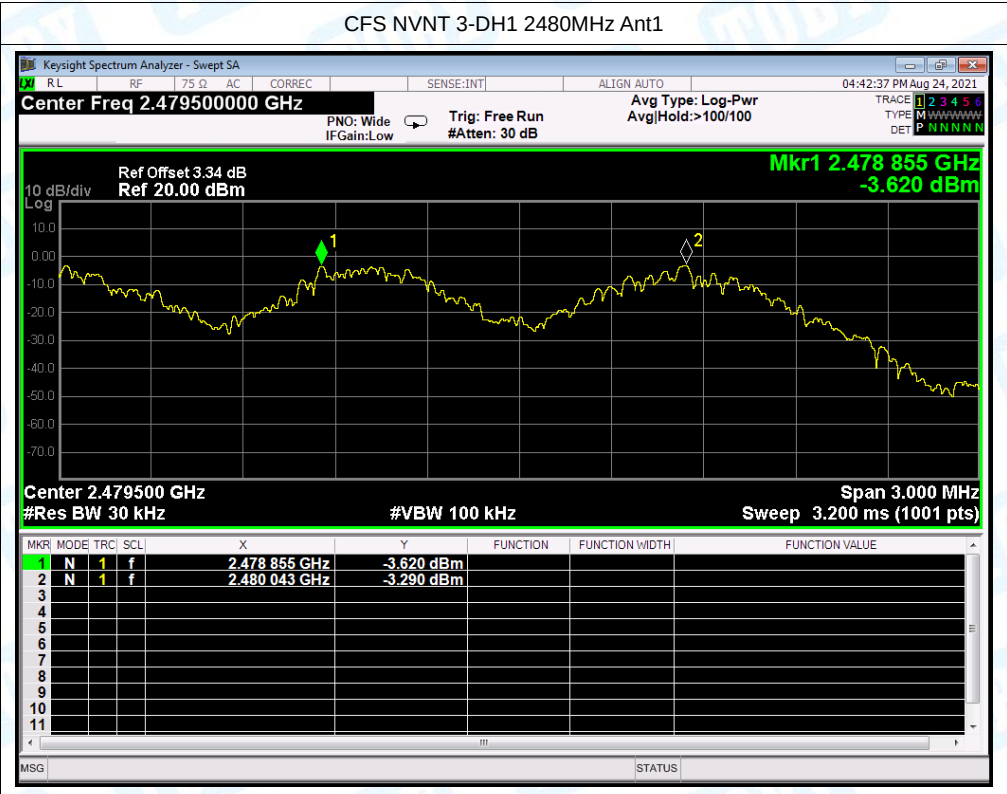
CFS NVNT 1-DH1 2441MHz Ant1





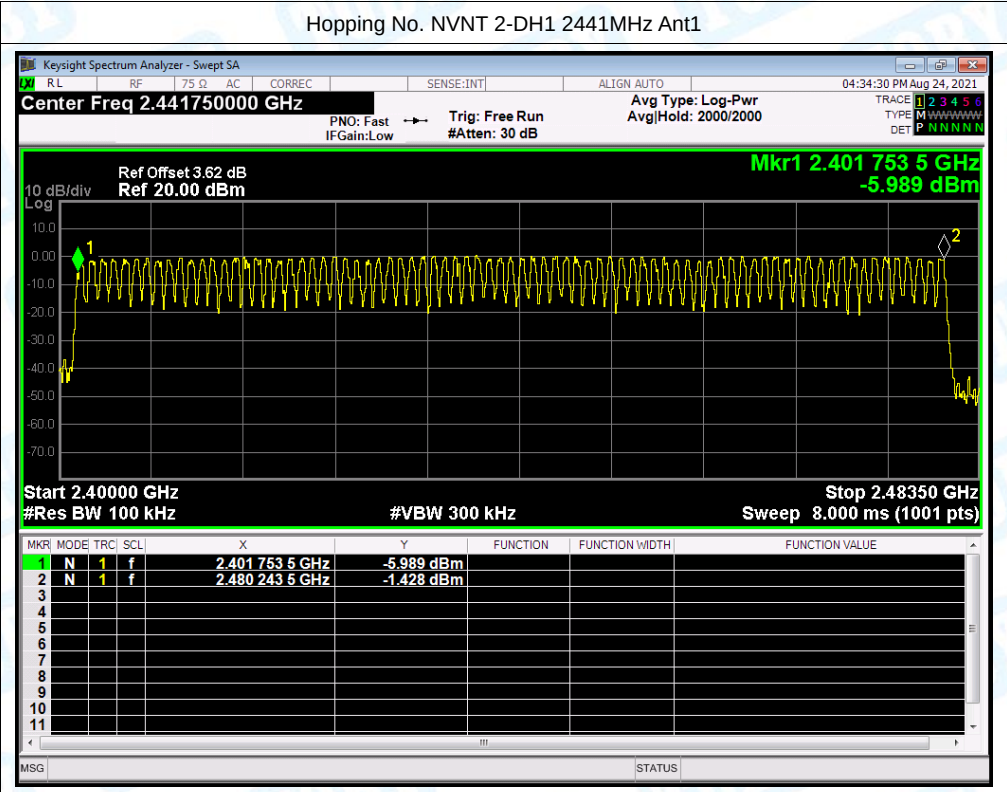
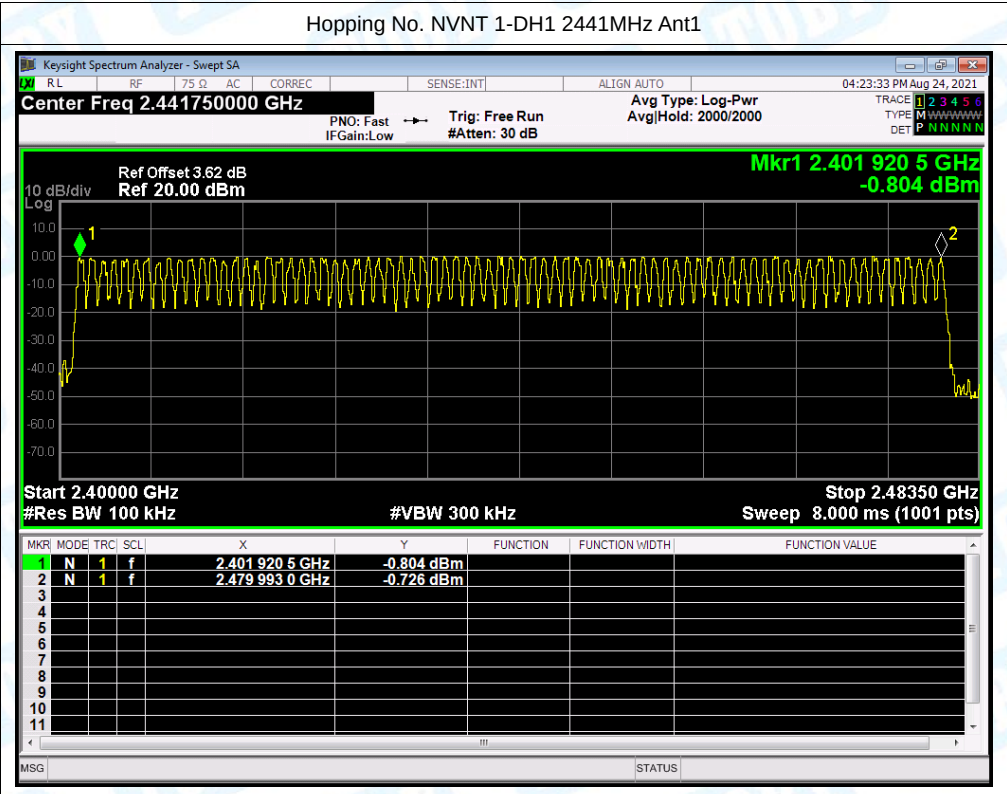


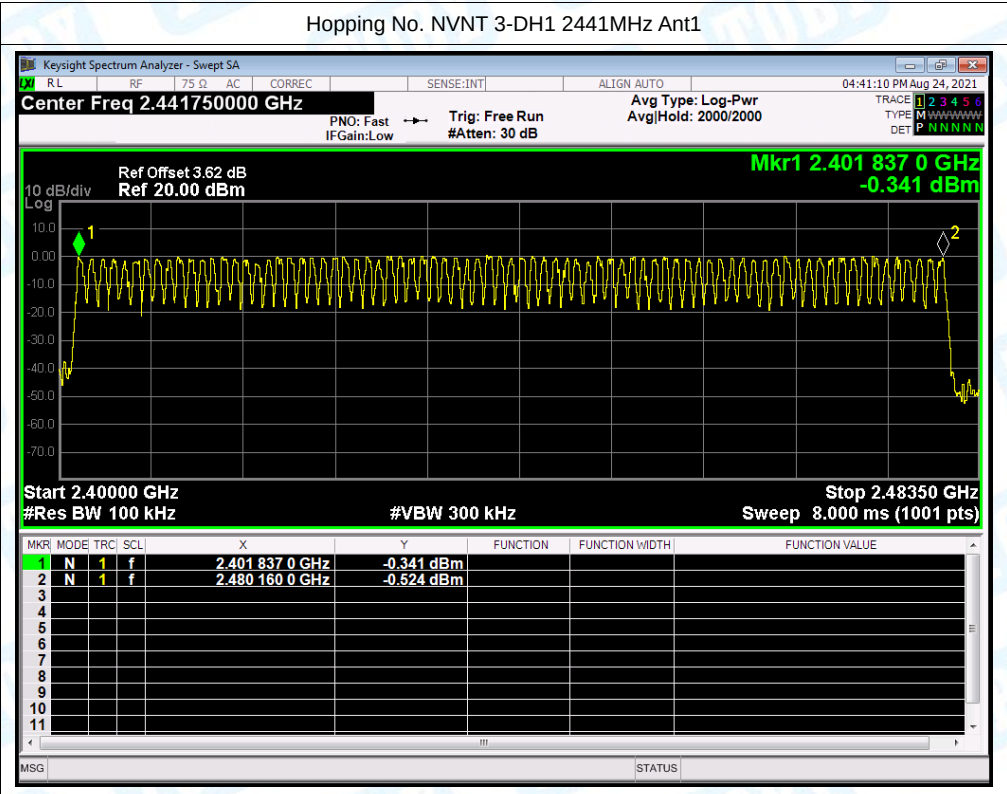




4. Number of Hopping Channel

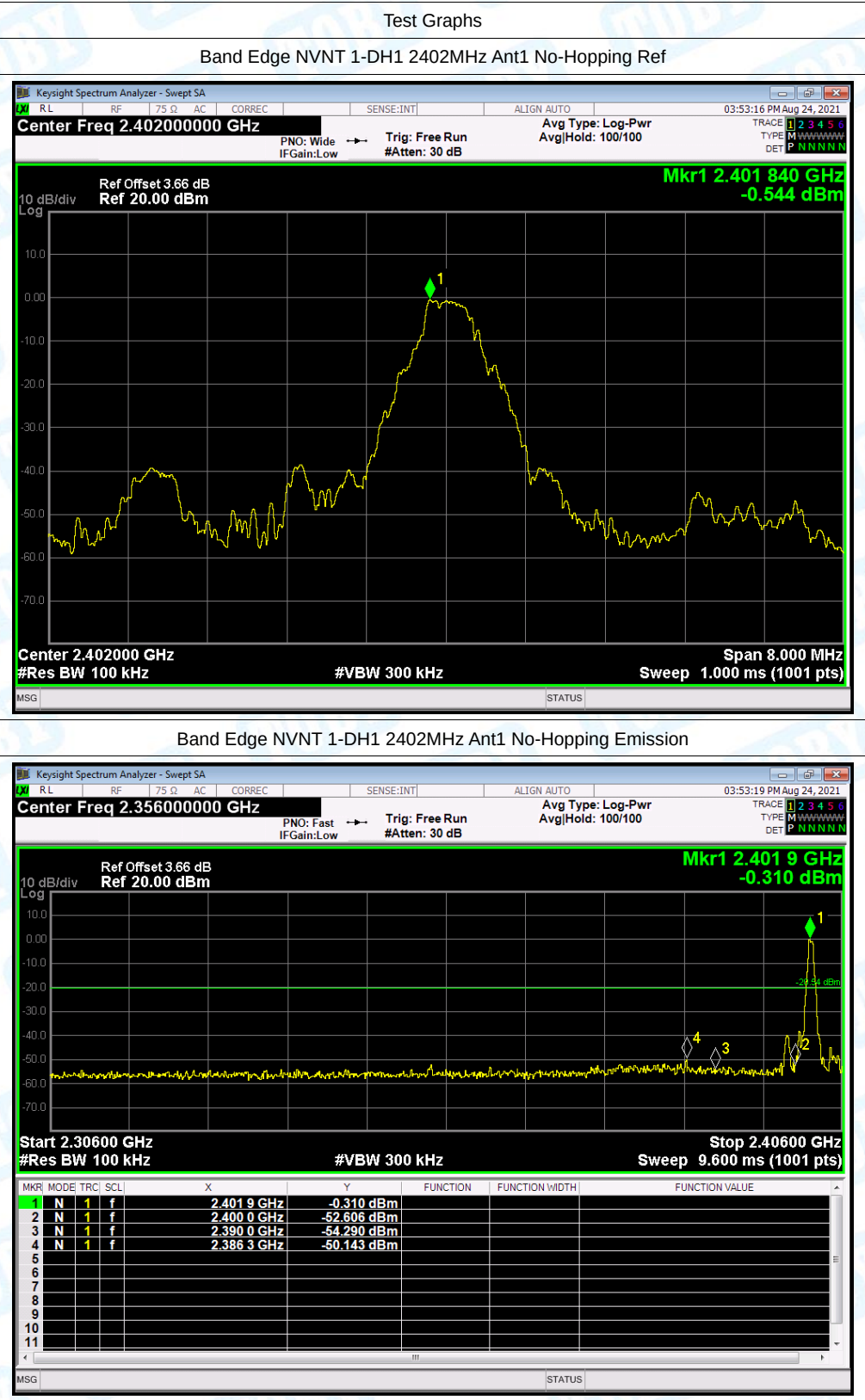
Condition	Mode	Hopping Number	Limit	Verdict
NVNT	1-DH1	79	15	Pass
NVNT	2-DH1	79	15	Pass
NVNT	3-DH1	79	15	Pass

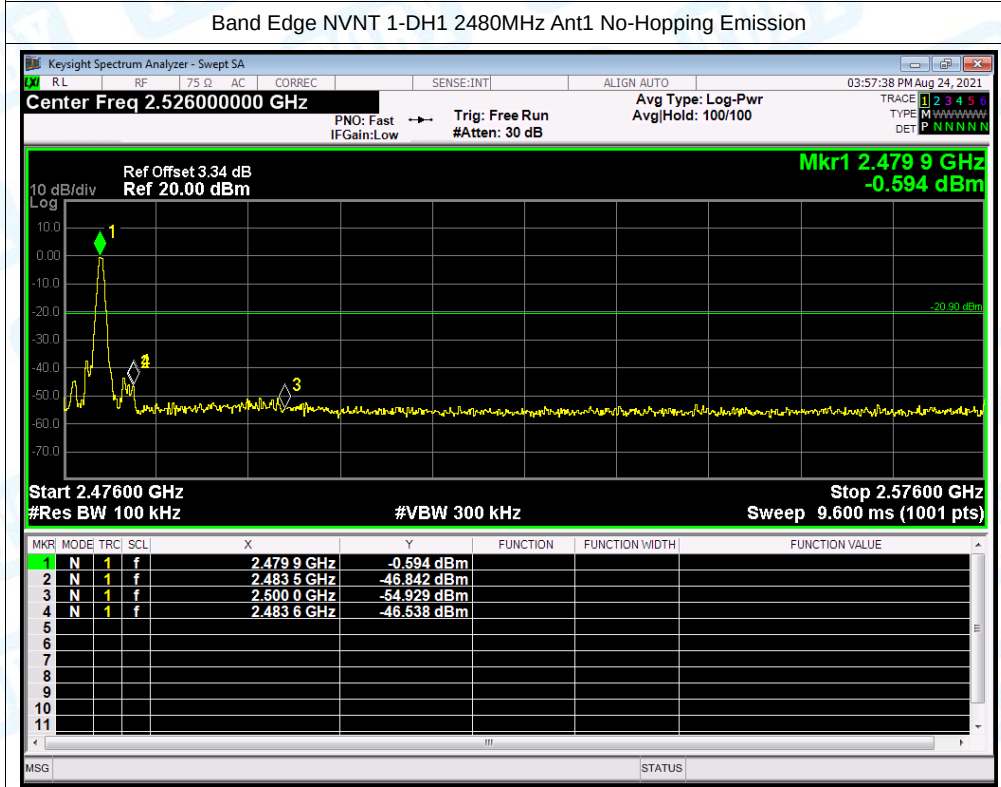


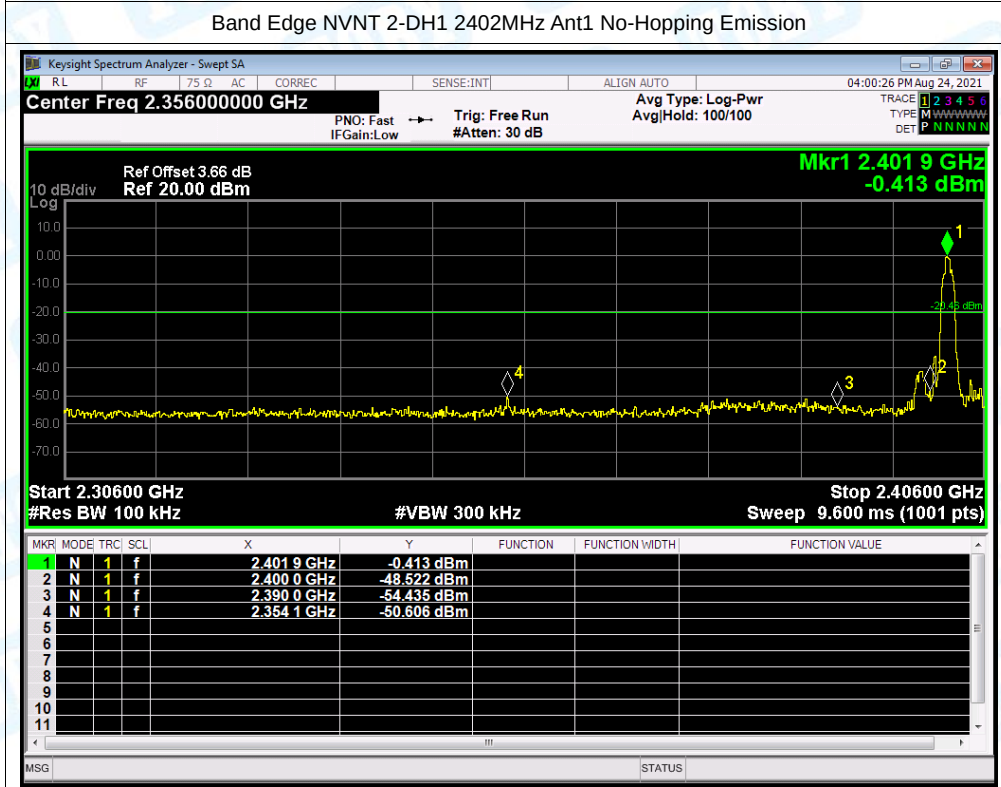


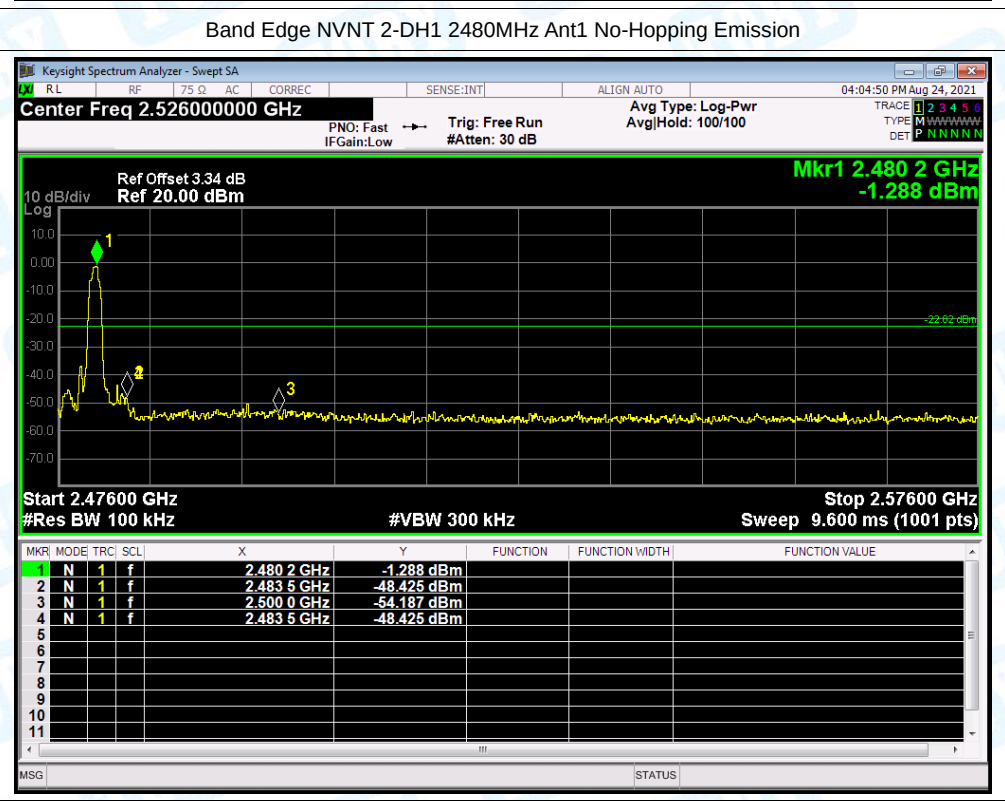
5. Band Edge

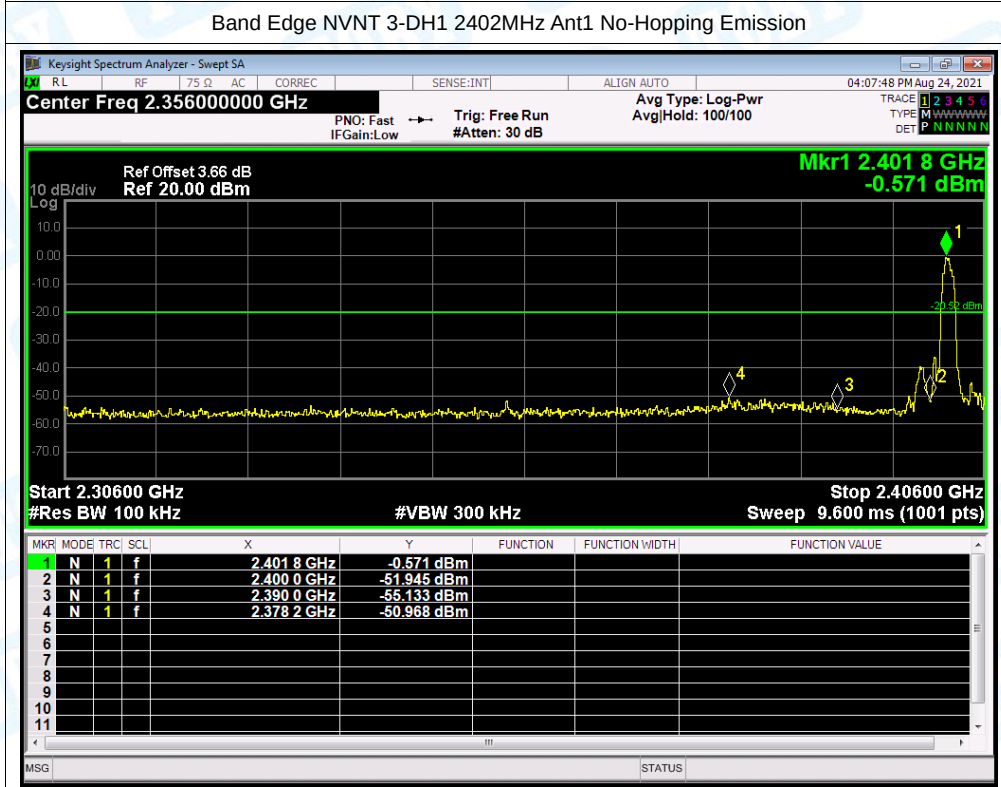
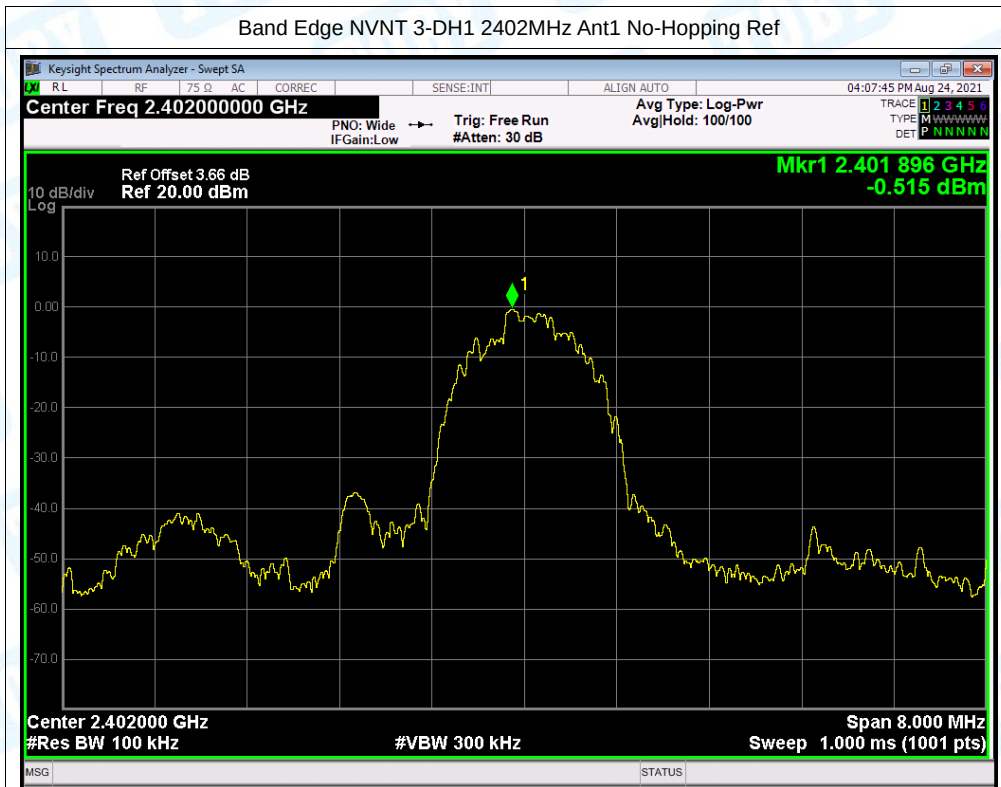
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-49.6	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-45.63	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-50.14	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-45.6	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-50.45	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-45.91	-20	Pass







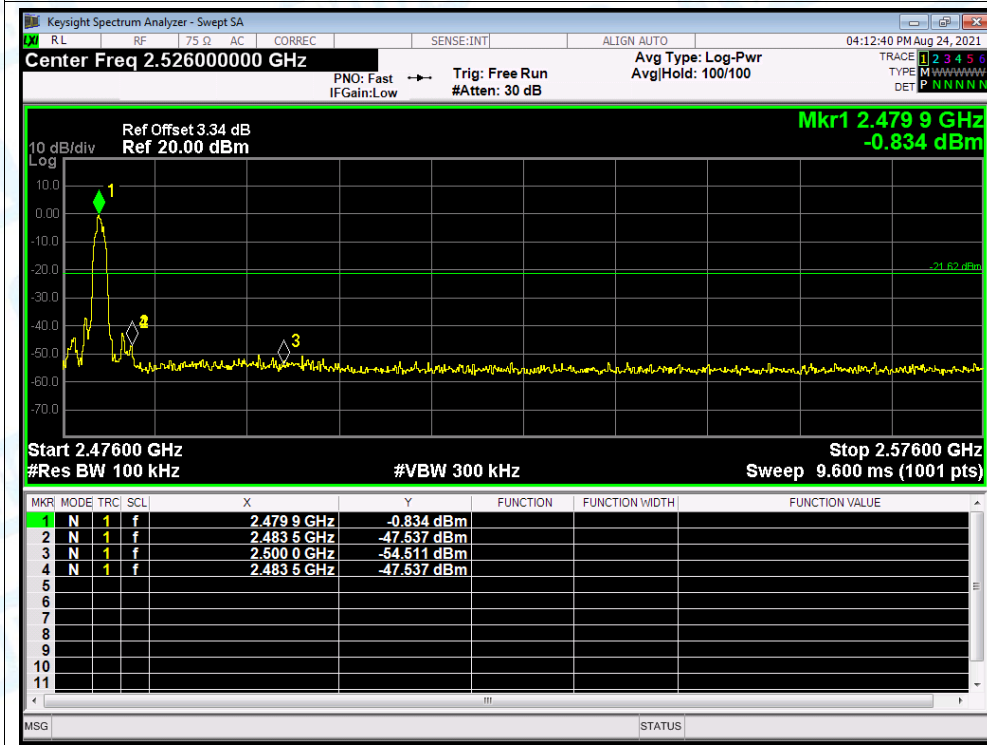




Band Edge NVNT 3-DH1 2480MHz Ant1 No-Hopping Ref



Band Edge NVNT 3-DH1 2480MHz Ant1 No-Hopping Emission



6. Band Edge (Hopping)

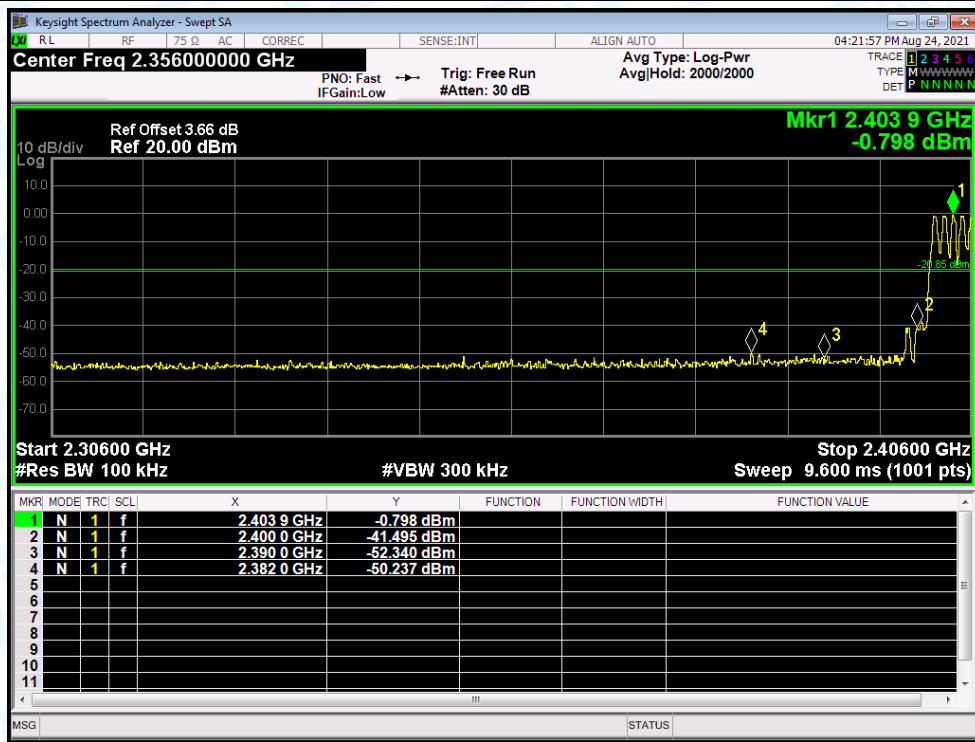
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-49.38	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-49.06	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-48.86	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-47.49	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-50.29	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-48.06	-20	Pass

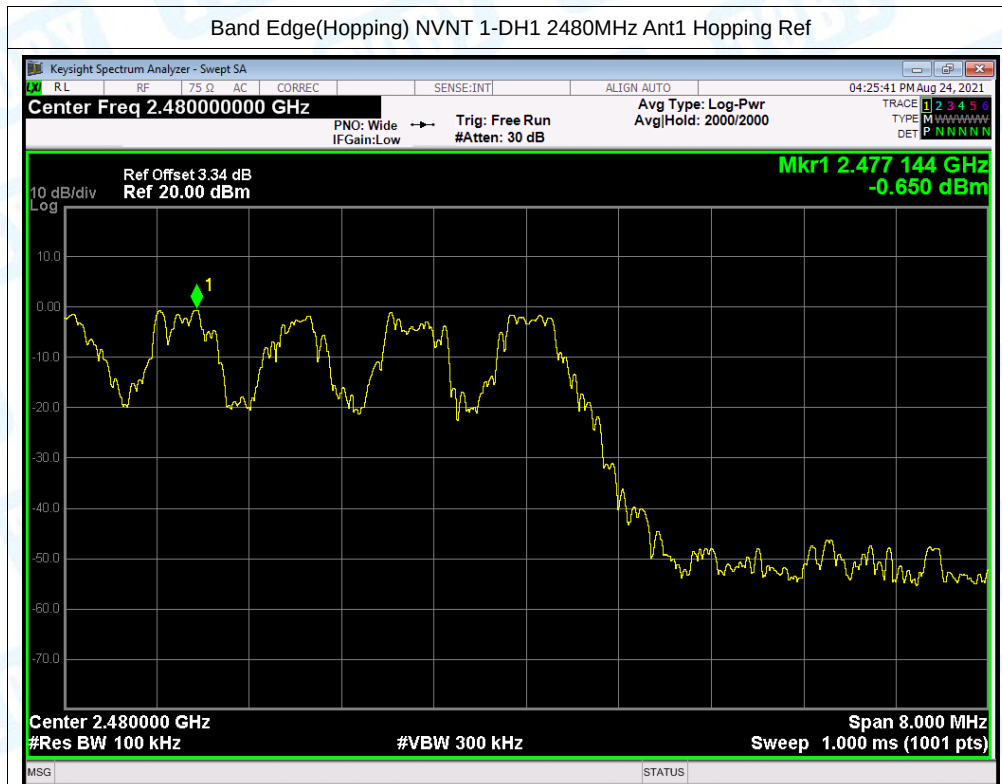
Test Graphs

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

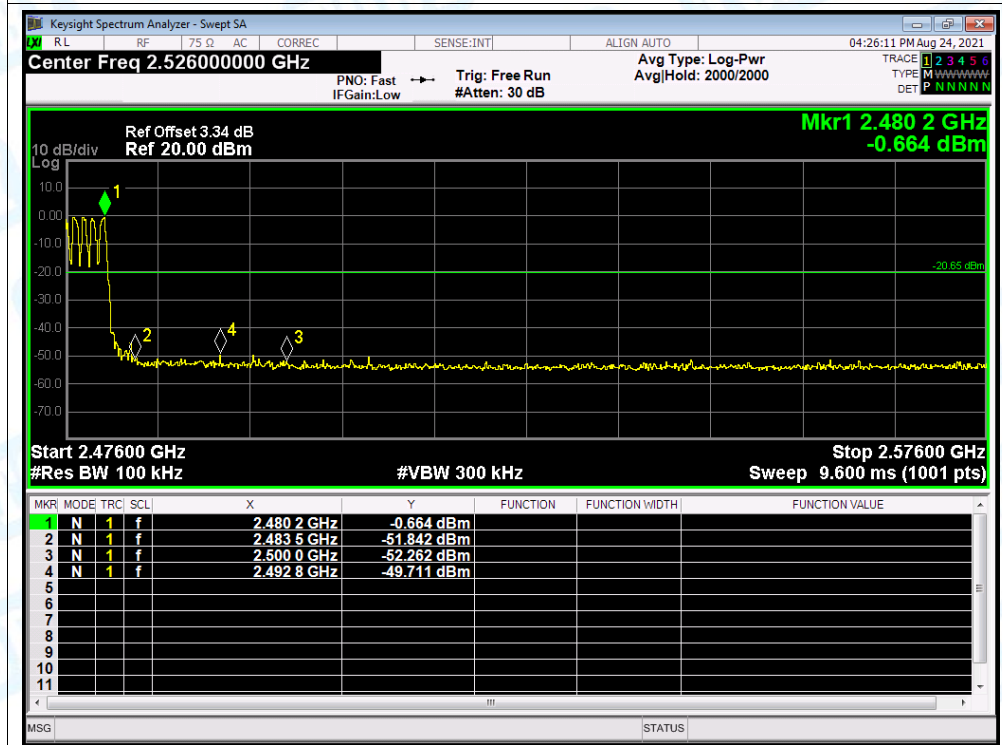


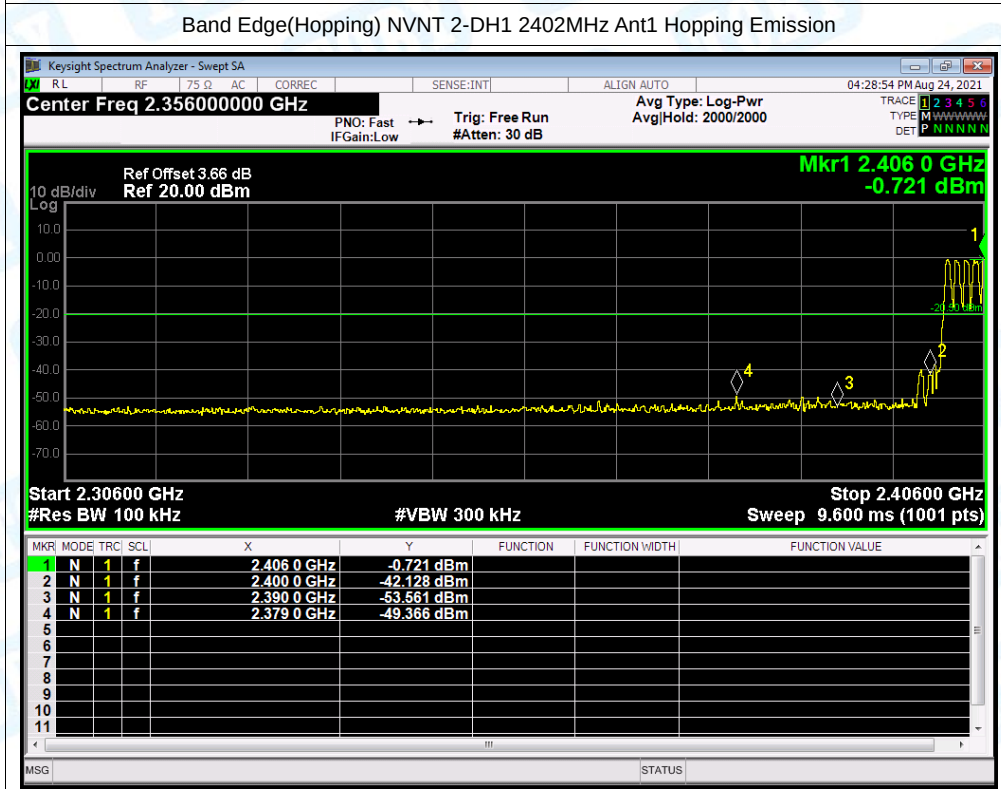
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission





Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Emission

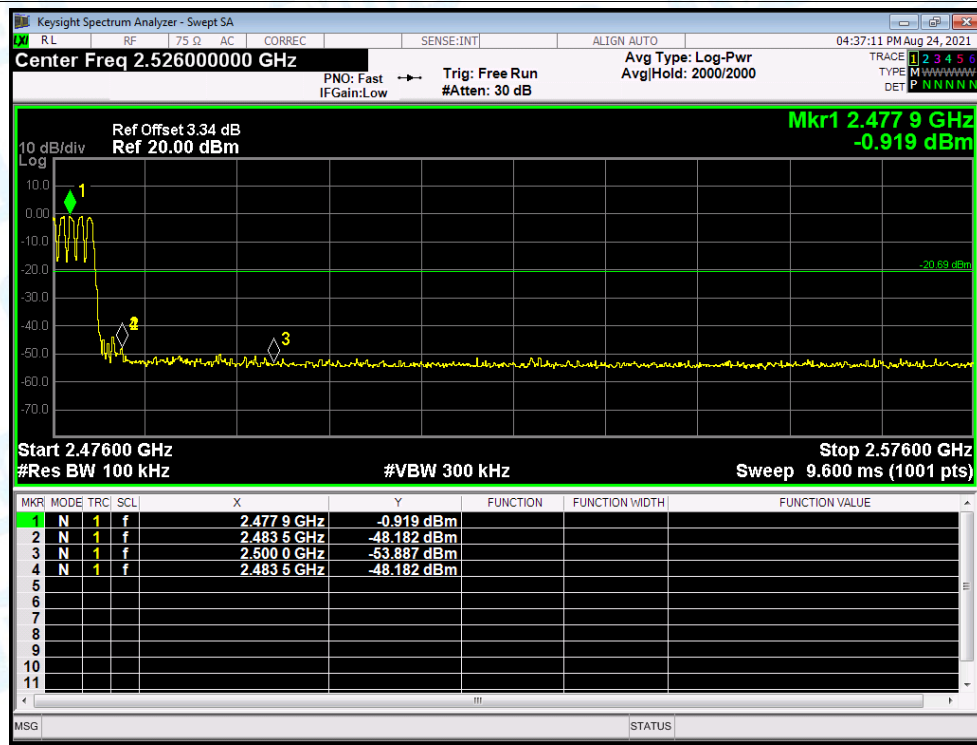




Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Ref



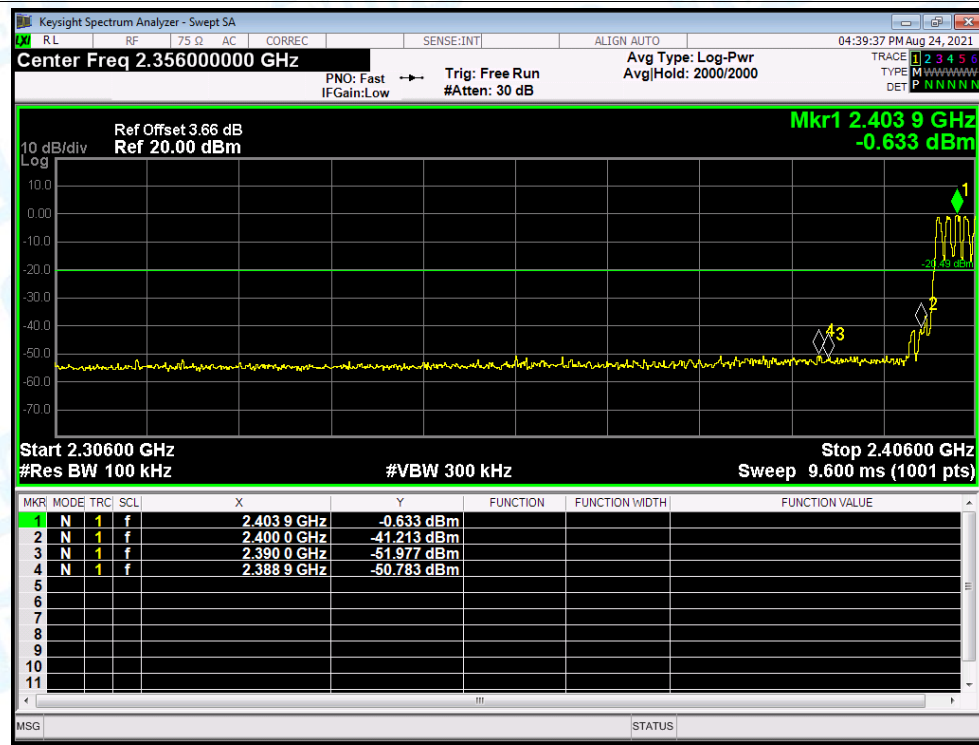
Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Emission

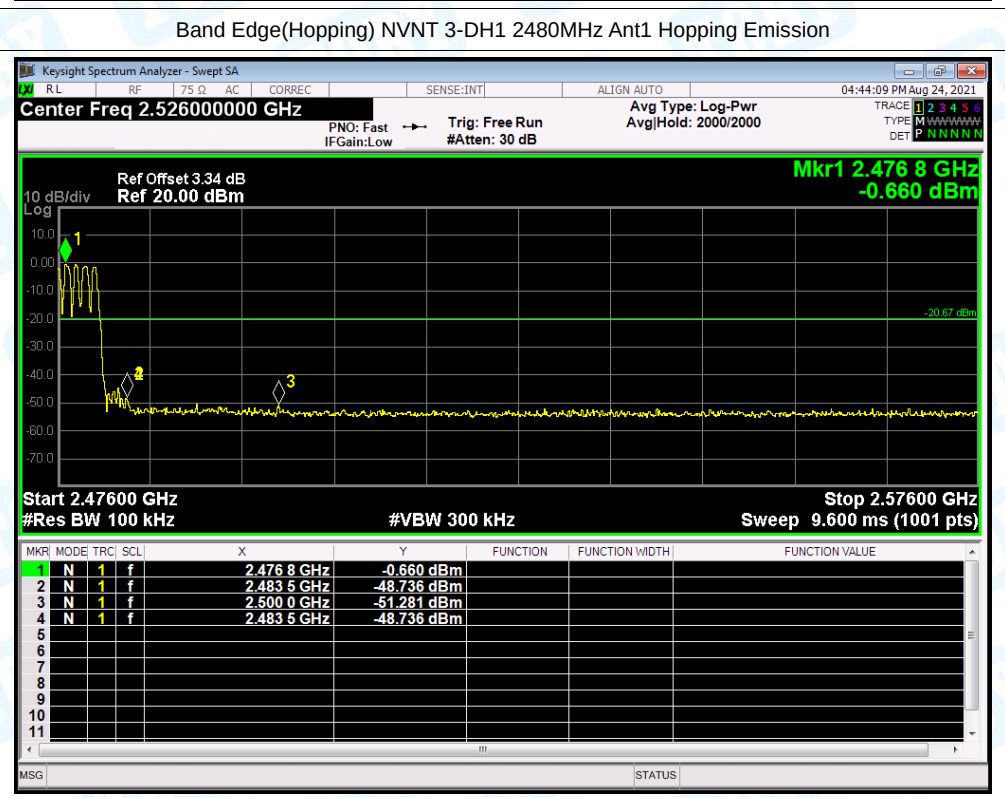


Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Ref



Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Emission



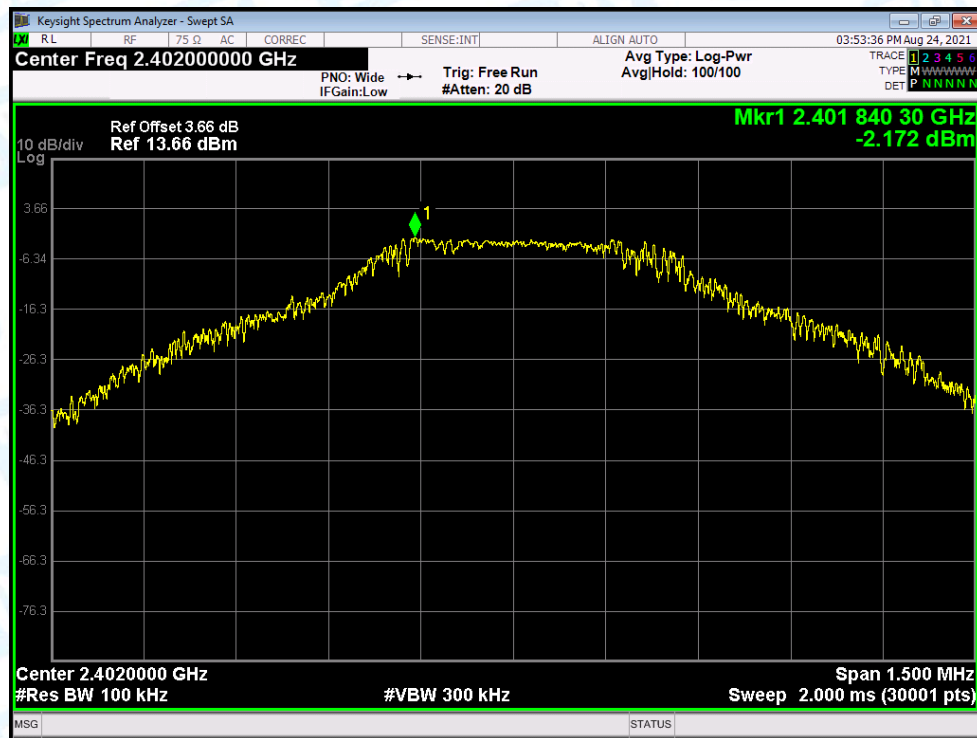


7. Conducted RF Spurious Emission

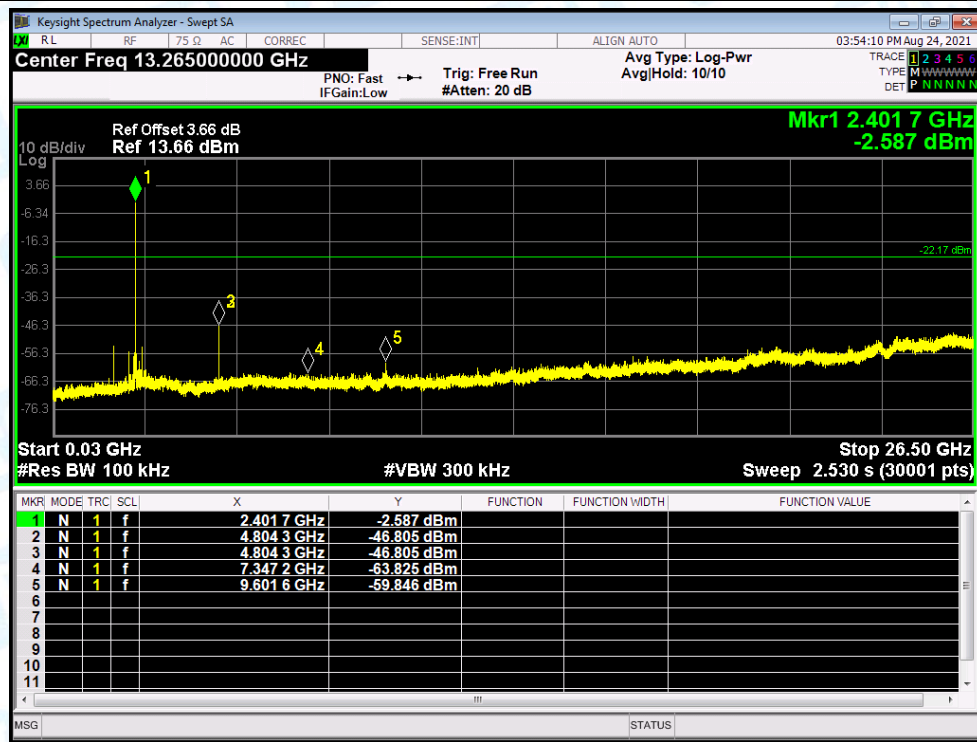
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-44.63	-20	Pass
NVNT	1-DH1	2441	Ant1	-46.46	-20	Pass
NVNT	1-DH1	2480	Ant1	-46.44	-20	Pass
NVNT	2-DH1	2402	Ant1	-43.11	-20	Pass
NVNT	2-DH1	2441	Ant1	-46.02	-20	Pass
NVNT	2-DH1	2480	Ant1	-46.68	-20	Pass
NVNT	3-DH1	2402	Ant1	-46.22	-20	Pass
NVNT	3-DH1	2441	Ant1	-46.07	-20	Pass
NVNT	3-DH1	2480	Ant1	-47.12	-20	Pass

Test Graphs

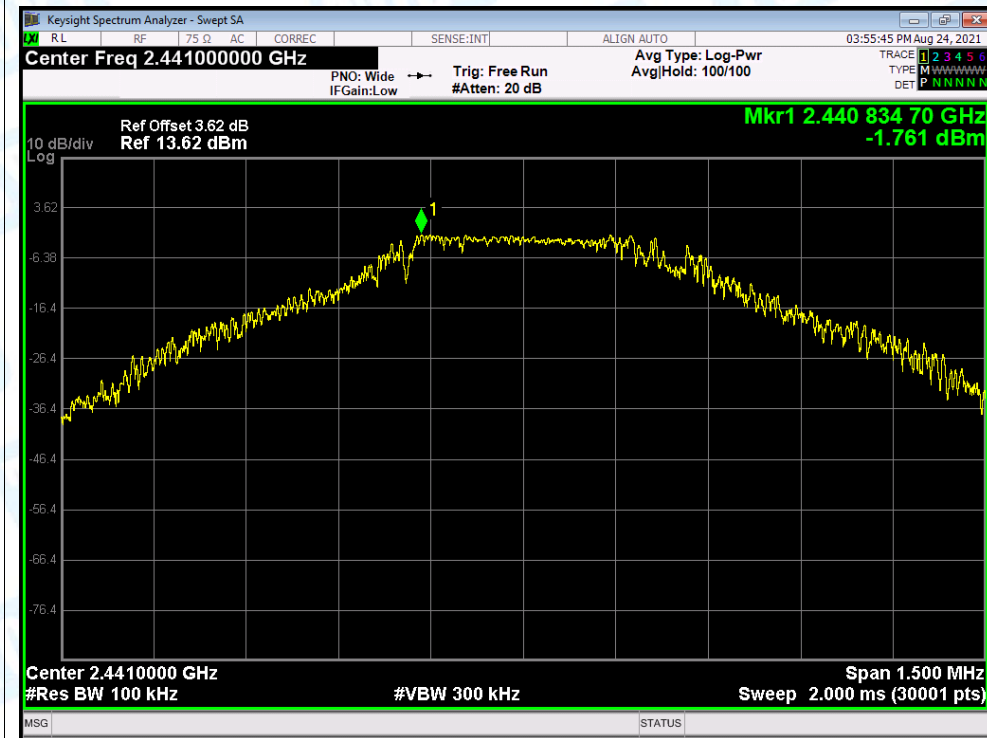
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



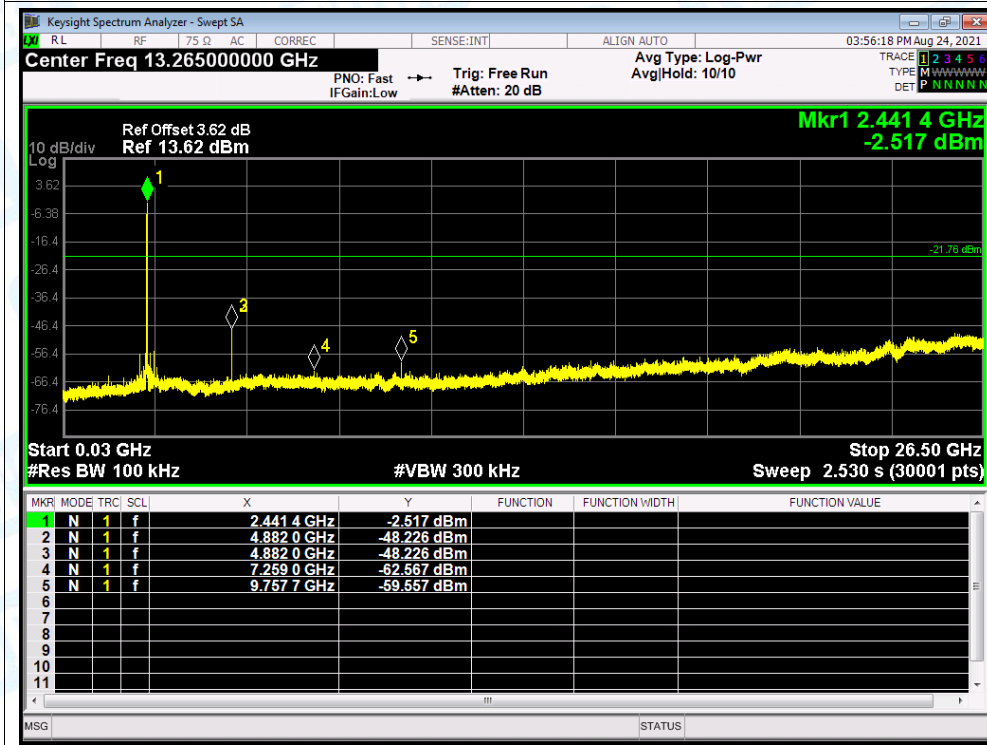
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



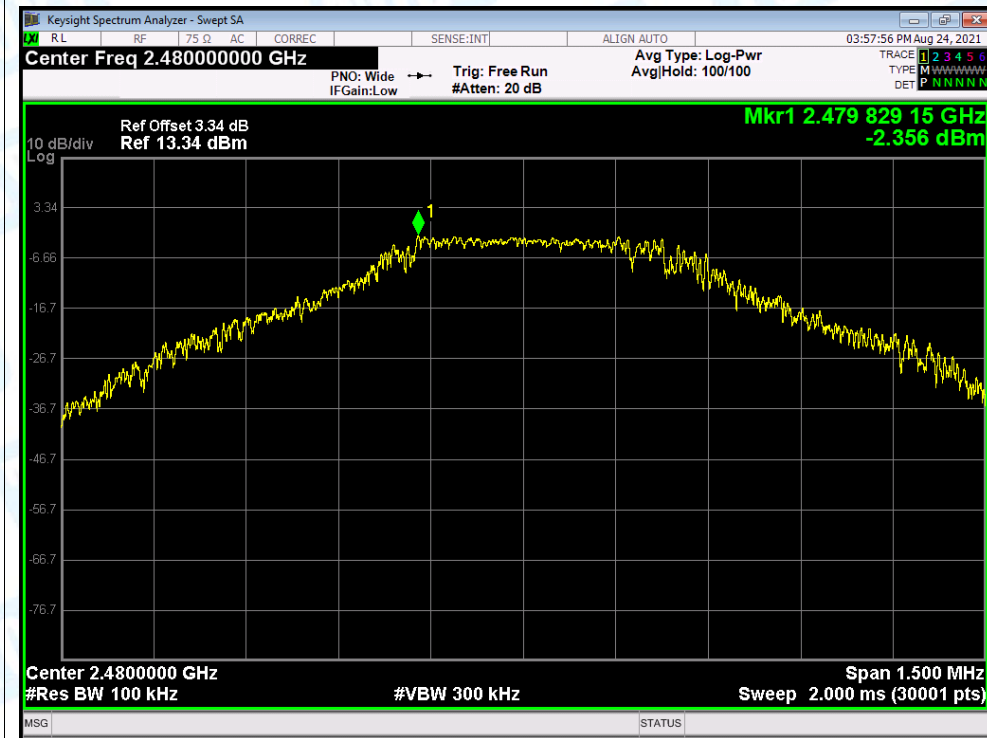
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



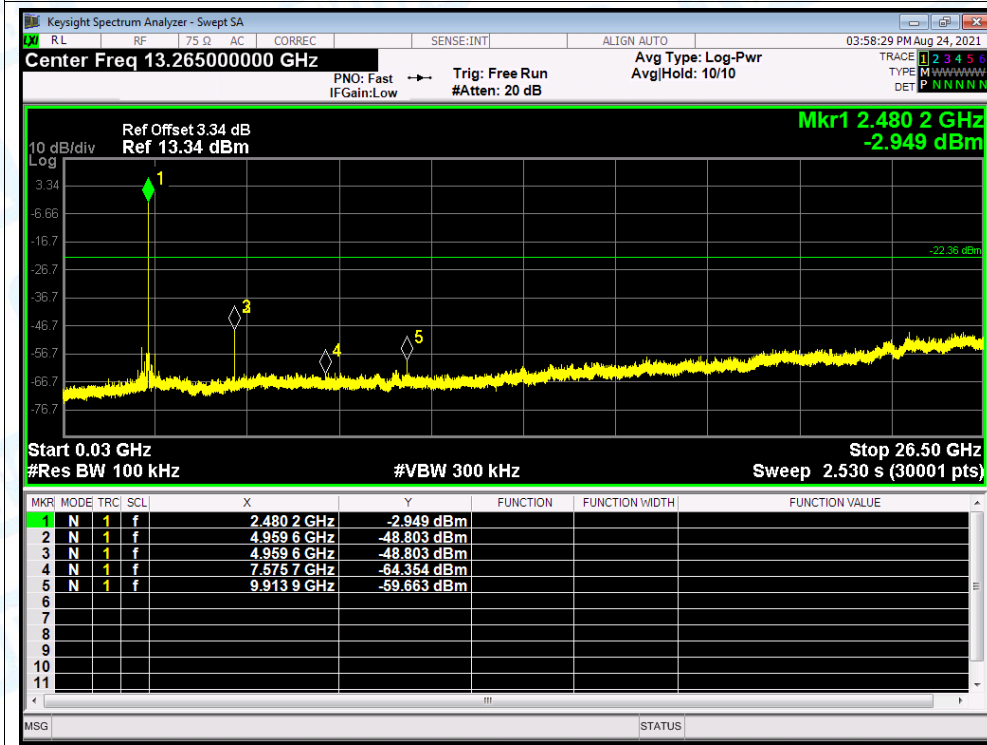
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



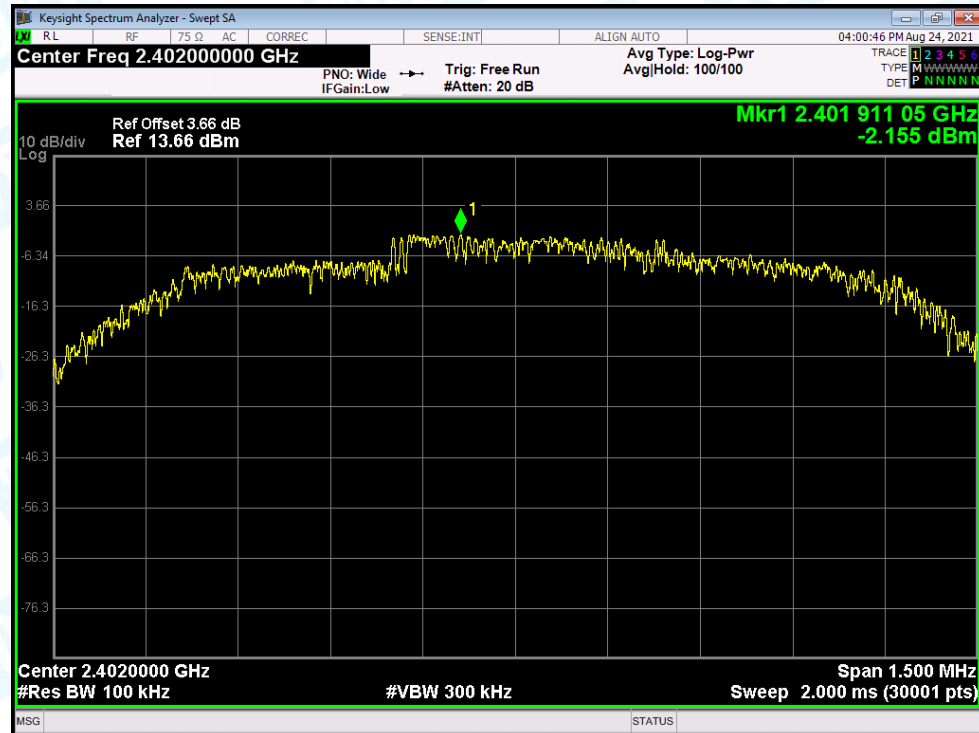
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



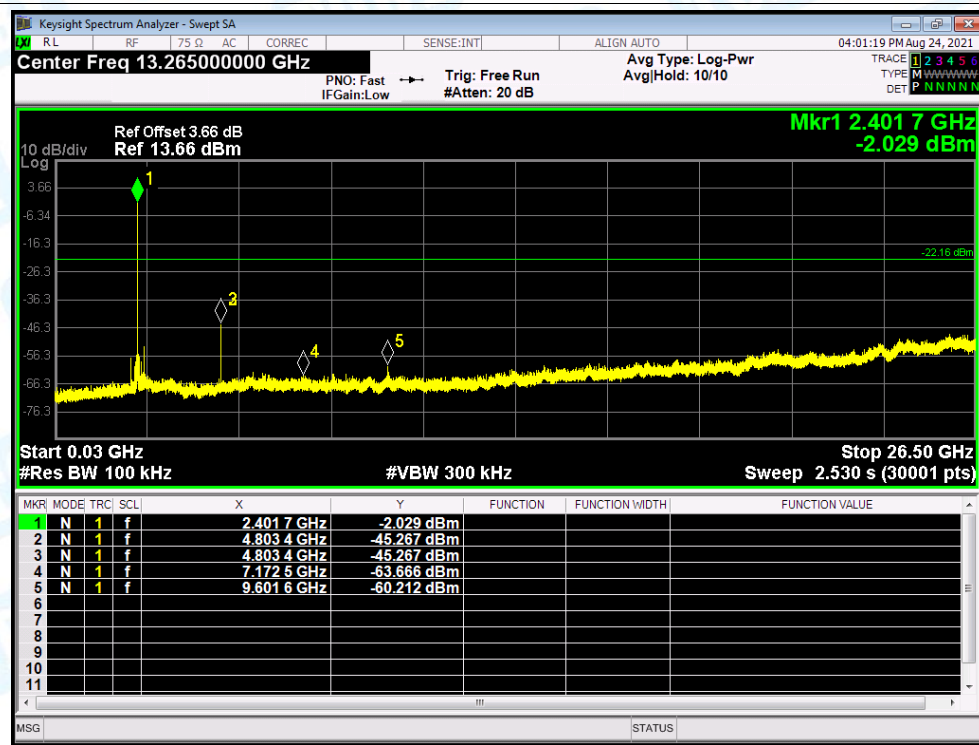
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



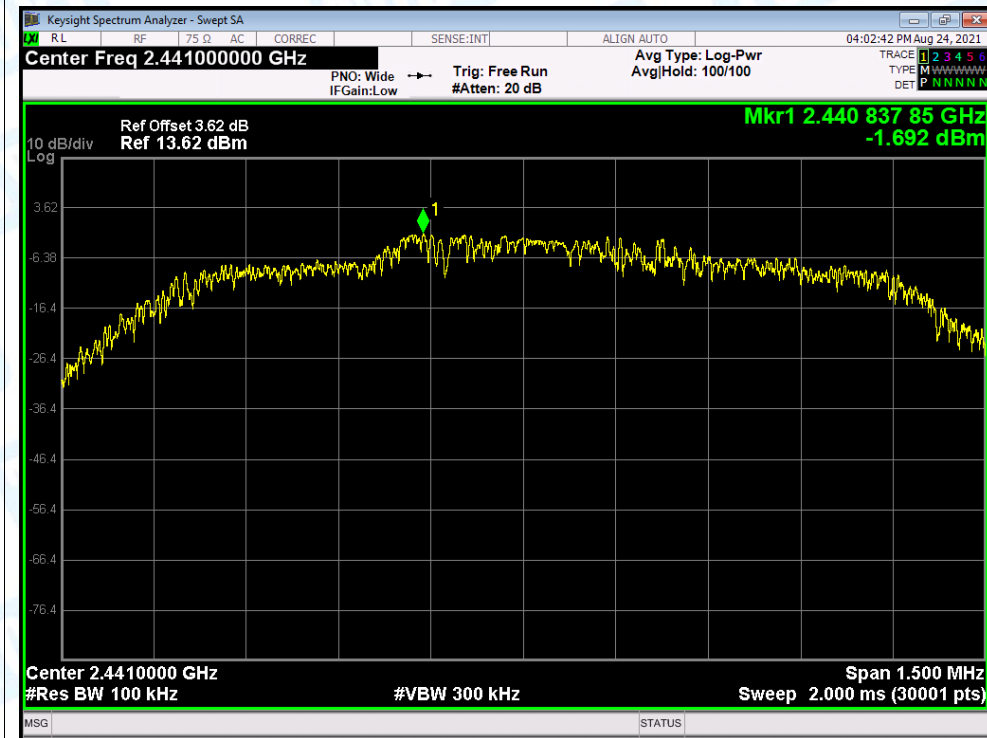
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



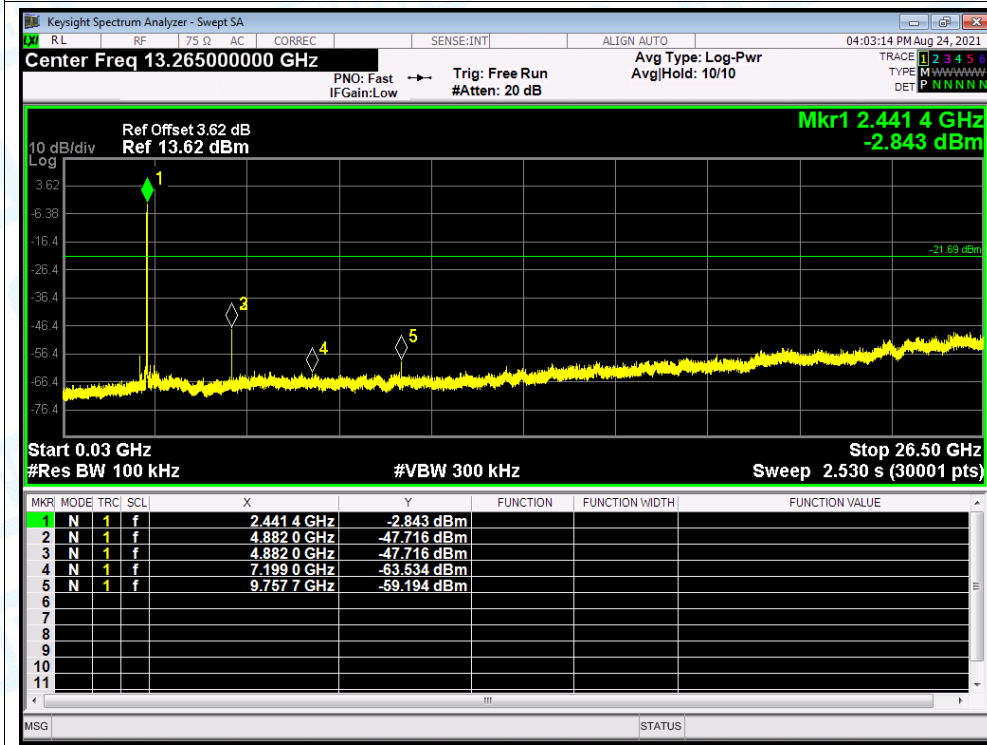
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



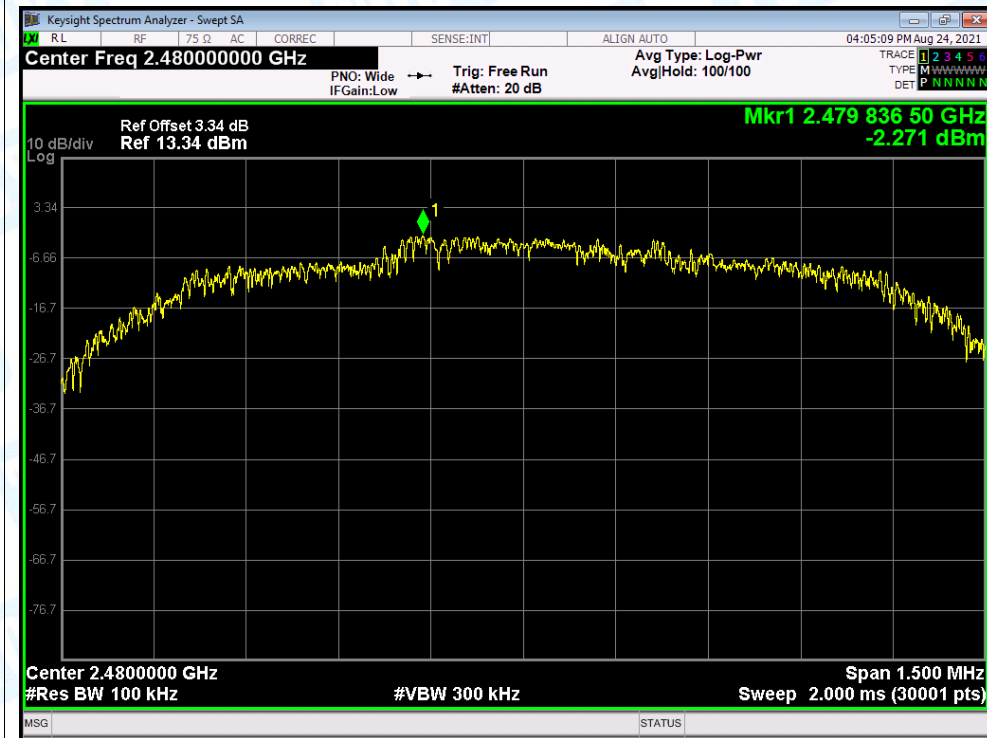
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref



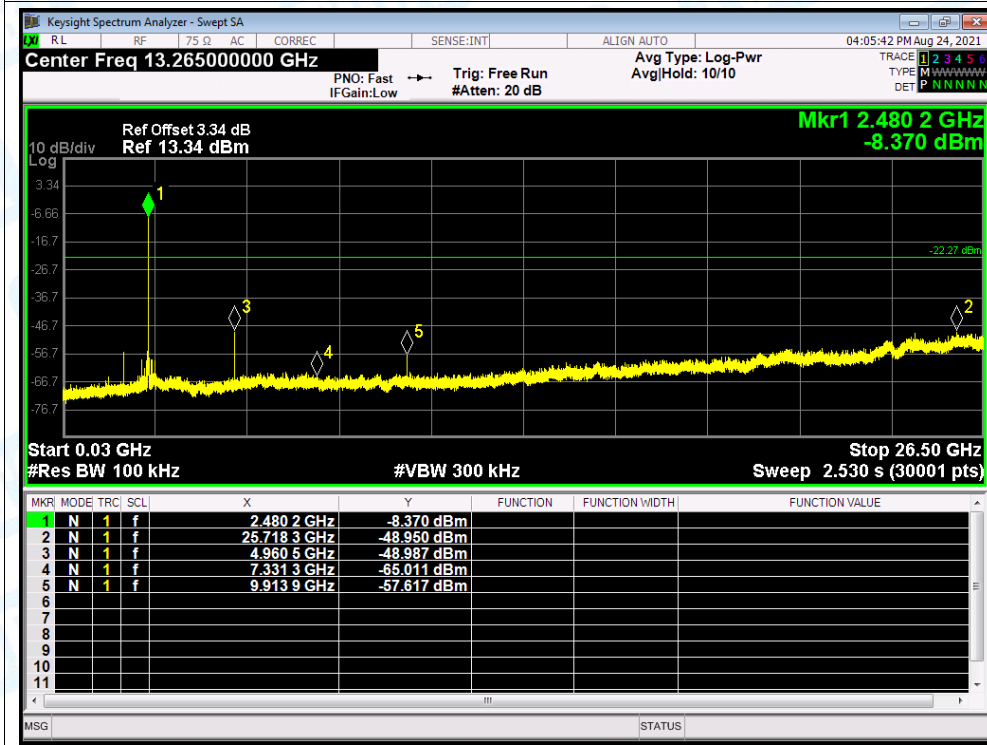
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



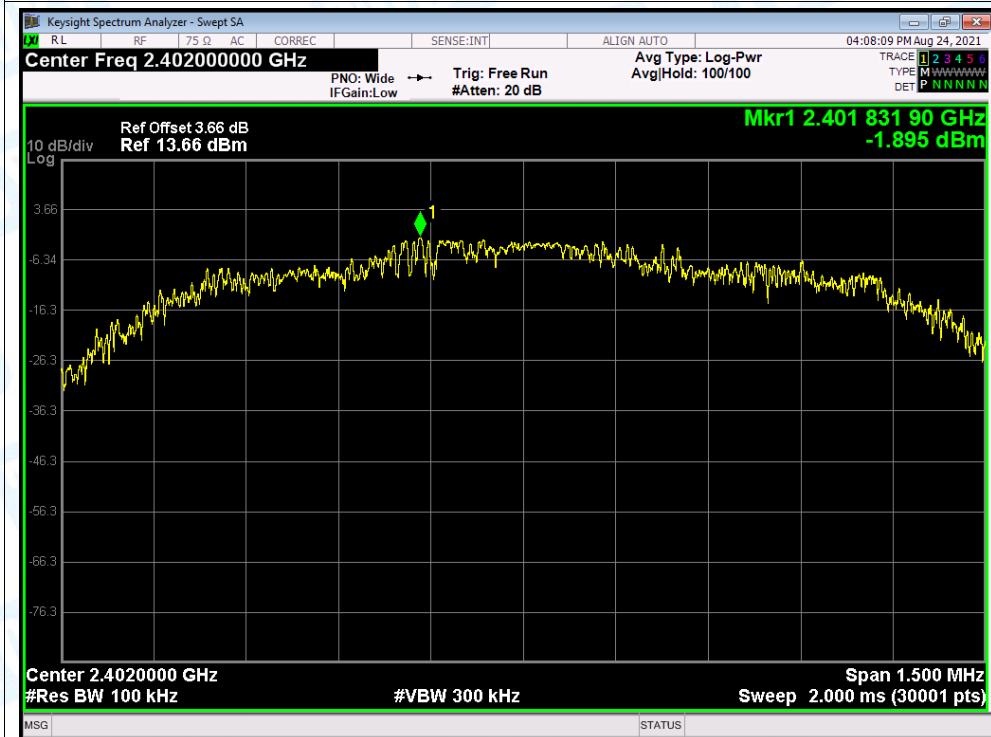
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref



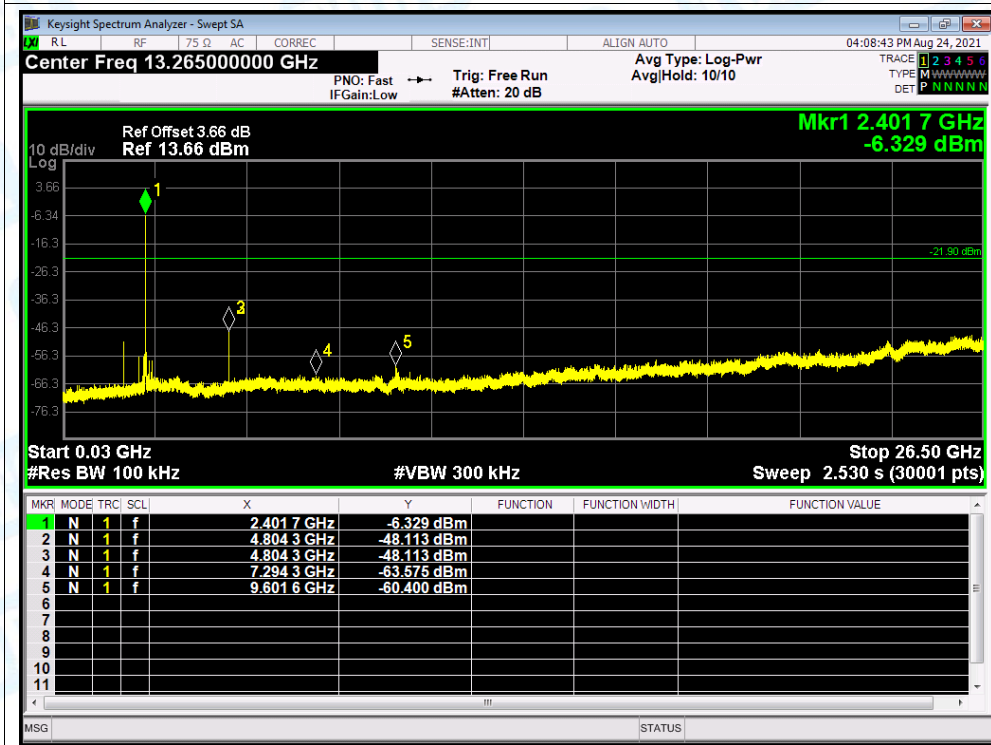
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission



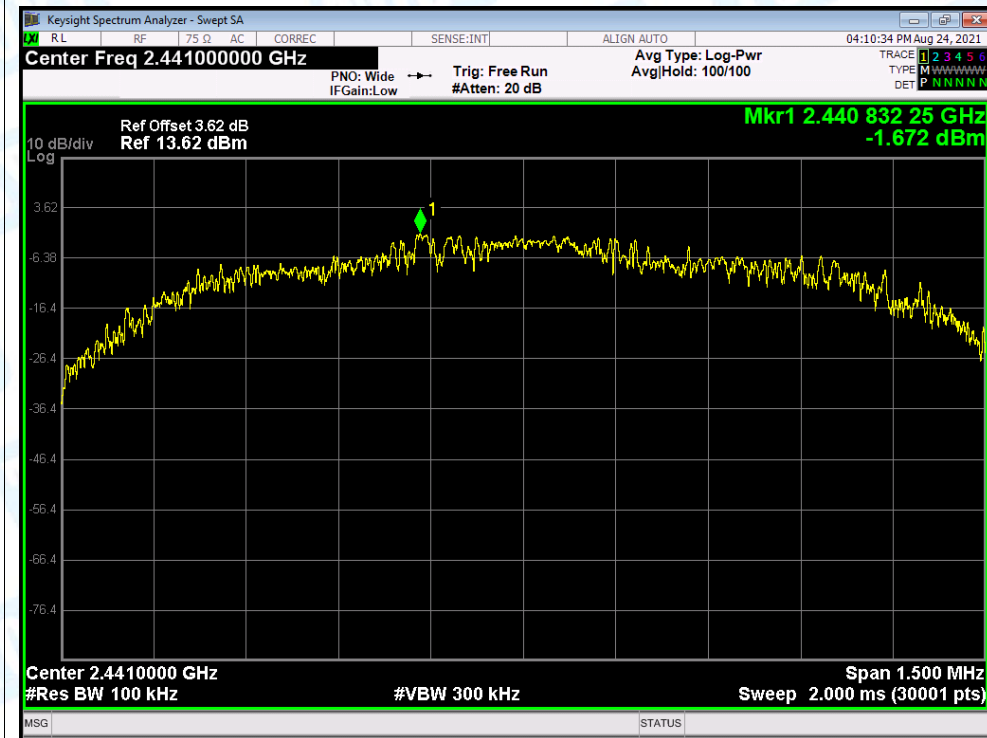
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Ref



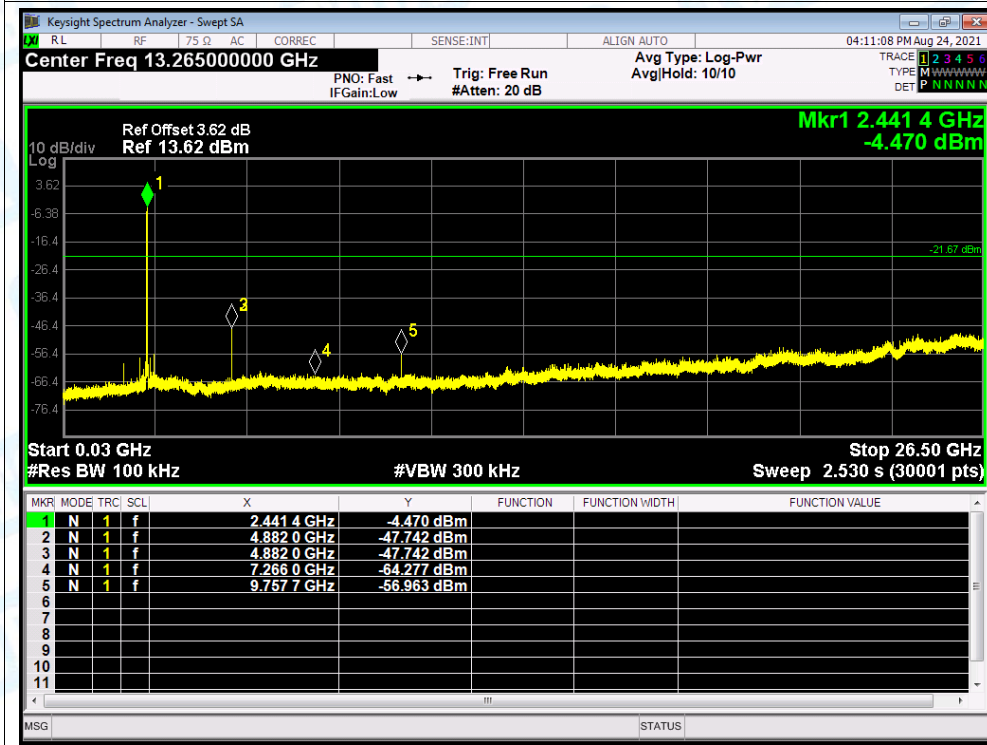
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Emission



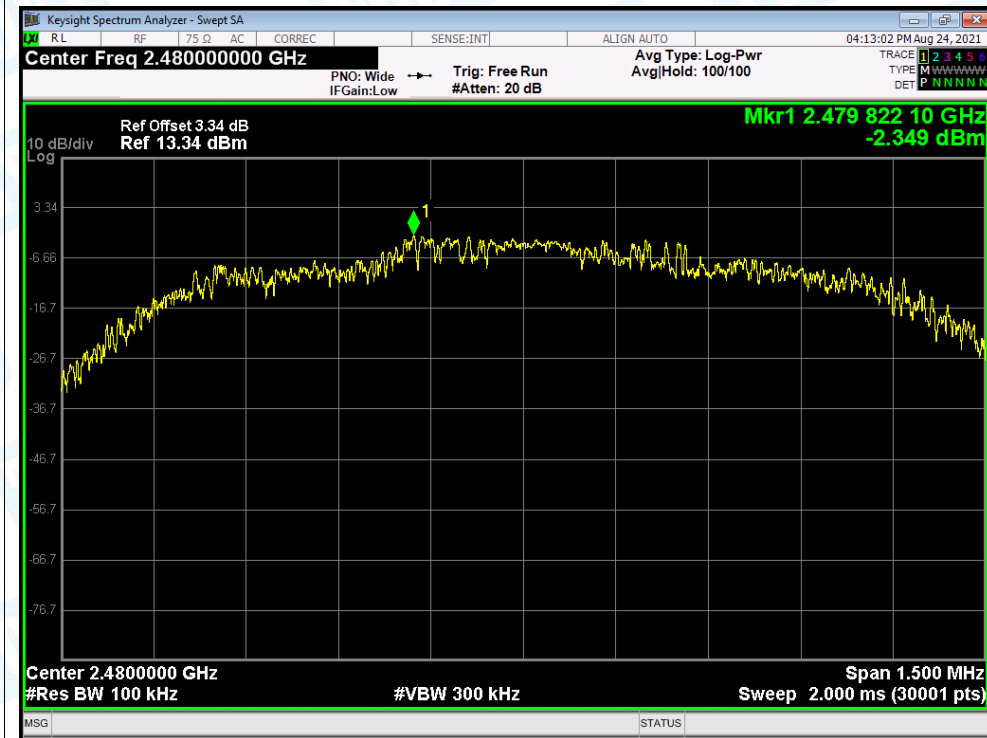
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Ref



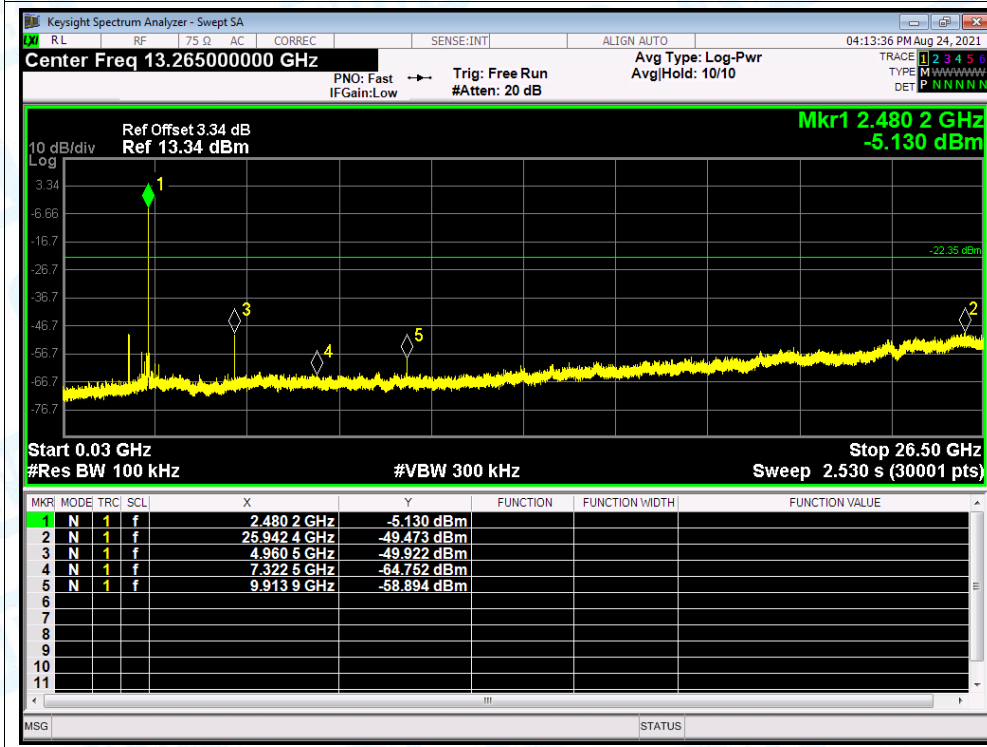
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission

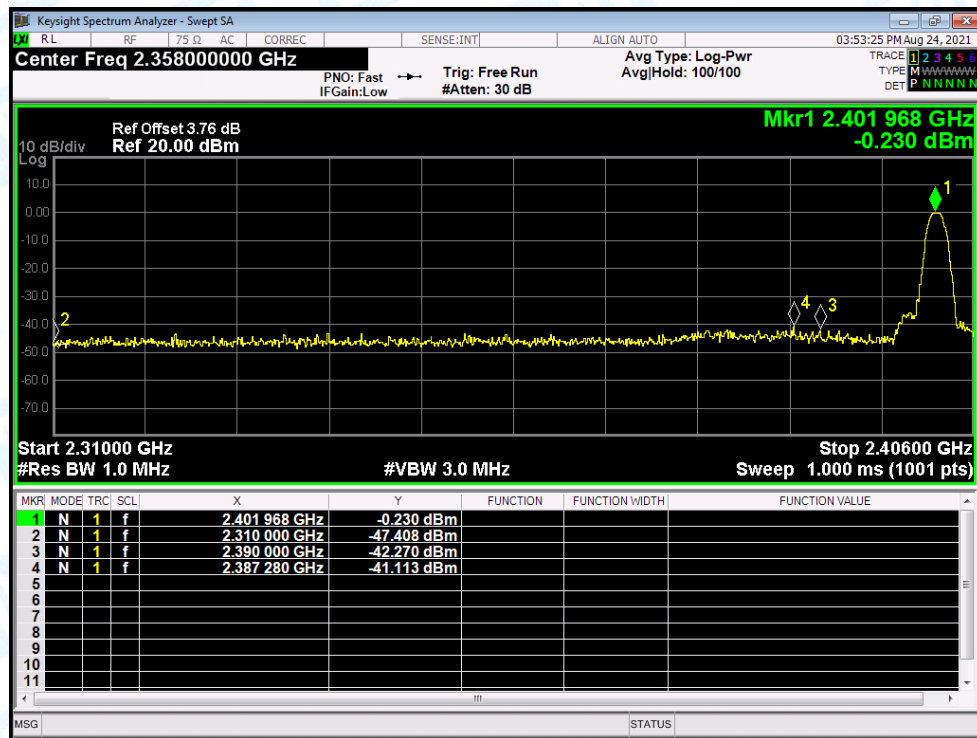


10. Restrict Band

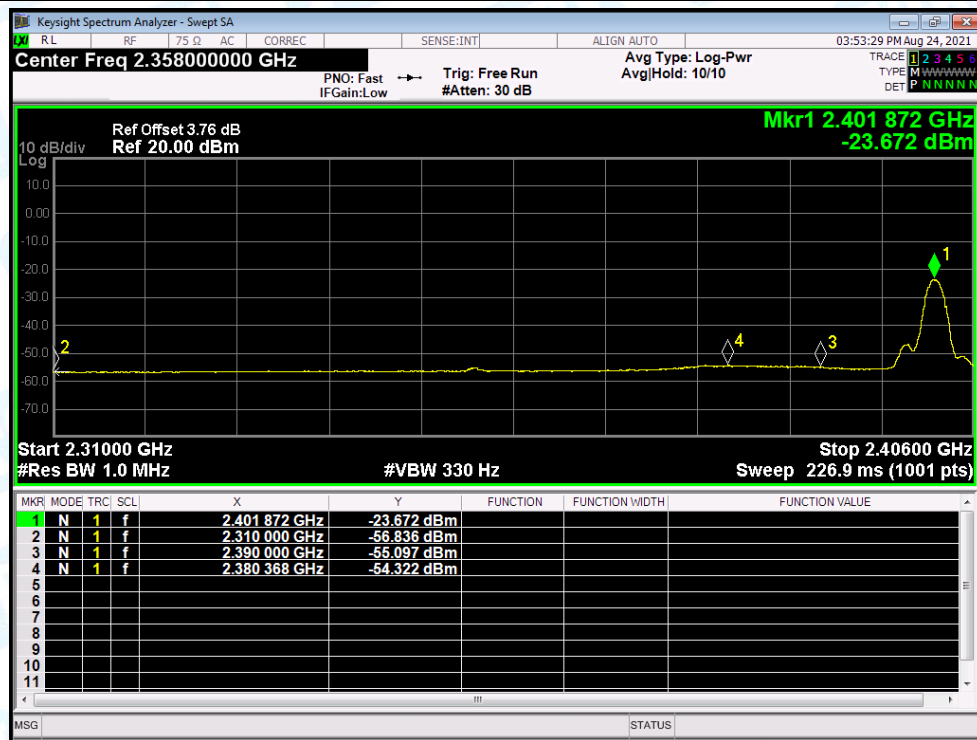
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-46.86	2	50.4	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-56.74	2	40.52	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2387.28	-41.11	2	56.15	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2380.368	-54.32	2	42.94	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-44.71	2	52.55	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-54.94	2	42.32	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-41.53	2	55.73	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-52.14	2	45.12	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.608	-39.49	2	57.77	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.512	-52.14	2	45.12	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-43.25	2	54.01	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-54.35	2	42.91	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-45.37	2	51.89	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-56.78	2	40.48	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2389.776	-41.96	2	55.3	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2380.56	-54.15	2	43.11	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-43.47	2	53.79	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-54.94	2	42.32	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-40.99	2	56.27	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-52.77	2	44.49	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.824	-39.57	2	57.69	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.512	-52.77	2	44.49	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-44.39	2	52.87	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-54.5	2	42.76	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-46.23	2	51.03	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-56.77	2	40.49	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2381.616	-40.78	2	56.48	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2378.064	-54.14	2	43.12	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-44.91	2	52.35	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-54.96	2	42.3	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-41.22	2	56.04	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-52.83	2	44.43	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.608	-40.38	2	56.88	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.512	-52.83	2	44.43	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-44.1	2	53.16	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-54.55	2	42.71	Average	54	Pass

Test Graphs

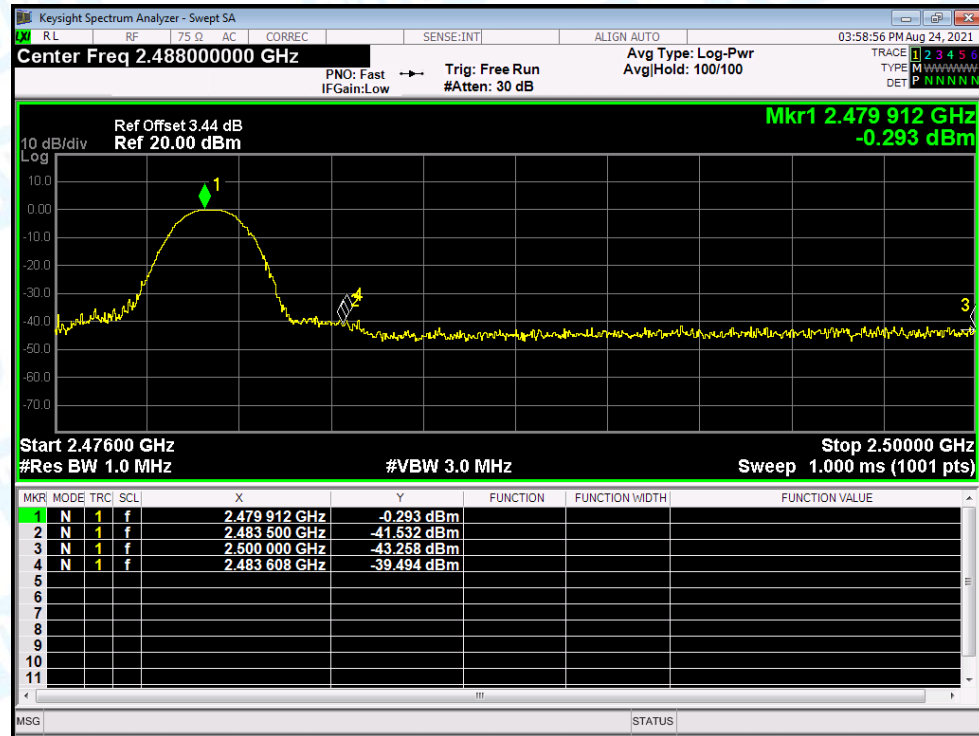
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Peak



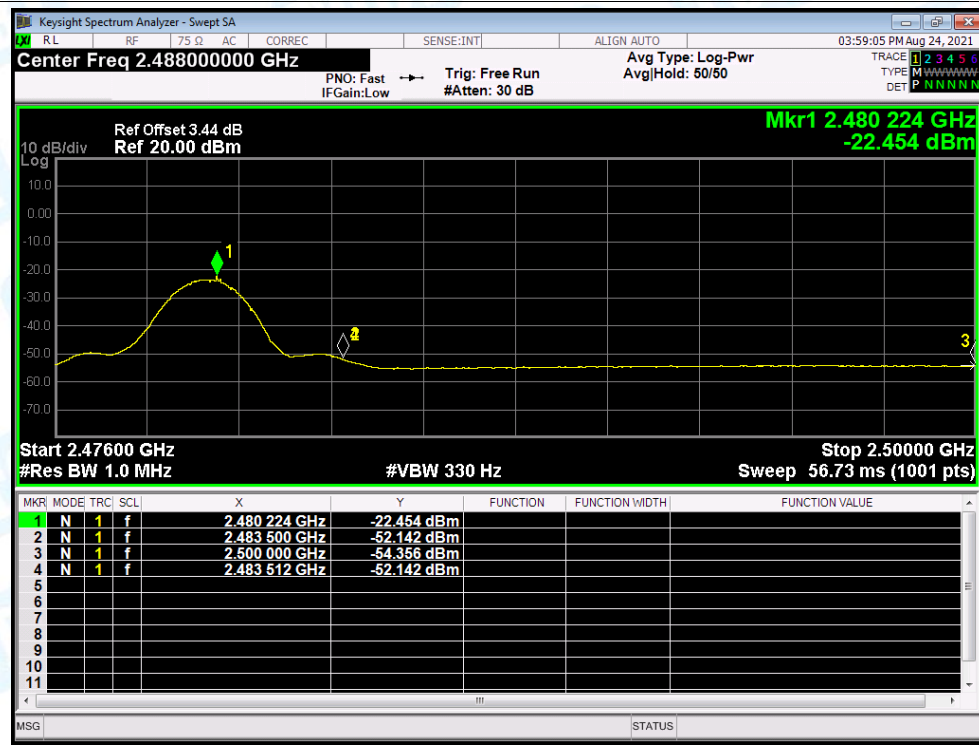
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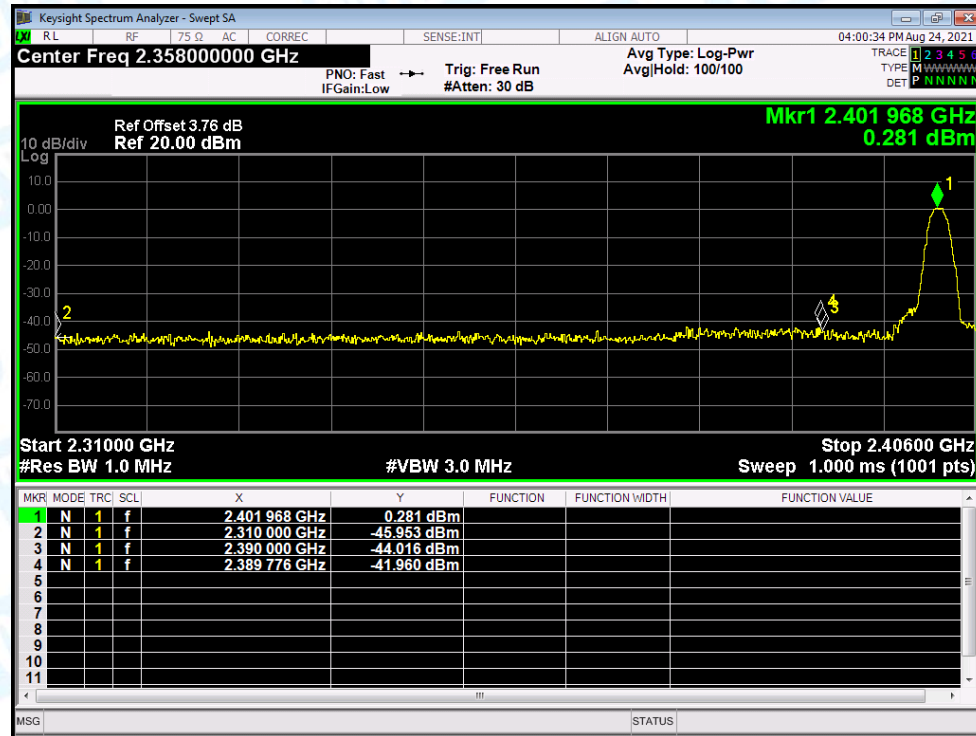
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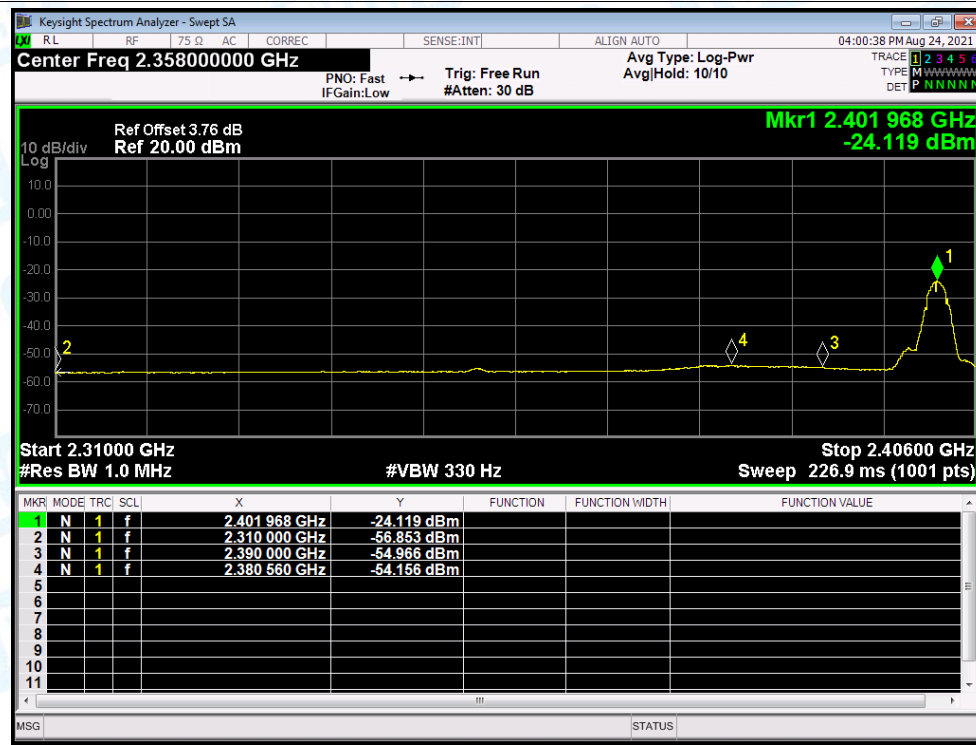
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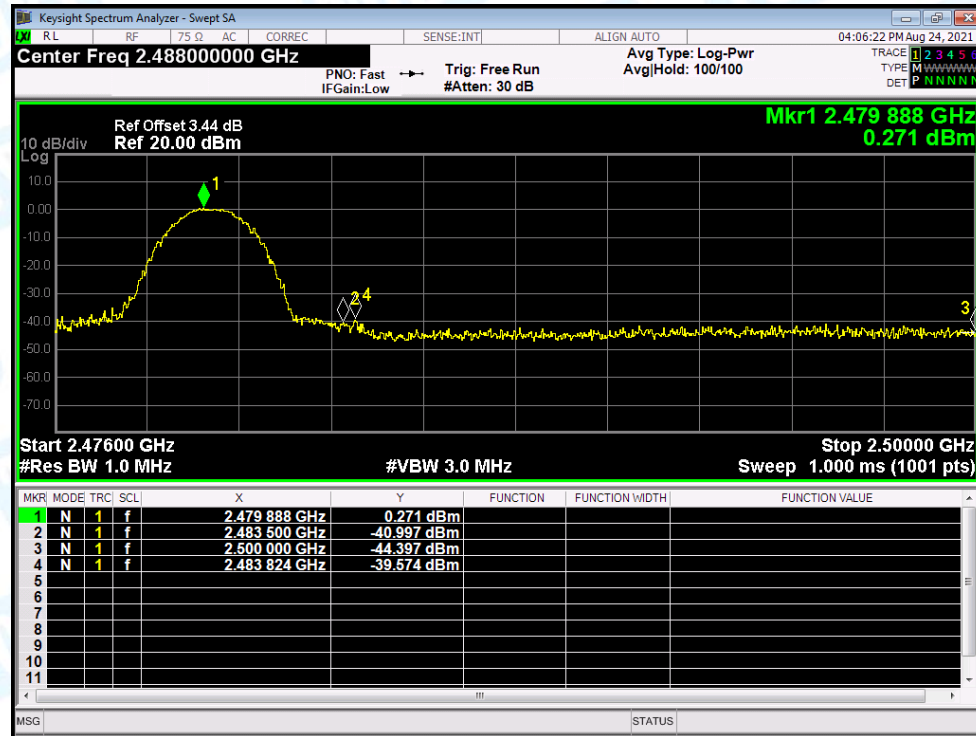
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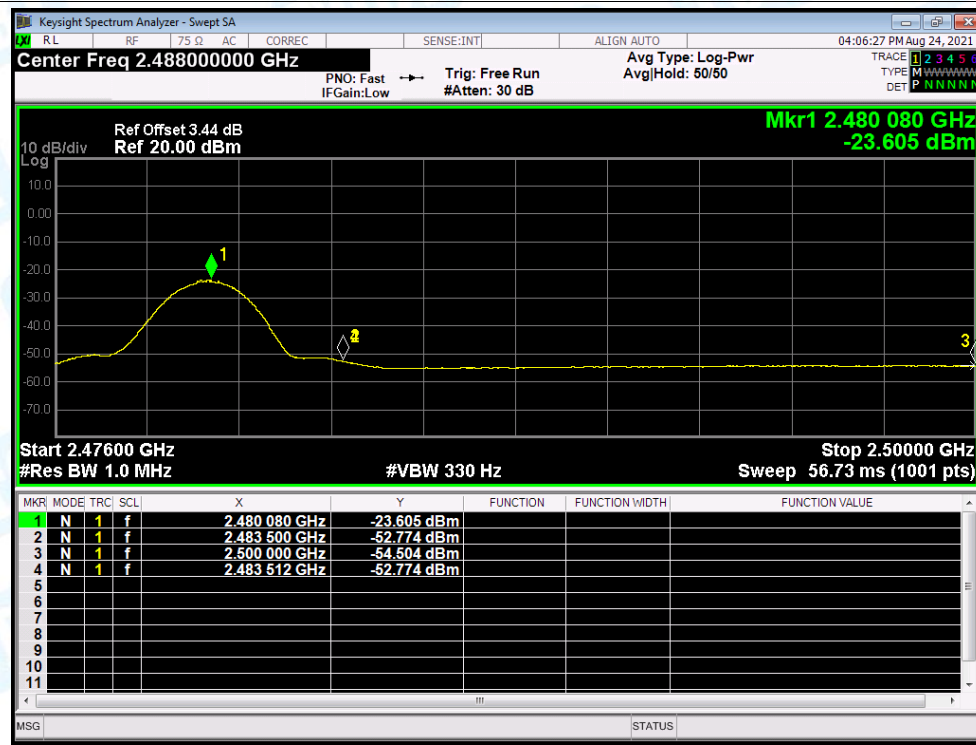
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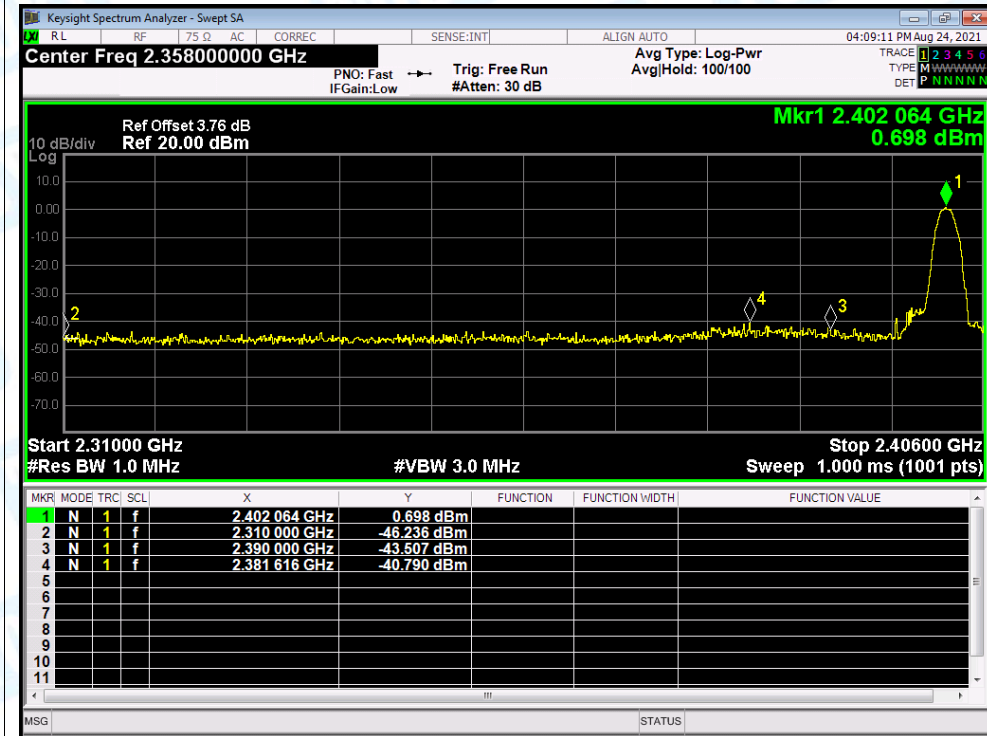
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Peak



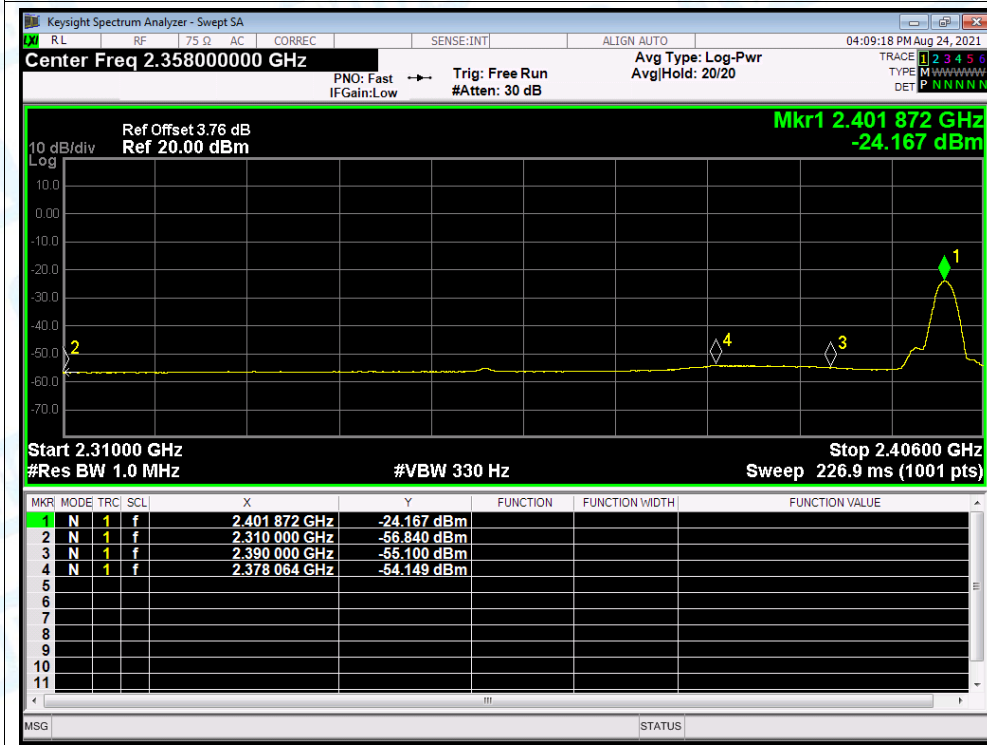
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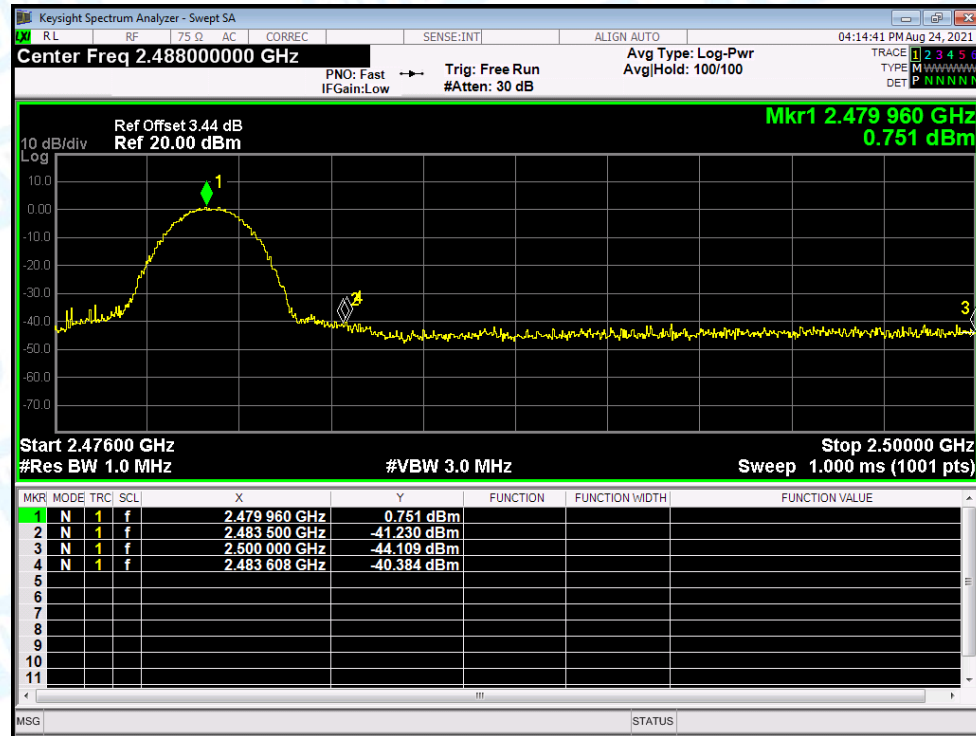
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Peak



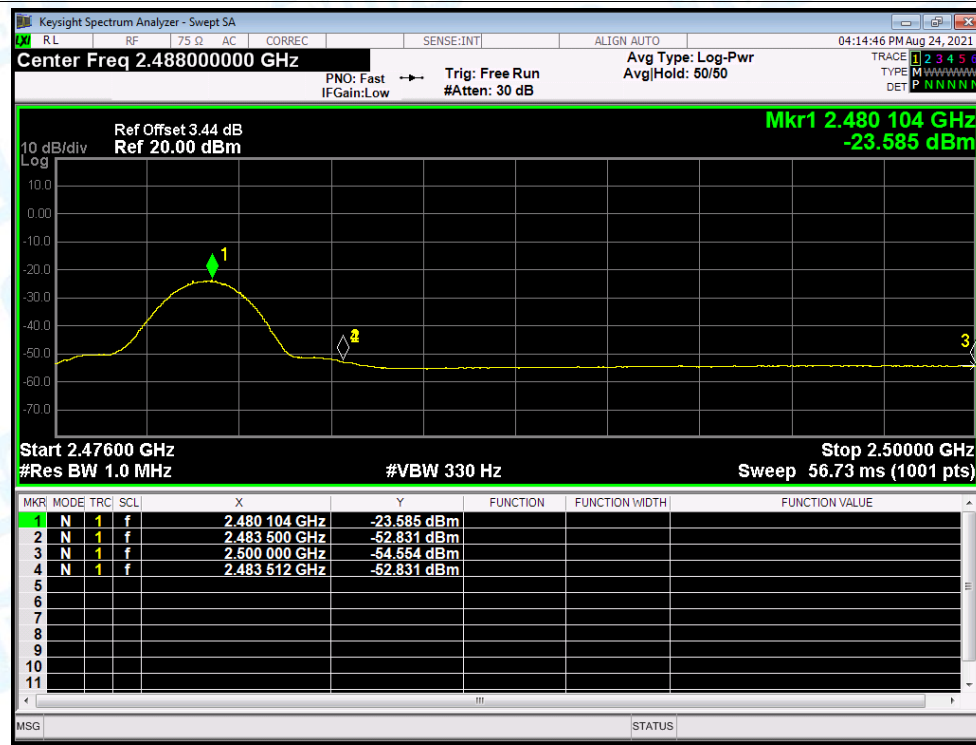
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Average



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



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

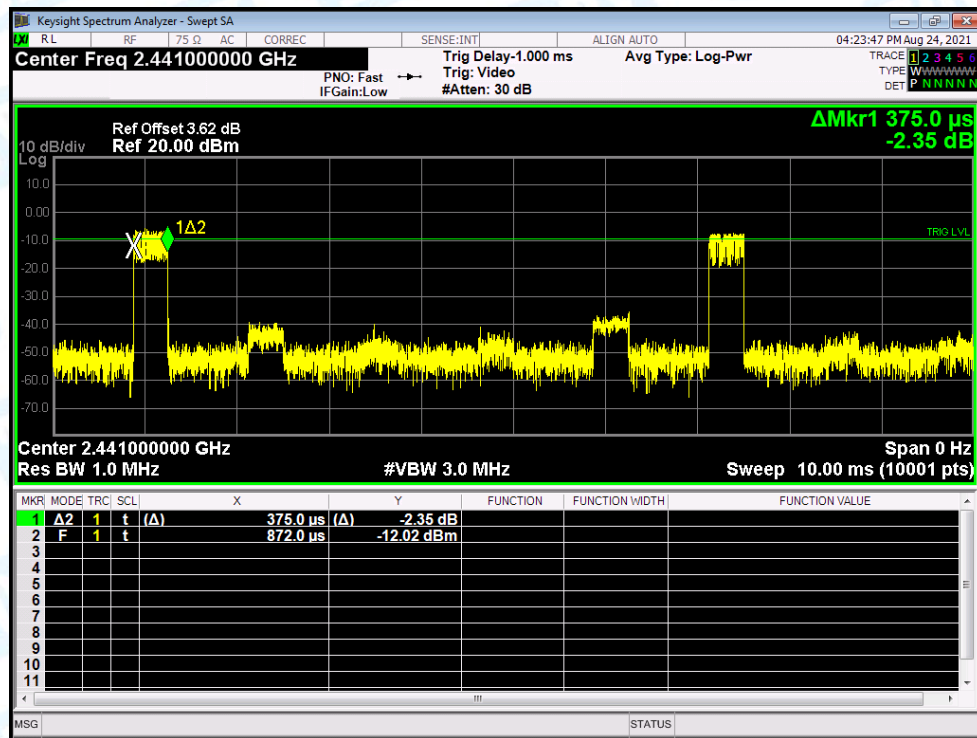


11. Dwell Time

Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.375	120	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.632	261.12	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.879	307.093	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.377	120.64	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.638	262.08	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.886	307.84	31600	400	Pass
NVNT	3-DH1	2441	Ant1	0.376	120.32	31600	400	Pass
NVNT	3-DH3	2441	Ant1	1.637	261.92	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.888	308.053	31600	400	Pass

Test Graphs

Dwell NVNT 1-DH1 2441MHz Ant1



Dwell NVNT 1-DH3 2441MHz Ant1

