

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

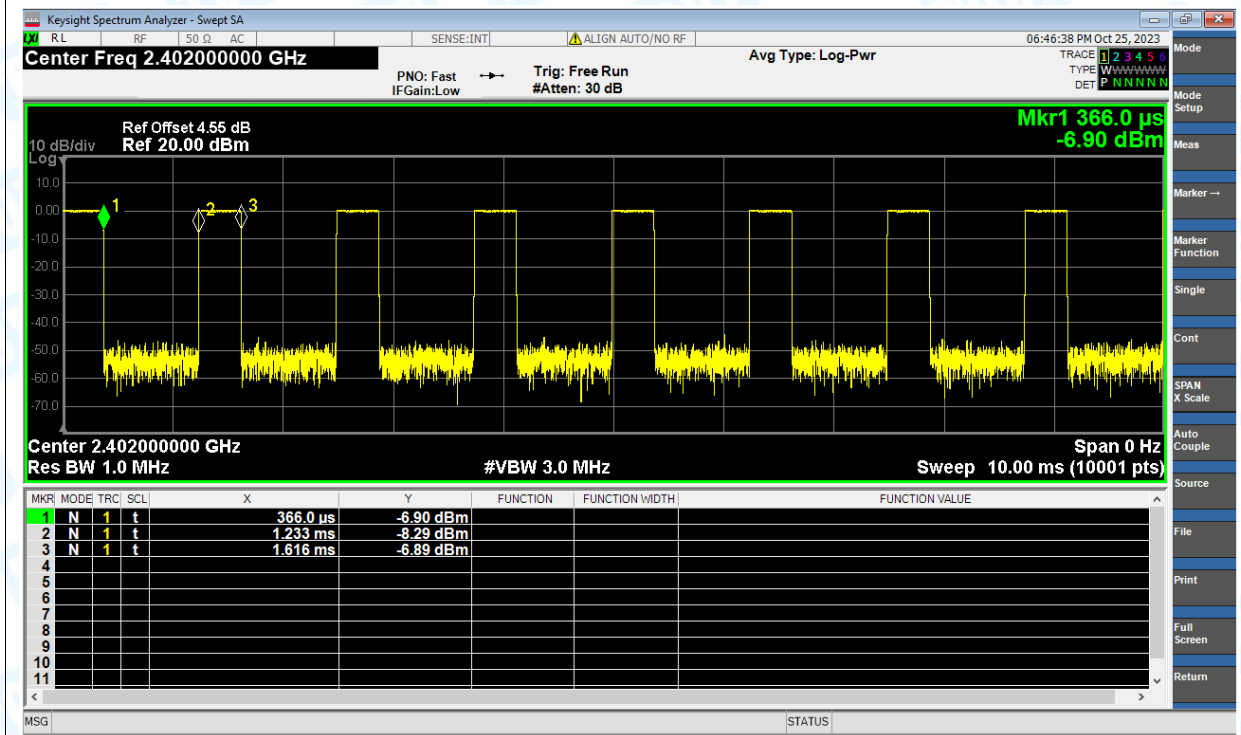
General Description of EUT	
Product Name:	Translator Earbuds
Test Model:	M3
Sample ID:	HC-C-202308-0081-01-01-2#
Environmental Conditions	
Temperature:	24°C
Relative Humidity:	50%
Test Voltage:	DC 3.7V
Test Engineer:	Liyinjing
Note: For a more detailed features description, please refer to the report TBR-C-202308-0081-2 The report only show the worst case data.	

Duty Cycle

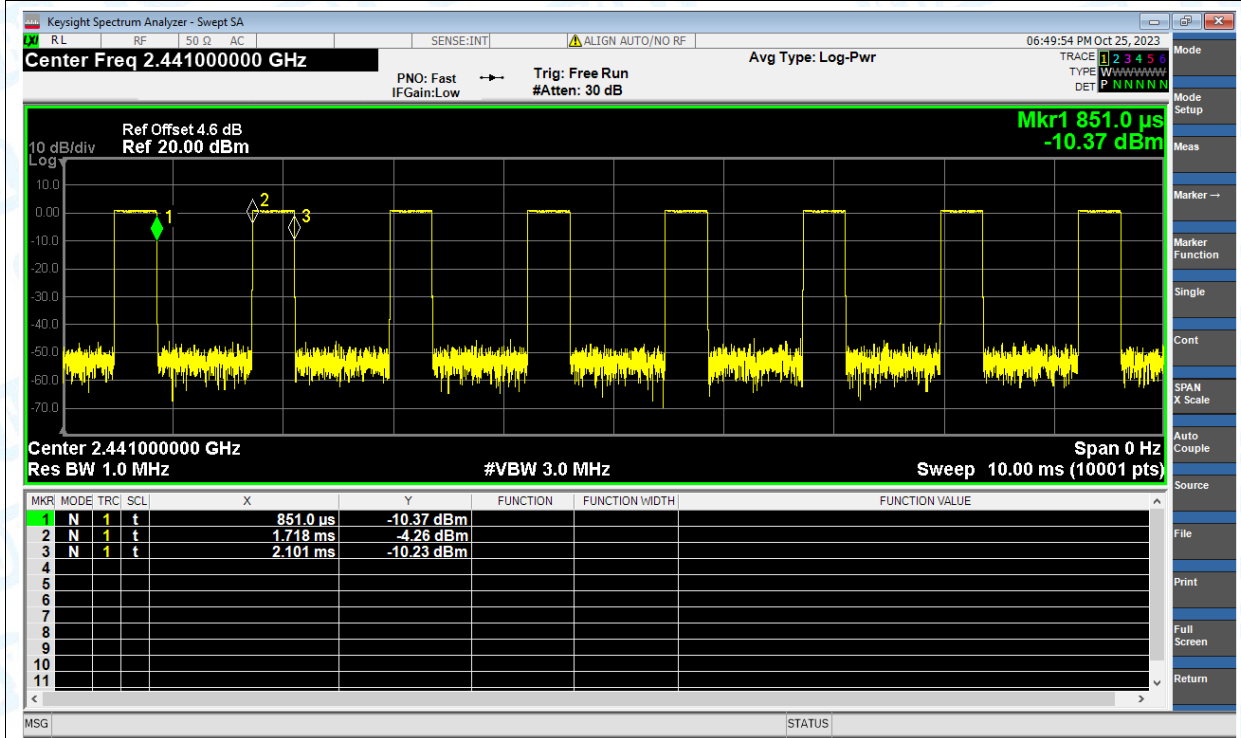
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH1	2402	Ant1	30.64	5.14	2.61
NVNT	1-DH1	2441	Ant1	30.64	5.14	2.61
NVNT	1-DH1	2480	Ant1	30.72	5.13	2.6
NVNT	2-DH1	2402	Ant1	31.44	5.03	2.54
NVNT	2-DH1	2441	Ant1	31.44	5.03	2.54
NVNT	2-DH1	2480	Ant1	31.52	5.01	2.54

Test Graphs

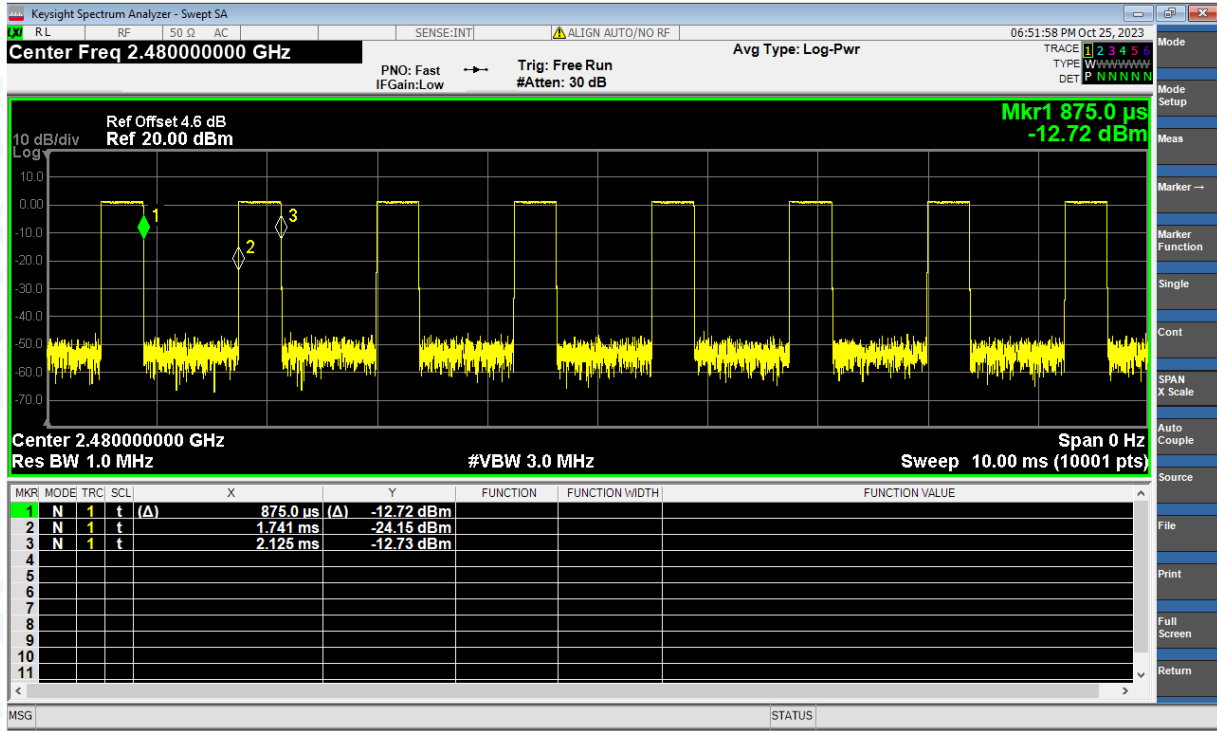
Duty Cycle NVNT 1-DH1 2402MHz Ant1



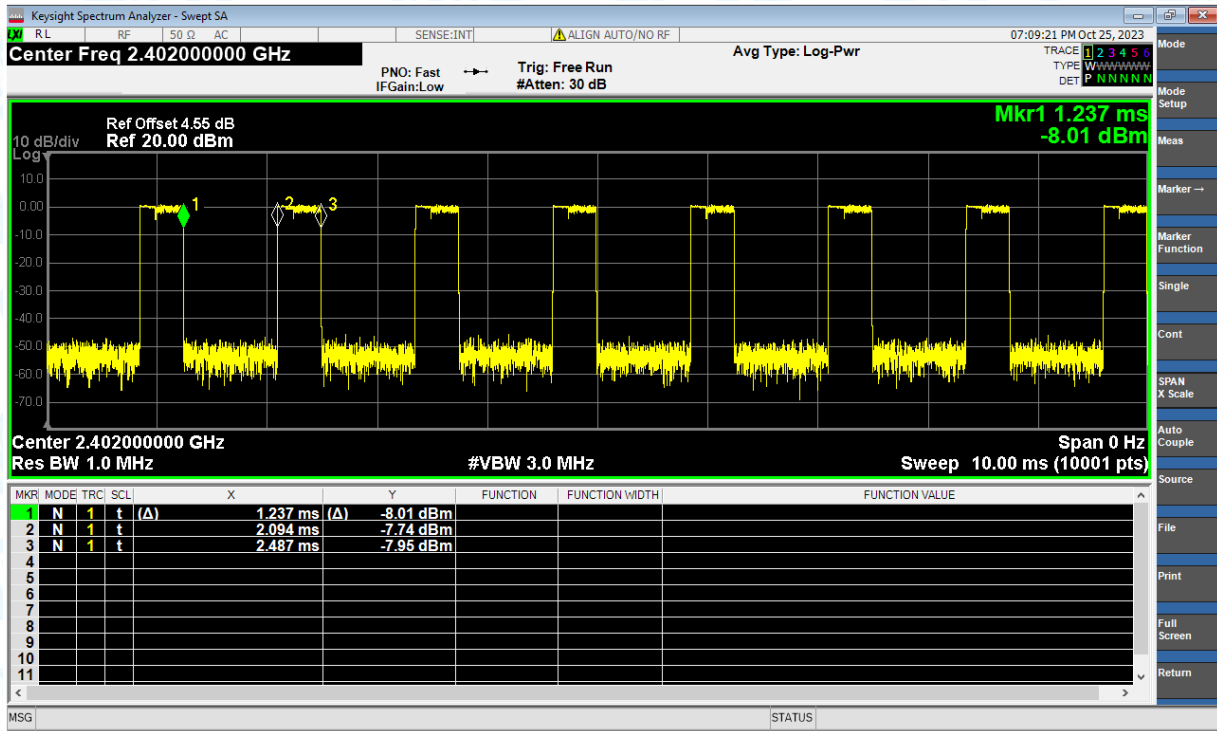
Duty Cycle NVNT 1-DH1 2441MHz Ant1



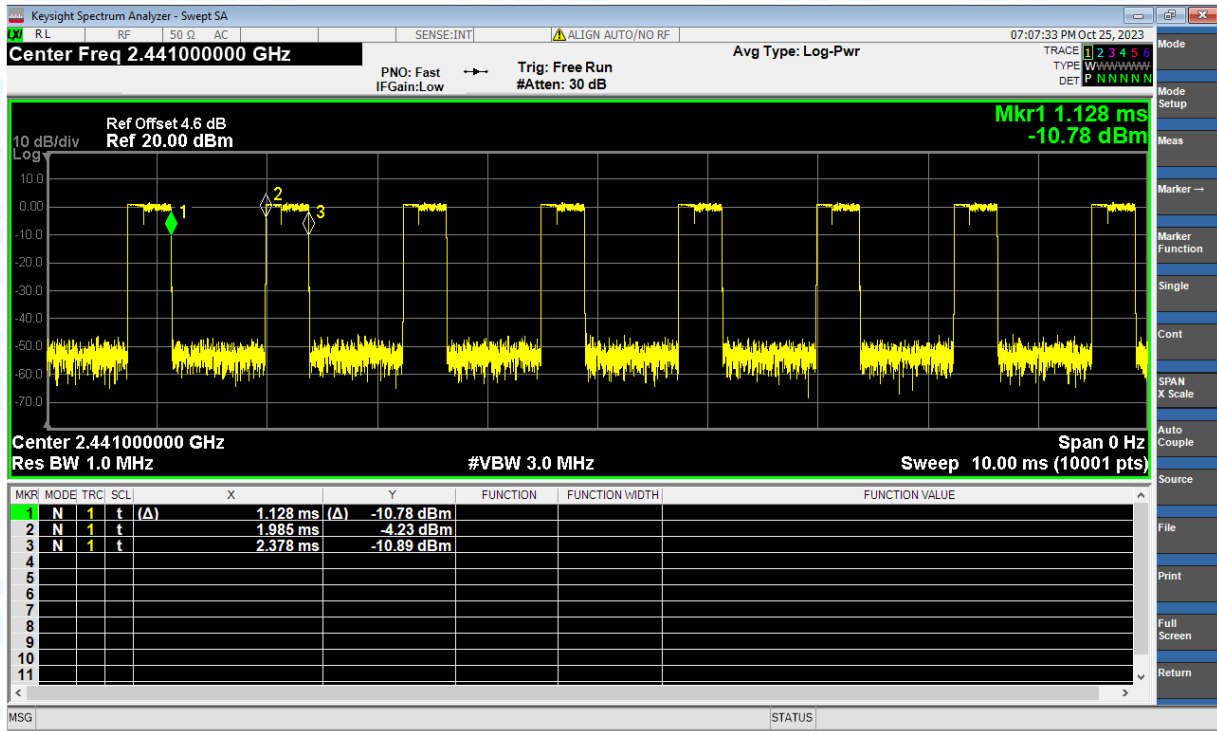
Duty Cycle NVNT 1-DH1 2480MHz Ant1



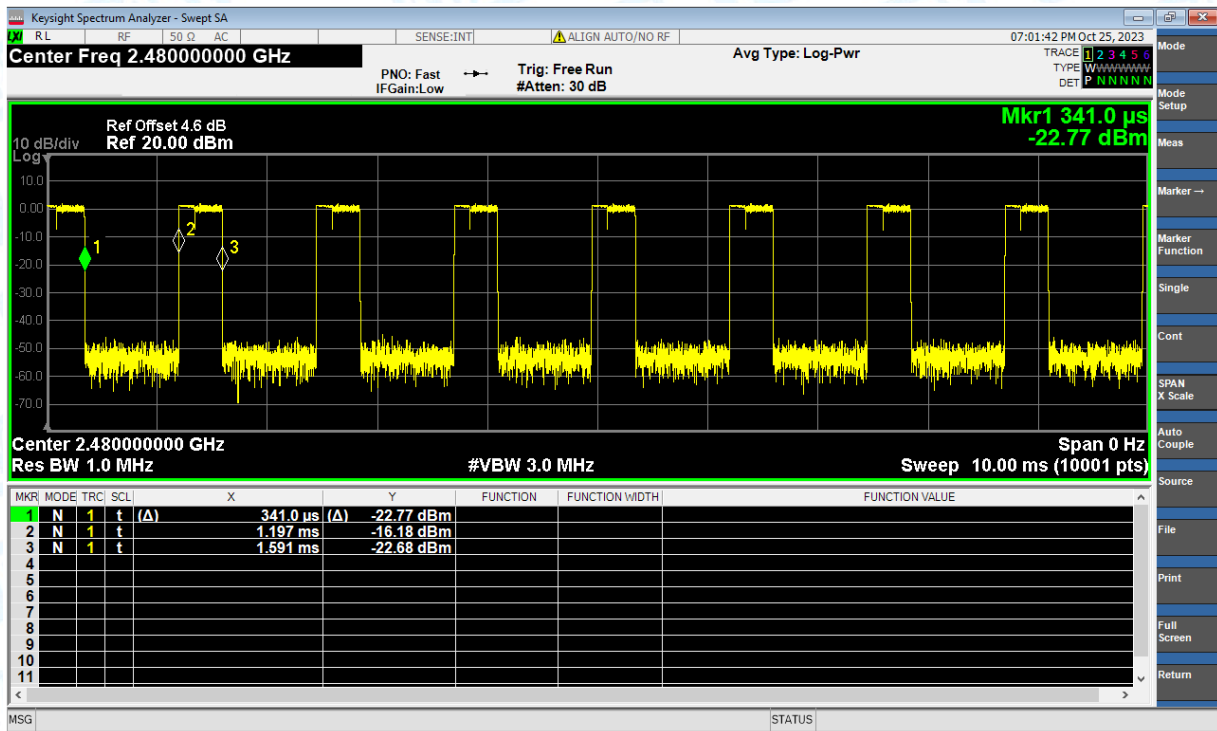
Duty Cycle NVNT 2-DH1 2402MHz Ant1



Duty Cycle NVNT 2-DH1 2441MHz Ant1



Duty Cycle NVNT 2-DH1 2480MHz Ant1

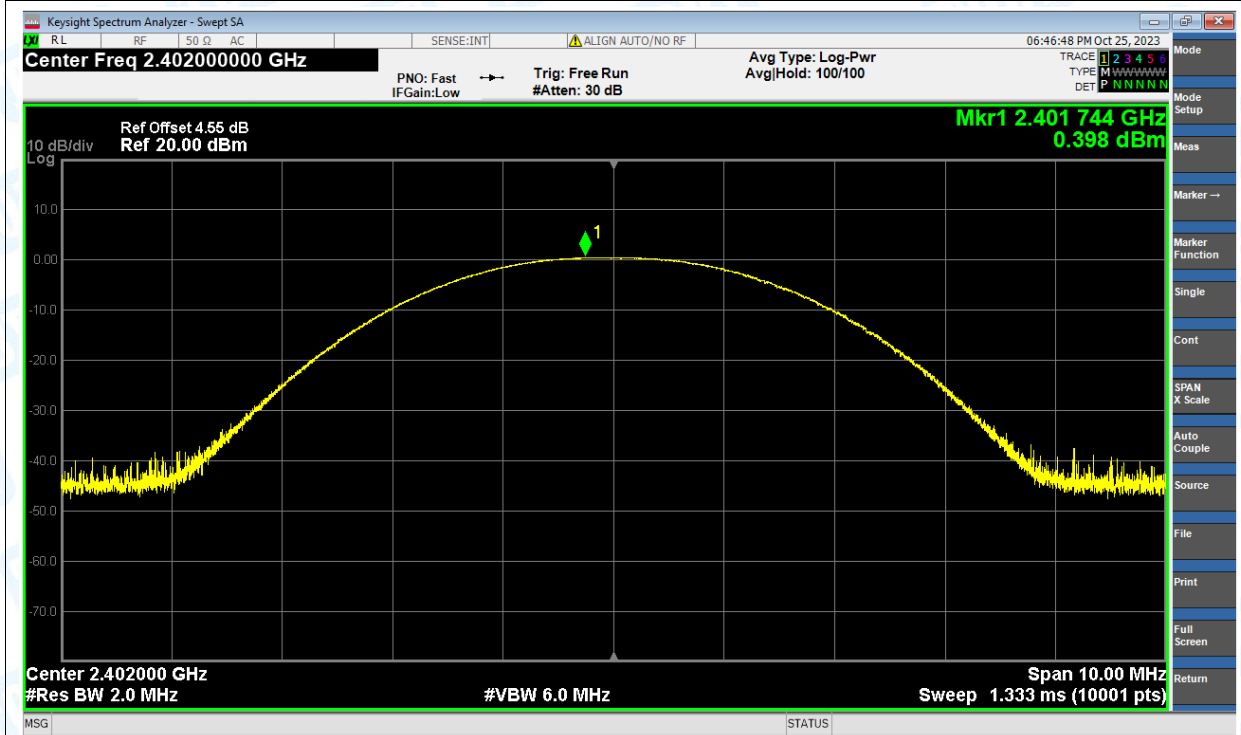


Maximum Conducted Output Power

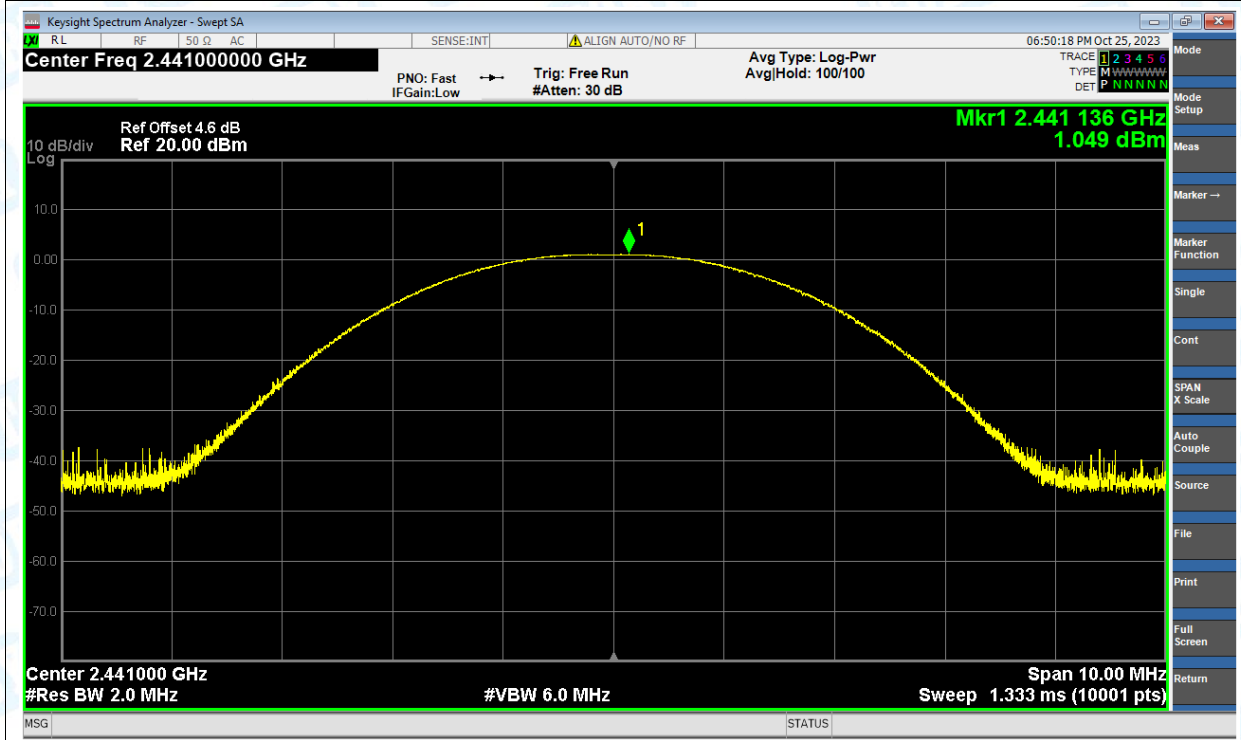
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	0.398	21	Pass
NVNT	1-DH1	2441	Ant1	1.049	21	Pass
NVNT	1-DH1	2480	Ant1	1.426	21	Pass
NVNT	2-DH1	2402	Ant1	1.457	21	Pass
NVNT	2-DH1	2441	Ant1	2.086	21	Pass
NVNT	2-DH1	2480	Ant1	2.266	21	Pass

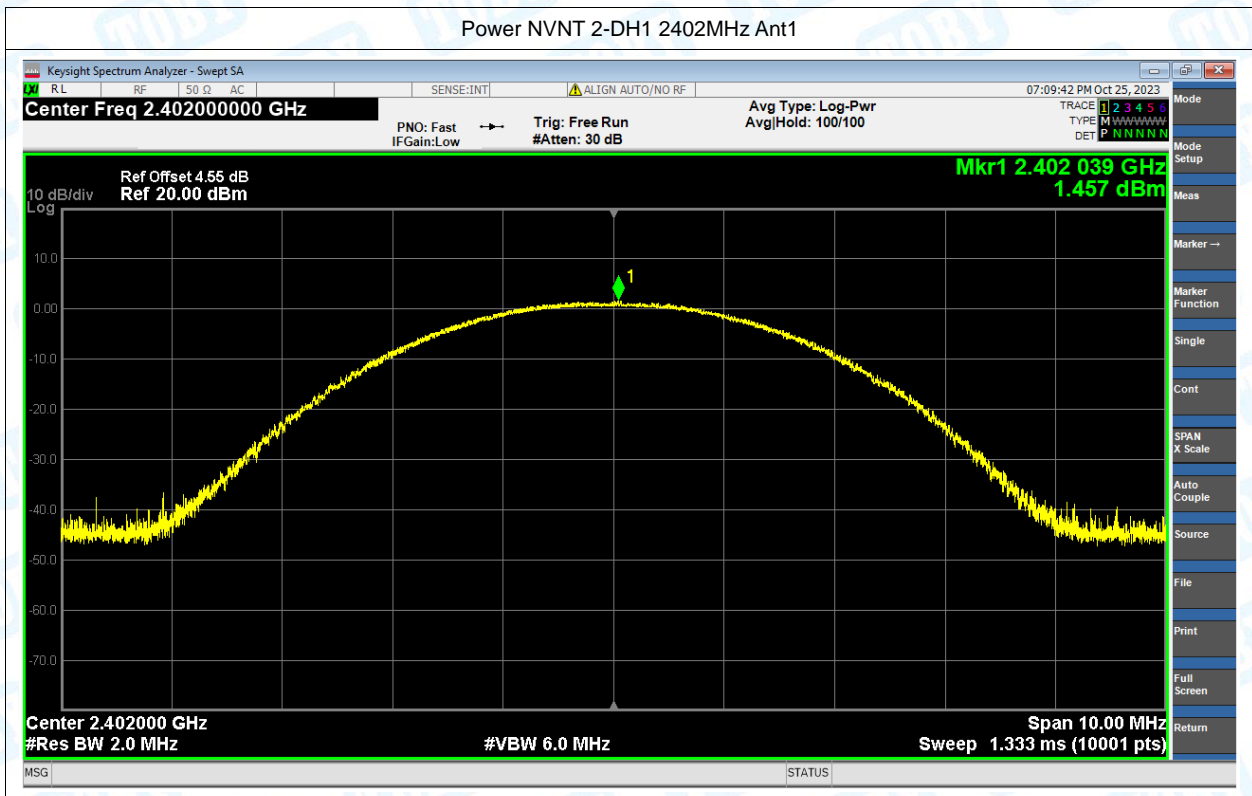
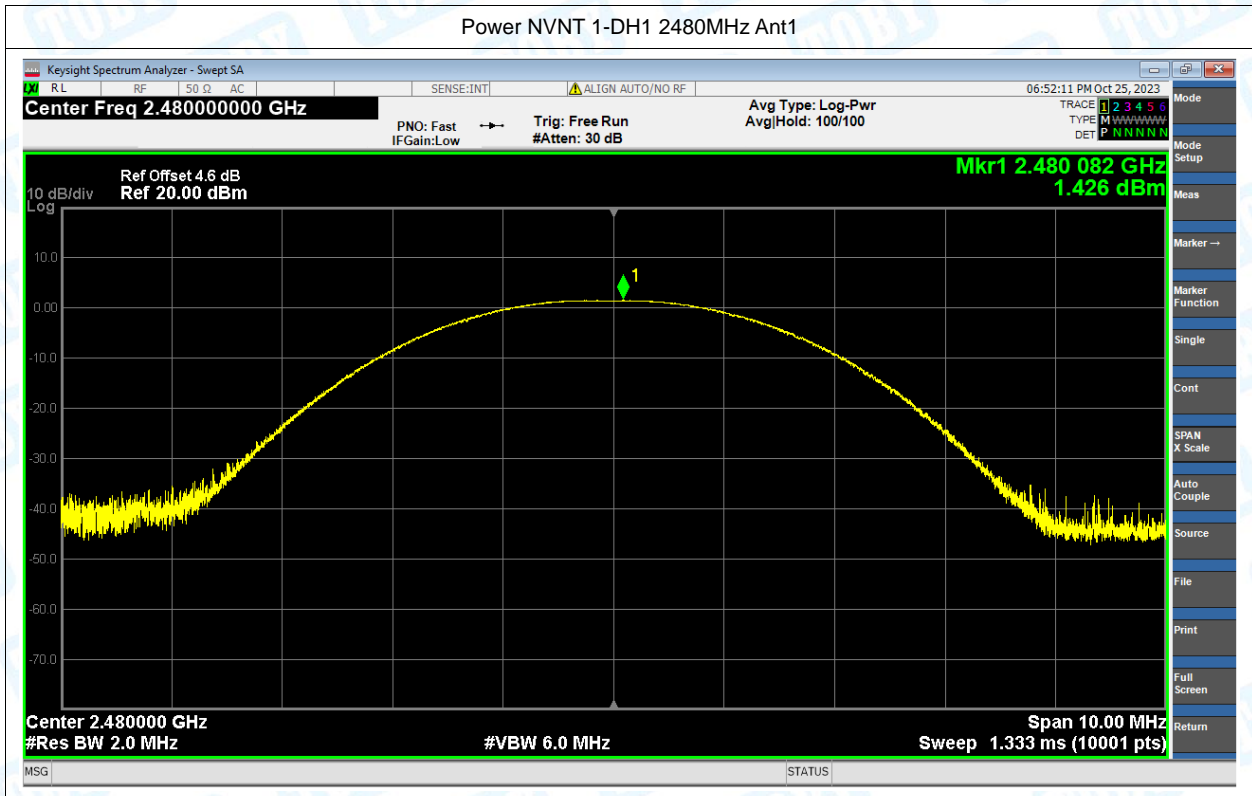
Test Graphs

Power NVNT 1-DH1 2402MHz Ant1



Power NVNT 1-DH1 2441MHz Ant1





Power NVNT 2-DH1 2441MHz Ant1



Power NVNT 2-DH1 2480MHz Ant1

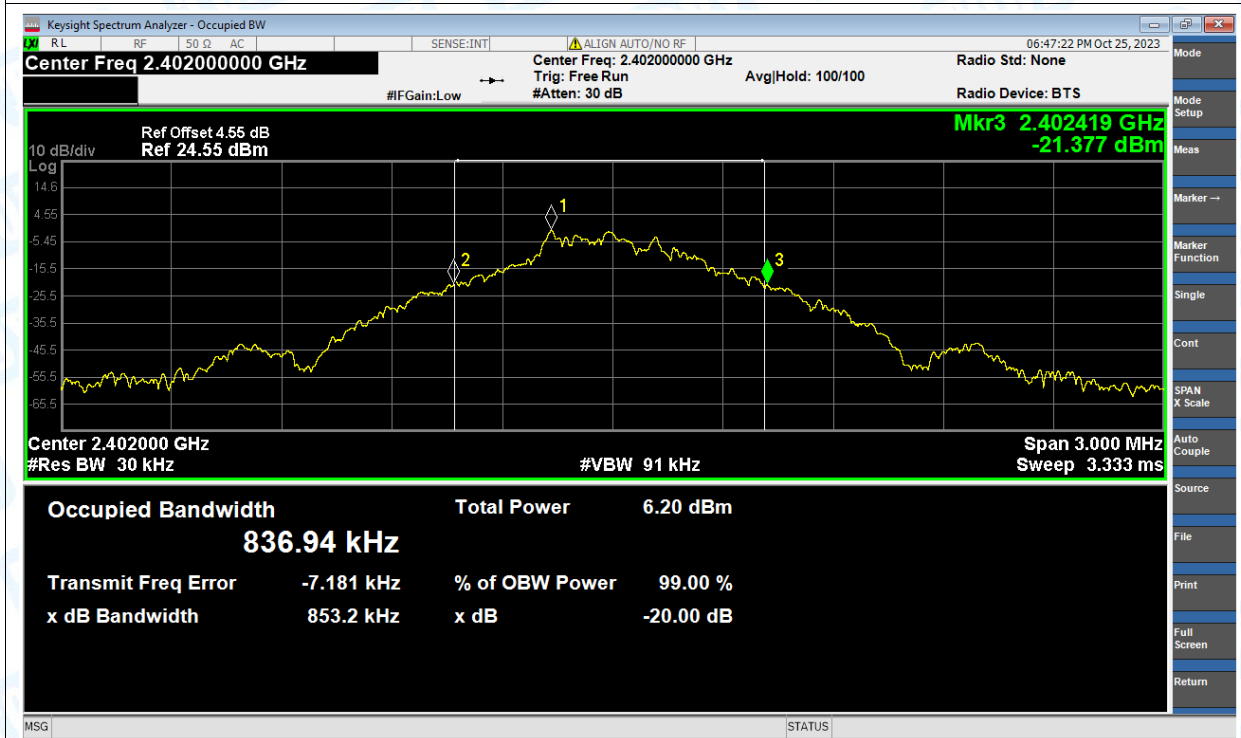


-20dB Bandwidth

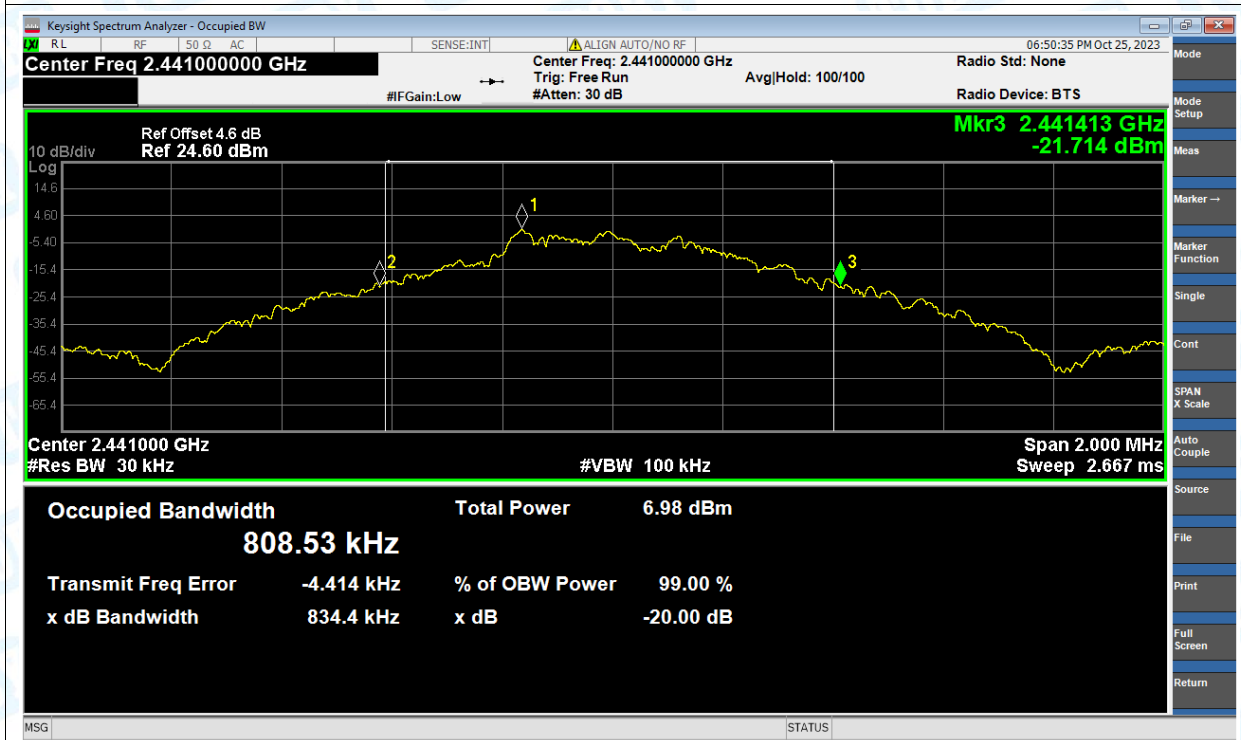
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	0.85	0	Pass
NVNT	1-DH1	2441	Ant1	0.83	0	Pass
NVNT	1-DH1	2480	Ant1	0.85	0	Pass
NVNT	2-DH1	2402	Ant1	1.25	0	Pass
NVNT	2-DH1	2441	Ant1	1.23	0	Pass
NVNT	2-DH1	2480	Ant1	1.23	0	Pass

Test Graphs

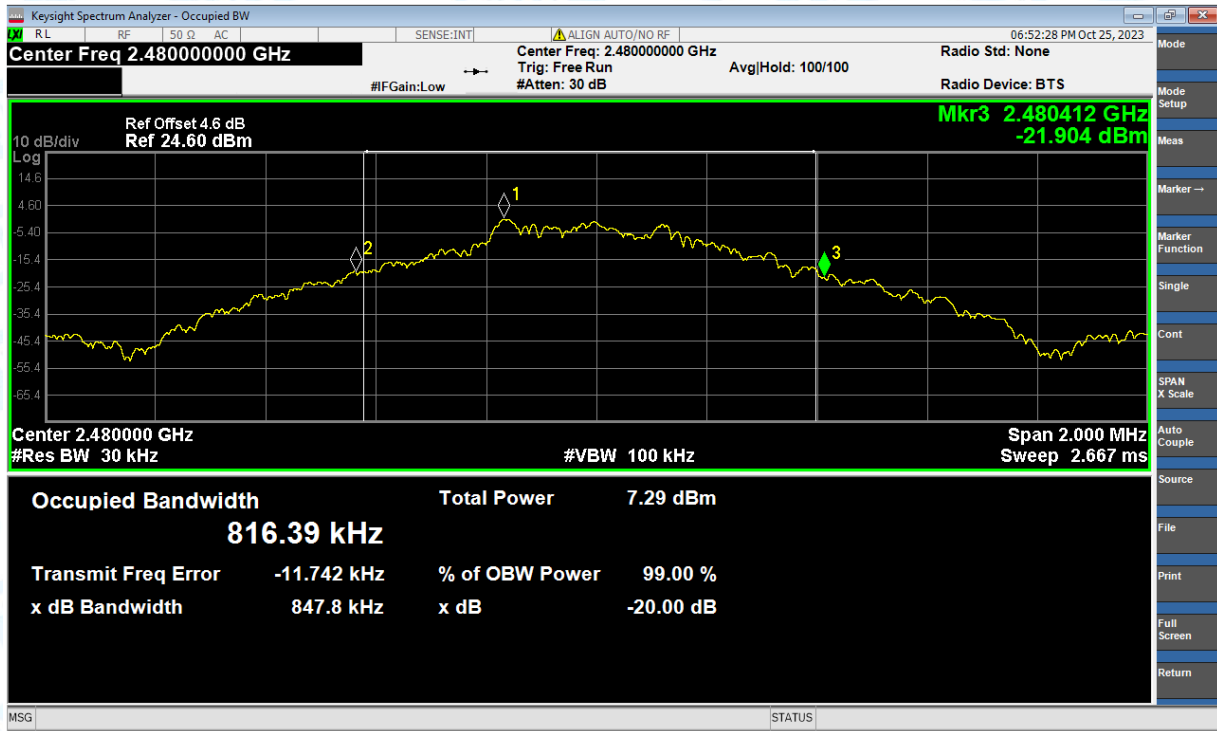
-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



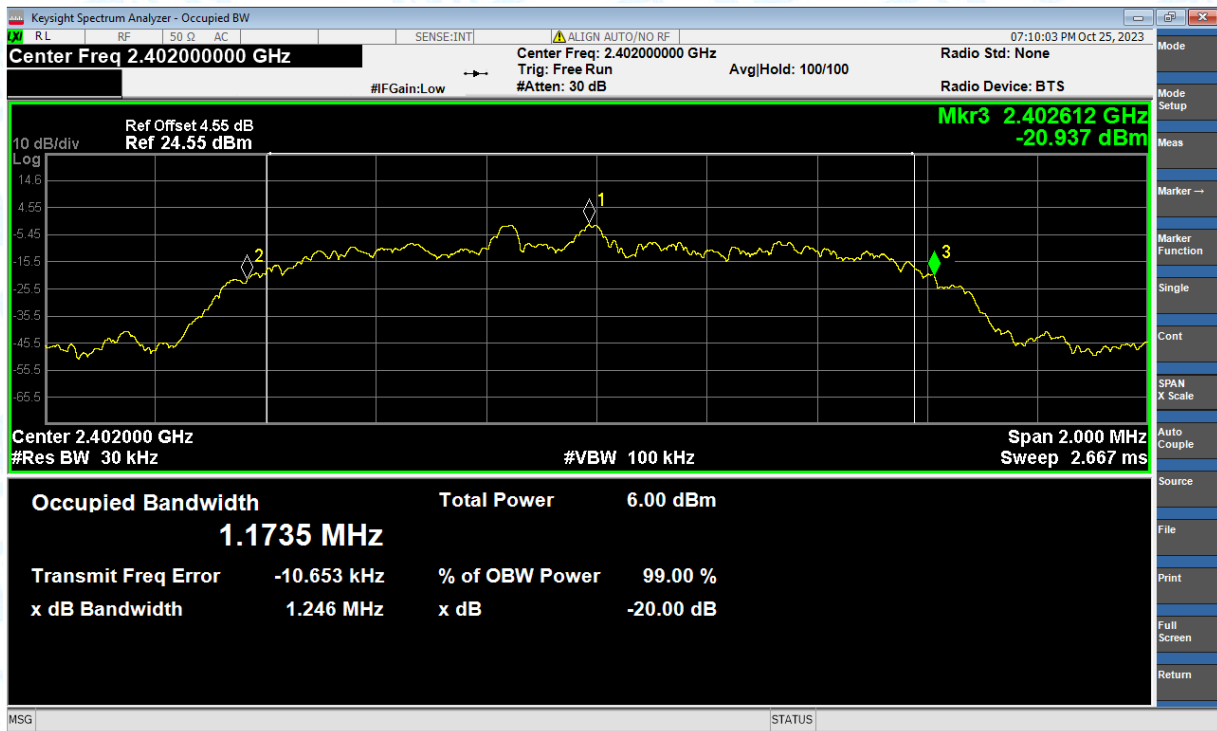
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



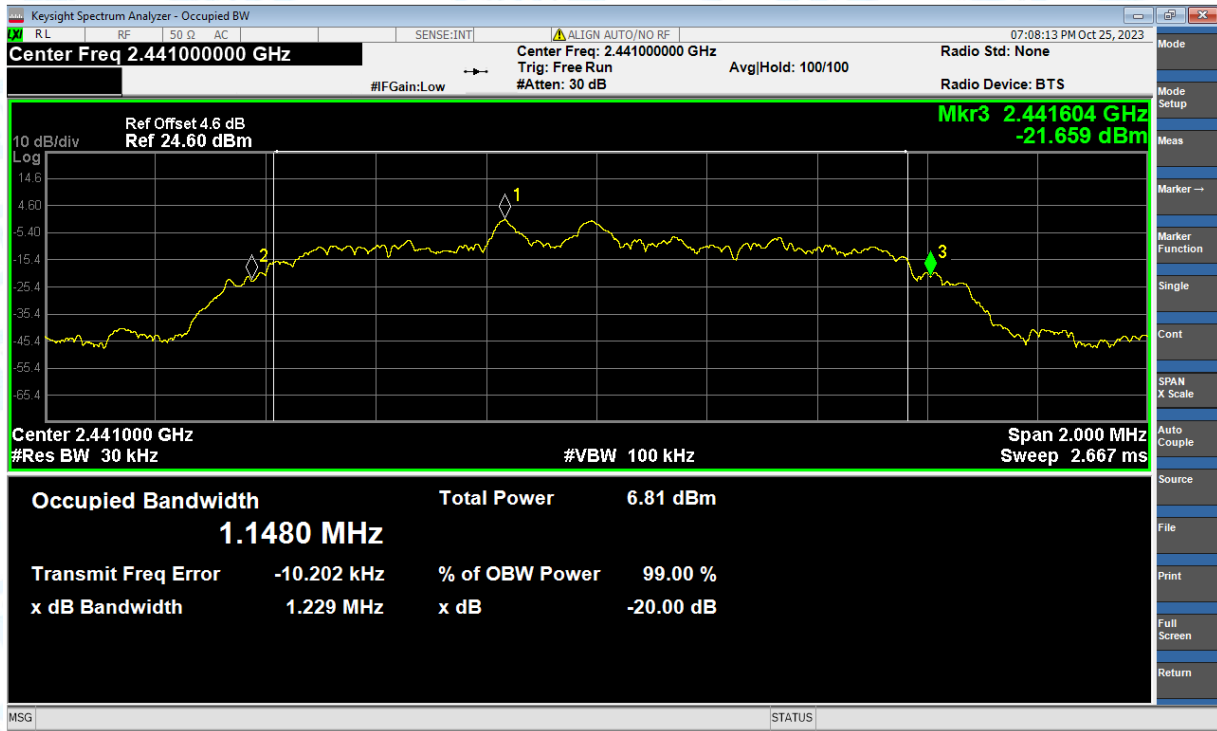
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



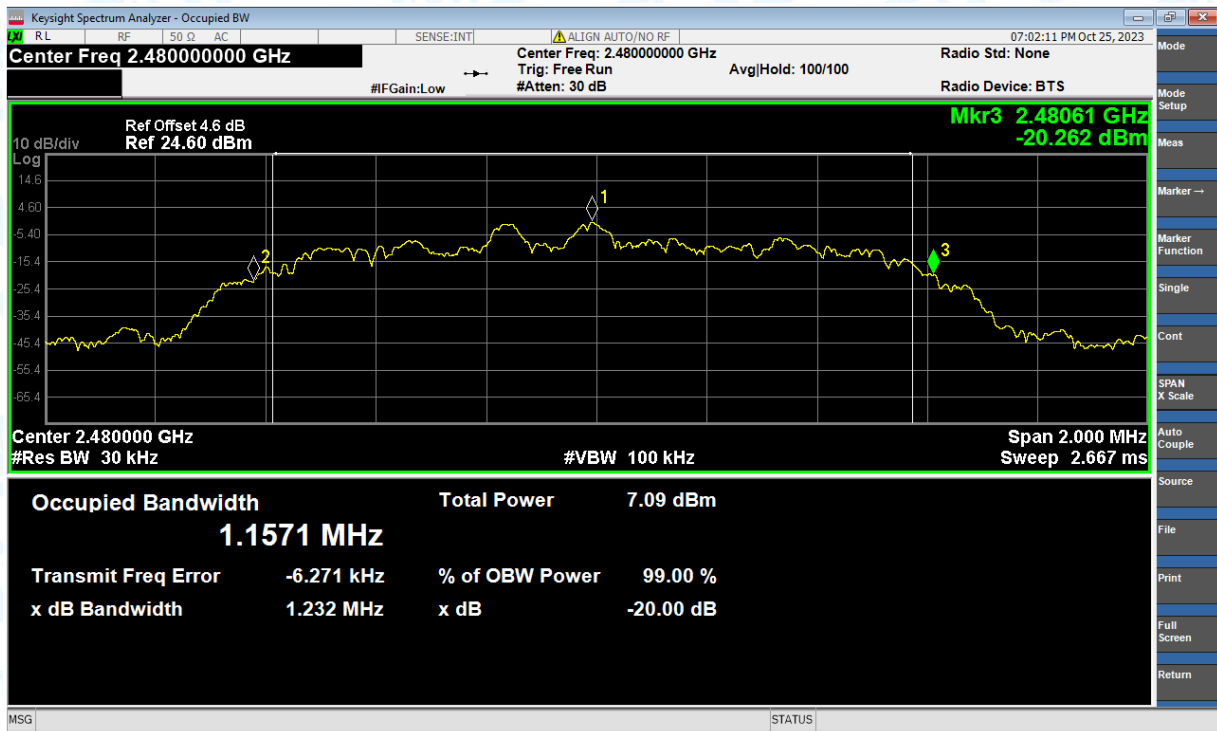
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

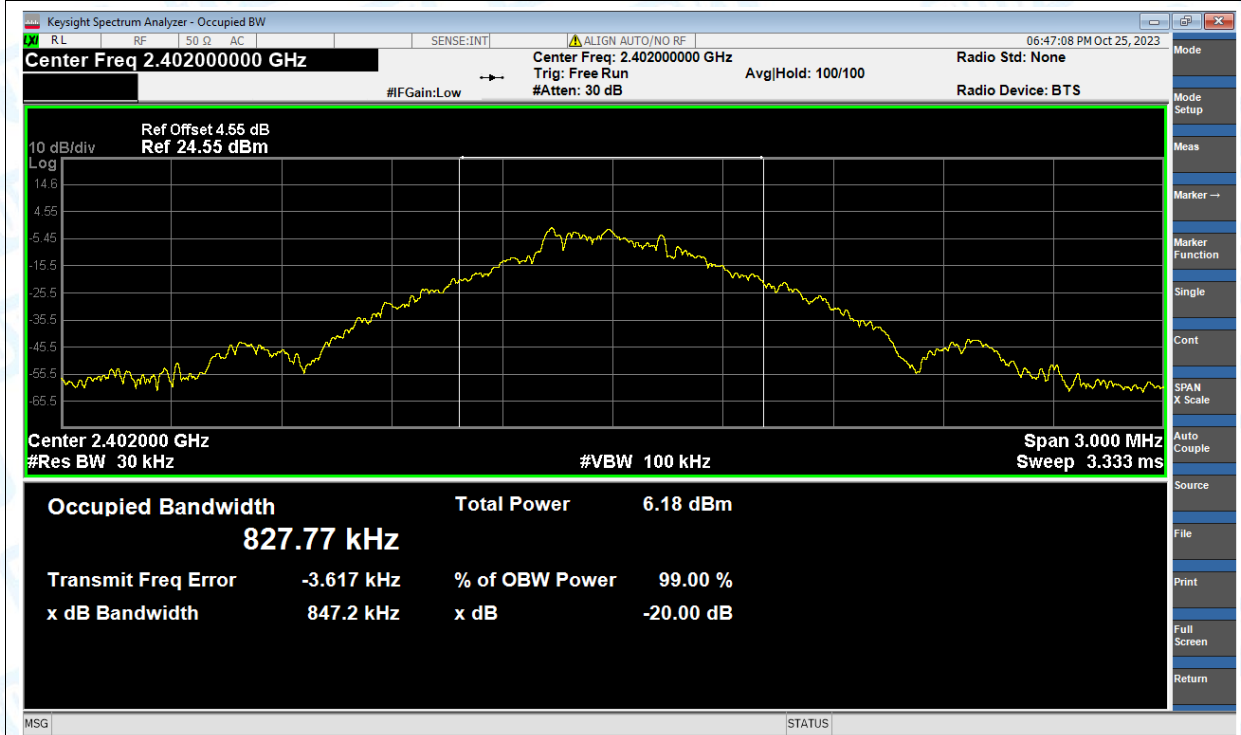


Occupied Channel Bandwidth

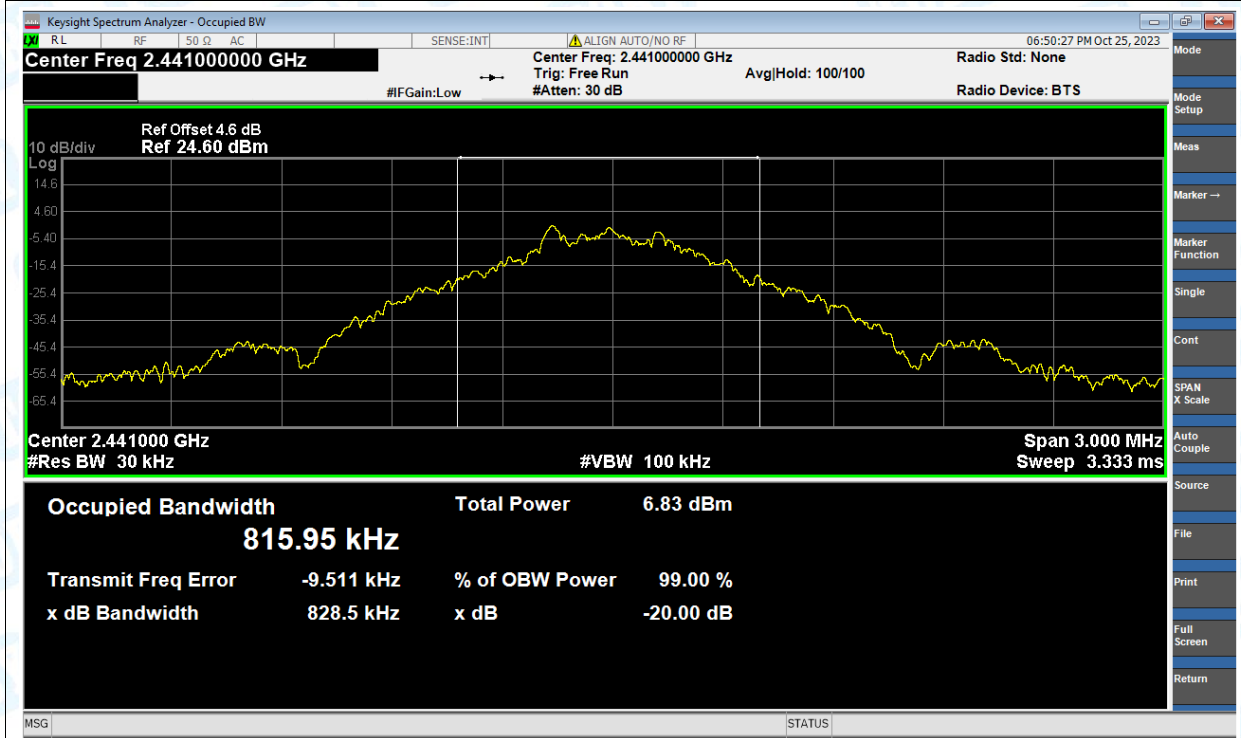
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.828
NVNT	1-DH1	2441	Ant1	0.816
NVNT	1-DH1	2480	Ant1	0.81
NVNT	2-DH1	2402	Ant1	1.166
NVNT	2-DH1	2441	Ant1	1.176
NVNT	2-DH1	2480	Ant1	1.162

Test Graphs

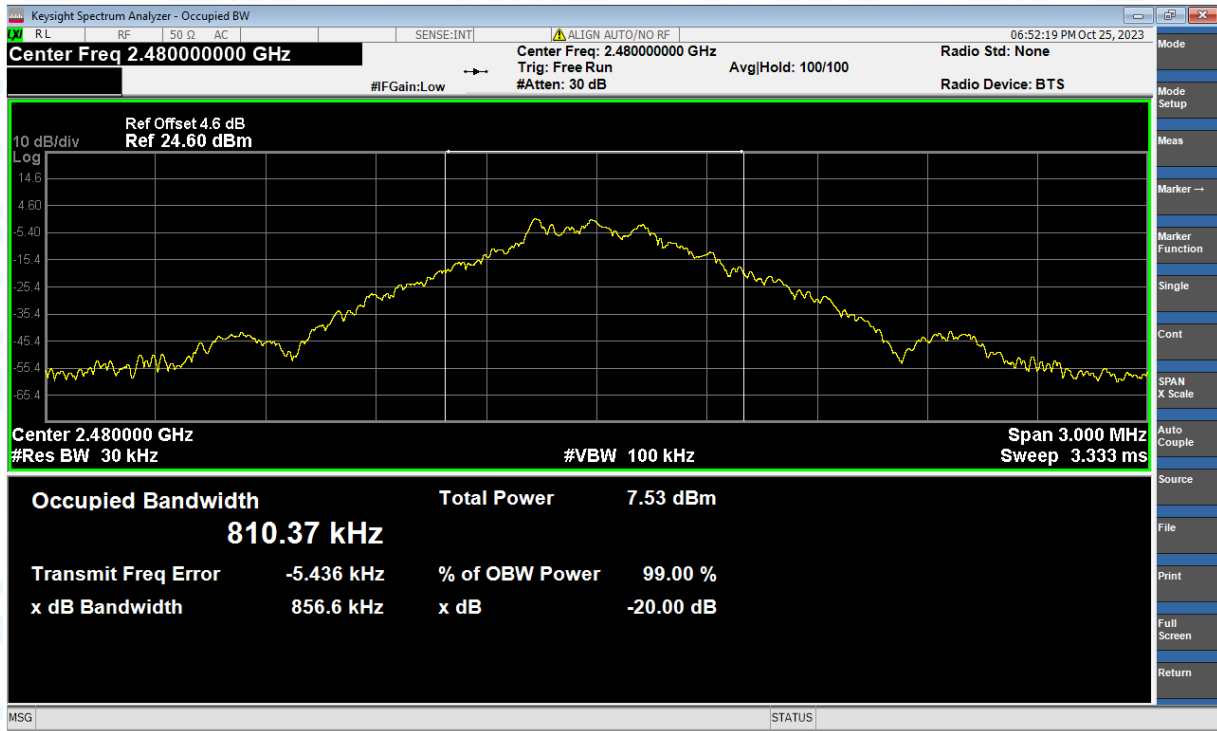
OBW NVNT 1-DH1 2402MHz Ant1



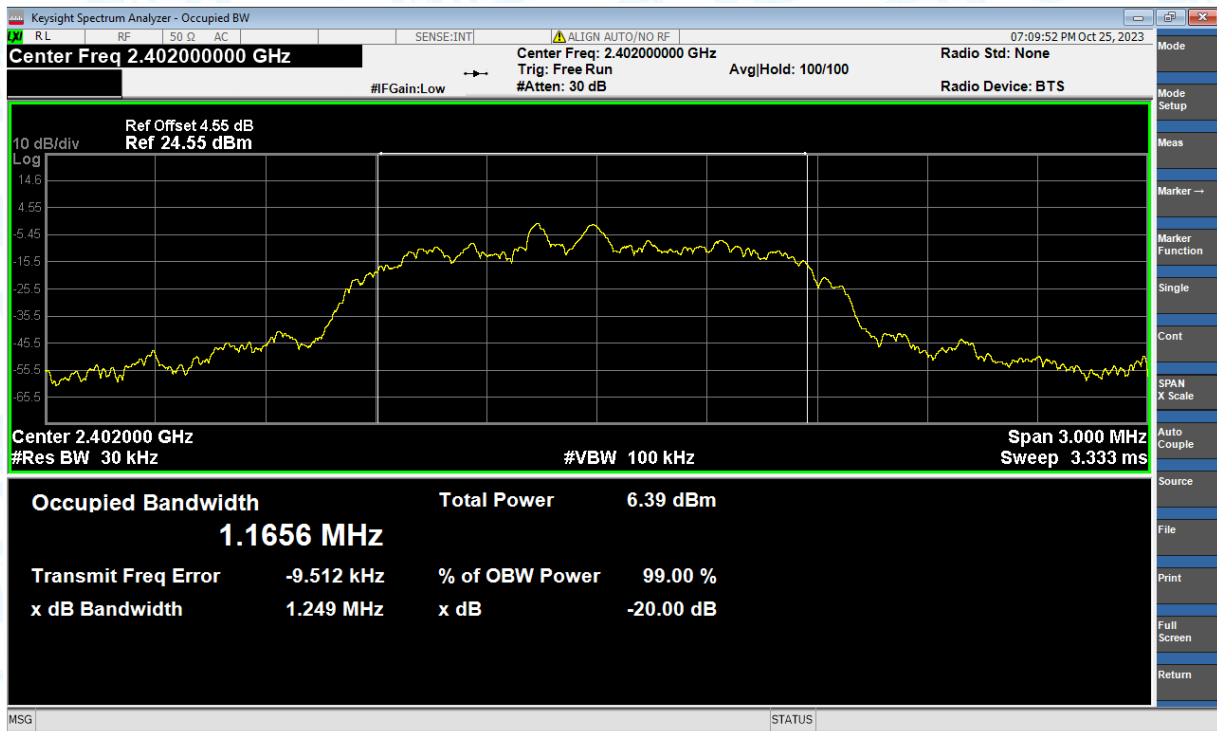
OBW NVNT 1-DH1 2441MHz Ant1



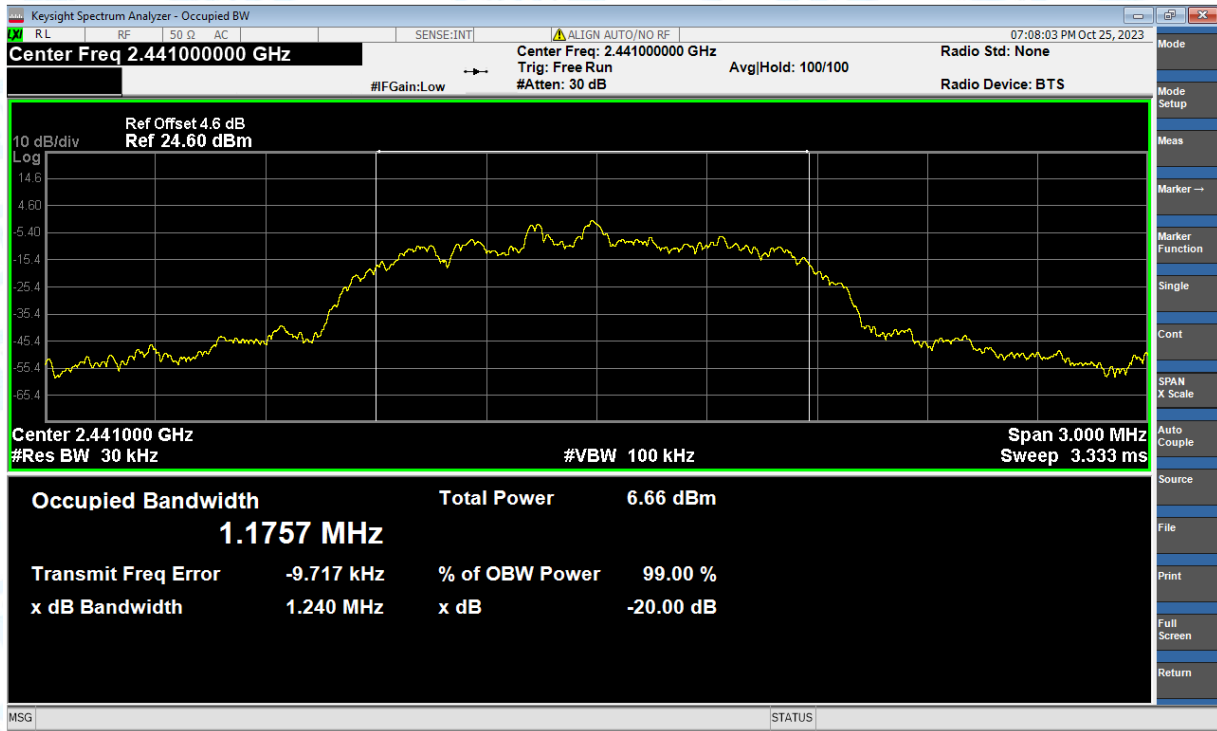
OBW NVNT 1-DH1 2480MHz Ant1



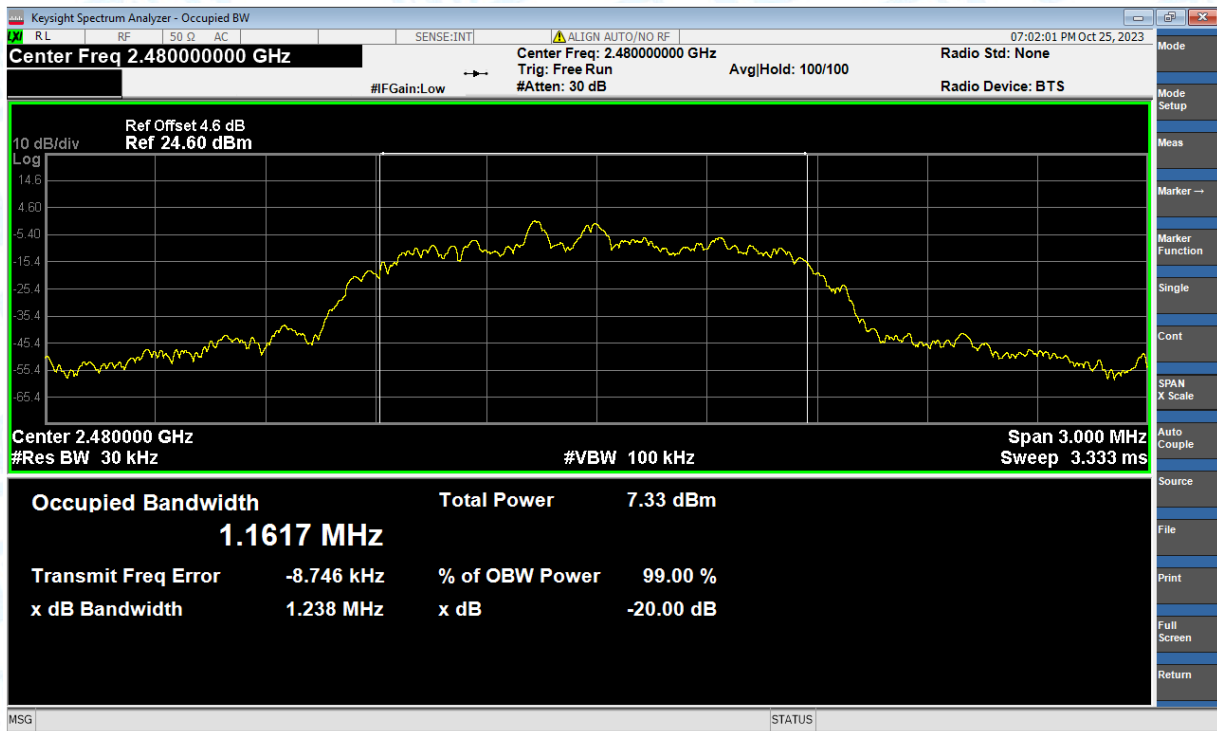
OBW NVNT 2-DH1 2402MHz Ant1



OBW NVNT 2-DH1 2441MHz Ant1



OBW NVNT 2-DH1 2480MHz Ant1

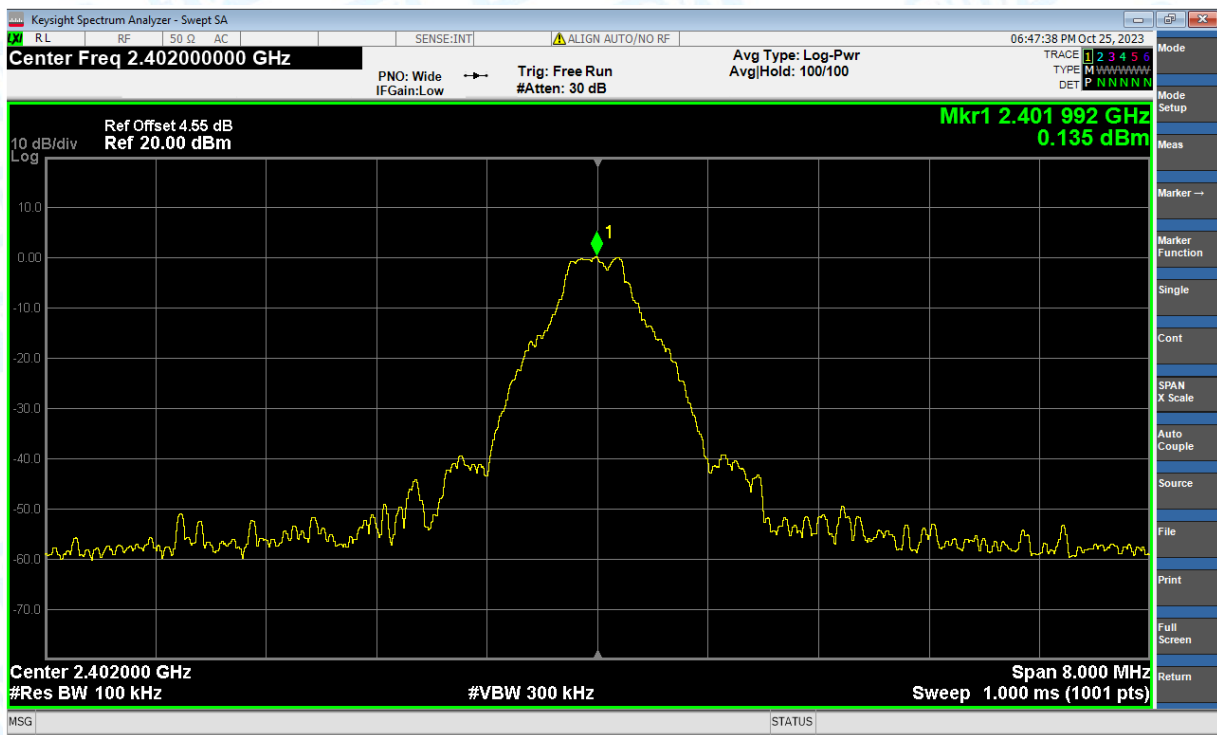


Band Edge

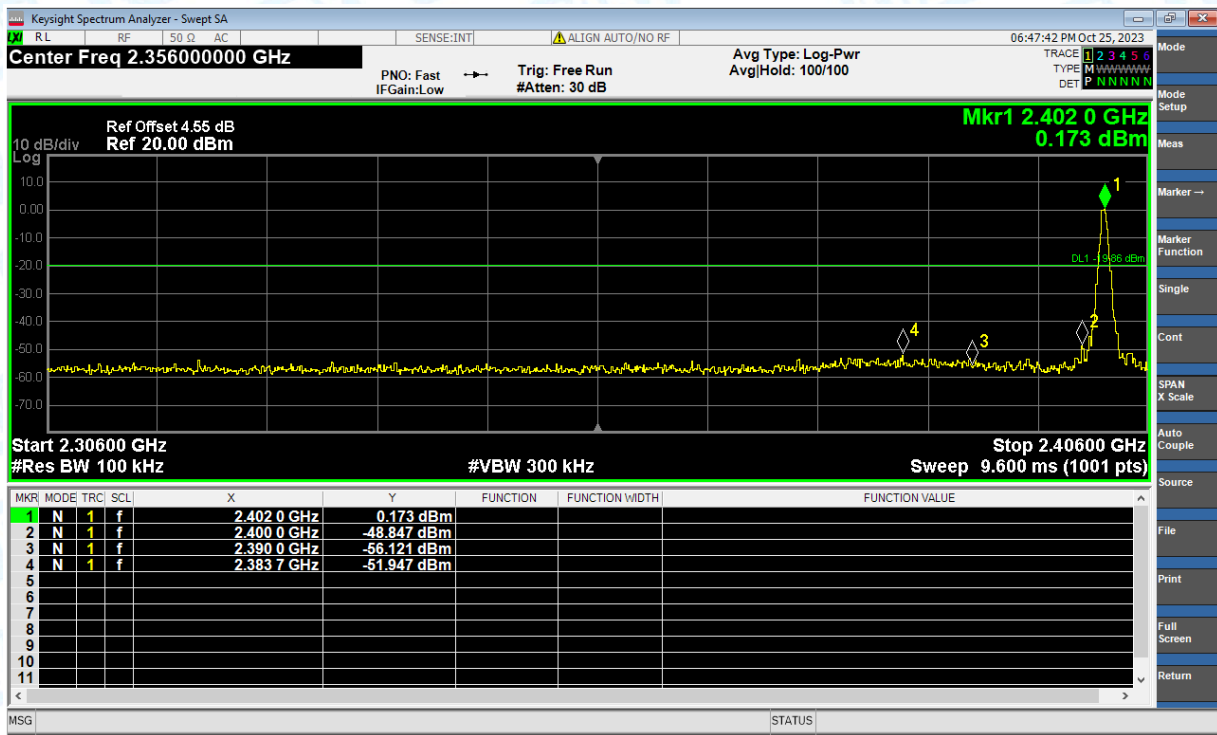
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-52.09	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-52.1	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-50.49	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-52.92	-20	Pass

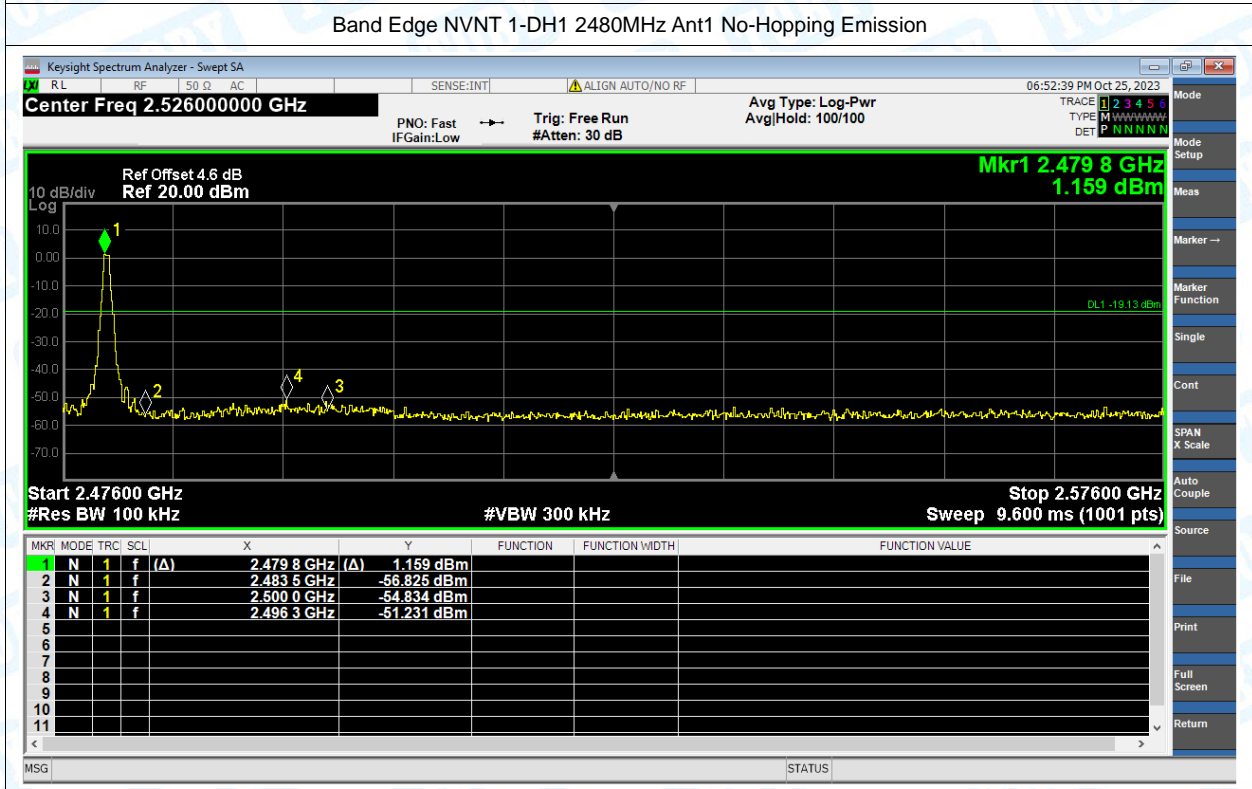
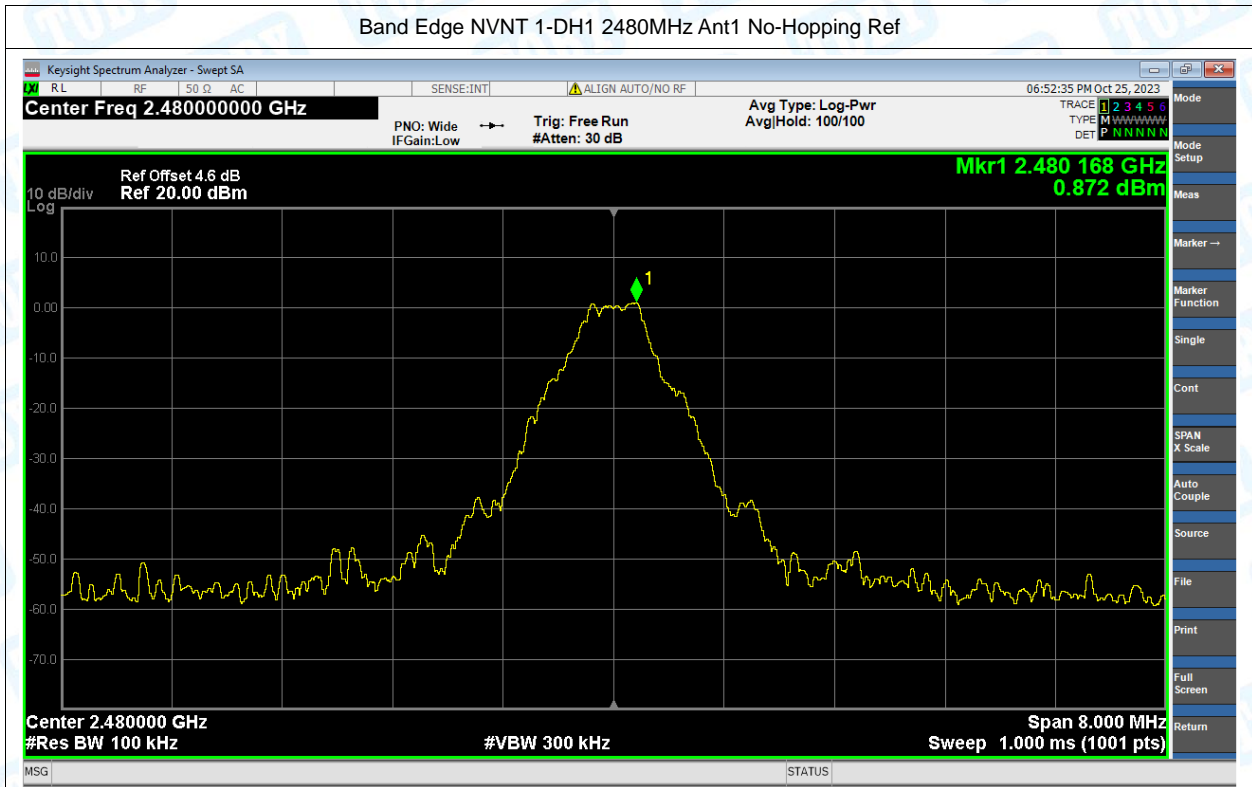
Test Graphs

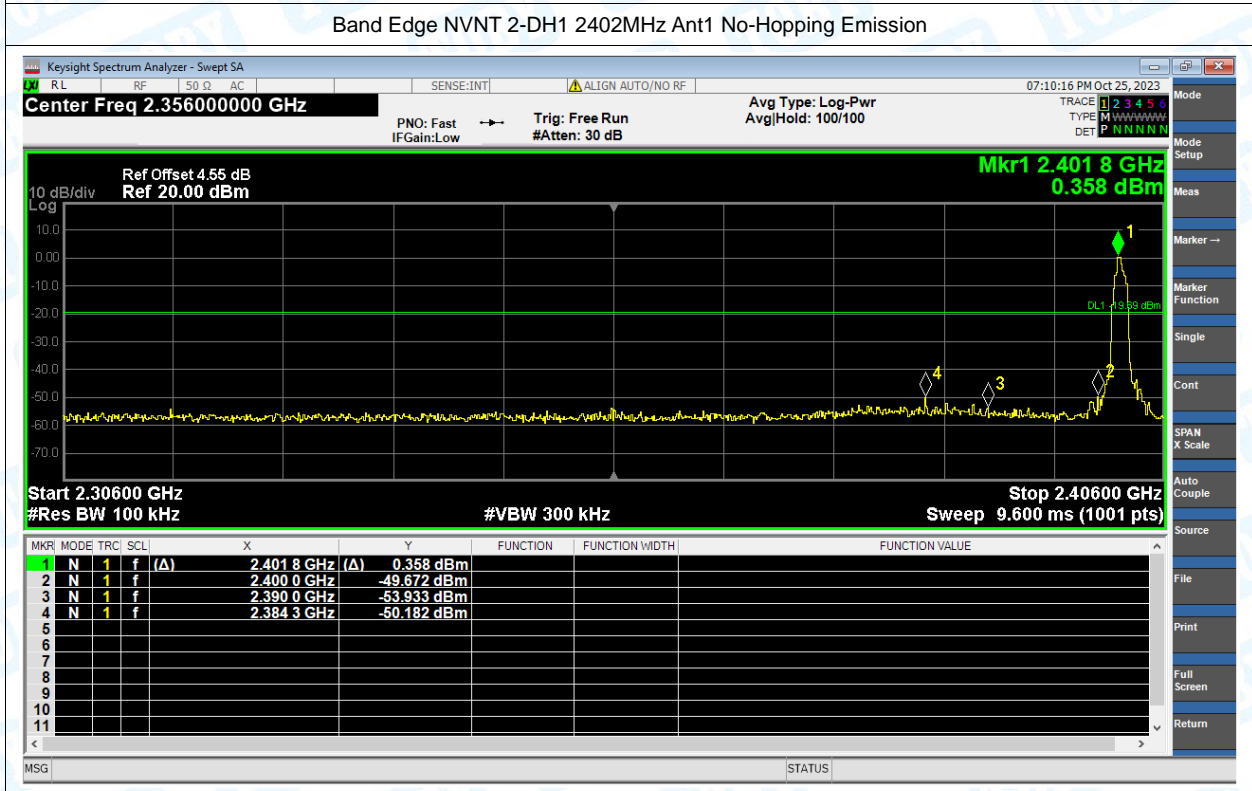
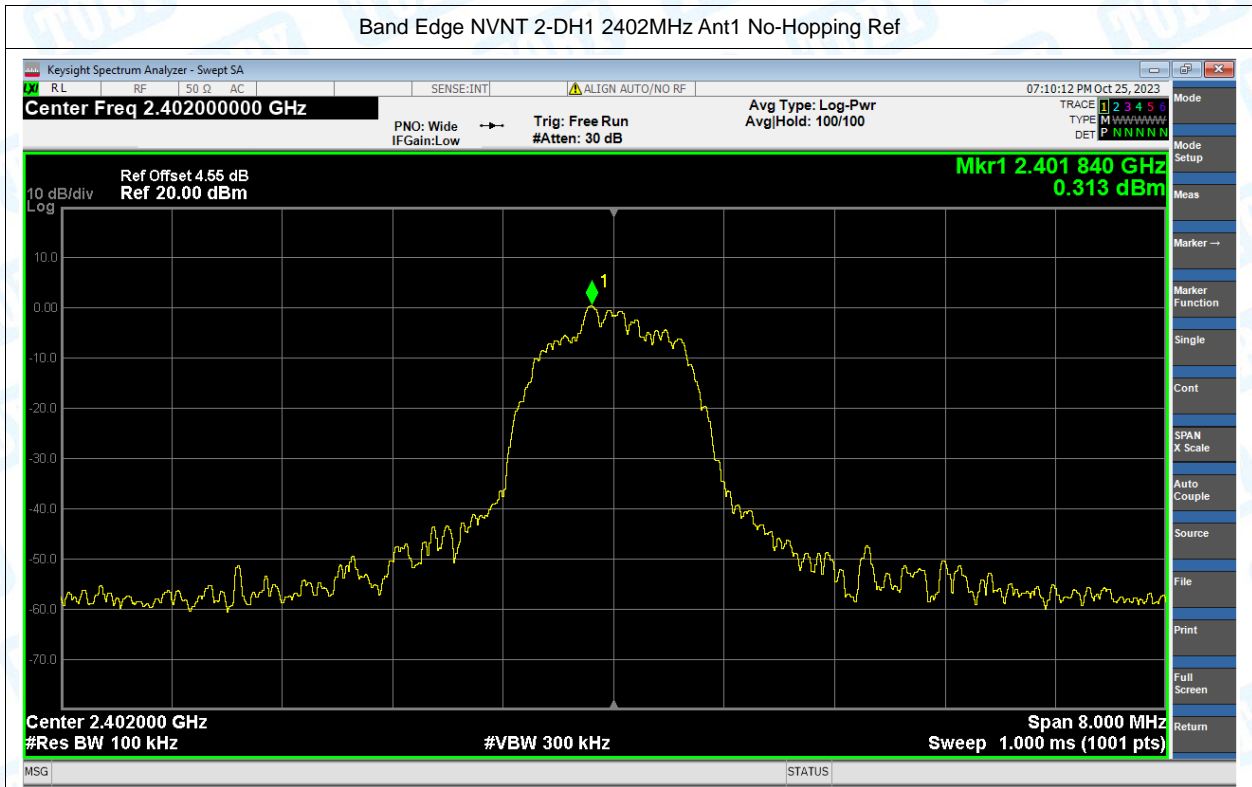
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref

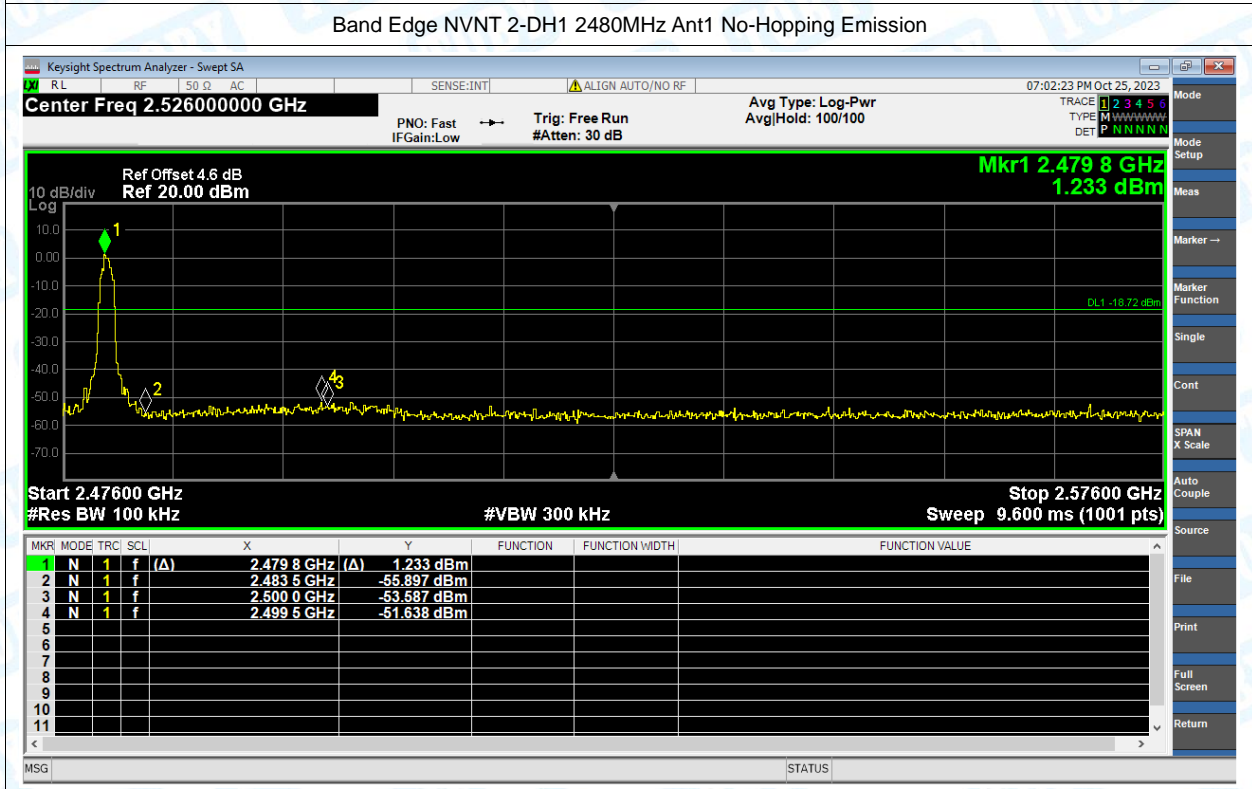
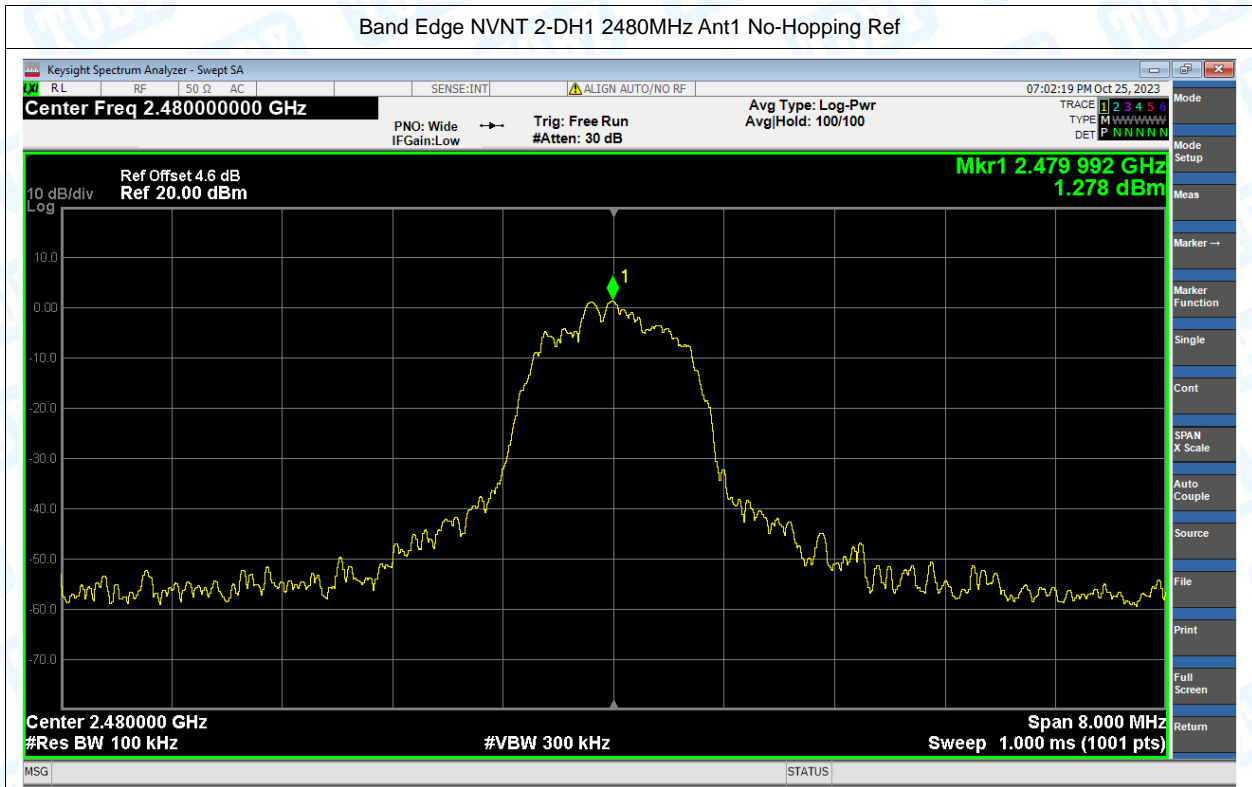


Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission







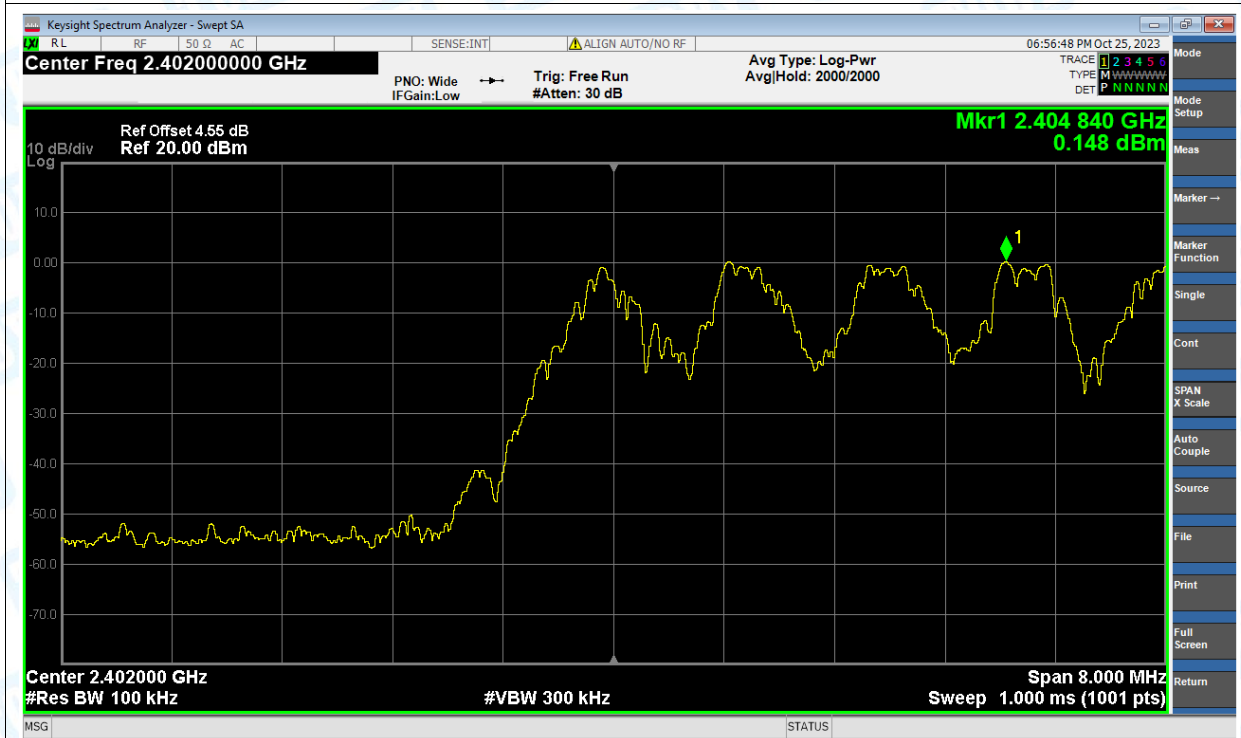


Band Edge(Hopping)

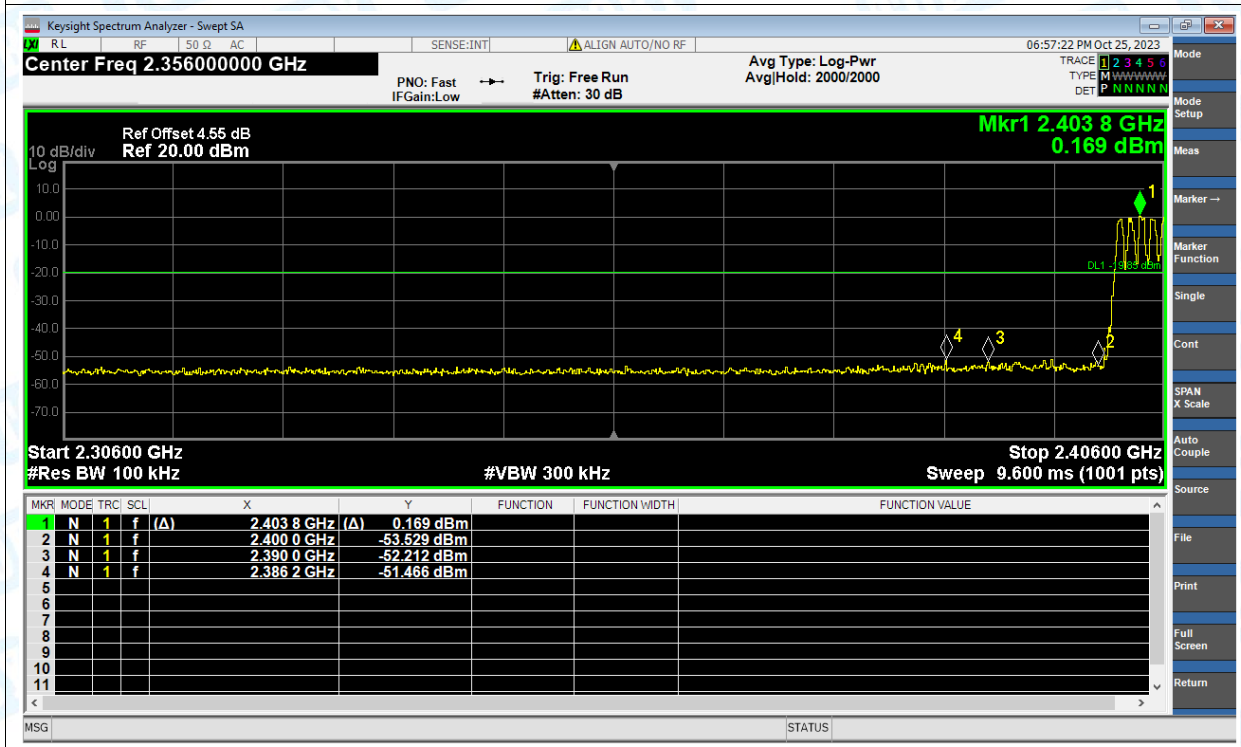
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-51.62	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-51.02	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-51.89	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-52.2	-20	Pass

Test Graphs

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



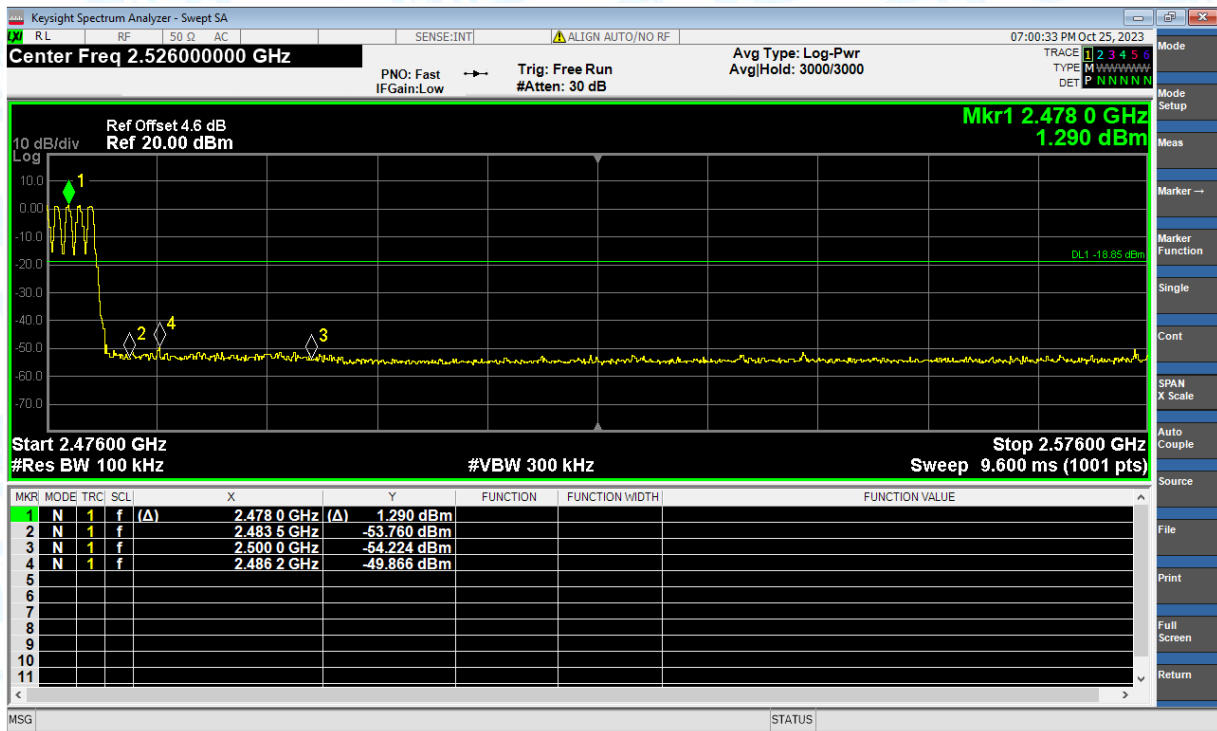
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission



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



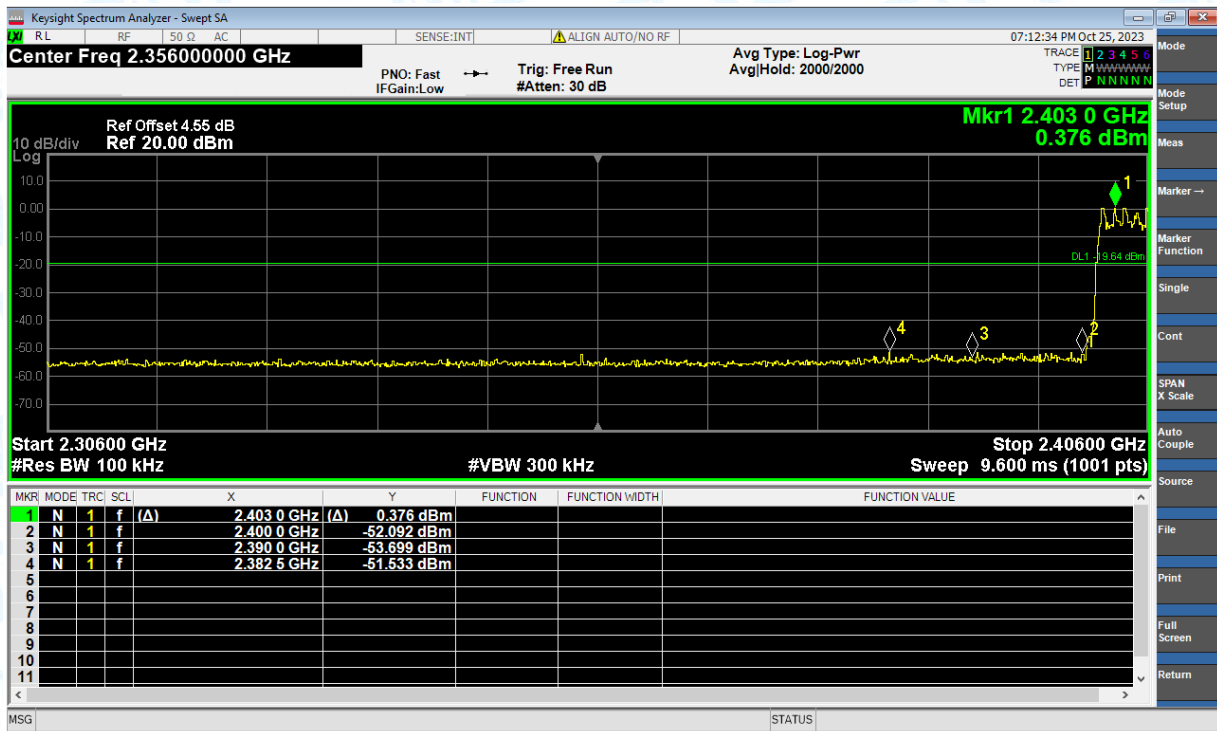
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Emission

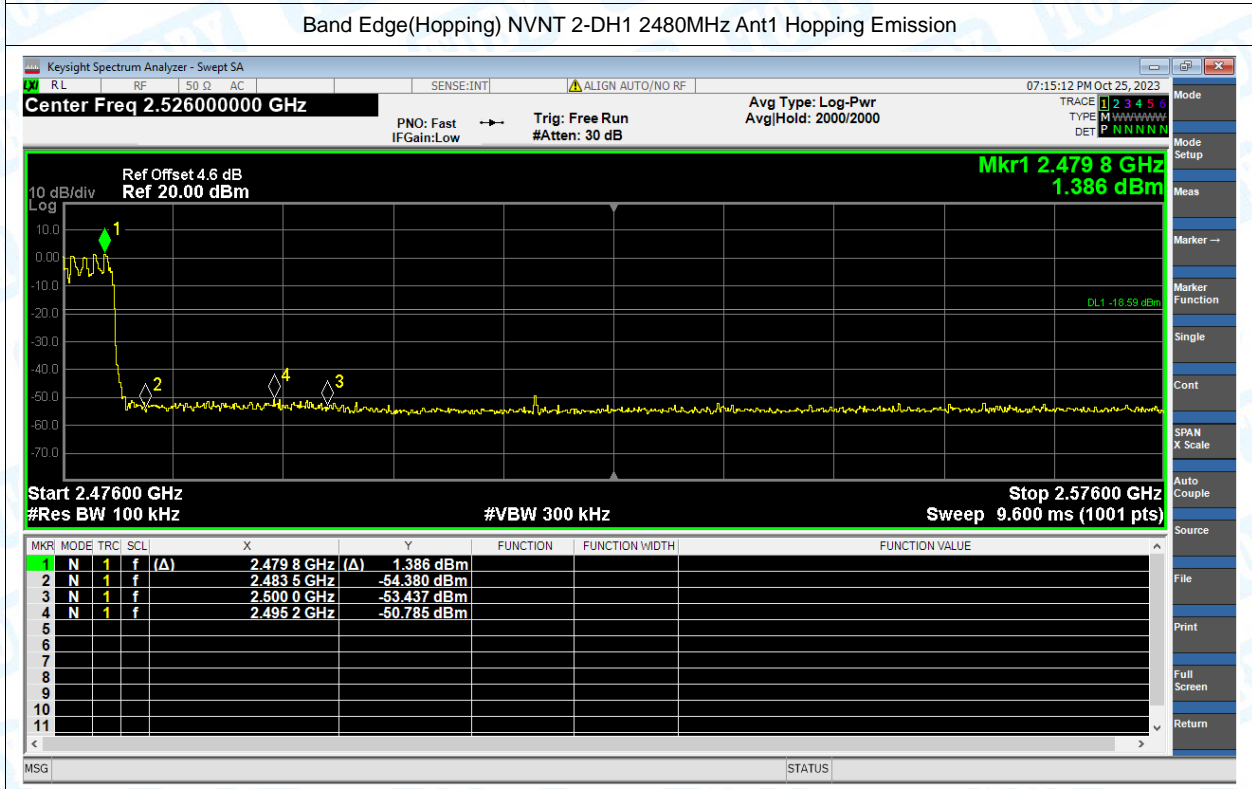
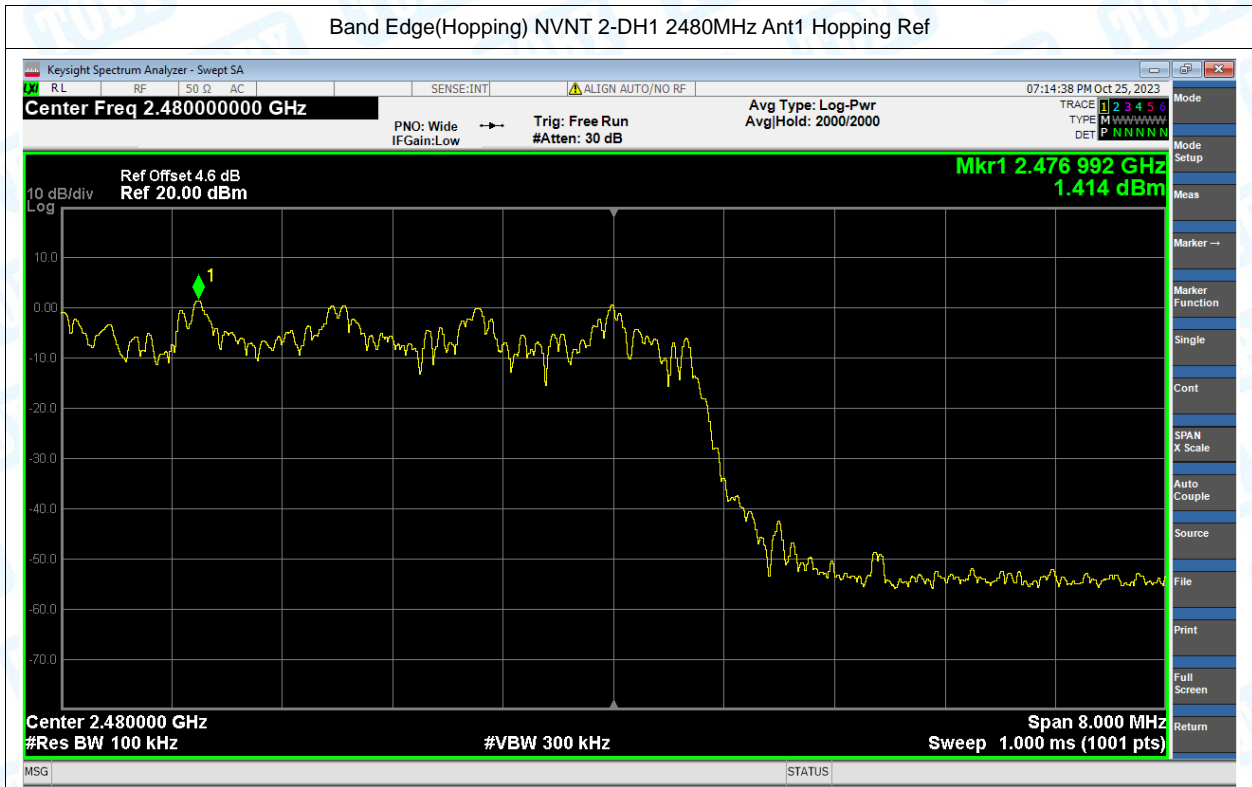


Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Ref



Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Emission



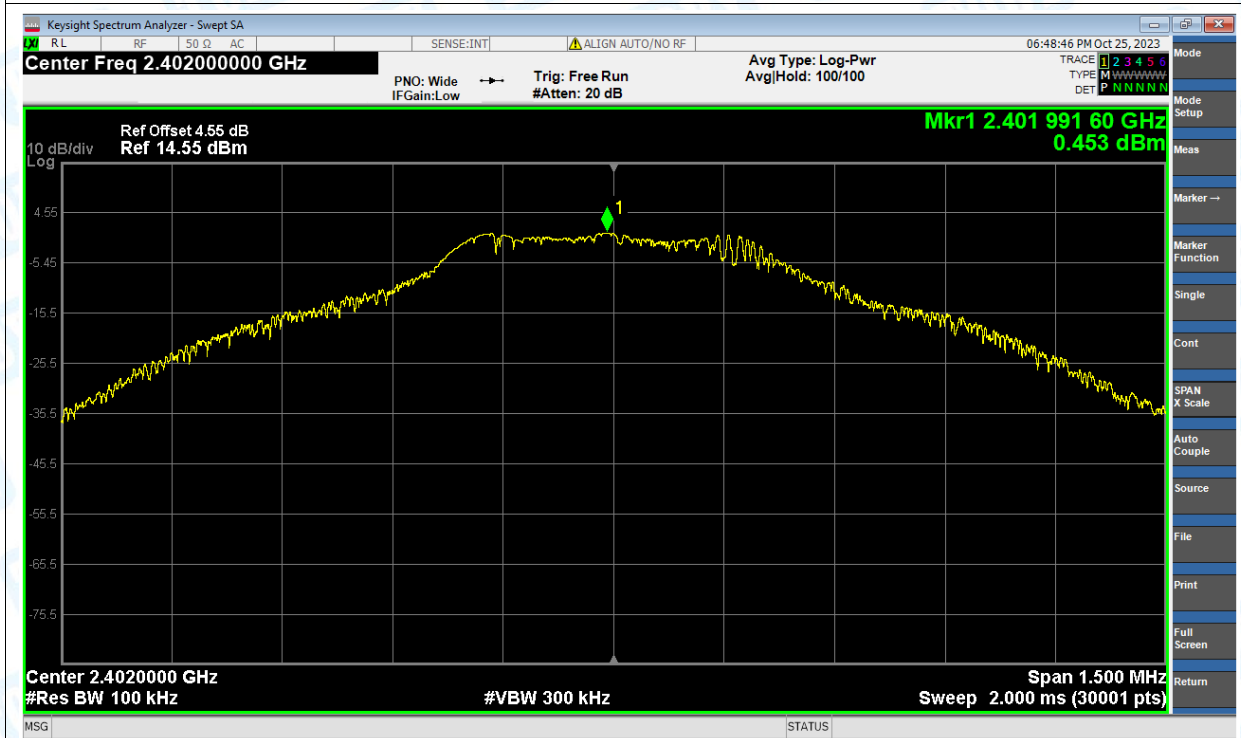


Conducted RF Spurious Emission

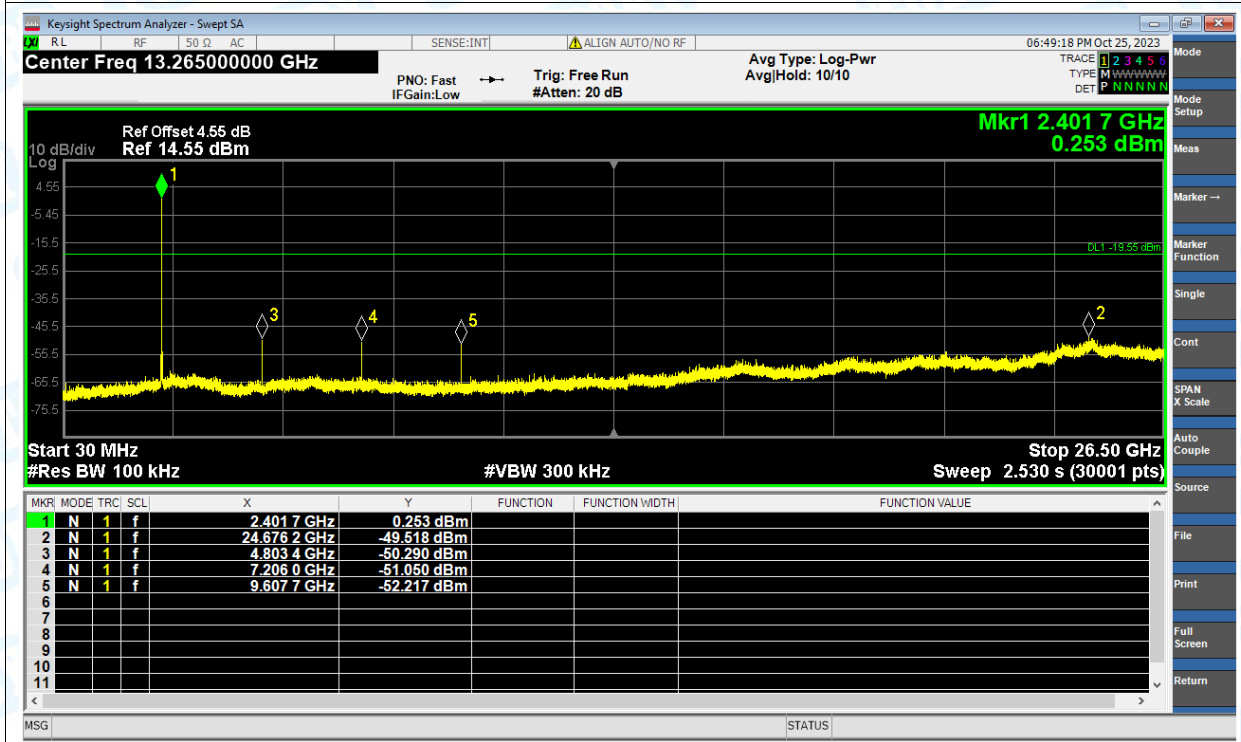
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-49.97	-20	Pass
NVNT	1-DH1	2441	Ant1	-49.95	-20	Pass
NVNT	1-DH1	2480	Ant1	-50.57	-20	Pass
NVNT	2-DH1	2402	Ant1	-49.38	-20	Pass
NVNT	2-DH1	2441	Ant1	-50.23	-20	Pass
NVNT	2-DH1	2480	Ant1	-50.03	-20	Pass

Test Graphs

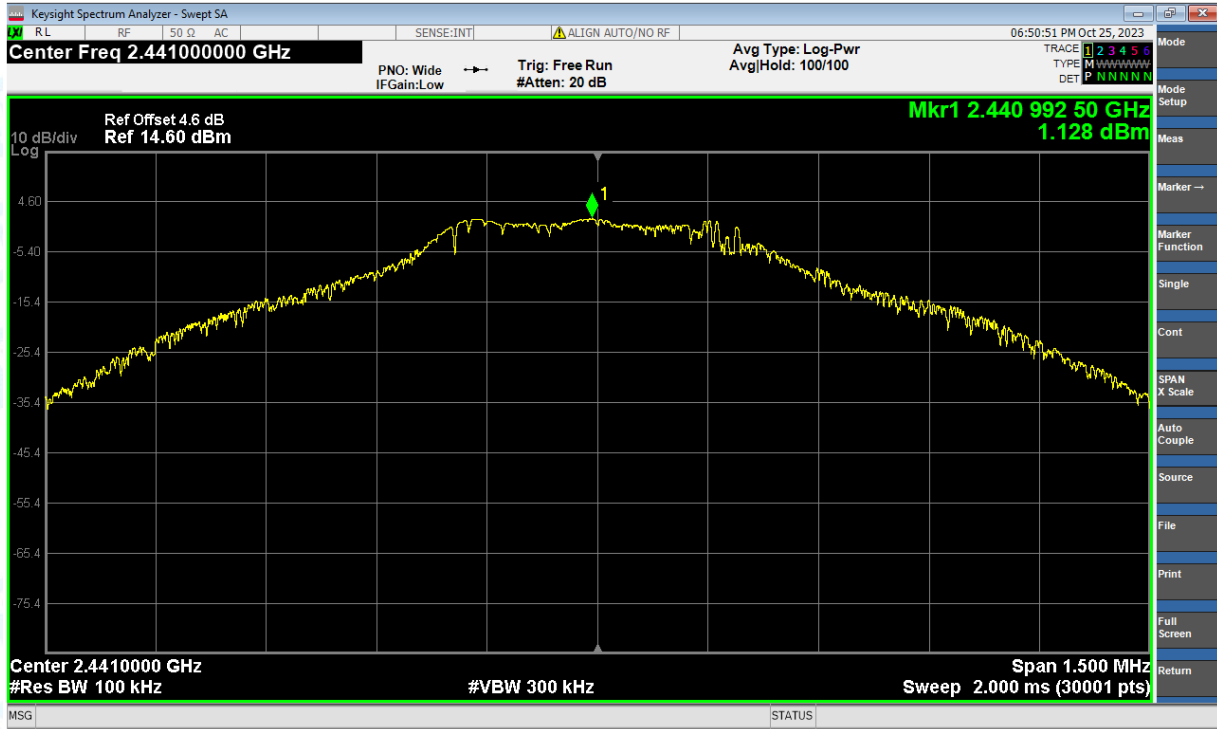
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



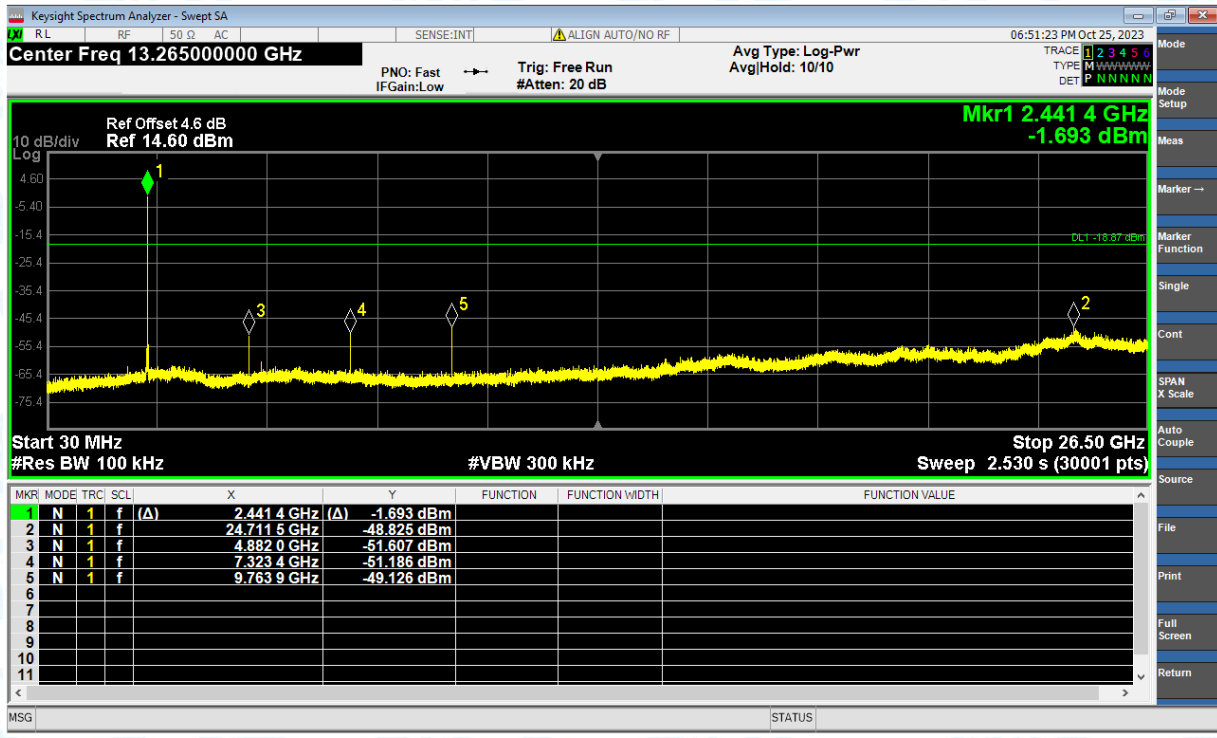
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



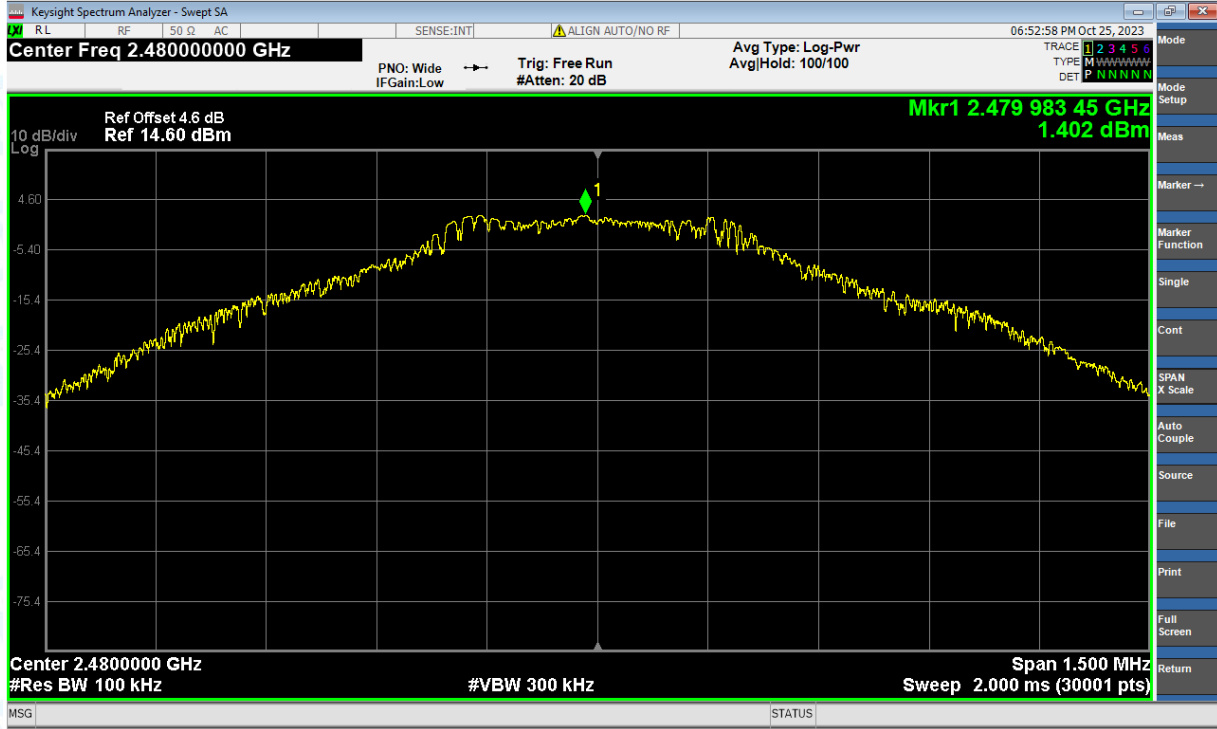
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



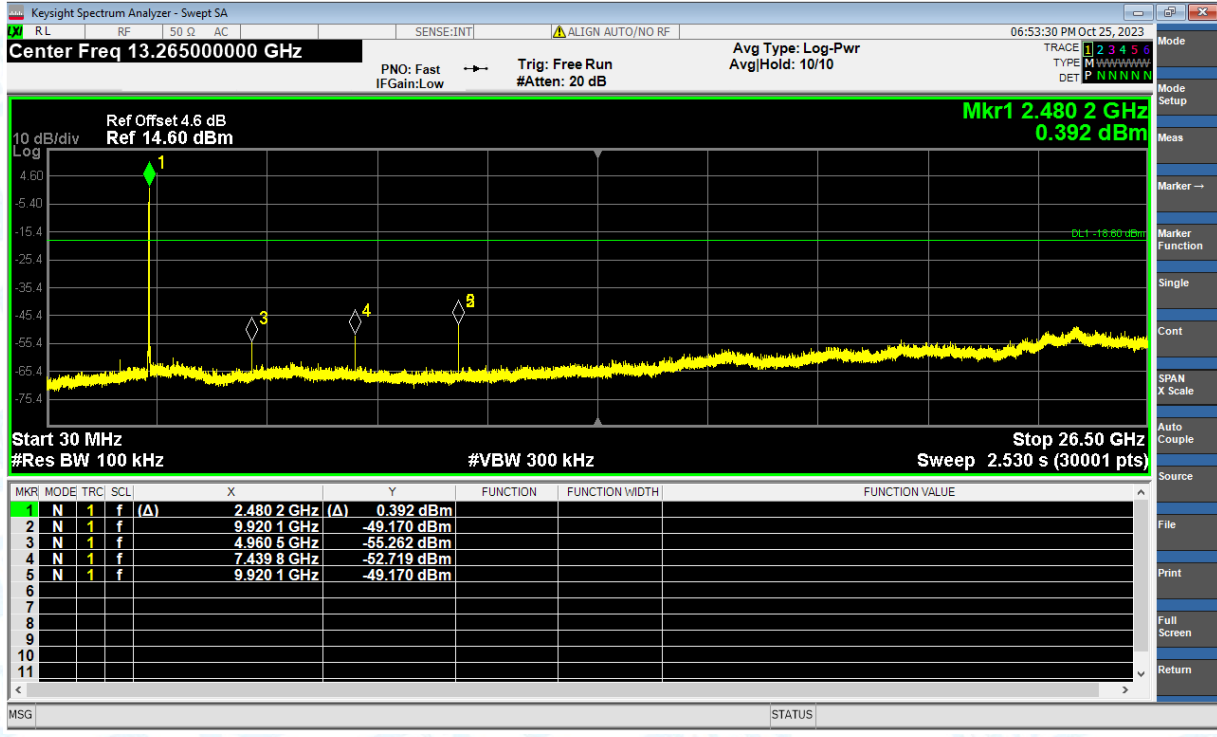
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



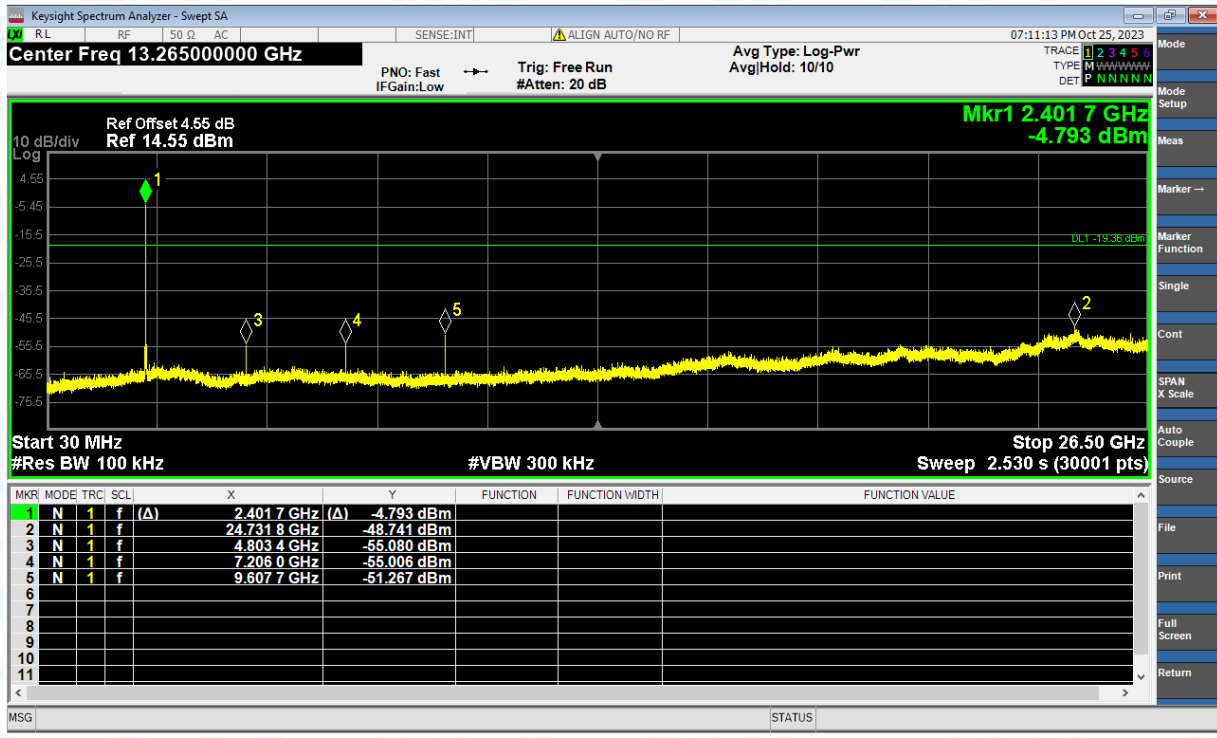
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



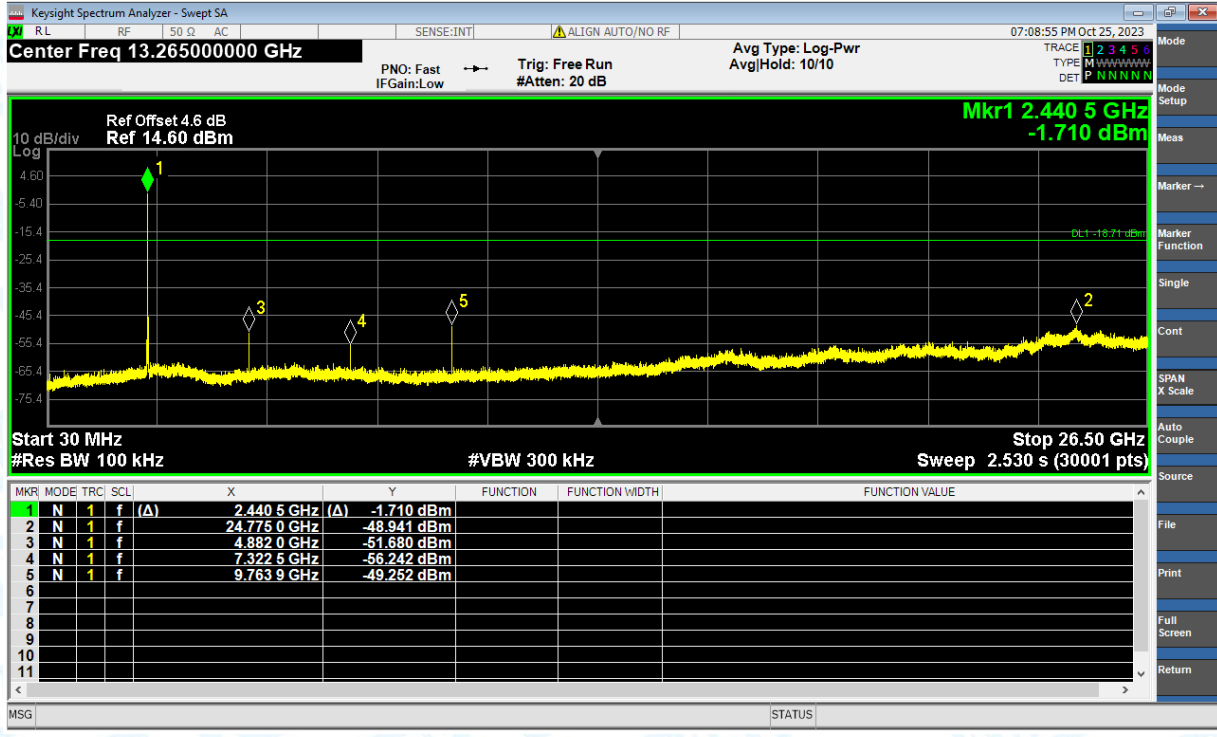
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



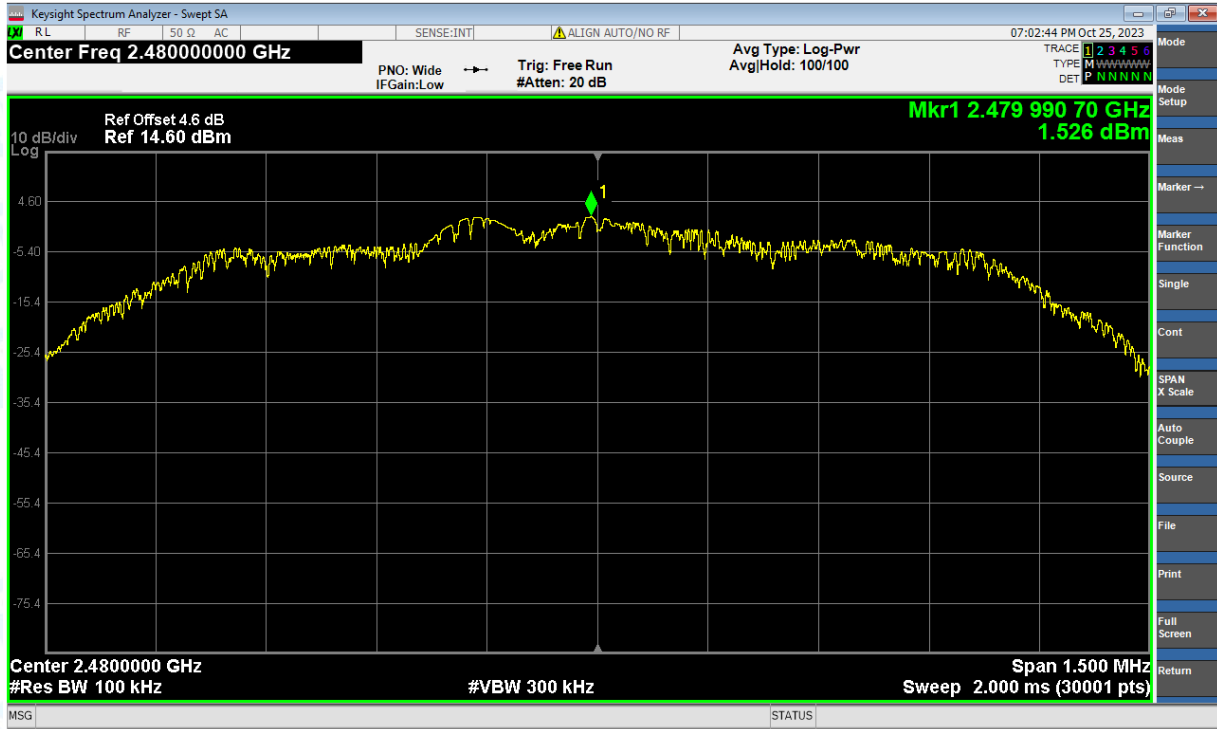
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref



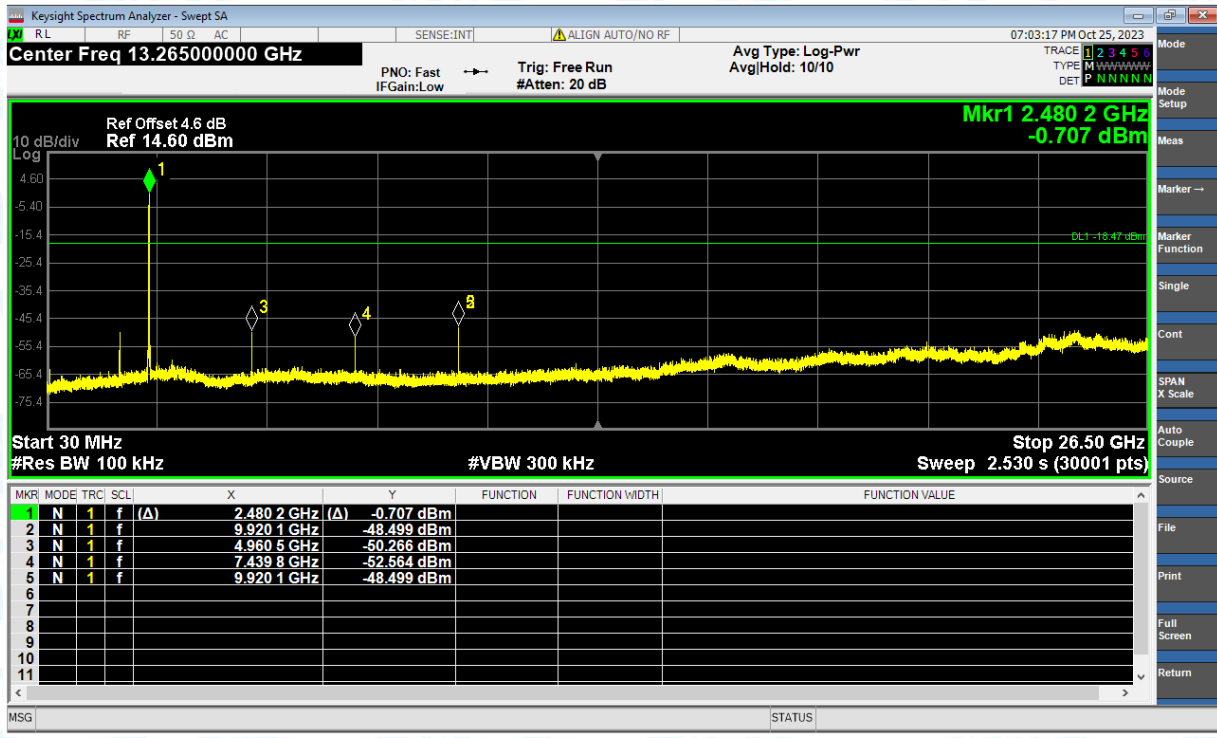
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission

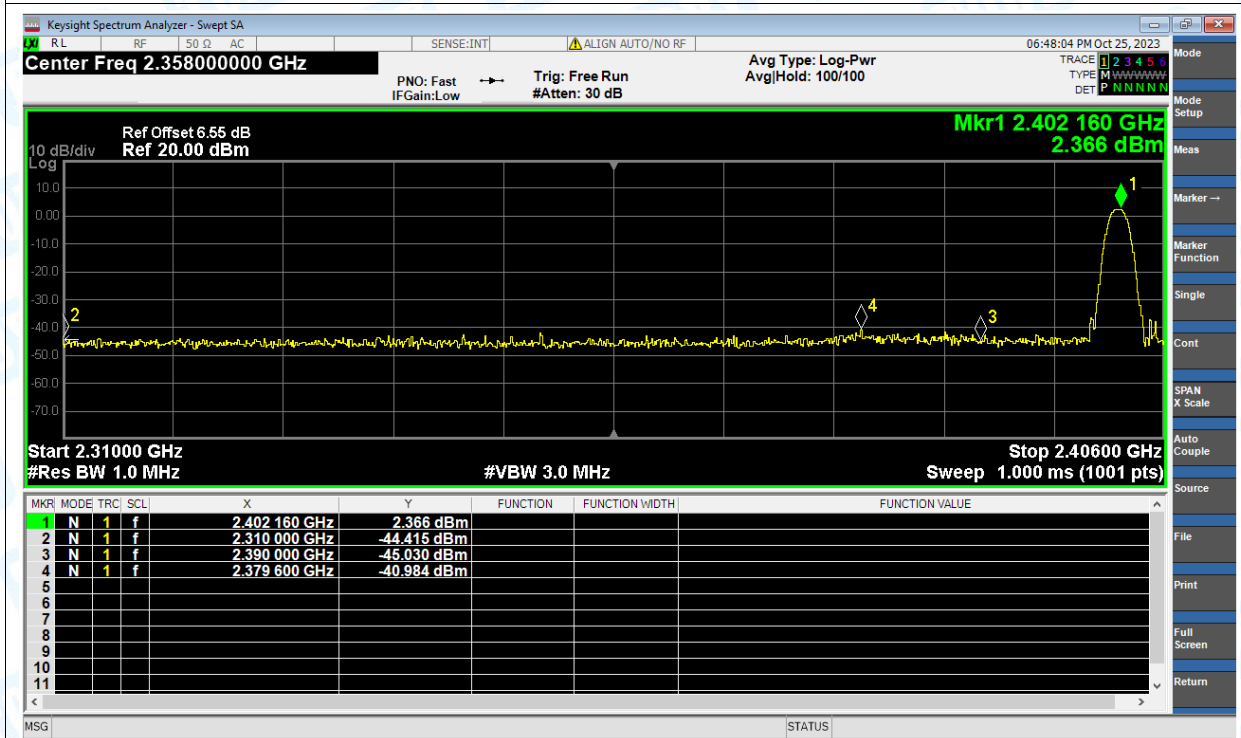


Restrict Band

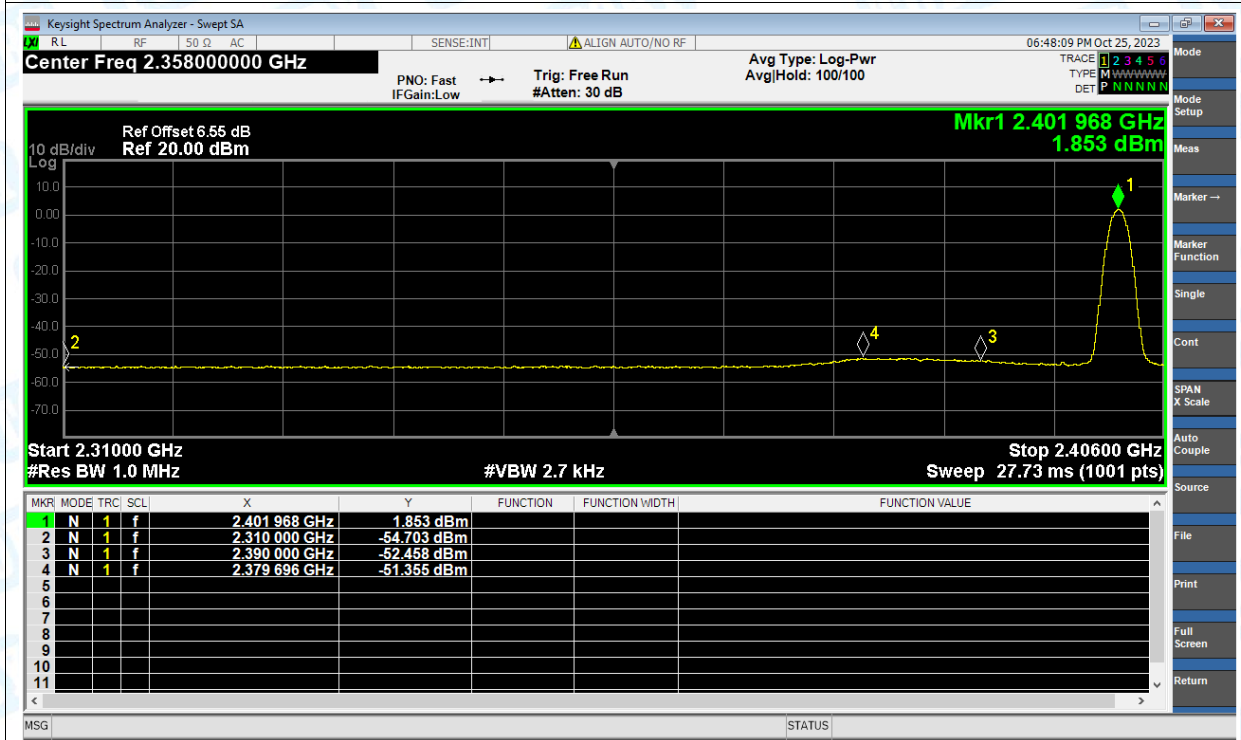
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-44.41	2	52.85	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-54.7	2	42.56	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2379.6	-40.98	2	56.28	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2379.696	-51.35	2	45.91	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-45.65	2	51.61	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-51.83	2	45.43	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-43.33	2	53.93	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-53	2	44.26	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2485.216	-39.36	2	57.9	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2499.16	-50.06	2	47.2	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-40.62	2	56.64	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-50.52	2	46.74	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-46.11	2	51.15	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-54.66	2	42.6	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2384.4	-39.51	2	57.75	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2384.688	-50.63	2	46.63	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-44.99	2	52.27	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-52.36	2	44.9	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-42.85	2	54.41	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-53.28	2	43.98	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2485.432	-38.04	2	59.22	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2499.832	-50.43	2	46.83	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-42.91	2	54.35	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-50.9	2	46.36	Average	54	Pass

Test Graphs

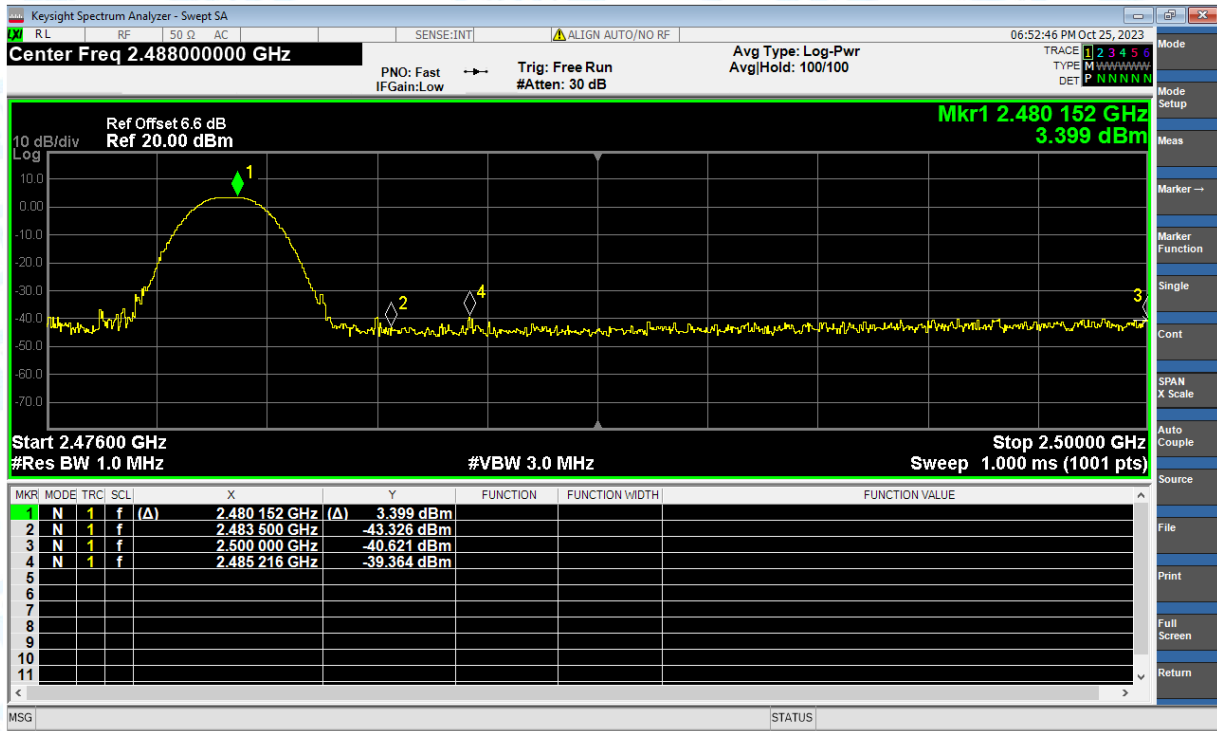
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Peak



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



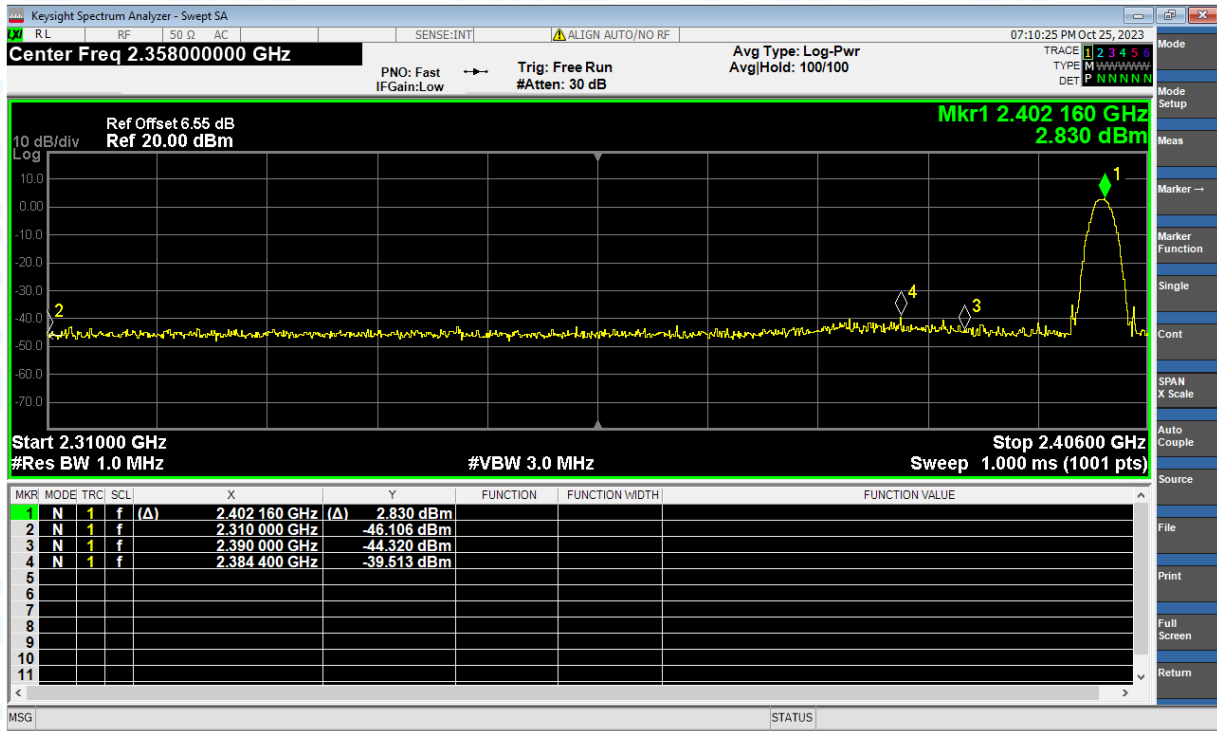
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Peak



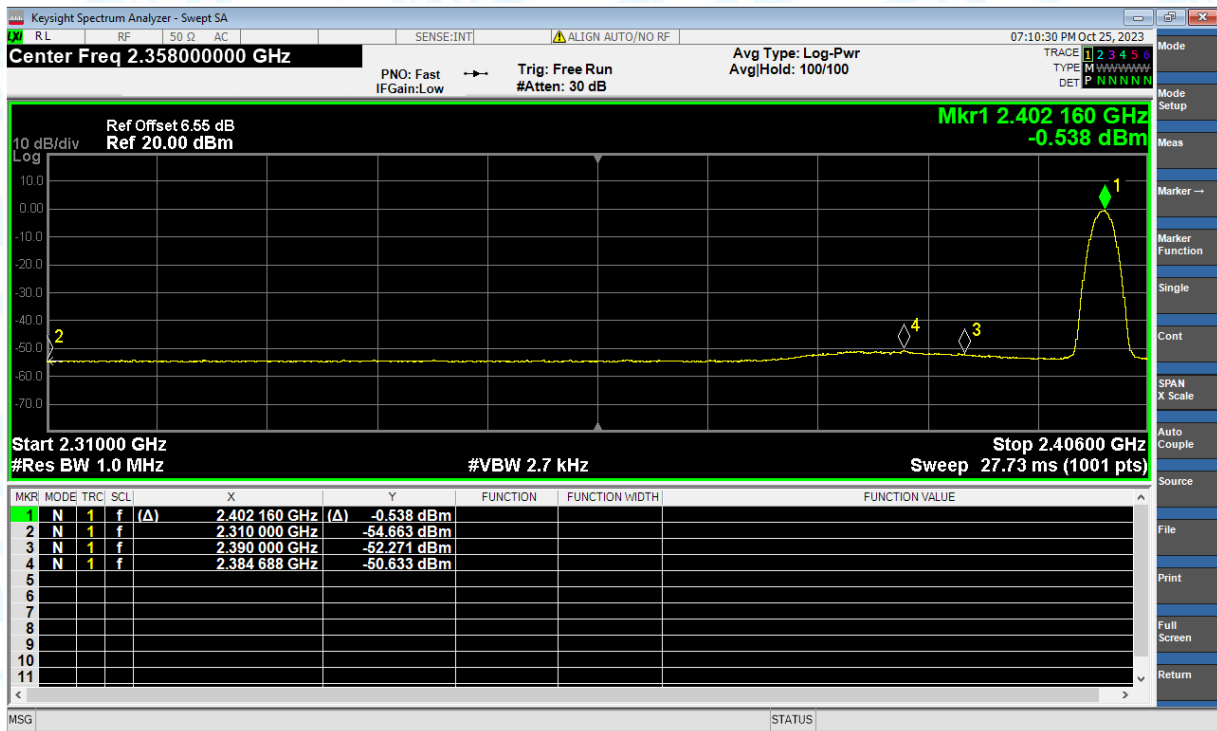
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Average



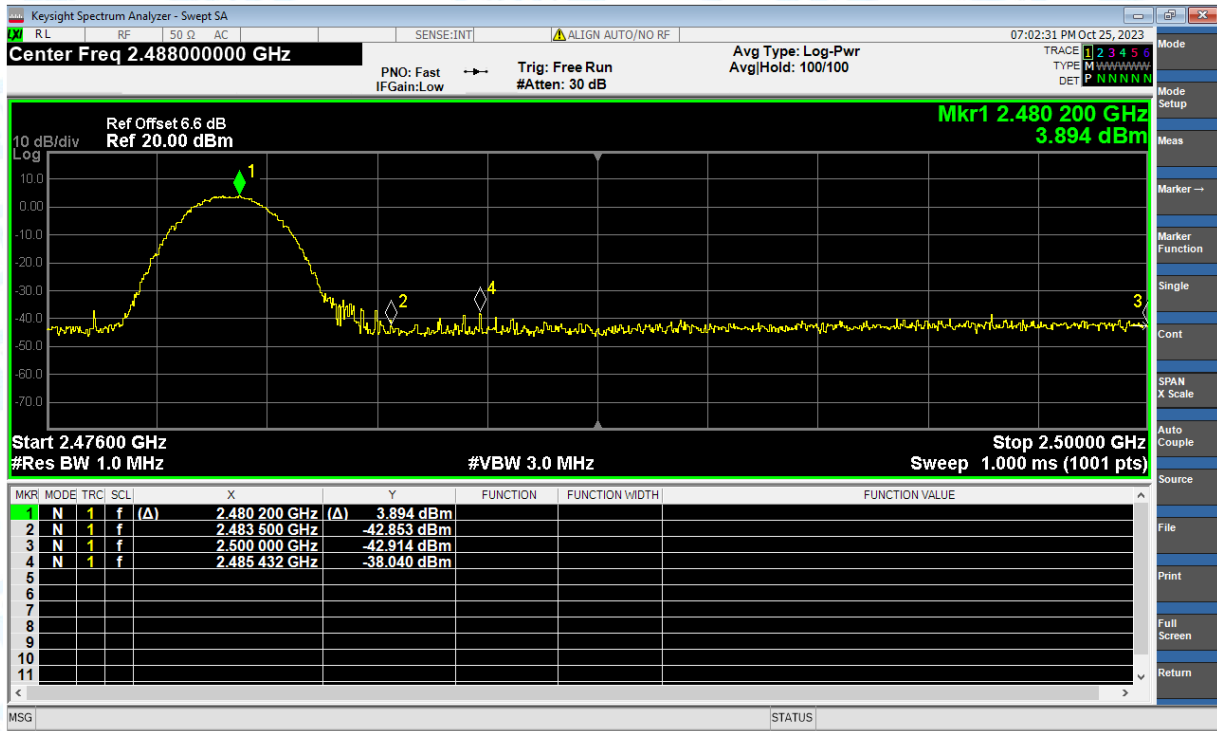
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Peak



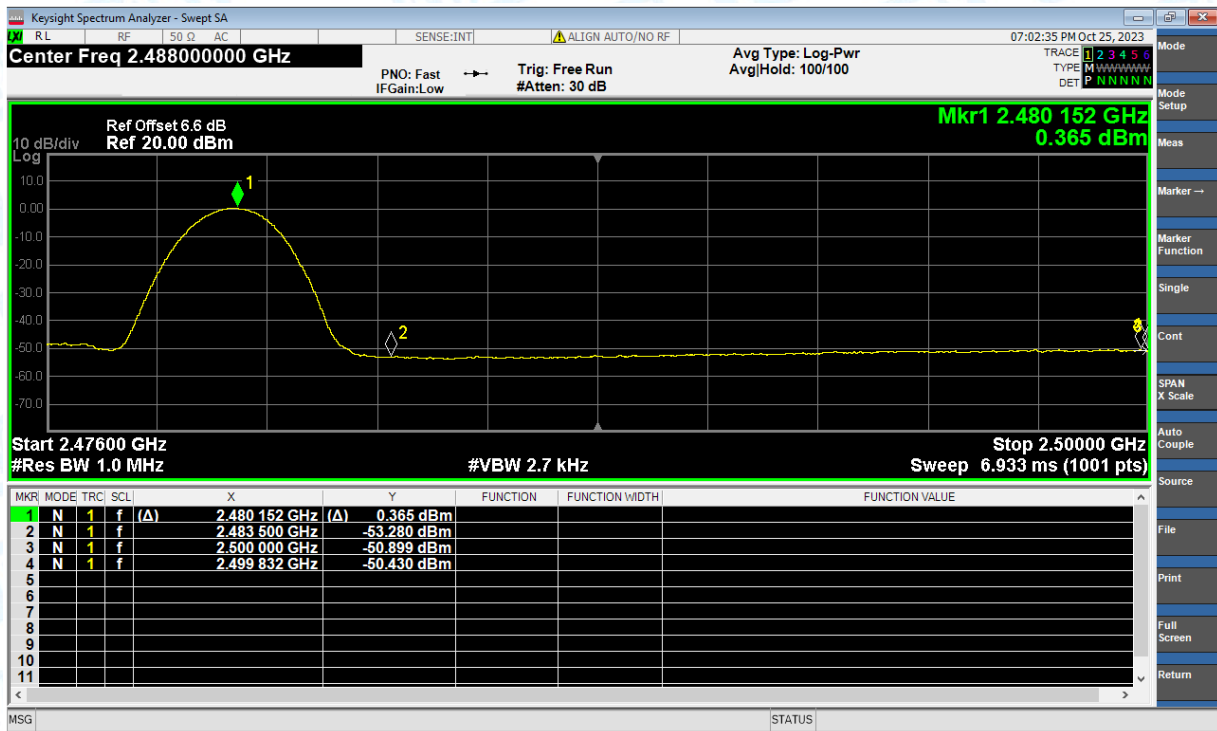
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Average



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



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



Carrier Frequencies Separation

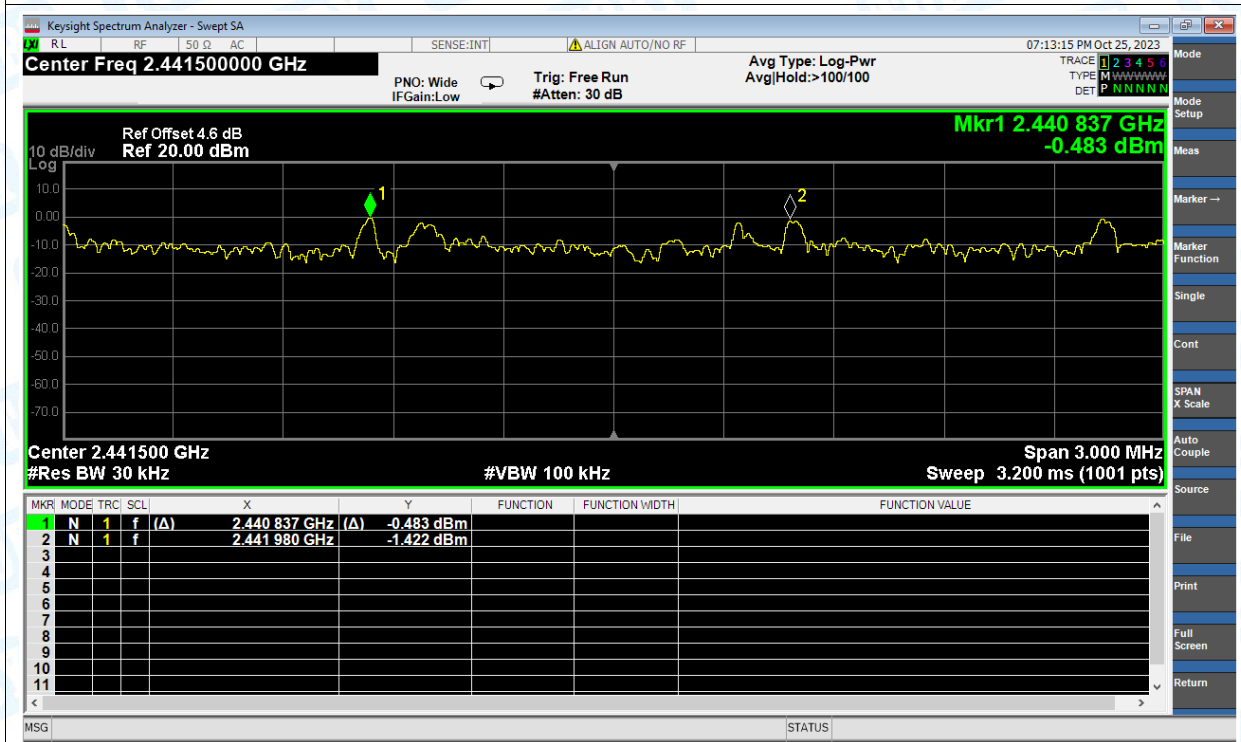
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2440.99	2441.839	0.849	0.553	Pass
NVNT	2-DH1	Ant1	2440.837	2441.98	1.143	0.82	Pass

Test Graphs

CFS NVNT 1-DH1 2441MHz Ant1



CFS NVNT 2-DH1 2441MHz Ant1

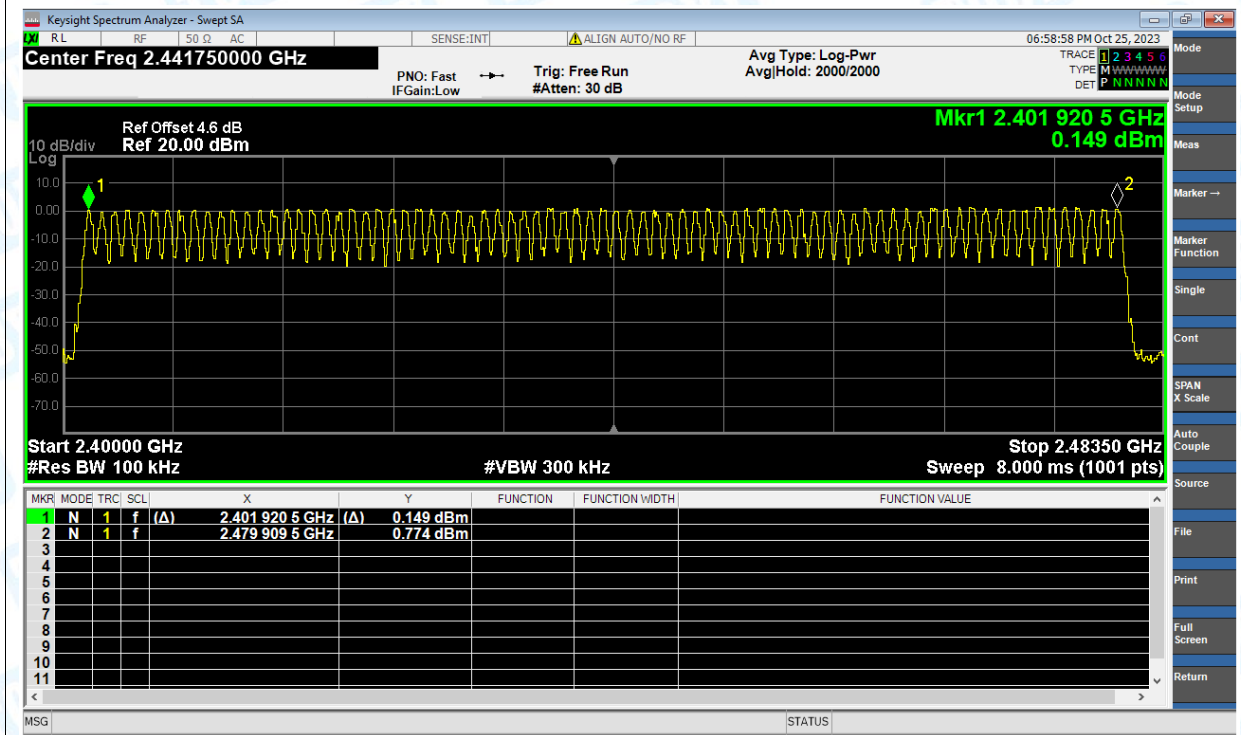


Number of Hopping Channel

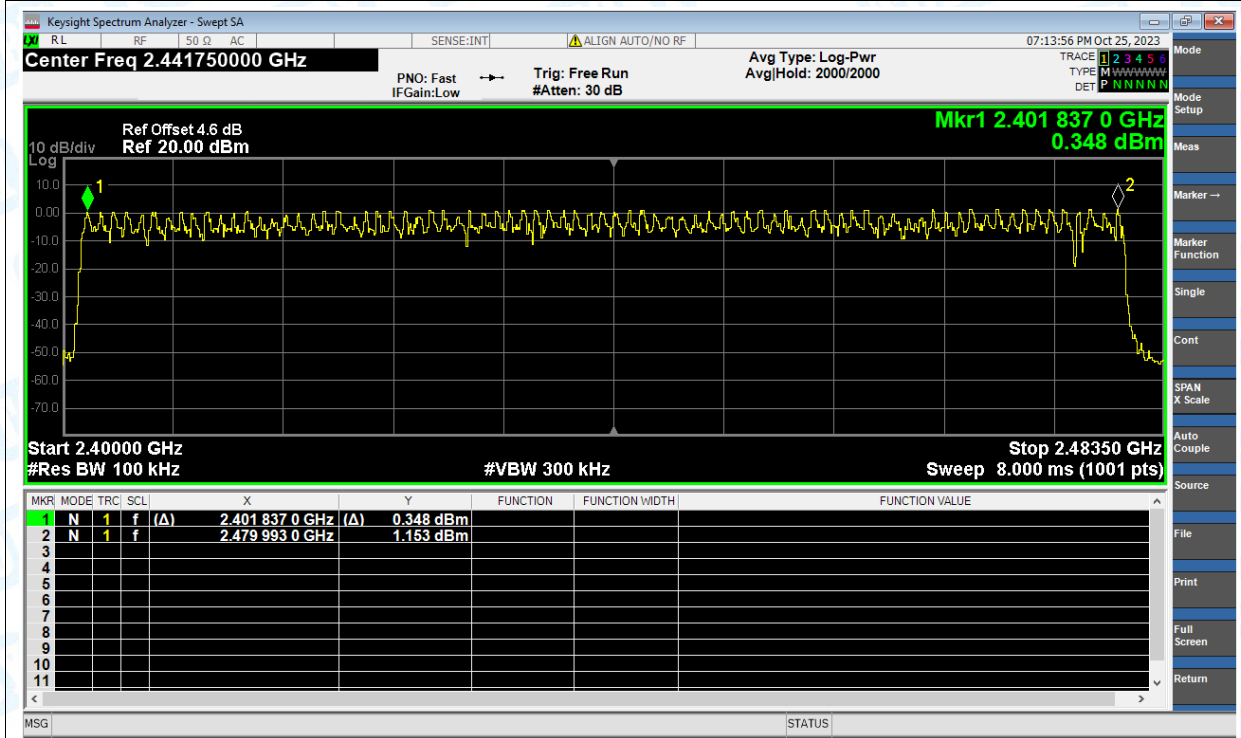
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass

Test Graphs

Hopping No. NVNT 1-DH1 2441MHz Ant1



Hopping No. NVNT 2-DH1 2441MHz Ant1

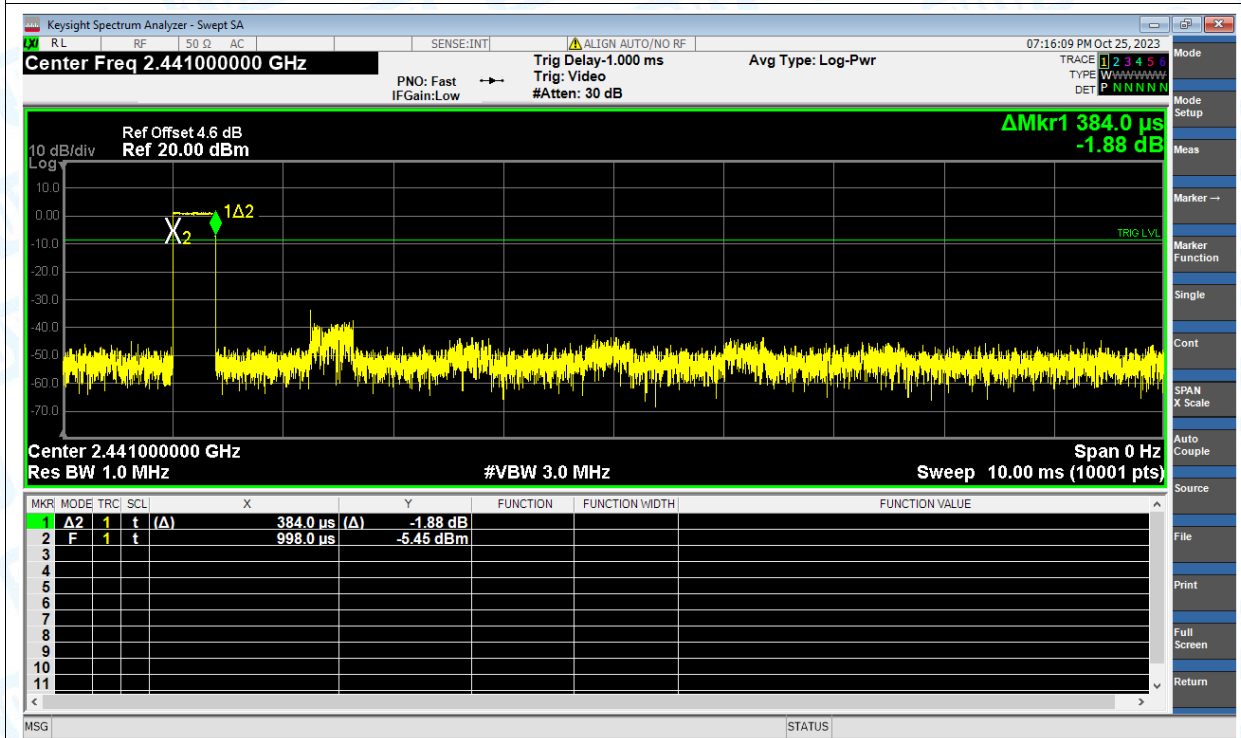


Dwell Time

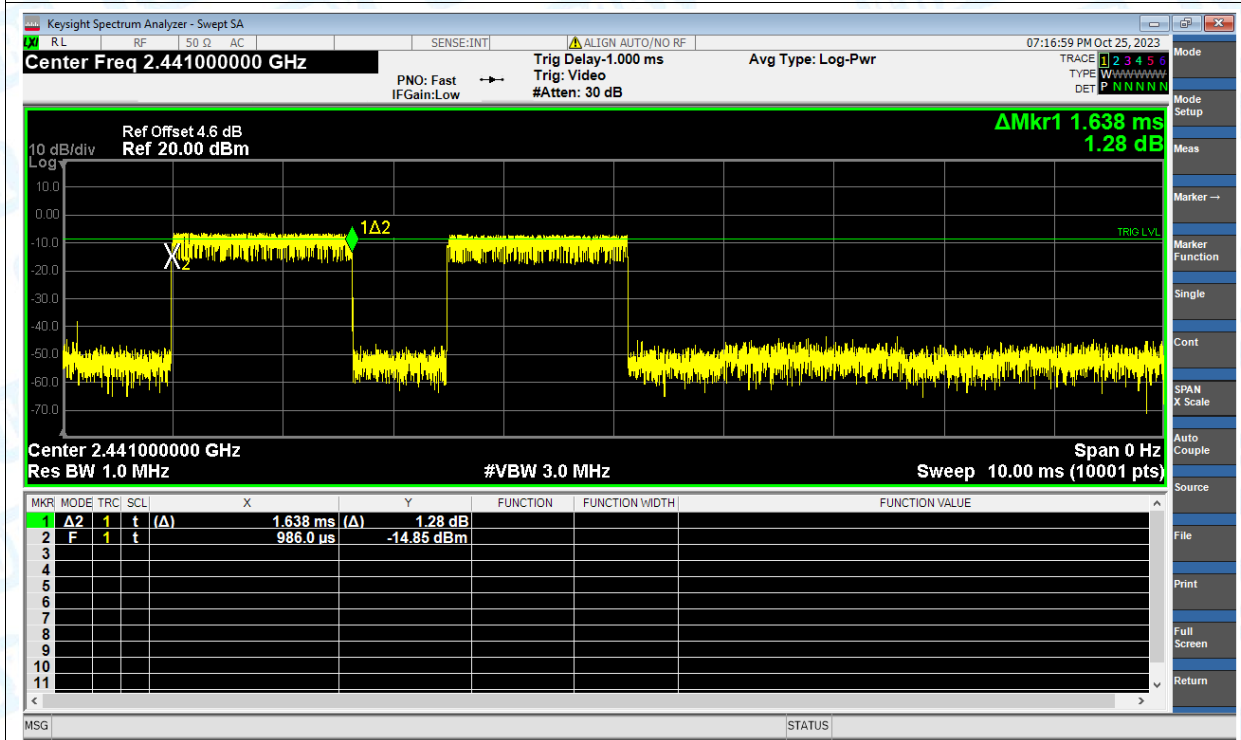
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.384	122.88	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.638	262.08	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.888	308.053	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.392	125.44	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.644	263.04	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.892	308.48	31600	400	Pass

Test Graphs

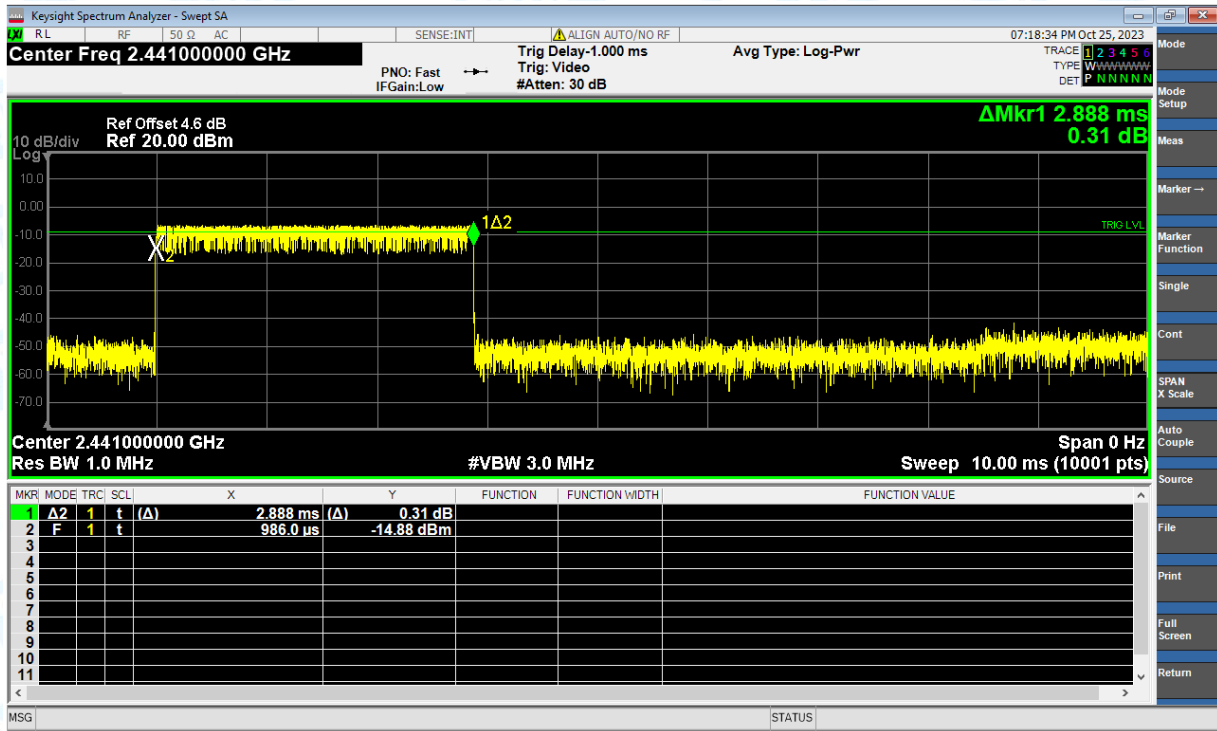
Dwell NVNT 1-DH1 2441MHz Ant1



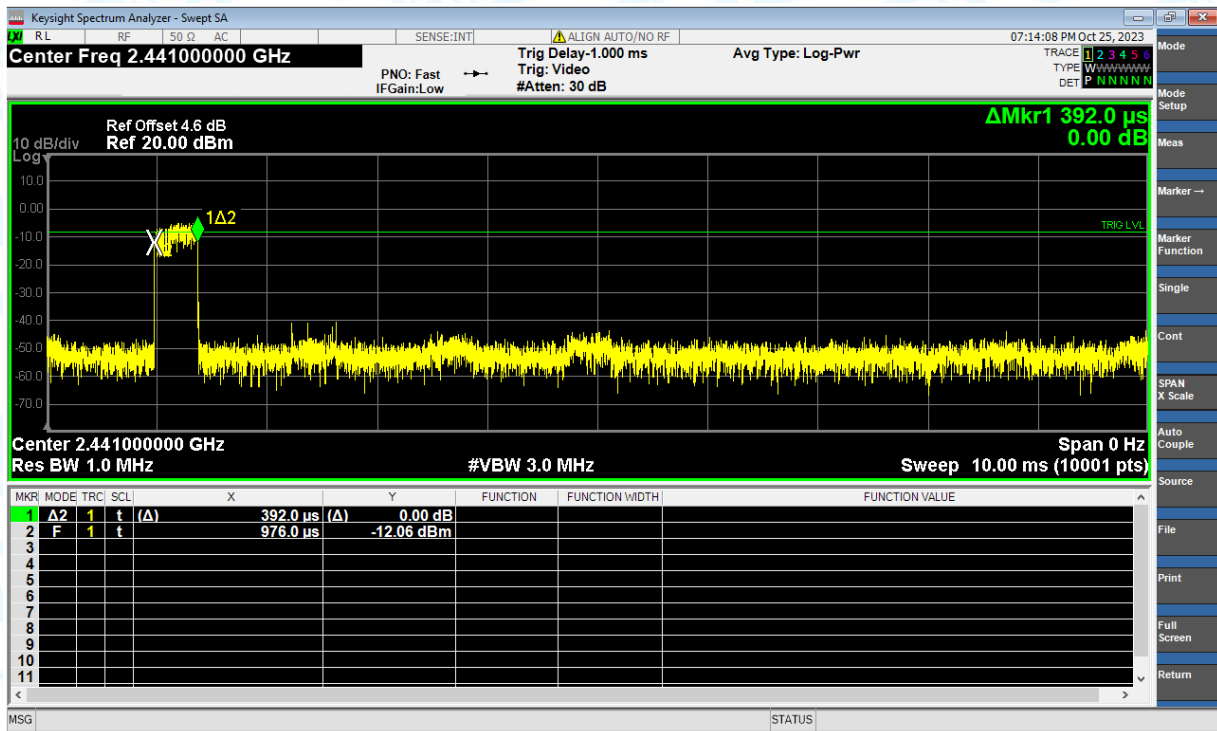
Dwell NVNT 1-DH3 2441MHz Ant1



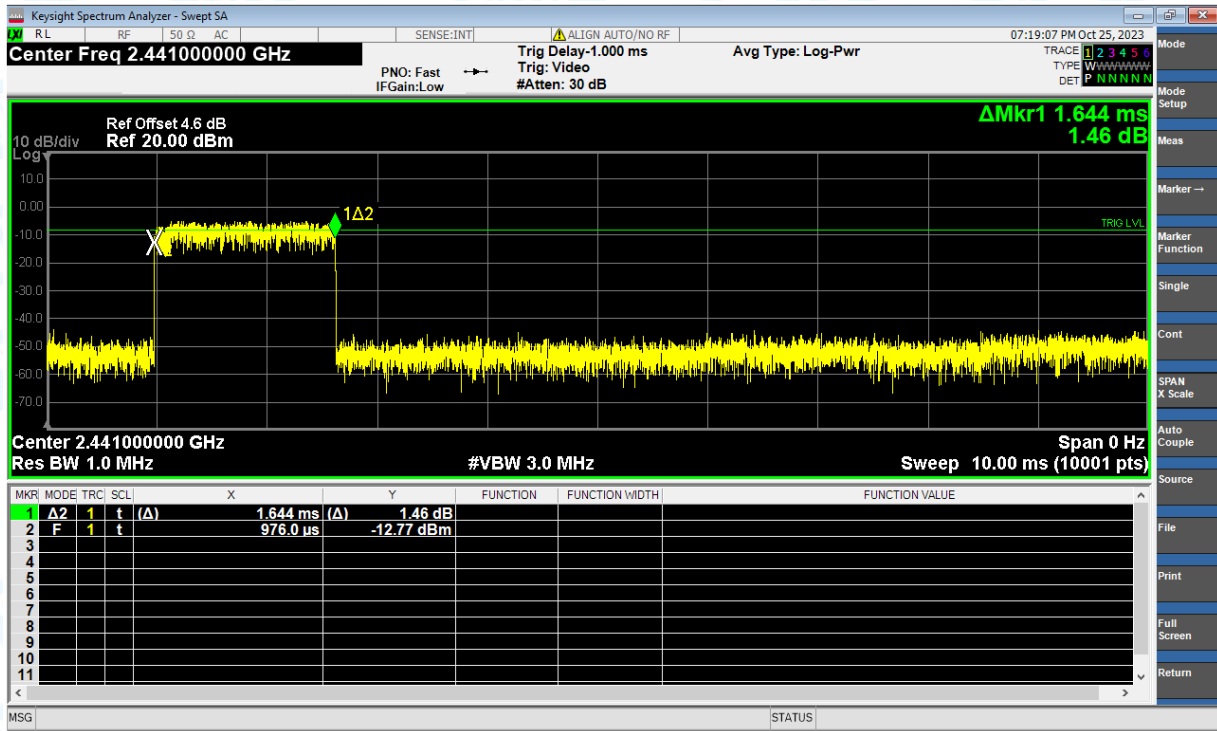
Dwell NVNT 1-DH5 2441MHz Ant1



Dwell NVNT 2-DH1 2441MHz Ant1



Dwell NVNT 2-DH3 2441MHz Ant1



Dwell NVNT 2-DH5 2441MHz Ant1

