

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

General Description of EUT	
Product Name:	Smart POS Payment Terminal
Test Model:	CM30
Sample ID:	202311-0170-7-2#
Environmental Conditions	
Temperature:	25°C
Relative Humidity:	55%
Test Voltage:	DC 24V
Test Engineer:	Yan zhen ming
Note: For a more detailed features description, please refer to the report TBR-C-202311-0170-81 The report only show the worst case data.	

Contents

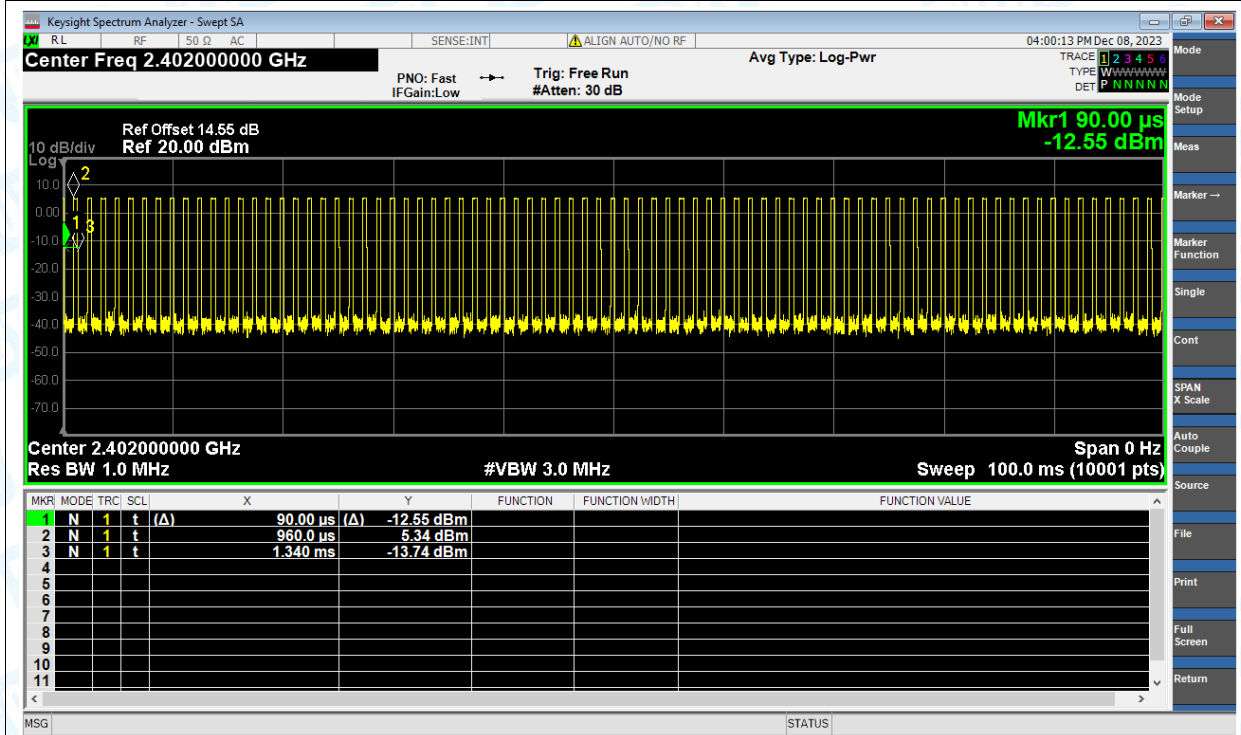
1. Duty Cycle.....	3
2. Maximum Conducted Output Power.....	9
3. -20dB Bandwidth.....	18
4. Occupied Channel Bandwidth.....	24
5. Band Edge.....	30
6. Band Edge(Hopping).....	37
7. Conducted RF Spurious Emission.....	44
8. Restrict Band.....	54
9. Carrier Frequencies Separation.....	61
10. Number of Hopping Channel.....	64
11. Dwell Time.....	67

1. Duty Cycle

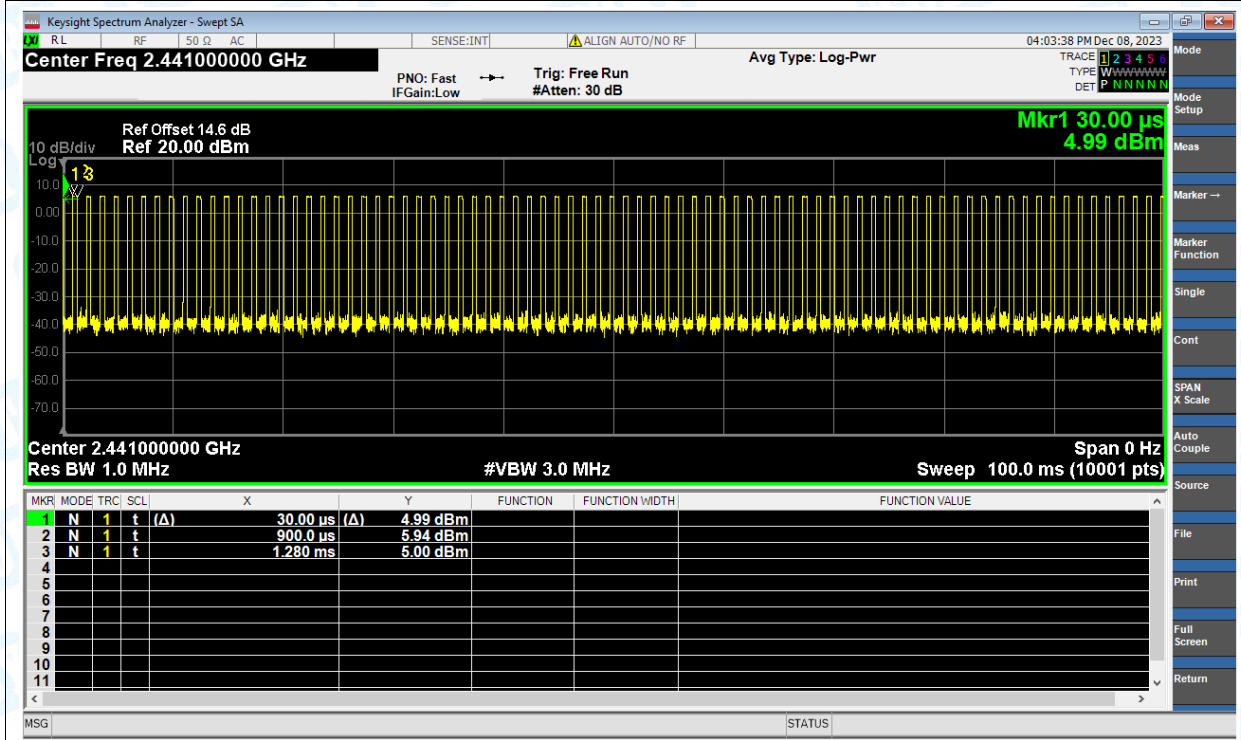
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH1	2402	Ant1	30.4	5.17	2.63
NVNT	1-DH1	2441	Ant1	30.4	5.17	2.63
NVNT	1-DH1	2480	Ant1	30.4	5.17	2.63
NVNT	2-DH1	2402	Ant1	31.2	5.06	2.56
NVNT	2-DH1	2441	Ant1	31.2	5.06	2.56
NVNT	2-DH1	2480	Ant1	31.2	5.06	2.56
NVNT	3-DH1	2402	Ant1	31.2	5.06	2.56
NVNT	3-DH1	2441	Ant1	30.4	5.17	2.63
NVNT	3-DH1	2480	Ant1	31.2	5.06	2.56

Test Graphs

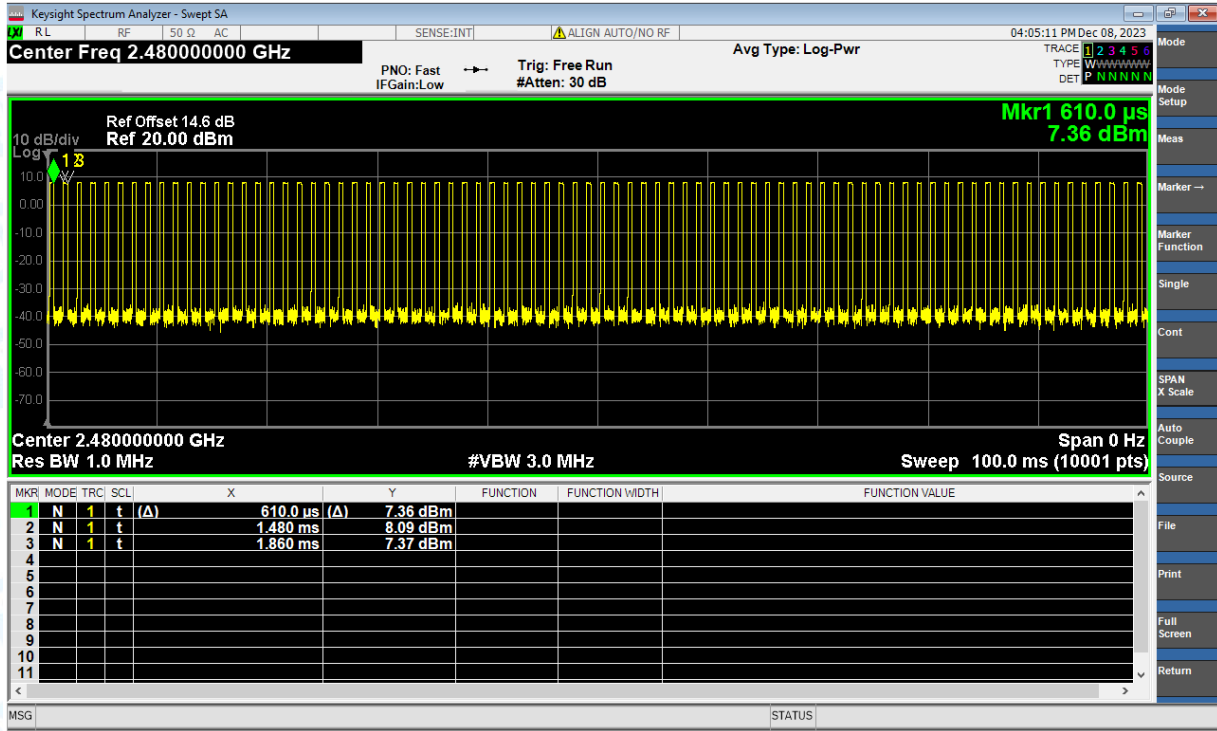
Duty Cycle NVNT 1-DH1 2402MHz Ant1



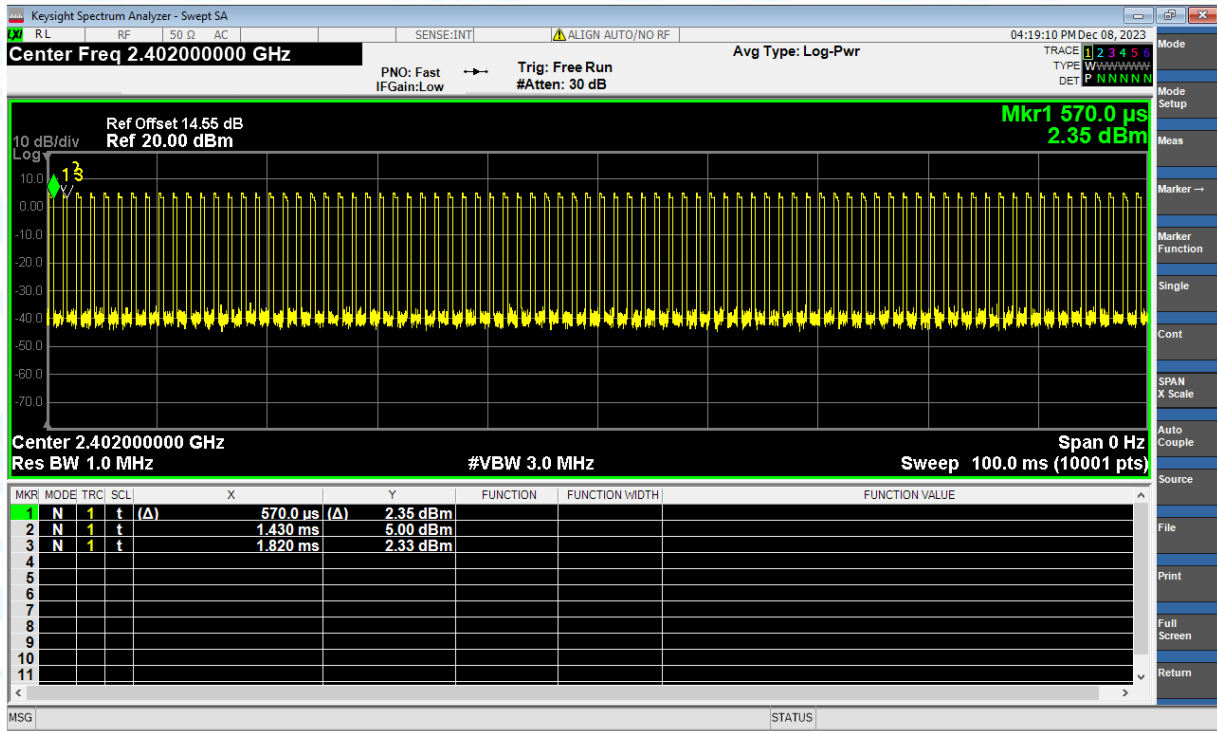
Duty Cycle NVNT 1-DH1 2441MHz Ant1



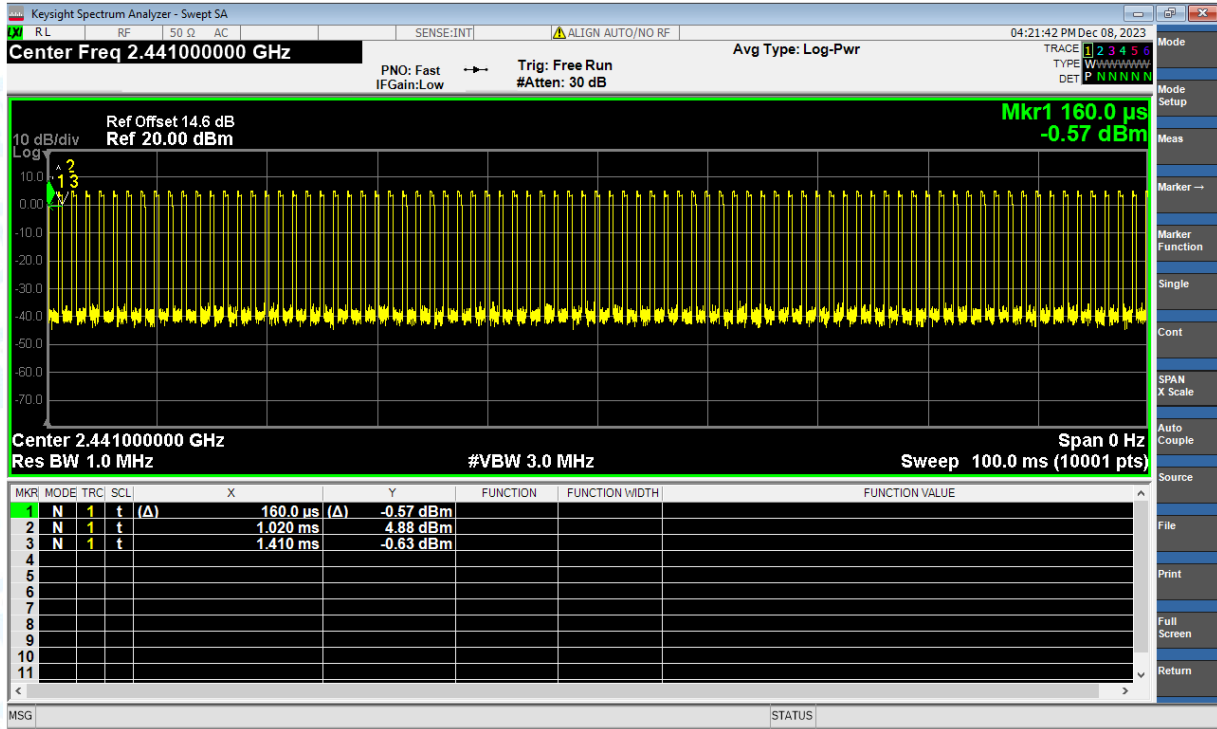
Duty Cycle NVNT 1-DH1 2480MHz Ant1



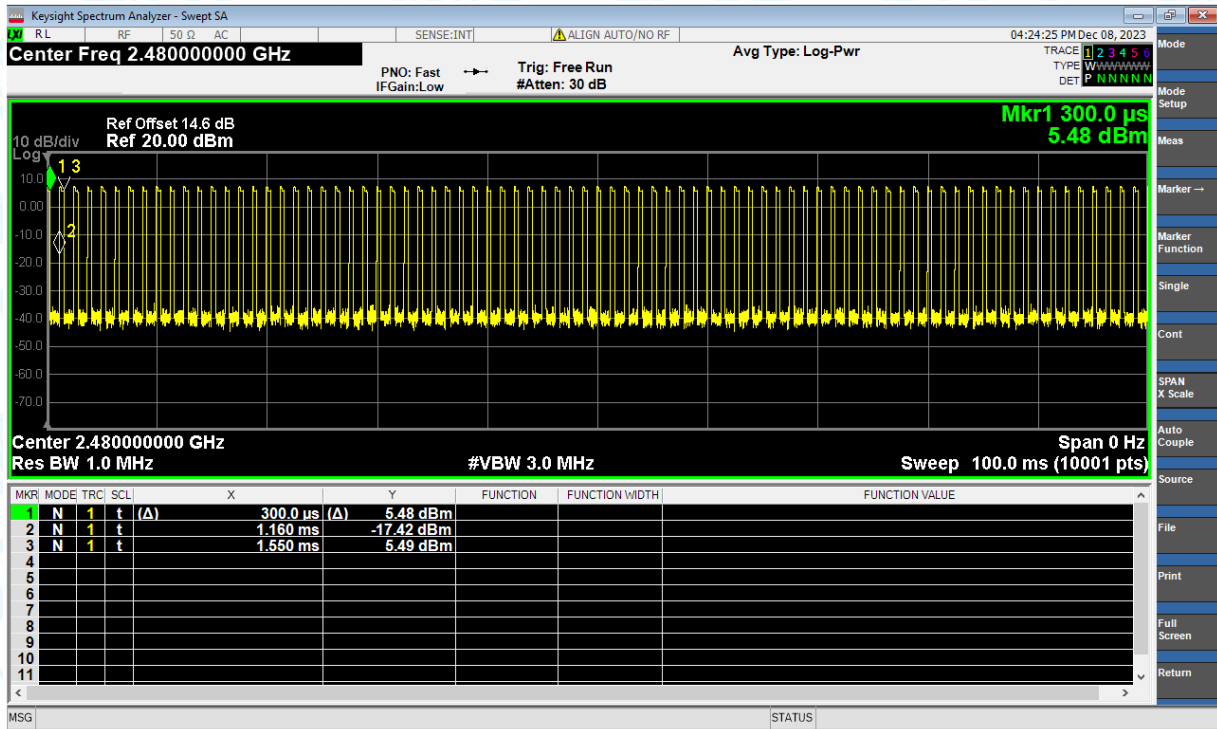
Duty Cycle NVNT 2-DH1 2402MHz Ant1



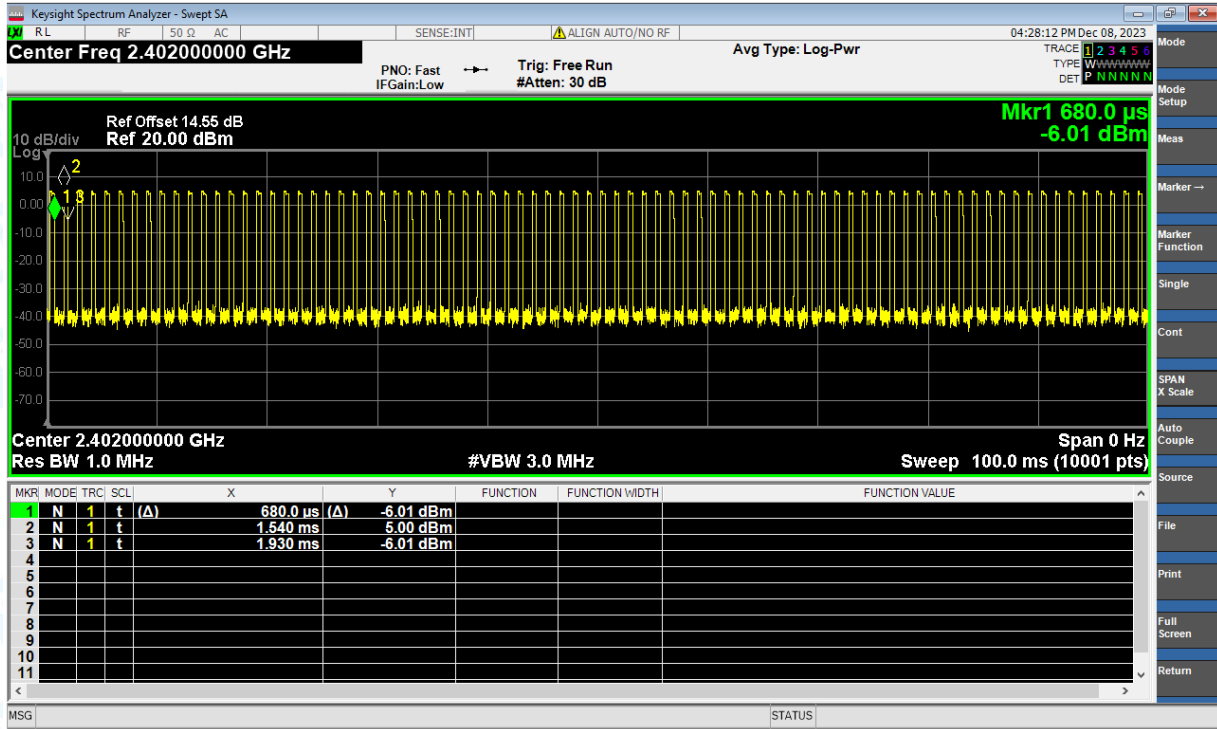
Duty Cycle NVNT 2-DH1 2441MHz Ant1



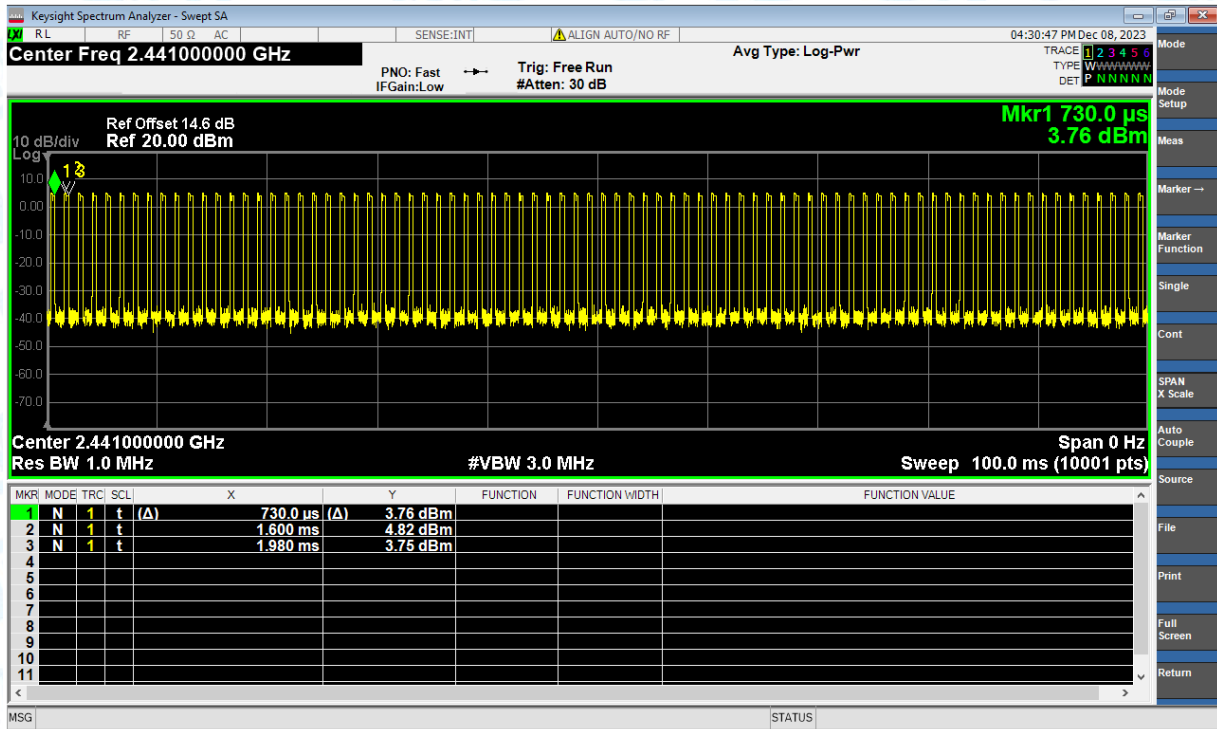
Duty Cycle NVNT 2-DH1 2480MHz Ant1

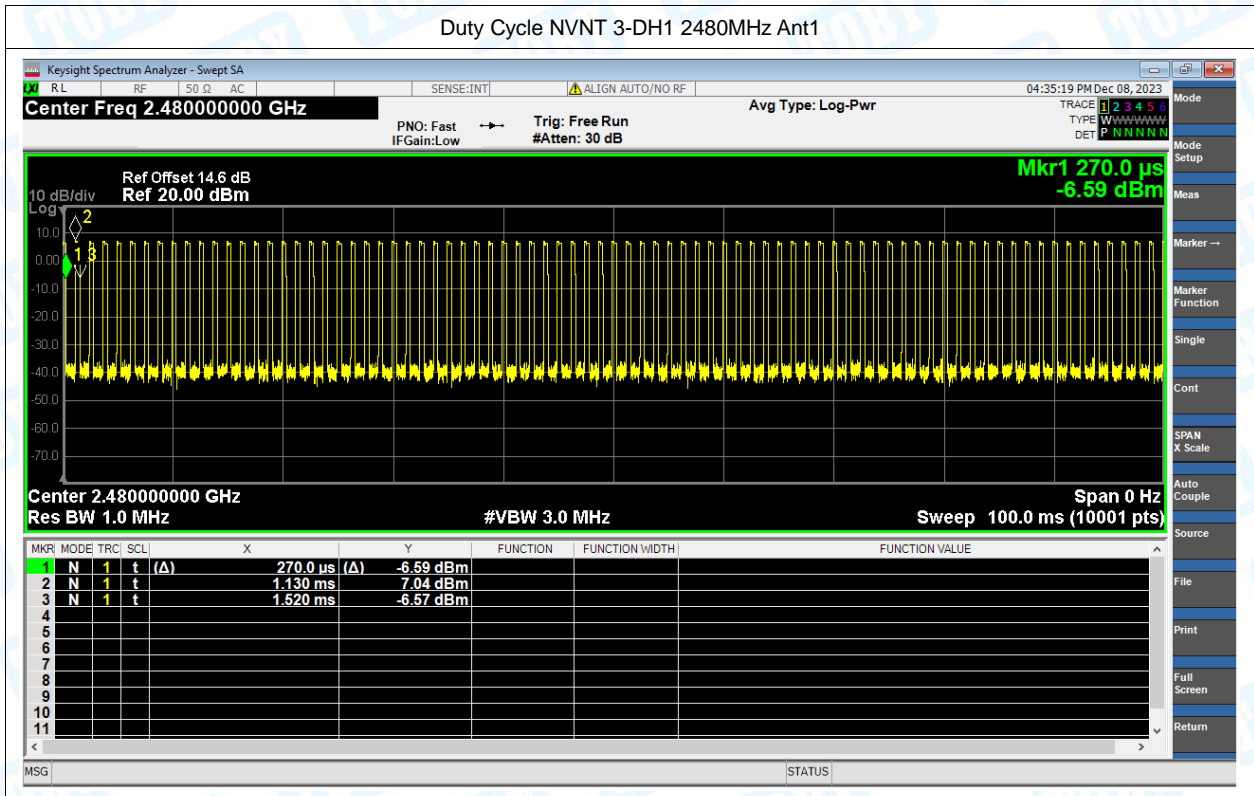


Duty Cycle NVNT 3-DH1 2402MHz Ant1



Duty Cycle NVNT 3-DH1 2441MHz Ant1



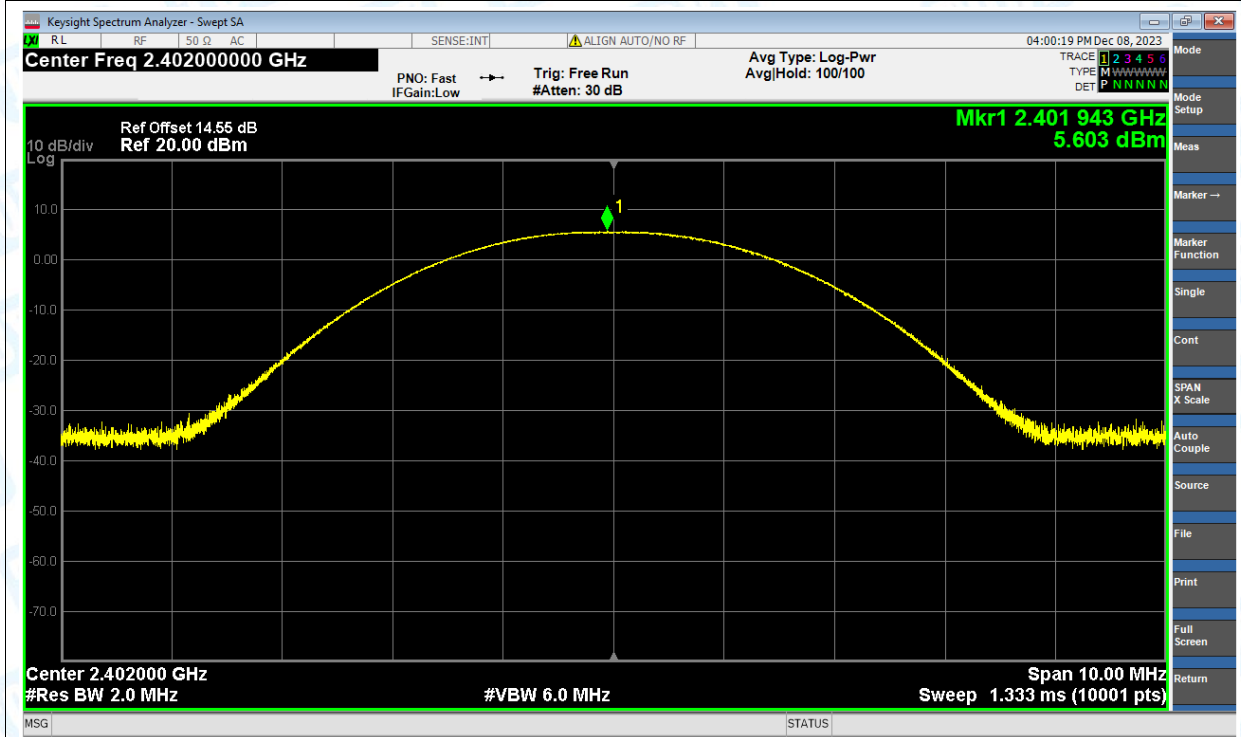


2. Maximum Conducted Output Power

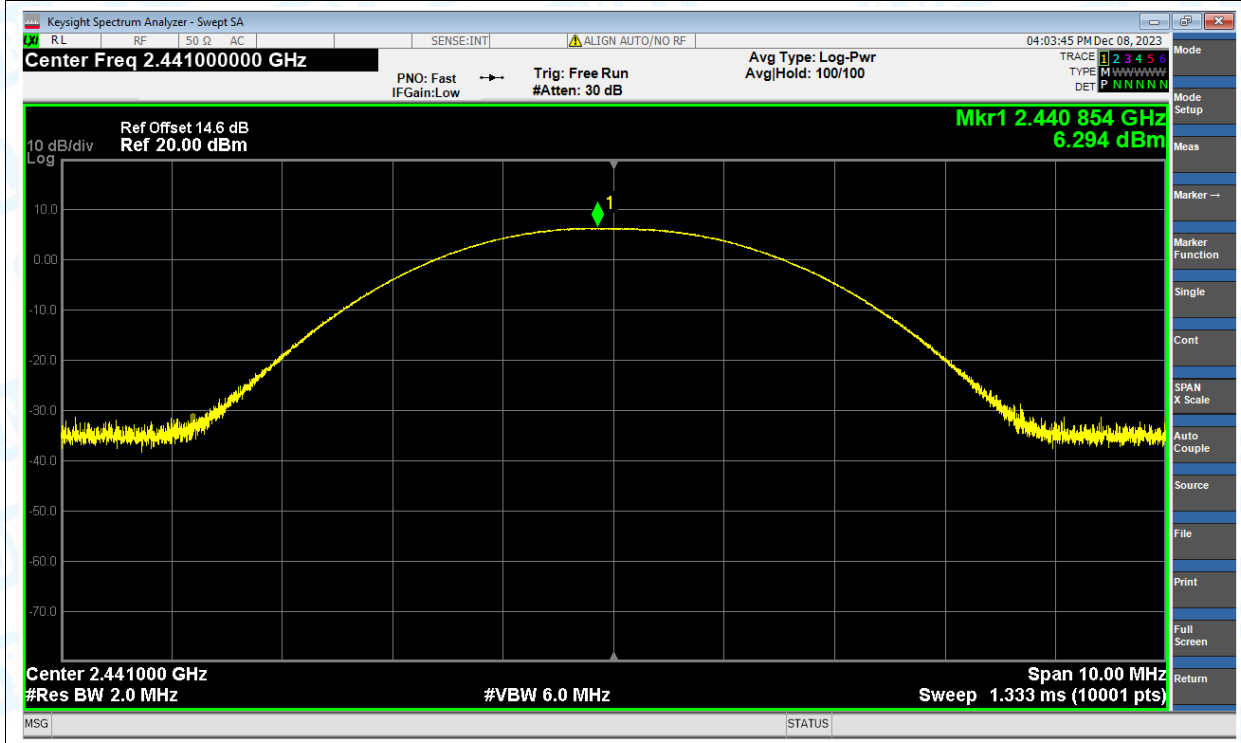
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	5.603	21	Pass
NVNT	1-DH1	2441	Ant1	6.294	21	Pass
NVNT	1-DH1	2480	Ant1	8.324	21	Pass
NVNT	1-DH3	2441	Ant1	5.835	21	Pass
NVNT	1-DH5	2441	Ant1	5.789	21	Pass
NVNT	2-DH1	2402	Ant1	5.246	21	Pass
NVNT	2-DH1	2441	Ant1	5.208	21	Pass
NVNT	2-DH1	2480	Ant1	7.433	21	Pass
NVNT	2-DH3	2441	Ant1	4.847	21	Pass
NVNT	2-DH5	2441	Ant1	4.849	21	Pass
NVNT	3-DH1	2402	Ant1	5.297	21	Pass
NVNT	3-DH1	2441	Ant1	5.221	21	Pass
NVNT	3-DH1	2480	Ant1	7.339	21	Pass
NVNT	3-DH3	2441	Ant1	4.871	21	Pass
NVNT	3-DH5	2441	Ant1	4.85	21	Pass

Test Graphs

Power NVNT 1-DH1 2402MHz Ant1



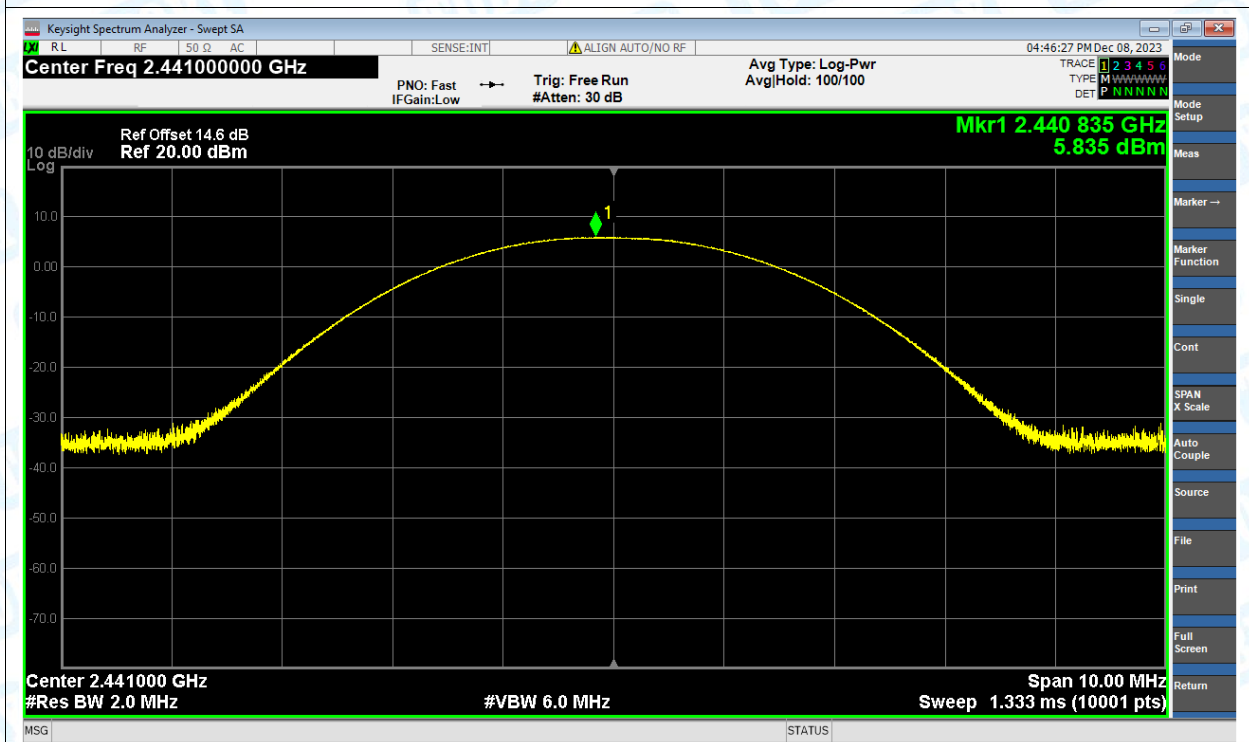
Power NVNT 1-DH1 2441MHz Ant1

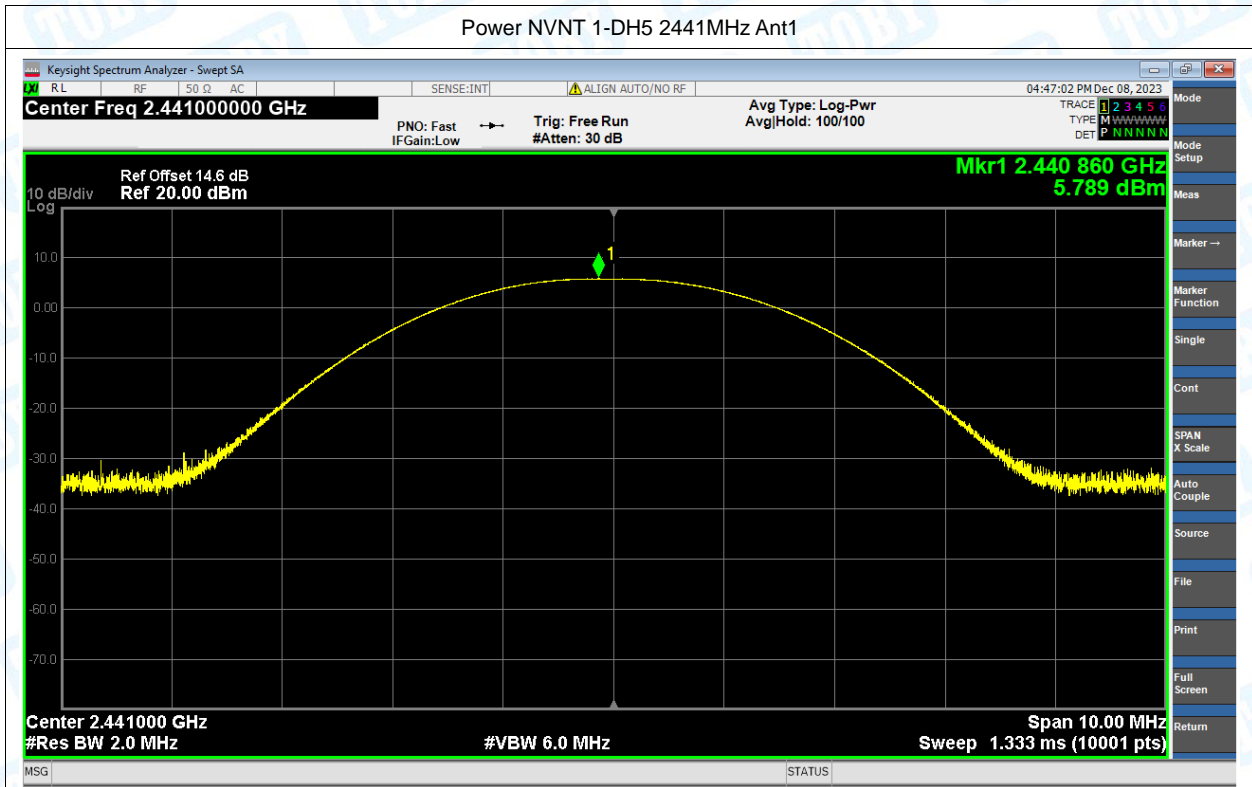


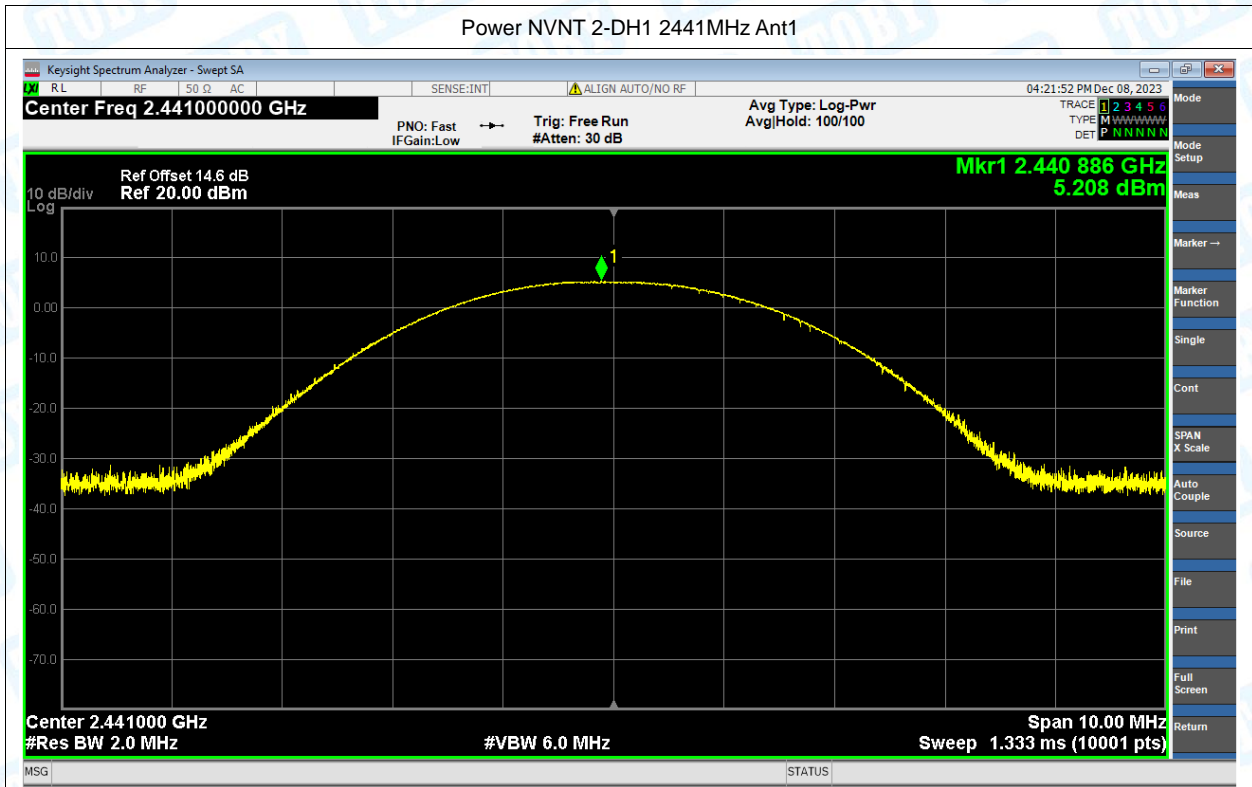
Power NVNT 1-DH1 2480MHz Ant1

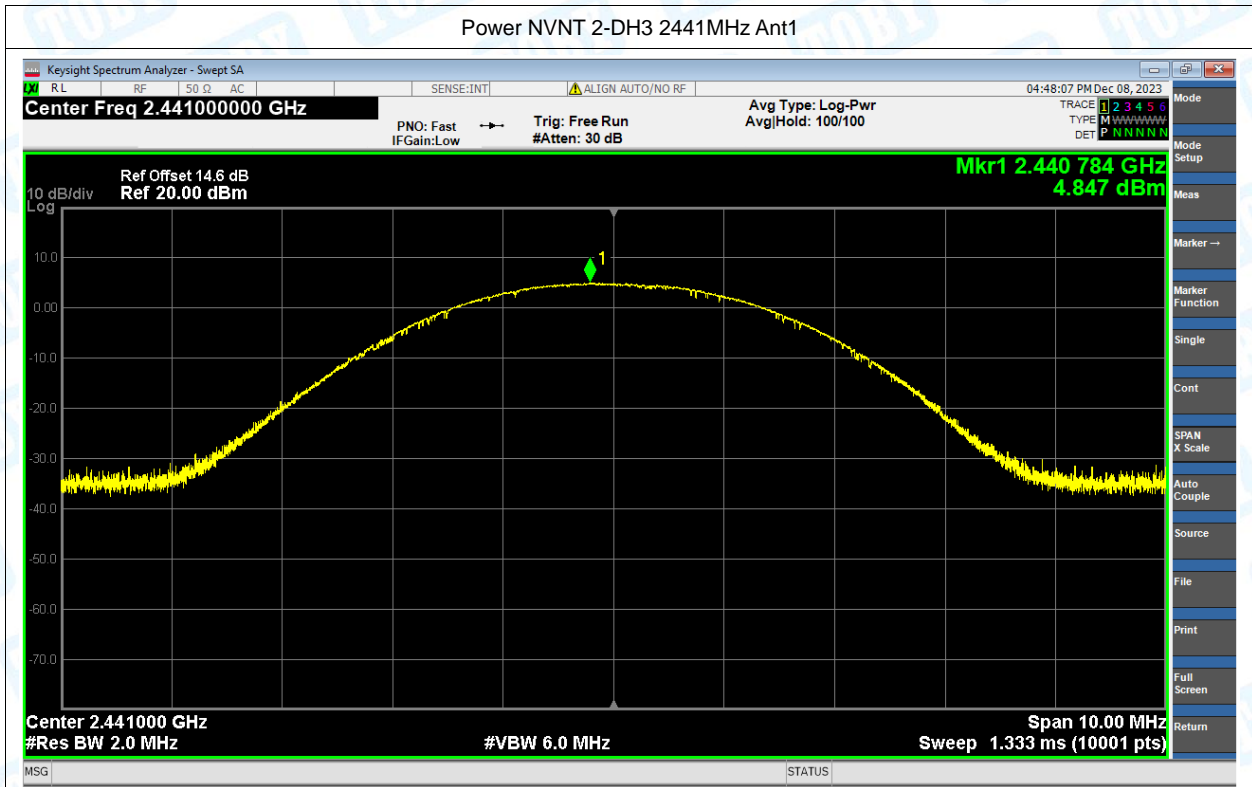


Power NVNT 1-DH3 2441MHz Ant1

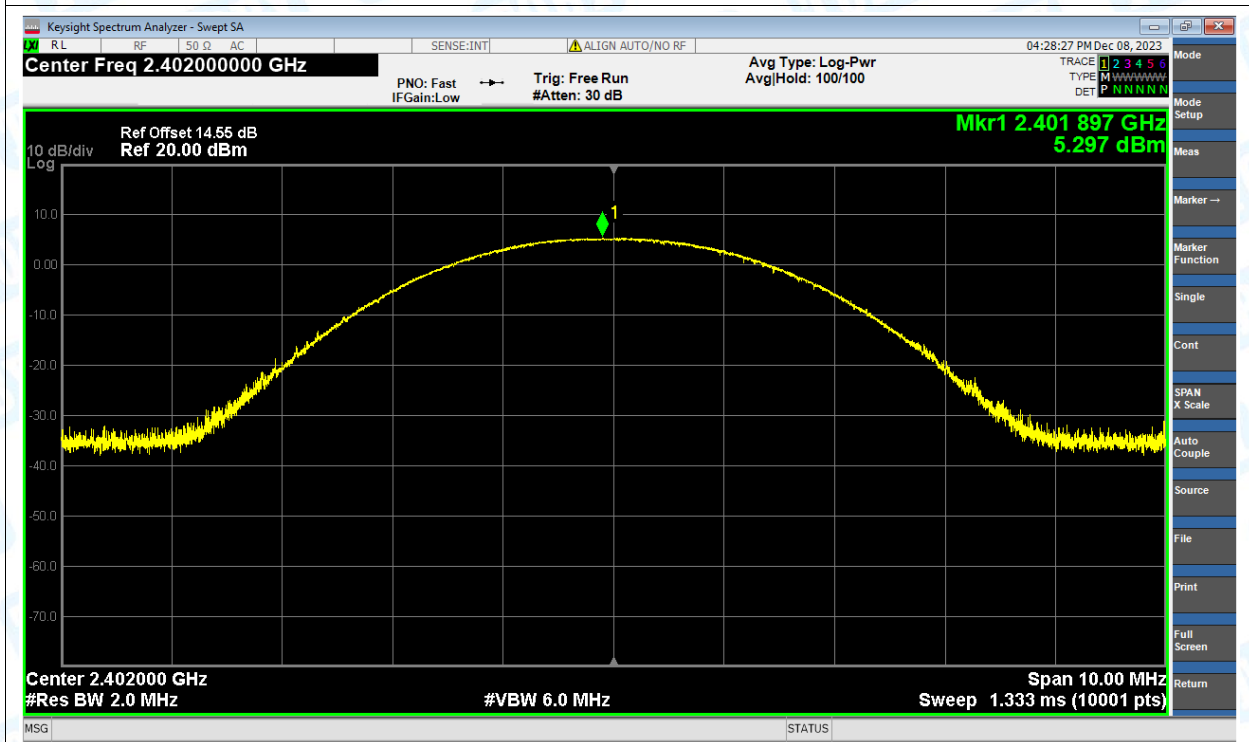








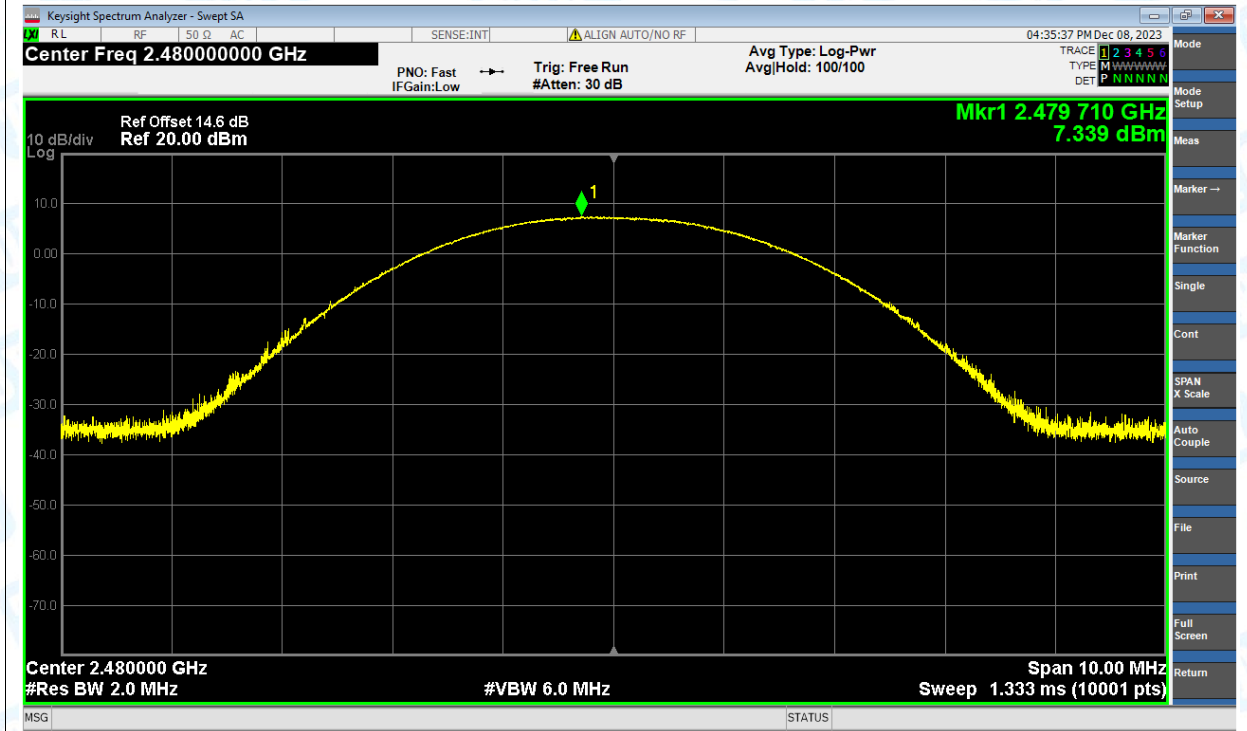
Power NVNT 3-DH1 2402MHz Ant1



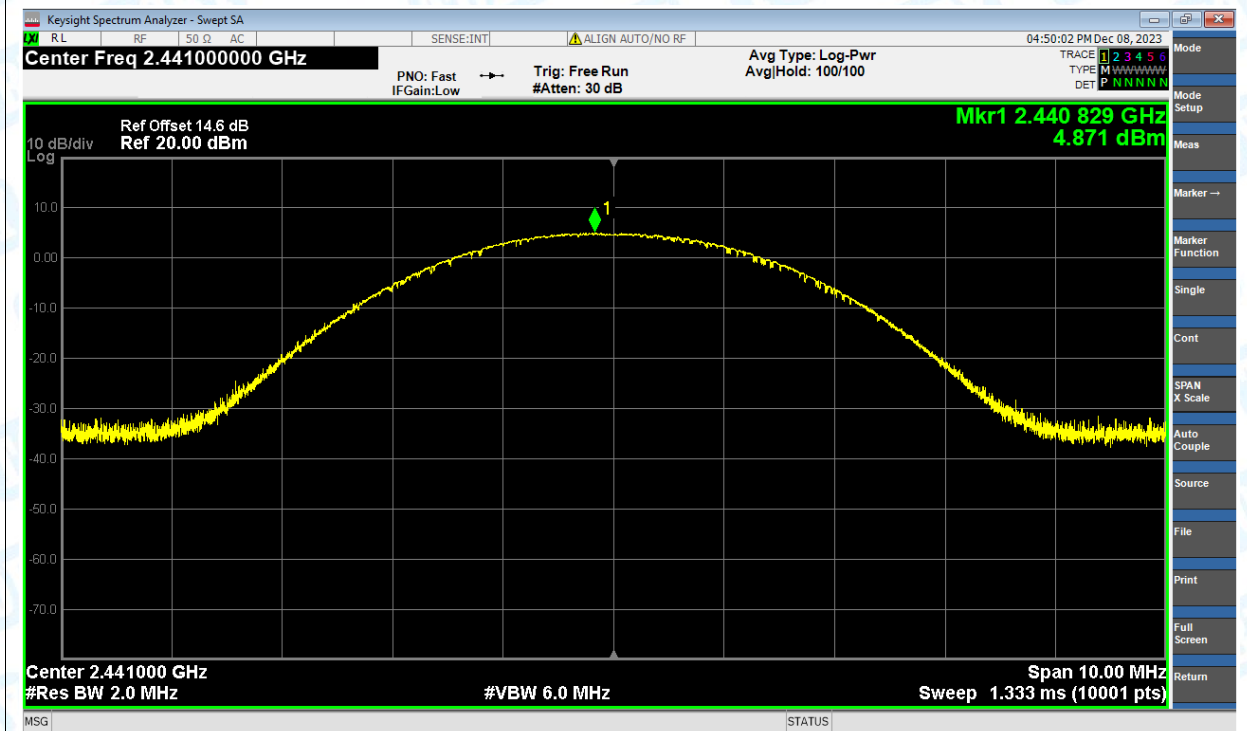
Power NVNT 3-DH1 2441MHz Ant1



Power NVNT 3-DH1 2480MHz Ant1



Power NVNT 3-DH3 2441MHz Ant1



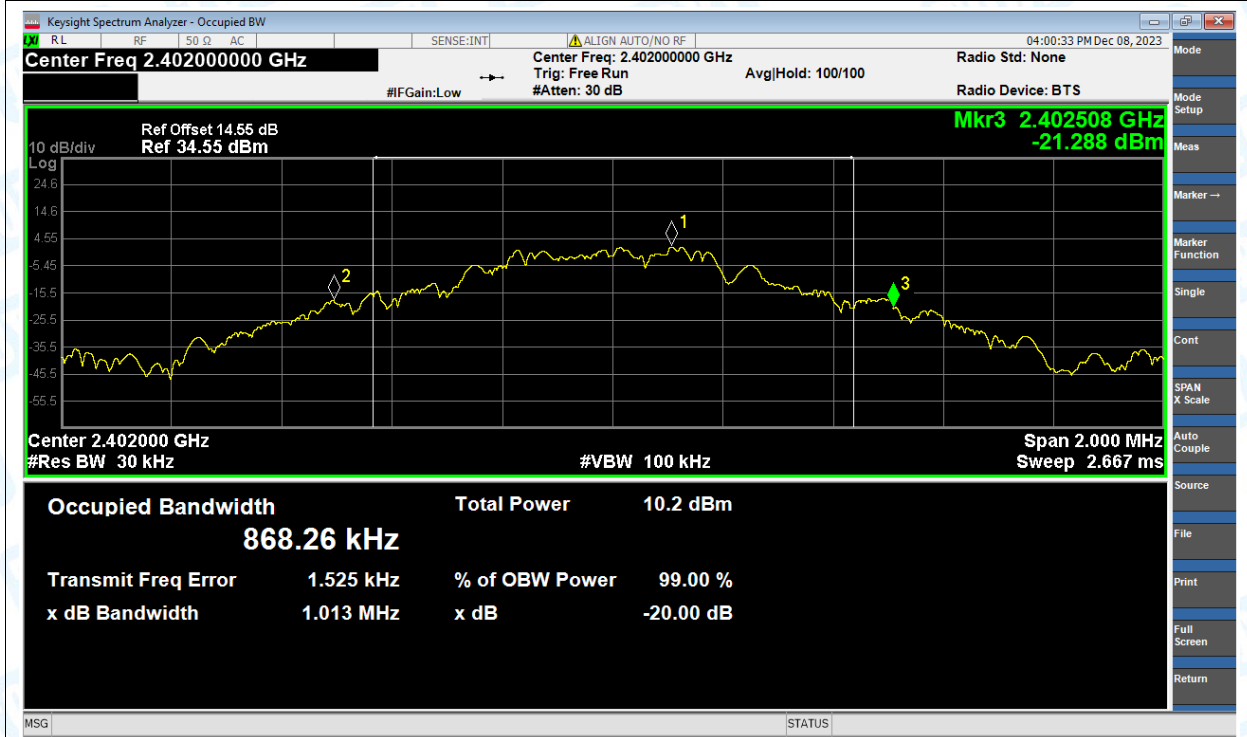


3. -20dB Bandwidth

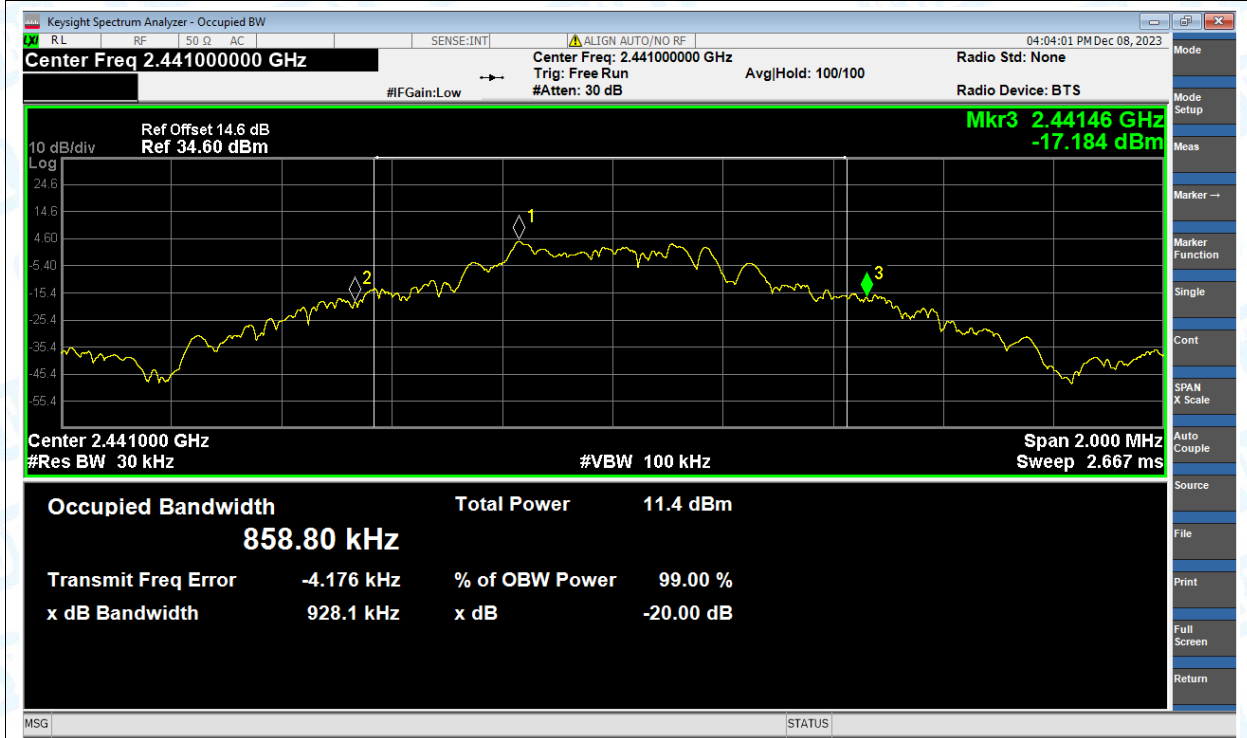
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	1.01	0	Pass
NVNT	1-DH1	2441	Ant1	0.93	0	Pass
NVNT	1-DH1	2480	Ant1	0.83	0	Pass
NVNT	2-DH1	2402	Ant1	1.28	0	Pass
NVNT	2-DH1	2441	Ant1	1.29	0	Pass
NVNT	2-DH1	2480	Ant1	1.28	0	Pass
NVNT	3-DH1	2402	Ant1	1.26	0	Pass
NVNT	3-DH1	2441	Ant1	1.24	0	Pass
NVNT	3-DH1	2480	Ant1	1.27	0	Pass

Test Graphs

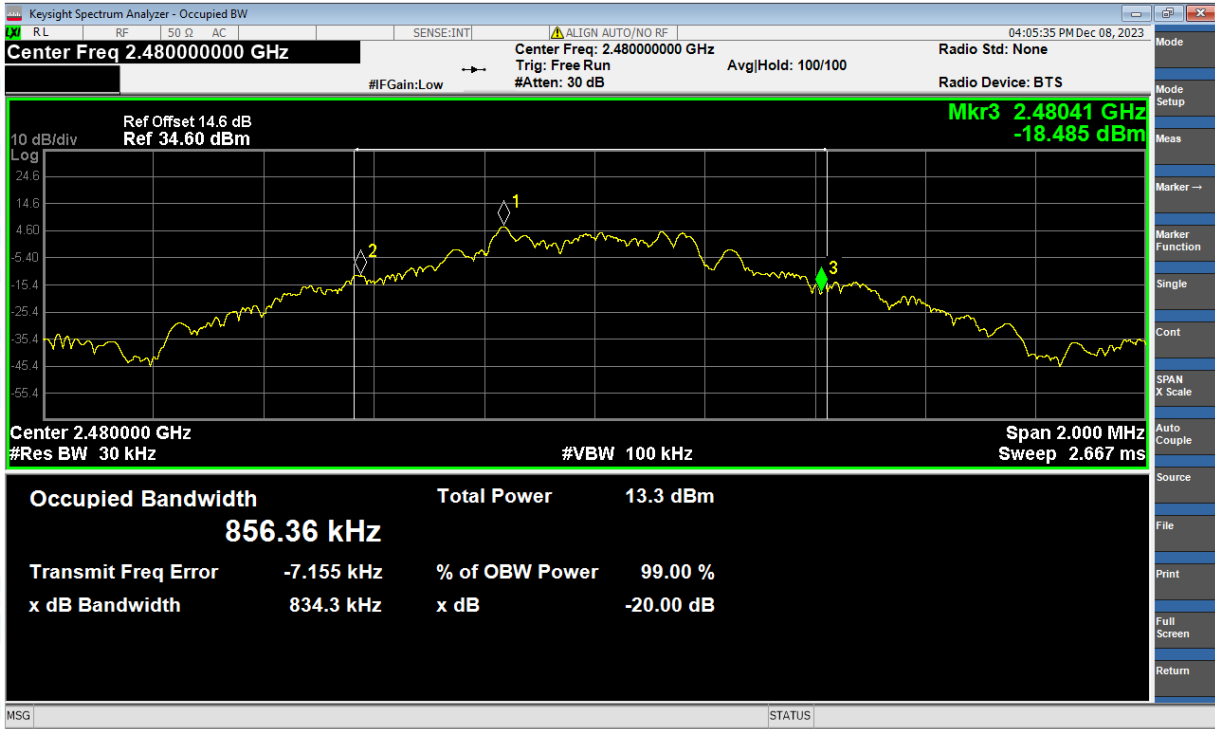
-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



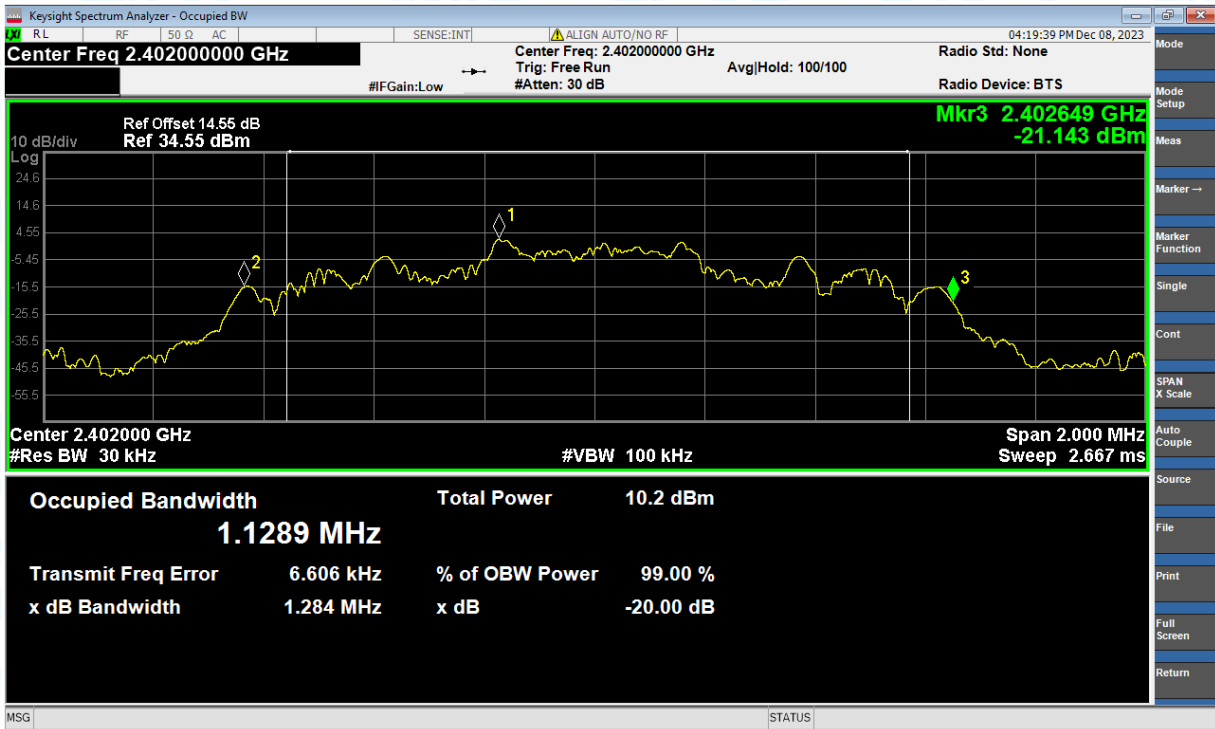
-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



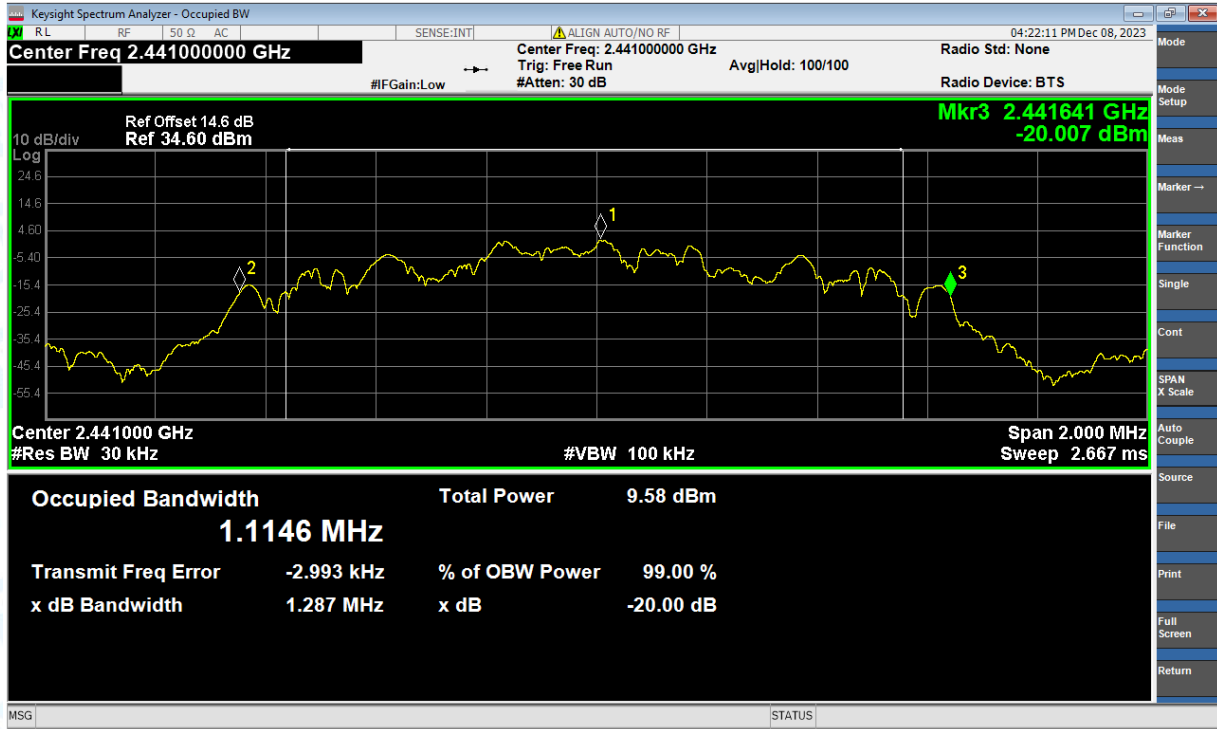
-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



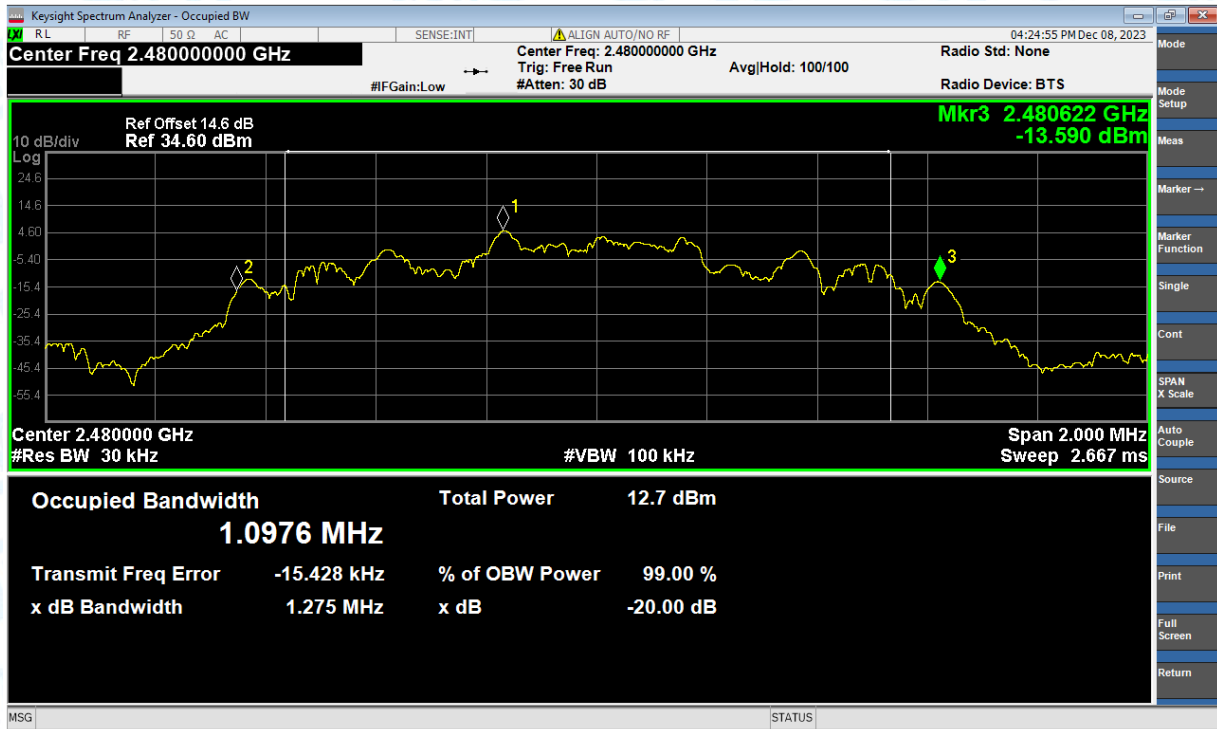
-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



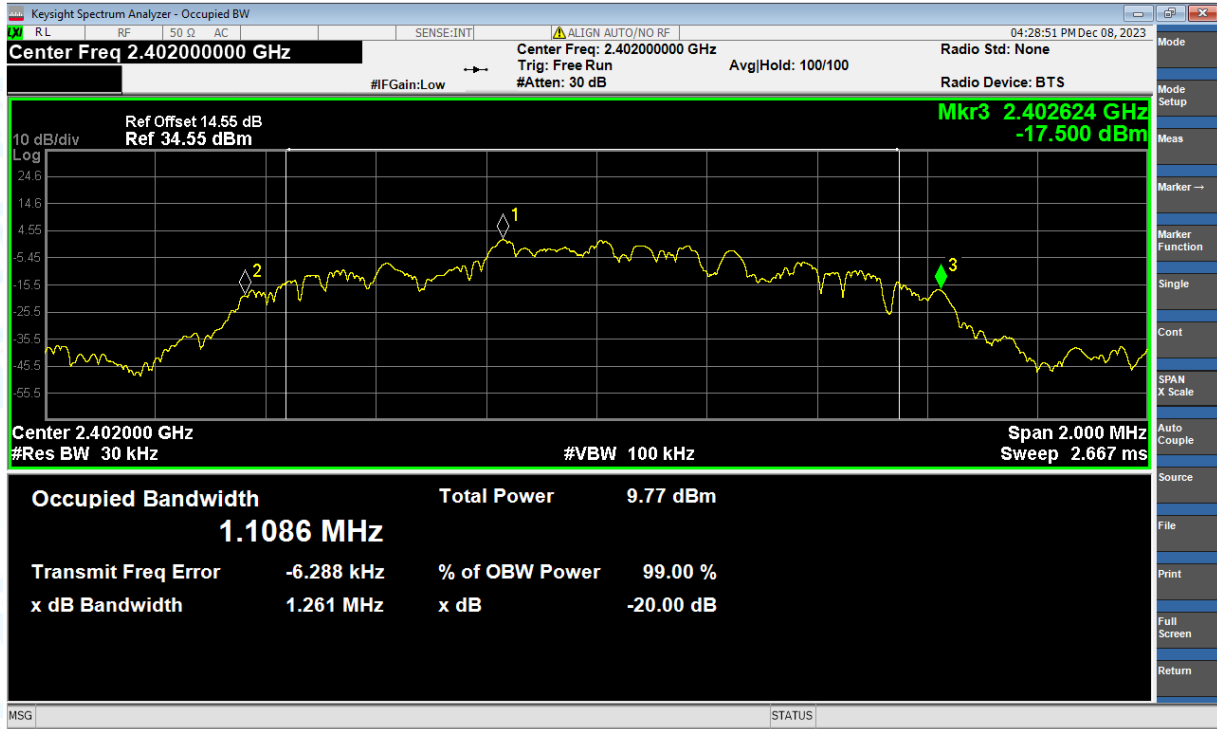
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



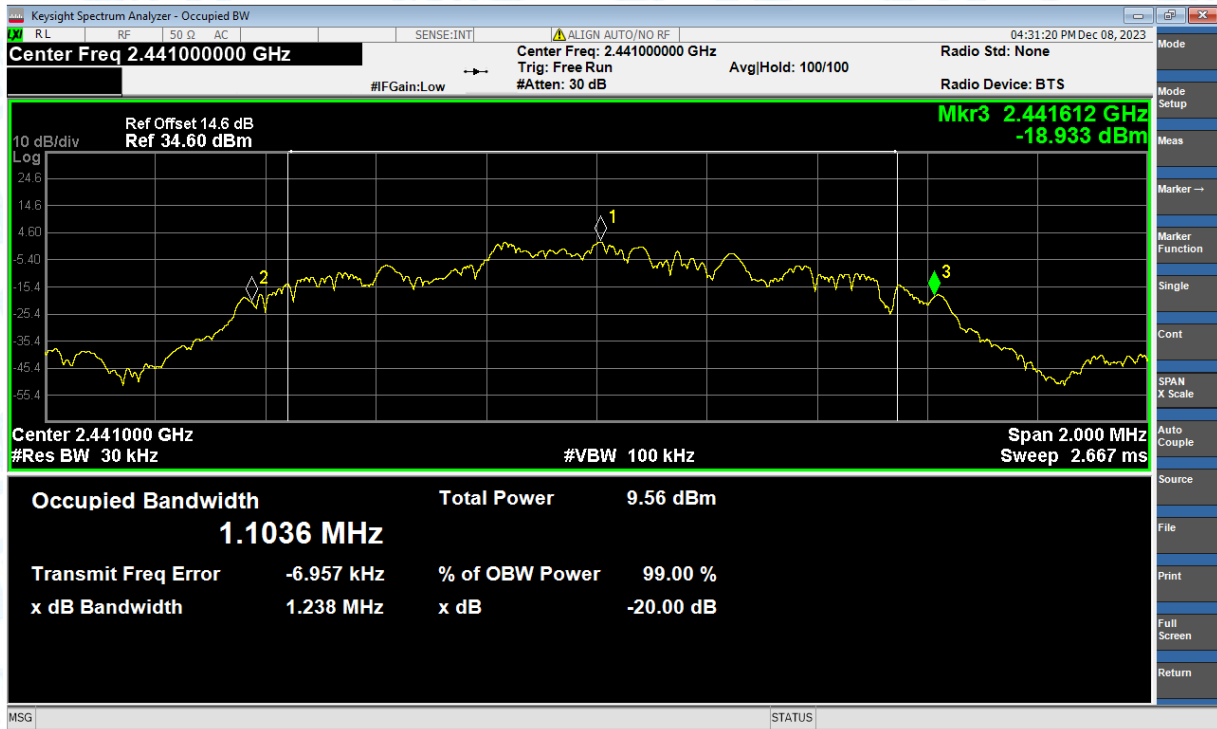
-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

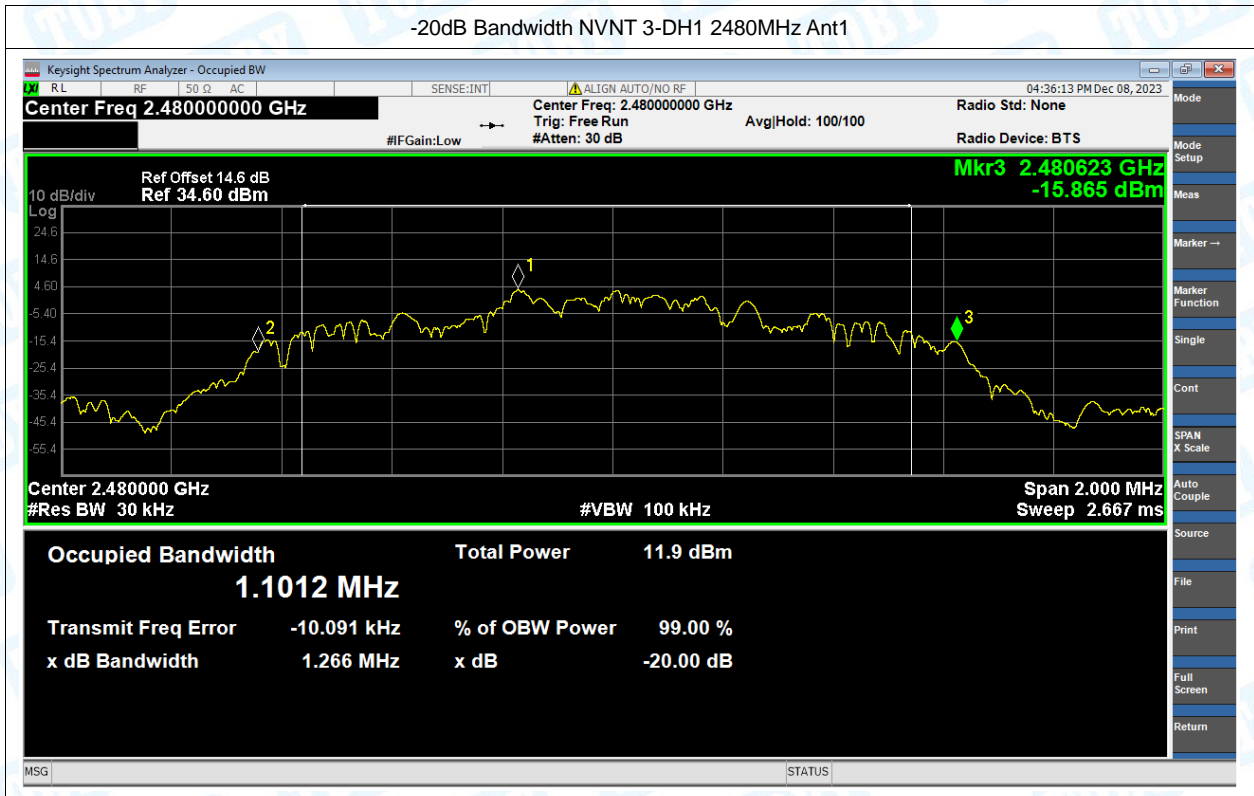


-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



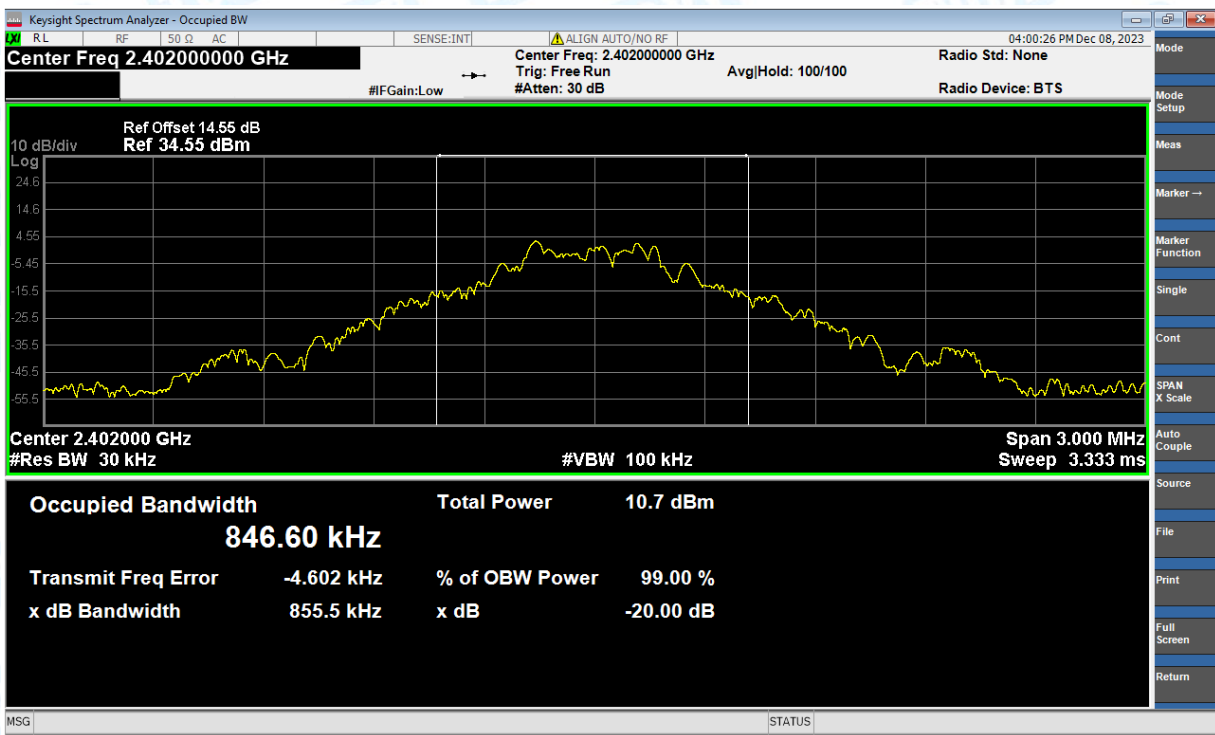


4. Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.847
NVNT	1-DH1	2441	Ant1	0.862
NVNT	1-DH1	2480	Ant1	0.838
NVNT	2-DH1	2402	Ant1	1.17
NVNT	2-DH1	2441	Ant1	1.089
NVNT	2-DH1	2480	Ant1	1.148
NVNT	3-DH1	2402	Ant1	1.097
NVNT	3-DH1	2441	Ant1	1.108
NVNT	3-DH1	2480	Ant1	1.101

Test Graphs

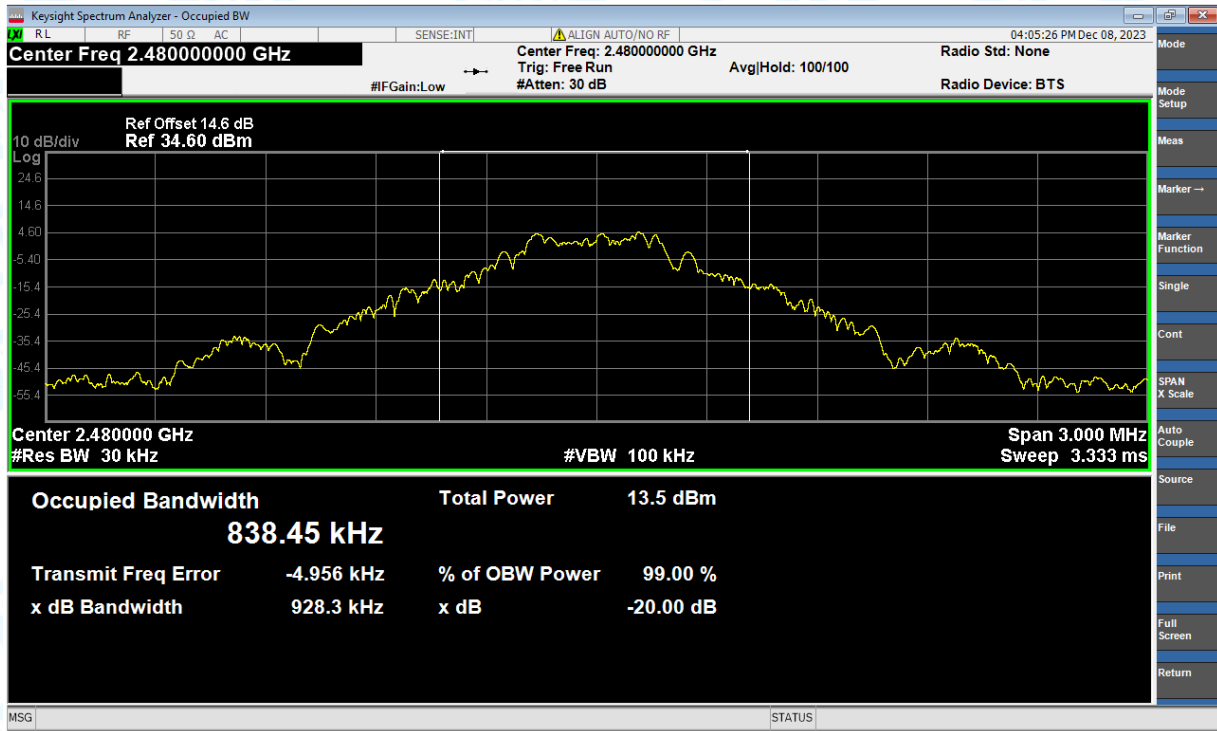
OBW NVNT 1-DH1 2402MHz Ant1



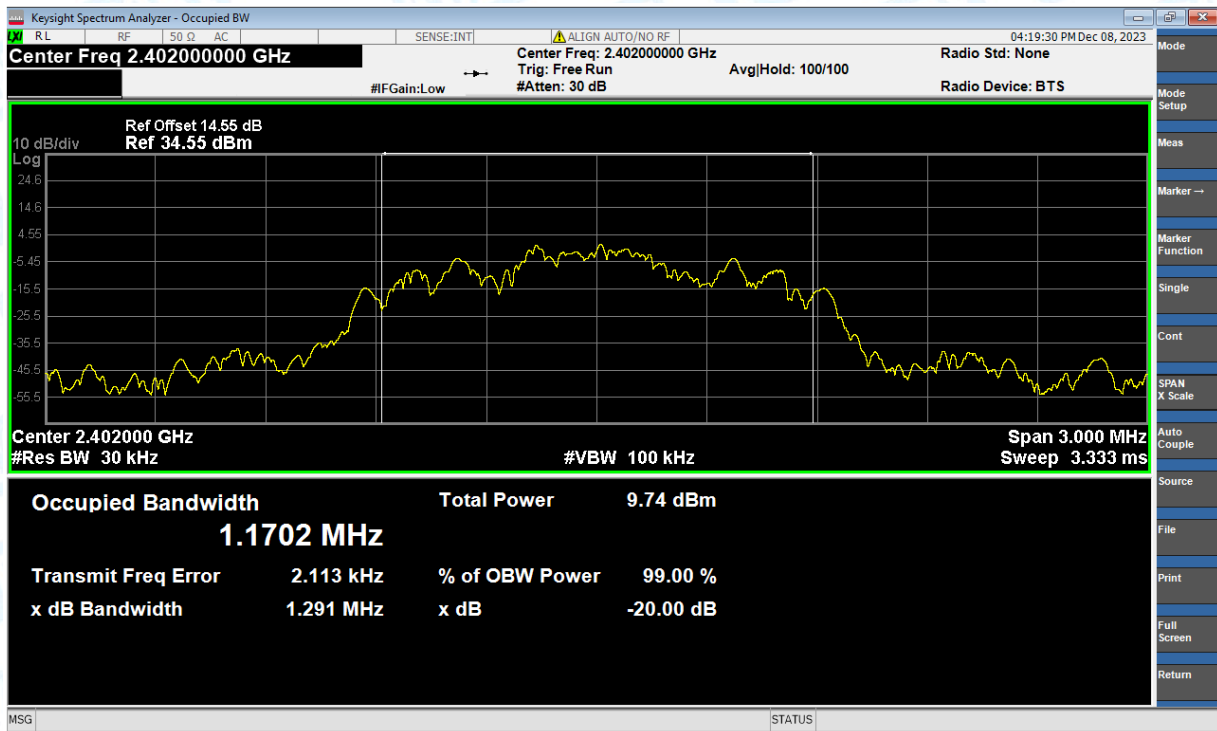
OBW NVNT 1-DH1 2441MHz Ant1



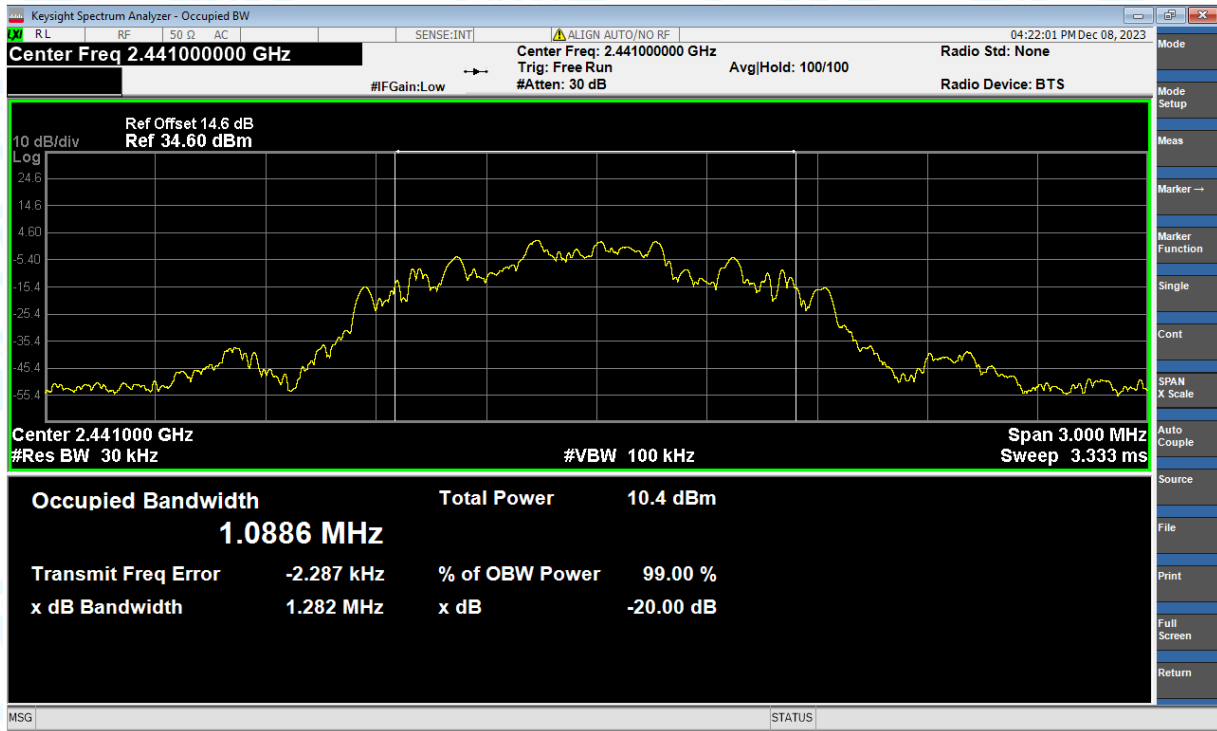
OBW NVNT 1-DH1 2480MHz Ant1



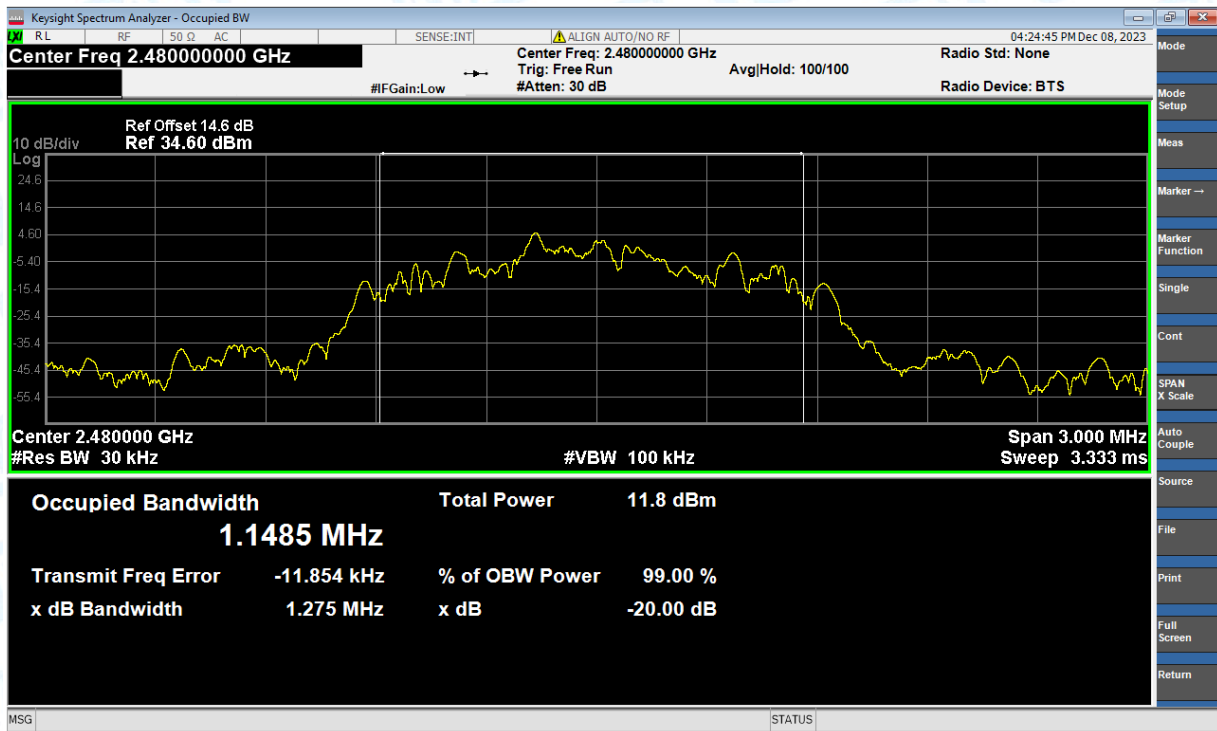
OBW NVNT 2-DH1 2402MHz Ant1



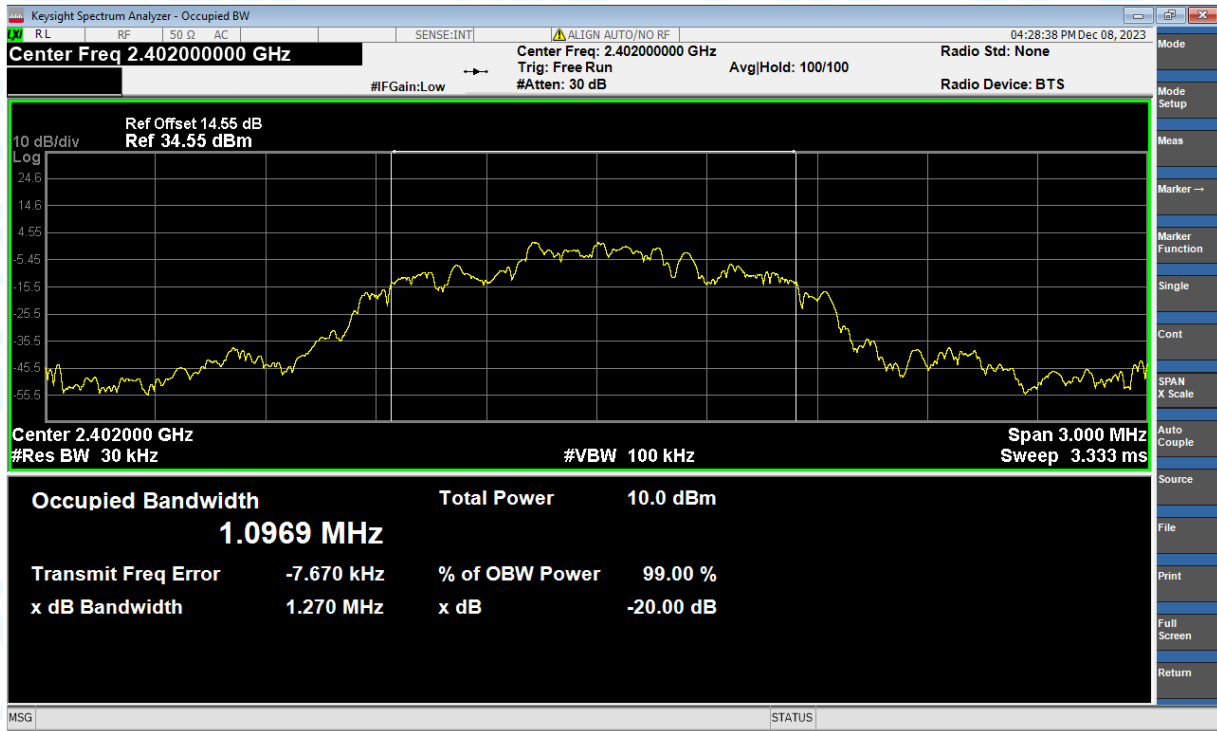
OBW NVNT 2-DH1 2441MHz Ant1



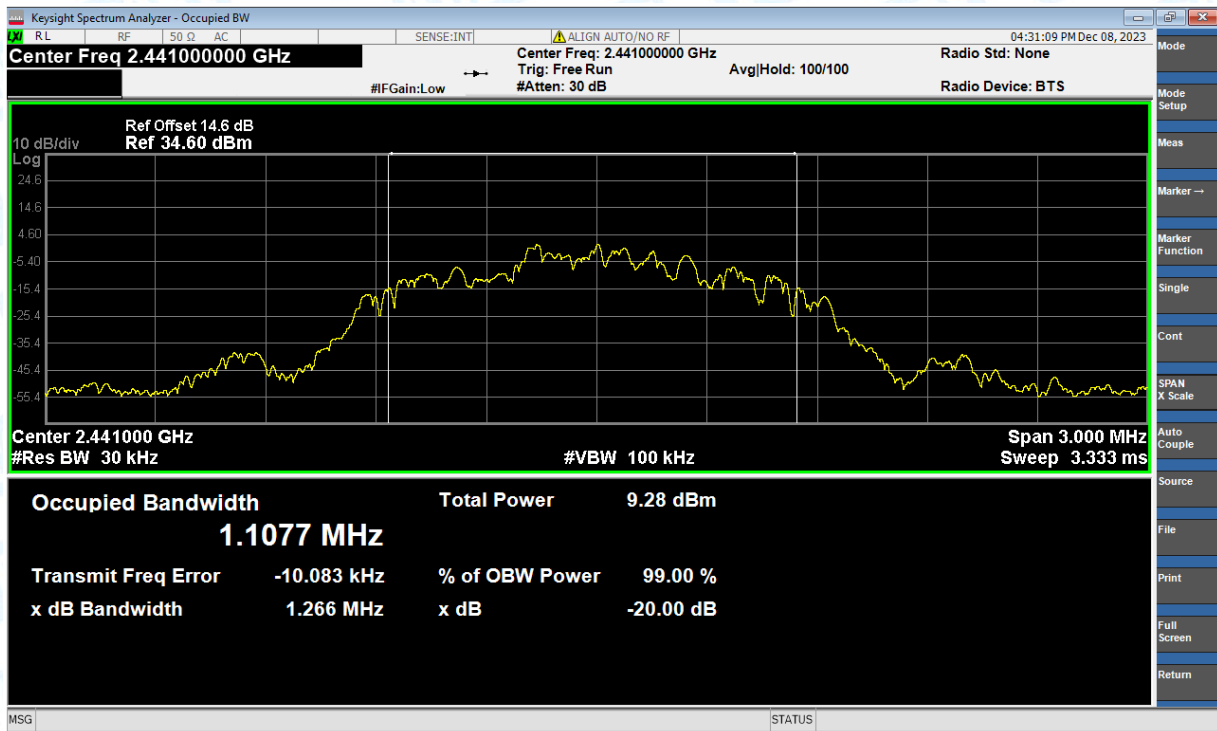
OBW NVNT 2-DH1 2480MHz Ant1

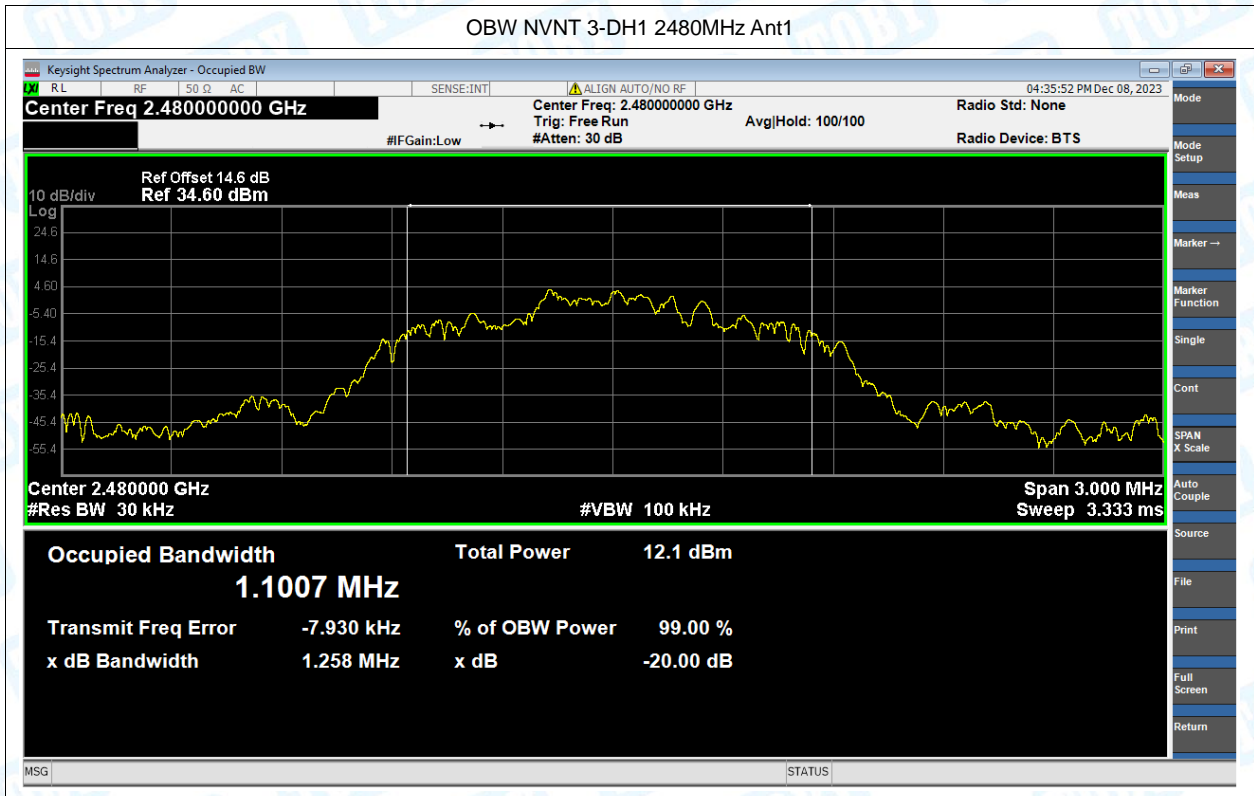


OBW NVNT 3-DH1 2402MHz Ant1



OBW NVNT 3-DH1 2441MHz Ant1



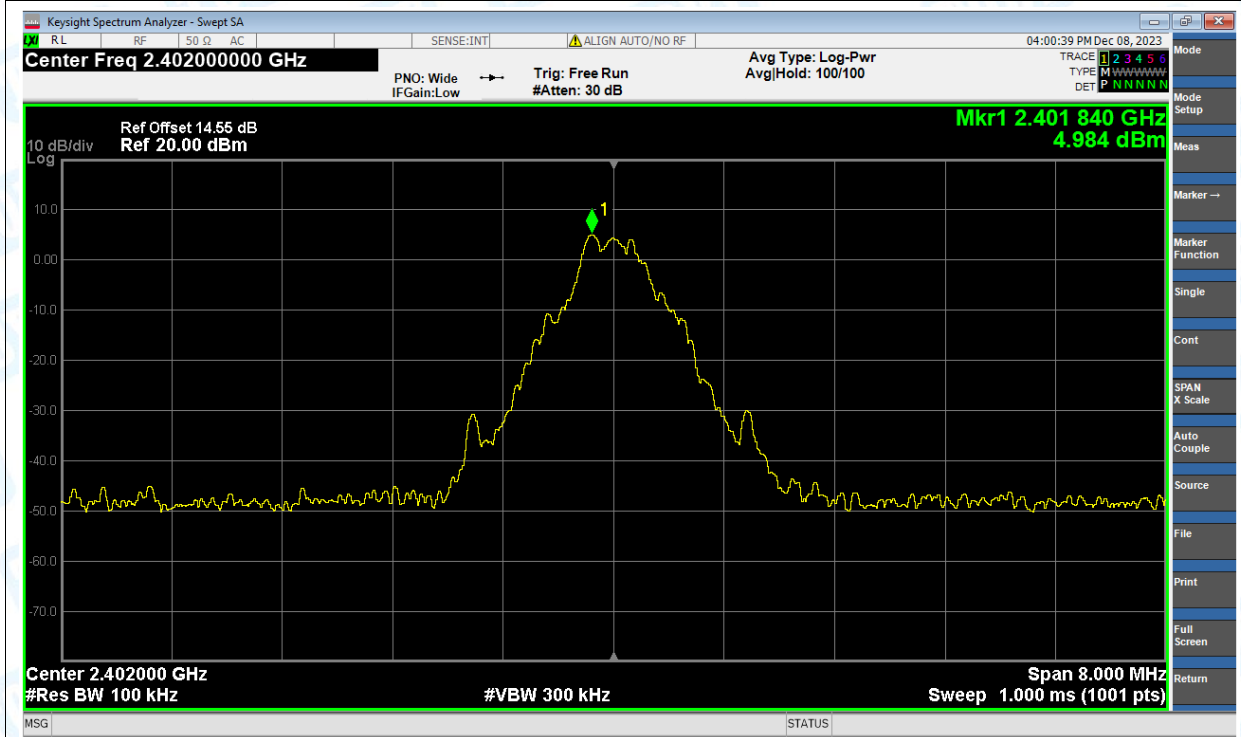


5. Band Edge

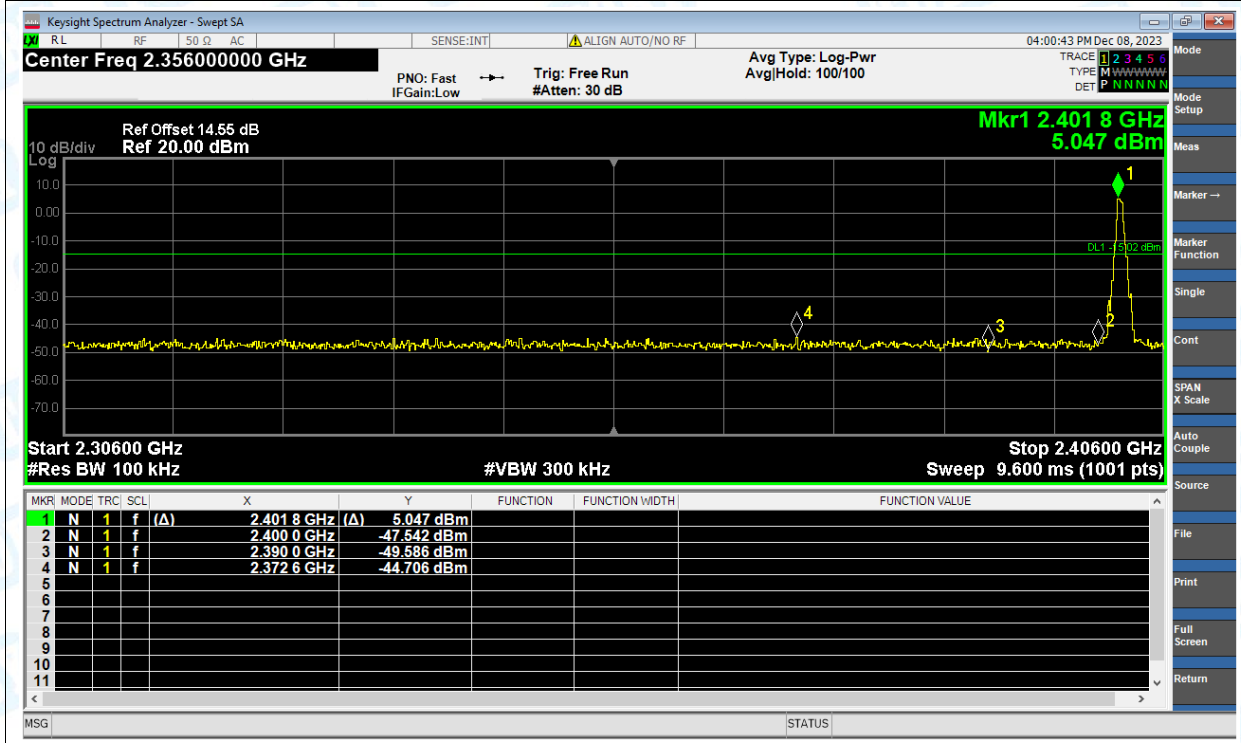
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-49.69	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-52.74	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-47.83	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-51.67	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-49.6	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-50.88	-20	Pass

Test Graphs

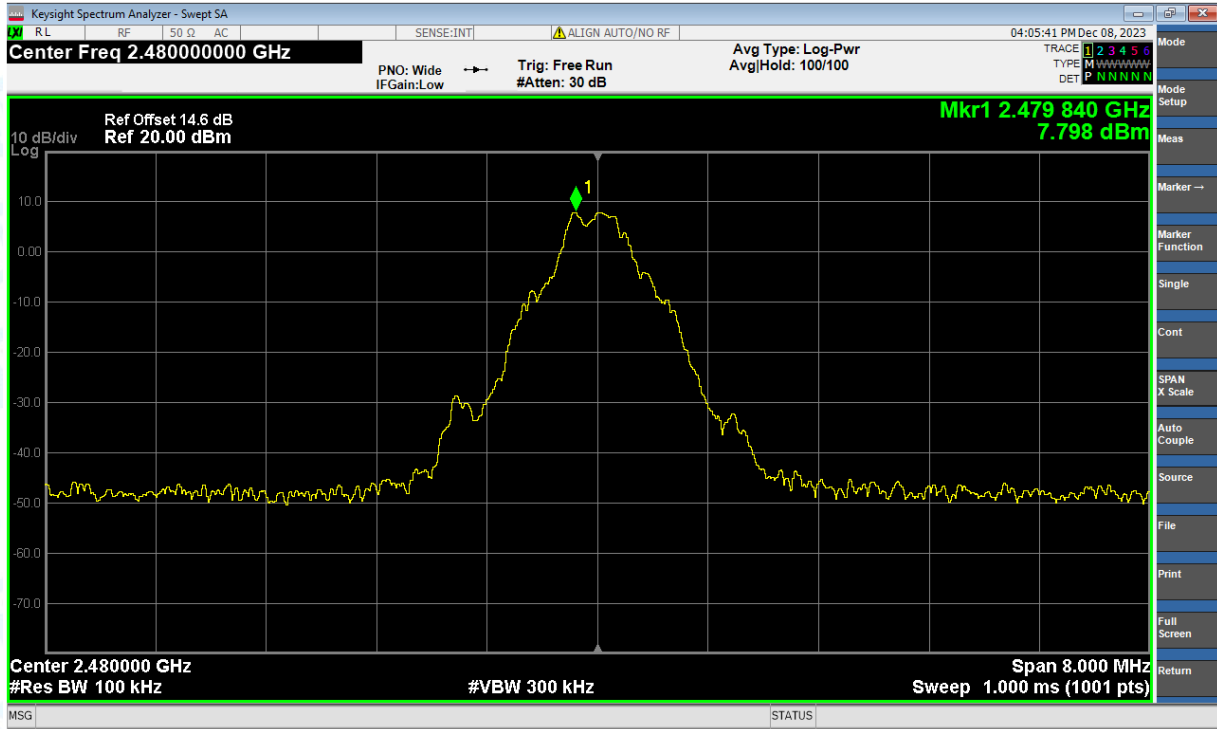
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Ref



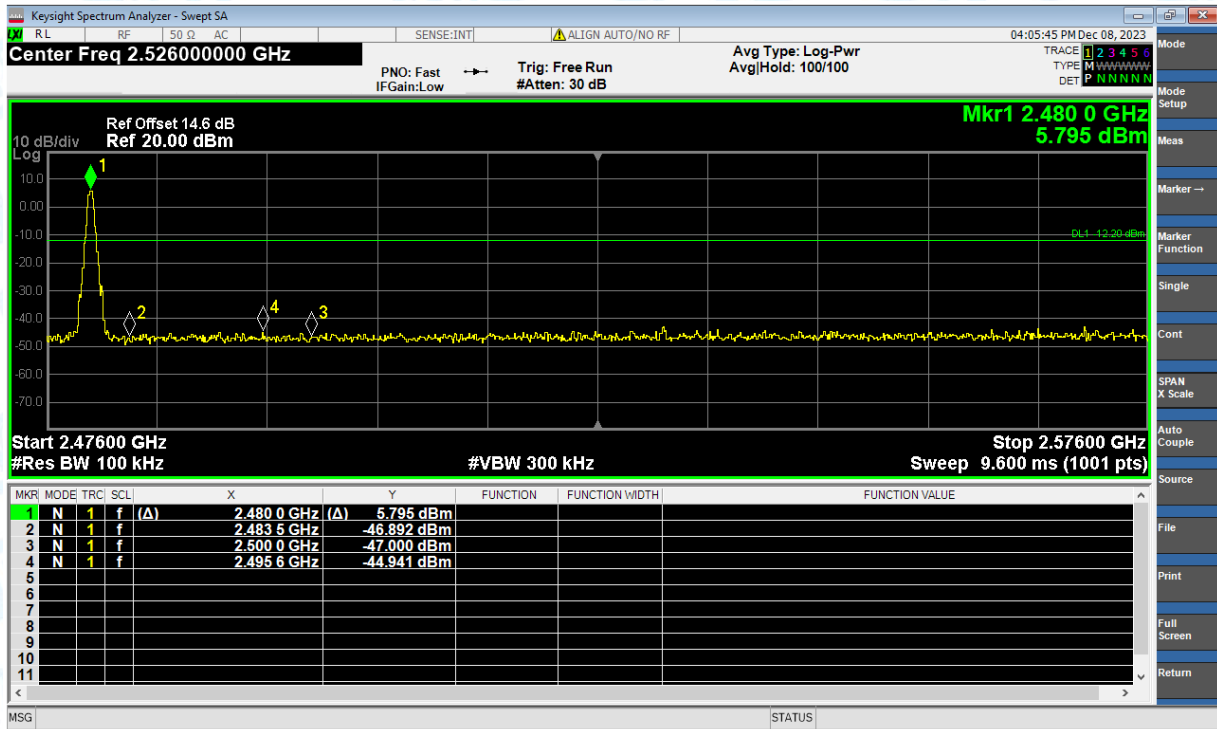
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission

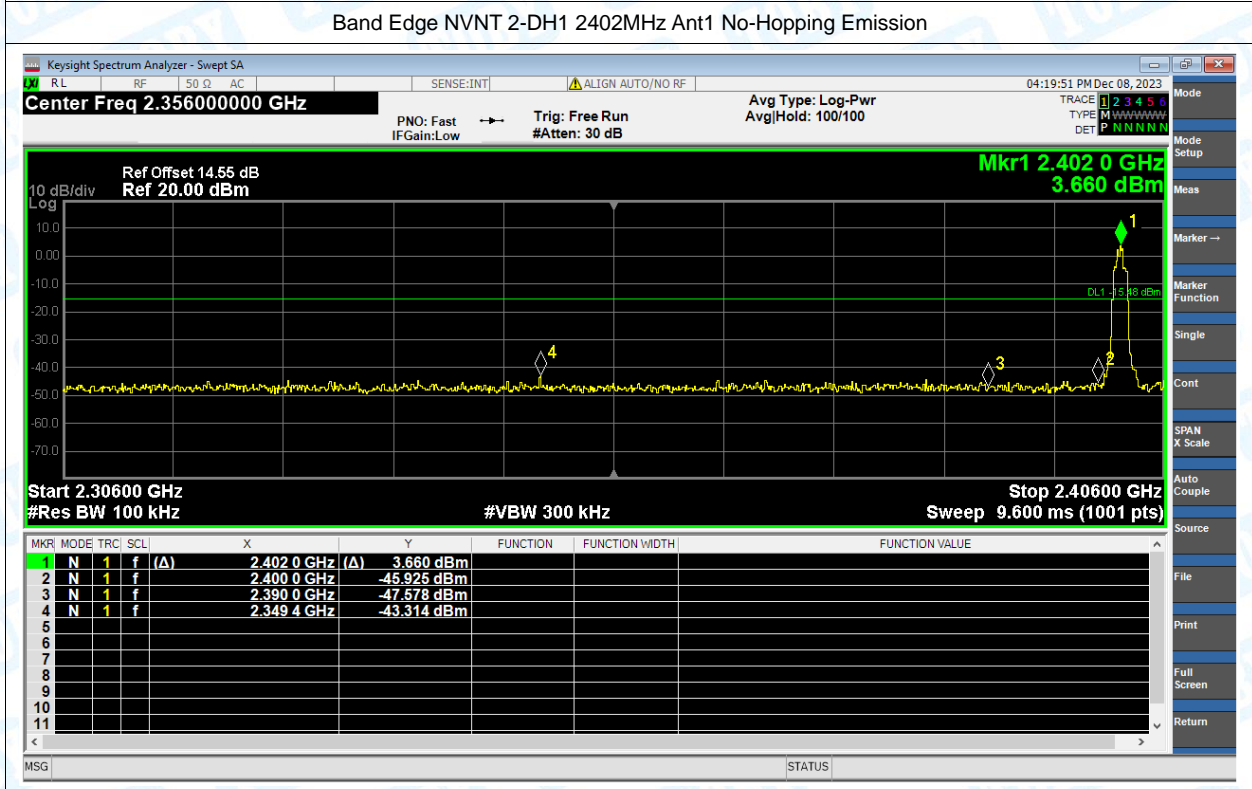
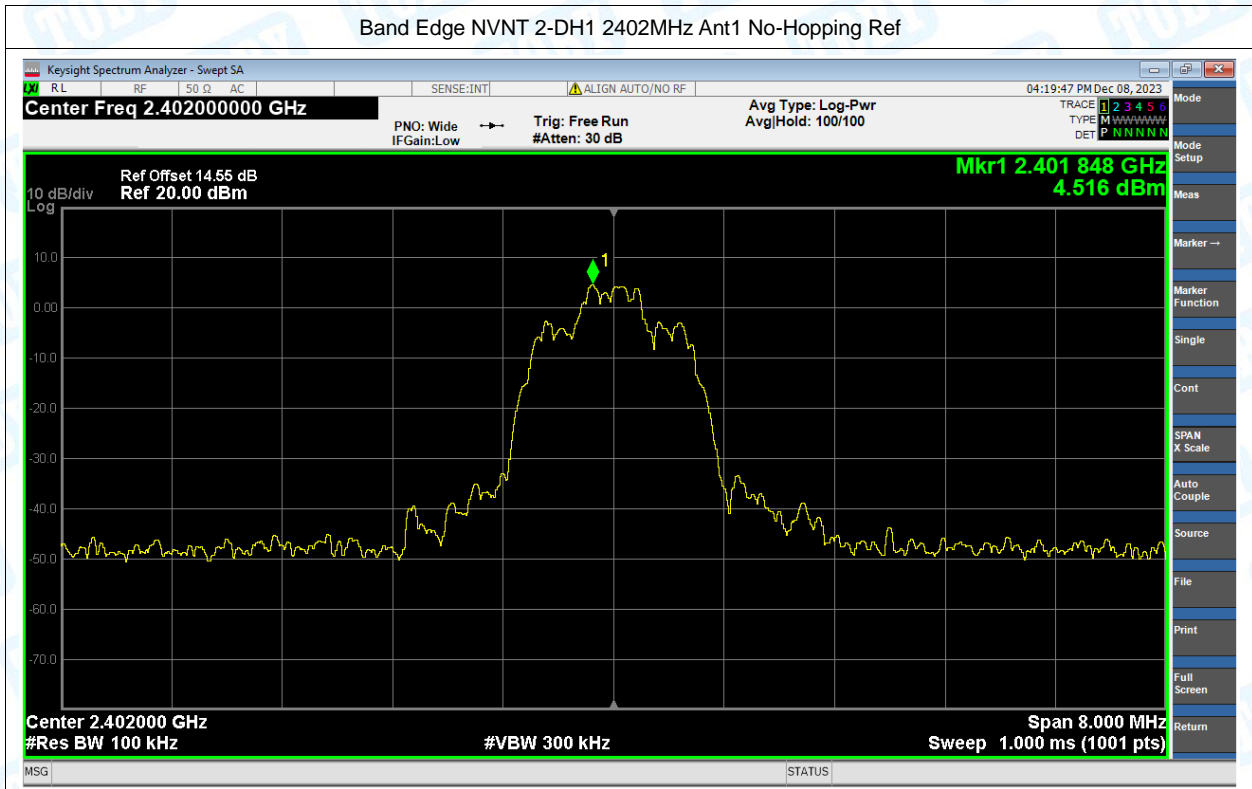


Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Ref

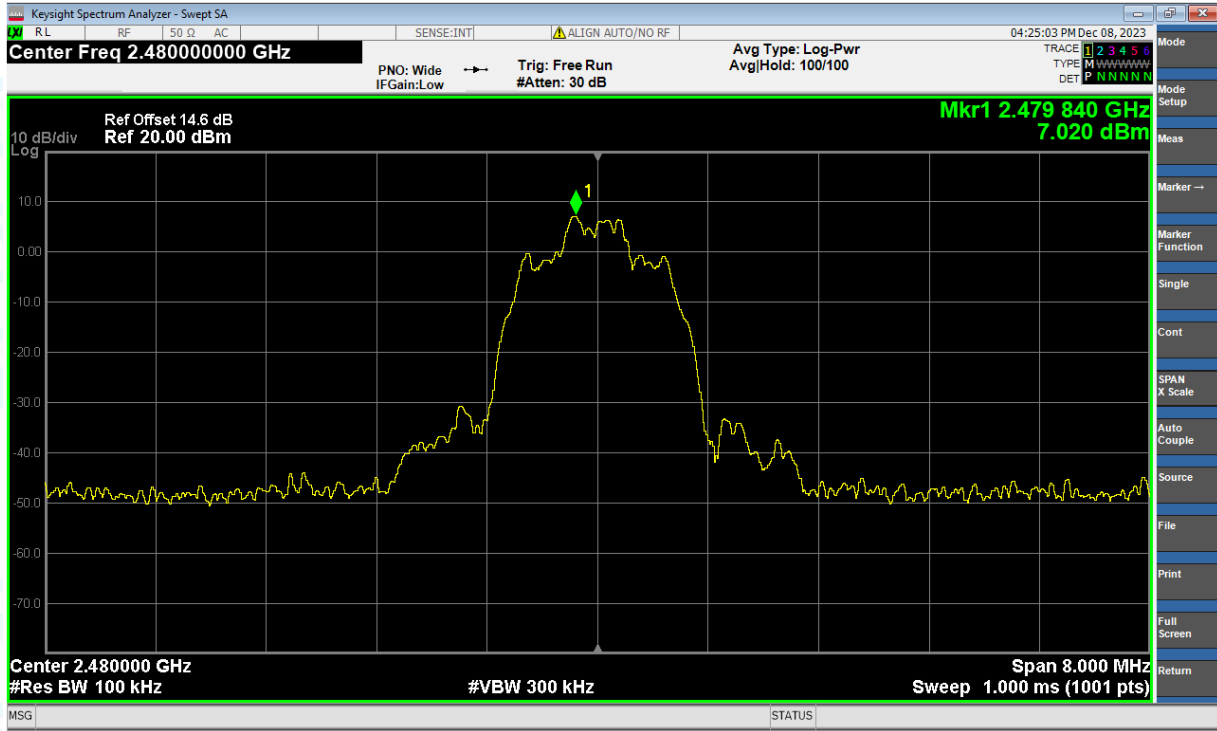


Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Emission

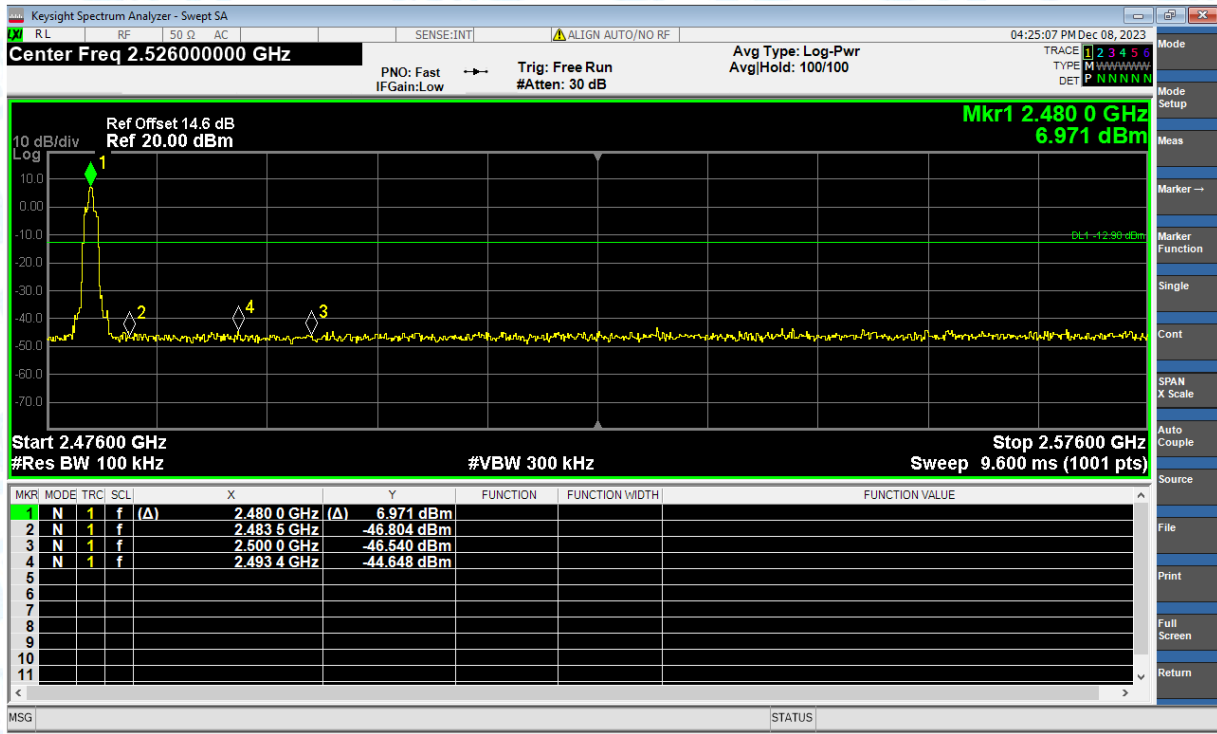


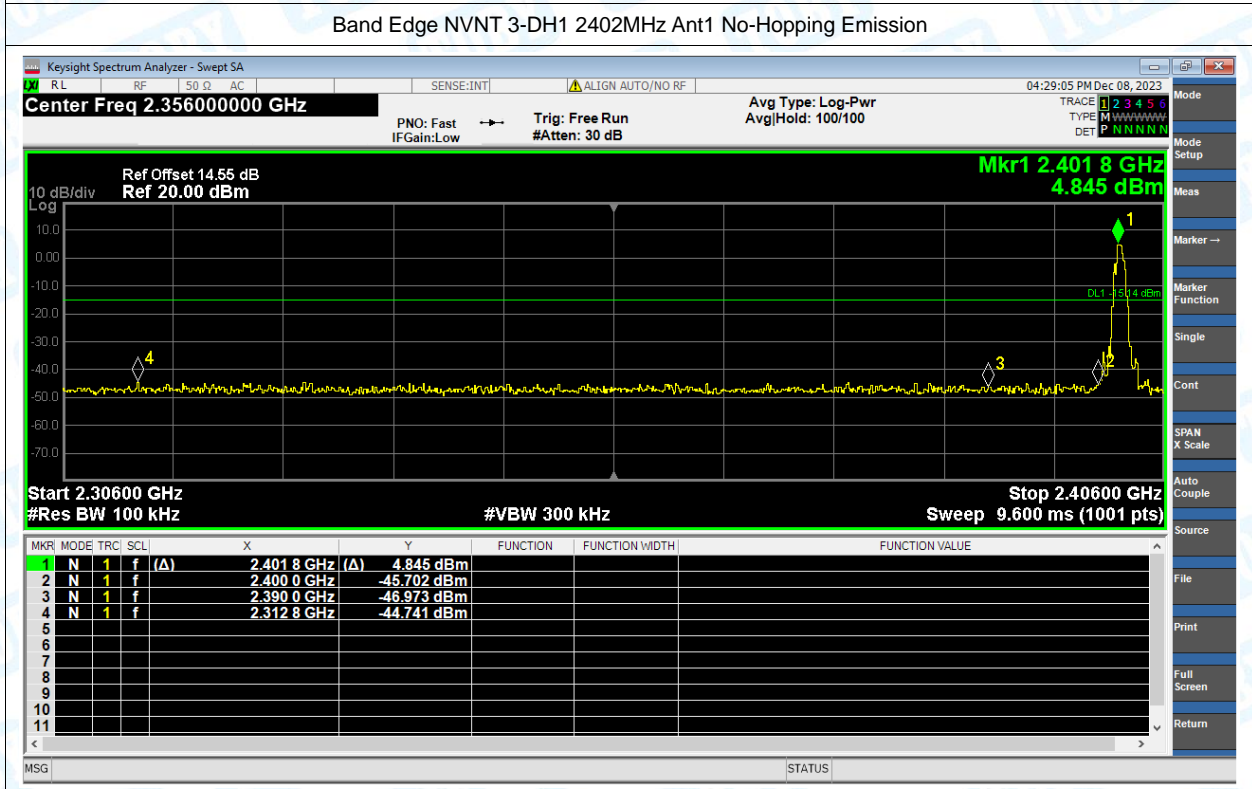


Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Ref

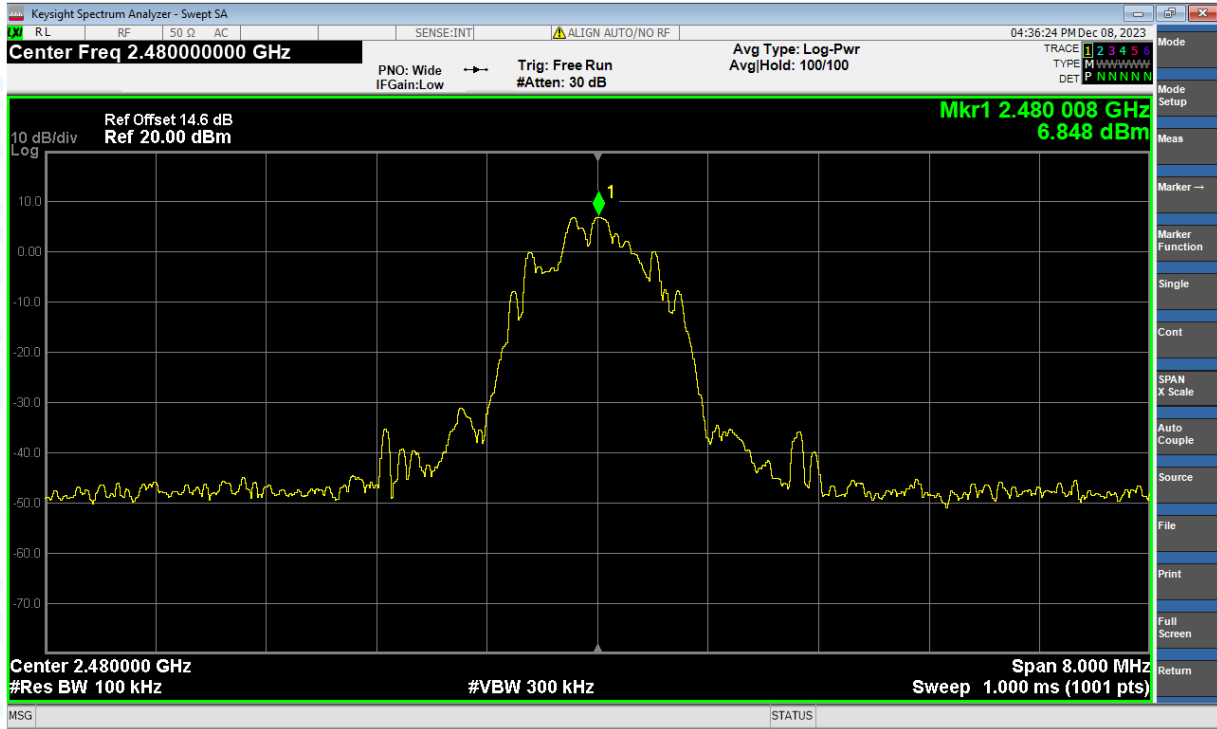


Band Edge NVNT 2-DH1 2480MHz Ant1 No-Hopping Emission

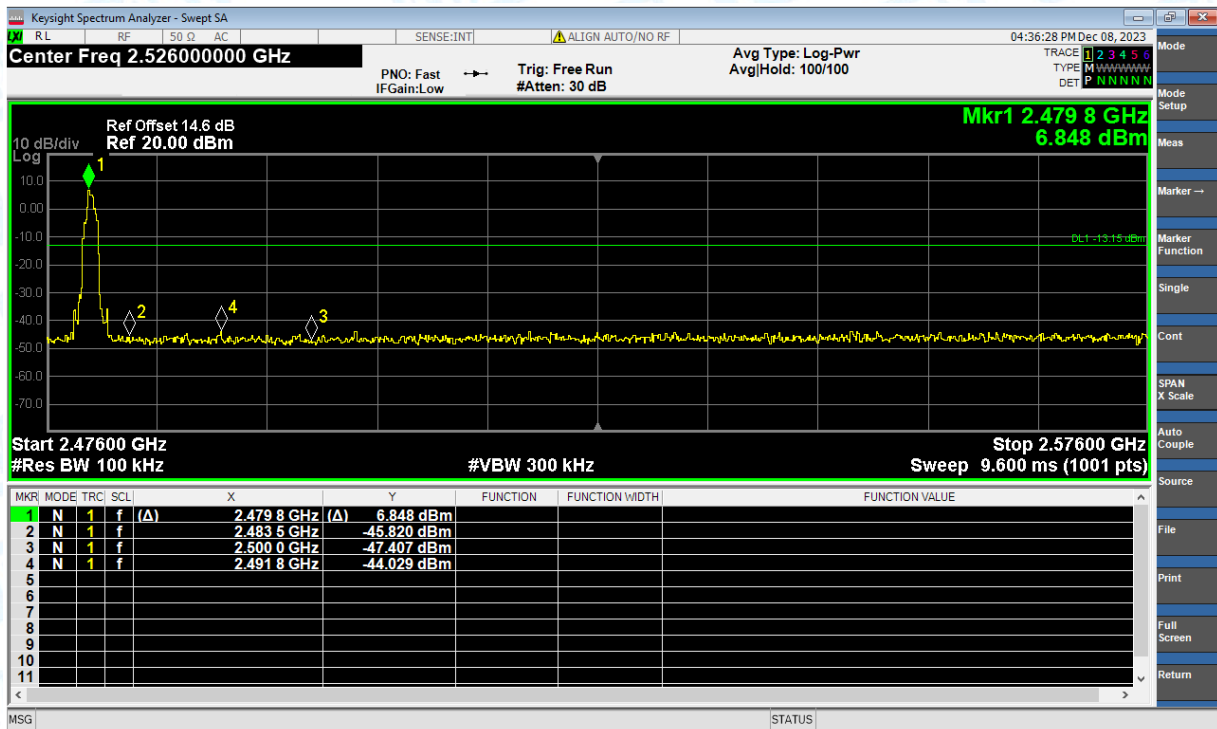




Band Edge NVNT 3-DH1 2480MHz Ant1 No-Hopping Ref



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



6. Band Edge(Hopping)

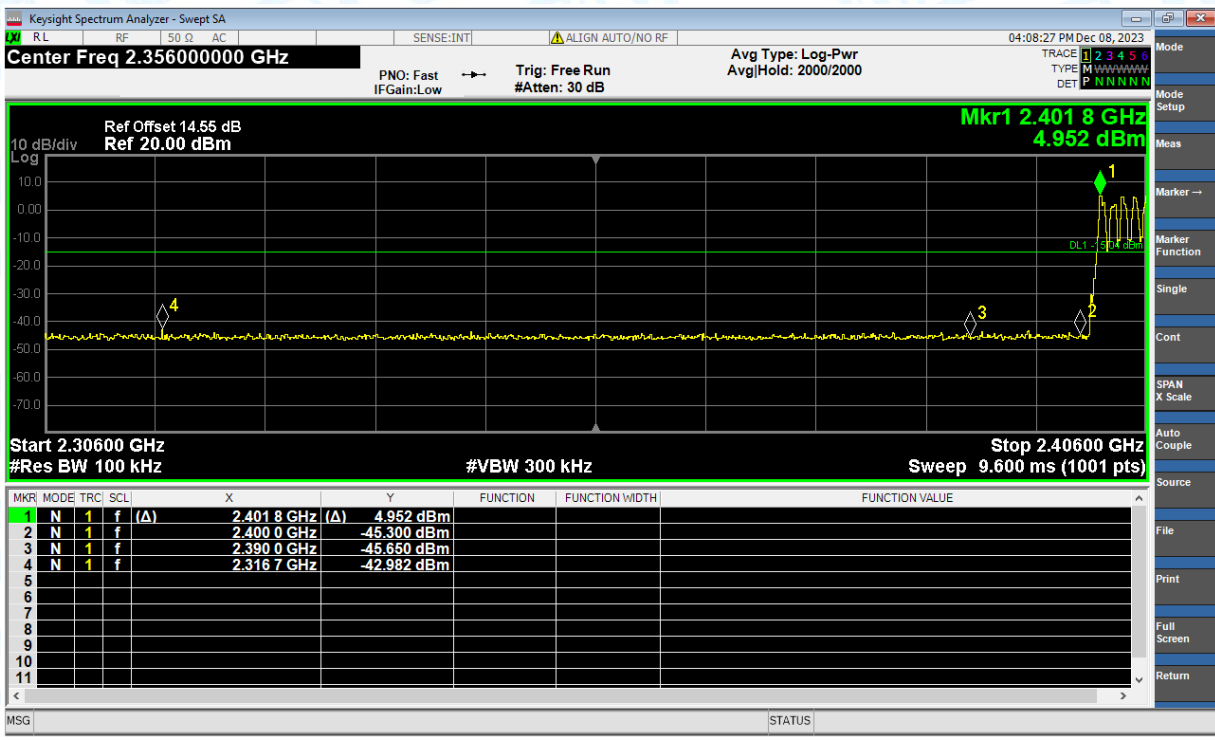
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-47.94	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-52.81	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-48.3	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-50.35	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-48.31	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-51.59	-20	Pass

Test Graphs

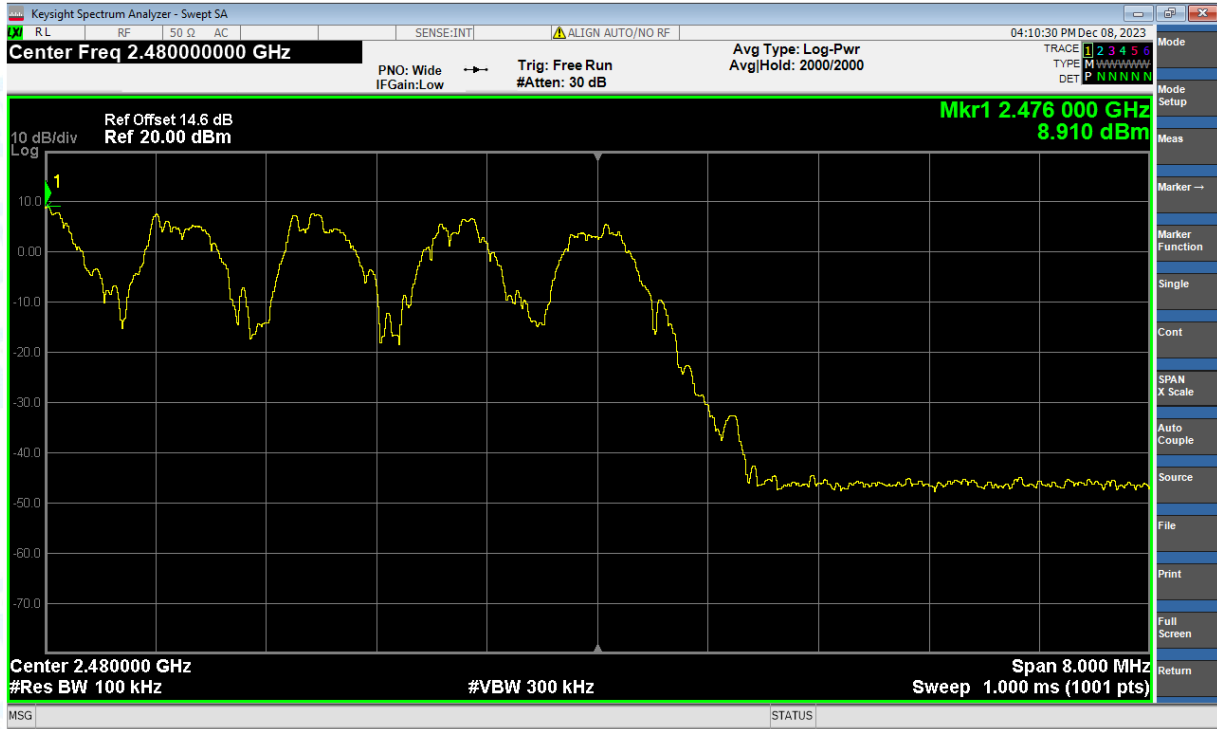
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Ref



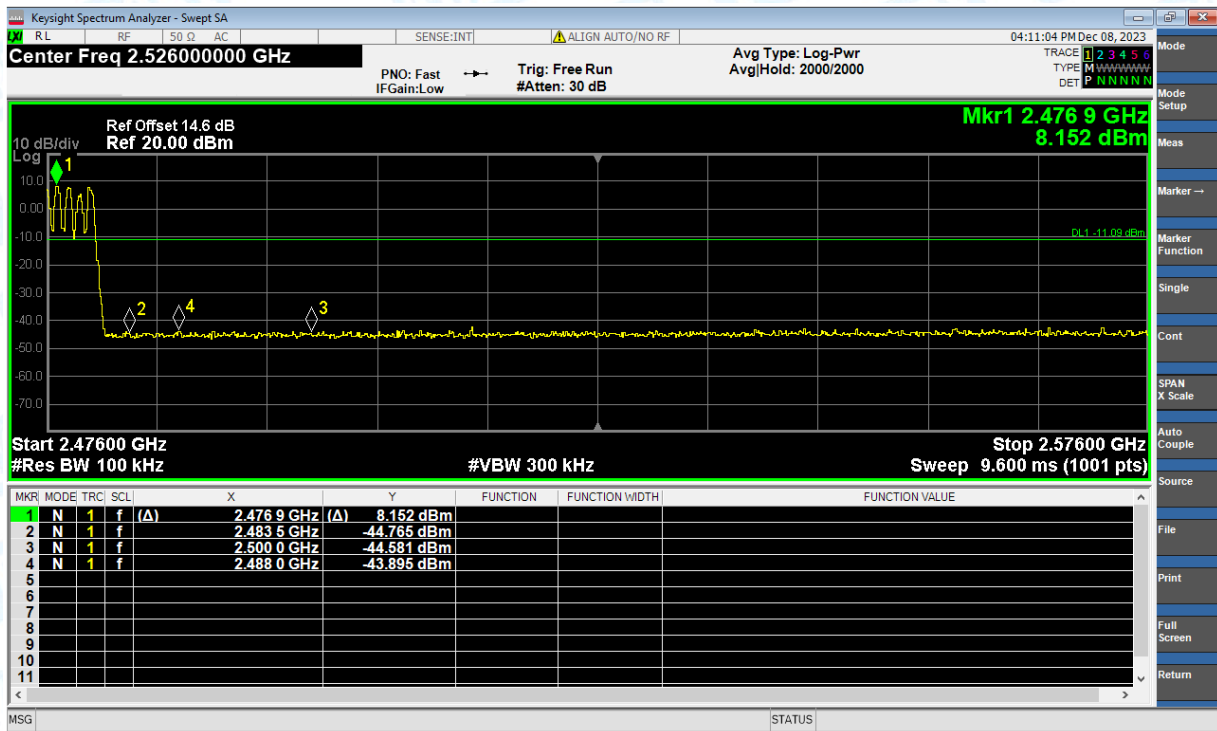
Band Edge(Hopping) NVNT 1-DH1 2402MHz Ant1 Hopping Emission



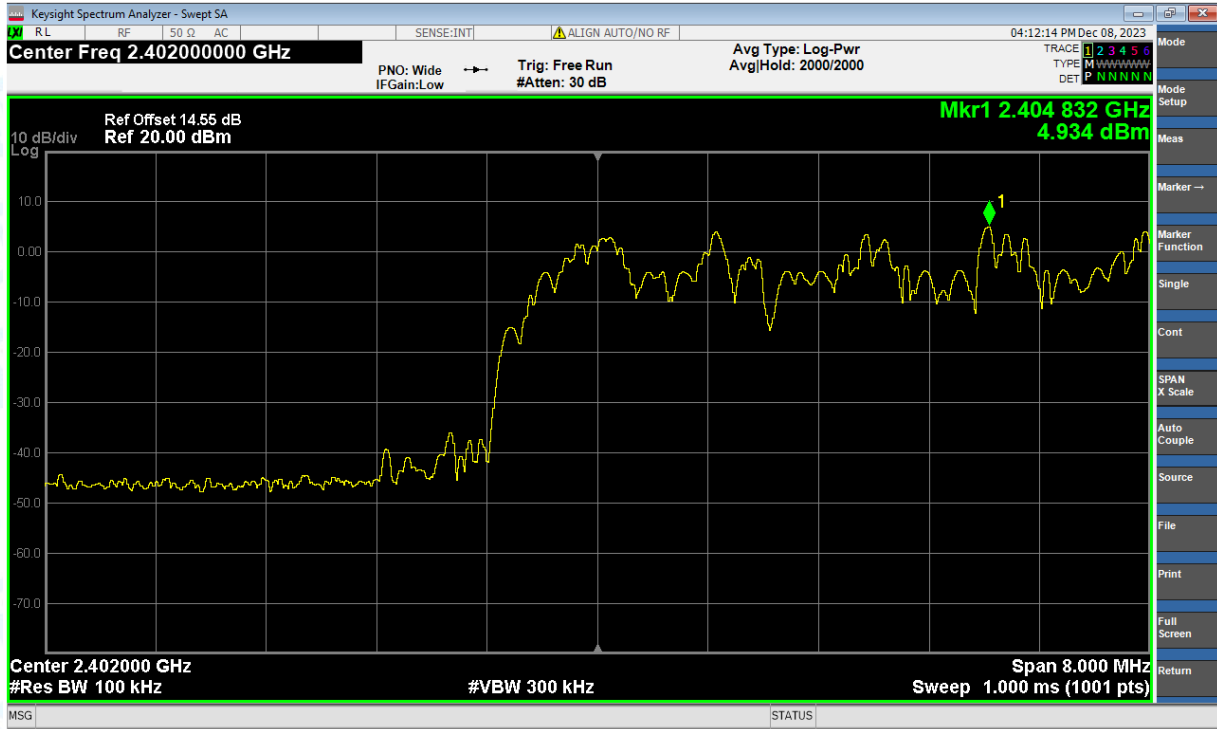
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Ref



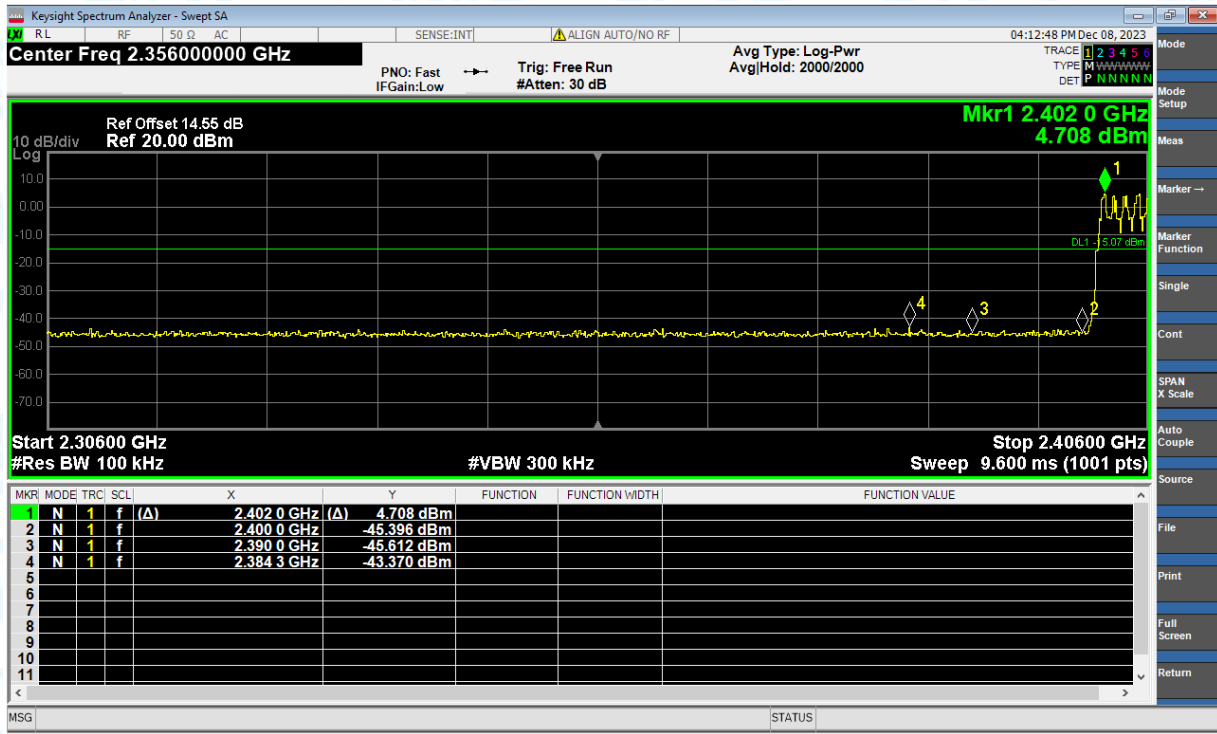
Band Edge(Hopping) NVNT 1-DH1 2480MHz Ant1 Hopping Emission



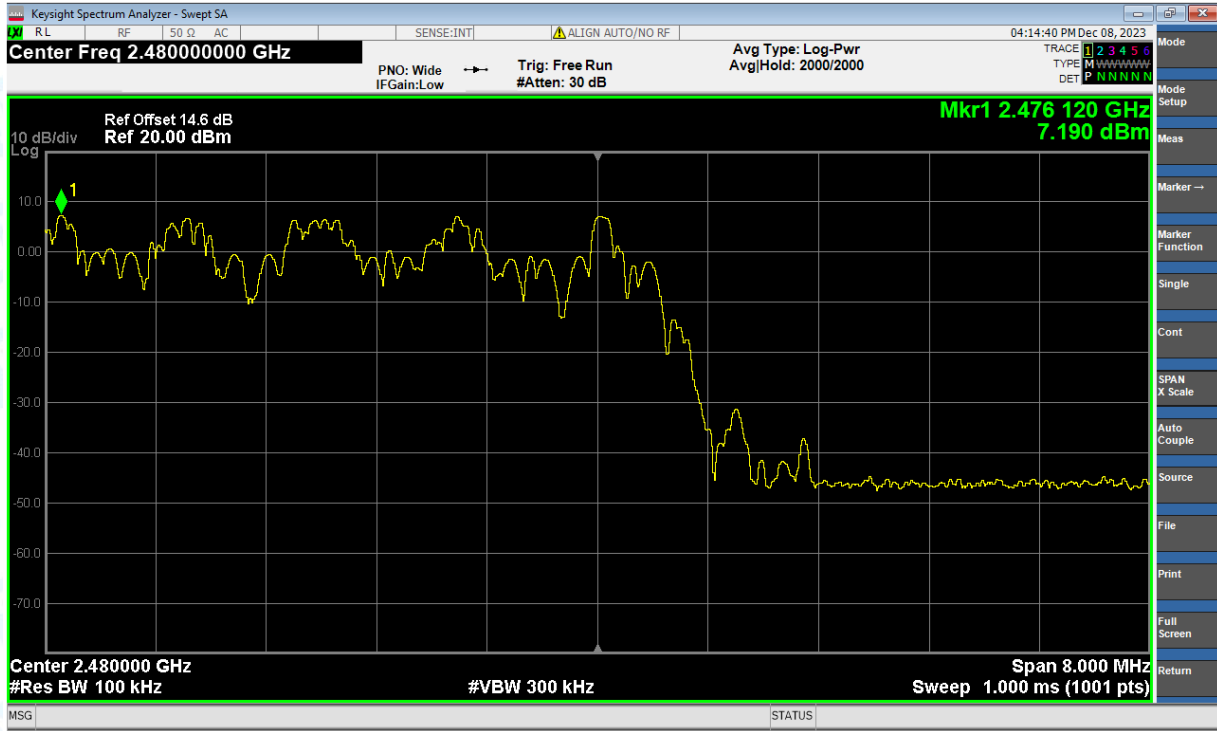
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Ref



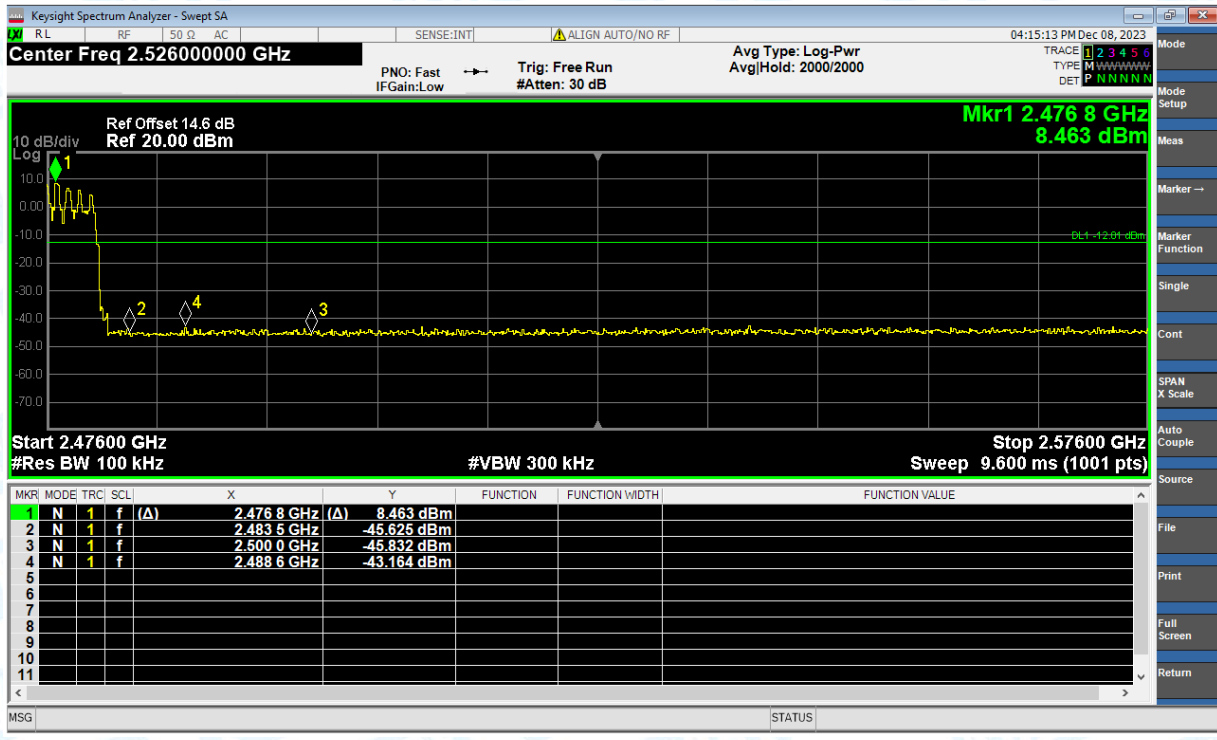
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Emission



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



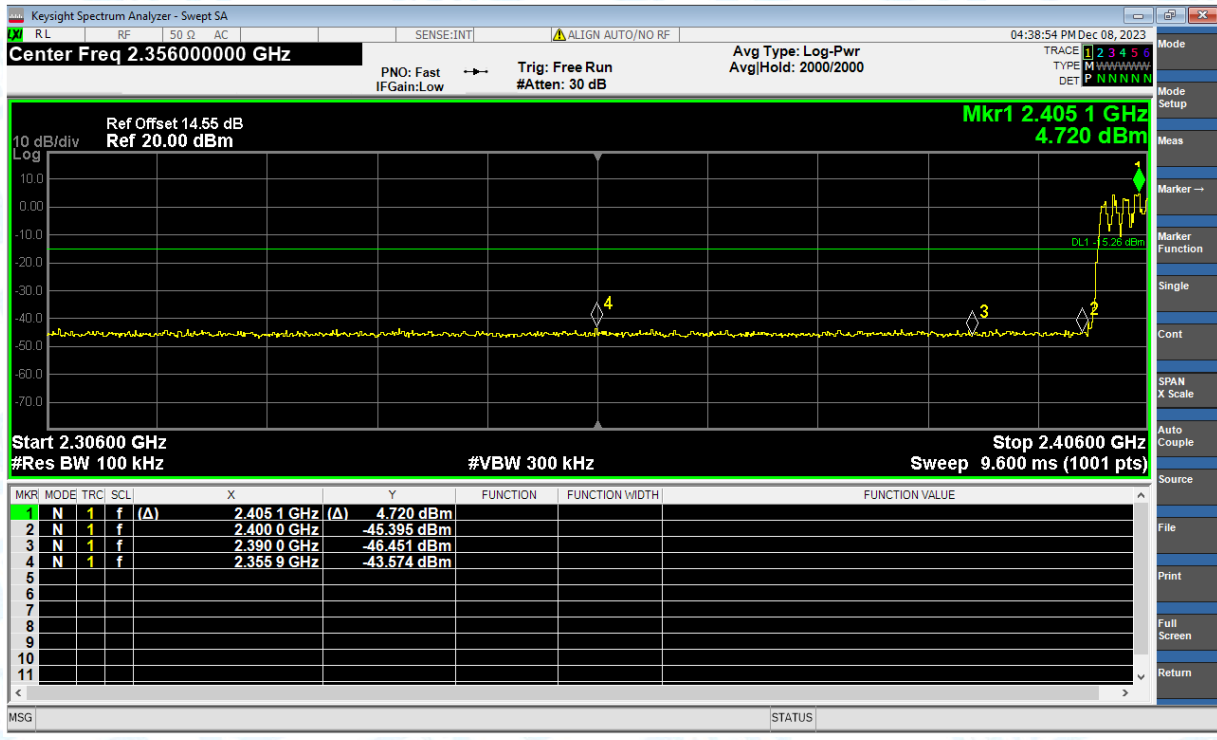
Band Edge(Hopping) NVNT 2-DH1 2480MHz Ant1 Hopping Emission



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



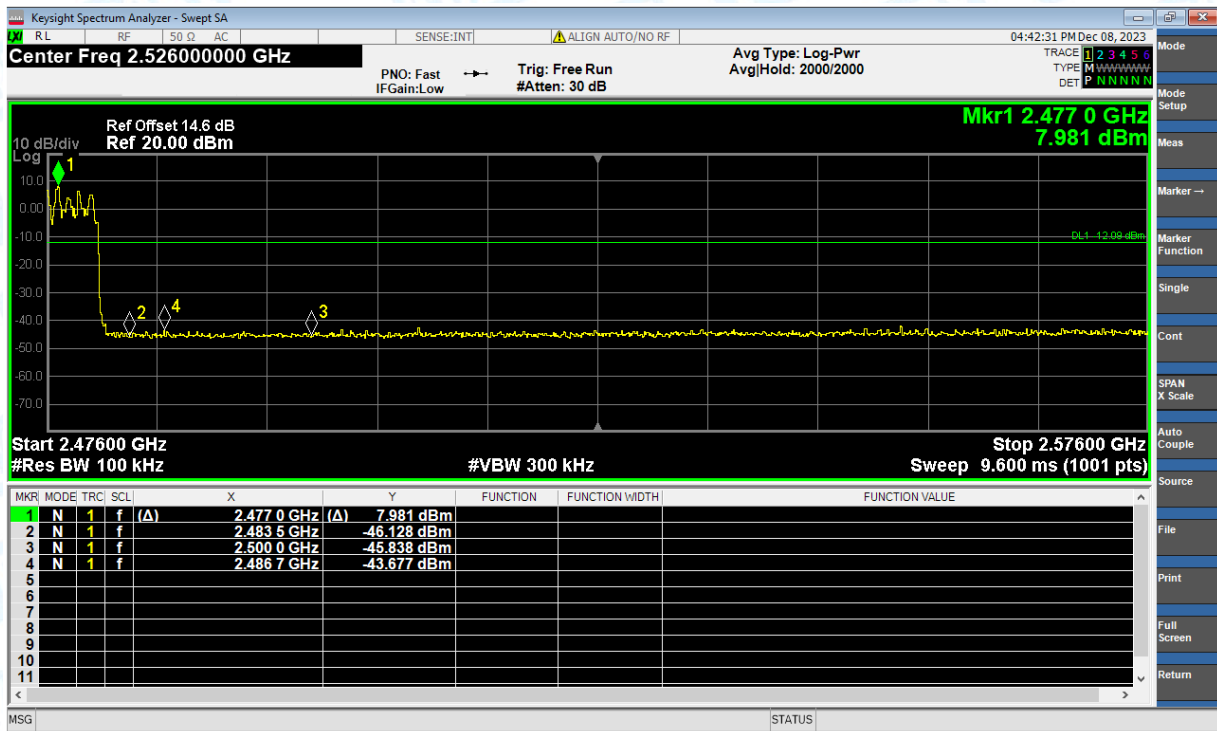
Band Edge(Hopping) NVNT 3-DH1 2402MHz Ant1 Hopping Emission



Band Edge(Hopping) NVNT 3-DH1 2480MHz Ant1 Hopping Ref



Band Edge(Hopping) NVNT 3-DH1 2480MHz Ant1 Hopping Emission

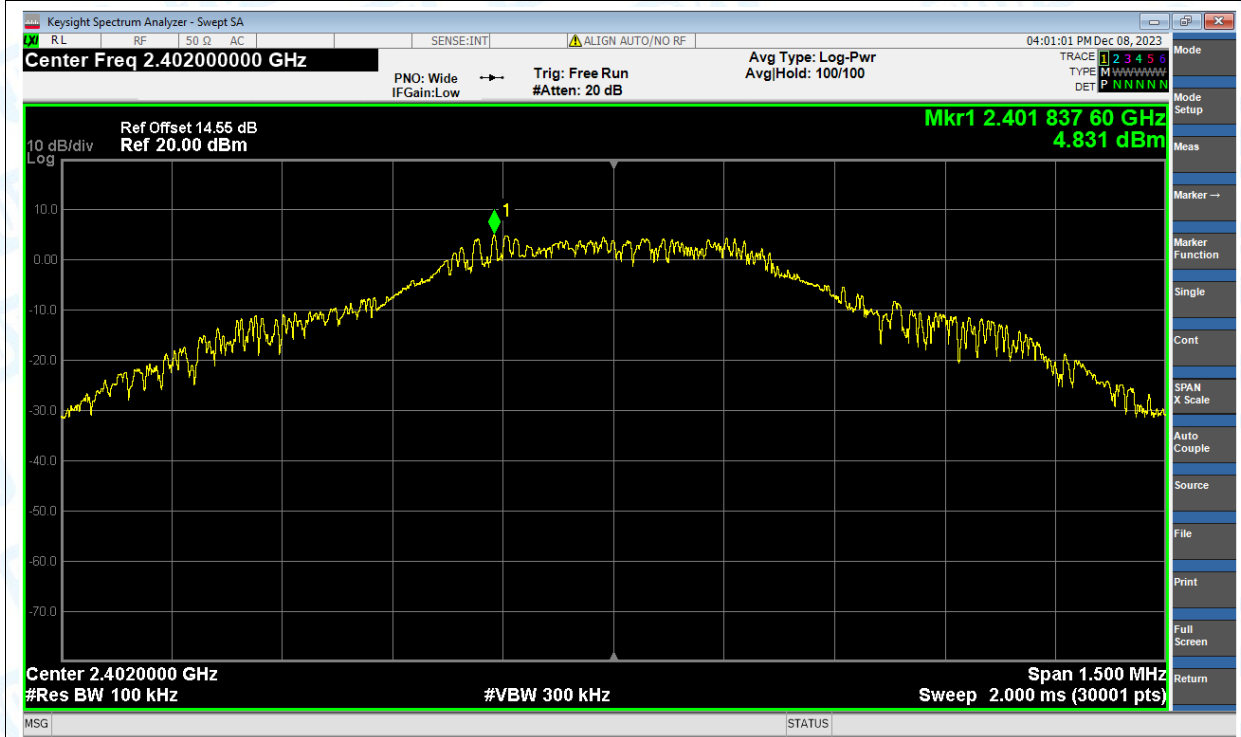


7. Conducted RF Spurious Emission

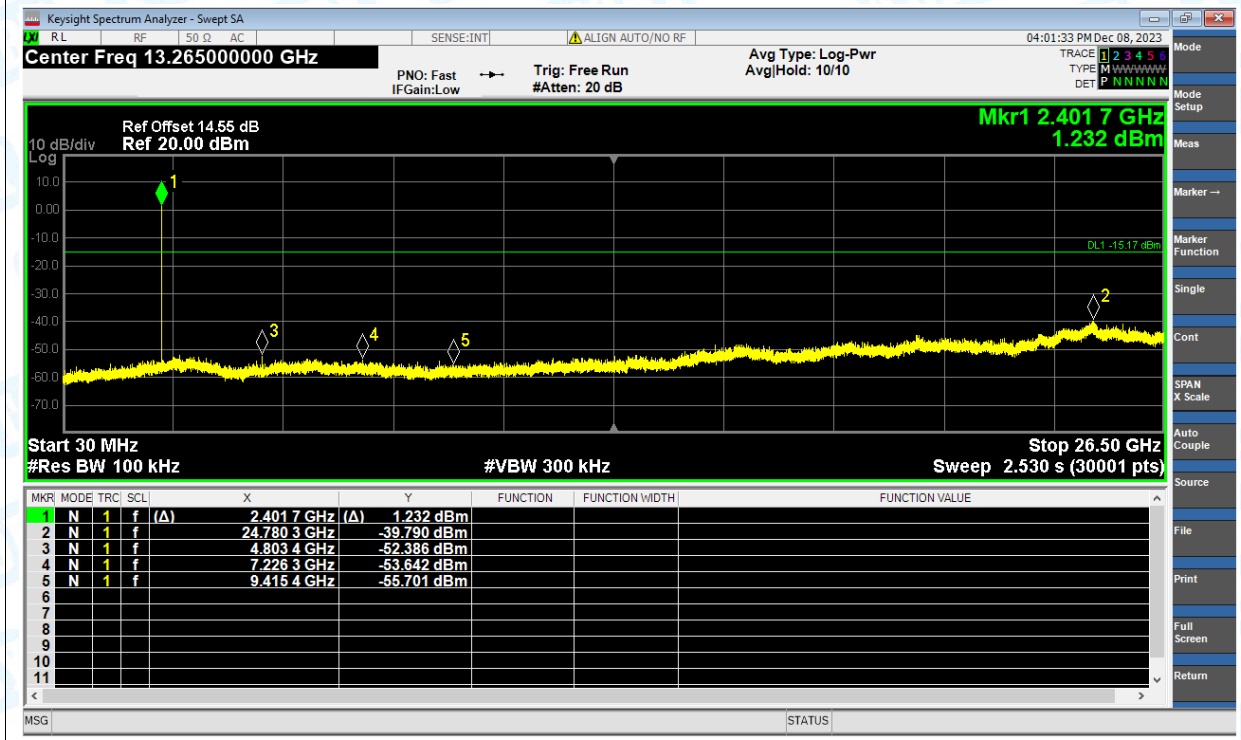
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-44.62	-20	Pass
NVNT	1-DH1	2441	Ant1	-45.95	-20	Pass
NVNT	1-DH1	2480	Ant1	-47.96	-20	Pass
NVNT	2-DH1	2402	Ant1	-44.49	-20	Pass
NVNT	2-DH1	2441	Ant1	-44.87	-20	Pass
NVNT	2-DH1	2480	Ant1	-46.14	-20	Pass
NVNT	3-DH1	2402	Ant1	-44.52	-20	Pass
NVNT	3-DH1	2441	Ant1	-44.78	-20	Pass
NVNT	3-DH1	2480	Ant1	-47.12	-20	Pass

Test Graphs

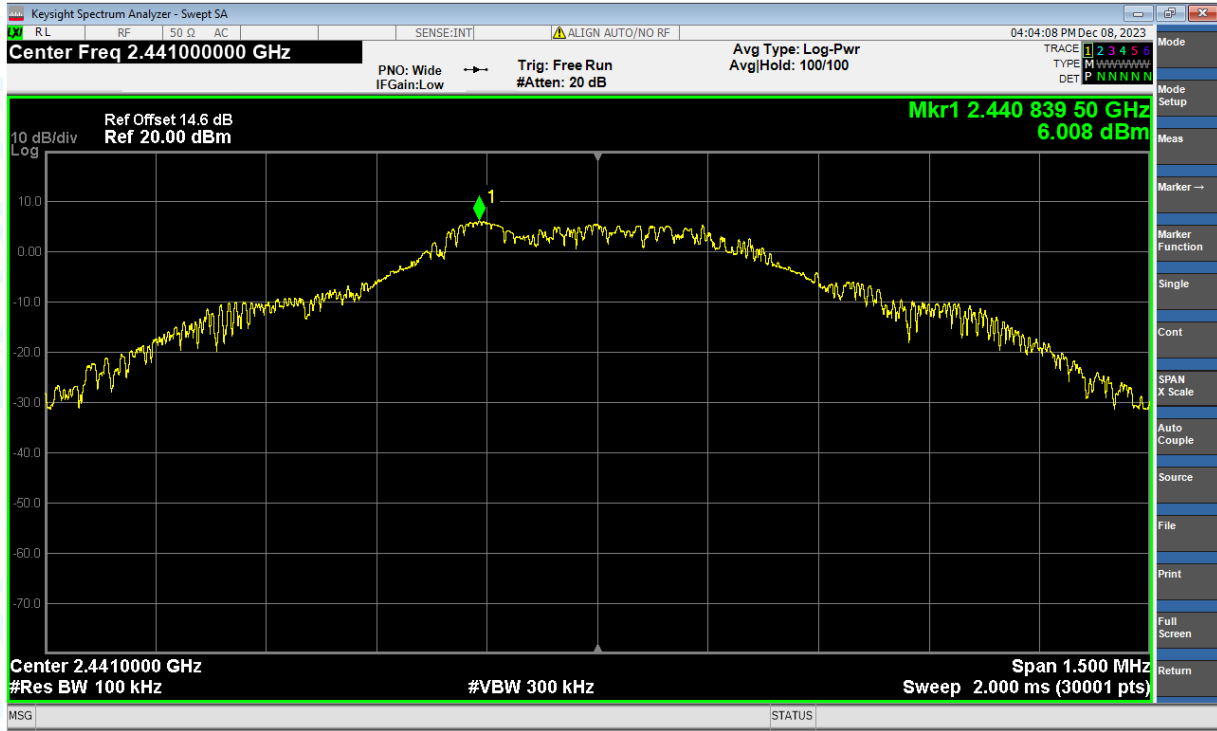
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



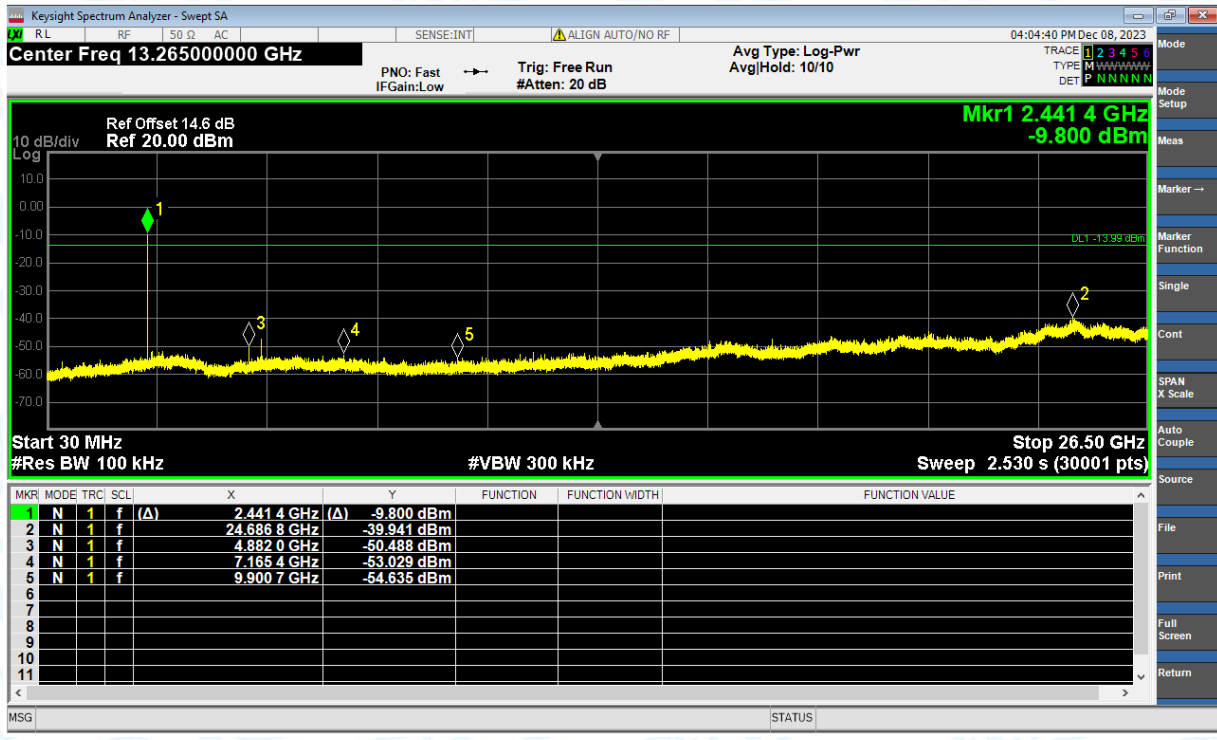
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



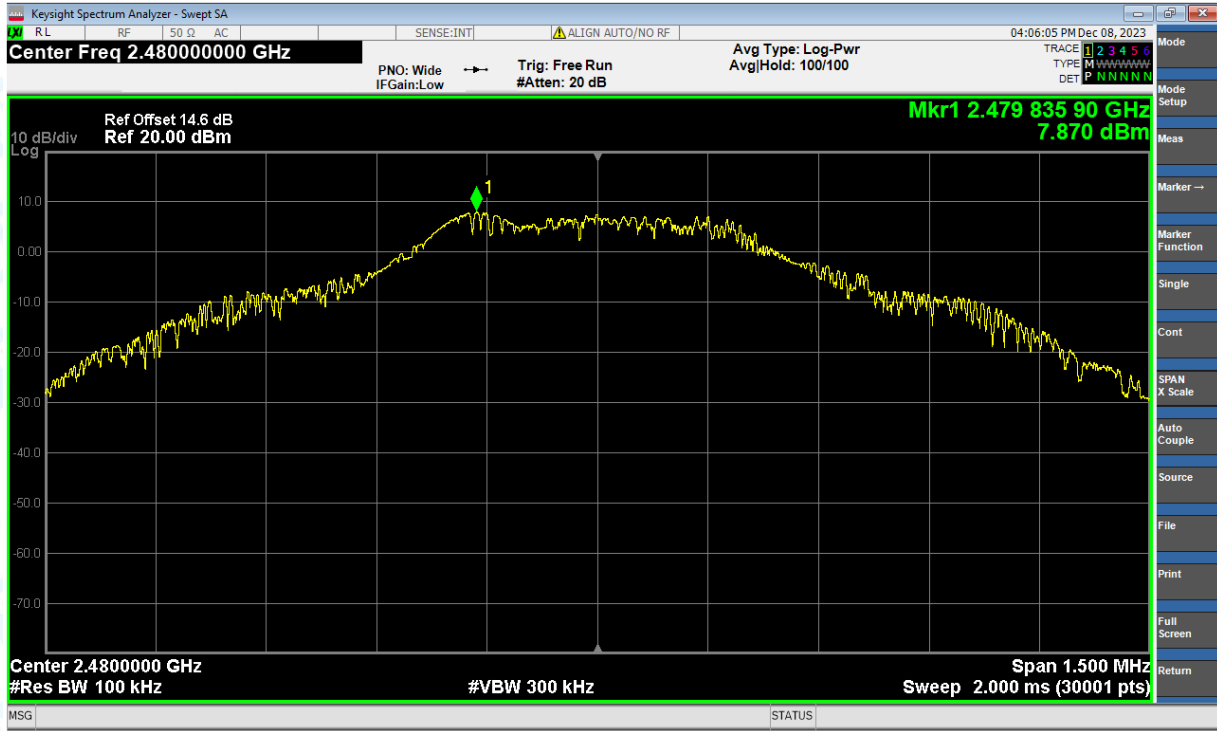
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



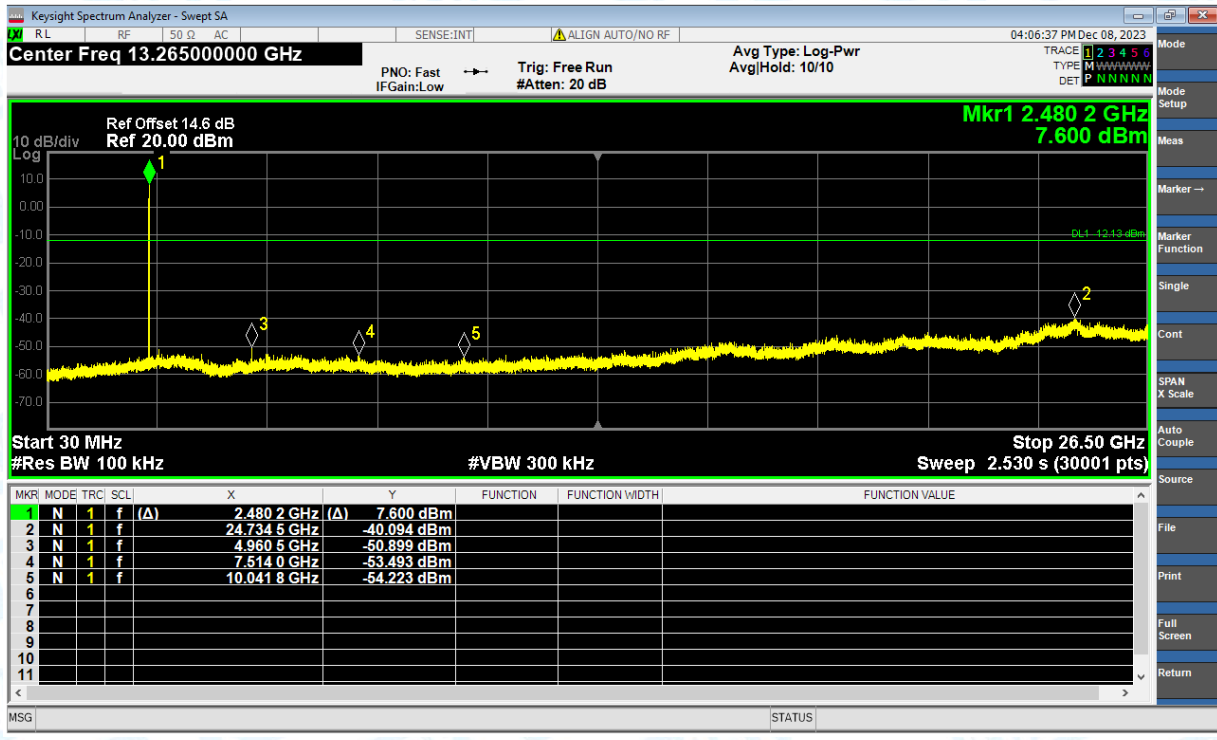
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



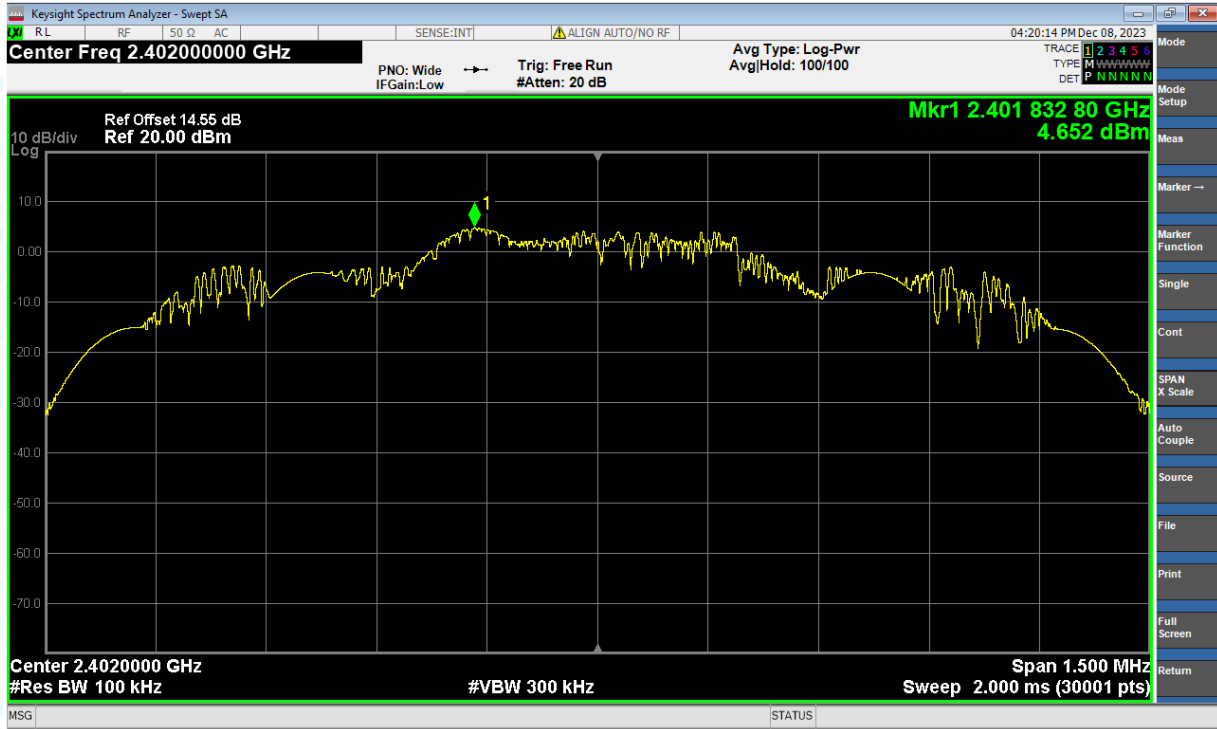
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission

