

RF Test Data for Bluetooth (Conducted Measurements)

General Description of EUT	
Product Name:	Smart Watch
Test Model:	ColorFit Pro 6
Sample ID:	HC-C-202411-0262-01-01
Environmental Conditions	
Temperature:	25.6℃
Relative Humidity:	49.2%
Test Voltage:	DC 3.8V
Test Engineer:	Rick.Chen
Note: For a more detailed features description, please refer to the report TBR-C-202411-0262-71 The report only show the worst case data.	

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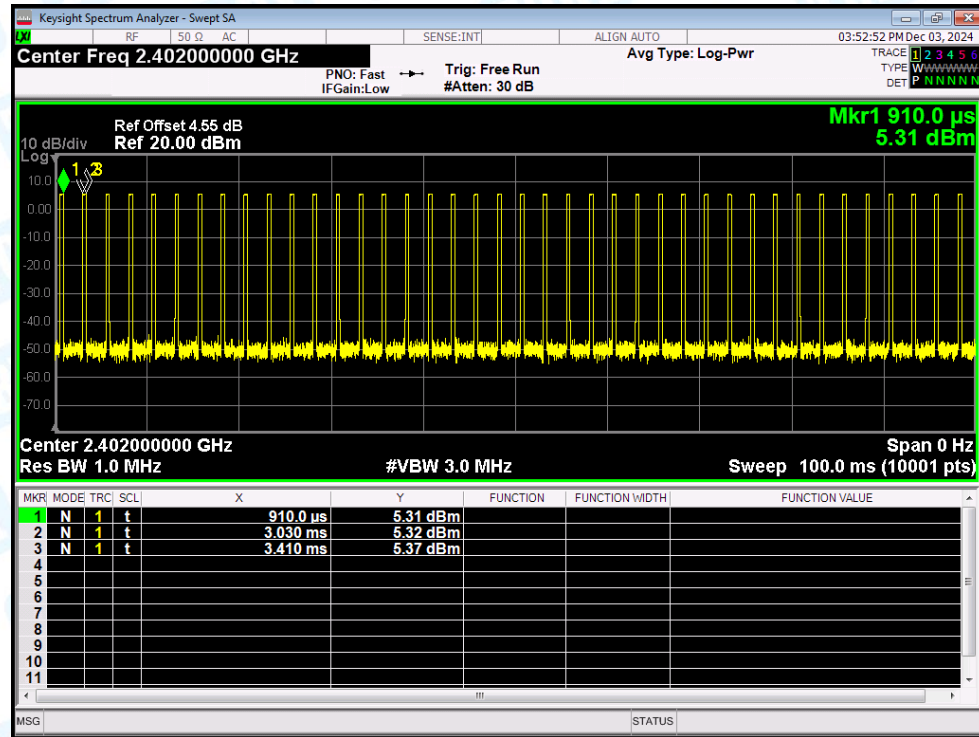
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1. Duty Cycle

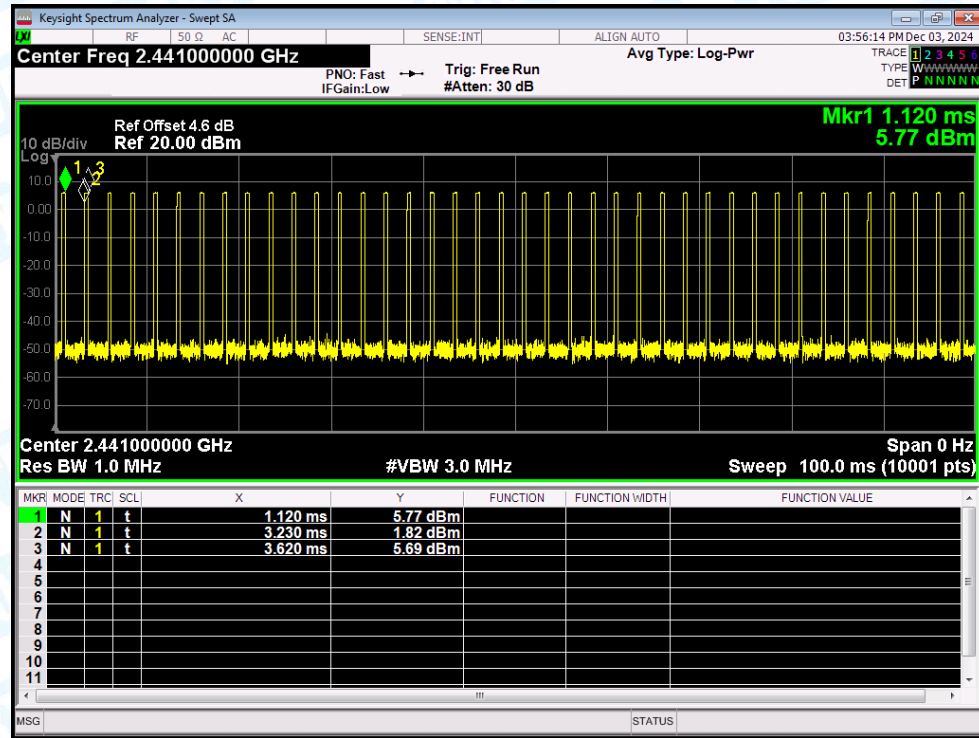
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	1-DH1	2402	Ant1	15.2	8.18	2.63
NVNT	1-DH1	2441	Ant1	15.6	8.07	2.56
NVNT	1-DH1	2480	Ant1	15.6	8.07	2.56
NVNT	2-DH1	2402	Ant1	15.6	8.07	2.56
NVNT	2-DH1	2441	Ant1	16	7.96	2.5
NVNT	2-DH1	2480	Ant1	16	7.96	2.5
NVNT	3-DH1	2402	Ant1	16	7.96	2.5
NVNT	3-DH1	2441	Ant1	15.6	8.07	2.56
NVNT	3-DH1	2480	Ant1	16	7.96	2.5

Test Graphs

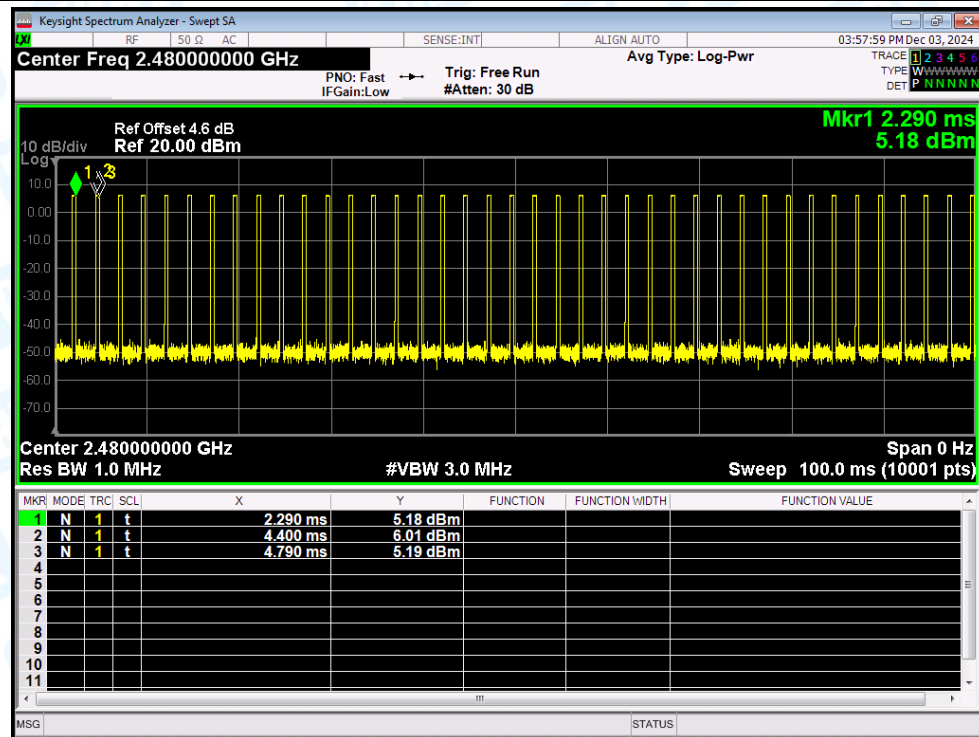
Duty Cycle NVNT 1-DH1 2402MHz Ant1



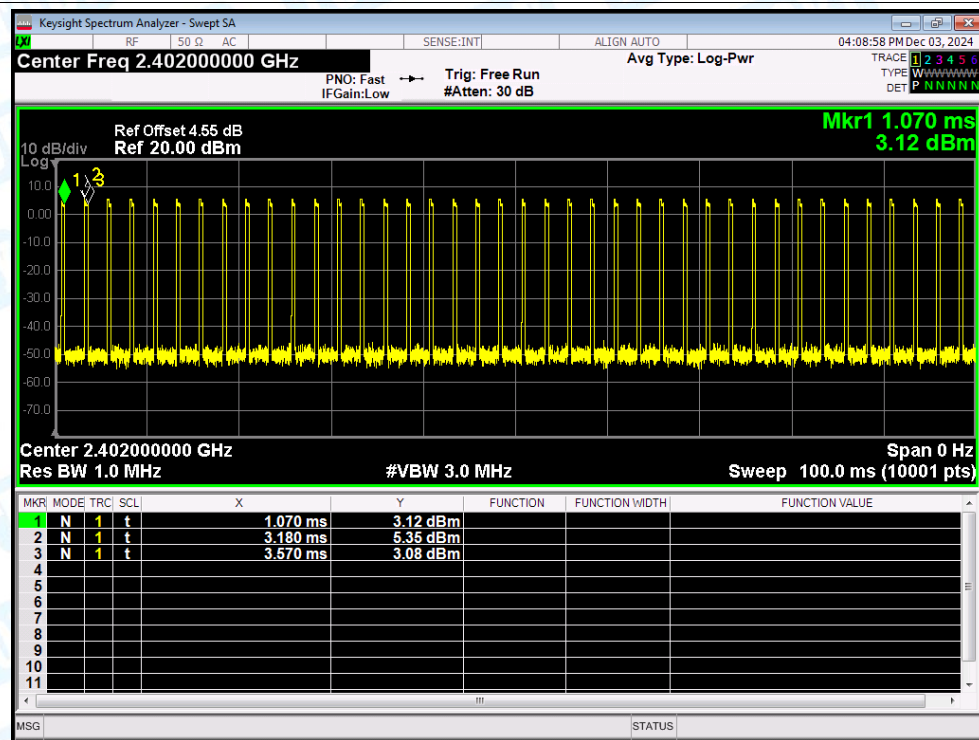
Duty Cycle NVNT 1-DH1 2441MHz Ant1



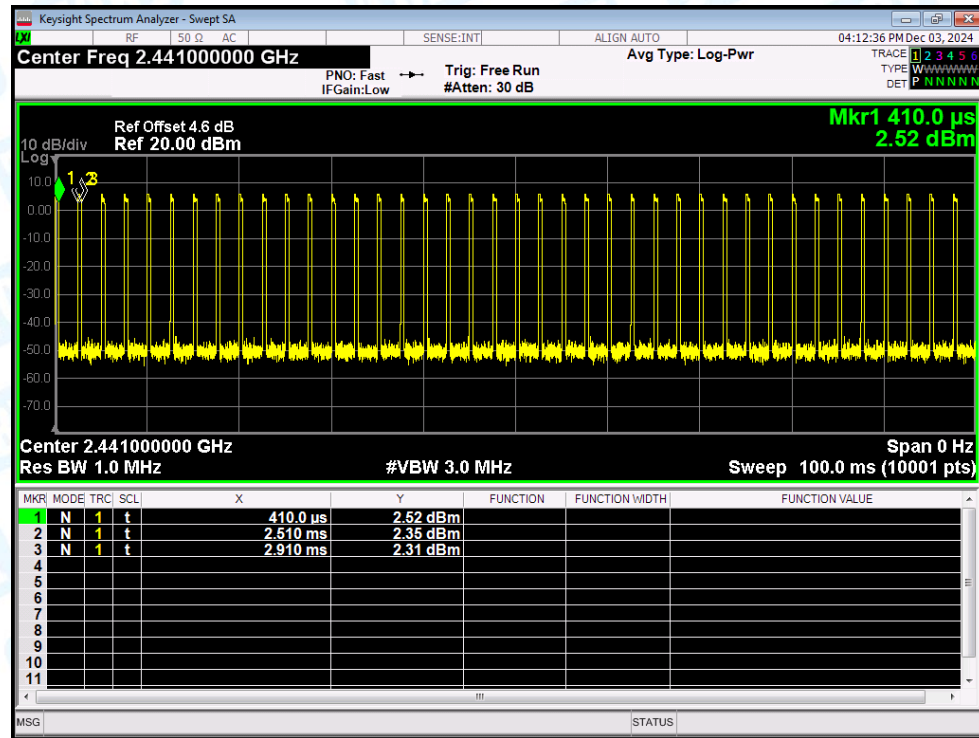
Duty Cycle NVNT 1-DH1 2480MHz Ant1



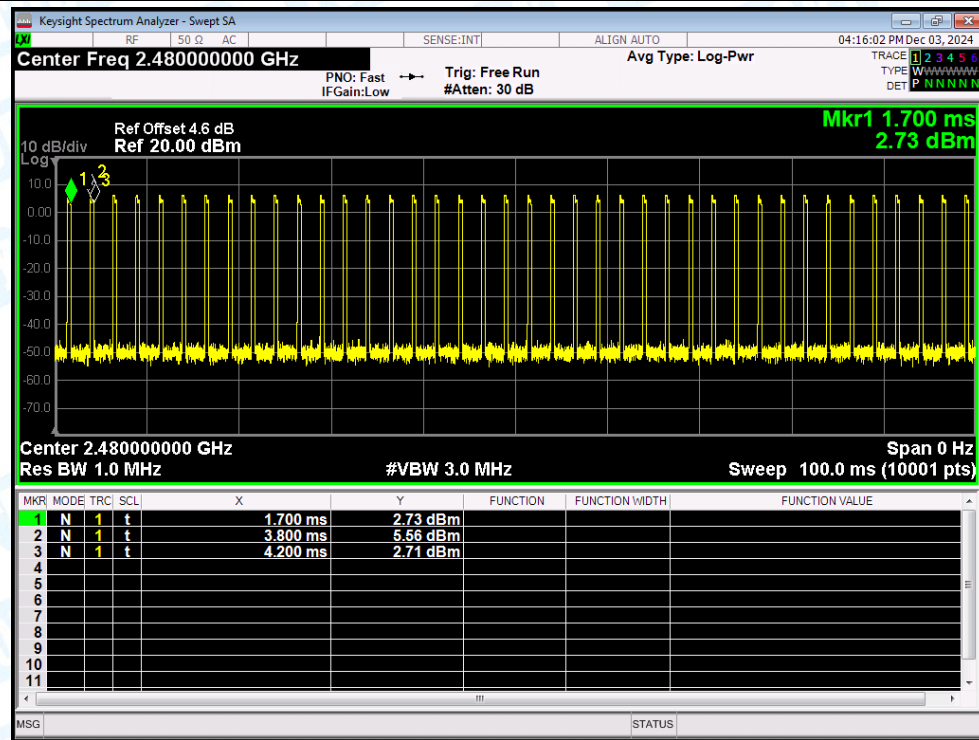
Duty Cycle NVNT 2-DH1 2402MHz Ant1



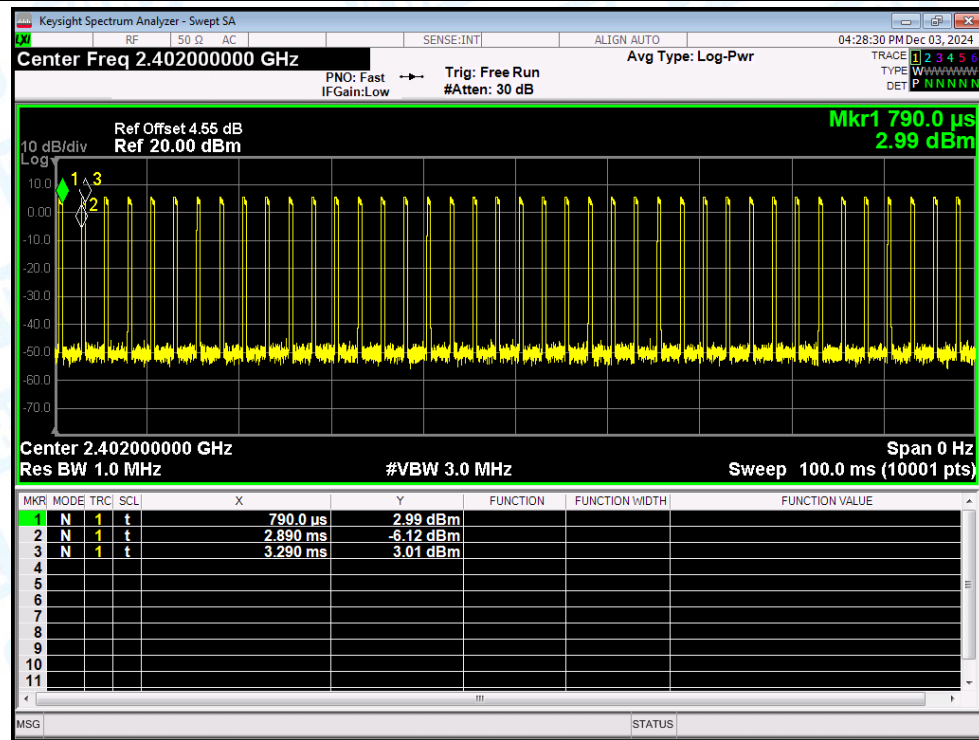
Duty Cycle NVNT 2-DH1 2441MHz Ant1



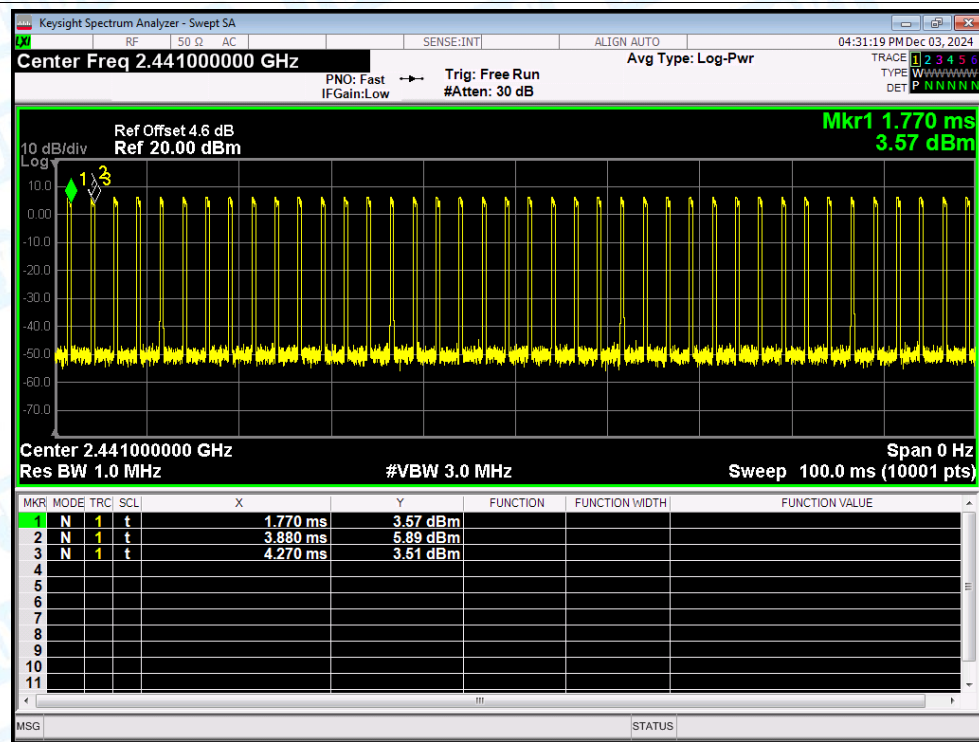
Duty Cycle NVNT 2-DH1 2480MHz Ant1

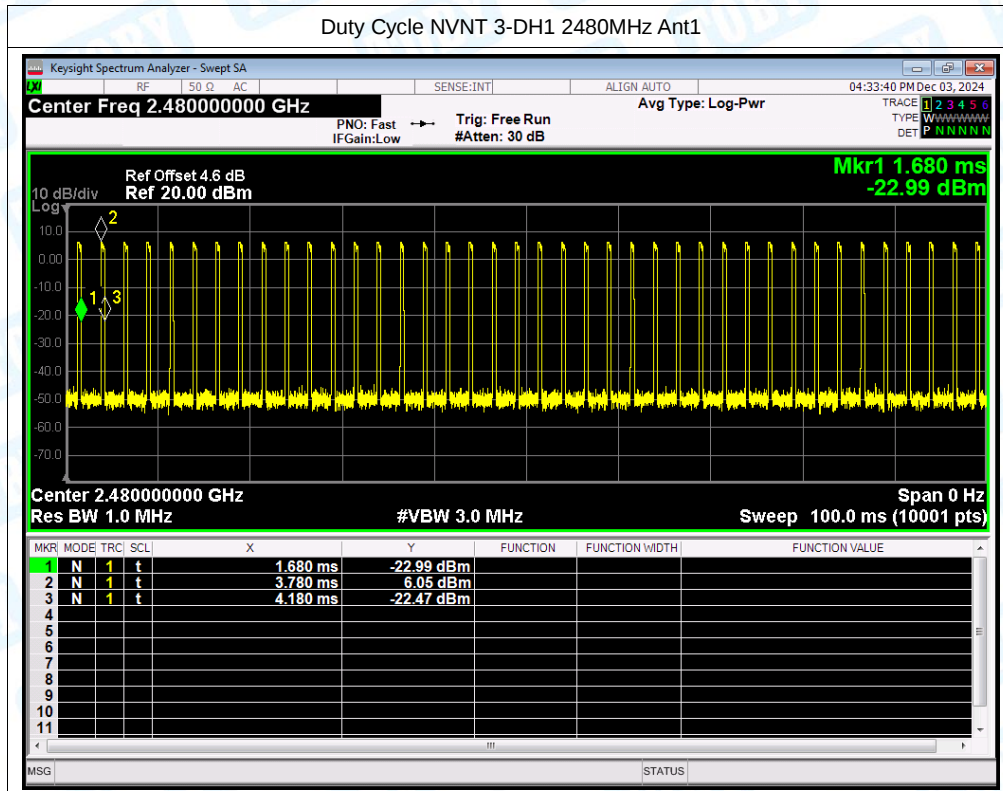


Duty Cycle NVNT 3-DH1 2402MHz Ant1



Duty Cycle NVNT 3-DH1 2441MHz Ant1



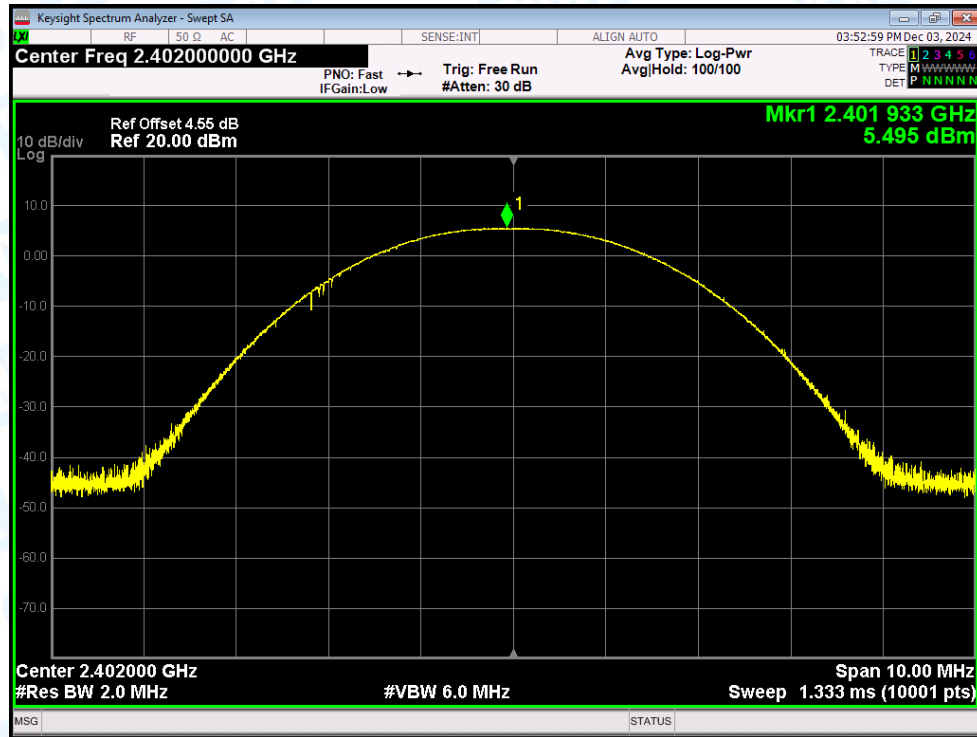


2. Maximum Conducted Output Power

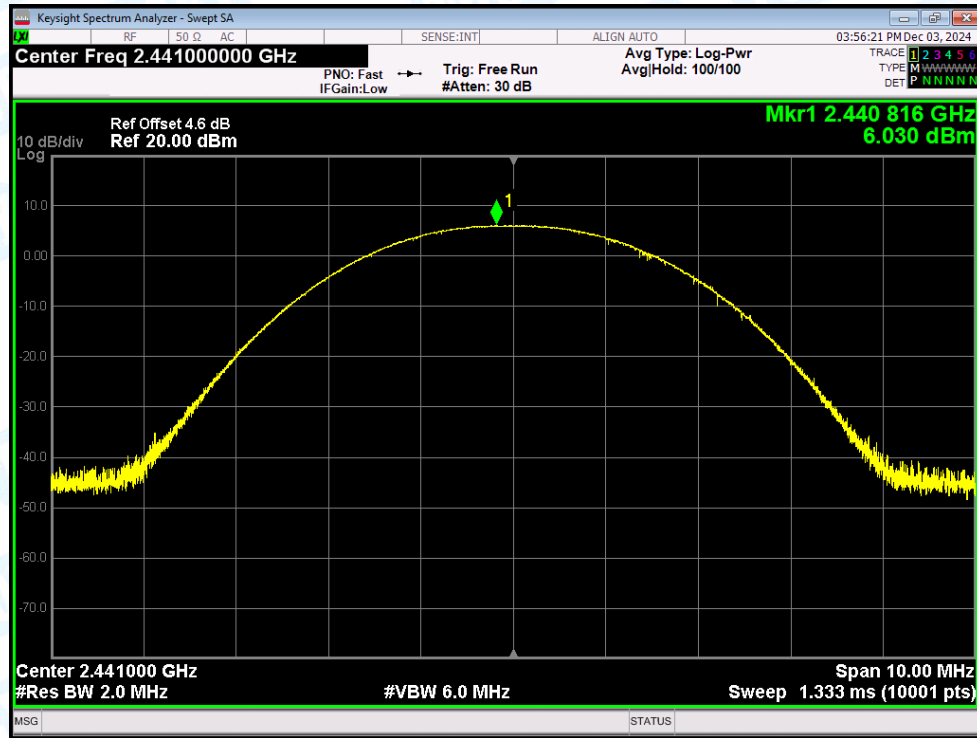
Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH1	2402	Ant1	5.495	21	Pass
NVNT	1-DH1	2441	Ant1	6.03	21	Pass
NVNT	1-DH1	2480	Ant1	6.213	21	Pass
NVNT	2-DH1	2402	Ant1	5.52	21	Pass
NVNT	2-DH1	2441	Ant1	5.918	21	Pass
NVNT	2-DH1	2480	Ant1	6.157	21	Pass
NVNT	3-DH1	2402	Ant1	5.567	21	Pass
NVNT	3-DH1	2441	Ant1	6.107	21	Pass
NVNT	3-DH1	2480	Ant1	6.253	21	Pass

Test Graphs

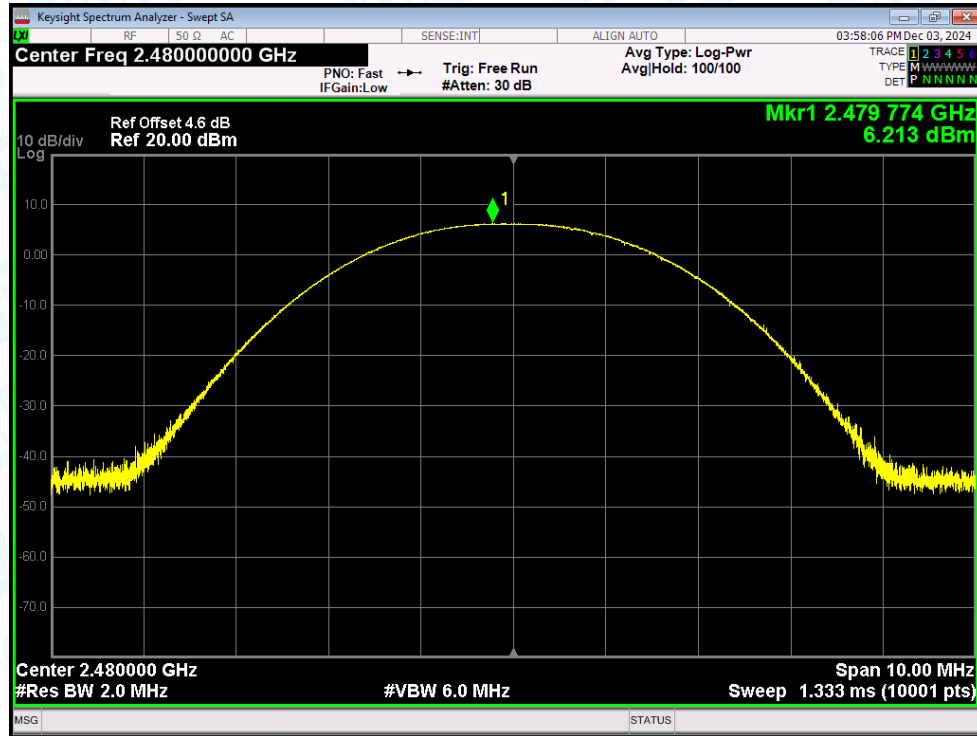
Power NVNT 1-DH1 2402MHz Ant1



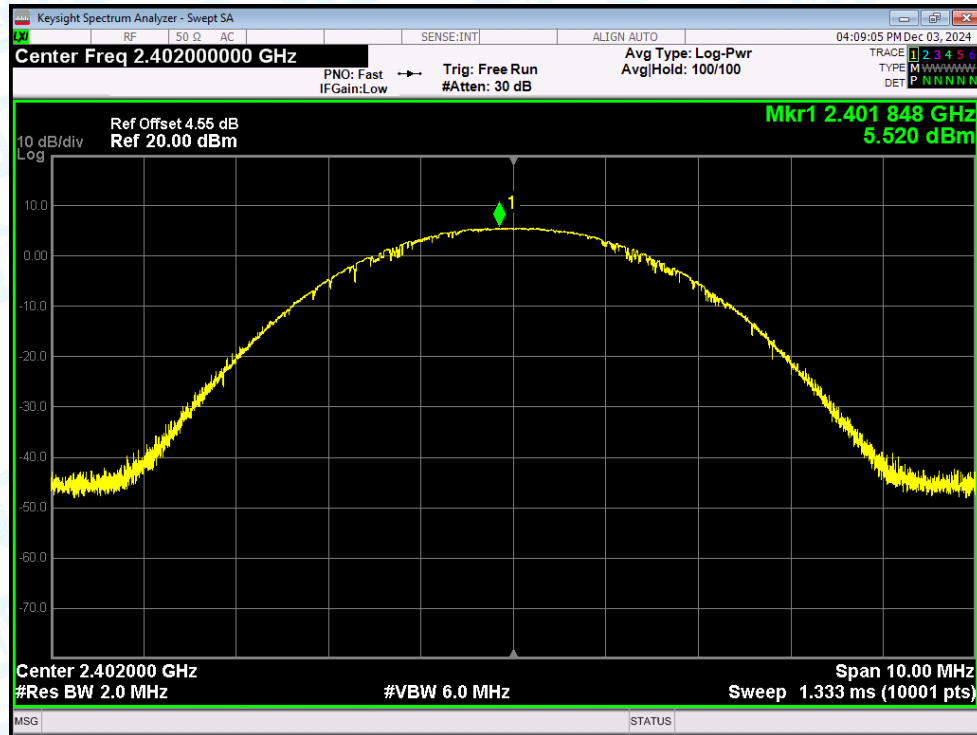
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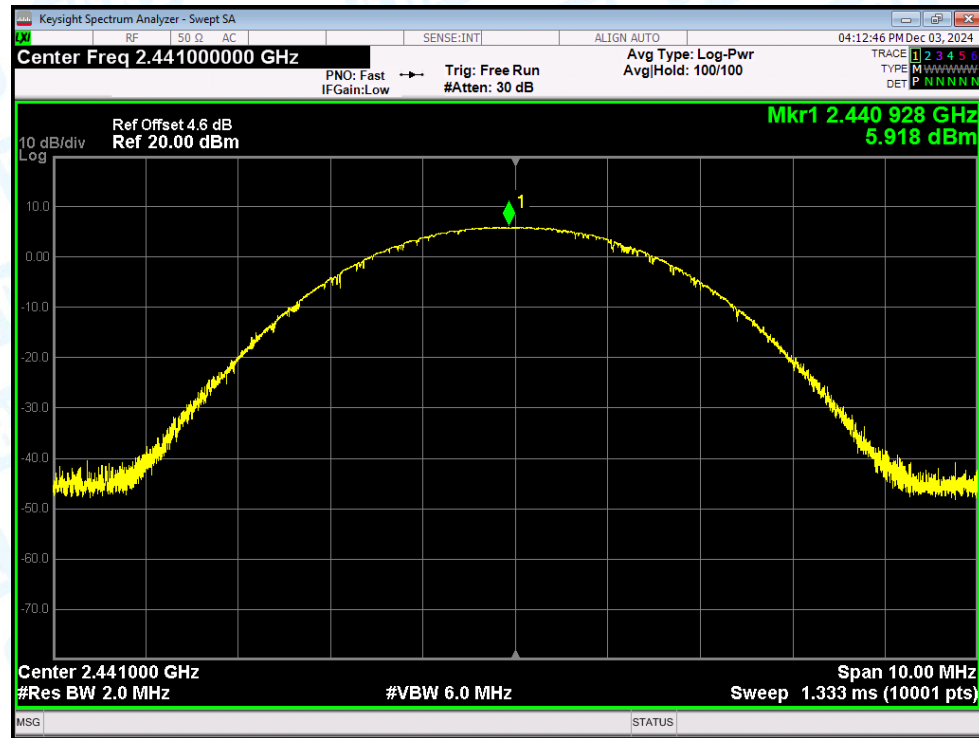
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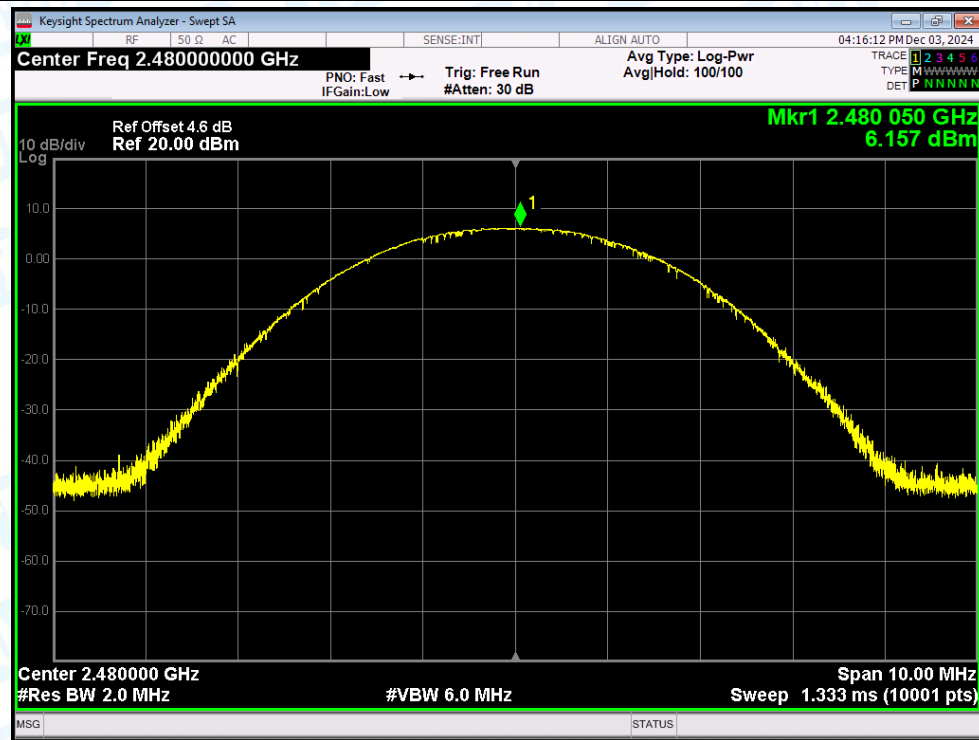
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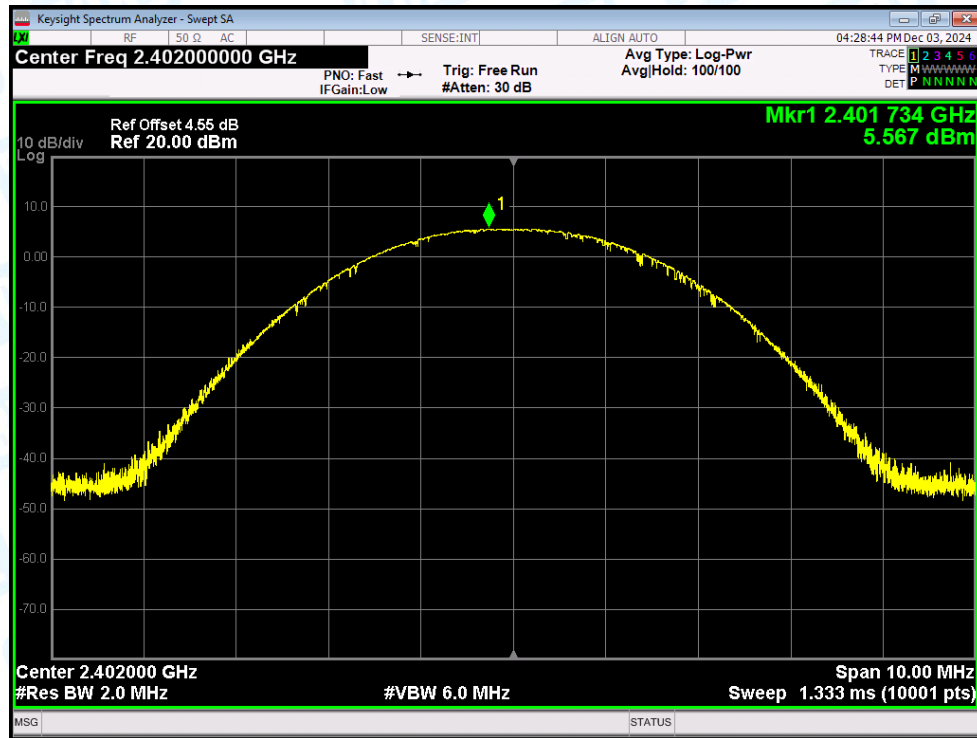
Power NVNT 2-DH1 2441MHz Ant1



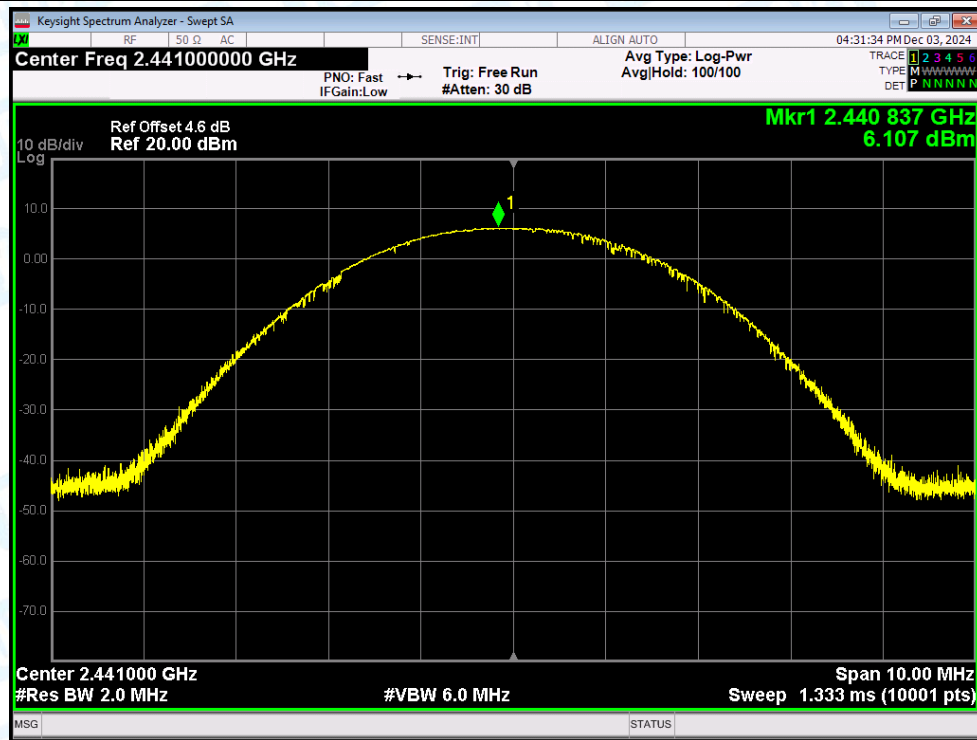
Power NVNT 2-DH1 2480MHz Ant1

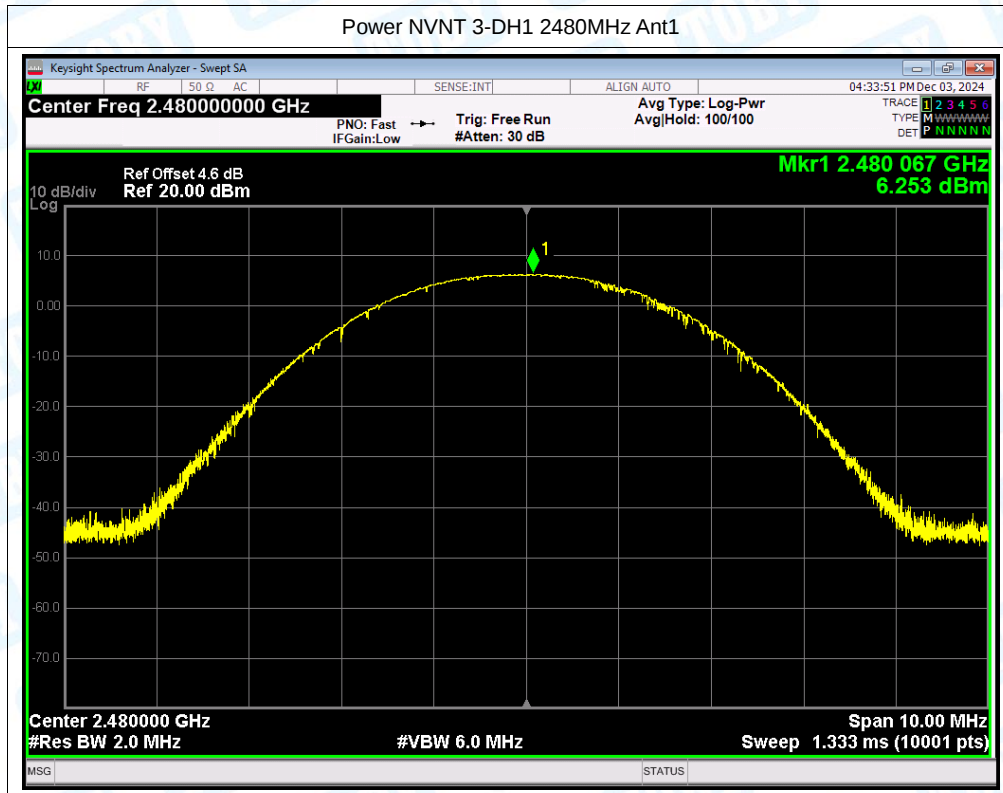


Power NVNT 3-DH1 2402MHz Ant1



Power NVNT 3-DH1 2441MHz Ant1



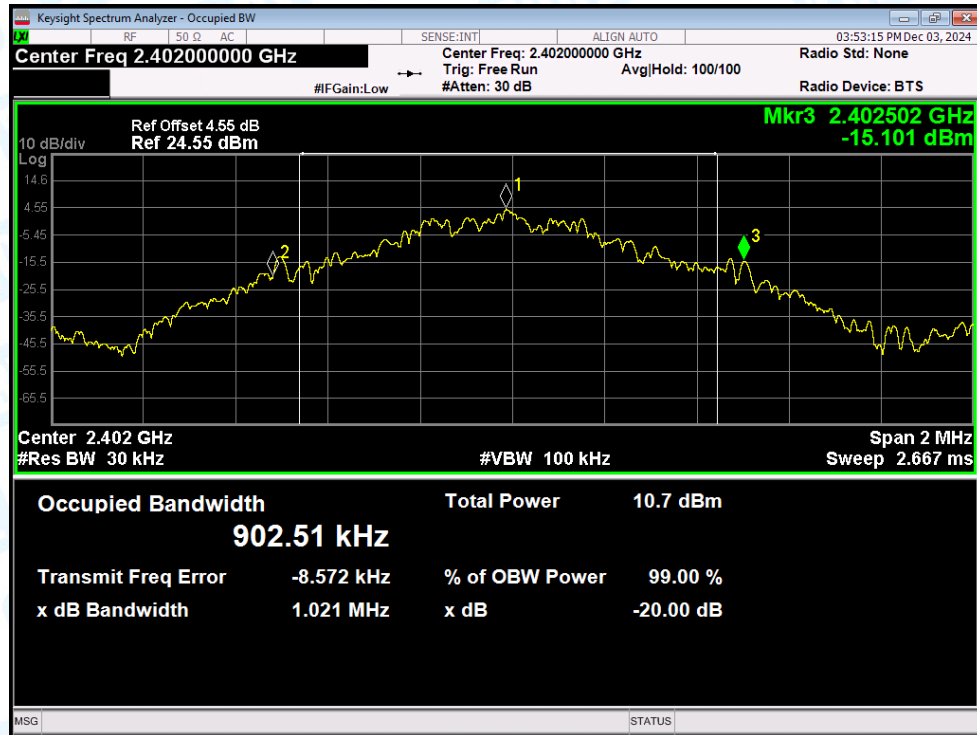


3. -20dB Bandwidth

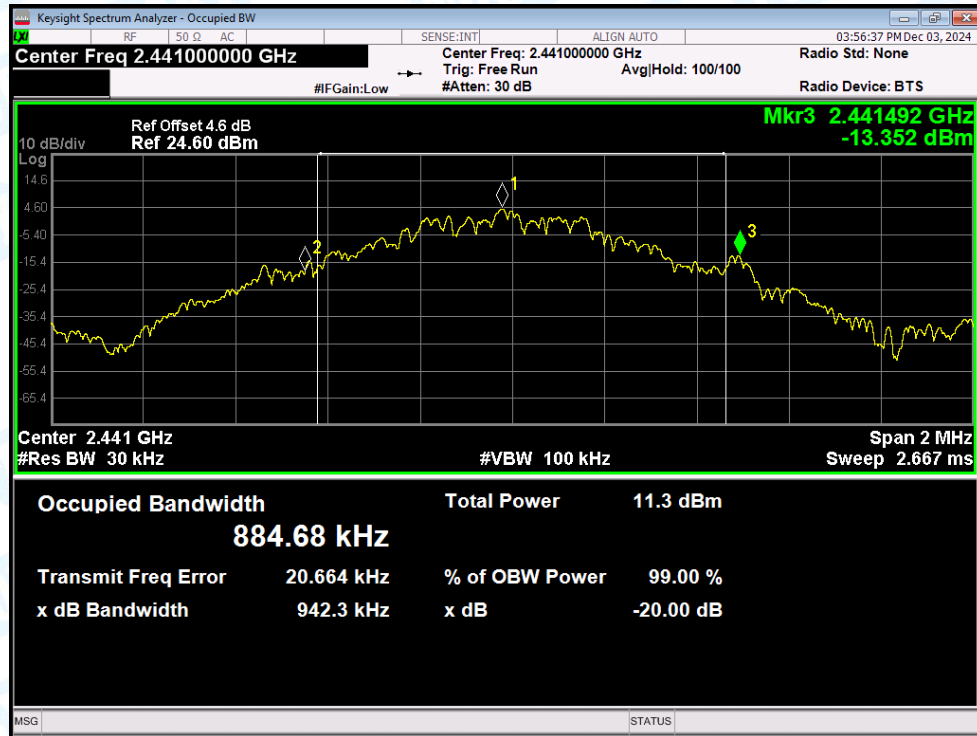
Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH1	2402	Ant1	1.02	0	Pass
NVNT	1-DH1	2441	Ant1	0.94	0	Pass
NVNT	1-DH1	2480	Ant1	1.01	0	Pass
NVNT	2-DH1	2402	Ant1	1.18	0	Pass
NVNT	2-DH1	2441	Ant1	1.17	0	Pass
NVNT	2-DH1	2480	Ant1	1.17	0	Pass
NVNT	3-DH1	2402	Ant1	1.14	0	Pass
NVNT	3-DH1	2441	Ant1	1.18	0	Pass
NVNT	3-DH1	2480	Ant1	1.17	0	Pass

Test Graphs

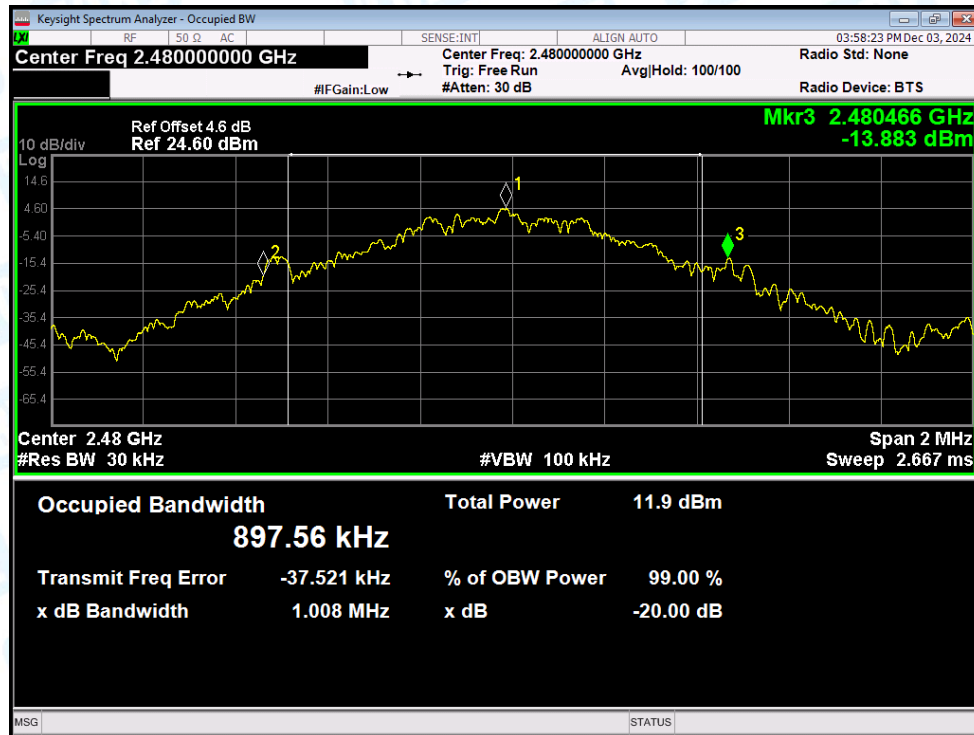
-20dB Bandwidth NVNT 1-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 1-DH1 2441MHz Ant1



-20dB Bandwidth NVNT 1-DH1 2480MHz Ant1



-20dB Bandwidth NVNT 2-DH1 2402MHz Ant1



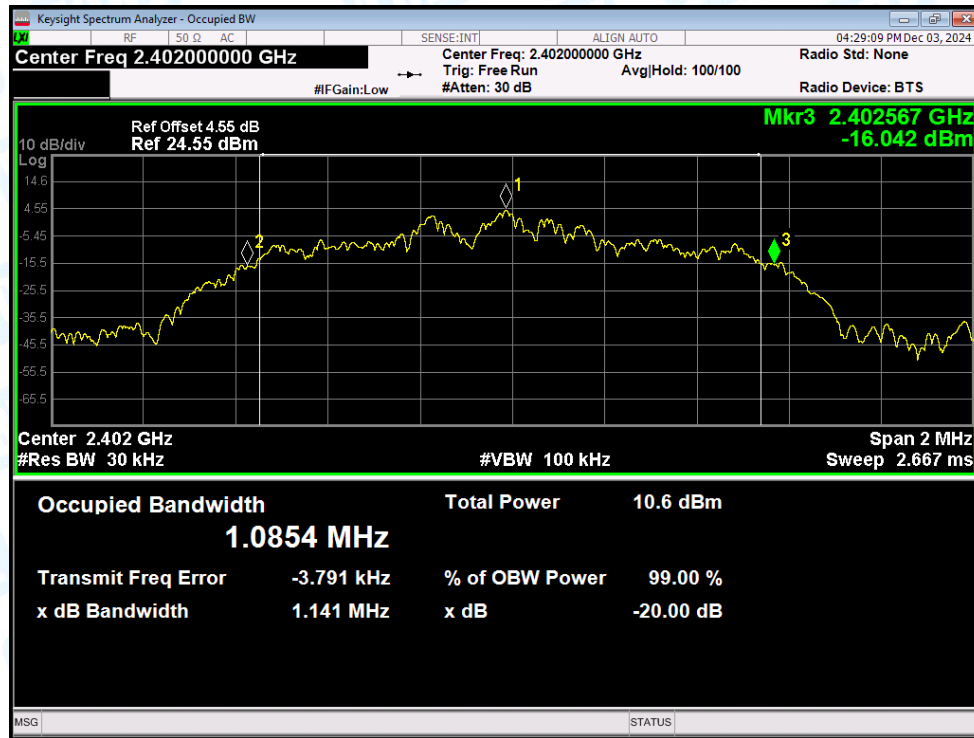
-20dB Bandwidth NVNT 2-DH1 2441MHz Ant1



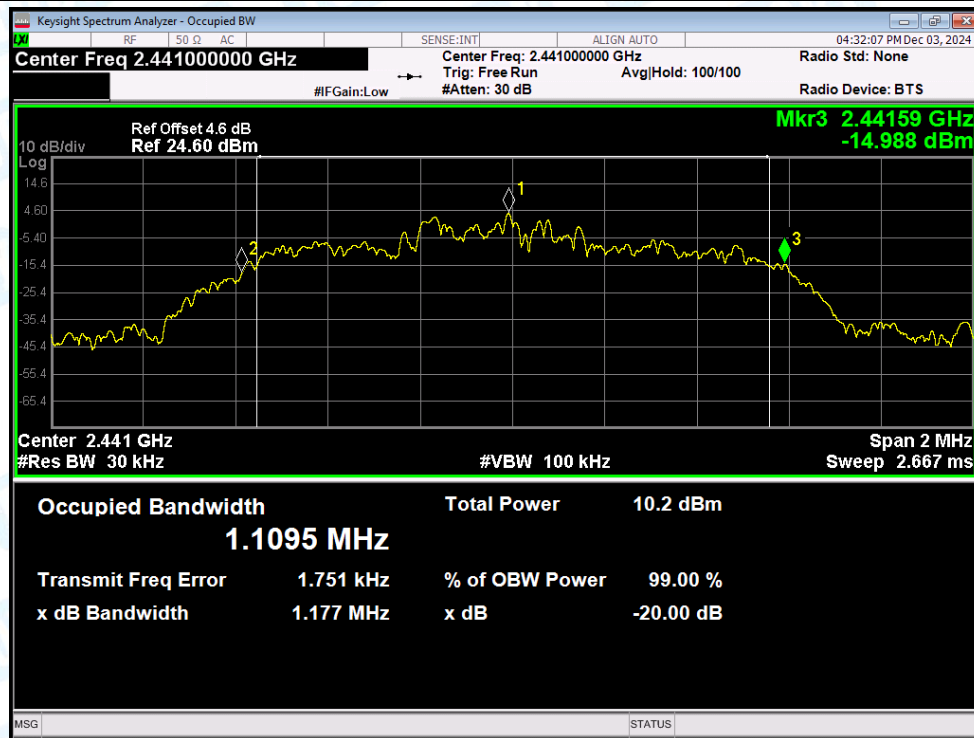
-20dB Bandwidth NVNT 2-DH1 2480MHz Ant1

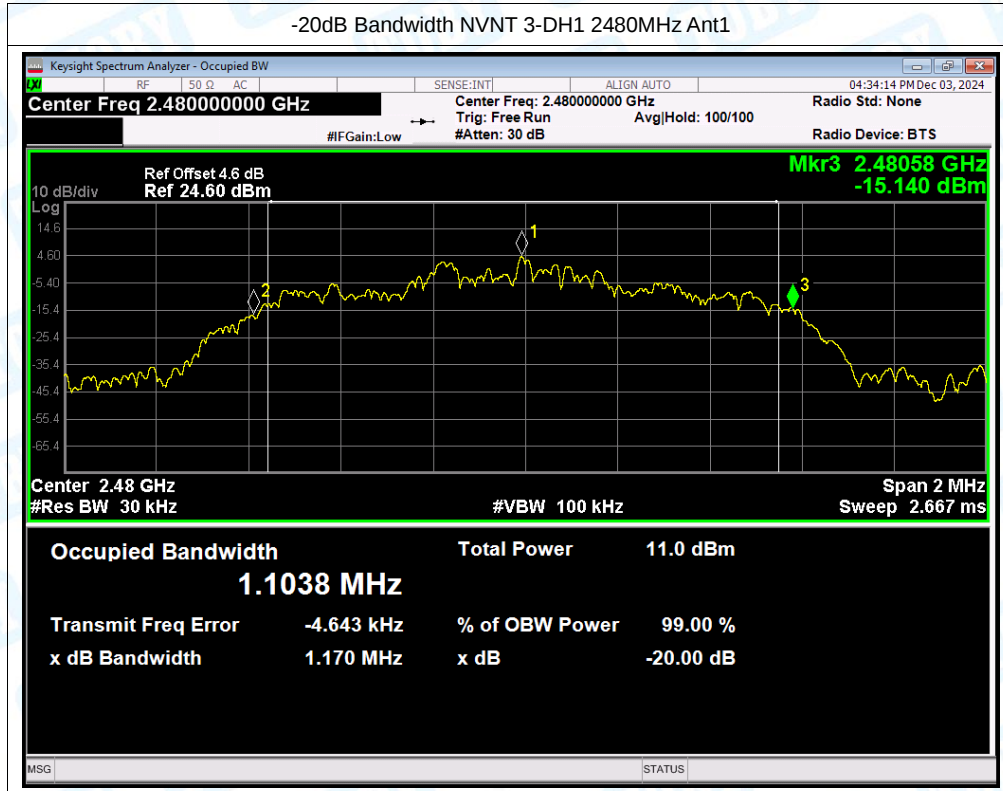


-20dB Bandwidth NVNT 3-DH1 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH1 2441MHz Ant1



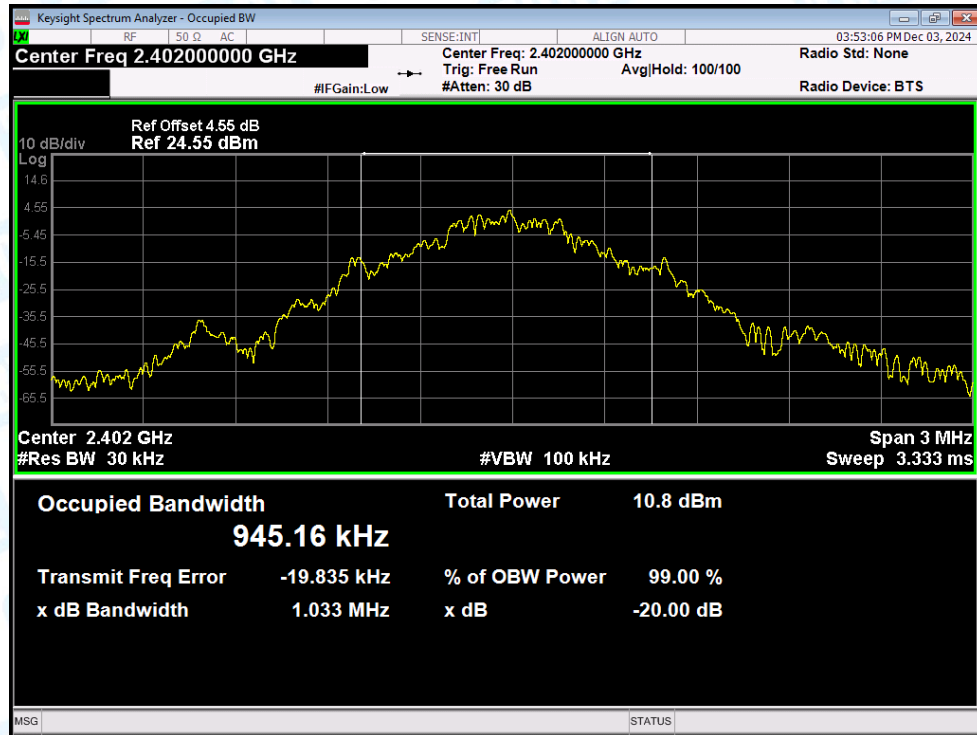


4. Occupied Channel Bandwidth

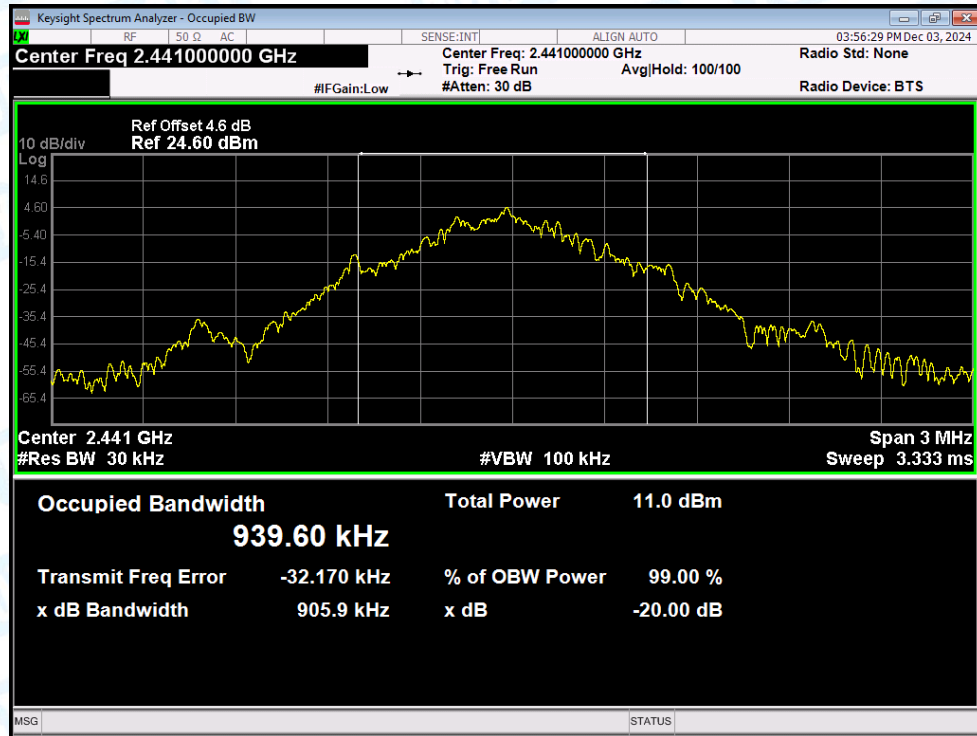
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH1	2402	Ant1	0.945
NVNT	1-DH1	2441	Ant1	0.94
NVNT	1-DH1	2480	Ant1	0.878
NVNT	2-DH1	2402	Ant1	1.11
NVNT	2-DH1	2441	Ant1	1.137
NVNT	2-DH1	2480	Ant1	1.105
NVNT	3-DH1	2402	Ant1	1.097
NVNT	3-DH1	2441	Ant1	1.105
NVNT	3-DH1	2480	Ant1	1.105

Test Graphs

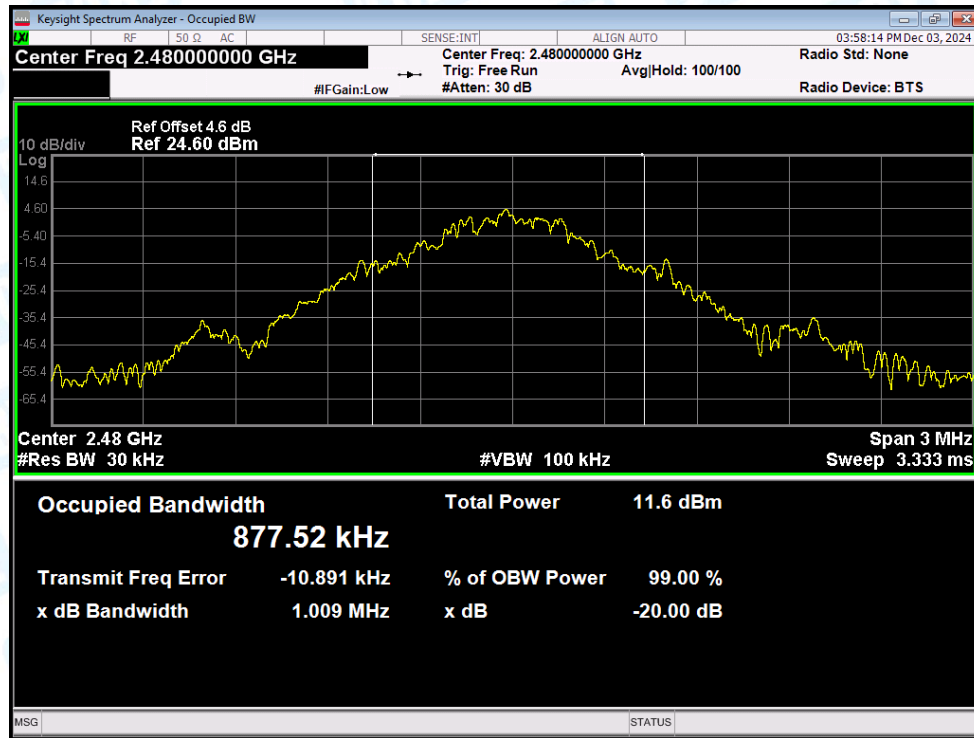
OBW NVNT 1-DH1 2402MHz Ant1



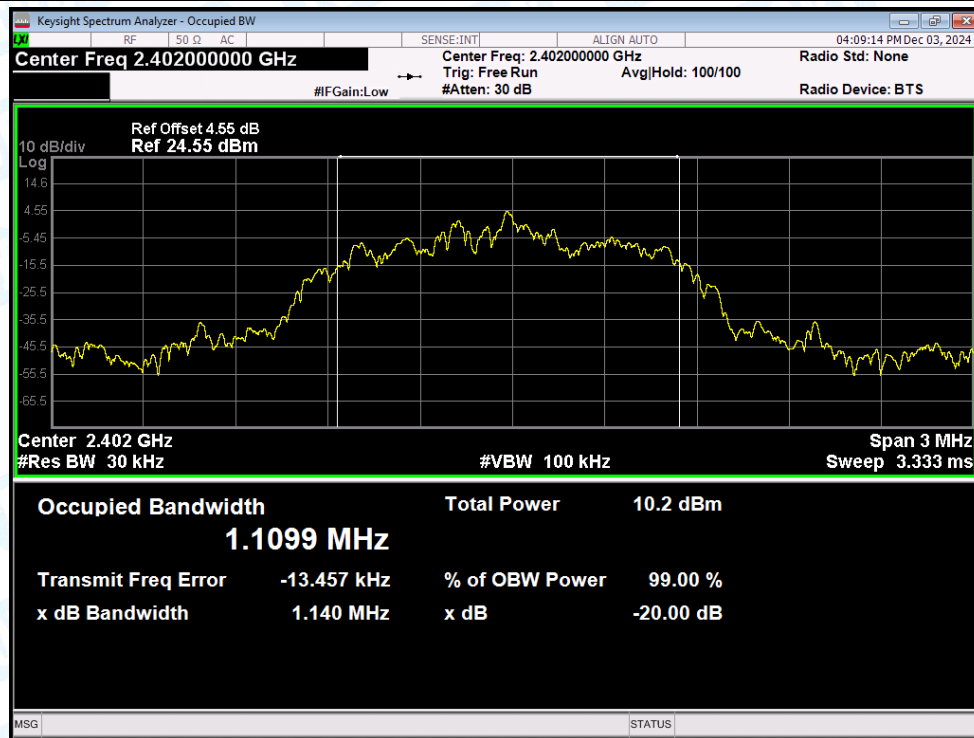
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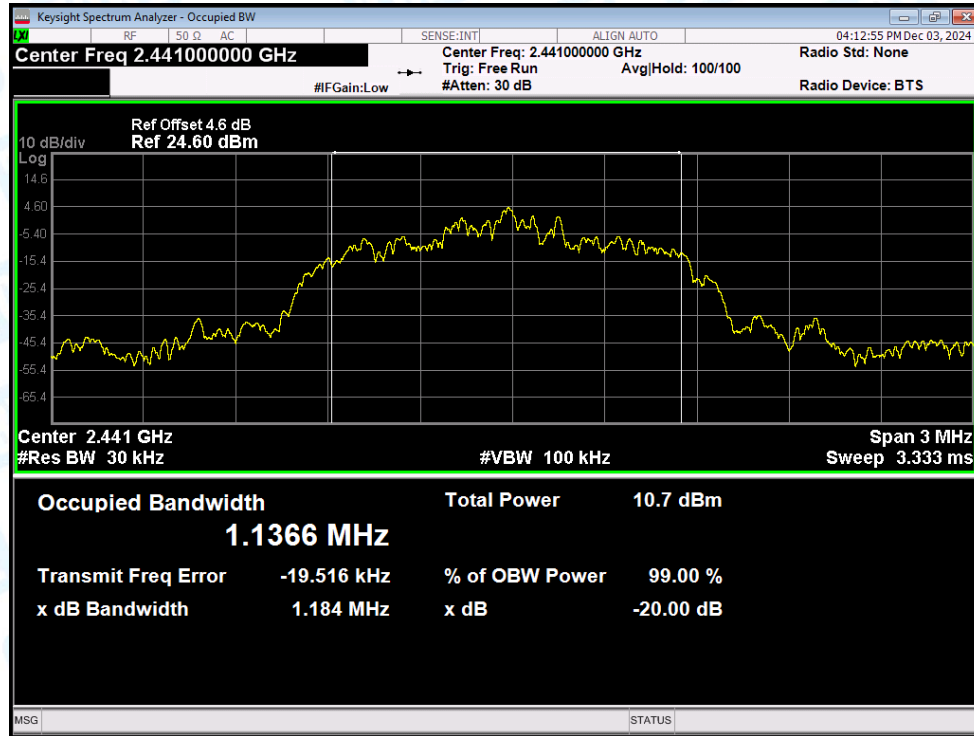
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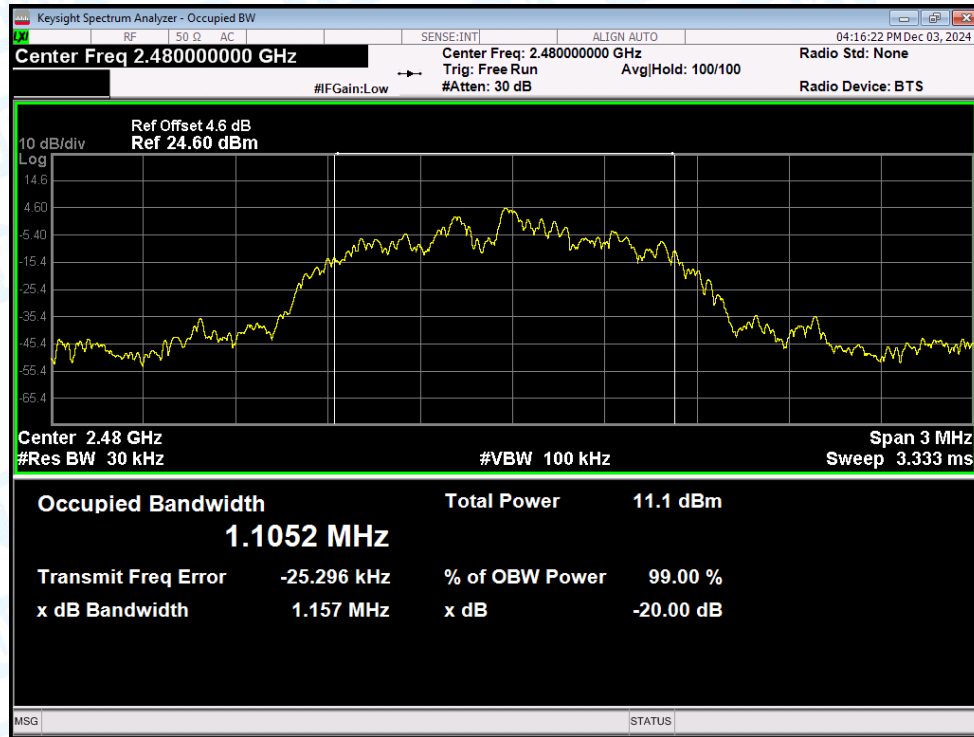
OBW NVNT 2-DH1 2402MHz Ant1



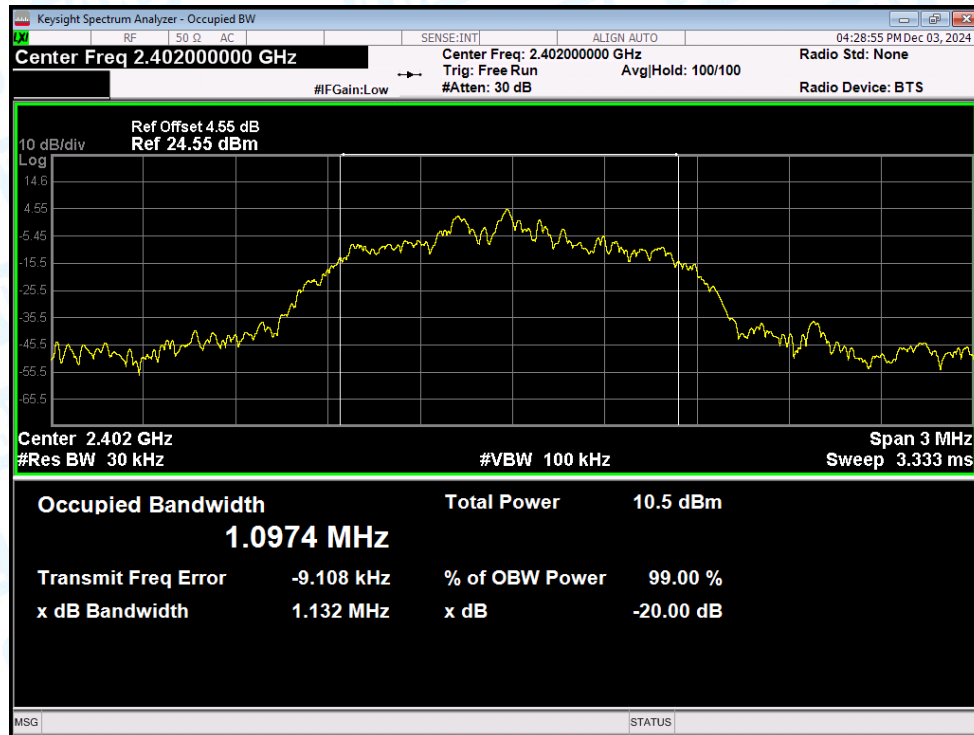
OBW NVNT 2-DH1 2441MHz Ant1



OBW NVNT 2-DH1 2480MHz Ant1

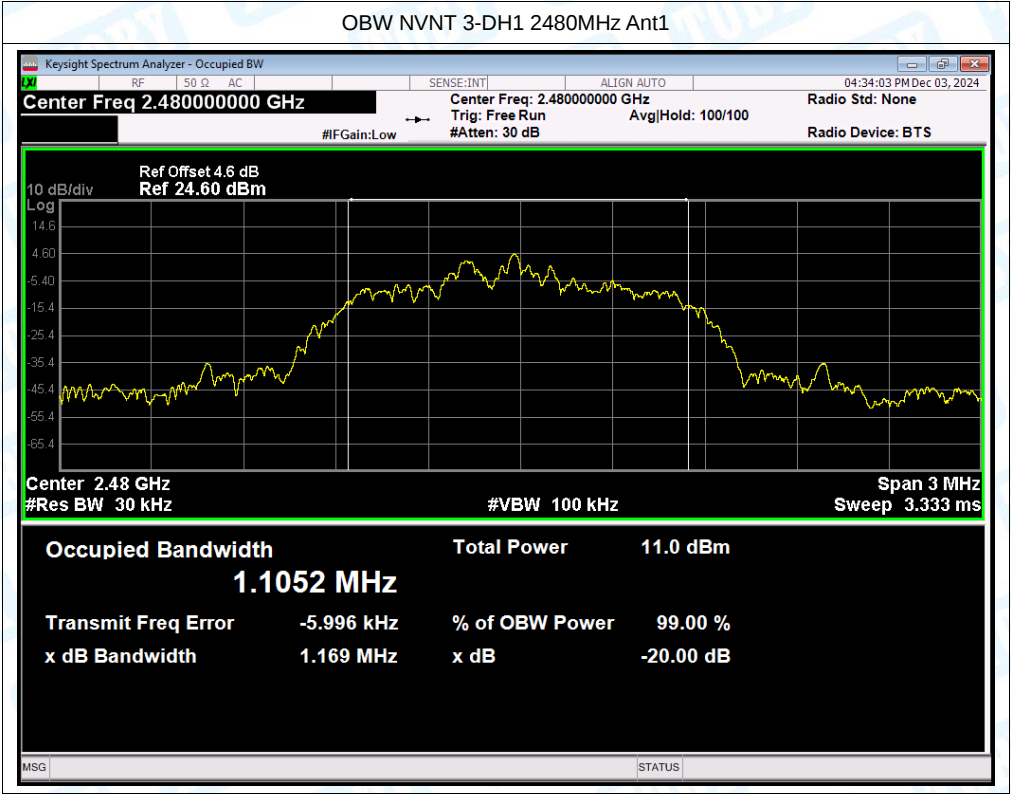


OBW NVNT 3-DH1 2402MHz Ant1



OBW NVNT 3-DH1 2441MHz Ant1



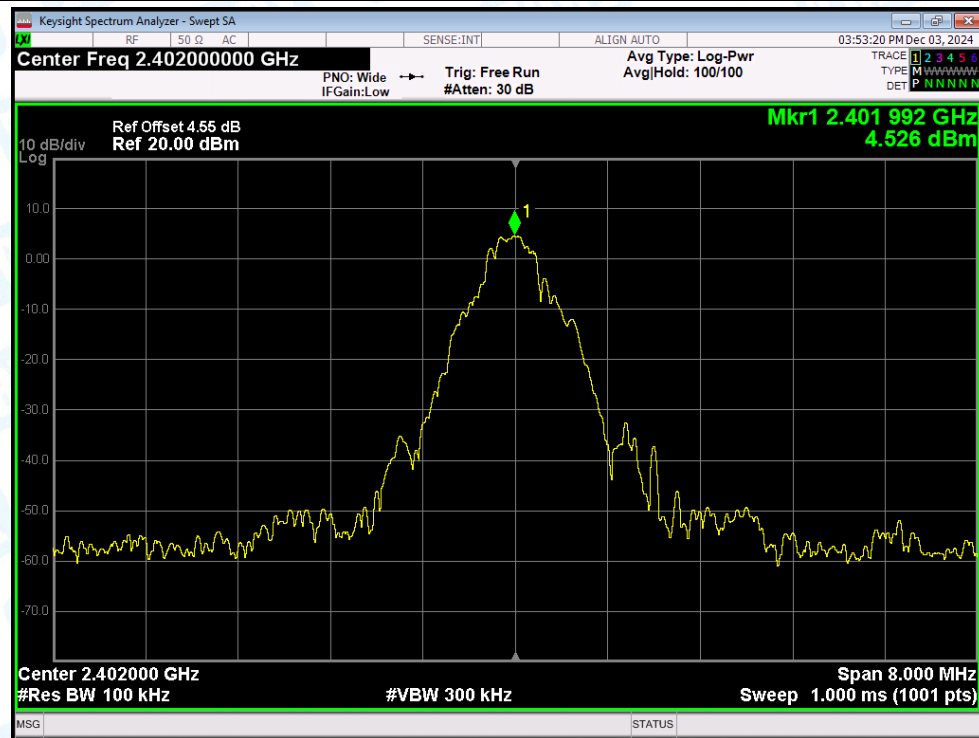


5. Band Edge

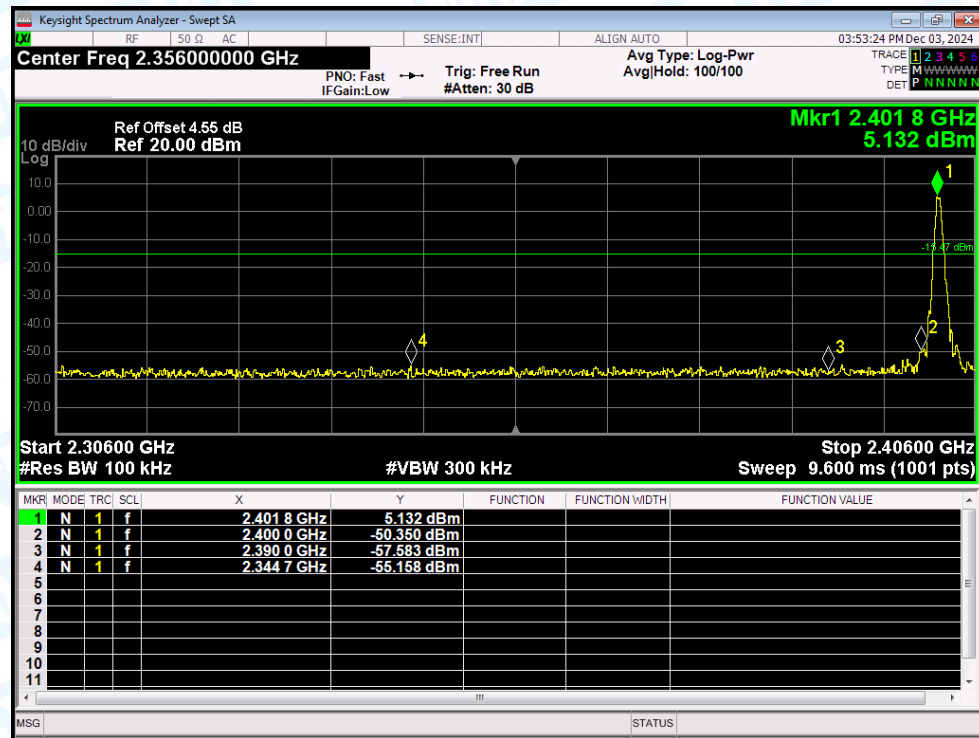
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	-59.69	-20	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	-60.23	-20	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	-60.19	-20	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	-58.68	-20	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	-59.65	-20	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	-60.68	-20	Pass

Test Graphs

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



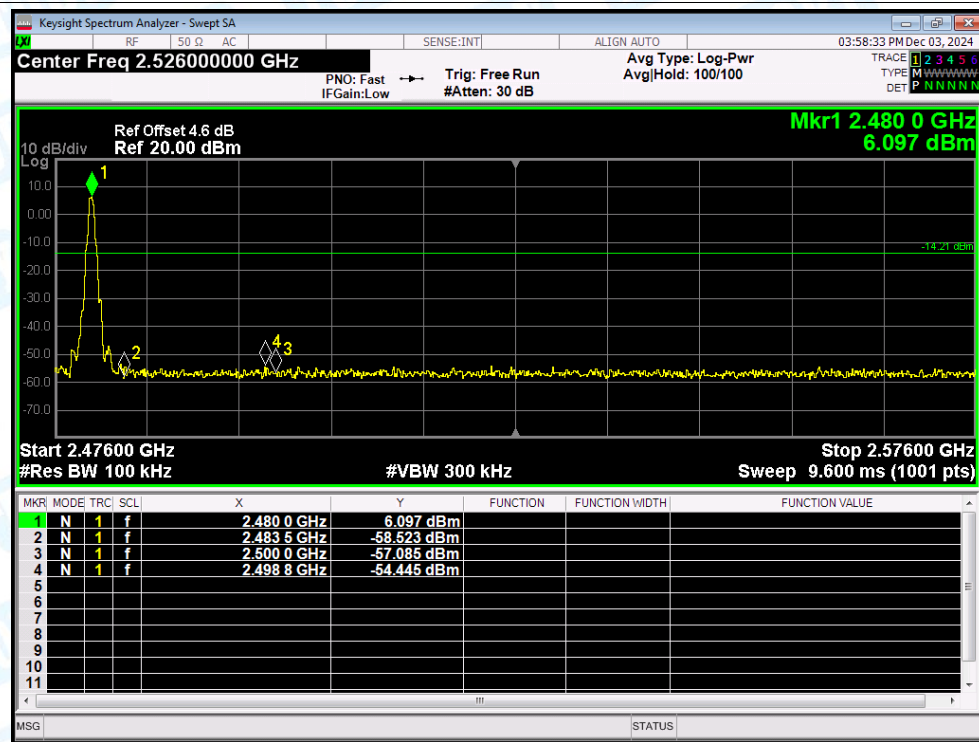
Band Edge NVNT 1-DH1 2402MHz Ant1 No-Hopping Emission



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



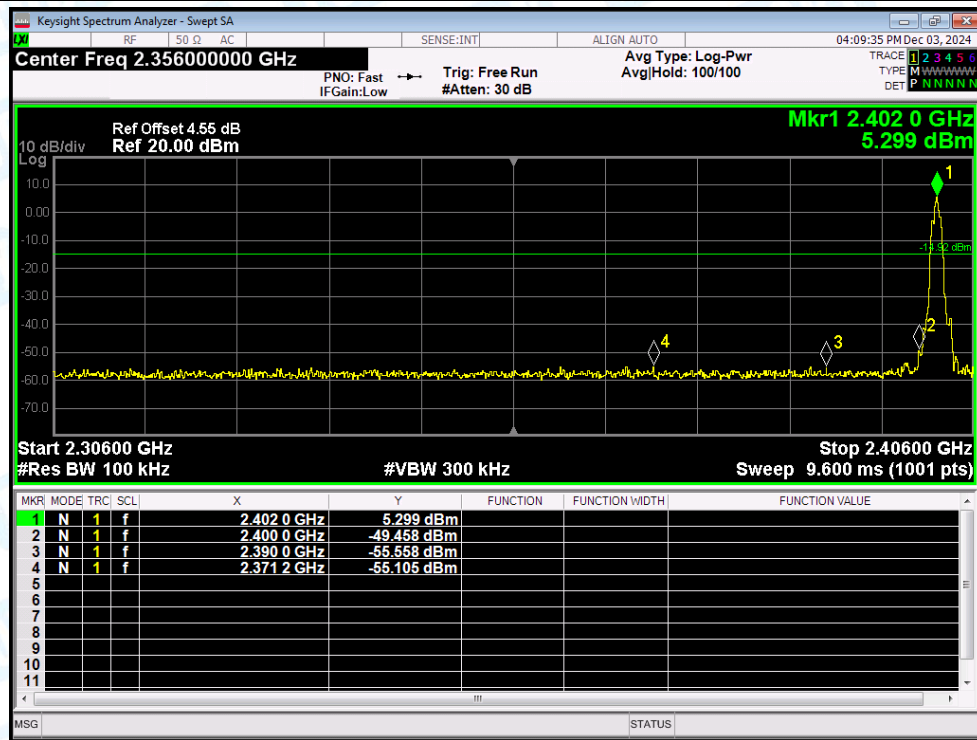
Band Edge NVNT 1-DH1 2480MHz Ant1 No-Hopping Emission

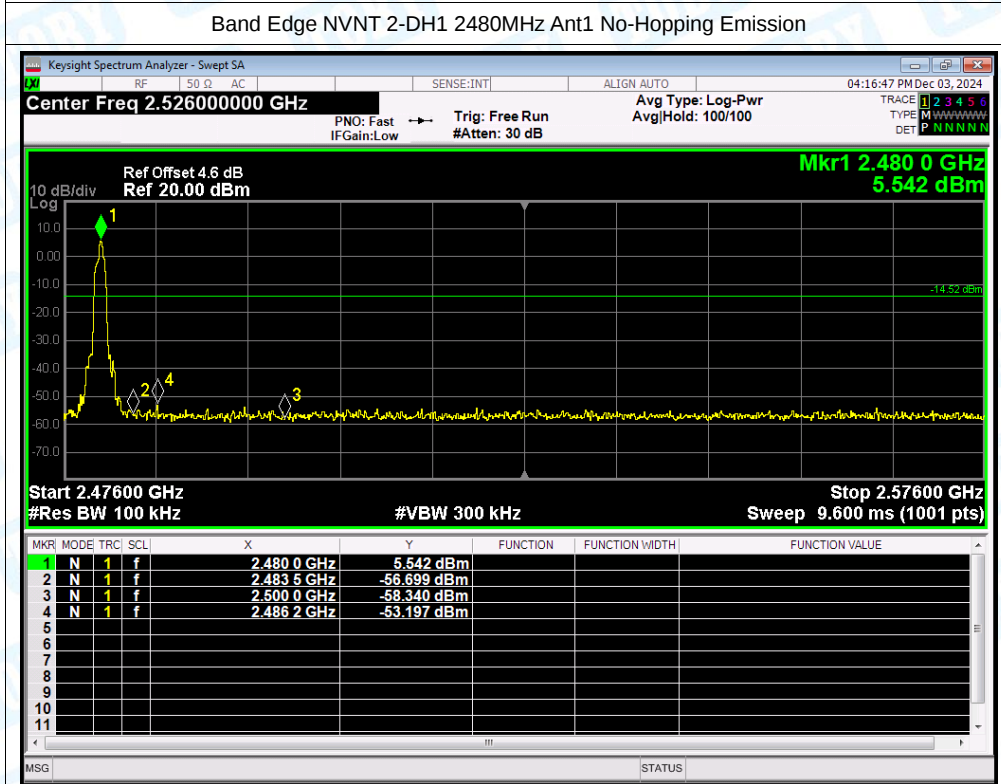
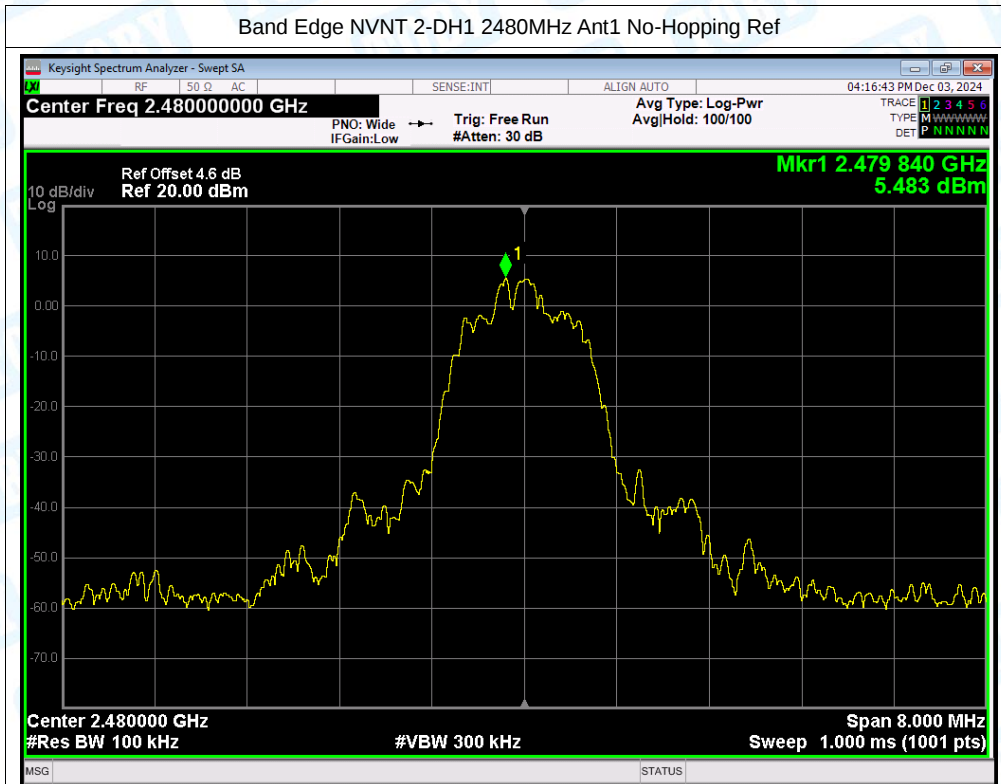


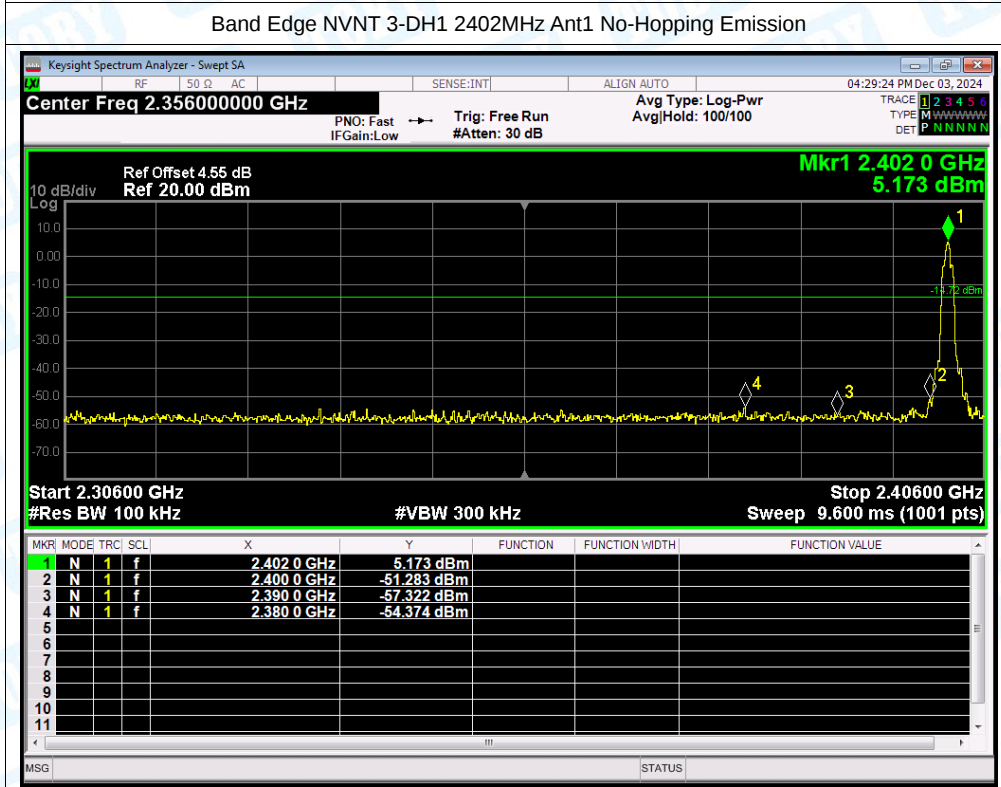
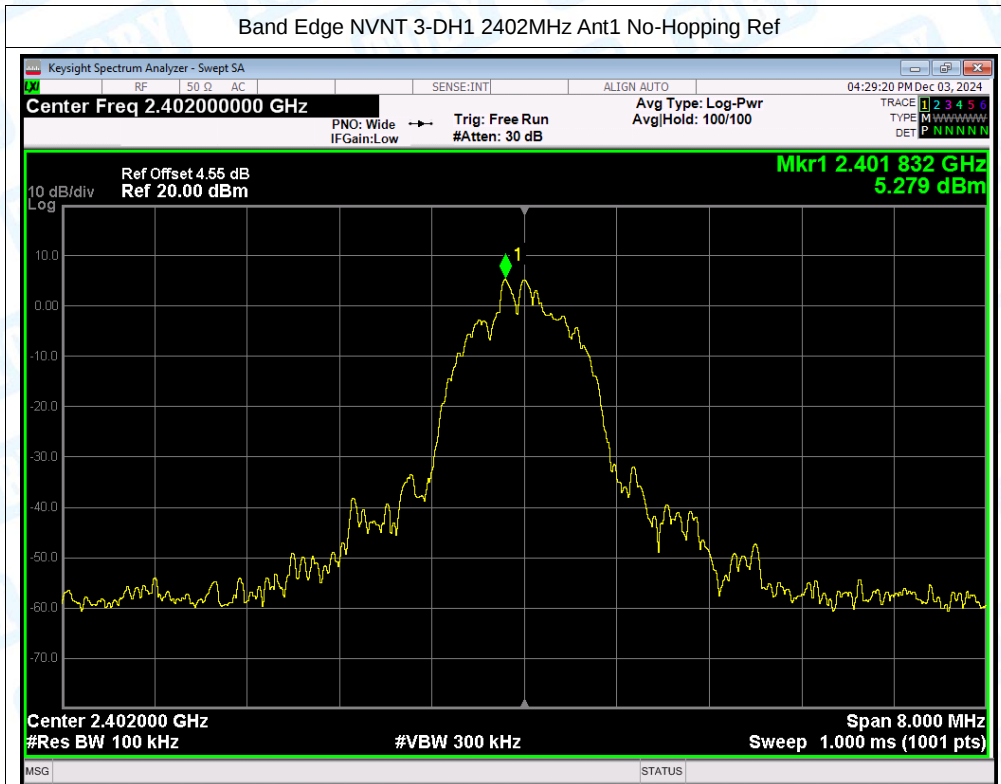
Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Ref

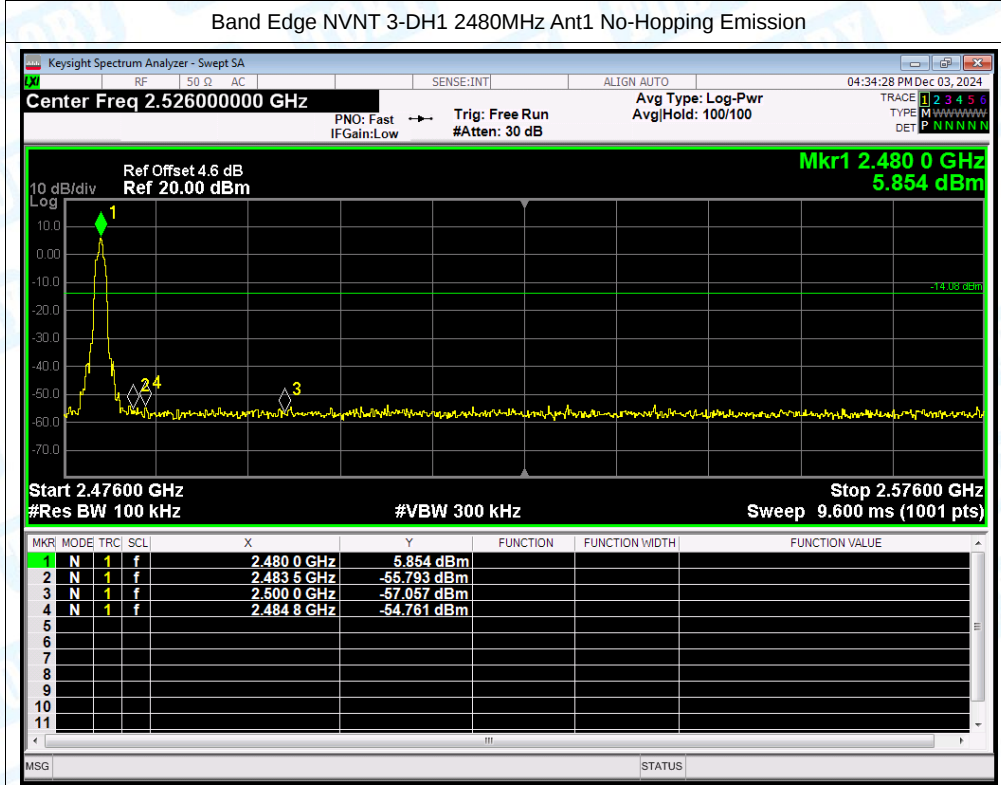
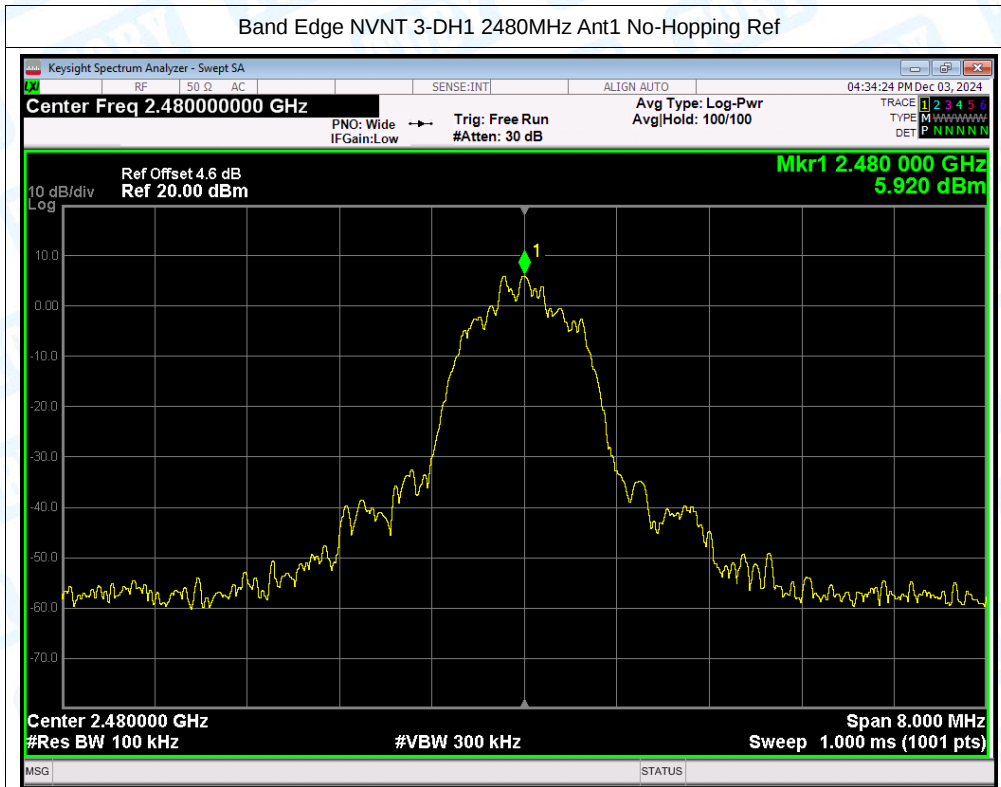


Band Edge NVNT 2-DH1 2402MHz Ant1 No-Hopping Emission









6. Band Edge(Hopping)

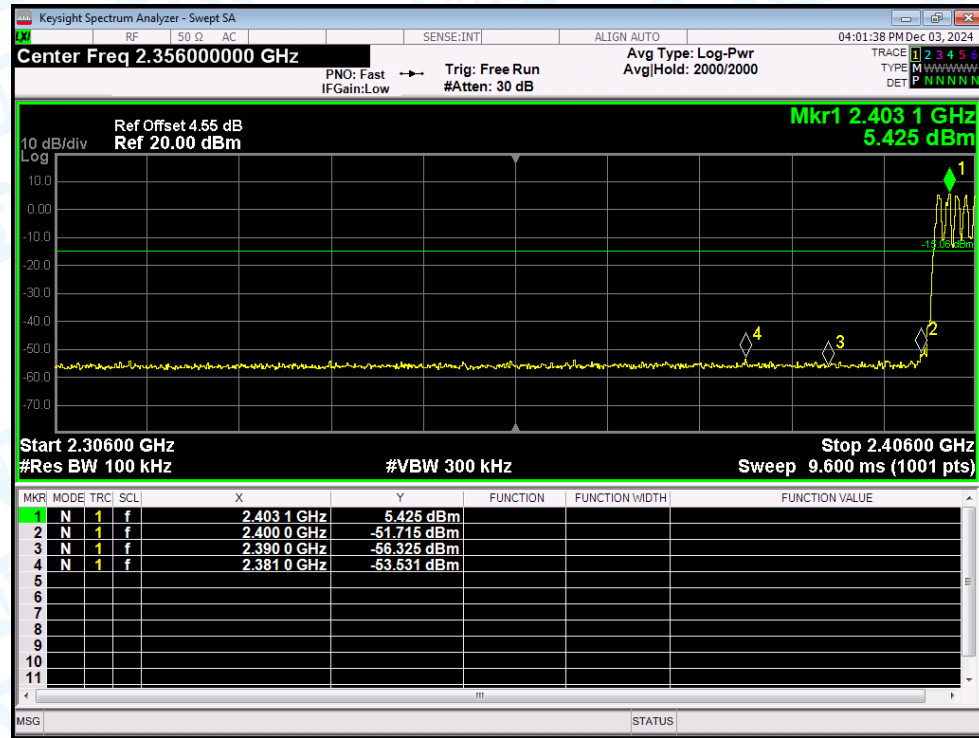
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	Hopping	-58.48	-20	Pass
NVNT	1-DH1	2480	Ant1	Hopping	-59.38	-20	Pass
NVNT	2-DH1	2402	Ant1	Hopping	-58.85	-20	Pass
NVNT	2-DH1	2480	Ant1	Hopping	-60.1	-20	Pass
NVNT	3-DH1	2402	Ant1	Hopping	-58.62	-20	Pass
NVNT	3-DH1	2480	Ant1	Hopping	-59.64	-20	Pass

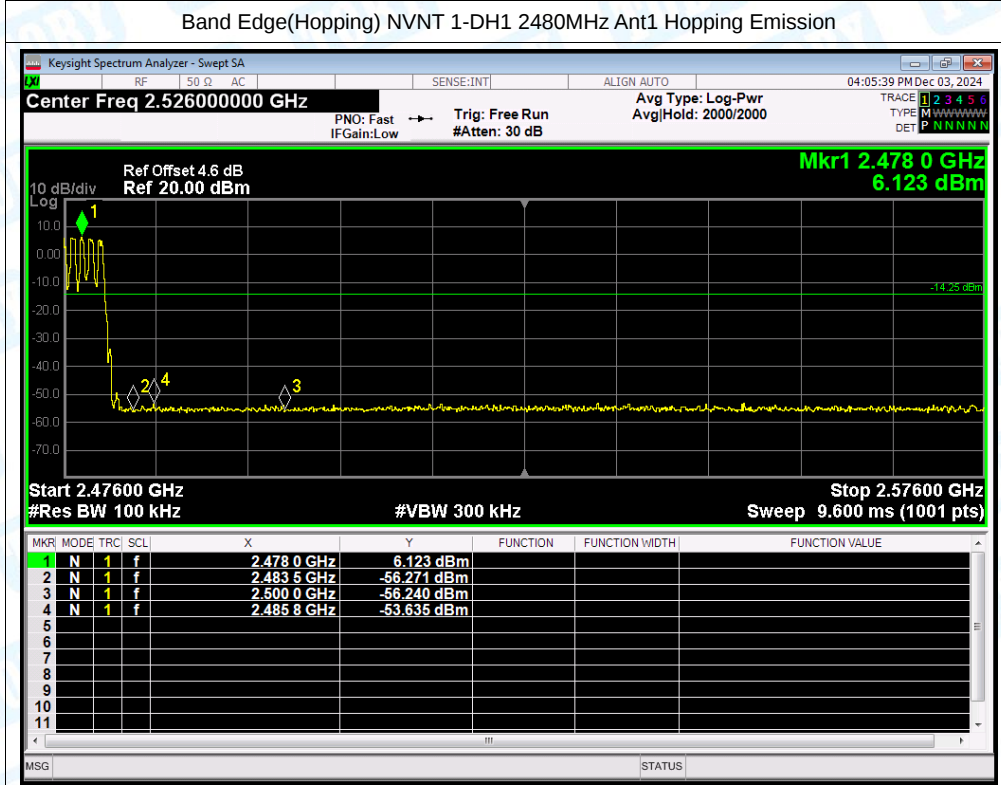
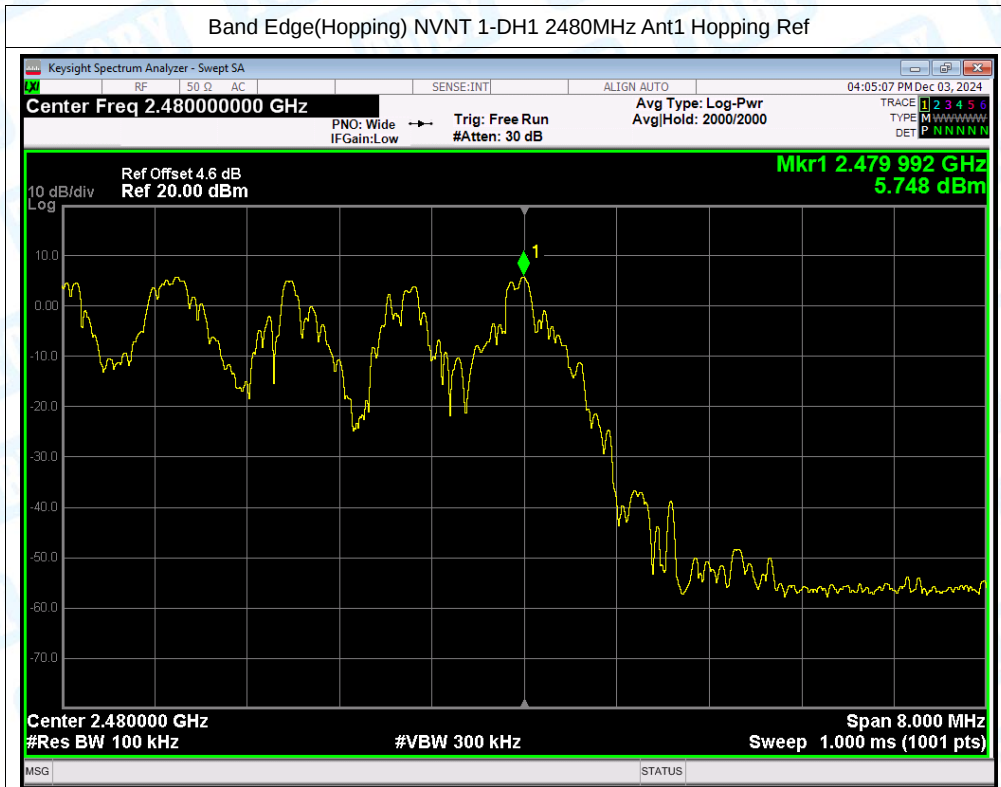
Test Graphs

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



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

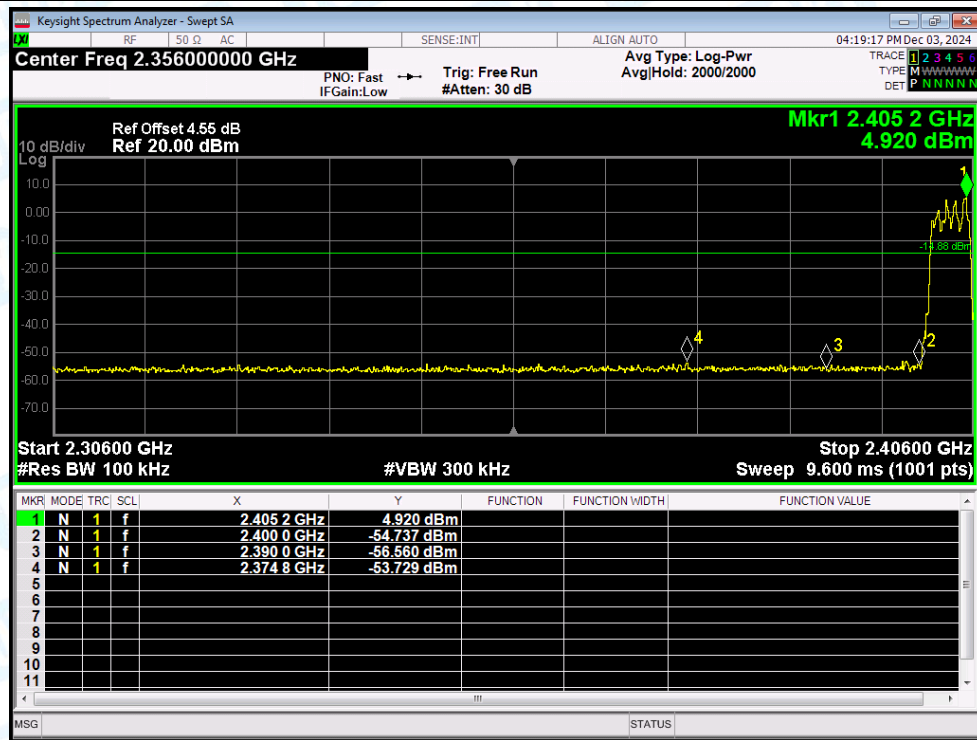


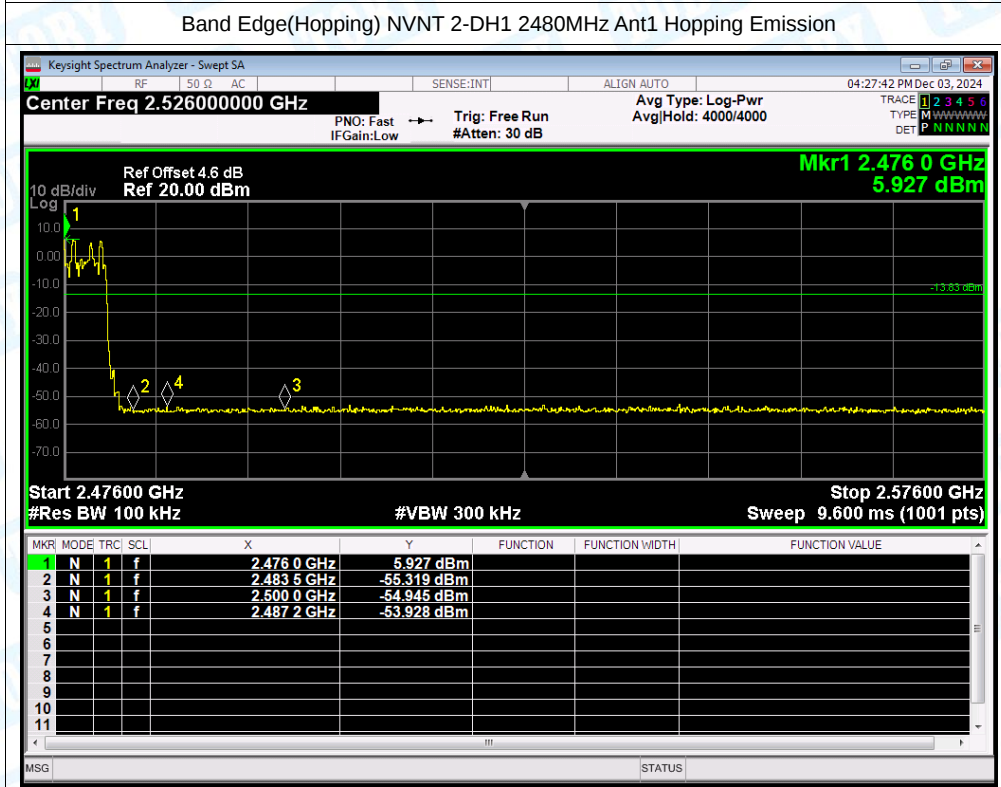


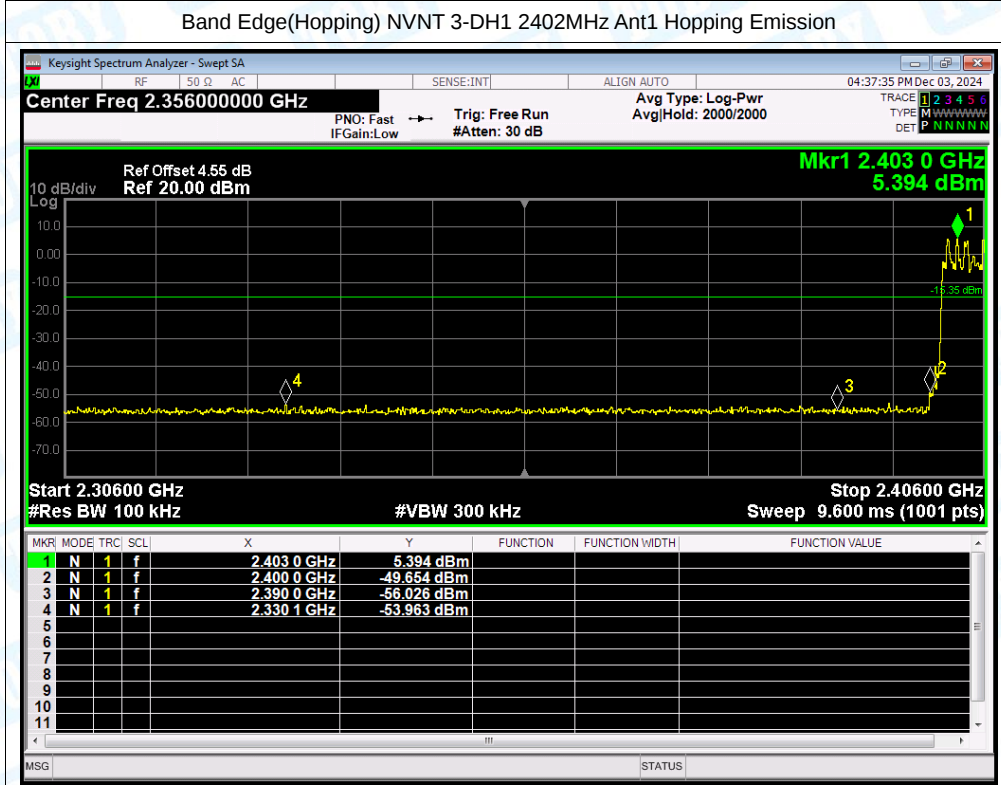
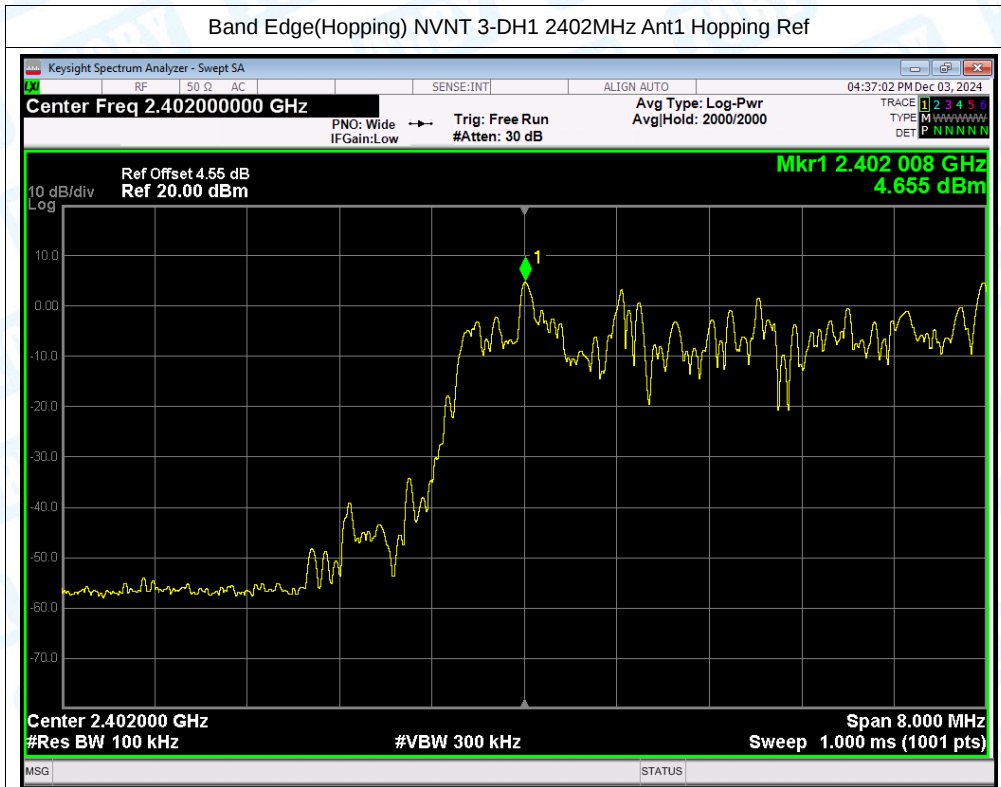
Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Ref

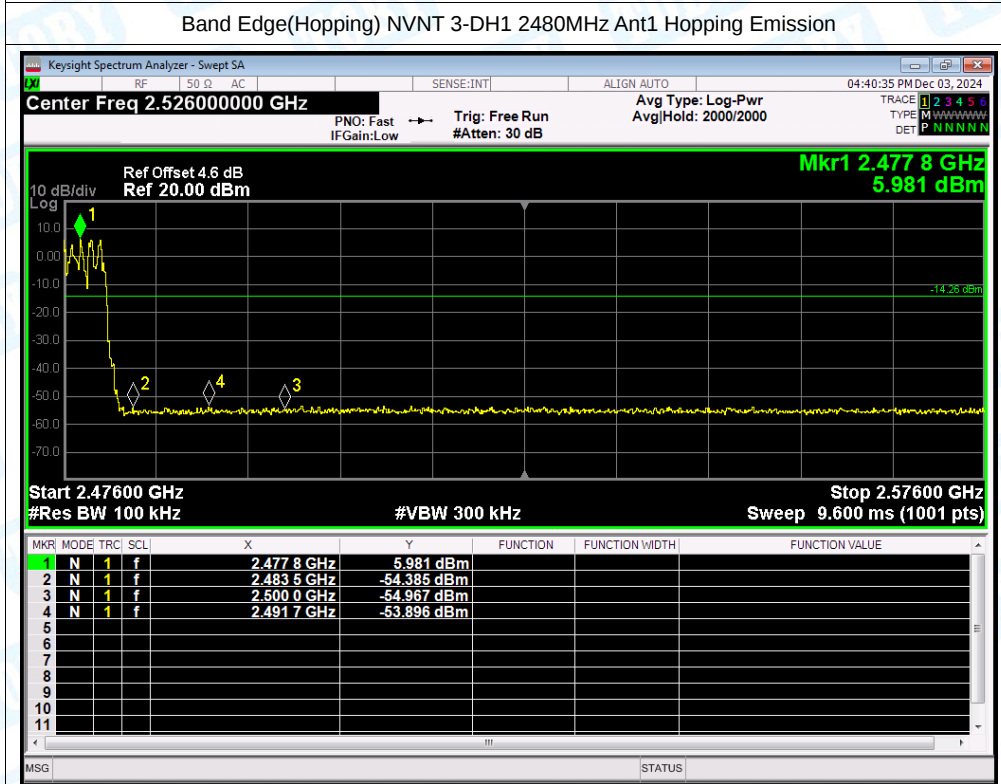


Band Edge(Hopping) NVNT 2-DH1 2402MHz Ant1 Hopping Emission







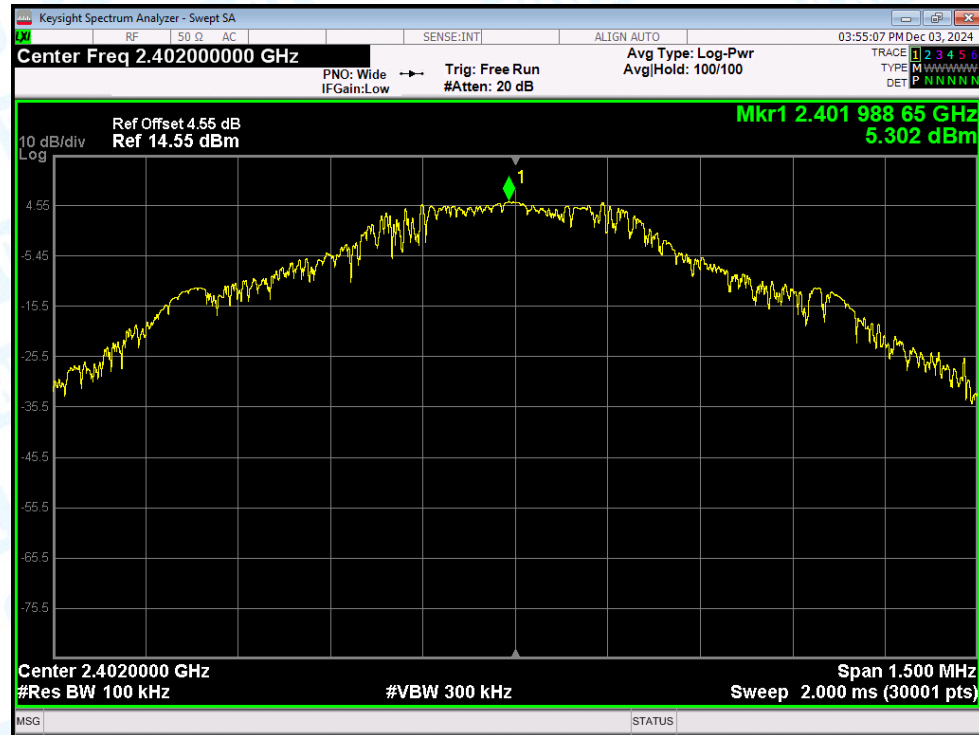


7. Conducted RF Spurious Emission

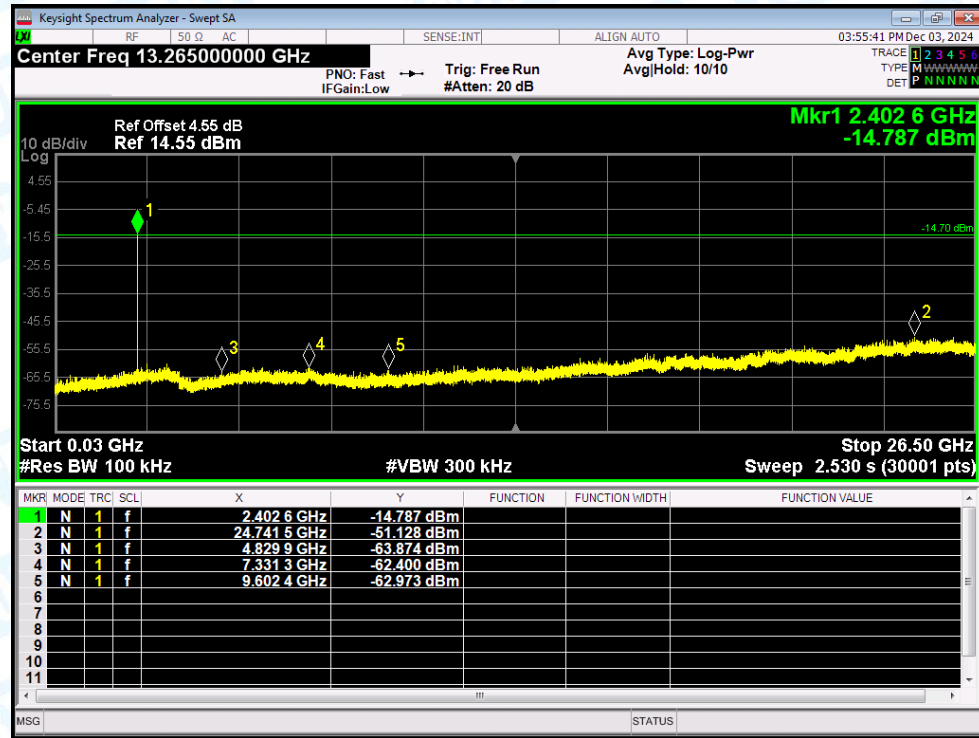
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH1	2402	Ant1	-56.43	-20	Pass
NVNT	1-DH1	2441	Ant1	-57.07	-20	Pass
NVNT	1-DH1	2480	Ant1	-57.28	-20	Pass
NVNT	2-DH1	2402	Ant1	-55.52	-20	Pass
NVNT	2-DH1	2441	Ant1	-57.26	-20	Pass
NVNT	2-DH1	2480	Ant1	-56.8	-20	Pass
NVNT	3-DH1	2402	Ant1	-56.5	-20	Pass
NVNT	3-DH1	2441	Ant1	-57.48	-20	Pass
NVNT	3-DH1	2480	Ant1	-57.78	-20	Pass

Test Graphs

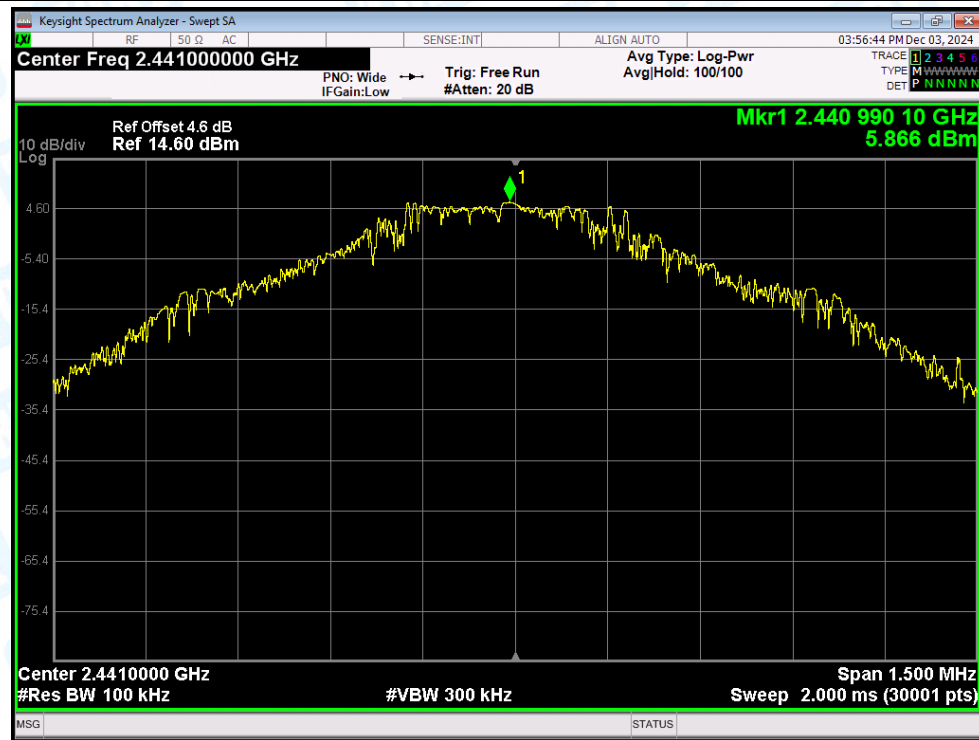
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Ref



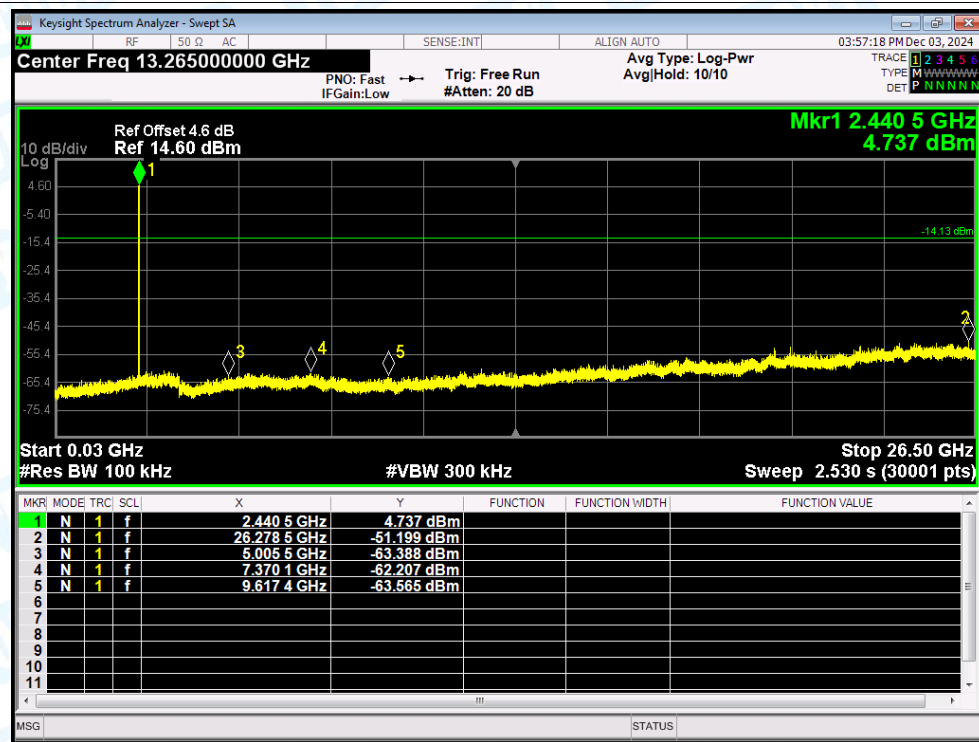
Tx. Spurious NVNT 1-DH1 2402MHz Ant1 Emission



Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Ref



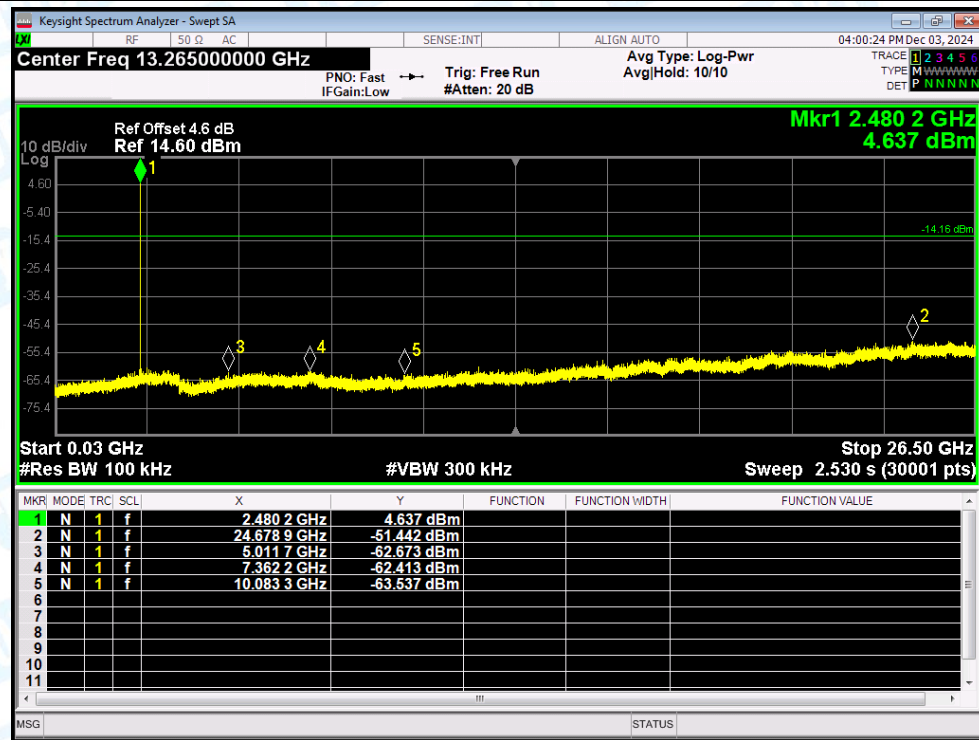
Tx. Spurious NVNT 1-DH1 2441MHz Ant1 Emission



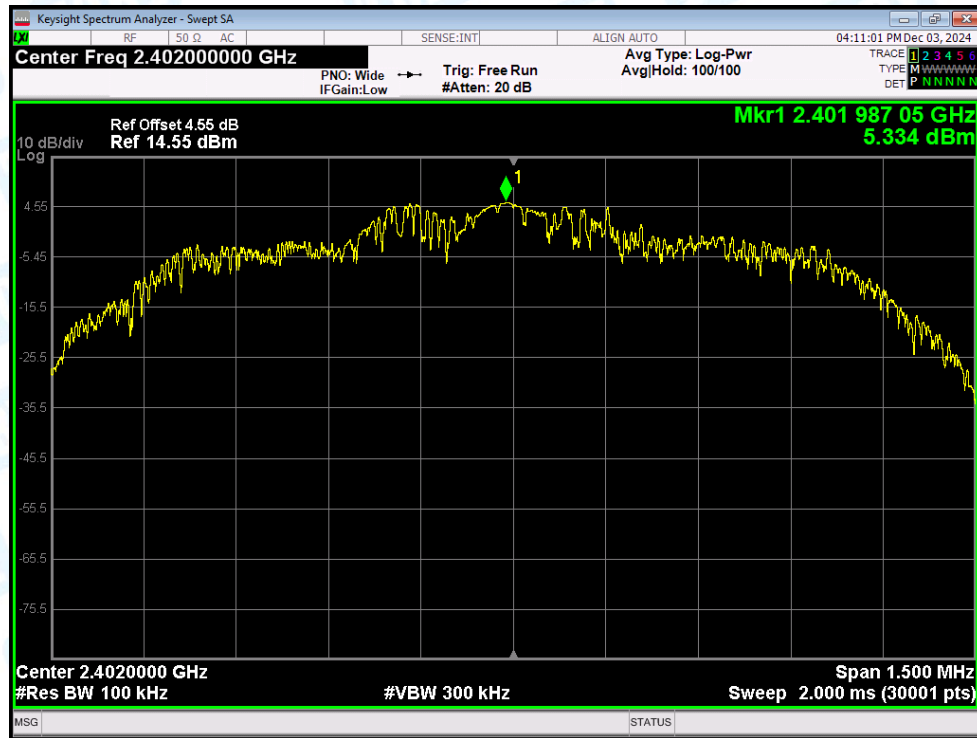
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Ref



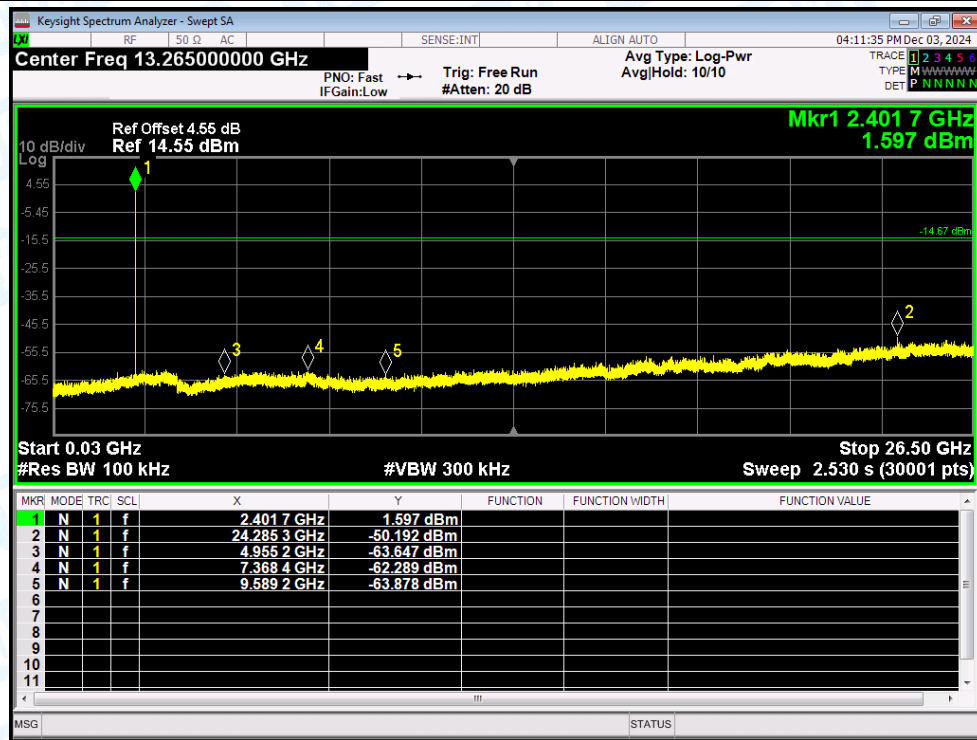
Tx. Spurious NVNT 1-DH1 2480MHz Ant1 Emission



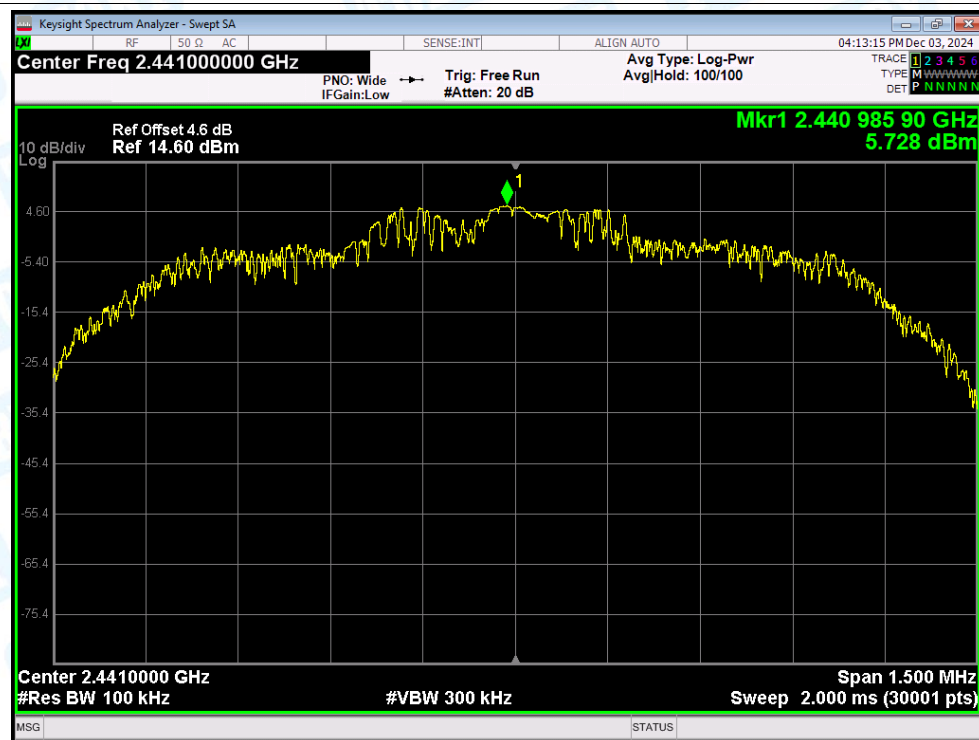
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Ref



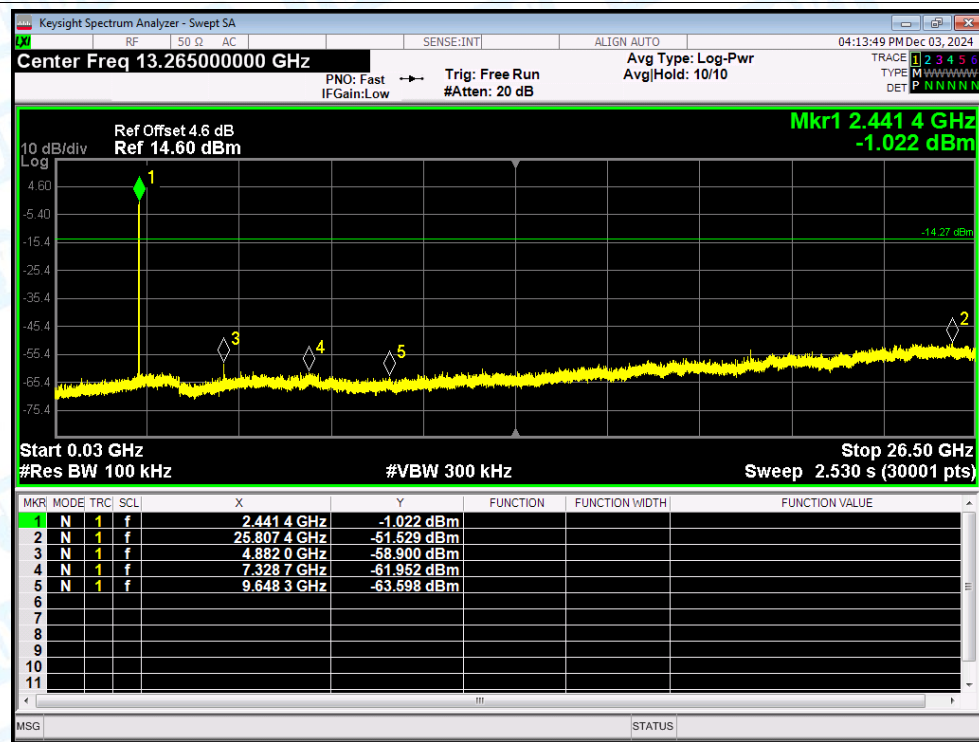
Tx. Spurious NVNT 2-DH1 2402MHz Ant1 Emission



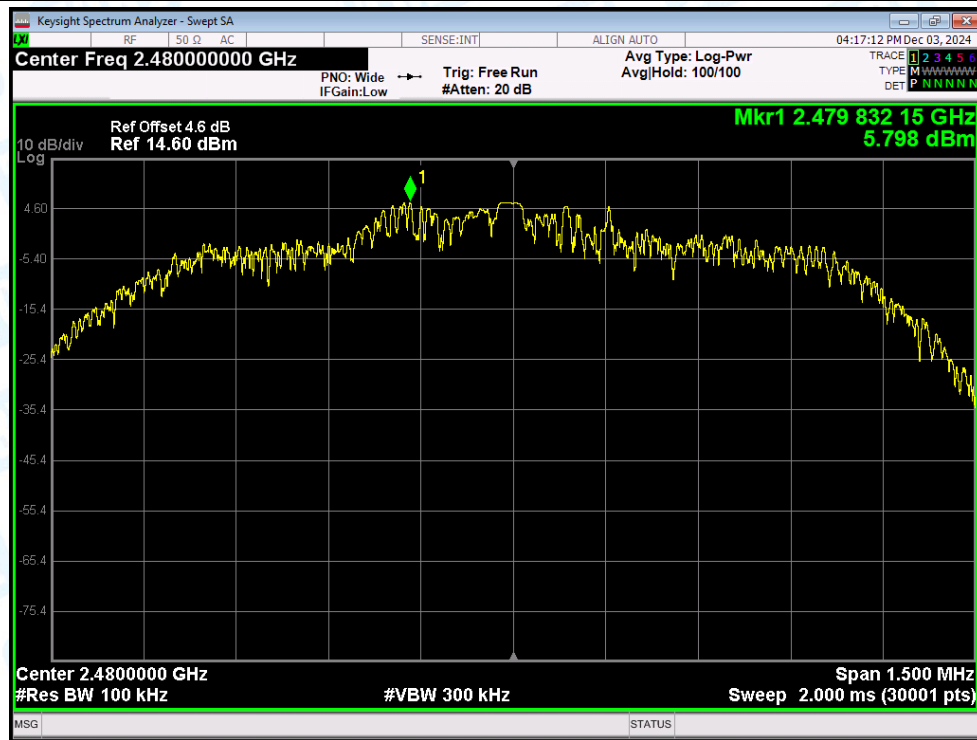
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Ref



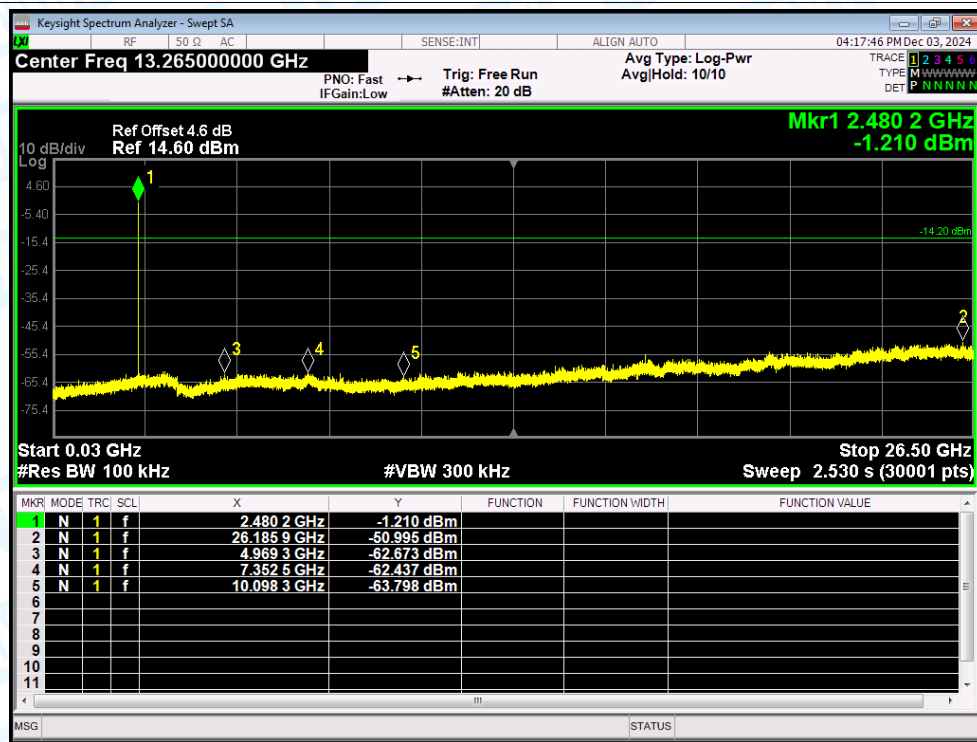
Tx. Spurious NVNT 2-DH1 2441MHz Ant1 Emission



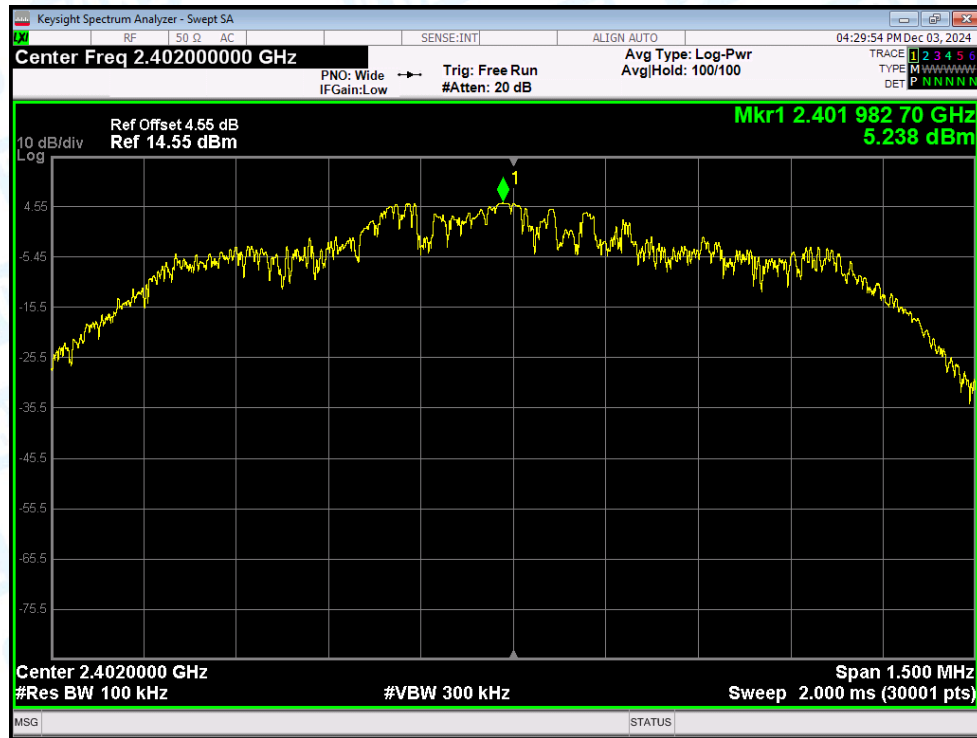
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Ref



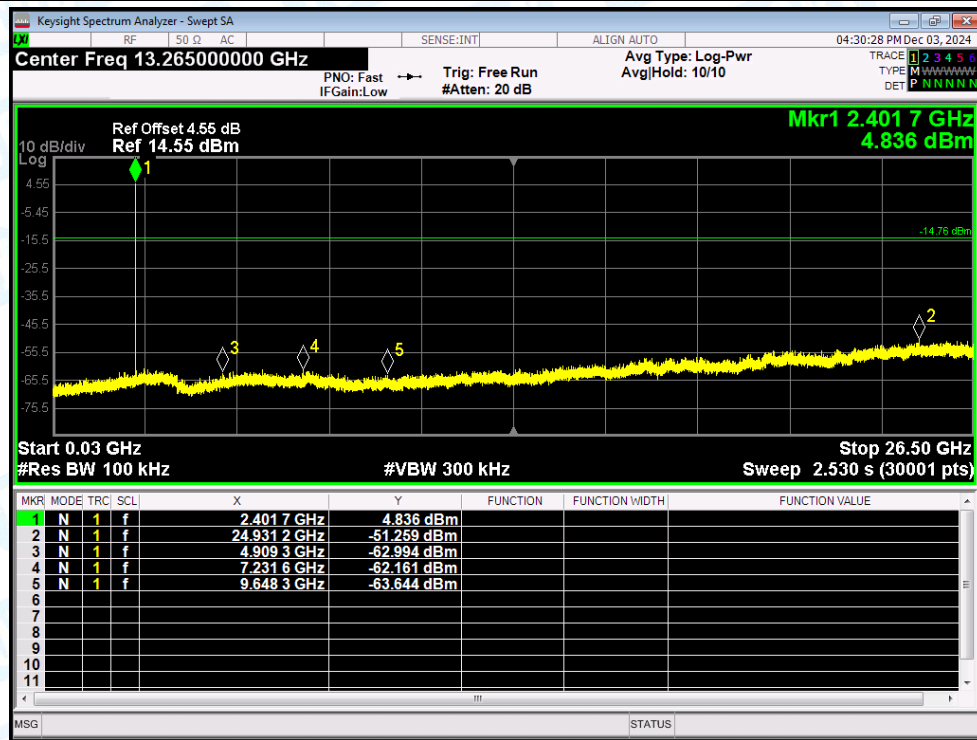
Tx. Spurious NVNT 2-DH1 2480MHz Ant1 Emission



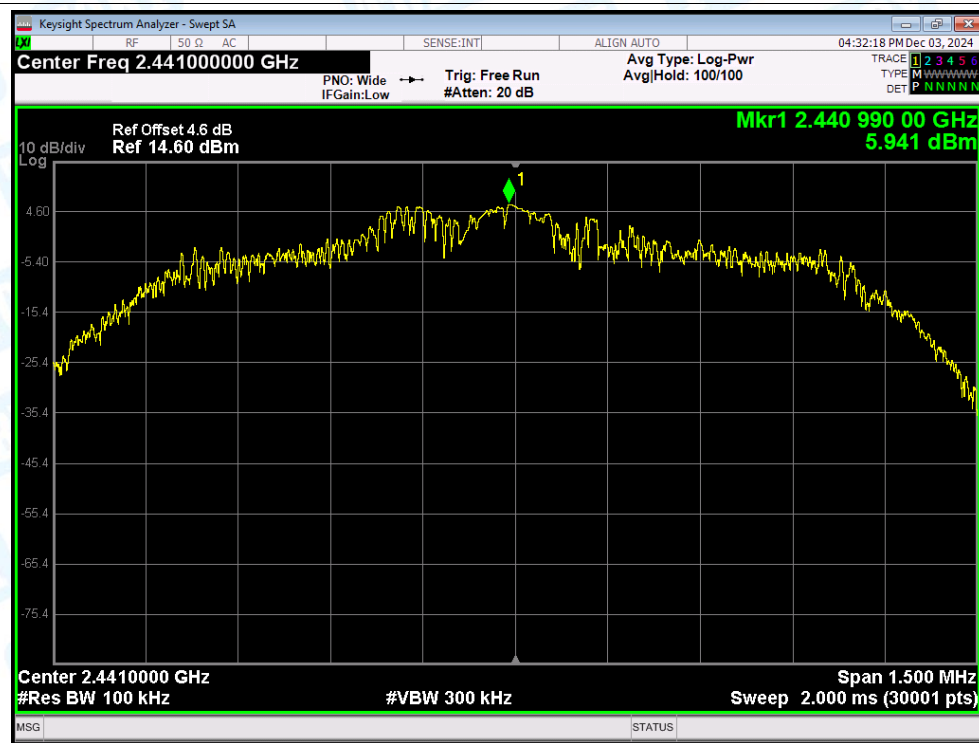
Tx. Spurious NVNT 3-DH1 2402MHz Ant1 Ref



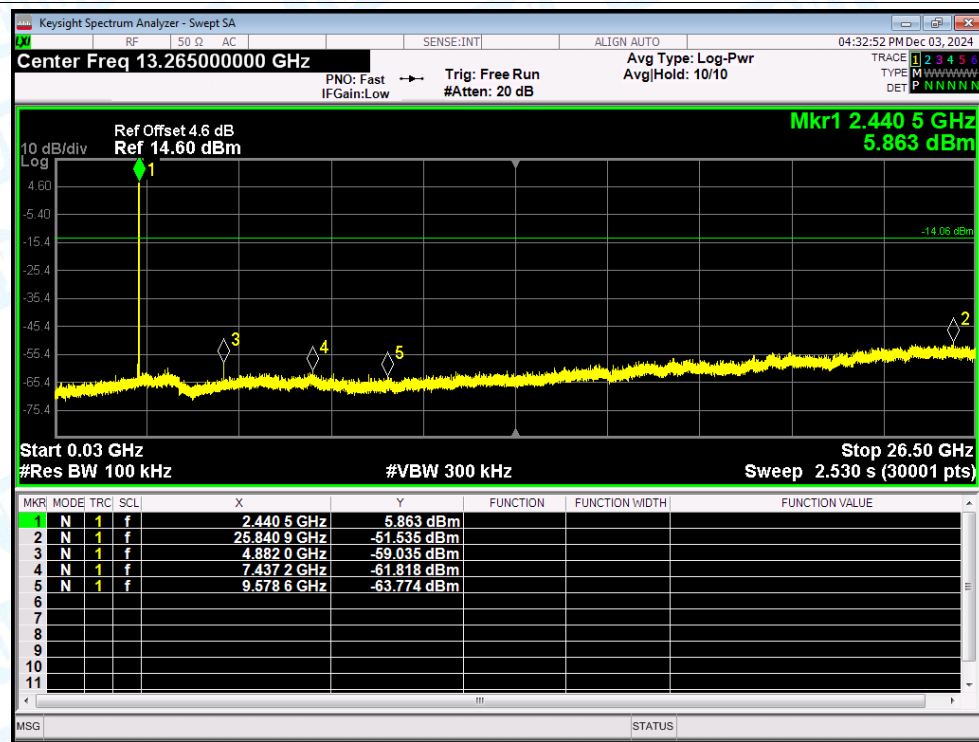
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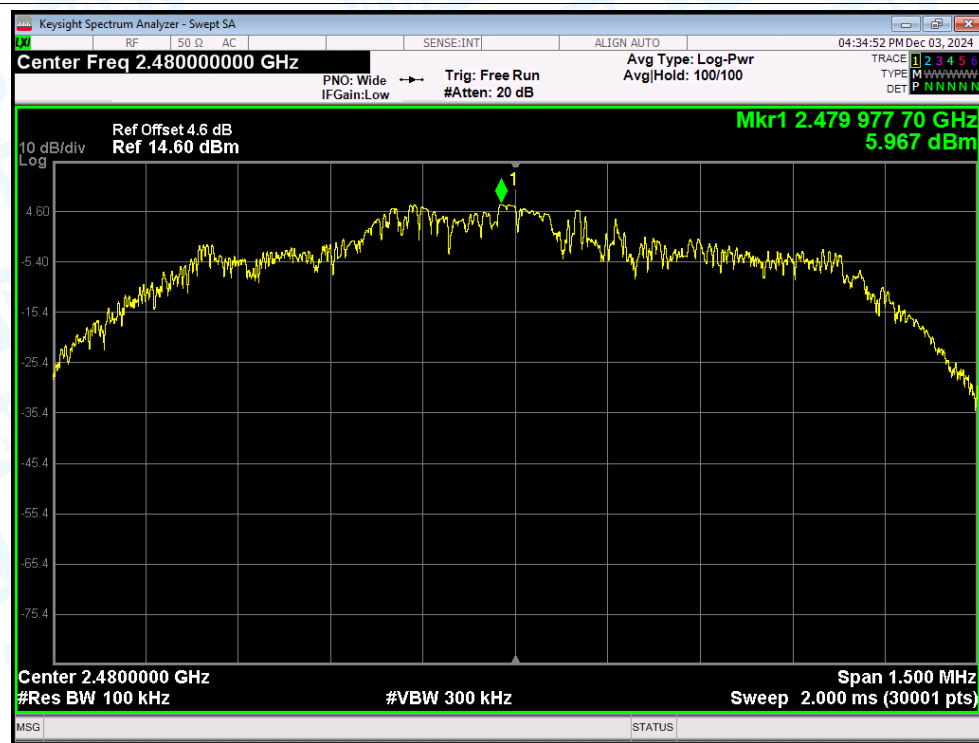
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Ref



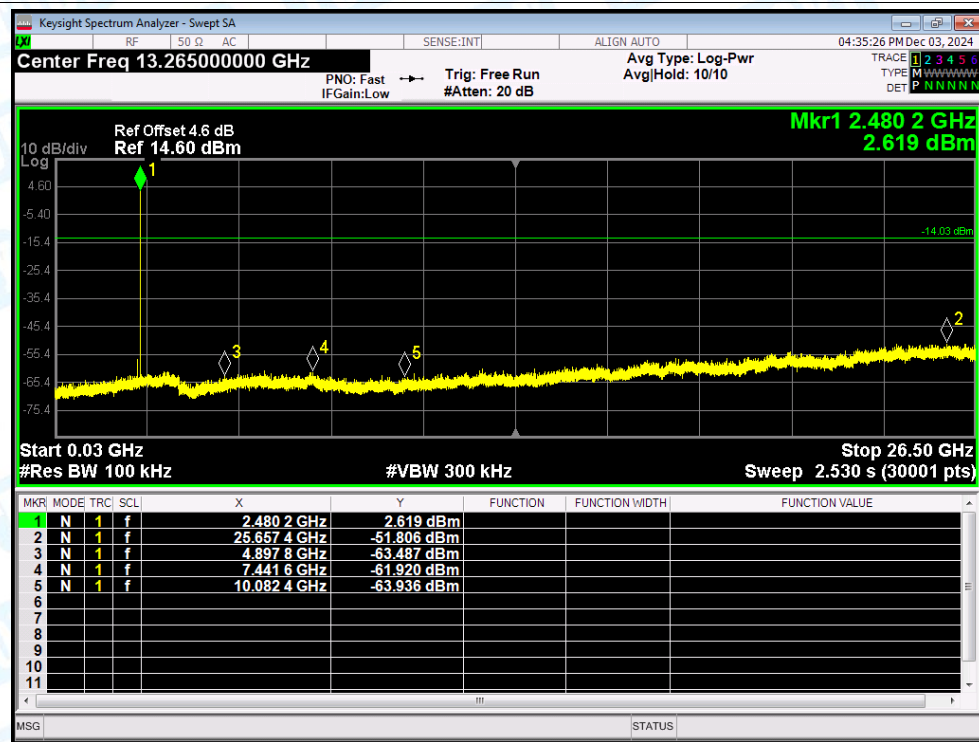
Tx. Spurious NVNT 3-DH1 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH1 2480MHz Ant1 Emission

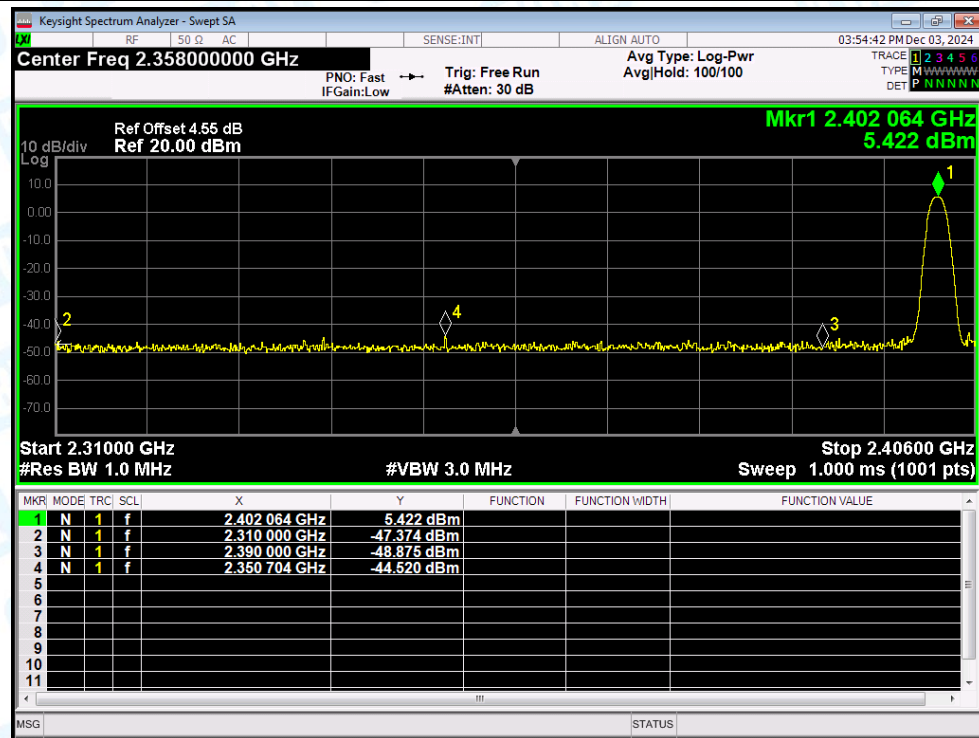


8. Restrict Band

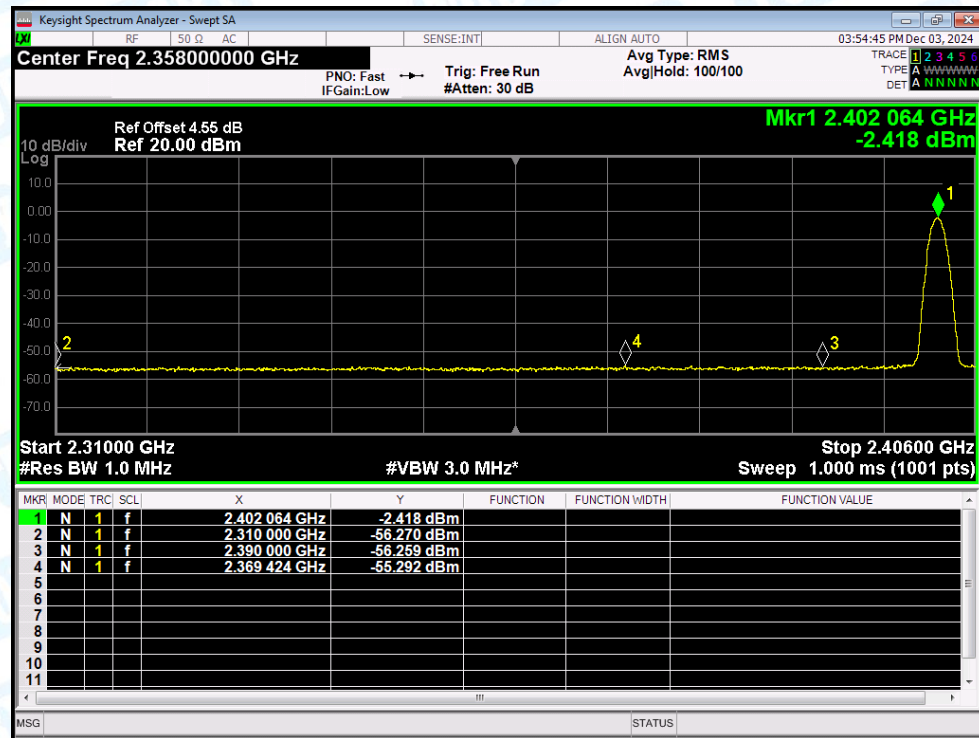
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-47.37	2	-	49.89	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2310	-56.27	2	8.18	49.17	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2350.704	-44.52	2	-	52.74	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2369.424	-55.29	2	8.18	50.15	Average	54	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-48.88	2	-	48.38	Peak	74	Pass
NVNT	1-DH1	2402	Ant1	No-Hopping	2390	-56.26	2	8.18	49.18	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-47.31	2	-	49.95	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2483.5	-55.66	2	8.07	49.67	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2494.12	-43.89	2	-	53.37	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2497.312	-54.46	2	8.07	50.87	Average	54	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-48.34	2	-	48.92	Peak	74	Pass
NVNT	1-DH1	2480	Ant1	No-Hopping	2500	-55.36	2	8.07	49.97	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-48.29	2	-	48.97	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2310	-56.4	2	8.07	48.93	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2311.632	-44.38	2	-	52.88	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2352.24	-55.47	2	8.07	49.86	Average	54	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-49.82	2	-	47.44	Peak	74	Pass
NVNT	2-DH1	2402	Ant1	No-Hopping	2390	-55.94	2	8.07	49.39	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-45.59	2	-	51.67	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2483.5	-55.22	2	7.96	50	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2496.184	-43.47	2	-	53.79	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2486.608	-54.61	2	7.96	50.61	Average	54	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-47.07	2	-	50.19	Peak	74	Pass
NVNT	2-DH1	2480	Ant1	No-Hopping	2500	-55.61	2	7.96	49.61	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-49.33	2	-	47.93	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2310	-56.81	2	7.96	48.41	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2311.344	-45.19	2	-	52.07	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2375.28	-55.43	2	7.96	49.79	Average	54	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-47.61	2	-	49.65	Peak	74	Pass
NVNT	3-DH1	2402	Ant1	No-Hopping	2390	-55.87	2	7.96	49.35	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-46.51	2	-	50.75	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.5	-55.46	2	7.96	49.76	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2483.992	-44.39	2	-	52.87	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2484.808	-54.85	2	7.96	50.37	Average	54	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-48.21	2	-	49.05	Peak	74	Pass
NVNT	3-DH1	2480	Ant1	No-Hopping	2500	-55.38	2	7.96	49.84	Average	54	Pass

Test Graphs

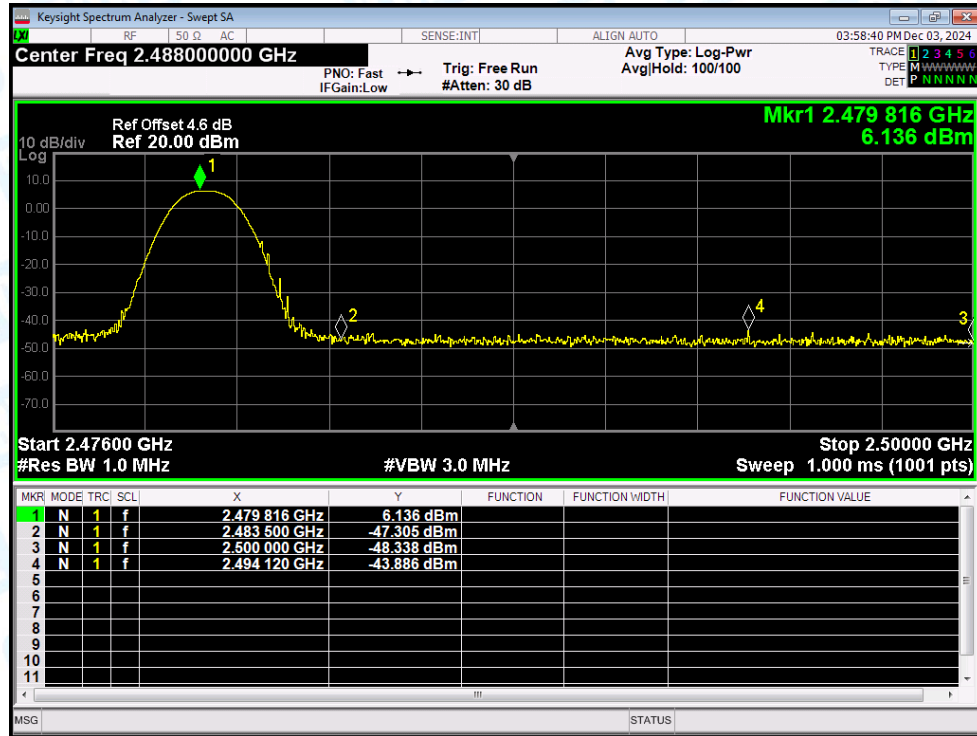
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Peak



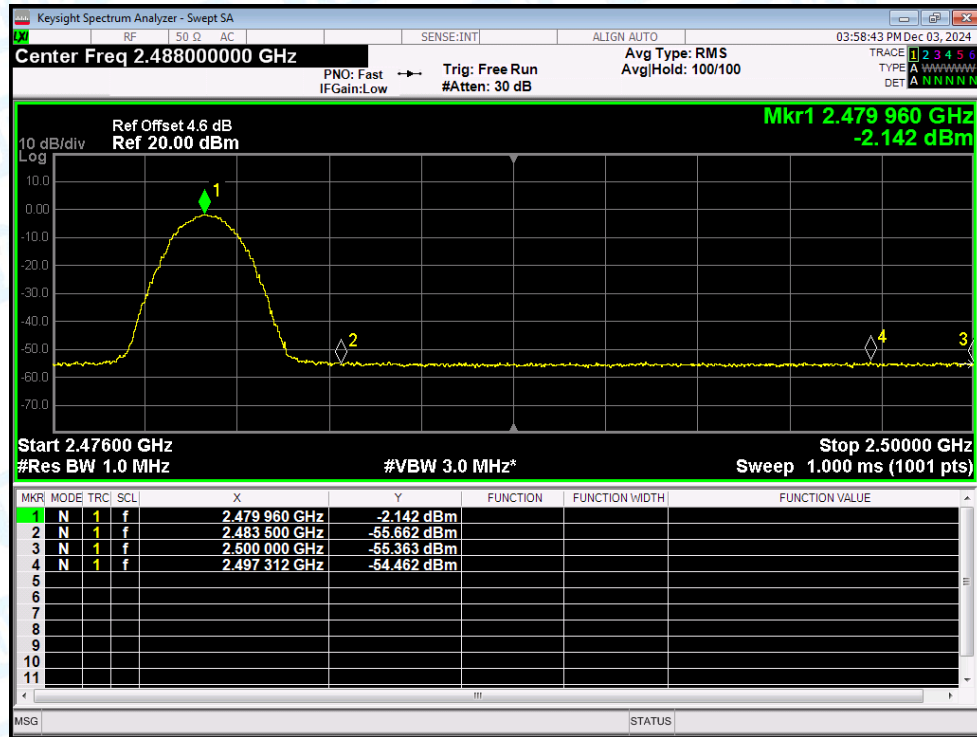
Restrict Band NVNT 1-DH1 2402MHz Ant1 No-Hopping Average



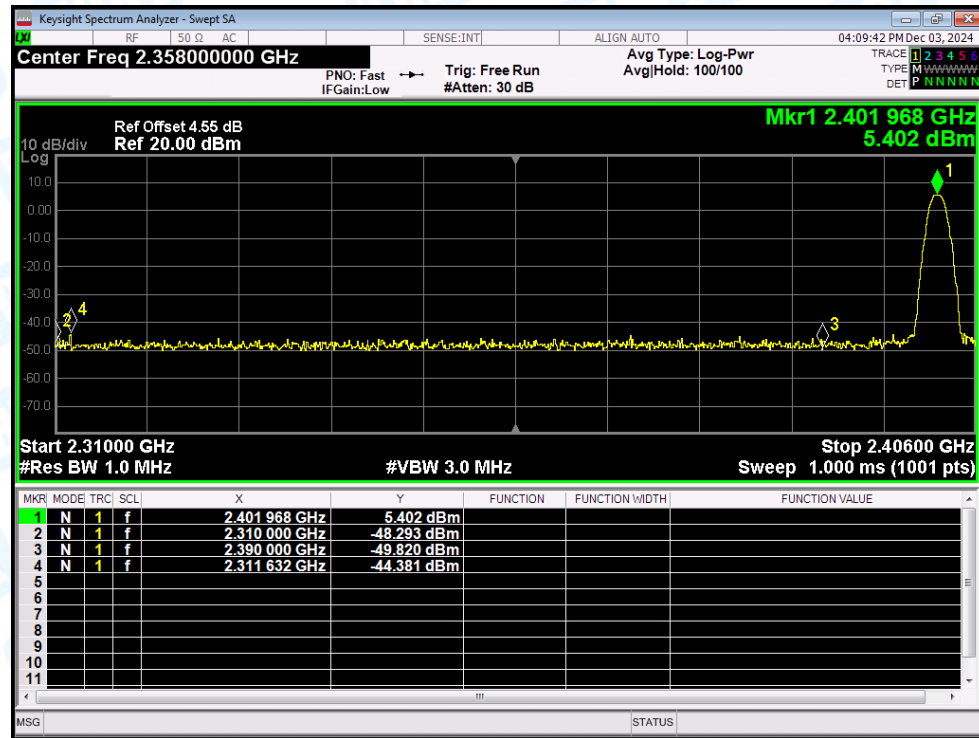
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Peak



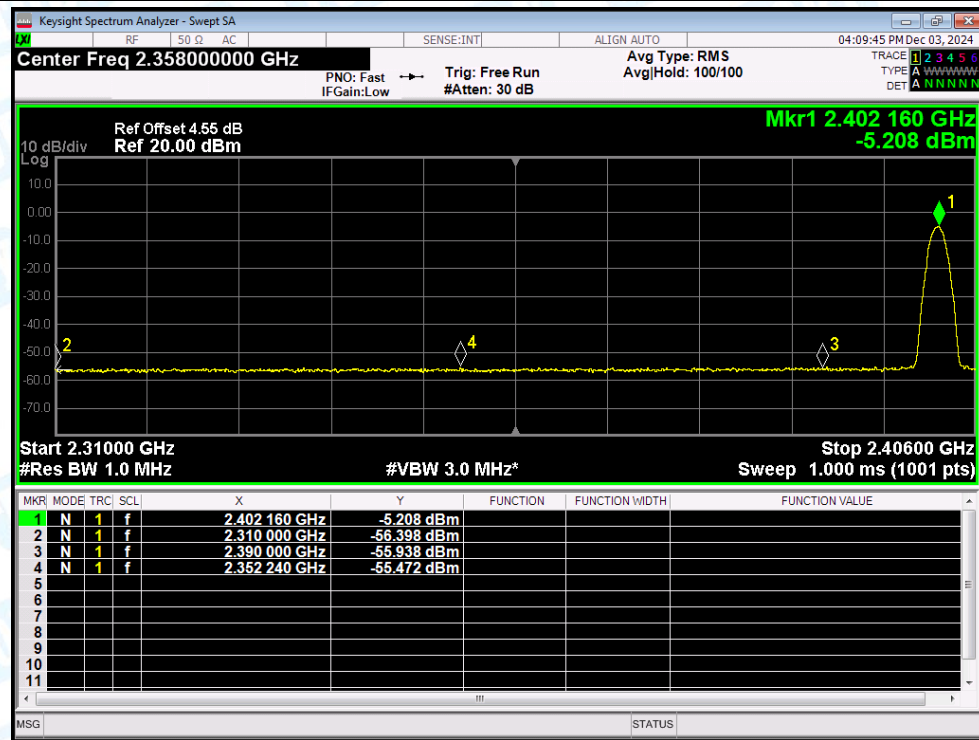
Restrict Band NVNT 1-DH1 2480MHz Ant1 No-Hopping Average



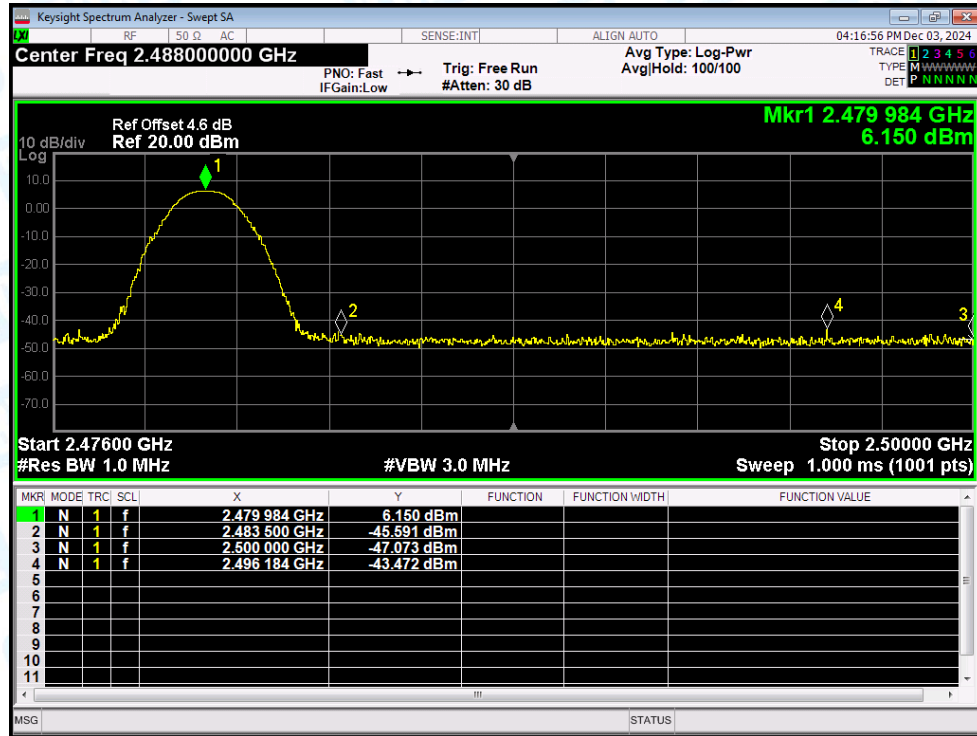
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Peak



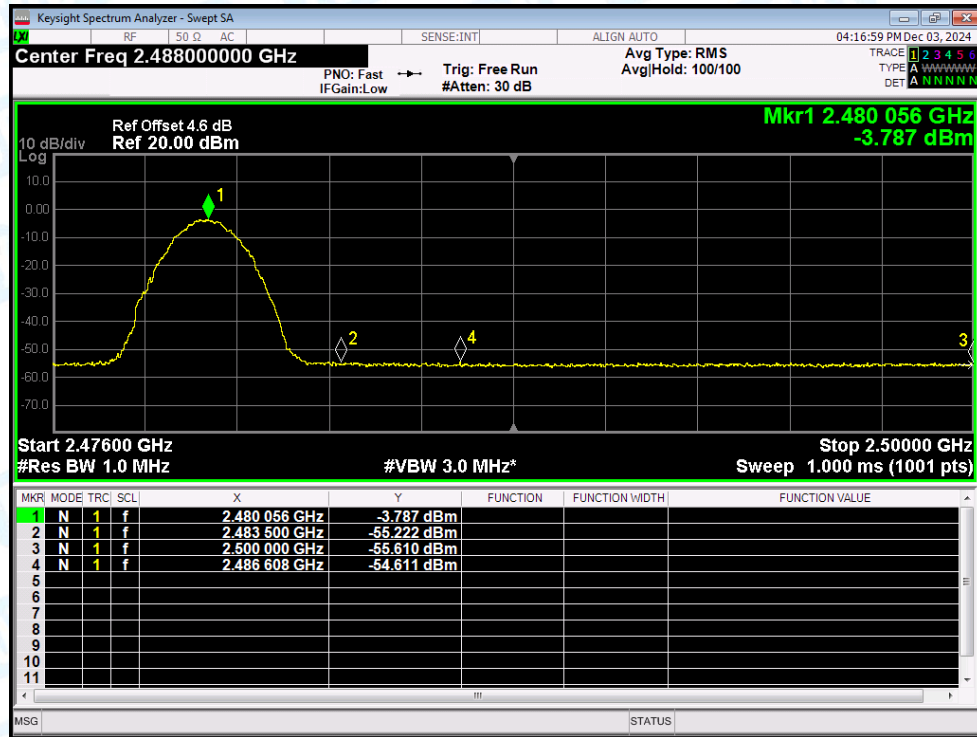
Restrict Band NVNT 2-DH1 2402MHz Ant1 No-Hopping Average



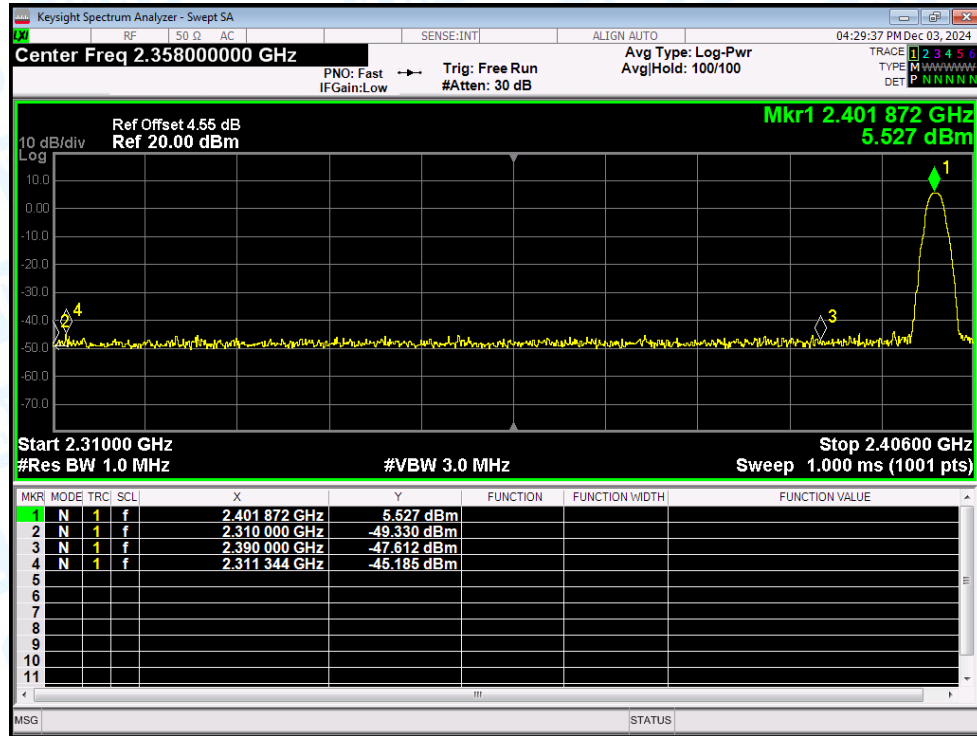
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Peak



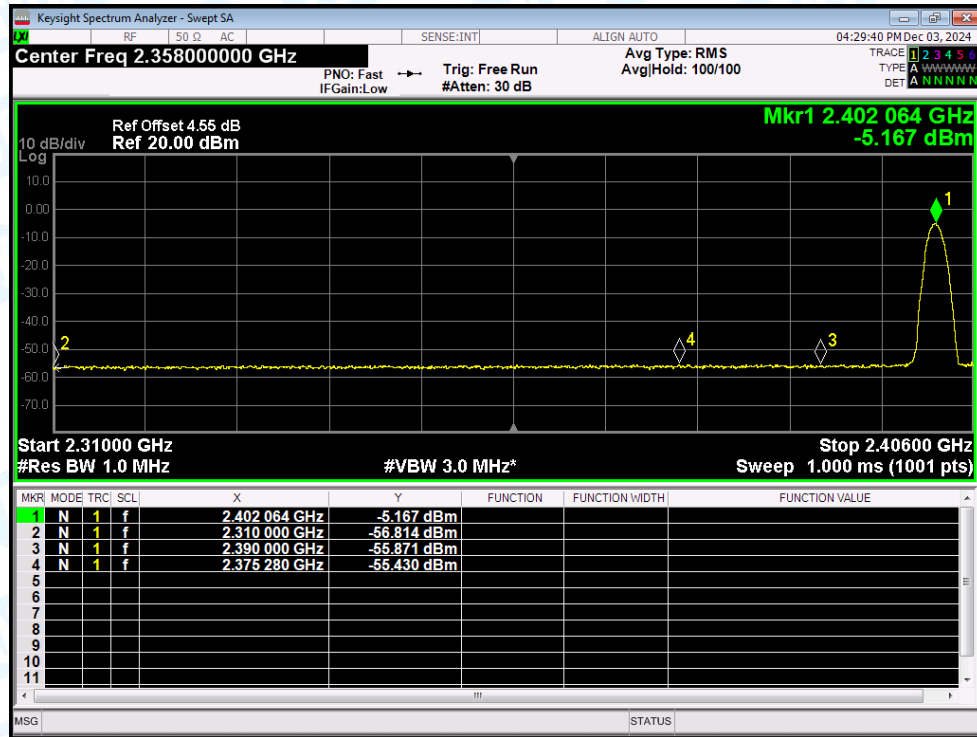
Restrict Band NVNT 2-DH1 2480MHz Ant1 No-Hopping Average



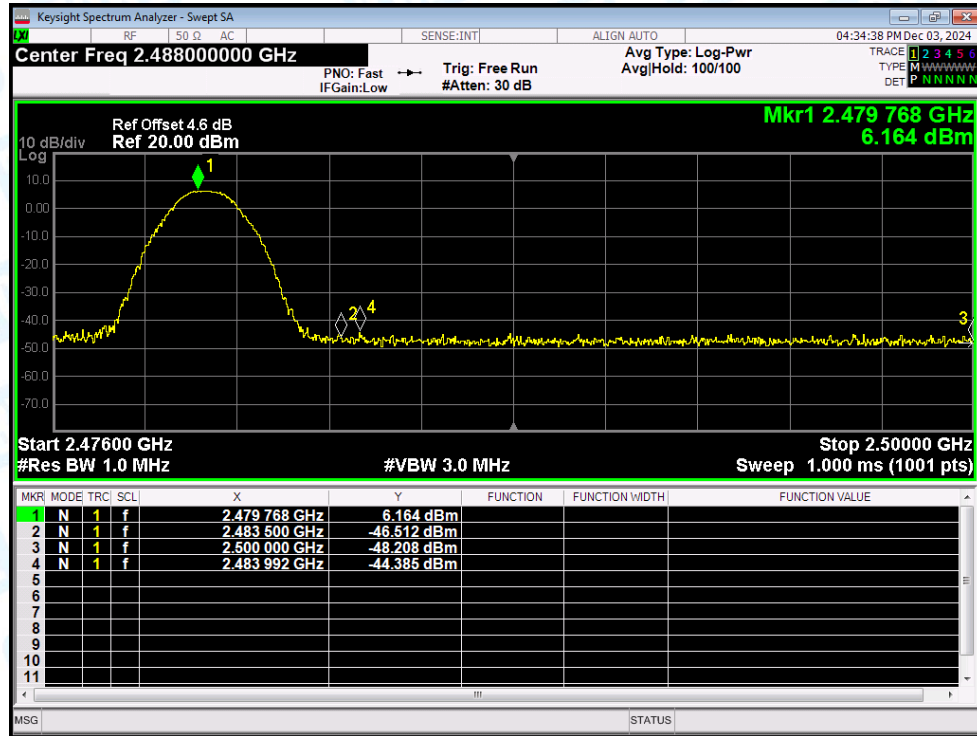
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Peak



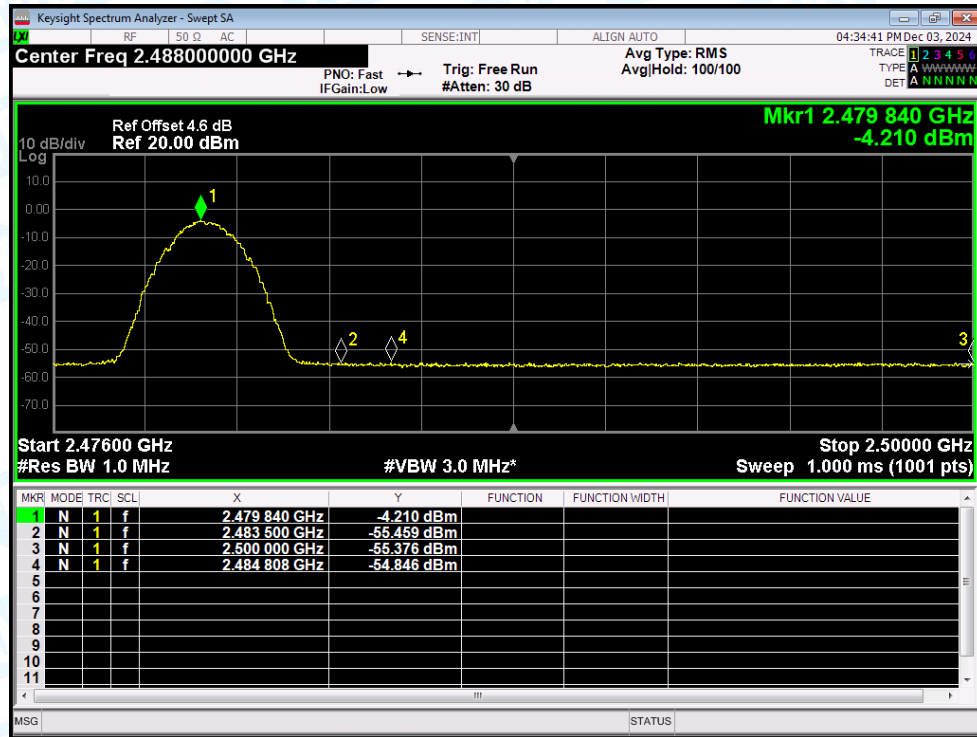
Restrict Band NVNT 3-DH1 2402MHz Ant1 No-Hopping Average



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



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

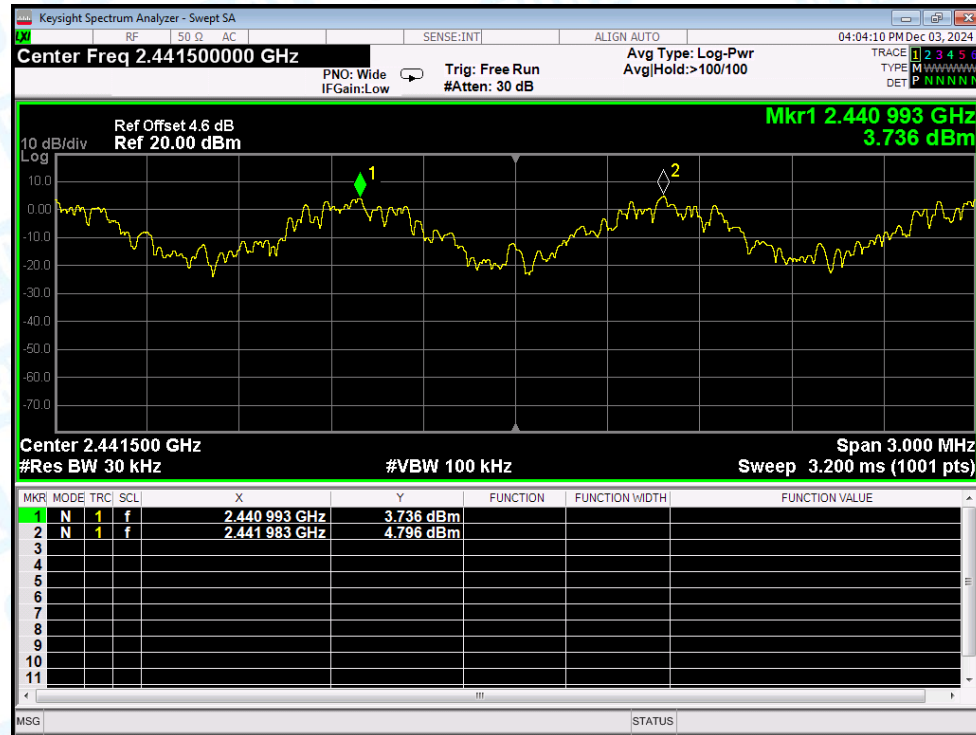


9. Carrier Frequencies Separation

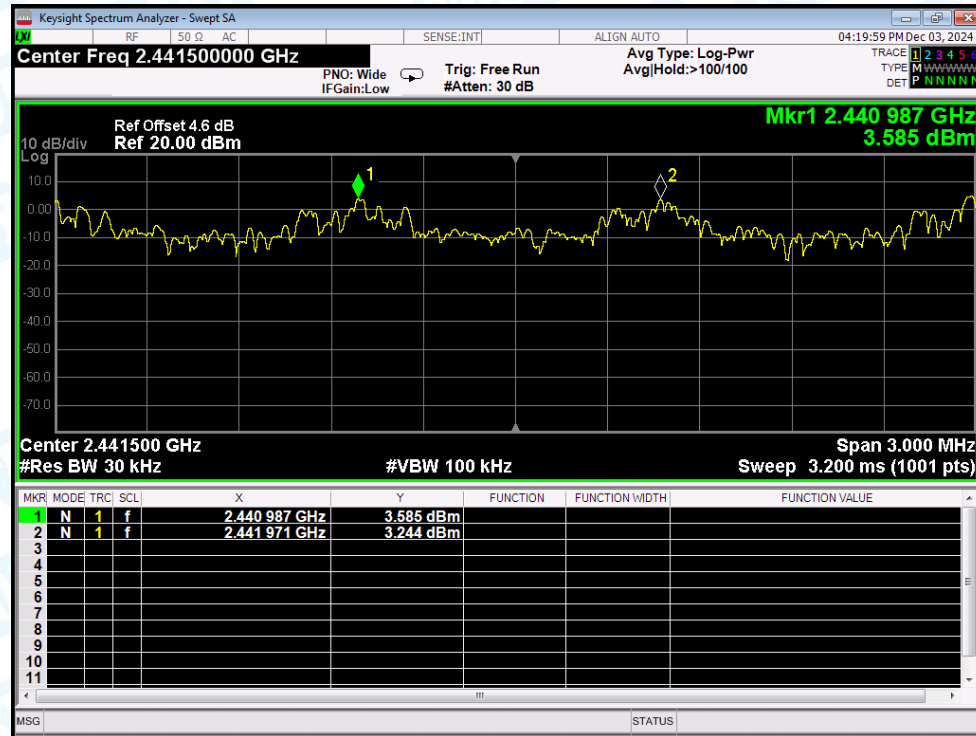
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH1	Ant1	2440.993	2441.983	0.99	0.627	Pass
NVNT	2-DH1	Ant1	2440.987	2441.971	0.984	0.78	Pass
NVNT	3-DH1	Ant1	2440.996	2442.004	1.008	0.787	Pass

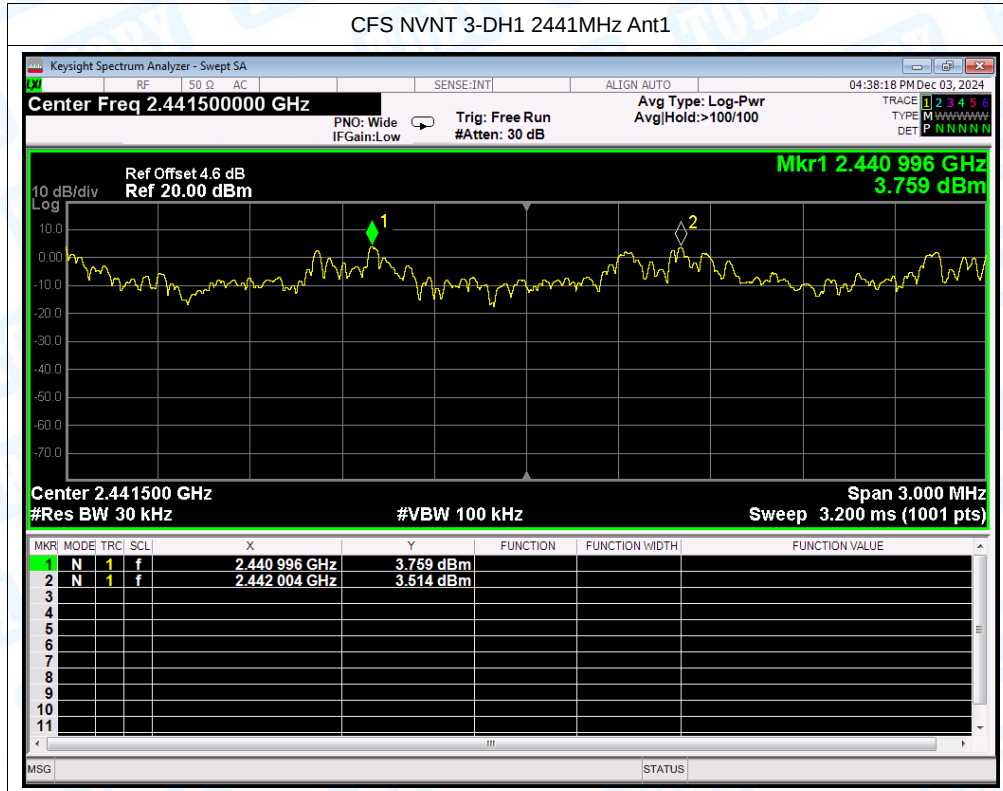
Test Graphs

CFS NVNT 1-DH1 2441MHz Ant1



CFS NVNT 2-DH1 2441MHz Ant1



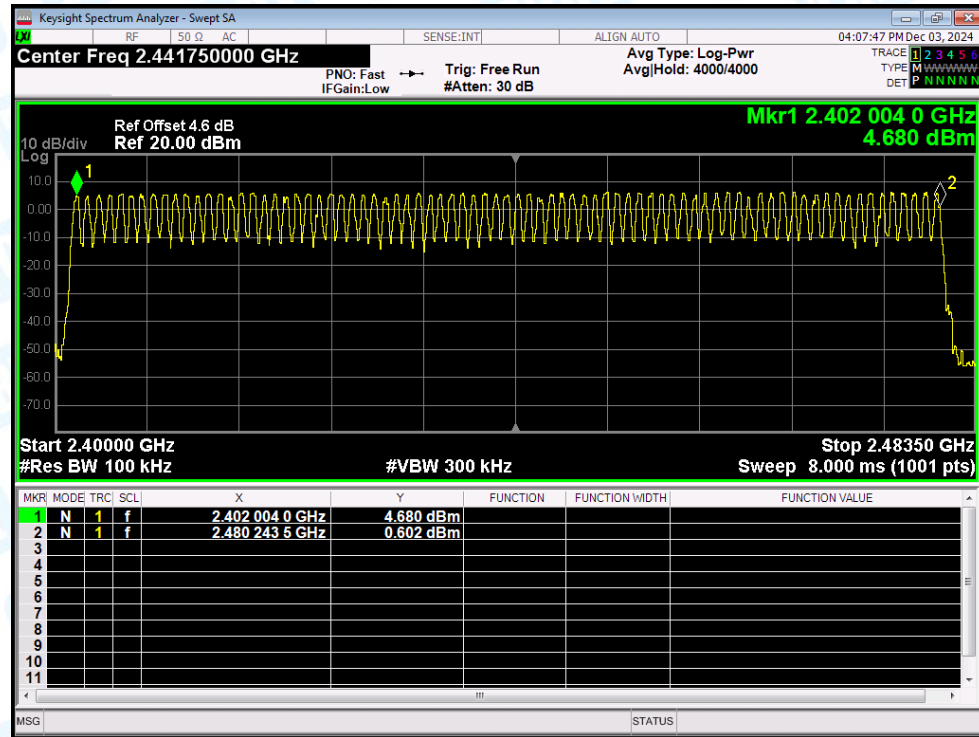


10. Number of Hopping Channel

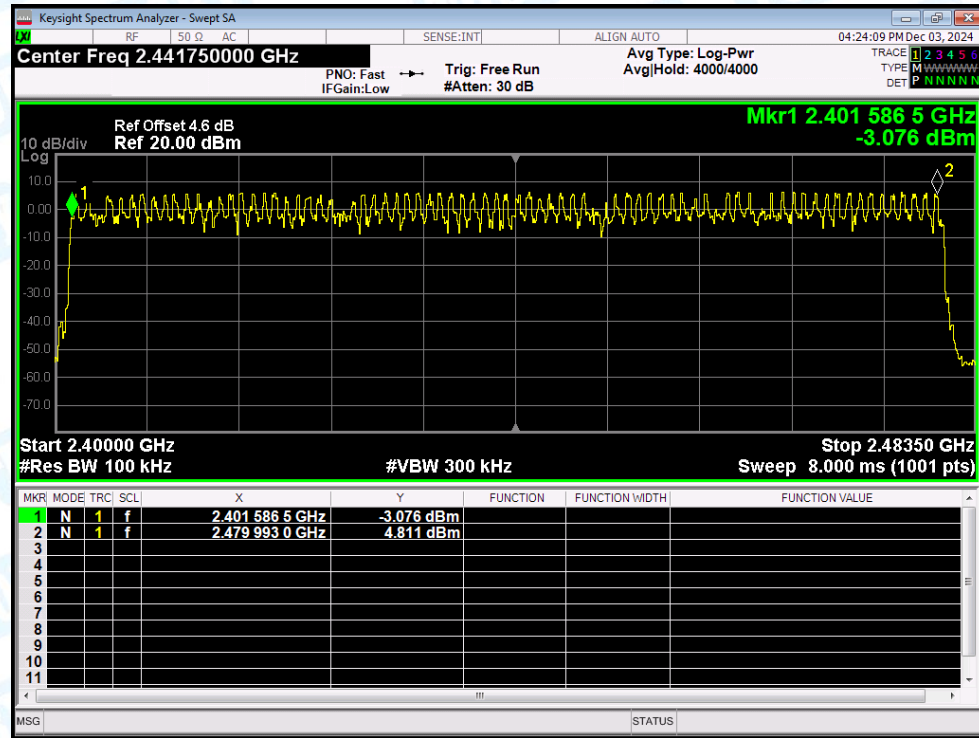
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH1	Ant1	79	15	Pass
NVNT	2-DH1	Ant1	79	15	Pass
NVNT	3-DH1	Ant1	79	15	Pass

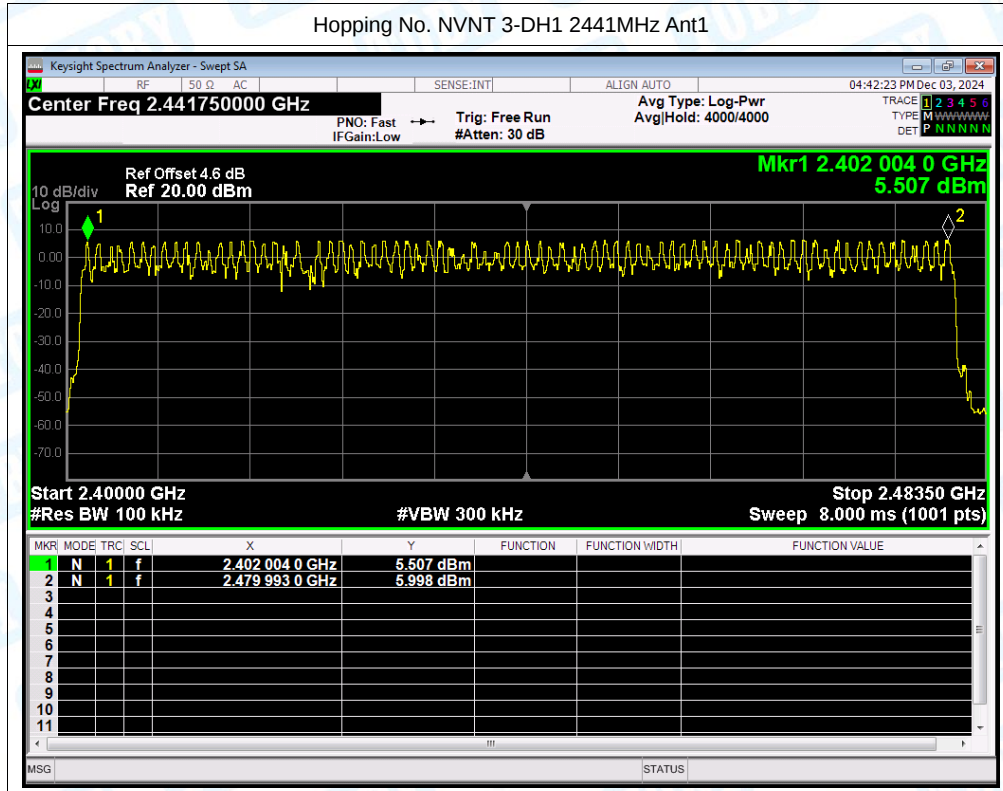
Test Graphs

Hopping No. NVNT 1-DH1 2441MHz Ant1



Hopping No. NVNT 2-DH1 2441MHz Ant1



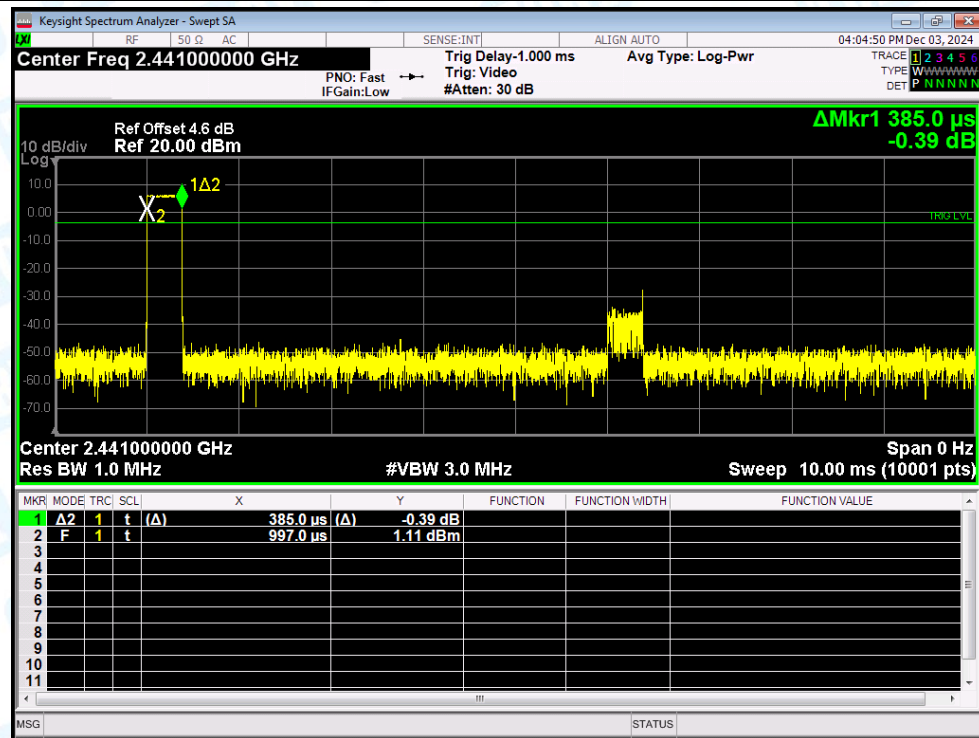


11. Dwell Time

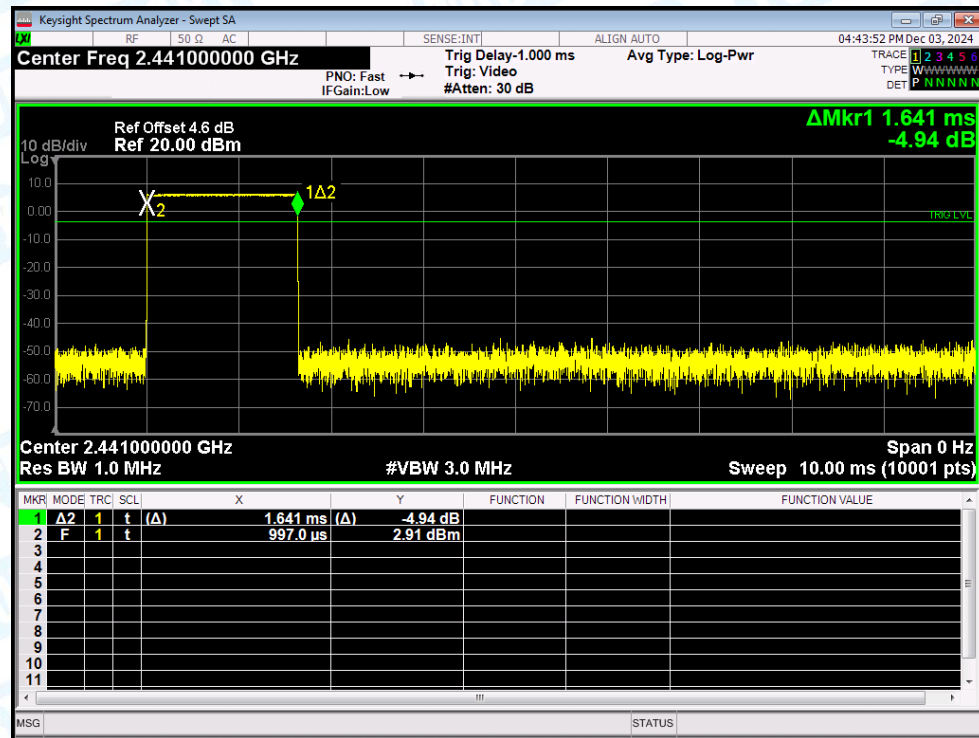
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH1	2441	Ant1	0.385	123.2	31600	400	Pass
NVNT	1-DH3	2441	Ant1	1.641	262.56	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.888	308.053	31600	400	Pass
NVNT	2-DH1	2441	Ant1	0.395	126.4	31600	400	Pass
NVNT	2-DH3	2441	Ant1	1.647	263.52	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.894	308.693	31600	400	Pass
NVNT	3-DH1	2441	Ant1	0.395	126.4	31600	400	Pass
NVNT	3-DH3	2441	Ant1	1.645	263.2	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.896	308.907	31600	400	Pass

Test Graphs

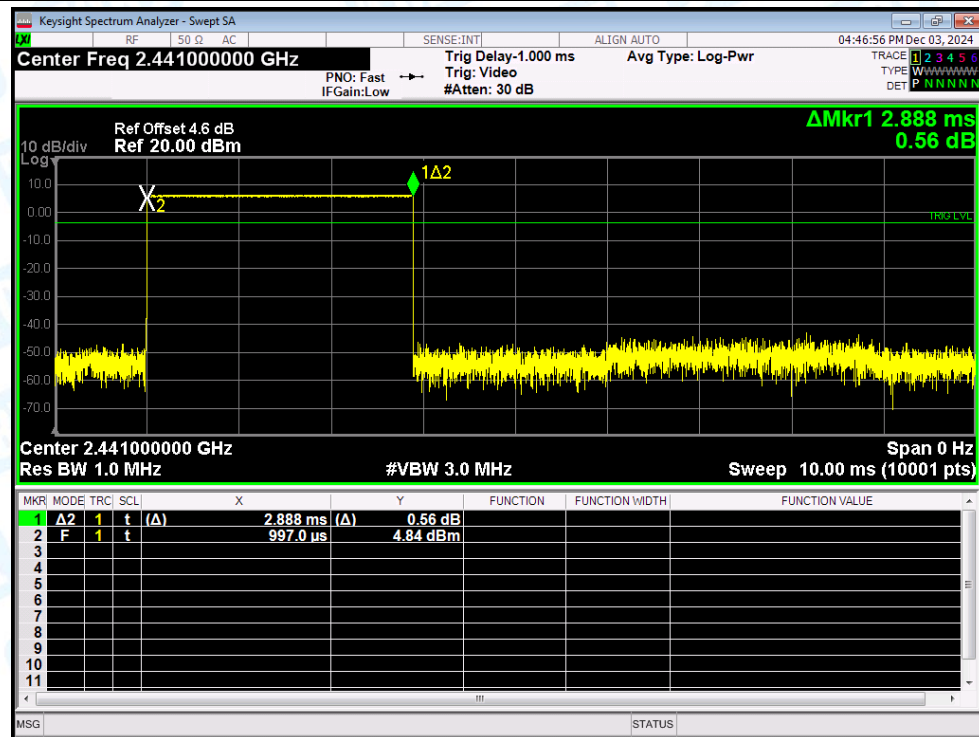
Dwell NVNT 1-DH1 2441MHz Ant1



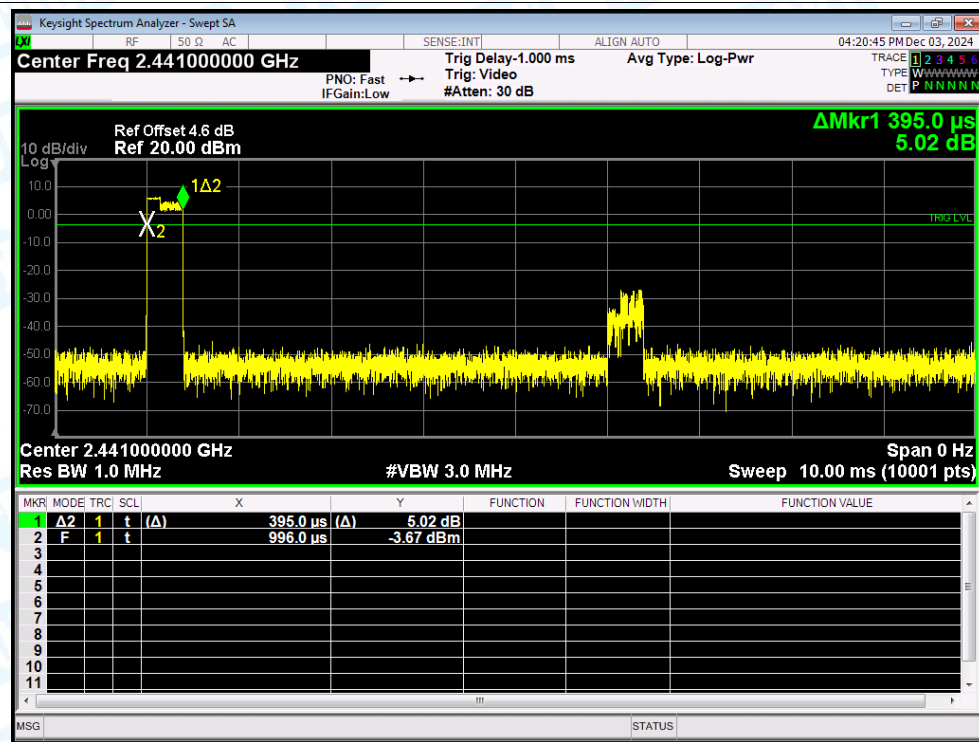
Dwell NVNT 1-DH3 2441MHz Ant1



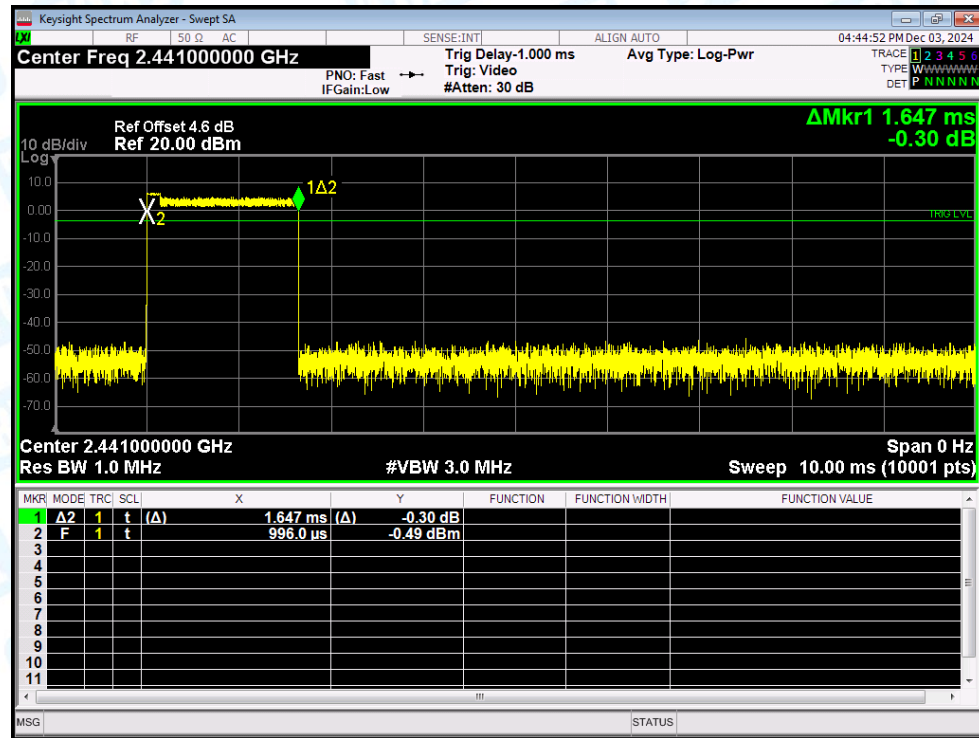
Dwell NVNT 1-DH5 2441MHz Ant1



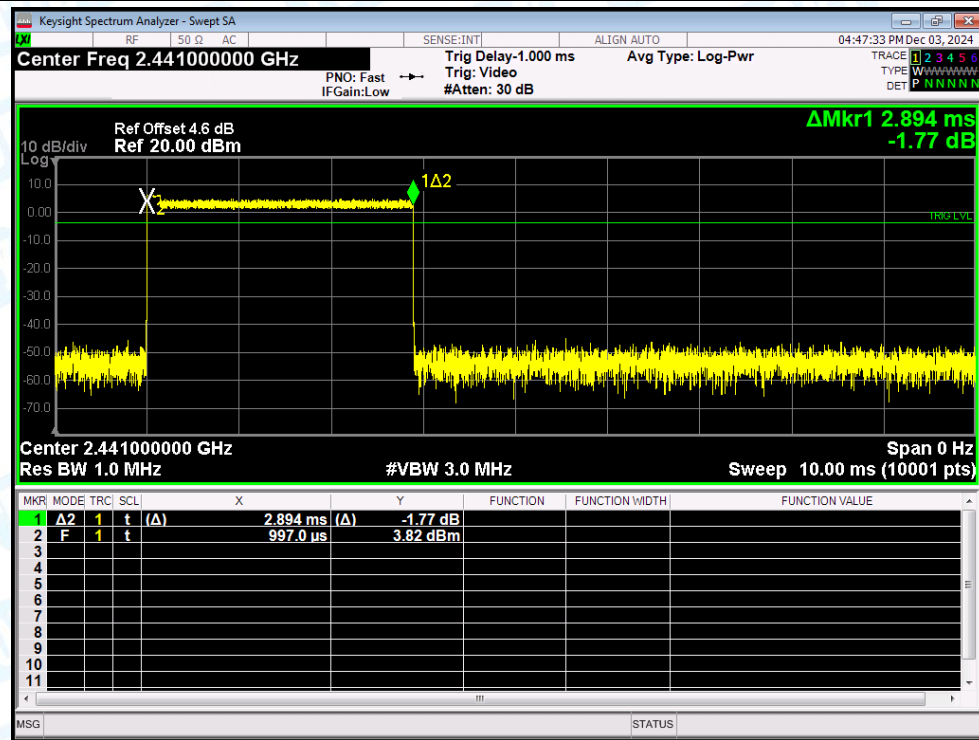
Dwell NVNT 2-DH1 2441MHz Ant1



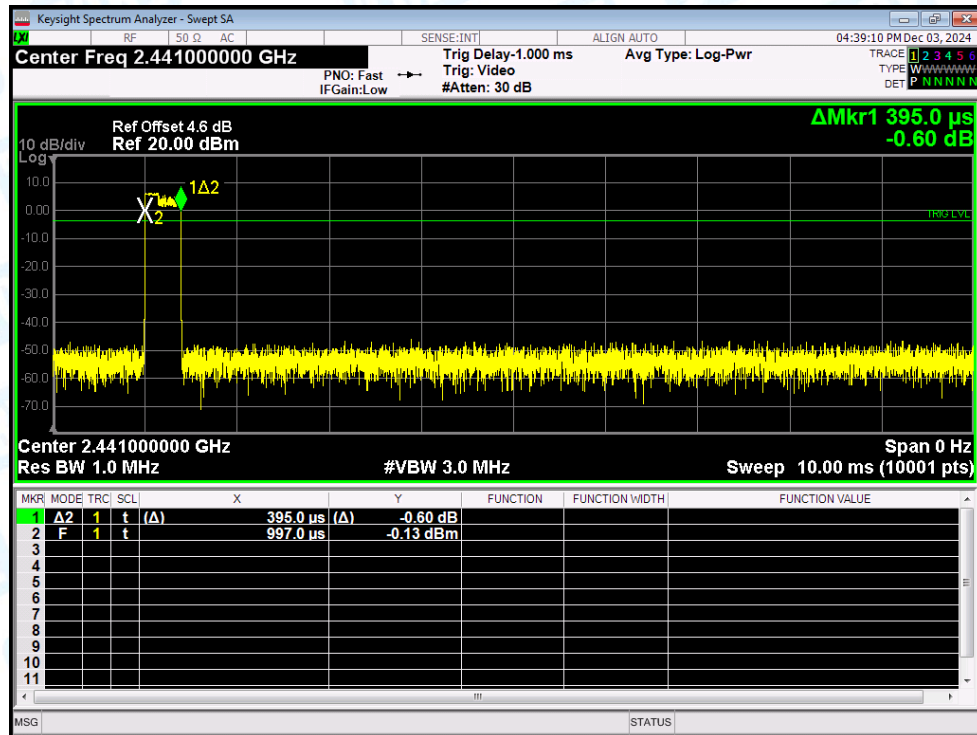
Dwell NVNT 2-DH3 2441MHz Ant1



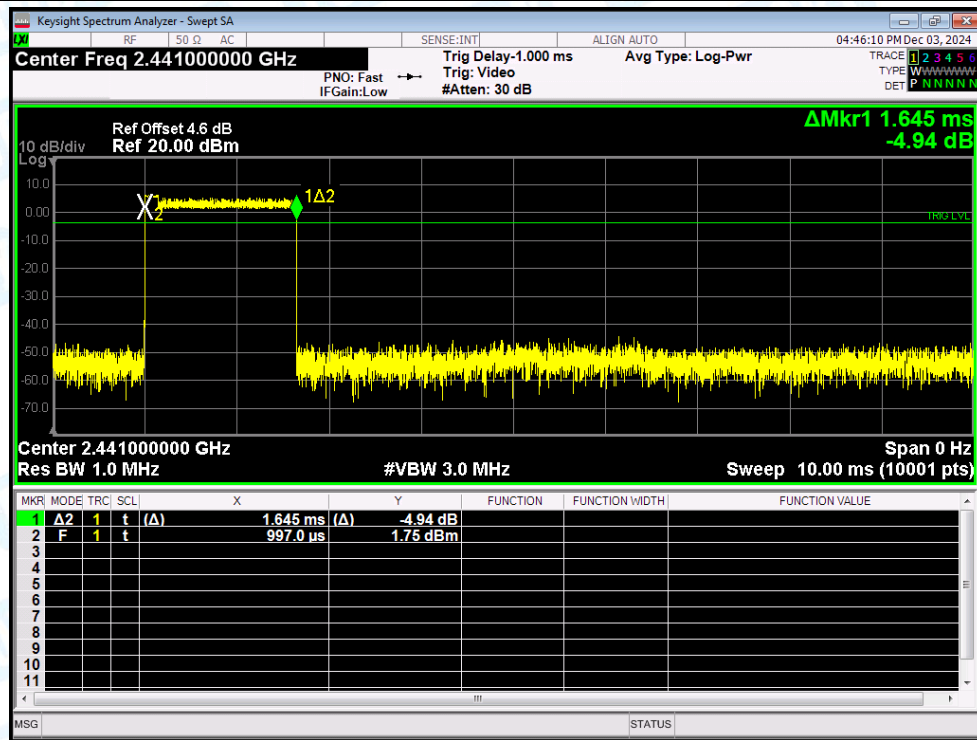
Dwell NVNT 2-DH5 2441MHz Ant1

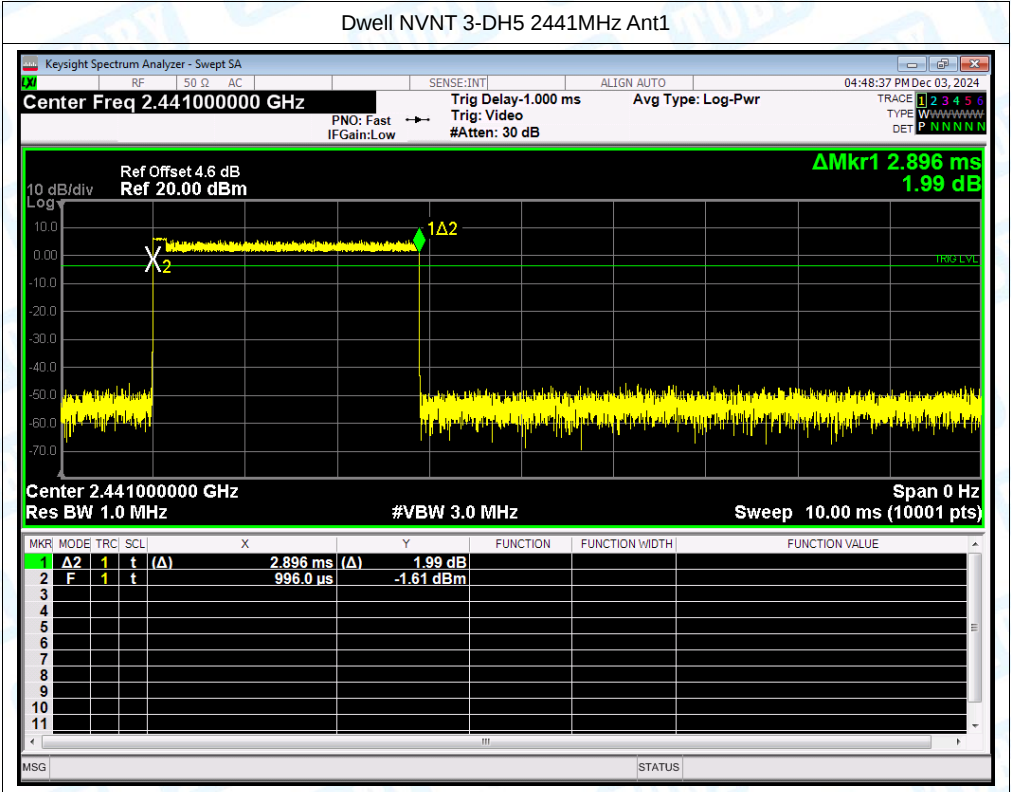


Dwell NVNT 3-DH1 2441MHz Ant1



Dwell NVNT 3-DH3 2441MHz Ant1





--- END OF REPORT ---