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FCC_BT(Part15.247) Test Data

1.Dwell Time

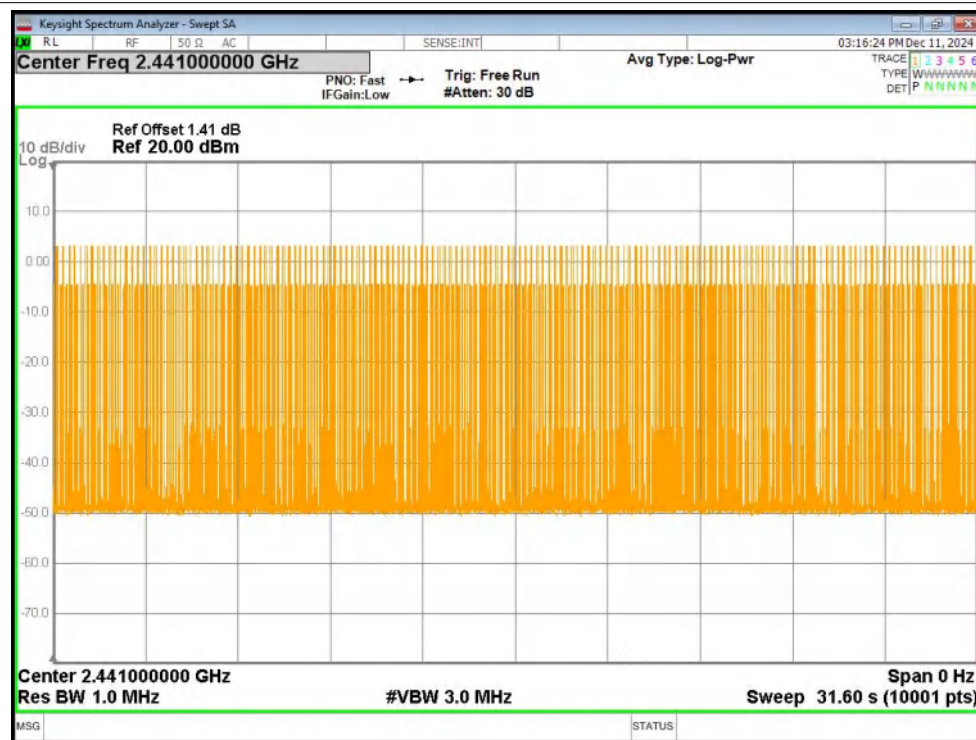
Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
1-DH1	2441	Ant1	0.397	125.849	317	31600	400	Pass
1-DH3	2441	Ant1	1.655	259.835	157	31600	400	Pass
1-DH5	2441	Ant1	2.902	319.22	110	31600	400	Pass
2-DH1	2441	Ant1	0.409	129.244	316	31600	400	Pass
2-DH3	2441	Ant1	1.639	263.879	161	31600	400	Pass
2-DH5	2441	Ant1	2.909	346.171	119	31600	400	Pass
3-DH1	2441	Ant1	0.408	128.928	316	31600	400	Pass
3-DH3	2441	Ant1	1.658	253.674	153	31600	400	Pass
3-DH5	2441	Ant1	2.909	305.445	105	31600	400	Pass

Test Graphs

Dwell NVNT 1-DH1 2441MHz Ant1 One Burst



Dwell NVNT 1-DH1 2441MHz Ant1 Accumulated



The screenshot displays a Keysight Spectrum Analyzer interface. The main plot shows a signal trace with two points of interest marked by orange diamonds and labeled Δ2. A horizontal green line indicates the TRIG LVL at approximately -10 dBm. The top status bar shows the center frequency as 2.441000000 GHz, resolution bandwidth as 1.0 MHz, and sweep time as 10.00 ms. The bottom status bar shows the reference offset as 1.41 dB and reference power as 20.00 dBm.

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	Δ2	F	t	(Δ)	1.655 ms (Δ)			0.16 dB
2			t		497.0 μs			-4.69 dBm

Keysight Spectrum Analyzer - Swept SA

RL RF 50 Ω AC SENSE:INT 03:17:21 PM Dec 11, 2024

Center Freq 2.441000000 GHz Avg Type: Log-Pwr

PNO: Fast IFGain:Low Trig: Free Run #Atten: 30 dB

TRACE 1 2 3 4 5 6
TYPE W W W W W W W W
DET P P P P P P P P

10 dB/div
Log

Ref Offset 1.41 dB
Ref 20.00 dBm

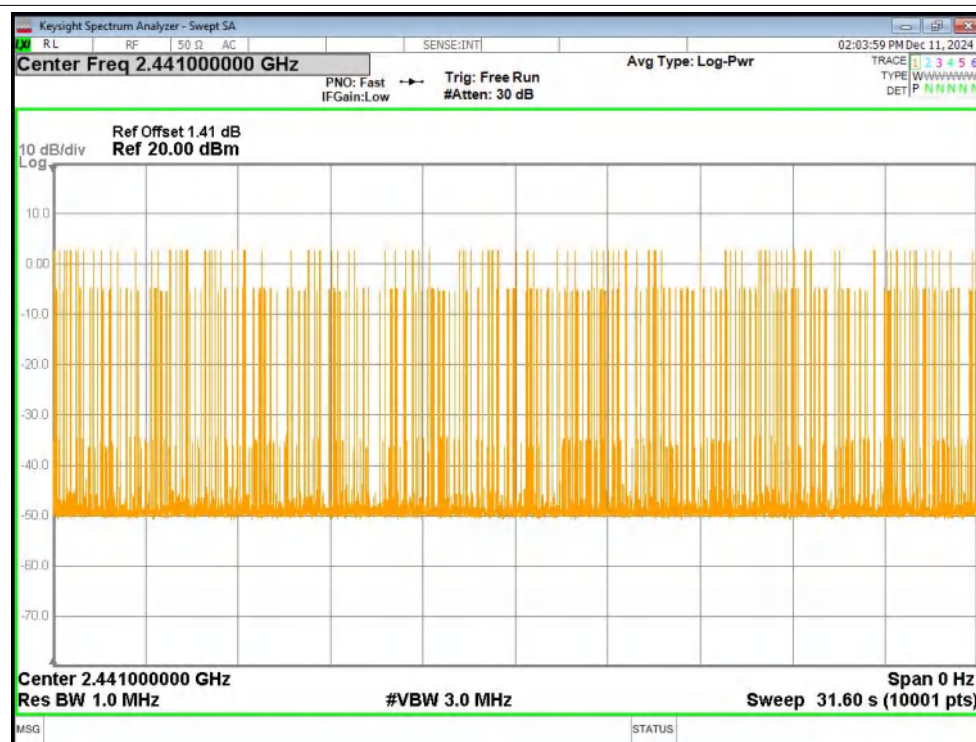
Center 2.441000000 GHz Span 0 Hz
Res BW 1.0 MHz #VBW 3.0 MHz Sweep 31.60 s (10001 pts)

MSG STATUS

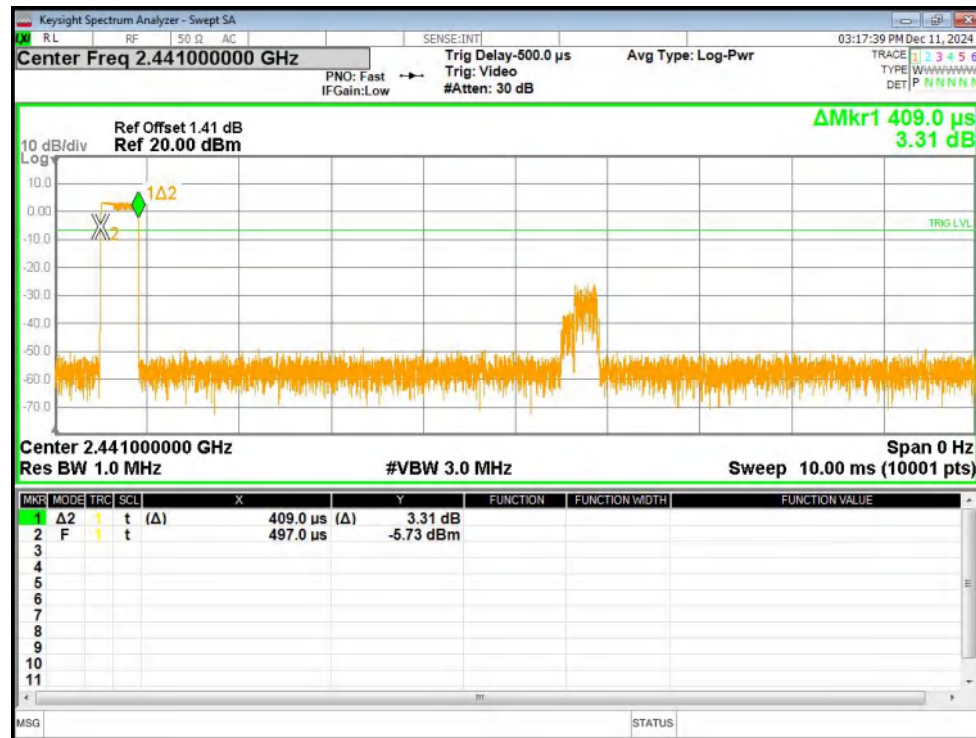
Dwell NVNT 1-DH5 2441MHz Ant1 One Burst



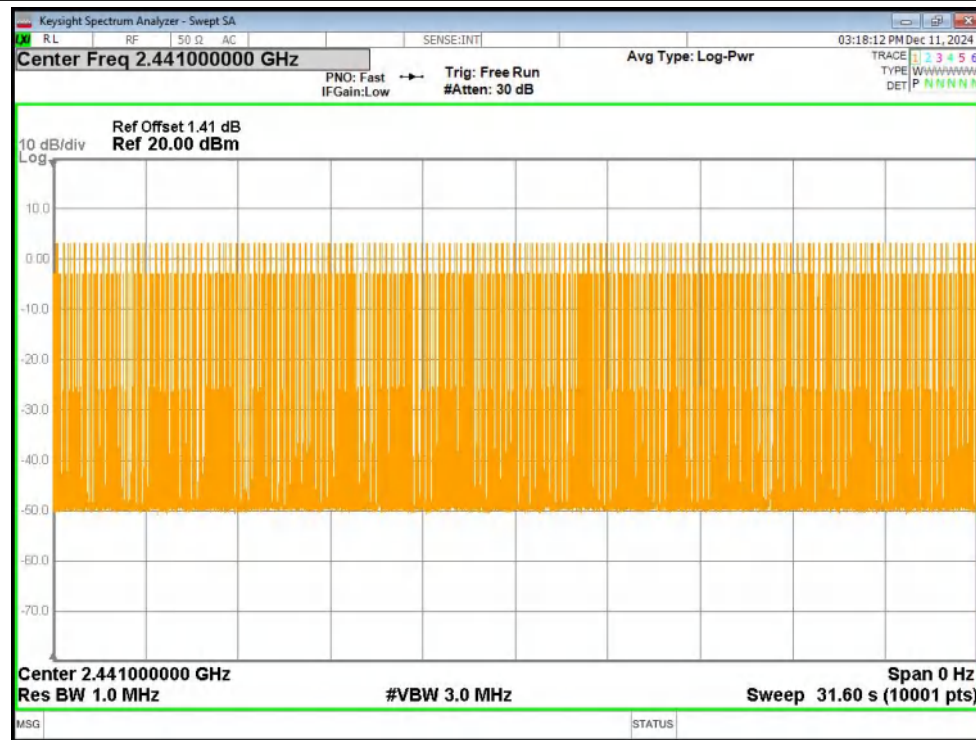
Dwell NVNT 1-DH5 2441MHz Ant1 Accumulated



Dwell NVNT 2-DH1 2441MHz Ant1 One Burst



Dwell NVNT 2-DH1 2441MHz Ant1 Accumulated



[illegible]

Keysight Spectrum Analyzer - Swept SA

03:19:31 PM Dec 11, 2024

Center Freq 2.441000000 GHz

PNO: Fast IFGain: Low Trig: Free Run #Atten: 30 dB

Avg Type: Log-Pwr

TRACE 1 2 3 4 5 6

TYPE W W W W W W W W

DET P P P P P P P P

10 dB/div Log

Ref Offset 1.41 dB

Ref 20.00 dBm

Center 2.441000000 GHz

Res BW 1.0 MHz

#VBW 3.0 MHz

Span 0 Hz

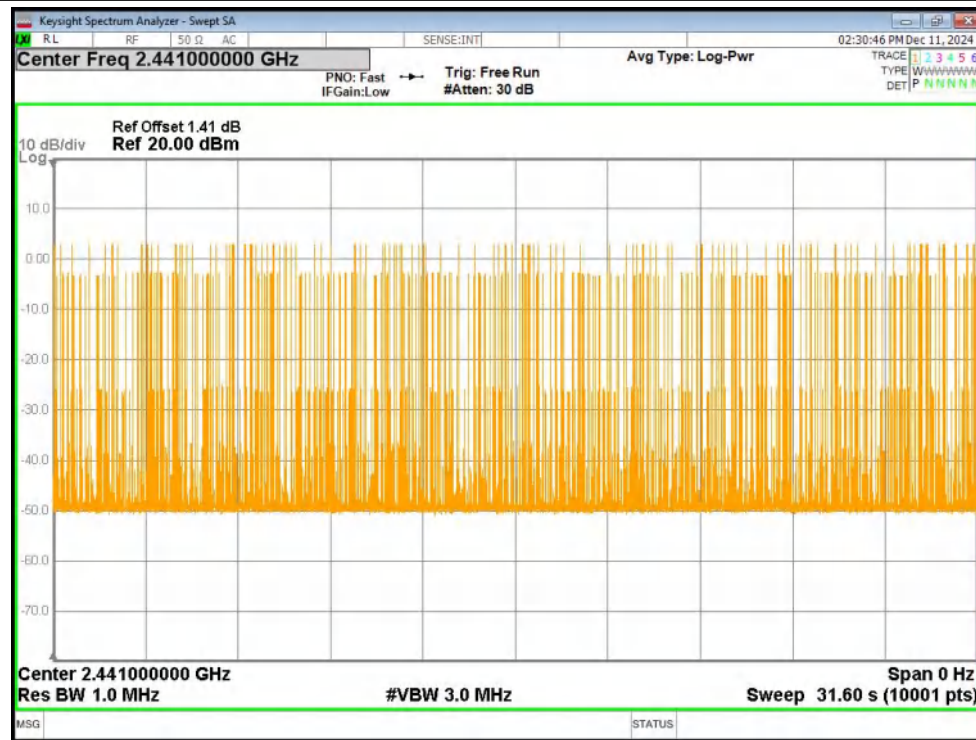
Sweep 31.60 s (10001 pts)

MSG STATUS

Dwell NVNT 2-DH5 2441MHz Ant1 One Burst



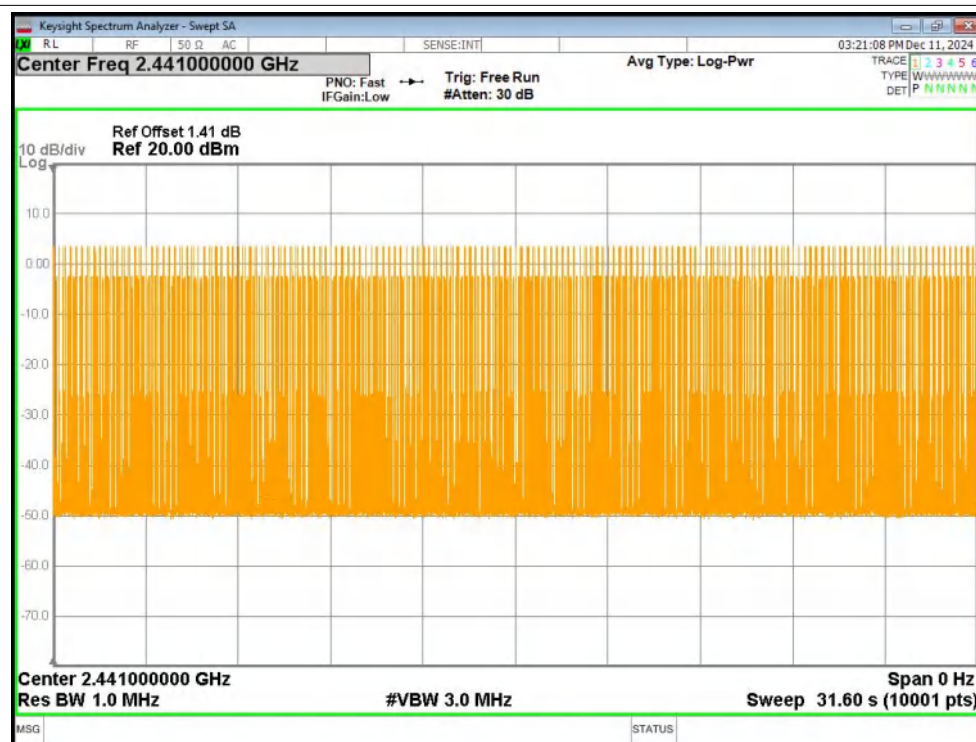
Dwell NVNT 2-DH5 2441MHz Ant1 Accumulated



Dwell NVNT 3-DH1 2441MHz Ant1 One Burst



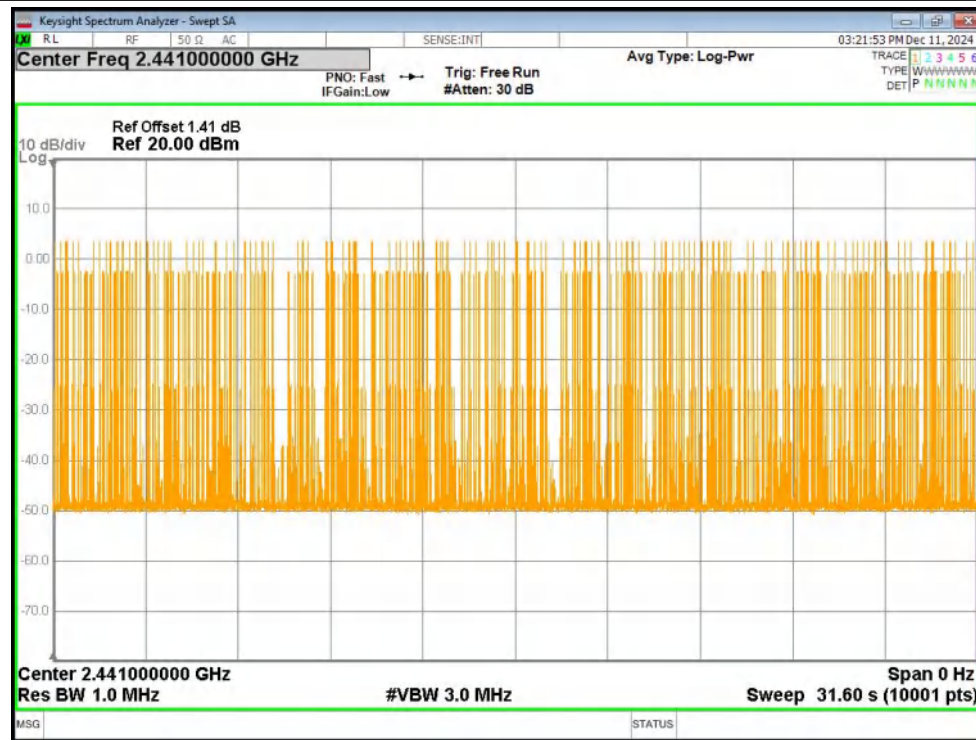
Dwell NVNT 3-DH1 2441MHz Ant1 Accumulated



Dwell NVNT 3-DH3 2441MHz Ant1 One Burst



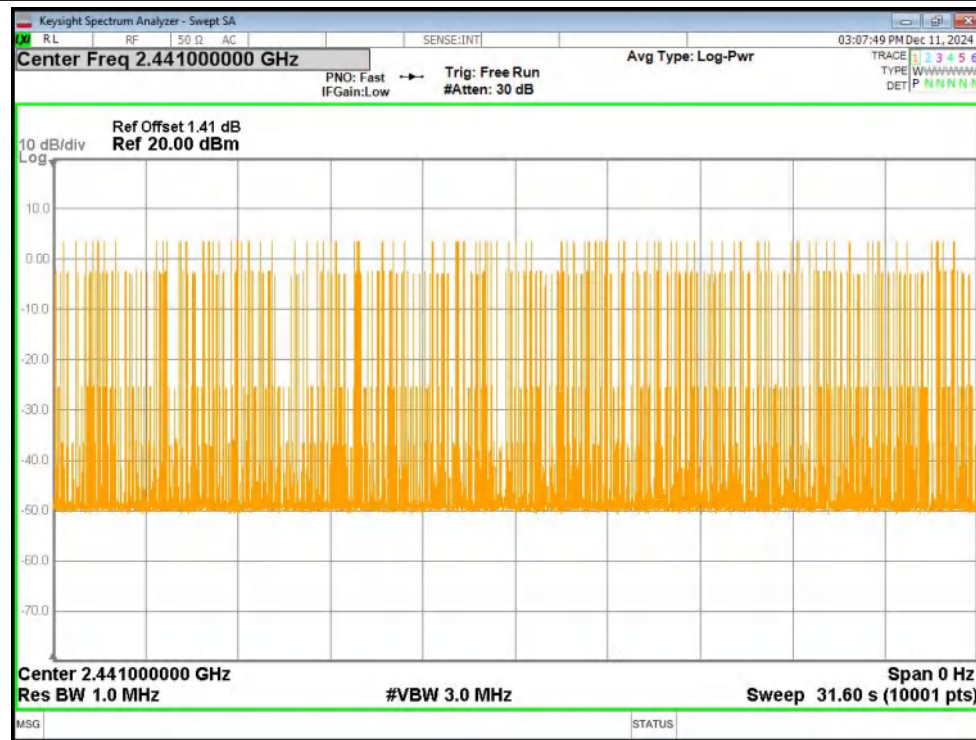
Dwell NVNT 3-DH3 2441MHz Ant1 Accumulated



Dwell NVNT 3-DH5 2441MHz Ant1 One Burst



Dwell NVNT 3-DH5 2441MHz Ant1 Accumulated

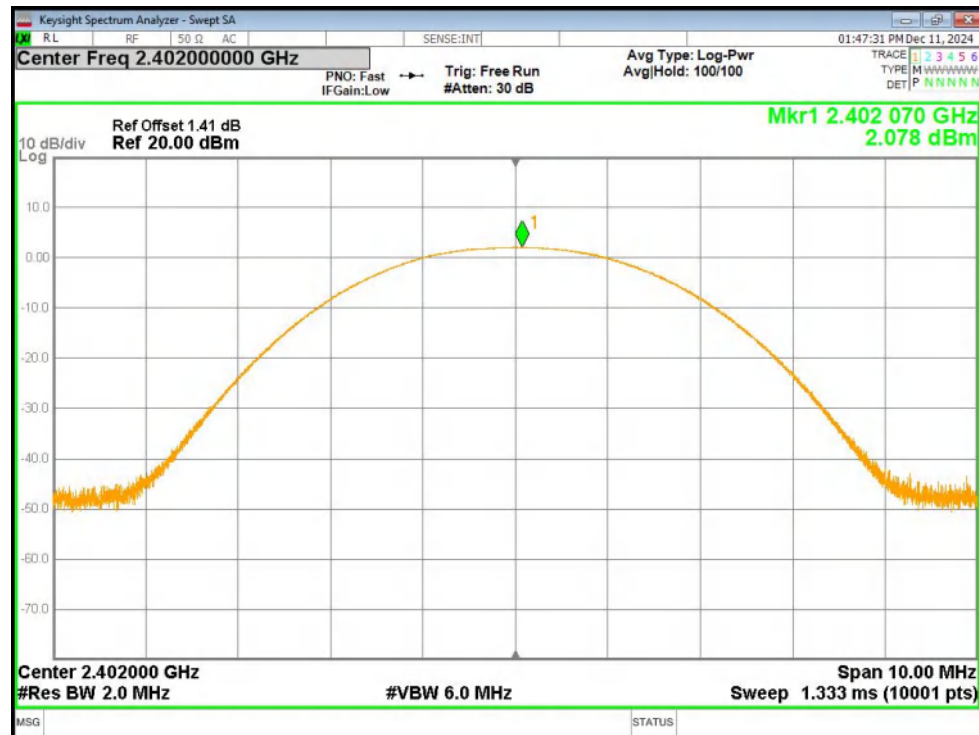


2.Maximum Peak Conducted Output Power

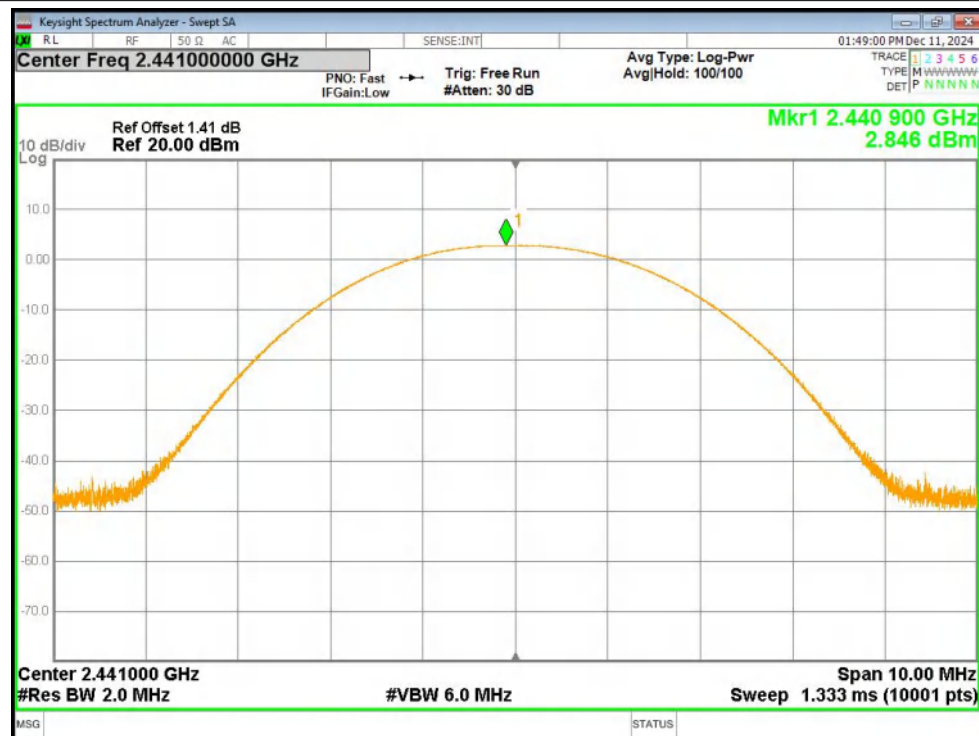
Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
1-DH5	2402	Ant1	2.08	21	Pass
1-DH5	2441	Ant1	2.85	21	Pass
1-DH5	2480	Ant1	1.96	21	Pass
2-DH5	2402	Ant1	2.34	21	Pass
2-DH5	2441	Ant1	3.22	21	Pass
2-DH5	2480	Ant1	2.44	21	Pass
3-DH5	2402	Ant1	2.58	21	Pass
3-DH5	2441	Ant1	3.54	21	Pass
3-DH5	2480	Ant1	2.79	21	Pass

Test Graphs

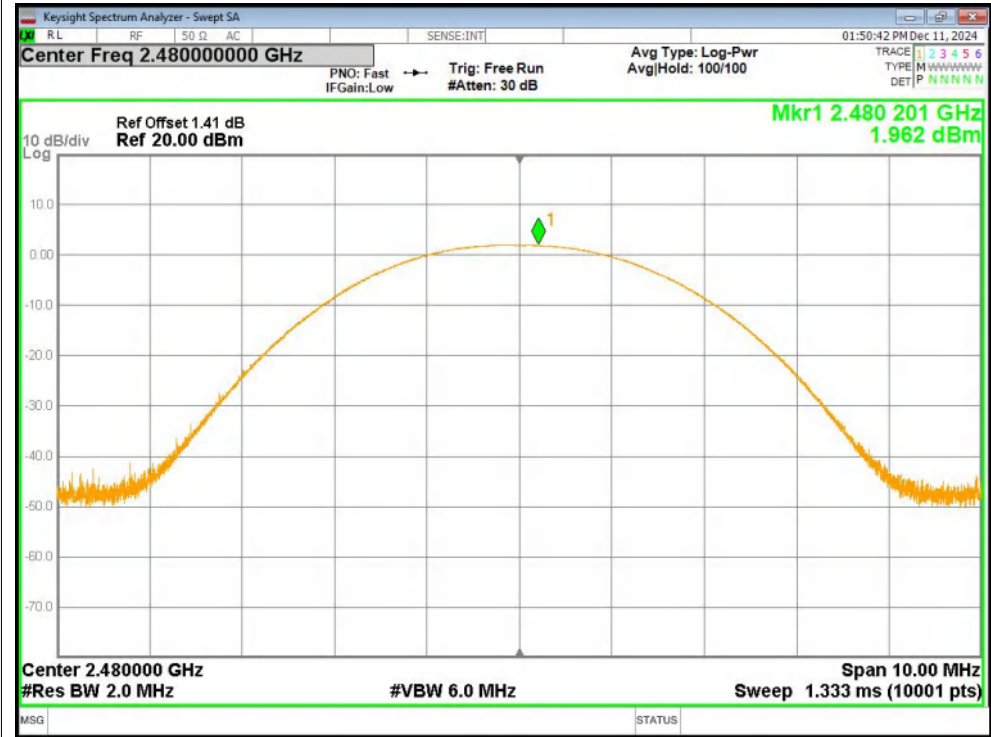
Peak Power NVNT 1-DH5 2402MHz Ant1



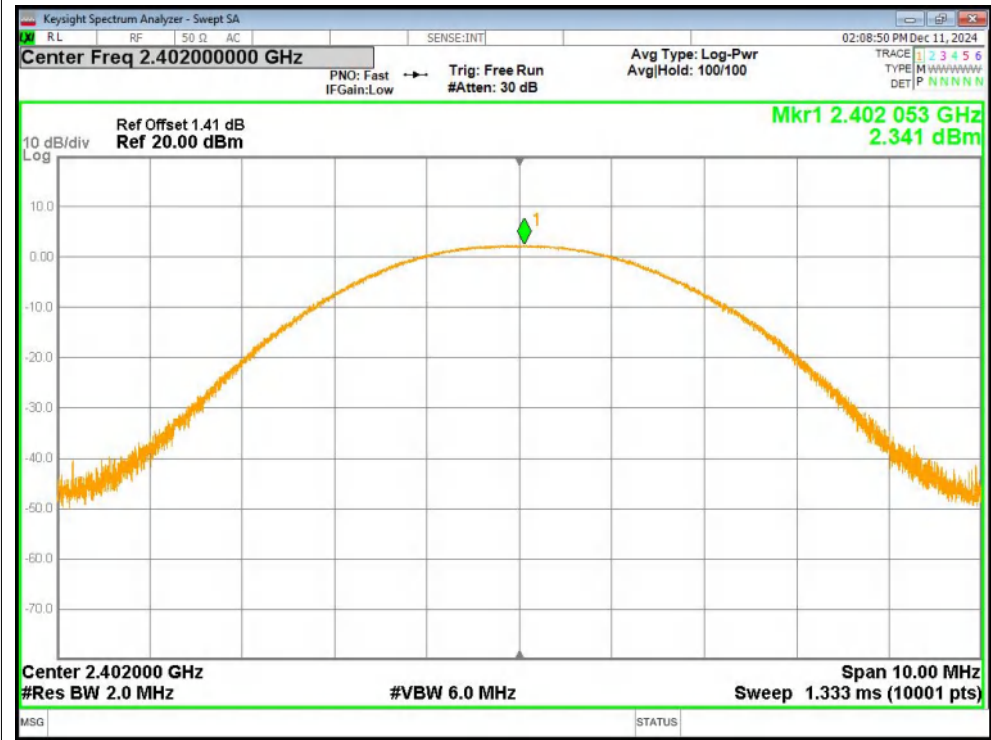
Peak Power NVNT 1-DH5 2441MHz Ant1



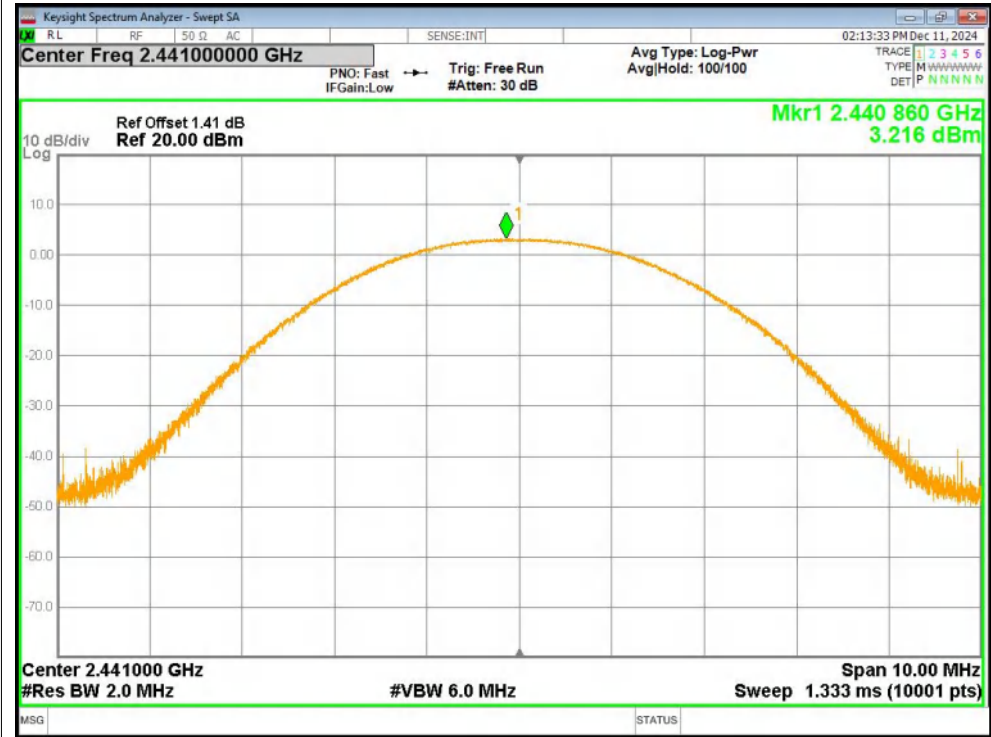
Peak Power NVNT 1-DH5 2480MHz Ant1



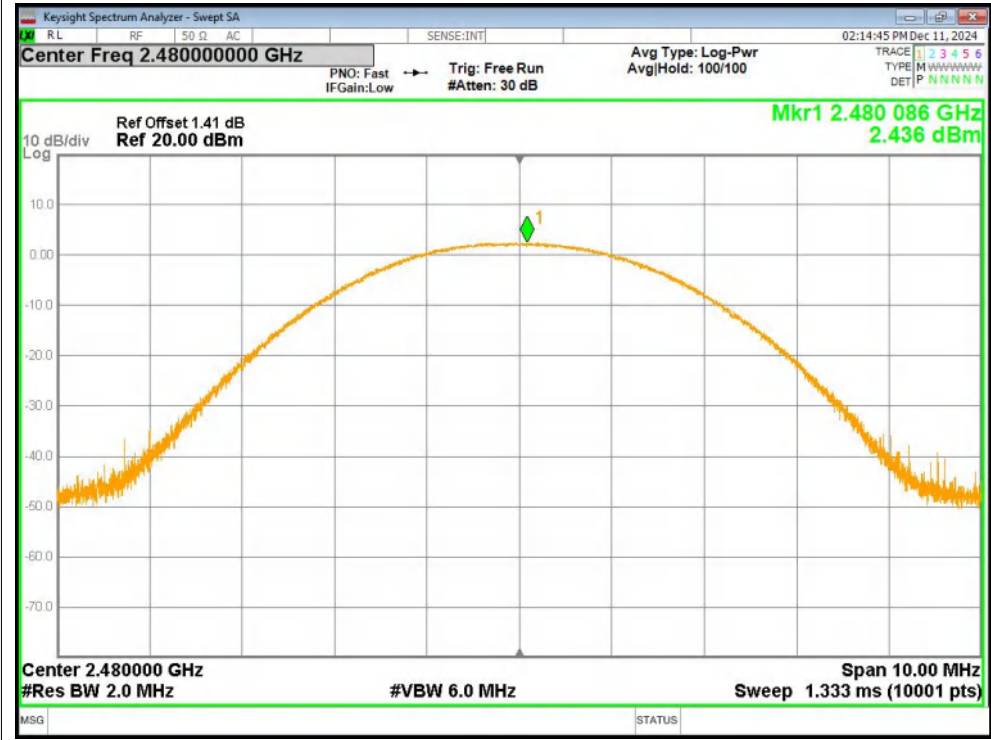
Peak Power NVNT 2-DH5 2402MHz Ant1



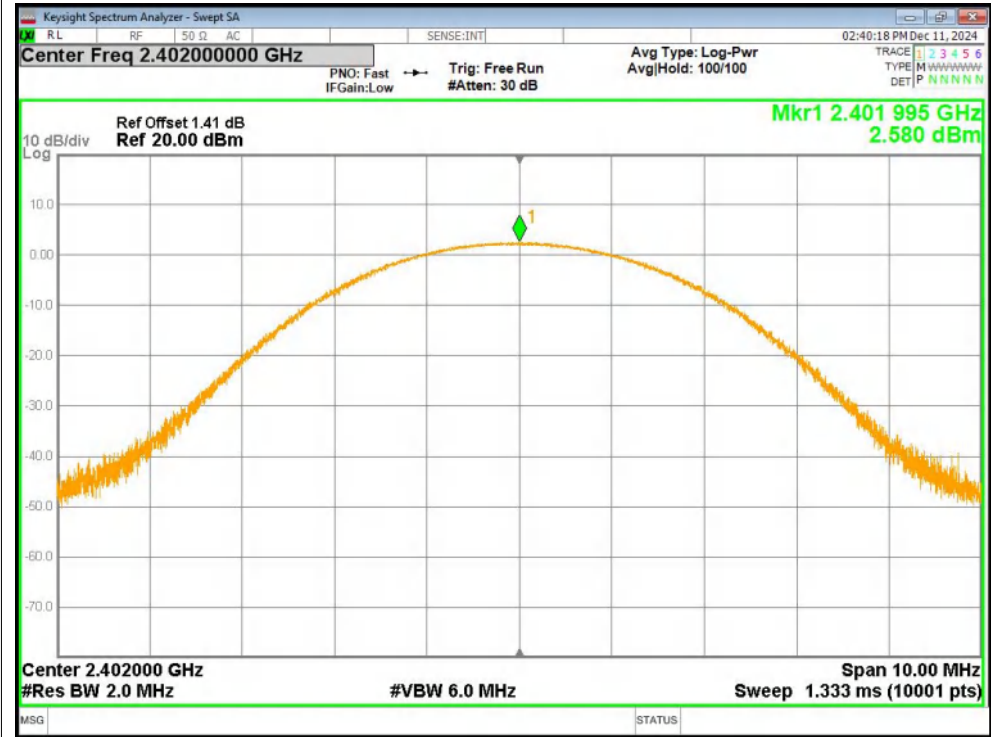
Peak Power NVNT 2-DH5 2441MHz Ant1



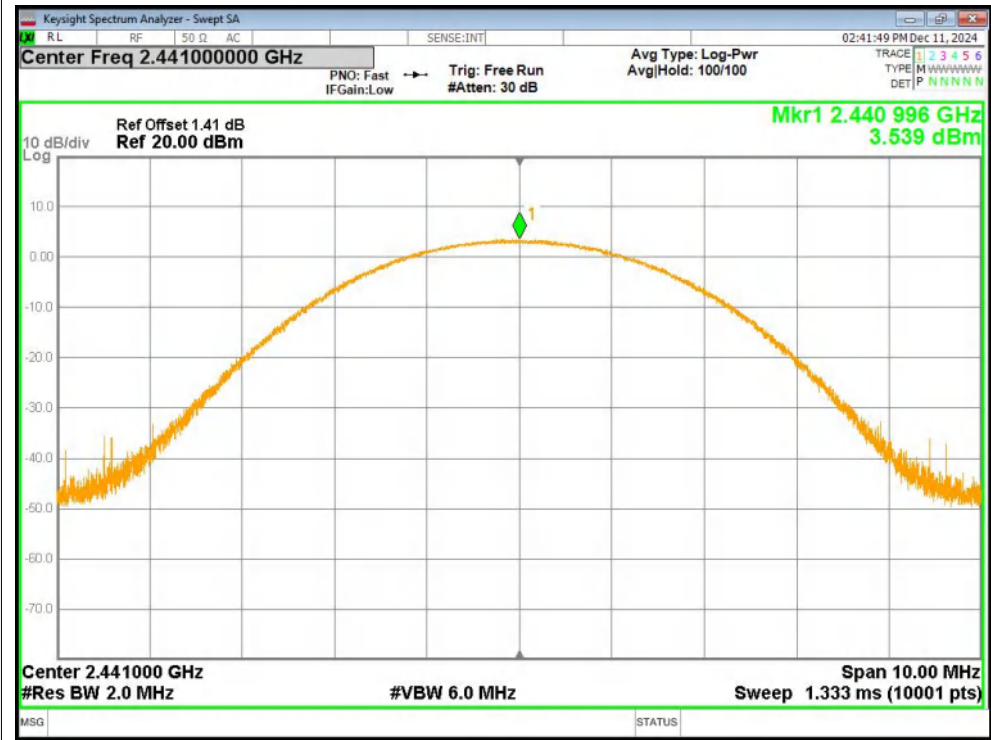
Peak Power NVNT 2-DH5 2480MHz Ant1



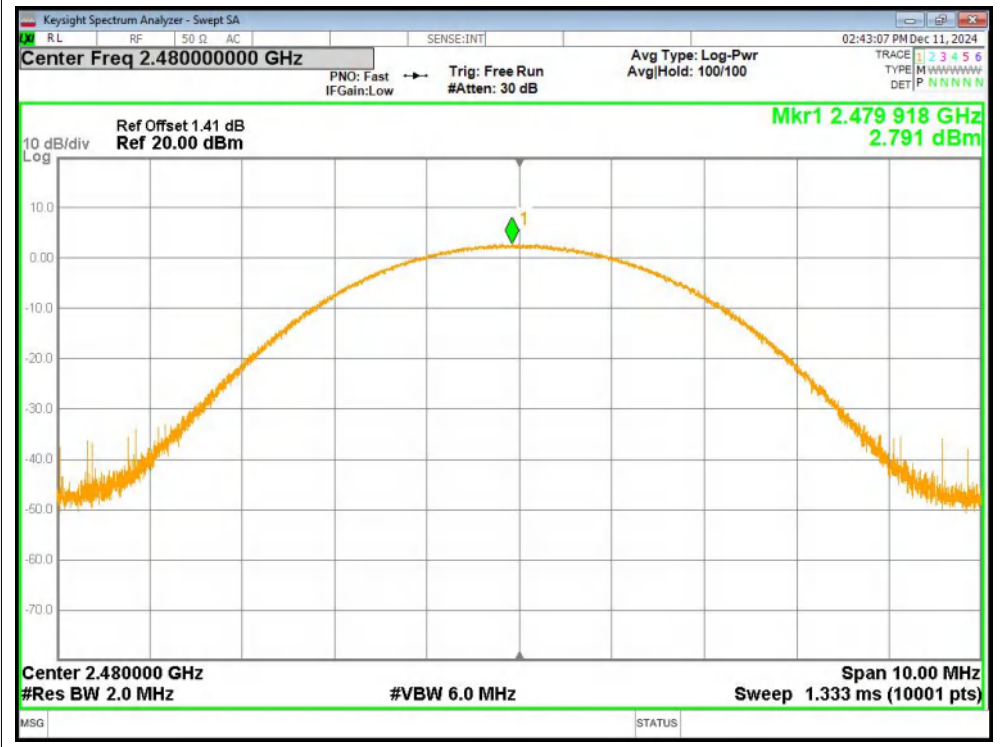
Peak Power NVNT 3-DH5 2402MHz Ant1



Peak Power NVNT 3-DH5 2441MHz Ant1



Peak Power NVNT 3-DH5 2480MHz Ant1

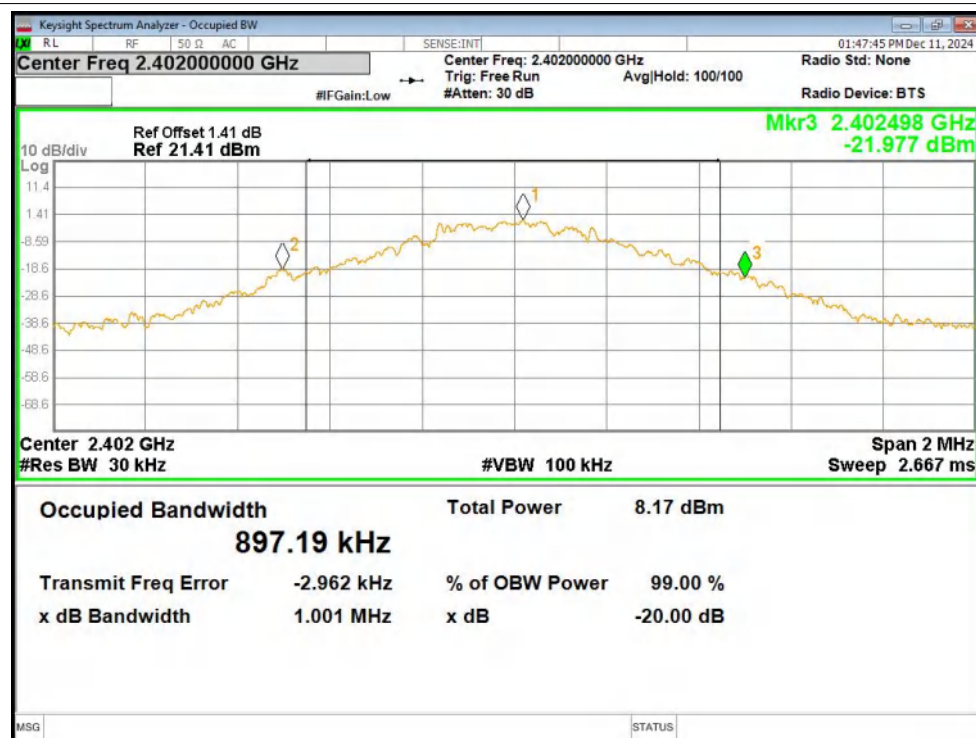


3.-20dB Bandwidth

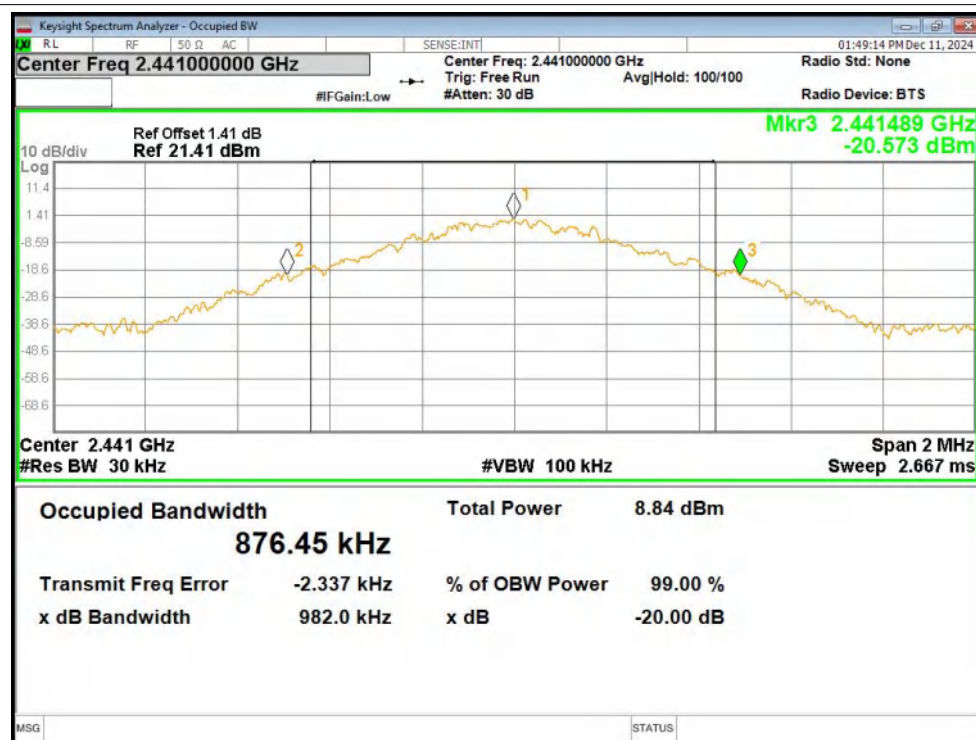
Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Verdict
1-DH5	2402	Ant1	1.001	Pass
1-DH5	2441	Ant1	0.982	Pass
1-DH5	2480	Ant1	0.951	Pass
2-DH5	2402	Ant1	1.283	Pass
2-DH5	2441	Ant1	1.327	Pass
2-DH5	2480	Ant1	1.28	Pass
3-DH5	2402	Ant1	1.318	Pass
3-DH5	2441	Ant1	1.311	Pass
3-DH5	2480	Ant1	1.297	Pass

Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1



-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1

Keysight Spectrum Analyzer - Occupied BW

RL RF 50 Ω AC SENSE:INT 01:50:56 PM Dec 11, 2024

Center Freq 2.480000000 GHz Center Freq: 2.480000000 GHz Radio Std: None
 Trig: Free Run Avg|Hold: 100/100
 #FGain:Low #Atten: 30 dB Radio Device: BTS

Ref Offset 1.41 dB
 Ref 21.41 dBm

**Mkr3 2.480474 GHz
 -19.395 dBm**

10 dB/div
 Log

Center 2.48 GHz Span 2 MHz
 #Res BW 30 kHz #VBW 100 kHz Sweep 2.667 ms

Occupied Bandwidth		Total Power	
880.36 kHz		7.96 dBm	
Transmit Freq Error	-1.168 kHz	% of OBW Power	99.00 %
x dB Bandwidth	950.9 kHz	x dB	-20.00 dB

MSG STATUS

Keysight Spectrum Analyzer - Occupied BW

02:09:04 PM Dec 11, 2024

Center Freq 2.402000000 GHz

Center Freq: 2.402000000 GHz
Trig: Free Run
Avg/Hold: 100/100

Radio Std: None

Radio Device: BTS

#FGain: Low

#Atten: 30 dB

Ref Offset 1.41 dB
Ref 21.41 dBm

Mkr3 2.40265 GHz
-19.781 dBm

Center 2.402 GHz
#Res BW 30 kHz

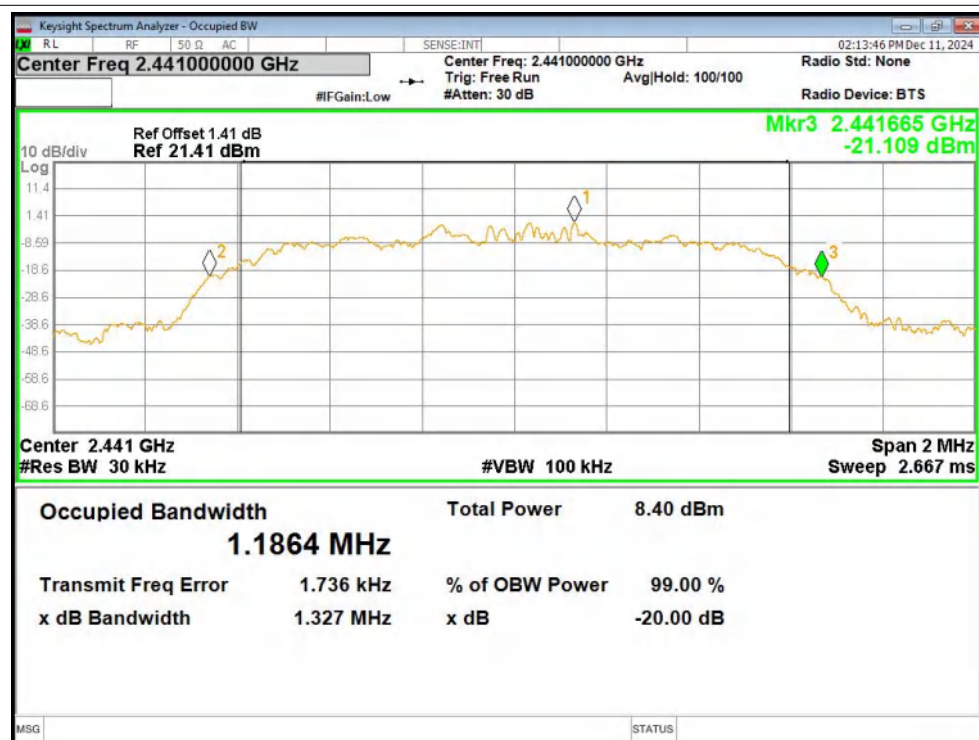
#VBW 100 kHz

Span 2 MHz
Sweep 2.667 ms

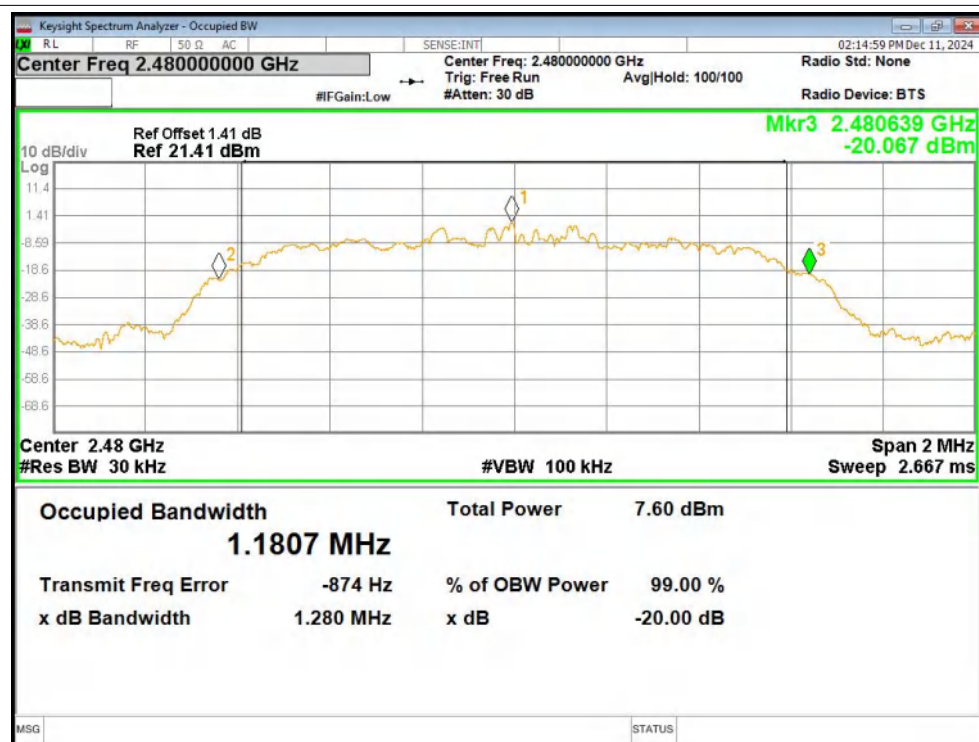
Occupied Bandwidth		Total Power	
1.2044 MHz		7.61 dBm	
Transmit Freq Error	8.755 kHz	% of OBW Power	99.00 %
x dB Bandwidth	1.283 MHz	x dB	-20.00 dB

MSG STATUS

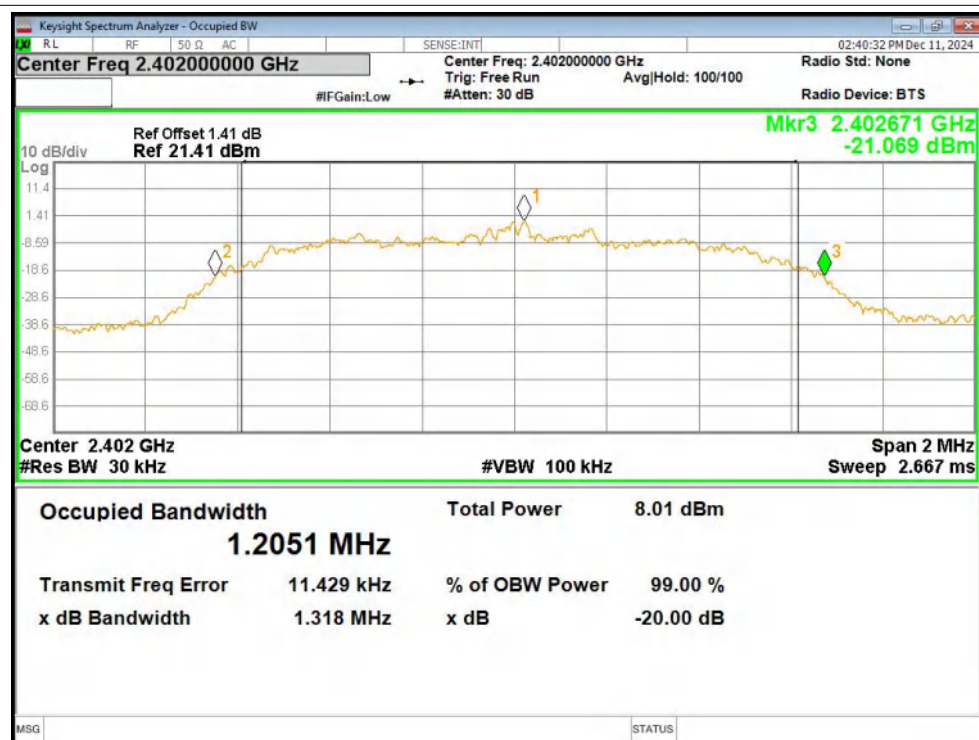
-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1



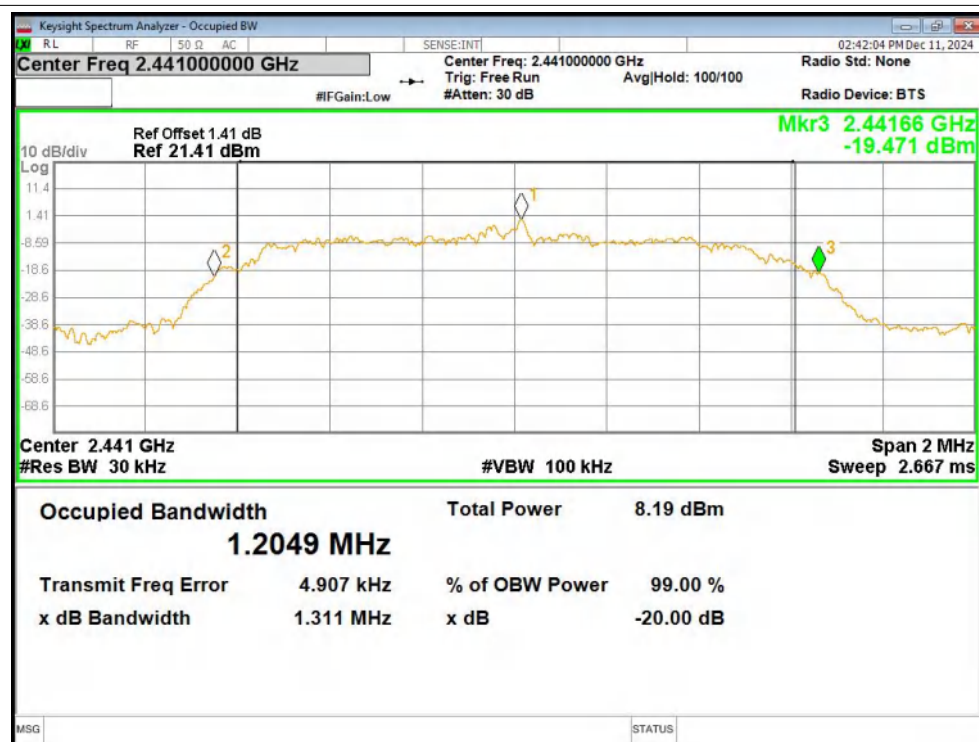
-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1



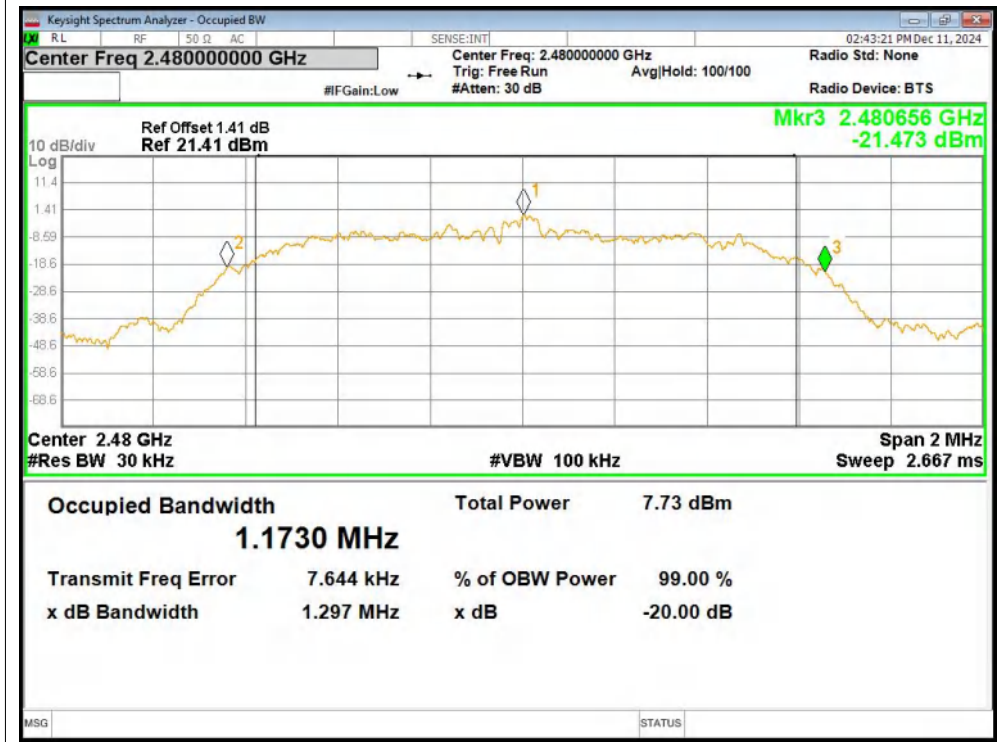
-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2480MHz Ant1

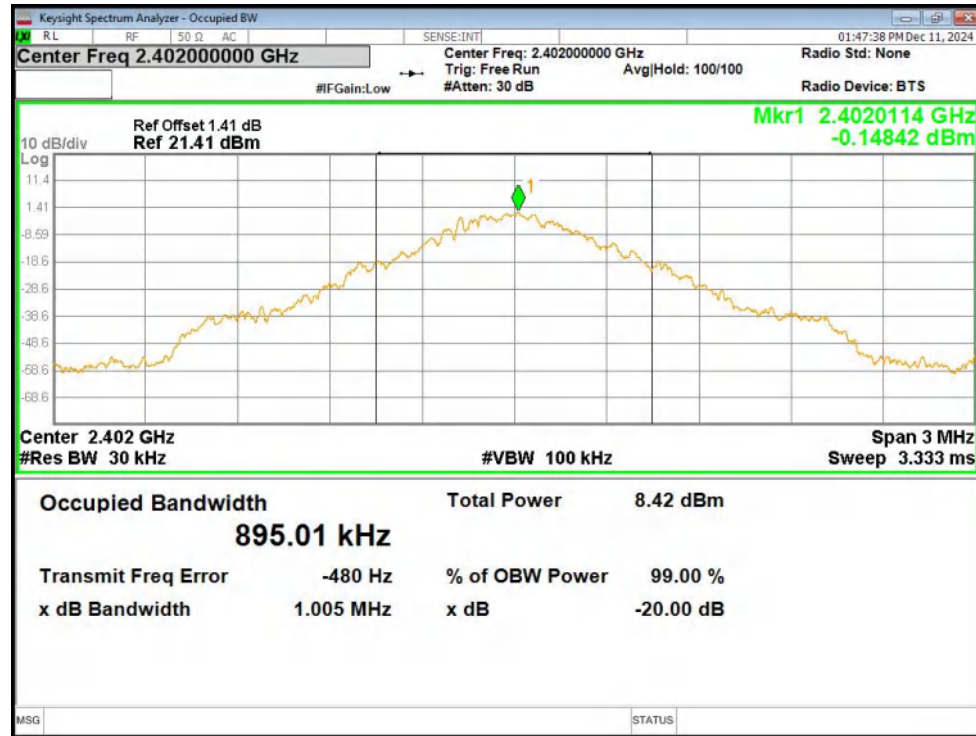


4.Occupied Channel Bandwidth

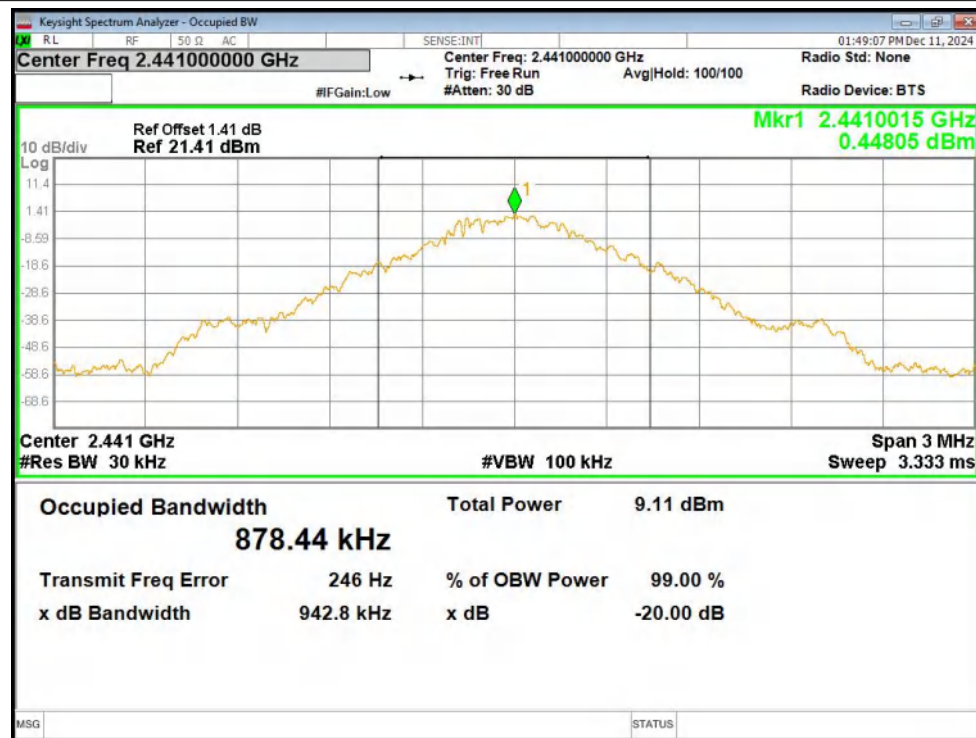
Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
1-DH5	2402	Ant1	0.895
1-DH5	2441	Ant1	0.878
1-DH5	2480	Ant1	0.872
2-DH5	2402	Ant1	1.208
2-DH5	2441	Ant1	1.19
2-DH5	2480	Ant1	1.191
3-DH5	2402	Ant1	1.222
3-DH5	2441	Ant1	1.189
3-DH5	2480	Ant1	1.184

Test Graphs

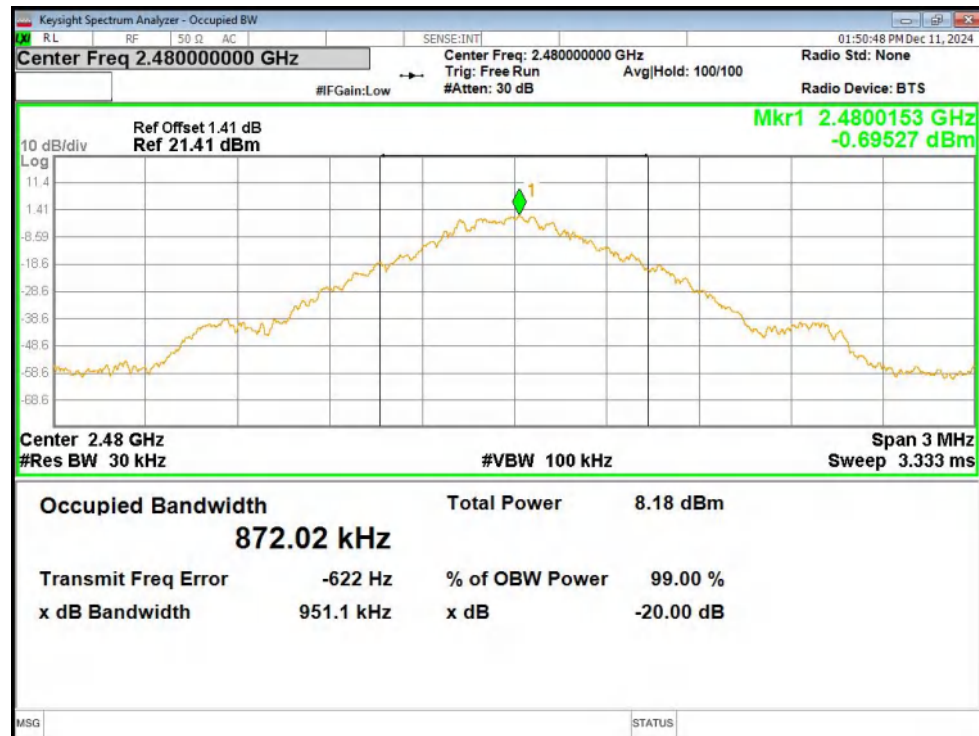
OBW NVNT 1-DH5 2402MHz Ant1



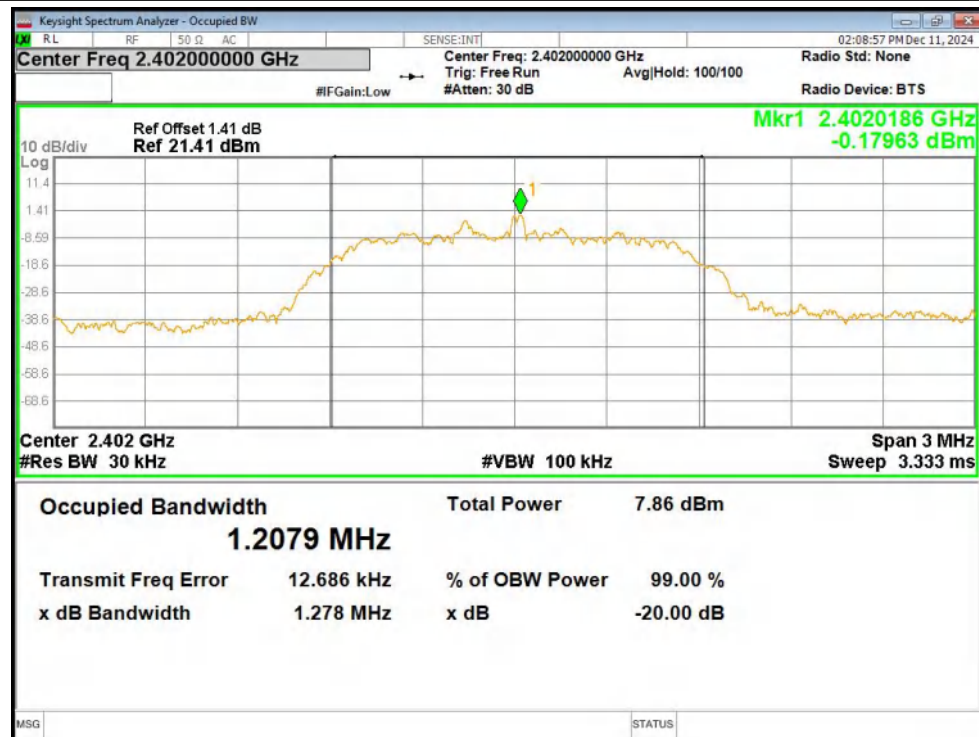
OBW NVNT 1-DH5 2441MHz Ant1



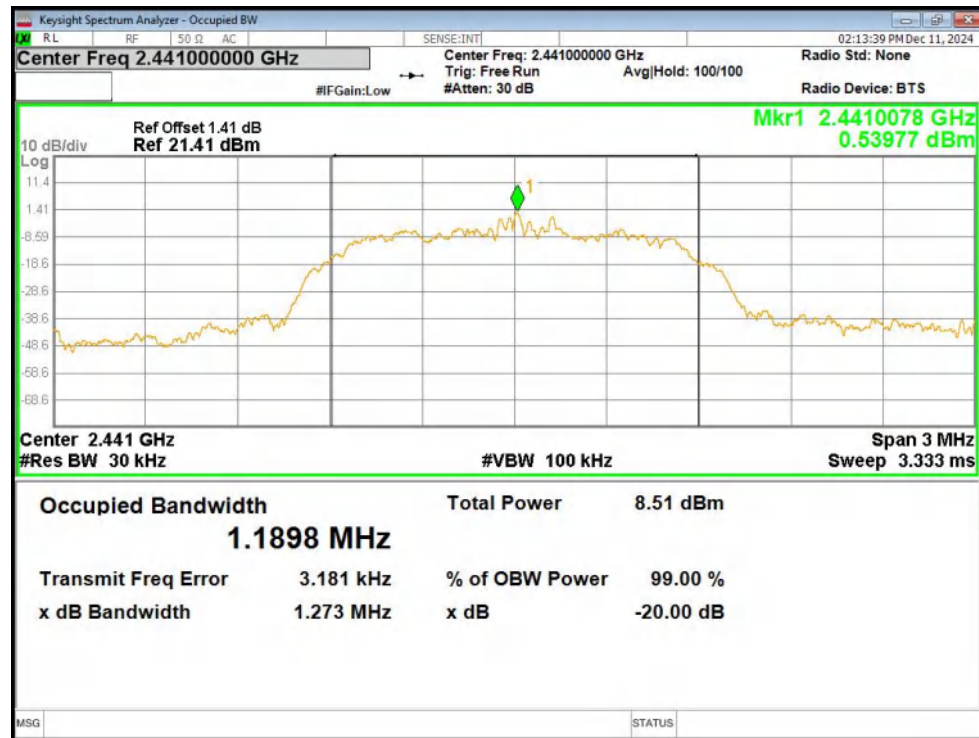
OBW NVNT 1-DH5 2480MHz Ant1



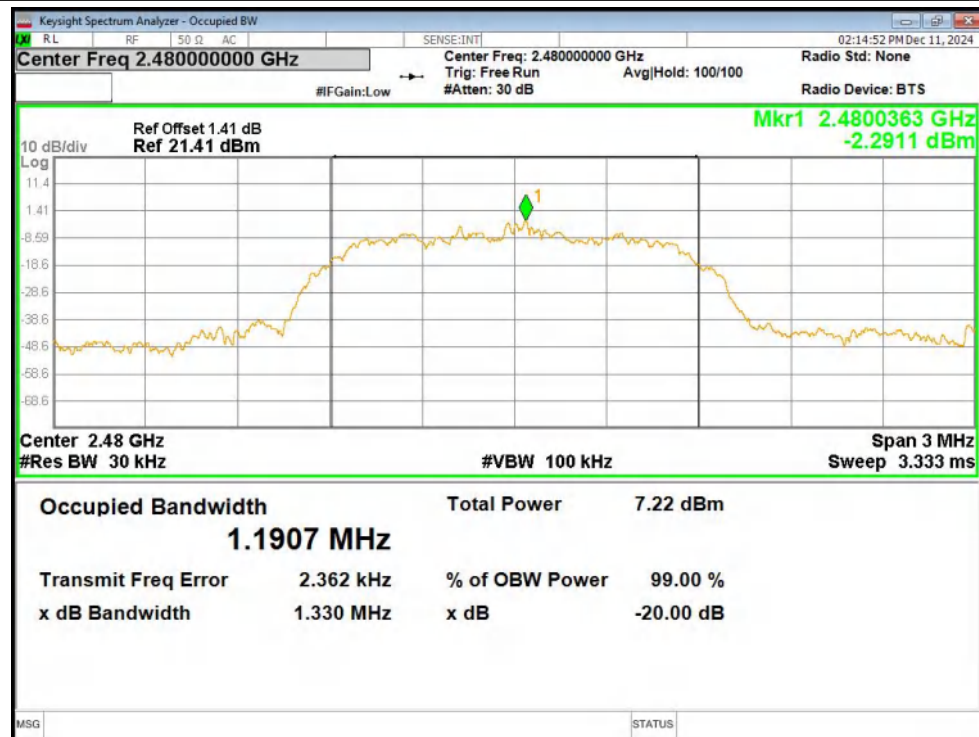
OBW NVNT 2-DH5 2402MHz Ant1



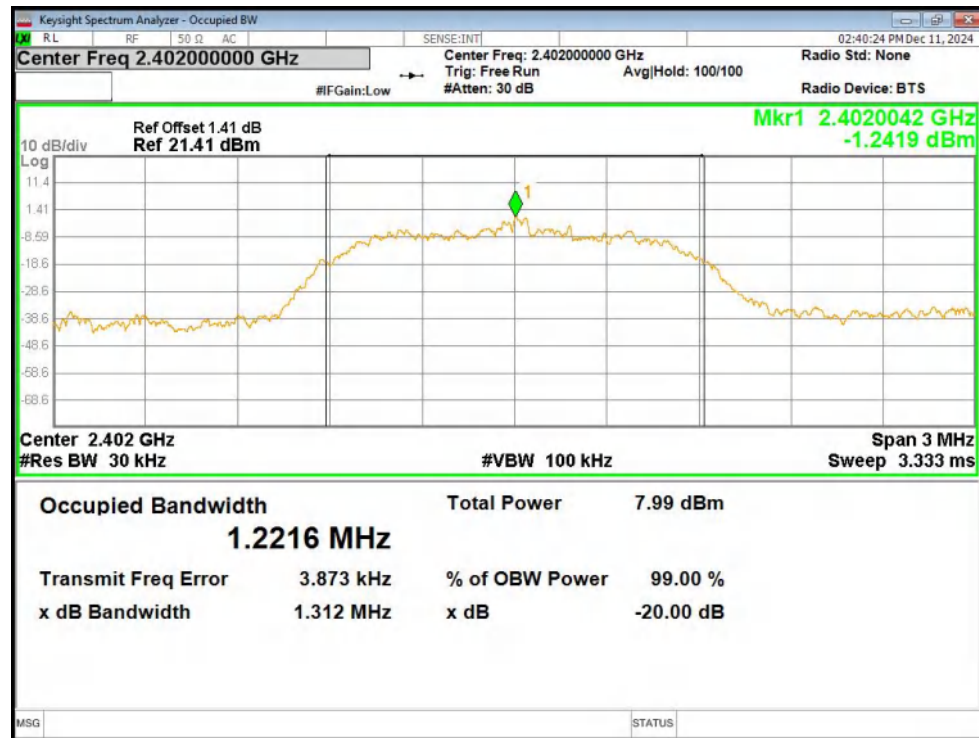
OBW NVNT 2-DH5 2441MHz Ant1



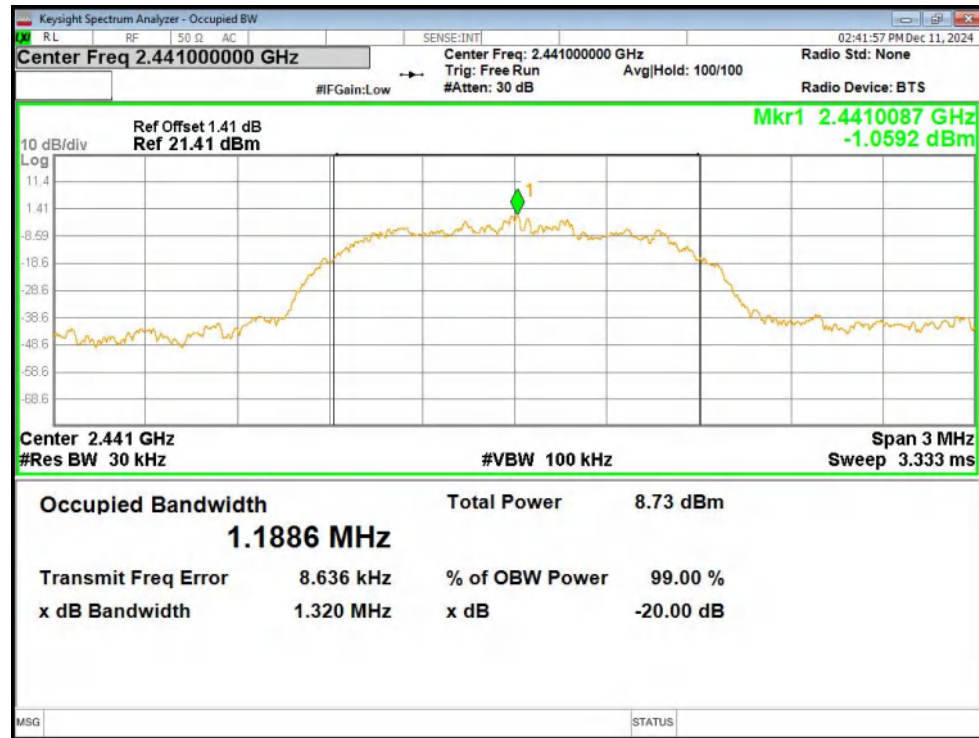
OBW NVNT 2-DH5 2480MHz Ant1



OBW NVNT 3-DH5 2402MHz Ant1



OBW NVNT 3-DH5 2441MHz Ant1



OBW NVNT 3-DH5 2480MHz Ant1

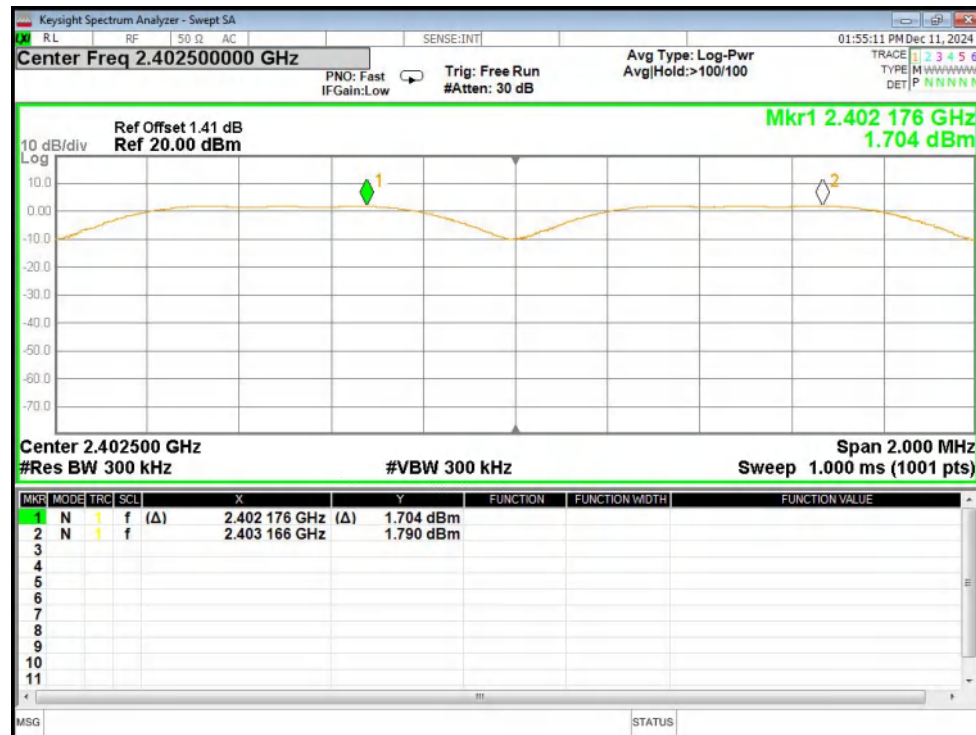


5.Carrier Frequencies Separation

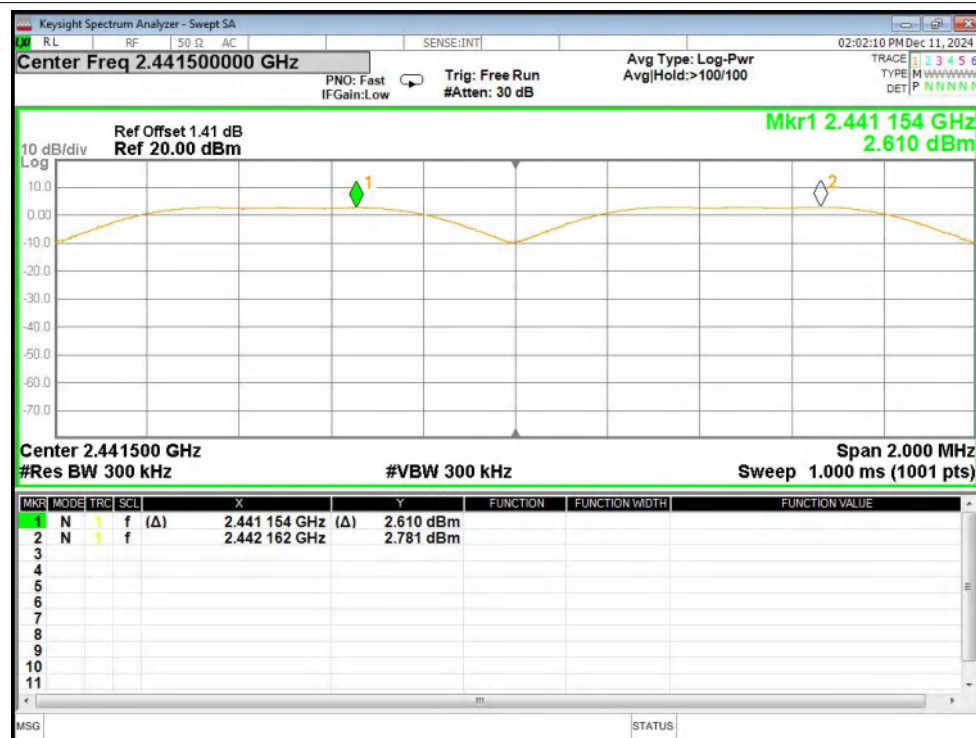
Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
1-DH5	Ant1	2402.176	2403.166	0.99	0.667	Pass
1-DH5	Ant1	2441.154	2442.162	1.008	0.655	Pass
1-DH5	Ant1	2478.84	2479.834	0.994	0.634	Pass
2-DH5	Ant1	2401.83	2402.834	1.004	0.855	Pass
2-DH5	Ant1	2440.828	2441.83	1.002	0.885	Pass
2-DH5	Ant1	2478.836	2480.148	1.312	0.853	Pass
3-DH5	Ant1	2402.148	2403.156	1.008	0.879	Pass
3-DH5	Ant1	2441.164	2442.16	0.996	0.874	Pass
3-DH5	Ant1	2478.834	2479.846	1.012	0.865	Pass

Test Graphs

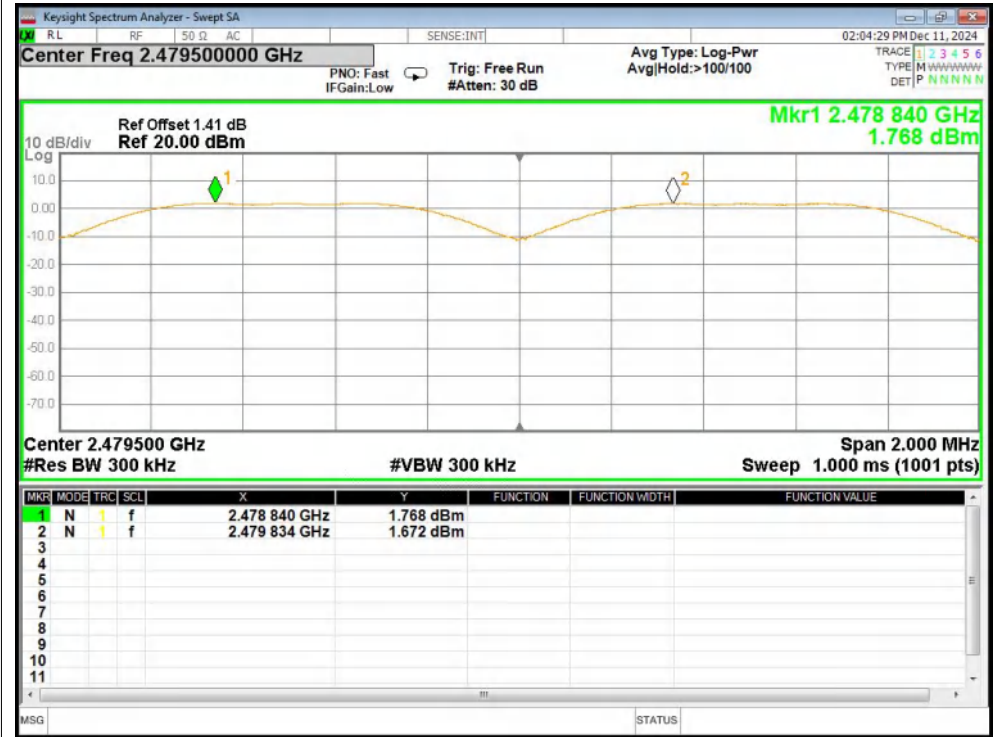
CFS NVNT 1-DH5 2402MHz Ant1



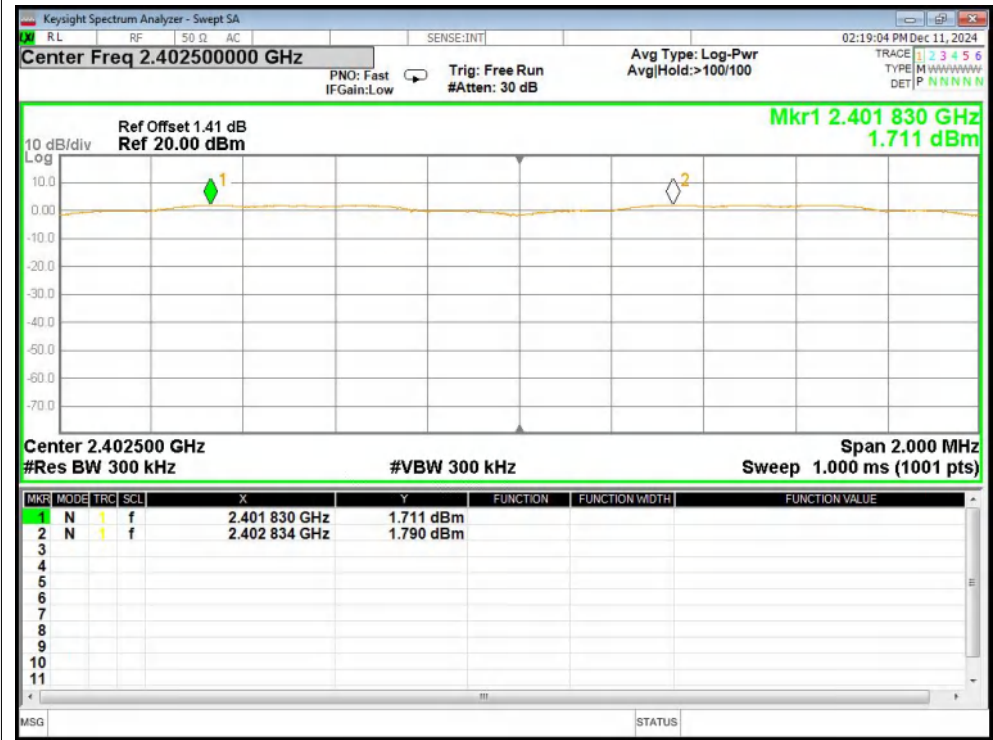
CFS NVNT 1-DH5 2441MHz Ant1



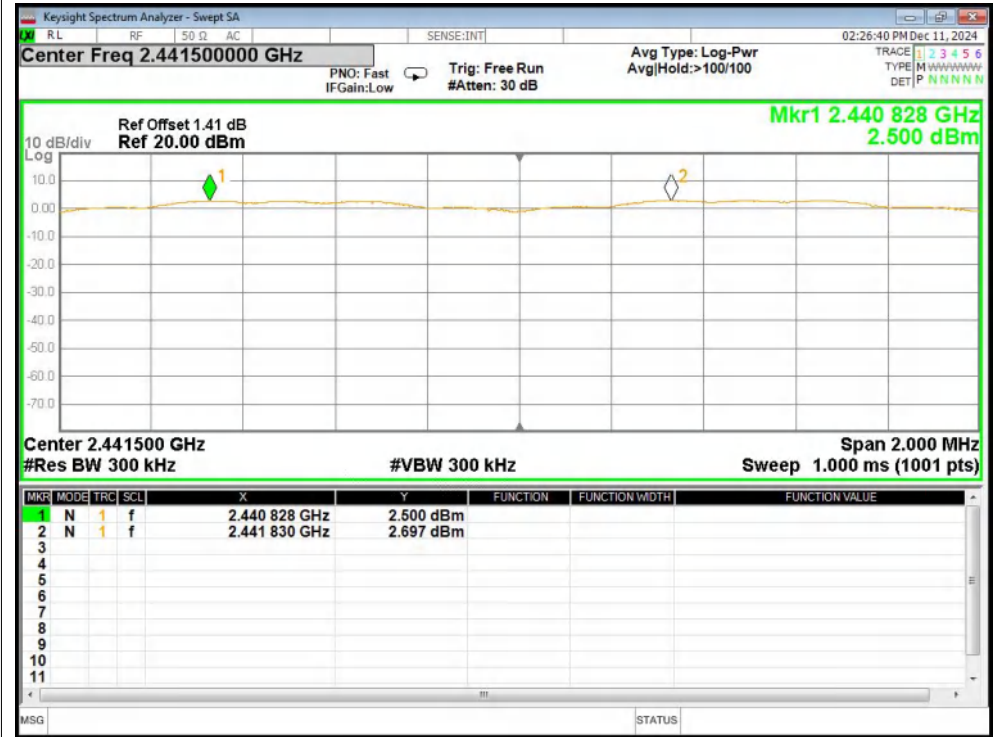
CFS NVNT 1-DH5 2480MHz Ant1



CFS NVNT 2-DH5 2402MHz Ant1



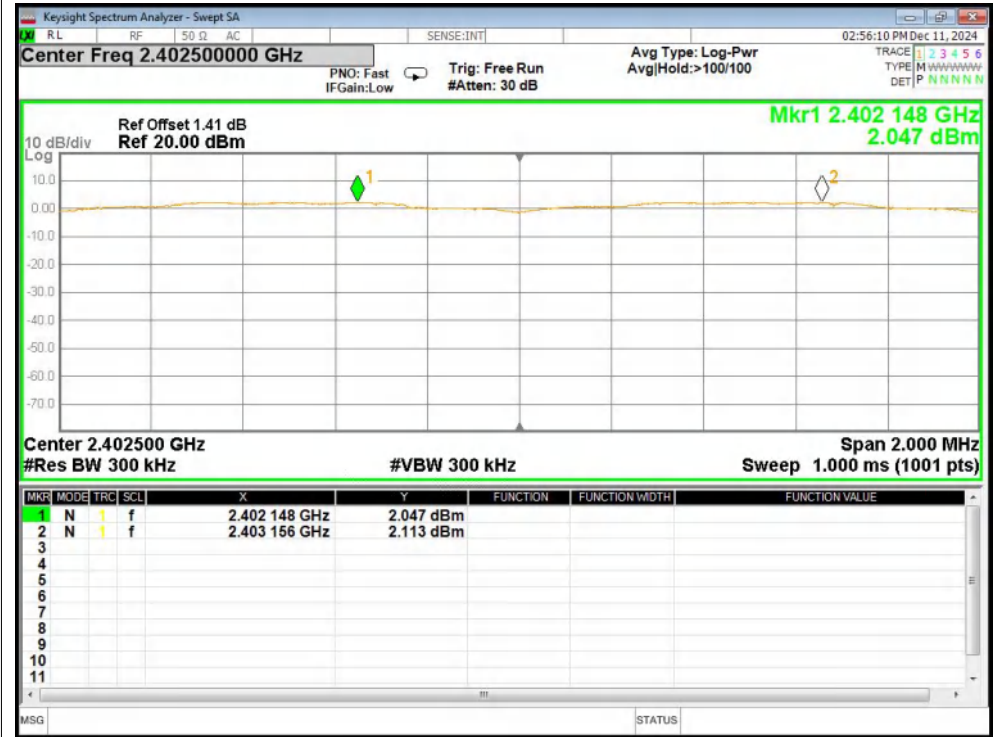
CFS NVNT 2-DH5 2441MHz Ant1



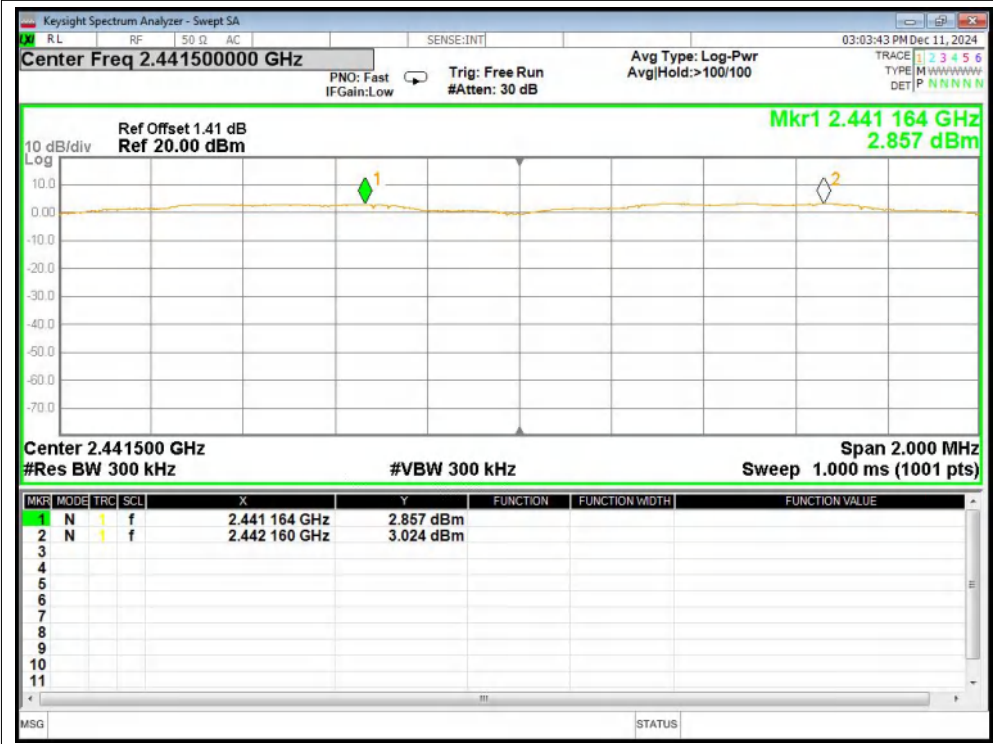
CFS NVNT 2-DH5 2480MHz Ant1



CFS NVNT 3-DH5 2402MHz Ant1



CFS NVNT 3-DH5 2441MHz Ant1



CFS NVNT 3-DH5 2480MHz Ant1

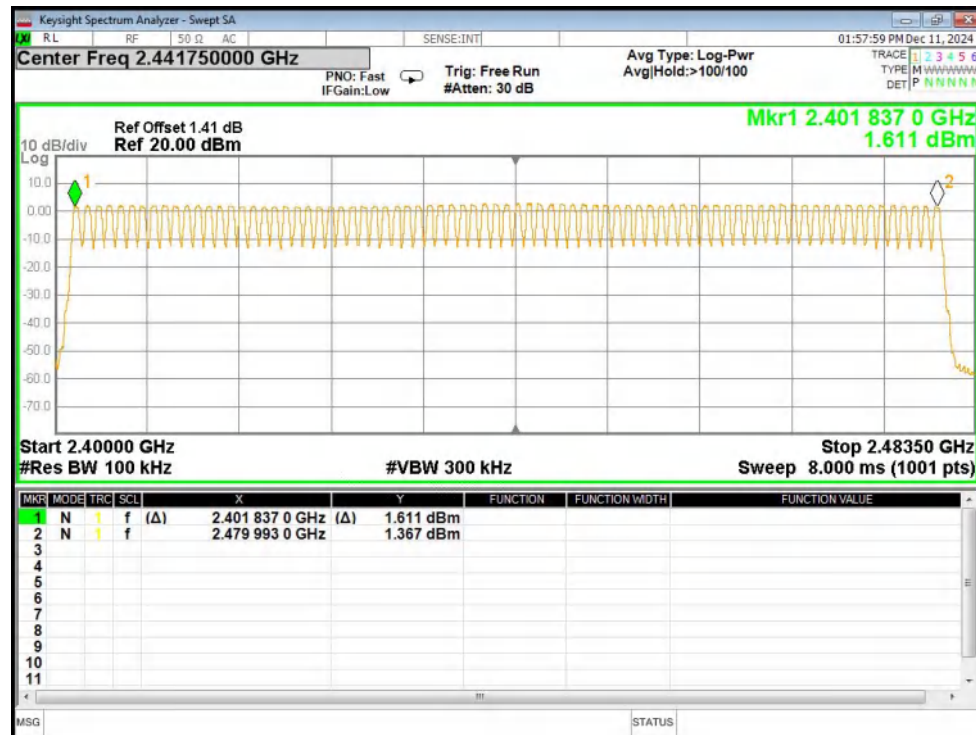


6.Number of Hopping Channel

Mode	Antenna	Hopping Number	Limit	Verdict
1-DH5	Ant1	79	15	Pass
2-DH5	Ant1	79	15	Pass
3-DH5	Ant1	79	15	Pass

Test Graphs

Hopping No. NVNT 1-DH5 2402MHz Ant1



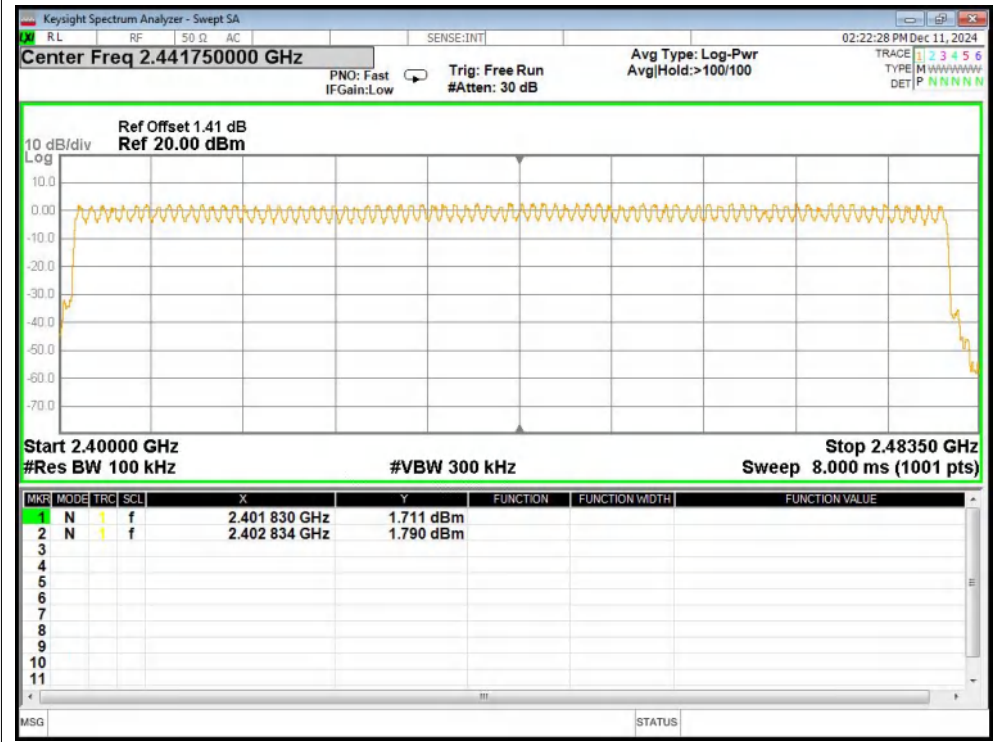
Hopping No. NVNT 1-DH5 2441MHz Ant1



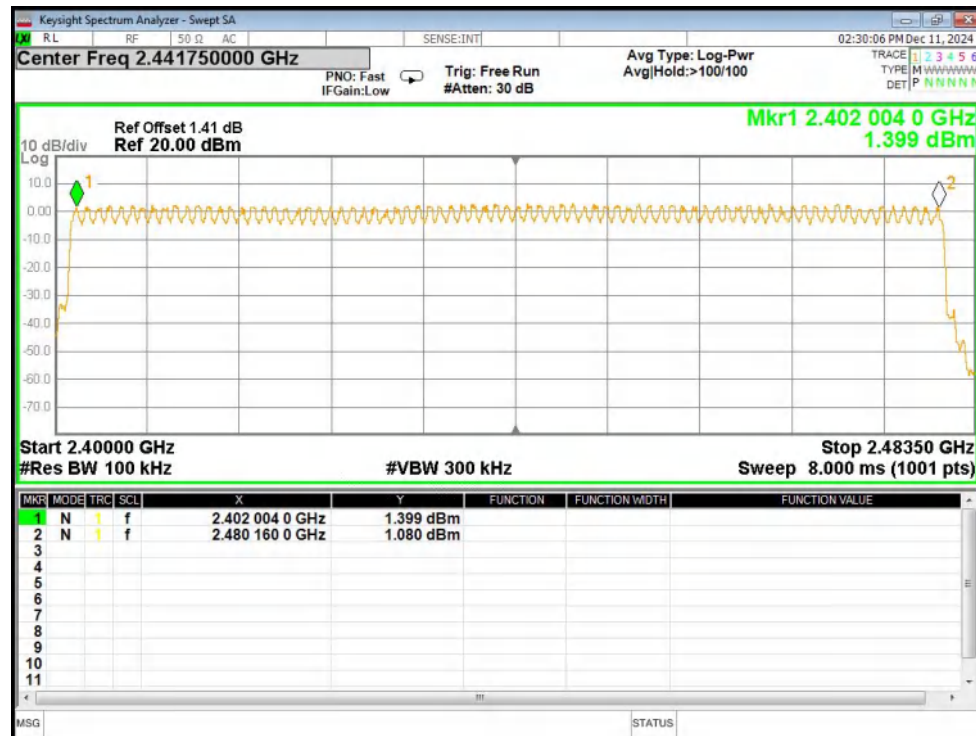
Hopping No. NVNT 1-DH5 2480MHz Ant1



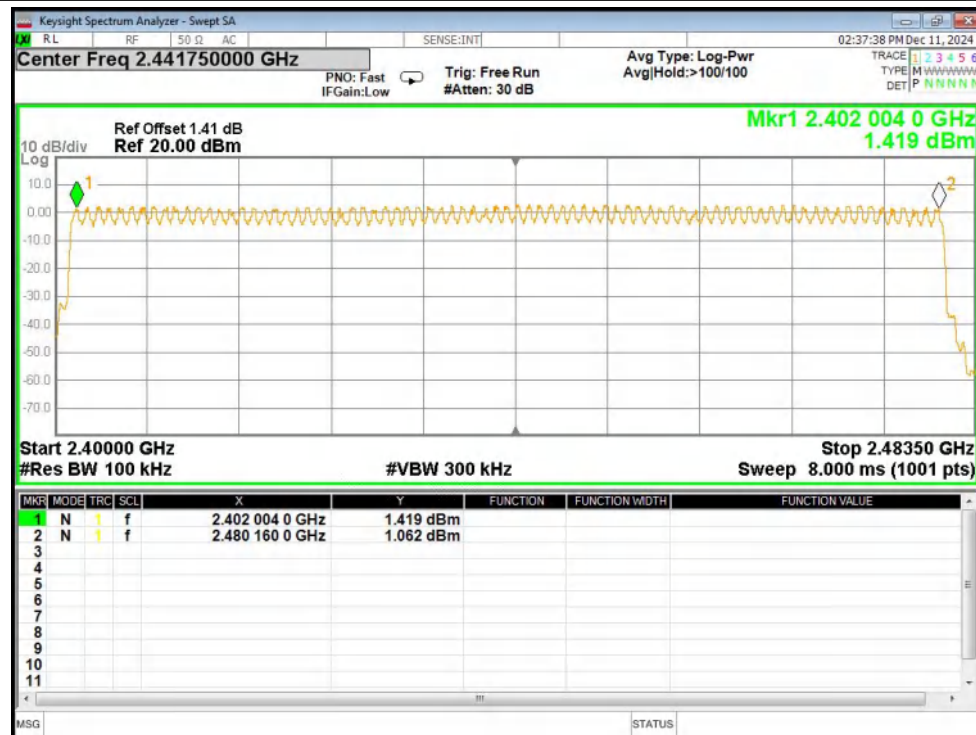
Hopping No. NVNT 2-DH5 2402MHz Ant1



Hopping No. NVNT 2-DH5 2441MHz Ant1



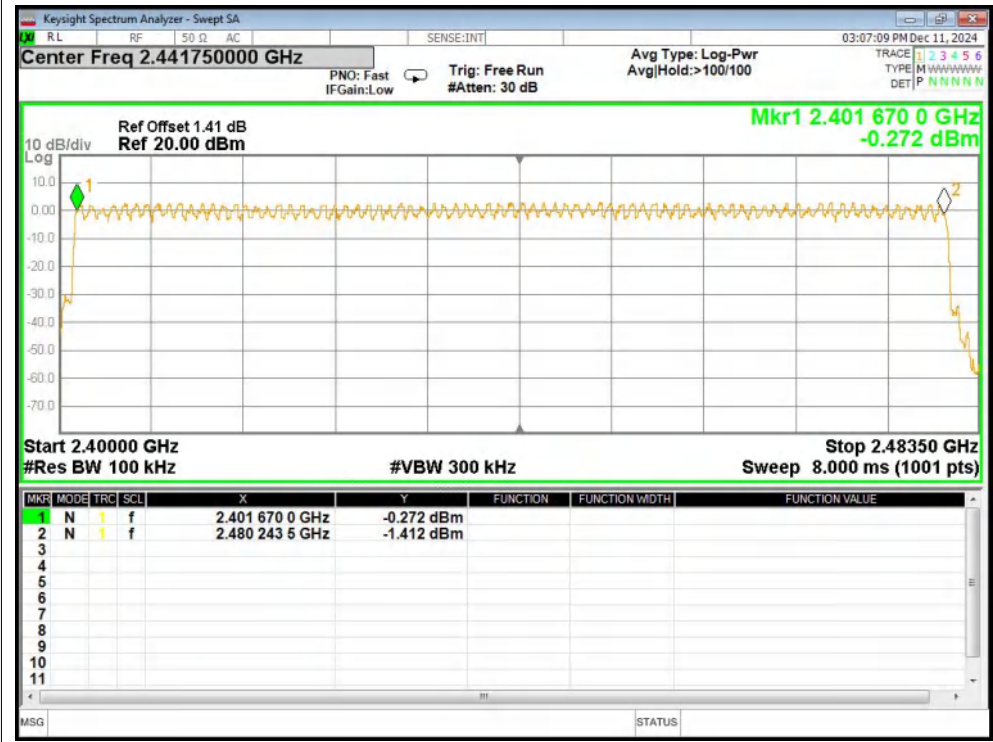
Hopping No. NVNT 2-DH5 2480MHz Ant1



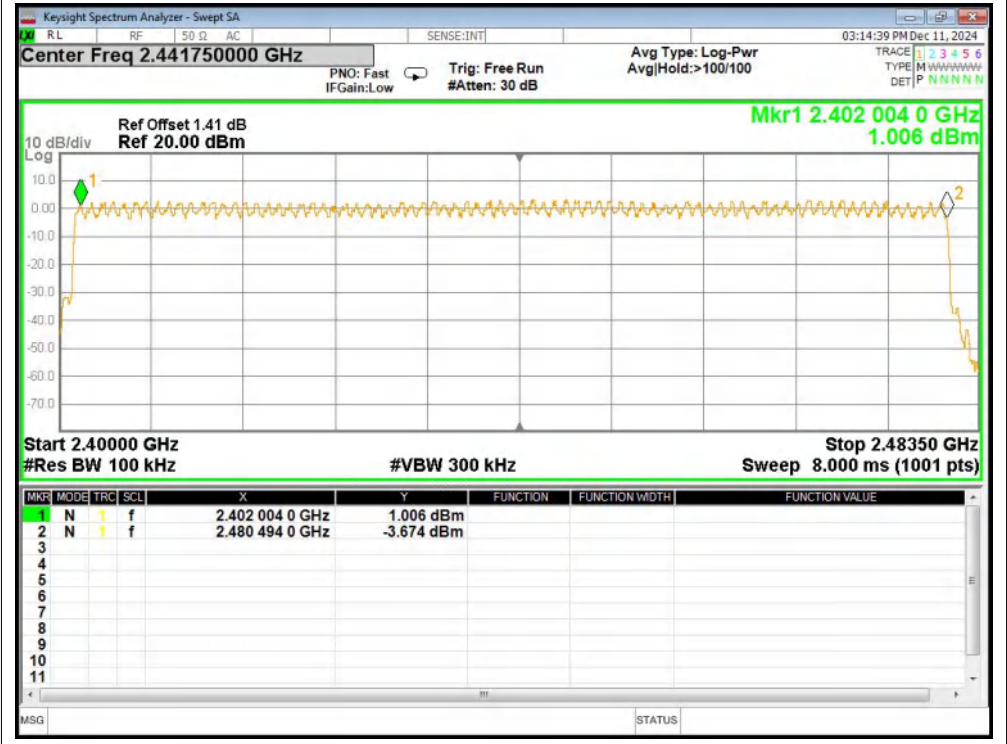
Hopping No. NVNT 3-DH5 2402MHz Ant1



Hopping No. NVNT 3-DH5 2441MHz Ant1



Hopping No. NVNT 3-DH5 2480MHz Ant1

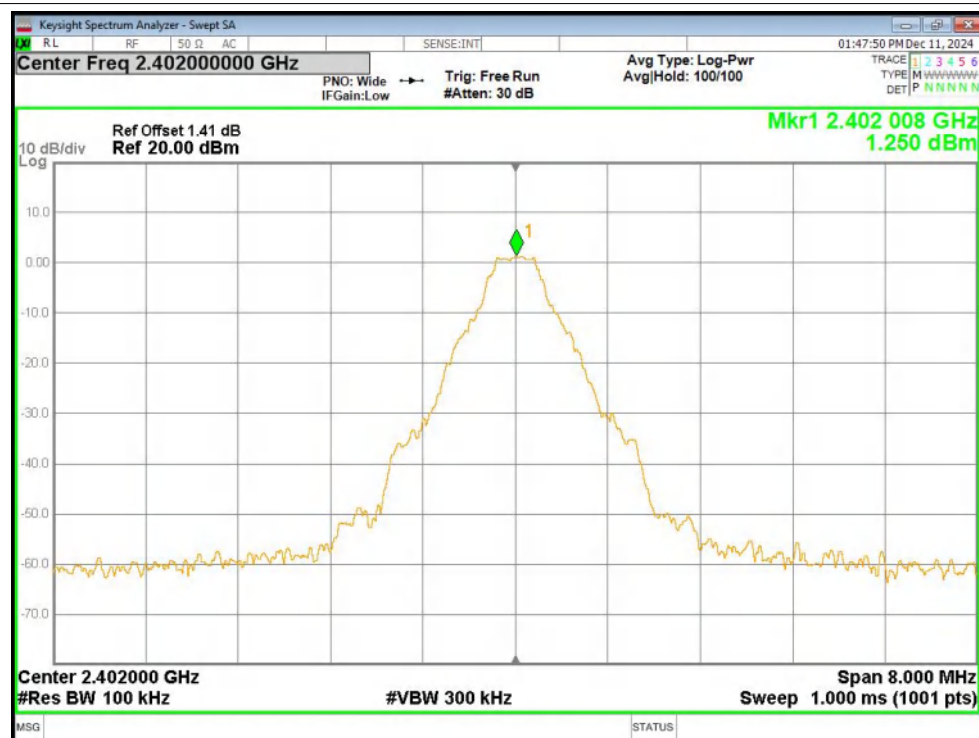


7.Band Edge

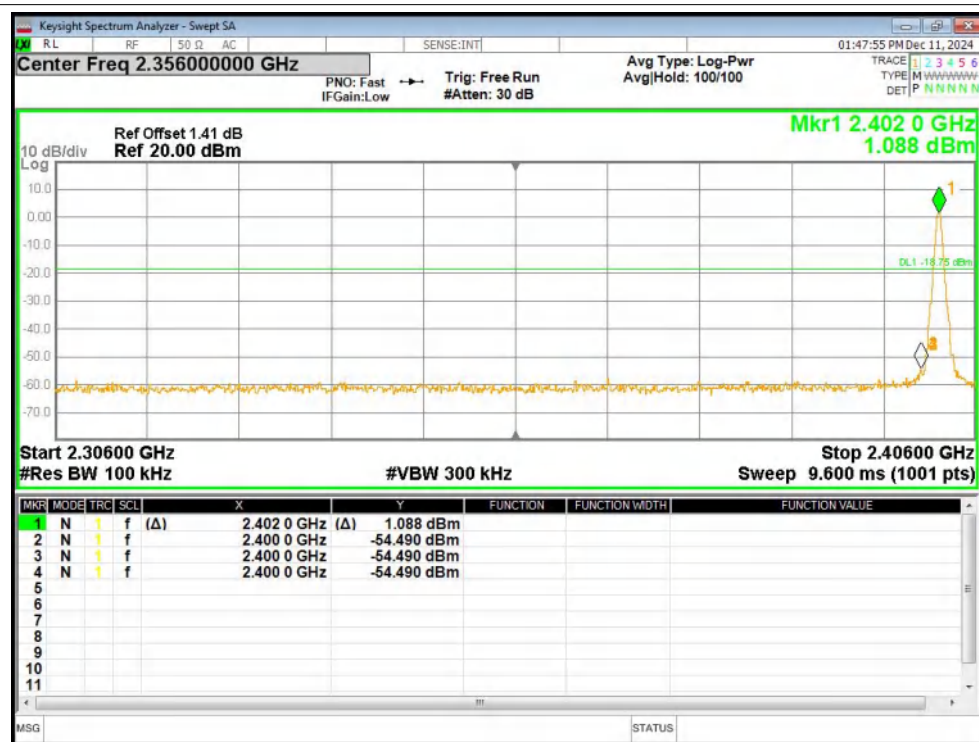
Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
1-DH5	2402	Ant1	No-Hopping	-55.73	-20	Pass
1-DH5	2480	Ant1	No-Hopping	-54.48	-20	Pass
2-DH5	2402	Ant1	No-Hopping	-45.57	-20	Pass
2-DH5	2480	Ant1	No-Hopping	-59.97	-20	Pass
3-DH5	2402	Ant1	No-Hopping	-44.25	-20	Pass
3-DH5	2480	Ant1	No-Hopping	-54.34	-20	Pass

Test Graphs

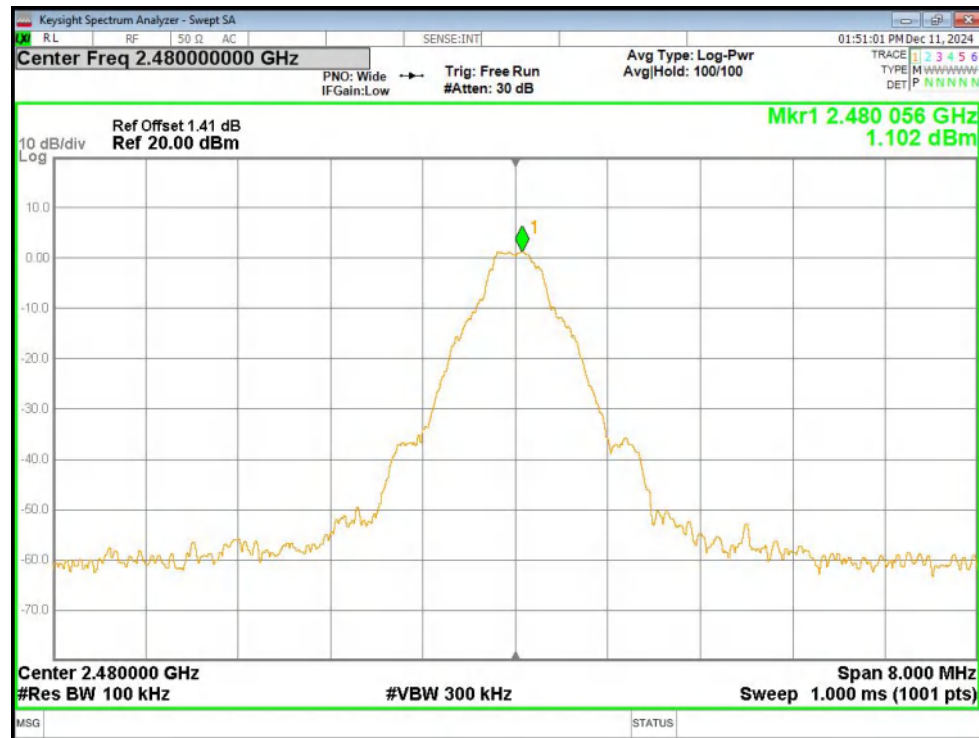
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Ref



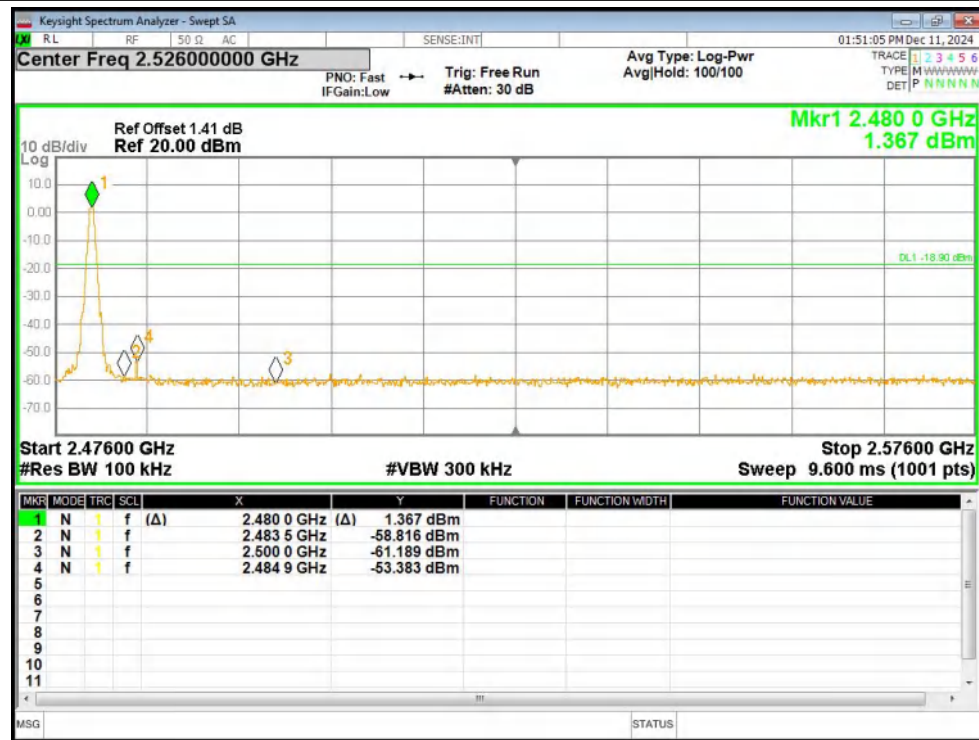
Band Edge NVNT 1-DH5 2402MHz Ant1 No-Hopping Emission



Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Ref



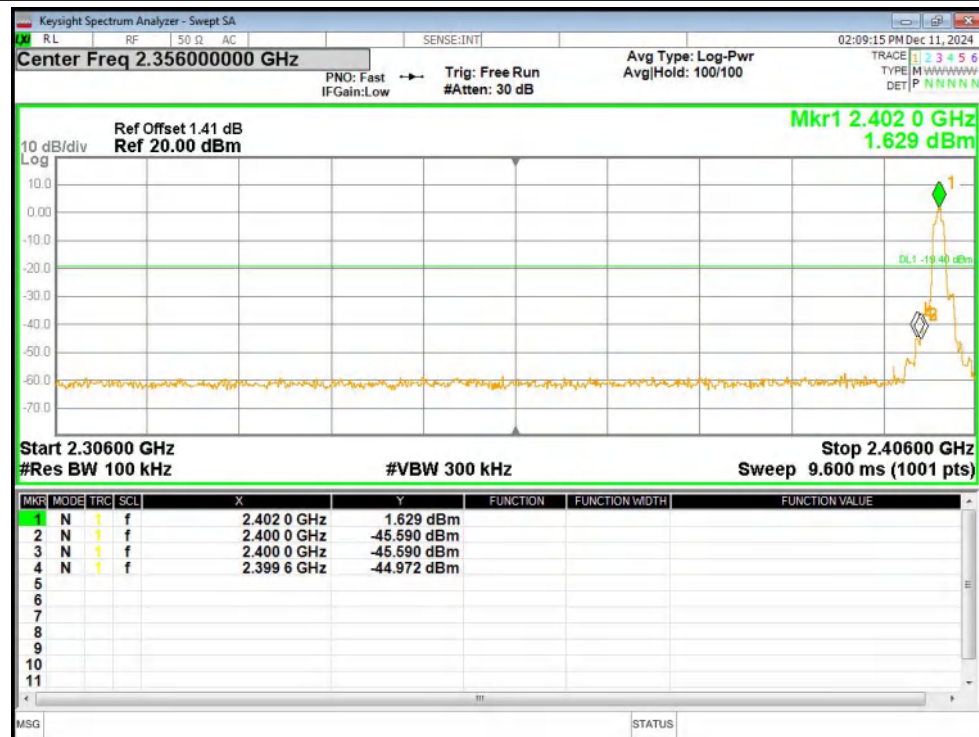
Band Edge NVNT 1-DH5 2480MHz Ant1 No-Hopping Emission



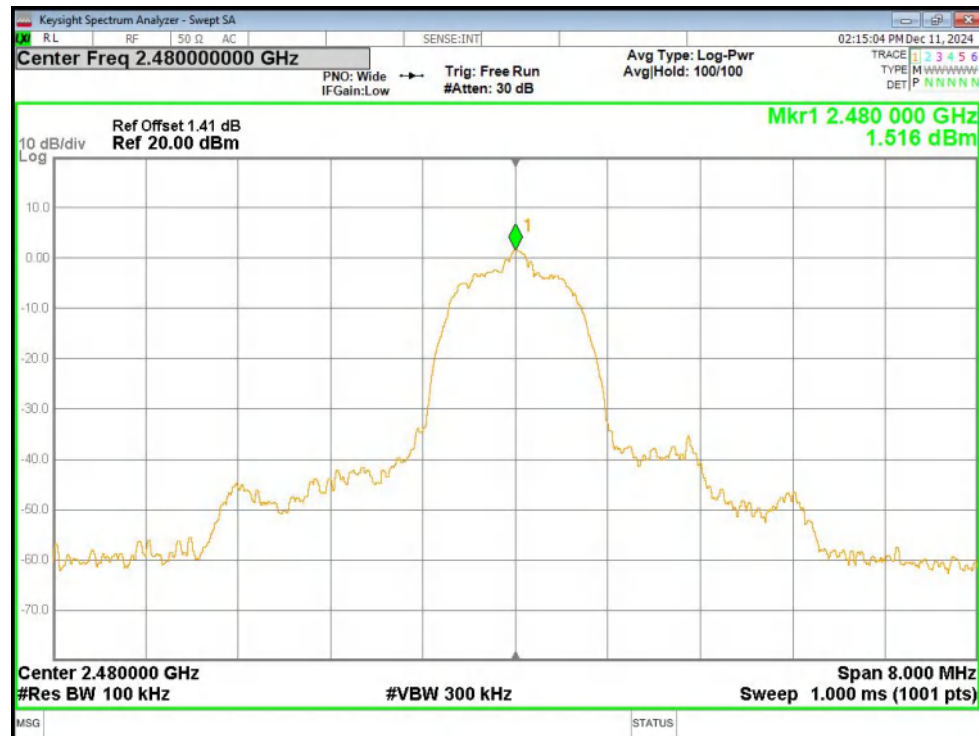
Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Ref



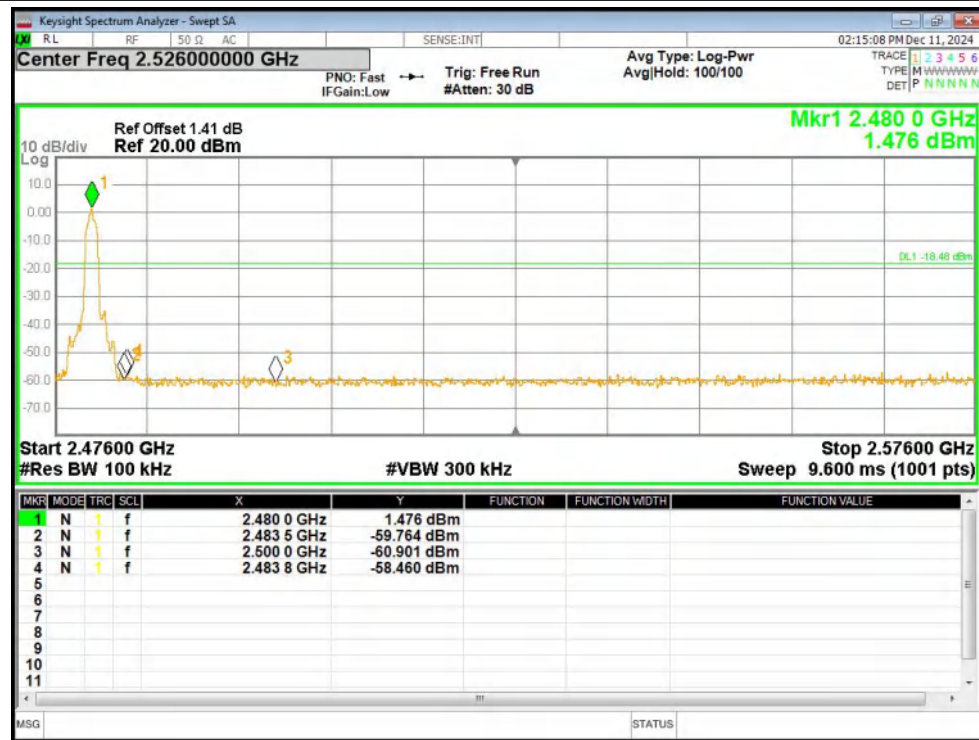
Band Edge NVNT 2-DH5 2402MHz Ant1 No-Hopping Emission



Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Ref



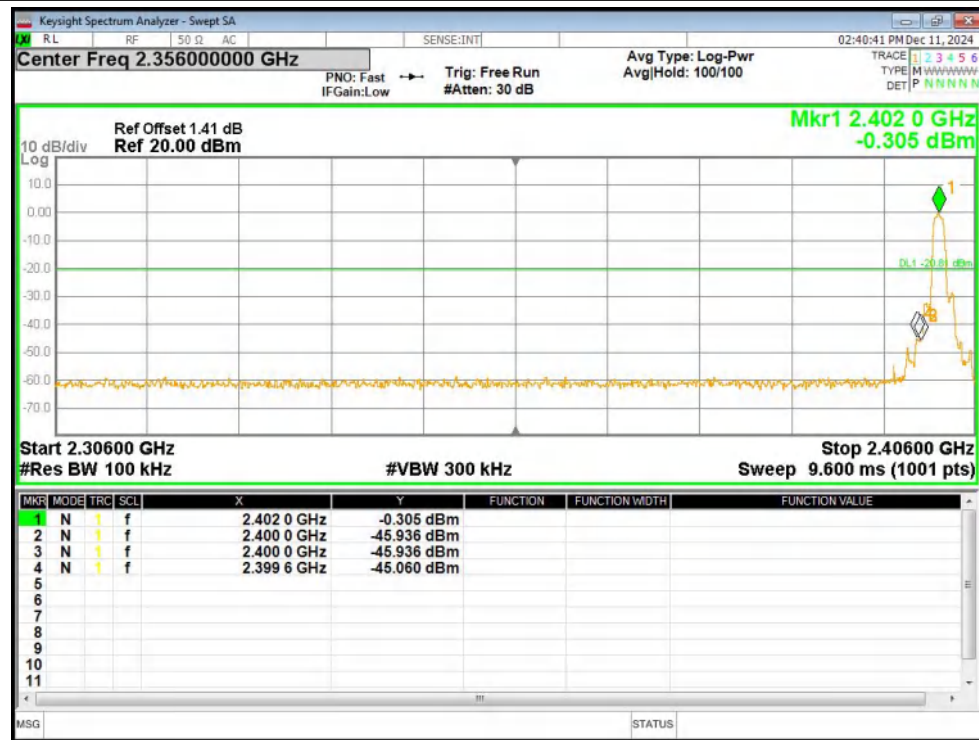
Band Edge NVNT 2-DH5 2480MHz Ant1 No-Hopping Emission



Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Ref



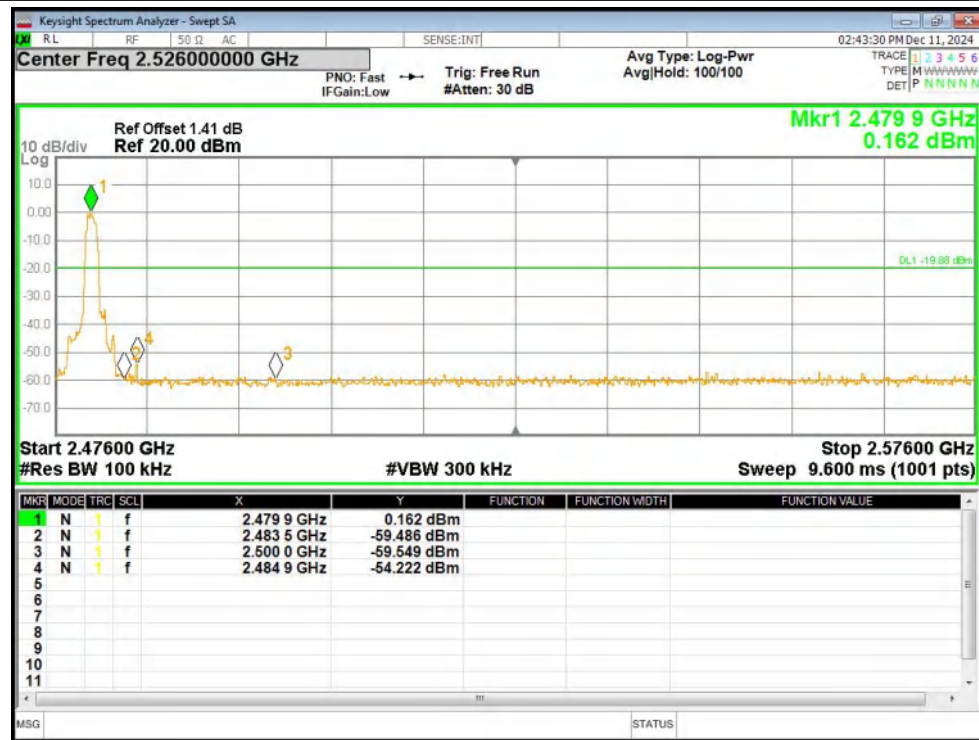
Band Edge NVNT 3-DH5 2402MHz Ant1 No-Hopping Emission



Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Ref



Band Edge NVNT 3-DH5 2480MHz Ant1 No-Hopping Emission

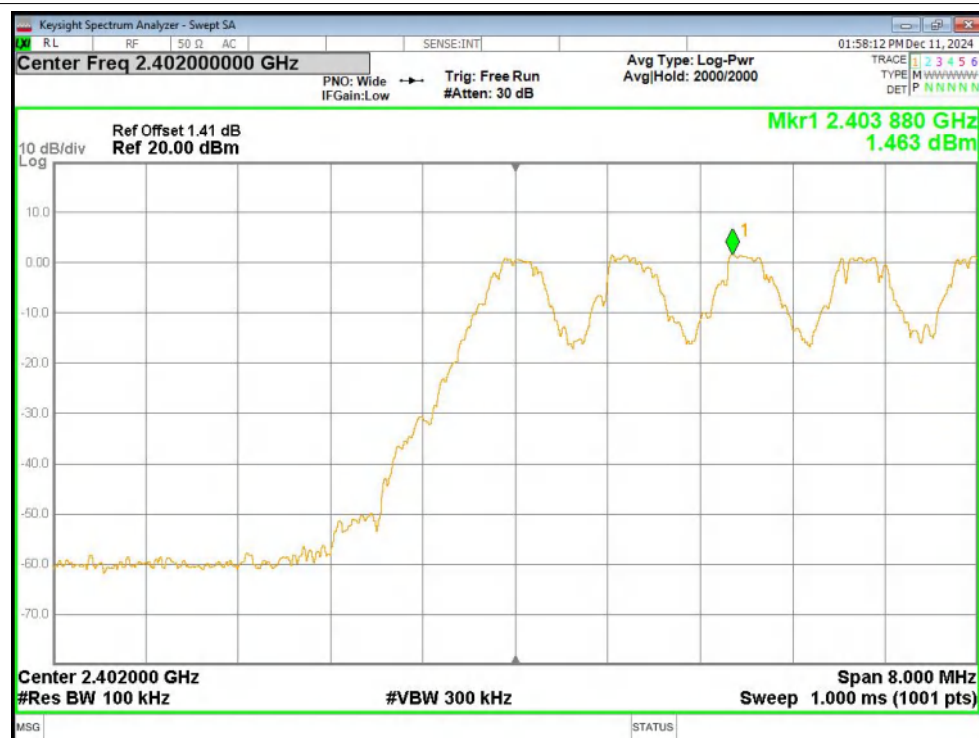


8.Band Edge(Hopping)

Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
1-DH5	2402	Ant1	Hopping	-58.54	-20	Pass
1-DH5	2480	Ant1	Hopping	-58.51	-20	Pass
2-DH5	2402	Ant1	Hopping	-58.22	-20	Pass
2-DH5	2480	Ant1	Hopping	-56.31	-20	Pass
3-DH5	2402	Ant1	Hopping	-57.47	-20	Pass
3-DH5	2480	Ant1	Hopping	-56.31	-20	Pass

Test Graphs

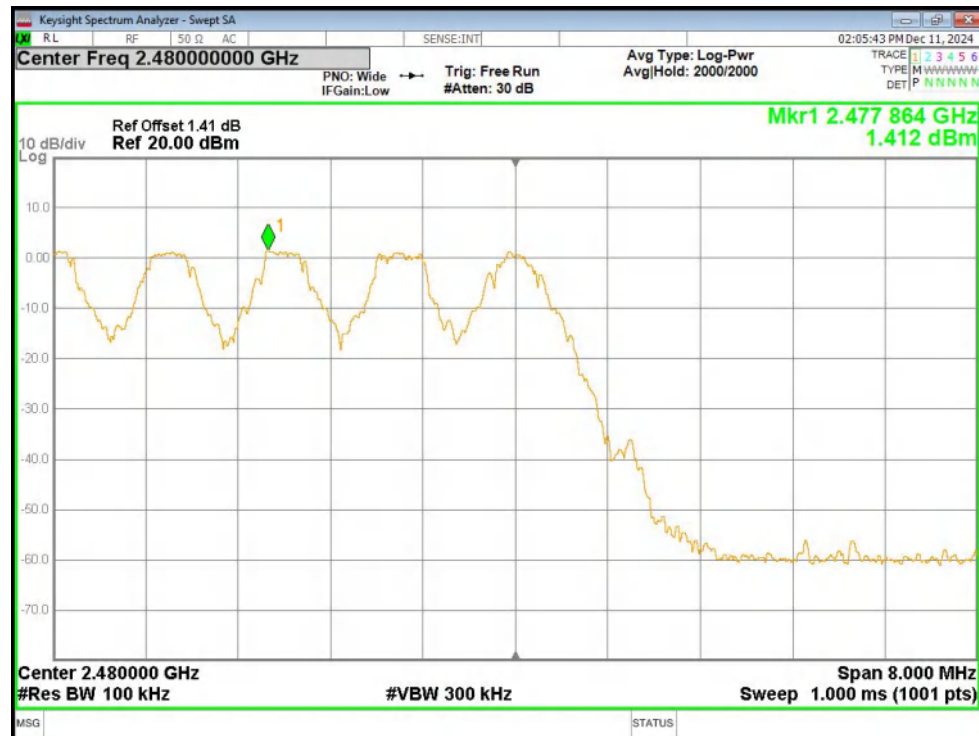
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Ref



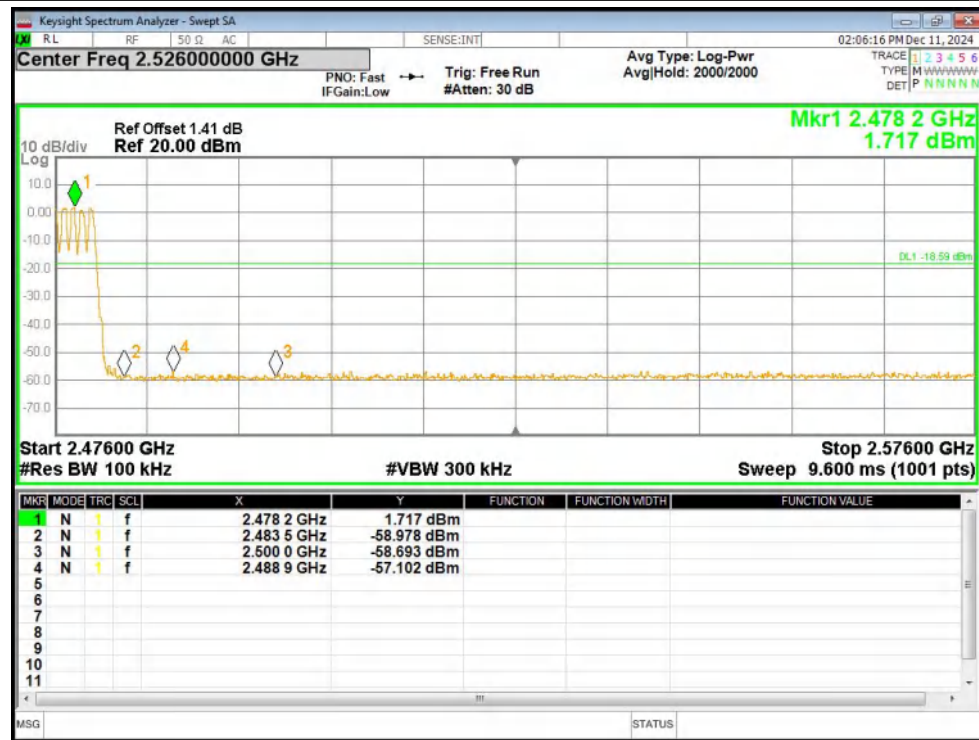
Band Edge(Hopping) NVNT 1-DH5 2402MHz Ant1 Hopping Emission



Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Ref



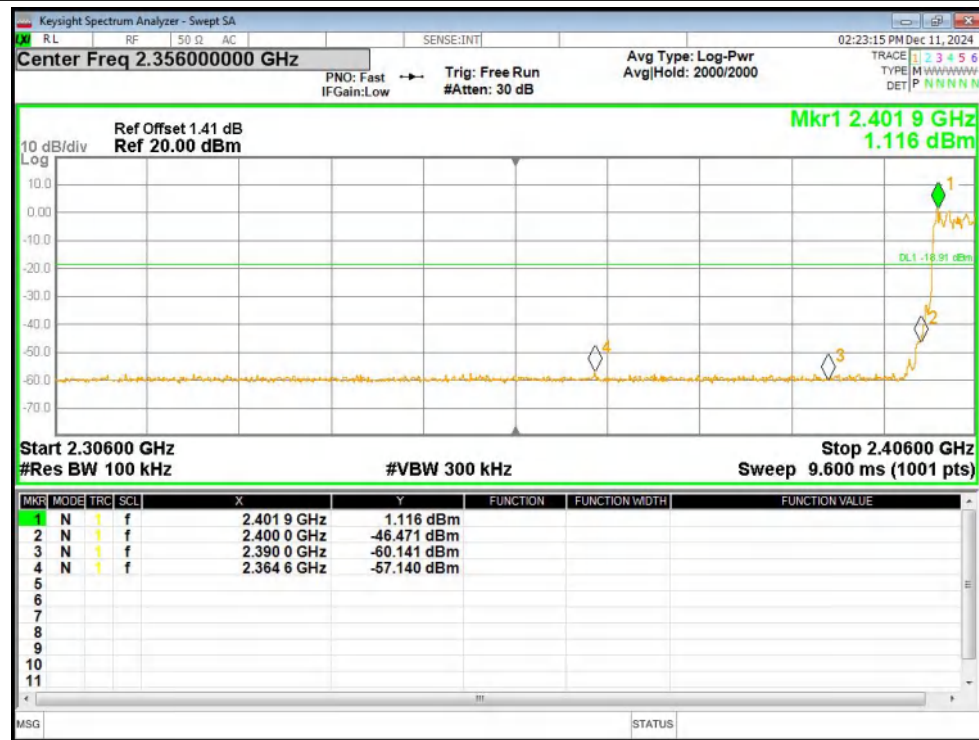
Band Edge(Hopping) NVNT 1-DH5 2480MHz Ant1 Hopping Emission



Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Ref



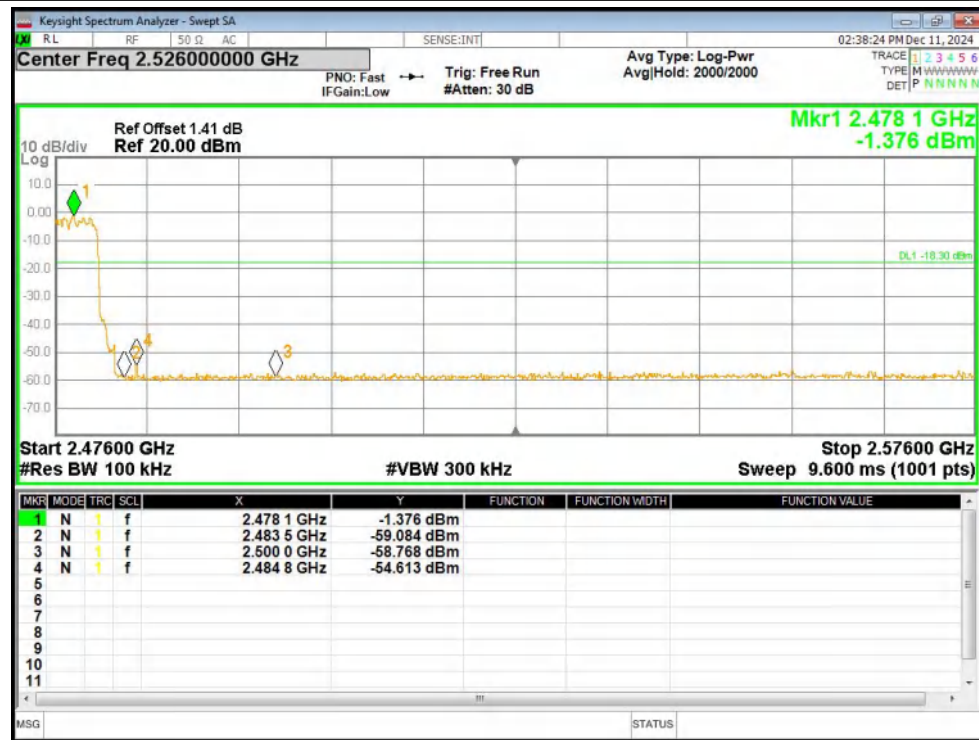
Band Edge(Hopping) NVNT 2-DH5 2402MHz Ant1 Hopping Emission



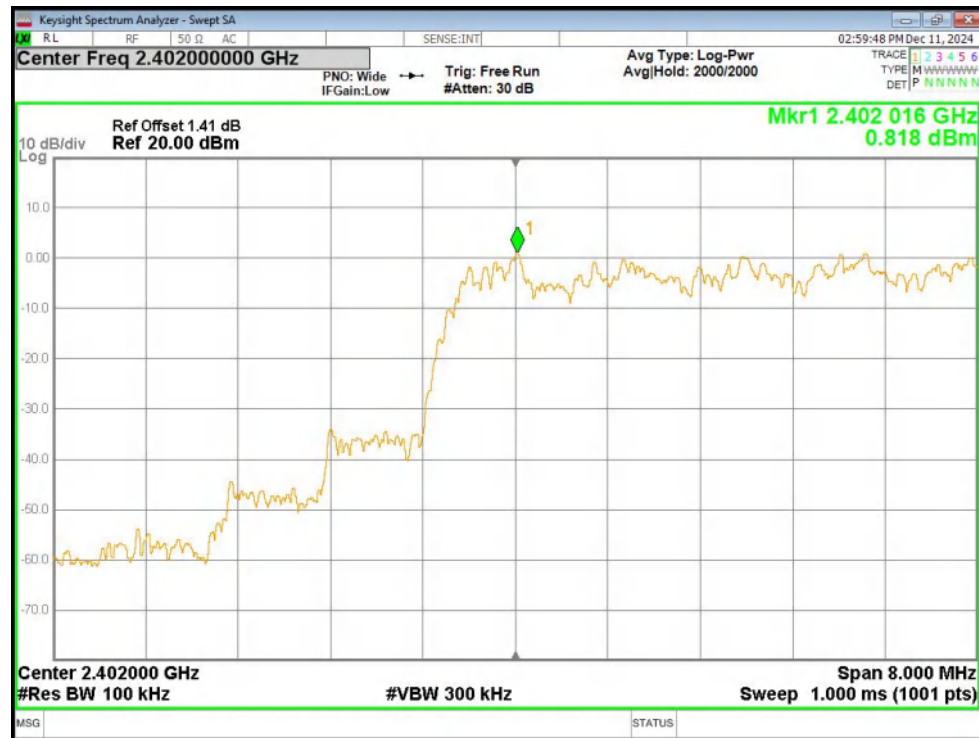
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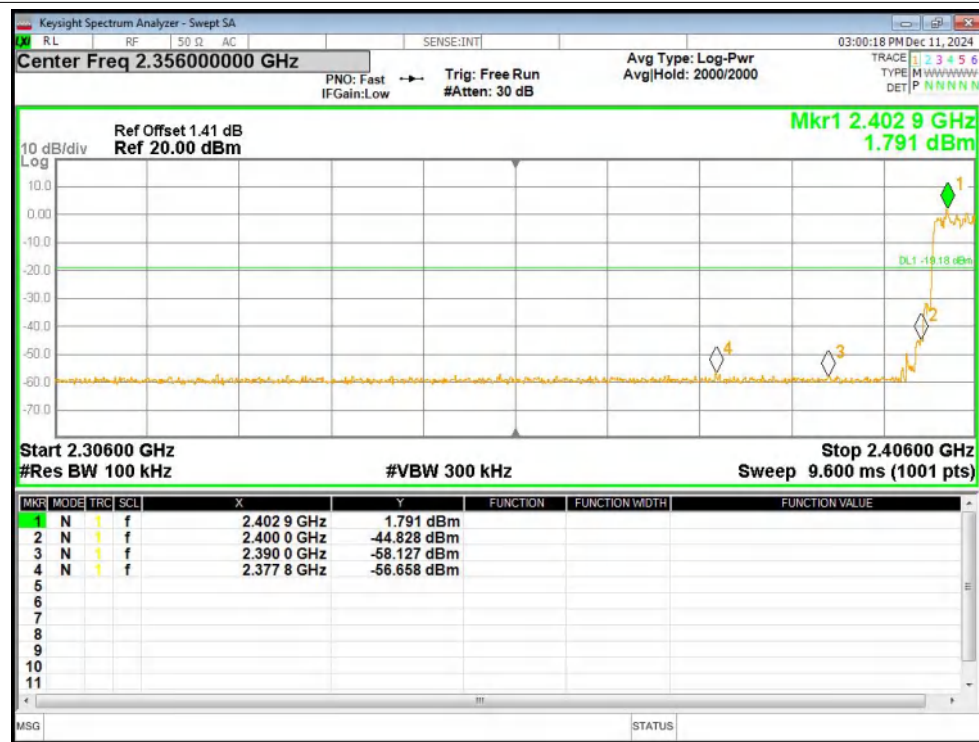
Band Edge(Hopping) NVNT 2-DH5 2480MHz Ant1 Hopping Emission



Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Ref



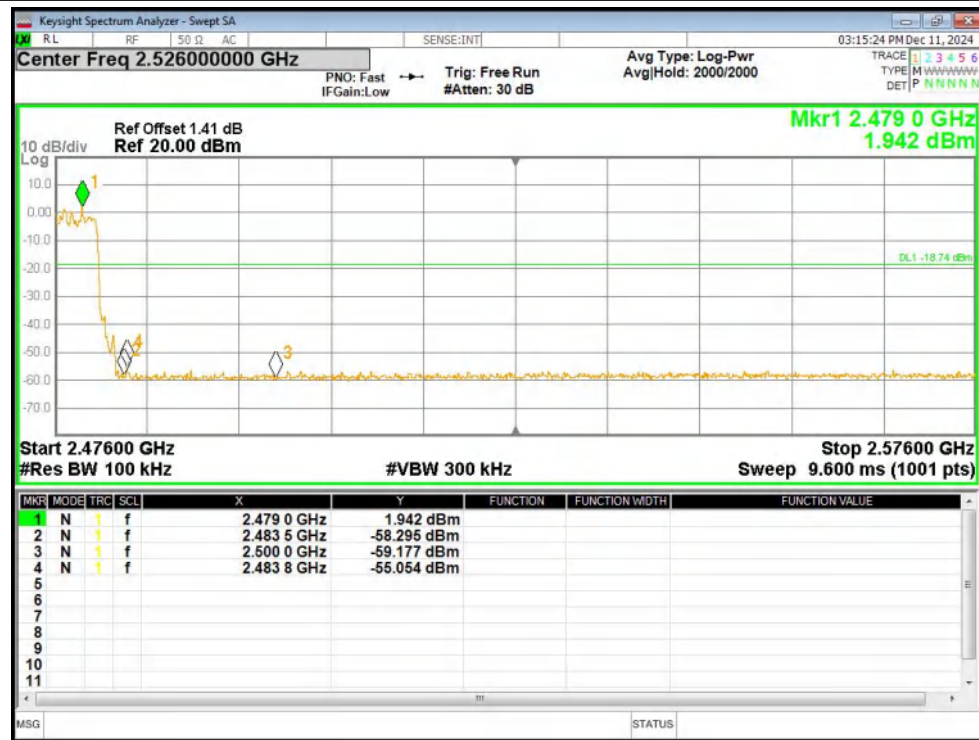
Band Edge(Hopping) NVNT 3-DH5 2402MHz Ant1 Hopping Emission



Band Edge(Hopping) NVNT 3-DH5 2480MHz Ant1 Hopping Ref



Band Edge(Hopping) NVNT 3-DH5 2480MHz Ant1 Hopping Emission

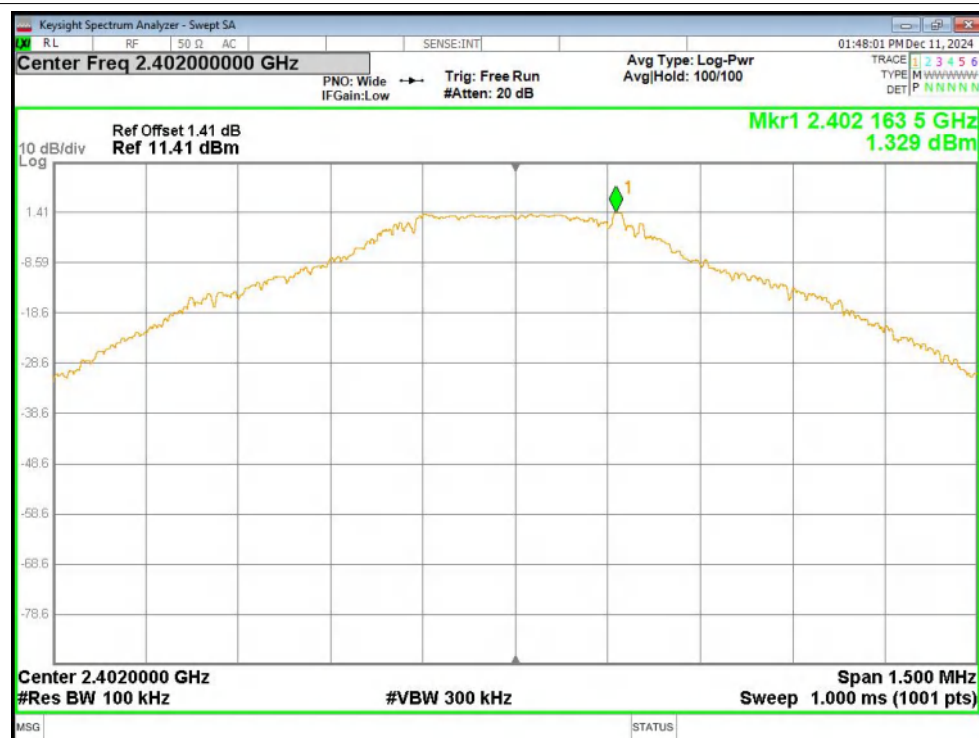


9. Conducted RF Spurious Emission

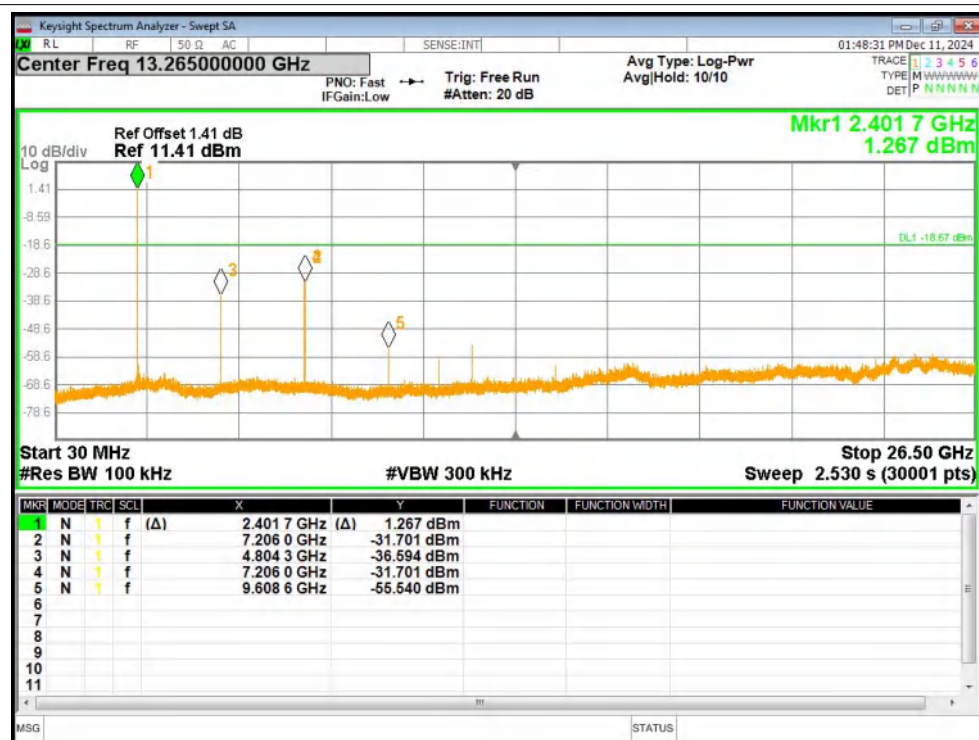
Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
1-DH5	2402	Ant1	-33.03	-20	Pass
1-DH5	2441	Ant1	-36.58	-20	Pass
1-DH5	2480	Ant1	-38.89	-20	Pass
2-DH5	2402	Ant1	-37.98	-20	Pass
2-DH5	2441	Ant1	-37.38	-20	Pass
2-DH5	2480	Ant1	-39.15	-20	Pass
3-DH5	2402	Ant1	-33.59	-20	Pass
3-DH5	2441	Ant1	-42	-20	Pass
3-DH5	2480	Ant1	-40.77	-20	Pass

Test Graphs

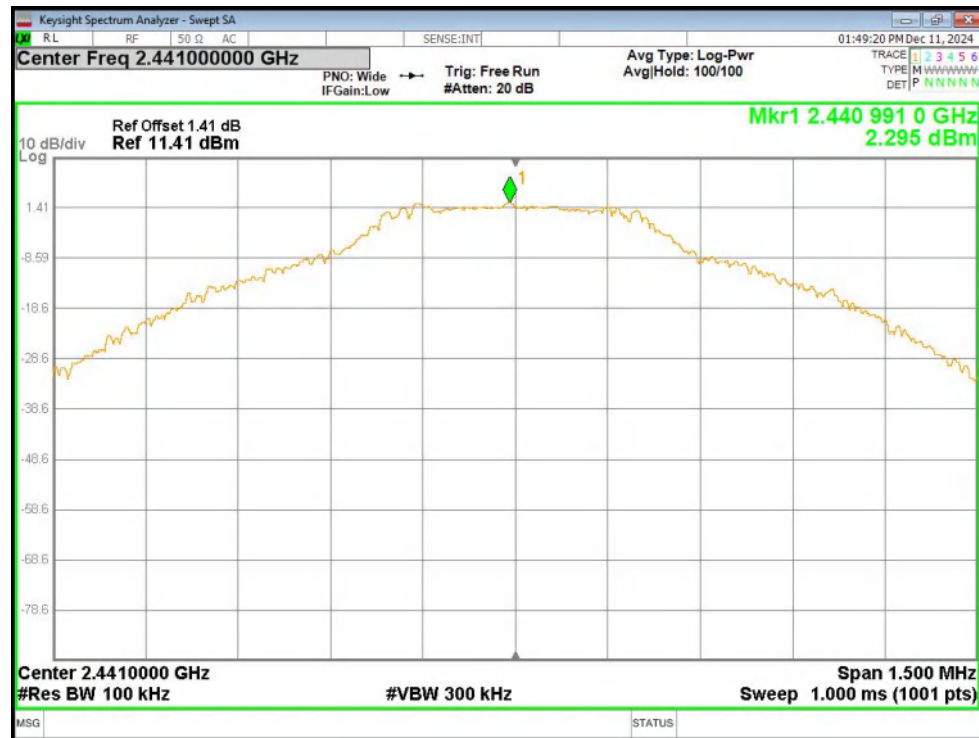
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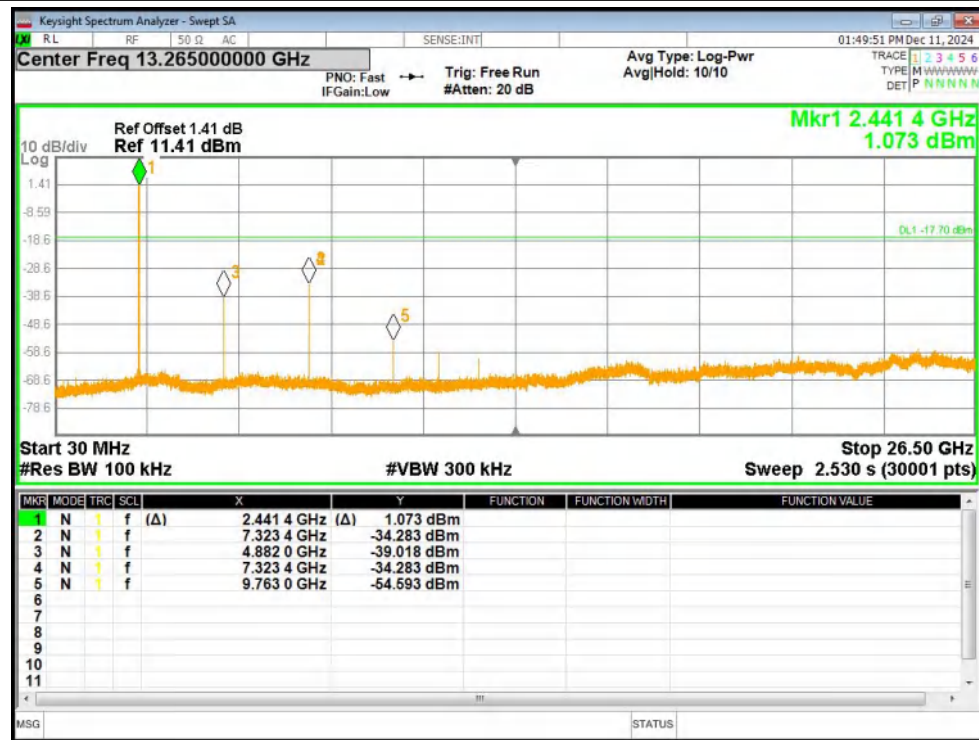
Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission



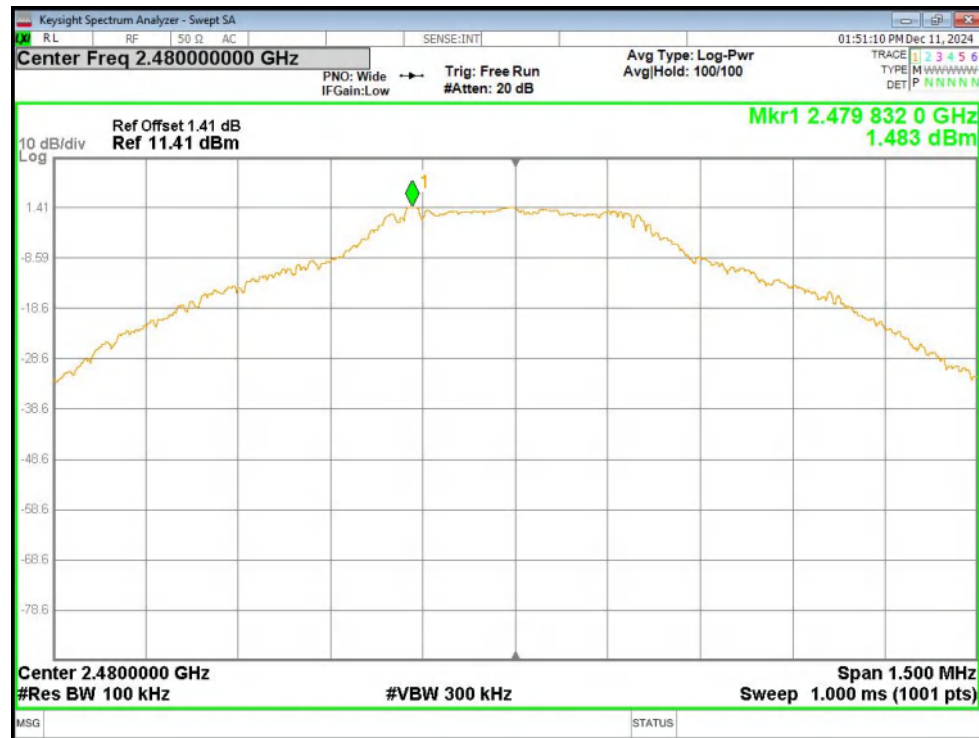
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref



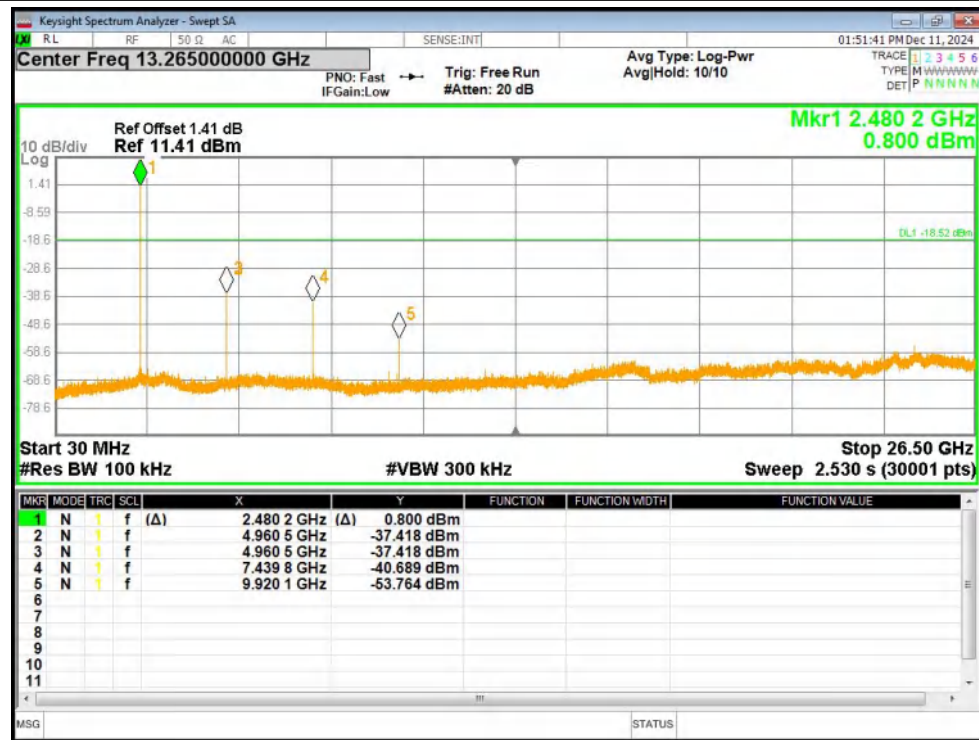
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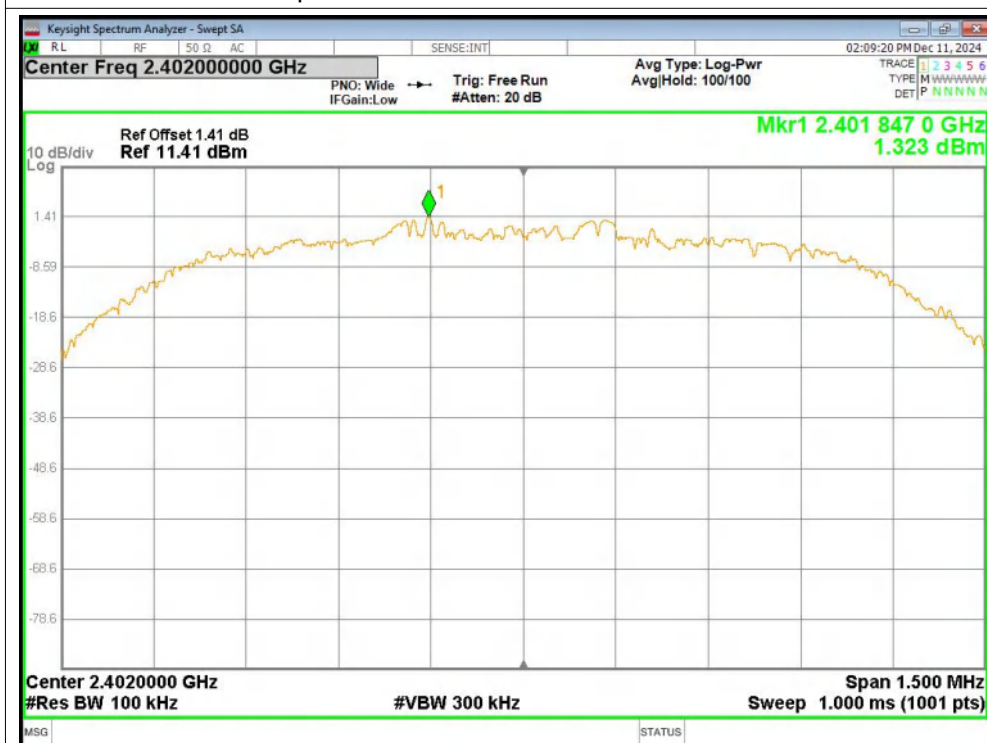
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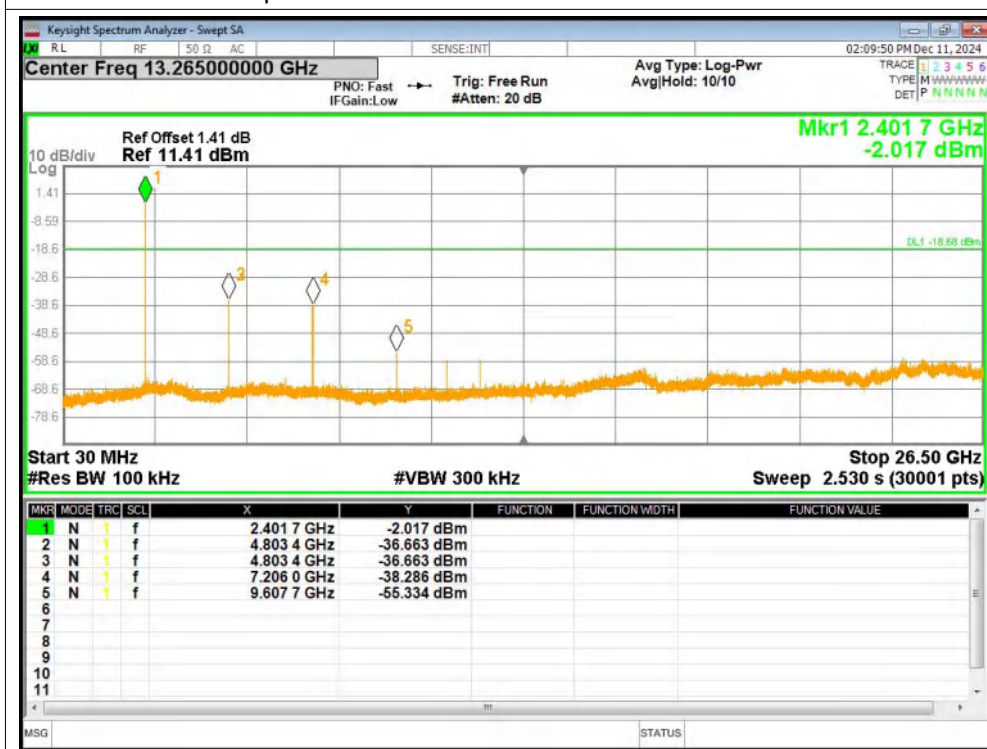
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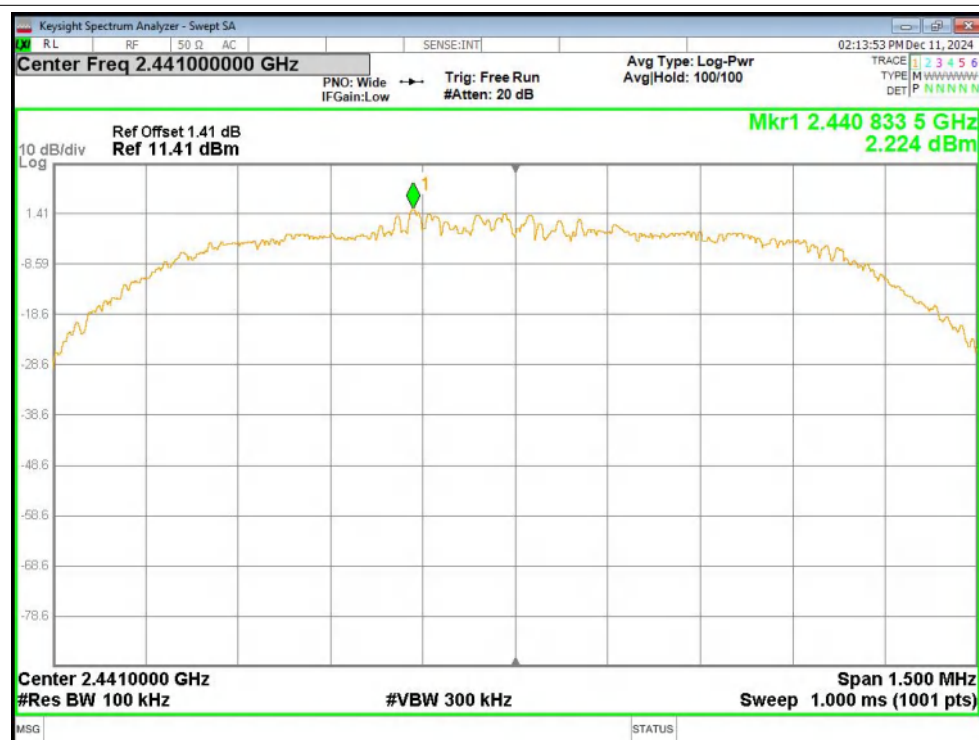
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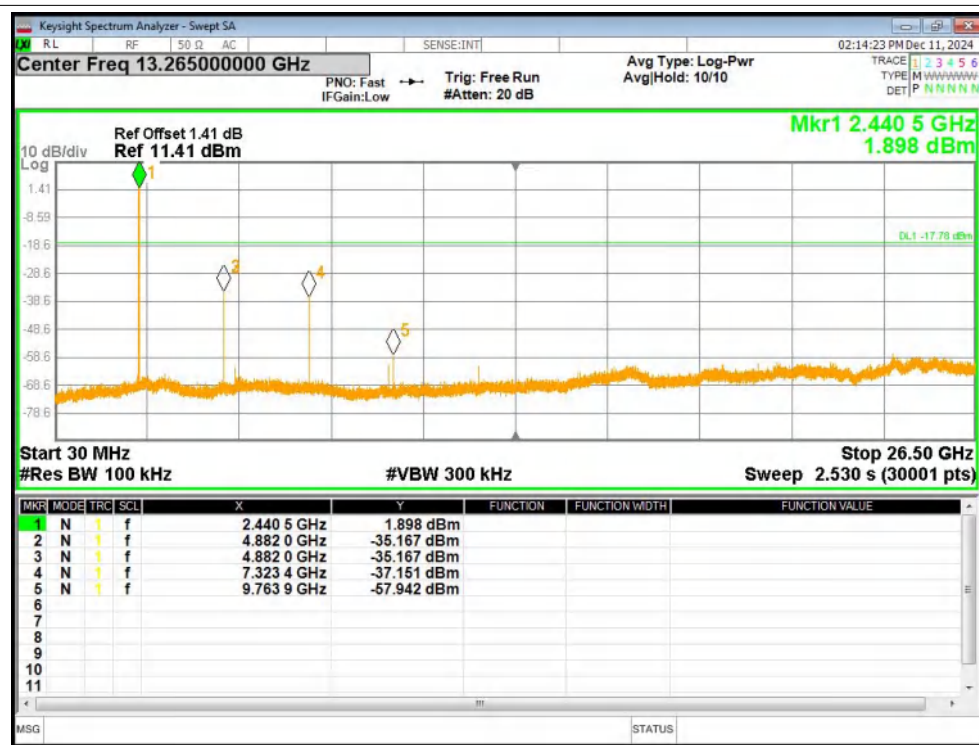
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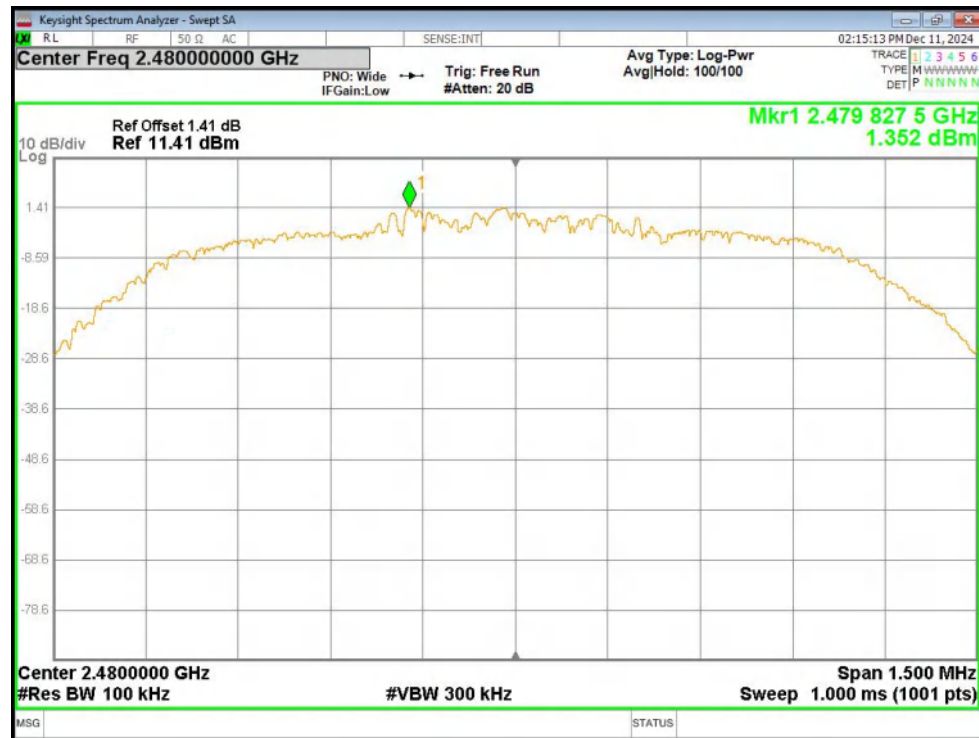
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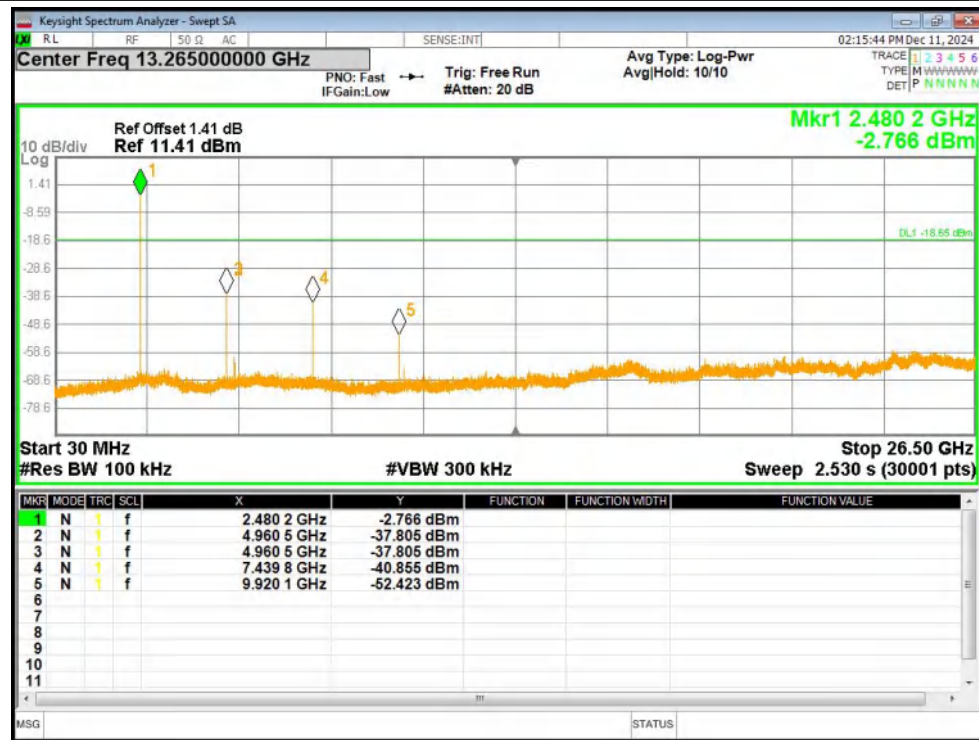
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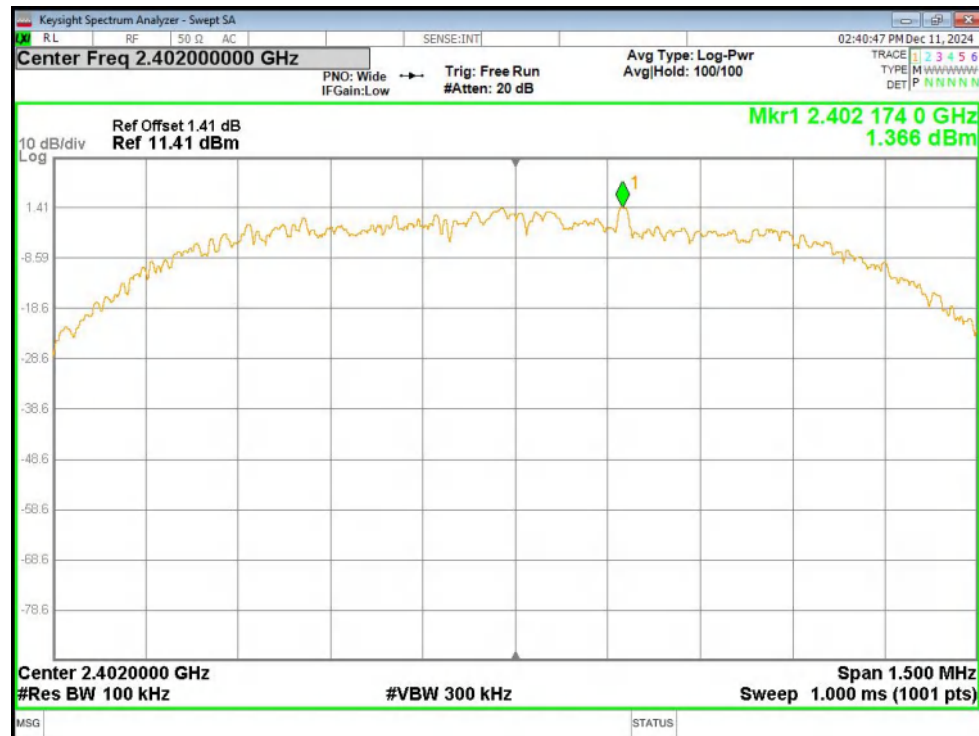
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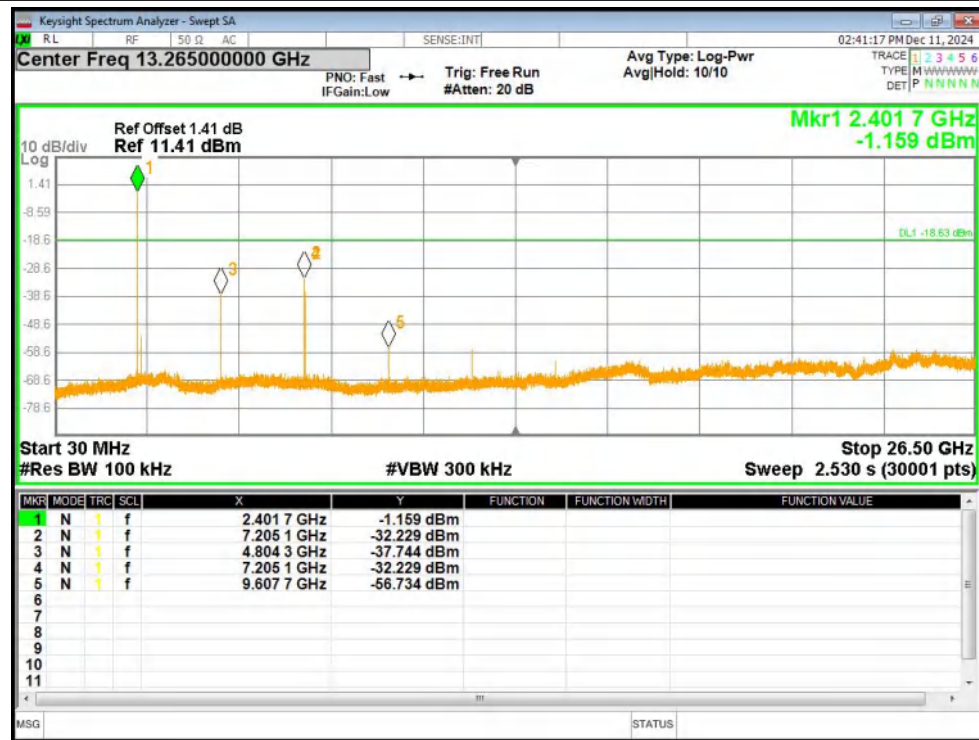
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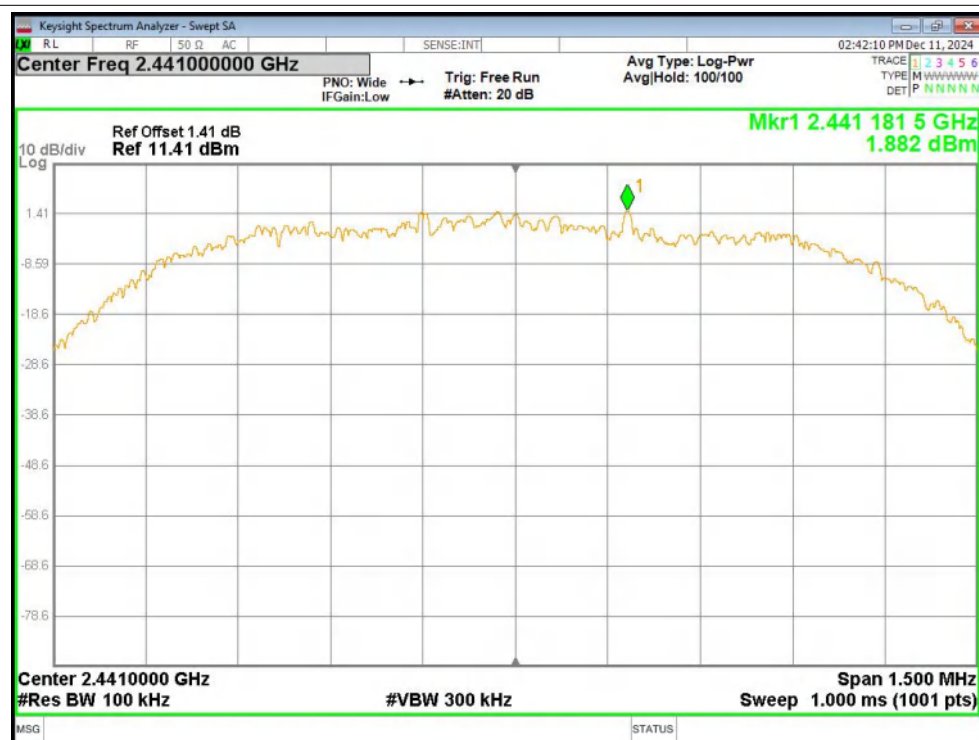
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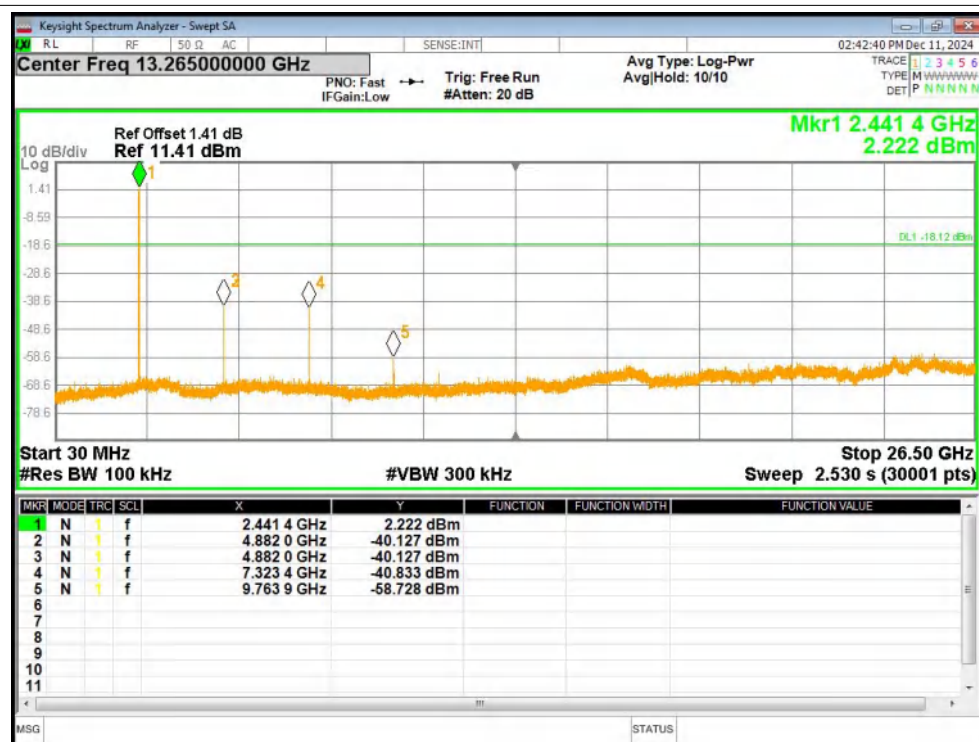
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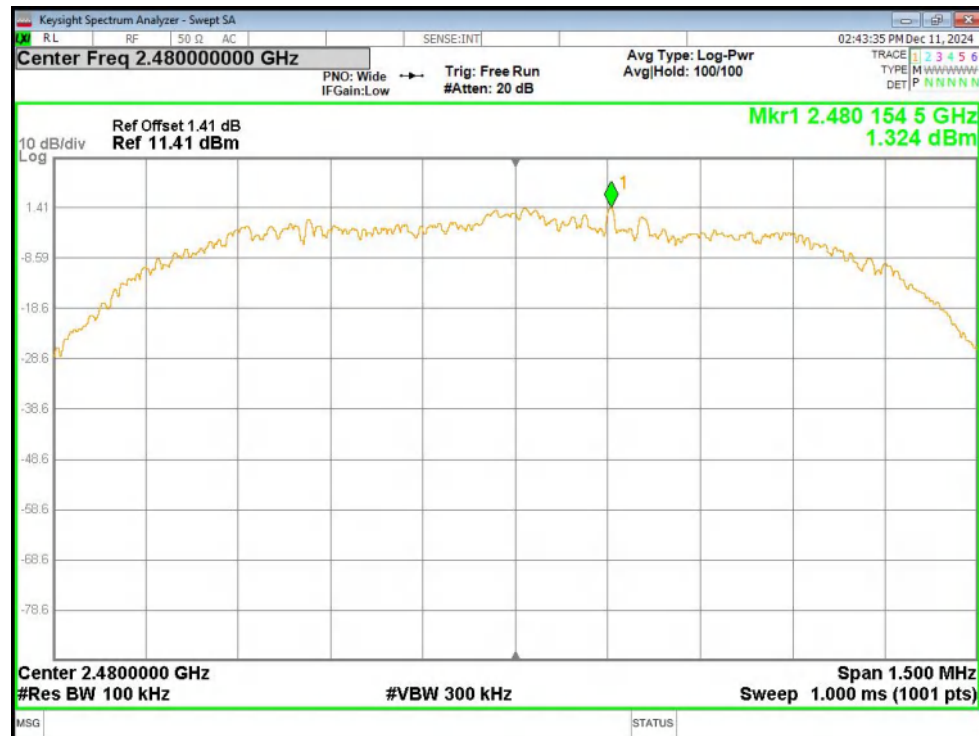
Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Ref



Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Emission



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Emission

