

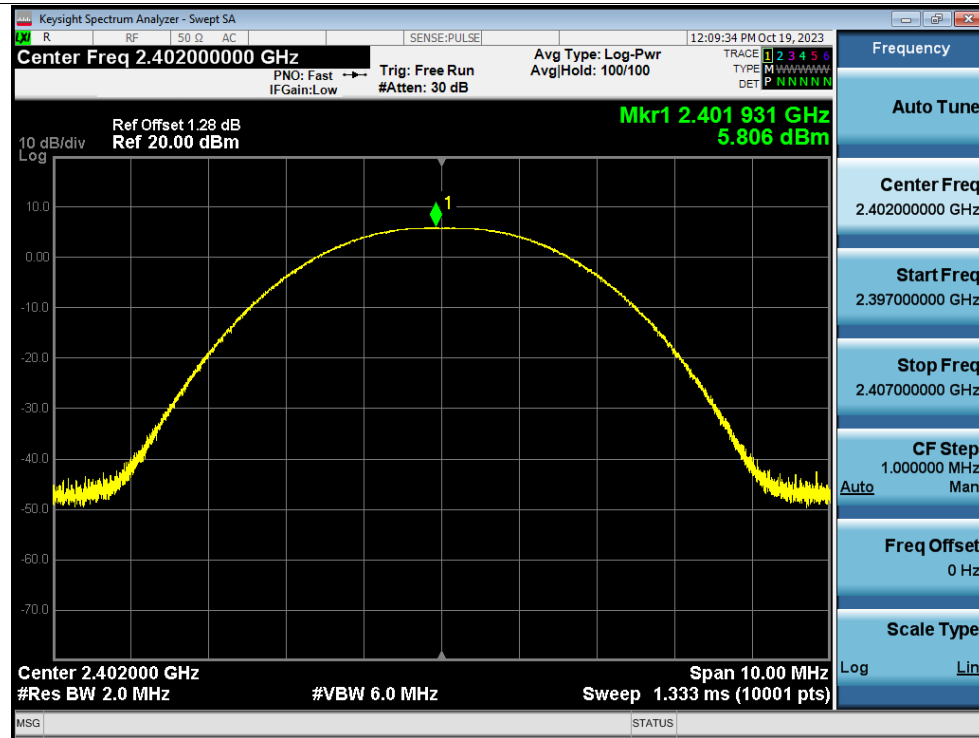
Appendix A

Maximum Conducted Output Power

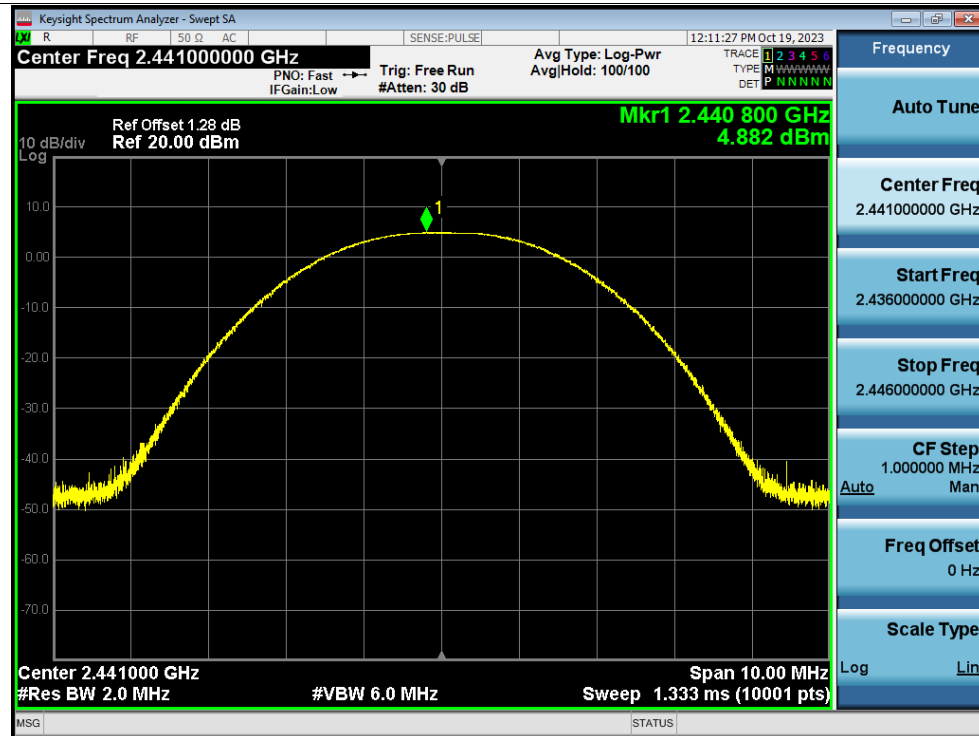
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	1-DH5	2402	Ant1	5.81	0	5.81	21	Pass
NVNT	1-DH5	2441	Ant1	4.88	0	4.88	21	Pass
NVNT	1-DH5	2480	Ant1	3.47	0	3.47	21	Pass
NVNT	2-DH5	2402	Ant1	6.42	0	6.42	21	Pass
NVNT	2-DH5	2441	Ant1	5.56	0	5.56	21	Pass
NVNT	2-DH5	2480	Ant1	4.24	0	4.24	21	Pass
NVNT	3-DH5	2402	Ant1	5.78	0	5.78	21	Pass
NVNT	3-DH5	2441	Ant1	4.93	0	4.93	21	Pass
NVNT	3-DH5	2480	Ant1	3.58	0	3.58	21	Pass

Test Graphs

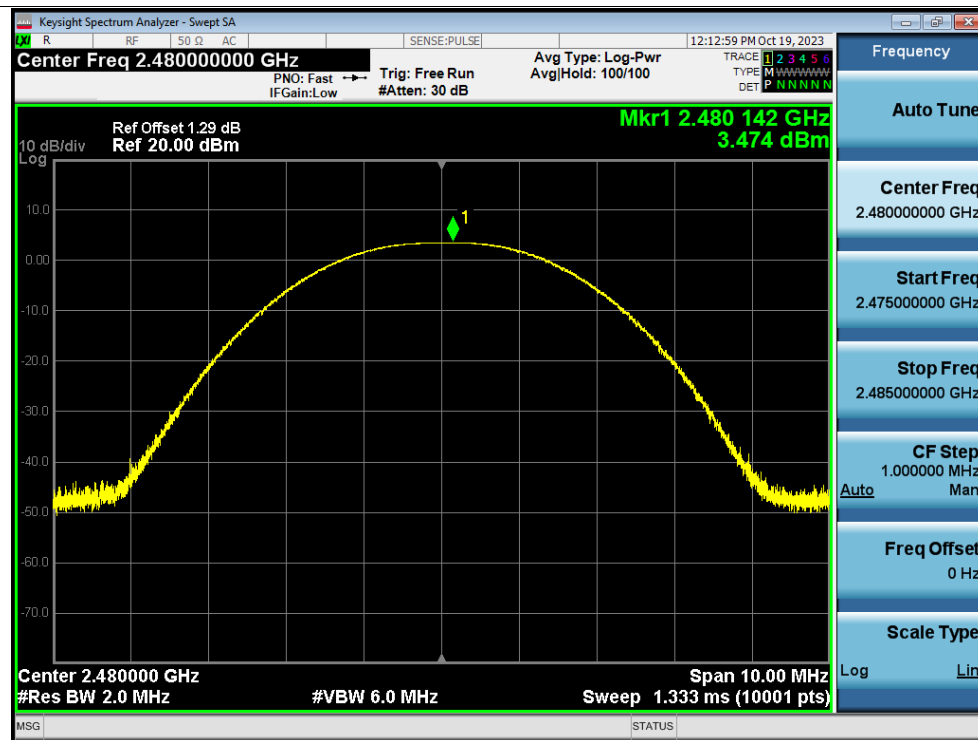
Power NVNT 1-DH5 2402MHz Ant1



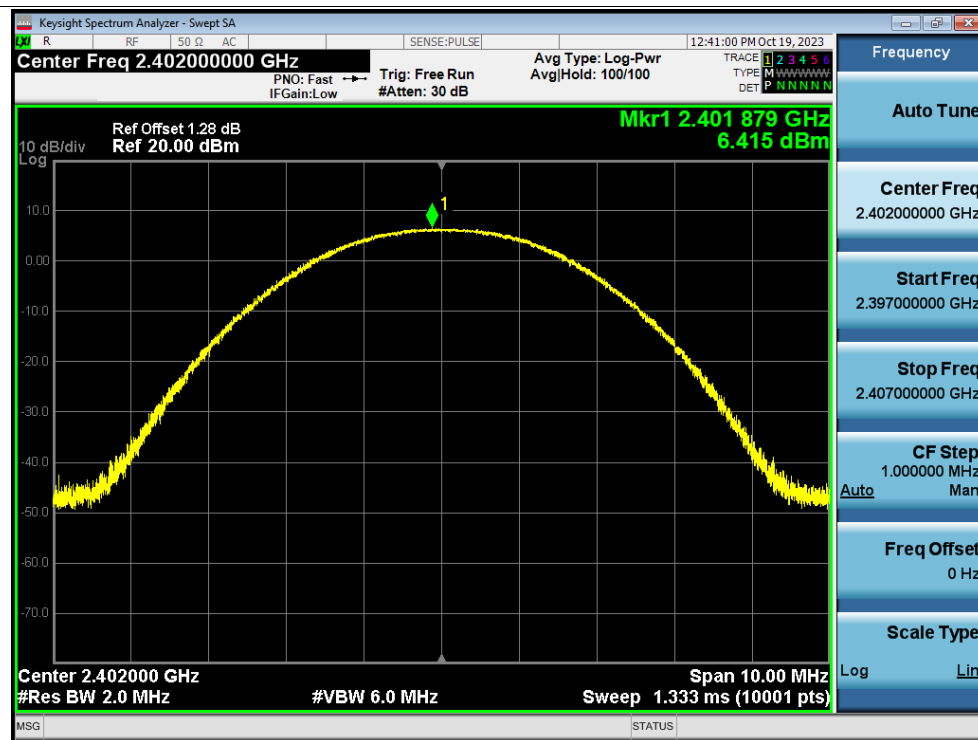
Power NVNT 1-DH5 2441MHz Ant1



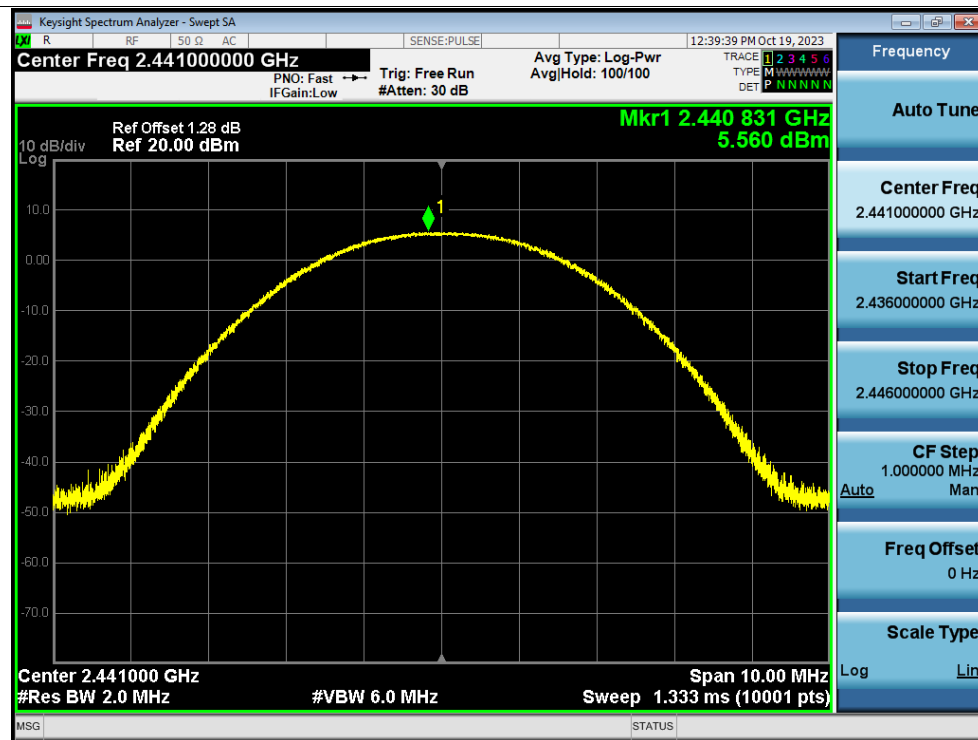
Power NVNT 1-DH5 2480MHz Ant1



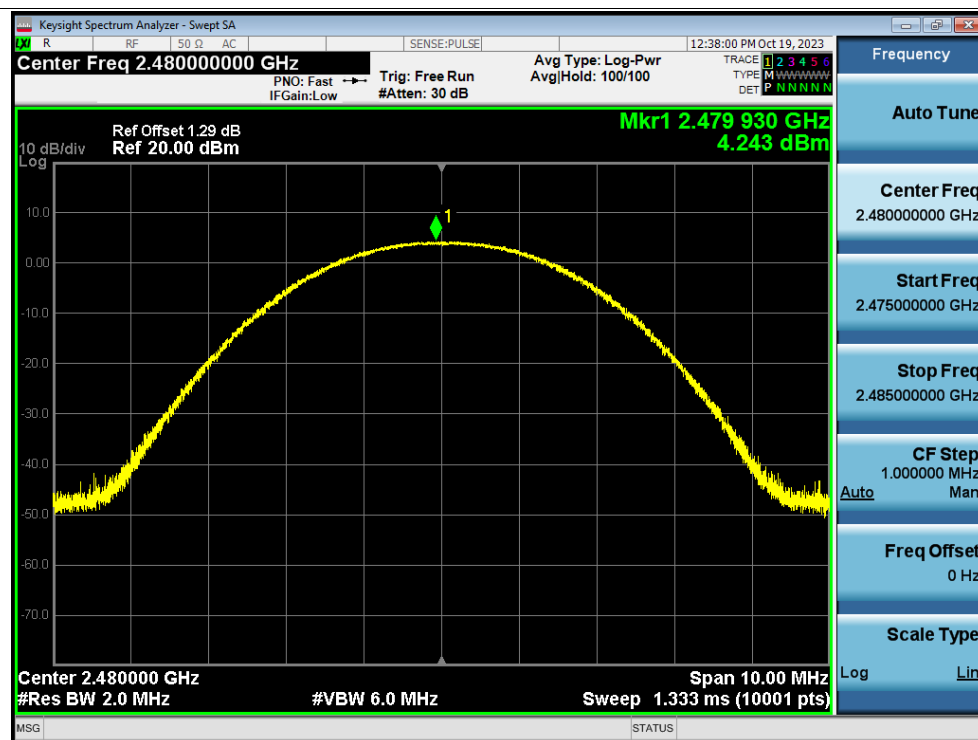
Power NVNT 2-DH5 2402MHz Ant1



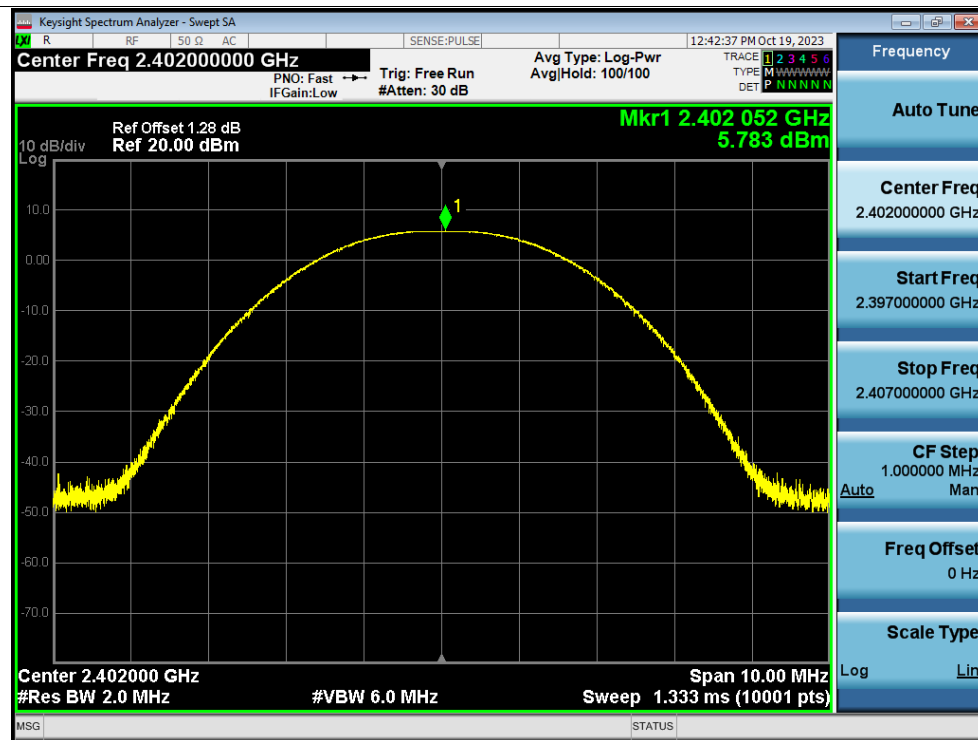
Power NVNT 2-DH5 2441MHz Ant1



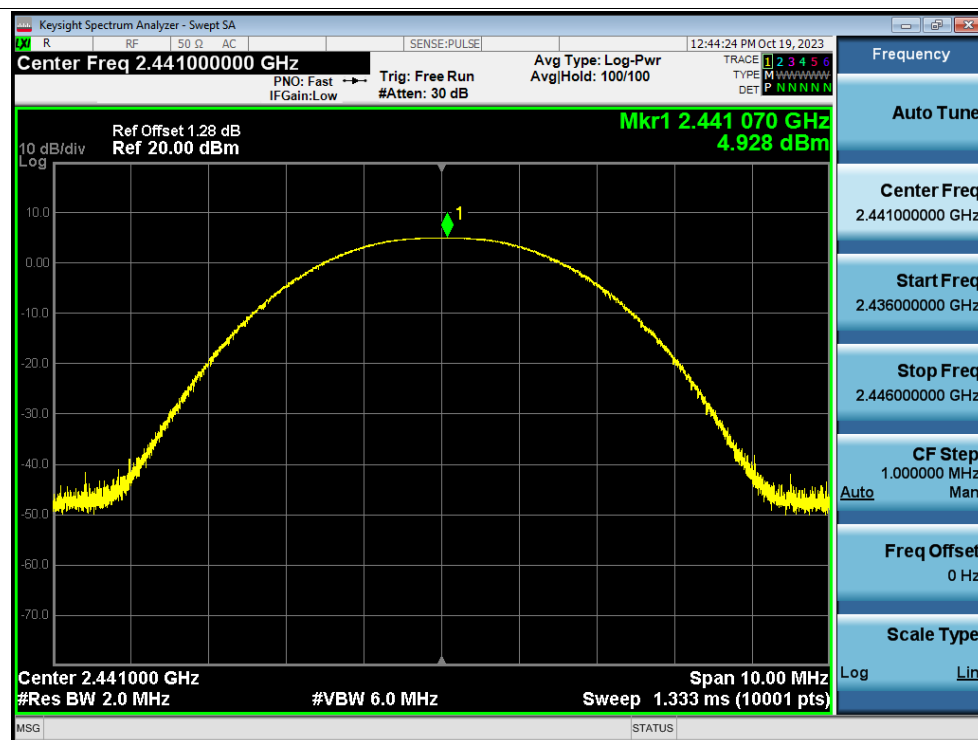
Power NVNT 2-DH5 2480MHz Ant1



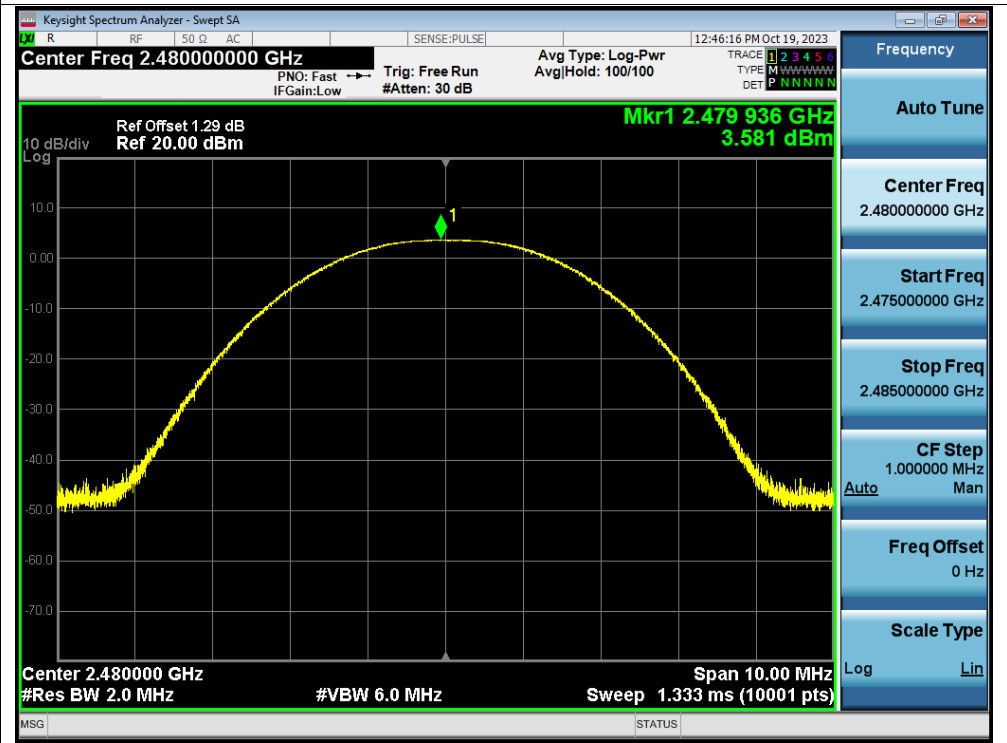
Power NVNT 3-DH5 2402MHz Ant1



Power NVNT 3-DH5 2441MHz Ant1



Power NVNT 3-DH5 2480MHz Ant1



-20dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-20 dB Bandwidth (MHz)	Limit -20 dB Bandwidth (MHz)	Verdict
NVNT	1-DH5	2402	Ant1	1.061	0	Pass
NVNT	1-DH5	2441	Ant1	1.027	0	Pass
NVNT	1-DH5	2480	Ant1	1.044	0	Pass
NVNT	2-DH5	2402	Ant1	1.332	0	Pass
NVNT	2-DH5	2441	Ant1	1.329	0	Pass
NVNT	2-DH5	2480	Ant1	1.321	0	Pass
NVNT	3-DH5	2402	Ant1	1.042	0	Pass
NVNT	3-DH5	2441	Ant1	1.034	0	Pass
NVNT	3-DH5	2480	Ant1	1.029	0	Pass

Test Graphs

-20dB Bandwidth NVNT 1-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 1-DH5 2441MHz Ant1



-20dB Bandwidth NVNT 1-DH5 2480MHz Ant1



-20dB Bandwidth NVNT 2-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 2-DH5 2441MHz Ant1



-20dB Bandwidth NVNT 2-DH5 2480MHz Ant1



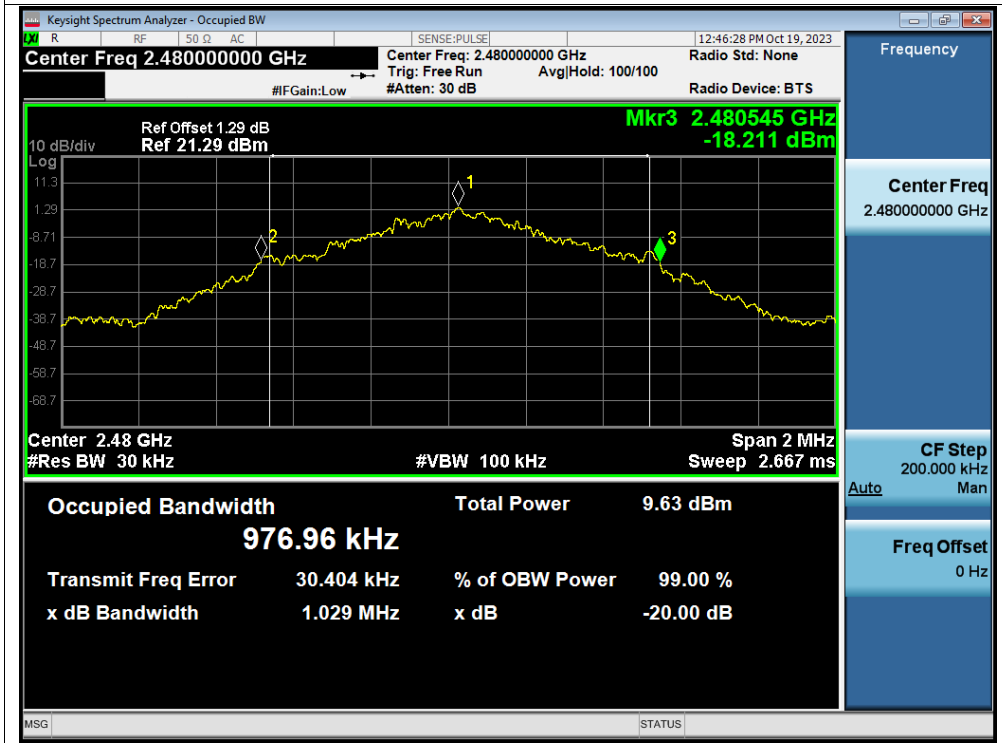
-20dB Bandwidth NVNT 3-DH5 2402MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2441MHz Ant1



-20dB Bandwidth NVNT 3-DH5 2480MHz Ant1



Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	1-DH5	2402	Ant1	0.945
NVNT	1-DH5	2441	Ant1	0.957
NVNT	1-DH5	2480	Ant1	0.958
NVNT	2-DH5	2402	Ant1	1.228
NVNT	2-DH5	2441	Ant1	1.225
NVNT	2-DH5	2480	Ant1	1.218
NVNT	3-DH5	2402	Ant1	0.957
NVNT	3-DH5	2441	Ant1	0.984
NVNT	3-DH5	2480	Ant1	0.965

Test Graphs

OBW NVNT 1-DH5 2402MHz Ant1



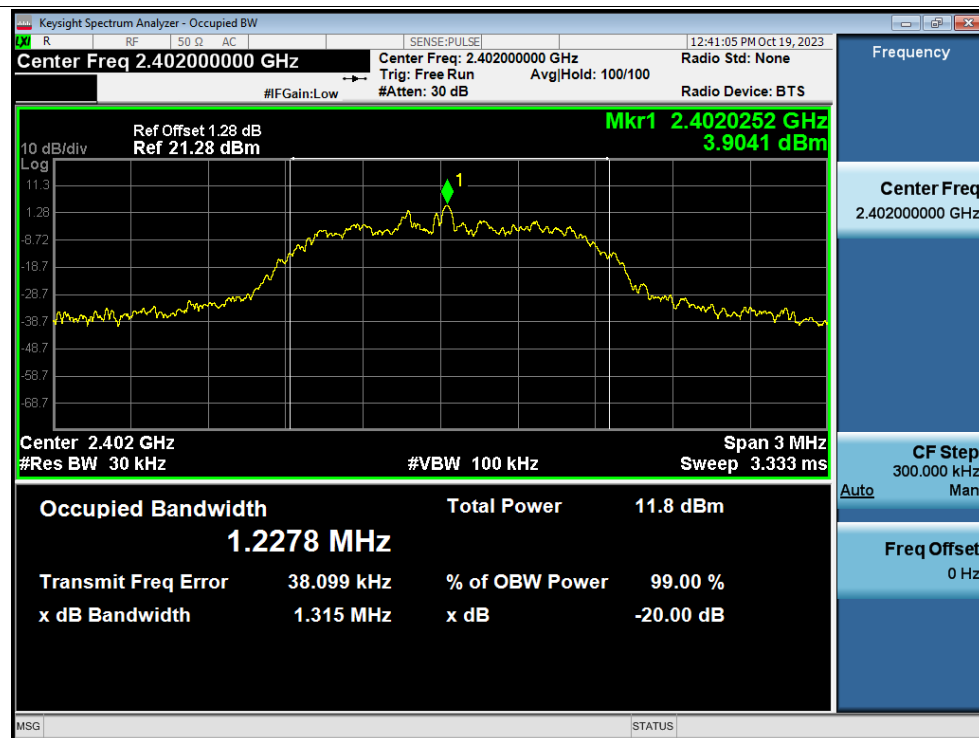
OBW NVNT 1-DH5 2441MHz Ant1



OBW NVNT 1-DH5 2480MHz Ant1



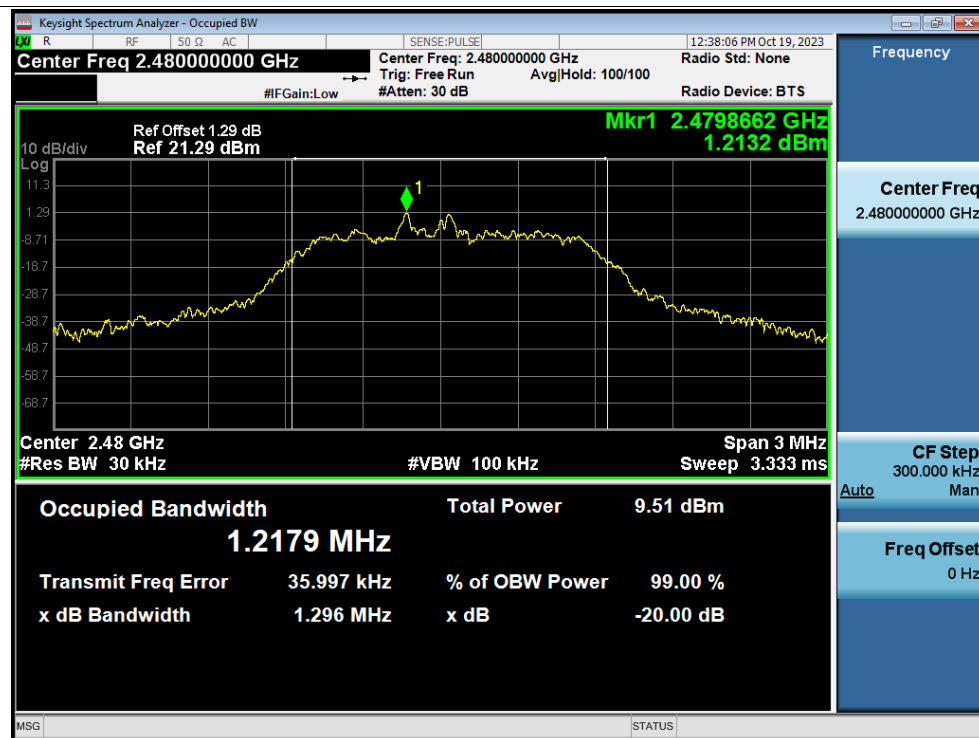
OBW NVNT 2-DH5 2402MHz Ant1



OBW NVNT 2-DH5 2441MHz Ant1



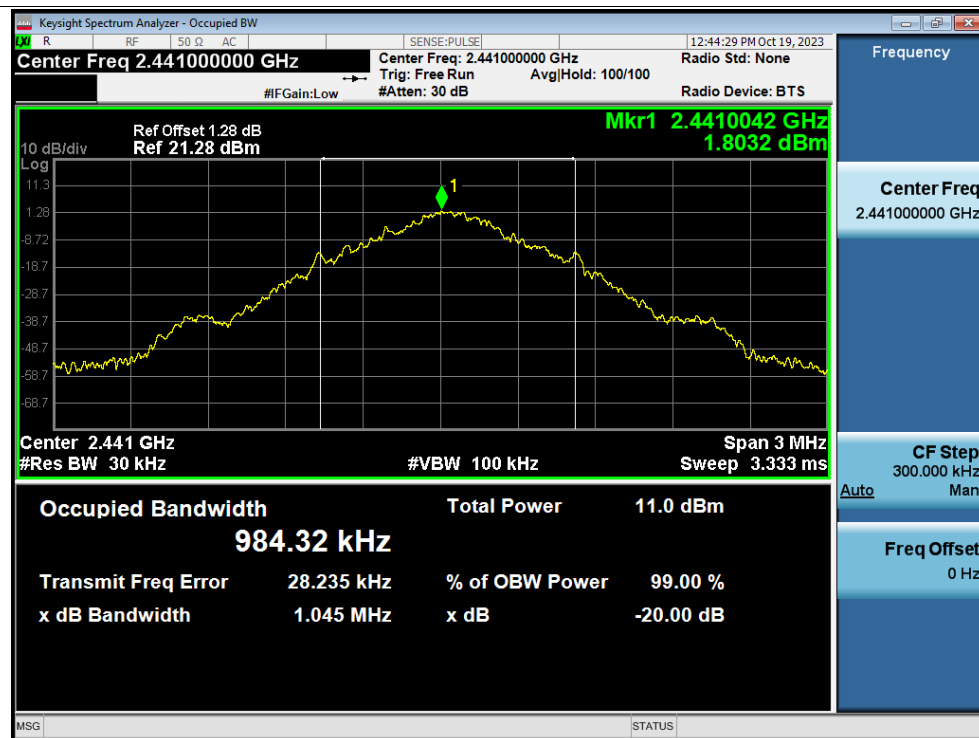
OBW NVNT 2-DH5 2480MHz Ant1



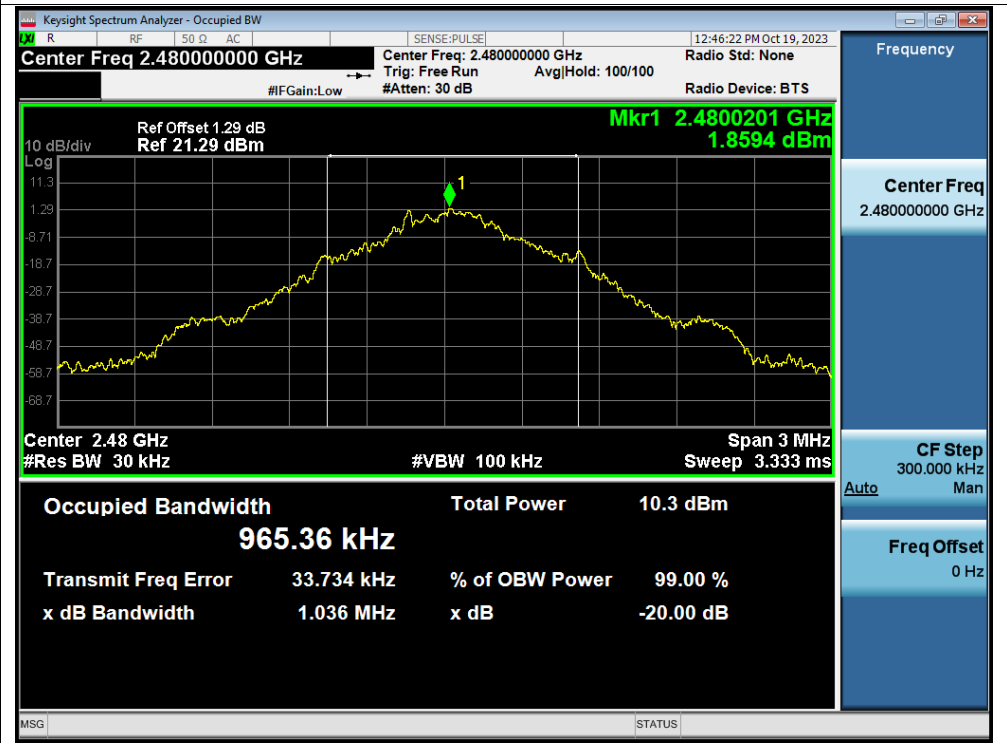
OBW NVNT 3-DH5 2402MHz Ant1



OBW NVNT 3-DH5 2441MHz Ant1



OBW NVNT 3-DH5 2480MHz Ant1

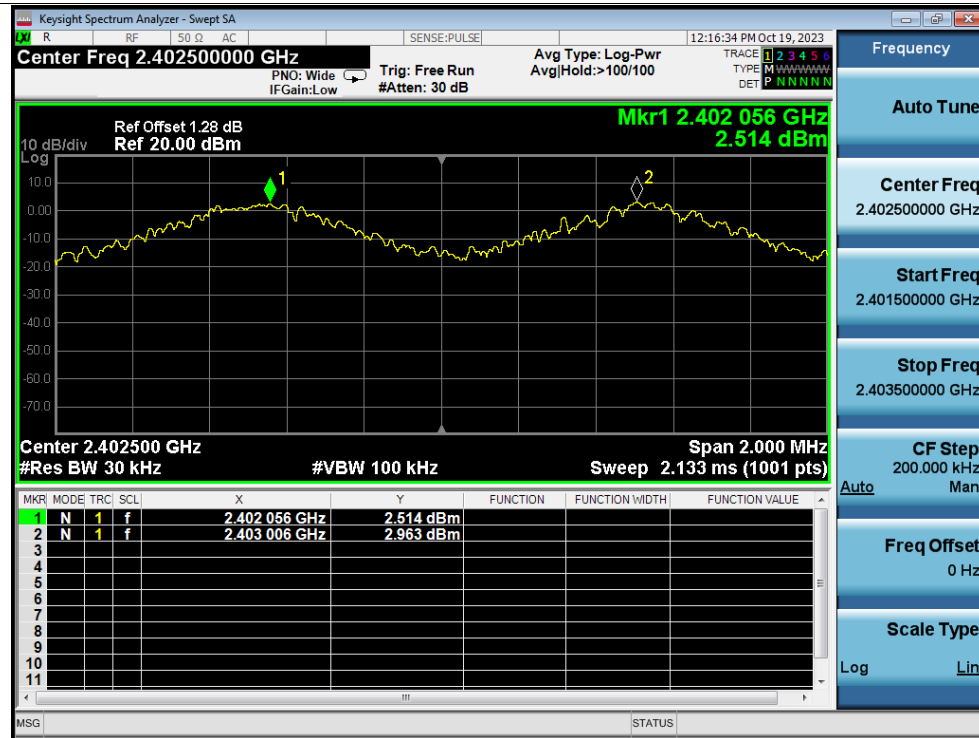


Carrier Frequencies Separation

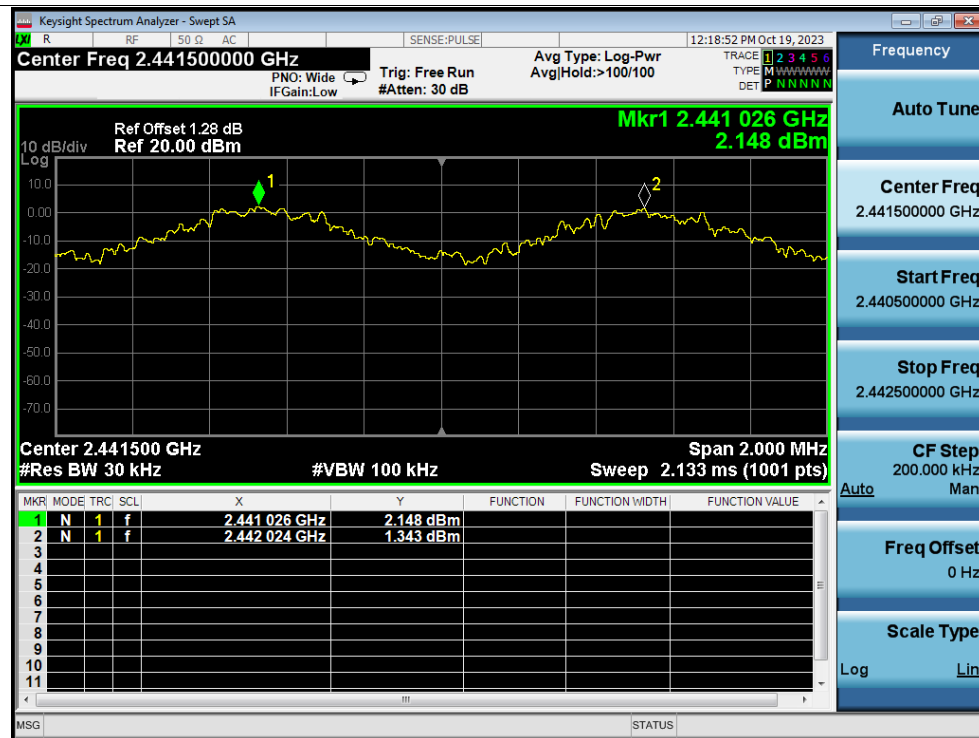
Condition	Mode	Antenna	Hopping Freq1 (MHz)	Hopping Freq2 (MHz)	HFS (MHz)	Limit (MHz)	Verdict
NVNT	1-DH5	Ant1	2402.056	2403.006	0.95	0.707	Pass
NVNT	1-DH5	Ant1	2441.026	2442.024	0.998	0.685	Pass
NVNT	1-DH5	Ant1	2479.052	2480.014	0.962	0.696	Pass
NVNT	2-DH5	Ant1	2402.004	2403.012	1.008	0.025	Pass
NVNT	2-DH5	Ant1	2441.016	2442.016	1	0.025	Pass
NVNT	2-DH5	Ant1	2478.88	2479.866	0.986	0.025	Pass
NVNT	3-DH5	Ant1	2402.022	2402.986	0.964	0.695	Pass
NVNT	3-DH5	Ant1	2441.026	2442.054	1.028	0.689	Pass
NVNT	3-DH5	Ant1	2479.064	2480.022	0.958	0.686	Pass

Test Graphs

CFS NVNT 1-DH5 2402MHz Ant1



CFS NVNT 1-DH5 2441MHz Ant1



KeySight Spectrum Analyzer - Swept SA

RF 50 Ω AC SENSE:PULSE 12:19:54 PM Oct 19, 2023

Center Freq 2.479500000 GHz PNO: Wide IF Gain: Low Trig: Free Run #Atten: 30 dB

Avg Type: Log-Pwr Avg|Hold: >100/100

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

Ref Offset 1.29 dB
Ref 20.00 dBm

Mkr1 2.479 052 GHz
0.793 dBm

10 dB/div
Log

Center 2.479500 GHz
#Res BW 30 kHz
#VBW 100 kHz
Span 2.000 MHz
Sweep 2.133 ms (1001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.479 052 GHz	0.793 dBm			
2	N	1	f	2.480 014 GHz	-0.020 dBm			
3								
4								
5								
6								
7								
8								
9								
10								
11								

MSG STATUS

Frequency

Auto Tune

Center Freq
2.479500000 GHz

Start Freq
2.478500000 GHz

Stop Freq
2.480500000 GHz

CF Step
200.000 kHz
Man

Auto

Freq Offset
0 Hz

Scale Type
Log Lin

[illegible]

CFS NVNT 2-DH5 2441MHz Ant1

Keysight Spectrum Analyzer - Swept SA

R F 50 Ω AC SENSE:PULSE 12:35:37 PM Oct 19, 2023

Center Freq 2.441500000 GHz PNO: Wide IFGain:Low Trig: Free Run Avg Type: Log-Pwr AvgHold:>100/100

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

Ref Offset 1.28 dB Ref 20.00 dBm

Mkr1 2.441 016 GHz 0.198 dBm

10 dB/div Log

Center 2.441500 GHz #Res BW 30 kHz #VBW 100 kHz Span 2.000 MHz Sweep 2.133 ms (1001 pts)

Mkr	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.441 016 GHz	0.198 dBm			
2	N	1	f	2.442 016 GHz	0.925 dBm			
3								
4								
5								
6								
7								
8								
9								
10								
11								

MSG STATUS

Frequency

Auto Tune

Center Freq
2.441500000 GHz

Start Freq
2.440500000 GHz

Stop Freq
2.442500000 GHz

CF Step
200.000 kHz
Man

Auto

Freq Offset
0 Hz

Scale Type
Log Lin

CFS NVNT 2-DH5 2480MHz Ant1

Keysight Spectrum Analyzer - Swept SA

R RF 50 Ω AC SENSE:PULSE 12:36:27 PM Oct 19, 2023

Center Freq 2.479500000 GHz Avg Type: Log-Pwr Avg|Hold:>100/100

PNO: Wide Trig: Free Run P 1 2 3 4 5 6
IFGain:Low #Atten: 30 dB TYPE M W W W W W W W W
DET P N N N N N N N

Ref Offset 1.29 dB Mkr1 2.478 880 GHz
Ref 20.00 dBm -2.567 dBm

10 dB/div Log

Center 2.479500 GHz Span 2.000 MHz
#Res BW 30 kHz #VBW 100 kHz Sweep 2.133 ms (1001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.478 880 GHz	-2.567 dBm			
2	N	1	f	2.479 866 GHz	1.265 dBm			
3								
4								
5								
6								
7								
8								
9								
10								
11								

MSG STATUS

Frequency

Auto Tune

Center Freq 2.479500000 GHz

Start Freq 2.478500000 GHz

Stop Freq 2.480500000 GHz

CF Step 200.000 kHz Man

Auto

Freq Offset 0 Hz

Scale Type Log Lin

CFS NVNT 3-DH5 2402MHz Ant1

Keysight Spectrum Analyzer - Swept SA

RF 50 Ω AC SENSE:PULSE 12:50:02 PM Oct 19, 2023

Center Freq 2.402500000 GHz PNO: Wide IF Gain: Low Trig: Free Run Avg Type: Log-Pwr Avg Hold: >100/100

TRACE 1 2 3 4 5 6 TYPE M N P N N N N N DET P N N N N N N

Ref Offset 1.28 dB Ref 20.00 dBm

Mkr1 2.402 022 GHz 3.822 dBm

10 dB/div Log

Center 2.402500 GHz Span 2.000 MHz

#Res BW 30 kHz #VBW 100 kHz Sweep 2.133 ms (1001 pts)

Mkr	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.402 022 GHz	3.822 dBm			
2	N	1	f	2.402 986 GHz	3.079 dBm			
3								
4								
5								
6								
7								
8								
9								
10								
11								

MSG STATUS

Frequency

Auto Tune

Center Freq 2.402500000 GHz

Start Freq 2.401500000 GHz

Stop Freq 2.403500000 GHz

CF Step 200.000 kHz Man

Auto

Freq Offset 0 Hz

Scale Type Log Lin

[illegible]

CFS NVNT 3-DH5 2480MHz Ant1

Keysight Spectrum Analyzer - Swept SA

Center Freq 2.47950000 GHz

Ref Offset 1.29 dB
Ref 20.00 dBm

Trig: Free Run
#Atten: 30 dB

Avg Type: Log-Pwr
AvgHold: >100/100

12:57:39 PM Oct 19, 2023

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

10 dB/div
Log

Ref Offset 1.29 dB
Ref 20.00 dBm

Mkr1 2.479 064 GHz
0.496 dBm

Center 2.479500 GHz
#Res BW 30 kHz
#VBW 100 kHz
Span 2.000 MHz
Sweep 2.133 ms (1001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.479 064 GHz	0.496 dBm			
2	N	1	f	2.480 022 GHz	2.022 dBm			
3								
4								
5								
6								
7								
8								
9								
10								
11								

Frequency

Auto Tune

Center Freq
2.479500000 GHz

Start Freq
2.478500000 GHz

Stop Freq
2.480500000 GHz

CF Step
200.000 kHz
Man

Freq Offset
0 Hz

Scale Type
Log Lin

MSG

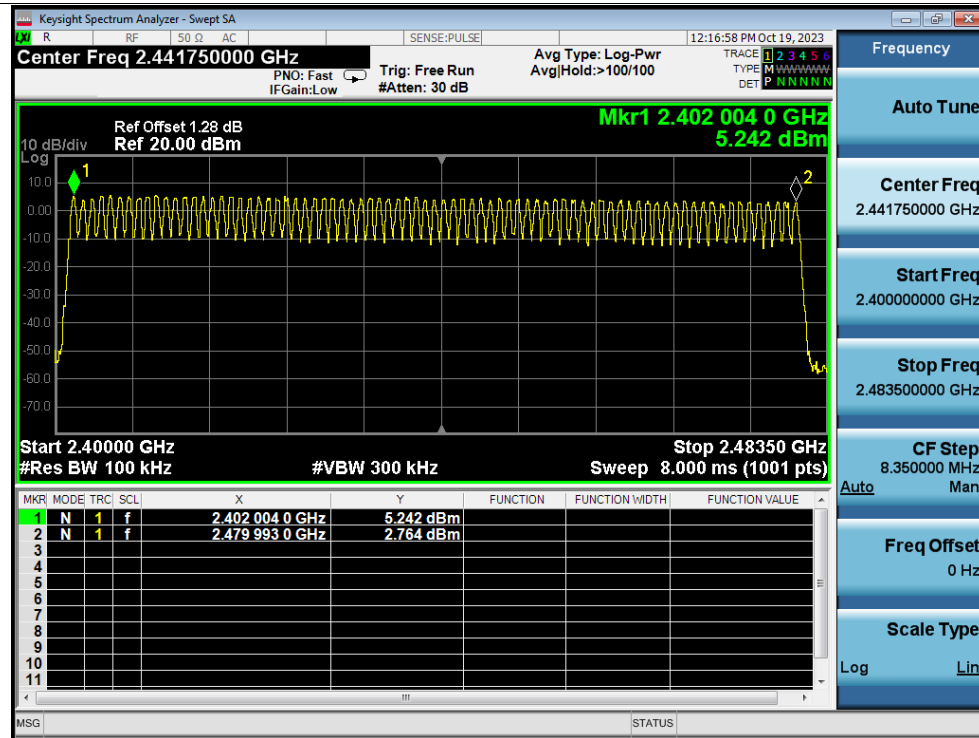
STATUS

Number of Hopping Channel

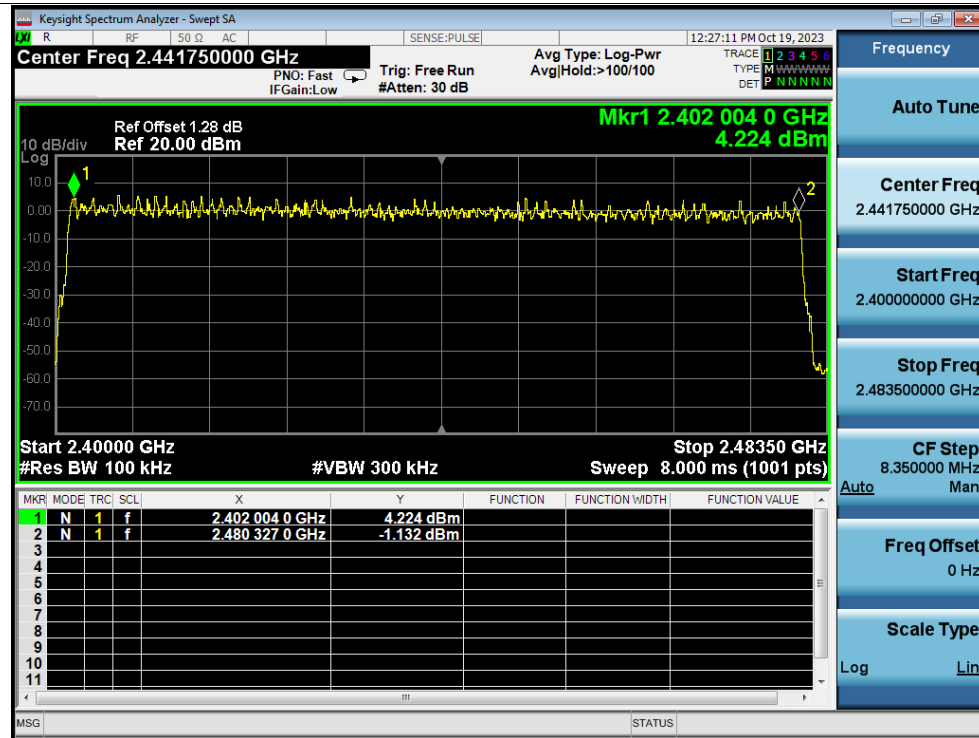
Condition	Mode	Antenna	Hopping Number	Limit	Verdict
NVNT	1-DH5	Ant1	79	15	Pass
NVNT	2-DH5	Ant1	79	15	Pass
NVNT	3-DH5	Ant1	79	15	Pass

Test Graphs

Hopping No. NVNT 1-DH5 2402MHz Ant1



Hopping No. NVNT 2-DH5 2402MHz Ant1



The screenshot shows a Keysight Spectrum Analyzer interface. The main display is a frequency plot with a yellow signal trace. The plot has a grid with a vertical scale from -70.0 to 10 dB/div and a horizontal scale from 2.40000 GHz to 2.48350 GHz. A yellow signal trace is visible, with a peak at 2.441750000 GHz. The plot is labeled with 'Mkr1 2.402 004 0 GHz' and '5.551 dBm'. The plot also shows 'Ref Offset 1.28 dB' and 'Ref 20.00 dBm'. The plot is labeled with 'Start 2.40000 GHz' and 'Stop 2.48350 GHz'. The plot is labeled with '#Res BW 100 kHz' and '#VBW 300 kHz'. The plot is labeled with 'Sweep 8.000 ms (1001 pts)'.

The right side of the interface contains several control panels. The 'Frequency' panel shows 'Auto Tune'. The 'Center Freq' panel shows '2.441750000 GHz'. The 'Start Freq' panel shows '2.400000000 GHz'. The 'Stop Freq' panel shows '2.483500000 GHz'. The 'CF Step' panel shows '8.350000 MHz' and 'Man'. The 'Auto' panel shows 'Auto'. The 'Freq Offset' panel shows '0 Hz'. The 'Scale Type' panel shows 'Log' and 'Lin'.

The bottom of the interface shows a table of markers. The table has columns for 'MKR', 'MODE', 'TRC', 'SCL', 'X', 'Y', 'FUNCTION', 'FUNCTION WIDTH', and 'FUNCTION VALUE'. The table contains two rows of data.

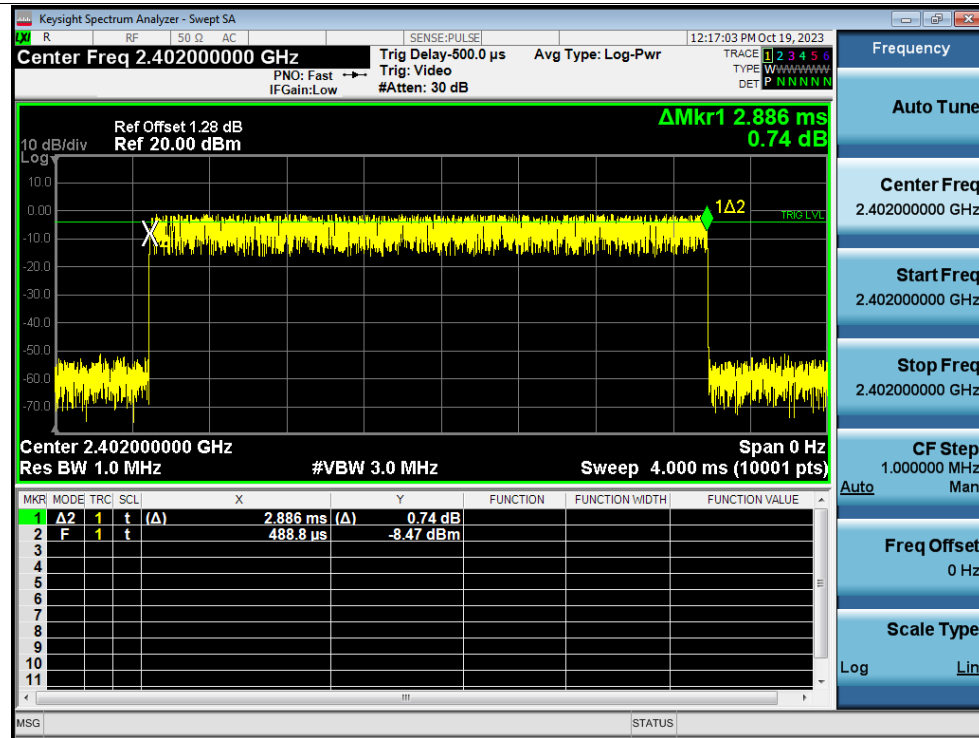
MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.402 004 0 GHz	5.551 dBm			
2	N	1	f	2.480 076 5 GHz	2.744 dBm			

Dwell Time

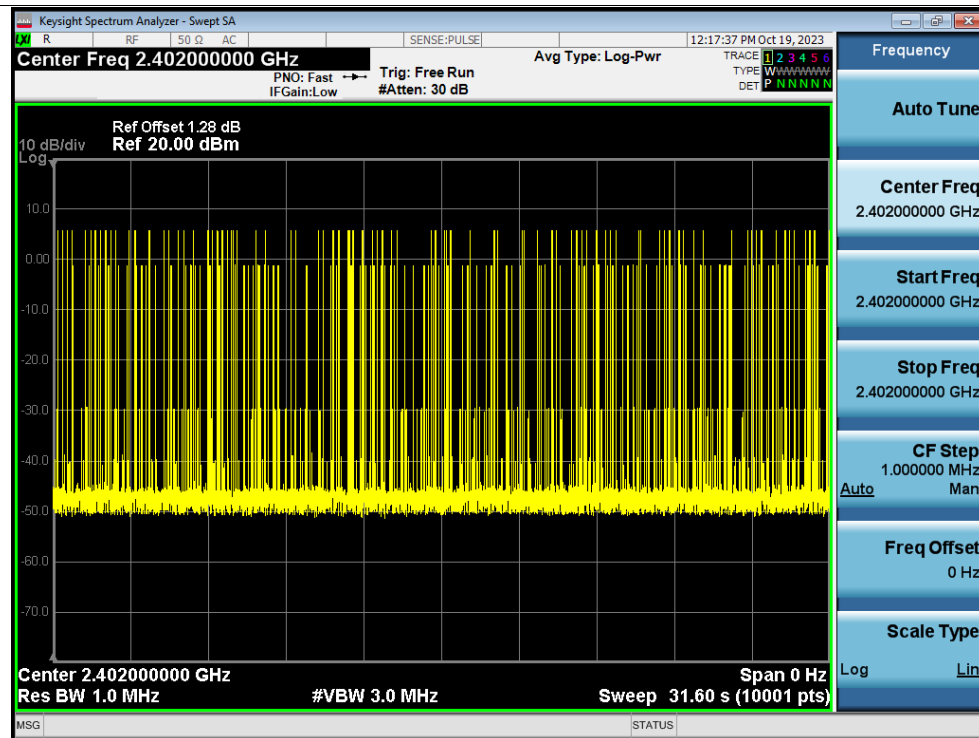
Condition	Mode	Frequency (MHz)	Antenna	Pulse Time (ms)	Total Dwell Time (ms)	Burst Count	Period Time (ms)	Limit (ms)	Verdict
NVNT	1-DH5	2402	Ant1	2.886	291.486	101	31600	400	Pass
NVNT	1-DH5	2441	Ant1	2.885	282.73	98	31600	400	Pass
NVNT	1-DH5	2480	Ant1	2.885	291.385	101	31600	400	Pass
NVNT	2-DH5	2402	Ant1	2.885	363.51	126	31600	400	Pass
NVNT	2-DH5	2441	Ant1	2.891	320.901	111	31600	400	Pass
NVNT	2-DH5	2480	Ant1	2.892	315.228	109	31600	400	Pass
NVNT	3-DH5	2402	Ant1	2.362	243.286	103	31600	400	Pass
NVNT	3-DH5	2441	Ant1	2.362	262.182	111	31600	400	Pass
NVNT	3-DH5	2480	Ant1	2.362	255.096	108	31600	400	Pass

Test Graphs

Dwell NVNT 1-DH5 2402MHz Ant1 One Burst



Dwell NVNT 1-DH5 2402MHz Ant1 Accumulated



Dwell NVNT 1-DHS 2441MHz Ant1 One Burst

Keysight Spectrum Analyzer - Swept SA

RF 50.0 AC SENSE:PULSE 12:18:57 PM Oct 19, 2023

Center Freq 2.441000000 GHz Trig Delay: 500.0 μ s Avg Type: Log-Pwr

PNO: Fast IFGain: Low Trig: Video #Atten: 30 dB

TRACE 1 2 3 4 5 6 TYPE WWWWWWWW P NNNNNN

Ref Offset 1.28 dB
Ref 20.00 dBm

ΔMkr1 2.885 ms
-0.16 dB

Δ2 TRIG LVL

Center 2.441000000 GHz Span 0 Hz
Res BW 1.0 MHz #VBW 3.0 MHz Sweep 4.000 ms (10001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	Δ2	1	t	(Δ)	2.885 ms (Δ)	-0.16 dB		
2	F	1	t		487.2 μ s	-9.98 dBm		
3								
4								
5								
6								
7								
8								
9								
10								
11								

Frequency

Auto Tune

Center Freq
2.441000000 GHz

Start Freq
2.441000000 GHz

Stop Freq
2.441000000 GHz

CF Step
1.000000 MHz

Man

Freq Offset
0 Hz

Scale Type
Log Lin

MSG **STATUS**

Keysight Spectrum Analyzer - Swept SA

R RF 50 Ω AC SENSE:PULSE 12:19:29 PM Oct 19, 2023

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 N N N N N N

Ref Offset 1.28 dB
Ref 20.00 dBm

10 dB/div
Log

The main display area shows a spectrum plot with a vertical axis from -70.0 to 10.0 dBm and a horizontal axis representing frequency. A dense, yellow signal is visible, centered at 2.441 GHz, with a span of 0 Hz. The signal appears as a series of vertical lines, indicating a very narrow bandwidth or a specific modulation scheme. The background is black with a grid.

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

MSG STATUS

Frequency

Auto Tune

Center Freq 2.441000000 GHz

Start Freq 2.441000000 GHz

Stop Freq 2.441000000 GHz

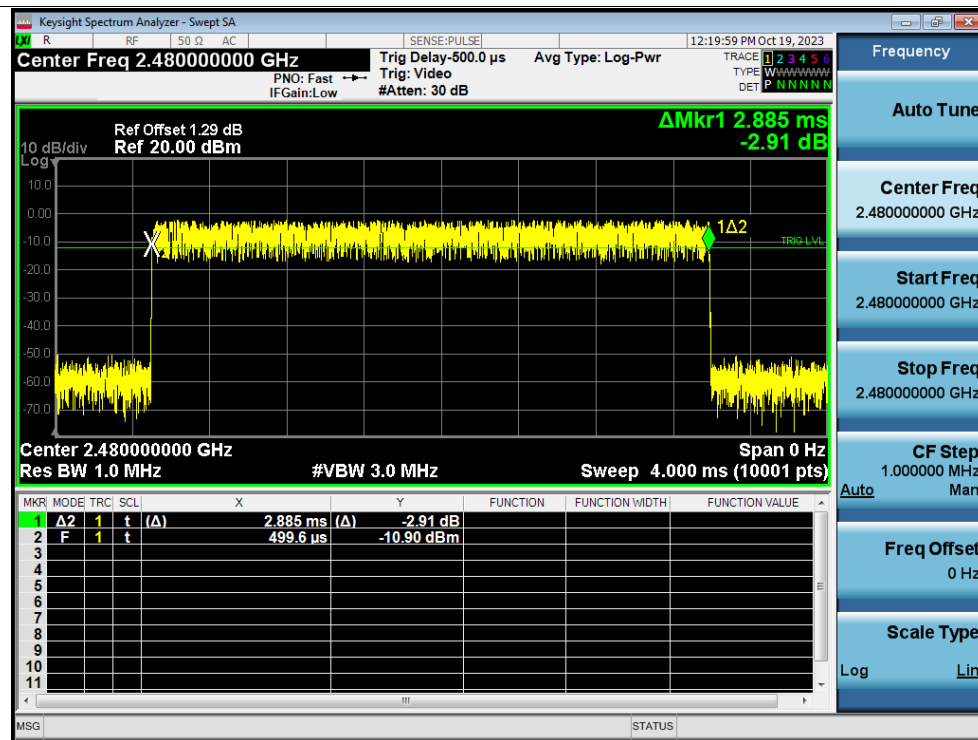
CF Step 1.000000 MHz Man

Auto

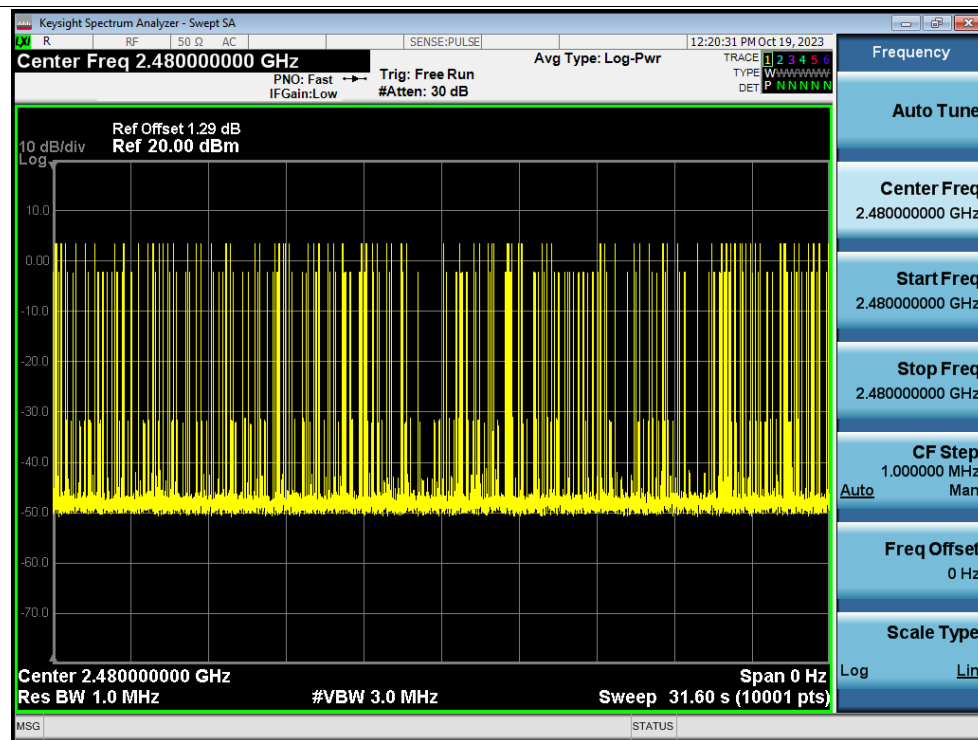
Freq Offset 0 Hz

Scale Type Log Lin

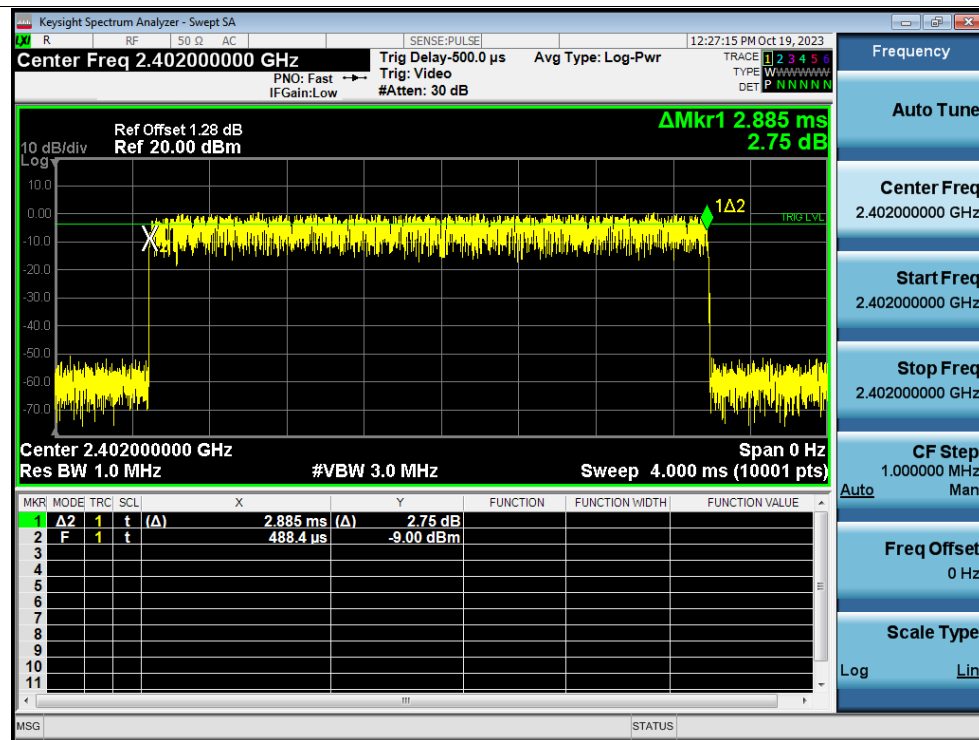
Dwell NVNT 1-DH5 2480MHz Ant1 One Burst



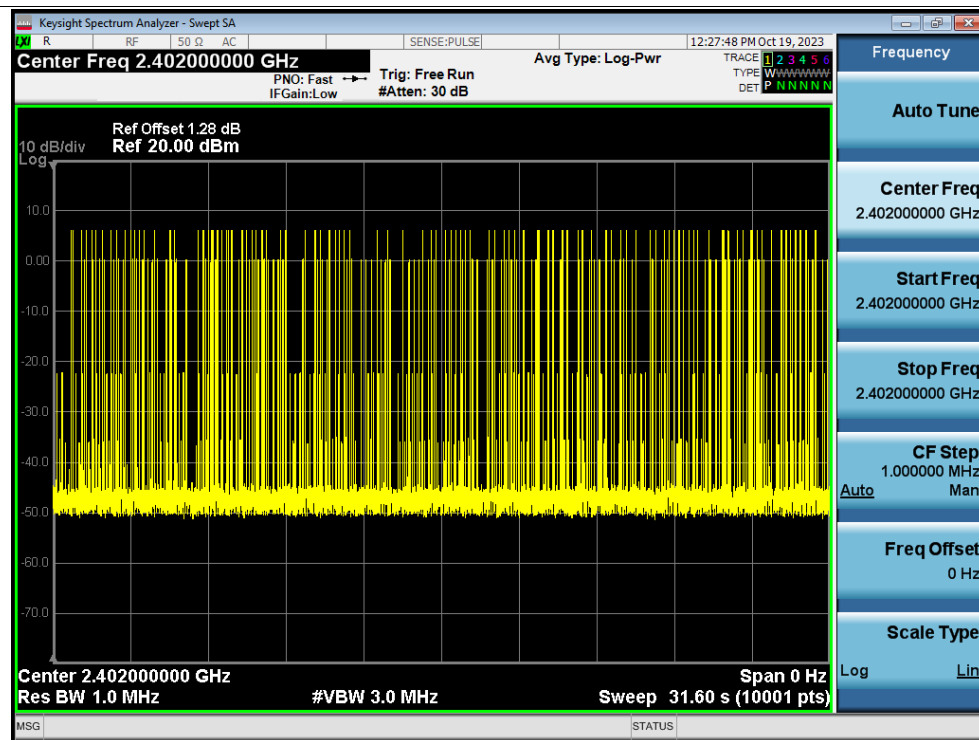
Dwell NVNT 1-DH5 2480MHz Ant1 Accumulated



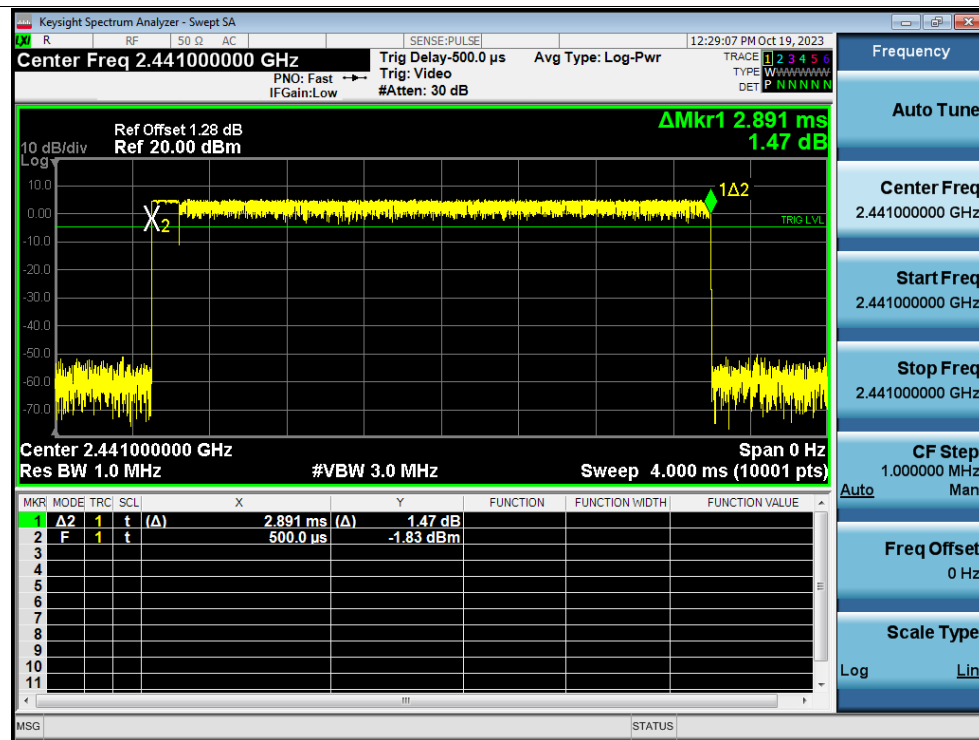
Dwell NVNT 2-DH5 2402MHz Ant1 One Burst



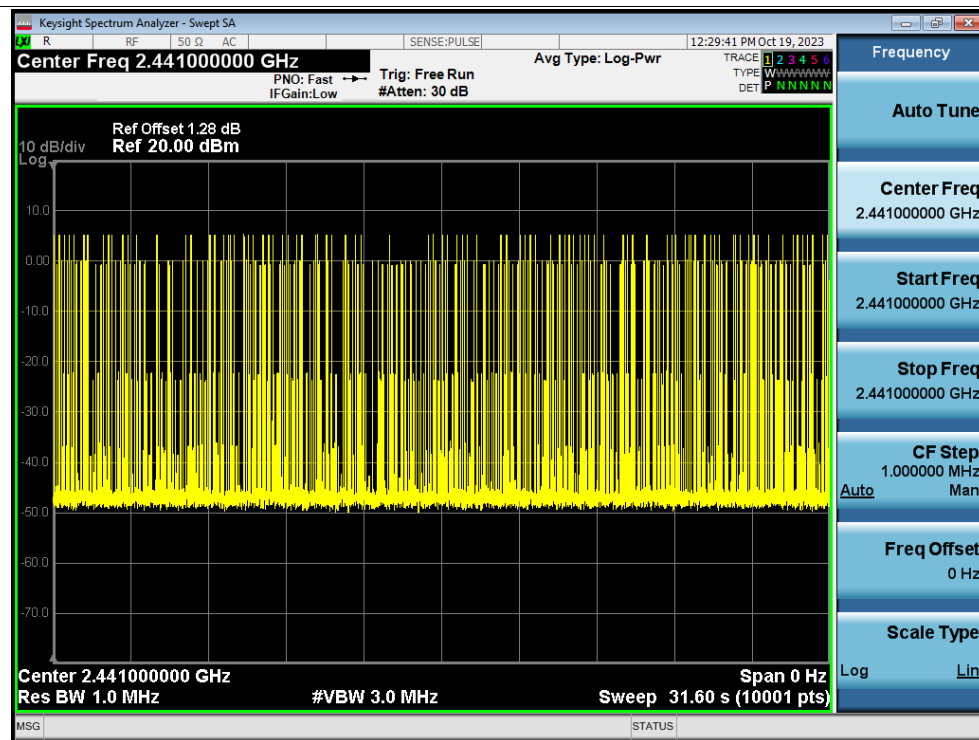
Dwell NVNT 2-DH5 2402MHz Ant1 Accumulated



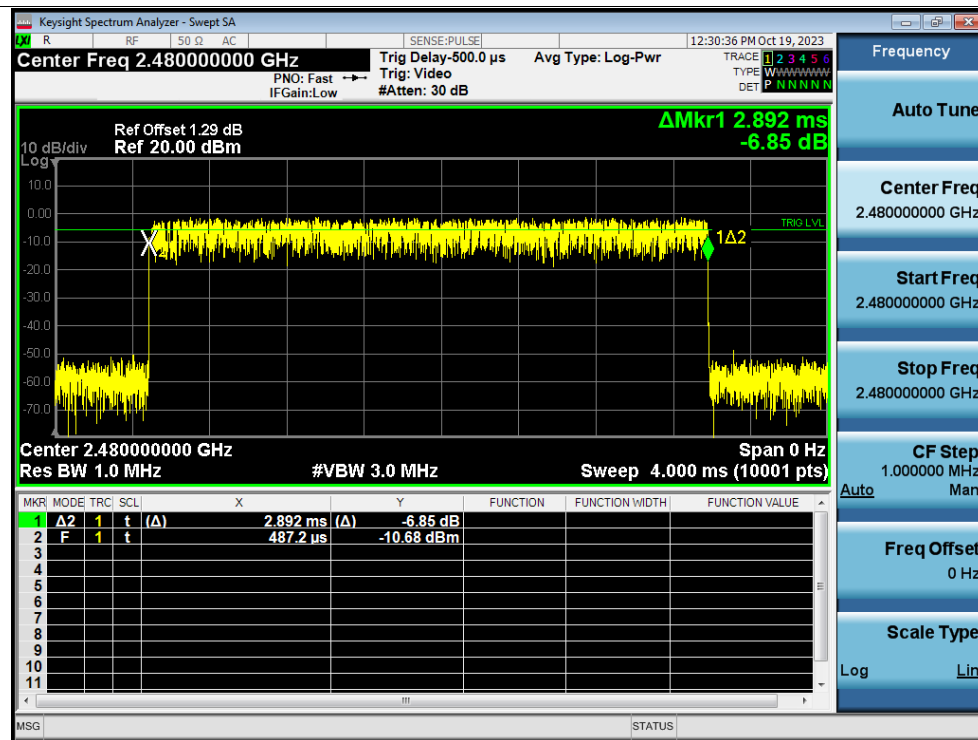
Dwell NVNT 2-DH5 2441MHz Ant1 One Burst



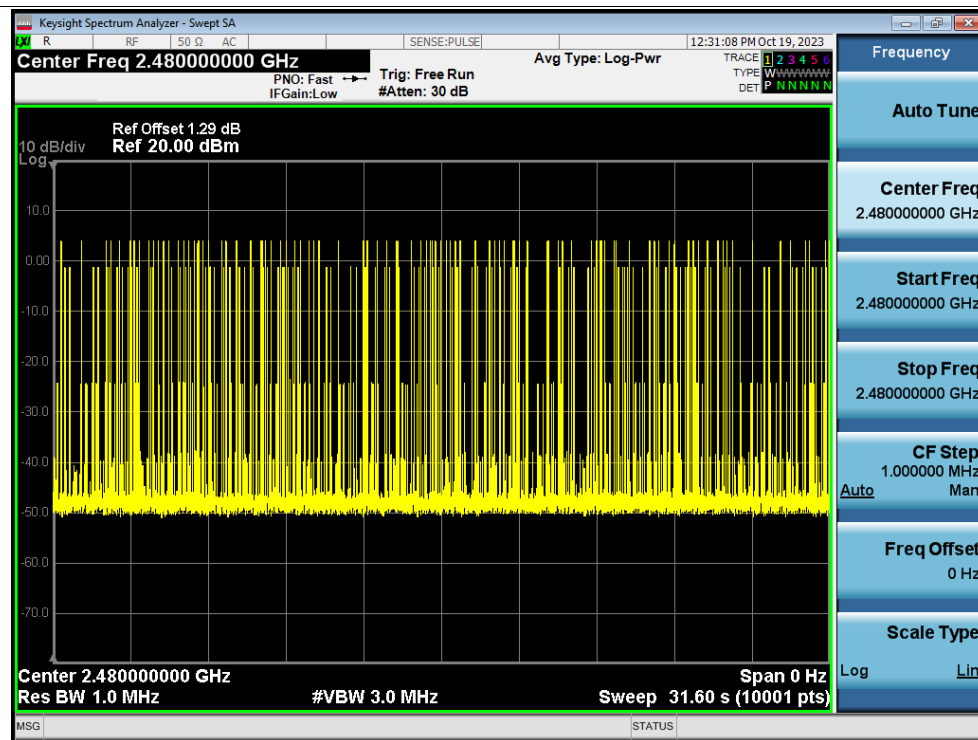
Dwell NVNT 2-DH5 2441MHz Ant1 Accumulated



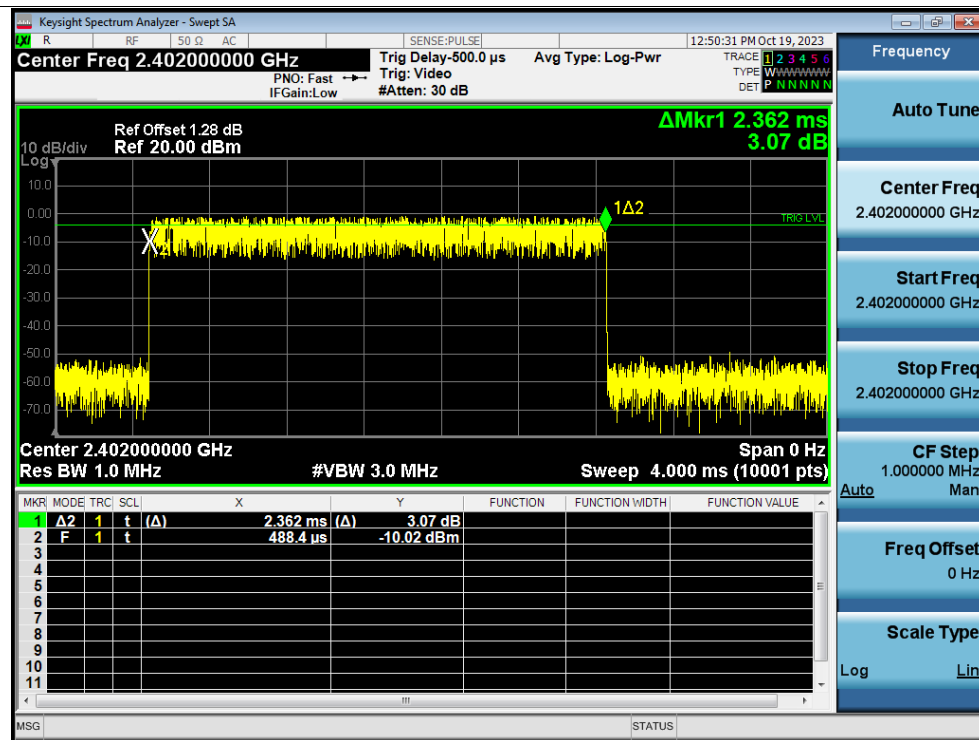
Dwell NVNT 2-DH5 2480MHz Ant1 One Burst



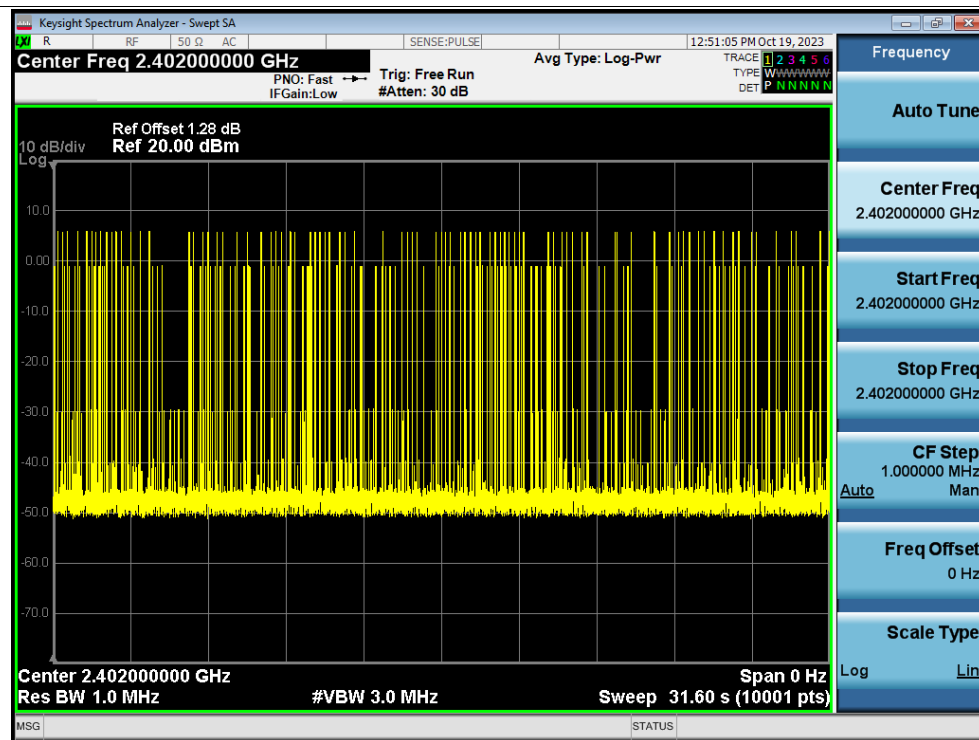
Dwell NVNT 2-DH5 2480MHz Ant1 Accumulated



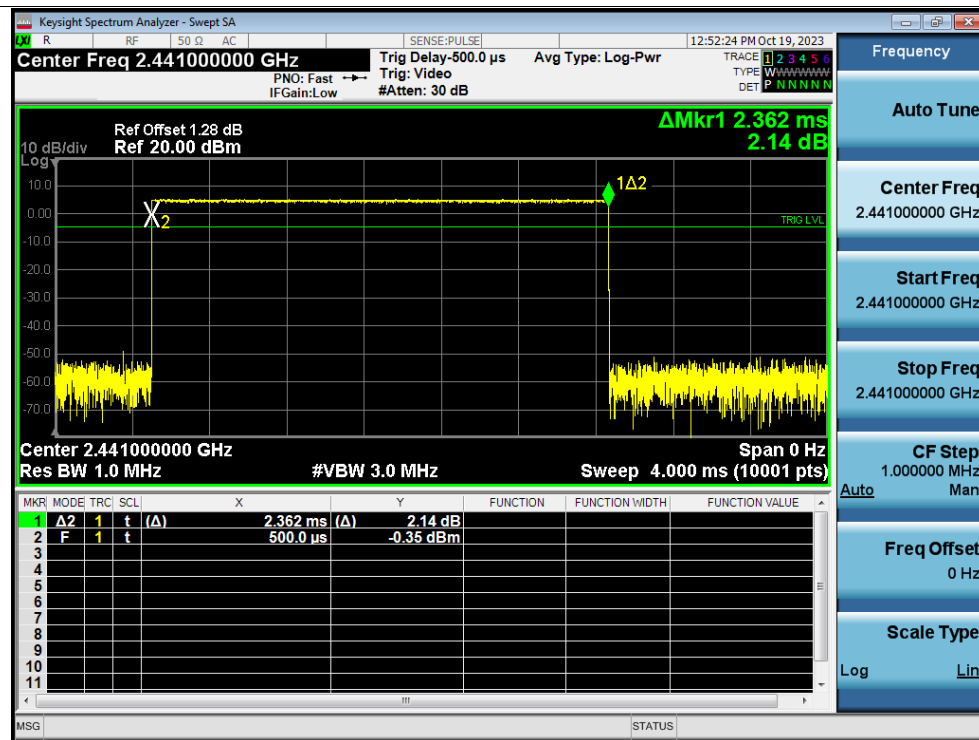
Dwell NVNT 3-DH5 2402MHz Ant1 One Burst



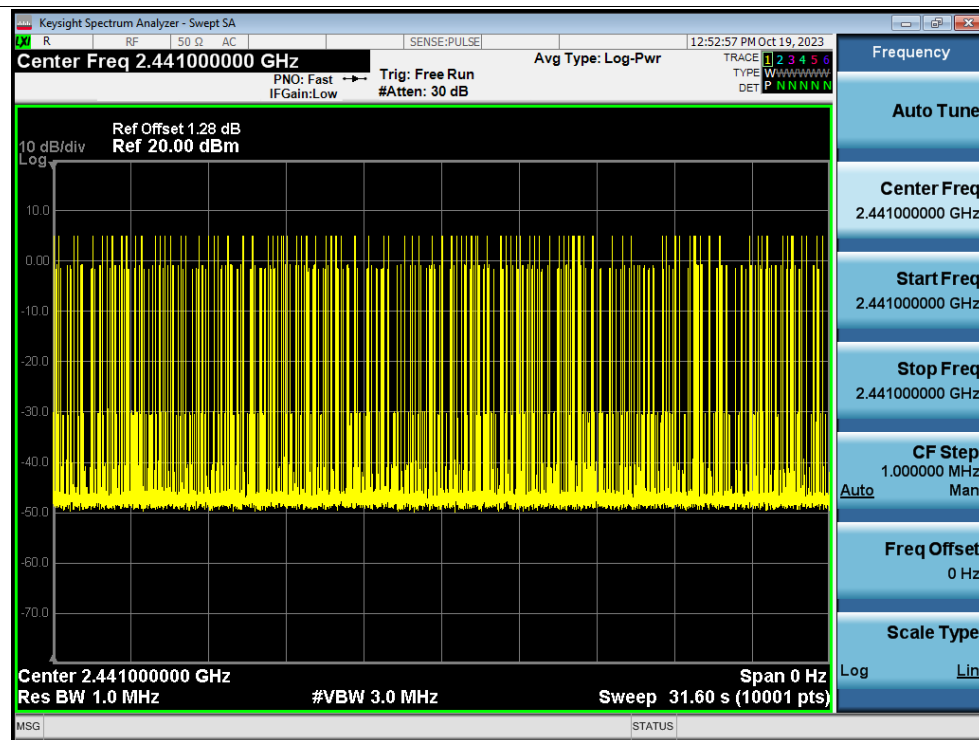
Dwell NVNT 3-DH5 2402MHz Ant1 Accumulated



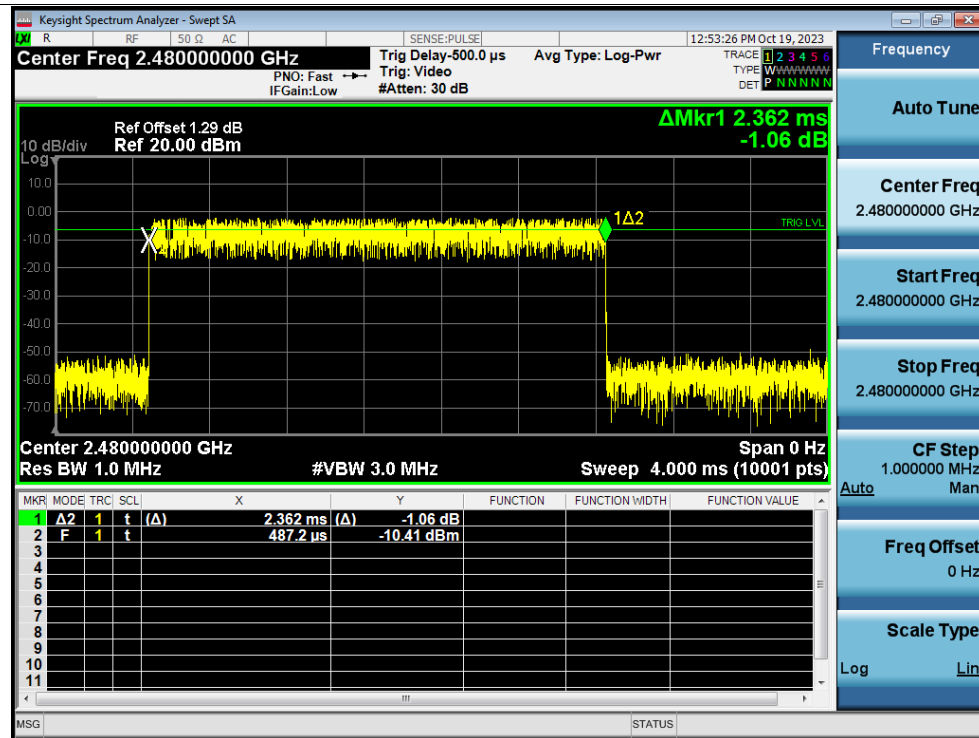
Dwell NVNT 3-DH5 2441MHz Ant1 One Burst



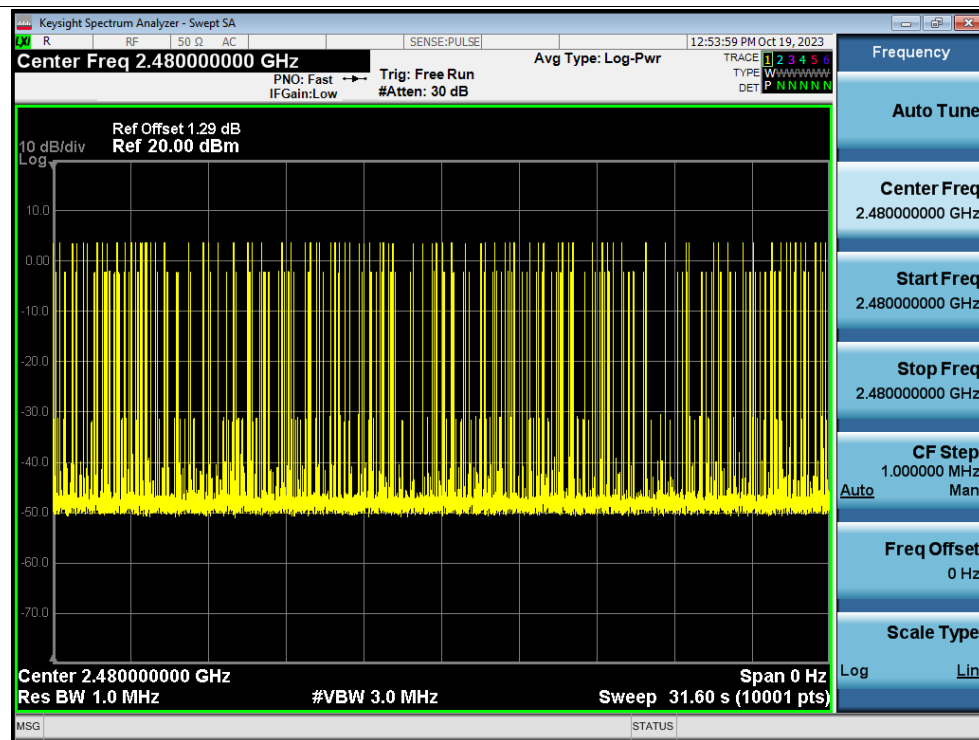
Dwell NVNT 3-DH5 2441MHz Ant1 Accumulated



Dwell NVNT 3-DH5 2480MHz Ant1 One Burst



Dwell NVNT 3-DH5 2480MHz Ant1 Accumulated

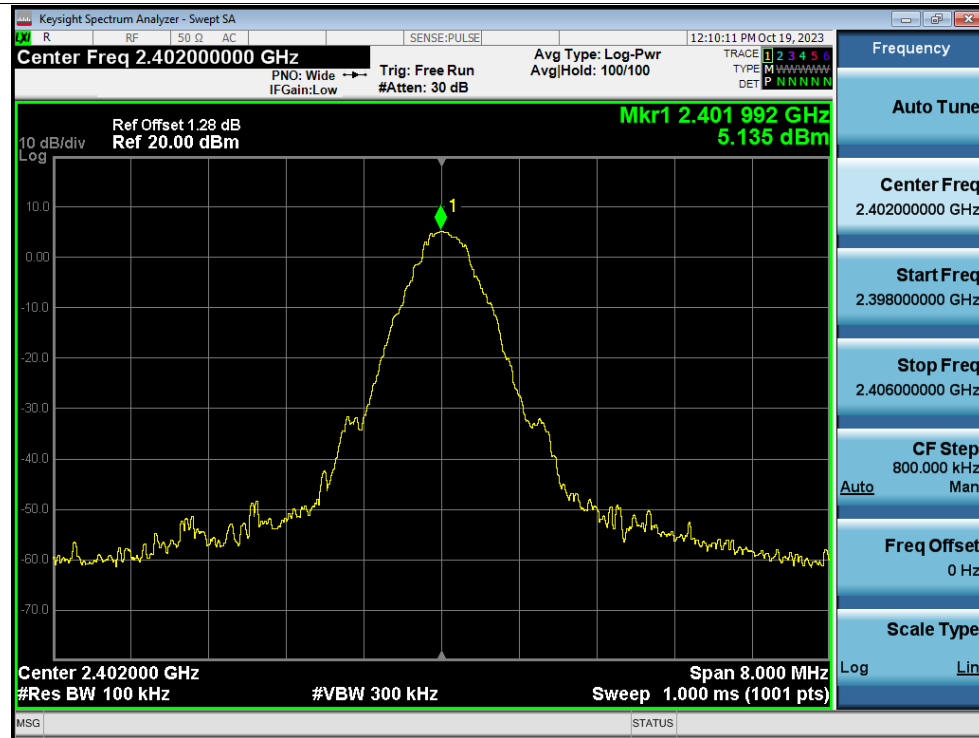


Band Edge

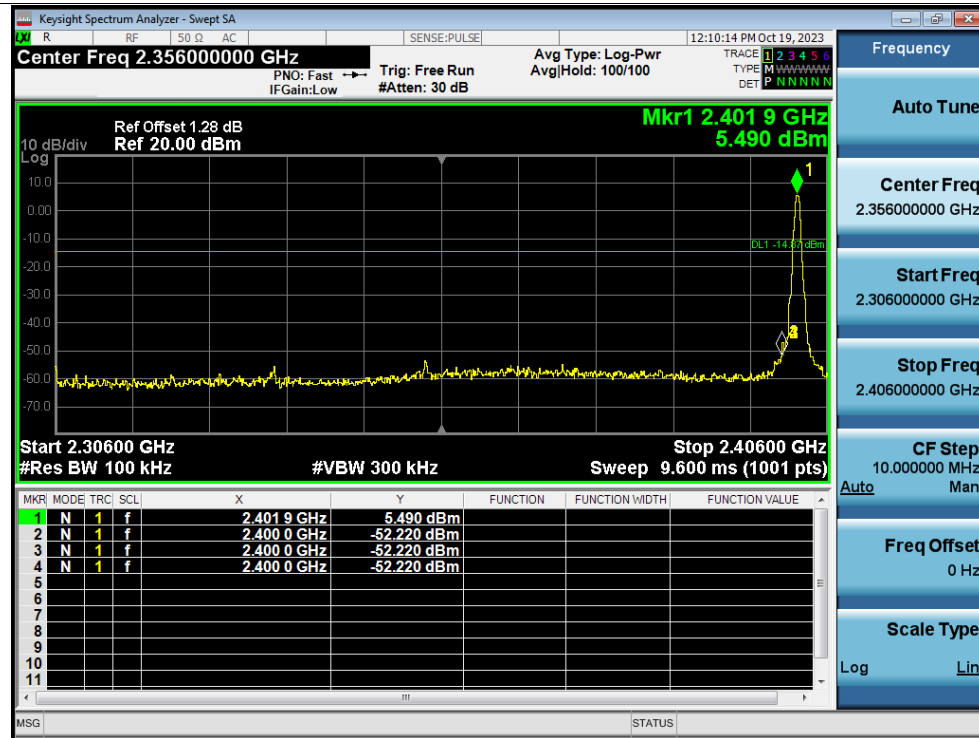
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	No-Hopping	-57.36	-20	Pass
NVNT	1-DH5	2480	Ant1	No-Hopping	-59.09	-20	Pass
NVNT	2-DH5	2402	Ant1	No-Hopping	-53.89	-20	Pass
NVNT	2-DH5	2480	Ant1	No-Hopping	-60.38	-20	Pass
NVNT	3-DH5	2402	Ant1	No-Hopping	-56.5	-20	Pass
NVNT	3-DH5	2480	Ant1	No-Hopping	-60.4	-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 NV2M 1-DHS 2480MHz Ant1 No-Hopping Ref

Keysight Spectrum Analyzer - Swept SA

Center Freq 2.48000000 GHz

PNO: Wide → Trig: Free Run

IFGain: Low #Atten: 30 dB

Avg Type: Log-Pwr Avg/Hold: 100/100

12:13:15 PM Oct 19, 2023

TRACE 1 2 3 4 5 6

TYPE M NNNNNN

DET P NNNNN

Ref Offset 1.29 dB

Ref 20.00 dBm

Mkr1 2.480 104 GHz

2.817 dBm

10 dB/div

Log

Center Freq 2.480000 GHz

Span 8.000 MHz

#Res BW 100 kHz

#VBW 300 kHz

Sweep 1.000 ms (1001 pts)

Auto Tune

Center Freq 2.480000000 GHz

Start Freq 2.476000000 GHz

Stop Freq 2.484000000 GHz

CF Step 800.000 kHz

Man

Auto

Freq Offset 0 Hz

Scale Type Log Lin

[illegible]

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

Keysight Spectrum Analyzer - Swept SA

Center Freq 2.40200000 GHz

Ref Offset 1.28 dB
Ref 20.00 dBm

Mkr1 2.402 008 GHz
5.208 dBm

Trig: Free Run
#Atten: 30 dB

Avg Type: Log-Pwr
Avg/Hold: 100/100

Frequency

Auto Tune

Center Freq
2.402000000 GHz

Start Freq
2.398000000 GHz

Stop Freq
2.406000000 GHz

CF Step
800.000 kHz
Man

Freq Offset
0 Hz

Scale Type
Log

Center 2.402000 GHz
#Res BW 100 kHz
#VBW 300 kHz

Span 8.000 MHz
Sweep 1.000 ms (1001 pts)

The image shows a Keysight Spectrum Analyzer interface. The main display area shows a frequency spectrum with a prominent peak at 2.402000 GHz. A marker is placed on this peak, showing a frequency of 2.402008 GHz and a power level of 5.208 dBm. The y-axis represents power in dBm, ranging from -70.0 to 10.0. The x-axis represents frequency in GHz, ranging from 2.398 to 2.406. The display includes various settings and parameters such as Center Freq, Span, Resolution Bandwidth (Res BW), Video Bandwidth (VBW), and Sweep time. The interface also shows a frequency table on the right side with fields for Auto Tune, Center Freq, Start Freq, Stop Freq, CF Step, Freq Offset, and Scale Type.

Keysight Spectrum Analyzer - Sweep SA

R RF 50 Ω AC SENSE:PULSE 12:41:20 PM Oct 19, 2023

Center Freq 2.356000000 GHz

PNO: Fast IF Gain: Low Trig: Free Run #Atten: 30 dB Avg Type: Log-Pwr Avg/Hold: 100/100

TRACE 1 2 3 4 5 6
TYPE M N N N N N
DET P N N N N N

Ref Offset 1.28 dB
Ref 20.00 dBm

Mkr1 2.4019 GHz
5.441 dBm

10 dB/div
Log

Start 2.30600 GHz Stop 2.40600 GHz
#Res BW 100 kHz #VBW 300 kHz Sweep 9.600 ms (1001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	f	f	2.4019 GHz	5.441 dBm			
2	N	f	f	2.4000 GHz	-52.313 dBm			
3	N	f	f	2.4000 GHz	-52.313 dBm			
4	N	f	f	2.3999 GHz	-48.689 dBm			

Auto Tune

Center Freq 2.356000000 GHz

Start Freq 2.306000000 GHz

Stop Freq 2.406000000 GHz

CF Step 10.000000 MHz Man

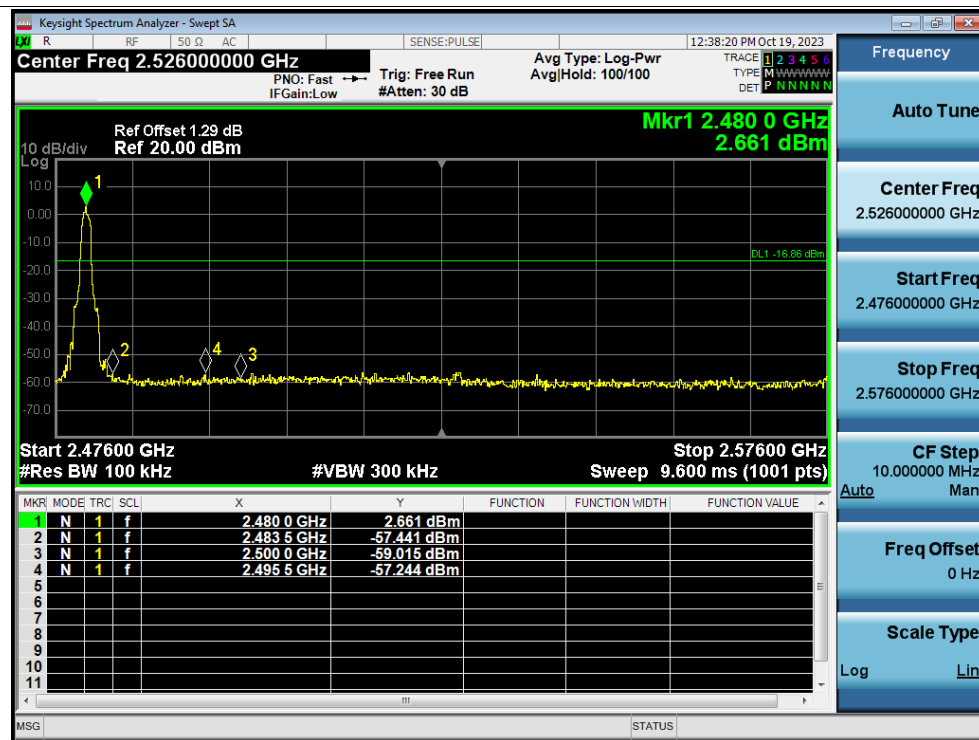
Freq Offset 0 Hz

Scale Type Log Lin

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

Keysight Spectrum Analyzer - Swept SA

Center Freq 2.40200000 GHz

Ref Offset 1.28 dB
Ref 20.00 dBm

Mkr1 2.402 024 GHz
5.163 dBm

10 dB/div
Log

Center 2.402000 GHz
#Res BW 100 kHz
#VBW 300 kHz
Span 8.000 MHz
Sweep 1.000 ms (1001 pts)

Frequency

Auto Tune

Center Freq
2.402000000 GHz

Start Freq
2.398000000 GHz

Stop Freq
2.406000000 GHz

CF Step
800.000 kHz
Man

Freq Offset
0 Hz

Scale Type
Log

Keysight Spectrum Analyzer - Swept SA

R RF 50 Ω AC SENSE:PULSE 12:42:56 PM Oct 19, 2023

Center Freq 2.35600000 GHz

PNO: Fast → Trig: Free Run Avg|Hold: 100/100

IFGain:Low #Atten: 30 dB

TRACE 1 2 3 4 5 6
TYPE M P
DET N N N N N

Ref Offset 1.28 dB
Ref 20.00 dBm

Mkr1 2.402 1 GHz
5.424 dBm

10 dB/div Log

Start 2.30600 GHz Stop 2.40600 GHz
#Res BW 100 kHz #VBW 300 kHz Sweep 9.600 ms (1001 pts)

MkR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.402 1 GHz	5.424 dBm			
2	N	1	f	2.400 0 GHz	-52.295 dBm			
3	N	1	f	2.400 0 GHz	-52.295 dBm			
4	N	1	f	2.399 4 GHz	-51.350 dBm			

Auto Tune

Center Freq 2.356000000 GHz

Start Freq 2.306000000 GHz

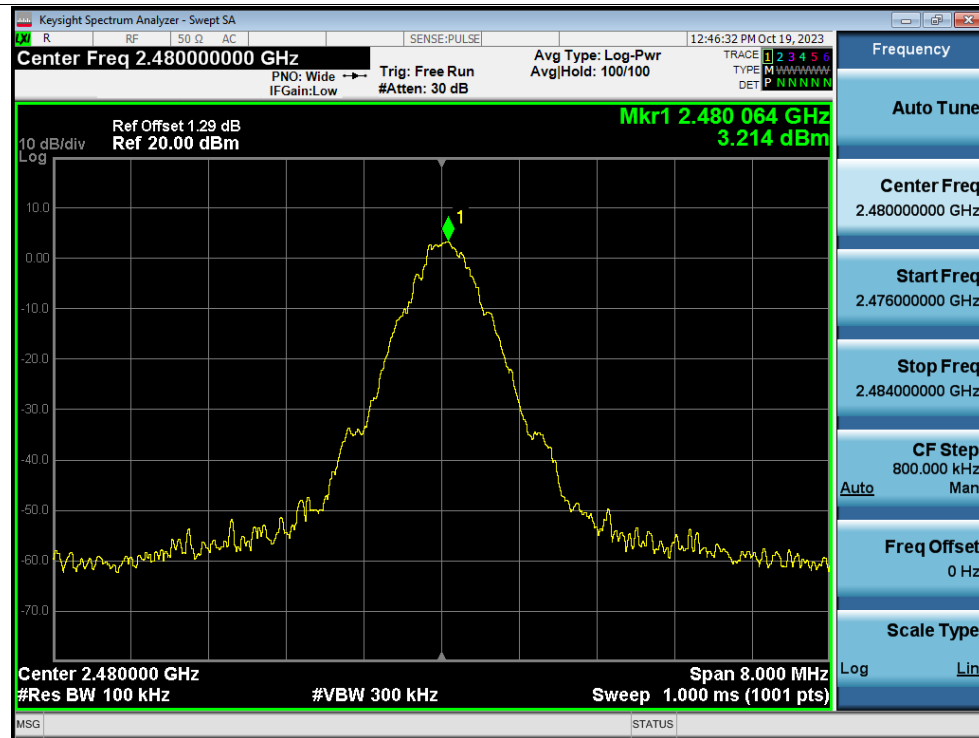
Stop Freq 2.406000000 GHz

CF Step 10.000000 MHz Man

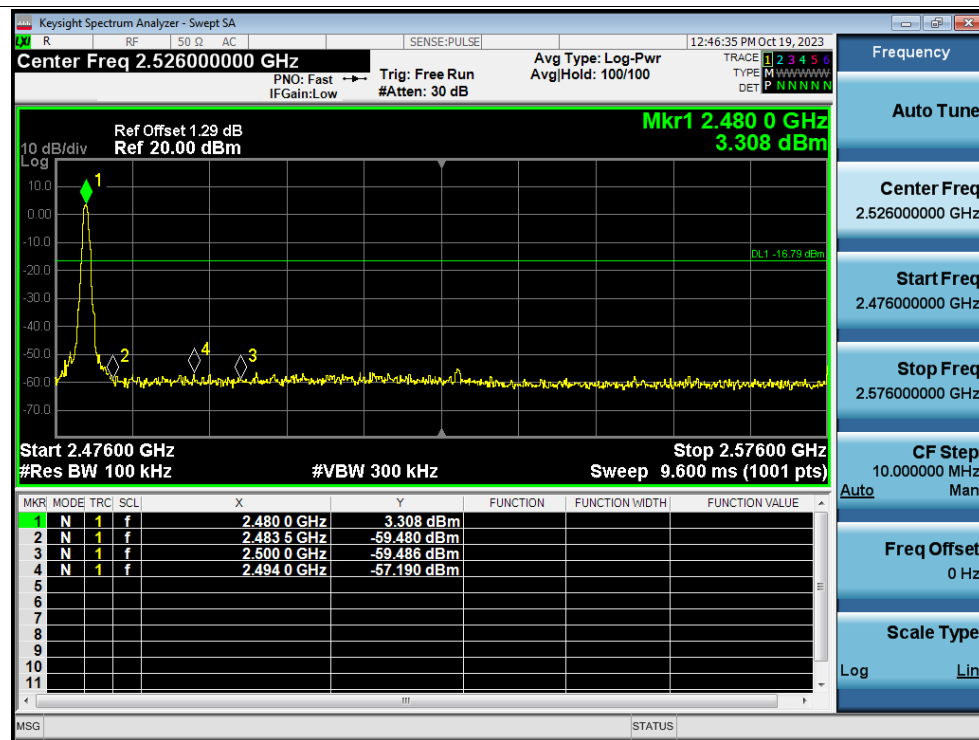
Freq Offset 0 Hz

Scale Type Log Lin

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



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



Band Edge(Hopping)

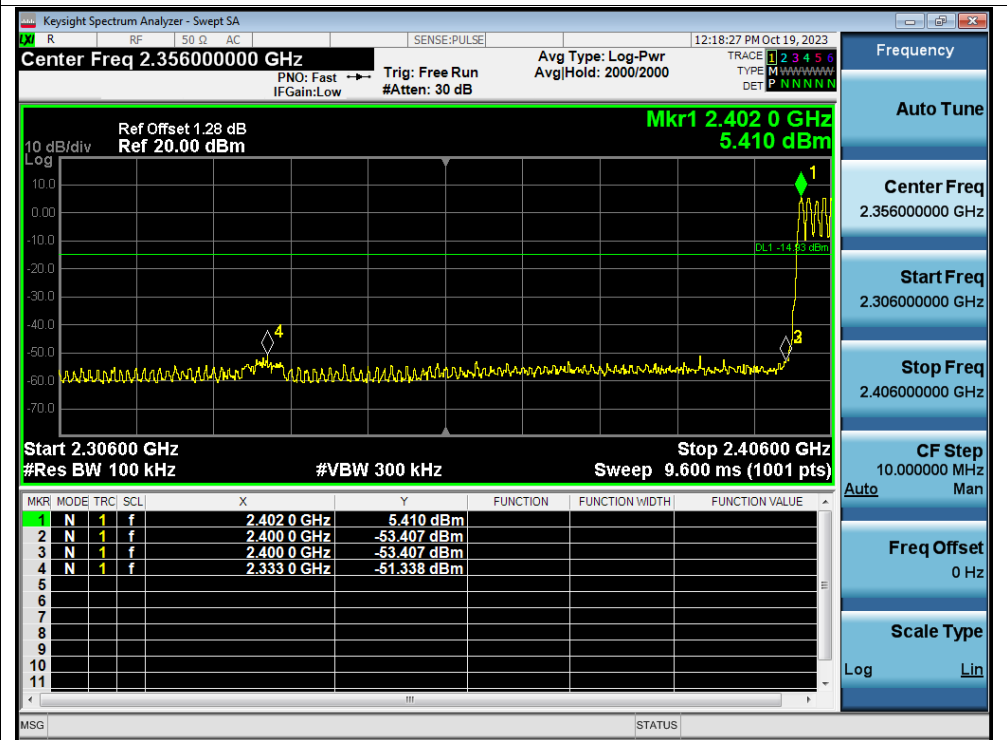
Condition	Mode	Frequency (MHz)	Antenna	Hopping Mode	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	Hopping	-56.4	-20	Pass
NVNT	1-DH5	2480	Ant1	Hopping	-55.89	-20	Pass
NVNT	2-DH5	2402	Ant1	Hopping	-58.55	-20	Pass
NVNT	2-DH5	2480	Ant1	Hopping	-57.57	-20	Pass
NVNT	3-DH5	2402	Ant1	Hopping	-57.95	-20	Pass
NVNT	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



Keysight Spectrum Analyzer - Swept SA

Center Freq 2.480000000 GHz

Ref Offset 1.29 dB
Ref 20.00 dBm

10 dB/div
Log

Mkr1 2.476 880 GHz
3.145 dBm

Center Freq 2.480000000 GHz

Span 8.000 MHz

#Res BW 100 kHz

#VBW 300 kHz

Sweep 1.000 ms (1001 pts)

Frequency

Auto Tune

Center Freq 2.480000000 GHz

Start Freq 2.476000000 GHz

Stop Freq 2.484000000 GHz

CF Step 800.000 kHz

Man

Freq Offset 0 Hz

Scale Type Log

Lin

Keysight Spectrum Analyzer - Swept SA

R F 50 Ω AC SENSE:PULSE 12:21:23 PM Oct 19, 2023

Center Freq 2.526000000 GHz Avg Type: Log-Pwr Avg/Hold: 2000/2000
PNO: Fast IFGain:Low Trig: Free Run #Atten: 30 dB

Ref Offset 1.29 dB Ref 20.00 dBm Mkr1 2.479 1 GHz 3.167 dBm

10 dB/div Log

Start 2.47600 GHz Stop 2.57600 GHz
#Res BW 100 kHz #VBW 300 kHz Sweep 9.600 ms (1001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.479 1 GHz	3.167 dBm			
2	N	1	f	2.483 5 GHz	-57.744 dBm			
3	N	1	f	2.500 0 GHz	-52.748 dBm			
4	N	1	f	2.500 0 GHz	-52.748 dBm			

Auto Tune Center Freq 2.526000000 GHz Start Freq 2.476000000 GHz Stop Freq 2.576000000 GHz CF Step 10.000000 MHz Man Auto Freq Offset 0 Hz Scale Type Log Lin

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

Keysight Spectrum Analyzer - Swept SA

Center Freq 2.402000000 GHz

Ref Offset 1.28 dB
Ref 20.00 dBm

Mkr1 2.403184 GHz
5.257 dBm

10 dB/div
Log

Center Freq 2.402000 GHz

Span 8.000 MHz

#Res BW 100 kHz

#VBW 300 kHz

Sweep 1.000 ms (1001 pts)

Frequency

Auto Tune

Center Freq 2.402000000 GHz

Start Freq 2.398000000 GHz

Stop Freq 2.406000000 GHz

CF Step 800.000 kHz

Man

Freq Offset 0 Hz

Scale Type Log

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

The screenshot displays a Keysight Spectrum Analyzer interface. The main plot shows a frequency spectrum from 2.306 GHz to 2.406 GHz. A yellow trace represents the signal, which is mostly flat at -60 dBm but has a sharp peak at 2.402 GHz reaching approximately -40 dBm. The peak is labeled 'Mkr1 2.405 2 GHz' and '5.610 dBm'. The plot settings include a resolution bandwidth of 300 kHz, a sweep time of 9.600 ms, and a reference level of 20.00 dBm.

Keysight Spectrum Analyzer - Swept SA

R RF 50 Ω AC SENSE:PULSE 12:37:27 PM Oct 19, 2023

Center Freq 2.356000000 GHz

PNO: Fast IF Gain: Low Trig: Free Run #Atten: 30 dB Avg Type: Log-Pwr Avg|Hold: 2000/2000

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

Ref Offset 1.28 dB Ref 20.00 dBm

Mkr1 2.405 2 GHz 5.610 dBm

10 dB/div Log

Start 2.30600 GHz Stop 2.40600 GHz
#Res BW 100 kHz #VBW 300 kHz Sweep 9.600 ms (1001 pts)

Mkr	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.405 2 GHz	5.610 dBm			
2	N	1	f	2.400 0 GHz	-53.297 dBm			
3	N	1	f	2.400 0 GHz	-53.297 dBm			
4	N	1	f	2.400 0 GHz	-53.297 dBm			
5								
6								
7								
8								
9								
10								
11								

MSG STATUS

Frequency

Auto Tune

Center Freq 2.356000000 GHz

Start Freq 2.306000000 GHz

Stop Freq 2.406000000 GHz

CF Step 10.000000 MHz Man

Autu

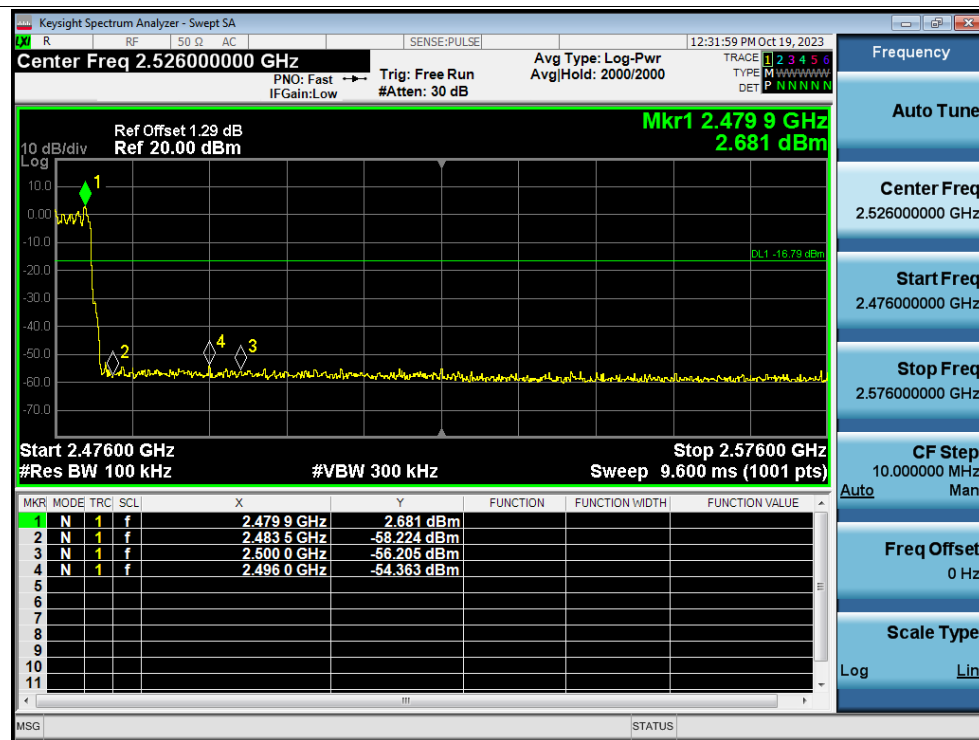
Freq Offset 0 Hz

Scale Type Log Lin

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



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



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

Keysight Spectrum Analyzer - Swept SA

R RF 50.0 AC SENSE:PULSE 12:51:21 PM Oct 19, 2023

Center Freq 2.402000000 GHz PNO: Wide Trig: Free Run Avg Type: Log-Pwr 12 3 4 5 6
IFGain:Low #Atten: 30 dB Avg|Hold: 2000/2000 TYPE: M N N N N N N
DET: P N N N N N

Ref Offset 1.28 dB Mkr1 2.405 032 GHz
Ref 20.00 dBm 5.384 dBm

10 dB/div Log

Center 2.402000 GHz Span 8.000 MHz
#Res BW 100 kHz #VBW 300 kHz Sweep 1.000 ms (1001 pts)

MSG STATUS

Frequency

Auto Tune

Center Freq 2.402000000 GHz

Start Freq 2.398000000 GHz

Stop Freq 2.406000000 GHz

CF Step 800.000 kHz Man

Auto

Freq Offset 0 Hz

Scale Type Log Lin

Keysight Spectrum Analyzer - Swept SA

R F 50 Ω AC SENSE:PULSE 12:51:55 PM Oct 19, 2023

Center Freq 2.356000000 GHz Avg Type: Log-Pwr Avg|Hold: 2000/2000

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

TRACE 1 2 3 4 5 6
TYPE M N N N N N N
DET P N N N N N

Ref Offset 1.28 dB
Ref 20.00 dBm

Mkr1 2.406 0 GHz
5.422 dBm

Start 2.30600 GHz Stop 2.40600 GHz
#Res BW 100 kHz #VBW 300 kHz Sweep 9.600 ms (1001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.406 0 GHz	5.422 dBm			
2	N	1	f	2.400 0 GHz	-52.905 dBm			
3	N	1	f	2.400 0 GHz	-52.905 dBm			
4	N	1	f	2.387 1 GHz	-52.578 dBm			

Auto Tune

Center Freq 2.356000000 GHz

Start Freq 2.306000000 GHz

Stop Freq 2.406000000 GHz

CF Step 10.000000 MHz Man

Freq Offset 0 Hz

Scale Type Log Lin

Keysight Spectrum Analyzer - Swept SA

Center Freq 2.48000000 GHz

Ref Offset 1.29 dB
Ref 20.00 dBm

Mkr1 2.478 040 GHz
3.16 dBm

10 dB/div
Log

Center Freq 2.480000 GHz
Span 8.000 MHz
#Res BW 100 kHz
#VBW 300 kHz
Sweep 1.000 ms (1001 pts)

Frequency

Auto Tune

Center Freq
2.48000000 GHz

Start Freq
2.47600000 GHz

Stop Freq
2.48400000 GHz

CF Step
800.000 kHz
Man

Freq Offset
0 Hz

Scale Type
Log

Keysight Spectrum Analyzer - Swept SA

Center Freq 2.526000000 GHz

PNO: Fast IF Gain: Low Trig: Free Run #Atten: 30 dB

Avg Type: Log-Pwr Avg/Hold: 2000/2000

12:54:49 PM Oct 19, 2023

Ref Offset 1.29 dB Ref 20.00 dBm

Mkr1 2.478 0 GHz 3.290 dBm

Start 2.47600 GHz Stop 2.57600 GHz

#Res BW 100 kHz #VBW 300 kHz Sweep 9.600 ms (1001 pts)

Mkr	Mode	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.478 0 GHz	3.290 dBm			
2	N	1	f	2.483 5 GHz	-57.330 dBm			
3	N	1	f	2.500 0 GHz	-53.974 dBm			
4	N	1	f	2.494 0 GHz	-53.142 dBm			

Auto Tune

Center Freq 2.526000000 GHz

Start Freq 2.476000000 GHz

Stop Freq 2.576000000 GHz

CF Step 10.000000 MHz

Auto Man

Freq Offset 0 Hz

Scale Type Log Lin

Conducted RF Spurious Emission

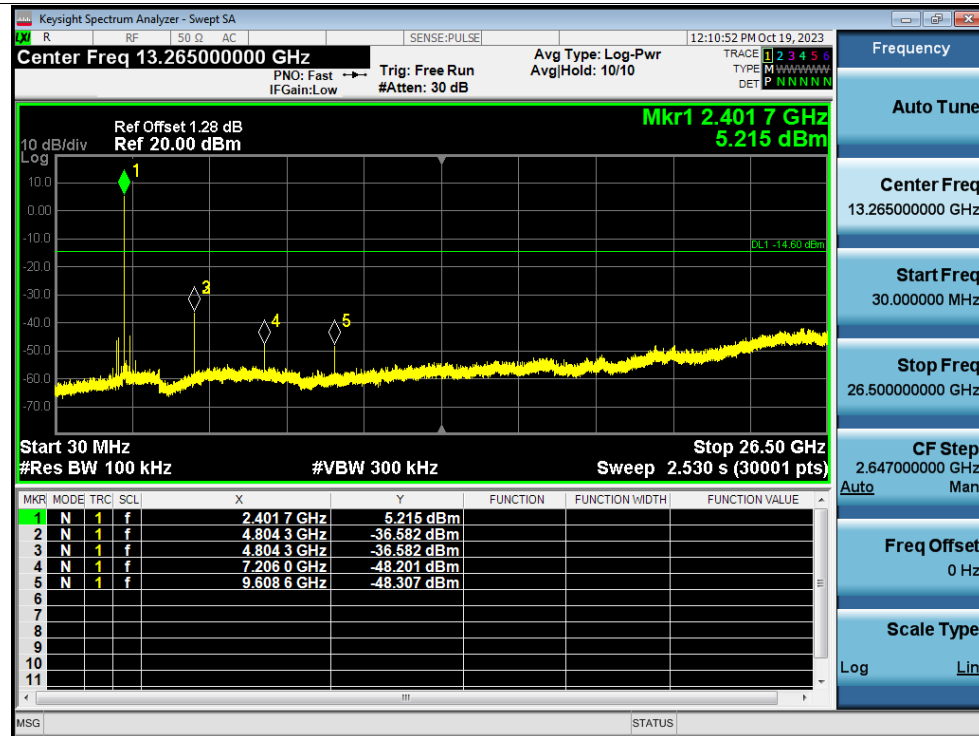
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	1-DH5	2402	Ant1	-41.98	-20	Pass
NVNT	1-DH5	2441	Ant1	-40.86	-20	Pass
NVNT	1-DH5	2480	Ant1	-40.89	-20	Pass
NVNT	2-DH5	2402	Ant1	-39.98	-20	Pass
NVNT	2-DH5	2441	Ant1	-42.03	-20	Pass
NVNT	2-DH5	2480	Ant1	-42.04	-20	Pass
NVNT	3-DH5	2402	Ant1	-42.13	-20	Pass
NVNT	3-DH5	2441	Ant1	-41.45	-20	Pass
NVNT	3-DH5	2480	Ant1	-40.16	-20	Pass

Test Graphs

Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Ref



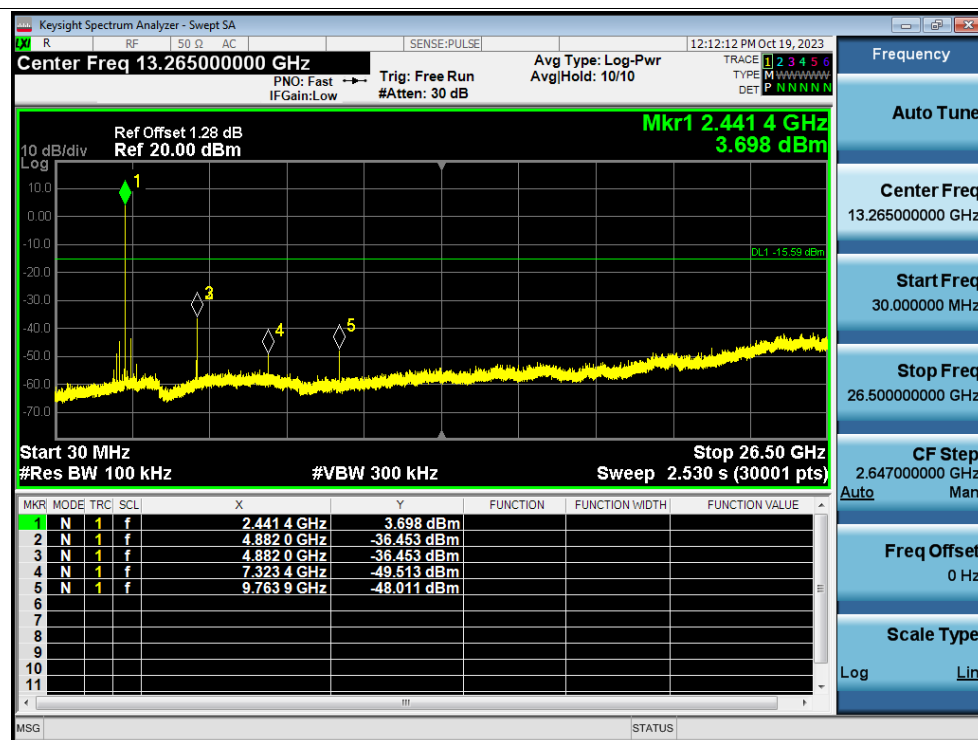
Tx. Spurious NVNT 1-DH5 2402MHz Ant1 Emission



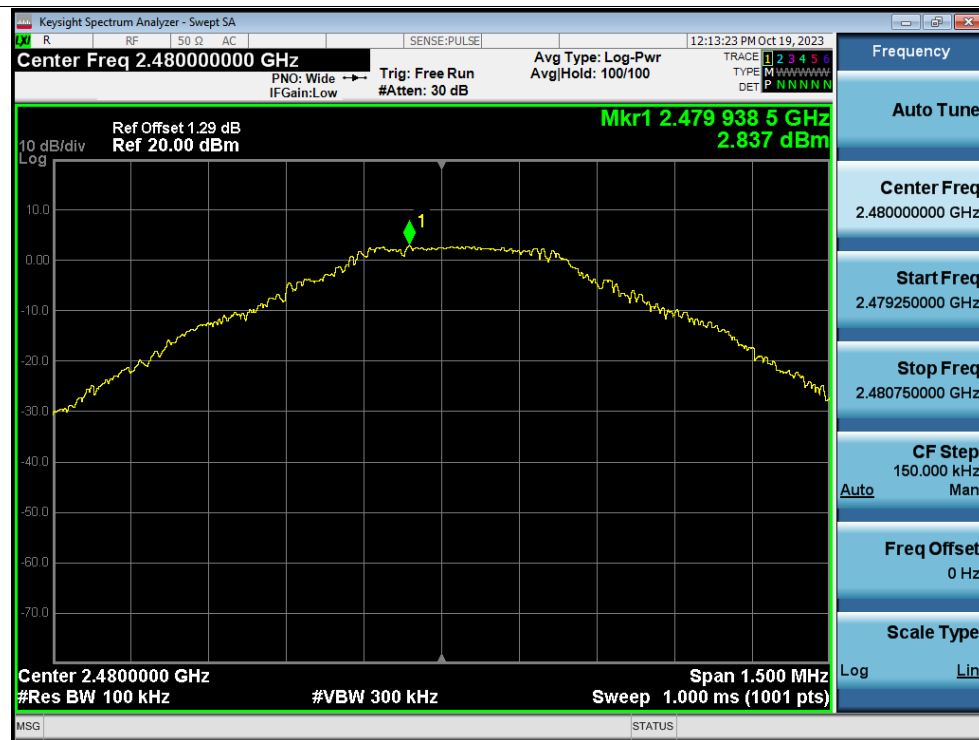
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Ref



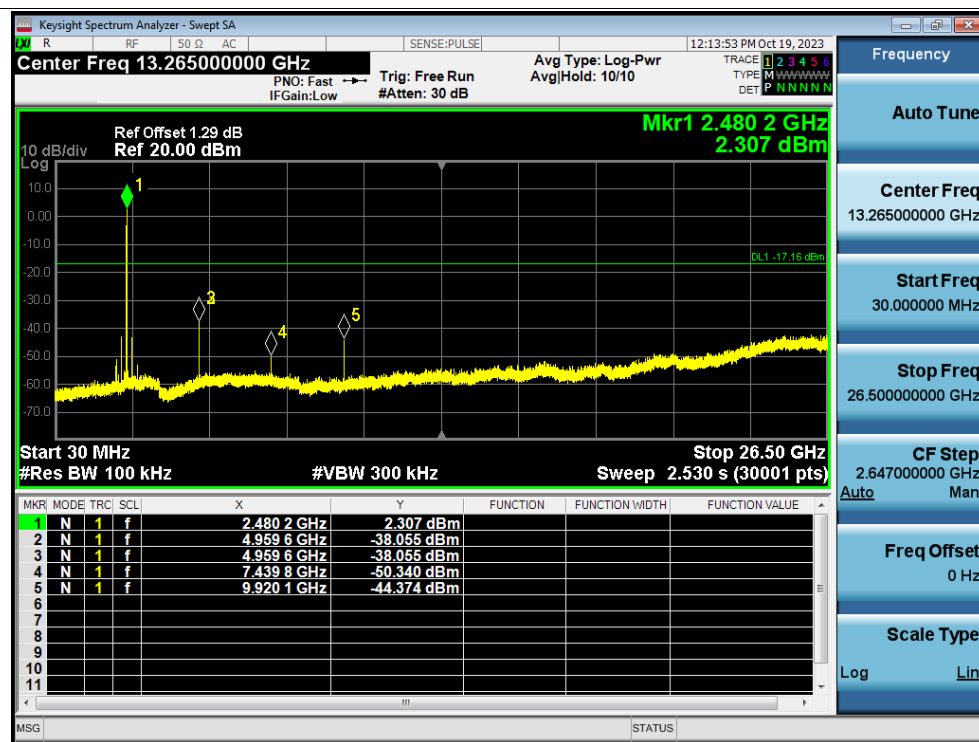
Tx. Spurious NVNT 1-DH5 2441MHz Ant1 Emission



Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Ref



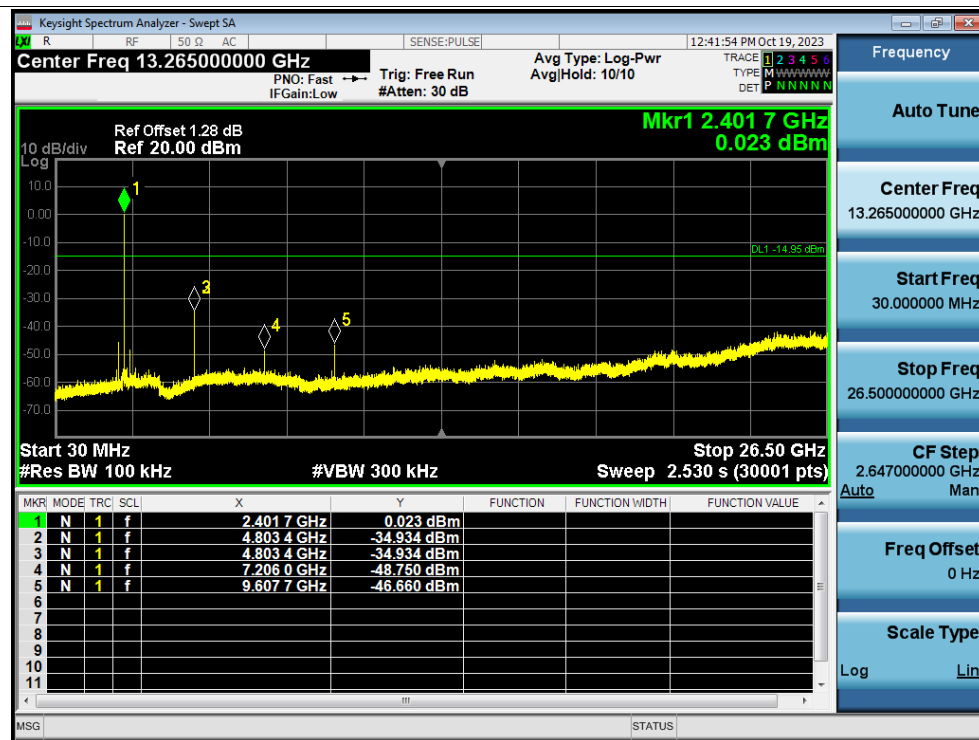
Tx. Spurious NVNT 1-DH5 2480MHz Ant1 Emission



Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Ref



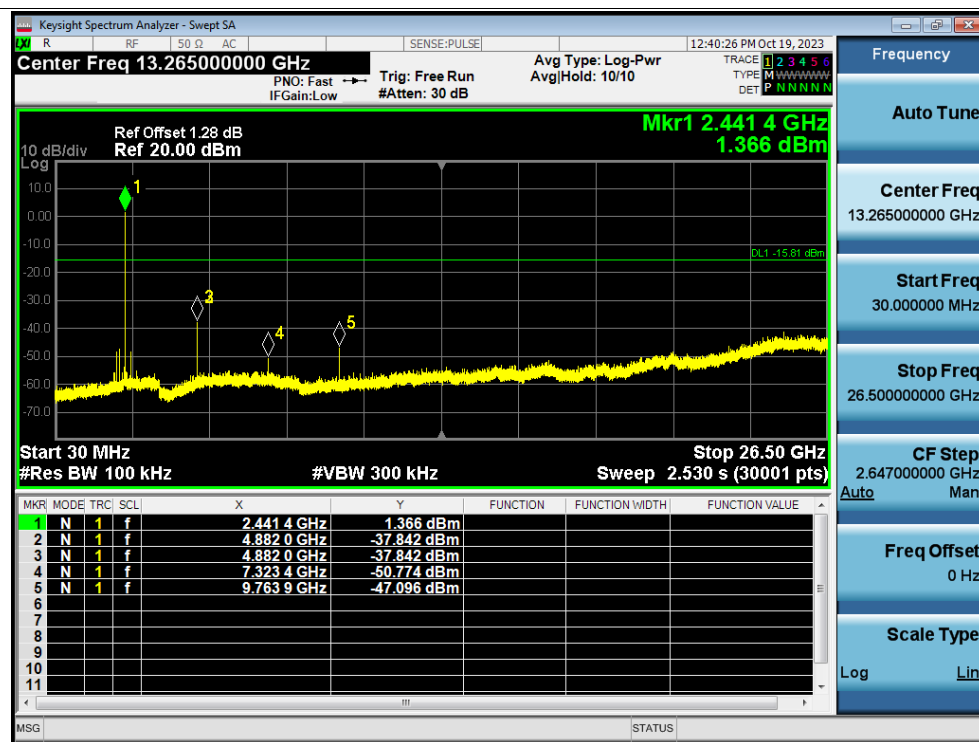
Tx. Spurious NVNT 2-DH5 2402MHz Ant1 Emission



Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Ref



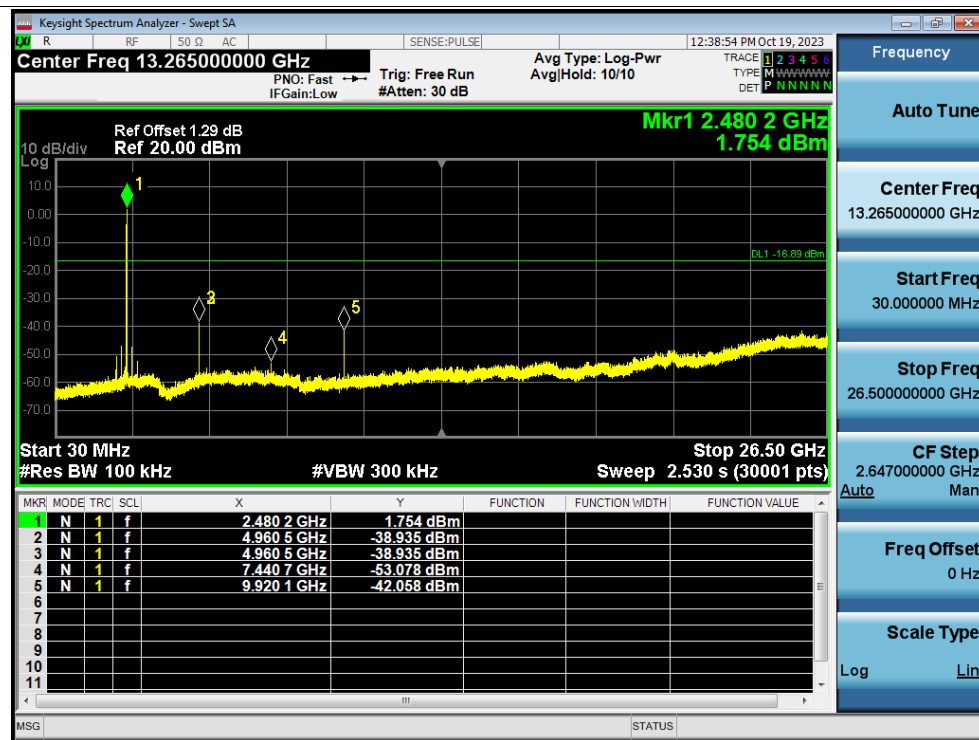
Tx. Spurious NVNT 2-DH5 2441MHz Ant1 Emission



Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Ref



Tx. Spurious NVNT 2-DH5 2480MHz Ant1 Emission



Tx. Spurious NVNT 3-DH5 2402MHz Ant1 Ref

Keysight Spectrum Analyzer - Swept SA

RF 50.0 AC SENSE:PULSE 12:43:00 PM Oct 19, 2023

Center Freq 2.402000000 GHz PNO: Wide Trig: Free Run Avg Type: Log-Pwr
IFGain:Low #Atten: 30 dB Avg|Hold: 100/100

TRACE 1 2 3 4 5 6
TYPE M M M M M M
DET P N N N N N

Ref Offset 1.28 dB
Ref 20.00 dBm

10 dB/div
Log

Mkr1 2.401 875 5 GHz
5.366 dBm

1

Center Freq 2.40200000 GHz
Start Freq 2.401250000 GHz
Stop Freq 2.402750000 GHz
CF Step 150.000 kHz
Auto Man
Freq Offset 0 Hz
Scale Type Log Lin

Center 2.4020000 GHz Span 1.500 MHz
#Res BW 100 kHz #VBW 300 kHz Sweep 1.000 ms (1001 pts)

MSG STATUS

Keysight Spectrum Analyzer - Sweep SA

R F 50 Ω AC SENSE:PULSE 12:43:30 PM Oct 19, 2023

Center Freq 13.265000000 GHz PNO: Fast IFGain:Low Trig: Free Run Avg|Hold: 10/10

Avg Type: Log-Pwr Mkr1 2.401 7 GHz 4.574 dBm

Ref Offset 1.28 dB Ref 20.00 dBm

10 dB/div Log

Start 30 MHz Stop 26.50 GHz

#Res BW 100 kHz #VBW 300 kHz Sweep 2.530 s (30001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.401 7 GHz	4.574 dBm			
2	N	1	f	4.804 3 GHz	-36.763 dBm			
3	N	1	f	4.804 3 GHz	-36.763 dBm			
4	N	1	f	7.206 0 GHz	-46.412 dBm			
5	N	1	f	9.607 7 GHz	-49.414 dBm			

Auto Tune

Center Freq 13.265000000 GHz

Start Freq 30.000000 MHz

Stop Freq 26.500000000 GHz

CF Step 2.647000000 GHz

Auto Man

Freq Offset 0 Hz

Scale Type Log Lin

MSG STATUS

Tx. Spurious NVNT 3-DH5 2441MHz Ant1 Ref

Keysight Spectrum Analyzer - Swept SA

Center Freq 2.441000000 GHz

Ref Offset 1.28 dB
Ref 20.00 dBm

Mkr1 2.440 878 5 GHz
4.470 dBm

Center Freq 2.441000000 GHz

Start Freq 2.440250000 GHz

Stop Freq 2.441750000 GHz

CF Step 150.000 kHz

Freq Offset 0 Hz

Scale Type Log

Center 2.44100000 GHz

#Res BW 100 kHz

#VBW 300 kHz

Span 1.500 MHz

Sweep 1.000 ms (1001 pts)

Keysight Spectrum Analyzer - Swept SA

Center Freq 13.26500000 GHz

Ref Offset 1.28 dB
Ref 20.00 dBm

PNO: Fast IF Gain: Low

Trig: Free Run #Atten: 30 dB

Avg Type: Log-Pwr Avg|Hold: 10/10

12:45:09 PM Oct 19, 2023

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

Mkr1 2.441 4 GHz
3.520 dBm

DL1 -15.53 dBm

Start 30 MHz #Res BW 100 kHz

Stop 26.50 GHz #VBW 300 kHz

Sweep 2.530 s (30001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.441 4 GHz	3.520 dBm			
2	N	1	f	4.882 0 GHz	-36.989 dBm			
3	N	1	f	4.882 0 GHz	-36.989 dBm			
4	N	1	f	7.323 4 GHz	-48.714 dBm			
5	N	1	f	9.763 9 GHz	-47.242 dBm			

Auto Tune

Center Freq 13.26500000 GHz

Start Freq 30.000000 MHz

Stop Freq 26.50000000 GHz

CF Step 2.647000000 GHz

Auto Man

Freq Offset 0 Hz

Scale Type Log Lin

MSG STATUS

Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Ref



Tx. Spurious NVNT 3-DH5 2480MHz Ant1 Emission

