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FCC ID BLE

FCC_BT(Part15.247) Test Data

1.Duty Cycle

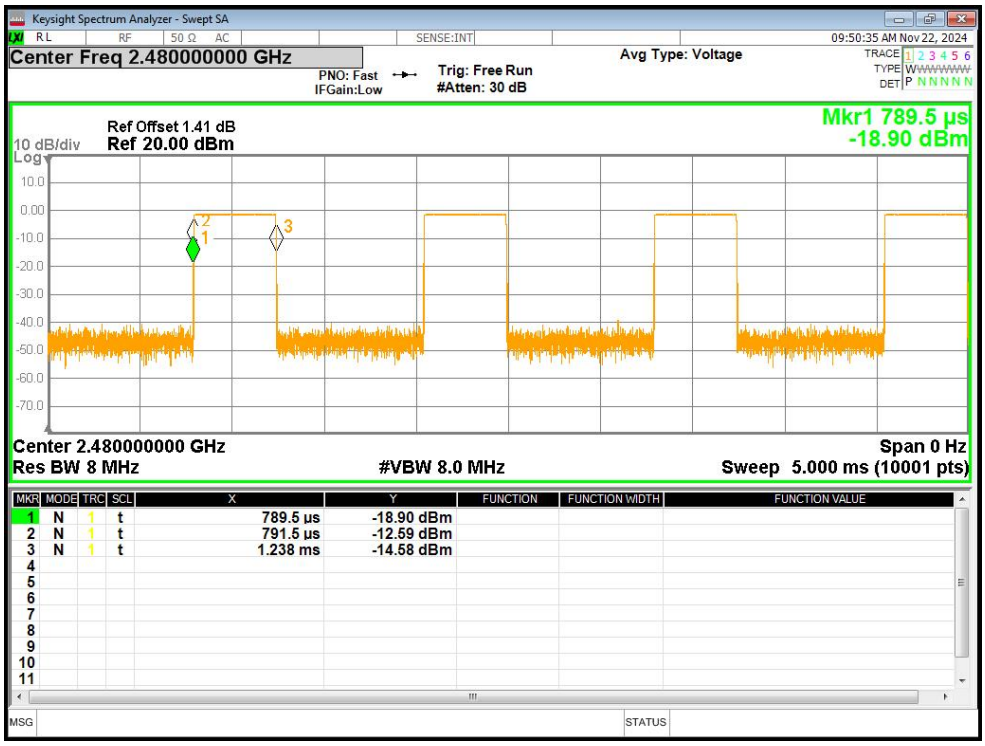
Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
BLE 1M	2402	Ant1	99.55	0	2.24
BLE 1M	2440	Ant1	99.55	0	2.24
BLE 1M	2480	Ant1	99.55	0	2.24
BLE 2M	2402	Ant1	19.08	7.19	4.19
BLE 2M	2440	Ant1	19.08	7.19	4.19
BLE 2M	2480	Ant1	19.08	7.19	4.19

Test Graphs

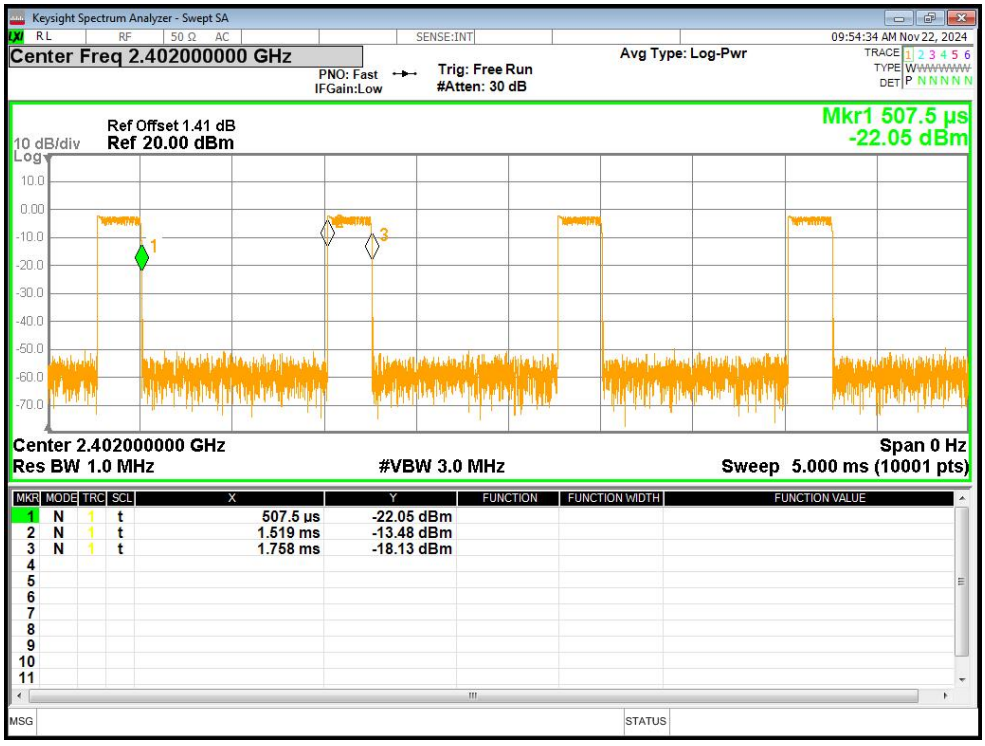
Duty Cycle NVNT BLE 1M 2402MHz Ant1

Duty Cycle NVNT BLE 1M 2440MHz Ant1

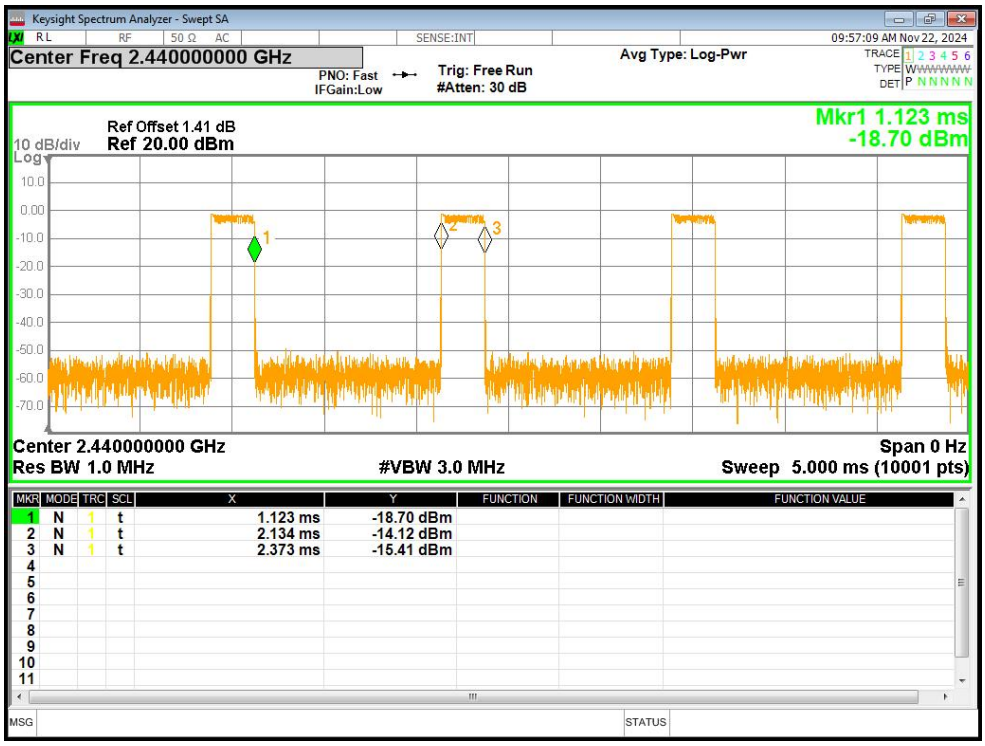
Duty Cycle NVNT BLE 1M 2480MHz Ant1



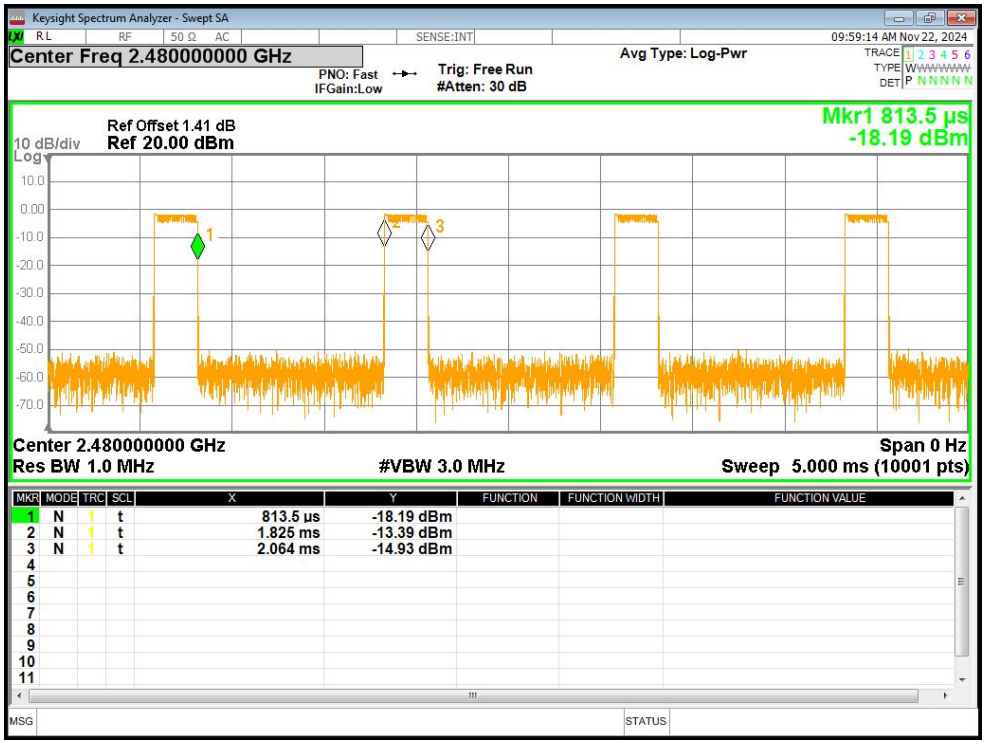
Duty Cycle NVNT BLE 2M 2402MHz Ant1



Duty Cycle NVNT BLE 2M 2440MHz Ant1



Duty Cycle NVNT BLE 2M 2480MHz Ant1

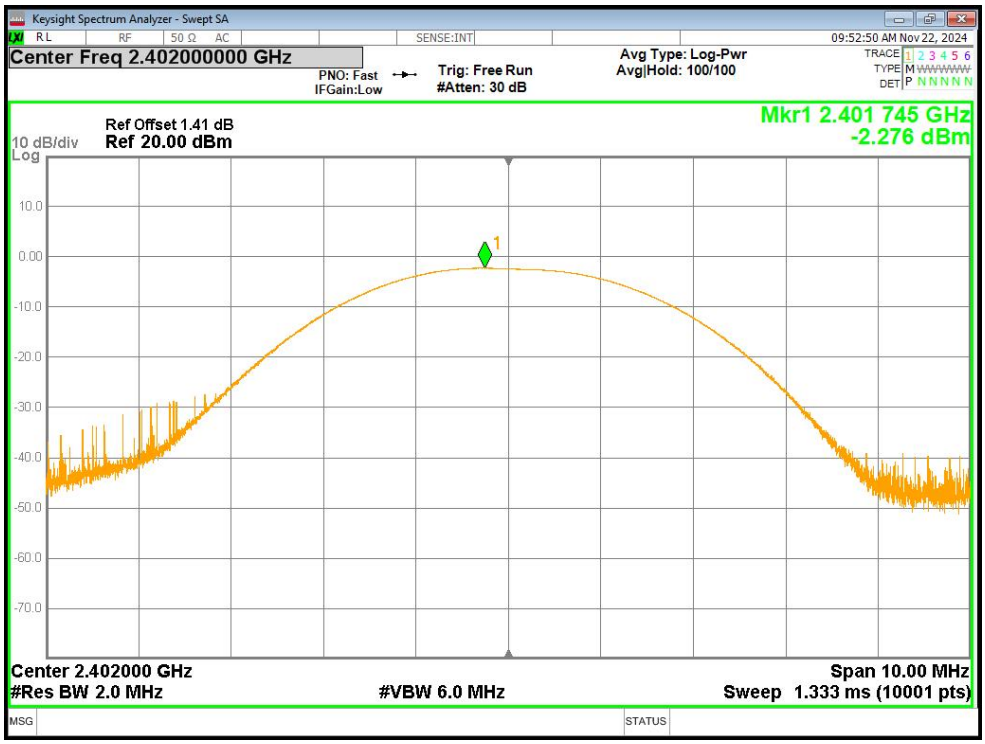


2.Maximum Peak Conducted Output Power

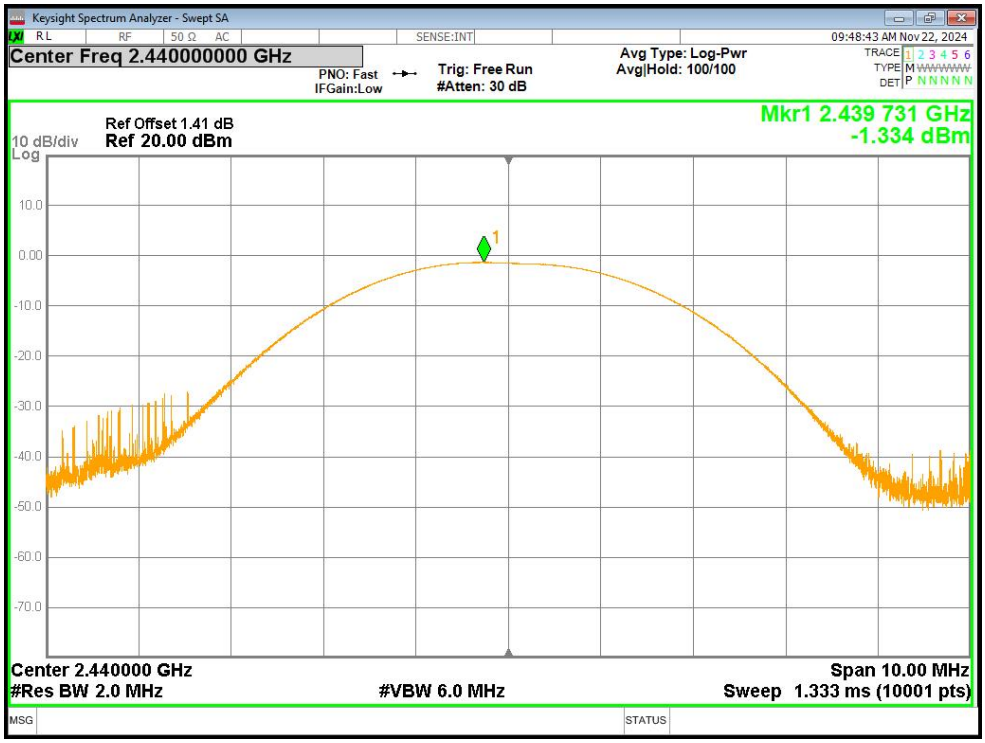
Mode	Frequency (MHz)	Total Power (dBm)	Limit (dBm)	Verdict
BLE 1M	2402	-2.28	30	Pass
BLE 1M	2440	-1.33	30	Pass
BLE 1M	2480	-1.43	30	Pass
BLE 2M	2402	-2.07	30	Pass
BLE 2M	2440	-1.11	30	Pass
BLE 2M	2480	-1.23	30	Pass

Test Graphs

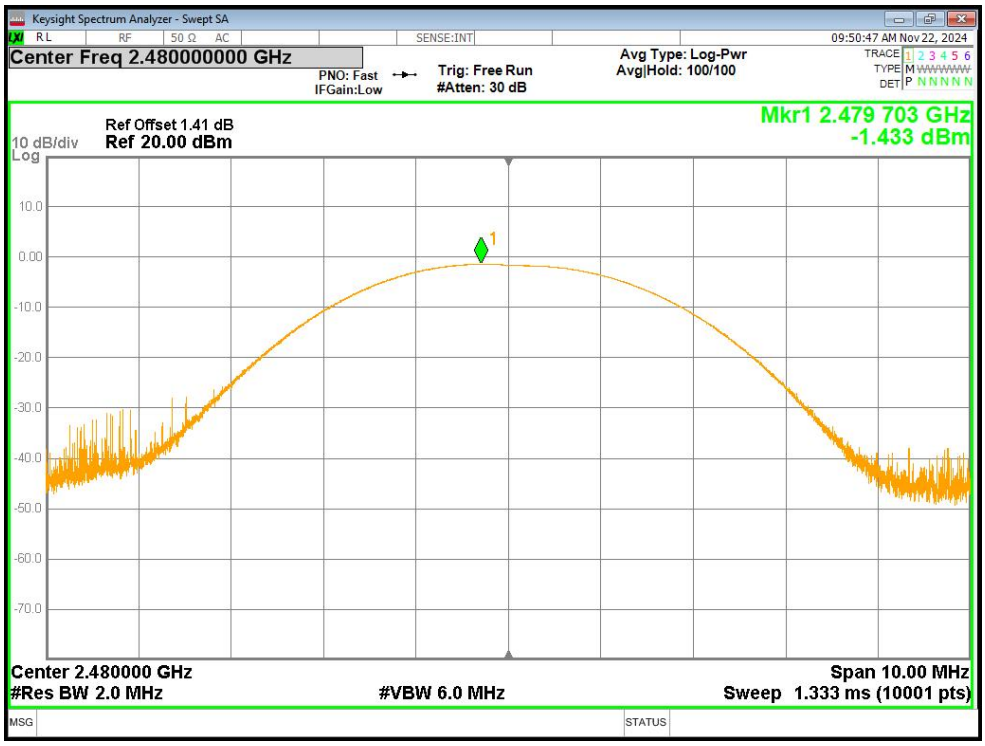
Peak Power NVNT BLE 1M 2402MHz Ant1



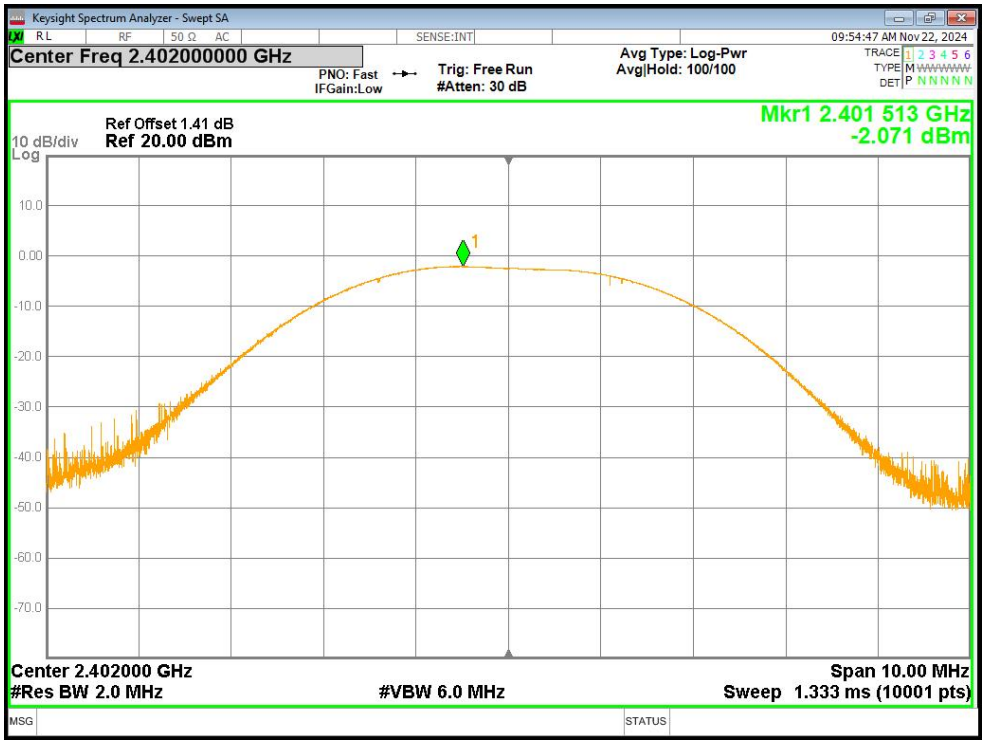
Peak Power NVNT BLE 1M 2440MHz Ant1



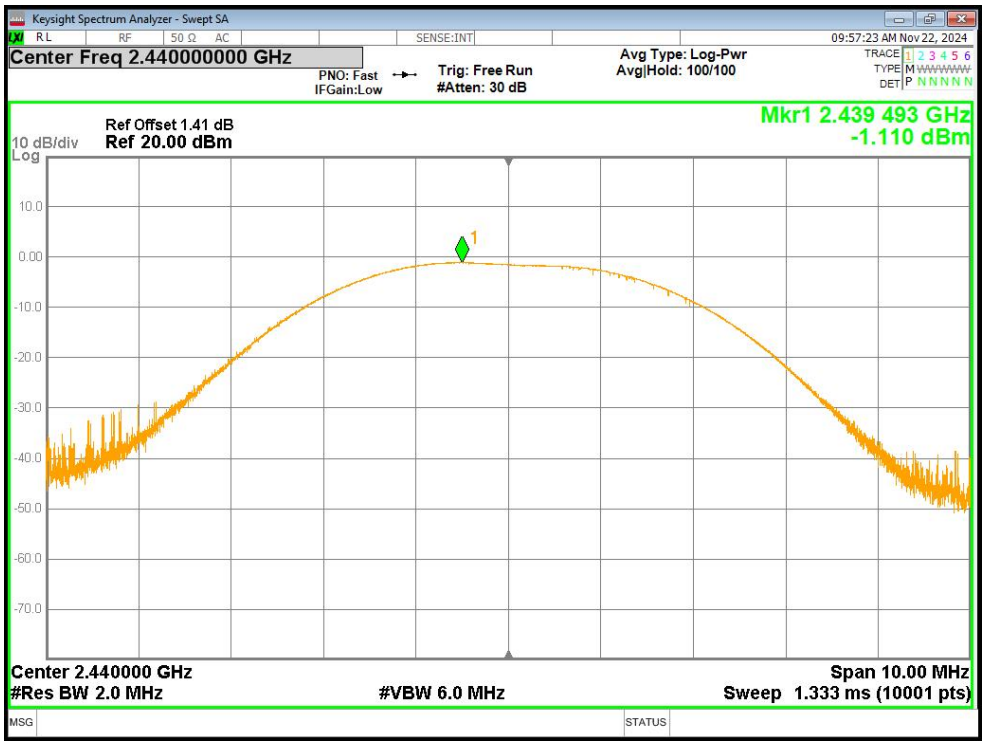
Peak Power NVNT BLE 1M 2480MHz Ant1



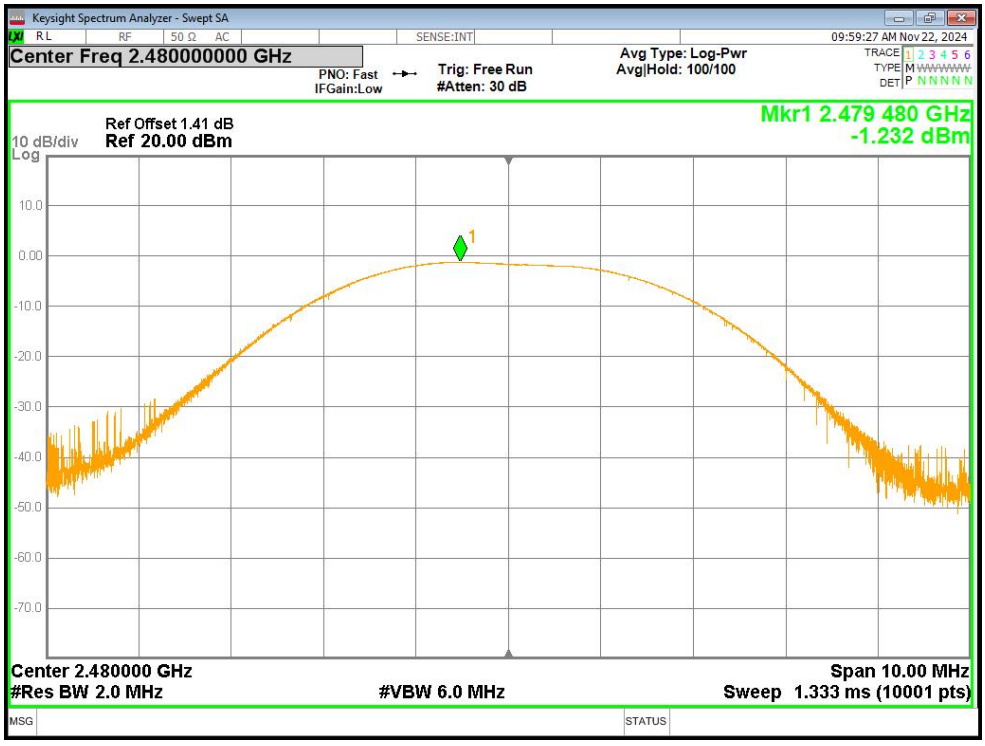
Peak Power NVNT BLE 2M 2402MHz Ant1



Peak Power NVNT BLE 2M 2440MHz Ant1



Peak Power NVNT BLE 2M 2480MHz Ant1

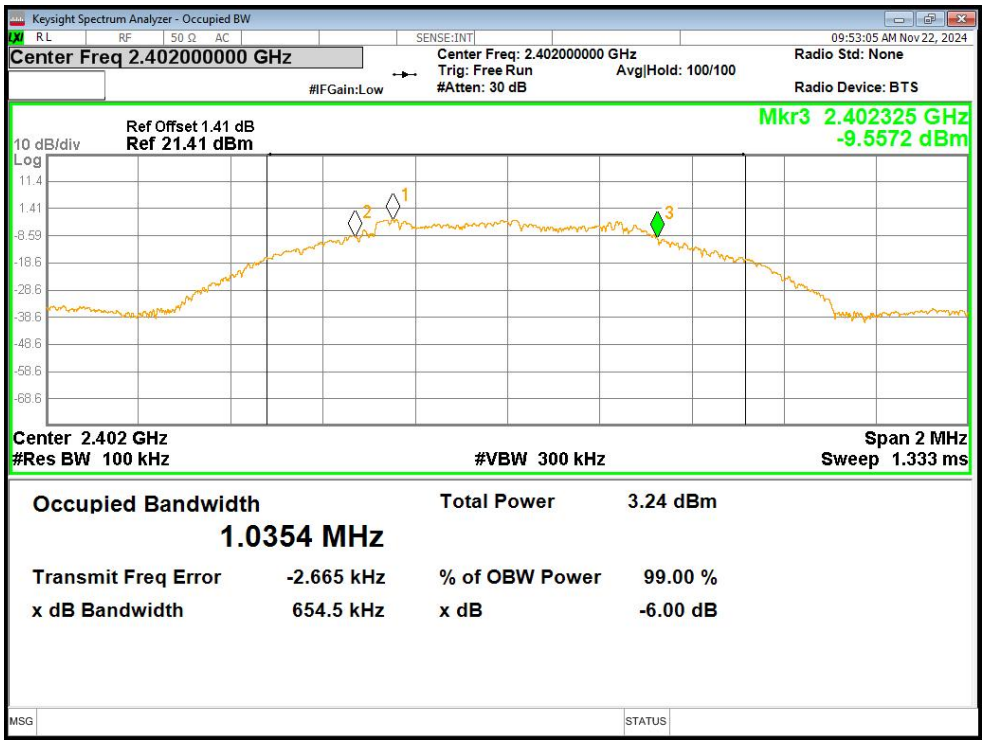


3.-6dB Bandwidth

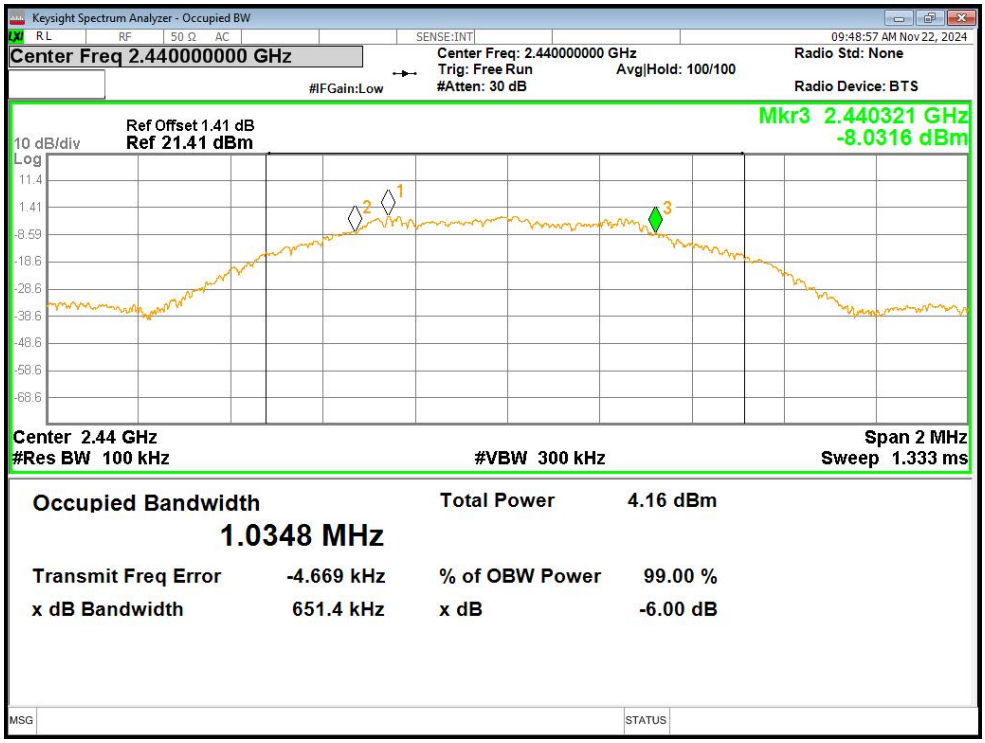
Mode	Frequency (MHz)	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
BLE 1M	2402	0.654	0.5	Pass
BLE 1M	2440	0.651	0.5	Pass
BLE 1M	2480	0.653	0.5	Pass
BLE 2M	2402	1.037	0.5	Pass
BLE 2M	2440	1.208	0.5	Pass
BLE 2M	2480	1.112	0.5	Pass

Test Graphs

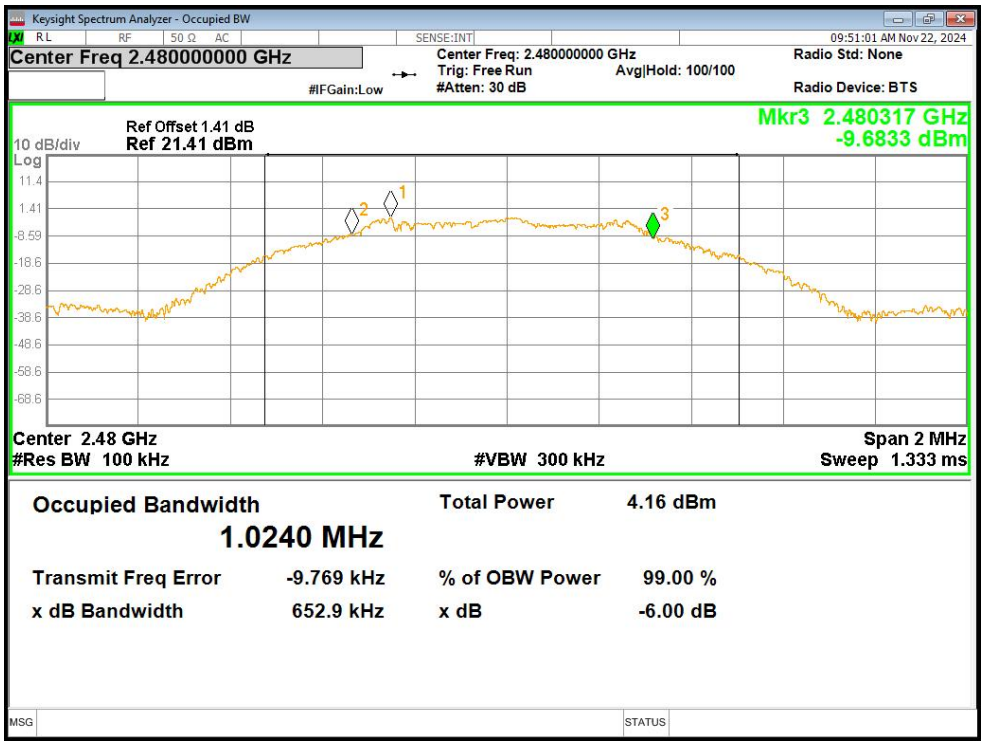
-6dB Bandwidth NVNT BLE 1M 2402MHz Ant1



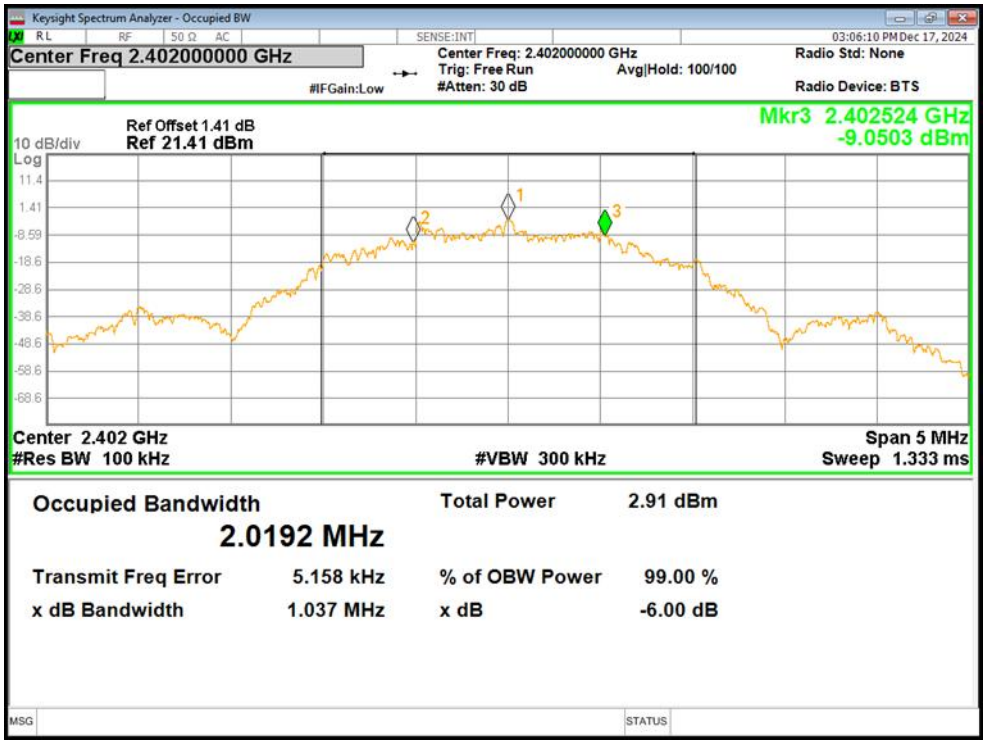
-6dB Bandwidth NVNT BLE 1M 2440MHz Ant1



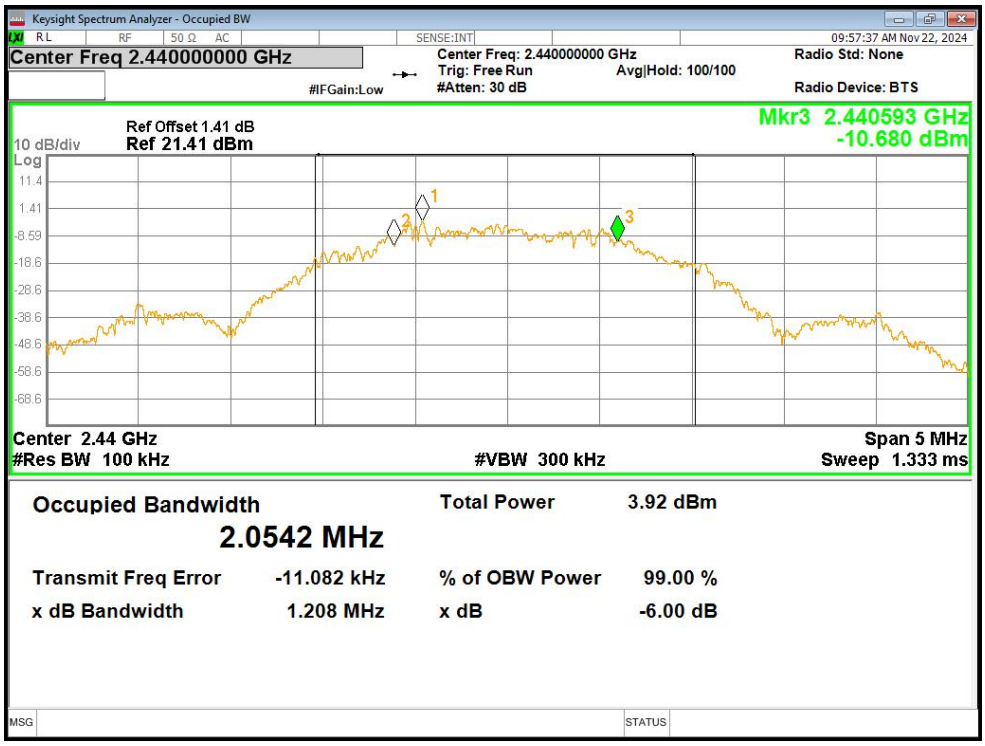
-6dB Bandwidth NVNT BLE 1M 2480MHz Ant1



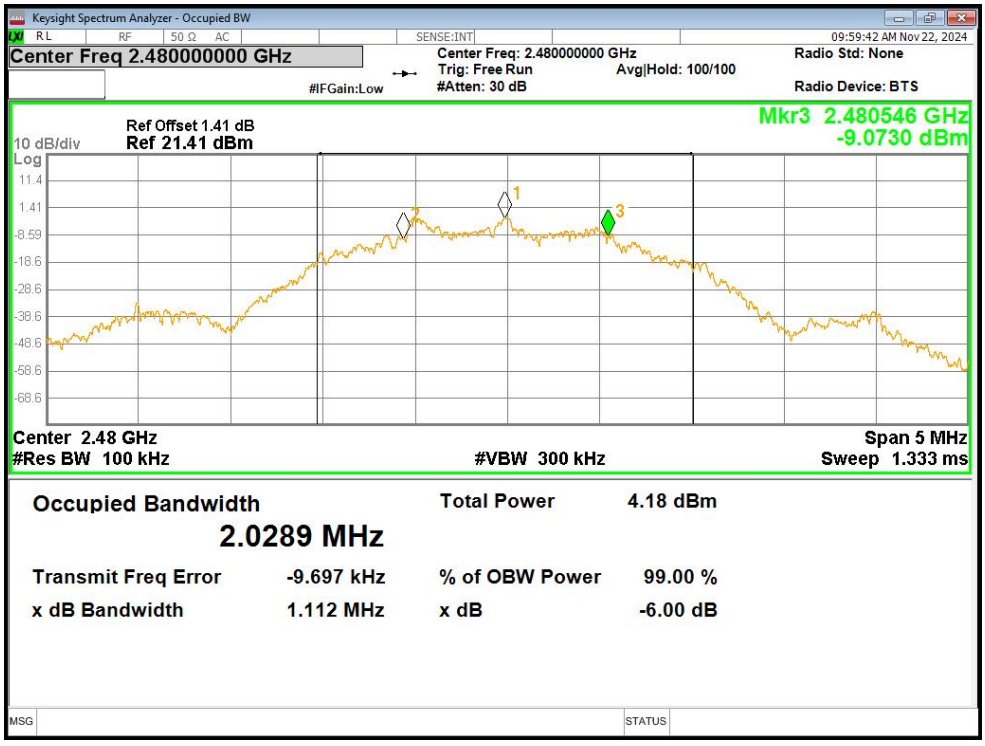
-6dB Bandwidth NVNT BLE 2M 2402MHz Ant1



-6dB Bandwidth NVNT BLE 2M 2440MHz Ant1



-6dB Bandwidth NVNT BLE 2M 2480MHz Ant1

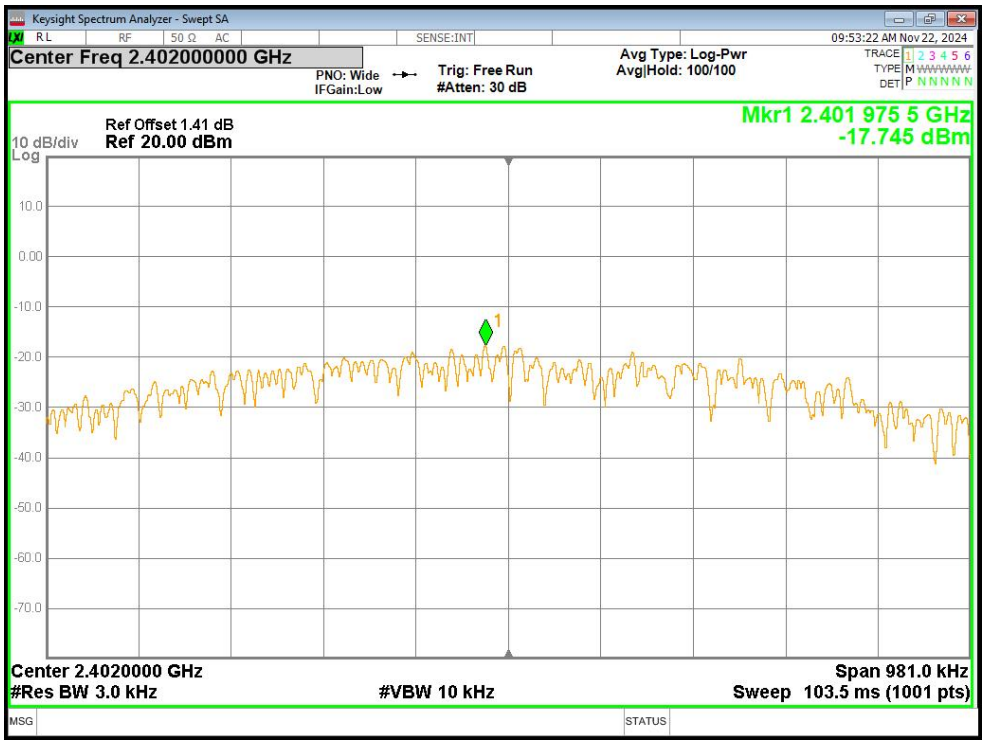


4.Maximum Power Spectral Density Level

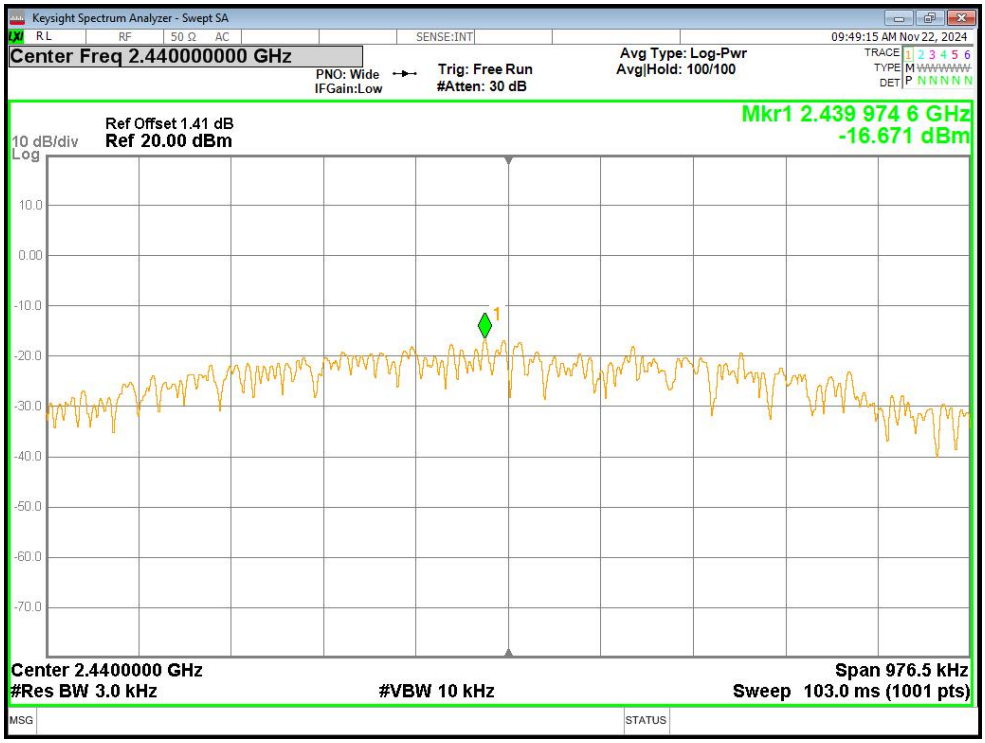
Mode	Frequency (MHz)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
BLE 1M	2402	-17.75	8	Pass
BLE 1M	2440	-16.67	8	Pass
BLE 1M	2480	-16.92	8	Pass
BLE 2M	2402	-20.48	8	Pass
BLE 2M	2440	-19.55	8	Pass
BLE 2M	2480	-19.54	8	Pass

Test Graphs

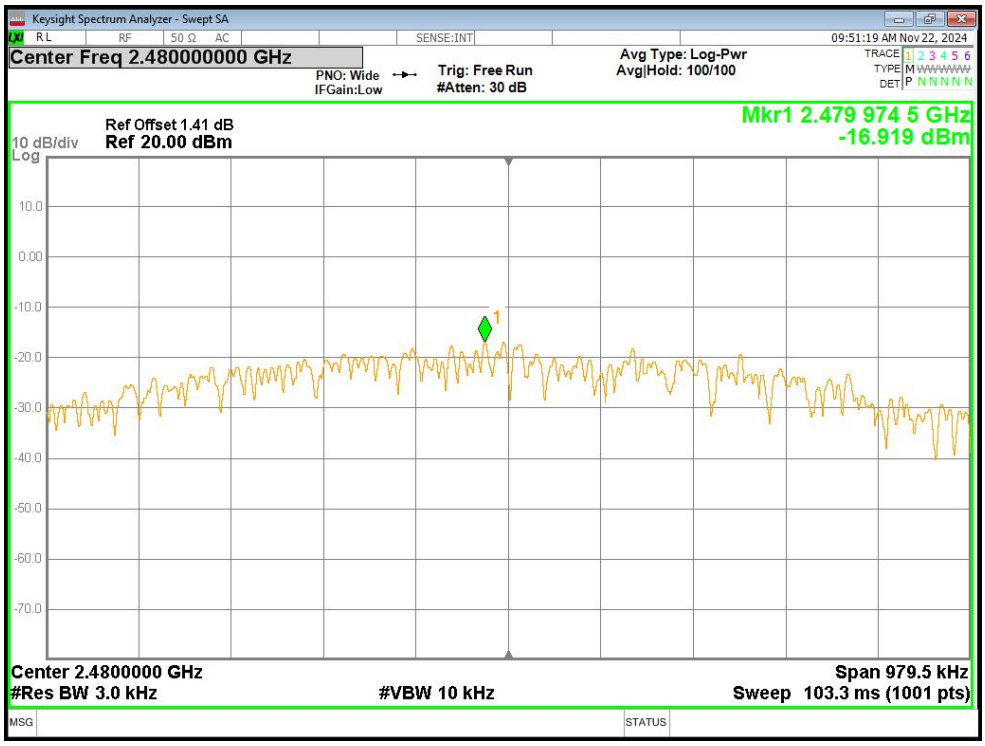
PSD NVNT BLE 1M 2402MHz Ant1



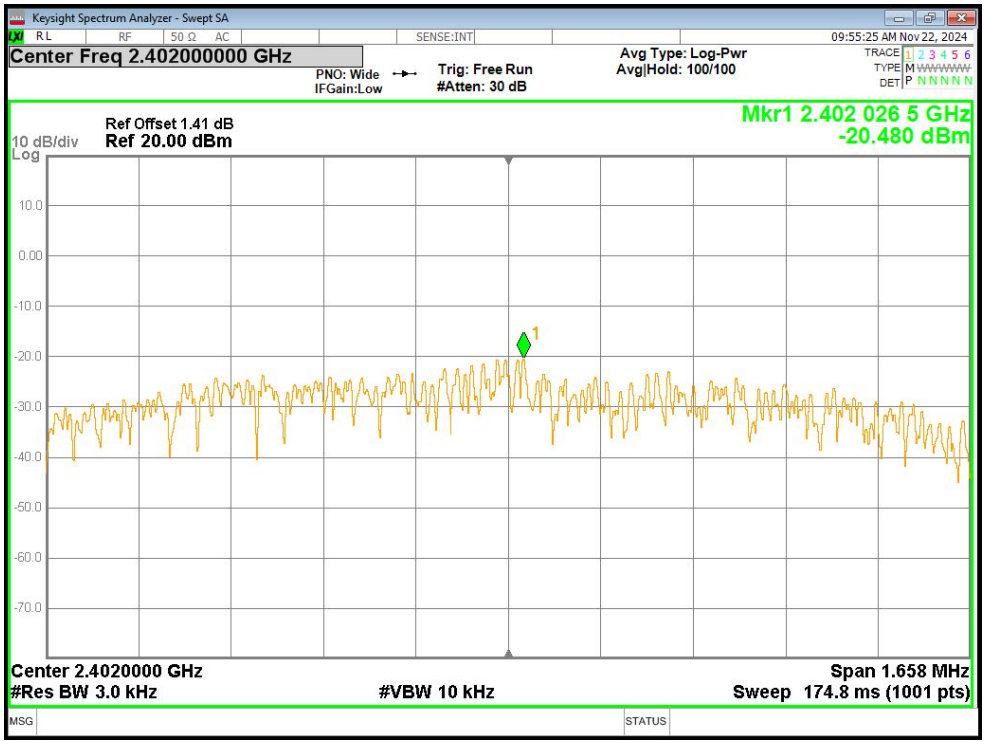
PSD NVNT BLE 1M 2440MHz Ant1



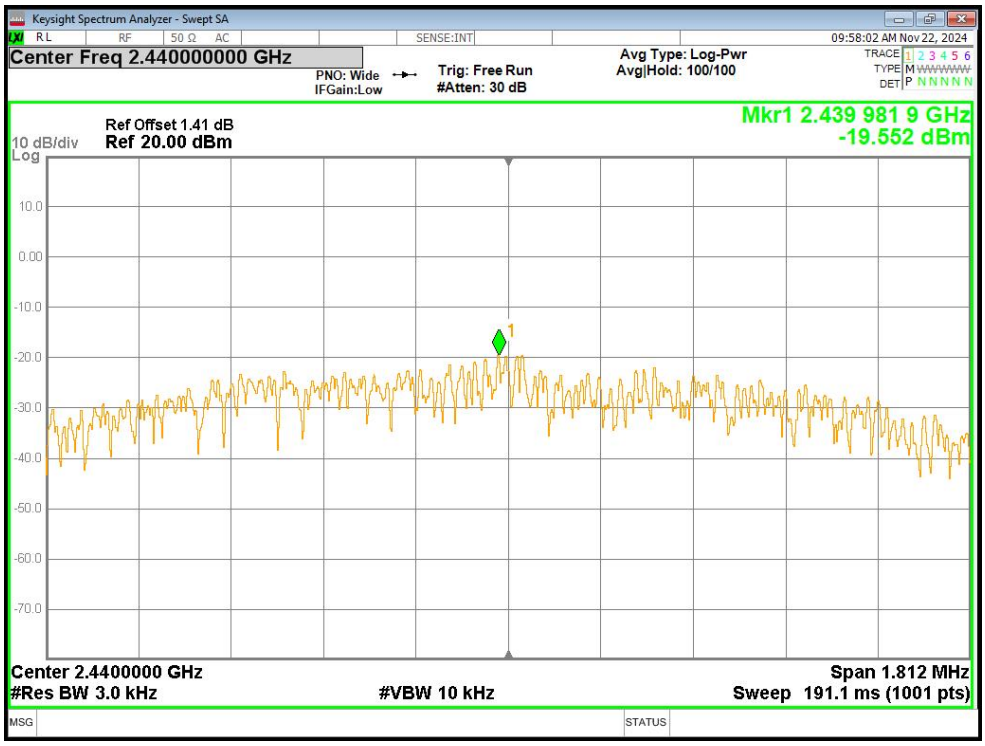
PSD NVNT BLE 1M 2480MHz Ant1



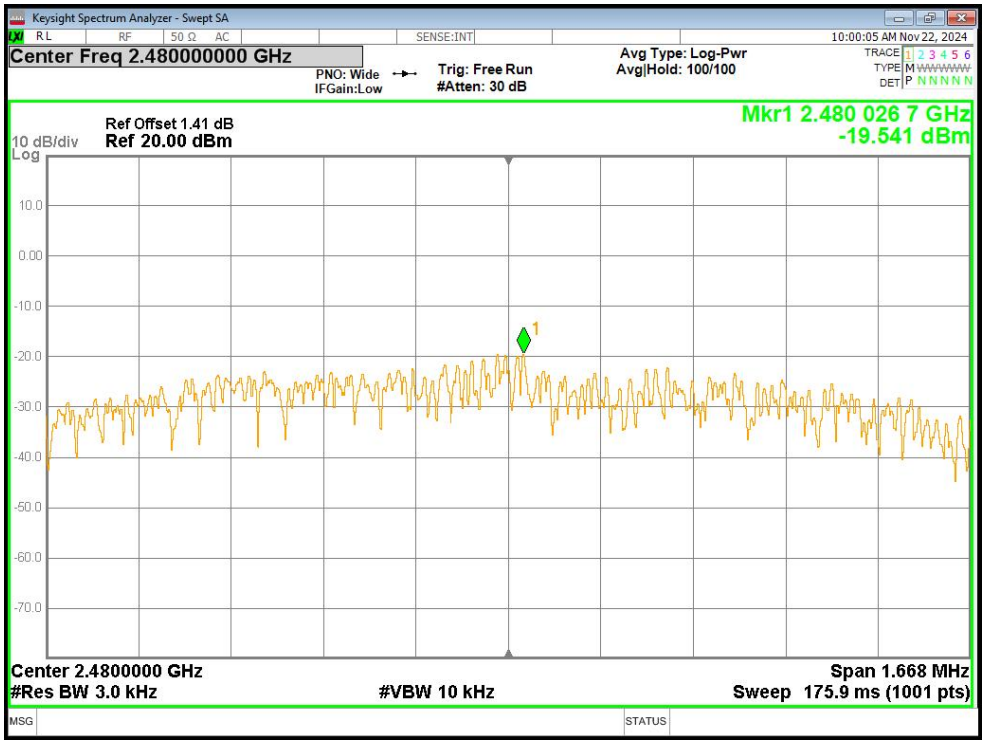
PSD NVNT BLE 2M 2402MHz Ant1



PSD NVNT BLE 2M 2440MHz Ant1



PSD NVNT BLE 2M 2480MHz Ant1

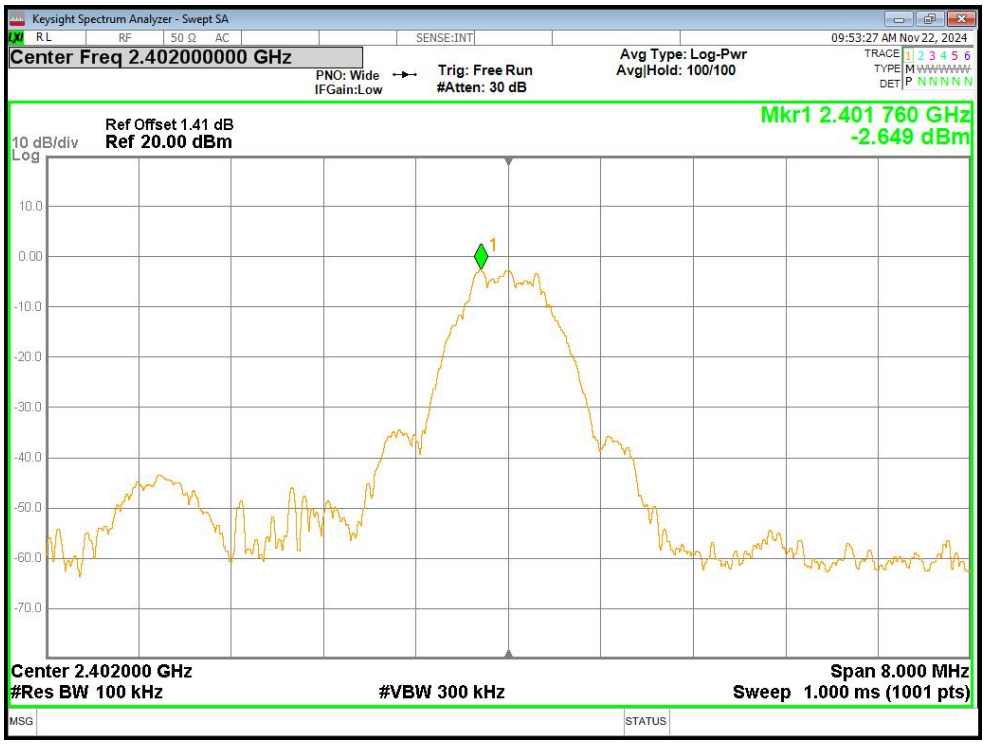


5.Band Edge

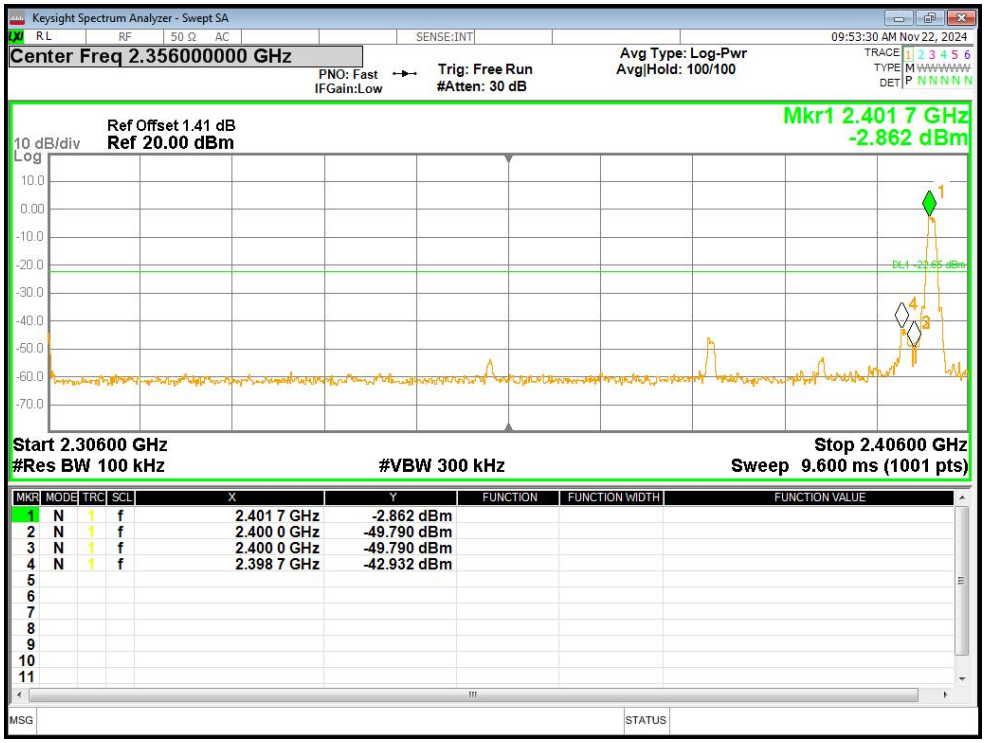
Mode	Frequency (MHz)	Max Value (dBc)	Limit (dBc)	Verdict
BLE 1M	2402	-40.28	-20	Pass
BLE 1M	2480	-45.7	-20	Pass
BLE 2M	2402	-30.8	-20	Pass
BLE 2M	2480	-47.15	-20	Pass

Test Graphs

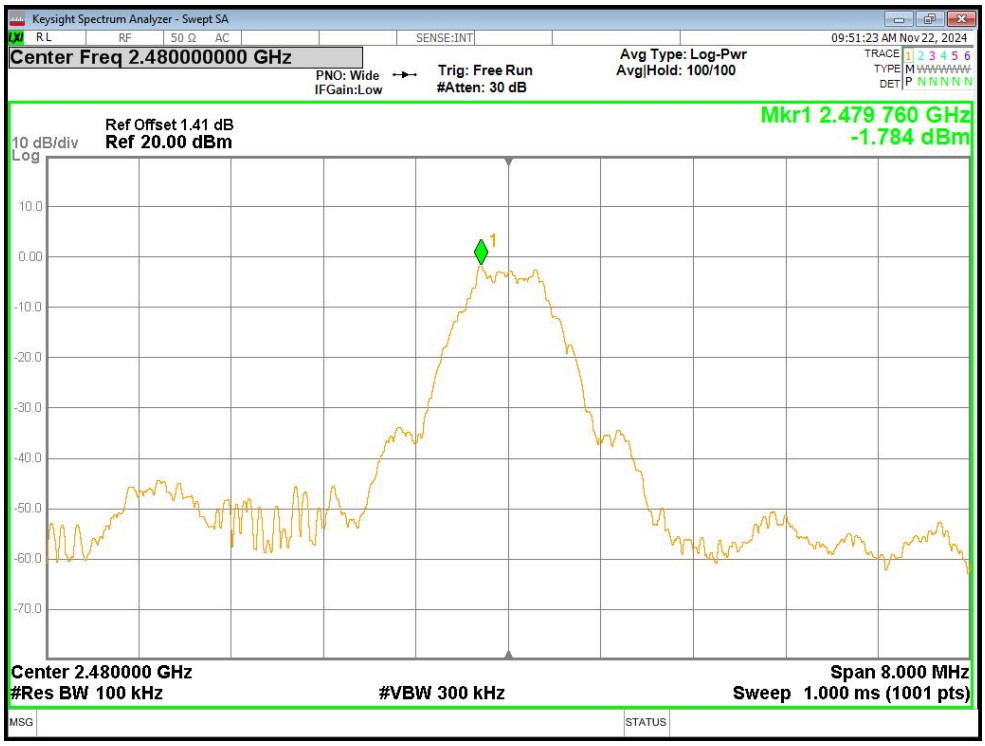
Band Edge NVNT BLE 1M 2402MHz Ant1 Ref



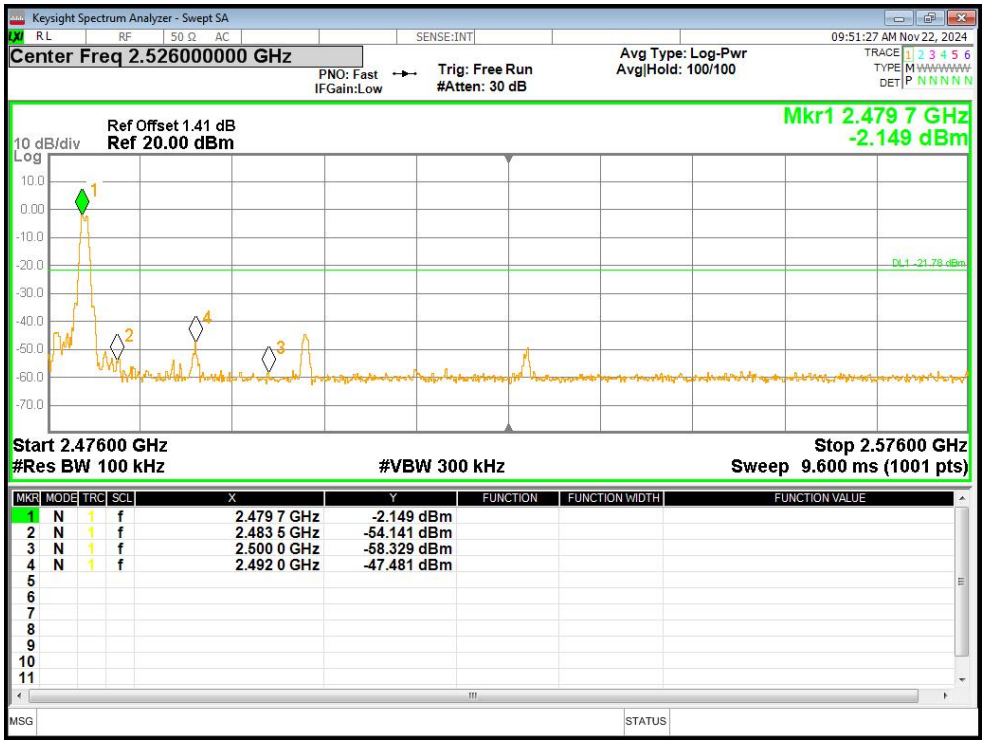
Band Edge NVNT BLE 1M 2402MHz Ant1 Emission



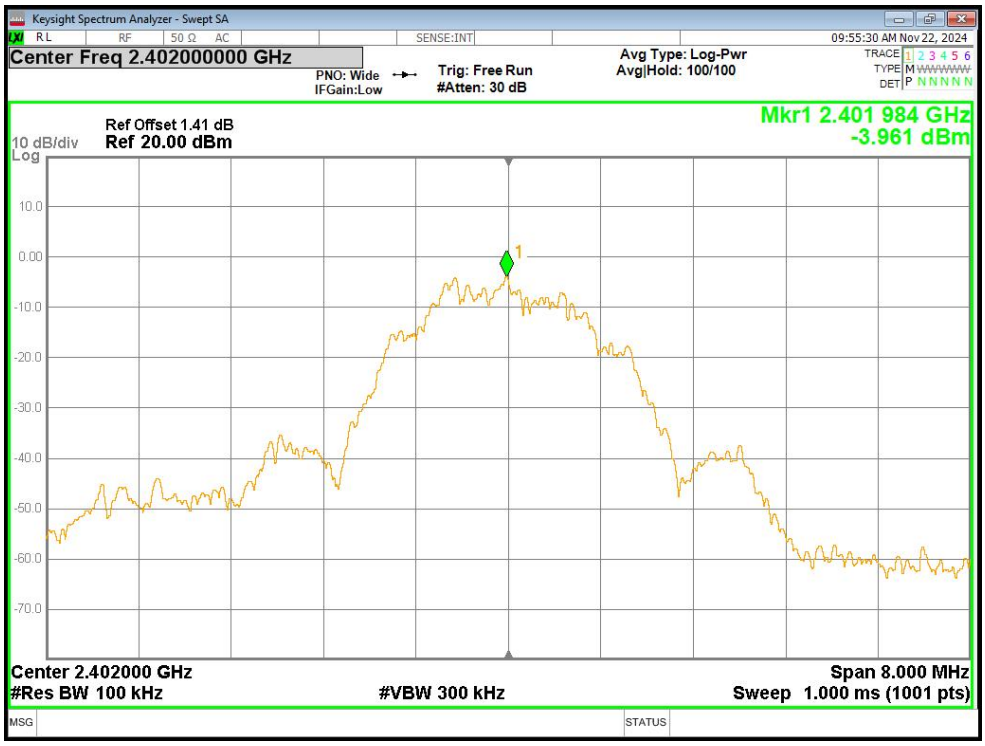
Band Edge NVNT BLE 1M 2480MHz Ant1 Ref



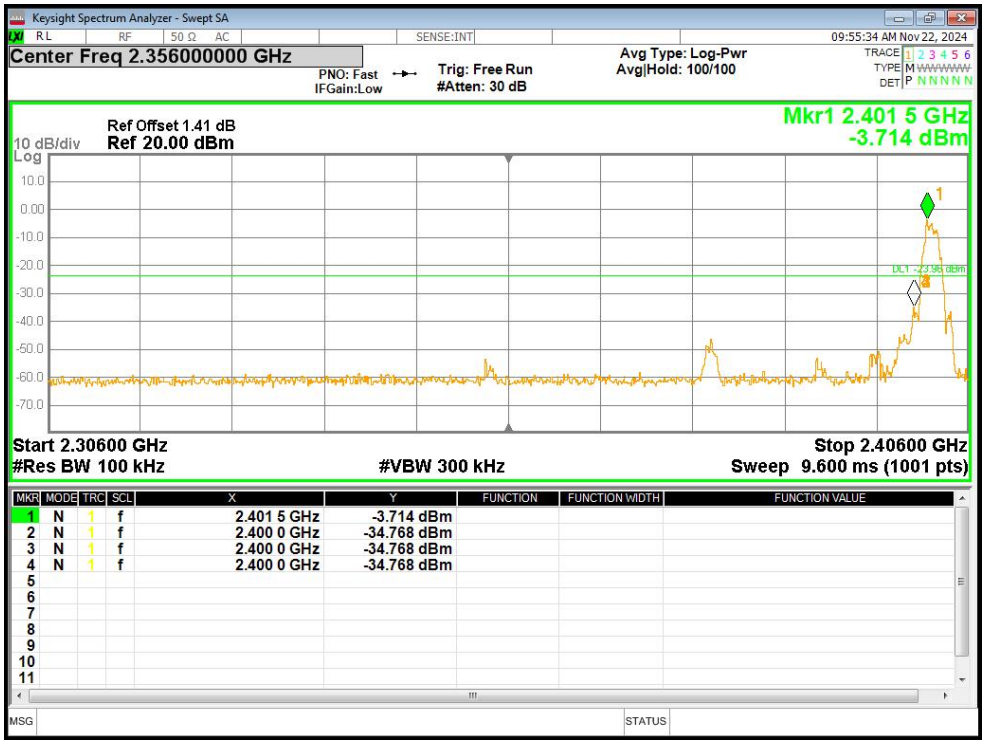
Band Edge NVNT BLE 1M 2480MHz Ant1 Emission



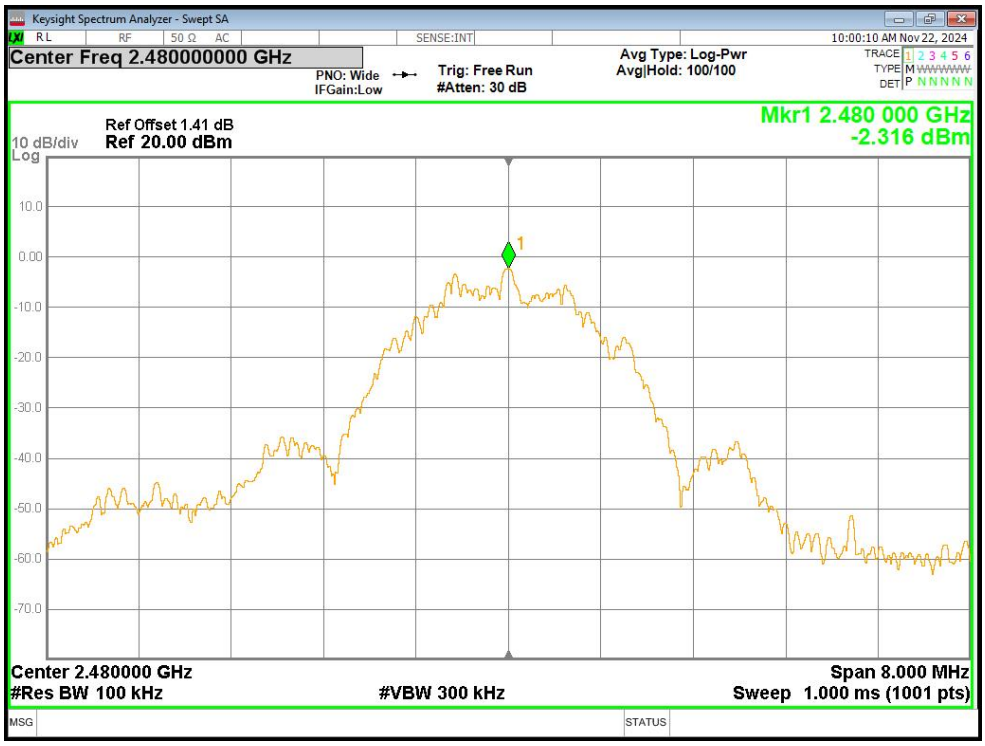
Band Edge NVNT BLE 2M 2402MHz Ant1 Ref



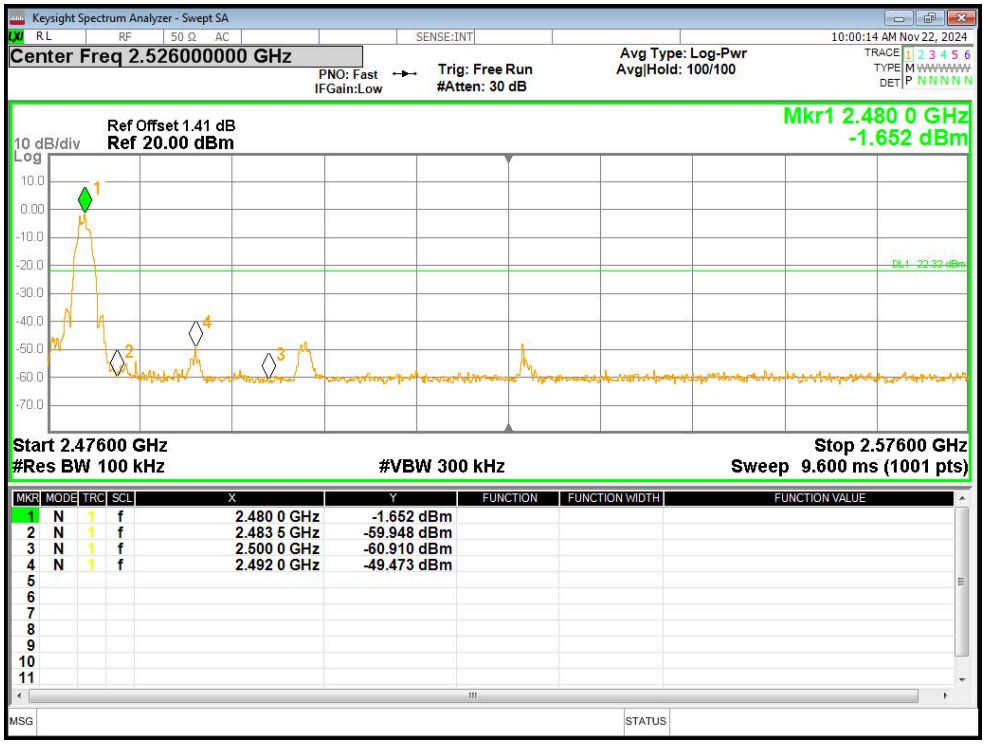
Band Edge NVNT BLE 2M 2402MHz Ant1 Emission



Band Edge NVNT BLE 2M 2480MHz Ant1 Ref



Band Edge NVNT BLE 2M 2480MHz Ant1 Emission



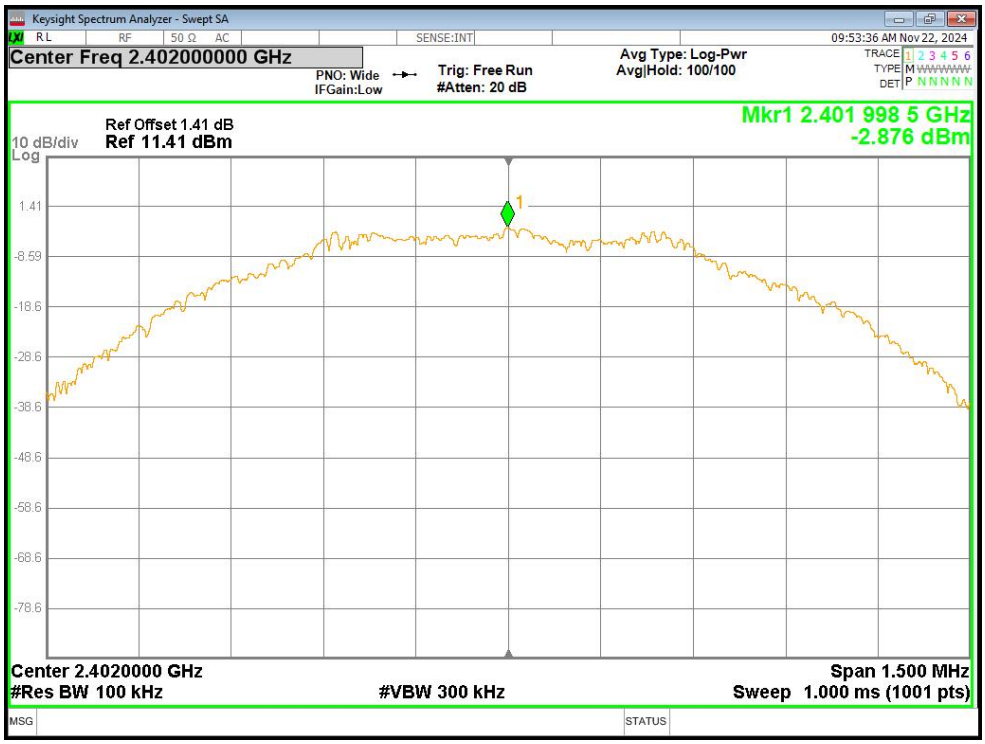
MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.480 0 GHz	-1.652 dBm			
2	N	1	f	2.483 5 GHz	-59.948 dBm			
3	N	1	f	2.500 0 GHz	-60.910 dBm			
4	N	1	f	2.492 0 GHz	-49.473 dBm			
5								
6								
7								
8								
9								
10								
11								

6.Conducted RF Spurious Emission

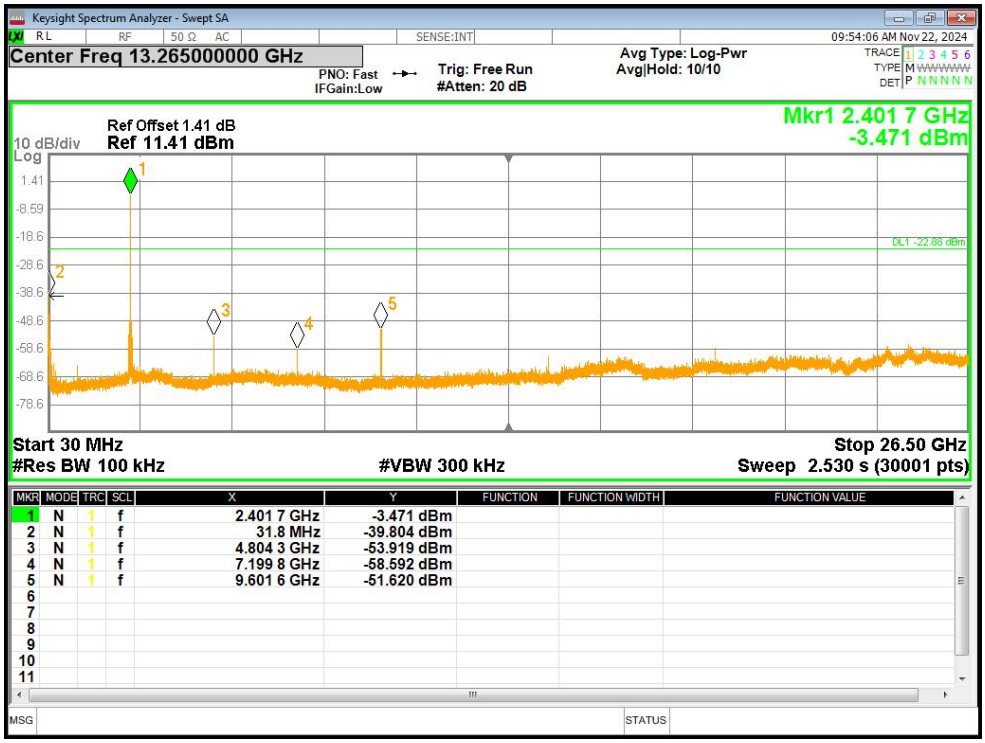
Mode	Frequency (MHz)	Max Value (dBc)	Limit (dBc)	Verdict
BLE 1M	2402	-36.92	-20	Pass
BLE 1M	2440	-37.8	-20	Pass
BLE 1M	2480	-37.22	-20	Pass
BLE 2M	2402	-37.18	-20	Pass
BLE 2M	2440	-38.47	-20	Pass
BLE 2M	2480	-37.27	-20	Pass

Test Graphs

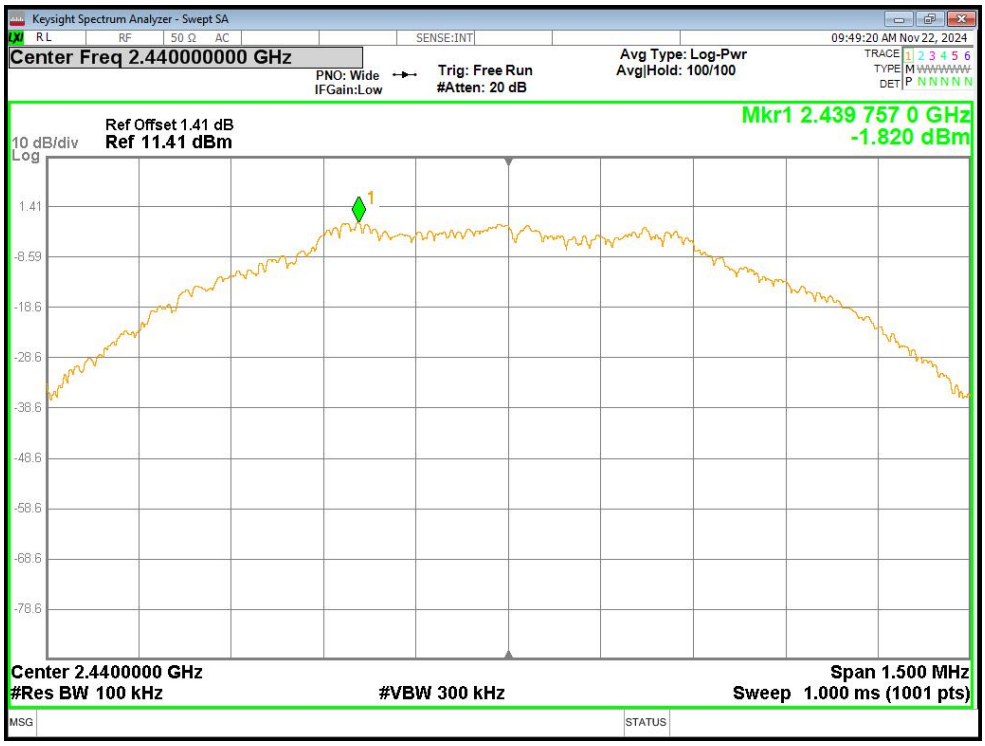
Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Ref



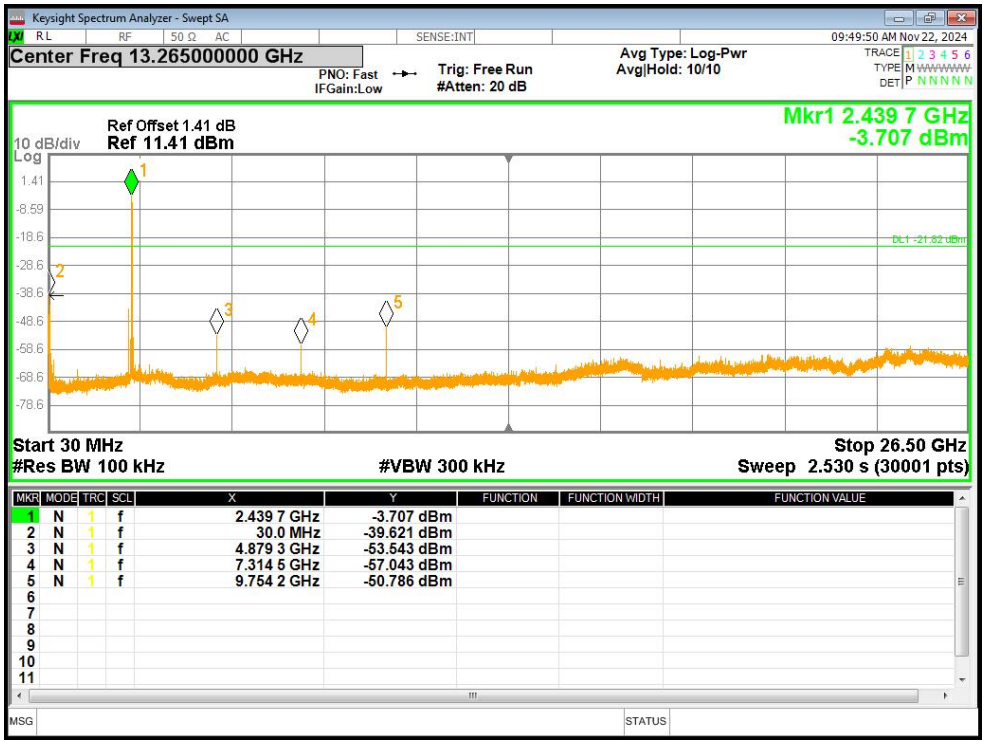
Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Emission



Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Ref

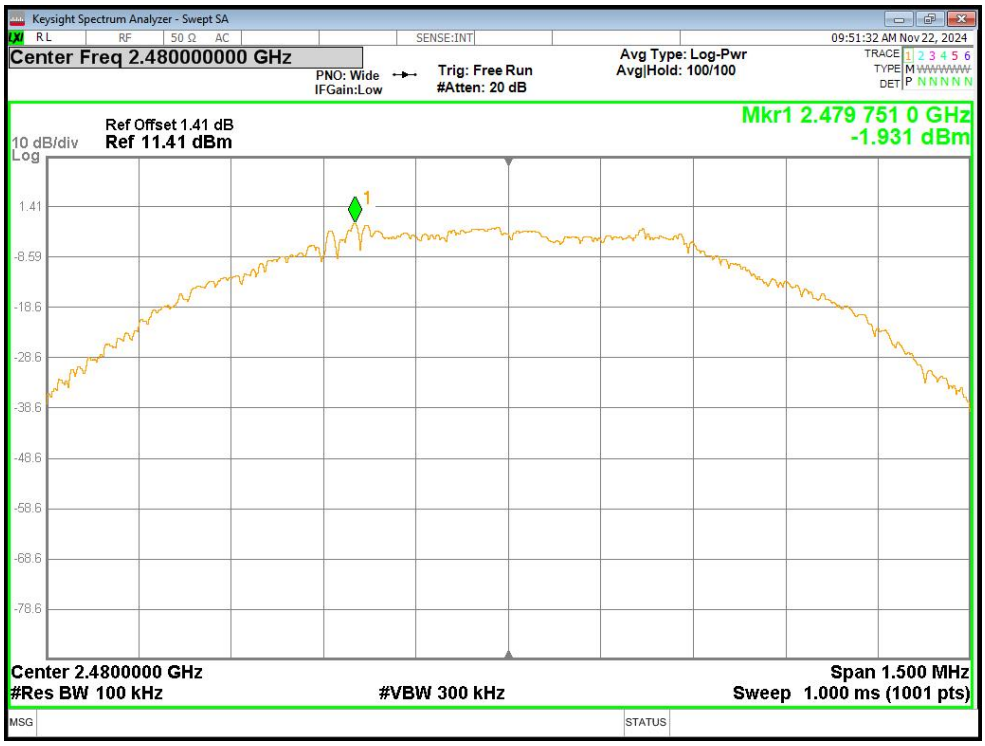


Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Emission

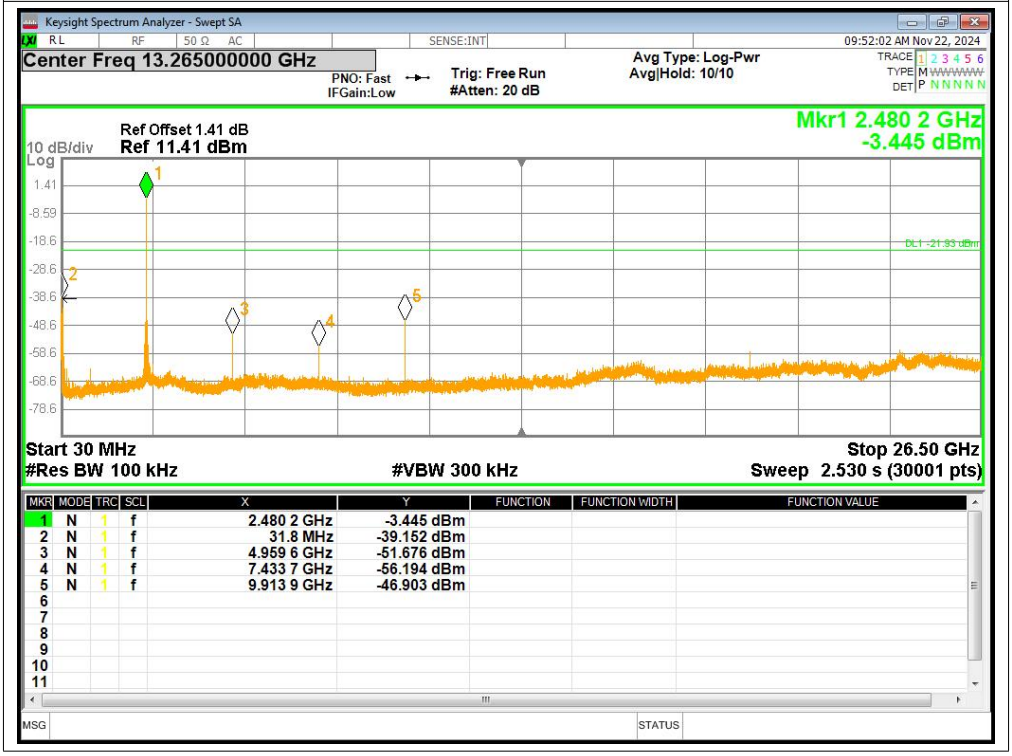


MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.439 7 GHz	-3.707 dBm			
2	N	1	f	30.0 MHz	-39.621 dBm			
3	N	1	f	4.879 3 GHz	-53.543 dBm			
4	N	1	f	7.314 5 GHz	-57.043 dBm			
5	N	1	f	9.754 2 GHz	-50.786 dBm			
6								
7								
8								
9								
10								
11								

Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Ref

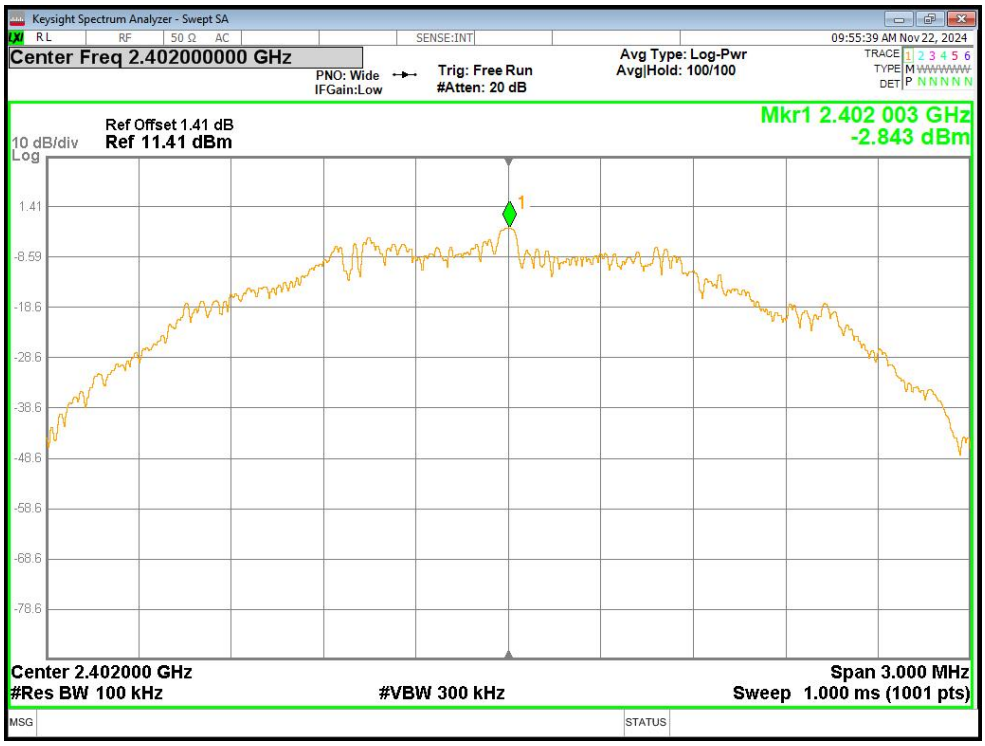


Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Emission

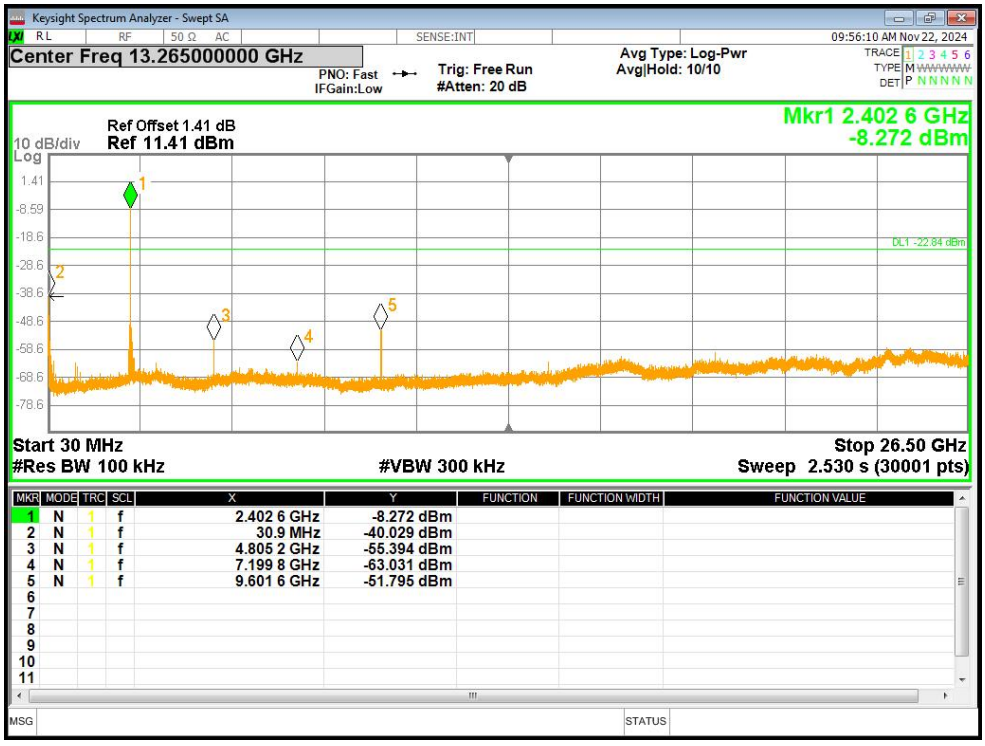


MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.480 2 GHz	-3.445 dBm			
2	N	1	f	31.8 MHz	-39.152 dBm			
3	N	1	f	4.959 6 GHz	-51.676 dBm			
4	N	1	f	7.433 7 GHz	-56.194 dBm			
5	N	1	f	9.913 9 GHz	-46.903 dBm			
6								
7								
8								
9								
10								
11								

Tx. Spurious NVNT BLE 2M 2402MHz Ant1 Ref

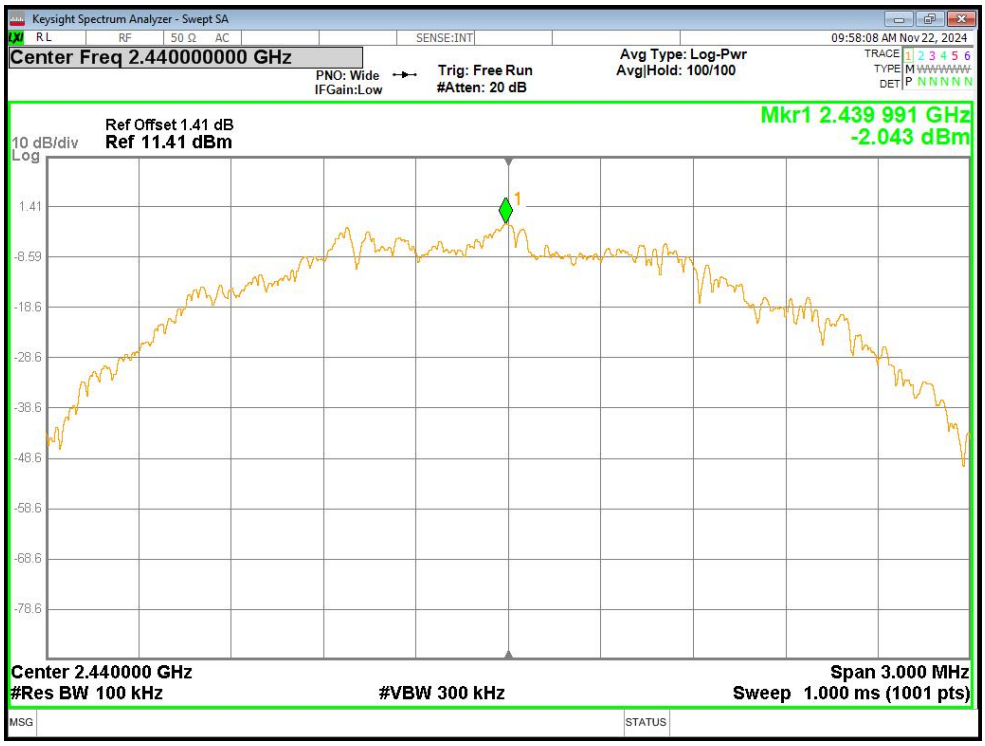


Tx. Spurious NVNT BLE 2M 2402MHz Ant1 Emission

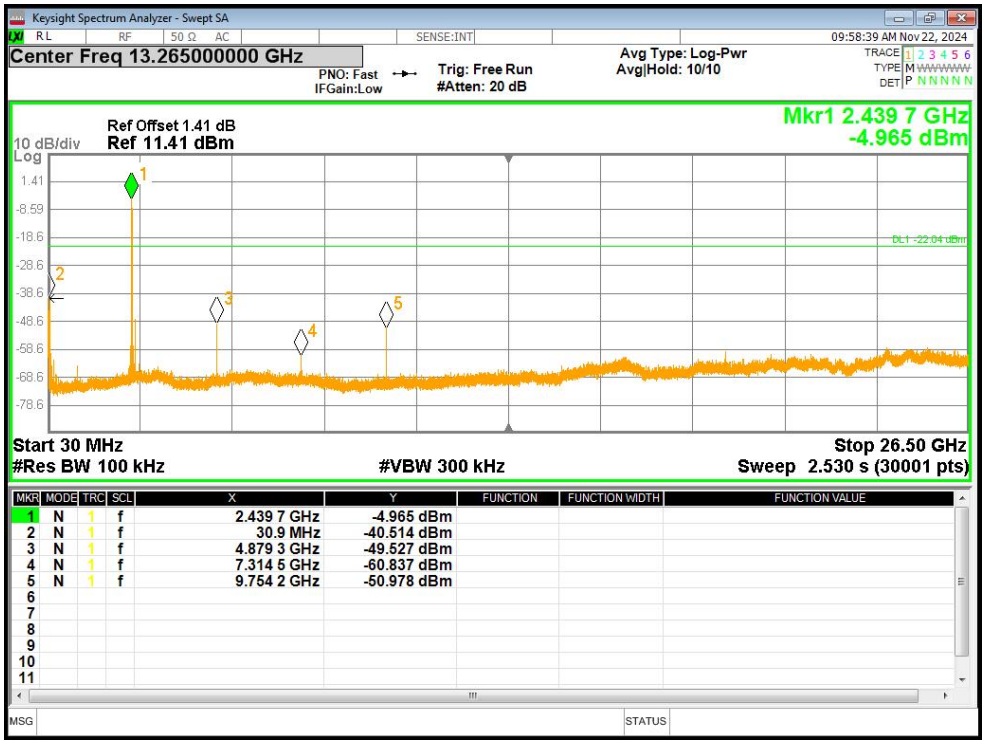


MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.402 6 GHz	-8.272 dBm			
2	N	1	f	30.9 MHz	-40.029 dBm			
3	N	1	f	4.805 2 GHz	-55.394 dBm			
4	N	1	f	7.199 8 GHz	-63.031 dBm			
5	N	1	f	9.601 6 GHz	-51.795 dBm			
6								
7								
8								
9								
10								
11								

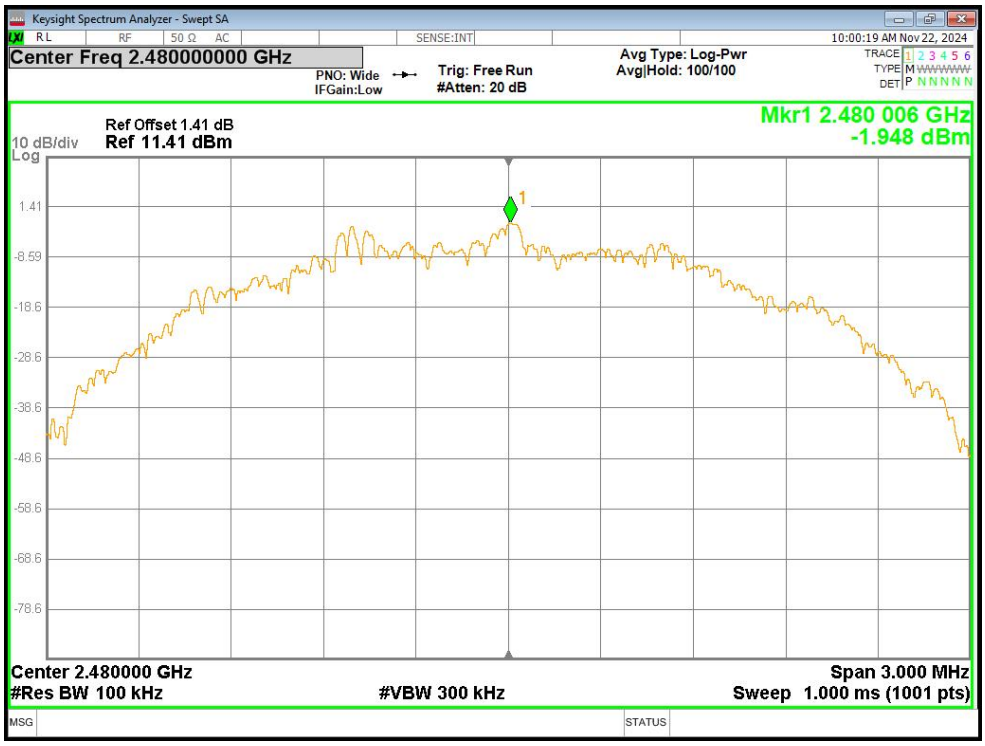
Tx. Spurious NVNT BLE 2M 2440MHz Ant1 Ref



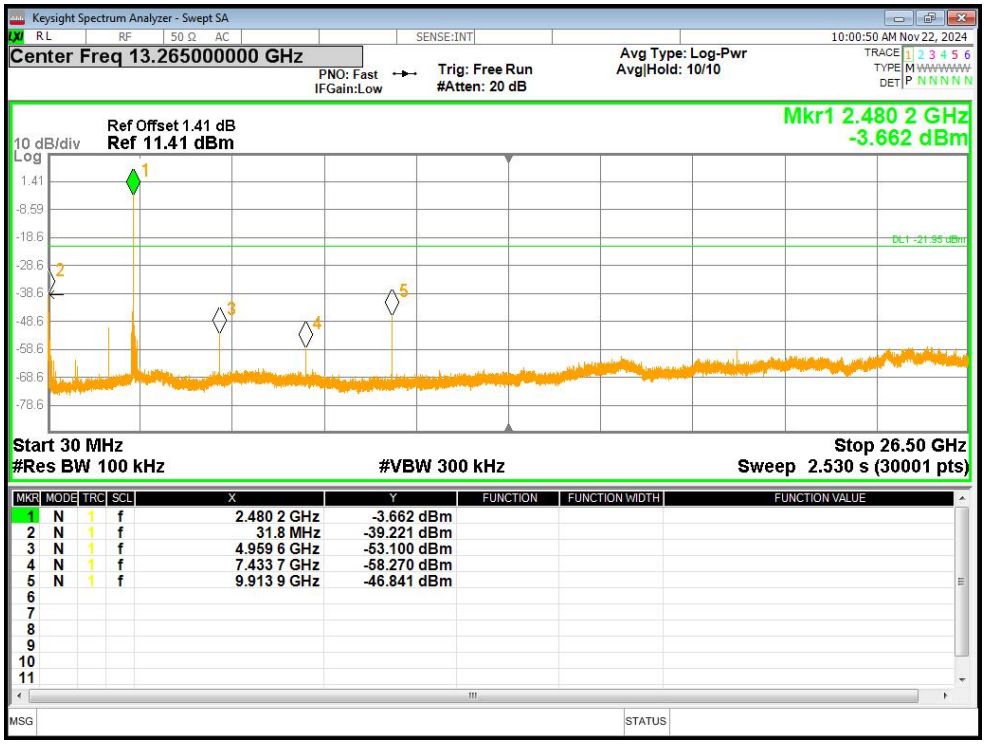
Tx. Spurious NVNT BLE 2M 2440MHz Ant1 Emission



Tx. Spurious NVNT BLE 2M 2480MHz Ant1 Ref



Tx. Spurious NVNT BLE 2M 2480MHz Ant1 Emission



MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.480 2 GHz	-3.662 dBm			
2	N	1	f	31.8 MHz	-39.221 dBm			
3	N	1	f	4.959 6 GHz	-53.100 dBm			
4	N	1	f	7.433 7 GHz	-58.270 dBm			
5	N	1	f	9.913 9 GHz	-46.841 dBm			
6								
7								
8								
9								
10								
11								