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FCC ID BLE

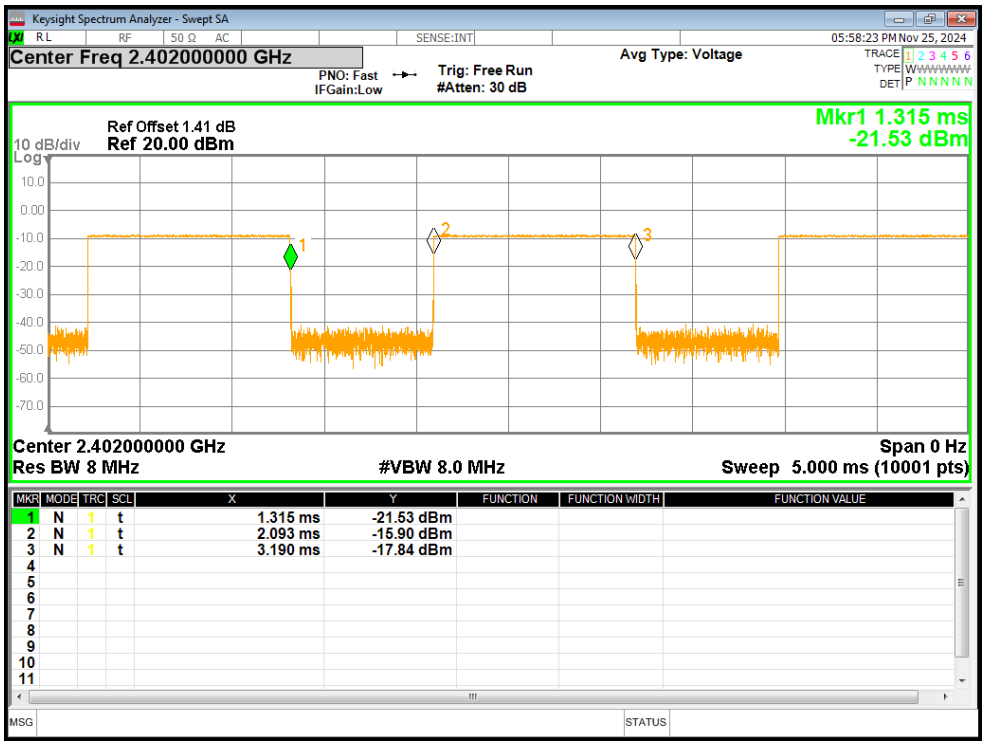
FCC_BLE(Part15.247) Test Data

1.Duty Cycle

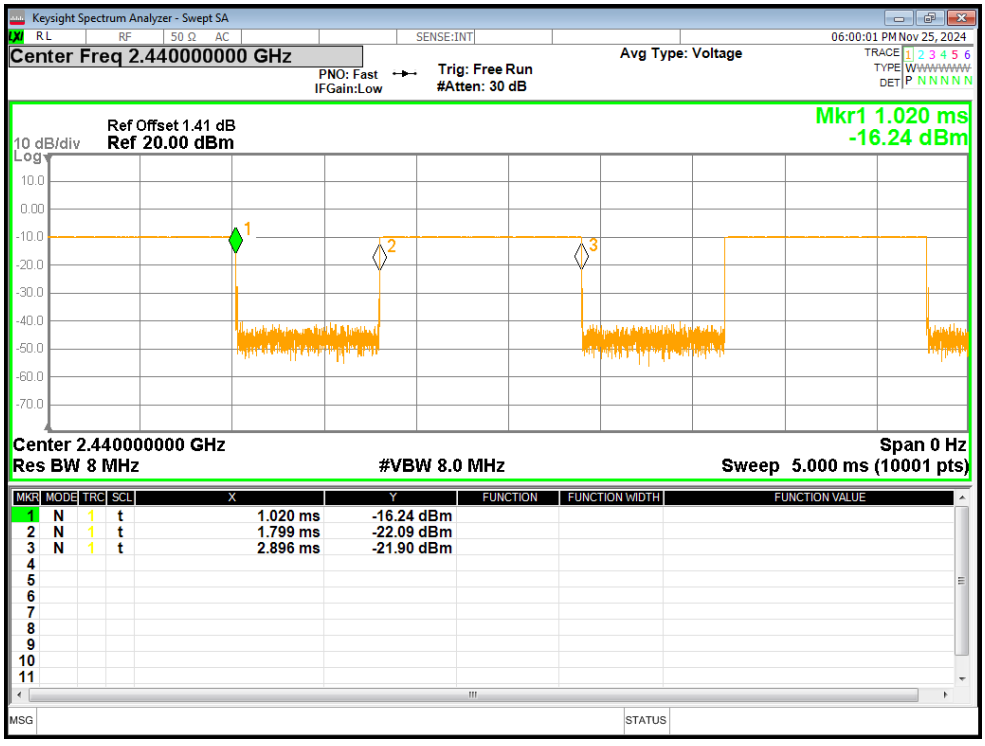
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	BLE 1M	2402	Ant1	58.48	2.33	0.91
NVNT	BLE 1M	2440	Ant1	58.49	2.33	0.91
NVNT	BLE 1M	2480	Ant1	58.51	2.33	0.91
NVNT	BLE 2M	2402	Ant1	29.91	5.24	1.78
NVNT	BLE 2M	2440	Ant1	29.91	5.24	1.78
NVNT	BLE 2M	2480	Ant1	29.89	5.24	1.78

Test Graphs

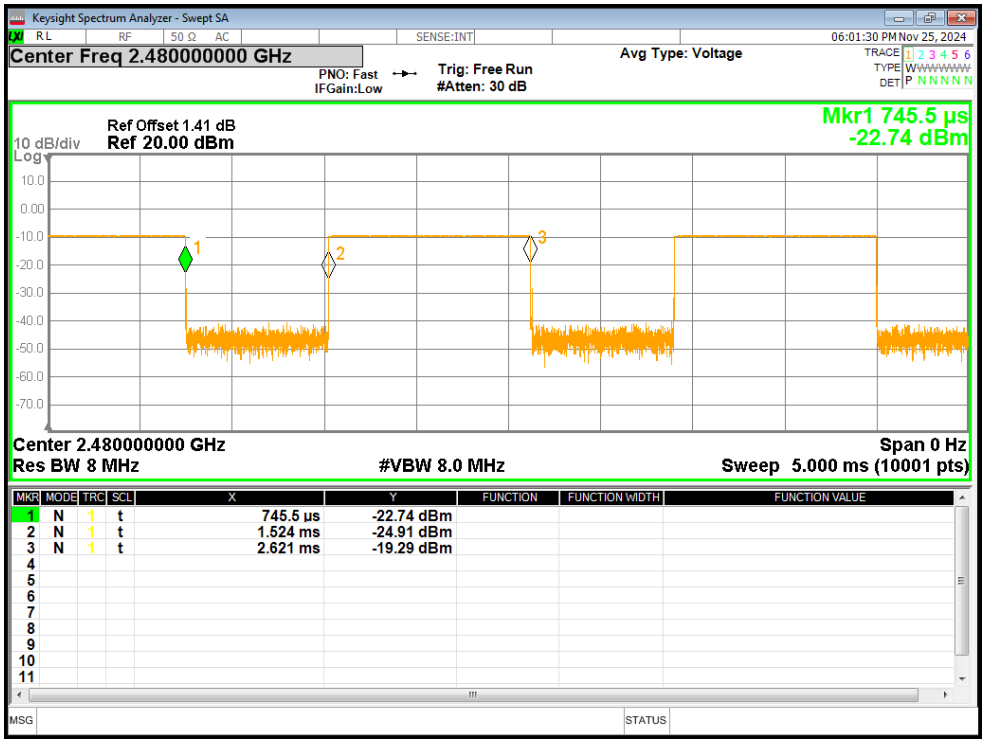
Duty Cycle NVNT BLE 1M 2402MHz Ant1



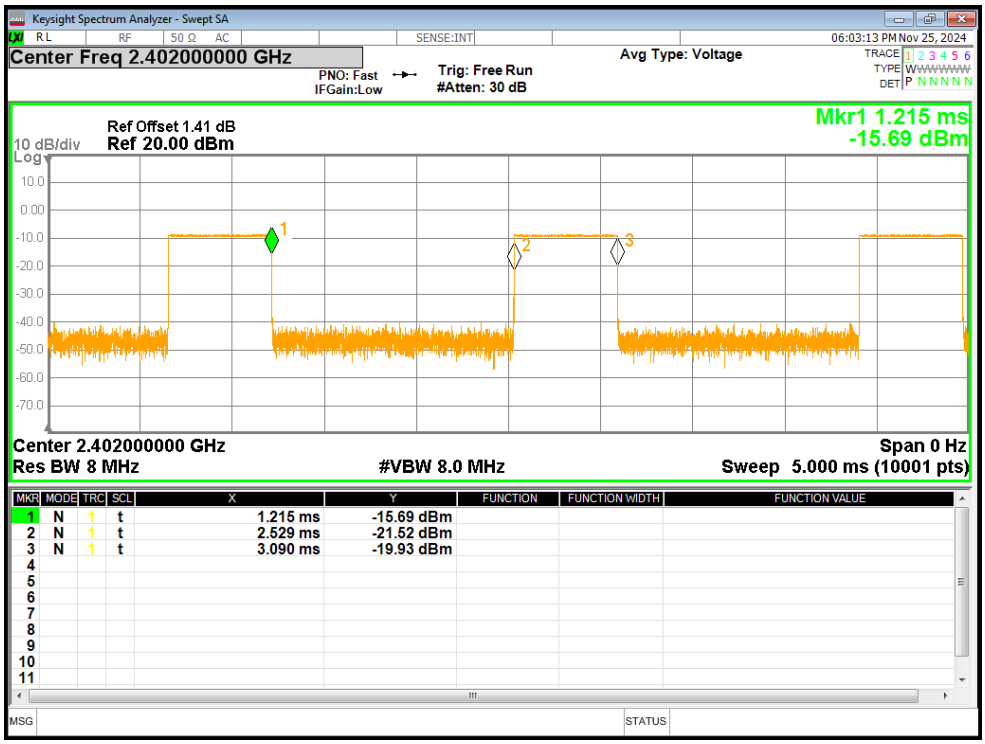
Duty Cycle NVNT BLE 1M 2440MHz Ant1



Duty Cycle NVNT BLE 1M 2480MHz Ant1

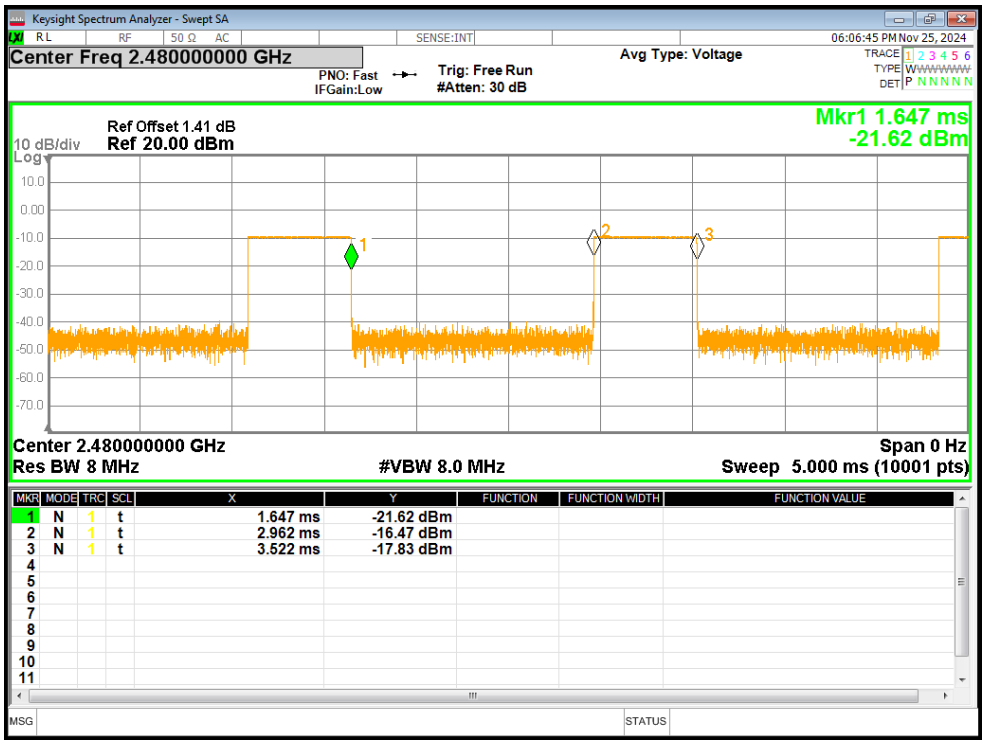


Duty Cycle NVNT BLE 2M 2402MHz Ant1



Duty Cycle NVNT BLE 2M 2440MHz Ant1

Duty Cycle NVNT BLE 2M 2480MHz Ant1

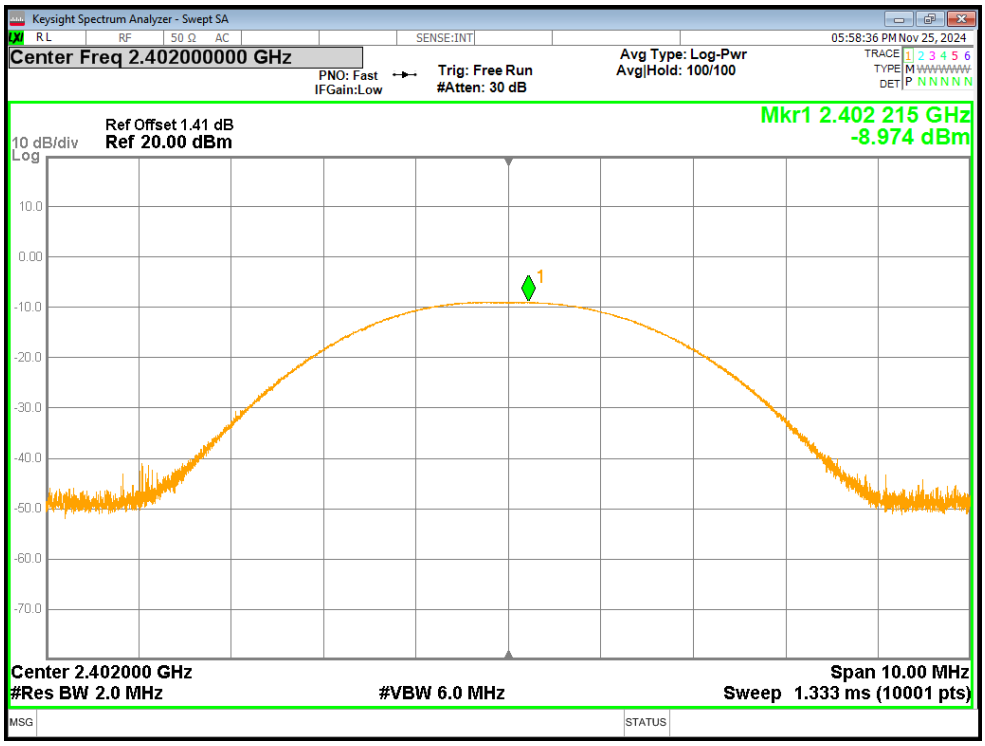


2.Maximum Peak Conducted Output Power

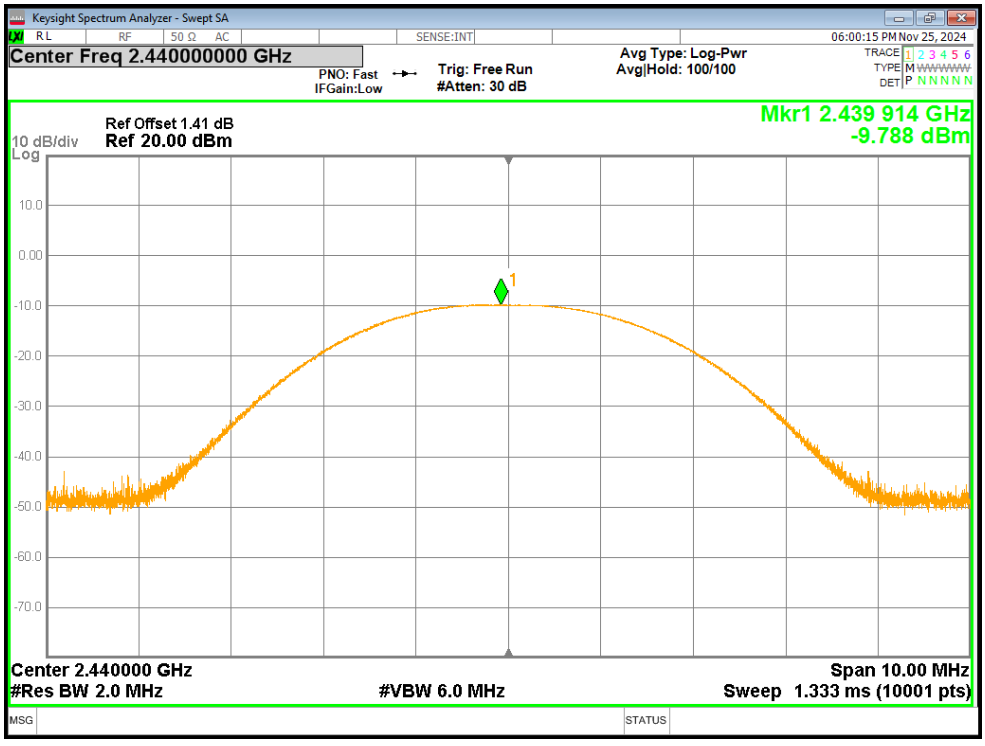
Mode	Frequency (MHz)	Total Power (dBm)	Limit (dBm)	Verdict
BLE 1M	2402	-8.97	30	Pass
BLE 1M	2440	-9.79	30	Pass
BLE 1M	2480	-9.47	30	Pass
BLE 2M	2402	-9	30	Pass
BLE 2M	2440	-9.76	30	Pass
BLE 2M	2480	-9.56	30	Pass

Test Graphs

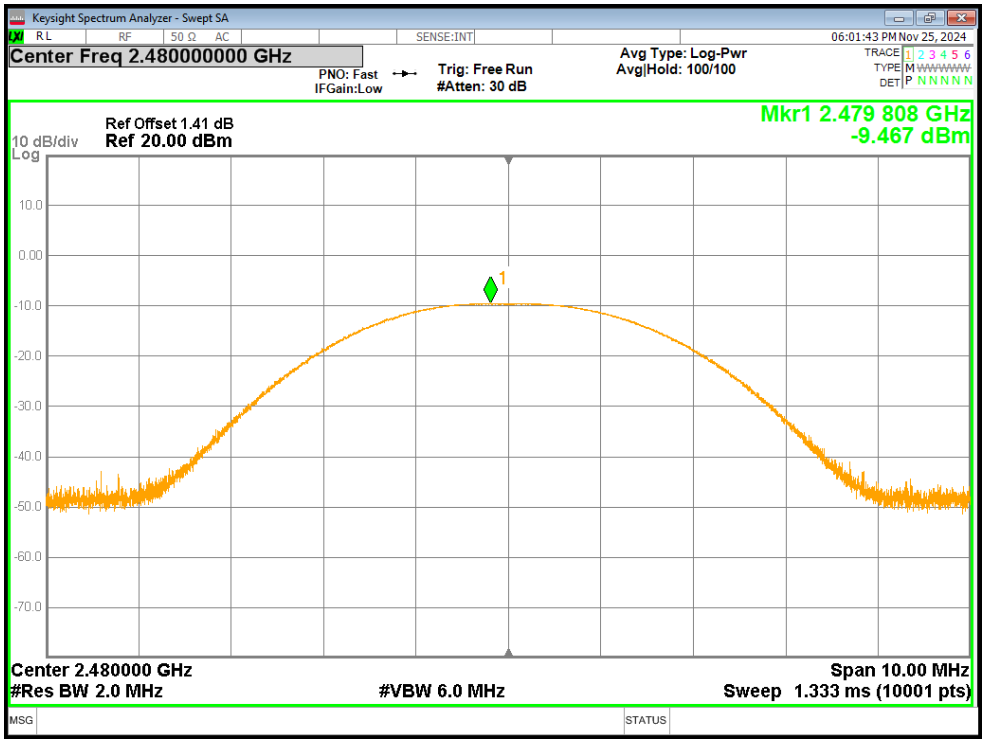
Peak Power NVNT BLE 1M 2402MHz Ant1



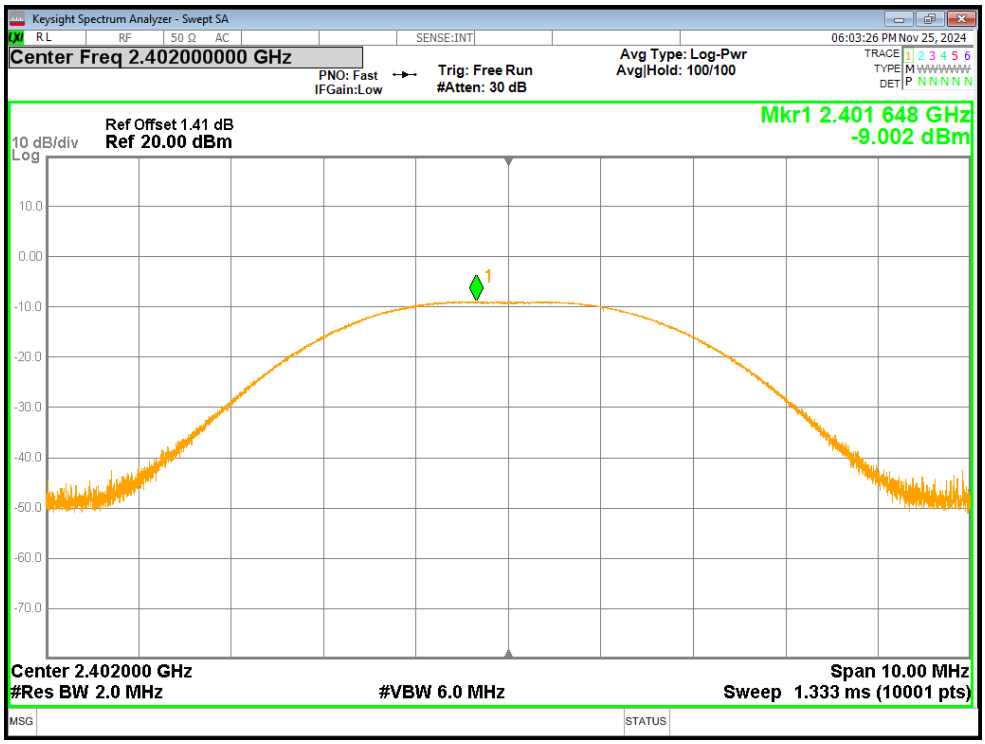
Peak Power NVNT BLE 1M 2440MHz Ant1



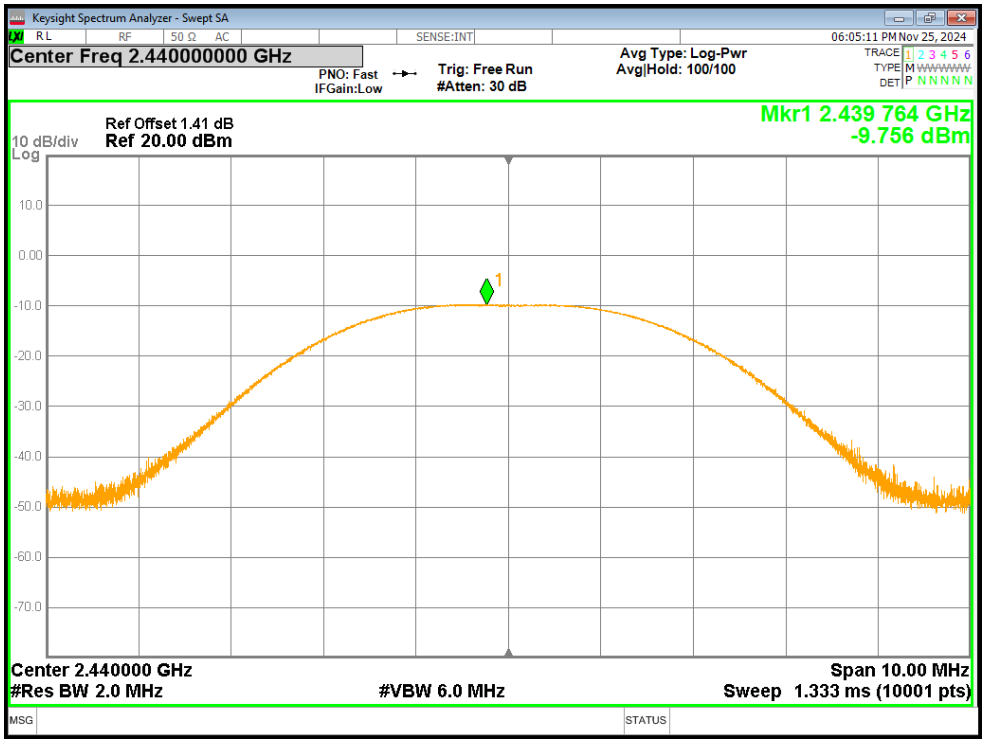
Peak Power NVNT BLE 1M 2480MHz Ant1



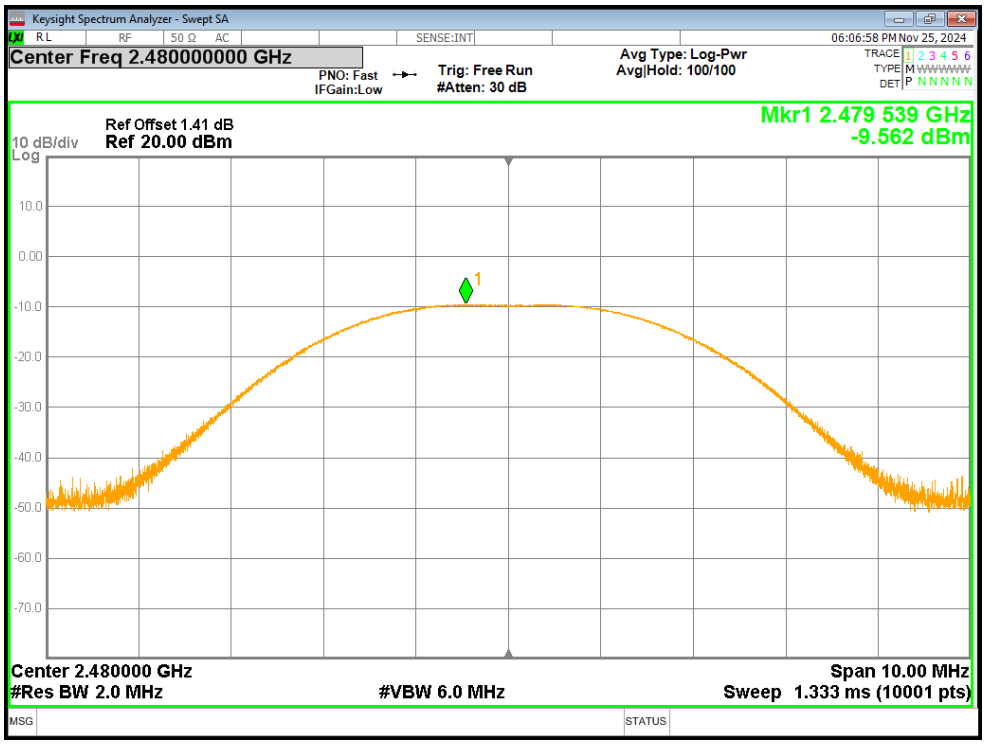
Peak Power NVNT BLE 2M 2402MHz Ant1



Peak Power NVNT BLE 2M 2440MHz Ant1



Peak Power NVNT BLE 2M 2480MHz Ant1

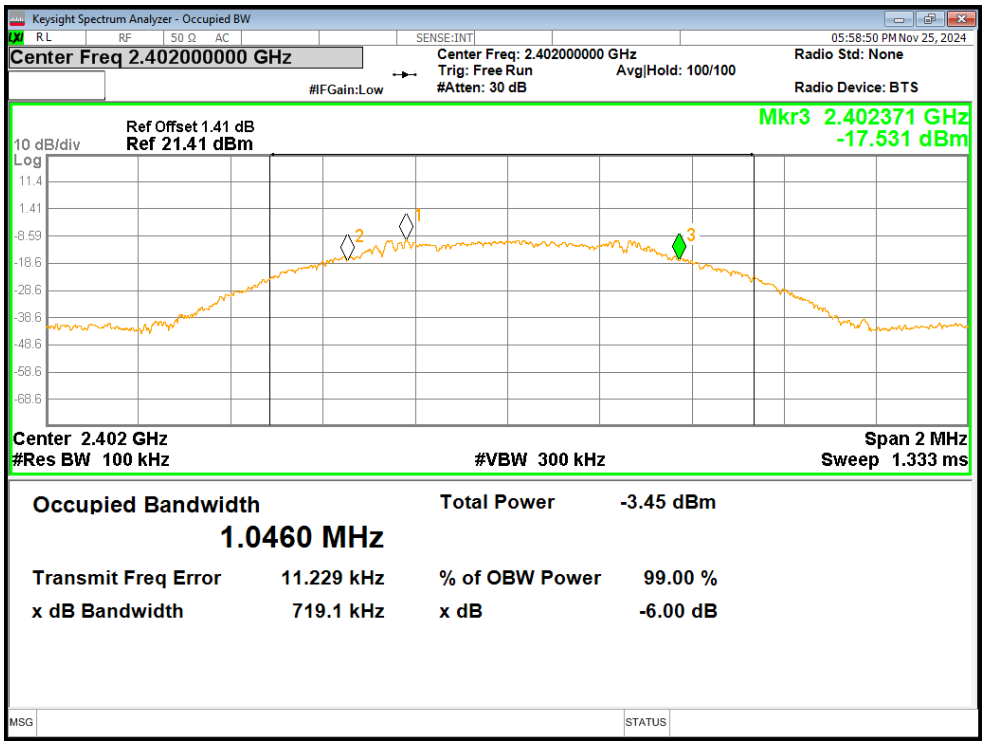


3.-6dB Bandwidth

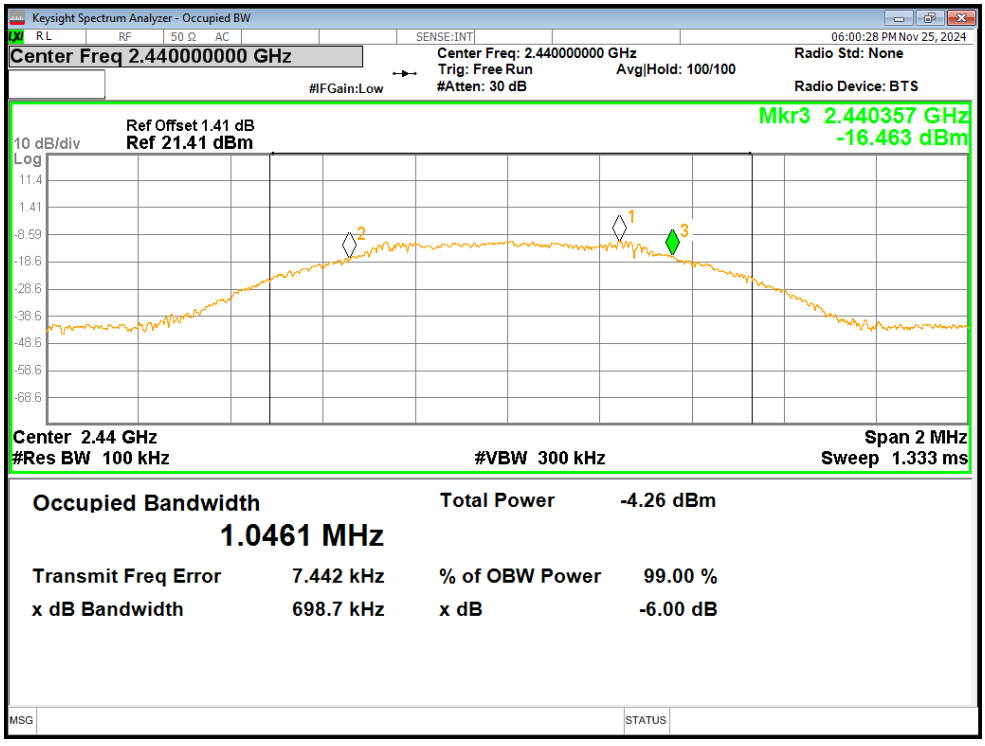
Mode	Frequency (MHz)	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
BLE 1M	2402	0.719	0.5	Pass
BLE 1M	2440	0.699	0.5	Pass
BLE 1M	2480	0.701	0.5	Pass
BLE 2M	2402	1.17	0.5	Pass
BLE 2M	2440	1.363	0.5	Pass
BLE 2M	2480	1.201	0.5	Pass

Test Graphs

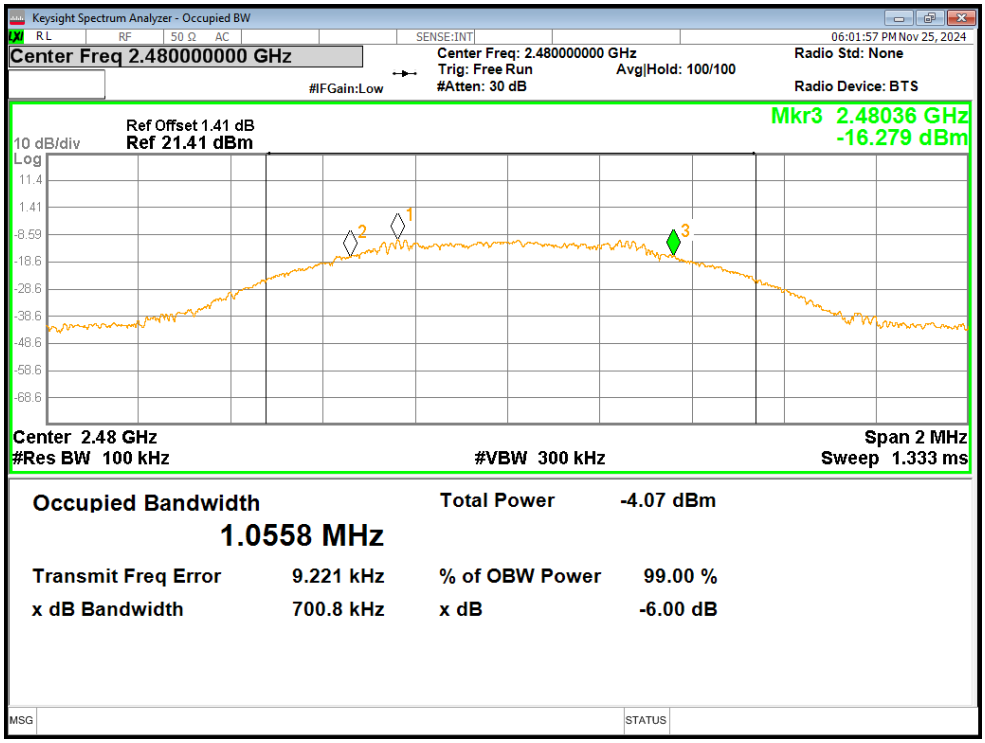
-6dB Bandwidth NVNT BLE 1M 2402MHz Ant1



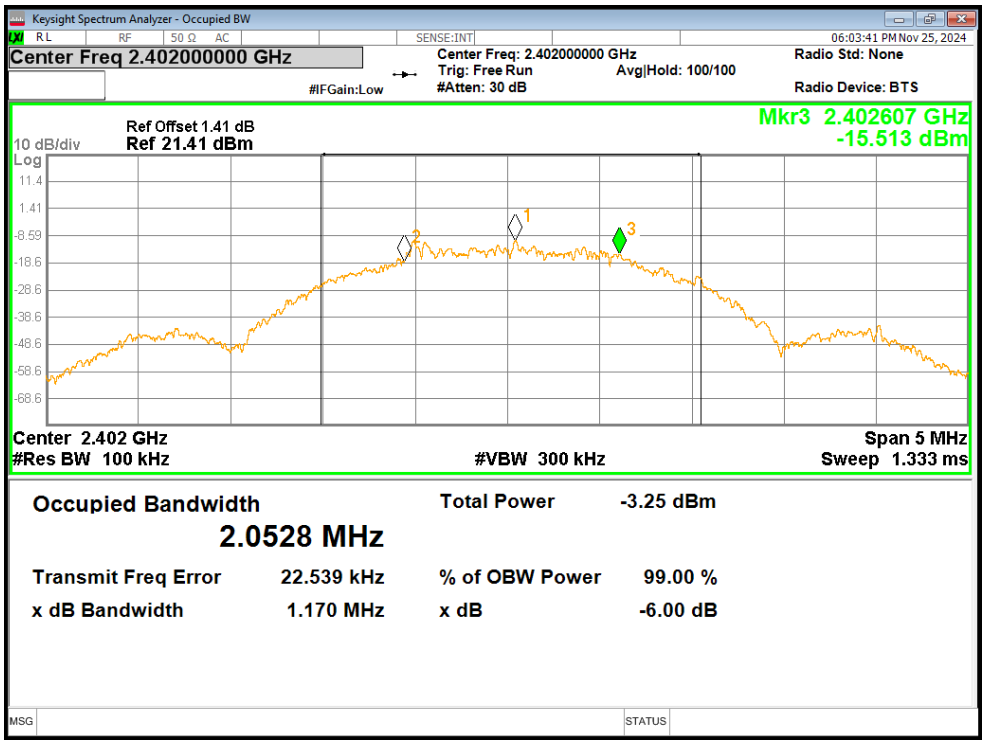
-6dB Bandwidth NVNT BLE 1M 2440MHz Ant1



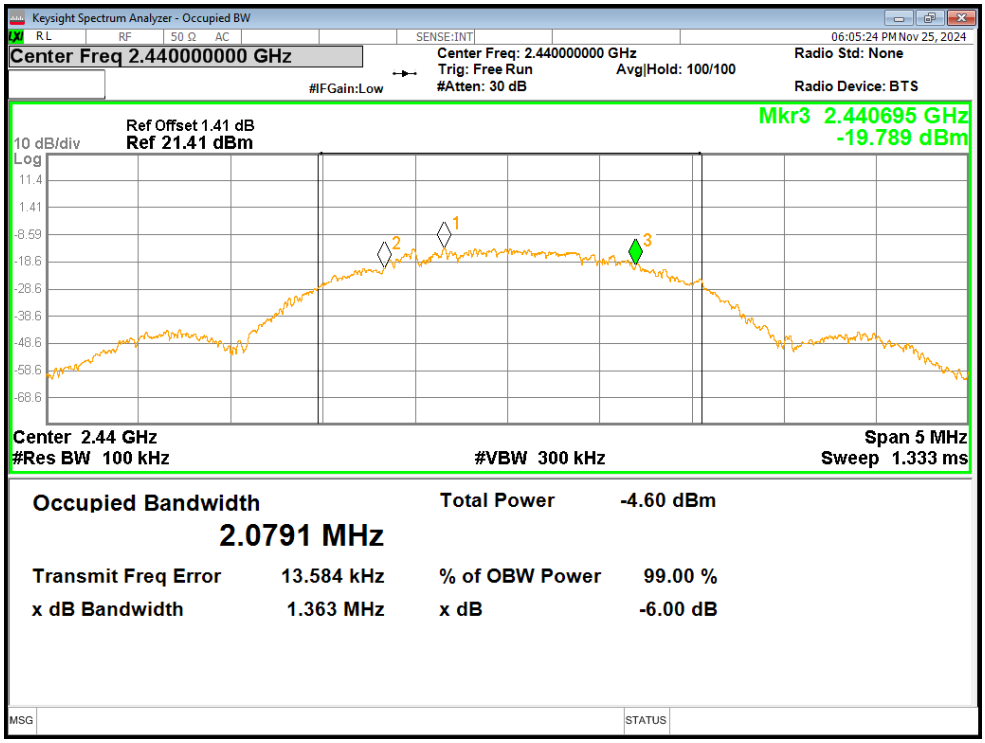
-6dB Bandwidth NVNT BLE 1M 2480MHz Ant1



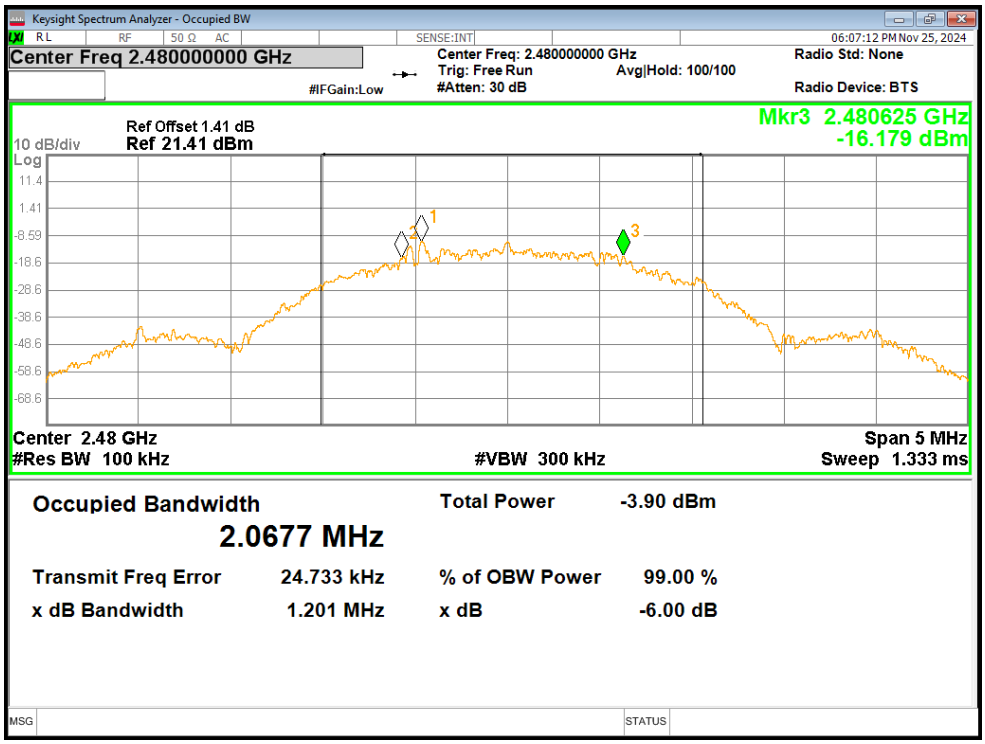
-6dB Bandwidth NVNT BLE 2M 2402MHz Ant1



-6dB Bandwidth NVNT BLE 2M 2440MHz Ant1



-6dB Bandwidth NVNT BLE 2M 2480MHz Ant1

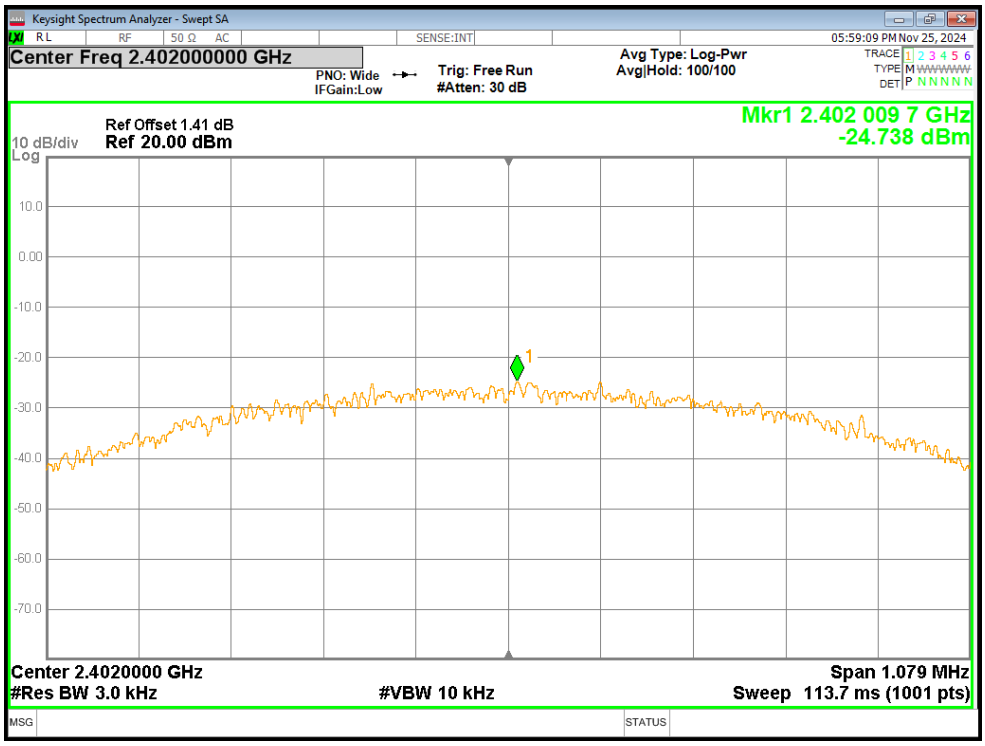


4.Maximum Power Spectral Density Level

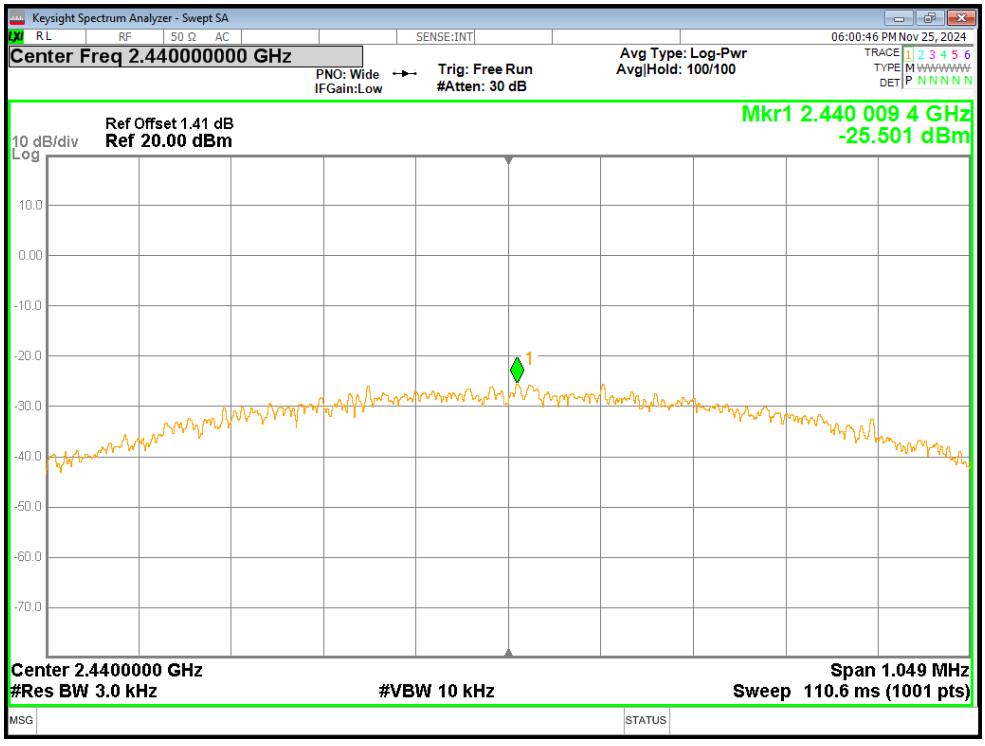
Mode	Frequency (MHz)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
BLE 1M	2402	-24.74	8	Pass
BLE 1M	2440	-25.5	8	Pass
BLE 1M	2480	-25.11	8	Pass
BLE 2M	2402	-28.62	8	Pass
BLE 2M	2440	-29.3	8	Pass
BLE 2M	2480	-28.88	8	Pass

Test Graphs

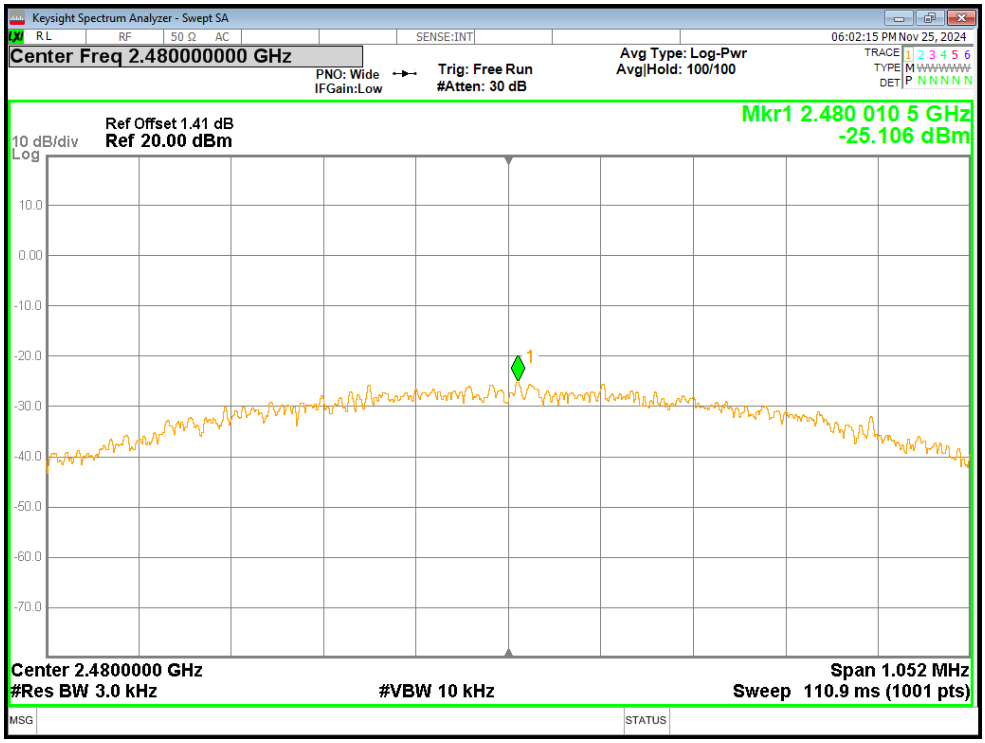
PSD NVNT BLE 1M 2402MHz Ant1



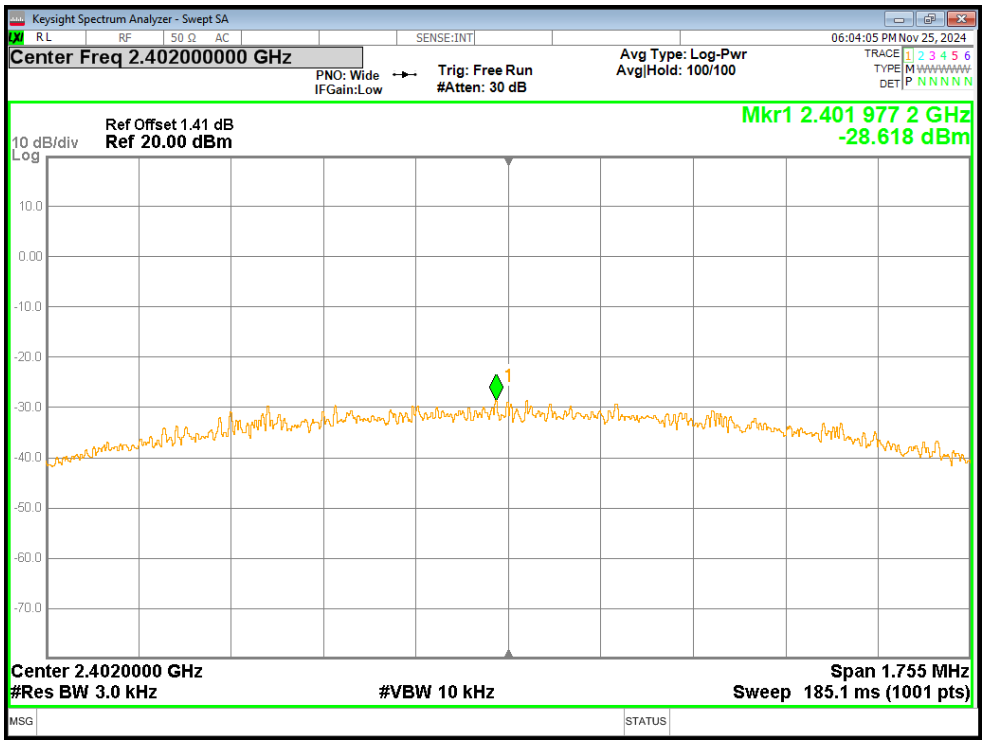
PSD NVNT BLE 1M 2440MHz Ant1



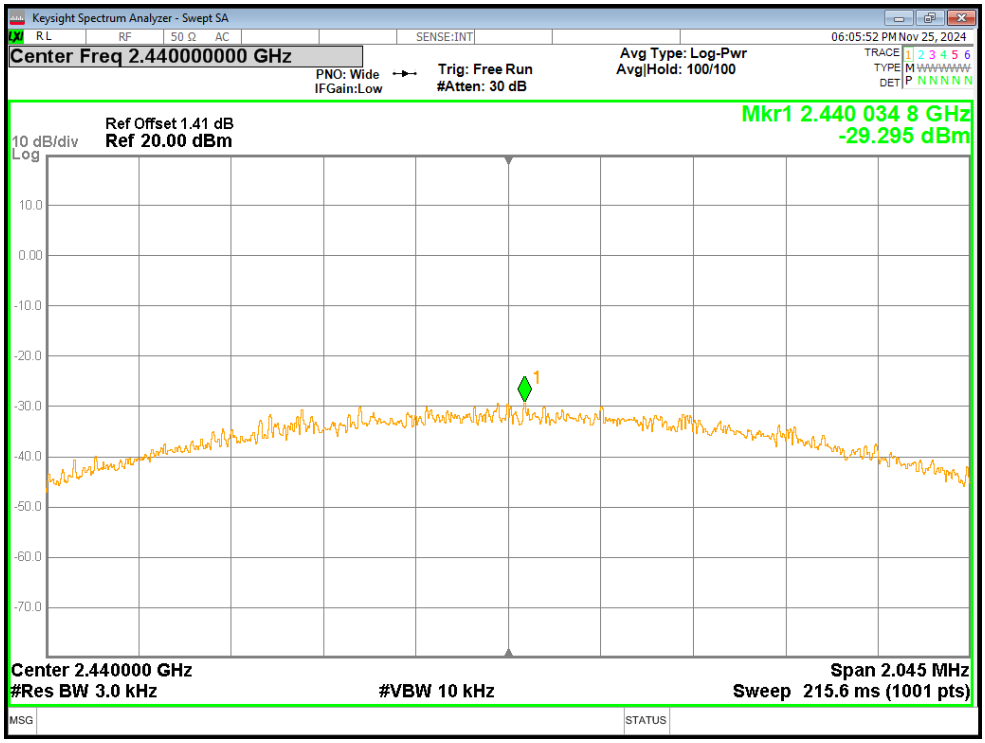
PSD NVNT BLE 1M 2480MHz Ant1



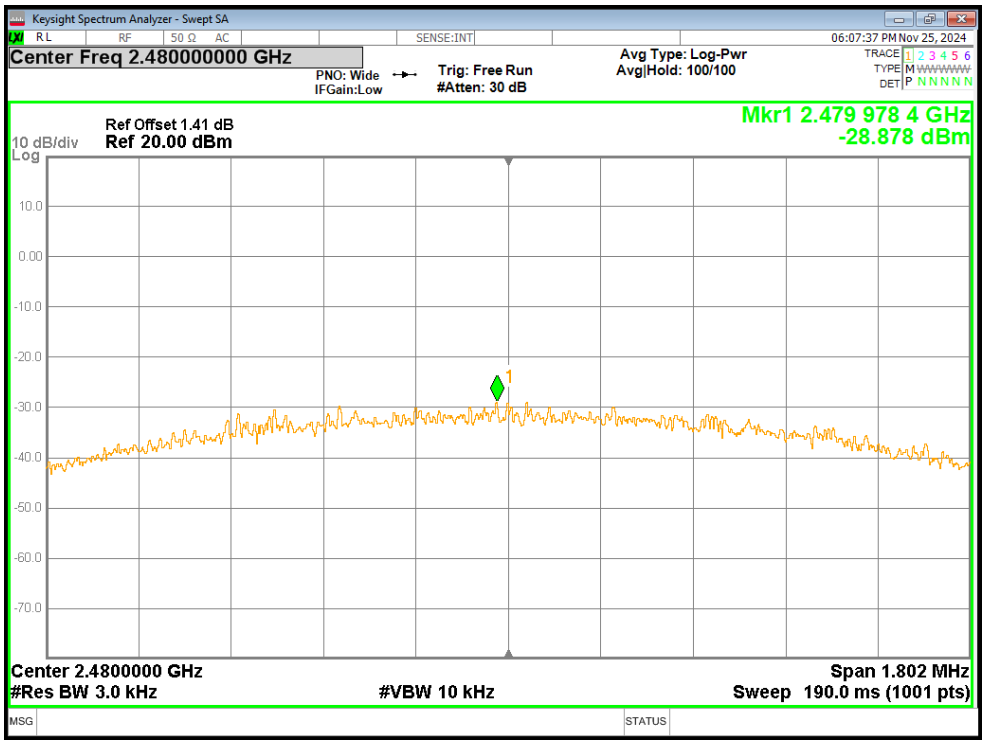
PSD NVNT BLE 2M 2402MHz Ant1



PSD NVNT BLE 2M 2440MHz Ant1



PSD NVNT BLE 2M 2480MHz Ant1

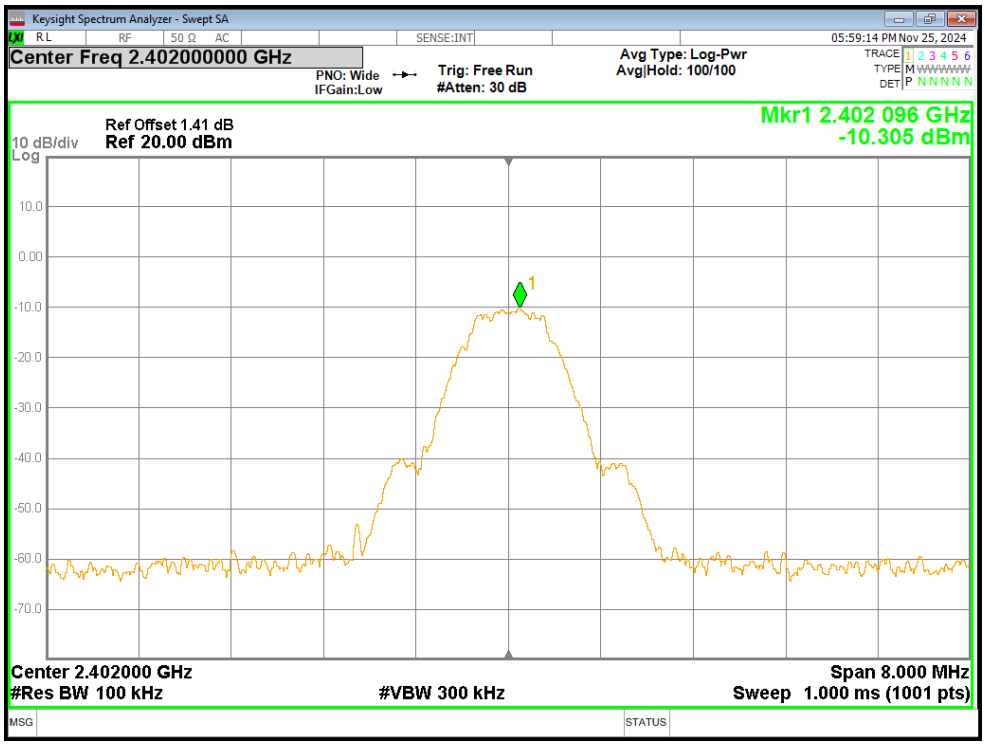


5.Band Edge

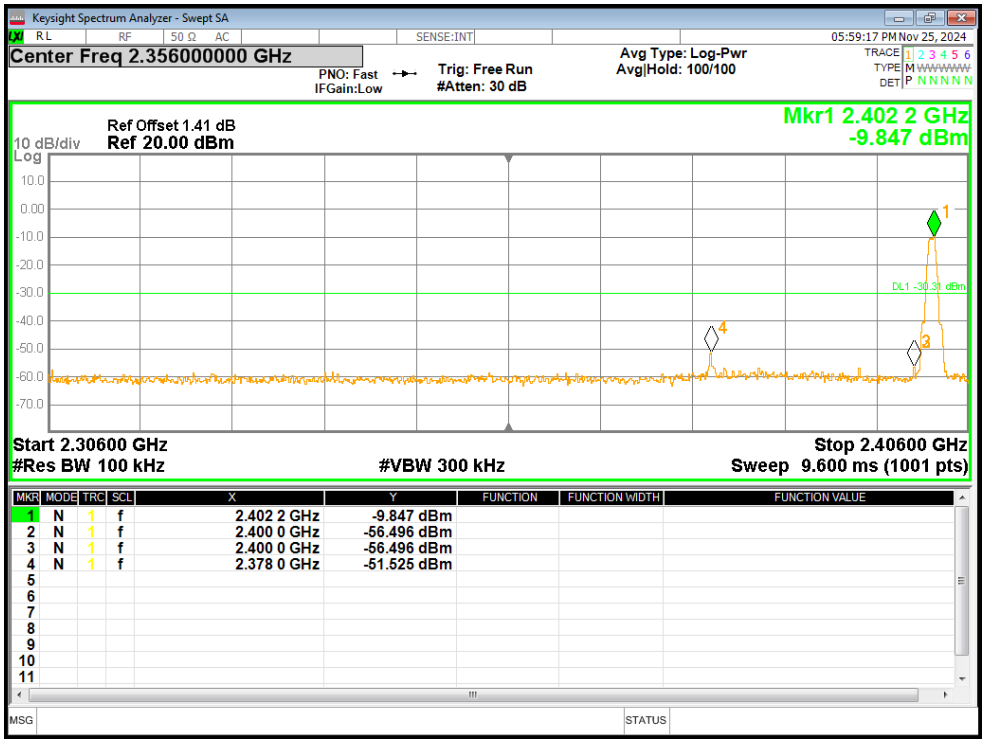
Mode	Frequency (MHz)	Max Value (dBc)	Limit (dBc)	Verdict
BLE 1M	2402	-41.22	-20	Pass
BLE 1M	2480	-46.18	-20	Pass
BLE 2M	2402	-33.62	-20	Pass
BLE 2M	2480	-45.18	-20	Pass

Test Graphs

Band Edge NVNT BLE 1M 2402MHz Ant1 Ref

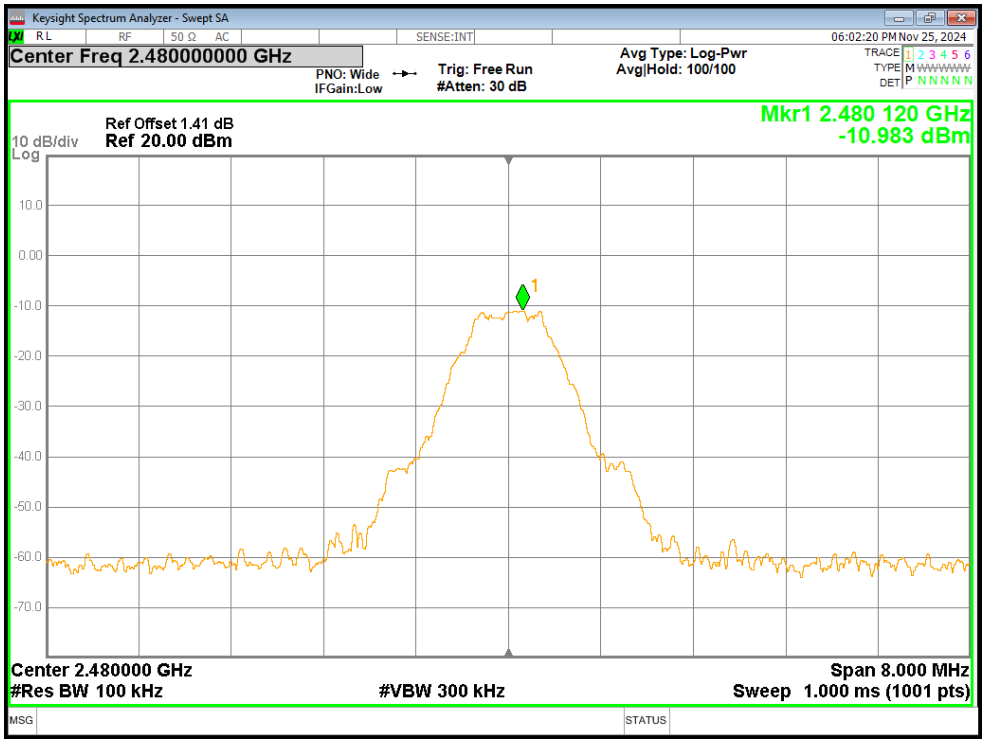


Band Edge NVNT BLE 1M 2402MHz Ant1 Emission

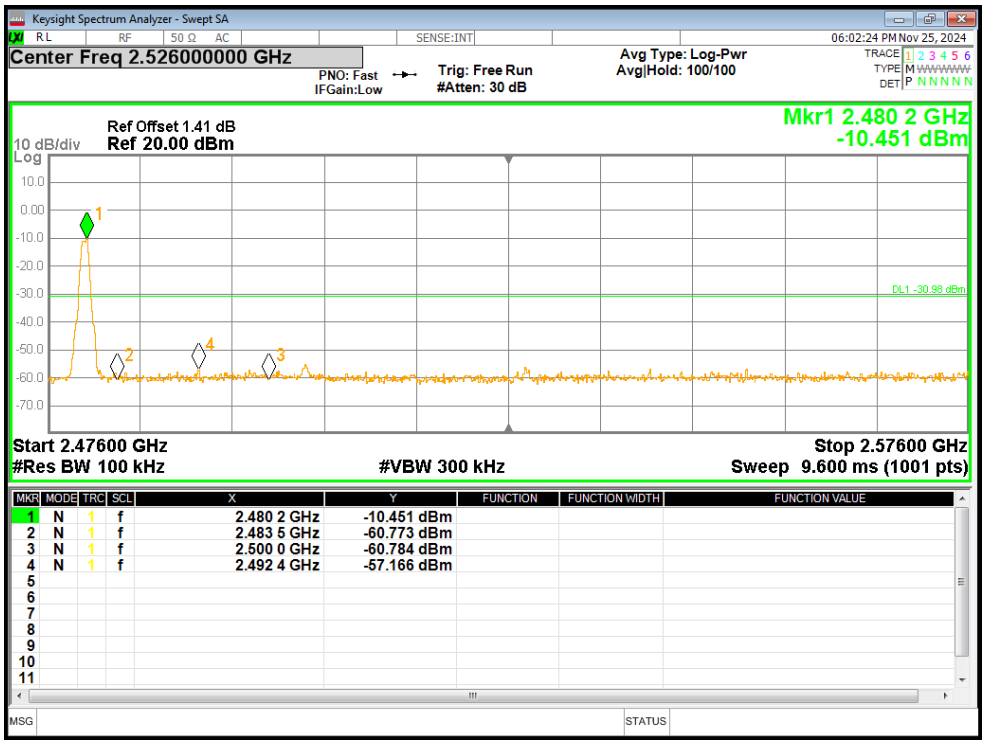


MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.402 2 GHz	-9.847 dBm			
2	N	1	f	2.400 0 GHz	-56.496 dBm			
3	N	1	f	2.400 0 GHz	-56.496 dBm			
4	N	1	f	2.378 0 GHz	-51.525 dBm			
5								
6								
7								
8								
9								
10								
11								

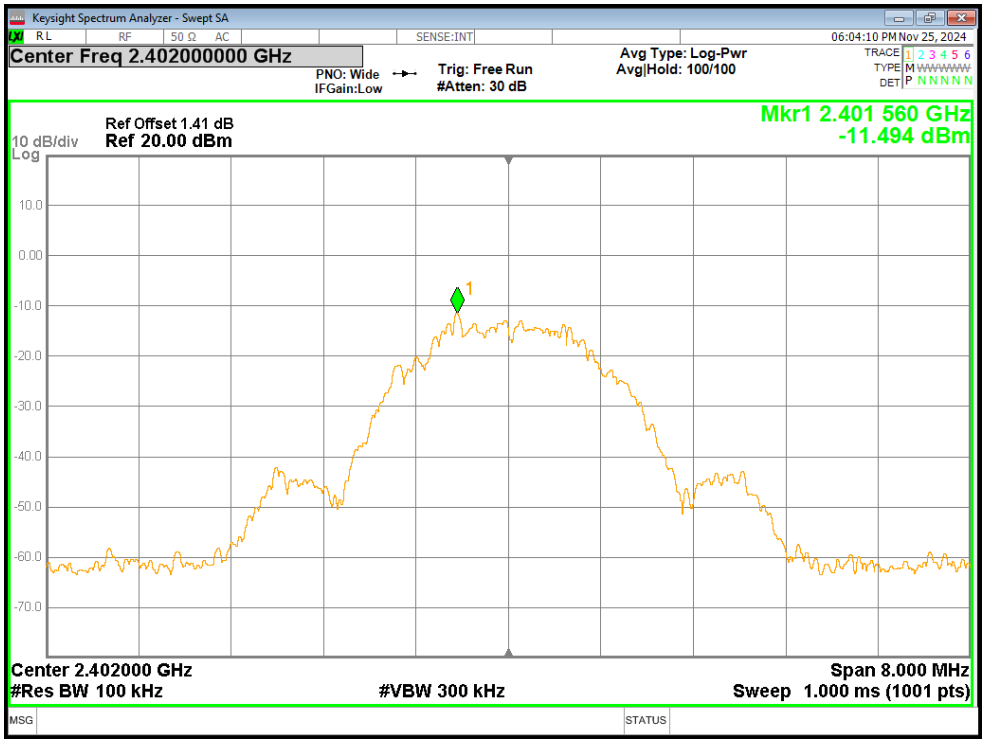
Band Edge NVNT BLE 1M 2480MHz Ant1 Ref



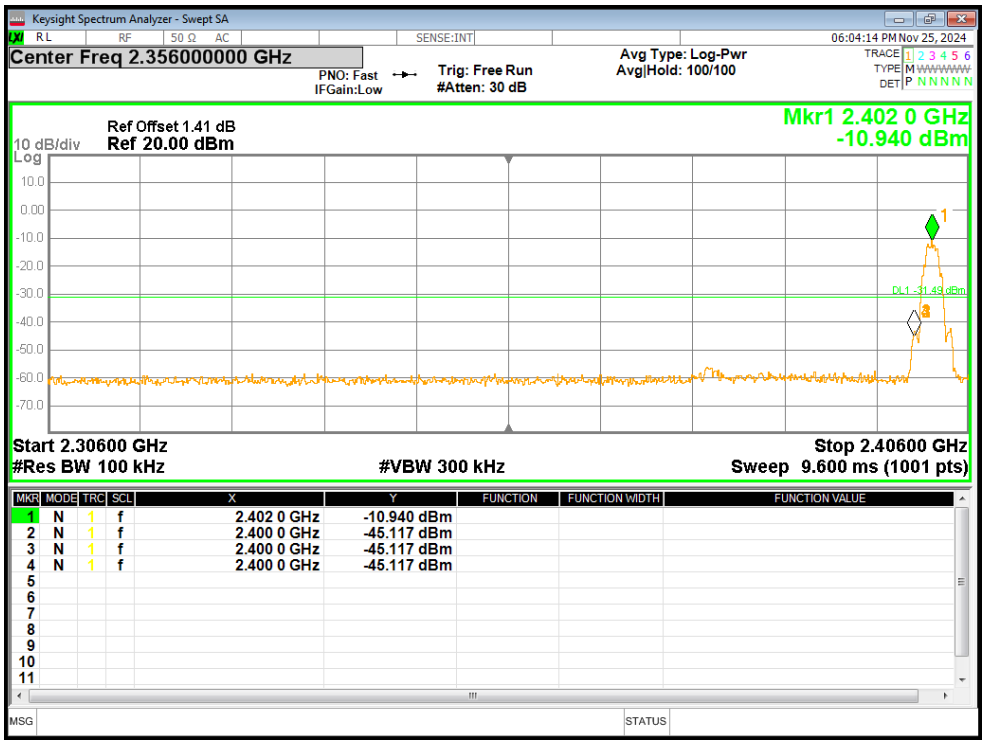
Band Edge NVNT BLE 1M 2480MHz Ant1 Emission



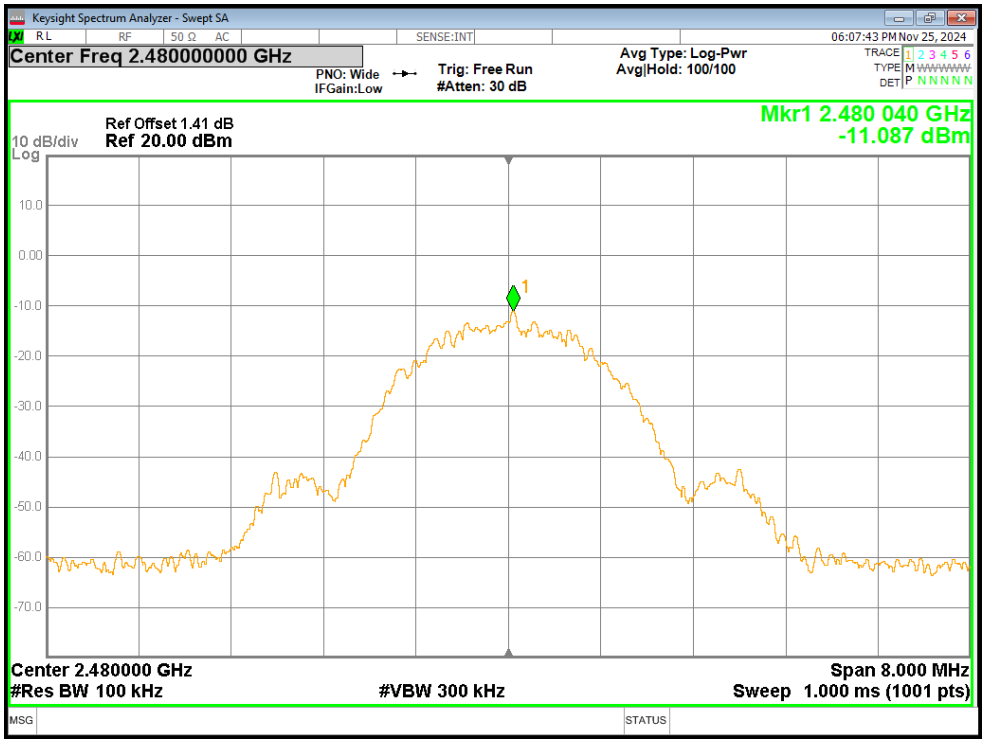
Band Edge NVNT BLE 2M 2402MHz Ant1 Ref



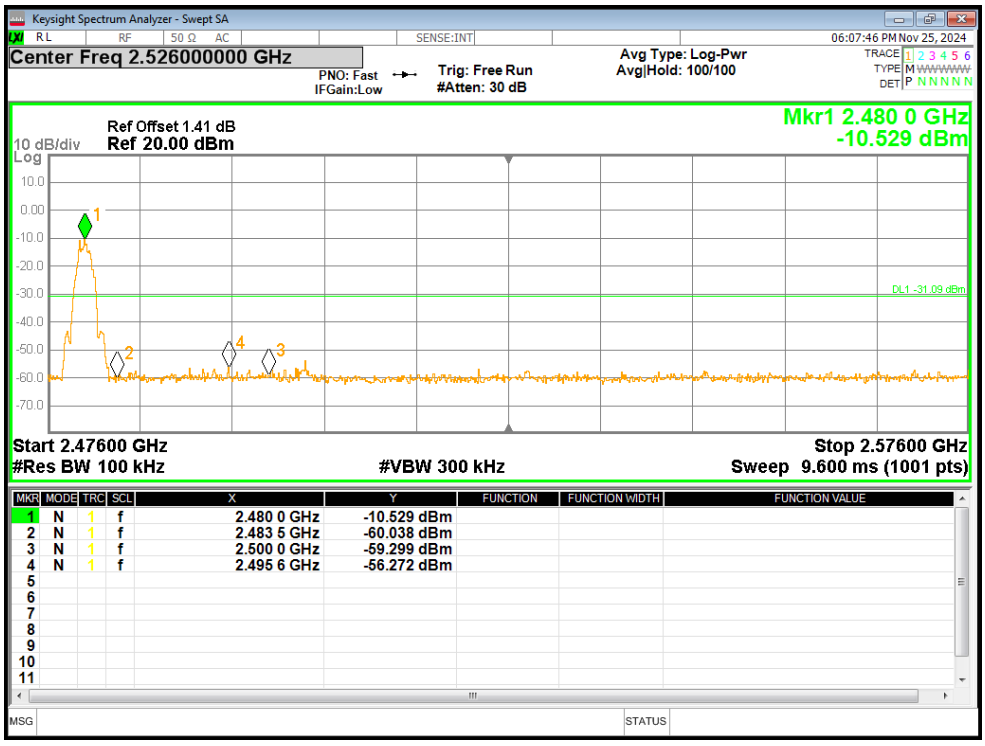
Band Edge NVNT BLE 2M 2402MHz Ant1 Emission



Band Edge NVNT BLE 2M 2480MHz Ant1 Ref



Band Edge NVNT BLE 2M 2480MHz Ant1 Emission

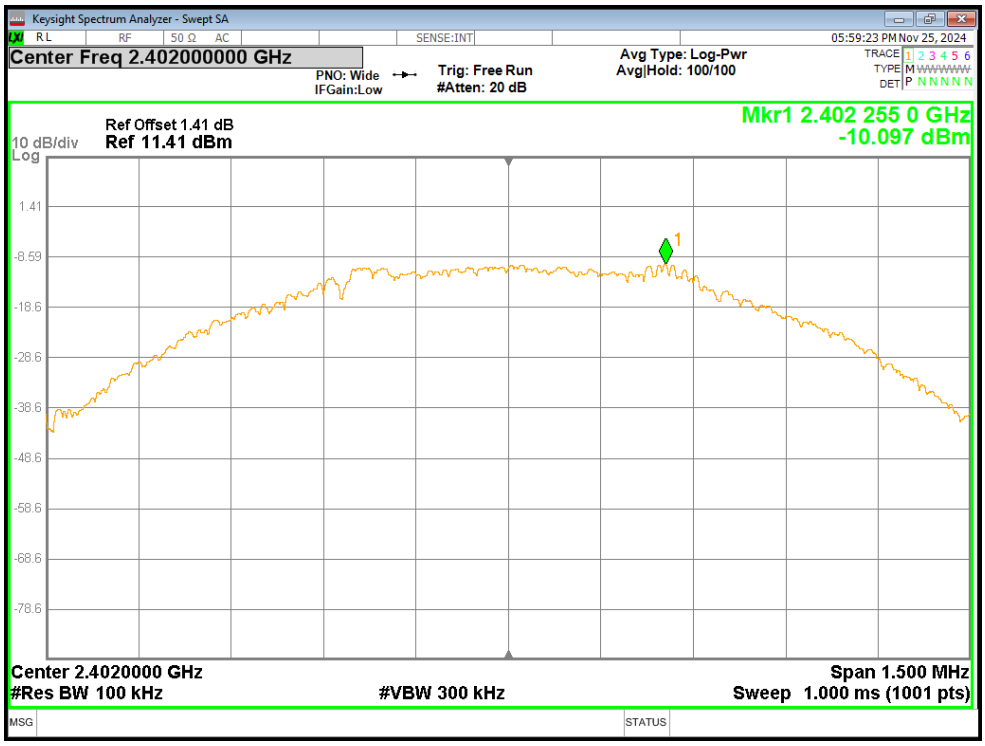


6.Conducted RF Spurious Emission

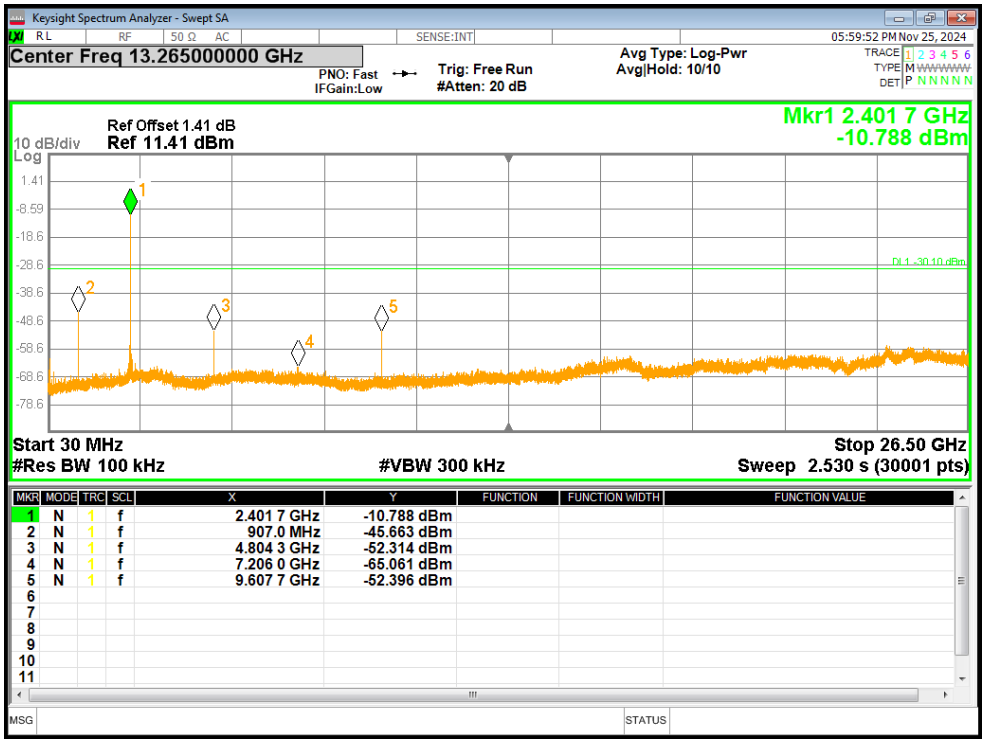
Mode	Frequency (MHz)	Max Value (dBc)	Limit (dBc)	Verdict
BLE 1M	2402	-35.56	-20	Pass
BLE 1M	2440	-35.5	-20	Pass
BLE 1M	2480	-29.64	-20	Pass
BLE 2M	2402	-34.52	-20	Pass
BLE 2M	2440	-34.72	-20	Pass
BLE 2M	2480	-36.33	-20	Pass

Test Graphs

Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Ref

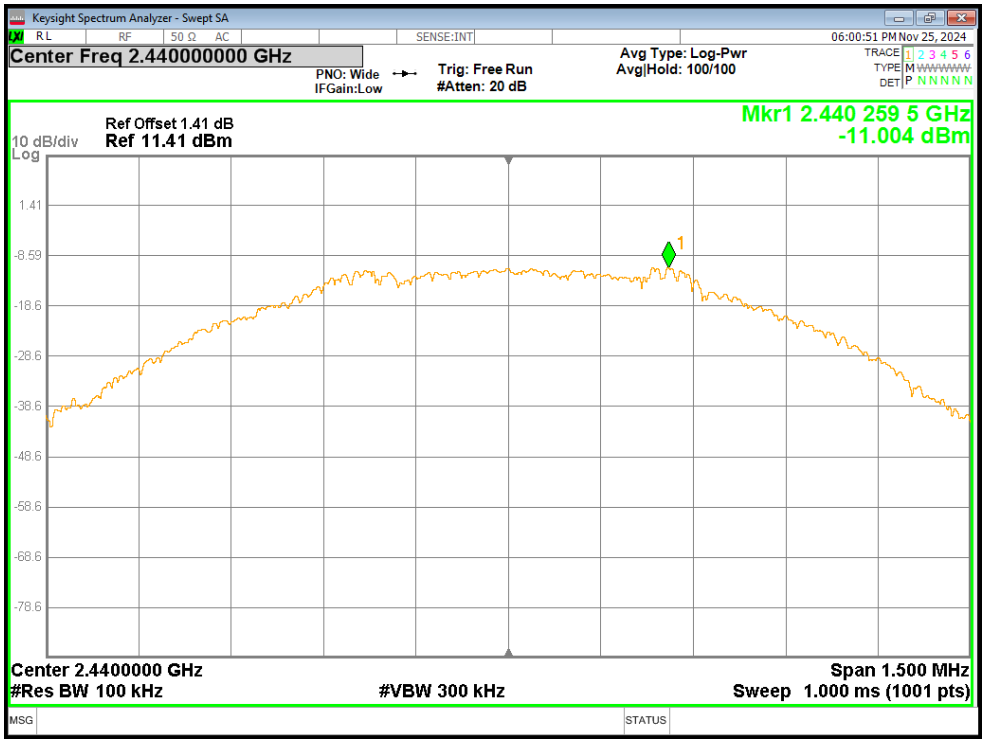


Tx. Spurious NVNT BLE 1M 2402MHz Ant1 Emission

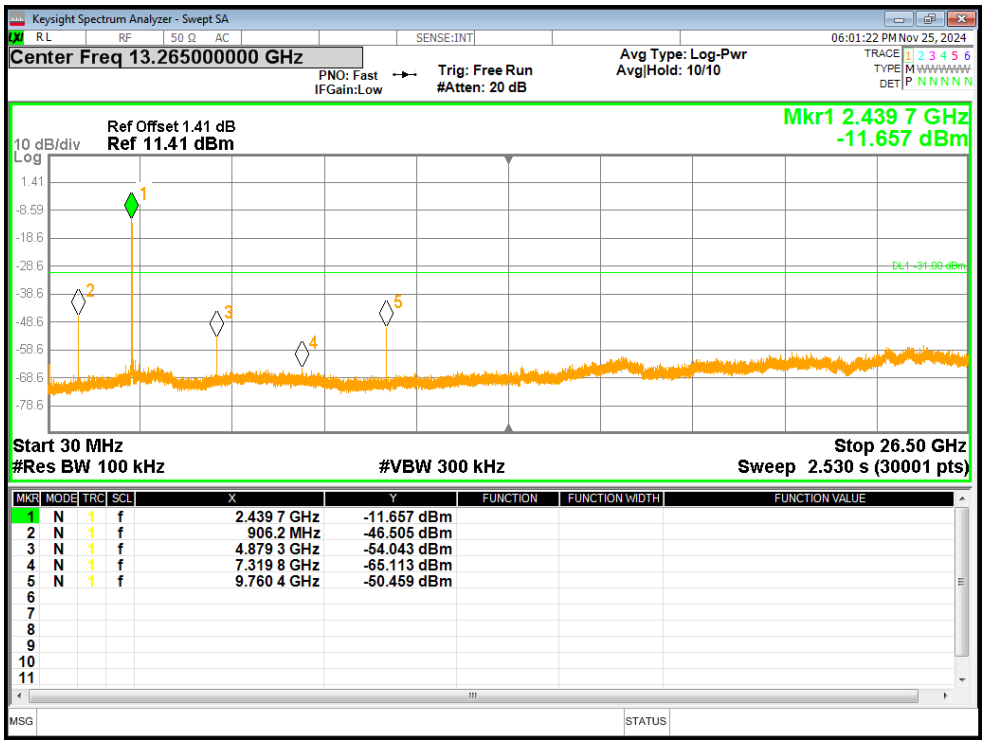


MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.401 7 GHz	-10.788 dBm			
2	N	1	f	907.0 MHz	-45.663 dBm			
3	N	1	f	4.804 3 GHz	-52.314 dBm			
4	N	1	f	7.206 0 GHz	-65.061 dBm			
5	N	1	f	9.607 7 GHz	-52.396 dBm			
6								
7								
8								
9								
10								
11								

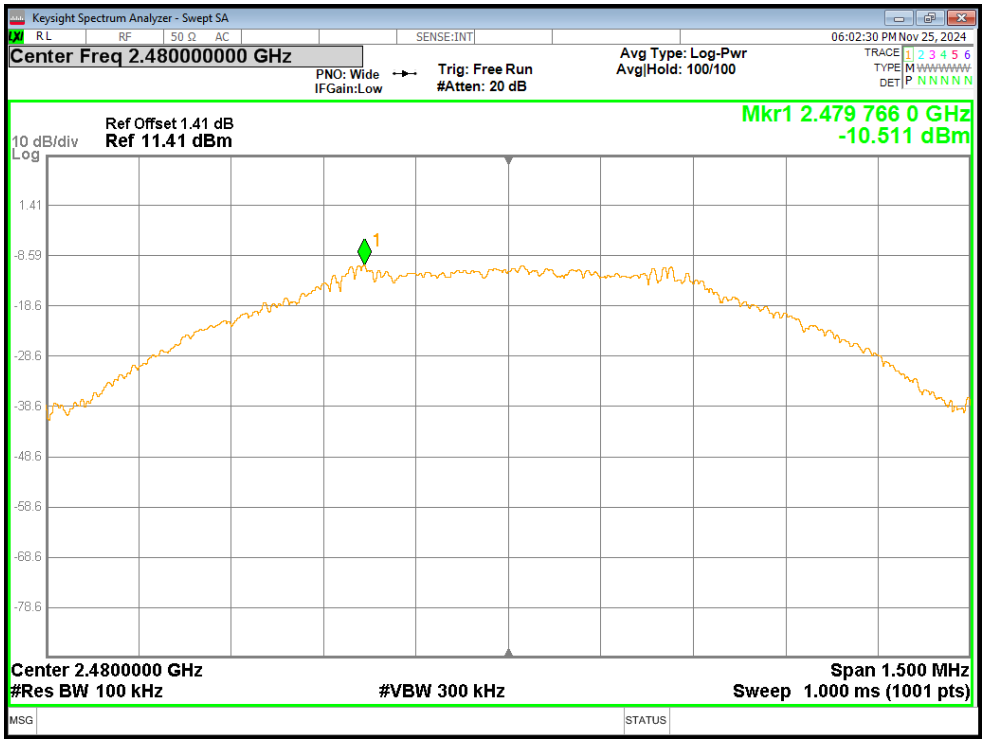
Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Ref



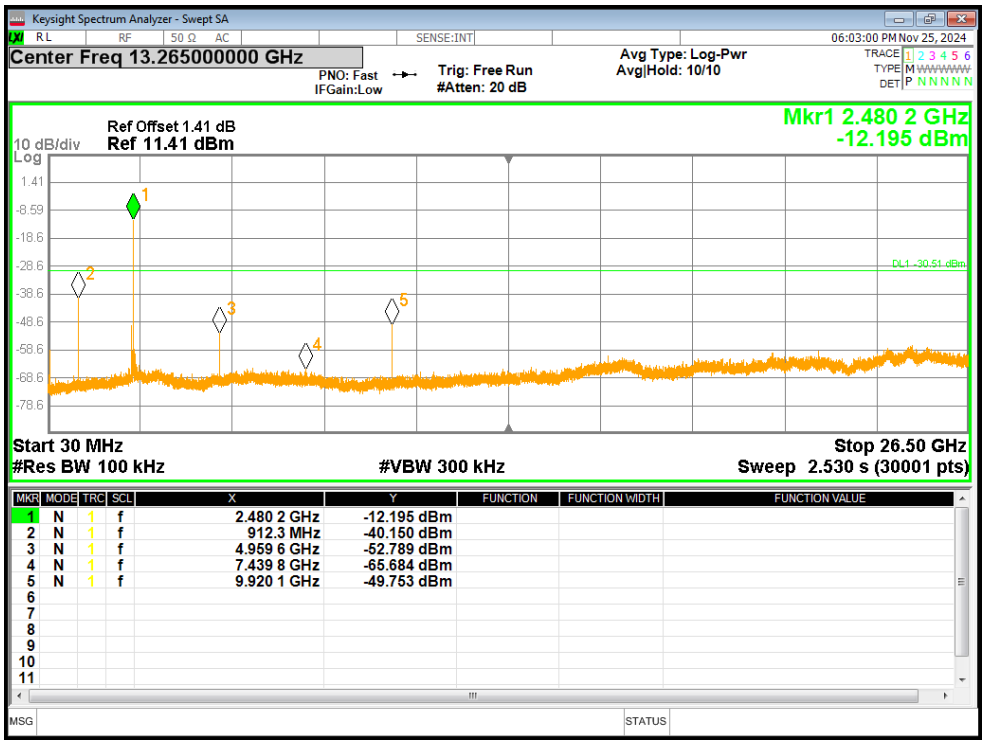
Tx. Spurious NVNT BLE 1M 2440MHz Ant1 Emission



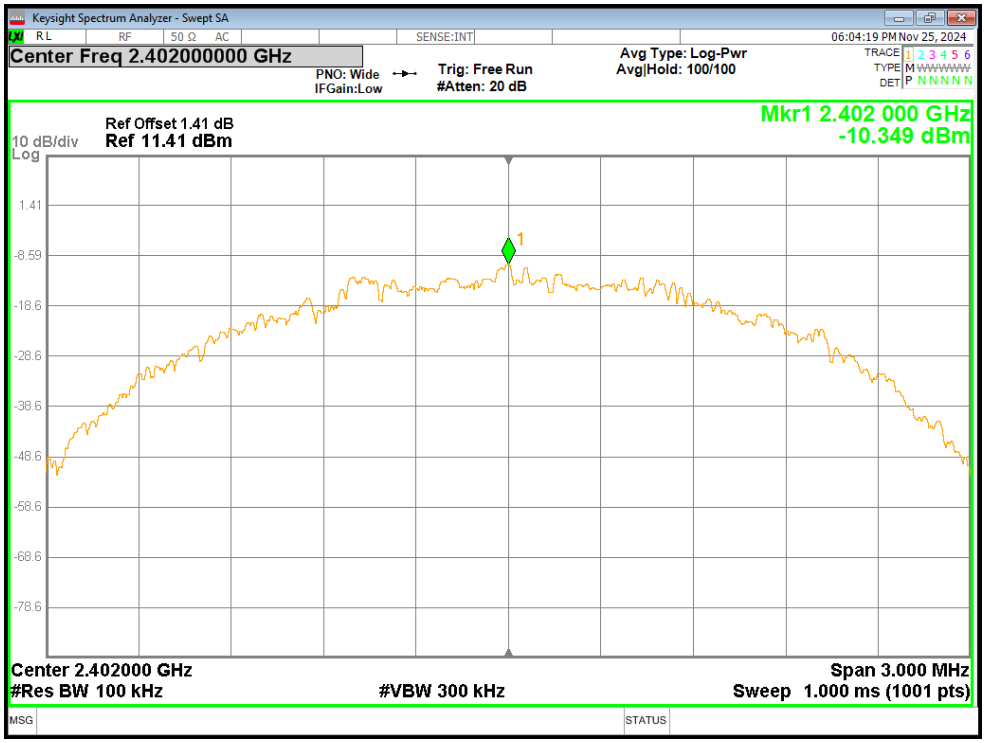
Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Ref



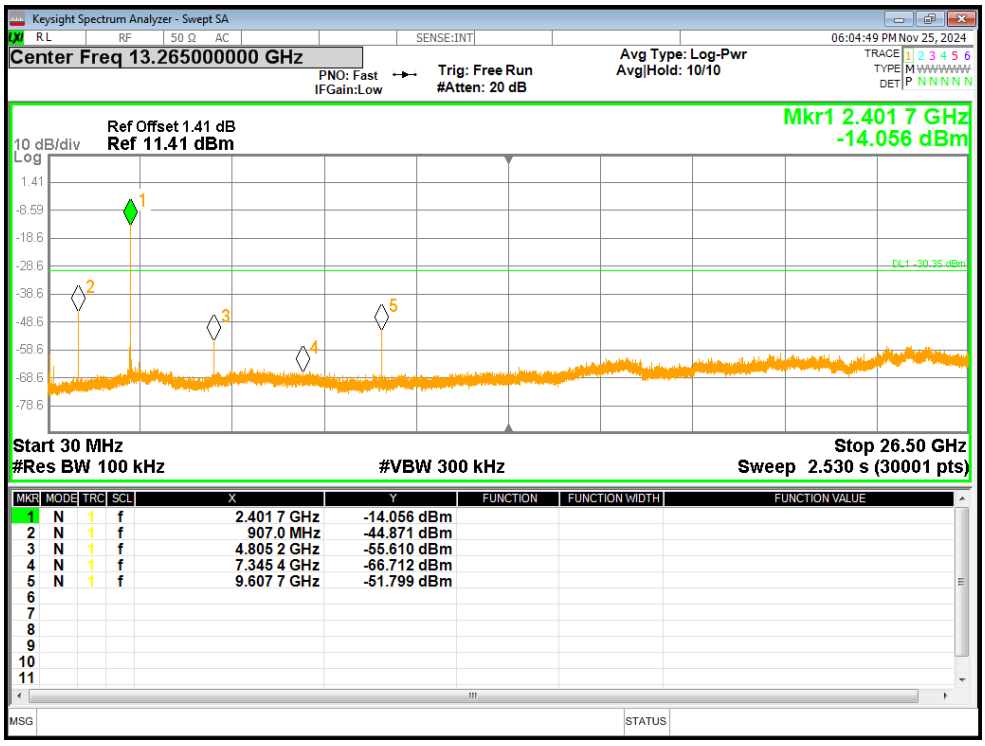
Tx. Spurious NVNT BLE 1M 2480MHz Ant1 Emission



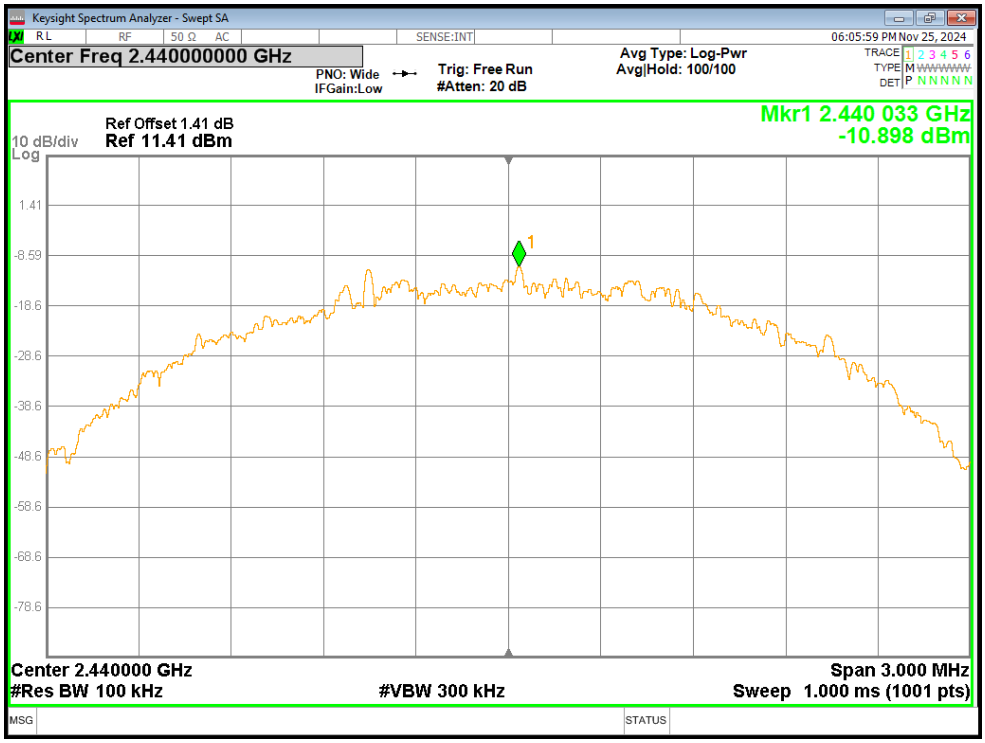
Tx. Spurious NVNT BLE 2M 2402MHz Ant1 Ref



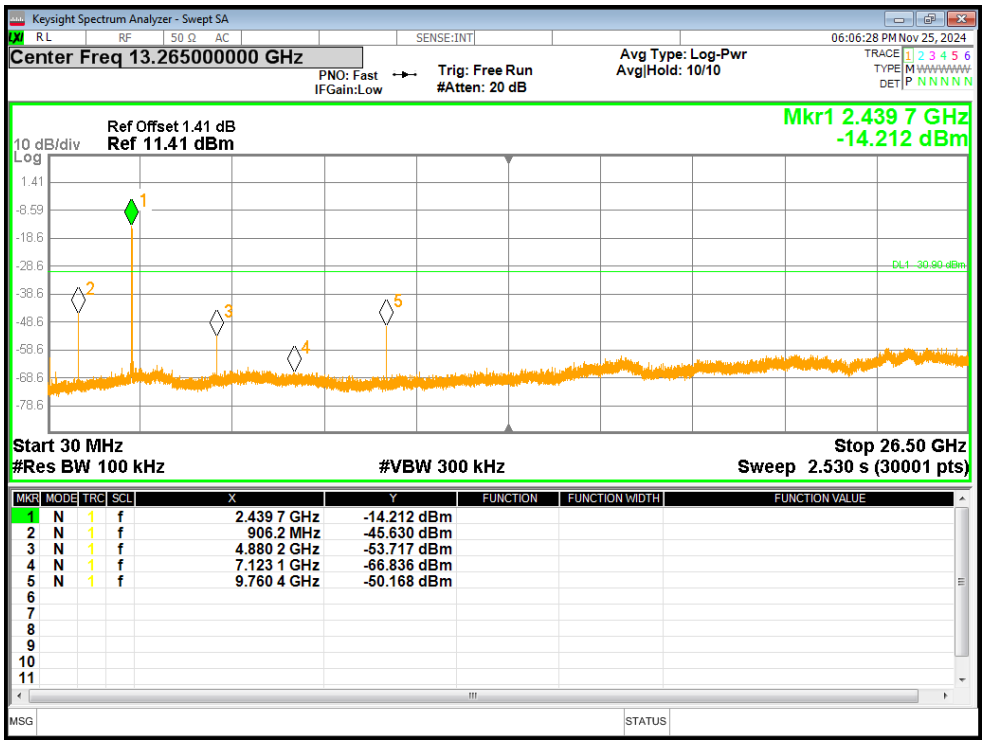
Tx. Spurious NVNT BLE 2M 2402MHz Ant1 Emission



Tx. Spurious NVNT BLE 2M 2440MHz Ant1 Ref

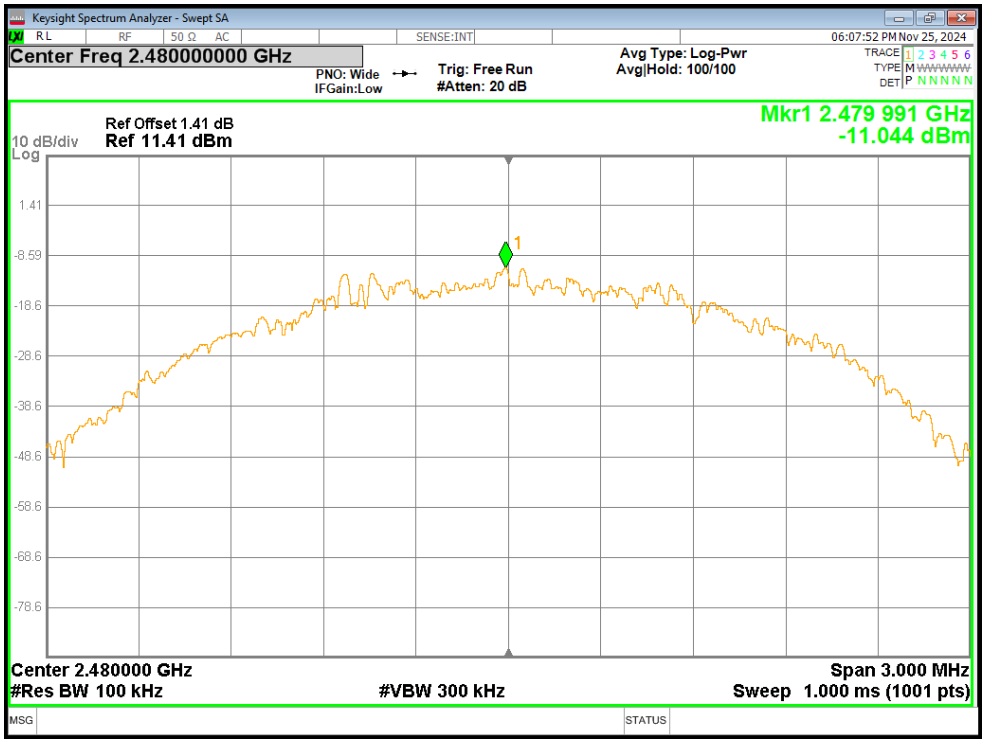


Tx. Spurious NVNT BLE 2M 2440MHz Ant1 Emission

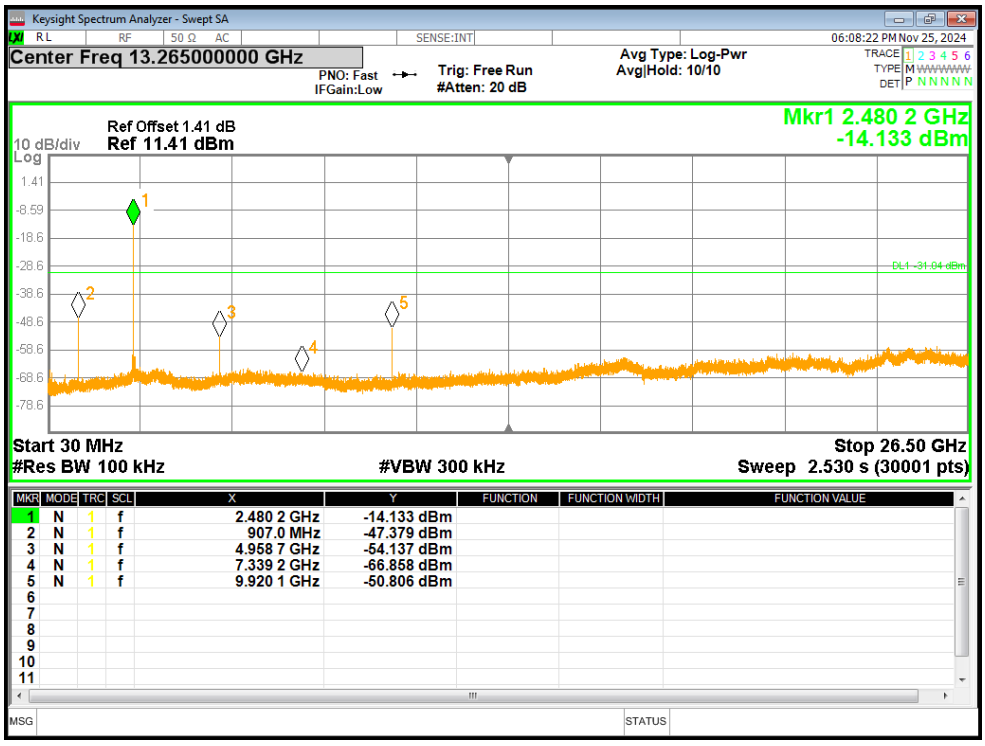


MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.439 7 GHz	-14.212 dBm			
2	N	1	f	906.2 MHz	-45.630 dBm			
3	N	1	f	4.880 2 GHz	-53.717 dBm			
4	N	1	f	7.123 1 GHz	-66.836 dBm			
5	N	1	f	9.760 4 GHz	-50.168 dBm			
6								
7								
8								
9								
10								
11								

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	-14.133 dBm			
2	N	1	f	907.0 MHz	-47.379 dBm			
3	N	1	f	4.958 7 GHz	-54.137 dBm			
4	N	1	f	7.339 2 GHz	-66.858 dBm			
5	N	1	f	9.920 1 GHz	-50.806 dBm			
6								
7								
8								
9								
10								
11								