

RF Test Data for Bluetooth LE (Conducted Measurements)

General Description of EUT	
Product Name:	Smart Battery Camera
Test Model:	CG6
Sample ID:	HC-C-202505-0155-01-01
Environmental Conditions	
Temperature:	24.6℃
Relative Humidity:	52.6%
Test Voltage:	DC 3.7V
Test Engineer:	Lily zhang
Note: For a more detailed features description, please refer to the report TBR-C-202505-0155-15 The report only show the worst case data.	

Contents

1. Duty Cycle.....	3
2. Maximum Conducted Output Power.....	7
3. -6dB Bandwidth.....	11
4. Occupied Channel Bandwidth.....	15
5. Maximum Power Spectral Density Level.....	19
6. Band Edge.....	23
7. Conducted RF Spurious Emission.....	28
8. Restrict Band.....	35

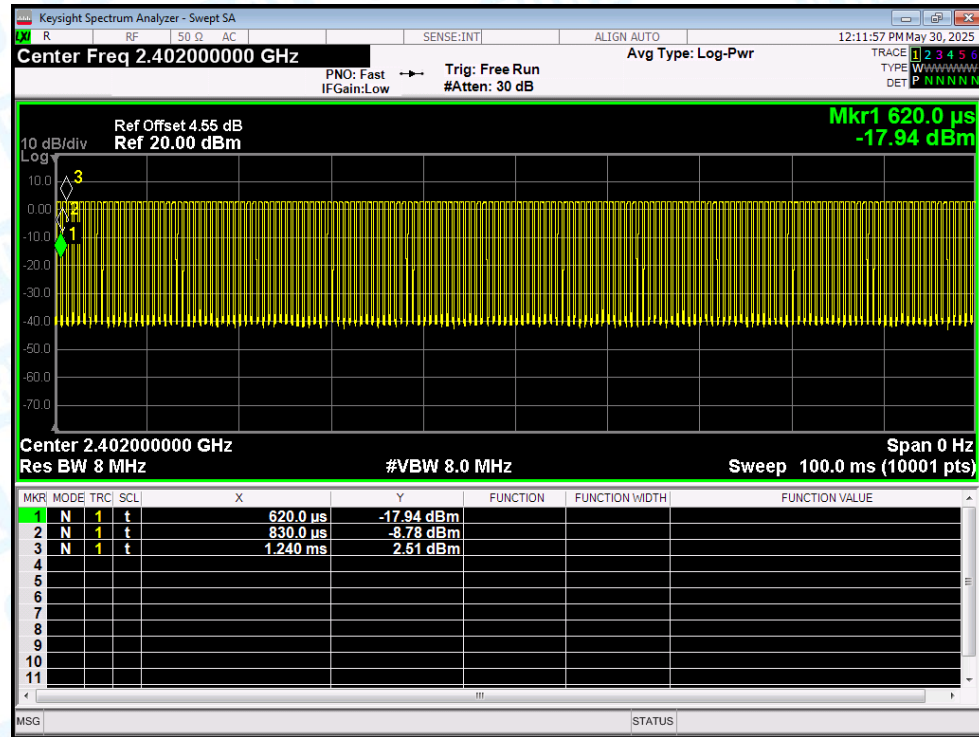
1.Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	BLE 1Mbps	2402	Ant1	66.13	1.8	2.44
NVNT	BLE 1Mbps	2440	Ant1	66.67	1.76	2.38
NVNT	BLE 1Mbps	2480	Ant1	66.13	1.8	2.44
NVNT	BLE 2Mbps	2402	Ant1	37.1	4.31	4.35
NVNT	BLE 2Mbps	2440	Ant1	36.51	4.38	4.35
NVNT	BLE 2Mbps	2480	Ant1	36.51	4.38	4.35

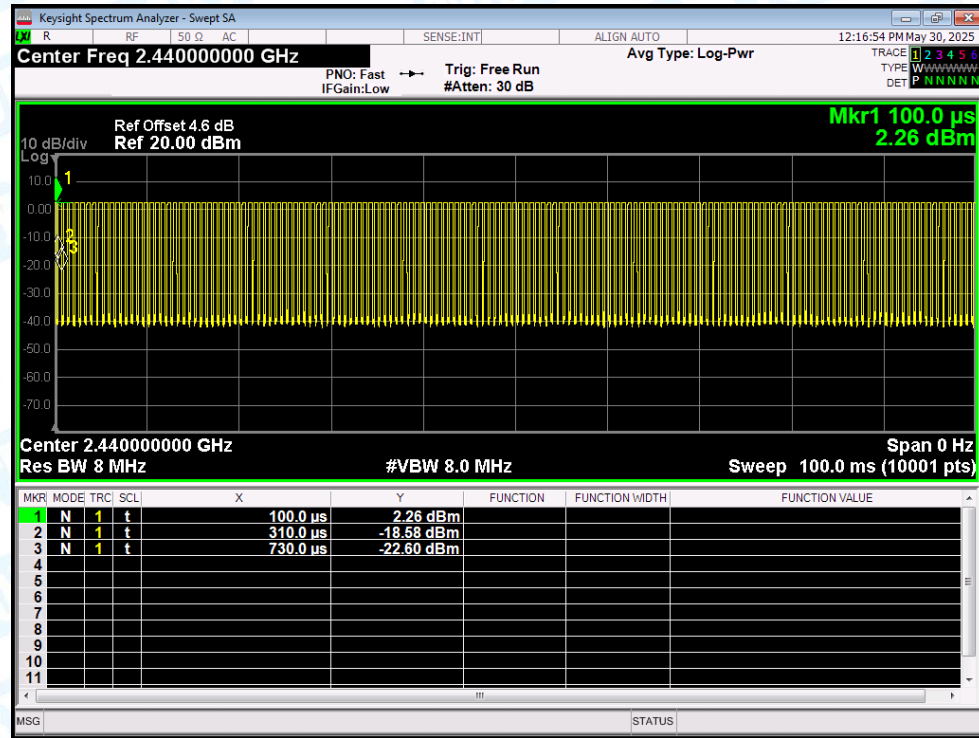
Note: RF Conducted test Offset= cable loss+ Attenuator factor.

Test Graphs

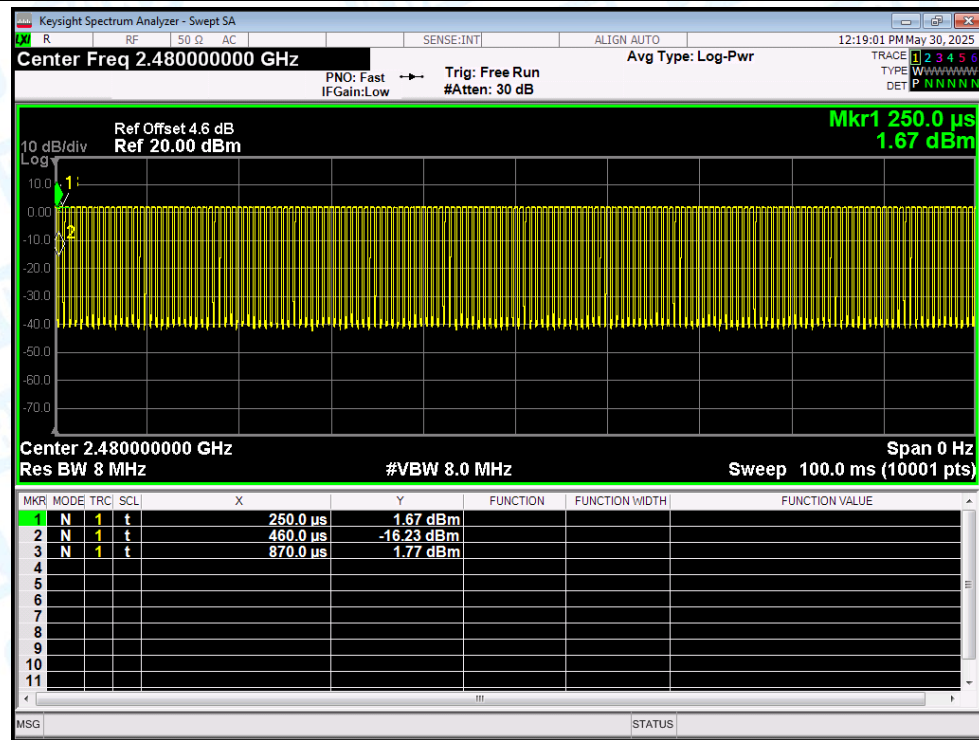
Duty Cycle NVNT BLE 1Mbps 2402MHz Ant1



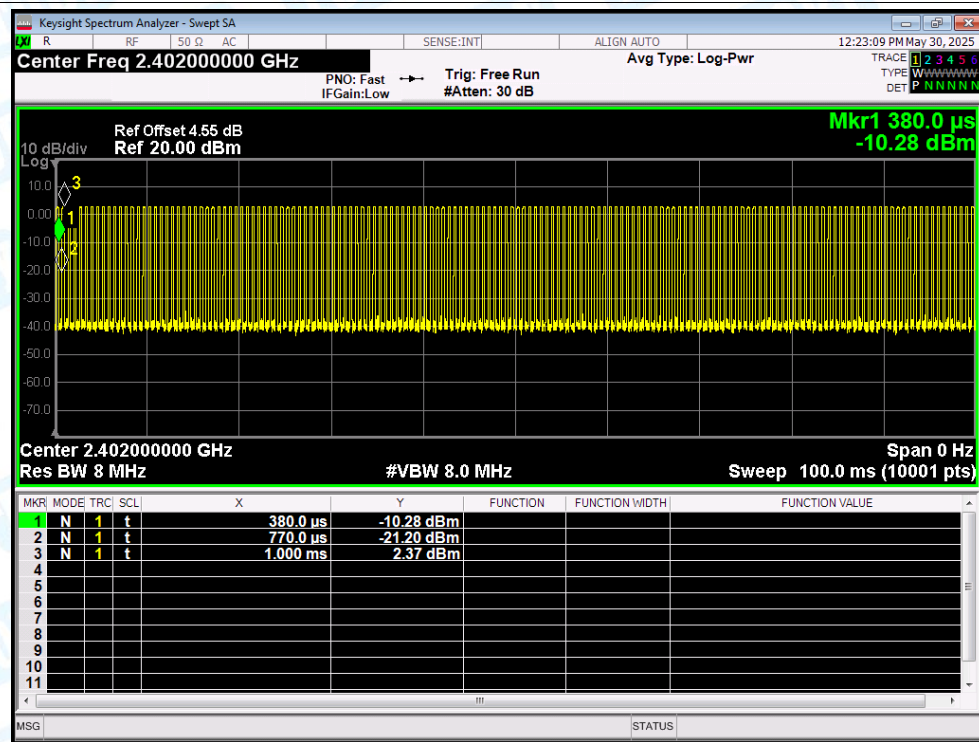
Duty Cycle NVNT BLE 1Mbps 2440MHz Ant1



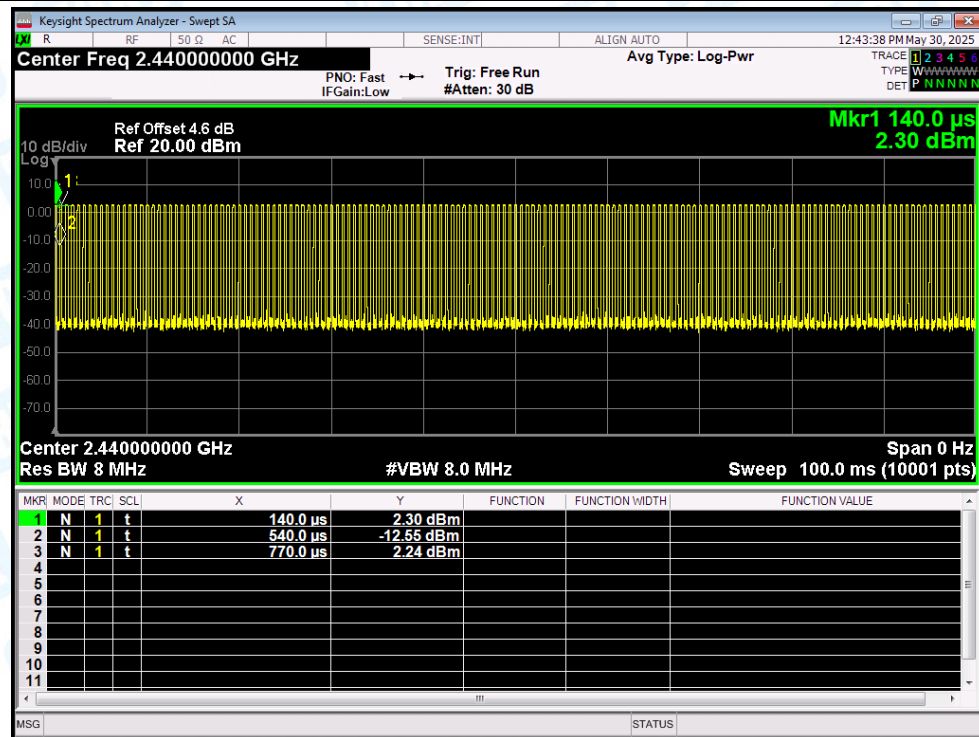
Duty Cycle NVNT BLE 1Mbps 2480MHz Ant1



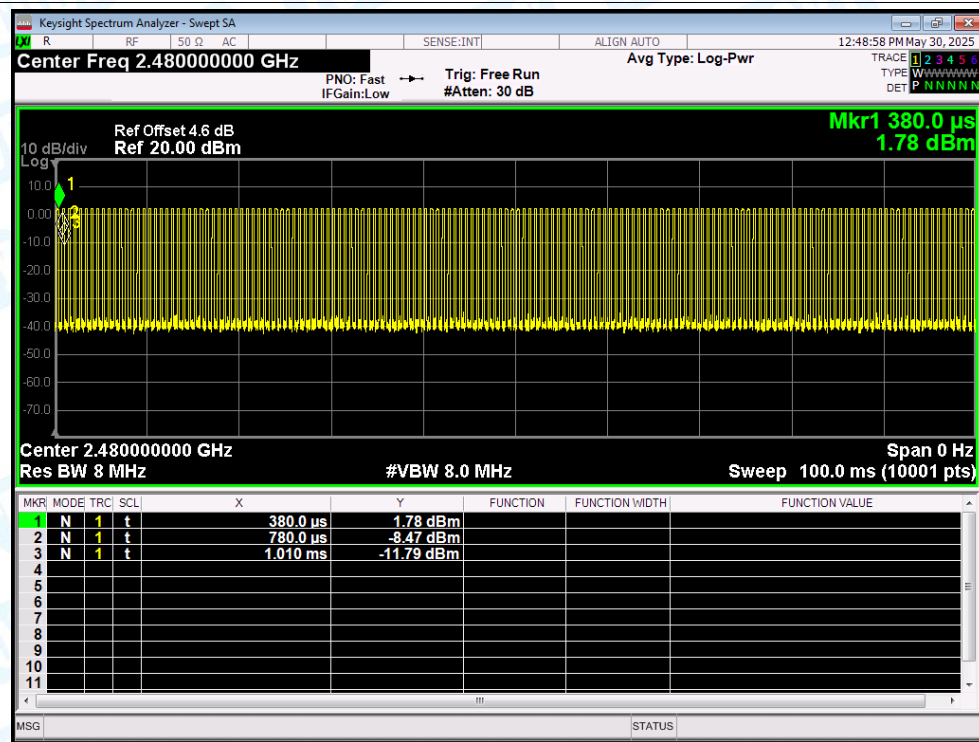
Duty Cycle NVNT BLE 2Mbps 2402MHz Ant1



Duty Cycle NVNT BLE 2Mbps 2440MHz Ant1



Duty Cycle NVNT BLE 2Mbps 2480MHz Ant1



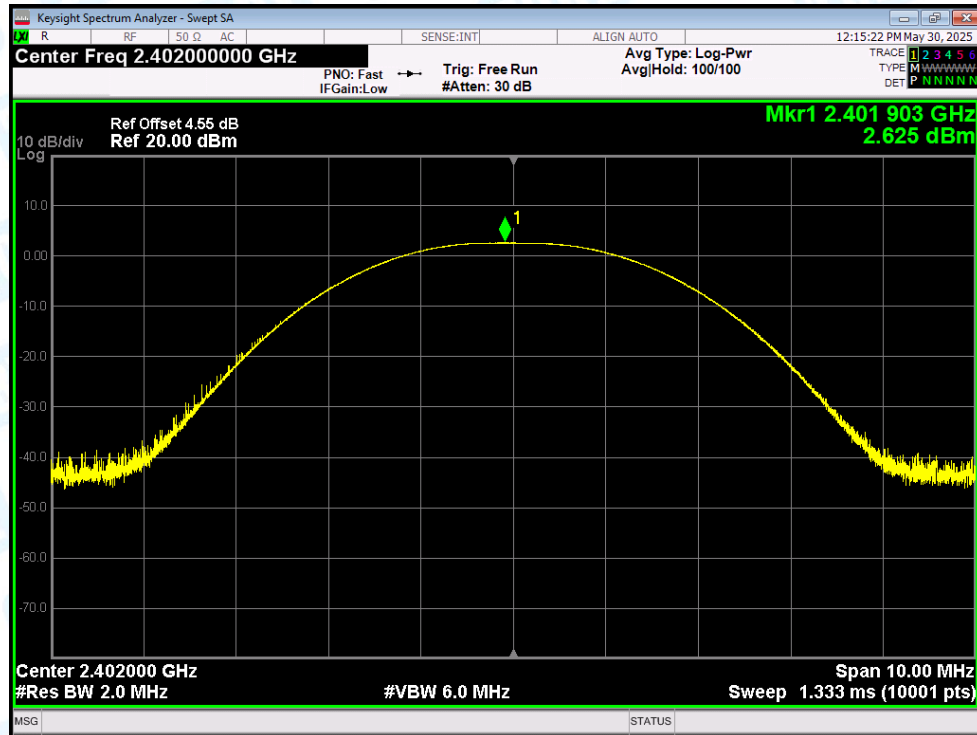
2. Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Total Power (dBm)	Gain(dBi)	Limit (dBm)	EIRP(dBm)	EIRP Limit (dBm)	Verdict
NVNT	BLE 1Mbps	2402	2.625	0.5	30	3.125	36	Pass
NVNT	BLE 1Mbps	2440	2.316	0.5	30	2.816	36	Pass
NVNT	BLE 1Mbps	2480	1.844	0.5	30	2.344	36	Pass
NVNT	BLE 2Mbps	2402	2.647	0.5	30	3.147	36	Pass
NVNT	BLE 2Mbps	2440	2.406	0.5	30	2.906	36	Pass
NVNT	BLE 2Mbps	2480	1.905	0.5	30	2.405	36	Pass

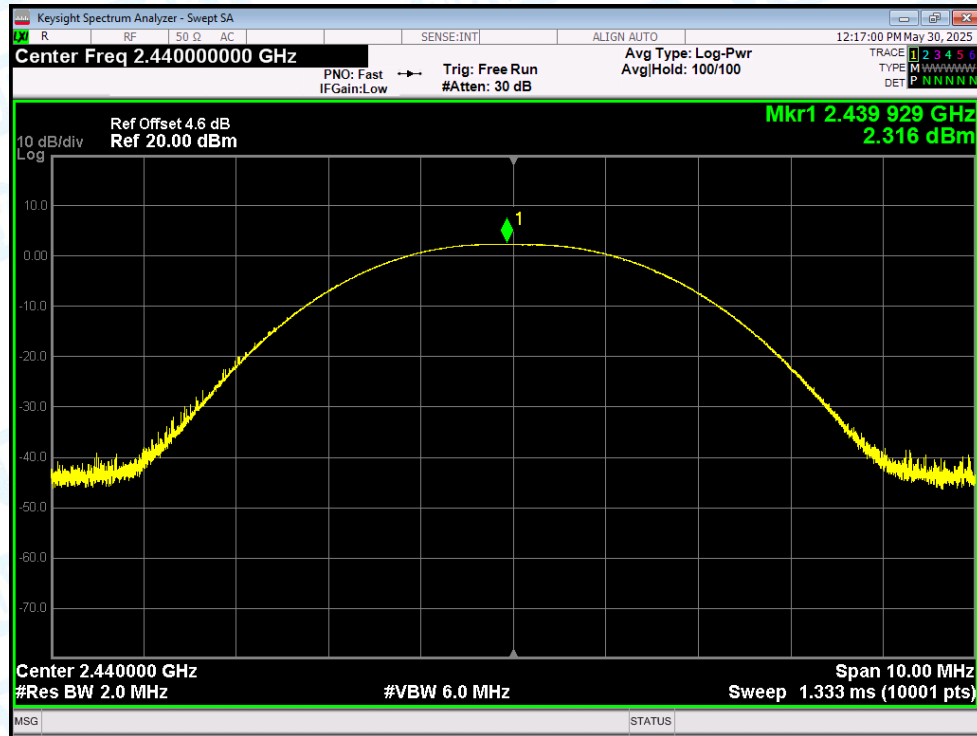
Note: RF Conducted test Offset= cable loss+ Attenuator factor.

Test Graphs

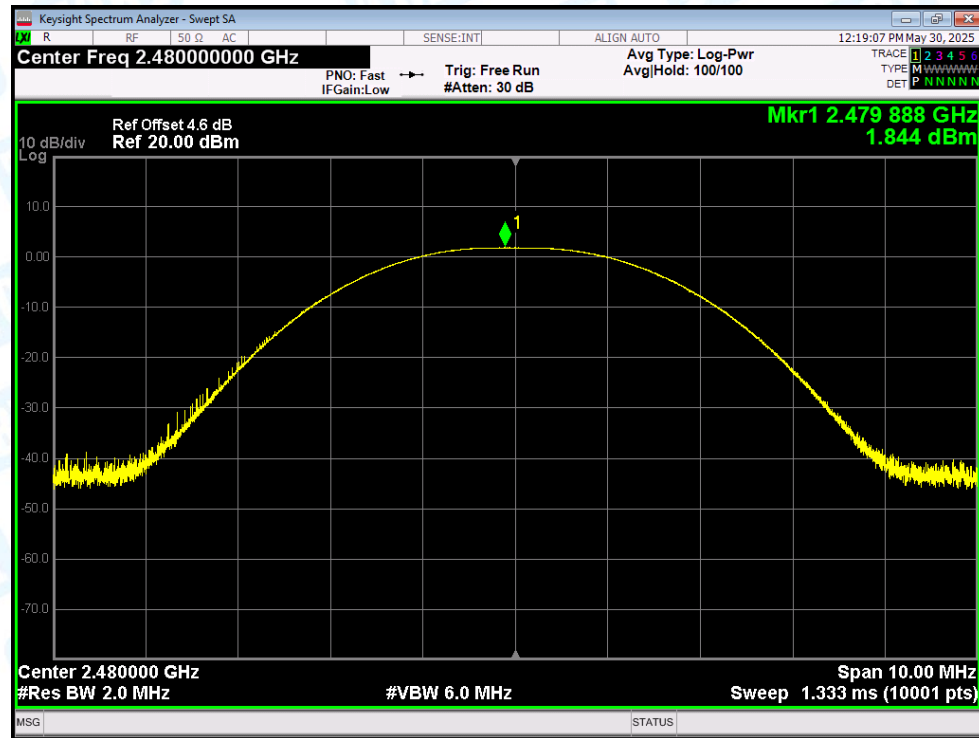
Power NVNT BLE 1Mbps 2402MHz Ant1



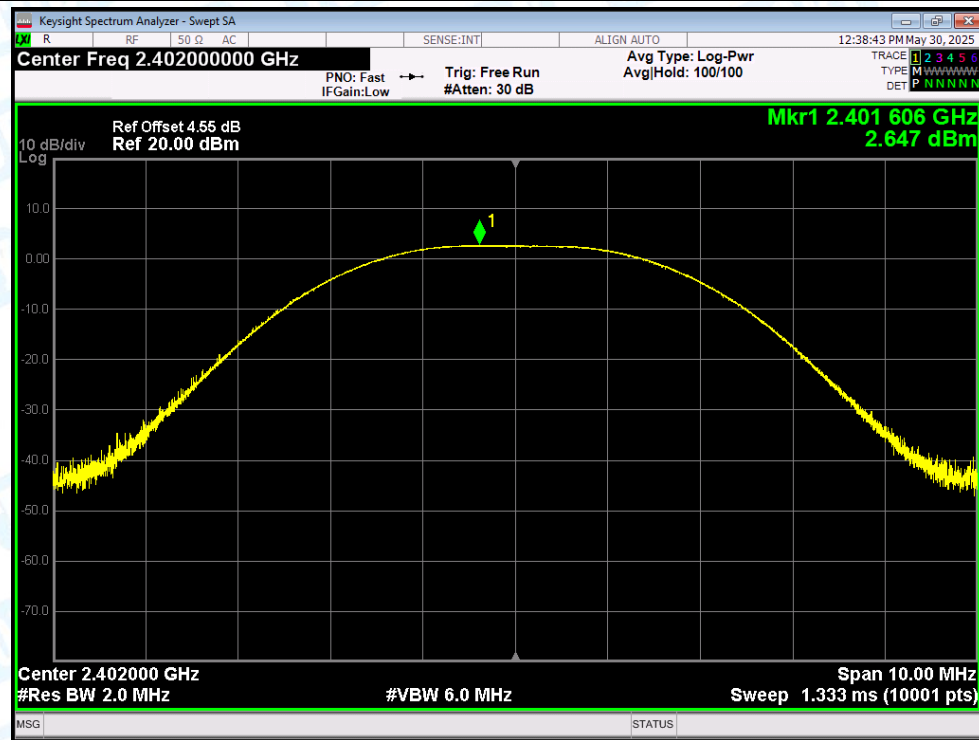
Power NVNT BLE 1Mbps 2440MHz Ant1



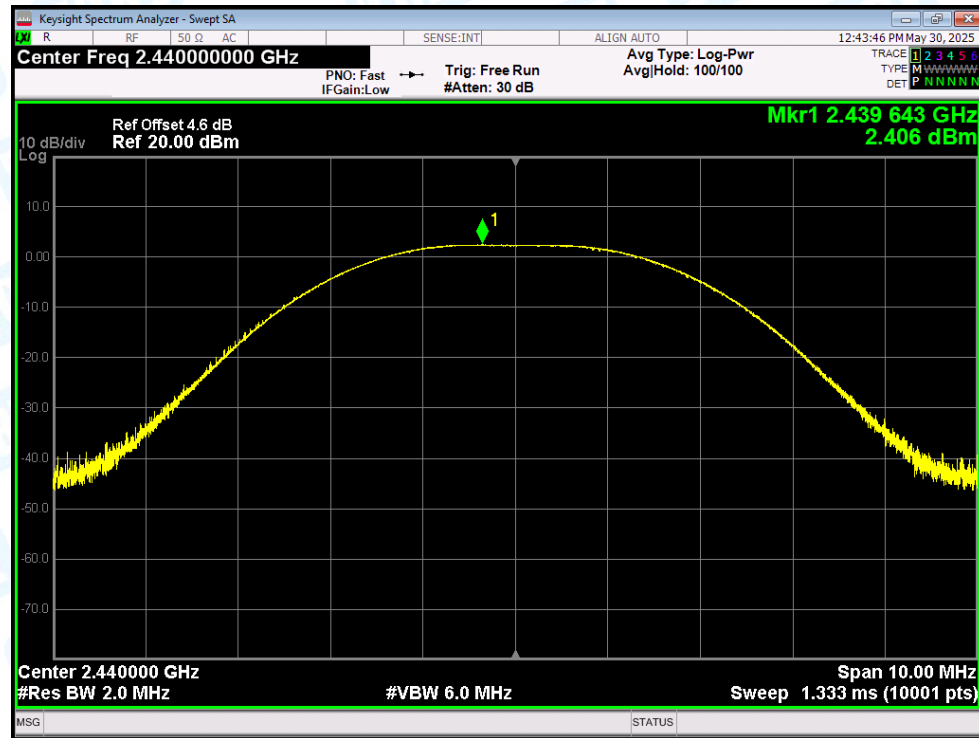
Power NVNT BLE 1Mbps 2480MHz Ant1



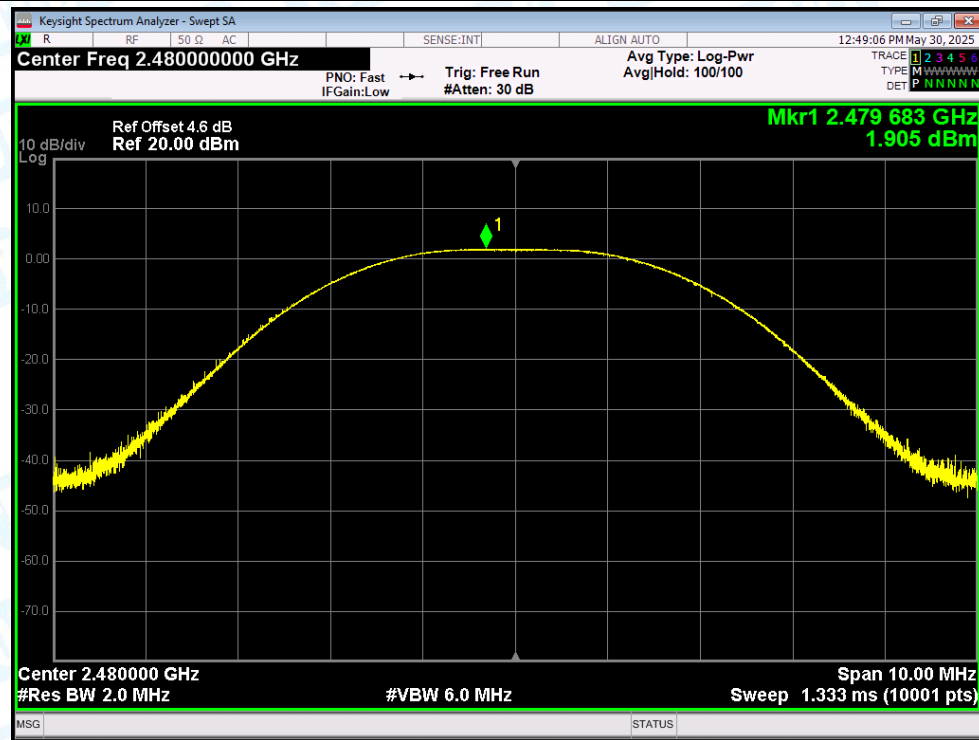
Power NVNT BLE 2Mbps 2402MHz Ant1



Power NVNT BLE 2Mbps 2440MHz Ant1



Power NVNT BLE 2Mbps 2480MHz Ant1



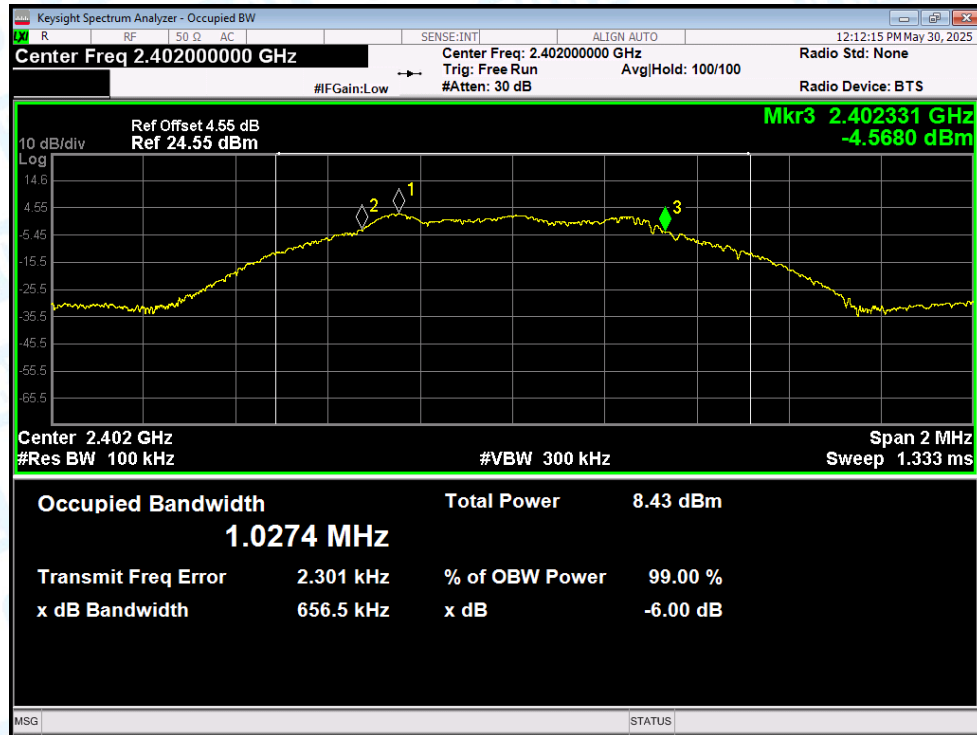
3. -6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	0.66	0.5	Pass
NVNT	BLE 1Mbps	2440	Ant1	0.66	0.5	Pass
NVNT	BLE 1Mbps	2480	Ant1	0.66	0.5	Pass
NVNT	BLE 2Mbps	2402	Ant1	1.14	0.5	Pass
NVNT	BLE 2Mbps	2440	Ant1	1.15	0.5	Pass
NVNT	BLE 2Mbps	2480	Ant1	1.11	0.5	Pass

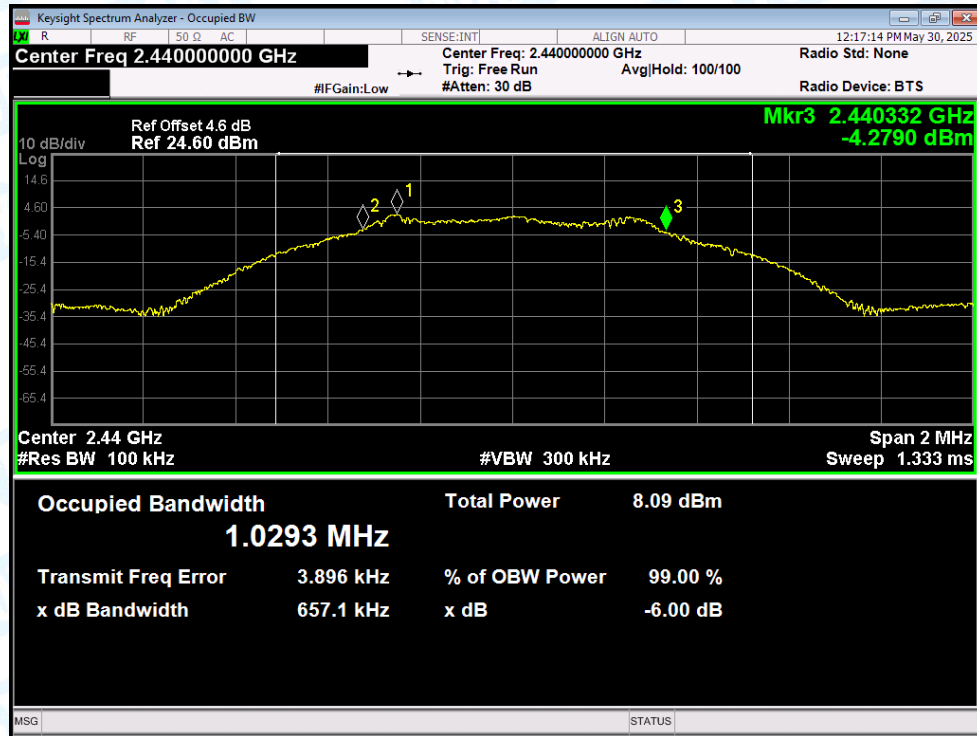
Note: RF Conducted test Offset= cable loss+ Attenuator factor.

Test Graphs

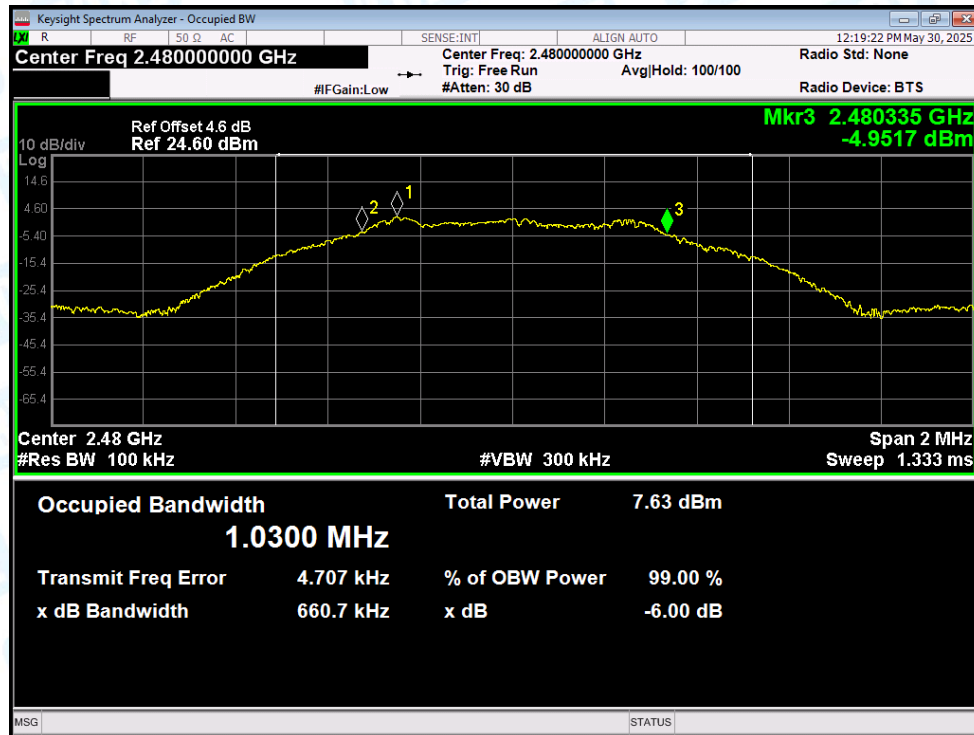
-6dB Bandwidth NVNT BLE 1Mbps 2402MHz Ant1



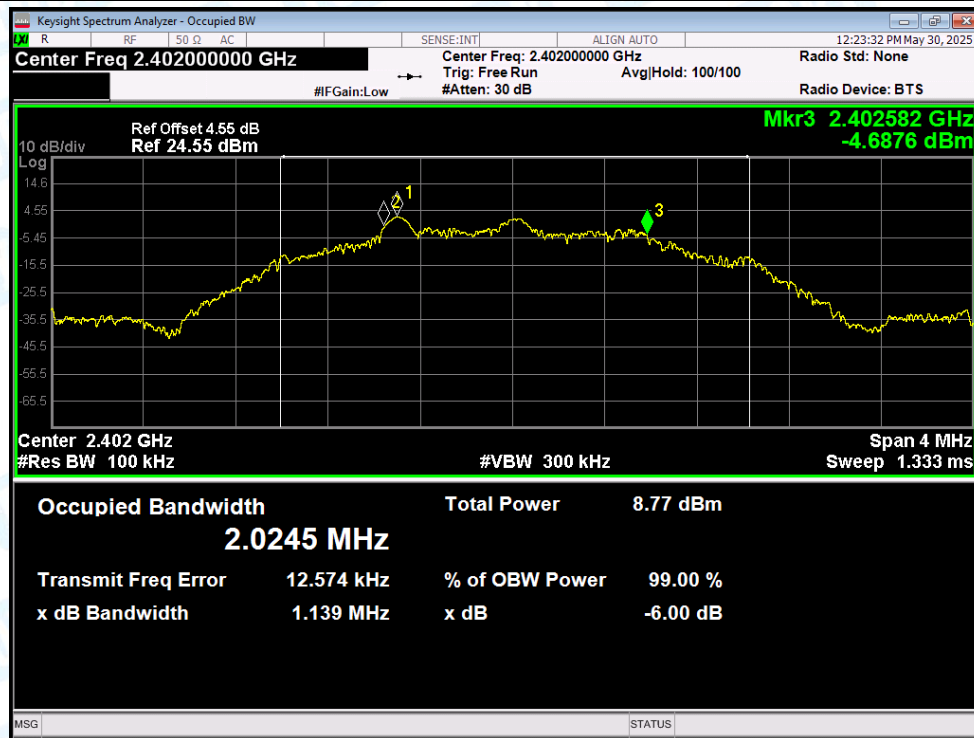
-6dB Bandwidth NVNT BLE 1Mbps 2440MHz Ant1



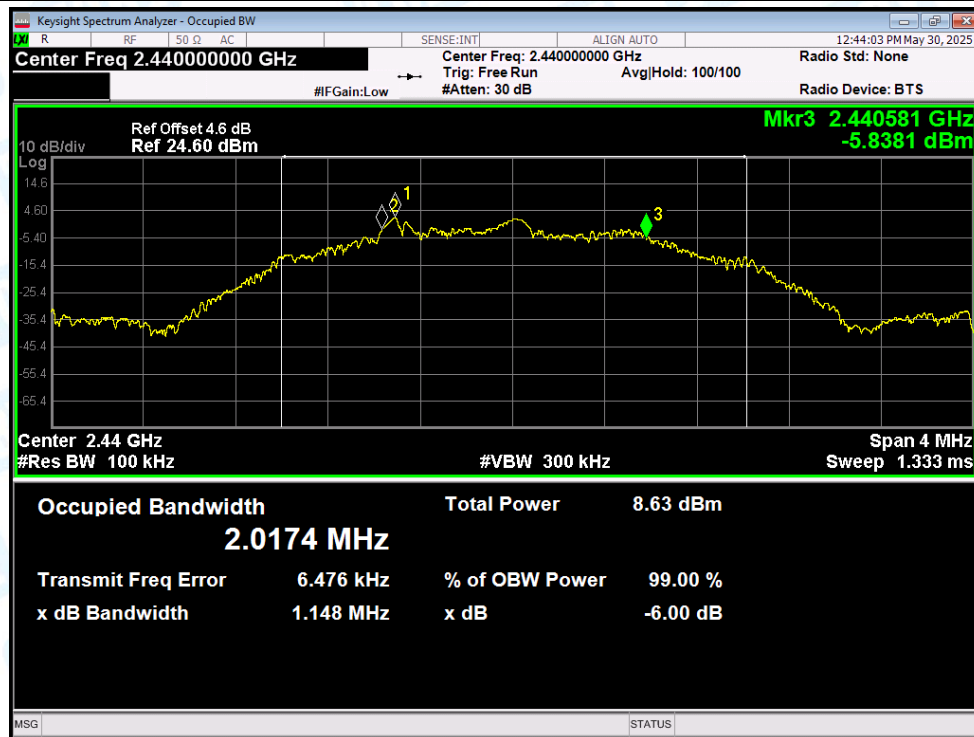
-6dB Bandwidth NVNT BLE 1Mbps 2480MHz Ant1



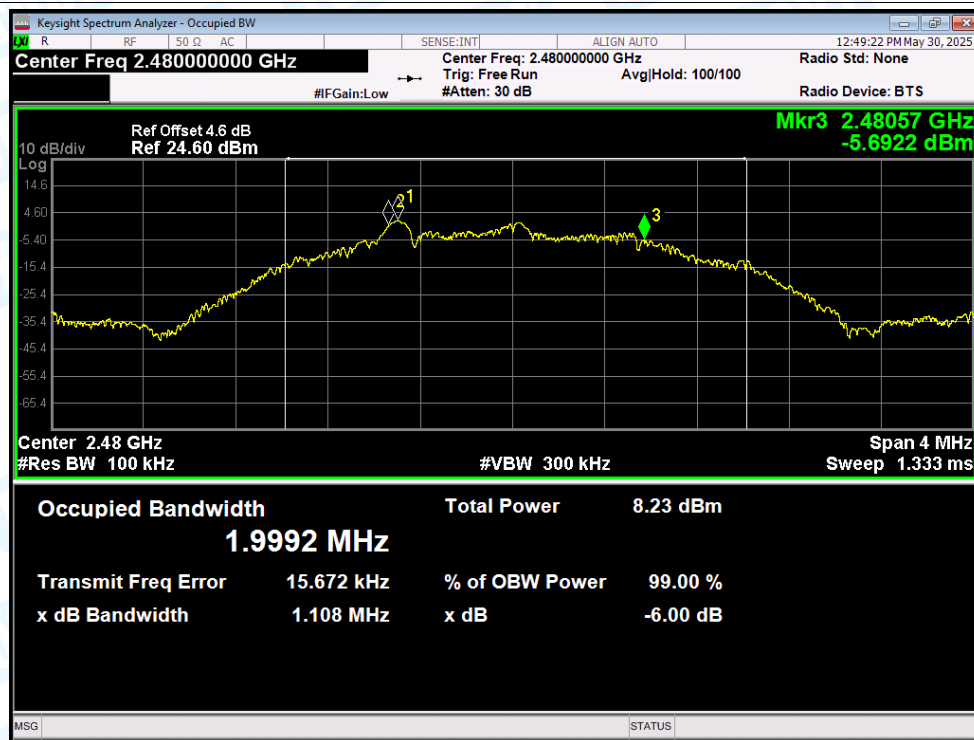
-6dB Bandwidth NVNT BLE 2Mbps 2402MHz Ant1



-6dB Bandwidth NVNT BLE 2Mbps 2440MHz Ant1



-6dB Bandwidth NVNT BLE 2Mbps 2480MHz Ant1



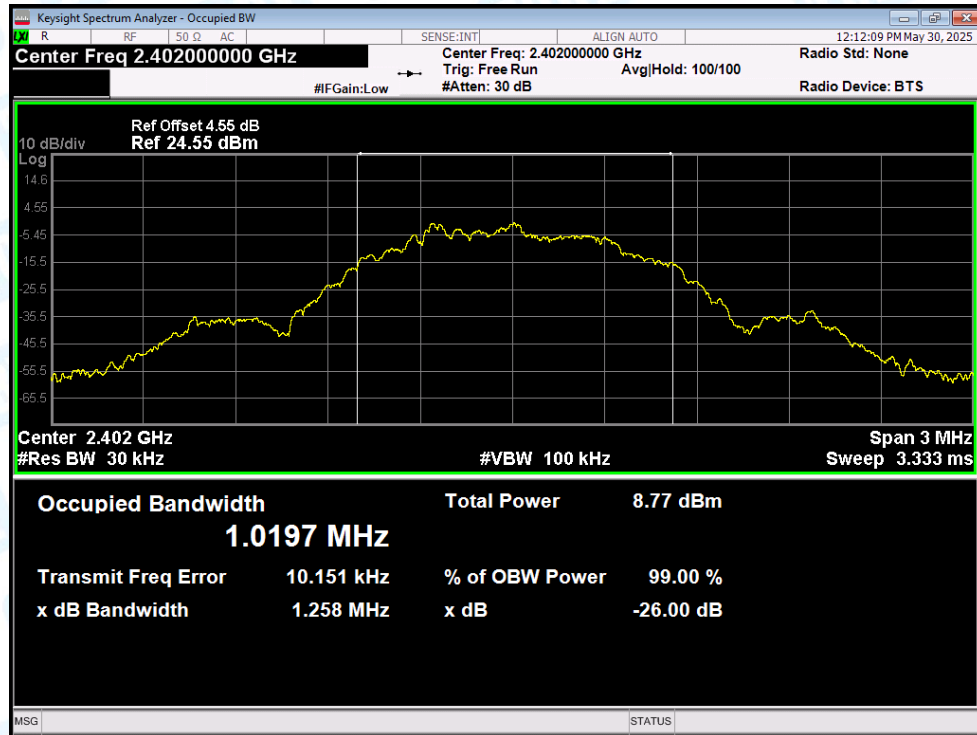
4. Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	BLE 1Mbps	2402	Ant1	1.02
NVNT	BLE 1Mbps	2440	Ant1	1.022
NVNT	BLE 1Mbps	2480	Ant1	1.023
NVNT	BLE 2Mbps	2402	Ant1	2.016
NVNT	BLE 2Mbps	2440	Ant1	2.01
NVNT	BLE 2Mbps	2480	Ant1	2.015

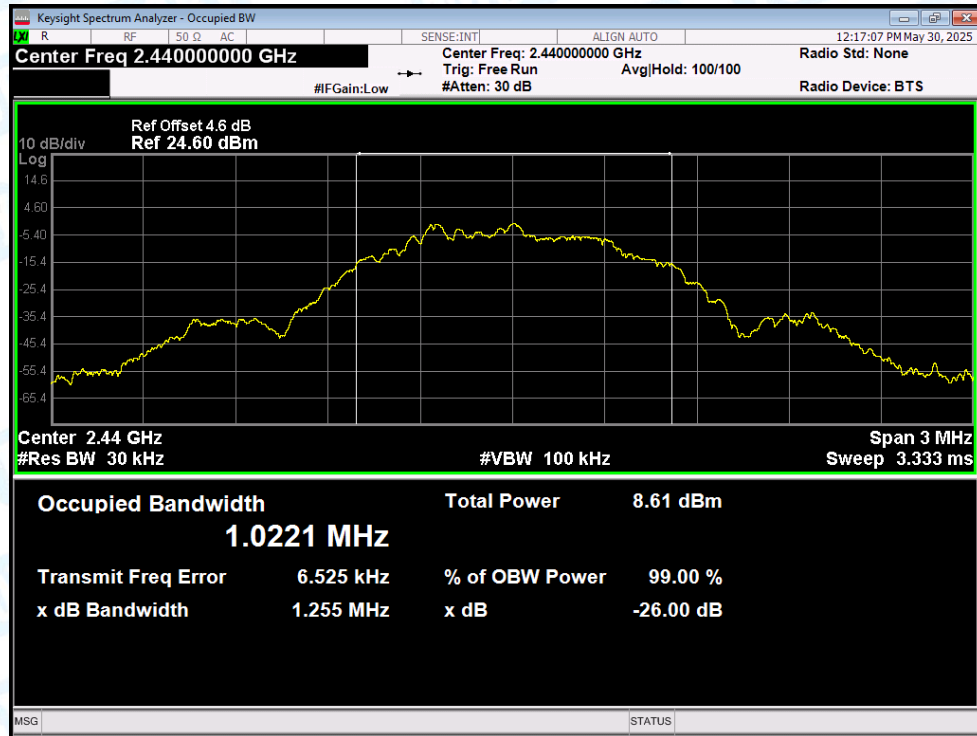
Note: RF Conducted test Offset= cable loss+ Attenuator factor.

Test Graphs

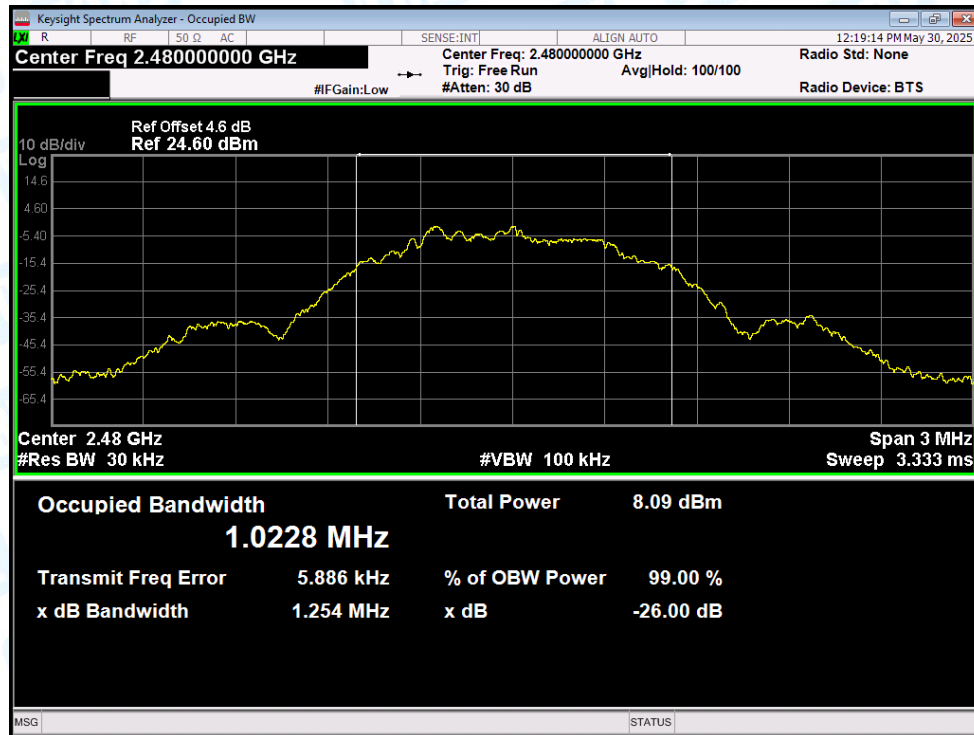
OBW NVNT BLE 1Mbps 2402MHz Ant1



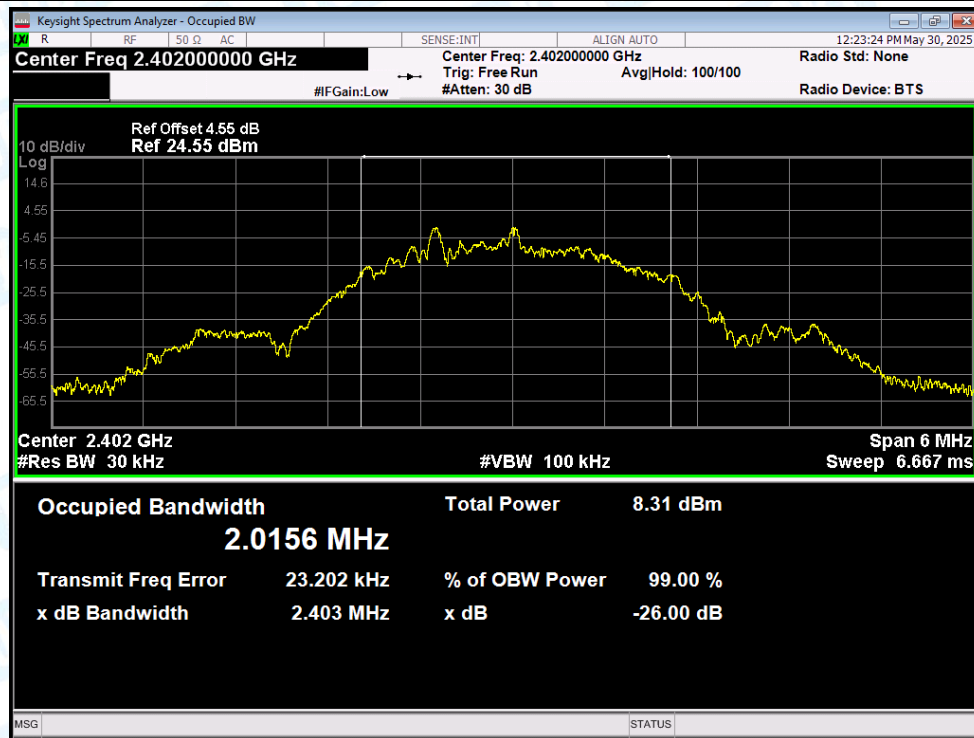
OBW NVNT BLE 1Mbps 2440MHz Ant1



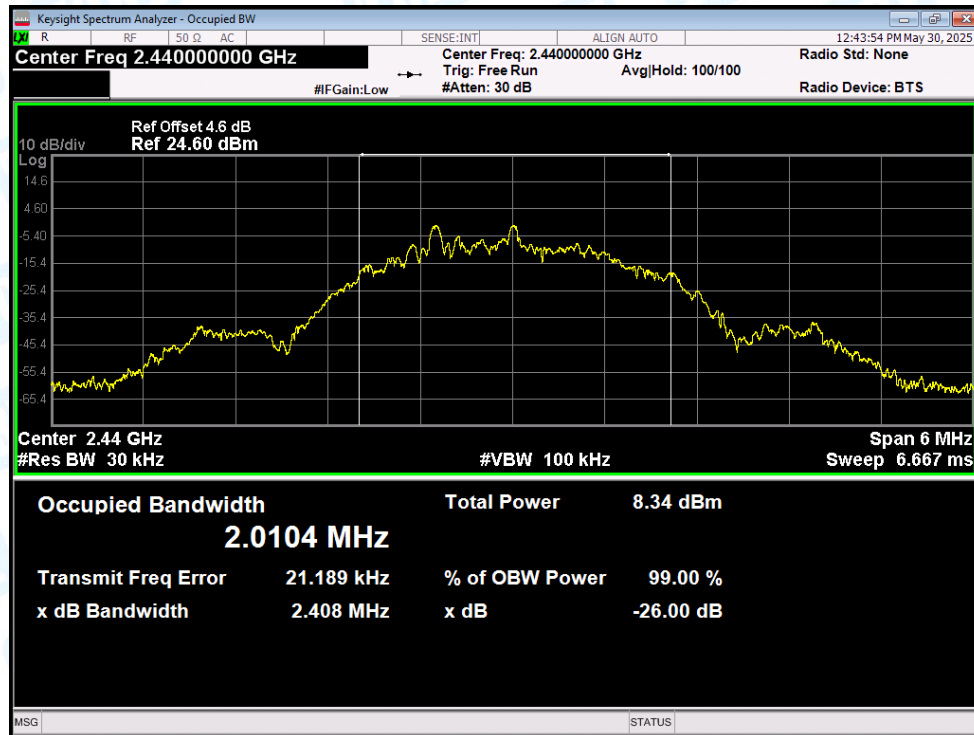
OBW NVNT BLE 1Mbps 2480MHz Ant1



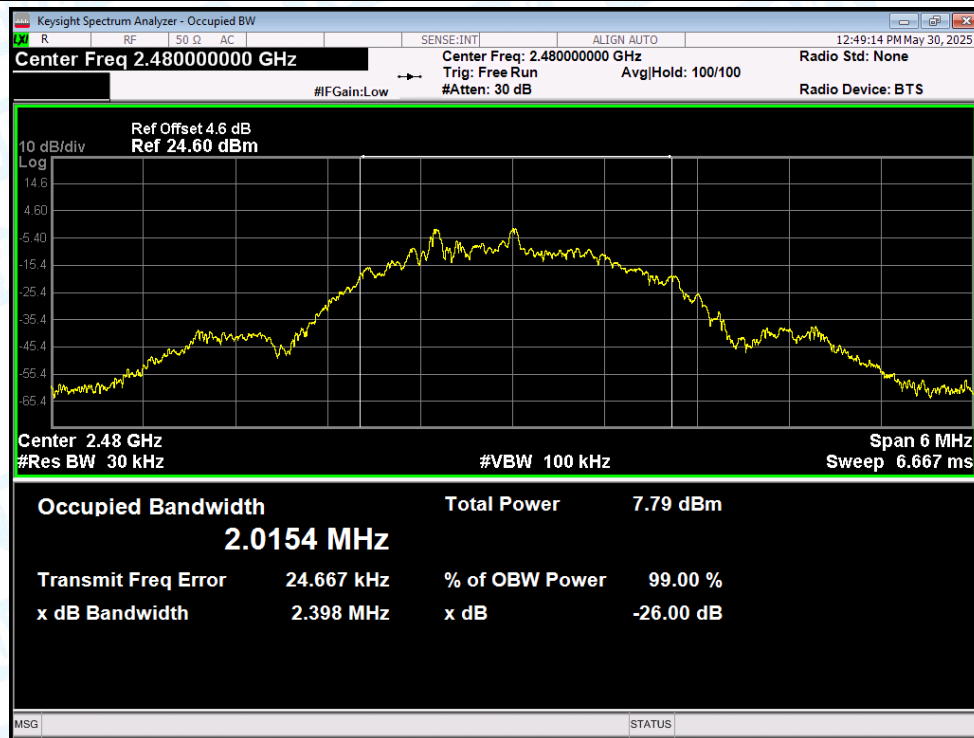
OBW NVNT BLE 2Mbps 2402MHz Ant1



OBW NVNT BLE 2Mbps 2440MHz Ant1



OBW NVNT BLE 2Mbps 2480MHz Ant1



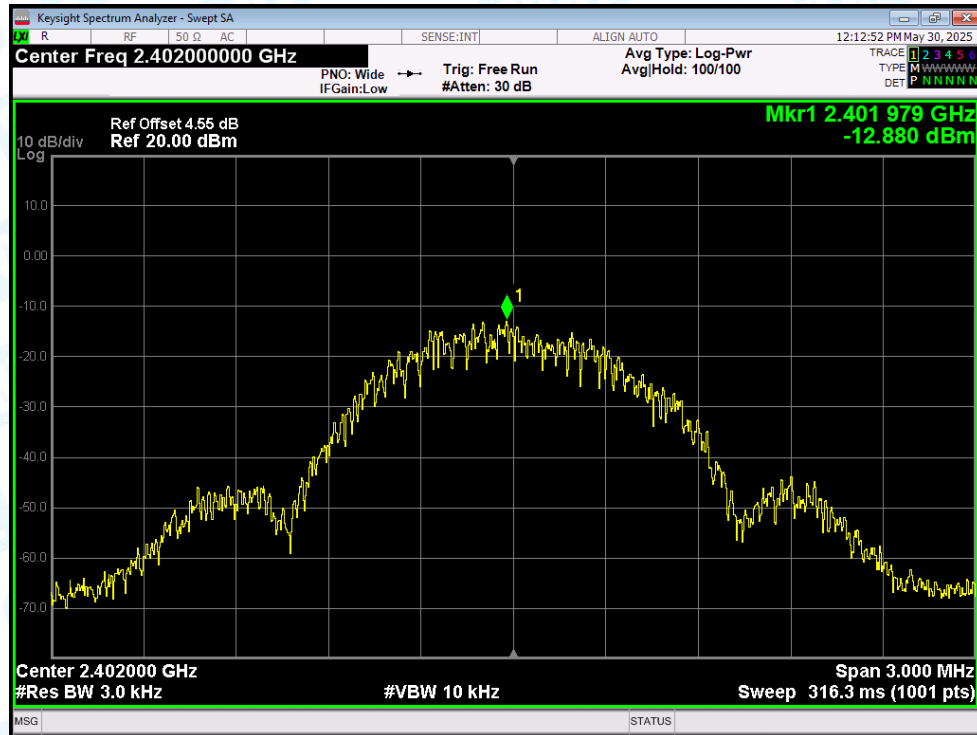
5. Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm/3KHz)	Limit (dBm/3KHz)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	-12.88	8	Pass
NVNT	BLE 1Mbps	2440	Ant1	-13.1	8	Pass
NVNT	BLE 1Mbps	2480	Ant1	-13.639	8	Pass
NVNT	BLE 2Mbps	2402	Ant1	-16.353	8	Pass
NVNT	BLE 2Mbps	2440	Ant1	-16.261	8	Pass
NVNT	BLE 2Mbps	2480	Ant1	-16.693	8	Pass

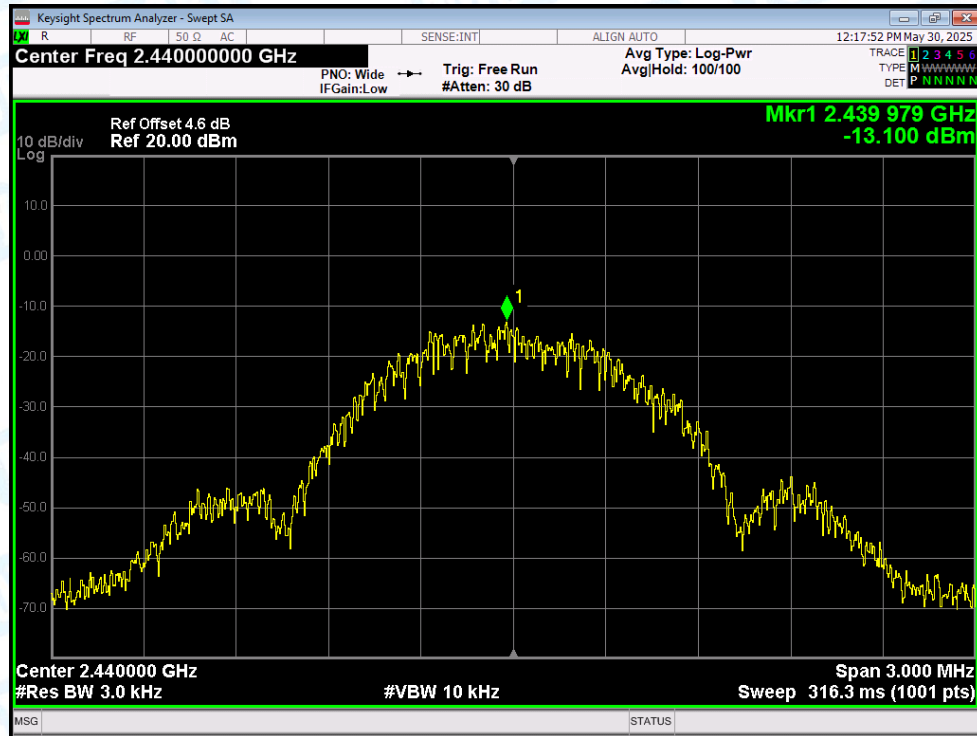
Note: RF Conducted test Offset= cable loss+ Attenuator factor.

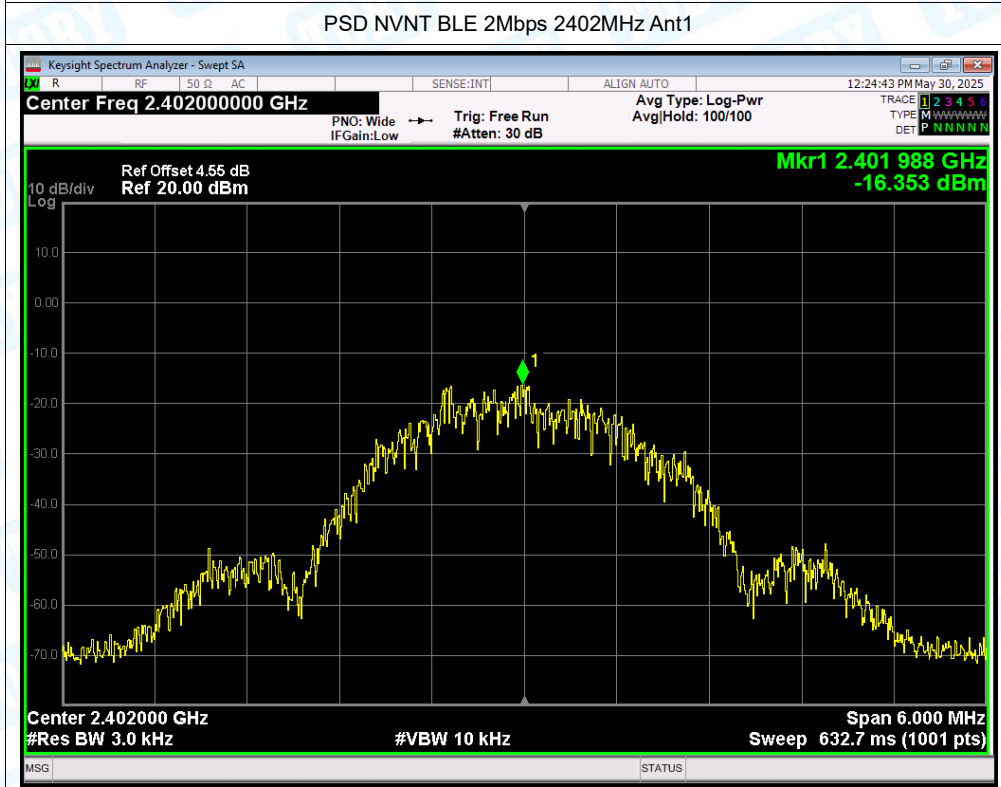
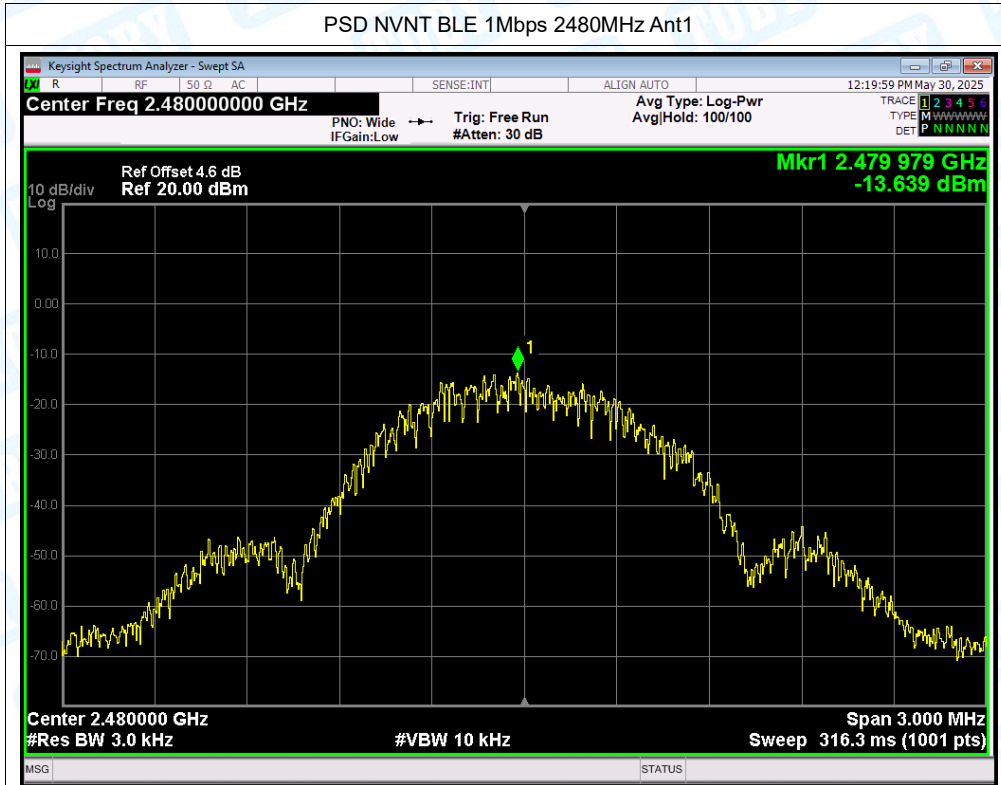
Test Graphs

PSD NVNT BLE 1Mbps 2402MHz Ant1

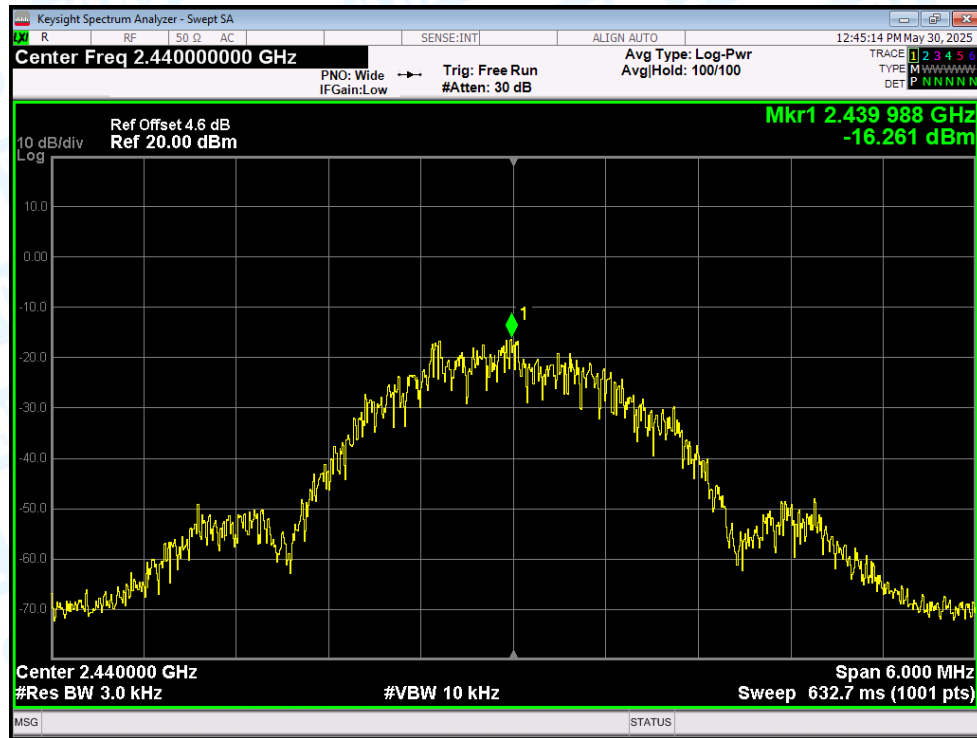


PSD NVNT BLE 1Mbps 2440MHz Ant1

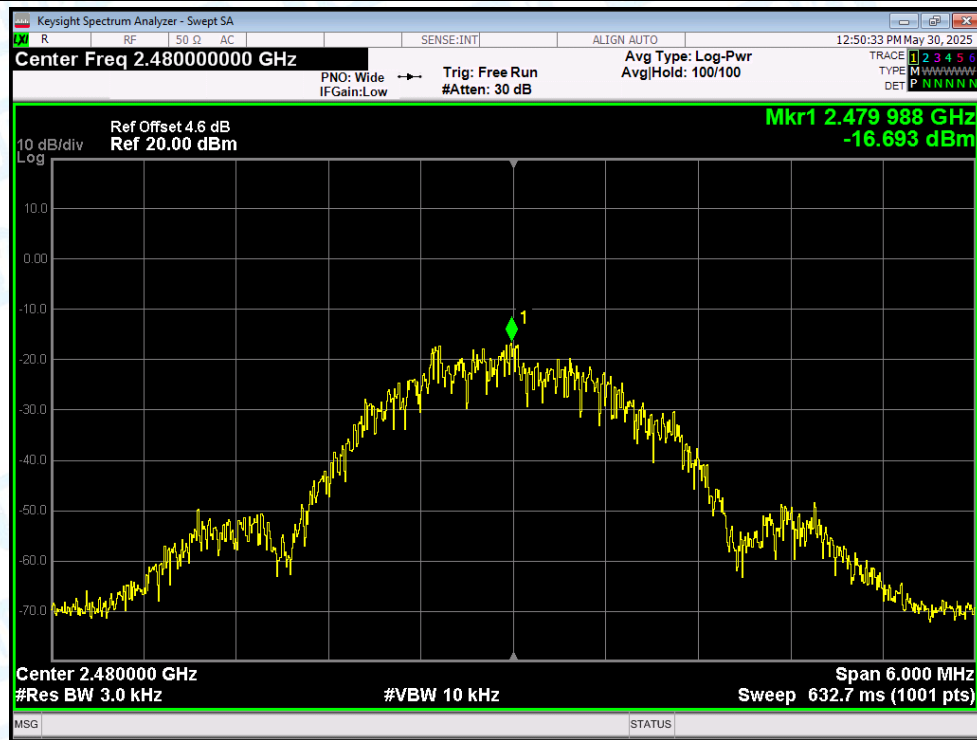




PSD NVNT BLE 2Mbps 2440MHz Ant1



PSD NVNT BLE 2Mbps 2480MHz Ant1



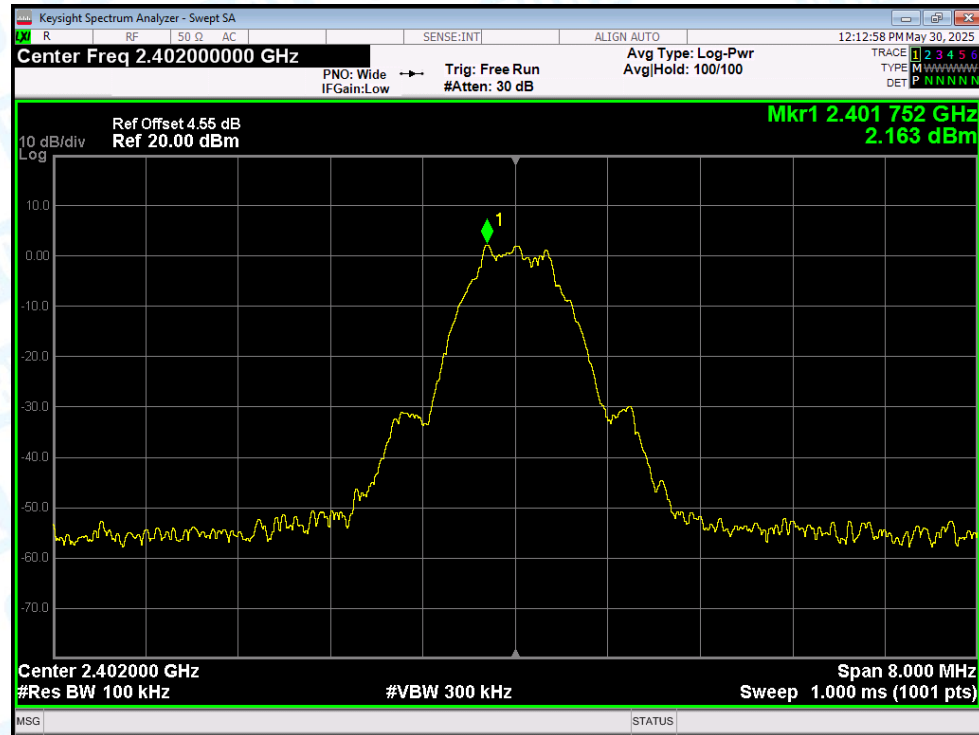
6. Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	-44.05	-20	Pass
NVNT	BLE 1Mbps	2480	Ant1	-53.78	-20	Pass
NVNT	BLE 2Mbps	2402	Ant1	-43.3	-20	Pass
NVNT	BLE 2Mbps	2480	Ant1	-52.7	-20	Pass

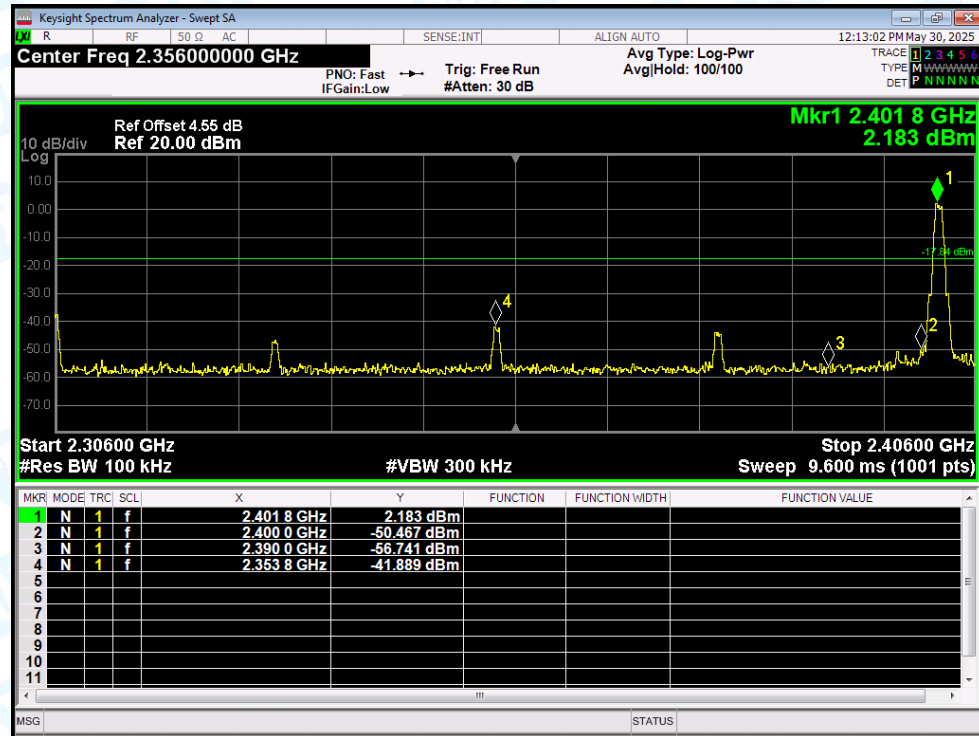
Note: RF Conducted test Offset= cable loss+ Attenuator factor.

Test Graphs

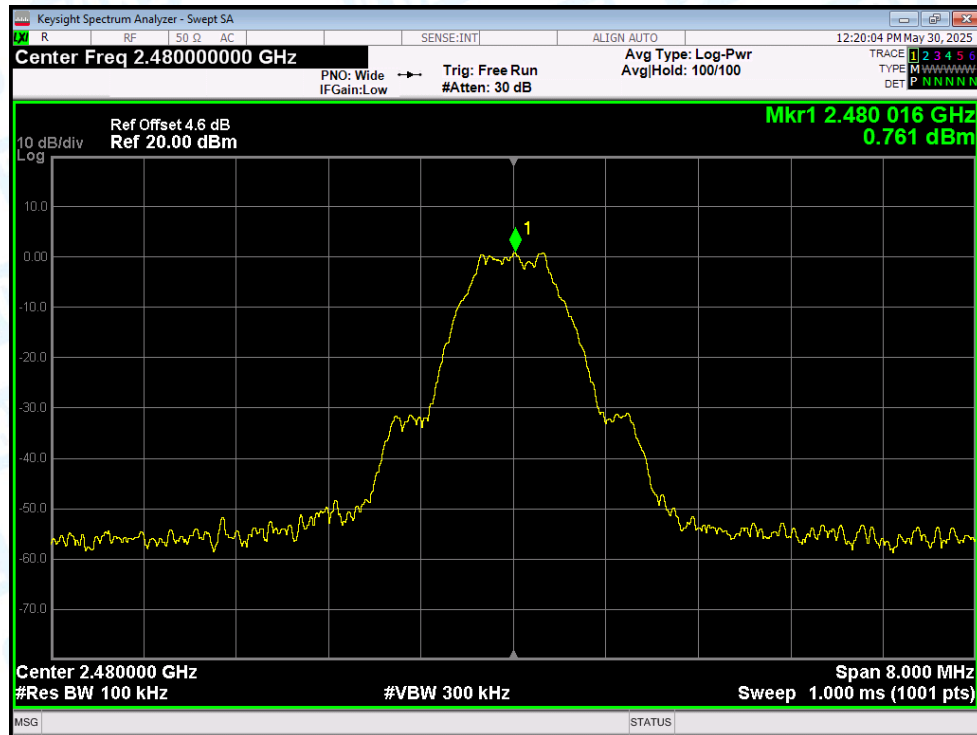
Band Edge NVNT BLE 1Mbps 2402MHz Ant1 Ref



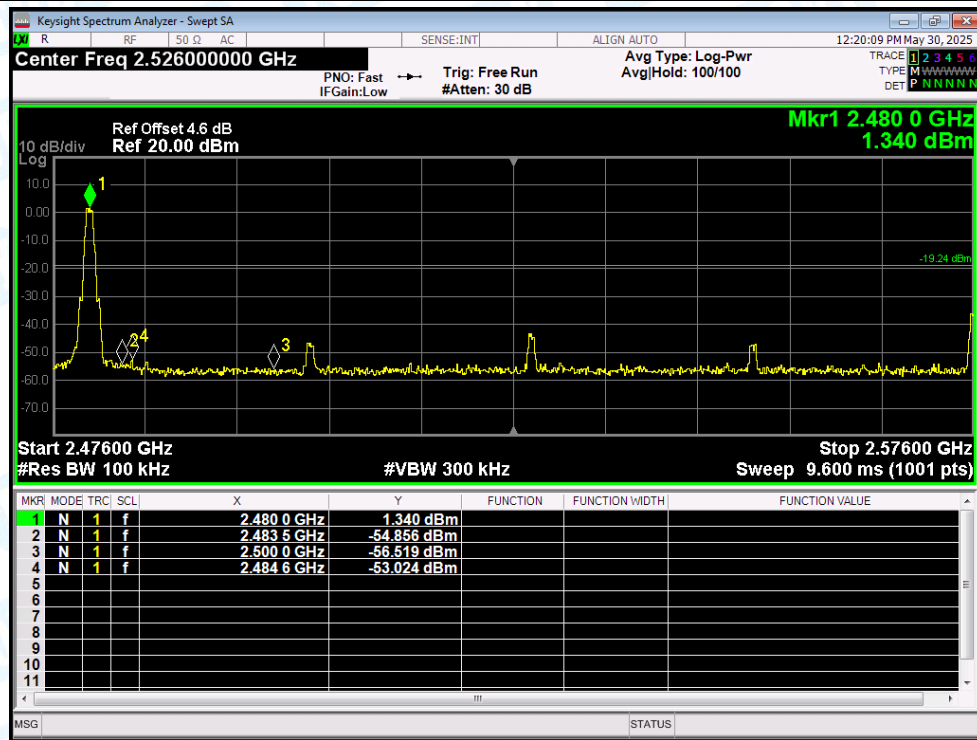
Band Edge NVNT BLE 1Mbps 2402MHz Ant1 Emission



Band Edge NVNT BLE 1Mbps 2480MHz Ant1 Ref



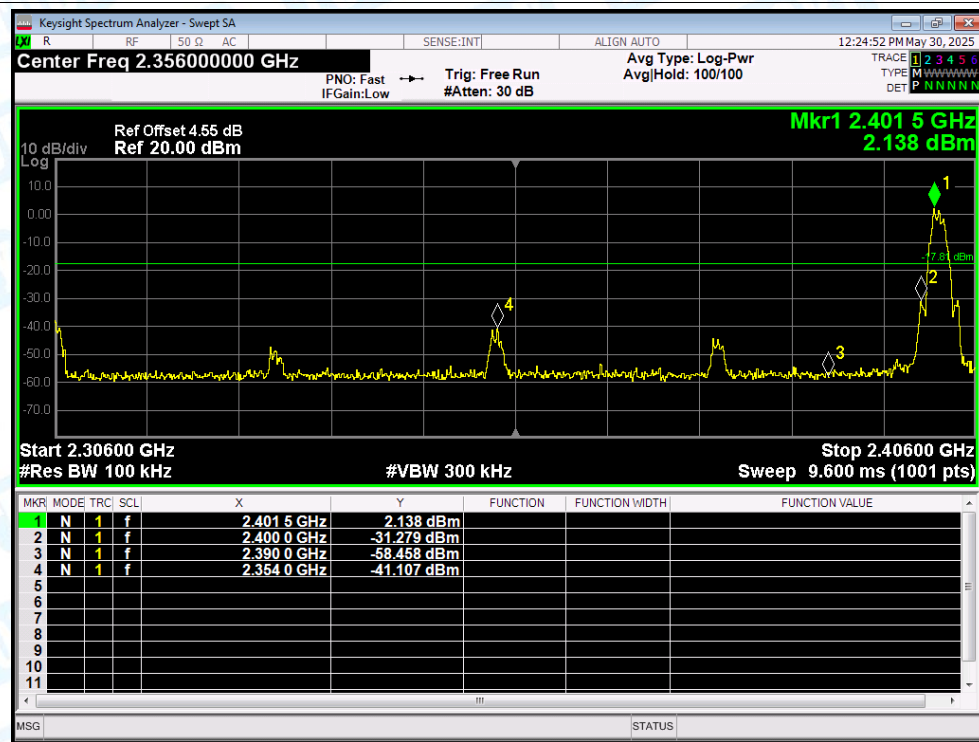
Band Edge NVNT BLE 1Mbps 2480MHz Ant1 Emission



Band Edge NVNT BLE 2Mbps 2402MHz Ant1 Ref



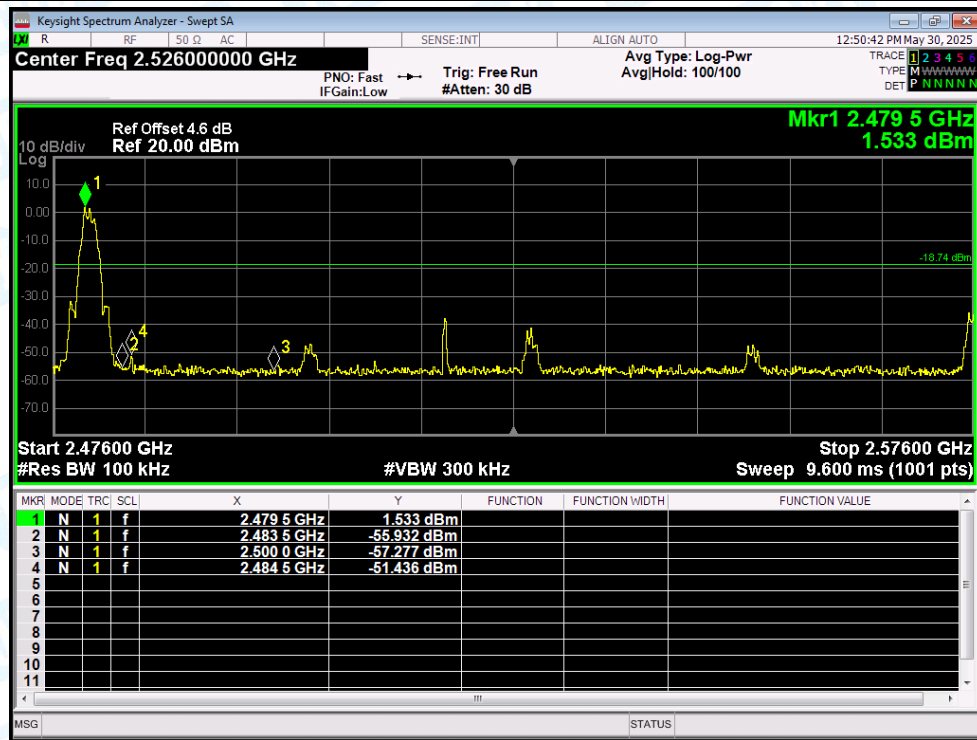
Band Edge NVNT BLE 2Mbps 2402MHz Ant1 Emission



Band Edge NVNT BLE 2Mbps 2480MHz Ant1 Ref



Band Edge NVNT BLE 2Mbps 2480MHz Ant1 Emission



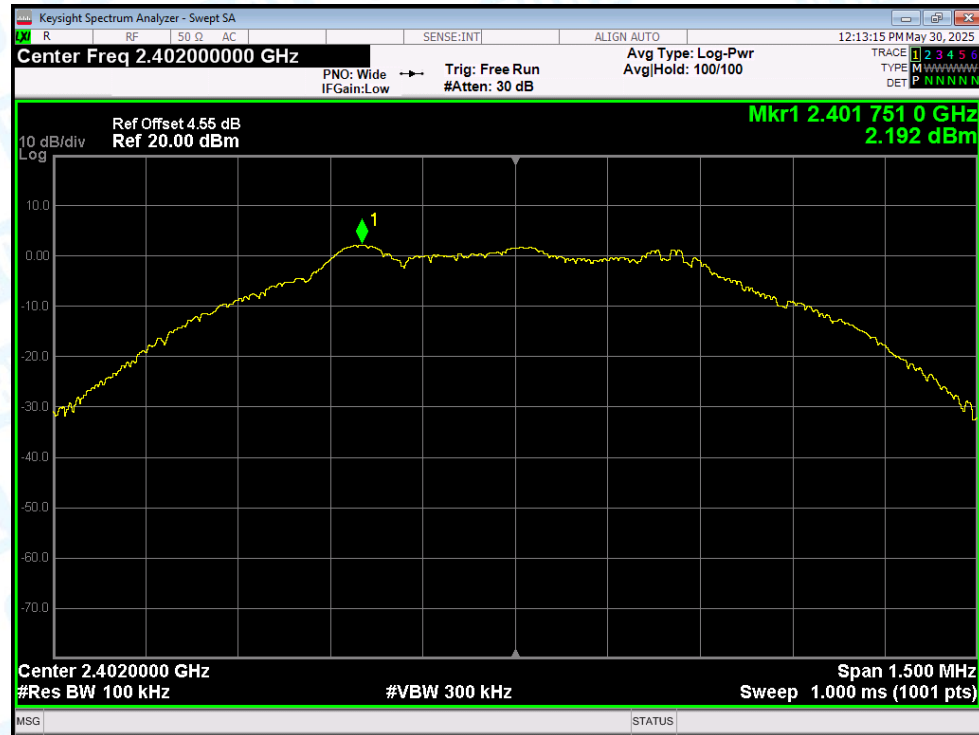
7. Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	-20.36	-20	Pass
NVNT	BLE 1Mbps	2440	Ant1	-20.79	-20	Pass
NVNT	BLE 1Mbps	2480	Ant1	-22.35	-20	Pass
NVNT	BLE 2Mbps	2402	Ant1	-23.47	-20	Pass
NVNT	BLE 2Mbps	2440	Ant1	-20.53	-20	Pass
NVNT	BLE 2Mbps	2480	Ant1	-24.94	-20	Pass

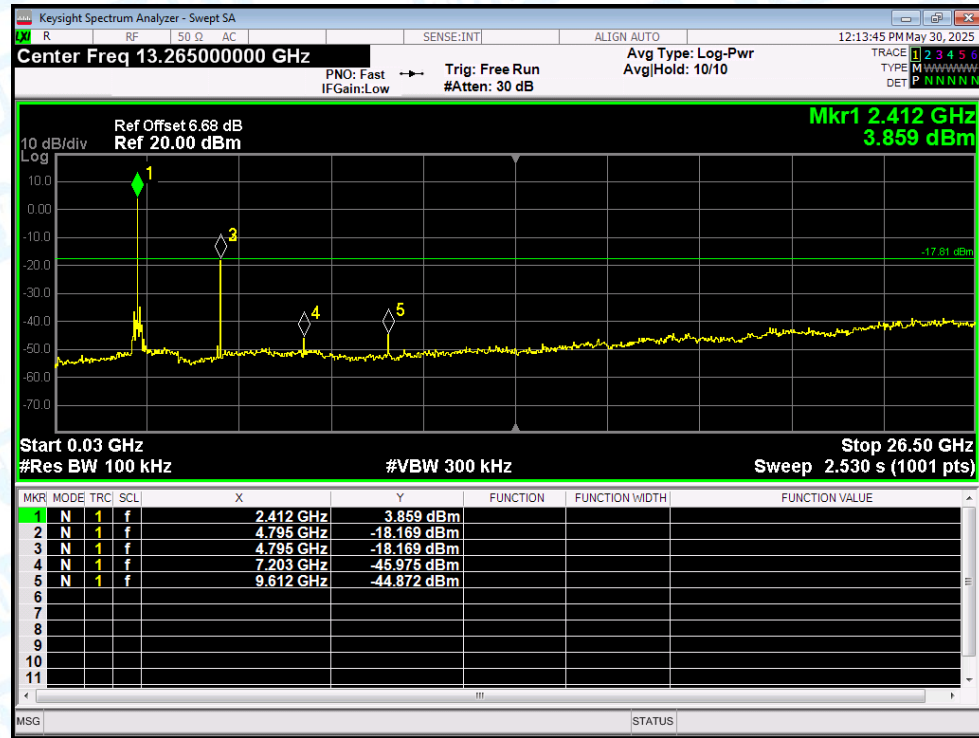
Note: RF Conducted test Offset= cable loss+ Attenuator factor.

Test Graphs

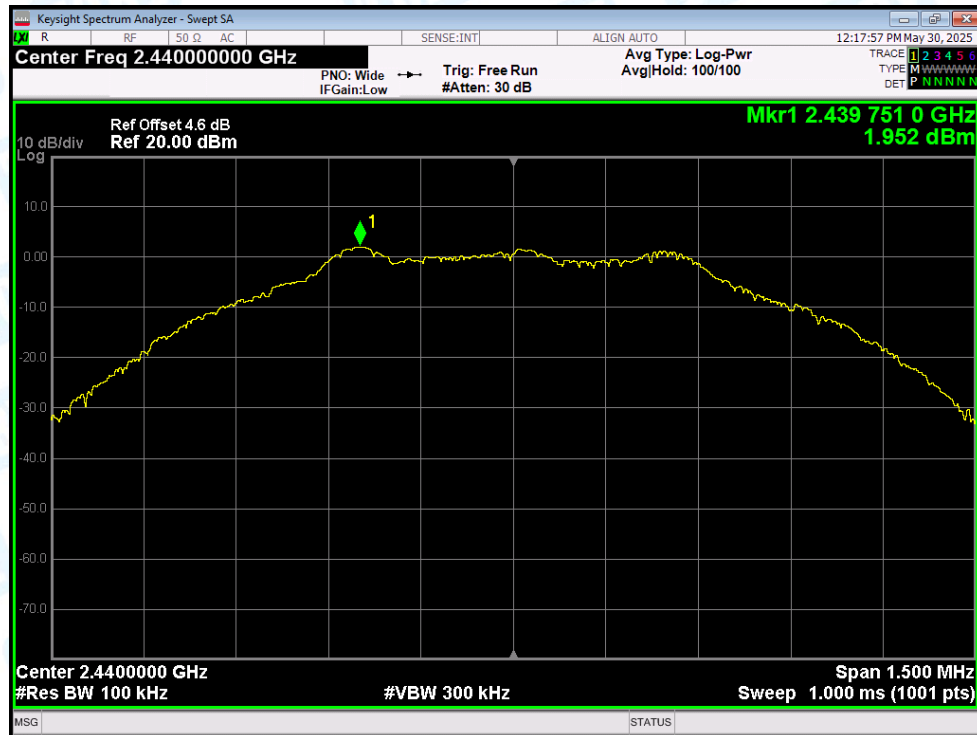
Tx. Spurious NVNT BLE 1Mbps 2402MHz Ant1 Ref



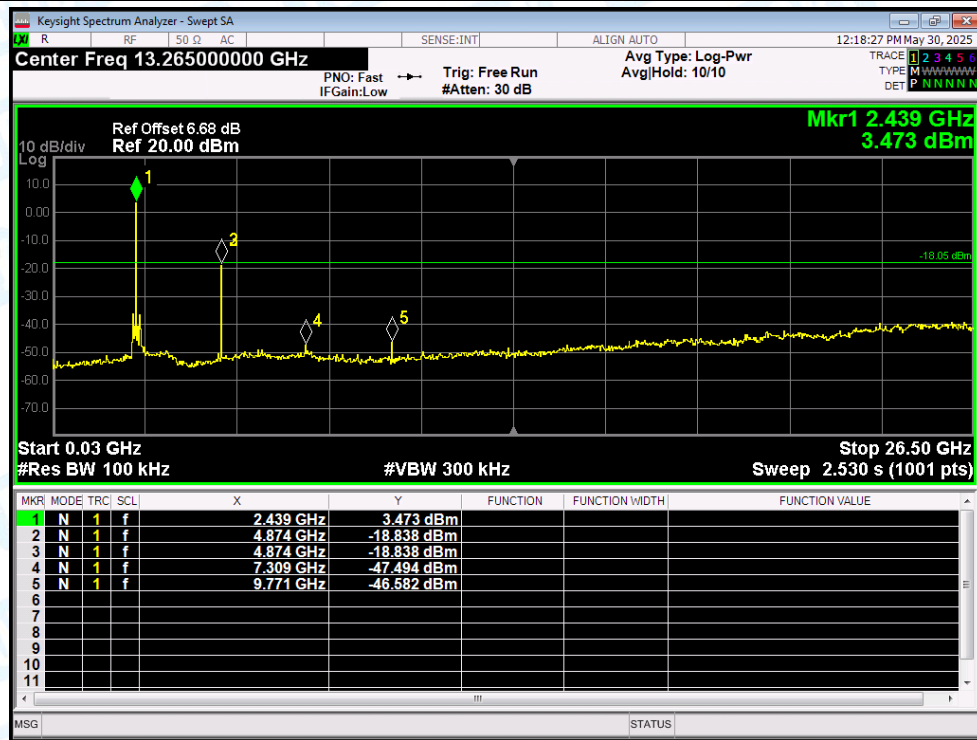
Tx. Spurious NVNT BLE 1Mbps 2402MHz Ant1 Emission



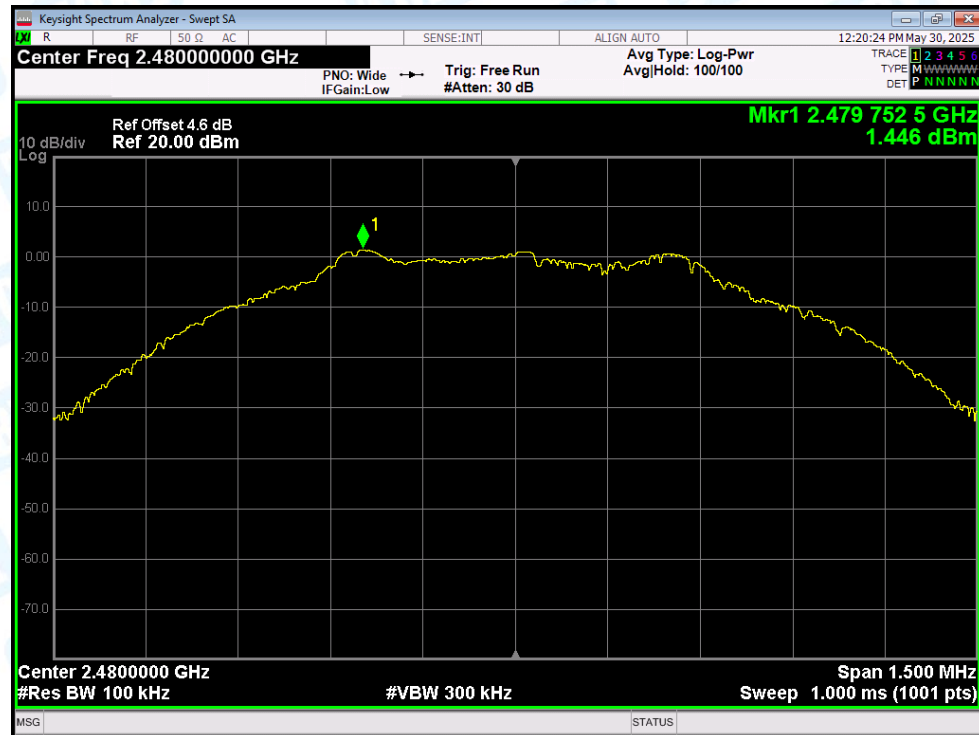
Tx. Spurious NVNT BLE 1Mbps 2440MHz Ant1 Ref



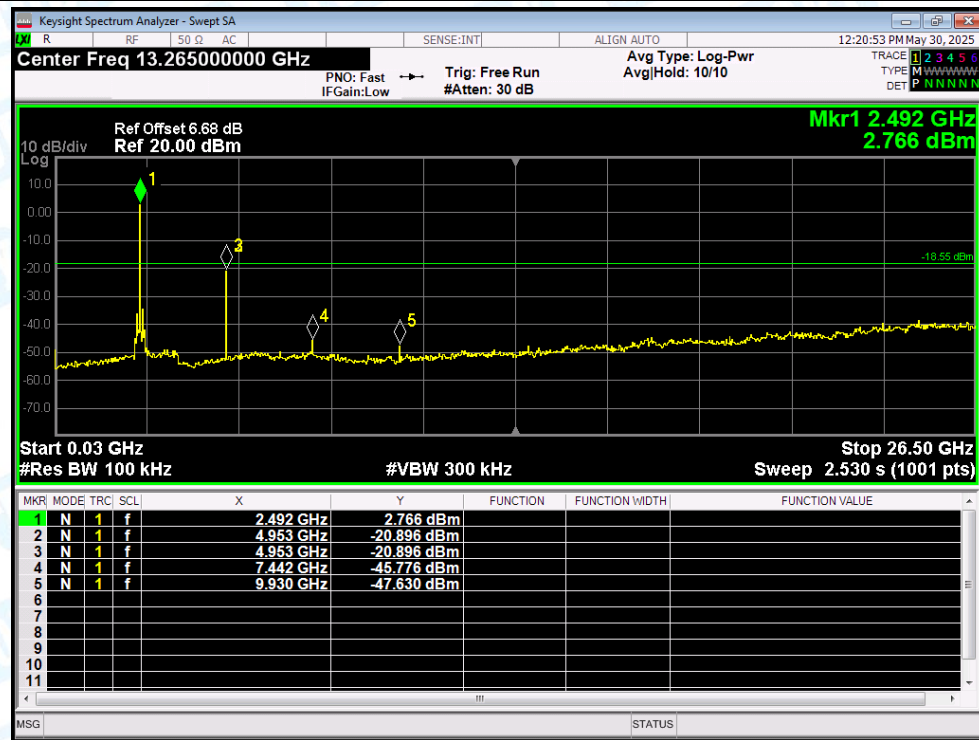
Tx. Spurious NVNT BLE 1Mbps 2440MHz Ant1 Emission



Tx. Spurious NVNT BLE 1Mbps 2480MHz Ant1 Ref



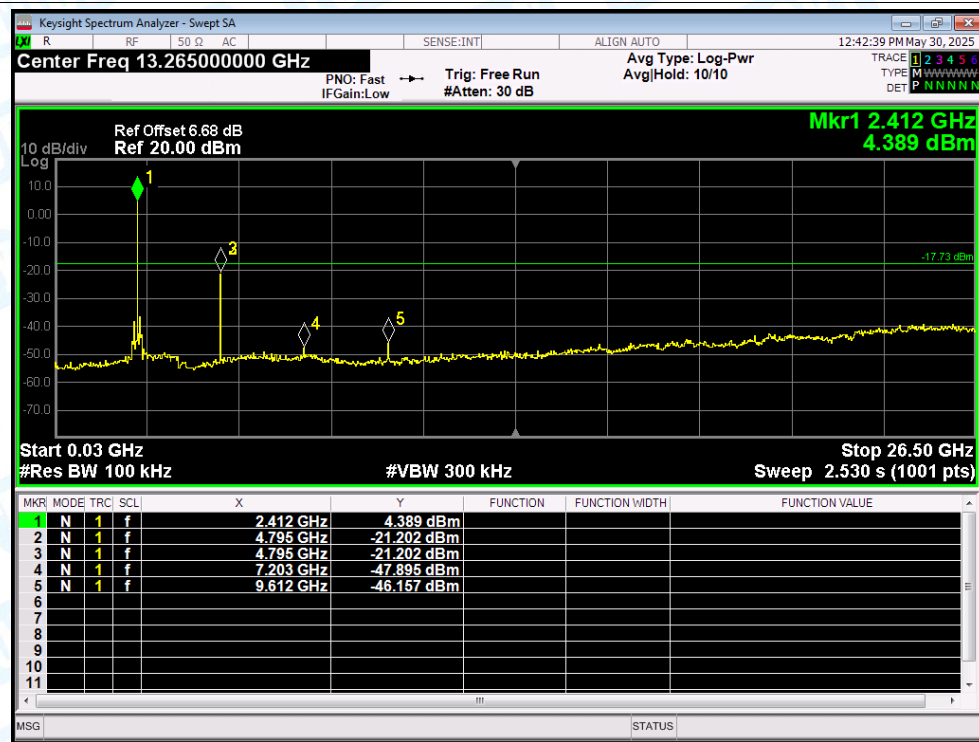
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Tx. Spurious NVNT BLE 2Mbps 2402MHz Ant1 Ref



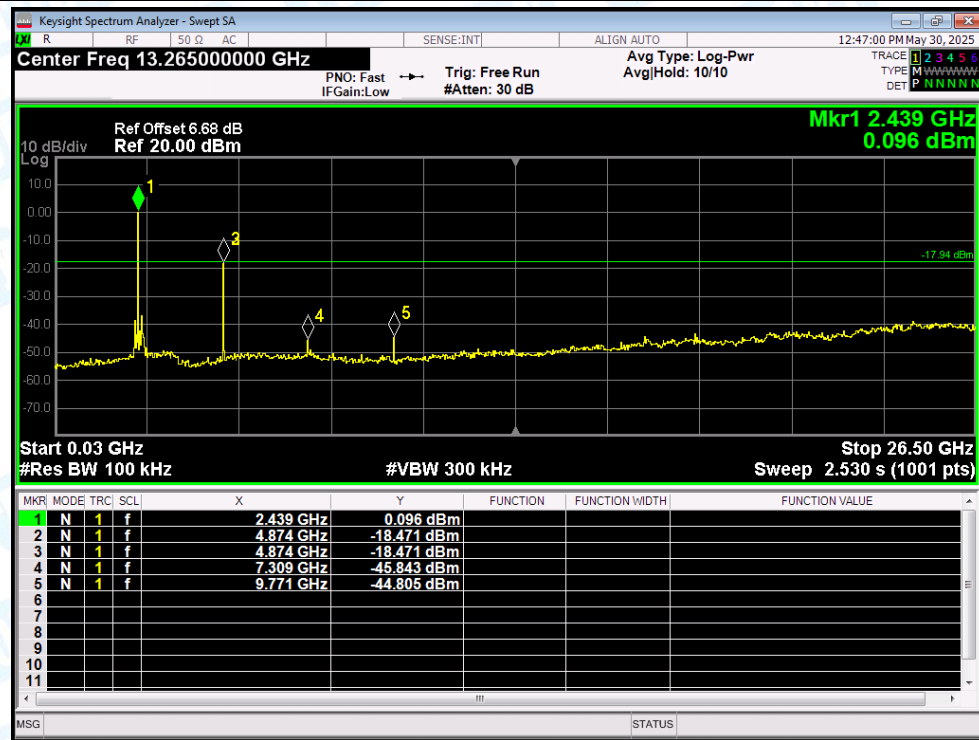
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Tx. Spurious NVNT BLE 2Mbps 2440MHz Ant1 Ref



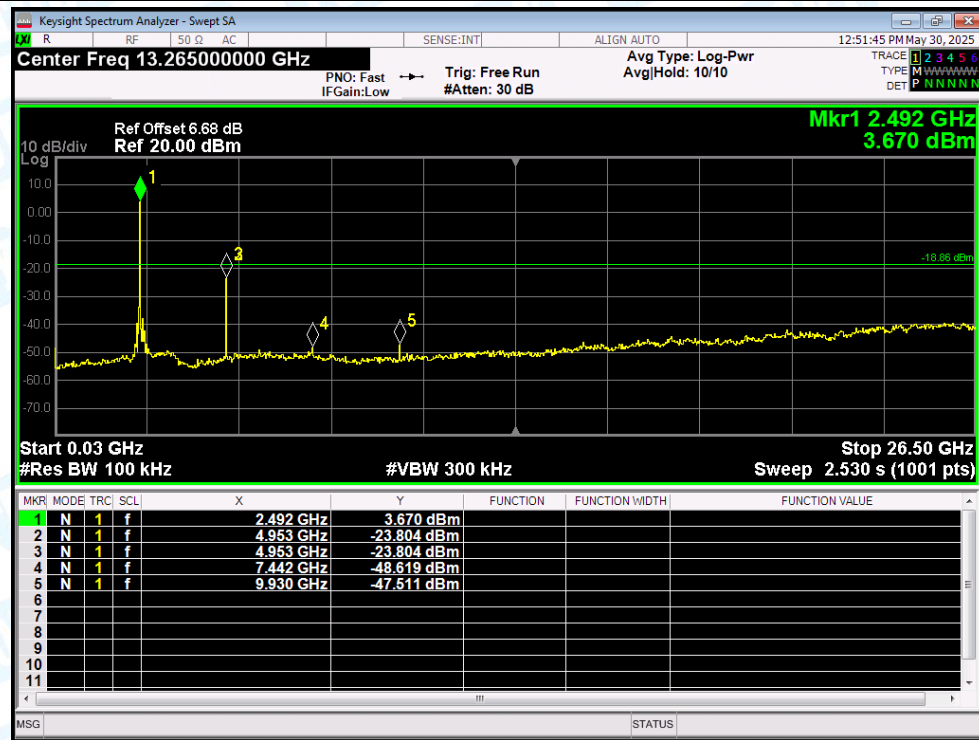
Tx. Spurious NVNT BLE 2Mbps 2440MHz Ant1 Emission



Tx. Spurious NVNT BLE 2Mbps 2480MHz Ant1 Ref



Tx. Spurious NVNT BLE 2Mbps 2480MHz Ant1 Emission



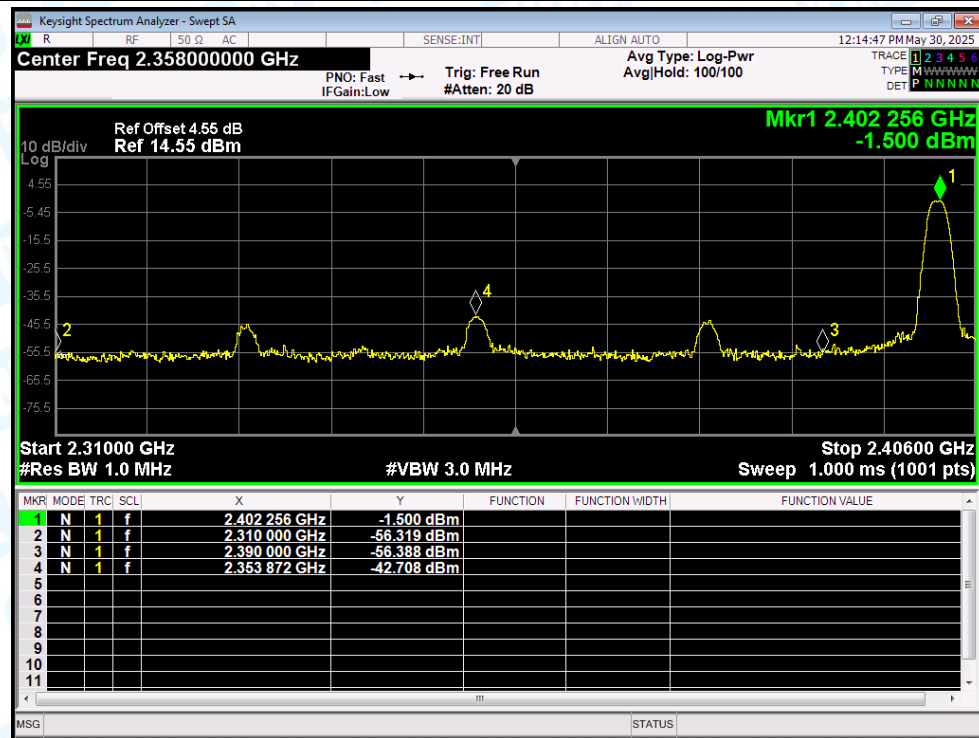
8. Restrict Band

Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	BLE 1Mbps	2402	Ant1	2310	-56.32	2	-	40.94	Peak	74	Pass
NVNT	BLE 1Mbps	2402	Ant1	2310	-65.23	2	1.8	33.83	Average	54	Pass
NVNT	BLE 1Mbps	2402	Ant1	2353.872	-42.71	2	-	54.55	Peak	74	Pass
NVNT	BLE 1Mbps	2402	Ant1	2353.968	-47.42	2	1.8	51.64	Average	54	Pass
NVNT	BLE 1Mbps	2402	Ant1	2390	-56.39	2	-	40.87	Peak	74	Pass
NVNT	BLE 1Mbps	2402	Ant1	2390	-64.08	2	1.8	34.98	Average	54	Pass
NVNT	BLE 1Mbps	2480	Ant1	2483.5	-47.43	2	-	49.83	Peak	74	Pass
NVNT	BLE 1Mbps	2480	Ant1	2483.5	-57.98	2	1.8	41.08	Average	54	Pass
NVNT	BLE 1Mbps	2480	Ant1	2484.472	-43.87	2	-	53.39	Peak	74	Pass
NVNT	BLE 1Mbps	2480	Ant1	2483.56	-57.18	2	1.8	41.88	Average	54	Pass
NVNT	BLE 1Mbps	2480	Ant1	2500	-57.01	2	-	40.25	Peak	74	Pass
NVNT	BLE 1Mbps	2480	Ant1	2500	-64.84	2	1.8	34.22	Average	54	Pass
NVNT	BLE 2Mbps	2402	Ant1	2310	-57.09	2	-	40.17	Peak	74	Pass
NVNT	BLE 2Mbps	2402	Ant1	2310	-64.98	2	4.31	36.59	Average	54	Pass
NVNT	BLE 2Mbps	2402	Ant1	2354.352	-38.87	2	-	58.39	Peak	74	Pass
NVNT	BLE 2Mbps	2402	Ant1	2353.968	-48.4	2	4.31	53.17	Average	54	Pass
NVNT	BLE 2Mbps	2402	Ant1	2390	-55.56	2	-	41.7	Peak	74	Pass
NVNT	BLE 2Mbps	2402	Ant1	2390	-63.54	2	4.31	38.03	Average	54	Pass
NVNT	BLE 2Mbps	2480	Ant1	2483.5	-46.61	2	-	50.65	Peak	74	Pass
NVNT	BLE 2Mbps	2480	Ant1	2483.5	-58.74	2	4.38	42.9	Average	54	Pass
NVNT	BLE 2Mbps	2480	Ant1	2484.688	-44.11	2	-	53.15	Peak	74	Pass
NVNT	BLE 2Mbps	2480	Ant1	2483.632	-58.12	2	4.38	43.52	Average	54	Pass
NVNT	BLE 2Mbps	2480	Ant1	2500	-55.41	2	-	41.85	Peak	74	Pass
NVNT	BLE 2Mbps	2480	Ant1	2500	-65.56	2	4.38	36.08	Average	54	Pass

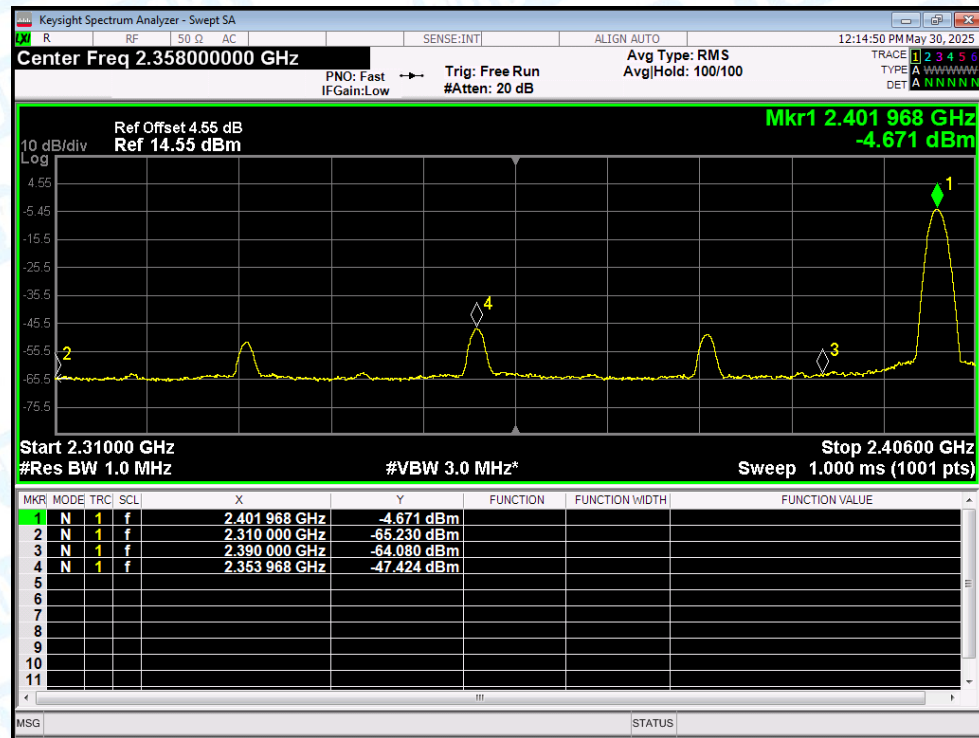
Note: RF Conducted test Offset= cable loss+ Attenuator factor.

Test Graphs

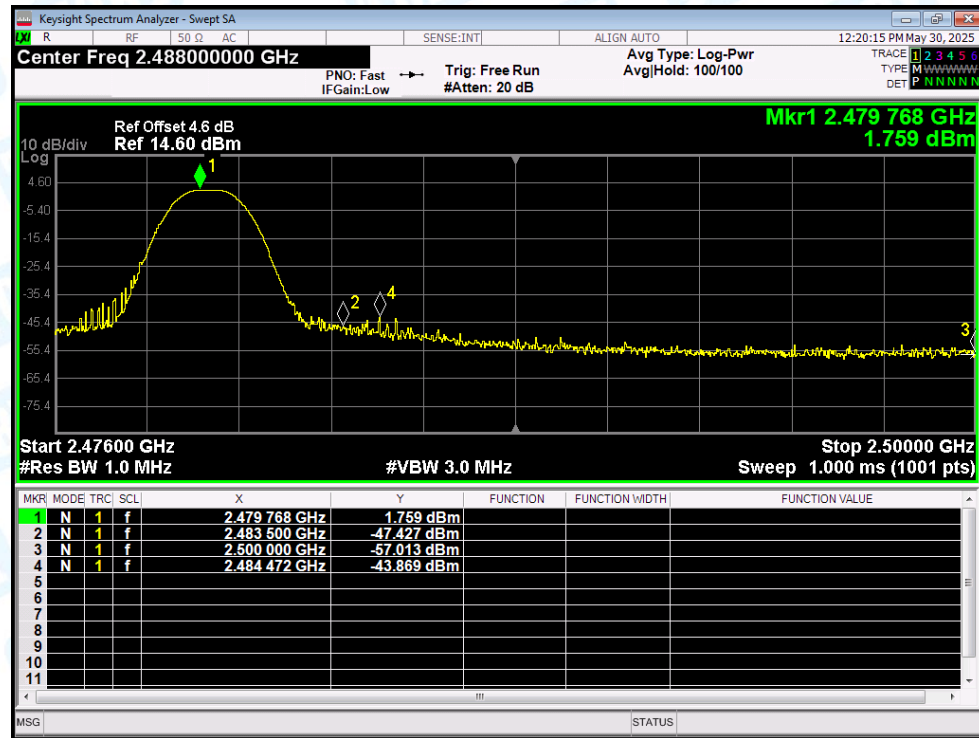
Restrict Band NVNT BLE 1Mbps 2402MHz Ant1 Peak



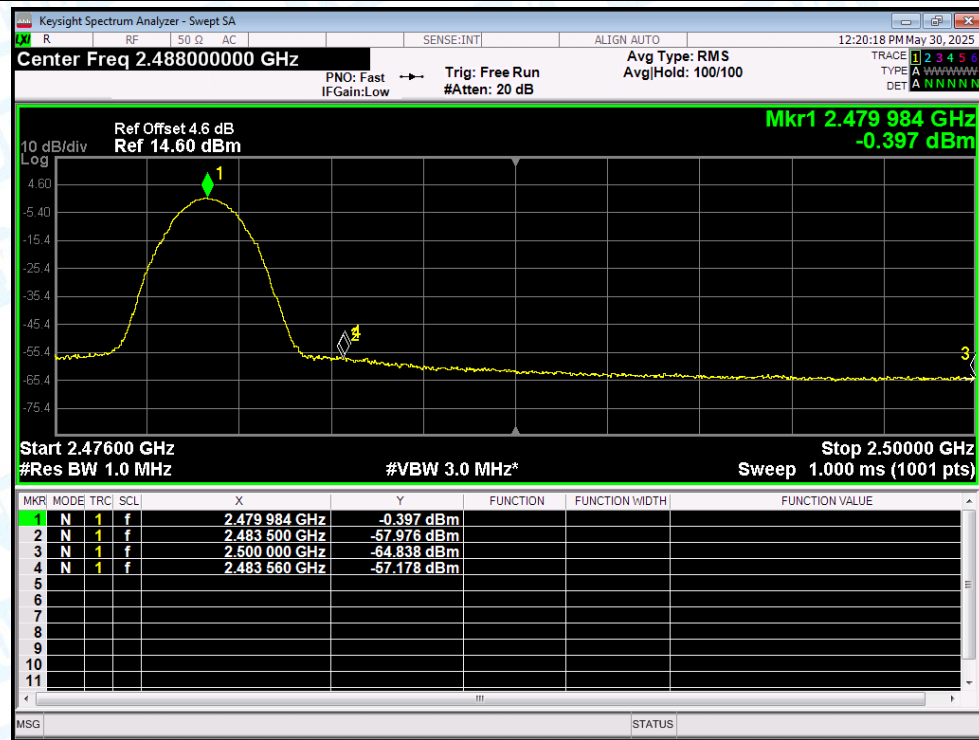
Restrict Band NVNT BLE 1Mbps 2402MHz Ant1 Average



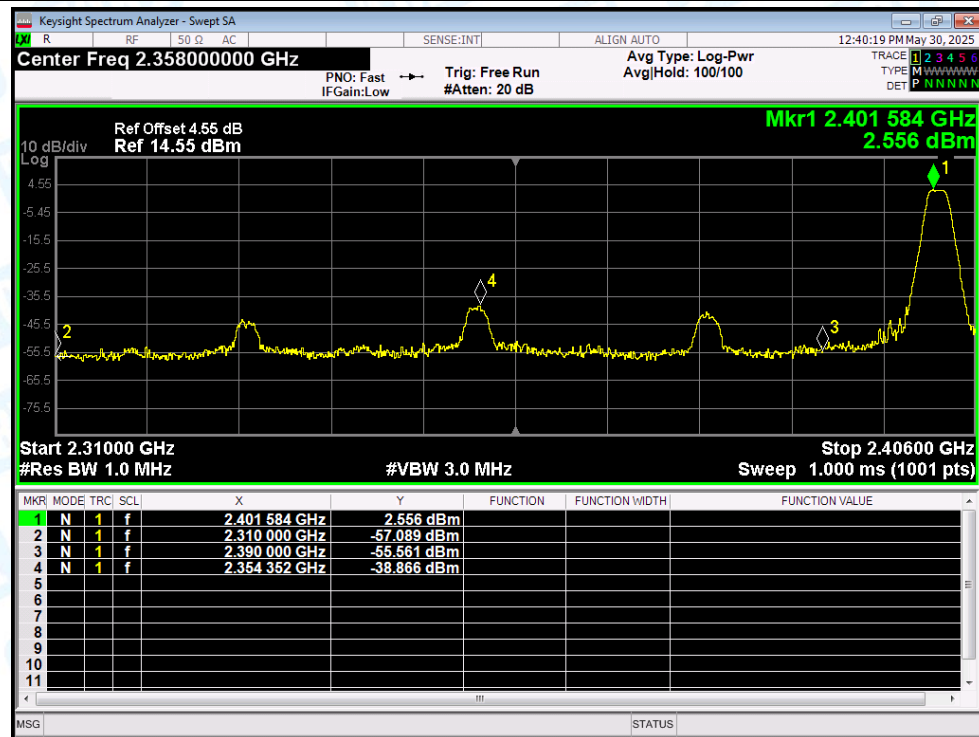
Restrict Band NVNT BLE 1Mbps 2480MHz Ant1 Peak



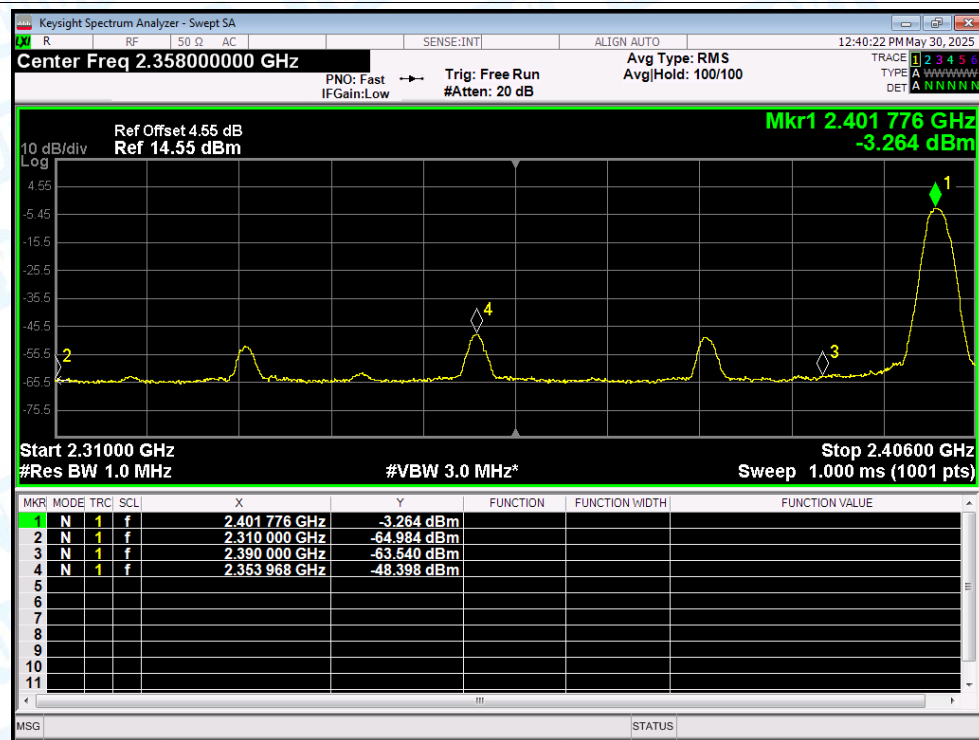
Restrict Band NVNT BLE 1Mbps 2480MHz Ant1 Average



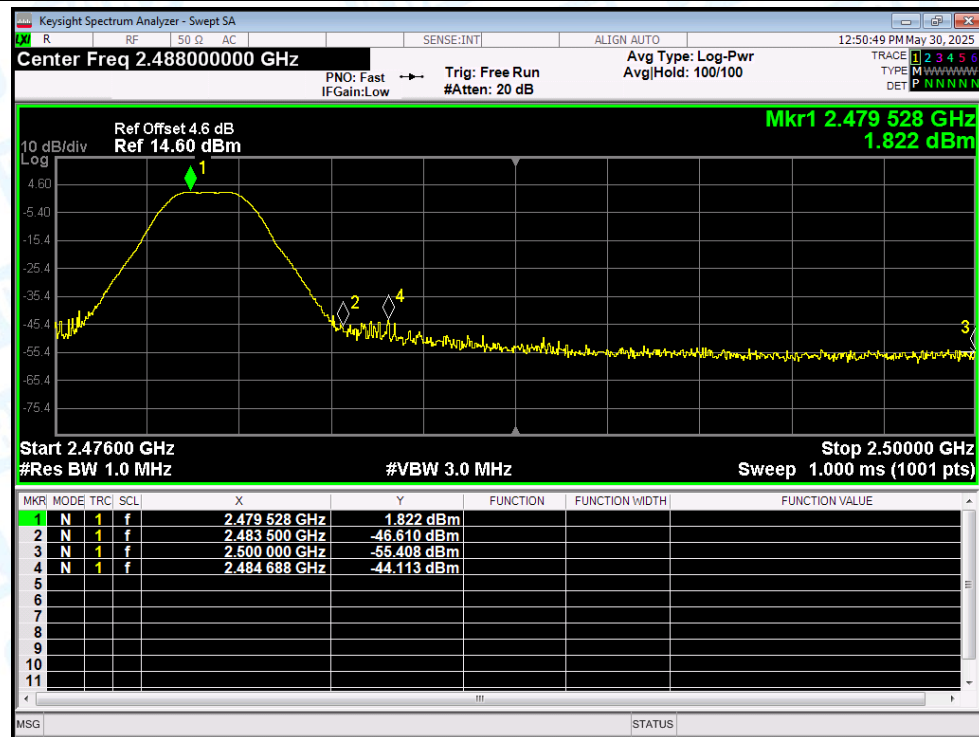
Restrict Band NVNT BLE 2Mbps 2402MHz Ant1 Peak



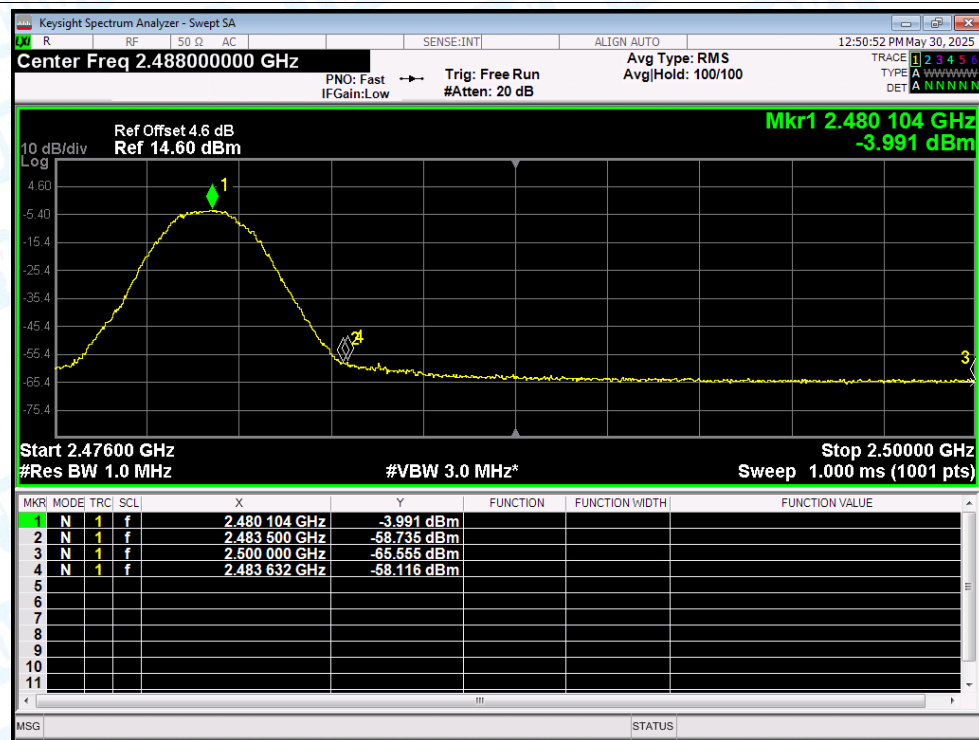
Restrict Band NVNT BLE 2Mbps 2402MHz Ant1 Average



Restrict Band NVNT BLE 2Mbps 2480MHz Ant1 Peak



Restrict Band NVNT BLE 2Mbps 2480MHz Ant1 Average



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