

RF Test Data for Thread (Conducted Measurements)

General Description of EUT	
Product Name:	Contact & Motion Sensor
Test Model:	VHMS1
Sample ID:	HC-C-202511-0129-01-01-2#
Environmental Conditions	
Temperature:	23.8℃
Relative Humidity:	48%
Test Voltage:	DC 3V
Test Engineer:	Lily. zhang
Note: For a more detailed features description, please refer to the report TBR-C-202511-0129-22 The report only show the worst case data.	

Contents

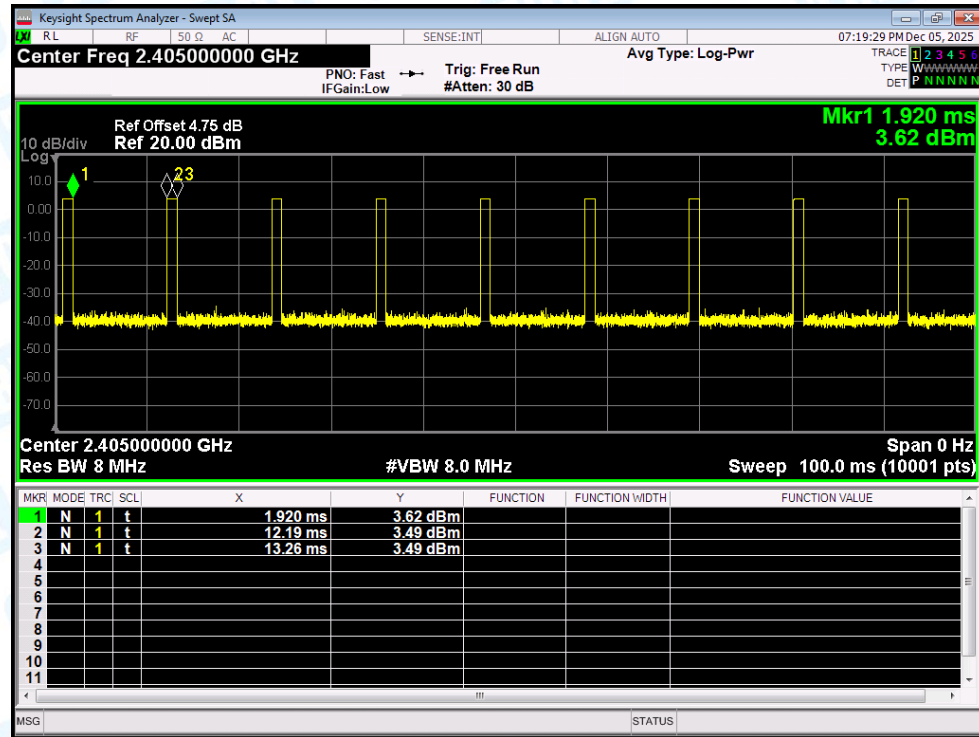
1.	Duty Cycle	3
2.	Maximum Conducted Output Power	6
3.	-6dB Bandwidth	9
4.	Occupied Channel Bandwidth	12
5.	Maximum Power Spectral Density Level	15
6.	Band Edge	18
7.	Conducted RF Spurious Emission	21
8.	Restrict Band	25

1. Duty Cycle

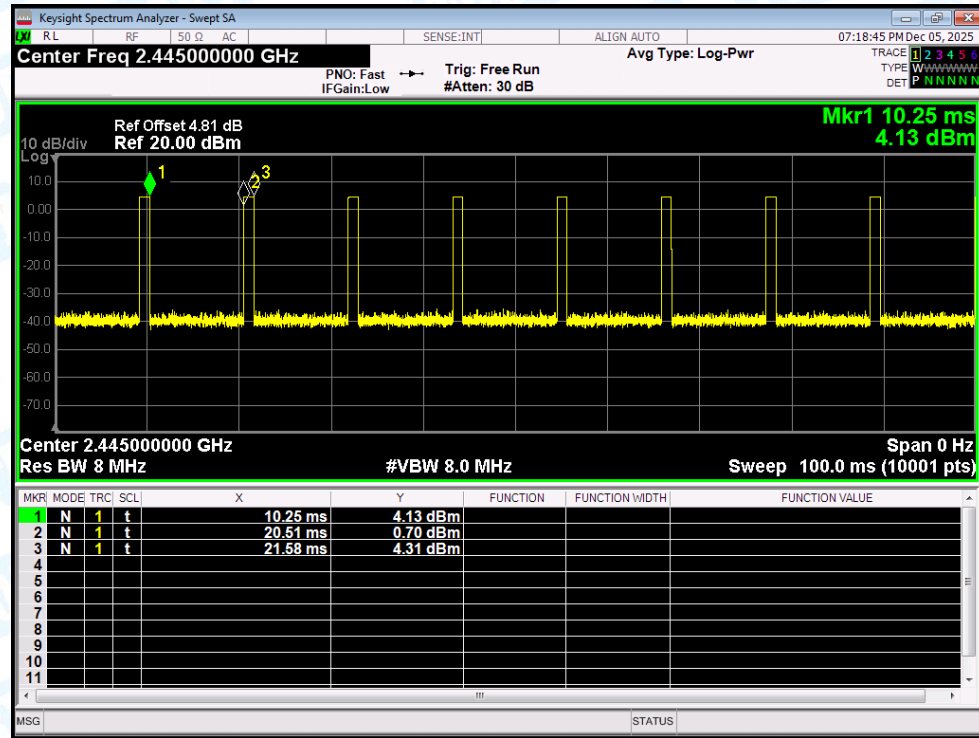
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	Thread	2405	Ant1	9.44	10.25	0.93
NVNT	Thread	2445	Ant1	9.44	10.25	0.93
NVNT	Thread	2480	Ant1	9.44	10.25	0.93

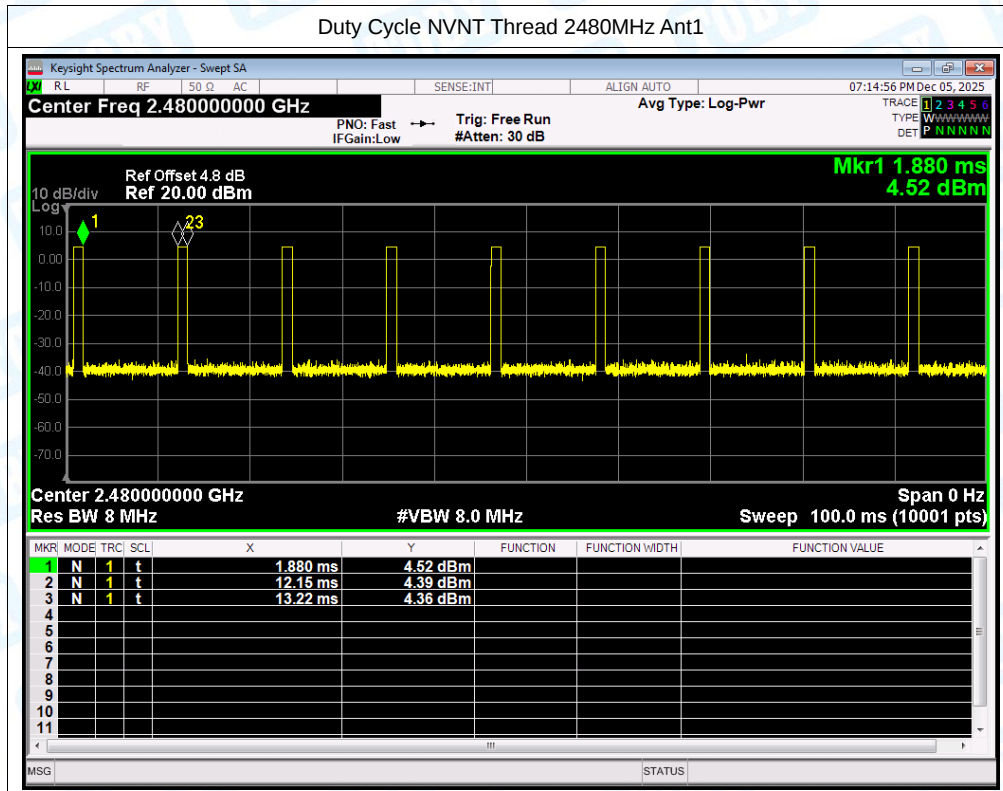
Test Graphs

Duty Cycle NVNT Thread 2405MHz Ant1



Duty Cycle NVNT Thread 2445MHz Ant1



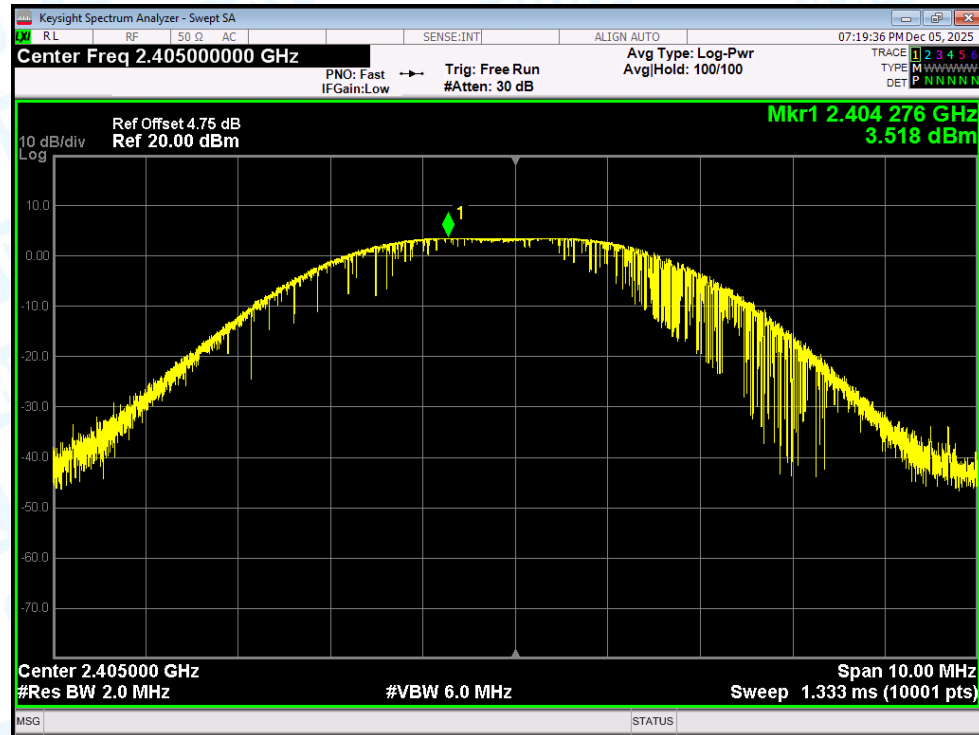


2. Maximum Conducted Output Power

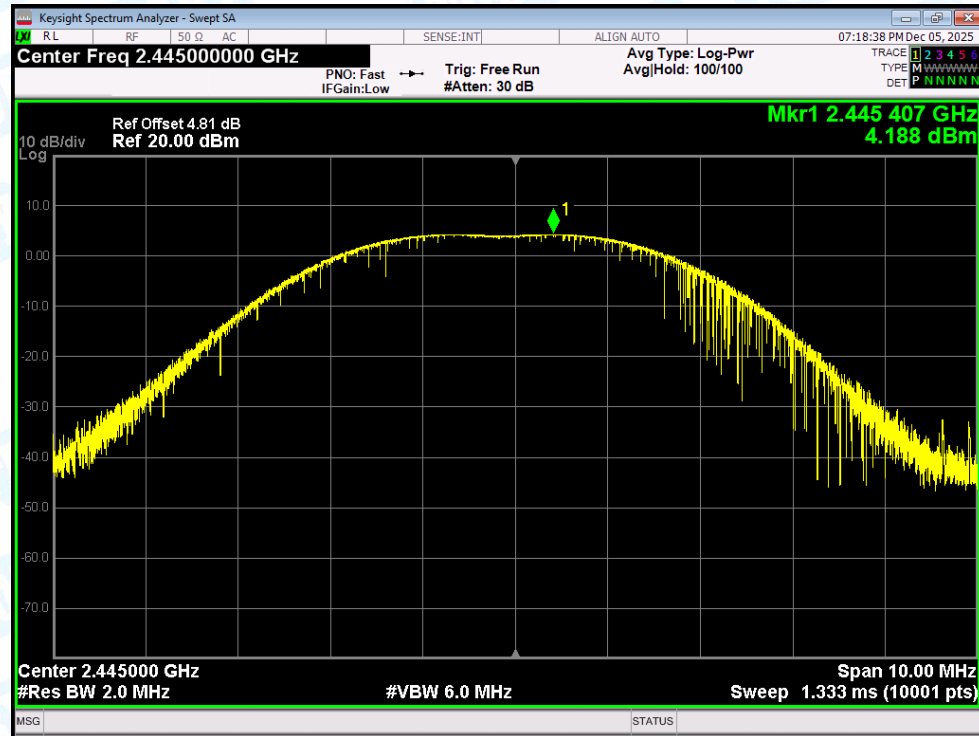
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	Thread	2405	Ant1	3.518	30	Pass
NVNT	Thread	2445	Ant1	4.188	30	Pass
NVNT	Thread	2480	Ant1	4.418	30	Pass

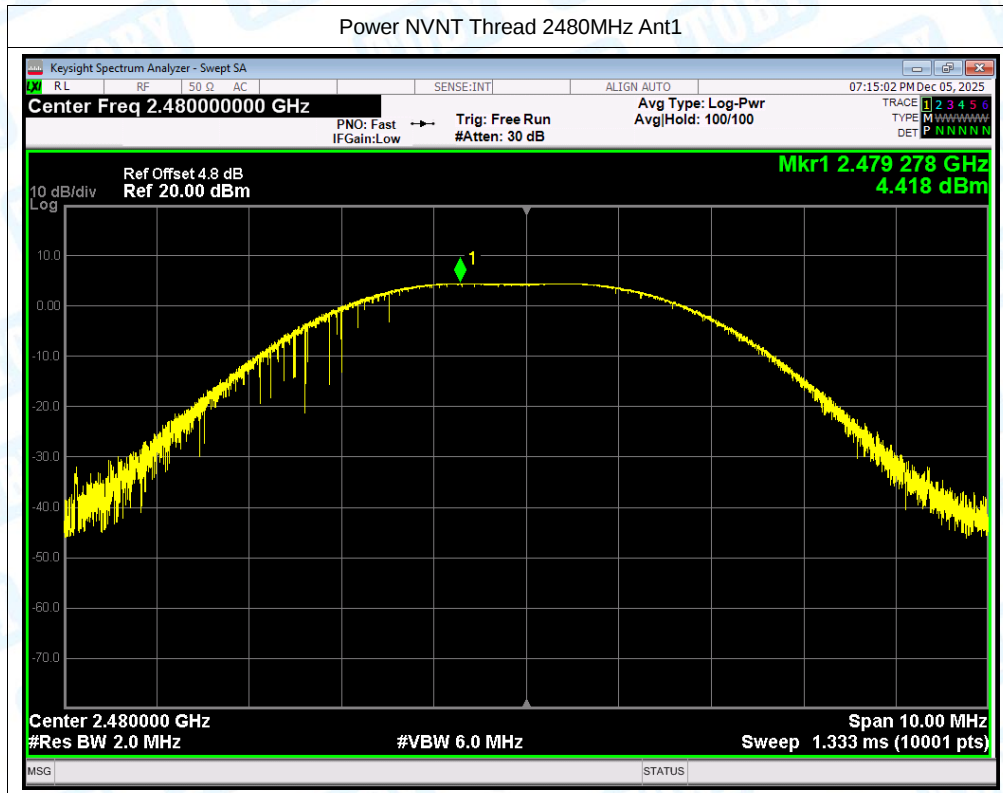
Test Graphs

Power NVNT Thread 2405MHz Ant1



Power NVNT Thread 2445MHz Ant1



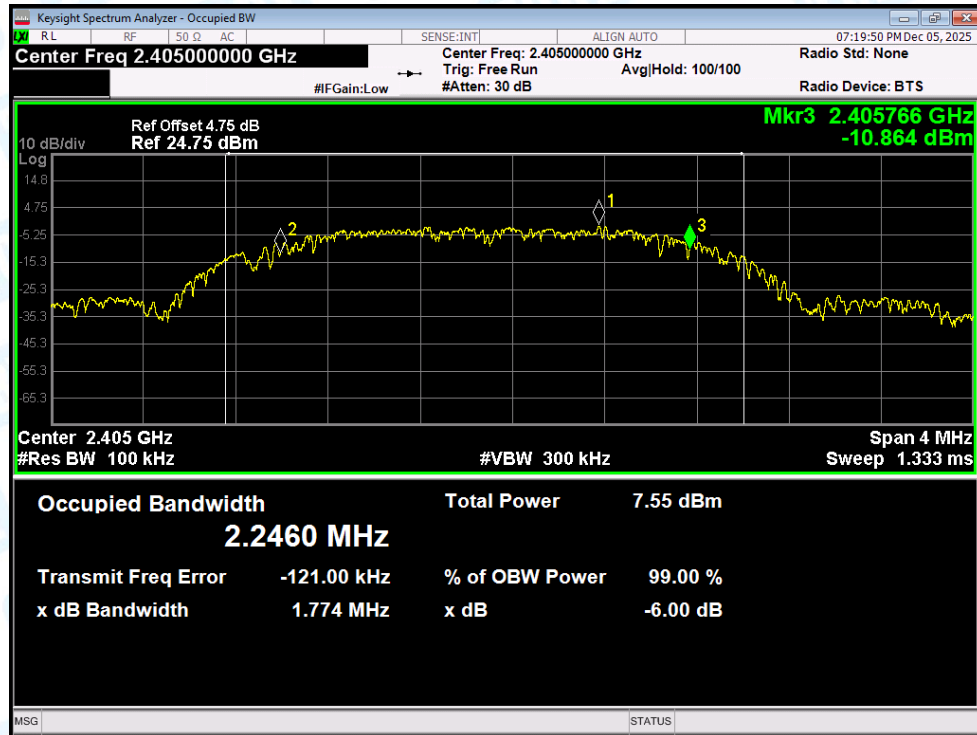


3. -6dB Bandwidth

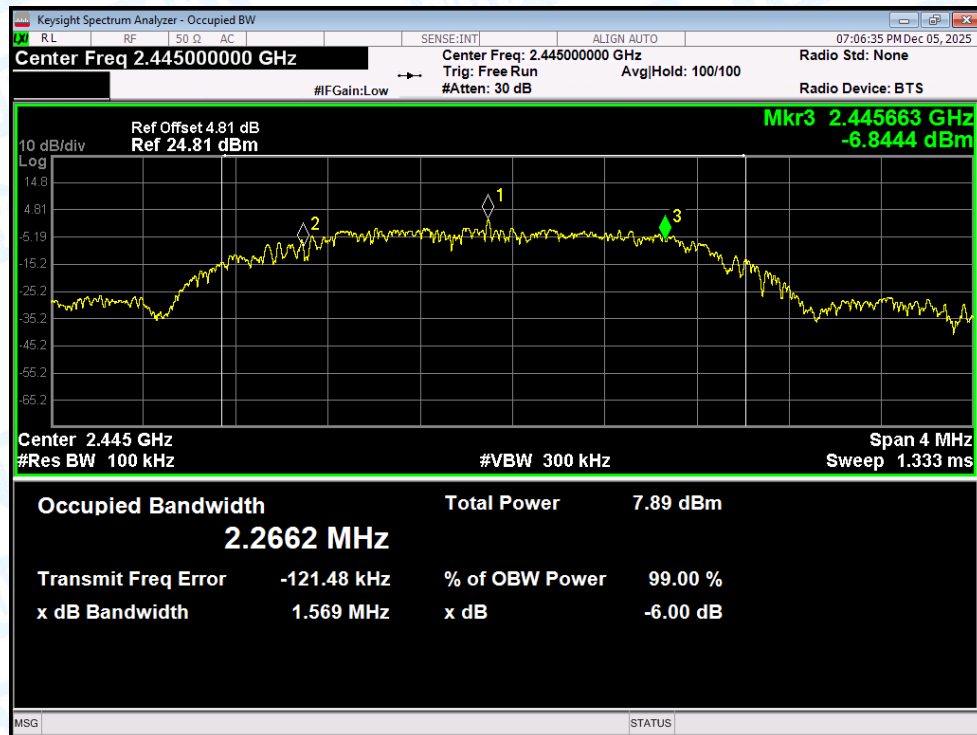
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	Thread	2405	Ant1	1.77	0.5	Pass
NVNT	Thread	2445	Ant1	1.57	0.5	Pass
NVNT	Thread	2480	Ant1	1.73	0.5	Pass

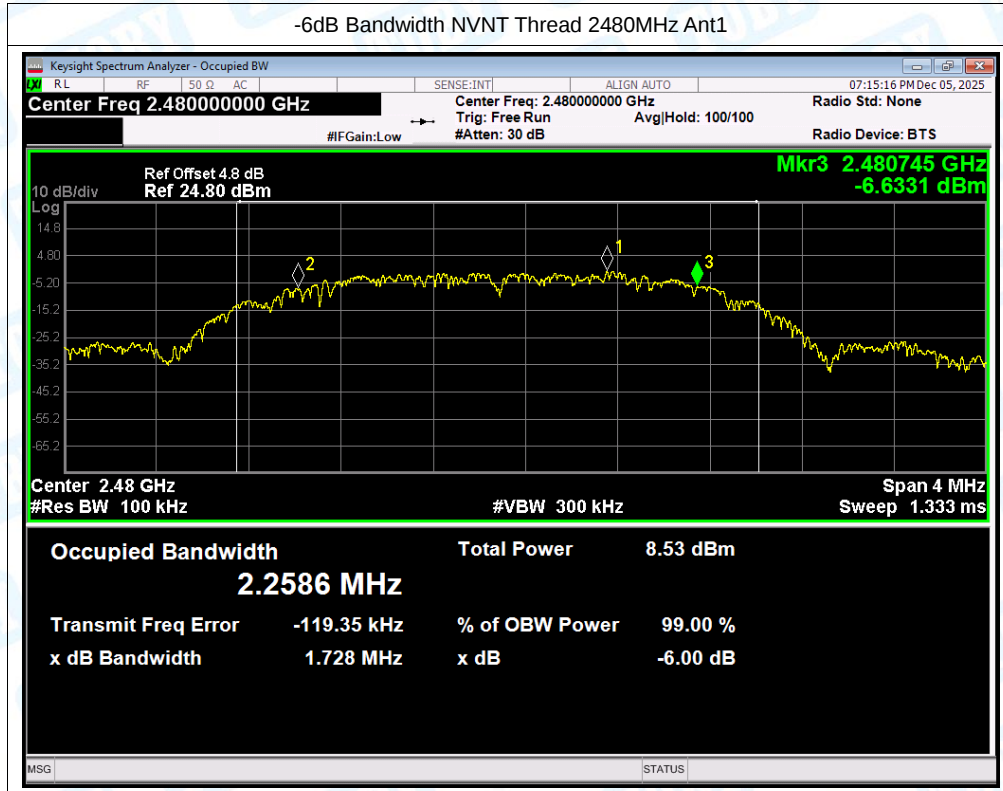
Test Graphs

-6dB Bandwidth NVNT Thread 2405MHz Ant1



-6dB Bandwidth NVNT Thread 2445MHz Ant1



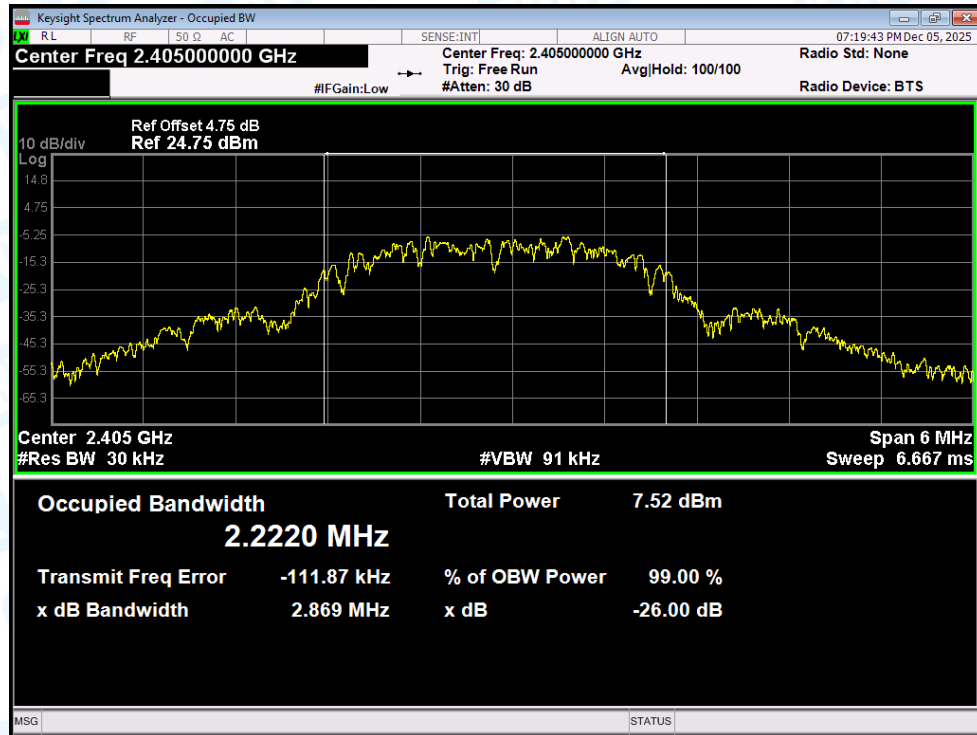


4. Occupied Channel Bandwidth

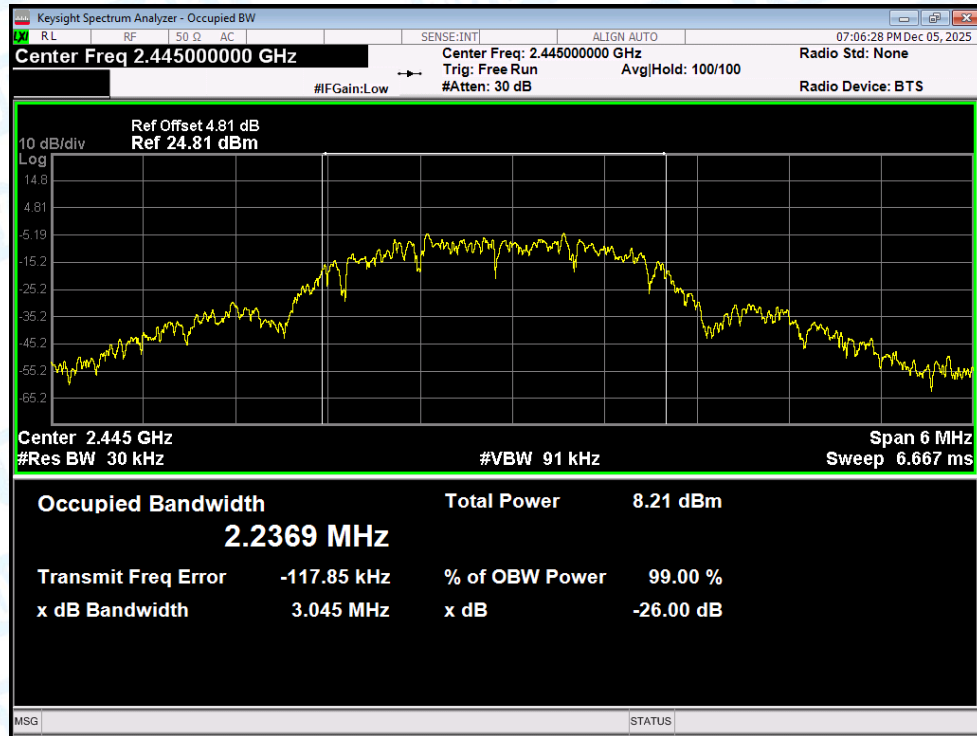
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	Thread	2405	Ant1	2.222
NVNT	Thread	2445	Ant1	2.237
NVNT	Thread	2480	Ant1	2.249

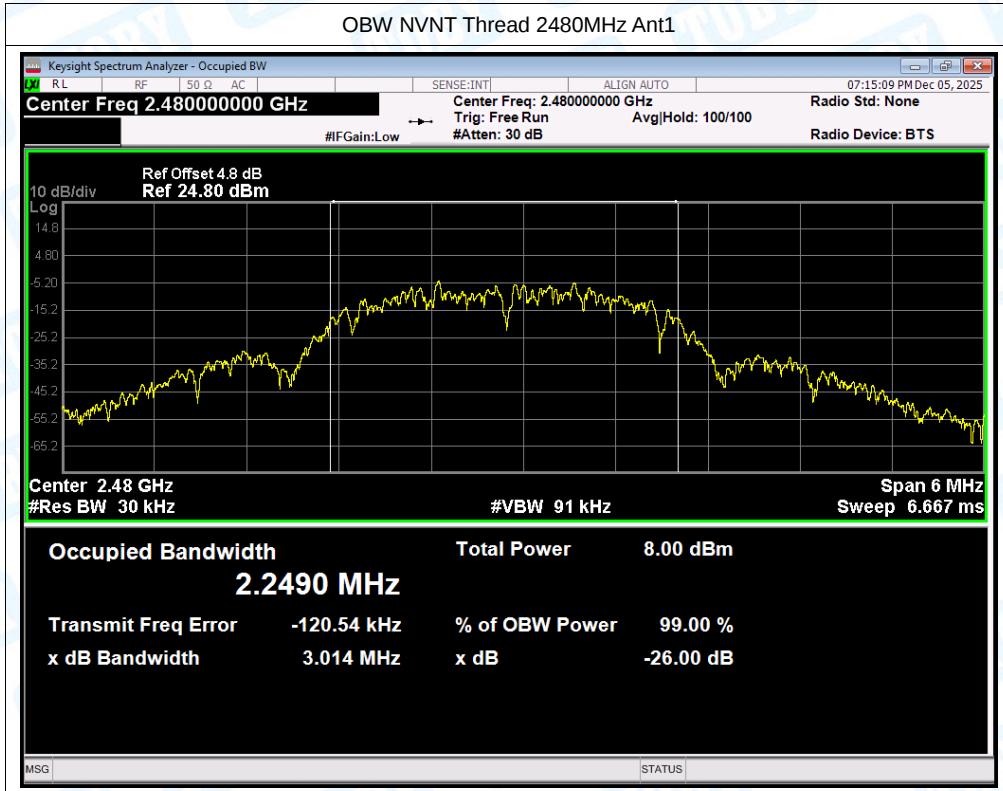
Test Graphs

OBW NVNT Thread 2405MHz Ant1



OBW NVNT Thread 2445MHz Ant1



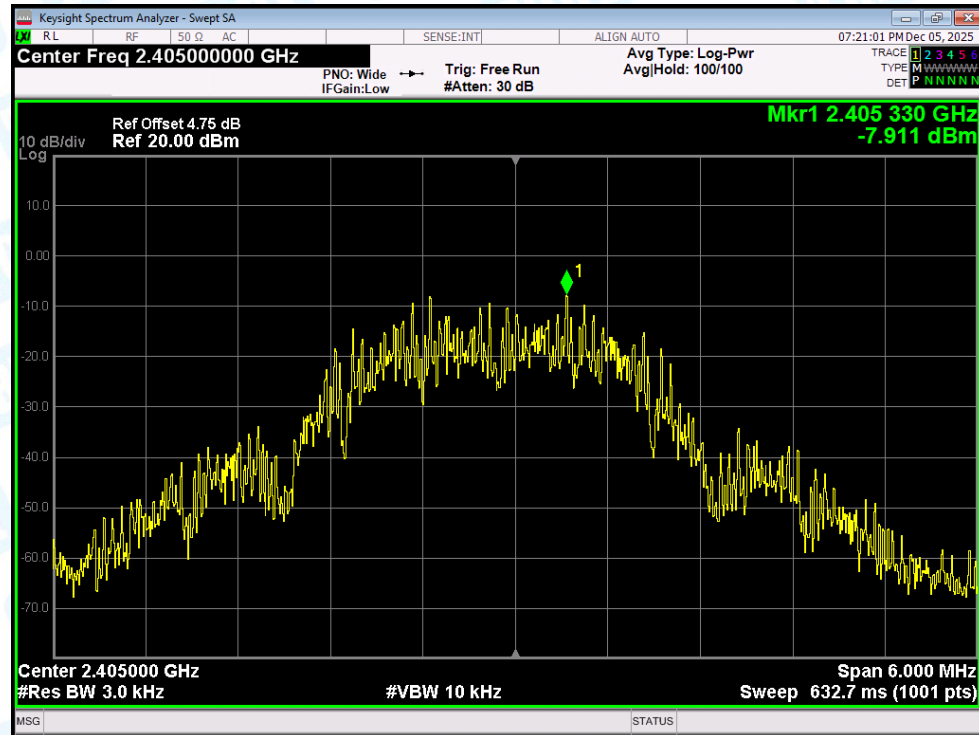


5. Maximum Power Spectral Density Level

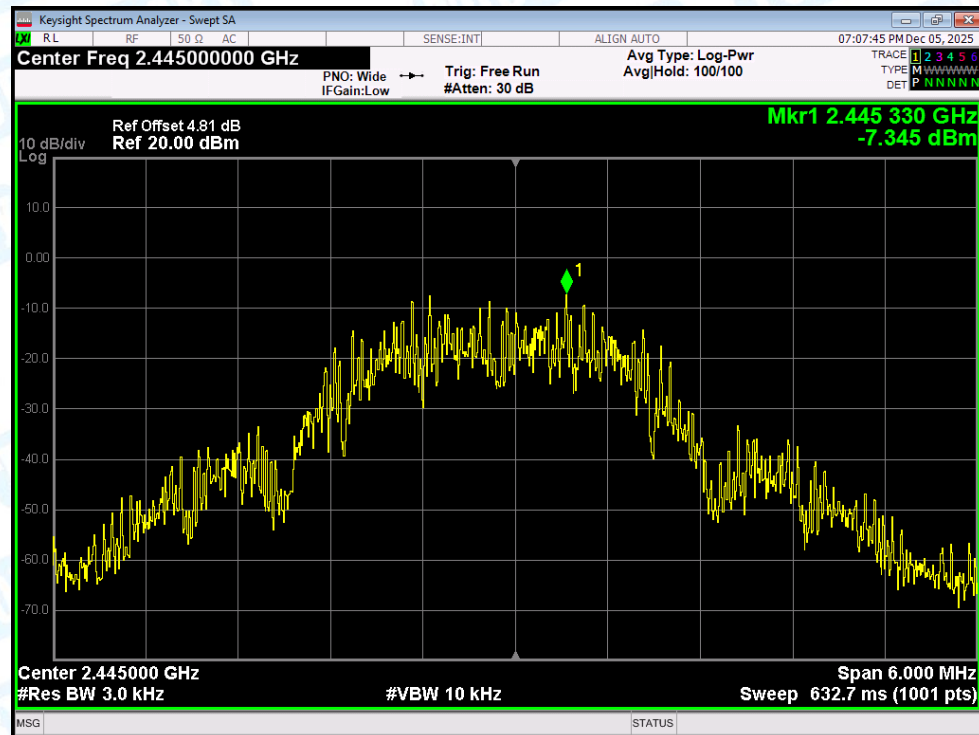
Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	Thread	2405	Ant1	-7.911	8	Pass
NVNT	Thread	2445	Ant1	-7.345	8	Pass
NVNT	Thread	2480	Ant1	-7.334	8	Pass

Test Graphs

PSD NVNT Thread 2405MHz Ant1



PSD NVNT Thread 2445MHz Ant1



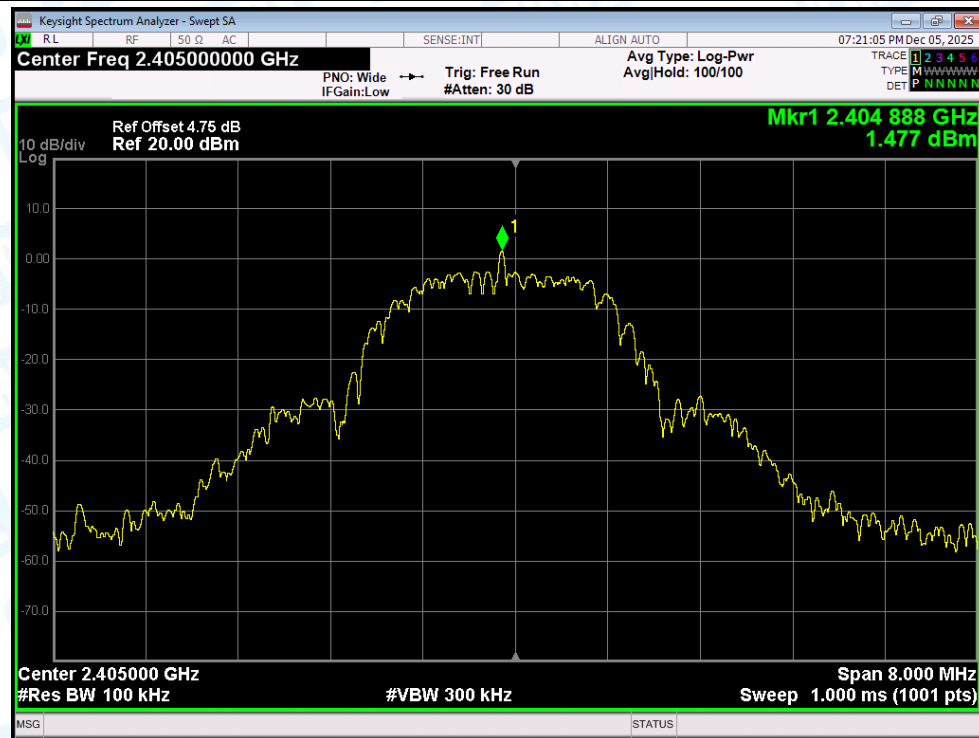


6. Band Edge

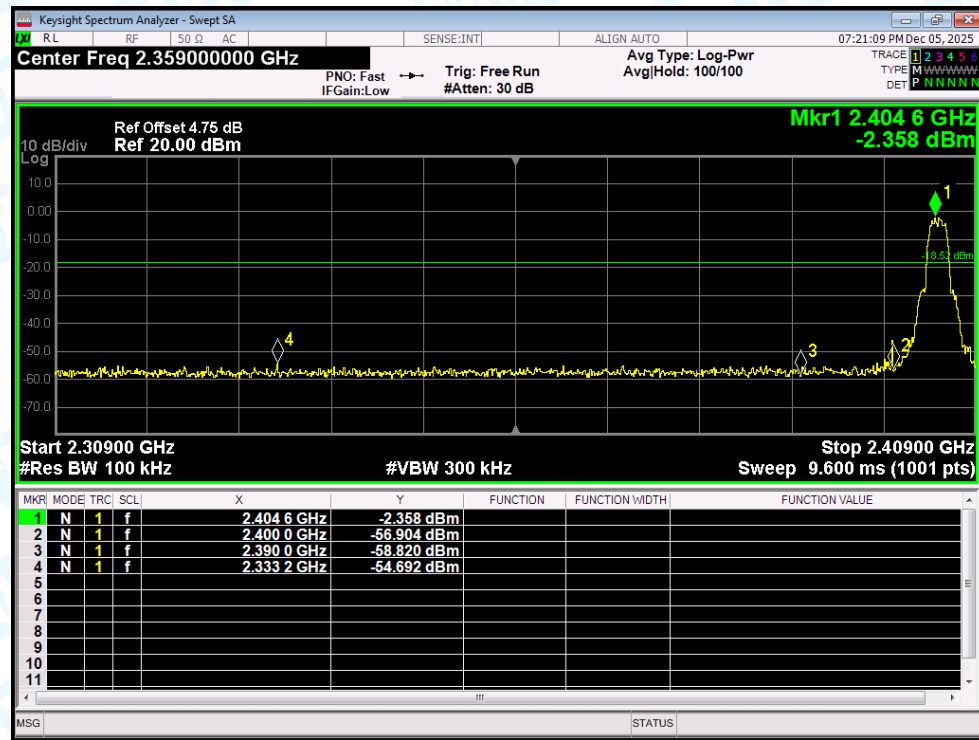
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	Thread	2405	Ant1	-56.17	-20	Pass
NVNT	Thread	2480	Ant1	-50.1	-20	Pass

Test Graphs

Band Edge NVNT Thread 2405MHz Ant1 Ref



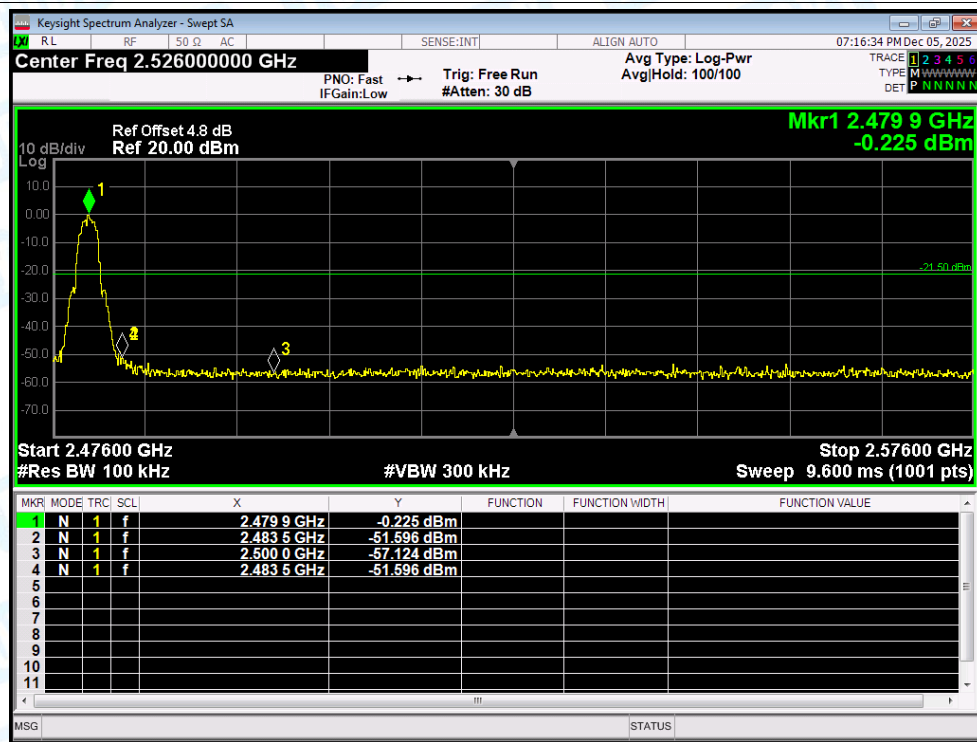
Band Edge NVNT Thread 2405MHz Ant1 Emission



Band Edge NVNT Thread 2480MHz Ant1 Ref



Band Edge NVNT Thread 2480MHz Ant1 Emission

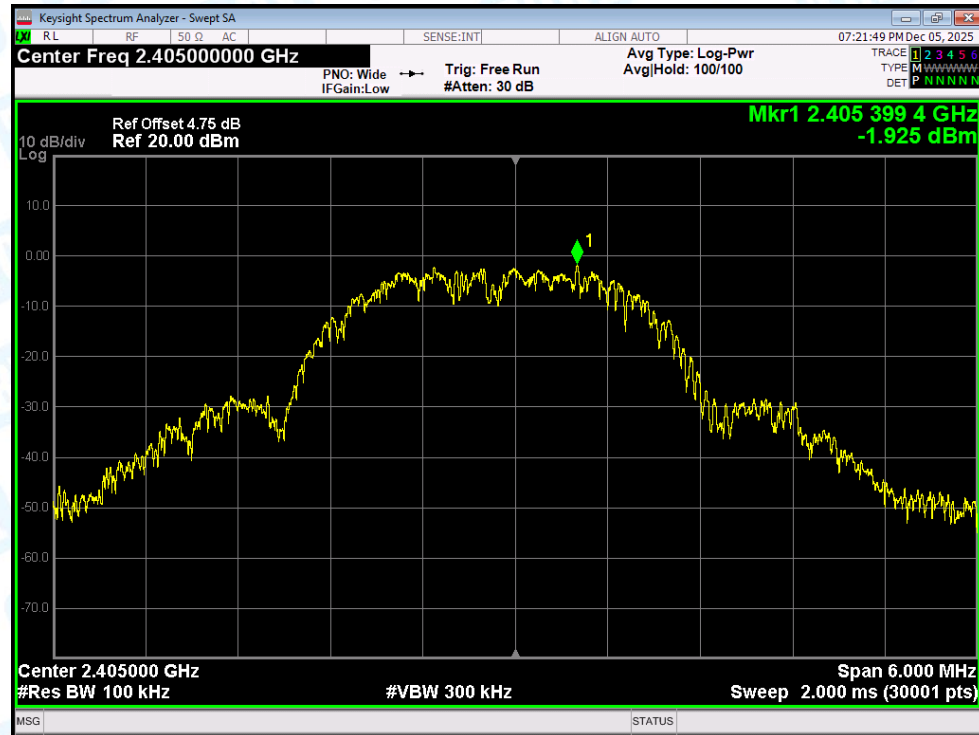


7. Conducted RF Spurious Emission

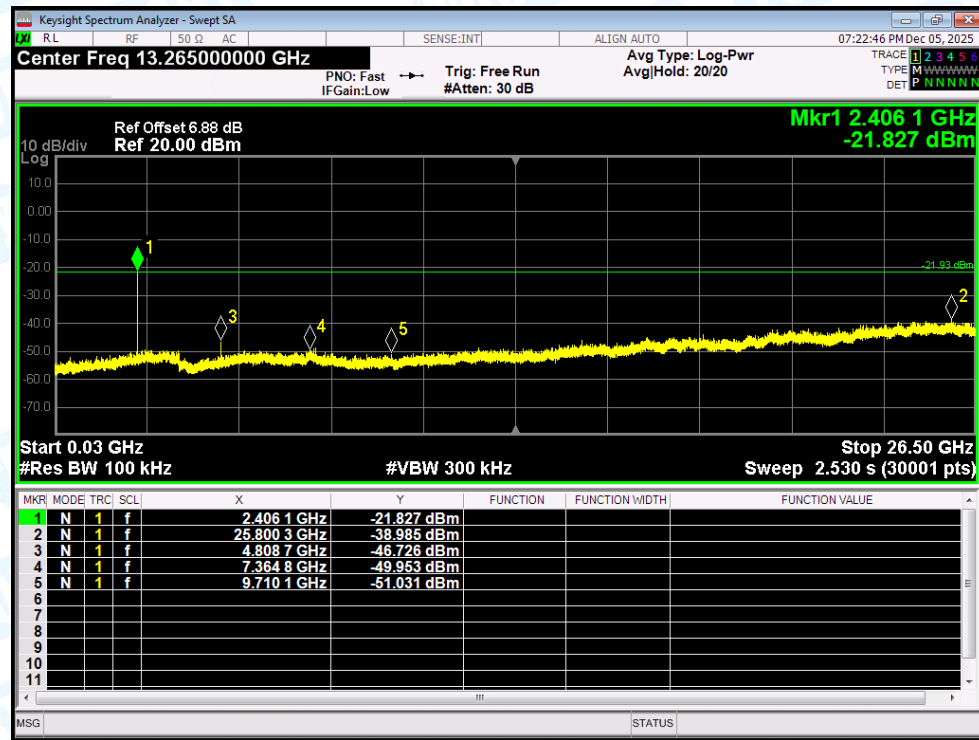
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	Thread	2405	Ant1	-37.07	-20	Pass
NVNT	Thread	2445	Ant1	-40.28	-20	Pass
NVNT	Thread	2480	Ant1	-41.76	-20	Pass

Test Graphs

Tx. Spurious NVNT Thread 2405MHz Ant1 Ref



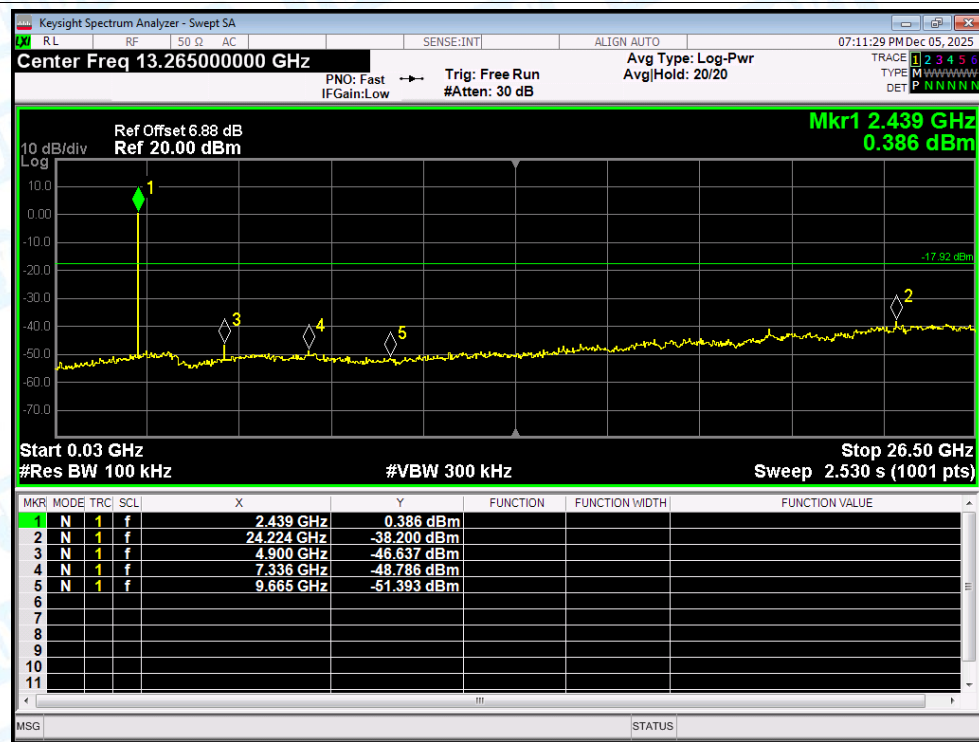
Tx. Spurious NVNT Thread 2405MHz Ant1 Emission



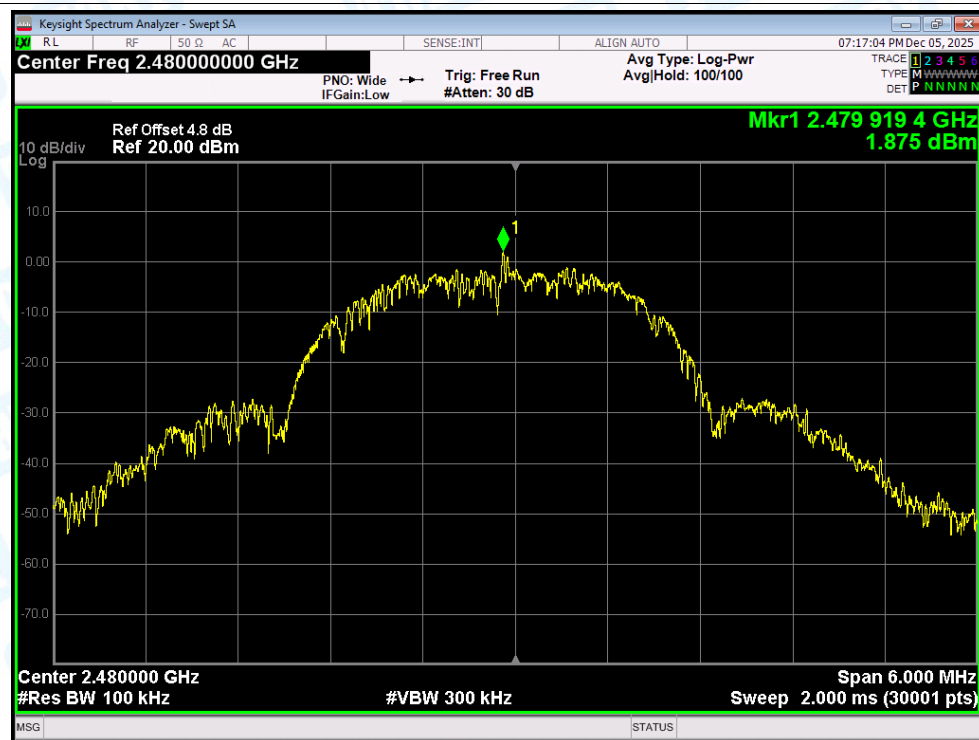
Tx. Spurious NVNT Thread 2445MHz Ant1 Ref



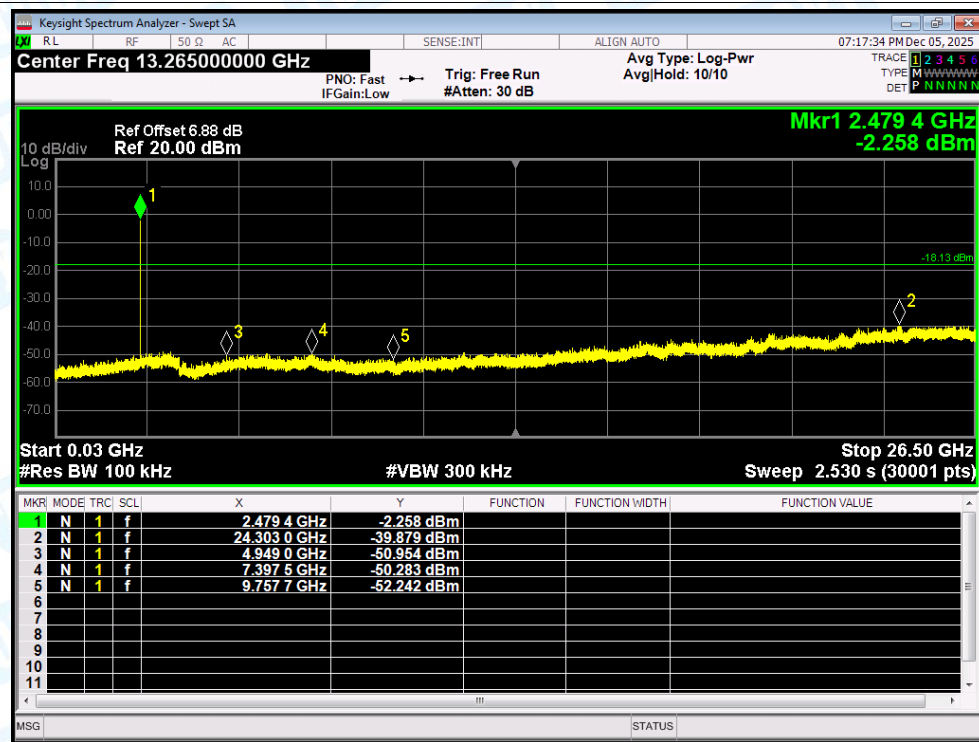
Tx. Spurious NVNT Thread 2445MHz Ant1 Emission



Tx. Spurious NVNT Thread 2480MHz Ant1 Ref



Tx. Spurious NVNT Thread 2480MHz Ant1 Emission

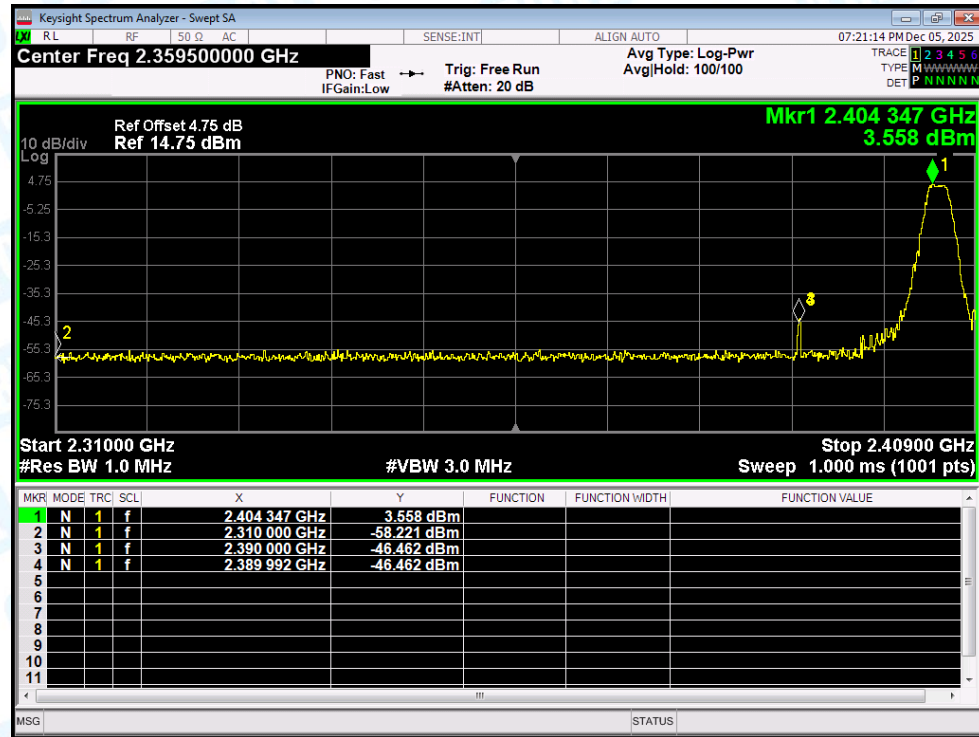


8. Restrict Band

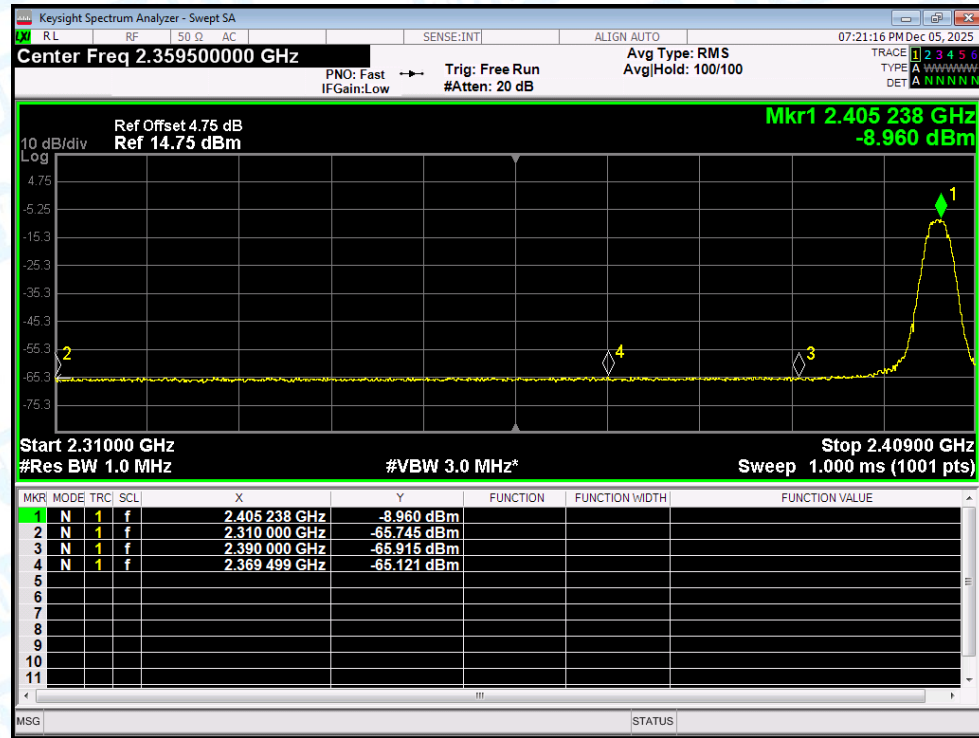
Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	Thread	2405	Ant1	2310	-58.22	1.84	-	39.04	Peak	74	Pass
NVNT	Thread	2405	Ant1	2310	-65.75	1.84	10.25	41.76	Average	54	Pass
NVNT	Thread	2405	Ant1	2389.992	-46.46	1.84	-	50.8	Peak	74	Pass
NVNT	Thread	2405	Ant1	2369.499	-65.12	1.84	10.25	42.39	Average	54	Pass
NVNT	Thread	2405	Ant1	2390	-46.46	1.84	-	50.8	Peak	74	Pass
NVNT	Thread	2405	Ant1	2390	-65.92	1.84	10.25	41.59	Average	54	Pass
NVNT	Thread	2480	Ant1	2483.5	-41.28	1.84	-	55.98	Peak	74	Pass
NVNT	Thread	2480	Ant1	2483.5	-57.4	1.84	10.25	50.11	Average	54	Pass
NVNT	Thread	2480	Ant1	2483.68	-39.98	1.84	-	57.28	Peak	74	Pass
NVNT	Thread	2480	Ant1	2484.976	-54.1	1.84	10.25	53.41	Average	54	Pass
NVNT	Thread	2480	Ant1	2500	-58.19	1.84	-	39.07	Peak	74	Pass
NVNT	Thread	2480	Ant1	2500	-64.77	1.84	10.25	42.74	Average	54	Pass

Test Graphs

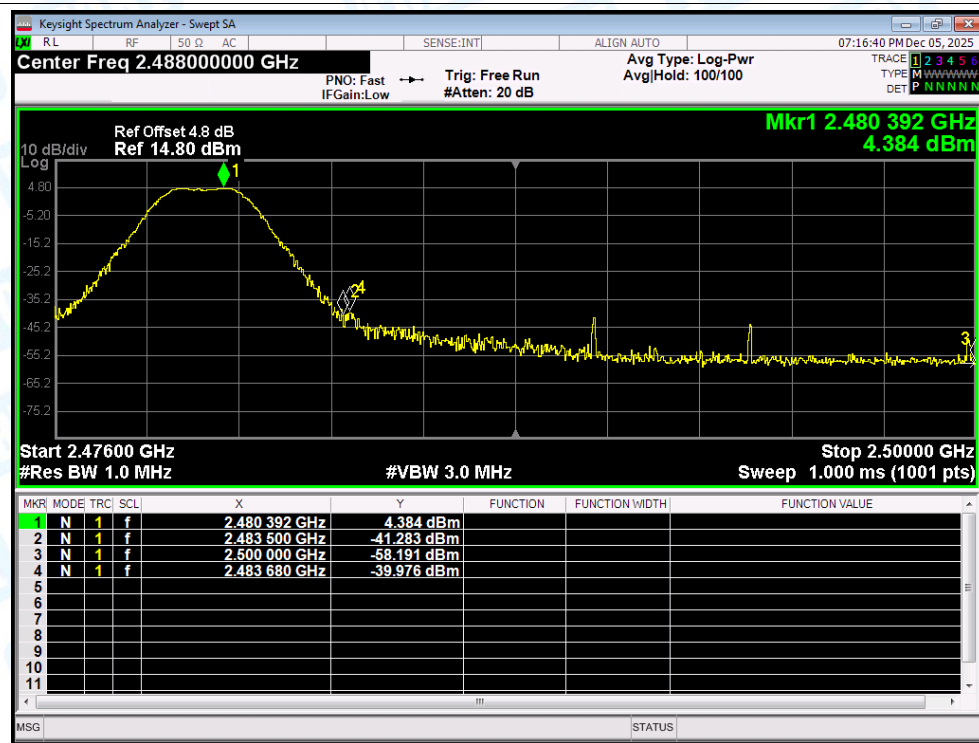
Restrict Band NVNT Thread 2405MHz Ant1 Peak



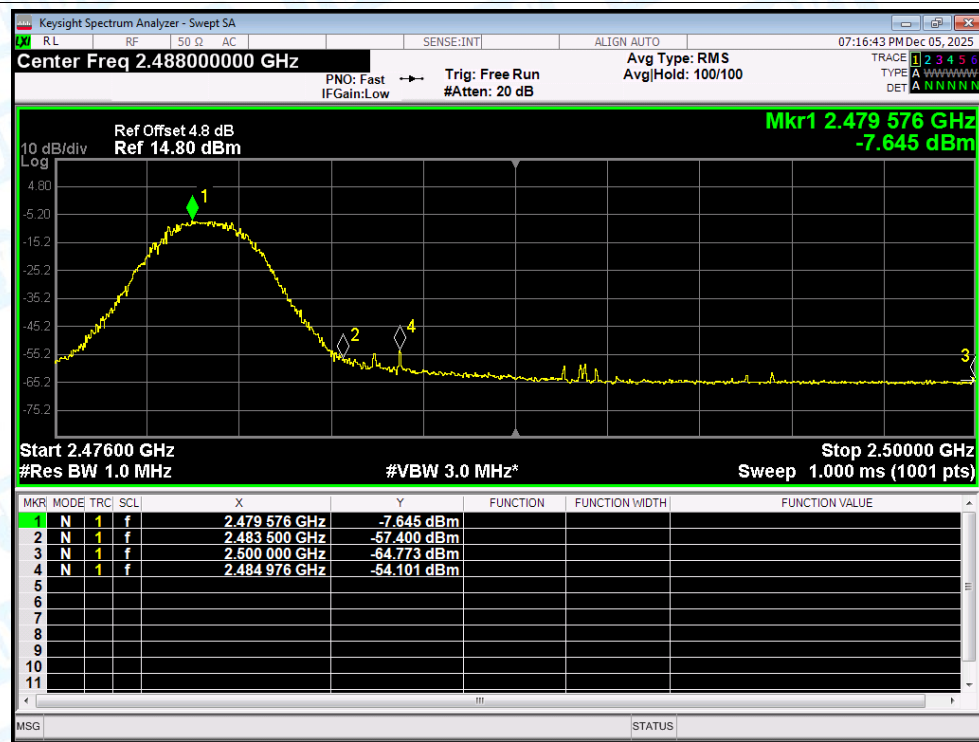
Restrict Band NVNT Thread 2405MHz Ant1 Average



Restrict Band NVNT Thread 2480MHz Ant1 Peak



Restrict Band NVNT Thread 2480MHz Ant1 Average



-----END OF THE REPORT-----