

Appendix A for 5.2GWIFI Test Data

Product Name: Pathfinder

Test Model: CK3-Max

Environmental Conditions

Temperature:	24.7℃
Relative Humidity:	51.3%
ATM Pressure:	101.4 kPa
Test Engineer:	Kimi Lu
Supervised by:	Baret Wu

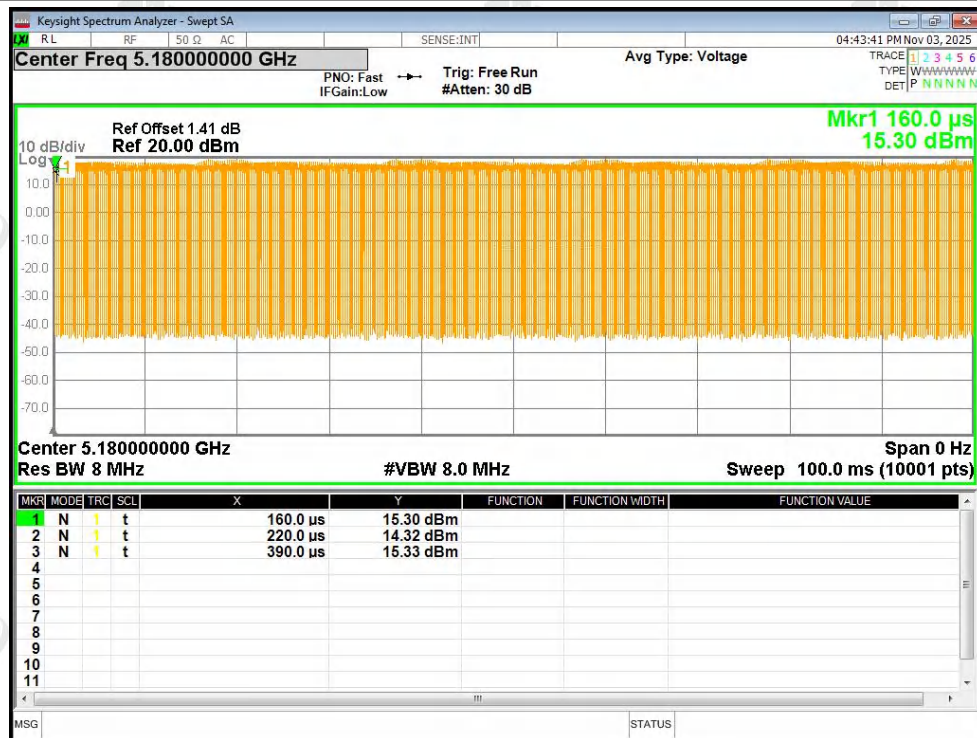
**ZHONGHAN**
A.1 Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	a	5180	Ant1	73.91	1.31	5.88
NVNT	a	5200	Ant1	77.27	1.12	5.88
NVNT	a	5240	Ant1	78.26	1.06	5.56
NVNT	n20	5180	Ant1	76.19	1.18	6.25
NVNT	n20	5200	Ant1	76.19	1.18	6.25
NVNT	n20	5240	Ant1	76.19	1.18	6.25
NVNT	n40	5190	Ant1	66.67	1.76	10
NVNT	n40	5230	Ant1	64.29	1.92	11.11

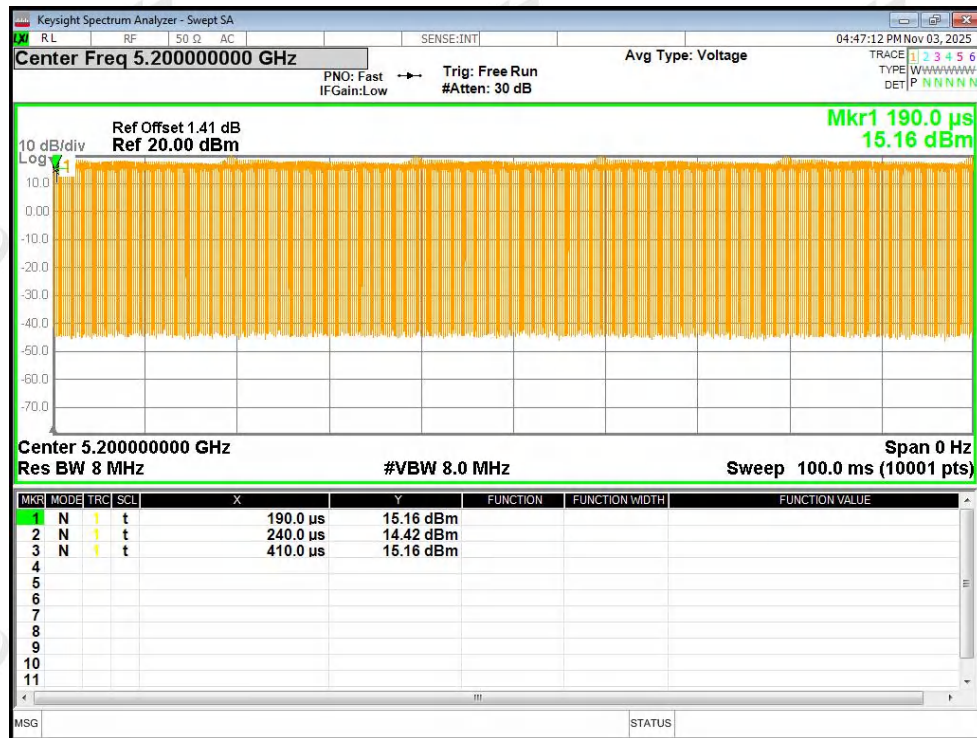


Test Graphs

Duty Cycle NVNT a 5180MHz Ant1

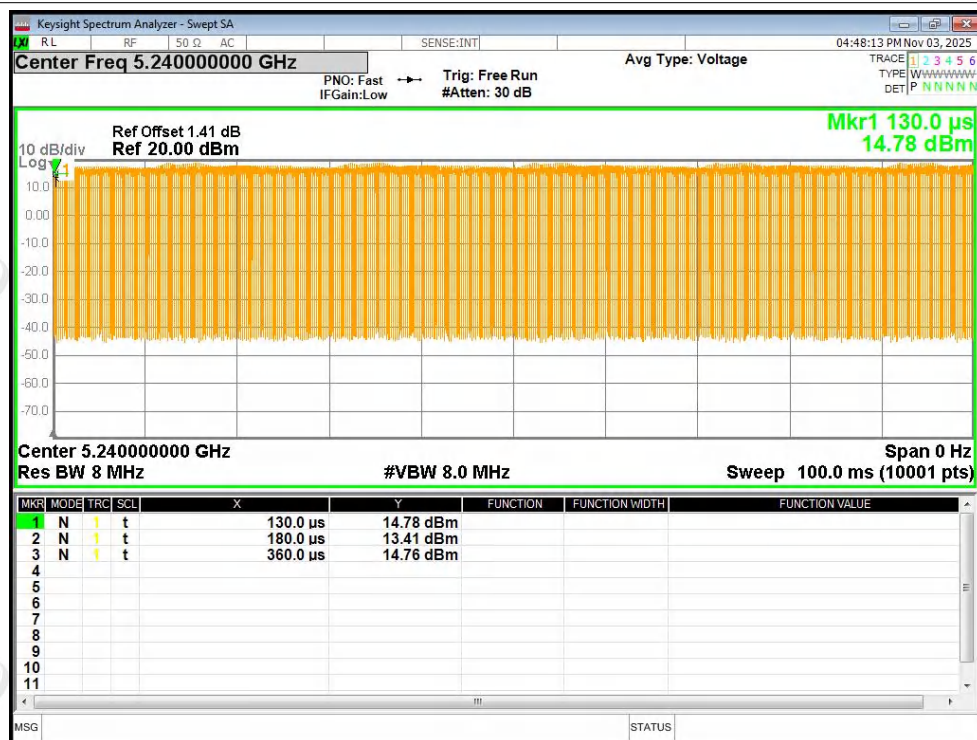


Duty Cycle NVNT a 5200MHz Ant1

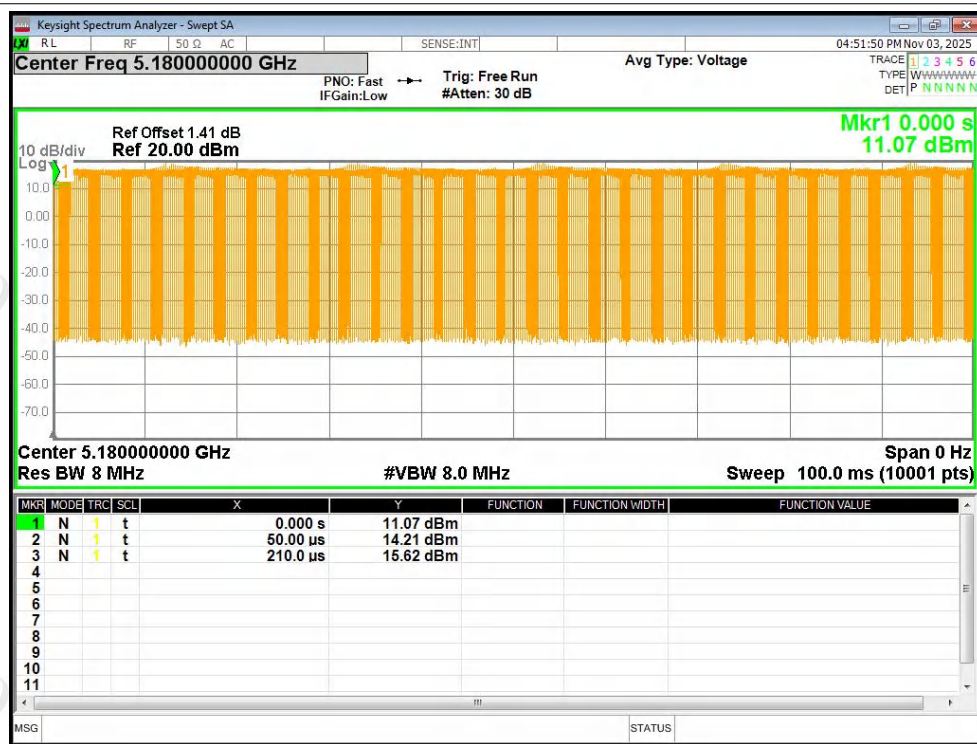




Duty Cycle NVNT a 5240MHz Ant1

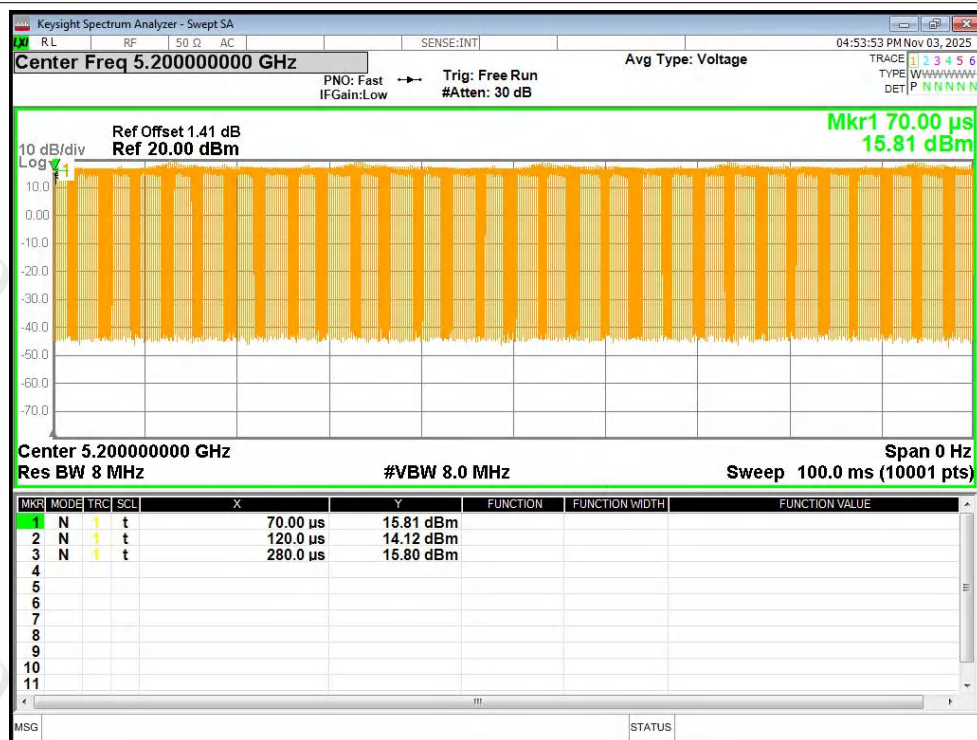


Duty Cycle NVNT n20 5180MHz Ant1

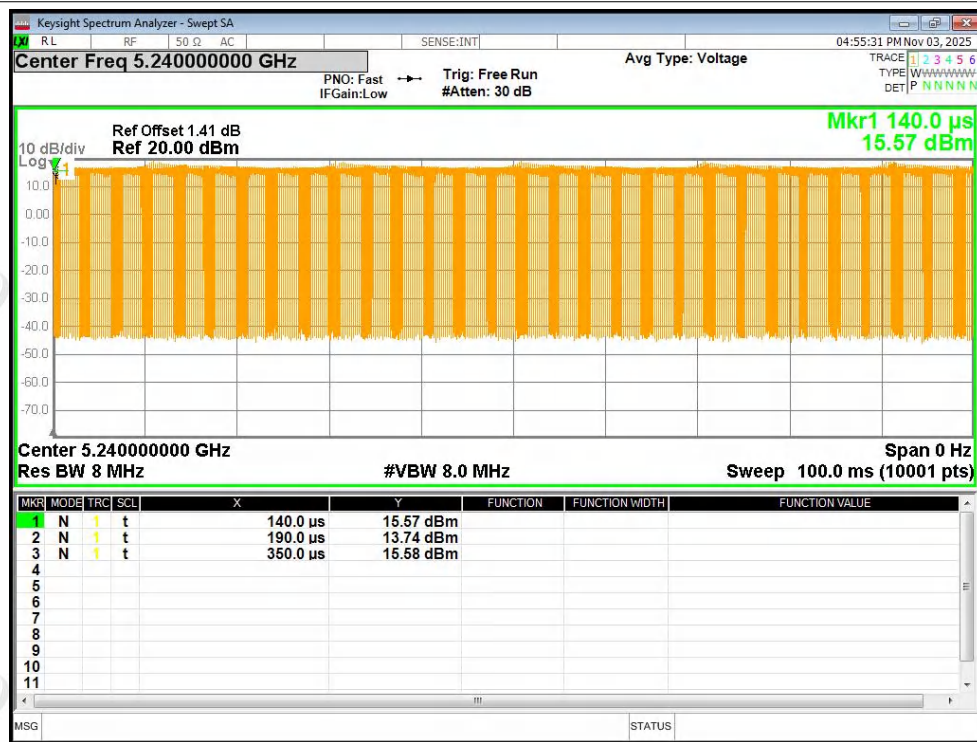




Duty Cycle NVNT n20 5200MHz Ant1

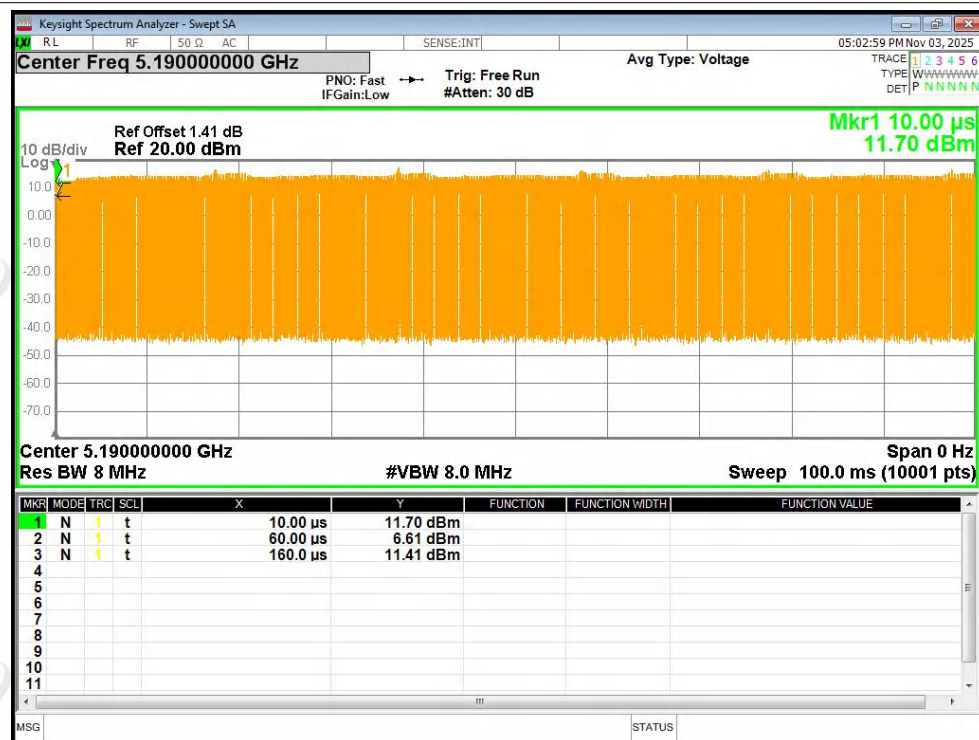


Duty Cycle NVNT n20 5240MHz Ant1

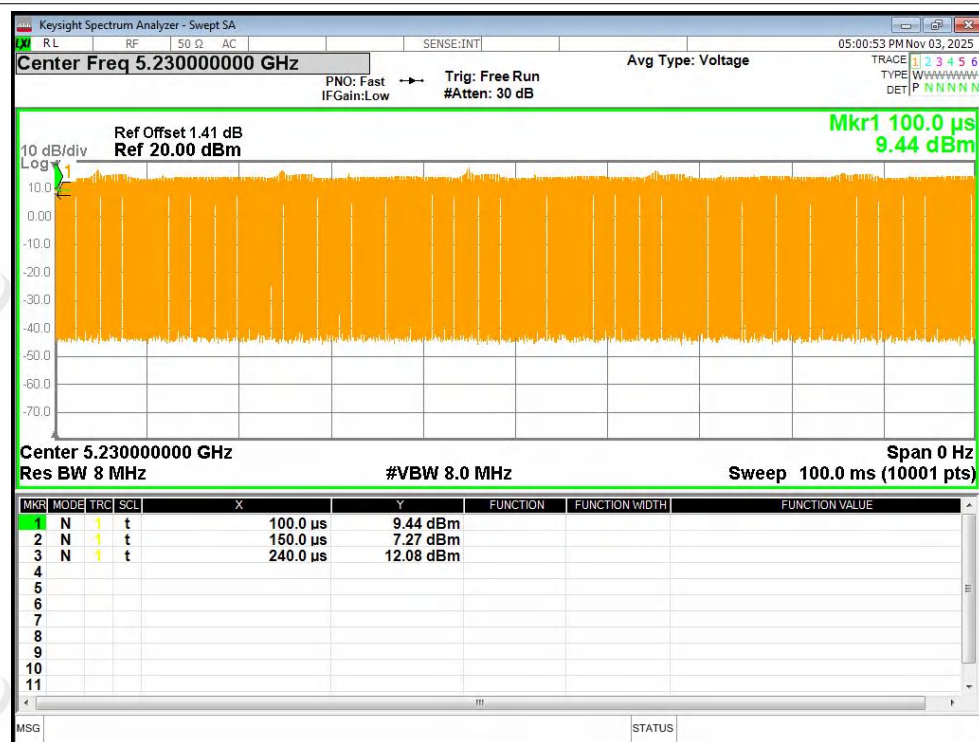




Duty Cycle NVNT n40 5190MHz Ant1



Duty Cycle NVNT n40 5230MHz Ant1



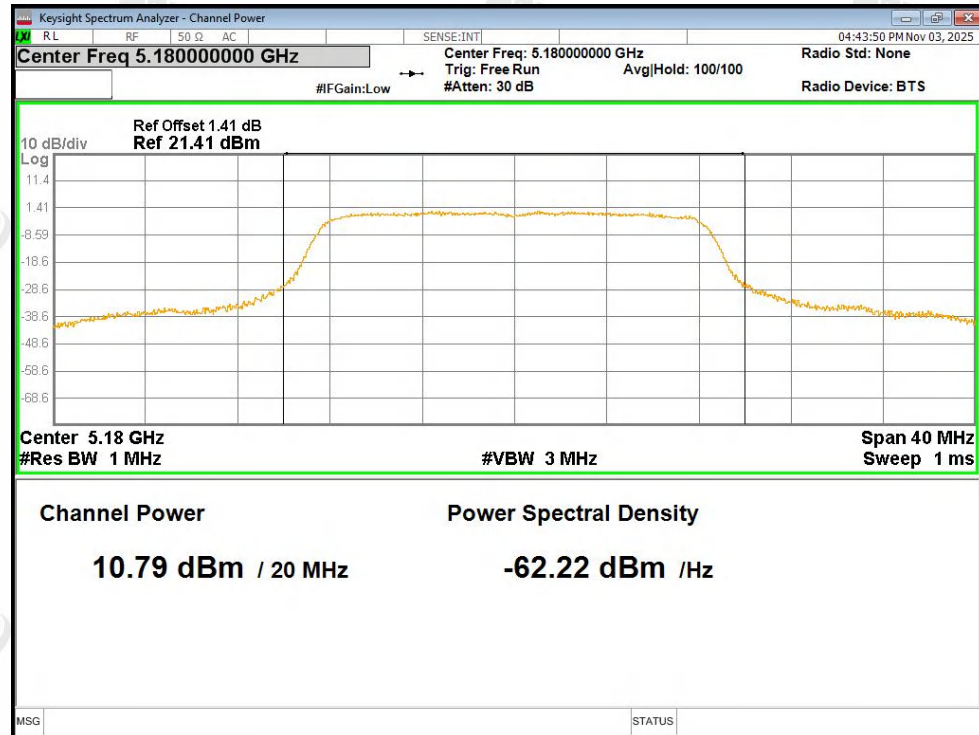
**ZHONGHAN****A.2 Maximum Conducted Output Power**

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	a	5180	Ant1	10.79	1.31	12.1	24	Pass
NVNT	a	5200	Ant1	10.84	1.12	11.96	24	Pass
NVNT	a	5240	Ant1	10.68	1.06	11.74	24	Pass
NVNT	n20	5180	Ant1	10.65	1.18	11.83	24	Pass
NVNT	n20	5200	Ant1	10.66	1.18	11.84	24	Pass
NVNT	n20	5240	Ant1	10.49	1.18	11.67	24	Pass
NVNT	n40	5190	Ant1	10.37	1.76	12.13	24	Pass
NVNT	n40	5230	Ant1	10.33	1.92	12.25	24	Pass

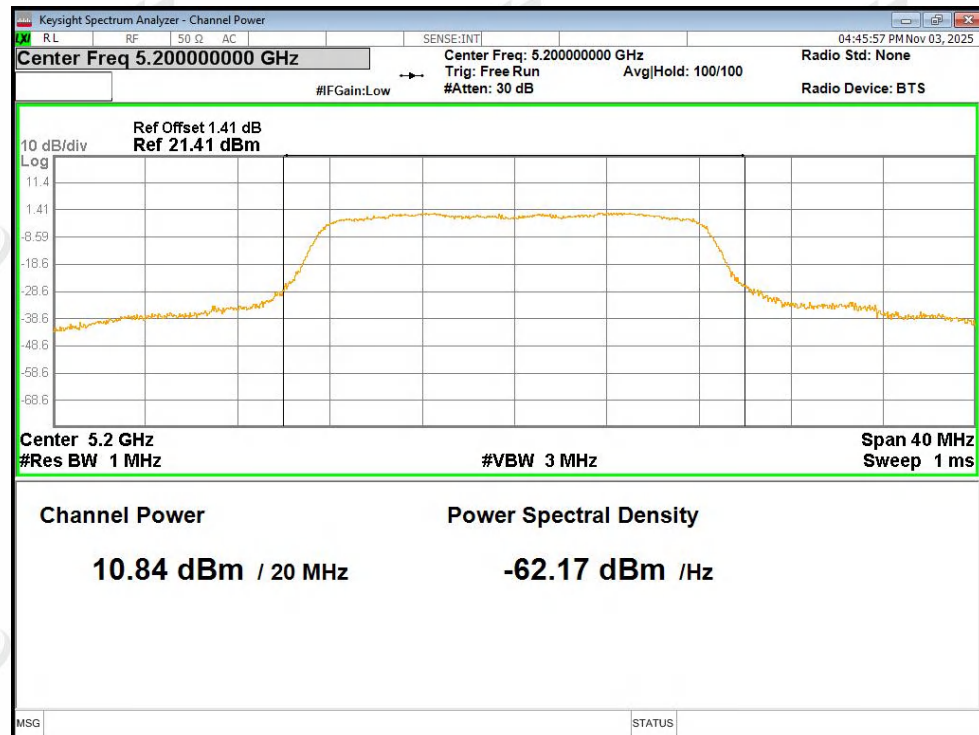


Test Graphs

Power NVNT a 5180MHz Ant1

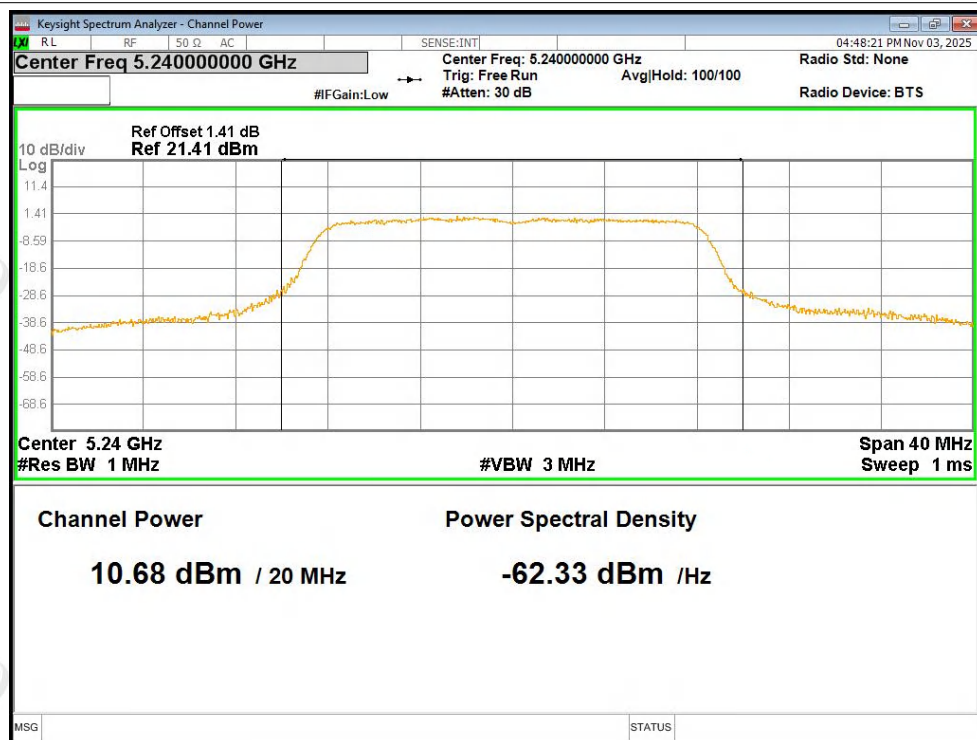


Power NVNT a 5200MHz Ant1

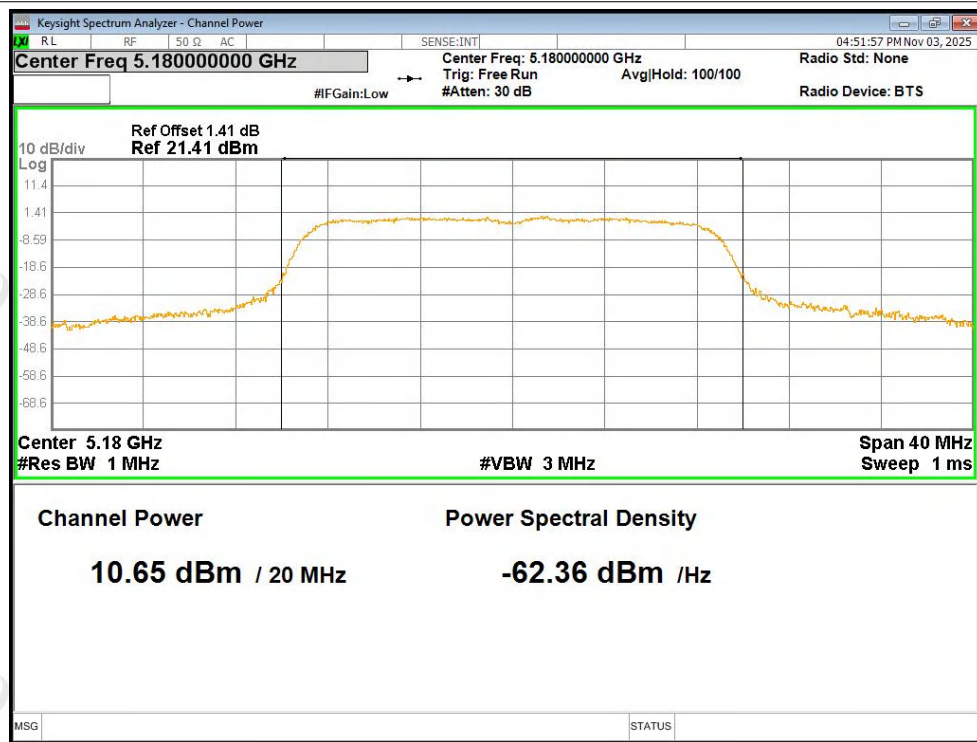




Power NVNT a 5240MHz Ant1

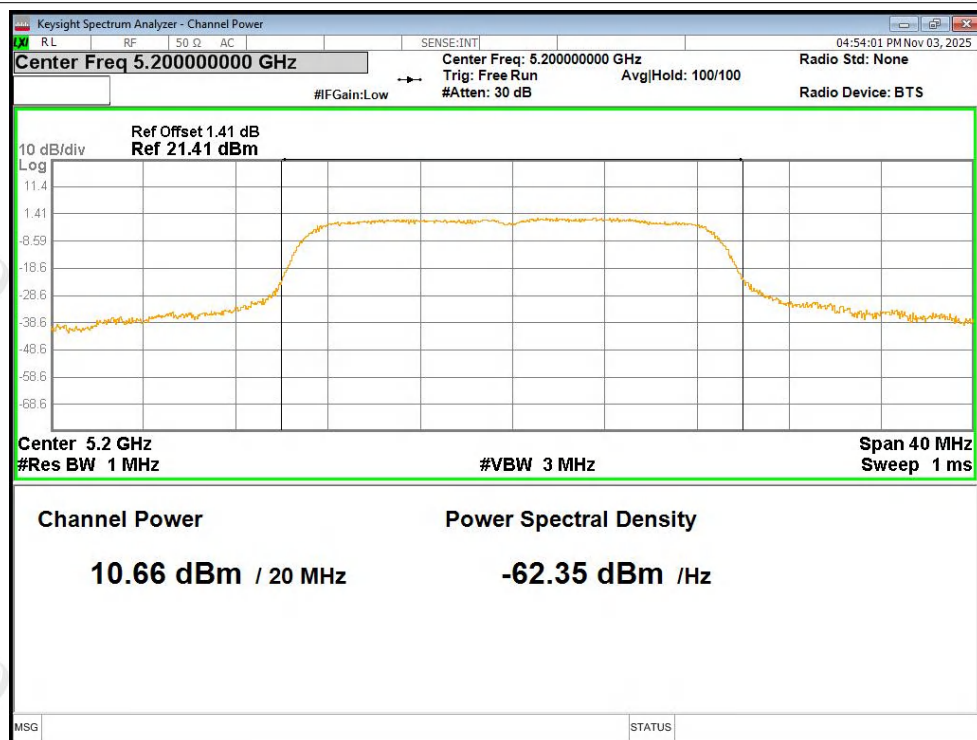


Power NVNT n20 5180MHz Ant1

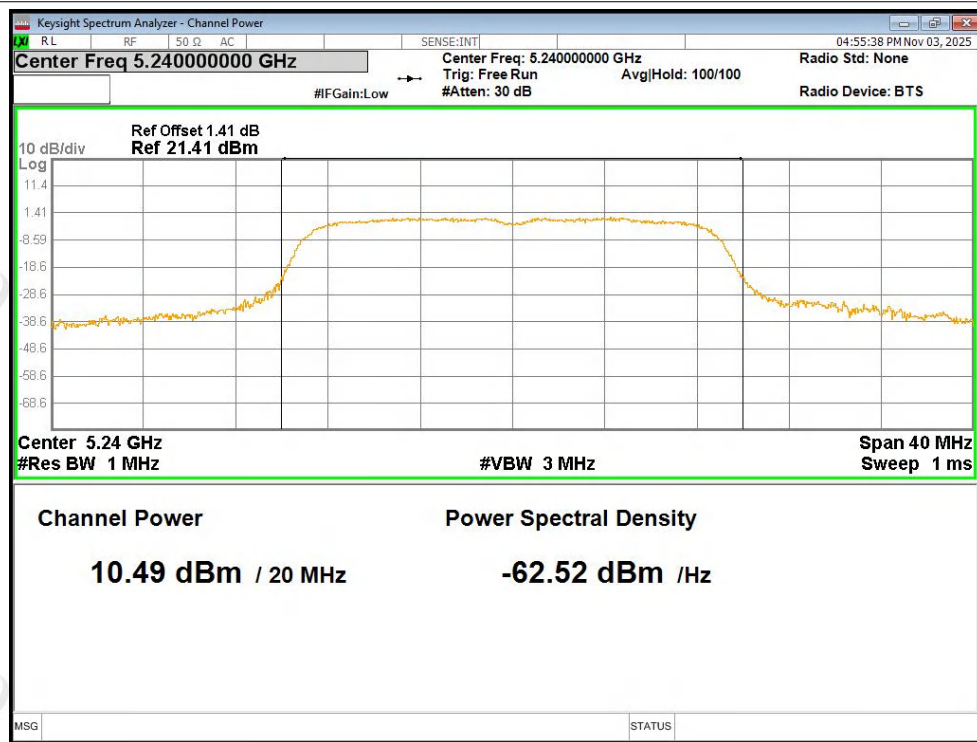




Power NVNT n20 5200MHz Ant1

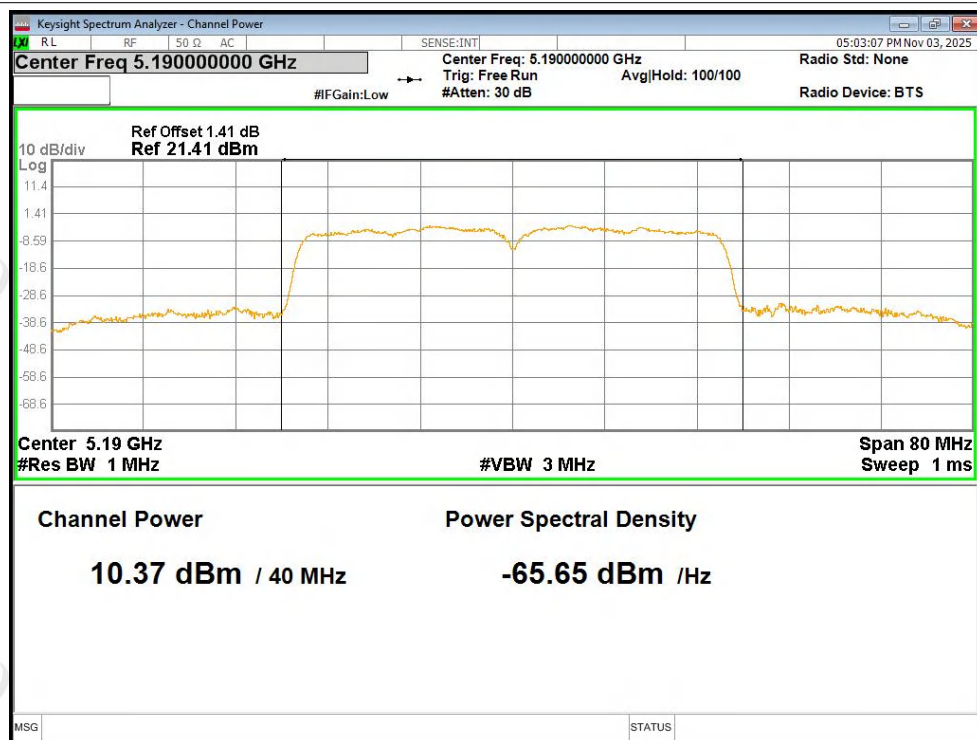


Power NVNT n20 5240MHz Ant1

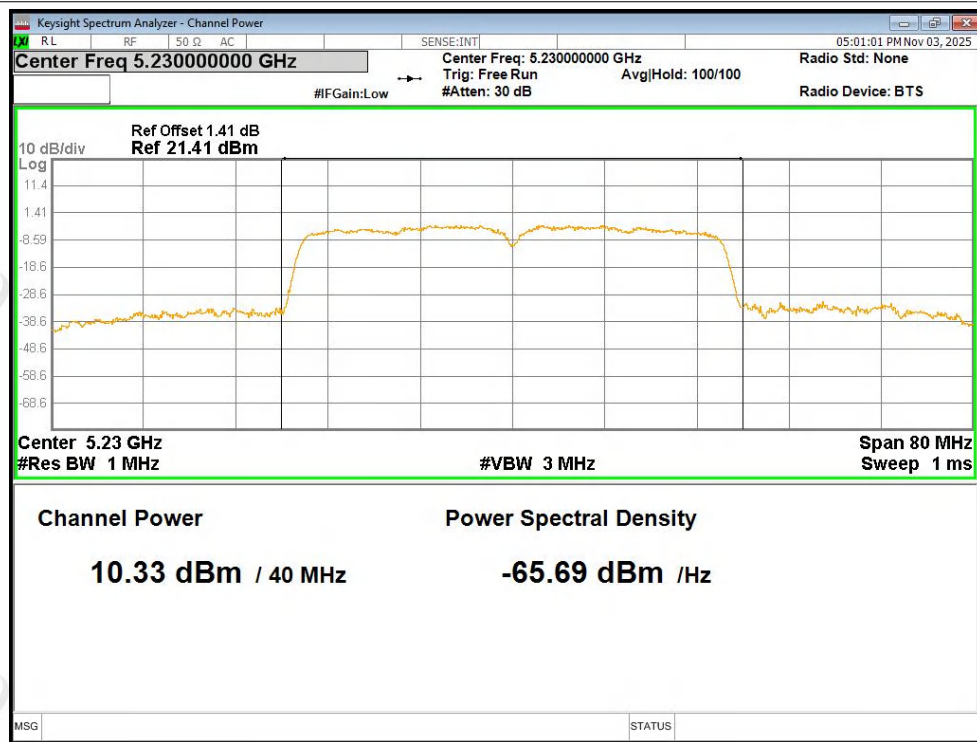




Power NVNT n40 5190MHz Ant1



Power NVNT n40 5230MHz Ant1



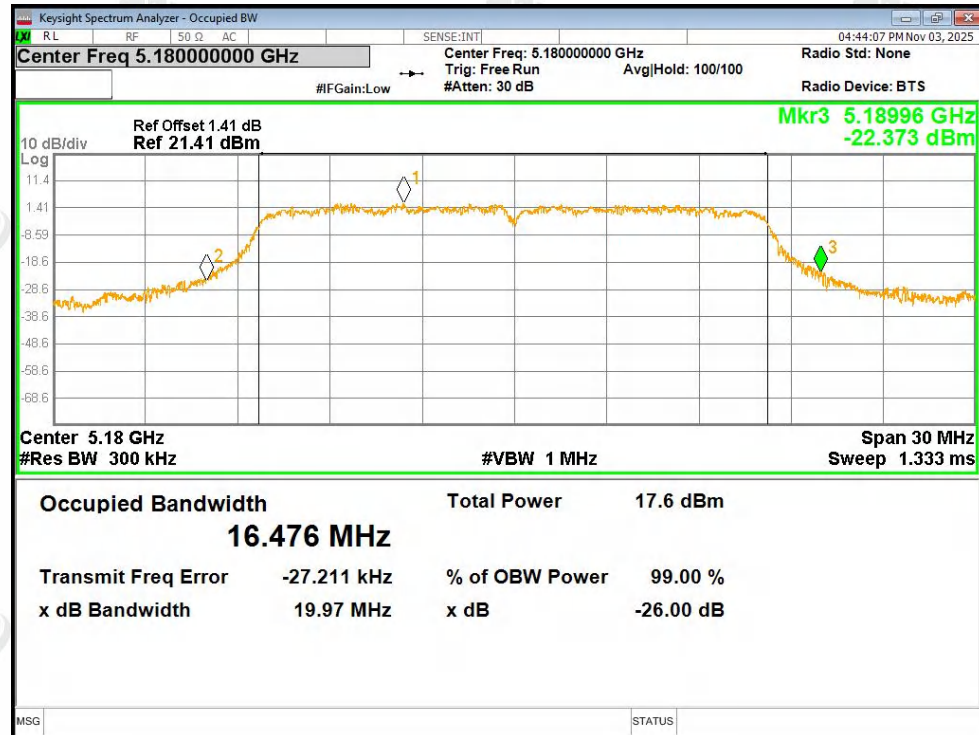
**ZHONGHAN****A.3 -26dB Bandwidth**

Condition	Mode	Frequency (MHz)	Antenna	-26 dB Bandwidth (MHz)	Verdict
NVNT	a	5180	Ant1	19.974	Pass
NVNT	a	5200	Ant1	19.863	Pass
NVNT	a	5240	Ant1	19.965	Pass
NVNT	n20	5180	Ant1	20.968	Pass
NVNT	n20	5200	Ant1	21.6	Pass
NVNT	n20	5240	Ant1	21.584	Pass
NVNT	n40	5190	Ant1	51.05	Pass
NVNT	n40	5230	Ant1	47.496	Pass

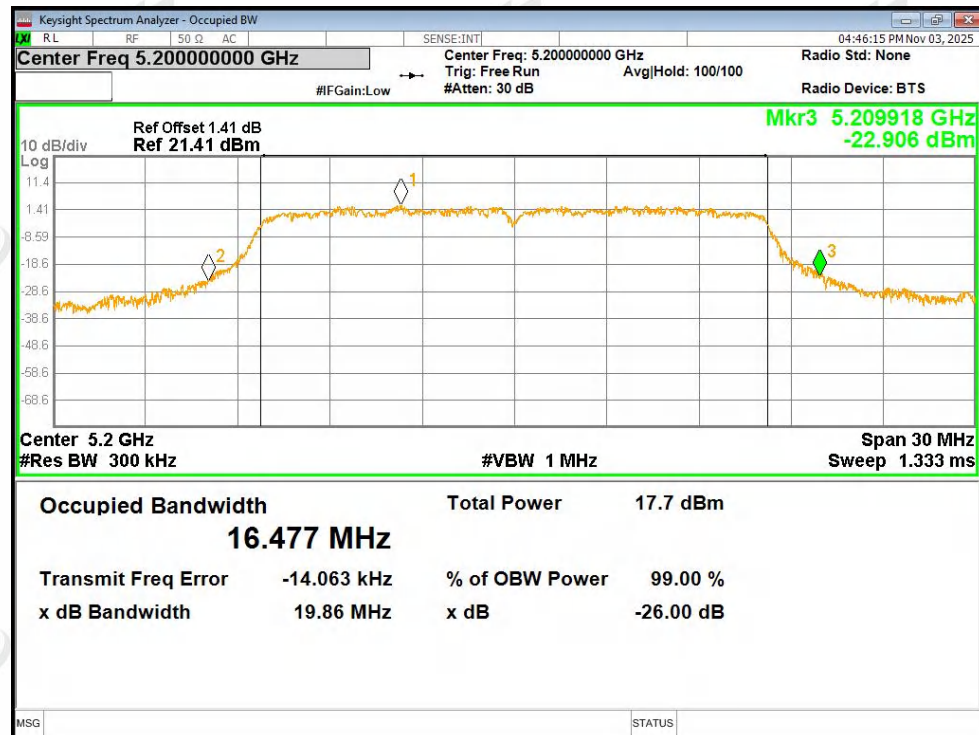


Test Graphs

-26dB Bandwidth NVNT a 5180MHz Ant1

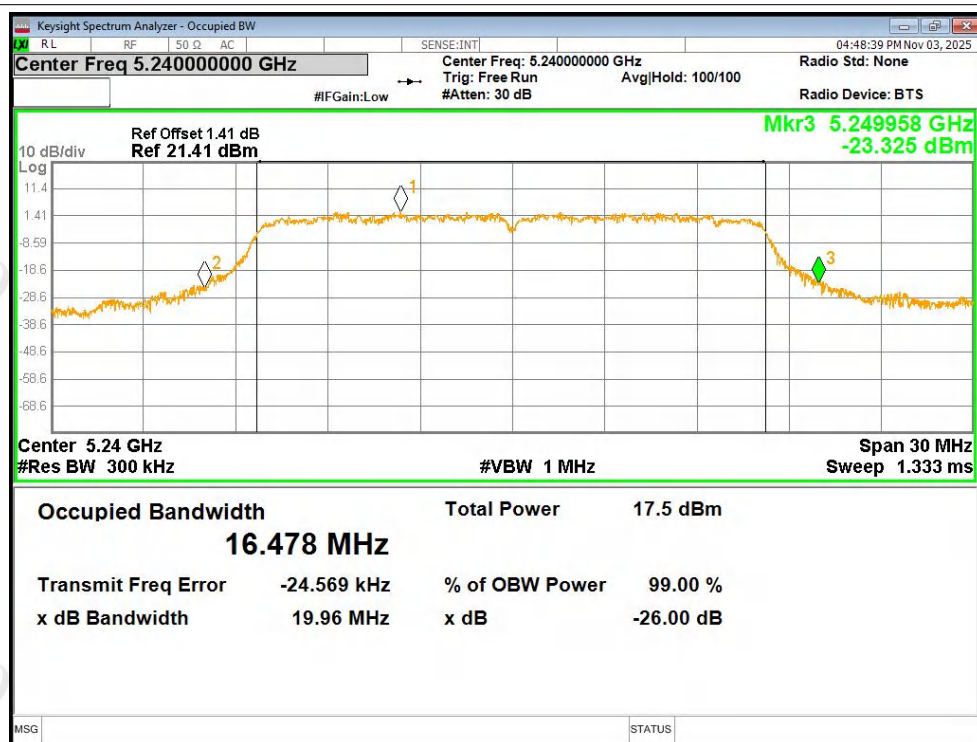


-26dB Bandwidth NVNT a 5200MHz Ant1

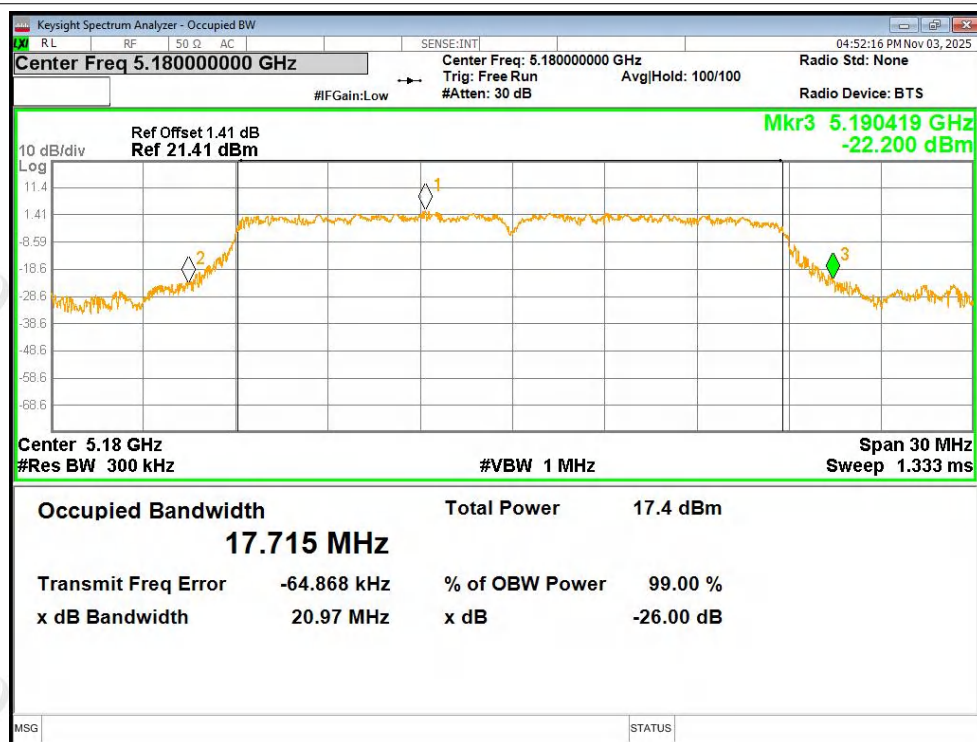




-26dB Bandwidth NVNT a 5240MHz Ant1

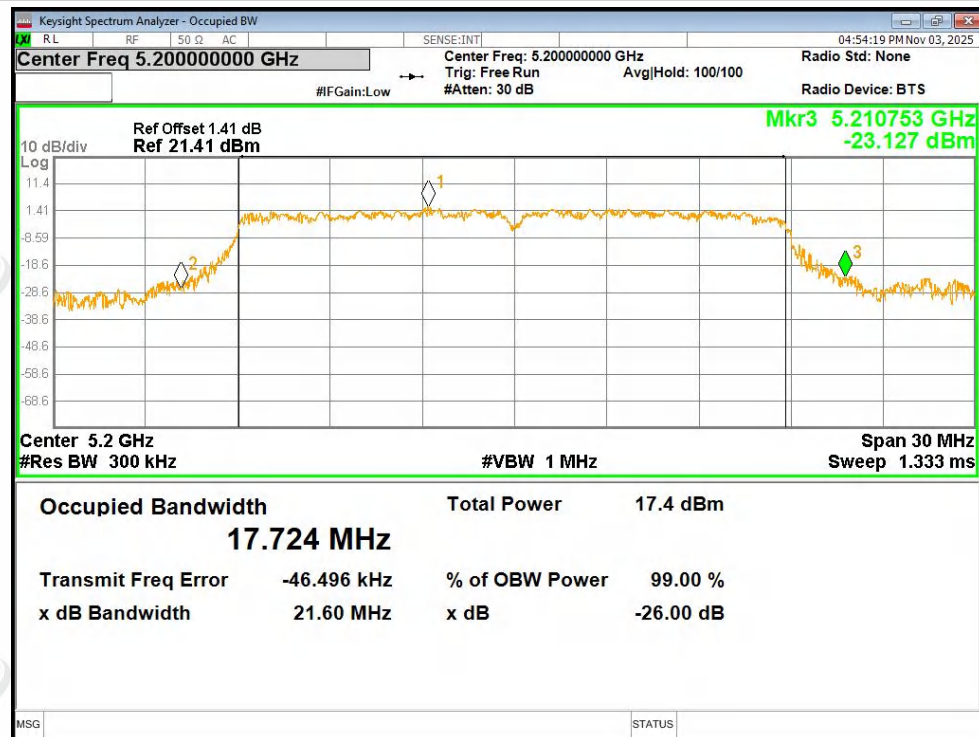


-26dB Bandwidth NVNT n20 5180MHz Ant1

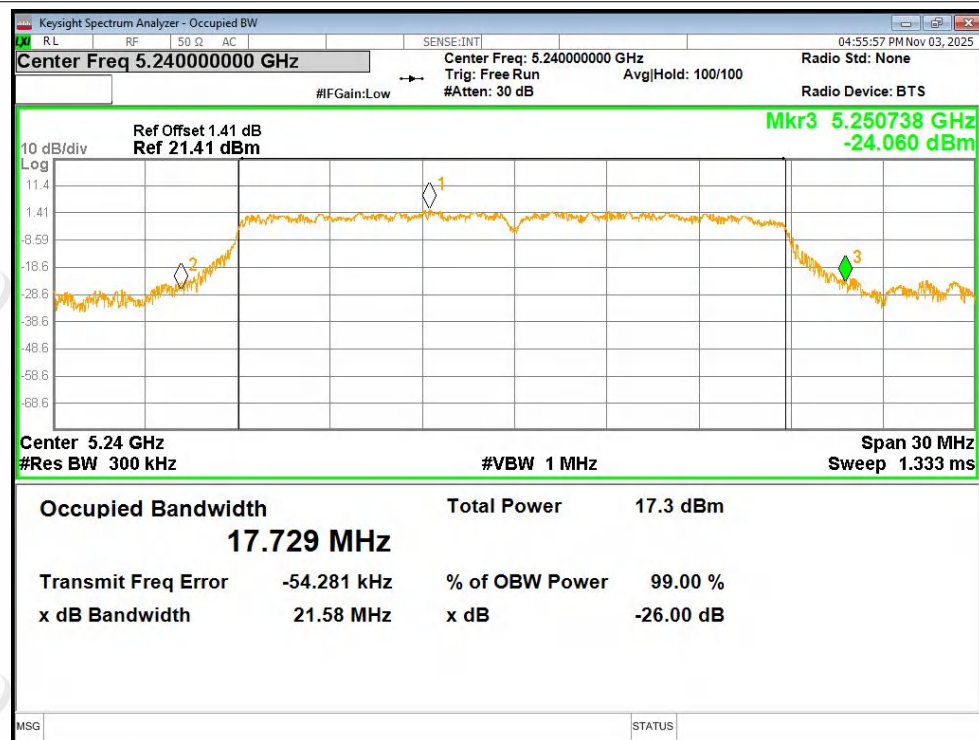




-26dB Bandwidth NVNT n20 5200MHz Ant1

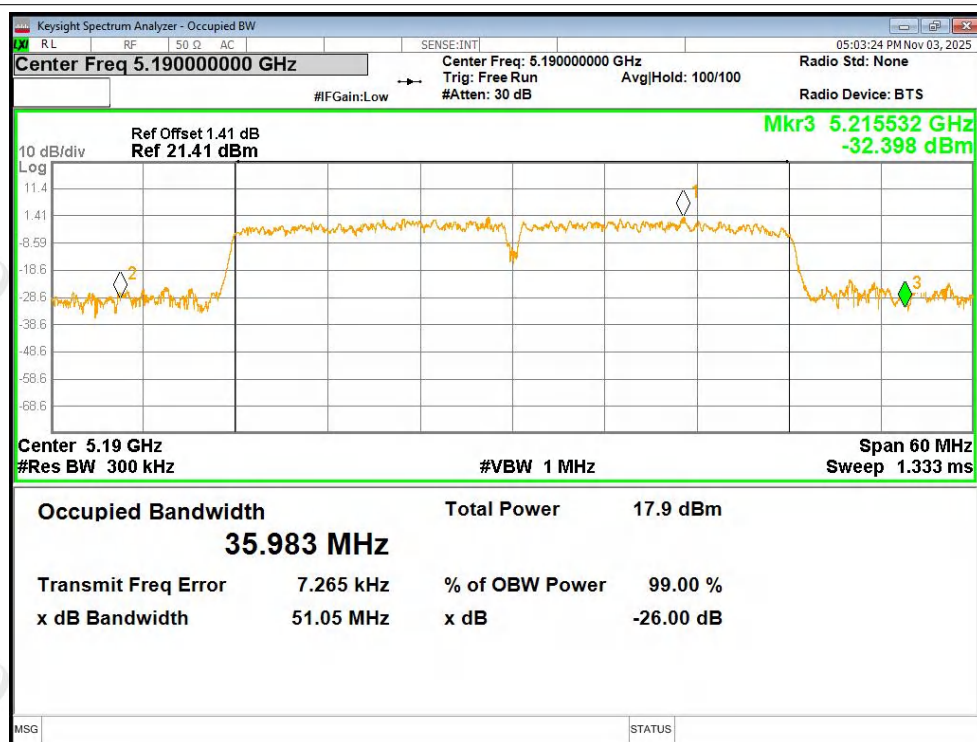


-26dB Bandwidth NVNT n20 5240MHz Ant1

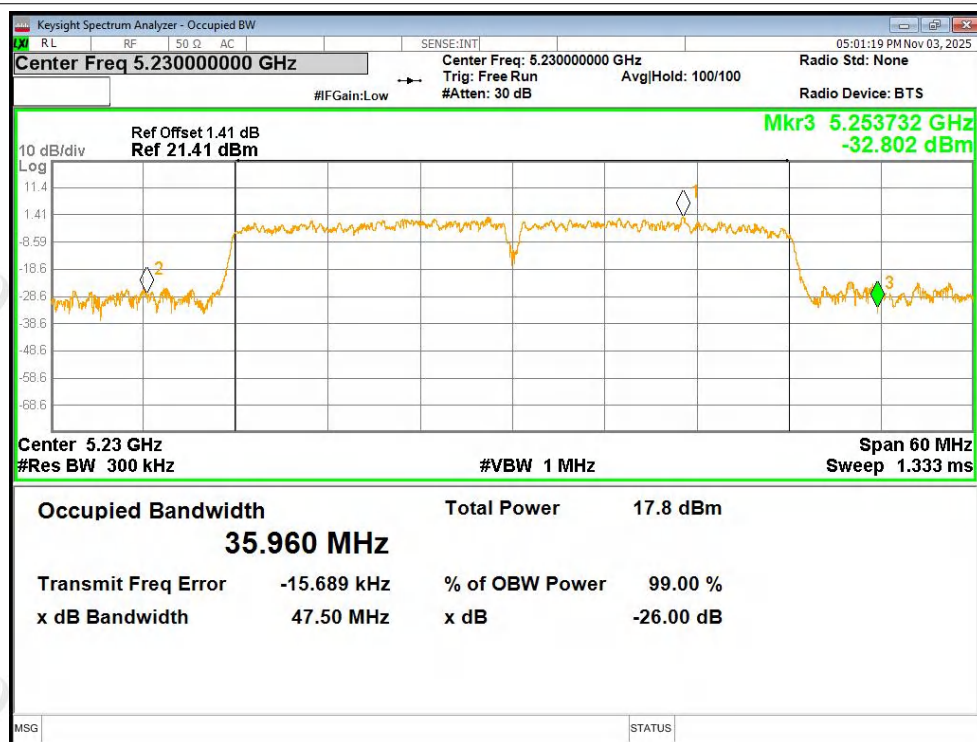




-26dB Bandwidth NVNT n40 5190MHz Ant1



-26dB Bandwidth NVNT n40 5230MHz Ant1



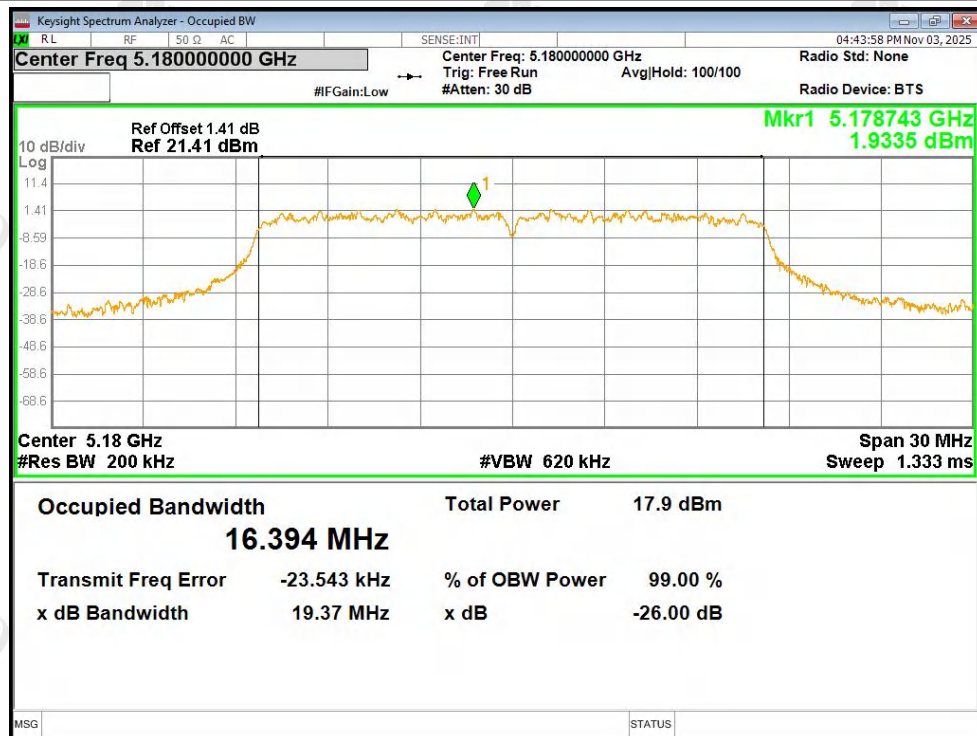
**ZHONGHAN****A.4 Occupied Channel Bandwidth**

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	a	5180	Ant1	16.394
NVNT	a	5200	Ant1	16.381
NVNT	a	5240	Ant1	16.394
NVNT	n20	5180	Ant1	17.642
NVNT	n20	5200	Ant1	17.64
NVNT	n20	5240	Ant1	17.618
NVNT	n40	5190	Ant1	36.044
NVNT	n40	5230	Ant1	36.007

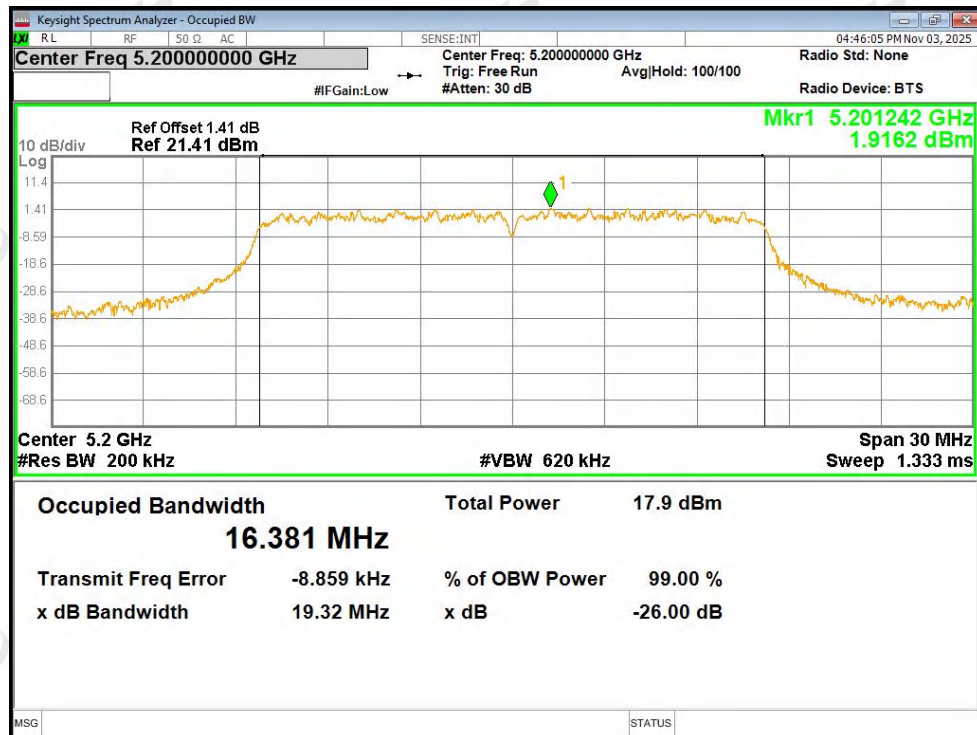


Test Graphs

OBW NVNT a 5180MHz Ant1

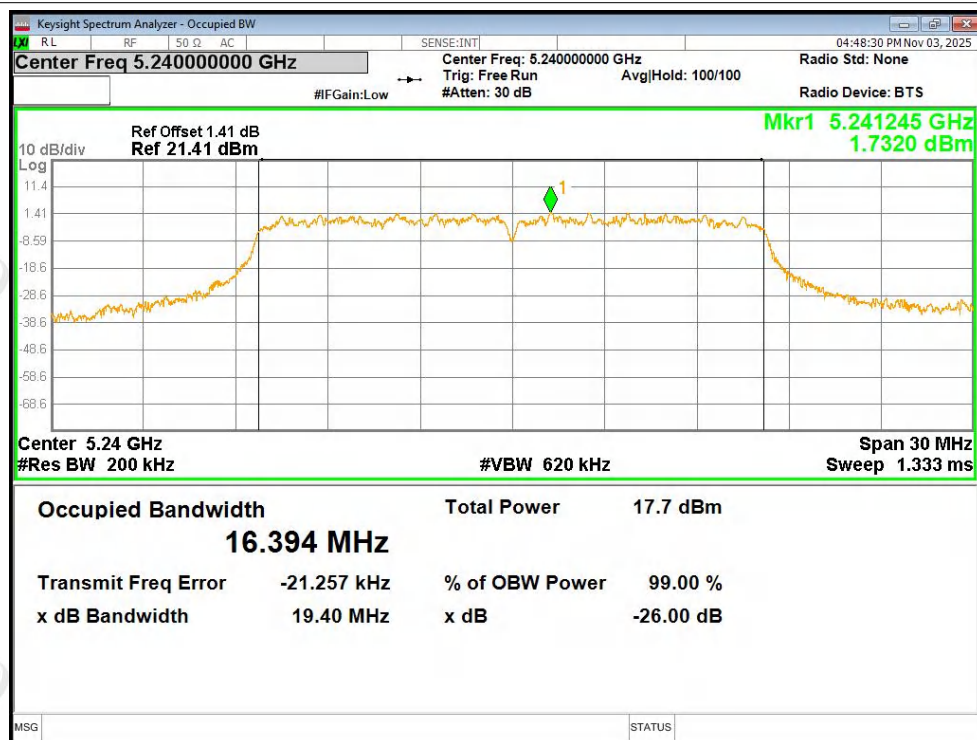


OBW NVNT a 5200MHz Ant1

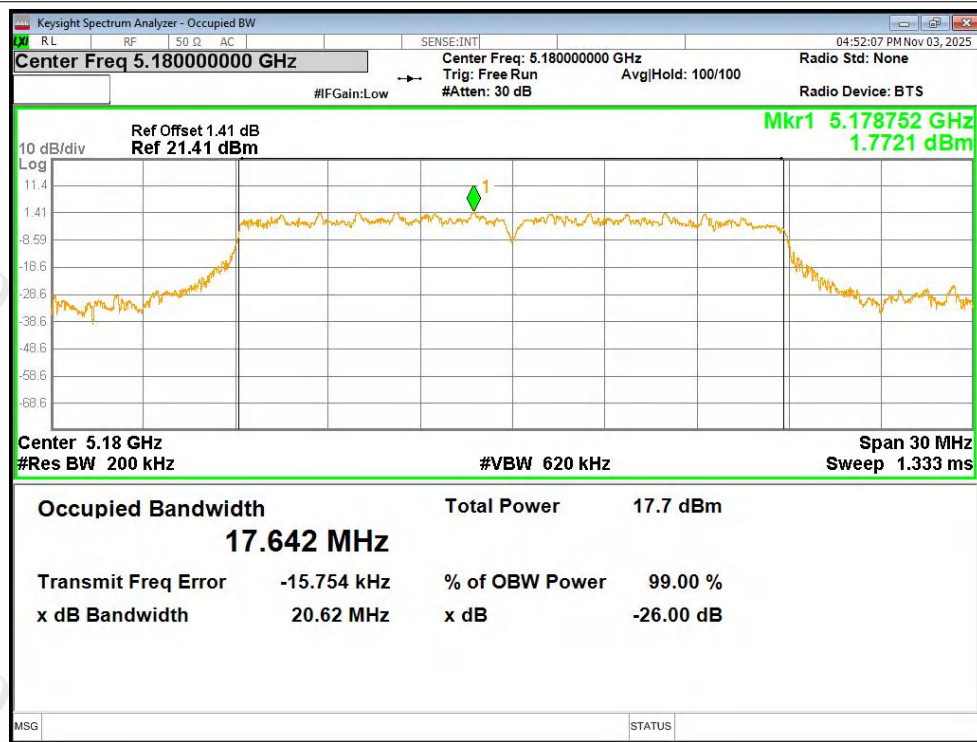




OBW NVNT a 5240MHz Ant1

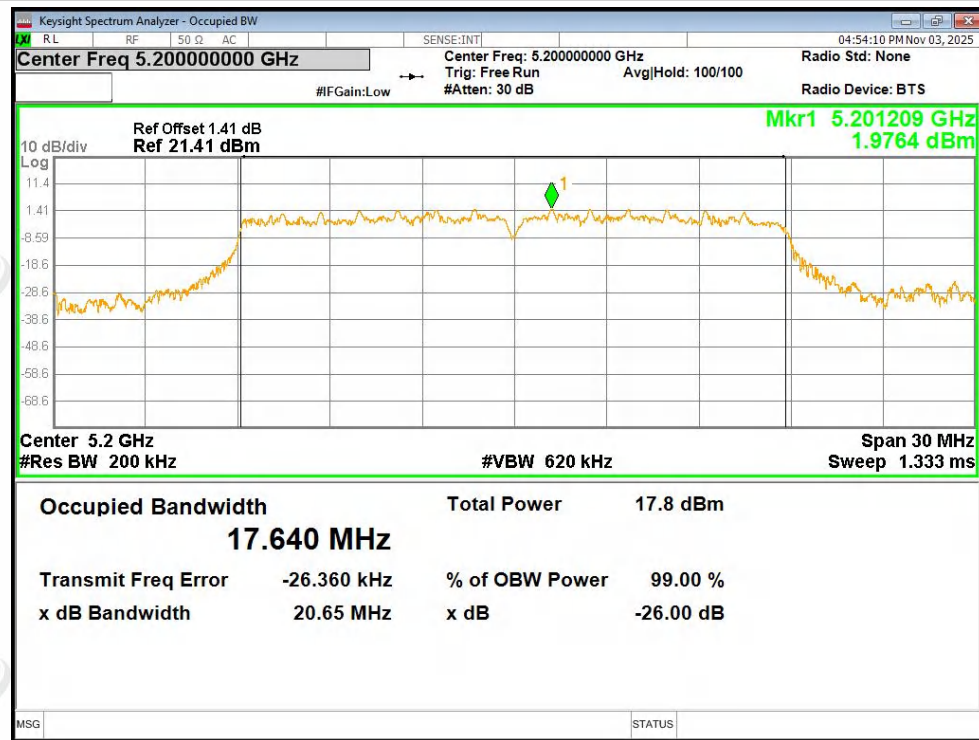


OBW NVNT n20 5180MHz Ant1

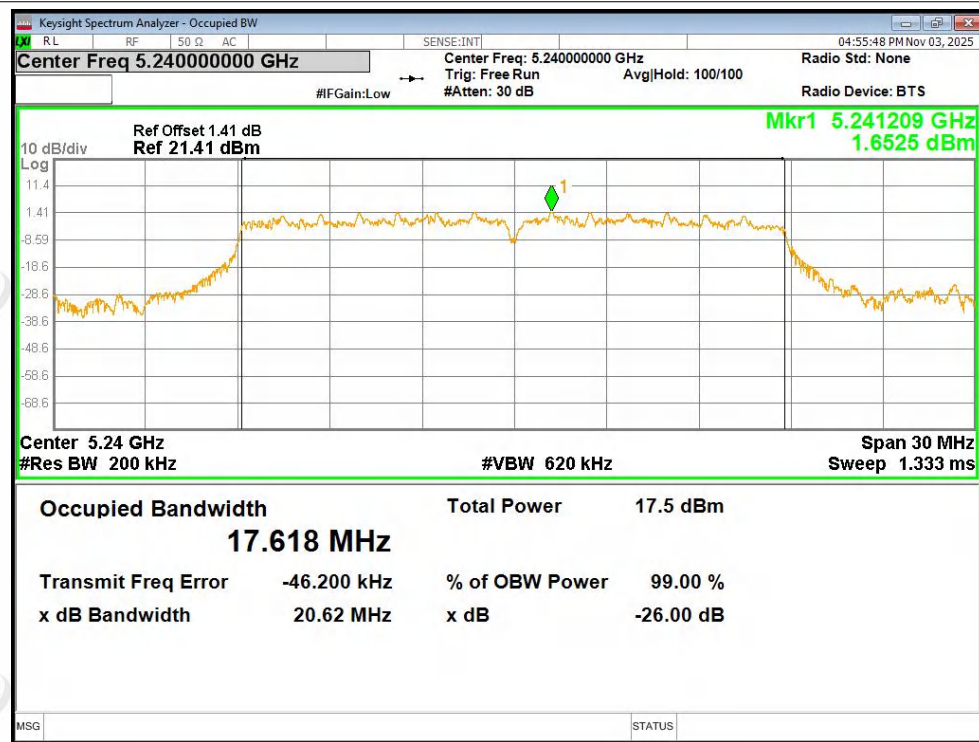




OBW NVNT n20 5200MHz Ant1

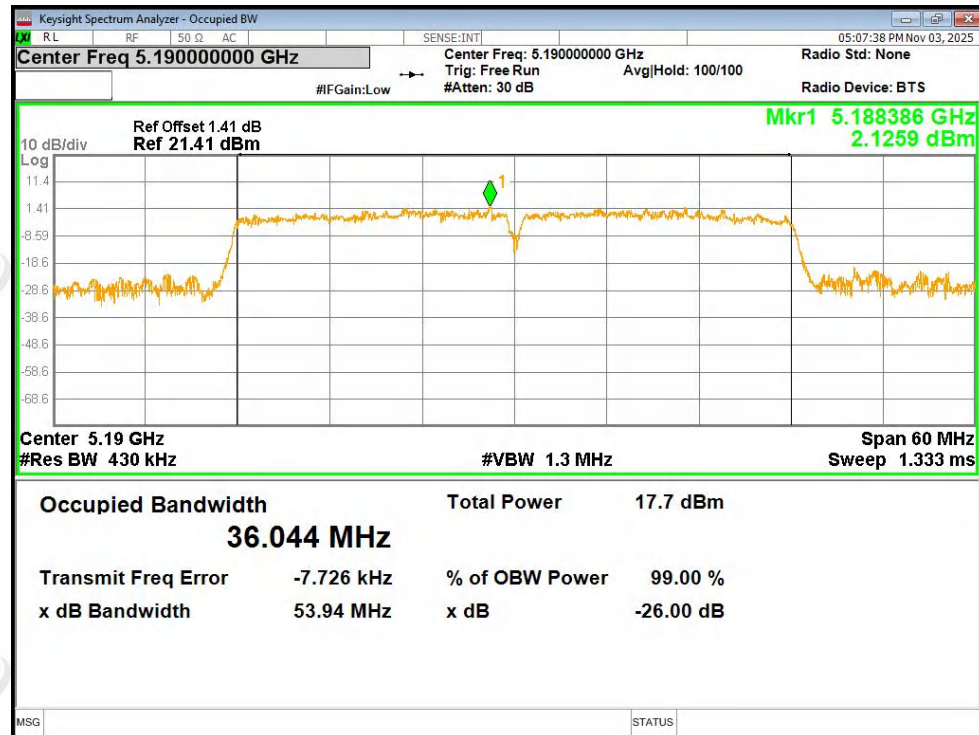


OBW NVNT n20 5240MHz Ant1

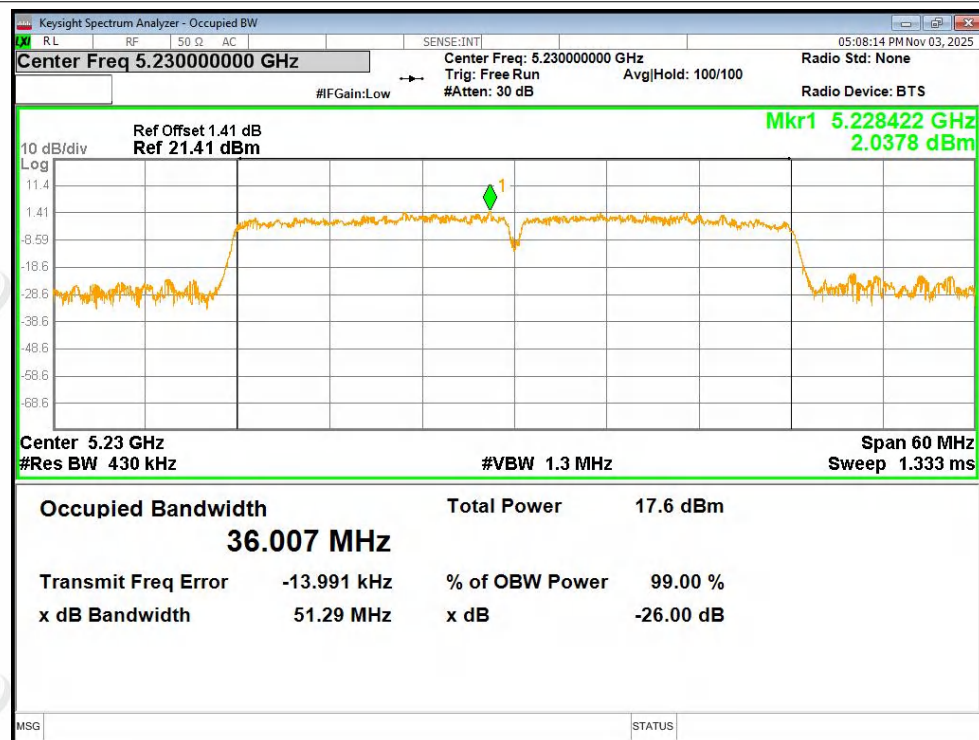




OBW NVNT n40 5190MHz Ant1



OBW NVNT n40 5230MHz Ant1



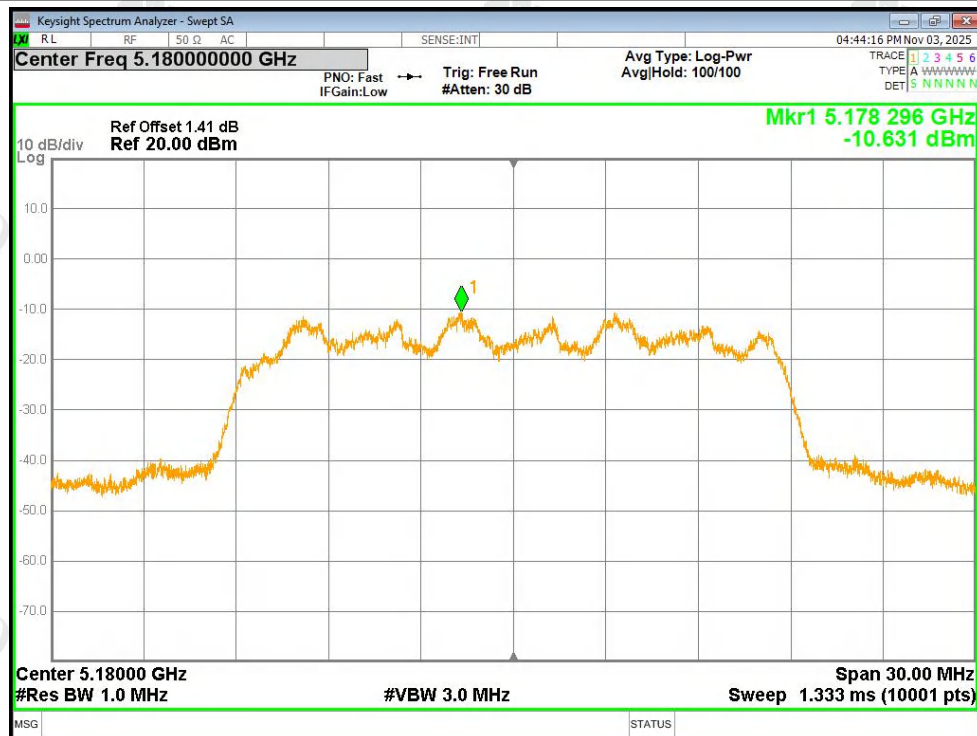
**ZHONGHAN****A.5 Maximum Power Spectral Density Level**

Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/MHz)	Duty Factor (dB)	Total PSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
NVNT	a	5180	Ant1	-10.63	1.31	-9.32	11	Pass
NVNT	a	5200	Ant1	-9.82	1.12	-8.7	11	Pass
NVNT	a	5240	Ant1	-7.42	1.06	-6.36	11	Pass
NVNT	n20	5180	Ant1	-10.72	1.18	-9.54	11	Pass
NVNT	n20	5200	Ant1	-9.82	1.18	-8.64	11	Pass
NVNT	n20	5240	Ant1	-10.46	1.18	-9.28	11	Pass
NVNT	n40	5190	Ant1	-17.01	1.76	-15.25	11	Pass
NVNT	n40	5230	Ant1	-18.51	1.92	-16.59	11	Pass

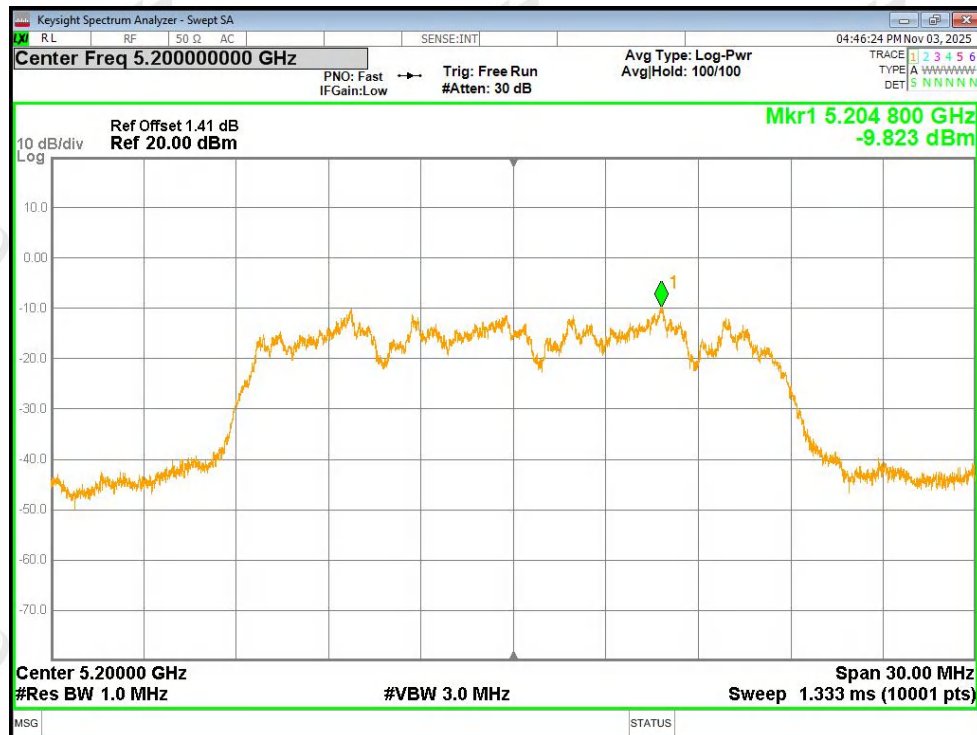


Test Graphs

PSD NVNT a 5180MHz Ant1

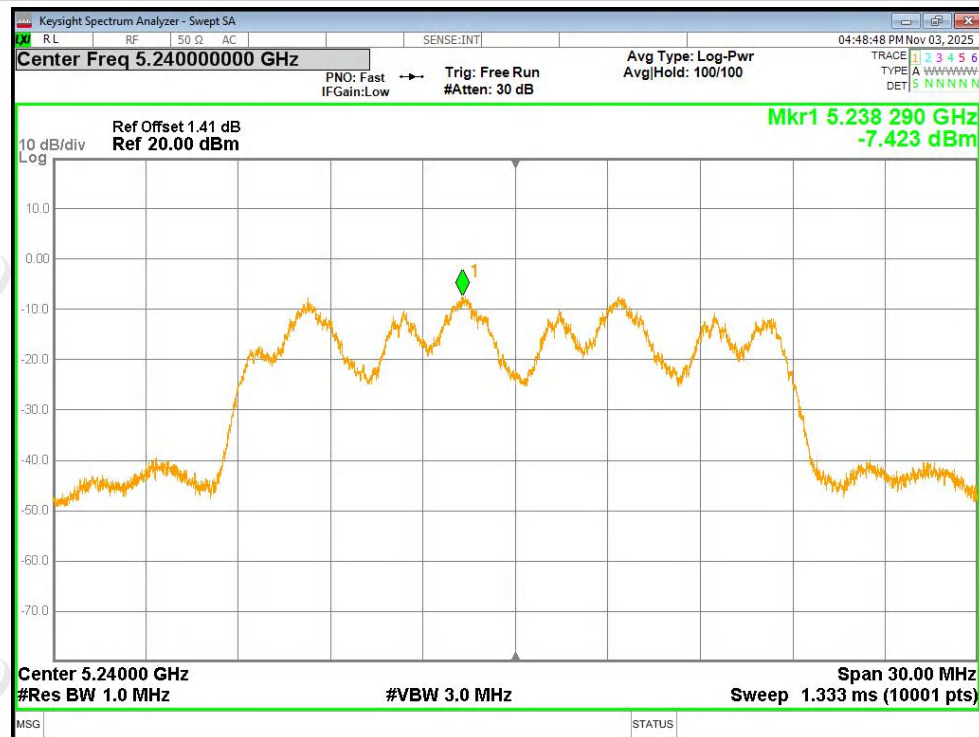


PSD NVNT a 5200MHz Ant1

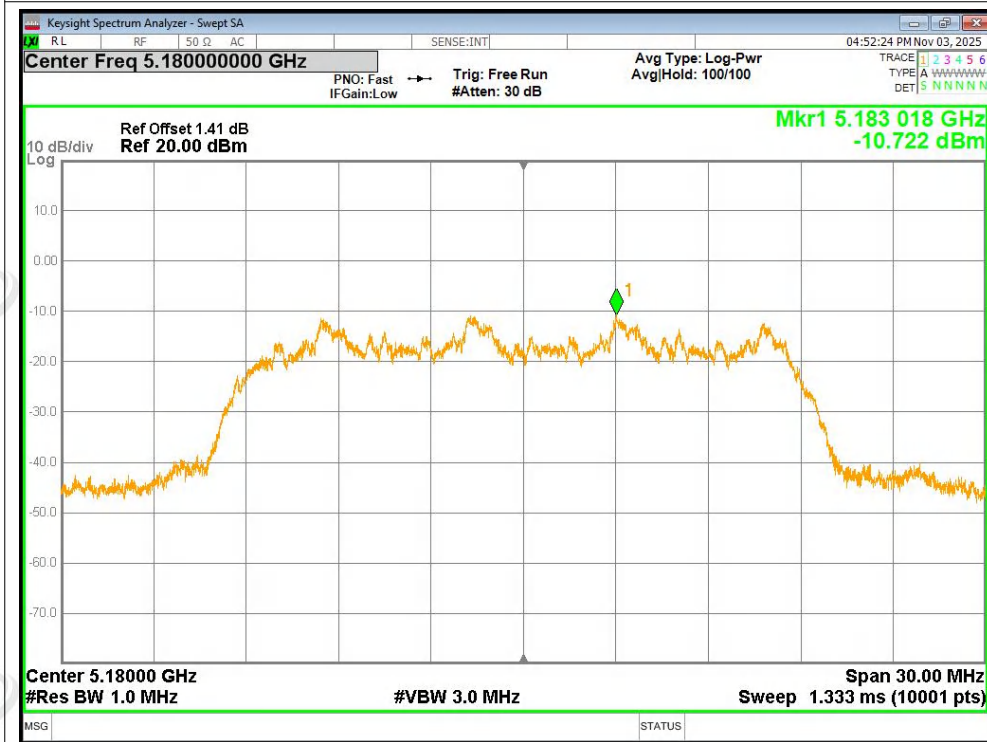




PSD NVNT a 5240MHz Ant1

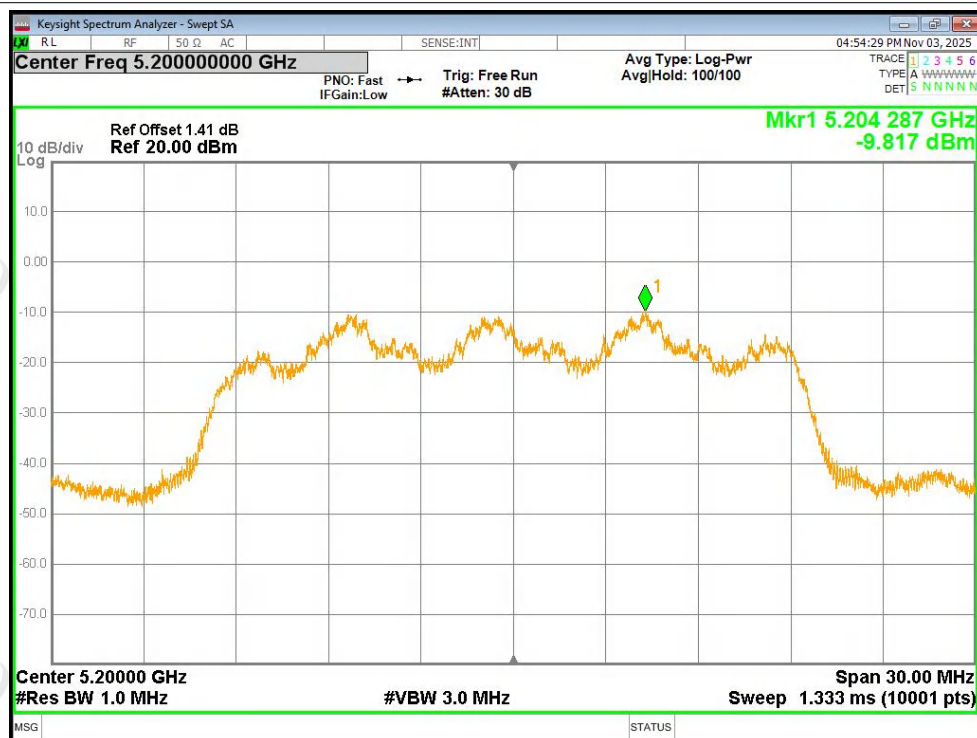


PSD NVNT n20 5180MHz Ant1





PSD NVNT n20 5200MHz Ant1

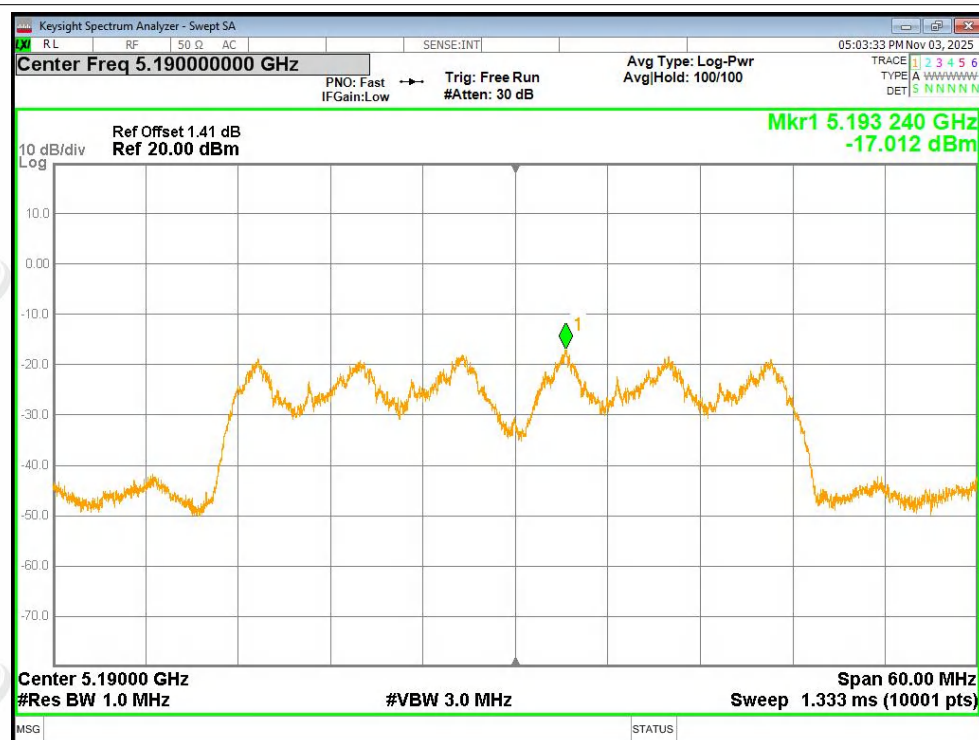


PSD NVNT n20 5240MHz Ant1

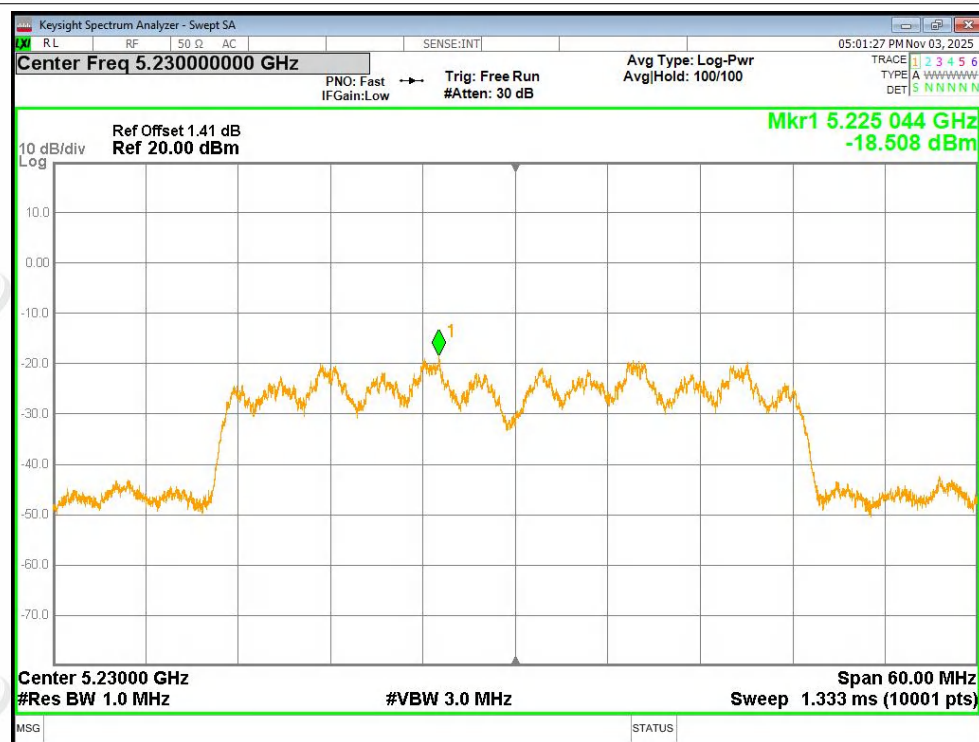




PSD NVNT n40 5190MHz Ant1



PSD NVNT n40 5230MHz Ant1



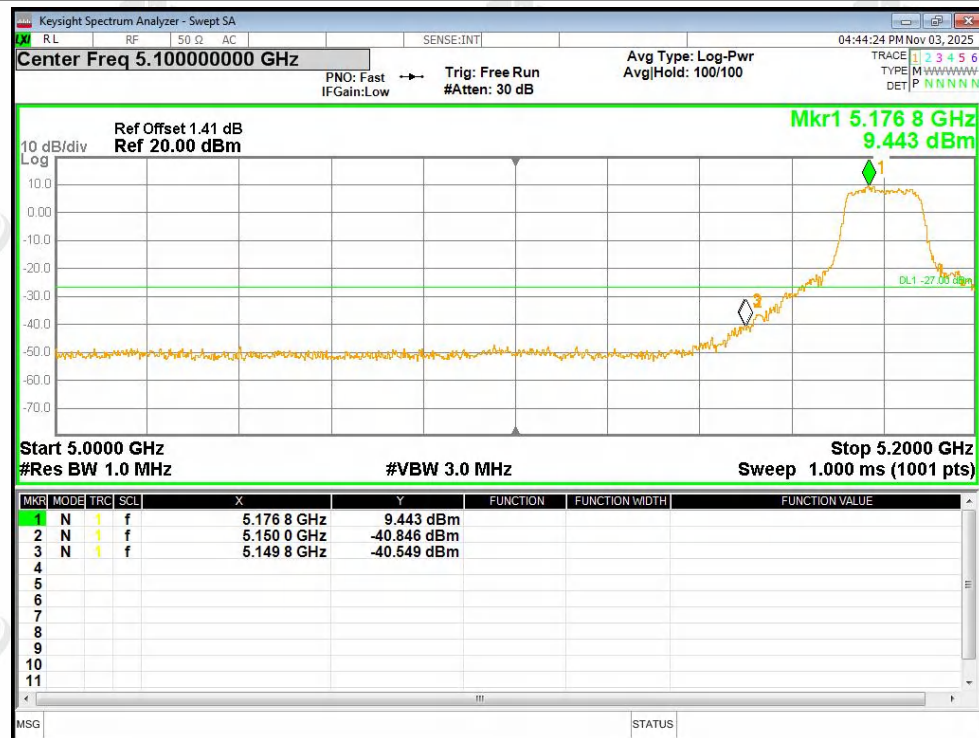
**ZHONGHAN**
A.6 Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBm)	Limit (dBm)	Verdict
NVNT	a	5180	Ant1	-40.54	-27	Pass
NVNT	a	5240	Ant1	-46.78	-27	Pass
NVNT	n20	5180	Ant1	-39.18	-27	Pass
NVNT	n20	5240	Ant1	-47.04	-27	Pass
NVNT	n40	5190	Ant1	-28.64	-27	Pass
NVNT	n40	5230	Ant1	-46.21	-27	Pass

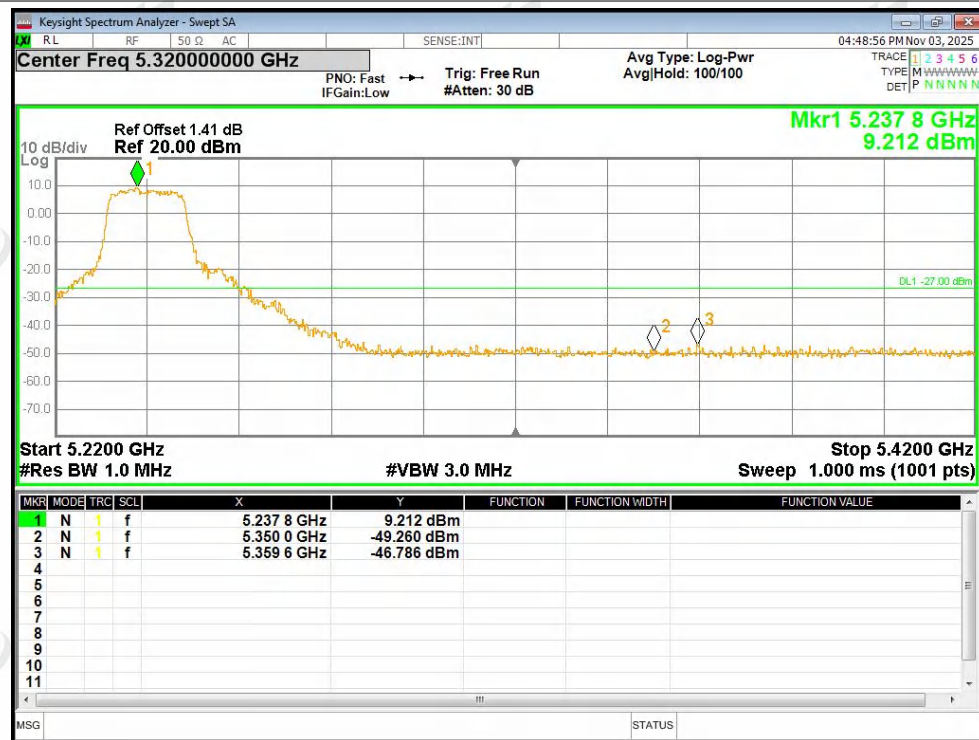


Test Graphs

Band Edge NVNT a 5180MHz Low Ant1

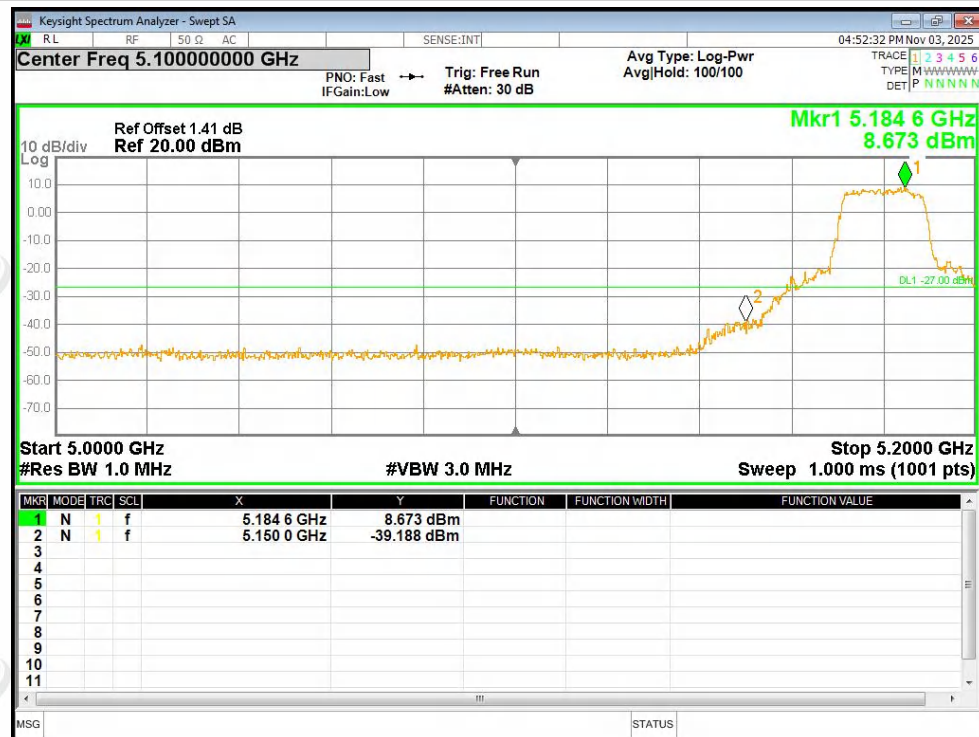


Band Edge NVNT a 5240MHz High Ant1

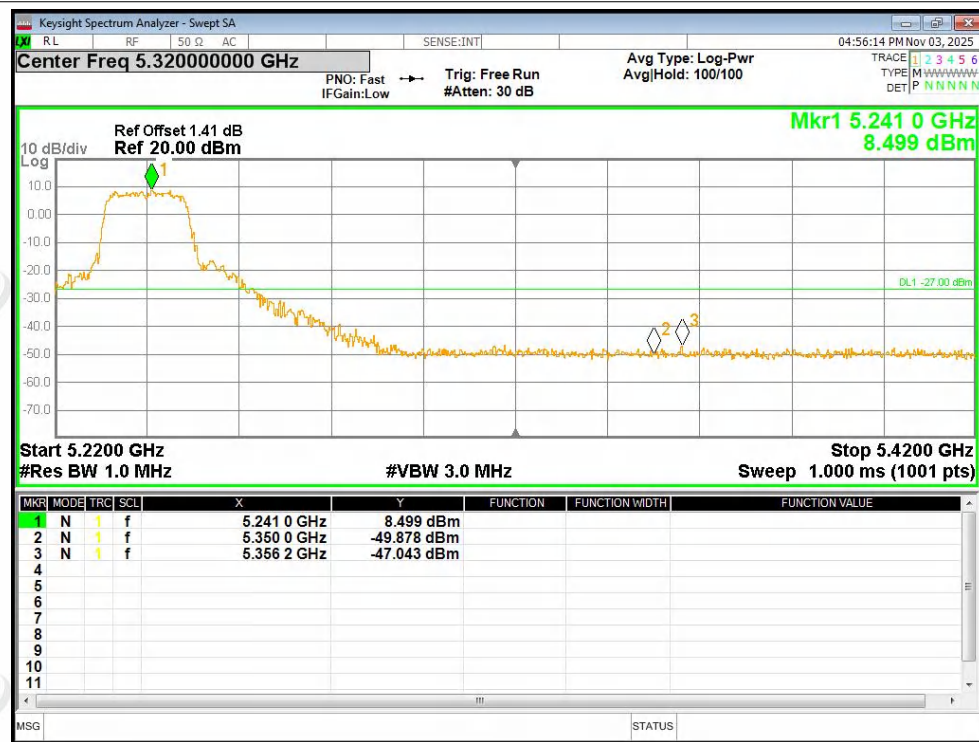




Band Edge NVNT n20 5180MHz Low Ant1

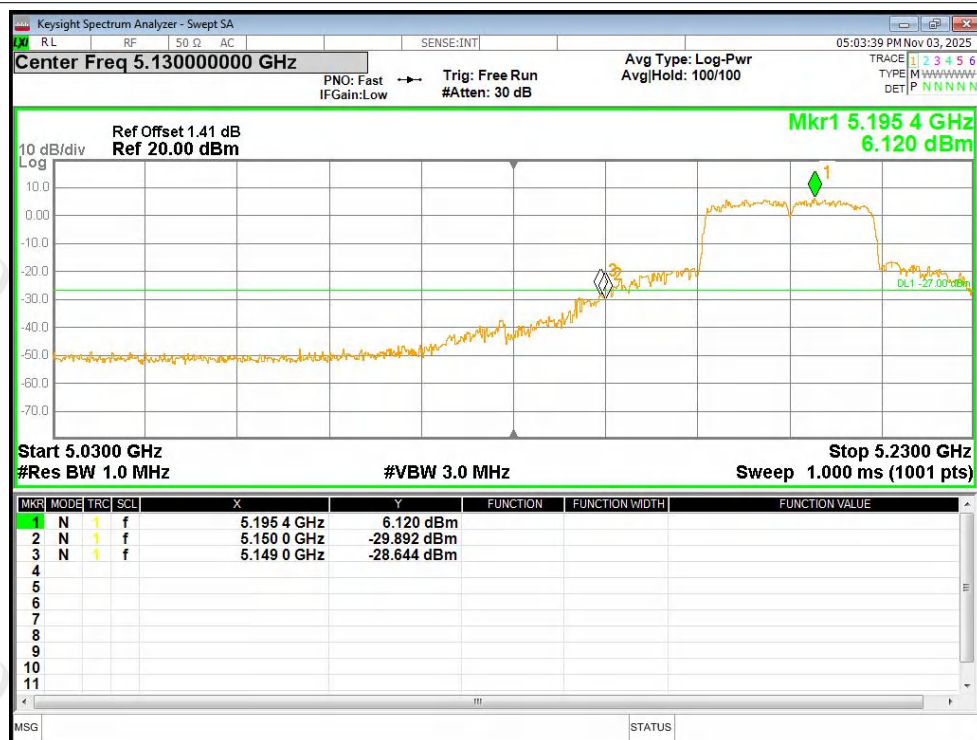


Band Edge NVNT n20 5240MHz High Ant1

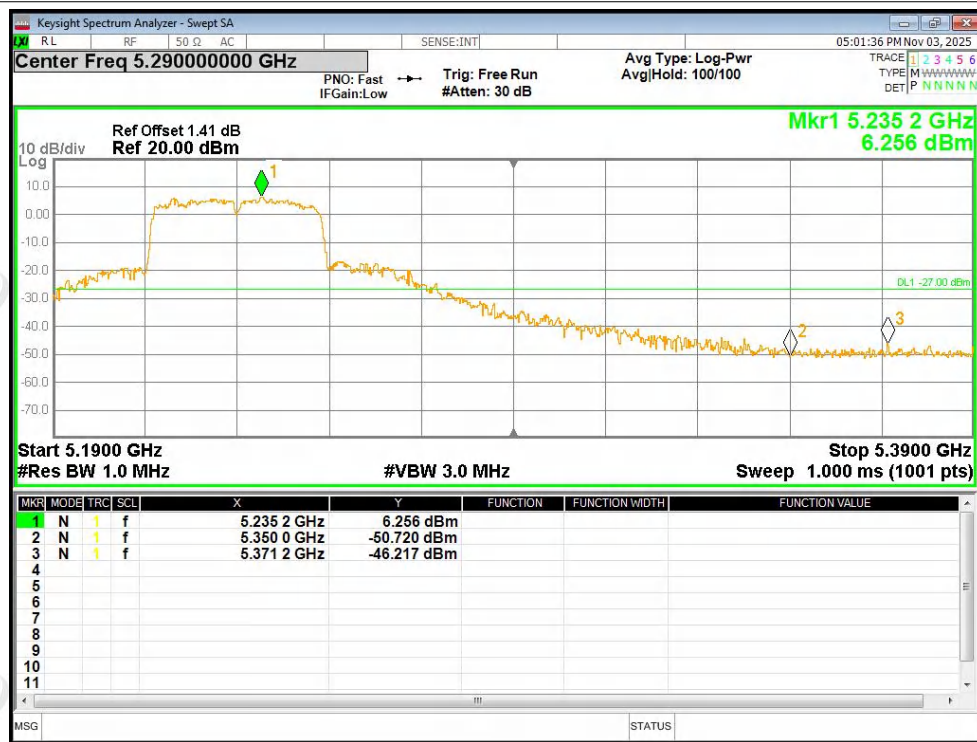




Band Edge NVNT n40 5190MHz Low Ant1



Band Edge NVNT n40 5230MHz High Ant1



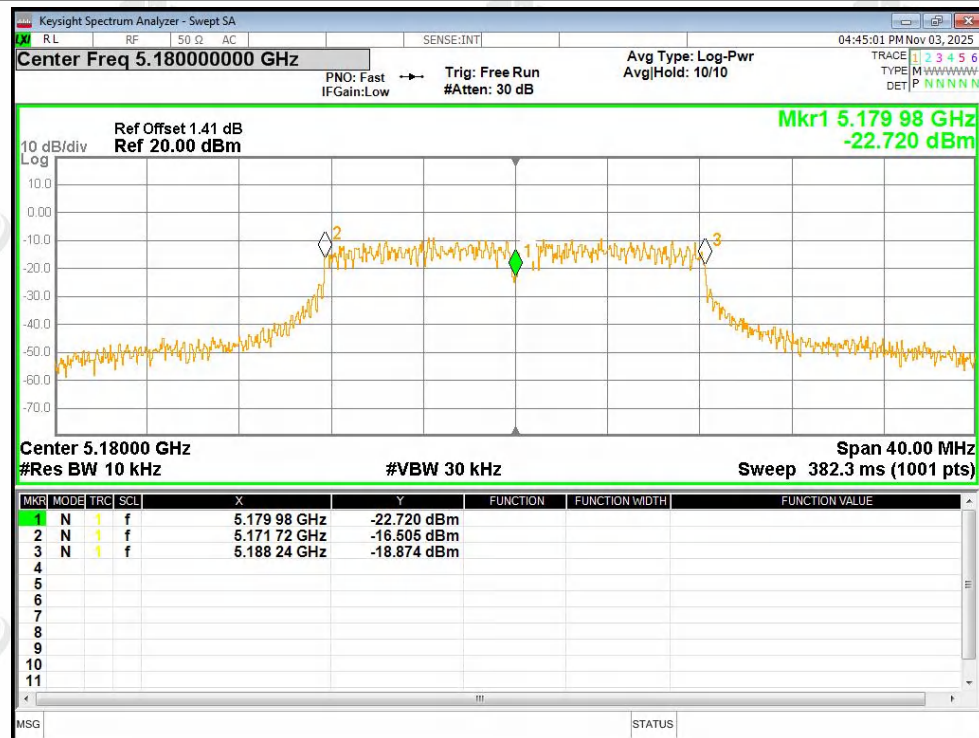
**ZHONGHAN****A.7 Frequency Stability**

Condition	Mode	Frequency (MHz)	Antenna	Measured Frequency (MHz)	Frequency Error (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
NVNT	a	5180	Ant1	5179.98	-20000	-3.86	25	Pass
NVNT	a	5200	Ant1	5199.96	-40000	-7.69	25	Pass
NVNT	a	5240	Ant1	5239.92	-80000	-15.27	25	Pass
NVNT	n20	5180	Ant1	5179.96	-40000	-7.72	25	Pass
NVNT	n20	5200	Ant1	5199.96	-40000	-7.69	25	Pass
NVNT	n20	5240	Ant1	5239.94	-60000	-11.45	25	Pass
NVNT	n40	5190	Ant1	5190.04	40000	7.71	25	Pass
NVNT	n40	5230	Ant1	5230	0	0	25	Pass

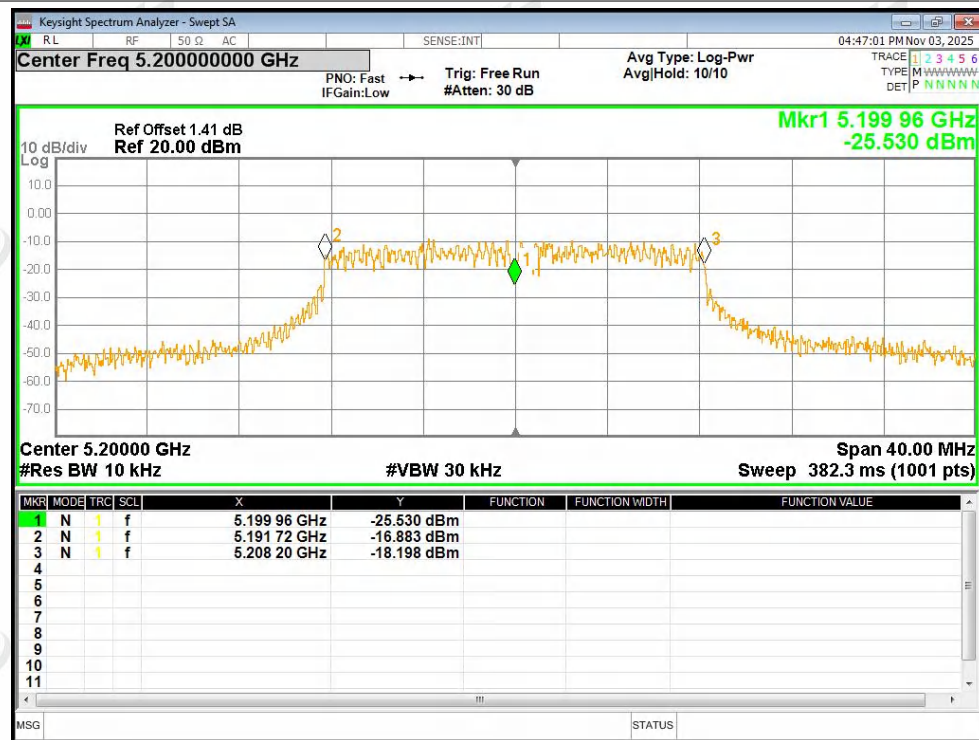


Test Graphs

Freq. Stability NVNT a 5180MHz Ant1



Freq. Stability NVNT a 5200MHz Ant1

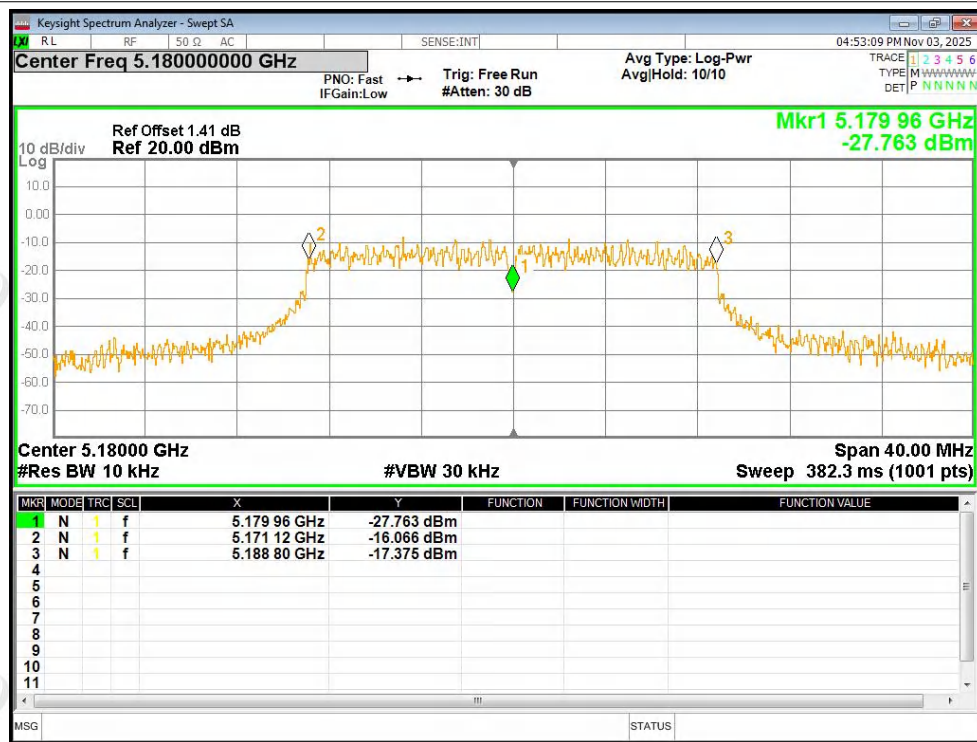




Freq. Stability NVNT a 5240MHz Ant1

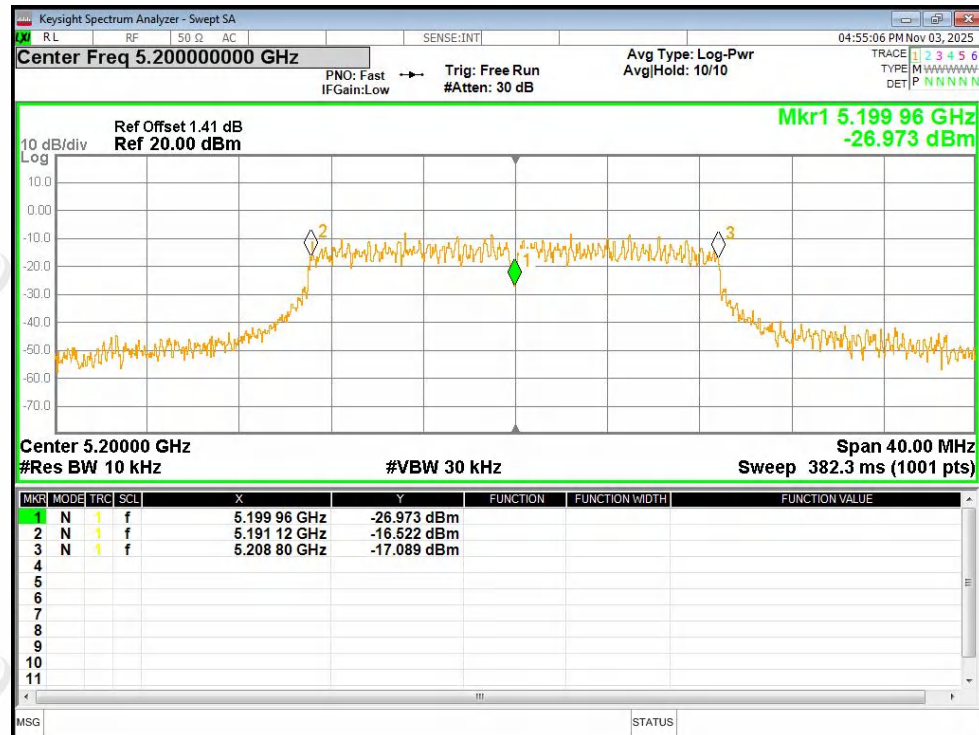


Freq. Stability NVNT n20 5180MHz Ant1

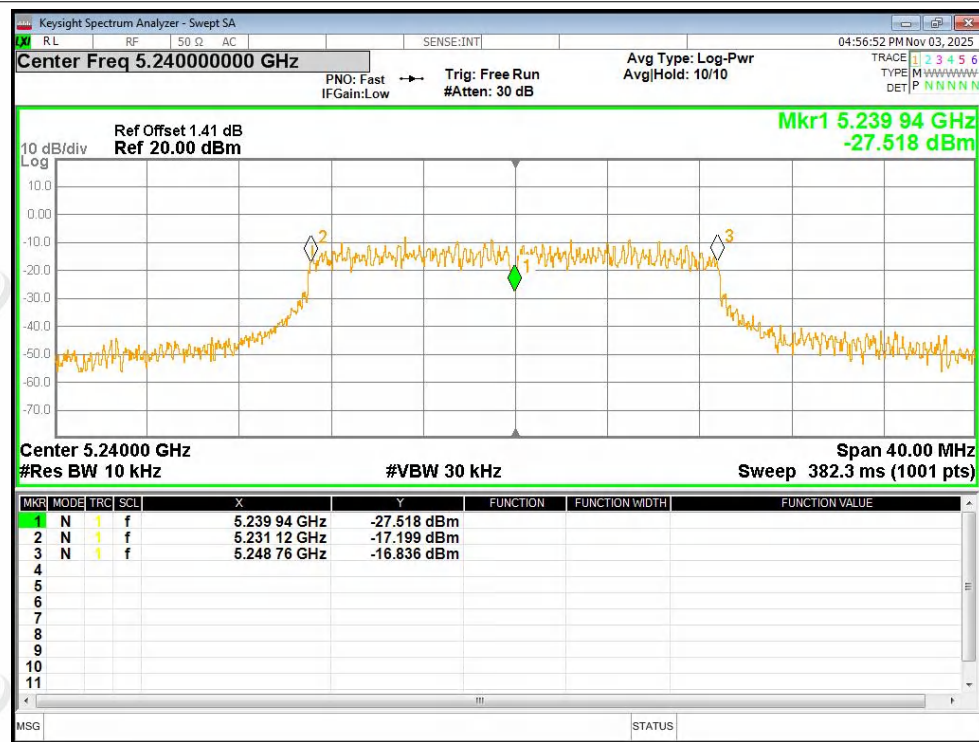




Freq. Stability NVNT n20 5200MHz Ant1

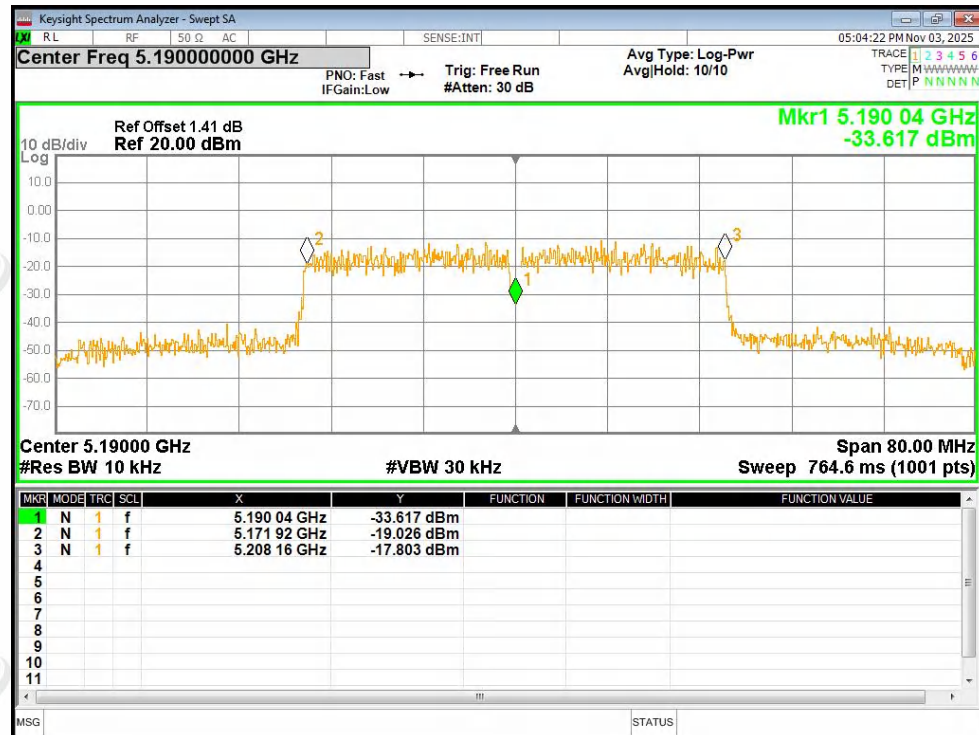


Freq. Stability NVNT n20 5240MHz Ant1

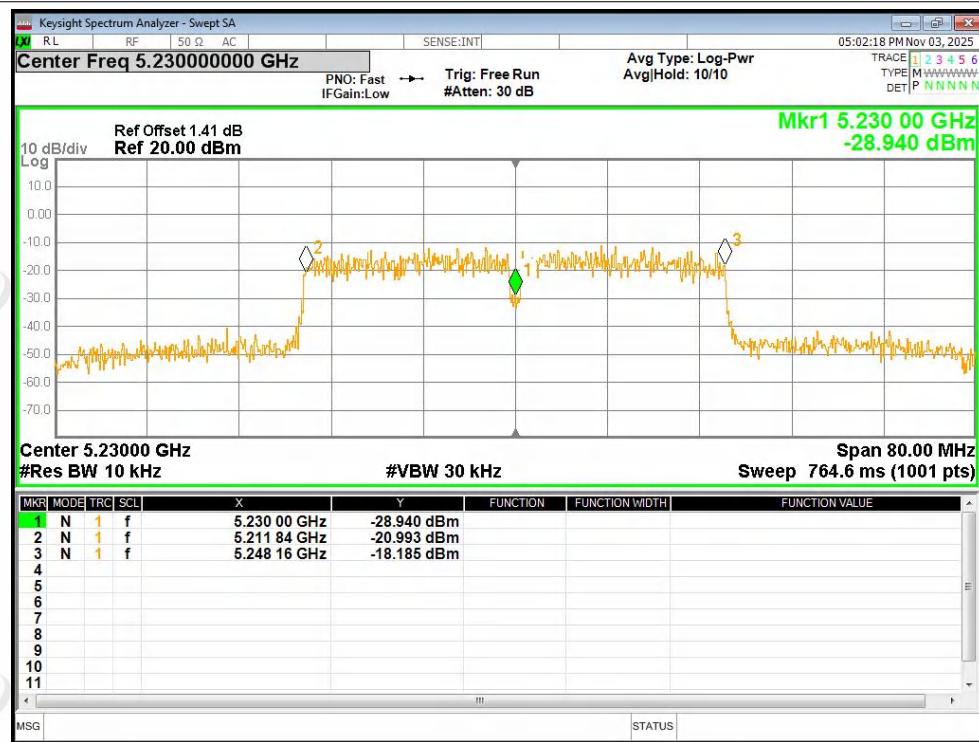




Freq. Stability NVNT n40 5190MHz Ant1



Freq. Stability NVNT n40 5230MHz Ant1



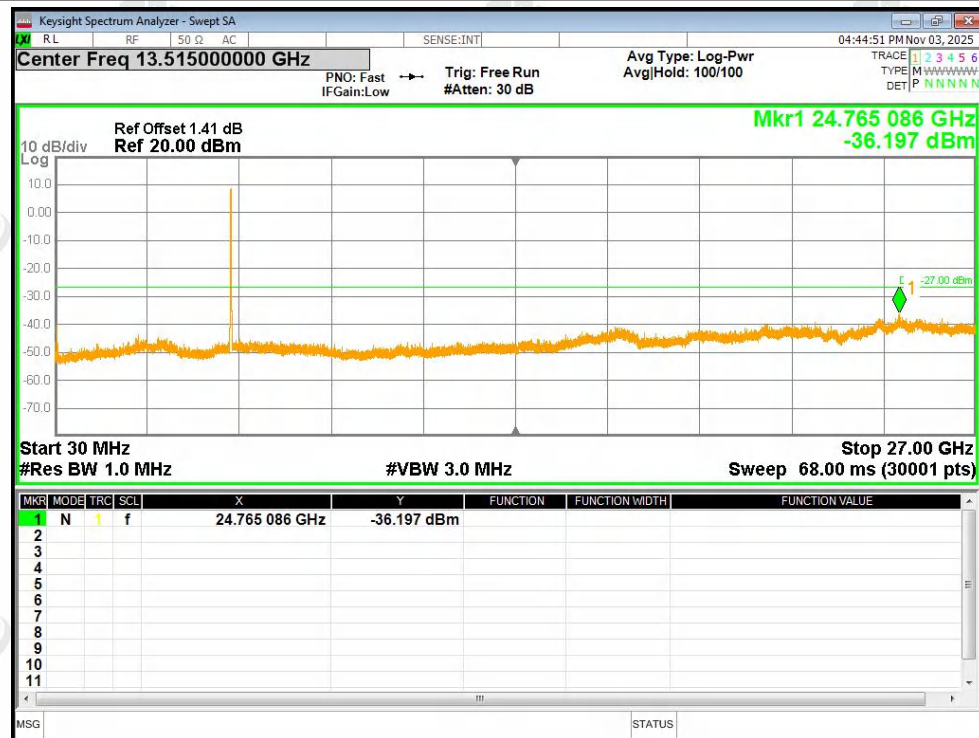
**ZHONGHAN****A.8 Conducted RF Spurious Emission**

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBm)	Limit (dBm)	Verdict
NVNT	a	5180	Ant1	-36.19	-27	Pass
NVNT	a	5200	Ant1	-37.04	-27	Pass
NVNT	a	5240	Ant1	-36.85	-27	Pass
NVNT	n20	5180	Ant1	-37.29	-27	Pass
NVNT	n20	5200	Ant1	-37.54	-27	Pass
NVNT	n20	5240	Ant1	-37.37	-27	Pass
NVNT	n40	5190	Ant1	-36.2	-27	Pass
NVNT	n40	5230	Ant1	-36.58	-27	Pass

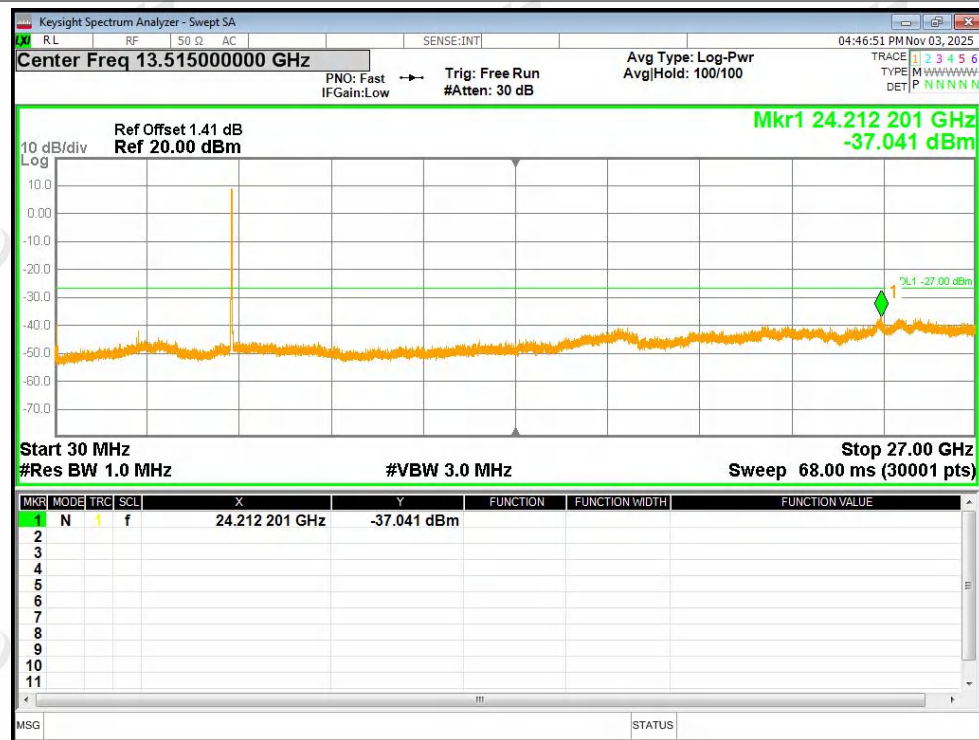


Test Graphs

Tx. Spurious NVNT a 5180MHz Ant1 Emission

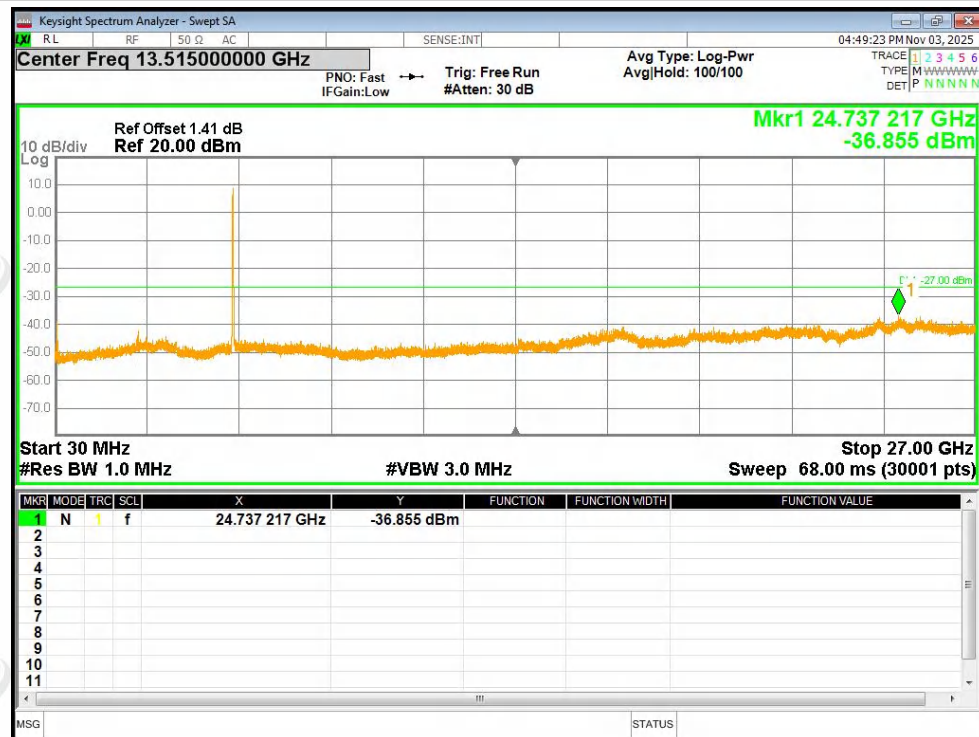


Tx. Spurious NVNT a 5200MHz Ant1 Emission

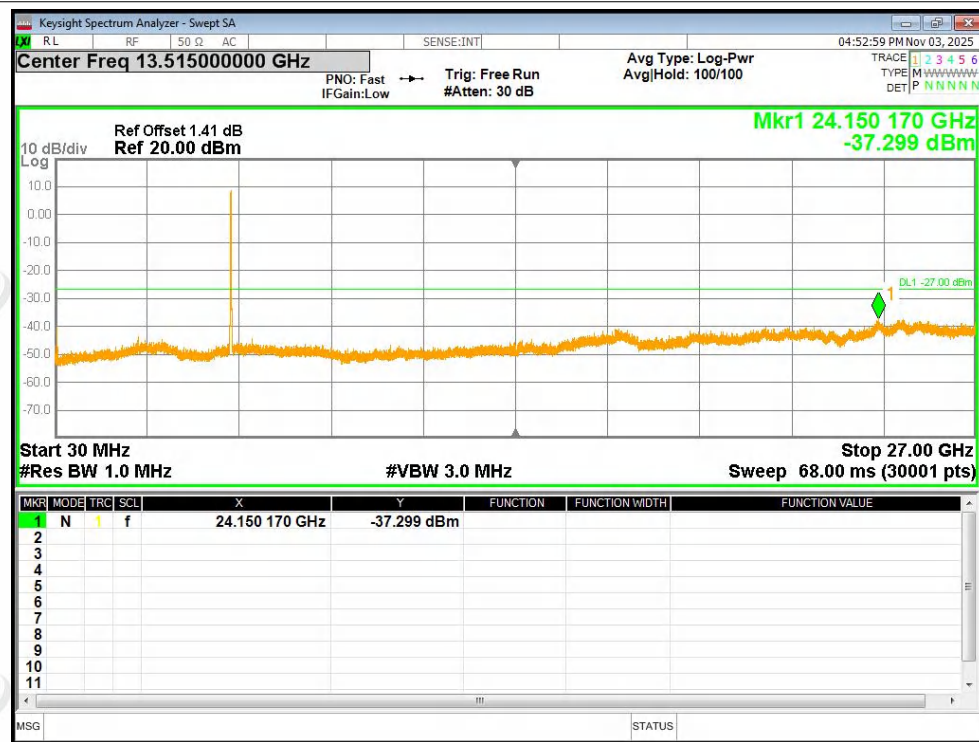




Tx. Spurious NVNT a 5240MHz Ant1 Emission

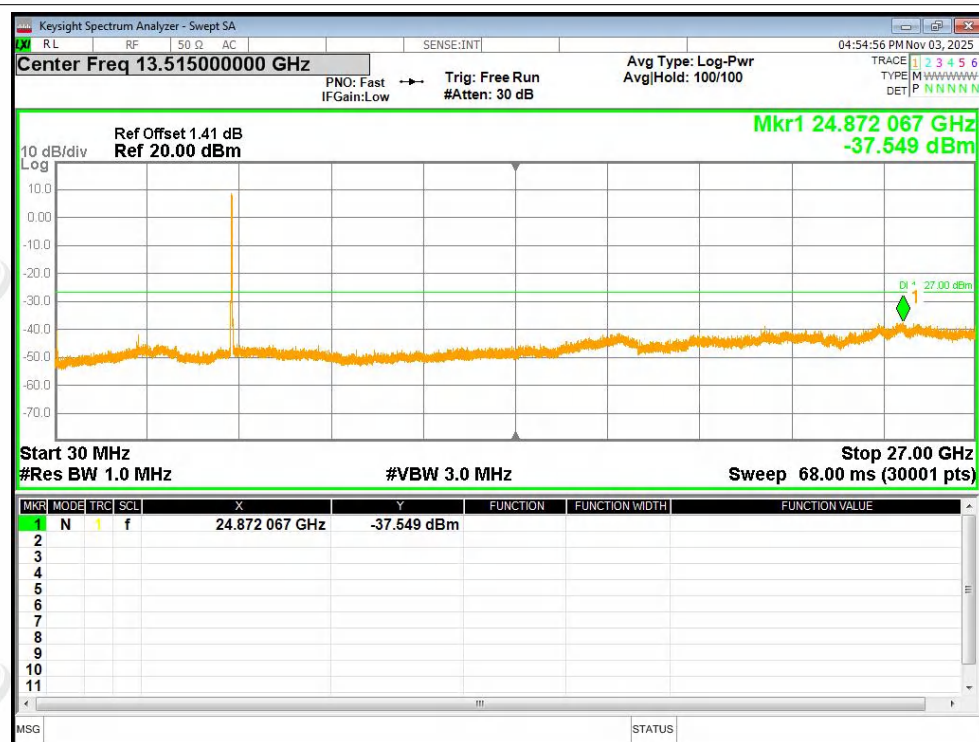


Tx. Spurious NVNT n20 5180MHz Ant1 Emission

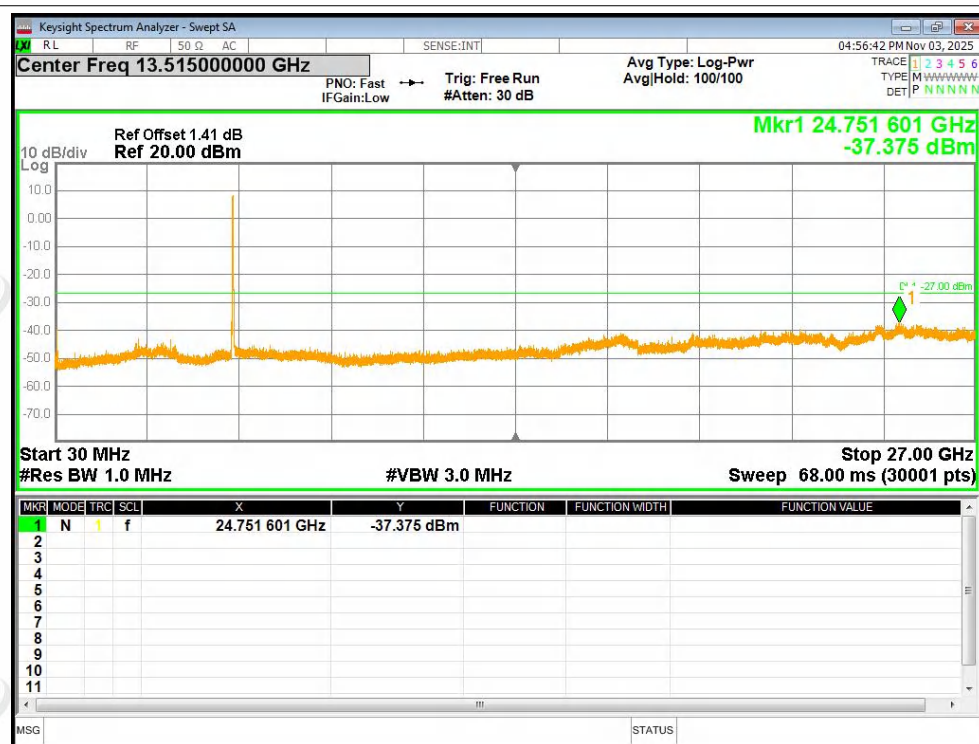




Tx. Spurious NVNT n20 5200MHz Ant1 Emission

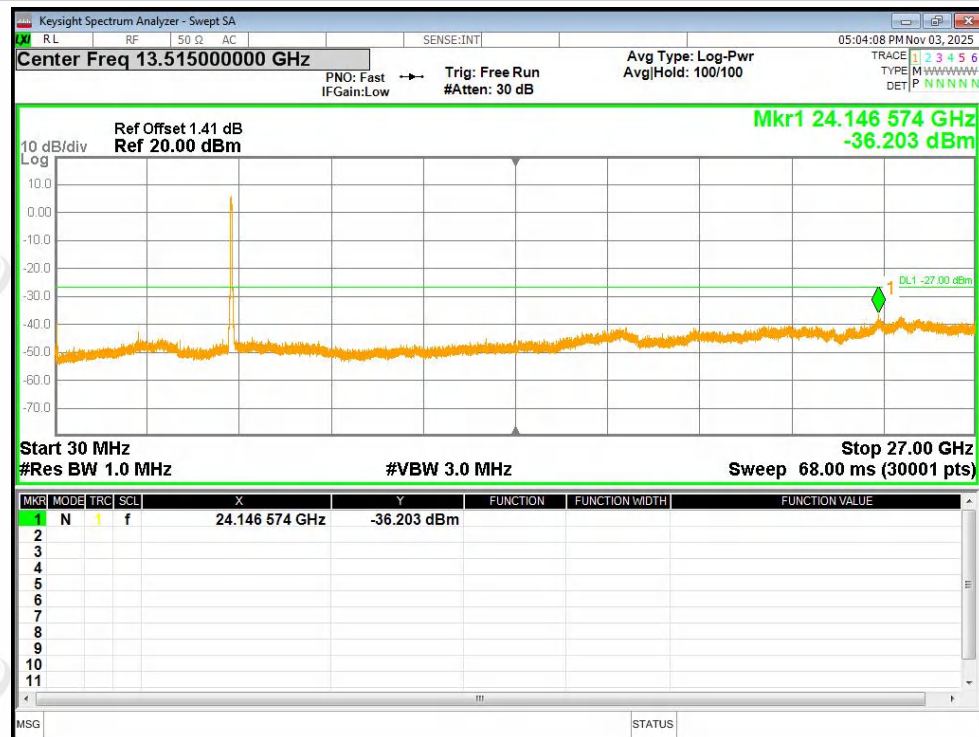


Tx. Spurious NVNT n20 5240MHz Ant1 Emission





Tx. Spurious NVNT n40 5190MHz Ant1 Emission



Tx. Spurious NVNT n40 5230MHz Ant1 Emission

