

Appendix A for 5.2GWIFI Test Data

Product Name: Car Navigation Multimedia

Test Model: P507SD

Environmental Conditions

Temperature:	23.8℃
Relative Humidity:	52%
ATM Pressure:	101.0 kPa
Test Engineer:	Leon Li
Supervised by:	Baret Wu



A1. Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	a	5180	Ant1	93.67	0.28	0.48
NVNT	a	5200	Ant1	94.06	0.27	0.49
NVNT	a	5240	Ant1	94.5	0.25	0.49
NVNT	n20	5180	Ant1	97.46	0.11	0.52
NVNT	n20	5200	Ant1	95.52	0.2	0.52
NVNT	n20	5240	Ant1	95.52	0.2	0.52
NVNT	n40	5190	Ant1	95.96	0.18	1.05
NVNT	n40	5230	Ant1	90.48	0.43	1.05
NVNT	ac20	5180	Ant1	94.63	0.24	0.52
NVNT	ac20	5200	Ant1	97.49	0.11	0.52
NVNT	ac20	5240	Ant1	96.02	0.18	0.52
NVNT	ac40	5190	Ant1	95	0.22	1.05
NVNT	ac40	5230	Ant1	85.59	0.68	1.05
NVNT	ac80	5210	Ant1	85.19	0.7	2.17

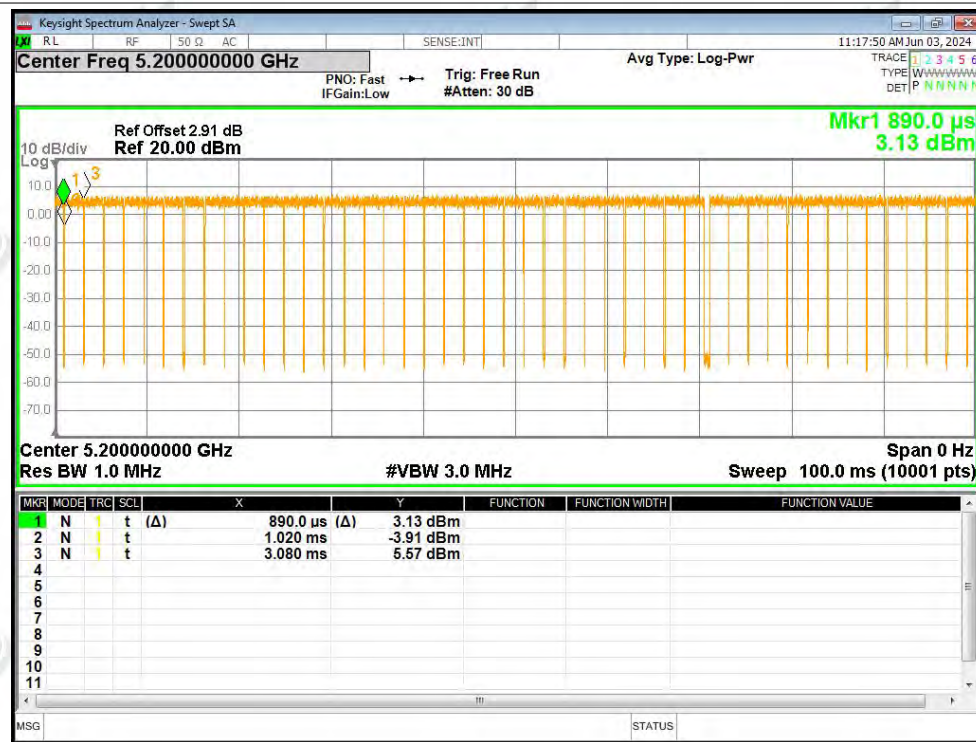


Test Graphs

Duty Cycle NVNT a 5180MHz Ant1

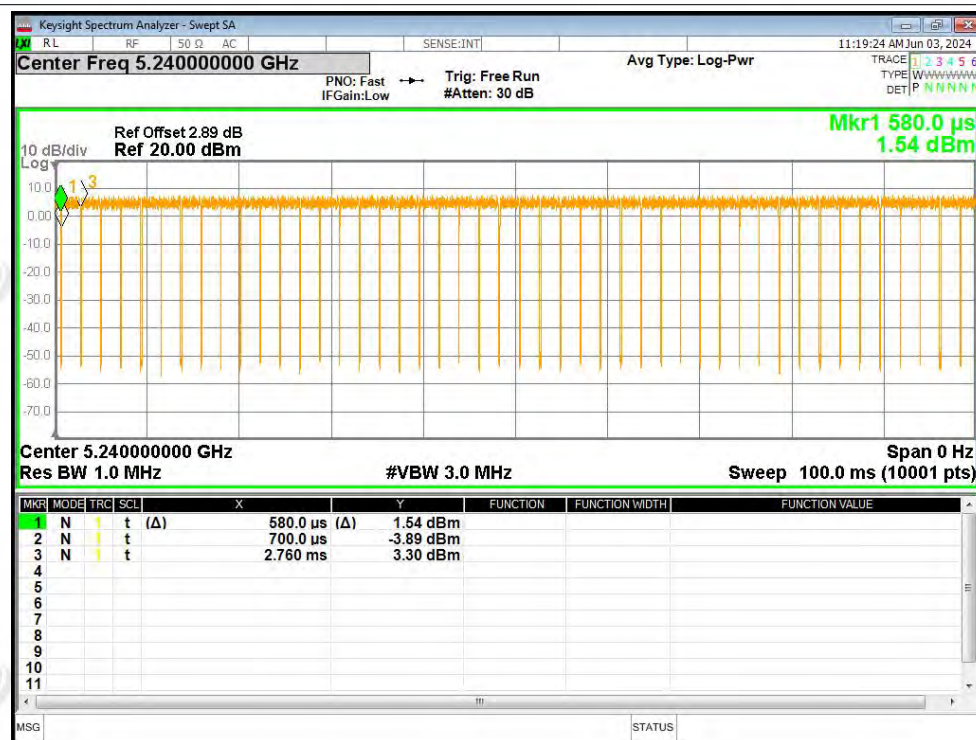


Duty Cycle NVNT a 5200MHz Ant1

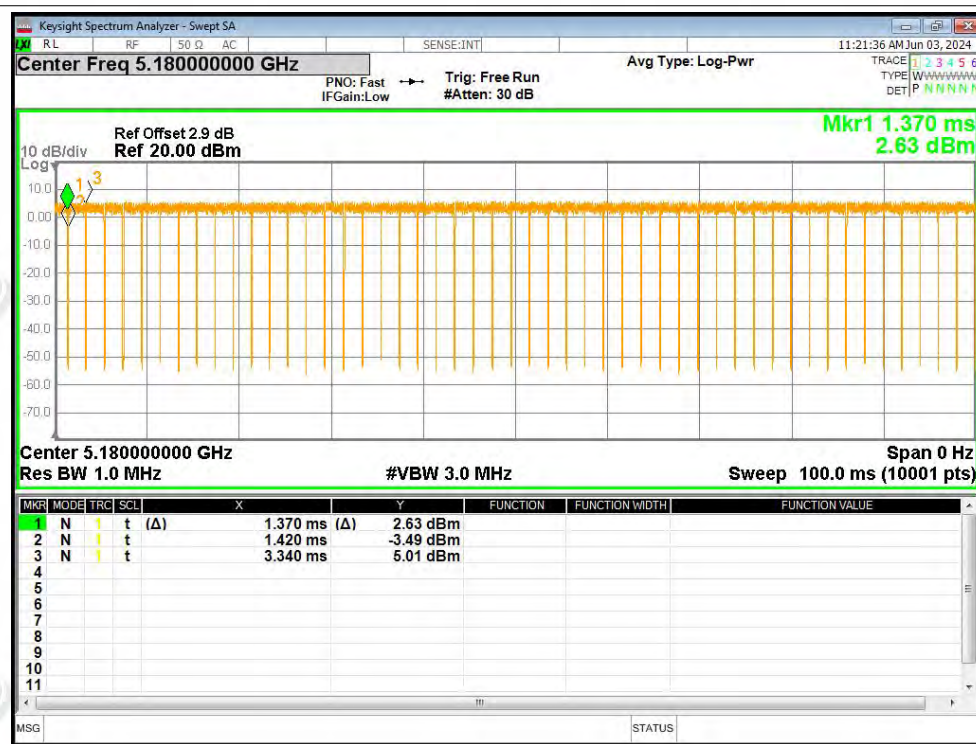




Duty Cycle NVNT a 5240MHz Ant1

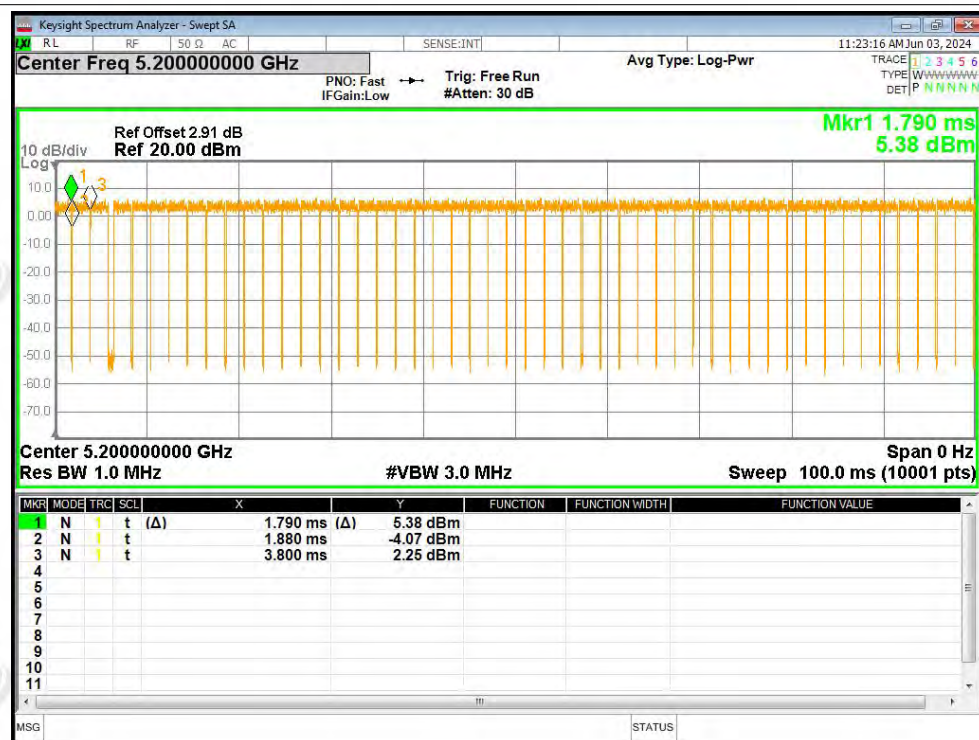


Duty Cycle NVNT n20 5180MHz Ant1

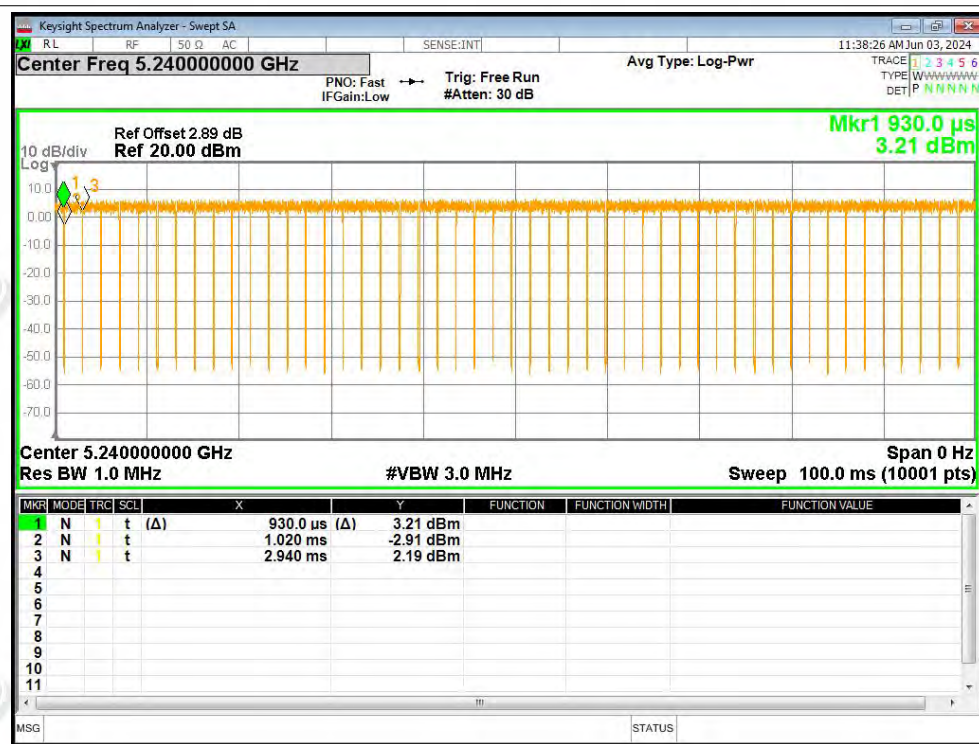




Duty Cycle NVNT n20 5200MHz Ant1

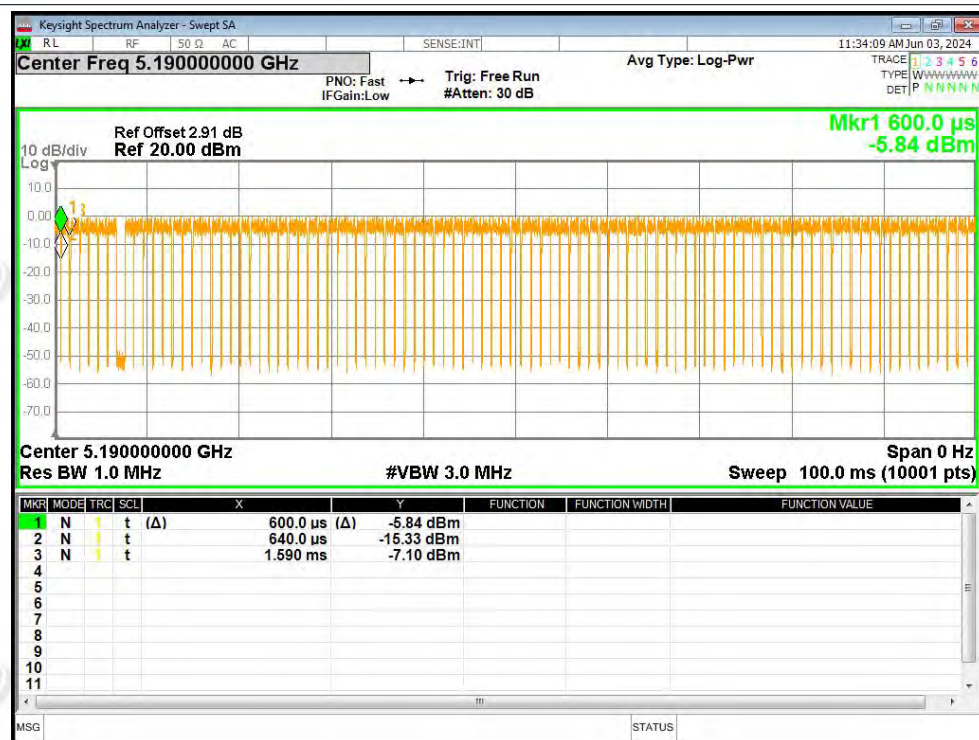


Duty Cycle NVNT n20 5240MHz Ant1

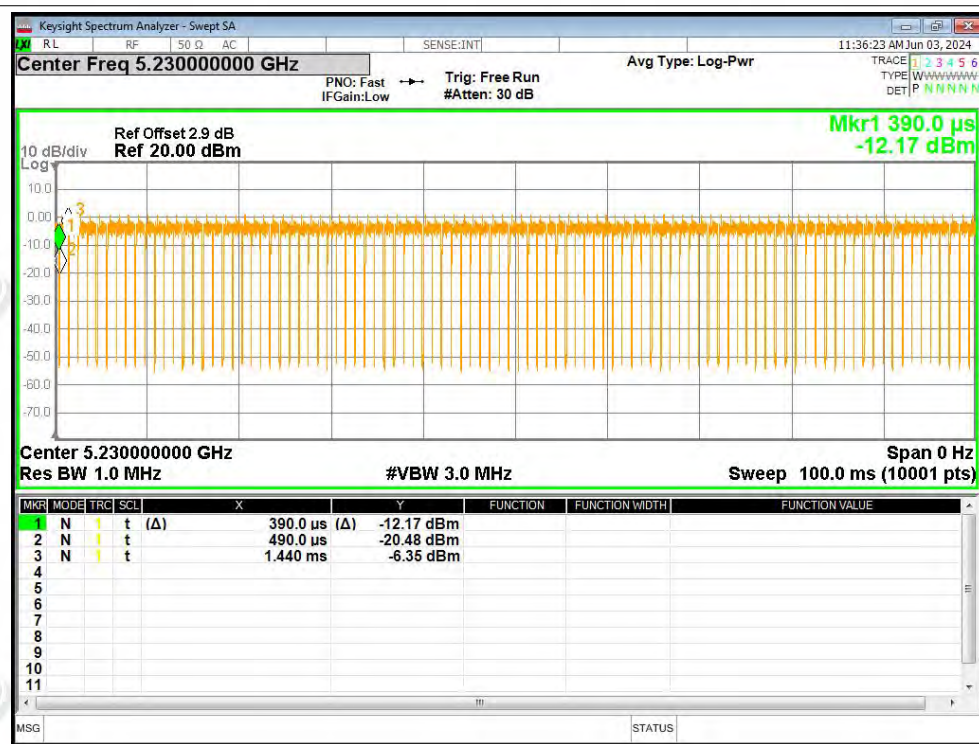




Duty Cycle NVNT n40 5190MHz Ant1

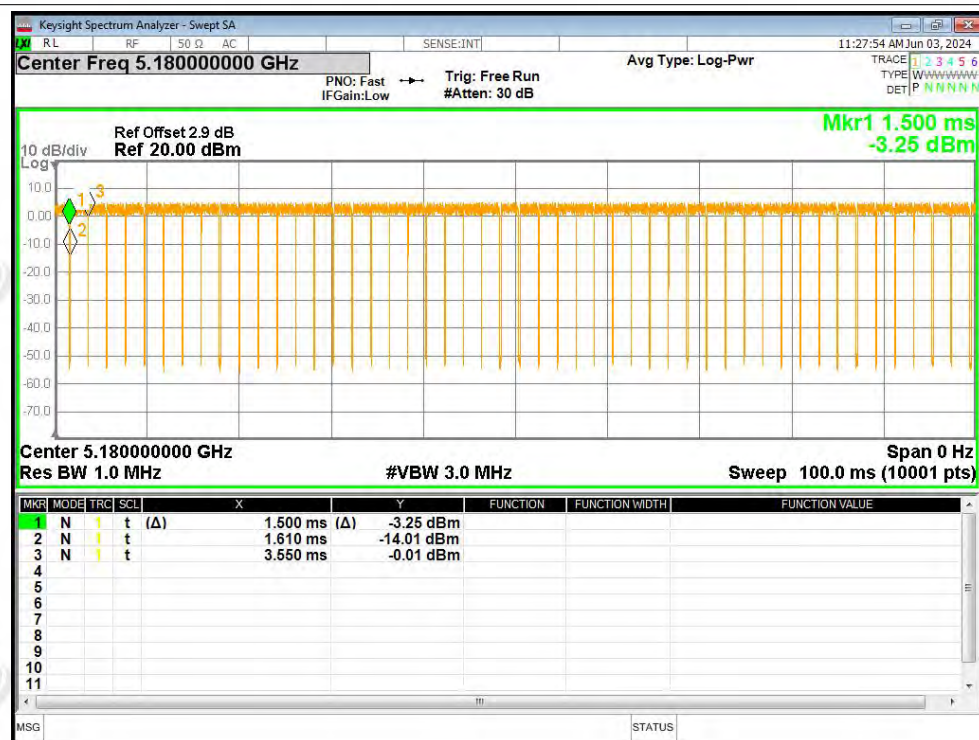


Duty Cycle NVNT n40 5230MHz Ant1

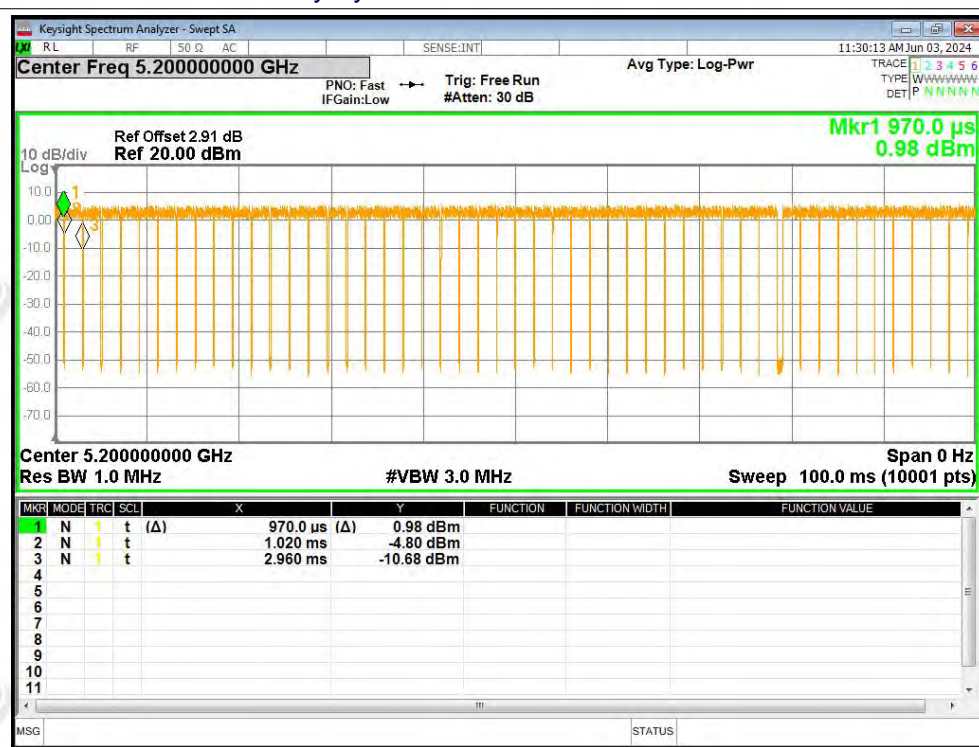




Duty Cycle NVNT ac20 5180MHz Ant1

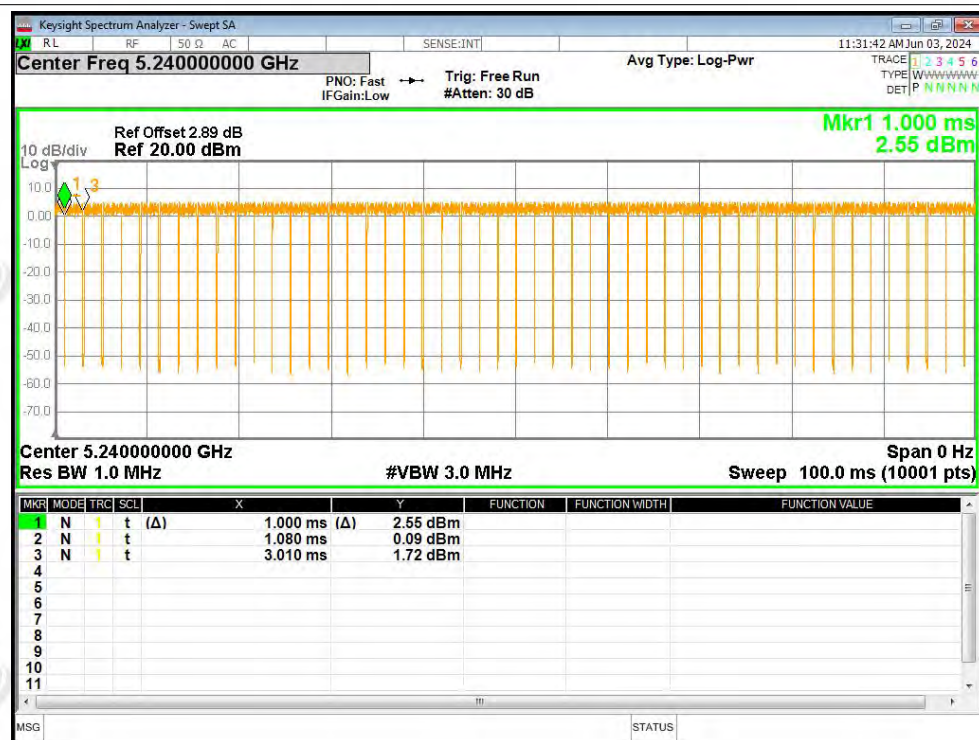


Duty Cycle NVNT ac20 5200MHz Ant1

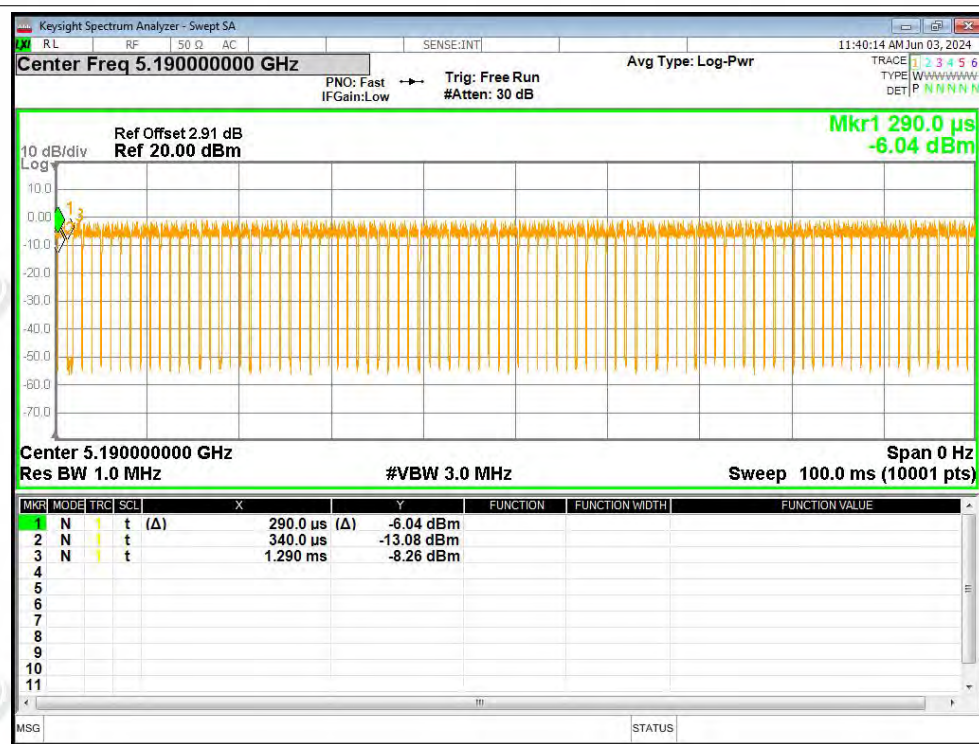




Duty Cycle NVNT ac20 5240MHz Ant1

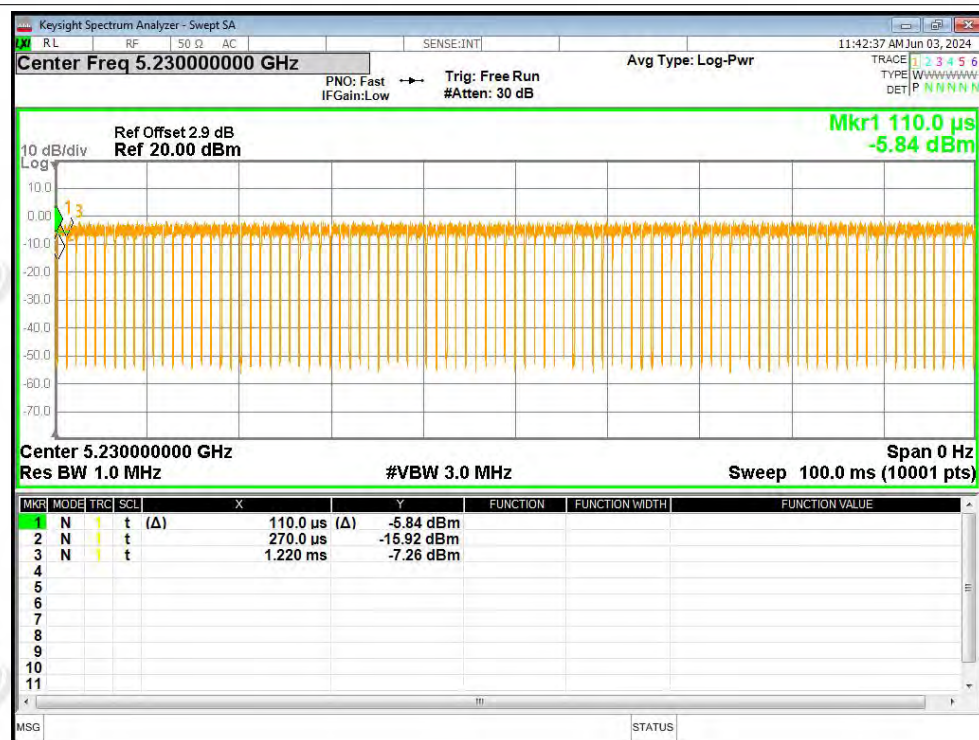


Duty Cycle NVNT ac40 5190MHz Ant1

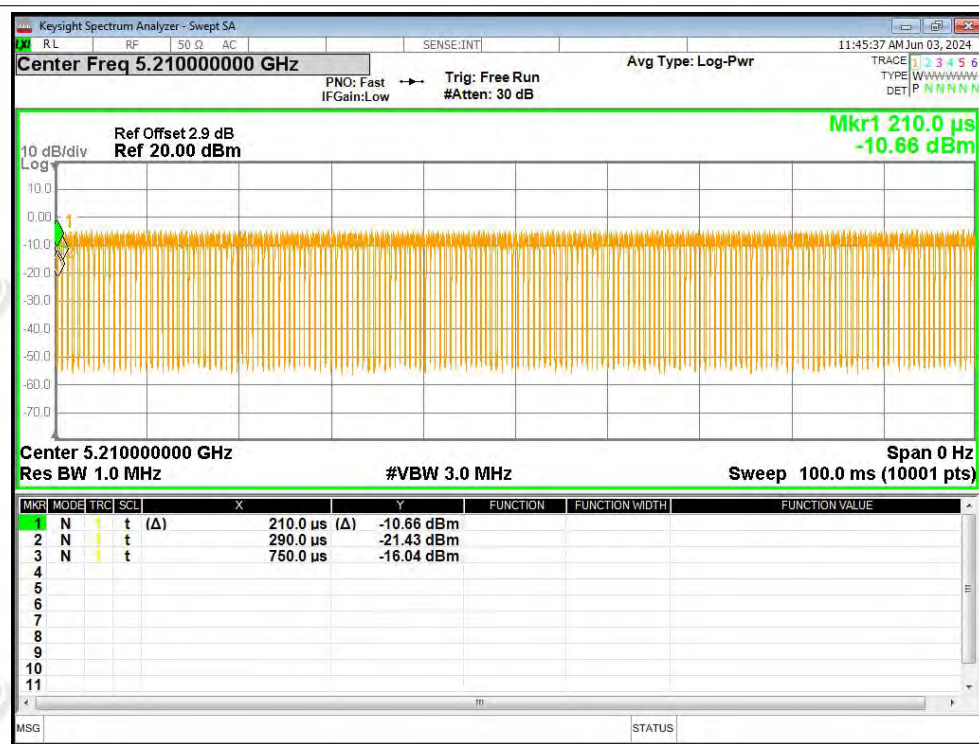




Duty Cycle NVNT ac40 5230MHz Ant1



Duty Cycle NVNT ac80 5210MHz Ant1



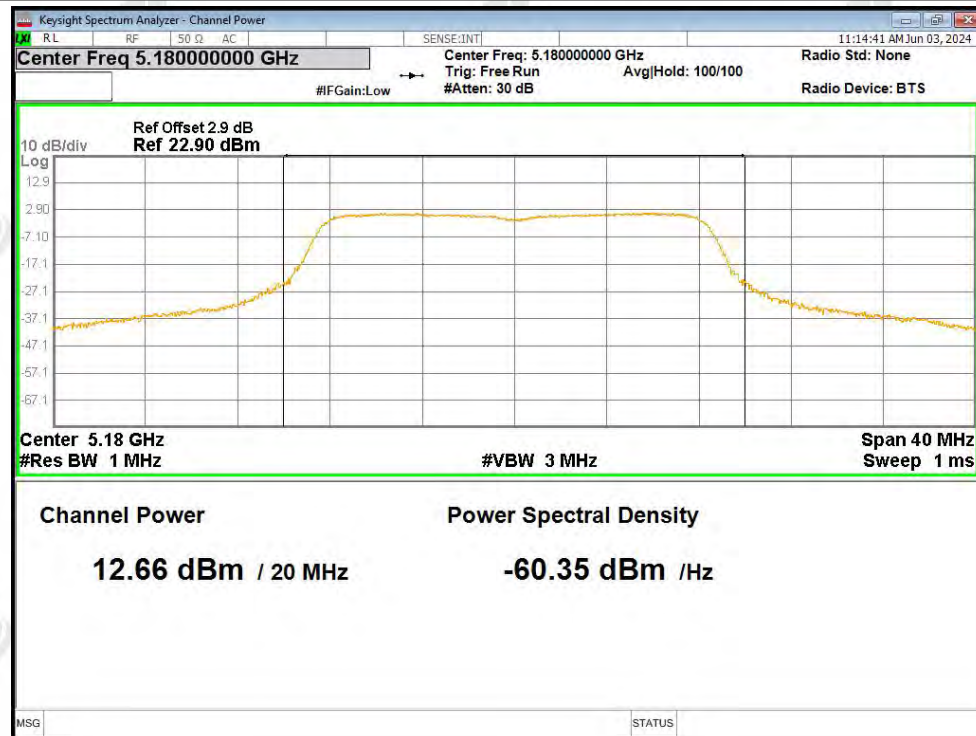
**ZHONGHAN****A2. Maximum Conducted Output Power**

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	a	5180	Ant1	12.66	0.28	12.94	24	Pass
NVNT	a	5200	Ant1	12.53	0.27	12.8	24	Pass
NVNT	a	5240	Ant1	12.59	0.25	12.84	24	Pass
NVNT	n20	5180	Ant1	11.56	0.11	11.67	24	Pass
NVNT	n20	5200	Ant1	11.68	0.2	11.88	24	Pass
NVNT	n20	5240	Ant1	11.69	0	11.69	24	Pass
NVNT	n40	5190	Ant1	9.43	0.18	9.61	24	Pass
NVNT	n40	5230	Ant1	9.79	0.43	10.22	24	Pass
NVNT	ac20	5180	Ant1	10.7	0.24	10.94	24	Pass
NVNT	ac20	5200	Ant1	10.77	0.11	10.88	24	Pass
NVNT	ac20	5240	Ant1	10.9	0.18	11.08	24	Pass
NVNT	ac40	5190	Ant1	8.27	0.22	8.49	24	Pass
NVNT	ac40	5230	Ant1	8.52	0.68	9.2	24	Pass
NVNT	ac80	5210	Ant1	7.44	0.7	8.14	24	Pass

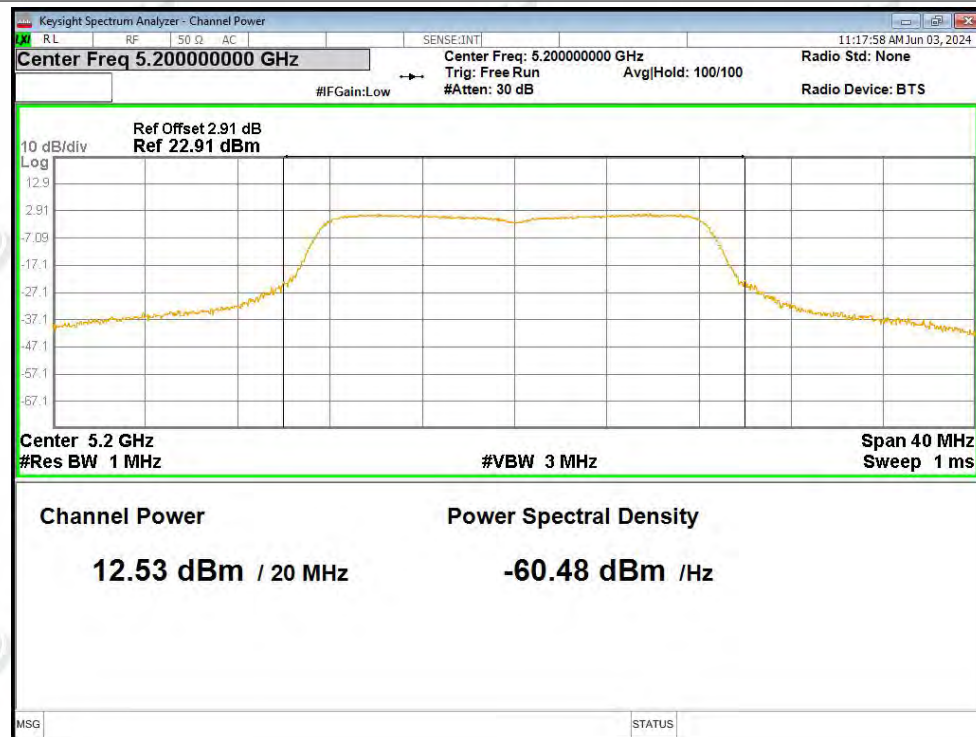


Test Graphs

Power NVNT a 5180MHz Ant1

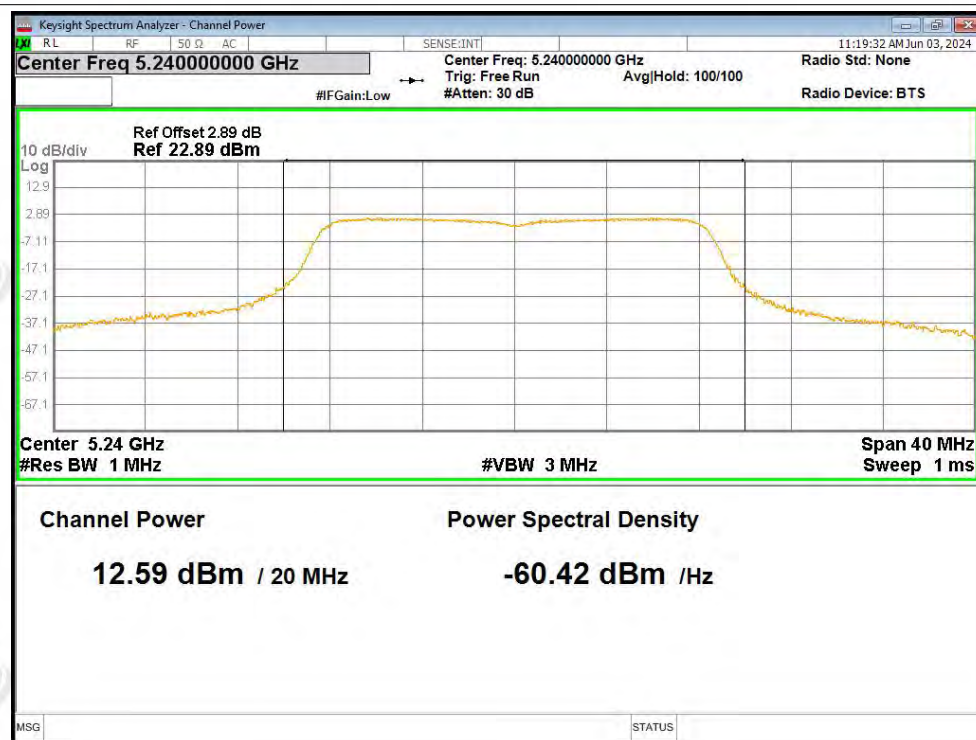


Power NVNT a 5200MHz Ant1

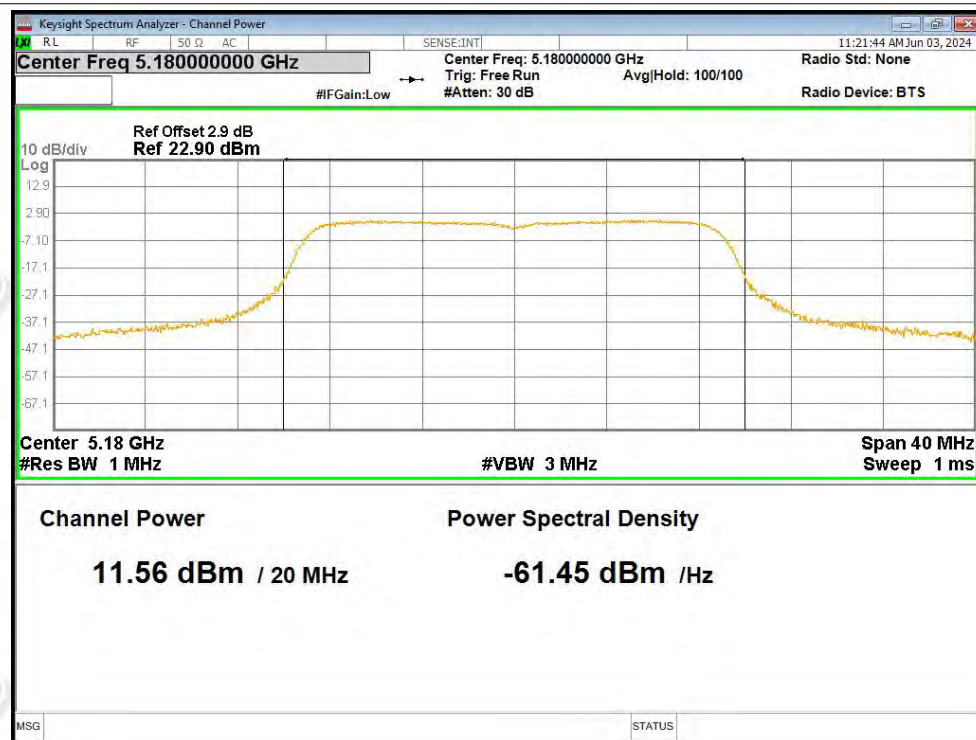




Power NVNT a 5240MHz Ant1

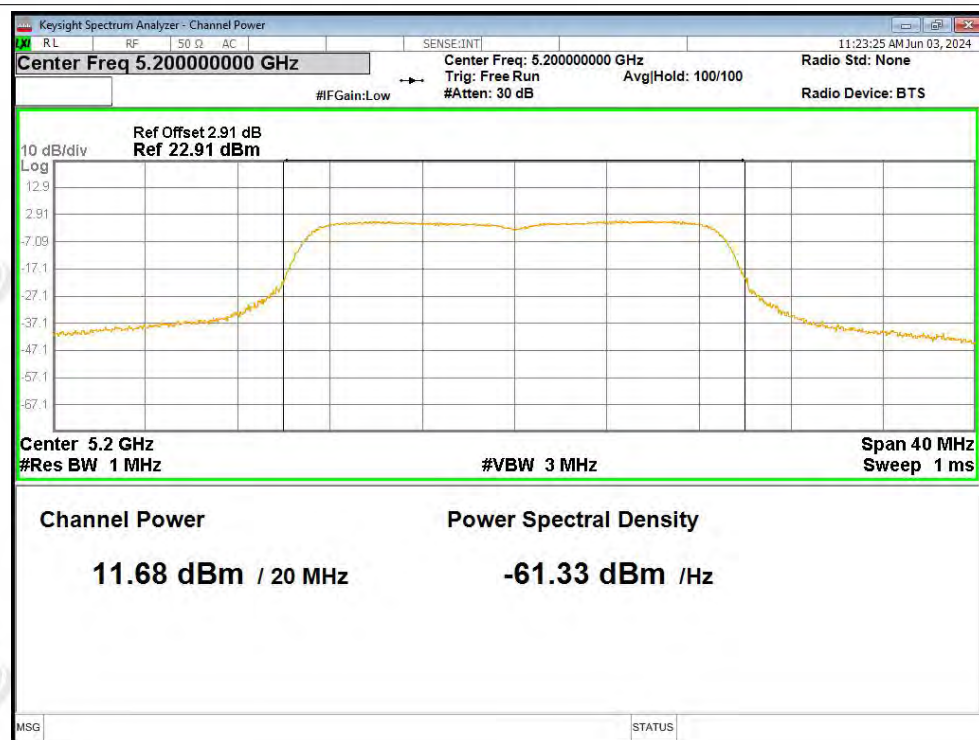


Power NVNT n20 5180MHz Ant1

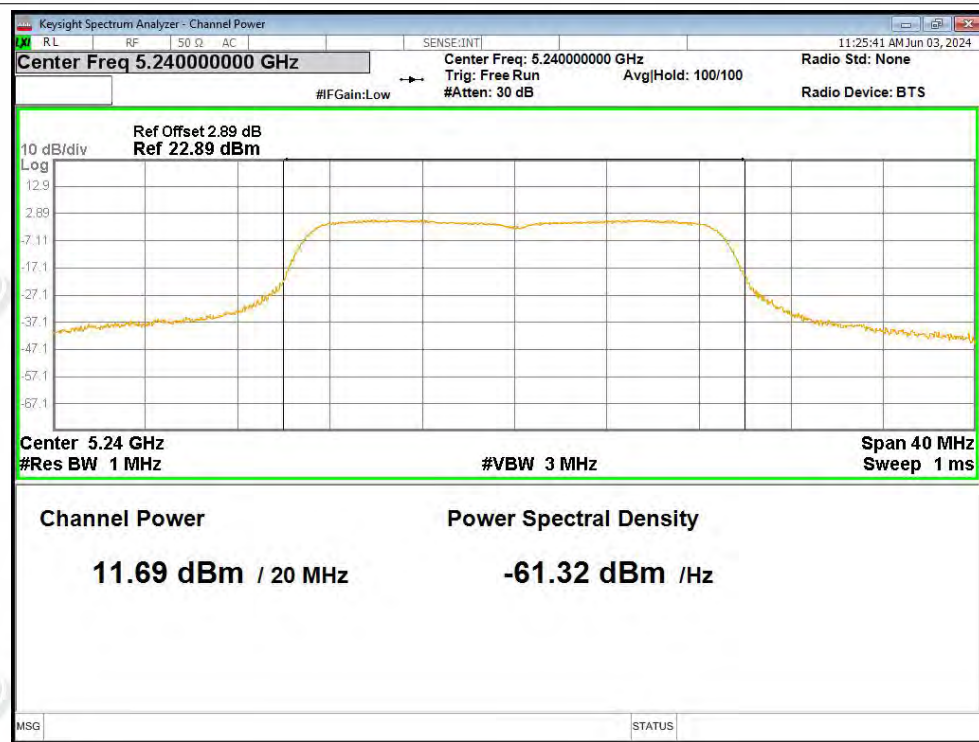




Power NVNT n20 5200MHz Ant1

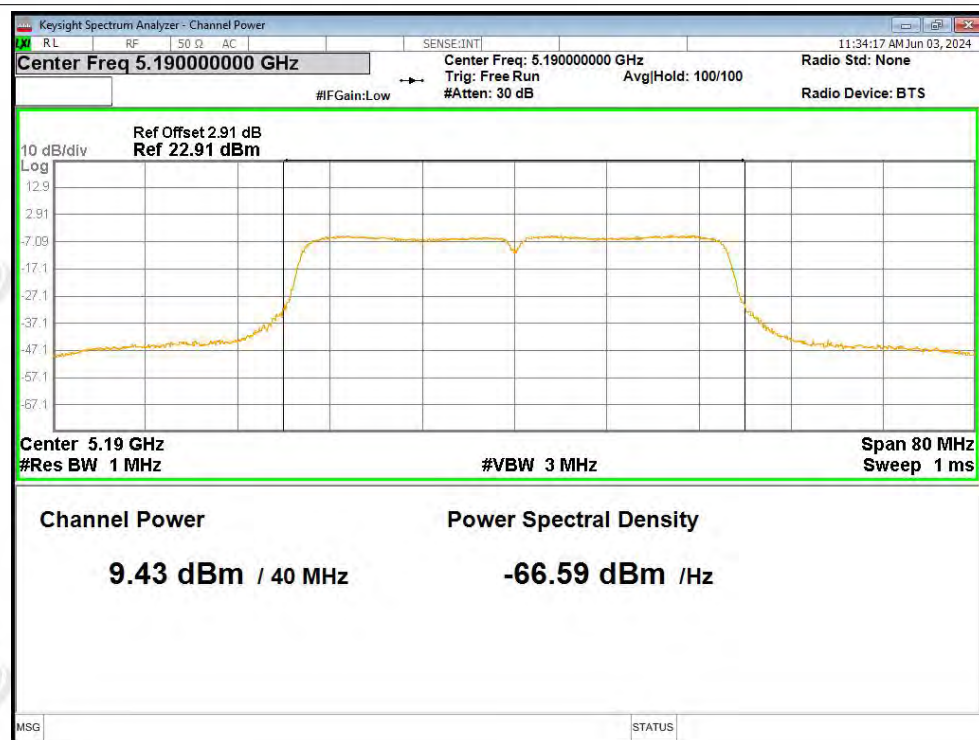


Power NVNT n20 5240MHz Ant1

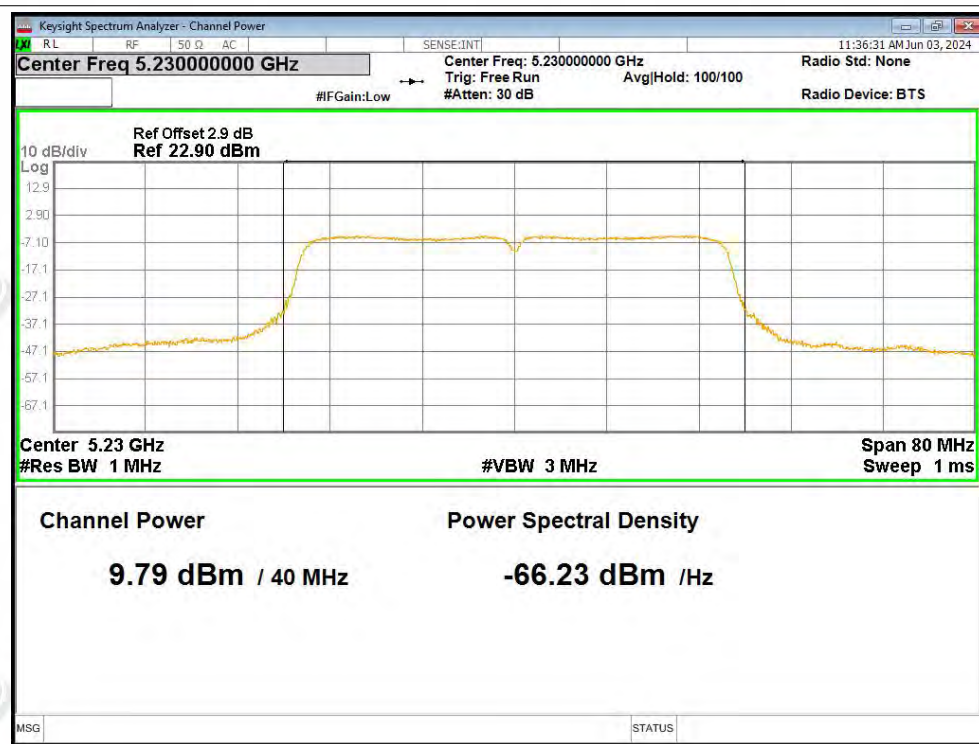




Power NVNT n40 5190MHz Ant1

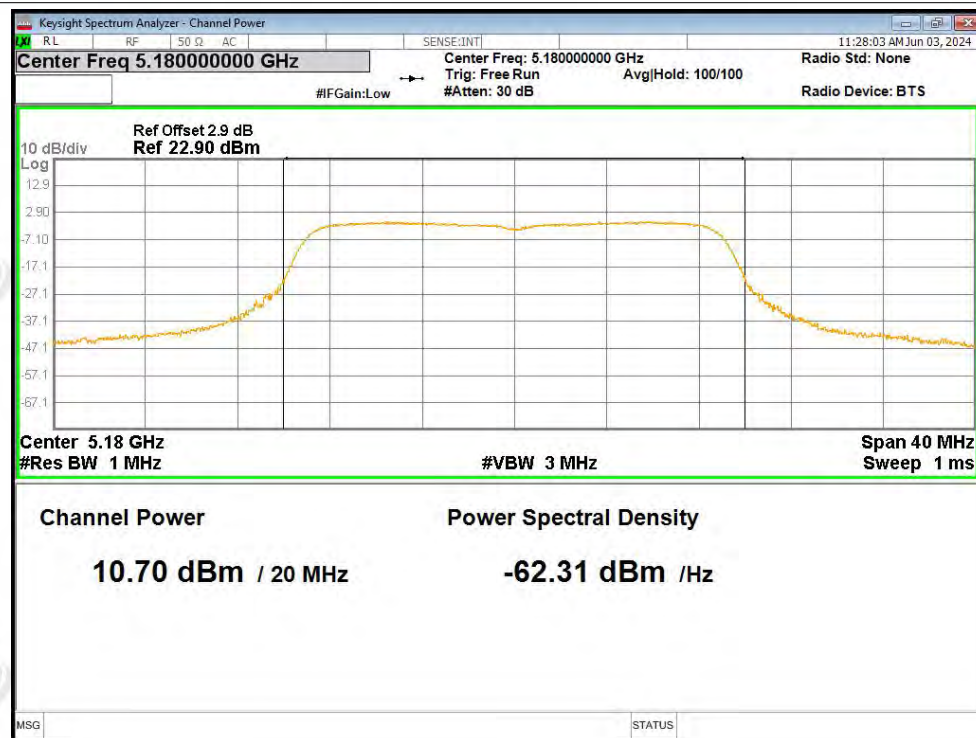


Power NVNT n40 5230MHz Ant1

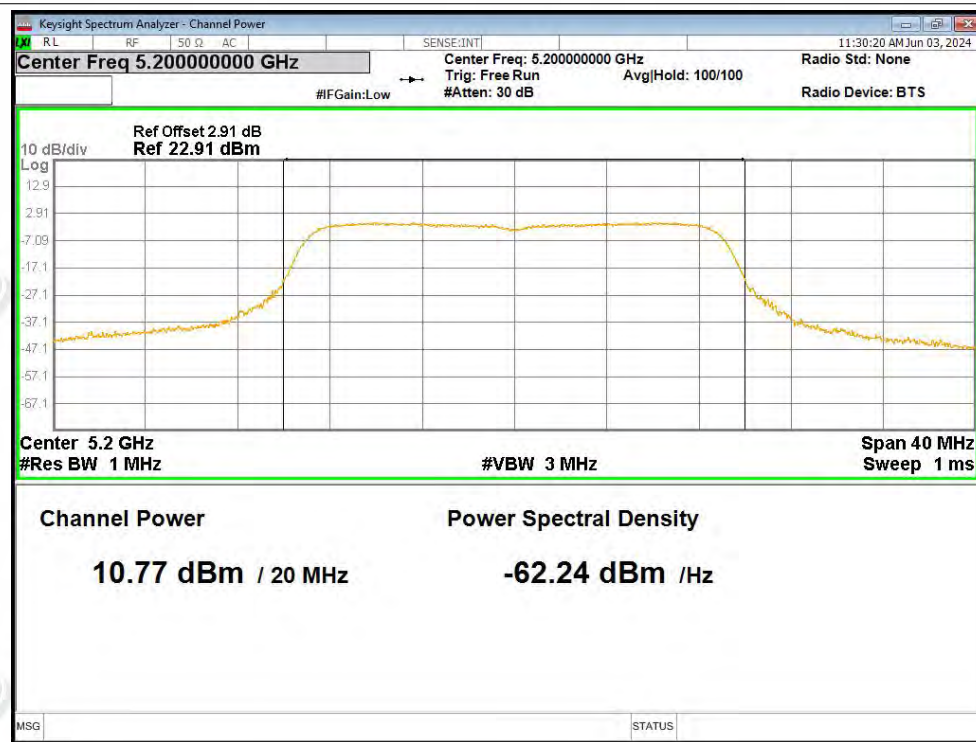




Power NVNT ac20 5180MHz Ant1

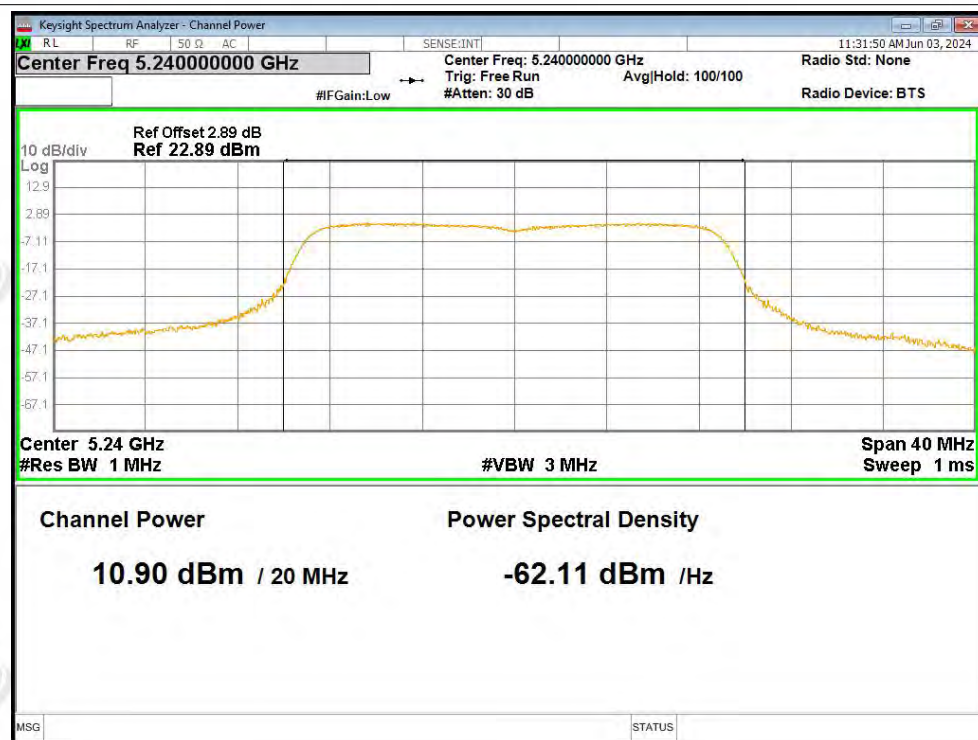


Power NVNT ac20 5200MHz Ant1

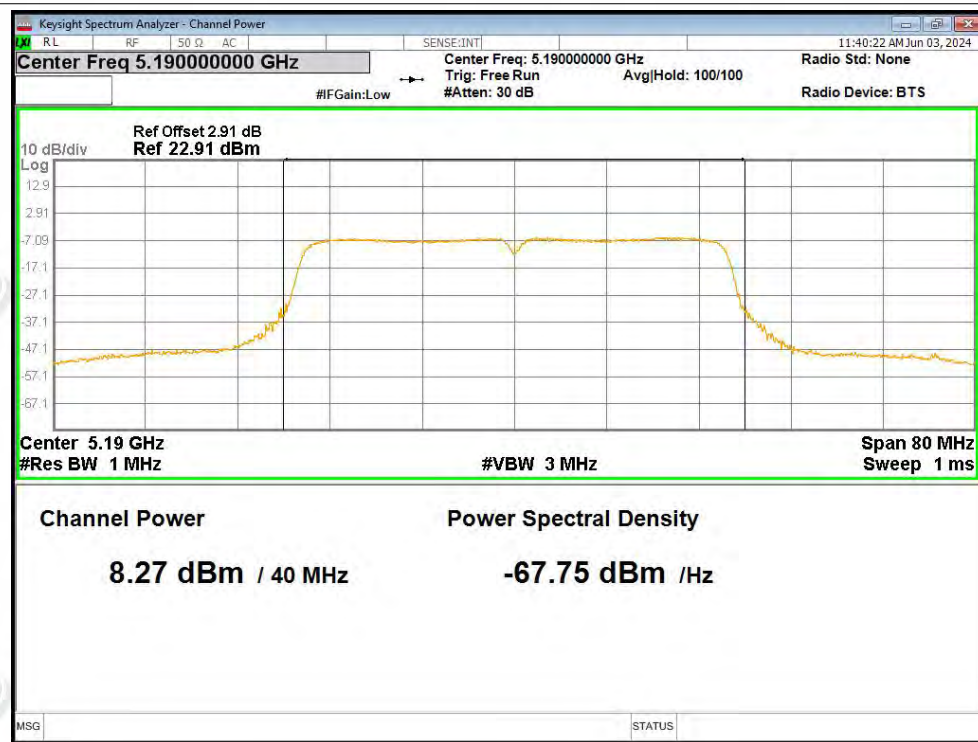




Power NVNT ac20 5240MHz Ant1

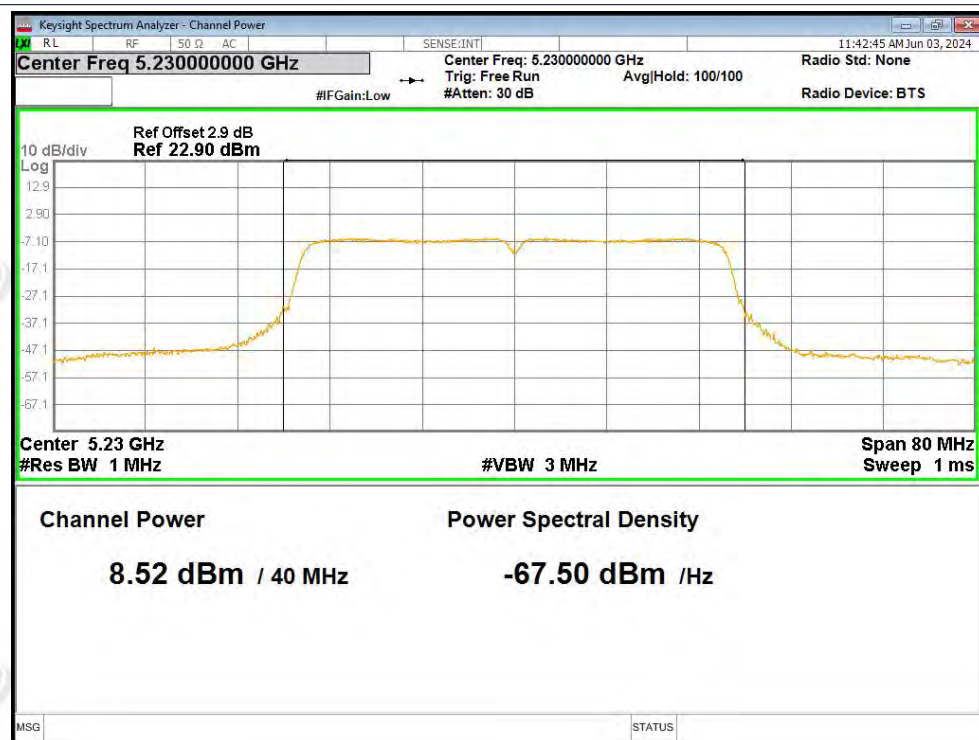


Power NVNT ac40 5190MHz Ant1





Power NVNT ac40 5230MHz Ant1



Power NVNT ac80 5210MHz Ant1



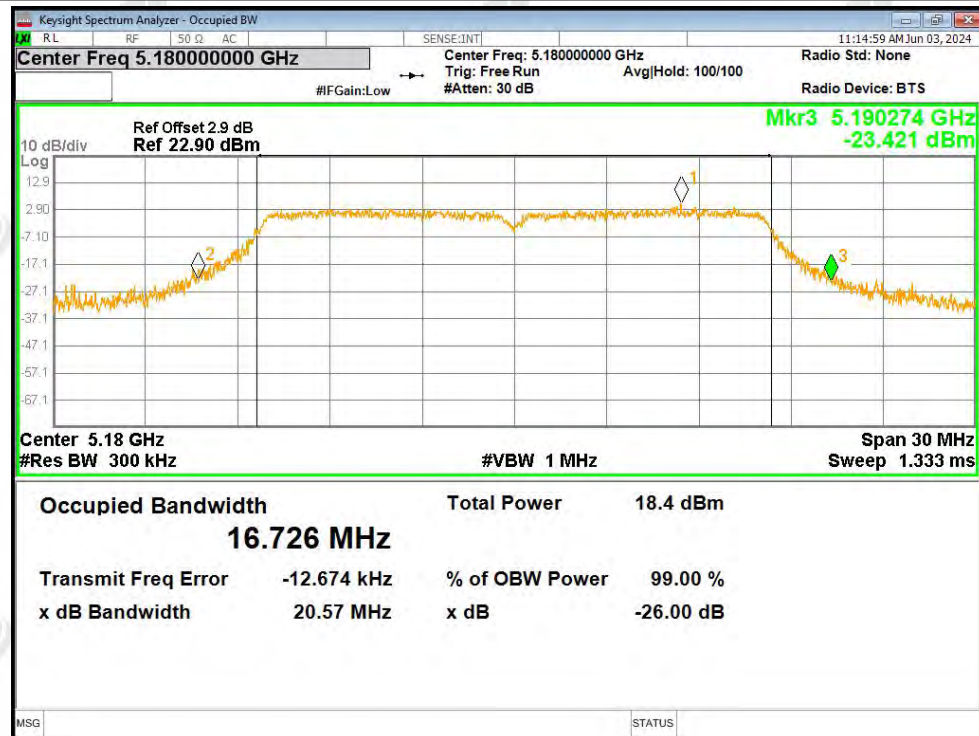
**ZHONGHAN****A3. -26dB Bandwidth**

Condition	Mode	Frequency (MHz)	Antenna	-26 dB Bandwidth (MHz)	Verdict
NVNT	a	5180	Ant1	20.573	Pass
NVNT	a	5200	Ant1	21.57	Pass
NVNT	a	5240	Ant1	21.061	Pass
NVNT	n20	5180	Ant1	21.815	Pass
NVNT	n20	5200	Ant1	21.818	Pass
NVNT	n20	5240	Ant1	21.691	Pass
NVNT	n40	5190	Ant1	40.757	Pass
NVNT	n40	5230	Ant1	40.901	Pass
NVNT	ac20	5180	Ant1	21.52	Pass
NVNT	ac20	5200	Ant1	21.521	Pass
NVNT	ac20	5240	Ant1	21.675	Pass
NVNT	ac40	5190	Ant1	40.824	Pass
NVNT	ac40	5230	Ant1	41.166	Pass
NVNT	ac80	5210	Ant1	79.662	Pass

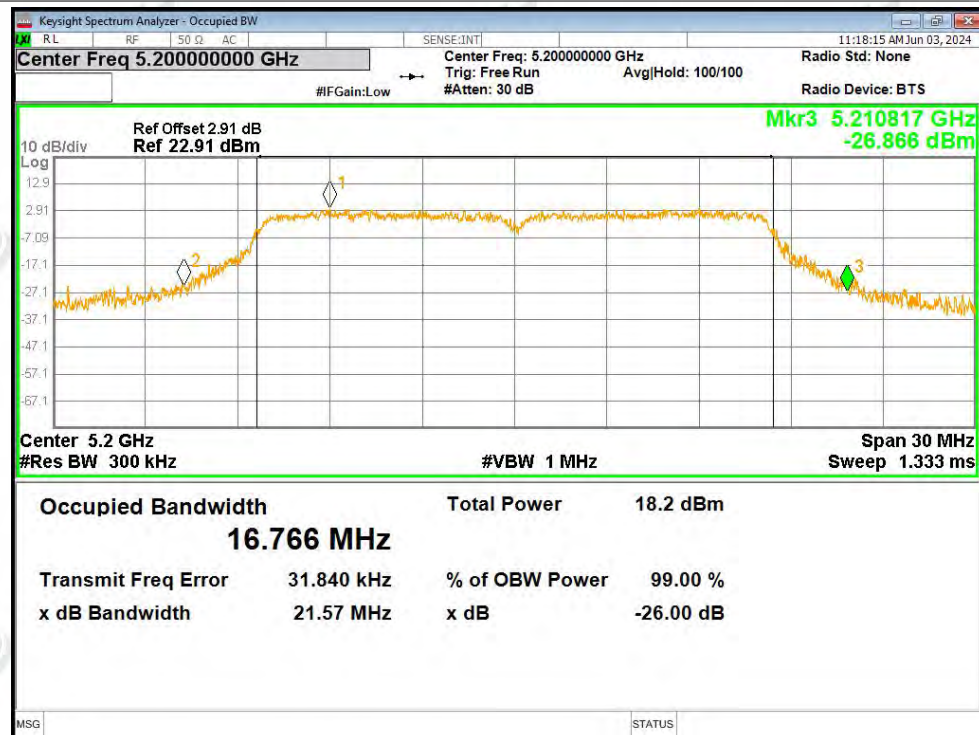


Test Graphs

-26dB Bandwidth NVNT a 5180MHz Ant1

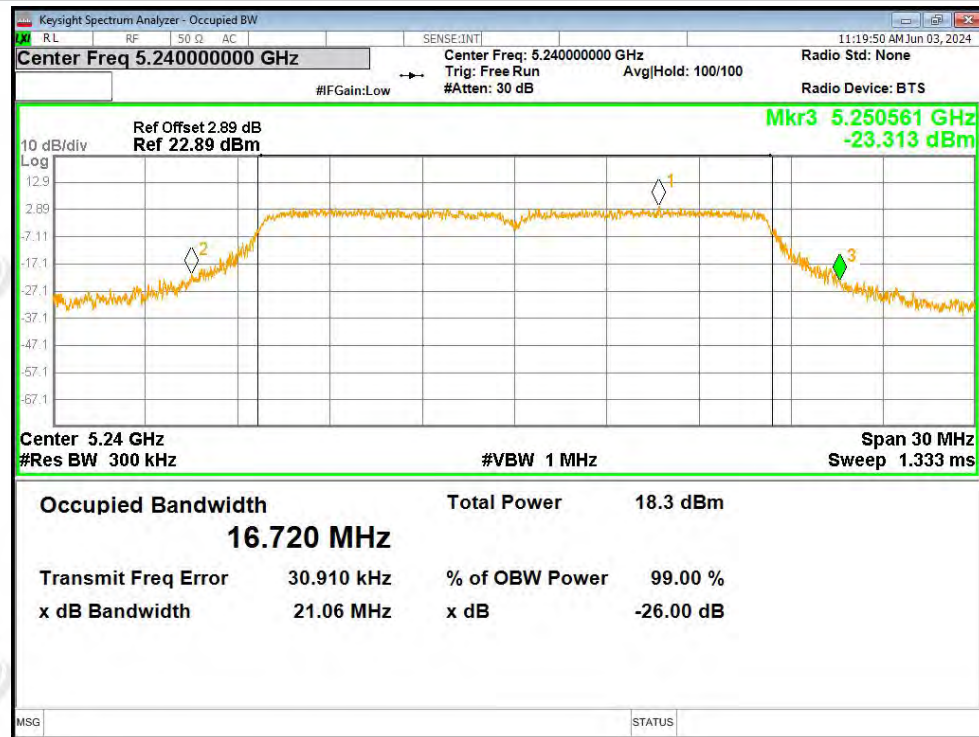


-26dB Bandwidth NVNT a 5200MHz Ant1

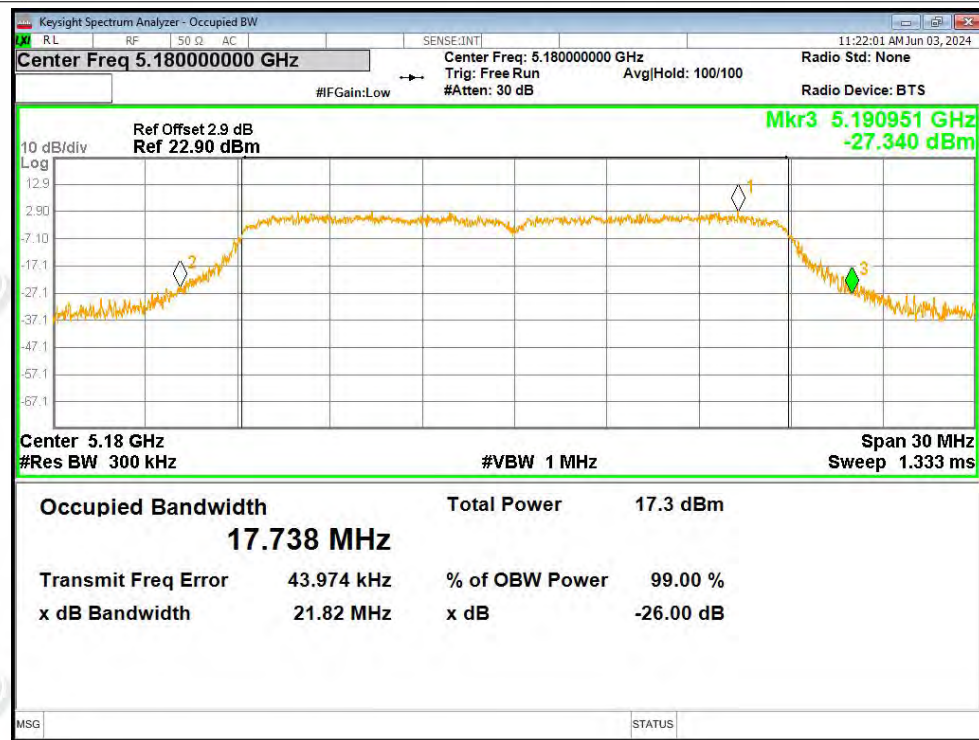




-26dB Bandwidth NVNT a 5240MHz Ant1

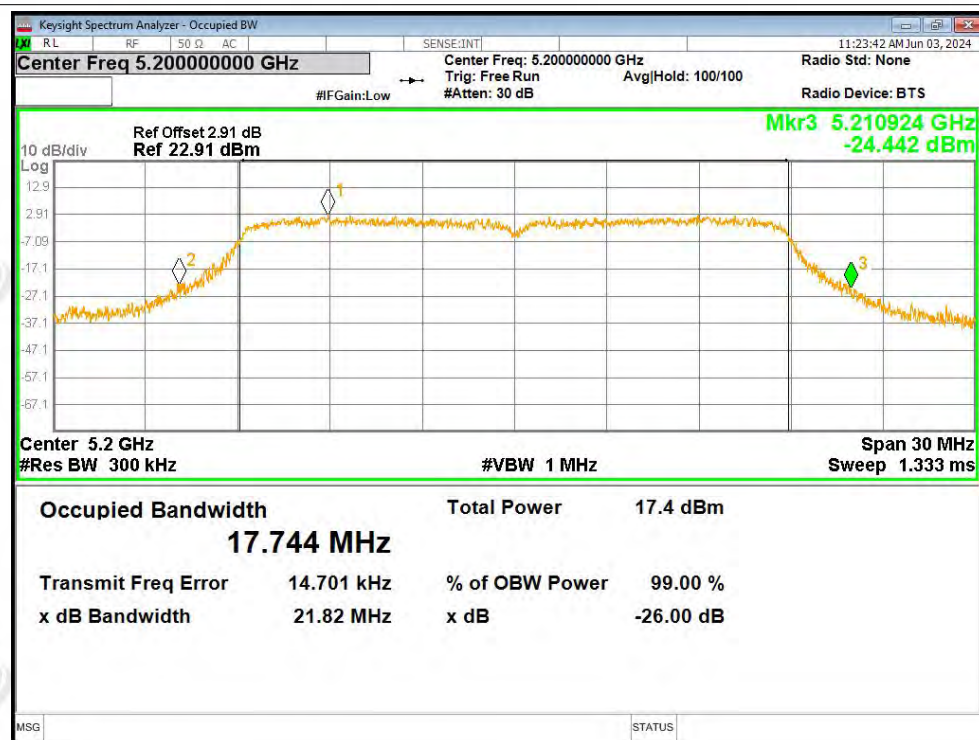


-26dB Bandwidth NVNT n20 5180MHz Ant1

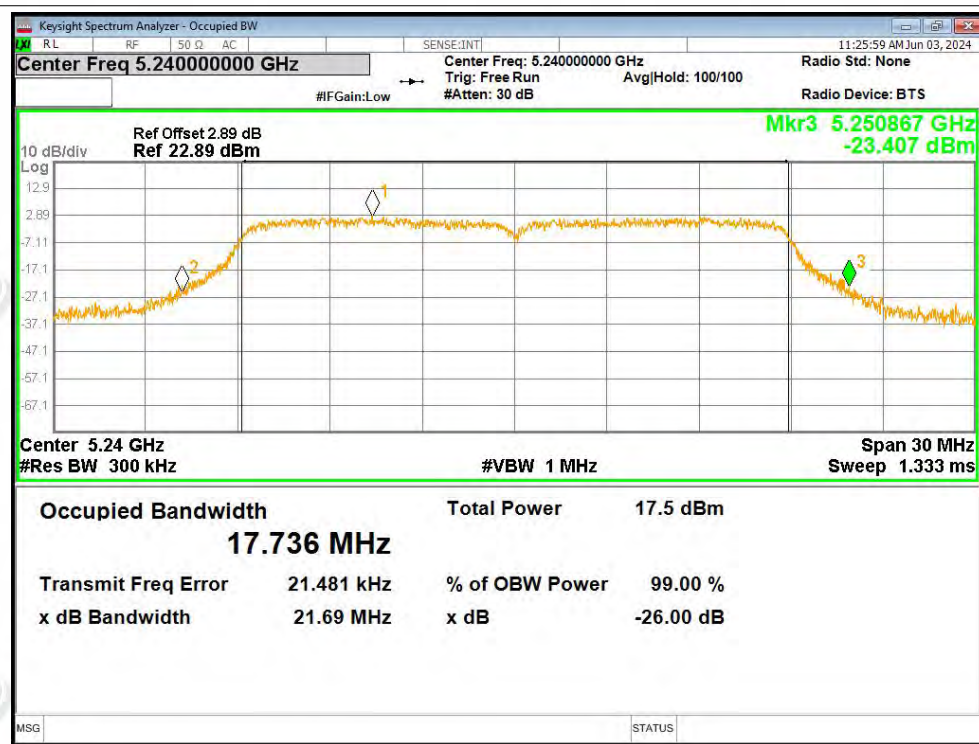




-26dB Bandwidth NVNT n20 5200MHz Ant1



-26dB Bandwidth NVNT n20 5240MHz Ant1

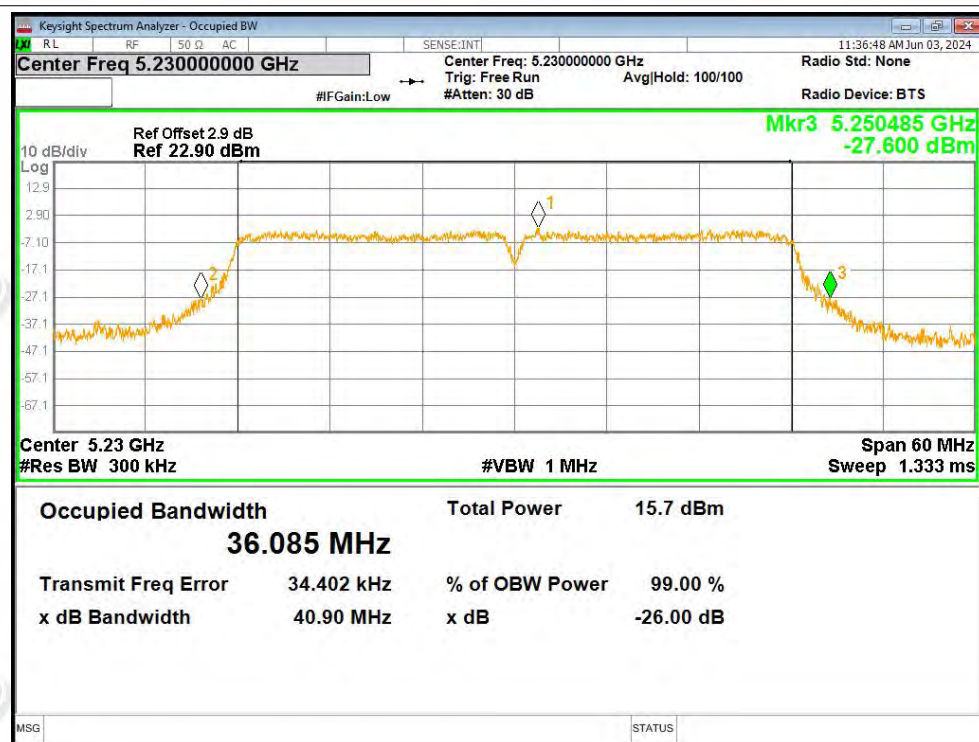




-26dB Bandwidth NVNT n40 5190MHz Ant1

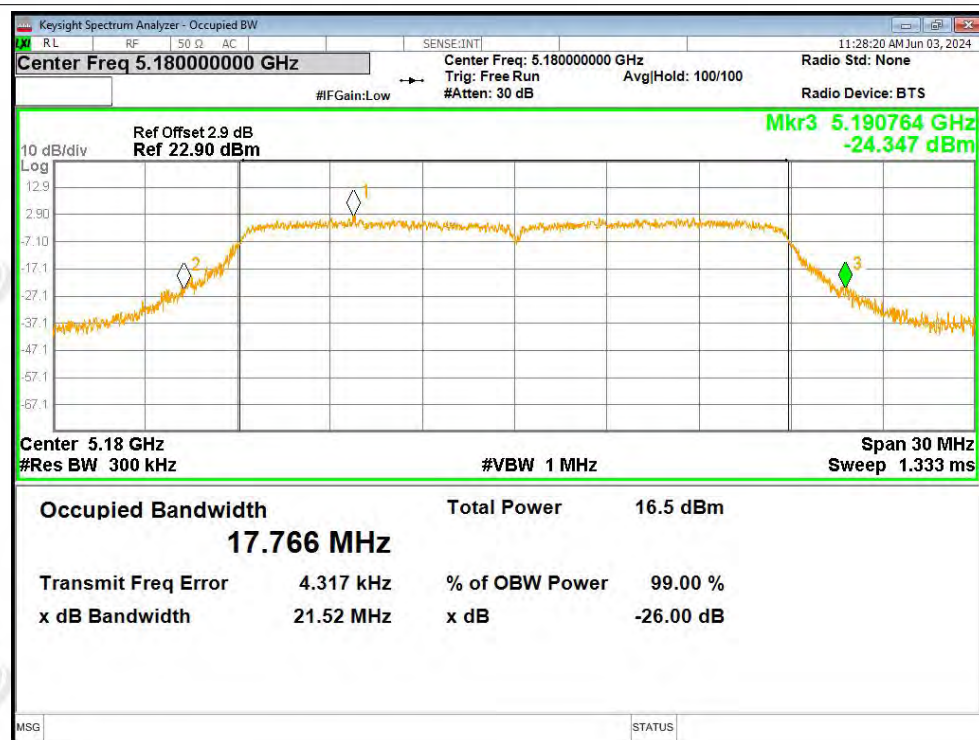


-26dB Bandwidth NVNT n40 5230MHz Ant1

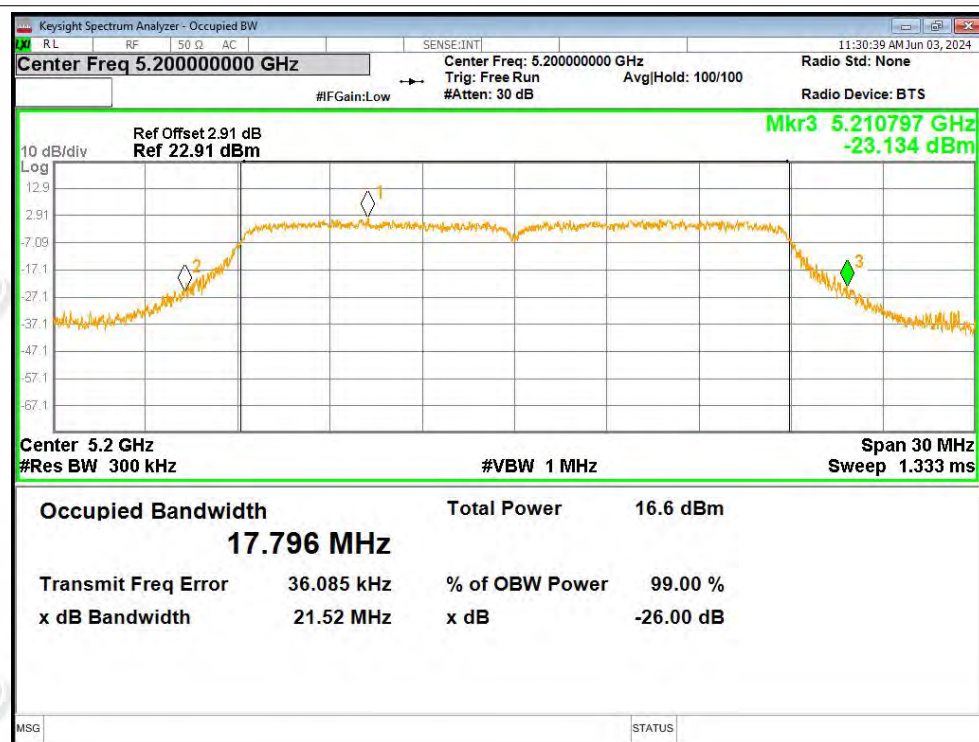




-26dB Bandwidth NVNT ac20 5180MHz Ant1



-26dB Bandwidth NVNT ac20 5200MHz Ant1

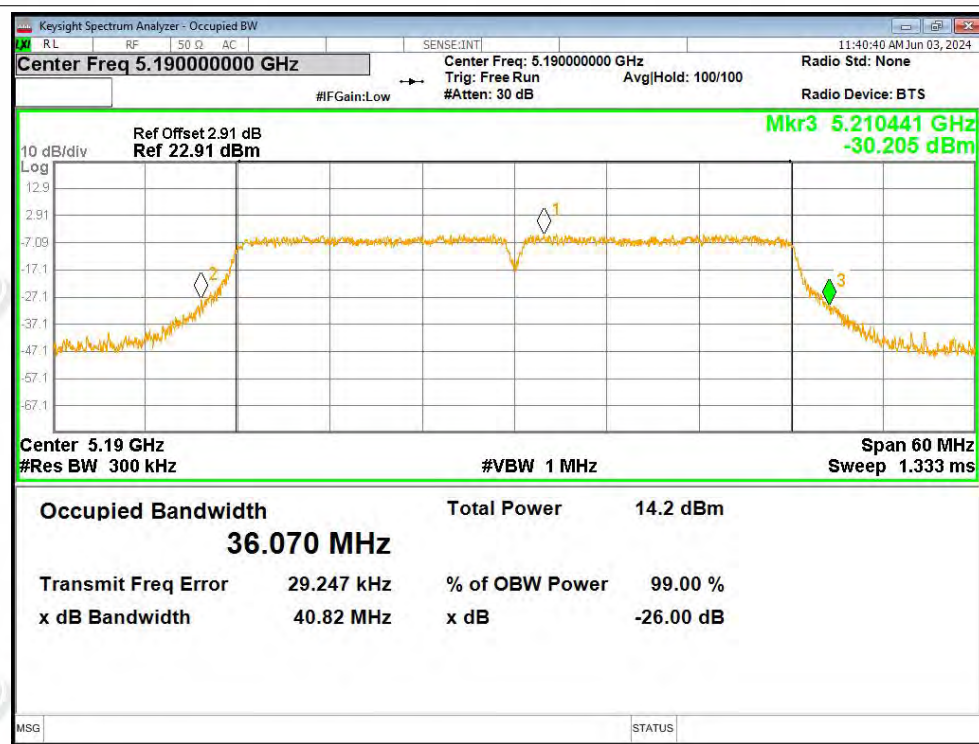




-26dB Bandwidth NVNT ac20 5240MHz Ant1

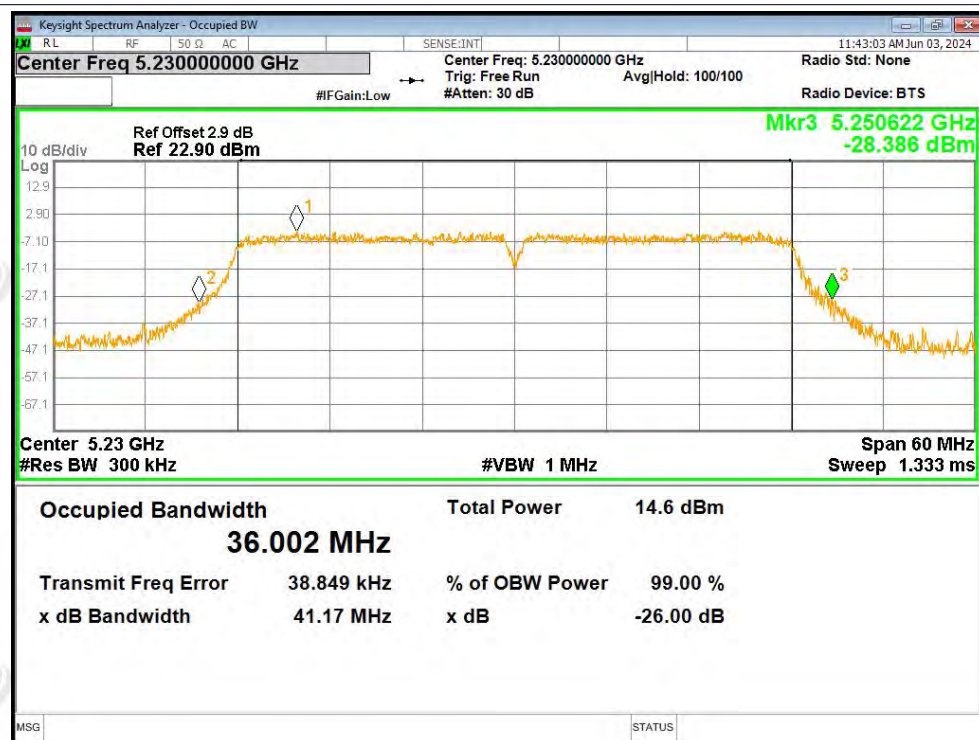


-26dB Bandwidth NVNT ac40 5190MHz Ant1

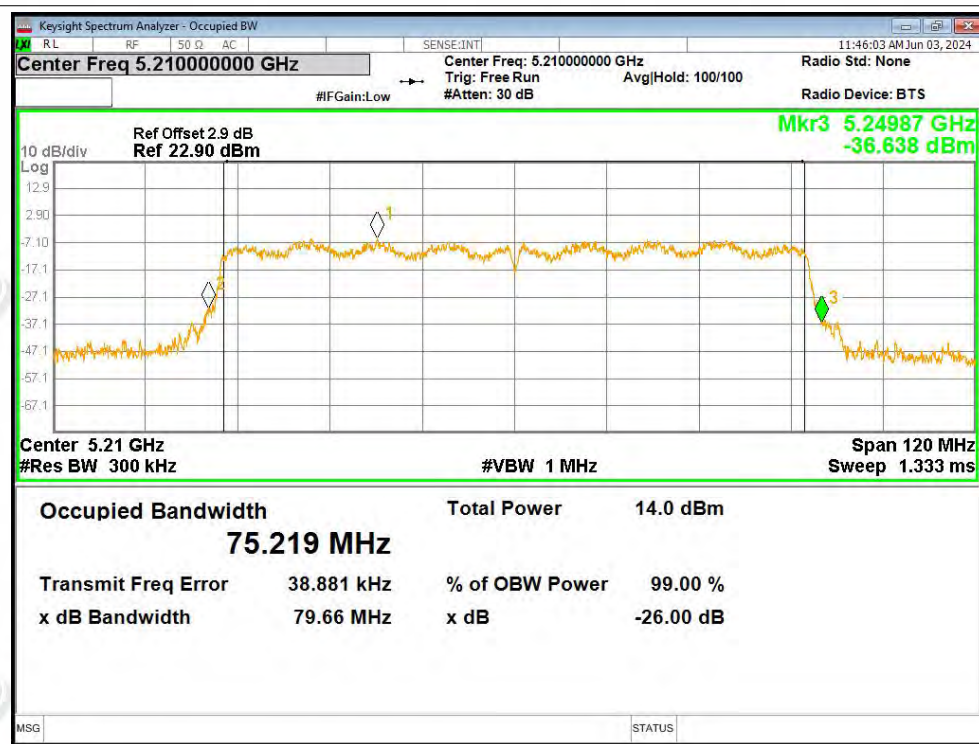




-26dB Bandwidth NVNT ac40 5230MHz Ant1



-26dB Bandwidth NVNT ac80 5210MHz Ant1



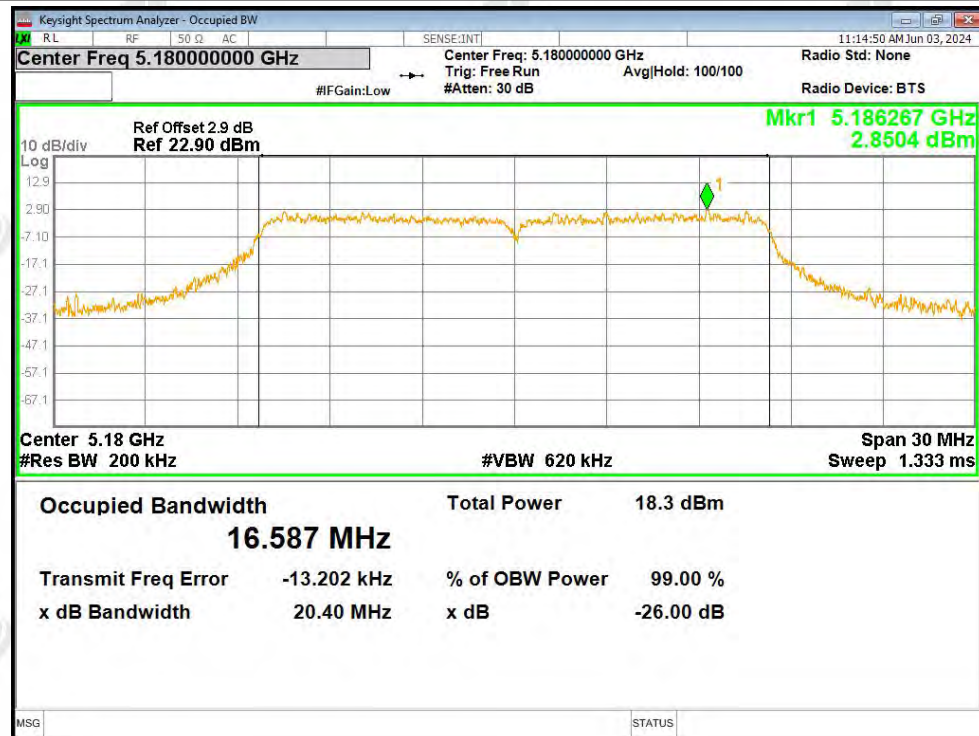
**ZHONGHAN****A4. Occupied Channel Bandwidth**

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	a	5180	Ant1	16.587
NVNT	a	5200	Ant1	16.574
NVNT	a	5240	Ant1	16.599
NVNT	n20	5180	Ant1	17.636
NVNT	n20	5200	Ant1	17.634
NVNT	n20	5240	Ant1	17.61
NVNT	n40	5190	Ant1	36.181
NVNT	n40	5230	Ant1	36.185
NVNT	ac20	5180	Ant1	17.657
NVNT	ac20	5200	Ant1	17.661
NVNT	ac20	5240	Ant1	17.659
NVNT	ac40	5190	Ant1	36.153
NVNT	ac40	5230	Ant1	36.169
NVNT	ac80	5210	Ant1	75.32

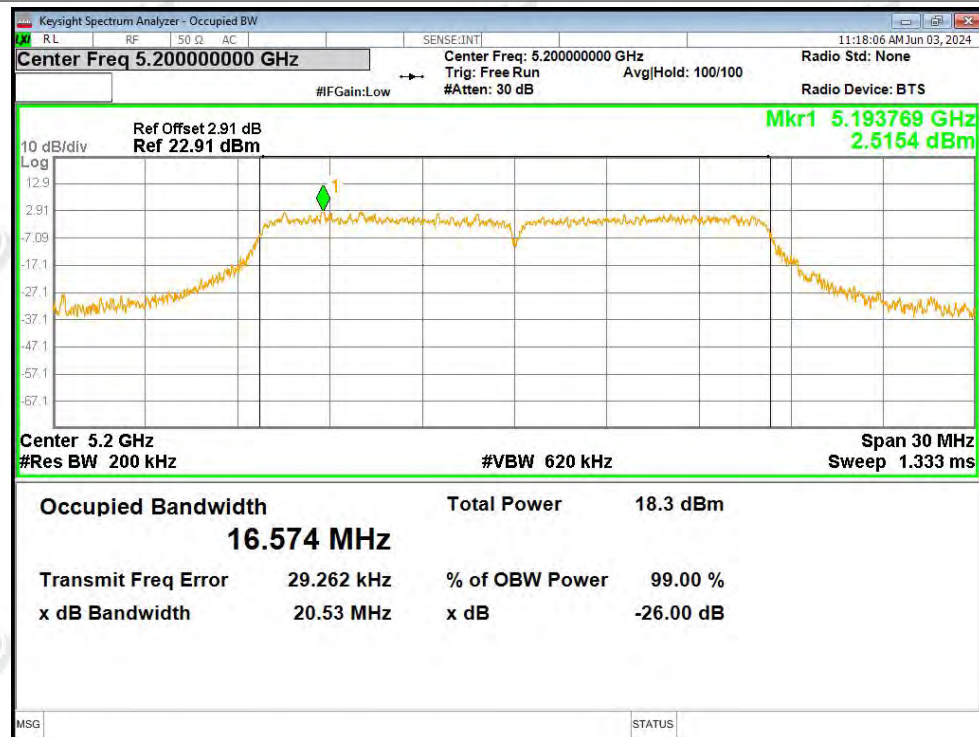


Test Graphs

OBW NVNT a 5180MHz Ant1

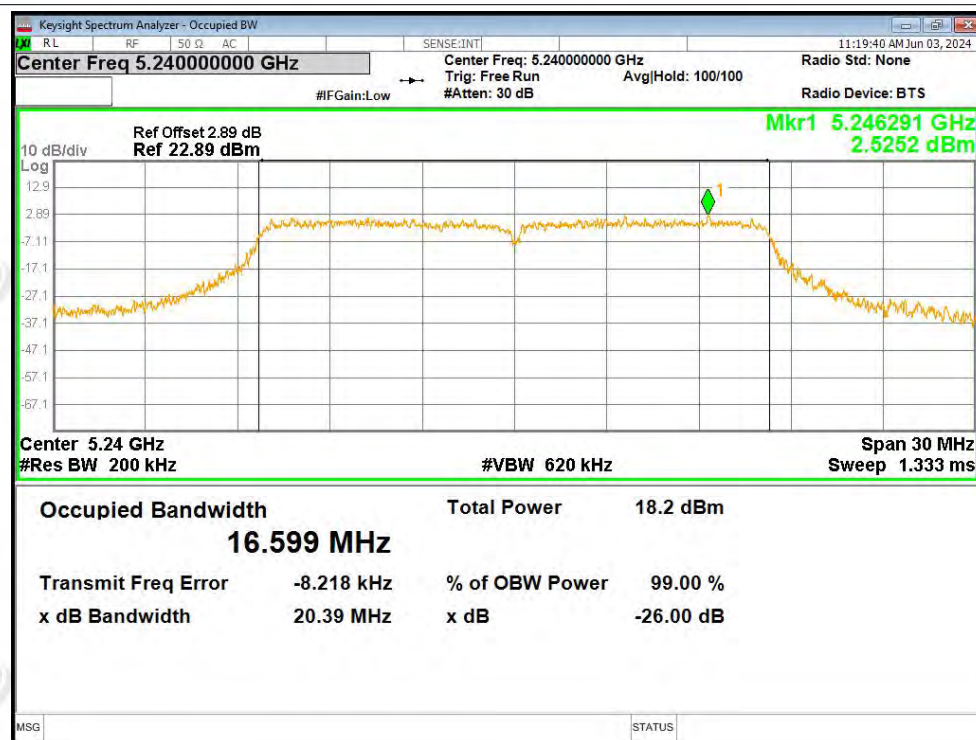


OBW NVNT a 5200MHz Ant1

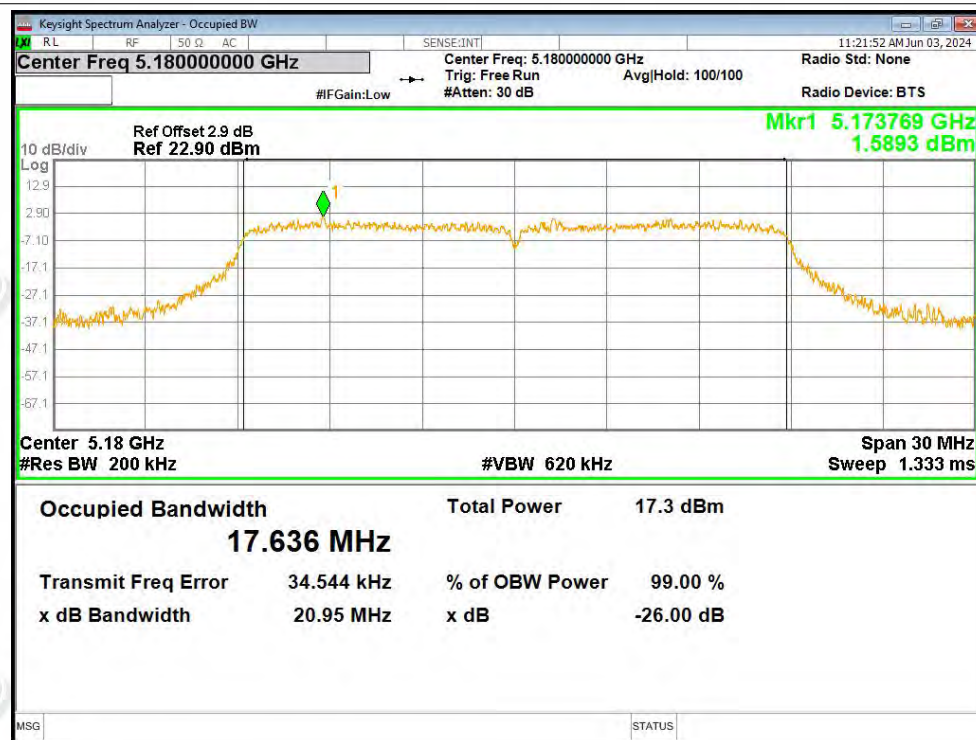




OBW NVNT a 5240MHz Ant1

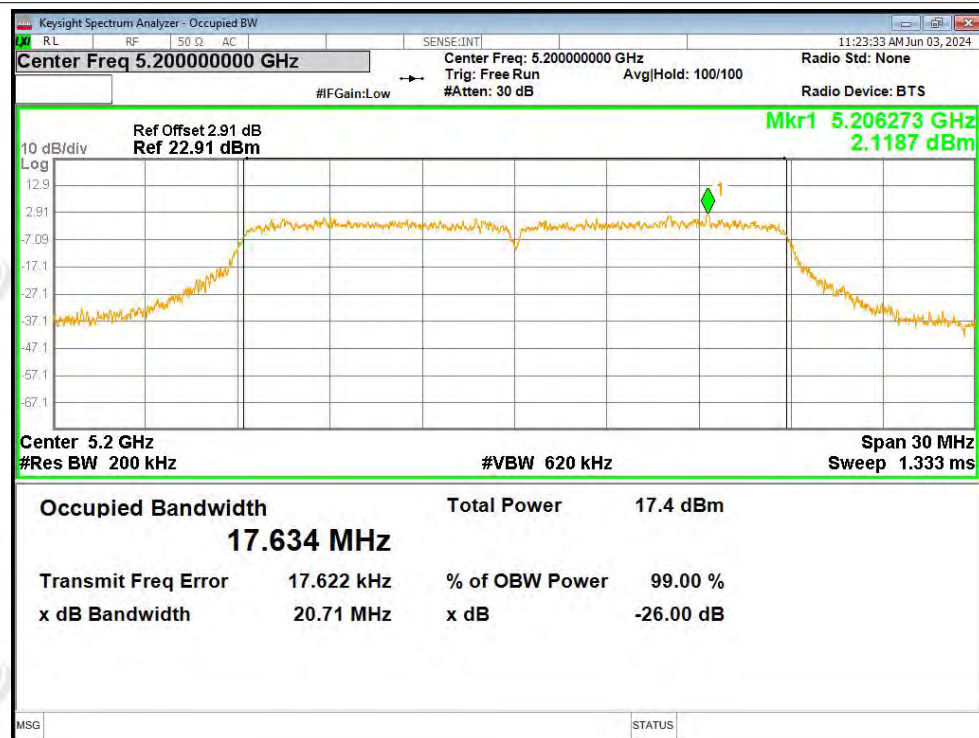


OBW NVNT n20 5180MHz Ant1

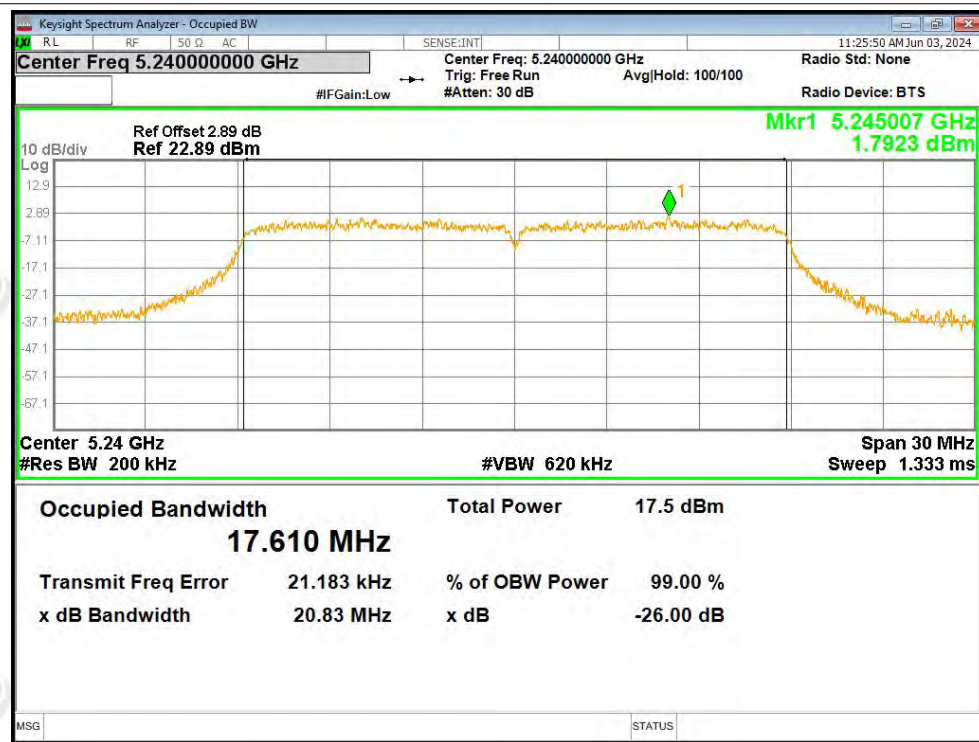




OBW NVNT n20 5200MHz Ant1

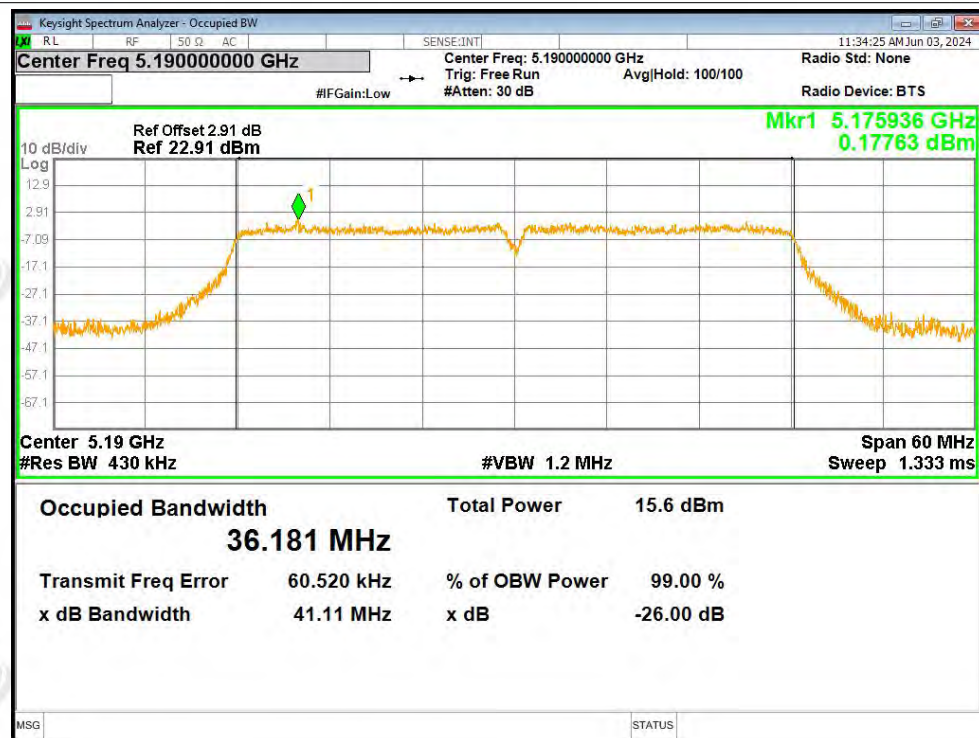


OBW NVNT n20 5240MHz Ant1

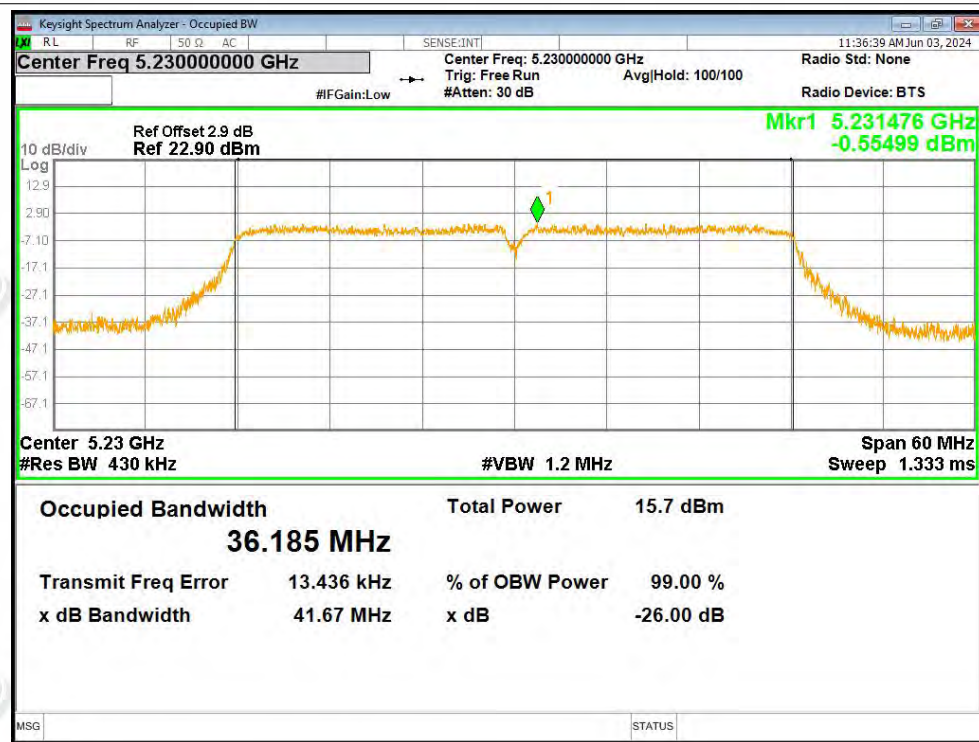




OBW NVNT n40 5190MHz Ant1

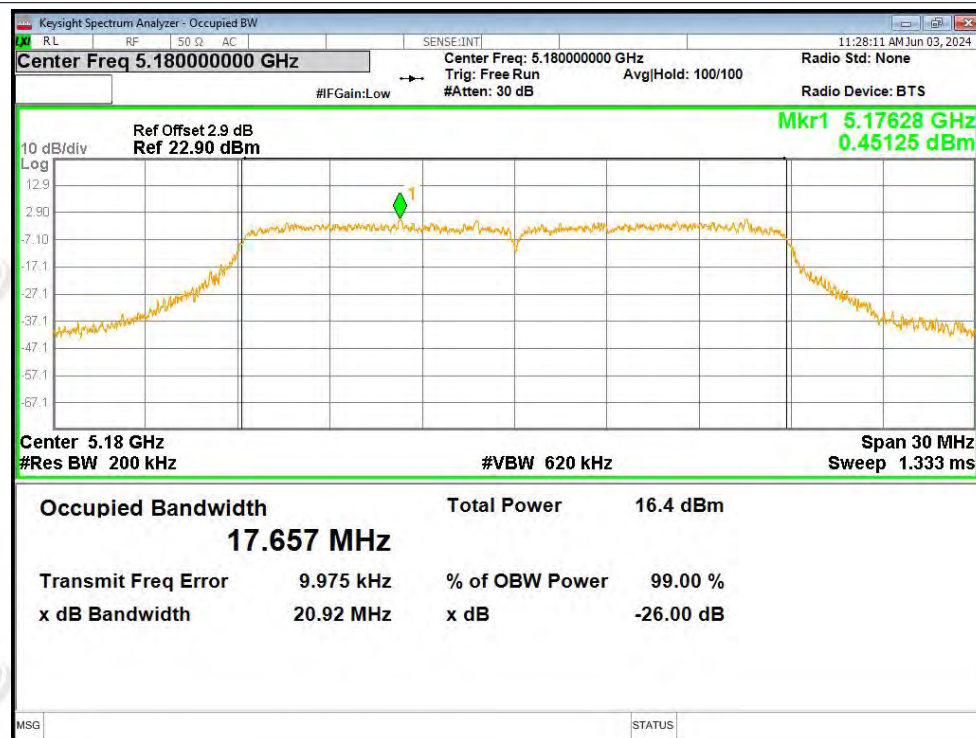


OBW NVNT n40 5230MHz Ant1

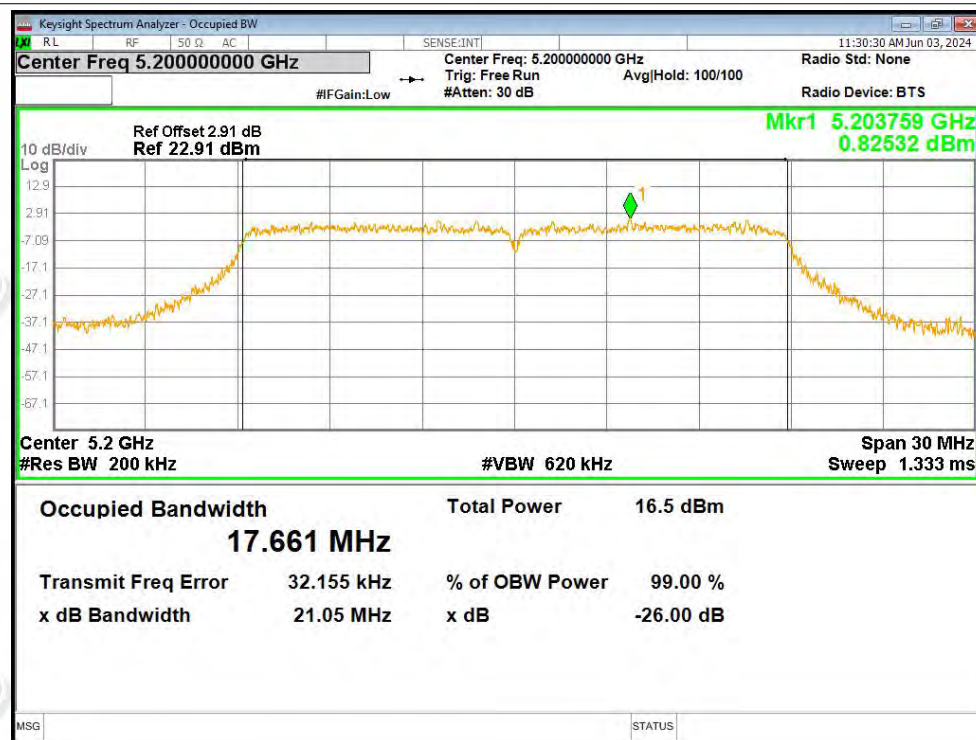




OBW NVNT ac20 5180MHz Ant1

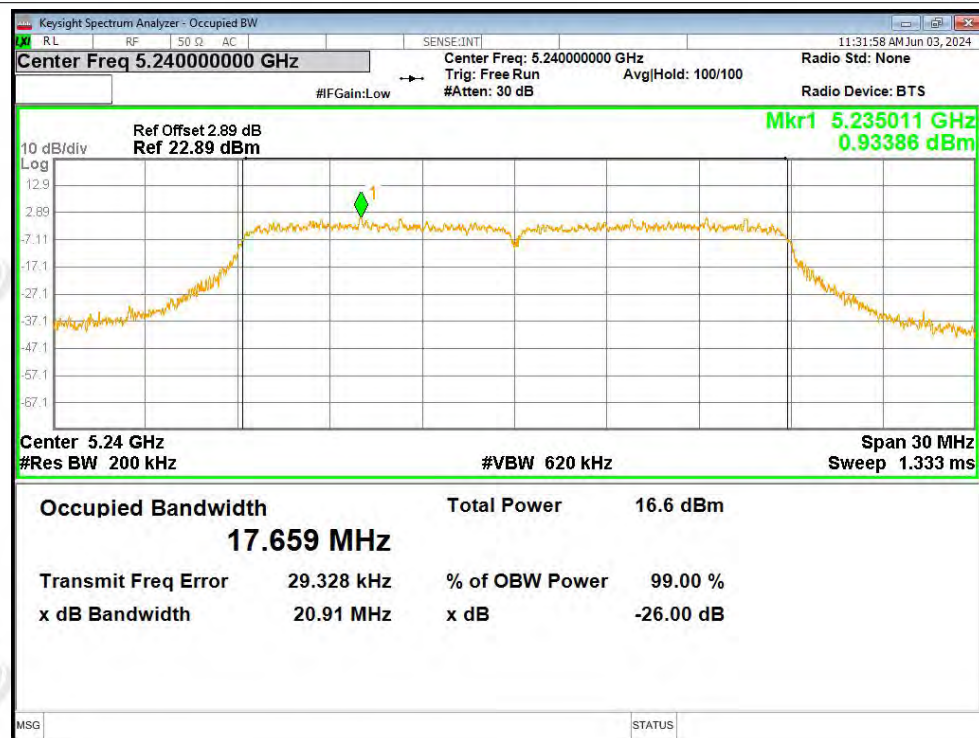


OBW NVNT ac20 5200MHz Ant1

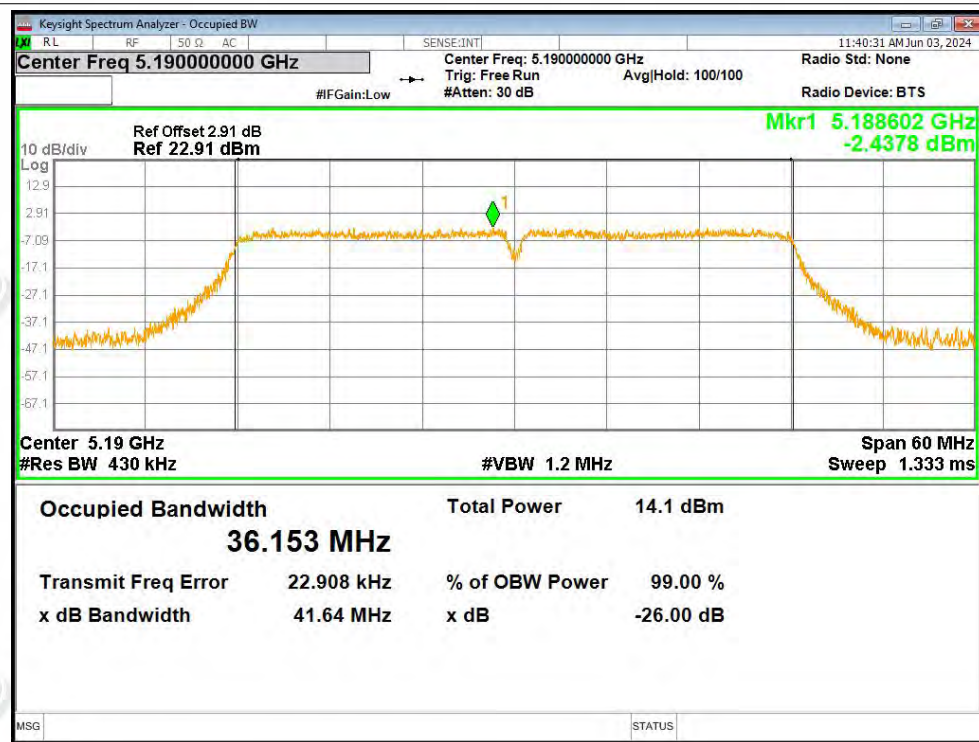




OBW NVNT ac20 5240MHz Ant1

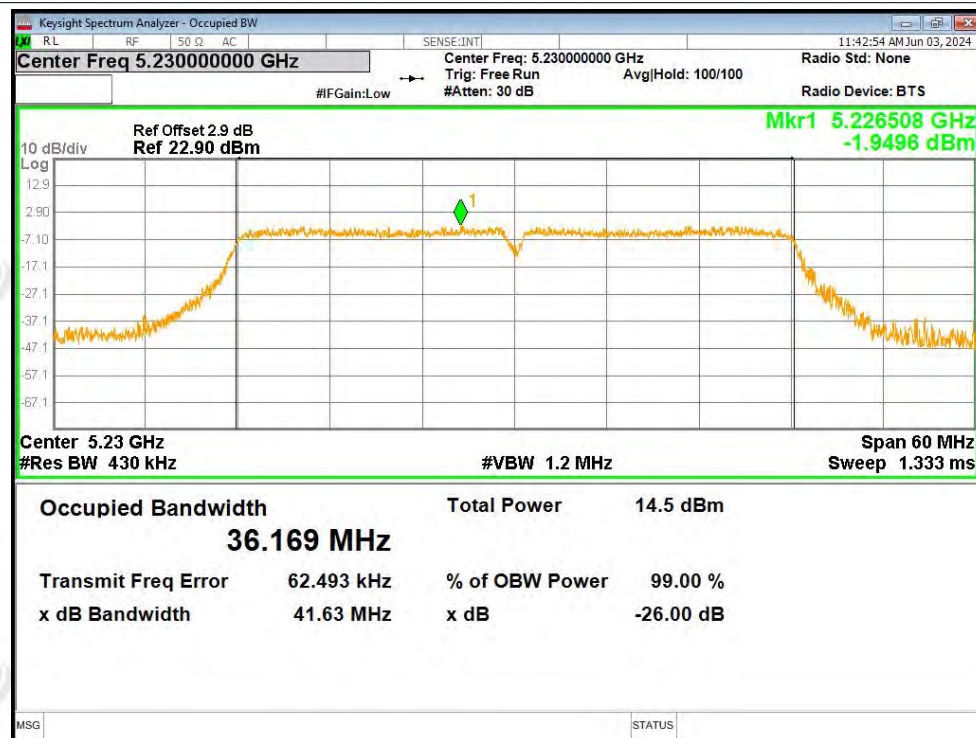


OBW NVNT ac40 5190MHz Ant1

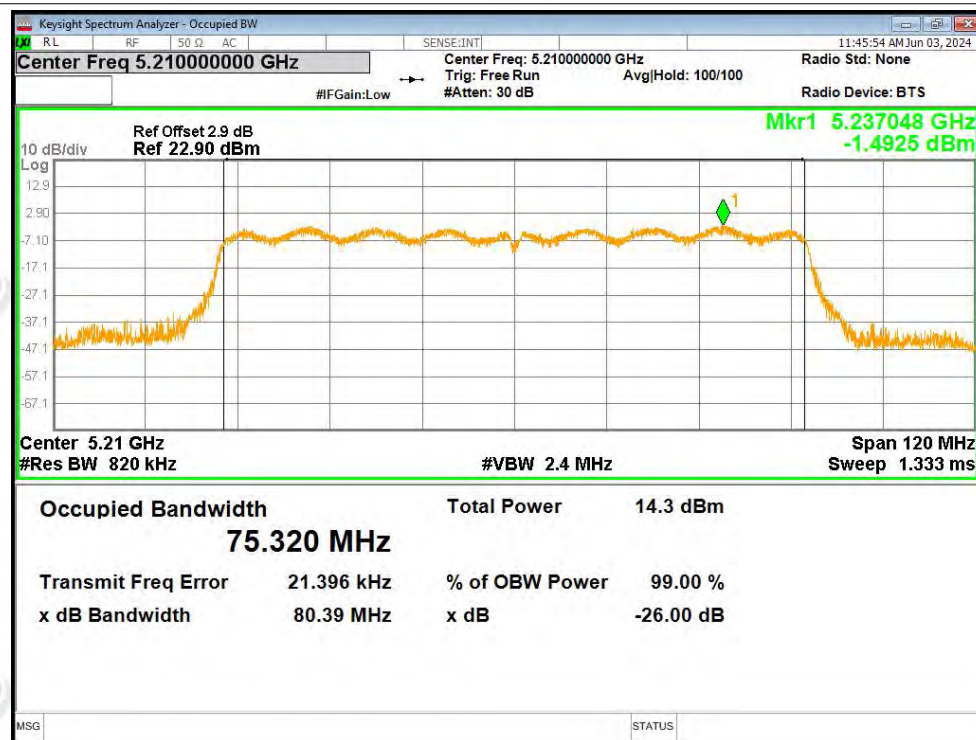




OBW NVNT ac40 5230MHz Ant1



OBW NVNT ac80 5210MHz Ant1



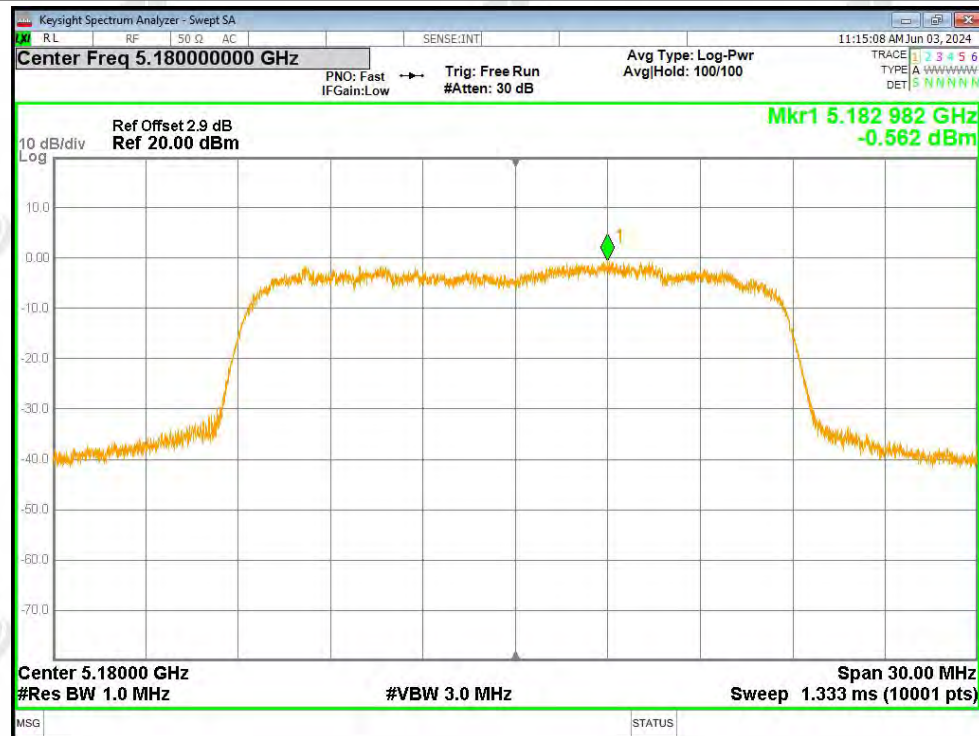
**ZHONGHAN****A5. Maximum Power Spectral Density Level**

Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm)	Duty Factor (dB)	Total PSD (dBm)	Limit (dBm)	Verdict
NVNT	a	5180	Ant1	-0.56	0.28	-0.28	11	Pass
NVNT	a	5200	Ant1	-2.33	0.27	-2.06	11	Pass
NVNT	a	5240	Ant1	-1.52	0.25	-1.27	11	Pass
NVNT	n20	5180	Ant1	-1.89	0.11	-1.78	11	Pass
NVNT	n20	5200	Ant1	-2.96	0.2	-2.76	11	Pass
NVNT	n20	5240	Ant1	-1.36	0	-1.36	11	Pass
NVNT	n40	5190	Ant1	-8.87	0.18	-8.69	11	Pass
NVNT	n40	5230	Ant1	-7.81	0.43	-7.38	11	Pass
NVNT	ac20	5180	Ant1	-3.23	0.24	-2.99	11	Pass
NVNT	ac20	5200	Ant1	-1.65	0.11	-1.54	11	Pass
NVNT	ac20	5240	Ant1	-2.57	0.18	-2.39	11	Pass
NVNT	ac40	5190	Ant1	-10.84	0.22	-10.62	11	Pass
NVNT	ac40	5230	Ant1	-9.62	0.68	-8.94	11	Pass
NVNT	ac80	5210	Ant1	-18.35	0.7	-17.65	11	Pass

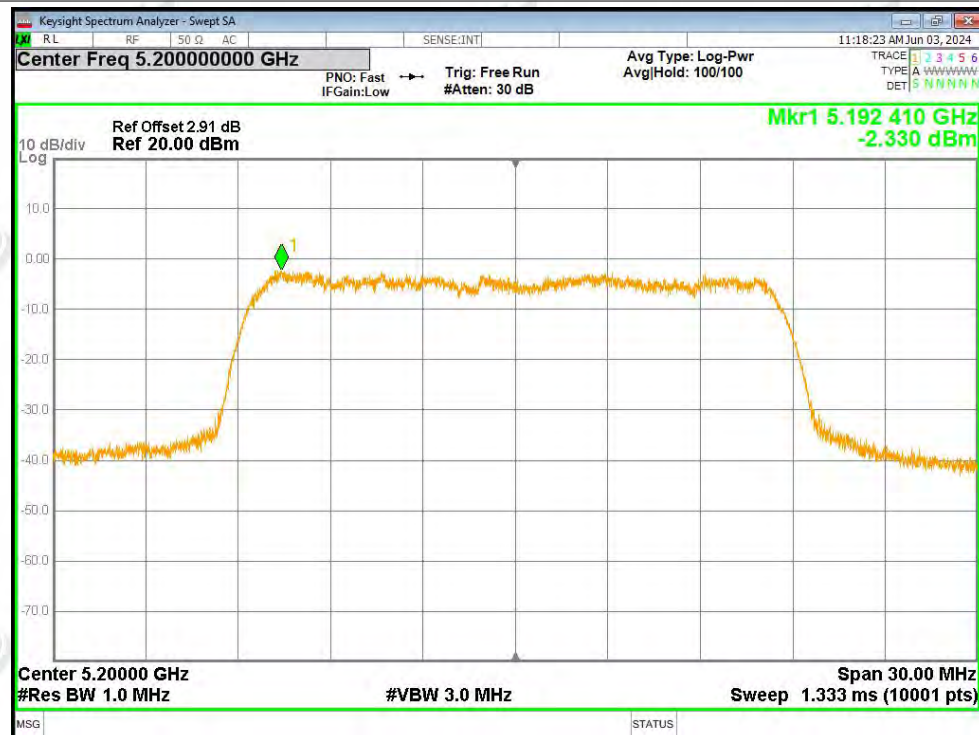


Test Graphs

PSD NVNT a 5180MHz Ant1



PSD NVNT a 5200MHz Ant1

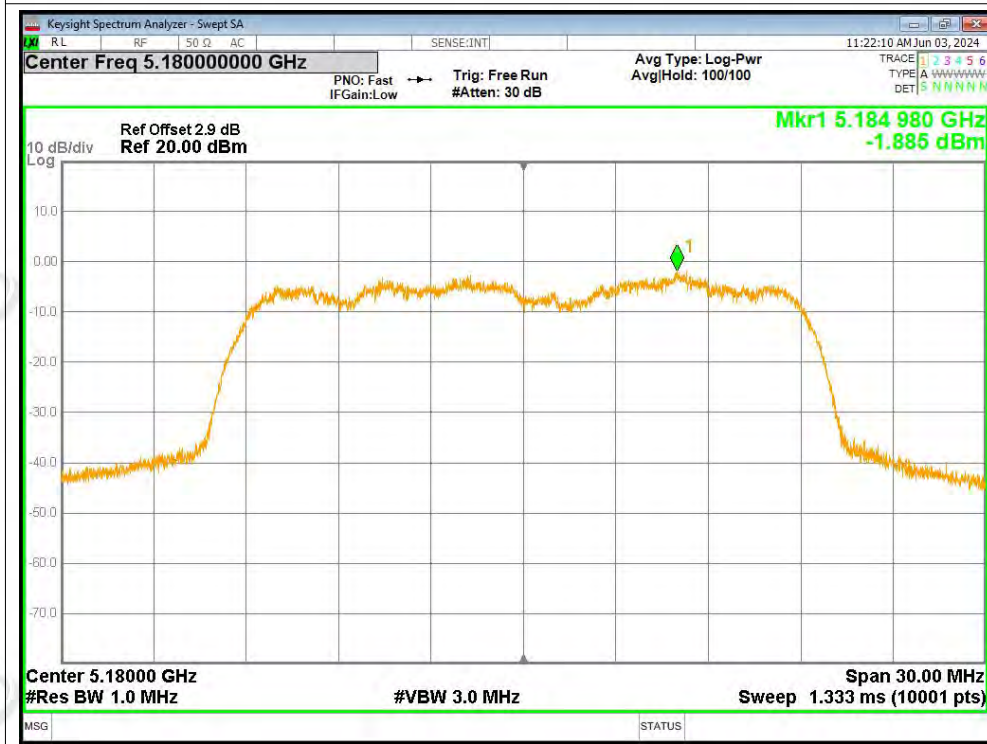




PSD NVNT a 5240MHz Ant1

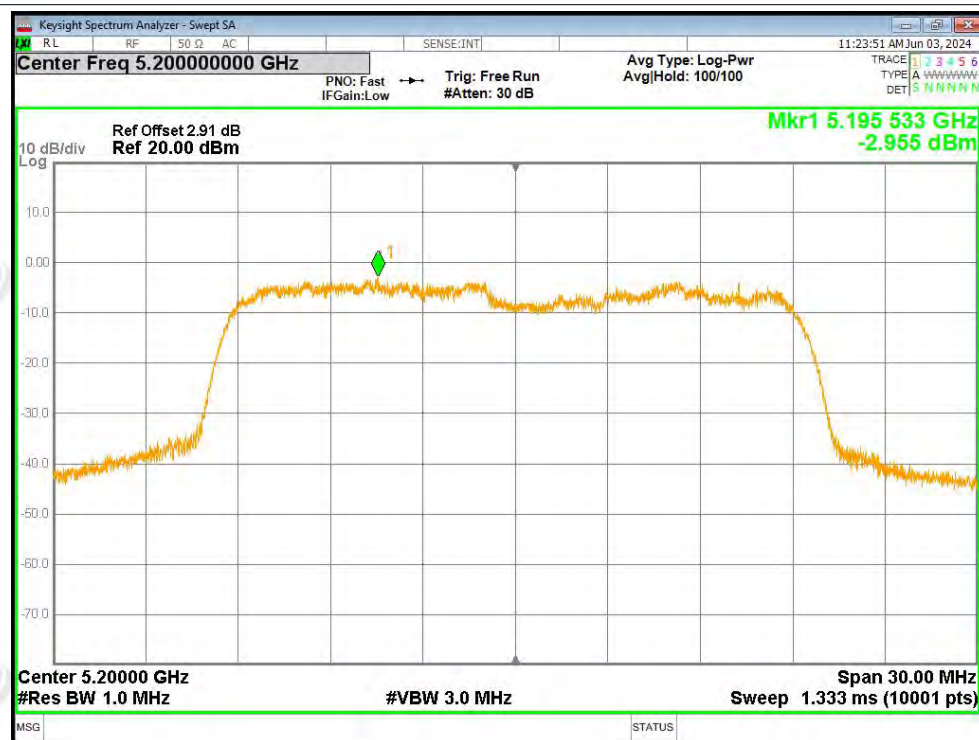


PSD NVNT n20 5180MHz Ant1





PSD NVNT n20 5200MHz Ant1



PSD NVNT n20 5240MHz Ant1

