

Appendix B for 5.8GWIFI Test Data

Product Name: Pathfinder Lite MotoNavAI

Test Model: CK3-QC

Environmental Conditions

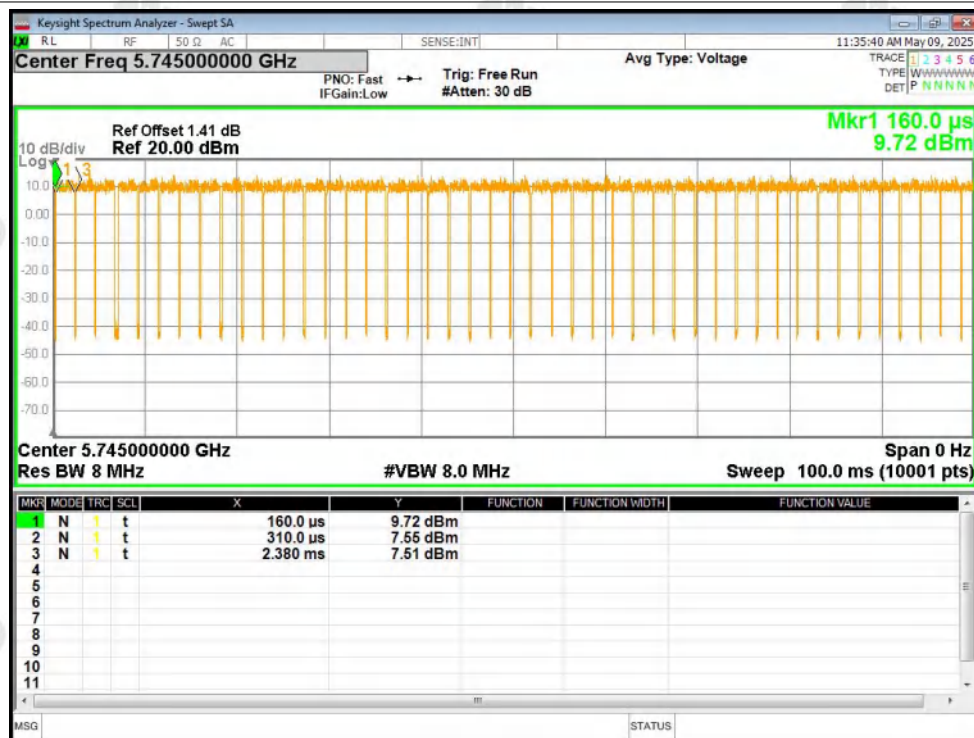
Temperature:	23.8℃
Relative Humidity:	52%
ATM Pressure:	101.0 kPa
Test Engineer:	Leon Li
Supervised by:	Baret Wu

B.1 Duty Cycle

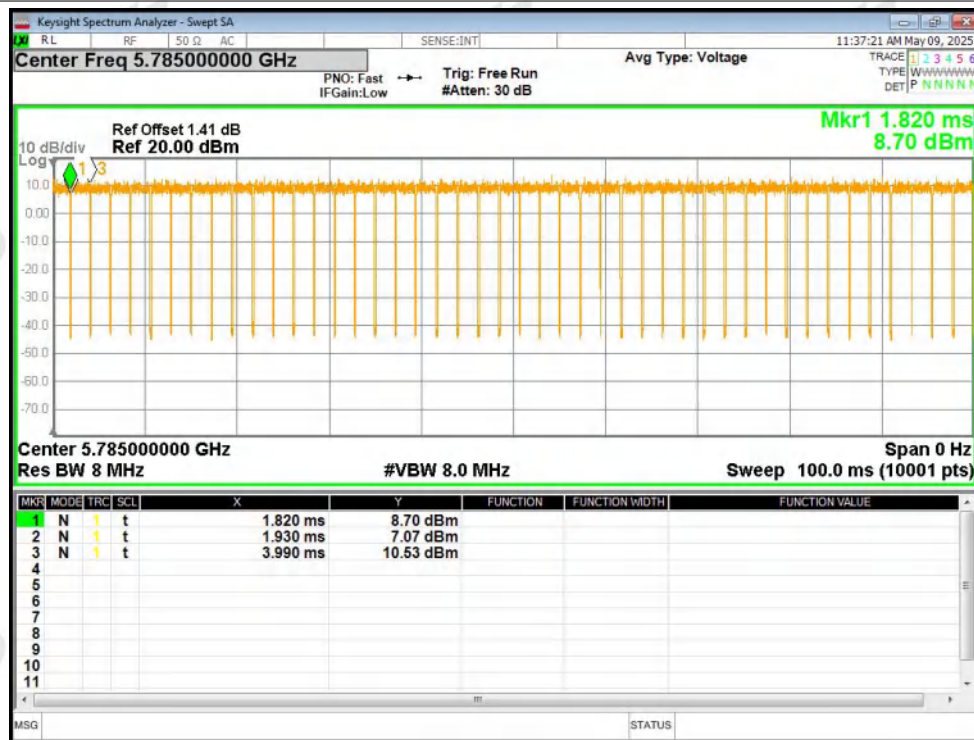
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	a	5745	Ant1	93.24	0.3	0.48
NVNT	a	5785	Ant1	94.93	0.23	0.49
NVNT	a	5825	Ant1	89.96	0.46	0.49
NVNT	n20	5745	Ant1	94.12	0.26	0.52
NVNT	n20	5785	Ant1	92.75	0.33	0.52
NVNT	n20	5825	Ant1	91	0.41	0.52
NVNT	n40	5755	Ant1	83.33	0.79	1.05
NVNT	n40	5795	Ant1	87.04	0.6	1.06
NVNT	ac20	5745	Ant1	82.14	0.85	0.48
NVNT	ac20	5785	Ant1	85.19	0.7	0.48
NVNT	ac20	5825	Ant1	80.78	0.93	0.49
NVNT	ac40	5755	Ant1	82.73	0.82	0.49
NVNT	ac40	5795	Ant1	81.75	0.88	0.49

Test Graphs

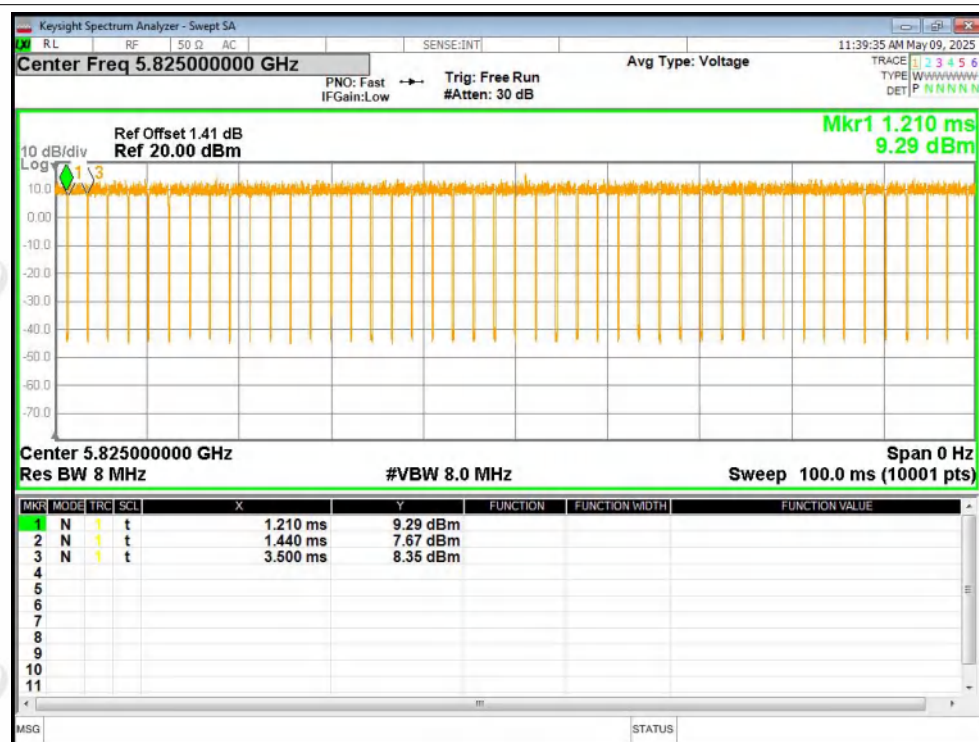
Duty Cycle NVNT a 5745MHz Ant1



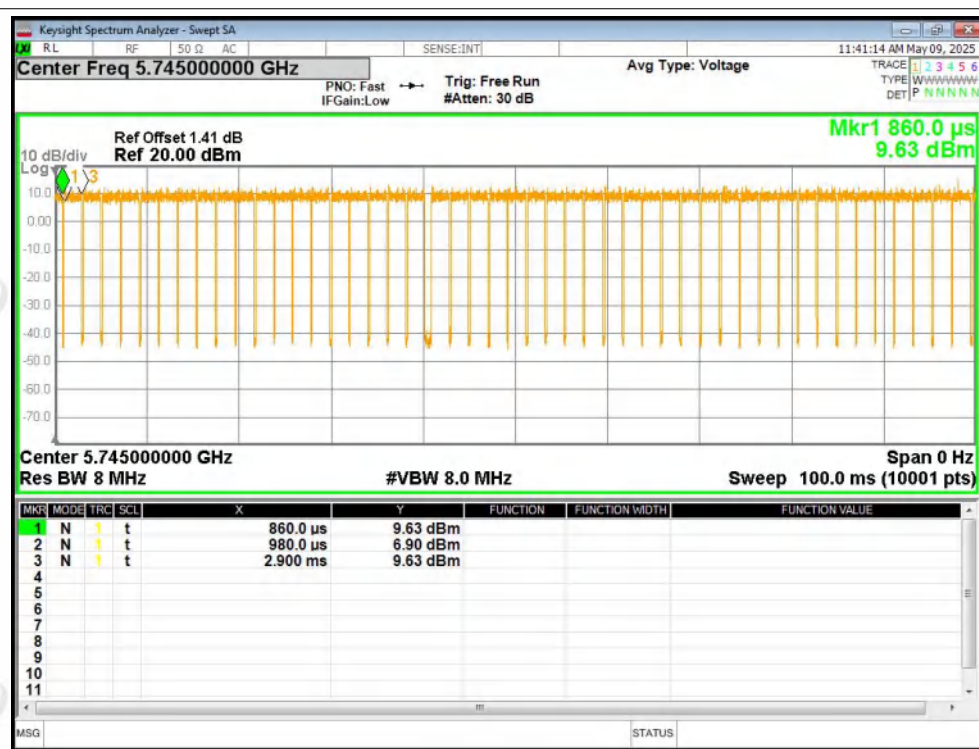
Duty Cycle NVNT a 5785MHz Ant1



Duty Cycle NVNT a 5825MHz Ant1



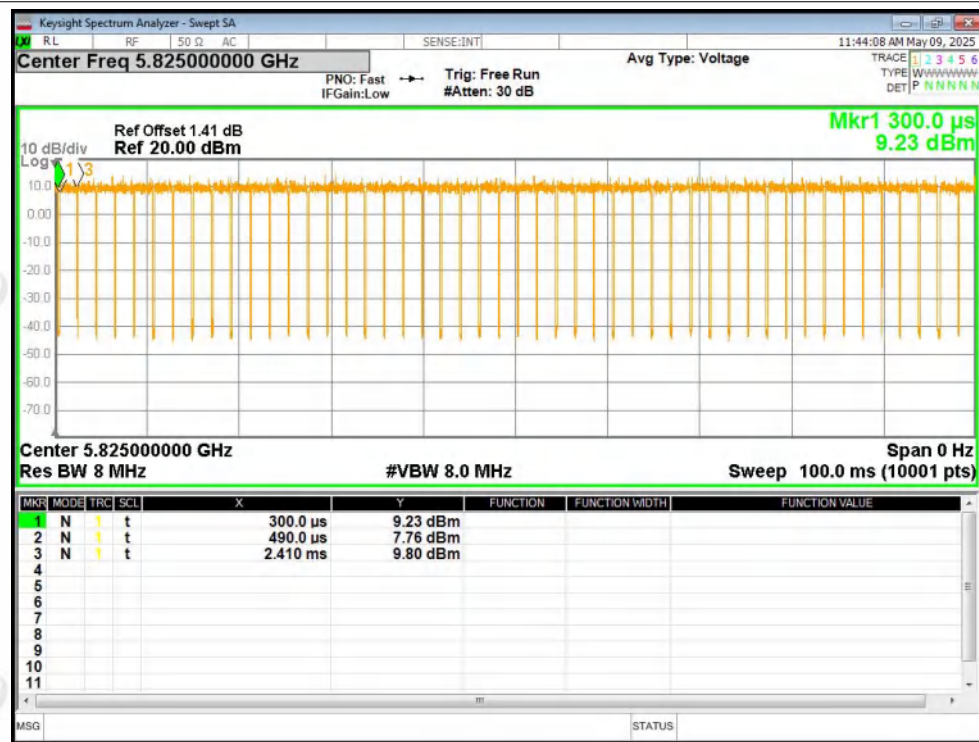
Duty Cycle NVNT n20 5745MHz Ant1



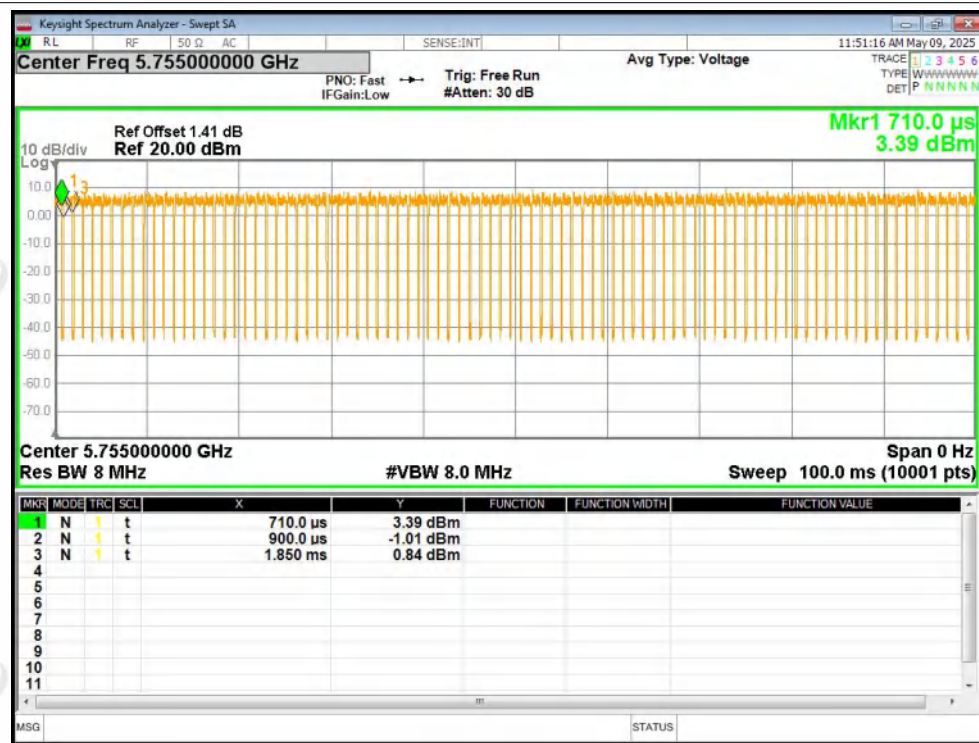
Duty Cycle NVNT n20 5785MHz Ant1



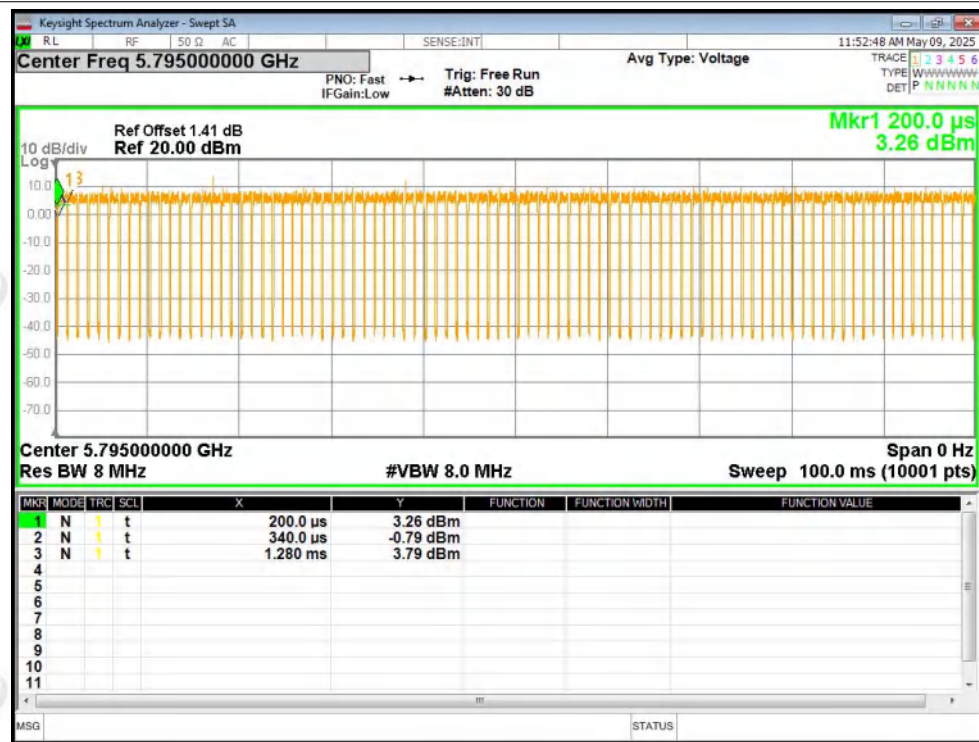
Duty Cycle NVNT n20 5825MHz Ant1



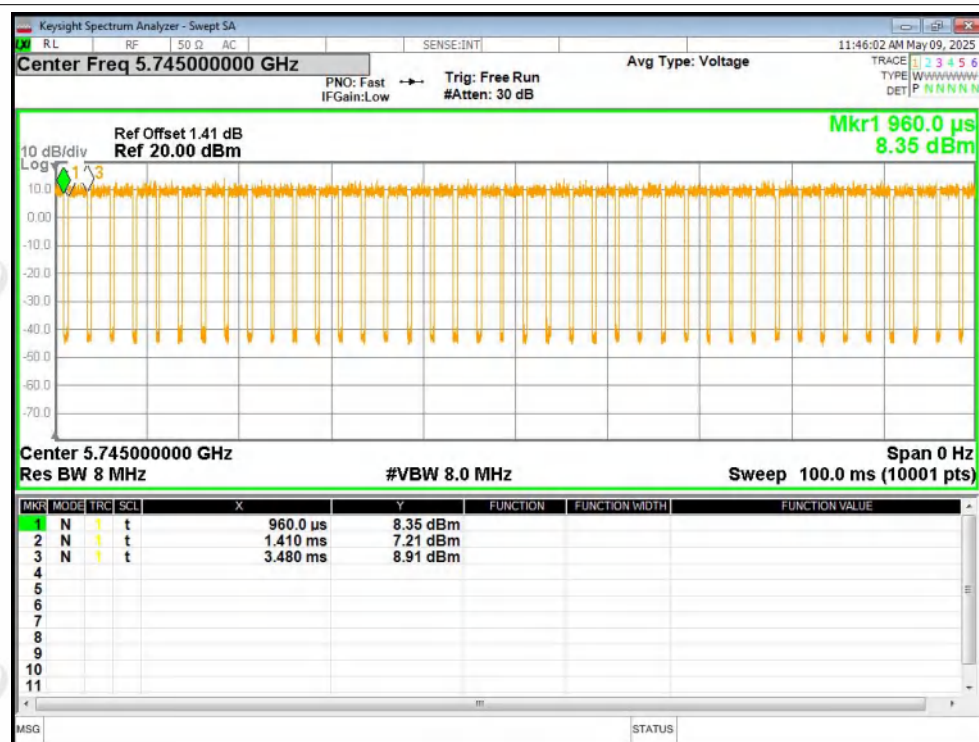
Duty Cycle NVNT n40 5755MHz Ant1



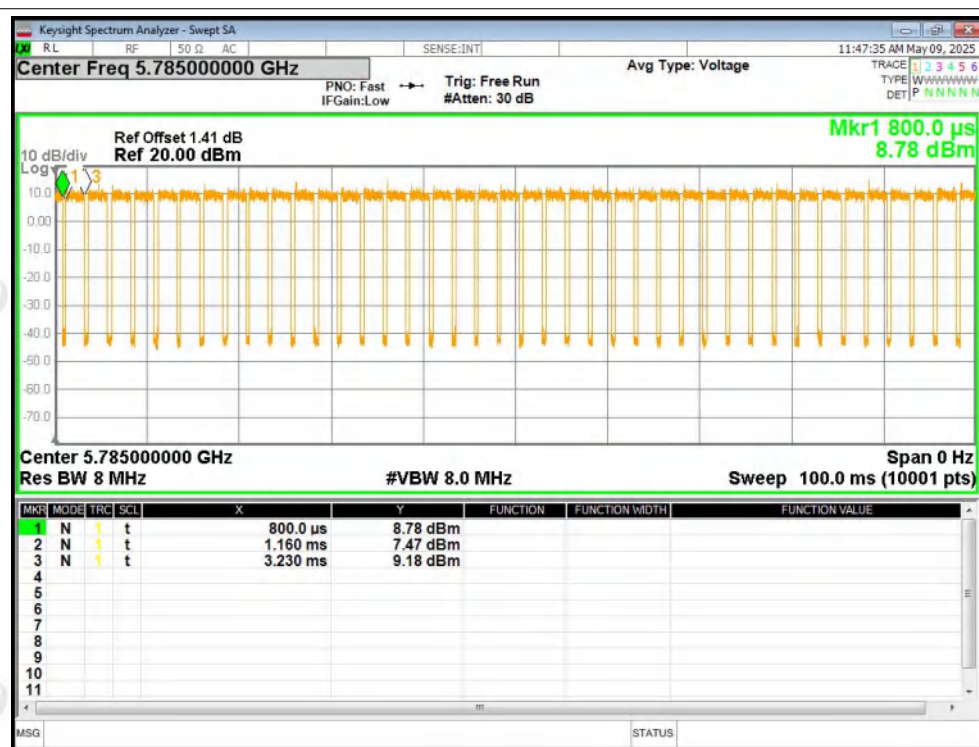
Duty Cycle NVNT n40 5795MHz Ant1



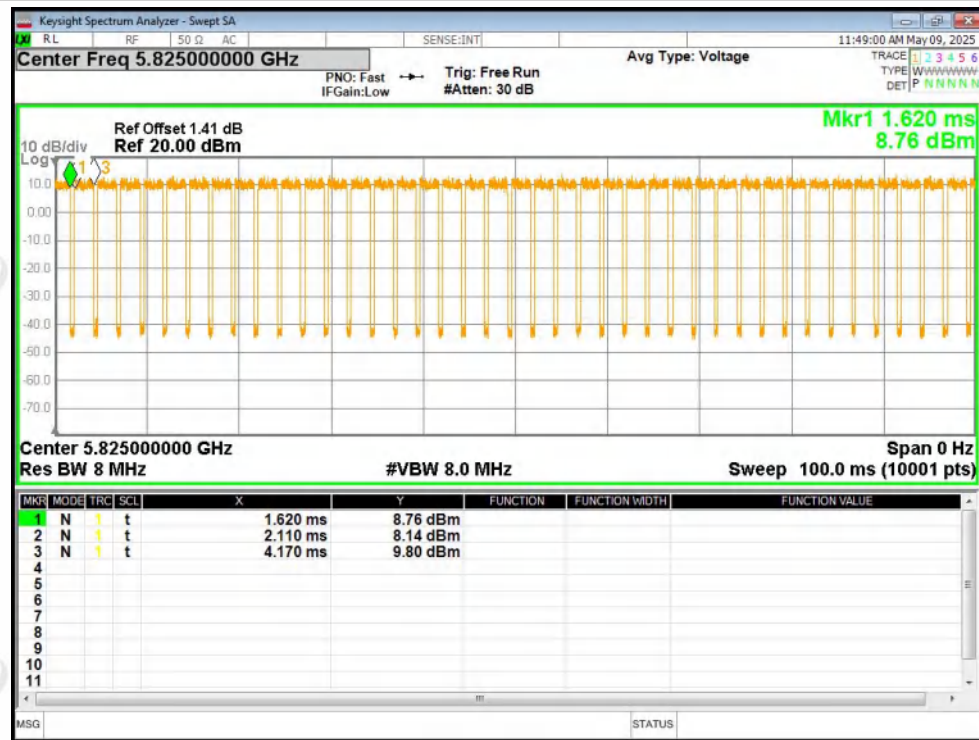
Duty Cycle NVNT ac20 5745MHz Ant1



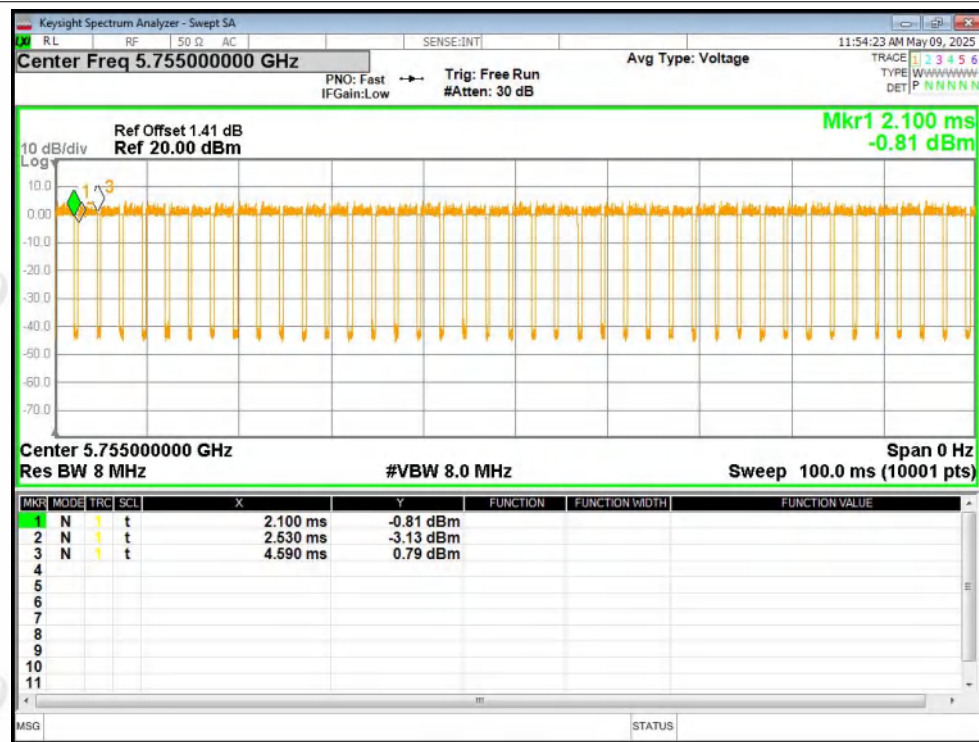
Duty Cycle NVNT ac20 5785MHz Ant1

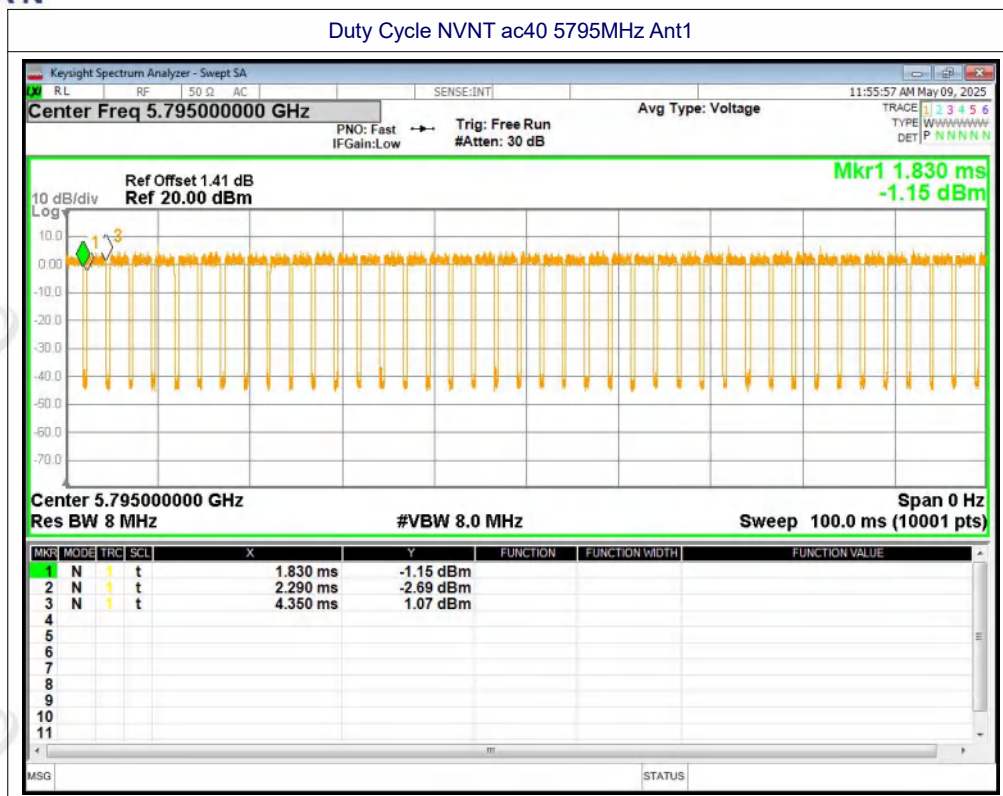


Duty Cycle NVNT ac20 5825MHz Ant1



Duty Cycle NVNT ac40 5755MHz Ant1





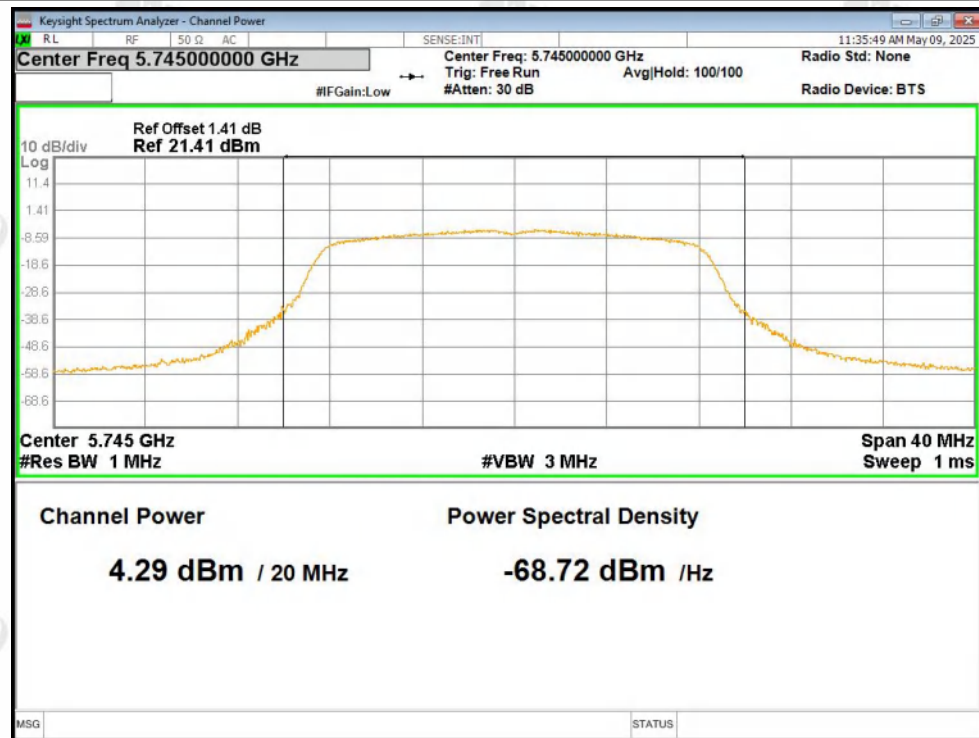


B.2 Maximum Conducted Output Power

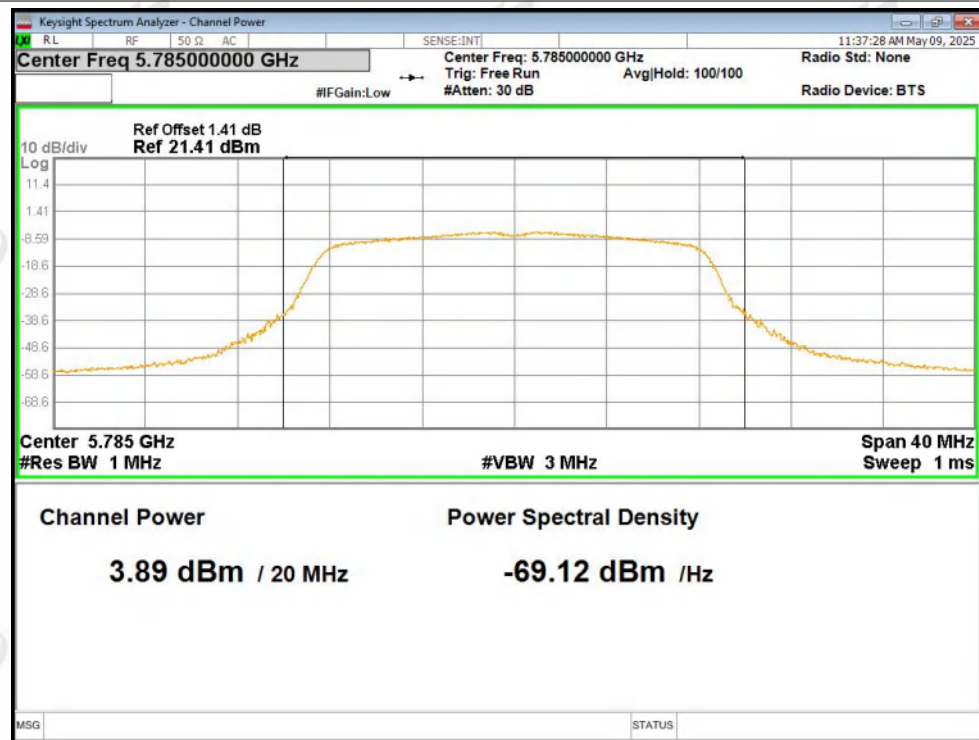
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	a	5745	Ant1	4.29	0.3	4.59	30	Pass
NVNT	a	5785	Ant1	3.89	0.23	4.12	30	Pass
NVNT	a	5825	Ant1	4.49	0.46	4.95	30	Pass
NVNT	n20	5745	Ant1	3.64	0.26	3.9	30	Pass
NVNT	n20	5785	Ant1	3.64	0.33	3.97	30	Pass
NVNT	n20	5825	Ant1	4.33	0.41	4.74	30	Pass
NVNT	n40	5755	Ant1	2.68	0.79	3.47	30	Pass
NVNT	n40	5795	Ant1	2.81	0.6	3.41	30	Pass
NVNT	ac20	5745	Ant1	3.42	0.85	4.27	30	Pass
NVNT	ac20	5785	Ant1	3.76	0.7	4.46	30	Pass
NVNT	ac20	5825	Ant1	4.43	0.93	5.36	30	Pass
NVNT	ac40	5755	Ant1	3.31	0.82	4.13	30	Pass
NVNT	ac40	5795	Ant1	3.54	0.88	4.42	30	Pass

Test Graphs

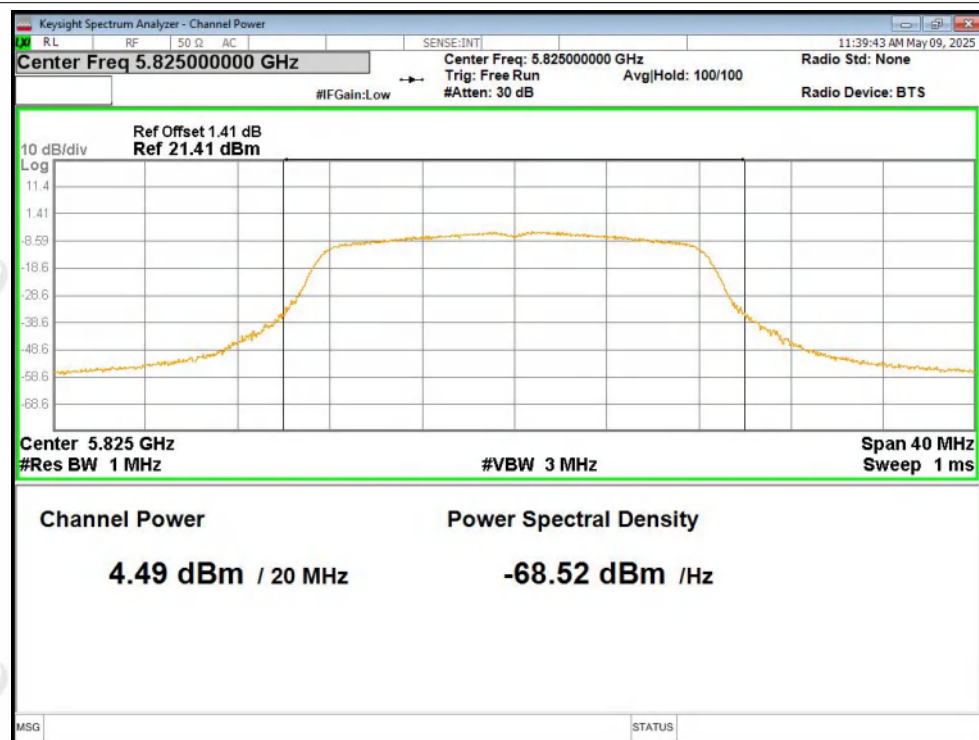
Power NVNT a 5745MHz Ant1



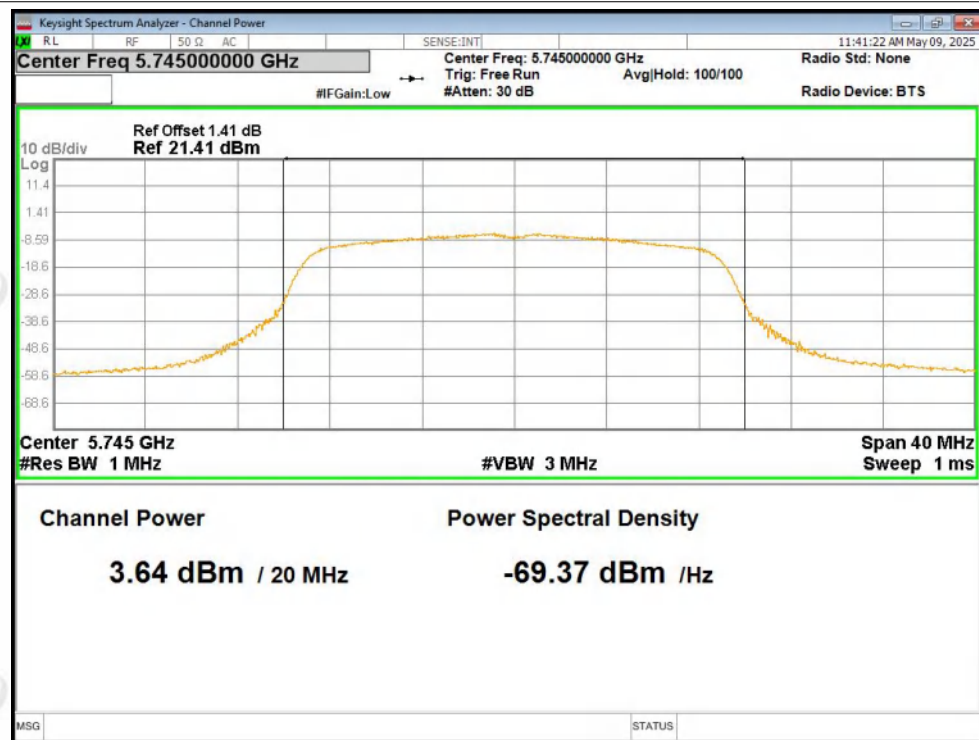
Power NVNT a 5785MHz Ant1



Power NVNT a 5825MHz Ant1

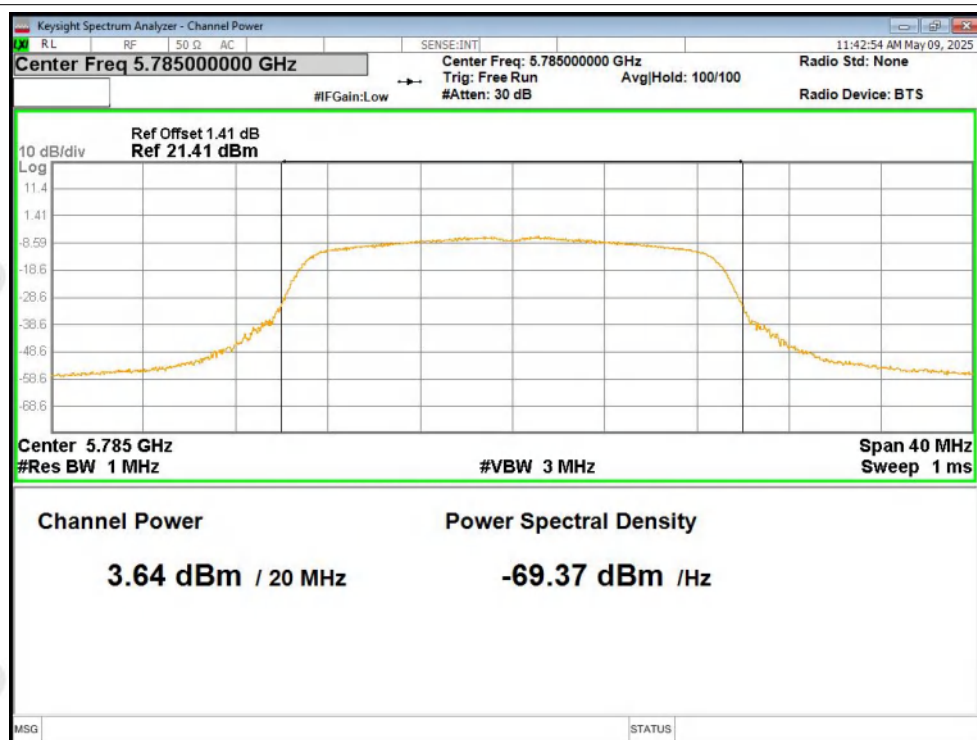


Power NVNT n20 5745MHz Ant1

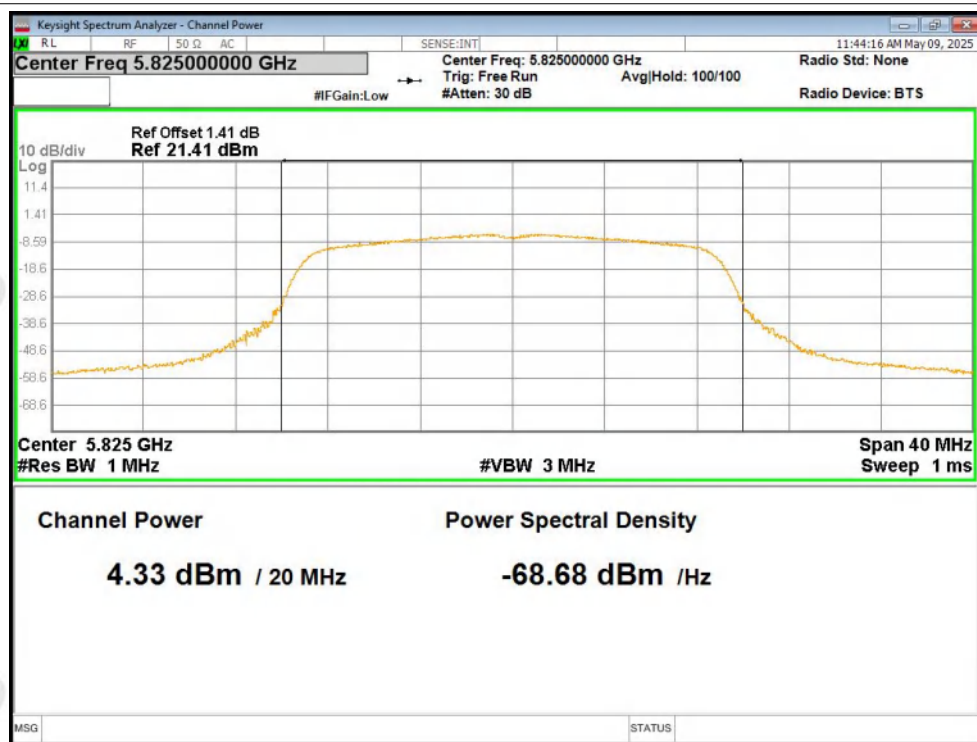




Power NVNT n20 5785MHz Ant1

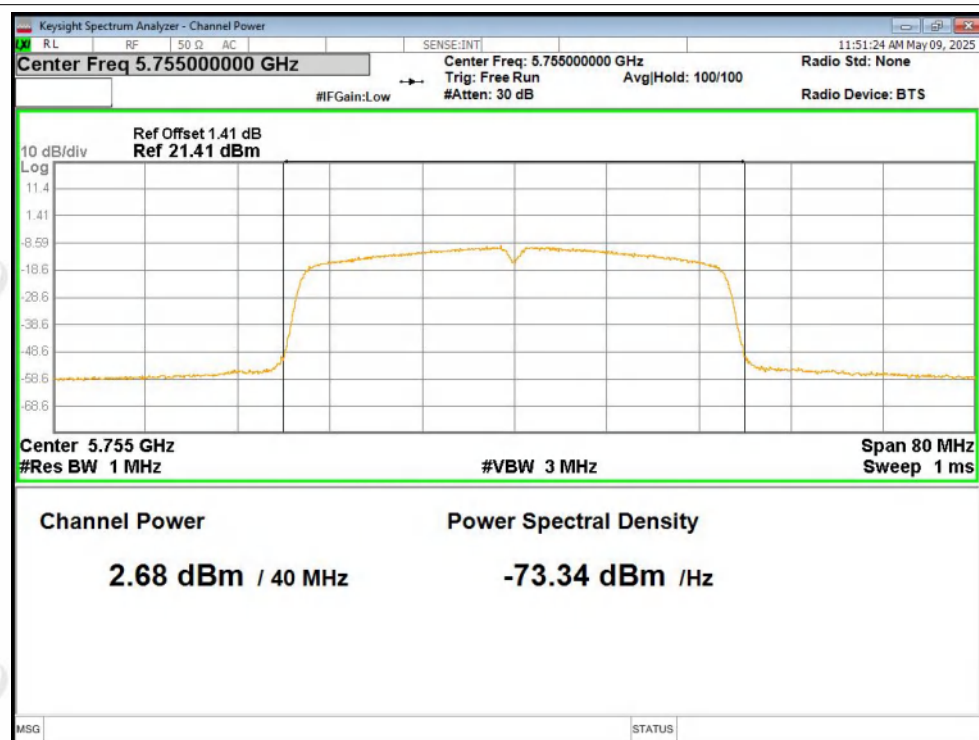


Power NVNT n20 5825MHz Ant1

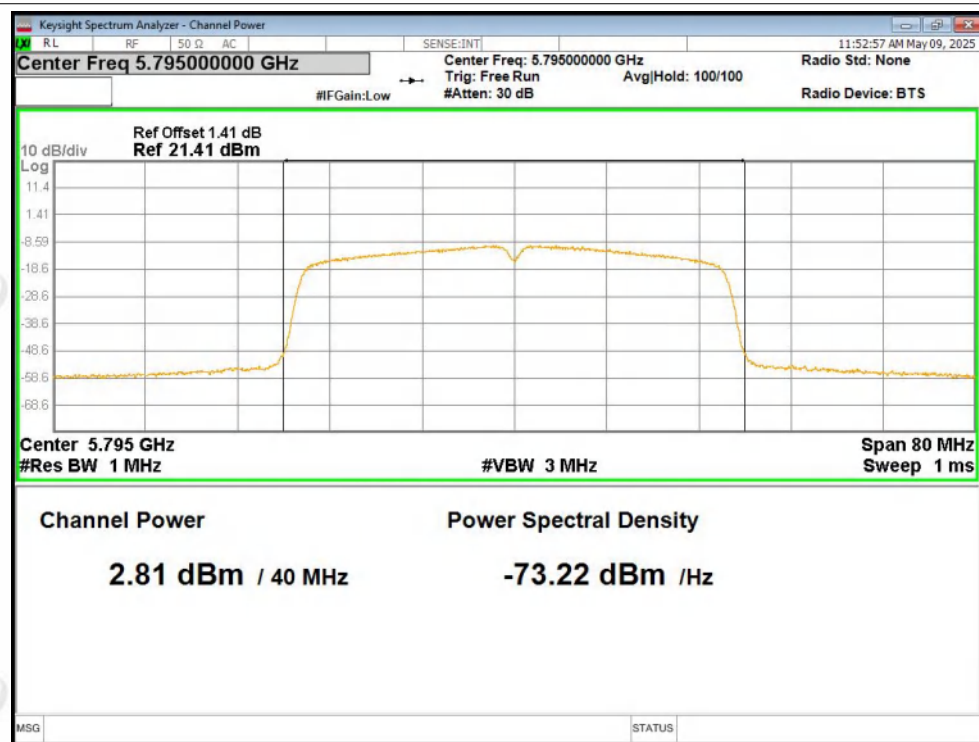




Power NVNT n40 5755MHz Ant1

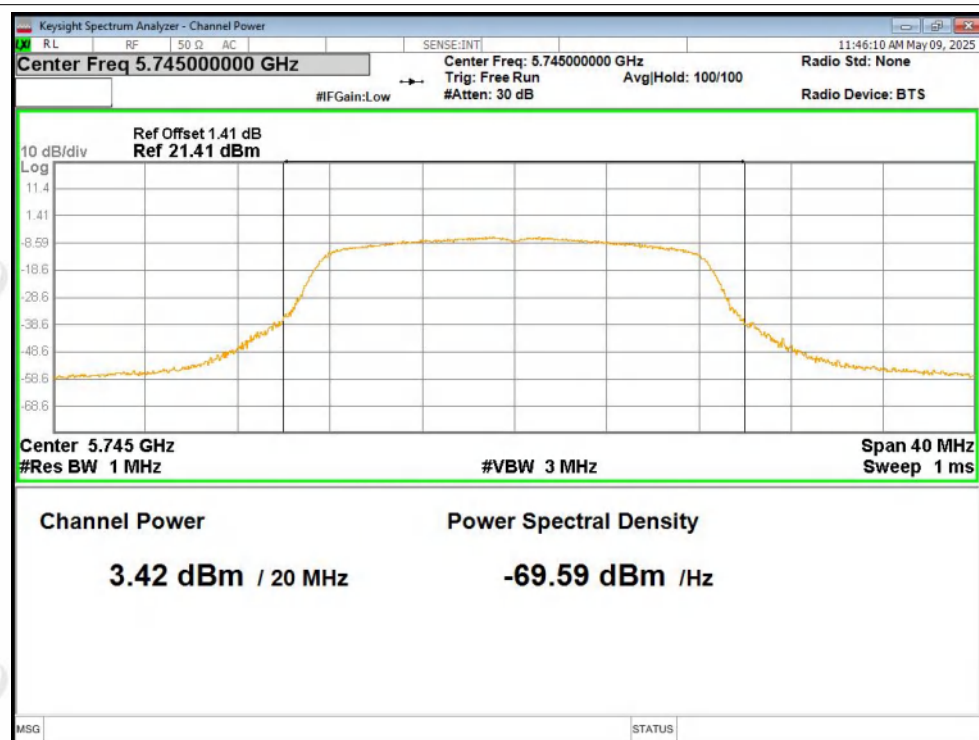


Power NVNT n40 5795MHz Ant1

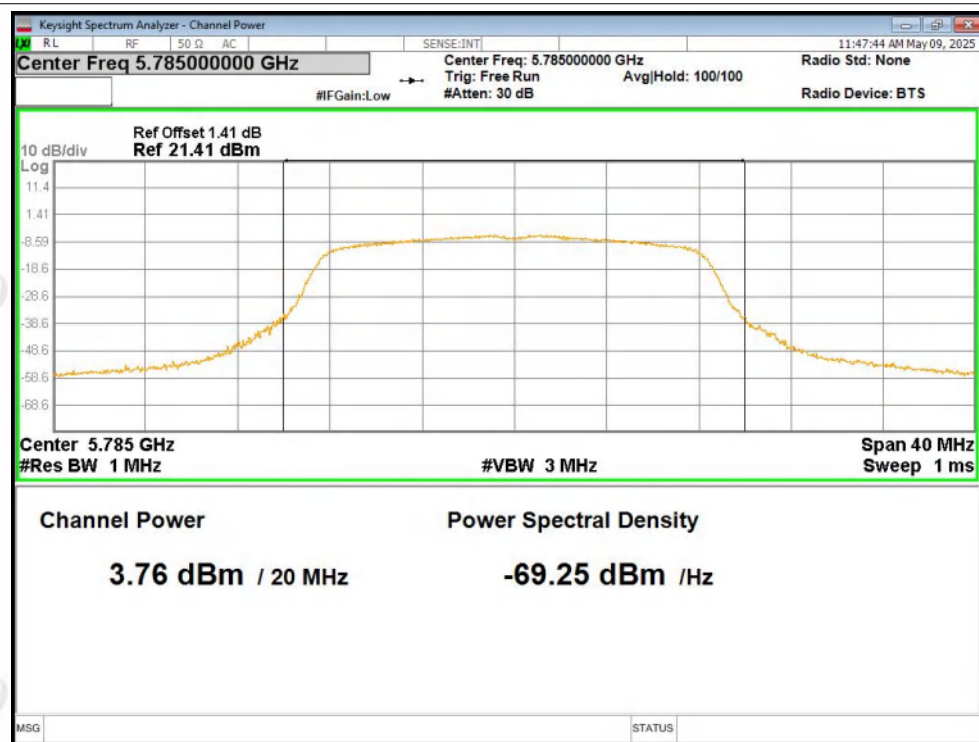




Power NVNT ac20 5745MHz Ant1

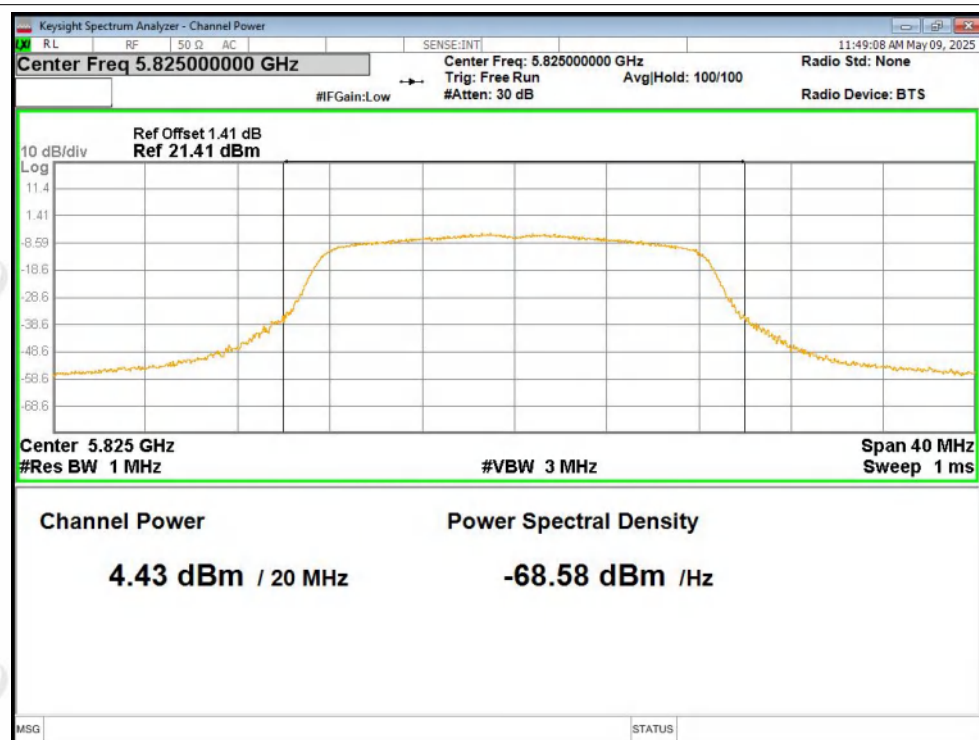


Power NVNT ac20 5785MHz Ant1

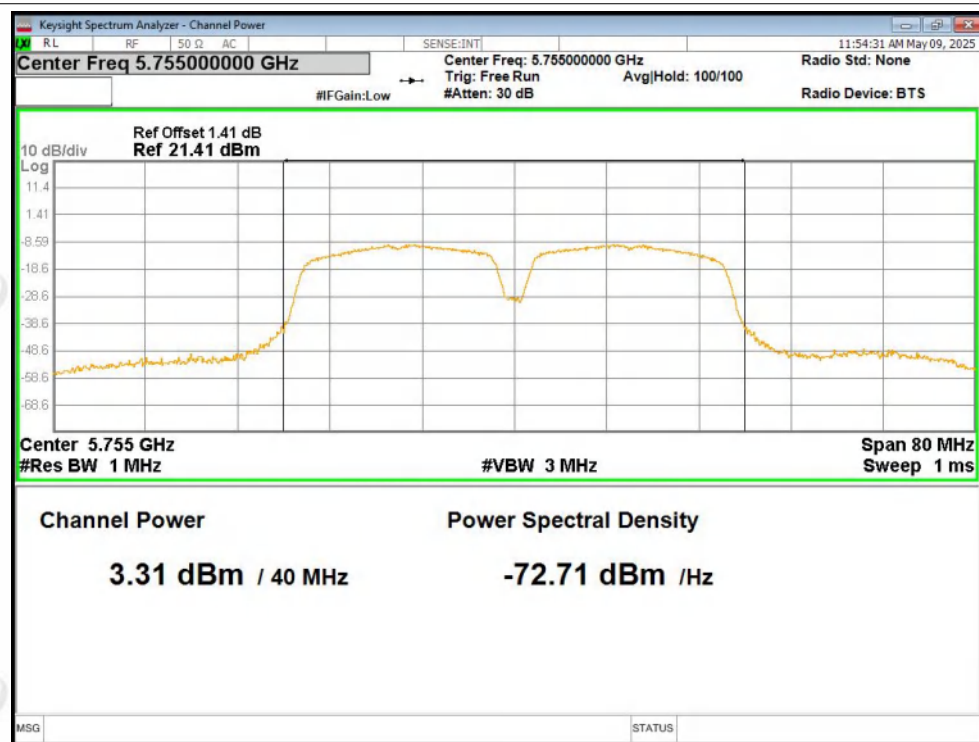


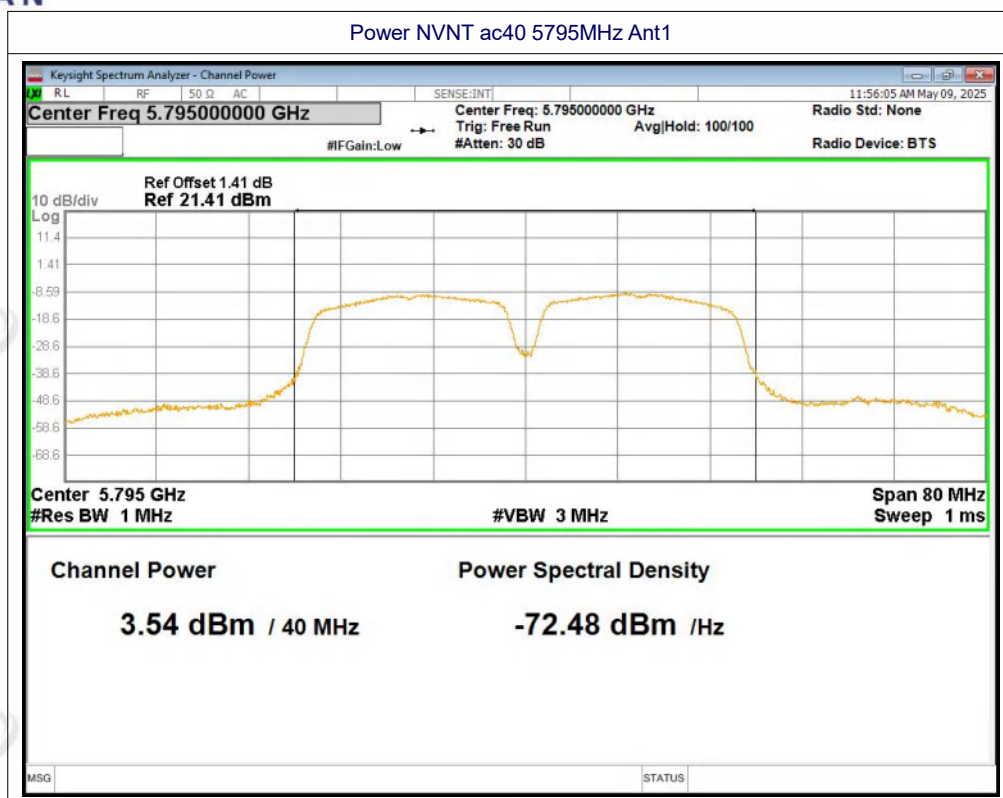


Power NVNT ac20 5825MHz Ant1



Power NVNT ac40 5755MHz Ant1





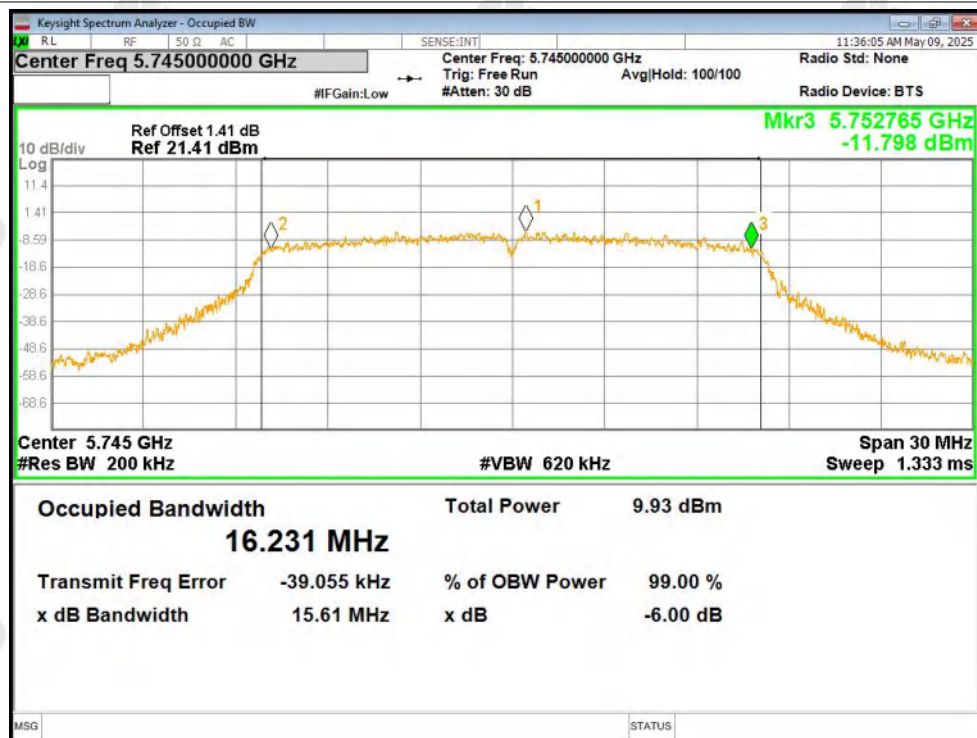
**B.3 -6dB Bandwidth**

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	a	5745	Ant1	15.607	0.5	Pass
NVNT	a	5785	Ant1	15.703	0.5	Pass
NVNT	a	5825	Ant1	15.634	0.5	Pass
NVNT	n20	5745	Ant1	14.888	0.5	Pass
NVNT	n20	5785	Ant1	15.137	0.5	Pass
NVNT	n20	5825	Ant1	16.351	0.5	Pass
NVNT	n40	5755	Ant1	33.022	0.5	Pass
NVNT	n40	5795	Ant1	32.093	0.5	Pass
NVNT	ac20	5745	Ant1	15.078	0.5	Pass
NVNT	ac20	5785	Ant1	15.722	0.5	Pass
NVNT	ac20	5825	Ant1	14.941	0.5	Pass
NVNT	ac40	5755	Ant1	34.375	0.5	Pass
NVNT	ac40	5795	Ant1	34.409	0.5	Pass

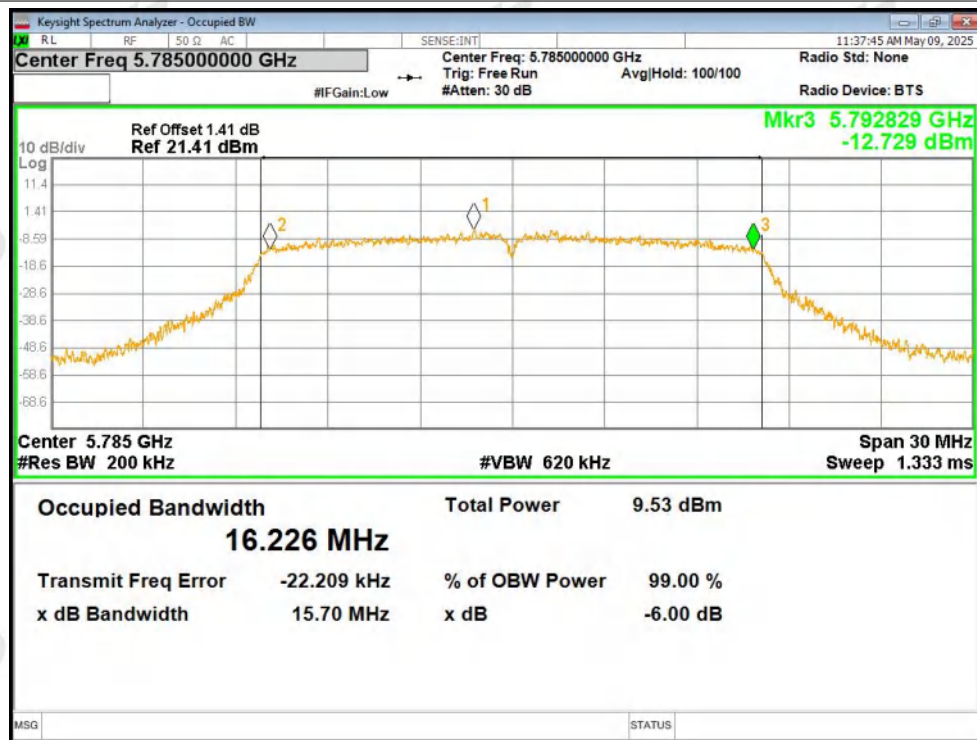


Test Graphs

-6dB Bandwidth NVNT a 5745MHz Ant1

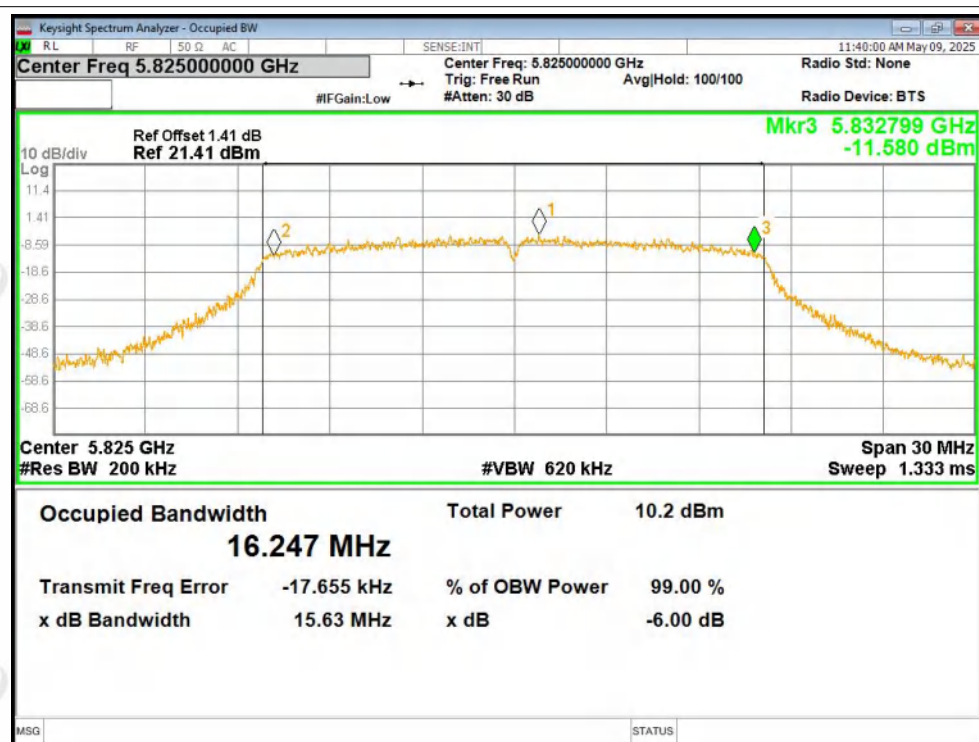


-6dB Bandwidth NVNT a 5785MHz Ant1

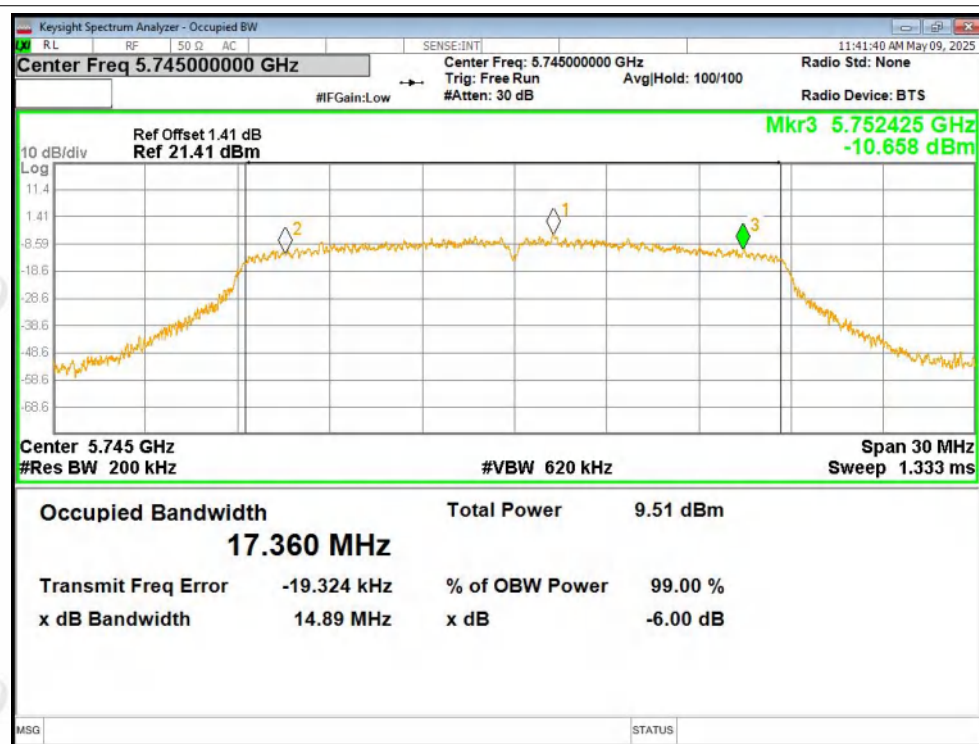




-6dB Bandwidth NVNT a 5825MHz Ant1

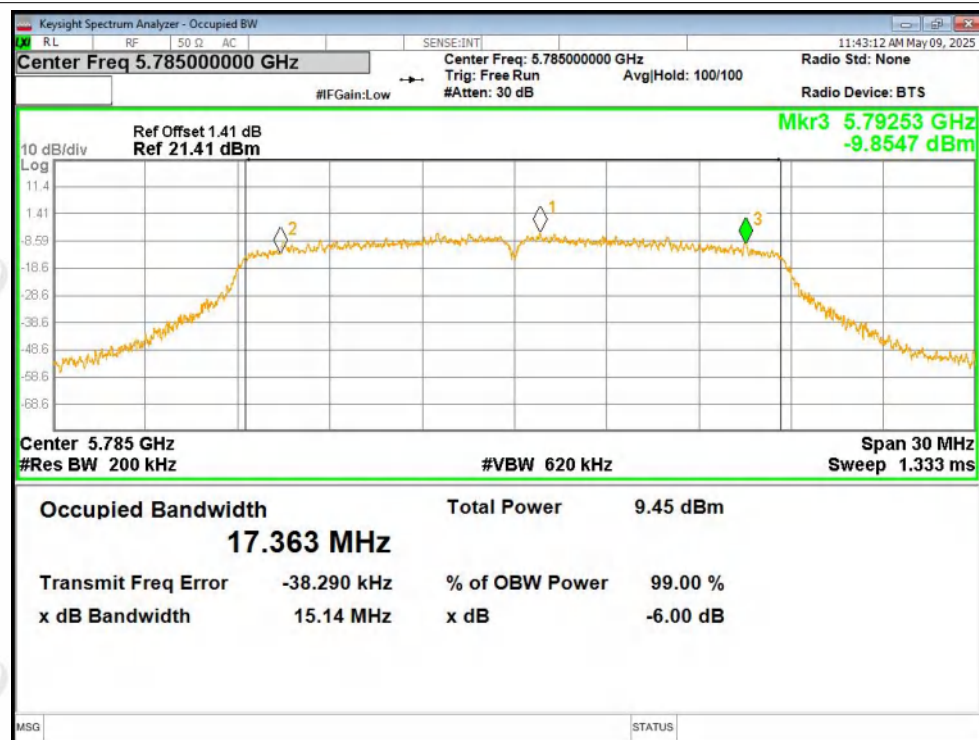


-6dB Bandwidth NVNT n20 5745MHz Ant1

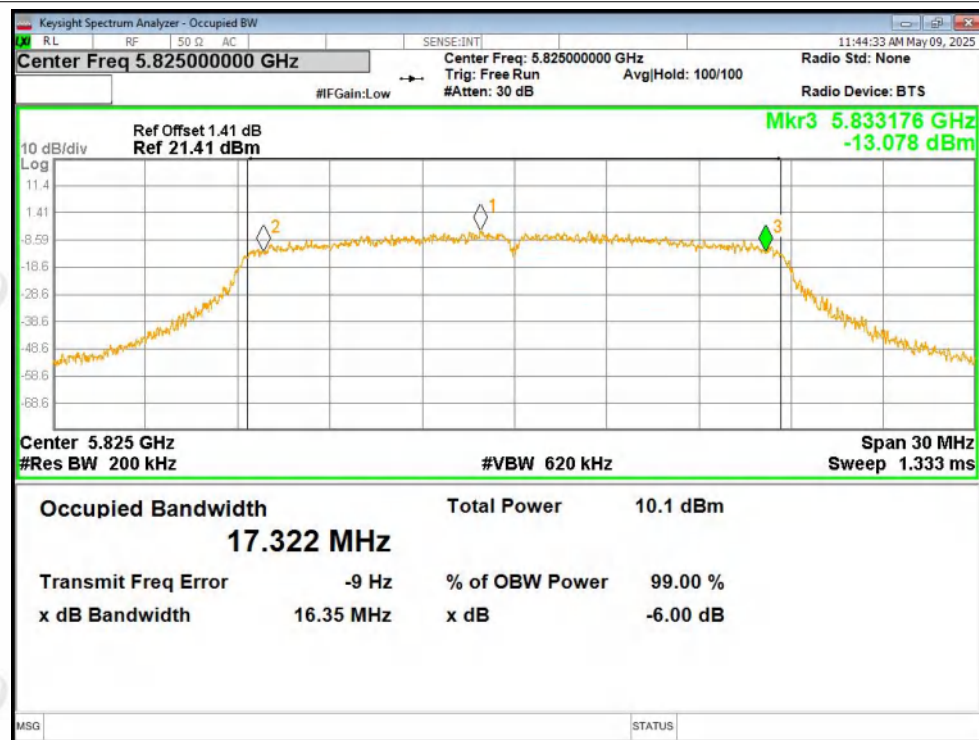




-6dB Bandwidth NVNT n20 5785MHz Ant1

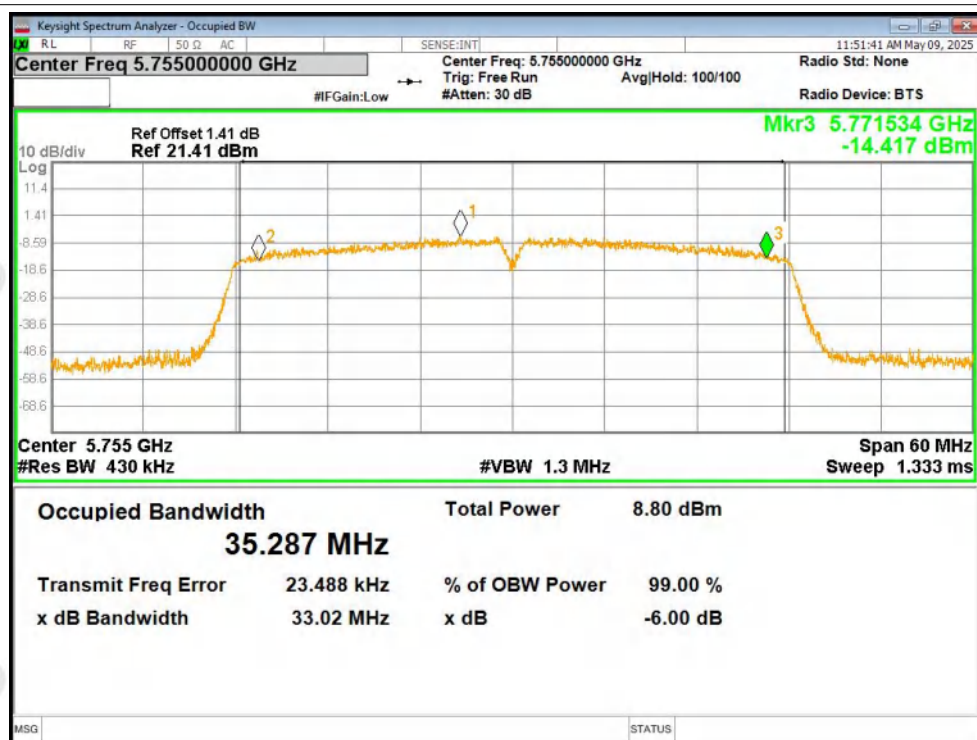


-6dB Bandwidth NVNT n20 5825MHz Ant1

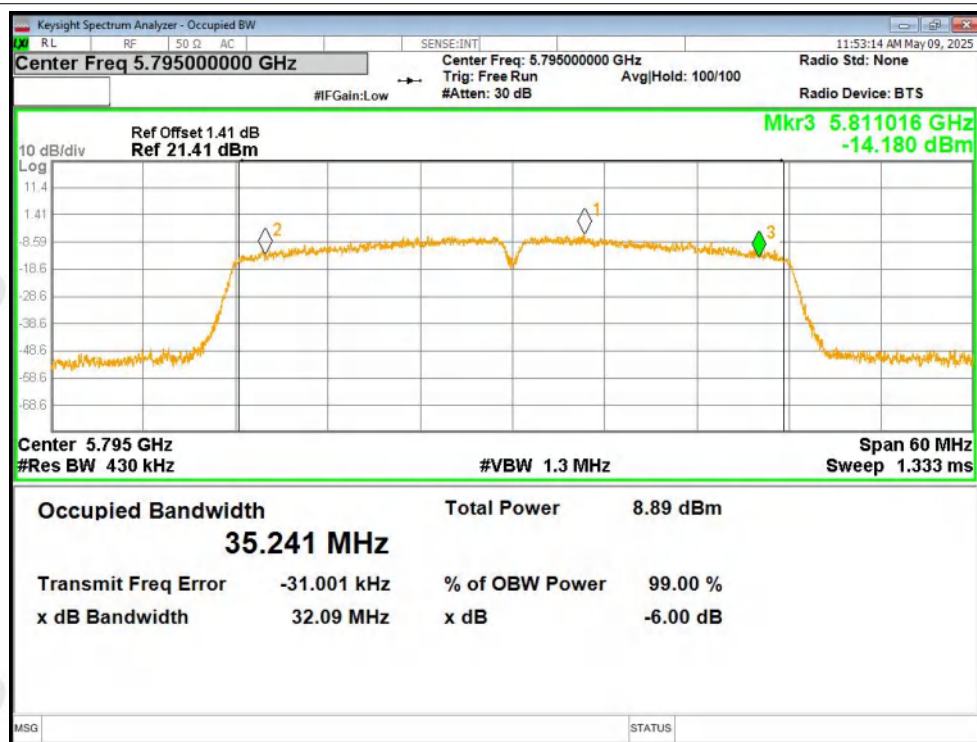




-6dB Bandwidth NVNT n40 5755MHz Ant1

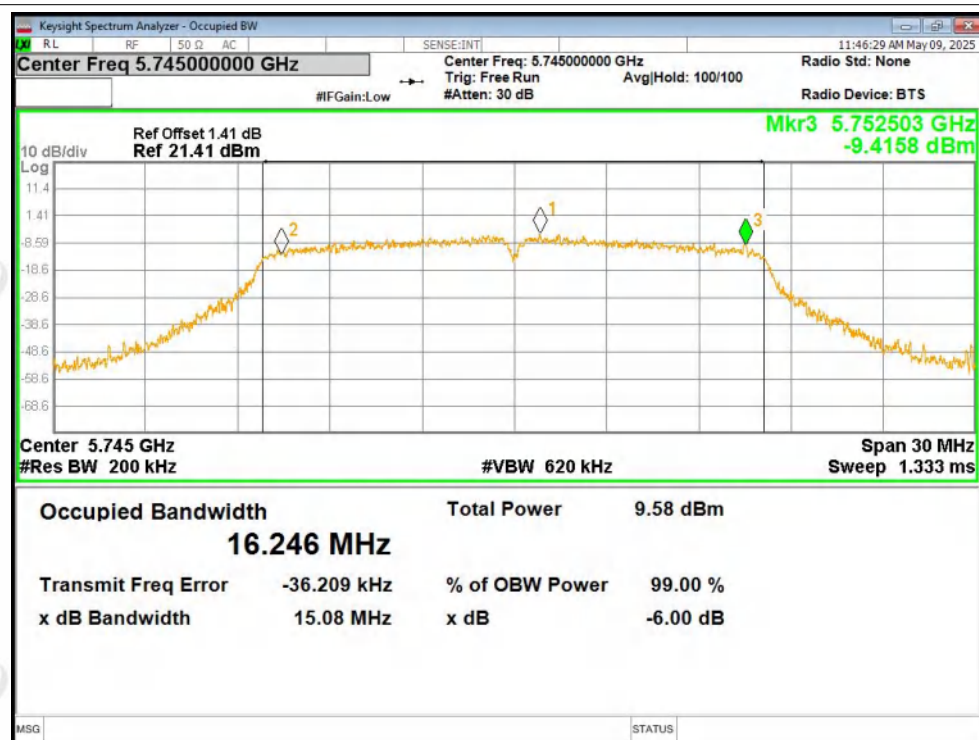


-6dB Bandwidth NVNT n40 5795MHz Ant1

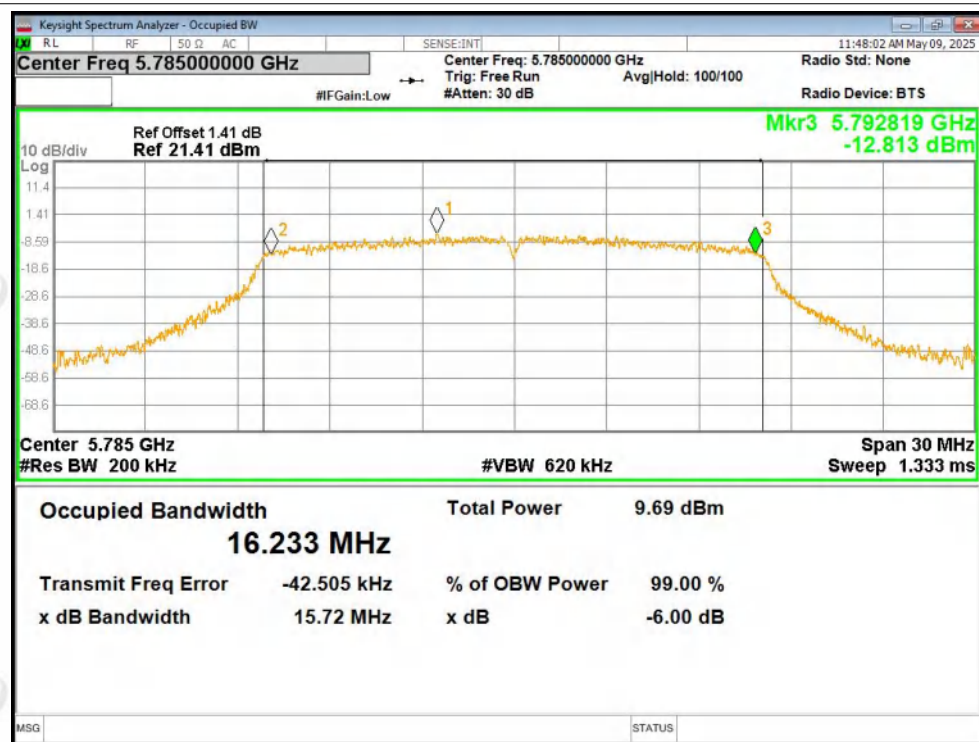




-6dB Bandwidth NVNT ac20 5745MHz Ant1

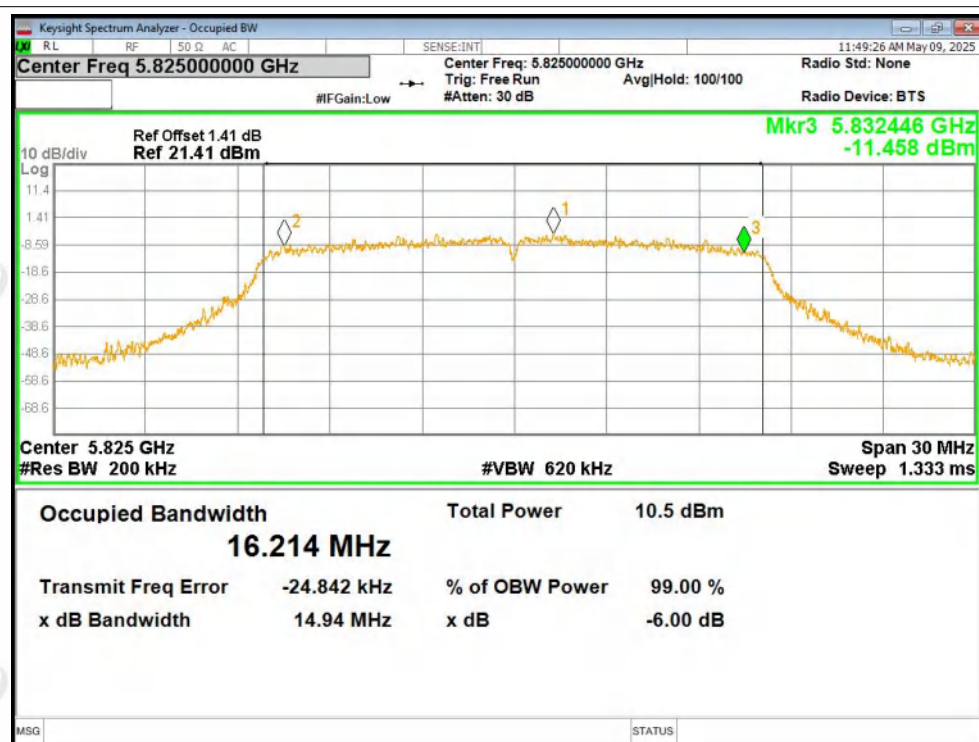


-6dB Bandwidth NVNT ac20 5785MHz Ant1

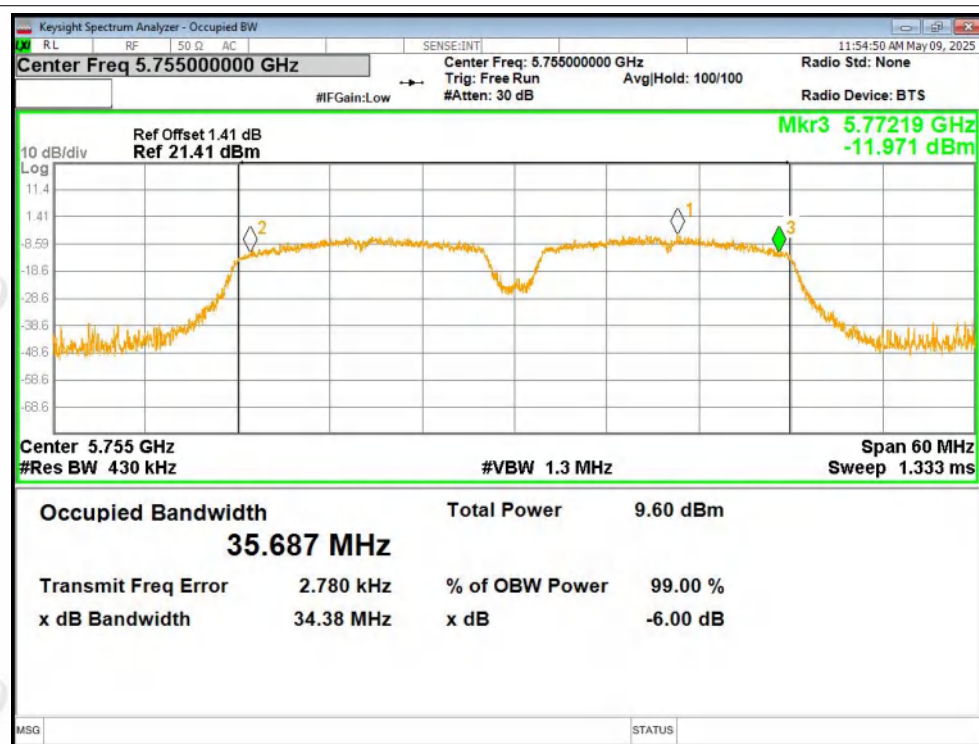


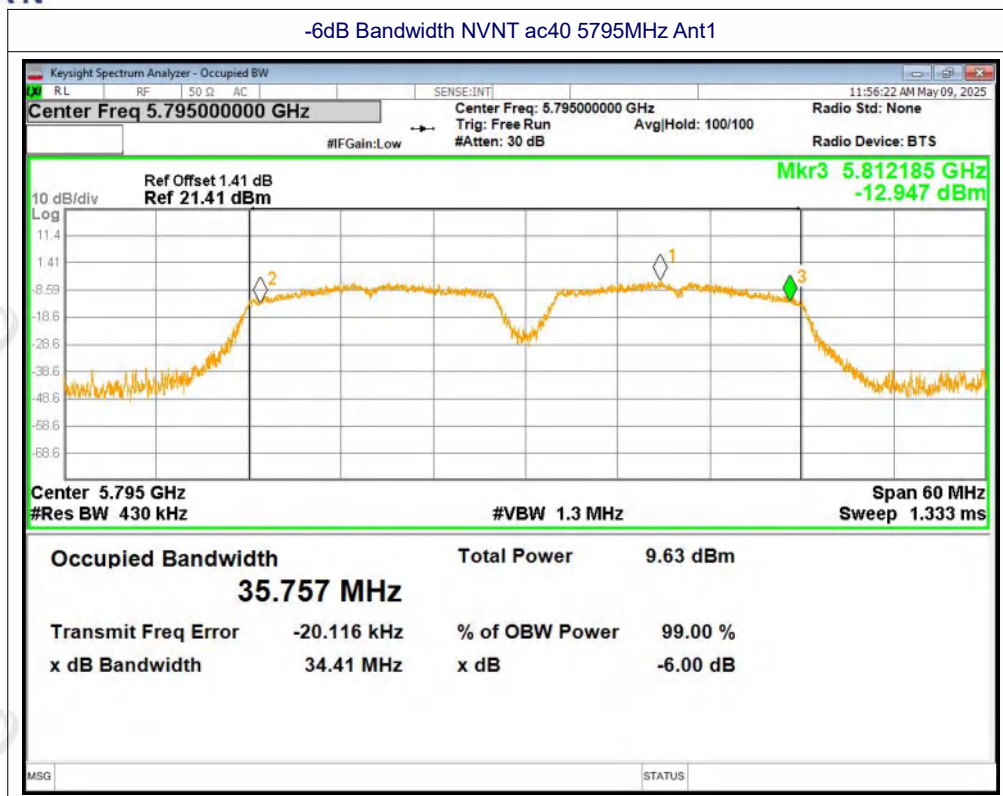


-6dB Bandwidth NVNT ac20 5825MHz Ant1



-6dB Bandwidth NVNT ac40 5755MHz Ant1





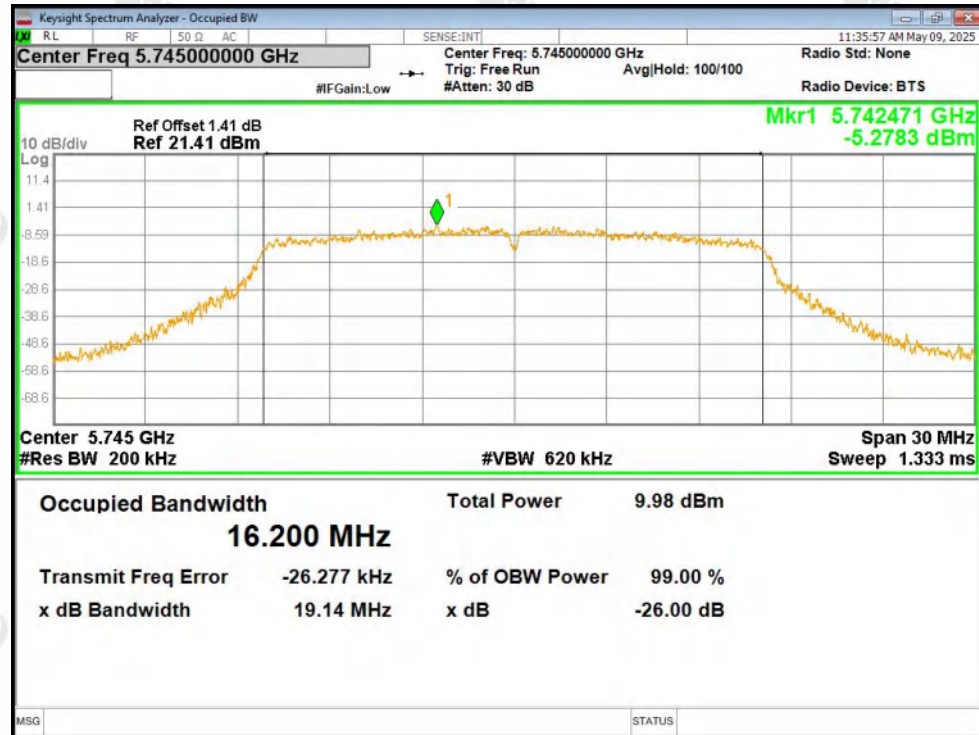


B.4 Occupied Channel Bandwidth

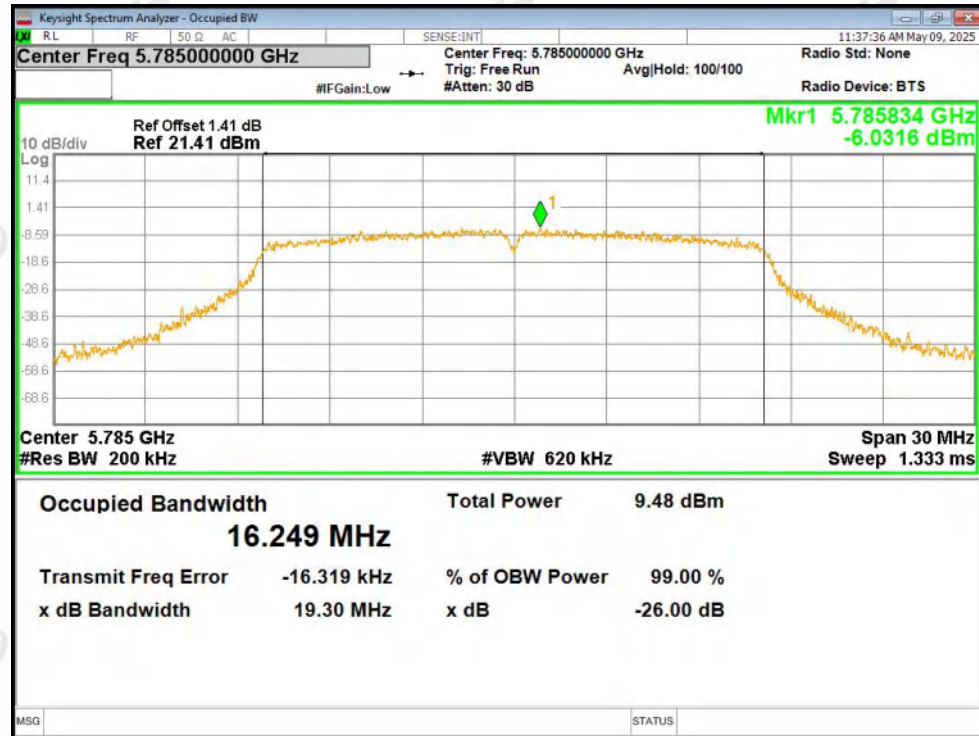
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	a	5745	Ant1	16.2
NVNT	a	5785	Ant1	16.249
NVNT	a	5825	Ant1	16.218
NVNT	n20	5745	Ant1	17.361
NVNT	n20	5785	Ant1	17.366
NVNT	n20	5825	Ant1	17.34
NVNT	n40	5755	Ant1	36.236
NVNT	n40	5795	Ant1	36.142
NVNT	ac20	5745	Ant1	16.238
NVNT	ac20	5785	Ant1	16.233
NVNT	ac20	5825	Ant1	16.238
NVNT	ac40	5755	Ant1	36.206
NVNT	ac40	5795	Ant1	36.209

Test Graphs

OBW NVNT a 5745MHz Ant1

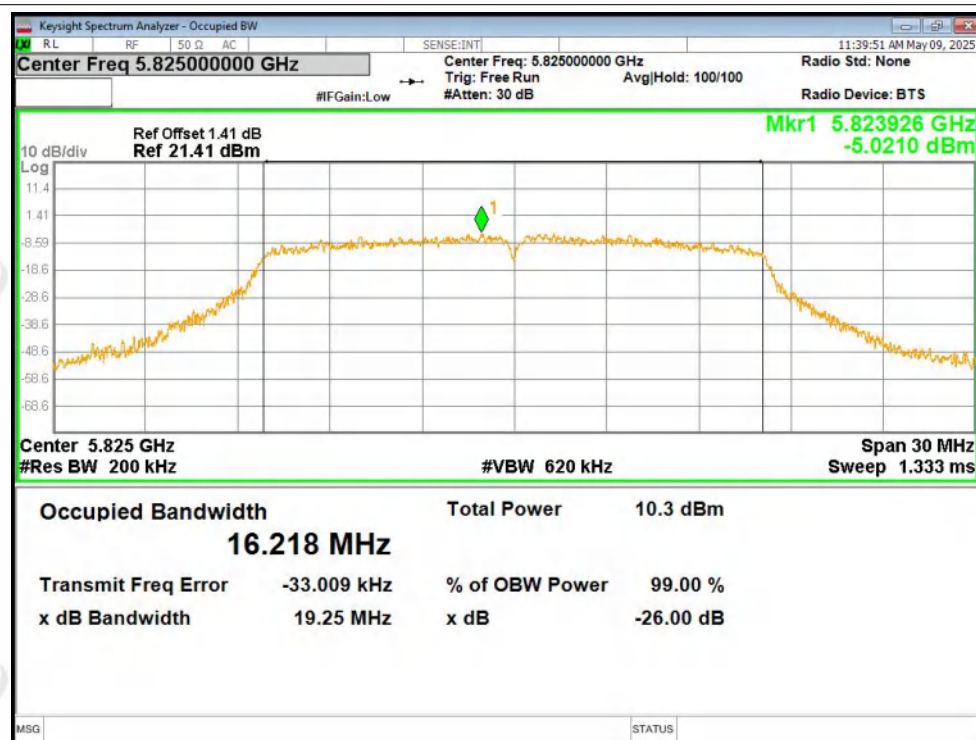


OBW NVNT a 5785MHz Ant1

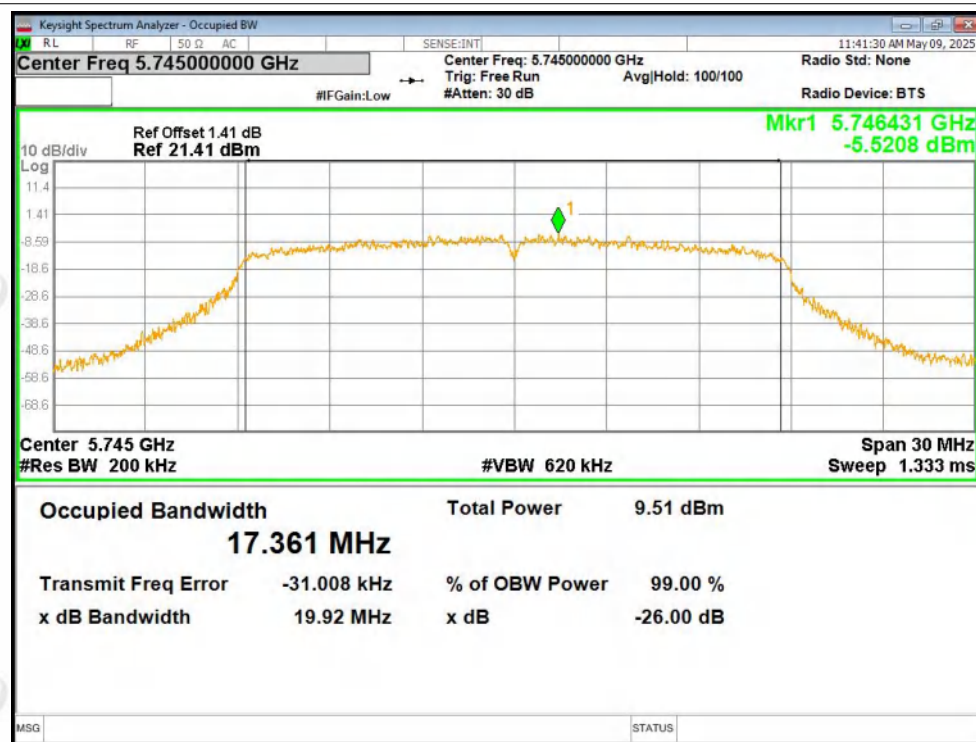




OBW NVNT a 5825MHz Ant1

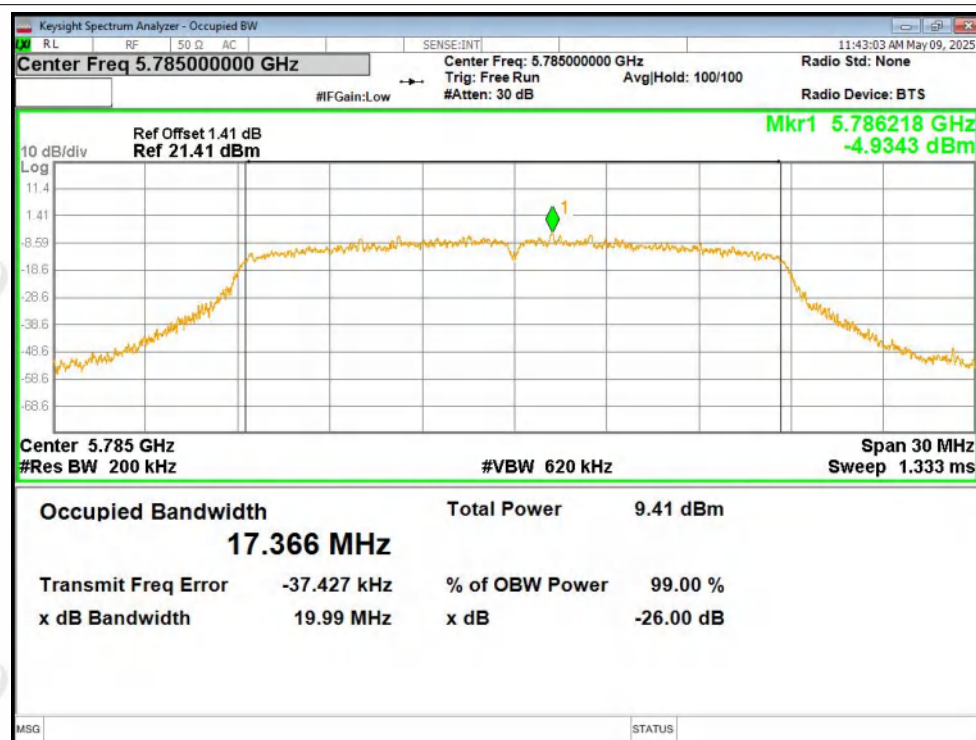


OBW NVNT n20 5745MHz Ant1

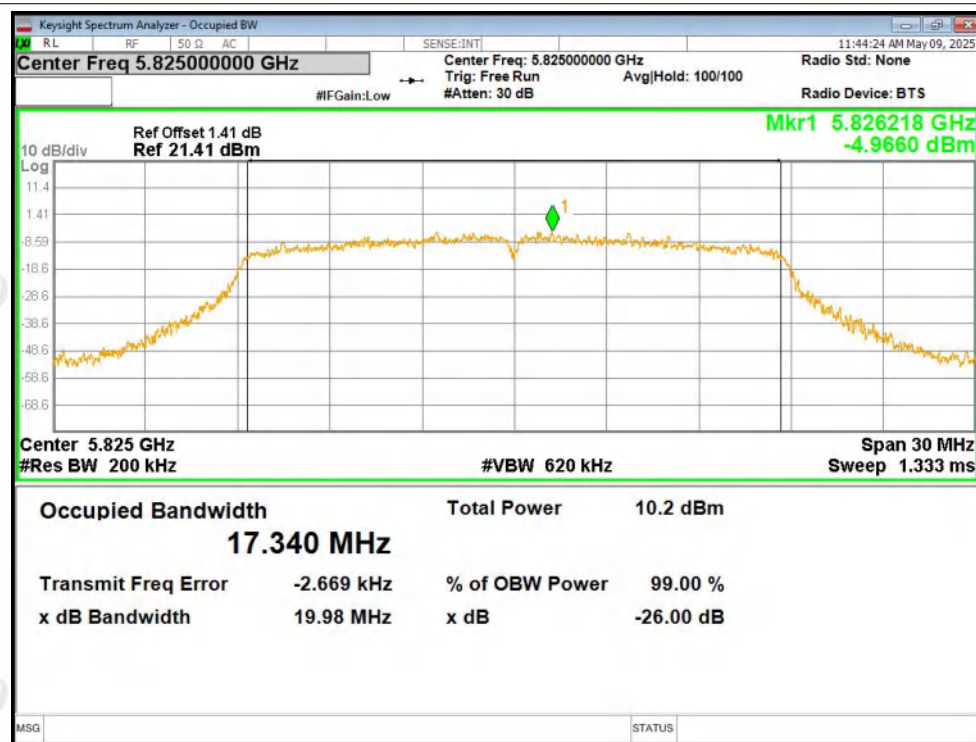




OBW NVNT n20 5785MHz Ant1

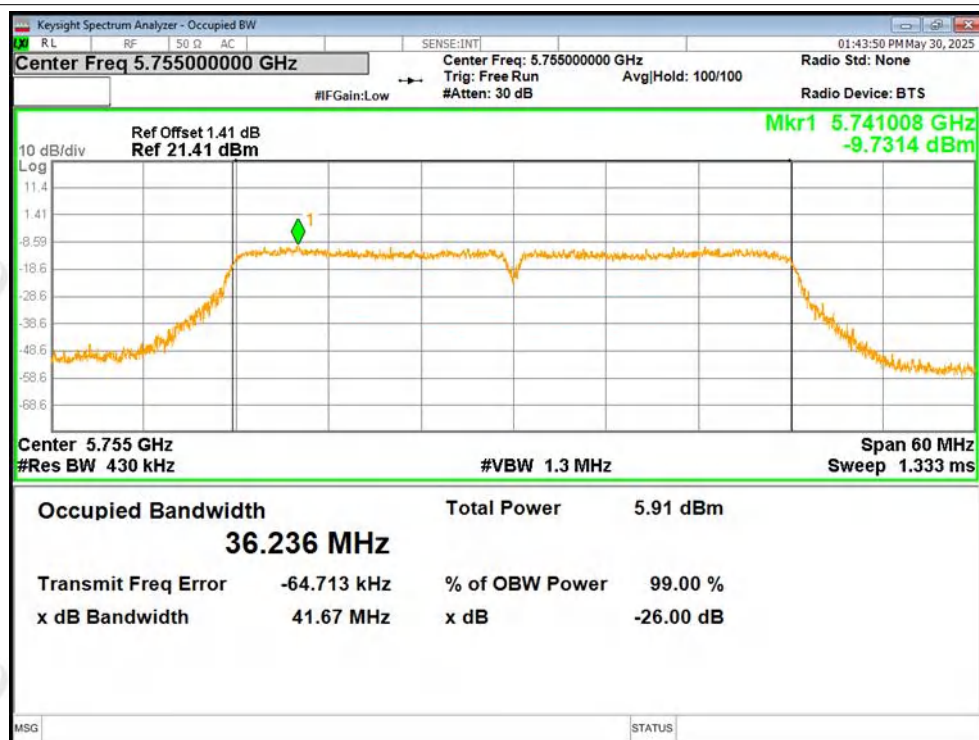


OBW NVNT n20 5825MHz Ant1

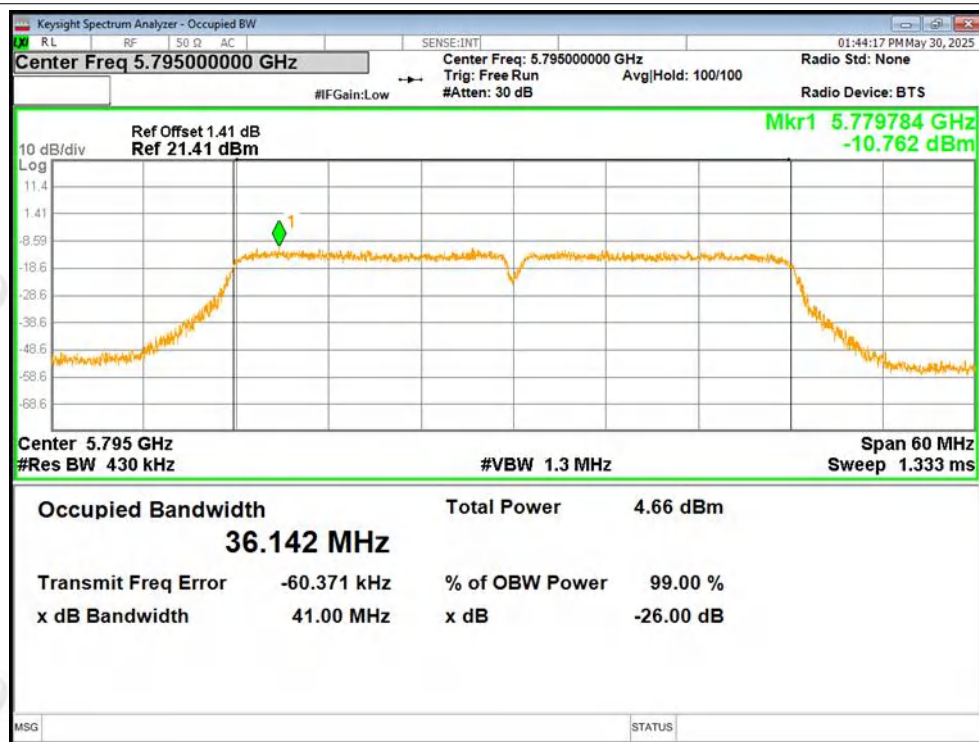




OBW NVNT n40 5755MHz Ant1

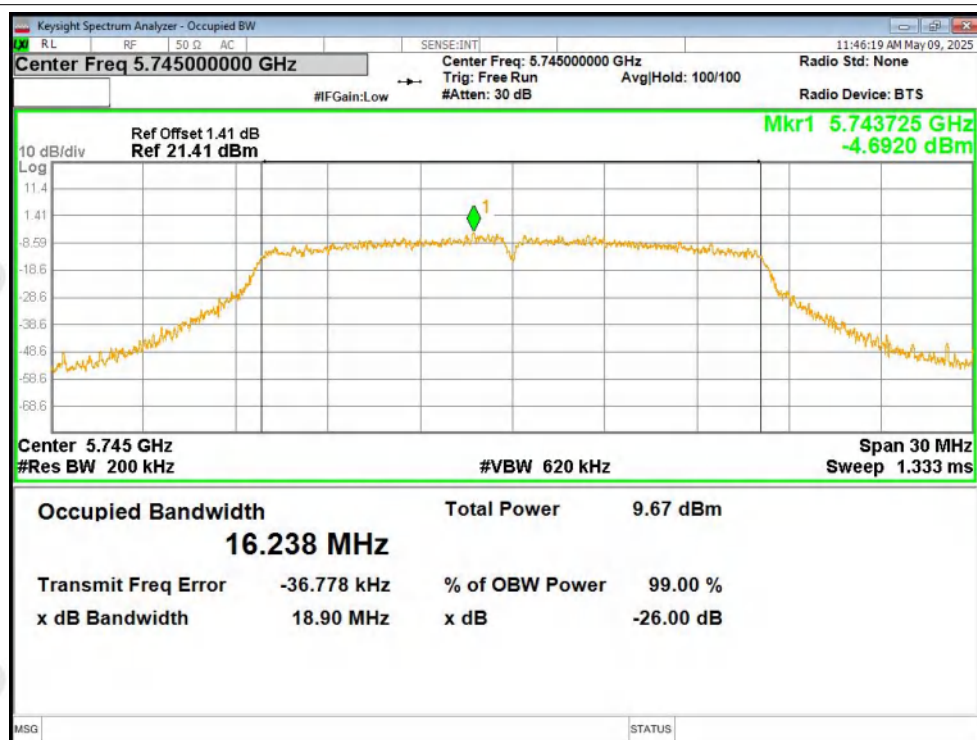


OBW NVNT n40 5795MHz Ant1

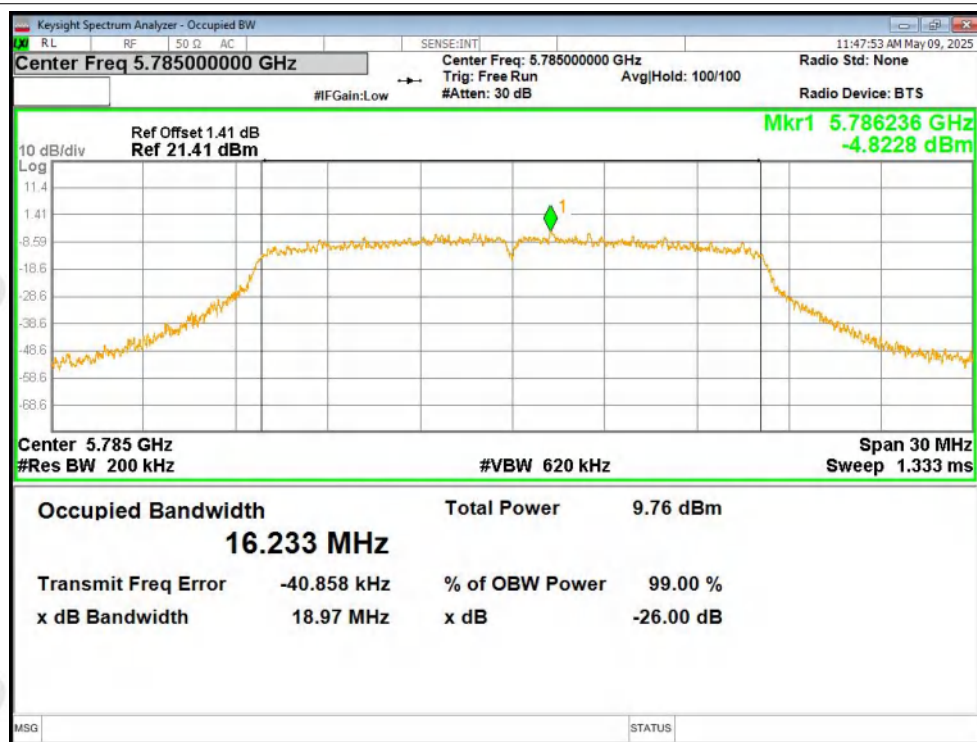




OBW NVNT ac20 5745MHz Ant1

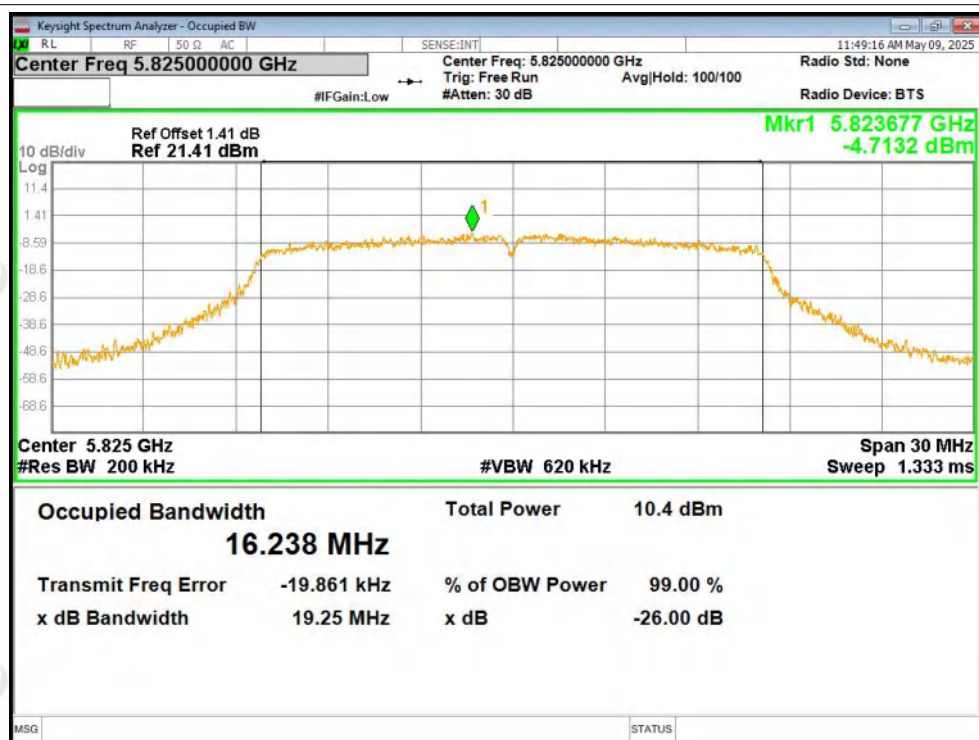


OBW NVNT ac20 5785MHz Ant1

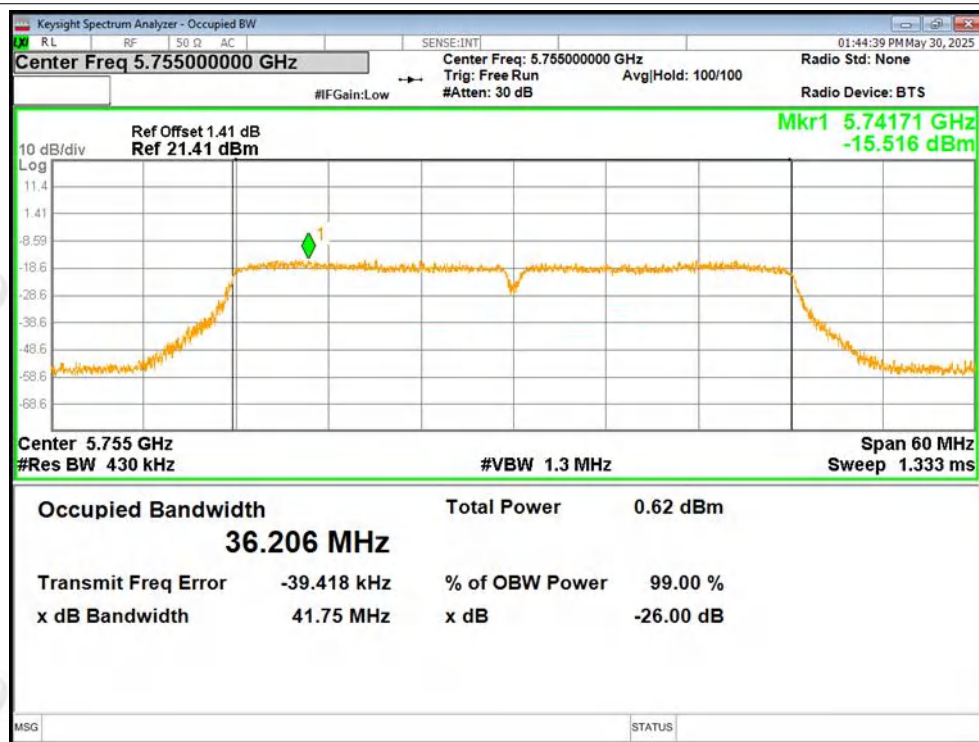


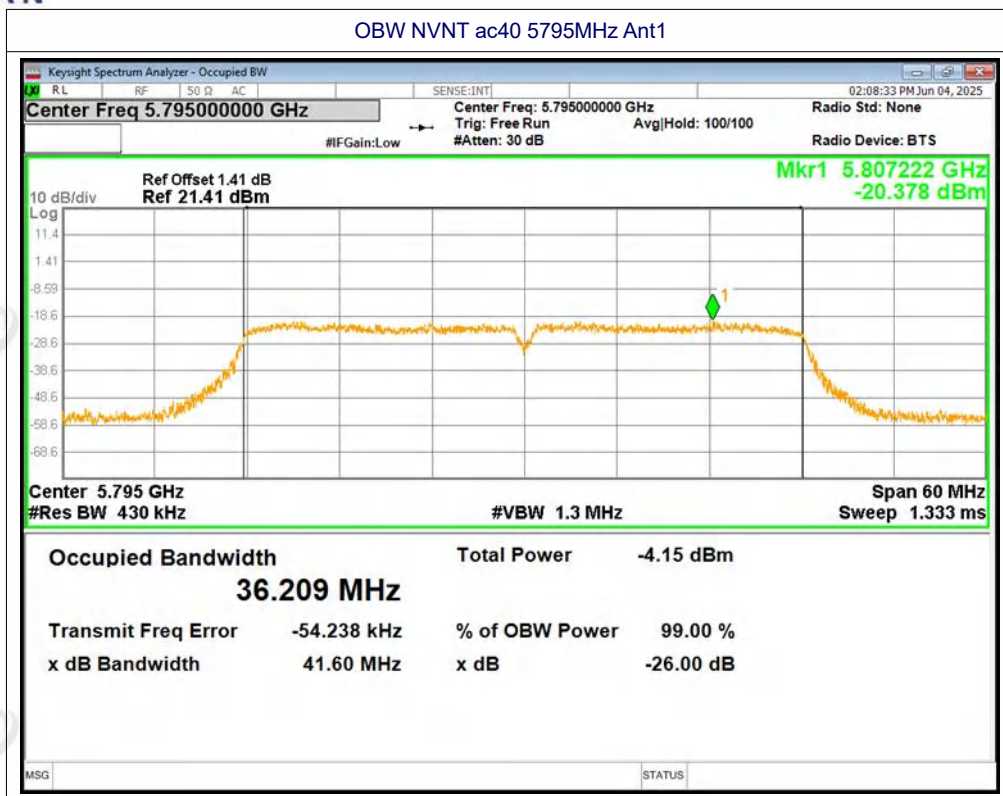


OBW NVNT ac20 5825MHz Ant1



OBW NVNT ac40 5755MHz Ant1







B.5 Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm)	Duty Factor (dB)	RB factor(dB)	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Verdict
NVNT	a	5745	Ant1	-31.24	0.3	-0.086	-31.026	30	Pass
NVNT	a	5785	Ant1	-28.06	0.23	-0.086	-27.916	30	Pass
NVNT	a	5825	Ant1	-25.74	0.46	-0.086	-25.366	30	Pass
NVNT	n20	5745	Ant1	-30.87	0.26	-0.086	-30.696	30	Pass
NVNT	n20	5785	Ant1	-29.53	0.33	-0.086	-29.286	30	Pass
NVNT	n20	5825	Ant1	-28.17	0.41	-0.086	-27.846	30	Pass
NVNT	n40	5755	Ant1	-39.58	0.79	-0.086	-38.876	30	Pass
NVNT	n40	5795	Ant1	-40.07	0.6	-0.086	-39.556	30	Pass
NVNT	ac20	5745	Ant1	-23.12	0.85	-0.086	-22.356	30	Pass
NVNT	ac20	5785	Ant1	-19.24	0.7	-0.086	-18.626	30	Pass
NVNT	ac20	5825	Ant1	-16.53	0.93	-0.086	-15.686	30	Pass
NVNT	ac40	5755	Ant1	-21.13	0.82	-0.086	-20.396	30	Pass
NVNT	ac40	5795	Ant1	-21.97	0.88	-0.086	-21.176	30	Pass

RB factor = $10 \lg (\text{Measure RB} / 500)$, Measure RB = 510 kHz

Total PSD = Conducted PSD + Duty factor(dB) + RB factor(dB)

Test Graphs

PSD NVNT a 5745MHz Ant1



PSD NVNT a 5785MHz Ant1



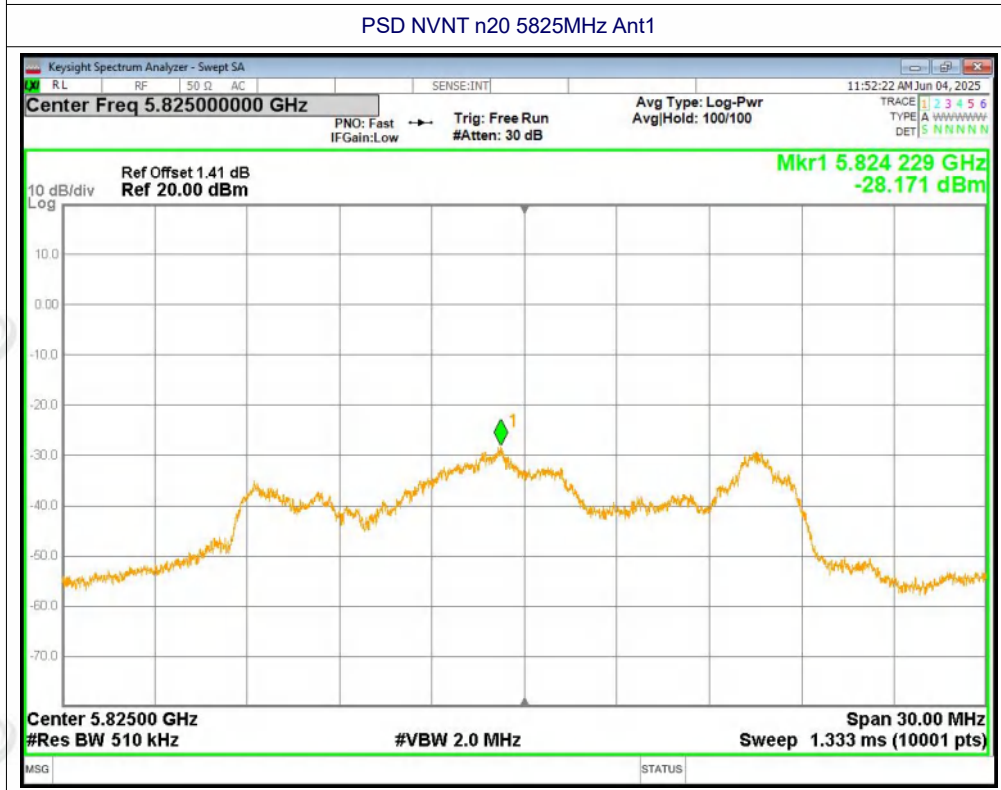
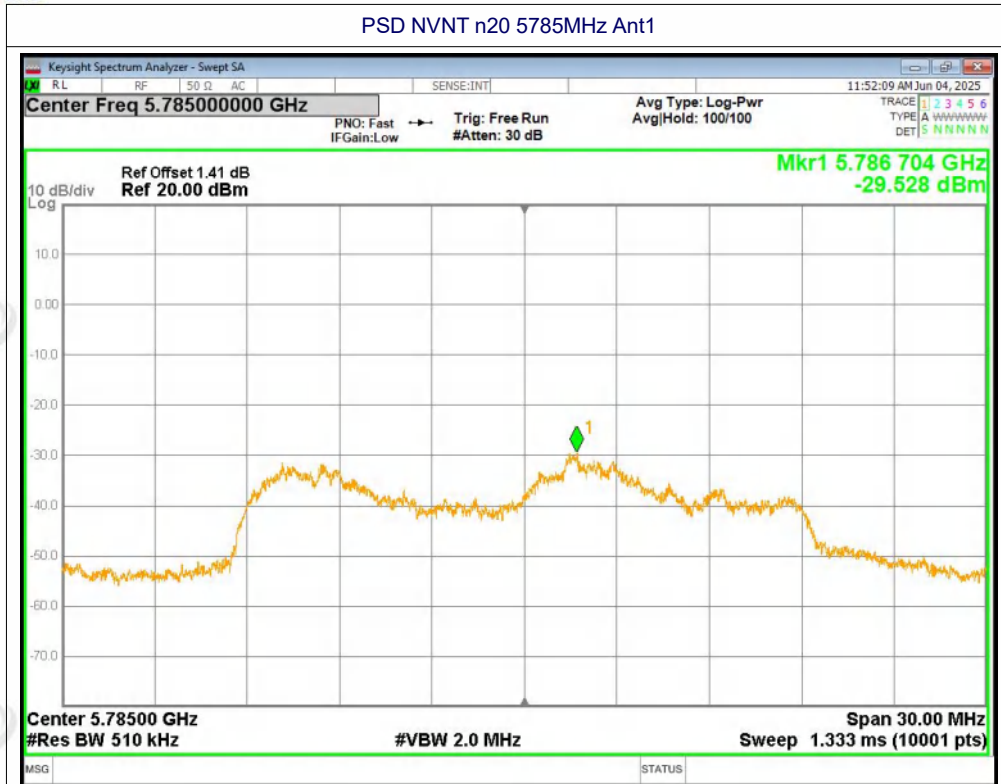


PSD NVNT a 5825MHz Ant1



PSD NVNT n20 5745MHz Ant1







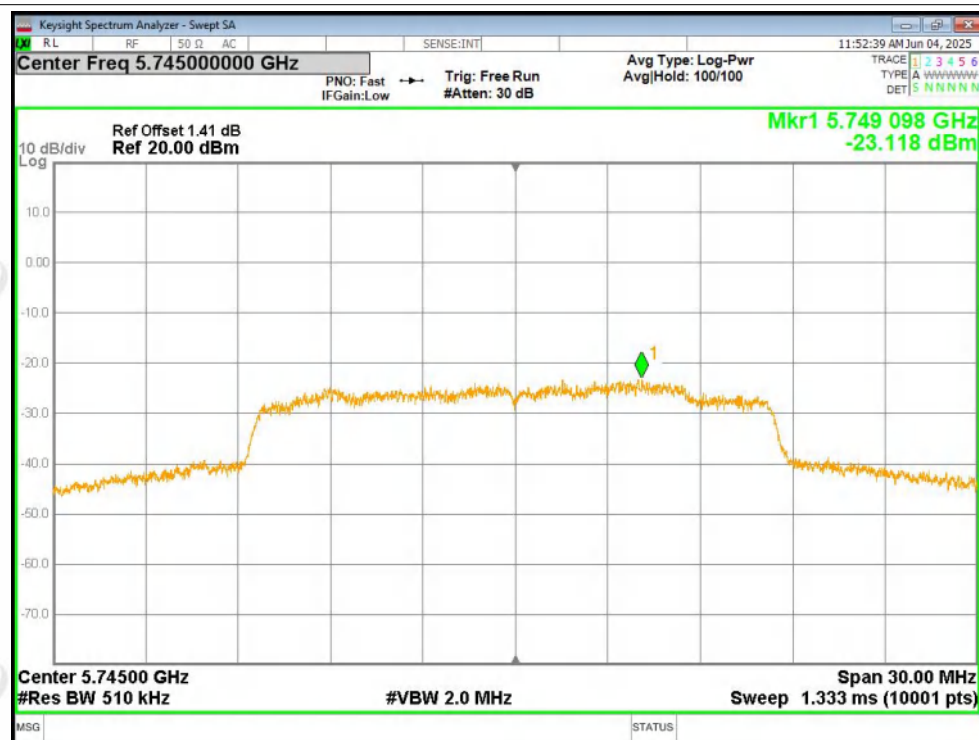
PSD NVNT n40 5755MHz Ant1



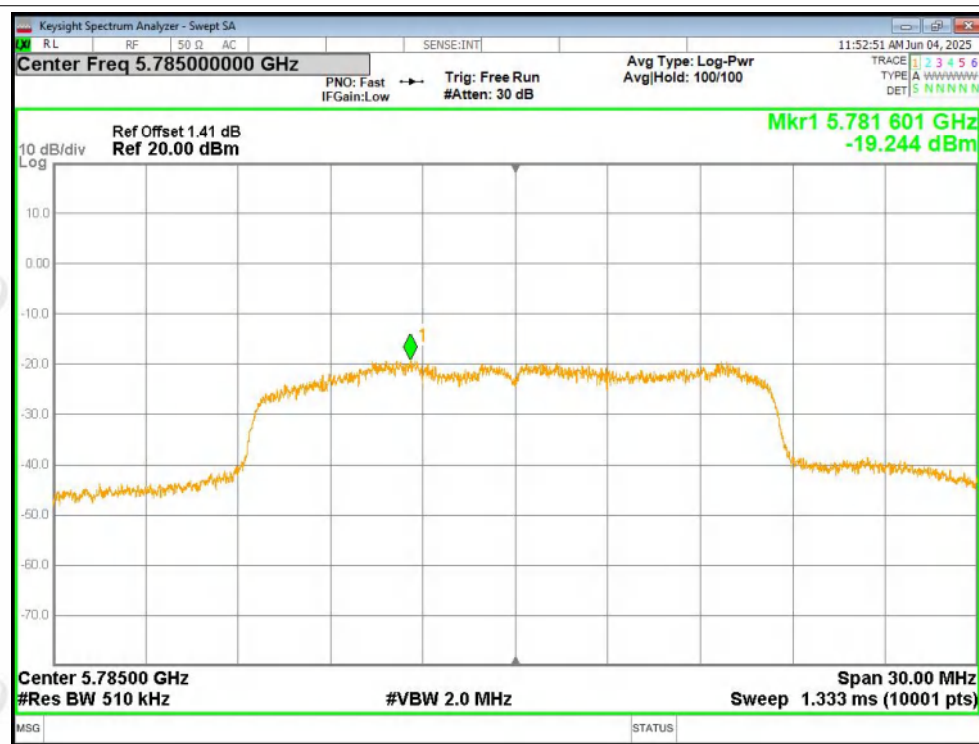
PSD NVNT n40 5795MHz Ant1



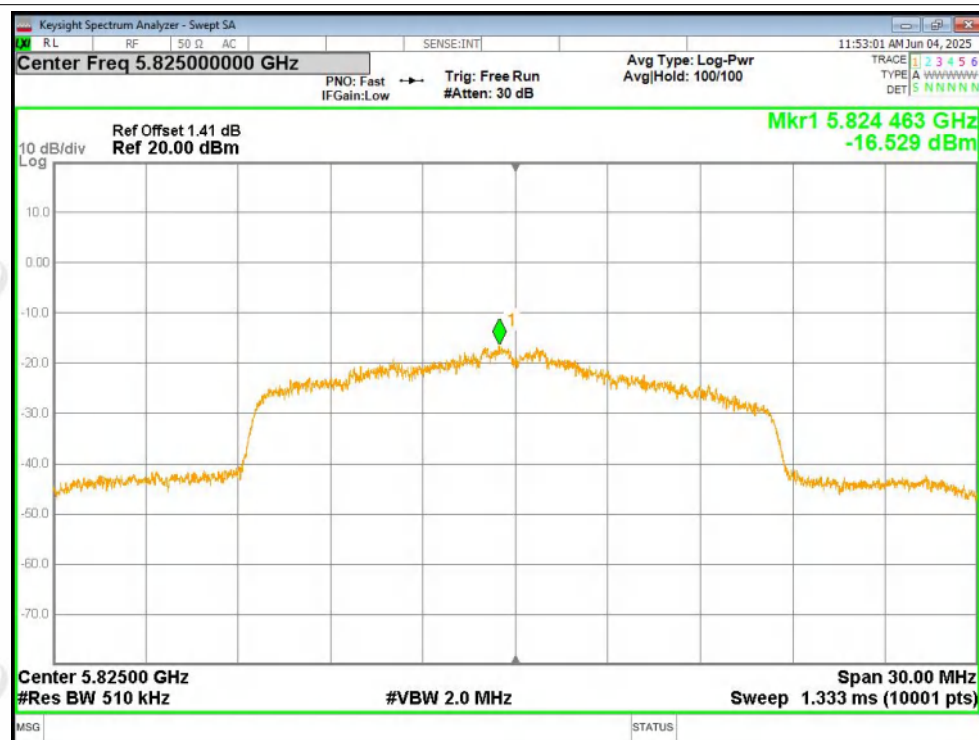
PSD NVNT ac20 5745MHz Ant1



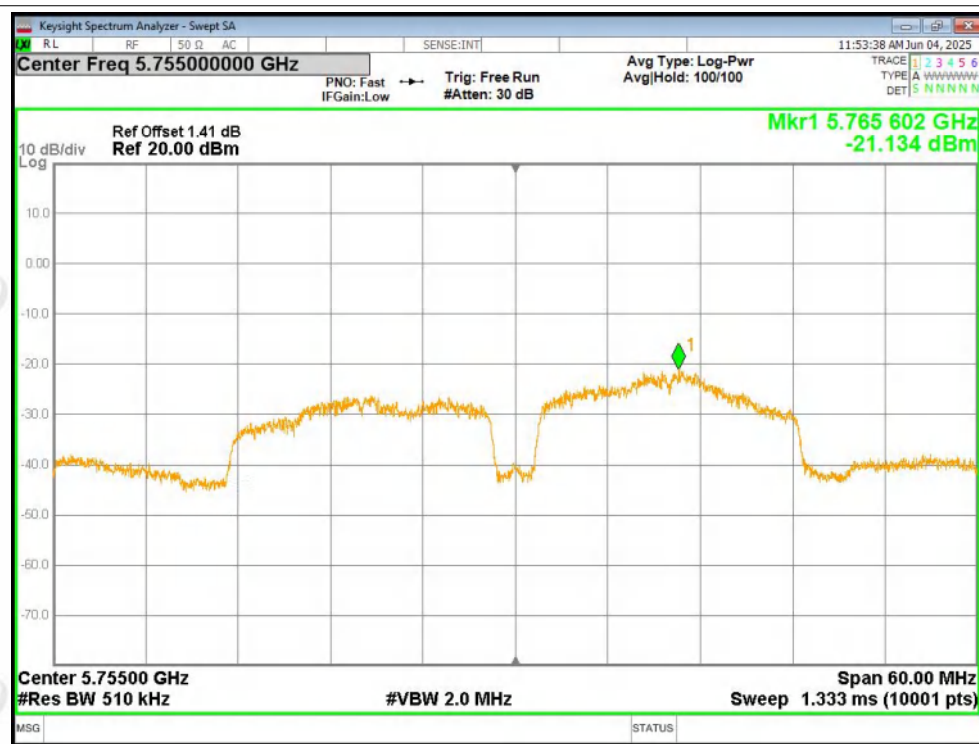
PSD NVNT ac20 5785MHz Ant1

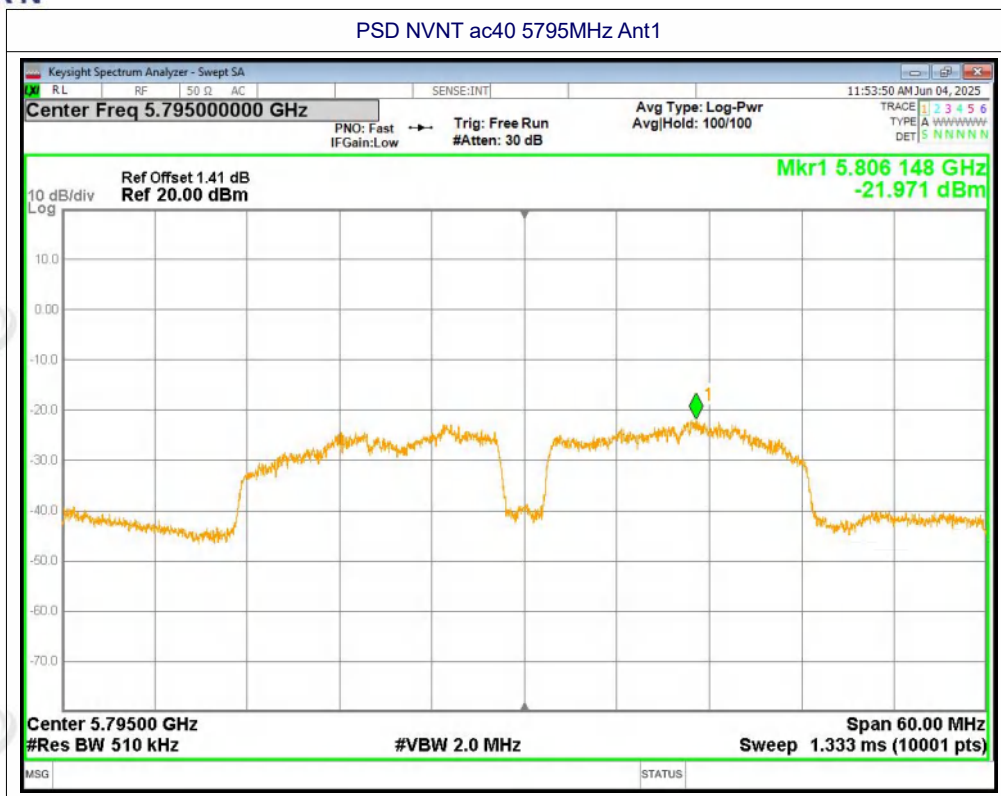


PSD NVNT ac20 5825MHz Ant1



PSD NVNT ac40 5755MHz Ant1







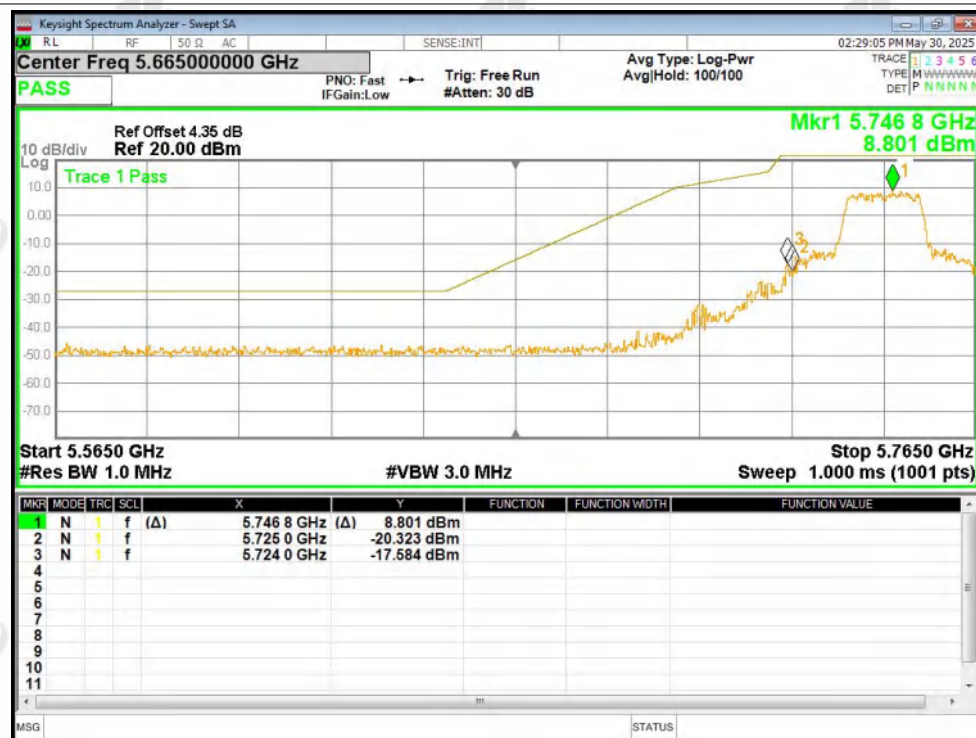
B.6 Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBm)	Limit (dBm)	Verdict
NVNT	a	5745	Ant1	-17.58	See the test diagram	Pass
NVNT	a	5825	Ant1	-32.99	See the test diagram	Pass
NVNT	n20	5745	Ant1	-19.75	See the test diagram	Pass
NVNT	n20	5825	Ant1	-29.31	See the test diagram	Pass
NVNT	n40	5755	Ant1	-13.2	See the test diagram	Pass
NVNT	n40	5795	Ant1	-28.8	See the test diagram	Pass
NVNT	ac20	5745	Ant1	-13.05	See the test diagram	Pass
NVNT	ac20	5825	Ant1	-27.7	See the test diagram	Pass
NVNT	ac40	5755	Ant1	-9.32	See the test diagram	Pass
NVNT	ac40	5795	Ant1	-25.12	See the test diagram	Pass

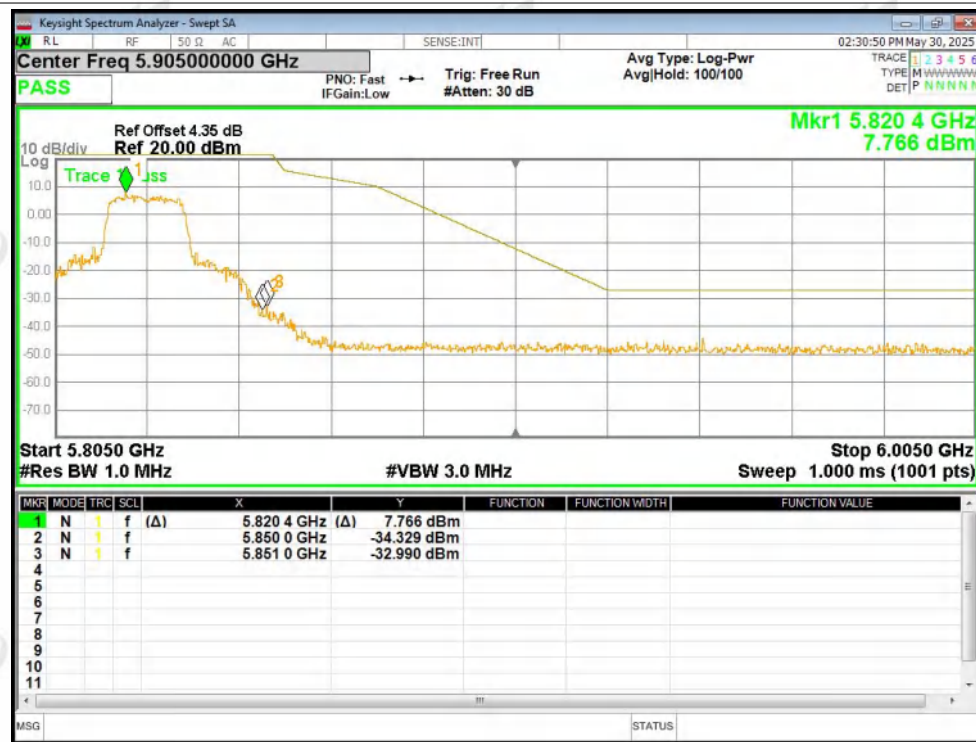
Note: During testing, the antenna gain has been added to the Ref offset.

Test Graphs

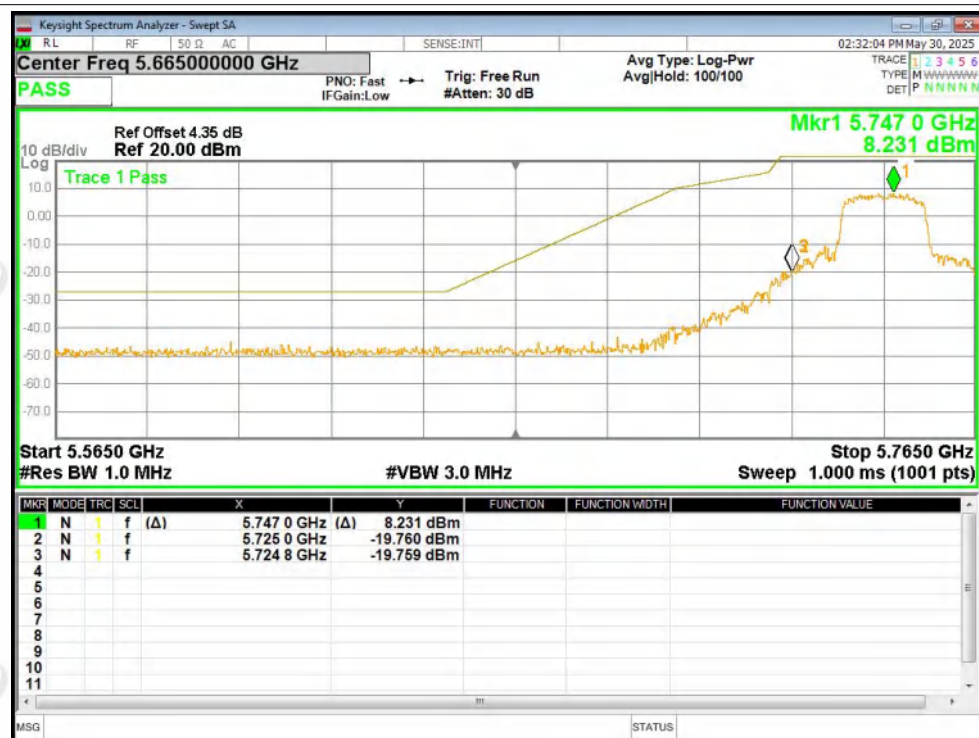
Band Edge NVNT a 5745MHz Low Ant1



Band Edge NVNT a 5825MHz High Ant1



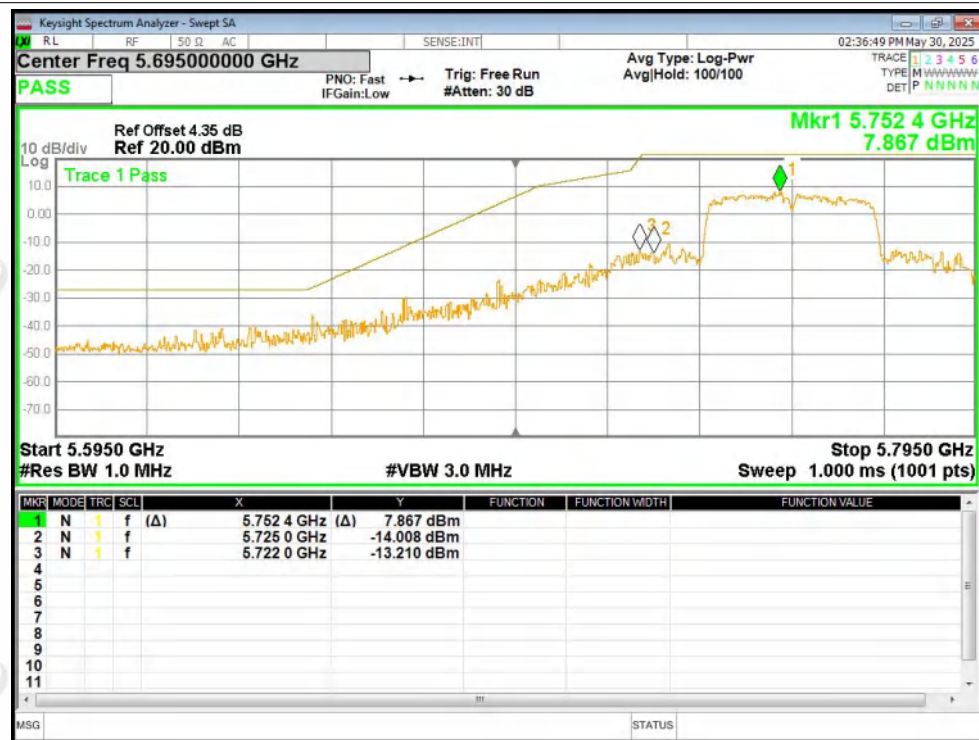
Band Edge NVNT n20 5745MHz Low Ant1



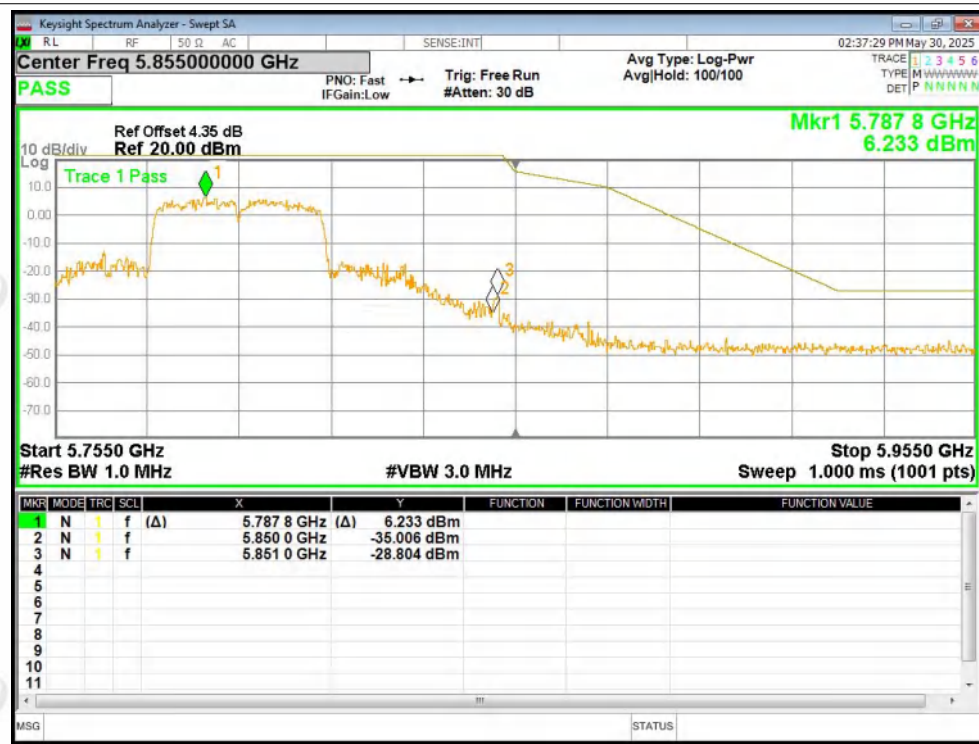
Band Edge NVNT n20 5825MHz High Ant1



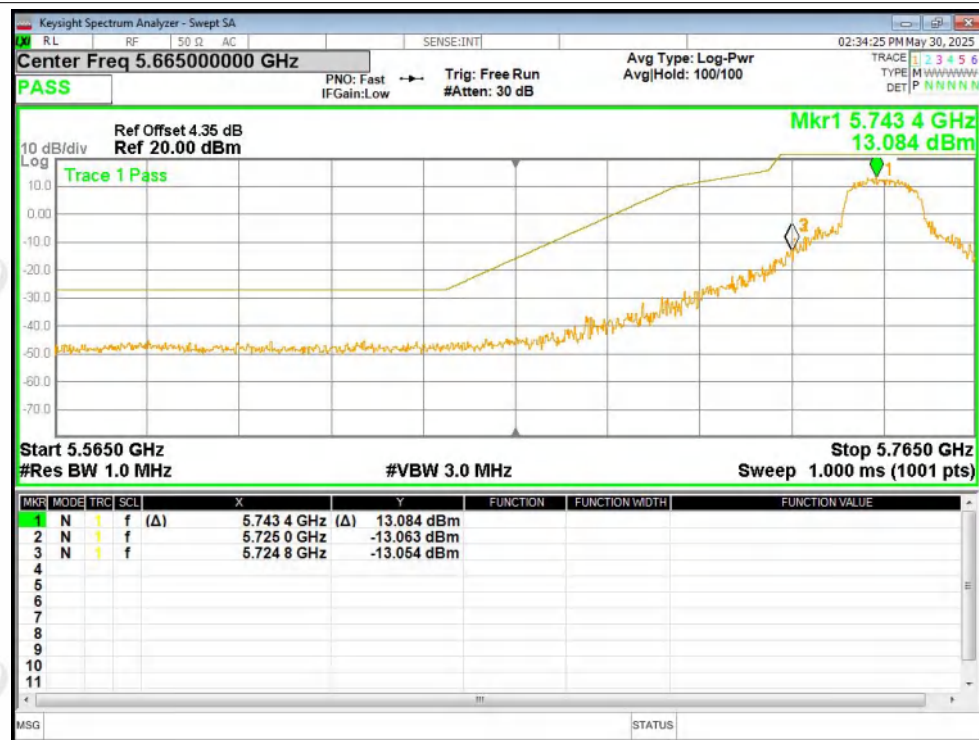
Band Edge NVNT n40 5755MHz Low Ant1



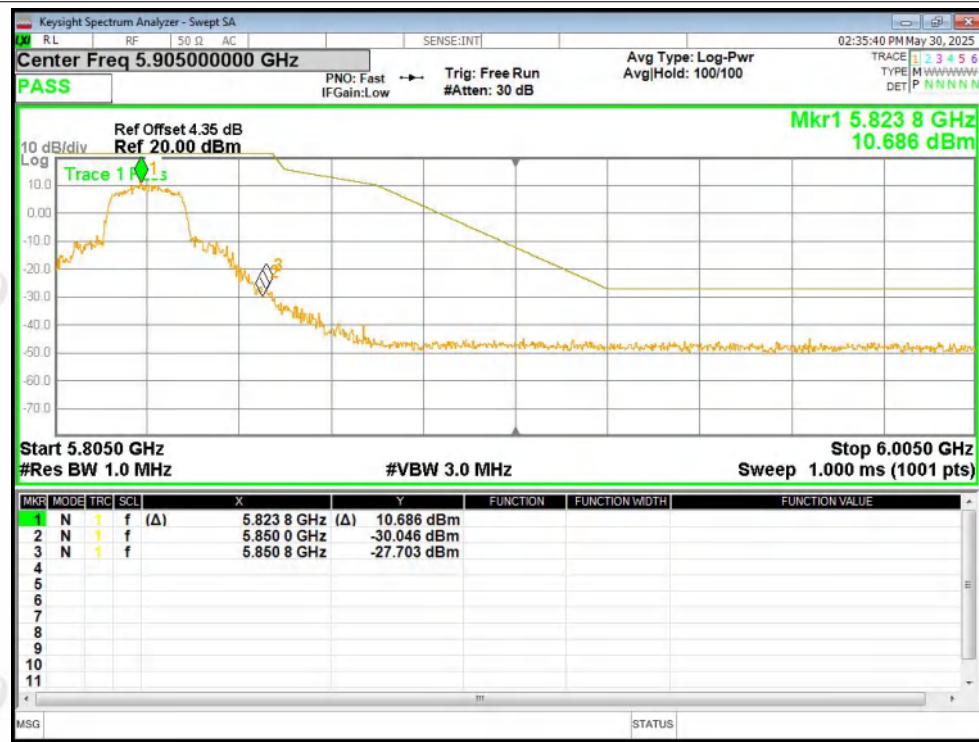
Band Edge NVNT n40 5795MHz High Ant1



Band Edge NVNT ac20 5745MHz Low Ant1

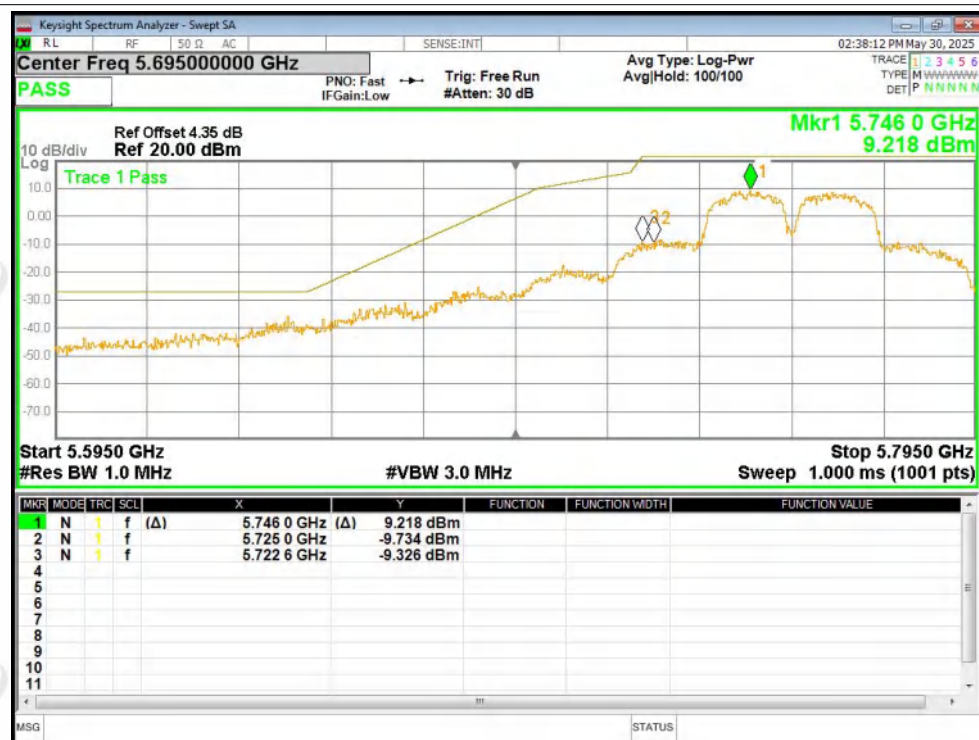


Band Edge NVNT ac20 5825MHz High Ant1

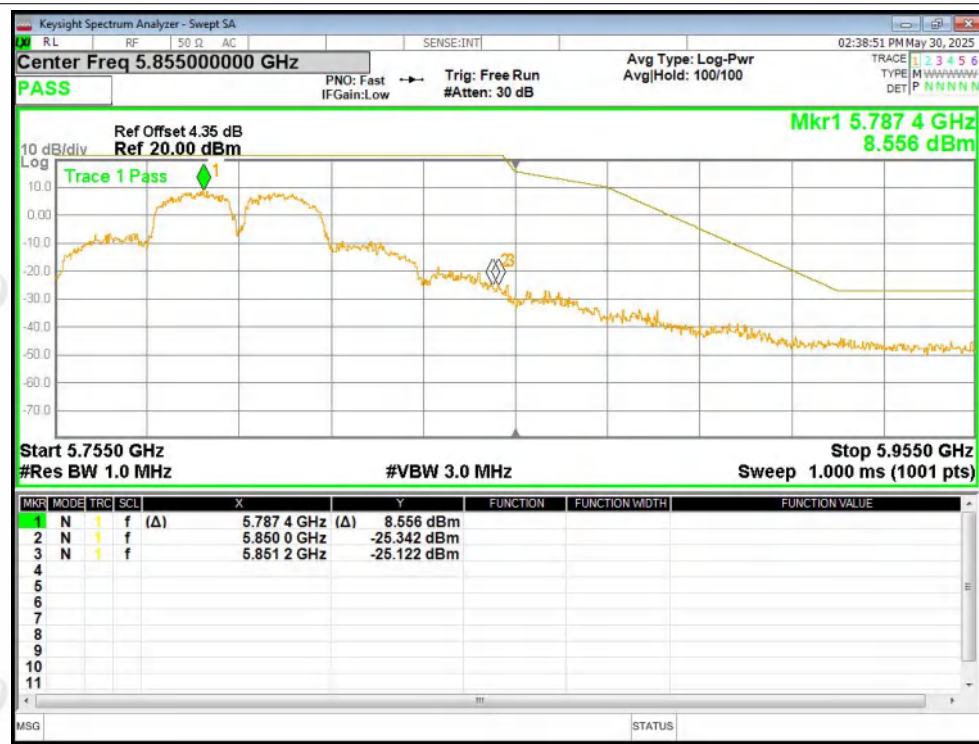




Band Edge NVNT ac40 5755MHz Low Ant1



Band Edge NVNT ac40 5795MHz High Ant1



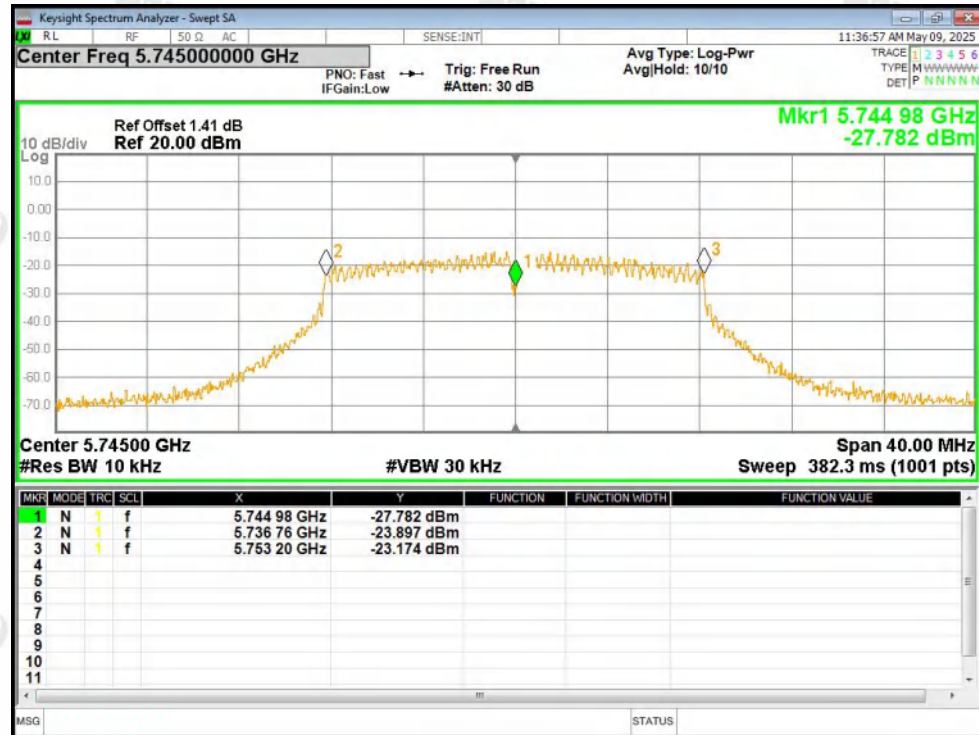


B.7 Frequency Stability

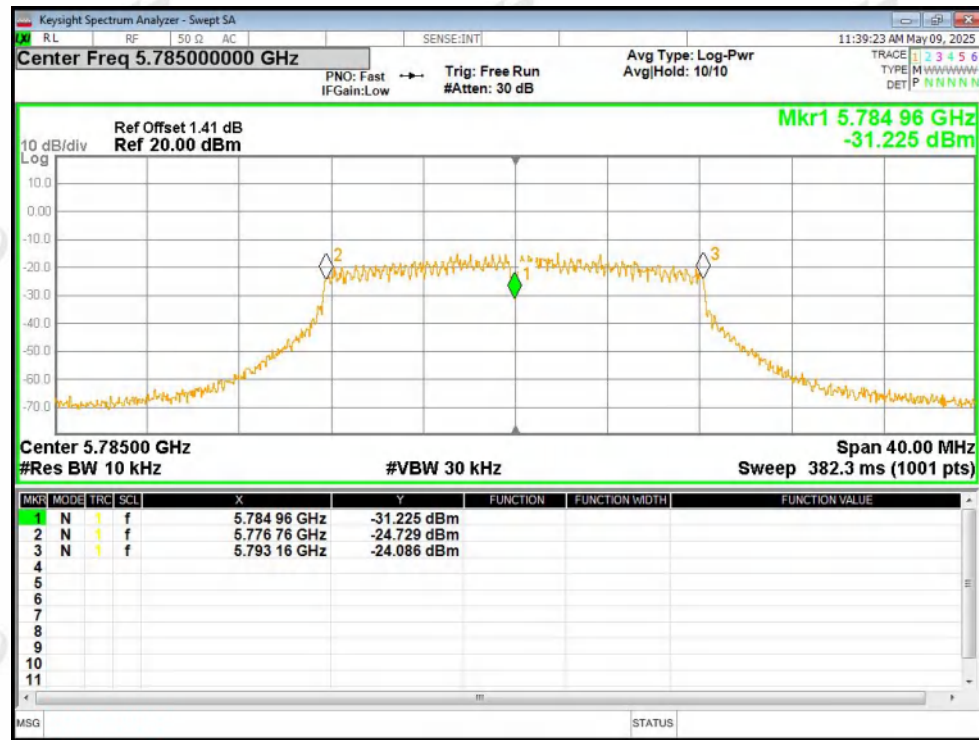
Condition	Mode	Frequency (MHz)	Antenna	Measured Frequency (MHz)	Frequency Error (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
NVNT	a	5745	Ant1	5744.98	-20000	-3.48	25	Pass
NVNT	a	5785	Ant1	5784.96	-40000	-6.91	25	Pass
NVNT	a	5825	Ant1	5824.94	-60000	-10.3	25	Pass
NVNT	n20	5745	Ant1	5744.96	-40000	-6.96	25	Pass
NVNT	n20	5785	Ant1	5784.96	-40000	-6.91	25	Pass
NVNT	n20	5825	Ant1	5824.98	-20000	-3.43	25	Pass
NVNT	n40	5755	Ant1	5754.96	-40000	-6.95	25	Pass
NVNT	n40	5795	Ant1	5794.96	-40000	-6.9	25	Pass
NVNT	ac20	5745	Ant1	5744.96	-40000	-6.96	25	Pass
NVNT	ac20	5785	Ant1	5784.96	-40000	-6.91	25	Pass
NVNT	ac20	5825	Ant1	5824.96	-40000	-6.87	25	Pass
NVNT	ac40	5755	Ant1	5754.96	-40000	-6.95	25	Pass
NVNT	ac40	5795	Ant1	5794.92	-80000	-13.81	25	Pass

Test Graphs

Freq. Stability NVNT a 5745MHz Ant1

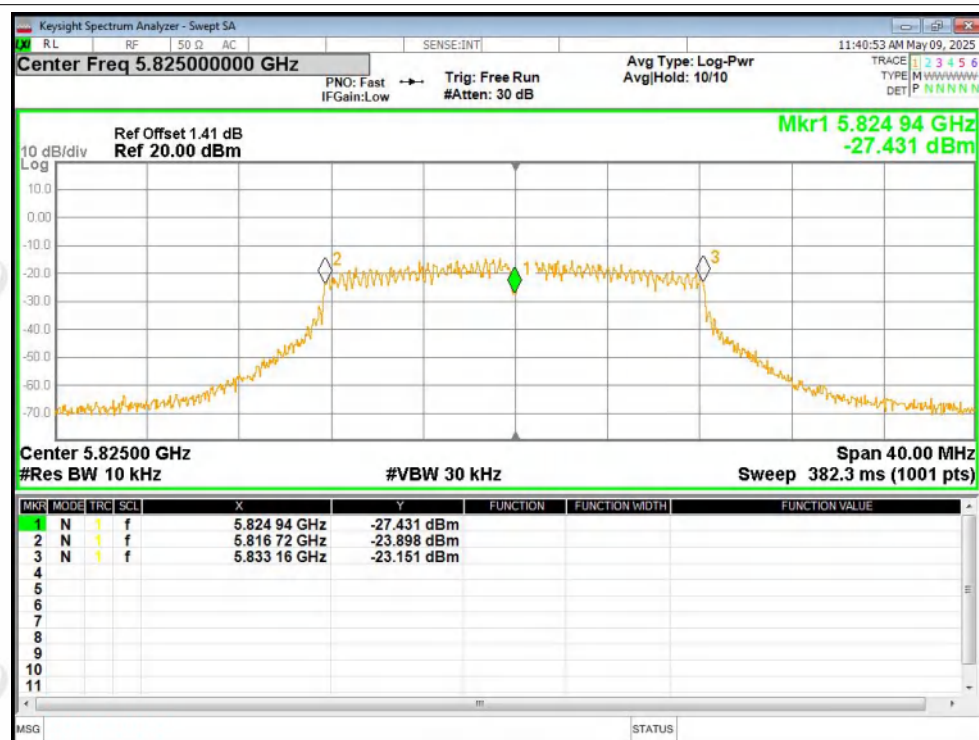


Freq. Stability NVNT a 5785MHz Ant1

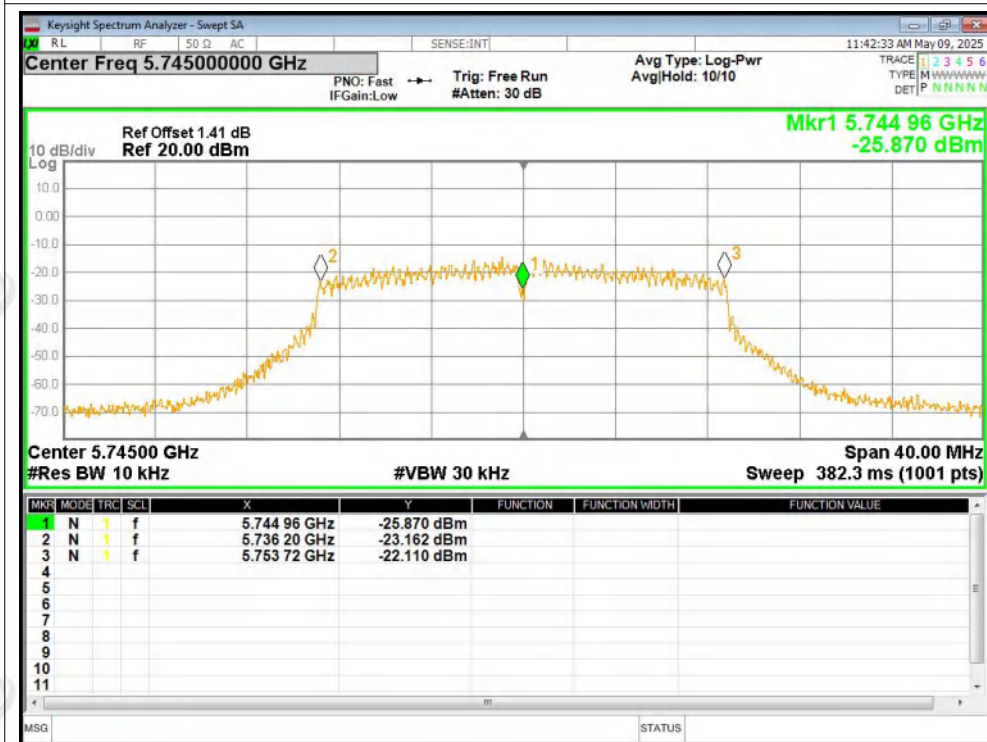




Freq. Stability NVNT a 5825MHz Ant1

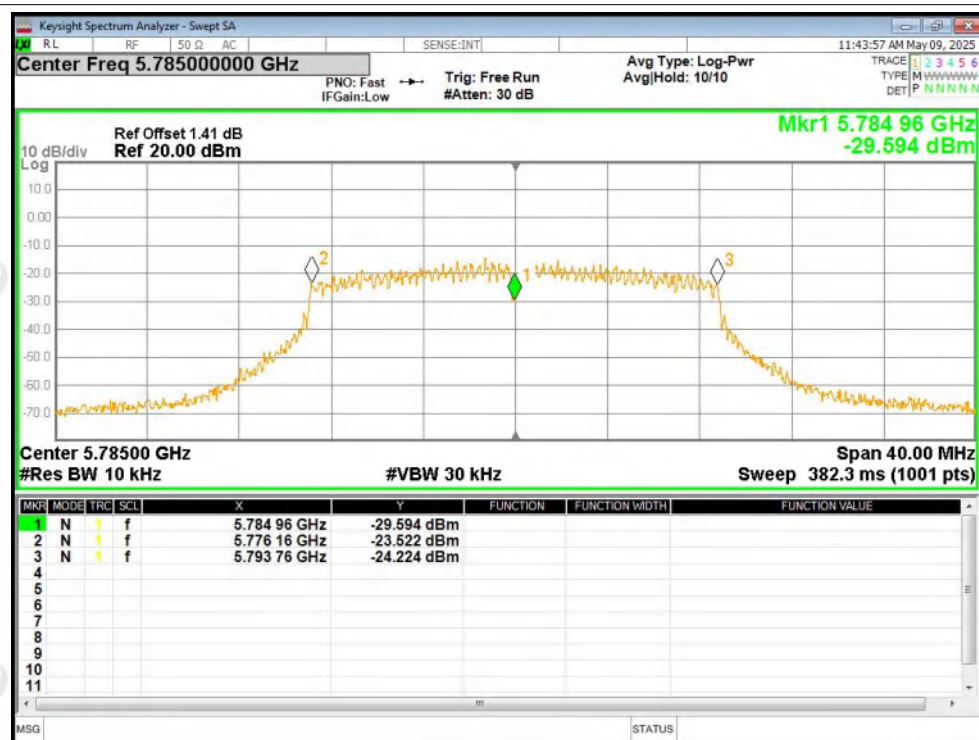


Freq. Stability NVNT n20 5745MHz Ant1

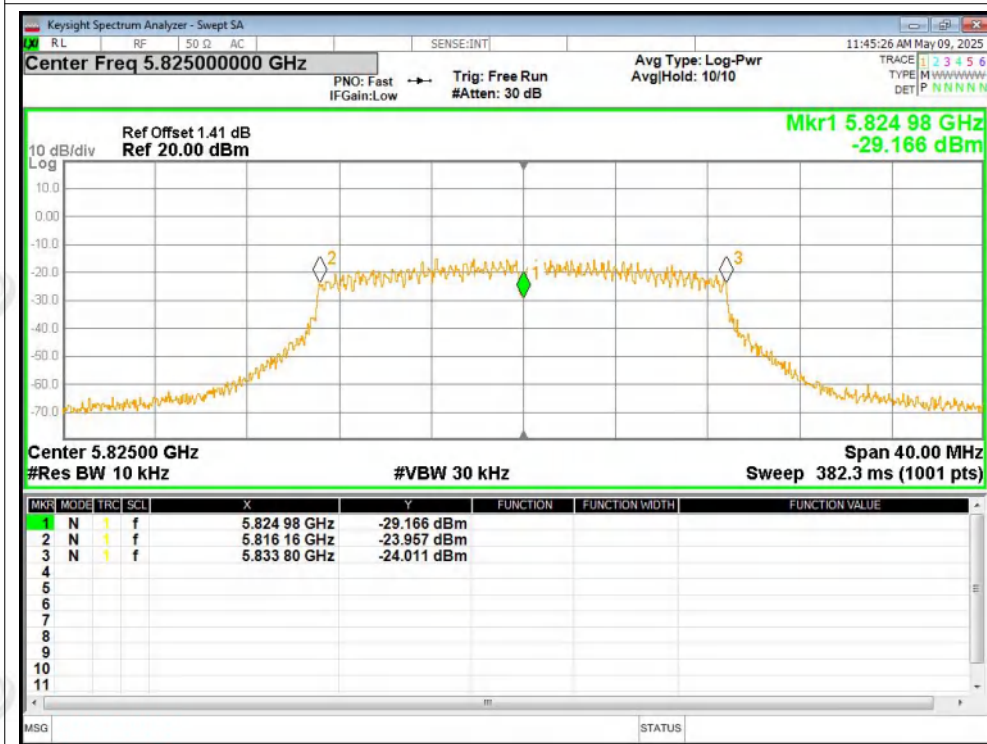




Freq. Stability NVNT n20 5785MHz Ant1

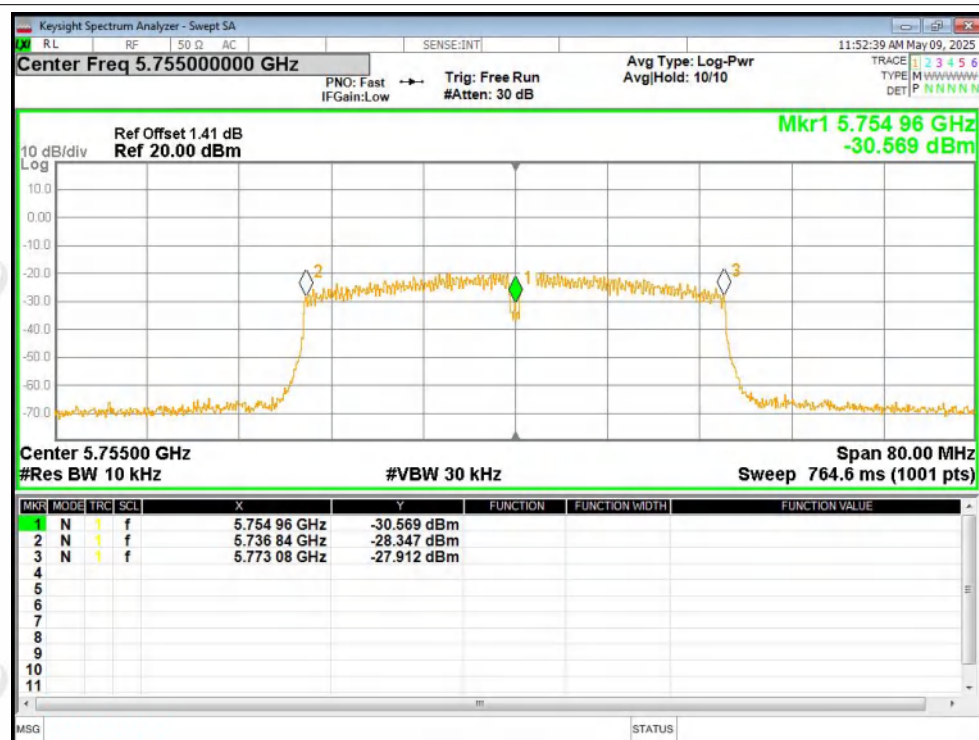


Freq. Stability NVNT n20 5825MHz Ant1

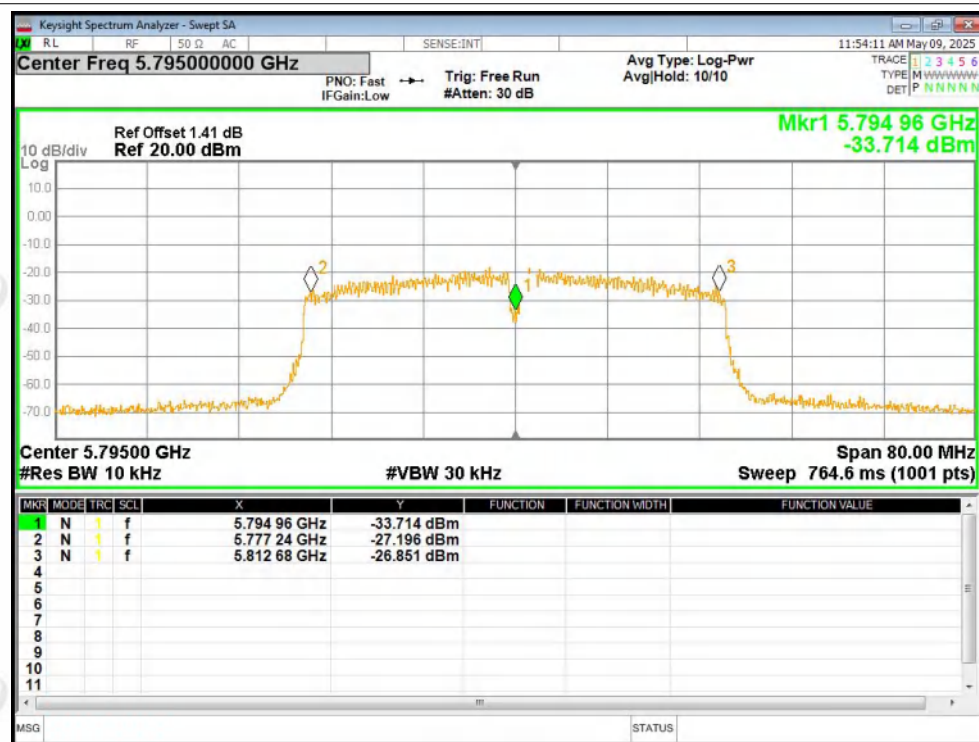




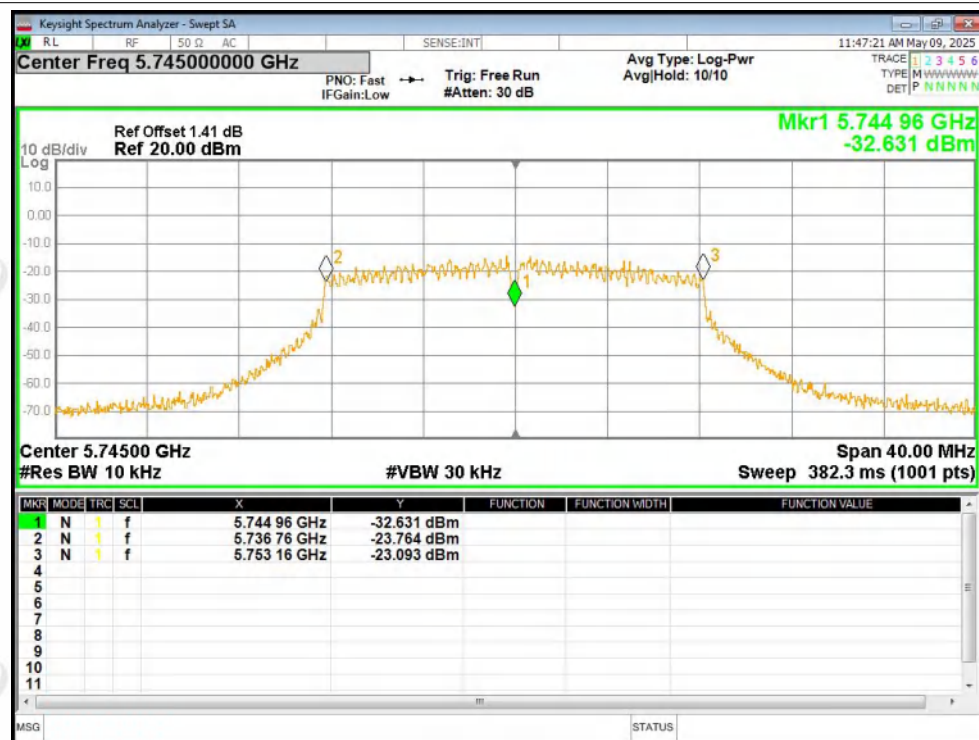
Freq. Stability NVNT n40 5755MHz Ant1



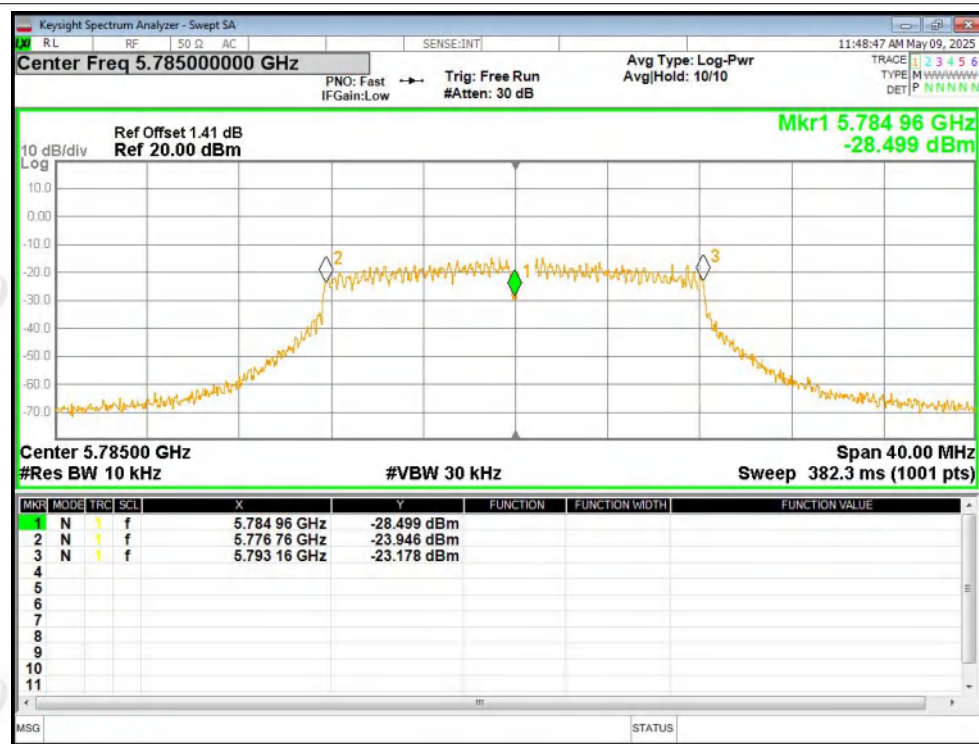
Freq. Stability NVNT n40 5795MHz Ant1



Freq. Stability NVNT ac20 5745MHz Ant1

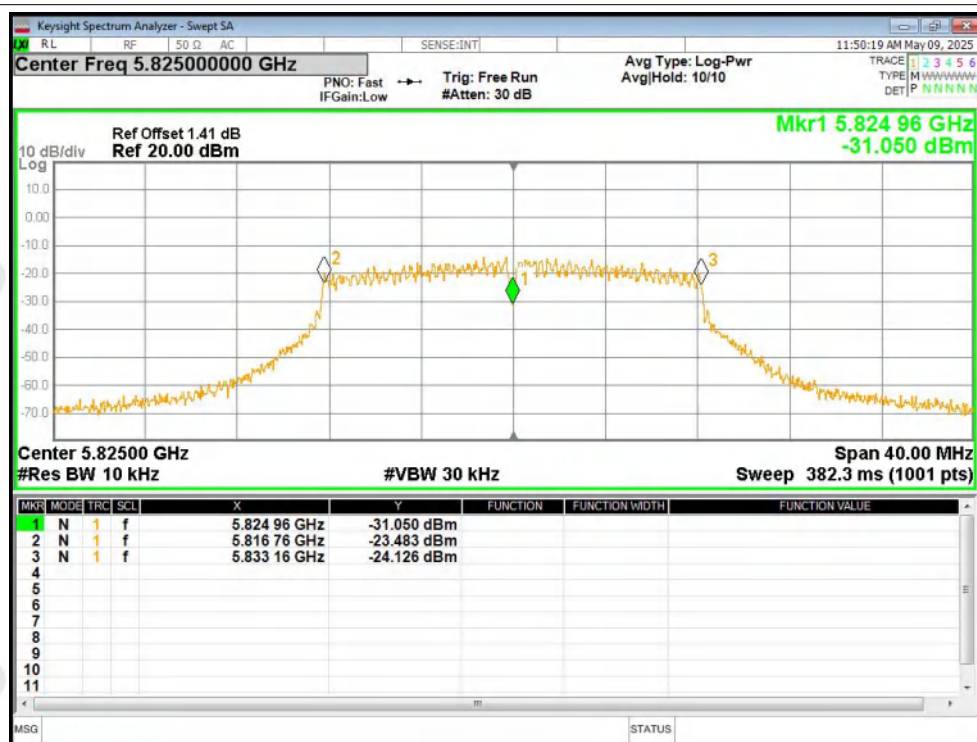


Freq. Stability NVNT ac20 5785MHz Ant1

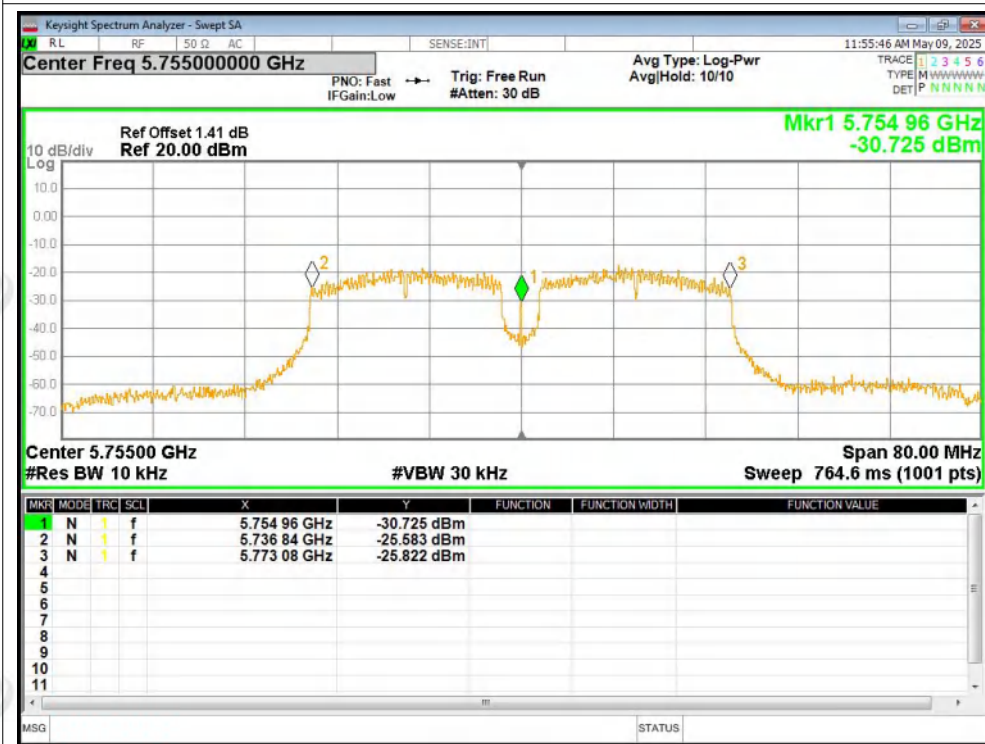


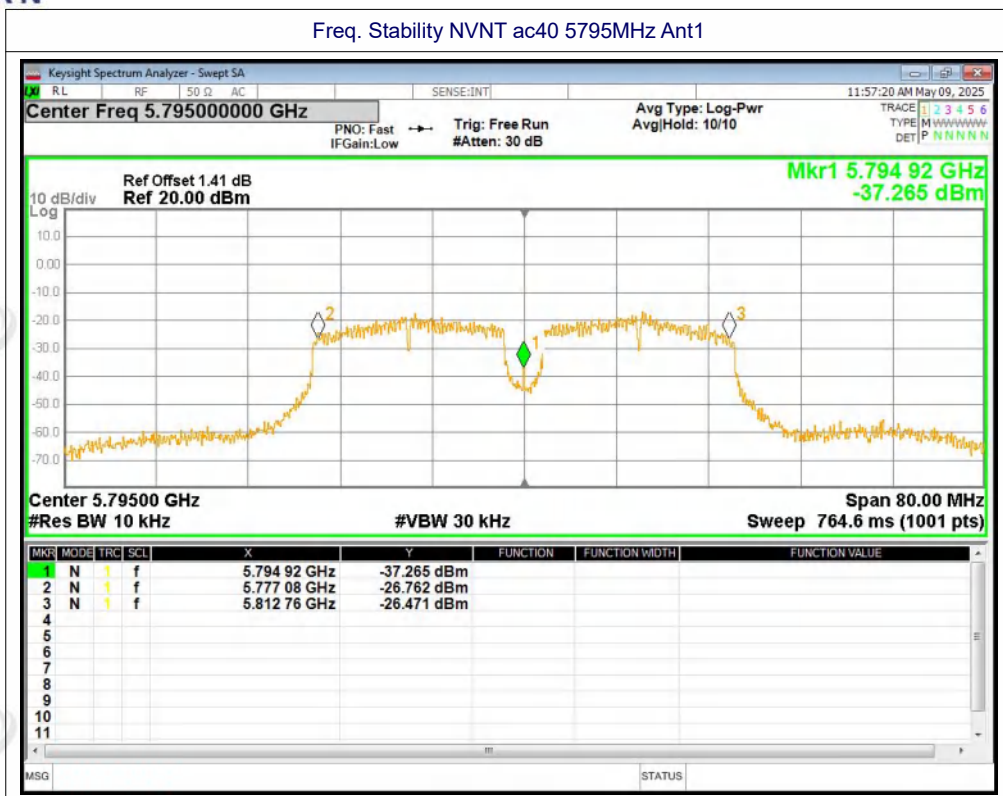


Freq. Stability NVNT ac20 5825MHz Ant1



Freq. Stability NVNT ac40 5755MHz Ant1







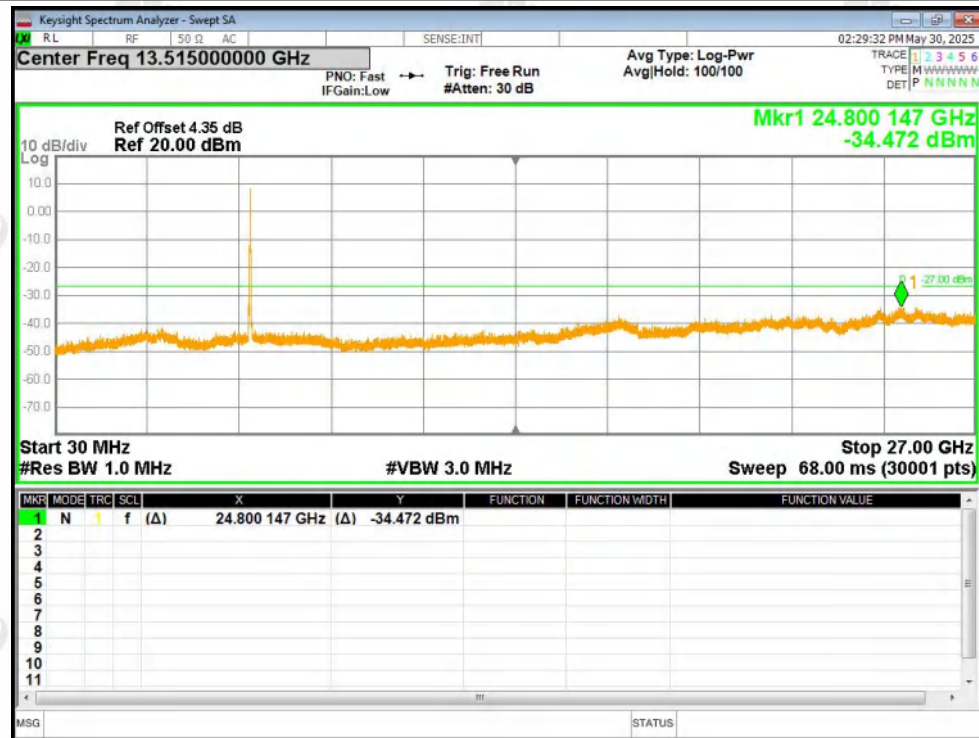
B.8 Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	a	5745	Ant1	-34.47	-27	Pass
NVNT	a	5785	Ant1	-34.31	-27	Pass
NVNT	a	5825	Ant1	-34.73	-27	Pass
NVNT	n20	5745	Ant1	-34.76	-27	Pass
NVNT	n20	5785	Ant1	-34.37	-27	Pass
NVNT	n20	5825	Ant1	-34.1	-27	Pass
NVNT	n40	5755	Ant1	-34.32	-27	Pass
NVNT	n40	5795	Ant1	-34.71	-27	Pass
NVNT	ac20	5745	Ant1	-33.35	-27	Pass
NVNT	ac20	5785	Ant1	-34.65	-27	Pass
NVNT	ac20	5825	Ant1	-34.54	-27	Pass
NVNT	ac40	5755	Ant1	-34.15	-27	Pass
NVNT	ac40	5795	Ant1	-33.91	-27	Pass

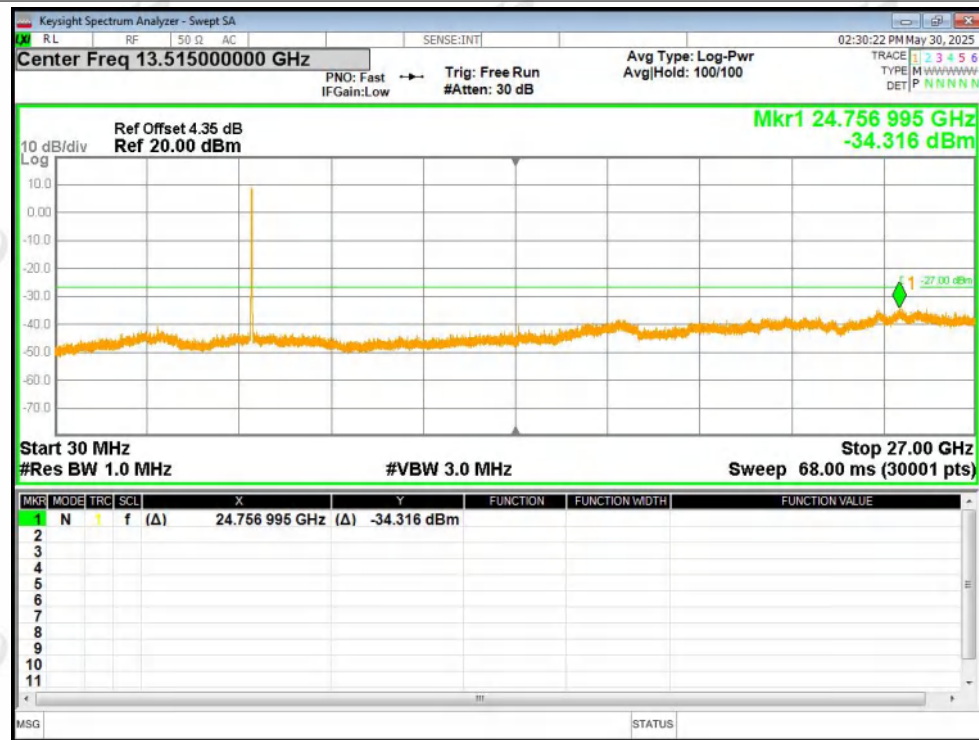
Note: During testing, the antenna gain has been added to the Ref offset.

Test Graphs

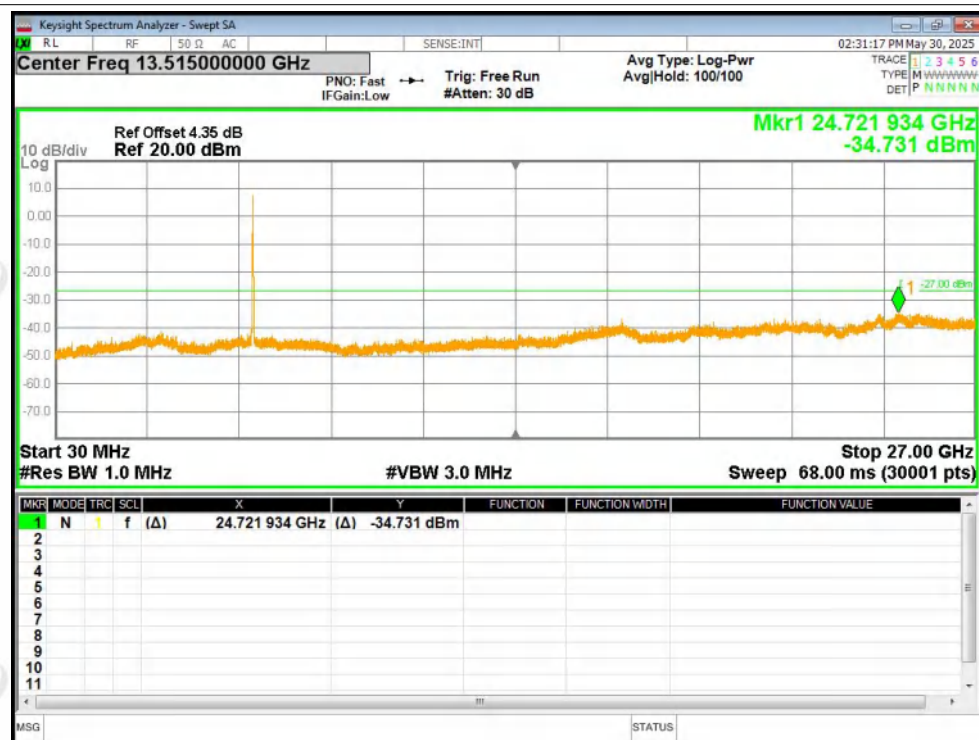
Tx. Spurious NVNT a 5745MHz Ant1 Emission



Tx. Spurious NVNT a 5785MHz Ant1 Emission



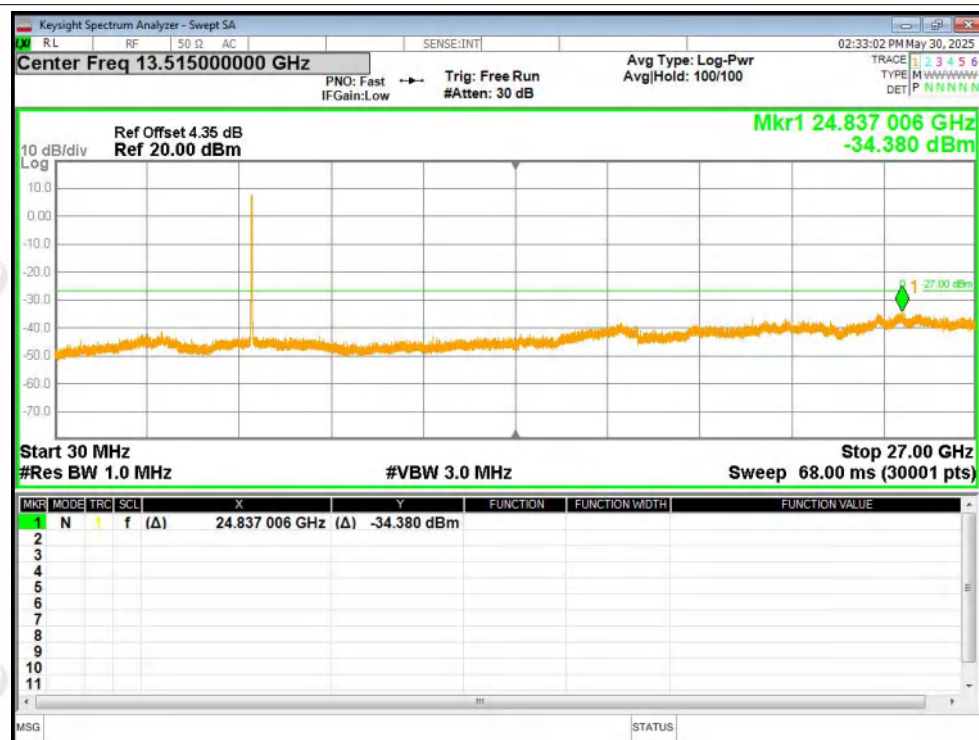
Tx. Spurious NVNT a 5825MHz Ant1 Emission



Tx. Spurious NVNT n20 5745MHz Ant1 Emission



Tx. Spurious NVNT n20 5785MHz Ant1 Emission



Tx. Spurious NVNT n20 5825MHz Ant1 Emission



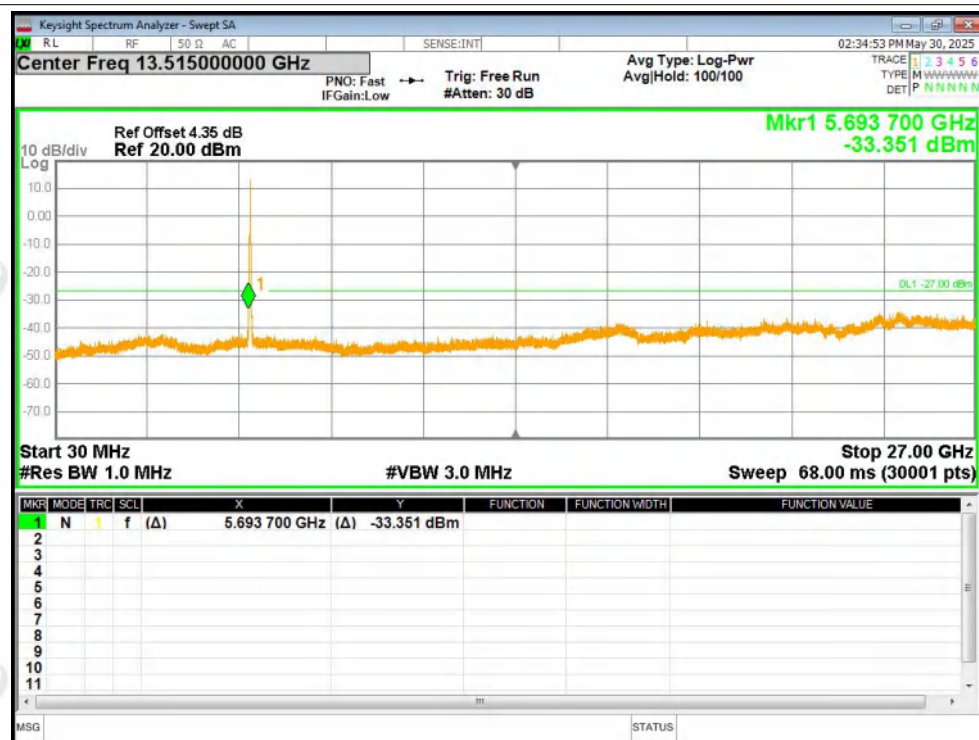
Tx. Spurious NVNT n40 5755MHz Ant1 Emission



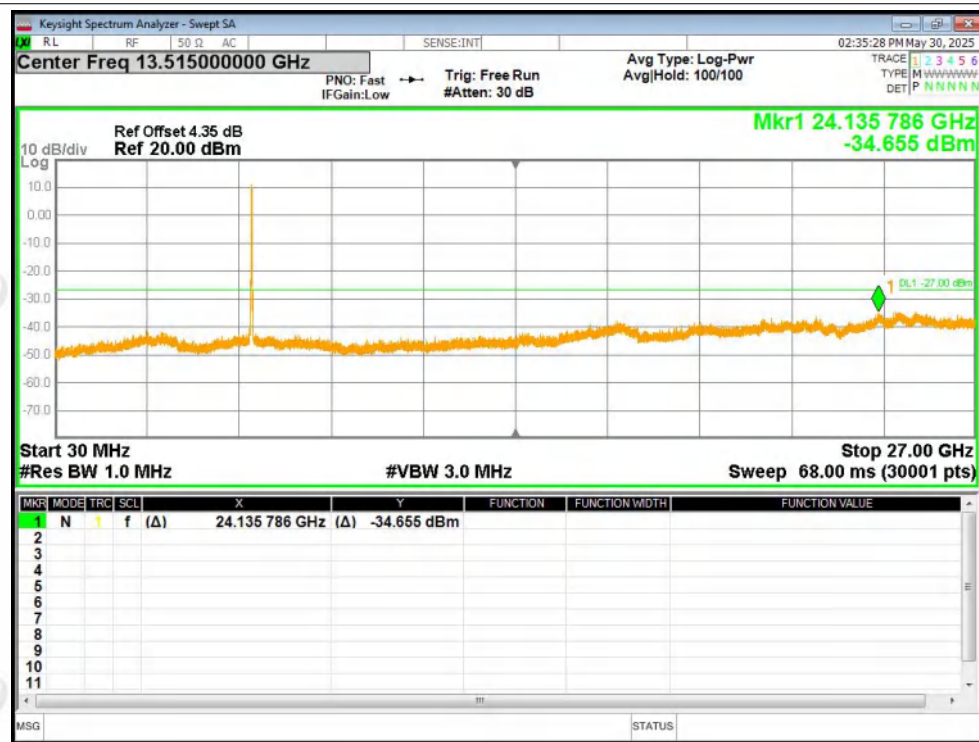
Tx. Spurious NVNT n40 5795MHz Ant1 Emission



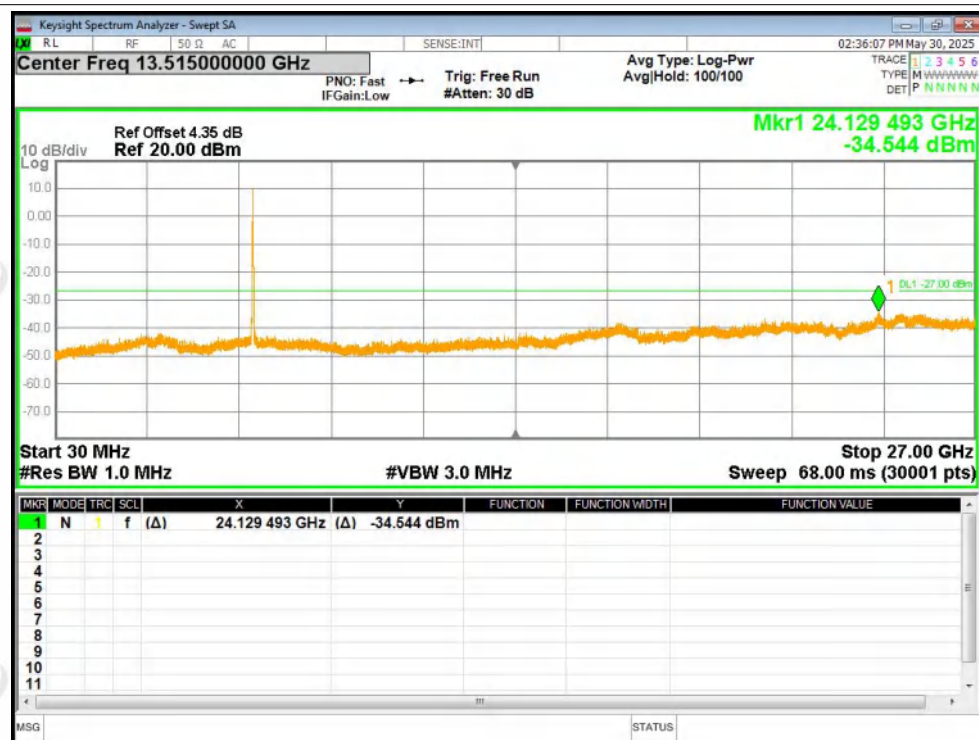
Tx. Spurious NVNT ac20 5745MHz Ant1 Emission



Tx. Spurious NVNT ac20 5785MHz Ant1 Emission



Tx. Spurious NVNT ac20 5825MHz Ant1 Emission



Tx. Spurious NVNT ac40 5755MHz Ant1 Emission



Tx. Spurious NVNT ac40 5795MHz Ant1 Emission

