



Appendix E

RF Test Data for 5.8GWIFI (Conducted Measurement)

Product Name: Smart TV Box

Test Model: Q1

Environmental Conditions

Temperature:	23.8° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Nick Peng
	<i>Nick Peng</i>
Supervised by:	Jack Cheng
	<i>Jack cheng</i>





E.1 -6dB Bandwidth

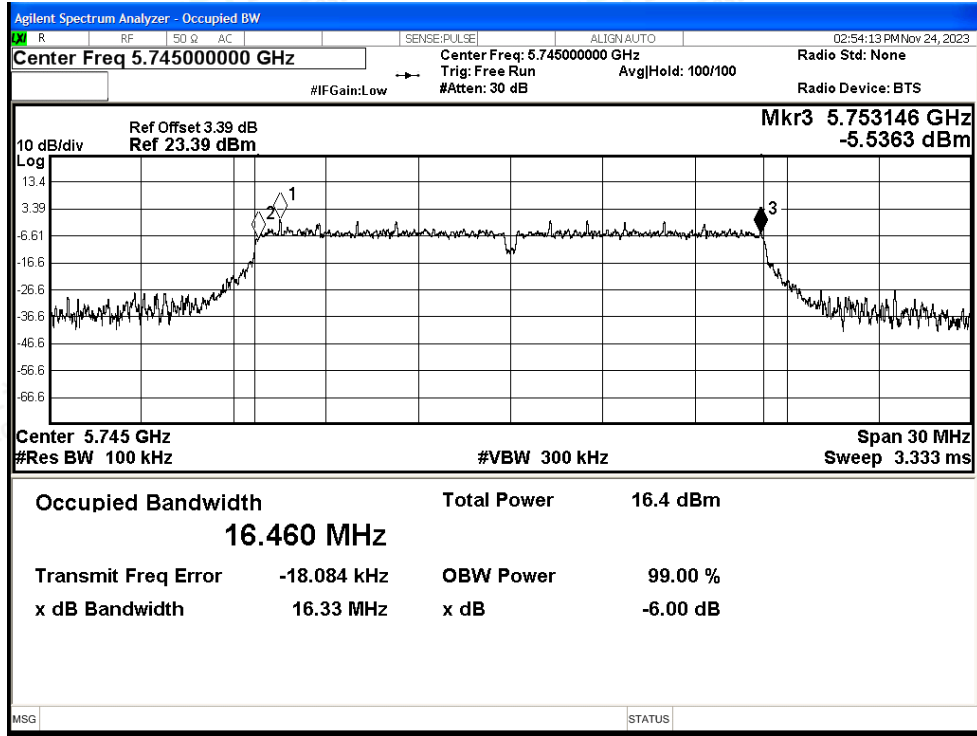
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	a	5745	Ant1	16.327	≥ 0.5	Pass
NVNT	a	5785	Ant1	16.352	≥ 0.5	Pass
NVNT	a	5825	Ant1	16.34	≥ 0.5	Pass
NVNT	n20	5745	Ant1	17.401	≥ 0.5	Pass
NVNT	n20	5785	Ant1	17.547	≥ 0.5	Pass
NVNT	n20	5825	Ant1	17.408	≥ 0.5	Pass
NVNT	n40	5755	Ant1	36.01	≥ 0.5	Pass
NVNT	n40	5795	Ant1	35.643	≥ 0.5	Pass



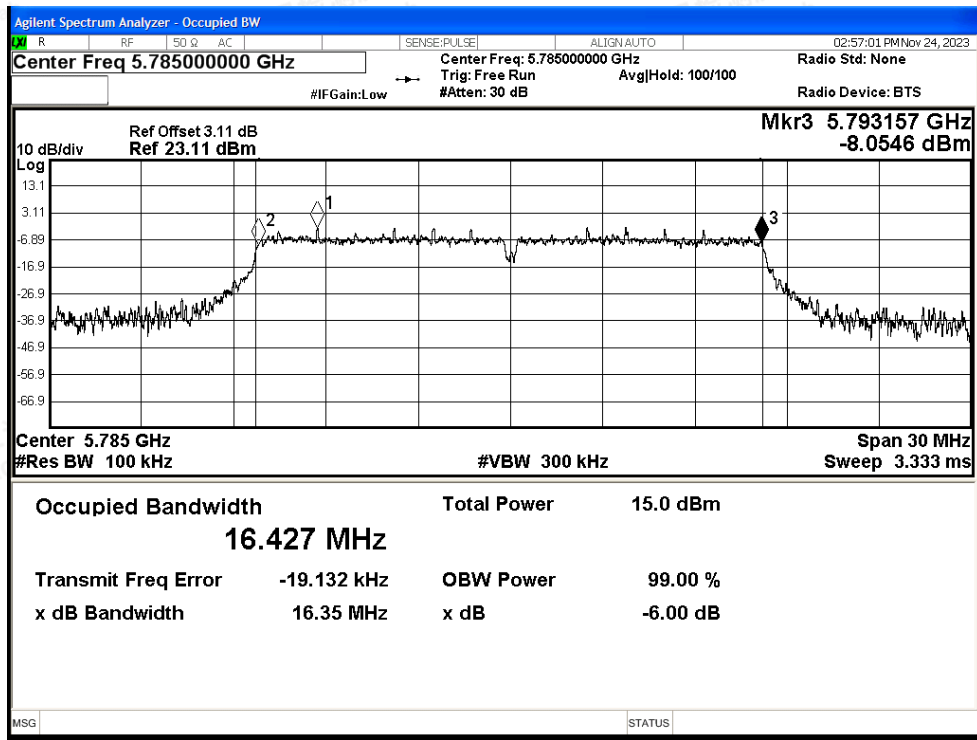


Test Graphs

-6dB Bandwidth NVNT a 5745MHz Ant1

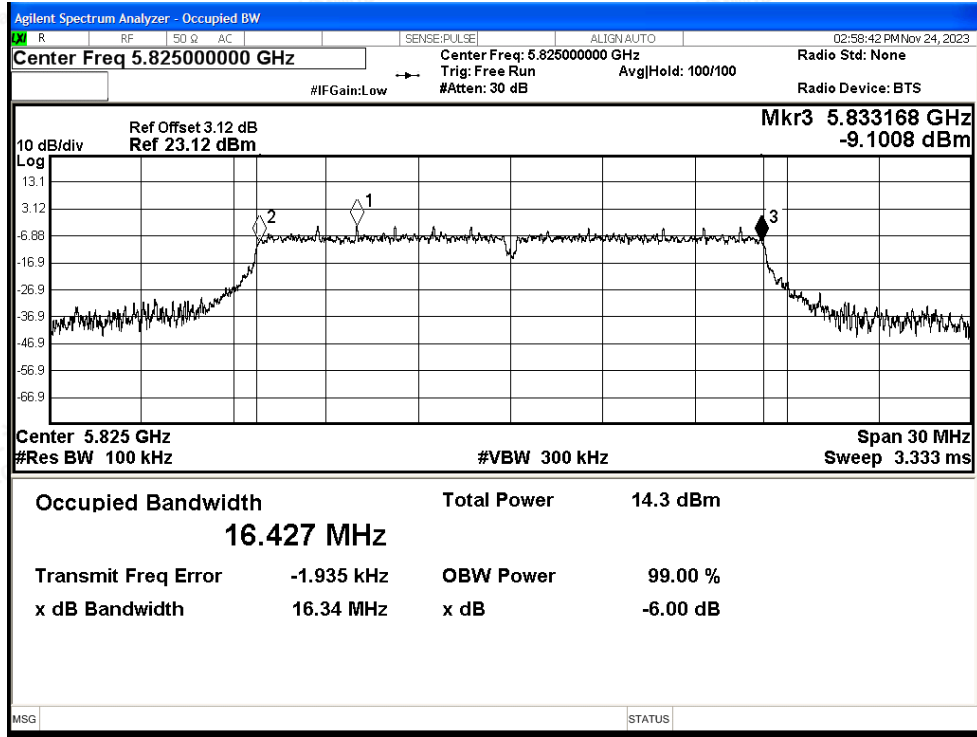


-6dB Bandwidth NVNT a 5785MHz Ant1

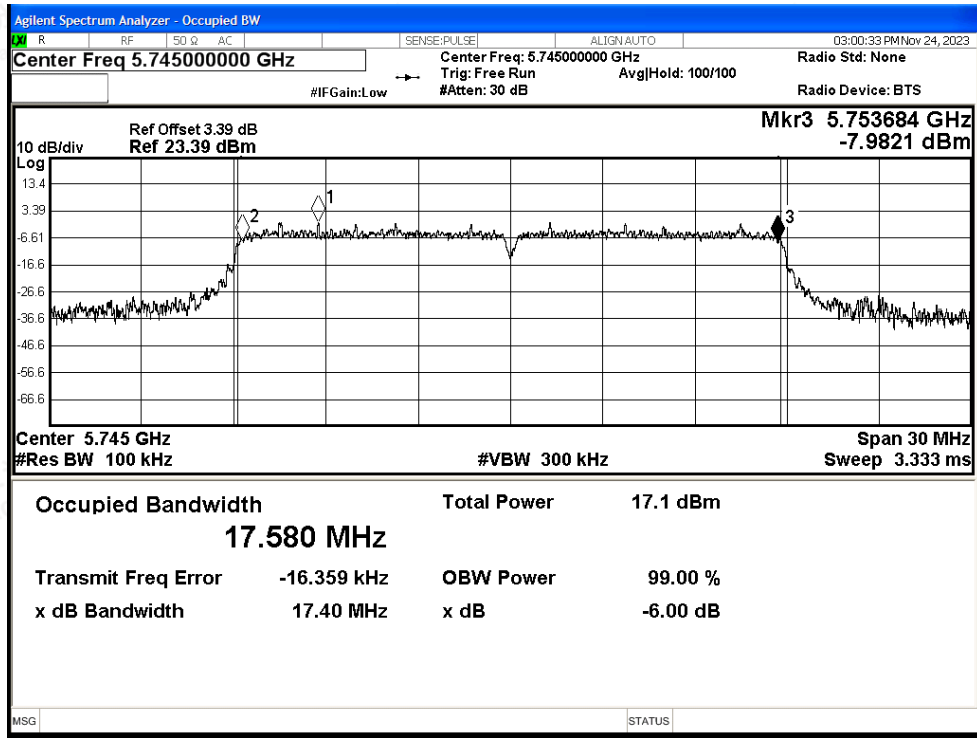




-6dB Bandwidth NVNT a 5825MHz Ant1

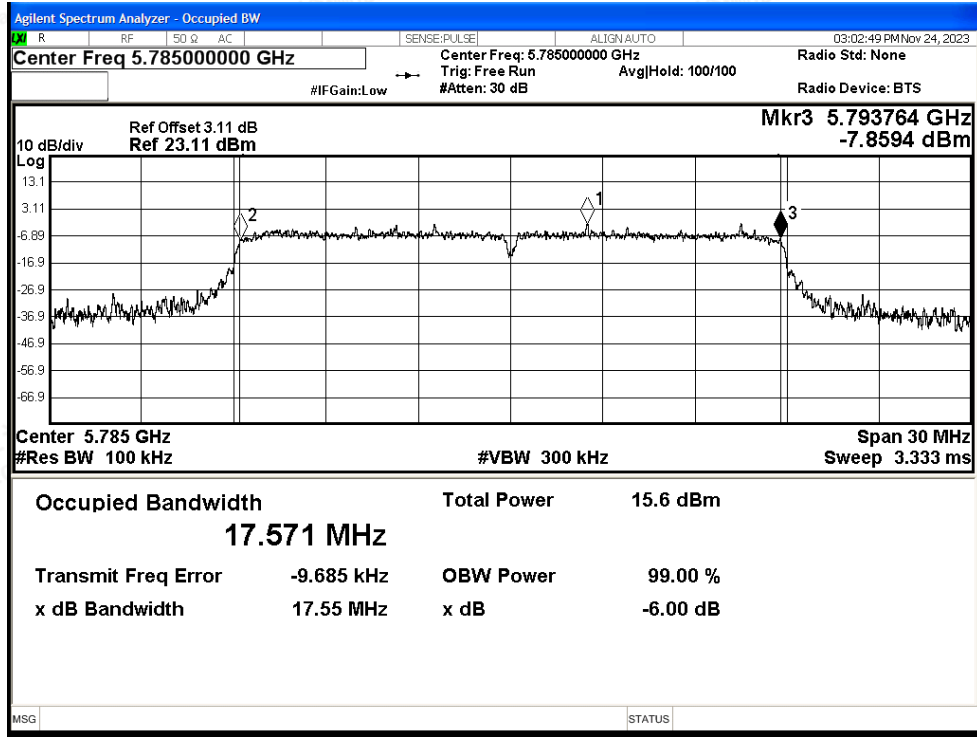


-6dB Bandwidth NVNT n20 5745MHz Ant1

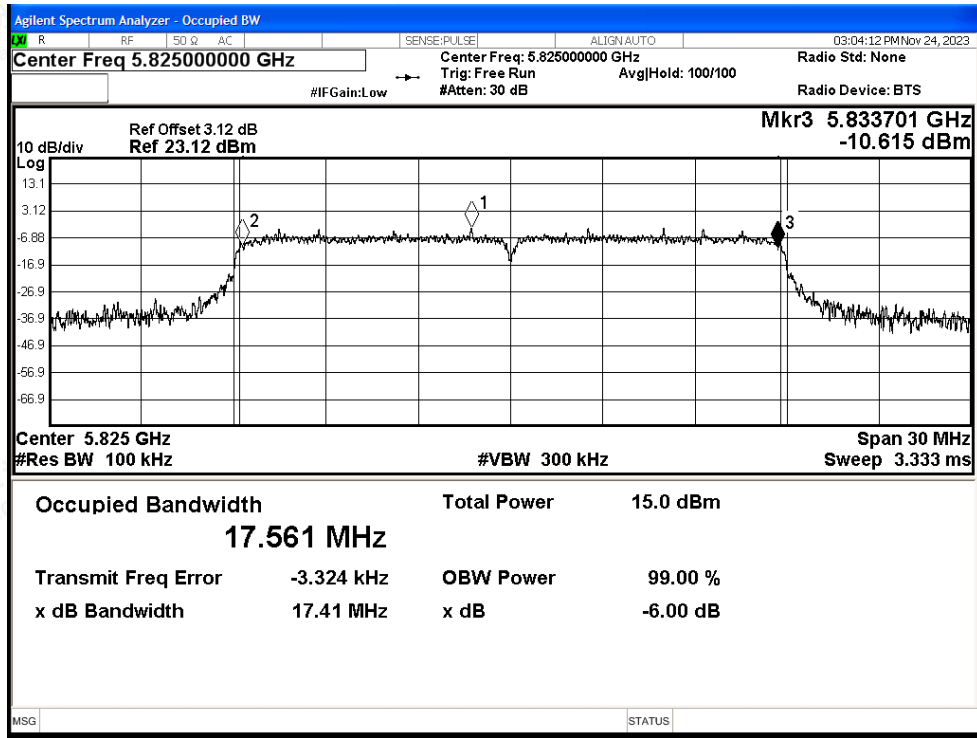




-6dB Bandwidth NVNT n20 5785MHz Ant1

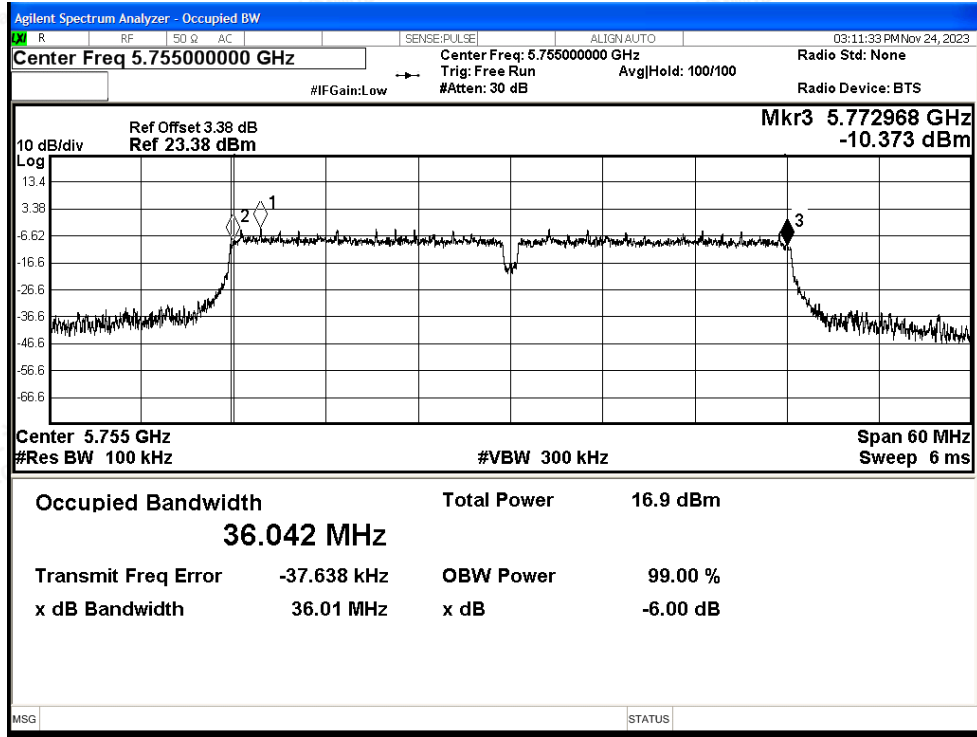


-6dB Bandwidth NVNT n20 5825MHz Ant1

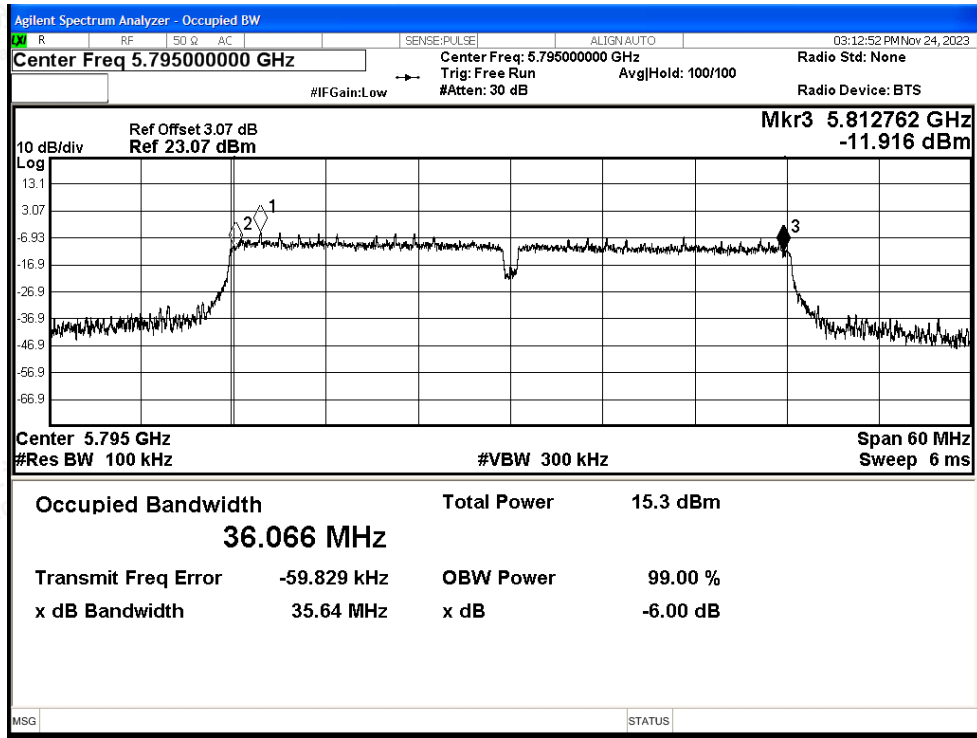




-6dB Bandwidth NVNT n40 5755MHz Ant1



-6dB Bandwidth NVNT n40 5795MHz Ant1





E.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	10.48	0.19	10.67	30	Pass
NVNT	a	5785	Ant1	9.01	0.19	9.2	30	Pass
NVNT	a	5825	Ant1	8.29	0.19	8.48	30	Pass
NVNT	n20	5745	Ant1	10.69	0.23	10.92	30	Pass
NVNT	n20	5785	Ant1	9.29	0.23	9.52	30	Pass
NVNT	n20	5825	Ant1	8.62	0.23	8.85	30	Pass
NVNT	n40	5755	Ant1	10	0.43	10.43	30	Pass
NVNT	n40	5795	Ant1	8.44	0.44	8.88	30	Pass





E.3 Maximum Power Spectral Density Level

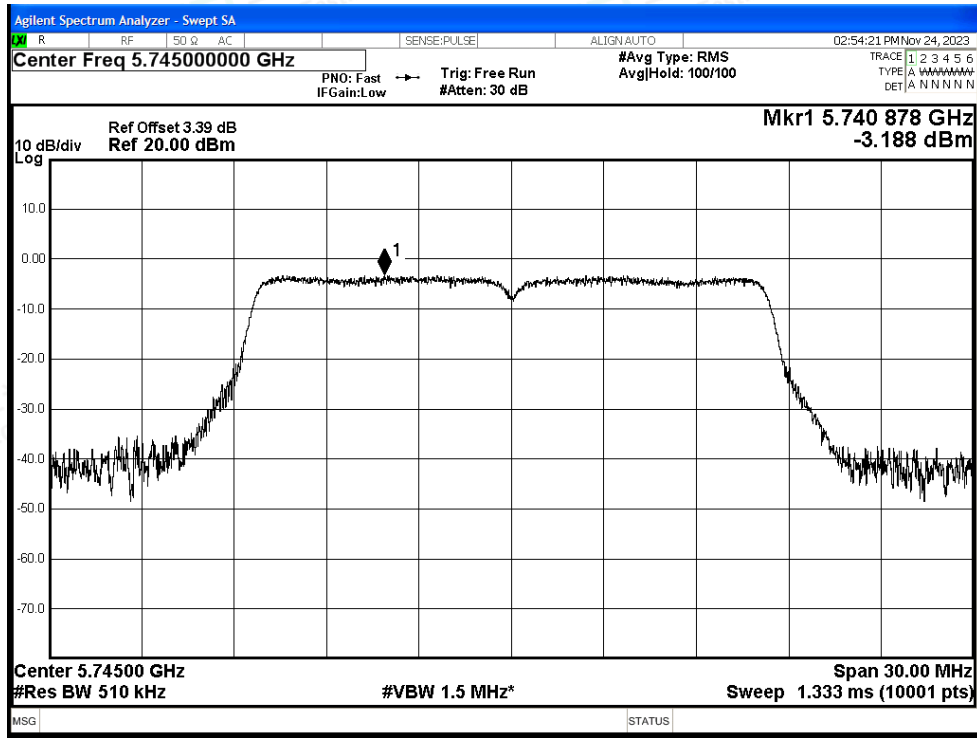
Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm)	Duty Factor (dB)	Total PSD (dBm)	Limit (dBm)	Verdict
NVNT	a	5745	Ant1	-3.19	0.19	-3	30	Pass
NVNT	a	5785	Ant1	-4.47	0.19	-4.28	30	Pass
NVNT	a	5825	Ant1	-5.24	0.19	-5.05	30	Pass
NVNT	n20	5745	Ant1	-3.08	0.23	-2.85	30	Pass
NVNT	n20	5785	Ant1	-4.64	0.23	-4.41	30	Pass
NVNT	n20	5825	Ant1	-5.19	0.23	-4.96	30	Pass
NVNT	n40	5755	Ant1	-6.49	0.43	-6.06	30	Pass
NVNT	n40	5795	Ant1	-7.51	0.44	-7.07	30	Pass



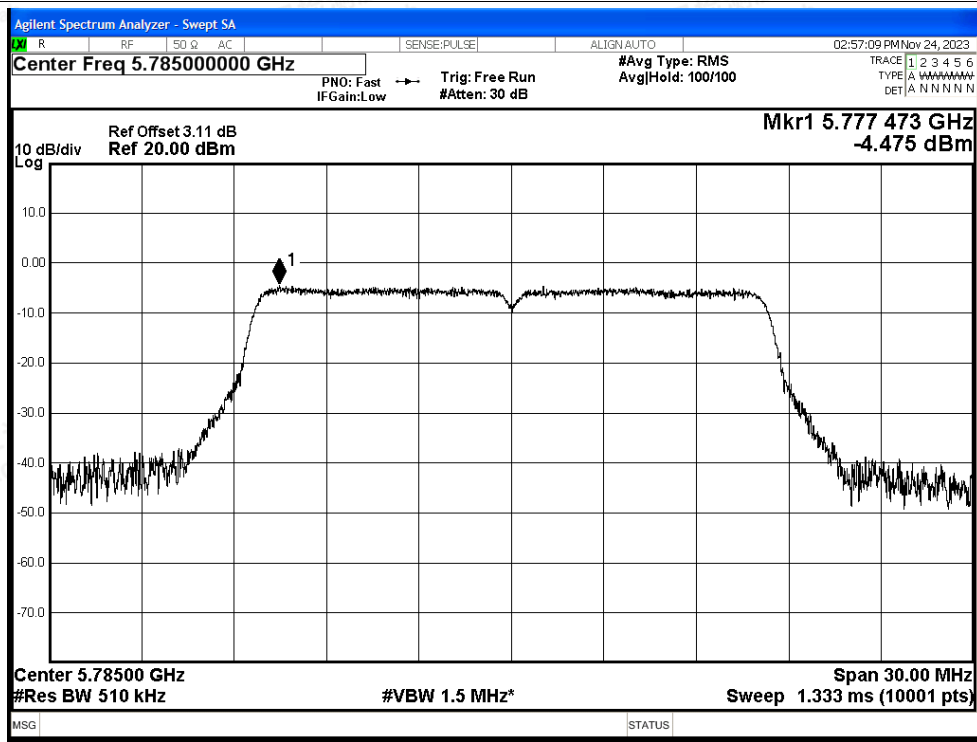


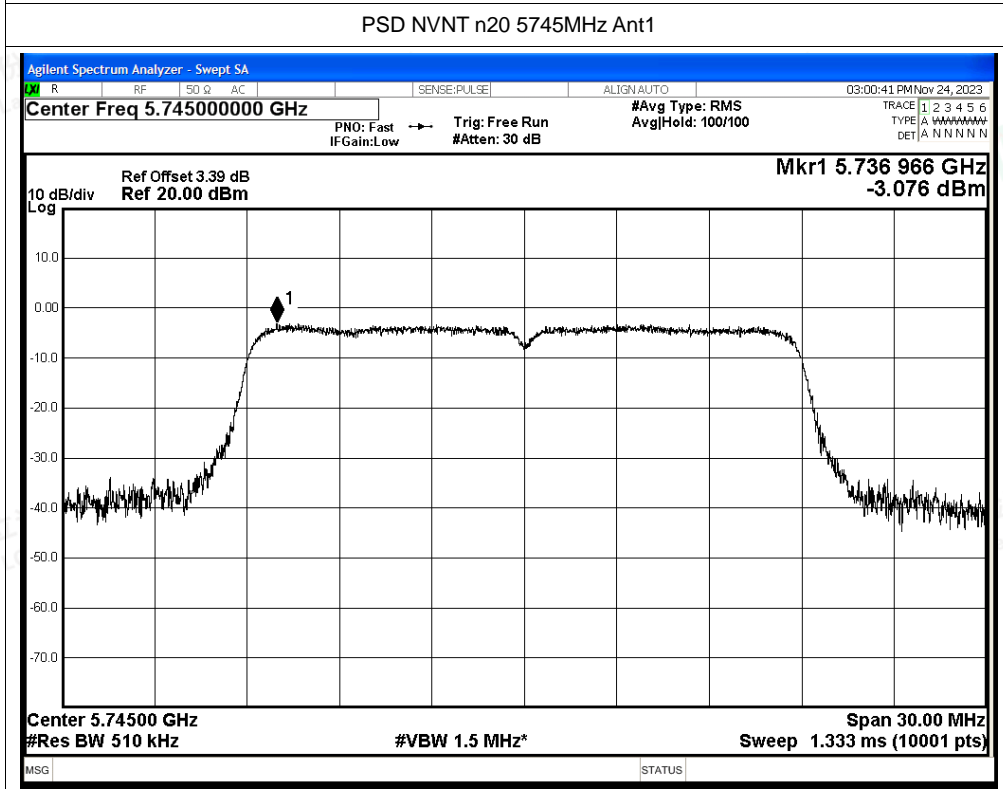
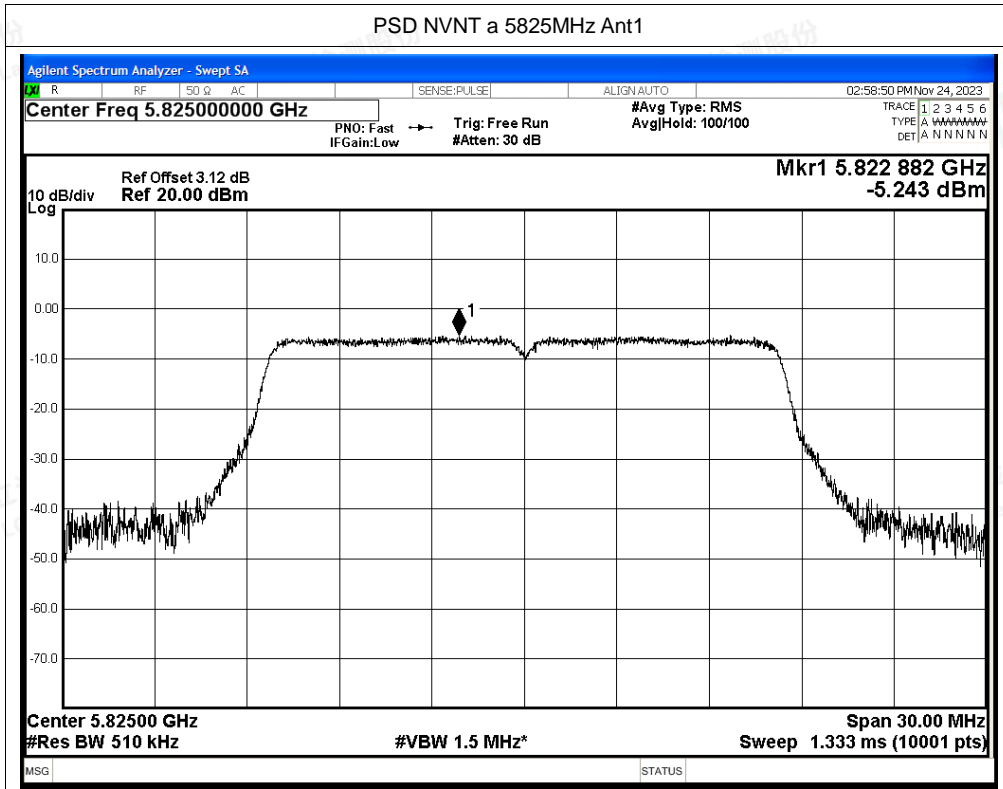
Test Graphs

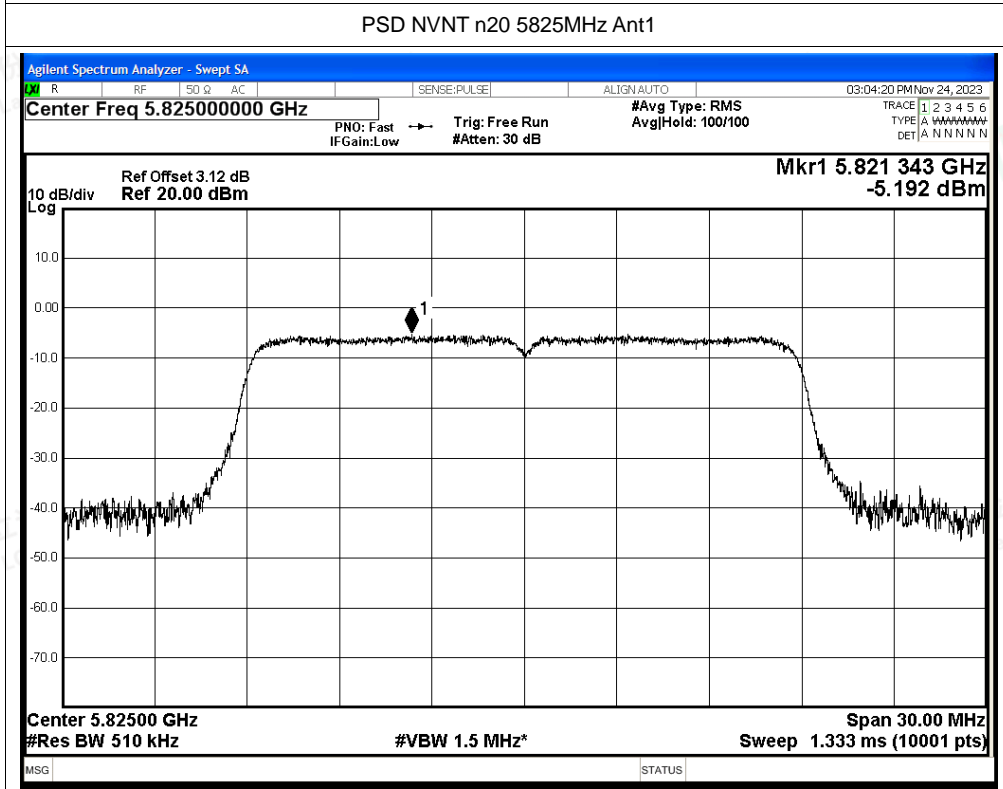
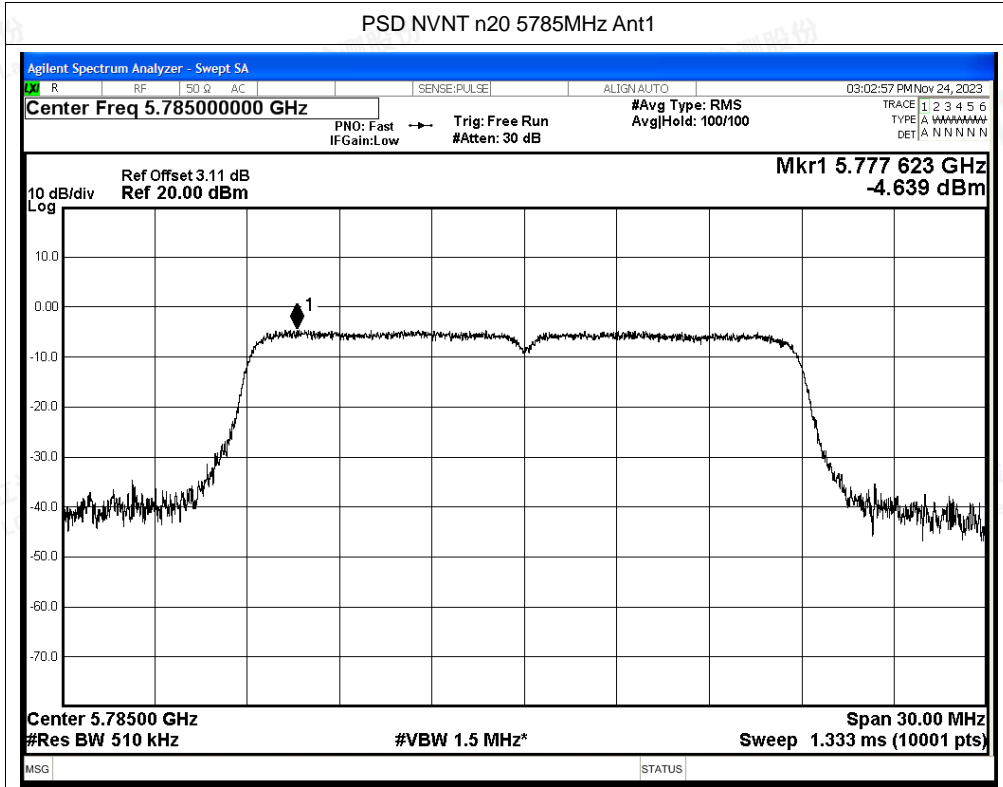
PSD NVNT a 5745MHz Ant1

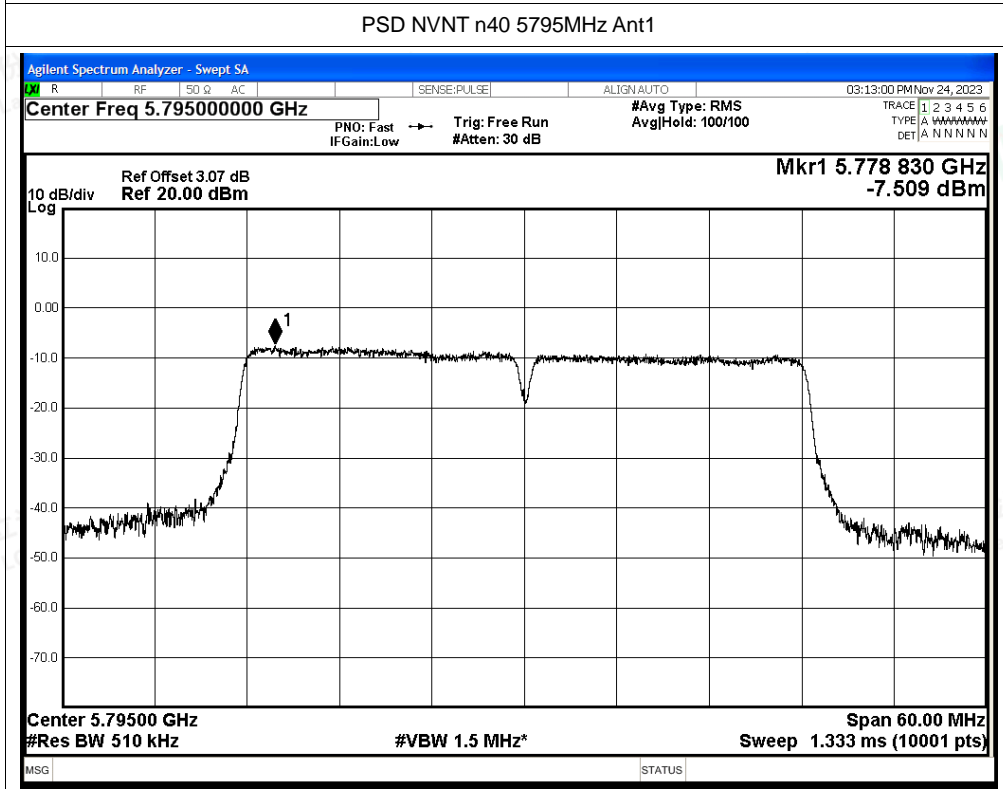
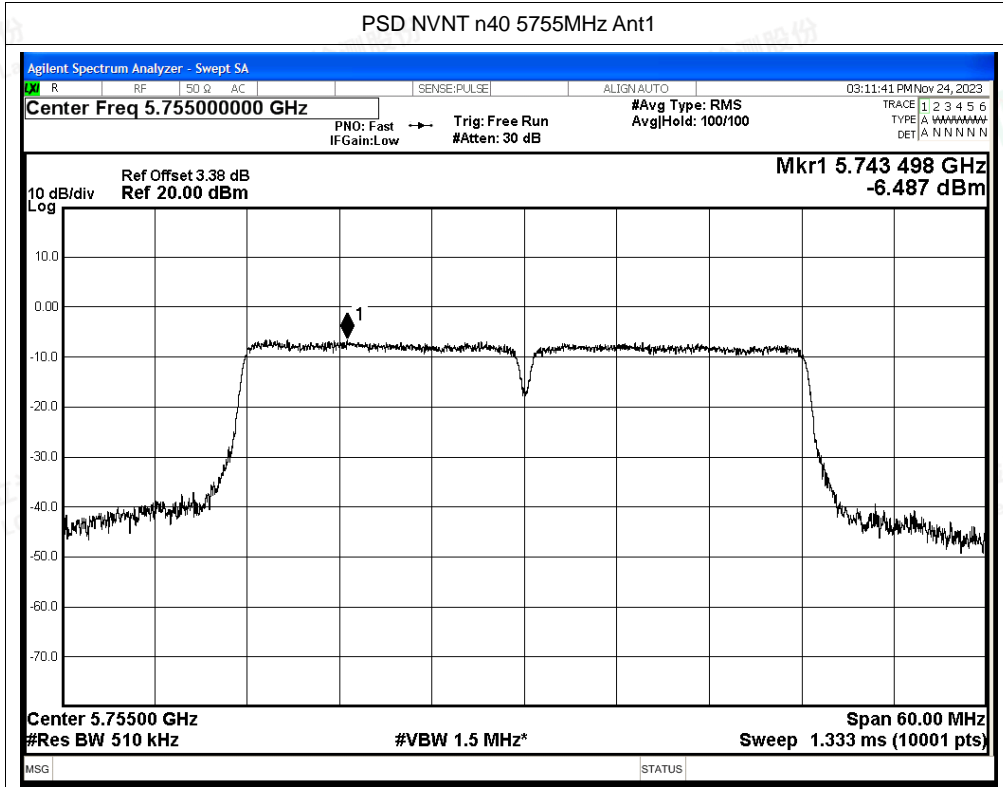


PSD NVNT a 5785MHz Ant1











E.4 Restrict Band

Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	EIRP Power (dBm)	Detector	Limit (dBm)	Verdict
NVNT	a	5745	Ant1	5650	-49.67	2	-47.67	Peak	-27	Pass
NVNT	a	5745	Ant1	5650	-56.33	2	-54.33	Average	-27	Pass
NVNT	a	5745	Ant1	5700	-46.92	2	-44.92	Peak	10	Pass
NVNT	a	5745	Ant1	5700	-54.38	2	-52.38	Average	10	Pass
NVNT	a	5745	Ant1	5720	-31.47	2	-29.47	Peak	15.6	Pass
NVNT	a	5745	Ant1	5720	-45.52	2	-43.52	Average	15.6	Pass
NVNT	a	5745	Ant1	5725	-27.07	2	-25.07	Peak	27	Pass
NVNT	a	5745	Ant1	5725	-39.98	2	-37.98	Average	27	Pass
NVNT	a	5825	Ant1	5850	-40.53	2	-38.53	Peak	27	Pass
NVNT	a	5825	Ant1	5850	-50.51	2	-48.51	Average	27	Pass
NVNT	a	5825	Ant1	5855	-45.46	2	-43.46	Peak	15.6	Pass
NVNT	a	5825	Ant1	5855	-53.66	2	-51.66	Average	15.6	Pass
NVNT	a	5825	Ant1	5875	-47.55	2	-45.55	Peak	10	Pass
NVNT	a	5825	Ant1	5875	-55.69	2	-53.69	Average	10	Pass
NVNT	a	5825	Ant1	5925	-49.83	2	-47.83	Peak	-27	Pass
NVNT	a	5825	Ant1	5925	-56.03	2	-54.03	Average	-27	Pass
NVNT	n20	5745	Ant1	5650	-49.3	2	-47.3	Peak	-27	Pass
NVNT	n20	5745	Ant1	5650	-56.07	2	-54.07	Average	-27	Pass
NVNT	n20	5745	Ant1	5700	-48.1	2	-46.1	Peak	10	Pass
NVNT	n20	5745	Ant1	5700	-53.95	2	-51.95	Average	10	Pass
NVNT	n20	5745	Ant1	5720	-29.72	2	-27.72	Peak	15.6	Pass
NVNT	n20	5745	Ant1	5720	-41.97	2	-39.97	Average	15.6	Pass
NVNT	n20	5745	Ant1	5725	-22.66	2	-20.66	Peak	27	Pass
NVNT	n20	5745	Ant1	5725	-36.11	2	-34.11	Average	27	Pass
NVNT	n20	5825	Ant1	5850	-34.69	2	-32.69	Peak	27	Pass
NVNT	n20	5825	Ant1	5850	-45.58	2	-43.58	Average	27	Pass
NVNT	n20	5825	Ant1	5855	-42.32	2	-40.32	Peak	15.6	Pass
NVNT	n20	5825	Ant1	5855	-50.67	2	-48.67	Average	15.6	Pass
NVNT	n20	5825	Ant1	5875	-49.81	2	-47.81	Peak	10	Pass
NVNT	n20	5825	Ant1	5875	-55.57	2	-53.57	Average	10	Pass
NVNT	n20	5825	Ant1	5925	-48.83	2	-46.83	Peak	-27	Pass
NVNT	n20	5825	Ant1	5925	-55.97	2	-53.97	Average	-27	Pass
NVNT	n40	5755	Ant1	5650	-48.37	2	-46.37	Peak	-27	Pass
NVNT	n40	5755	Ant1	5650	-55.97	2	-53.97	Average	-27	Pass
NVNT	n40	5755	Ant1	5700	-46.91	2	-44.91	Peak	10	Pass
NVNT	n40	5755	Ant1	5700	-53.26	2	-51.26	Average	10	Pass
NVNT	n40	5755	Ant1	5720	-30.6	2	-28.6	Peak	15.6	Pass
NVNT	n40	5755	Ant1	5720	-40.29	2	-38.29	Average	15.6	Pass



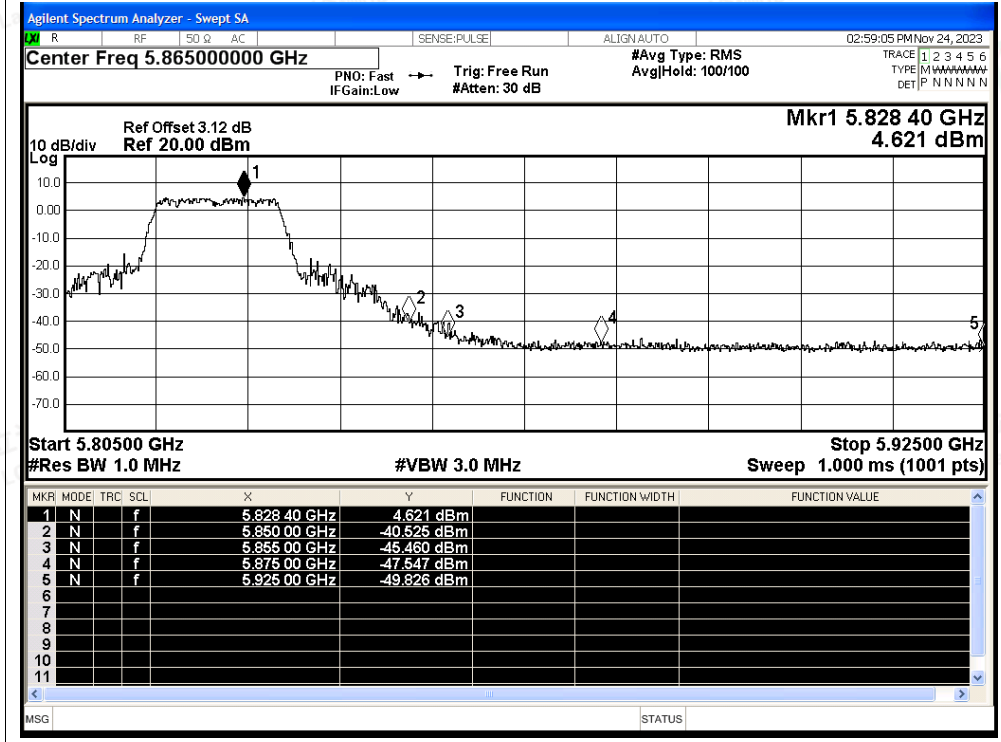


NVNT	n40	5755	Ant1	5725	-25.27	2	-23.27	Peak	27	Pass
NVNT	n40	5755	Ant1	5725	-37.57	2	-35.57	Average	27	Pass
NVNT	n40	5795	Ant1	5850	-48.54	2	-46.54	Peak	27	Pass
NVNT	n40	5795	Ant1	5850	-55.93	2	-53.93	Average	27	Pass
NVNT	n40	5795	Ant1	5855	-50.06	2	-48.06	Peak	15.6	Pass
NVNT	n40	5795	Ant1	5855	-55.73	2	-53.73	Average	15.6	Pass
NVNT	n40	5795	Ant1	5875	-50.2	2	-48.2	Peak	10	Pass
NVNT	n40	5795	Ant1	5875	-56.61	2	-54.61	Average	10	Pass
NVNT	n40	5795	Ant1	5925	-48.32	2	-46.32	Peak	-27	Pass
NVNT	n40	5795	Ant1	5925	-56.46	2	-54.46	Average	-27	Pass

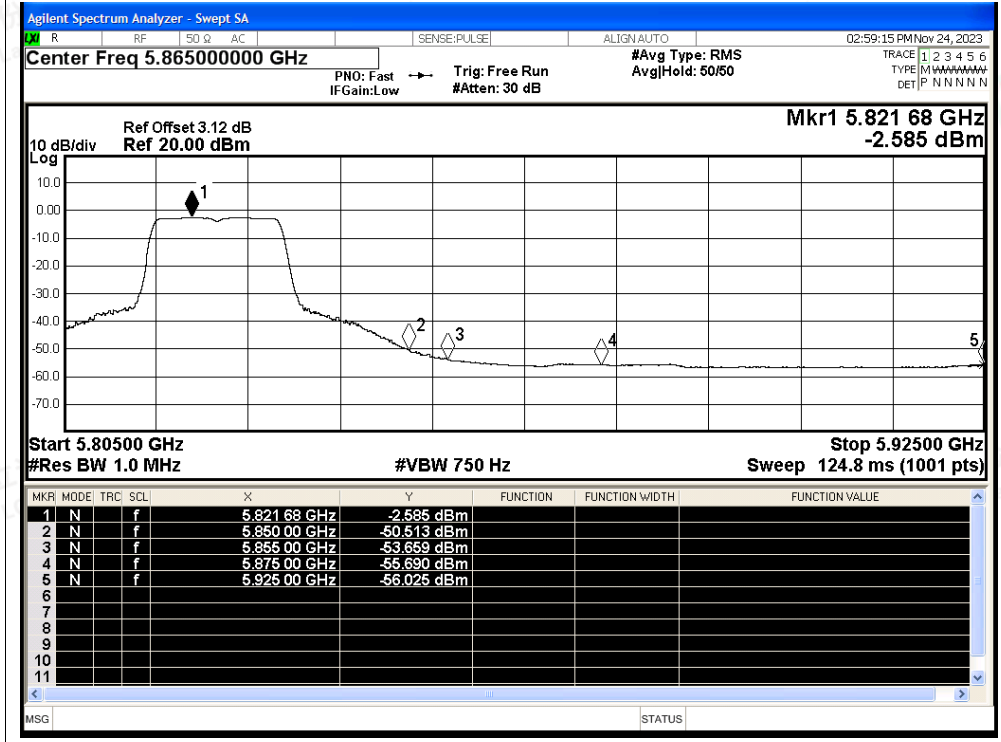


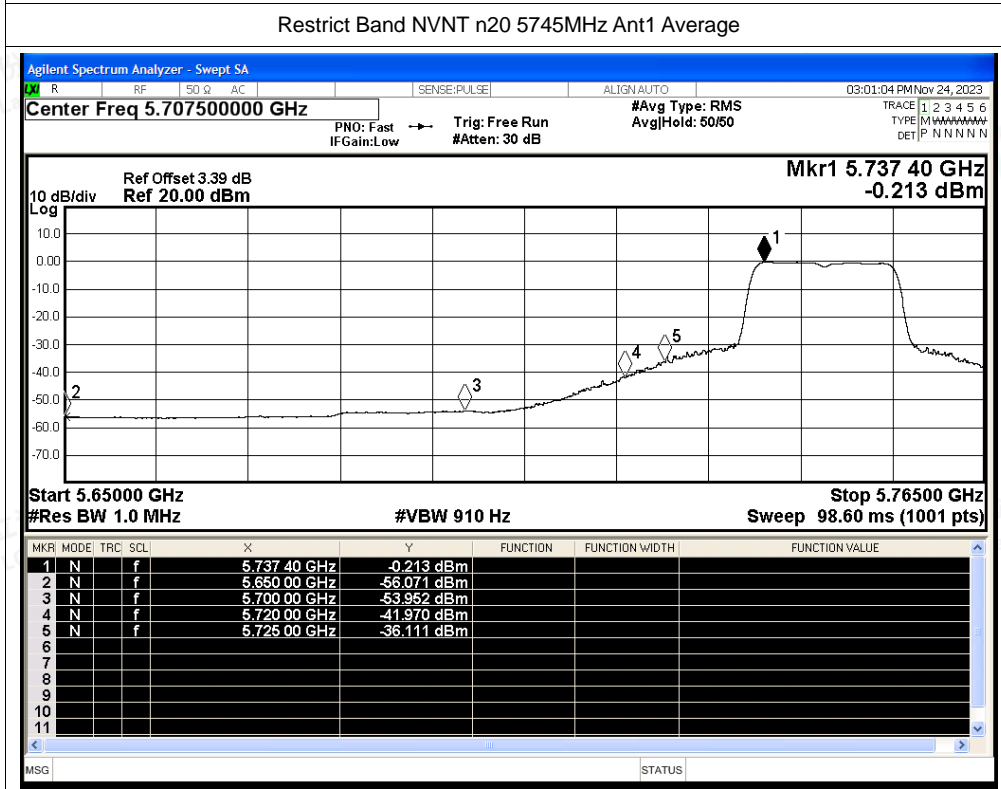
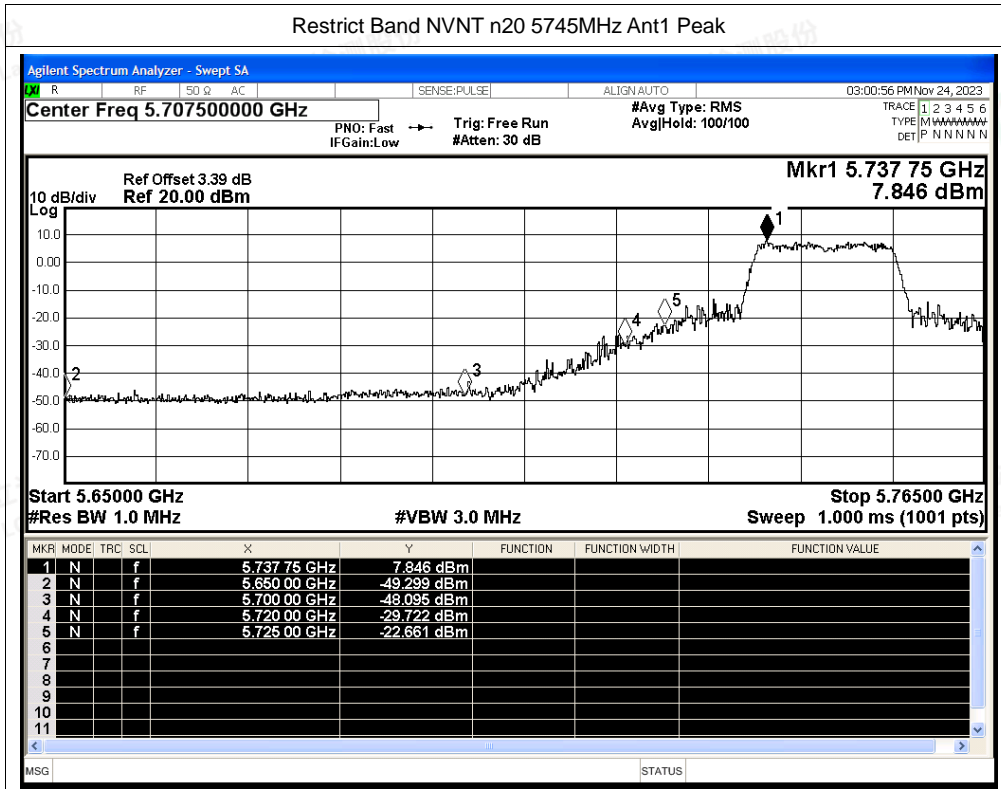


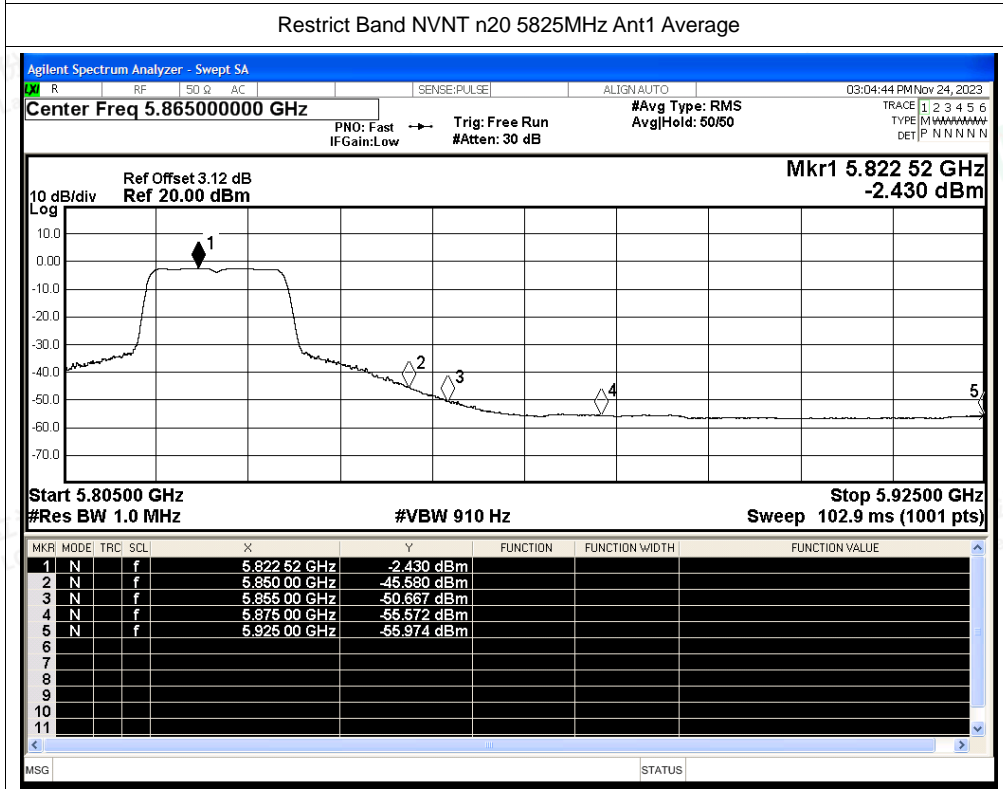
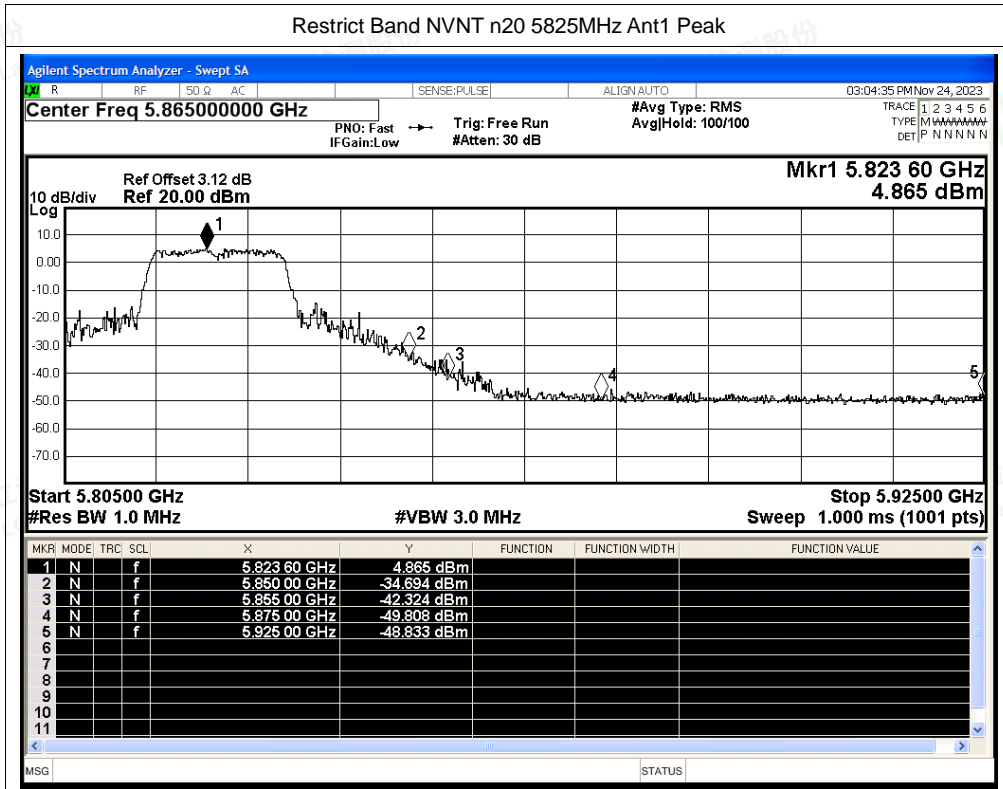
Restrict Band NVNT a 5825MHz Ant1 Peak

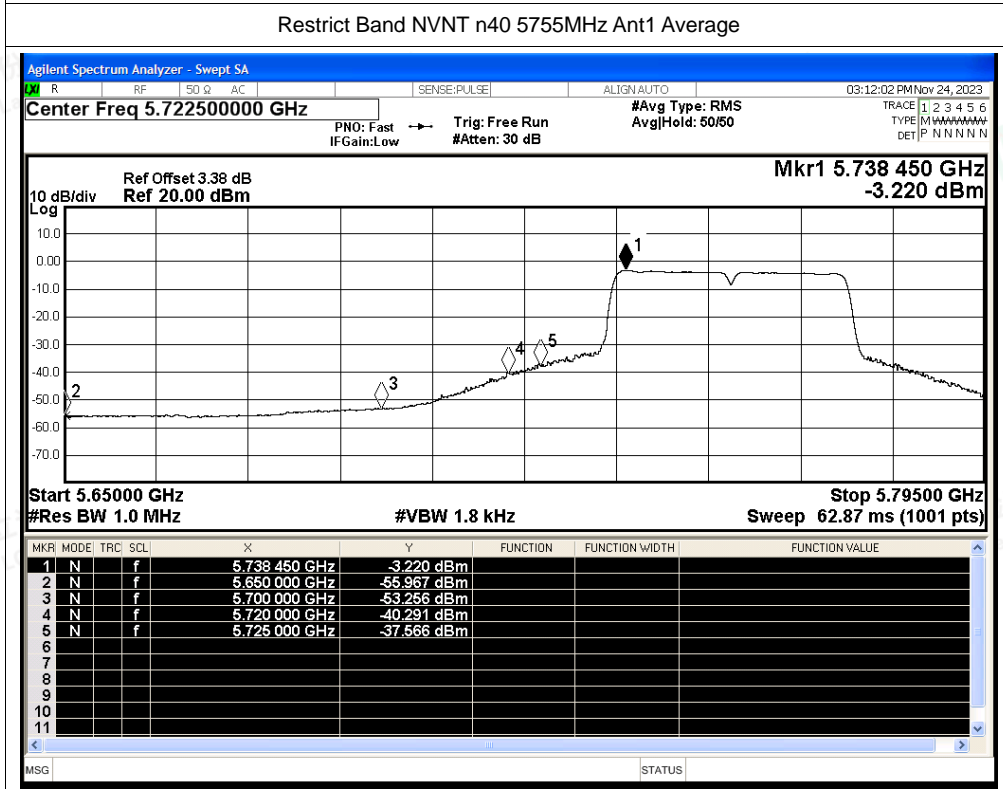
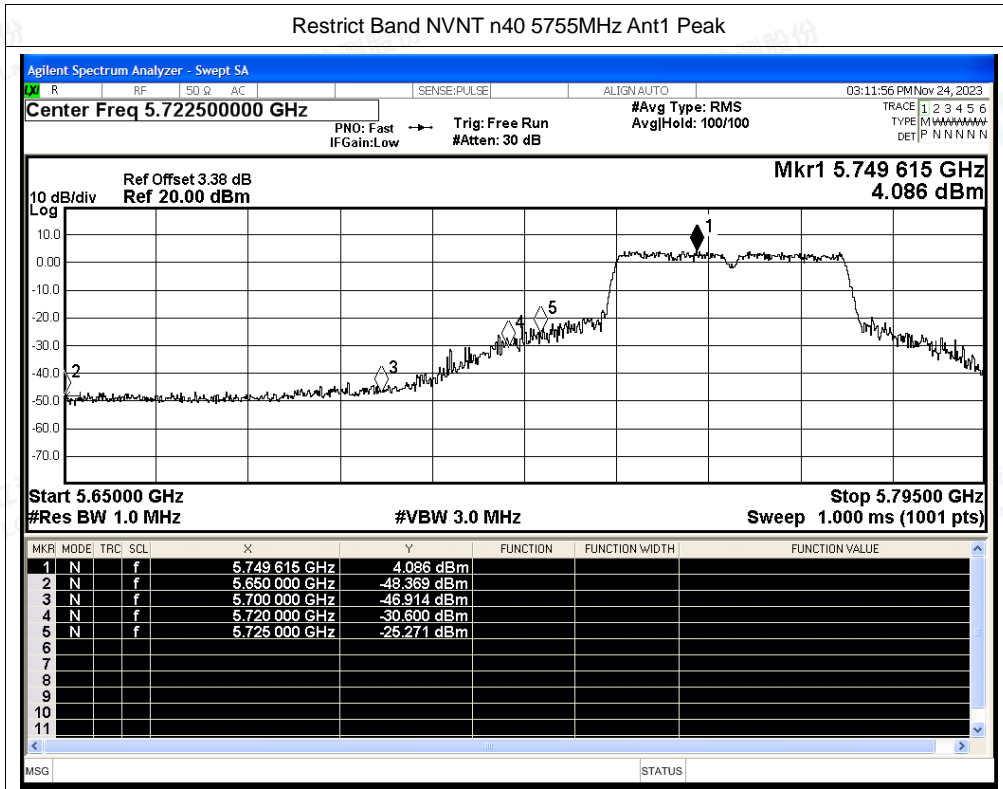


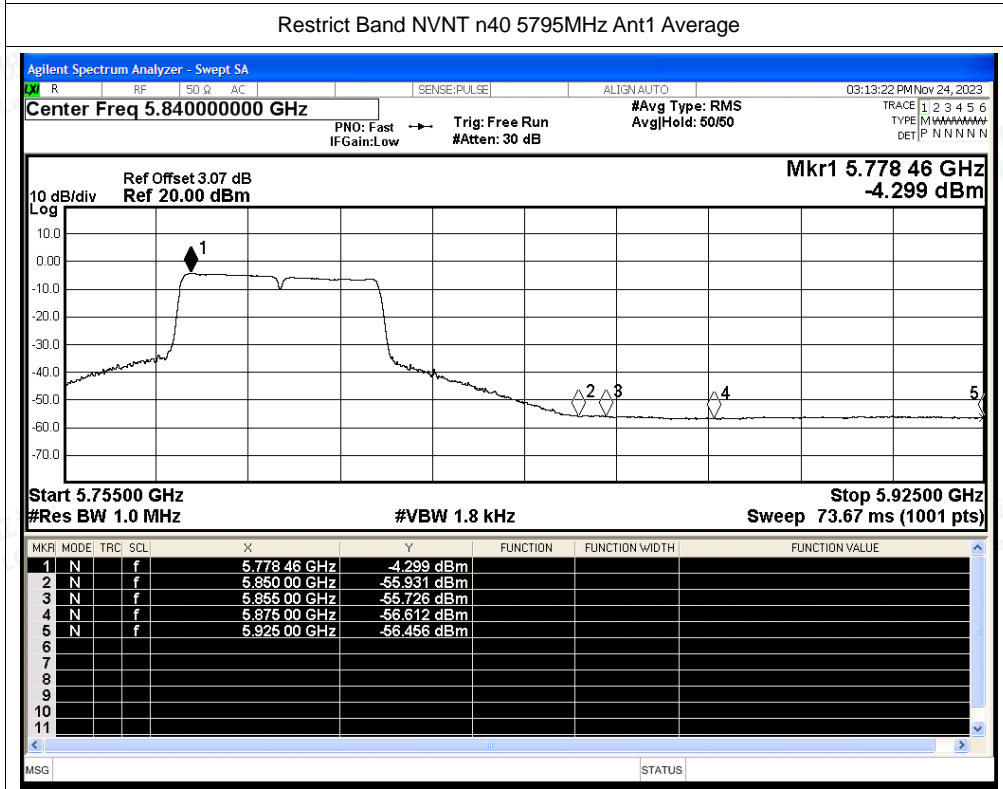
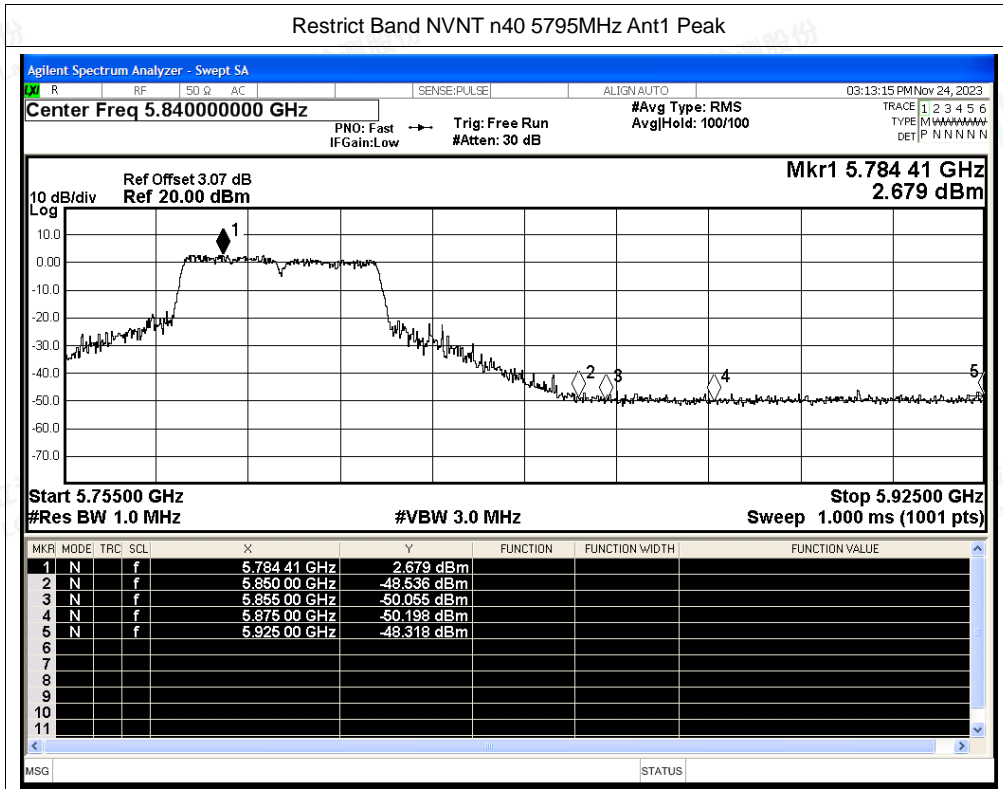
Restrict Band NVNT a 5825MHz Ant1 Average













E.5 Frequency Stability

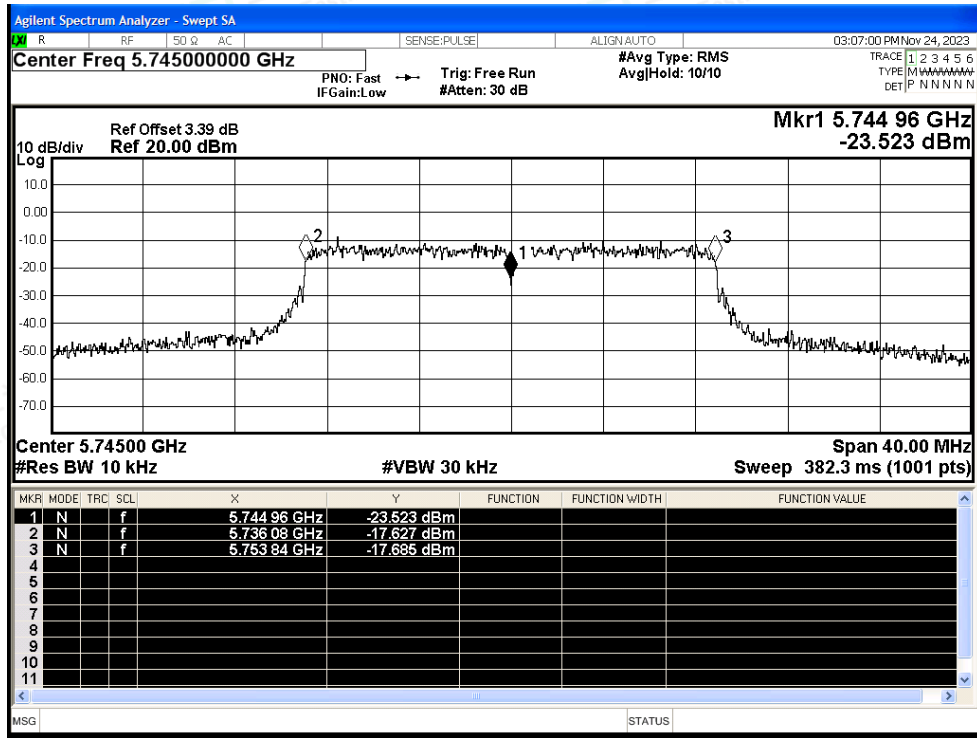
Condition	Mode	Frequency (MHz)	Antenna	Measured Frequency (MHz)	Frequency Error (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
NVNT	n20	5745	Ant1	5744.96	-40000	-6.96	25	Pass
NVNT	n20	5785	Ant1	5784.98	-20000	-3.46	25	Pass
NVNT	n20	5825	Ant1	5824.98	-20000	-3.43	25	Pass
NVNT	n40	5755	Ant1	5754.96	-40000	-6.95	25	Pass
NVNT	n40	5795	Ant1	5794.92	-80000	-13.81	25	Pass



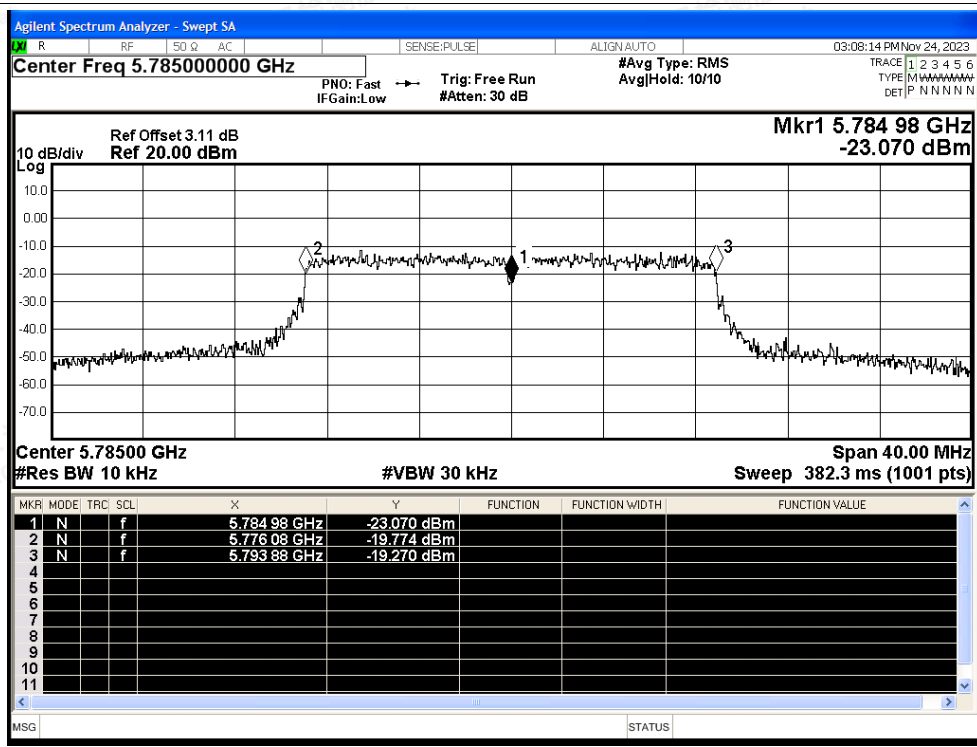


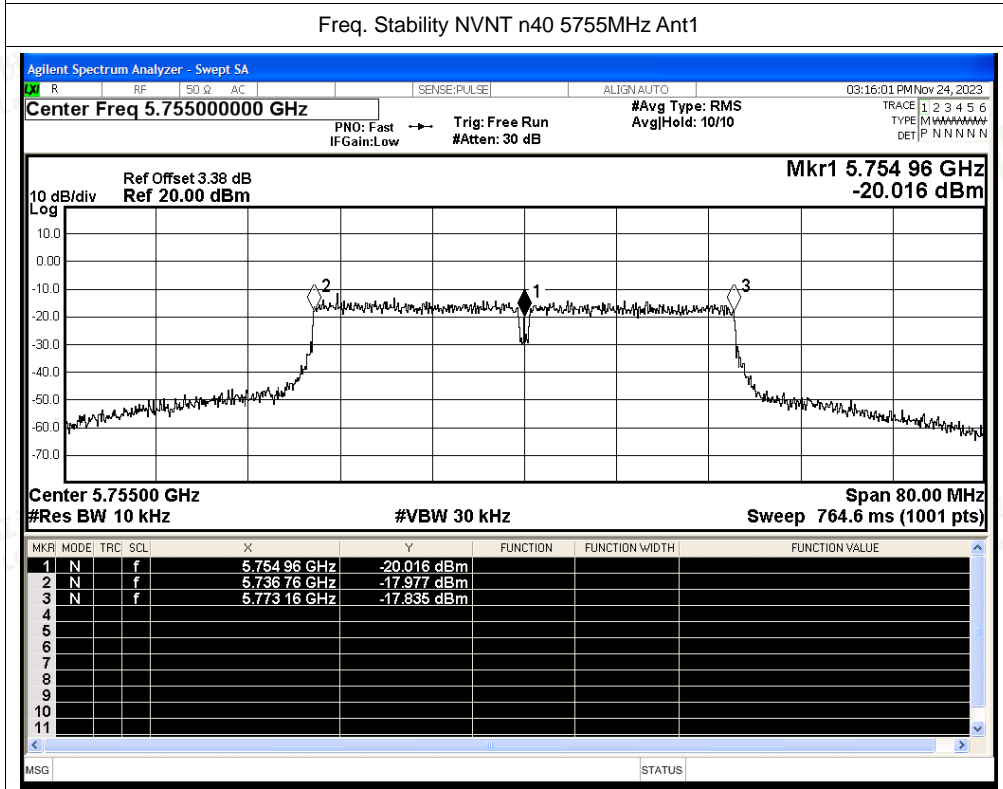
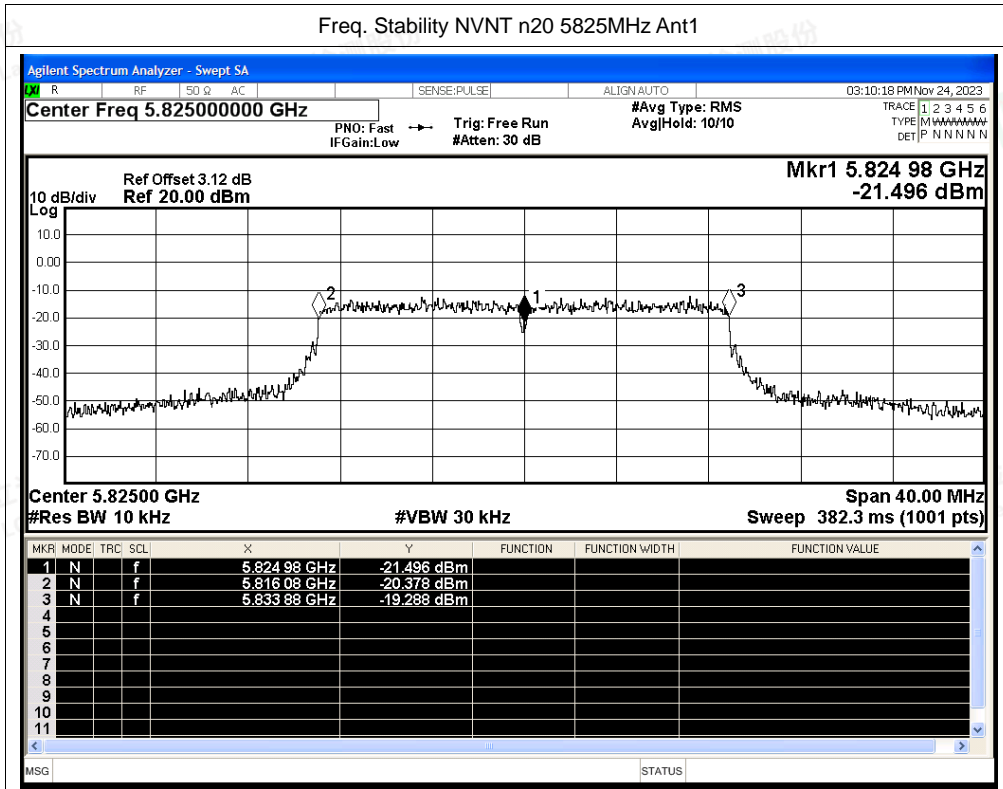
Test Graphs

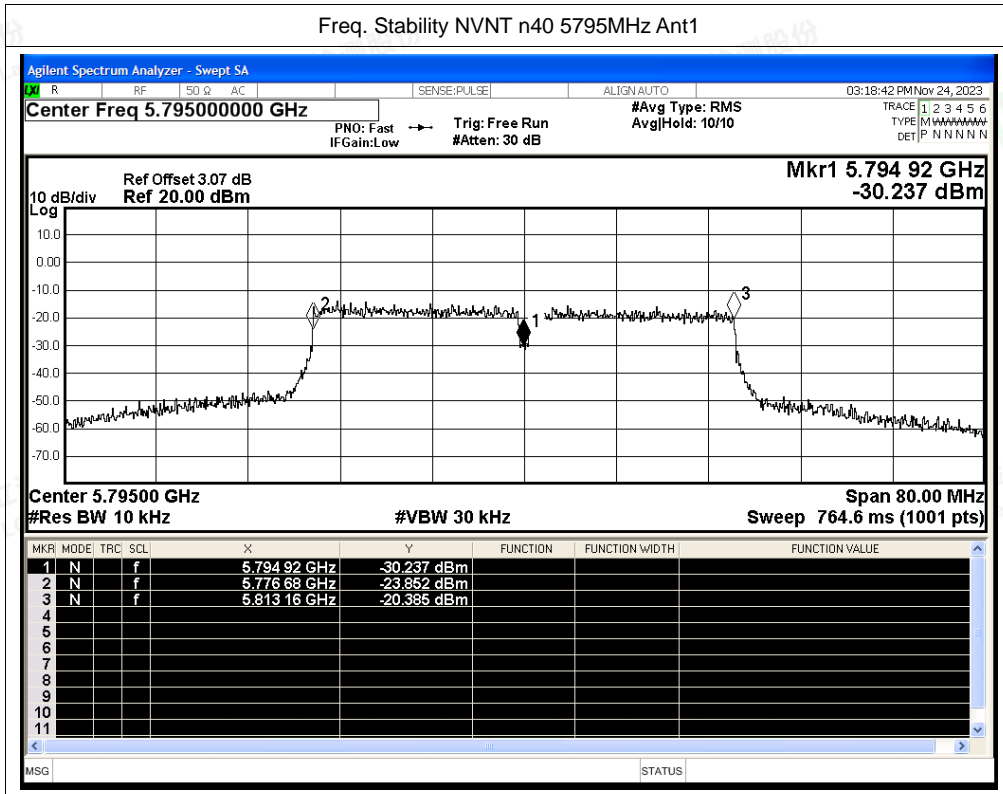
Freq. Stability NVNT n20 5745MHz Ant1



Freq. Stability NVNT n20 5785MHz Ant1









E.6 Duty Cycle

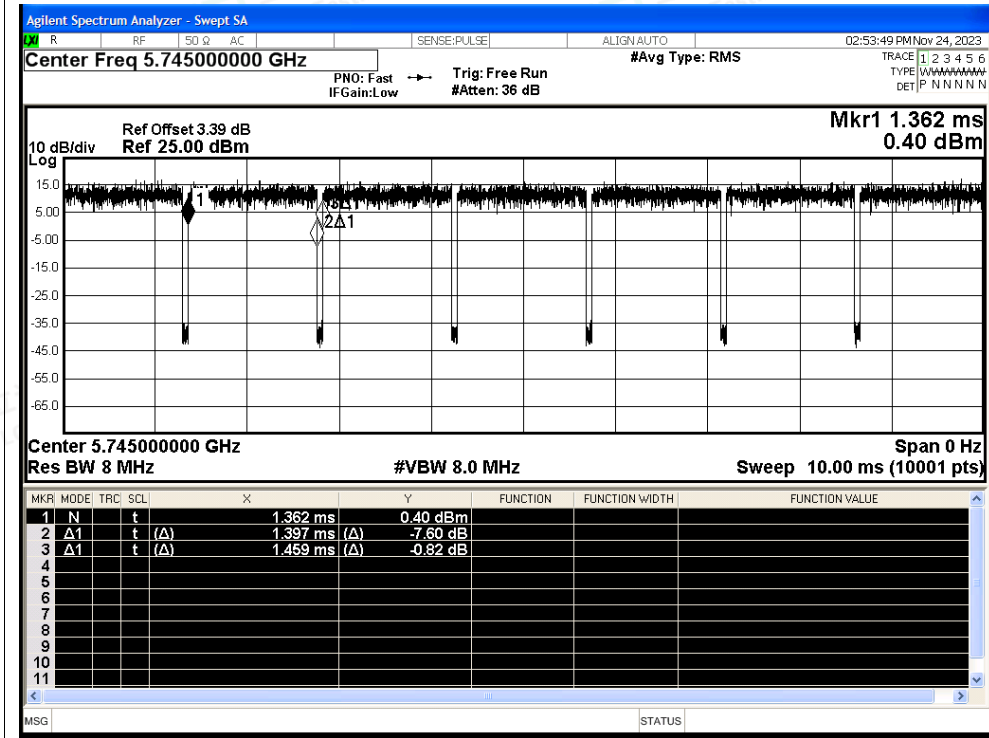
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	a	5745	Ant1	95.75	0.19	0.72
NVNT	a	5785	Ant1	95.75	0.19	0.72
NVNT	a	5825	Ant1	95.75	0.19	0.72
NVNT	n20	5745	Ant1	94.94	0.23	0.85
NVNT	n20	5785	Ant1	94.94	0.23	0.85
NVNT	n20	5825	Ant1	94.94	0.23	0.85
NVNT	n40	5755	Ant1	90.6	0.43	1.7
NVNT	n40	5795	Ant1	90.45	0.44	1.7



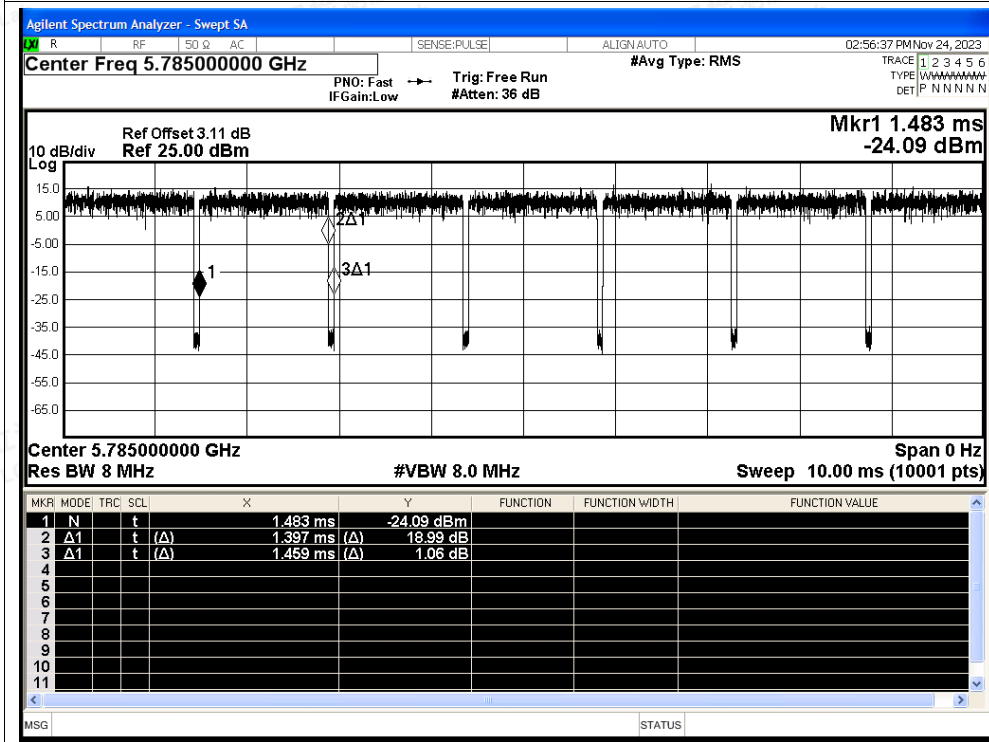


Test Graphs

Duty Cycle NVNT a 5745MHz Ant1

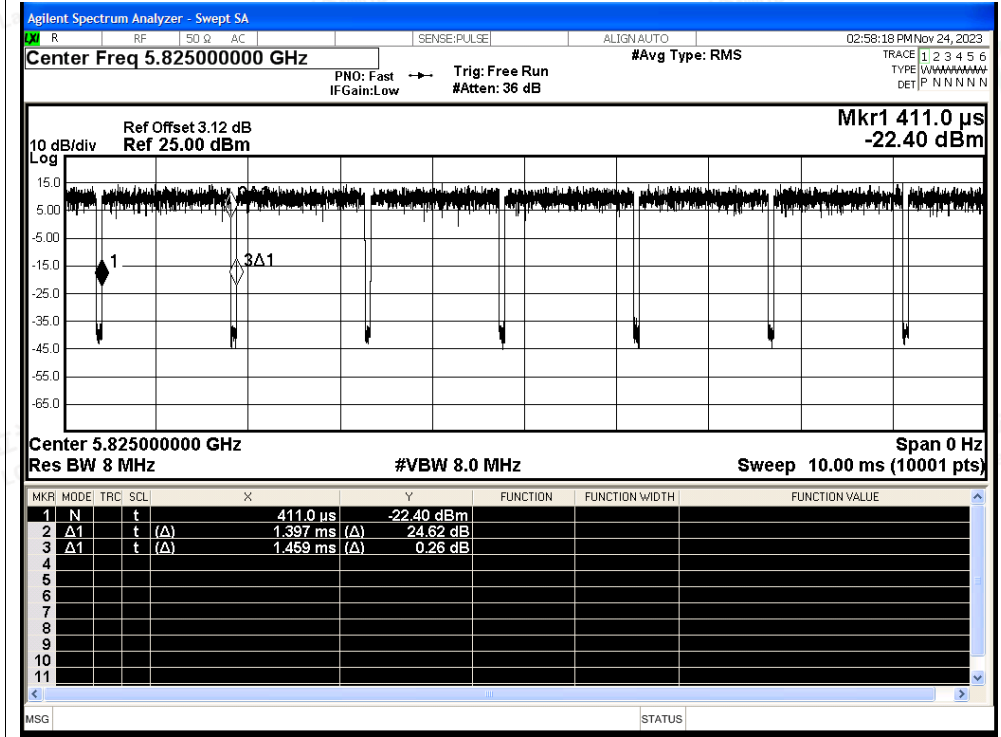


Duty Cycle NVNT a 5785MHz Ant1

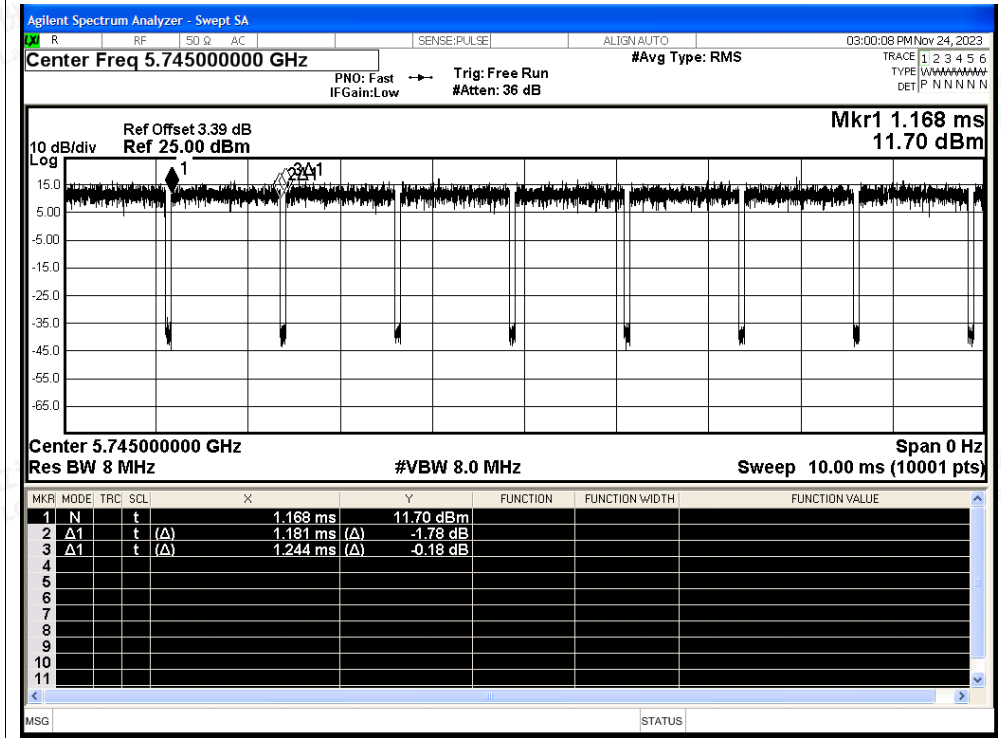




Duty Cycle NVNT a 5825MHz Ant1

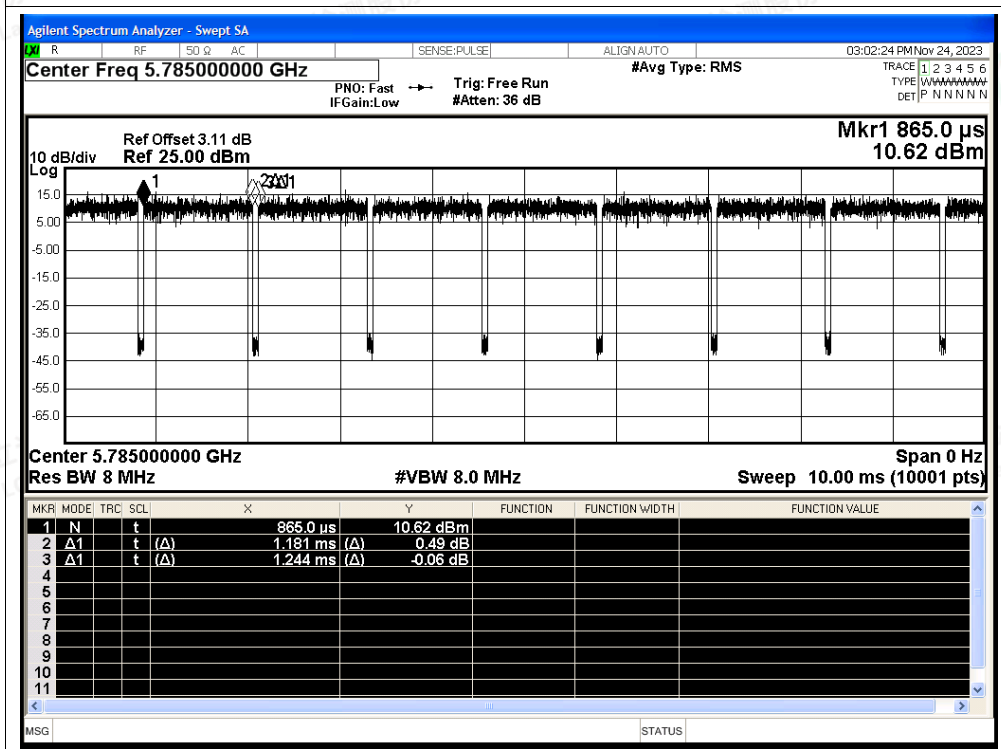


Duty Cycle NVNT n20 5745MHz Ant1





Duty Cycle NVNT n20 5785MHz Ant1



Duty Cycle NVNT n20 5825MHz Ant1

