



Appendix F

RF Test Data for 5.8GWIFI(Conducted Measurement)

Product Name: Smart Phone

Test Model: HPPL67A

Environmental Conditions

Temperature:	23.8° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Can Kun
Supervised by:	Nick Peng





F.1 -6dB Bandwidth

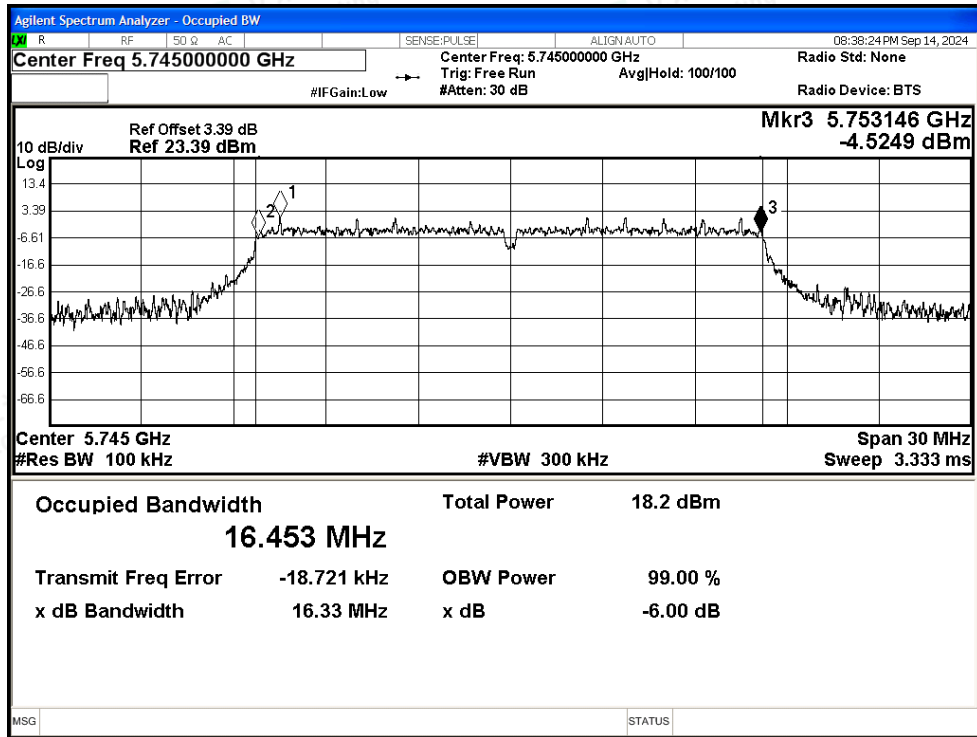
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	a	5745	Ant	16.329	>=0.5	Pass
NVNT	a	5785	Ant	16.331	>=0.5	Pass
NVNT	a	5825	Ant	16.351	>=0.5	Pass
NVNT	n20	5745	Ant	17.513	>=0.5	Pass
NVNT	n20	5785	Ant	17.524	>=0.5	Pass
NVNT	n20	5825	Ant	17.411	>=0.5	Pass
NVNT	n40	5755	Ant	35.855	>=0.5	Pass
NVNT	n40	5795	Ant	35.597	>=0.5	Pass
NVNT	ac20	5745	Ant	17.532	>=0.5	Pass
NVNT	ac20	5785	Ant	17.554	>=0.5	Pass
NVNT	ac20	5825	Ant	17.364	>=0.5	Pass
NVNT	ac40	5755	Ant	36.134	>=0.5	Pass
NVNT	ac40	5795	Ant	36.013	>=0.5	Pass



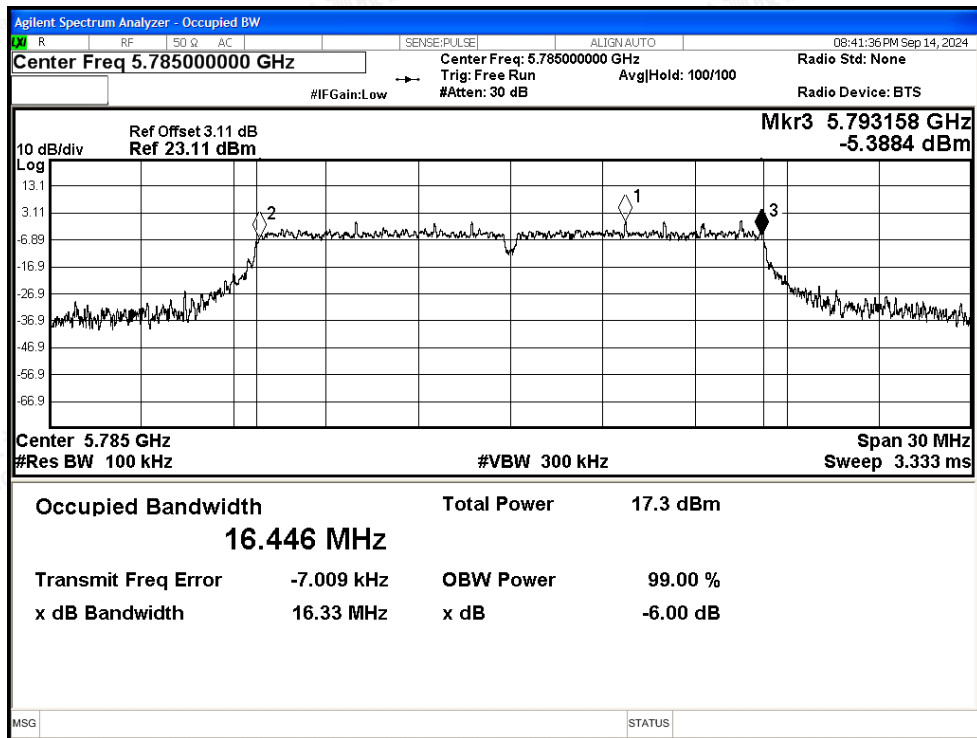


Test Graphs

-6dB Bandwidth NVNT a 5745MHz Ant

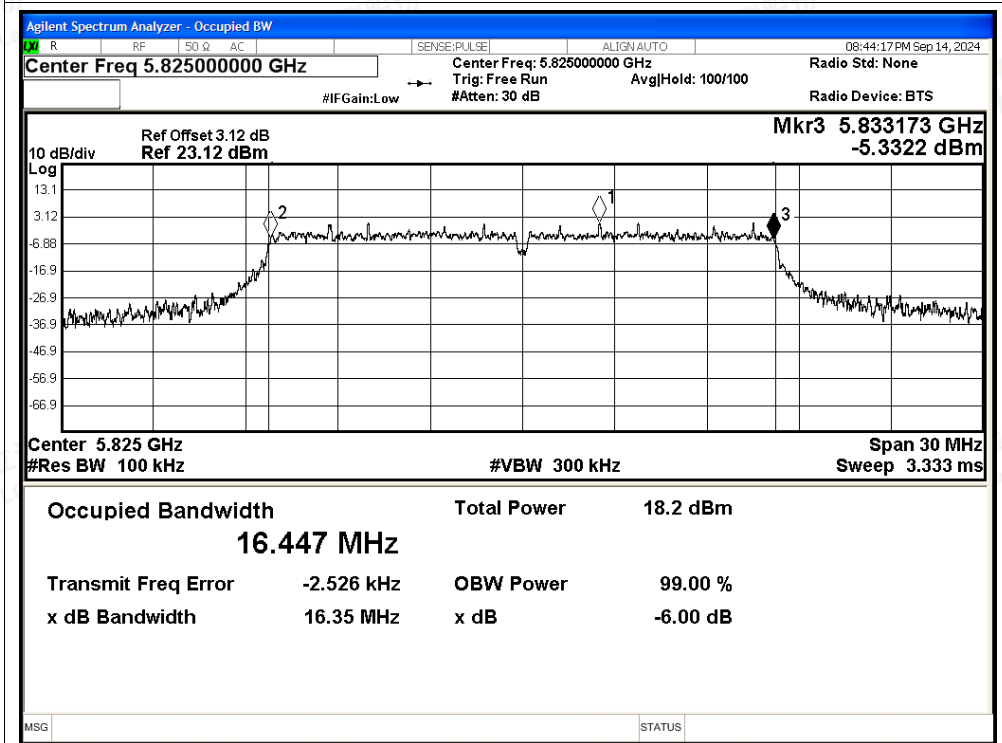


-6dB Bandwidth NVNT a 5785MHz Ant

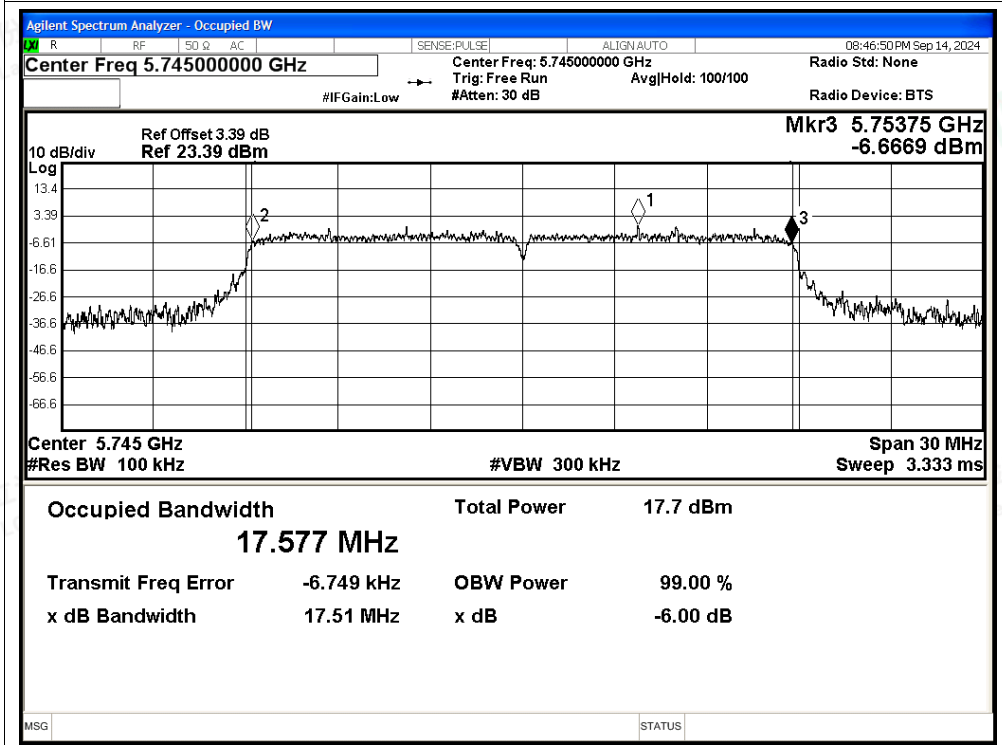




-6dB Bandwidth NVNT a 5825MHz Ant

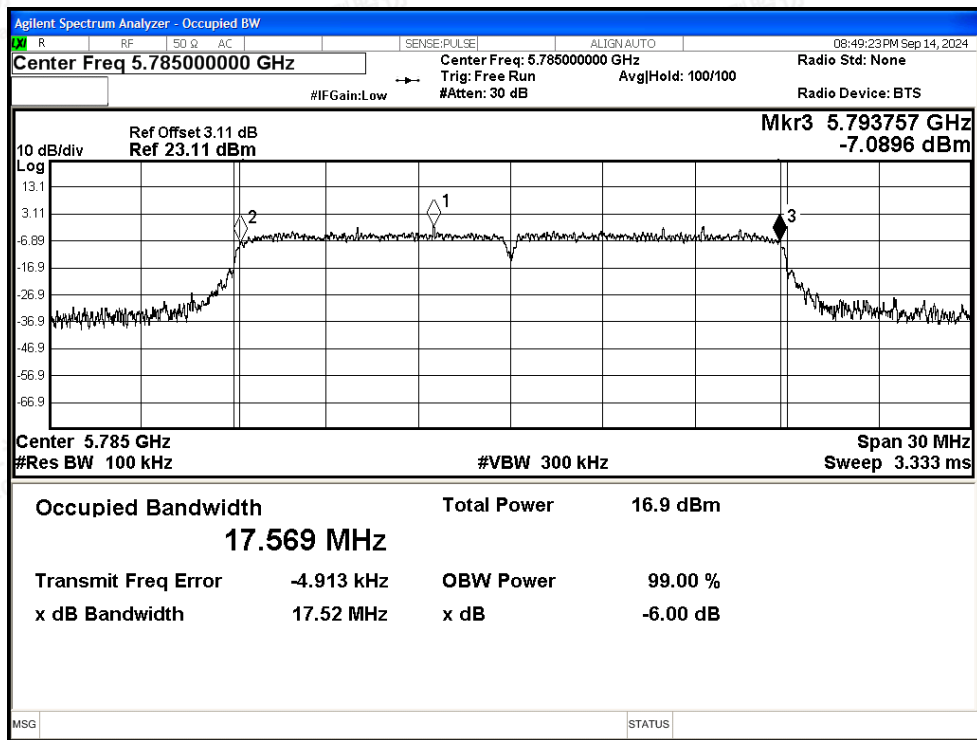


-6dB Bandwidth NVNT n20 5745MHz Ant

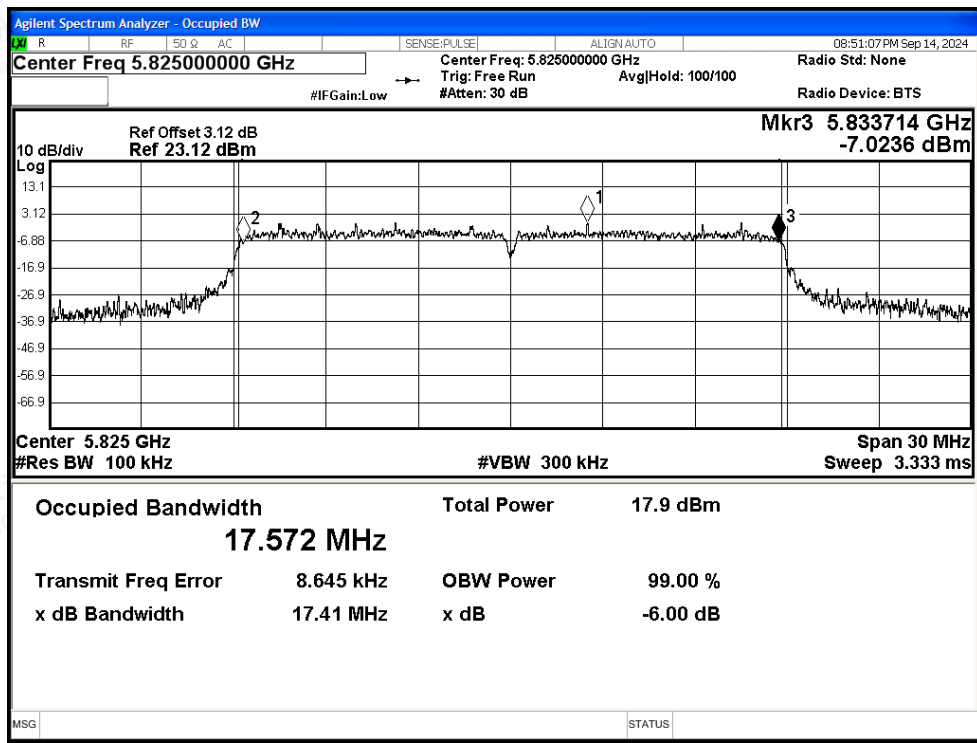




-6dB Bandwidth NVNT n20 5785MHz Ant

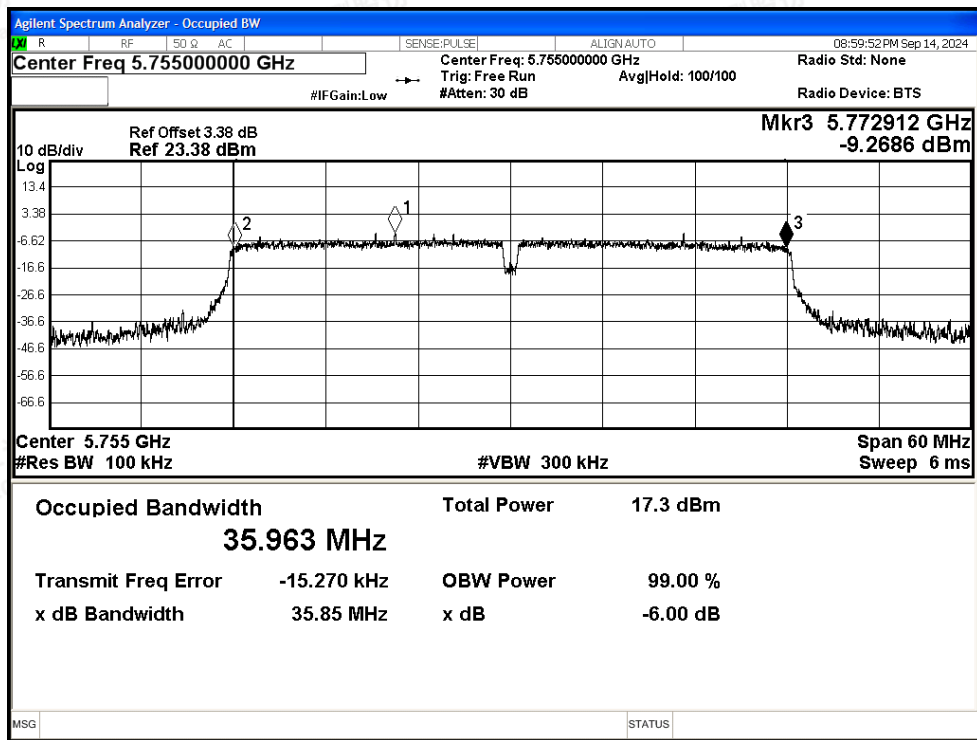


-6dB Bandwidth NVNT n20 5825MHz Ant

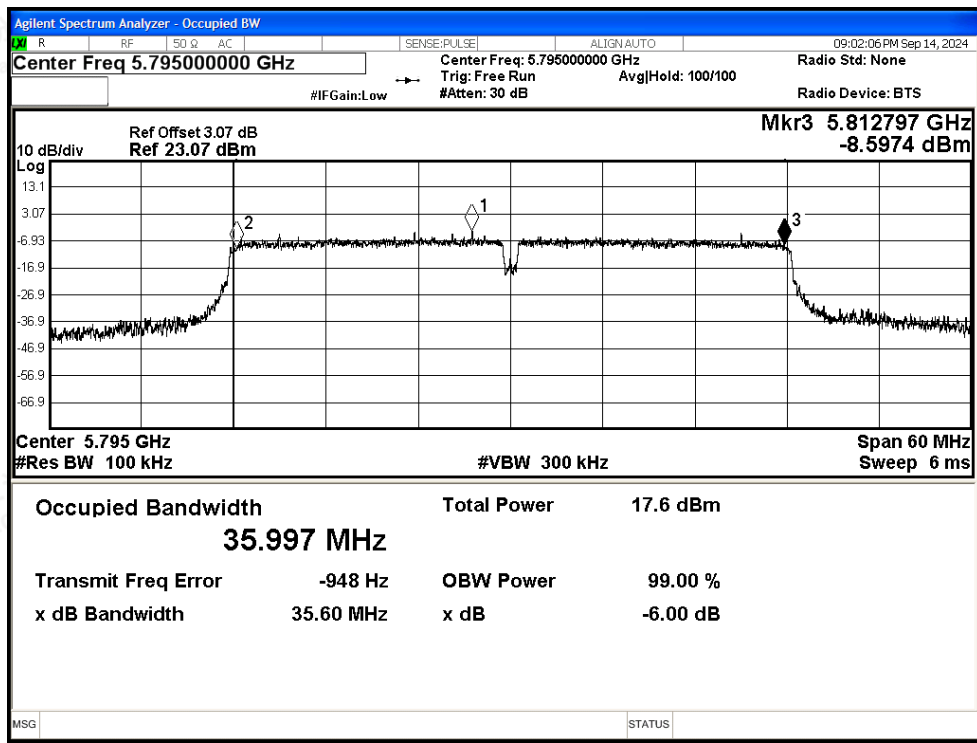




-6dB Bandwidth NVNT n40 5755MHz Ant

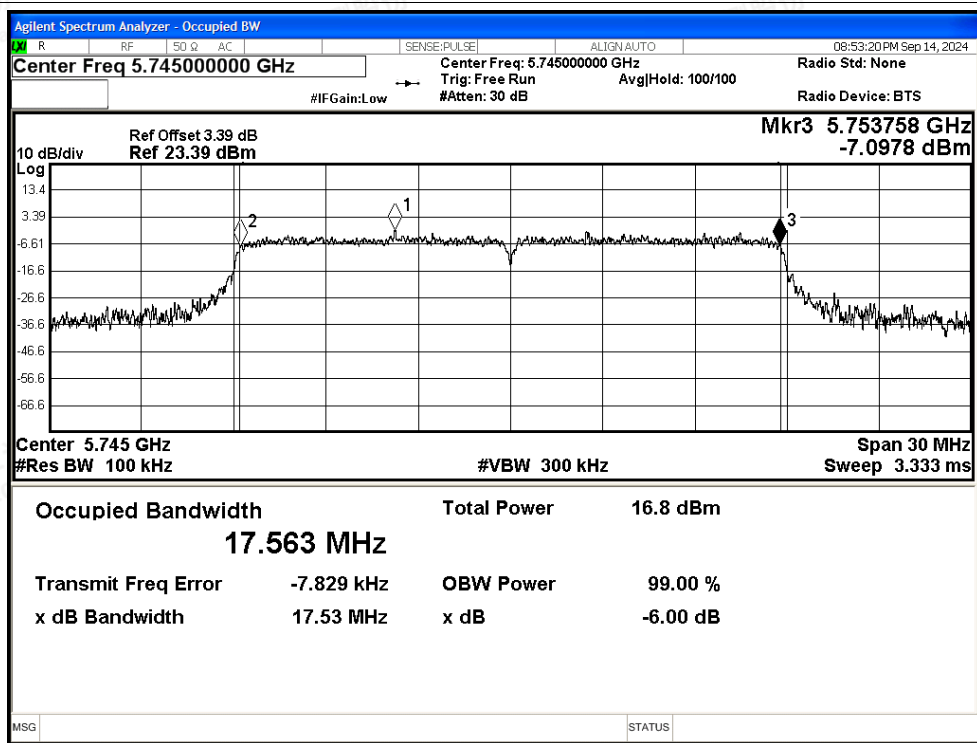


-6dB Bandwidth NVNT n40 5795MHz Ant

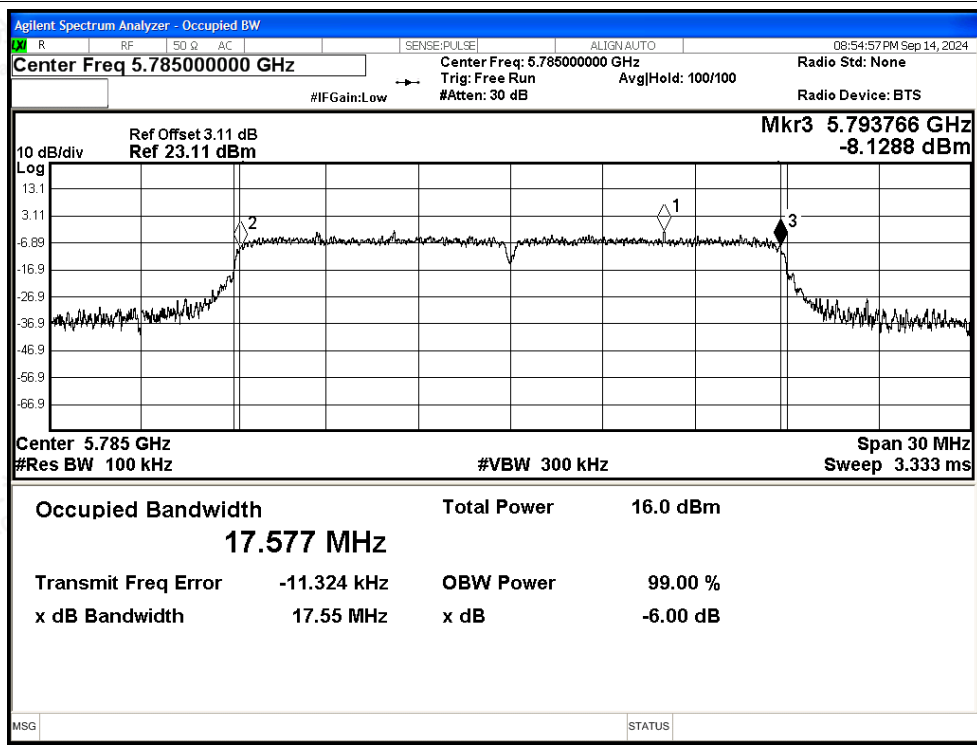




-6dB Bandwidth NVNT ac20 5745MHz Ant

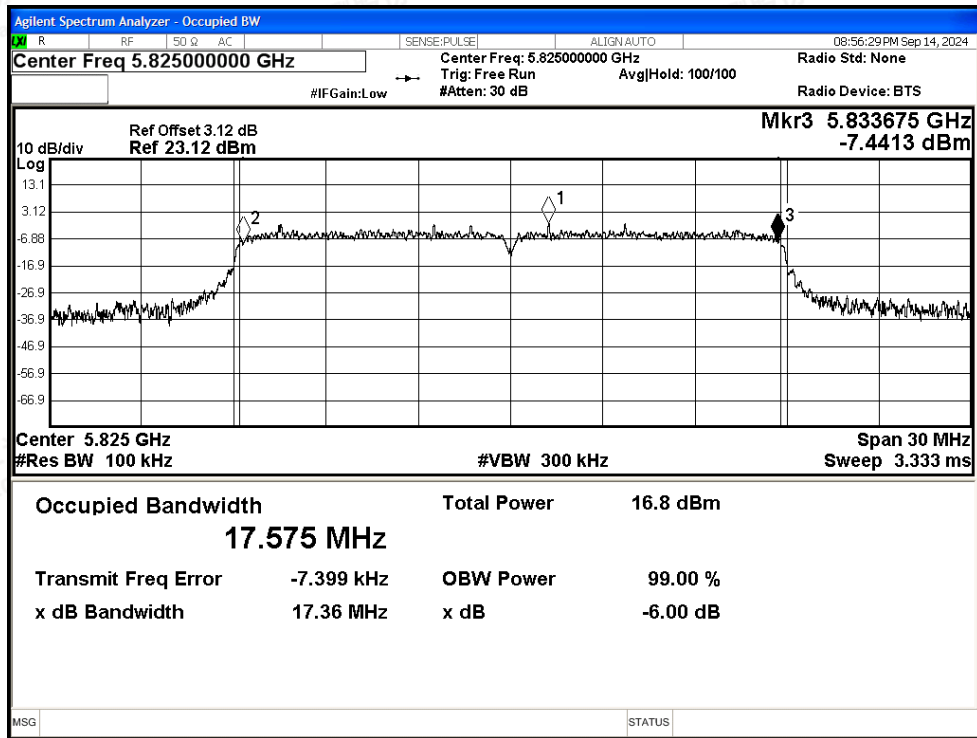


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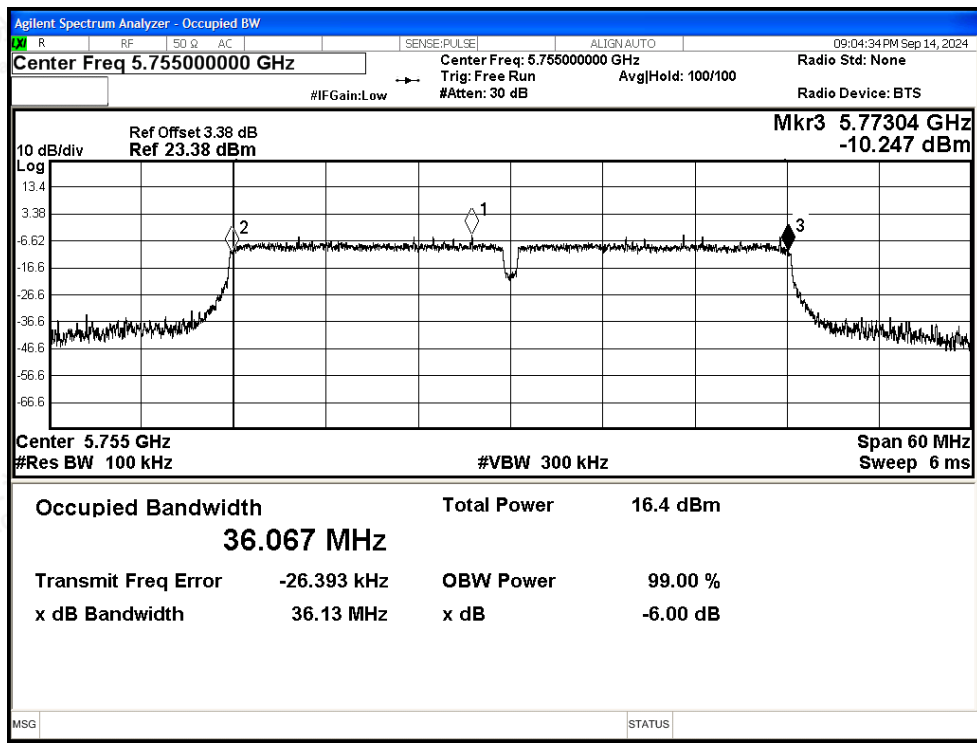


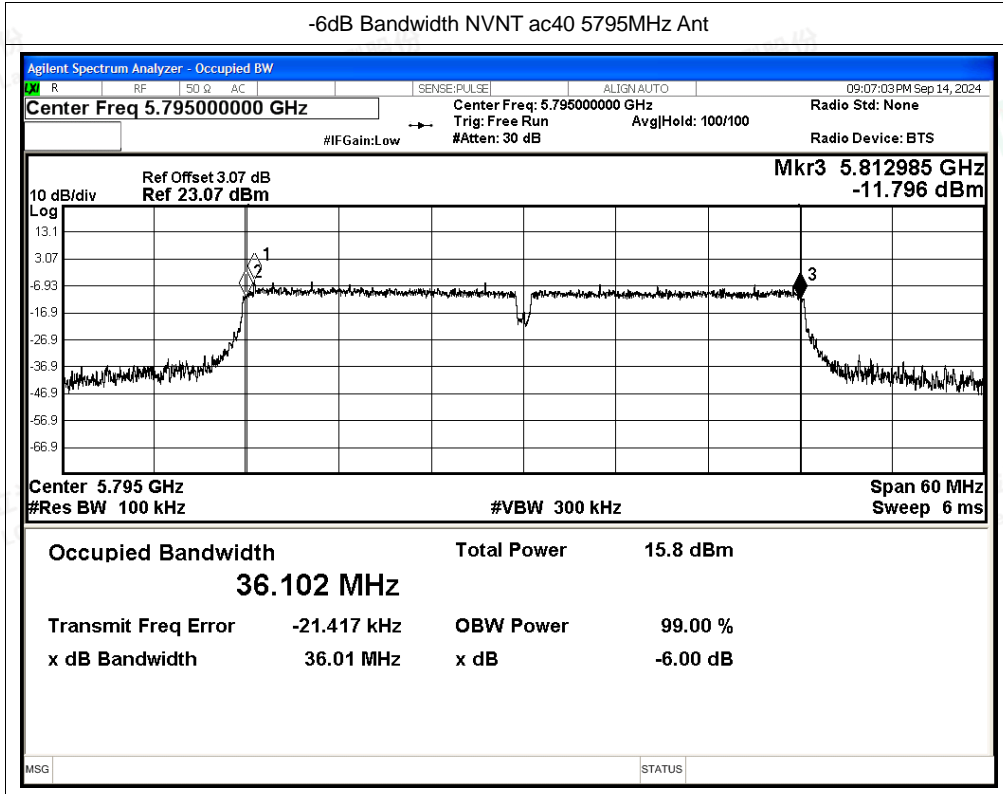


-6dB Bandwidth NVNT ac20 5825MHz Ant



-6dB Bandwidth NVNT ac40 5755MHz Ant







F.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	Ant	12.11	0.24	12.35	30	Pass
NVNT	a	5785	Ant	12.26	0.24	12.5	30	Pass
NVNT	a	5825	Ant	12.15	0.24	12.39	30	Pass
NVNT	n20	5745	Ant	11.56	0.12	11.68	30	Pass
NVNT	n20	5785	Ant	11.72	0.12	11.84	30	Pass
NVNT	n20	5825	Ant	11.58	0.12	11.7	30	Pass
NVNT	n40	5755	Ant	10.99	0.12	11.11	30	Pass
NVNT	n40	5795	Ant	11.24	0.12	11.36	30	Pass
NVNT	ac20	5745	Ant	10.64	0.12	10.76	30	Pass
NVNT	ac20	5785	Ant	10.78	0.12	10.9	30	Pass
NVNT	ac20	5825	Ant	10.69	0.12	10.81	30	Pass
NVNT	ac40	5755	Ant	10.13	0.12	10.25	30	Pass
NVNT	ac40	5795	Ant	10.28	0.12	10.4	30	Pass





F.3 Maximum Power Spectral Density Level

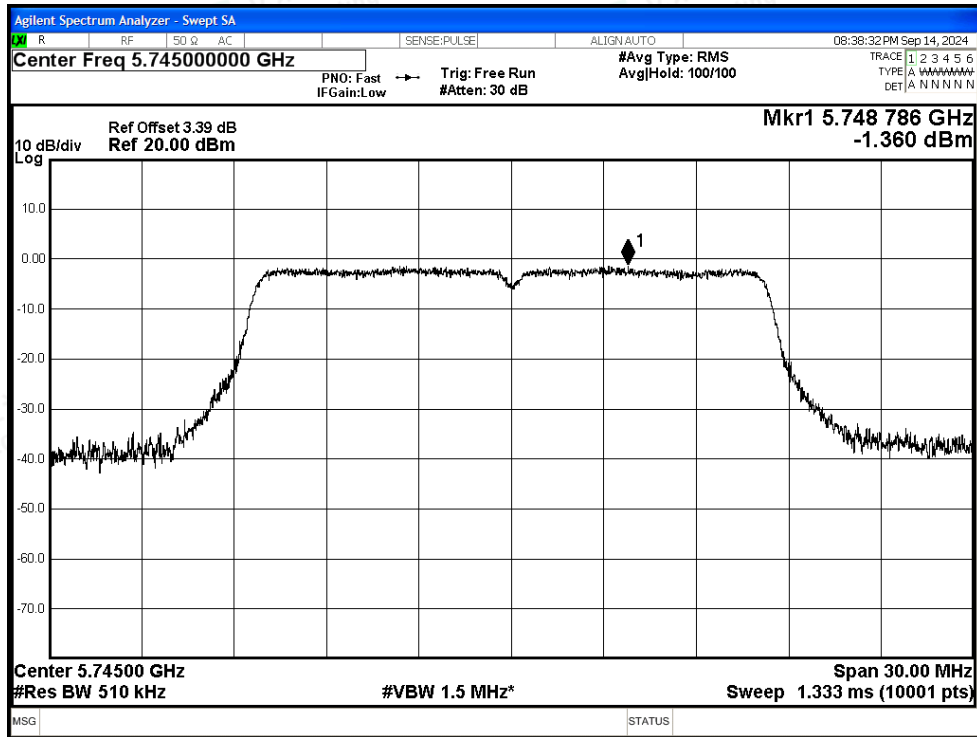
Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/500KHz)	Duty Factor (dB)	Total PSD (dBm/500KHz)	Limit (dBm/500KHz)	Verdict
NVNT	a	5745	Ant	-1.36	0.24	-1.12	30	Pass
NVNT	a	5785	Ant	-2.02	0.24	-1.78	30	Pass
NVNT	a	5825	Ant	-1.18	0.24	-0.94	30	Pass
NVNT	n20	5745	Ant	-2.39	0.12	-2.27	30	Pass
NVNT	n20	5785	Ant	-3.1	0.12	-2.98	30	Pass
NVNT	n20	5825	Ant	-2.31	0.12	-2.19	30	Pass
NVNT	n40	5755	Ant	-5.51	0.12	-5.39	30	Pass
NVNT	n40	5795	Ant	-5.2	0.12	-5.08	30	Pass
NVNT	ac20	5745	Ant	-2.8	0.12	-2.68	30	Pass
NVNT	ac20	5785	Ant	-3.94	0.12	-3.82	30	Pass
NVNT	ac20	5825	Ant	-3.16	0.12	-3.04	30	Pass
NVNT	ac40	5755	Ant	-6.68	0.12	-6.56	30	Pass
NVNT	ac40	5795	Ant	-7.23	0.12	-7.11	30	Pass



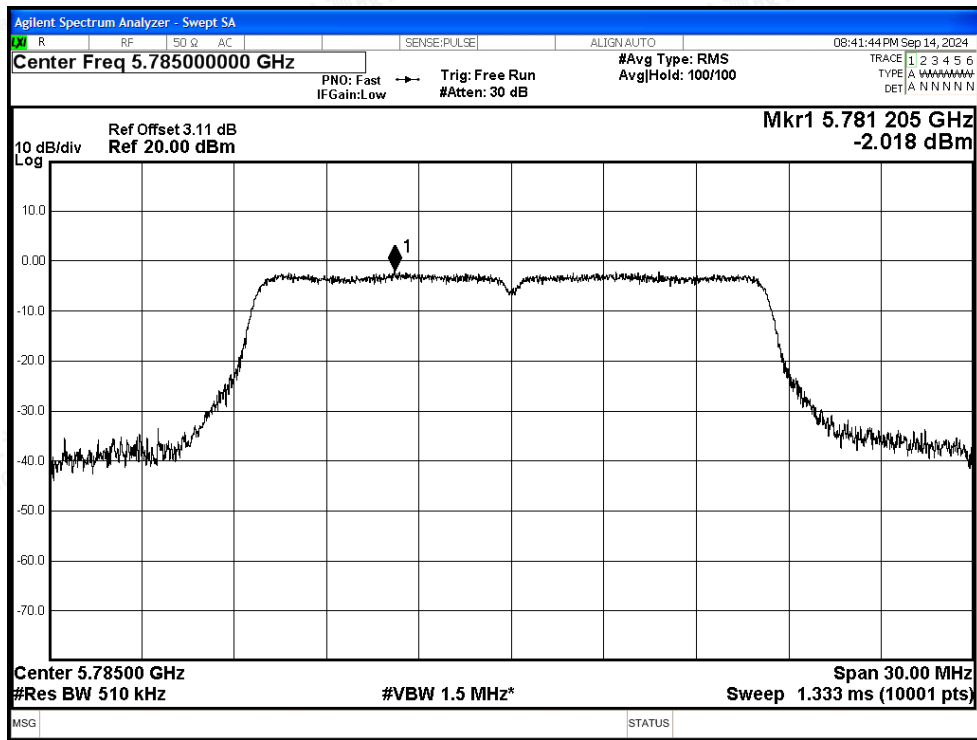


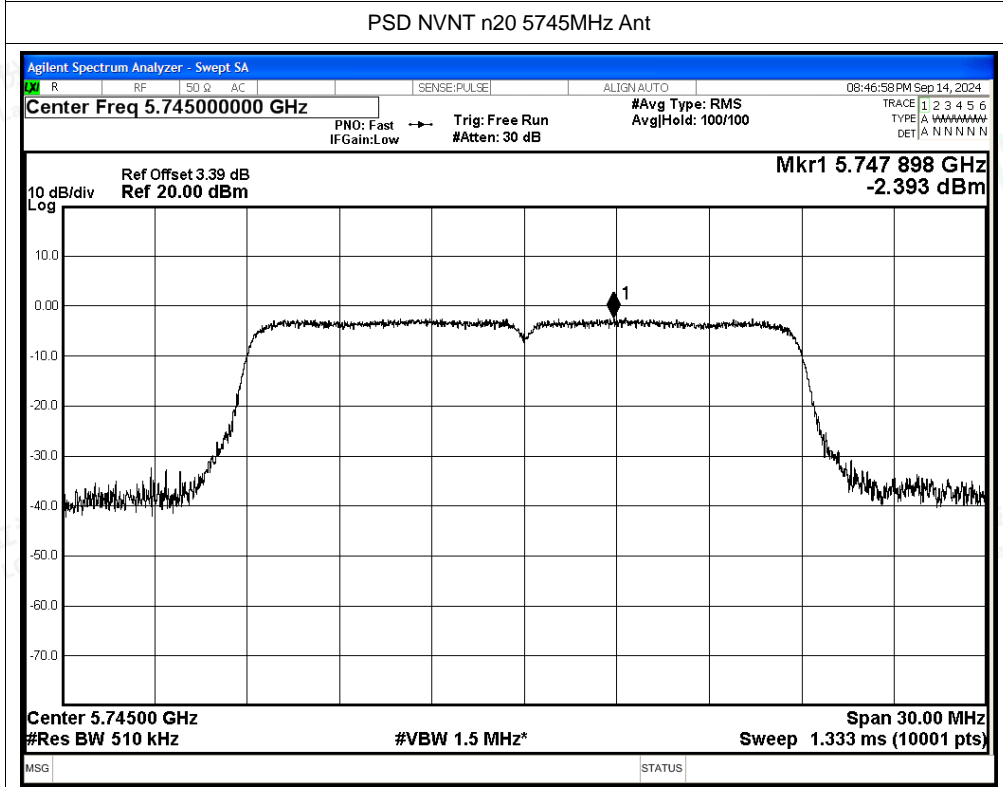
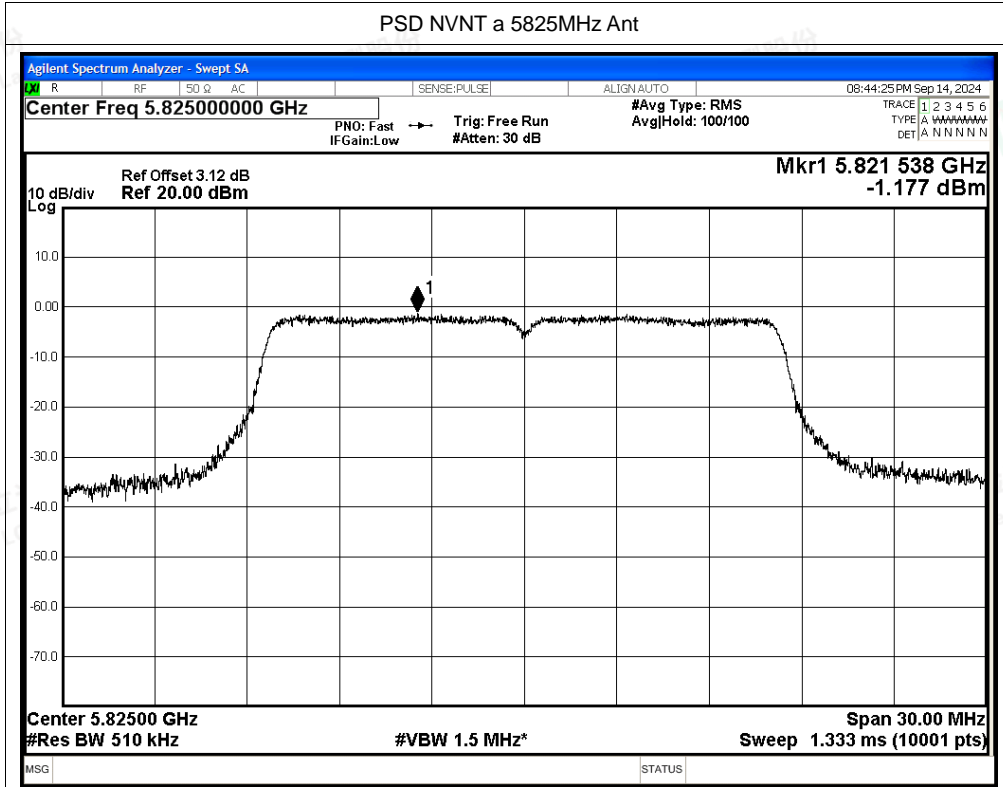
Test Graphs

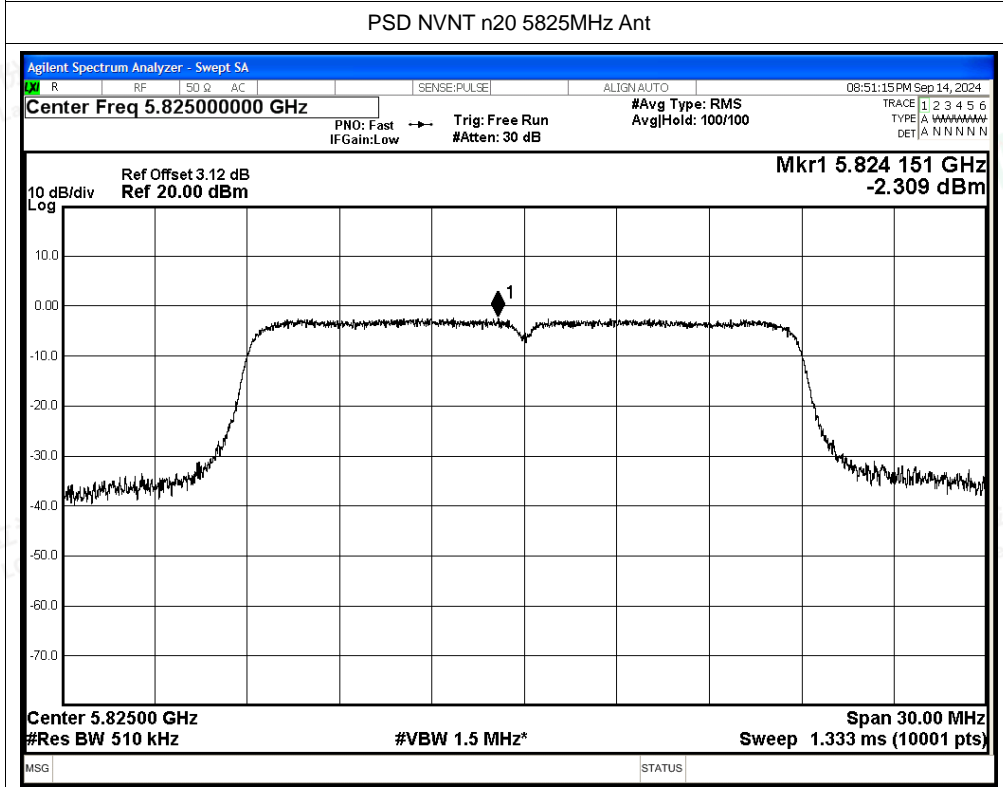
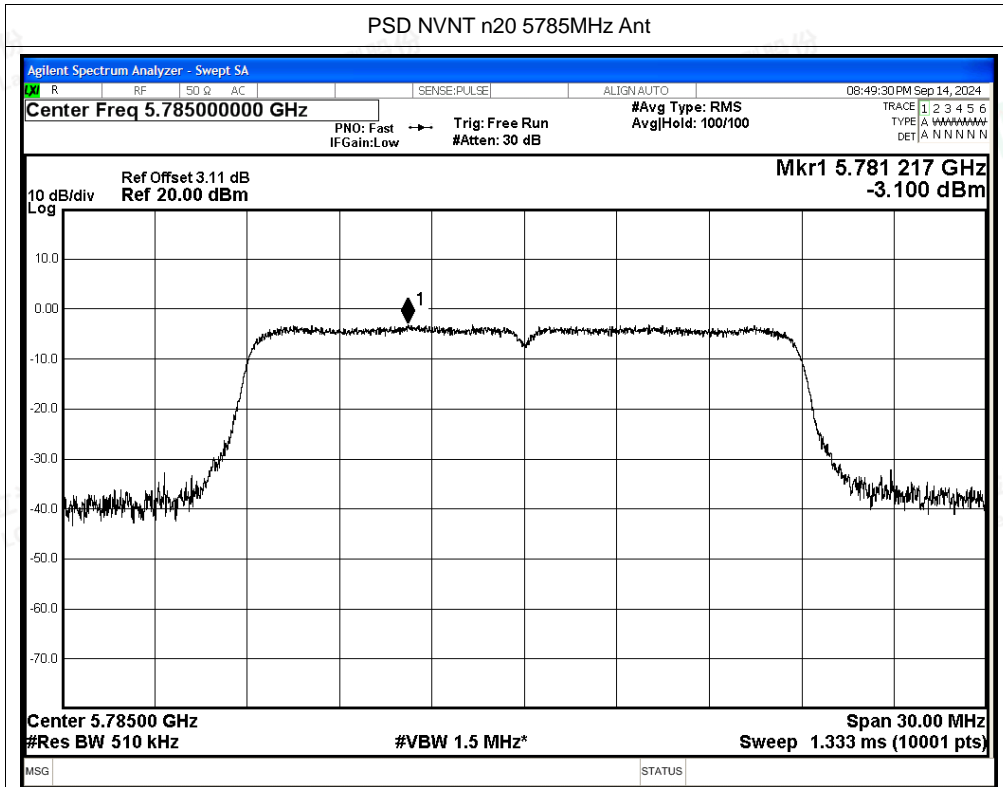
PSD NVNT a 5745MHz Ant

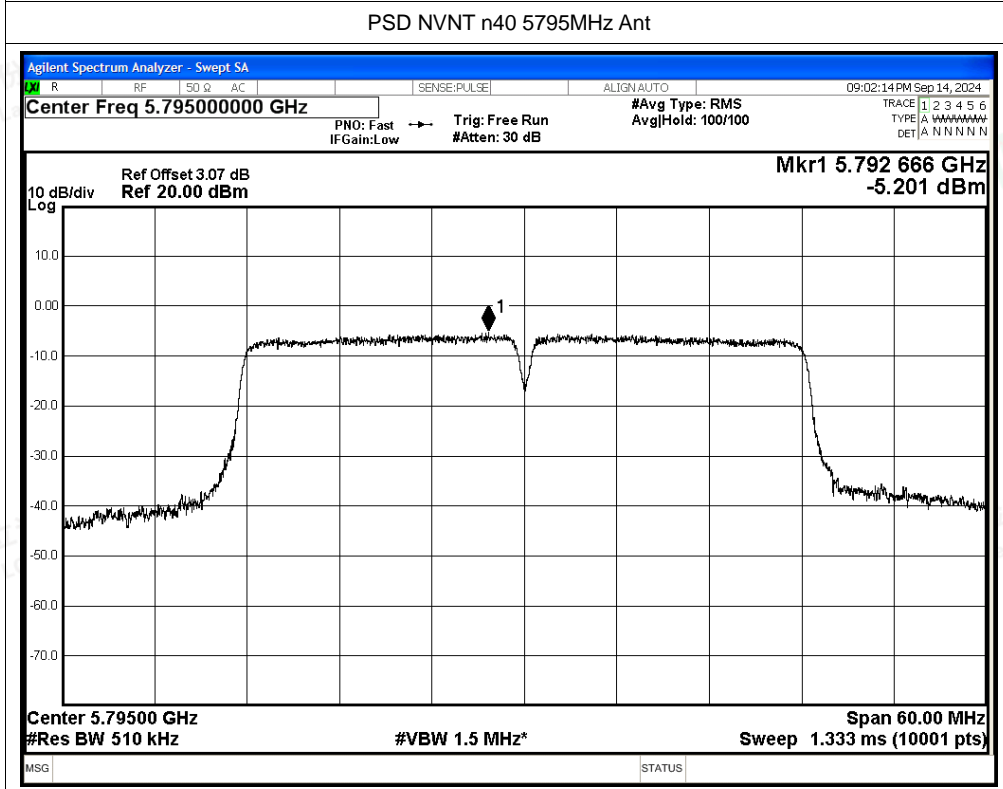
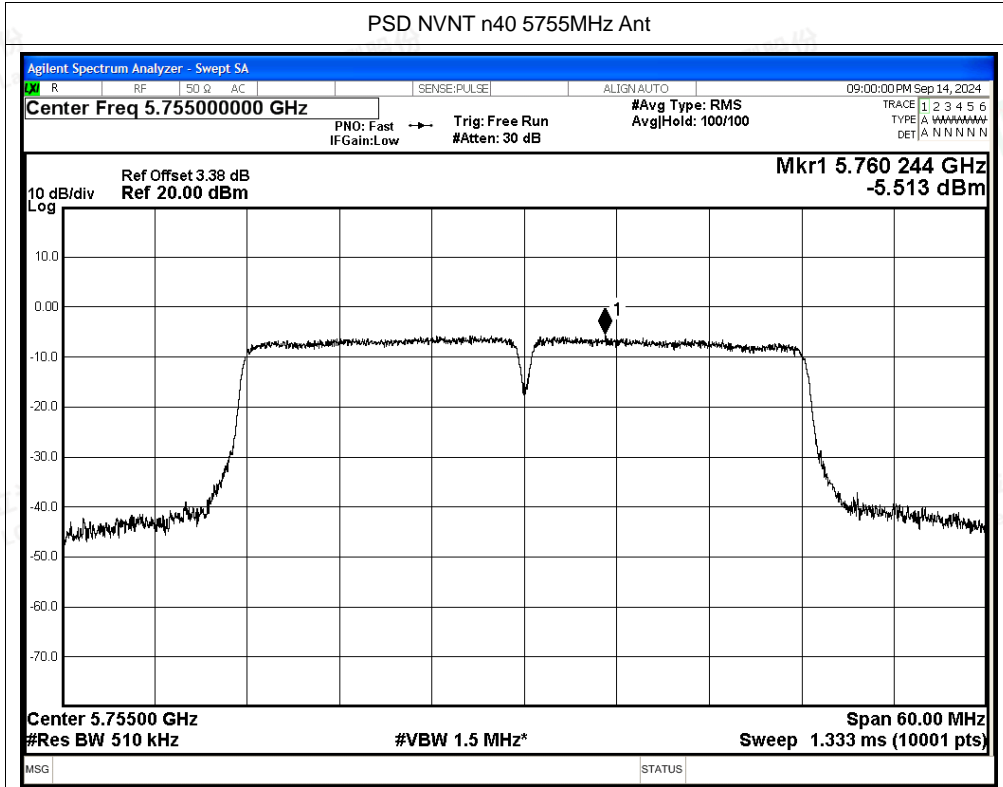


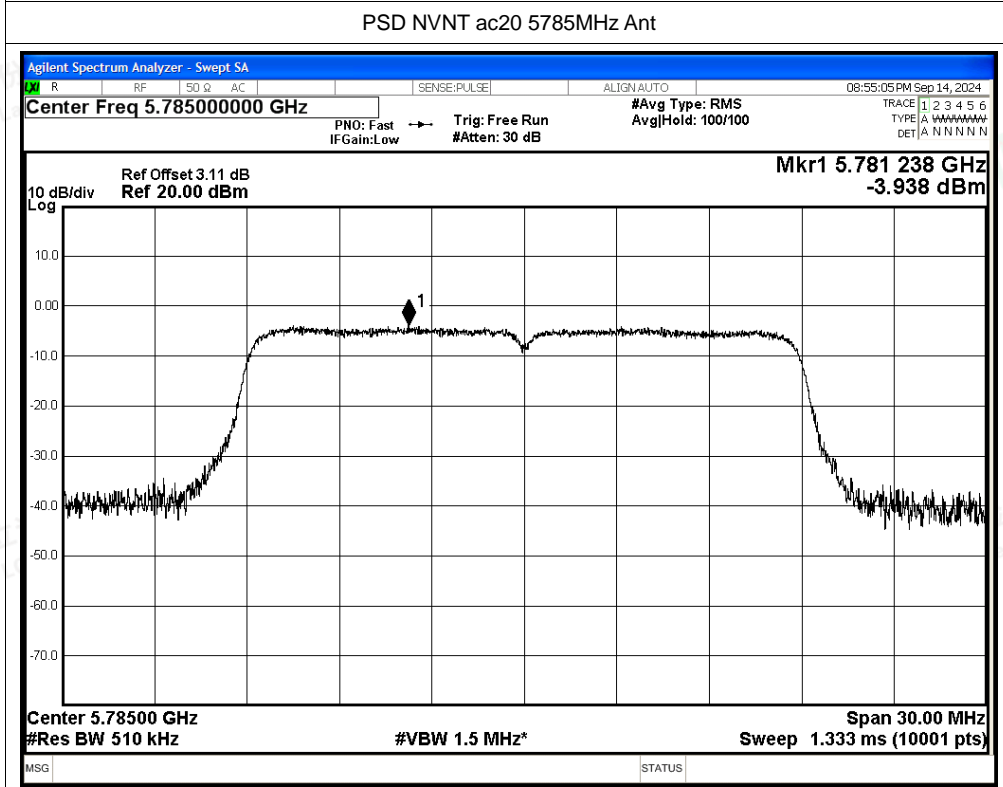
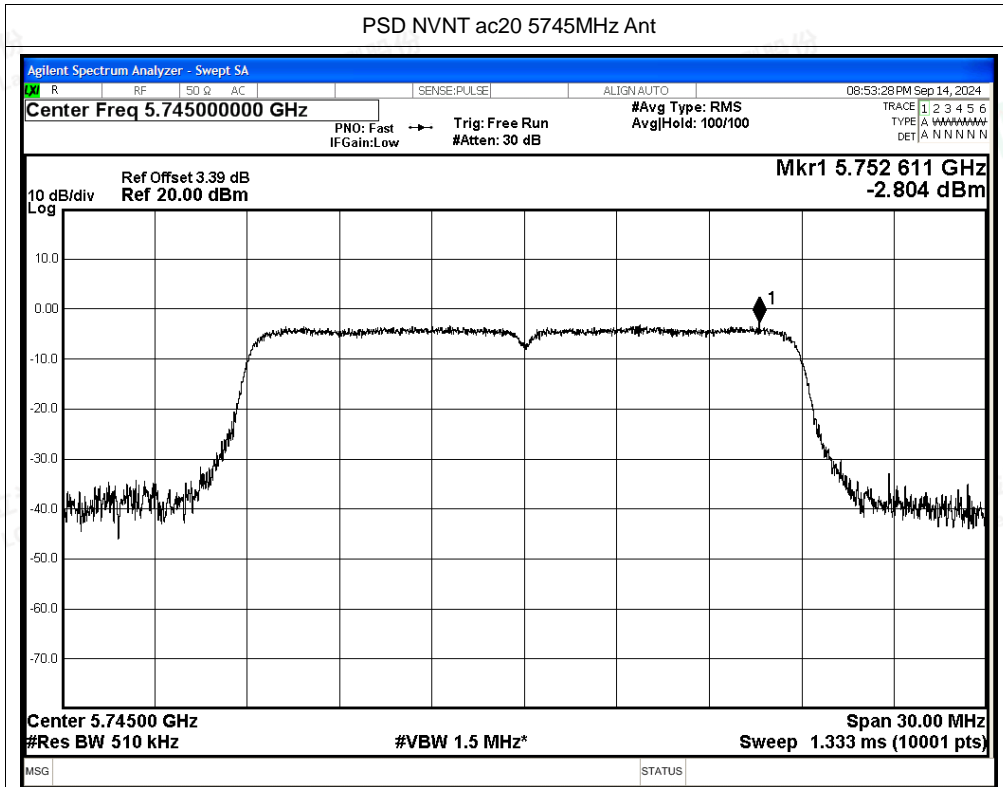
PSD NVNT a 5785MHz Ant

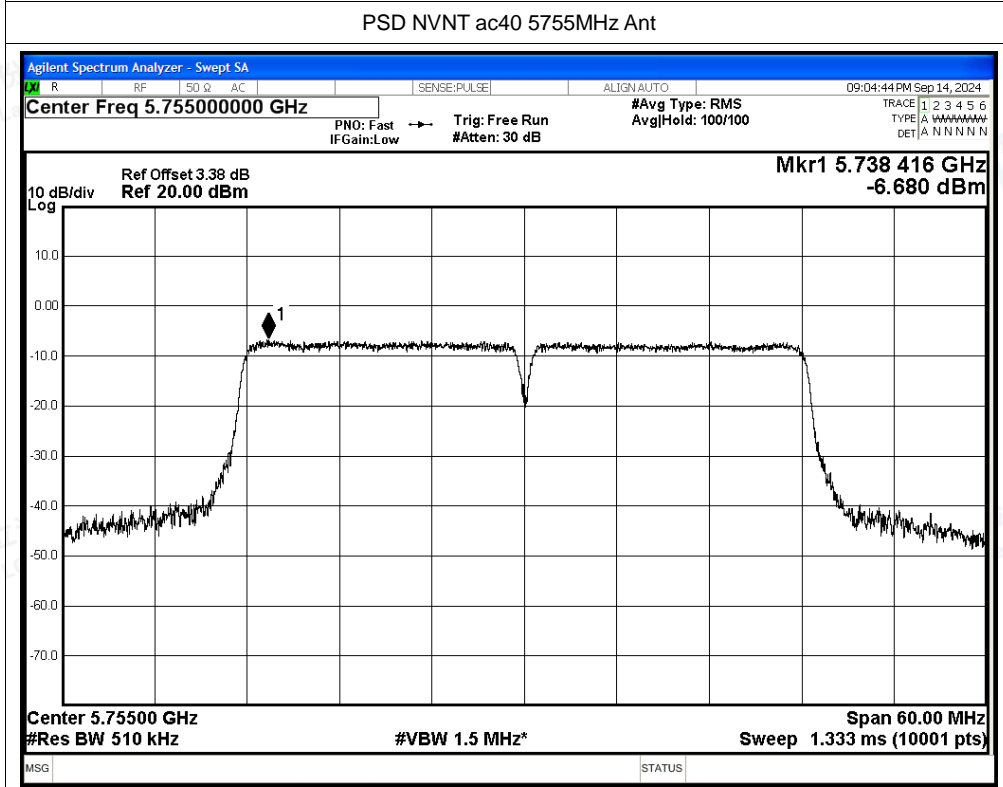
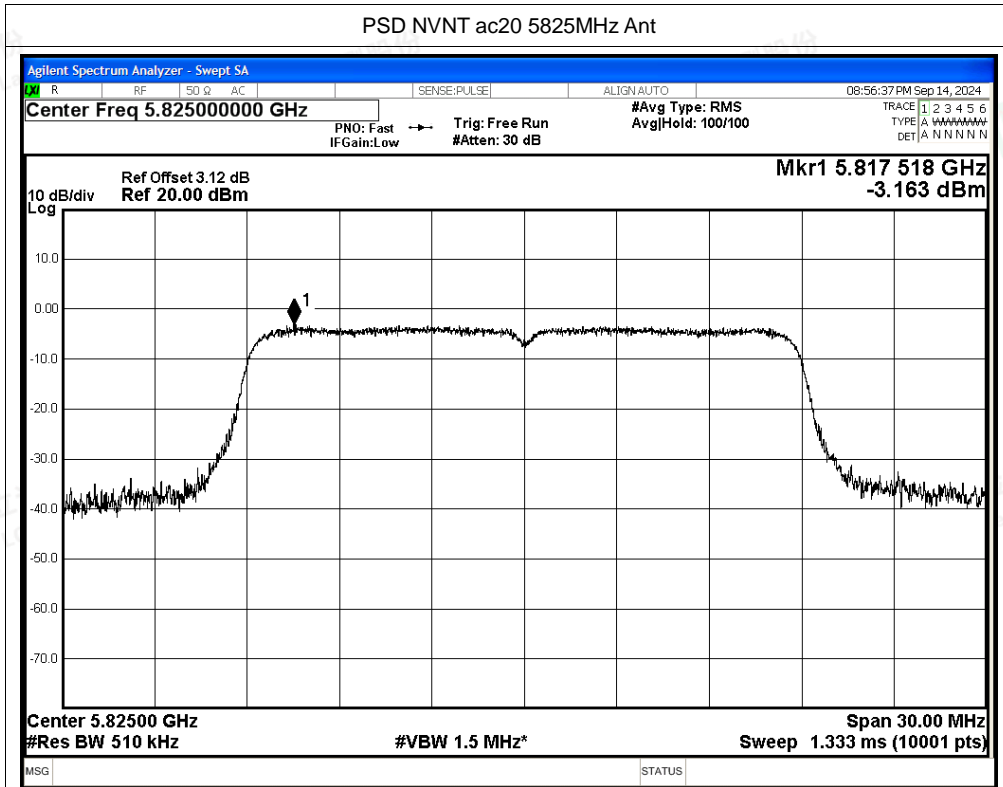


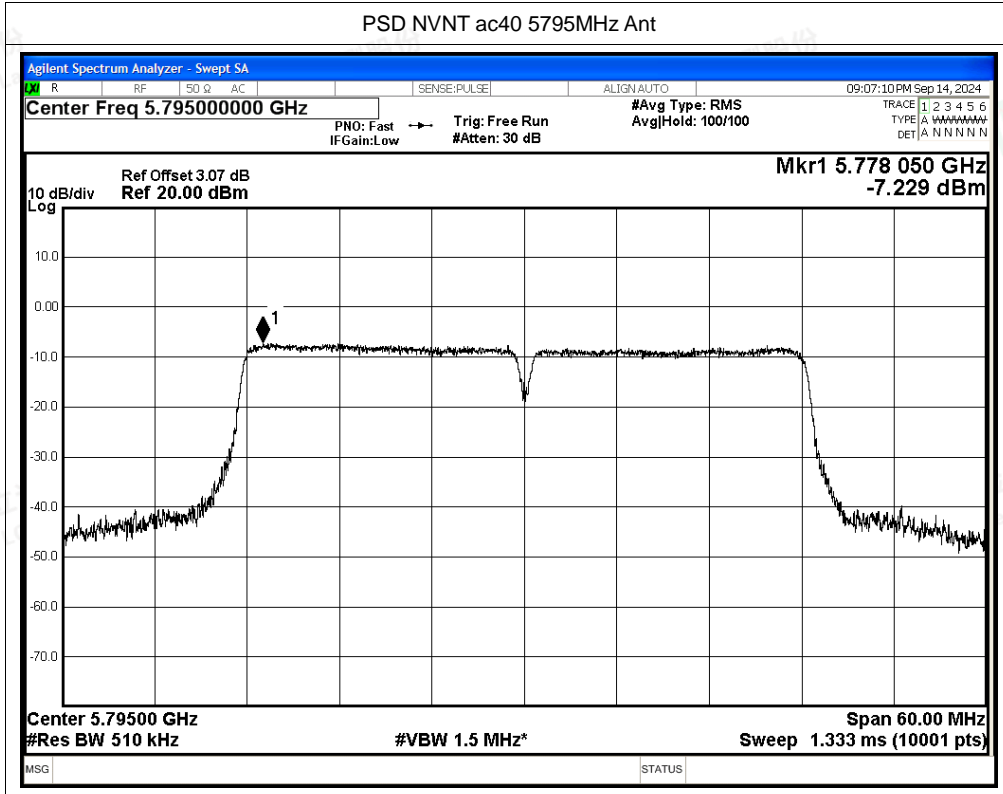














F.4 Restrict Band

Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	EIRP Power (dBm)	Detector	Limit (dBm)	Verdict
NVNT	a	5745	Ant	5650	-50.55	2	-	-48.55	Peak	-27	Pass
NVNT	a	5745	Ant	5650	-57.27	2	0.24	-55.03	Average	-27	Pass
NVNT	a	5745	Ant	5700	-45	2	-	-43	Peak	10	Pass
NVNT	a	5745	Ant	5700	-55.08	2	0.24	-52.84	Average	10	Pass
NVNT	a	5745	Ant	5720	-30.23	2	-	-28.23	Peak	15.6	Pass
NVNT	a	5745	Ant	5720	-46	2	0.24	-43.76	Average	15.6	Pass
NVNT	a	5745	Ant	5725	-23.36	2	-	-21.36	Peak	27	Pass
NVNT	a	5745	Ant	5725	-39.87	2	0.24	-37.63	Average	27	Pass
NVNT	a	5825	Ant	5850	-35.11	2	-	-33.11	Peak	27	Pass
NVNT	a	5825	Ant	5850	-47.1	2	0.24	-44.86	Average	27	Pass
NVNT	a	5825	Ant	5855	-39.86	2	-	-37.86	Peak	15.6	Pass
NVNT	a	5825	Ant	5855	-50.05	2	0.24	-47.81	Average	15.6	Pass
NVNT	a	5825	Ant	5875	-46.68	2	-	-44.68	Peak	10	Pass
NVNT	a	5825	Ant	5875	-55.27	2	0.24	-53.03	Average	10	Pass
NVNT	a	5825	Ant	5925	-47.22	2	-	-45.22	Peak	-27	Pass
NVNT	a	5825	Ant	5925	-56.84	2	0.24	-54.6	Average	-27	Pass
NVNT	n20	5745	Ant	5650	-48.92	2	-	-46.92	Peak	-27	Pass
NVNT	n20	5745	Ant	5650	-57.1	2	0.12	-54.98	Average	-27	Pass
NVNT	n20	5745	Ant	5700	-47.22	2	-	-45.22	Peak	10	Pass
NVNT	n20	5745	Ant	5700	-55.41	2	0.12	-53.29	Average	10	Pass
NVNT	n20	5745	Ant	5720	-33.44	2	-	-31.44	Peak	15.6	Pass
NVNT	n20	5745	Ant	5720	-45.09	2	0.12	-42.97	Average	15.6	Pass
NVNT	n20	5745	Ant	5725	-23.84	2	-	-21.84	Peak	27	Pass
NVNT	n20	5745	Ant	5725	-41.18	2	0.12	-39.06	Average	27	Pass
NVNT	n20	5825	Ant	5850	-34.74	2	-	-32.74	Peak	27	Pass
NVNT	n20	5825	Ant	5850	-45.65	2	0.12	-43.53	Average	27	Pass
NVNT	n20	5825	Ant	5855	-41.14	2	-	-39.14	Peak	15.6	Pass
NVNT	n20	5825	Ant	5855	-52.42	2	0.12	-50.3	Average	15.6	Pass
NVNT	n20	5825	Ant	5875	-45.96	2	-	-43.96	Peak	10	Pass
NVNT	n20	5825	Ant	5875	-55.59	2	0.12	-53.47	Average	10	Pass
NVNT	n20	5825	Ant	5925	-48.35	2	-	-46.35	Peak	-27	Pass
NVNT	n20	5825	Ant	5925	-56.17	2	0.12	-54.05	Average	-27	Pass
NVNT	n40	5755	Ant	5650	-49.97	2	-	-47.97	Peak	-27	Pass
NVNT	n40	5755	Ant	5650	-56.81	2	0.12	-54.69	Average	-27	Pass
NVNT	n40	5755	Ant	5700	-41.55	2	-	-39.55	Peak	10	Pass
NVNT	n40	5755	Ant	5700	-53	2	0.12	-50.88	Average	10	Pass
NVNT	n40	5755	Ant	5720	-32.95	2	-	-30.95	Peak	15.6	Pass
NVNT	n40	5755	Ant	5720	-45.91	2	0.12	-43.79	Average	15.6	Pass



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NVNT	n40	5755	Ant	5725	-28.15	2	-	-26.15	Peak	27	Pass
NVNT	n40	5755	Ant	5725	-40.85	2	0.12	-38.73	Average	27	Pass
NVNT	n40	5795	Ant	5850	-44.96	2	-	-42.96	Peak	27	Pass
NVNT	n40	5795	Ant	5850	-54.17	2	0.12	-52.05	Average	27	Pass
NVNT	n40	5795	Ant	5855	-46	2	-	-44	Peak	15.6	Pass
NVNT	n40	5795	Ant	5855	-54.95	2	0.12	-52.83	Average	15.6	Pass
NVNT	n40	5795	Ant	5875	-47.94	2	-	-45.94	Peak	10	Pass
NVNT	n40	5795	Ant	5875	-57.41	2	0.12	-55.29	Average	10	Pass
NVNT	n40	5795	Ant	5925	-46.41	2	-	-44.41	Peak	-27	Pass
NVNT	n40	5795	Ant	5925	-57.54	2	0.12	-55.42	Average	-27	Pass
NVNT	ac20	5745	Ant	5650	-49.5	2	-	-47.5	Peak	-27	Pass
NVNT	ac20	5745	Ant	5650	-57.57	2	0.12	-55.45	Average	-27	Pass
NVNT	ac20	5745	Ant	5700	-46.42	2	-	-44.42	Peak	10	Pass
NVNT	ac20	5745	Ant	5700	-54.85	2	0.12	-52.73	Average	10	Pass
NVNT	ac20	5745	Ant	5720	-33.51	2	-	-31.51	Peak	15.6	Pass
NVNT	ac20	5745	Ant	5720	-46.6	2	0.12	-44.48	Average	15.6	Pass
NVNT	ac20	5745	Ant	5725	-26.47	2	-	-24.47	Peak	27	Pass
NVNT	ac20	5745	Ant	5725	-41.67	2	0.12	-39.55	Average	27	Pass
NVNT	ac20	5825	Ant	5850	-33.19	2	-	-31.19	Peak	27	Pass
NVNT	ac20	5825	Ant	5850	-47.47	2	0.12	-45.35	Average	27	Pass
NVNT	ac20	5825	Ant	5855	-38.22	2	-	-36.22	Peak	15.6	Pass
NVNT	ac20	5825	Ant	5855	-52.24	2	0.12	-50.12	Average	15.6	Pass
NVNT	ac20	5825	Ant	5875	-49.82	2	-	-47.82	Peak	10	Pass
NVNT	ac20	5825	Ant	5875	-56.23	2	0.12	-54.11	Average	10	Pass
NVNT	ac20	5825	Ant	5925	-47.98	2	-	-45.98	Peak	-27	Pass
NVNT	ac20	5825	Ant	5925	-56.58	2	0.12	-54.46	Average	-27	Pass
NVNT	ac40	5755	Ant	5650	-49.89	2	-	-47.89	Peak	-27	Pass
NVNT	ac40	5755	Ant	5650	-57.21	2	0.12	-55.09	Average	-27	Pass
NVNT	ac40	5755	Ant	5700	-45.55	2	-	-43.55	Peak	10	Pass
NVNT	ac40	5755	Ant	5700	-54.52	2	0.12	-52.4	Average	10	Pass
NVNT	ac40	5755	Ant	5720	-29.79	2	-	-27.79	Peak	15.6	Pass
NVNT	ac40	5755	Ant	5720	-46.14	2	0.12	-44.02	Average	15.6	Pass
NVNT	ac40	5755	Ant	5725	-27.8	2	-	-25.8	Peak	27	Pass
NVNT	ac40	5755	Ant	5725	-43	2	0.12	-40.88	Average	27	Pass
NVNT	ac40	5795	Ant	5850	-49.86	2	-	-47.86	Peak	27	Pass
NVNT	ac40	5795	Ant	5850	-56.76	2	0.12	-54.64	Average	27	Pass
NVNT	ac40	5795	Ant	5855	-49.64	2	-	-47.64	Peak	15.6	Pass
NVNT	ac40	5795	Ant	5855	-56.69	2	0.12	-54.57	Average	15.6	Pass
NVNT	ac40	5795	Ant	5875	-51.35	2	-	-49.35	Peak	10	Pass
NVNT	ac40	5795	Ant	5875	-57.76	2	0.12	-55.64	Average	10	Pass
NVNT	ac40	5795	Ant	5925	-50.32	2	-	-48.32	Peak	-27	Pass
NVNT	ac40	5795	Ant	5925	-57.99	2	0.12	-55.87	Average	-27	Pass



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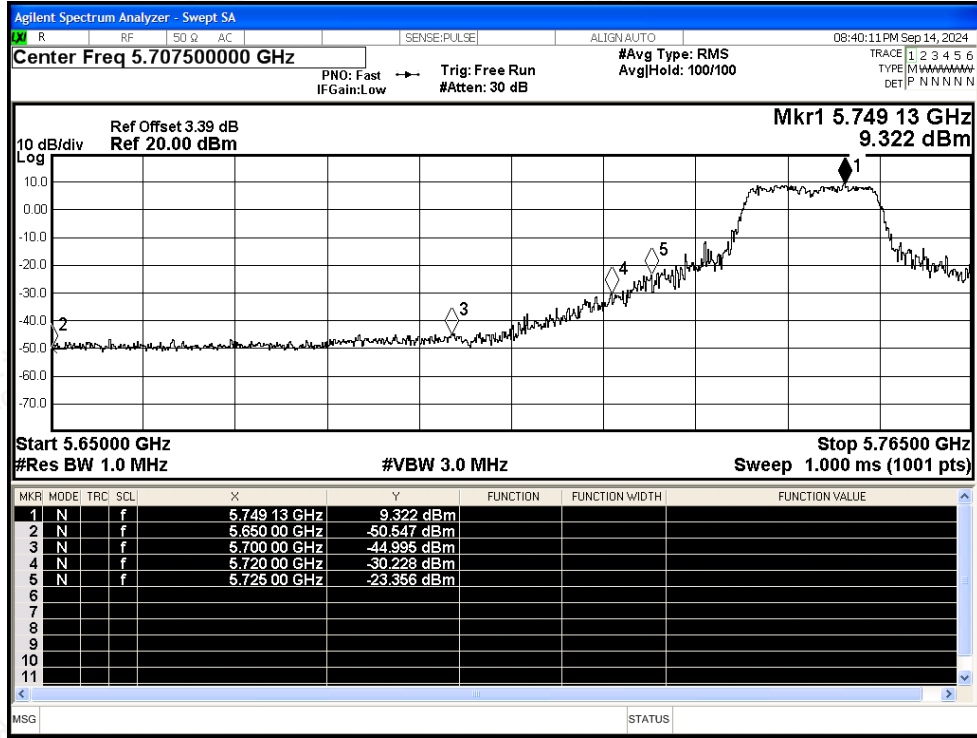
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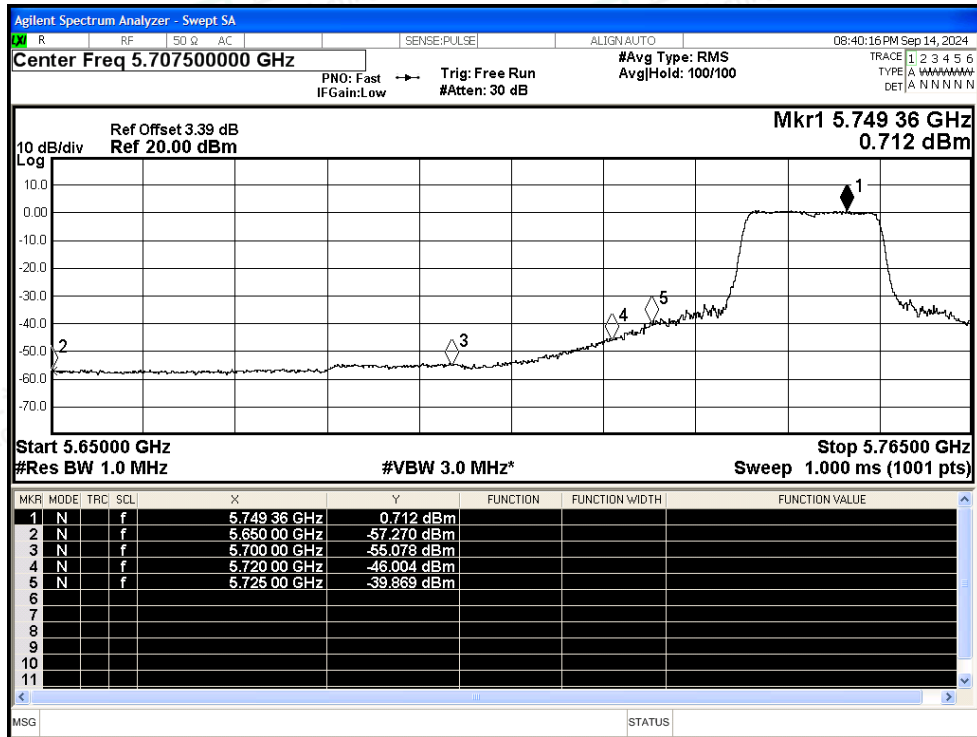


Test Graphs

Restrict Band NVNT a 5745MHz Ant Peak

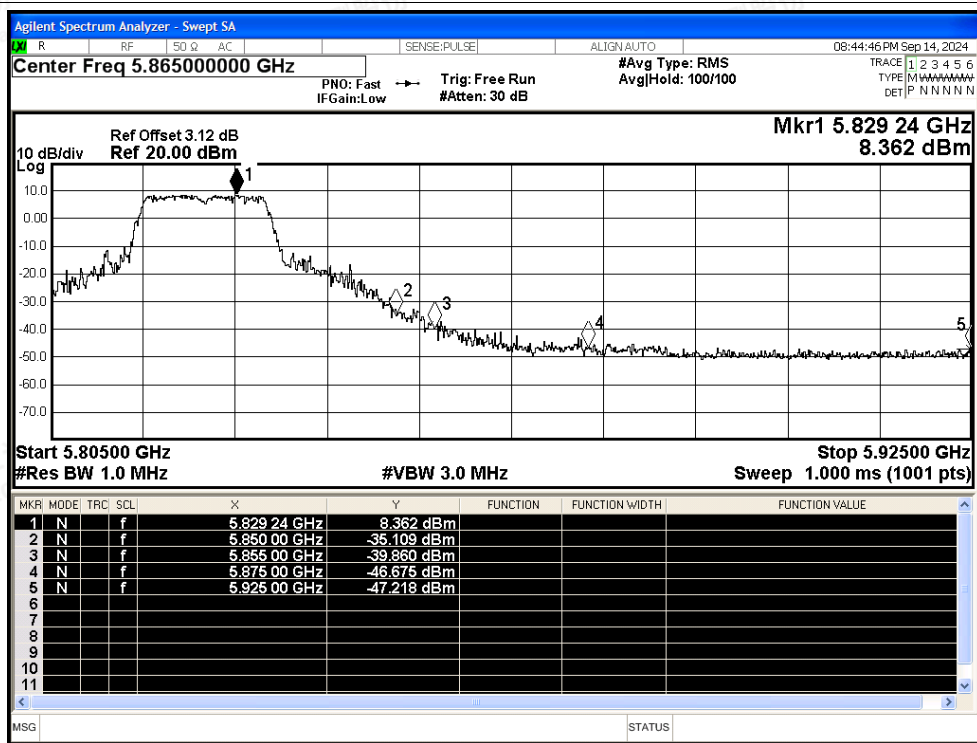


Restrict Band NVNT a 5745MHz Ant Average

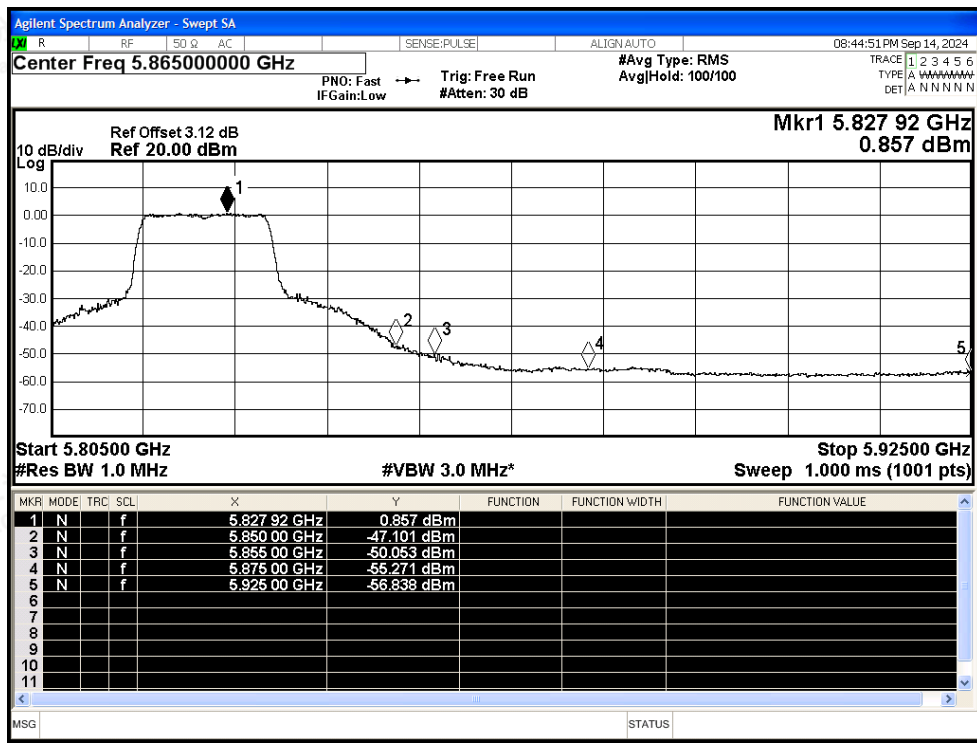




Restrict Band NVNT a 5825MHz Ant Peak

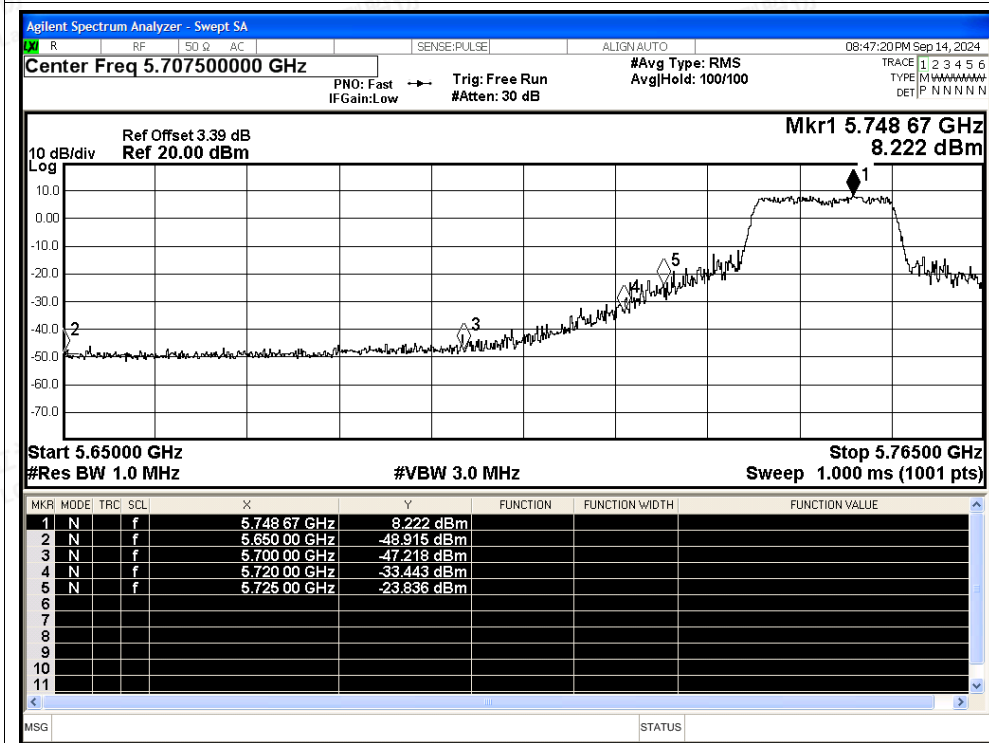


Restrict Band NVNT a 5825MHz Ant Average

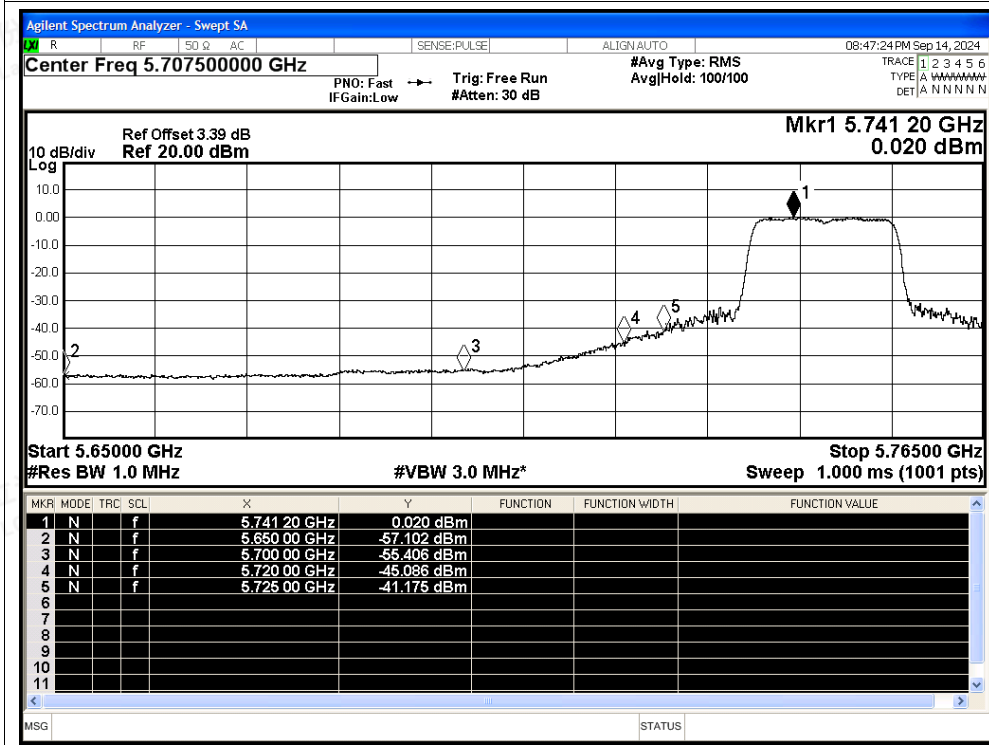




Restrict Band NVNT n20 5745MHz Ant Peak

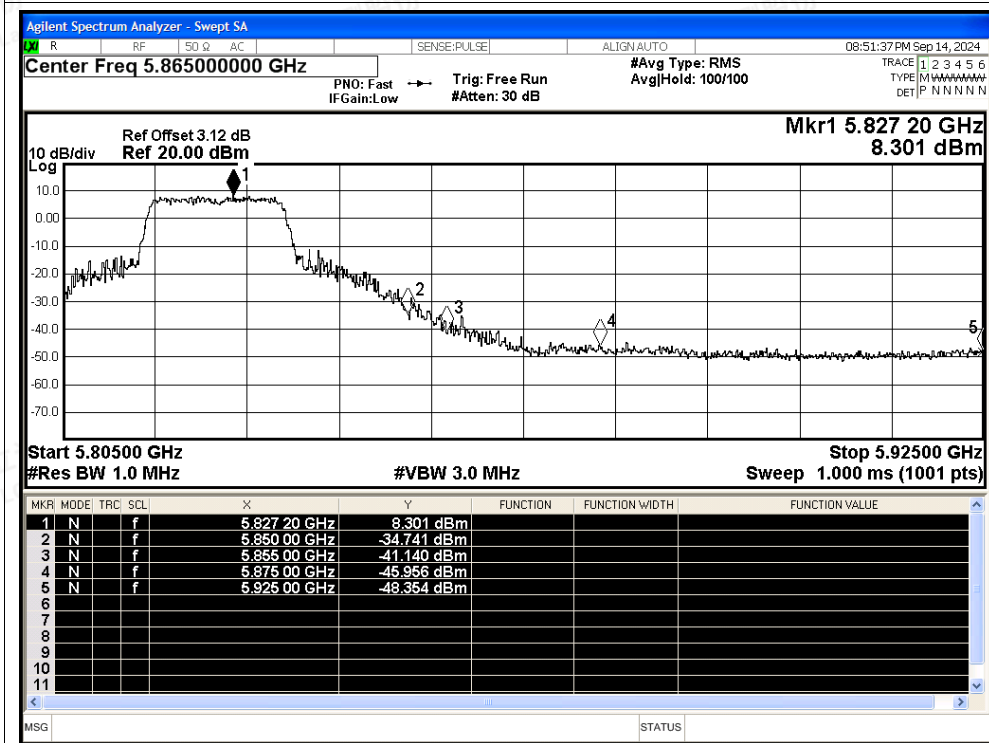


Restrict Band NVNT n20 5745MHz Ant Average

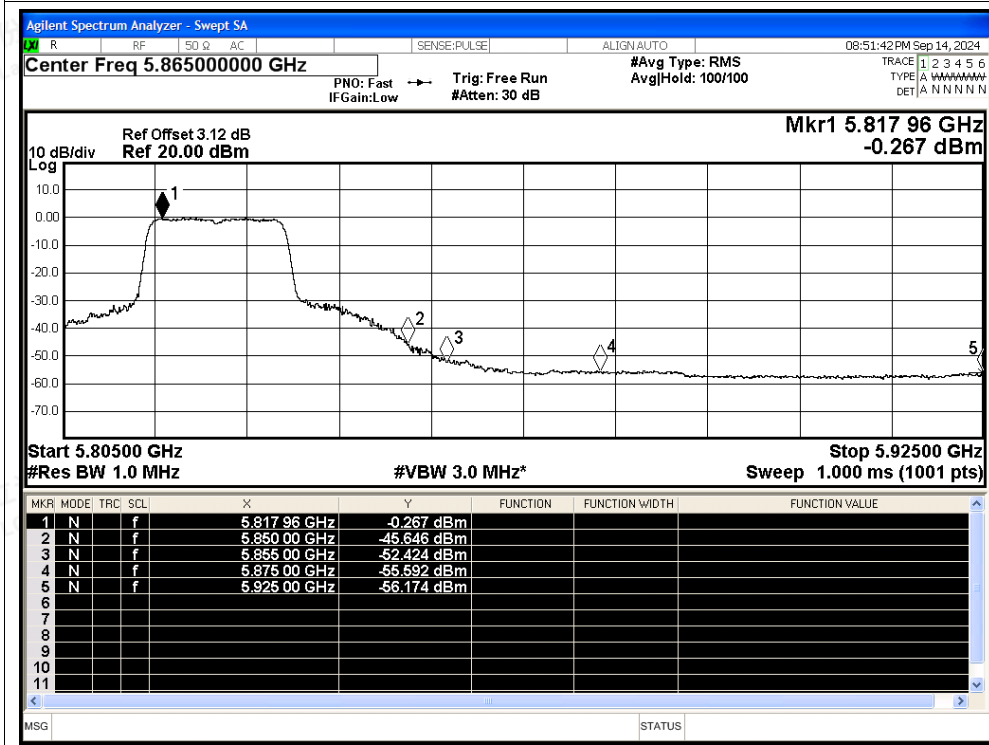




Restrict Band NVNT n20 5825MHz Ant Peak

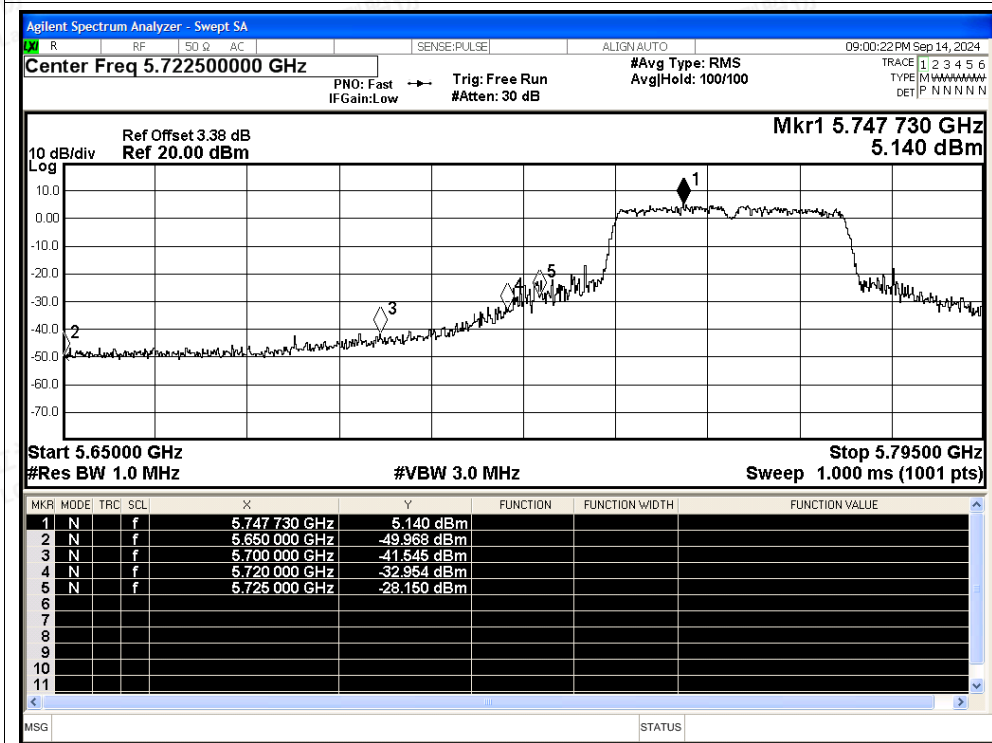


Restrict Band NVNT n20 5825MHz Ant Average

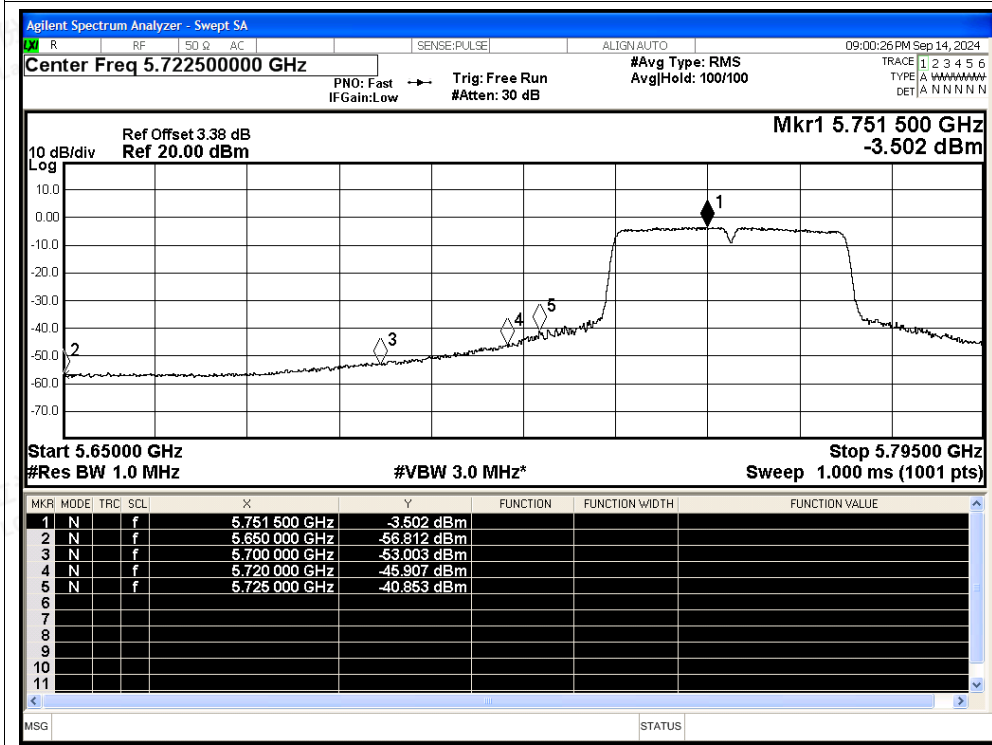




Restrict Band NVNT n40 5755MHz Ant Peak



Restrict Band NVNT n40 5755MHz Ant Average



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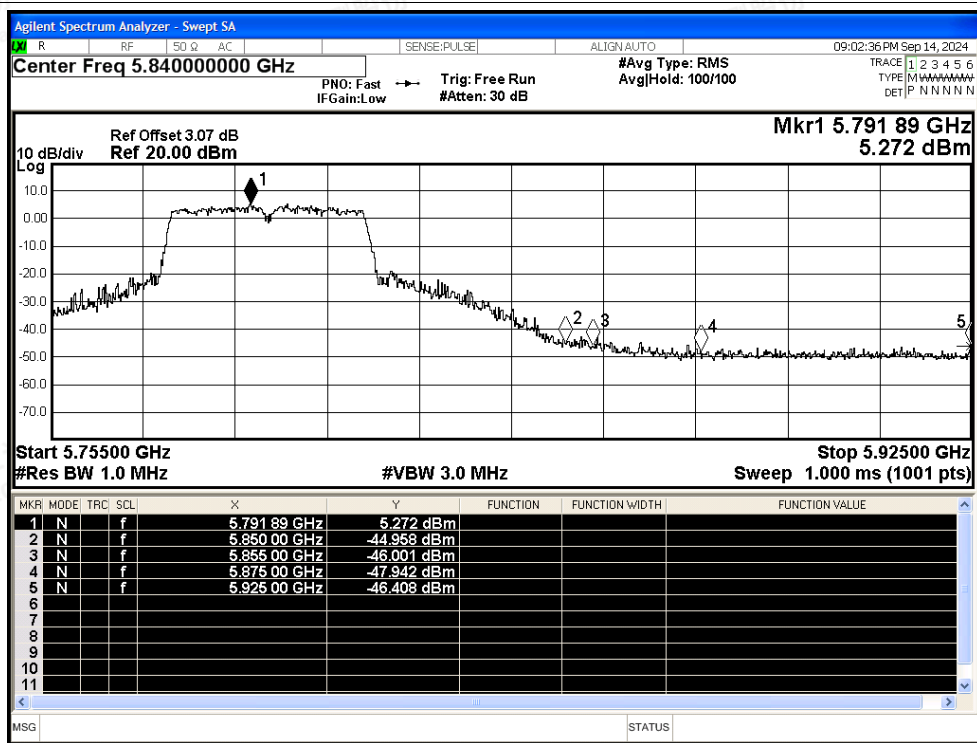
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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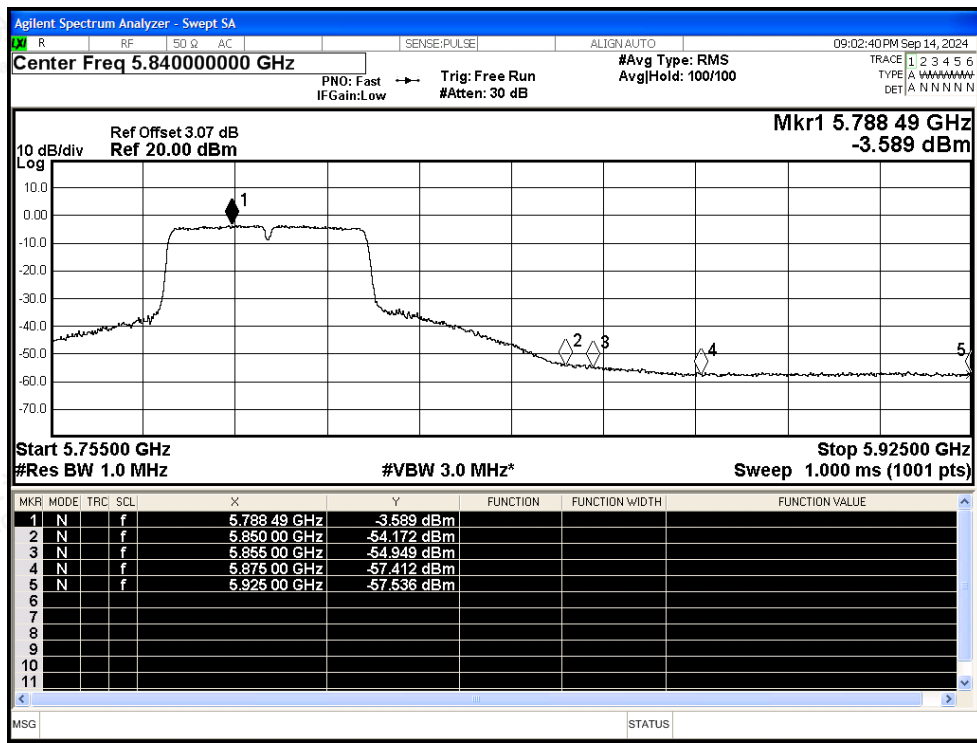
Scan code to check authenticity



Restrict Band NVNT n40 5795MHz Ant Peak

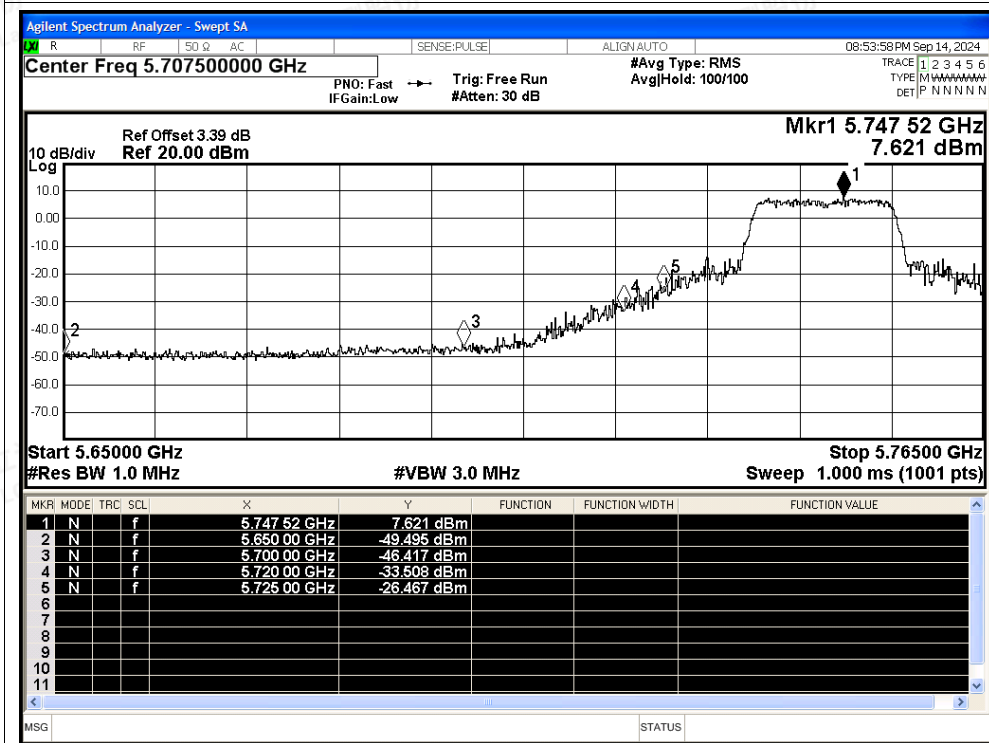


Restrict Band NVNT n40 5795MHz Ant Average

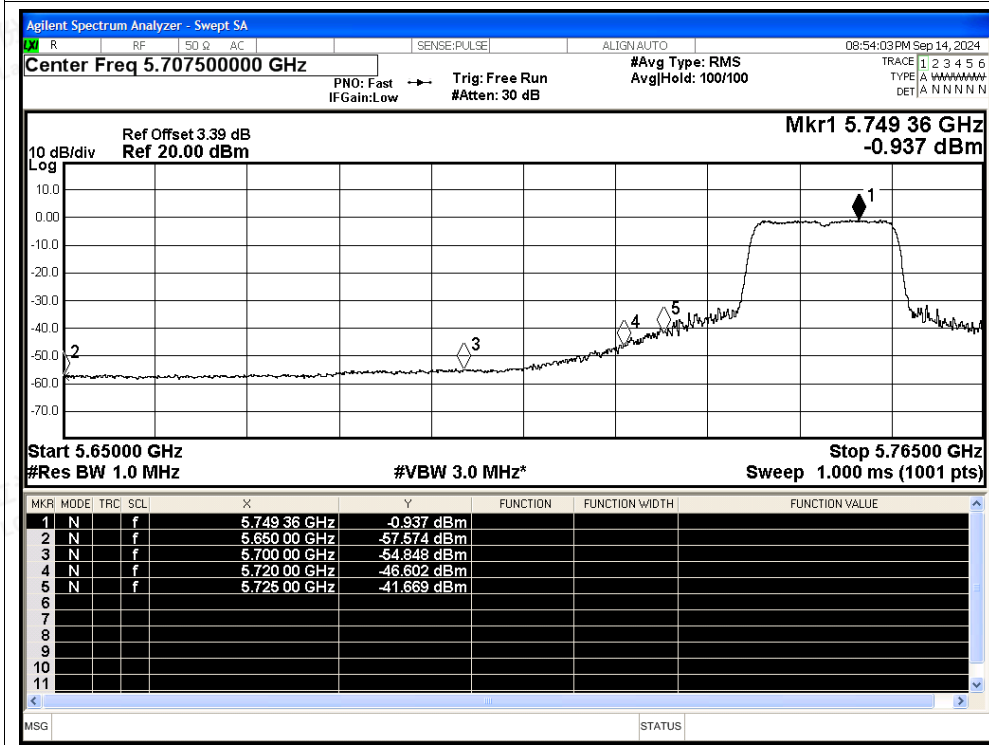




Restrict Band NVNT ac20 5745MHz Ant Peak

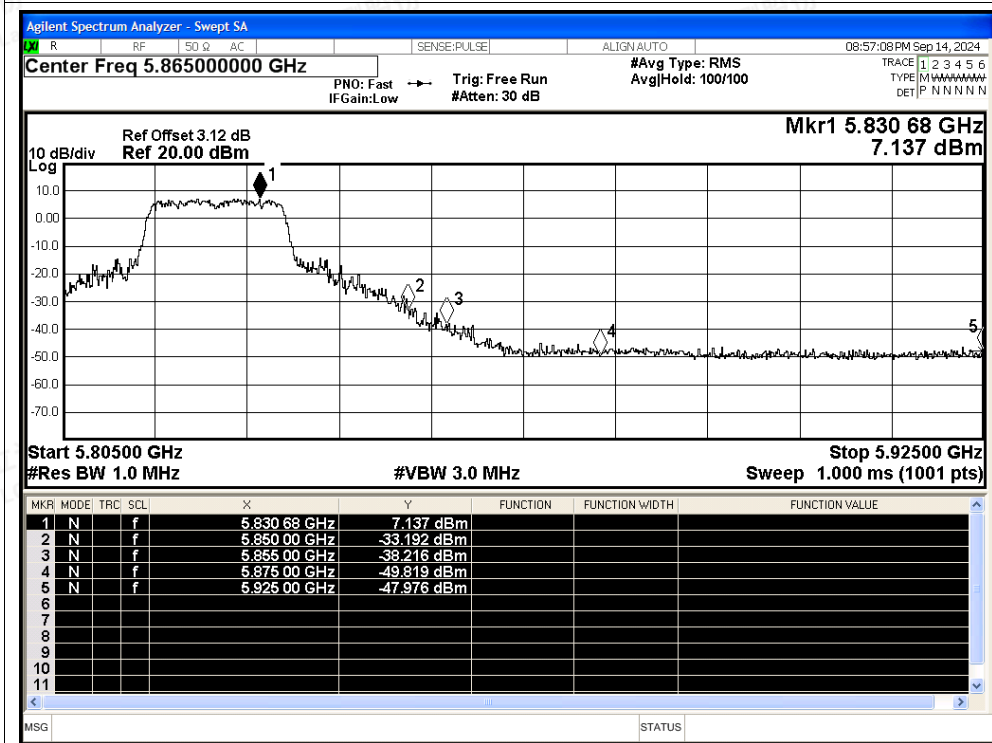


Restrict Band NVNT ac20 5745MHz Ant Average

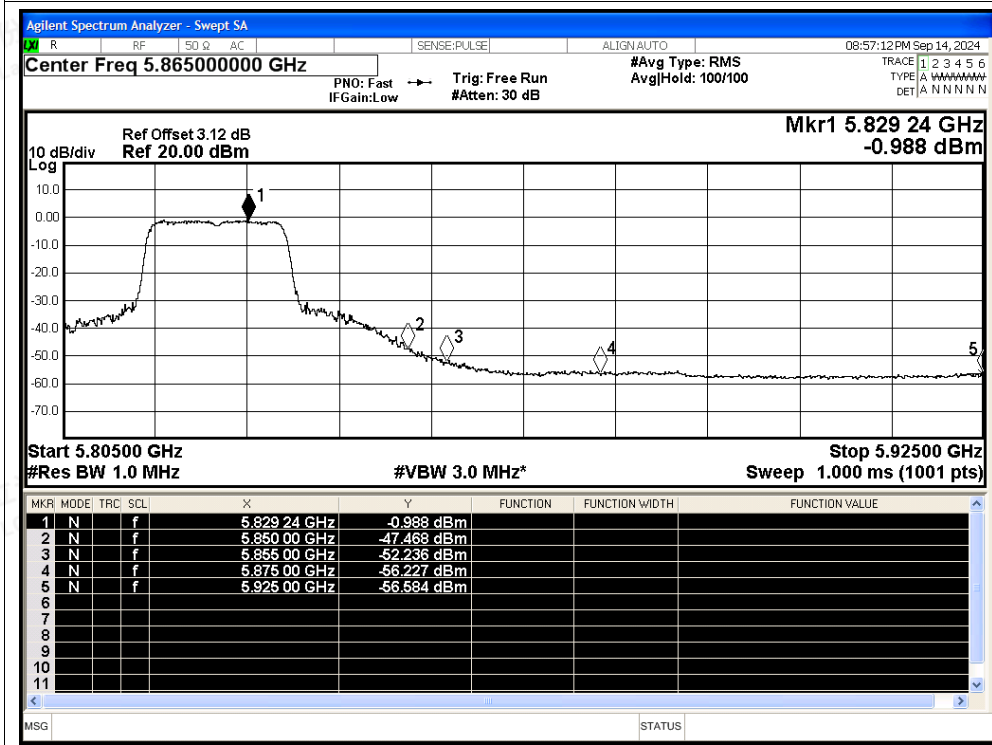




Restrict Band NVNT ac20 5825MHz Ant Peak

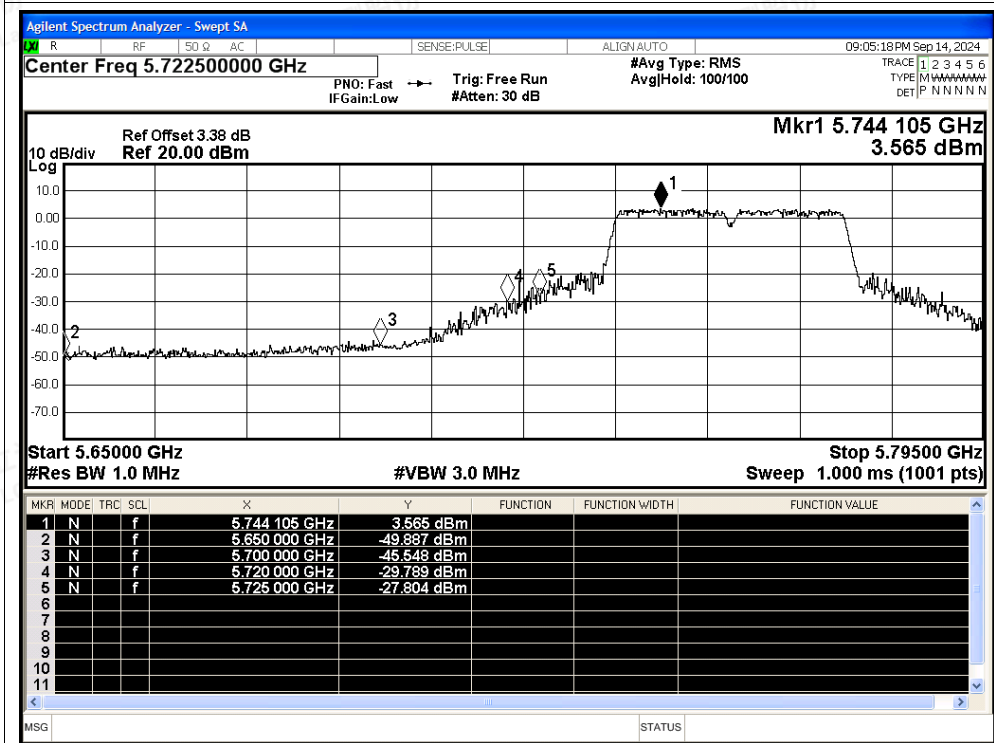


Restrict Band NVNT ac20 5825MHz Ant Average

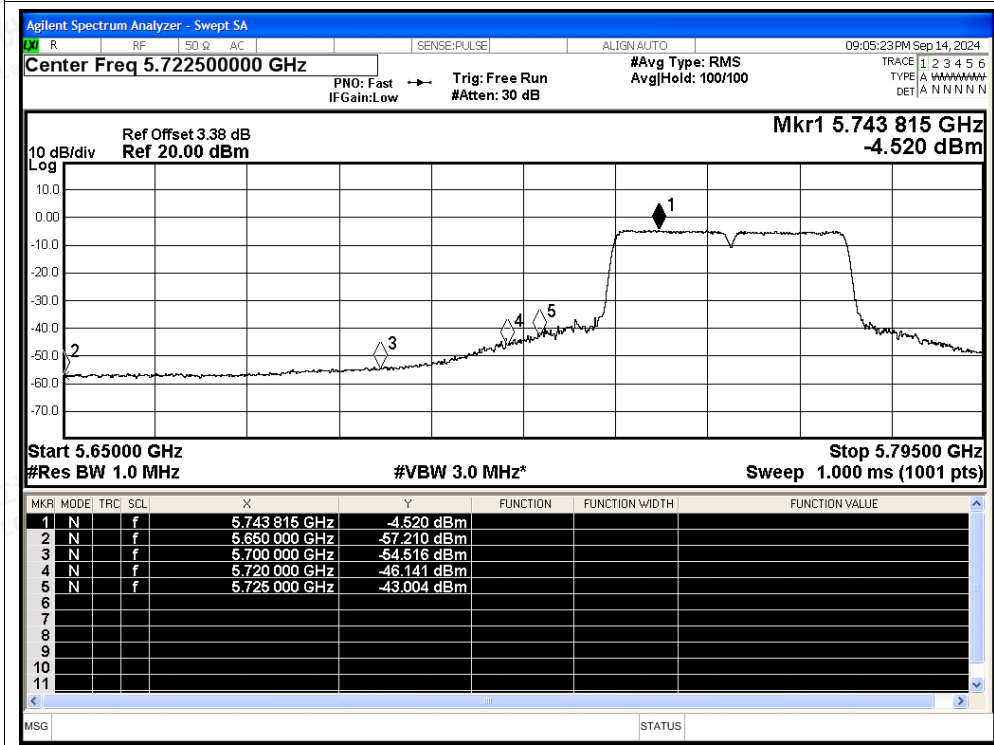




Restrict Band NVNT ac40 5755MHz Ant Peak

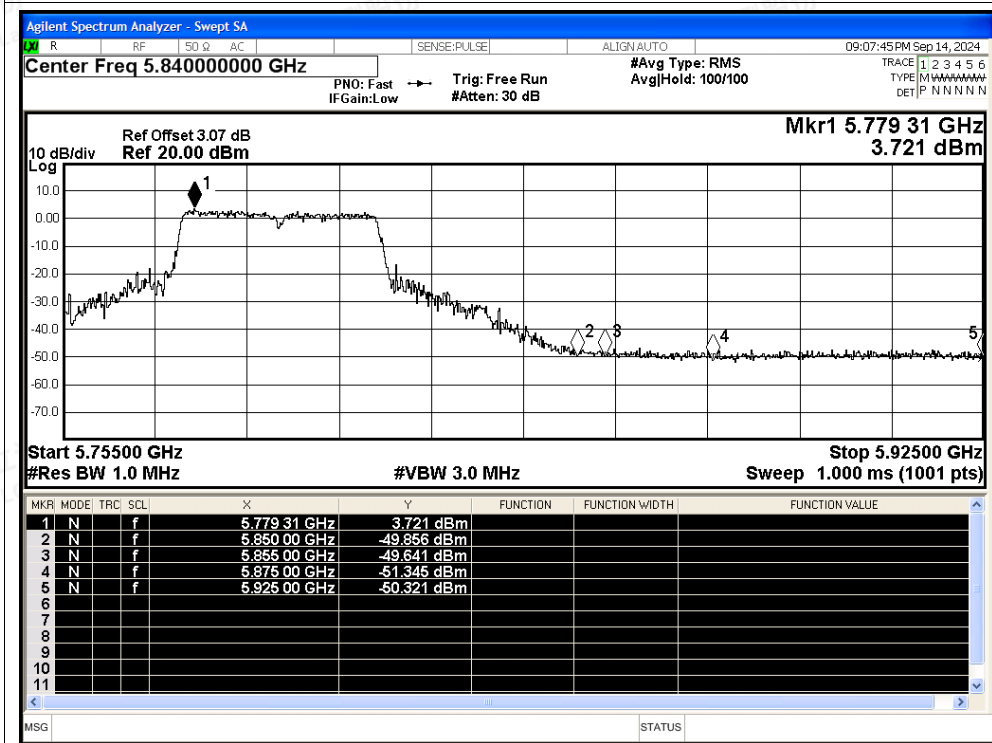


Restrict Band NVNT ac40 5755MHz Ant Average

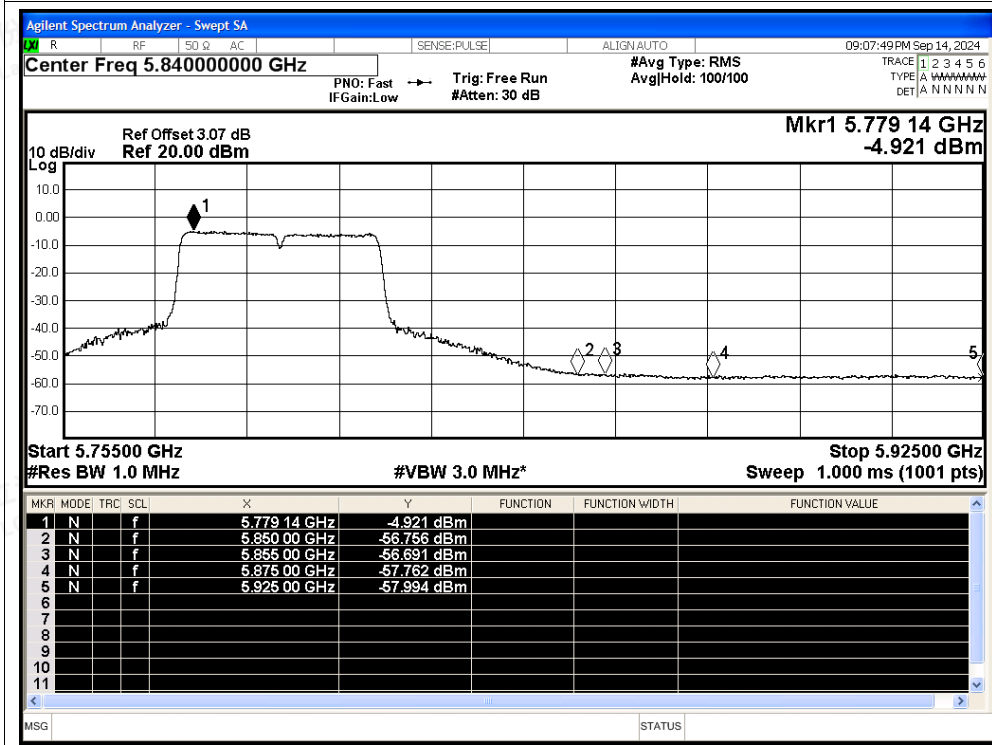




Restrict Band NVNT ac40 5795MHz Ant Peak



Restrict Band NVNT ac40 5795MHz Ant Average





F.5 Frequency Stability

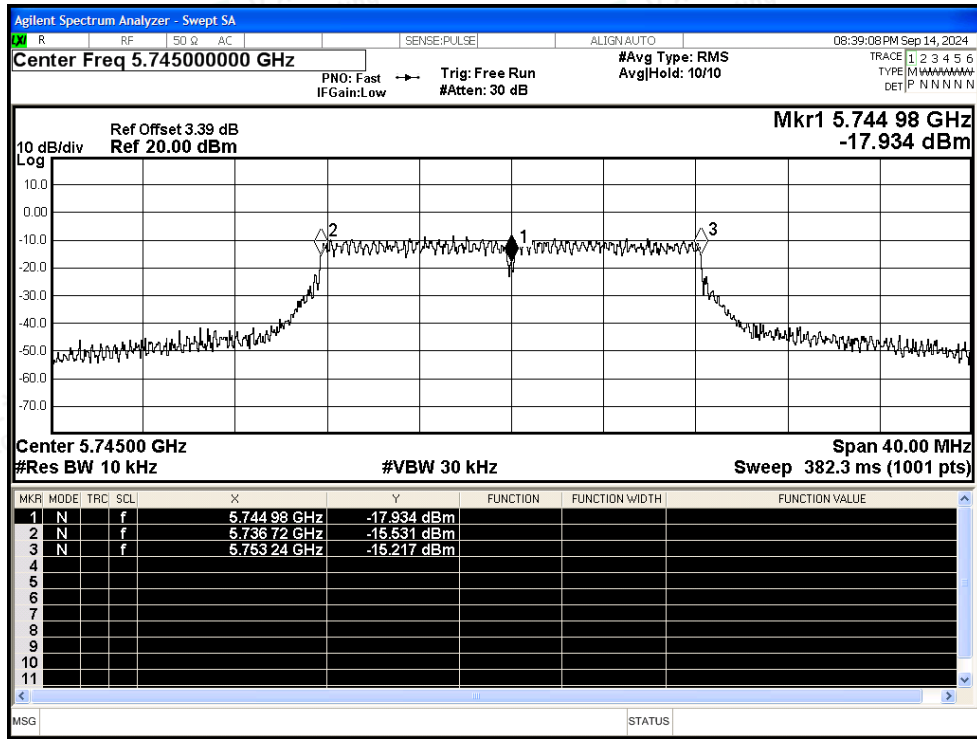
Condition	Mode	Frequency (MHz)	Antenna	Measured Frequency (MHz)	Frequency Error (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
NVNT	a	5745	Ant	5744.98	-20000	-3.48	25	Pass
NVNT	a	5785	Ant	5785	0	0	25	Pass
NVNT	a	5825	Ant	5824.98	-20000	-3.43	25	Pass
NVNT	n20	5745	Ant	5744.98	-20000	-3.48	25	Pass
NVNT	n20	5785	Ant	5784.98	-20000	-3.46	25	Pass
NVNT	n20	5825	Ant	5824.96	-40000	-6.87	25	Pass
NVNT	n40	5755	Ant	5755	0	0	25	Pass
NVNT	n40	5795	Ant	5794.96	-40000	-6.9	25	Pass
NVNT	ac20	5745	Ant	5745	0	0	25	Pass
NVNT	ac20	5785	Ant	5785	0	0	25	Pass
NVNT	ac20	5825	Ant	5825	0	0	25	Pass
NVNT	ac40	5755	Ant	5754.96	-40000	-6.95	25	Pass
NVNT	ac40	5795	Ant	5795	0	0	25	Pass



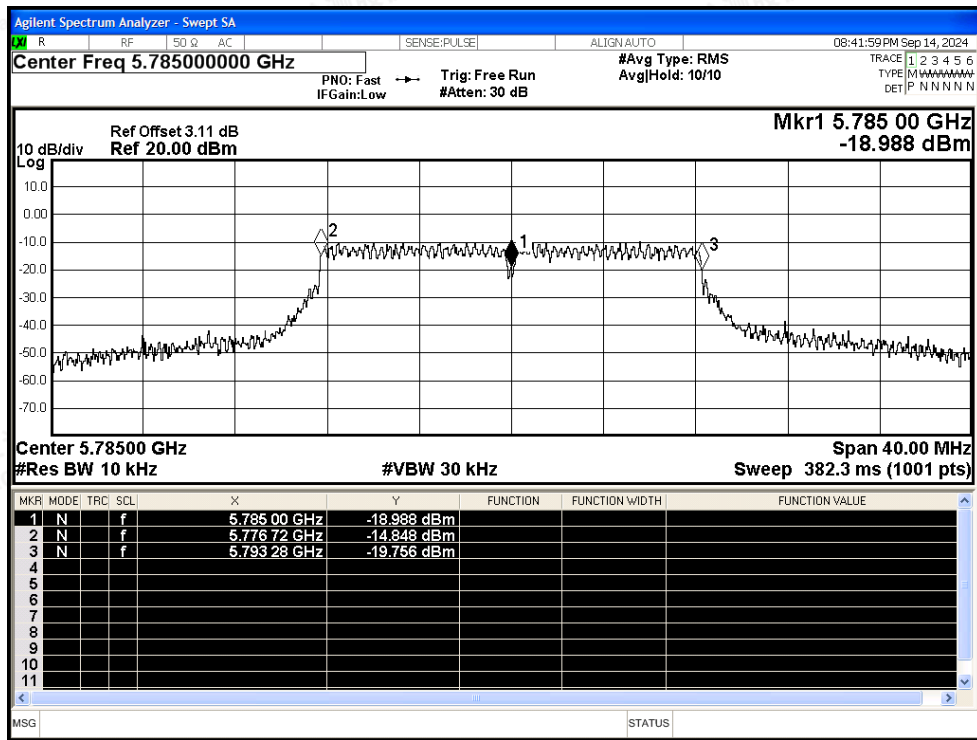


Test Graphs

Freq. Stability NVNT a 5745MHz Ant

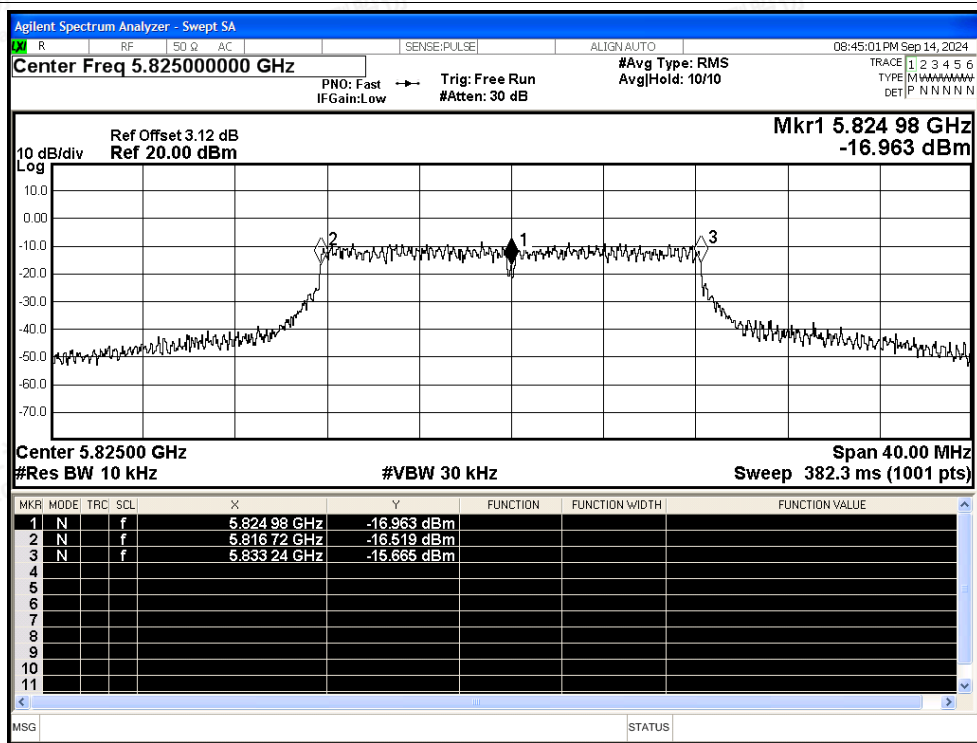


Freq. Stability NVNT a 5785MHz Ant

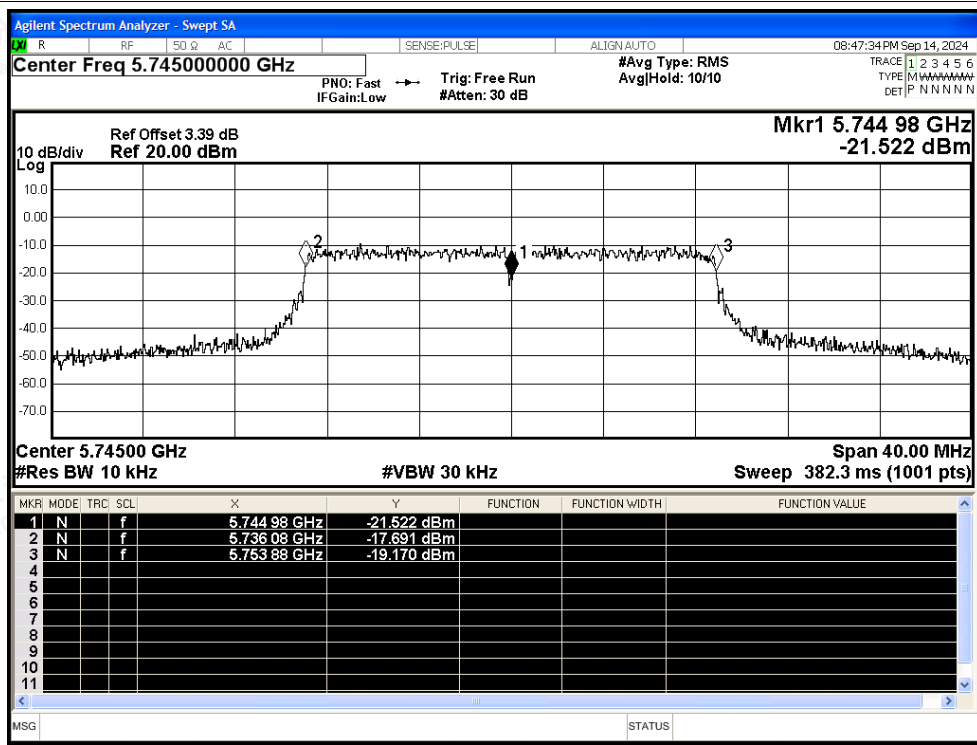




Freq. Stability NVNT a 5825MHz Ant

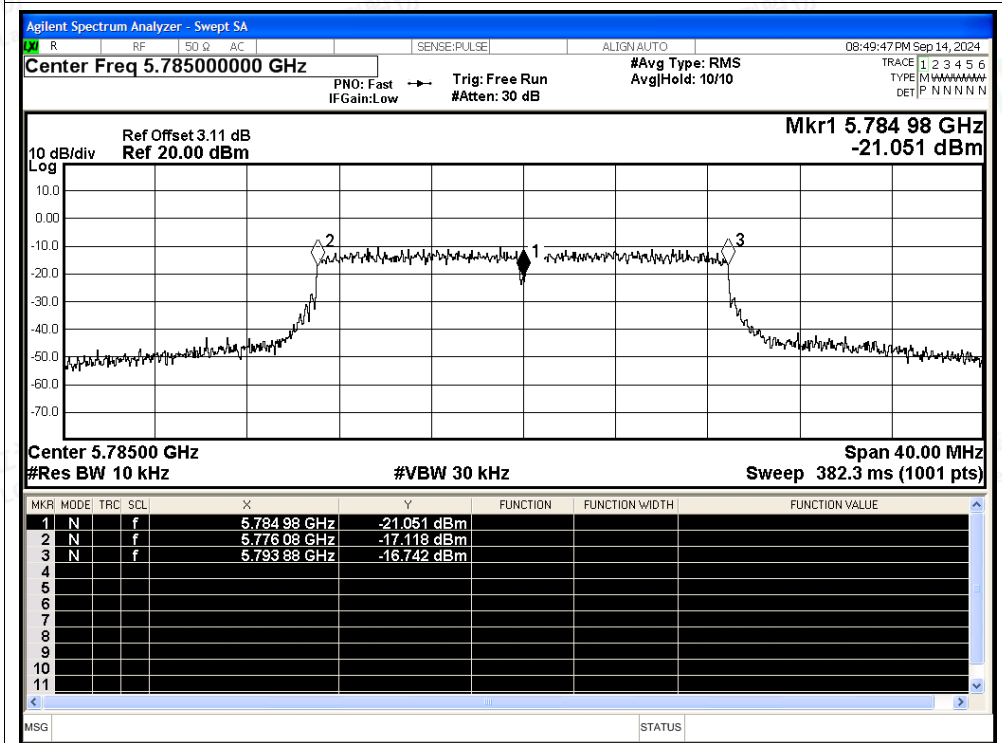


Freq. Stability NVNT n20 5745MHz Ant

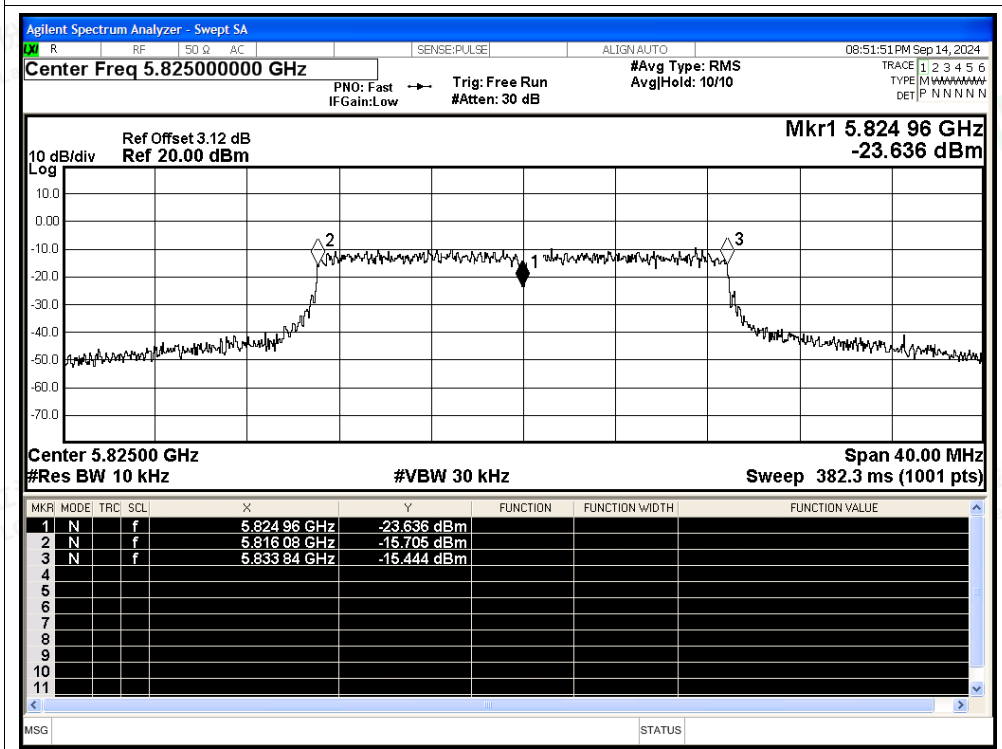




Freq. Stability NVNT n20 5785MHz Ant

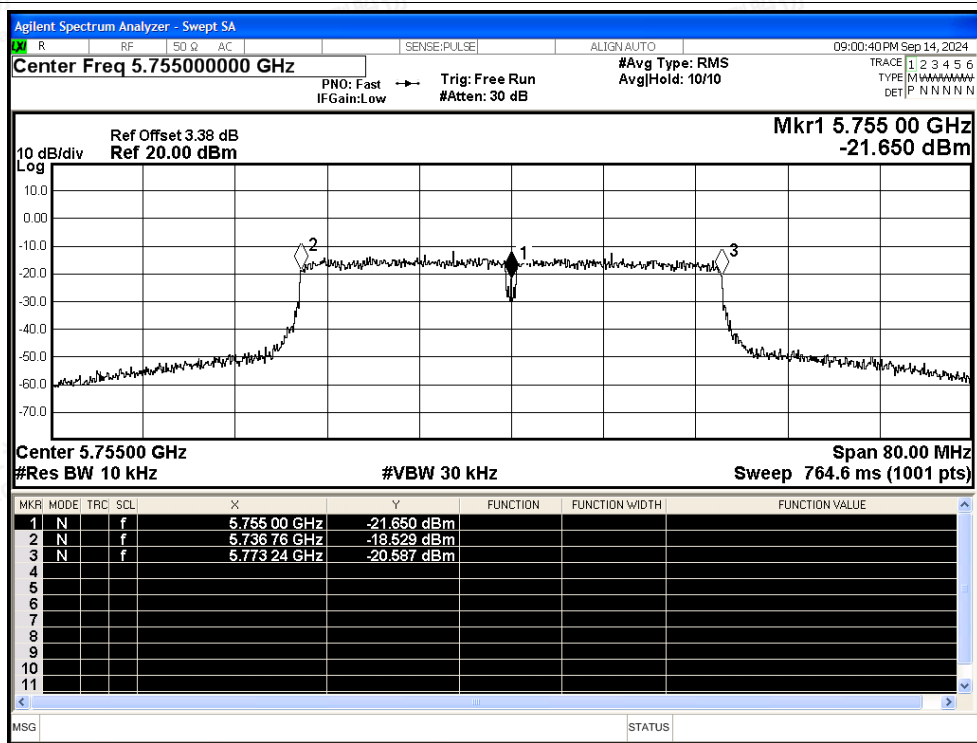


Freq. Stability NVNT n20 5825MHz Ant

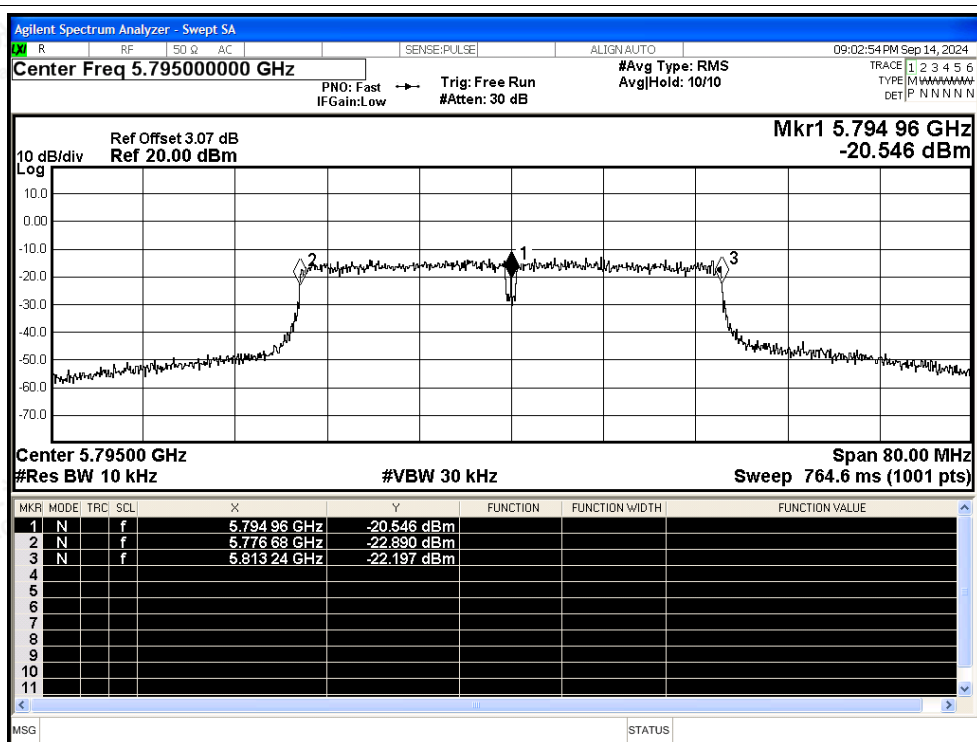




Freq. Stability NVNT n40 5755MHz Ant

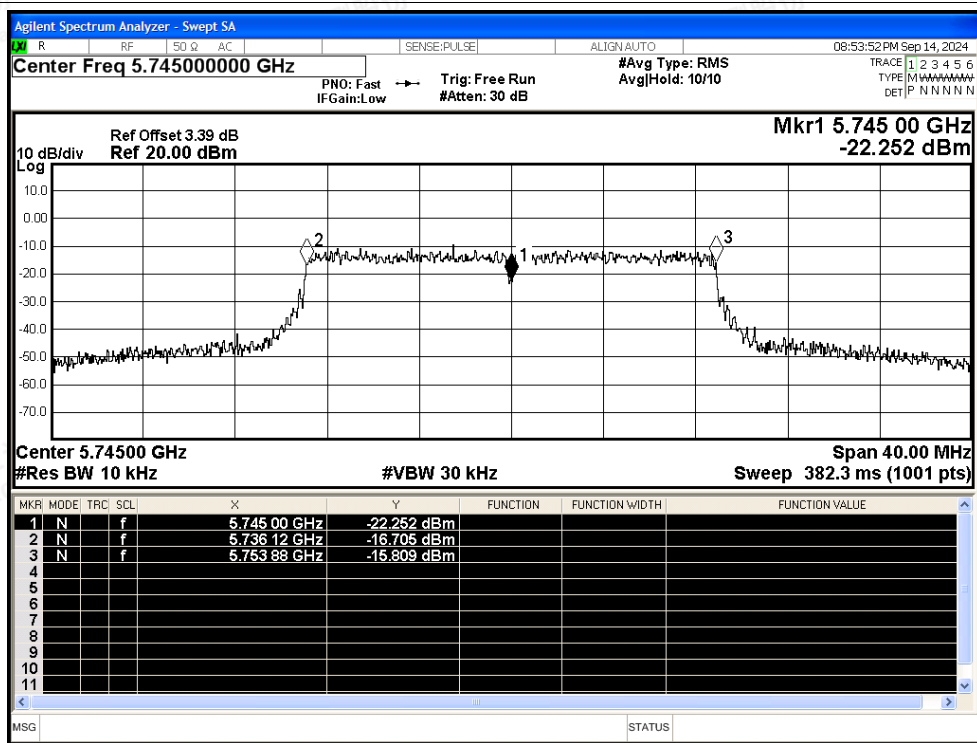


Freq. Stability NVNT n40 5795MHz Ant

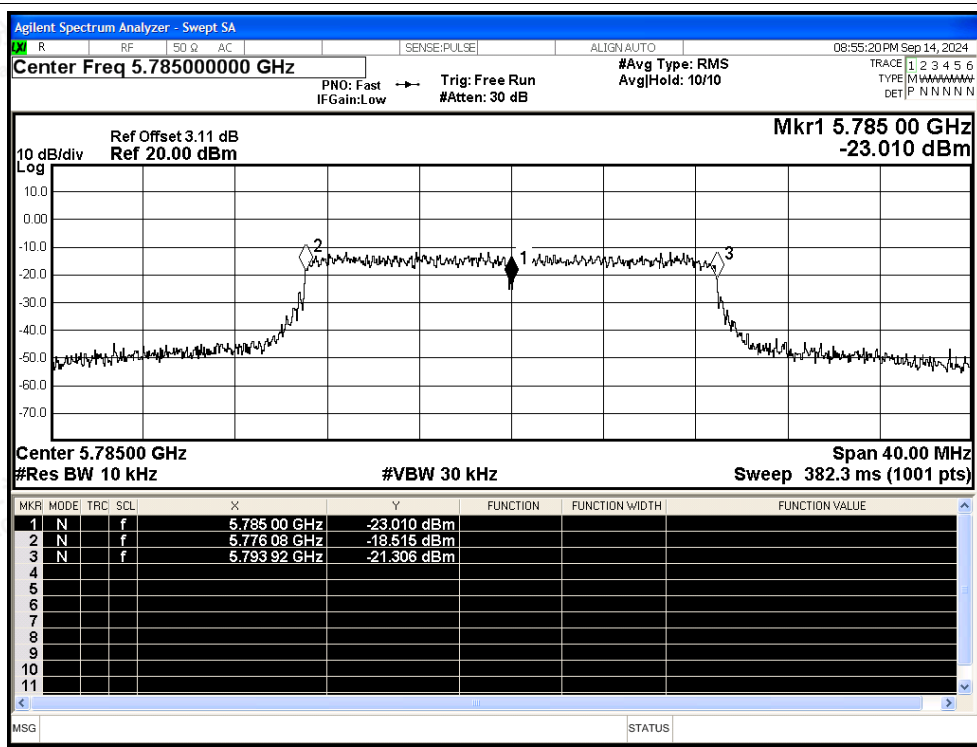




Freq. Stability NVNT ac20 5745MHz Ant

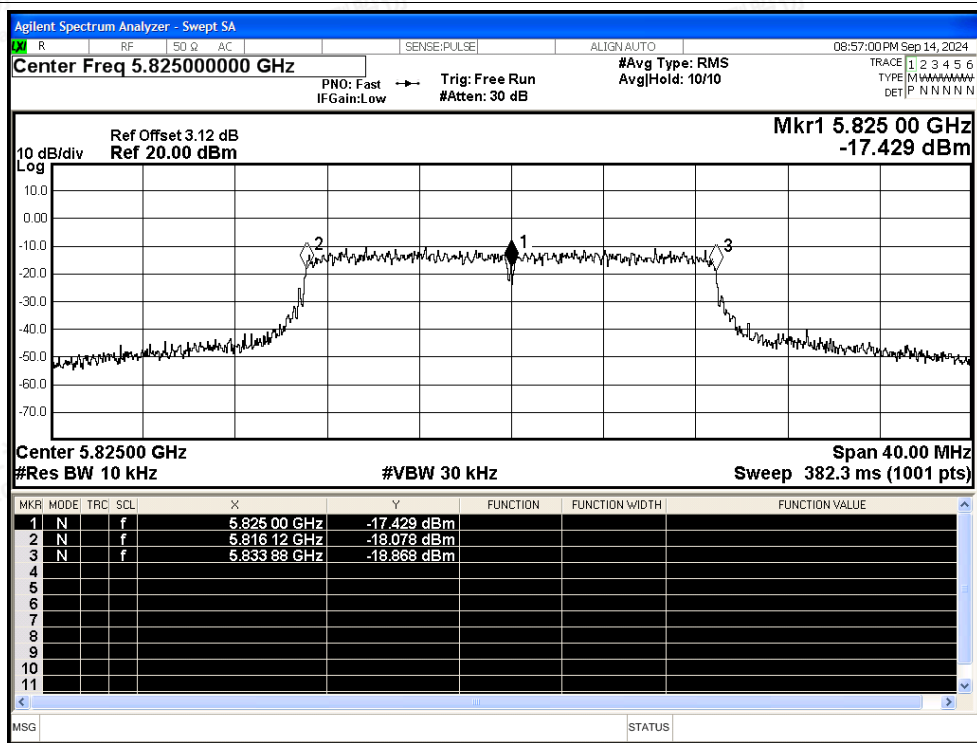


Freq. Stability NVNT ac20 5785MHz Ant

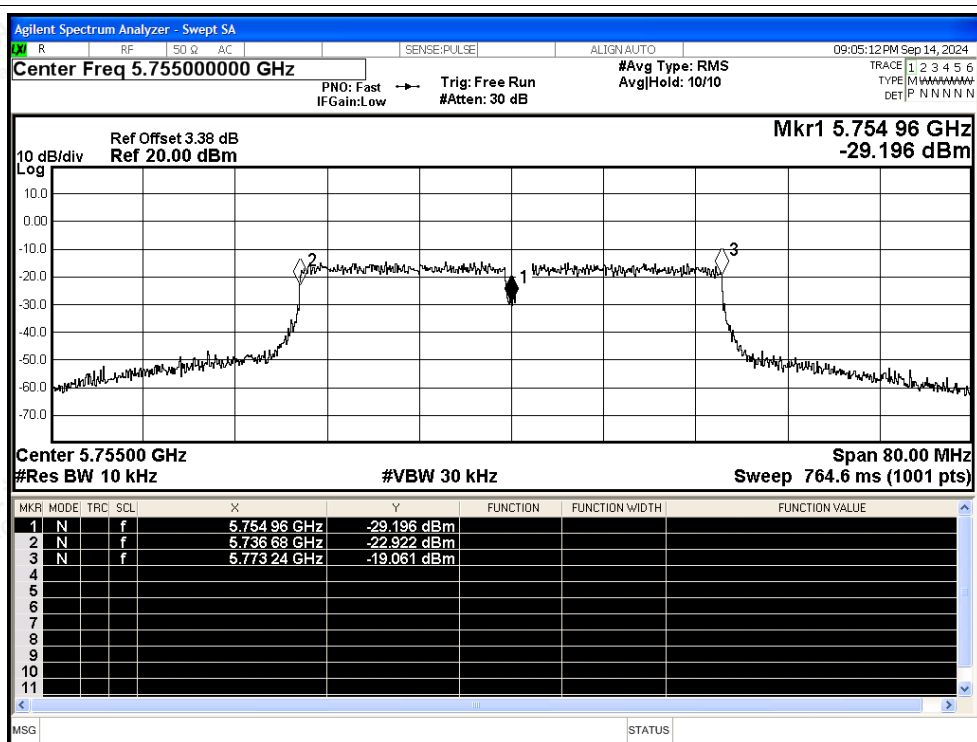


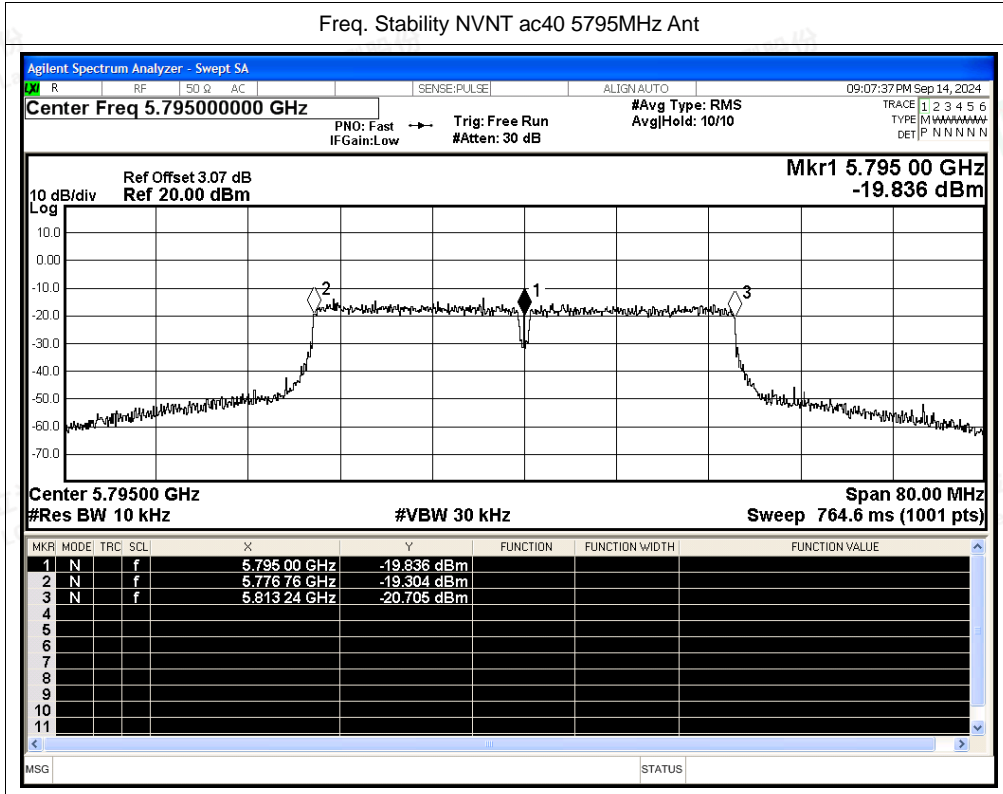


Freq. Stability NVNT ac20 5825MHz Ant



Freq. Stability NVNT ac40 5755MHz Ant







F.6 Duty Cycle

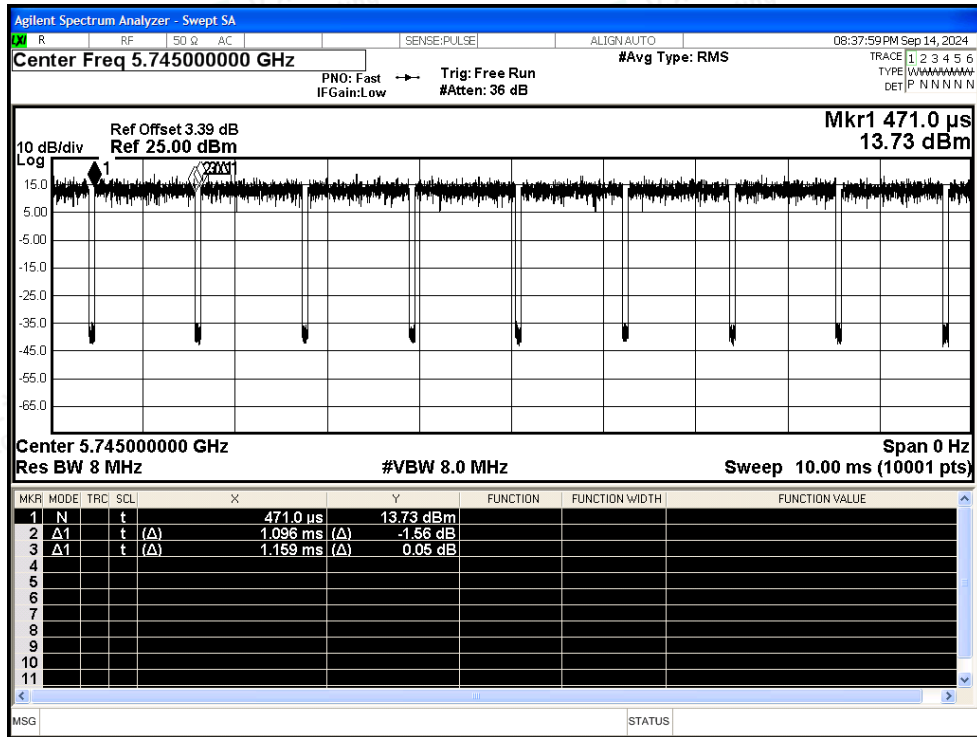
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	a	5745	Ant	94.56	0.24	0.91
NVNT	a	5785	Ant	94.56	0.24	0.91
NVNT	a	5825	Ant	94.65	0.24	0.91
NVNT	n20	5745	Ant	97.29	0.12	0.44
NVNT	n20	5785	Ant	97.33	0.12	0.44
NVNT	n20	5825	Ant	97.29	0.12	0.44
NVNT	n40	5755	Ant	97.23	0.12	0.46
NVNT	n40	5795	Ant	97.23	0.12	0.46
NVNT	ac20	5745	Ant	97.34	0.12	0.44
NVNT	ac20	5785	Ant	97.34	0.12	0.44
NVNT	ac20	5825	Ant	97.34	0.12	0.44
NVNT	ac40	5755	Ant	97.19	0.12	0.46
NVNT	ac40	5795	Ant	97.24	0.12	0.46



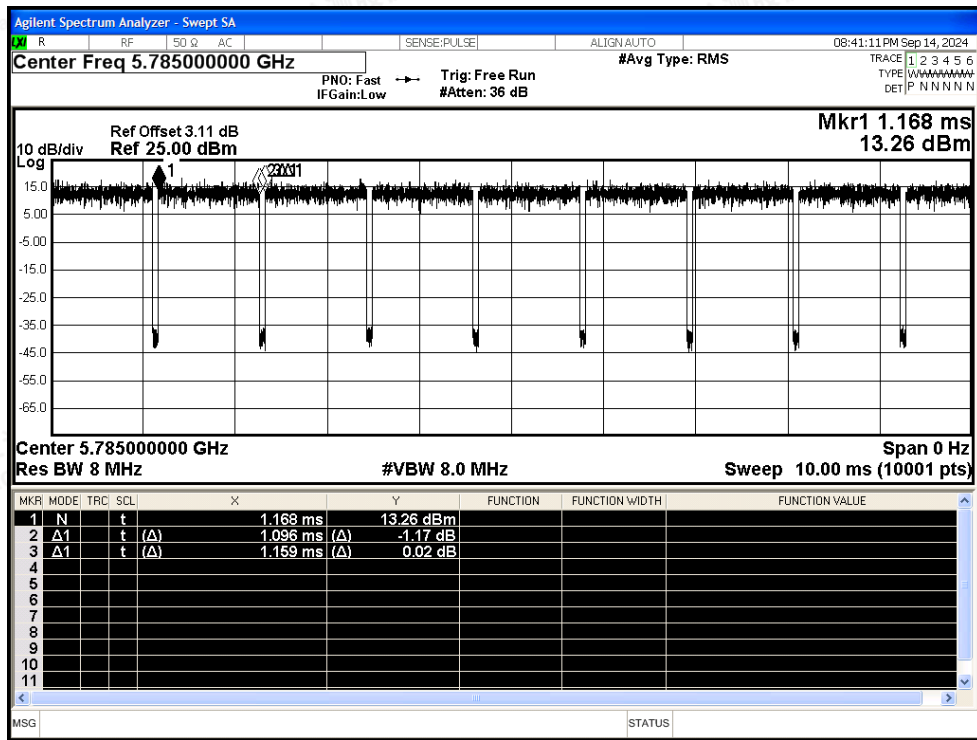


Test Graphs

Duty Cycle NVNT a 5745MHz Ant

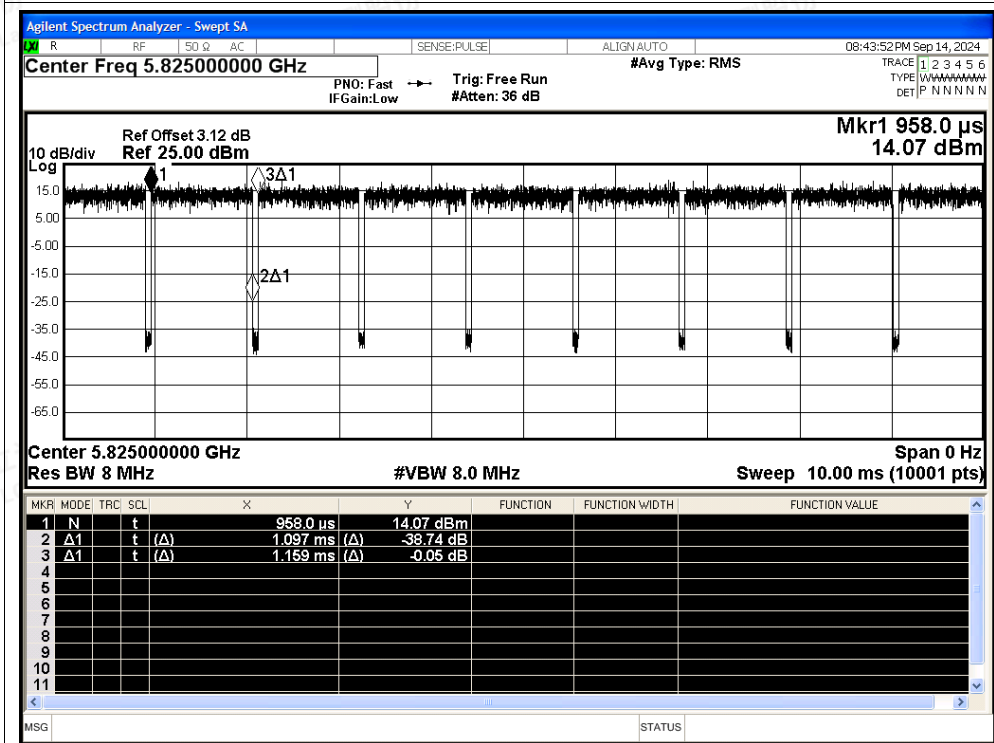


Duty Cycle NVNT a 5785MHz Ant

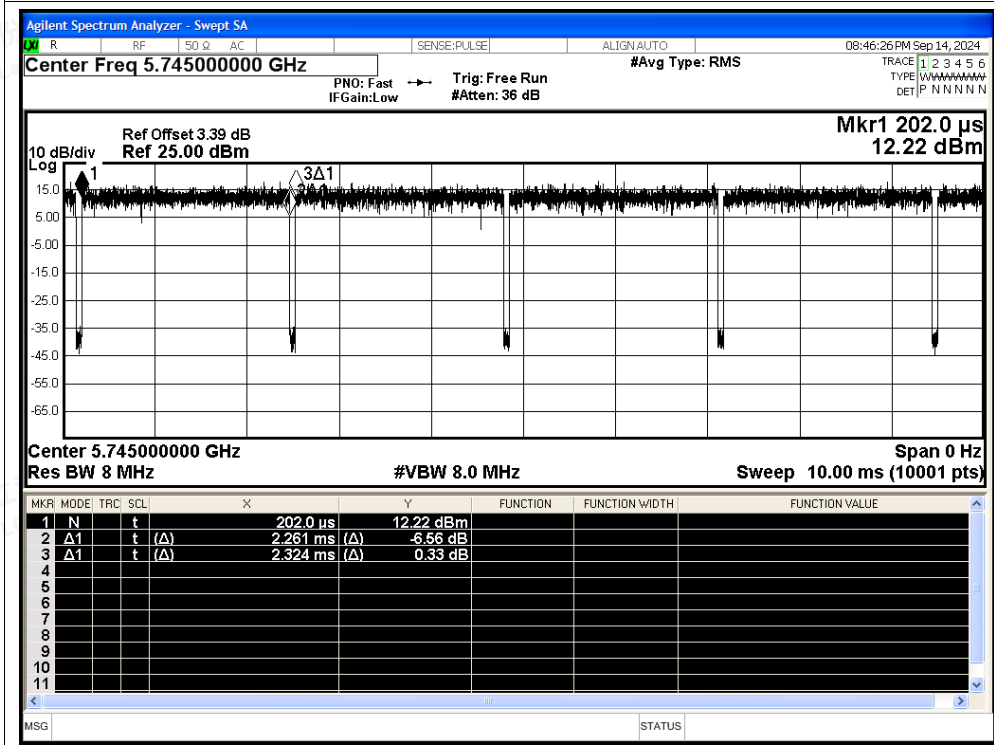


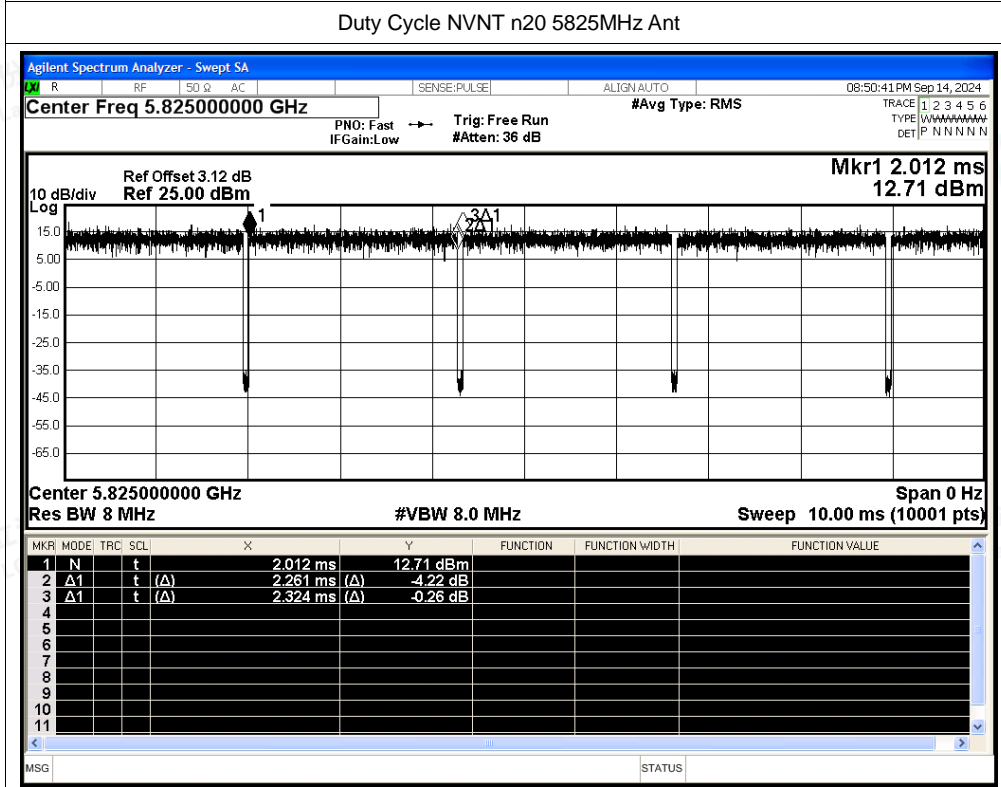
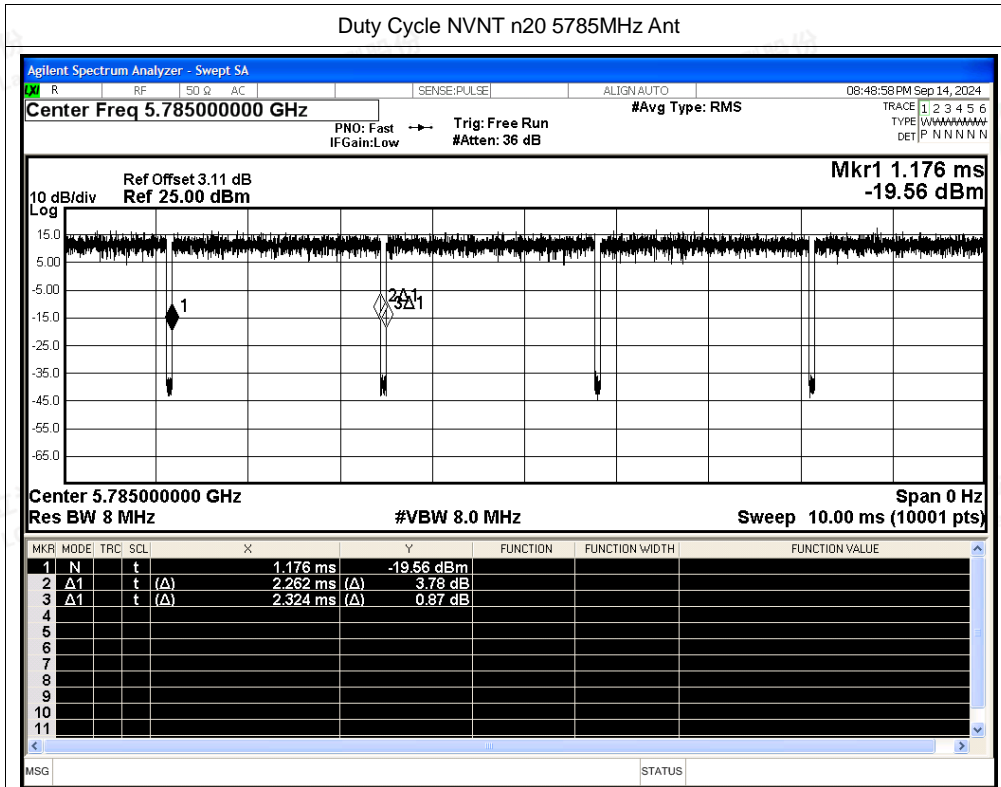


Duty Cycle NVNT a 5825MHz Ant



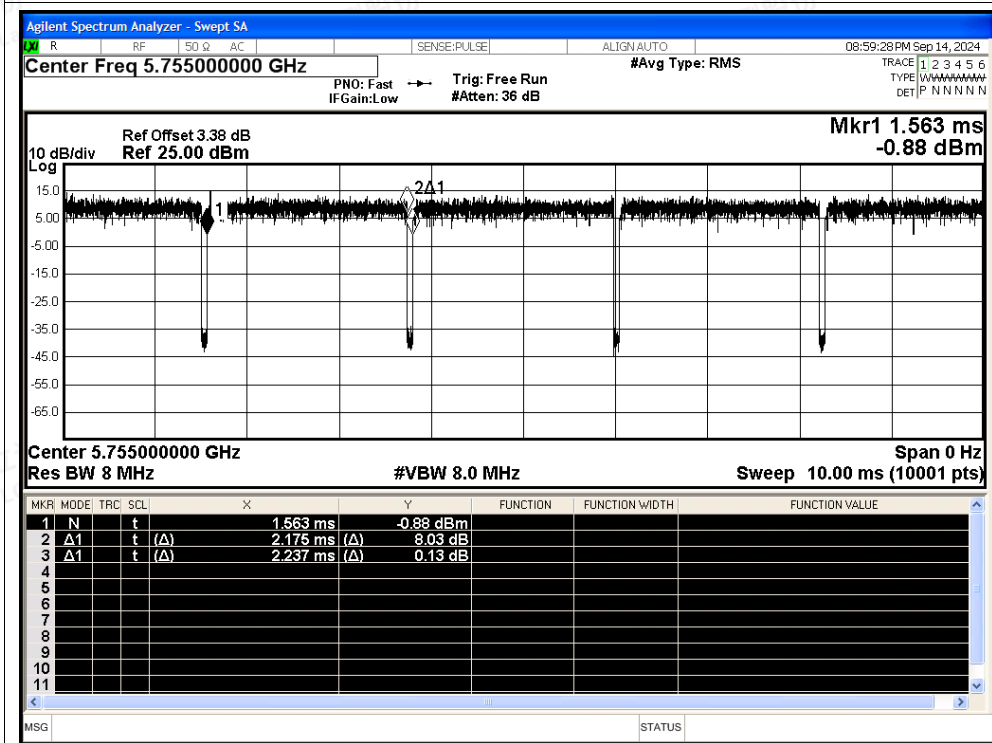
Duty Cycle NVNT n20 5745MHz Ant







Duty Cycle NVNT n40 5755MHz Ant



Duty Cycle NVNT n40 5795MHz Ant

