Appendix C

RF Test Data for 5.8G WIFI (Conducted Measurement)

Product Name: Industrial 5G/4G/3G Router

Test Model: QUARTZ-GOLD-5G

Environmental Conditions

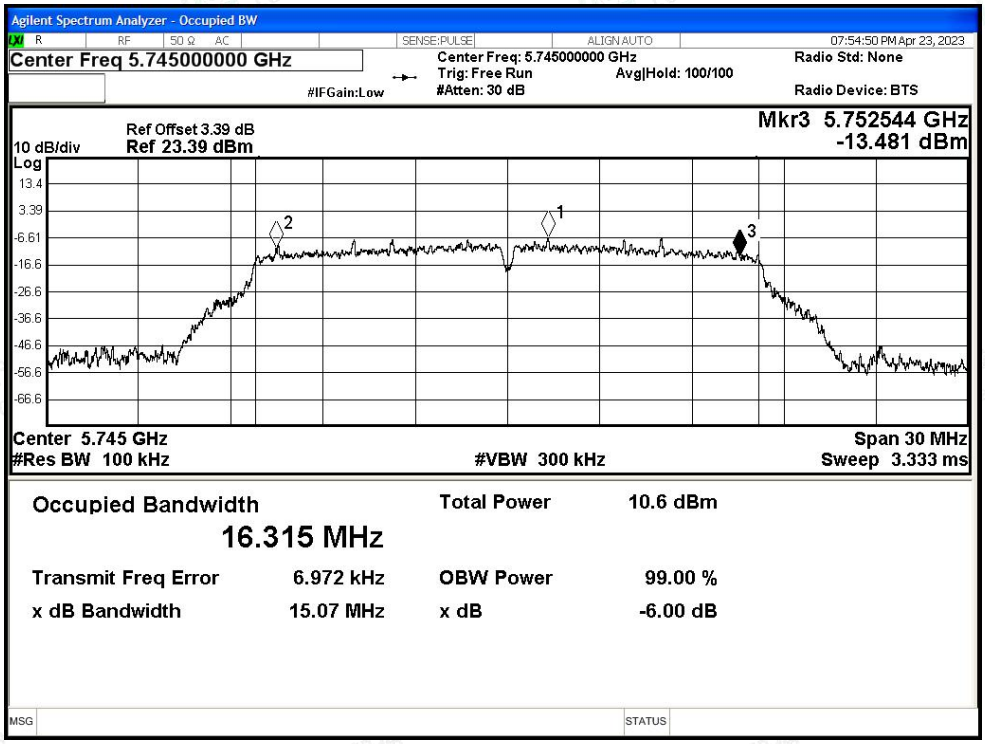
Temperature:	23.8 ° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Nick Peng
Supervised by:	Ling Zhu

C.1 -6dB Bandwidth

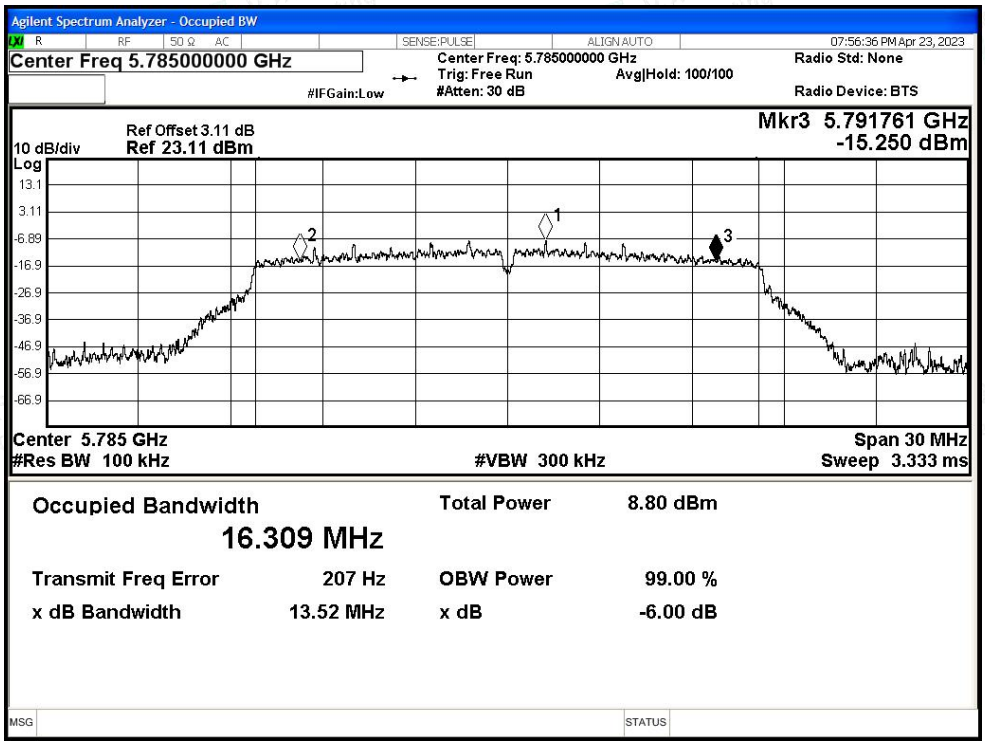
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	a	5745	Ant1	15.074	>=0.5	Pass
NVNT	a	5785	Ant1	13.521	>=0.5	Pass
NVNT	a	5825	Ant1	14.135	>=0.5	Pass
NVNT	n20	5745	Ant1	15.298	>=0.5	Pass
NVNT	n20	5785	Ant1	13.829	>=0.5	Pass
NVNT	n20	5825	Ant1	15.062	>=0.5	Pass
NVNT	n40	5755	Ant1	35.063	>=0.5	Pass
NVNT	n40	5795	Ant1	35.074	>=0.5	Pass
NVNT	ac20	5745	Ant1	14.793	>=0.5	Pass
NVNT	ac20	5785	Ant1	15.097	>=0.5	Pass
NVNT	ac20	5825	Ant1	13.786	>=0.5	Pass
NVNT	ac40	5755	Ant1	35.029	>=0.5	Pass
NVNT	ac40	5795	Ant1	35.084	>=0.5	Pass
NVNT	ac80	5775	Ant1	75.079	>=0.5	Pass

Test Graphs

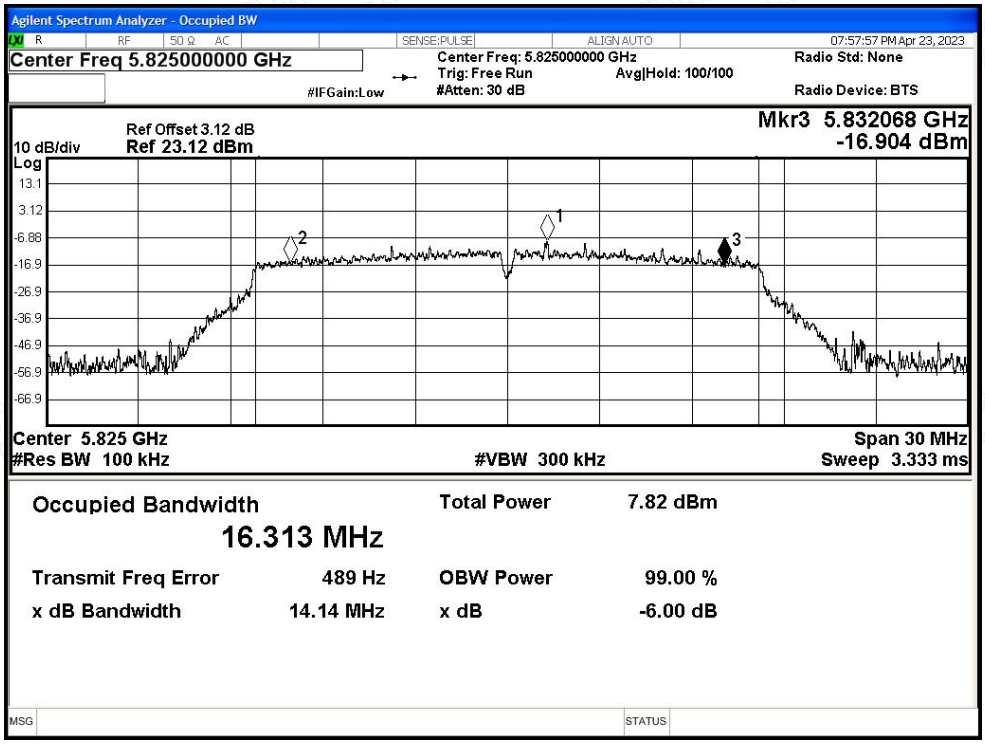
-6dB Bandwidth NVNT a 5745MHz Ant1



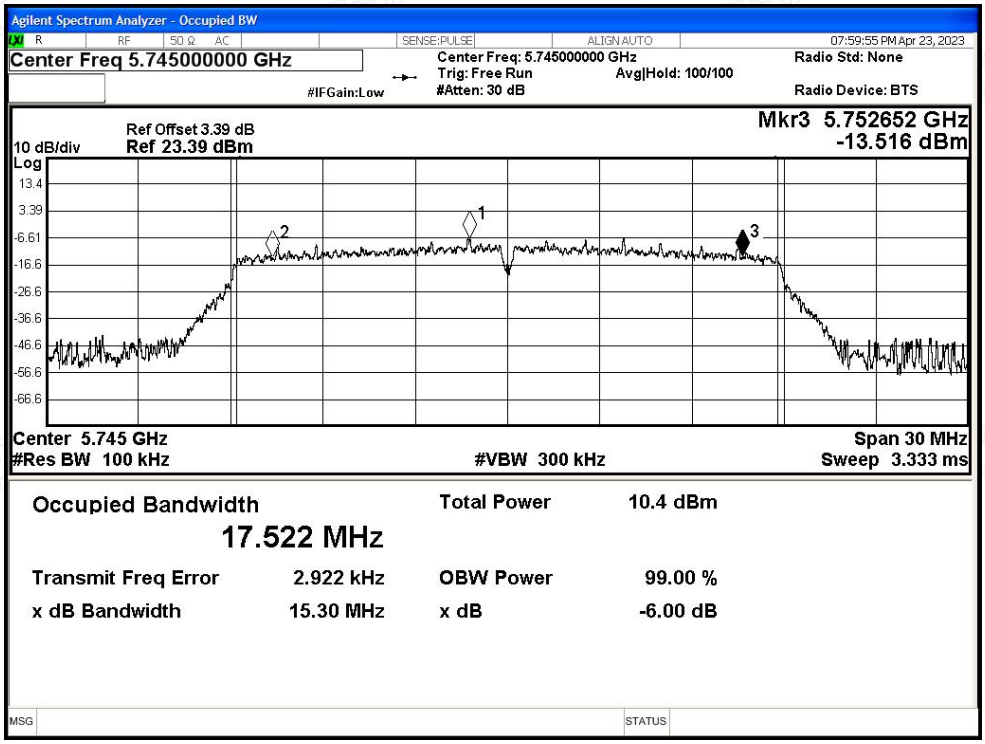
-6dB Bandwidth NVNT a 5785MHz Ant1



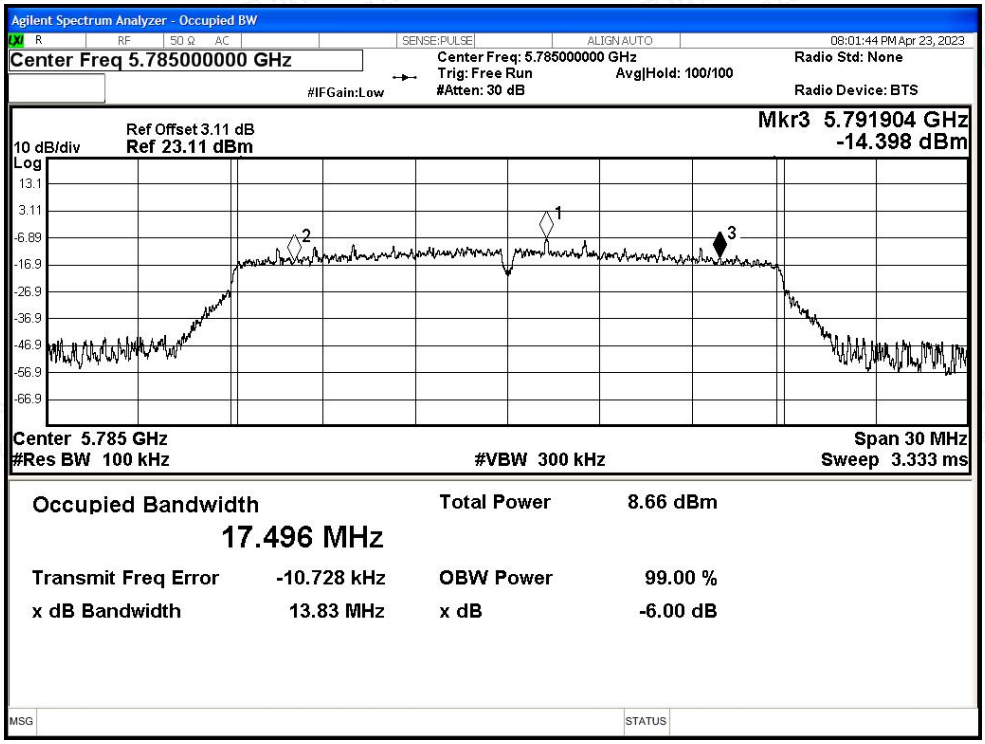
-6dB Bandwidth NVNT a 5825MHz Ant1



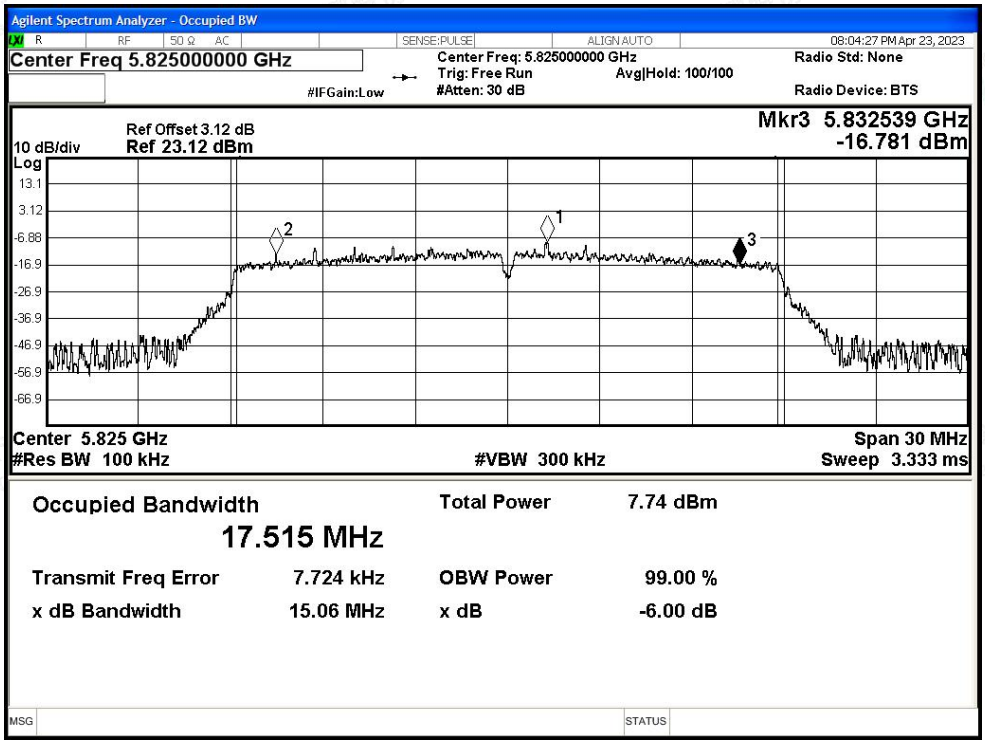
-6dB Bandwidth NVNT n20 5745MHz Ant1



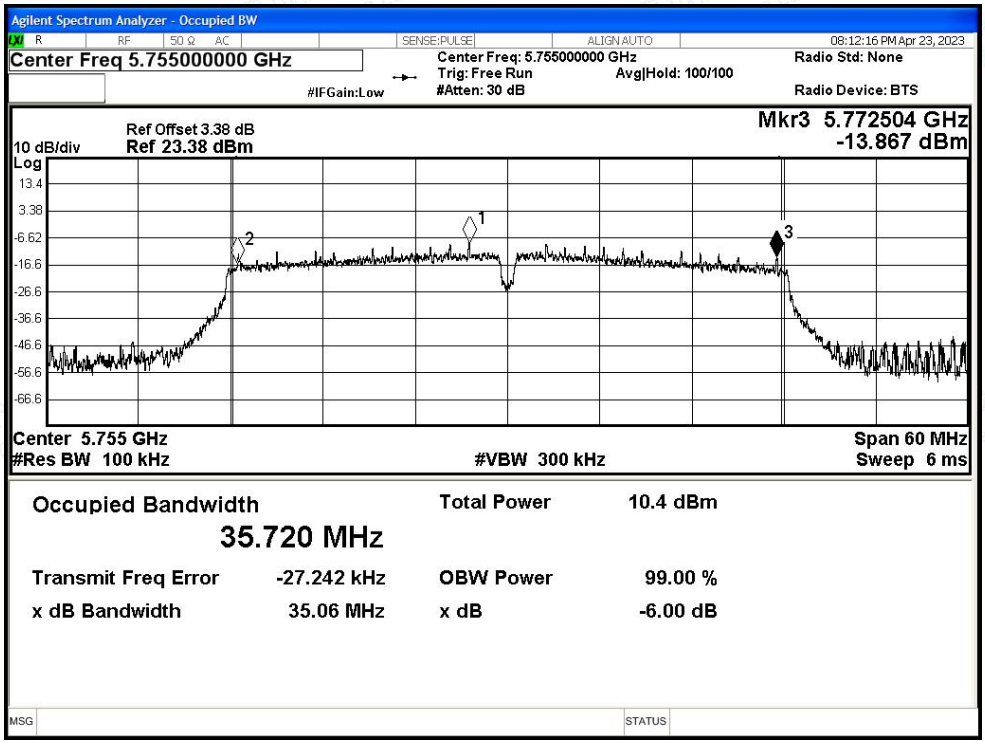
-6dB Bandwidth NVNT n20 5785MHz Ant1



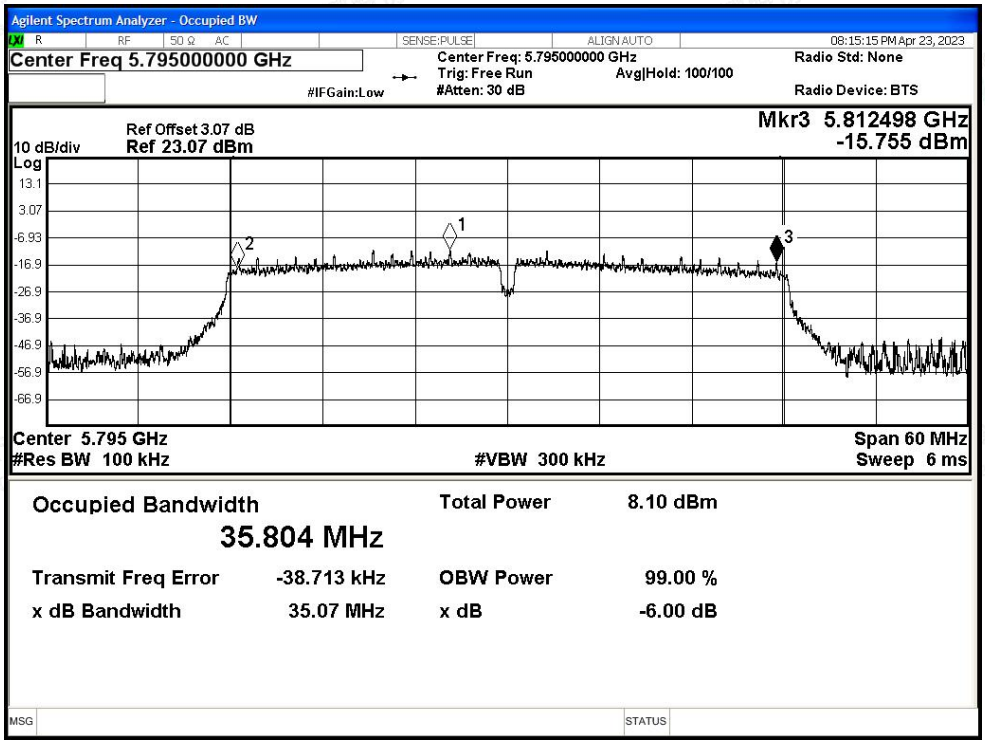
-6dB Bandwidth NVNT n20 5825MHz Ant1



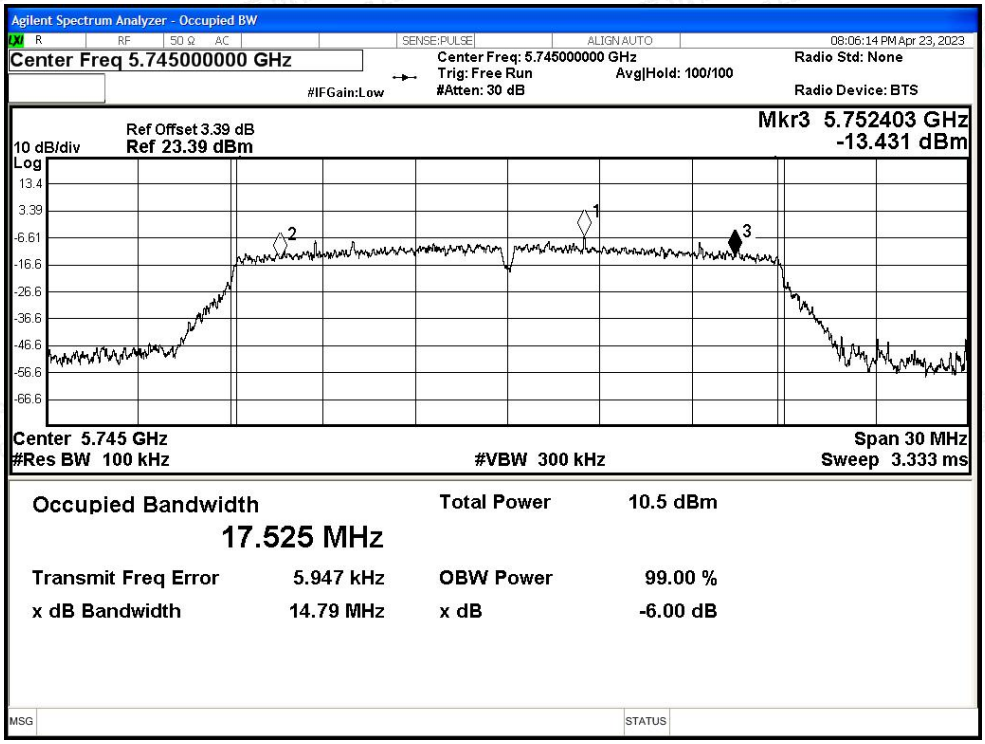
-6dB Bandwidth NVNT n40 5755MHz Ant1



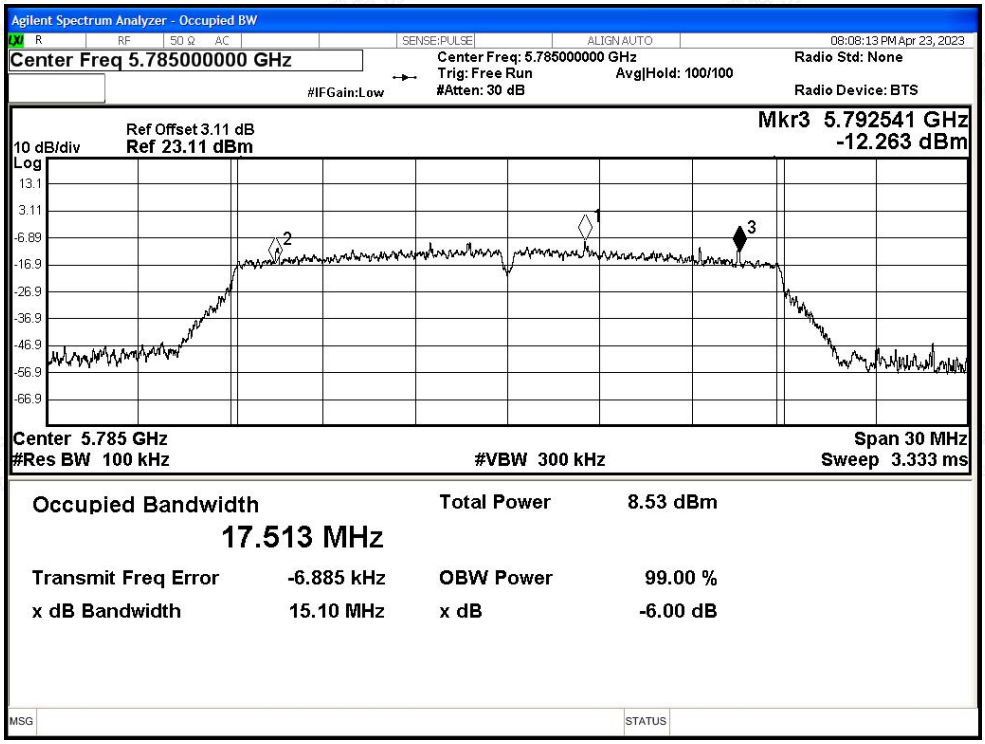
-6dB Bandwidth NVNT n40 5795MHz Ant1



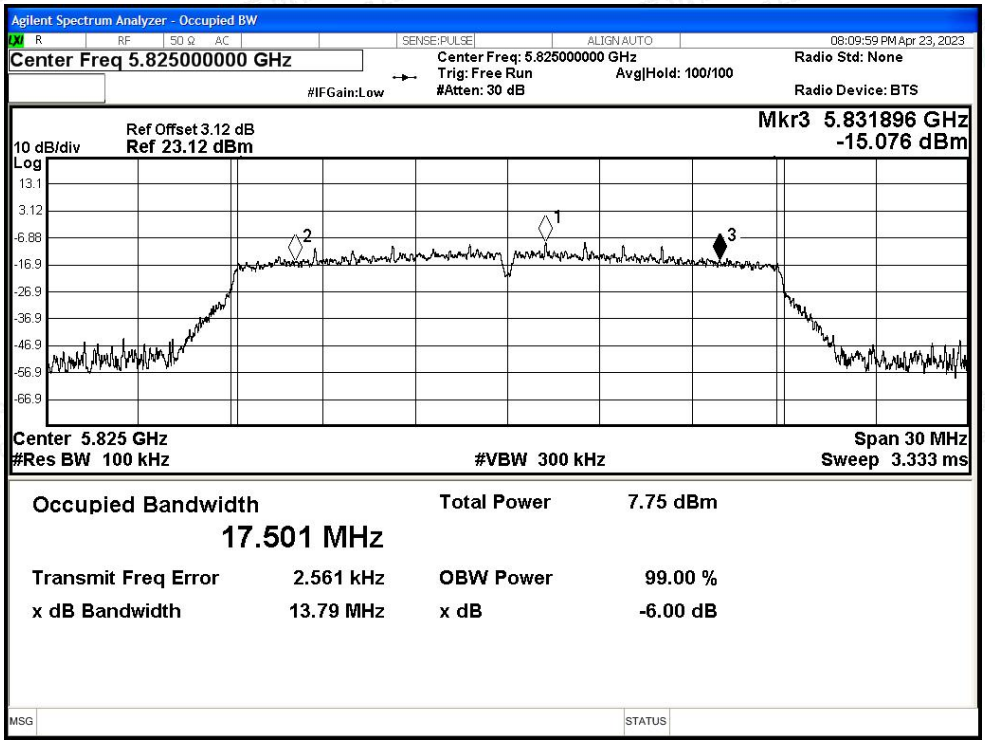
-6dB Bandwidth NVNT ac20 5745MHz Ant1



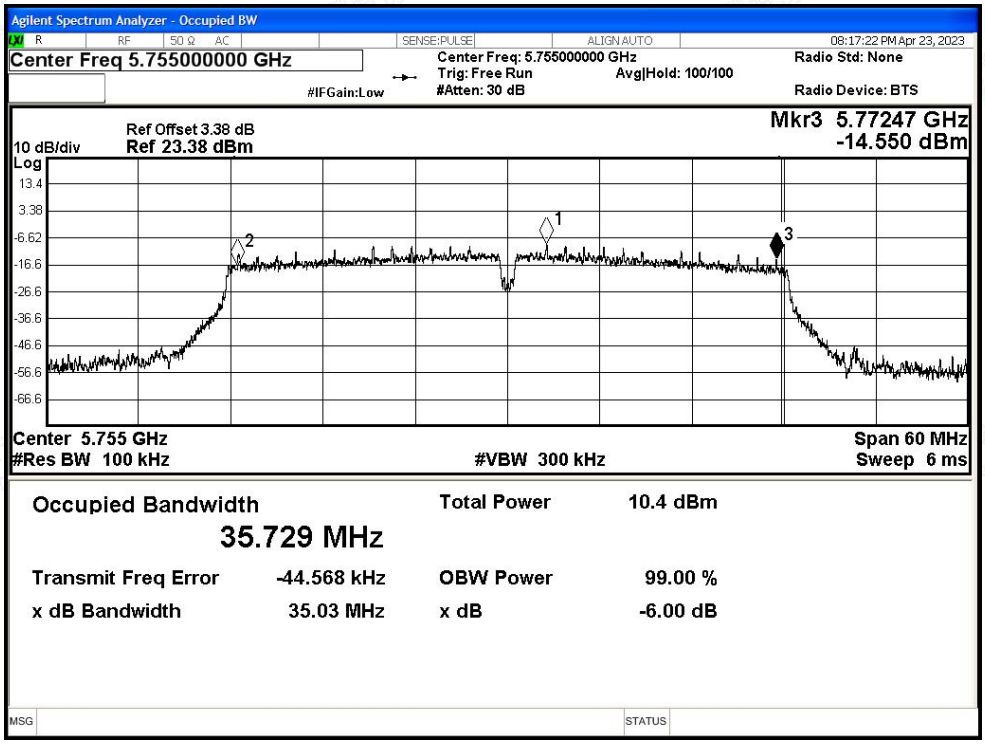
-6dB Bandwidth NVNT ac20 5785MHz Ant1



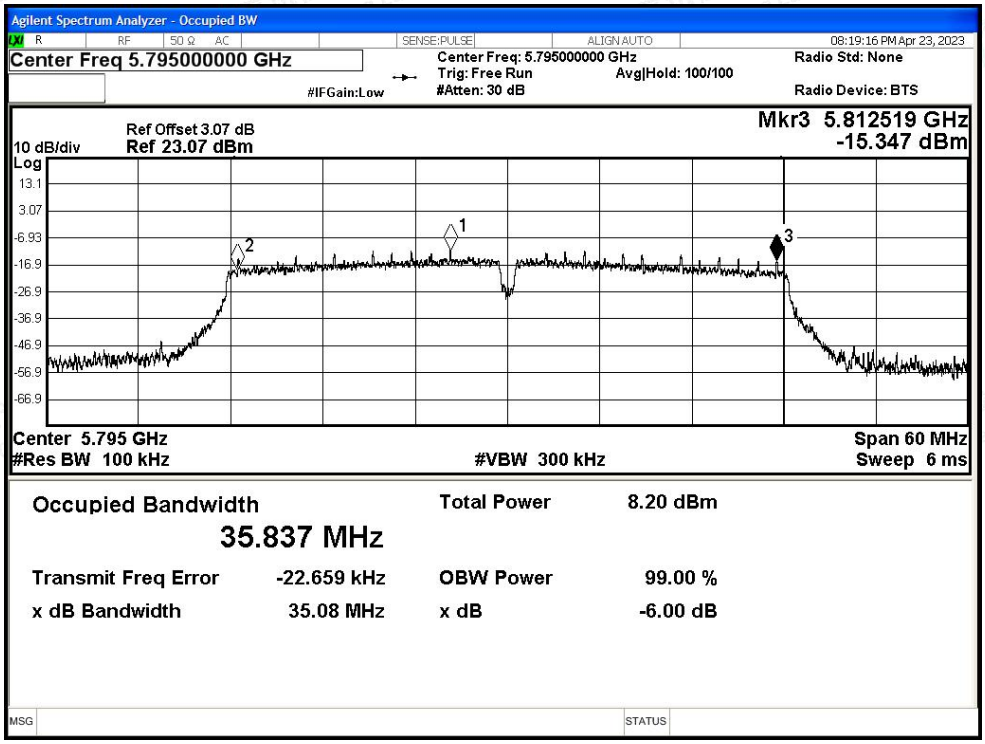
-6dB Bandwidth NVNT ac20 5825MHz Ant1



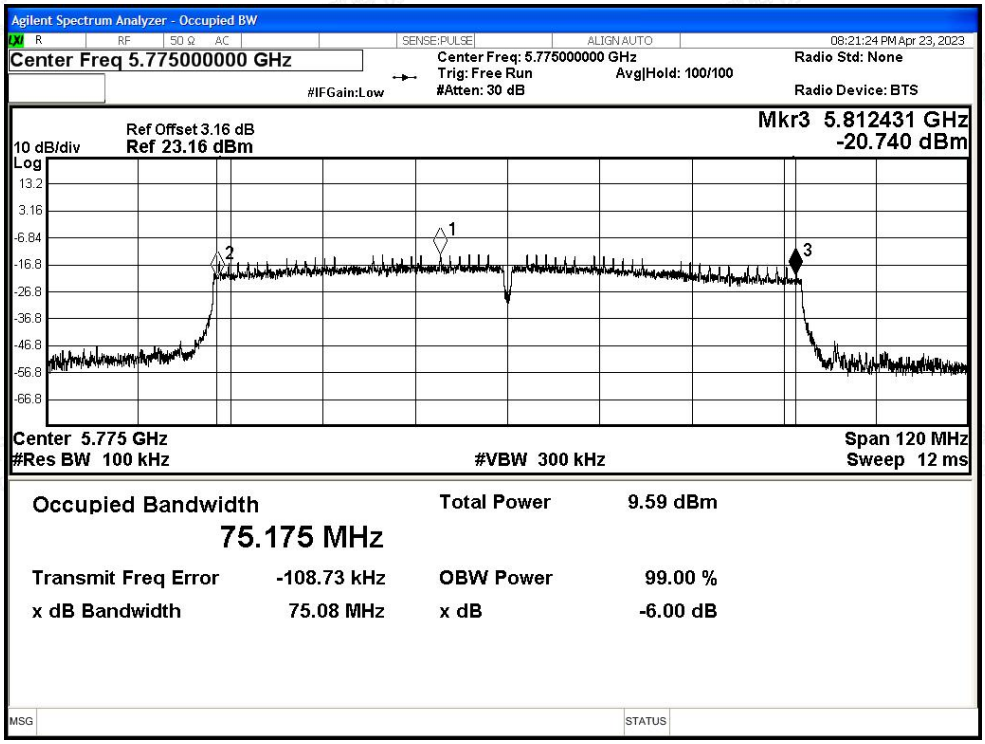
-6dB Bandwidth NVNT ac40 5755MHz Ant1



-6dB Bandwidth NVNT ac40 5795MHz Ant1



-6dB Bandwidth NVNT ac80 5775MHz Ant1



C.2 Maximum Conducted Output Power

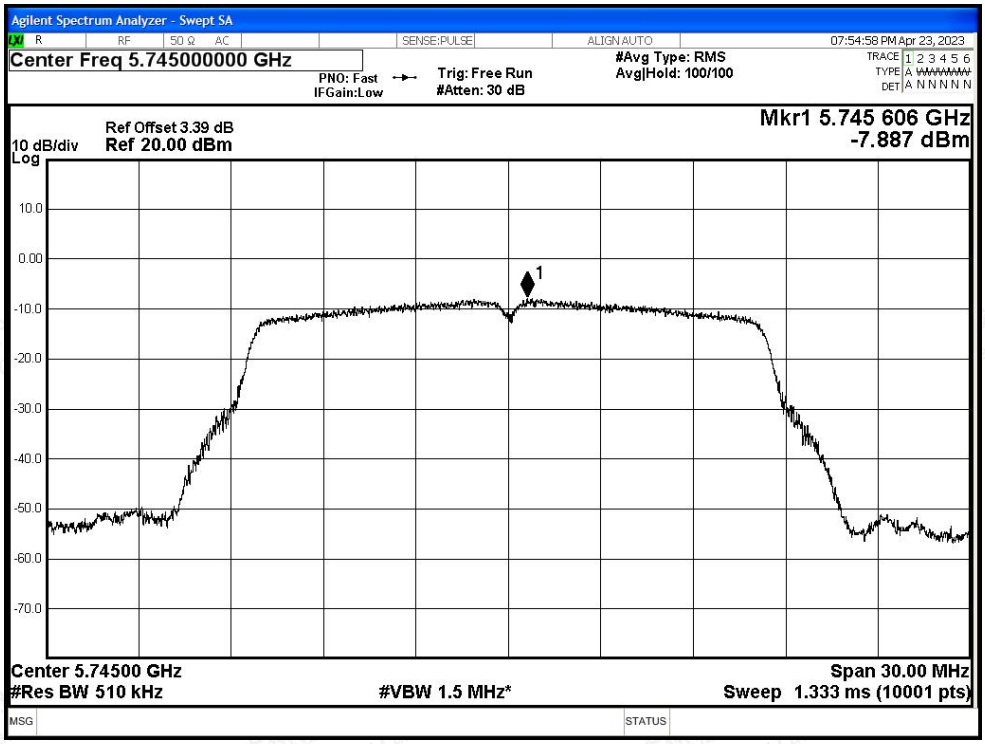
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	a	5745	Ant1	10.73	0.14	10.87	30	Pass
NVNT	a	5785	Ant1	10.88	0.14	11.02	30	Pass
NVNT	a	5825	Ant1	10.97	0.13	11.10	30	Pass
NVNT	n20	5745	Ant1	11.54	0.14	11.68	30	Pass
NVNT	n20	5785	Ant1	10.70	0.14	10.84	30	Pass
NVNT	n20	5825	Ant1	10.82	0.14	10.96	30	Pass
NVNT	n40	5755	Ant1	10.94	0.28	11.22	30	Pass
NVNT	n40	5795	Ant1	10.58	0.29	10.87	30	Pass
NVNT	ac20	5745	Ant1	10.76	0.14	10.90	30	Pass
NVNT	ac20	5785	Ant1	10.65	0.14	10.79	30	Pass
NVNT	ac20	5825	Ant1	10.67	0.14	10.81	30	Pass
NVNT	ac40	5755	Ant1	10.93	0.28	11.21	30	Pass
NVNT	ac40	5795	Ant1	10.77	0.28	11.05	30	Pass
NVNT	ac80	5775	Ant1	10.46	0.55	11.01	30	Pass

C.3 Maximum Power Spectral Density Level

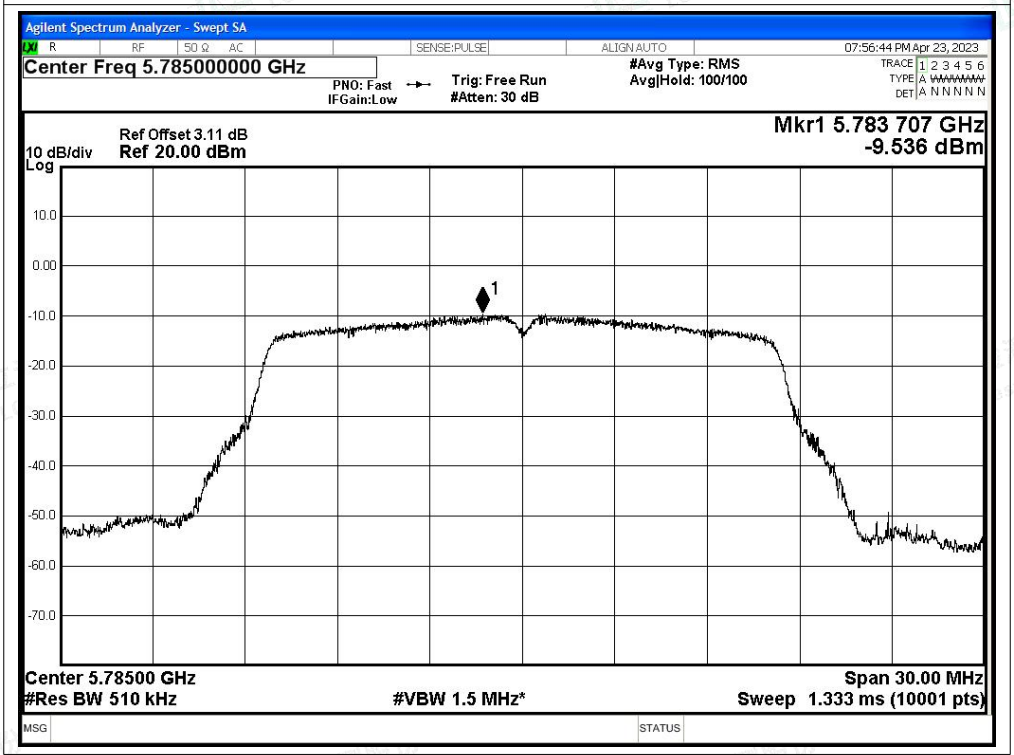
Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/500kHz)	Duty Factor (dB)	Total PSD (dBm/500kHz)	Limit (dBm/500kHz)	Verdict
NVNT	a	5745	Ant1	-7.89	0.14	-7.75	30	Pass
NVNT	a	5785	Ant1	-9.54	0.14	-9.4	30	Pass
NVNT	a	5825	Ant1	-10.6	0.13	-10.47	30	Pass
NVNT	n20	5745	Ant1	-8.26	0.14	-8.12	30	Pass
NVNT	n20	5785	Ant1	-9.69	0.14	-9.55	30	Pass
NVNT	n20	5825	Ant1	-11.01	0.14	-10.87	30	Pass
NVNT	n40	5755	Ant1	-11.23	0.28	-10.95	30	Pass
NVNT	n40	5795	Ant1	-13.85	0.29	-13.56	30	Pass
NVNT	ac20	5745	Ant1	-8.04	0.14	-7.9	30	Pass
NVNT	ac20	5785	Ant1	-9.6	0.14	-9.46	30	Pass
NVNT	ac20	5825	Ant1	-10.57	0.14	-10.43	30	Pass
NVNT	ac40	5755	Ant1	-11.45	0.28	-11.17	30	Pass
NVNT	ac40	5795	Ant1	-13.77	0.28	-13.49	30	Pass
NVNT	ac80	5775	Ant1	-16.29	0.55	-15.74	30	Pass

Test Graphs

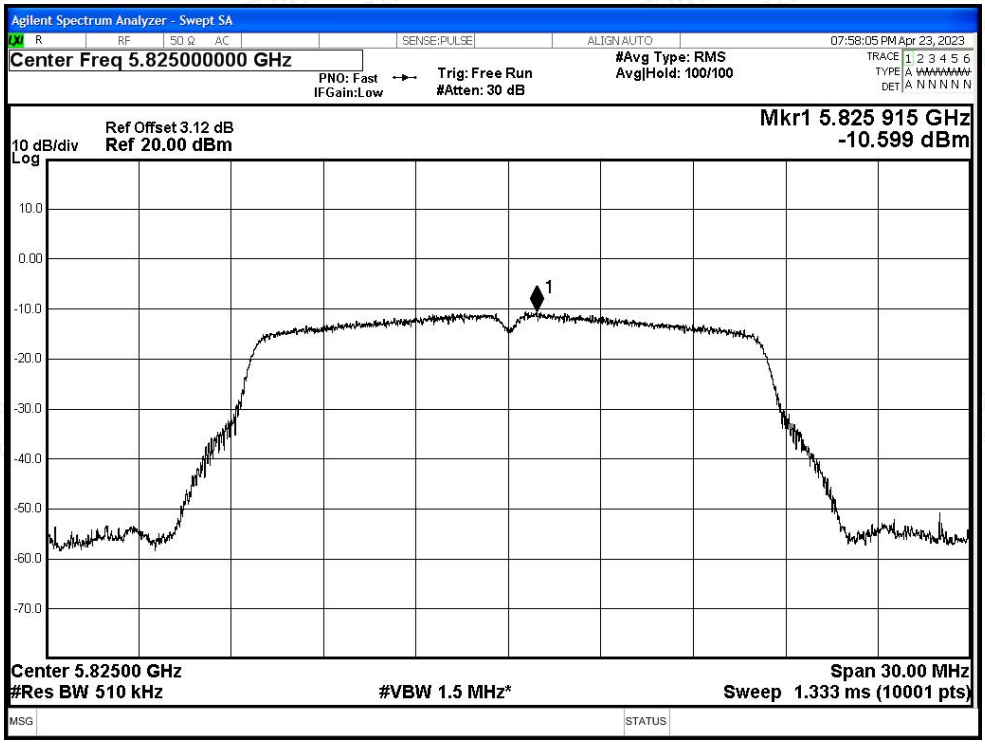
PSD NVNT a 5745MHz Ant1



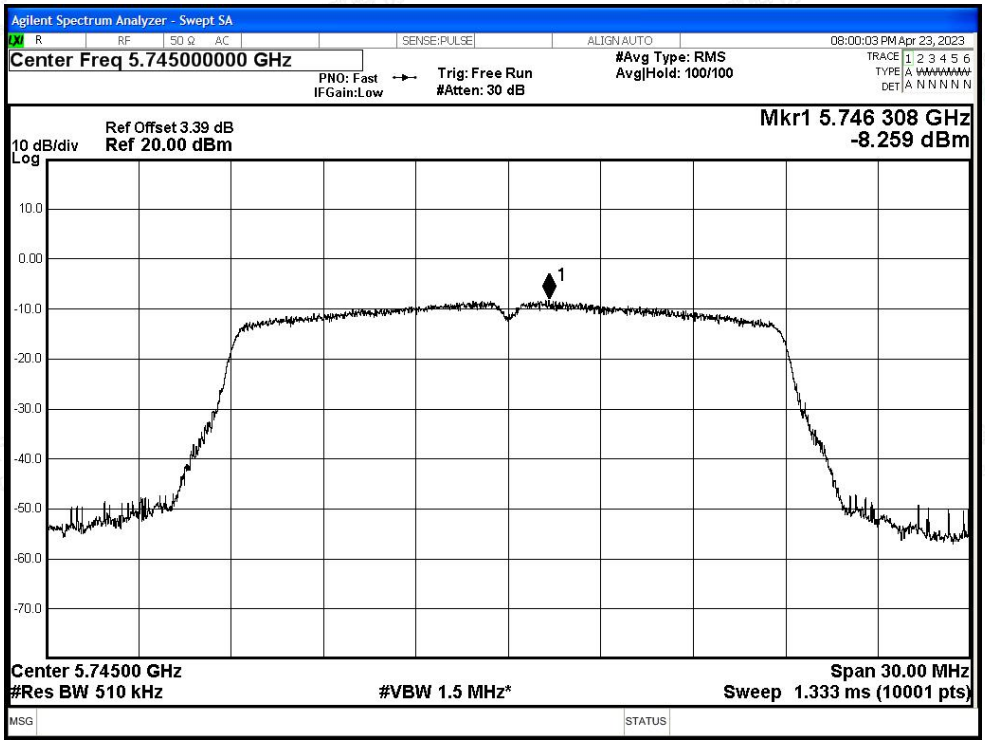
PSD NVNT a 5785MHz Ant1



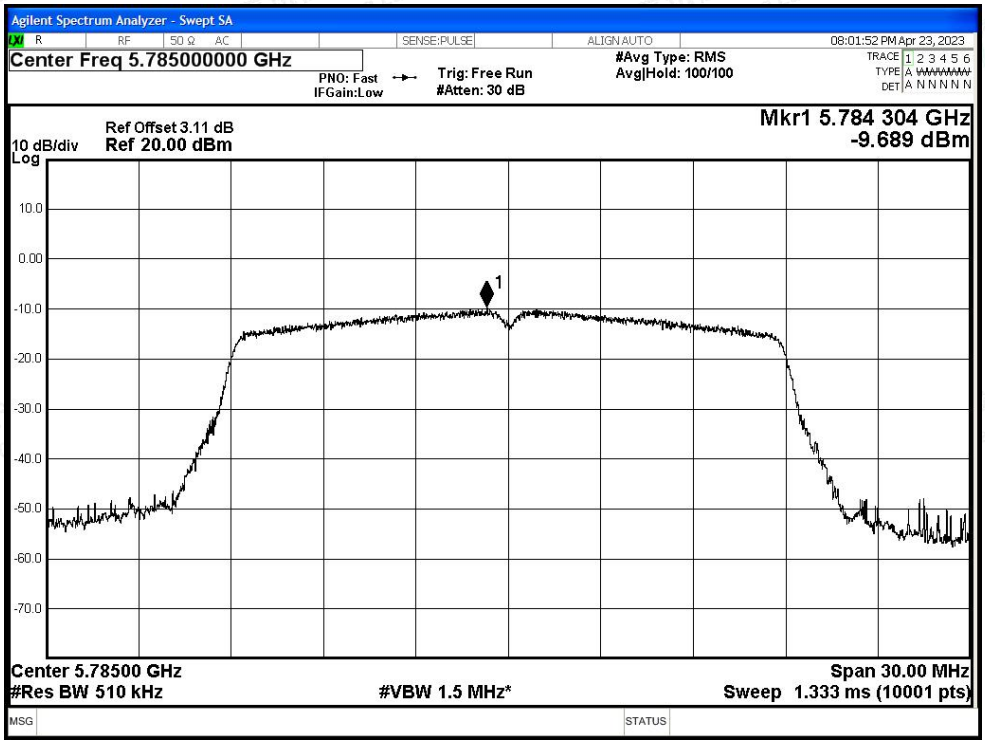
PSD NVNT a 5825MHz Ant1



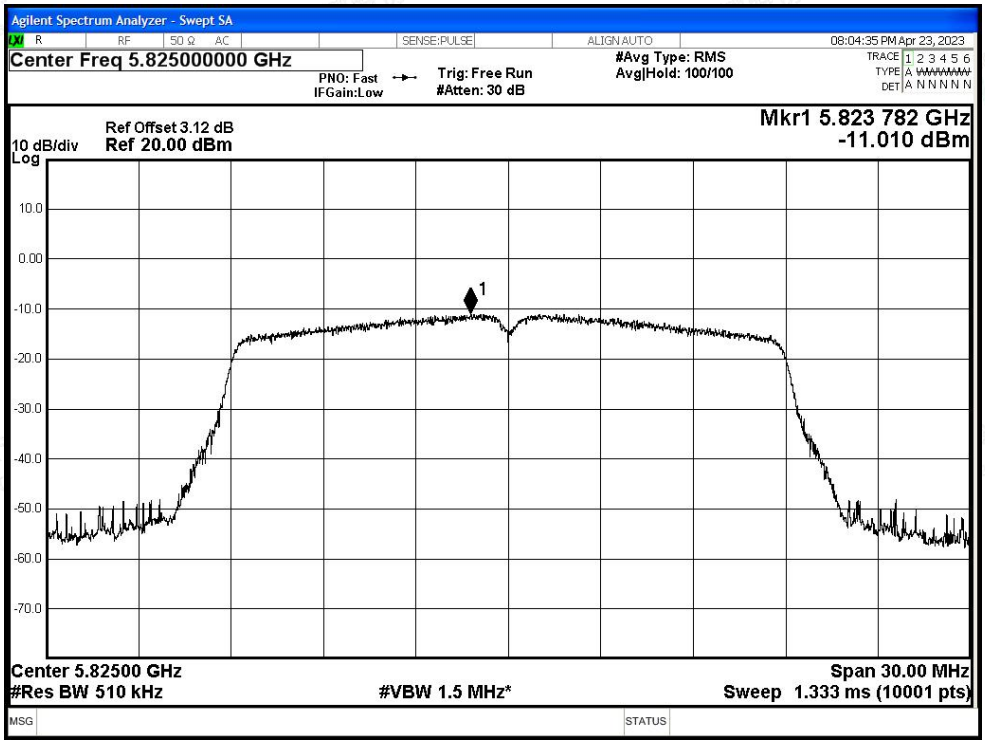
PSD NVNT n20 5745MHz Ant1



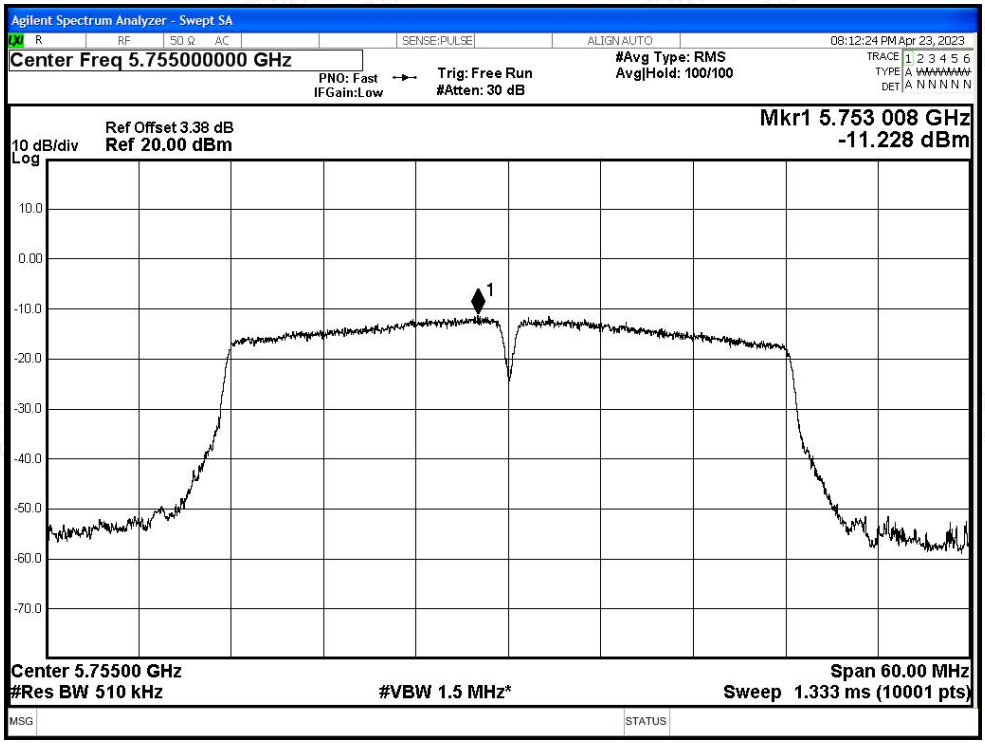
PSD NVNT n20 5785MHz Ant1



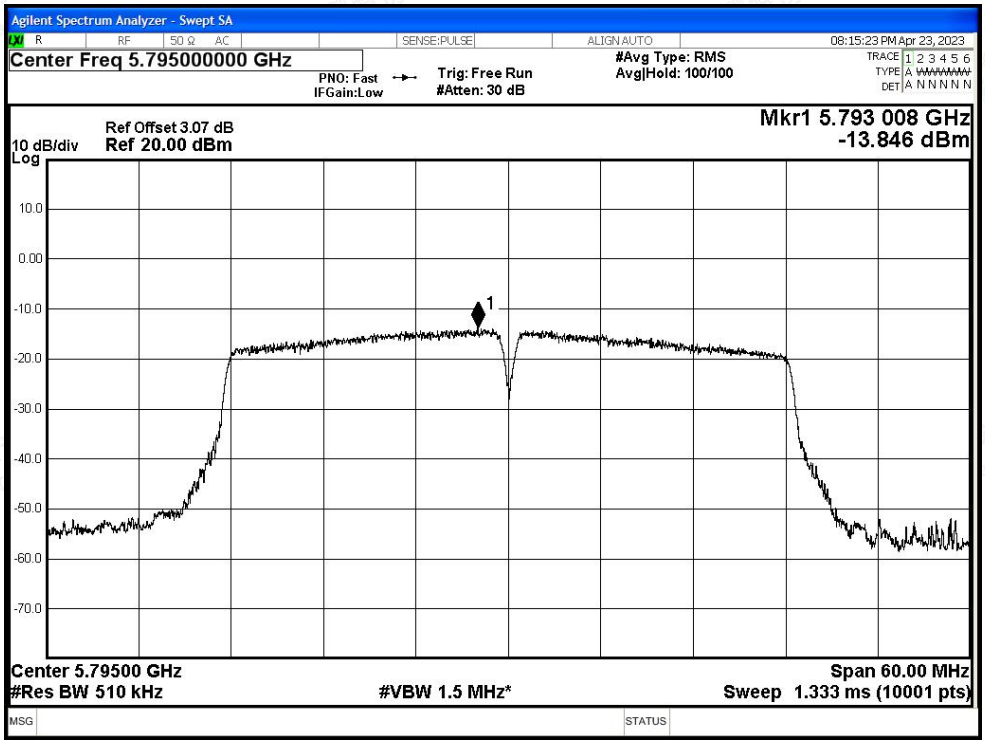
PSD NVNT n20 5825MHz Ant1



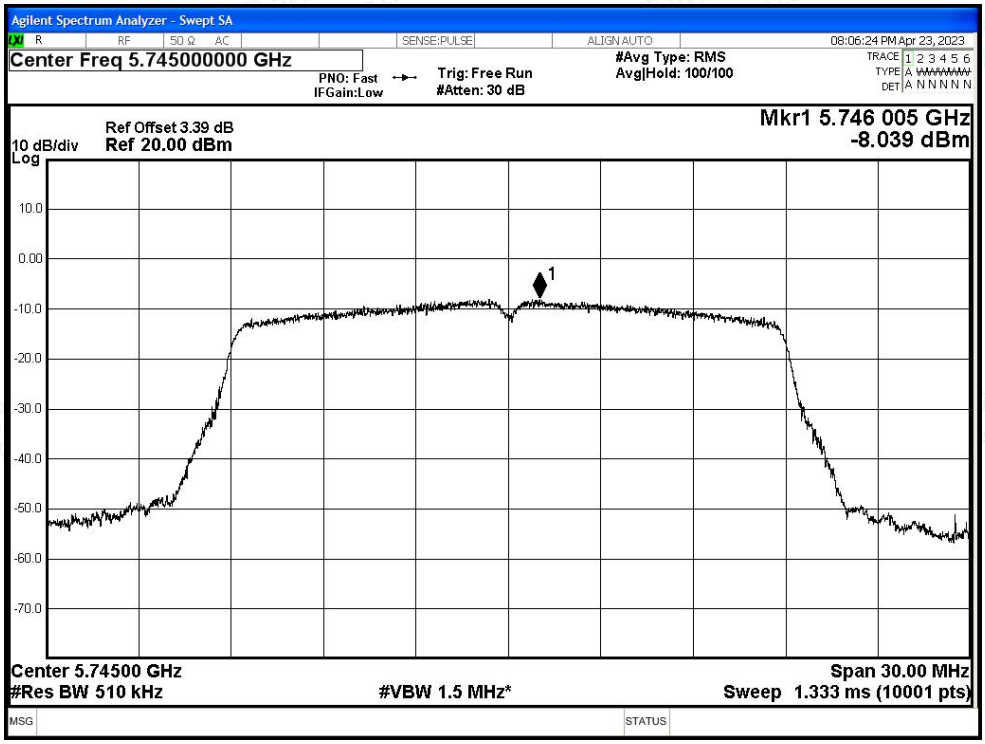
PSD NVNT n40 5755MHz Ant1



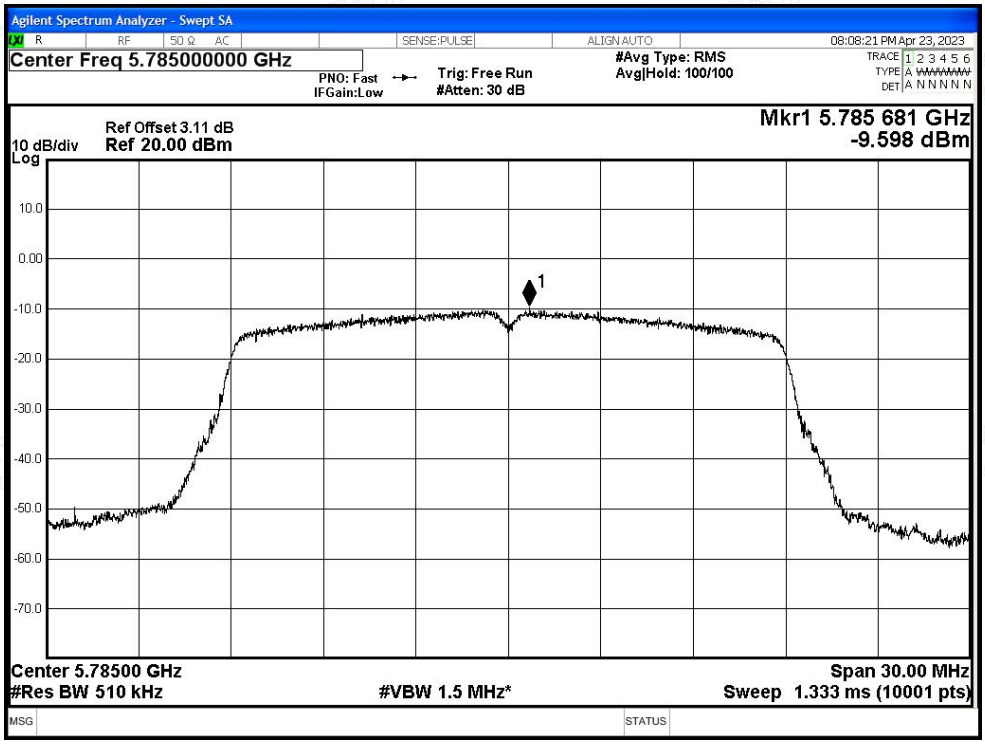
PSD NVNT n40 5795MHz Ant1



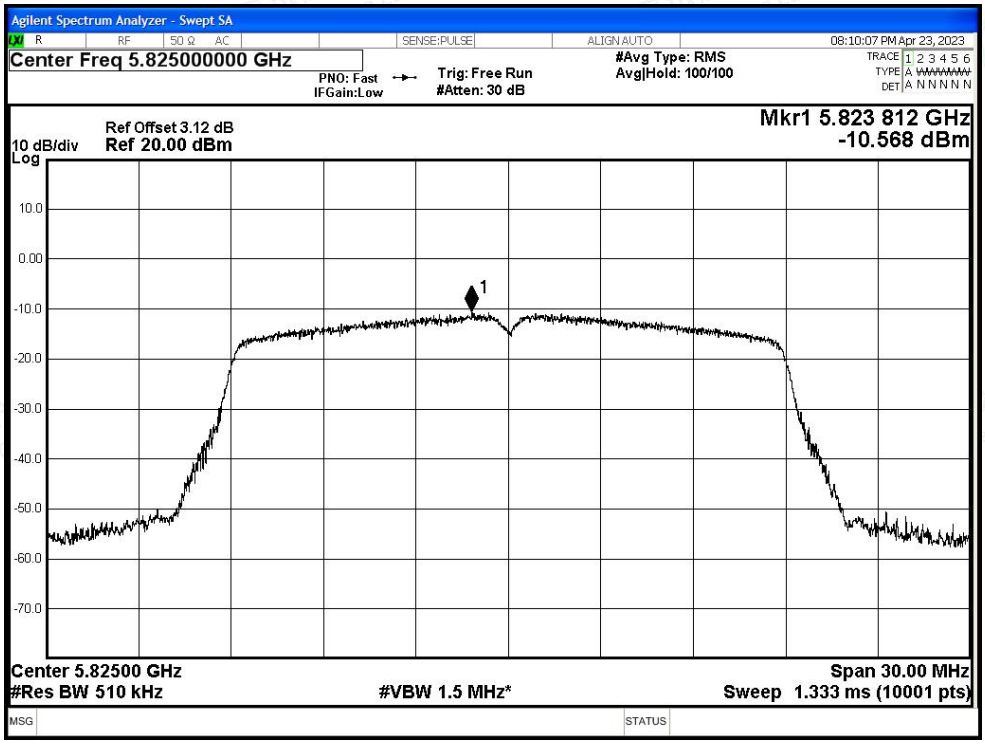
PSD NVNT ac20 5745MHz Ant1



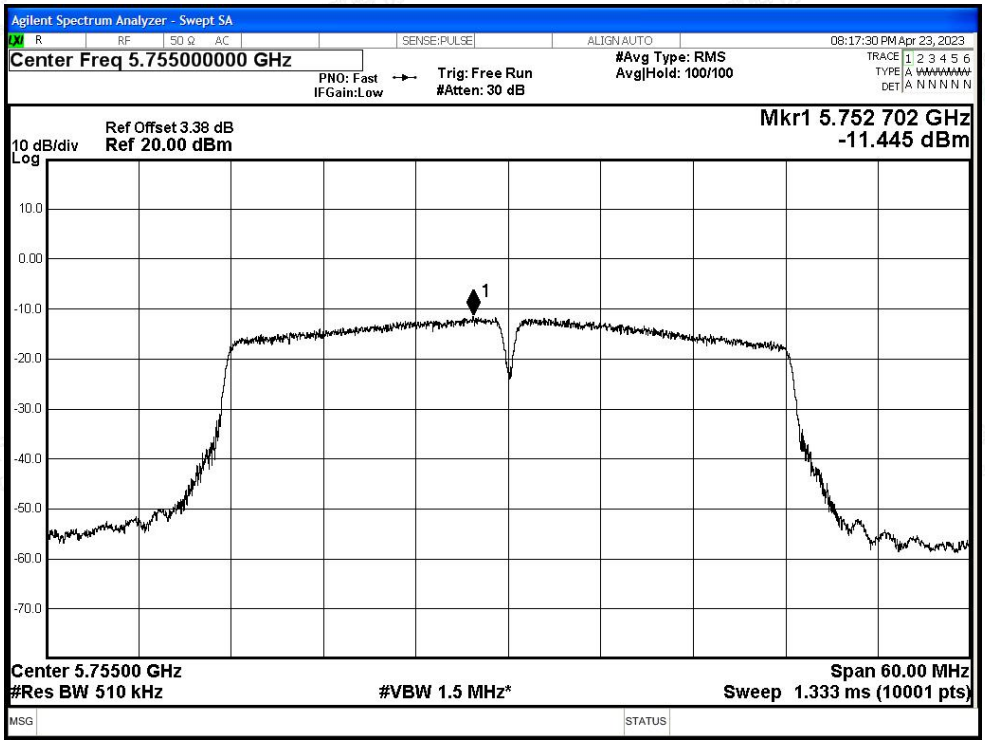
PSD NVNT ac20 5785MHz Ant1



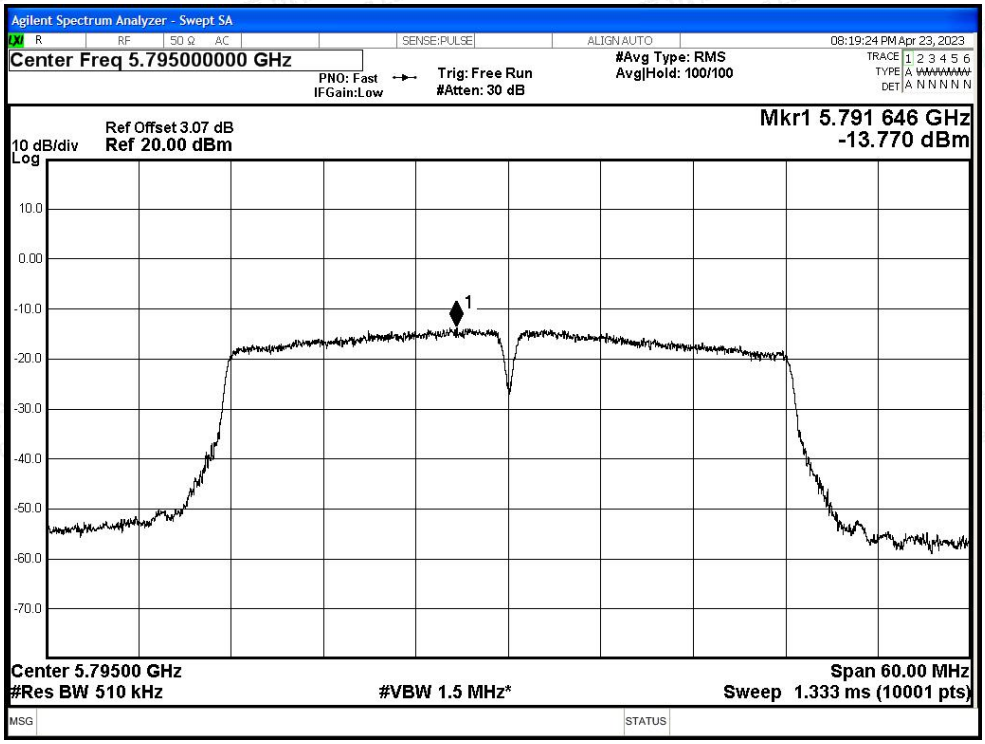
PSD NVNT ac20 5825MHz Ant1



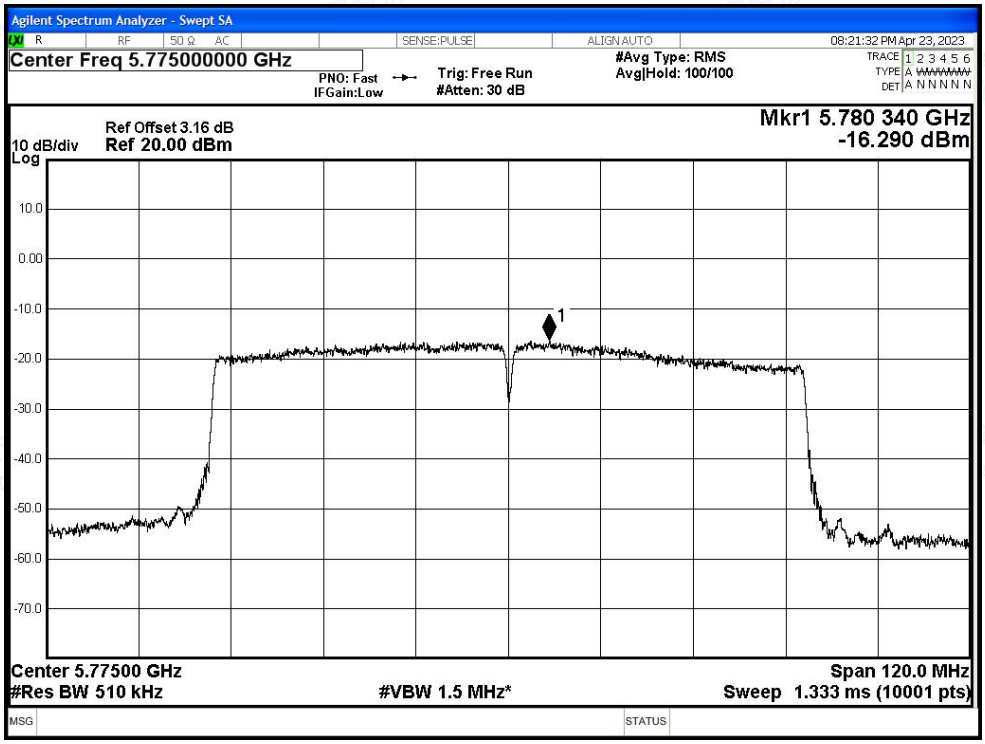
PSD NVNT ac40 5755MHz Ant1



PSD NVNT ac40 5795MHz Ant1



PSD NVNT ac80 5775MHz Ant1



C.4 Restrict Band

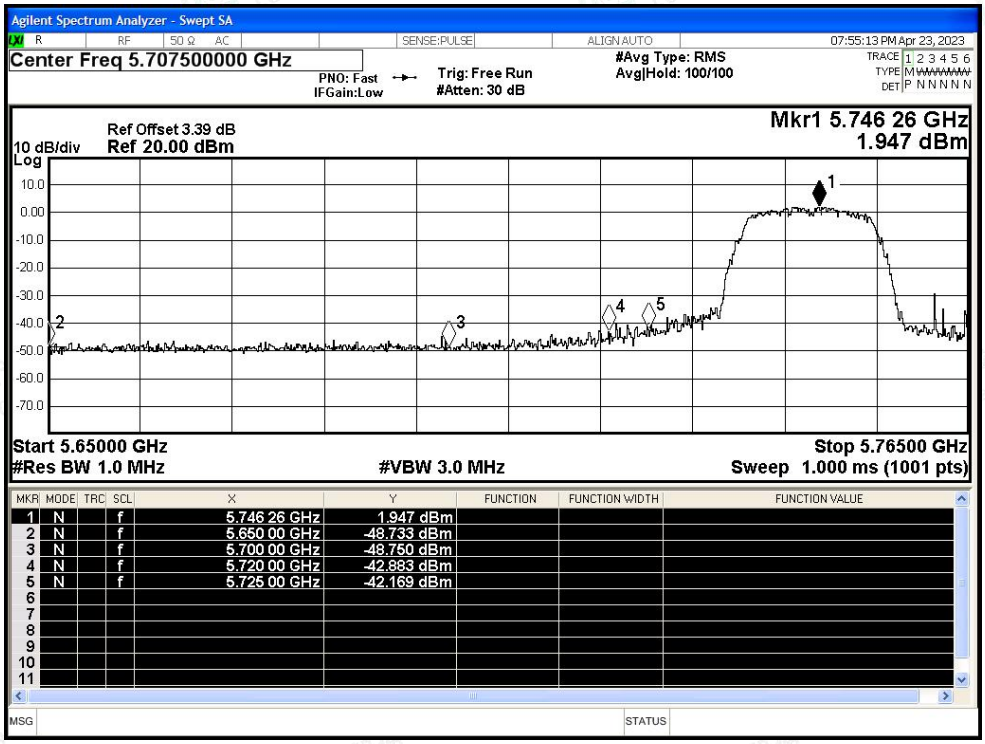
Condition	Mode	Frequency (MHz)	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	EIRP Power (dBm)	Detector	Limit (dBm)	Verdict
NVNT	a	5745	5650	-48.73	4.0	-44.73	Peak	-27	Pass
NVNT	a	5745	5650	-56.41	4.0	-52.41	Average	-27	Pass
NVNT	a	5745	5700	-48.75	4.0	-44.75	Peak	10	Pass
NVNT	a	5745	5700	-55.79	4.0	-51.79	Average	10	Pass
NVNT	a	5745	5720	-42.88	4.0	-38.88	Peak	15.6	Pass
NVNT	a	5745	5720	-53.72	4.0	-49.72	Average	15.6	Pass
NVNT	a	5745	5725	-42.17	4.0	-38.17	Peak	27	Pass
NVNT	a	5745	5725	-52.15	4.0	-48.15	Average	27	Pass
NVNT	a	5825	5850	-49.25	4.0	-45.25	Peak	27	Pass
NVNT	a	5825	5850	-55.3	4.0	-51.3	Average	27	Pass
NVNT	a	5825	5855	-48.01	4.0	-44.01	Peak	15.6	Pass
NVNT	a	5825	5855	-55.91	4.0	-51.91	Average	15.6	Pass
NVNT	a	5825	5875	-50.38	4.0	-46.38	Peak	10	Pass
NVNT	a	5825	5875	-56.89	4.0	-52.89	Average	10	Pass
NVNT	a	5825	5925	-48.84	4.0	-44.84	Peak	-27	Pass
NVNT	a	5825	5925	-56.61	4.0	-52.61	Average	-27	Pass
NVNT	n20	5745	5650	-49.97	4.0	-45.97	Peak	-27	Pass
NVNT	n20	5745	5650	-56.18	4.0	-52.18	Average	-27	Pass
NVNT	n20	5745	5700	-43.8	4.0	-39.8	Peak	10	Pass
NVNT	n20	5745	5700	-55.74	4.0	-51.74	Average	10	Pass
NVNT	n20	5745	5720	-45.68	4.0	-41.68	Peak	15.6	Pass
NVNT	n20	5745	5720	-53.23	4.0	-49.23	Average	15.6	Pass
NVNT	n20	5745	5725	-39.82	4.0	-35.82	Peak	27	Pass
NVNT	n20	5745	5725	-50.35	4.0	-46.35	Average	27	Pass
NVNT	n20	5825	5850	-47.2	4.0	-43.2	Peak	27	Pass
NVNT	n20	5825	5850	-54.84	4.0	-50.84	Average	27	Pass
NVNT	n20	5825	5855	-48.2	4.0	-44.2	Peak	15.6	Pass
NVNT	n20	5825	5855	-55.44	4.0	-51.44	Average	15.6	Pass
NVNT	n20	5825	5875	-46.99	4.0	-42.99	Peak	10	Pass
NVNT	n20	5825	5875	-56.24	4.0	-52.24	Average	10	Pass
NVNT	n20	5825	5925	-49.59	4.0	-45.59	Peak	-27	Pass
NVNT	n20	5825	5925	-56.28	4.0	-52.28	Average	-27	Pass
NVNT	n40	5755	5650	-49.79	4.0	-45.79	Peak	-27	Pass
NVNT	n40	5755	5650	-56.06	4.0	-52.06	Average	-27	Pass
NVNT	n40	5755	5700	-46.26	4.0	-42.26	Peak	10	Pass
NVNT	n40	5755	5700	-54.07	4.0	-50.07	Average	10	Pass
NVNT	n40	5755	5720	-38.77	4.0	-34.77	Peak	15.6	Pass

NVNT	n40	5755	5720	-49.99	4.0	-45.99	Average	15.6	Pass
NVNT	n40	5755	5725	-33.9	4.0	-29.9	Peak	27	Pass
NVNT	n40	5755	5725	-49.56	4.0	-45.56	Average	27	Pass
NVNT	n40	5795	5850	-49.48	4.0	-45.48	Peak	27	Pass
NVNT	n40	5795	5850	-55.86	4.0	-51.86	Average	27	Pass
NVNT	n40	5795	5855	-49.96	4.0	-45.96	Peak	15.6	Pass
NVNT	n40	5795	5855	-56.25	4.0	-52.25	Average	15.6	Pass
NVNT	n40	5795	5875	-50.38	4.0	-46.38	Peak	10	Pass
NVNT	n40	5795	5875	-56.47	4.0	-52.47	Average	10	Pass
NVNT	n40	5795	5925	-48.93	4.0	-44.93	Peak	-27	Pass
NVNT	n40	5795	5925	-56.36	4.0	-52.36	Average	-27	Pass
NVNT	ac20	5745	5650	-48.54	4.0	-44.54	Peak	-27	Pass
NVNT	ac20	5745	5650	-56.43	4.0	-52.43	Average	-27	Pass
NVNT	ac20	5745	5700	-48.2	4.0	-44.2	Peak	10	Pass
NVNT	ac20	5745	5700	-55.77	4.0	-51.77	Average	10	Pass
NVNT	ac20	5745	5720	-43.91	4.0	-39.91	Peak	15.6	Pass
NVNT	ac20	5745	5720	-52.78	4.0	-48.78	Average	15.6	Pass
NVNT	ac20	5745	5725	-42.96	4.0	-38.96	Peak	27	Pass
NVNT	ac20	5745	5725	-50.69	4.0	-46.69	Average	27	Pass
NVNT	ac20	5825	5850	-44.44	4.0	-40.44	Peak	27	Pass
NVNT	ac20	5825	5850	-54.81	4.0	-50.81	Average	27	Pass
NVNT	ac20	5825	5855	-49.2	4.0	-45.2	Peak	15.6	Pass
NVNT	ac20	5825	5855	-55.58	4.0	-51.58	Average	15.6	Pass
NVNT	ac20	5825	5875	-51.09	4.0	-47.09	Peak	10	Pass
NVNT	ac20	5825	5875	-56.42	4.0	-52.42	Average	10	Pass
NVNT	ac20	5825	5925	-50.29	4.0	-46.29	Peak	-27	Pass
NVNT	ac20	5825	5925	-56.38	4.0	-52.38	Average	-27	Pass
NVNT	ac40	5755	5650	-49.14	4.0	-45.14	Peak	-27	Pass
NVNT	ac40	5755	5650	-56.1	4.0	-52.1	Average	-27	Pass
NVNT	ac40	5755	5700	-47.46	4.0	-43.46	Peak	10	Pass
NVNT	ac40	5755	5700	-54.53	4.0	-50.53	Average	10	Pass
NVNT	ac40	5755	5720	-44.74	4.0	-40.74	Peak	15.6	Pass
NVNT	ac40	5755	5720	-51.62	4.0	-47.62	Average	15.6	Pass
NVNT	ac40	5755	5725	-44.52	4.0	-40.52	Peak	27	Pass
NVNT	ac40	5755	5725	-50.34	4.0	-46.34	Average	27	Pass
NVNT	ac40	5795	5850	-49.55	4.0	-45.55	Peak	27	Pass
NVNT	ac40	5795	5850	-56.02	4.0	-52.02	Average	27	Pass
NVNT	ac40	5795	5855	-50.06	4.0	-46.06	Peak	15.6	Pass
NVNT	ac40	5795	5855	-56.1	4.0	-52.1	Average	15.6	Pass
NVNT	ac40	5795	5875	-50.78	4.0	-46.78	Peak	10	Pass
NVNT	ac40	5795	5875	-56.49	4.0	-52.49	Average	10	Pass

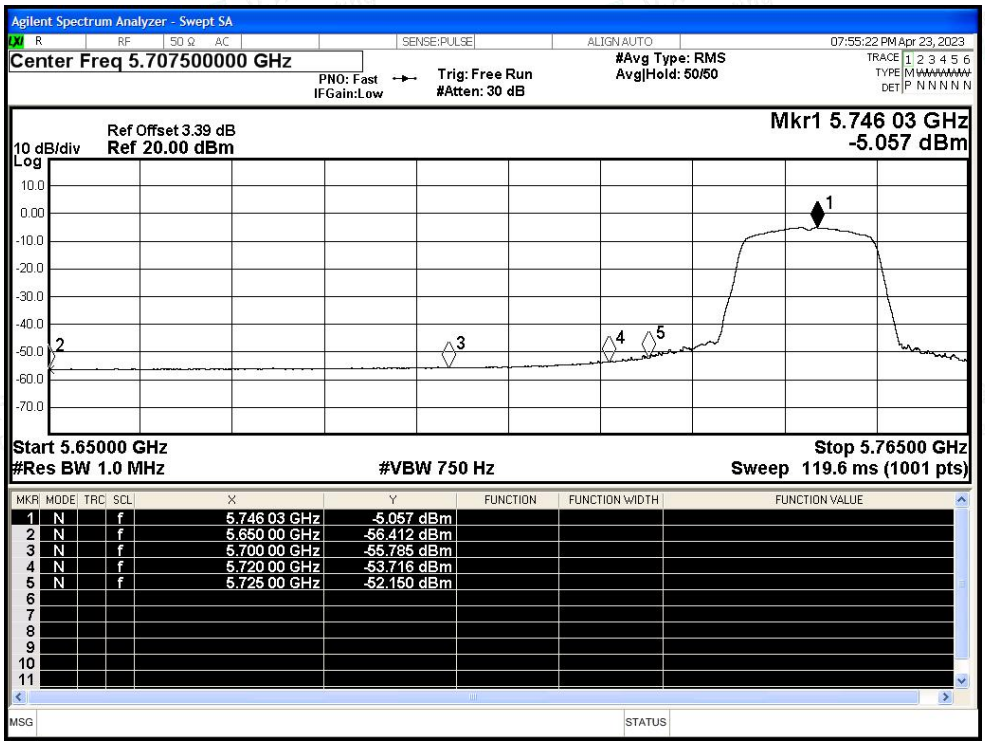
NVNT	ac40	5795	5925	-48.94	4.0	-44.94	Peak	-27	Pass
NVNT	ac40	5795	5925	-56.11	4.0	-52.11	Average	-27	Pass
NVNT	ac80	5775	5650	-47.89	4.0	-43.89	Peak	-27	Pass
NVNT	ac80	5775	5650	-54.88	4.0	-50.88	Average	-27	Pass
NVNT	ac80	5775	5700	-41.53	4.0	-37.53	Peak	10	Pass
NVNT	ac80	5775	5700	-50.96	4.0	-46.96	Average	10	Pass
NVNT	ac80	5775	5720	-42.82	4.0	-38.82	Peak	15.6	Pass
NVNT	ac80	5775	5720	-48.83	4.0	-44.83	Average	15.6	Pass
NVNT	ac80	5775	5725	-41.17	4.0	-37.17	Peak	27	Pass
NVNT	ac80	5775	5725	-48.06	4.0	-44.06	Average	27	Pass
NVNT	ac80	5775	5850	-42.53	4.0	-38.53	Peak	27	Pass
NVNT	ac80	5775	5850	-51.05	4.0	-47.05	Average	27	Pass
NVNT	ac80	5775	5855	-45.61	4.0	-41.61	Peak	15.6	Pass
NVNT	ac80	5775	5855	-51.17	4.0	-47.17	Average	15.6	Pass
NVNT	ac80	5775	5875	-48.31	4.0	-44.31	Peak	10	Pass
NVNT	ac80	5775	5875	-53.98	4.0	-49.98	Average	10	Pass
NVNT	ac80	5775	5925	-47.22	4.0	-43.22	Peak	-27	Pass
NVNT	ac80	5775	5925	-55.48	4.0	-51.48	Average	-27	Pass

Test Graphs

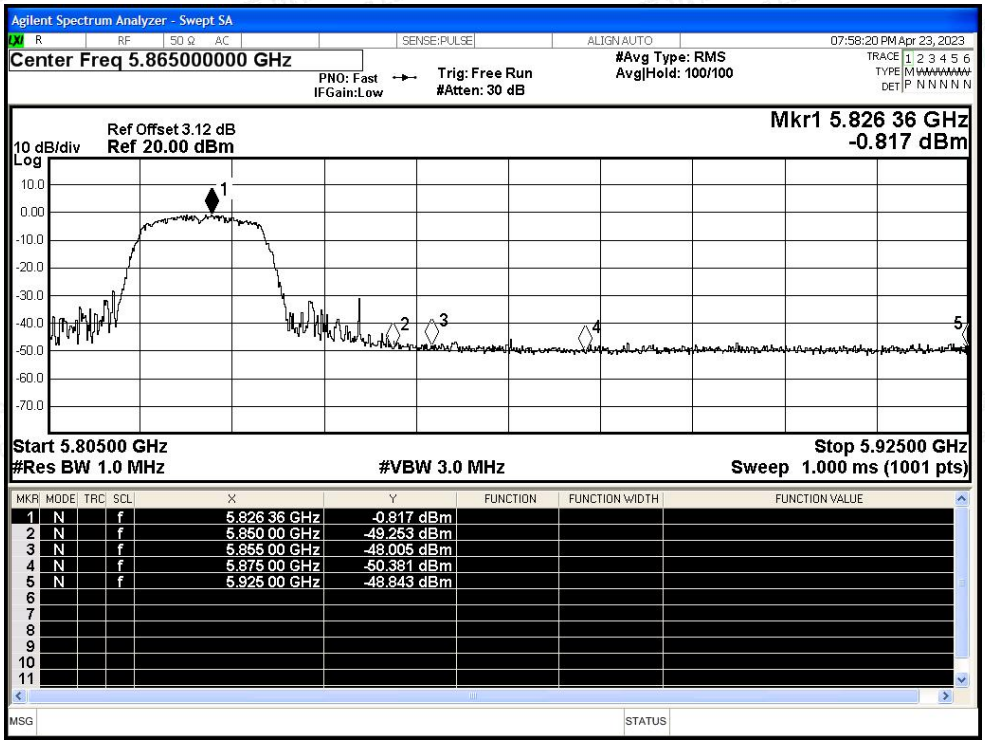
Restrict Band NVNT a 5745MHz Peak



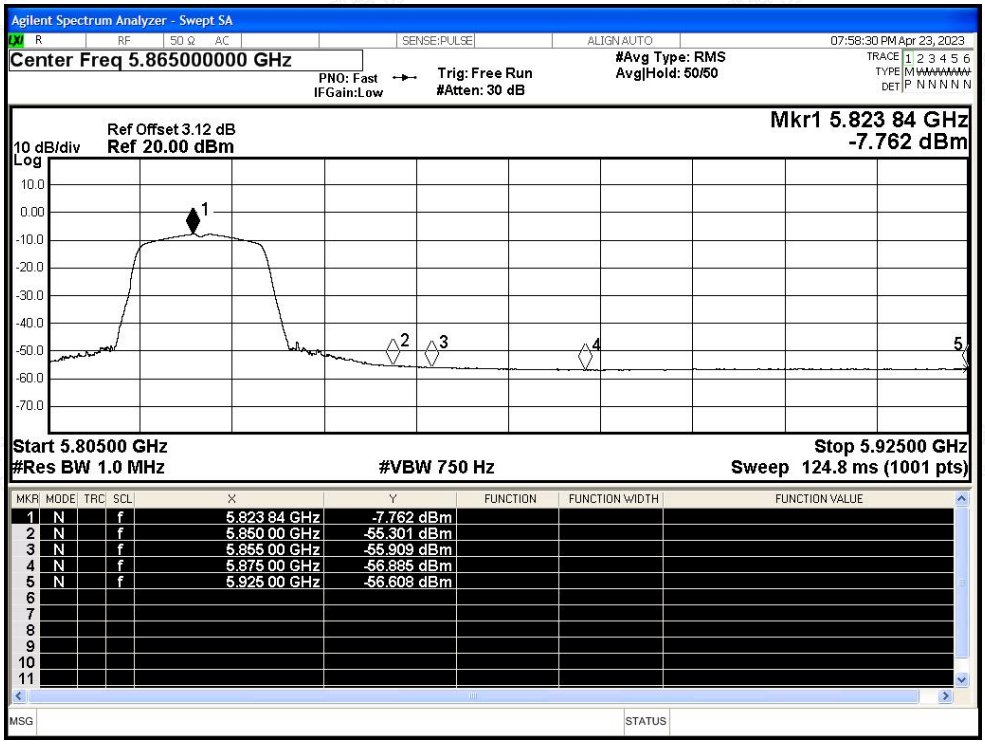
Restrict Band NVNT a 5745MHz Average



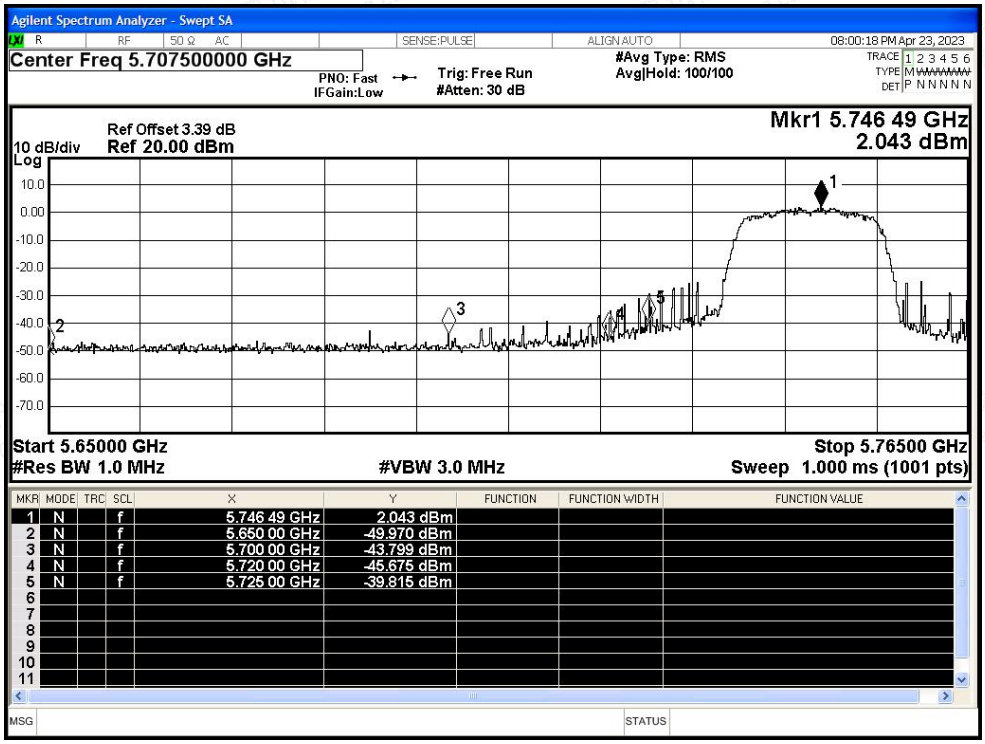
Restrict Band NVNT a 5825MHz Peak



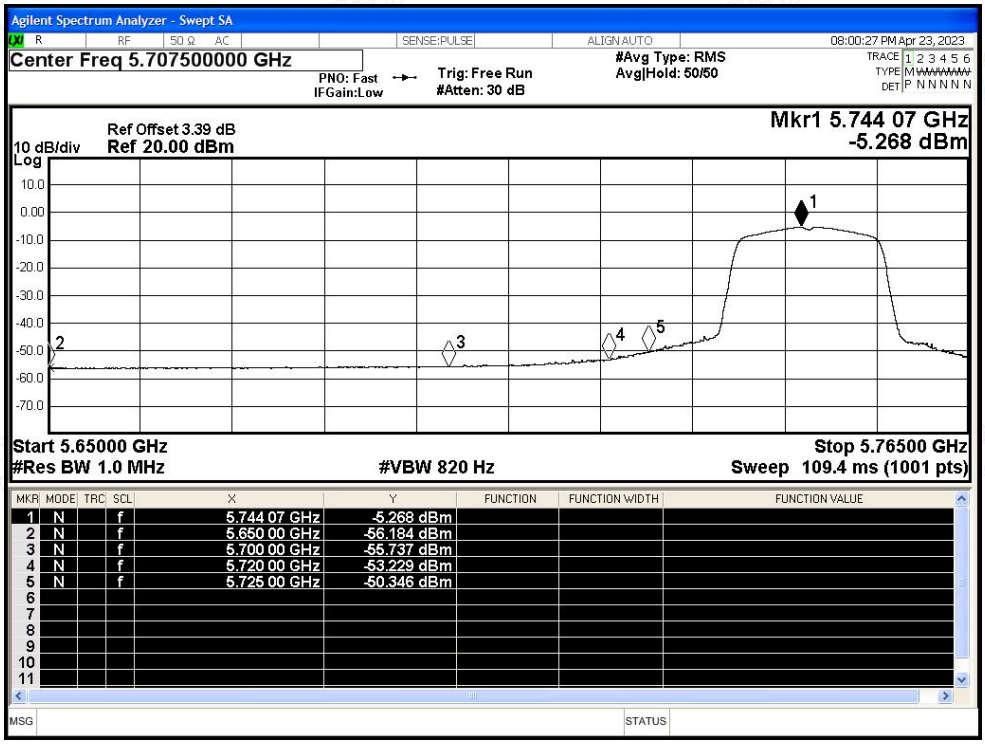
Restrict Band NVNT a 5825MHz Average



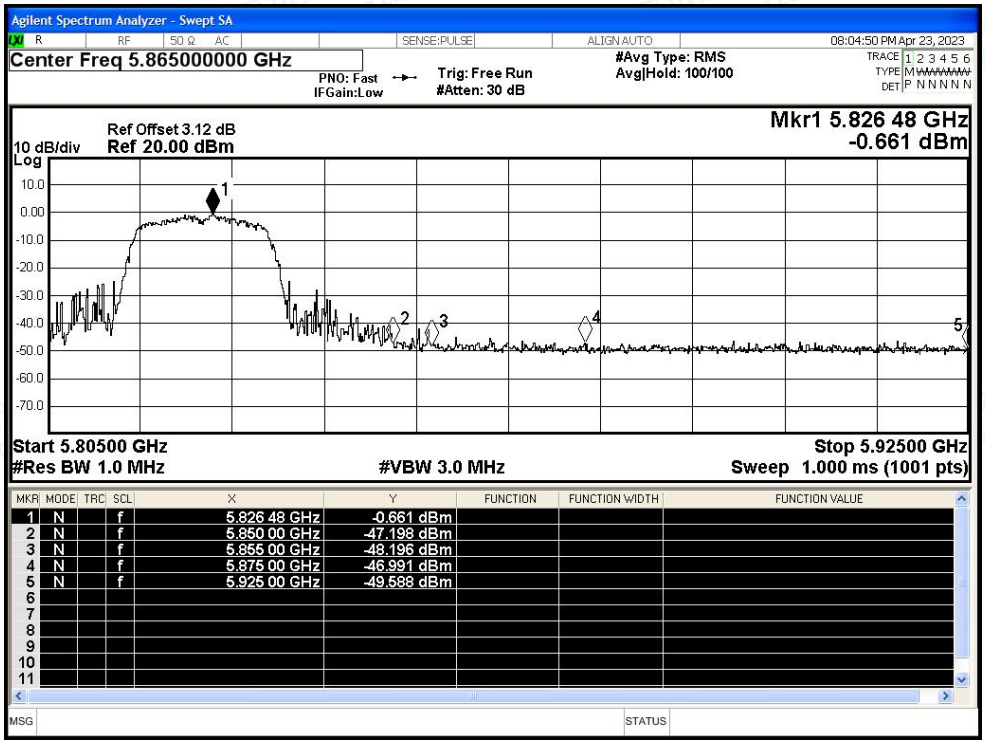
Restrict Band NVNT n20 5745MHz Peak



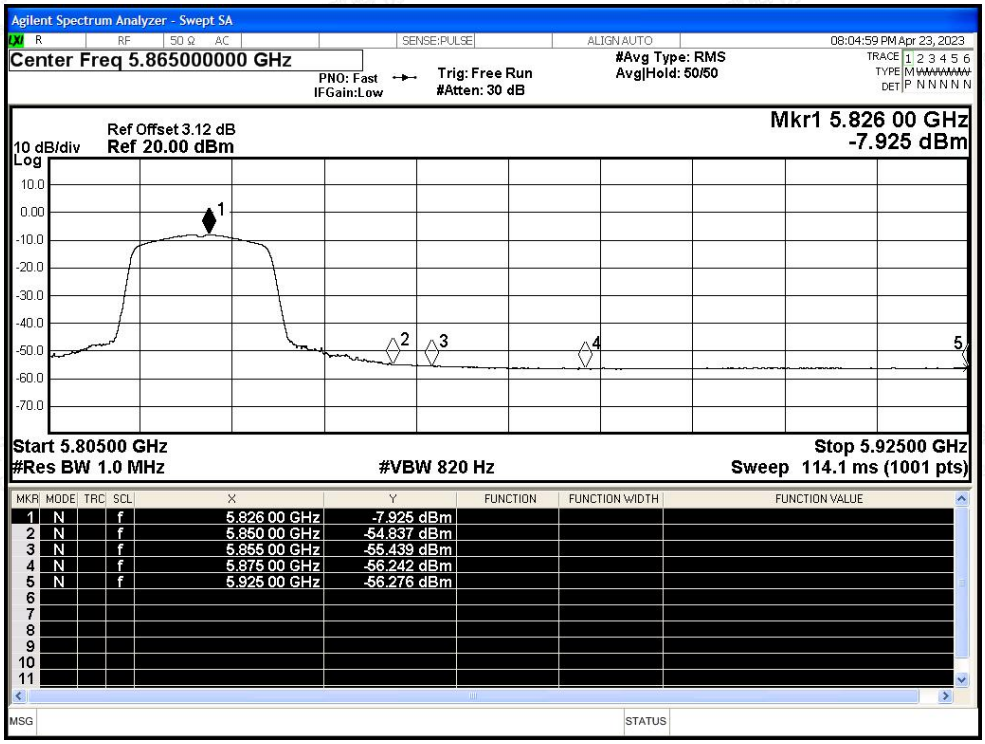
Restrict Band NVNT n20 5745MHz Average



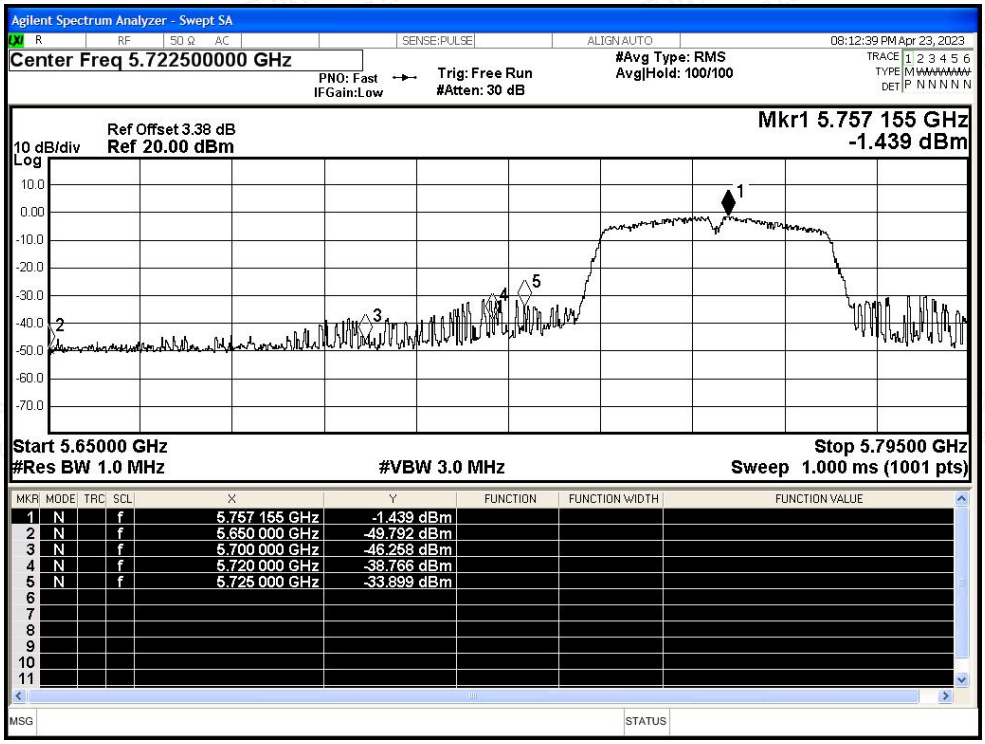
Restrict Band NVNT n20 5825MHz Peak



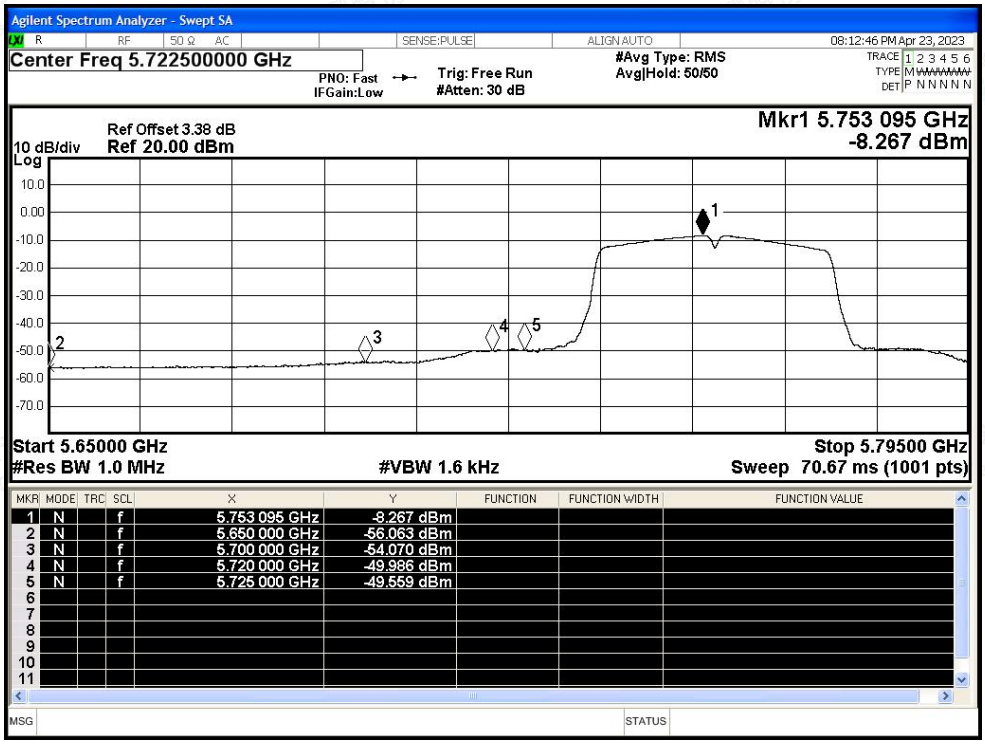
Restrict Band NVNT n20 5825MHz Average



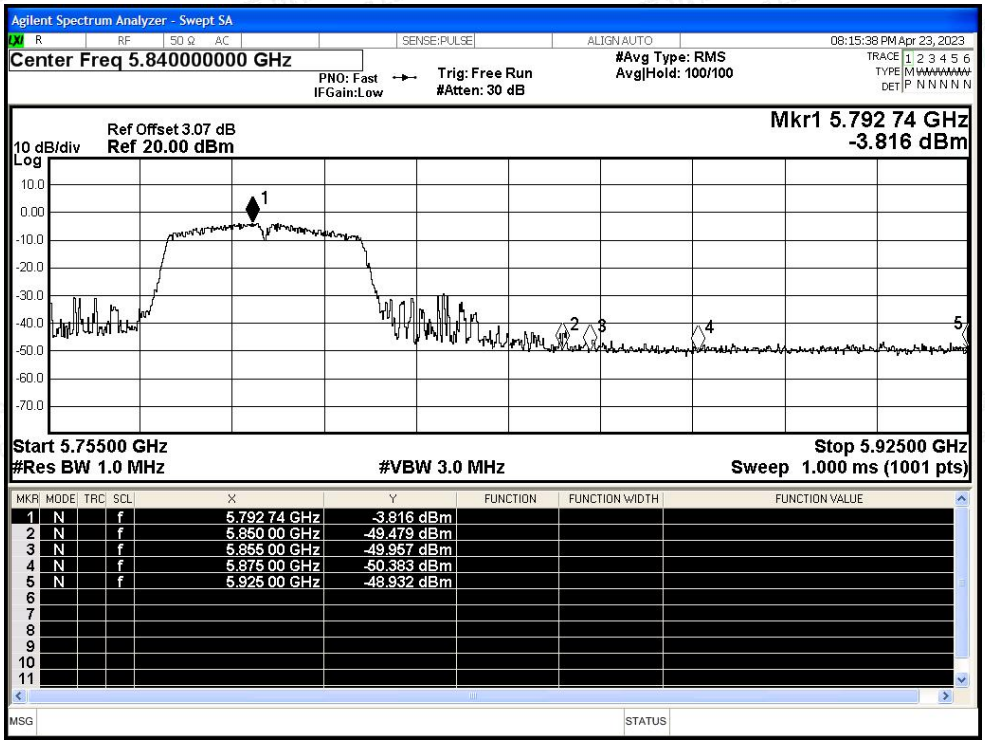
Restrict Band NVNT n40 5755MHz Peak



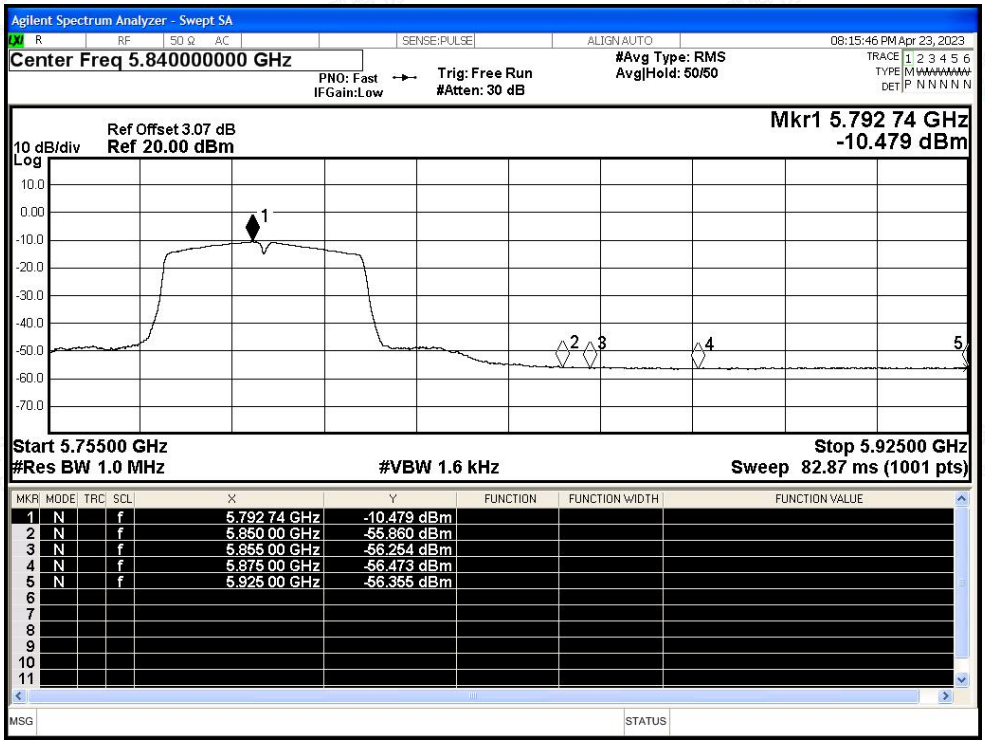
Restrict Band NVNT n40 5755MHz Average



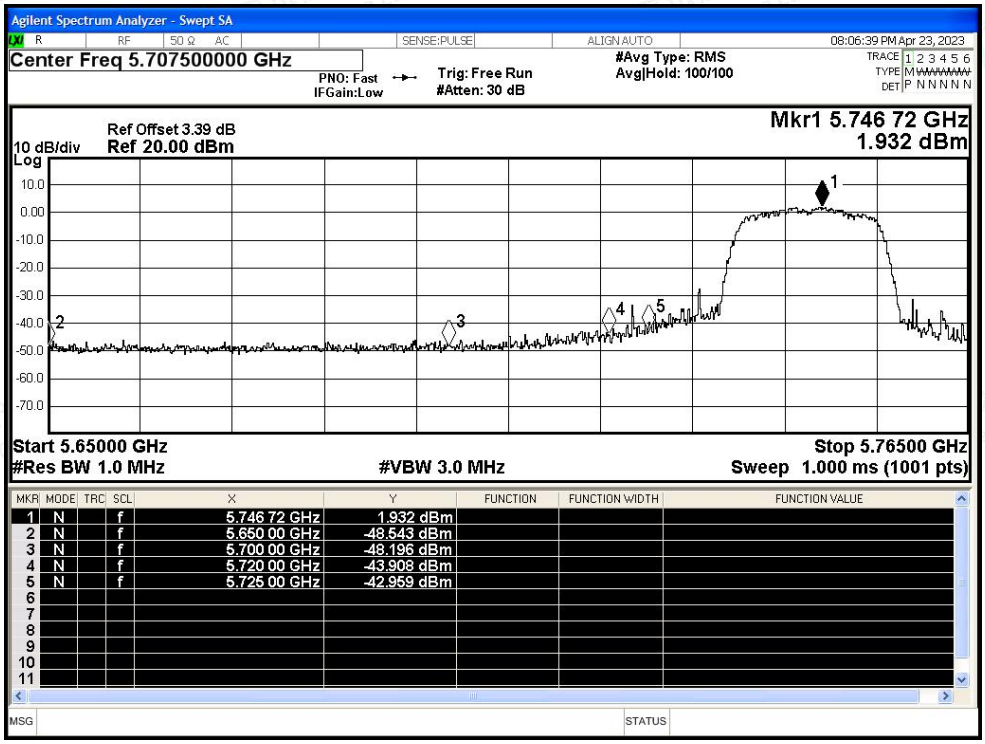
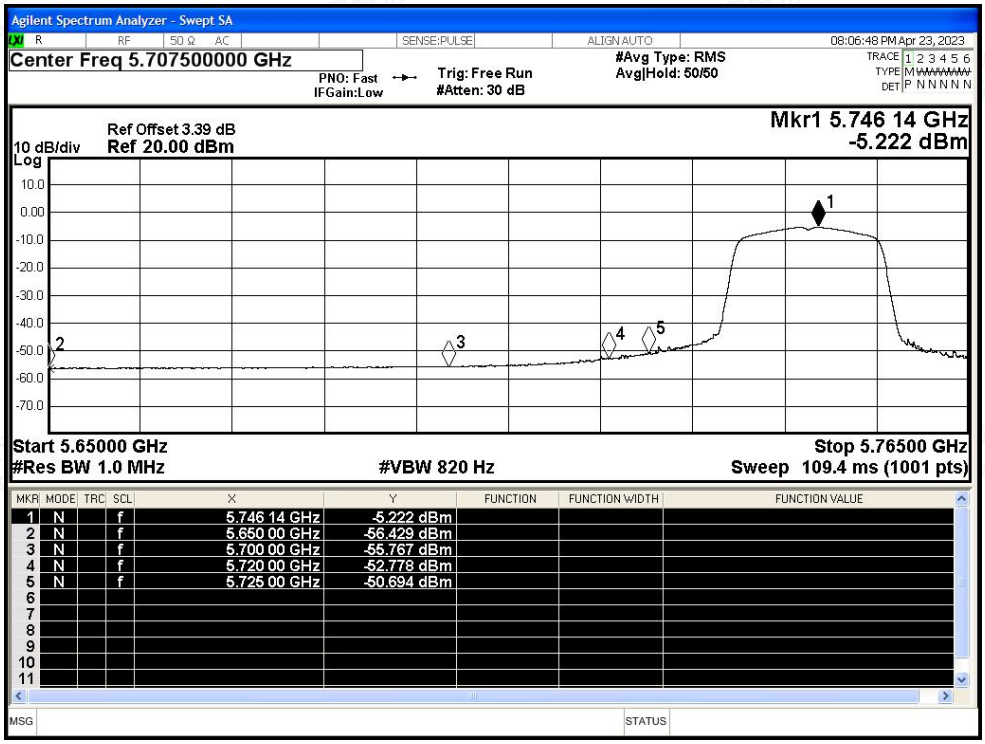
Restrict Band NVNT n40 5795MHz Peak



Restrict Band NVNT n40 5795MHz Average



Restrict Band NVNT ac20 5745MHz Peak



Restrict Band NVNT ac20 5745MHz Average