Appendix E

RF Test Data for 5.8GWIFI (Conducted Measurement)

Product Name: Smart Projector

Test Model: Y01

Environmental Conditions

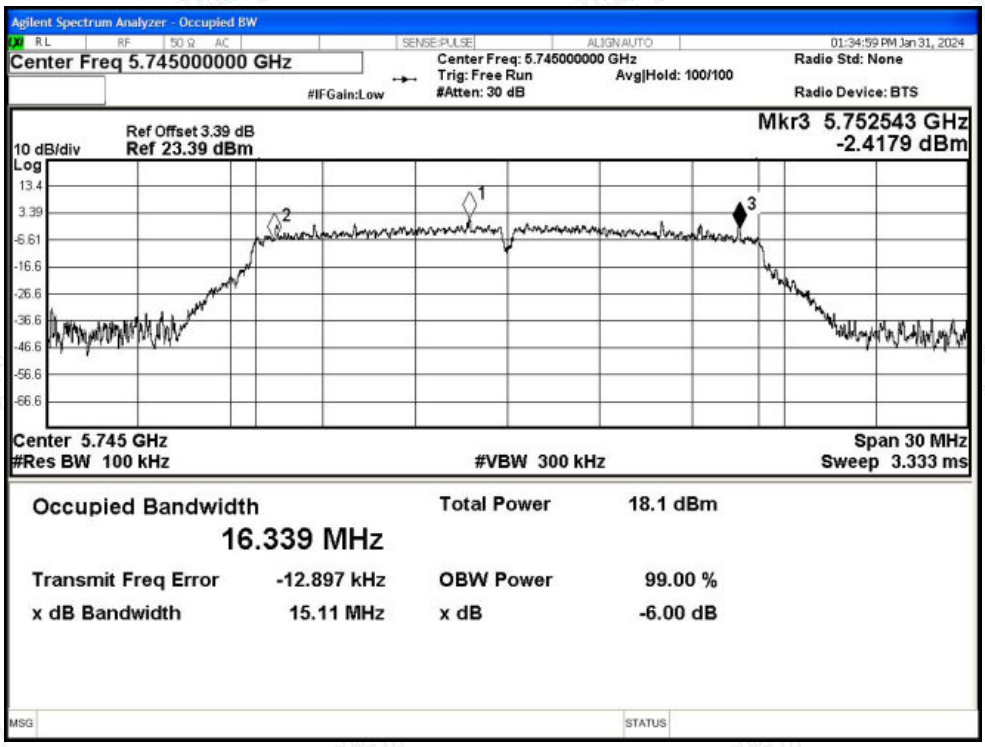
Temperature:	23.8°C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Jay Luo
Supervised by:	Nick Peng

E.1 -6dB Bandwidth

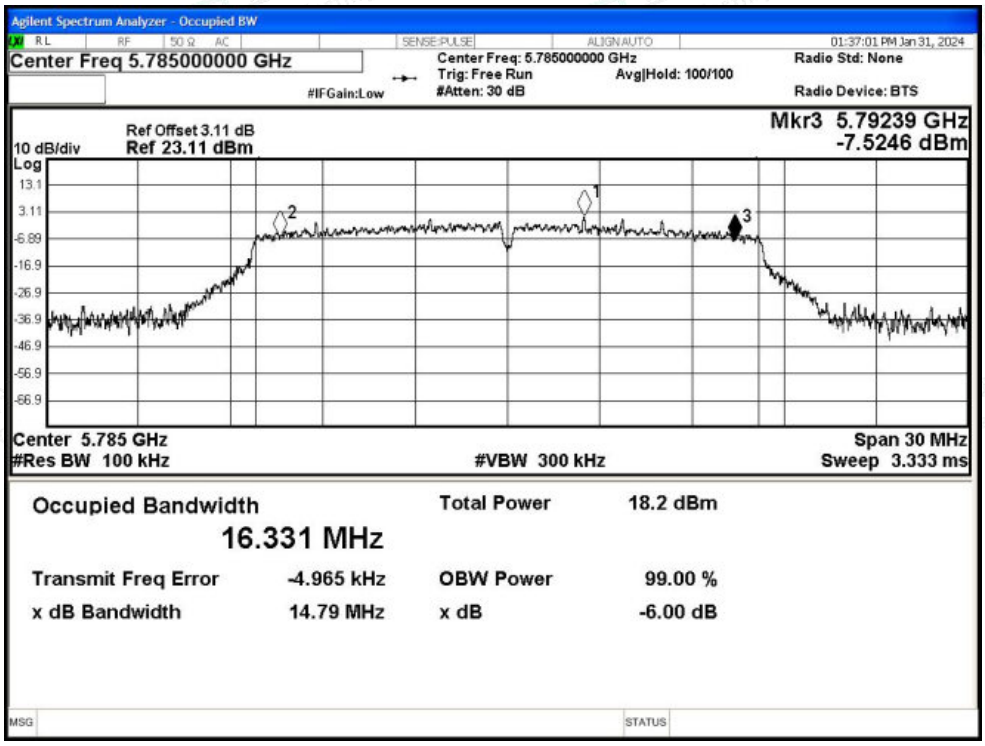
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	a	5745	Ant0	15.112	>=0.5	Pass
NVNT	a	5785	Ant0	14.791	>=0.5	Pass
NVNT	a	5825	Ant0	15.041	>=0.5	Pass
NVNT	n20	5745	Ant0	16.87	>=0.5	Pass
NVNT	n20	5785	Ant0	15.025	>=0.5	Pass
NVNT	n20	5825	Ant0	13.243	>=0.5	Pass
NVNT	n40	5755	Ant0	34.997	>=0.5	Pass
NVNT	n40	5795	Ant0	35.106	>=0.5	Pass
NVNT	ac20	5745	Ant0	15.114	>=0.5	Pass
NVNT	ac20	5785	Ant0	15.019	>=0.5	Pass
NVNT	ac20	5825	Ant0	14.999	>=0.5	Pass
NVNT	ac40	5755	Ant0	33.838	>=0.5	Pass
NVNT	ac40	5795	Ant0	33.861	>=0.5	Pass
NVNT	ac80	5775	Ant0	75.11	>=0.5	Pass

Test Graphs

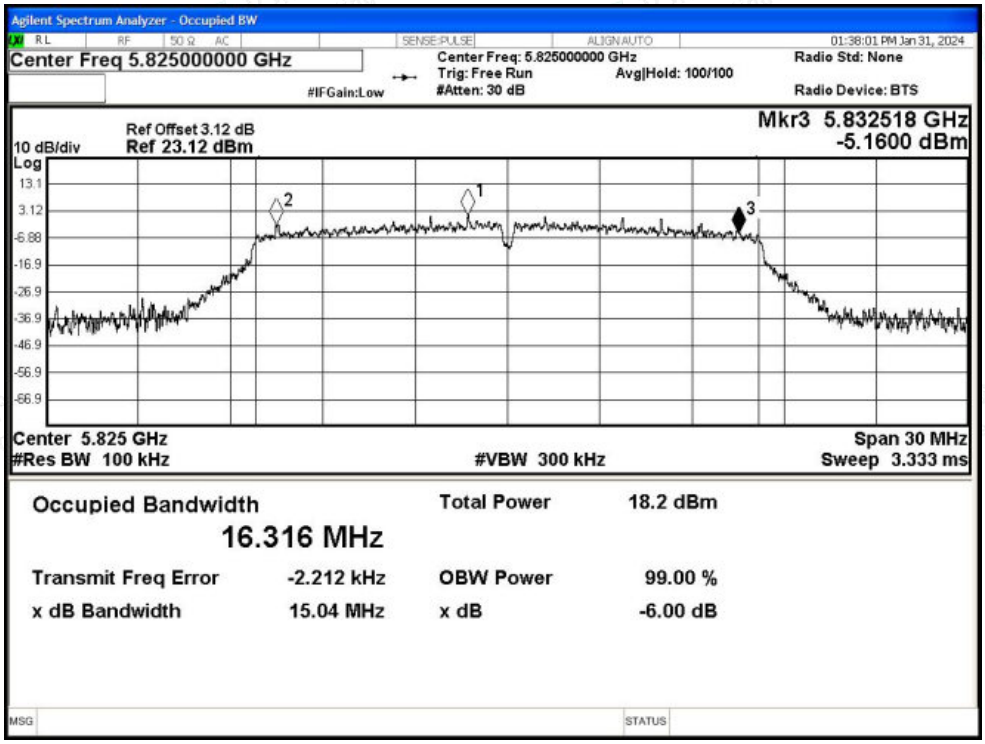
-6dB Bandwidth NVNT a 5745MHz Ant0



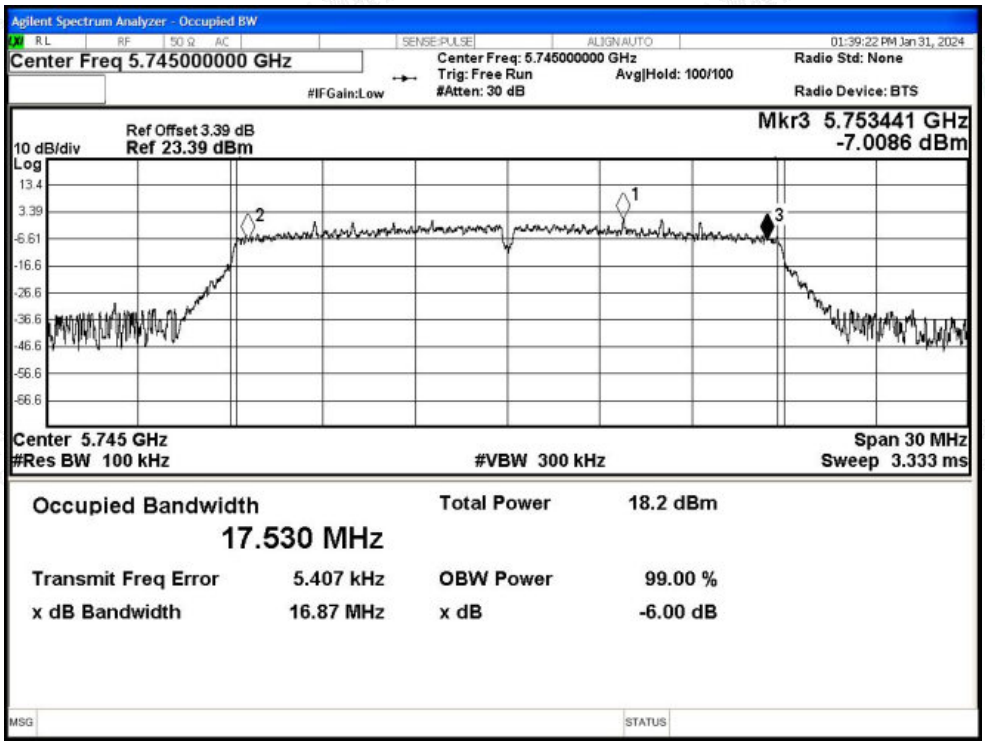
-6dB Bandwidth NVNT a 5785MHz Ant0



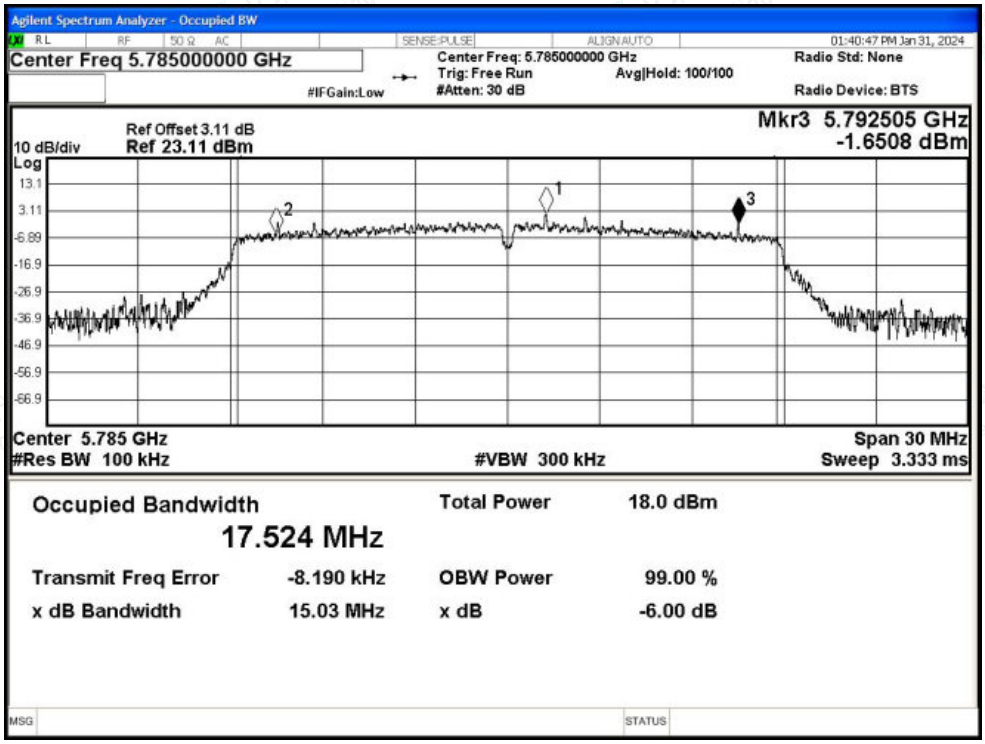
-6dB Bandwidth NVNT a 5825MHz Ant0



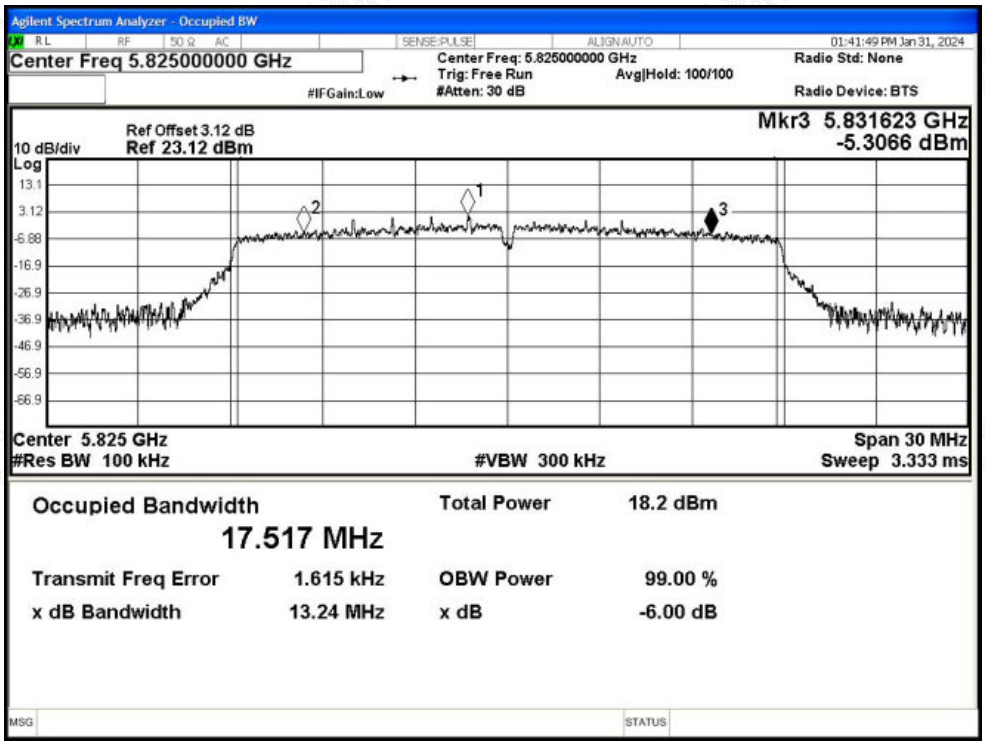
-6dB Bandwidth NVNT n20 5745MHz Ant0



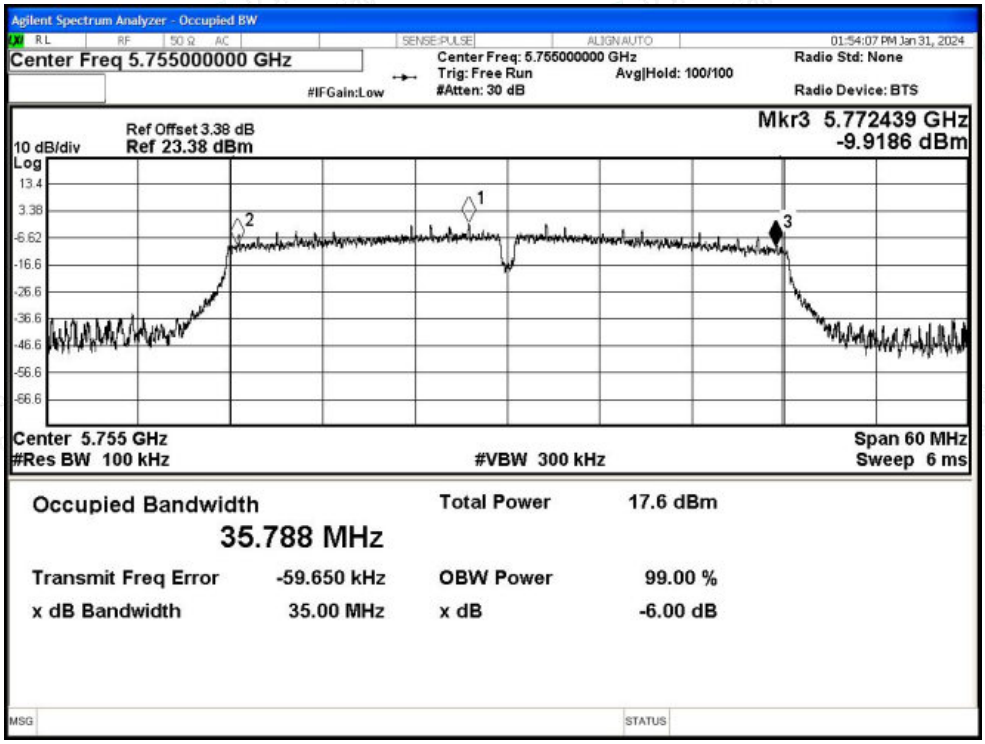
-6dB Bandwidth NVNT n20 5785MHz Ant0



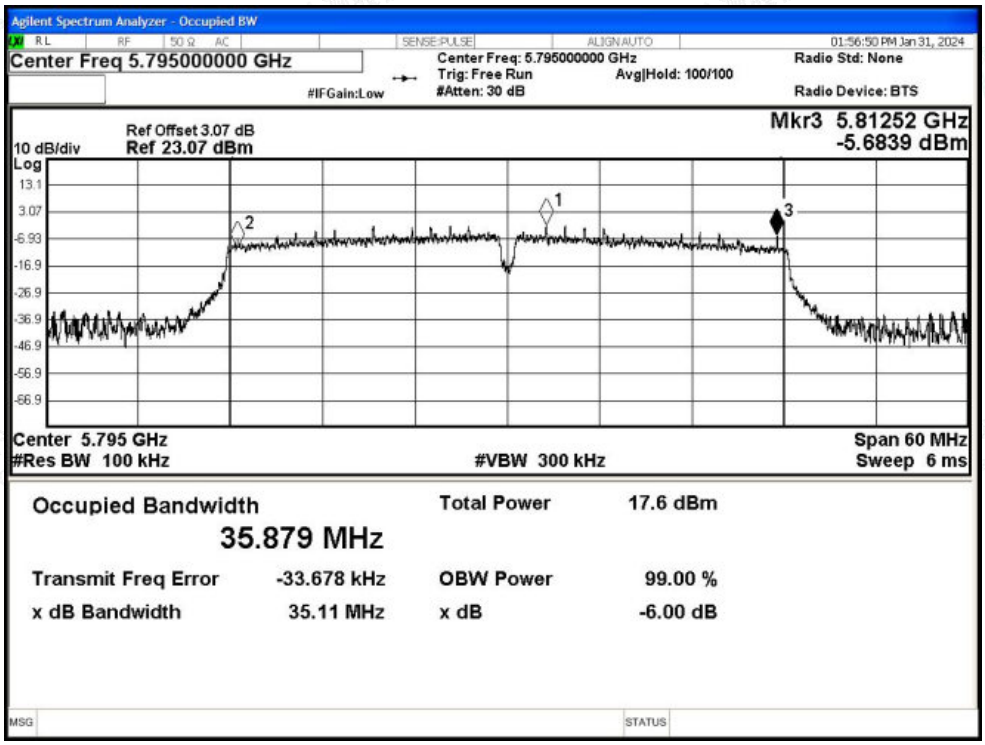
-6dB Bandwidth NVNT n20 5825MHz Ant0



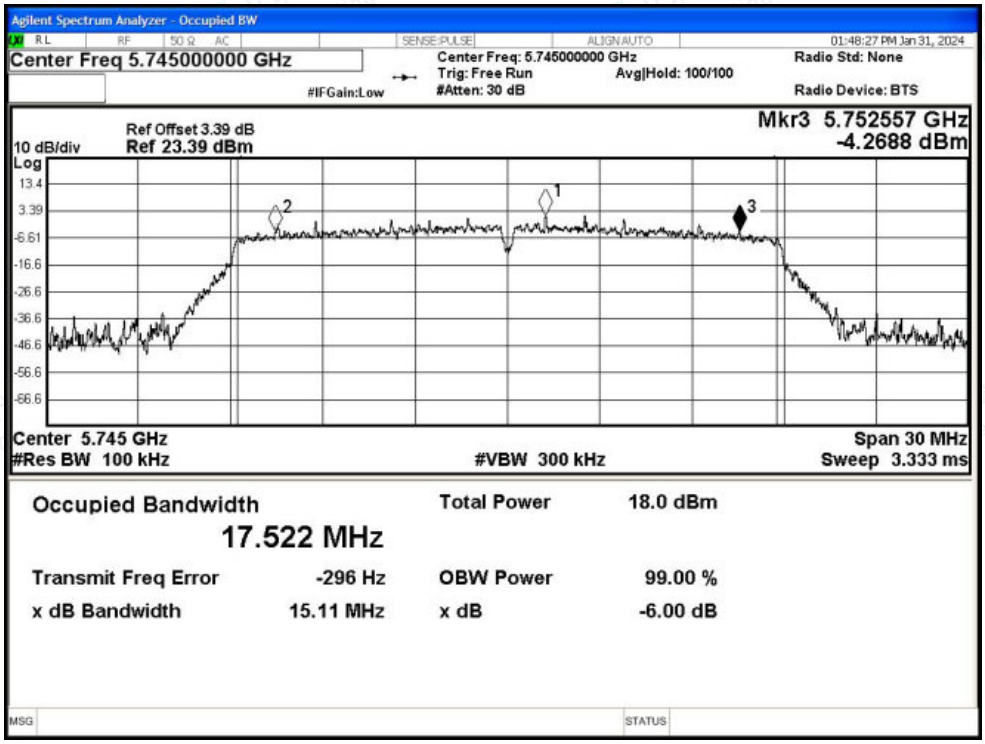
-6dB Bandwidth NVNT n40 5755MHz Ant0



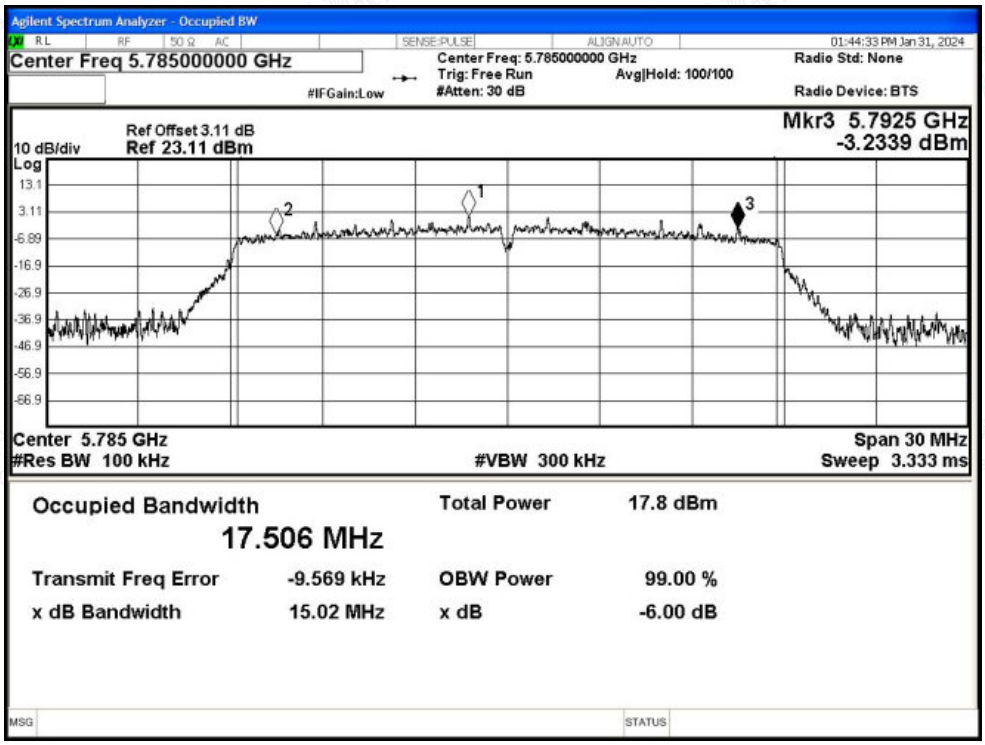
-6dB Bandwidth NVNT n40 5795MHz Ant0



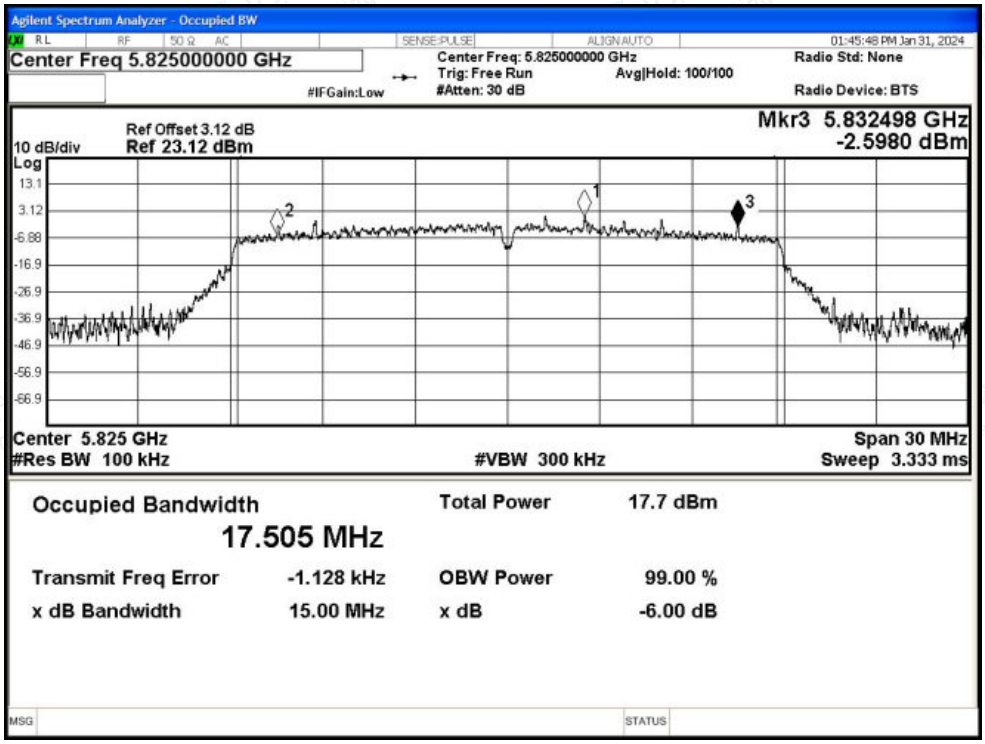
-6dB Bandwidth NVNT ac20 5745MHz Ant0



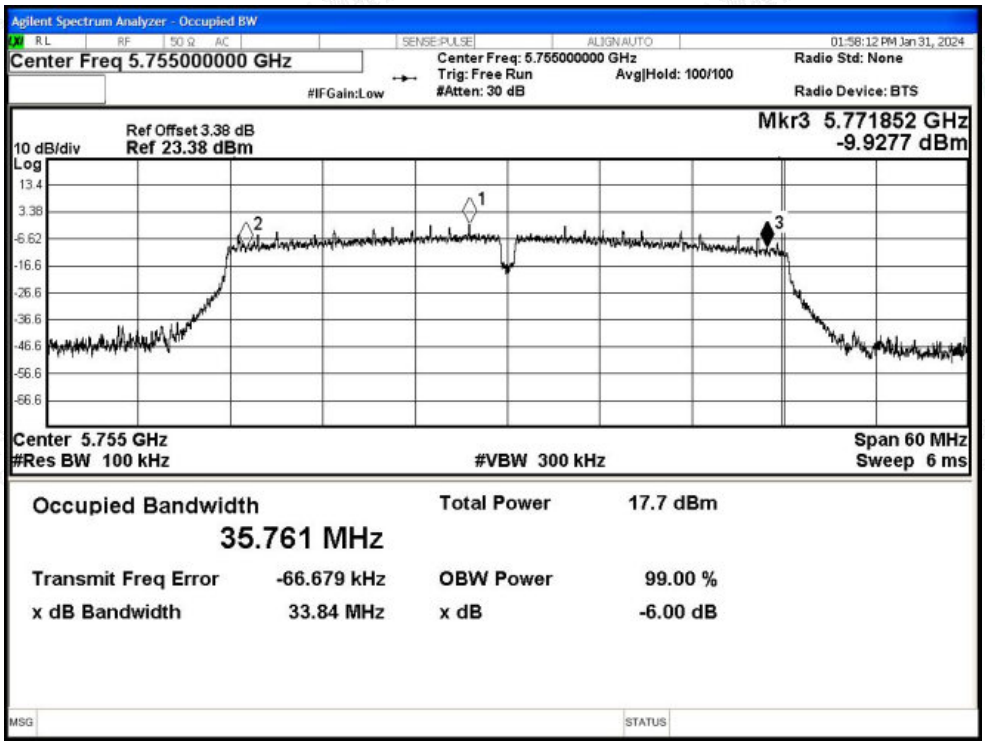
-6dB Bandwidth NVNT ac20 5785MHz Ant0



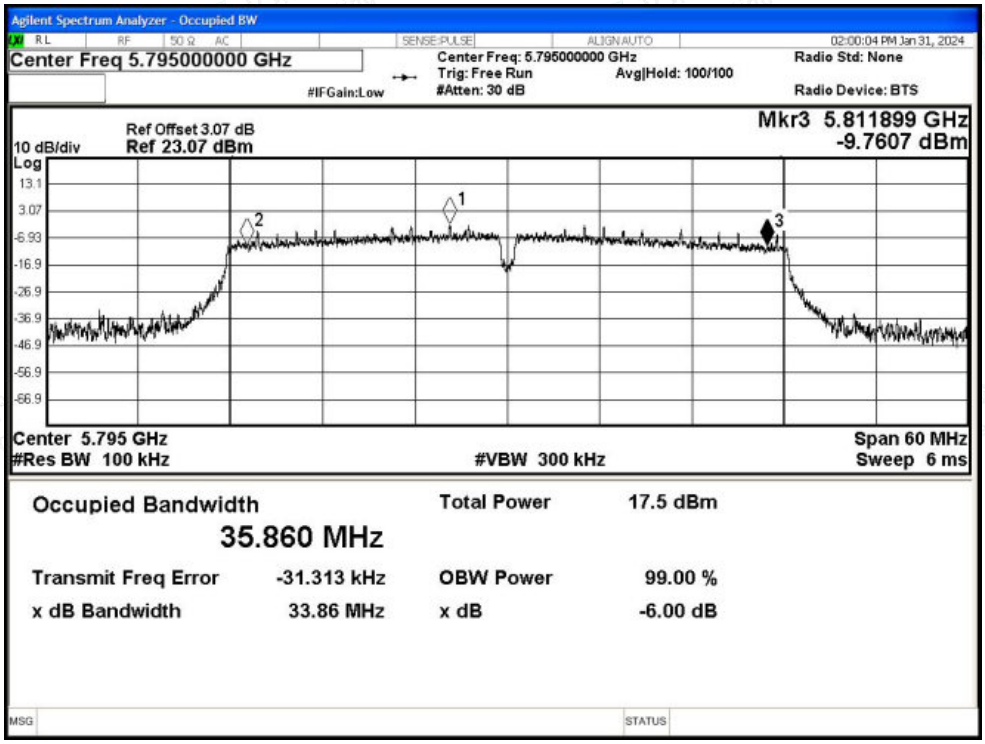
-6dB Bandwidth NVNT ac20 5825MHz Ant0



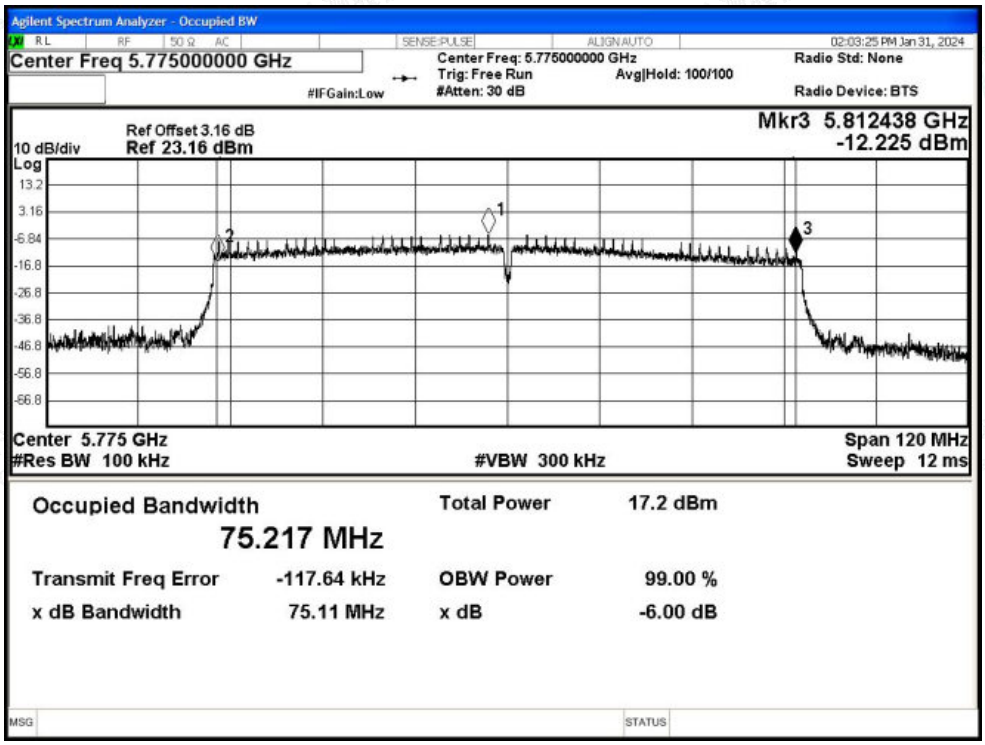
-6dB Bandwidth NVNT ac40 5755MHz Ant0



-6dB Bandwidth NVNT ac40 5795MHz Ant0



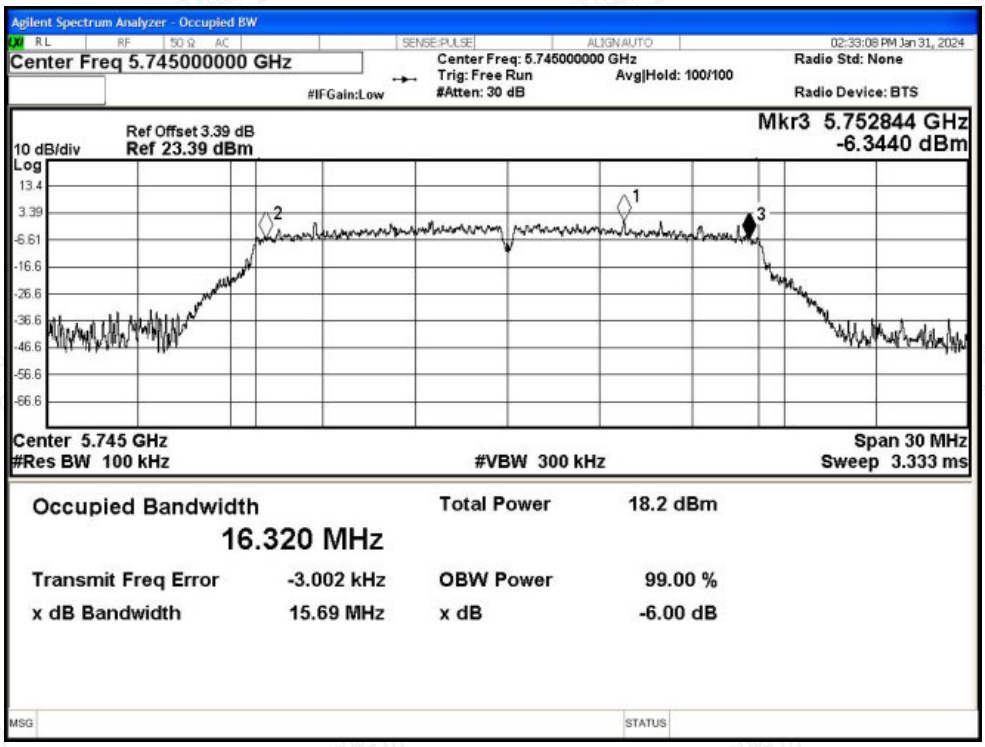
-6dB Bandwidth NVNT ac80 5775MHz Ant0



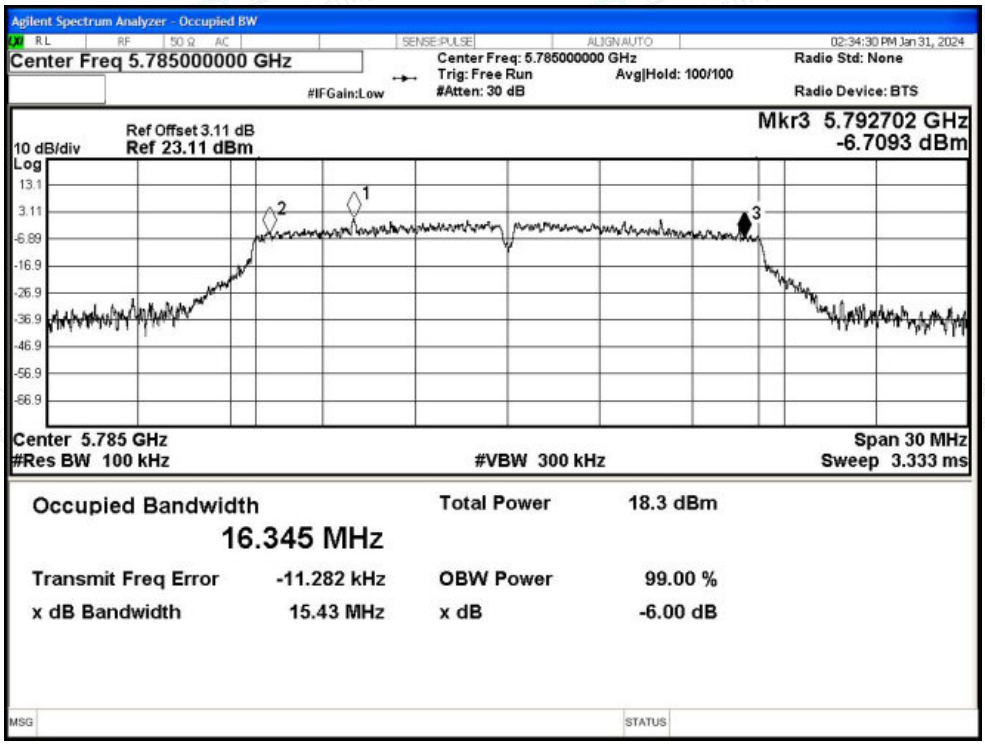
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	a	5745	Ant1	15.694	>=0.5	Pass
NVNT	a	5785	Ant1	15.426	>=0.5	Pass
NVNT	a	5825	Ant1	13.744	>=0.5	Pass
NVNT	n20	5745	Ant1	14.959	>=0.5	Pass
NVNT	n20	5785	Ant1	15.084	>=0.5	Pass
NVNT	n20	5825	Ant1	14.972	>=0.5	Pass
NVNT	n40	5755	Ant1	33.825	>=0.5	Pass
NVNT	n40	5795	Ant1	33.871	>=0.5	Pass
NVNT	ac20	5745	Ant1	15.079	>=0.5	Pass
NVNT	ac20	5785	Ant1	15.061	>=0.5	Pass
NVNT	ac20	5825	Ant1	15.072	>=0.5	Pass
NVNT	ac40	5755	Ant1	35.016	>=0.5	Pass
NVNT	ac40	5795	Ant1	35.1	>=0.5	Pass
NVNT	ac80	5775	Ant1	75.105	>=0.5	Pass

Test Graphs

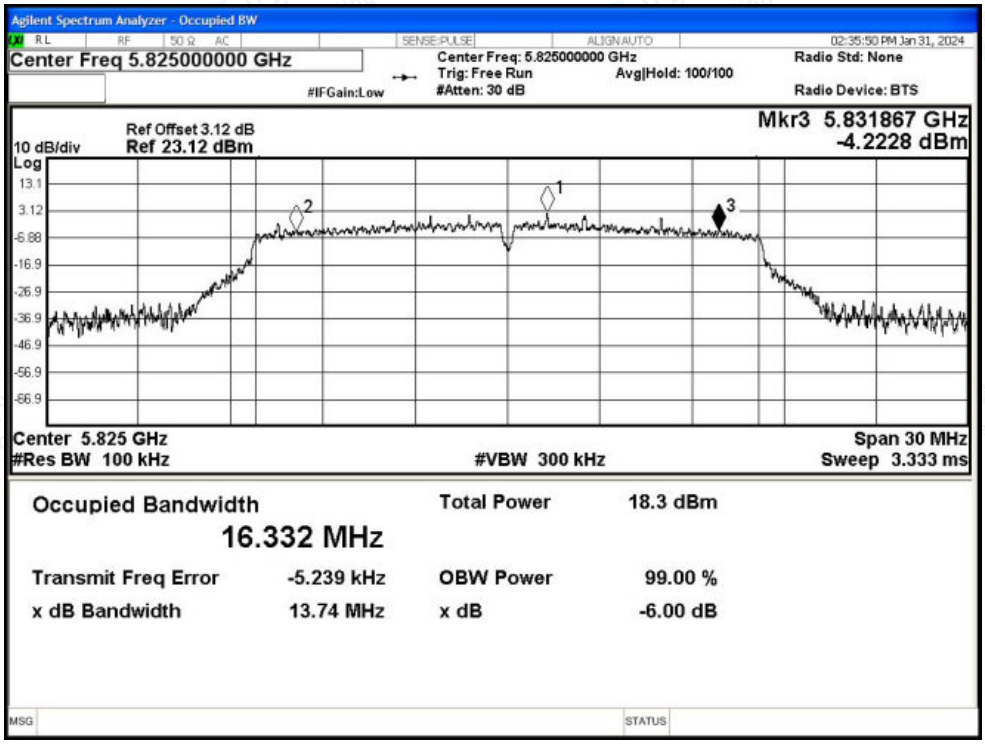
-6dB Bandwidth NVNT a 5745MHz Ant1



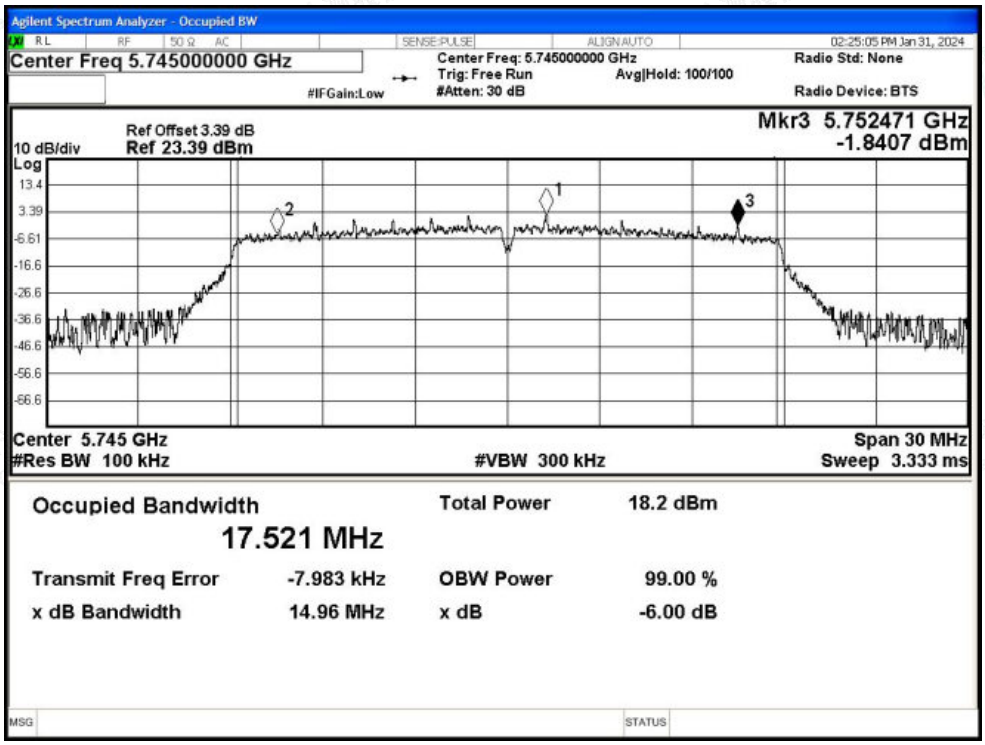
-6dB Bandwidth NVNT a 5785MHz Ant1



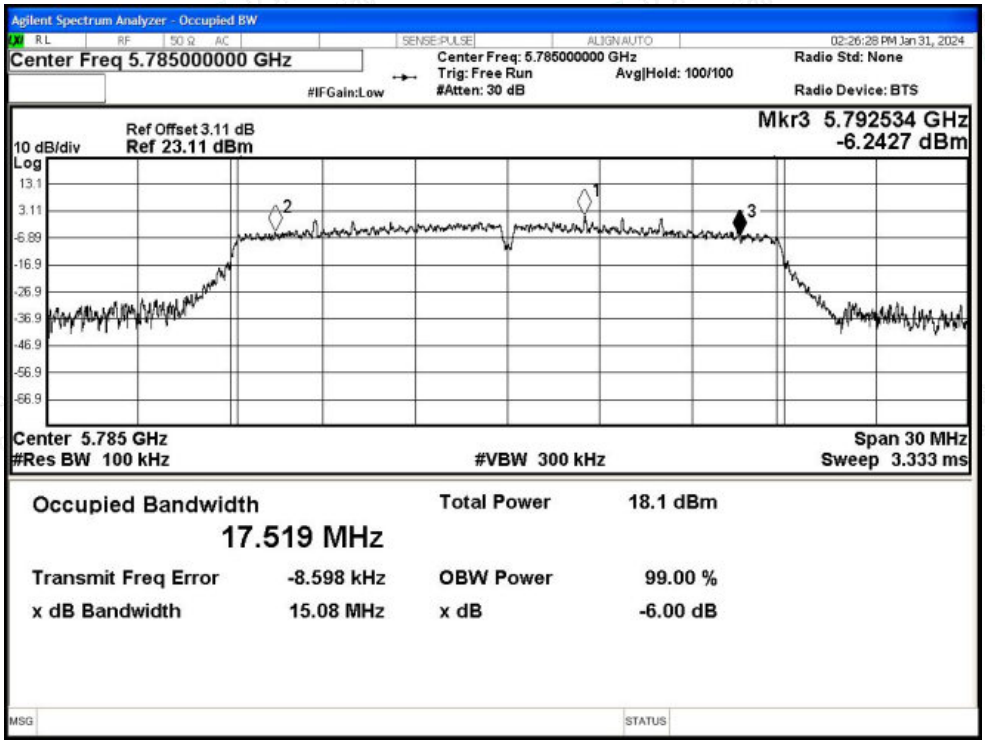
-6dB Bandwidth NVNT a 5825MHz Ant1



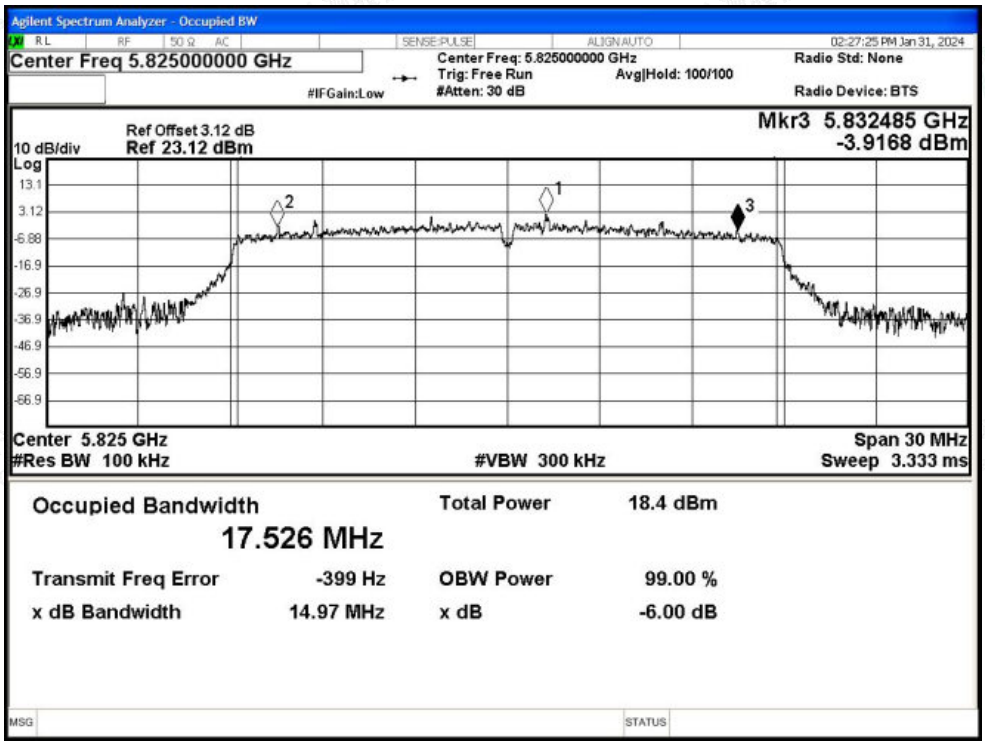
-6dB Bandwidth NVNT n20 5745MHz Ant1



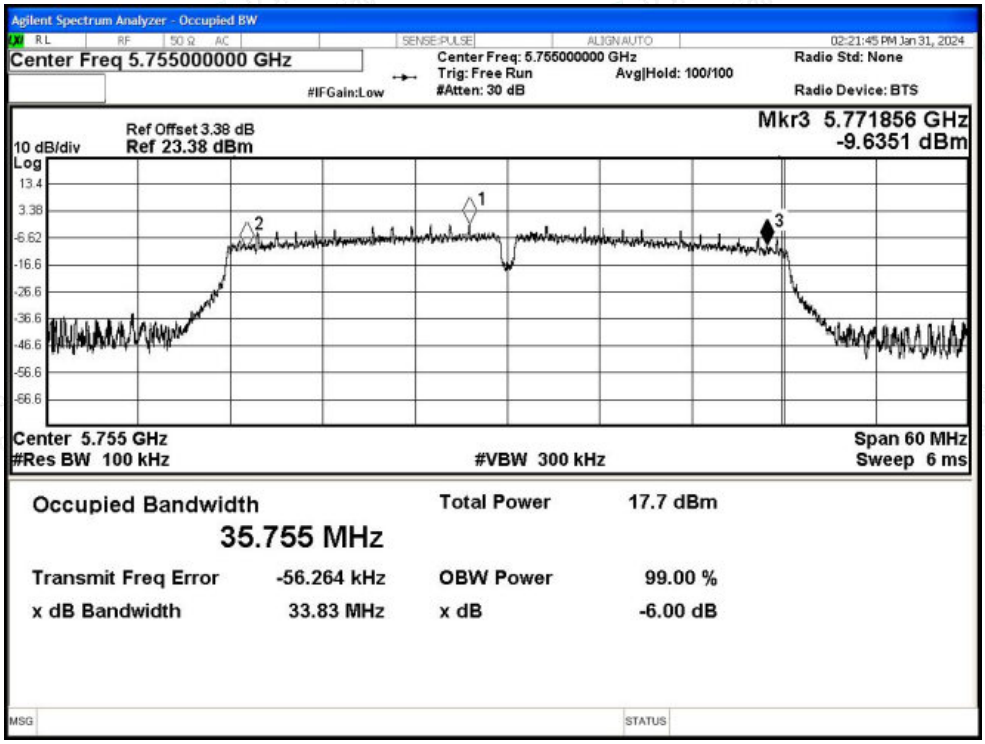
-6dB Bandwidth NVNT n20 5785MHz Ant1



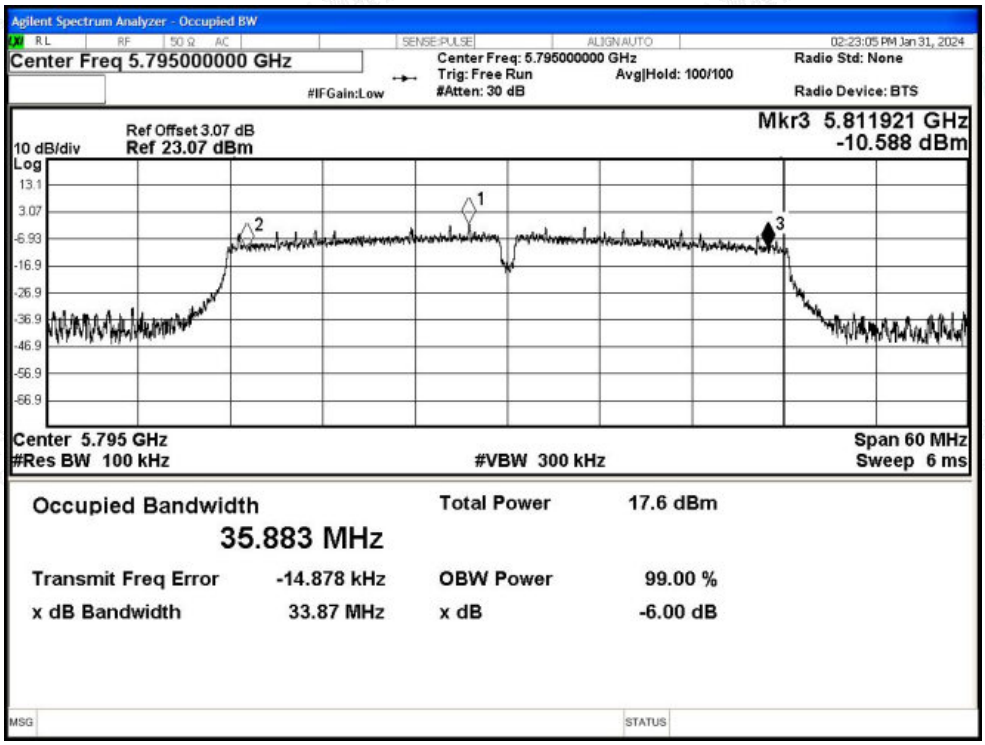
-6dB Bandwidth NVNT n20 5825MHz Ant1



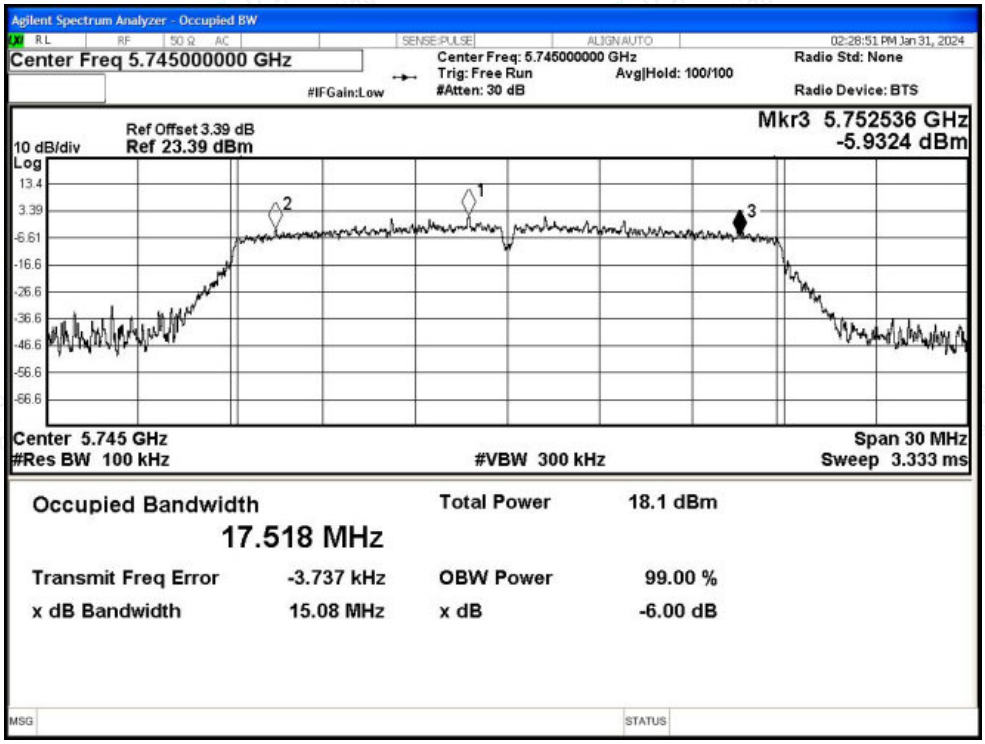
-6dB Bandwidth NVNT n40 5755MHz Ant1



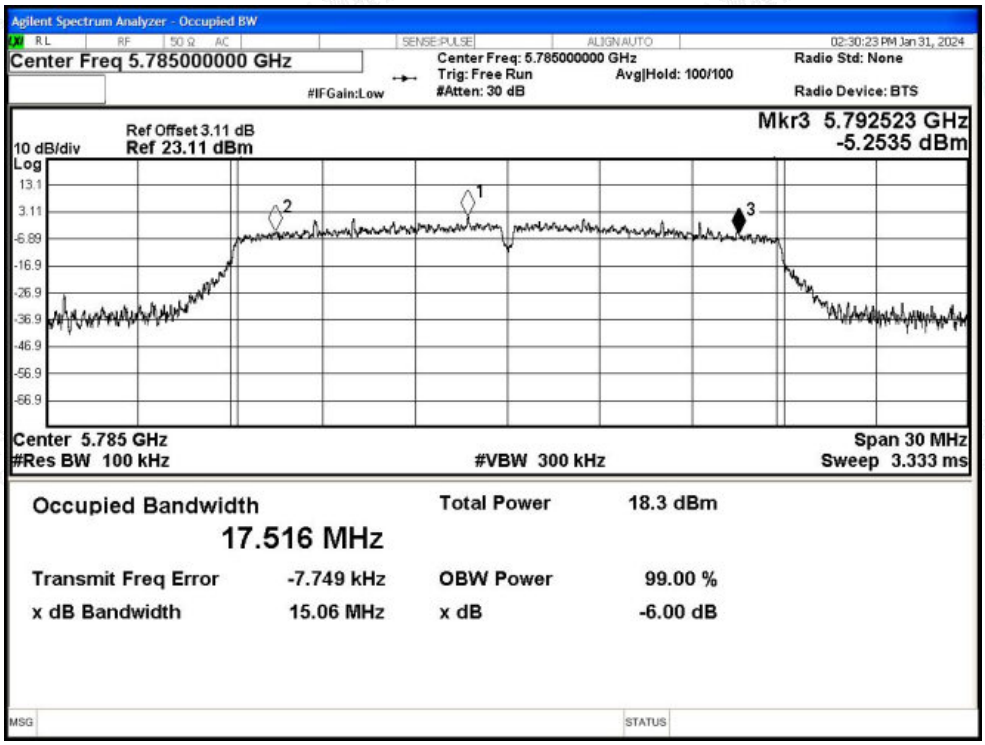
-6dB Bandwidth NVNT n40 5795MHz Ant1



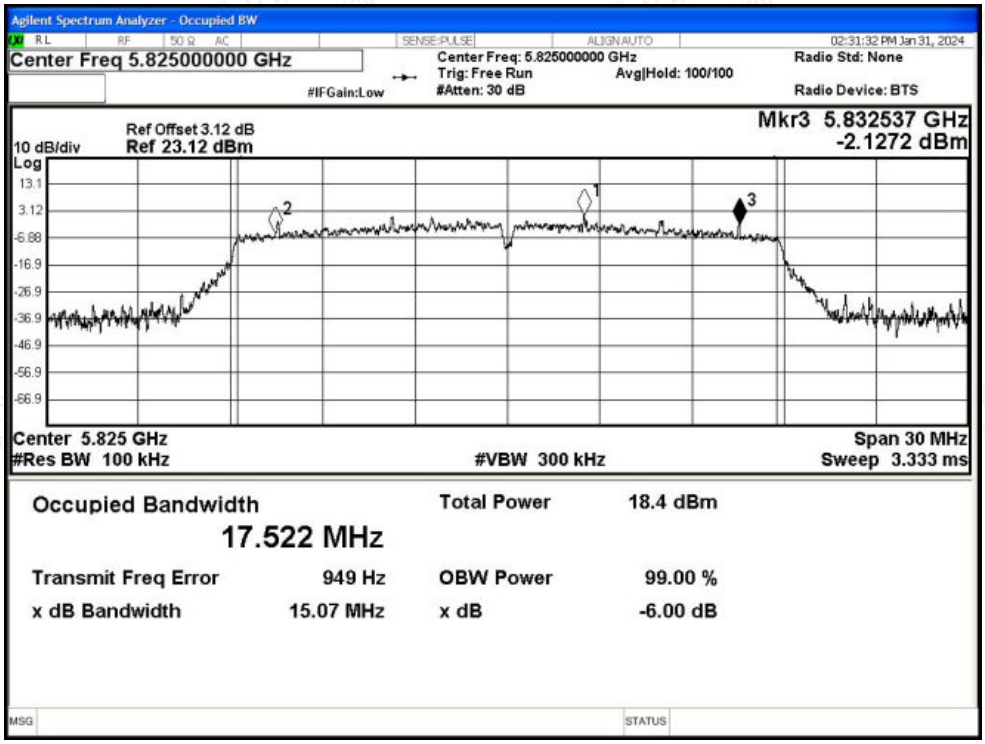
-6dB Bandwidth NVNT ac20 5745MHz Ant1



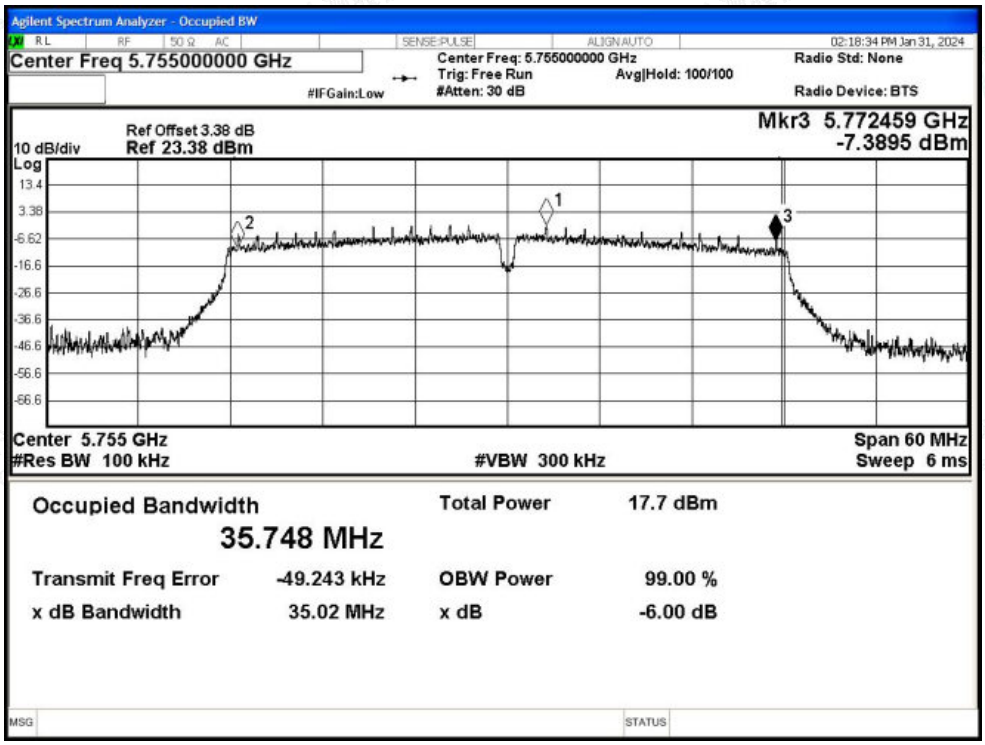
-6dB Bandwidth NVNT ac20 5785MHz Ant1



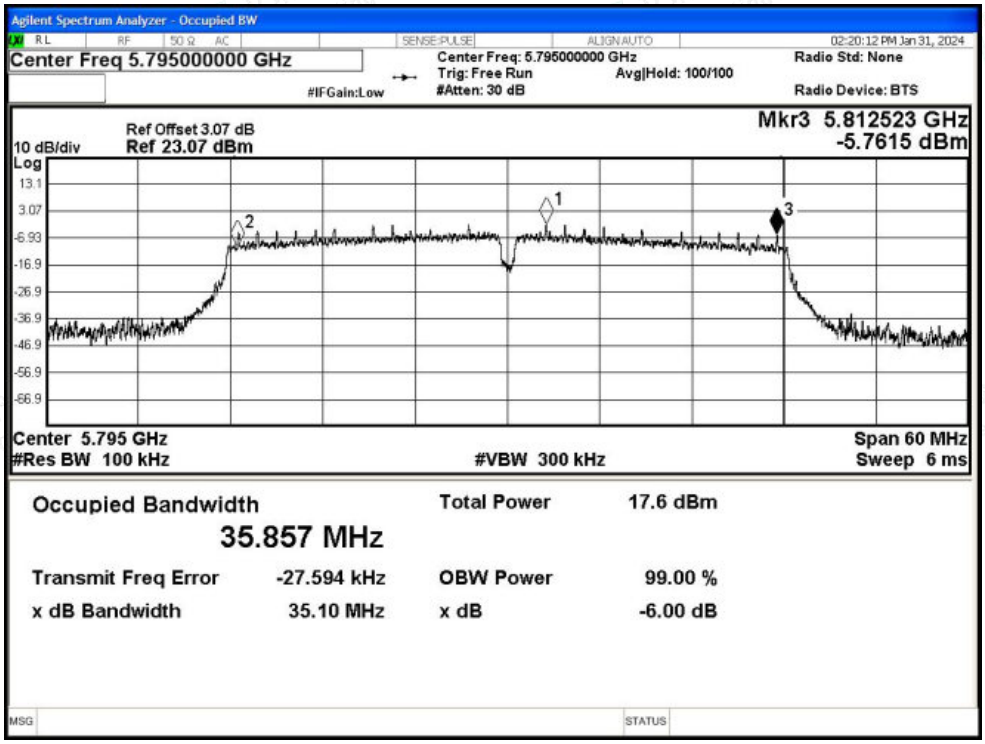
-6dB Bandwidth NVNT ac20 5825MHz Ant1



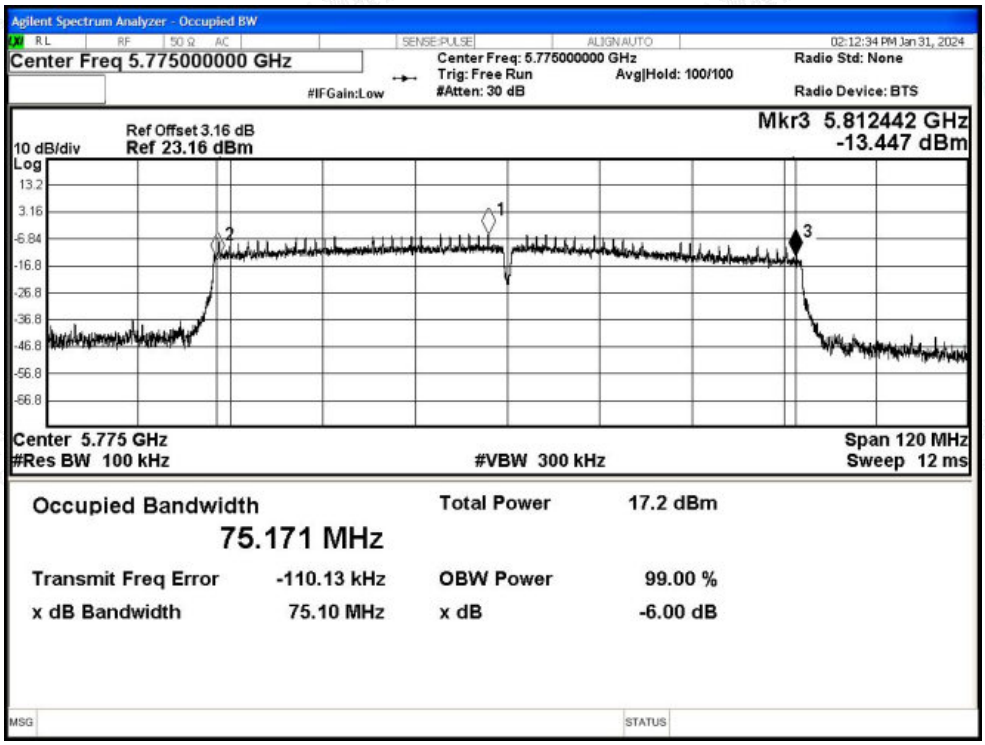
-6dB Bandwidth NVNT ac40 5755MHz Ant1



-6dB Bandwidth NVNT ac40 5795MHz Ant1



-6dB Bandwidth NVNT ac80 5775MHz Ant1



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	Ant0	12.31	0.13	12.44	30	Pass
NVNT	a	5785	Ant0	12.4	0.13	12.53	30	Pass
NVNT	a	5825	Ant0	12.45	0.14	12.59	30	Pass
NVNT	n20	5745	Ant0	12.16	0.15	12.31	30	Pass
NVNT	n20	5785	Ant0	12.1	0.15	12.25	30	Pass
NVNT	n20	5825	Ant0	12.18	0.15	12.33	30	Pass
NVNT	n40	5755	Ant0	11.28	0.29	11.57	30	Pass
NVNT	n40	5795	Ant0	11.17	0.29	11.46	30	Pass
NVNT	ac20	5745	Ant0	12.15	0.14	12.29	30	Pass
NVNT	ac20	5785	Ant0	12.17	0.14	12.31	30	Pass
NVNT	ac20	5825	Ant0	12.24	0.14	12.38	30	Pass
NVNT	ac40	5755	Ant0	11.32	0.28	11.6	30	Pass
NVNT	ac40	5795	Ant0	11.13	0.28	11.41	30	Pass
NVNT	ac80	5775	Ant0	10.07	0.55	10.62	30	Pass

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	a	5745	Ant1	12.31	0.14	12.45	30	Pass
NVNT	a	5785	Ant1	12.27	0.14	12.41	30	Pass
NVNT	a	5825	Ant1	12.53	0.13	12.66	30	Pass
NVNT	n20	5745	Ant1	12.24	0.15	12.39	30	Pass
NVNT	n20	5785	Ant1	12.21	0.15	12.36	30	Pass
NVNT	n20	5825	Ant1	12.23	0.15	12.38	30	Pass
NVNT	n40	5755	Ant1	11.33	0.29	11.62	30	Pass
NVNT	n40	5795	Ant1	11.2	0.28	11.48	30	Pass
NVNT	ac20	5745	Ant1	12.24	0.14	12.38	30	Pass
NVNT	ac20	5785	Ant1	12.22	0.14	12.36	30	Pass
NVNT	ac20	5825	Ant1	12.22	0.14	12.36	30	Pass
NVNT	ac40	5755	Ant1	11.31	0.28	11.59	30	Pass
NVNT	ac40	5795	Ant1	11.19	0.28	11.47	30	Pass
NVNT	ac80	5775	Ant1	10.13	0.55	10.68	30	Pass

MIMO

Condition	Mode	Frequency (MHz)	Total Power (dBm)			Limit (dBm)	Verdict
			Ant0	Ant1	Ant0+Ant1		
NVNT	n20	5745	12.31	12.39	15.36	30	Pass
NVNT	n20	5785	12.25	12.36	15.32	30	Pass
NVNT	n20	5825	12.33	12.38	15.37	30	Pass
NVNT	n40	5755	11.57	11.62	14.61	30	Pass
NVNT	n40	5795	11.46	11.48	14.48	30	Pass
NVNT	ac20	5745	12.29	12.38	15.35	30	Pass
NVNT	ac20	5785	12.31	12.36	15.35	30	Pass
NVNT	ac20	5825	12.38	12.36	15.38	30	Pass
NVNT	ac40	5755	11.6	11.59	14.61	30	Pass
NVNT	ac40	5795	11.41	11.47	14.45	30	Pass
NVNT	ac80	5775	10.62	10.68	13.66	30	Pass

E.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	Ant0	0.13	0.13	0.26	30	Pass
NVNT	a	5785	Ant0	-0.2	0.13	-0.07	30	Pass
NVNT	a	5825	Ant0	-0.17	0.14	-0.03	30	Pass
NVNT	n20	5745	Ant0	-0.47	0.15	-0.32	30	Pass
NVNT	n20	5785	Ant0	-0.08	0.15	0.07	30	Pass
NVNT	n20	5825	Ant0	-0.38	0.15	-0.23	30	Pass
NVNT	n40	5755	Ant0	-4.15	0.29	-3.86	30	Pass
NVNT	n40	5795	Ant0	-4.61	0.29	-4.32	30	Pass
NVNT	ac20	5745	Ant0	-0.7	0.14	-0.56	30	Pass
NVNT	ac20	5785	Ant0	-0.46	0.14	-0.32	30	Pass
NVNT	ac20	5825	Ant0	-0.5	0.14	-0.36	30	Pass
NVNT	ac40	5755	Ant0	-3.94	0.28	-3.66	30	Pass
NVNT	ac40	5795	Ant0	-4.72	0.28	-4.44	30	Pass
NVNT	ac80	5775	Ant0	-8.83	0.55	-8.28	30	Pass

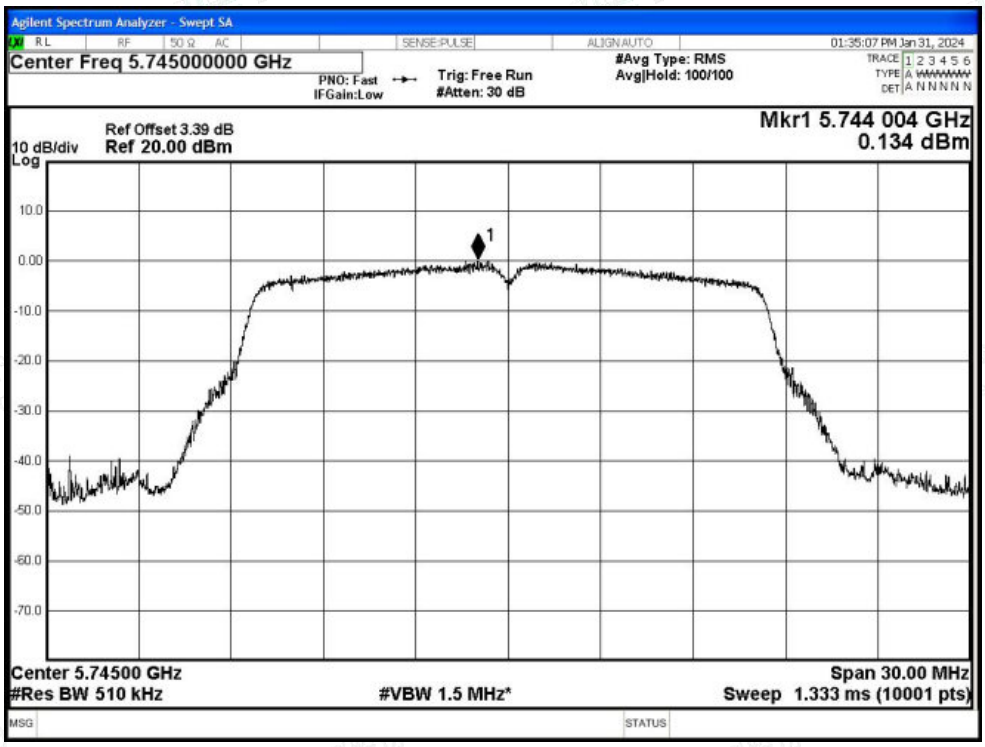
Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/500KHz)	Duty Factor (dB)	Total PSD (dBm/500KHz)	Limit (dBm/500KHz)	Verdict
NVNT	a	5745	Ant1	-0.32	0.14	-0.18	30	Pass
NVNT	a	5785	Ant1	-0.08	0.14	0.06	30	Pass
NVNT	a	5825	Ant1	-0.08	0.13	0.05	30	Pass
NVNT	n20	5745	Ant1	-0.51	0.15	-0.36	30	Pass
NVNT	n20	5785	Ant1	-0.21	0.15	-0.06	30	Pass
NVNT	n20	5825	Ant1	-0.15	0.15	0	30	Pass
NVNT	n40	5755	Ant1	-4.18	0.29	-3.89	30	Pass
NVNT	n40	5795	Ant1	-4.38	0.28	-4.1	30	Pass
NVNT	ac20	5745	Ant1	-0.6	0.14	-0.46	30	Pass
NVNT	ac20	5785	Ant1	-0.09	0.14	0.05	30	Pass
NVNT	ac20	5825	Ant1	-0.33	0.14	-0.19	30	Pass
NVNT	ac40	5755	Ant1	-4.15	0.28	-3.87	30	Pass
NVNT	ac40	5795	Ant1	-4.49	0.28	-4.21	30	Pass
NVNT	ac80	5775	Ant1	-8.65	0.55	-8.1	30	Pass

MIMO

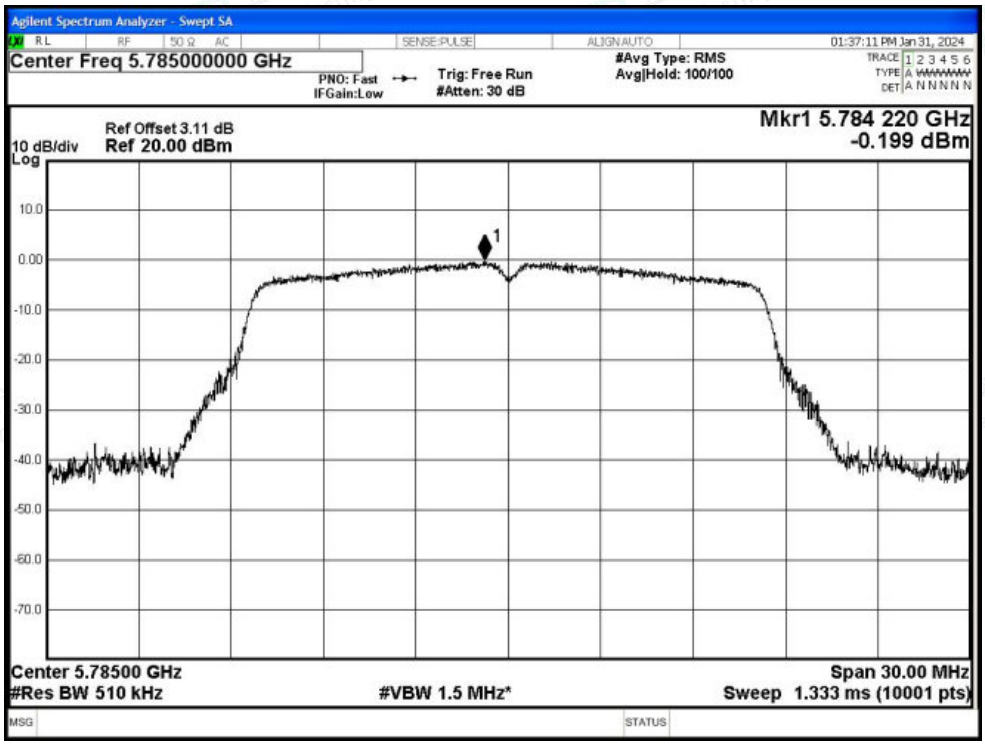
Condition	Mode	Frequency (MHz)	Total PSD (dBm/500KHz)			Limit (dBm/500KHz)	Verdict
			Ant0	Ant1	Ant0+Ant1		
NVNT	n20	5745	-0.32	-0.36	2.67	30	Pass
NVNT	n20	5785	0.07	-0.06	3.02	30	Pass
NVNT	n20	5825	-0.23	0	2.90	30	Pass
NVNT	n40	5755	-3.86	-3.89	-0.86	30	Pass
NVNT	n40	5795	-4.32	-4.1	-1.20	30	Pass
NVNT	ac20	5745	-0.56	-0.46	2.50	30	Pass
NVNT	ac20	5785	-0.32	0.05	2.88	30	Pass
NVNT	ac20	5825	-0.36	-0.19	2.74	30	Pass
NVNT	ac40	5755	-3.66	-3.87	-0.75	30	Pass
NVNT	ac40	5795	-4.44	-4.21	-1.31	30	Pass
NVNT	ac80	5775	-8.28	-8.1	-5.18	30	Pass

Test Graphs

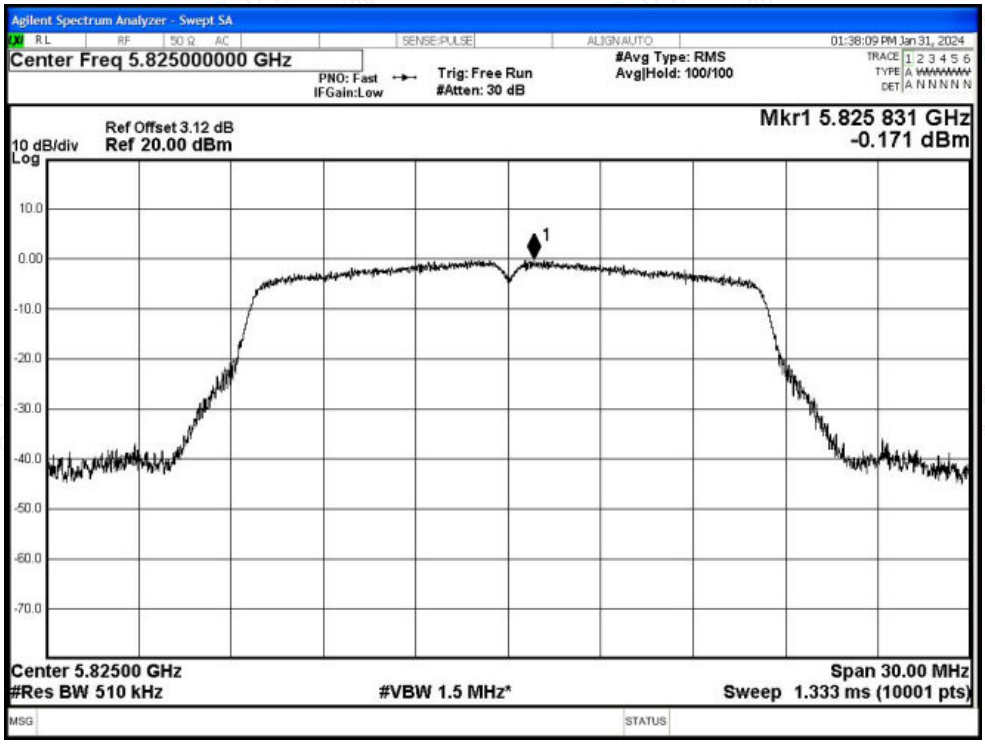
PSD NVNT a 5745MHz Ant0



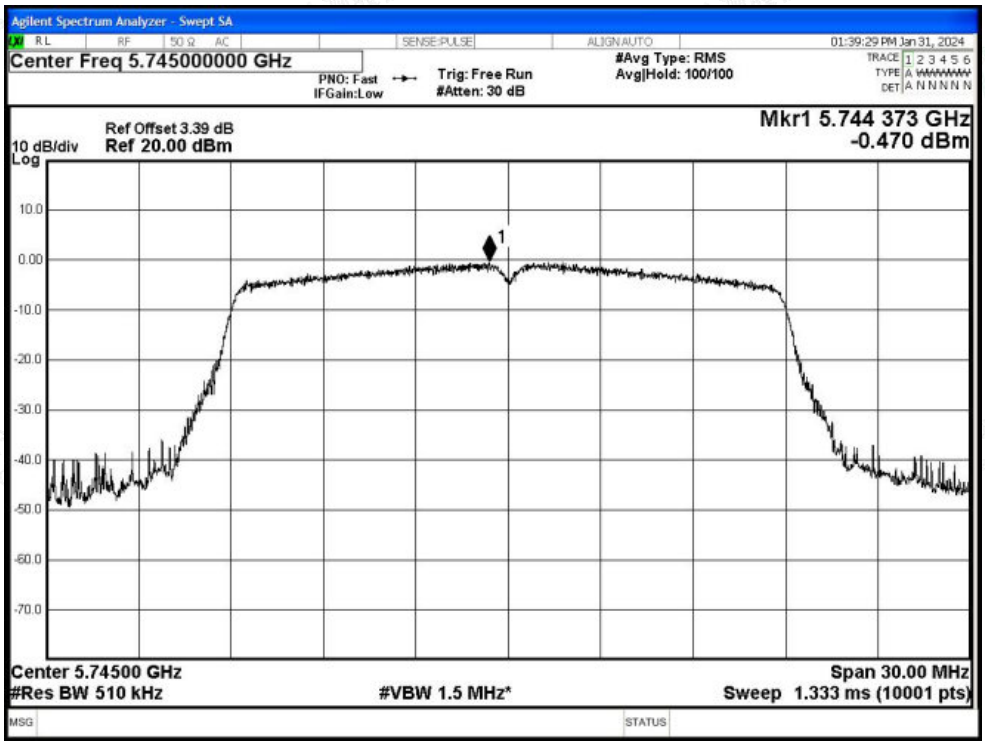
PSD NVNT a 5785MHz Ant0



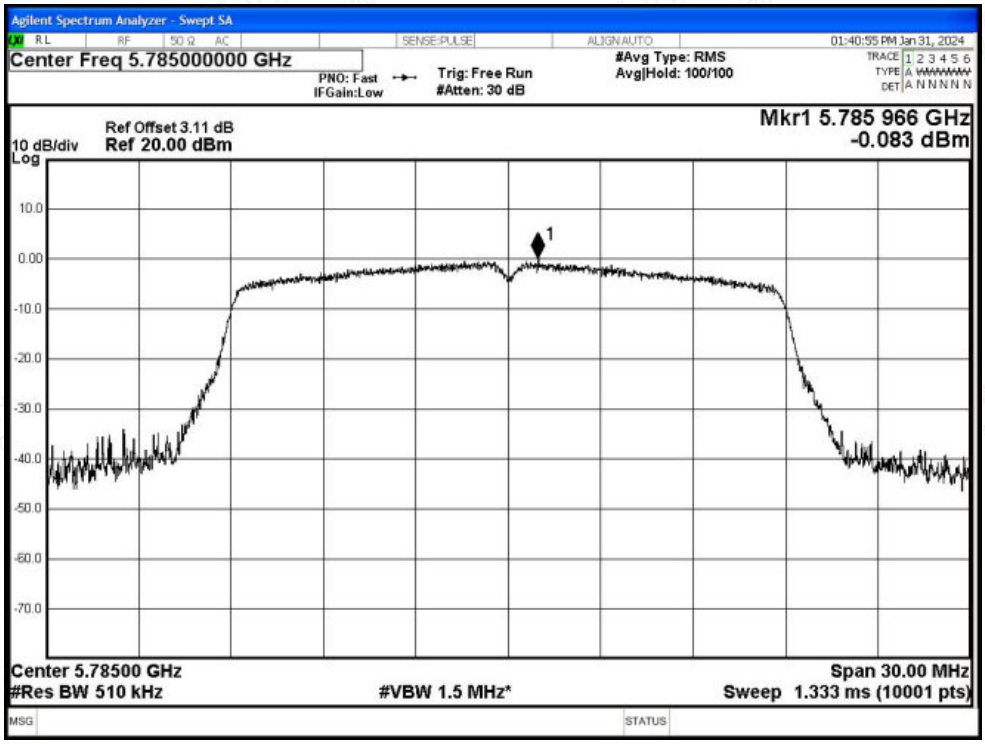
PSD NVNT a 5825MHz Ant0



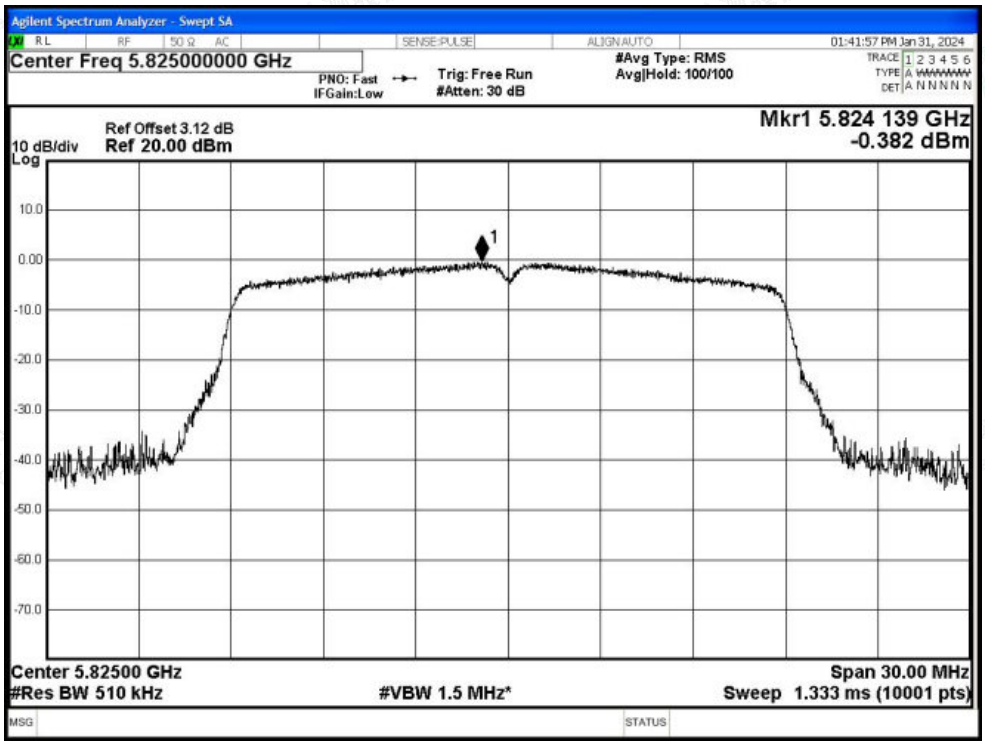
PSD NVNT n20 5745MHz Ant0



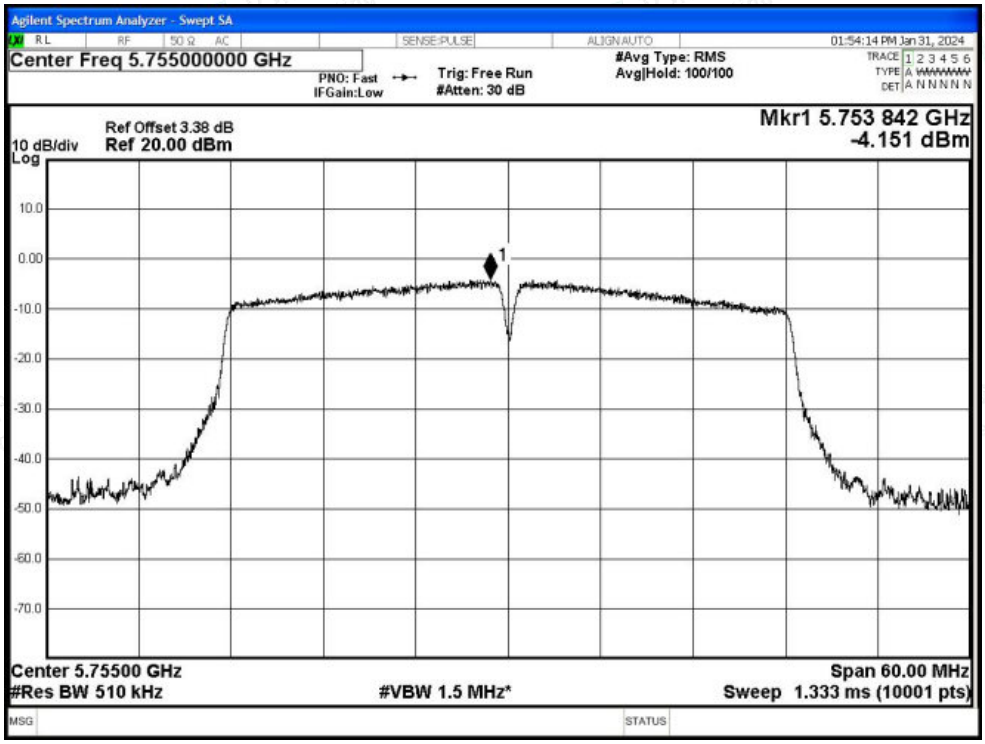
PSD NVNT n20 5785MHz Ant0



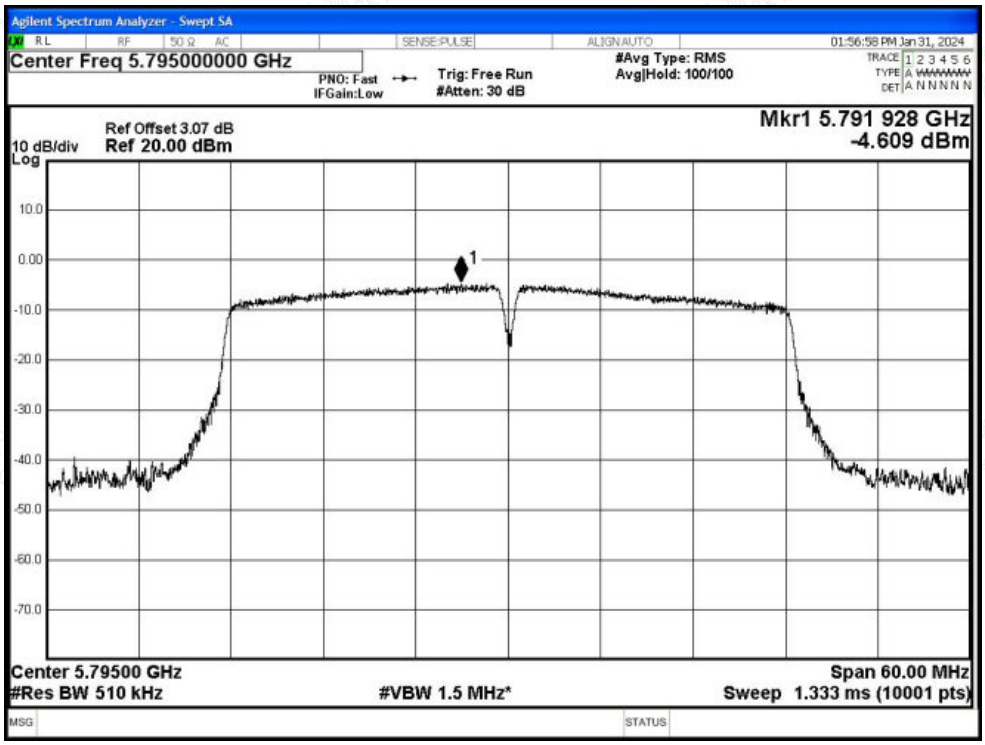
PSD NVNT n20 5825MHz Ant0



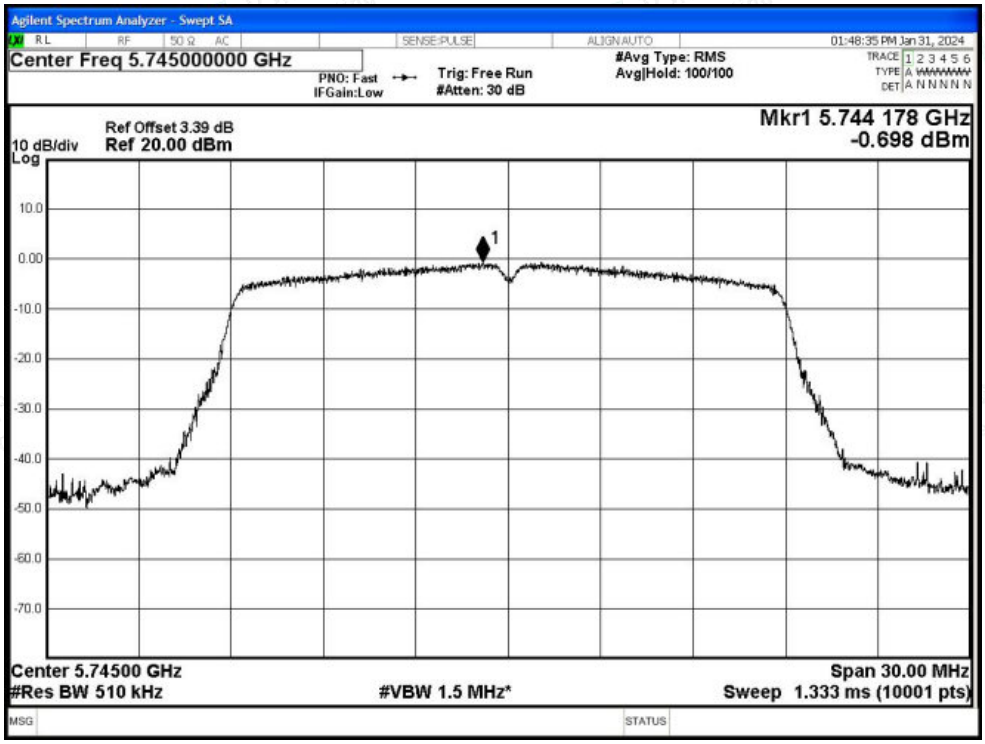
PSD NVNT n40 5755MHz Ant0



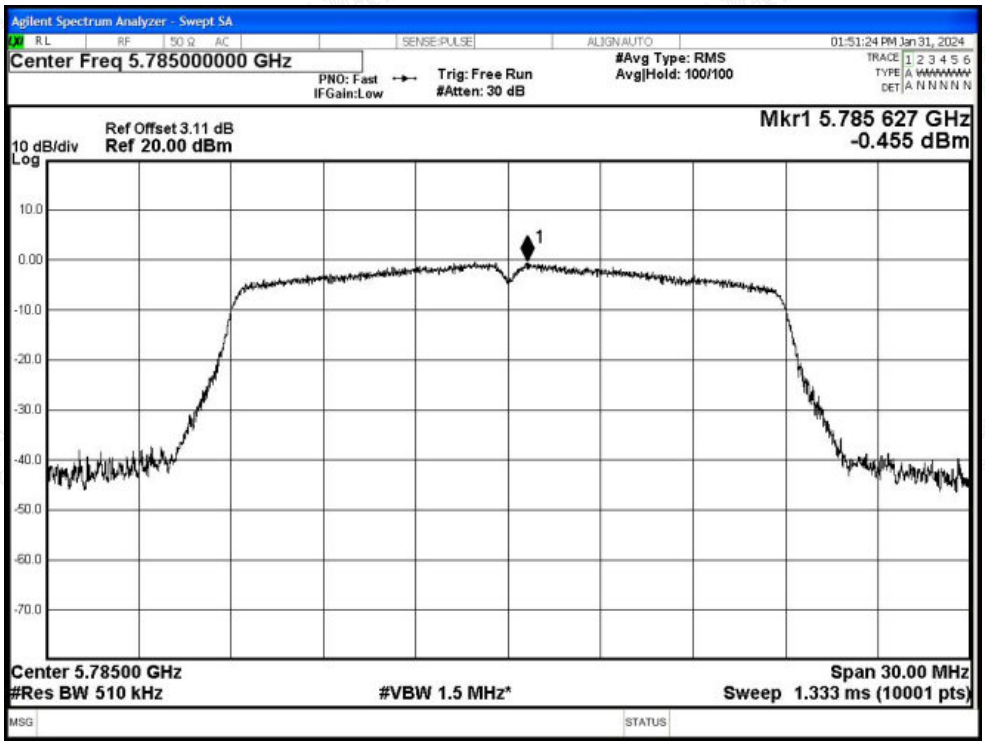
PSD NVNT n40 5795MHz Ant0



PSD NVNT ac20 5745MHz Ant0



PSD NVNT ac20 5785MHz Ant0



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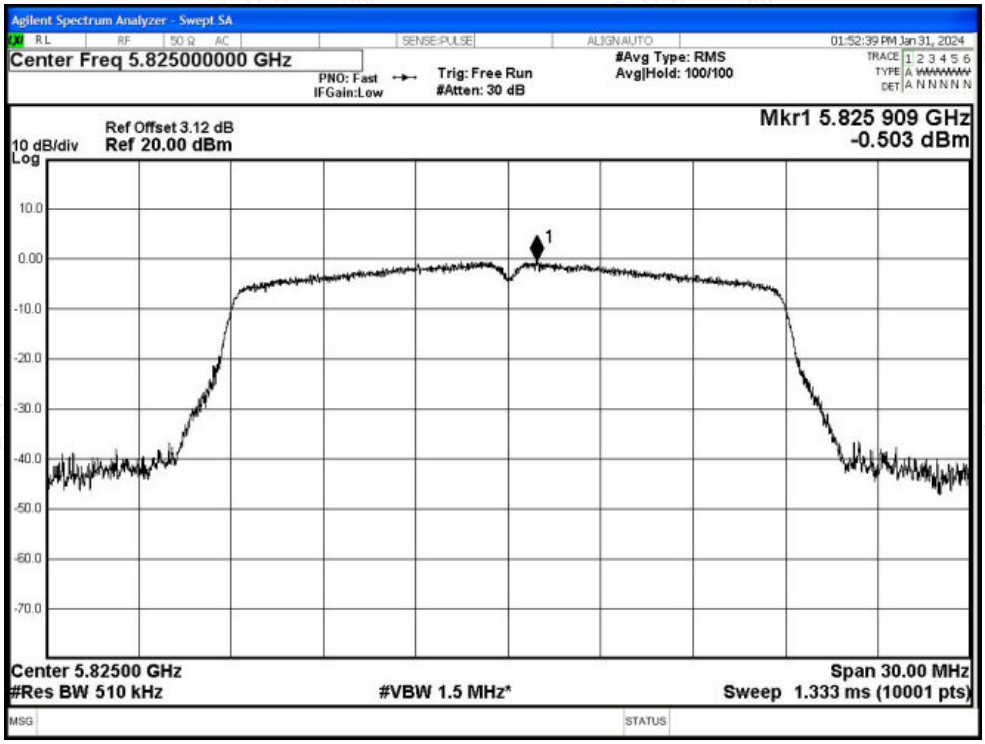
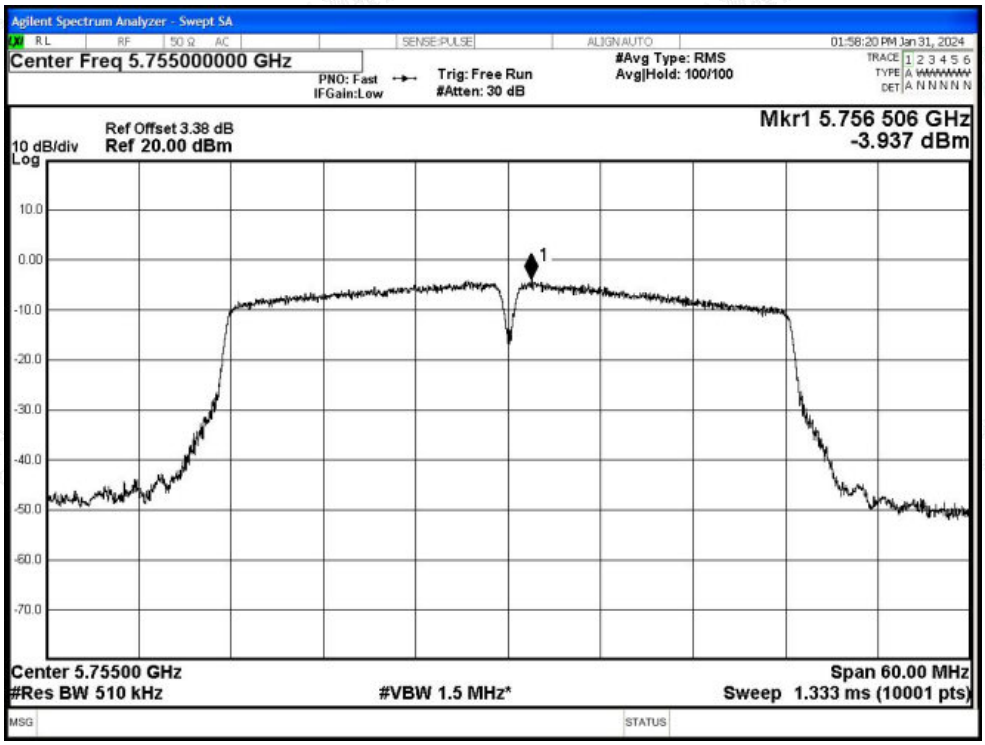
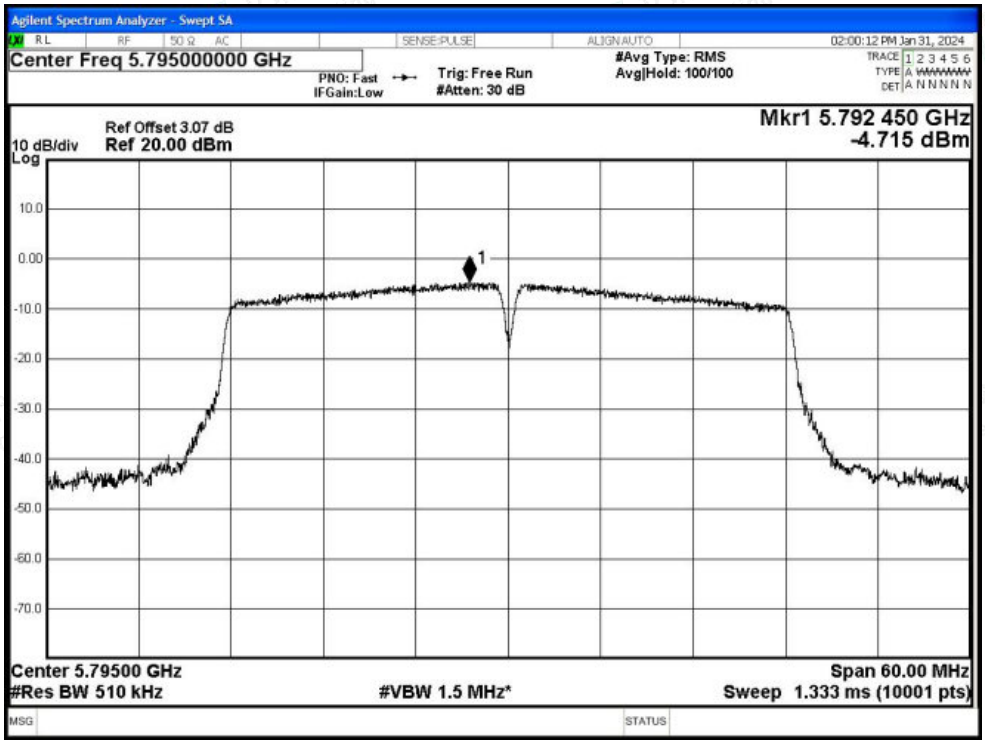


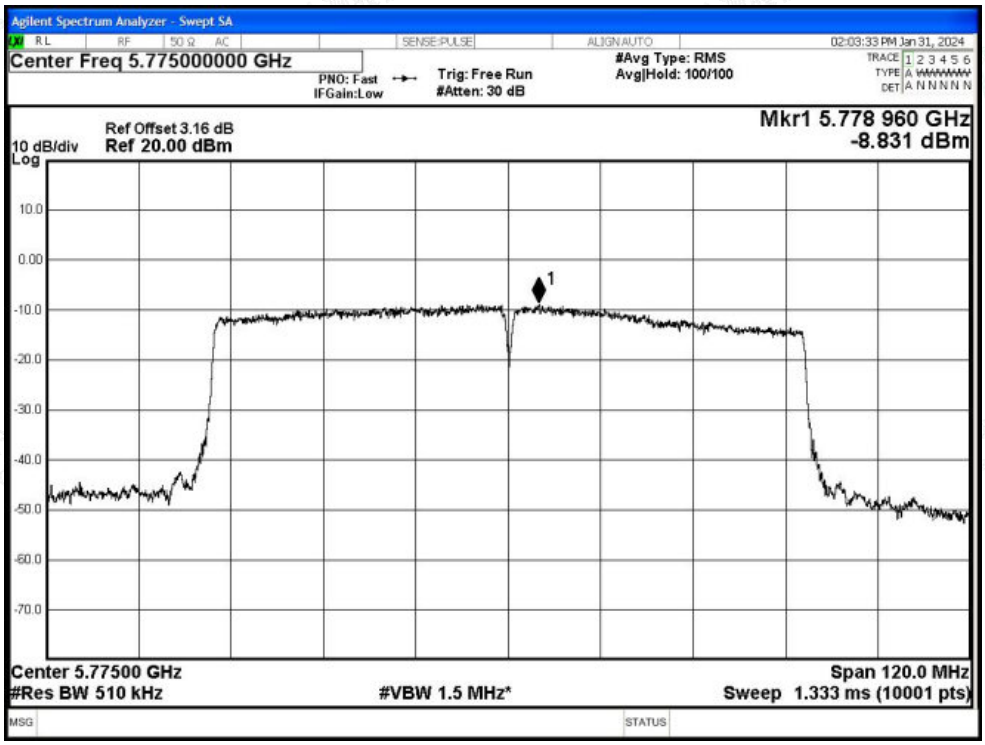
PSD NVNT ac40 5755MHz Ant0



PSD NVNT ac40 5795MHz Ant0

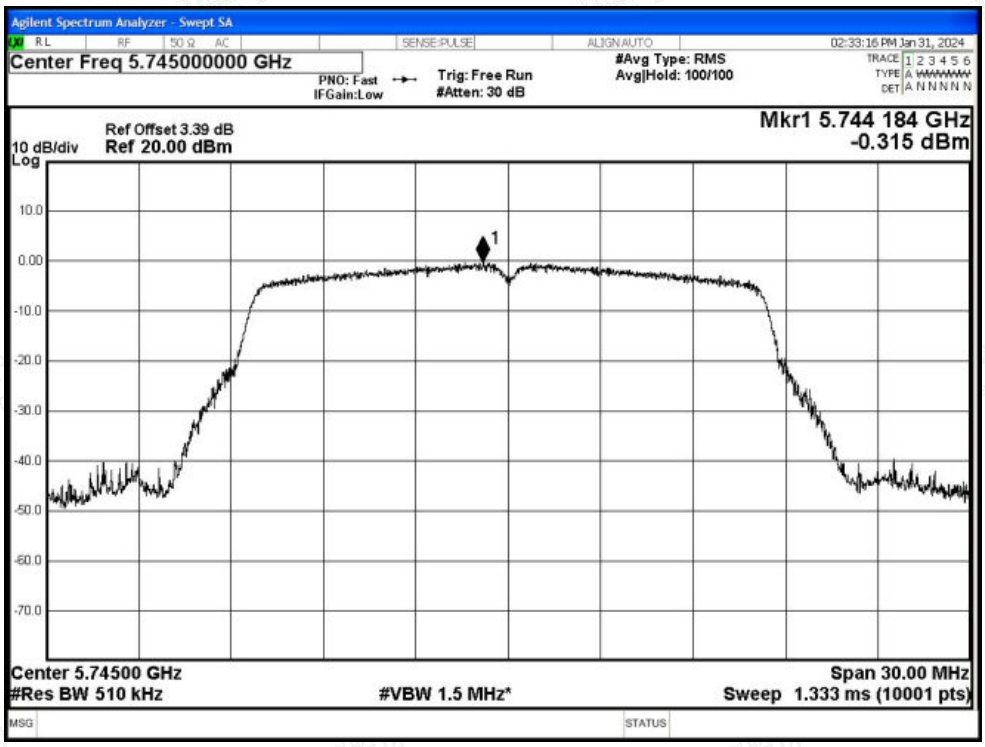


PSD NVNT ac80 5775MHz Ant0

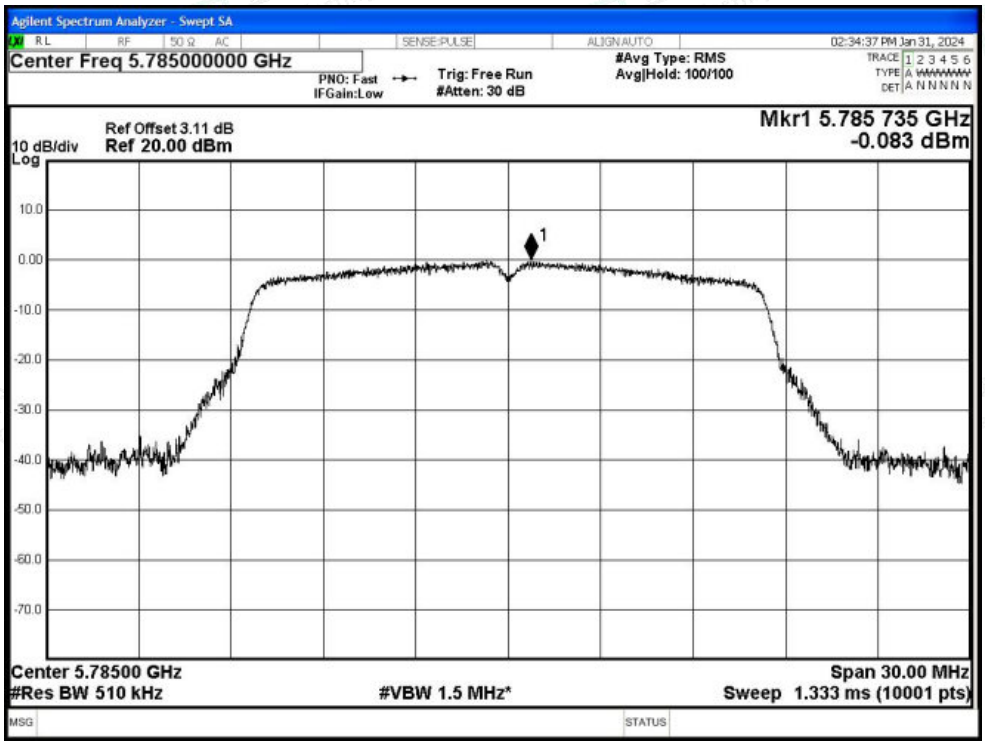


Test Graphs

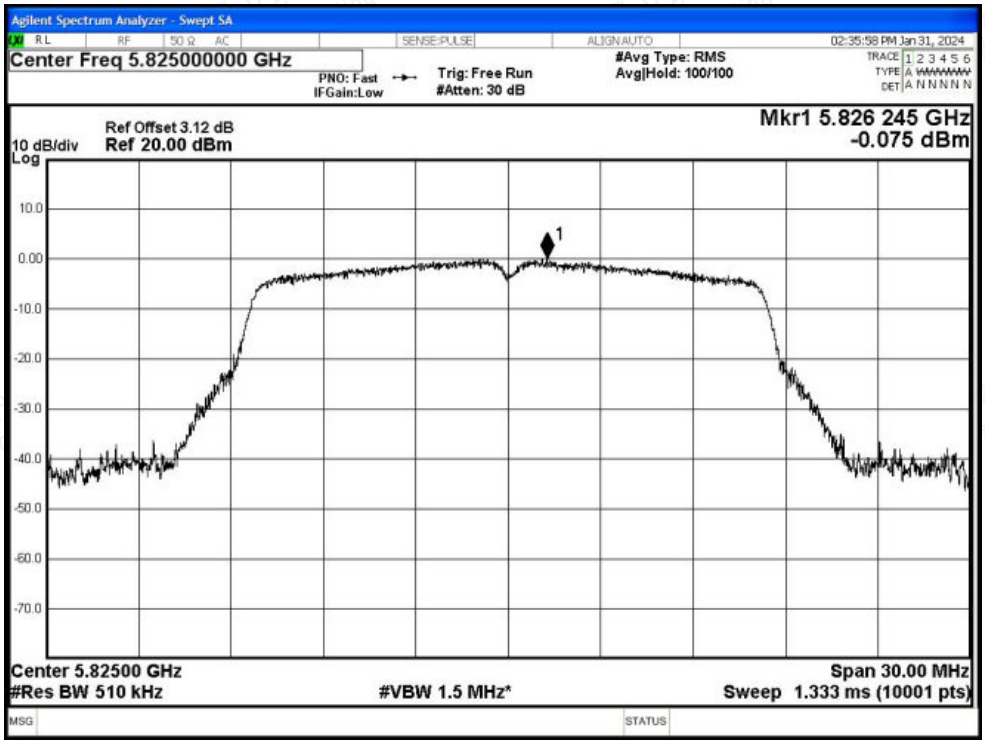
PSD NVNT a 5745MHz Ant1



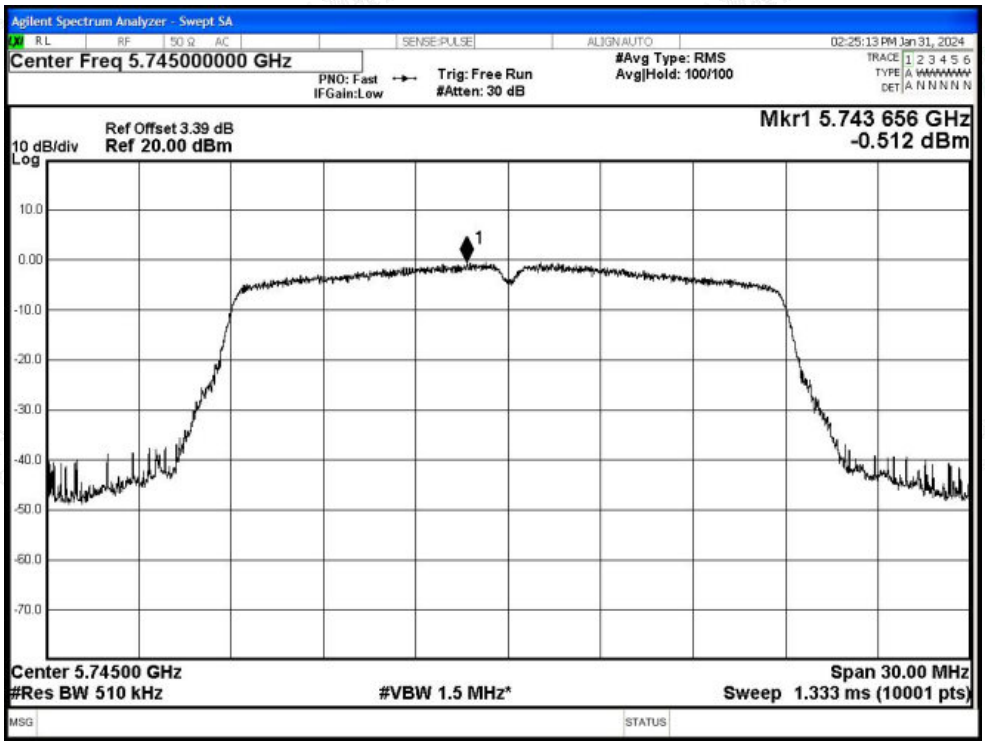
PSD NVNT a 5785MHz Ant1



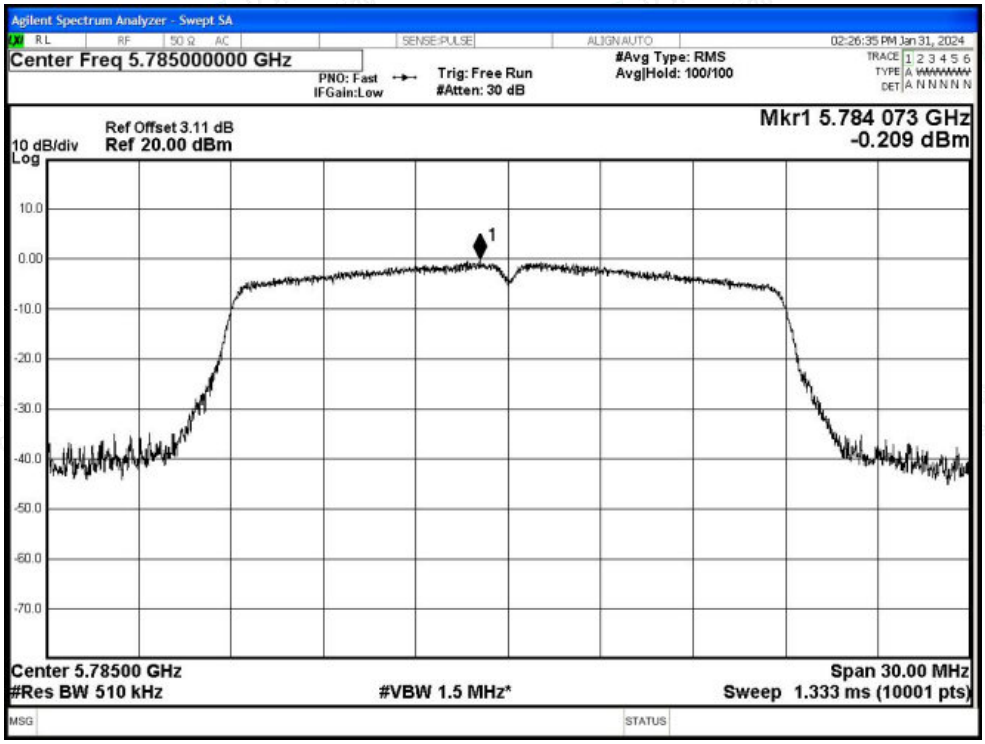
PSD NVNT a 5825MHz Ant1



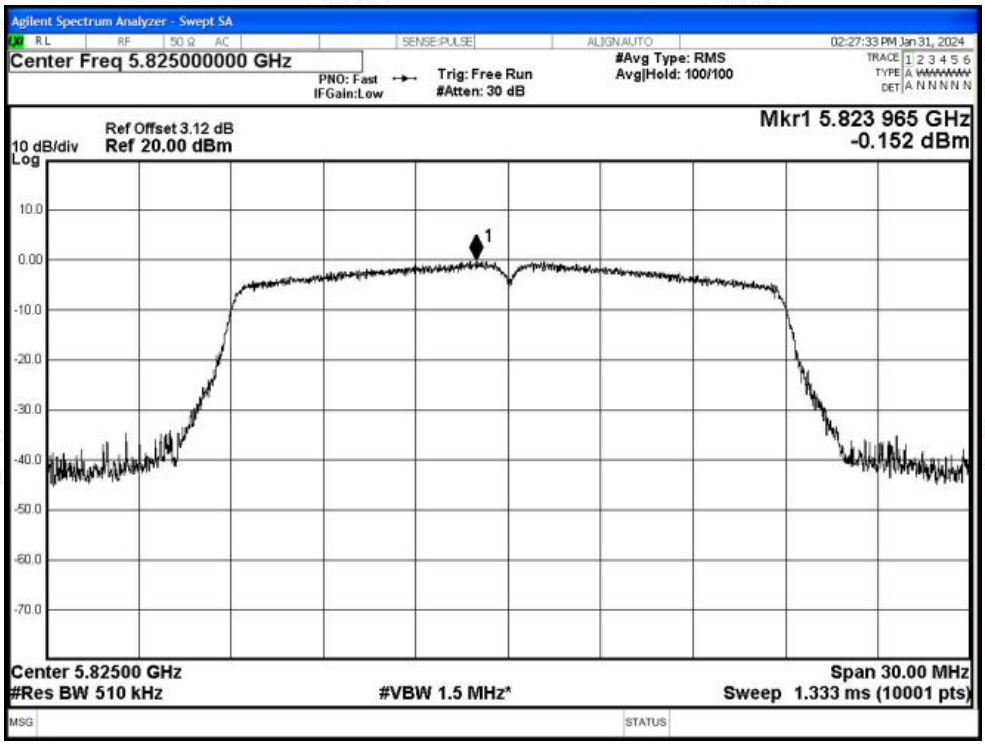
PSD NVNT n20 5745MHz Ant1



PSD NVNT n20 5785MHz Ant1



PSD NVNT n20 5825MHz Ant1



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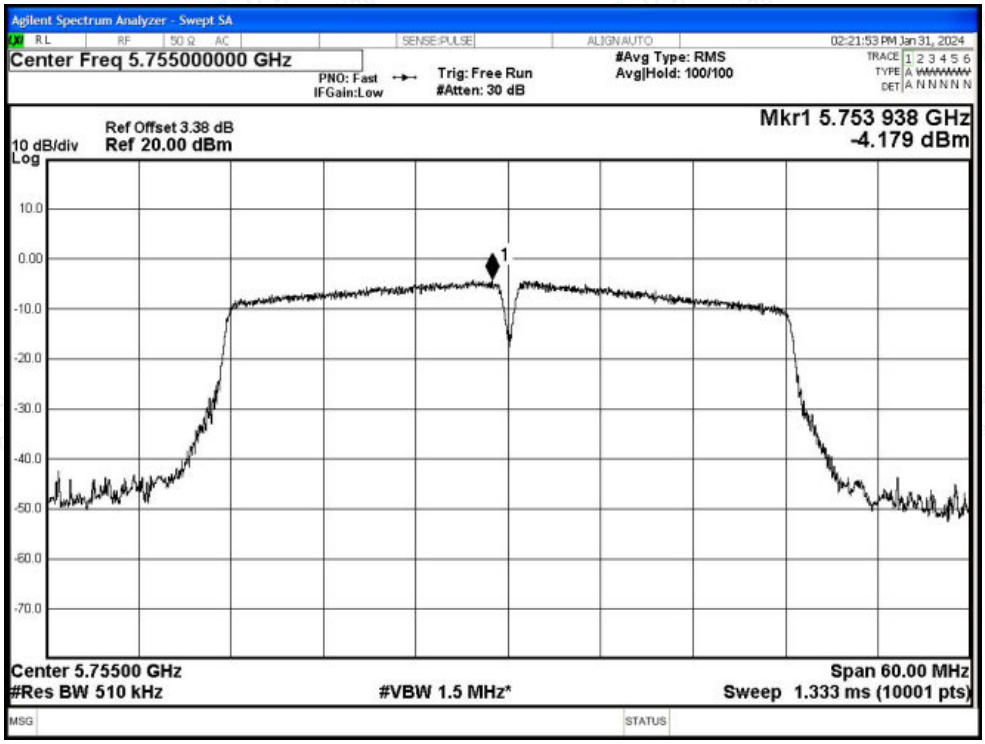
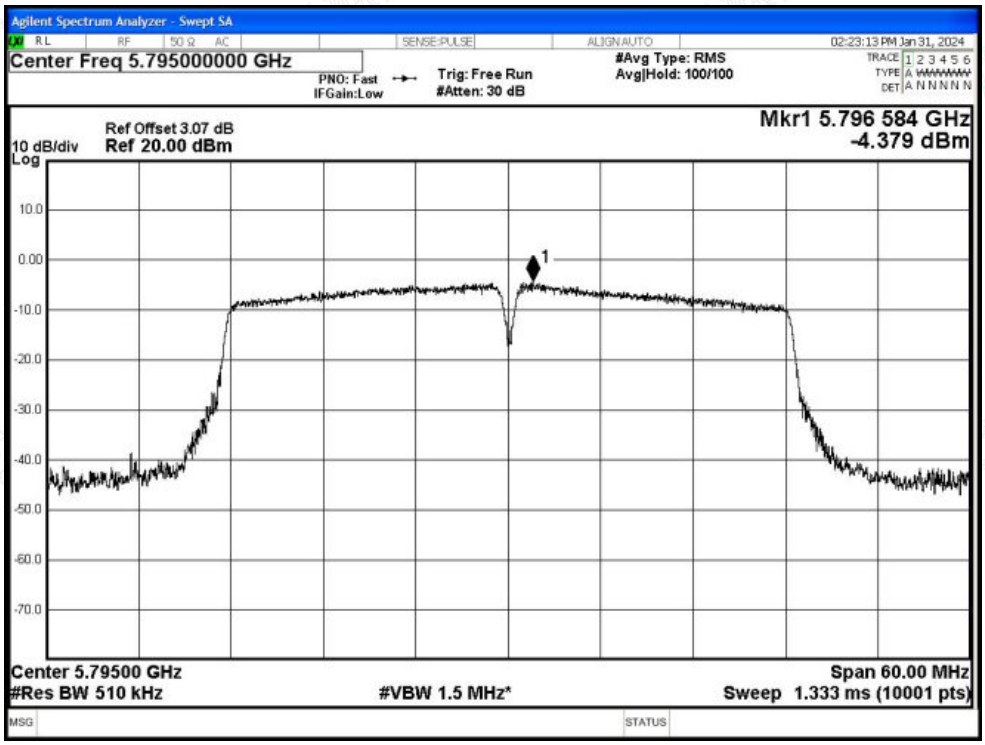
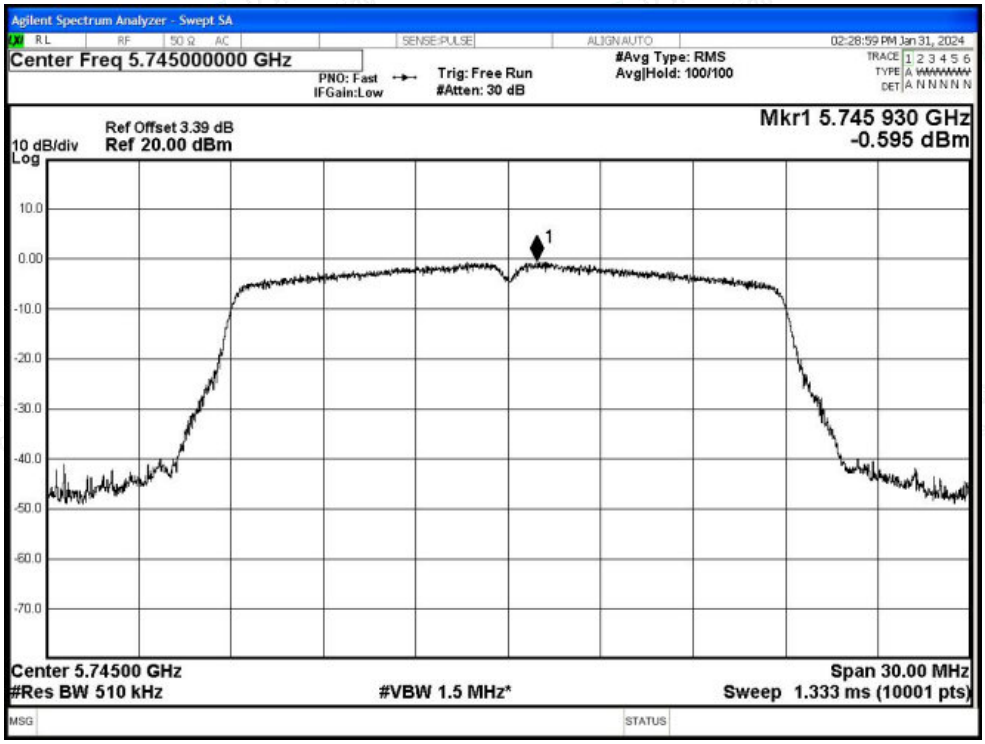


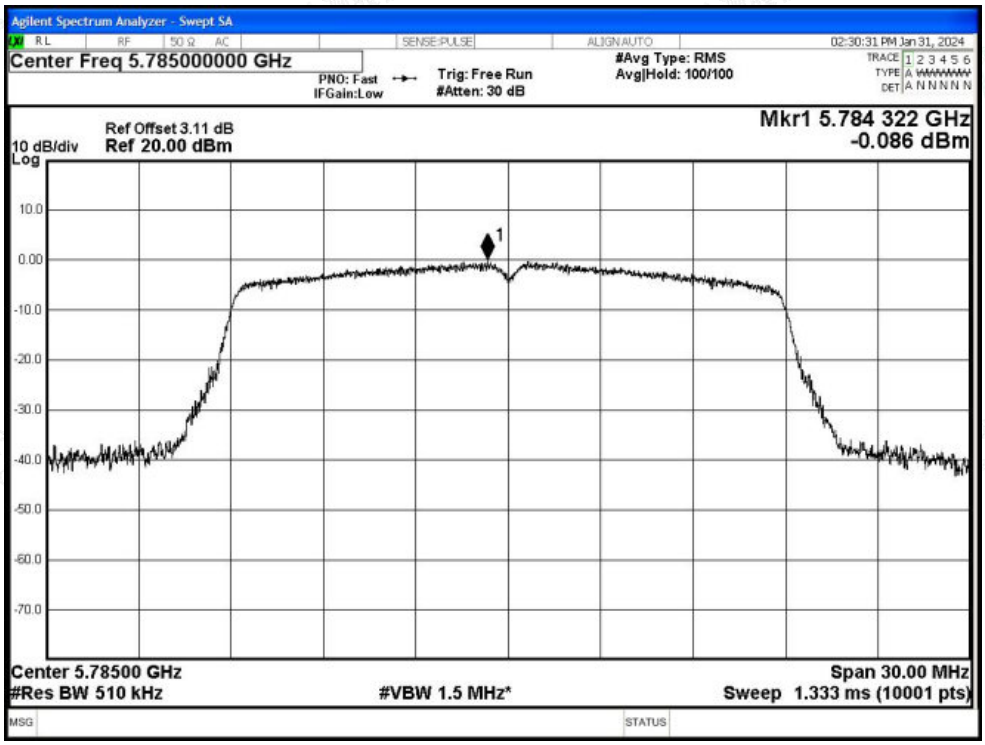
PSD NVNT n40 5795MHz Ant1



PSD NVNT ac20 5745MHz Ant1



PSD NVNT ac20 5785MHz Ant1



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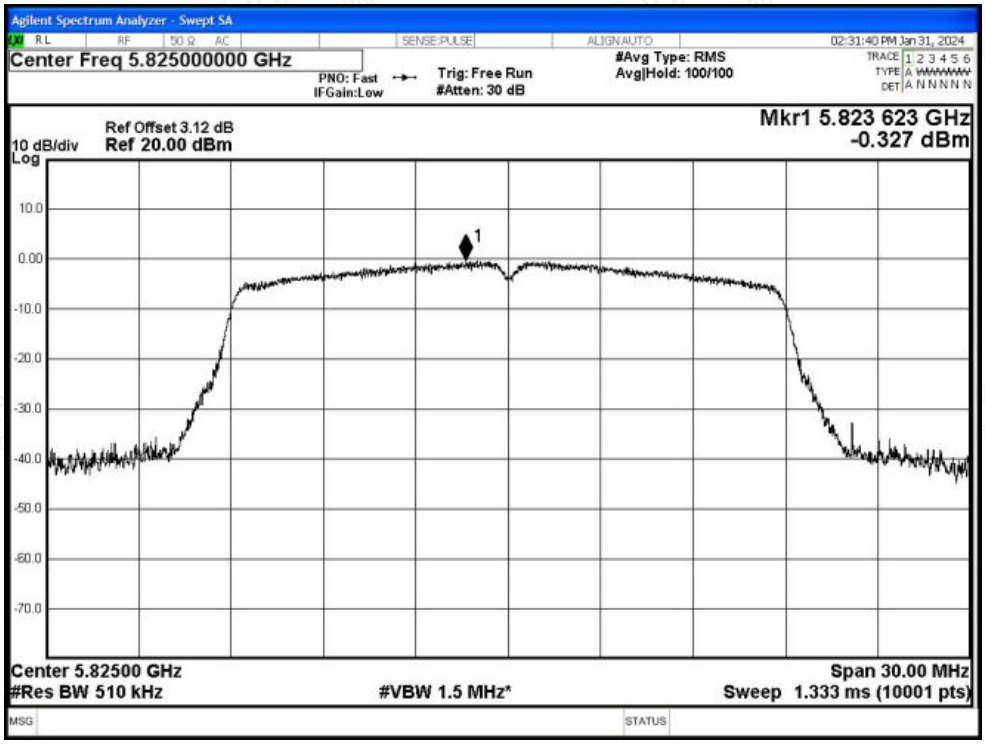
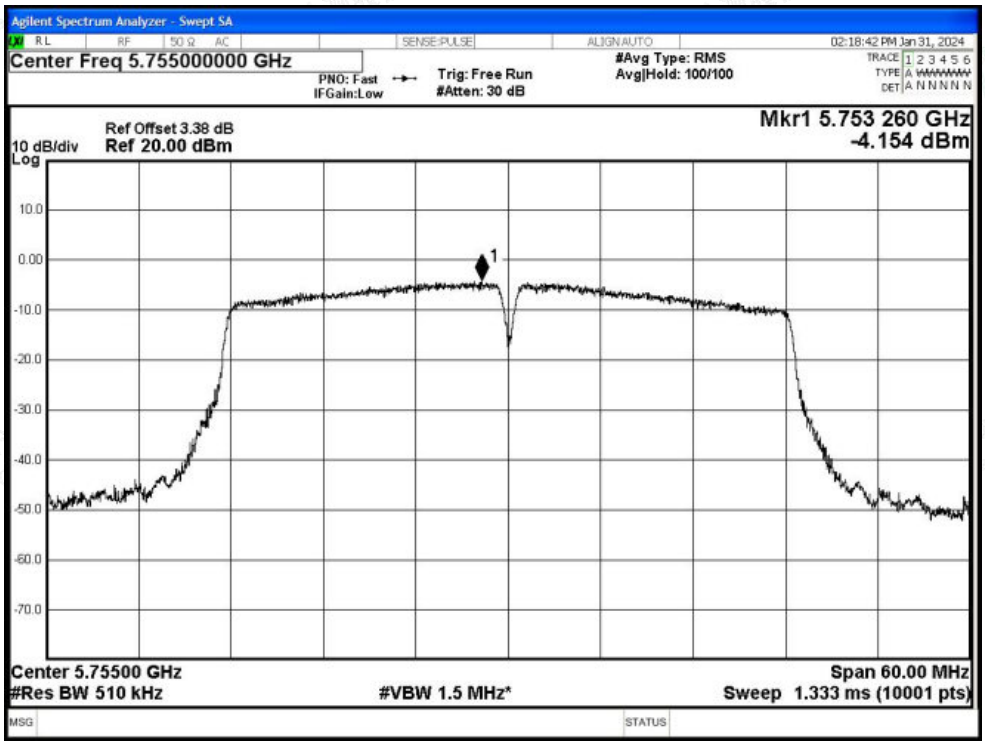
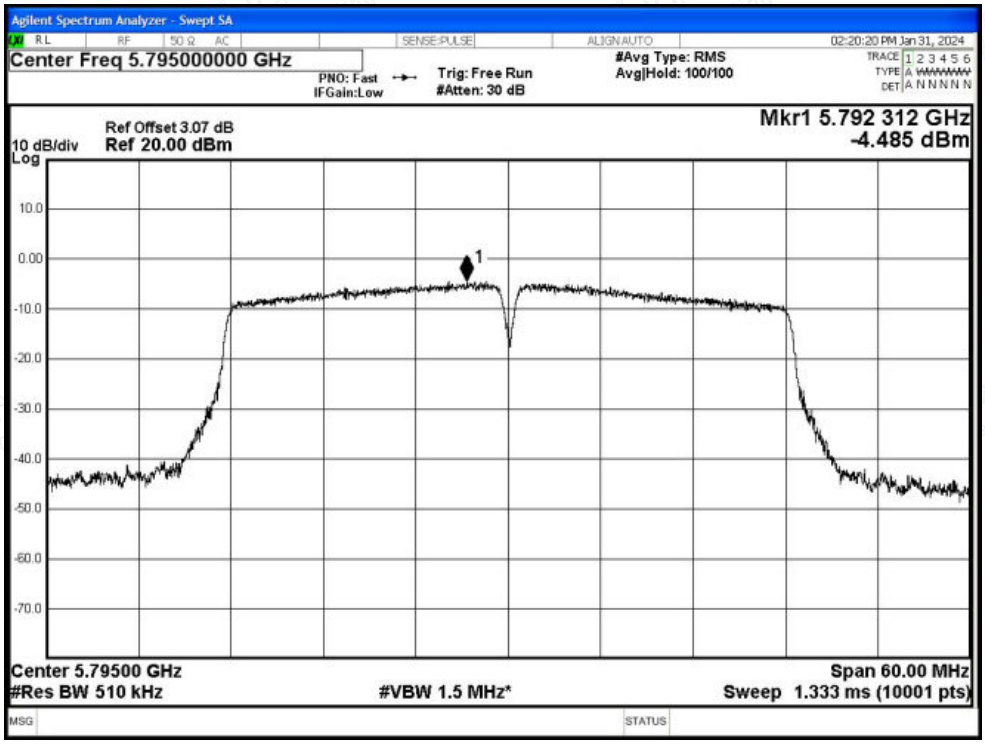


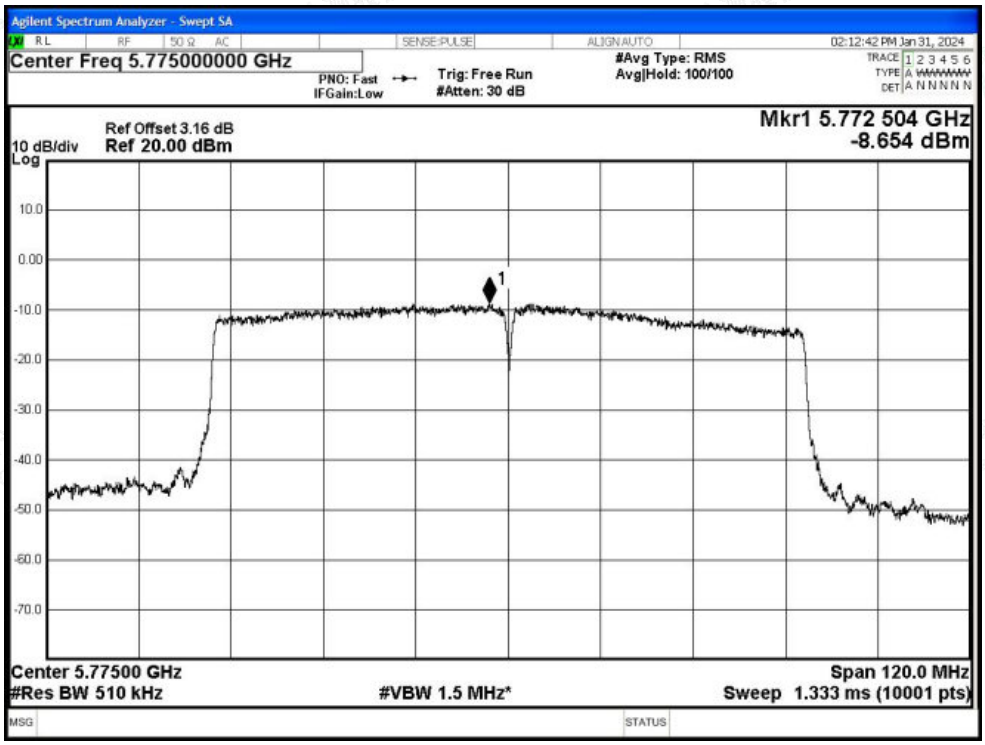
PSD NVNT ac40 5755MHz Ant1



PSD NVNT ac40 5795MHz Ant1



PSD NVNT ac80 5775MHz Ant1



E.4 Restrict Band

Condition	Mode	Frequency (MHz)	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	EIRP Power (dBm)	Detector	Limit (dBm)	Verdict
NVNT	a	5745	5650	-48.44	2	-	-46.44	Peak	-27	Pass
NVNT	a	5745	5650	-55.03	2	0.13	-52.9	Average	-27	Pass
NVNT	a	5745	5700	-44.73	2	-	-42.73	Peak	10	Pass
NVNT	a	5745	5700	-53.25	2	0.13	-51.12	Average	10	Pass
NVNT	a	5745	5720	-32.6	2	-	-30.6	Peak	15.6	Pass
NVNT	a	5745	5720	-47.4	2	0.13	-45.27	Average	15.6	Pass
NVNT	a	5745	5725	-33.08	2	-	-31.08	Peak	27	Pass
NVNT	a	5745	5725	-46.39	2	0.13	-44.26	Average	27	Pass
NVNT	a	5825	5850	-29.76	2	-	-27.76	Peak	27	Pass
NVNT	a	5825	5850	-45.84	2	0.14	-43.7	Average	27	Pass
NVNT	a	5825	5855	-36.52	2	-	-34.52	Peak	15.6	Pass
NVNT	a	5825	5855	-49.38	2	0.14	-47.24	Average	15.6	Pass
NVNT	a	5825	5875	-45.93	2	-	-43.93	Peak	10	Pass
NVNT	a	5825	5875	-54.12	2	0.14	-51.98	Average	10	Pass
NVNT	a	5825	5925	-48.26	2	-	-46.26	Peak	-27	Pass
NVNT	a	5825	5925	-56.14	2	0.14	-54	Average	-27	Pass
NVNT	n20mimo	5745	5650	-46.62	4.43	-	-42.19	Peak	-27	Pass
NVNT	n20mimo	5745	5650	-54.78	4.43	0.15	-50.35	Average	-27	Pass
NVNT	n20mimo	5745	5700	-45.15	4.43	-	-40.72	Peak	10	Pass
NVNT	n20mimo	5745	5700	-53.48	4.43	0.15	-49.05	Average	10	Pass
NVNT	n20mimo	5745	5720	-33.3	4.43	-	-28.87	Peak	15.6	Pass
NVNT	n20mimo	5745	5720	-48.68	4.43	0.15	-44.25	Average	15.6	Pass
NVNT	n20mimo	5745	5725	-34.47	4.43	-	-30.04	Peak	27	Pass
NVNT	n20mimo	5745	5725	-45.61	4.43	0.15	-41.18	Average	27	Pass
NVNT	n20mimo	5825	5850	-29.88	4.43	-	-25.45	Peak	27	Pass
NVNT	n20mimo	5825	5850	-45.03	4.43	0.15	-40.6	Average	27	Pass
NVNT	n20mimo	5825	5855	-39.33	4.43	-	-34.9	Peak	15.6	Pass
NVNT	n20mimo	5825	5855	-48.85	4.43	0.15	-44.42	Average	15.6	Pass
NVNT	n20mimo	5825	5875	-44.78	4.43	-	-40.35	Peak	10	Pass
NVNT	n20mimo	5825	5875	-54.67	4.43	0.15	-50.24	Average	10	Pass
NVNT	n20mimo	5825	5925	-48.87	4.43	-	-44.44	Peak	-27	Pass
NVNT	n20mimo	5825	5925	-56.42	4.43	0.15	-51.99	Average	-27	Pass
NVNT	n40mimo	5755	5650	-48.25	4.43	-	-43.82	Peak	-27	Pass
NVNT	n40mimo	5755	5650	-54.76	4.43	0.29	-50.33	Average	-27	Pass
NVNT	n40mimo	5755	5700	-40.71	4.43	-	-36.28	Peak	10	Pass

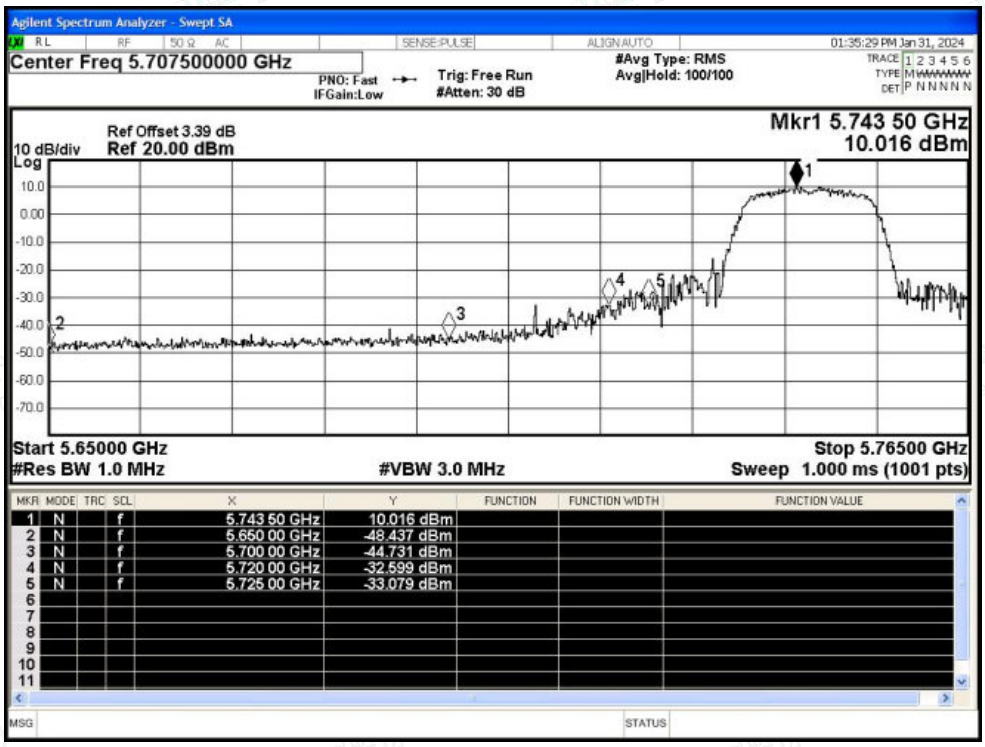
NVNT	n40mimo	5755	5700	-52.22	4.43	0.29	-47.79	Average	10	Pass
NVNT	n40mimo	5755	5720	-38.55	4.43	-	-34.12	Peak	15.6	Pass
NVNT	n40mimo	5755	5720	-43.83	4.43	0.29	-39.4	Average	15.6	Pass
NVNT	n40mimo	5755	5725	-33.44	4.43	-	-29.01	Peak	27	Pass
NVNT	n40mimo	5755	5725	-45.8	4.43	0.29	-41.37	Average	27	Pass
NVNT	n40mimo	5795	5850	-36.26	4.43	-	-31.83	Peak	27	Pass
NVNT	n40mimo	5795	5850	-50.64	4.43	0.29	-46.21	Average	27	Pass
NVNT	n40mimo	5795	5855	-41.93	4.43	-	-37.5	Peak	15.6	Pass
NVNT	n40mimo	5795	5855	-52.25	4.43	0.29	-47.82	Average	15.6	Pass
NVNT	n40mimo	5795	5875	-46.54	4.43	-	-42.11	Peak	10	Pass
NVNT	n40mimo	5795	5875	-55.21	4.43	0.29	-50.78	Average	10	Pass
NVNT	n40mimo	5795	5925	-49.81	4.43	-	-45.38	Peak	-27	Pass
NVNT	n40mimo	5795	5925	-57.13	4.43	0.29	-52.7	Average	-27	Pass
NVNT	ac20mimo	5745	5650	-47.49	4.43	-	-43.06	Peak	-27	Pass
NVNT	ac20mimo	5745	5650	-55.51	4.43	0.14	-51.08	Average	-27	Pass
NVNT	ac20mimo	5745	5700	-45.08	4.43	-	-40.65	Peak	10	Pass
NVNT	ac20mimo	5745	5700	-53.52	4.43	0.14	-49.09	Average	10	Pass
NVNT	ac20mimo	5745	5720	-37.89	4.43	-	-33.46	Peak	15.6	Pass
NVNT	ac20mimo	5745	5720	-49.99	4.43	0.14	-45.56	Average	15.6	Pass
NVNT	ac20mimo	5745	5725	-29.39	4.43	-	-24.96	Peak	27	Pass
NVNT	ac20mimo	5745	5725	-47.48	4.43	0.14	-43.05	Average	27	Pass
NVNT	ac20mimo	5825	5850	-37.58	4.43	-	-33.15	Peak	27	Pass
NVNT	ac20mimo	5825	5850	-48.34	4.43	0.14	-43.91	Average	27	Pass
NVNT	ac20mimo	5825	5855	-37.95	4.43	-	-33.52	Peak	15.6	Pass
NVNT	ac20mimo	5825	5855	-50.42	4.43	0.14	-45.99	Average	15.6	Pass
NVNT	ac20mimo	5825	5875	-45.73	4.43	-	-41.3	Peak	10	Pass
NVNT	ac20mimo	5825	5875	-54.69	4.43	0.14	-50.26	Average	10	Pass
NVNT	ac20mimo	5825	5925	-47.94	4.43	-	-43.51	Peak	-27	Pass
NVNT	ac20mimo	5825	5925	-56.08	4.43	0.14	-51.65	Average	-27	Pass
NVNT	ac40mimo	5755	5650	-46.04	4.43	-	-41.61	Peak	-27	Pass
NVNT	ac40mimo	5755	5650	-55.13	4.43	0.28	-50.7	Average	-27	Pass
NVNT	ac40mimo	5755	5700	-41.54	4.43	-	-37.11	Peak	10	Pass
NVNT	ac40mimo	5755	5700	-52.19	4.43	0.28	-47.76	Average	10	Pass
NVNT	ac40mimo	5755	5720	-37.57	4.43	-	-33.14	Peak	15.6	Pass
NVNT	ac40mimo	5755	5720	-46.87	4.43	0.28	-42.44	Average	15.6	Pass
NVNT	ac40mimo	5755	5725	-36.06	4.43	-	-31.63	Peak	27	Pass
NVNT	ac40mimo	5755	5725	-44.95	4.43	0.28	-40.52	Average	27	Pass
NVNT	ac40mimo	5795	5850	-38.59	4.43	-	-34.16	Peak	27	Pass
NVNT	ac40mimo	5795	5850	-51.31	4.43	0.28	-46.88	Average	27	Pass
NVNT	ac40mimo	5795	5855	-41.37	4.43	-	-36.94	Peak	15.6	Pass
NVNT	ac40mimo	5795	5855	-52.85	4.43	0.28	-48.42	Average	15.6	Pass

NVNT	ac40mimo	5795	5875	-44.83	4.43	-	-40.4	Peak	10	Pass
NVNT	ac40mimo	5795	5875	-55.25	4.43	0.28	-50.82	Average	10	Pass
NVNT	ac40mimo	5795	5925	-48.43	4.43	-	-44	Peak	-27	Pass
NVNT	ac40mimo	5795	5925	-57.08	4.43	0.28	-52.65	Average	-27	Pass
NVNT	ac80mimo	5775	5650	-42.36	4.43	-	-37.93	Peak	-27	Pass
NVNT	ac80mimo	5775	5650	-54.25	4.43	0.55	-49.82	Average	-27	Pass
NVNT	ac80mimo	5775	5700	-35.52	4.43	-	-31.09	Peak	10	Pass
NVNT	ac80mimo	5775	5700	-45.55	4.43	0.55	-41.12	Average	10	Pass
NVNT	ac80mimo	5775	5720	-27.95	4.43	-	-23.52	Peak	15.6	Pass
NVNT	ac80mimo	5775	5720	-43.69	4.43	0.55	-39.26	Average	15.6	Pass
NVNT	ac80mimo	5775	5725	-31.09	4.43	-	-26.66	Peak	27	Pass
NVNT	ac80mimo	5775	5725	-43.96	4.43	0.55	-39.53	Average	27	Pass
NVNT	ac80mimo	5775	5850	-34.71	4.43	-	-30.28	Peak	27	Pass
NVNT	ac80mimo	5775	5850	-49.93	4.43	0.55	-45.5	Average	27	Pass
NVNT	ac80mimo	5775	5855	-36.45	4.43	-	-32.02	Peak	15.6	Pass
NVNT	ac80mimo	5775	5855	-49.64	4.43	0.55	-45.21	Average	15.6	Pass
NVNT	ac80mimo	5775	5875	-42.74	4.43	-	-38.31	Peak	10	Pass
NVNT	ac80mimo	5775	5875	-52.97	4.43	0.55	-48.54	Average	10	Pass
NVNT	ac80mimo	5775	5925	-46.61	4.43	-	-42.18	Peak	-27	Pass
NVNT	ac80mimo	5775	5925	-56.82	4.43	0.55	-52.39	Average	-27	Pass

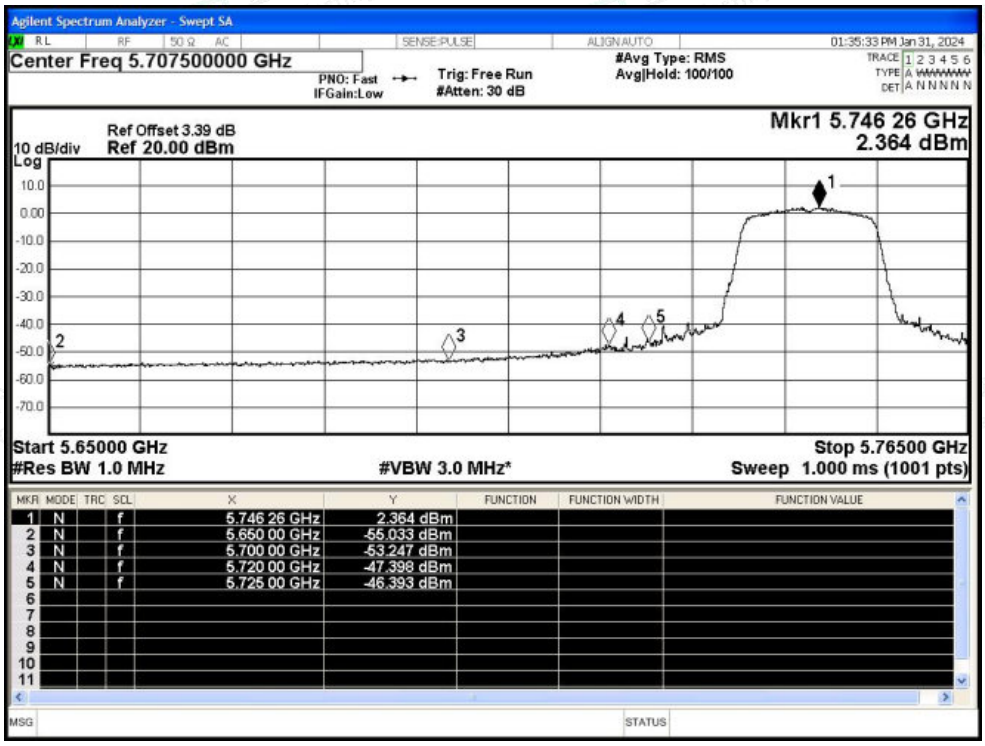
Note: 802.11a mode, only show the worst set of antenna0 data.

Test Graphs

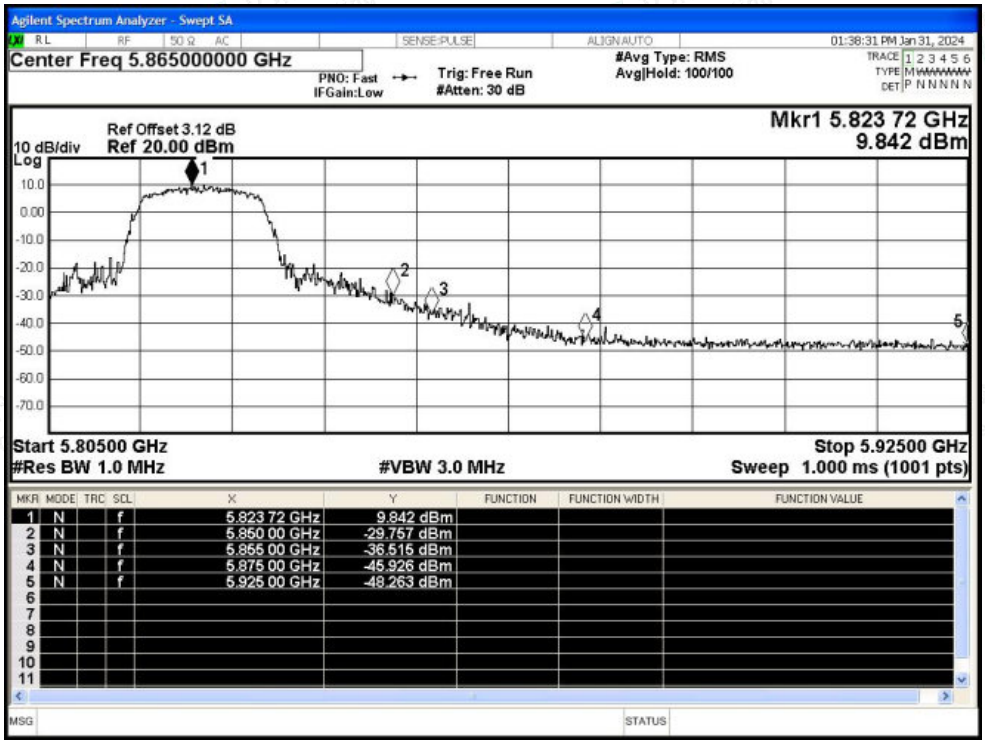
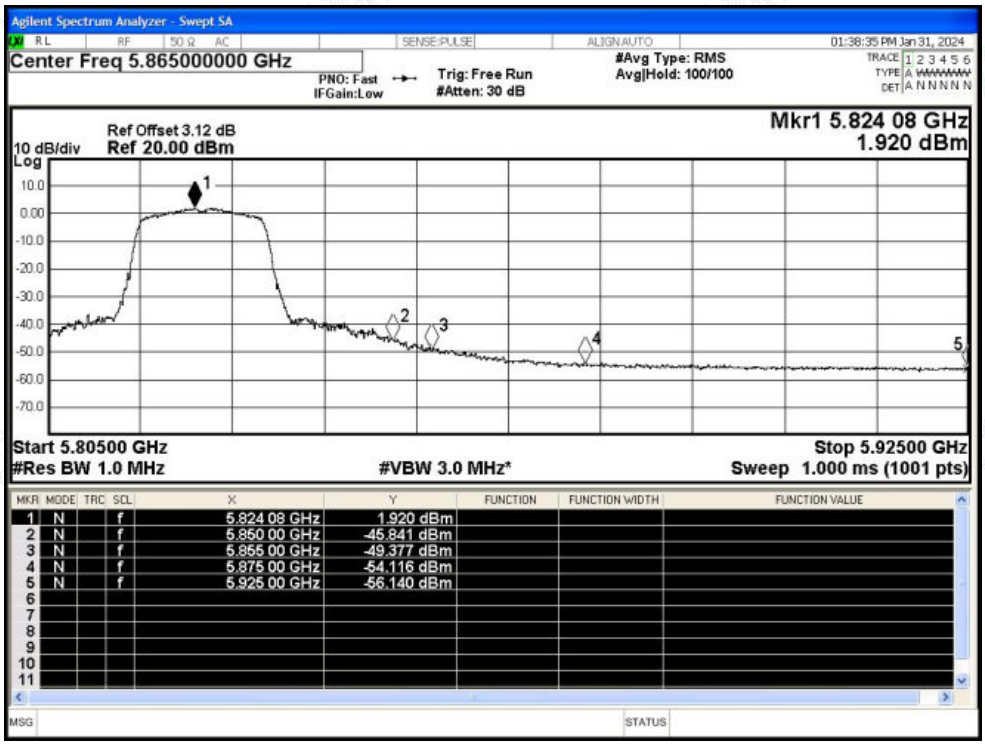
Restrict Band NVNT a 5745MHz Peak



Restrict Band NVNT a 5745MHz Average



Restrict Band NVNT a 5825MHz Peak



Restrict Band NVNT a 5825MHz Average