



Appendix E

RF Test Data for 5.8GWIFI (Conducted Measurement)

Product Name: 7-inch Rugged Embedded Computer

Test Model: agroNave7

Environmental Conditions

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





E.1 -6dB Bandwidth

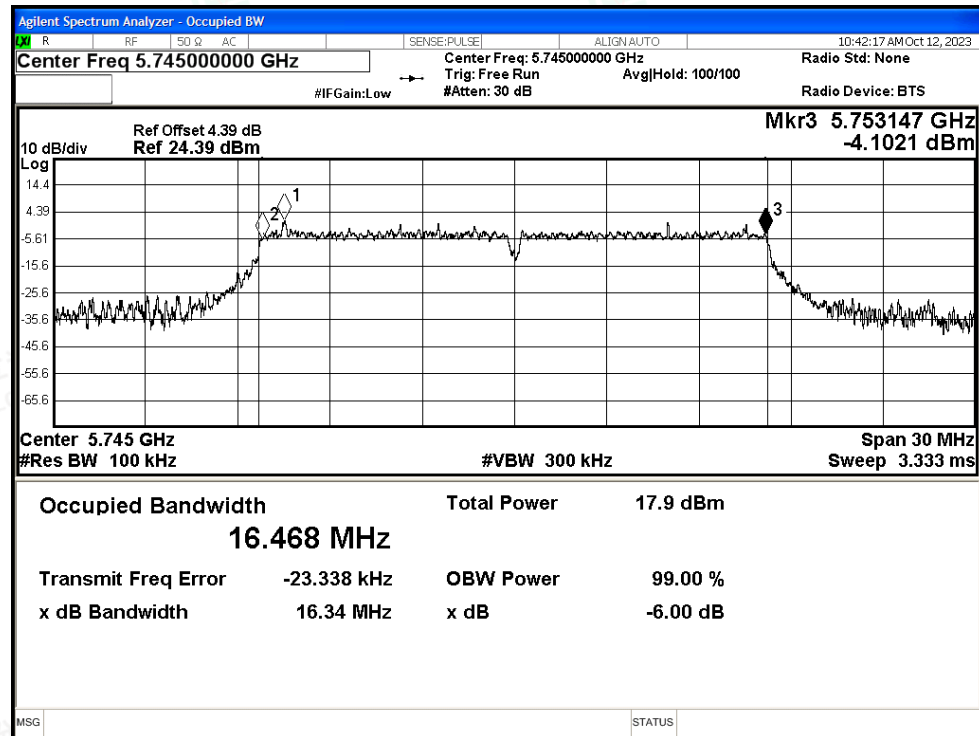
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	a	5745	Ant1	16.342	≥ 0.5	Pass
NVNT	a	5785	Ant1	16.34	≥ 0.5	Pass
NVNT	a	5825	Ant1	16.356	≥ 0.5	Pass
NVNT	n20	5745	Ant1	17.384	≥ 0.5	Pass
NVNT	n20	5785	Ant1	17.097	≥ 0.5	Pass
NVNT	n20	5825	Ant1	17.524	≥ 0.5	Pass
NVNT	n40	5755	Ant1	36.287	≥ 0.5	Pass
NVNT	n40	5795	Ant1	35.638	≥ 0.5	Pass
NVNT	ac20	5745	Ant1	17.561	≥ 0.5	Pass
NVNT	ac20	5785	Ant1	17.366	≥ 0.5	Pass
NVNT	ac20	5825	Ant1	17.179	≥ 0.5	Pass
NVNT	ac40	5755	Ant1	35.757	≥ 0.5	Pass
NVNT	ac40	5795	Ant1	36.193	≥ 0.5	Pass
NVNT	ac80	5775	Ant1	75.314	≥ 0.5	Pass



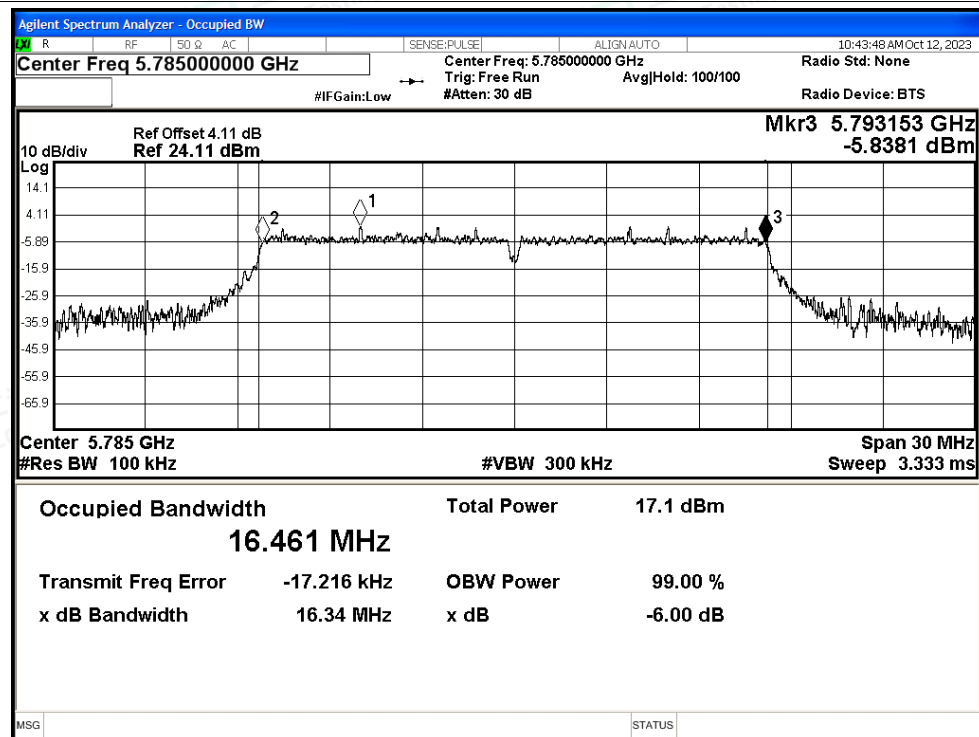


Test Graphs

-6dB Bandwidth NVNT a 5745MHz Ant1



-6dB Bandwidth NVNT a 5785MHz Ant1



Shenzhen LCS Compliance Testing Laboratory Ltd.

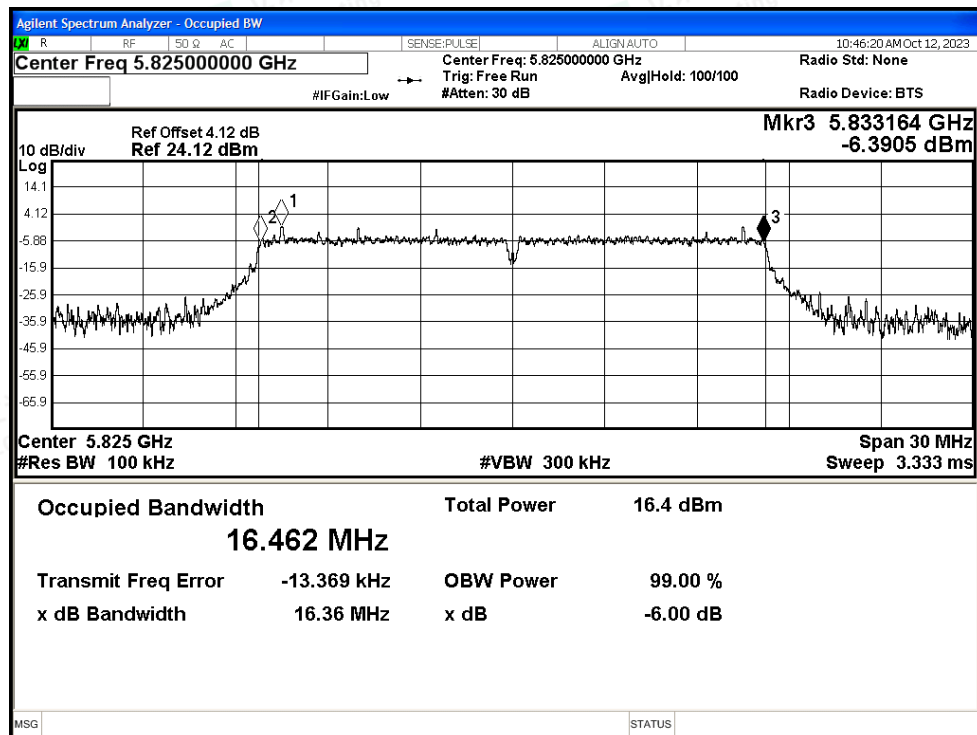
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

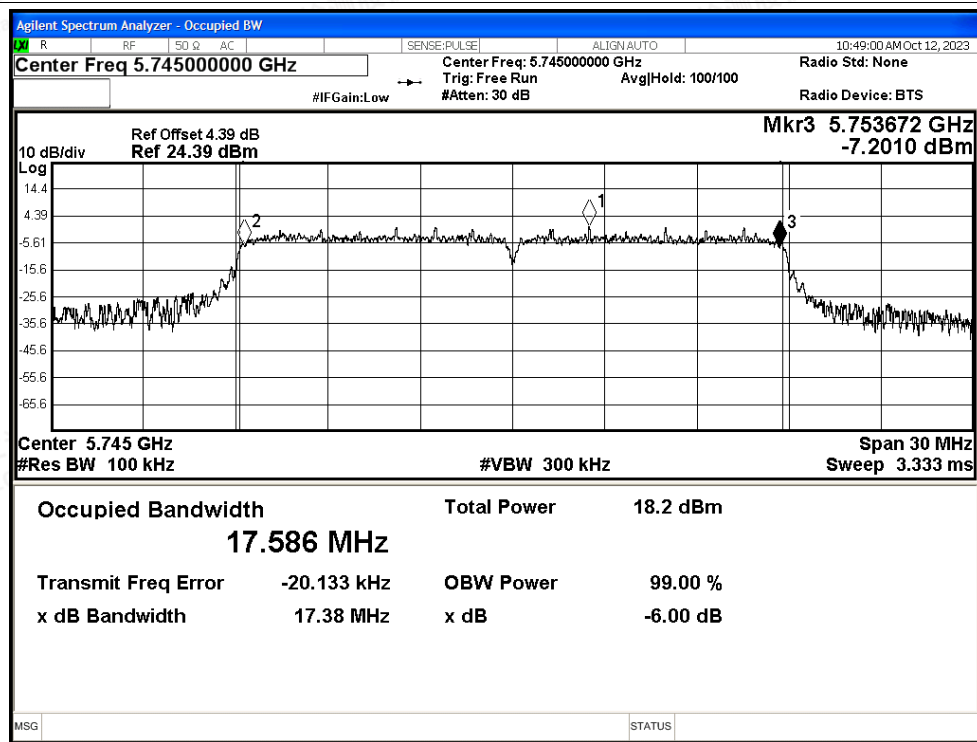
Scan code to check authenticity



-6dB Bandwidth NVNT a 5825MHz Ant1

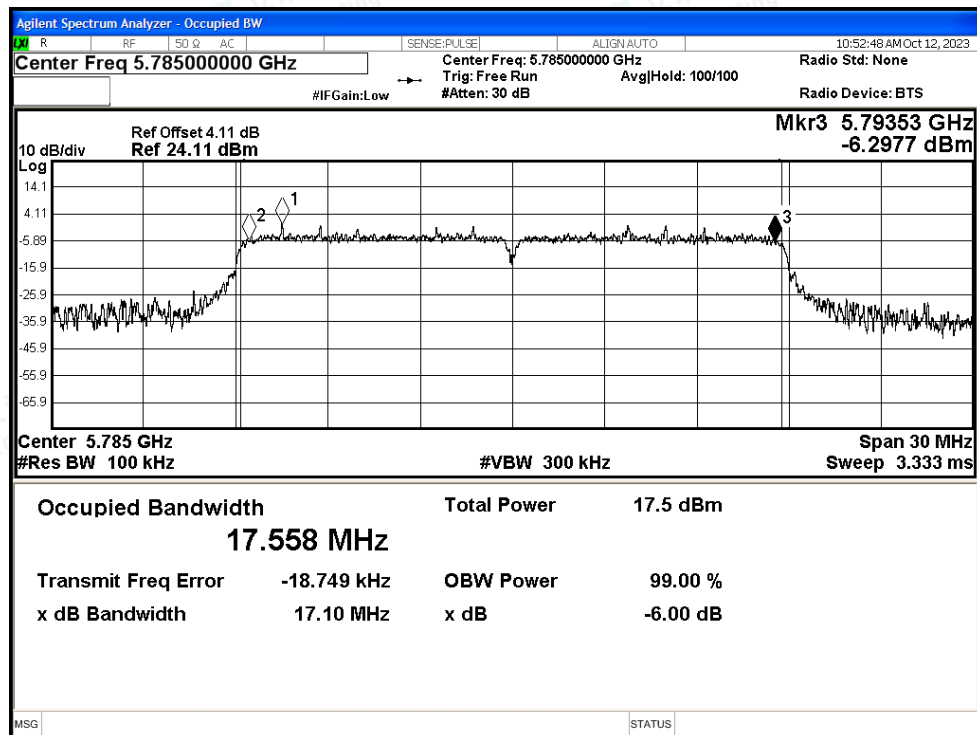


-6dB Bandwidth NVNT n20 5745MHz Ant1

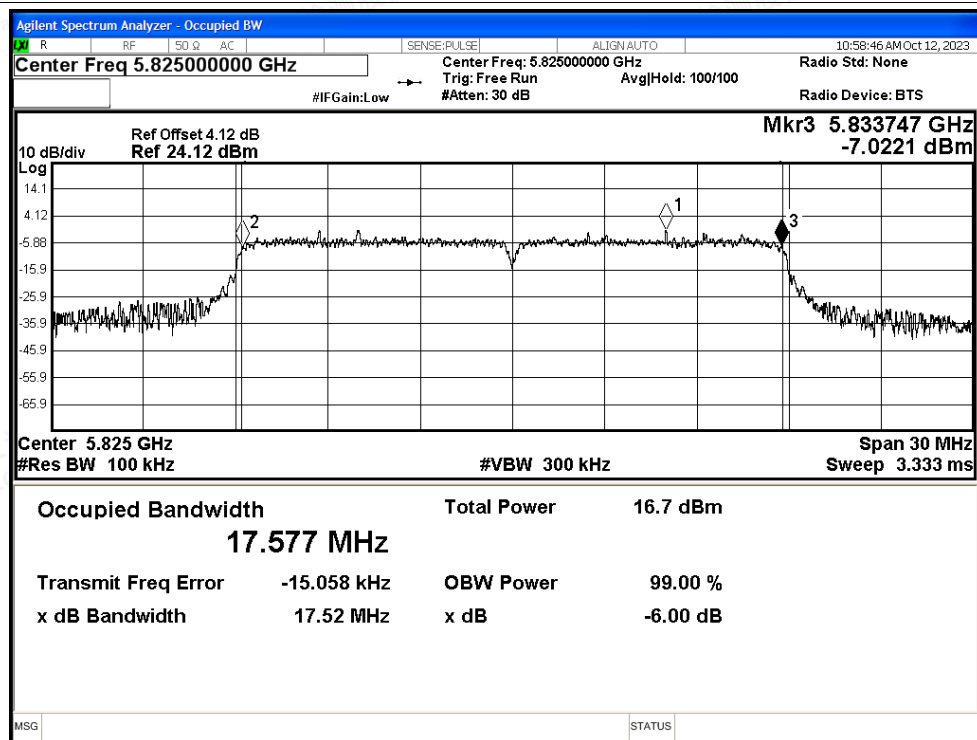




-6dB Bandwidth NVNT n20 5785MHz Ant1

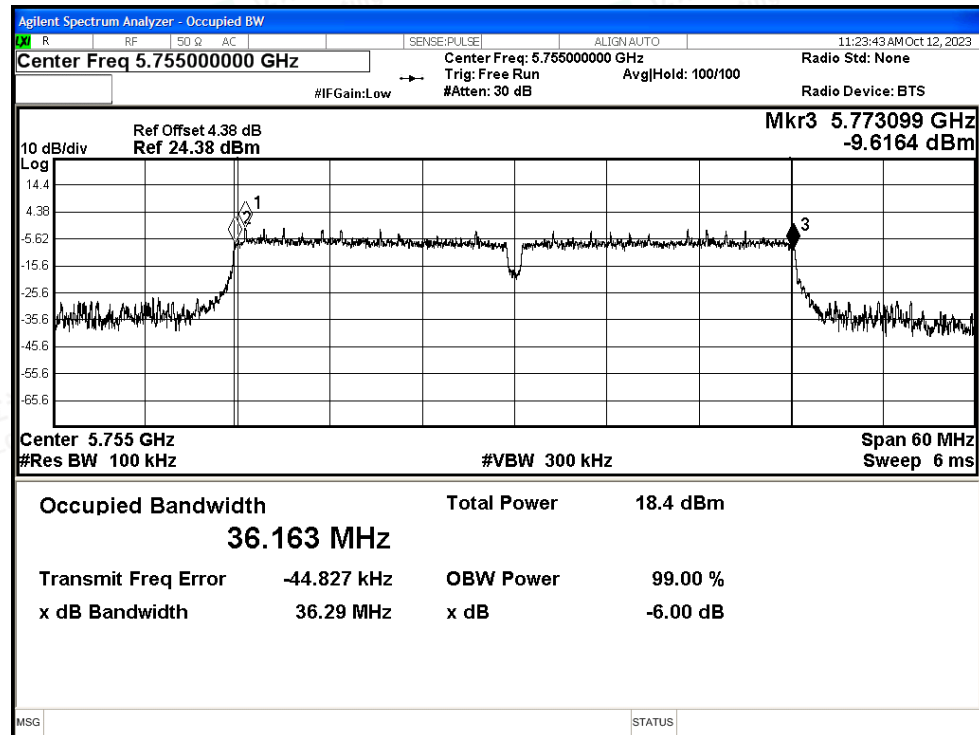


-6dB Bandwidth NVNT n20 5825MHz Ant1

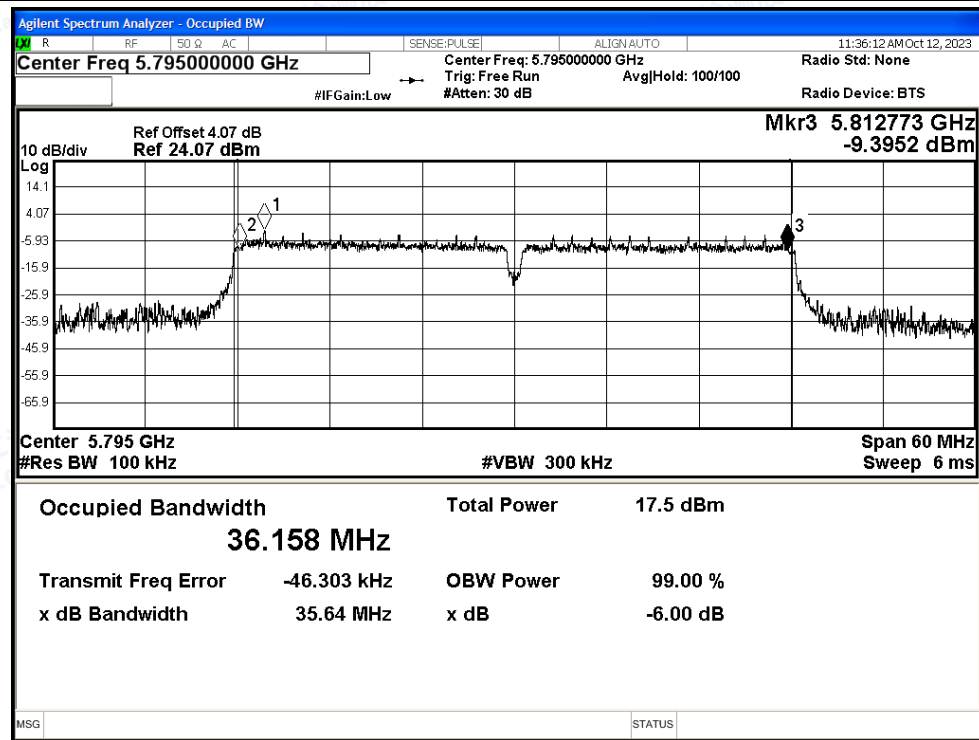




-6dB Bandwidth NVNT n40 5755MHz Ant1

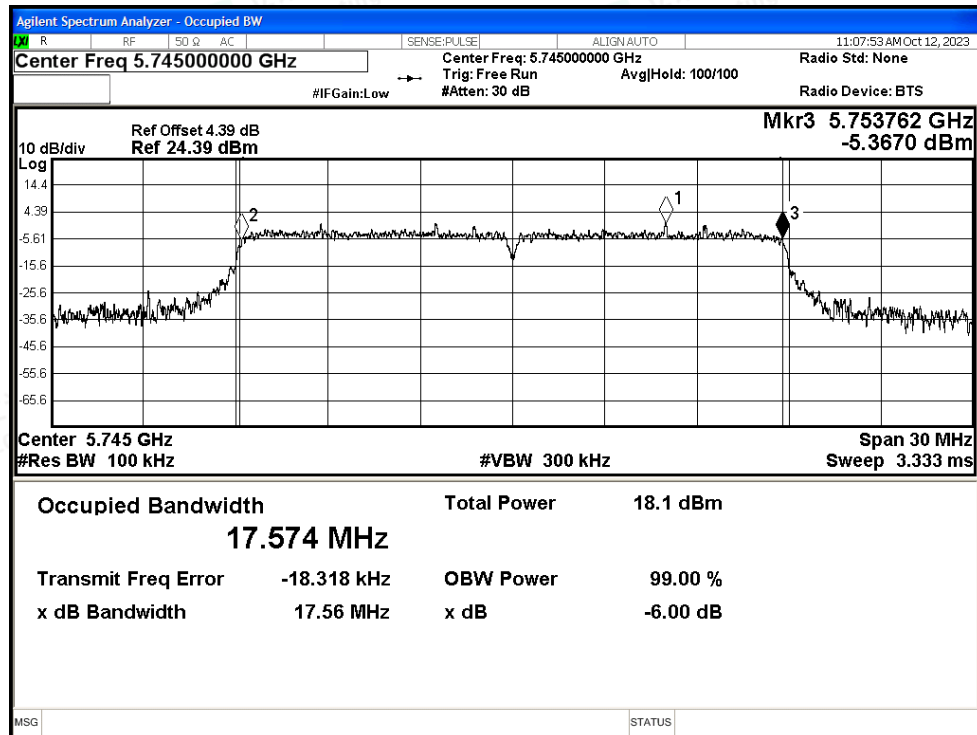


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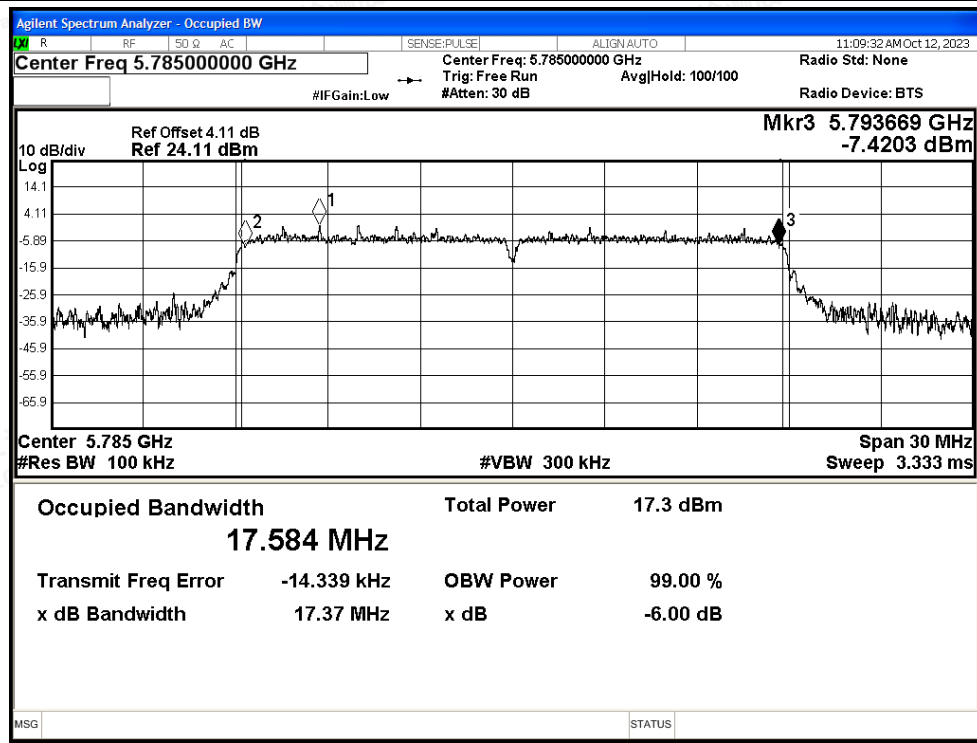




-6dB Bandwidth NVNT ac20 5745MHz Ant1

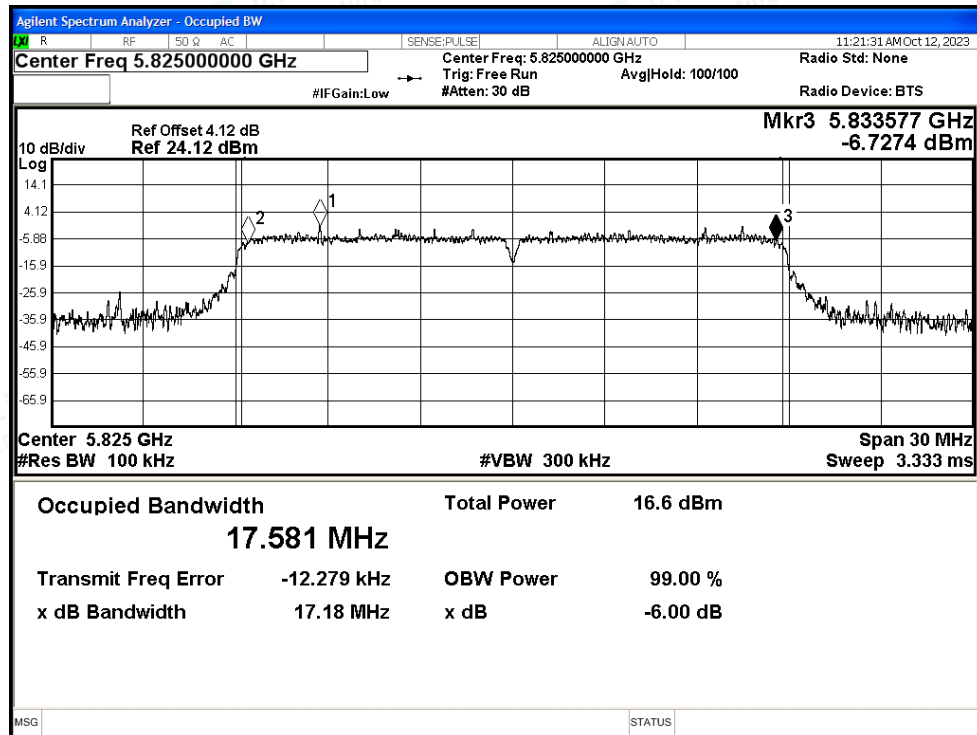


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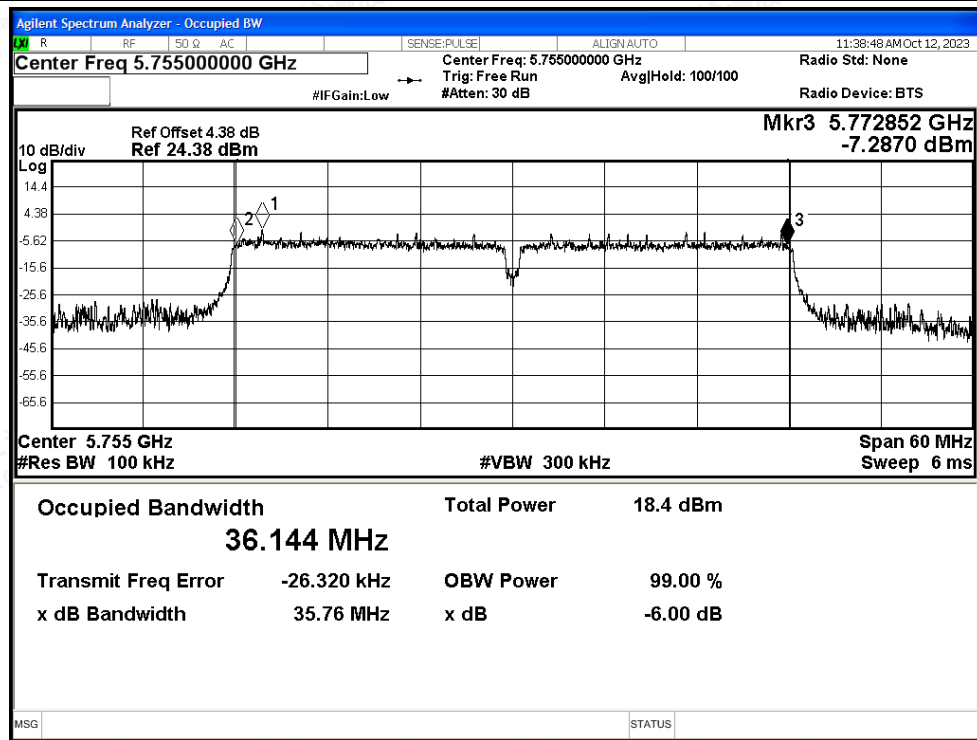




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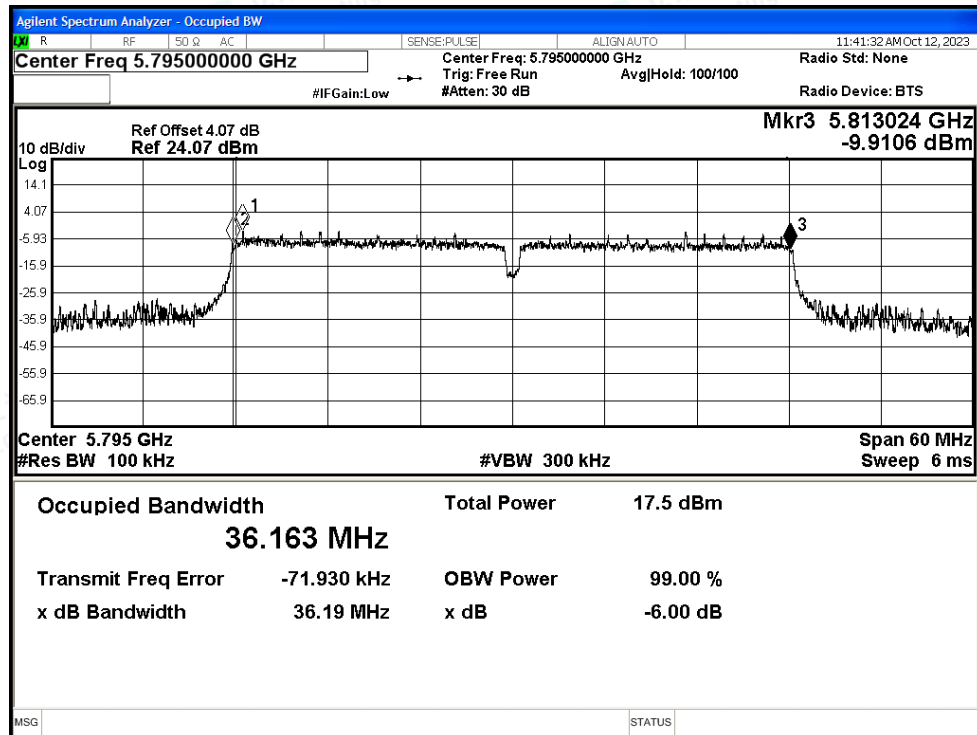


-6dB Bandwidth NVNT ac40 5755MHz Ant1

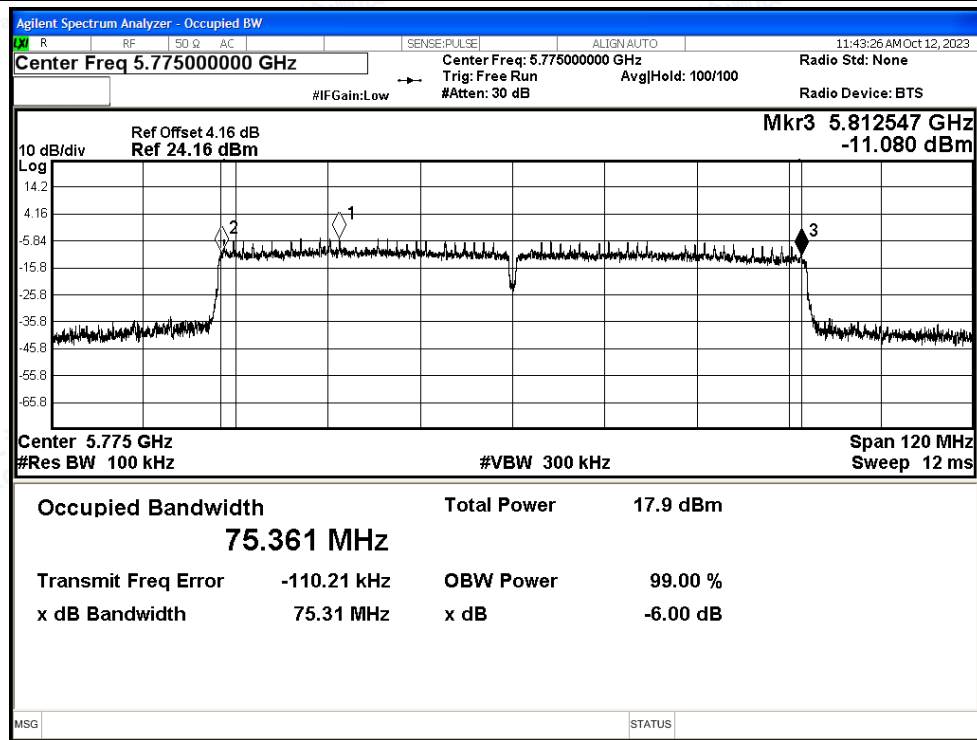




-6dB Bandwidth NVNT ac40 5795MHz Ant1



-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	Ant1	11.76	0.5	12.26	30	Pass
NVNT	a	5785	Ant1	10.73	0.5	11.23	30	Pass
NVNT	a	5825	Ant1	10.14	0.77	10.91	30	Pass
NVNT	n20	5745	Ant1	11.52	0.59	12.11	30	Pass
NVNT	n20	5785	Ant1	10.66	0.82	11.48	30	Pass
NVNT	n20	5825	Ant1	9.88	0.59	10.47	30	Pass
NVNT	n40	5755	Ant1	10.88	1.2	12.08	30	Pass
NVNT	n40	5795	Ant1	10.1	1.2	11.30	30	Pass
NVNT	ac20	5745	Ant1	11.46	0.67	12.13	30	Pass
NVNT	ac20	5785	Ant1	10.54	0.58	11.12	30	Pass
NVNT	ac20	5825	Ant1	9.83	0.59	10.42	30	Pass
NVNT	ac40	5755	Ant1	10.84	1.49	12.33	30	Pass
NVNT	ac40	5795	Ant1	9.9	1.49	11.39	30	Pass
NVNT	ac80	5775	Ant1	9.25	1.97	11.22	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	-1.47	0.5	-0.97	30	Pass
NVNT	a	5785	Ant1	-2.56	0.5	-2.06	30	Pass
NVNT	a	5825	Ant1	-3.34	0.77	-2.57	30	Pass
NVNT	n20	5745	Ant1	-1.58	0.59	-0.99	30	Pass
NVNT	n20	5785	Ant1	-2.57	0.82	-1.75	30	Pass
NVNT	n20	5825	Ant1	-3.97	0.59	-3.38	30	Pass
NVNT	n40	5755	Ant1	-5.25	1.2	-4.05	30	Pass
NVNT	n40	5795	Ant1	-6.17	1.2	-4.97	30	Pass
NVNT	ac20	5745	Ant1	-2.28	0.67	-1.61	30	Pass
NVNT	ac20	5785	Ant1	-3.03	0.58	-2.45	30	Pass
NVNT	ac20	5825	Ant1	-4.02	0.59	-3.43	30	Pass
NVNT	ac40	5755	Ant1	-5.69	1.49	-4.2	30	Pass
NVNT	ac40	5795	Ant1	-6.26	1.49	-4.77	30	Pass
NVNT	ac80	5775	Ant1	-9.44	1.97	-7.47	30	Pass

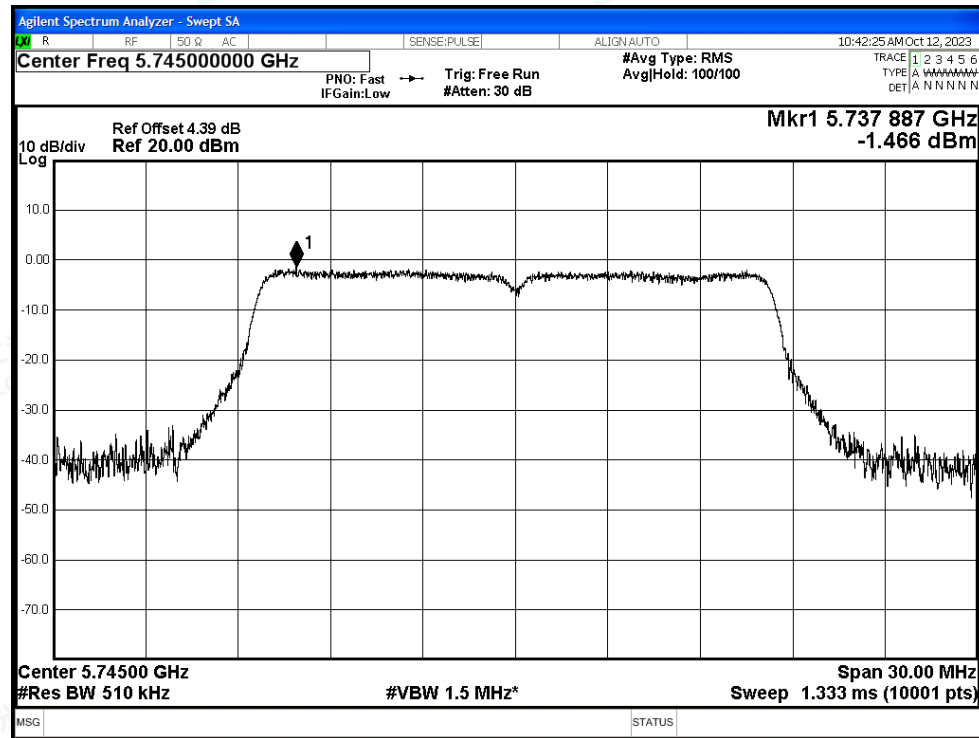


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518000, China
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com
Scan code to check authenticity

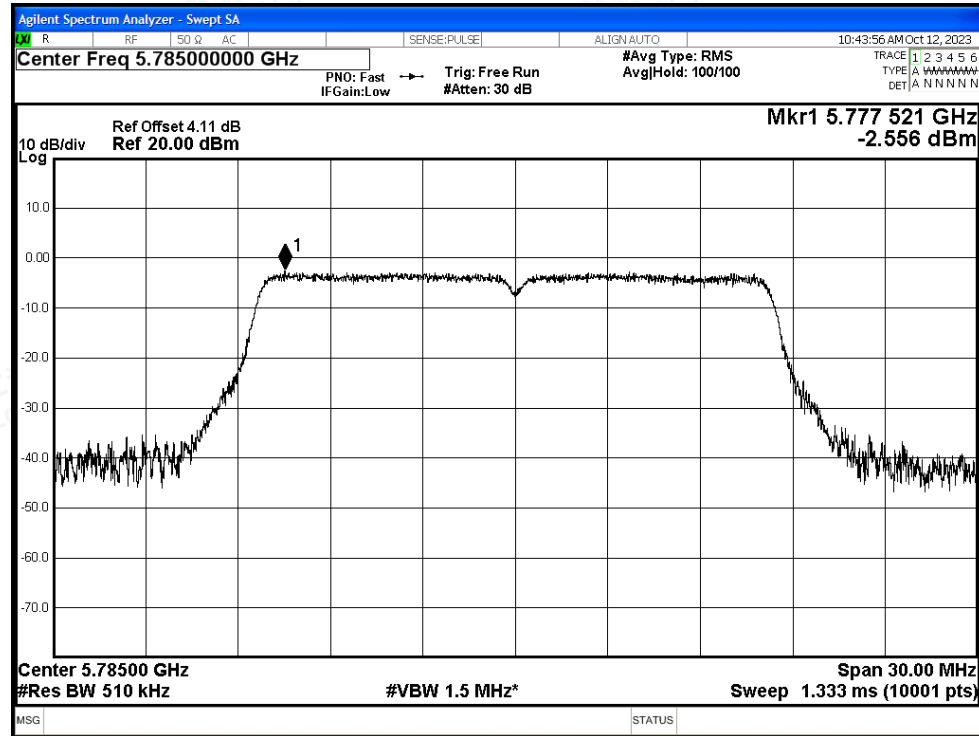


Test Graphs

PSD NVNT a 5745MHz Ant1

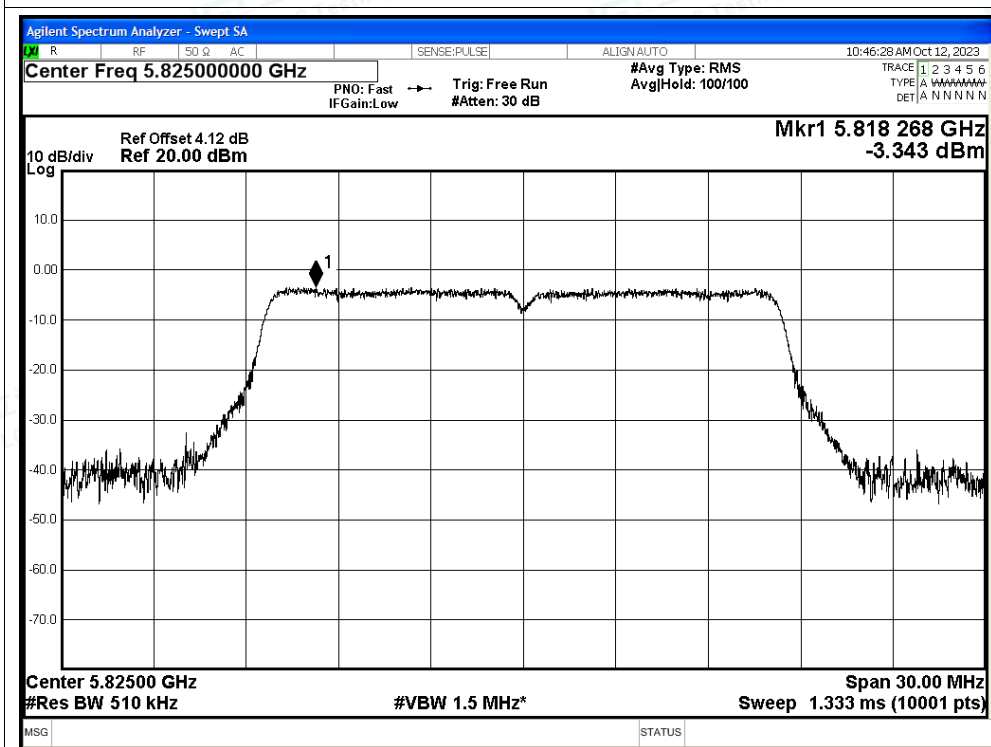


PSD NVNT a 5785MHz Ant1

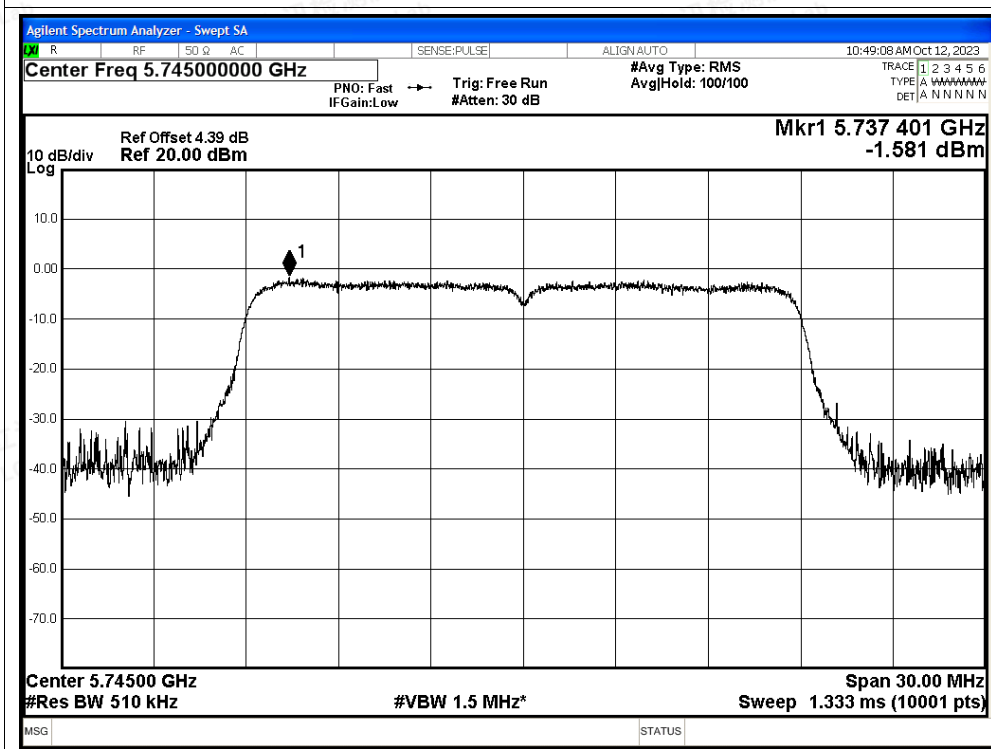


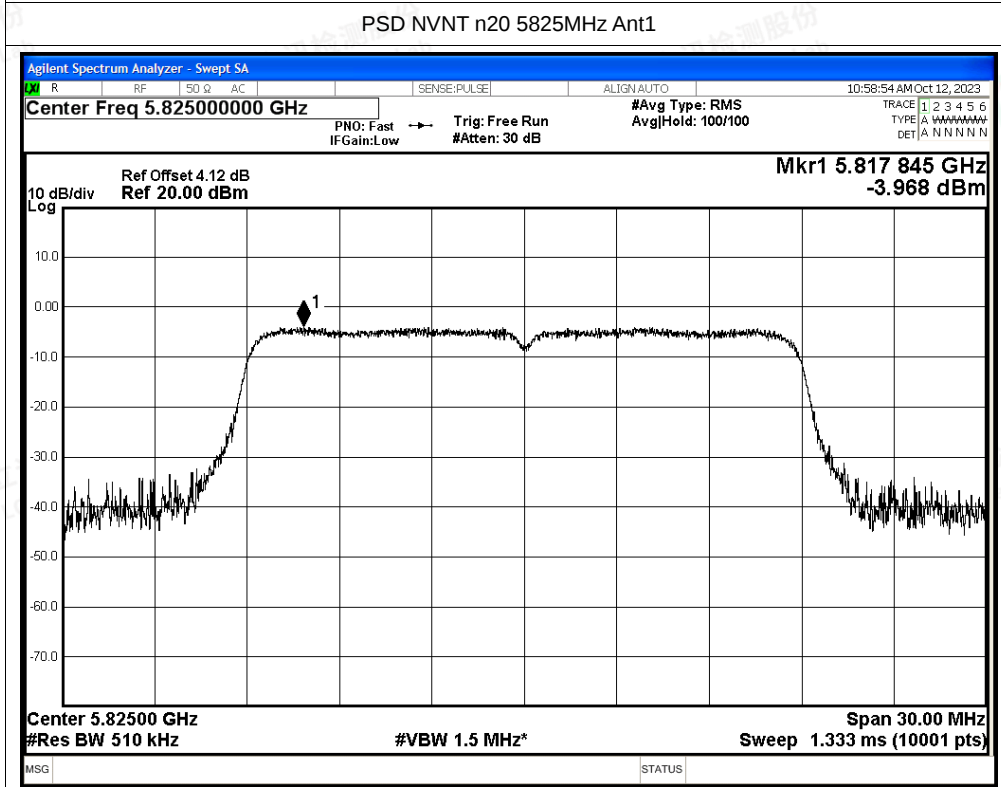
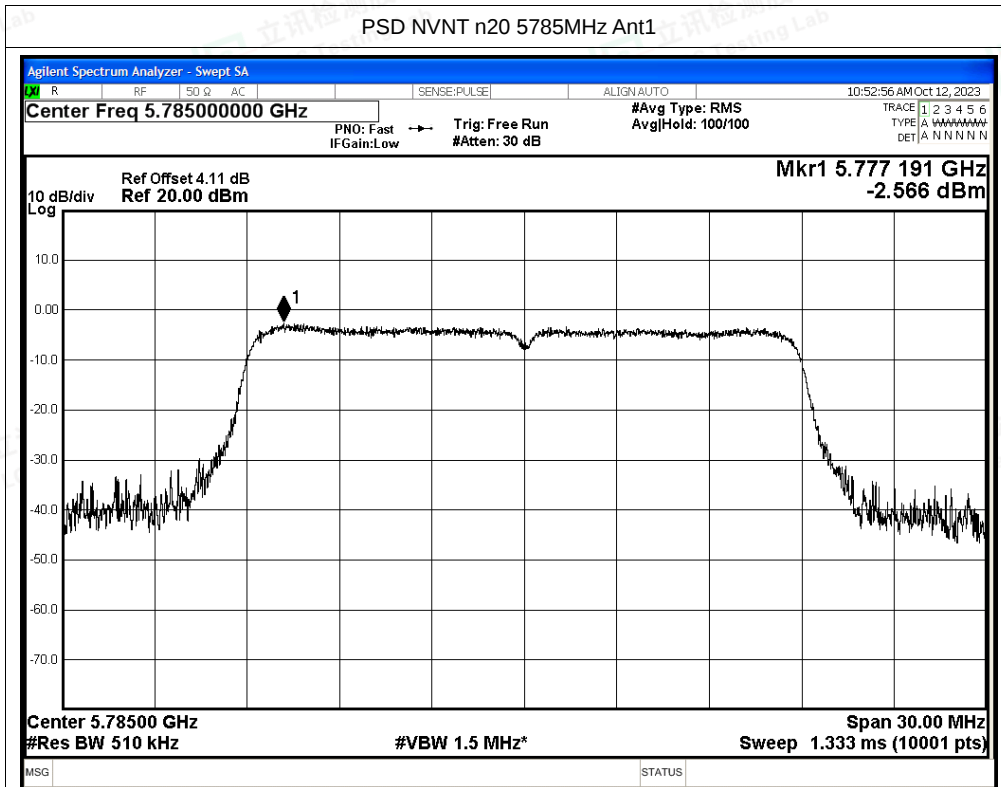


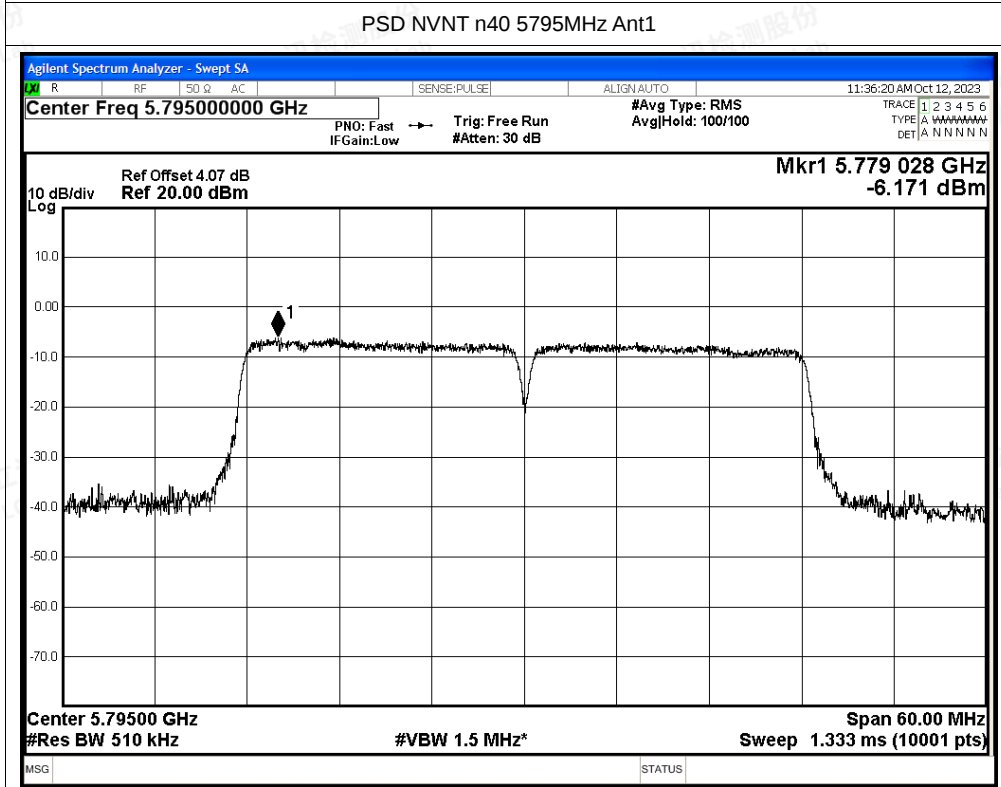
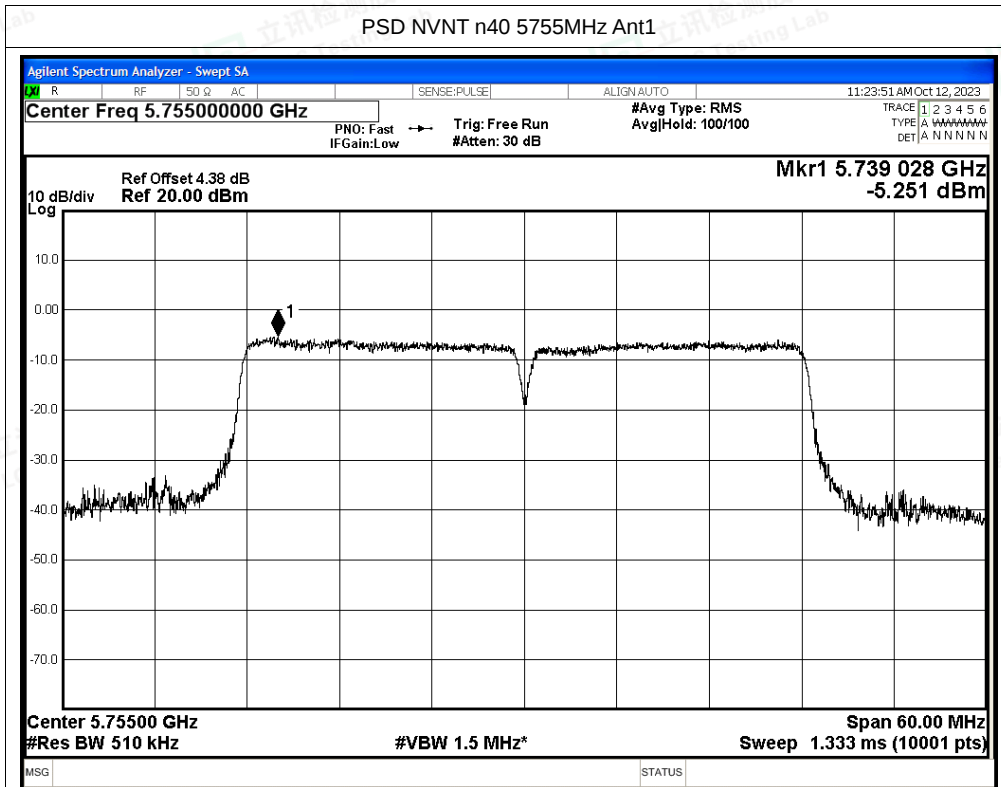
PSD NVNT a 5825MHz Ant1



PSD NVNT n20 5745MHz Ant1

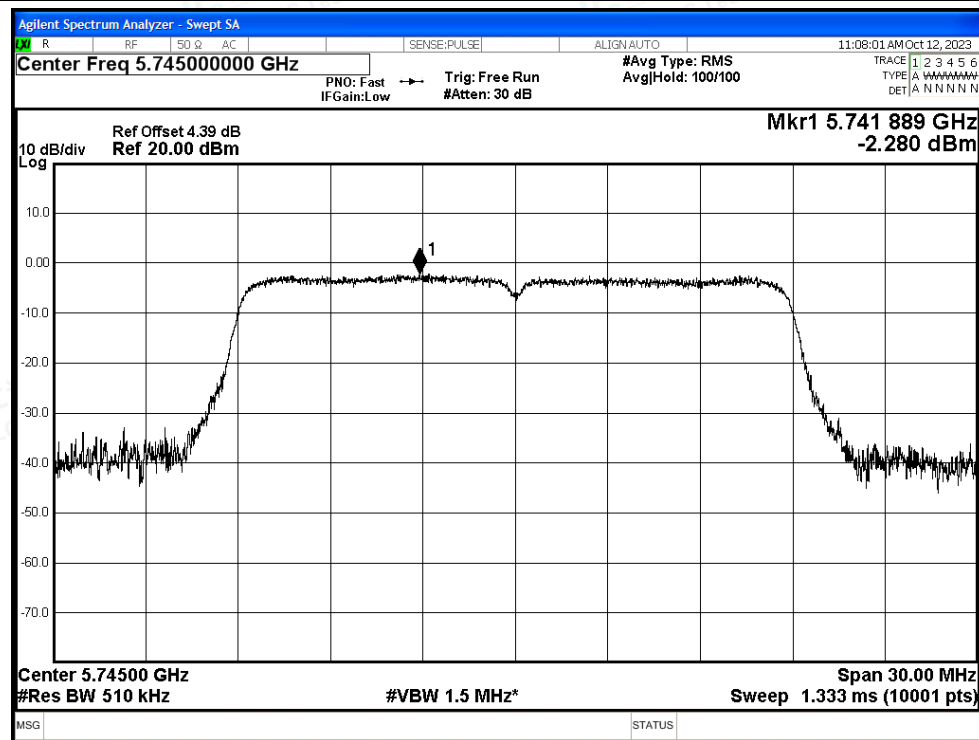




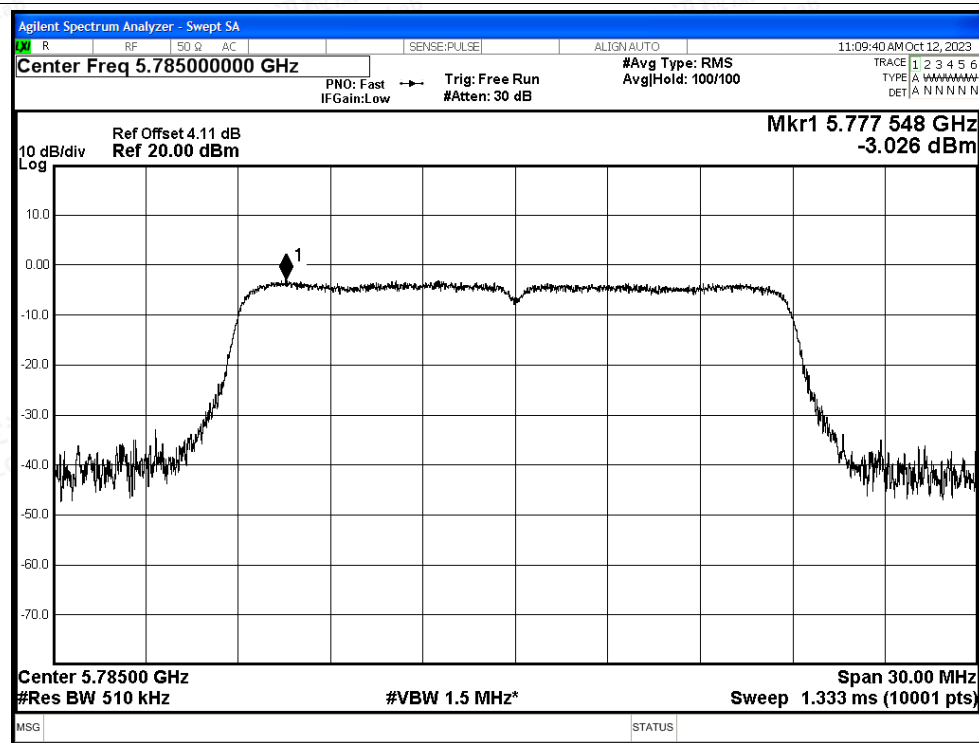




PSD NVNT ac20 5745MHz Ant1

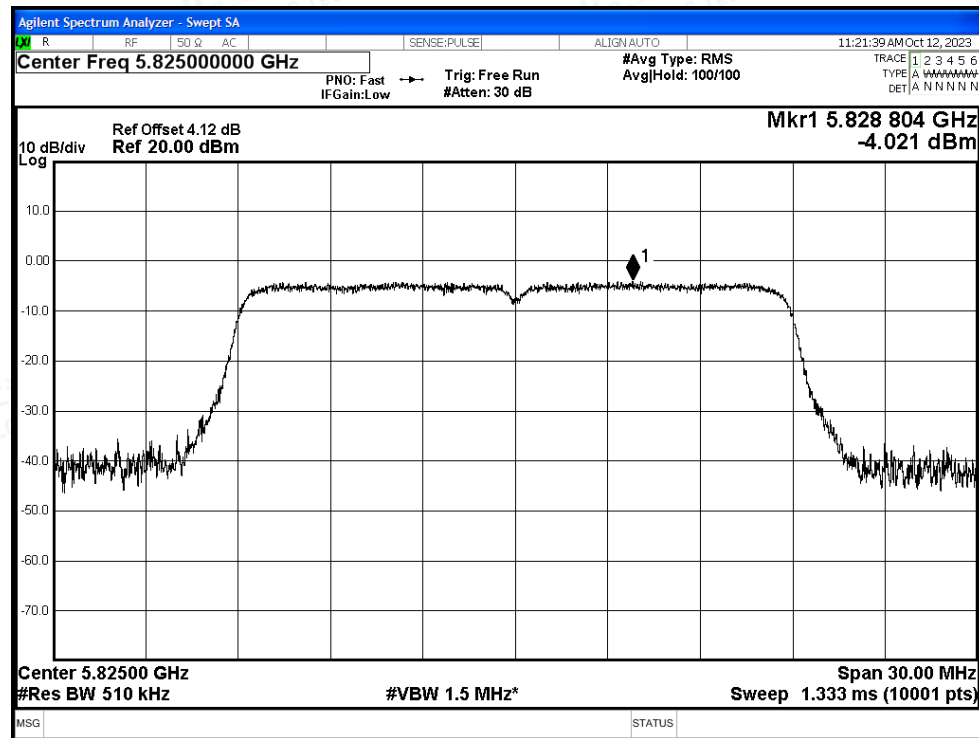


PSD NVNT ac20 5785MHz Ant1

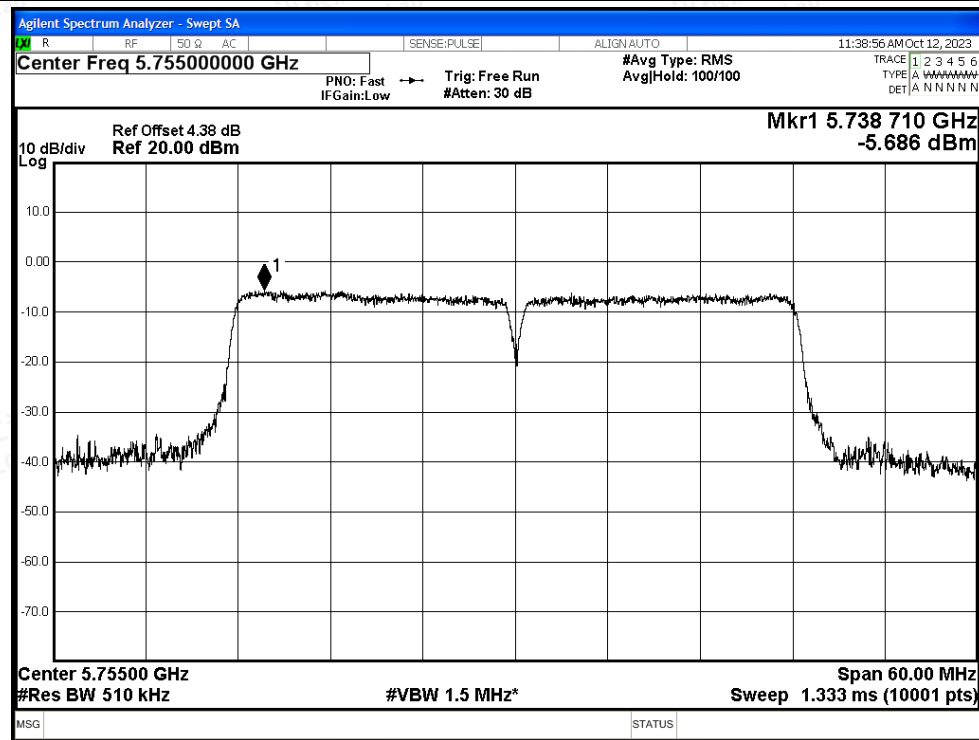




PSD NVNT ac20 5825MHz Ant1

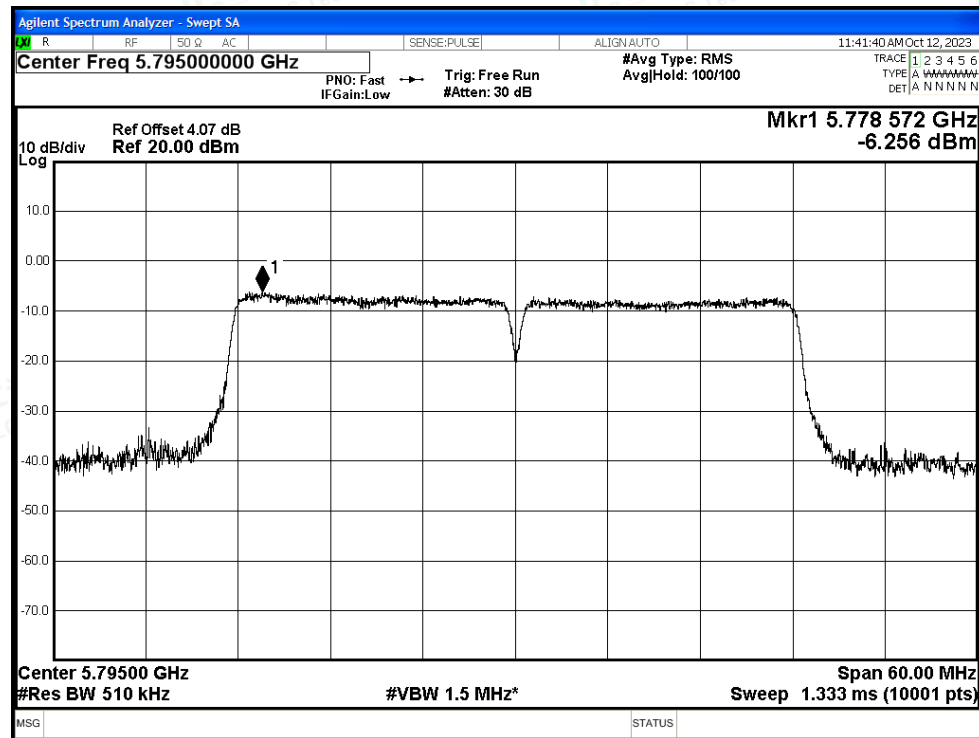


PSD NVNT ac40 5755MHz Ant1

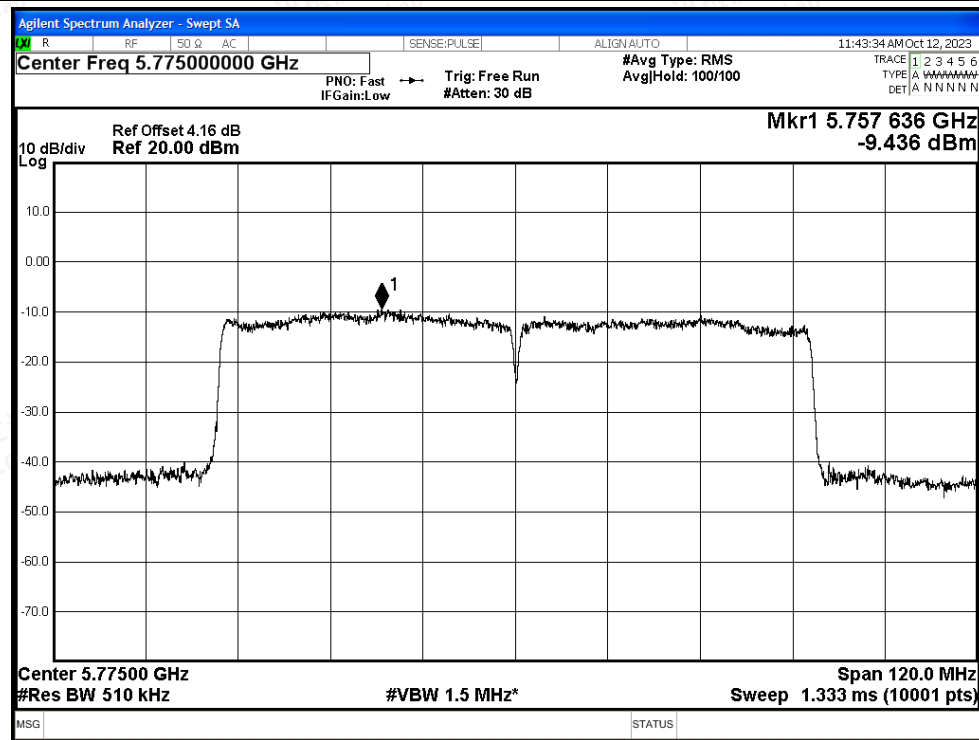




PSD NVNT ac40 5795MHz Ant1



PSD NVNT ac80 5775MHz Ant1





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	-47.43	1.3802	-46.05	Peak	-27	Pass
NVNT	a	5745	Ant1	5650	-55.44	1.3802	-54.06	Average	-27	Pass
NVNT	a	5745	Ant1	5700	-46.23	1.3802	-44.85	Peak	10	Pass
NVNT	a	5745	Ant1	5700	-53.66	1.3802	-52.28	Average	10	Pass
NVNT	a	5745	Ant1	5720	-33.15	1.3802	-31.77	Peak	15.6	Pass
NVNT	a	5745	Ant1	5720	-43.71	1.3802	-42.33	Average	15.6	Pass
NVNT	a	5745	Ant1	5725	-22.34	1.3802	-20.96	Peak	27	Pass
NVNT	a	5745	Ant1	5725	-38.44	1.3802	-37.06	Average	27	Pass
NVNT	a	5825	Ant1	5850	-34.64	1.3802	-33.26	Peak	27	Pass
NVNT	a	5825	Ant1	5850	-45.77	1.3802	-44.39	Average	27	Pass
NVNT	a	5825	Ant1	5855	-39.68	1.3802	-38.30	Peak	15.6	Pass
NVNT	a	5825	Ant1	5855	-49.65	1.3802	-48.27	Average	15.6	Pass
NVNT	a	5825	Ant1	5875	-48.23	1.3802	-46.85	Peak	10	Pass
NVNT	a	5825	Ant1	5875	-54.87	1.3802	-53.49	Average	10	Pass
NVNT	a	5825	Ant1	5925	-48.5	1.3802	-47.12	Peak	-27	Pass
NVNT	a	5825	Ant1	5925	-55.68	1.3802	-54.30	Average	-27	Pass
NVNT	n20	5745	Ant1	5650	-48.11	1.3802	-46.73	Peak	-27	Pass
NVNT	n20	5745	Ant1	5650	-55.47	1.3802	-54.09	Average	-27	Pass
NVNT	n20	5745	Ant1	5700	-45.19	1.3802	-43.81	Peak	10	Pass
NVNT	n20	5745	Ant1	5700	-53.55	1.3802	-52.17	Average	10	Pass
NVNT	n20	5745	Ant1	5720	-29.84	1.3802	-28.46	Peak	15.6	Pass
NVNT	n20	5745	Ant1	5720	-42.17	1.3802	-40.79	Average	15.6	Pass
NVNT	n20	5745	Ant1	5725	-27.69	1.3802	-26.31	Peak	27	Pass
NVNT	n20	5745	Ant1	5725	-36.42	1.3802	-35.04	Average	27	Pass
NVNT	n20	5825	Ant1	5850	-35.16	1.3802	-33.78	Peak	27	Pass
NVNT	n20	5825	Ant1	5850	-44.5	1.3802	-43.12	Average	27	Pass
NVNT	n20	5825	Ant1	5855	-39.68	1.3802	-38.30	Peak	15.6	Pass
NVNT	n20	5825	Ant1	5855	-49.41	1.3802	-48.03	Average	15.6	Pass
NVNT	n20	5825	Ant1	5875	-46.31	1.3802	-44.93	Peak	10	Pass
NVNT	n20	5825	Ant1	5875	-54.8	1.3802	-53.42	Average	10	Pass
NVNT	n20	5825	Ant1	5925	-49.33	1.3802	-47.95	Peak	-27	Pass
NVNT	n20	5825	Ant1	5925	-55.53	1.3802	-54.15	Average	-27	Pass
NVNT	n40	5755	Ant1	5650	-49.37	1.3802	-47.99	Peak	-27	Pass
NVNT	n40	5755	Ant1	5650	-55.28	1.3802	-53.90	Average	-27	Pass
NVNT	n40	5755	Ant1	5700	-44.24	1.3802	-42.86	Peak	10	Pass
NVNT	n40	5755	Ant1	5700	-50.08	1.3802	-48.70	Average	10	Pass





NVNT	n40	5755	Ant1	5720	-26.68	1.3802	-25.30	Peak	15.6	Pass
NVNT	n40	5755	Ant1	5720	-35.94	1.3802	-34.56	Average	15.6	Pass
NVNT	n40	5755	Ant1	5725	-21.87	1.3802	-20.49	Peak	27	Pass
NVNT	n40	5755	Ant1	5725	-33.8	1.3802	-32.42	Average	27	Pass
NVNT	n40	5795	Ant1	5850	-34.62	1.3802	-33.24	Peak	27	Pass
NVNT	n40	5795	Ant1	5850	-49.94	1.3802	-48.56	Average	27	Pass
NVNT	n40	5795	Ant1	5855	-43.84	1.3802	-42.46	Peak	15.6	Pass
NVNT	n40	5795	Ant1	5855	-51.6	1.3802	-50.22	Average	15.6	Pass
NVNT	n40	5795	Ant1	5875	-48.95	1.3802	-47.57	Peak	10	Pass
NVNT	n40	5795	Ant1	5875	-54.9	1.3802	-53.52	Average	10	Pass
NVNT	n40	5795	Ant1	5925	-49.13	1.3802	-47.75	Peak	-27	Pass
NVNT	n40	5795	Ant1	5925	-55.41	1.3802	-54.03	Average	-27	Pass
NVNT	ac20	5745	Ant1	5650	-48.43	1.3802	-47.05	Peak	-27	Pass
NVNT	ac20	5745	Ant1	5650	-55.09	1.3802	-53.71	Average	-27	Pass
NVNT	ac20	5745	Ant1	5700	-48.19	1.3802	-46.81	Peak	10	Pass
NVNT	ac20	5745	Ant1	5700	-53.41	1.3802	-52.03	Average	10	Pass
NVNT	ac20	5745	Ant1	5720	-34.08	1.3802	-32.70	Peak	15.6	Pass
NVNT	ac20	5745	Ant1	5720	-42.77	1.3802	-41.39	Average	15.6	Pass
NVNT	ac20	5745	Ant1	5725	-24.43	1.3802	-23.05	Peak	27	Pass
NVNT	ac20	5745	Ant1	5725	-36.15	1.3802	-34.77	Average	27	Pass
NVNT	ac20	5825	Ant1	5850	-31.86	1.3802	-30.48	Peak	27	Pass
NVNT	ac20	5825	Ant1	5850	-44.67	1.3802	-43.29	Average	27	Pass
NVNT	ac20	5825	Ant1	5855	-41.47	1.3802	-40.09	Peak	15.6	Pass
NVNT	ac20	5825	Ant1	5855	-49.34	1.3802	-47.96	Average	15.6	Pass
NVNT	ac20	5825	Ant1	5875	-47.41	1.3802	-46.03	Peak	10	Pass
NVNT	ac20	5825	Ant1	5875	-54.95	1.3802	-53.57	Average	10	Pass
NVNT	ac20	5825	Ant1	5925	-48.48	1.3802	-47.10	Peak	-27	Pass
NVNT	ac20	5825	Ant1	5925	-55.57	1.3802	-54.19	Average	-27	Pass
NVNT	ac40	5755	Ant1	5650	-49.63	1.3802	-48.25	Peak	-27	Pass
NVNT	ac40	5755	Ant1	5650	-55.14	1.3802	-53.76	Average	-27	Pass
NVNT	ac40	5755	Ant1	5700	-38.95	1.3802	-37.57	Peak	10	Pass
NVNT	ac40	5755	Ant1	5700	-49.91	1.3802	-48.53	Average	10	Pass
NVNT	ac40	5755	Ant1	5720	-27.12	1.3802	-25.74	Peak	15.6	Pass
NVNT	ac40	5755	Ant1	5720	-36.01	1.3802	-34.63	Average	15.6	Pass
NVNT	ac40	5755	Ant1	5725	-24.56	1.3802	-23.18	Peak	27	Pass
NVNT	ac40	5755	Ant1	5725	-33.41	1.3802	-32.03	Average	27	Pass
NVNT	ac40	5795	Ant1	5850	-40.39	1.3802	-39.01	Peak	27	Pass
NVNT	ac40	5795	Ant1	5850	-49.81	1.3802	-48.43	Average	27	Pass
NVNT	ac40	5795	Ant1	5855	-44.86	1.3802	-43.48	Peak	15.6	Pass
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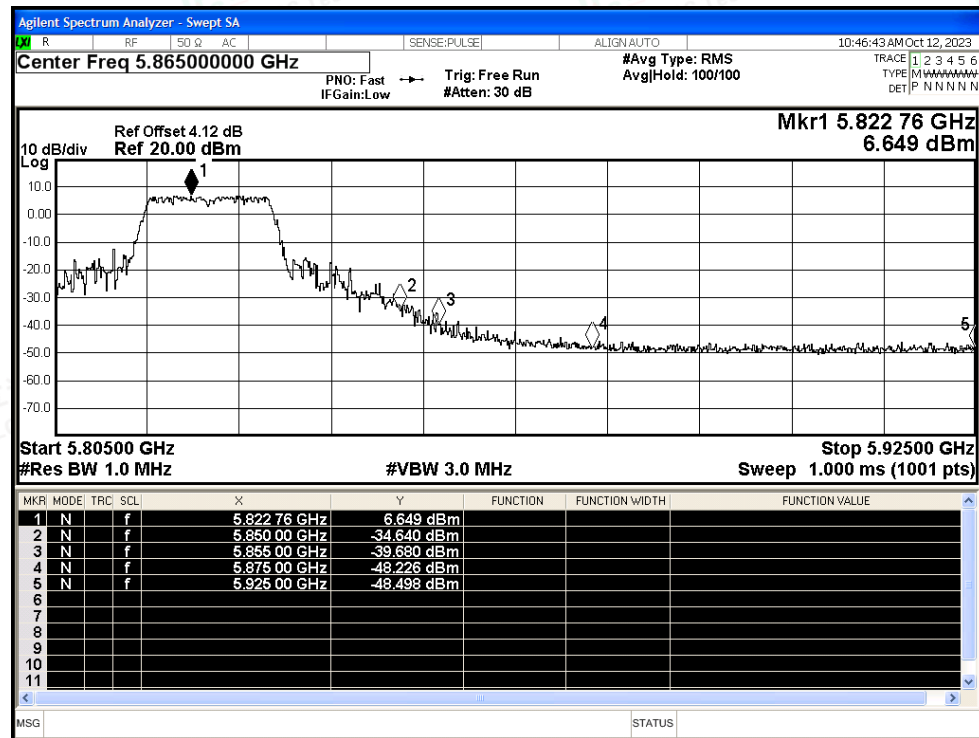


NVNT	ac40	5795	Ant1	5875	-48.97	1.3802	-47.59	Peak	10	Pass
NVNT	ac40	5795	Ant1	5875	-55.21	1.3802	-53.83	Average	10	Pass
NVNT	ac40	5795	Ant1	5925	-48.87	1.3802	-47.49	Peak	-27	Pass
NVNT	ac40	5795	Ant1	5925	-55.34	1.3802	-53.96	Average	-27	Pass
NVNT	ac80	5775	Ant1	5650	-46.2	1.3802	-44.82	Peak	-27	Pass
NVNT	ac80	5775	Ant1	5650	-53.31	1.3802	-51.93	Average	-27	Pass
NVNT	ac80	5775	Ant1	5700	-31.85	1.3802	-30.47	Peak	10	Pass
NVNT	ac80	5775	Ant1	5700	-39.08	1.3802	-37.70	Average	10	Pass
NVNT	ac80	5775	Ant1	5720	-22.31	1.3802	-20.93	Peak	15.6	Pass
NVNT	ac80	5775	Ant1	5720	-37.02	1.3802	-35.64	Average	15.6	Pass
NVNT	ac80	5775	Ant1	5725	-29.14	1.3802	-27.76	Peak	27	Pass
NVNT	ac80	5775	Ant1	5725	-35.74	1.3802	-34.36	Average	27	Pass
NVNT	ac80	5775	Ant1	5850	-30.19	1.3802	-28.81	Peak	27	Pass
NVNT	ac80	5775	Ant1	5850	-38.59	1.3802	-37.21	Average	27	Pass
NVNT	ac80	5775	Ant1	5855	-31.25	1.3802	-29.87	Peak	15.6	Pass
NVNT	ac80	5775	Ant1	5855	-39.34	1.3802	-37.96	Average	15.6	Pass
NVNT	ac80	5775	Ant1	5875	-37.92	1.3802	-36.54	Peak	10	Pass
NVNT	ac80	5775	Ant1	5875	-45.41	1.3802	-44.03	Average	10	Pass
NVNT	ac80	5775	Ant1	5925	-47.14	1.3802	-45.76	Peak	-27	Pass
NVNT	ac80	5775	Ant1	5925	-54.56	1.3802	-53.18	Average	-27	Pass

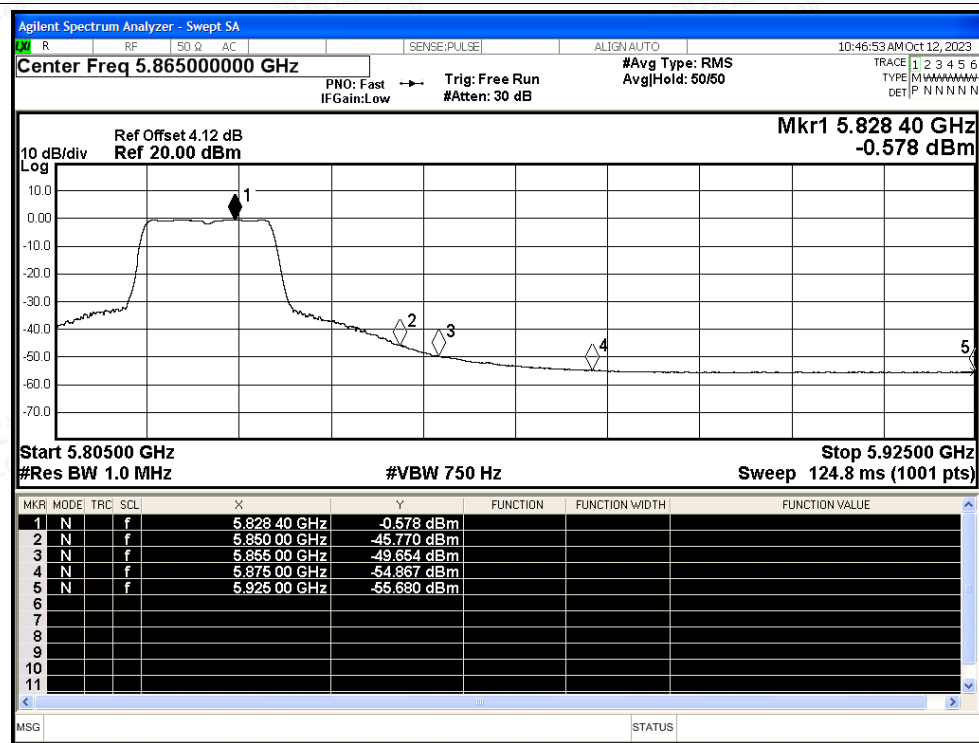




Restrict Band NVNT a 5825MHz Ant1 Peak

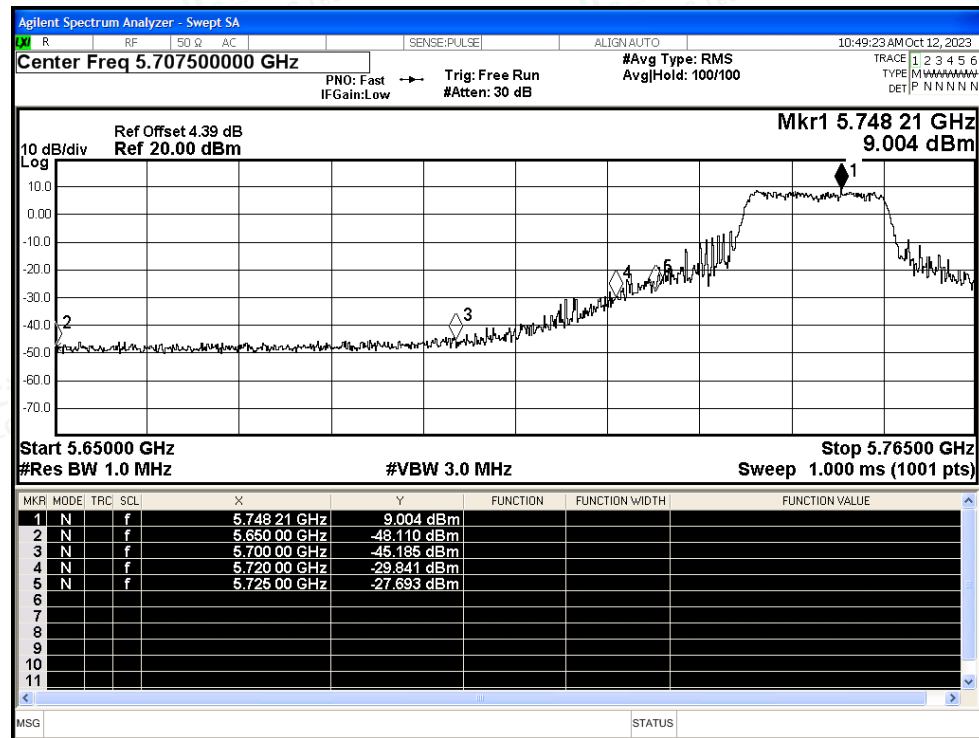


Restrict Band NVNT a 5825MHz Ant1 Average

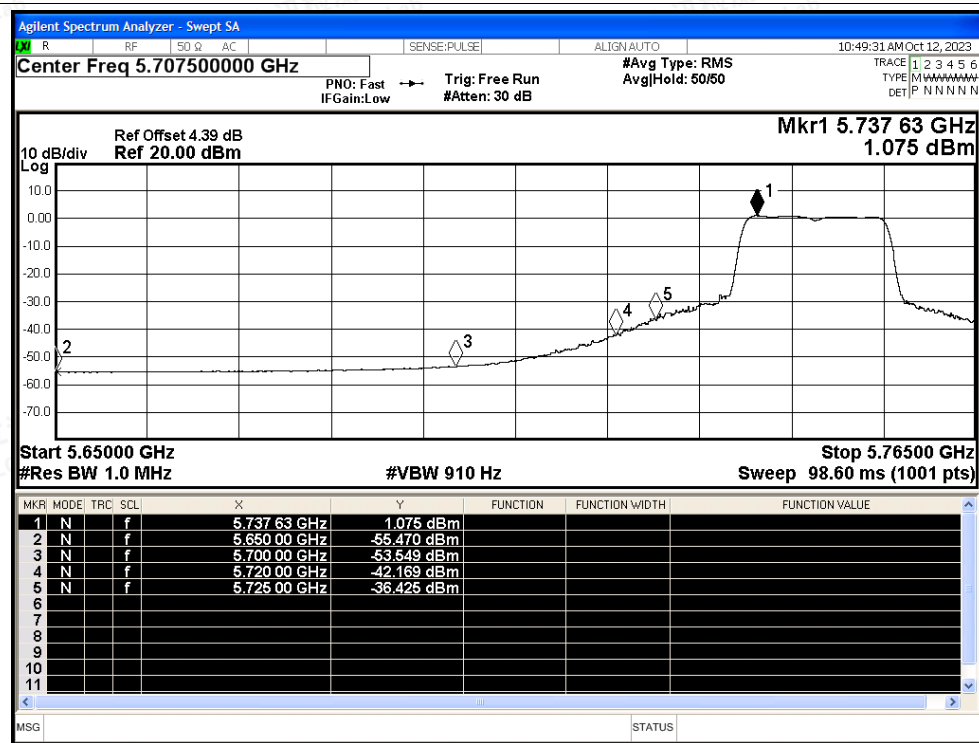




Restrict Band NVNT n20 5745MHz Ant1 Peak

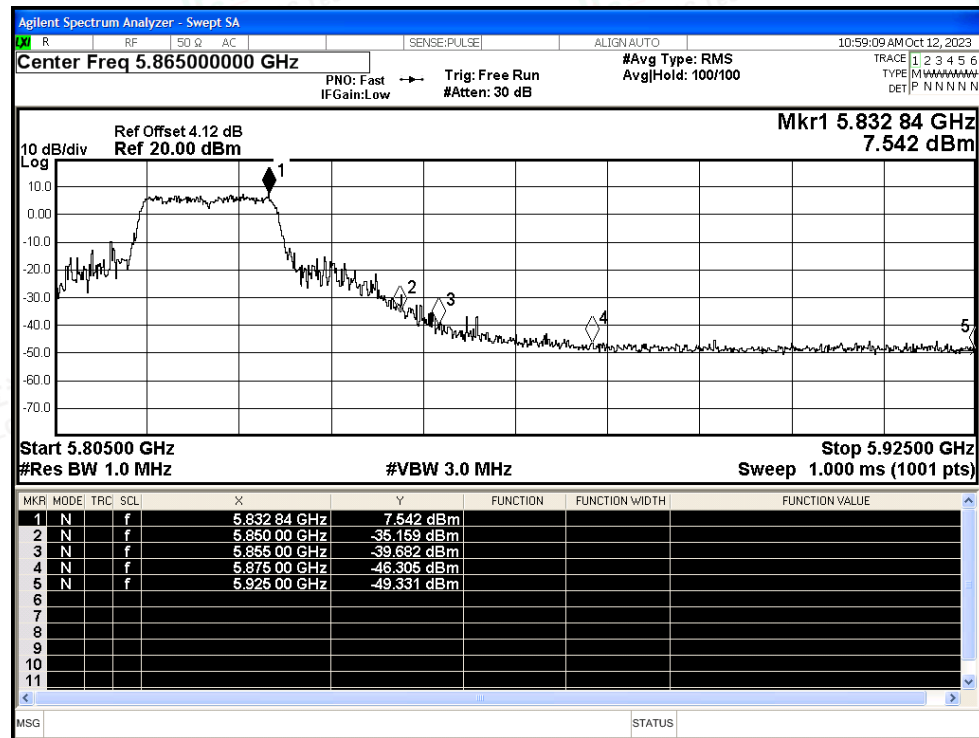


Restrict Band NVNT n20 5745MHz Ant1 Average

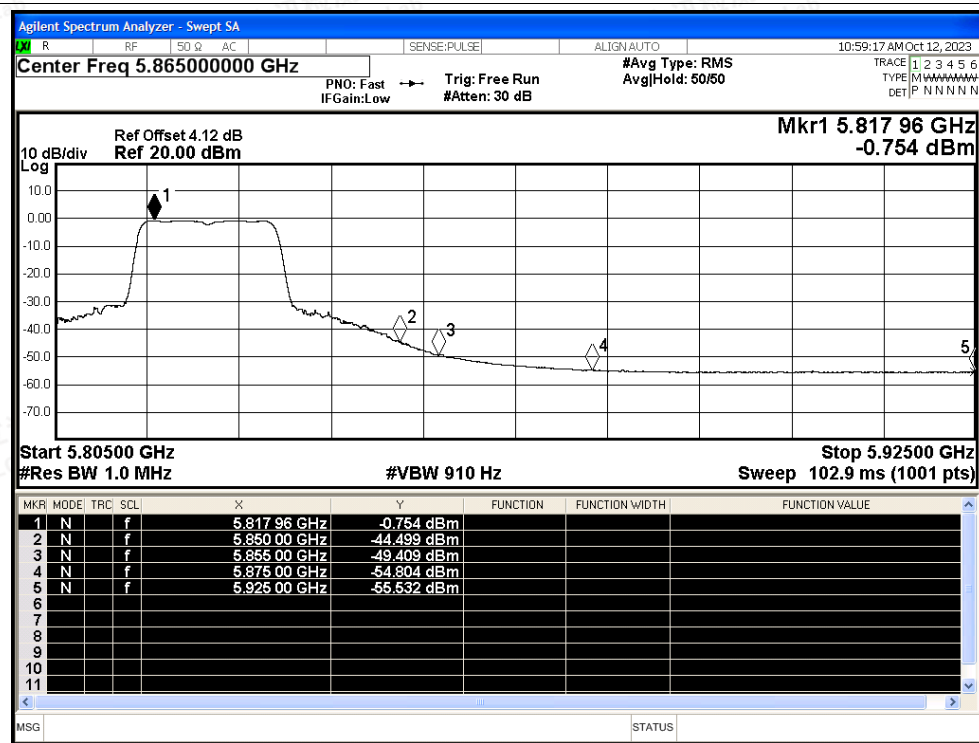




Restrict Band NVNT n20 5825MHz Ant1 Peak

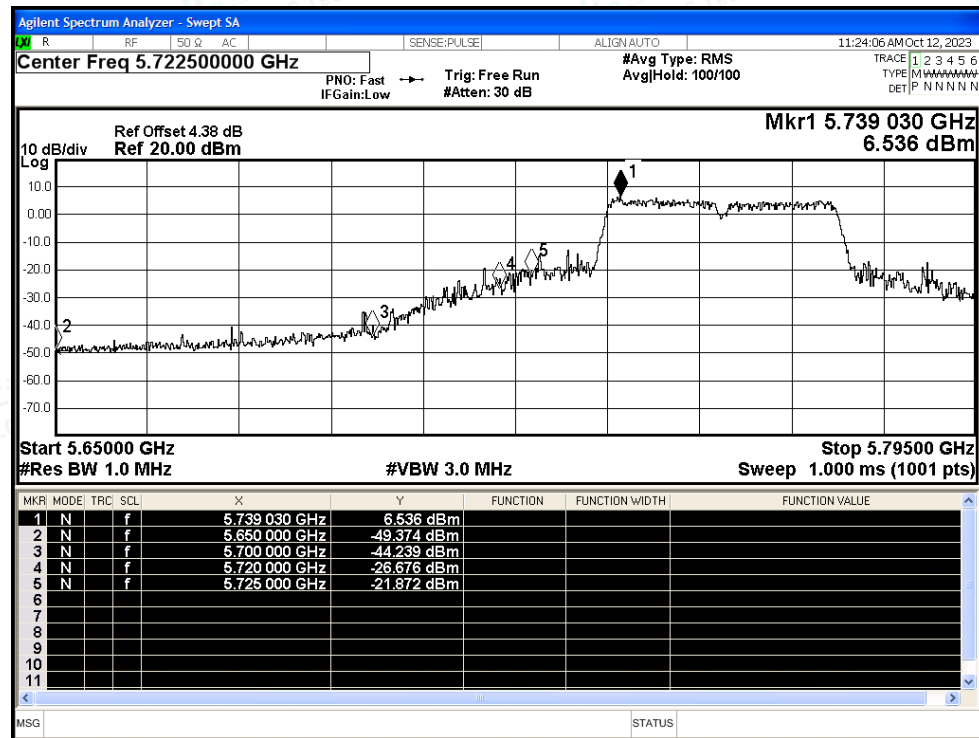


Restrict Band NVNT n20 5825MHz Ant1 Average

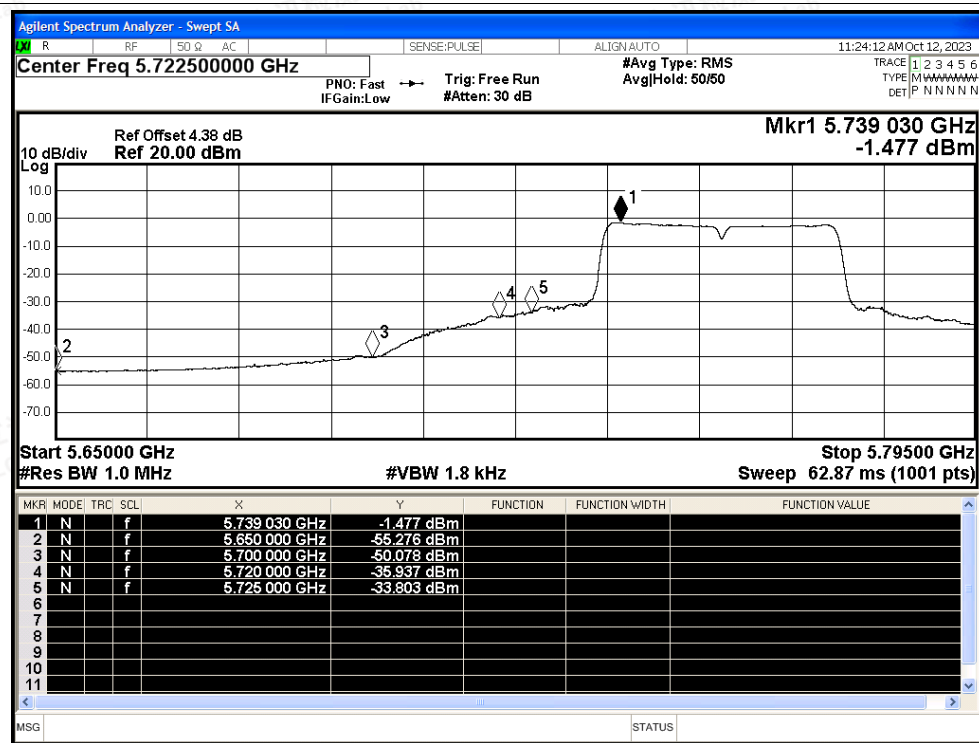




Restrict Band NVNT n40 5755MHz Ant1 Peak

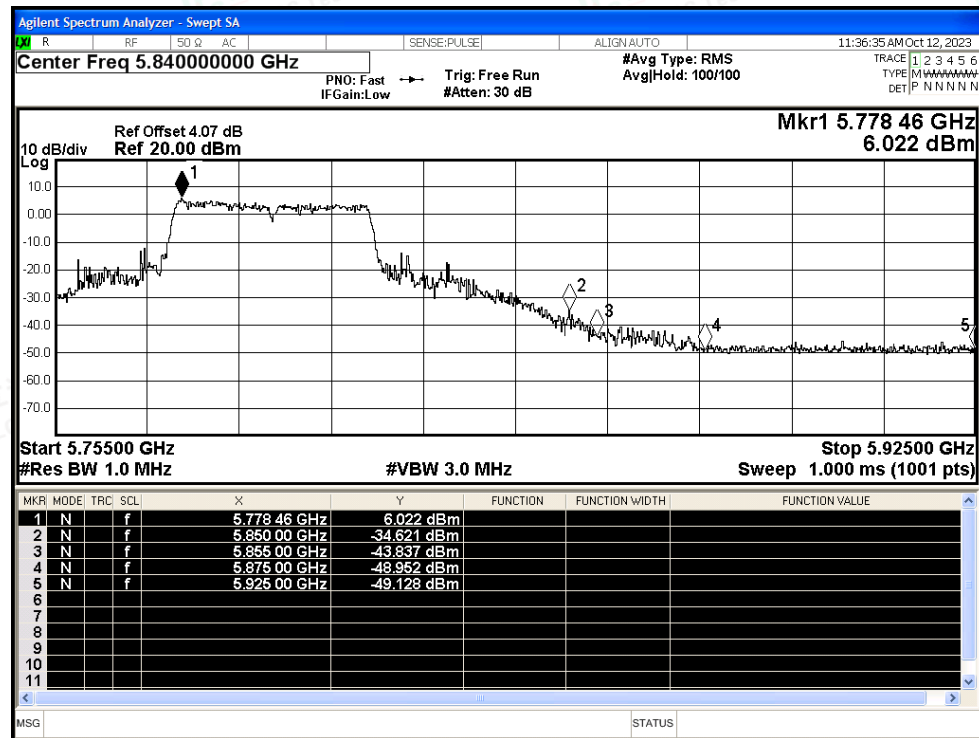


Restrict Band NVNT n40 5755MHz Ant1 Average

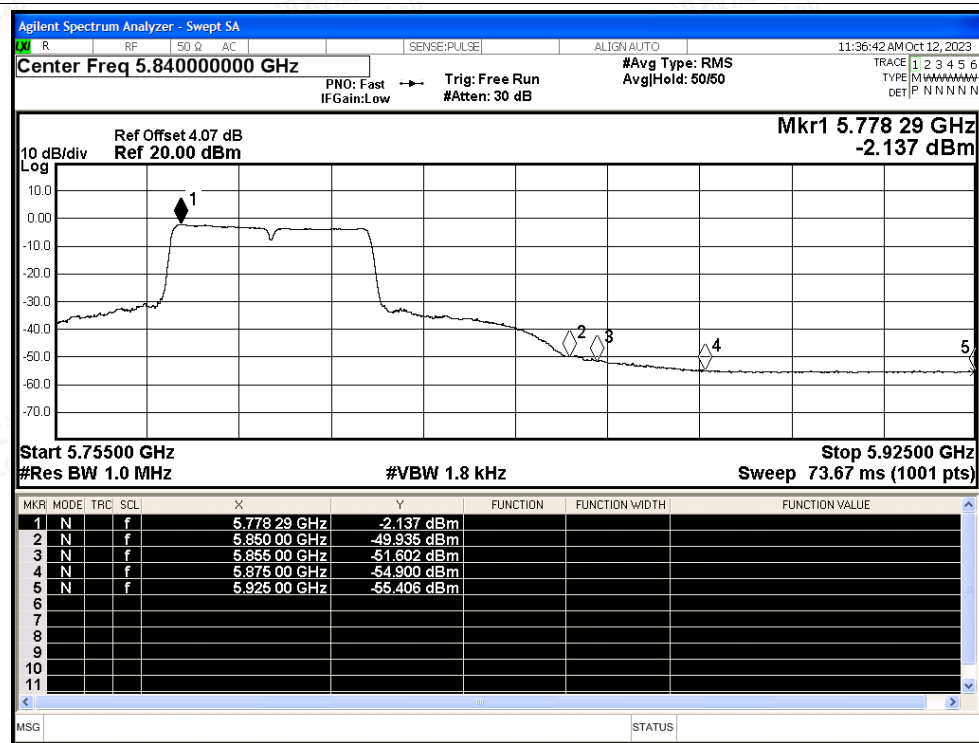




Restrict Band NVNT n40 5795MHz Ant1 Peak

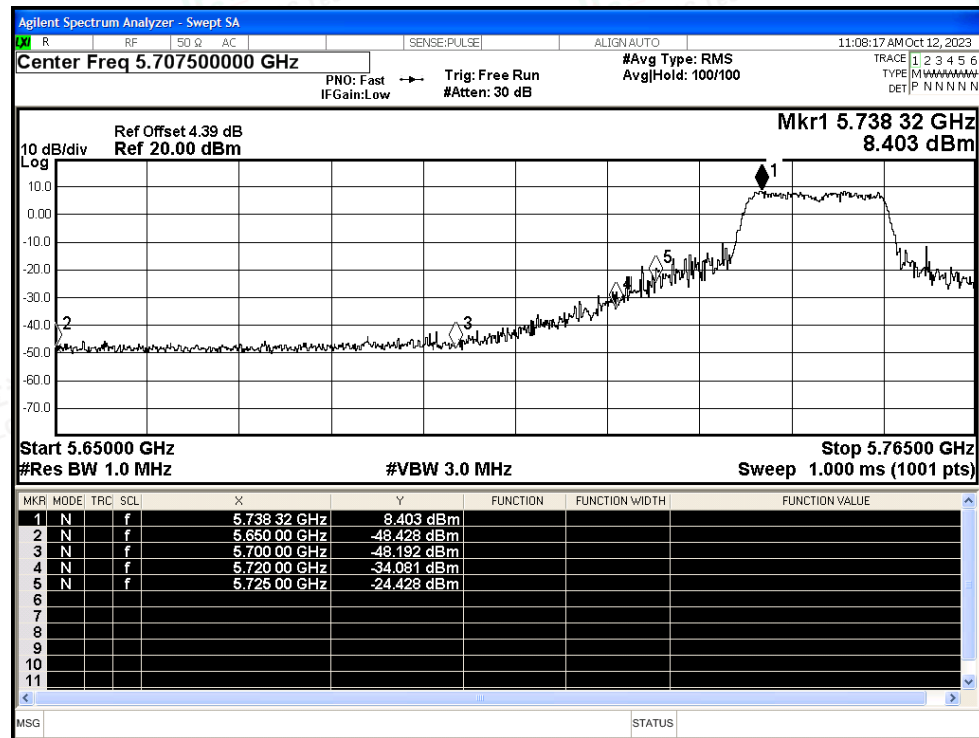


Restrict Band NVNT n40 5795MHz Ant1 Average

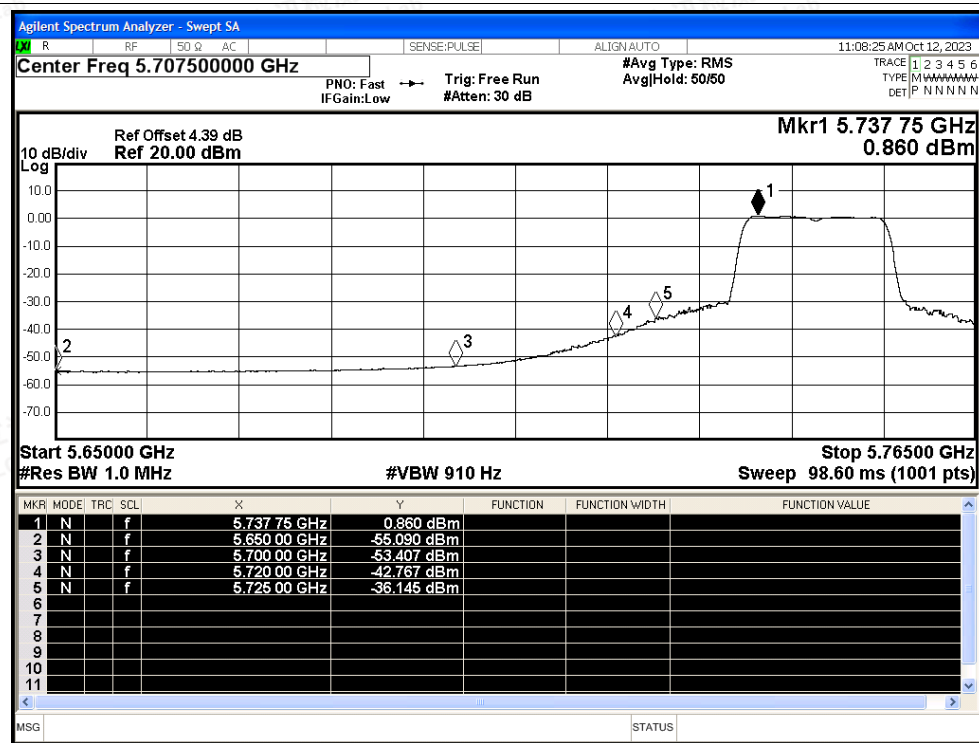




Restrict Band NVNT ac20 5745MHz Ant1 Peak

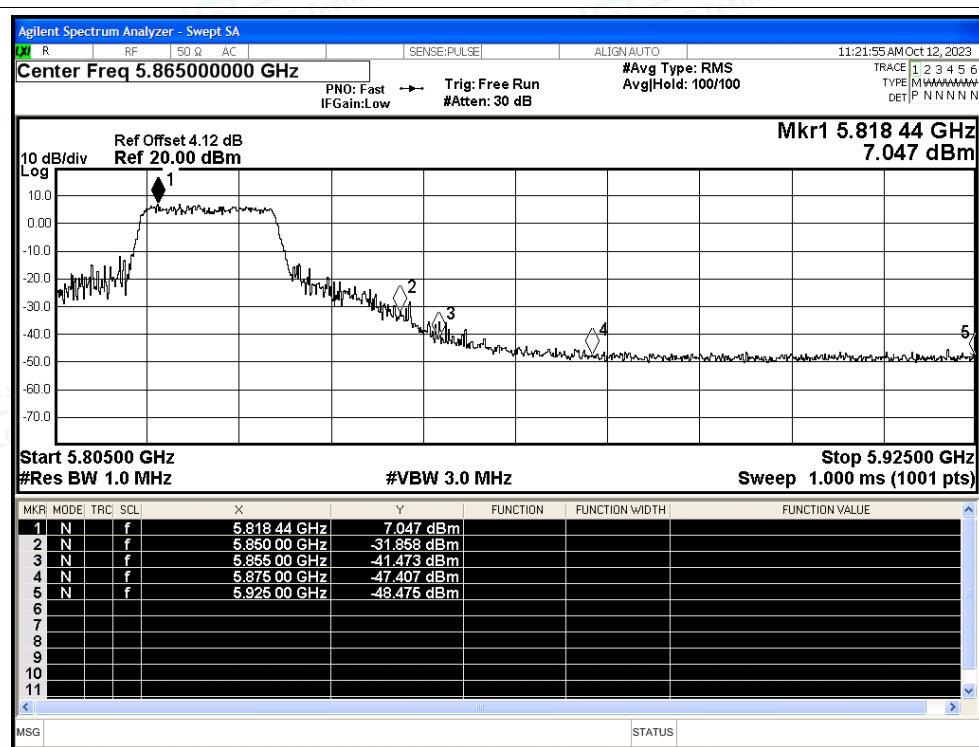


Restrict Band NVNT ac20 5745MHz Ant1 Average

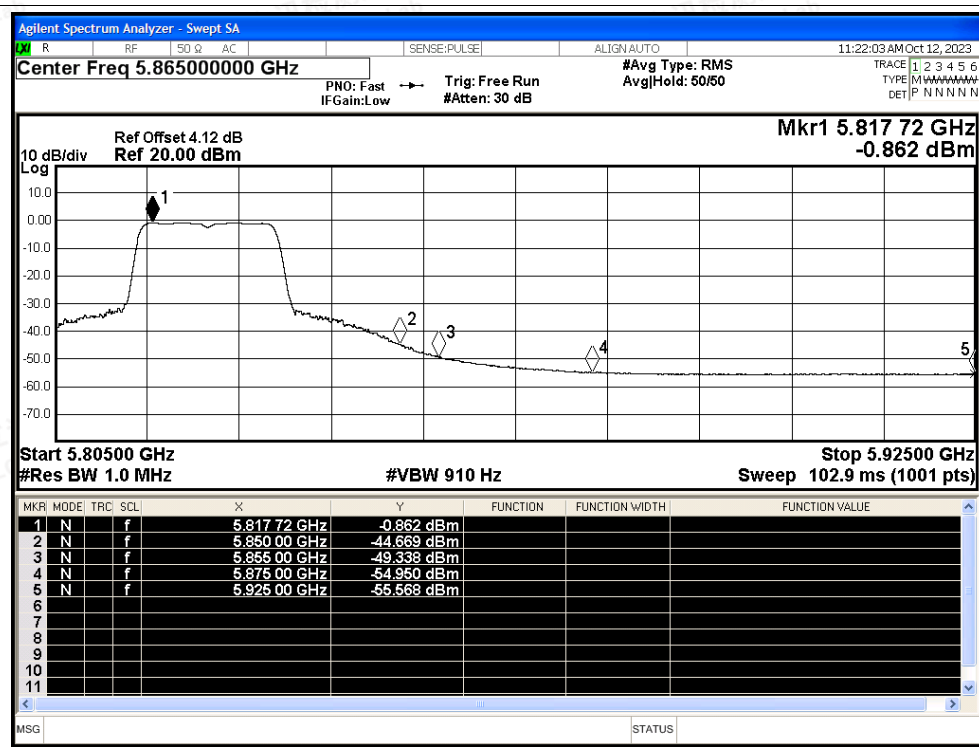




Restrict Band NVNT ac20 5825MHz Ant1 Peak

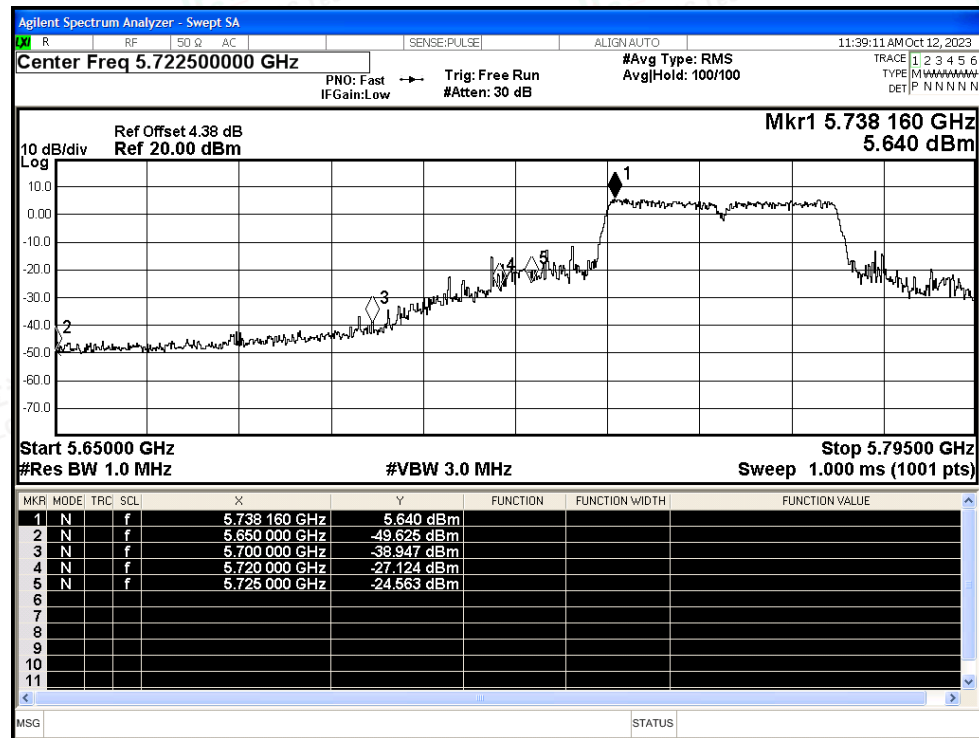


Restrict Band NVNT ac20 5825MHz Ant1 Average

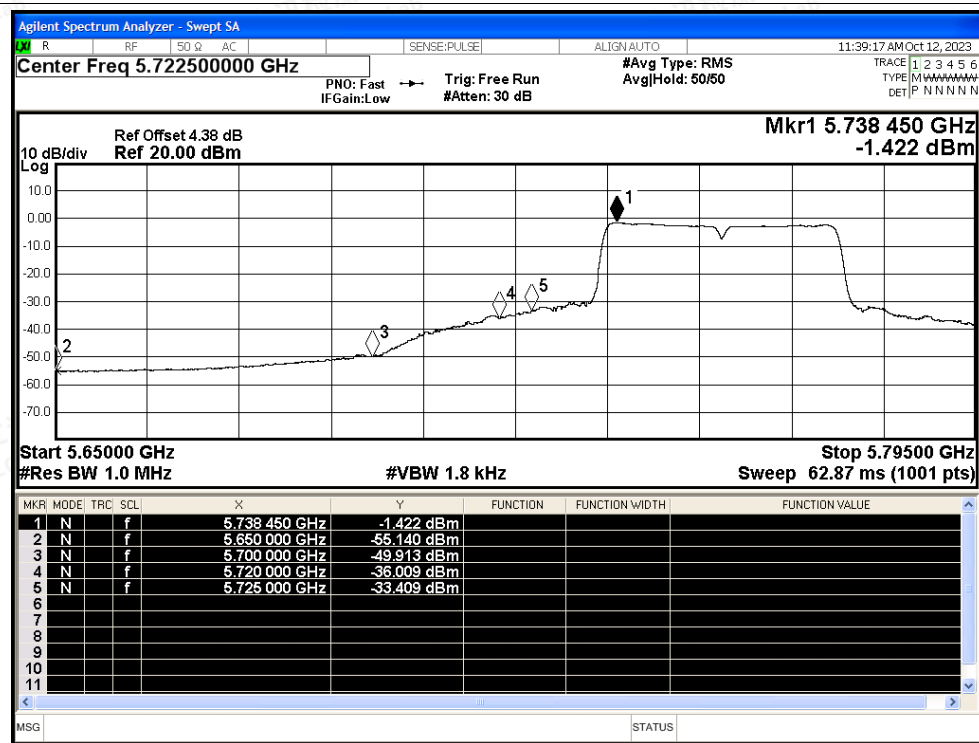




Restrict Band NVNT ac40 5755MHz Ant1 Peak

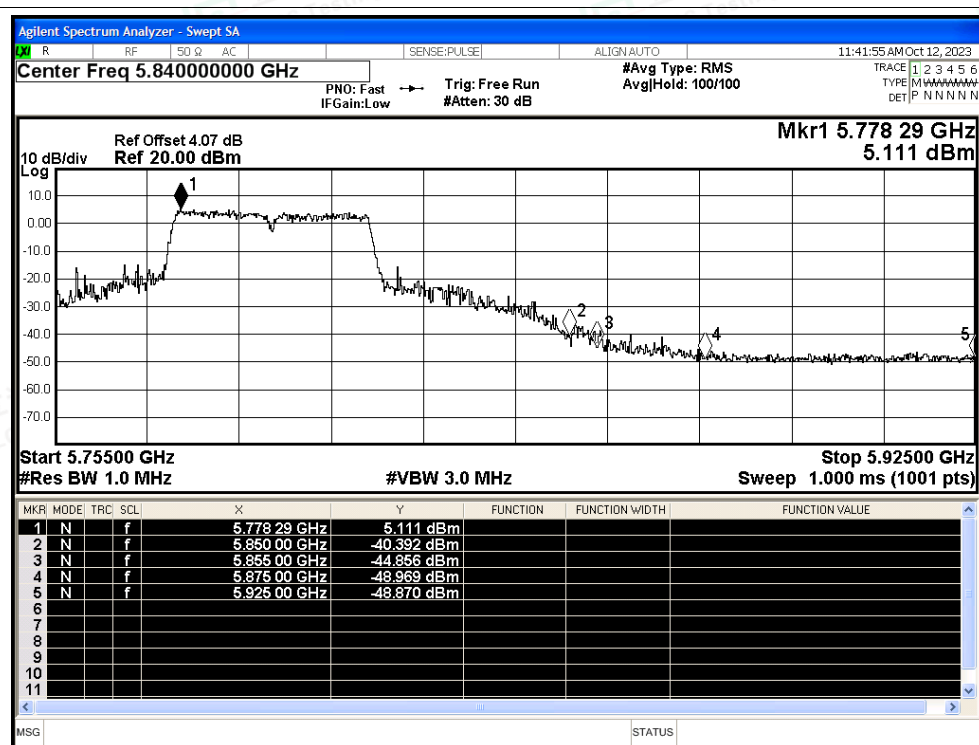


Restrict Band NVNT ac40 5755MHz Ant1 Average

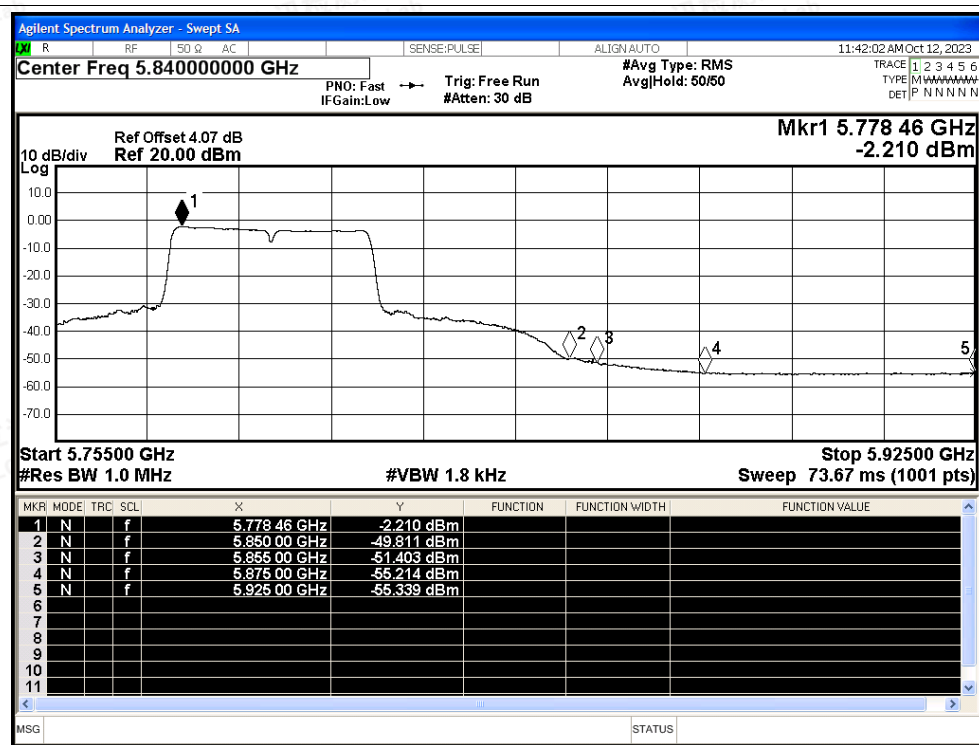




Restrict Band NVNT ac40 5795MHz Ant1 Peak

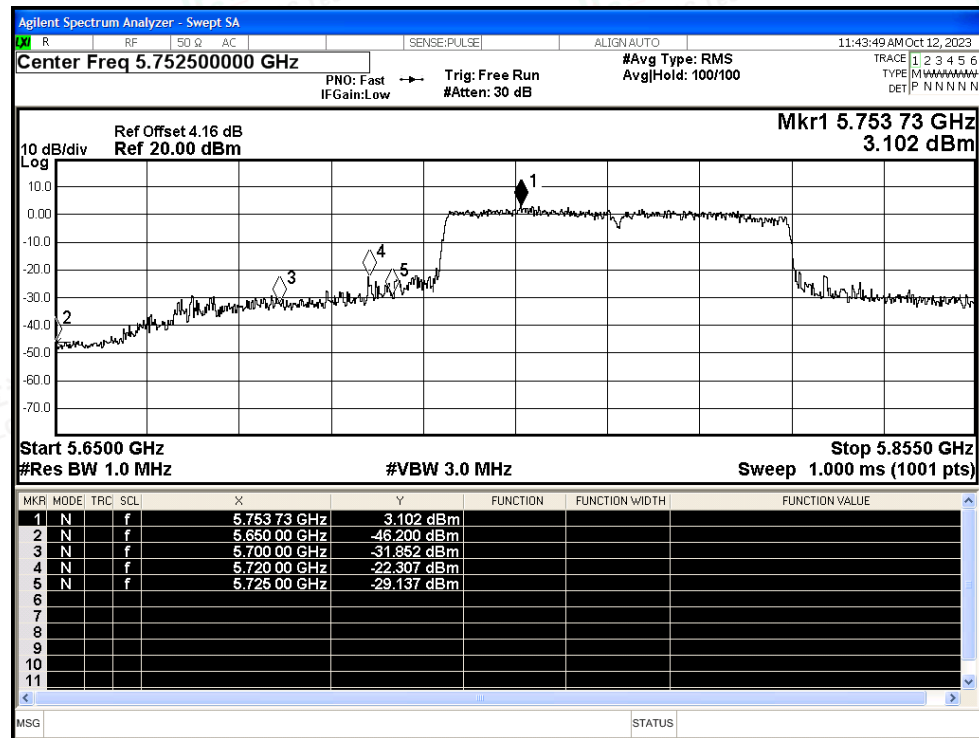


Restrict Band NVNT ac40 5795MHz Ant1 Average

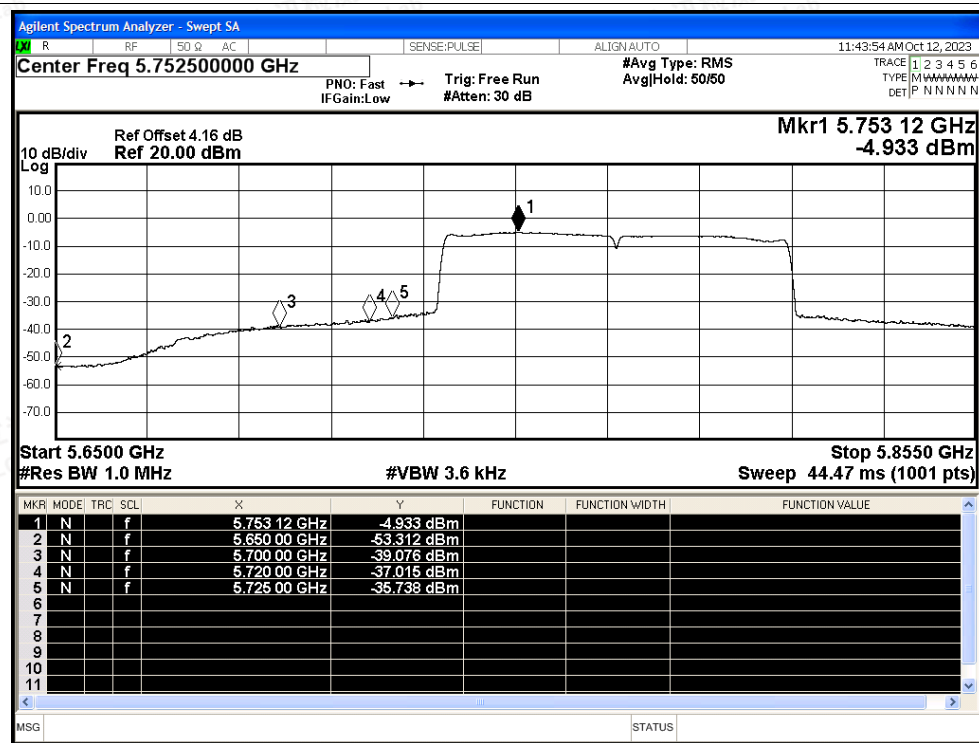




Restrict Band NVNT ac80 5775MHz Ant1 Peak

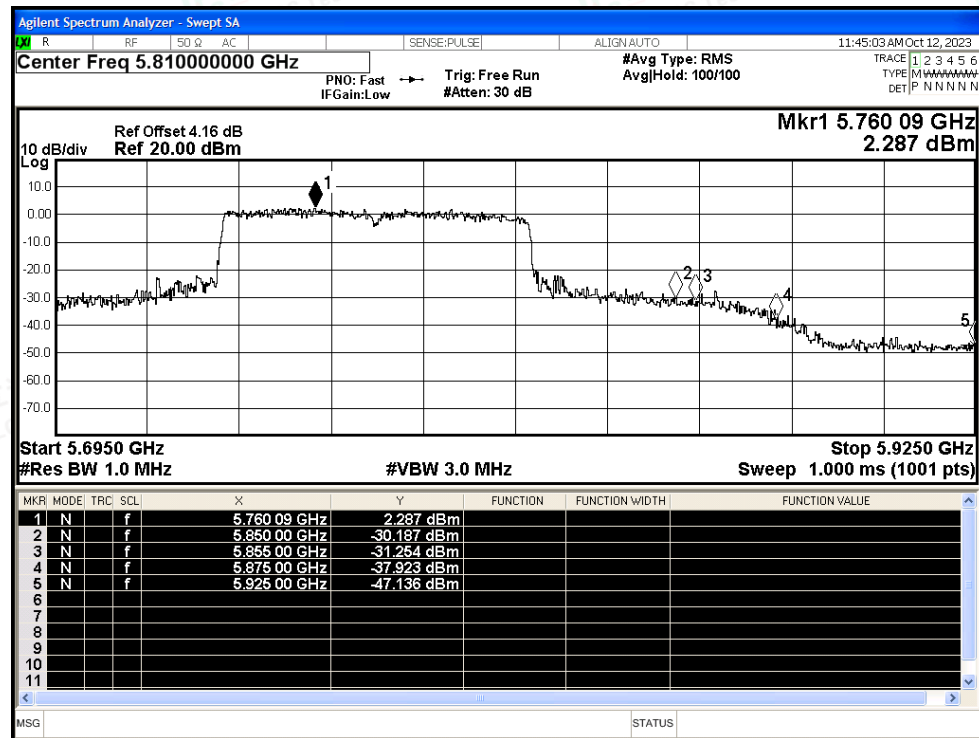


Restrict Band NVNT ac80 5775MHz Ant1 Average

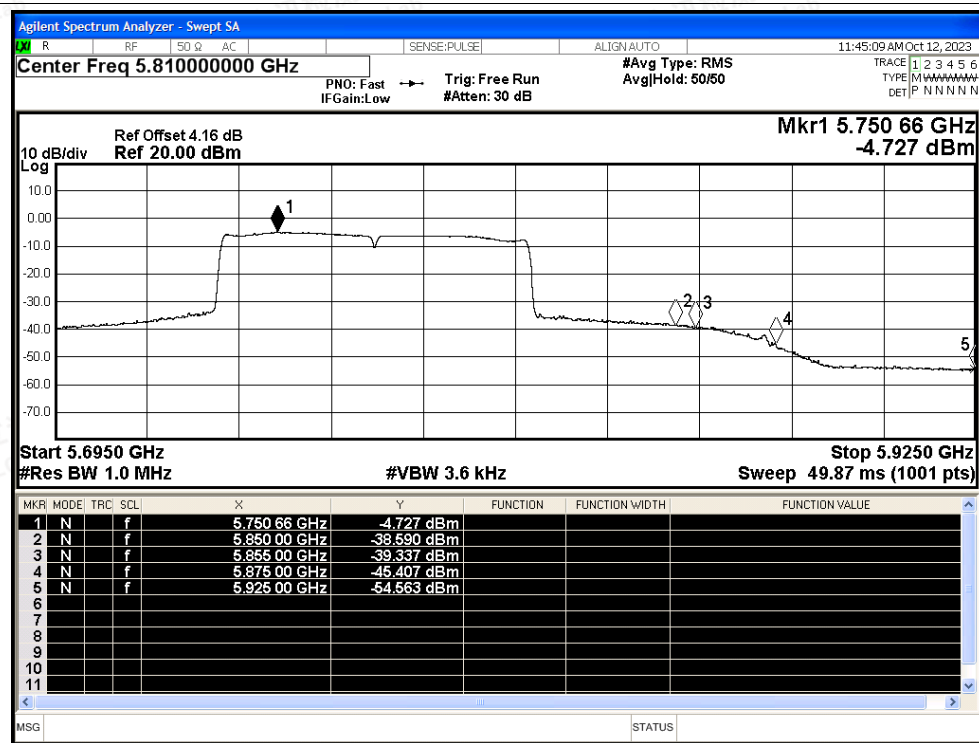




Restrict Band NVNT ac80 5775MHz Ant1 Peak



Restrict Band NVNT ac80 5775MHz Ant1 Average





E.5 Frequency Stability

Condition	Mode	Frequency (MHz)	Antenna	Measured Frequency (MHz)	Frequency Error (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
NVNT	ac20	5745	Ant1	5744.98	-20000	-3.48	25	Pass
NVNT	ac20	5785	Ant1	5785	0	0	25	Pass
NVNT	ac20	5825	Ant1	5824.98	-20000	-3.43	25	Pass
NVNT	ac40	5755	Ant1	5754.96	-40000	-6.95	25	Pass
NVNT	ac40	5795	Ant1	5794.96	-40000	-6.9	25	Pass
NVNT	ac80	5775	Ant1	5775	0	0	25	Pass

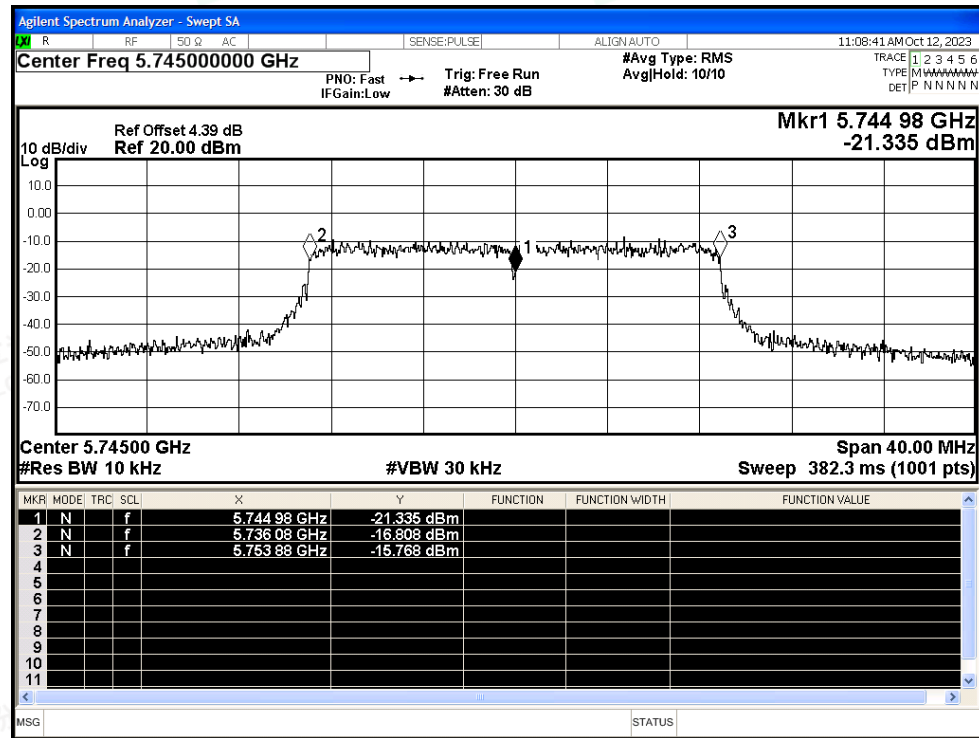


Shenzhen LCS Compliance Testing Laboratory Ltd.
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com
Scan code to check authenticity

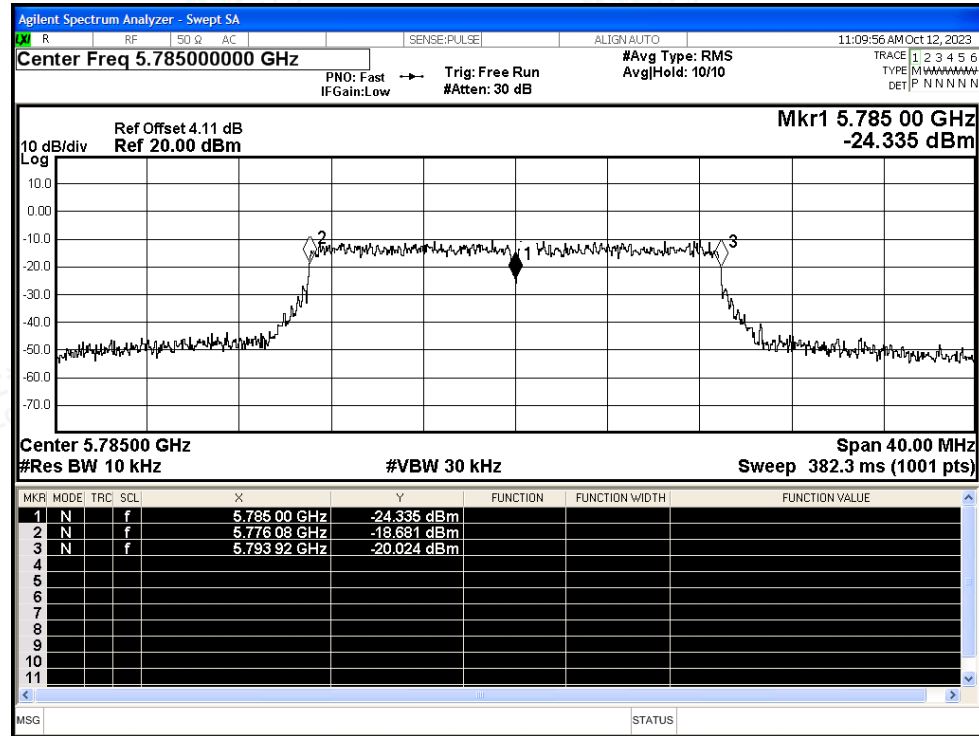


Test Graphs

Freq. Stability NVNT ac20 5745MHz Ant1

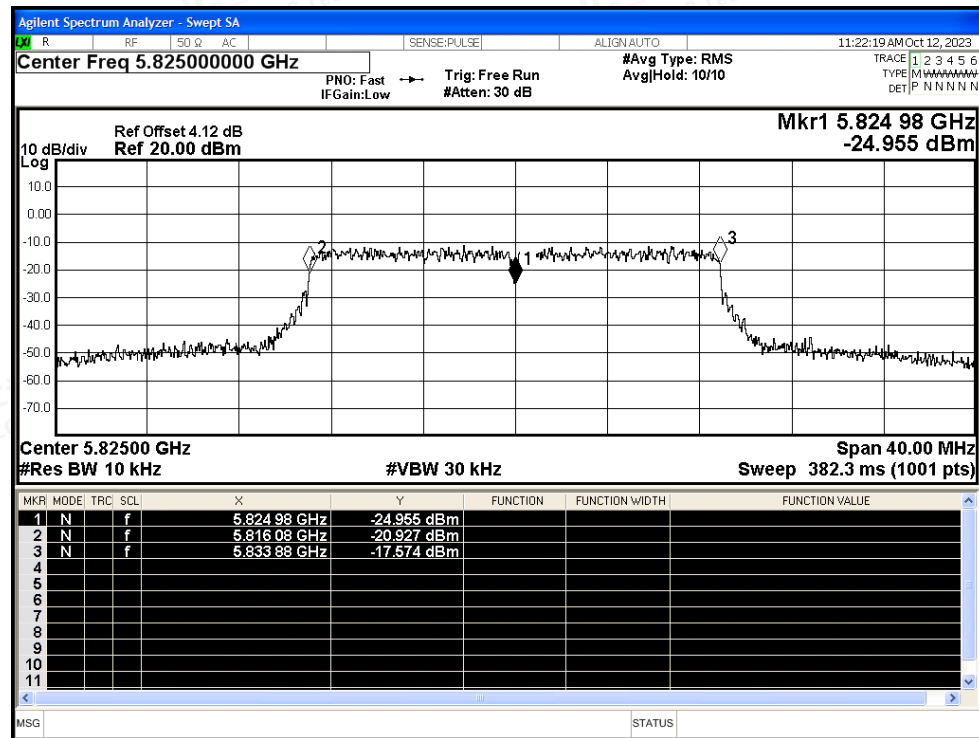


Freq. Stability NVNT ac20 5785MHz Ant1

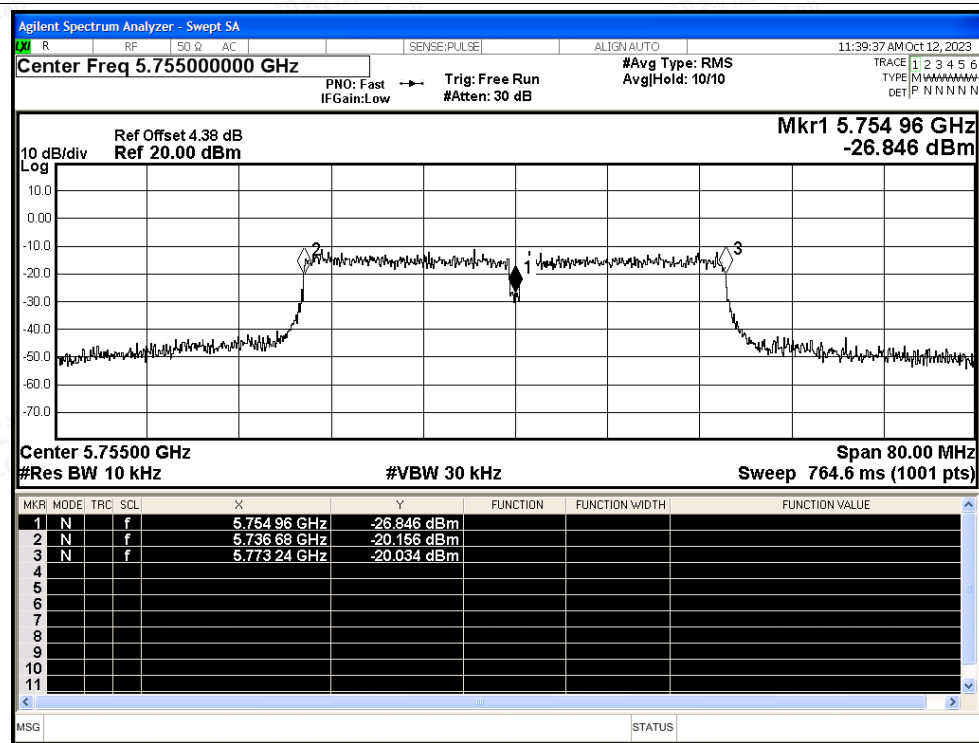




Freq. Stability NVNT ac20 5825MHz Ant1

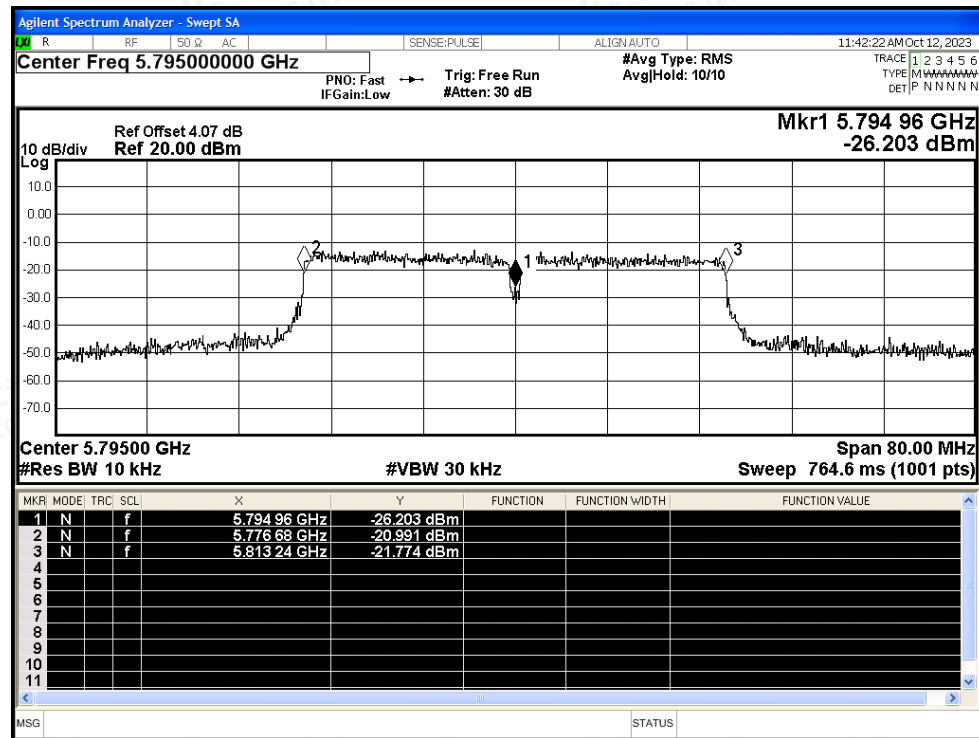


Freq. Stability NVNT ac40 5755MHz Ant1

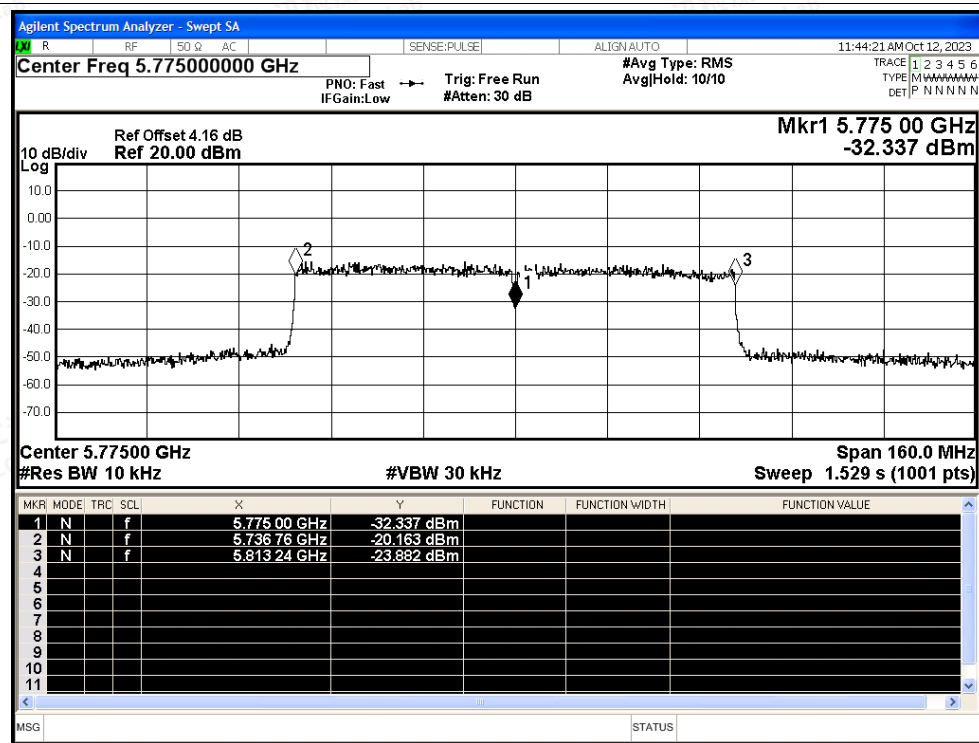




Freq. Stability NVNT ac40 5795MHz Ant1



Freq. Stability NVNT ac80 5775MHz Ant1





E.6 Duty Cycle

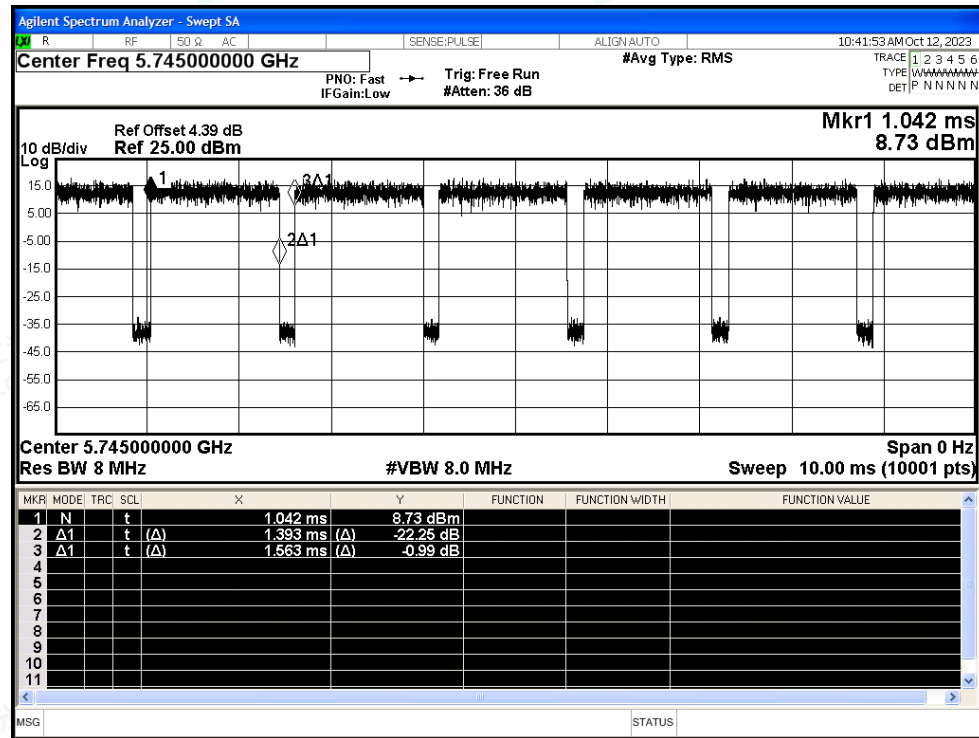
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	a	5745	Ant1	89.12	0.5	0.72
NVNT	a	5785	Ant1	89.06	0.5	0.72
NVNT	a	5825	Ant1	83.75	0.77	0.72
NVNT	n20	5745	Ant1	87.36	0.59	0.85
NVNT	n20	5785	Ant1	82.85	0.82	0.85
NVNT	n20	5825	Ant1	87.29	0.59	0.85
NVNT	n40	5755	Ant1	75.87	1.2	1.69
NVNT	n40	5795	Ant1	75.87	1.2	1.69
NVNT	ac20	5745	Ant1	85.68	0.67	0.84
NVNT	ac20	5785	Ant1	87.46	0.58	0.84
NVNT	ac20	5825	Ant1	87.39	0.59	0.84
NVNT	ac40	5755	Ant1	70.95	1.49	1.69
NVNT	ac40	5795	Ant1	70.95	1.49	1.69
NVNT	ac80	5775	Ant1	63.52	1.97	3.38



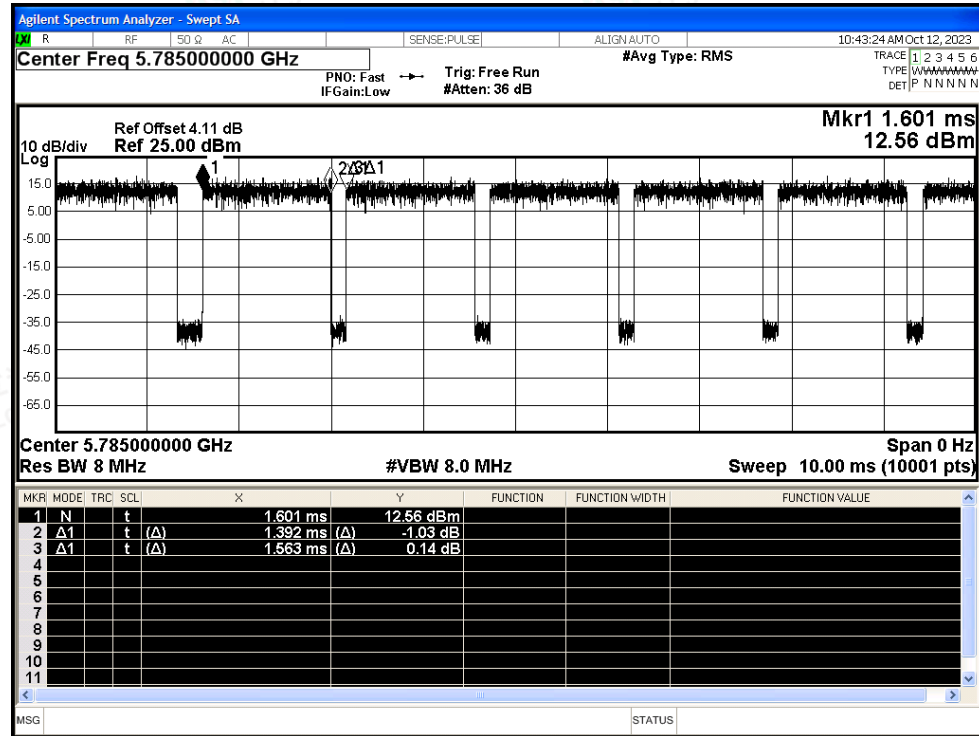


Test Graphs

Duty Cycle NVNT a 5745MHz Ant1

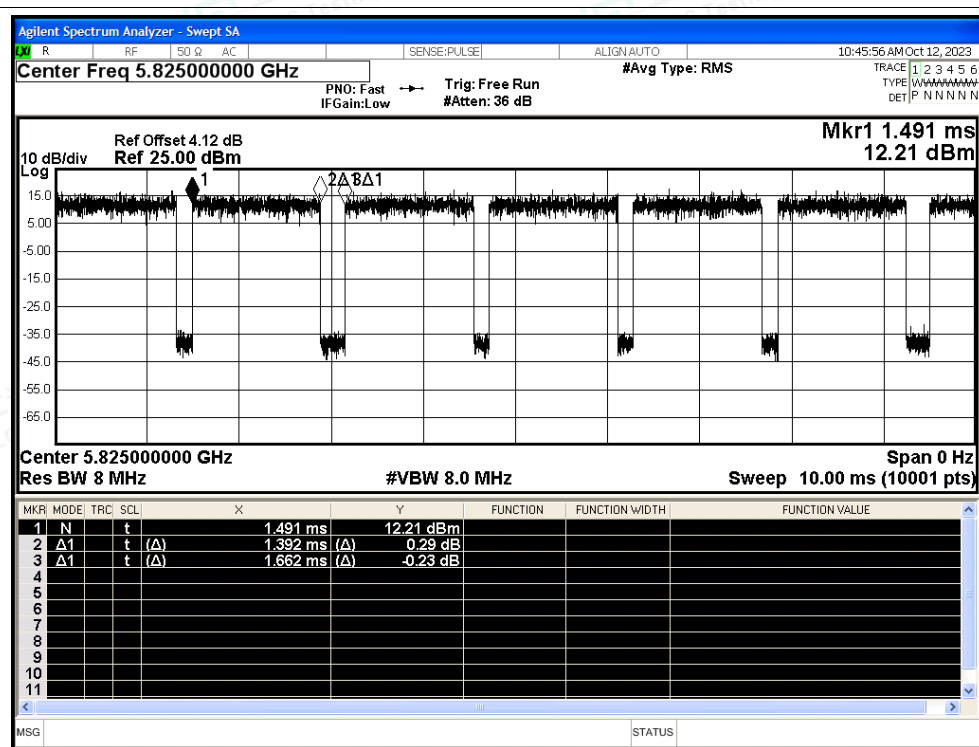


Duty Cycle NVNT a 5785MHz Ant1

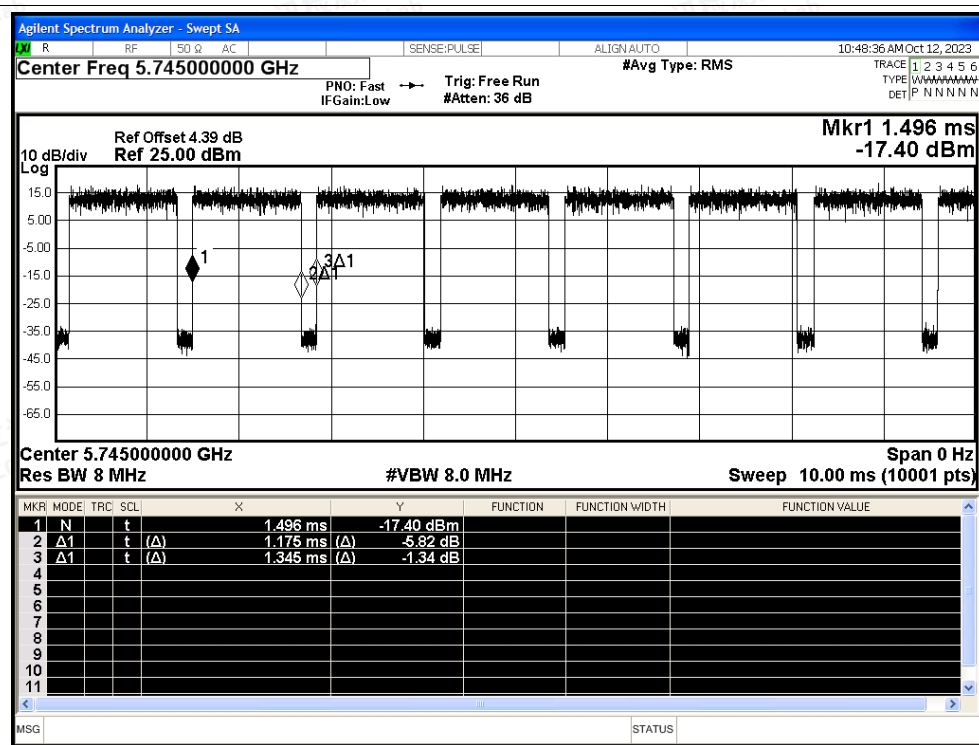




Duty Cycle NVNT a 5825MHz Ant1

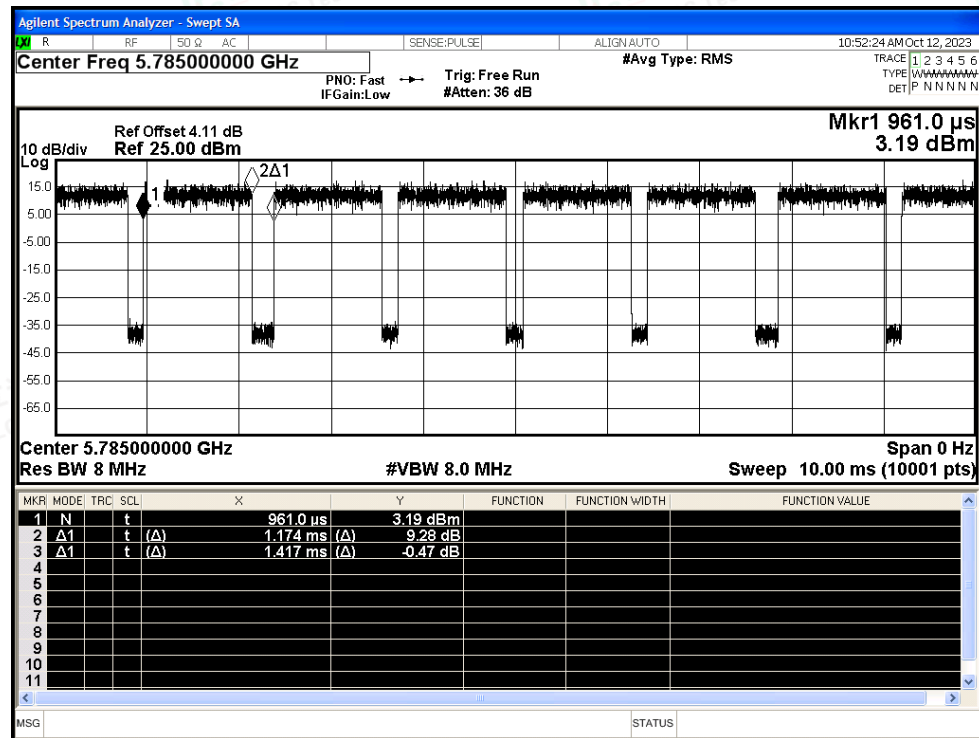


Duty Cycle NVNT n20 5745MHz Ant1

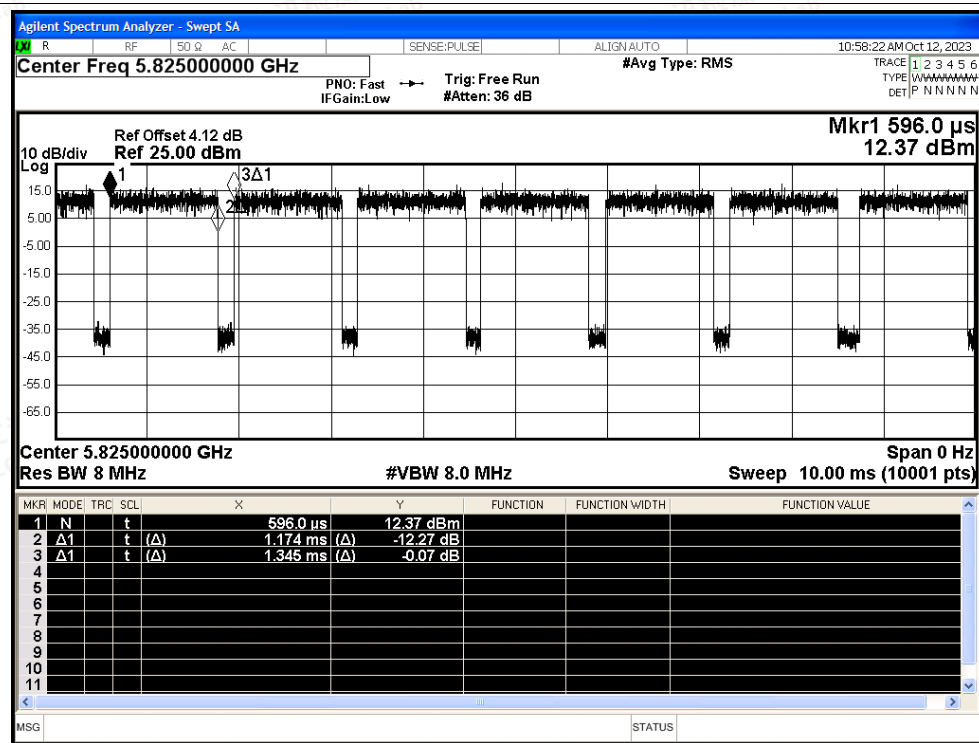




Duty Cycle NVNT n20 5785MHz Ant1

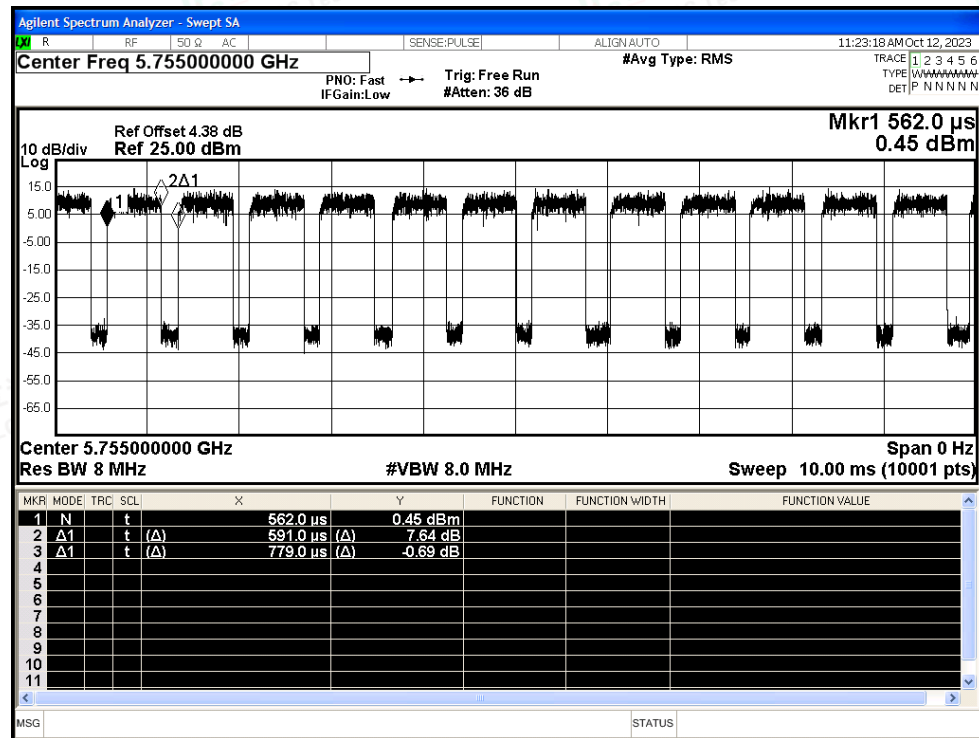


Duty Cycle NVNT n20 5825MHz Ant1

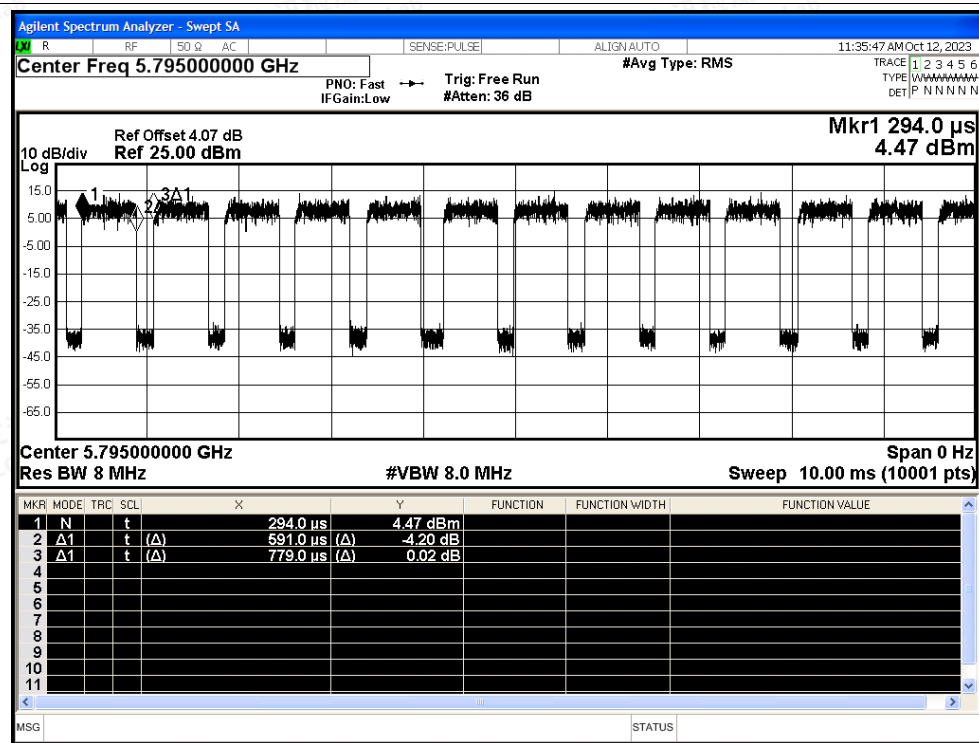




Duty Cycle NVNT n40 5755MHz Ant1

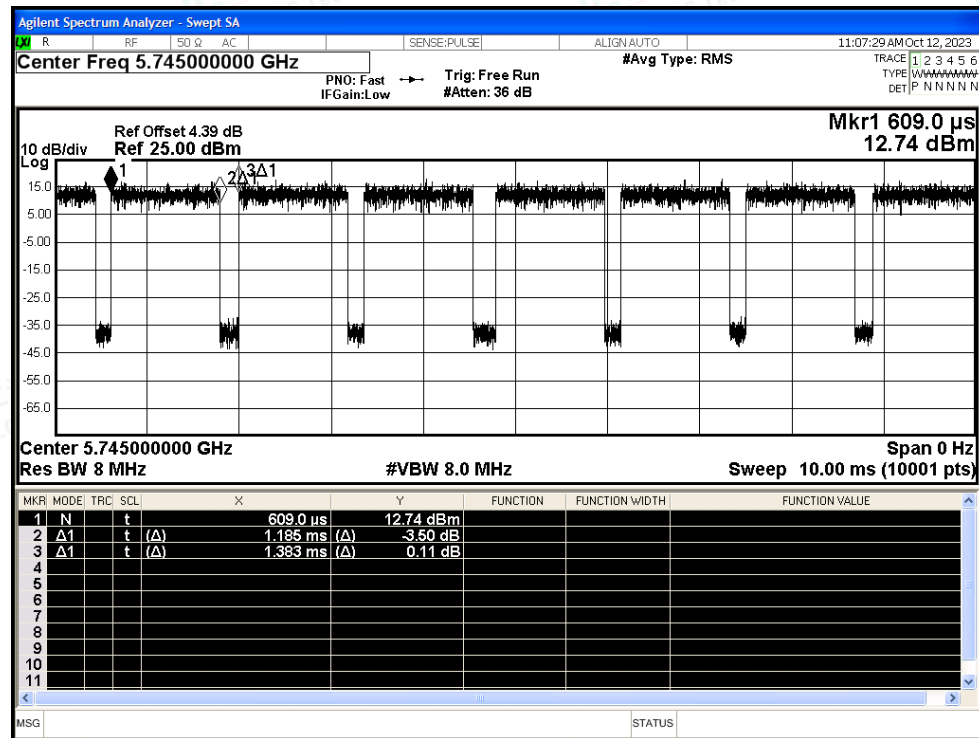


Duty Cycle NVNT n40 5795MHz Ant1

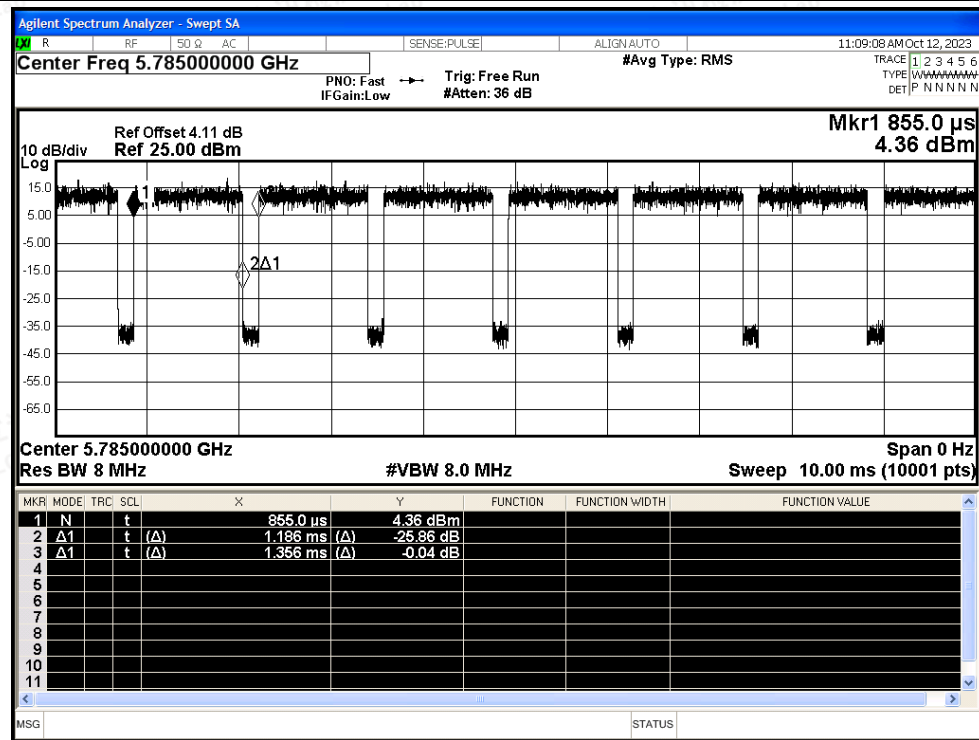




Duty Cycle NVNT ac20 5745MHz Ant1

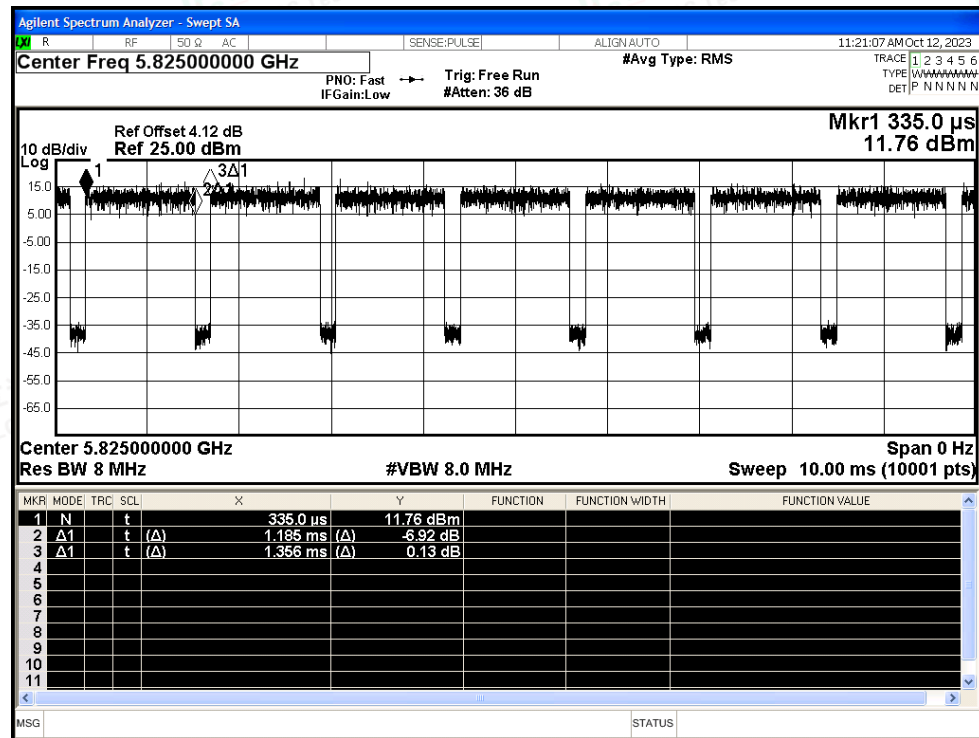


Duty Cycle NVNT ac20 5785MHz Ant1

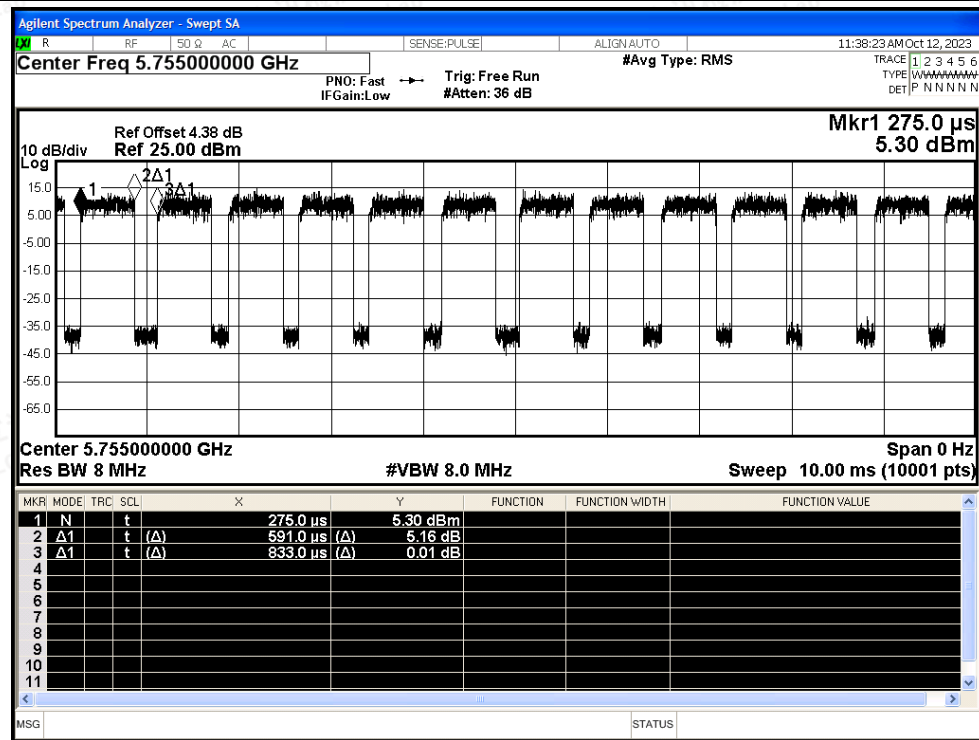




Duty Cycle NVNT ac20 5825MHz Ant1

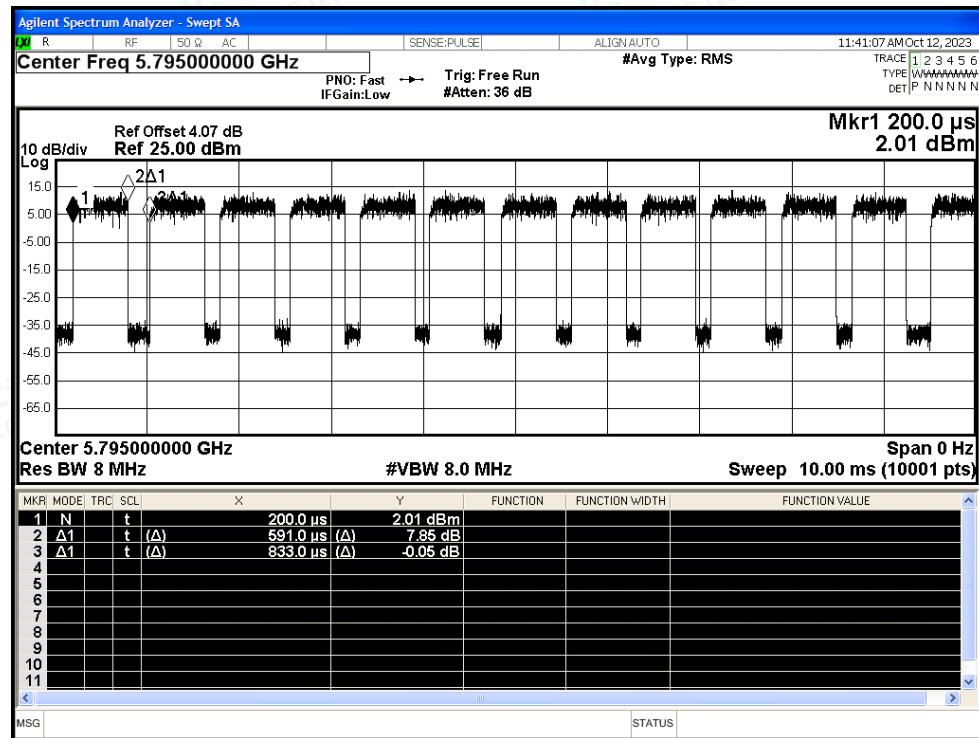


Duty Cycle NVNT ac40 5755MHz Ant1





Duty Cycle NVNT ac40 5795MHz Ant1



Duty Cycle NVNT ac80 5775MHz Ant1

