



## Appendix F

### RF Test Data for 5.5GWIFI (Conducted Measurement)

Product Name: Smart Diagnostic System

Test Model: P102

#### Environmental Conditions

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





### F.1 -26dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-26 dB Bandwidth (MHz)	Limit -26 dB Bandwidth (MHz)	Verdict
NVNT	a	5500	Ant0	27.348	---	Pass
NVNT	a	5580	Ant0	25.995	---	Pass
NVNT	a	5700	Ant0	28.287	---	Pass
NVNT	n20	5500	Ant0	28.684	---	Pass
NVNT	n20	5580	Ant0	29.304	---	Pass
NVNT	n20	5700	Ant0	28.21	---	Pass
NVNT	n40	5510	Ant0	57.799	---	Pass
NVNT	n40	5550	Ant0	57.902	---	Pass
NVNT	n40	5670	Ant0	57.918	---	Pass
NVNT	ac20	5500	Ant0	28.833	---	Pass
NVNT	ac20	5580	Ant0	28.024	---	Pass
NVNT	ac20	5700	Ant0	26.33	---	Pass
NVNT	ac40	5510	Ant0	54.308	---	Pass
NVNT	ac40	5550	Ant0	55.173	---	Pass
NVNT	ac40	5670	Ant0	54.68	---	Pass
NVNT	ac80	5530	Ant0	78.458	---	Pass
NVNT	ac80	5610	Ant0	78.139	---	Pass

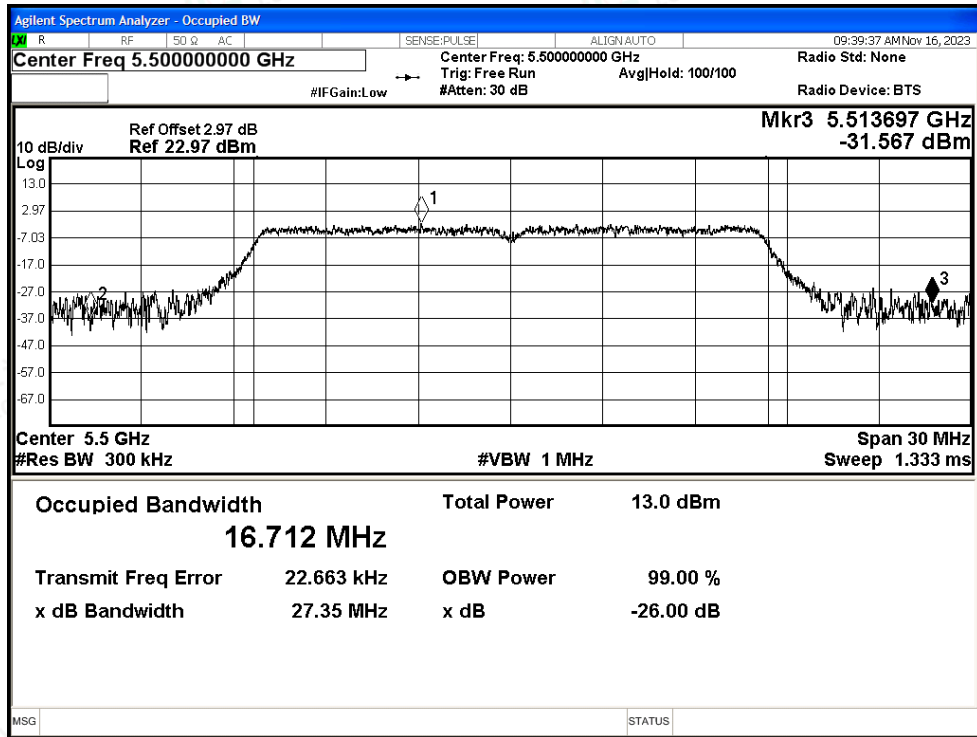


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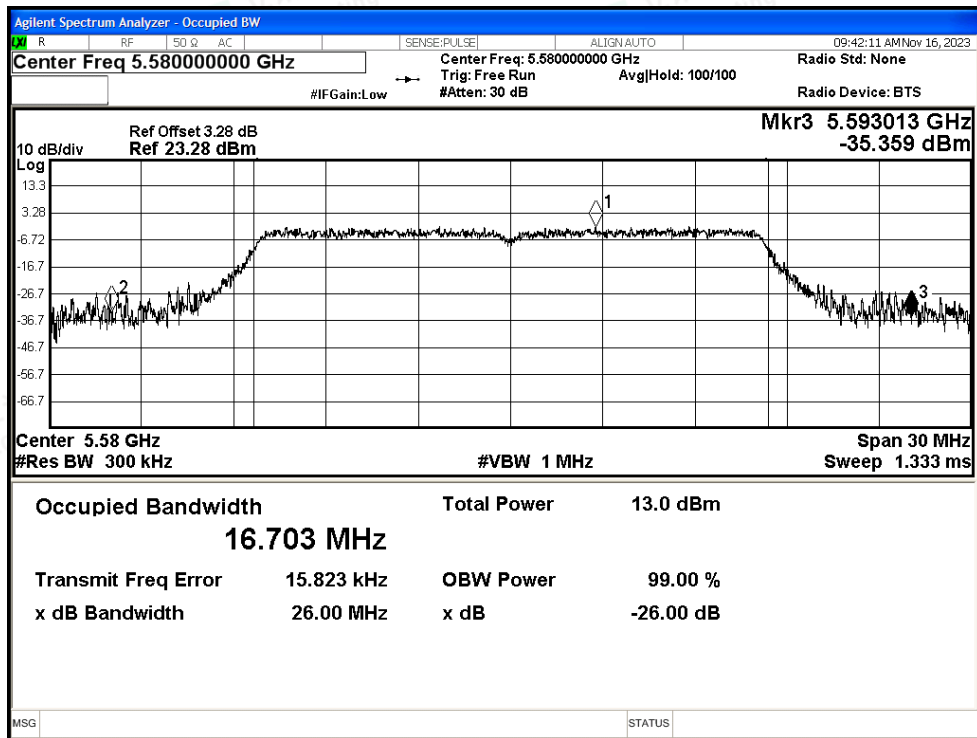


Test Graphs

-26dB Bandwidth NVNT a 5500MHz Ant0

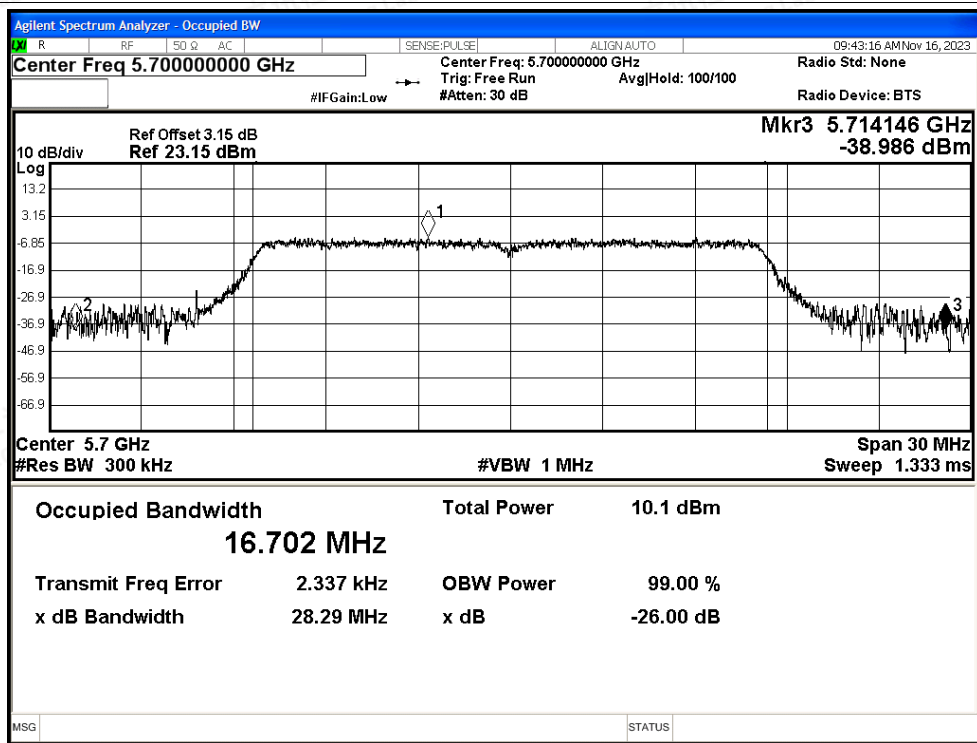


-26dB Bandwidth NVNT a 5580MHz Ant0

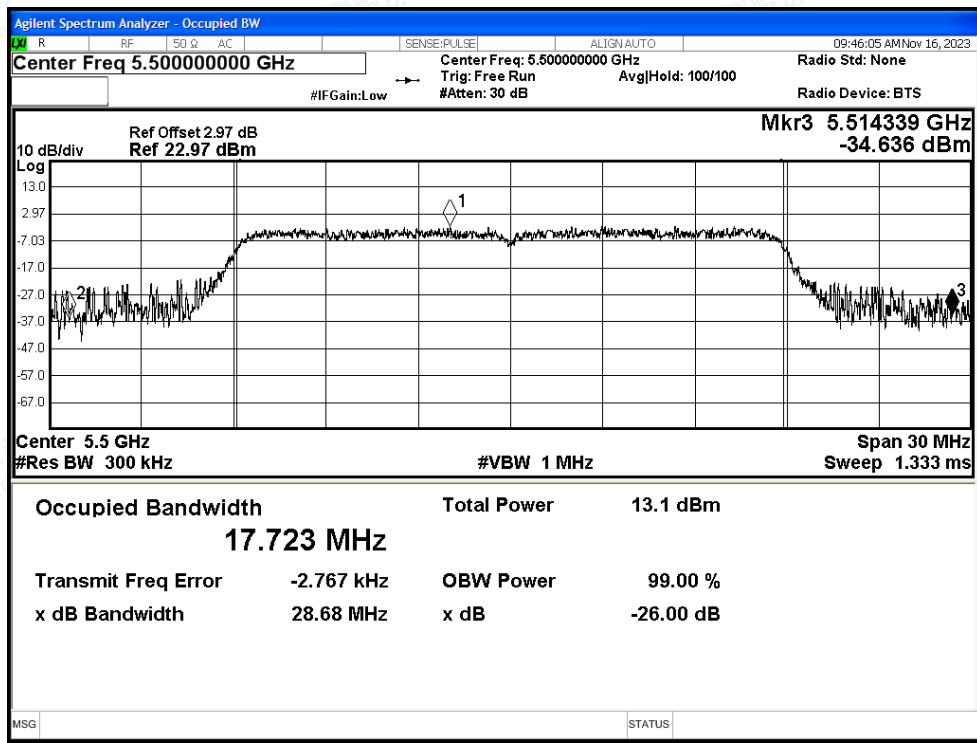




-26dB Bandwidth NVNT a 5700MHz Ant0

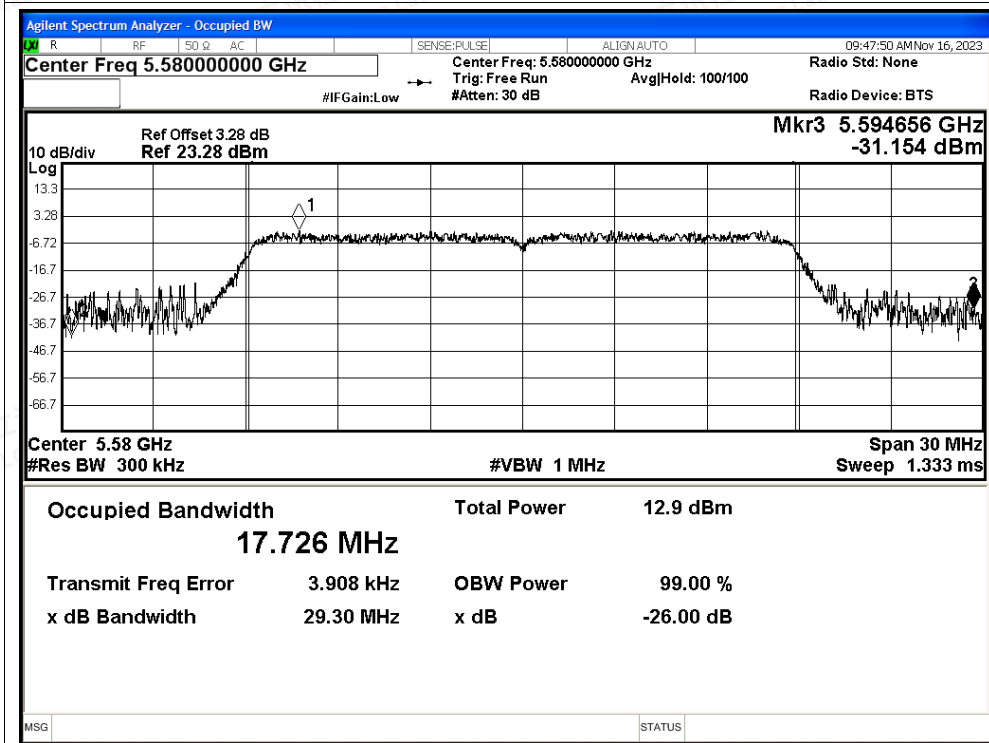


-26dB Bandwidth NVNT n20 5500MHz Ant0

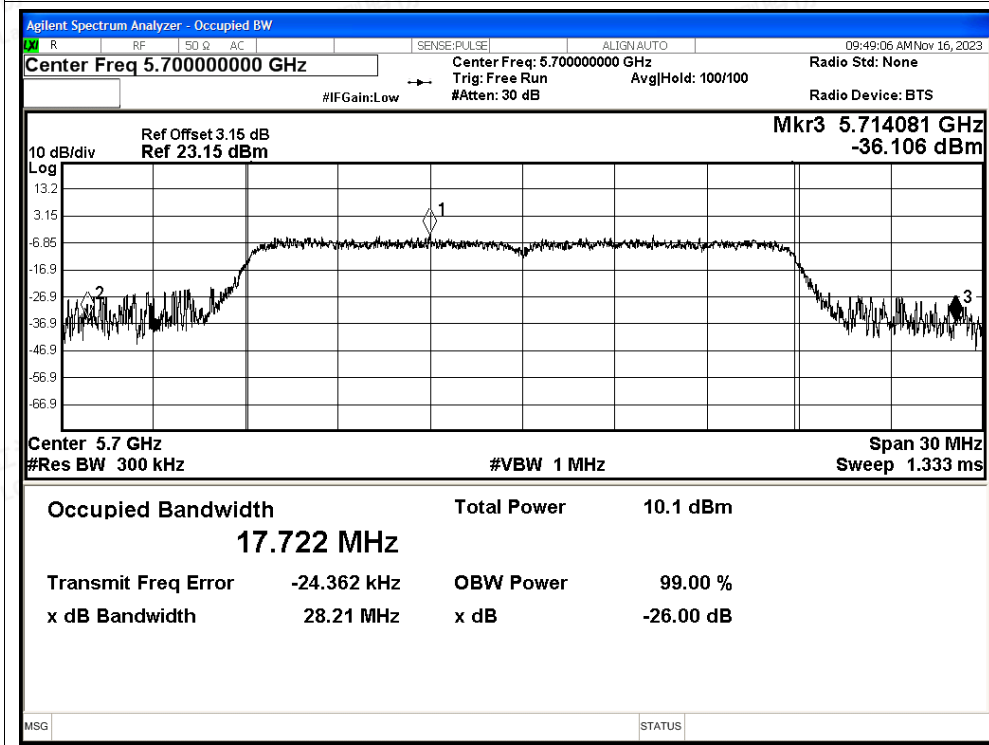




-26dB Bandwidth NVNT n20 5580MHz Ant0

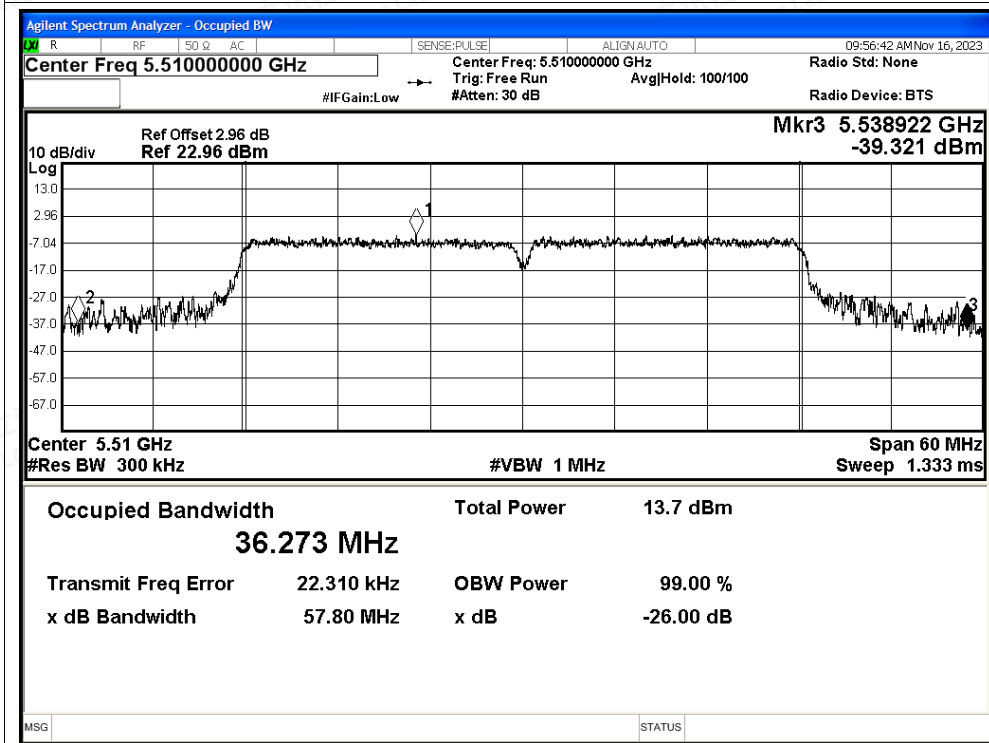


-26dB Bandwidth NVNT n20 5700MHz Ant0

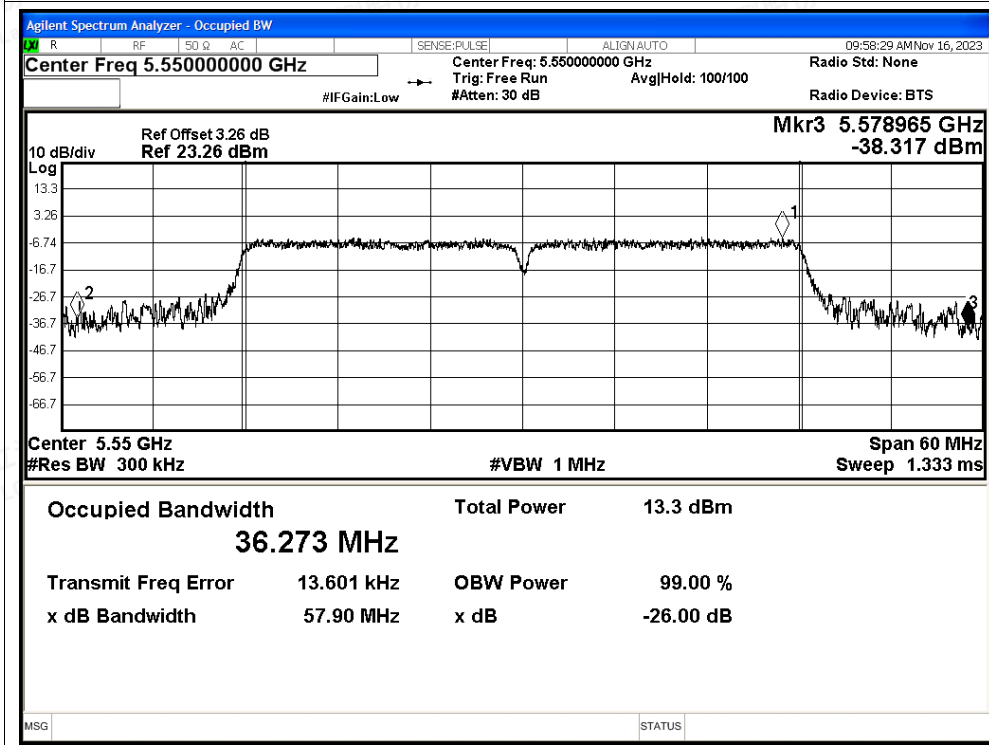




-26dB Bandwidth NVNT n40 5510MHz Ant0

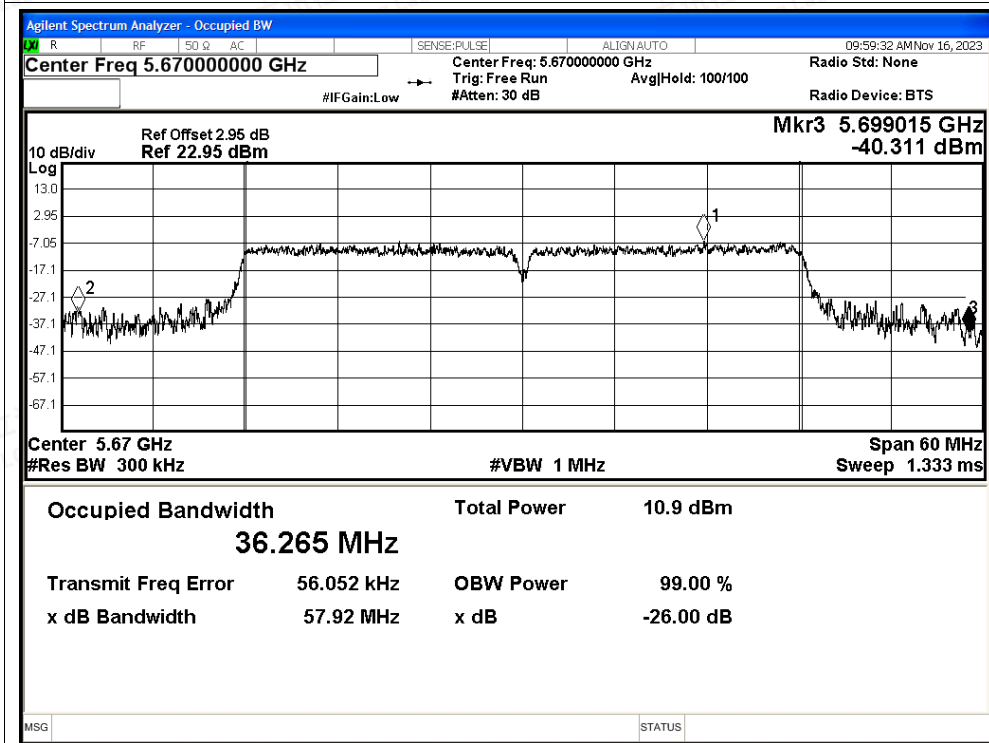


-26dB Bandwidth NVNT n40 5550MHz Ant0

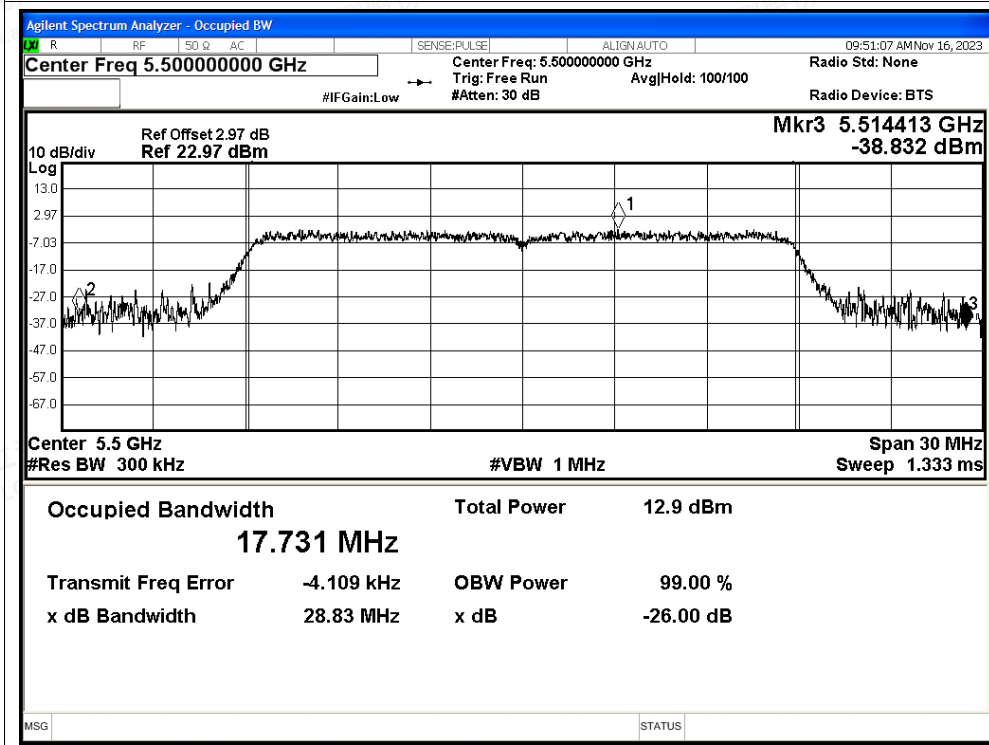




-26dB Bandwidth NVNT n40 5670MHz Ant0

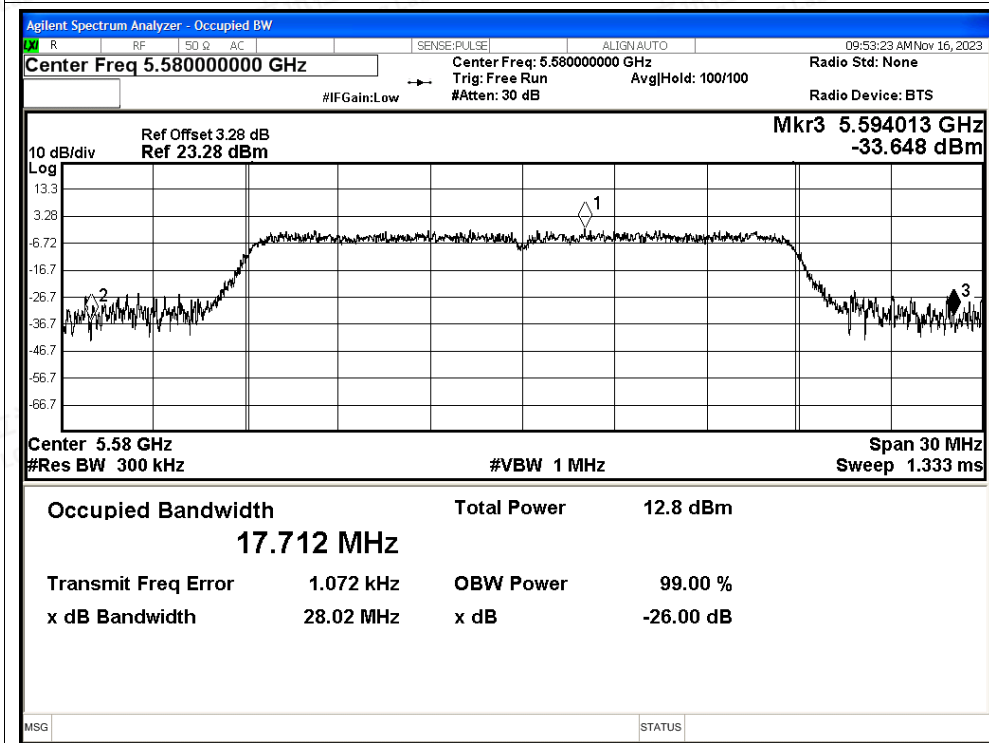


-26dB Bandwidth NVNT ac20 5500MHz Ant0

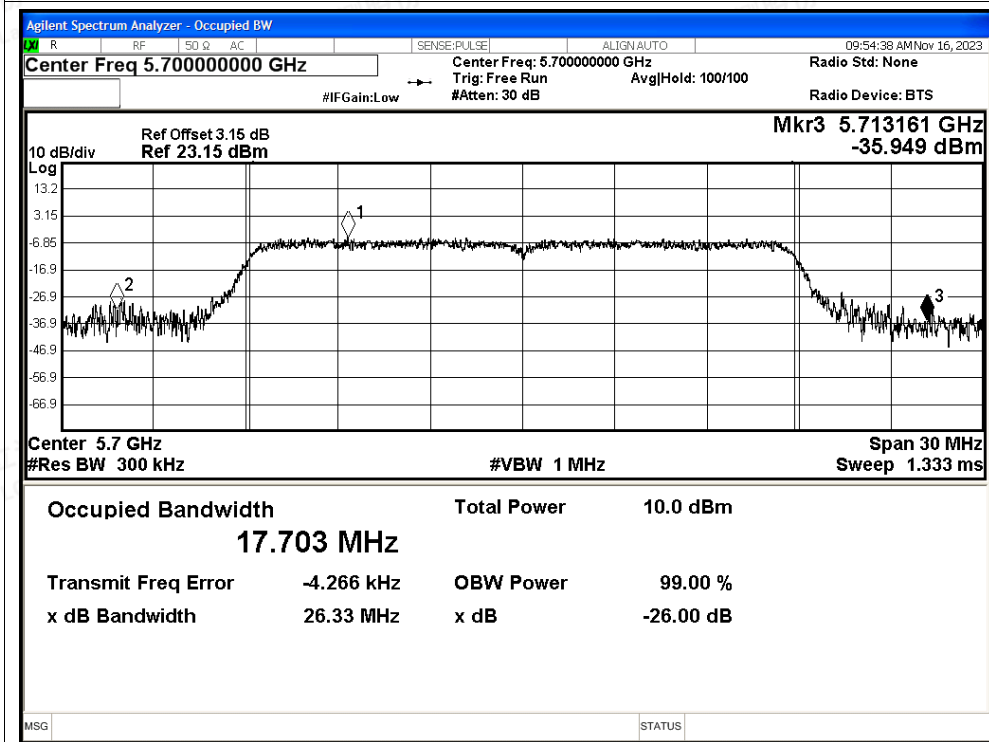




-26dB Bandwidth NVNT ac20 5580MHz Ant0



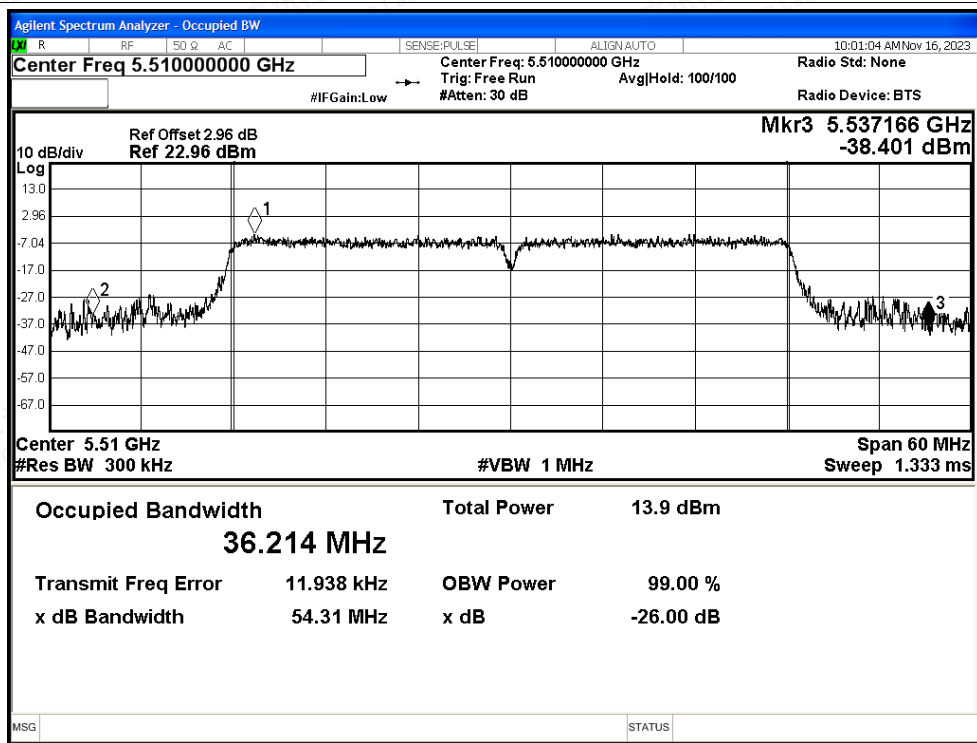
-26dB Bandwidth NVNT ac20 5700MHz Ant0



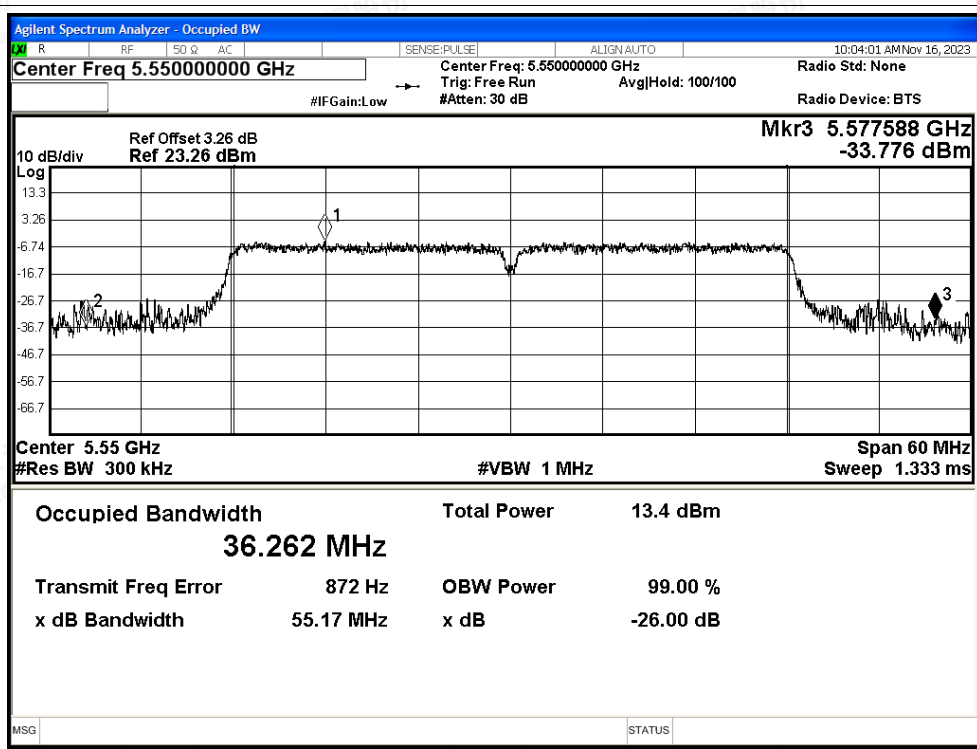




-26dB Bandwidth NVNT ac40 5510MHz Ant0

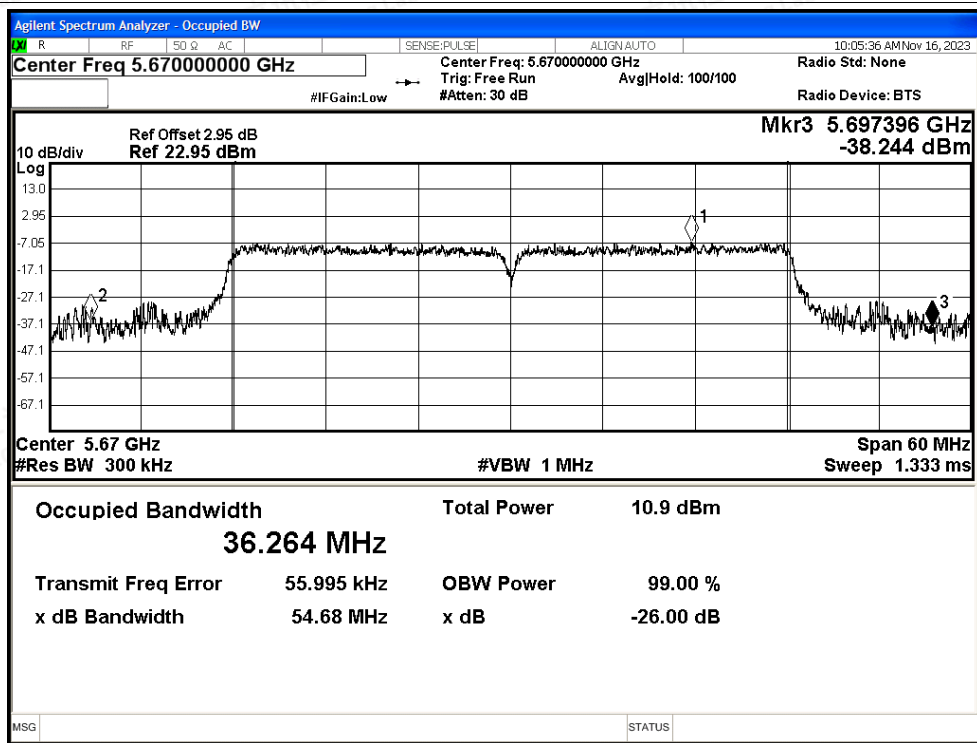


-26dB Bandwidth NVNT ac40 5550MHz Ant0

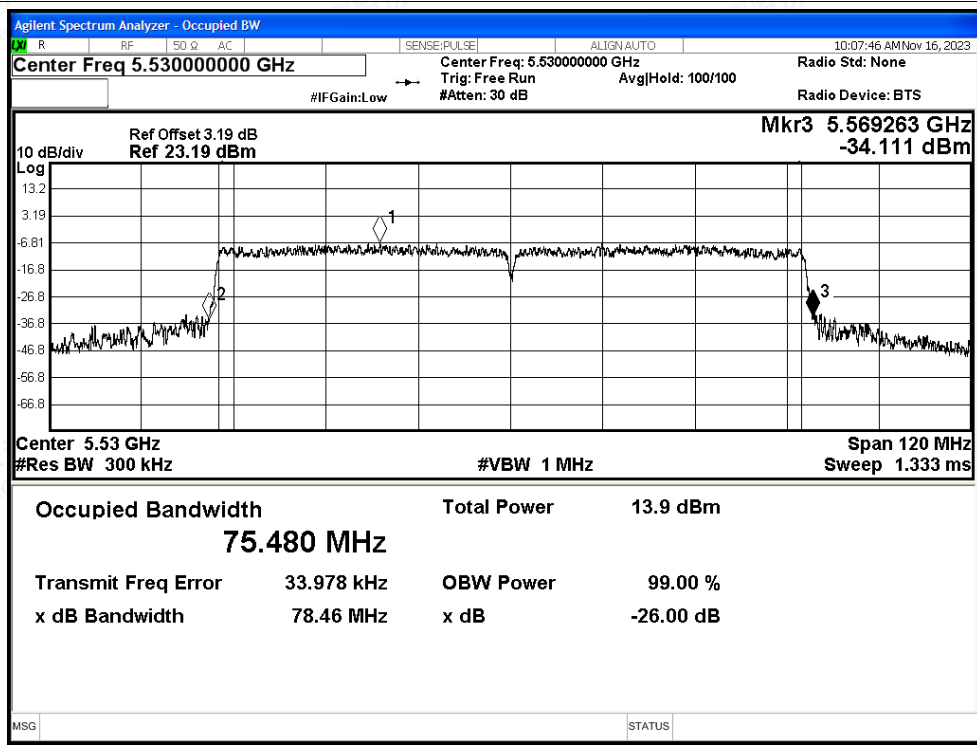


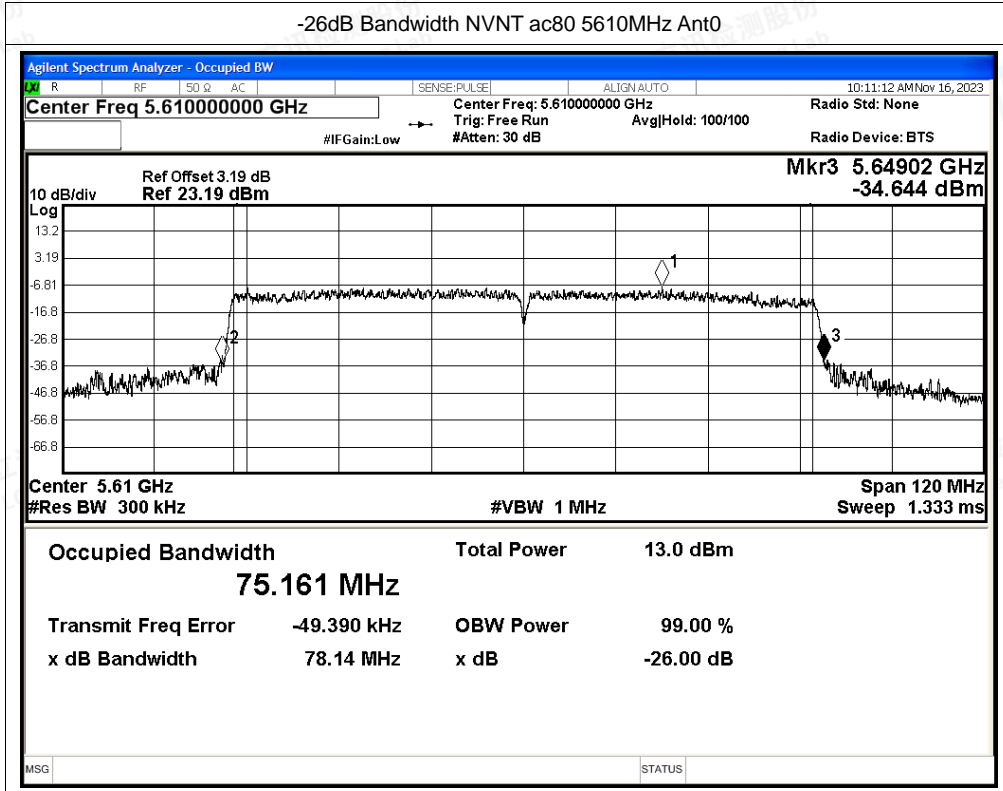


-26dB Bandwidth NVNT ac40 5670MHz Ant0



-26dB Bandwidth NVNT ac80 5530MHz Ant0







### 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	5500	Ant0	13.36	0.42	13.78	24	Pass
NVNT	a	5580	Ant0	13.41	0.45	13.86	24	Pass
NVNT	a	5700	Ant0	10.8	0.45	11.25	24	Pass
NVNT	n20	5500	Ant0	13.31	0.53	13.84	24	Pass
NVNT	n20	5580	Ant0	13.34	0.5	13.84	24	Pass
NVNT	n20	5700	Ant0	10.7	0.59	11.29	24	Pass
NVNT	n40	5510	Ant0	13.67	0.99	14.66	24	Pass
NVNT	n40	5550	Ant0	13.31	0.95	14.26	24	Pass
NVNT	n40	5670	Ant0	10.87	1	11.87	24	Pass
NVNT	ac20	5500	Ant0	13.17	0.5	13.67	24	Pass
NVNT	ac20	5580	Ant0	13.32	0.53	13.85	24	Pass
NVNT	ac20	5700	Ant0	10.74	0.59	11.33	24	Pass
NVNT	ac40	5510	Ant0	13.59	0.99	14.58	24	Pass
NVNT	ac40	5550	Ant0	13.36	0.99	14.35	24	Pass
NVNT	ac40	5670	Ant0	10.97	0.99	11.96	24	Pass
NVNT	ac80	5530	Ant0	12.79	1.97	14.76	24	Pass
NVNT	ac80	5610	Ant0	11.59	1.99	13.58	24	Pass



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### F.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	5500	Ant0	2.63	0.42	3.05	11	Pass
NVNT	a	5580	Ant0	3.06	0.45	3.51	11	Pass
NVNT	a	5700	Ant0	0.42	0.45	0.87	11	Pass
NVNT	n20	5500	Ant0	2.74	0.53	3.27	11	Pass
NVNT	n20	5580	Ant0	2.65	0.5	3.15	11	Pass
NVNT	n20	5700	Ant0	0.18	0.59	0.77	11	Pass
NVNT	n40	5510	Ant0	0.41	0.99	1.4	11	Pass
NVNT	n40	5550	Ant0	-0.16	0.95	0.79	11	Pass
NVNT	n40	5670	Ant0	-2.68	1	-1.68	11	Pass
NVNT	ac20	5500	Ant0	2.55	0.5	3.05	11	Pass
NVNT	ac20	5580	Ant0	2.39	0.53	2.92	11	Pass
NVNT	ac20	5700	Ant0	0.07	0.59	0.66	11	Pass
NVNT	ac40	5510	Ant0	-0.08	0.99	0.91	11	Pass
NVNT	ac40	5550	Ant0	0.03	0.99	1.02	11	Pass
NVNT	ac40	5670	Ant0	-2.66	0.99	-1.67	11	Pass
NVNT	ac80	5530	Ant0	-3.39	1.97	-1.42	11	Pass
NVNT	ac80	5610	Ant0	-3.93	1.99	-1.94	11	Pass

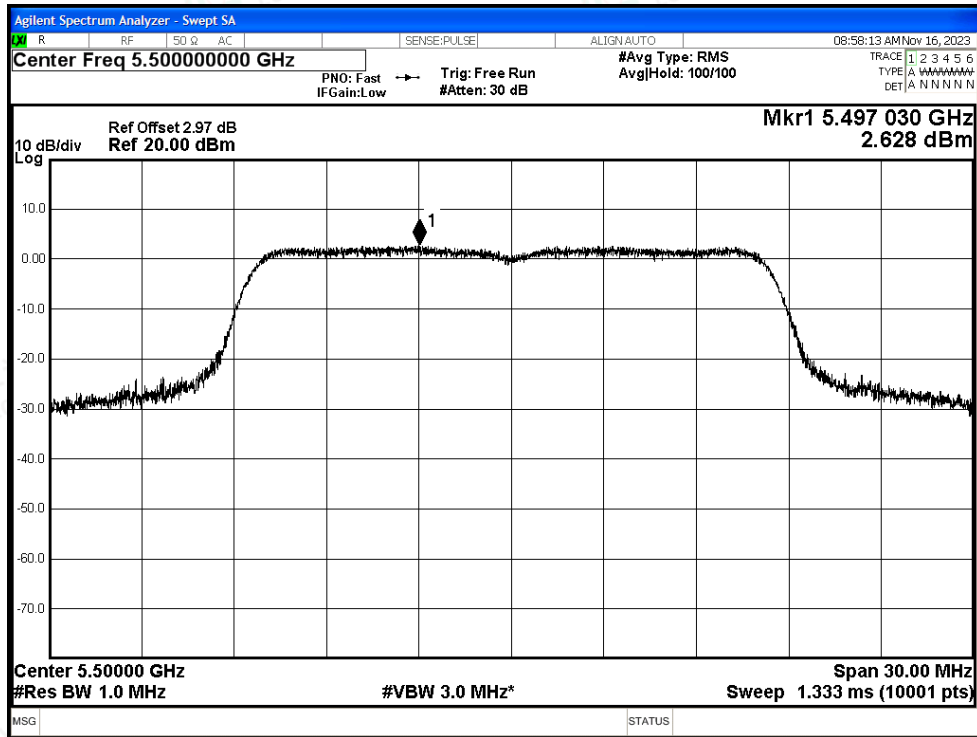


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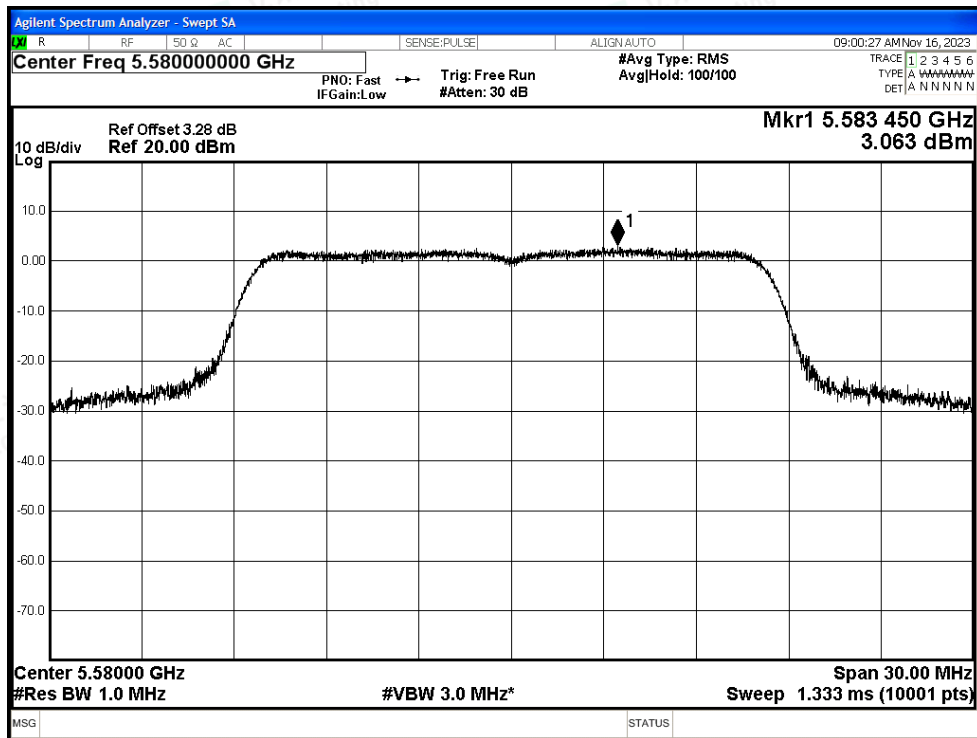


Test Graphs

PSD NVNT a 5500MHz Ant0

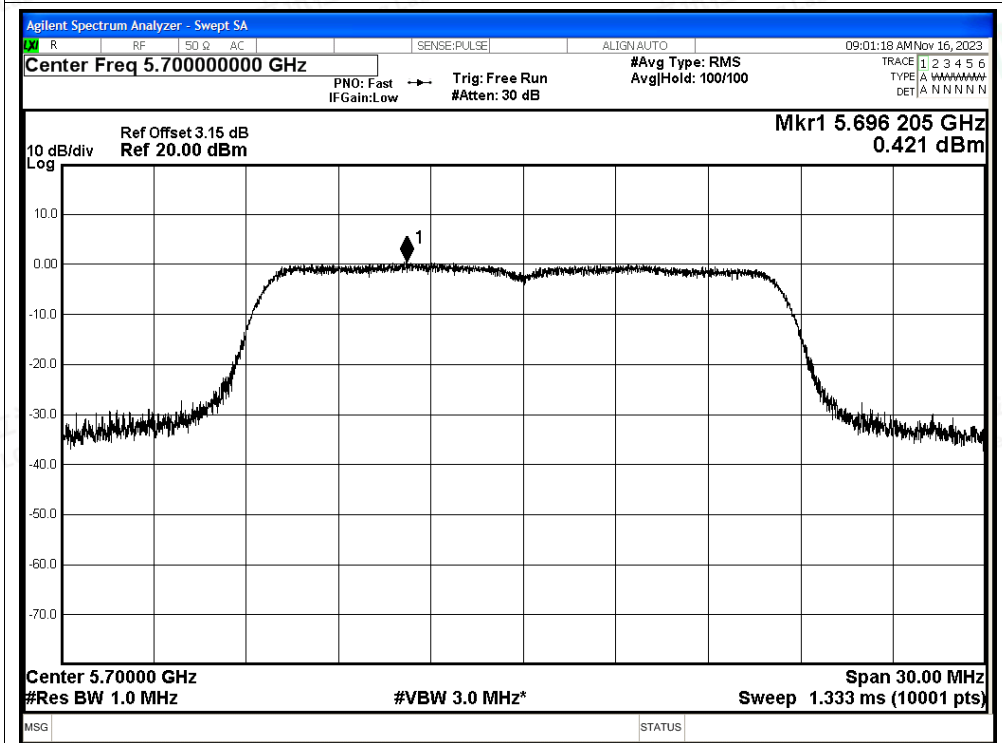


PSD NVNT a 5580MHz Ant0

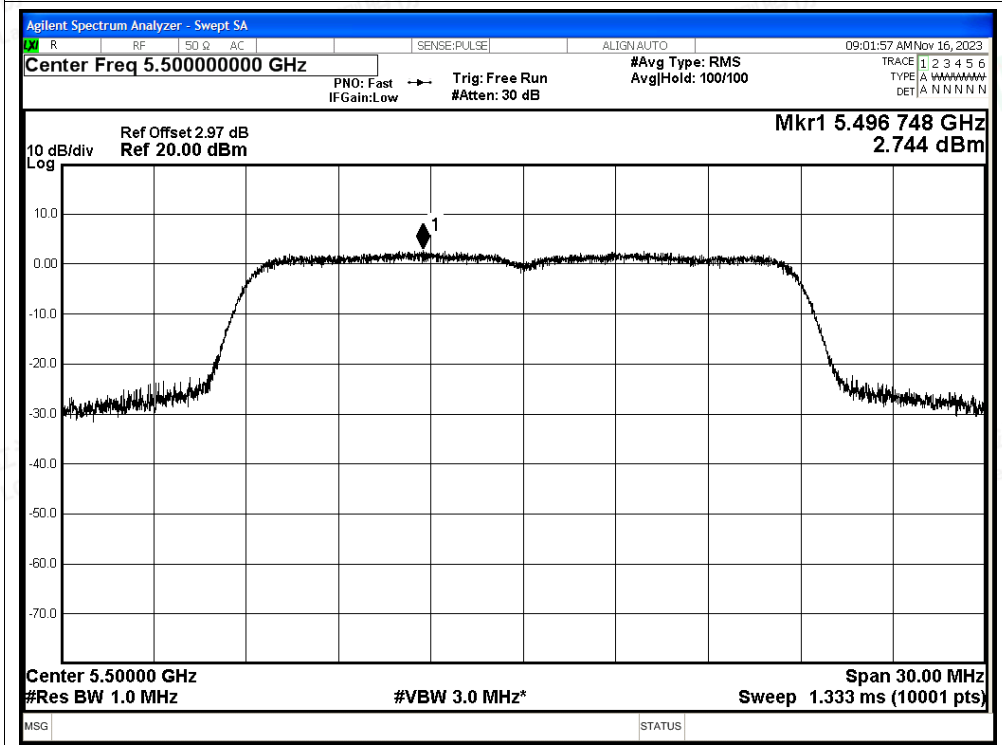


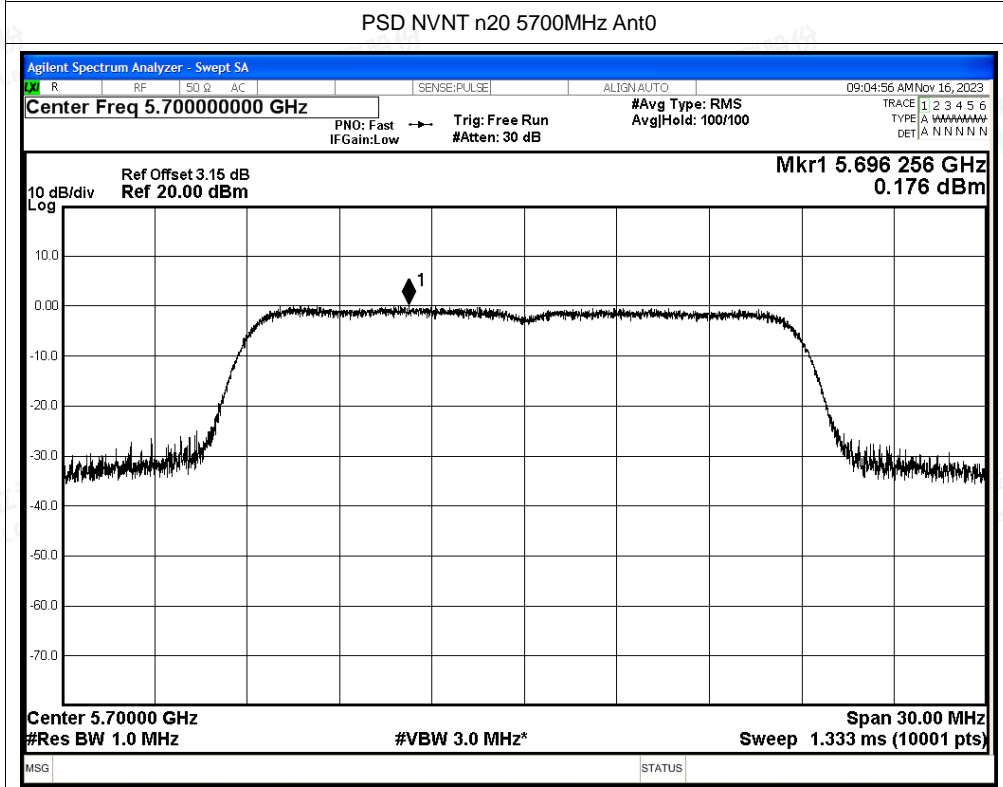
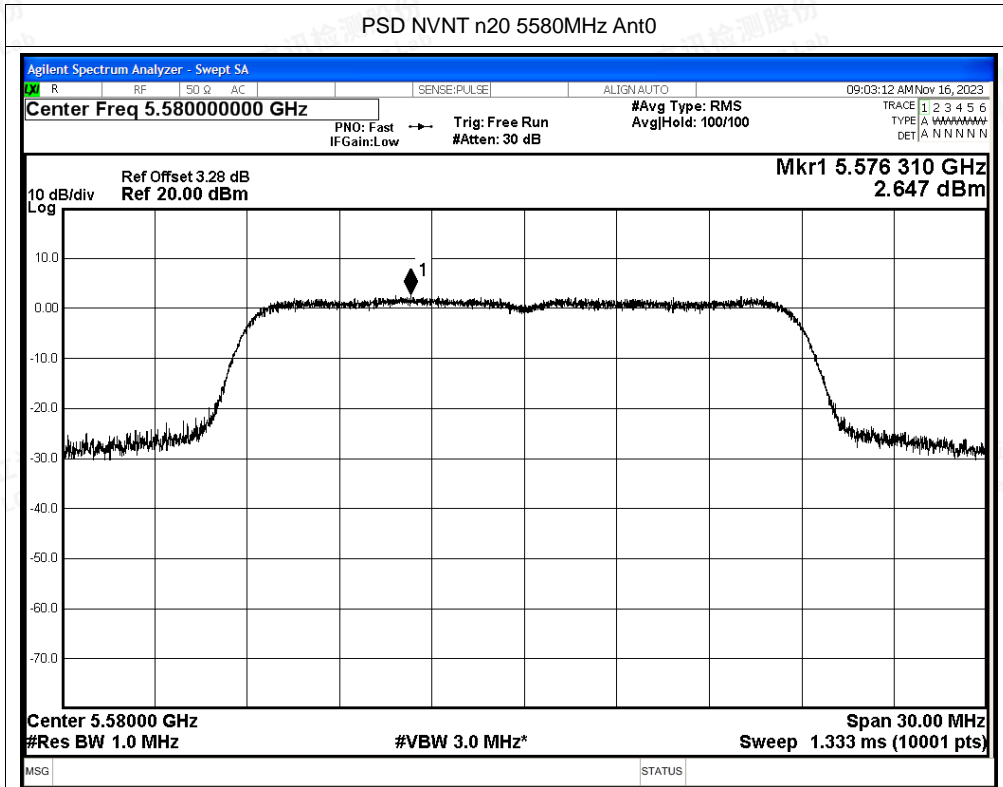


PSD NVNT a 5700MHz Ant0

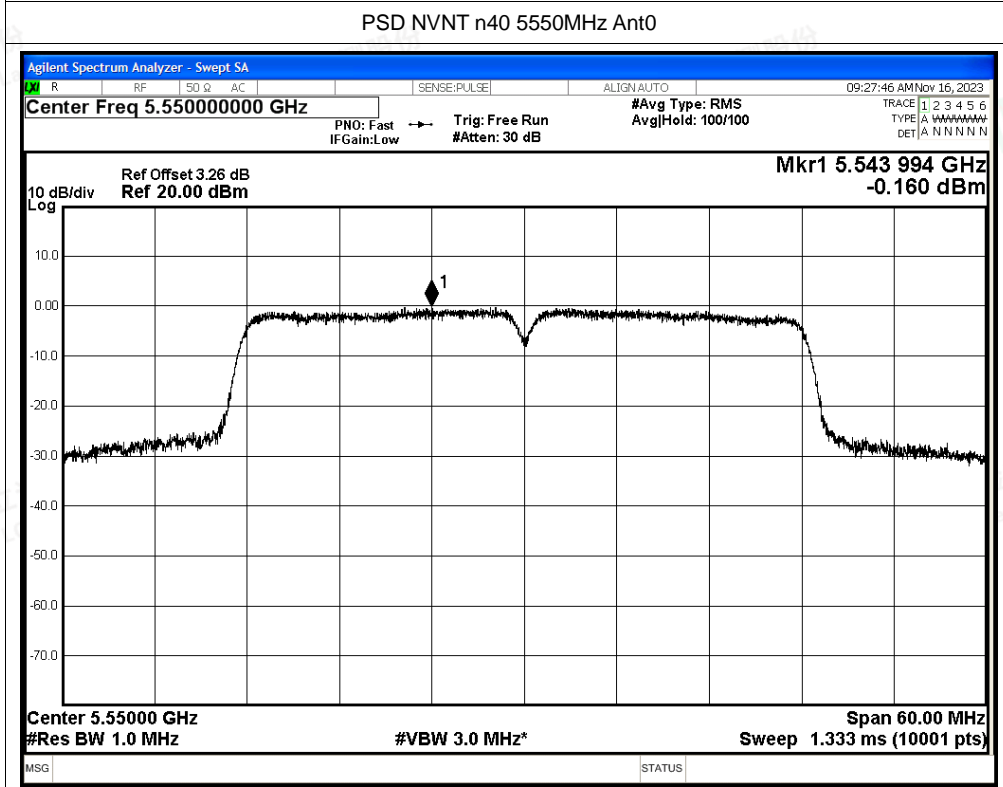
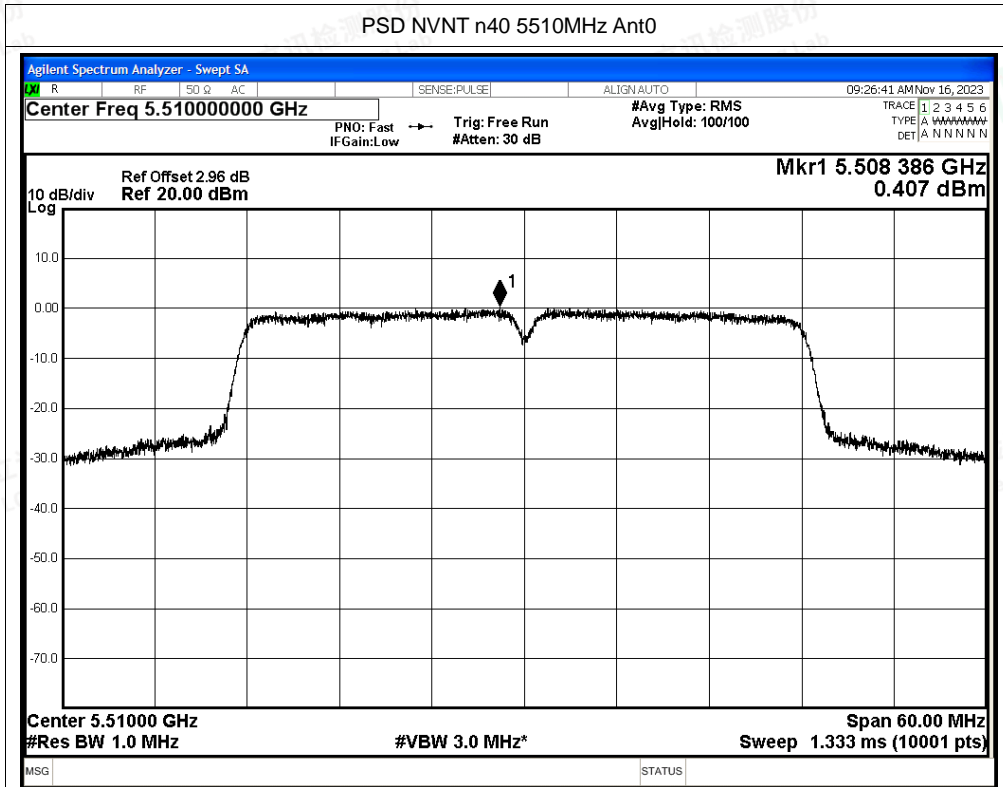


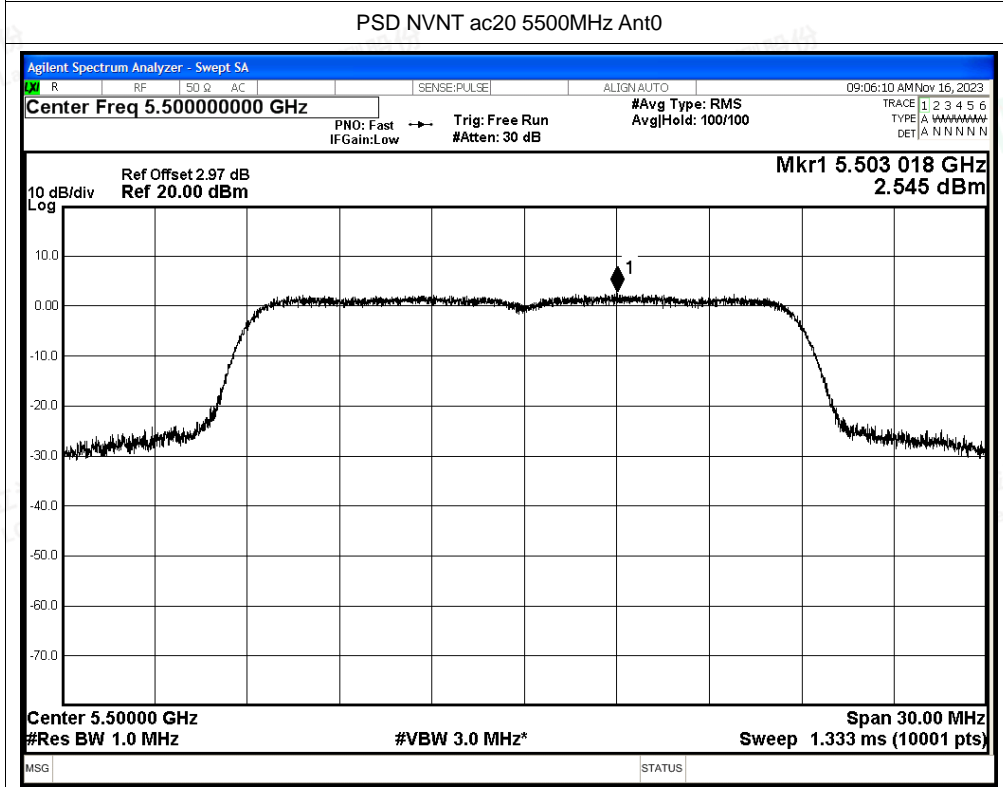
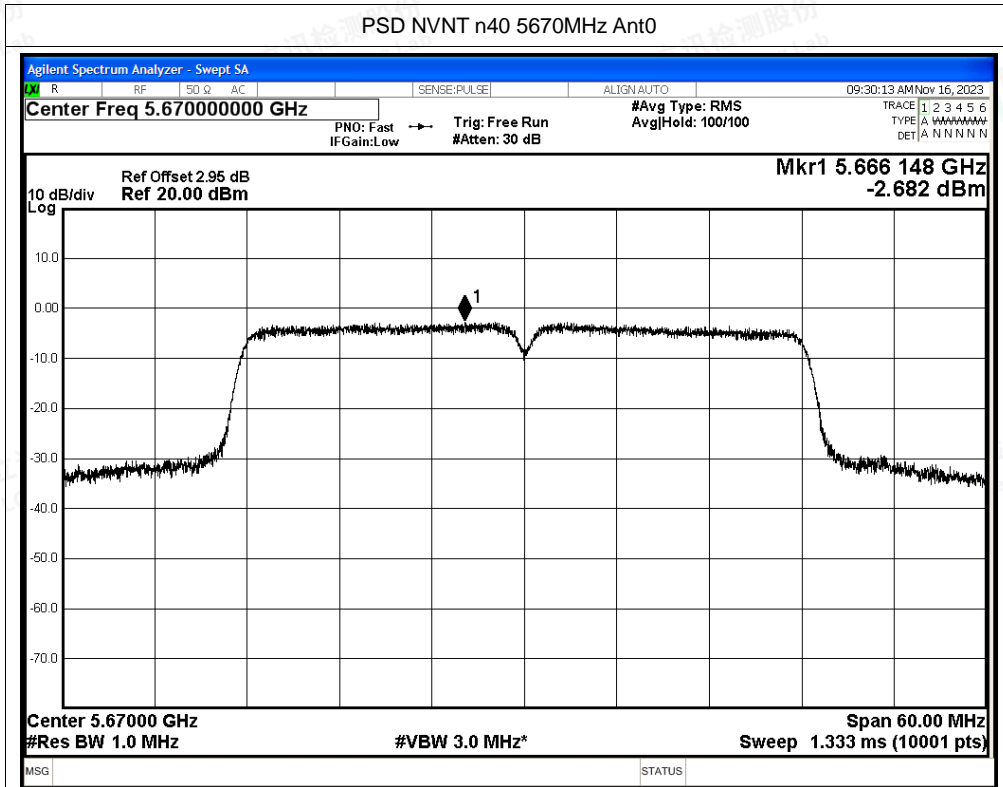
PSD NVNT n20 5500MHz Ant0

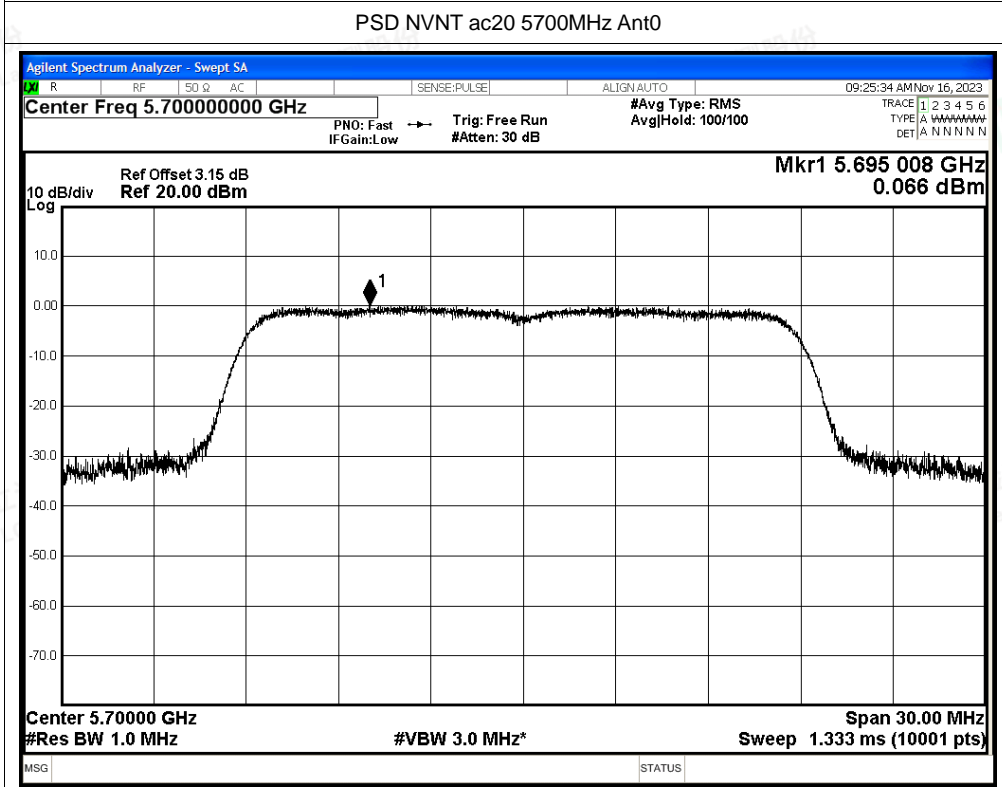
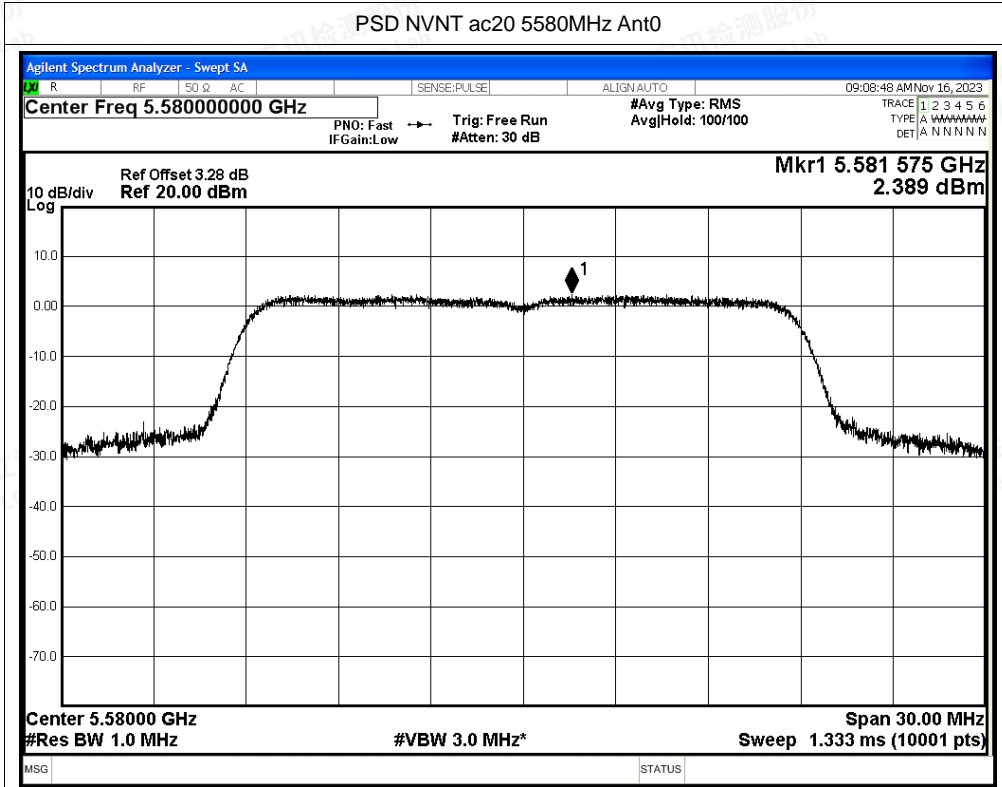


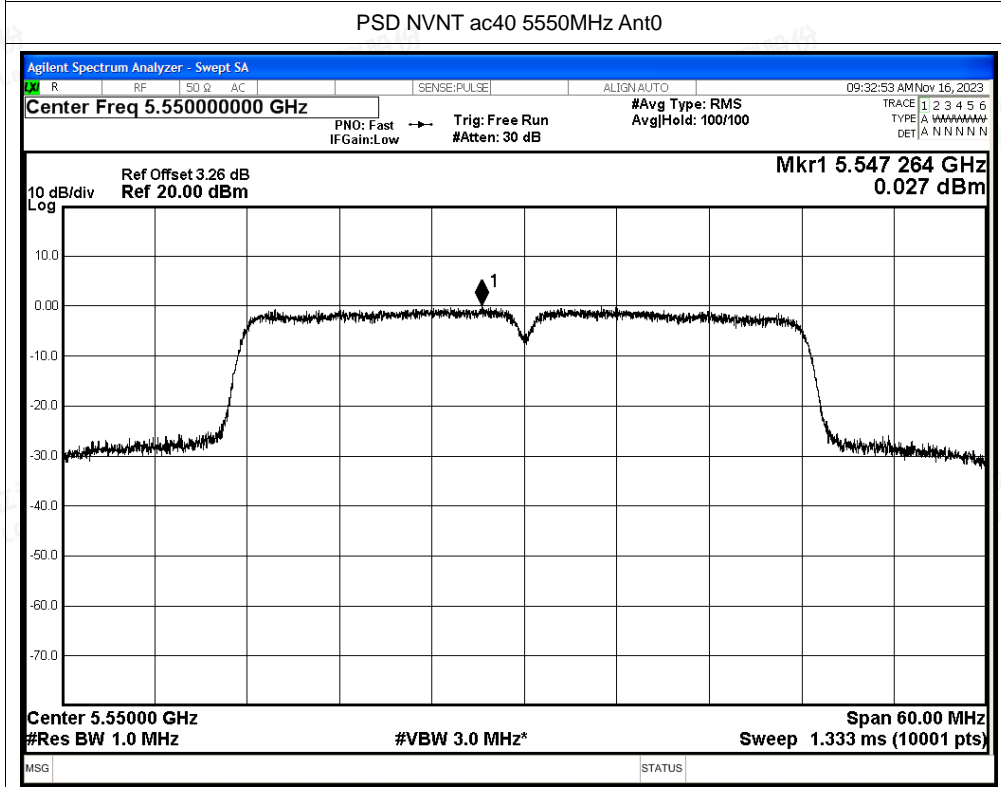
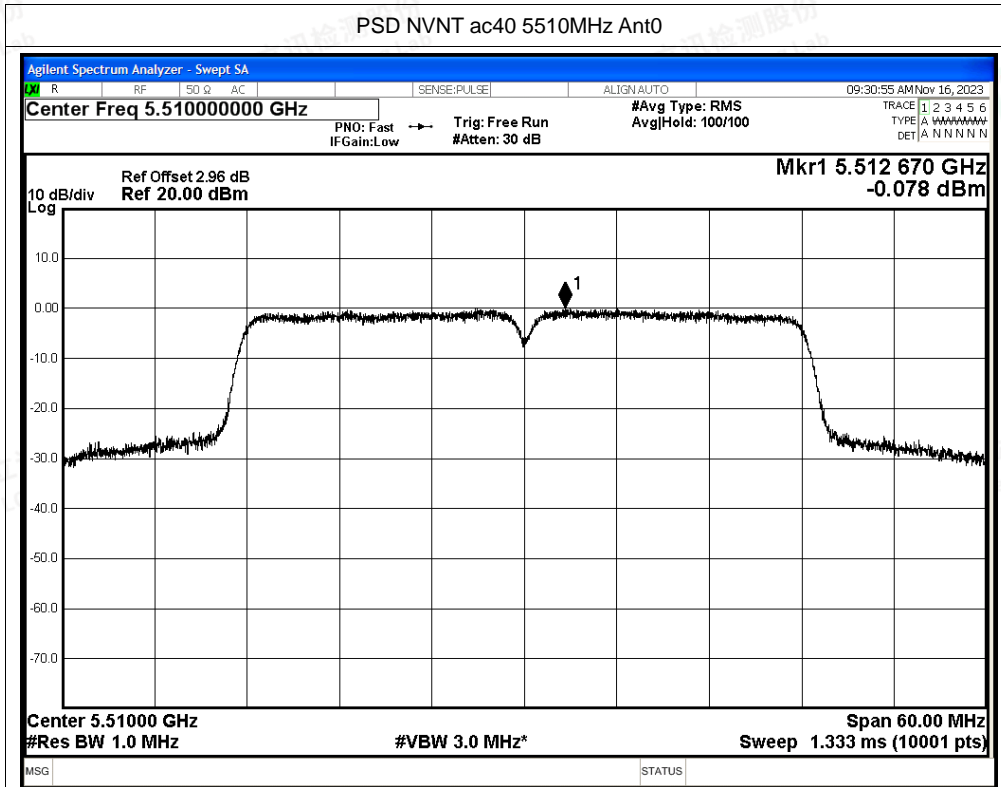


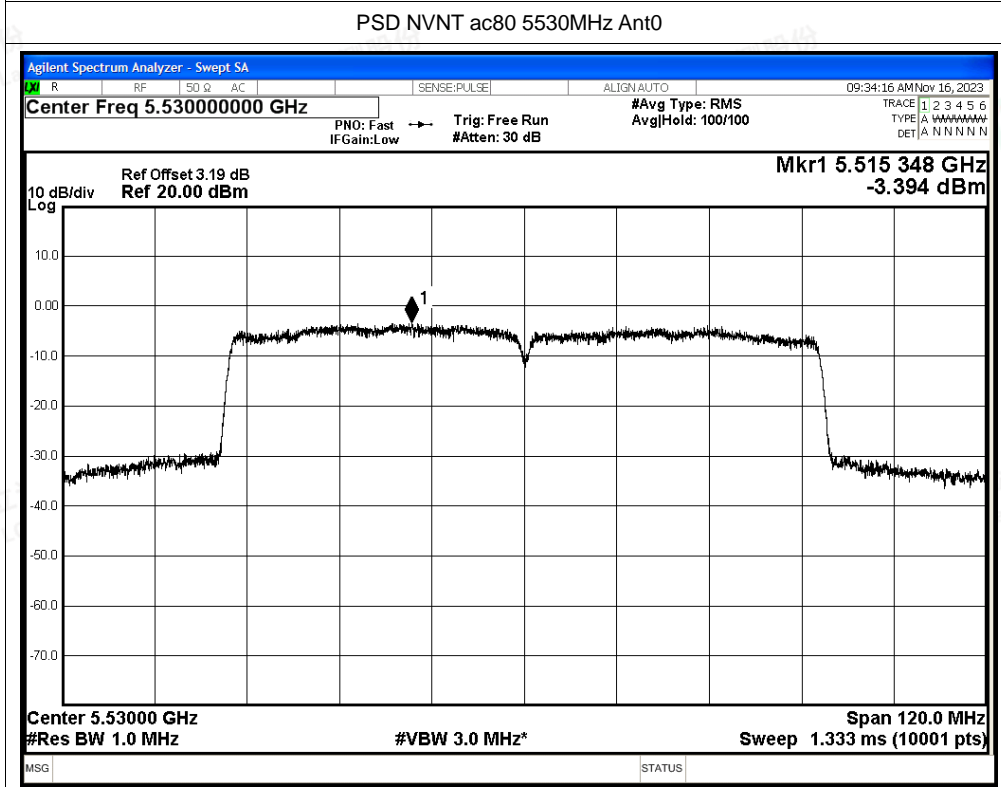
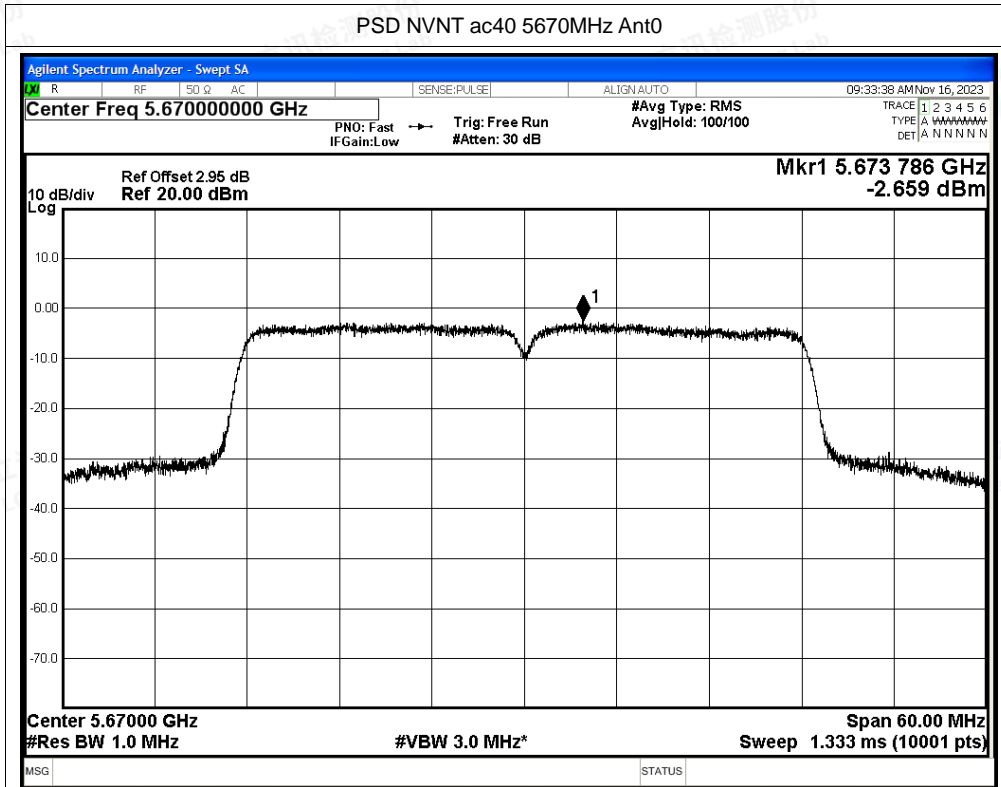


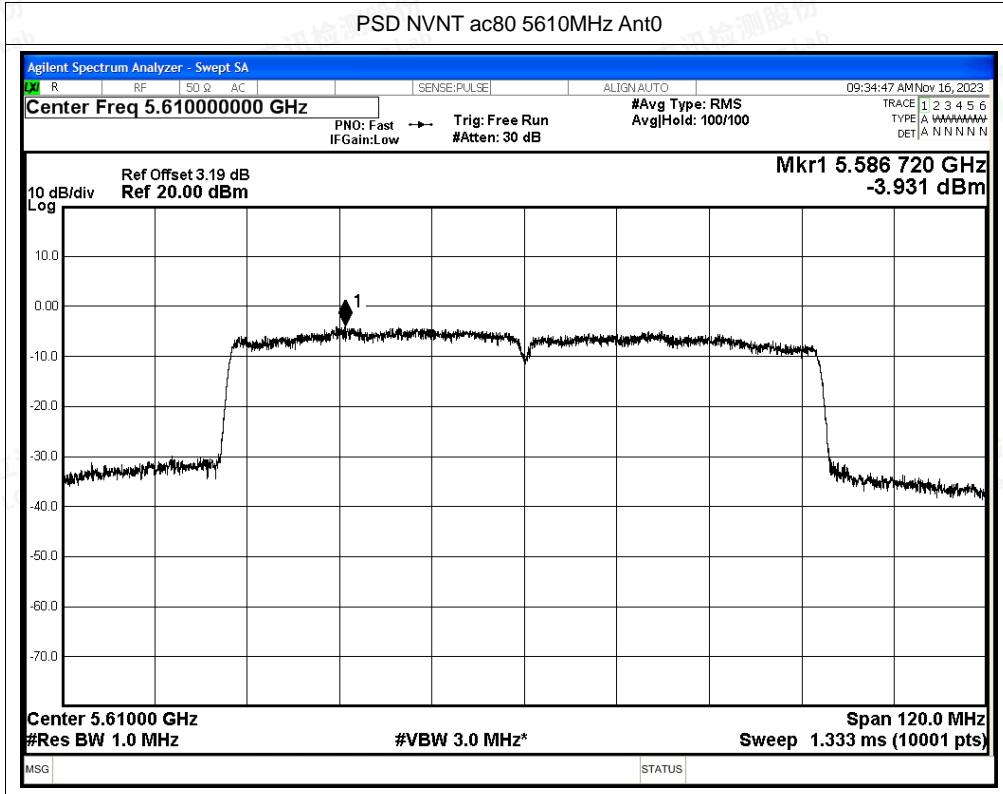














### F.4 Restrict Band

Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	a	5500	Ant0	5460	-48.36	2.06	48.93	Peak	68.2	Pass
NVNT	a	5500	Ant0	5460	-57.3	2.06	39.99	Average	54	Pass
NVNT	a	5500	Ant0	5466.2	-48.32	2.06	48.97	Peak	68.2	Pass
NVNT	a	5500	Ant0	5469.2	-56.66	2.06	40.63	Average	54	Pass
NVNT	a	5500	Ant0	5470	-48.41	2.06	48.88	Peak	68.2	Pass
NVNT	a	5500	Ant0	5470	-57.06	2.06	40.23	Average	54	Pass
NVNT	a	5700	Ant0	5725	-42.84	2.06	54.45	Peak	68.2	Pass
NVNT	a	5700	Ant0	5725	-56.03	2.06	41.26	Average	54	Pass
NVNT	a	5700	Ant0	5735	-51.51	2.06	45.78	Peak	68.2	Pass
NVNT	a	5700	Ant0	5735	-57.13	2.06	40.16	Average	54	Pass
NVNT	n20	5500	Ant0	5460	-51.11	2.06	46.18	Peak	68.2	Pass
NVNT	n20	5500	Ant0	5460	-57.31	2.06	39.98	Average	54	Pass
NVNT	n20	5500	Ant0	5467.4	-47.73	2.06	49.56	Peak	68.2	Pass
NVNT	n20	5500	Ant0	5469.8	-56.49	2.06	40.80	Average	54	Pass
NVNT	n20	5500	Ant0	5470	-48.5	2.06	48.79	Peak	68.2	Pass
NVNT	n20	5500	Ant0	5470	-56.6	2.06	40.69	Average	54	Pass
NVNT	n20	5700	Ant0	5725	-45.91	2.06	51.38	Peak	68.2	Pass
NVNT	n20	5700	Ant0	5725	-55.14	2.06	42.15	Average	54	Pass
NVNT	n20	5700	Ant0	5726.8	-43.73	2.06	53.56	Peak	68.2	Pass
NVNT	n20	5700	Ant0	5725.8	-55.12	2.06	42.17	Average	54	Pass
NVNT	n20	5700	Ant0	5735	-49.8	2.06	47.49	Peak	68.2	Pass
NVNT	n20	5700	Ant0	5735	-56.96	2.06	40.33	Average	54	Pass
NVNT	n40	5510	Ant0	5460	-50.24	2.06	47.05	Peak	68.2	Pass
NVNT	n40	5510	Ant0	5460	-57.11	2.06	40.18	Average	54	Pass
NVNT	n40	5510	Ant0	5468.4	-47.41	2.06	49.88	Peak	68.2	Pass
NVNT	n40	5510	Ant0	5469.4	-56.02	2.06	41.27	Average	54	Pass
NVNT	n40	5510	Ant0	5470	-50.85	2.06	46.44	Peak	68.2	Pass
NVNT	n40	5510	Ant0	5470	-56.32	2.06	40.97	Average	54	Pass
NVNT	n40	5670	Ant0	5725	-51.86	2.06	45.43	Peak	68.2	Pass
NVNT	n40	5670	Ant0	5725	-57.53	2.06	39.76	Average	54	Pass
NVNT	n40	5670	Ant0	5733.8	-48.78	2.06	48.51	Peak	68.2	Pass
NVNT	n40	5670	Ant0	5731.2	-56.51	2.06	40.78	Average	54	Pass
NVNT	n40	5670	Ant0	5735	-51.37	2.06	45.92	Peak	68.2	Pass
NVNT	n40	5670	Ant0	5735	-57.68	2.06	39.61	Average	54	Pass
NVNT	ac20	5500	Ant0	5460	-49.59	2.06	47.70	Peak	68.2	Pass
NVNT	ac20	5500	Ant0	5460	-57.32	2.06	39.97	Average	54	Pass
NVNT	ac20	5500	Ant0	5465.8	-47.77	2.06	49.52	Peak	68.2	Pass



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NVNT	ac20	5500	Ant0	5470	-56.5	2.06	40.79	Average	54	Pass
NVNT	ac20	5500	Ant0	5470	-49.59	2.06	47.70	Peak	68.2	Pass
NVNT	ac20	5700	Ant0	5725	-45.05	2.06	52.24	Peak	68.2	Pass
NVNT	ac20	5700	Ant0	5725	-55.5	2.06	41.79	Average	54	Pass
NVNT	ac20	5700	Ant0	5725.8	-44.36	2.06	52.93	Peak	68.2	Pass
NVNT	ac20	5700	Ant0	5735	-50.72	2.06	46.57	Peak	68.2	Pass
NVNT	ac20	5700	Ant0	5735	-57.17	2.06	40.12	Average	54	Pass
NVNT	ac40	5510	Ant0	5460	-50.05	2.06	47.24	Peak	68.2	Pass
NVNT	ac40	5510	Ant0	5460	-56.97	2.06	40.32	Average	54	Pass
NVNT	ac40	5510	Ant0	5467.8	-47.02	2.06	50.27	Peak	68.2	Pass
NVNT	ac40	5510	Ant0	5470	-55.97	2.06	41.32	Average	54	Pass
NVNT	ac40	5510	Ant0	5470	-49.91	2.06	47.38	Peak	68.2	Pass
NVNT	ac40	5670	Ant0	5725	-51.14	2.06	46.15	Peak	68.2	Pass
NVNT	ac40	5670	Ant0	5725	-57.22	2.06	40.07	Average	54	Pass
NVNT	ac40	5670	Ant0	5726.6	-47.84	2.06	49.45	Peak	68.2	Pass
NVNT	ac40	5670	Ant0	5731.8	-56.91	2.06	40.38	Average	54	Pass
NVNT	ac40	5670	Ant0	5735	-50.24	2.06	47.05	Peak	68.2	Pass
NVNT	ac40	5670	Ant0	5735	-57.24	2.06	40.05	Average	54	Pass
NVNT	ac80	5530	Ant0	5460	-50.36	2.06	46.93	Peak	68.2	Pass
NVNT	ac80	5530	Ant0	5460	-56.58	2.06	40.71	Average	54	Pass
NVNT	ac80	5530	Ant0	5464.4	-46.77	2.06	50.52	Peak	68.2	Pass
NVNT	ac80	5530	Ant0	5469.2	-55.75	2.06	41.54	Average	54	Pass
NVNT	ac80	5530	Ant0	5470	-47.56	2.06	49.73	Peak	68.2	Pass
NVNT	ac80	5530	Ant0	5470	-55.83	2.06	41.46	Average	54	Pass
NVNT	ac80	5610	Ant0	5725	-50.4	2.06	46.89	Peak	68.2	Pass
NVNT	ac80	5610	Ant0	5725	-57.05	2.06	40.24	Average	54	Pass
NVNT	ac80	5610	Ant0	5734.385	-47.64	2.06	49.65	Peak	68.2	Pass
NVNT	ac80	5610	Ant0	5725.57	-56.62	2.06	40.67	Average	54	Pass
NVNT	ac80	5610	Ant0	5735	-50.46	2.06	46.83	Peak	68.2	Pass
NVNT	ac80	5610	Ant0	5735	-57.11	2.06	40.18	Average	54	Pass



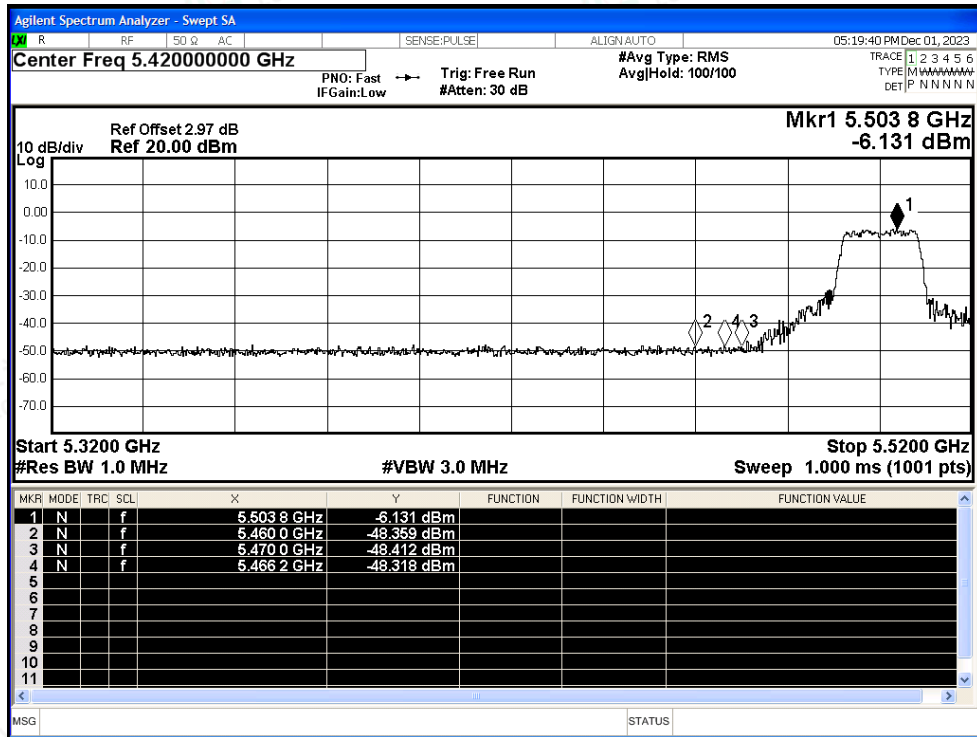
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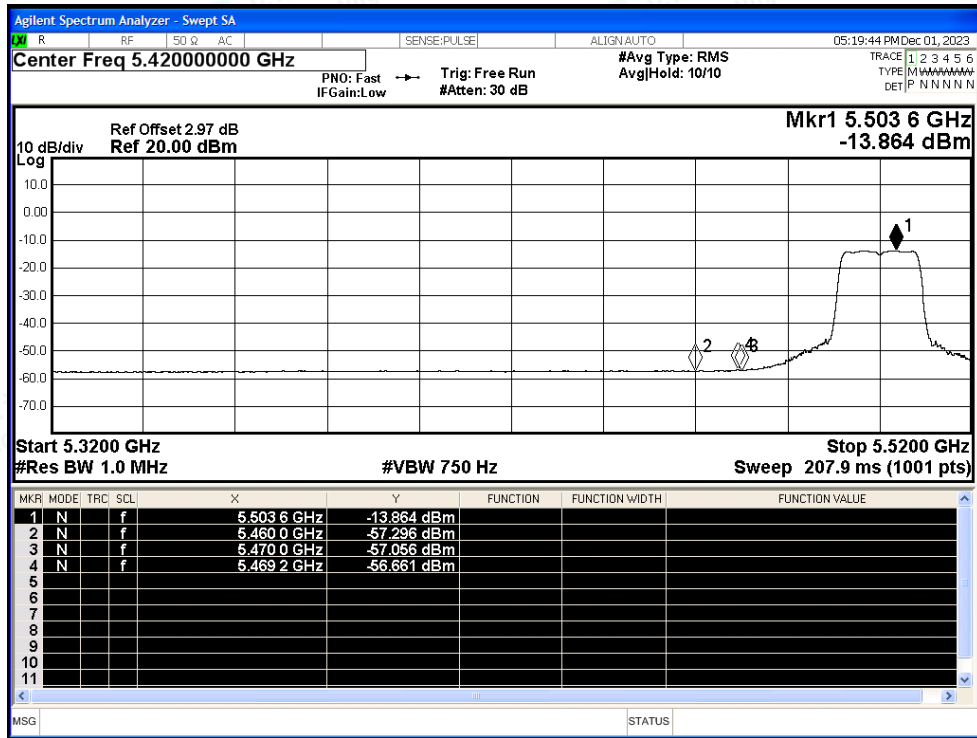


Test Graphs

Restrict Band NVNT a 5500MHz Ant0 Peak

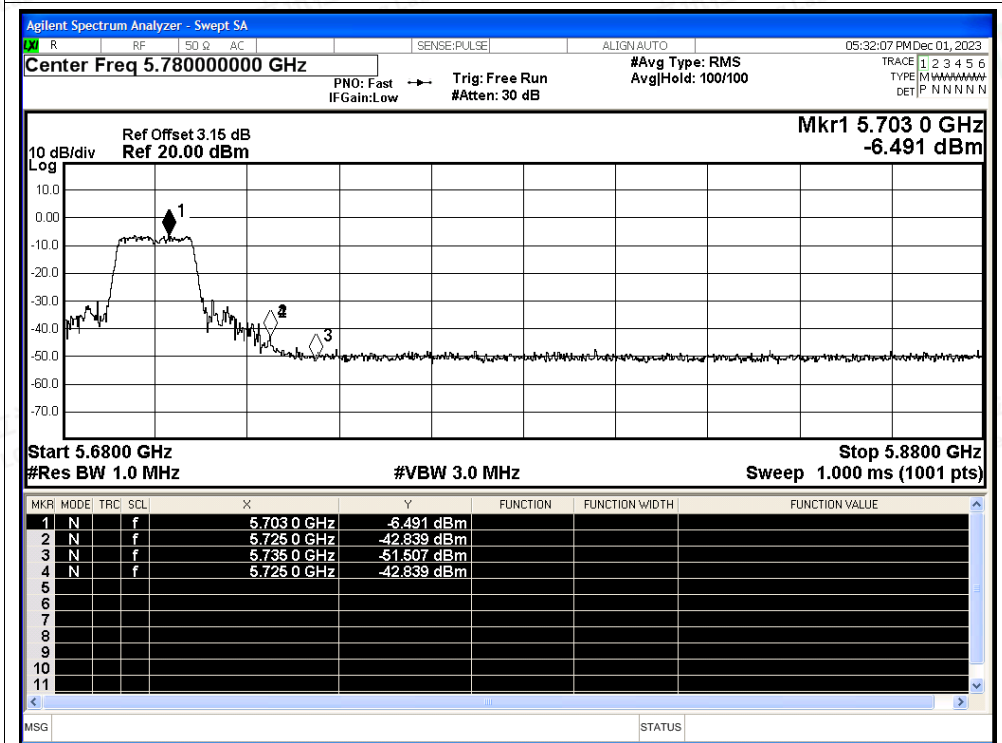


Restrict Band NVNT a 5500MHz Ant0 Average

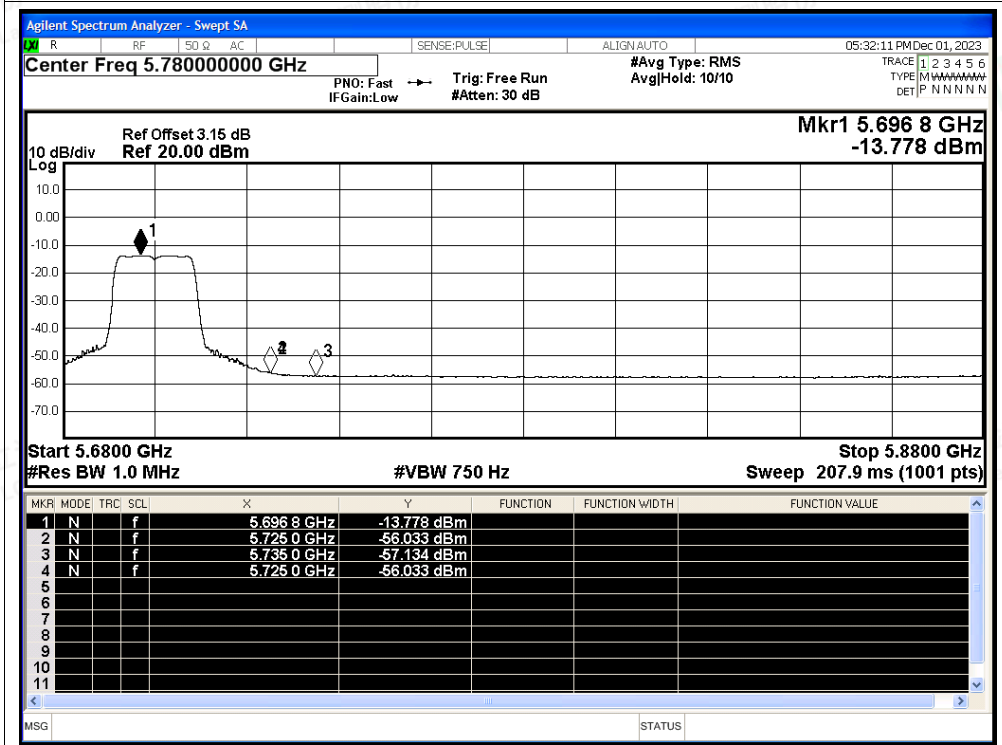




Restrict Band NVNT a 5700MHz Ant0 Peak

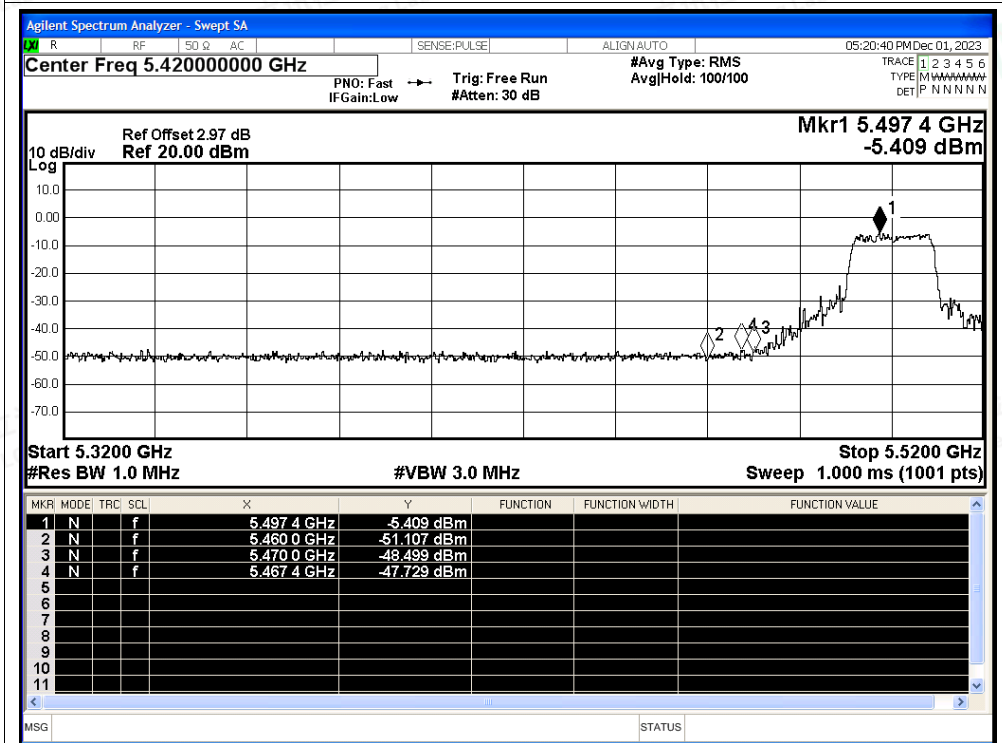


Restrict Band NVNT a 5700MHz Ant0 Average

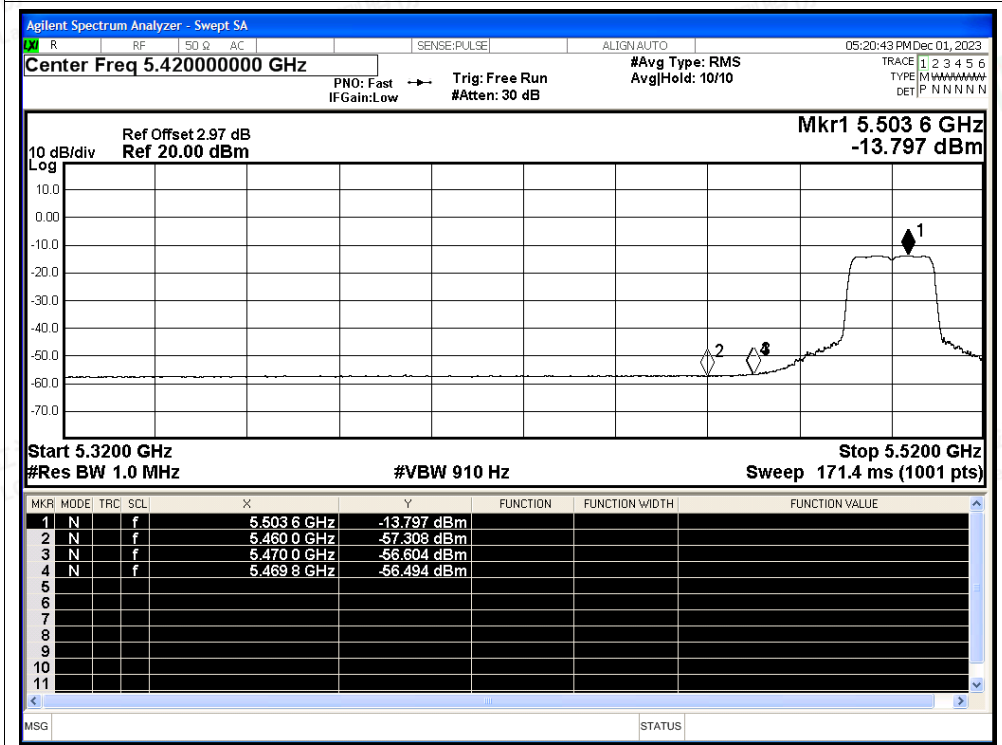




Restrict Band NVNT n20 5500MHz Ant0 Peak

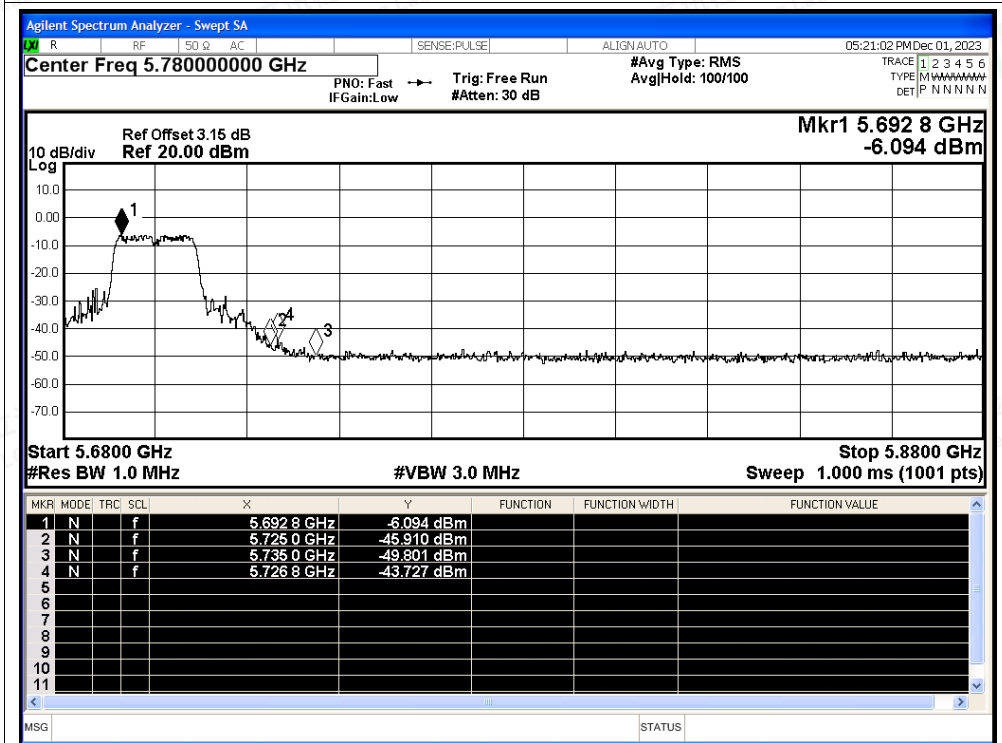


Restrict Band NVNT n20 5500MHz Ant0 Average

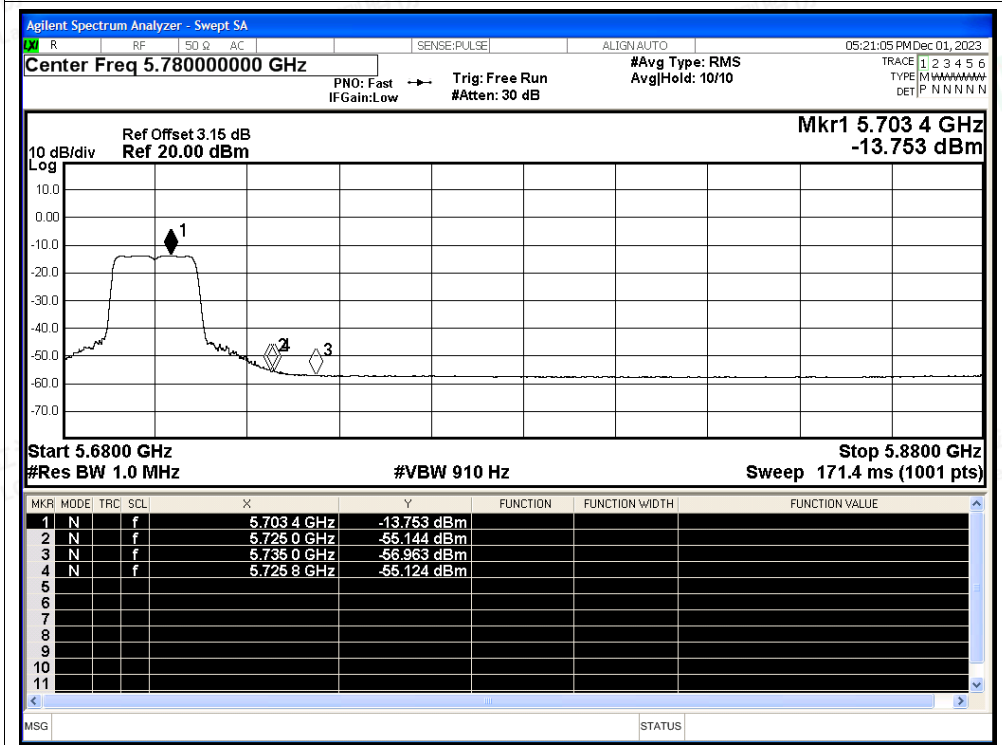




Restrict Band NVNT n20 5700MHz Ant0 Peak

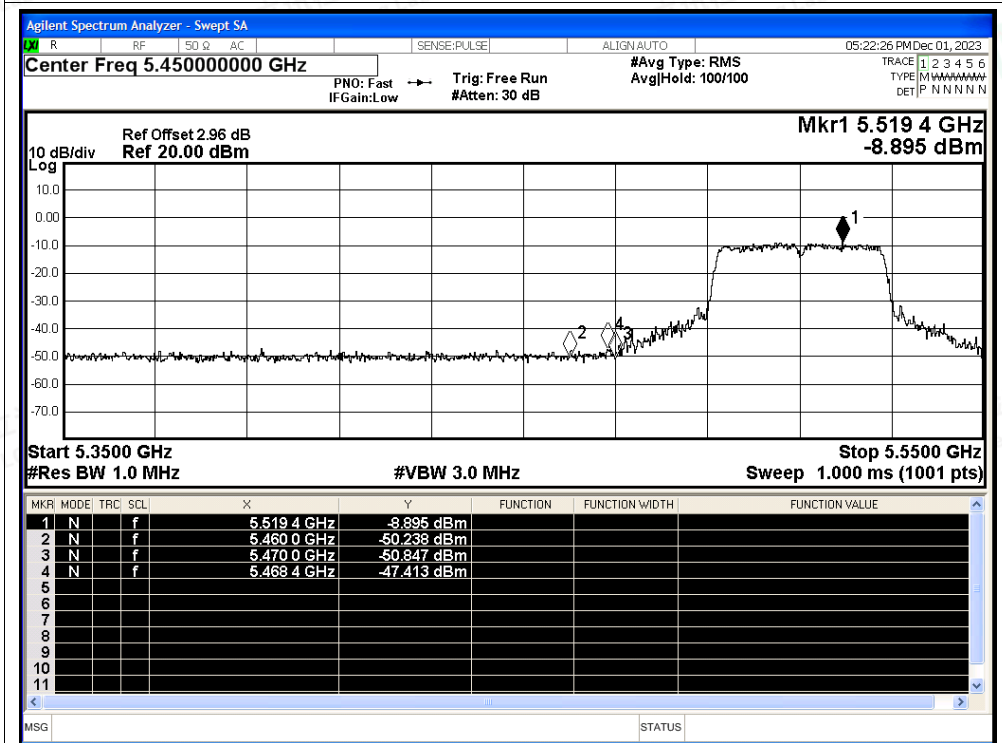


Restrict Band NVNT n20 5700MHz Ant0 Average

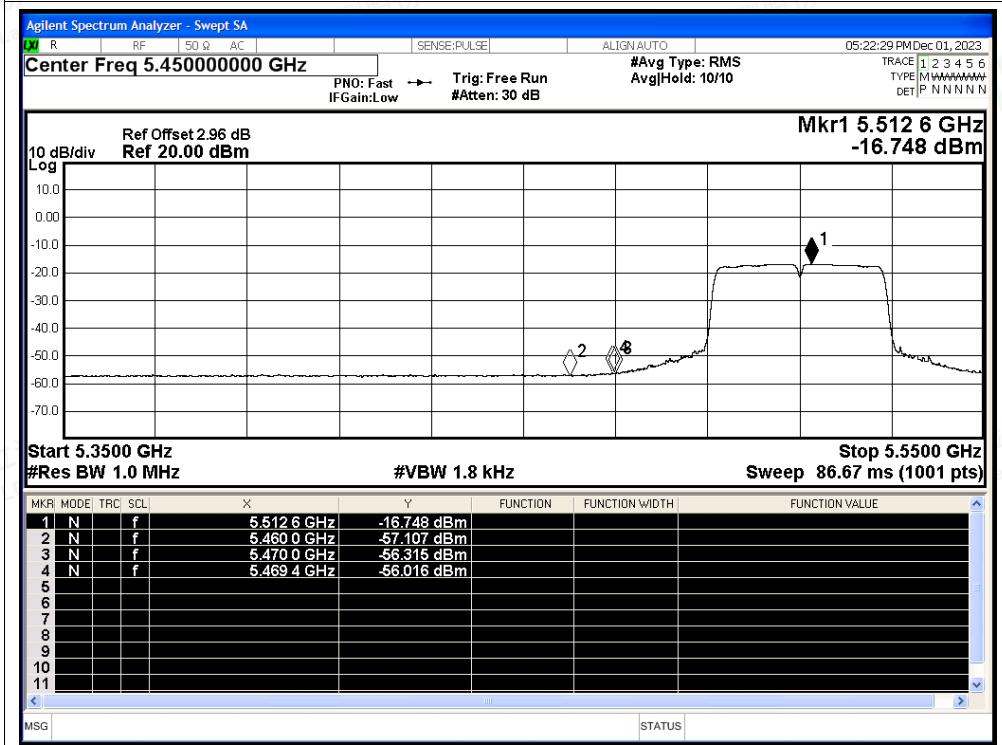




Restrict Band NVNT n40 5510MHz Ant0 Peak

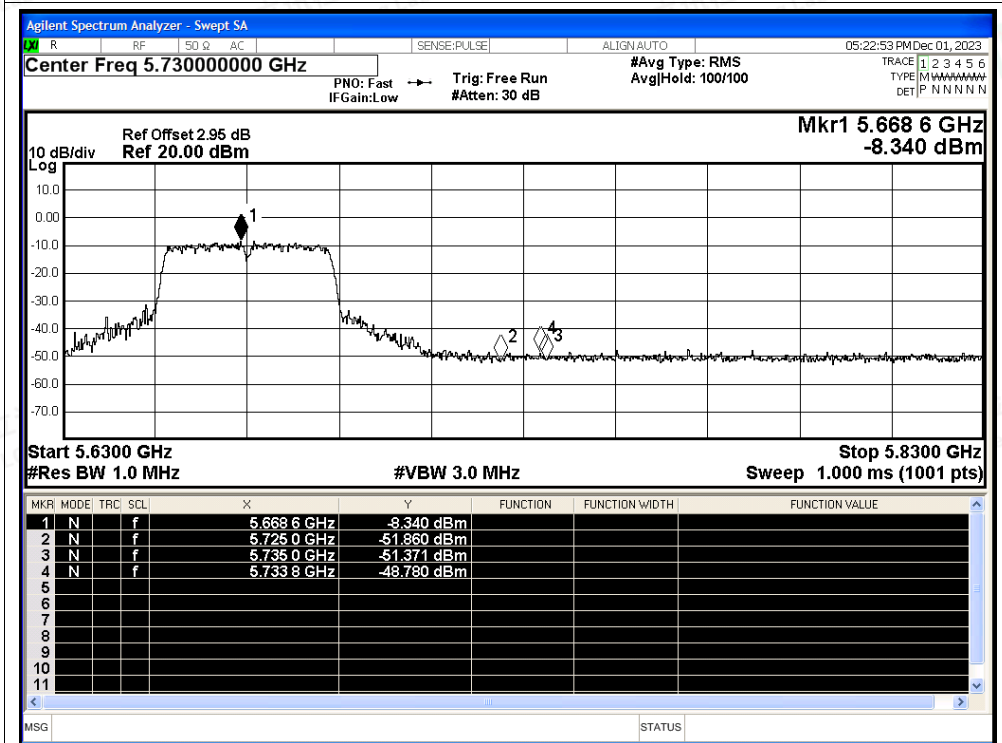


Restrict Band NVNT n40 5510MHz Ant0 Average

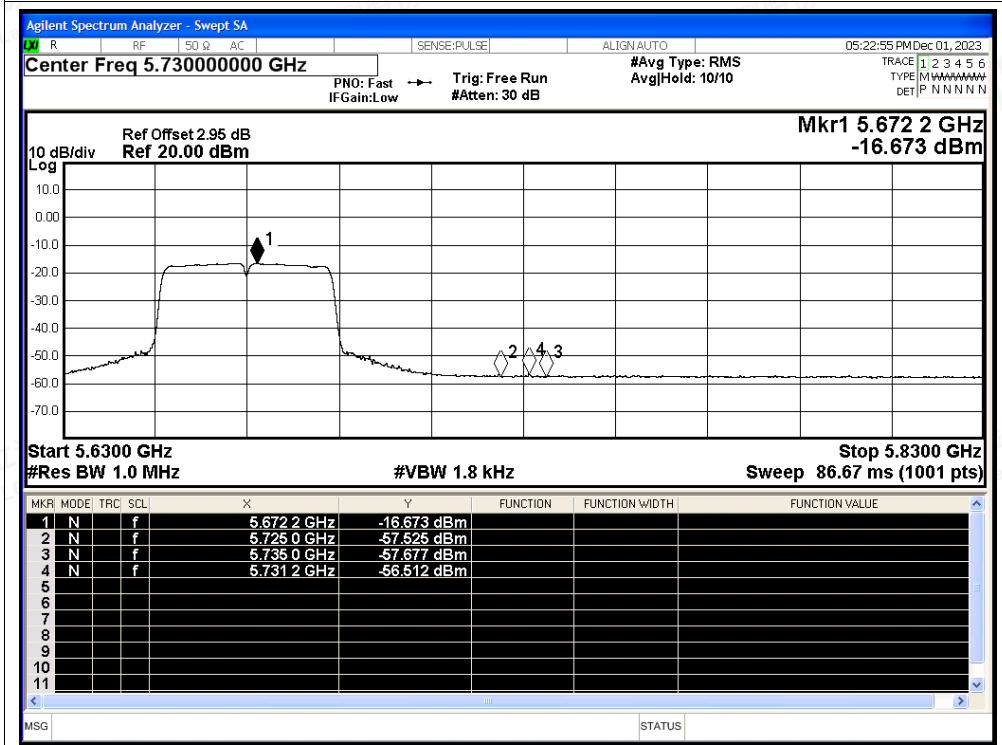




Restrict Band NVNT n40 5670MHz Ant0 Peak

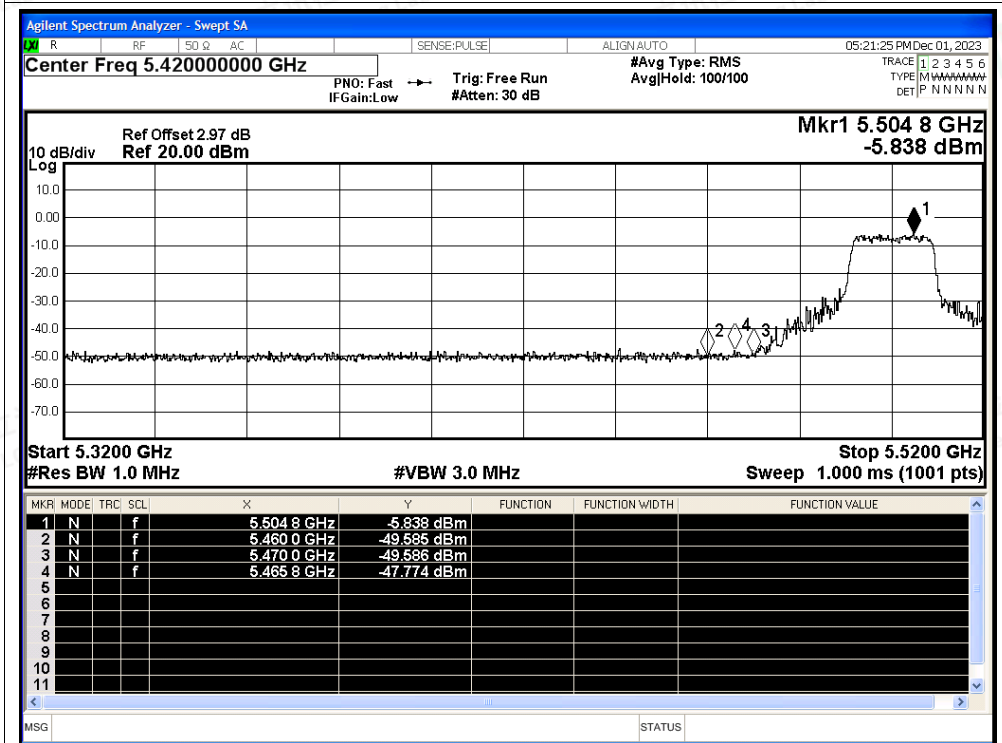


Restrict Band NVNT n40 5670MHz Ant0 Average

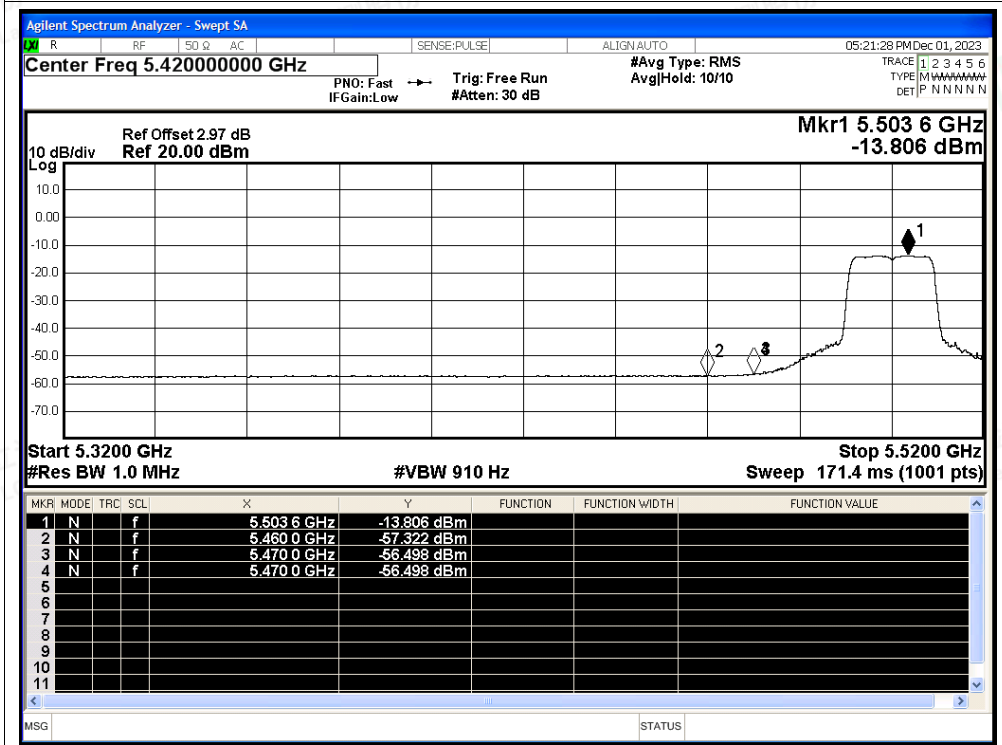




Restrict Band NVNT ac20 5500MHz Ant0 Peak

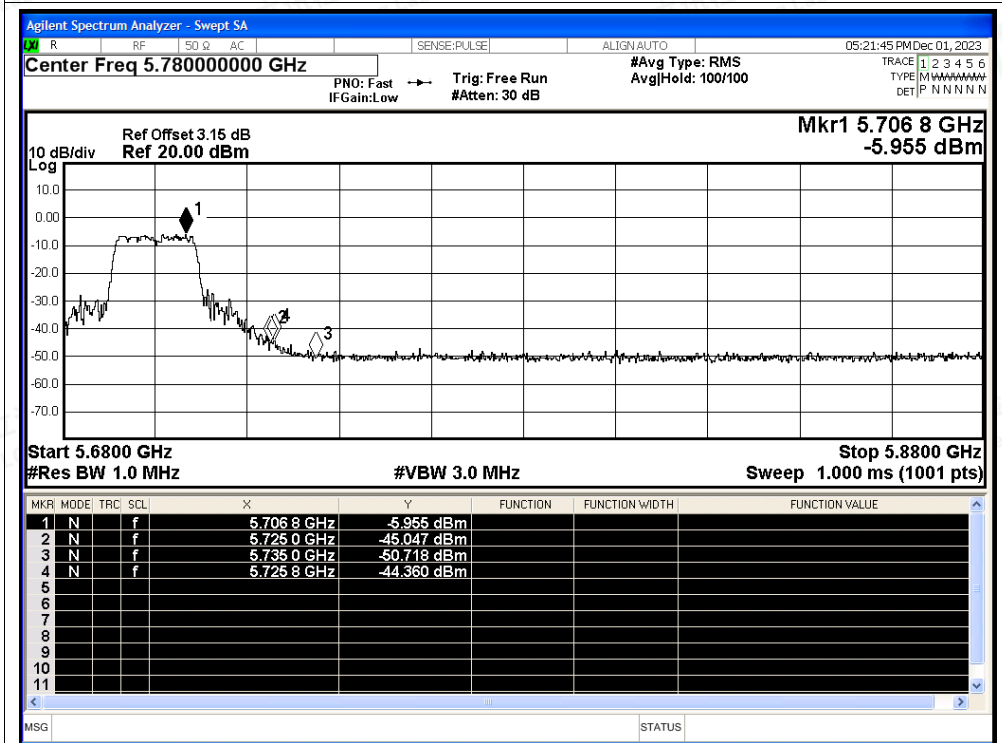


Restrict Band NVNT ac20 5500MHz Ant0 Average

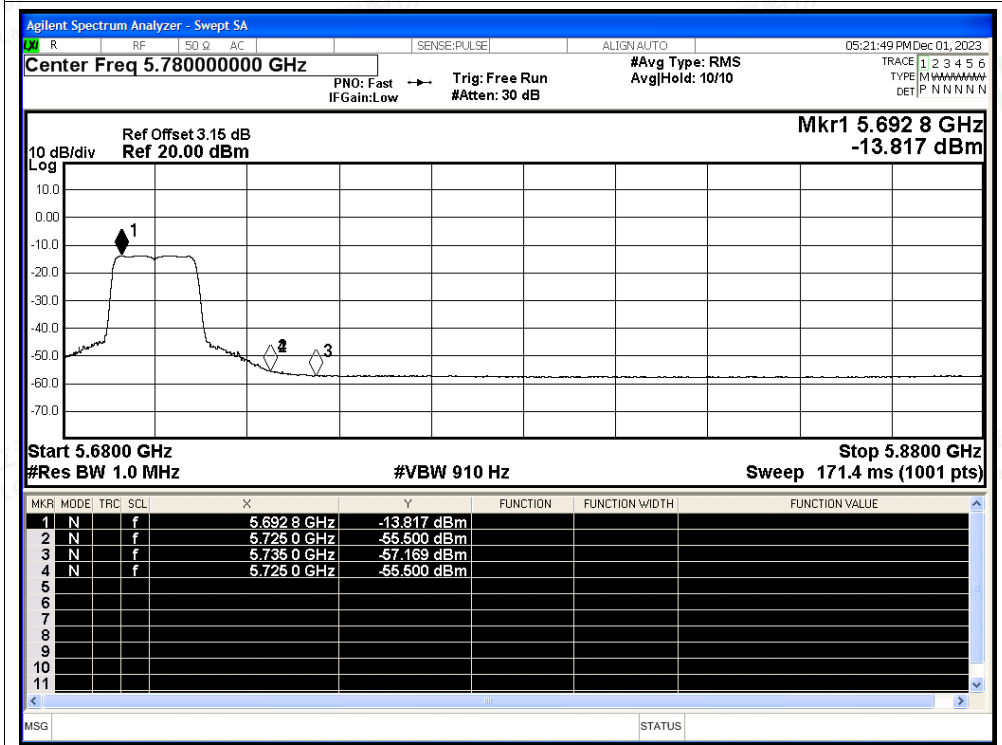




Restrict Band NVNT ac20 5700MHz Ant0 Peak



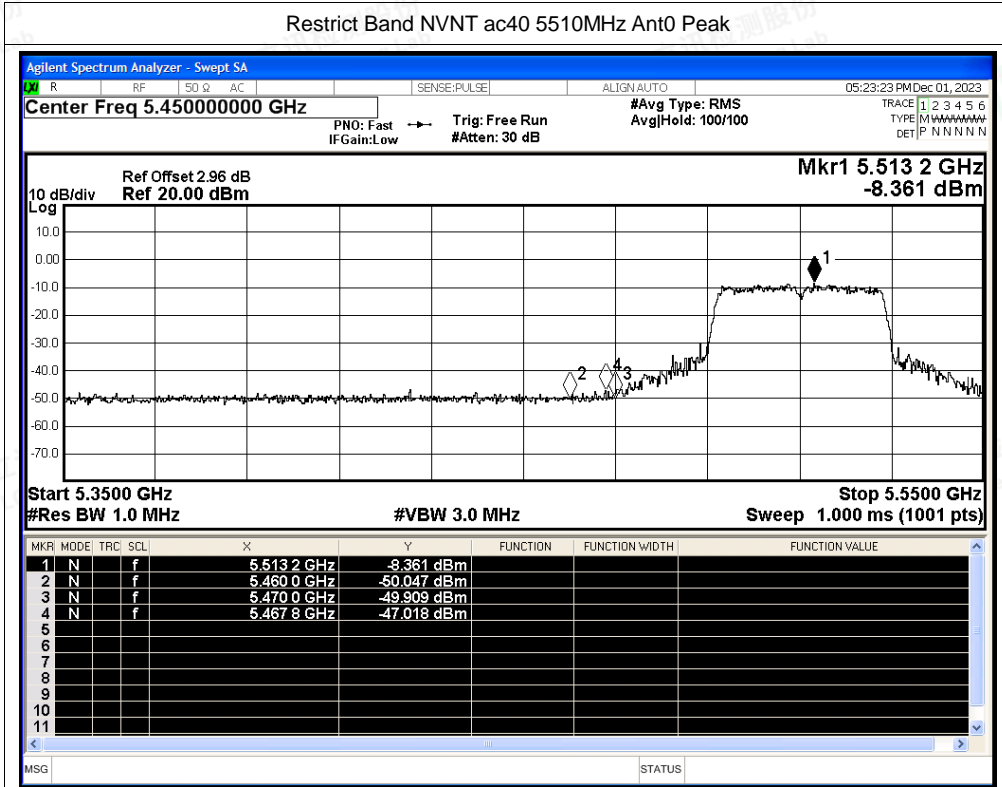
Restrict Band NVNT ac20 5700MHz Ant0 Average



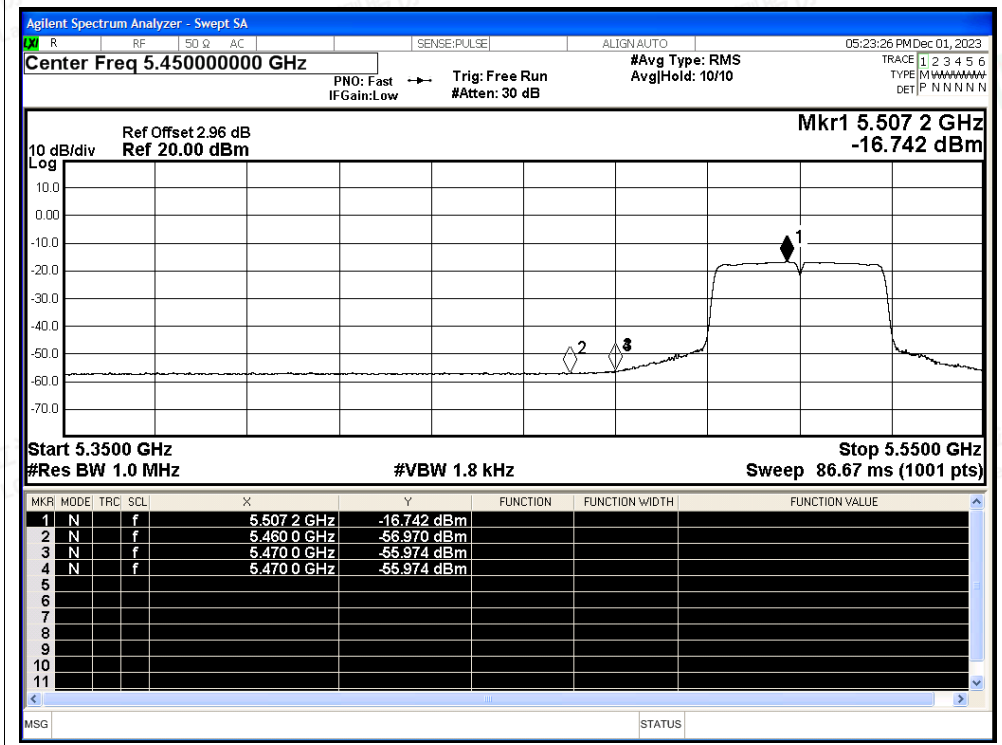




Restrict Band NVNT ac40 5510MHz Ant0 Peak

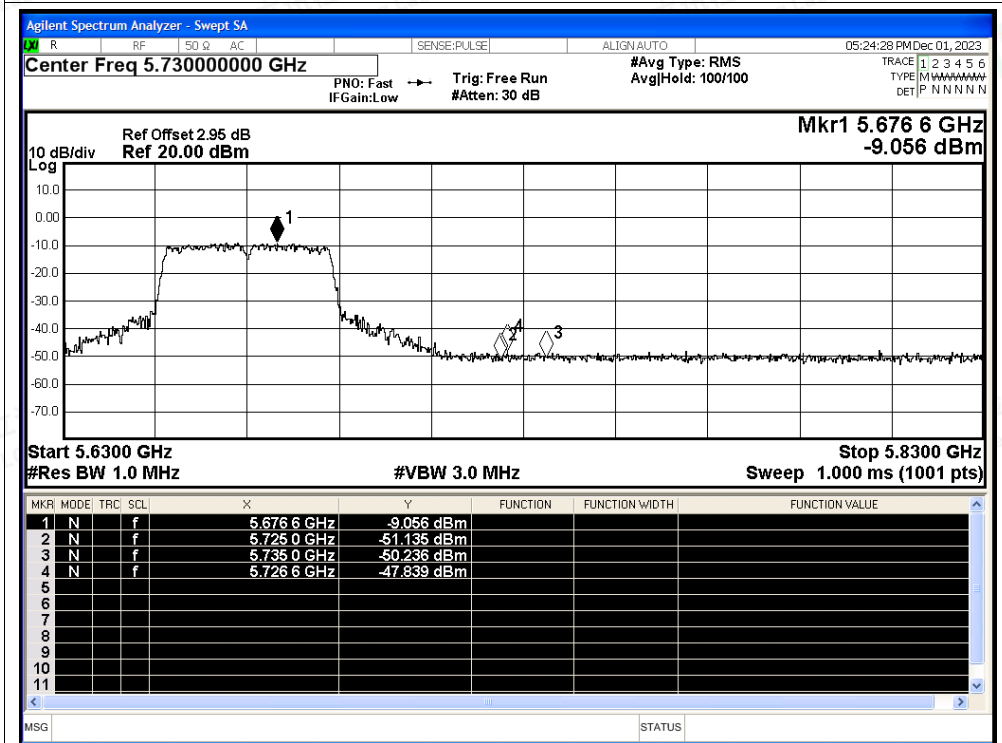


Restrict Band NVNT ac40 5510MHz Ant0 Average

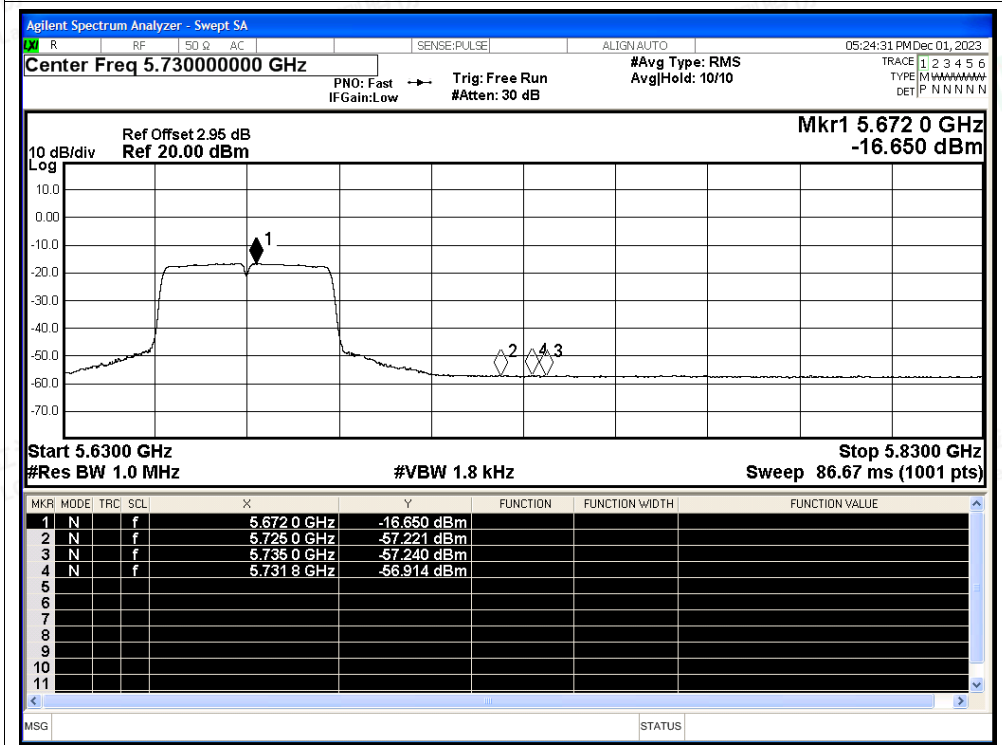




Restrict Band NVNT ac40 5670MHz Ant0 Peak

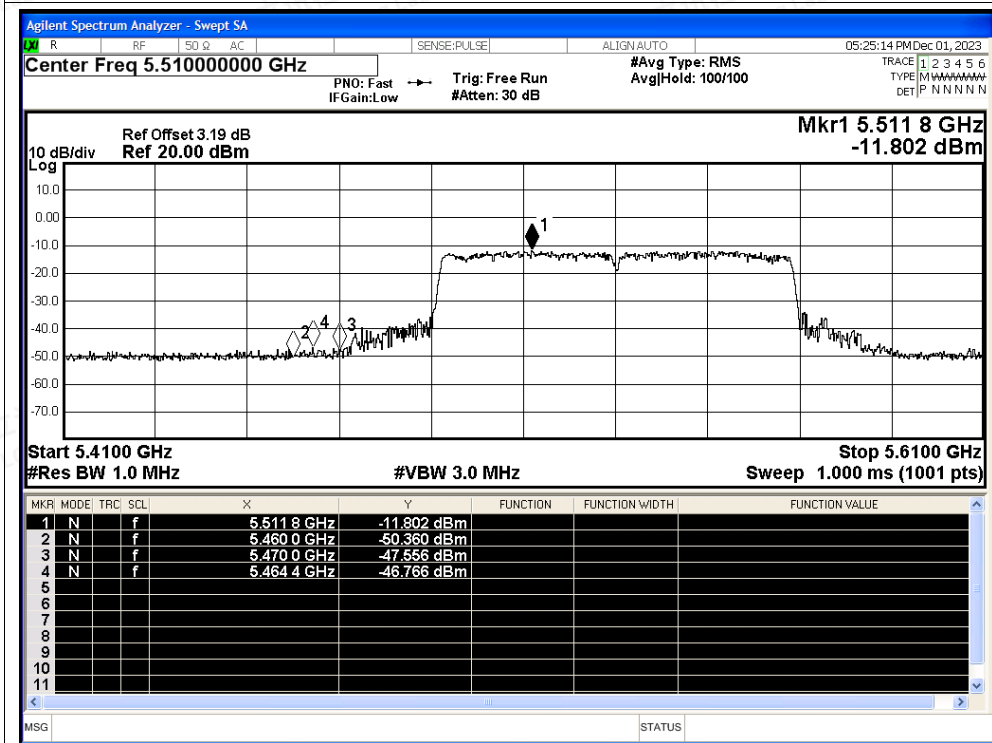


Restrict Band NVNT ac40 5670MHz Ant0 Average

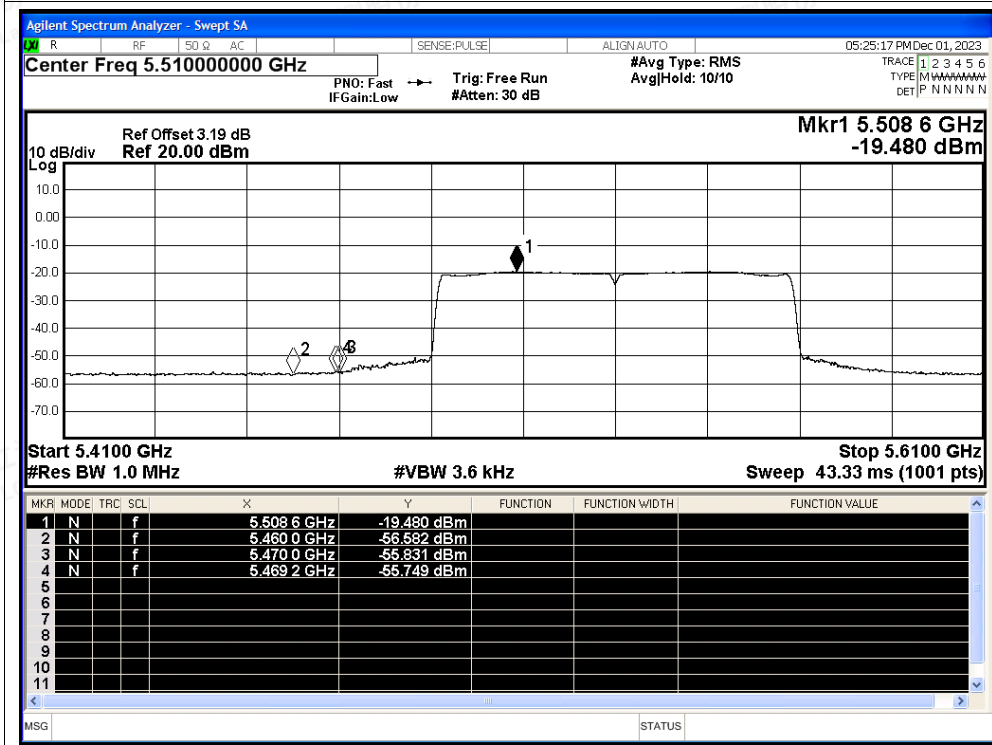




Restrict Band NVNT ac80 5530MHz Ant0 Peak

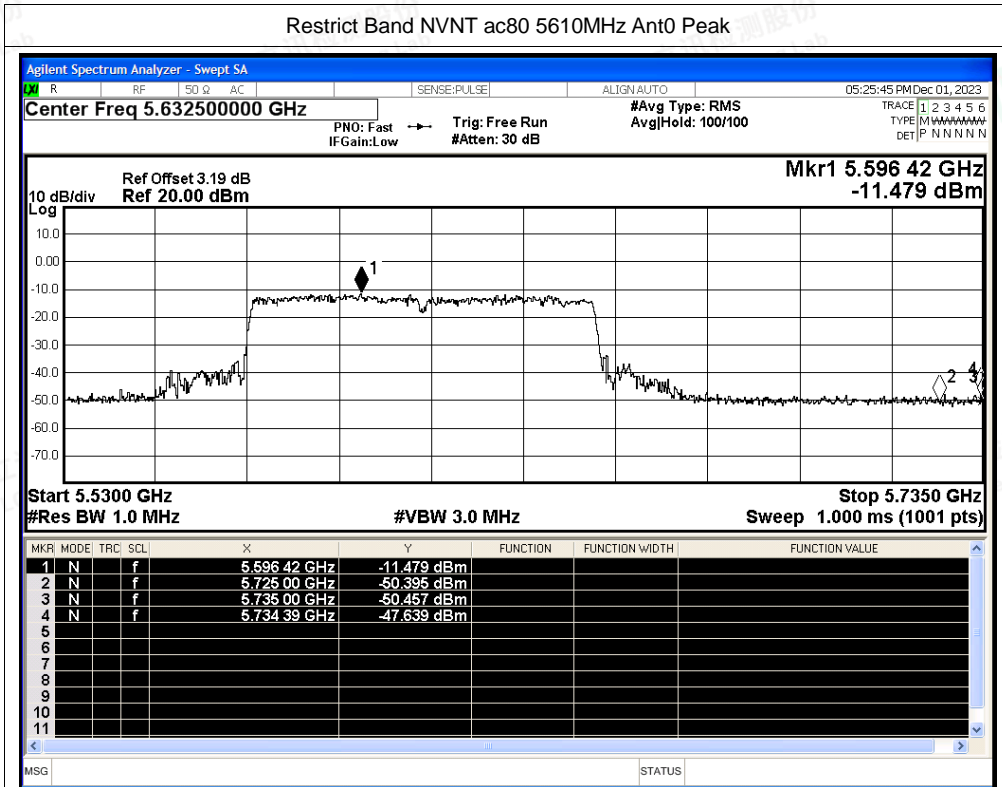


Restrict Band NVNT ac80 5530MHz Ant0 Average

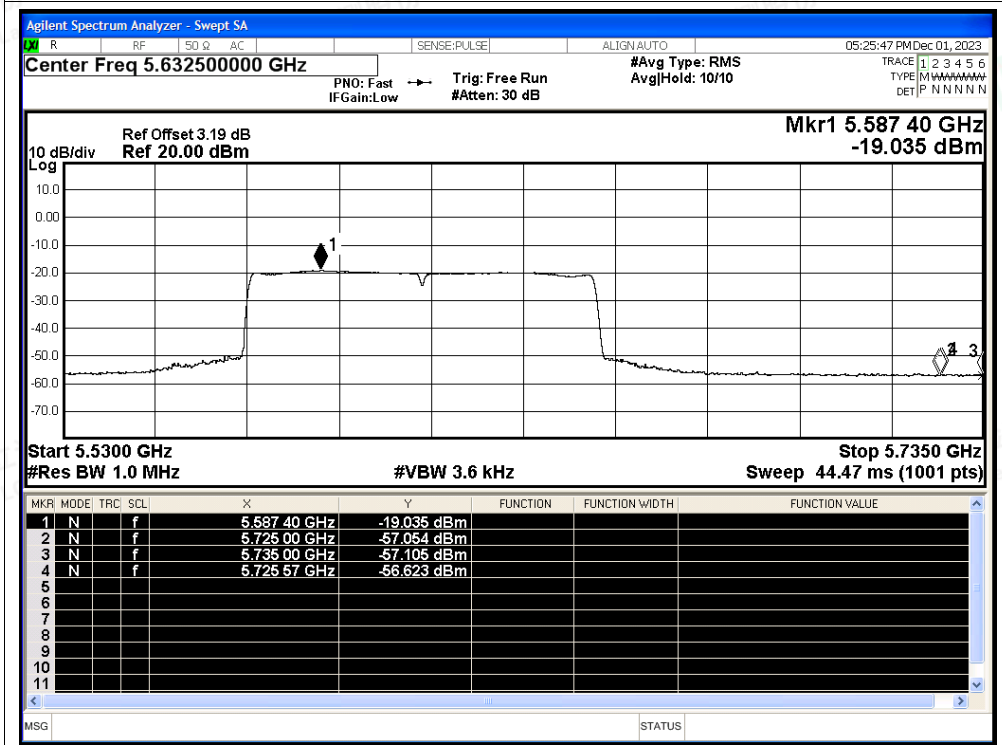




Restrict Band NVNT ac80 5610MHz Ant0 Peak



Restrict Band NVNT ac80 5610MHz Ant0 Average





### F.5 Frequency Stability

Condition	Mode	Frequency (MHz)	Antenna	Measured Frequency (MHz)	Frequency Error (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
NVNT	ac20	5500	Ant0	5499.94	-60000	-10.91	25	Pass
NVNT	ac20	5580	Ant0	5579.98	-20000	-3.58	25	Pass
NVNT	ac20	5700	Ant0	5699.98	-20000	-3.51	25	Pass
NVNT	ac40	5510	Ant0	5510	0	0	25	Pass
NVNT	ac40	5550	Ant0	5550	0	0	25	Pass
NVNT	ac40	5670	Ant0	5670	0	0	25	Pass
NVNT	ac80	5530	Ant0	5530	0	0	25	Pass
NVNT	ac80	5610	Ant0	5610	0	0	25	Pass

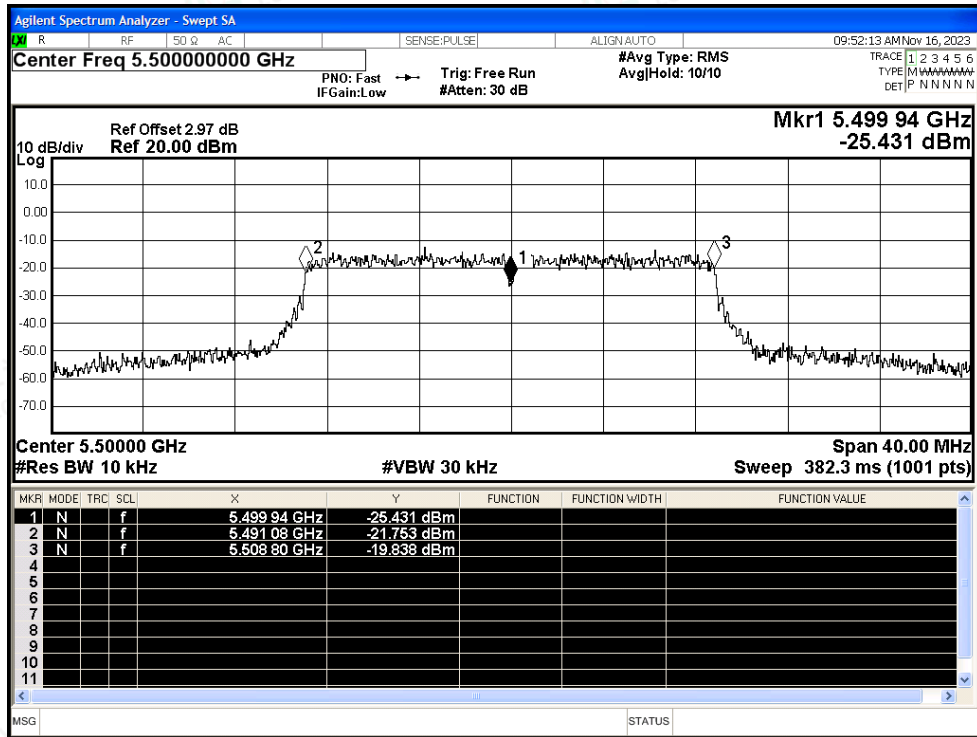


Shenzhen LCS Compliance Testing Laboratory Ltd.  
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China  
Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com  
Scan code to check authenticity

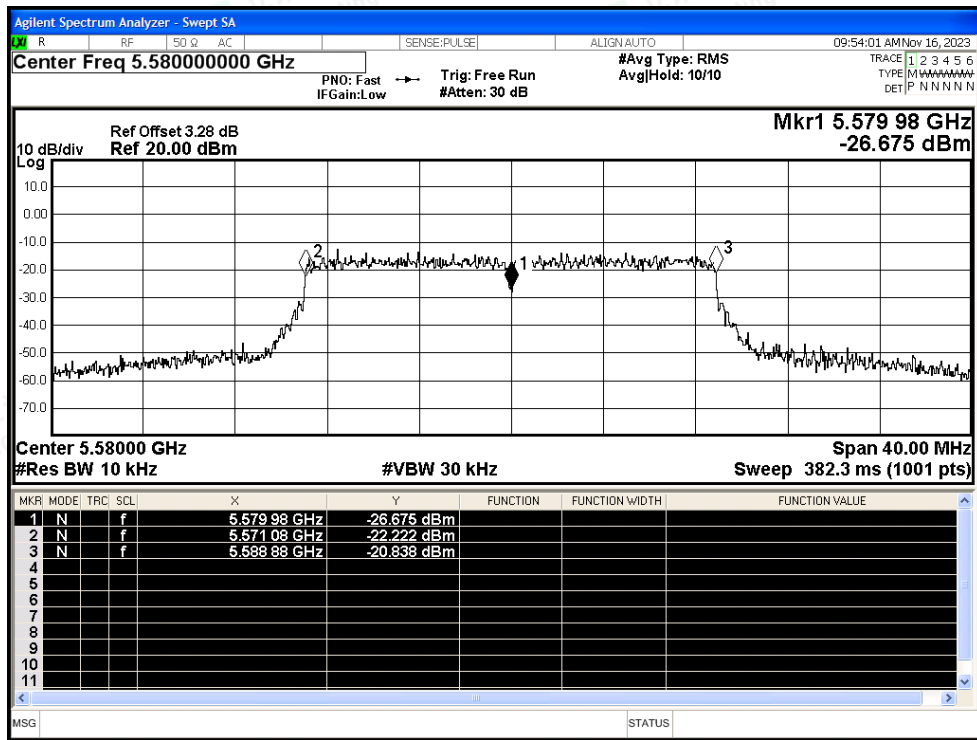


Test Graphs

Freq. Stability NVNT ac20 5500MHz Ant0

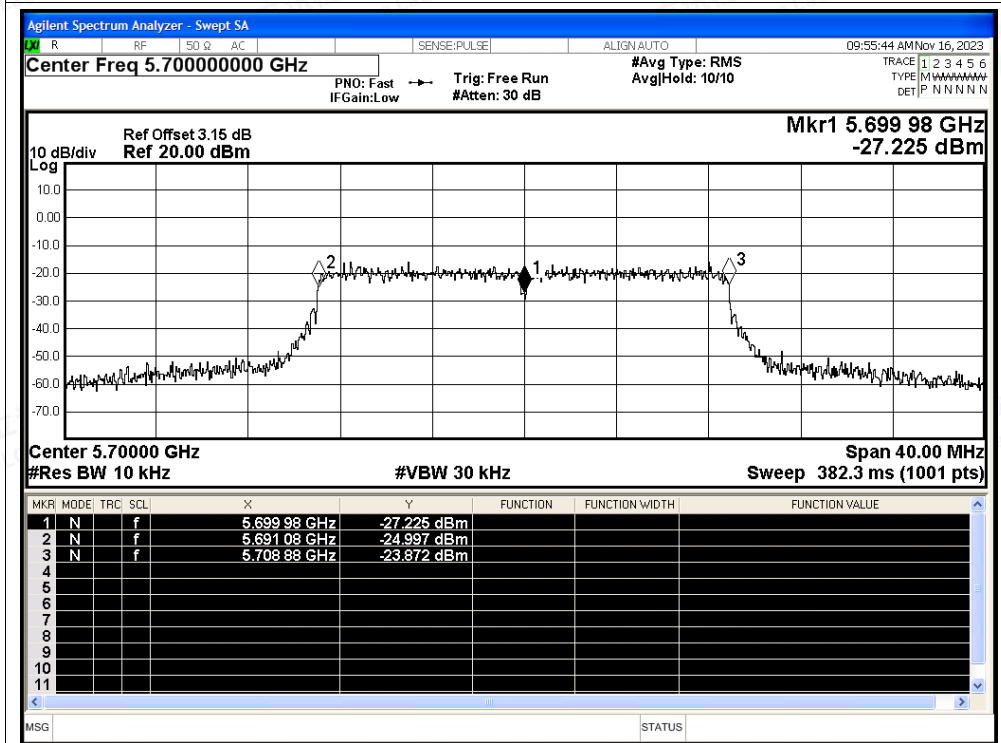


Freq. Stability NVNT ac20 5580MHz Ant0

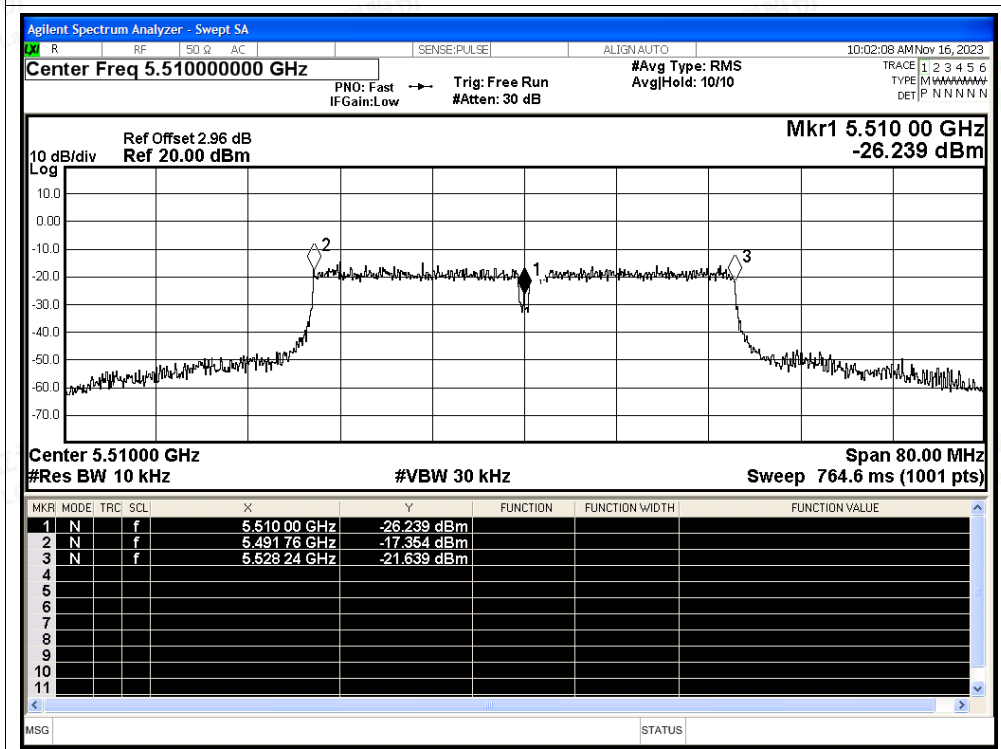




Freq. Stability NVNT ac20 5700MHz Ant0

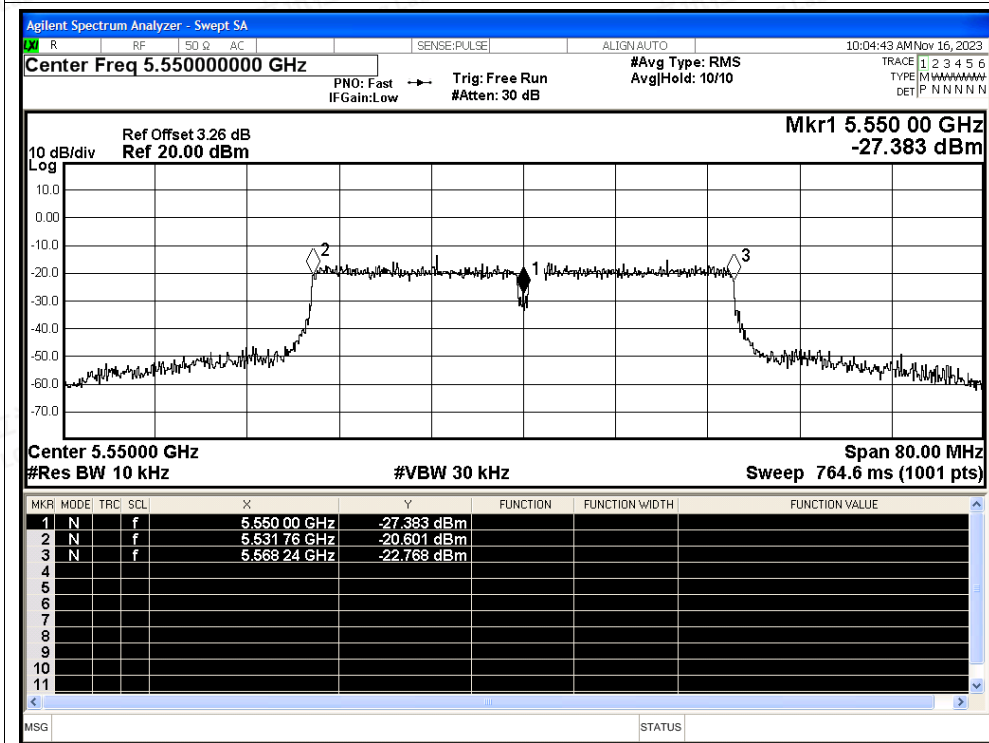


Freq. Stability NVNT ac40 5510MHz Ant0

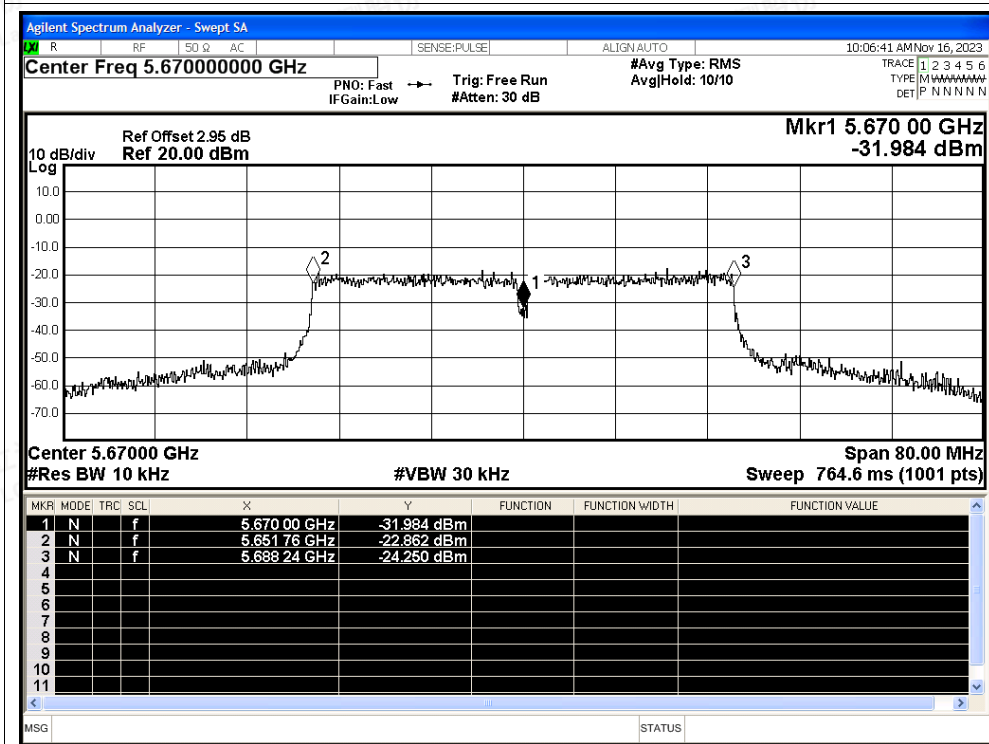




Freq. Stability NVNT ac40 5550MHz Ant0



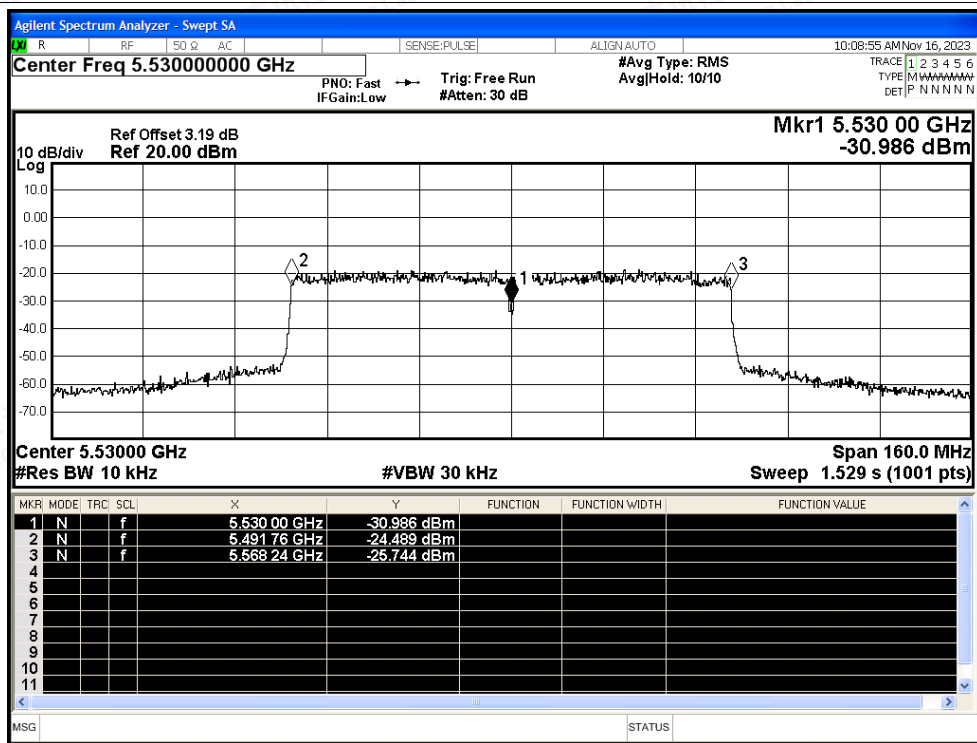
Freq. Stability NVNT ac40 5670MHz Ant0



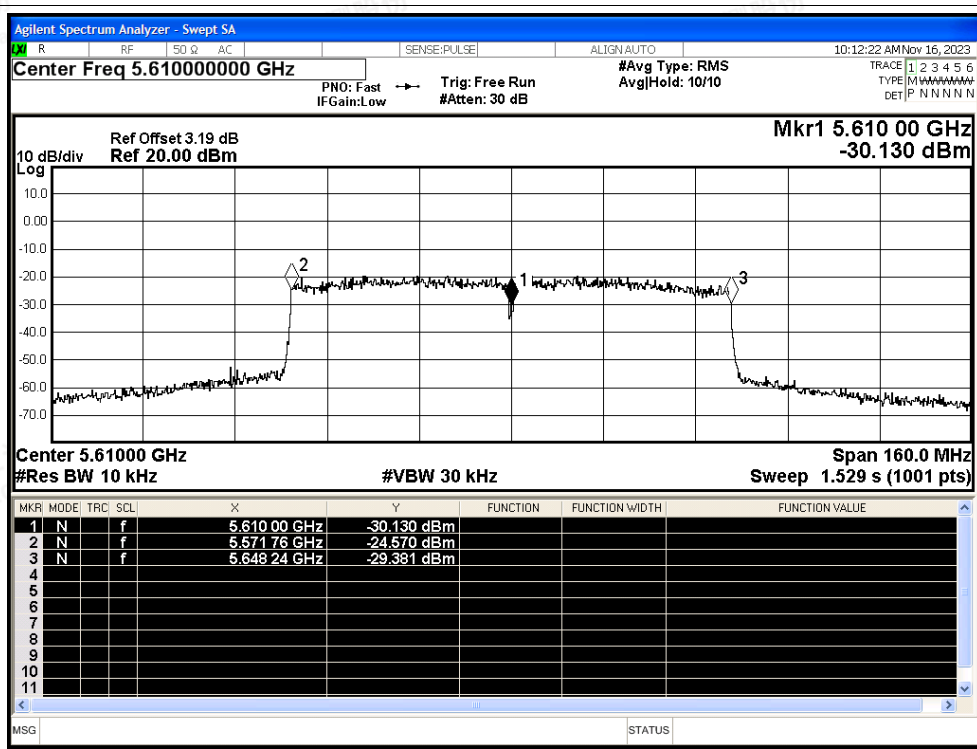




Freq. Stability NVNT ac80 5530MHz Ant0



Freq. Stability NVNT ac80 5610MHz Ant0





### F.6 Duty Cycle

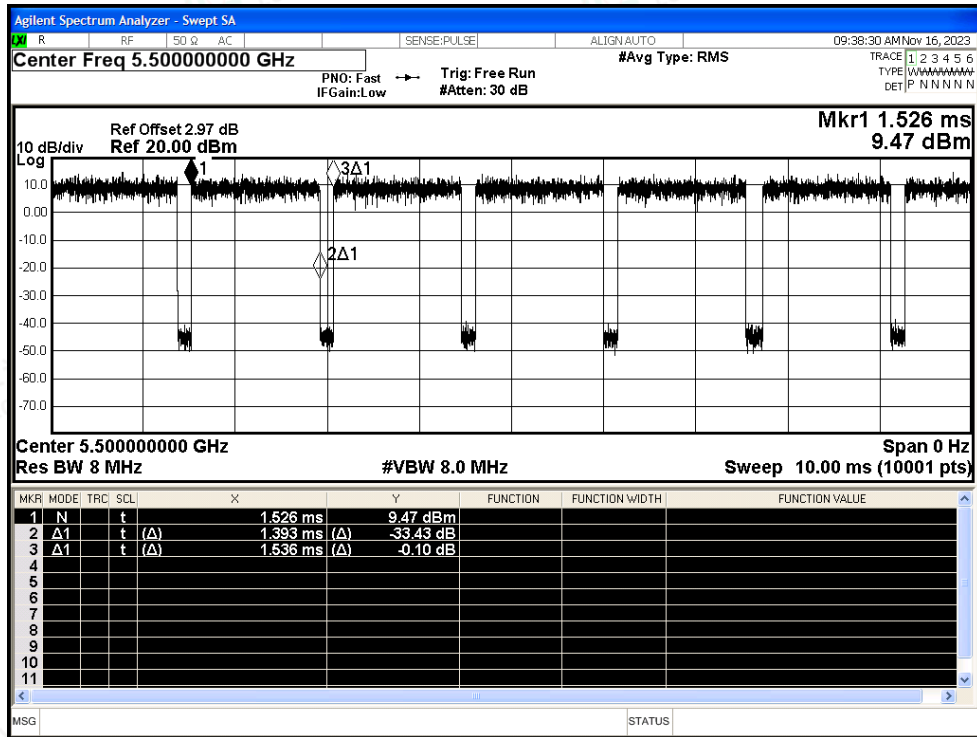
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	a	5500	Ant0	90.69	0.42	0.72
NVNT	a	5580	Ant0	90.1	0.45	0.72
NVNT	a	5700	Ant0	90.1	0.45	0.72
NVNT	n20	5500	Ant0	88.47	0.53	0.85
NVNT	n20	5580	Ant0	89.07	0.5	0.85
NVNT	n20	5700	Ant0	87.29	0.59	0.85
NVNT	n40	5510	Ant0	79.57	0.99	1.7
NVNT	n40	5550	Ant0	80.41	0.95	1.7
NVNT	n40	5670	Ant0	79.43	1	1.7
NVNT	ac20	5500	Ant0	89.16	0.5	0.84
NVNT	ac20	5580	Ant0	88.57	0.53	0.84
NVNT	ac20	5700	Ant0	87.39	0.59	0.84
NVNT	ac40	5510	Ant0	79.54	0.99	1.69
NVNT	ac40	5550	Ant0	79.54	0.99	1.69
NVNT	ac40	5670	Ant0	79.54	0.99	1.69
NVNT	ac80	5530	Ant0	63.52	1.97	3.38
NVNT	ac80	5610	Ant0	63.3	1.99	3.39



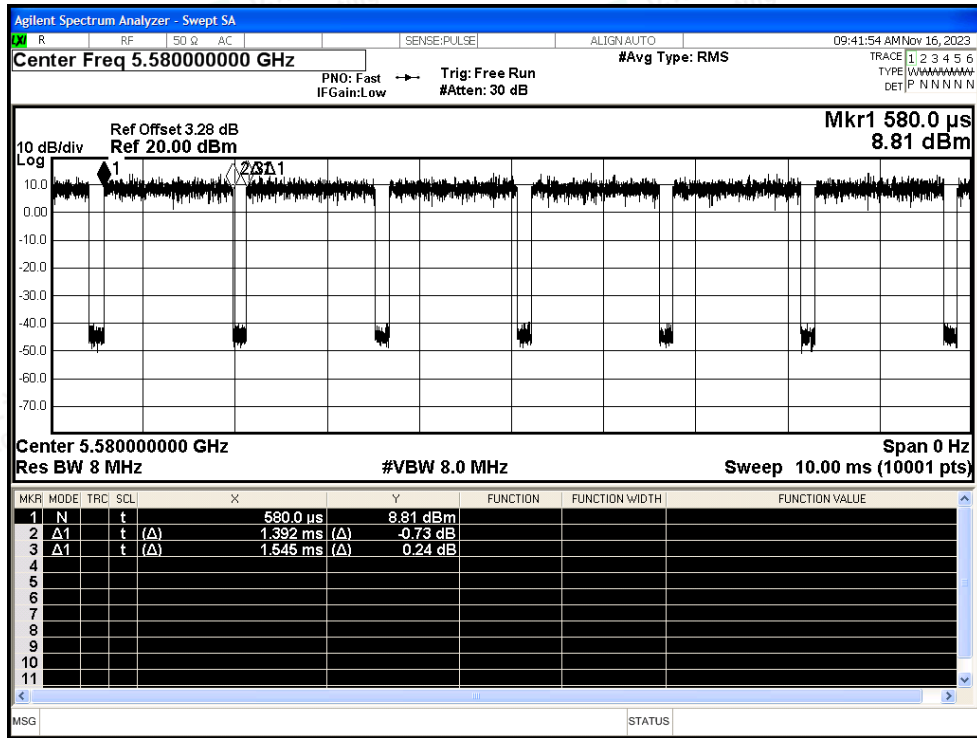


Test Graphs

Duty Cycle NVNT a 5500MHz Ant0

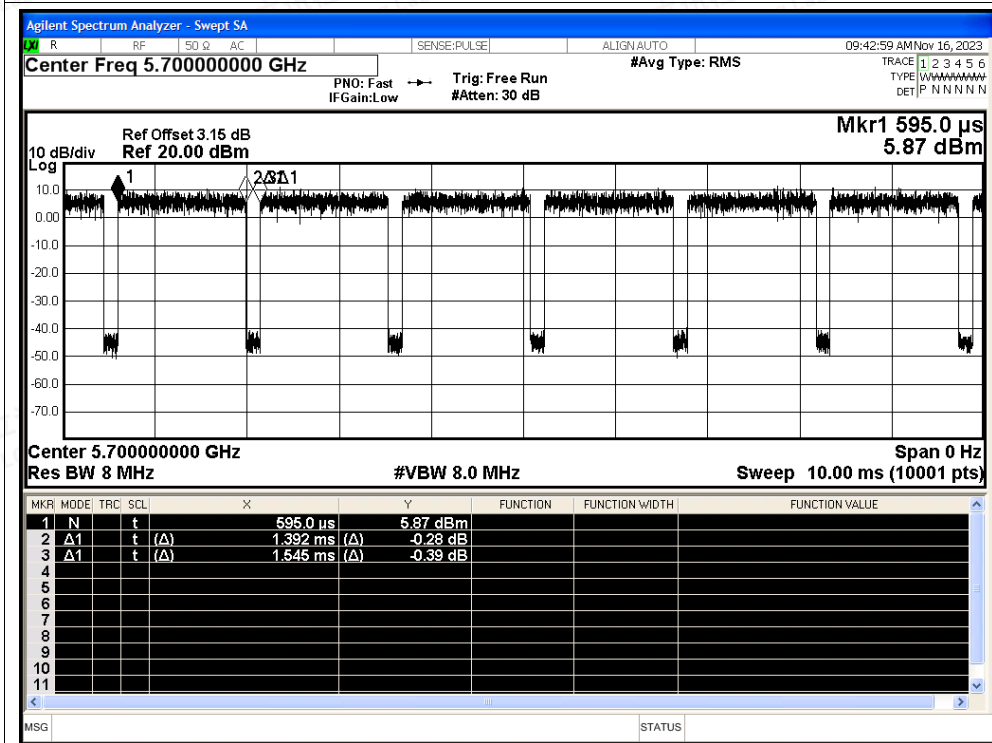


Duty Cycle NVNT a 5580MHz Ant0

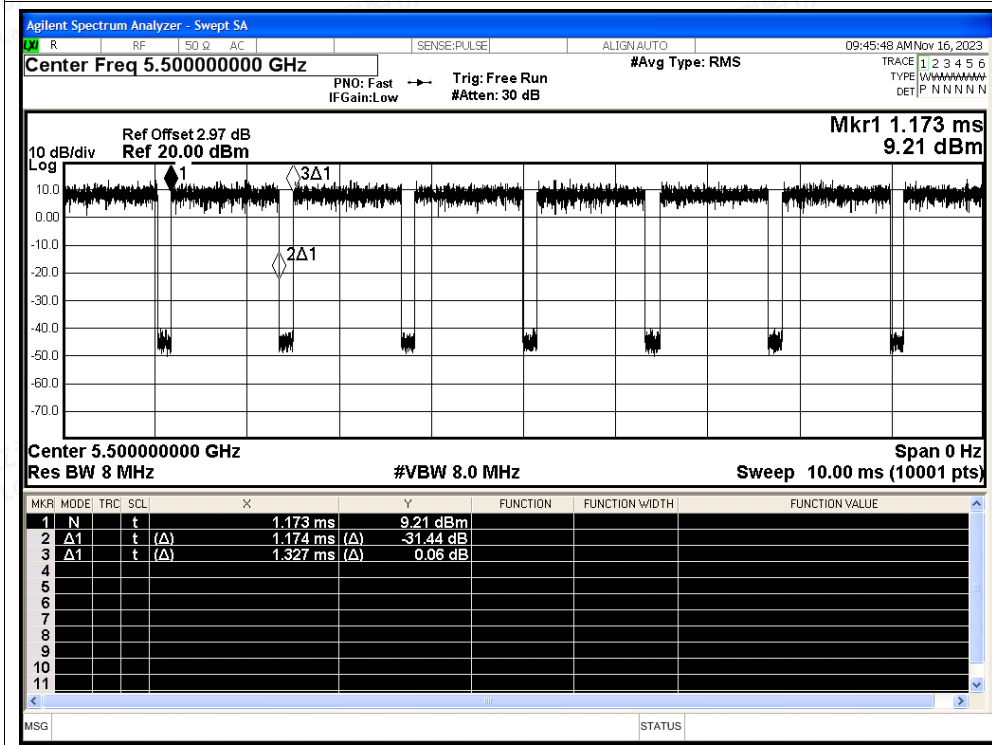




Duty Cycle NVNT a 5700MHz Ant0

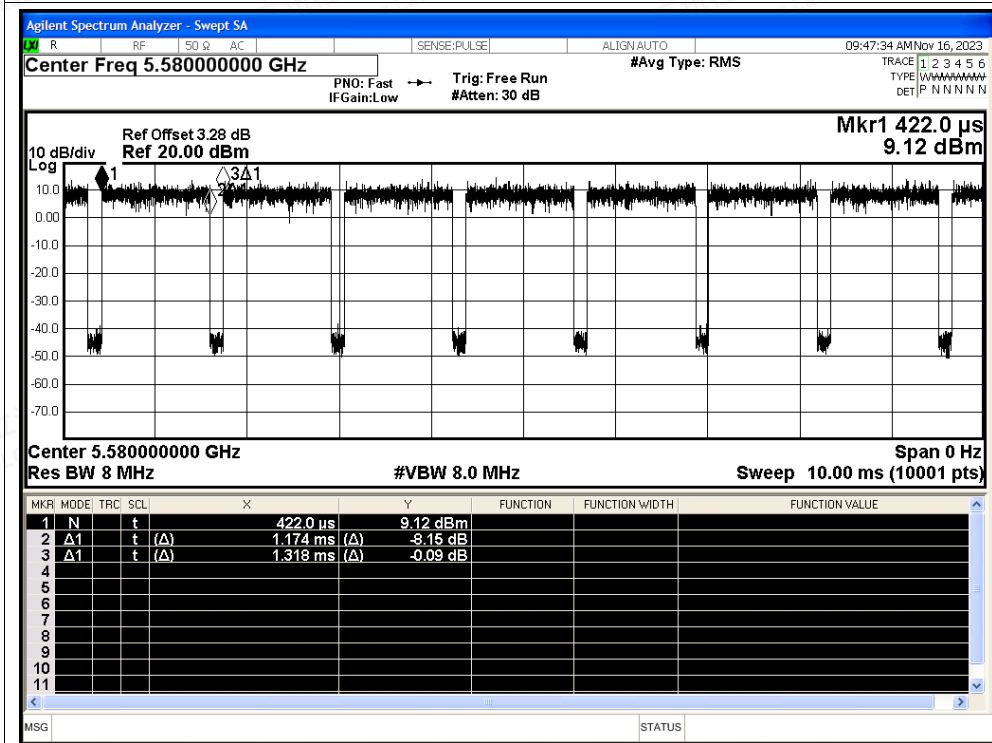


Duty Cycle NVNT n20 5500MHz Ant0

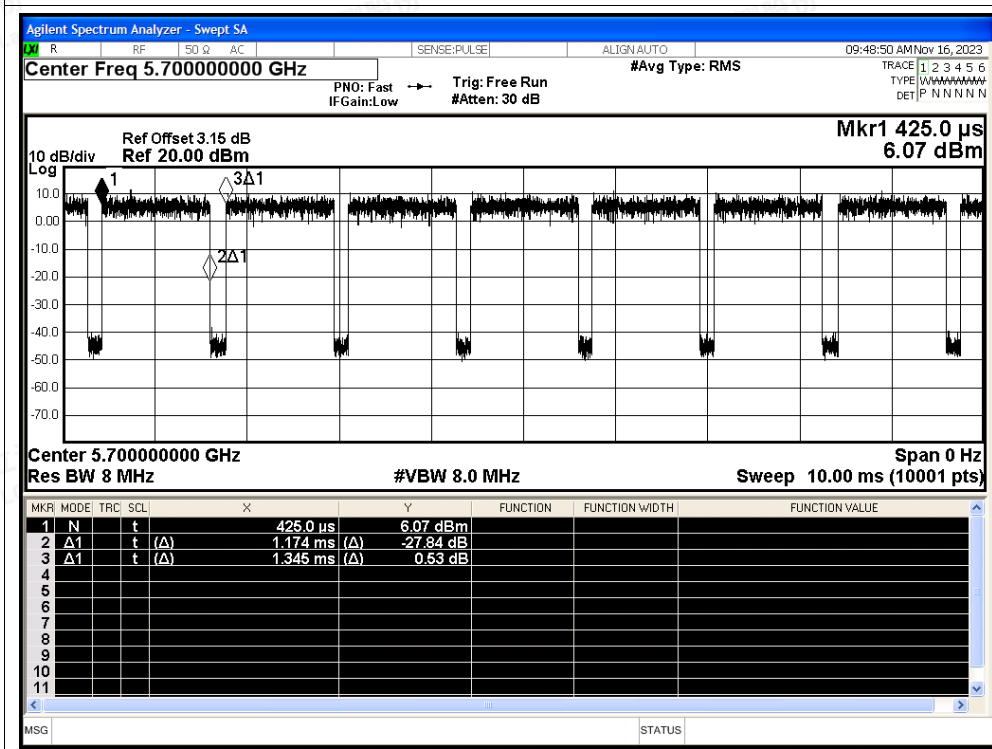




Duty Cycle NVNT n20 5580MHz Ant0

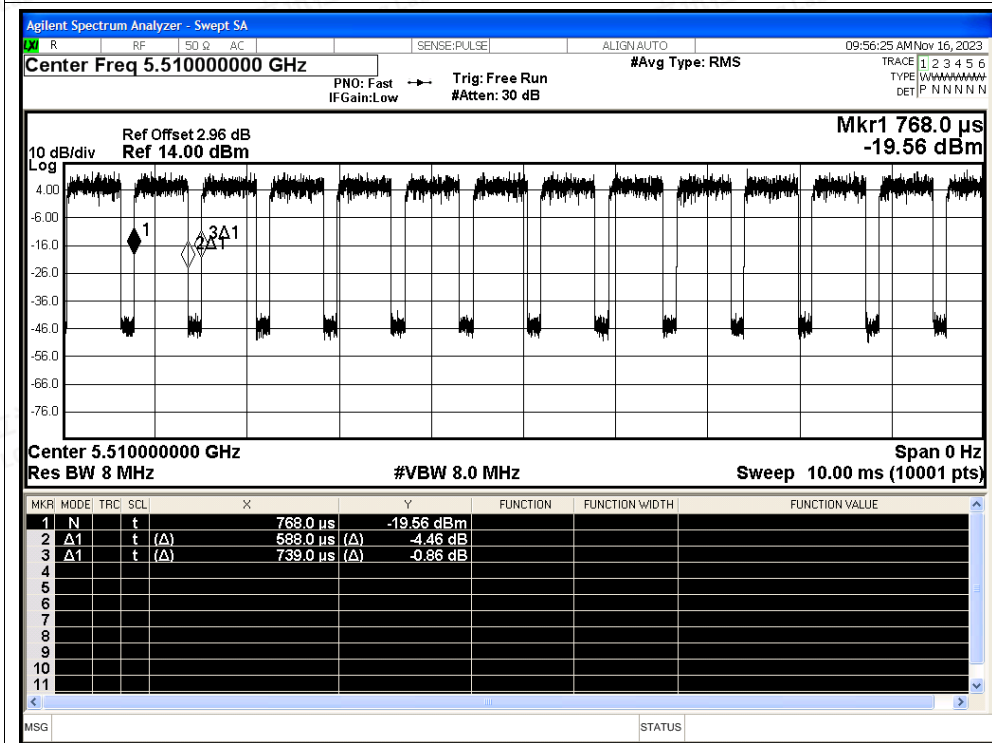


Duty Cycle NVNT n20 5700MHz Ant0

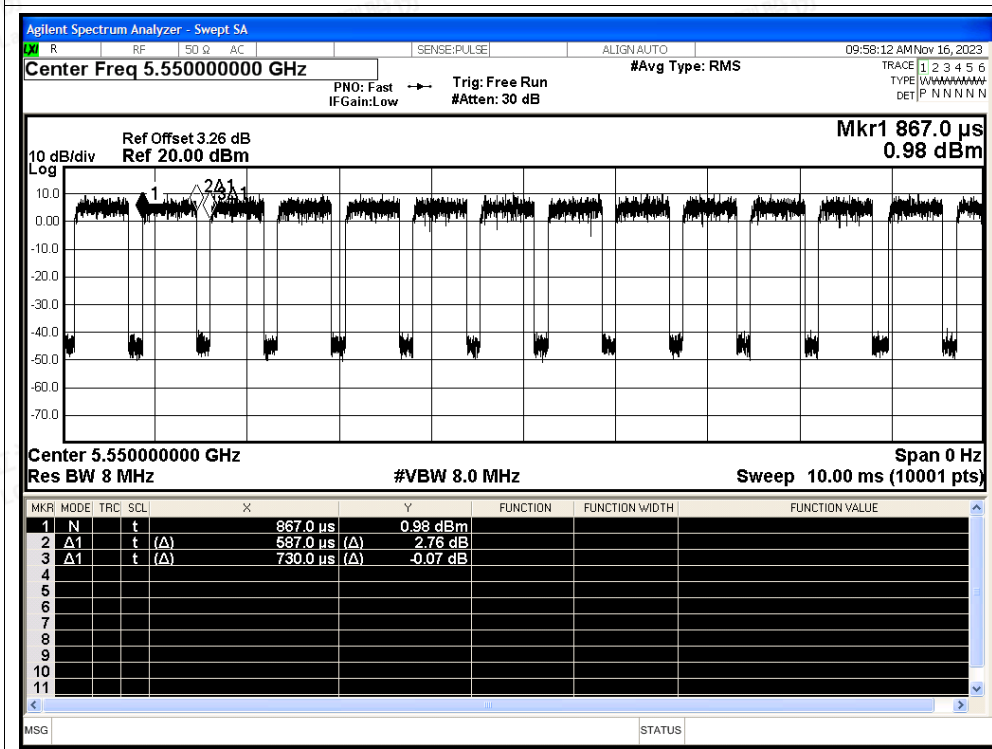




Duty Cycle NVNT n40 5510MHz Ant0

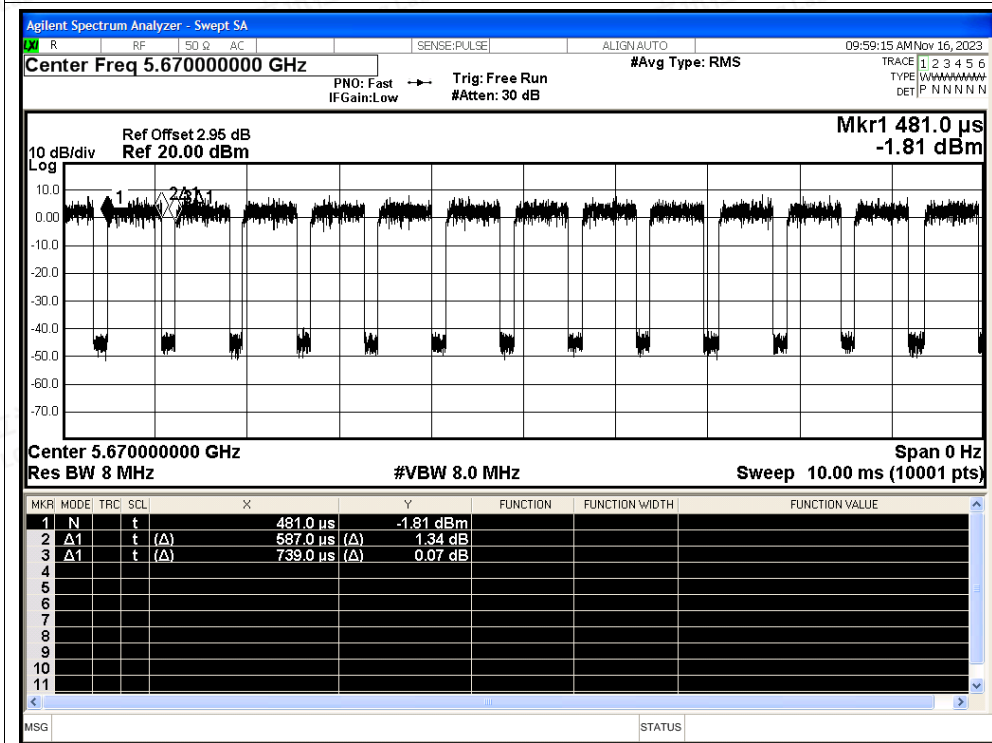


Duty Cycle NVNT n40 5550MHz Ant0

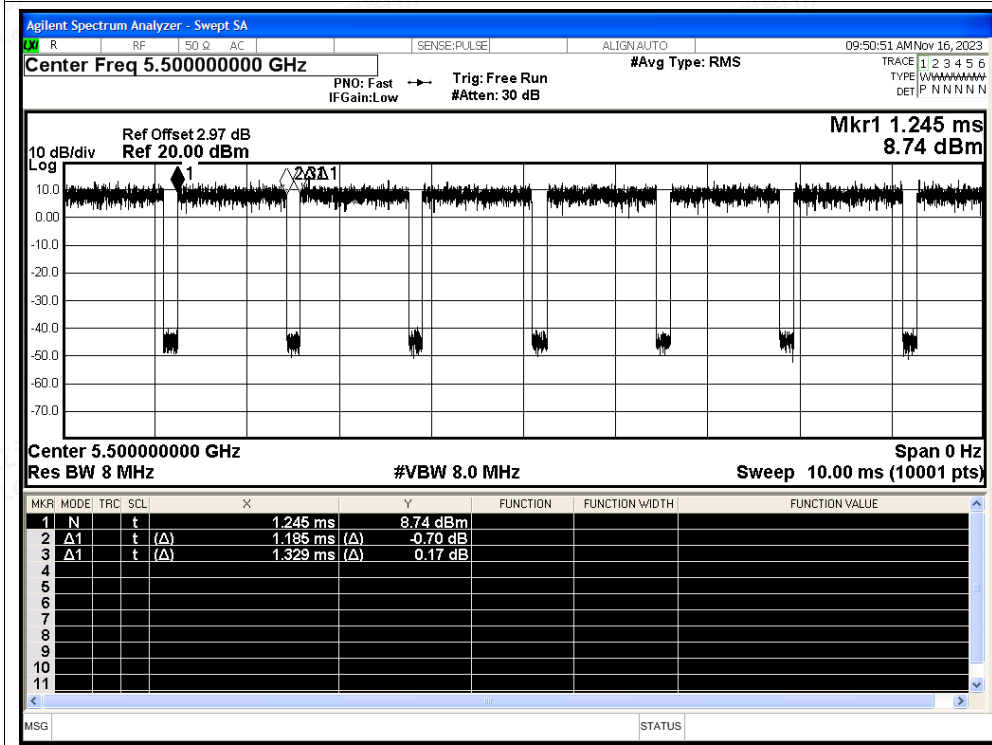




Duty Cycle NVNT n40 5670MHz Ant0

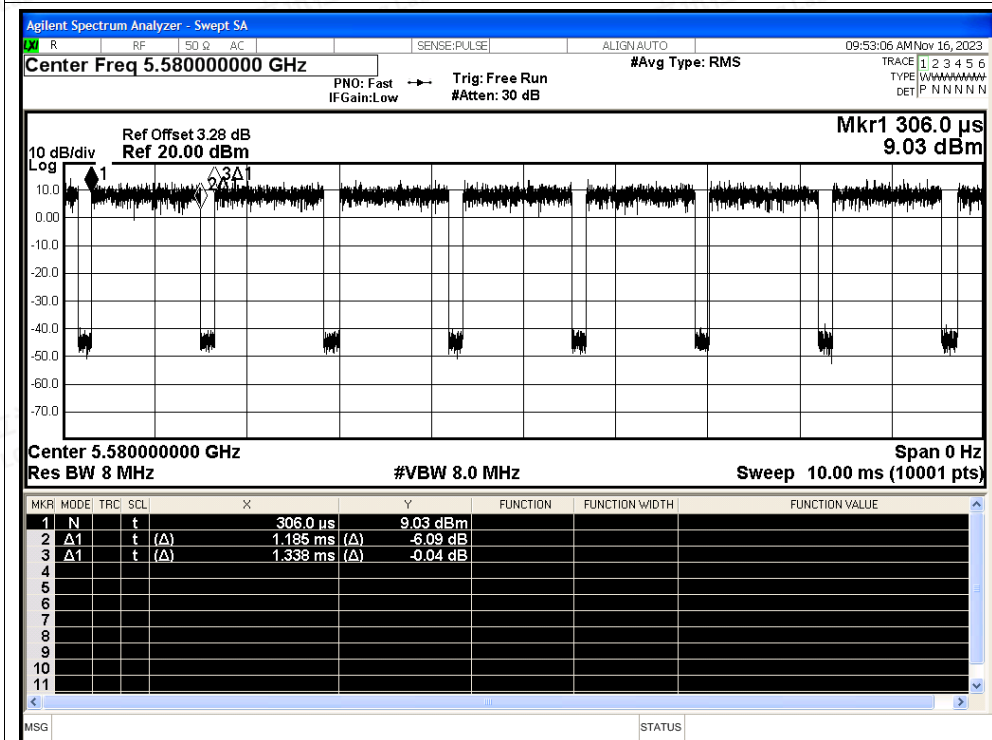


Duty Cycle NVNT ac20 5500MHz Ant0

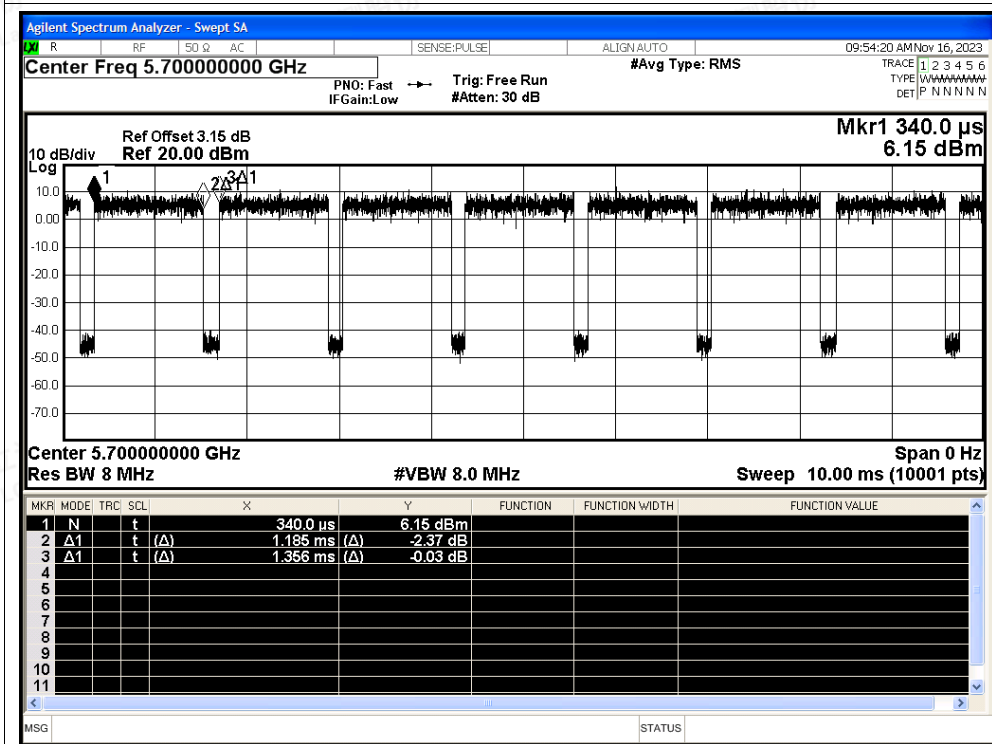




Duty Cycle NVNT ac20 5580MHz Ant0



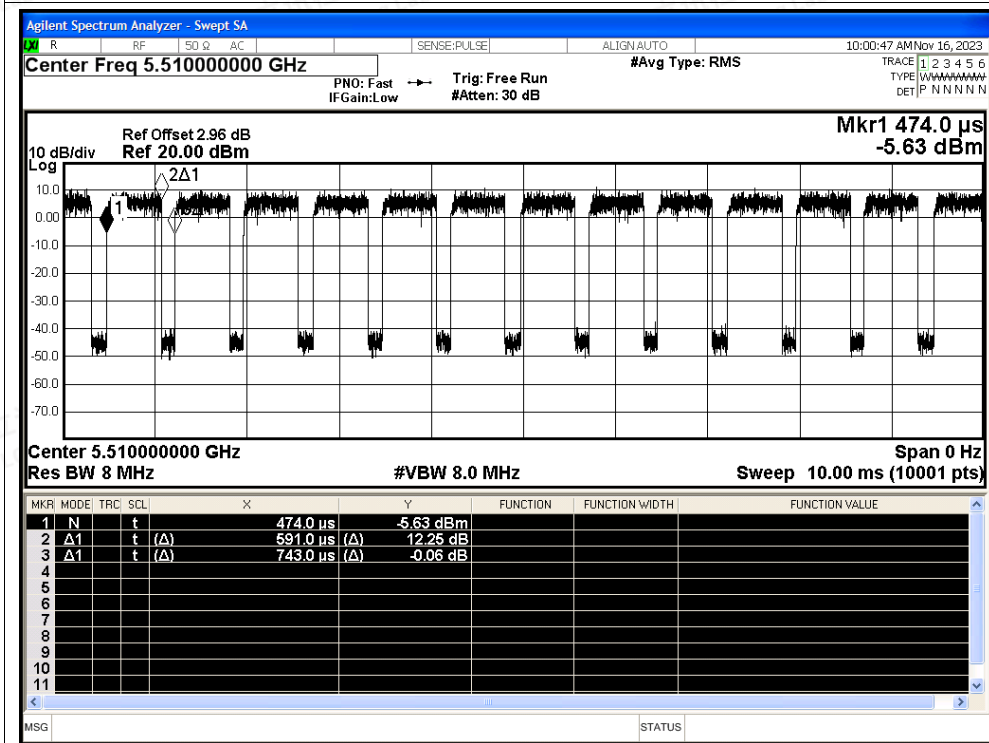
Duty Cycle NVNT ac20 5700MHz Ant0



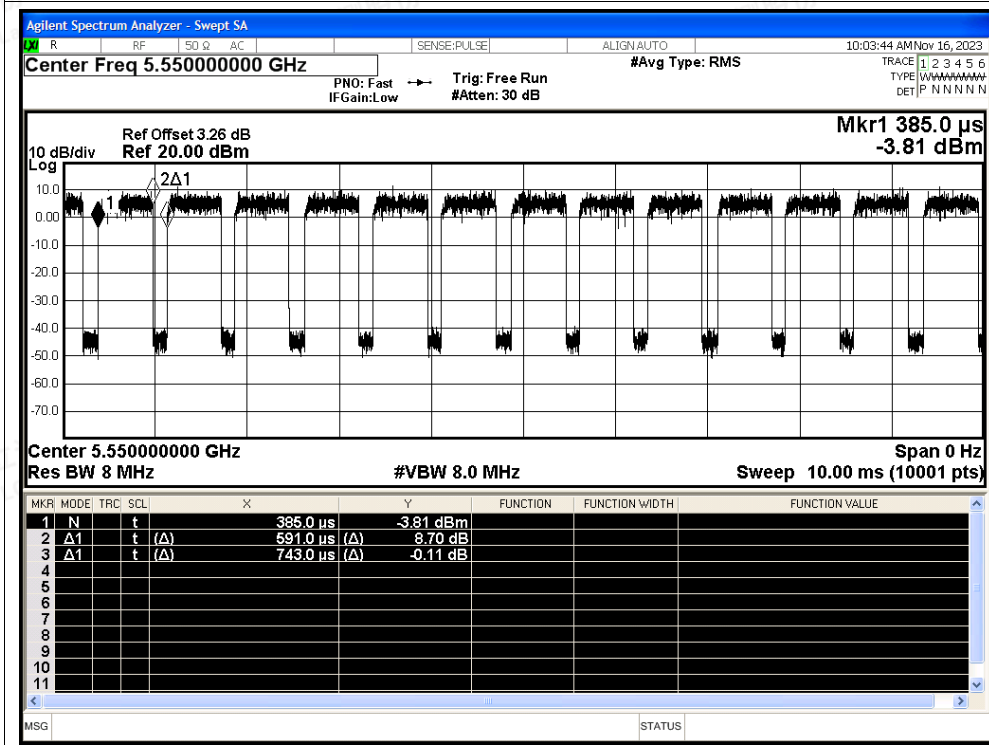




Duty Cycle NVNT ac40 5510MHz Ant0

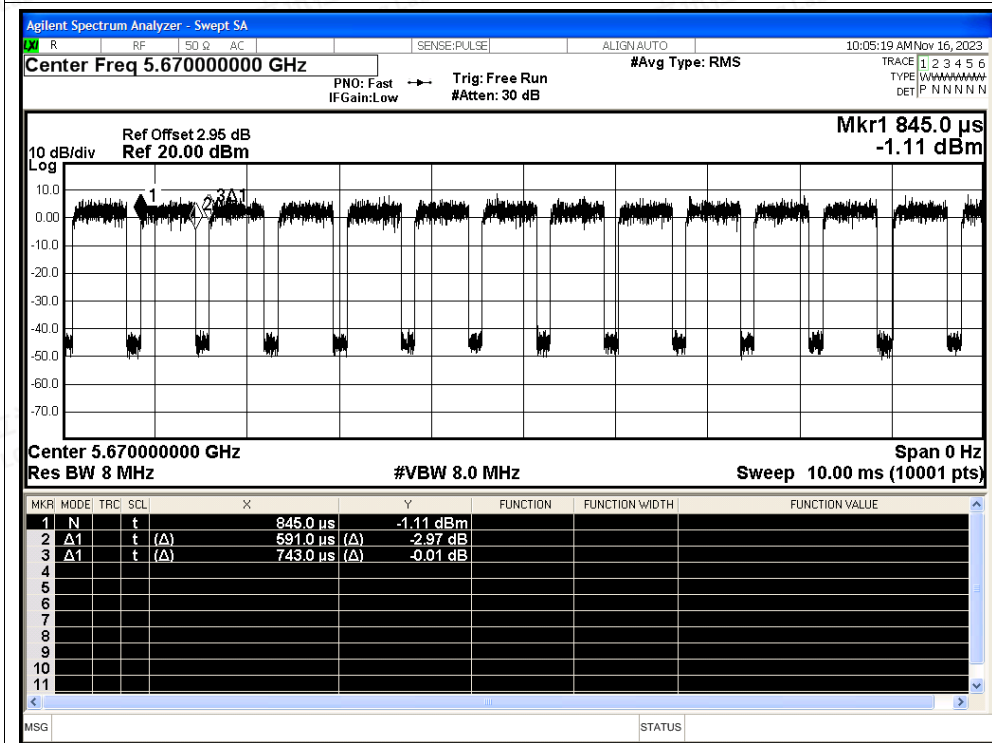


Duty Cycle NVNT ac40 5550MHz Ant0





Duty Cycle NVNT ac40 5670MHz Ant0



Duty Cycle NVNT ac80 5530MHz Ant0

