Appendix F

RF Test Data for 5.5GWIFI(Conducted Measurement)

Product Name: In-car entertainment system

Test Model: ZT-A

Environmental Conditions

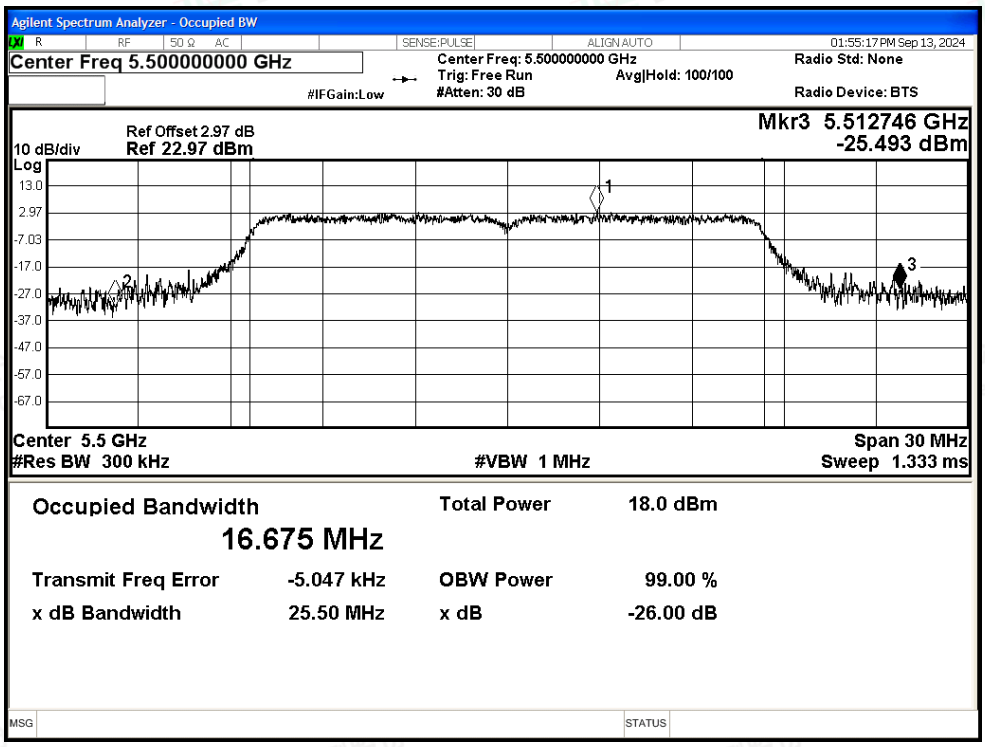
Temperature:	23.8° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Can Kun
Supervised by:	Nick Peng

F.1 -26dB Bandwidth

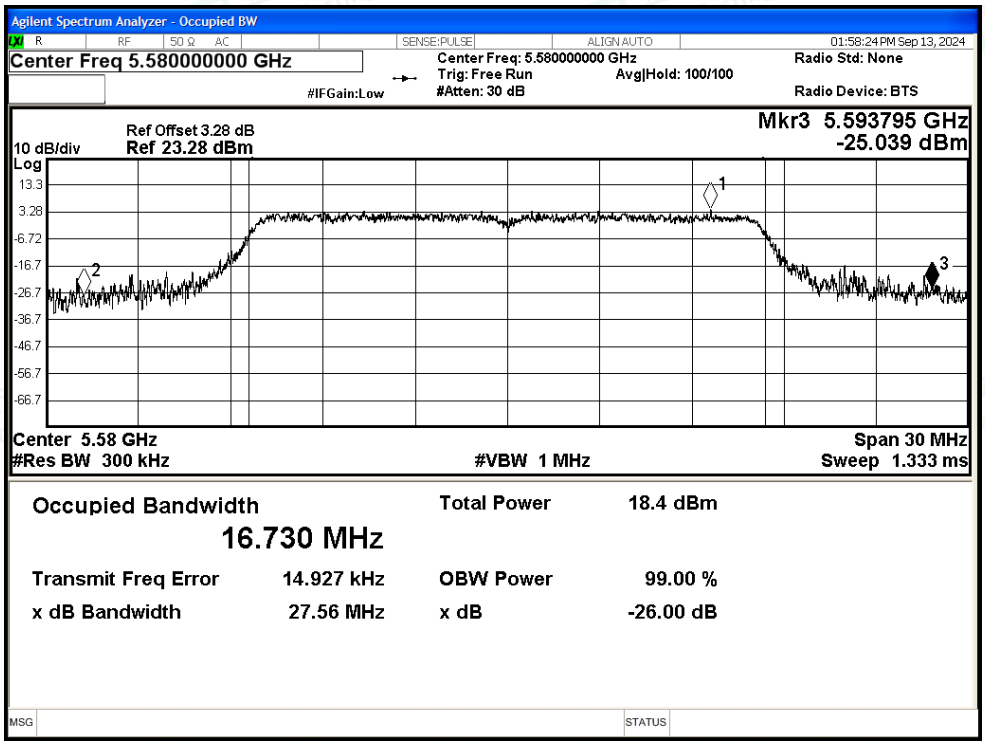
Condition	Mode	Frequency (MHz)	Antenna	-26 dB Bandwidth (MHz)	Limit -26 dB Bandwidth (MHz)	Verdict
NVNT	a	5500	Ant1	25.502	---	Pass
NVNT	a	5580	Ant1	27.559	---	Pass
NVNT	a	5700	Ant1	26.393	---	Pass
NVNT	n20	5500	Ant1	25.383	---	Pass
NVNT	n20	5580	Ant1	26.02	---	Pass
NVNT	n20	5700	Ant1	27.82	---	Pass
NVNT	n40	5510	Ant1	39.289	---	Pass
NVNT	n40	5550	Ant1	41.722	---	Pass
NVNT	n40	5670	Ant1	40.357	---	Pass
NVNT	ac20	5500	Ant1	27.239	---	Pass
NVNT	ac20	5580	Ant1	28.421	---	Pass
NVNT	ac20	5700	Ant1	27.934	---	Pass
NVNT	ac40	5510	Ant1	42.99	---	Pass
NVNT	ac40	5550	Ant1	39.16	---	Pass
NVNT	ac40	5670	Ant1	44.877	---	Pass
NVNT	ac80	5530	Ant1	78.709	---	Pass
NVNT	ac80	5610	Ant1	78.481	---	Pass

Test Graphs

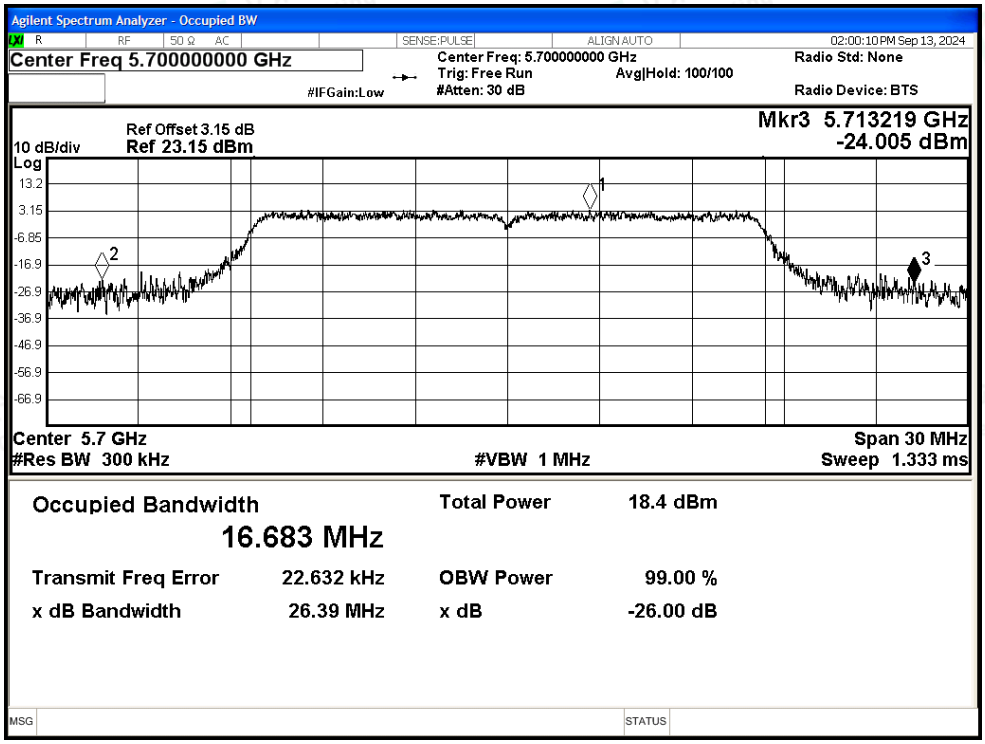
-26dB Bandwidth NVNT a 5500MHz Ant1



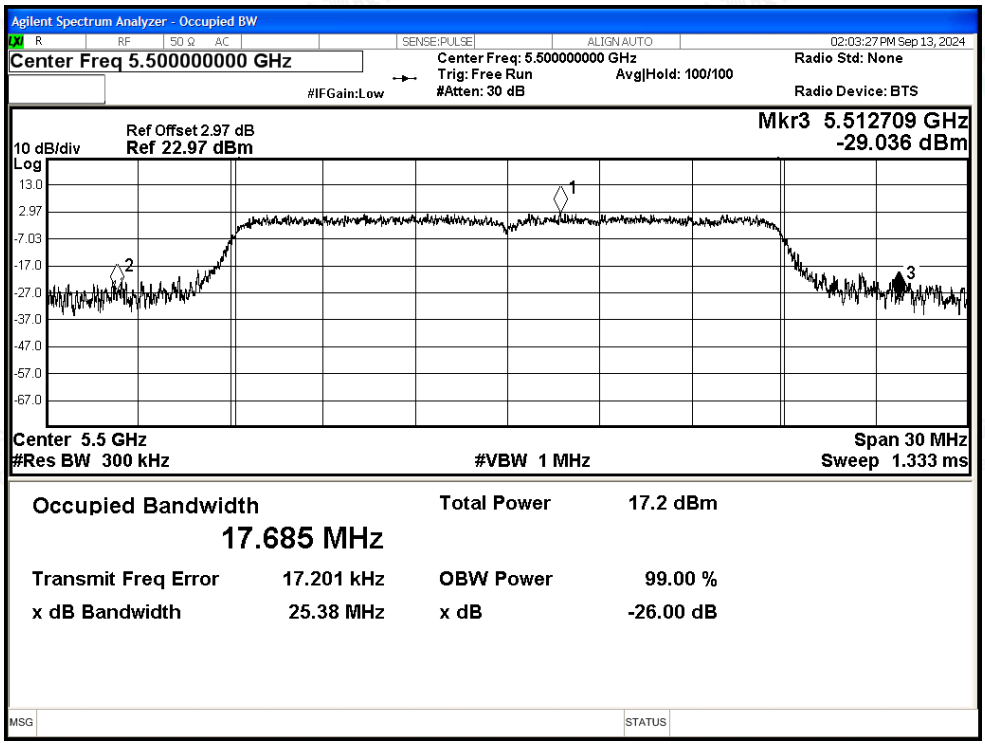
-26dB Bandwidth NVNT a 5580MHz Ant1



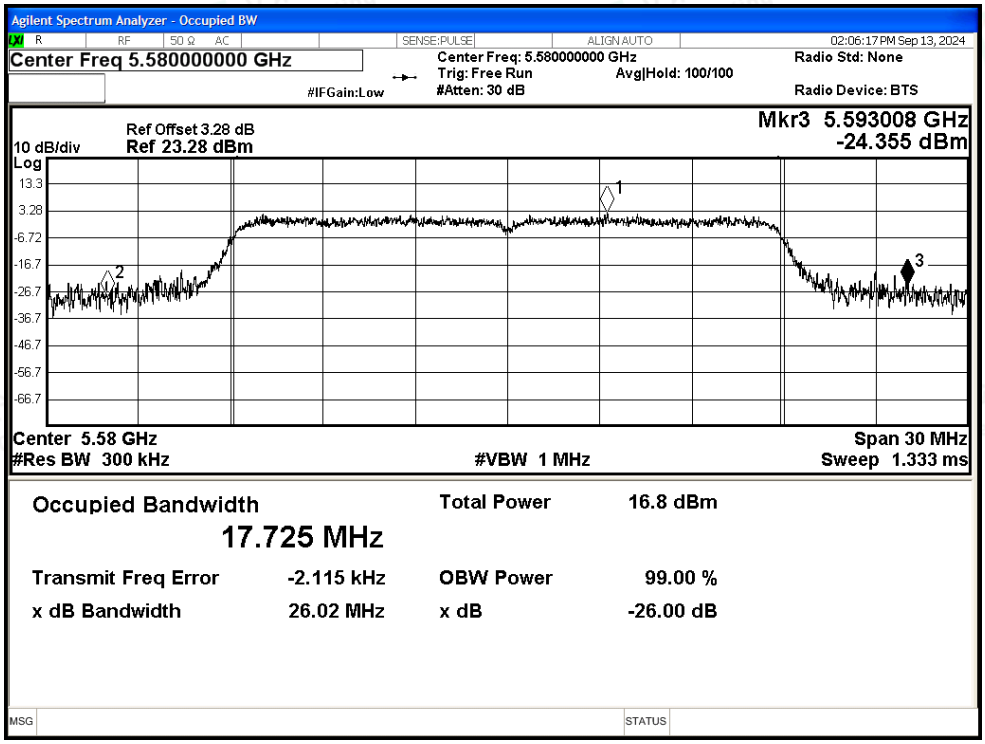
-26dB Bandwidth NVNT a 5700MHz Ant1



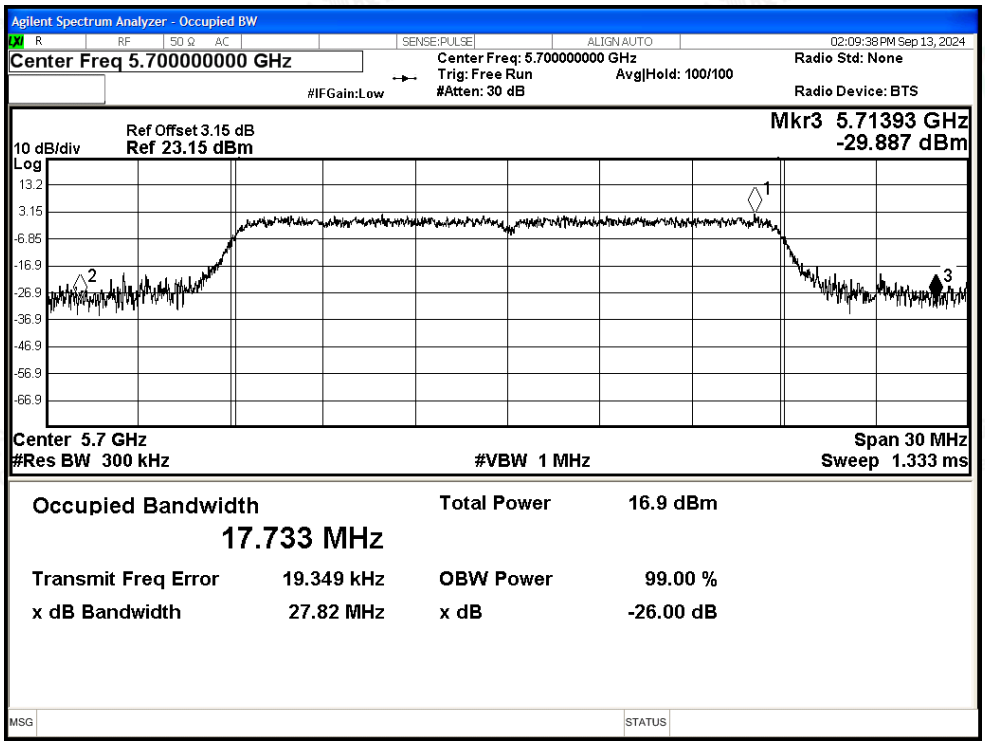
-26dB Bandwidth NVNT n20 5500MHz Ant1



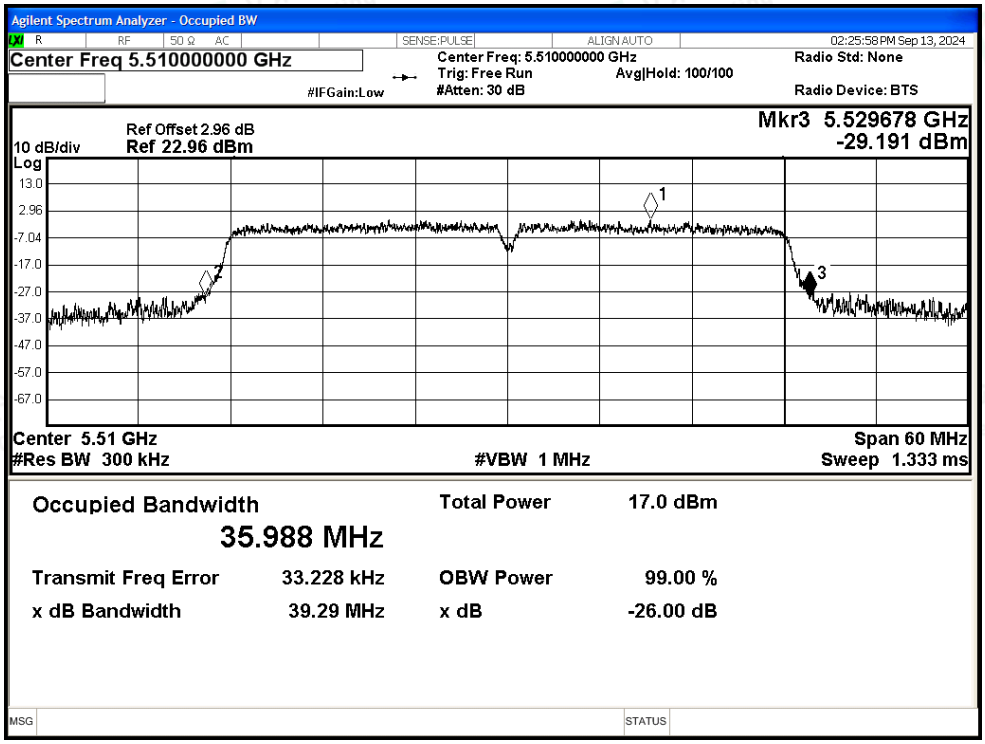
-26dB Bandwidth NVNT n20 5580MHz Ant1



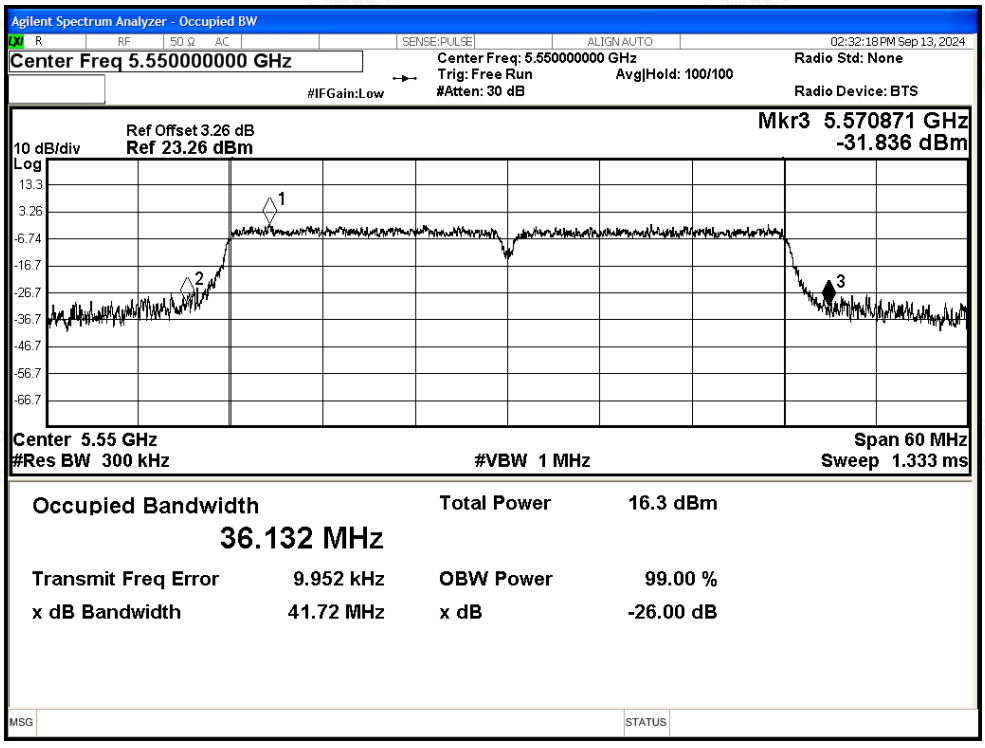
-26dB Bandwidth NVNT n20 5700MHz Ant1



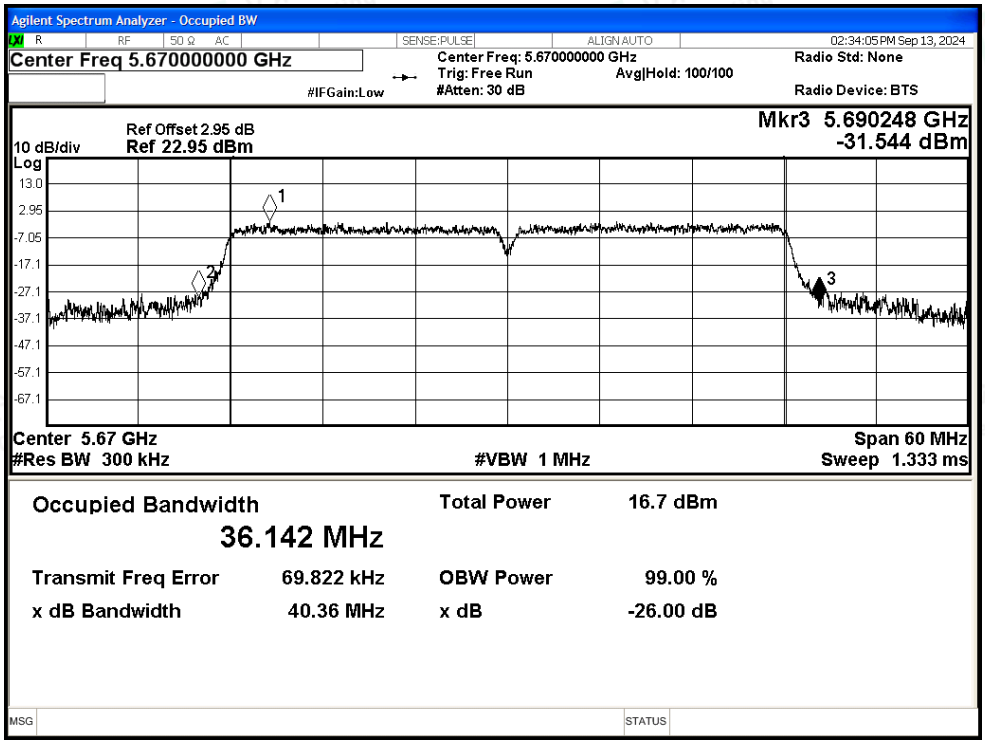
-26dB Bandwidth NVNT n40 5510MHz Ant1



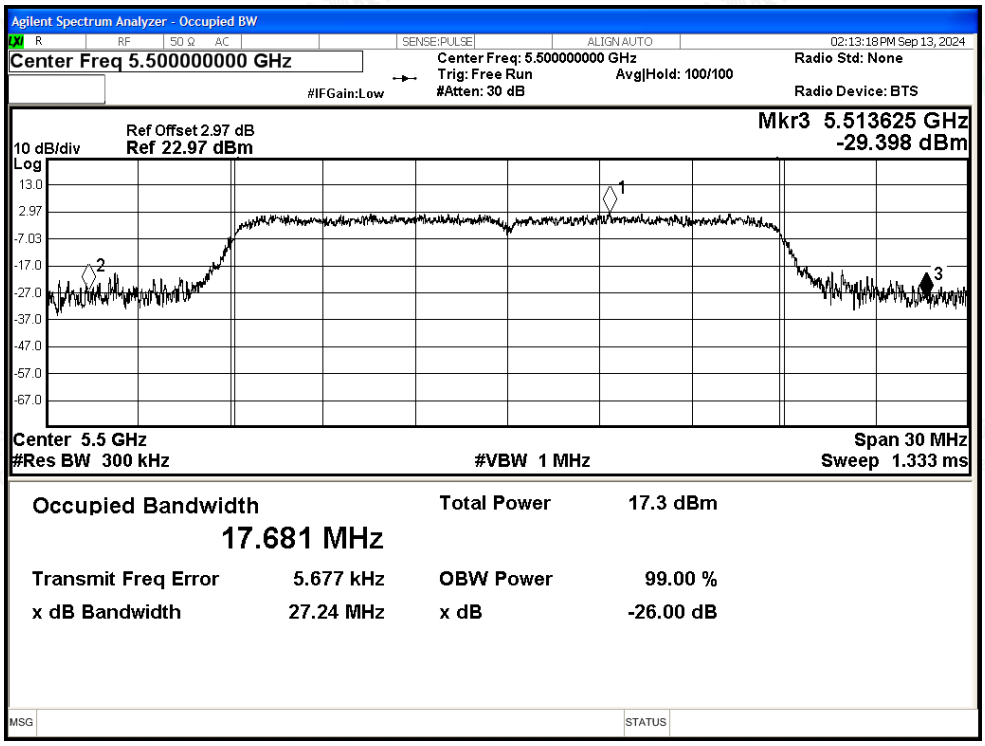
-26dB Bandwidth NVNT n40 5550MHz Ant1



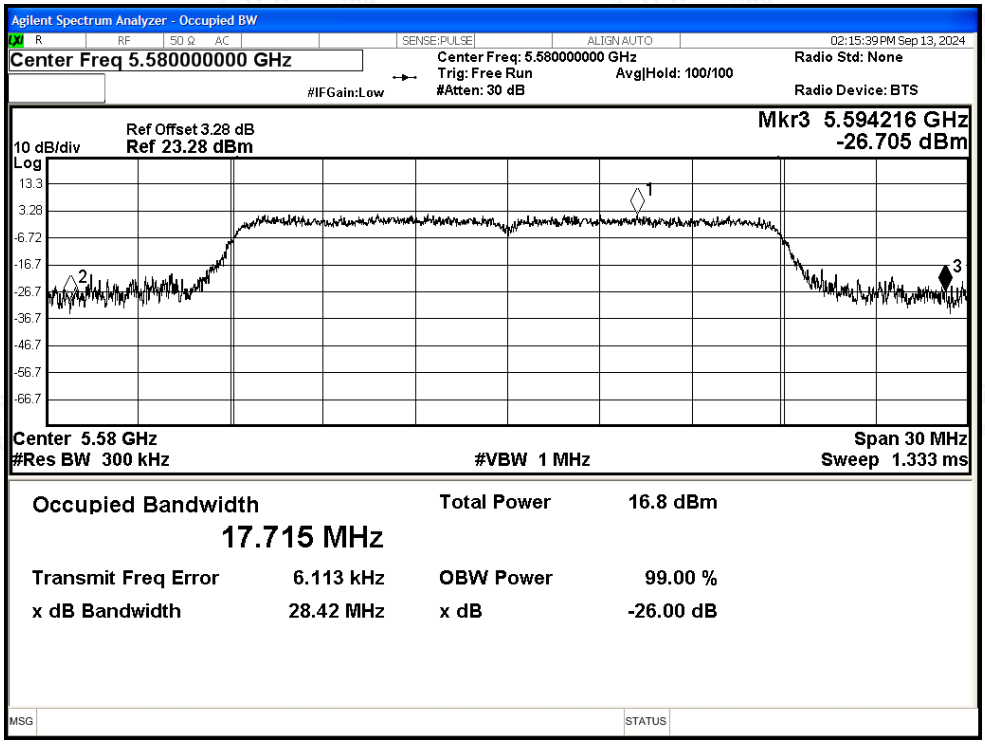
-26dB Bandwidth NVNT n40 5670MHz Ant1



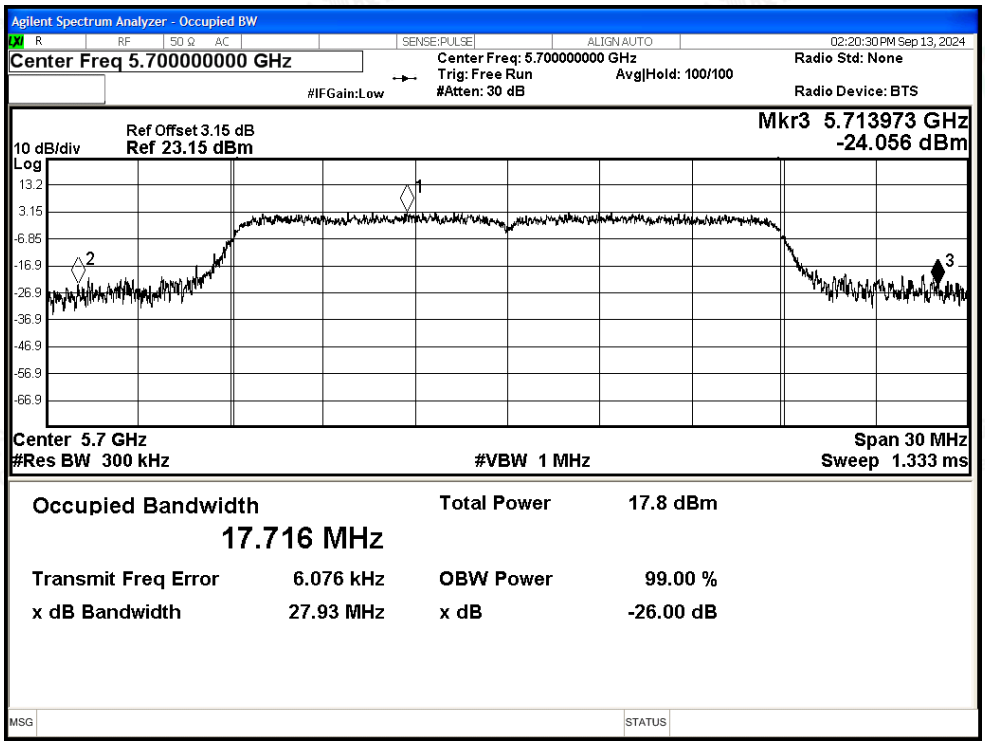
-26dB Bandwidth NVNT ac20 5500MHz Ant1



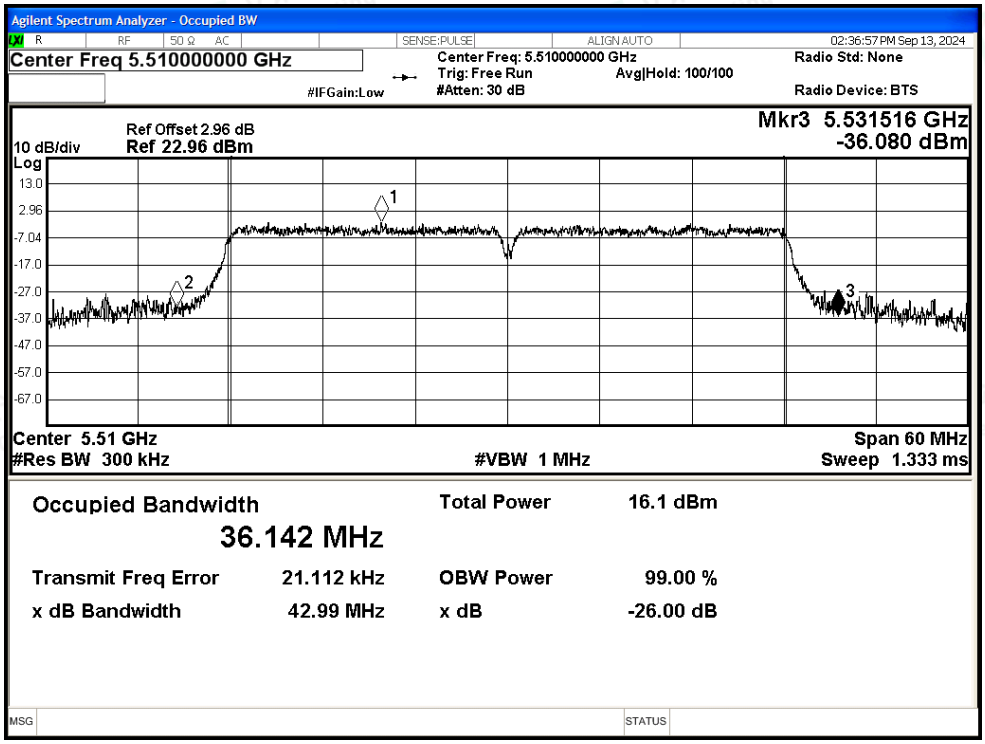
-26dB Bandwidth NVNT ac20 5580MHz Ant1



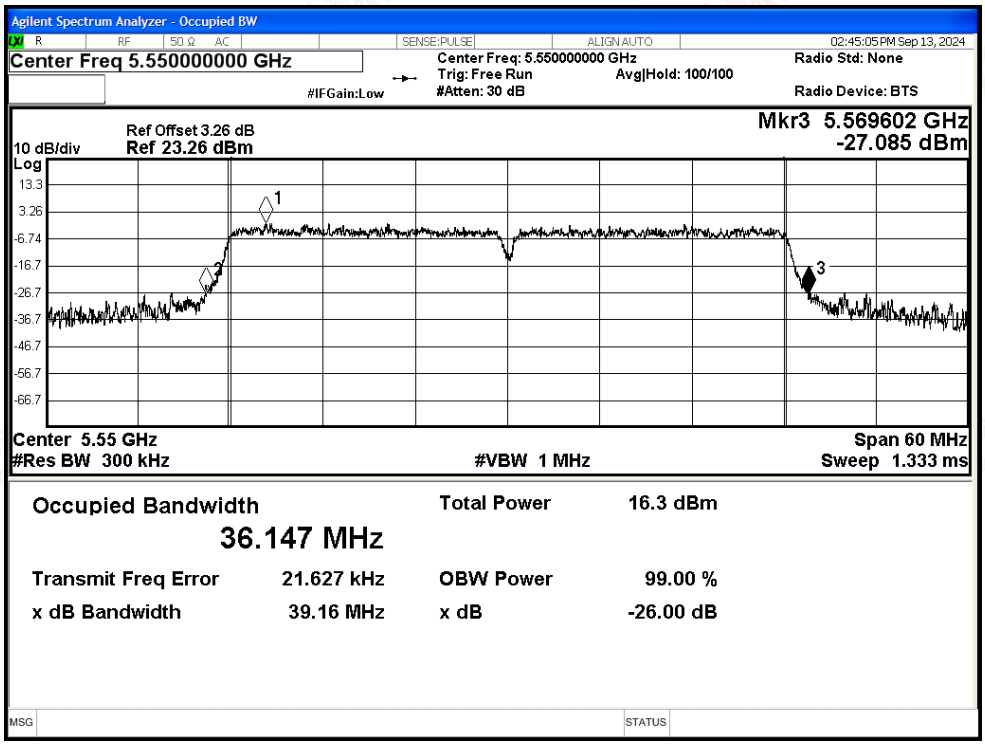
-26dB Bandwidth NVNT ac20 5700MHz Ant1



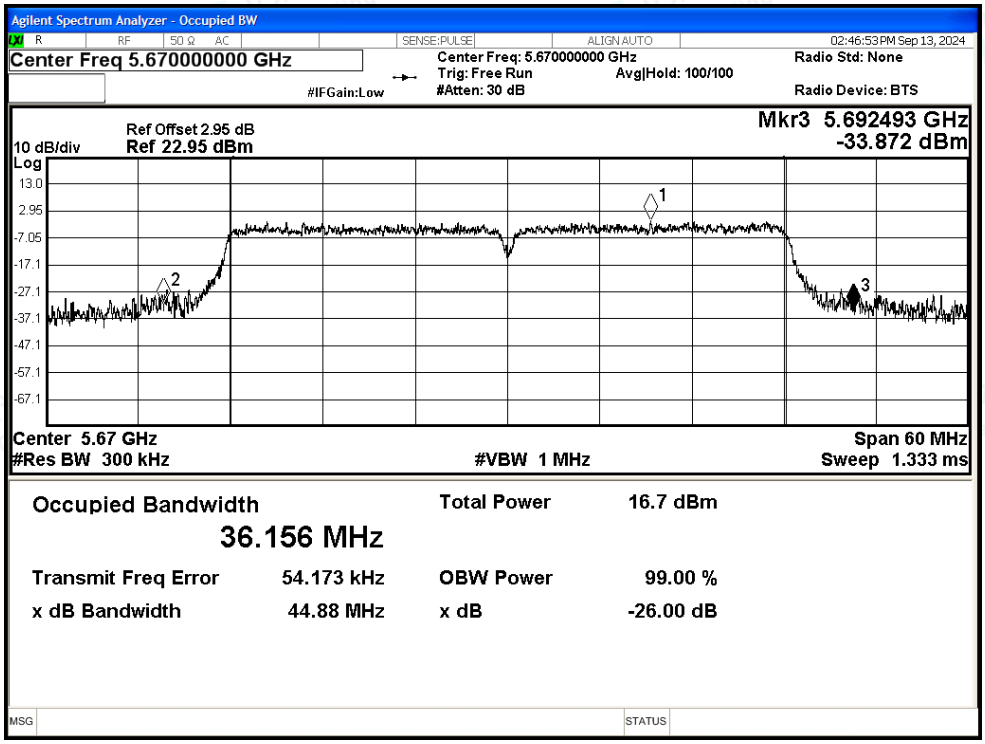
-26dB Bandwidth NVNT ac40 5510MHz Ant1



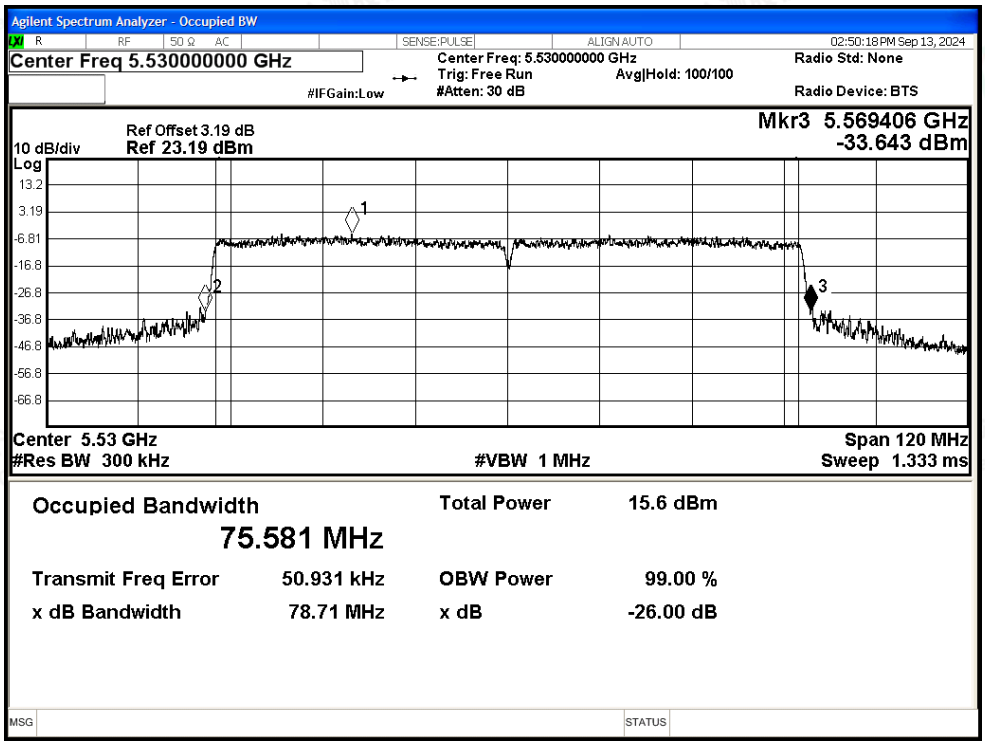
-26dB Bandwidth NVNT ac40 5550MHz Ant1



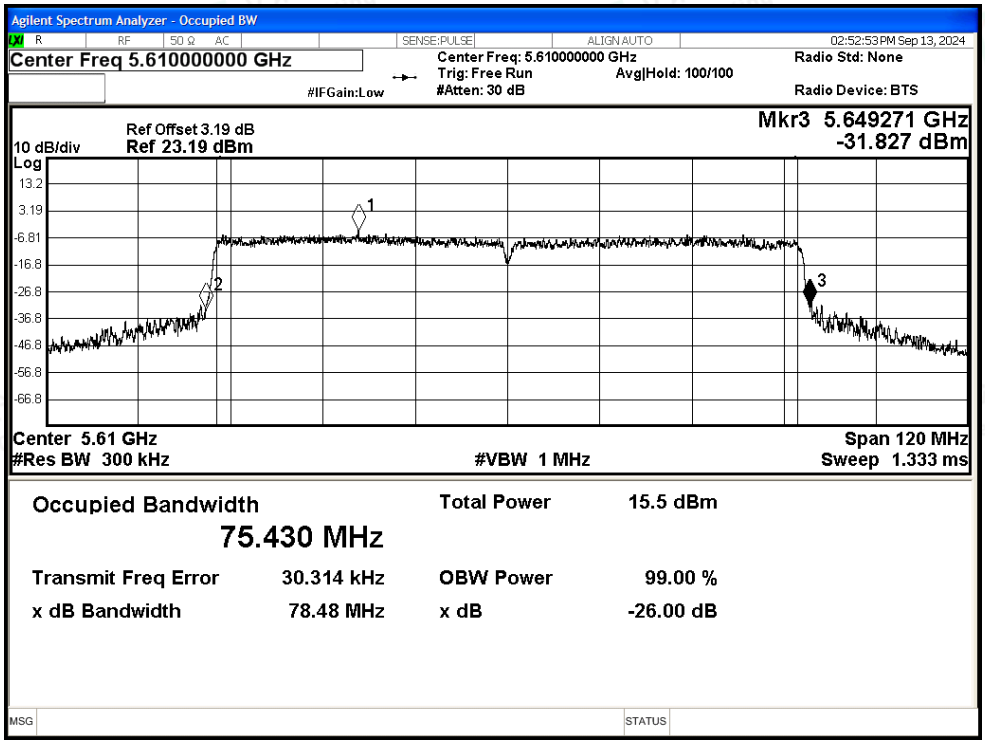
-26dB Bandwidth NVNT ac40 5670MHz Ant1



-26dB Bandwidth NVNT ac80 5530MHz Ant1



-26dB Bandwidth NVNT ac80 5610MHz Ant1



F.2 Maximum Conducted Output Power

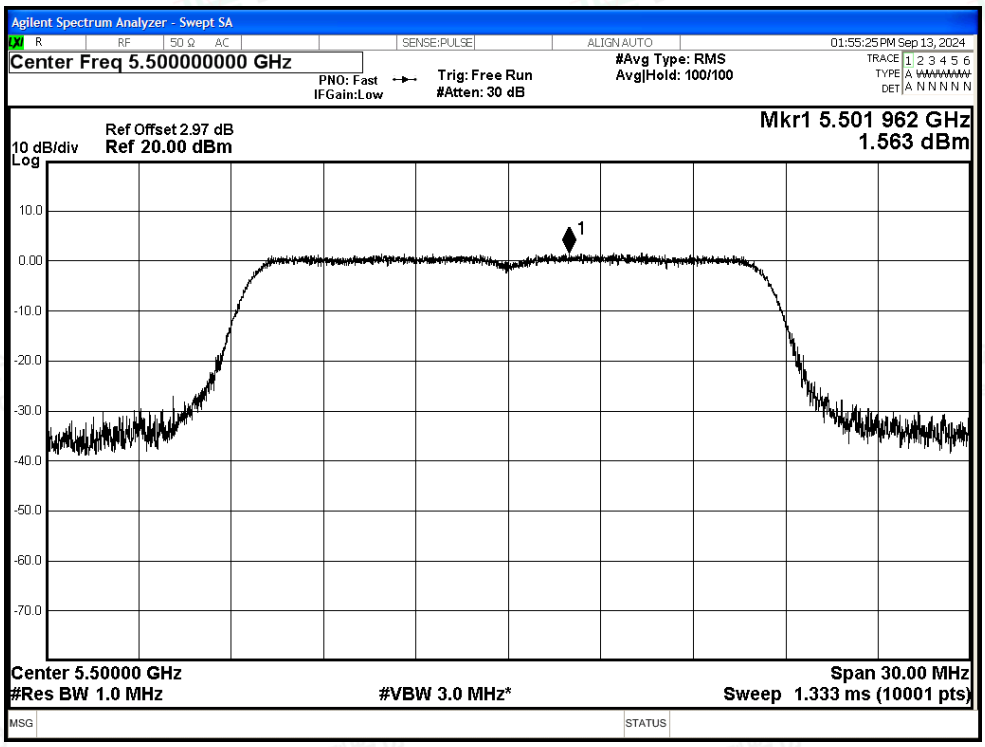
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	a	5500	Ant1	12.2	0.24	12.44	24	Pass
NVNT	a	5580	Ant1	12.61	0.24	12.85	24	Pass
NVNT	a	5700	Ant1	12.77	0.24	13.01	24	Pass
NVNT	n20	5500	Ant1	11.57	0.28	11.85	24	Pass
NVNT	n20	5580	Ant1	11.15	0.28	11.43	24	Pass
NVNT	n20	5700	Ant1	11.25	0.28	11.53	24	Pass
NVNT	n40	5510	Ant1	11.33	0.12	11.45	24	Pass
NVNT	n40	5550	Ant1	10.7	0.12	10.82	24	Pass
NVNT	n40	5670	Ant1	11.07	0.12	11.19	24	Pass
NVNT	ac20	5500	Ant1	11.59	0.28	11.87	24	Pass
NVNT	ac20	5580	Ant1	11.17	0.28	11.45	24	Pass
NVNT	ac20	5700	Ant1	11.08	0.28	11.36	24	Pass
NVNT	ac40	5510	Ant1	10.52	0.12	10.64	24	Pass
NVNT	ac40	5550	Ant1	10.62	0.12	10.74	24	Pass
NVNT	ac40	5670	Ant1	11.07	0.12	11.19	24	Pass
NVNT	ac80	5530	Ant1	9.58	0.25	9.83	24	Pass
NVNT	ac80	5610	Ant1	9.5	0.25	9.75	24	Pass

F.3 Maximum Power Spectral Density Level

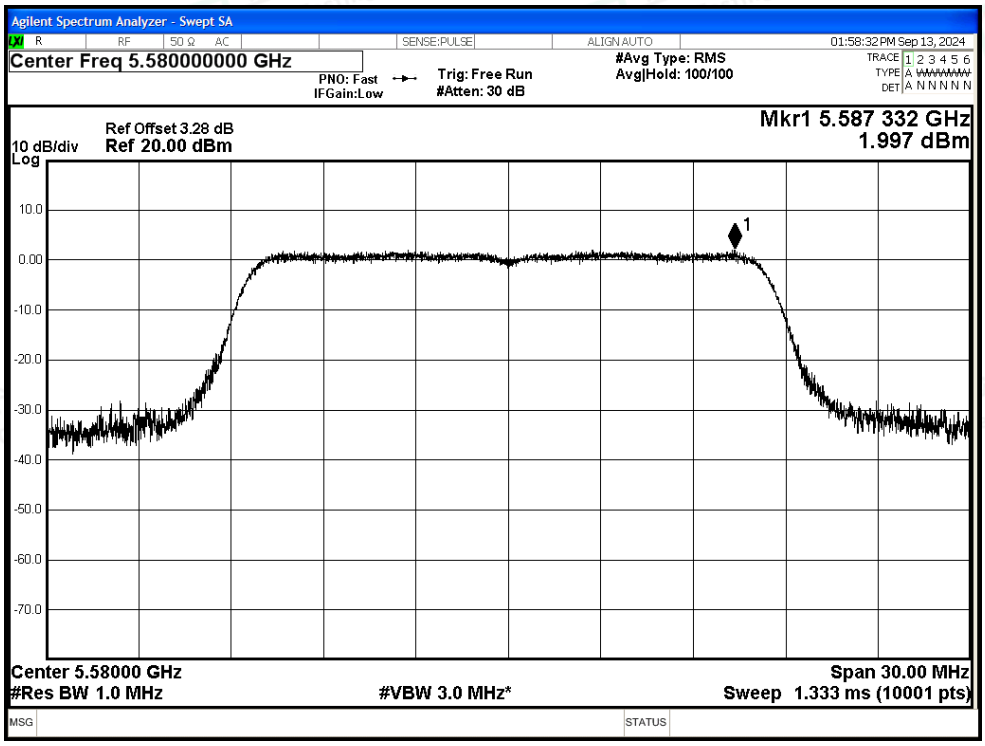
Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD(dBm/MHz)	Duty Factor (dB)	Total PSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
NVNT	a	5500	Ant1	1.56	0.24	1.80	11	Pass
NVNT	a	5580	Ant1	2	0.24	2.24	11	Pass
NVNT	a	5700	Ant1	2.33	0.24	2.57	11	Pass
NVNT	n20	5500	Ant1	0.8	0.28	1.08	11	Pass
NVNT	n20	5580	Ant1	0.74	0.28	1.02	11	Pass
NVNT	n20	5700	Ant1	0.37	0.28	0.65	11	Pass
NVNT	n40	5510	Ant1	-2.31	0.12	-2.19	11	Pass
NVNT	n40	5550	Ant1	-3.23	0.12	-3.11	11	Pass
NVNT	n40	5670	Ant1	-2.67	0.12	-2.55	11	Pass
NVNT	ac20	5500	Ant1	0.75	0.28	1.03	11	Pass
NVNT	ac20	5580	Ant1	0.23	0.28	0.51	11	Pass
NVNT	ac20	5700	Ant1	1.33	0.28	1.61	11	Pass
NVNT	ac40	5510	Ant1	-3.35	0.12	-3.23	11	Pass
NVNT	ac40	5550	Ant1	-3.1	0.12	-2.98	11	Pass
NVNT	ac40	5670	Ant1	-2.49	0.12	-2.37	11	Pass
NVNT	ac80	5530	Ant1	-6.88	0.25	-6.63	11	Pass
NVNT	ac80	5610	Ant1	-7.02	0.25	-6.77	11	Pass

Test Graphs

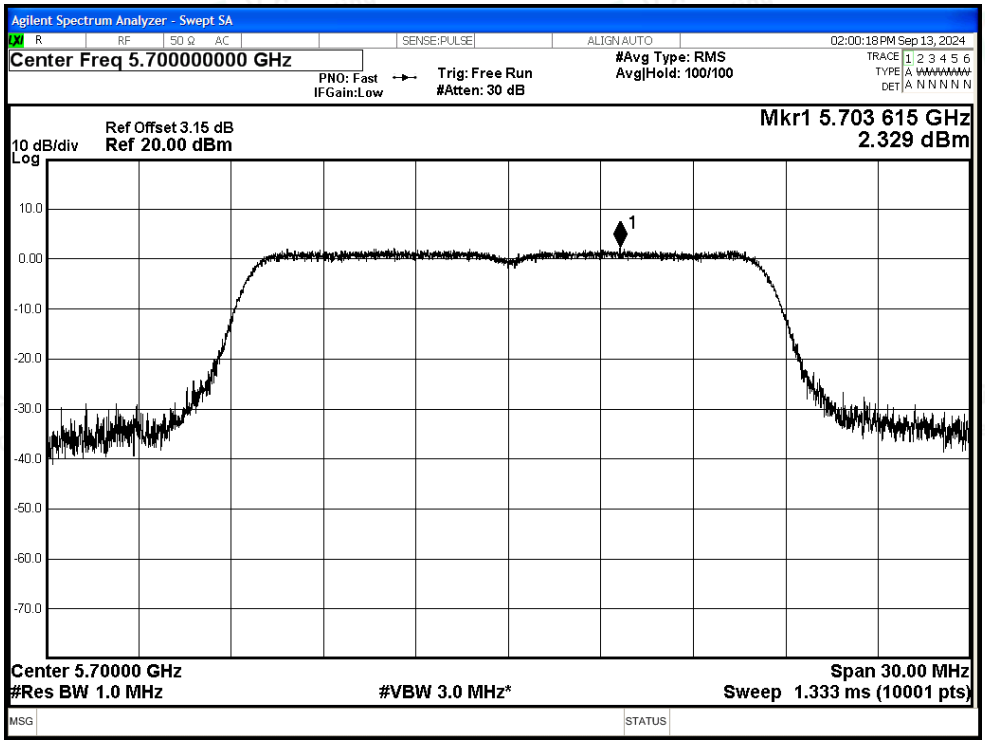
PSD NVNT a 5500MHz Ant1



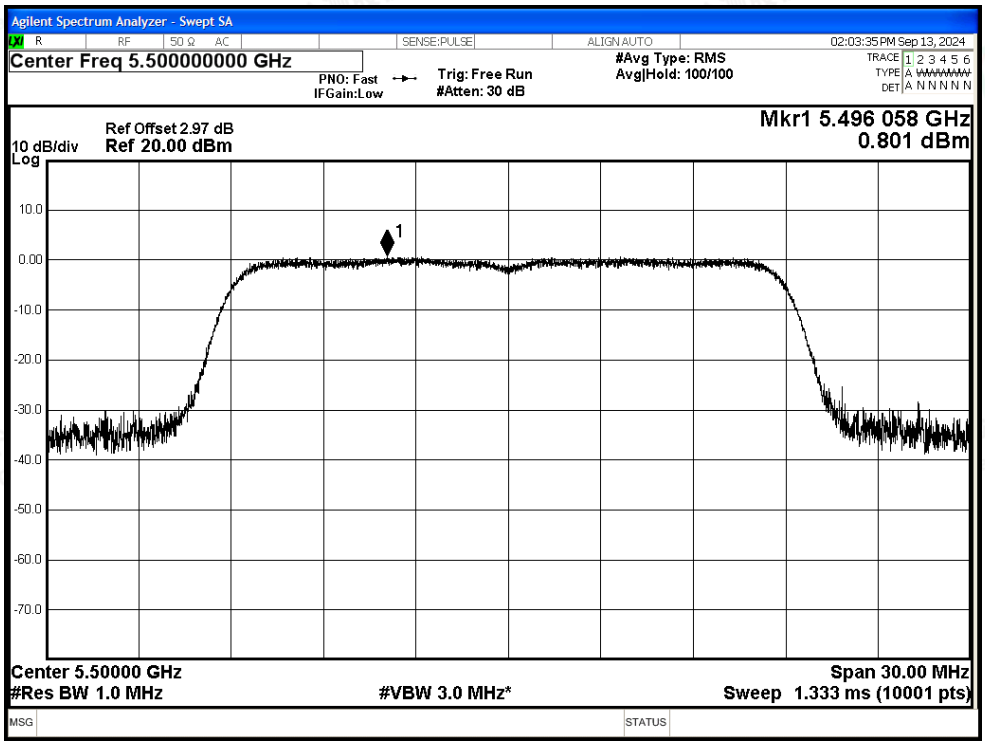
PSD NVNT a 5580MHz Ant1



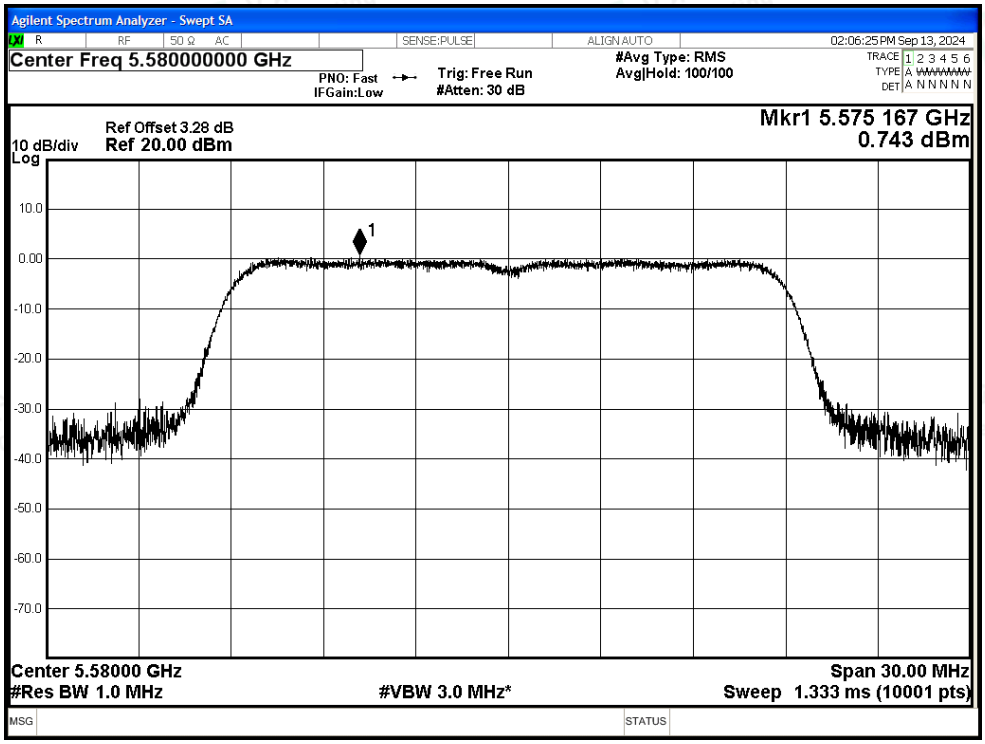
PSD NVNT a 5700MHz Ant1



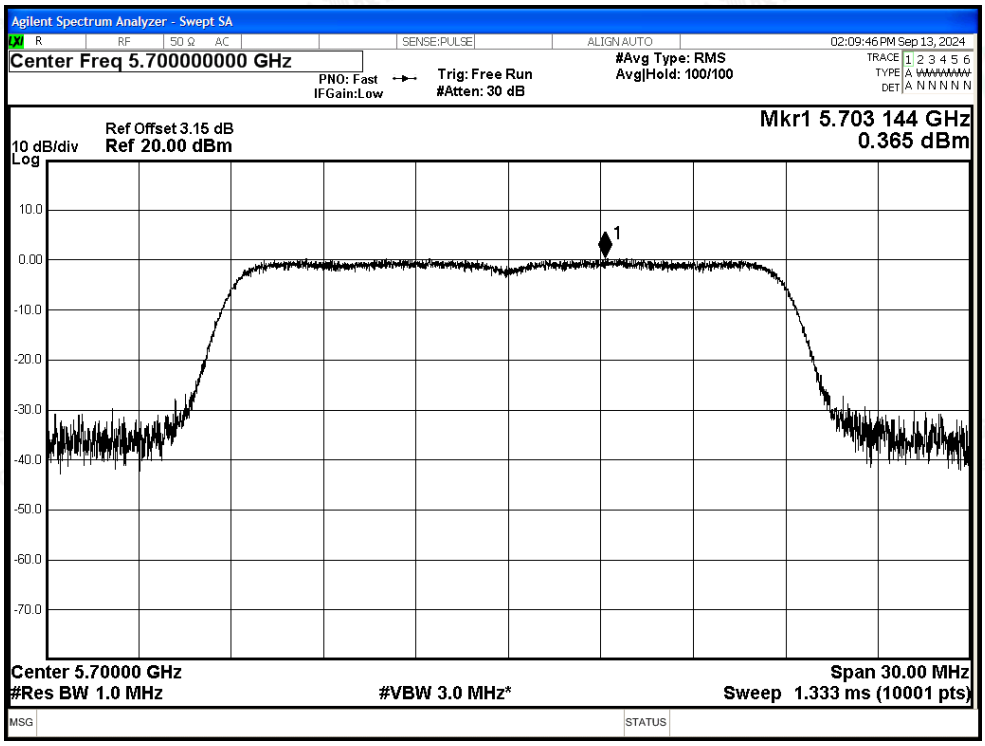
PSD NVNT n20 5500MHz Ant1



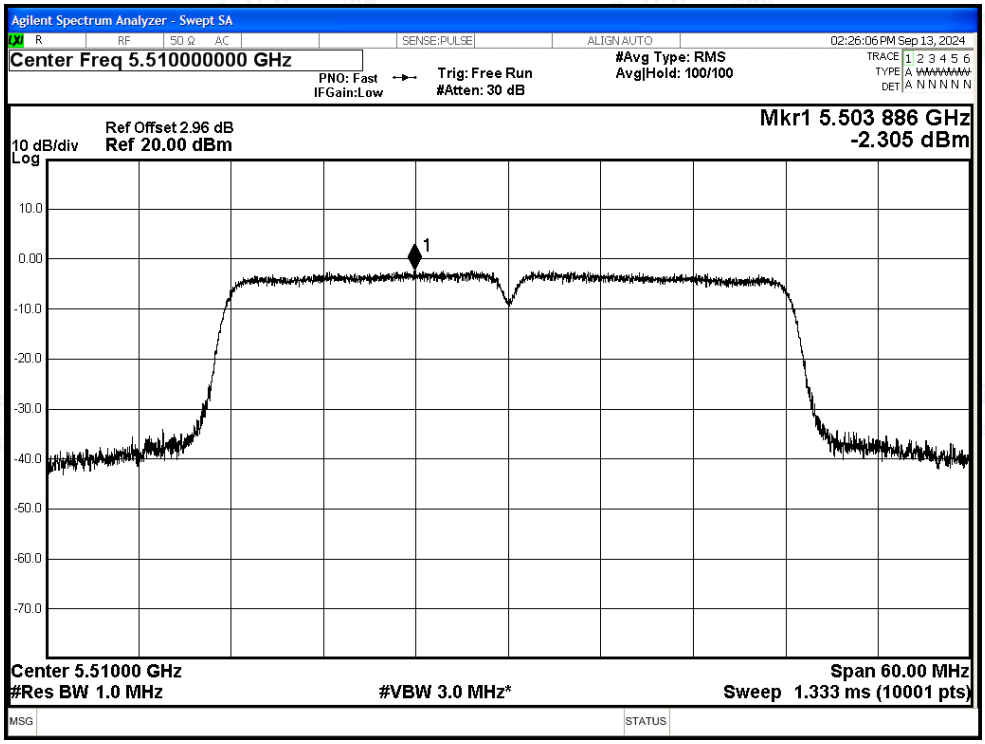
PSD NVNT n20 5580MHz Ant1



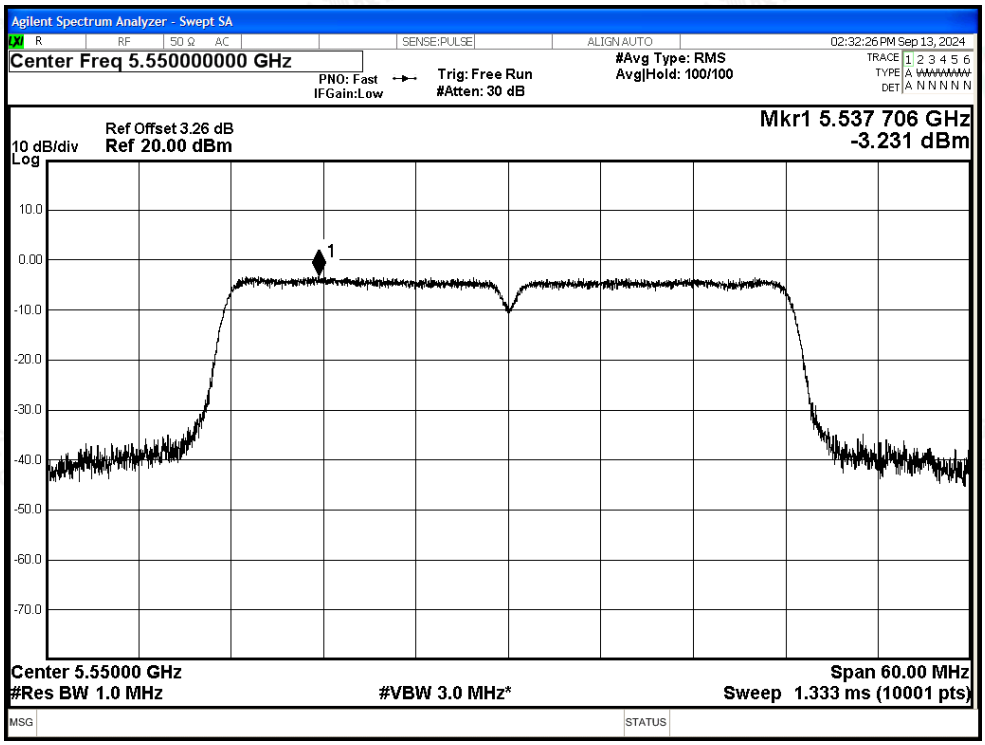
PSD NVNT n20 5700MHz Ant1



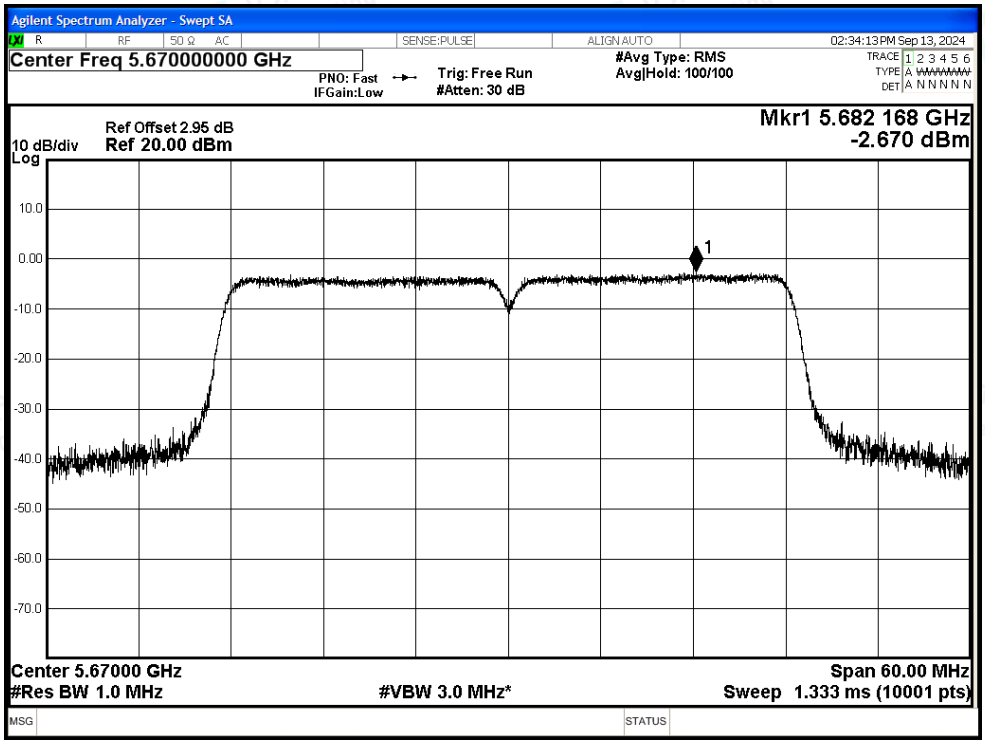
PSD NVNT n40 5510MHz Ant1



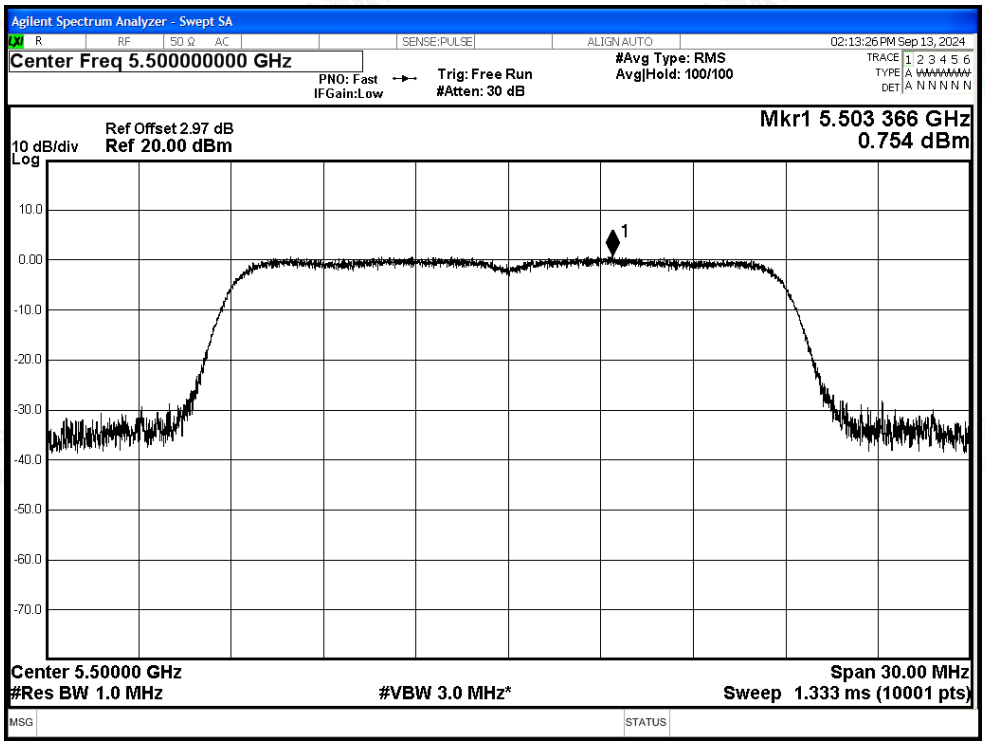
PSD NVNT n40 5550MHz Ant1



PSD NVNT n40 5670MHz Ant1



PSD NVNT ac20 5500MHz Ant1



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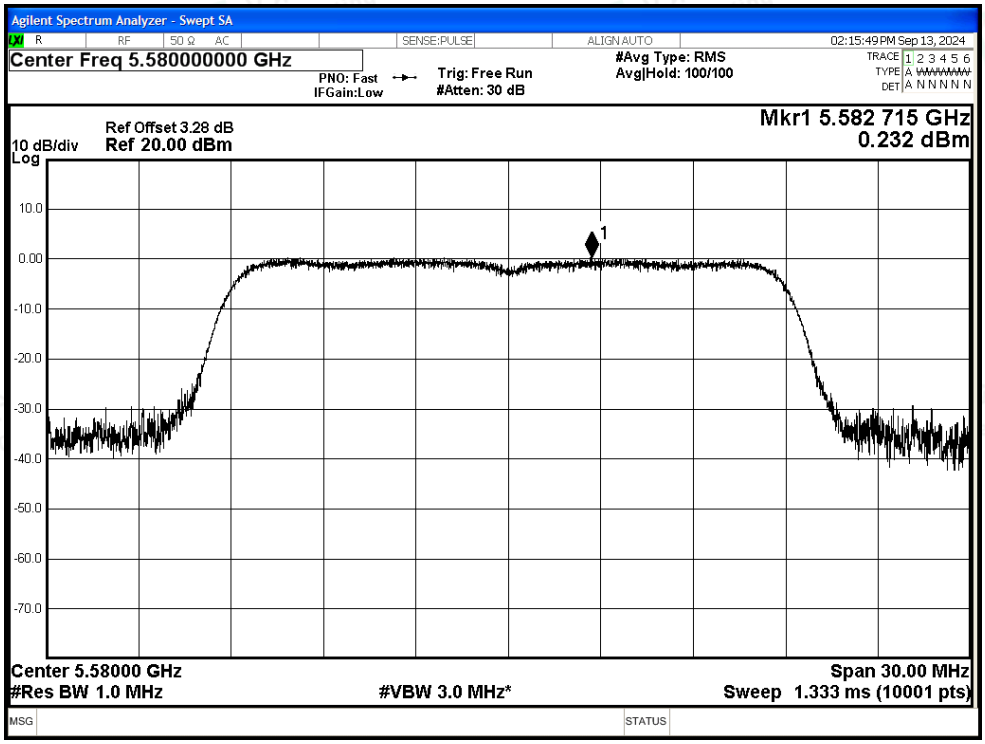
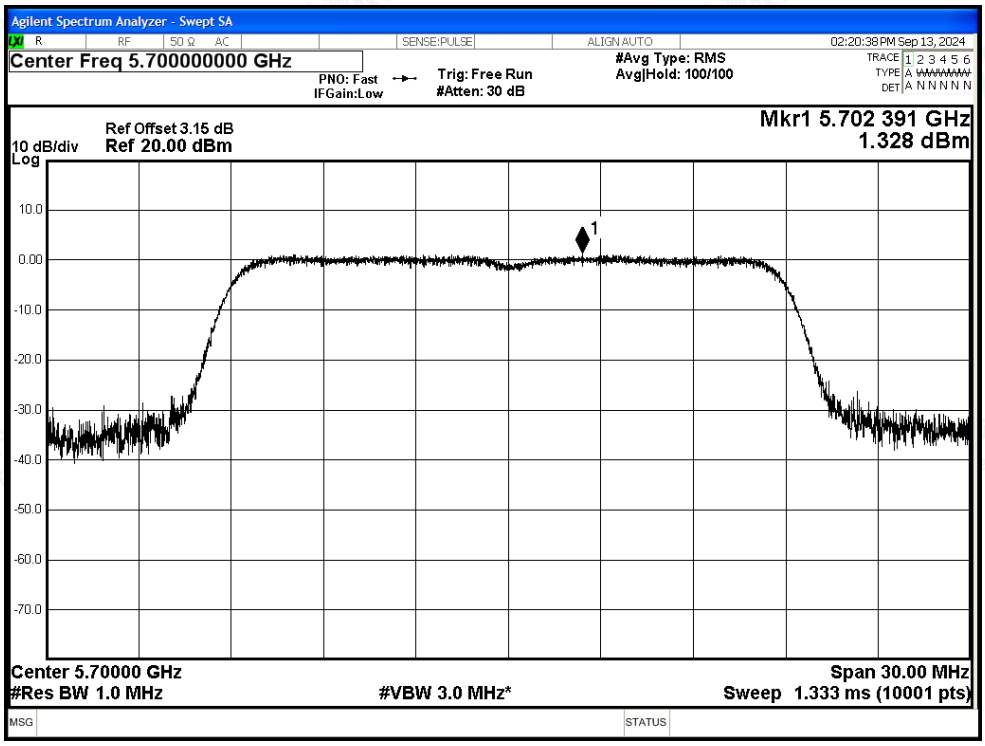
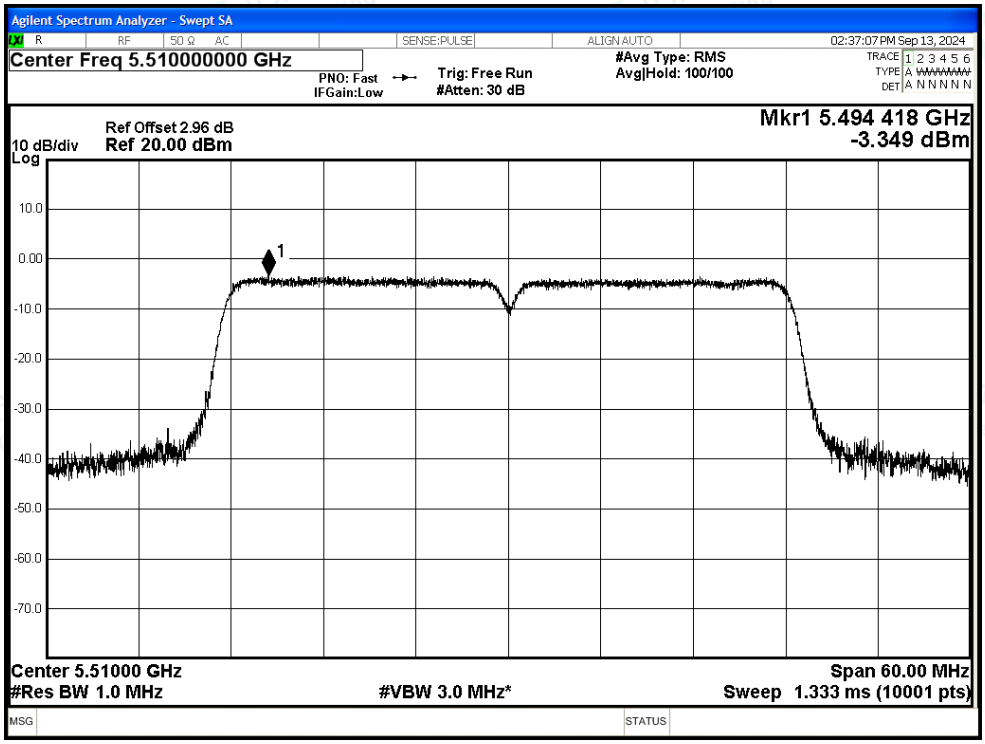


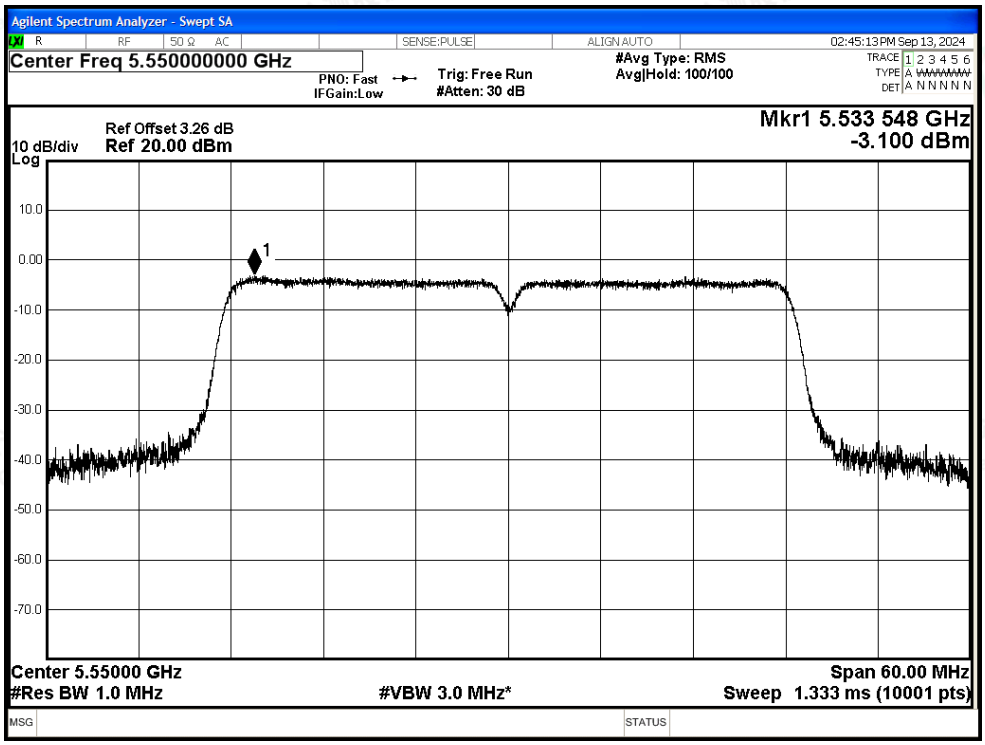
PSD NVNT ac20 5700MHz Ant1



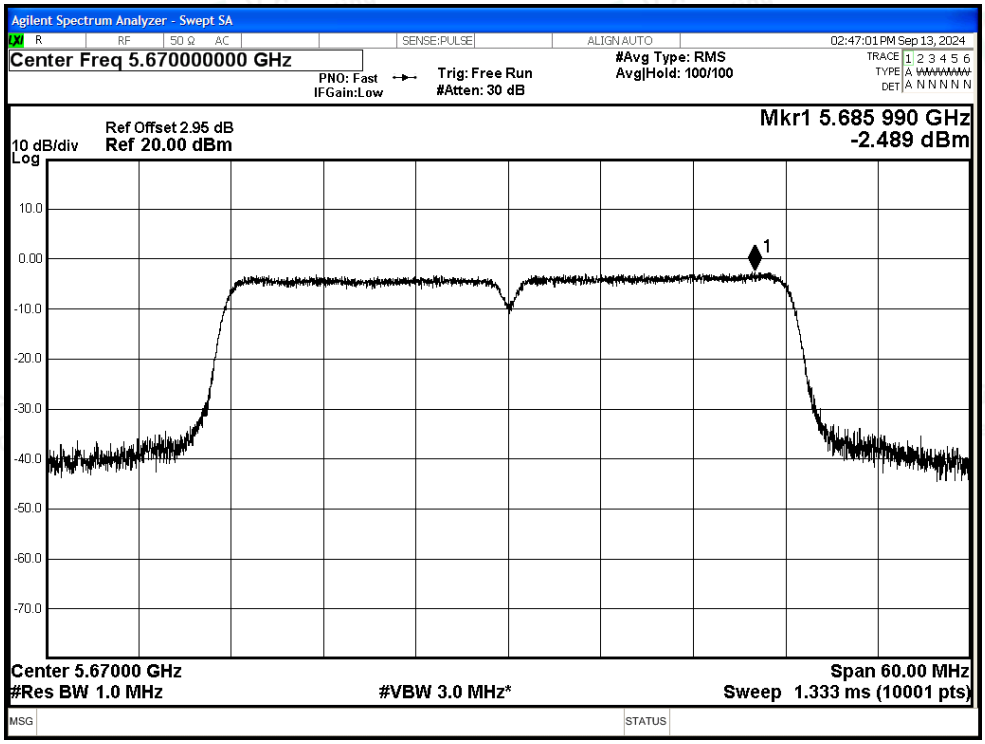
PSD NVNT ac40 5510MHz Ant1



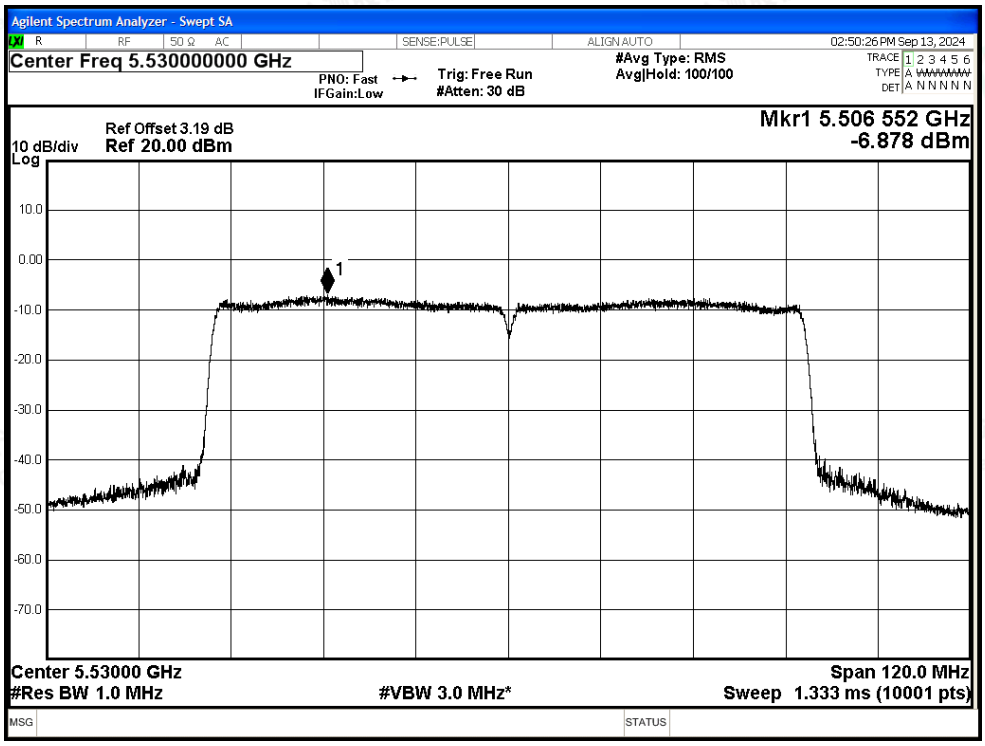
PSD NVNT ac40 5550MHz Ant1



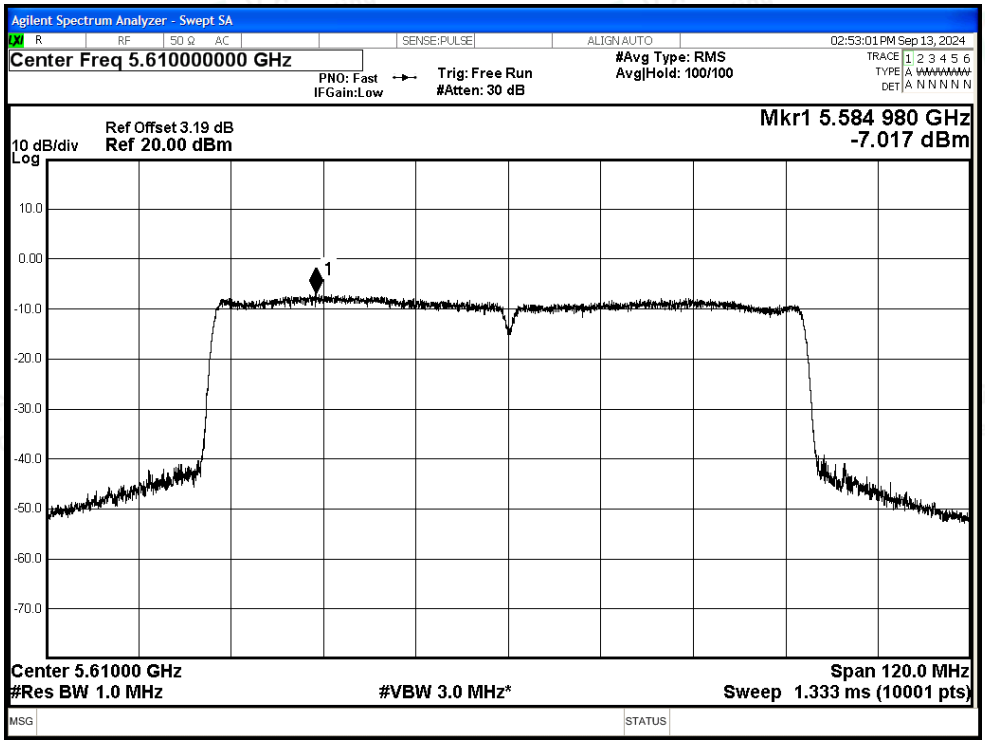
PSD NVNT ac40 5670MHz Ant1



PSD NVNT ac80 5530MHz Ant1



PSD NVNT ac80 5610MHz Ant1



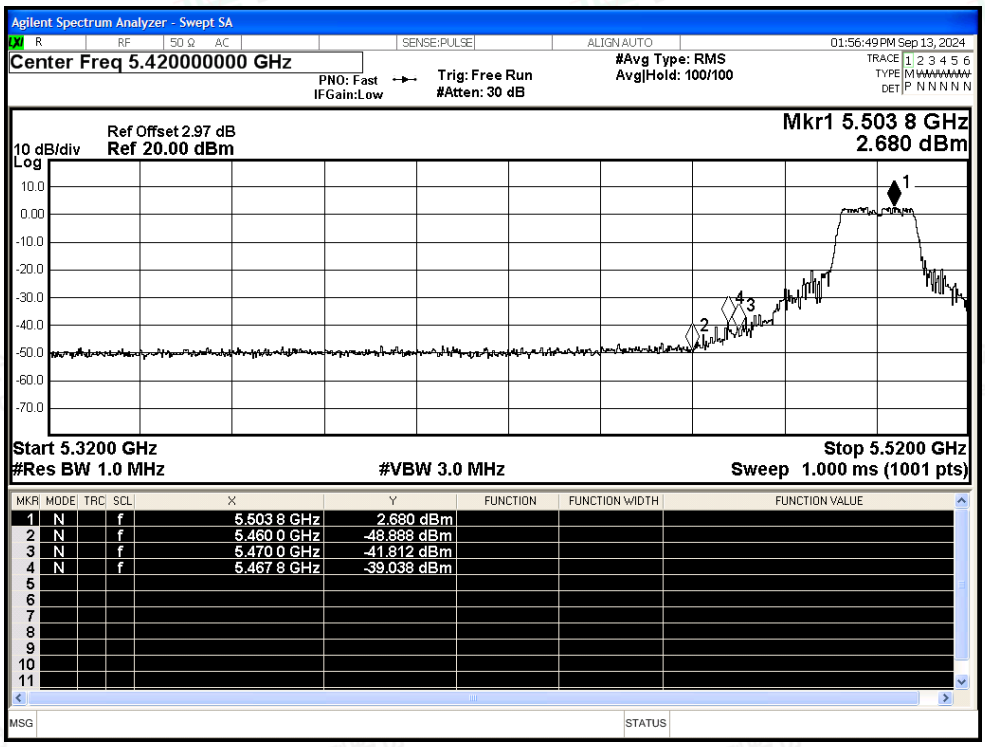
F.4 Restrict Band

Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	a	5500	Ant1	5460	-48.89	4.92	0	51.26	Peak	68.2	Pass
NVNT	a	5500	Ant1	5460	-57.14	4.92	0.24	43.25	Average	54	Pass
NVNT	a	5500	Ant1	5467.8	-39.04	4.92	0	61.11	Peak	68.2	Pass
NVNT	a	5500	Ant1	5470	-54.21	4.92	0.24	46.18	Average	54	Pass
NVNT	a	5500	Ant1	5470	-41.81	4.92	0	58.34	Peak	68.2	Pass
NVNT	a	5700	Ant1	5725	-36.68	4.92	0	63.47	Peak	68.2	Pass
NVNT	a	5700	Ant1	5725	-55.46	4.92	0.24	44.93	Average	54	Pass
NVNT	a	5700	Ant1	5726.6	-35.98	4.92	0	64.17	Peak	68.2	Pass
NVNT	a	5700	Ant1	5725.2	-53.35	4.92	0.24	47.04	Average	54	Pass
NVNT	a	5700	Ant1	5735	-50.02	4.92	0	50.13	Peak	68.2	Pass
NVNT	a	5700	Ant1	5735	-57.22	4.92	0.24	43.17	Average	54	Pass
NVNT	n20	5500	Ant1	5460	-49	4.92	0	51.15	Peak	68.2	Pass
NVNT	n20	5500	Ant1	5460	-57.28	4.92	0.28	43.15	Average	54	Pass
NVNT	n20	5500	Ant1	5468	-38.31	4.92	0	61.84	Peak	68.2	Pass
NVNT	n20	5500	Ant1	5469.2	-53.58	4.92	0.28	46.85	Average	54	Pass
NVNT	n20	5500	Ant1	5470	-40.74	4.92	0	59.41	Peak	68.2	Pass
NVNT	n20	5500	Ant1	5470	-54.09	4.92	0.28	46.34	Average	54	Pass
NVNT	n20	5700	Ant1	5725	-40.71	4.92	0	59.44	Peak	68.2	Pass
NVNT	n20	5700	Ant1	5725	-53.16	4.92	0.28	47.27	Average	54	Pass
NVNT	n20	5700	Ant1	5727.2	-38.05	4.92	0	62.10	Peak	68.2	Pass
NVNT	n20	5700	Ant1	5726	-51.43	4.92	0.28	49.00	Average	54	Pass
NVNT	n20	5700	Ant1	5735	-45.87	4.92	0	54.28	Peak	68.2	Pass
NVNT	n20	5700	Ant1	5735	-57.22	4.92	0.28	43.21	Average	54	Pass
NVNT	n40	5510	Ant1	5460	-48.6	4.92	0	51.55	Peak	68.2	Pass
NVNT	n40	5510	Ant1	5460	-57.26	4.92	0.12	43.01	Average	54	Pass
NVNT	n40	5510	Ant1	5468.2	-41.29	4.92	0	58.86	Peak	68.2	Pass
NVNT	n40	5510	Ant1	5470	-53.83	4.92	0.12	46.44	Average	54	Pass
NVNT	n40	5510	Ant1	5470	-44.27	4.92	0	55.88	Peak	68.2	Pass
NVNT	n40	5670	Ant1	5725	-51.09	4.92	0	49.06	Peak	68.2	Pass
NVNT	n40	5670	Ant1	5725	-57.99	4.92	0.12	42.28	Average	54	Pass
NVNT	n40	5670	Ant1	5728	-47.54	4.92	0	52.61	Peak	68.2	Pass
NVNT	n40	5670	Ant1	5733.8	-57.53	4.92	0.12	42.74	Average	54	Pass
NVNT	n40	5670	Ant1	5735	-49.93	4.92	0	50.22	Peak	68.2	Pass
NVNT	n40	5670	Ant1	5735	-58.42	4.92	0.12	41.85	Average	54	Pass
NVNT	ac20	5500	Ant1	5460	-49.28	4.92	0	50.87	Peak	68.2	Pass
NVNT	ac20	5500	Ant1	5460	-56.65	4.92	0.28	43.78	Average	54	Pass

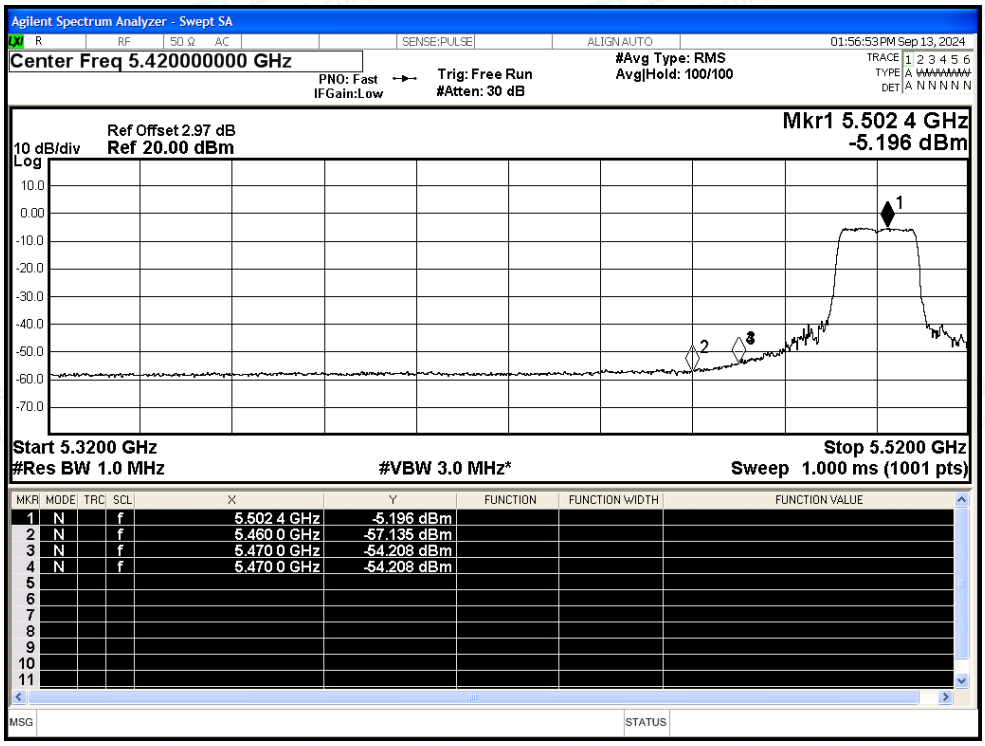
NVNT	ac20	5500	Ant1	5469.4	-37.69	4.92	0	62.46	Peak	68.2	Pass
NVNT	ac20	5500	Ant1	5468.4	-53.99	4.92	0.28	46.44	Average	54	Pass
NVNT	ac20	5500	Ant1	5470	-40.85	4.92	0	59.30	Peak	68.2	Pass
NVNT	ac20	5500	Ant1	5470	-54.34	4.92	0.28	46.09	Average	54	Pass
NVNT	ac20	5700	Ant1	5725	-36.14	4.92	0	64.01	Peak	68.2	Pass
NVNT	ac20	5700	Ant1	5725	-53.31	4.92	0.28	47.12	Average	54	Pass
NVNT	ac20	5700	Ant1	5726	-52.45	4.92	0.28	47.98	Average	54	Pass
NVNT	ac20	5700	Ant1	5735	-48.96	4.92	0	51.19	Peak	68.2	Pass
NVNT	ac20	5700	Ant1	5735	-57	4.92	0.28	43.43	Average	54	Pass
NVNT	ac40	5510	Ant1	5460	-49.56	4.92	0	50.59	Peak	68.2	Pass
NVNT	ac40	5510	Ant1	5460	-56.68	4.92	0.12	43.59	Average	54	Pass
NVNT	ac40	5510	Ant1	5467.6	-39.59	4.92	0	60.56	Peak	68.2	Pass
NVNT	ac40	5510	Ant1	5470	-53.35	4.92	0.12	46.92	Average	54	Pass
NVNT	ac40	5510	Ant1	5470	-43.05	4.92	0	57.10	Peak	68.2	Pass
NVNT	ac40	5670	Ant1	5725	-49.69	4.92	0	50.46	Peak	68.2	Pass
NVNT	ac40	5670	Ant1	5725	-58.73	4.92	0.12	41.54	Average	54	Pass
NVNT	ac40	5670	Ant1	5732.8	-48.36	4.92	0	51.79	Peak	68.2	Pass
NVNT	ac40	5670	Ant1	5726.8	-57.41	4.92	0.12	42.86	Average	54	Pass
NVNT	ac40	5670	Ant1	5735	-50.05	4.92	0	50.10	Peak	68.2	Pass
NVNT	ac40	5670	Ant1	5735	-57.79	4.92	0.12	42.48	Average	54	Pass
NVNT	ac80	5530	Ant1	5460	-46.44	4.92	0	53.71	Peak	68.2	Pass
NVNT	ac80	5530	Ant1	5460	-55.24	4.92	0.25	45.16	Average	54	Pass
NVNT	ac80	5530	Ant1	5469.2	-39.12	4.92	0	61.03	Peak	68.2	Pass
NVNT	ac80	5530	Ant1	5469	-52.97	4.92	0.25	47.43	Average	54	Pass
NVNT	ac80	5530	Ant1	5470	-43.88	4.92	0	56.27	Peak	68.2	Pass
NVNT	ac80	5530	Ant1	5470	-53.41	4.92	0.25	46.99	Average	54	Pass
NVNT	ac80	5610	Ant1	5725	-50.5	4.92	0	49.65	Peak	68.2	Pass
NVNT	ac80	5610	Ant1	5725	-57.79	4.92	0.25	42.61	Average	54	Pass
NVNT	ac80	5610	Ant1	5727.62	-48.77	4.92	0	51.38	Peak	68.2	Pass
NVNT	ac80	5610	Ant1	5732.54	-57.56	4.92	0.25	42.84	Average	54	Pass
NVNT	ac80	5610	Ant1	5735	-50.25	4.92	0	49.90	Peak	68.2	Pass
NVNT	ac80	5610	Ant1	5735	-58.14	4.92	0.25	42.26	Average	54	Pass

Test Graphs

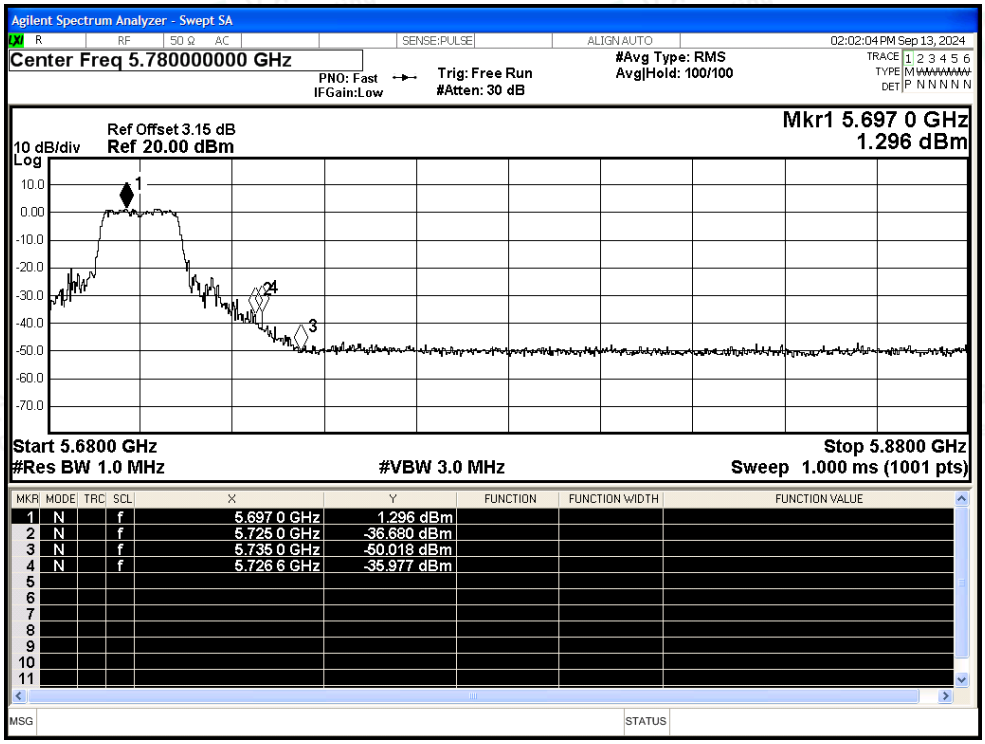
Restrict Band NVNT a 5500MHz Ant1 Peak



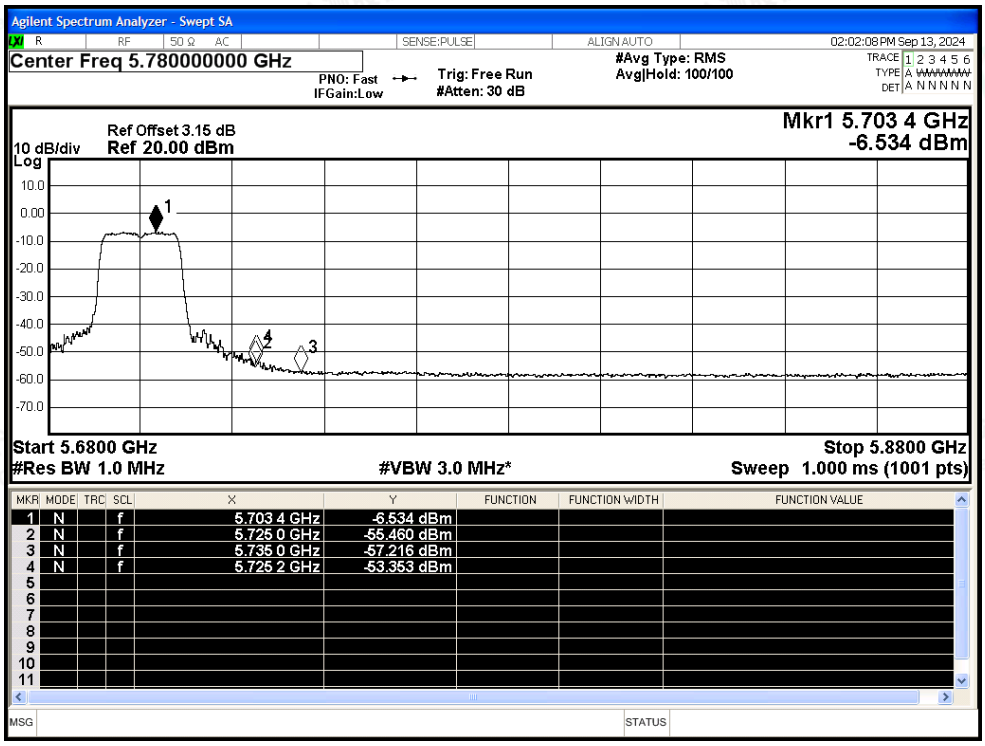
Restrict Band NVNT a 5500MHz Ant1 Average



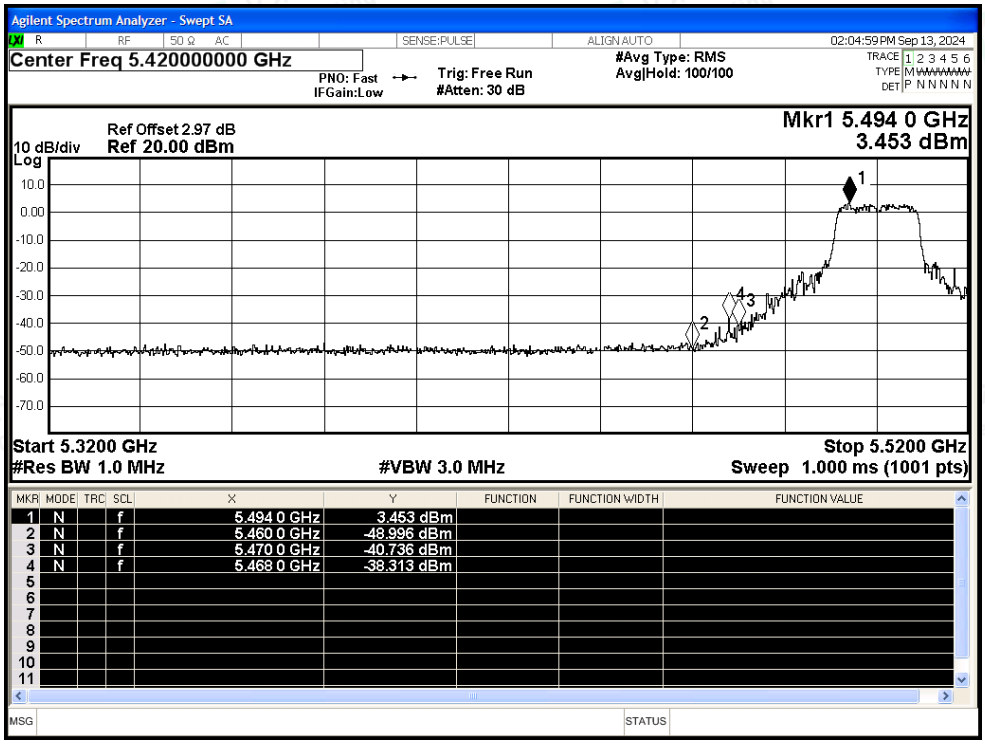
Restrict Band NVNT a 5700MHz Ant1 Peak



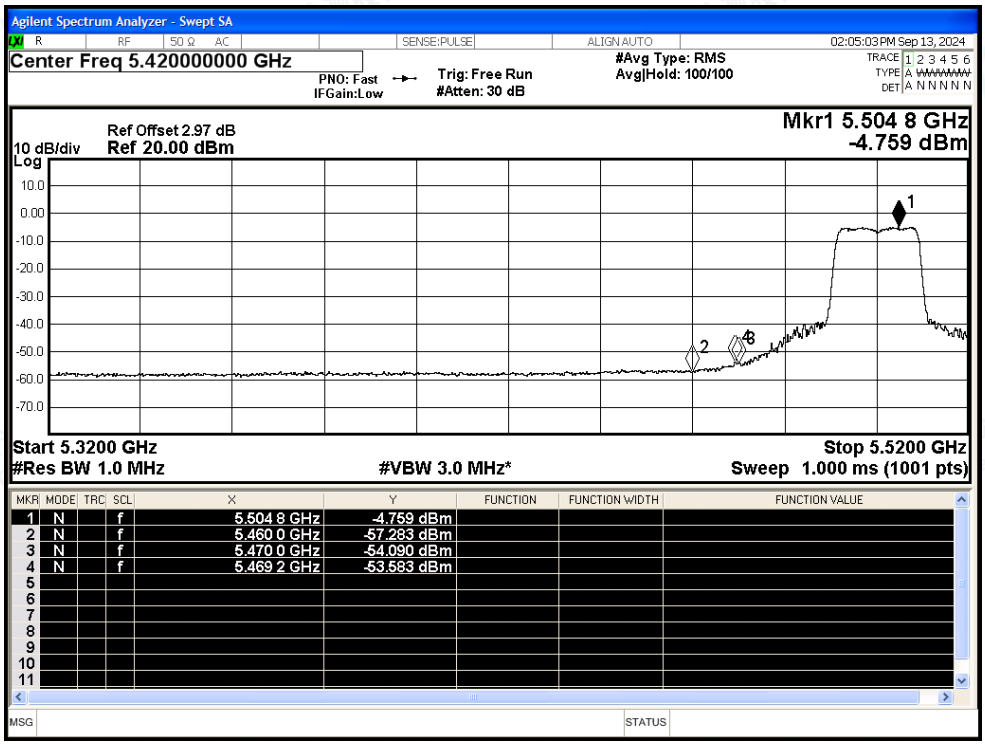
Restrict Band NVNT a 5700MHz Ant1 Average



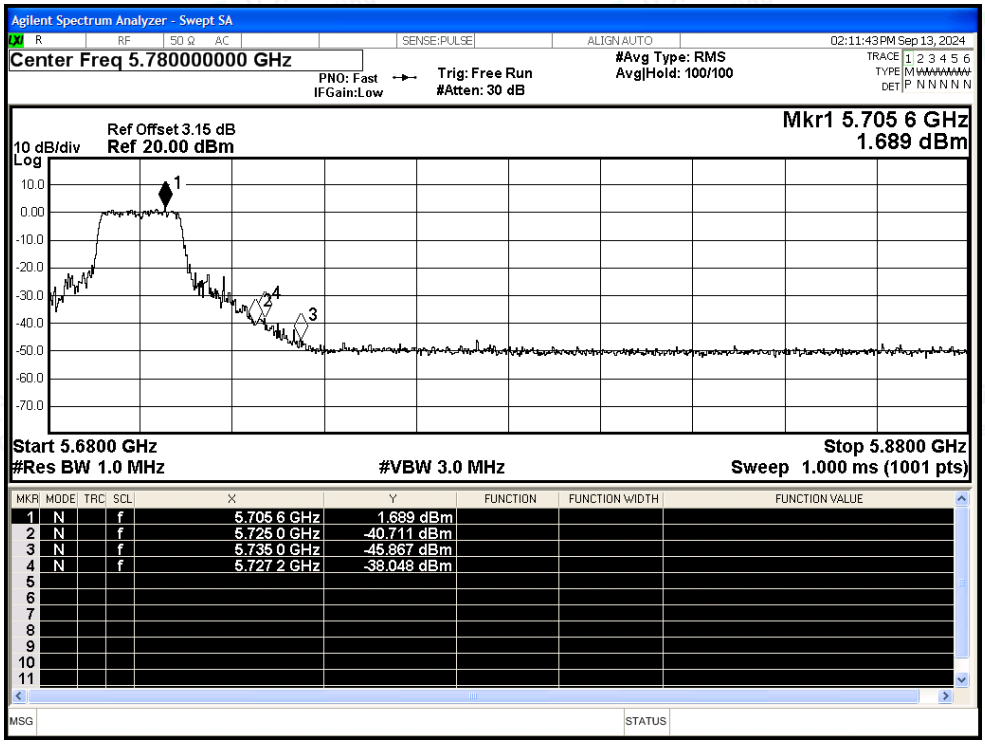
Restrict Band NVNT n20 5500MHz Ant1 Peak



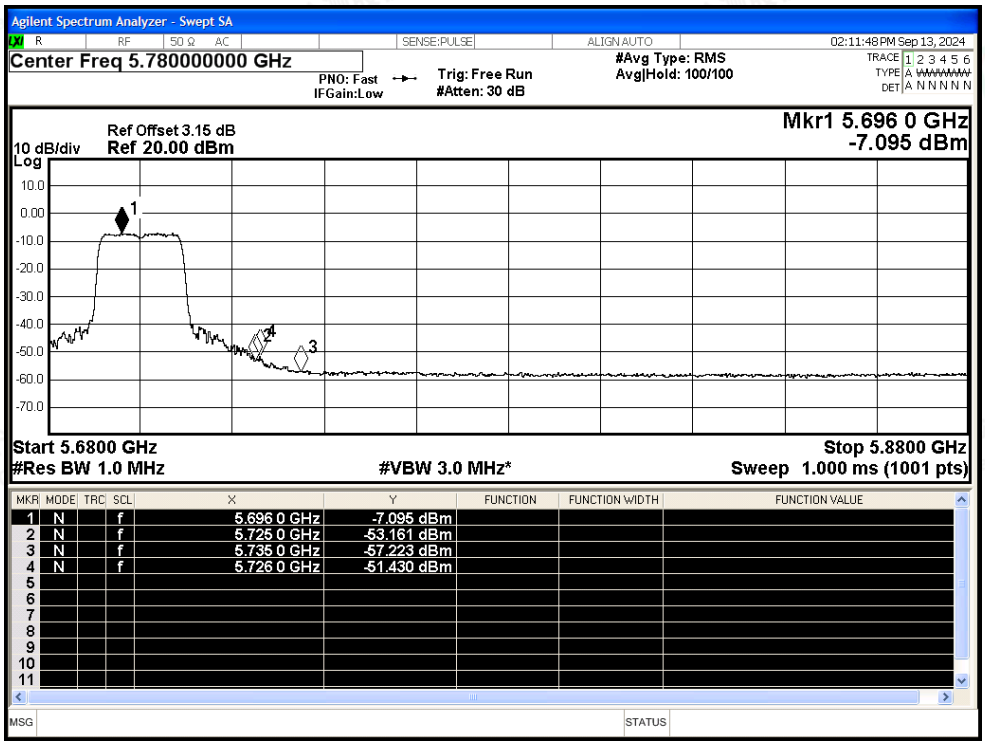
Restrict Band NVNT n20 5500MHz Ant1 Average



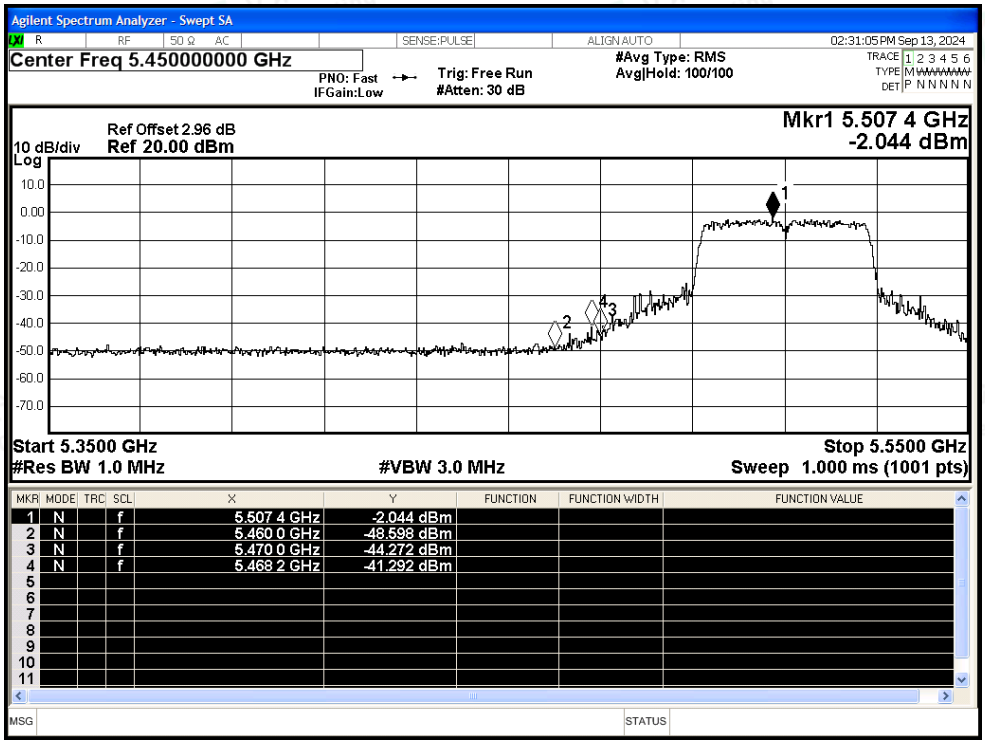
Restrict Band NVNT n20 5700MHz Ant1 Peak



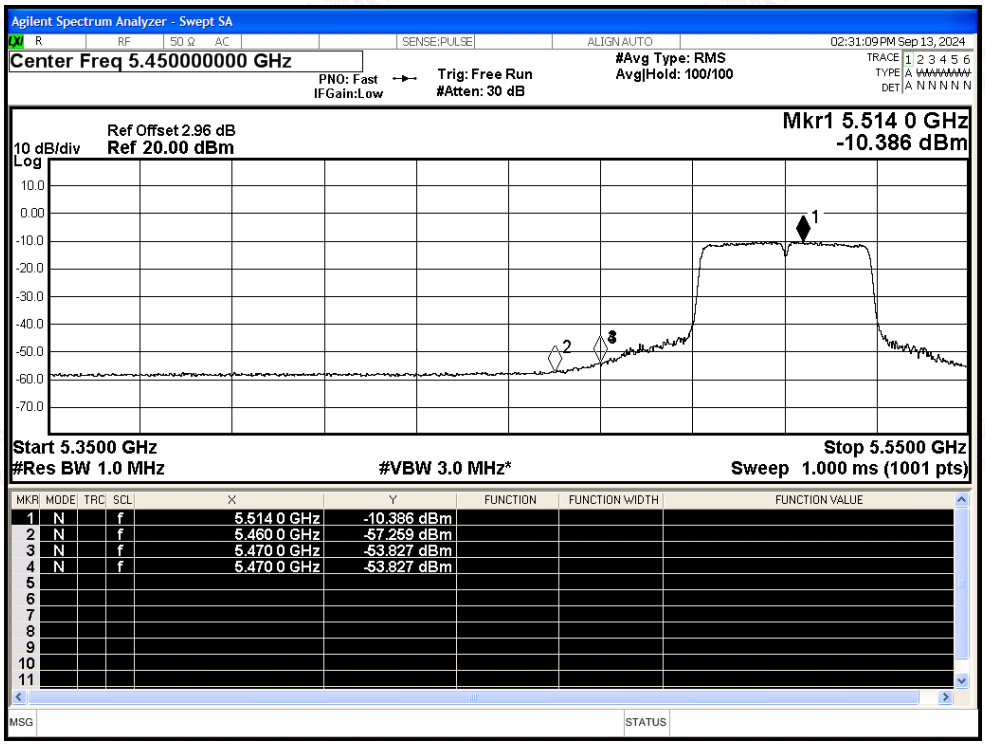
Restrict Band NVNT n20 5700MHz Ant1 Average



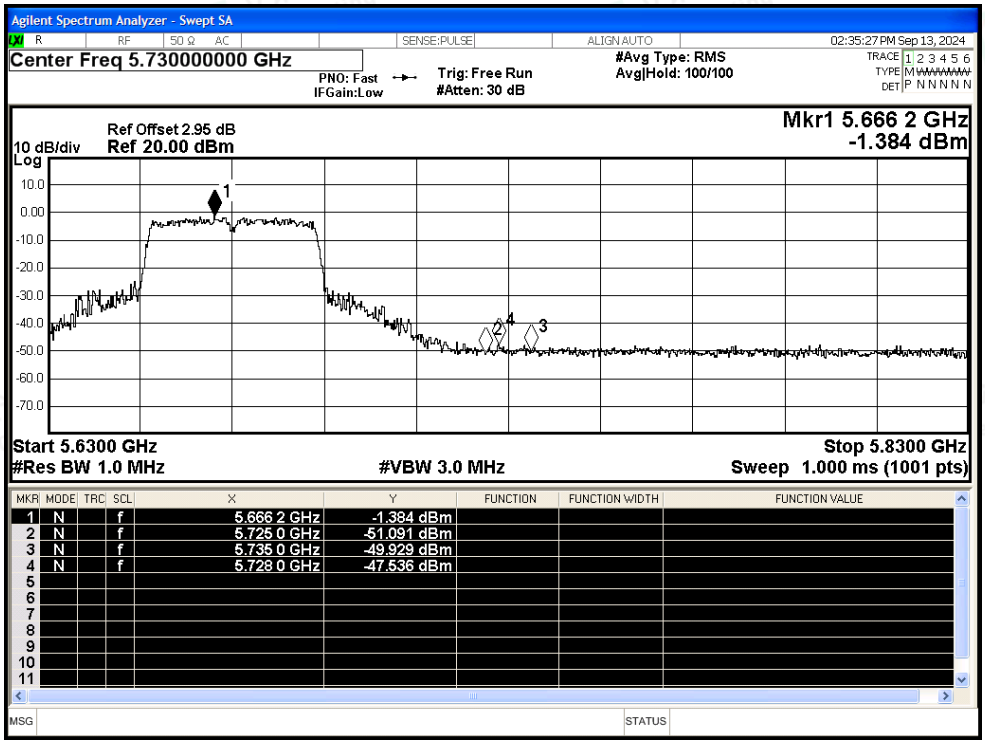
Restrict Band NVNT n40 5510MHz Ant1 Peak



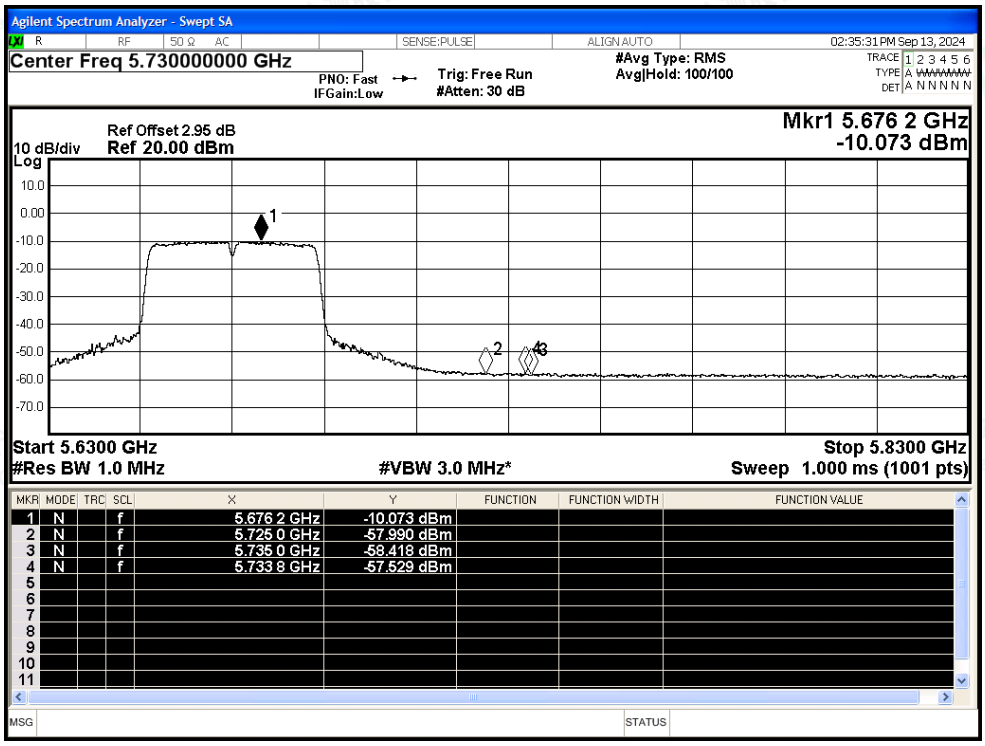
Restrict Band NVNT n40 5510MHz Ant1 Average



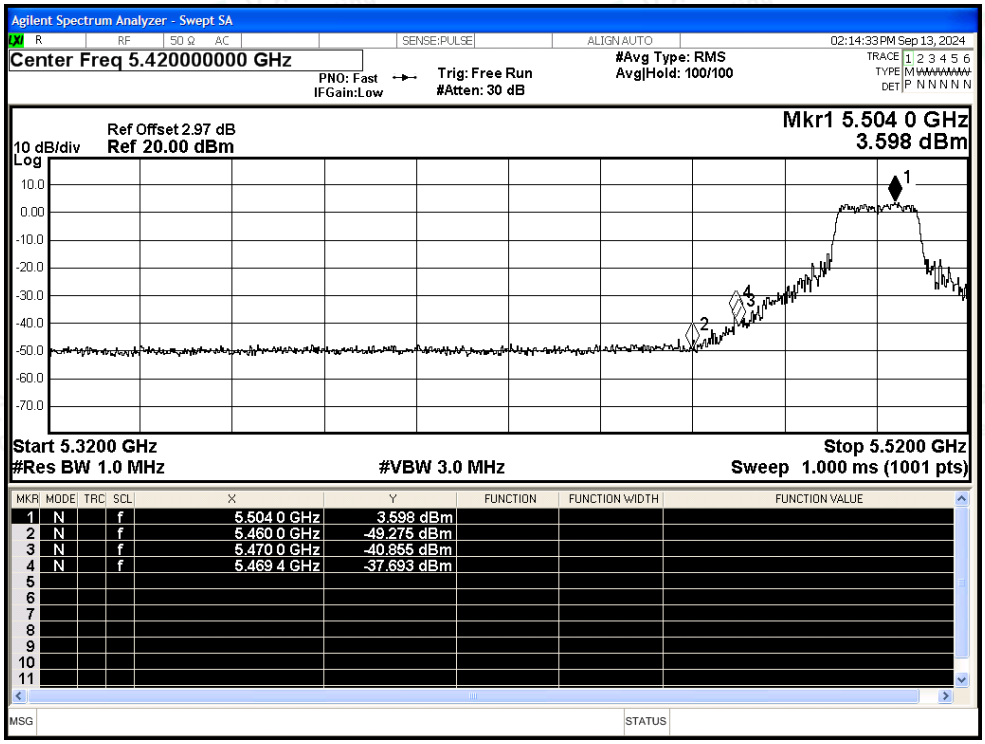
Restrict Band NVNT n40 5670MHz Ant1 Peak



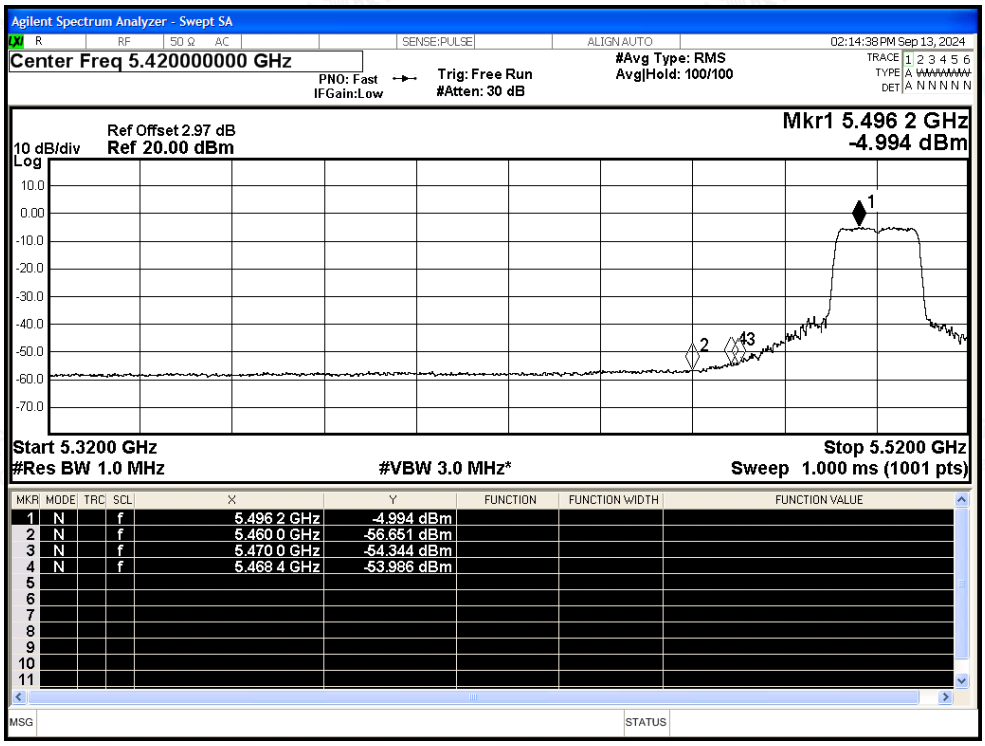
Restrict Band NVNT n40 5670MHz Ant1 Average



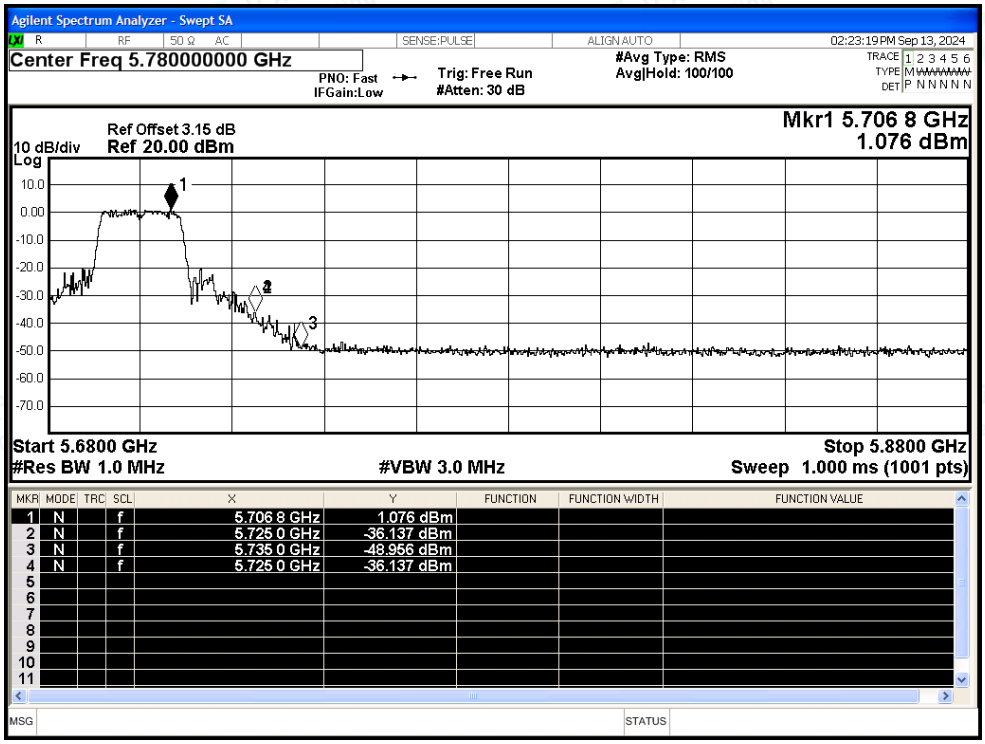
Restrict Band NVNT ac20 5500MHz Ant1 Peak



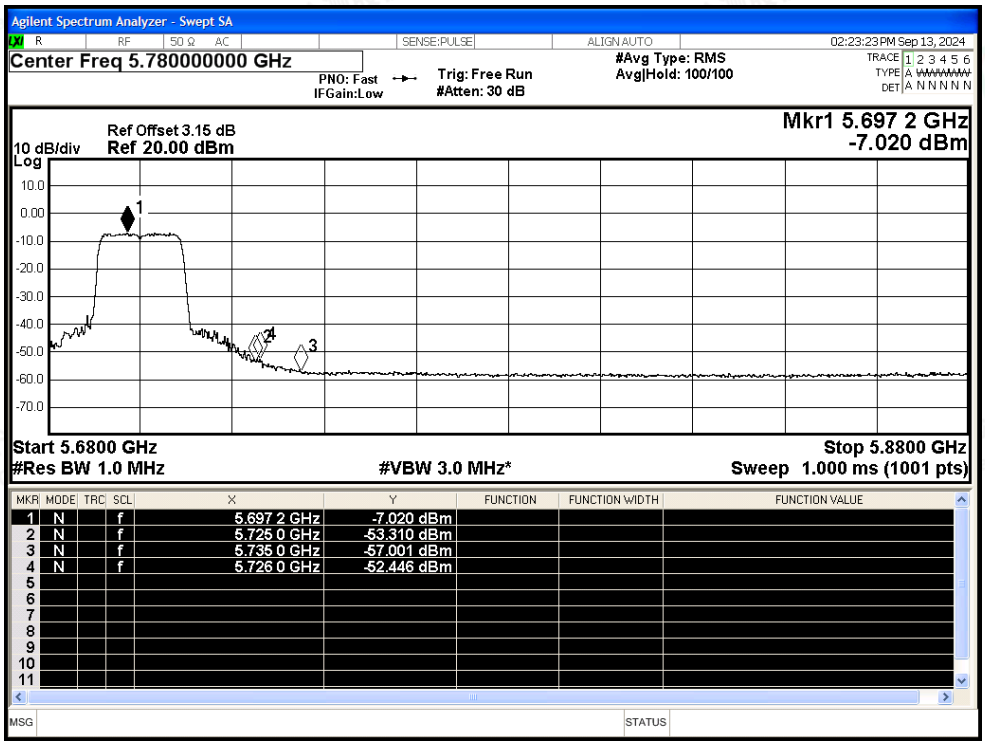
Restrict Band NVNT ac20 5500MHz Ant1 Average



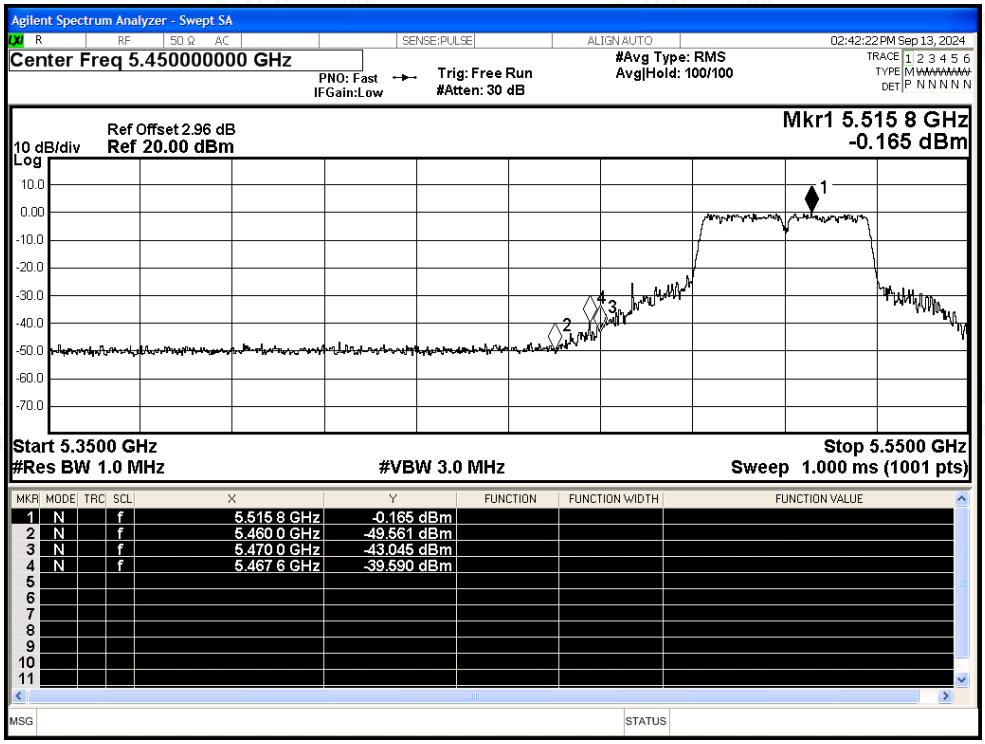
Restrict Band NVNT ac20 5700MHz Ant1 Peak



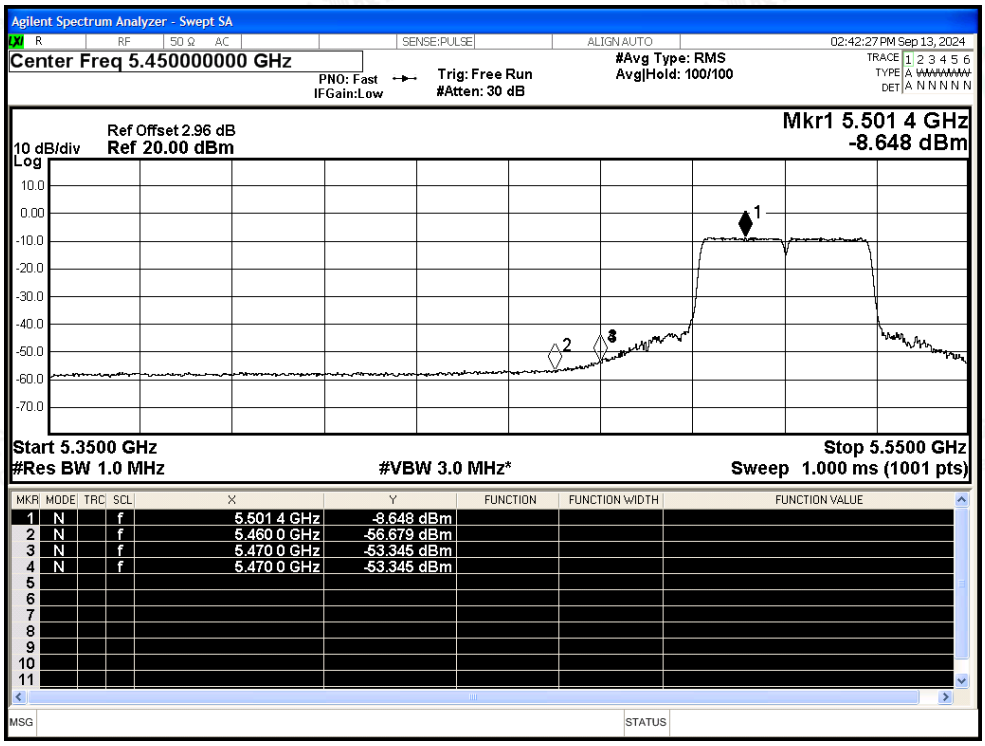
Restrict Band NVNT ac20 5700MHz Ant1 Average



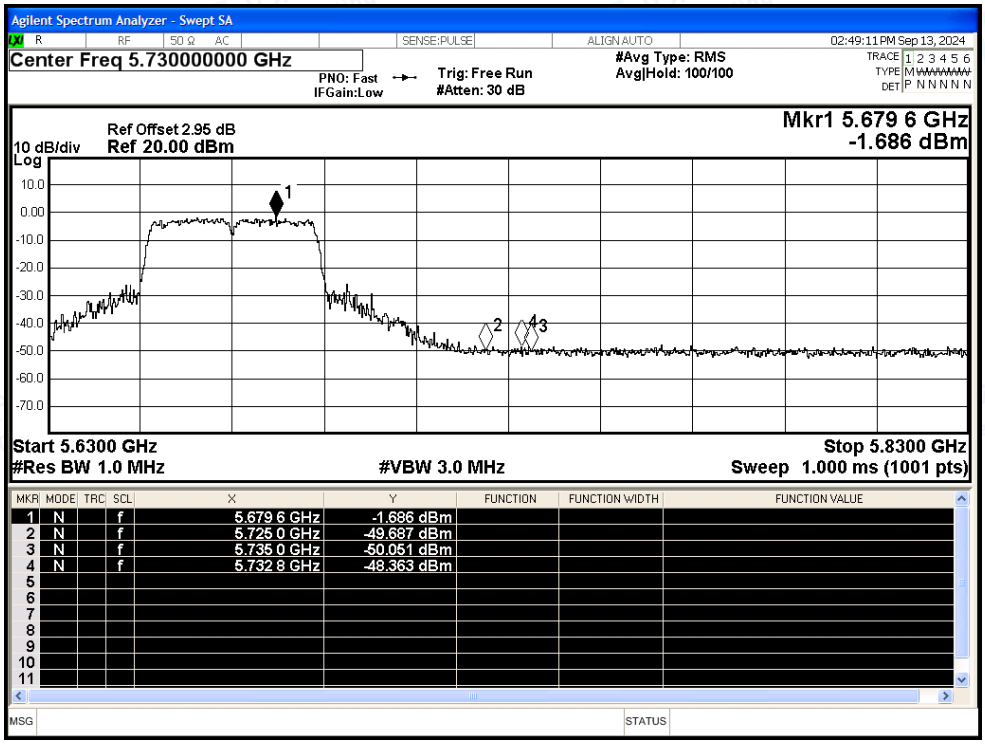
Restrict Band NVNT ac40 5510MHz Ant1 Peak



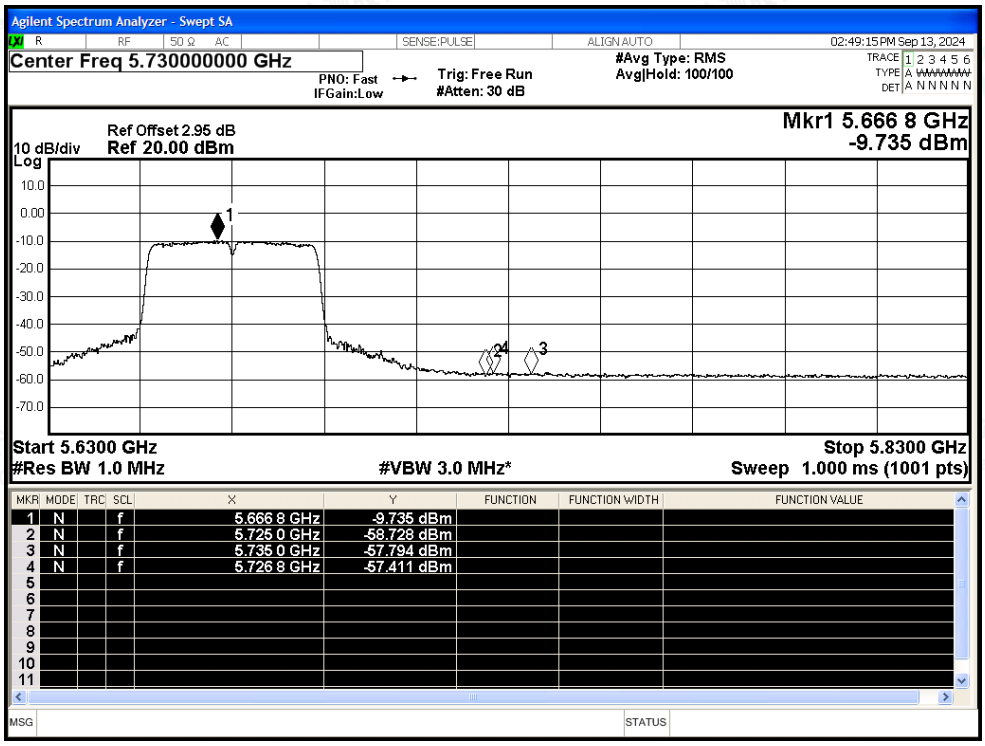
Restrict Band NVNT ac40 5510MHz Ant1 Average



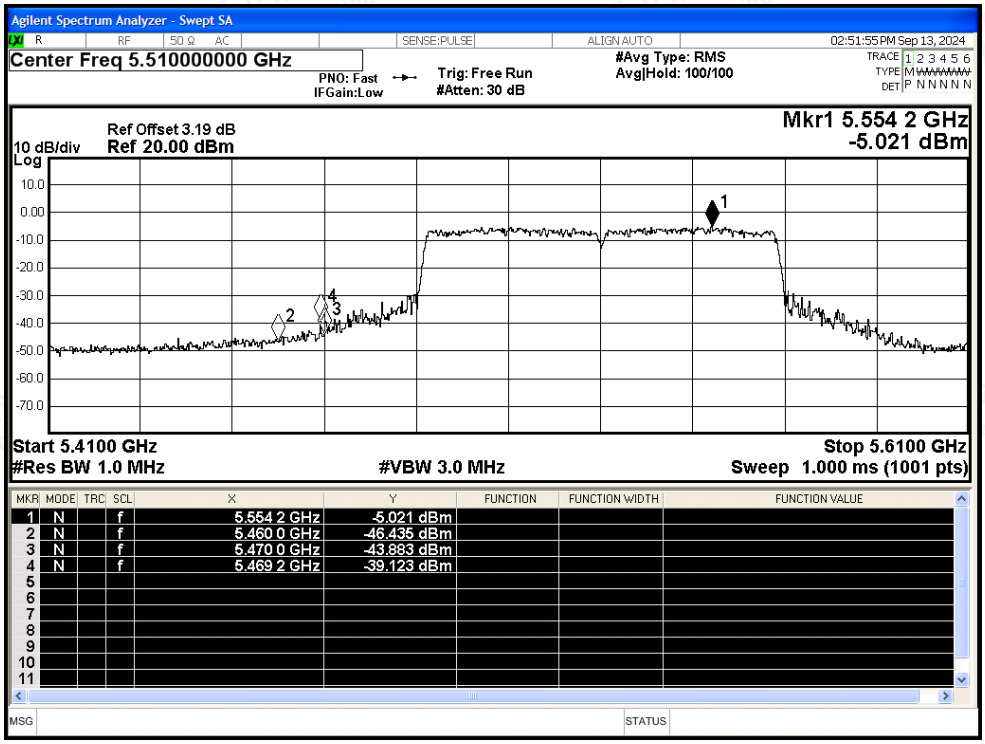
Restrict Band NVNT ac40 5670MHz Ant1 Peak



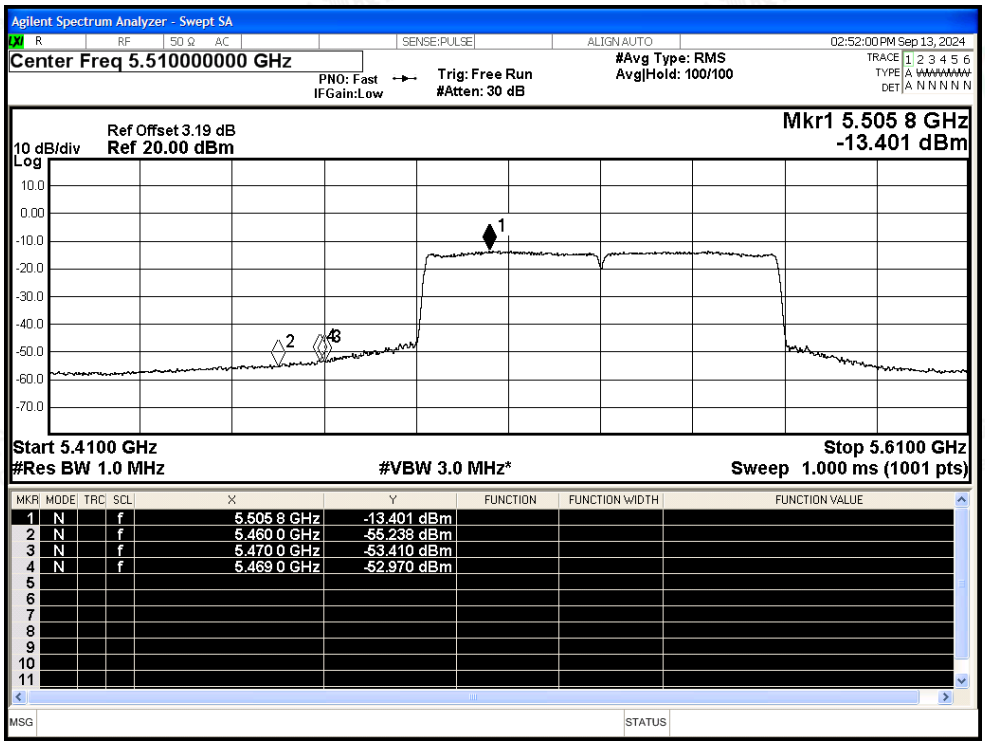
Restrict Band NVNT ac40 5670MHz Ant1 Average



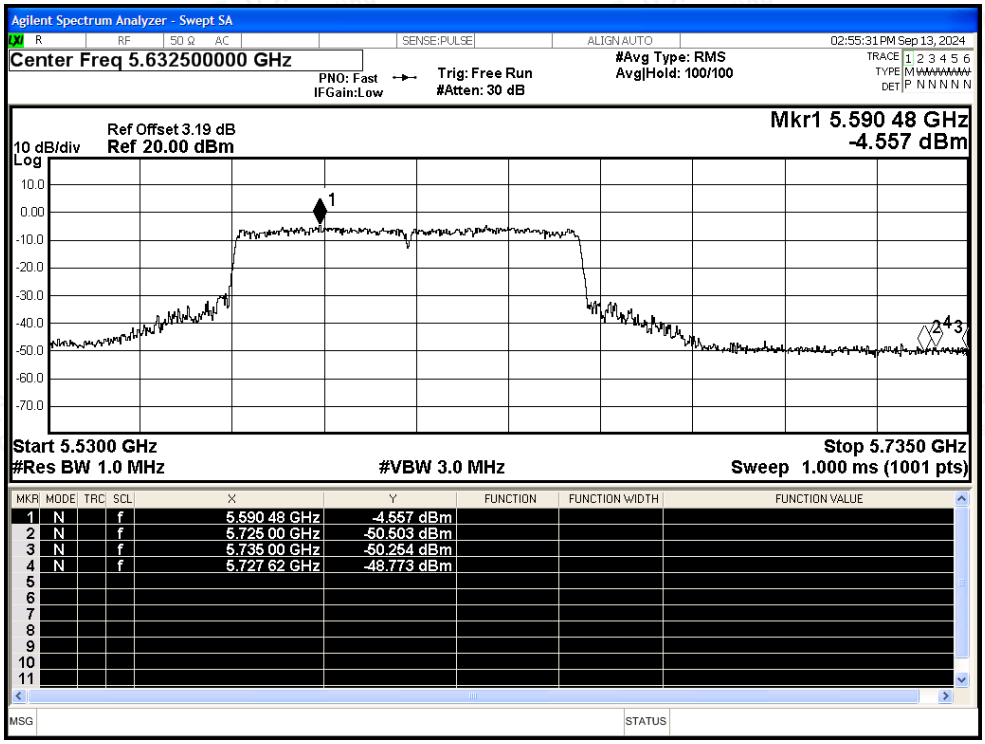
Restrict Band NVNT ac80 5530MHz Ant1 Peak



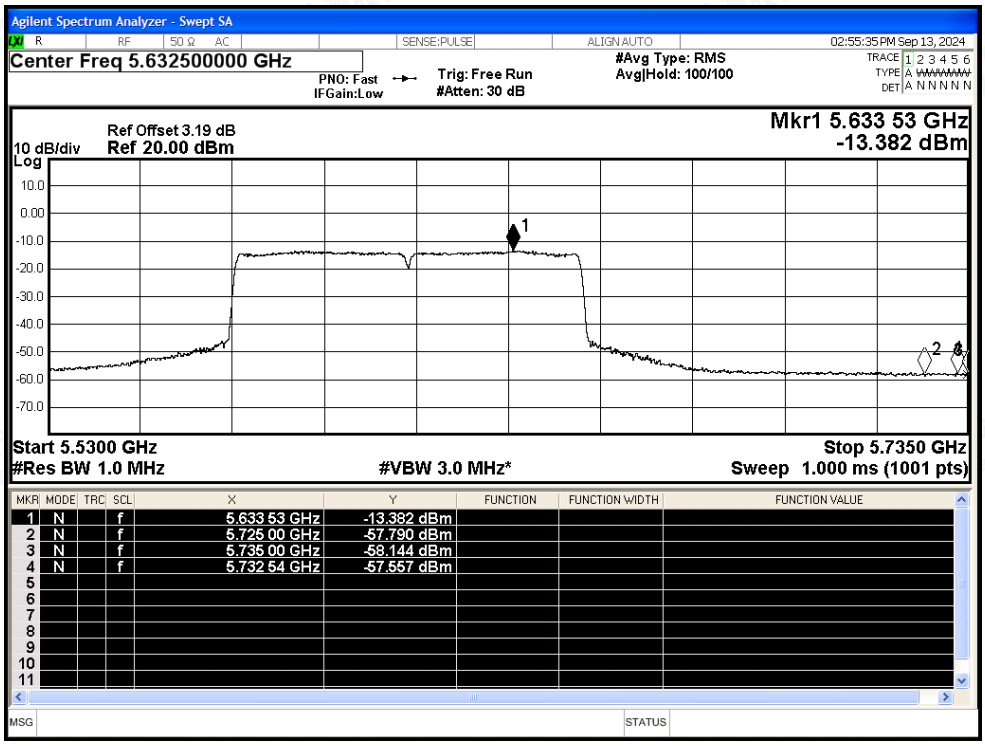
Restrict Band NVNT ac80 5530MHz Ant1 Average



Restrict Band NVNT ac80 5610MHz Ant1 Peak



Restrict Band NVNT ac80 5610MHz Ant1 Average

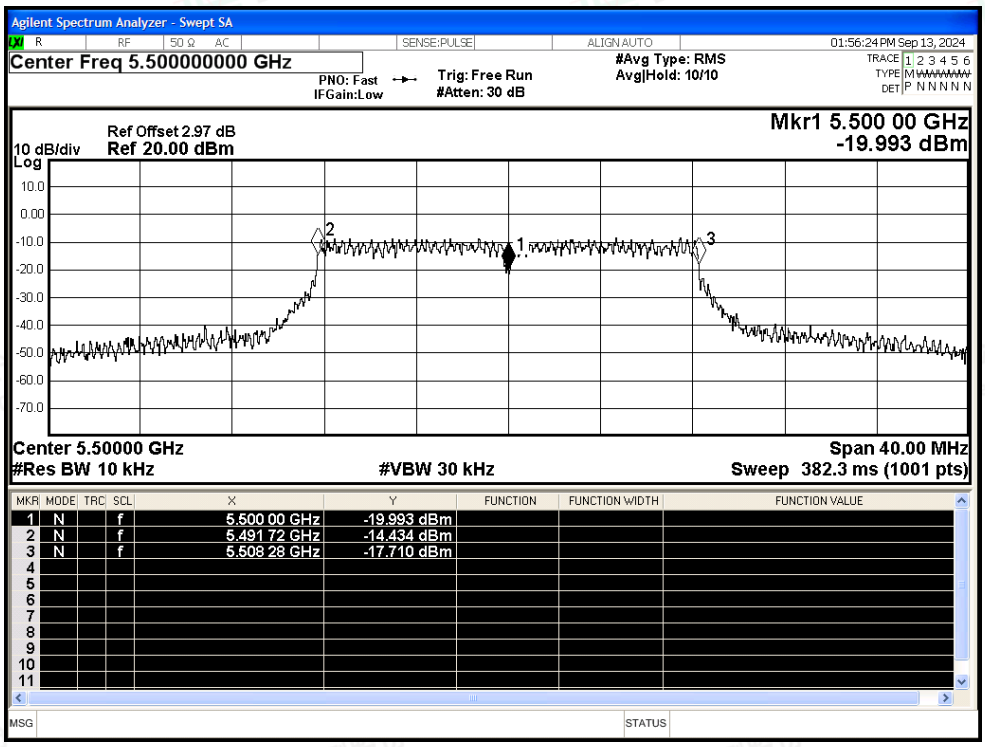


F.5 Frequency Stability

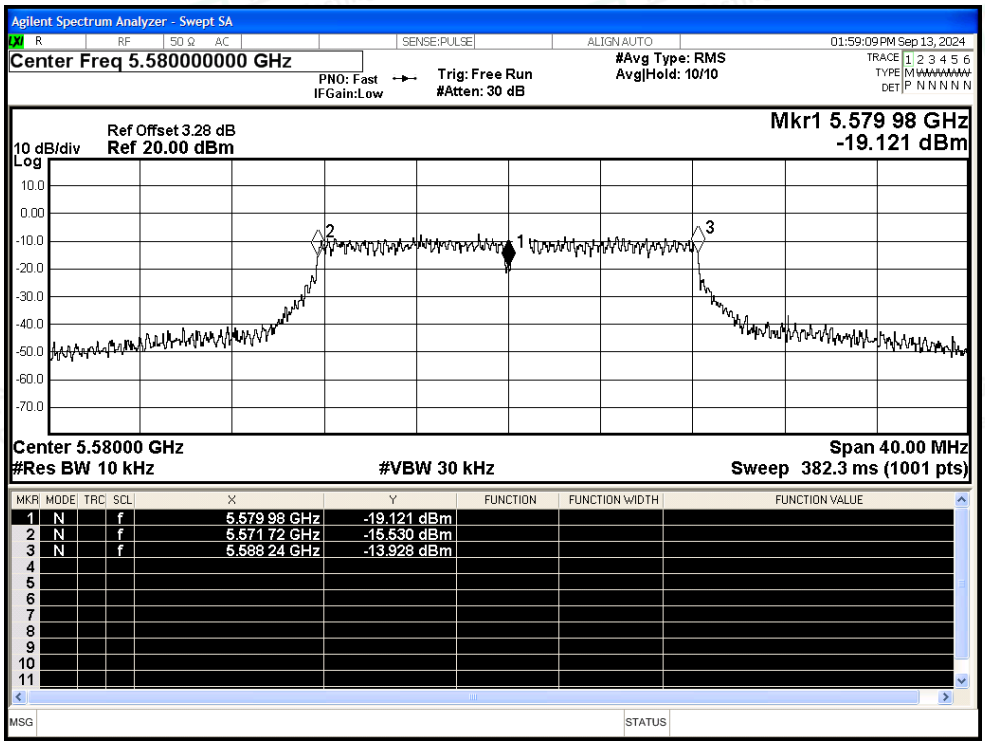
Condition	Mode	Frequency (MHz)	Antenna	Measured Frequency (MHz)	Frequency Error (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
NVNT	a	5500	Ant1	5500	0	0	25	Pass
NVNT	a	5580	Ant1	5579.98	-20000	-3.58	25	Pass
NVNT	a	5700	Ant1	5700	0	0	25	Pass
NVNT	n20	5500	Ant1	5499.98	-20000	-3.64	25	Pass
NVNT	n20	5580	Ant1	5580	0	0	25	Pass
NVNT	n20	5700	Ant1	5699.98	-20000	-3.51	25	Pass
NVNT	n40	5510	Ant1	5510	0	0	25	Pass
NVNT	n40	5550	Ant1	5550	0	0	25	Pass
NVNT	n40	5670	Ant1	5670	0	0	25	Pass
NVNT	ac20	5500	Ant1	5500	0	0	25	Pass
NVNT	ac20	5580	Ant1	5579.98	-20000	-3.58	25	Pass
NVNT	ac20	5700	Ant1	5699.98	-20000	-3.51	25	Pass
NVNT	ac40	5510	Ant1	5510	0	0	25	Pass
NVNT	ac40	5550	Ant1	5550	0	0	25	Pass
NVNT	ac40	5670	Ant1	5670	0	0	25	Pass
NVNT	ac80	5530	Ant1	5530	0	0	25	Pass
NVNT	ac80	5610	Ant1	5610	0	0	25	Pass

Test Graphs

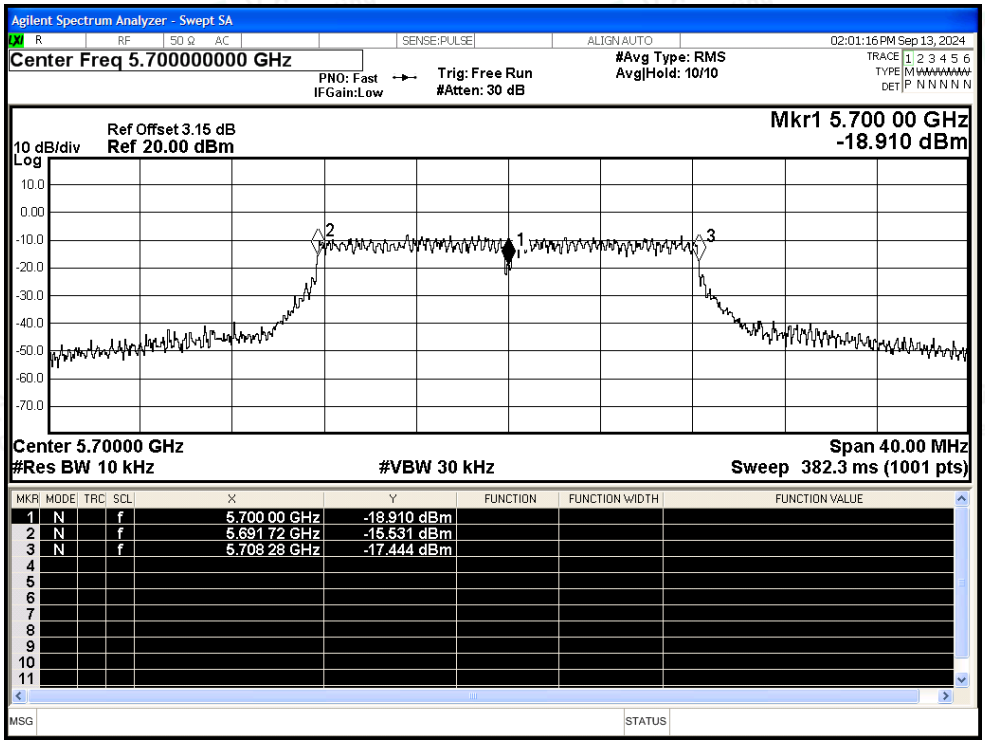
Freq. Stability NVNT a 5500MHz Ant1



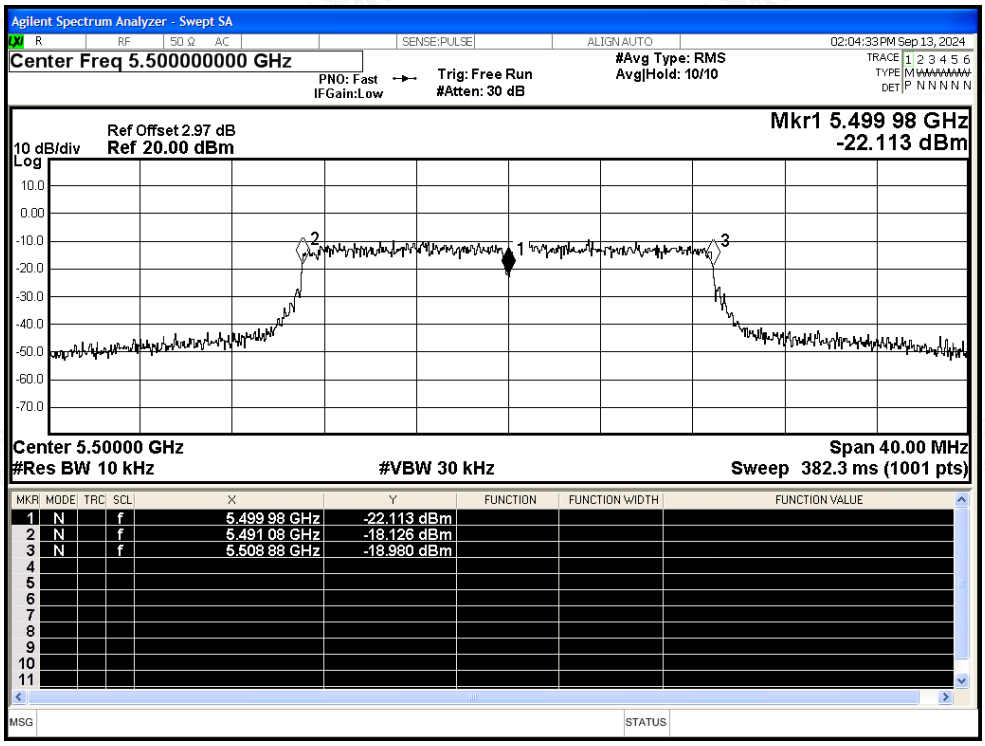
Freq. Stability NVNT a 5580MHz Ant1



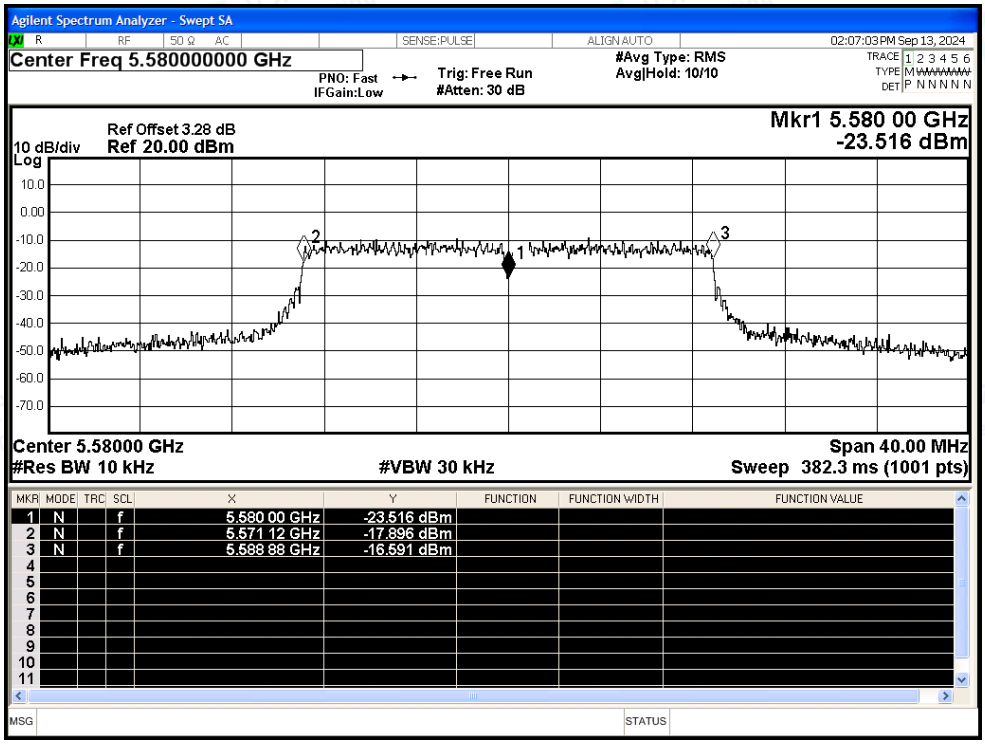
Freq. Stability NVNT a 5700MHz Ant1



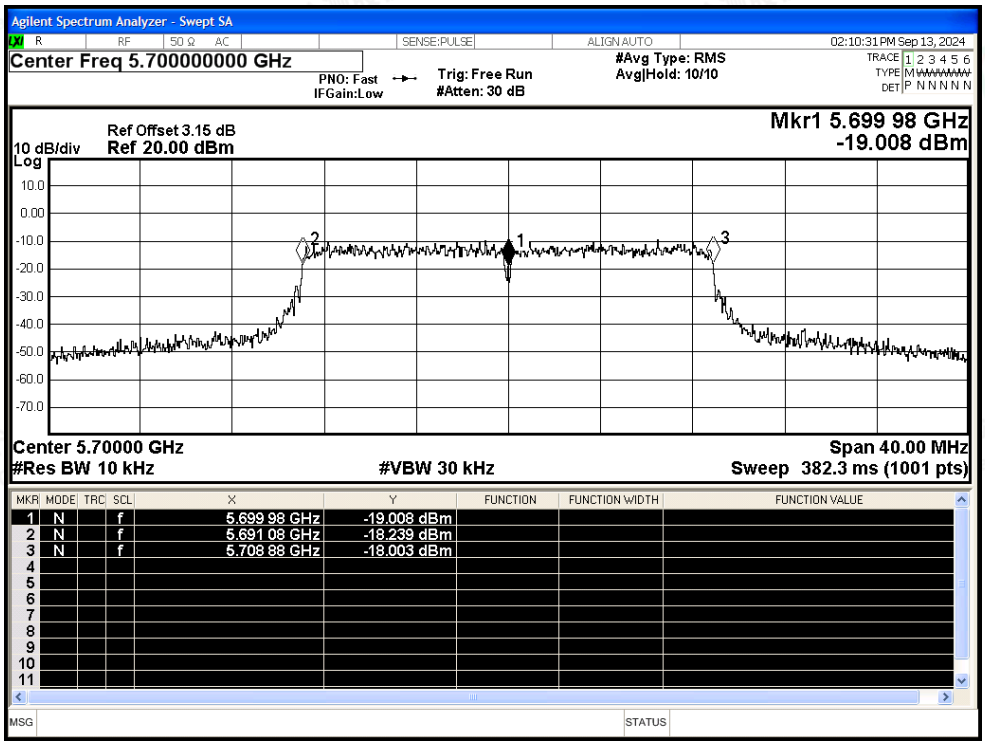
Freq. Stability NVNT n20 5500MHz Ant1



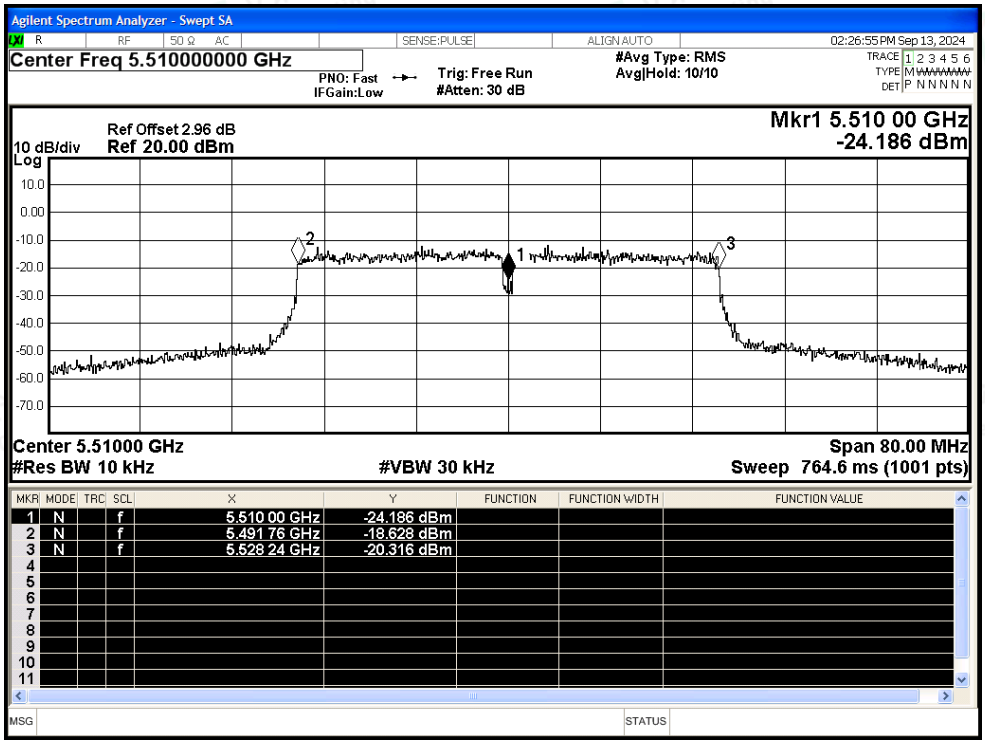
Freq. Stability NVNT n20 5580MHz Ant1



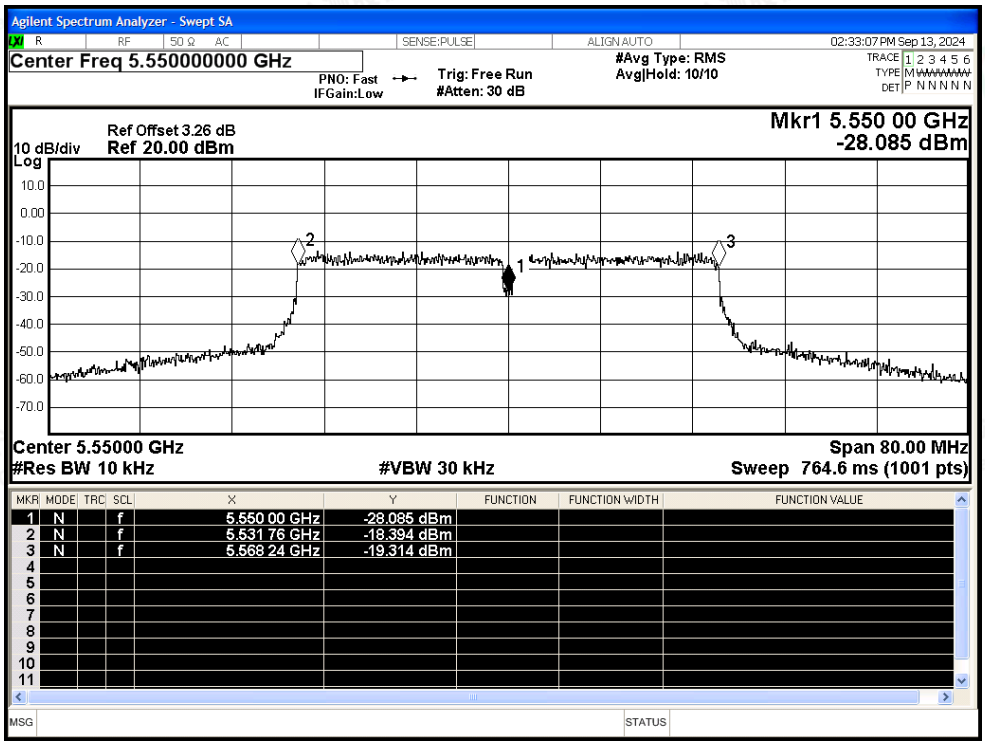
Freq. Stability NVNT n20 5700MHz Ant1



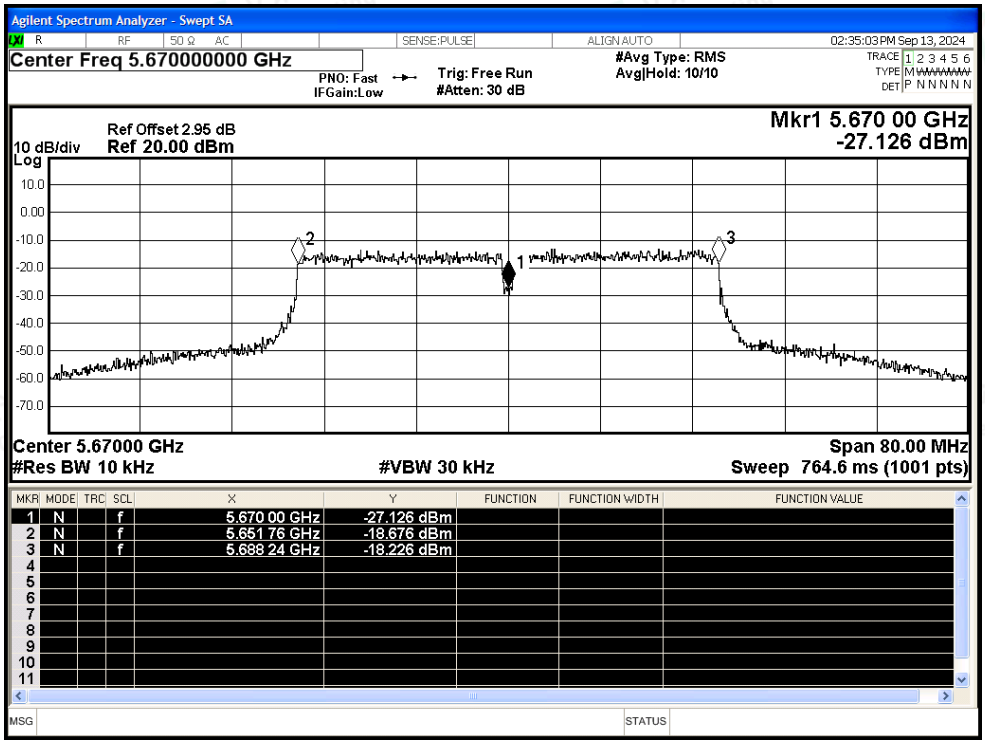
Freq. Stability NVNT n40 5510MHz Ant1



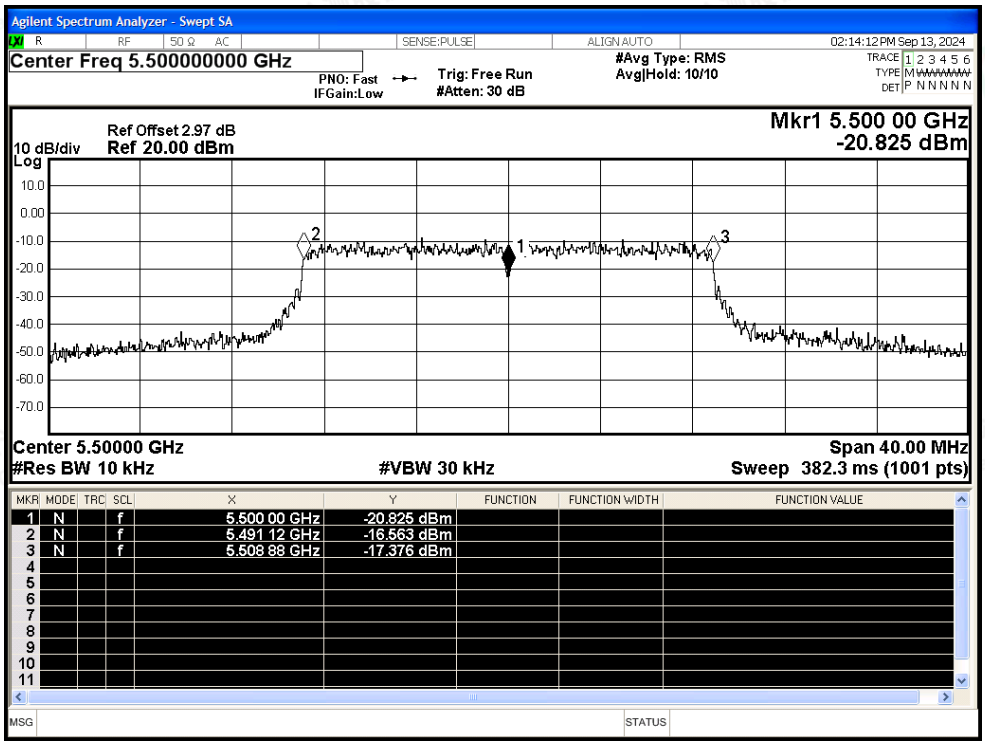
Freq. Stability NVNT n40 5550MHz Ant1



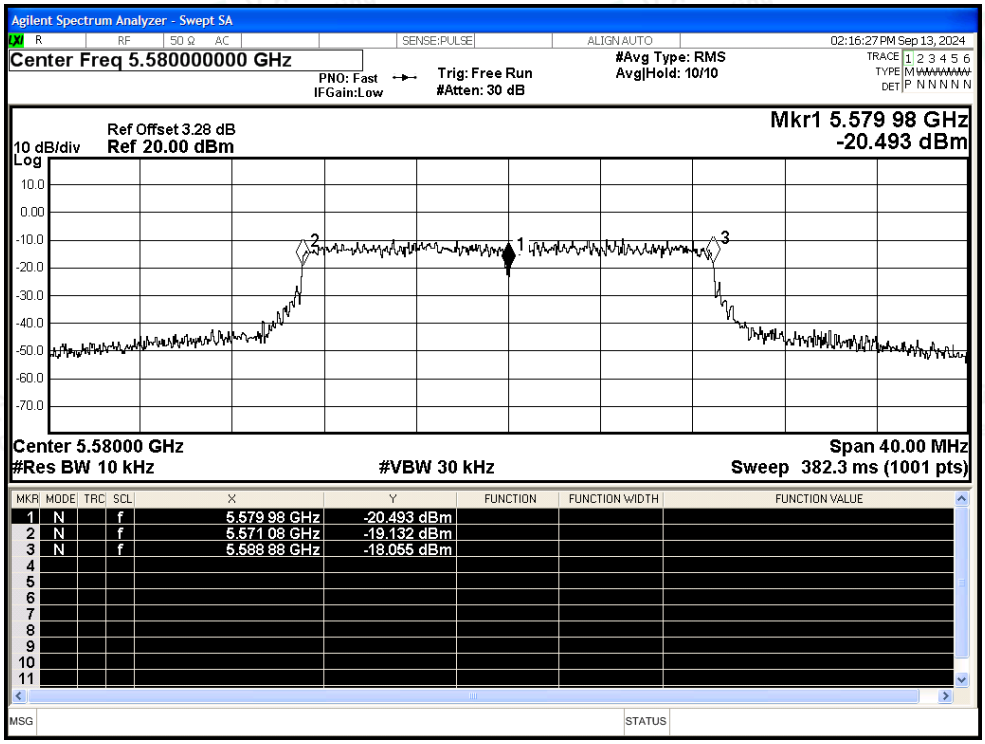
Freq. Stability NVNT n40 5670MHz Ant1



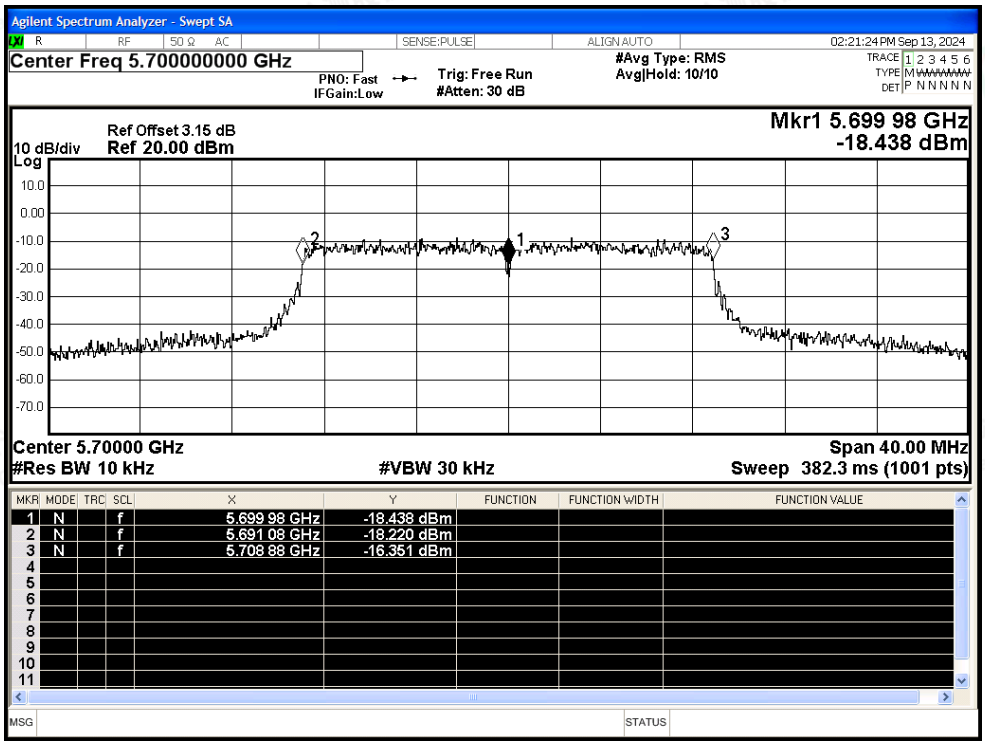
Freq. Stability NVNT ac20 5500MHz Ant1



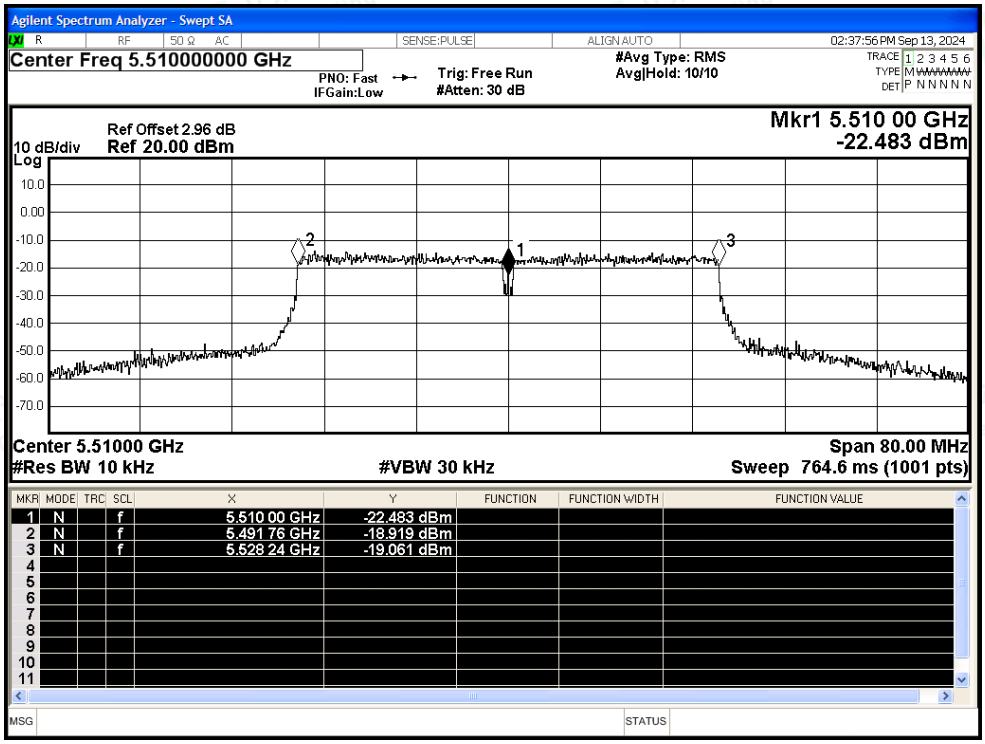
Freq. Stability NVNT ac20 5580MHz Ant1



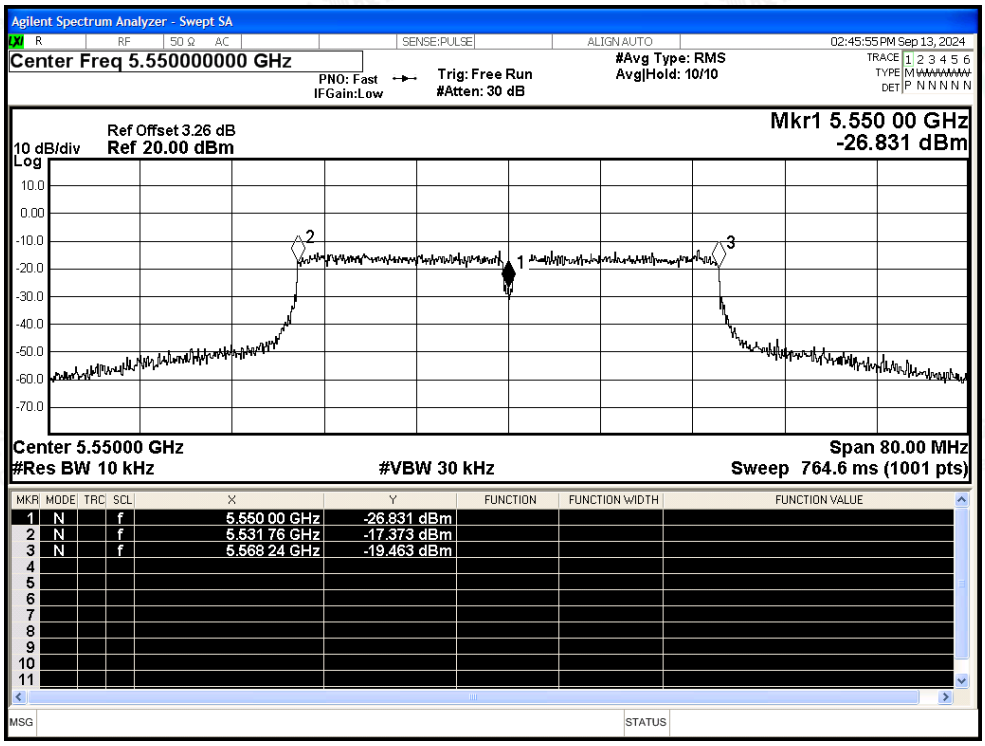
Freq. Stability NVNT ac20 5700MHz Ant1



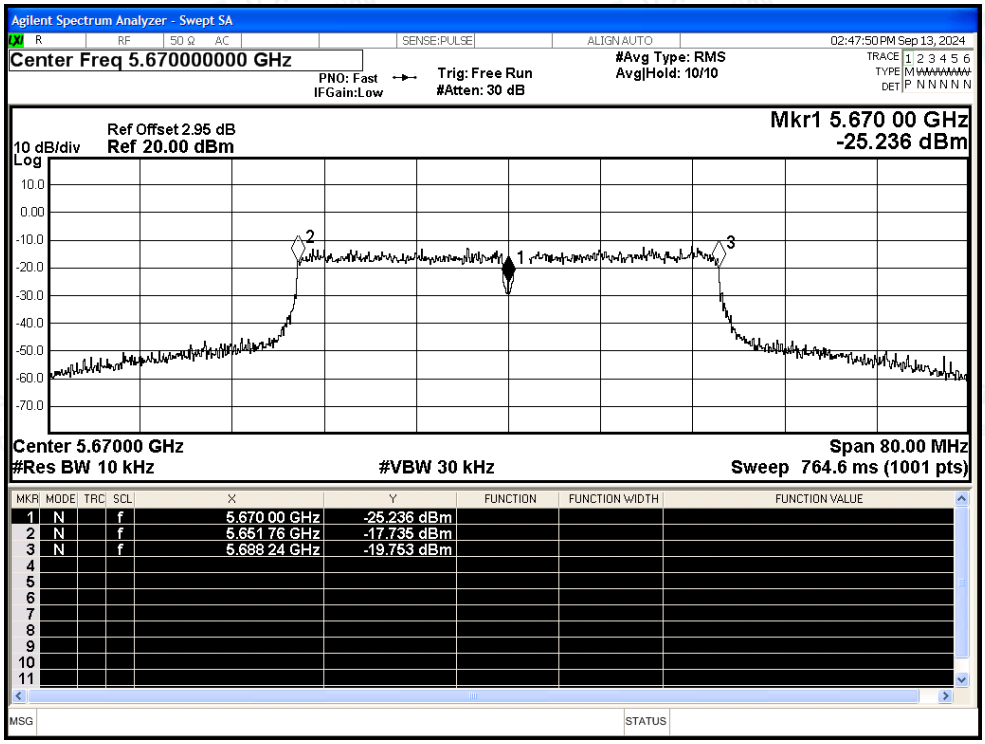
Freq. Stability NVNT ac40 5510MHz Ant1



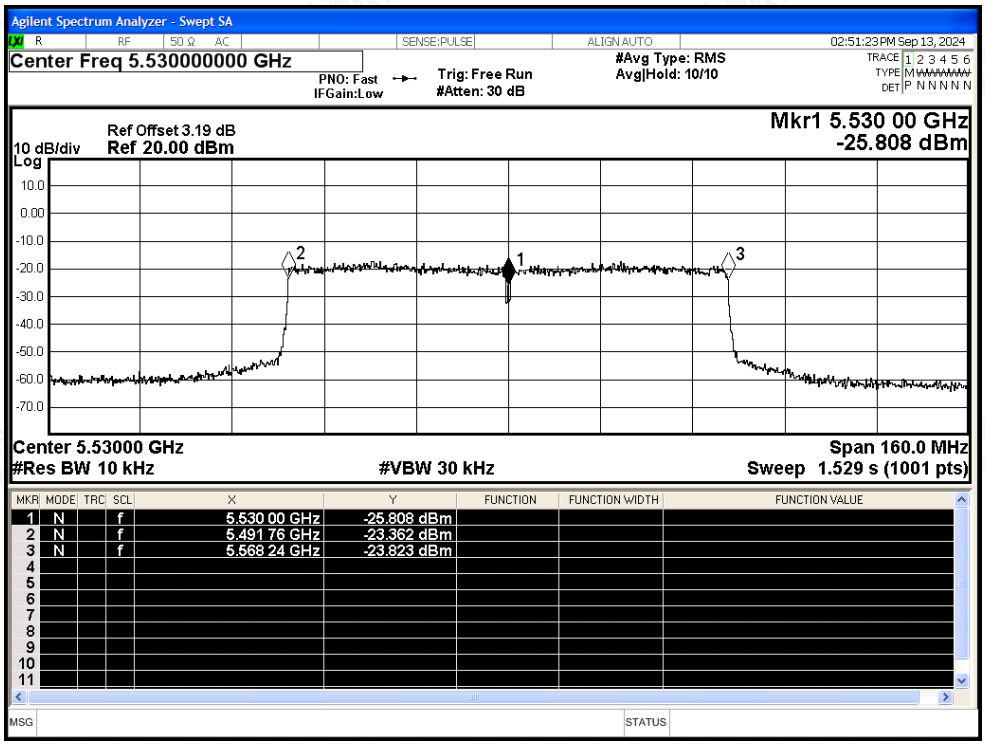
Freq. Stability NVNT ac40 5550MHz Ant1



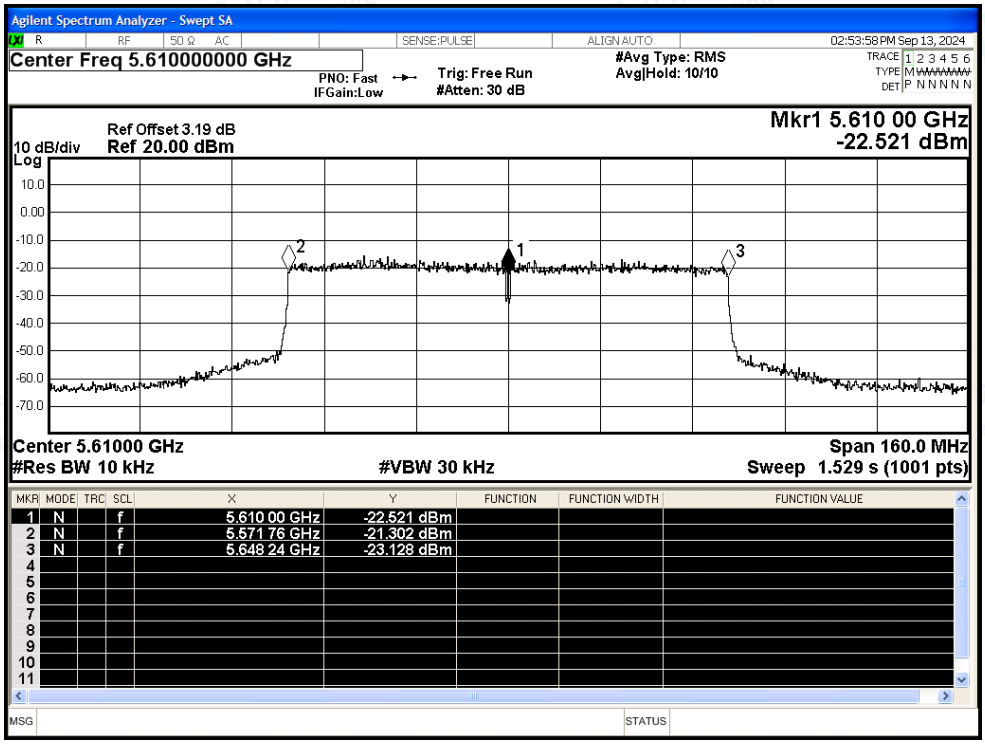
Freq. Stability NVNT ac40 5670MHz Ant1



Freq. Stability NVNT ac80 5530MHz Ant1



Freq. Stability NVNT ac80 5610MHz Ant1

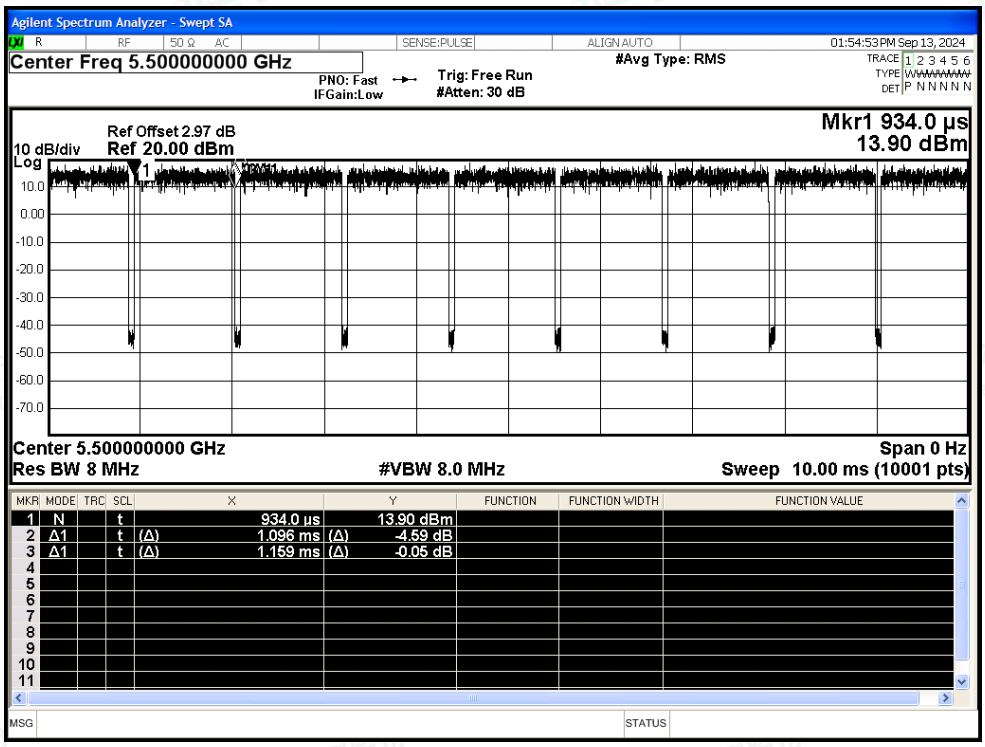


F.6 Duty Cycle

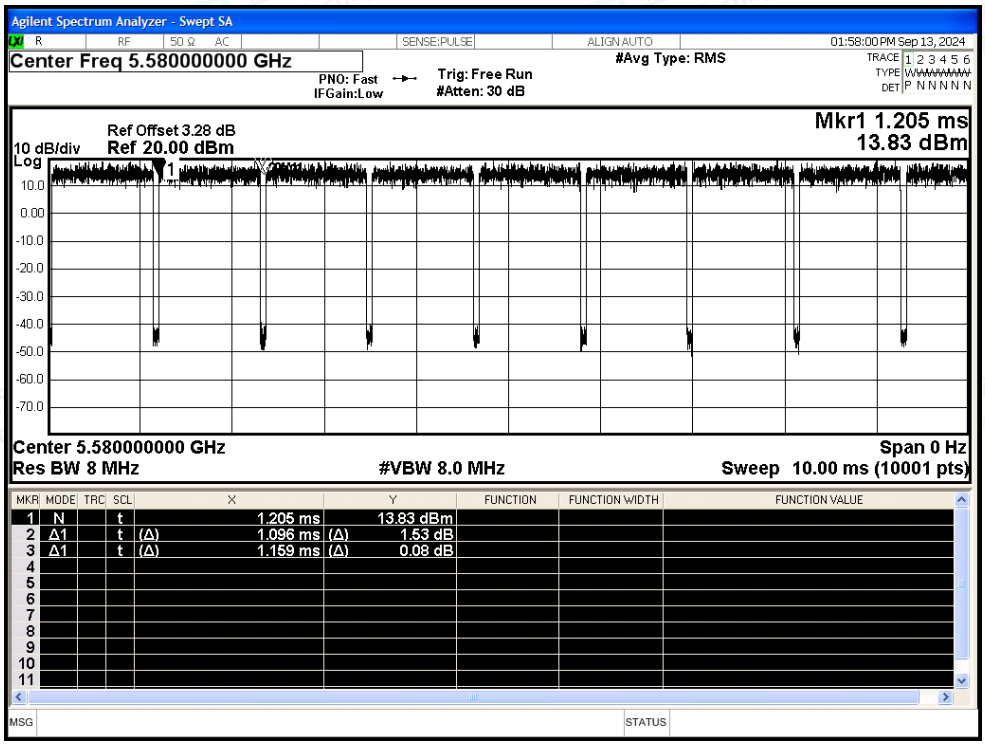
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	a	5500	Ant1	94.56	0.24	0.91
NVNT	a	5580	Ant1	94.56	0.24	0.91
NVNT	a	5700	Ant1	94.65	0.24	0.91
NVNT	n20	5500	Ant1	93.67	0.28	1.07
NVNT	n20	5580	Ant1	93.77	0.28	1.07
NVNT	n20	5700	Ant1	93.77	0.28	1.07
NVNT	n40	5510	Ant1	97.23	0.12	0.46
NVNT	n40	5550	Ant1	97.23	0.12	0.46
NVNT	n40	5670	Ant1	97.18	0.12	0.46
NVNT	ac20	5500	Ant1	93.82	0.28	1.06
NVNT	ac20	5580	Ant1	93.82	0.28	1.06
NVNT	ac20	5700	Ant1	93.72	0.28	1.06
NVNT	ac40	5510	Ant1	97.24	0.12	0.46
NVNT	ac40	5550	Ant1	97.19	0.12	0.46
NVNT	ac40	5670	Ant1	97.19	0.12	0.46
NVNT	ac80	5530	Ant1	94.32	0.25	0.97
NVNT	ac80	5610	Ant1	94.32	0.25	0.97

Test Graphs

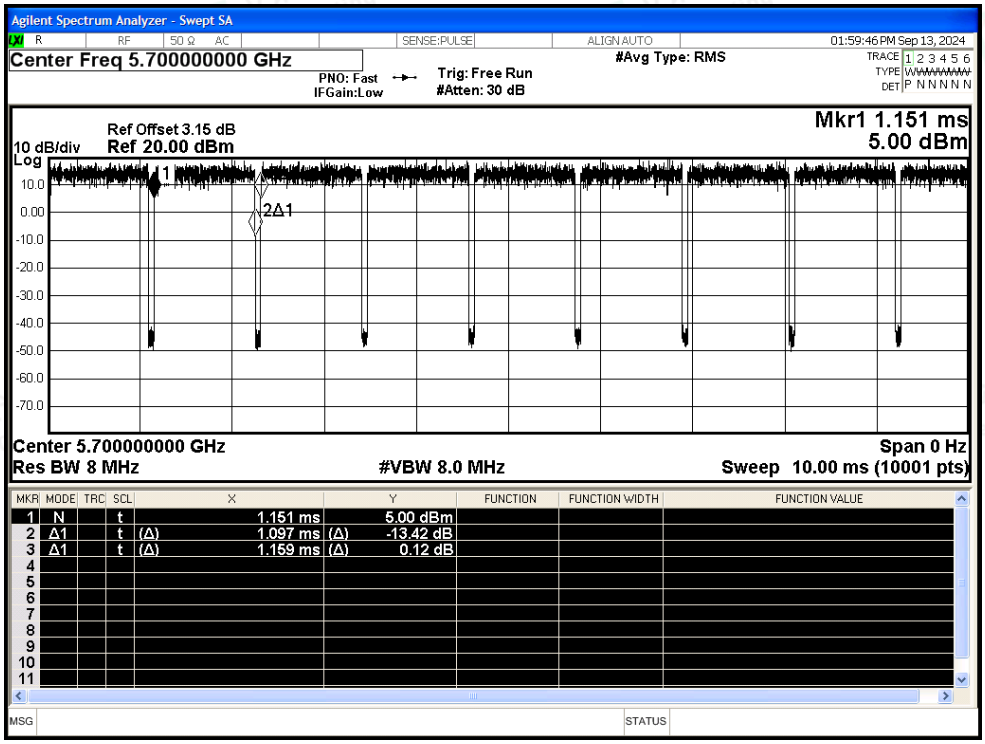
Duty Cycle NVNT a 5500MHz Ant1



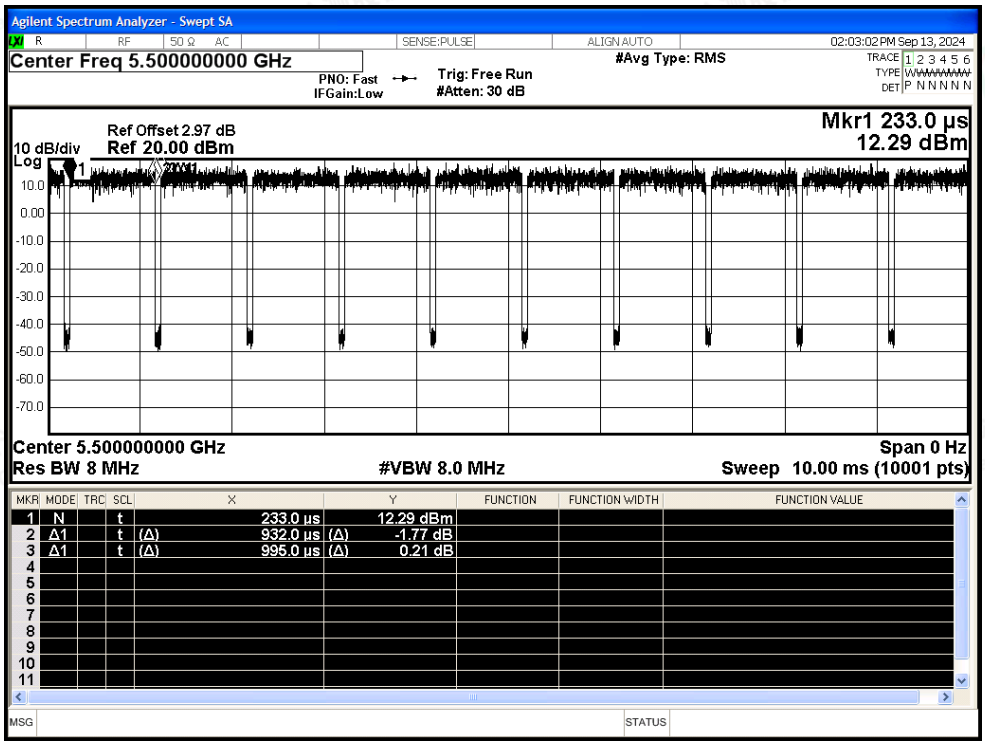
Duty Cycle NVNT a 5580MHz Ant1



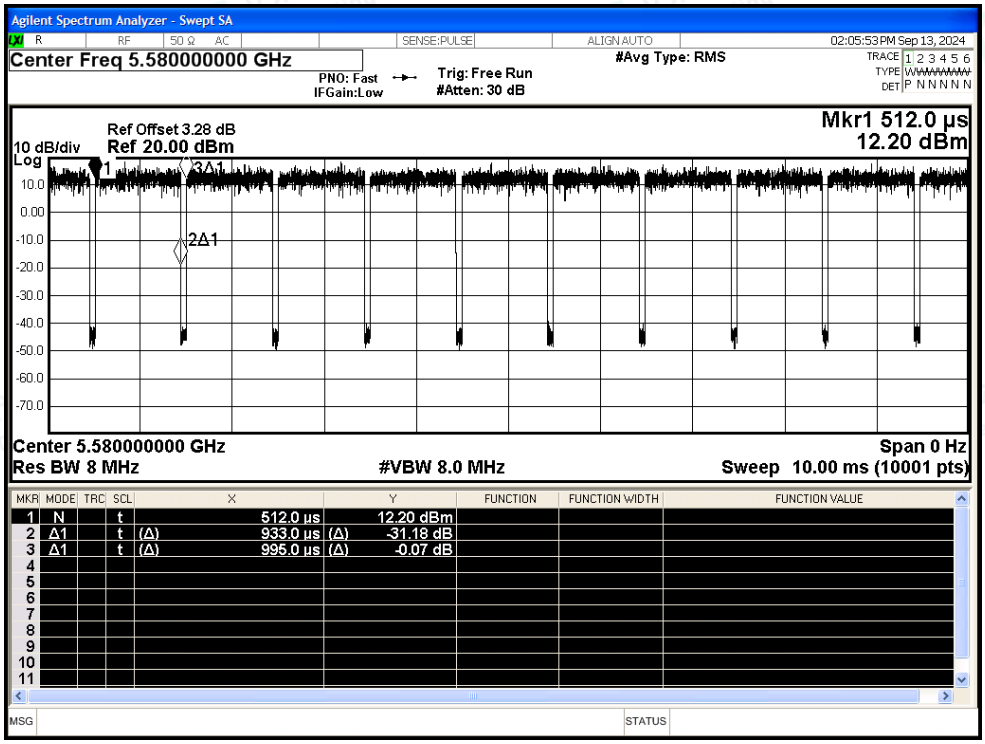
Duty Cycle NVNT a 5700MHz Ant1



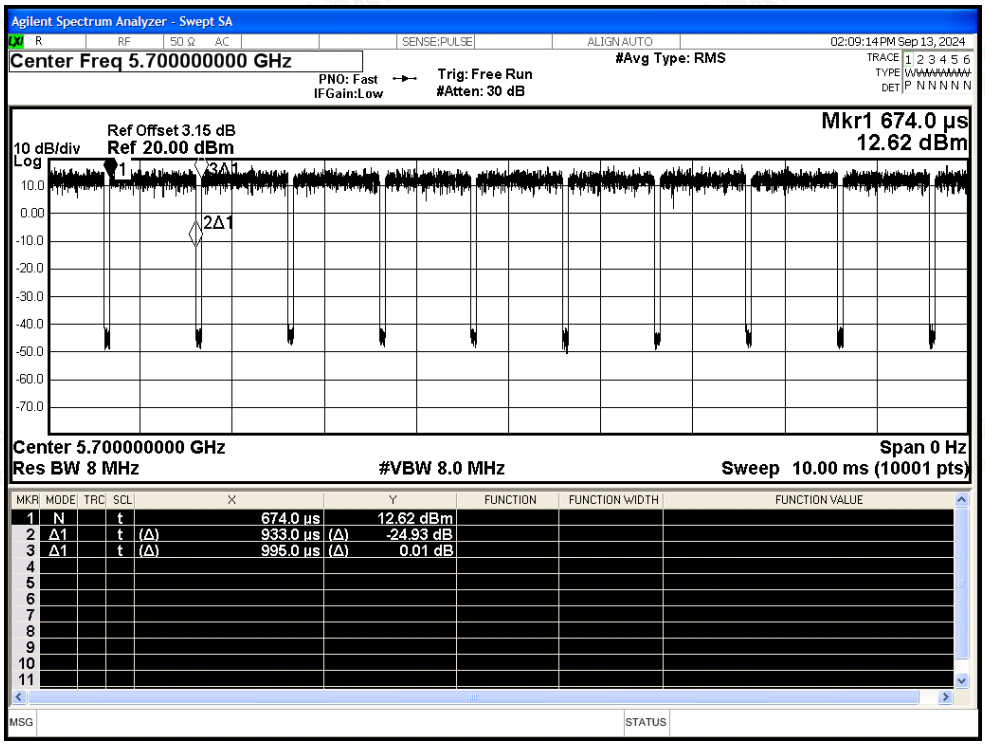
Duty Cycle NVNT n20 5500MHz Ant1



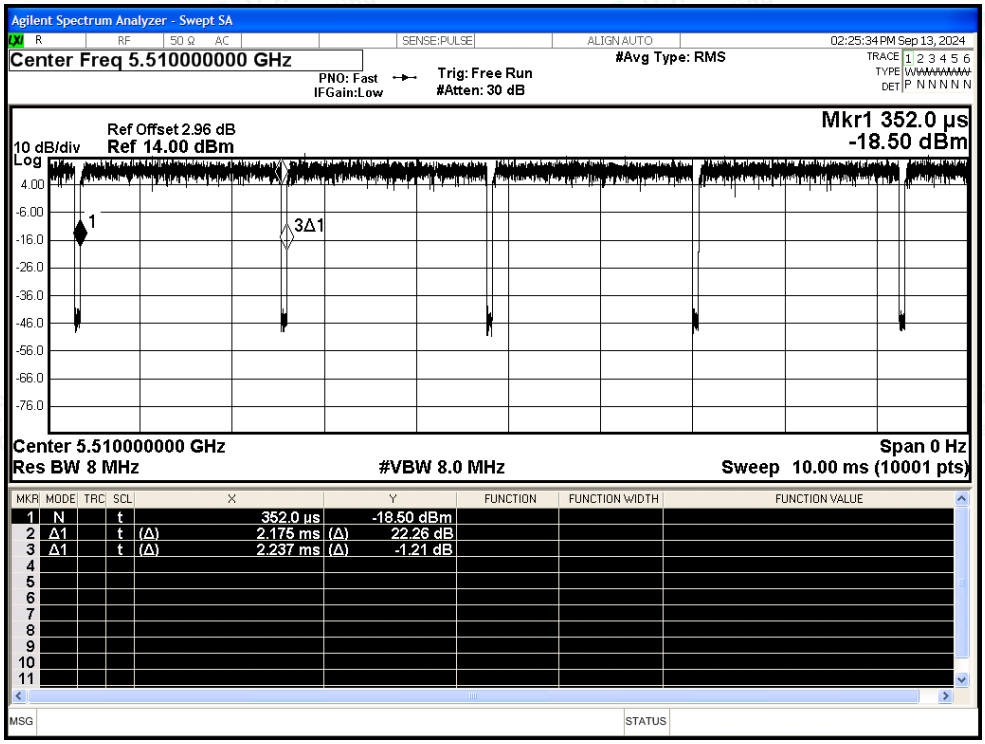
Duty Cycle NVNT n20 5580MHz Ant1



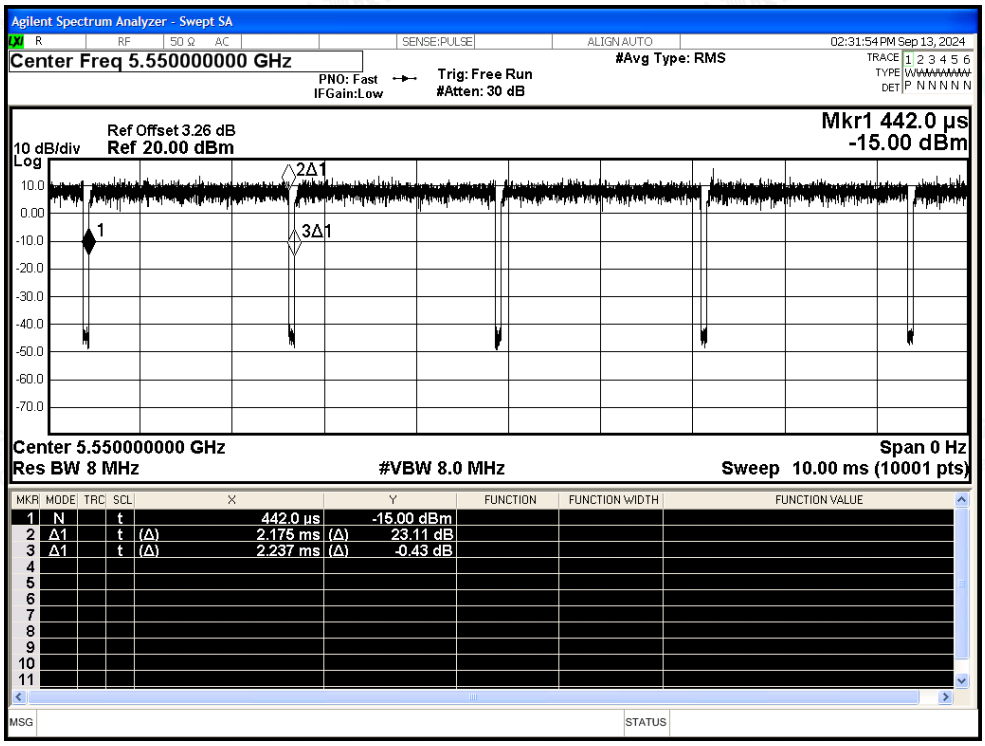
Duty Cycle NVNT n20 5700MHz Ant1



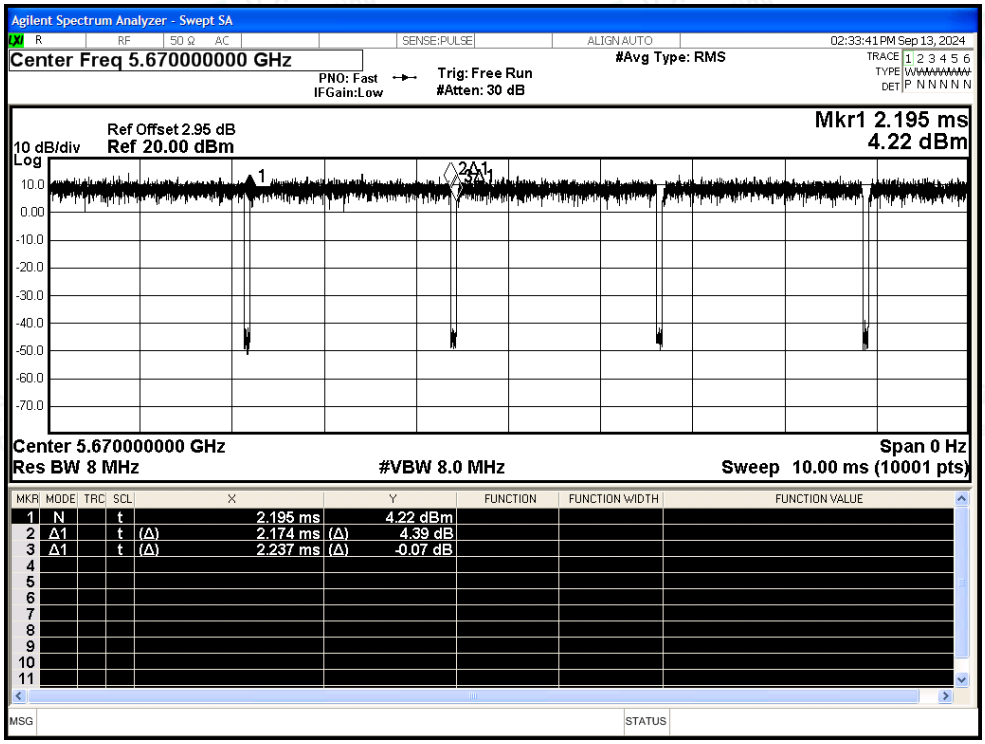
Duty Cycle NVNT n40 5510MHz Ant1



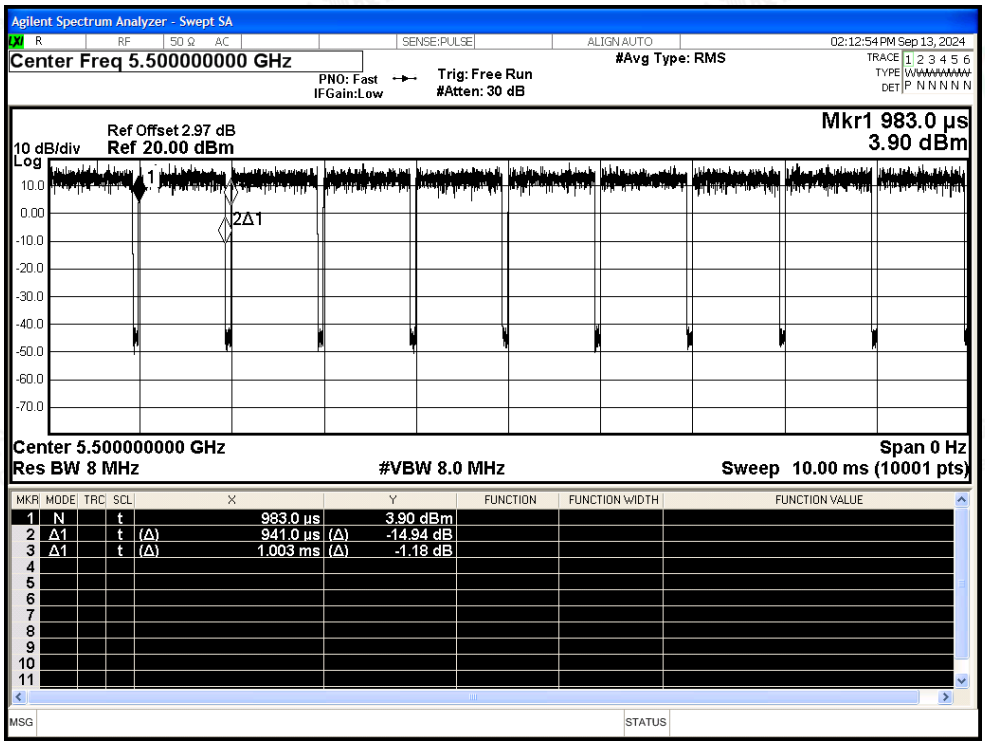
Duty Cycle NVNT n40 5550MHz Ant1



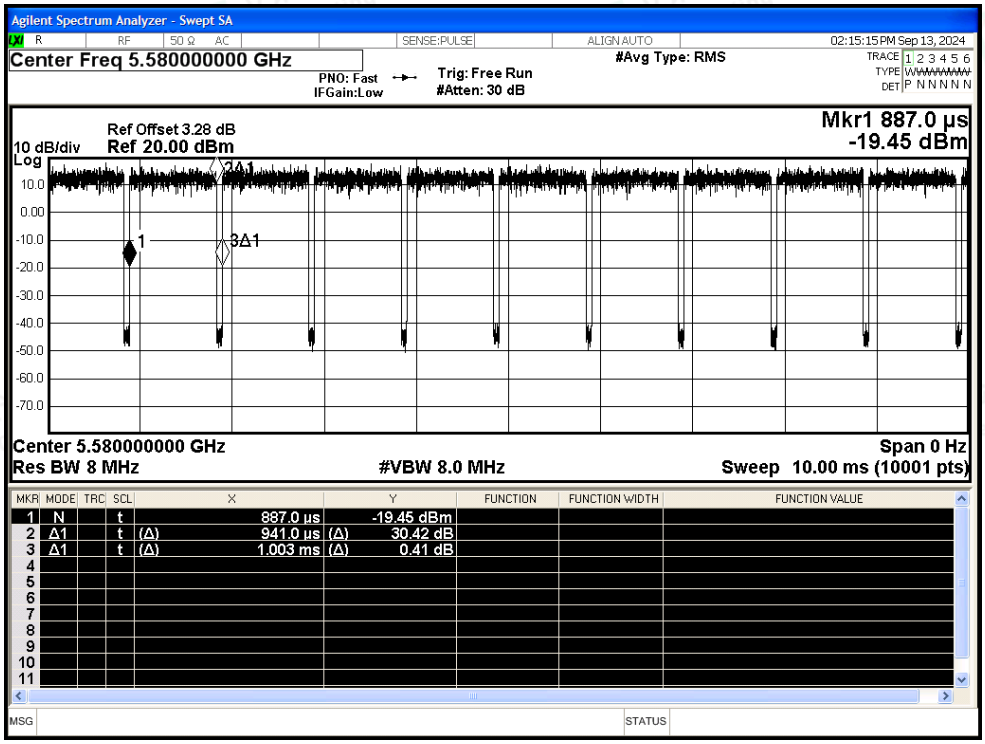
Duty Cycle NVNT n40 5670MHz Ant1



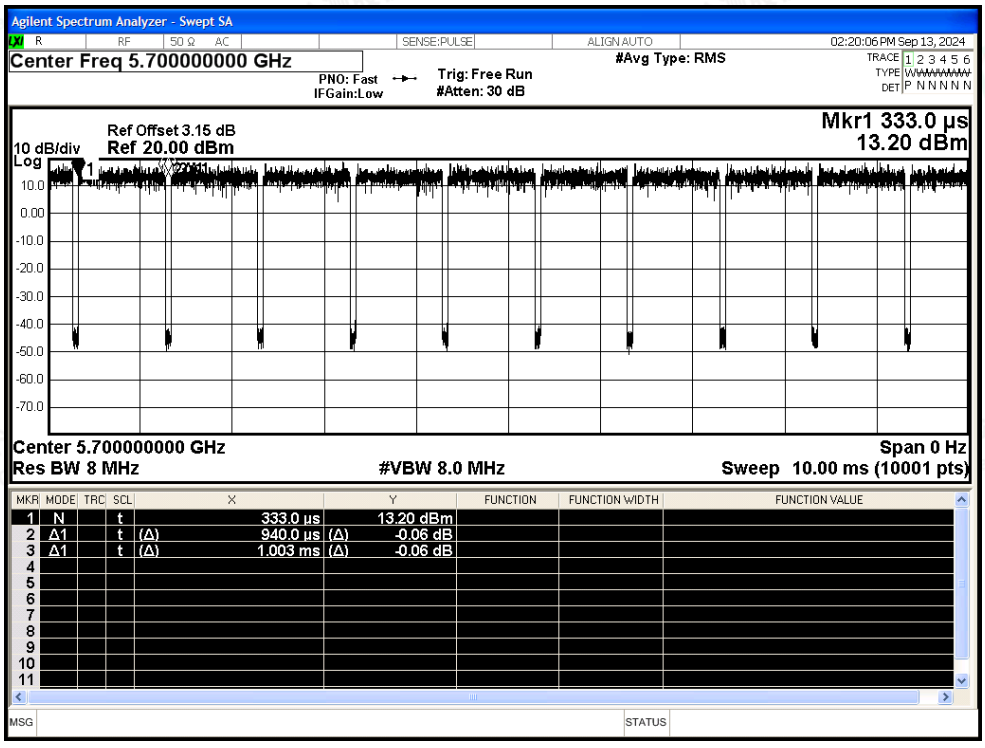
Duty Cycle NVNT ac20 5500MHz Ant1



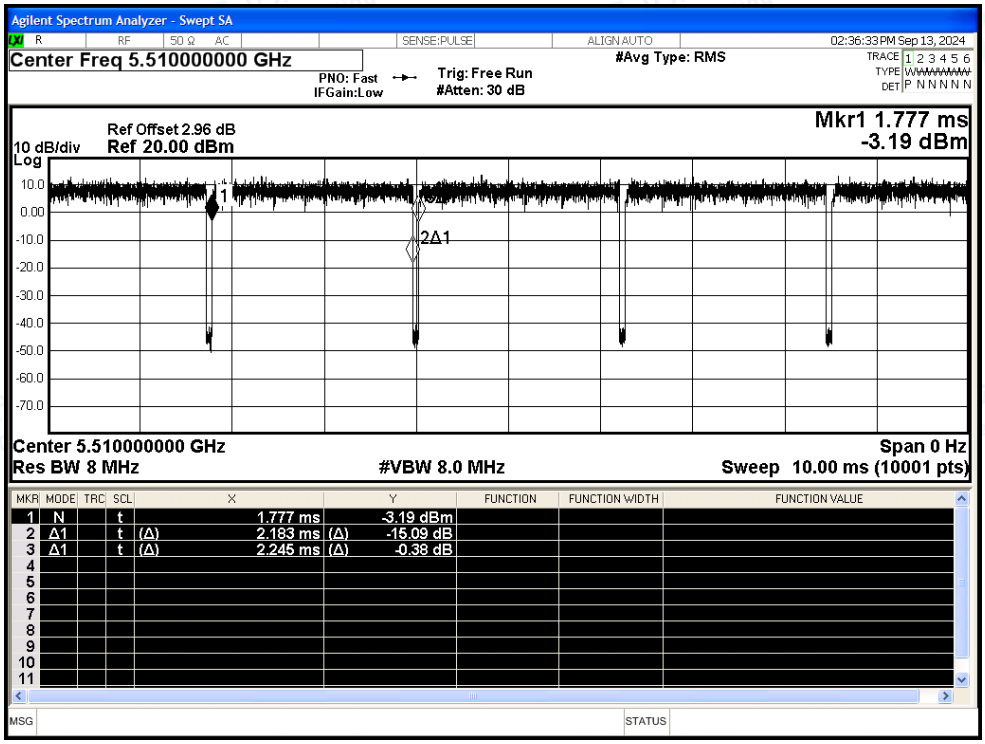
Duty Cycle NVNT ac20 5580MHz Ant1



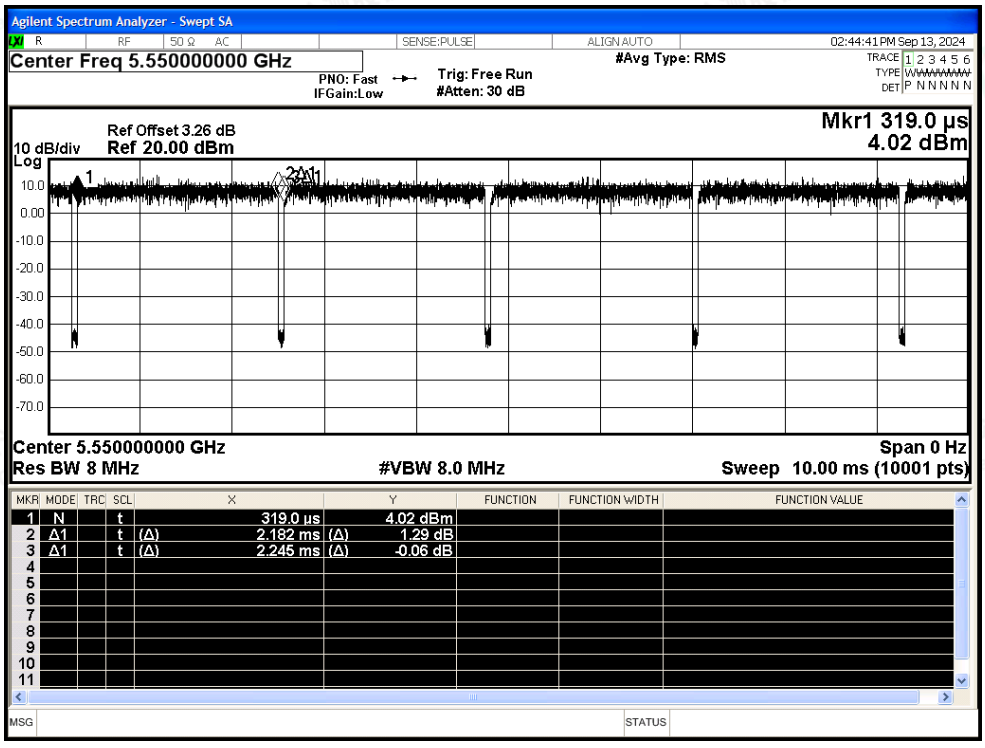
Duty Cycle NVNT ac20 5700MHz Ant1



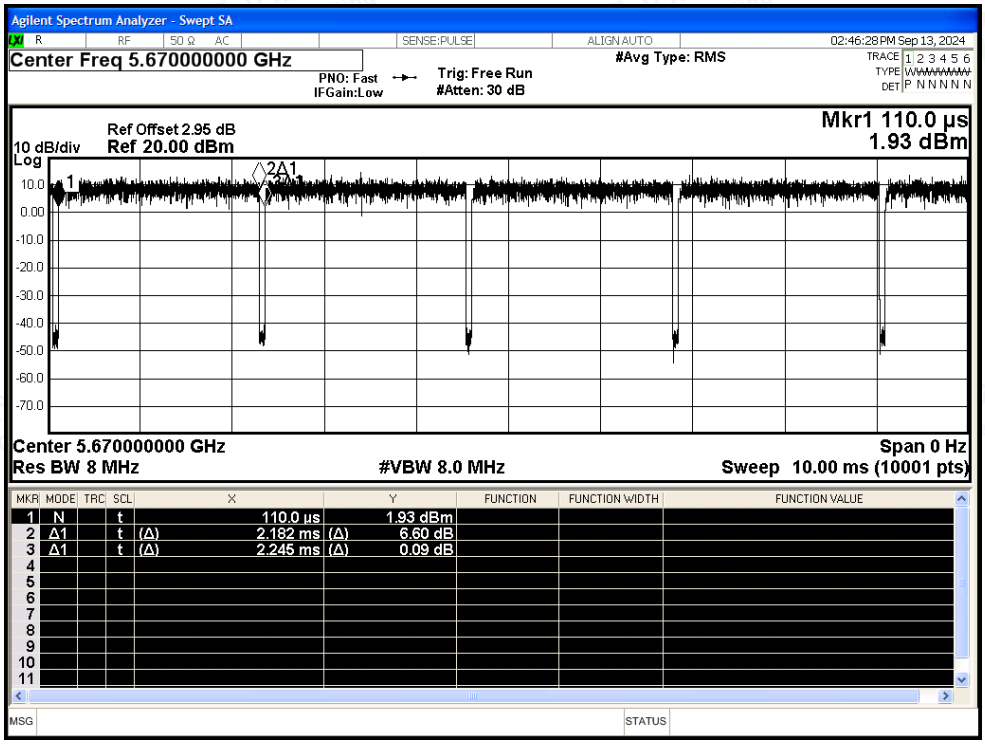
Duty Cycle NVNT ac40 5510MHz Ant1



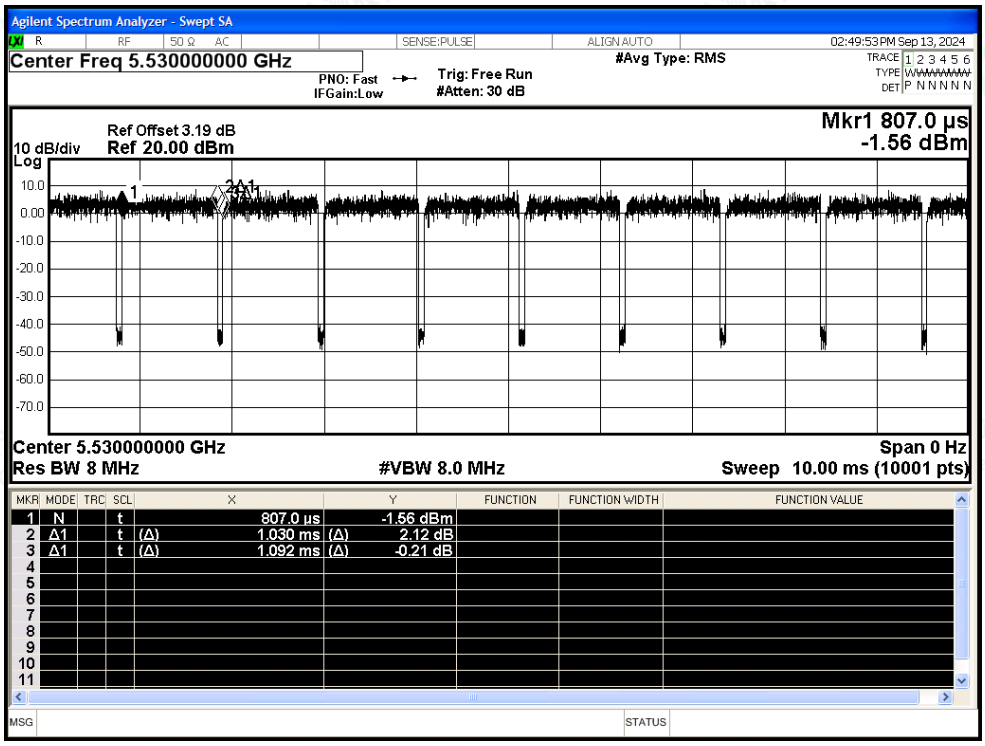
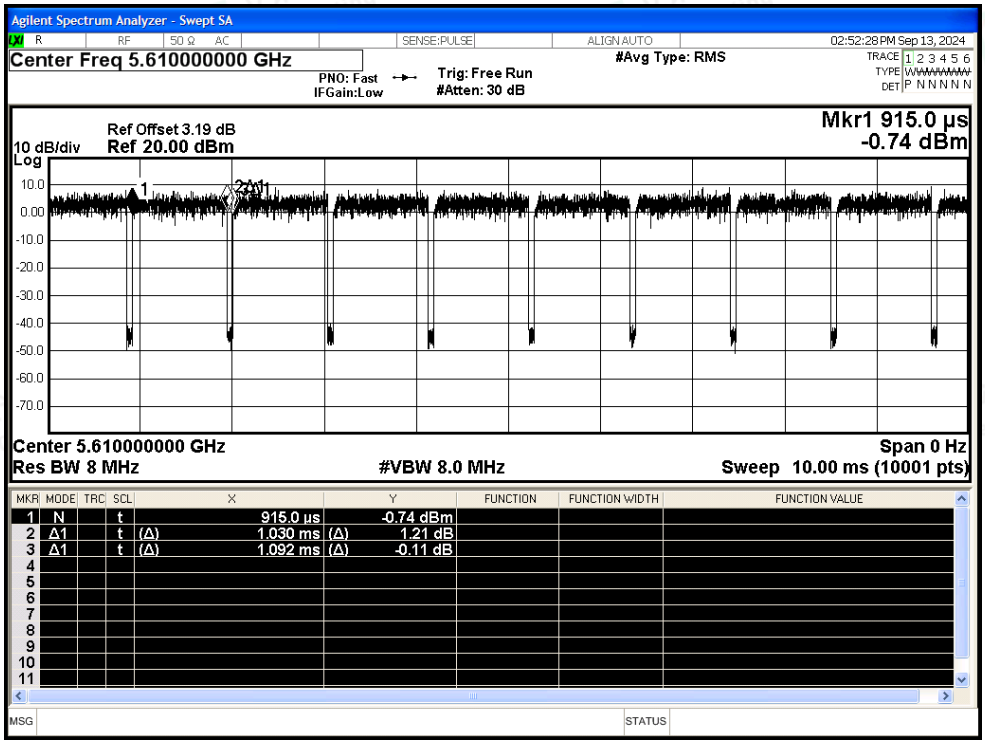
Duty Cycle NVNT ac40 5550MHz Ant1



Duty Cycle NVNT ac40 5670MHz Ant1



Duty Cycle NVNT ac80 5530MHz Ant1



Duty Cycle NVNT ac80 5610MHz Ant1