

FCC Appendix RF Test Data for 5.5GWIFI

Product Name: Smart Diagnostic System

Test Model: VD800

Environmental Conditions

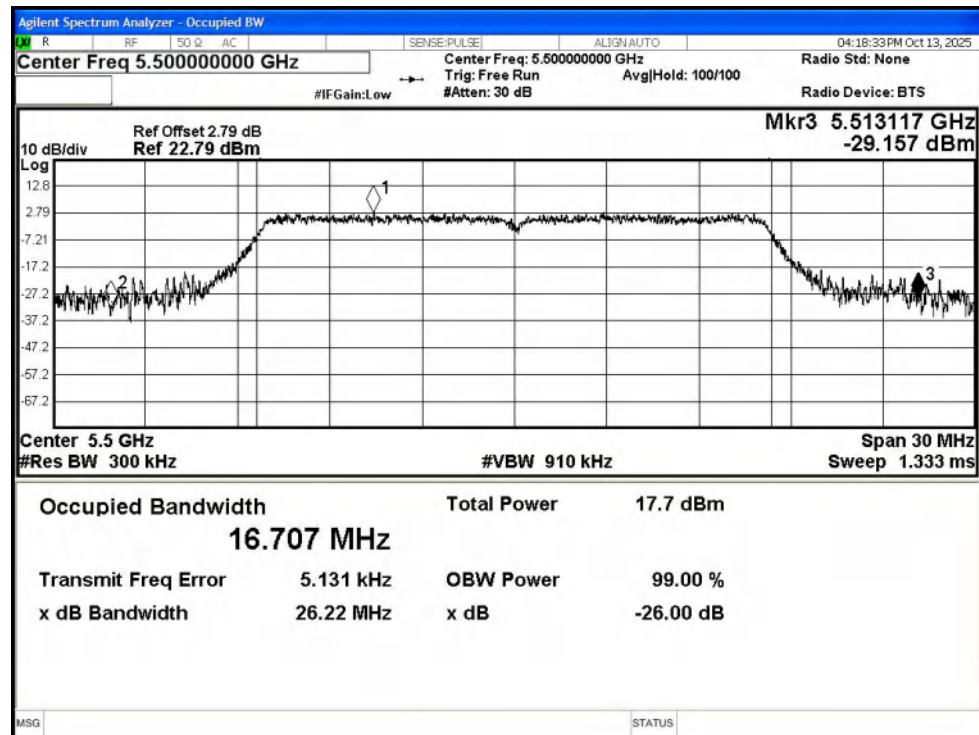
Temperature:	24.2° C
Relative Humidity:	53.2%
ATM Pressure:	100.0 kPa
Test Engineer:	Zoey Cao
Supervised by:	Eric Wang

1. -26dB Bandwidth

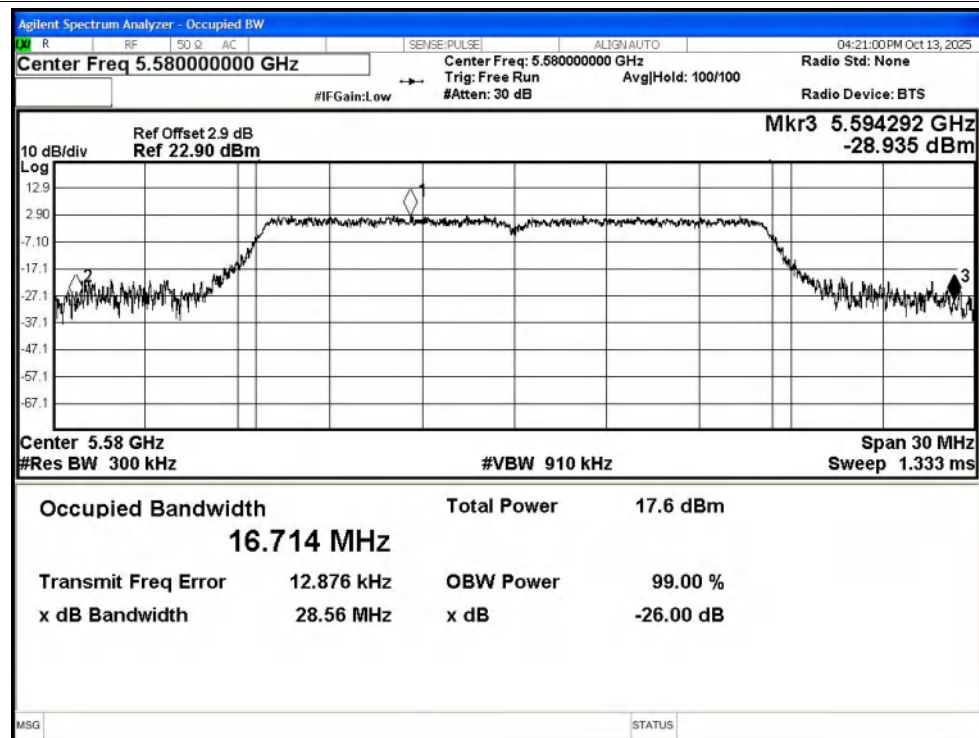
Condition	Mode	Frequency (MHz)	Antenna	-26 dB Bandwidth (MHz)	Limit -26 dB Bandwidth (MHz)	Verdict
NVNT	a	5500	Ant1	26.223	---	Pass
NVNT	a	5580	Ant1	28.559	---	Pass
NVNT	a	5700	Ant1	26.433	---	Pass
NVNT	n20	5500	Ant1	28.626	---	Pass
NVNT	n20	5580	Ant1	29.021	---	Pass
NVNT	n20	5700	Ant1	27.157	---	Pass
NVNT	n40	5510	Ant1	48.071	---	Pass
NVNT	n40	5550	Ant1	51.87	---	Pass
NVNT	n40	5670	Ant1	52.511	---	Pass
NVNT	ac20	5500	Ant1	27.182	---	Pass
NVNT	ac20	5580	Ant1	29.001	---	Pass
NVNT	ac20	5700	Ant1	28.87	---	Pass
NVNT	ac40	5510	Ant1	56.106	---	Pass
NVNT	ac40	5550	Ant1	54.061	---	Pass
NVNT	ac40	5670	Ant1	50.769	---	Pass
NVNT	ac80	5530	Ant1	88.222	---	Pass
NVNT	ac80	5610	Ant1	90.886	---	Pass

Test Graphs

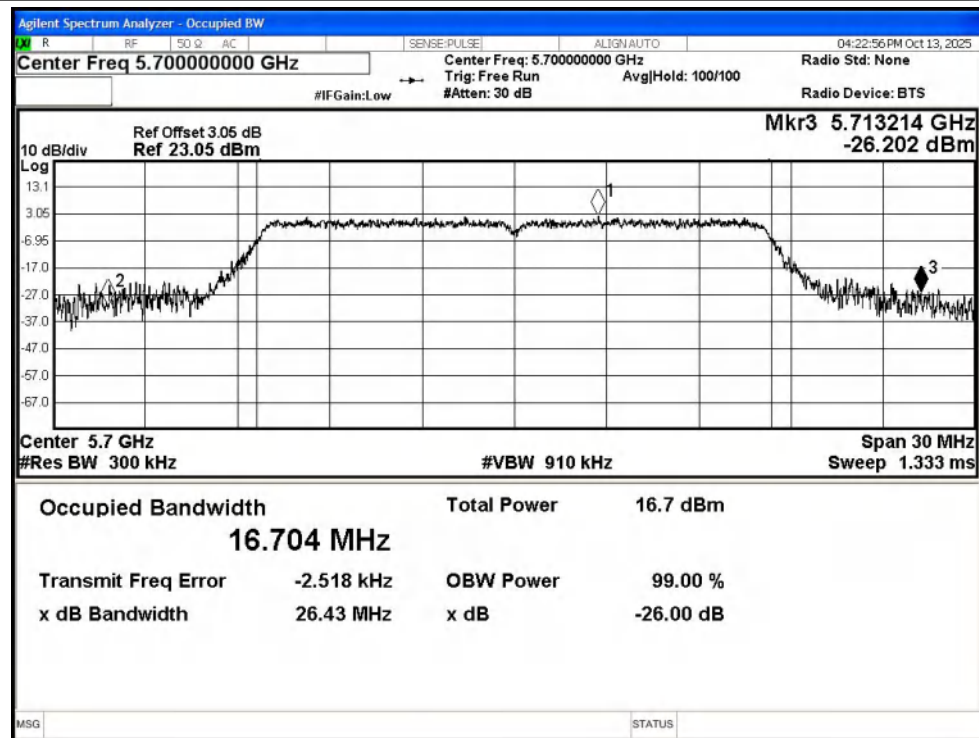
-26dB Bandwidth NVNT a 5500MHz Ant1



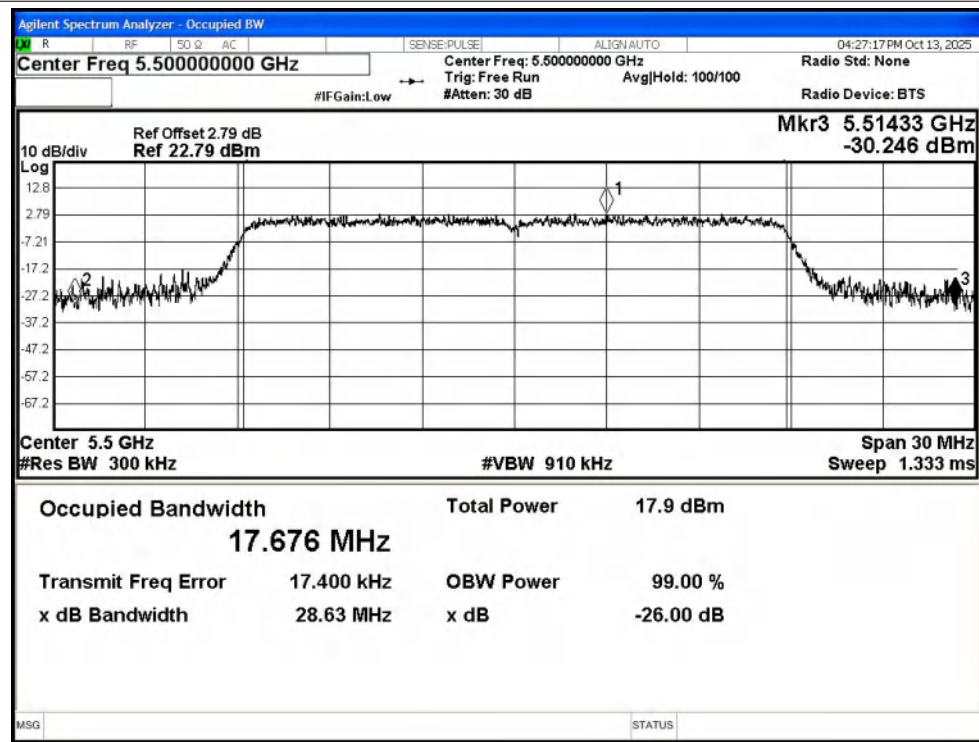
-26dB Bandwidth NVNT a 5580MHz Ant1



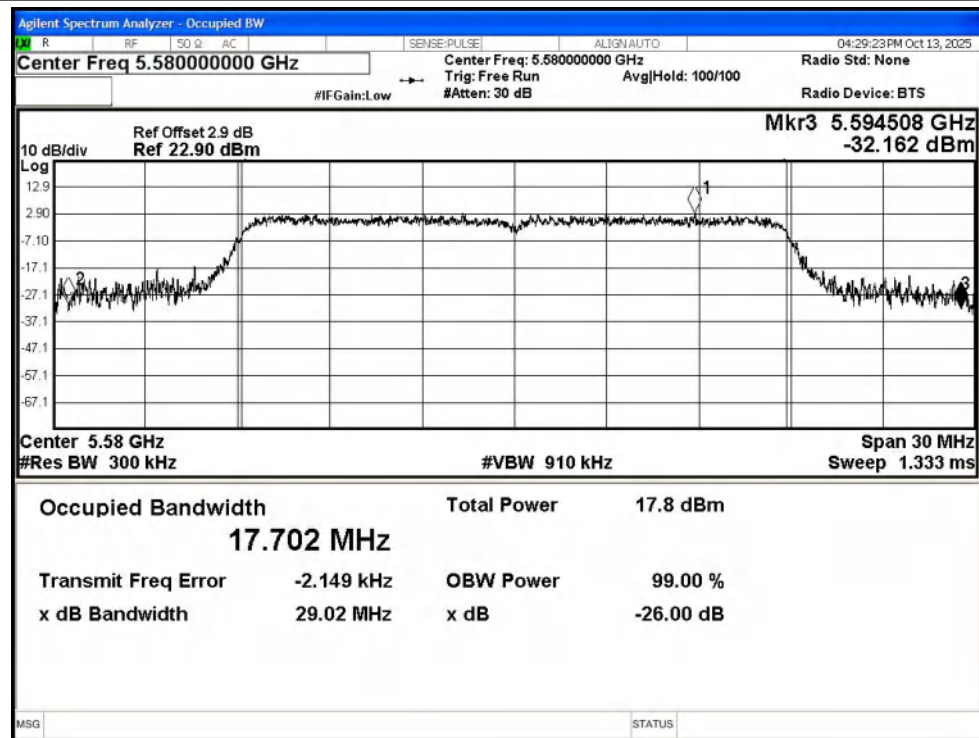
-26dB Bandwidth NVNT a 5700MHz Ant1



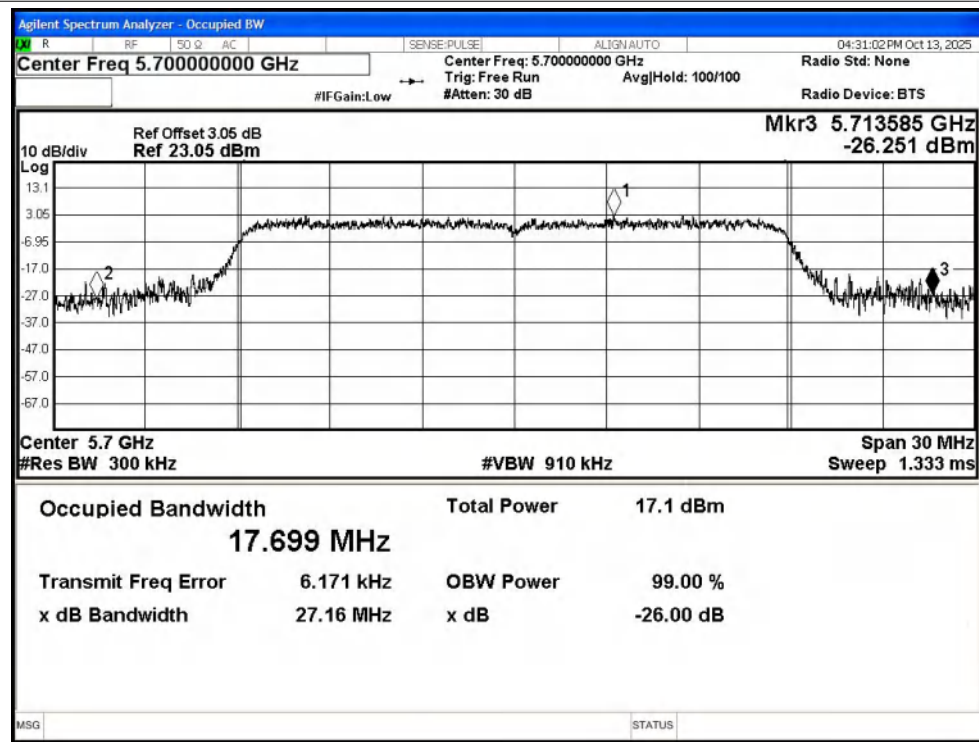
-26dB Bandwidth NVNT n20 5500MHz Ant1



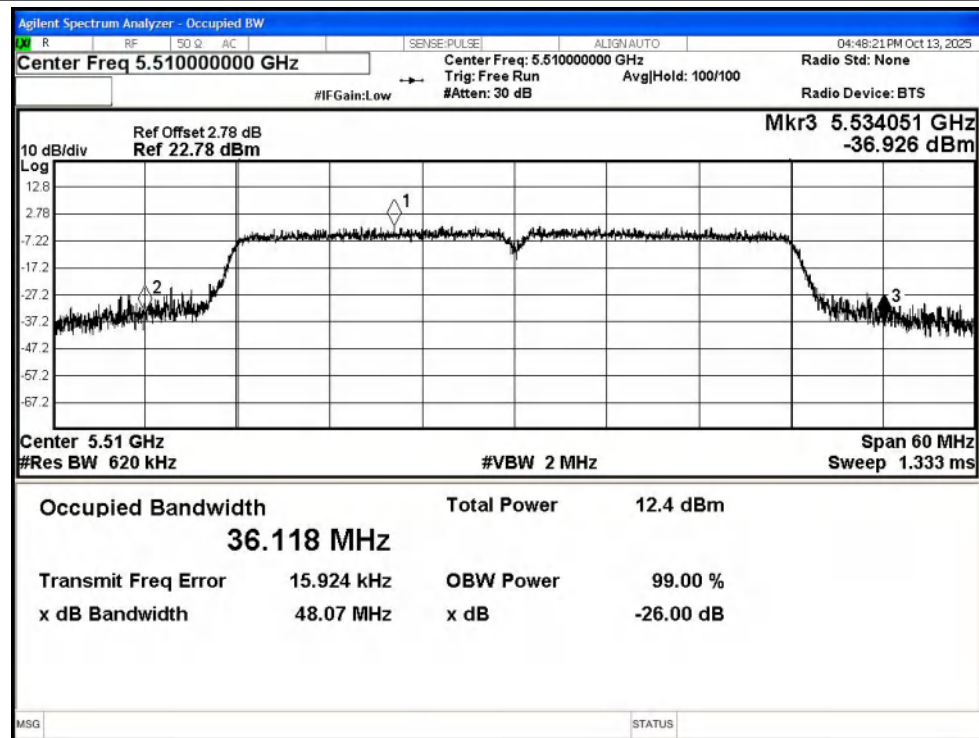
-26dB Bandwidth NVNT n20 5580MHz Ant1



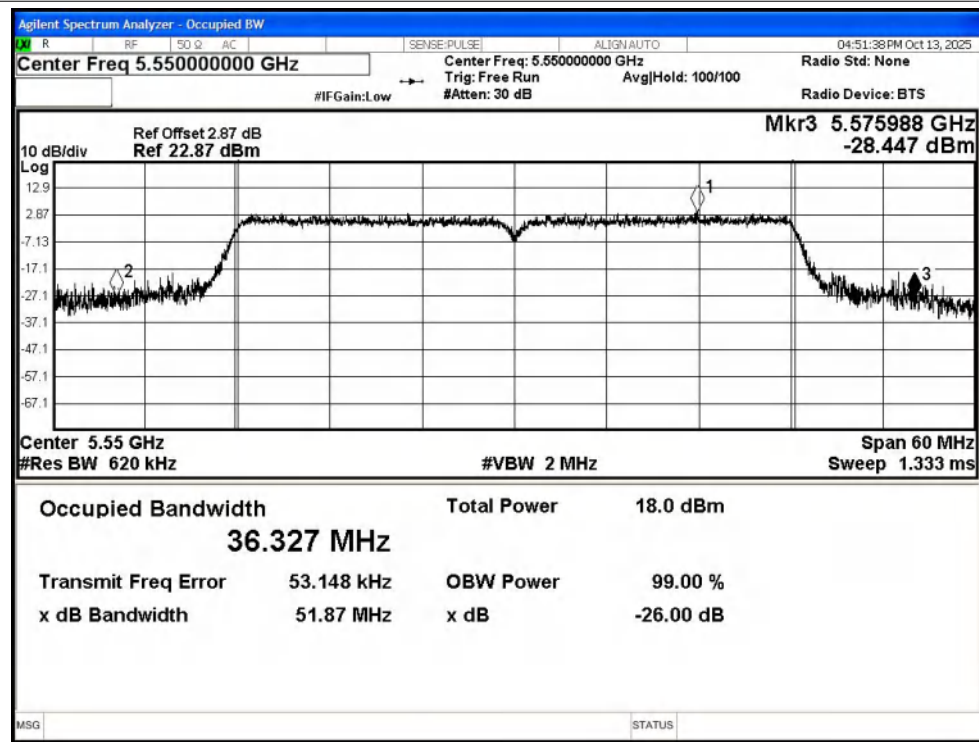
-26dB Bandwidth NVNT n20 5700MHz Ant1



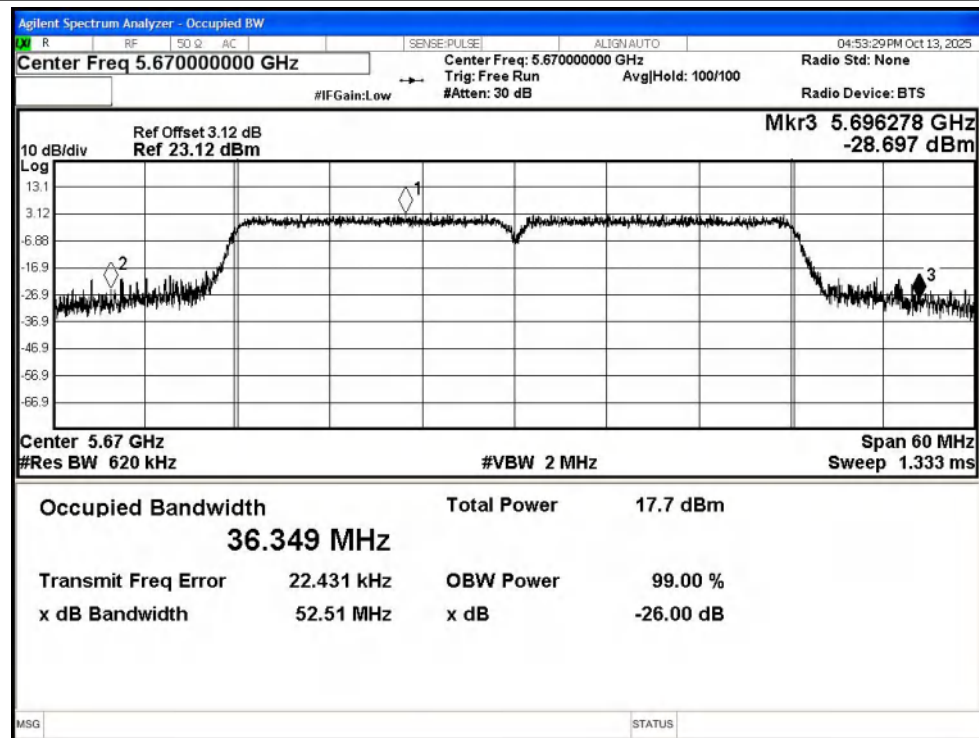
-26dB Bandwidth NVNT n40 5510MHz Ant1



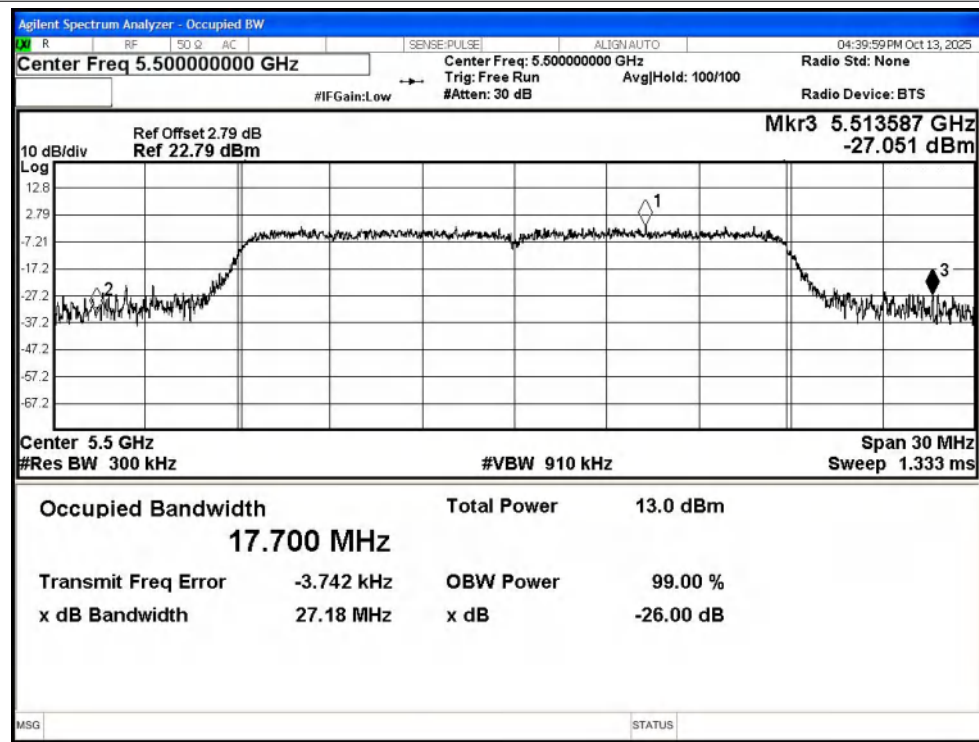
-26dB Bandwidth NVNT n40 5550MHz Ant1



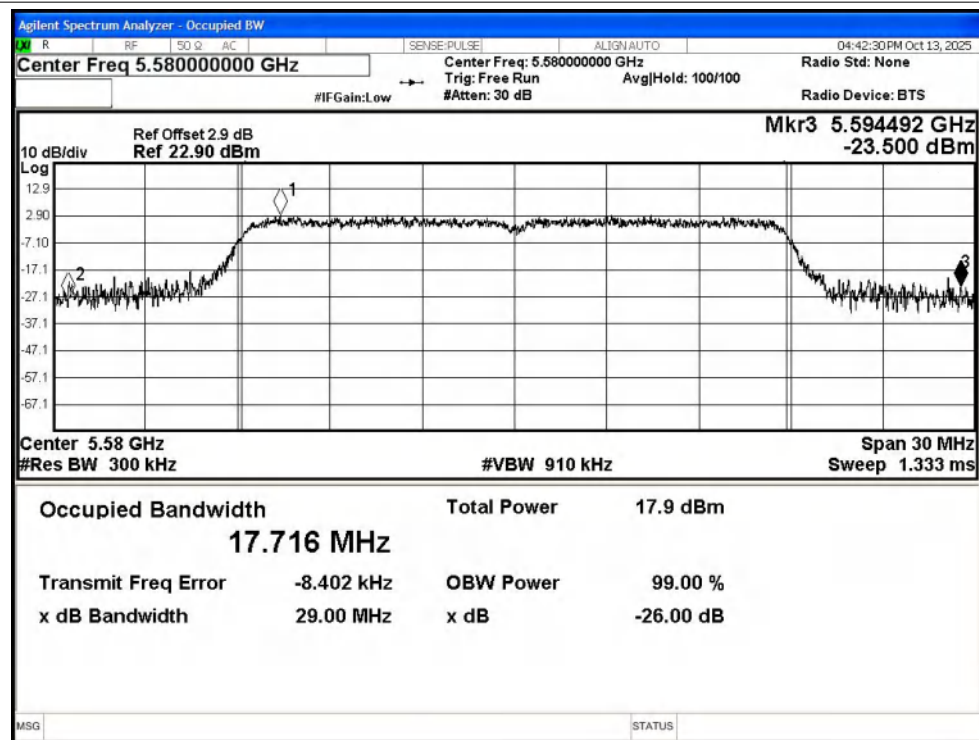
-26dB Bandwidth NVNT n40 5670MHz Ant1



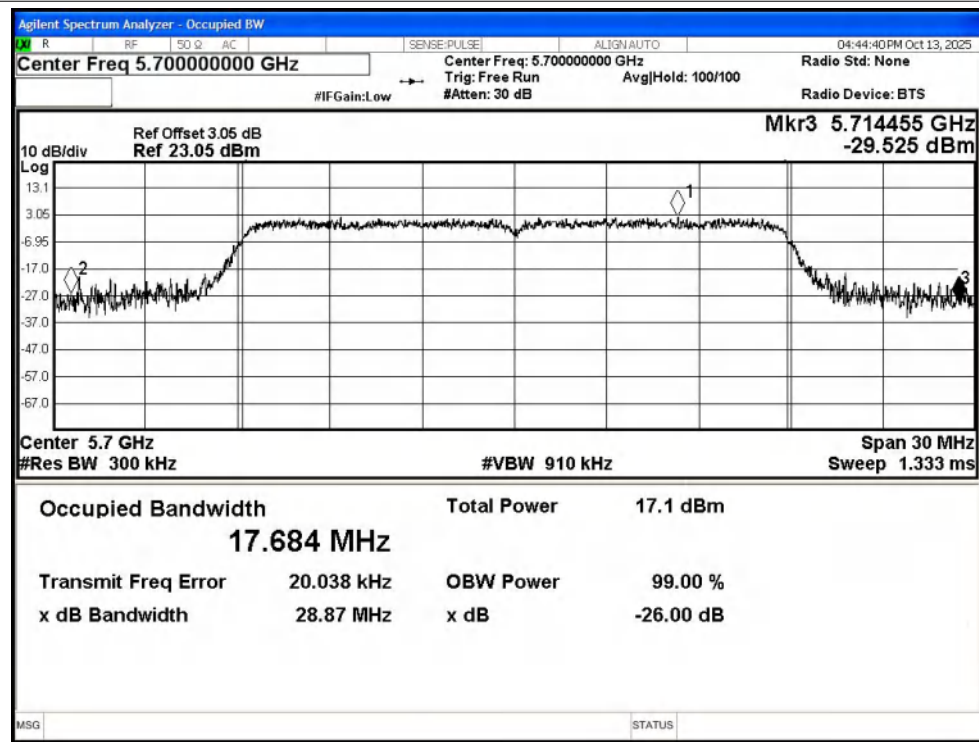
-26dB Bandwidth NVNT ac20 5500MHz Ant1



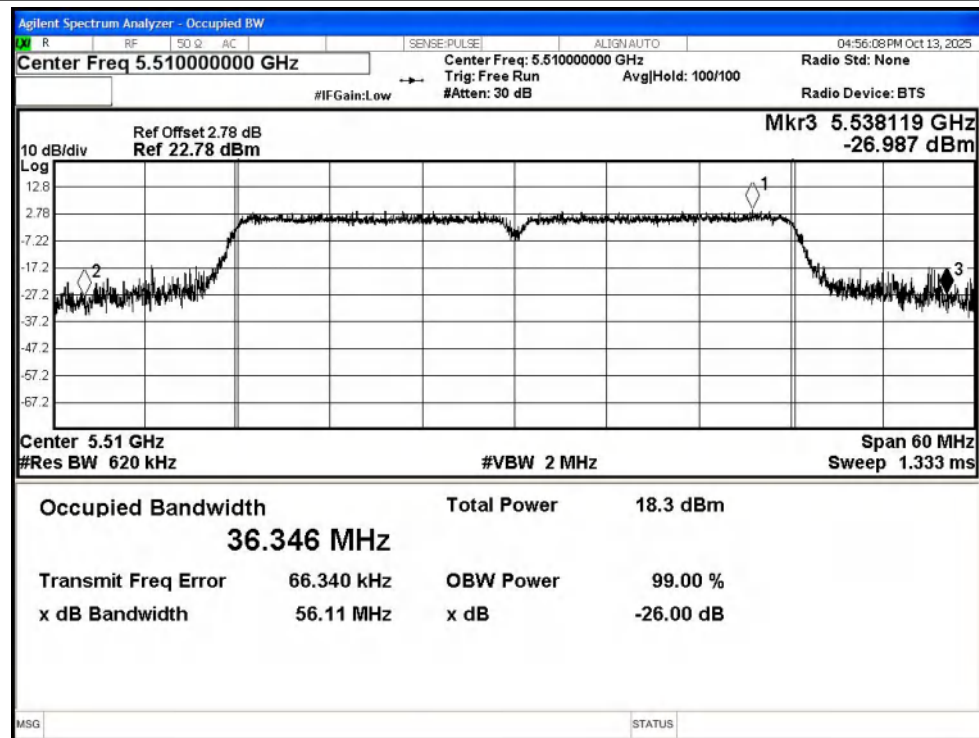
-26dB Bandwidth NVNT ac20 5580MHz Ant1



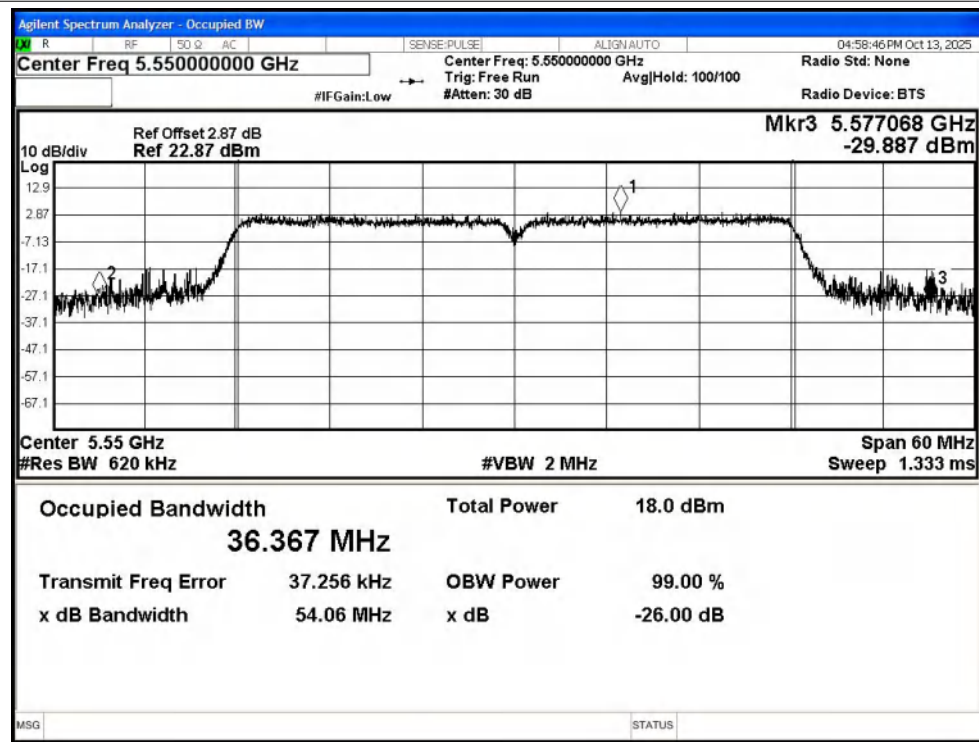
-26dB Bandwidth NVNT ac20 5700MHz Ant1



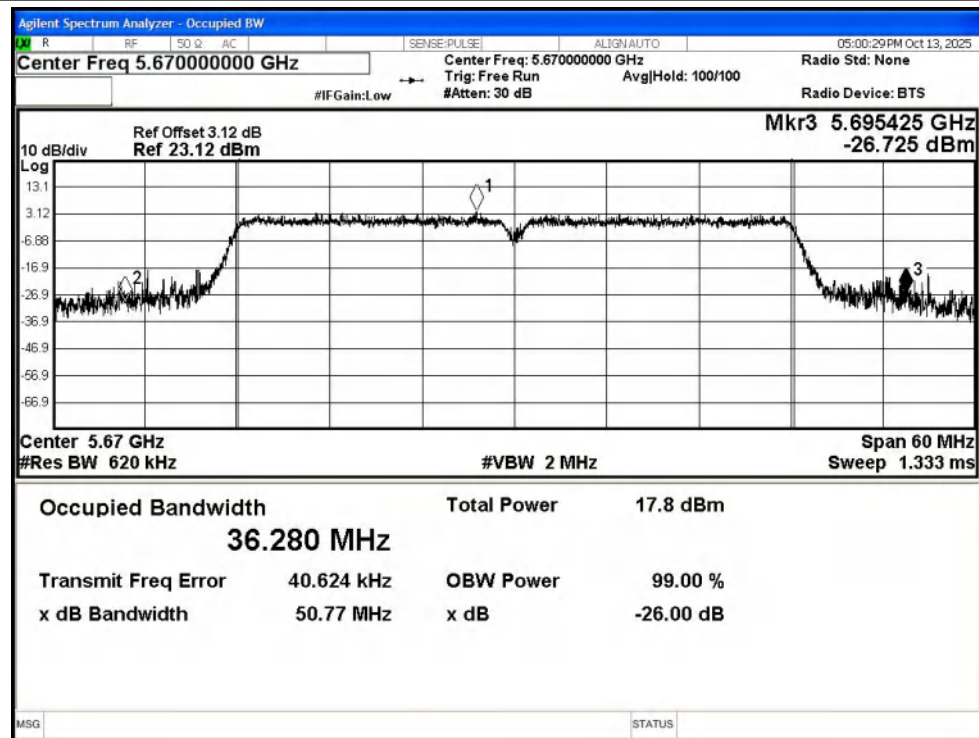
-26dB Bandwidth NVNT ac40 5510MHz Ant1



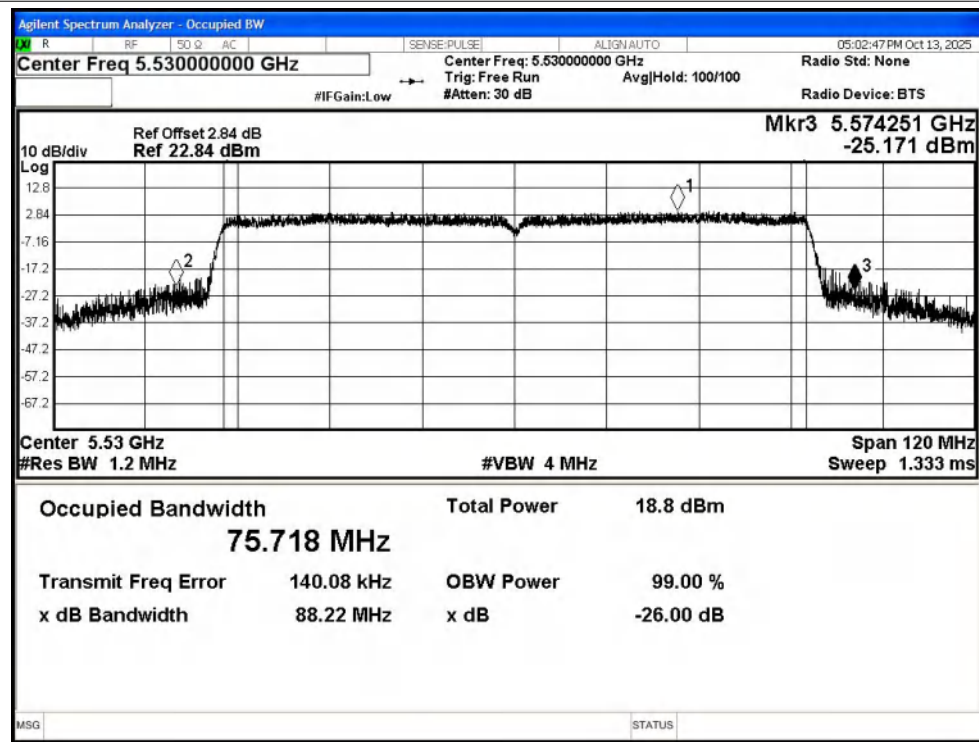
-26dB Bandwidth NVNT ac40 5550MHz Ant1

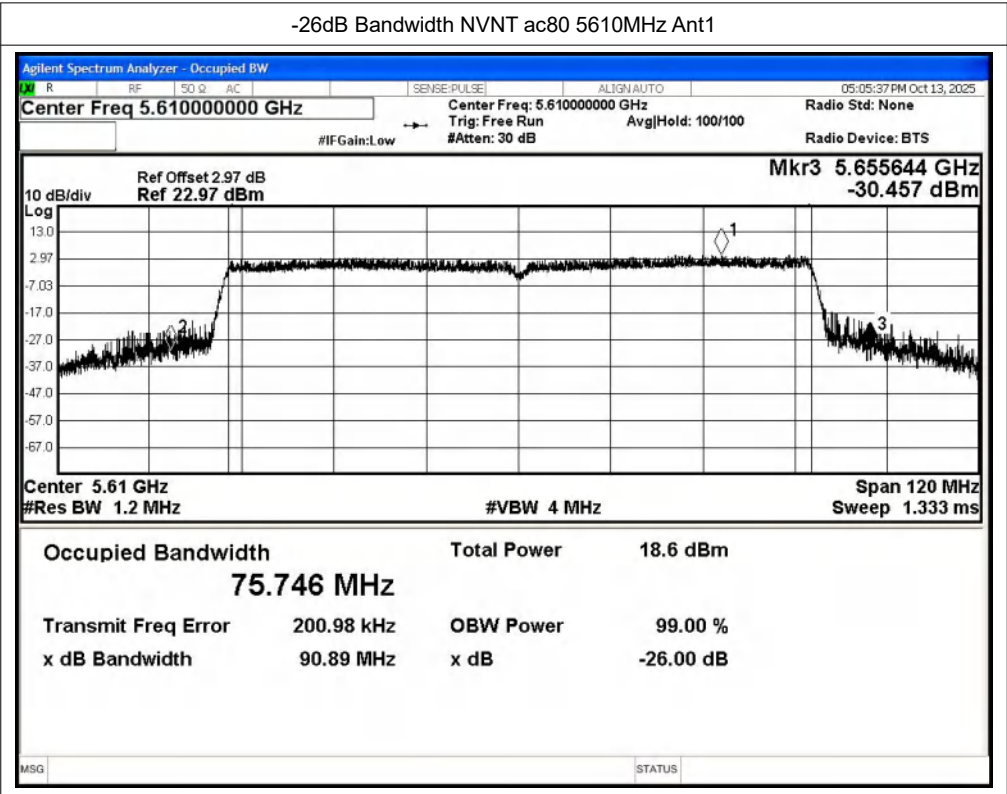


-26dB Bandwidth NVNT ac40 5670MHz Ant1



-26dB Bandwidth NVNT ac80 5530MHz Ant1



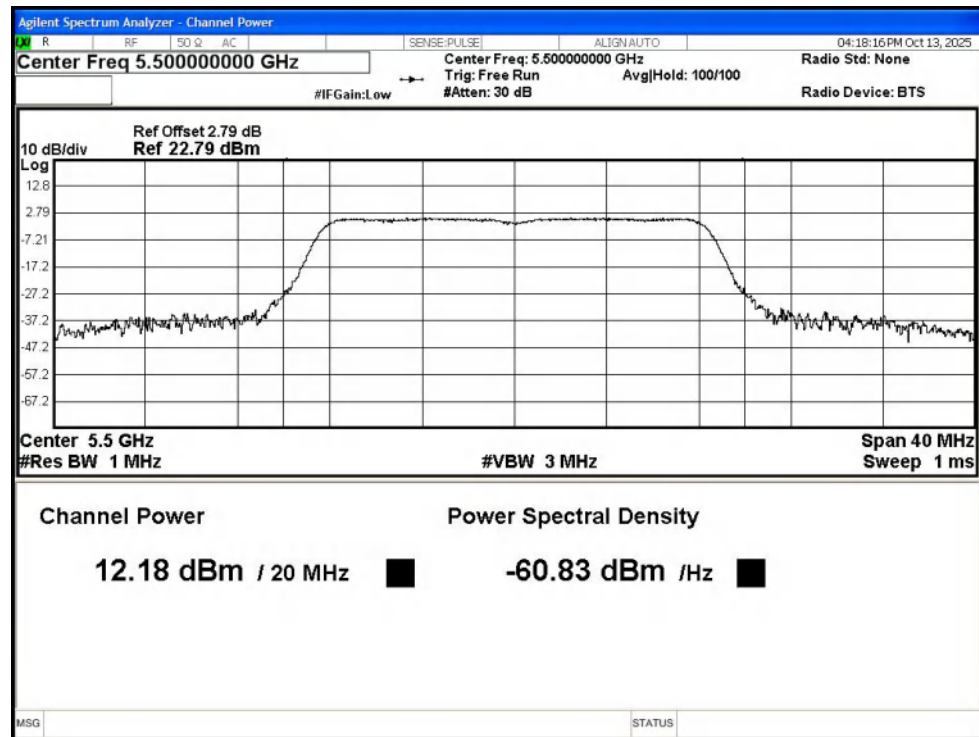


2. Maximum Conducted Output Power

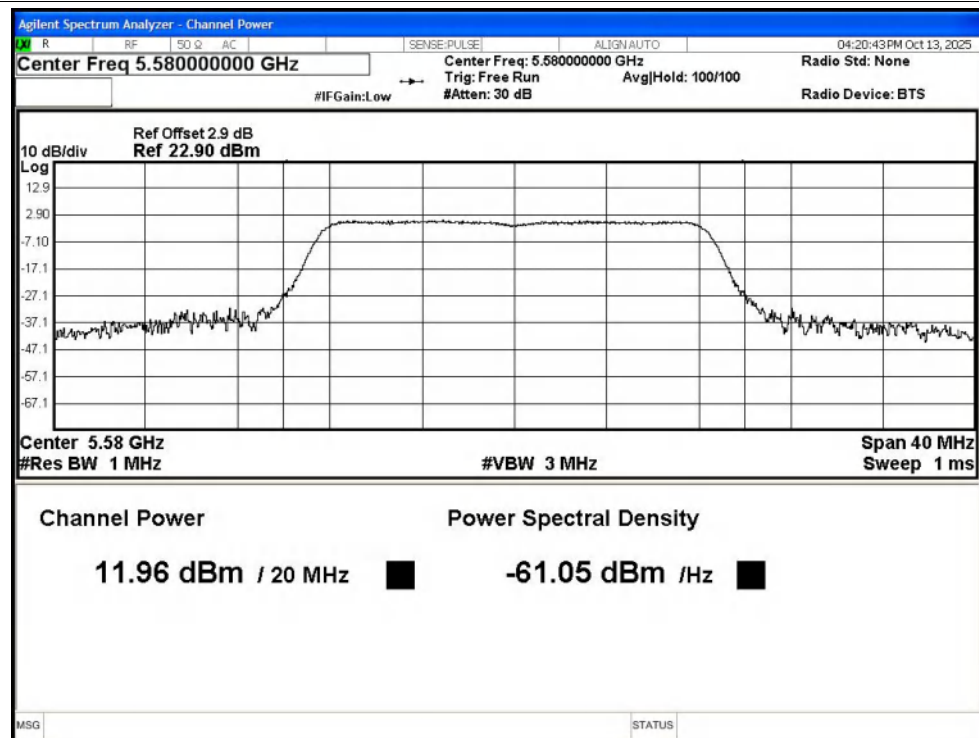
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	a	5500	Ant1	12.18	0.1	12.28	24	Pass
NVNT	a	5580	Ant1	11.96	0.1	12.06	24	Pass
NVNT	a	5700	Ant1	11.22	0.1	11.32	24	Pass
NVNT	n20	5500	Ant1	12.41	0.12	12.53	24	Pass
NVNT	n20	5580	Ant1	12.23	0.11	12.34	24	Pass
NVNT	n20	5700	Ant1	11.55	0.12	11.67	24	Pass
NVNT	n40	5510	Ant1	12.1	0.23	12.33	24	Pass
NVNT	n40	5550	Ant1	11.72	0.23	11.95	24	Pass
NVNT	n40	5670	Ant1	11.42	0.23	11.65	24	Pass
NVNT	ac20	5500	Ant1	7.48	0.11	7.59	24	Pass
NVNT	ac20	5580	Ant1	12.38	0.11	12.49	24	Pass
NVNT	ac20	5700	Ant1	11.5	0.11	11.61	24	Pass
NVNT	ac40	5510	Ant1	12.09	0.23	12.32	24	Pass
NVNT	ac40	5550	Ant1	11.74	0.23	11.97	24	Pass
NVNT	ac40	5670	Ant1	11.44	0.23	11.67	24	Pass
NVNT	ac80	5530	Ant1	11.7	0.47	12.17	24	Pass
NVNT	ac80	5610	Ant1	11.59	0.47	12.06	24	Pass

Test Graphs

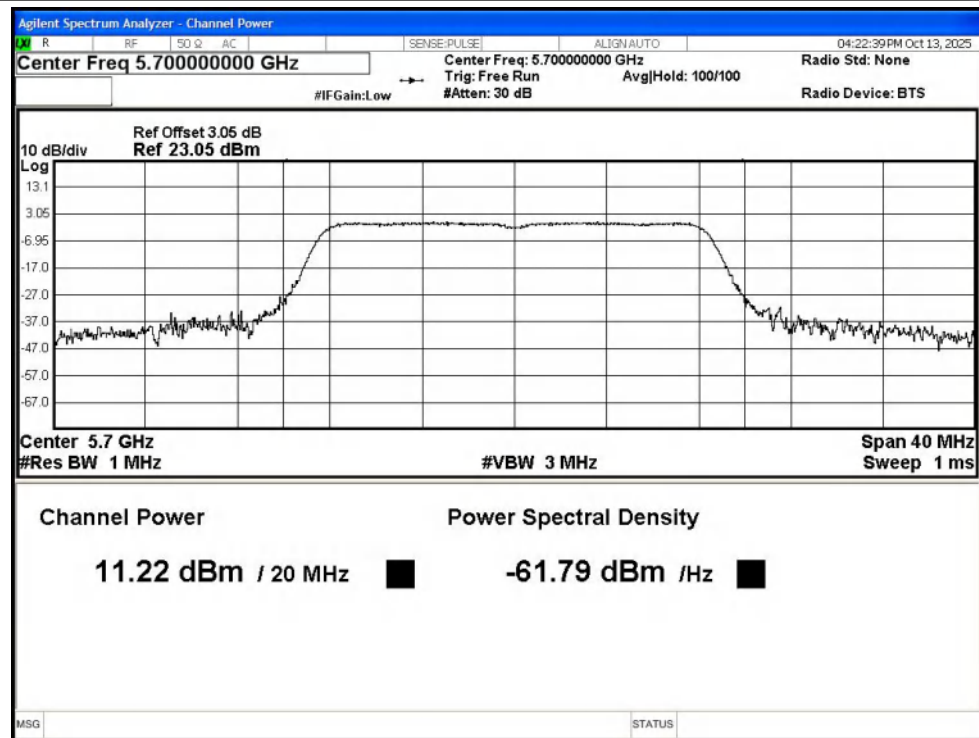
Power NVNT a 5500MHz Ant1



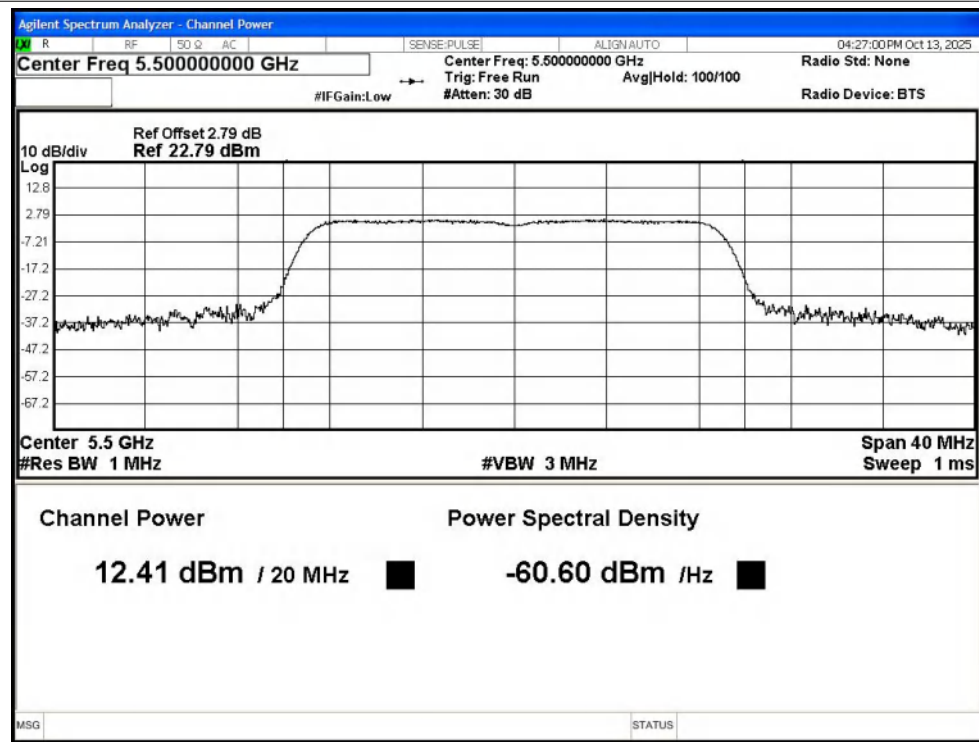
Power NVNT a 5580MHz Ant1



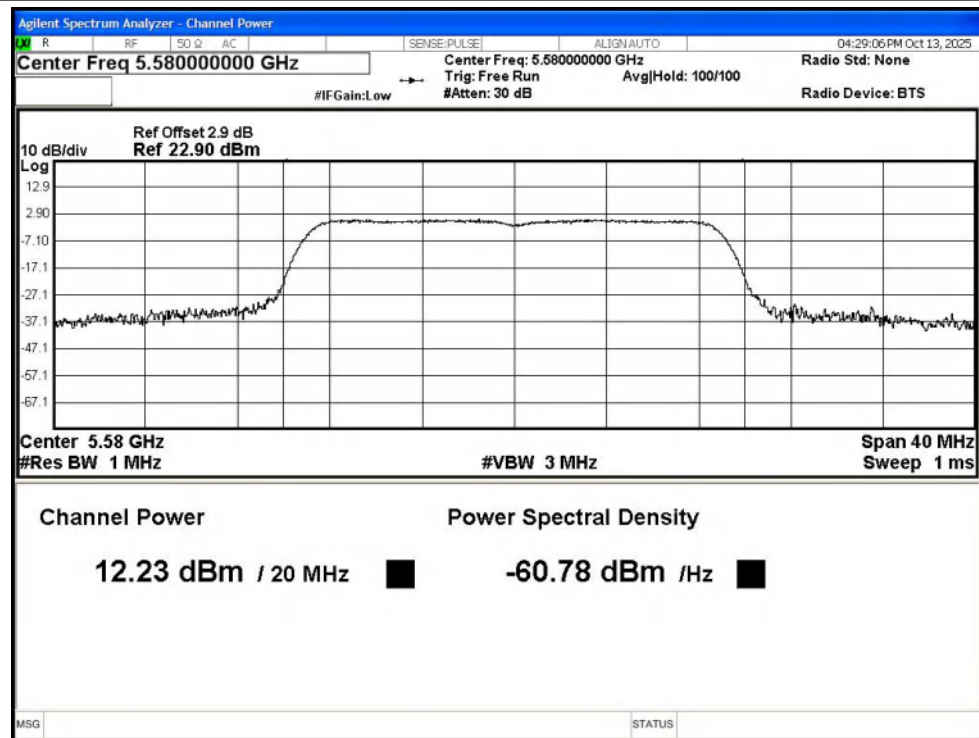
Power NVNT a 5700MHz Ant1



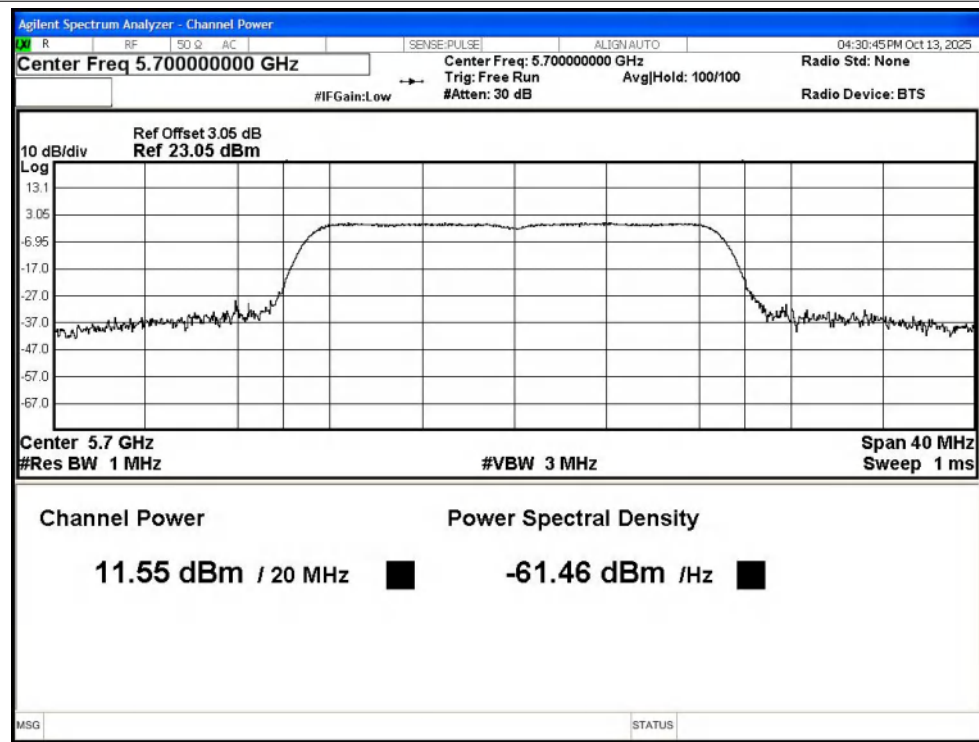
Power NVNT n20 5500MHz Ant1



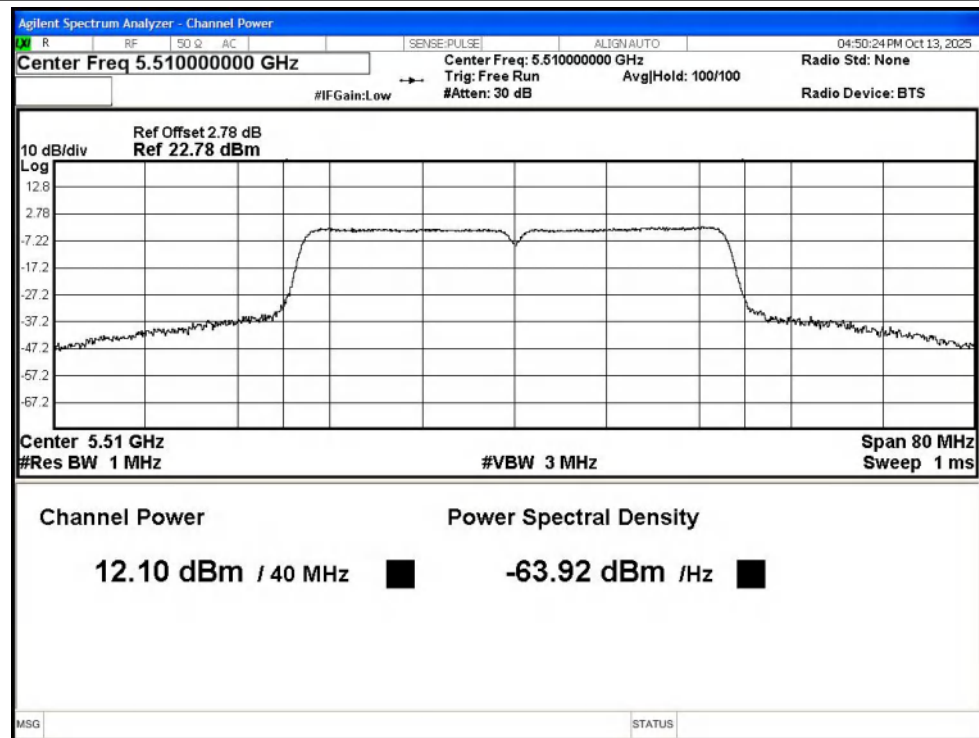
Power NVNT n20 5580MHz Ant1



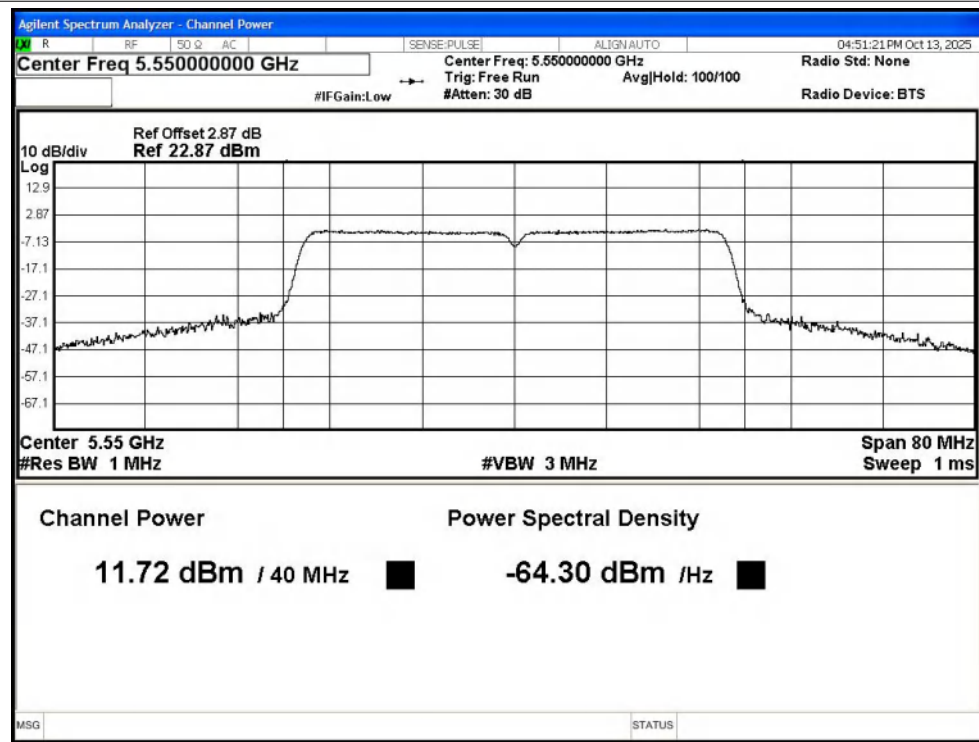
Power NVNT n20 5700MHz Ant1



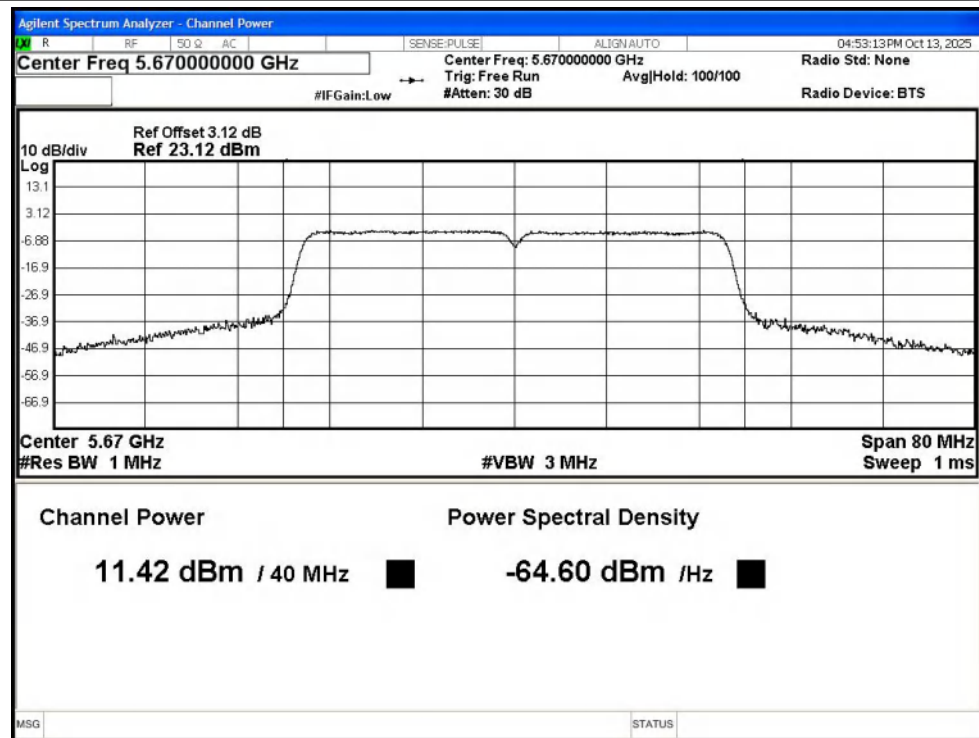
Power NVNT n40 5510MHz Ant1



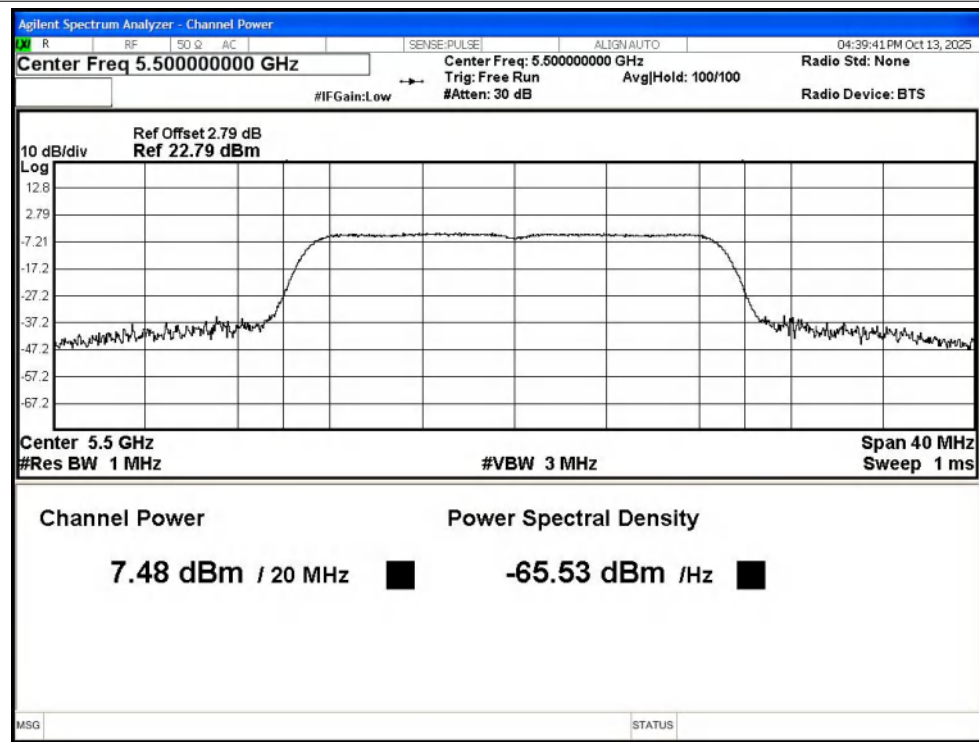
Power NVNT n40 5550MHz Ant1



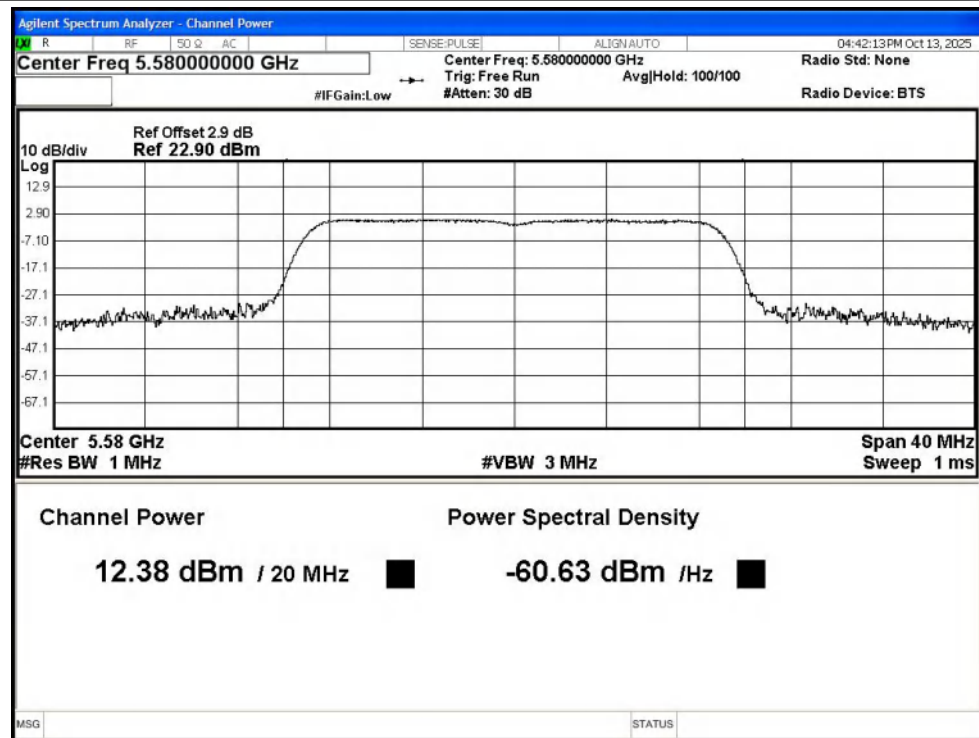
Power NVNT n40 5670MHz Ant1



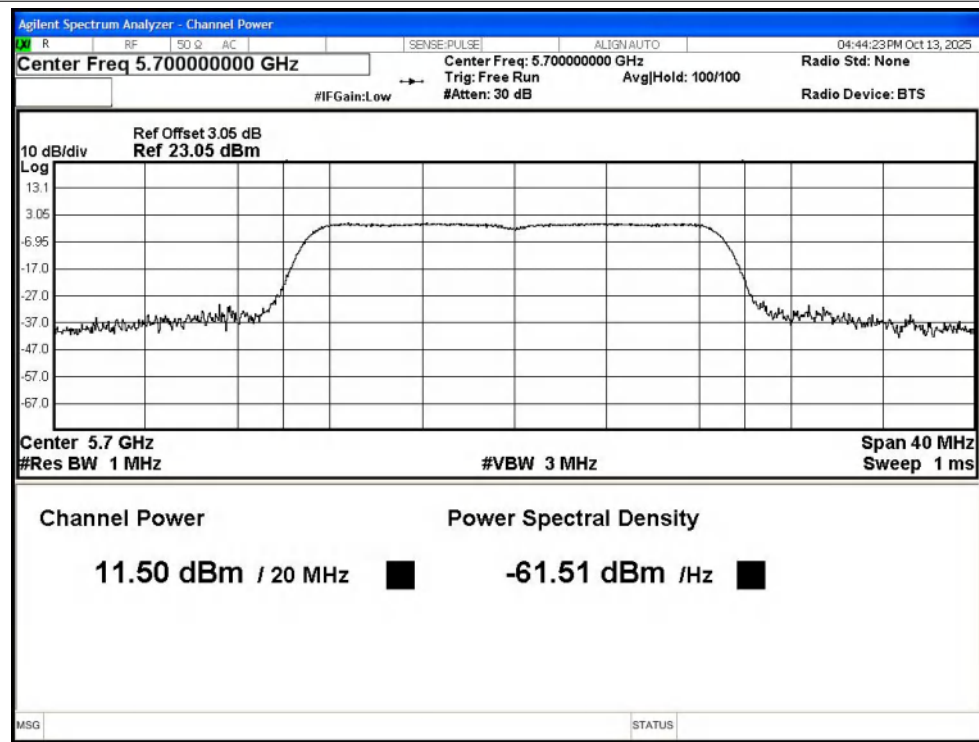
Power NVNT ac20 5500MHz Ant1



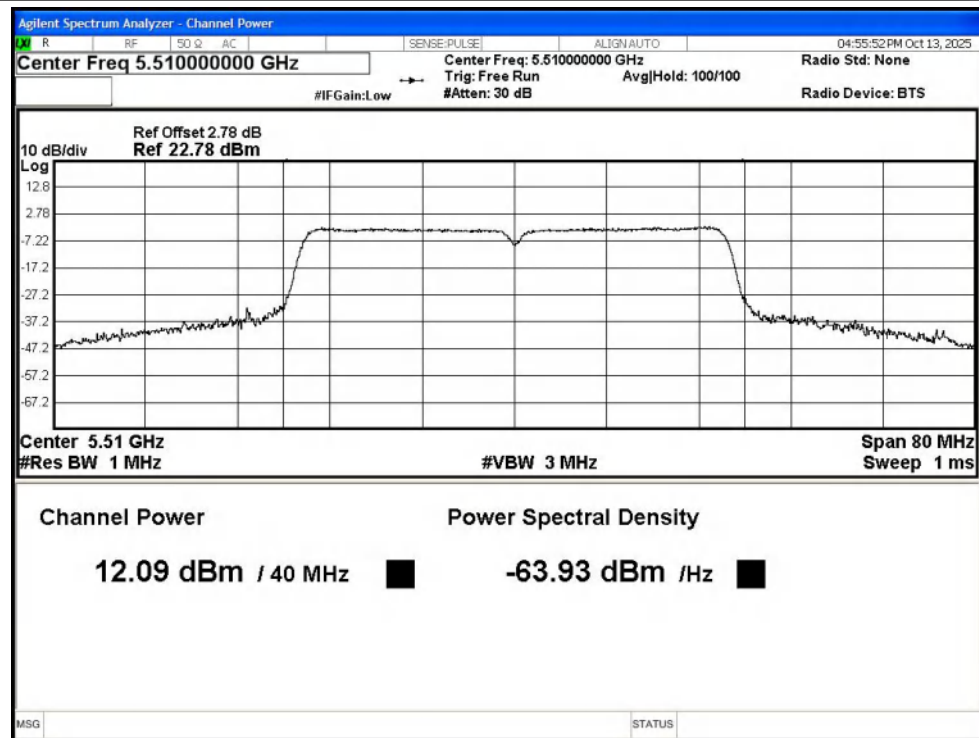
Power NVNT ac20 5580MHz Ant1



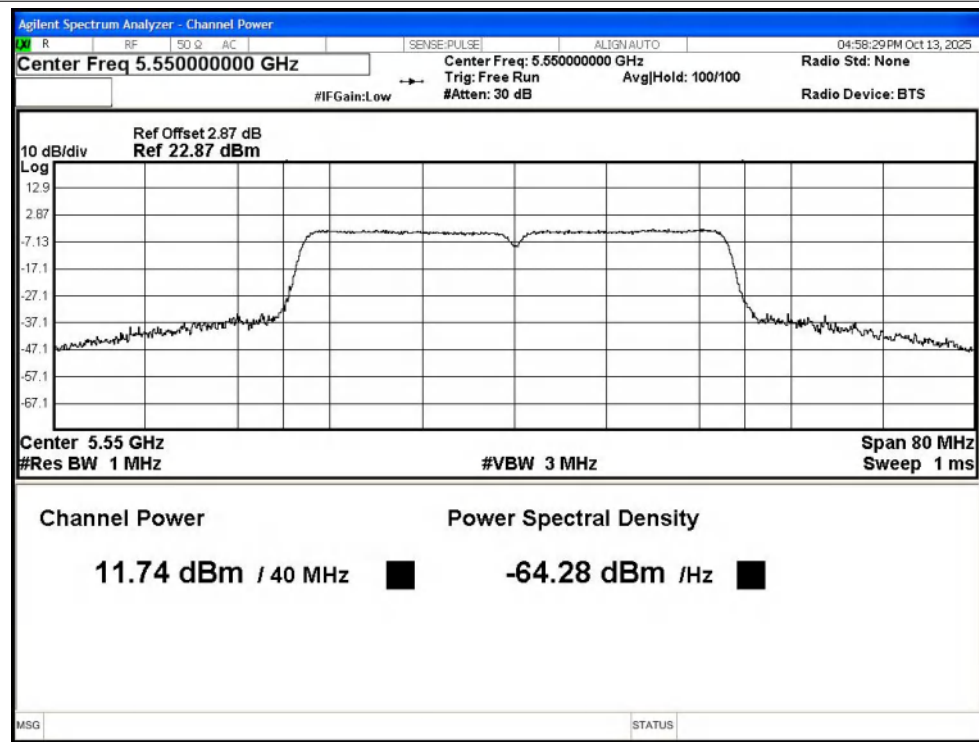
Power NVNT ac20 5700MHz Ant1



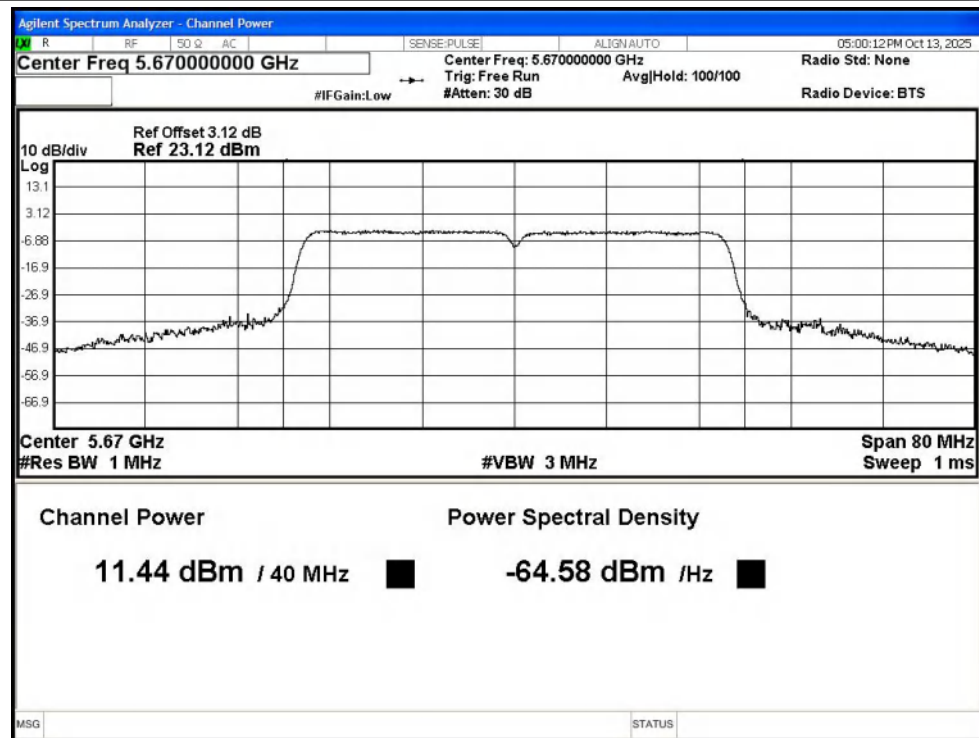
Power NVNT ac40 5510MHz Ant1



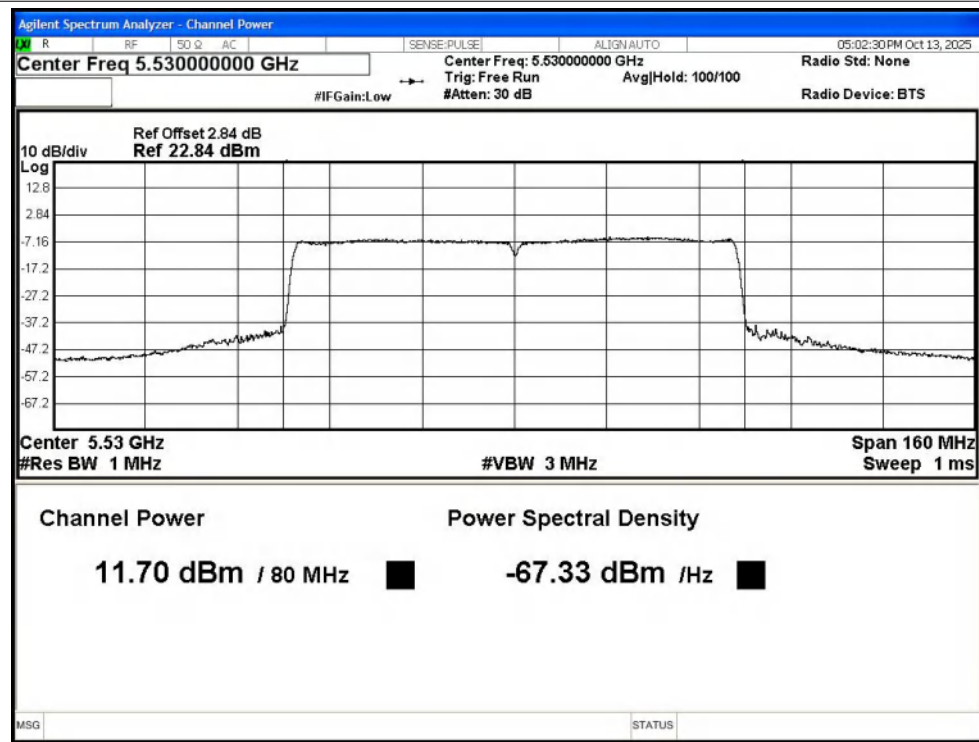
Power NVNT ac40 5550MHz Ant1

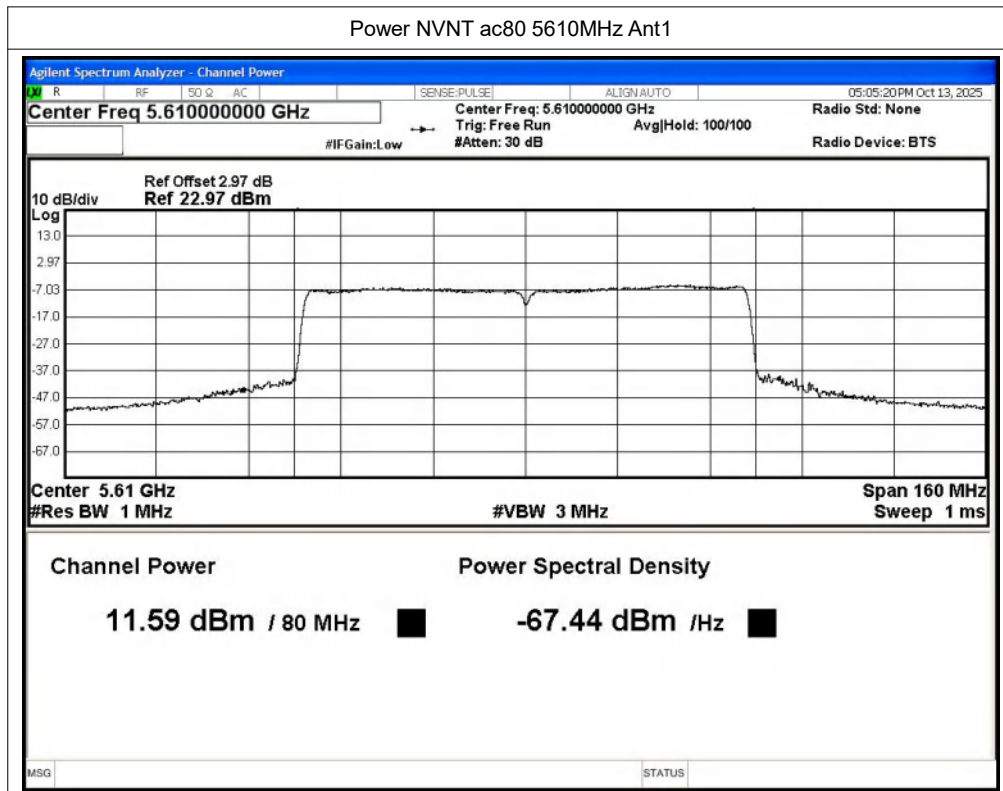


Power NVNT ac40 5670MHz Ant1



Power NVNT ac80 5530MHz Ant1



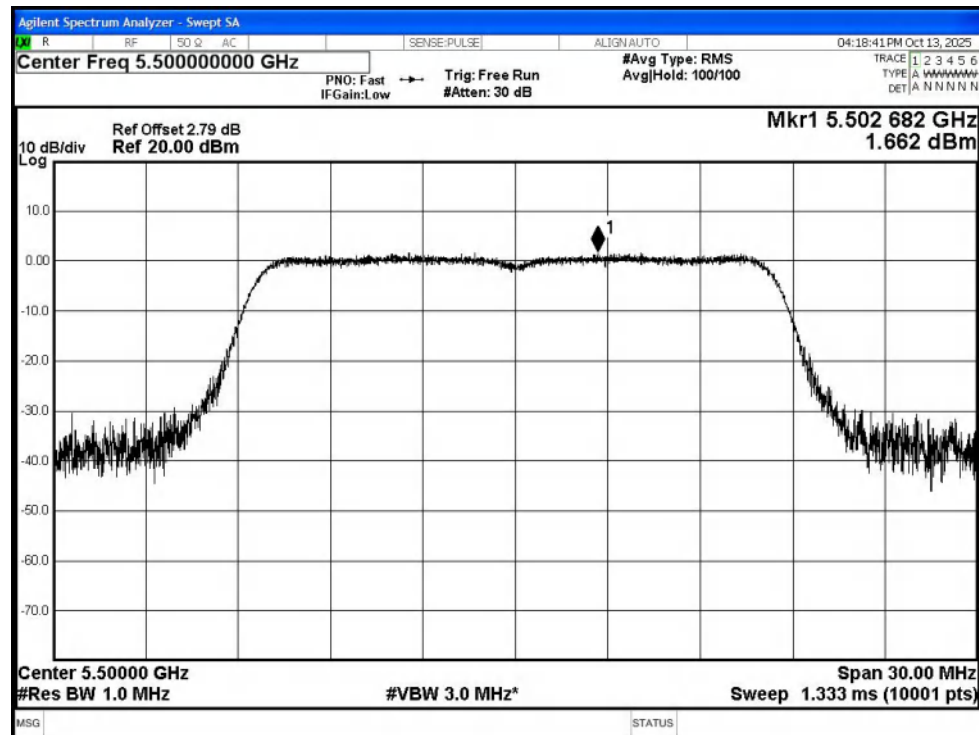


3. Maximum Power Spectral Density Level

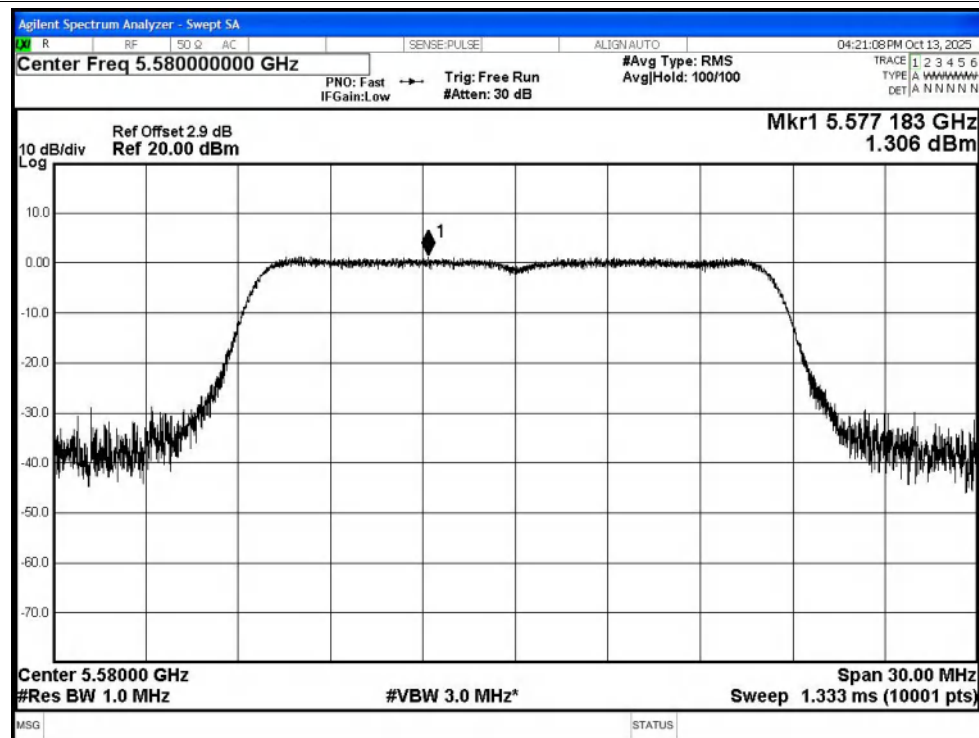
Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/MHz)	Duty Factor (dB)	Total PSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
NVNT	a	5500	Ant1	1.66	0.1	1.76	11	Pass
NVNT	a	5580	Ant1	1.31	0.1	1.41	11	Pass
NVNT	a	5700	Ant1	0.58	0.1	0.68	11	Pass
NVNT	n20	5500	Ant1	1.67	0.12	1.79	11	Pass
NVNT	n20	5580	Ant1	1.62	0.11	1.73	11	Pass
NVNT	n20	5700	Ant1	0.77	0.12	0.89	11	Pass
NVNT	n40	5510	Ant1	-1.33	0.23	-1.1	11	Pass
NVNT	n40	5550	Ant1	-1.89	0.23	-1.66	11	Pass
NVNT	n40	5670	Ant1	-2.53	0.23	-2.3	11	Pass
NVNT	ac20	5500	Ant1	-3.36	0.11	-3.25	11	Pass
NVNT	ac20	5580	Ant1	1.45	0.11	1.56	11	Pass
NVNT	ac20	5700	Ant1	0.77	0.11	0.88	11	Pass
NVNT	ac40	5510	Ant1	-1.4	0.23	-1.17	11	Pass
NVNT	ac40	5550	Ant1	-2.07	0.23	-1.84	11	Pass
NVNT	ac40	5670	Ant1	-2.43	0.23	-2.2	11	Pass
NVNT	ac80	5530	Ant1	-4.95	0.47	-4.48	11	Pass
NVNT	ac80	5610	Ant1	-4.8	0.47	-4.33	11	Pass

Test Graphs

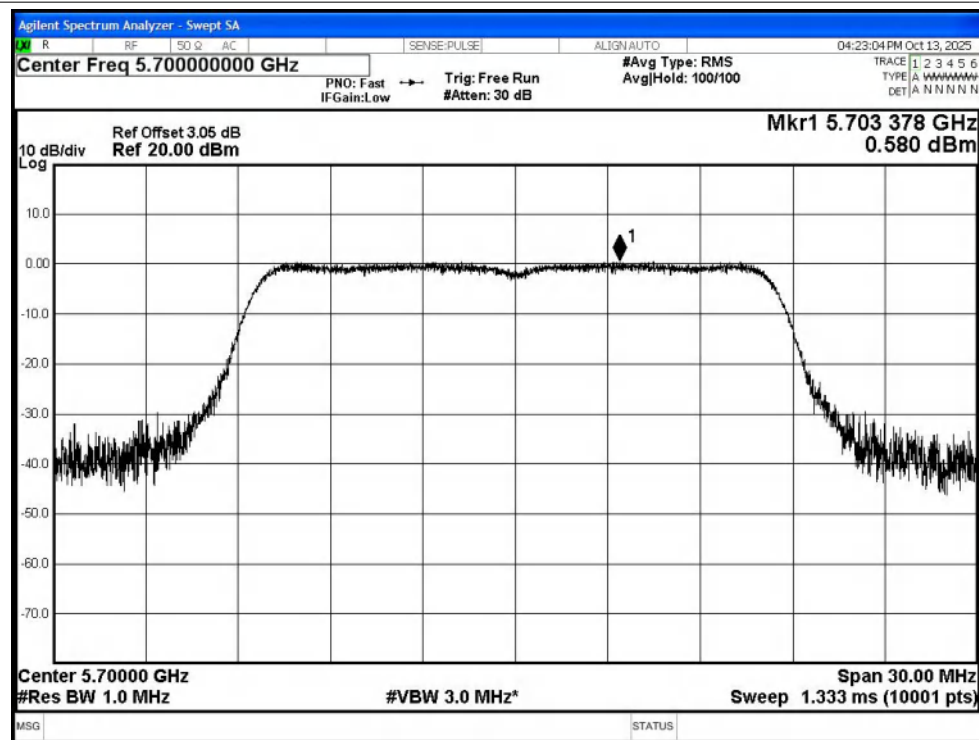
PSD NVNT a 5500MHz Ant1



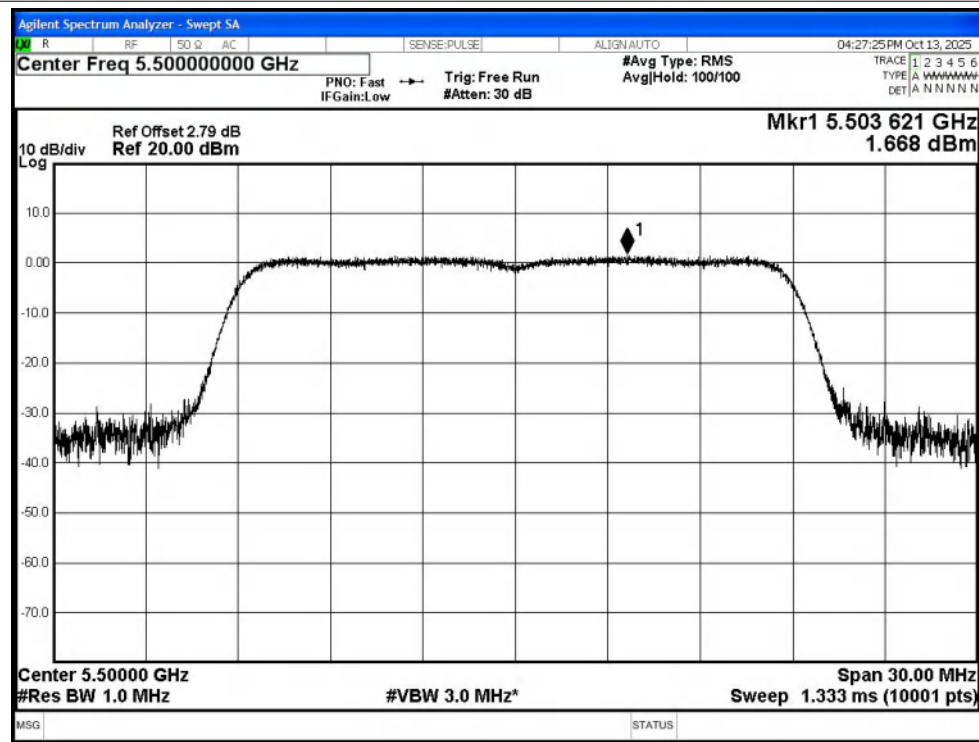
PSD NVNT a 5580MHz Ant1



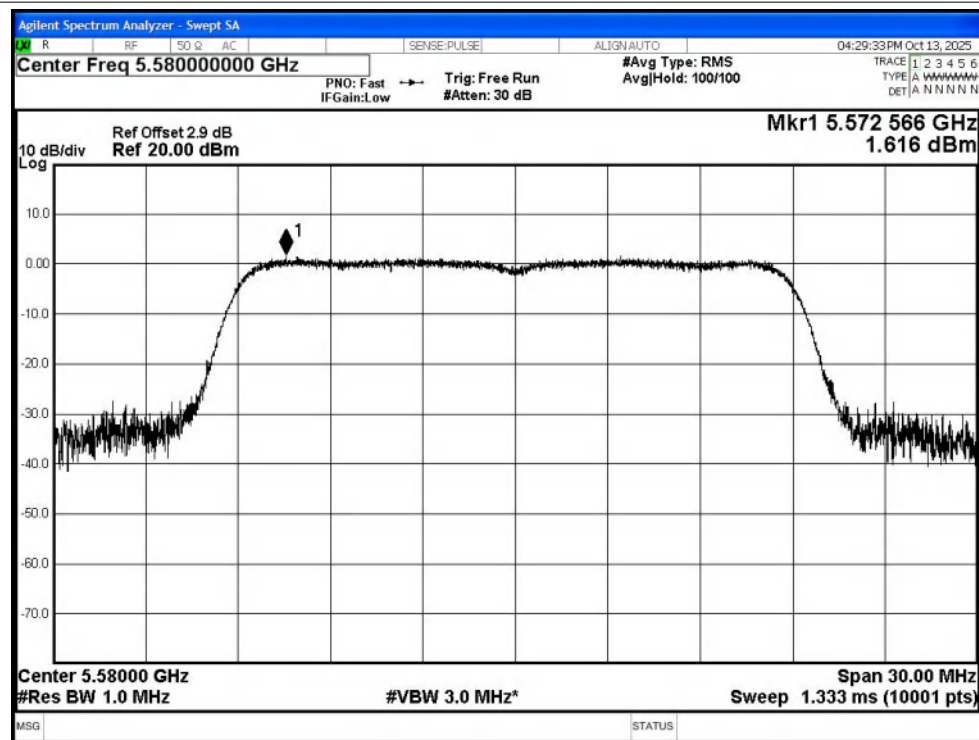
PSD NVNT a 5700MHz Ant1



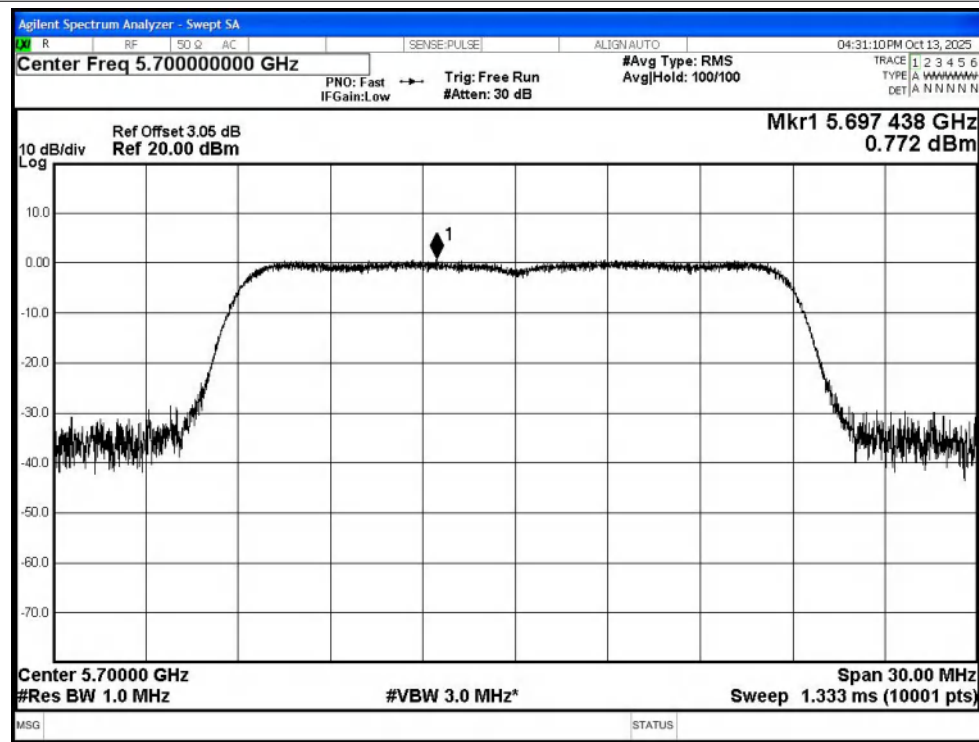
PSD NVNT n20 5500MHz Ant1



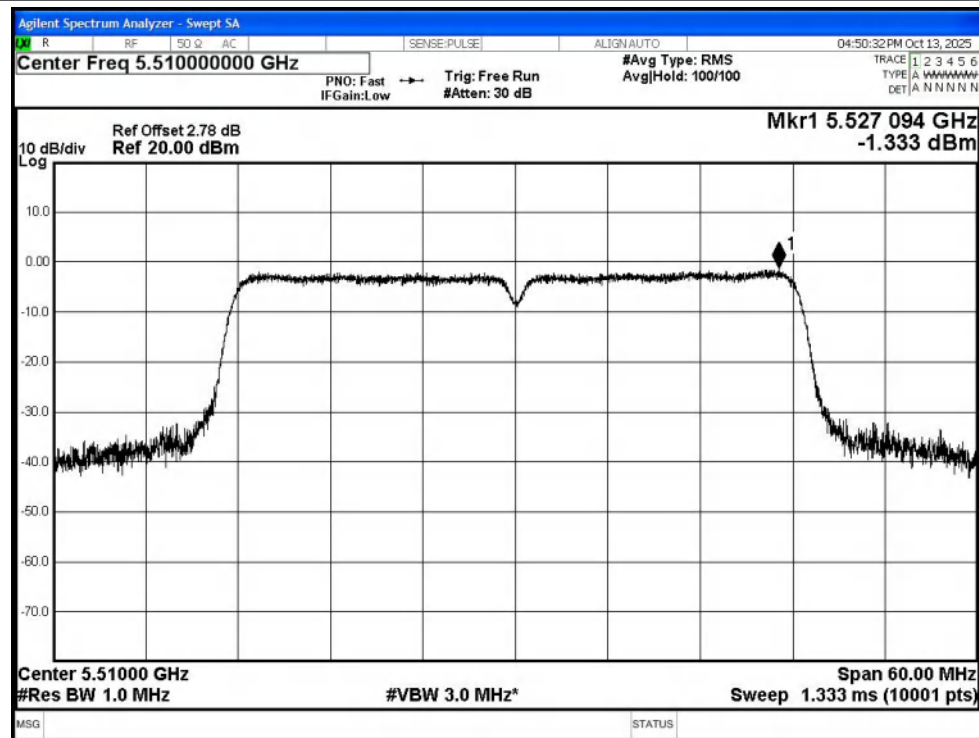
PSD NVNT n20 5580MHz Ant1



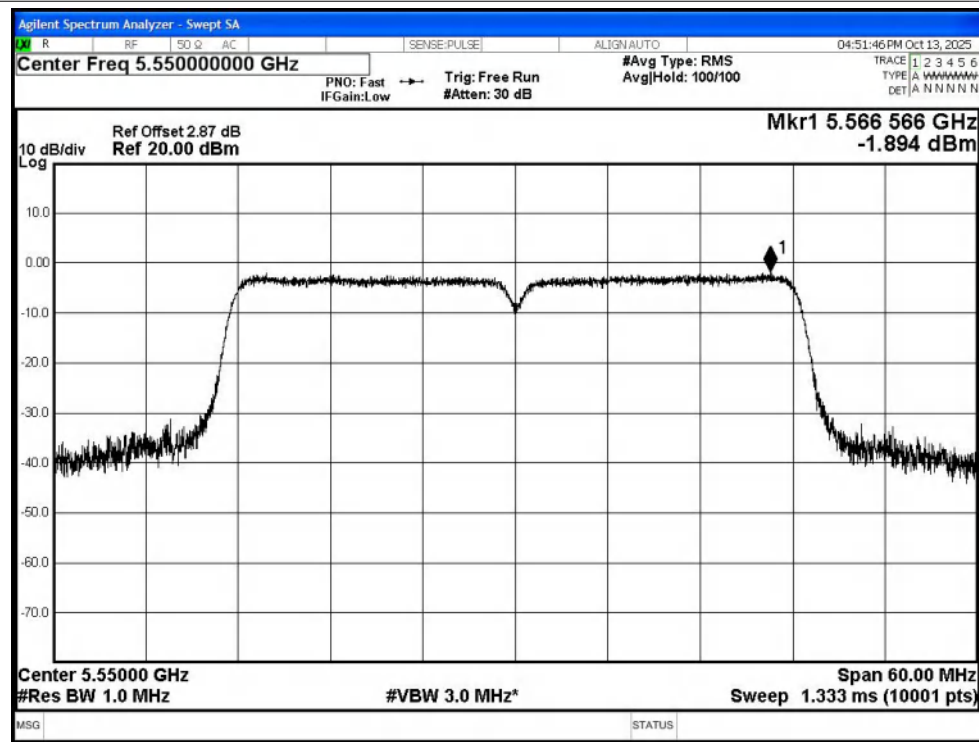
PSD NVNT n20 5700MHz Ant1



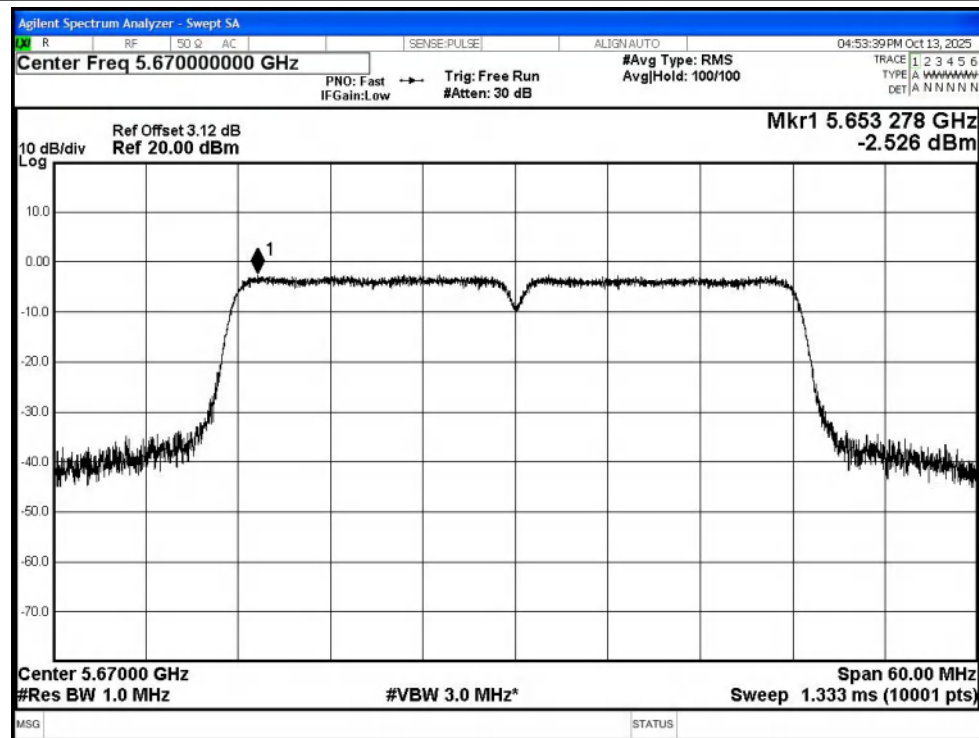
PSD NVNT n40 5510MHz Ant1



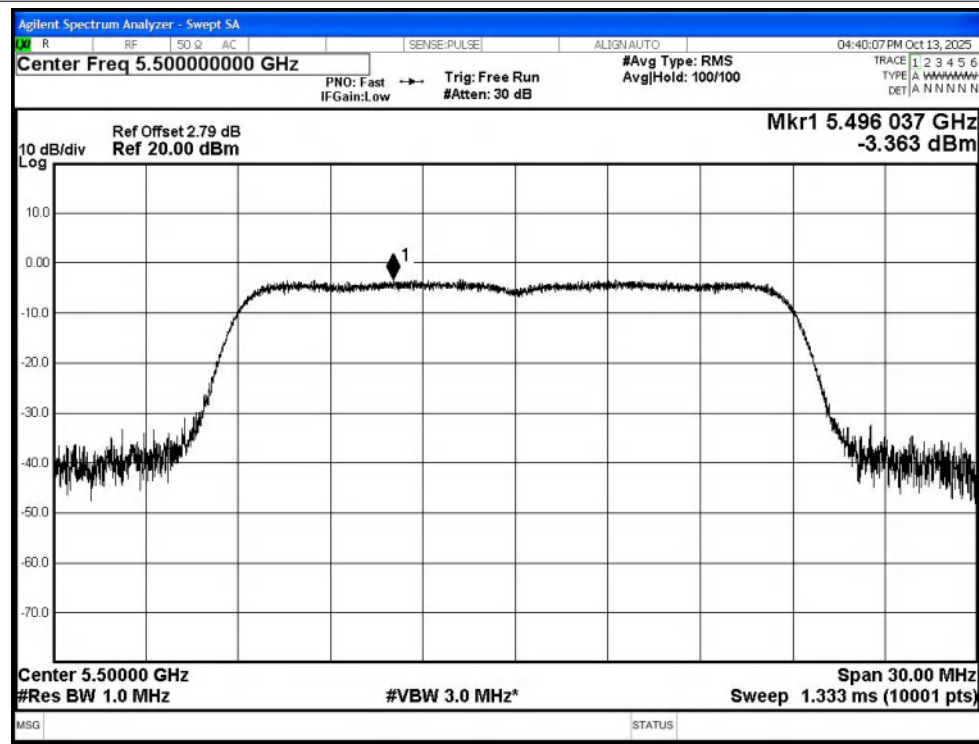
PSD NVNT n40 5550MHz Ant1



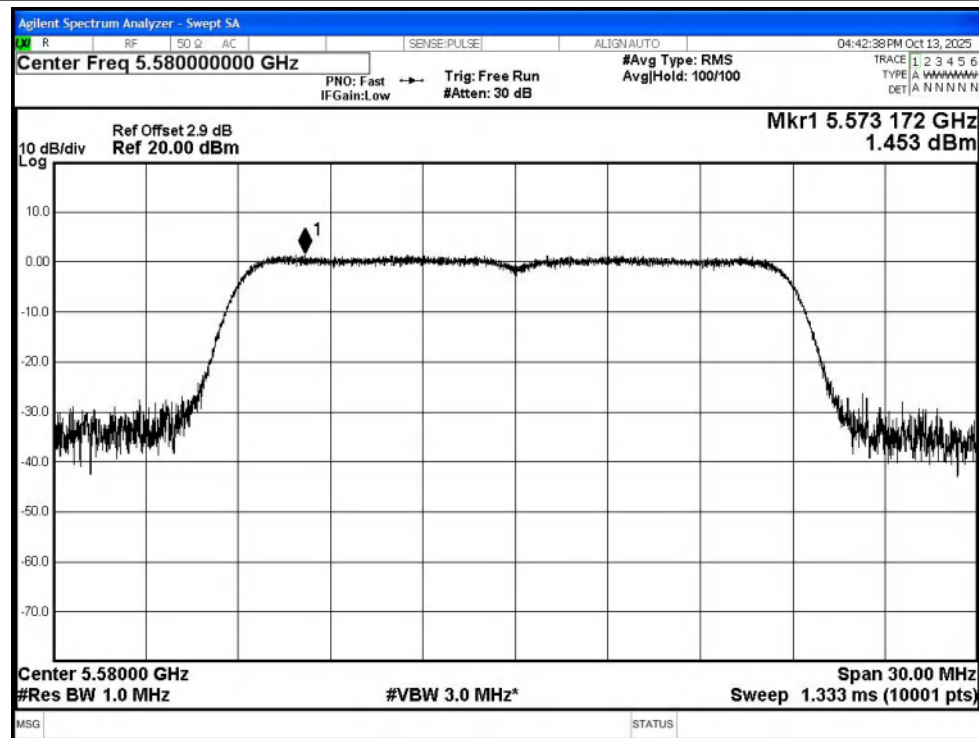
PSD NVNT n40 5670MHz Ant1



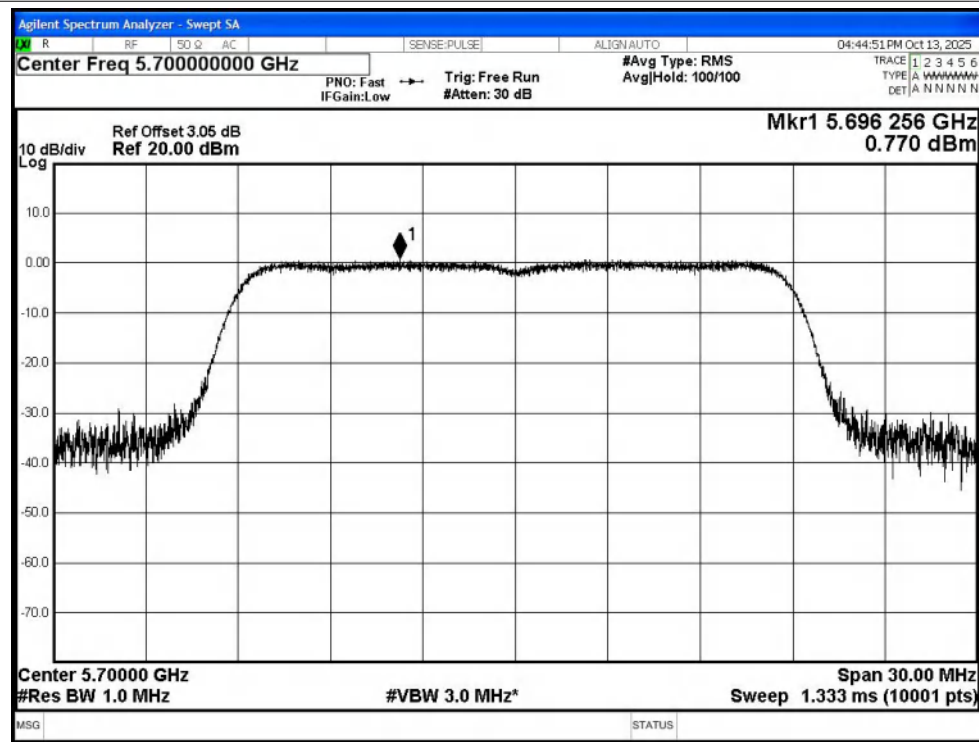
PSD NVNT ac20 5500MHz Ant1



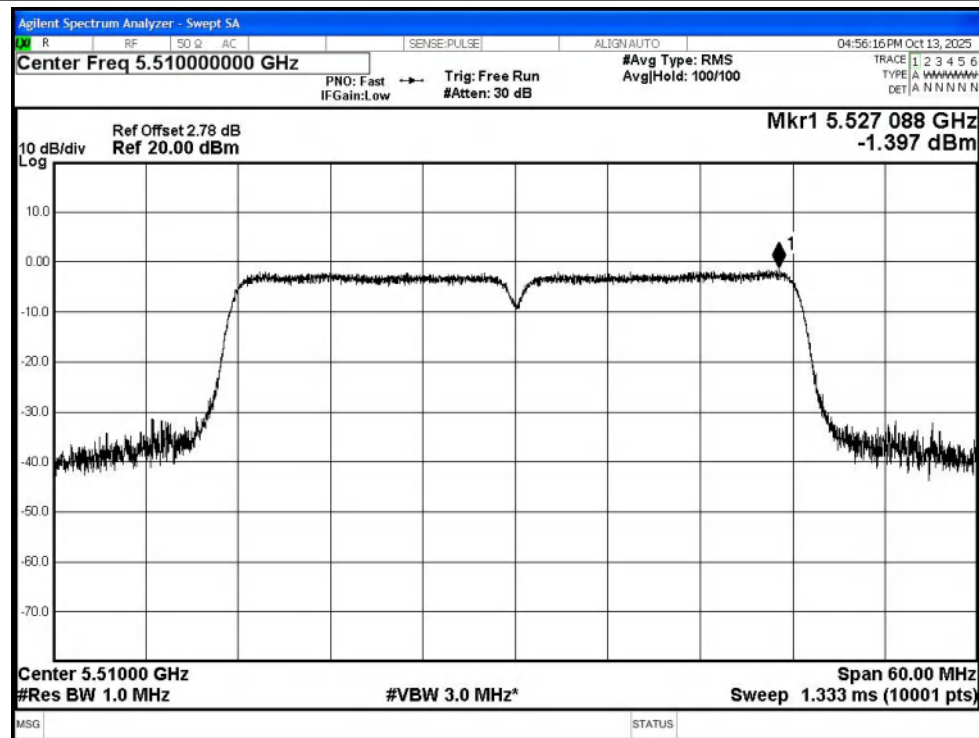
PSD NVNT ac20 5580MHz Ant1



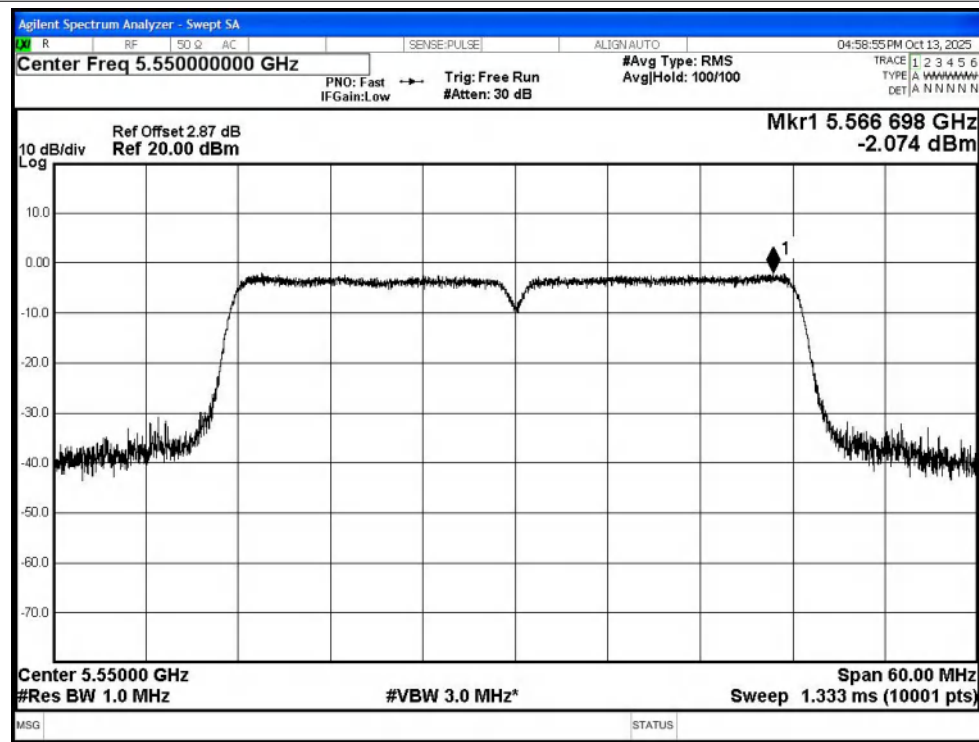
PSD NVNT ac20 5700MHz Ant1



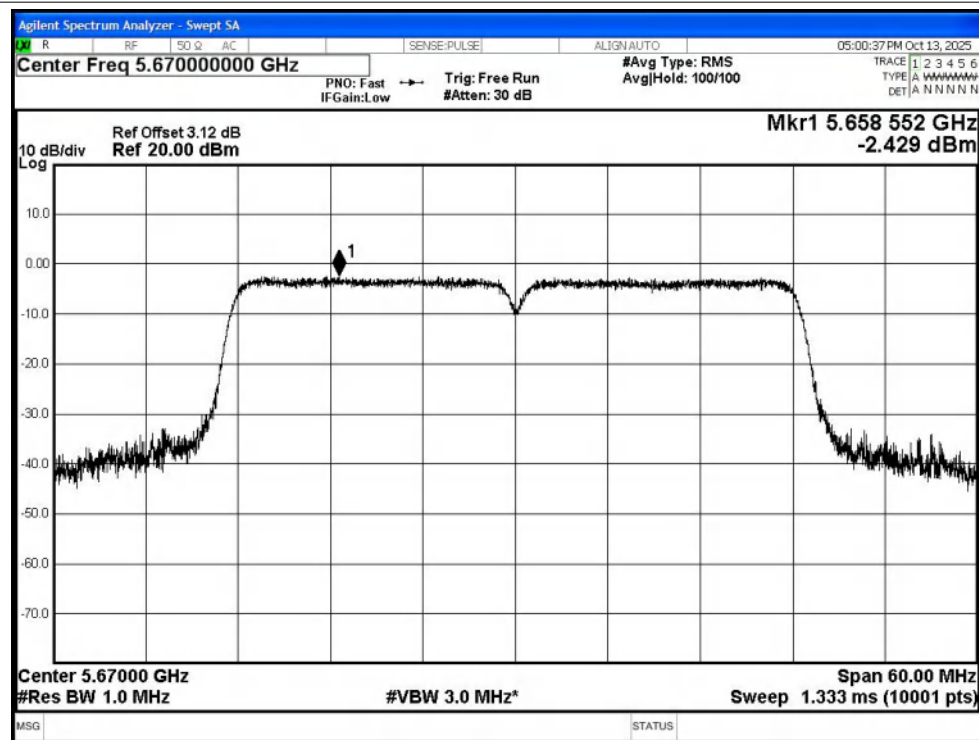
PSD NVNT ac40 5510MHz Ant1



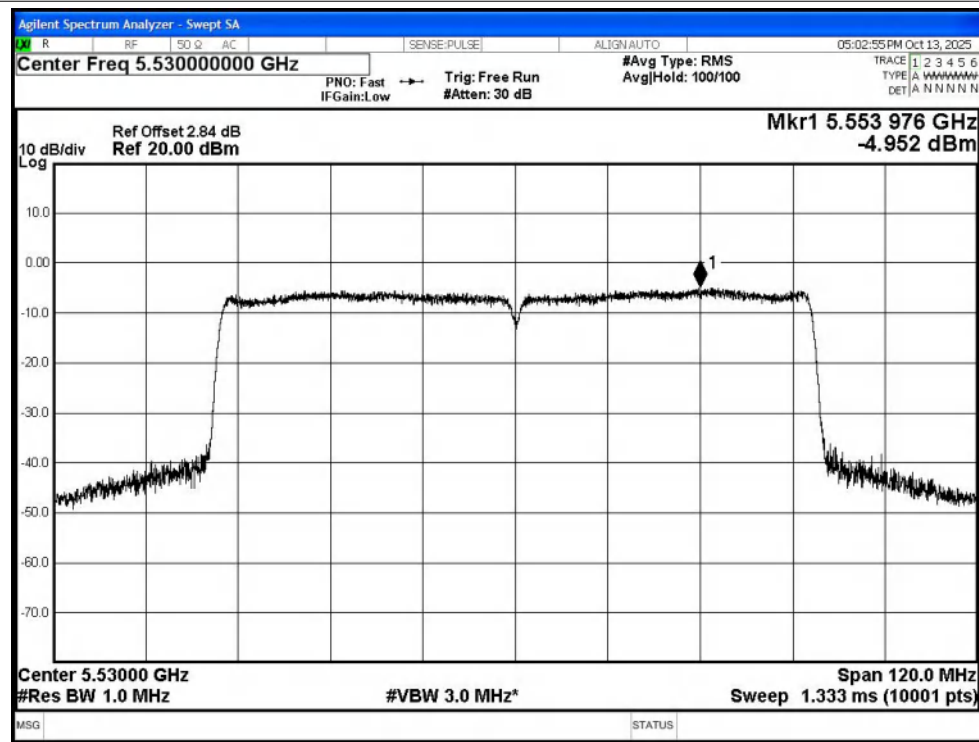
PSD NVNT ac40 5550MHz Ant1

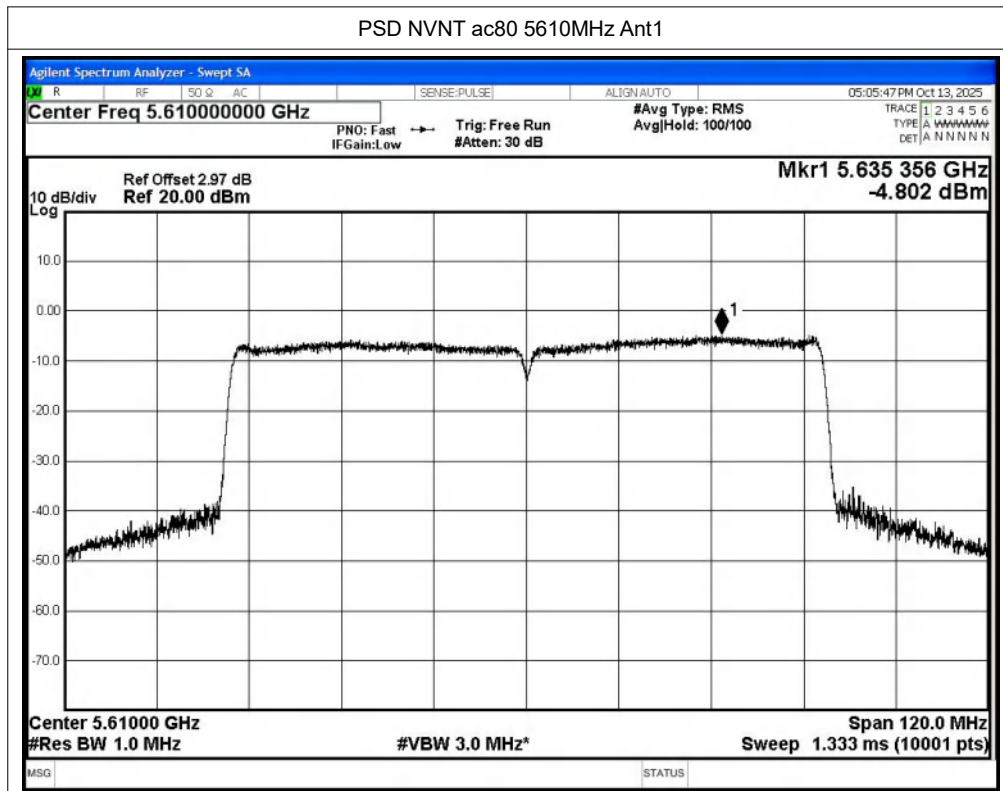


PSD NVNT ac40 5670MHz Ant1



PSD NVNT ac80 5530MHz Ant1



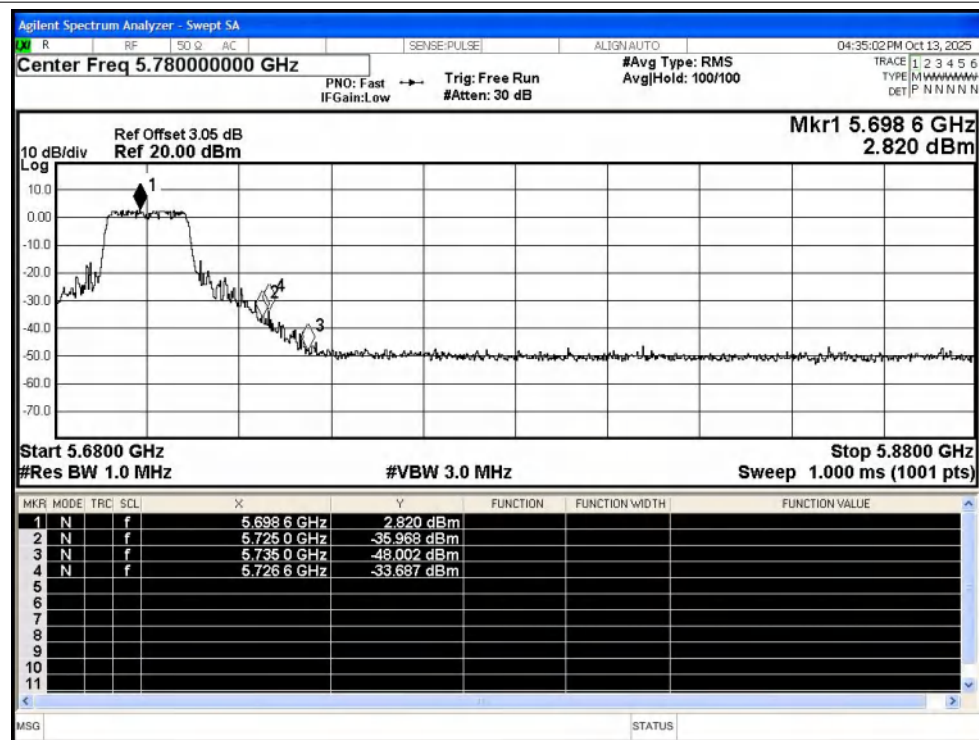


4. Restrict Band

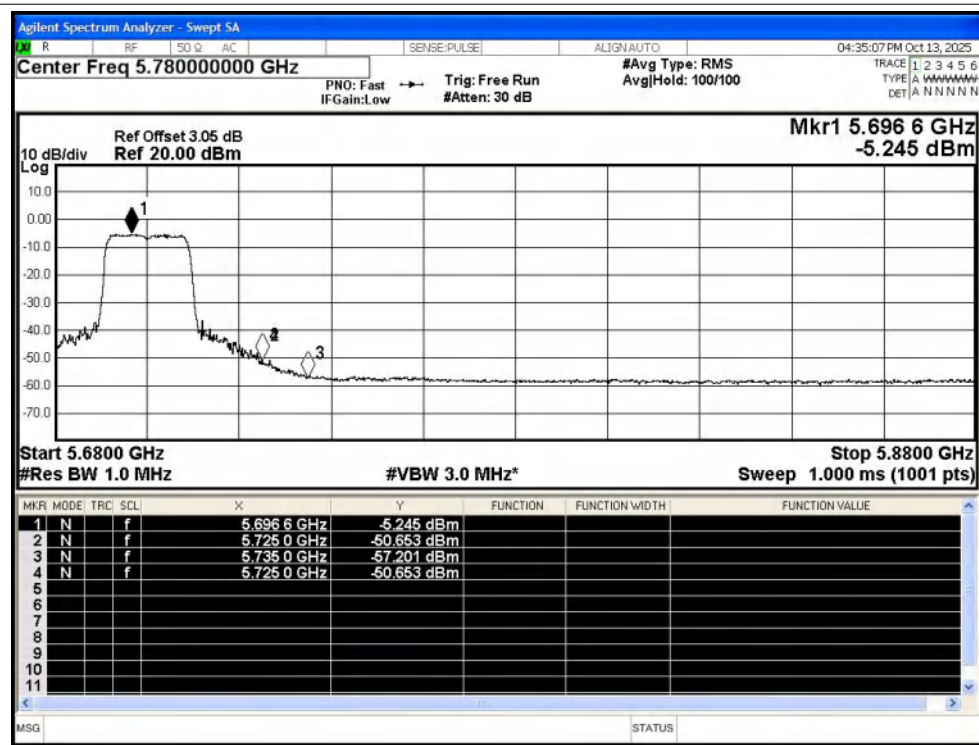
Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	a	5500	Ant1	5460	-48.25	2.57	-	49.55	Peak	68.2	Pass
NVNT	a	5500	Ant1	5460	-55.23	2.57	0.1	42.67	Average	54	Pass
NVNT	a	5500	Ant1	5469	-36.53	2.57	-	61.27	Peak	68.2	Pass
NVNT	a	5500	Ant1	5469.8	-50.63	2.57	0.1	47.27	Average	54	Pass
NVNT	a	5500	Ant1	5470	-37.83	2.57	-	59.97	Peak	68.2	Pass
NVNT	a	5500	Ant1	5470	-50.87	2.57	0.1	47.03	Average	54	Pass
NVNT	a	5700	Ant1	5725	-34.56	2.57	-	63.24	Peak	68.2	Pass
NVNT	a	5700	Ant1	5725	-50.22	2.57	0.1	47.68	Average	54	Pass
NVNT	a	5700	Ant1	5725.4	-31.87	2.57	-	65.93	Peak	68.2	Pass
NVNT	a	5700	Ant1	5726	-48	2.57	0.1	49.90	Average	54	Pass
NVNT	a	5700	Ant1	5735	-44.48	2.57	-	53.32	Peak	68.2	Pass
NVNT	a	5700	Ant1	5735	-53.91	2.57	0.1	43.99	Average	54	Pass
NVNT	n20	5500	Ant1	5460	-48.84	2.57	-	48.96	Peak	68.2	Pass
NVNT	n20	5500	Ant1	5460	-54.41	2.57	0.12	43.51	Average	54	Pass
NVNT	n20	5500	Ant1	5468	-37.73	2.57	-	60.07	Peak	68.2	Pass
NVNT	n20	5500	Ant1	5469.6	-50.98	2.57	0.12	46.94	Average	54	Pass
NVNT	n20	5500	Ant1	5470	-40.99	2.57	-	56.81	Peak	68.2	Pass
NVNT	n20	5500	Ant1	5470	-51.22	2.57	0.12	46.70	Average	54	Pass
NVNT	n20	5700	Ant1	5725	-35.97	2.57	-	61.83	Peak	68.2	Pass
NVNT	n20	5700	Ant1	5725	-50.65	2.57	0.12	47.27	Average	54	Pass
NVNT	n20	5700	Ant1	5726.6	-33.69	2.57	-	64.11	Peak	68.2	Pass
NVNT	n20	5700	Ant1	5725	-50.65	2.57	0.12	47.27	Average	54	Pass
NVNT	n20	5700	Ant1	5735	-48	2.57	-	49.80	Peak	68.2	Pass
NVNT	n20	5700	Ant1	5735	-57.2	2.57	0.12	40.72	Average	54	Pass
NVNT	n40	5510	Ant1	5460	-49.46	2.57	-	48.34	Peak	68.2	Pass
NVNT	n40	5510	Ant1	5460	-57.46	2.57	0.23	40.57	Average	54	Pass
NVNT	n40	5510	Ant1	5469.8	-39.17	2.57	-	58.63	Peak	68.2	Pass
NVNT	n40	5510	Ant1	5468.6	-54.41	2.57	0.23	43.62	Average	54	Pass
NVNT	n40	5510	Ant1	5470	-41.95	2.57	-	55.85	Peak	68.2	Pass
NVNT	n40	5510	Ant1	5470	-54.49	2.57	0.23	43.54	Average	54	Pass
NVNT	n40	5670	Ant1	5725	-46.61	2.57	-	51.19	Peak	68.2	Pass
NVNT	n40	5670	Ant1	5725	-54.88	2.57	0.23	43.15	Average	54	Pass
NVNT	n40	5670	Ant1	5728	-44.51	2.57	-	53.29	Peak	68.2	Pass
NVNT	n40	5670	Ant1	5728.4	-54.24	2.57	0.23	43.79	Average	54	Pass
NVNT	n40	5670	Ant1	5735	-45.39	2.57	-	52.41	Peak	68.2	Pass
NVNT	n40	5670	Ant1	5735	-55.55	2.57	0.23	42.48	Average	54	Pass
NVNT	ac20	5500	Ant1	5460	-49.13	2.57	-	48.67	Peak	68.2	Pass
NVNT	ac20	5500	Ant1	5460	-57.69	2.57	0.11	40.22	Average	54	Pass

NVNT	ac20	5500	Ant1	5468.2	-42.59	2.57	-	55.21	Peak	68.2	Pass
NVNT	ac20	5500	Ant1	5469.2	-53.7	2.57	0.11	44.21	Average	54	Pass
NVNT	ac20	5500	Ant1	5470	-43.29	2.57	-	54.51	Peak	68.2	Pass
NVNT	ac20	5500	Ant1	5470	-54.27	2.57	0.11	43.64	Average	54	Pass
NVNT	ac20	5700	Ant1	5725	-39.3	2.57	-	58.50	Peak	68.2	Pass
NVNT	ac20	5700	Ant1	5725	-52.26	2.57	0.11	45.65	Average	54	Pass
NVNT	ac20	5700	Ant1	5726.4	-36.83	2.57	-	60.97	Peak	68.2	Pass
NVNT	ac20	5700	Ant1	5726	-52.19	2.57	0.11	45.72	Average	54	Pass
NVNT	ac20	5700	Ant1	5735	-48.58	2.57	-	49.22	Peak	68.2	Pass
NVNT	ac20	5700	Ant1	5735	-57.43	2.57	0.11	40.48	Average	54	Pass
NVNT	ac40	5510	Ant1	5460	-45.2	2.57	-	52.60	Peak	68.2	Pass
NVNT	ac40	5510	Ant1	5460	-55.41	2.57	0.23	42.62	Average	54	Pass
NVNT	ac40	5510	Ant1	5470	-35.21	2.57	-	62.59	Peak	68.2	Pass
NVNT	ac40	5510	Ant1	5469.4	-51.38	2.57	0.23	46.65	Average	54	Pass
NVNT	ac40	5510	Ant1	5470	-35.21	2.57	-	62.59	Peak	68.2	Pass
NVNT	ac40	5510	Ant1	5470	-52.46	2.57	0.23	45.57	Average	54	Pass
NVNT	ac40	5670	Ant1	5725	-46.45	2.57	-	51.35	Peak	68.2	Pass
NVNT	ac40	5670	Ant1	5725	-54.61	2.57	0.23	43.42	Average	54	Pass
NVNT	ac40	5670	Ant1	5725.8	-44.46	2.57	-	53.34	Peak	68.2	Pass
NVNT	ac40	5670	Ant1	5725.2	-54.1	2.57	0.23	43.93	Average	54	Pass
NVNT	ac40	5670	Ant1	5735	-45.92	2.57	-	51.88	Peak	68.2	Pass
NVNT	ac40	5670	Ant1	5735	-55.97	2.57	0.23	42.06	Average	54	Pass
NVNT	ac80	5530	Ant1	5460	-45.84	2.57	-	51.96	Peak	68.2	Pass
NVNT	ac80	5530	Ant1	5460	-53.95	2.57	0.47	44.32	Average	54	Pass
NVNT	ac80	5530	Ant1	5468.4	-40.13	2.57	-	57.67	Peak	68.2	Pass
NVNT	ac80	5530	Ant1	5470	-52.4	2.57	0.47	45.87	Average	54	Pass
NVNT	ac80	5530	Ant1	5470	-43.38	2.57	-	54.42	Peak	68.2	Pass
NVNT	ac80	5530	Ant1	5470	-52.4	2.57	0.47	45.87	Average	54	Pass
NVNT	ac80	5610	Ant1	5725	-48.02	2.57	-	49.78	Peak	68.2	Pass
NVNT	ac80	5610	Ant1	5725	-56.75	2.57	0.47	41.52	Average	54	Pass
NVNT	ac80	5610	Ant1	5729.465	-44.26	2.57	-	53.54	Peak	68.2	Pass
NVNT	ac80	5610	Ant1	5725.365	-55.87	2.57	0.47	42.40	Average	54	Pass
NVNT	ac80	5610	Ant1	5735	-48.14	2.57	-	49.66	Peak	68.2	Pass
NVNT	ac80	5610	Ant1	5735	-56.97	2.57	0.47	41.30	Average	54	Pass

Restrict Band NVNT n20 5700MHz Ant1 Peak



Restrict Band NVNT n20 5700MHz Ant1 Average



Agilent Spectrum Analyzer - Swept SA

R F SO D AC SENSE:PULSE ALIGN:AUTO 04:49:13PM Oct 13, 2025

Center Freq 5.45000000 GHz

PNO: Fast IF Gain: Low Trig: Free Run #Atten: 30 dB #Avg Type: RMS Avg/Hold: 100/100

Ref Offset 2.78 dB Ref 20.00 dBm Mkr1 5.506 0 GHz 0.162 dBm

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	f		5.506 0 GHz	0.162 dBm			
2	N	f		5.460 0 GHz	-49.457 dBm			
3	N	f		5.470 0 GHz	-41.947 dBm			
4	N	f		5.469 8 GHz	-39.168 dBm			

Start 5.3500 GHz Stop 5.5500 GHz
#Res BW 1.0 MHz #VBW 3.0 MHz Sweep 1.000 ms (1001 pts)

Agilent Spectrum Analyzer - Sweep SA

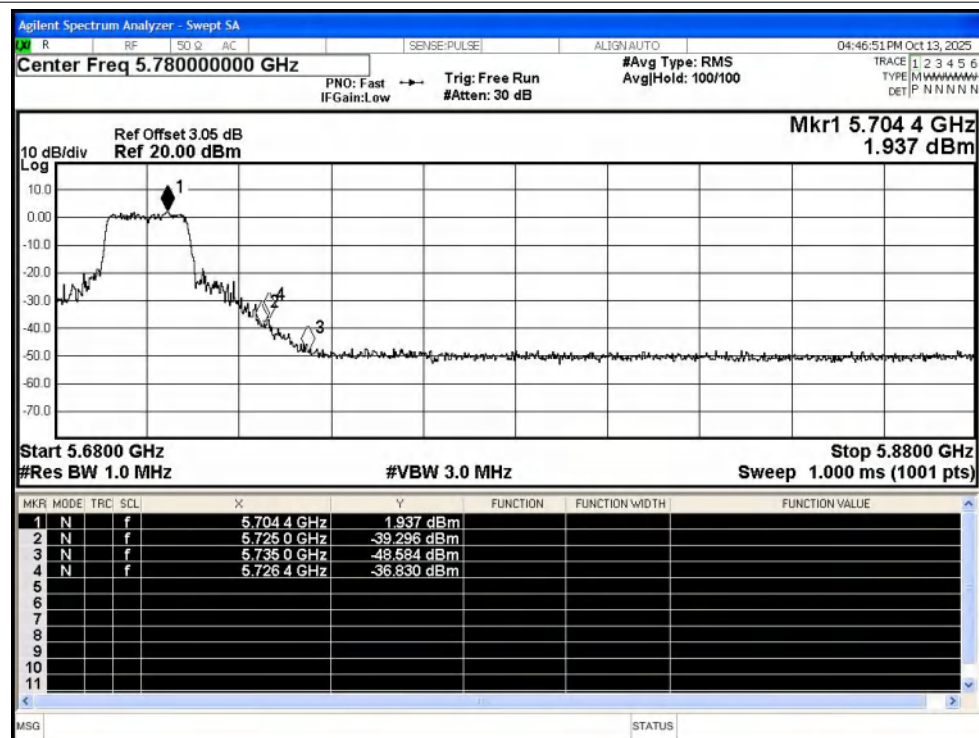
R F SO Q A C SENSE:PULSE ALIGN:AUTO #Avg Type: RMS AvgHold: 100/100
Center Freq 5.45000000 GHz PNO: Fast IFGain:Low Trig: Free Run #Atten: 30 dB Mkr1 5.512 4 GHz -8.152 dBm

The spectrum plot shows frequency from approximately 5.35 GHz to 5.55 GHz. The y-axis represents power density in dB/div Log, ranging from -70.0 to 10.0. A prominent peak is labeled 'Mkr1' at 5.5124 GHz with a value of -8.152 dBm. Other smaller peaks are visible around 5.46-5.47 GHz.

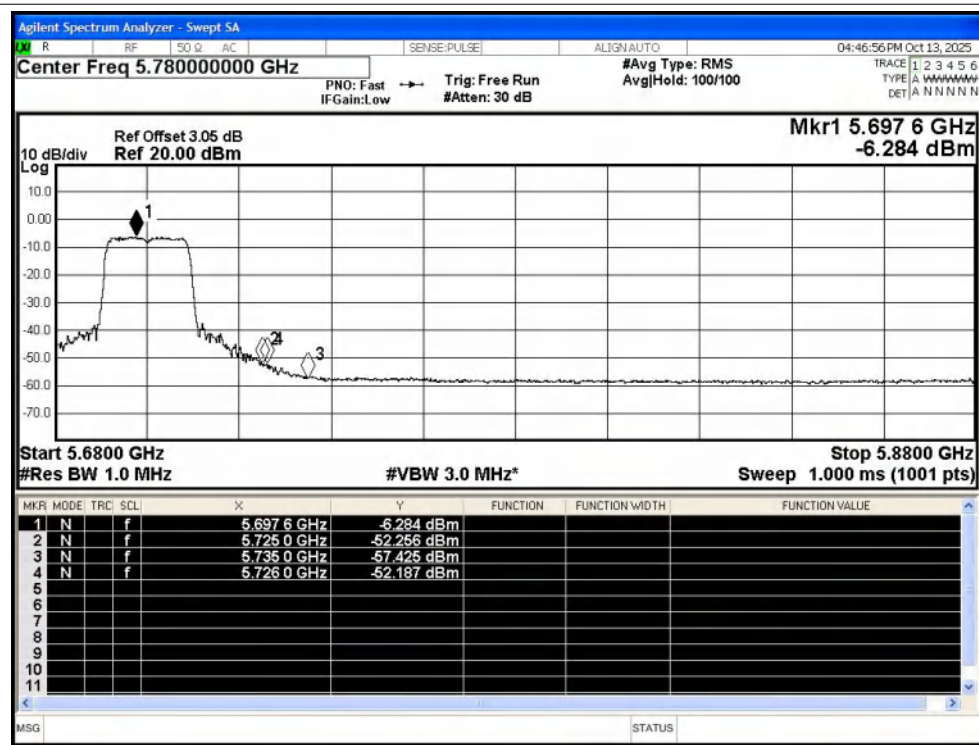
MKR MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	f	5.512 4 GHz	-8.152 dBm			
2	N	f	5.460 0 GHz	-57.464 dBm			
3	N	f	5.470 0 GHz	-54.494 dBm			
4	N	f	5.468 6 GHz	-54.407 dBm			

Start 5.3500 GHz Stop 5.5500 GHz
#Res BW 1.0 MHz #VBW 3.0 MHz* Sweep 1.000 ms (1001 pts)

Restrict Band NVNT ac20 5700MHz Ant1 Peak



Restrict Band NVNT ac20 5700MHz Ant1 Average



5. Frequency Stability

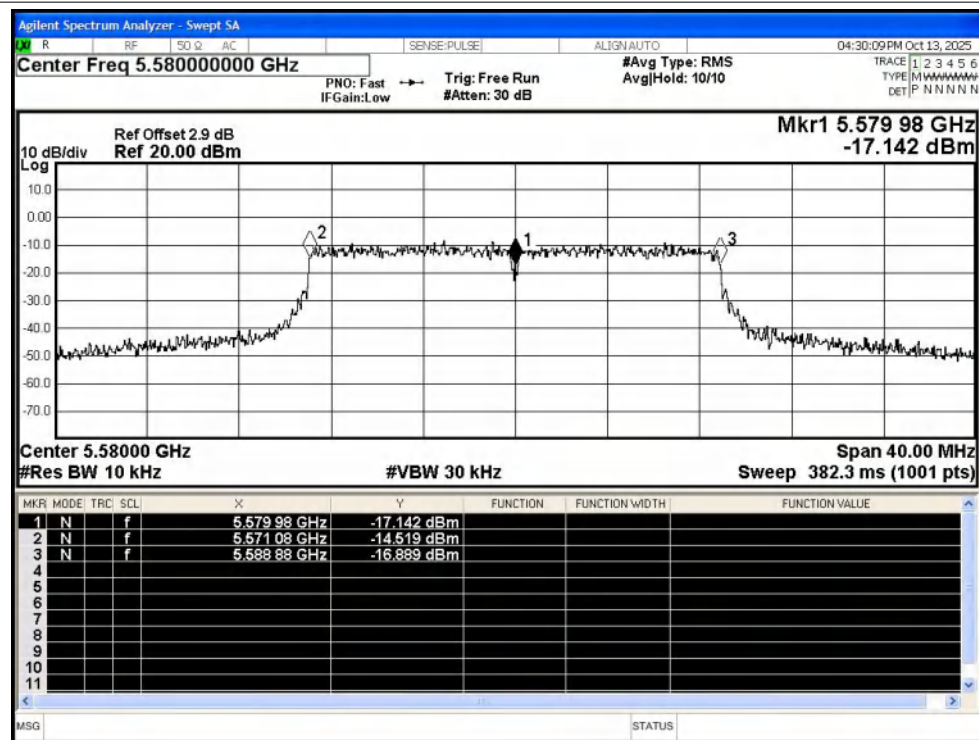
Condition	Mode	Frequency (MHz)	Antenna	Measured Frequency (MHz)	Frequency Error (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
NVNT	a	5500	Ant1	5500	0	0	25	Pass
NVNT	a	5580	Ant1	5580	0	0	25	Pass
NVNT	a	5700	Ant1	5699.98	-20000	-3.51	25	Pass
NVNT	n20	5500	Ant1	5499.98	-20000	-3.64	25	Pass
NVNT	n20	5580	Ant1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

Freq. Stability NVNT a 5500MHz Ant1

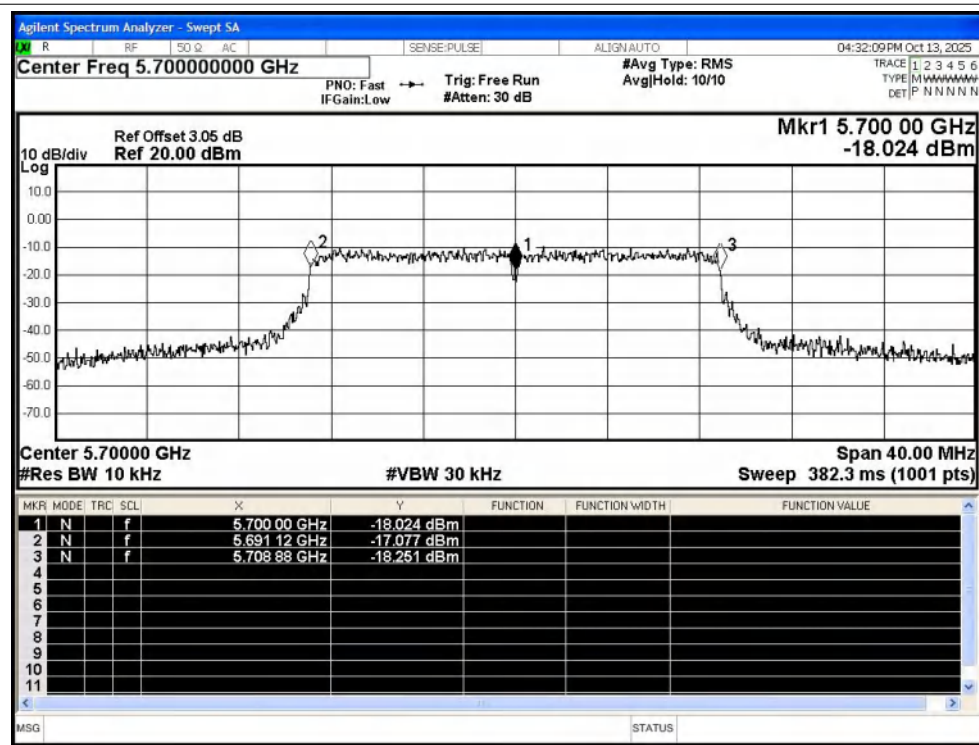
[illegible][illegible]

[illegible][illegible]

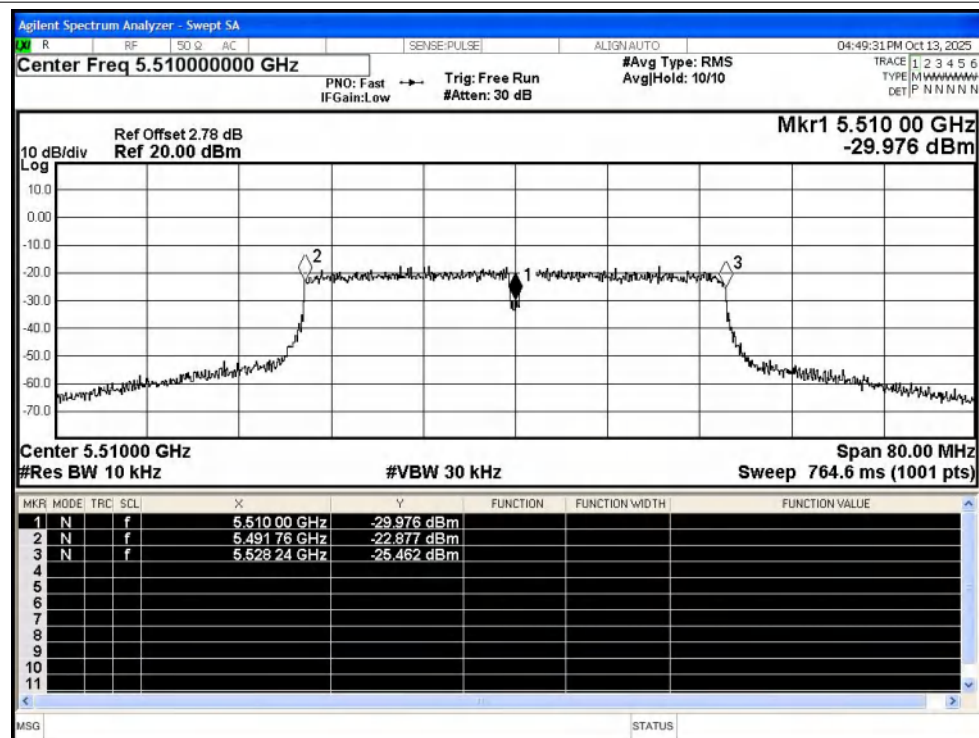
Freq. Stability NVNT n20 5580MHz Ant1



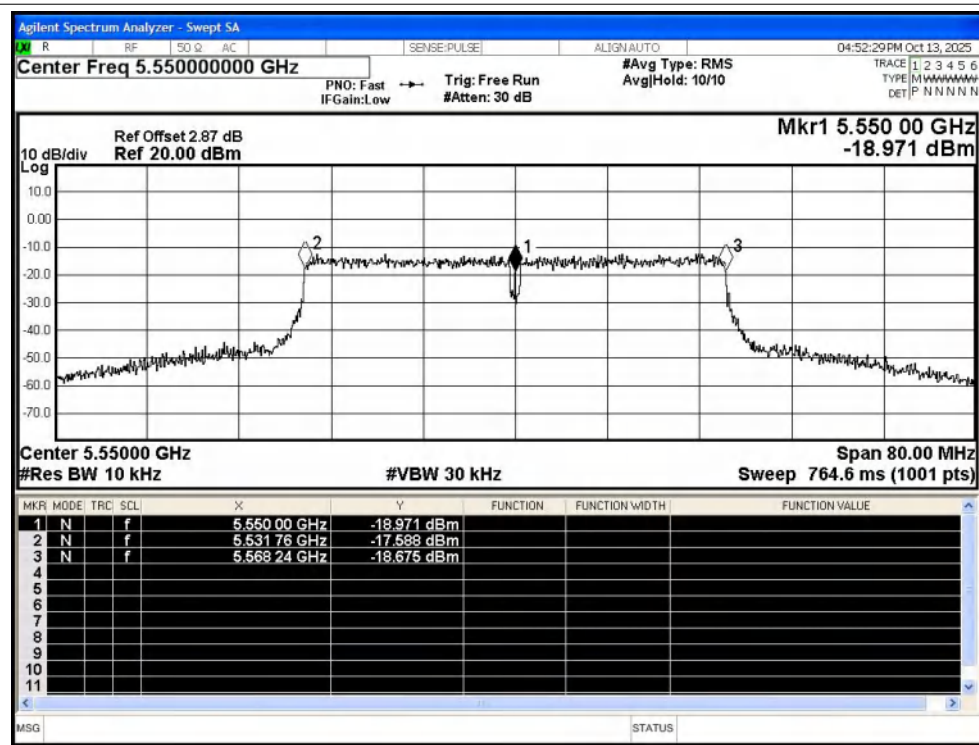
Freq. Stability NVNT n20 5700MHz Ant1



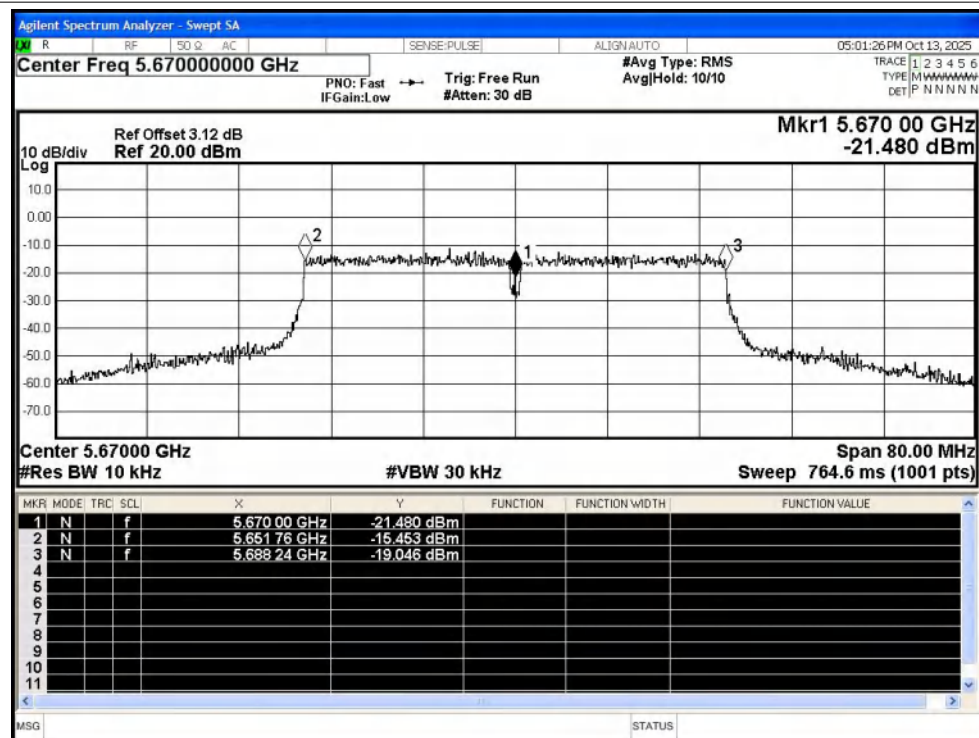
Freq. Stability NVNT n40 5510MHz Ant1



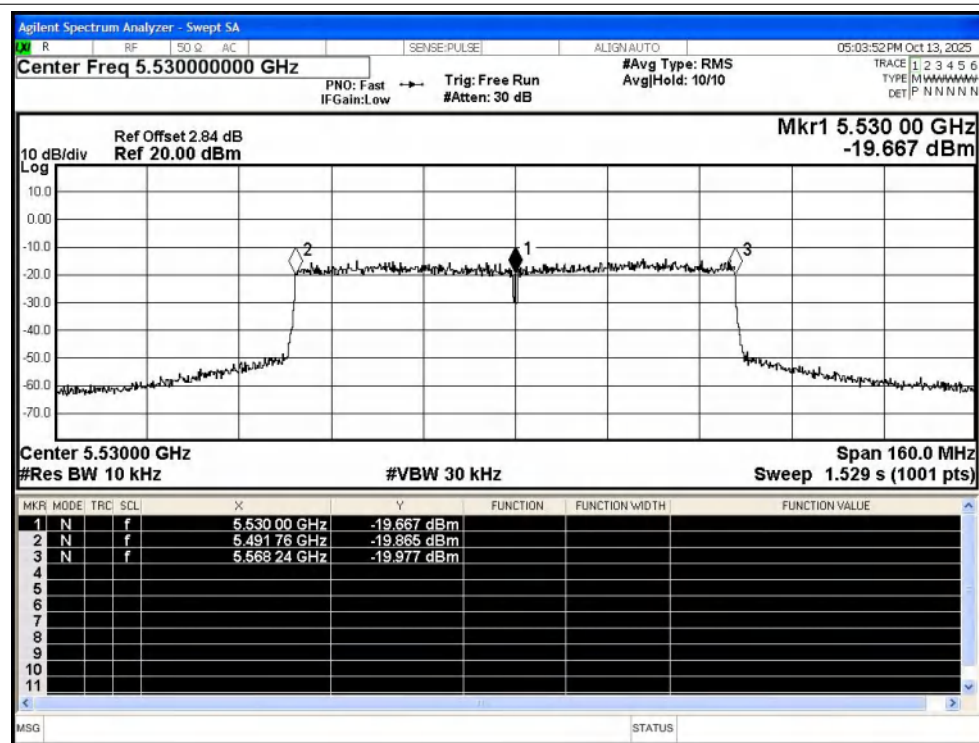
Freq. Stability NVNT n40 5550MHz Ant1



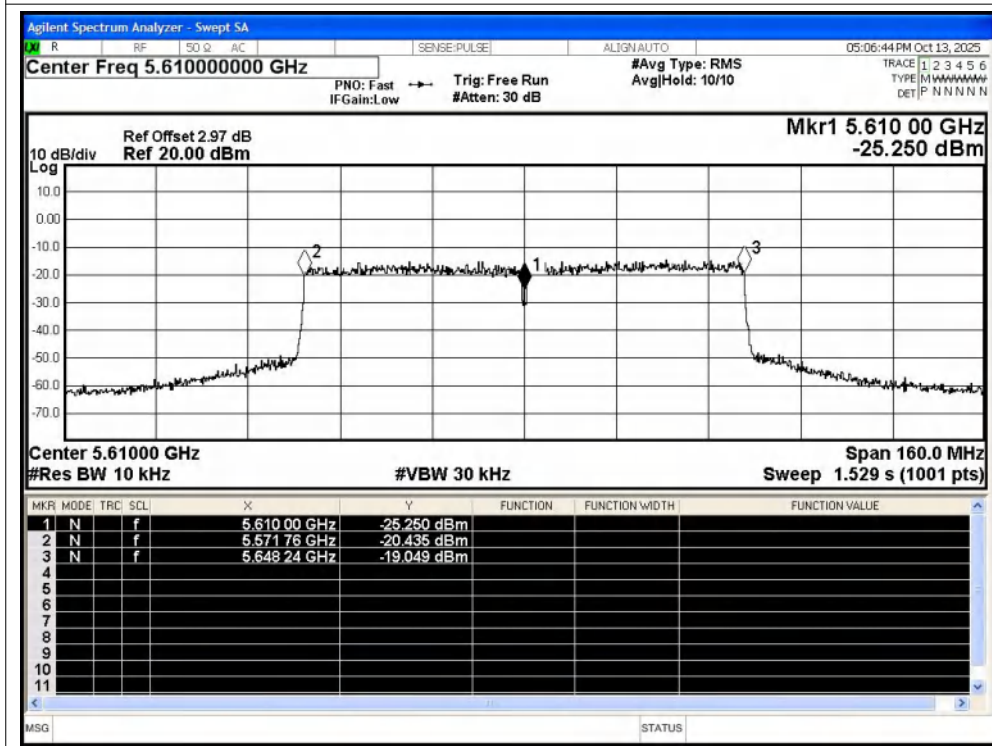
Freq. Stability NVNT ac40 5670MHz Ant1



Freq. Stability NVNT ac80 5530MHz Ant1



Freq. Stability NVNT ac80 5610MHz Ant1

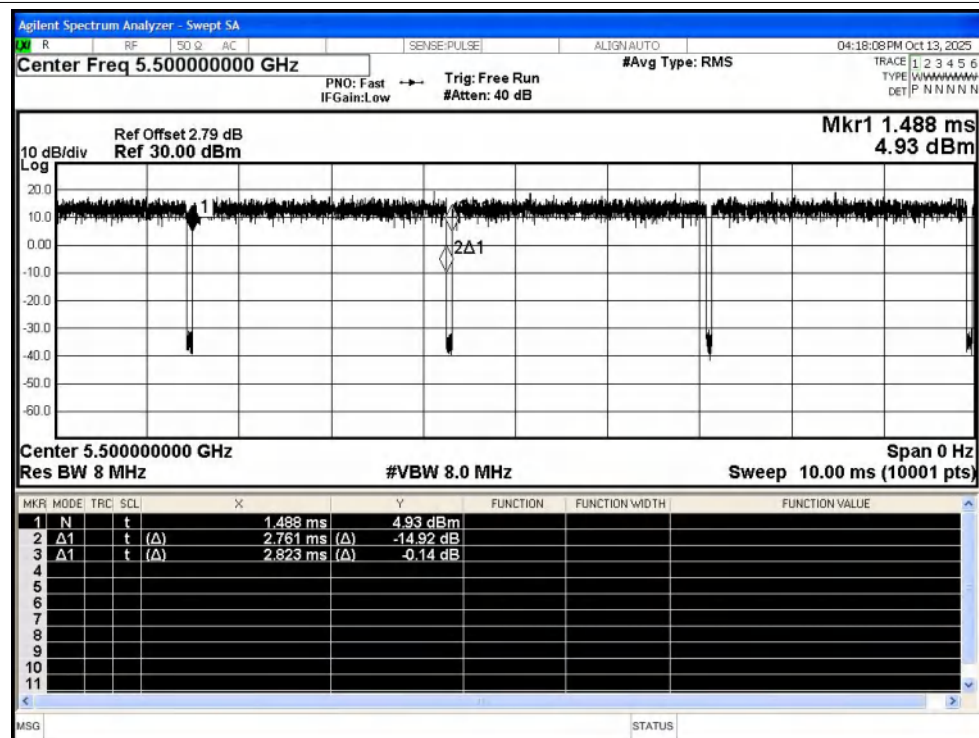


6. Duty Cycle

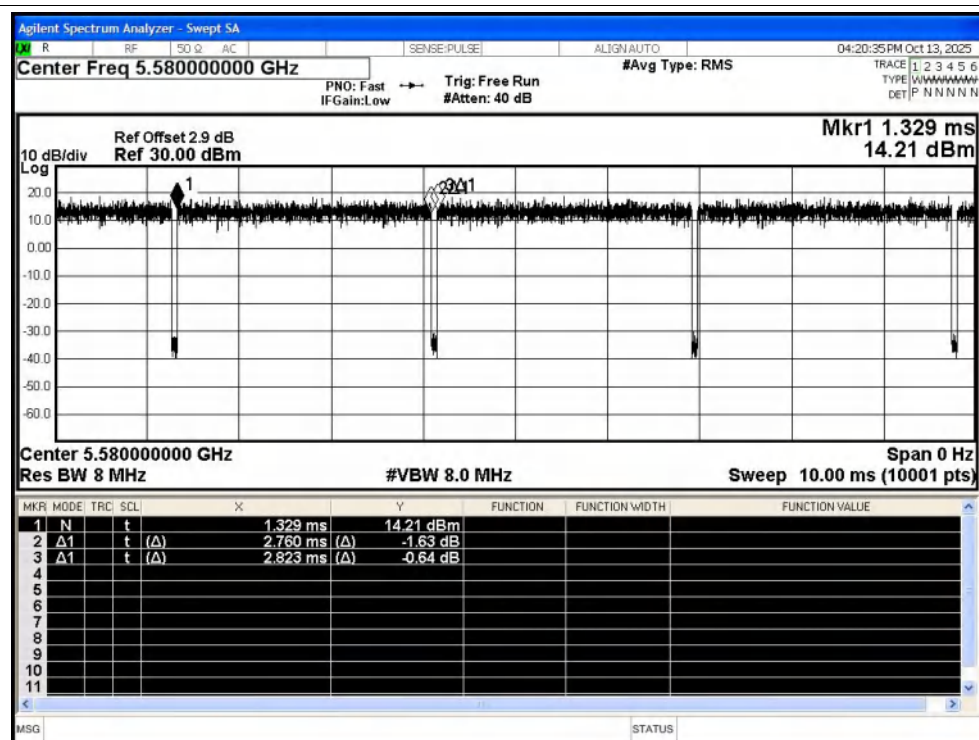
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	a	5500	Ant1	97.8	0.1	0.36
NVNT	a	5580	Ant1	97.77	0.1	0.36
NVNT	a	5700	Ant1	97.77	0.1	0.36
NVNT	n20	5500	Ant1	97.35	0.12	0.43
NVNT	n20	5580	Ant1	97.39	0.11	0.43
NVNT	n20	5700	Ant1	97.35	0.12	0.43
NVNT	n40	5510	Ant1	94.74	0.23	0.88
NVNT	n40	5550	Ant1	94.74	0.23	0.88
NVNT	n40	5670	Ant1	94.82	0.23	0.88
NVNT	ac20	5500	Ant1	97.4	0.11	0.43
NVNT	ac20	5580	Ant1	97.4	0.11	0.43
NVNT	ac20	5700	Ant1	97.4	0.11	0.43
NVNT	ac40	5510	Ant1	94.75	0.23	0.88
NVNT	ac40	5550	Ant1	94.84	0.23	0.88
NVNT	ac40	5670	Ant1	94.75	0.23	0.88
NVNT	ac80	5530	Ant1	89.84	0.47	1.82
NVNT	ac80	5610	Ant1	89.84	0.47	1.82

Test Graphs

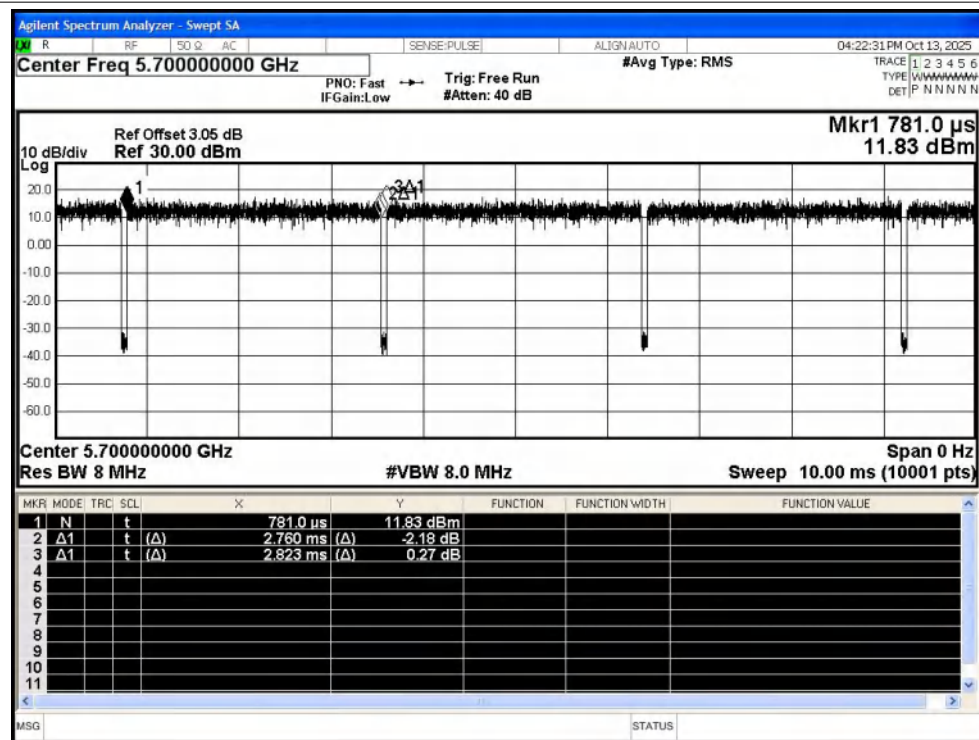
Duty Cycle NVNT a 5500MHz Ant1



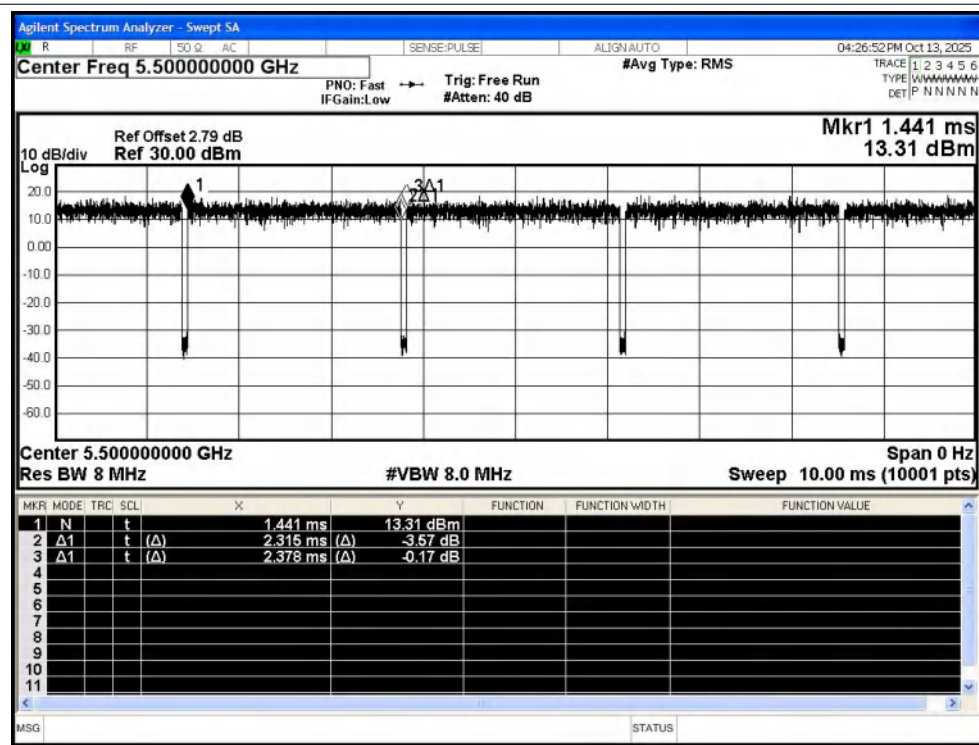
Duty Cycle NVNT a 5580MHz Ant1



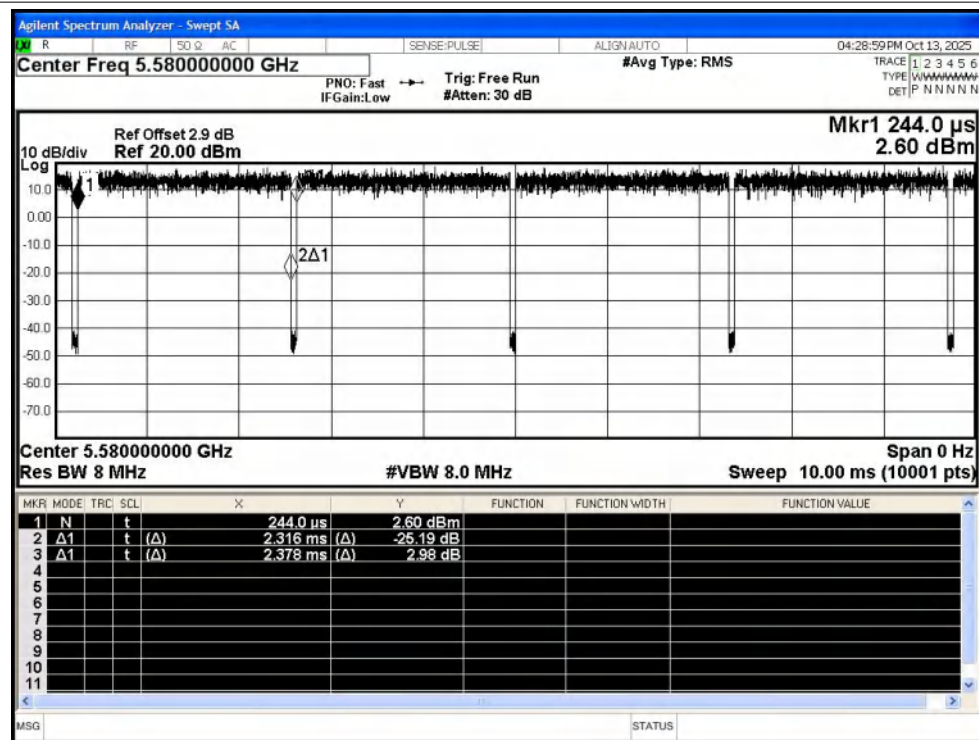
Duty Cycle NVNT a 5700MHz Ant1



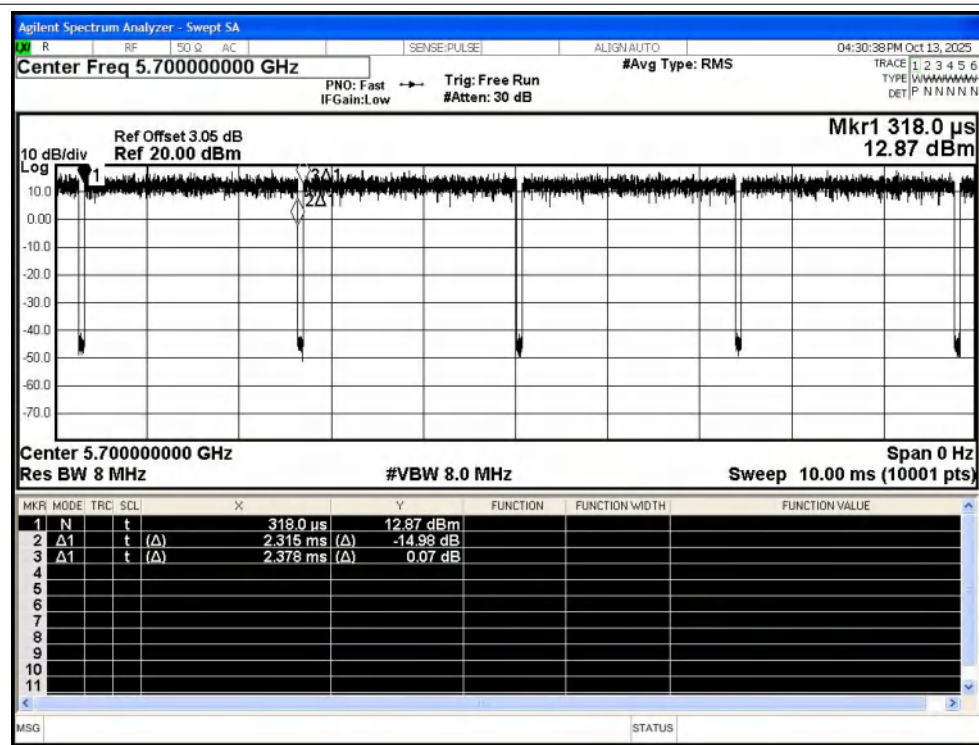
Duty Cycle NVNT n20 5500MHz Ant1



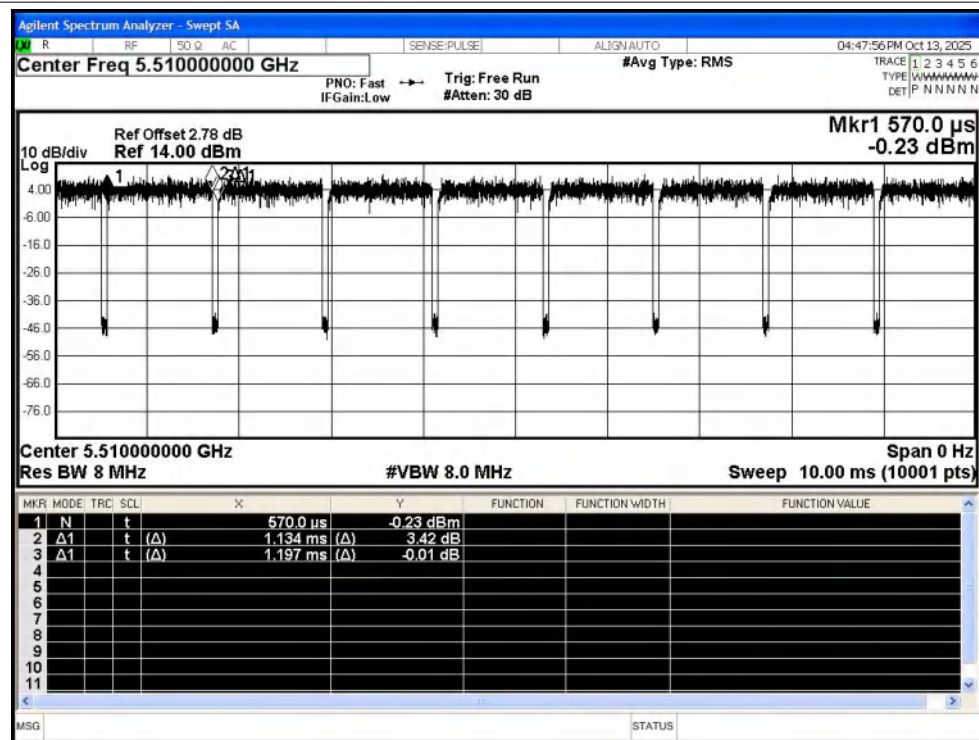
Duty Cycle NVNT n20 5580MHz Ant1



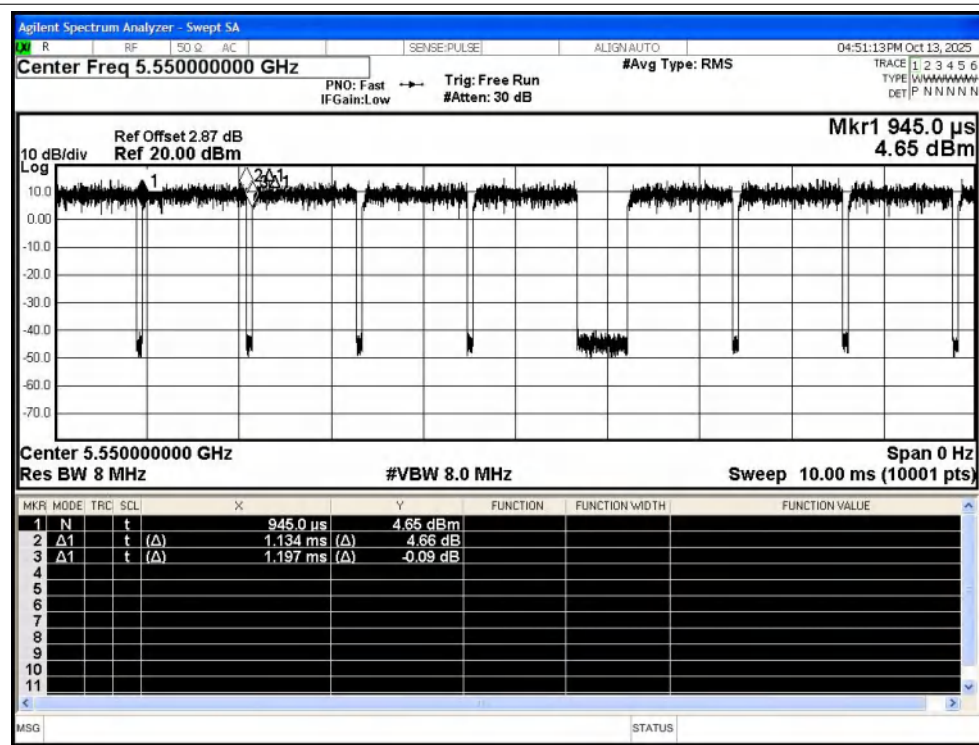
Duty Cycle NVNT n20 5700MHz Ant1



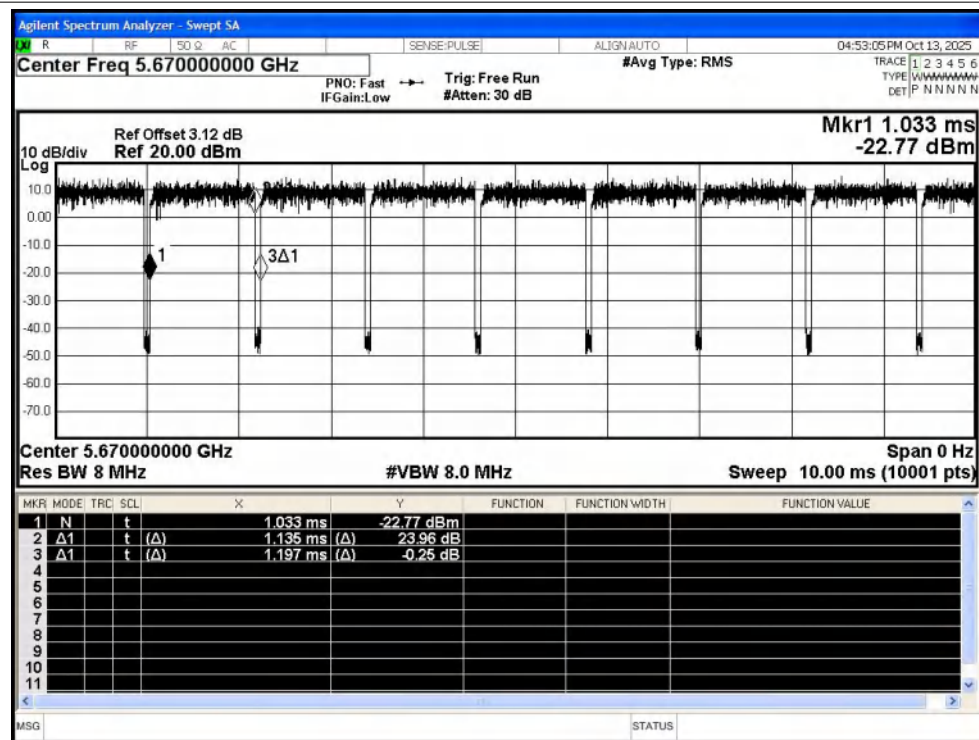
Duty Cycle NVNT n40 5510MHz Ant1



Duty Cycle NVNT n40 5550MHz Ant1



Duty Cycle NVNT n40 5670MHz Ant1



Duty Cycle NVNT ac20 5500MHz Ant1

