

FCC Appendix RF Test Data for 5.5GWIFI

Product Name: Automotive Diagnostic Tool

Test Model: VD700

Environmental Conditions

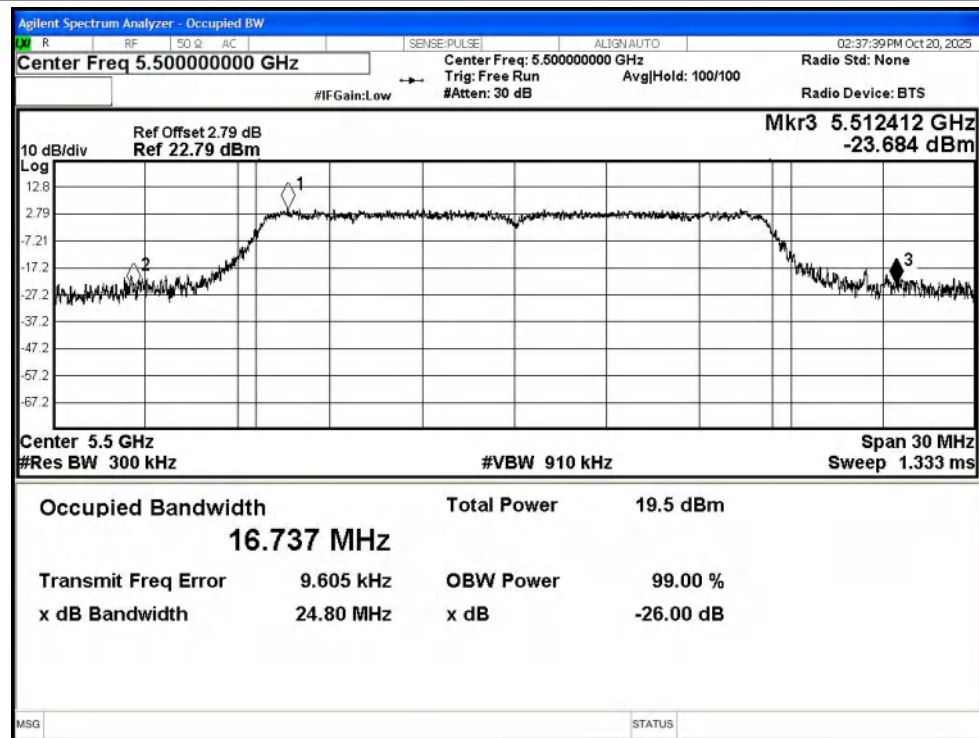
Temperature:	23.8° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Zoey Cao
Supervised by:	Eric Wang

1. -26dB Bandwidth

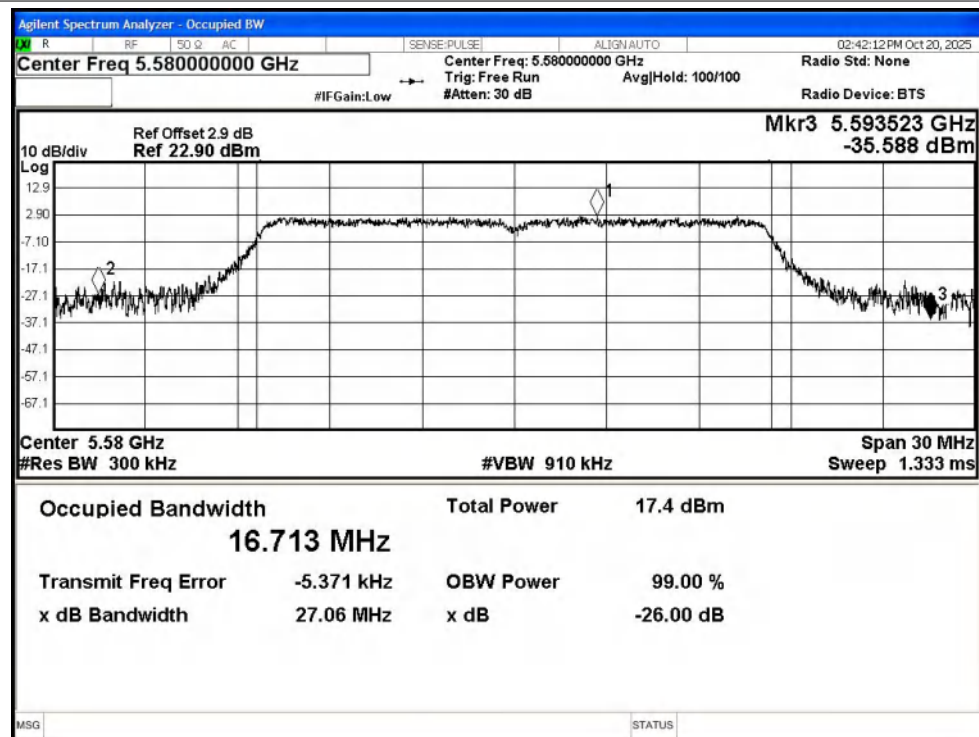
Condition	Mode	Frequency (MHz)	Antenna	-26 dB Bandwidth (MHz)	Limit -26 dB Bandwidth (MHz)	Verdict
NVNT	a	5500	Ant1	24.805	---	Pass
NVNT	a	5580	Ant1	27.056	---	Pass
NVNT	a	5700	Ant1	28.275	---	Pass
NVNT	n20	5500	Ant1	29.489	---	Pass
NVNT	n20	5580	Ant1	26.28	---	Pass
NVNT	n20	5700	Ant1	28.113	---	Pass
NVNT	n40	5510	Ant1	51.823	---	Pass
NVNT	n40	5550	Ant1	49.471	---	Pass
NVNT	n40	5670	Ant1	46.476	---	Pass
NVNT	ac20	5500	Ant1	29.068	---	Pass
NVNT	ac20	5580	Ant1	29.446	---	Pass
NVNT	ac20	5700	Ant1	27.822	---	Pass
NVNT	ac40	5510	Ant1	47.582	---	Pass
NVNT	ac40	5550	Ant1	50.804	---	Pass
NVNT	ac40	5670	Ant1	50.24	---	Pass
NVNT	ac80	5530	Ant1	85.581	---	Pass
NVNT	ac80	5610	Ant1	86.306	---	Pass

Test Graphs

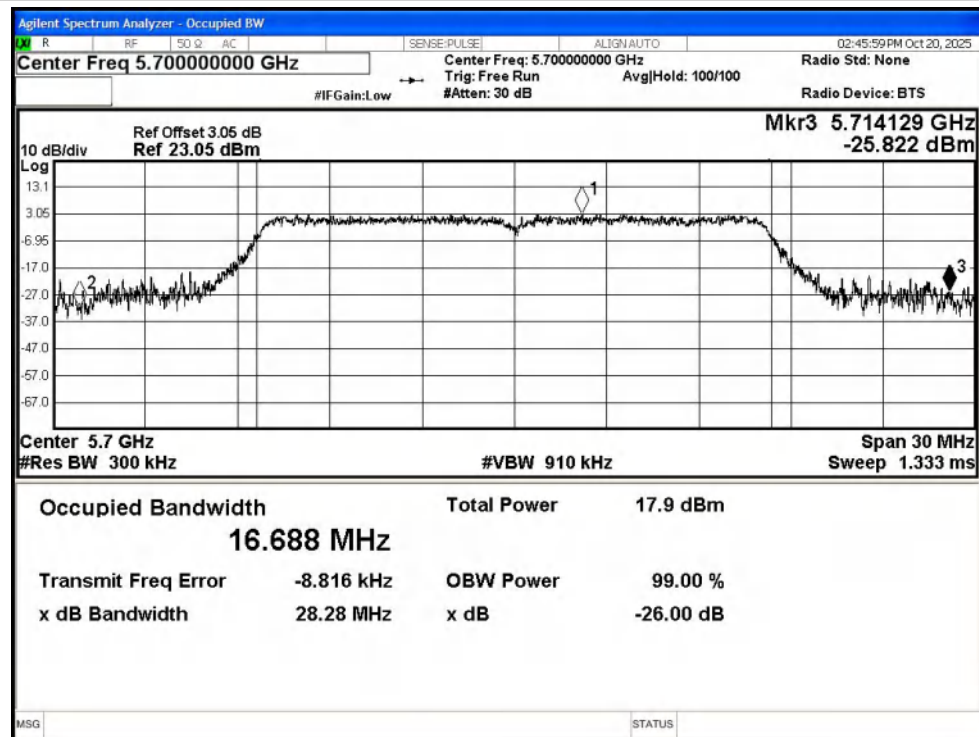
-26dB Bandwidth NVNT a 5500MHz Ant1



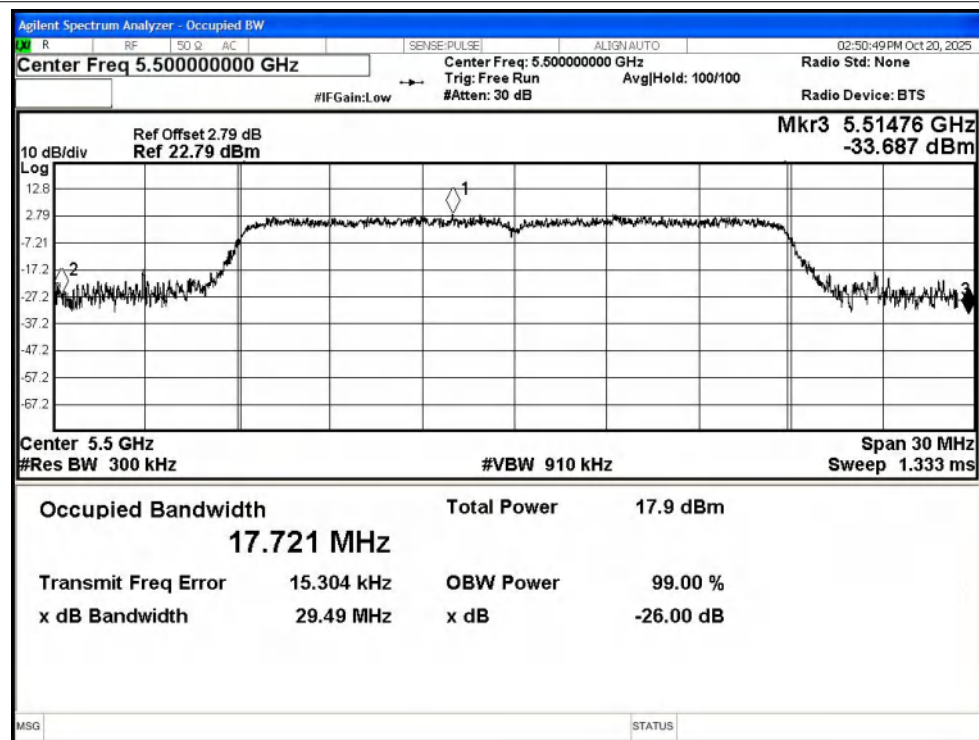
-26dB Bandwidth NVNT a 5580MHz Ant1



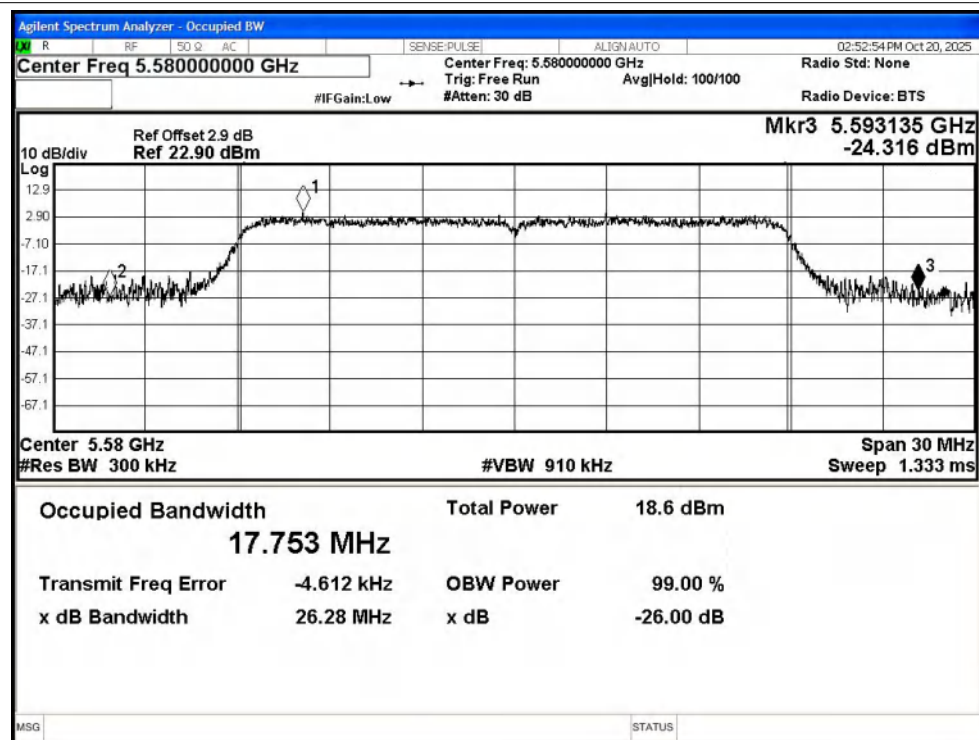
-26dB Bandwidth NVNT a 5700MHz Ant1



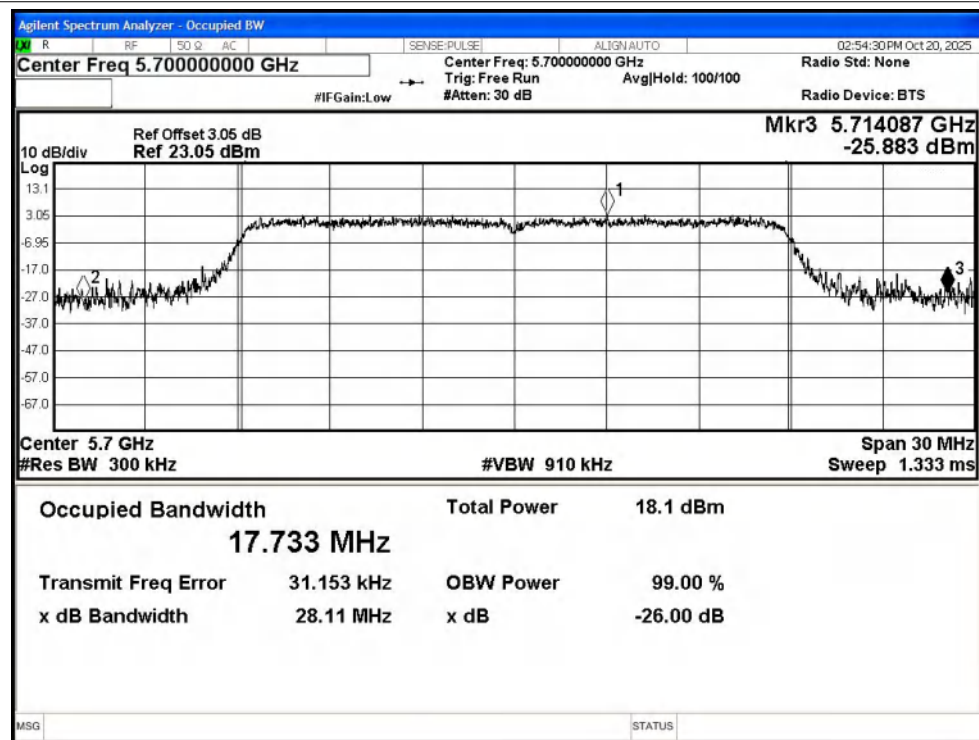
-26dB Bandwidth NVNT n20 5500MHz Ant1



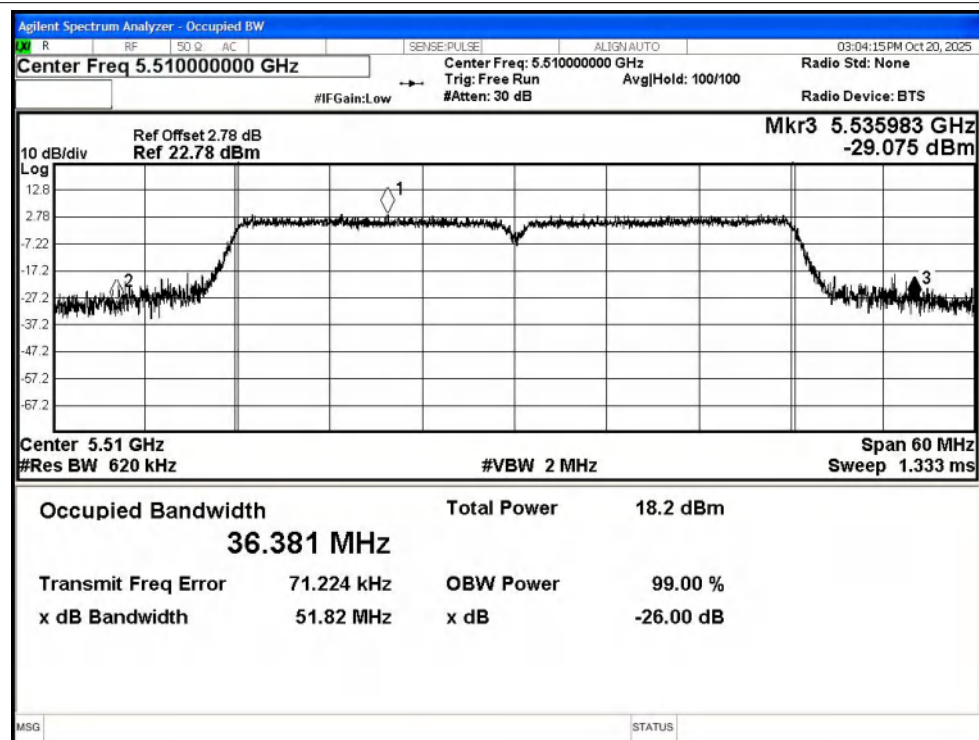
-26dB Bandwidth NVNT n20 5580MHz Ant1



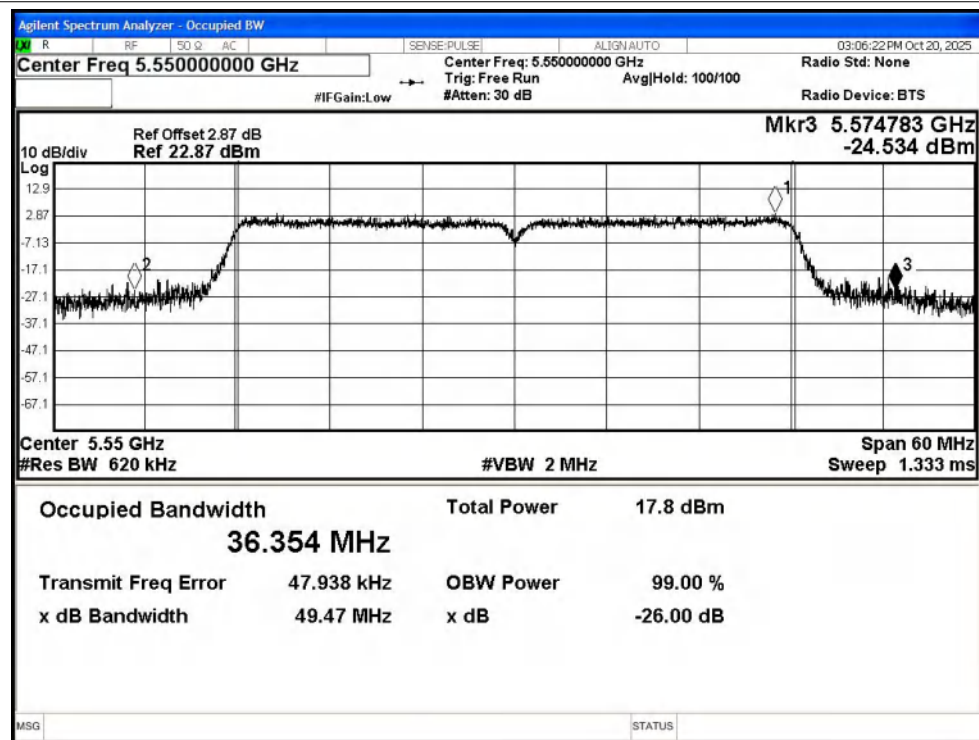
-26dB Bandwidth NVNT n20 5700MHz Ant1



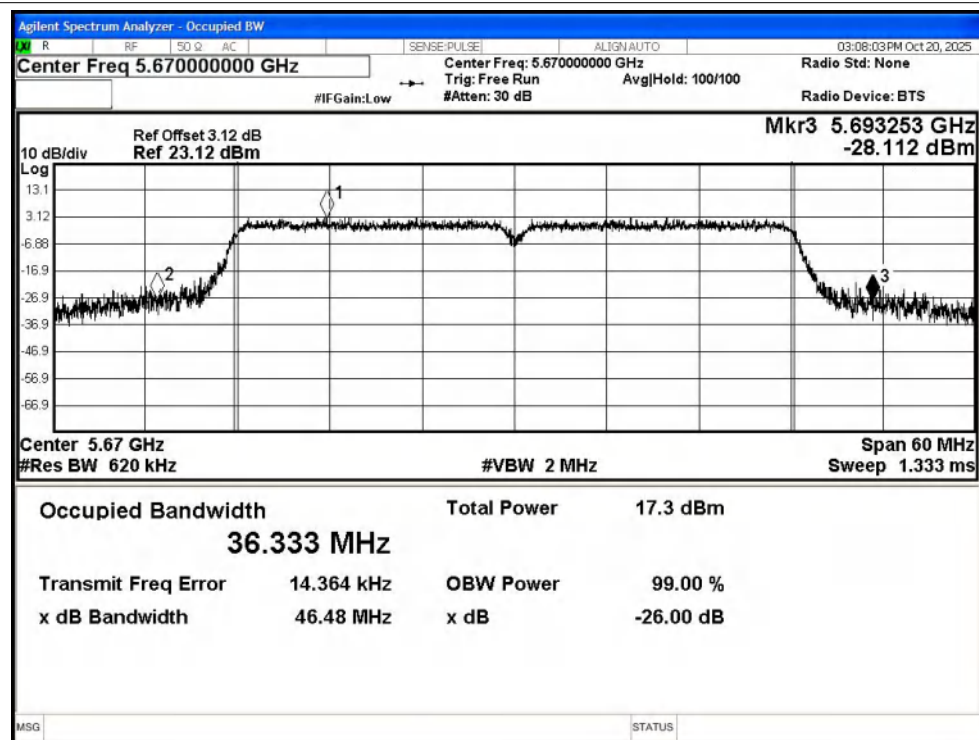
-26dB Bandwidth NVNT n40 5510MHz Ant1



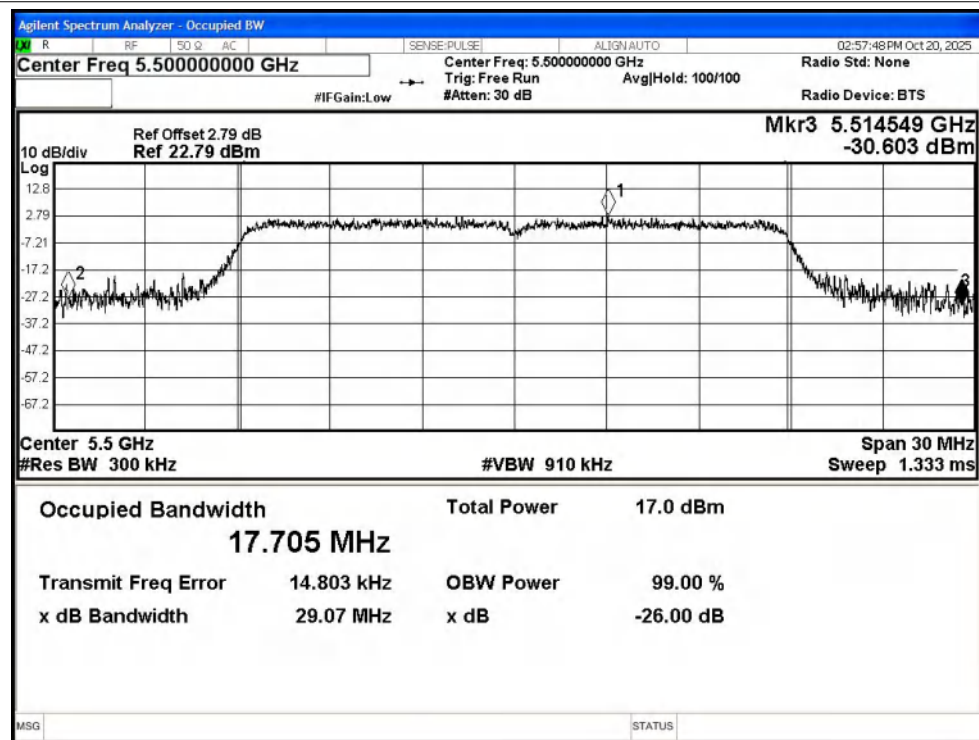
-26dB Bandwidth NVNT n40 5550MHz Ant1



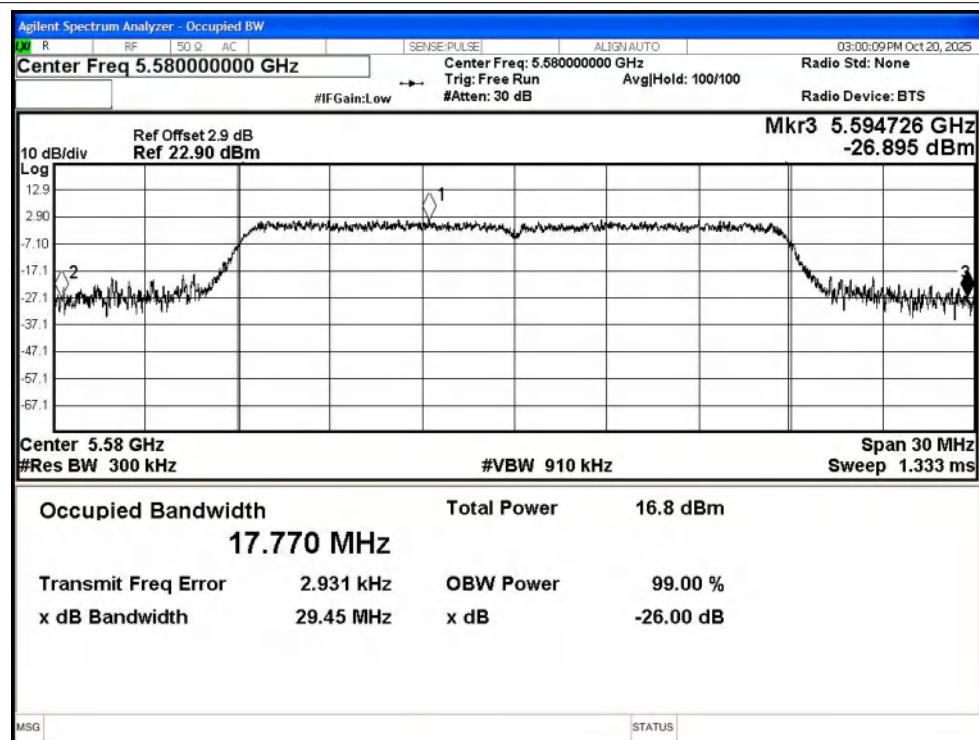
-26dB Bandwidth NVNT n40 5670MHz Ant1



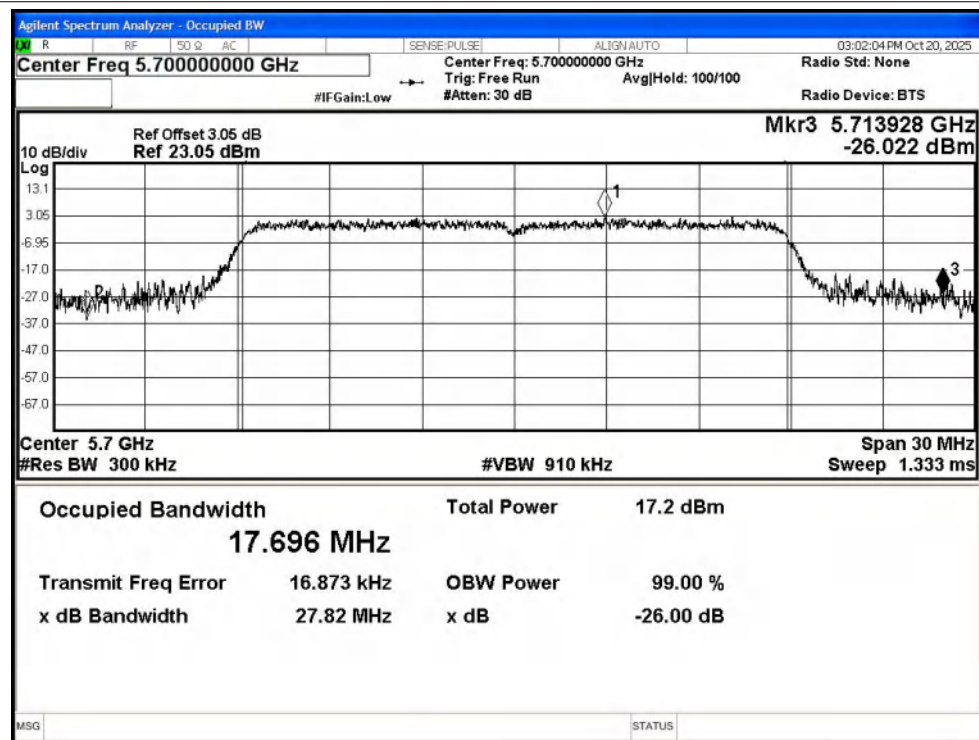
-26dB Bandwidth NVNT ac20 5500MHz Ant1



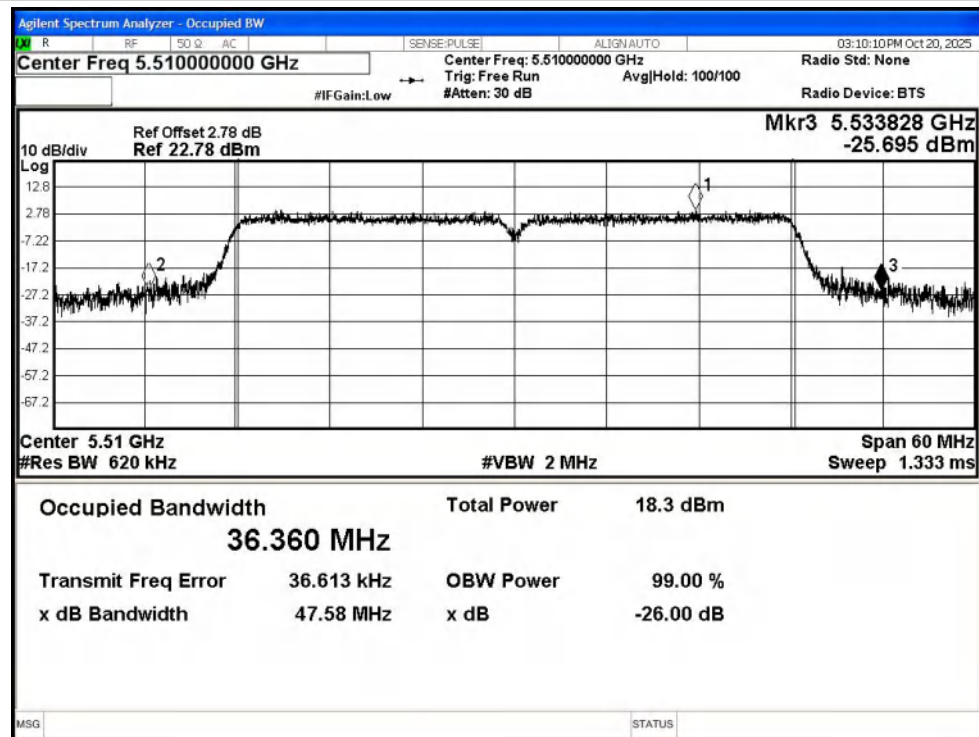
-26dB Bandwidth NVNT ac20 5580MHz Ant1



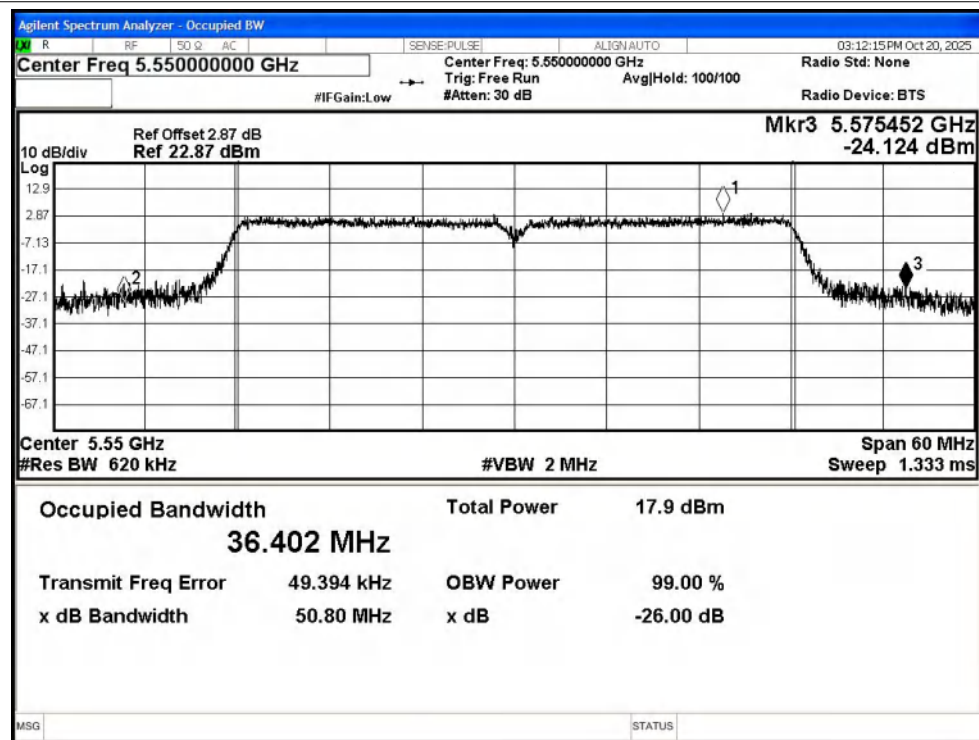
-26dB Bandwidth NVNT ac20 5700MHz Ant1



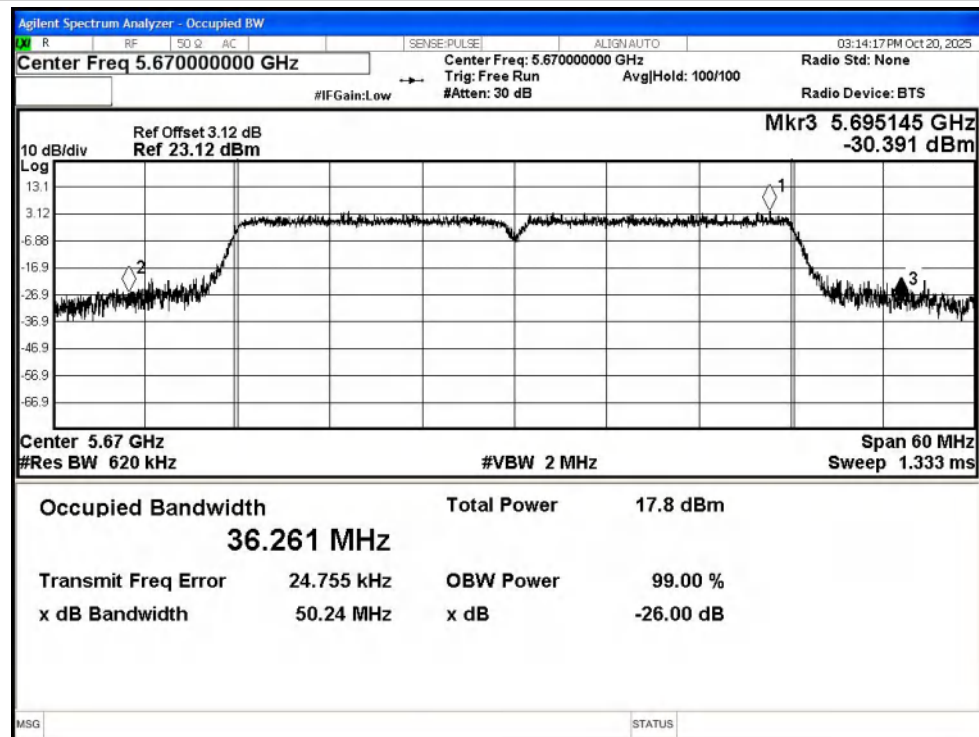
-26dB Bandwidth NVNT ac40 5510MHz Ant1



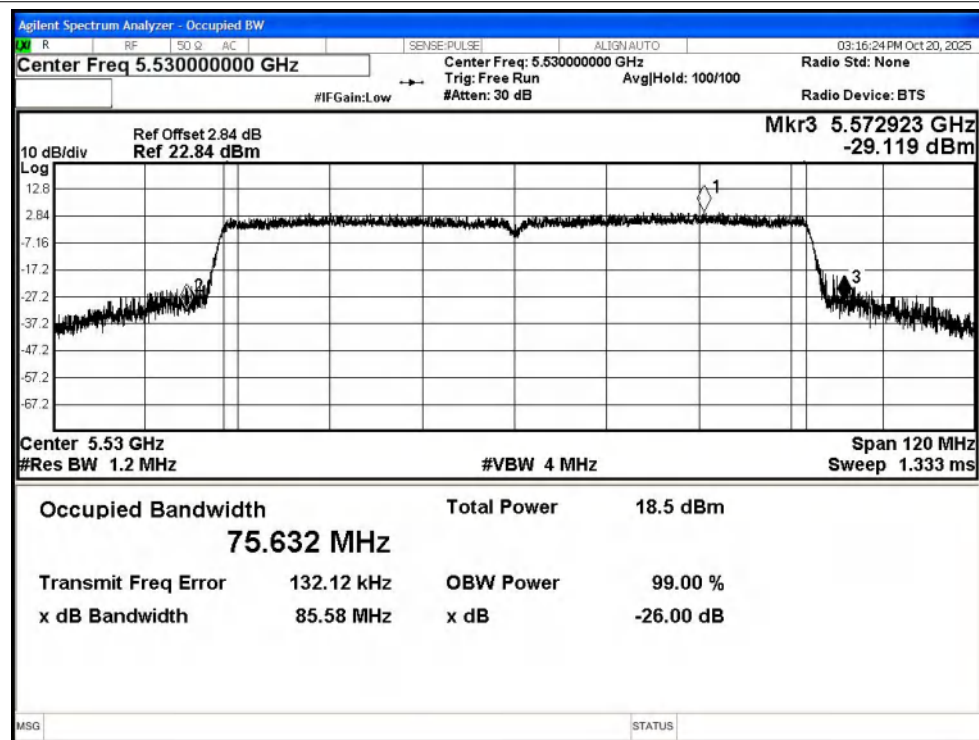
-26dB Bandwidth NVNT ac40 5550MHz Ant1

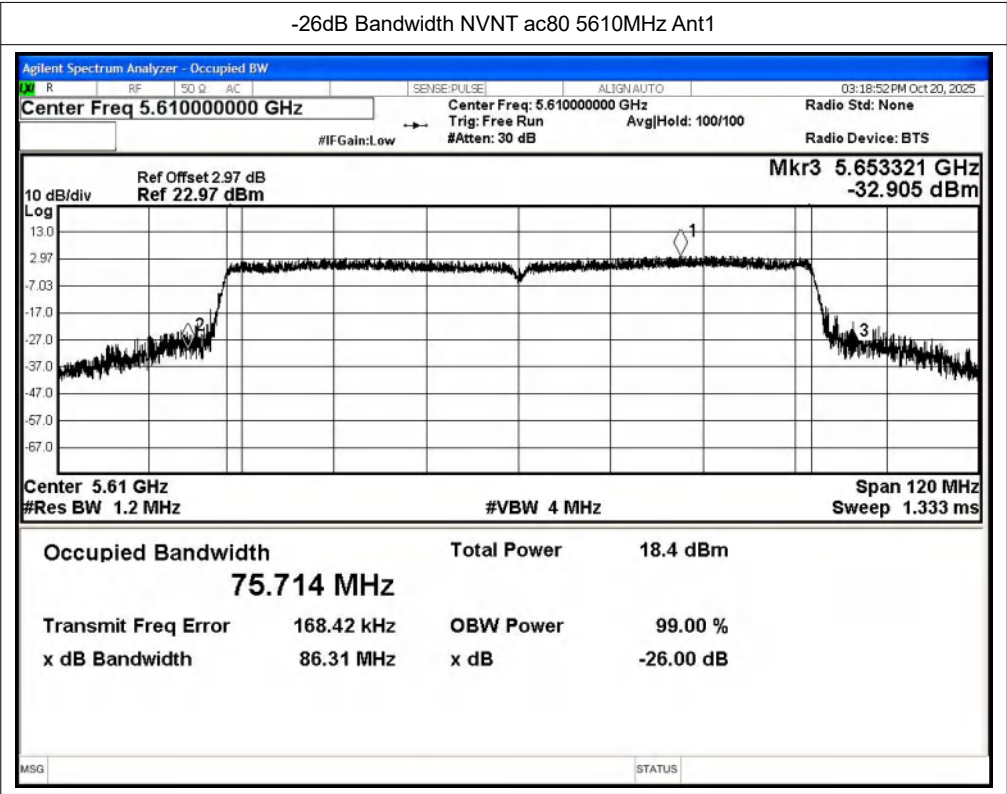


-26dB Bandwidth NVNT ac40 5670MHz Ant1



-26dB Bandwidth NVNT ac80 5530MHz Ant1





2. Maximum Conducted Output Power

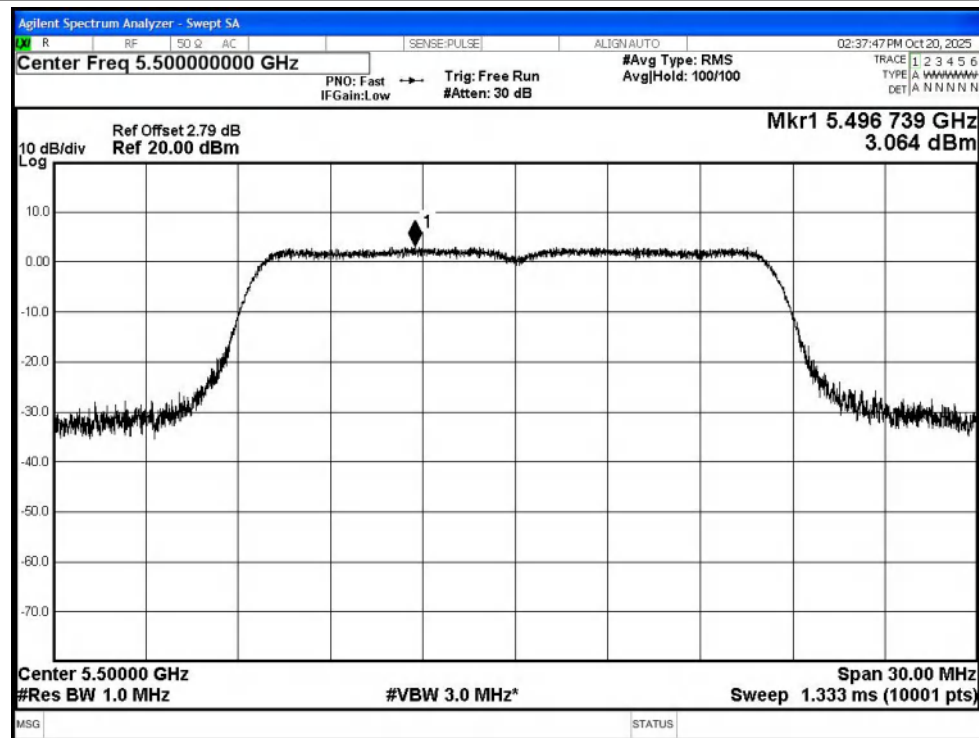
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	a	5500	Ant1	13.75	0.24	13.99	24	Pass
NVNT	a	5580	Ant1	11.67	0.24	11.91	24	Pass
NVNT	a	5700	Ant1	12.16	0.24	12.4	24	Pass
NVNT	n20	5500	Ant1	12.35	0.12	12.47	24	Pass
NVNT	n20	5580	Ant1	13.12	0.12	13.24	24	Pass
NVNT	n20	5700	Ant1	12.63	0.12	12.75	24	Pass
NVNT	n40	5510	Ant1	11.91	0.24	12.15	24	Pass
NVNT	n40	5550	Ant1	11.54	0.24	11.78	24	Pass
NVNT	n40	5670	Ant1	11.01	0.24	11.25	24	Pass
NVNT	ac20	5500	Ant1	11.58	0.12	11.7	24	Pass
NVNT	ac20	5580	Ant1	11.28	0.12	11.4	24	Pass
NVNT	ac20	5700	Ant1	11.64	0.12	11.76	24	Pass
NVNT	ac40	5510	Ant1	11.85	0.24	12.09	24	Pass
NVNT	ac40	5550	Ant1	11.66	0.23	11.89	24	Pass
NVNT	ac40	5670	Ant1	11.51	0.24	11.75	24	Pass
NVNT	ac80	5530	Ant1	11.63	0.47	12.1	24	Pass
NVNT	ac80	5610	Ant1	11.3	0.47	11.77	24	Pass

3. Maximum Power Spectral Density Level

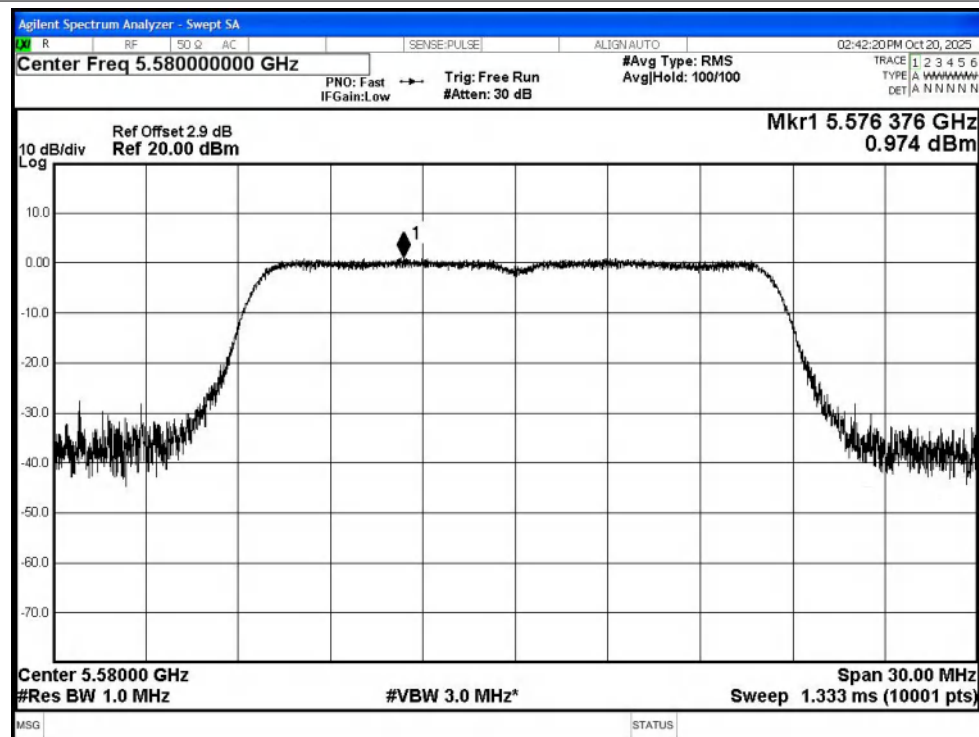
Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/MHz)	Duty Factor (dB)	Total PSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
NVNT	a	5500	Ant1	3.06	0.24	3.3	11	Pass
NVNT	a	5580	Ant1	0.97	0.24	1.21	11	Pass
NVNT	a	5700	Ant1	1.6	0.24	1.84	11	Pass
NVNT	n20	5500	Ant1	1.54	0.12	1.66	11	Pass
NVNT	n20	5580	Ant1	2.4	0.12	2.52	11	Pass
NVNT	n20	5700	Ant1	1.75	0.12	1.87	11	Pass
NVNT	n40	5510	Ant1	-1.93	0.24	-1.69	11	Pass
NVNT	n40	5550	Ant1	-2	0.24	-1.76	11	Pass
NVNT	n40	5670	Ant1	-2.8	0.24	-2.56	11	Pass
NVNT	ac20	5500	Ant1	0.77	0.12	0.89	11	Pass
NVNT	ac20	5580	Ant1	0.47	0.12	0.59	11	Pass
NVNT	ac20	5700	Ant1	1.13	0.12	1.25	11	Pass
NVNT	ac40	5510	Ant1	-1.41	0.24	-1.17	11	Pass
NVNT	ac40	5550	Ant1	-1.95	0.23	-1.72	11	Pass
NVNT	ac40	5670	Ant1	-2.55	0.24	-2.31	11	Pass
NVNT	ac80	5530	Ant1	-5.22	0.47	-4.75	11	Pass
NVNT	ac80	5610	Ant1	-4.69	0.47	-4.22	11	Pass

Test Graphs

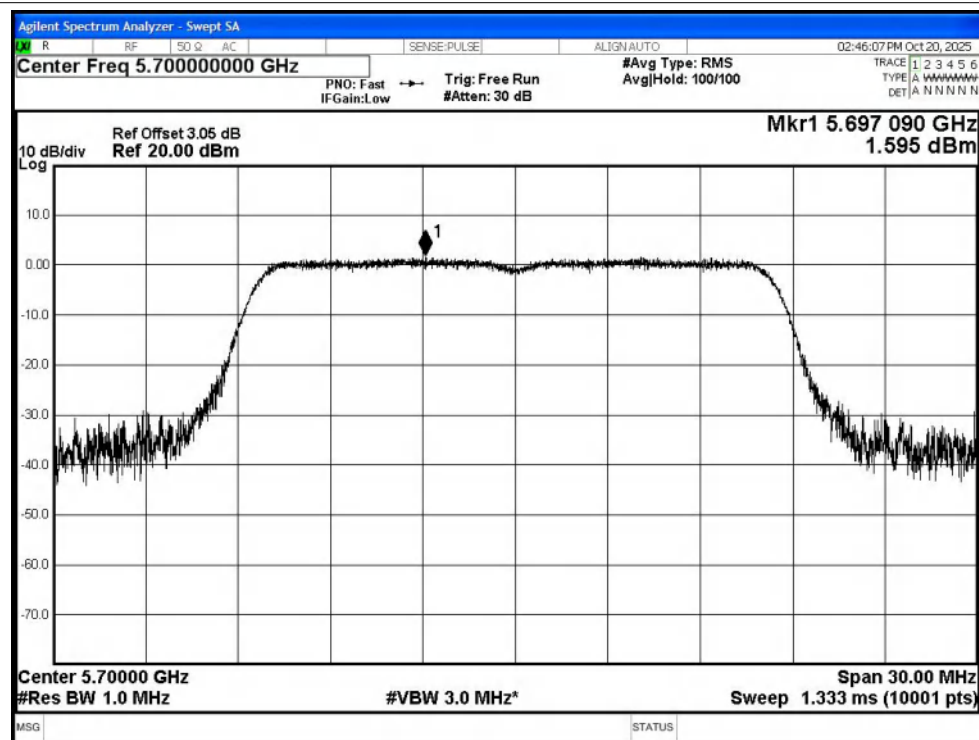
PSD NVNT a 5500MHz Ant1



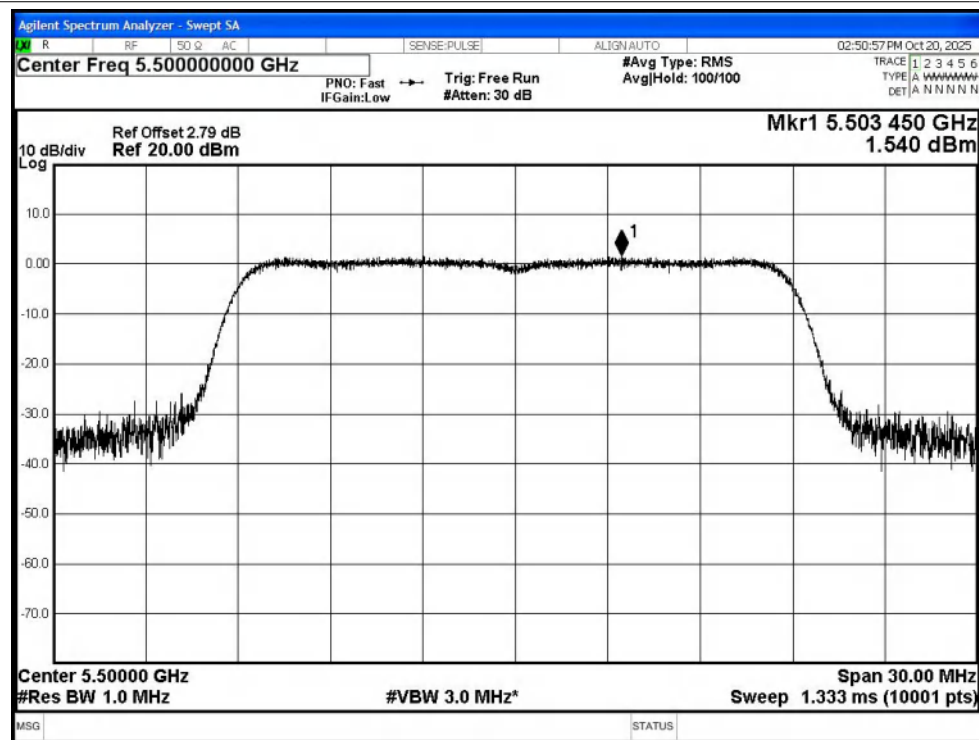
PSD NVNT a 5580MHz Ant1



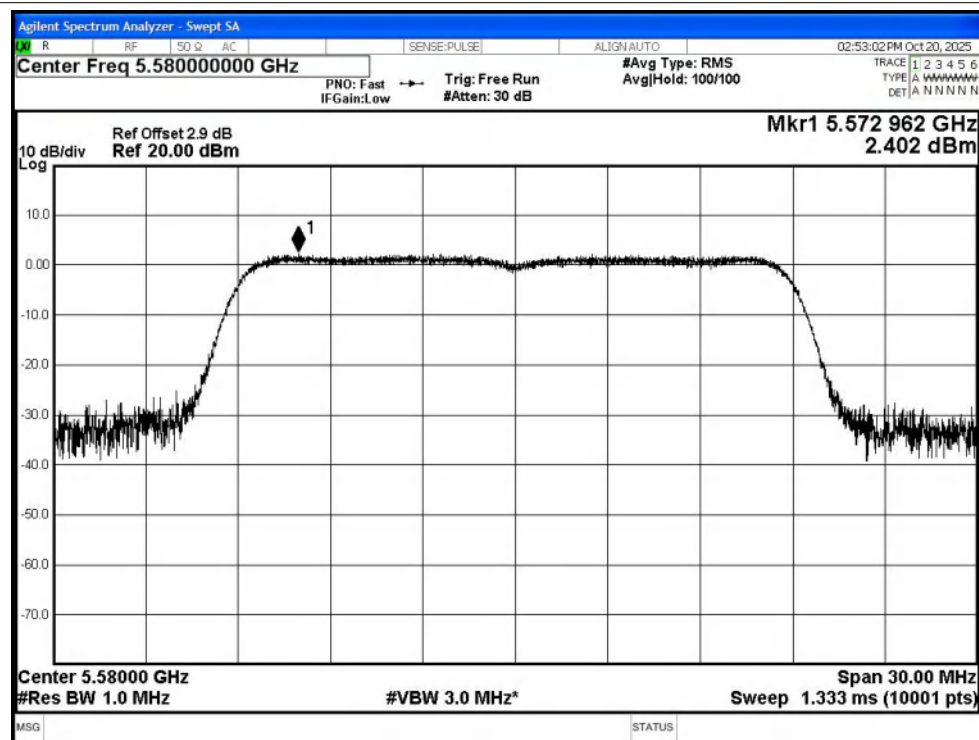
PSD NVNT a 5700MHz Ant1



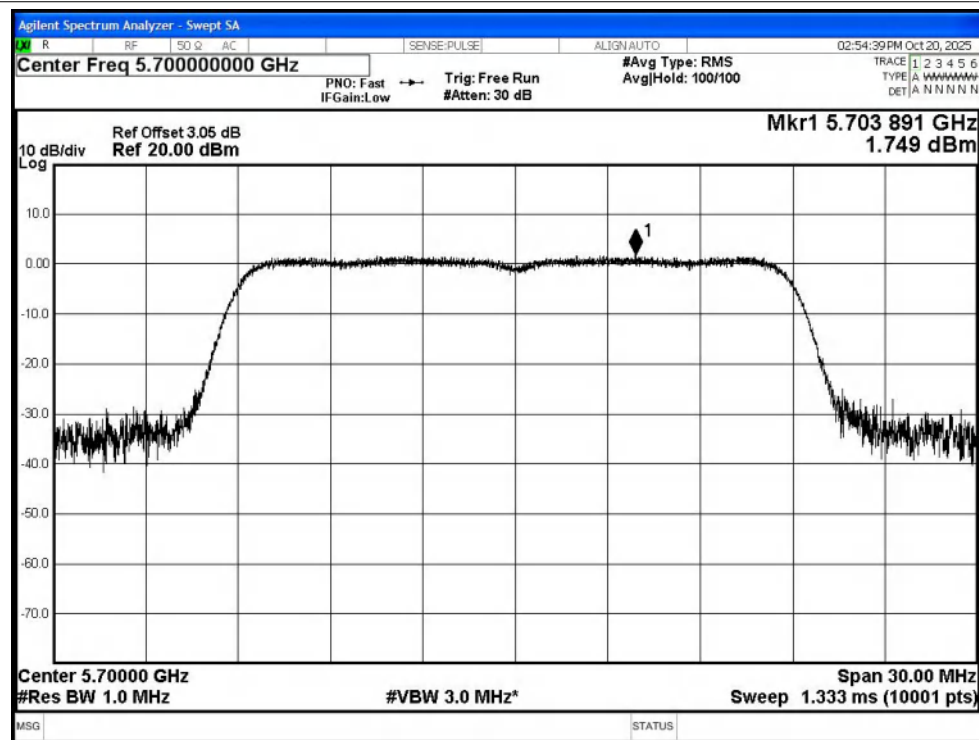
PSD NVNT n20 5500MHz Ant1



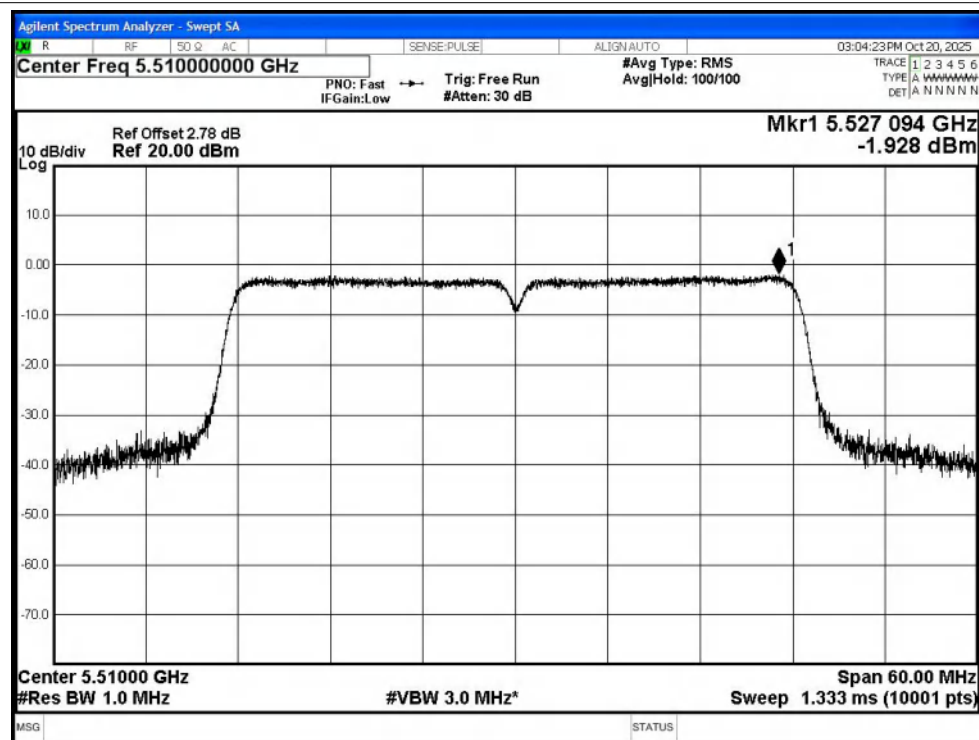
PSD NVNT n20 5580MHz Ant1



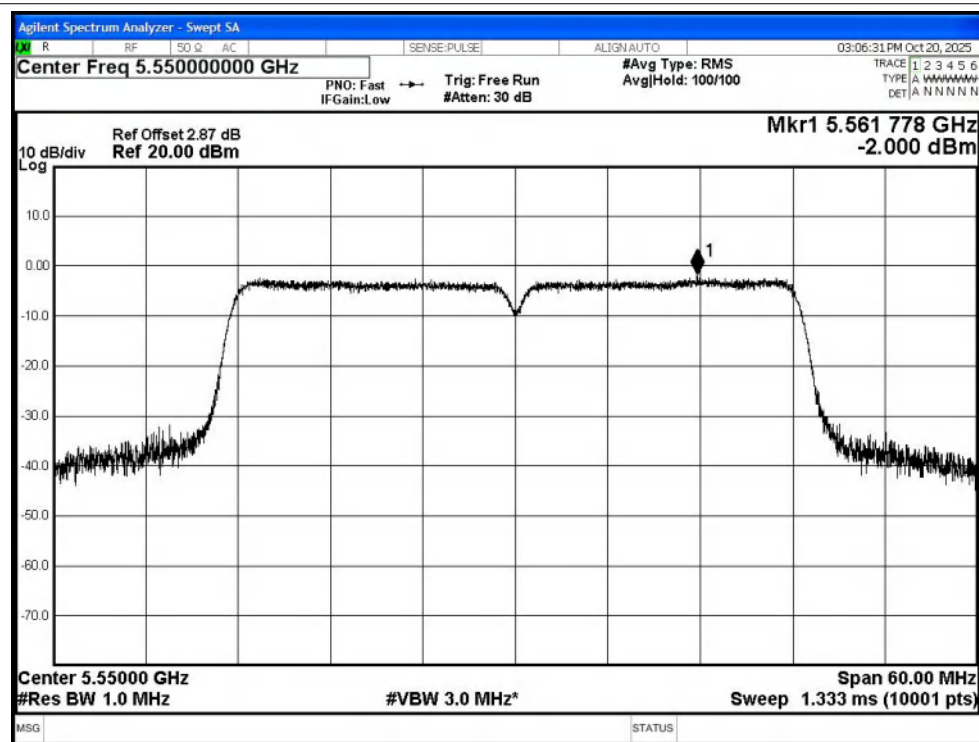
PSD NVNT n20 5700MHz Ant1



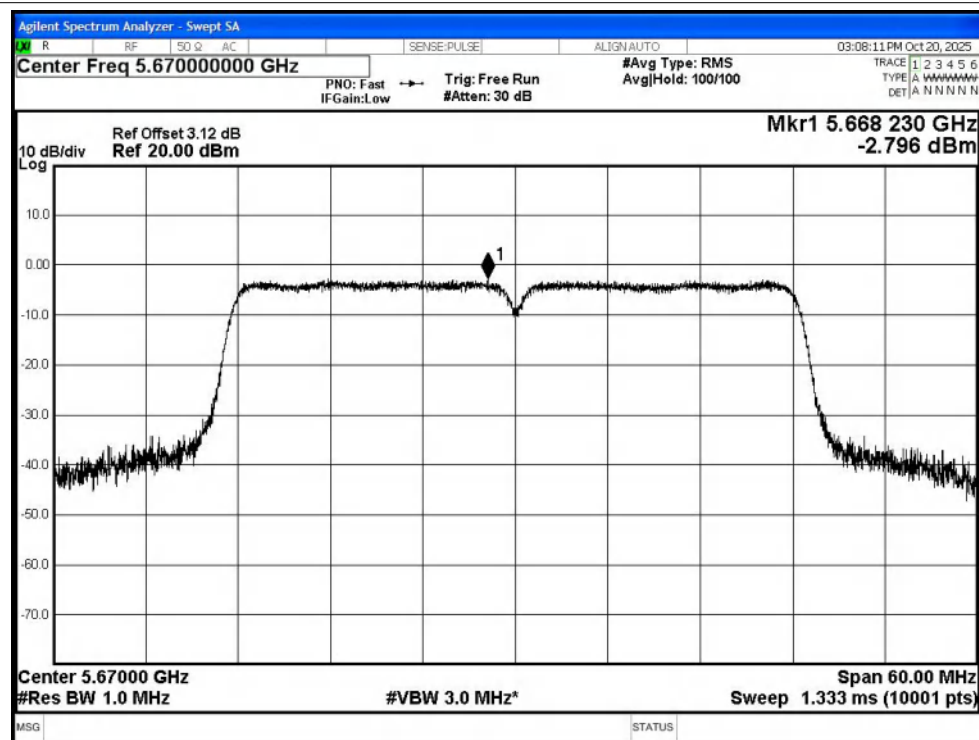
PSD NVNT n40 5510MHz Ant1



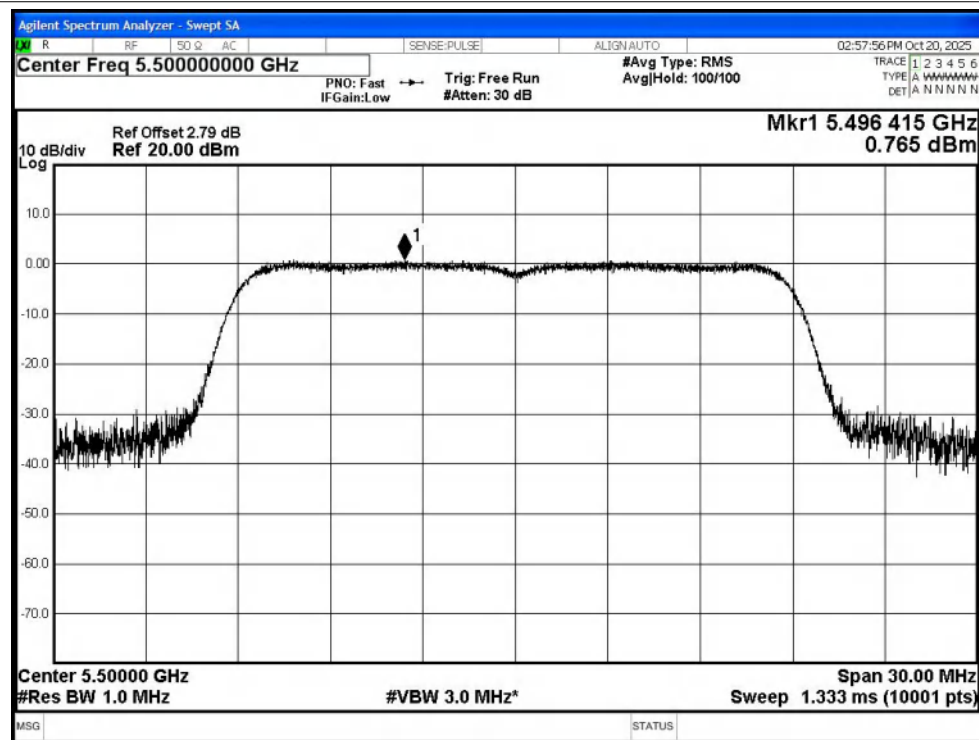
PSD NVNT n40 5550MHz Ant1



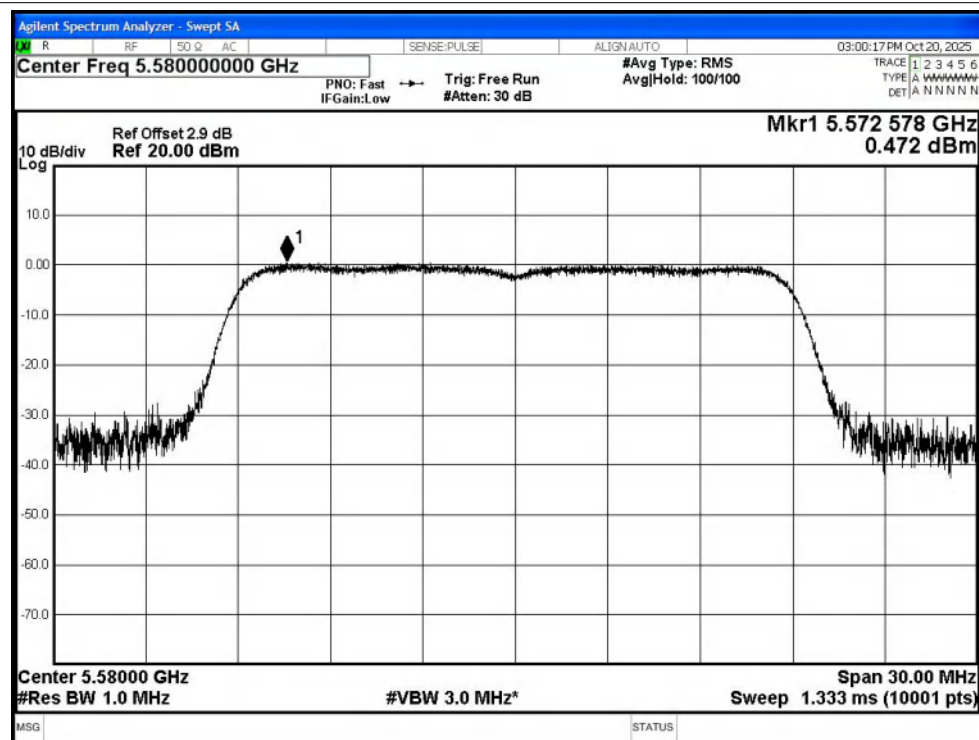
PSD NVNT n40 5670MHz Ant1



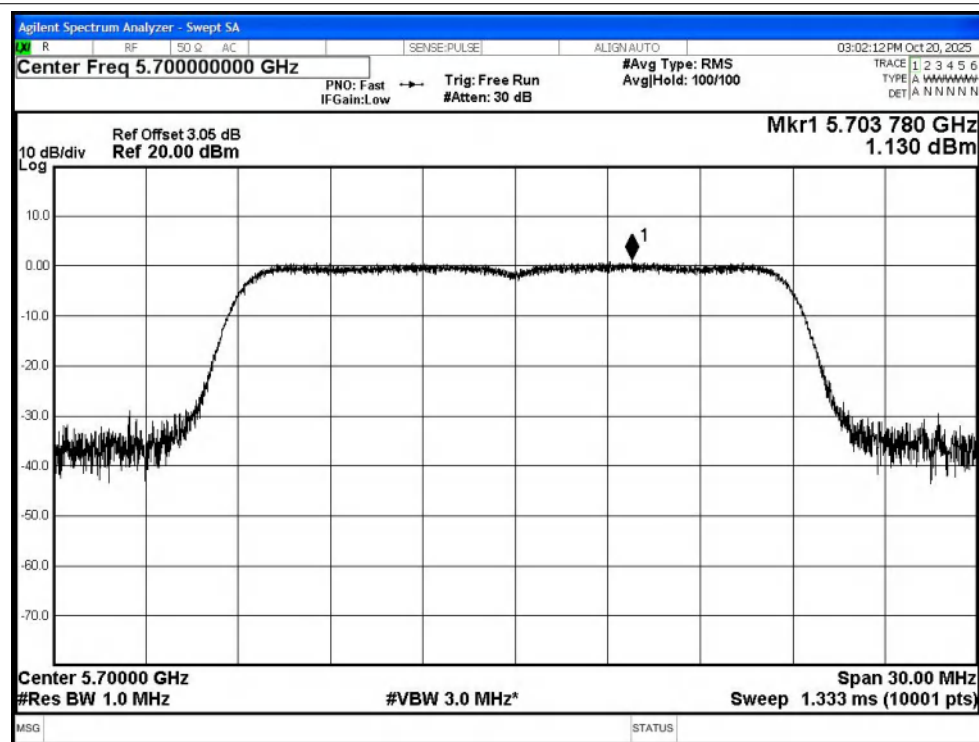
PSD NVNT ac20 5500MHz Ant1



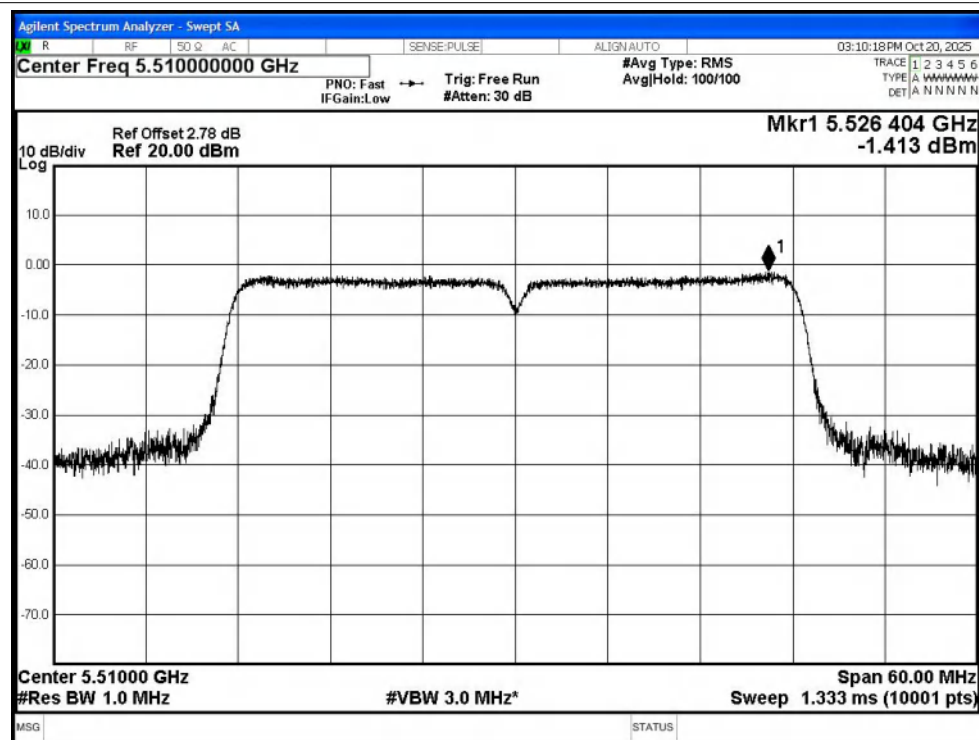
PSD NVNT ac20 5580MHz Ant1



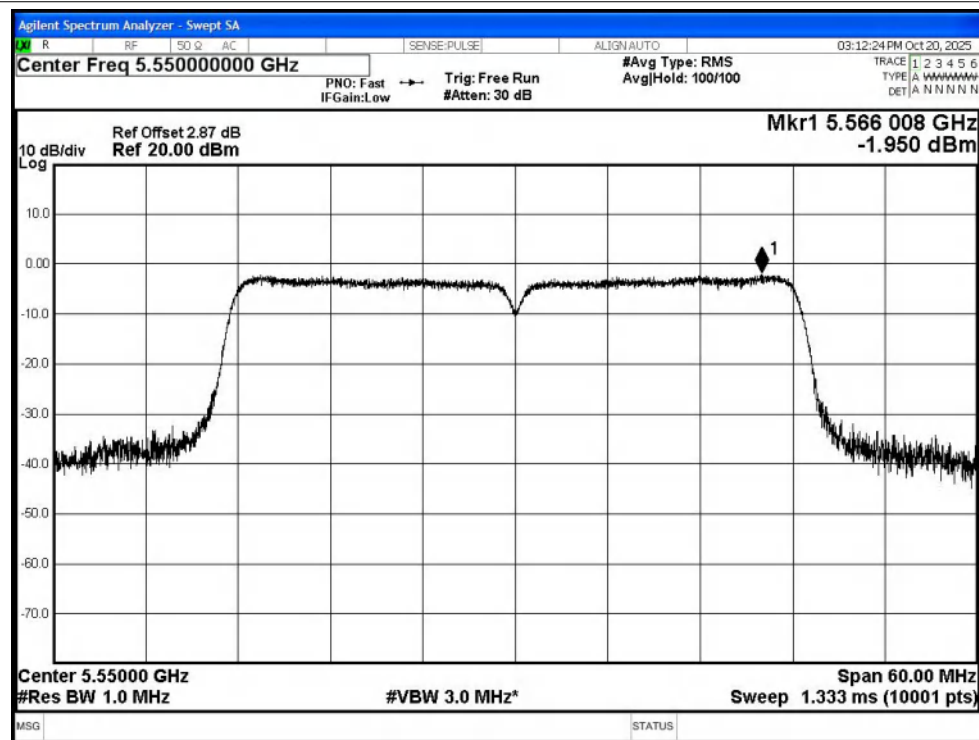
PSD NVNT ac20 5700MHz Ant1



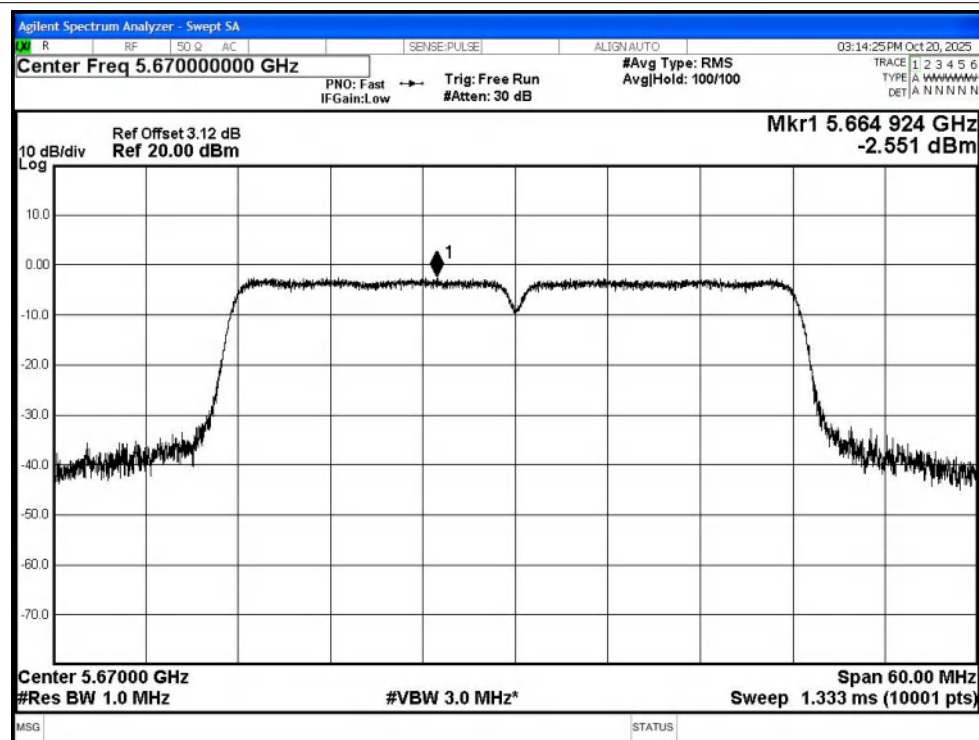
PSD NVNT ac40 5510MHz Ant1



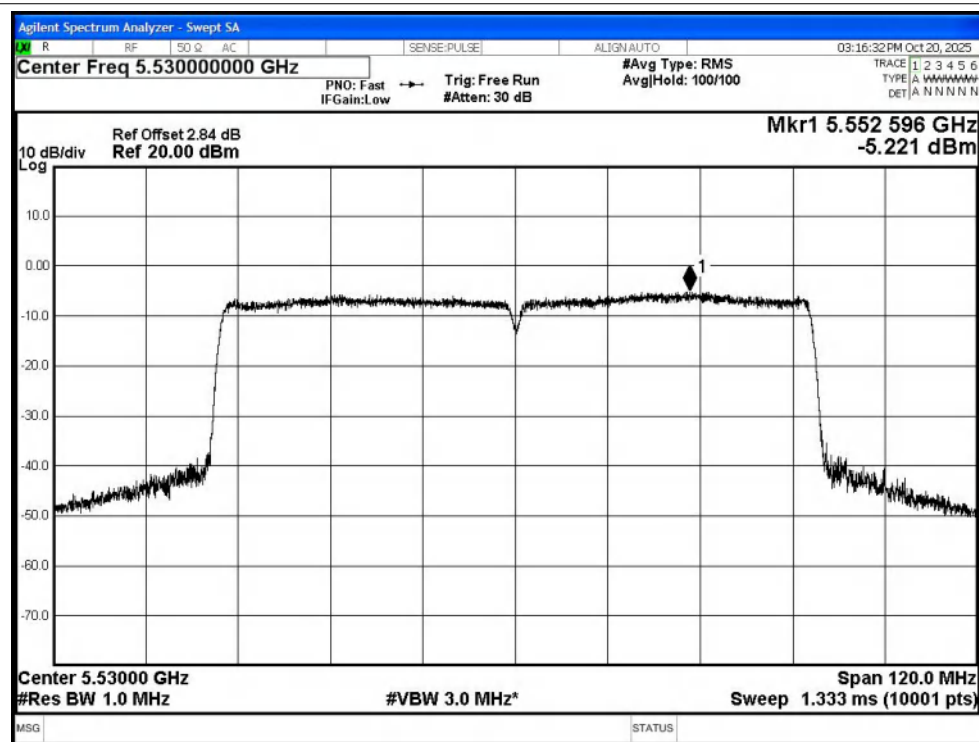
PSD NVNT ac40 5550MHz Ant1

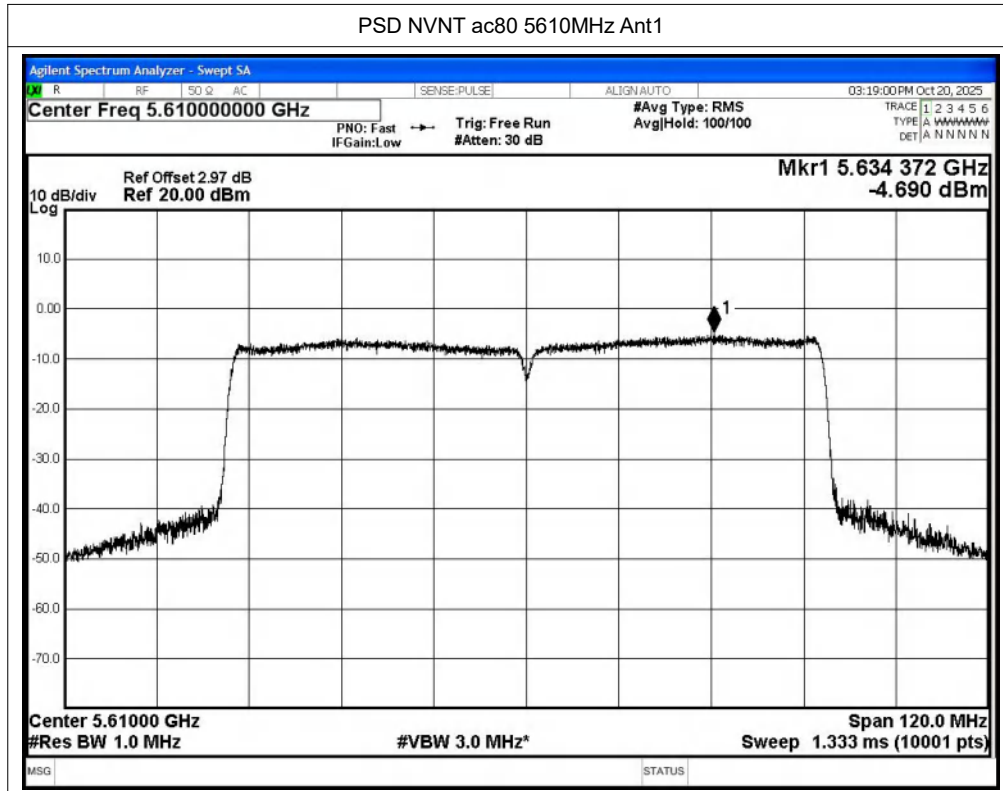


PSD NVNT ac40 5670MHz Ant1



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	-50.37	2.24	-	47.10	Peak	68.2	Pass
NVNT	a	5500	Ant1	5460	-57.49	2.24	0.24	40.22	Average	54	Pass
NVNT	a	5500	Ant1	5468.4	-43.73	2.24	-	53.74	Peak	68.2	Pass
NVNT	a	5500	Ant1	5469.2	-56.87	2.24	0.24	40.84	Average	54	Pass
NVNT	a	5500	Ant1	5470	-48.46	2.24	-	49.01	Peak	68.2	Pass
NVNT	a	5500	Ant1	5470	-57.36	2.24	0.24	40.35	Average	54	Pass
NVNT	a	5700	Ant1	5725	-39.97	2.24	-	57.50	Peak	68.2	Pass
NVNT	a	5700	Ant1	5725	-55.68	2.24	0.24	42.03	Average	54	Pass
NVNT	a	5700	Ant1	5726.8	-37.96	2.24	-	59.51	Peak	68.2	Pass
NVNT	a	5700	Ant1	5725.4	-54.66	2.24	0.24	43.05	Average	54	Pass
NVNT	a	5700	Ant1	5735	-50.82	2.24	-	46.65	Peak	68.2	Pass
NVNT	a	5700	Ant1	5735	-57.25	2.24	0.24	40.46	Average	54	Pass
NVNT	n20	5500	Ant1	5460	-49.73	2.24	-	47.74	Peak	68.2	Pass
NVNT	n20	5500	Ant1	5460	-57.54	2.24	0.12	40.05	Average	54	Pass
NVNT	n20	5500	Ant1	5465.6	-44.06	2.24	-	53.41	Peak	68.2	Pass
NVNT	n20	5500	Ant1	5468.8	-56.23	2.24	0.12	41.36	Average	54	Pass
NVNT	n20	5500	Ant1	5470	-44.34	2.24	-	53.13	Peak	68.2	Pass
NVNT	n20	5500	Ant1	5470	-56.63	2.24	0.12	40.96	Average	54	Pass
NVNT	n20	5700	Ant1	5725	-39.01	2.24	-	58.46	Peak	68.2	Pass
NVNT	n20	5700	Ant1	5725	-53.91	2.24	0.12	43.68	Average	54	Pass
NVNT	n20	5700	Ant1	5725	-39.01	2.24	-	58.46	Peak	68.2	Pass
NVNT	n20	5700	Ant1	5725.2	-53.62	2.24	0.12	43.97	Average	54	Pass
NVNT	n20	5700	Ant1	5735	-47.85	2.24	-	49.62	Peak	68.2	Pass
NVNT	n20	5700	Ant1	5735	-57.24	2.24	0.12	40.35	Average	54	Pass
NVNT	n40	5510	Ant1	5460	-50.74	2.24	-	46.73	Peak	68.2	Pass
NVNT	n40	5510	Ant1	5460	-57.29	2.24	0.24	40.42	Average	54	Pass
NVNT	n40	5510	Ant1	5469	-42.2	2.24	-	55.27	Peak	68.2	Pass
NVNT	n40	5510	Ant1	5470	-55.79	2.24	0.24	41.92	Average	54	Pass
NVNT	n40	5510	Ant1	5470	-44.09	2.24	-	53.38	Peak	68.2	Pass
NVNT	n40	5510	Ant1	5470	-55.79	2.24	0.24	41.92	Average	54	Pass
NVNT	n40	5670	Ant1	5725	-50.56	2.24	-	46.91	Peak	68.2	Pass
NVNT	n40	5670	Ant1	5725	-57.45	2.24	0.24	40.26	Average	54	Pass
NVNT	n40	5670	Ant1	5732.4	-47.69	2.24	-	49.78	Peak	68.2	Pass
NVNT	n40	5670	Ant1	5731	-57.16	2.24	0.24	40.55	Average	54	Pass
NVNT	n40	5670	Ant1	5735	-49.33	2.24	-	48.14	Peak	68.2	Pass
NVNT	n40	5670	Ant1	5735	-58.22	2.24	0.24	39.49	Average	54	Pass
NVNT	ac20	5500	Ant1	5460	-49.9	2.24	-	47.57	Peak	68.2	Pass
NVNT	ac20	5500	Ant1	5460	-58.02	2.24	0.12	39.57	Average	54	Pass
NVNT	ac20	5500	Ant1	5467.4	-43.75	2.24	-	53.72	Peak	68.2	Pass

NVNT	ac20	5500	Ant1	5470	-56.24	2.24	0.12	41.35	Average	54	Pass
NVNT	ac20	5500	Ant1	5470	-45.78	2.24	-	51.69	Peak	68.2	Pass
NVNT	ac20	5500	Ant1	5470	-56.24	2.24	0.12	41.35	Average	54	Pass
NVNT	ac20	5700	Ant1	5725	-41.15	2.24	-	56.32	Peak	68.2	Pass
NVNT	ac20	5700	Ant1	5725	-55.1	2.24	0.12	42.49	Average	54	Pass
NVNT	ac20	5700	Ant1	5725.2	-39.87	2.24	-	57.60	Peak	68.2	Pass
NVNT	ac20	5700	Ant1	5725.4	-53.63	2.24	0.12	43.96	Average	54	Pass
NVNT	ac20	5700	Ant1	5735	-48.78	2.24	-	48.69	Peak	68.2	Pass
NVNT	ac20	5700	Ant1	5735	-57.91	2.24	0.12	39.68	Average	54	Pass
NVNT	ac40	5510	Ant1	5460	-49.64	2.24	-	47.83	Peak	68.2	Pass
NVNT	ac40	5510	Ant1	5460	-57.77	2.24	0.24	39.94	Average	54	Pass
NVNT	ac40	5510	Ant1	5468.4	-44.76	2.24	-	52.71	Peak	68.2	Pass
NVNT	ac40	5510	Ant1	5469.6	-55.7	2.24	0.24	42.01	Average	54	Pass
NVNT	ac40	5510	Ant1	5470	-46.81	2.24	-	50.66	Peak	68.2	Pass
NVNT	ac40	5510	Ant1	5470	-55.75	2.24	0.24	41.96	Average	54	Pass
NVNT	ac40	5670	Ant1	5725	-50.05	2.24	-	47.42	Peak	68.2	Pass
NVNT	ac40	5670	Ant1	5725	-57.66	2.24	0.24	40.05	Average	54	Pass
NVNT	ac40	5670	Ant1	5726.8	-49.15	2.24	-	48.32	Peak	68.2	Pass
NVNT	ac40	5670	Ant1	5728	-57.37	2.24	0.24	40.34	Average	54	Pass
NVNT	ac40	5670	Ant1	5735	-50.27	2.24	-	47.20	Peak	68.2	Pass
NVNT	ac40	5670	Ant1	5735	-57.9	2.24	0.24	39.81	Average	54	Pass
NVNT	ac80	5530	Ant1	5460	-48.88	2.24	-	48.59	Peak	68.2	Pass
NVNT	ac80	5530	Ant1	5460	-57.41	2.24	0.47	40.53	Average	54	Pass
NVNT	ac80	5530	Ant1	5466.8	-43.33	2.24	-	54.14	Peak	68.2	Pass
NVNT	ac80	5530	Ant1	5469.4	-55.58	2.24	0.47	42.36	Average	54	Pass
NVNT	ac80	5530	Ant1	5470	-47.34	2.24	-	50.13	Peak	68.2	Pass
NVNT	ac80	5530	Ant1	5470	-56.11	2.24	0.47	41.83	Average	54	Pass
NVNT	ac80	5610	Ant1	5725	-51.44	2.24	-	46.03	Peak	68.2	Pass
NVNT	ac80	5610	Ant1	5725	-58.02	2.24	0.47	39.92	Average	54	Pass
NVNT	ac80	5610	Ant1	5731.925	-48.01	2.24	-	49.46	Peak	68.2	Pass
NVNT	ac80	5610	Ant1	5725.775	-57.58	2.24	0.47	40.36	Average	54	Pass
NVNT	ac80	5610	Ant1	5735	-49.55	2.24	-	47.92	Peak	68.2	Pass
NVNT	ac80	5610	Ant1	5735	-58.05	2.24	0.47	39.89	Average	54	Pass

[illegible]

Agilent Spectrum Analyzer - Swept SA

R F SO Q AC SENSE-PULSE ALIGN-AUTO 02:47:49PM Oct 20, 2025
 TRACE [1] 2 3 4 5 6 TYPE A WWWWWW DET A NNNN N

Center Freq 5.78000000 GHz

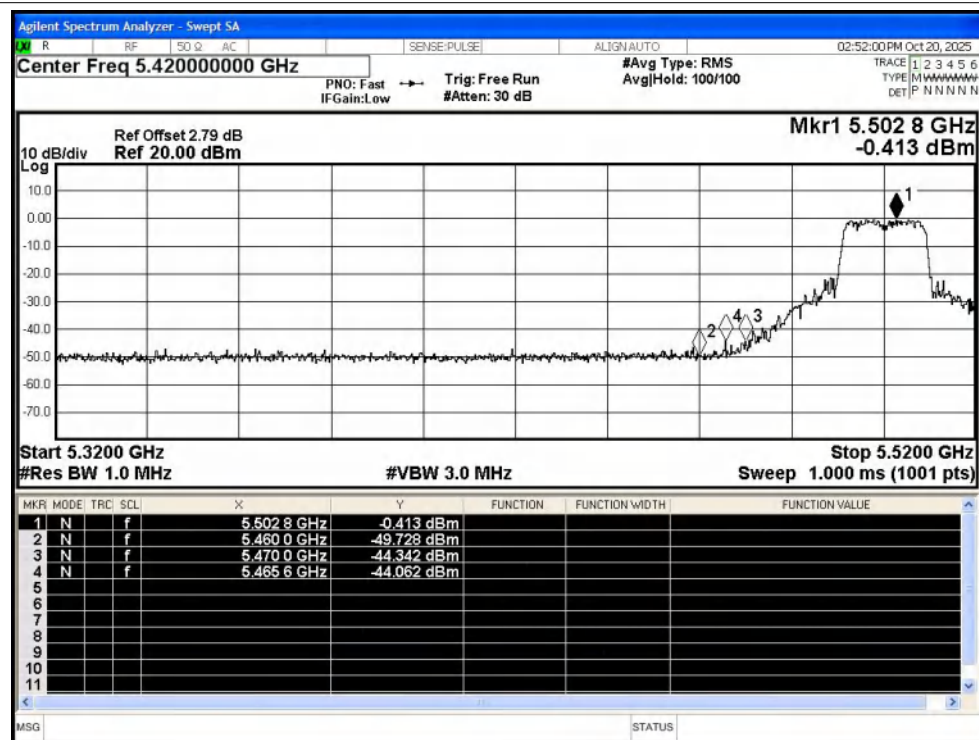
PNO: Fast IFGain:Low → Trig: Free Run #Atten: 30 dB #Avg Type: RMS AvgHold: 100/100

The spectrum analyzer displays a trace with a prominent peak labeled 'Mkr1' at 5.6958 GHz with a power level of -9.382 dBm. The y-axis is logarithmic, ranging from -70.0 dBm to 10 dB/div. Other smaller peaks are visible around 5.725 GHz.

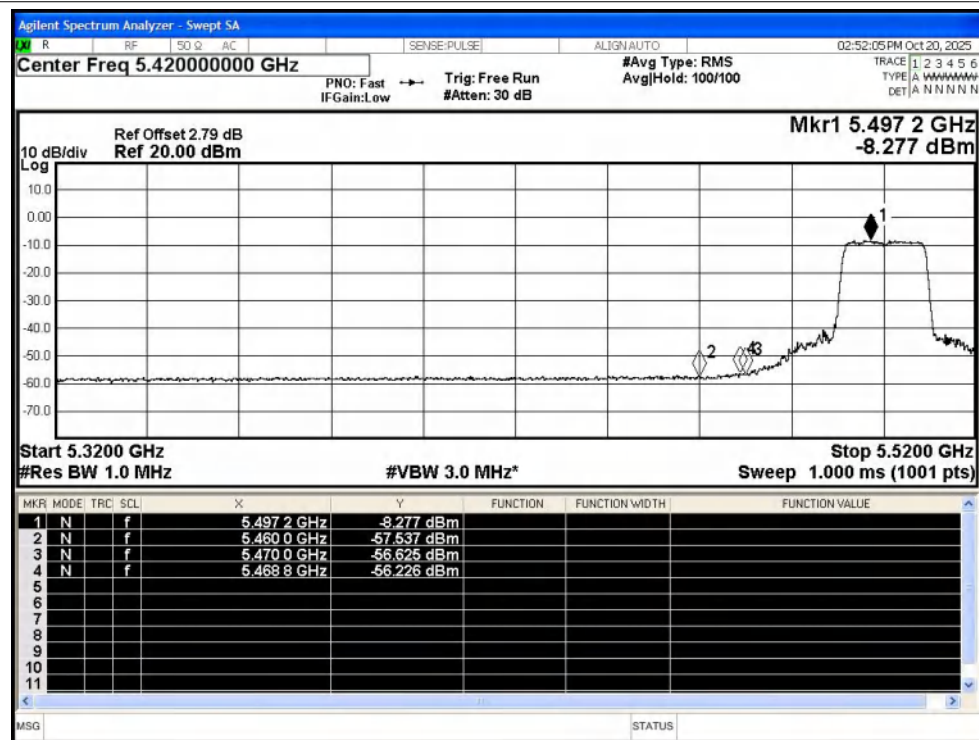
MKR MODE TRC SCL X Y FUNCTION FUNCTION WIDTH FUNCTION VALUE
1 N f 5.6958 GHz -9.382 dBm
2 N f 5.7250 GHz -55.678 dBm
3 N f 5.7350 GHz -57.245 dBm
4 N f 5.7254 GHz -54.655 dBm

Start 5.6800 GHz Stop 5.8800 GHz
 #Res BW 1.0 MHz #VBW 3.0 MHz Sweep 1.000 ms (1001 pts)

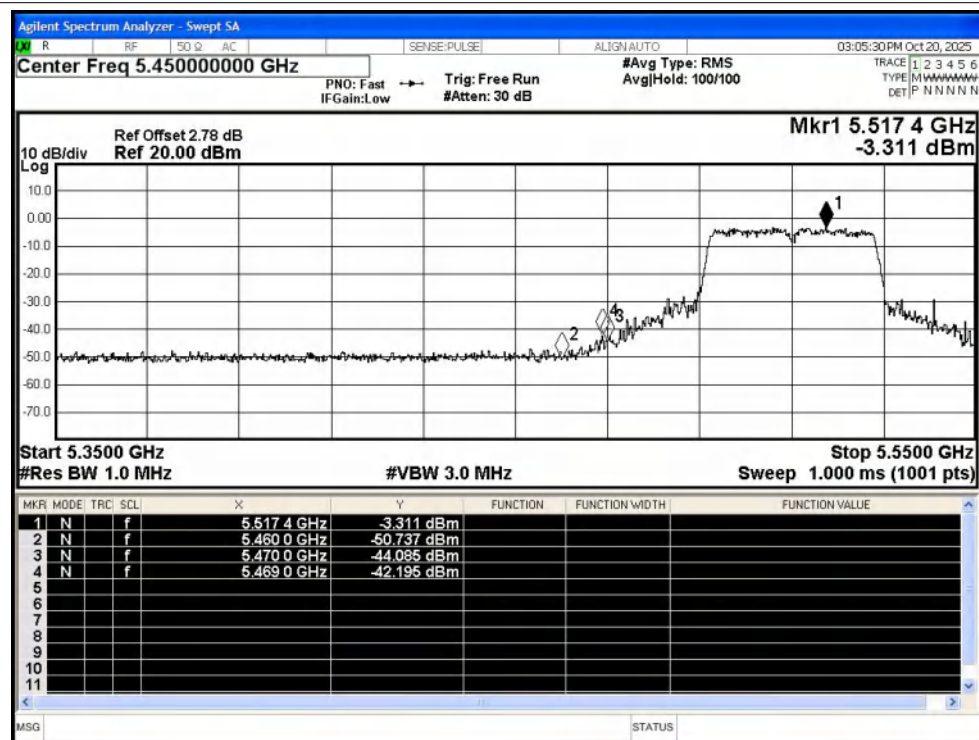
Restrict Band NVNT n20 5500MHz Ant1 Peak



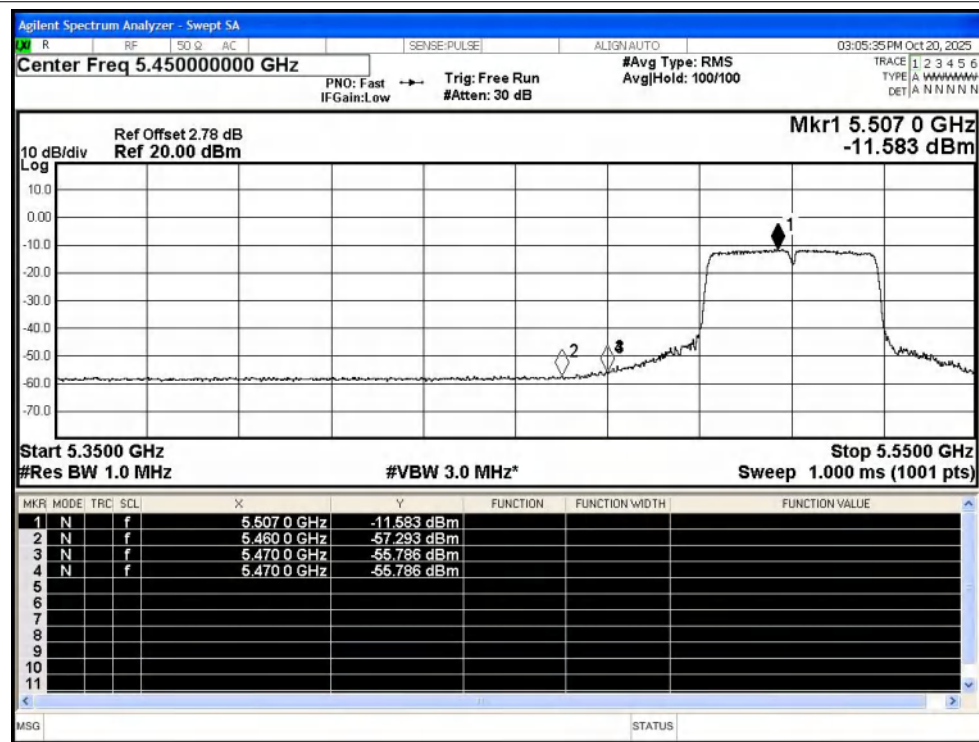
Restrict Band NVNT n20 5500MHz Ant1 Average



Restrict Band NVNT n40 5510MHz Ant1 Peak



Restrict Band NVNT n40 5510MHz Ant1 Average



[illegible][illegible]

[illegible][illegible]

MR	MODE	TRC	SL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N		f	5.668 0 GHz	-3.564 dBm			
2	N		f	5.725 0 GHz	-50.054 dBm			
3	N		f	5.735 0 GHz	-50.269 dBm			
4	N		f	5.726 8 GHz	-49.153 dBm			
5								
6								
7								
8								
9								
10								
11								

[illegible]

[illegible][illegible]

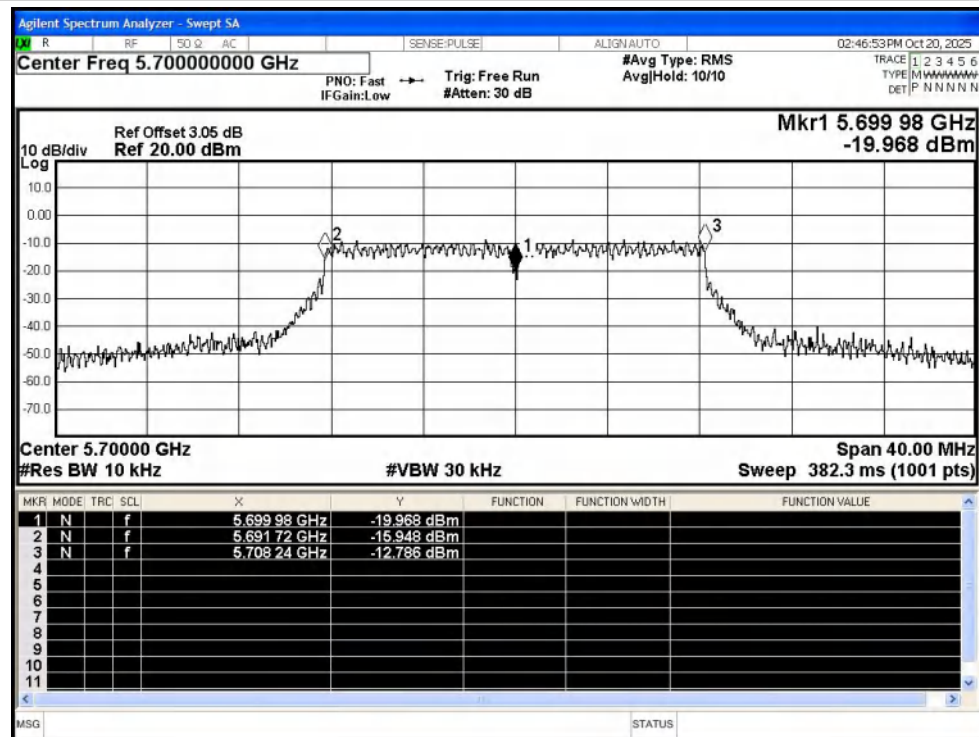
[illegible][illegible]

5. Frequency Stability

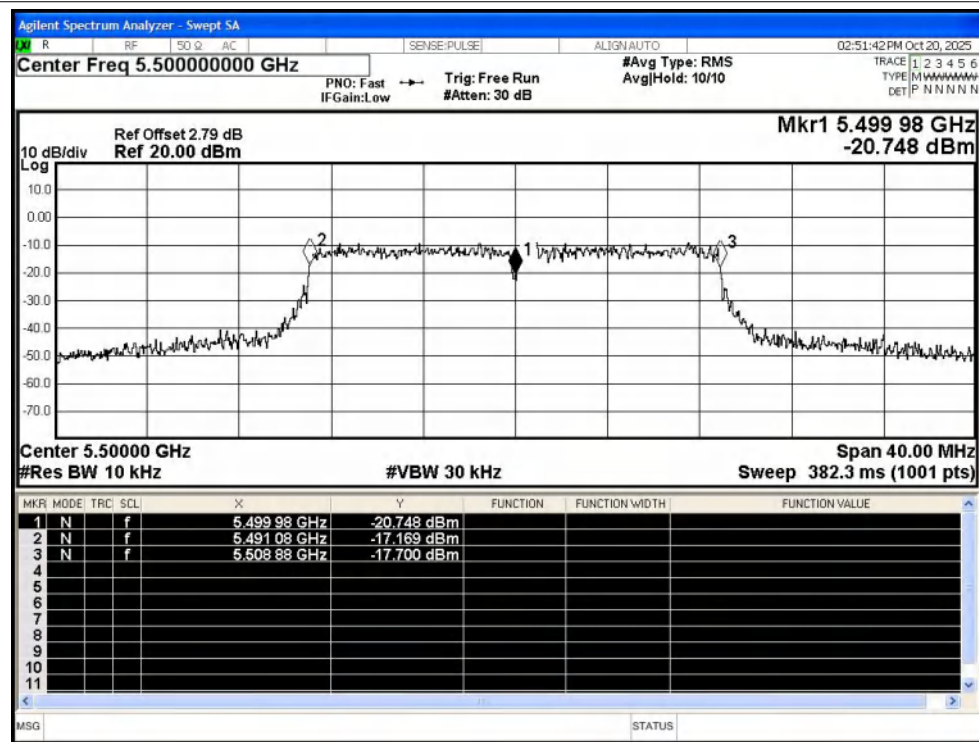
Condition	Mode	Frequency (MHz)	Antenna	Measured Frequency (MHz)	Frequency Error (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
NVNT	a	5500	Ant1	5500	0	0	25	Pass
NVNT	a	5580	Ant1	5580	0	0	25	Pass
NVNT	a	5700	Ant1	5699.98	-20000	-3.51	25	Pass
NVNT	n20	5500	Ant1	5499.98	-20000	-3.64	25	Pass
NVNT	n20	5580	Ant1	5580	0	0	25	Pass
NVNT	n20	5700	Ant1	5699.98	-20000	-3.51	25	Pass
NVNT	n40	5510	Ant1	5509.96	-40000	-7.26	25	Pass
NVNT	n40	5550	Ant1	5549.96	-40000	-7.21	25	Pass
NVNT	n40	5670	Ant1	5669.96	-40000	-7.05	25	Pass
NVNT	ac20	5500	Ant1	5499.98	-20000	-3.64	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

[illegible]

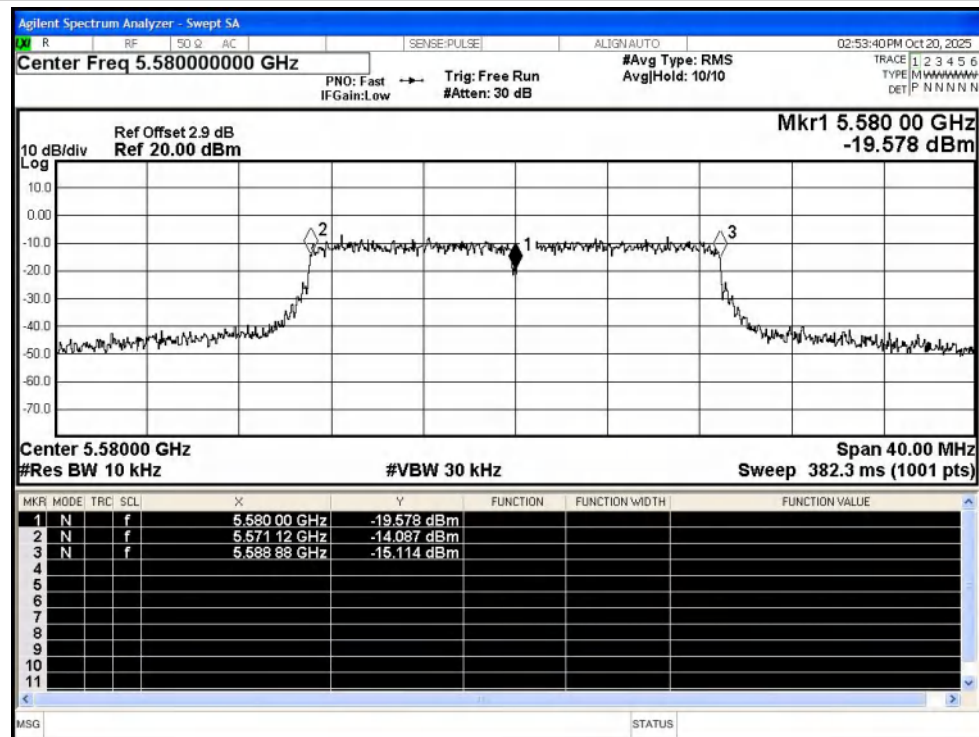
Freq. Stability NVNT a 5700MHz Ant1



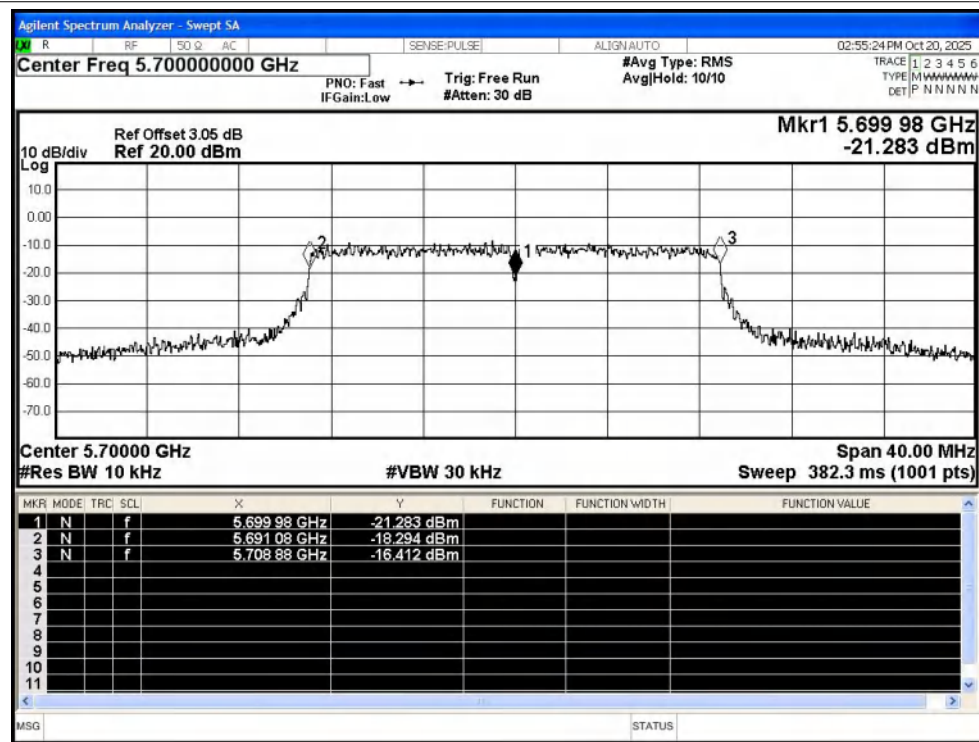
Freq. Stability NVNT n20 5500MHz Ant1



Freq. Stability NVNT n20 5580MHz Ant1



Freq. Stability NVNT n20 5700MHz Ant1

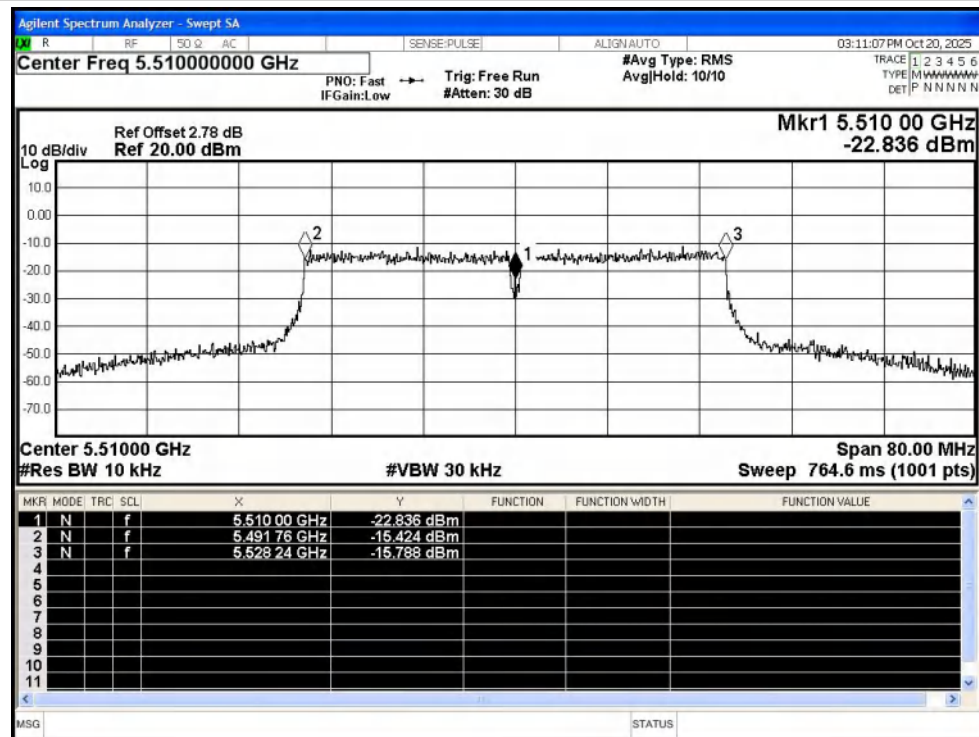


[illegible][illegible]

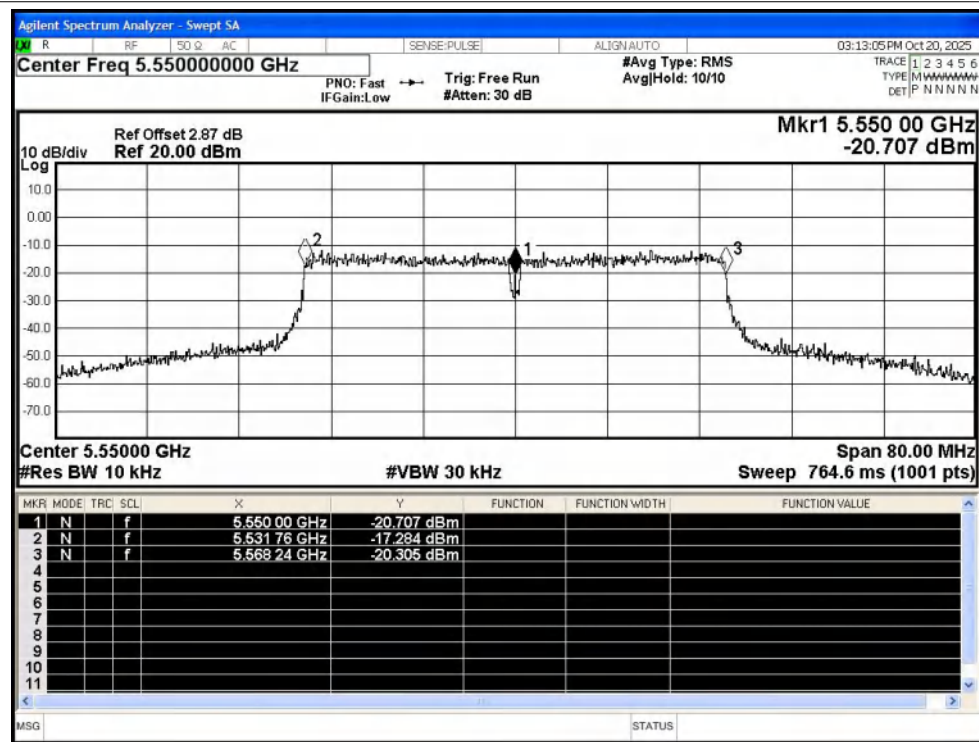
[illegible][illegible]

[illegible][illegible]

Freq. Stability NVNT ac40 5510MHz Ant1



Freq. Stability NVNT ac40 5550MHz Ant1



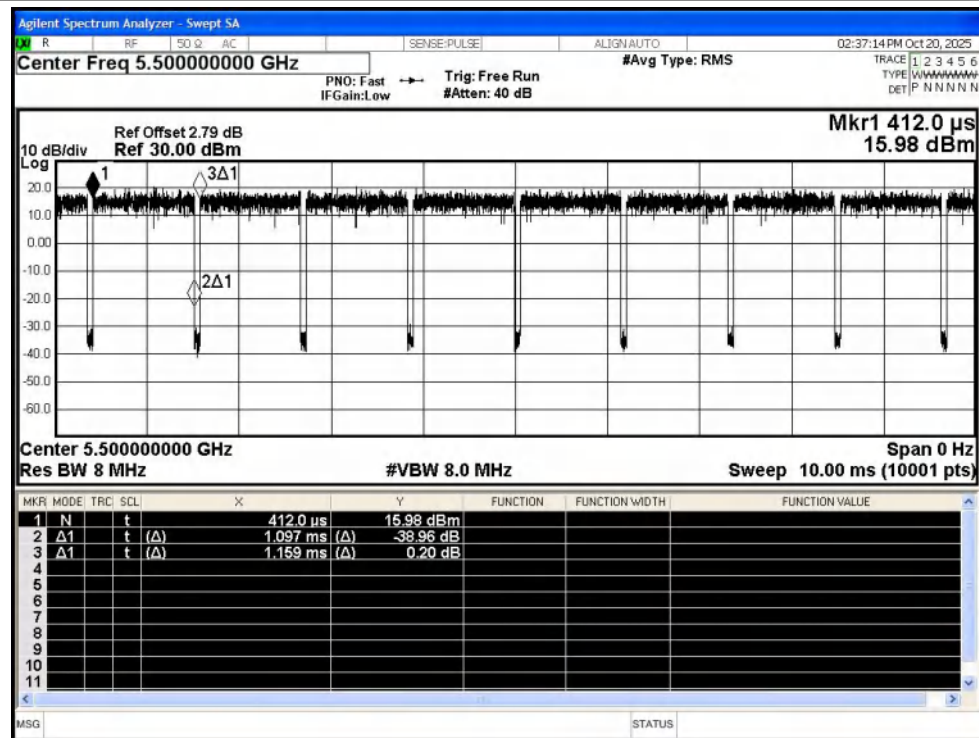
[illegible][illegible]

6. Duty Cycle

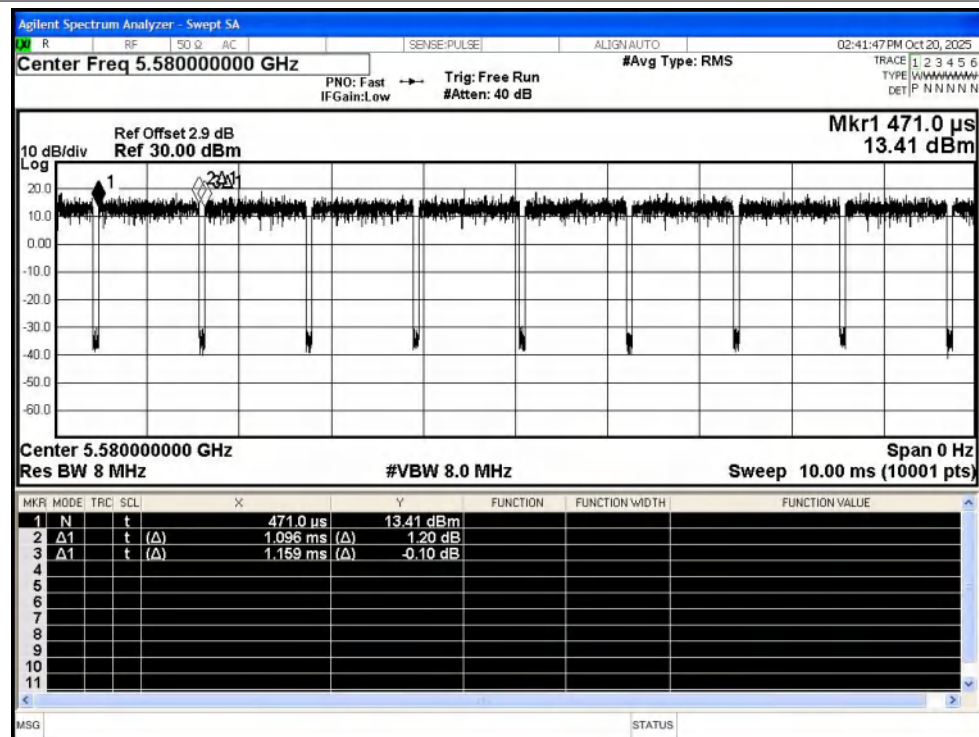
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	a	5500	Ant1	94.65	0.24	0.91
NVNT	a	5580	Ant1	94.56	0.24	0.91
NVNT	a	5700	Ant1	94.65	0.24	0.91
NVNT	n20	5500	Ant1	97.29	0.12	0.44
NVNT	n20	5580	Ant1	97.29	0.12	0.44
NVNT	n20	5700	Ant1	97.33	0.12	0.44
NVNT	n40	5510	Ant1	94.71	0.24	0.9
NVNT	n40	5550	Ant1	94.71	0.24	0.9
NVNT	n40	5670	Ant1	94.71	0.24	0.9
NVNT	ac20	5500	Ant1	97.34	0.12	0.44
NVNT	ac20	5580	Ant1	97.34	0.12	0.44
NVNT	ac20	5700	Ant1	97.3	0.12	0.44
NVNT	ac40	5510	Ant1	94.72	0.24	0.9
NVNT	ac40	5550	Ant1	94.81	0.23	0.9
NVNT	ac40	5670	Ant1	94.72	0.24	0.9
NVNT	ac80	5530	Ant1	89.65	0.47	1.86
NVNT	ac80	5610	Ant1	89.82	0.47	1.86

Test Graphs

Duty Cycle NVNT a 5500MHz Ant1



Duty Cycle NVNT a 5580MHz Ant1



[illegible][illegible]

Agilent Spectrum Analyzer - Swept SA

Center Freq 5.580000000 GHz

Ref Offset 2.9 dB
Ref 20.00 dBm

10 dB/div
Log

Mkr1 1.501 ms
-15.52 dBm

Span 0 Hz

Res BW 8 MHz

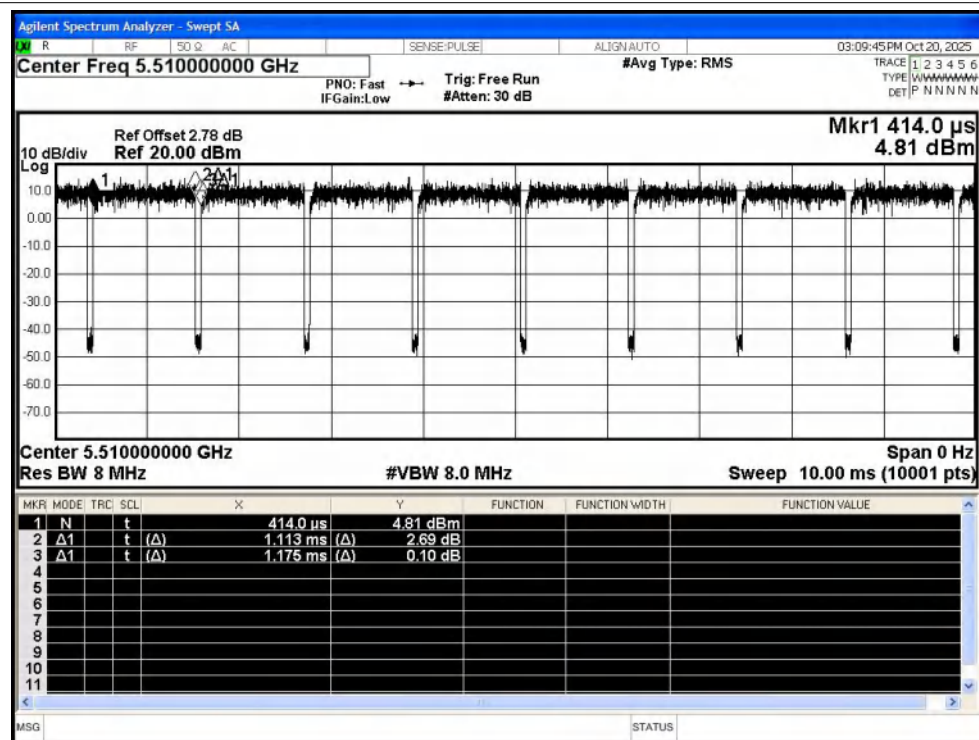
#VBW 8.0 MHz

Sweep 10.00 ms (10001 pts)

MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N		t	1.501 ms	-15.52 dBm			
2	Δ1		t (Δ)	2.269 ms (Δ)	25.47 dB			
3	Δ1		t (Δ)	2.331 ms (Δ)	-2.92 dB			
4								
5								
6								
7								
8								
9								
10								
11								

[illegible]

Duty Cycle NVNT ac40 5510MHz Ant1



Duty Cycle NVNT ac40 5550MHz Ant1

