

FCC Appendix RF Test Data for 5.3GWIFI

Product Name: Smart Diagnostic System

Test Model: P805

Environmental Conditions

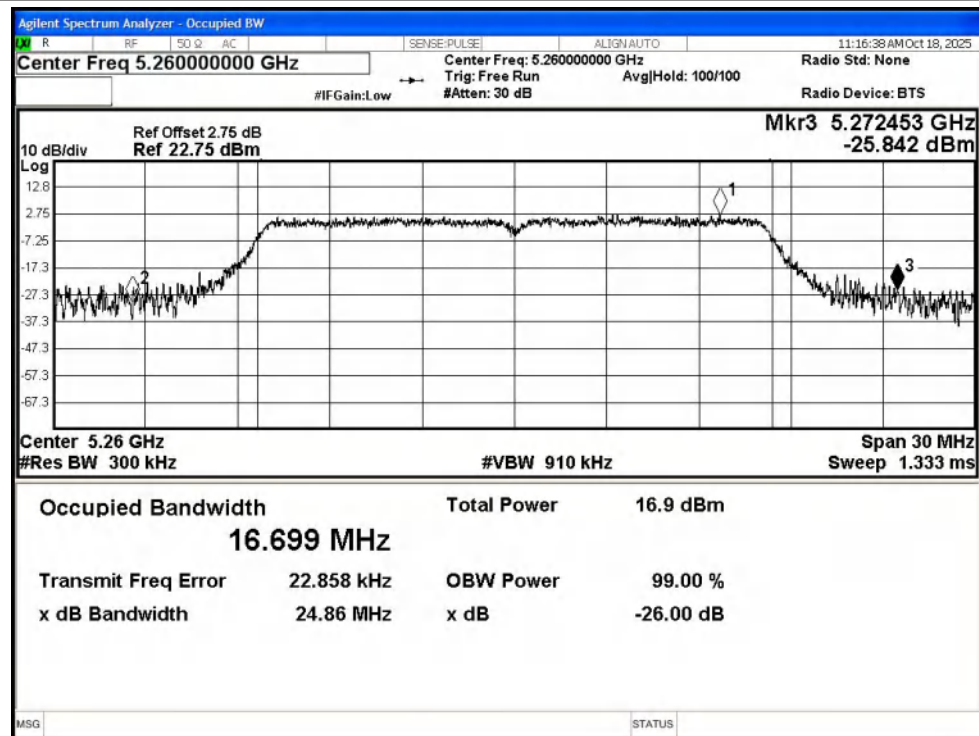
Temperature:	23.8° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Zoey Cao
Supervised by:	Eric Wang

1. -26dB Bandwidth

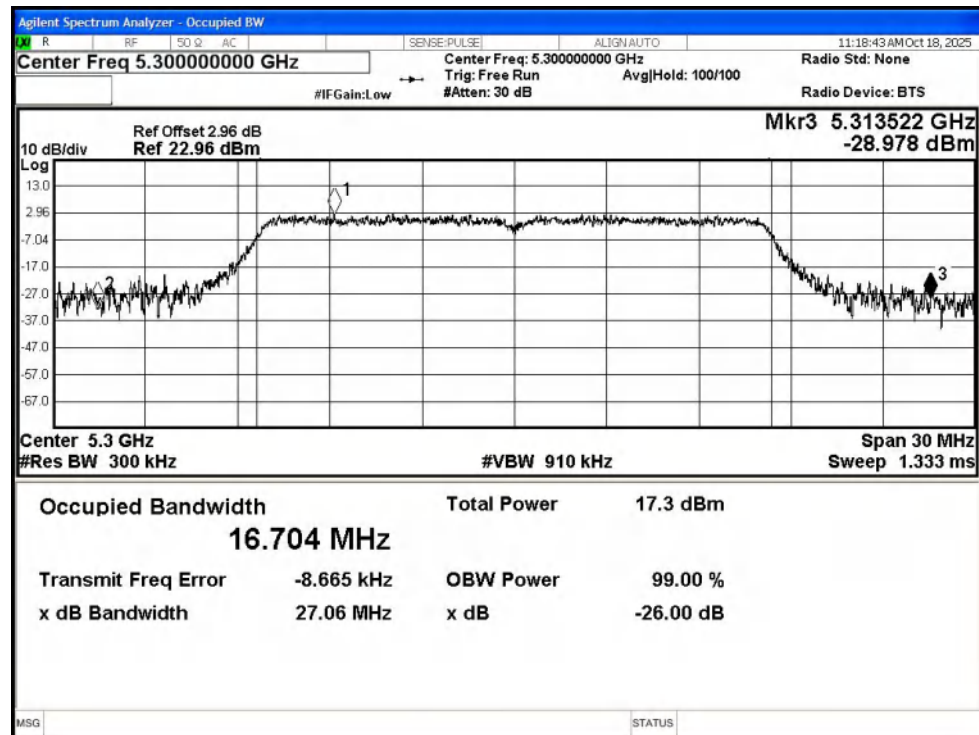
Condition	Mode	Frequency (MHz)	Antenna	-26 dB Bandwidth (MHz)	Limit -26 dB Bandwidth (MHz)	Verdict
NVNT	a	5260	Ant1	24.86	≥ 0.5	Pass
NVNT	a	5300	Ant1	27.062	≥ 0.5	Pass
NVNT	a	5320	Ant1	25.961	≥ 0.5	Pass
NVNT	n20	5260	Ant1	28.305	≥ 0.5	Pass
NVNT	n20	5300	Ant1	27.881	≥ 0.5	Pass
NVNT	n20	5320	Ant1	27.476	≥ 0.5	Pass
NVNT	n40	5270	Ant1	49.415	≥ 0.5	Pass
NVNT	n40	5310	Ant1	48.57	≥ 0.5	Pass
NVNT	ac20	5260	Ant1	28.808	≥ 0.5	Pass
NVNT	ac20	5300	Ant1	28.868	≥ 0.5	Pass
NVNT	ac20	5320	Ant1	29.515	≥ 0.5	Pass
NVNT	ac40	5270	Ant1	45.082	≥ 0.5	Pass
NVNT	ac40	5310	Ant1	49.029	≥ 0.5	Pass
NVNT	ac80	5290	Ant1	86.697	≥ 0.5	Pass

Test Graphs

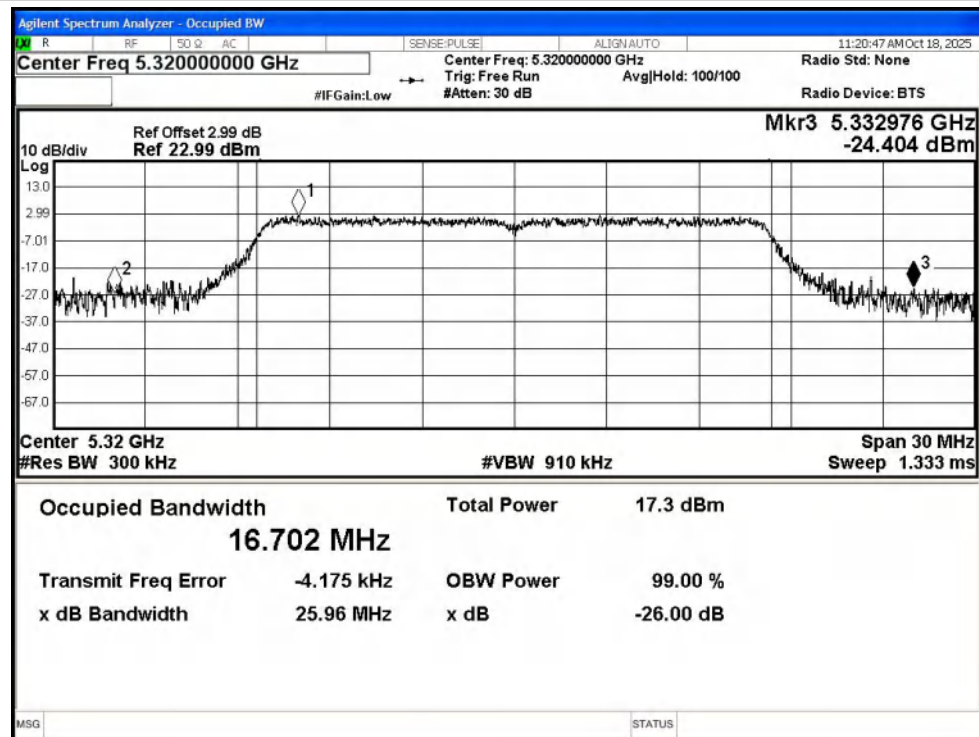
-26dB Bandwidth NVNT a 5260MHz Ant1



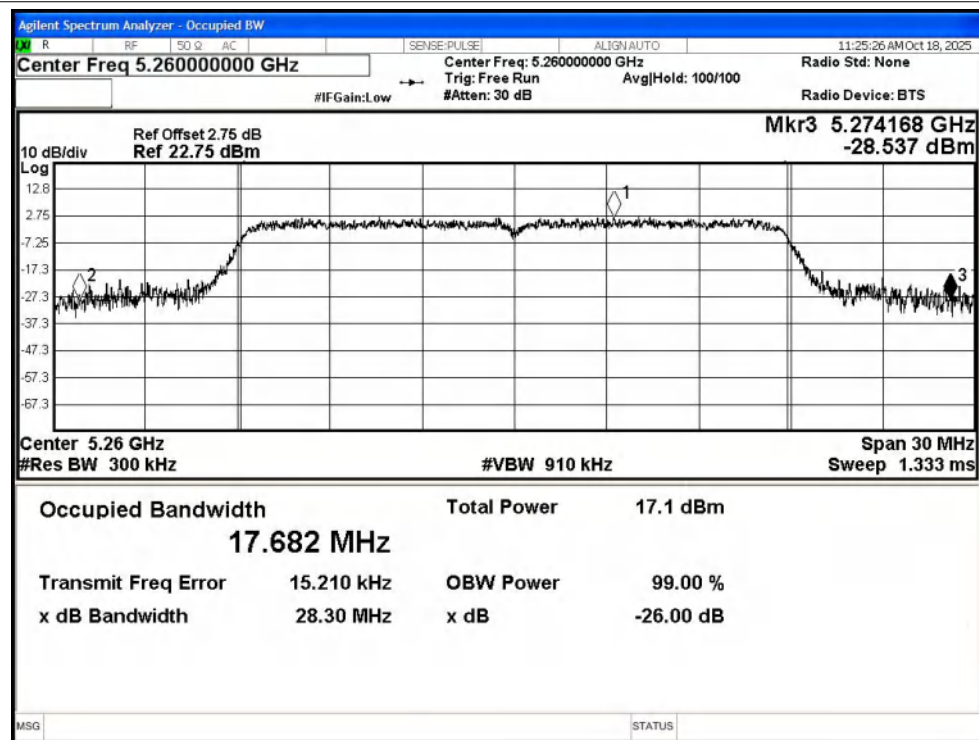
-26dB Bandwidth NVNT a 5300MHz Ant1



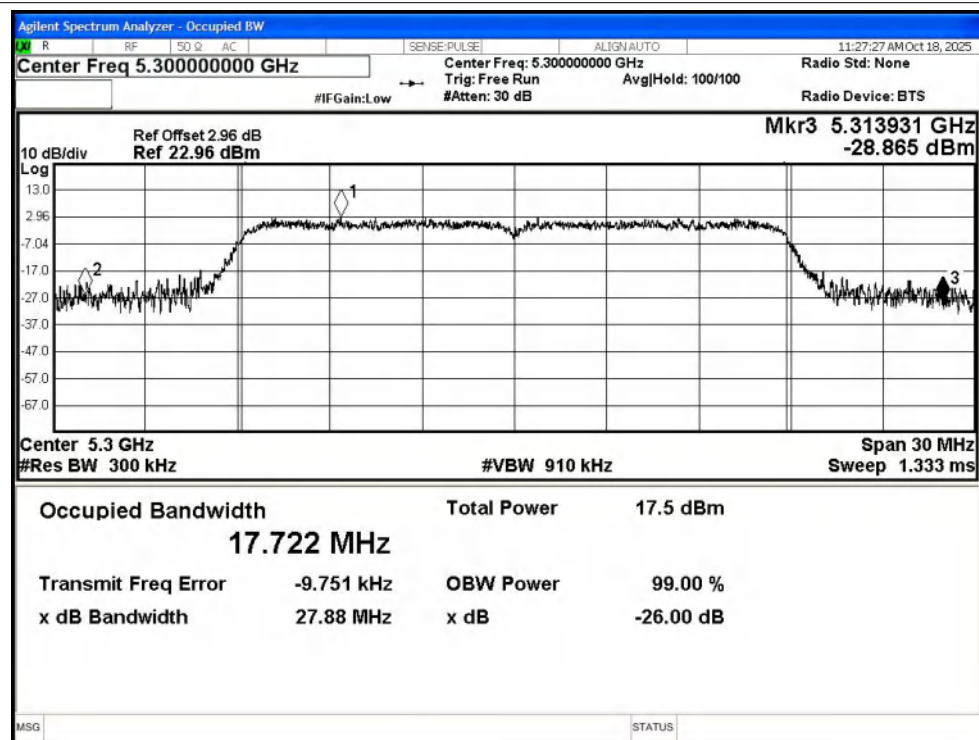
-26dB Bandwidth NVNT a 5320MHz Ant1



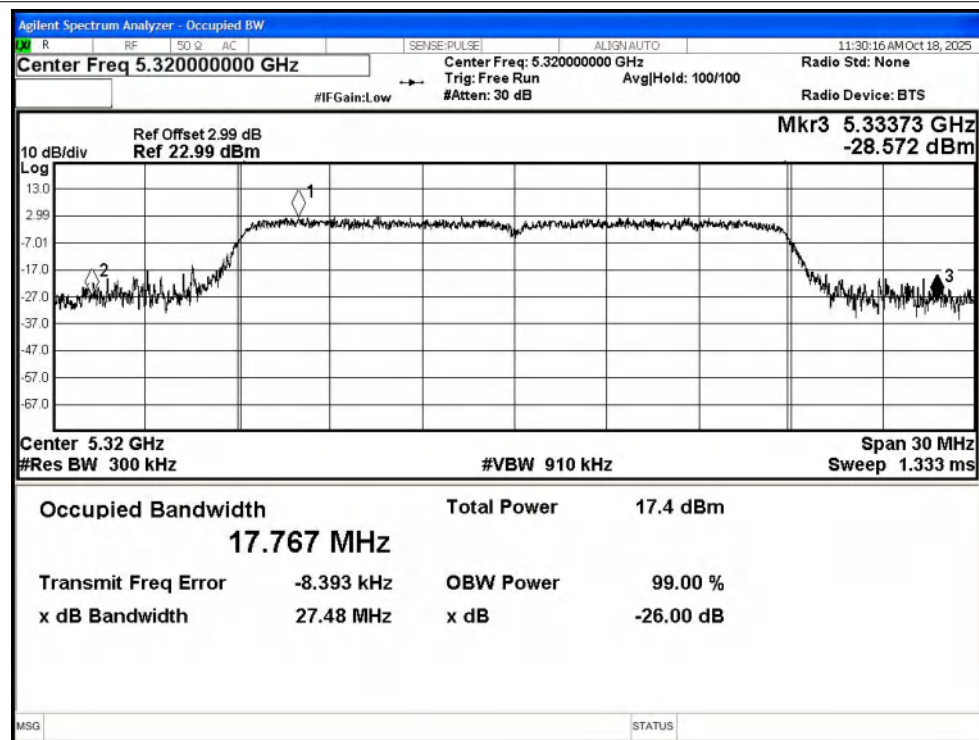
-26dB Bandwidth NVNT n20 5260MHz Ant1



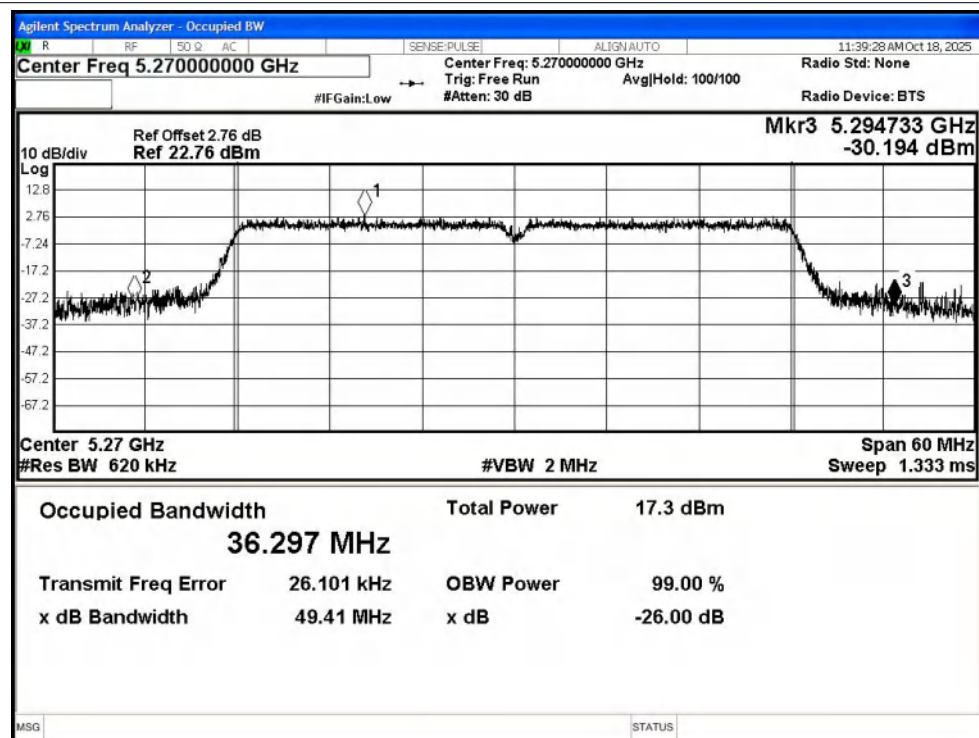
-26dB Bandwidth NVNT n20 5300MHz Ant1



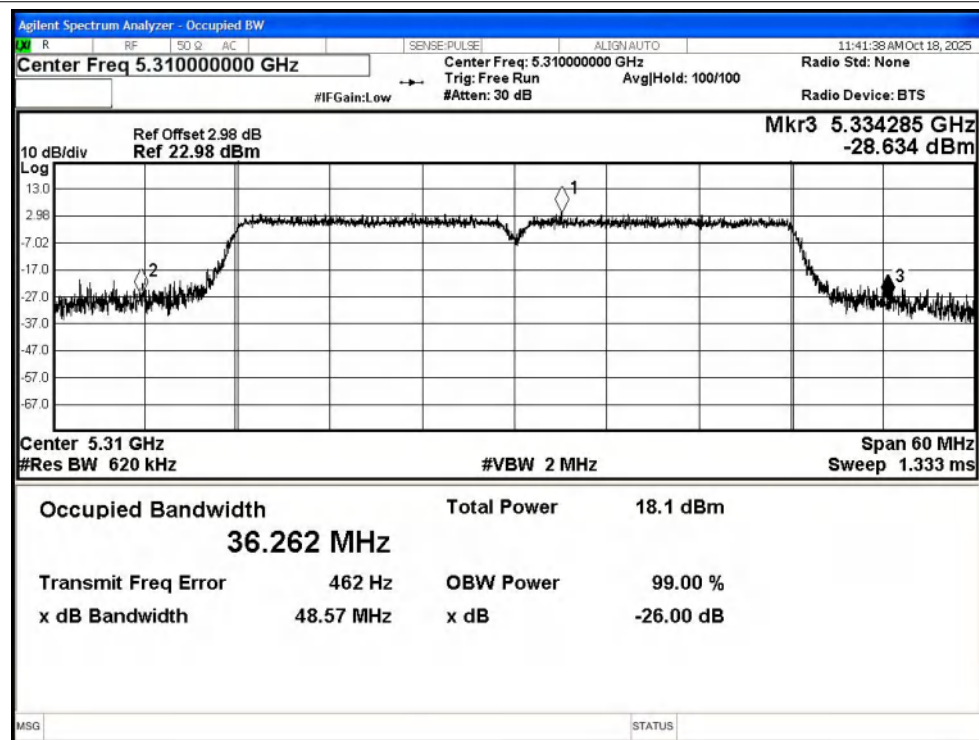
-26dB Bandwidth NVNT n20 5320MHz Ant1



-26dB Bandwidth NVNT n40 5270MHz Ant1



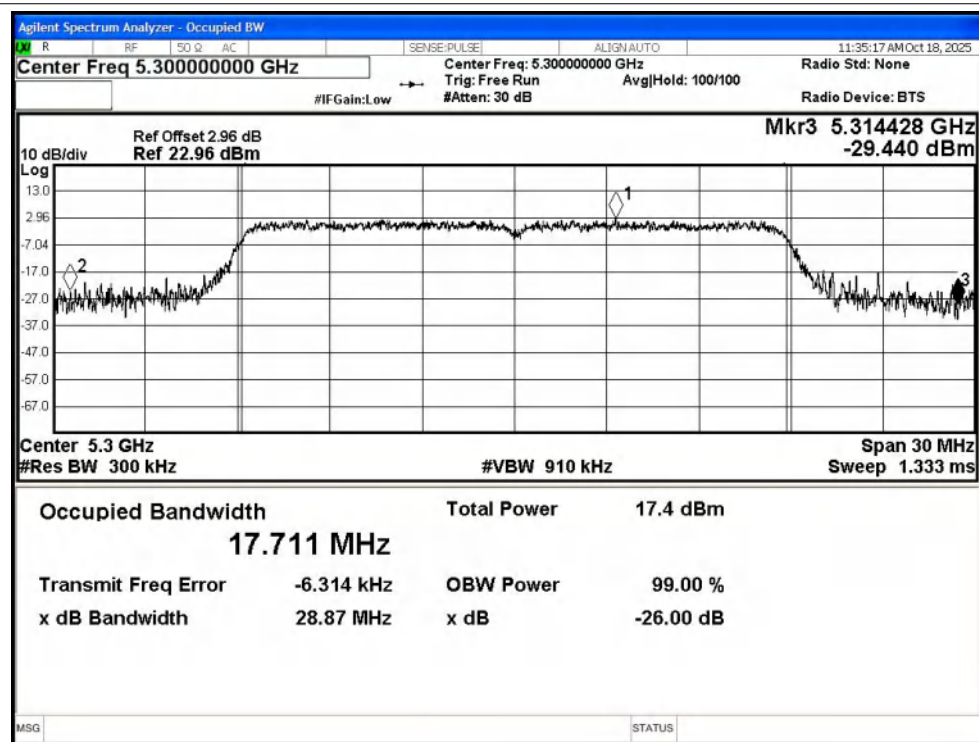
-26dB Bandwidth NVNT n40 5310MHz Ant1



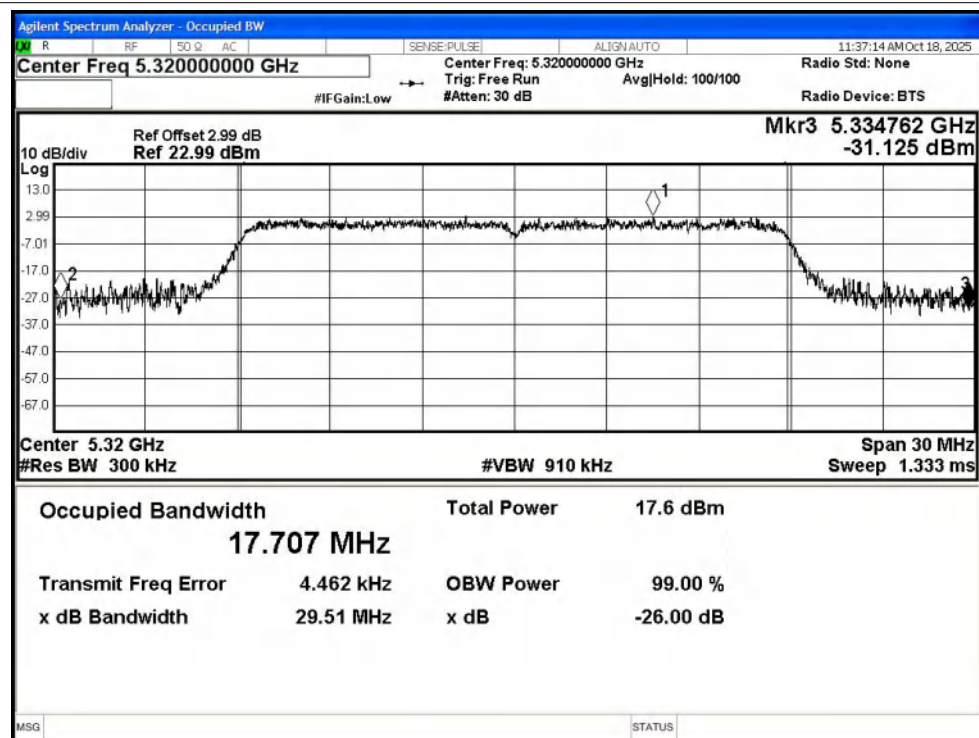
-26dB Bandwidth NVNT ac20 5260MHz Ant1



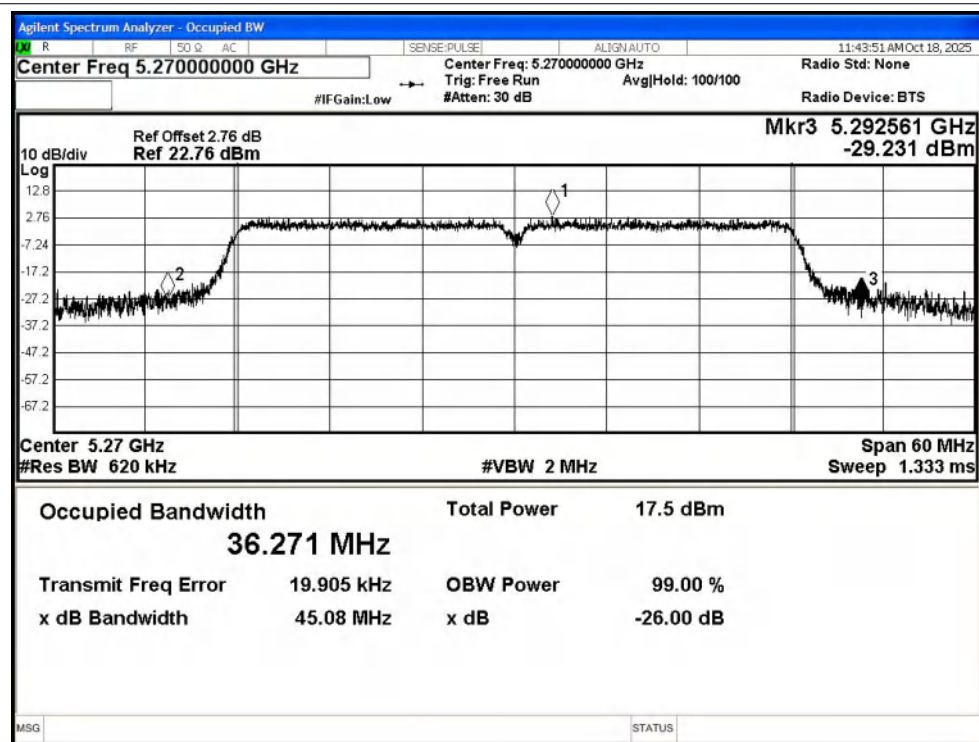
-26dB Bandwidth NVNT ac20 5300MHz Ant1



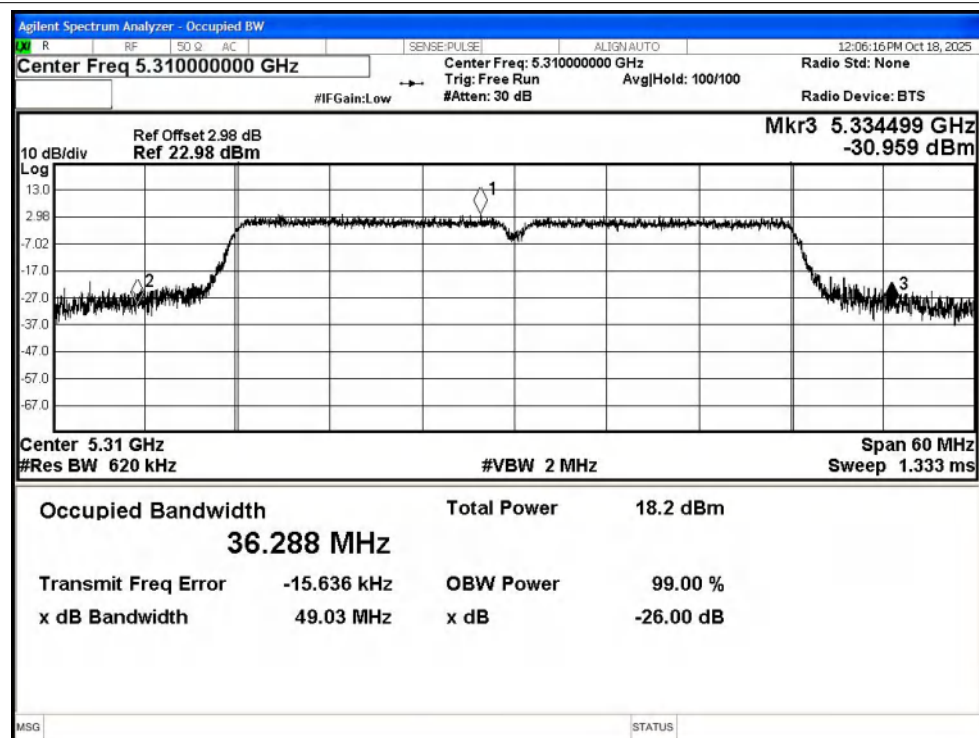
-26dB Bandwidth NVNT ac20 5320MHz Ant1



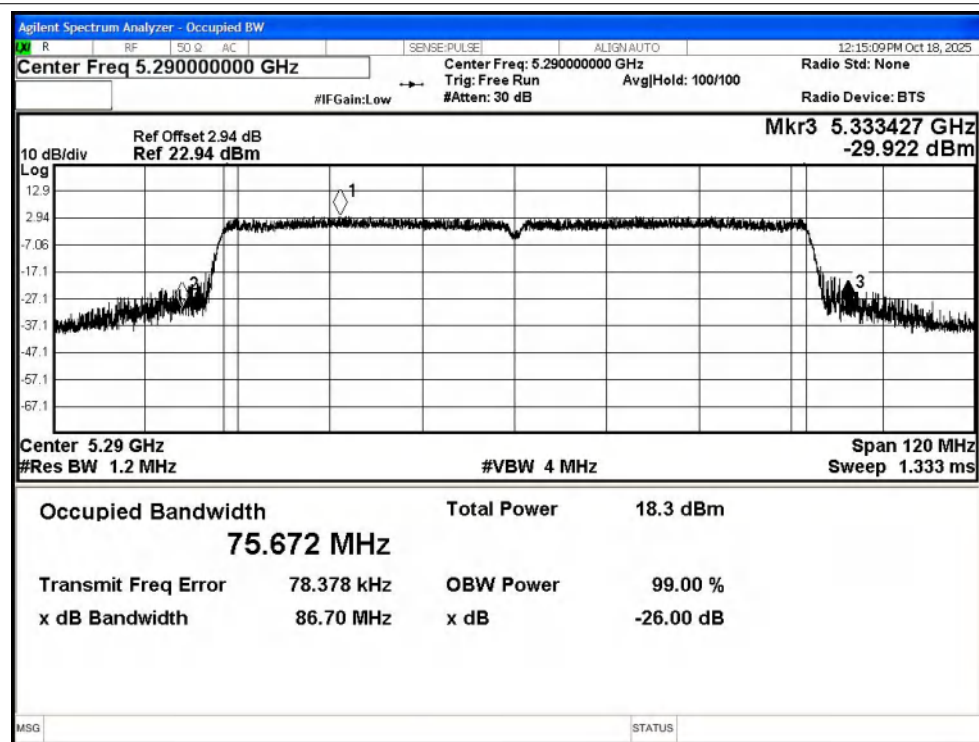
-26dB Bandwidth NVNT ac40 5270MHz Ant1



-26dB Bandwidth NVNT ac40 5310MHz Ant1



-26dB Bandwidth NVNT ac80 5290MHz Ant1

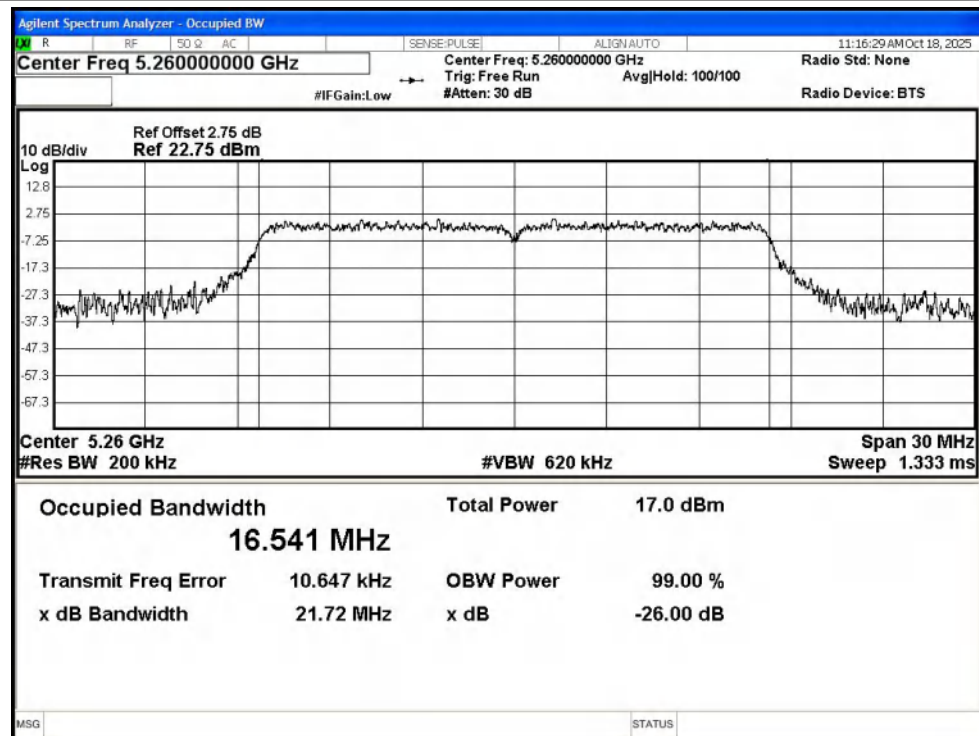


2. Occupied Channel Bandwidth

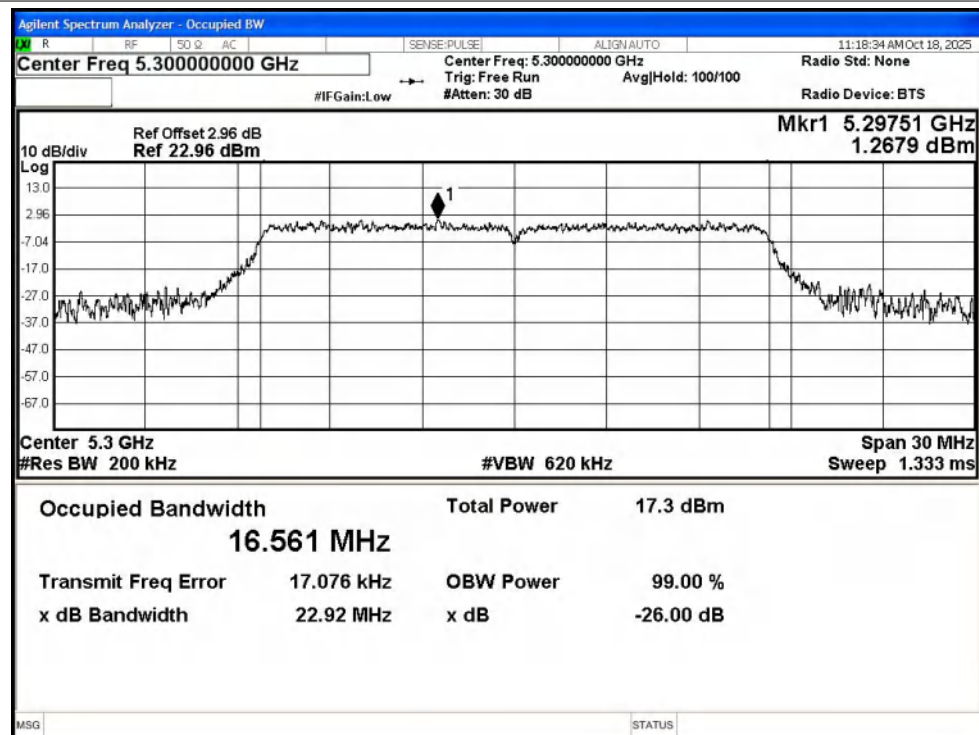
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	a	5260	Ant1	16.541
NVNT	a	5300	Ant1	16.561
NVNT	a	5320	Ant1	16.603
NVNT	n20	5260	Ant1	17.611
NVNT	n20	5300	Ant1	17.653
NVNT	n20	5320	Ant1	17.662
NVNT	n40	5270	Ant1	36.197
NVNT	n40	5310	Ant1	36.225
NVNT	ac20	5260	Ant1	17.627
NVNT	ac20	5300	Ant1	17.642
NVNT	ac20	5320	Ant1	17.64
NVNT	ac40	5270	Ant1	36.23
NVNT	ac40	5310	Ant1	36.268
NVNT	ac80	5290	Ant1	75.516

Test Graphs

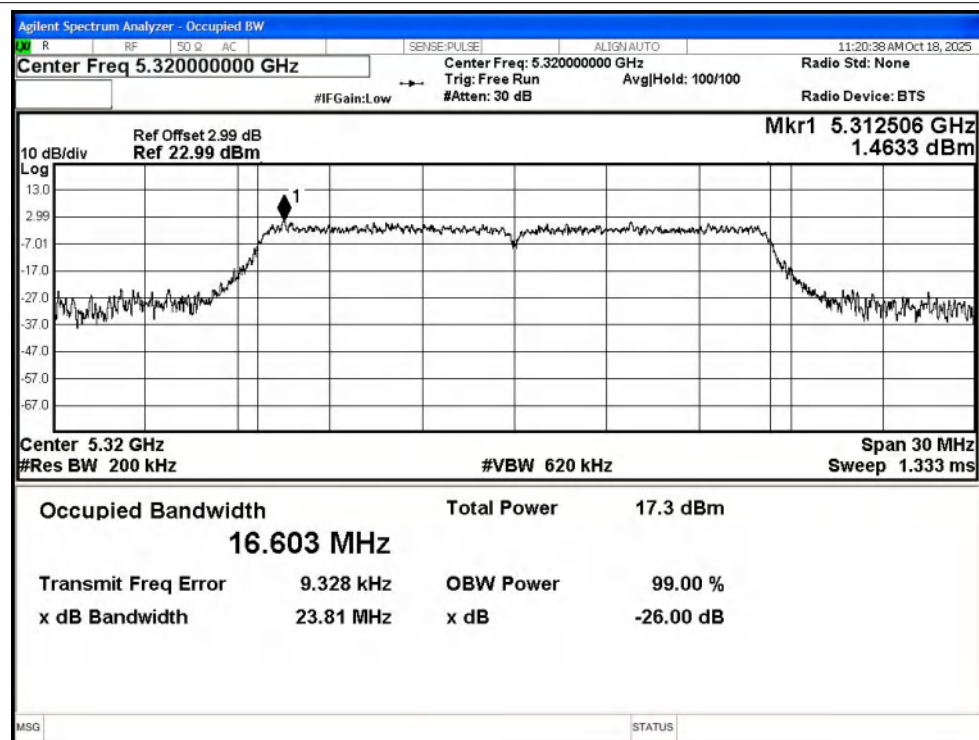
OBW NVNT a 5260MHz Ant1



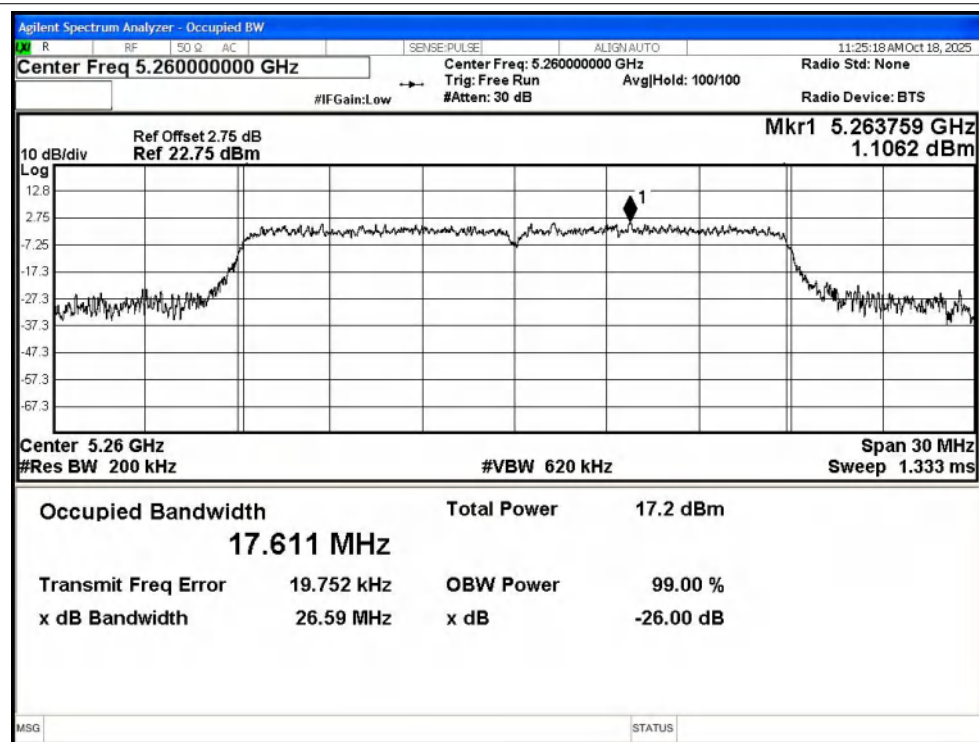
OBW NVNT a 5300MHz Ant1



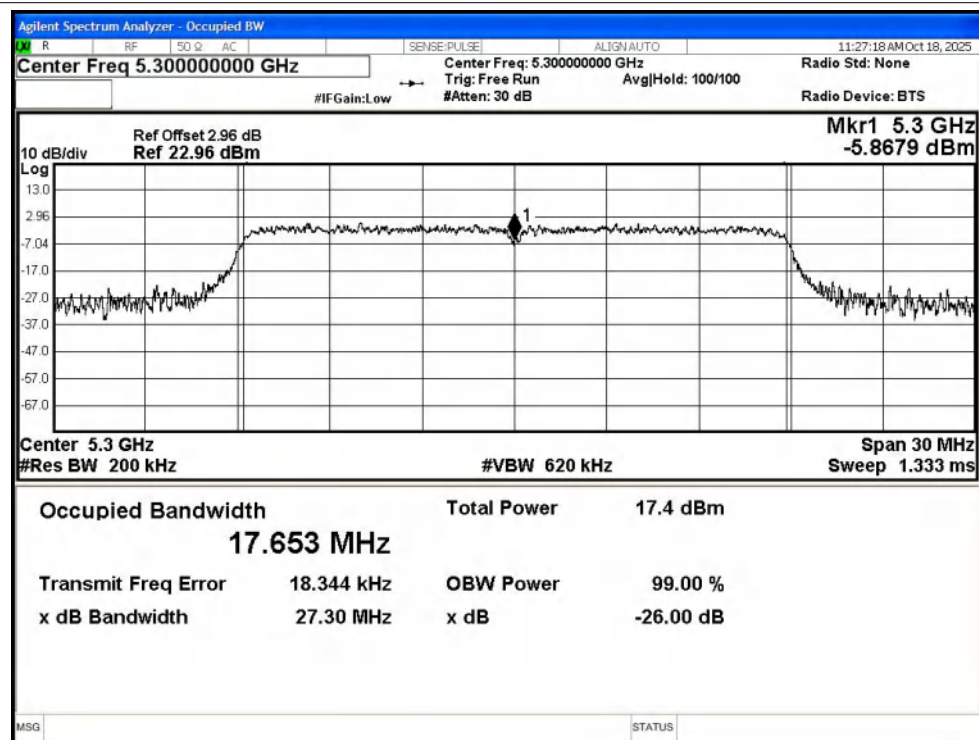
OBW NVNT a 5320MHz Ant1



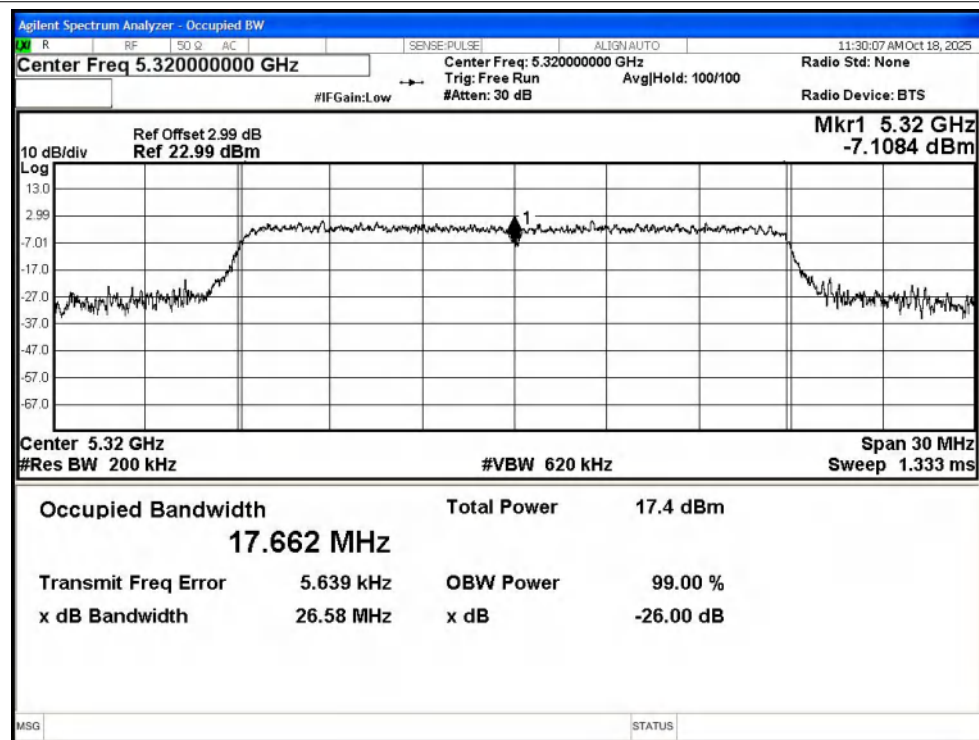
OBW NVNT n20 5260MHz Ant1



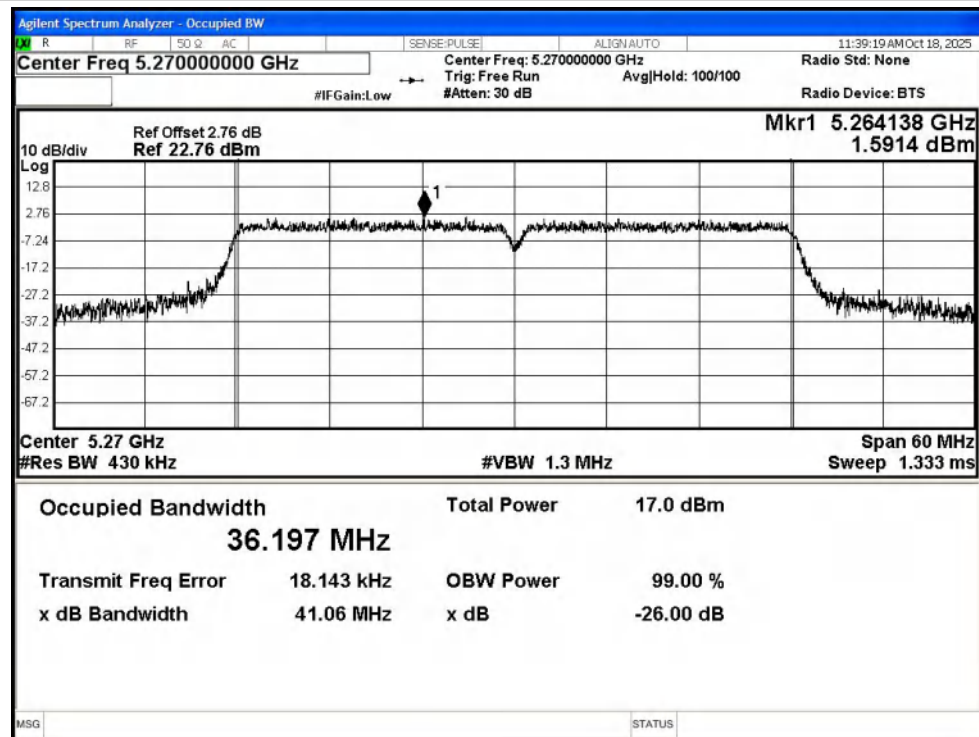
OBW NVNT n20 5300MHz Ant1



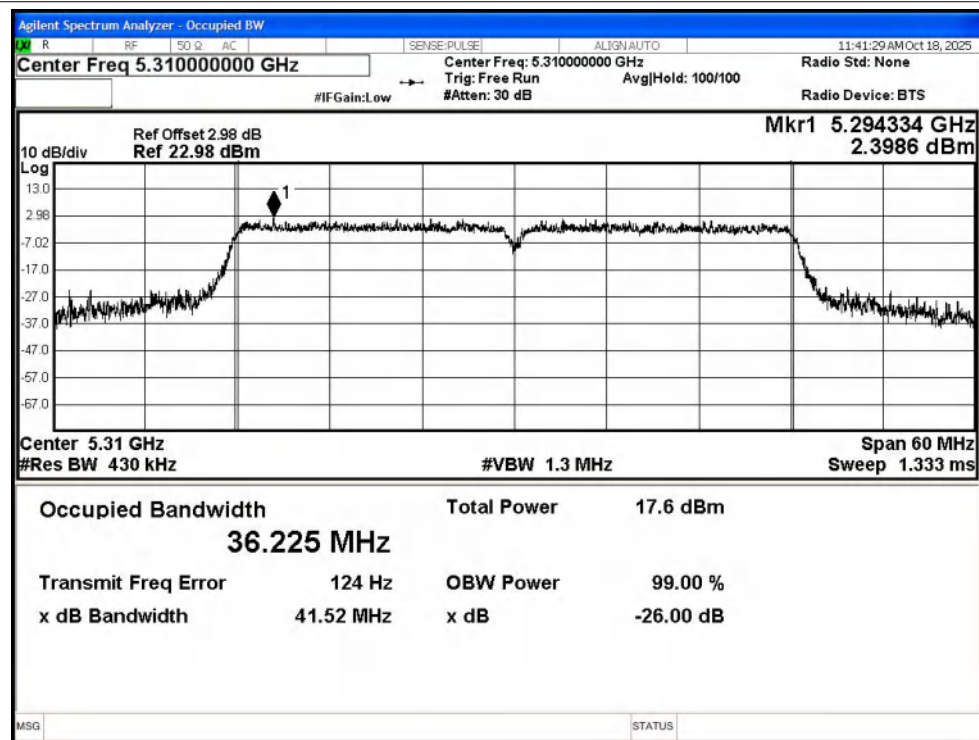
OBW NVNT n20 5320MHz Ant1



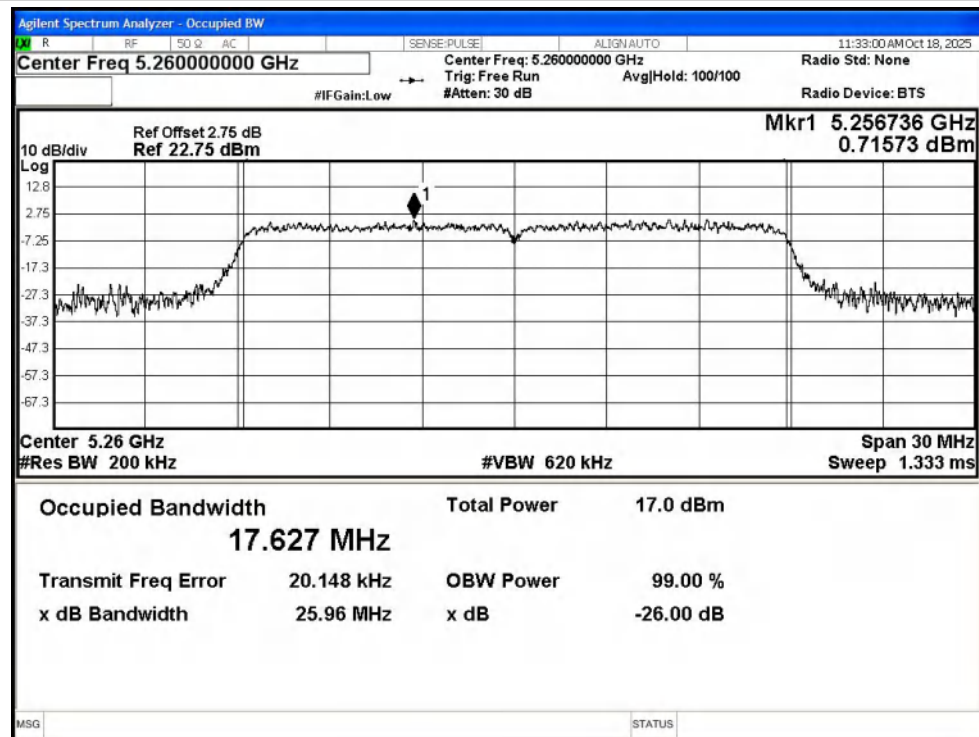
OBW NVNT n40 5270MHz Ant1



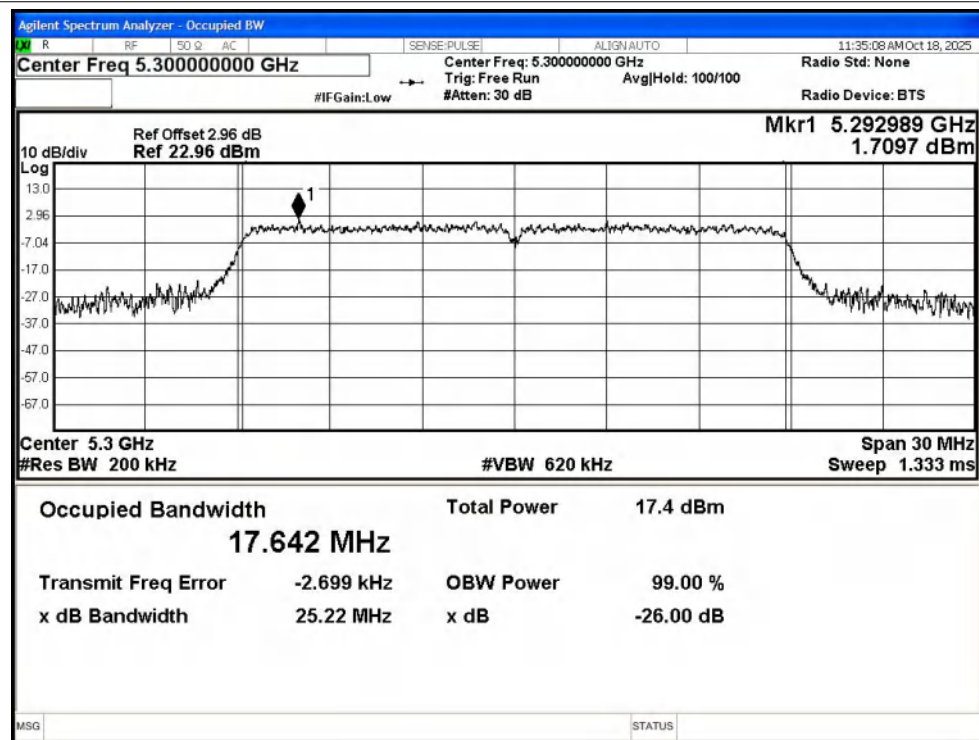
OBW NVNT n40 5310MHz Ant1



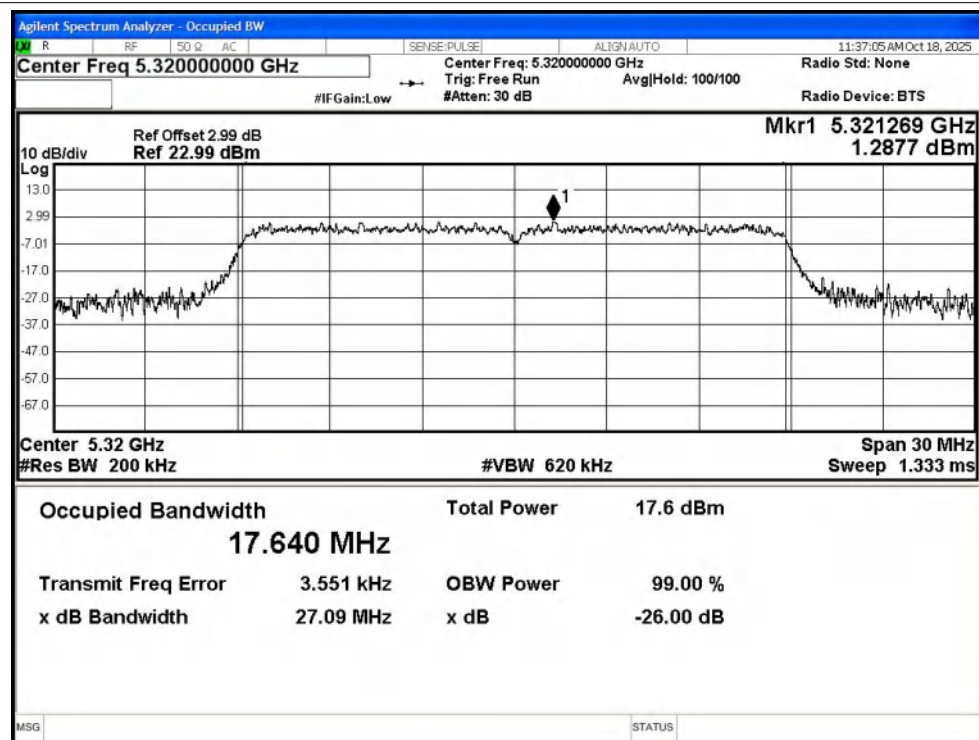
OBW NVNT ac20 5260MHz Ant1



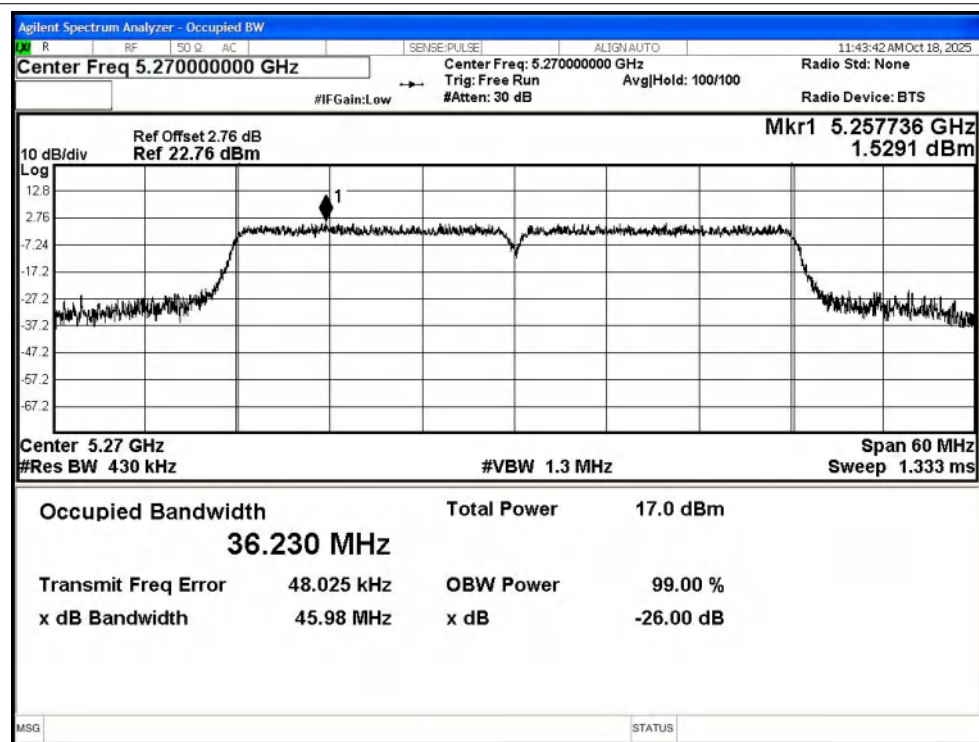
OBW NVNT ac20 5300MHz Ant1



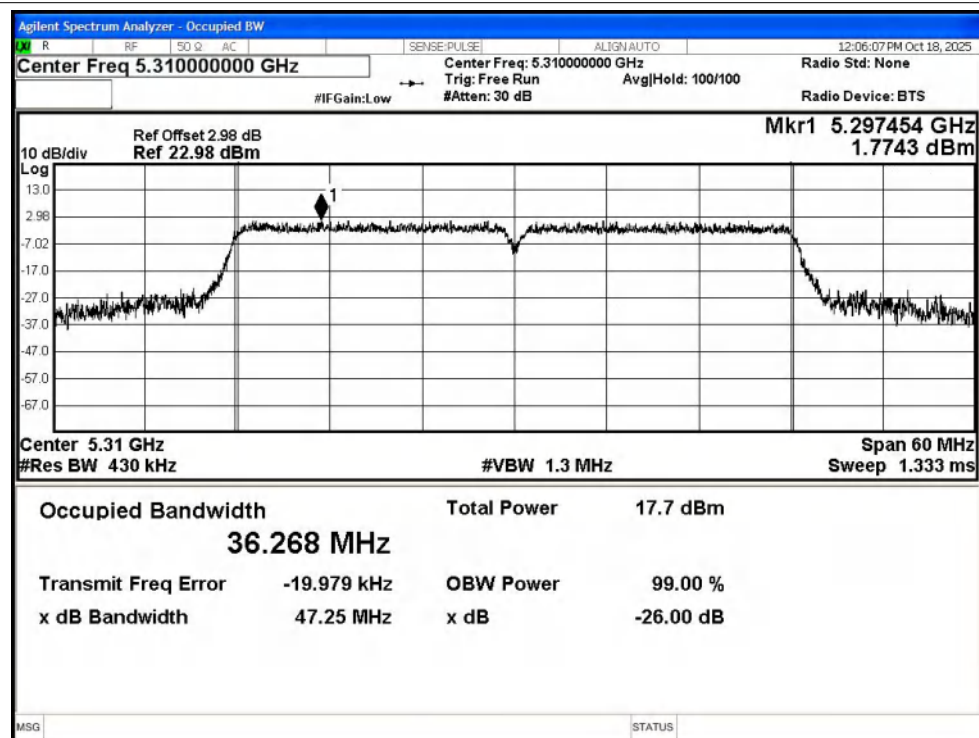
OBW NVNT ac20 5320MHz Ant1



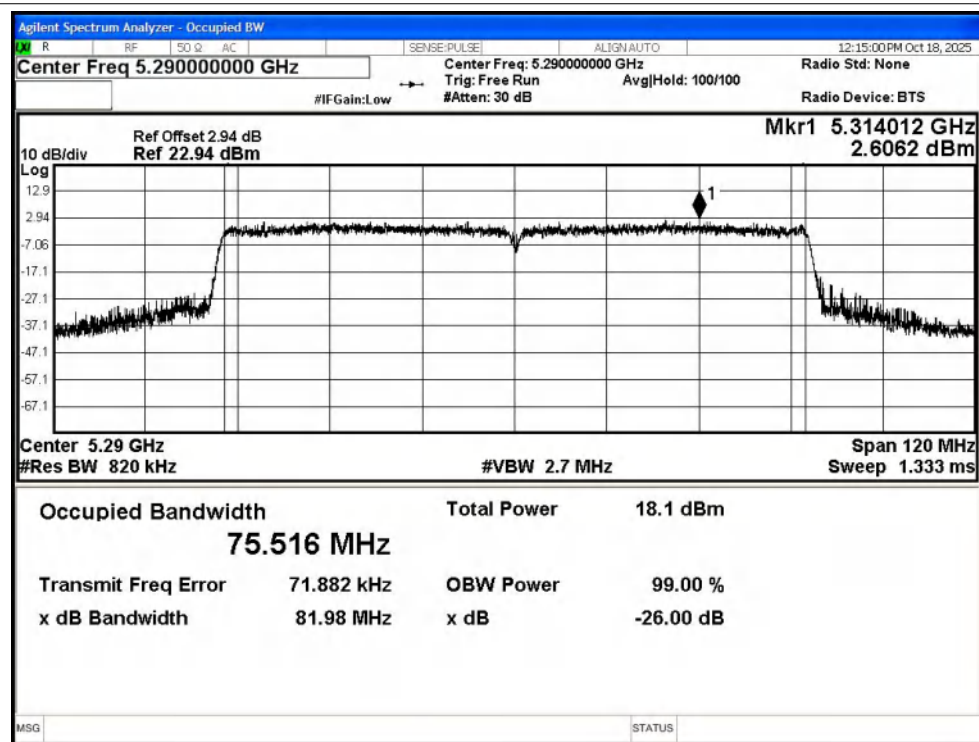
OBW NVNT ac40 5270MHz Ant1



OBW NVNT ac40 5310MHz Ant1



OBW NVNT ac80 5290MHz Ant1



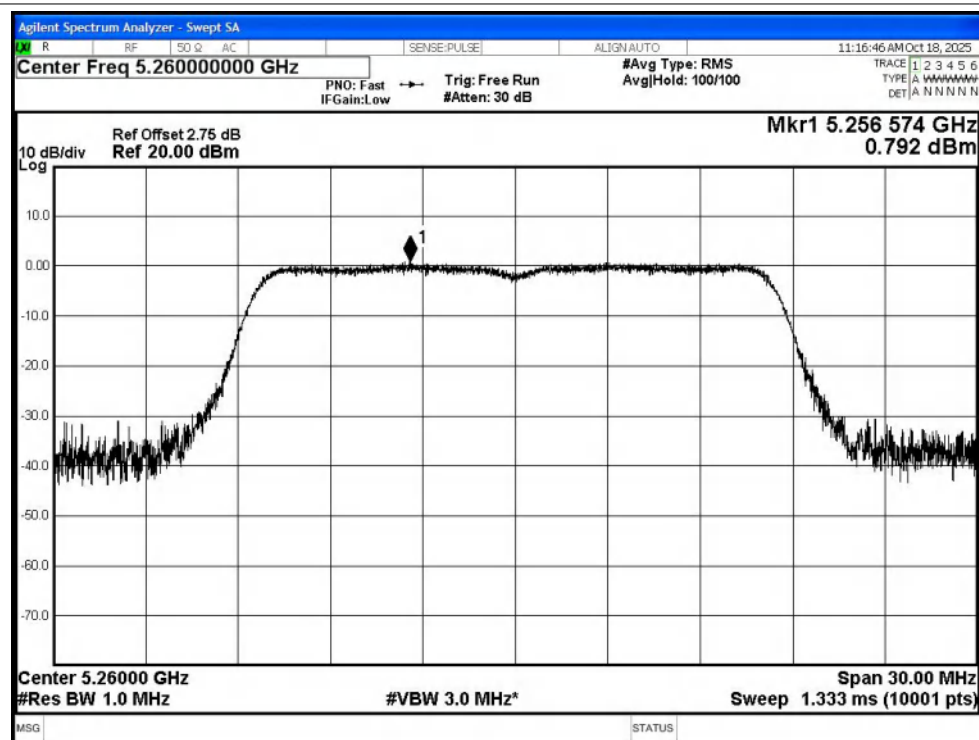
3. Maximum Conducted Output Power and i.r.p.

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	a	5260	Ant1	11.53	0.1	11.63	24	Pass
NVNT	a	5300	Ant1	11.67	0.1	11.77	24	Pass
NVNT	a	5320	Ant1	11.83	0.1	11.93	24	Pass
NVNT	n20	5260	Ant1	11.58	0.12	11.7	24	Pass
NVNT	n20	5300	Ant1	11.98	0.12	12.10	24	Pass
NVNT	n20	5320	Ant1	11.97	0.12	12.09	24	Pass
NVNT	n40	5270	Ant1	10.99	0.23	11.22	24	Pass
NVNT	n40	5310	Ant1	11.58	0.24	11.82	24	Pass
NVNT	ac20	5260	Ant1	11.53	0.12	11.65	24	Pass
NVNT	ac20	5300	Ant1	11.95	0.12	12.07	24	Pass
NVNT	ac20	5320	Ant1	12.07	0.12	12.19	24	Pass
NVNT	ac40	5270	Ant1	10.94	0.24	11.18	24	Pass
NVNT	ac40	5310	Ant1	11.61	0.24	11.85	24	Pass
NVNT	ac80	5290	Ant1	11.46	0.47	11.93	24	Pass

4. Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm)	Duty Factor (dB)	Total PSD (dBm)	Limit (dBm)	Verdict
NVNT	a	5260	Ant1	0.79	0.1	0.89	11	Pass
NVNT	a	5300	Ant1	1.07	0.1	1.17	11	Pass
NVNT	a	5320	Ant1	1.52	0.1	1.62	11	Pass
NVNT	n20	5260	Ant1	0.69	0.12	0.81	11	Pass
NVNT	n20	5300	Ant1	1.27	0.12	1.39	11	Pass
NVNT	n20	5320	Ant1	1.13	0.12	1.25	11	Pass
NVNT	n40	5270	Ant1	-2.9	0.23	-2.67	11	Pass
NVNT	n40	5310	Ant1	-2.06	0.24	-1.82	11	Pass
NVNT	ac20	5260	Ant1	0.75	0.12	0.87	11	Pass
NVNT	ac20	5300	Ant1	1.32	0.12	1.44	11	Pass
NVNT	ac20	5320	Ant1	1.07	0.12	1.19	11	Pass
NVNT	ac40	5270	Ant1	-2.84	0.24	-2.6	11	Pass
NVNT	ac40	5310	Ant1	-1.9	0.24	-1.66	11	Pass
NVNT	ac80	5290	Ant1	-5.59	0.47	-5.12	11	Pass

PSD NVNT a 5260MHz Ant1



Agilent Spectrum Analyzer - Swept SA

Center Freq 5.300000000 GHz

Ref Offset 2.96 dB
Ref 20.00 dBm

Mkr1 5.303 282 GHz
1.067 dBm

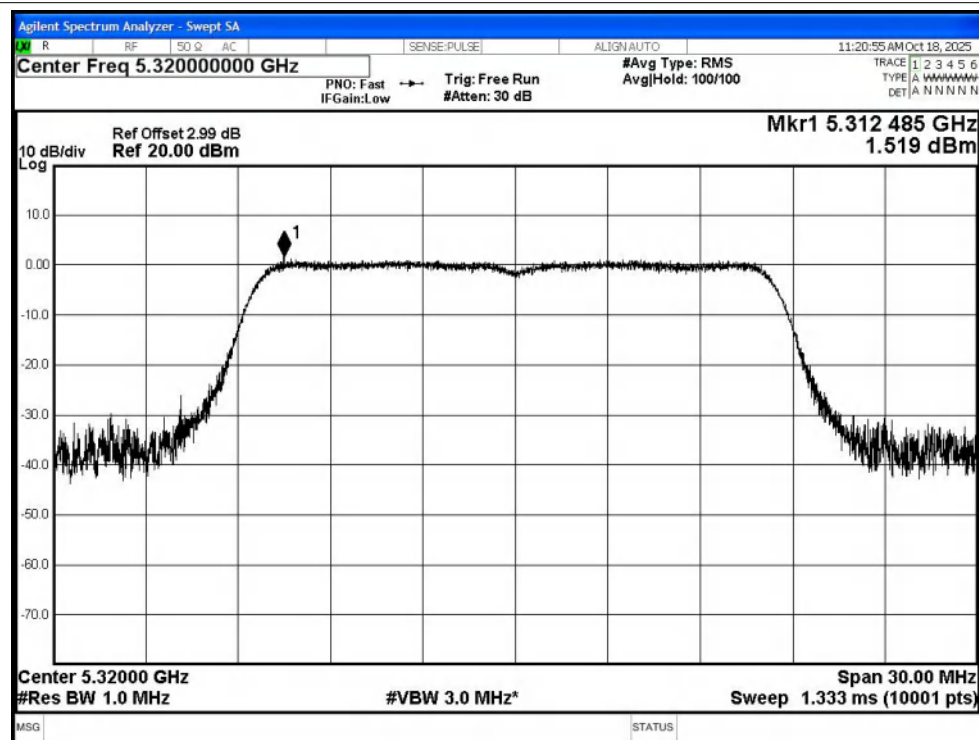
10 dB/div
Log

The screenshot displays a swept spectrum plot. The horizontal axis represents frequency, and the vertical axis represents power in dBm. A signal is visible, rising from a noise floor of approximately -40 dBm to a plateau around 0 dBm. A peak marker labeled '1' is positioned at 5.303282 GHz with a reading of 1.067 dBm. The plot is overlaid on a grid. Various instrument settings are visible at the top and bottom of the screen.

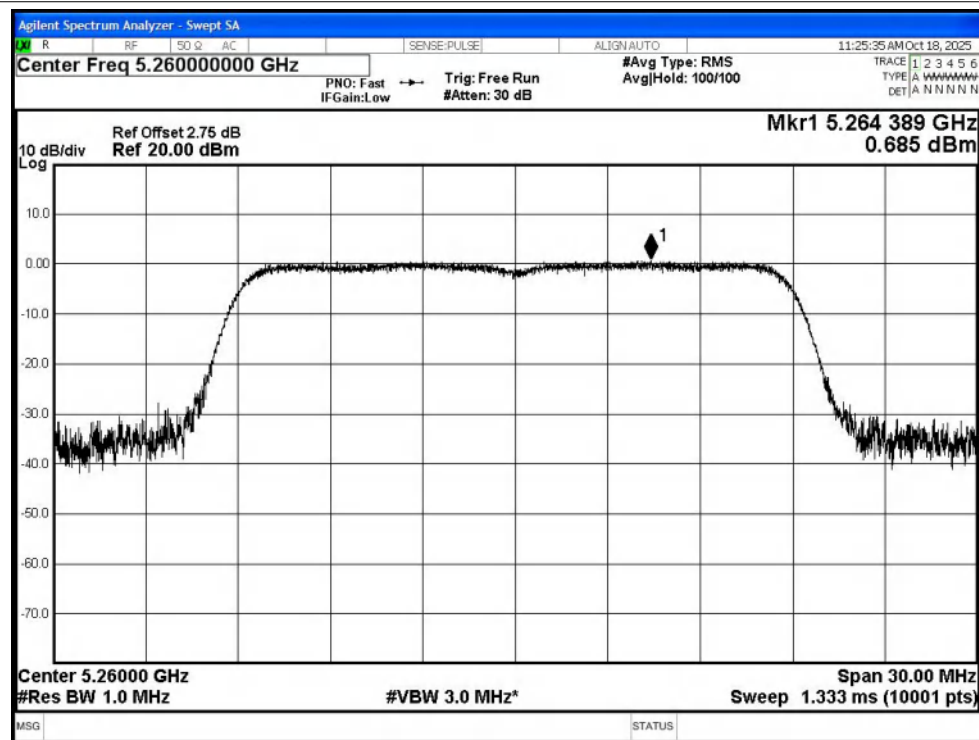
Center 5.30000 GHz
#Res BW 1.0 MHz
#VBW 3.0 MHz*

Span 30.00 MHz
Sweep 1.333 ms (10001 pts)

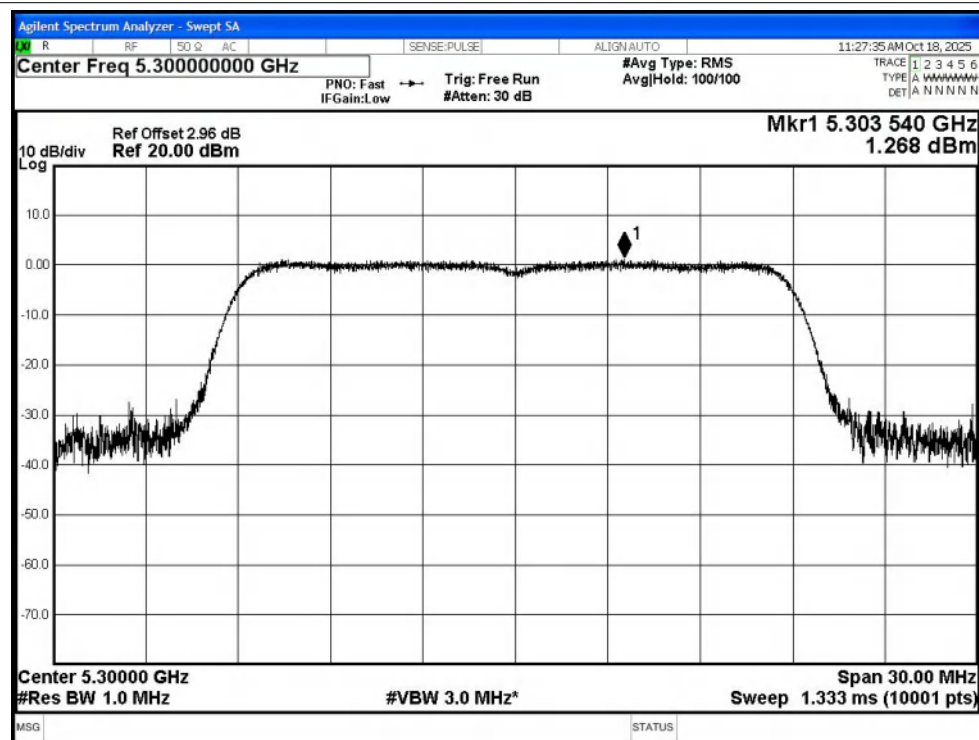
PSD NVNT a 5320MHz Ant1



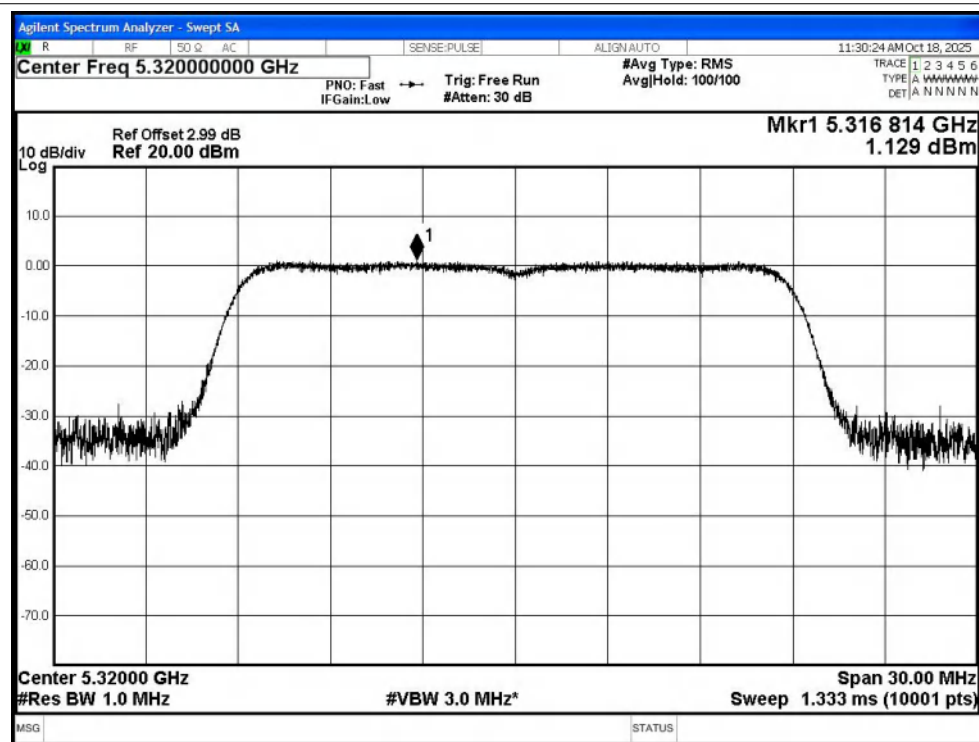
PSD NVNT n20 5260MHz Ant1



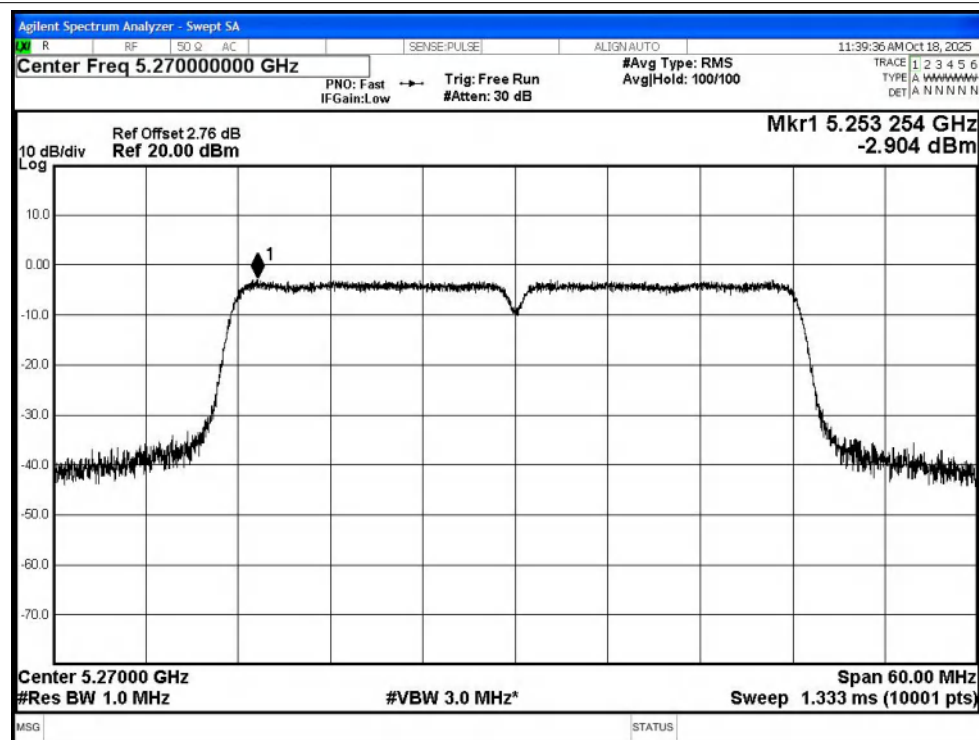
PSD NVNT n20 5300MHz Ant1



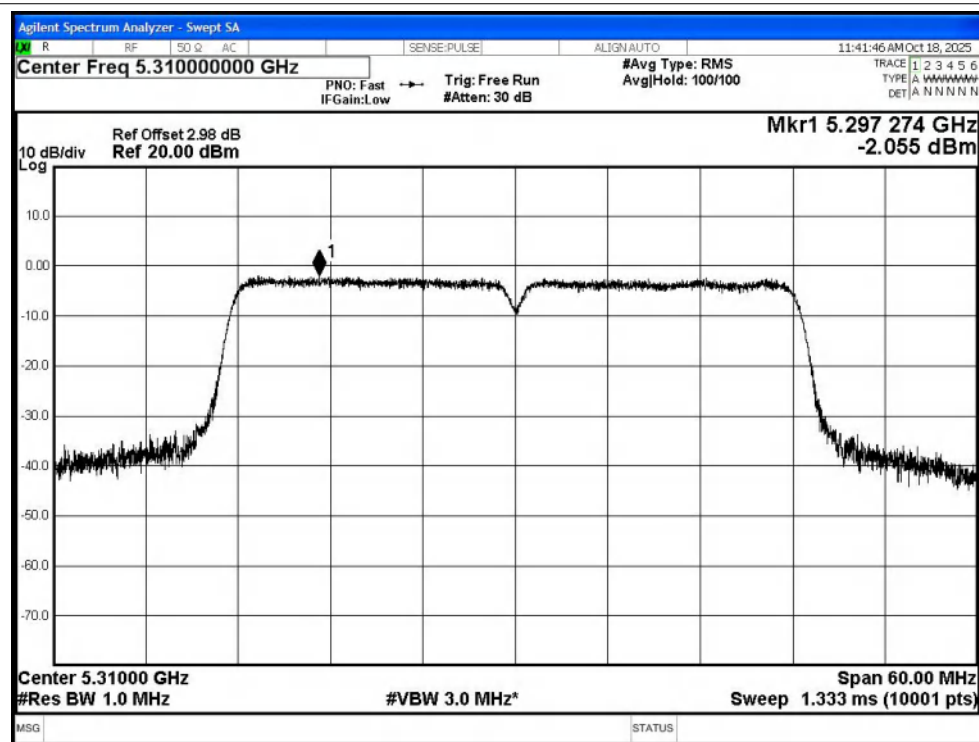
PSD NVNT n20 5320MHz Ant1



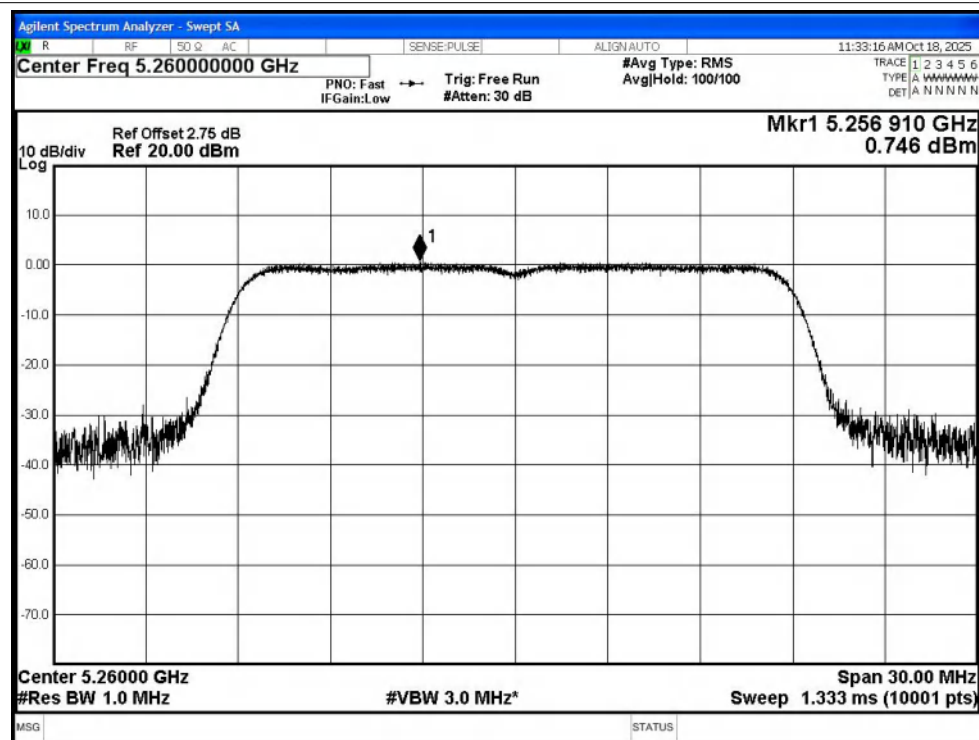
PSD NVNT n40 5270MHz Ant1



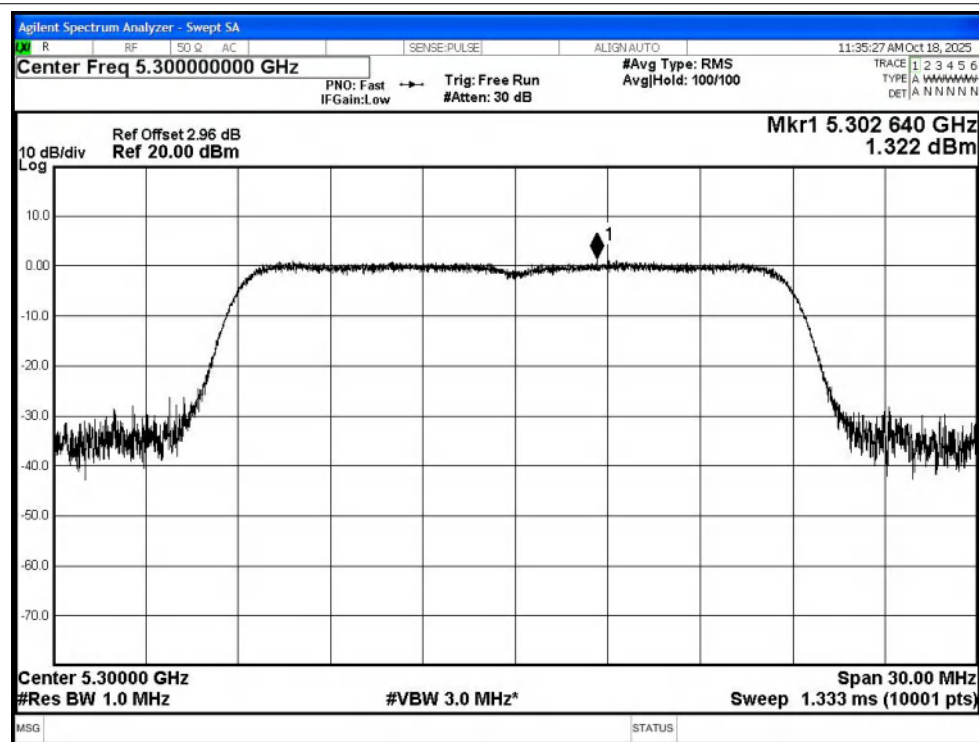
PSD NVNT n40 5310MHz Ant1



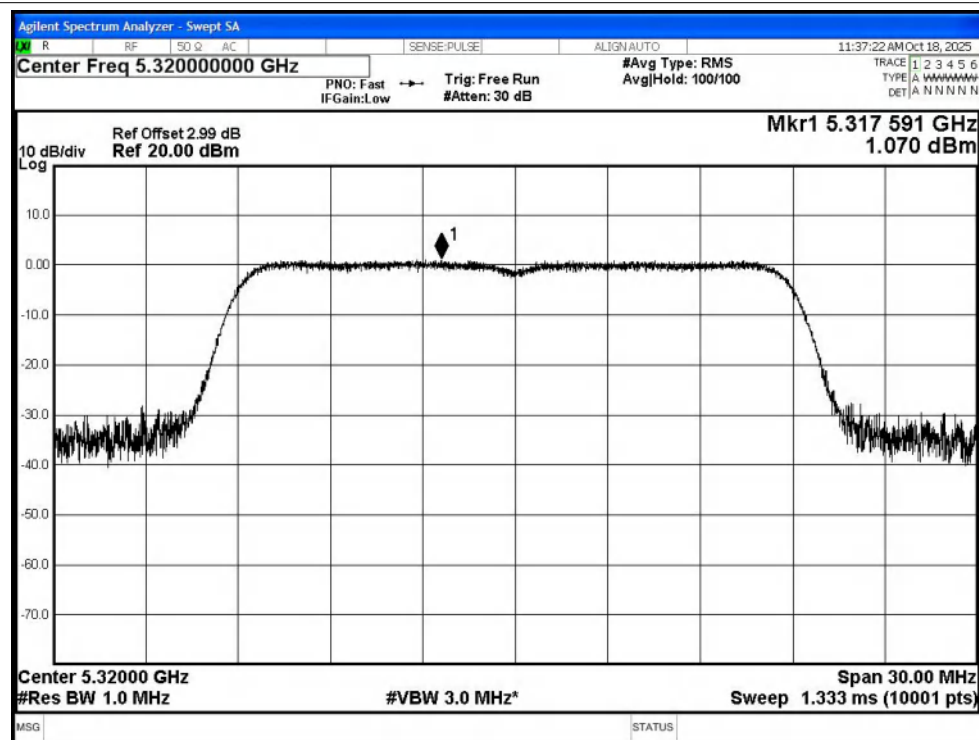
PSD NVNT ac20 5260MHz Ant1



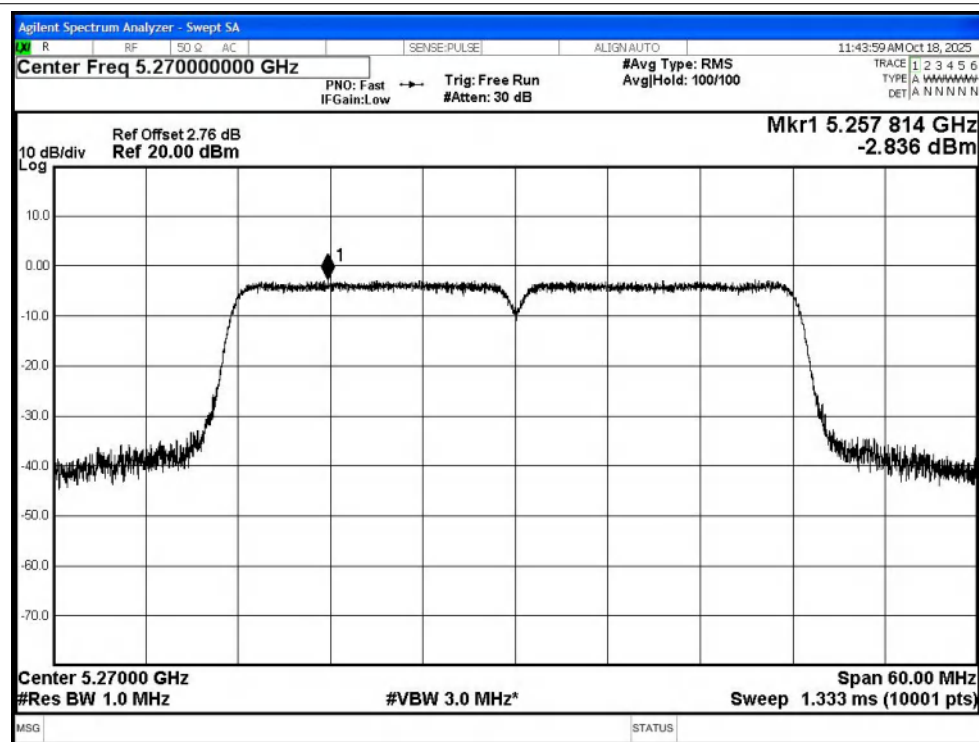
PSD NVNT ac20 5300MHz Ant1



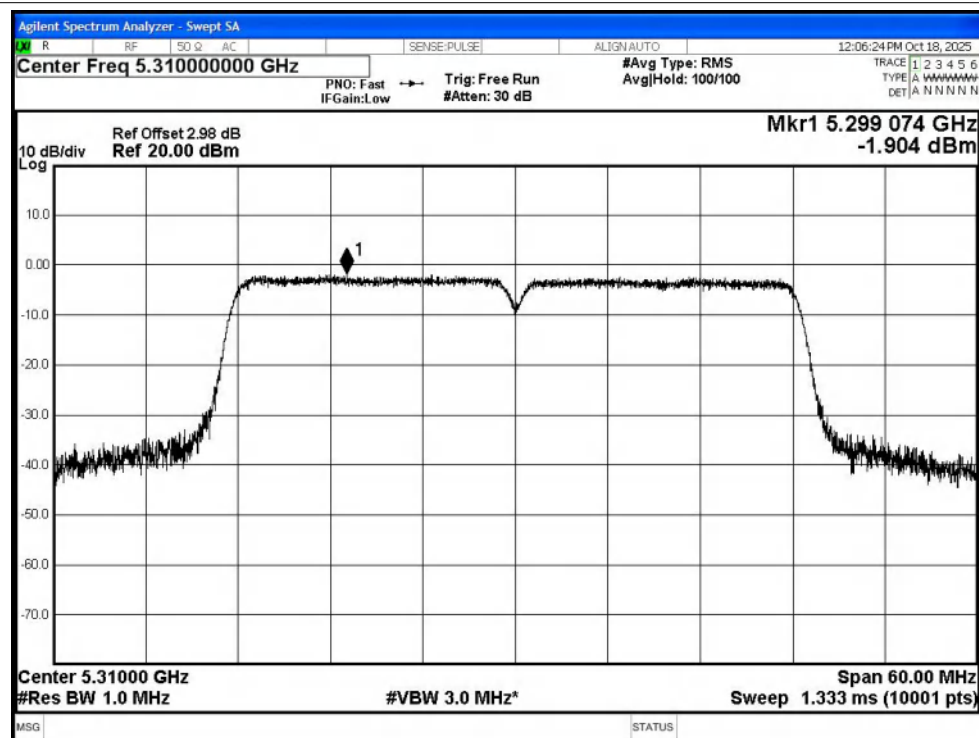
PSD NVNT ac20 5320MHz Ant1



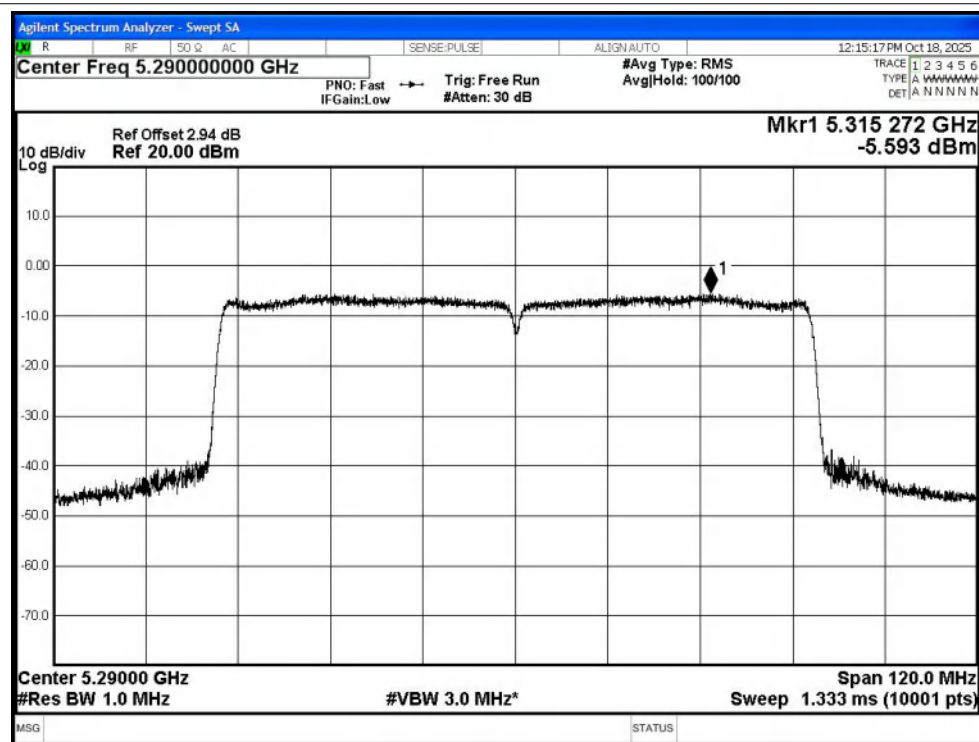
PSD NVNT ac40 5270MHz Ant1



PSD NVNT ac40 5310MHz Ant1



PSD NVNT ac80 5290MHz Ant1

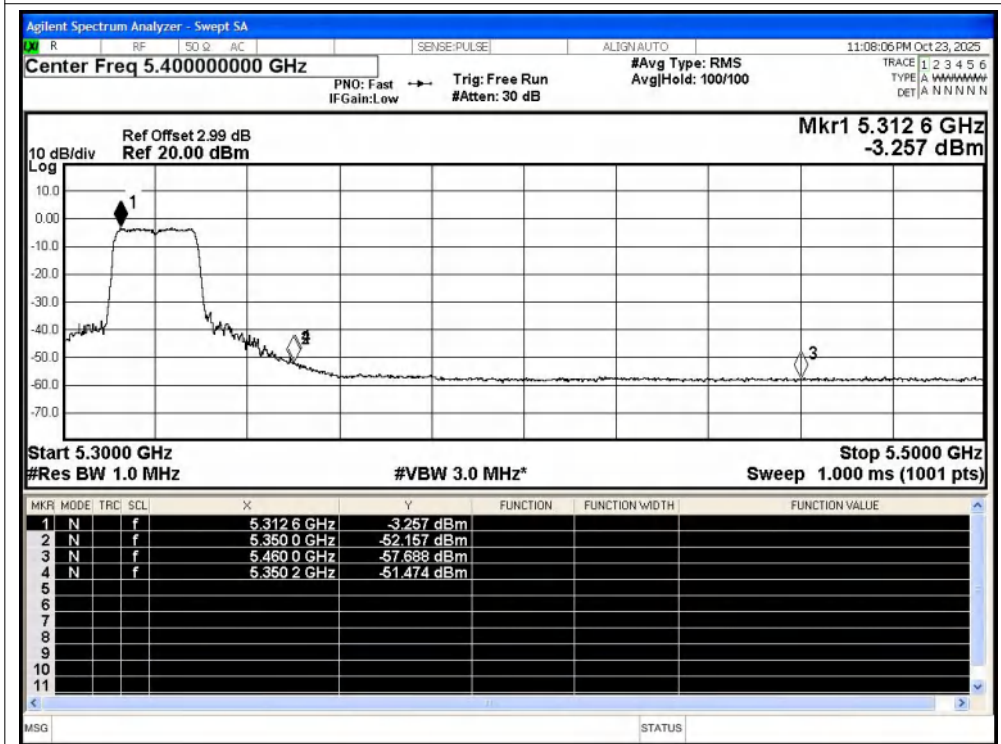
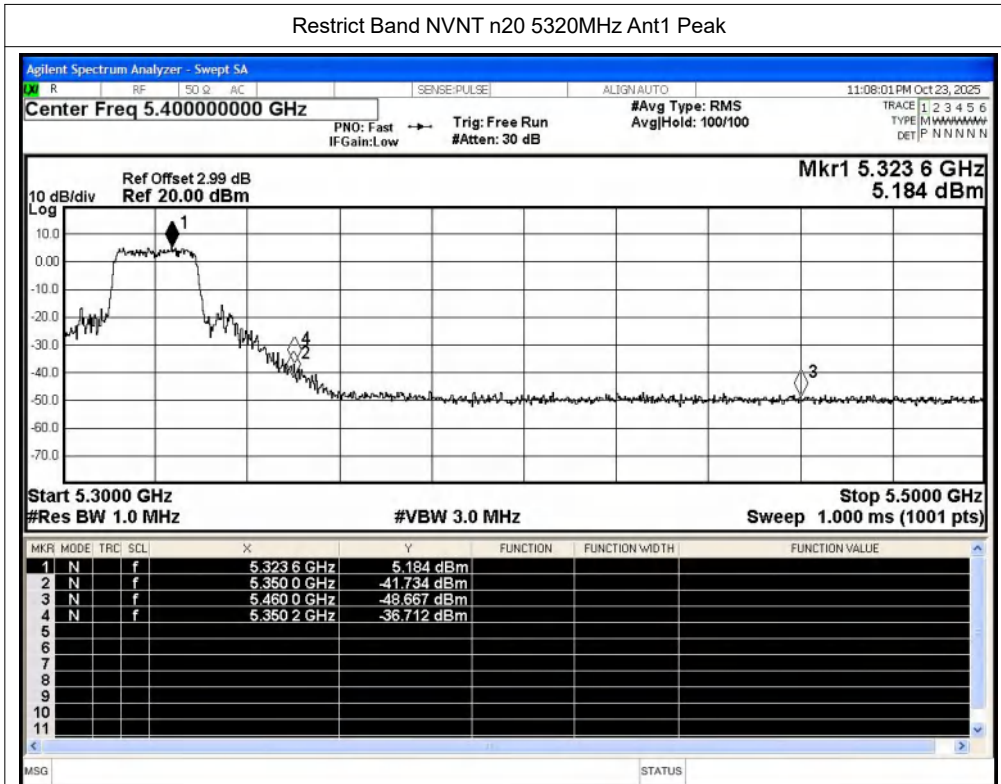


5. Restrict Band

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	5260	Ant1	4500	-51.09	5.1	-	49.24	Peak	68.2	Pass
NVNT	a	5260	Ant1	4500	-59.18	5.1	0.1	41.25	Average	54	Pass
NVNT	a	5260	Ant1	4773.78	-46.54	5.1	-	53.79	Peak	68.2	Pass
NVNT	a	5260	Ant1	4787.04	-55.05	5.1	0.1	45.38	Average	54	Pass
NVNT	a	5260	Ant1	5150	-47.98	5.1	-	52.35	Peak	68.2	Pass
NVNT	a	5260	Ant1	5150	-56.24	5.1	0.1	44.19	Average	54	Pass
NVNT	a	5320	Ant1	5350	-38.67	5.1	-	61.66	Peak	68.2	Pass
NVNT	a	5320	Ant1	5350	-53.42	5.1	0	46.91	Average	54	Pass
NVNT	a	5320	Ant1	5350.2	-38.43	5.1	-	61.9	Peak	68.2	Pass
NVNT	a	5320	Ant1	5351	-52.58	5.1	0	47.75	Average	54	Pass
NVNT	a	5320	Ant1	5460	-47.67	5.1	-	52.66	Peak	68.2	Pass
NVNT	a	5320	Ant1	5460	-57.85	5.1	0	42.48	Average	54	Pass
NVNT	n20	5260	Ant1	4500	-50.43	5.1	-	49.9	Peak	68.2	Pass
NVNT	n20	5260	Ant1	4500	-59.38	5.1	0.12	41.07	Average	54	Pass
NVNT	n20	5260	Ant1	4787.04	-45.72	5.1	-	54.61	Peak	68.2	Pass
NVNT	n20	5260	Ant1	4787.82	-54.63	5.1	0.12	45.82	Average	54	Pass
NVNT	n20	5260	Ant1	5150	-47.75	5.1	-	52.58	Peak	68.2	Pass
NVNT	n20	5260	Ant1	5150	-56.08	5.1	0.12	44.37	Average	54	Pass
NVNT	n20	5320	Ant1	5350	-41.73	5.1	-	58.6	Peak	68.2	Pass
NVNT	n20	5320	Ant1	5350	-52.16	5.1	0	48.17	Average	54	Pass
NVNT	n20	5320	Ant1	5350.2	-36.71	5.1	-	63.62	Peak	68.2	Pass
NVNT	n20	5320	Ant1	5350.2	-51.47	5.1	0	48.86	Average	54	Pass
NVNT	n20	5320	Ant1	5460	-48.67	5.1	-	51.66	Peak	68.2	Pass
NVNT	n20	5320	Ant1	5460	-57.69	5.1	0	42.64	Average	54	Pass
NVNT	n40	5270	Ant1	4500	-51.61	5.1	-	48.72	Peak	68.2	Pass
NVNT	n40	5270	Ant1	4500	-58.99	5.1	0.23	41.57	Average	54	Pass
NVNT	n40	5270	Ant1	4807.8	-43.77	5.1	-	56.56	Peak	68.2	Pass
NVNT	n40	5270	Ant1	4806.99	-51.49	5.1	0.23	49.07	Average	54	Pass
NVNT	n40	5270	Ant1	5150	-48.6	5.1	-	51.73	Peak	68.2	Pass
NVNT	n40	5270	Ant1	5150	-57.04	5.1	0.23	43.52	Average	54	Pass
NVNT	n40	5310	Ant1	5350	-40.75	5.1	-	59.58	Peak	68.2	Pass
NVNT	n40	5310	Ant1	5350	-52.59	5.1	0	47.74	Average	54	Pass
NVNT	n40	5310	Ant1	5350.4	-36.3	5.1	-	64.03	Peak	68.2	Pass
NVNT	n40	5310	Ant1	5350.2	-52.42	5.1	0	47.91	Average	54	Pass
NVNT	n40	5310	Ant1	5460	-48.6	5.1	-	51.73	Peak	68.2	Pass
NVNT	n40	5310	Ant1	5460	-57.95	5.1	0	42.38	Average	54	Pass
NVNT	ac20	5260	Ant1	4500	-48.75	5.1	-	51.58	Peak	68.2	Pass
NVNT	ac20	5260	Ant1	4500	-59.58	5.1	0.12	40.87	Average	54	Pass

NVNT	ac20	5260	Ant1	5134.92	-45.23	5.1	-	55.1	Peak	68.2	Pass
NVNT	ac20	5260	Ant1	4787.82	-54.23	5.1	0.12	46.22	Average	54	Pass
NVNT	ac20	5260	Ant1	5150	-49.34	5.1	-	50.99	Peak	68.2	Pass
NVNT	ac20	5260	Ant1	5150	-55.97	5.1	0.12	44.48	Average	54	Pass
NVNT	ac20	5320	Ant1	5350	-37.46	5.1	-	62.87	Peak	68.2	Pass
NVNT	ac20	5320	Ant1	5350	-52.21	5.1	0	48.12	Average	54	Pass
NVNT	ac20	5320	Ant1	5350.4	-37.02	5.1	-	63.31	Peak	68.2	Pass
NVNT	ac20	5320	Ant1	5460	-49.21	5.1	-	51.12	Peak	68.2	Pass
NVNT	ac20	5320	Ant1	5460	-57.59	5.1	0	42.74	Average	54	Pass
NVNT	ac40	5270	Ant1	4500	-51.49	5.1	-	48.84	Peak	68.2	Pass
NVNT	ac40	5270	Ant1	4500	-59.39	5.1	0.24	41.18	Average	54	Pass
NVNT	ac40	5270	Ant1	4806.99	-42.8	5.1	-	57.53	Peak	68.2	Pass
NVNT	ac40	5270	Ant1	4806.99	-51.8	5.1	0.24	48.77	Average	54	Pass
NVNT	ac40	5270	Ant1	5150	-48.54	5.1	-	51.79	Peak	68.2	Pass
NVNT	ac40	5270	Ant1	5150	-56.65	5.1	0.24	43.92	Average	54	Pass
NVNT	ac40	5310	Ant1	5350	-40.28	5.1	-	60.05	Peak	68.2	Pass
NVNT	ac40	5310	Ant1	5350	-51.38	5.1	0	48.95	Average	54	Pass
NVNT	ac40	5310	Ant1	5350.8	-38.18	5.1	-	62.15	Peak	68.2	Pass
NVNT	ac40	5310	Ant1	5350.2	-51.01	5.1	0	49.32	Average	54	Pass
NVNT	ac40	5310	Ant1	5460	-50.55	5.1	-	49.78	Peak	68.2	Pass
NVNT	ac40	5310	Ant1	5460	-58.42	5.1	0	41.91	Average	54	Pass
NVNT	ac80	5290	Ant1	4500	-51.41	5.1	-	48.92	Peak	68.2	Pass
NVNT	ac80	5290	Ant1	4500	-59.28	5.1	0.47	41.52	Average	54	Pass
NVNT	ac80	5290	Ant1	5135.1	-44.57	5.1	-	55.76	Peak	68.2	Pass
NVNT	ac80	5290	Ant1	5149.02	-54.55	5.1	0.47	46.25	Average	54	Pass
NVNT	ac80	5290	Ant1	5150	-46.89	5.1	-	53.44	Peak	68.2	Pass
NVNT	ac80	5290	Ant1	5150	-54.88	5.1	0.47	45.92	Average	54	Pass
NVNT	ac80	5290	Ant1	5350	-45.25	5.1	-	55.08	Peak	68.2	Pass
NVNT	ac80	5290	Ant1	5350	-55.87	5.1	0.47	44.93	Average	54	Pass
NVNT	ac80	5290	Ant1	5350.25	-44.41	5.1	-	55.92	Peak	68.2	Pass
NVNT	ac80	5290	Ant1	5460	-49.87	5.1	-	50.46	Peak	68.2	Pass
NVNT	ac80	5290	Ant1	5460	-58.45	5.1	0.47	42.35	Average	54	Pass

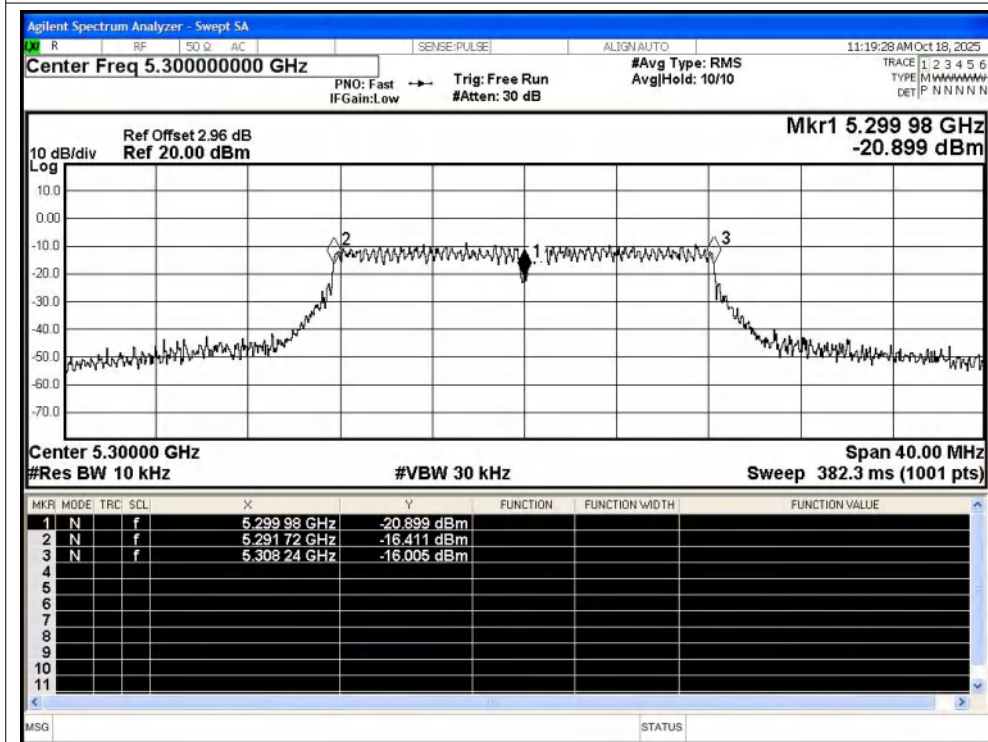
[illegible][illegible]



[illegible][illegible]

6. Frequency Stability

Condition	Mode	Frequency (MHz)	Antenna	Measured Frequency (MHz)	Frequency Error (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
NVNT	a	5260	Ant1	5260	0	0	25	Pass
NVNT	a	5300	Ant1	5299.98	-20000	-3.77	25	Pass
NVNT	a	5320	Ant1	5320	0	0	25	Pass
NVNT	n20	5260	Ant1	5259.98	-20000	-3.8	25	Pass
NVNT	n20	5300	Ant1	5299.98	-20000	-3.77	25	Pass
NVNT	n20	5320	Ant1	5319.98	-20000	-3.76	25	Pass
NVNT	n40	5270	Ant1	5270	0	0	25	Pass
NVNT	n40	5310	Ant1	5309.96	-40000	-7.53	25	Pass
NVNT	ac20	5260	Ant1	5259.98	-20000	-3.8	25	Pass
NVNT	ac20	5300	Ant1	5299.98	-20000	-3.77	25	Pass
NVNT	ac20	5320	Ant1	5319.98	-20000	-3.76	25	Pass
NVNT	ac40	5270	Ant1	5270	0	0	25	Pass
NVNT	ac40	5310	Ant1	5309.96	-40000	-7.53	25	Pass
NVNT	ac80	5290	Ant1	5290	0	0	25	Pass



[illegible]

Agilent Spectrum Analyzer - Swept SA

Center Freq 5.260000000 GHz

Ref Offset 2.75 dB
Ref 20.00 dBm

10 dB/div
Log

Mkr1 5.259 98 GHz
-20.410 dBm

Center 5.26000 GHz
#Res BW 10 kHz

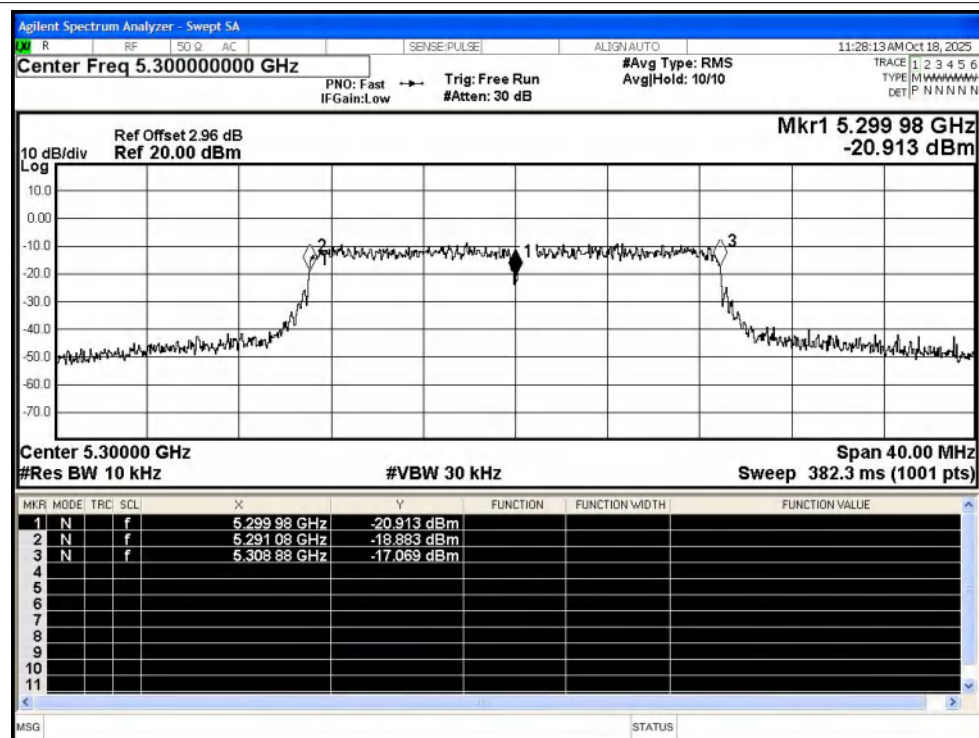
#VBW 30 kHz

Span 40.00 MHz
Sweep 382.3 ms (1001 pts)

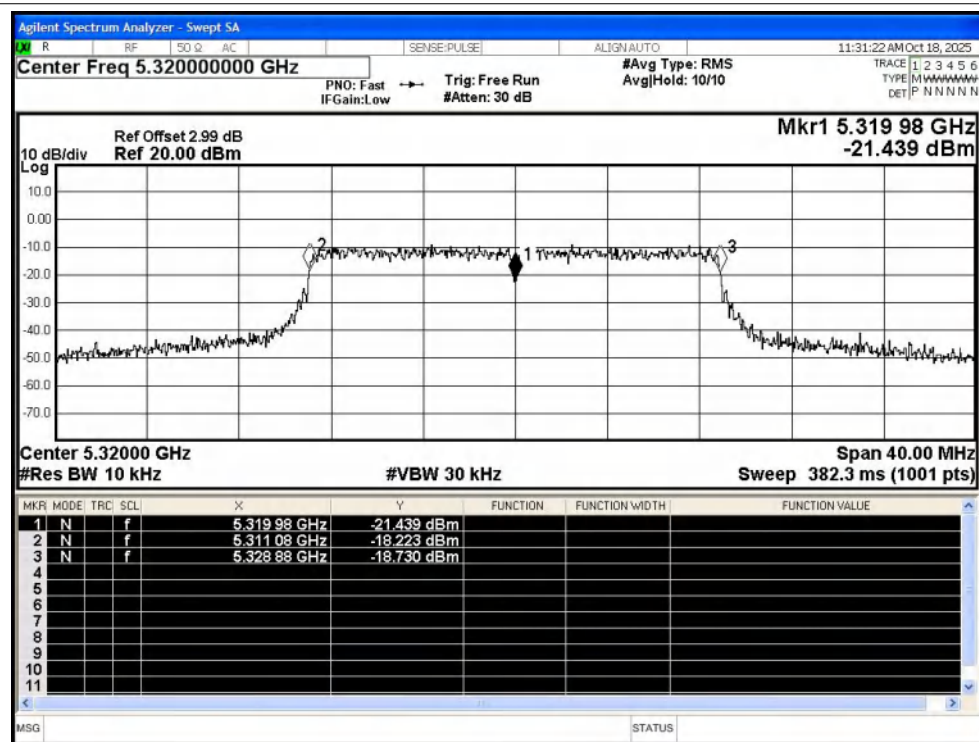
MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N		f	5.259 98 GHz	-20.410 dBm			
2	N		f	5.261 12 GHz	-18.901 dBm			
3	N		f	5.268 84 GHz	-16.504 dBm			
4								
5								
6								
7								
8								
9								
10								
11								

MSG STATUS

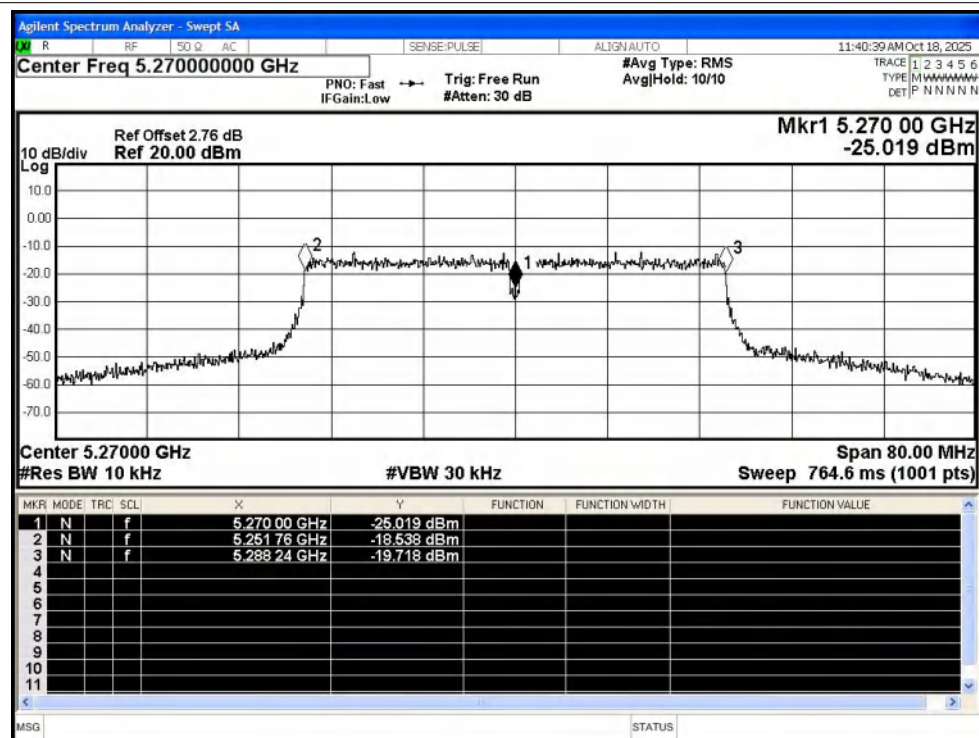
Freq. Stability NVNT n20 5300MHz Ant1



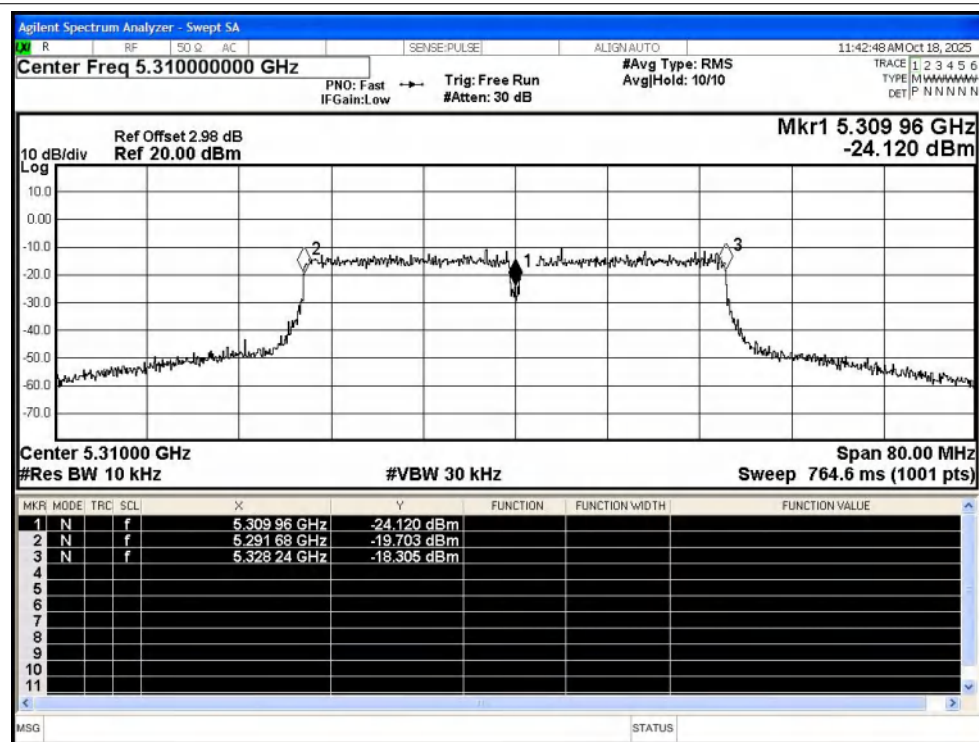
Freq. Stability NVNT n20 5320MHz Ant1



Freq. Stability NVNT n40 5270MHz Ant1



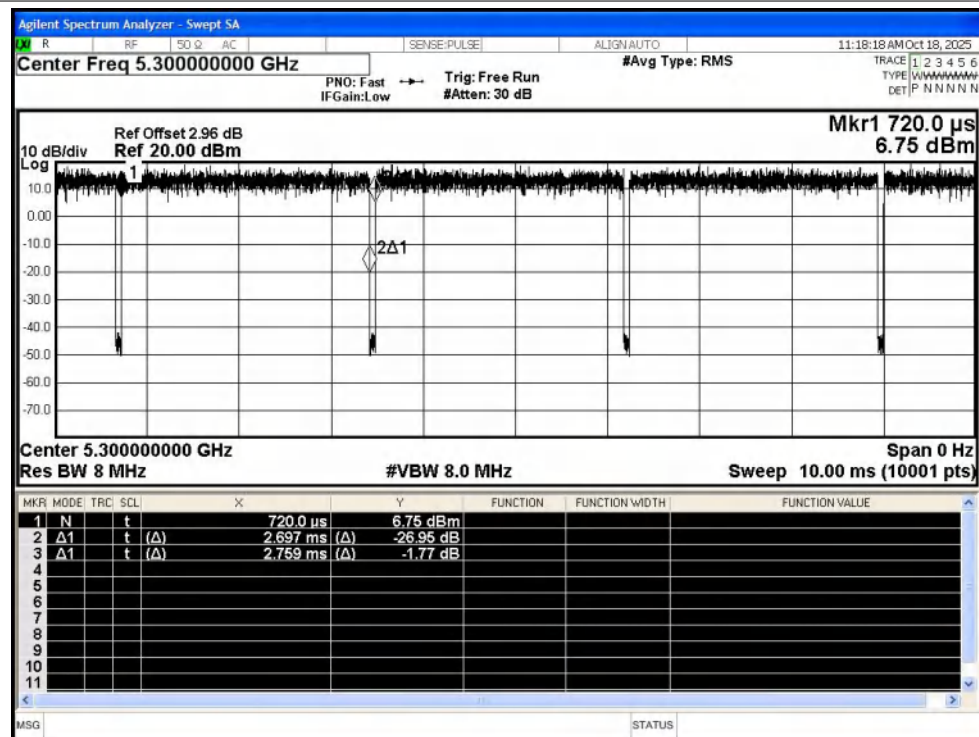
Freq. Stability NVNT n40 5310MHz Ant1



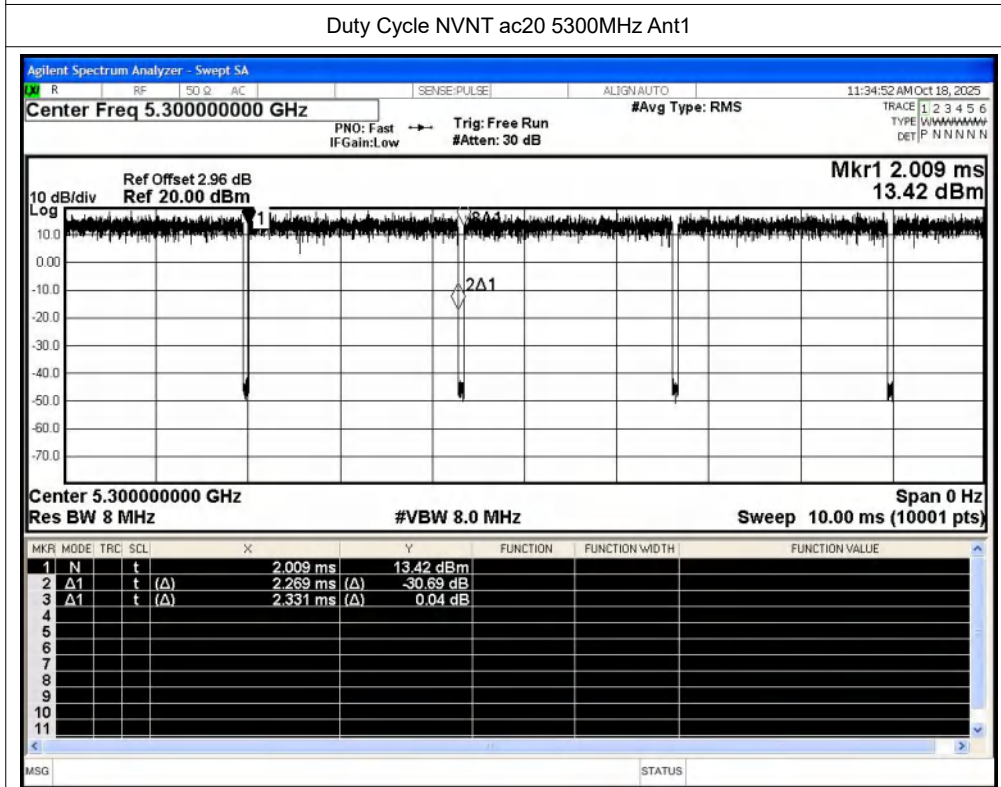
[illegible][illegible]

7. Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	a	5260	Ant1	97.72	0.1	0.37
NVNT	a	5300	Ant1	97.75	0.1	0.37
NVNT	a	5320	Ant1	97.75	0.1	0.37
NVNT	n20	5260	Ant1	97.29	0.12	0.44
NVNT	n20	5300	Ant1	97.29	0.12	0.44
NVNT	n20	5320	Ant1	97.29	0.12	0.44
NVNT	n40	5270	Ant1	94.79	0.23	0.9
NVNT	n40	5310	Ant1	94.71	0.24	0.9
NVNT	ac20	5260	Ant1	97.34	0.12	0.44
NVNT	ac20	5300	Ant1	97.34	0.12	0.44
NVNT	ac20	5320	Ant1	97.34	0.12	0.44
NVNT	ac40	5270	Ant1	94.72	0.24	0.9
NVNT	ac40	5310	Ant1	94.72	0.24	0.9
NVNT	ac80	5290	Ant1	89.65	0.47	1.86



[illegible][illegible]



[illegible][illegible]

[illegible][illegible]