



## Appendix D

### RF Test Data for 5.2GWIFI (Conducted Measurement)

**Product Name:** Smartphone

**Test Model:** Smooth 5

**Environmental Conditions**

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





### D.1 -26dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-26 dB Bandwidth (MHz)	Limit -26 dB Bandwidth (MHz)	Verdict
NVNT	a	5180	Ant1	23.506	---	Pass
NVNT	a	5200	Ant1	22.859	---	Pass
NVNT	a	5240	Ant1	25.141	---	Pass
NVNT	n20	5180	Ant1	22.429	---	Pass
NVNT	n20	5200	Ant1	21.647	---	Pass
NVNT	n20	5240	Ant1	26.336	---	Pass
NVNT	n40	5190	Ant1	53.854	---	Pass
NVNT	n40	5230	Ant1	57.434	---	Pass
NVNT	ac20	5180	Ant1	24.419	---	Pass
NVNT	ac20	5200	Ant1	25.456	---	Pass
NVNT	ac20	5240	Ant1	27.328	---	Pass
NVNT	ac40	5190	Ant1	55.529	---	Pass
NVNT	ac40	5230	Ant1	58.883	---	Pass

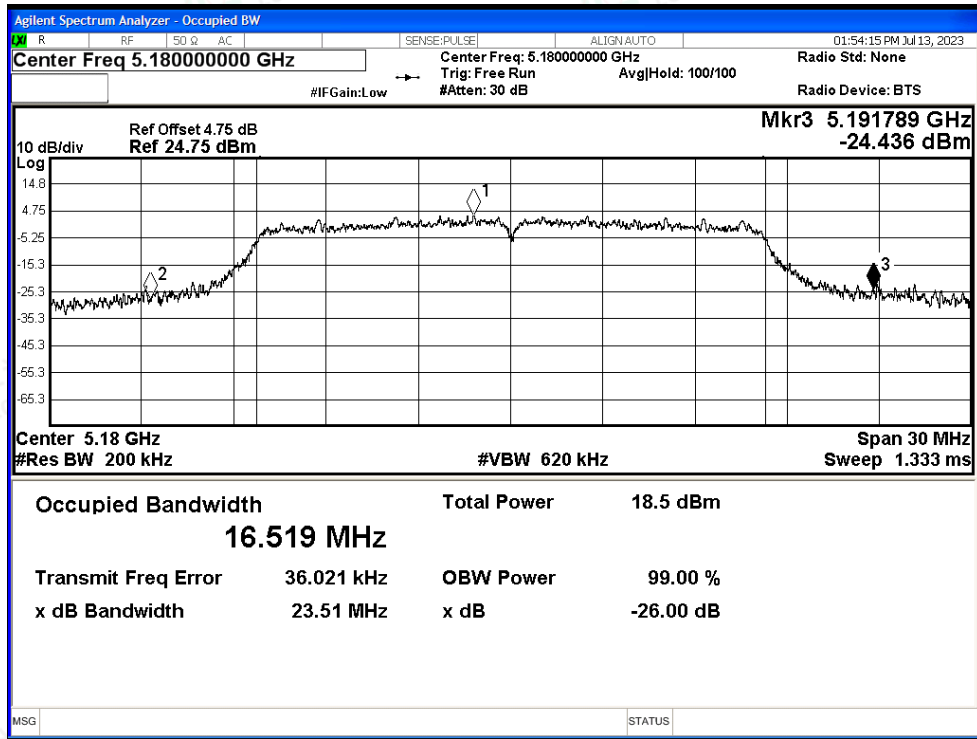


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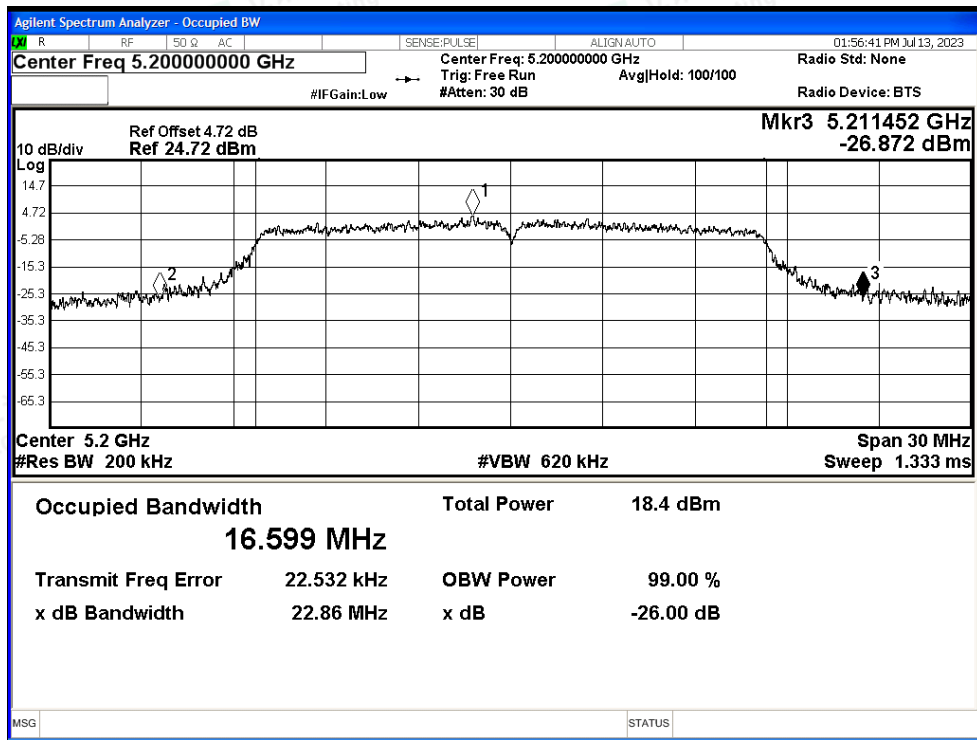


Test Graphs

-26dB Bandwidth NVNT a 5180MHz Ant1

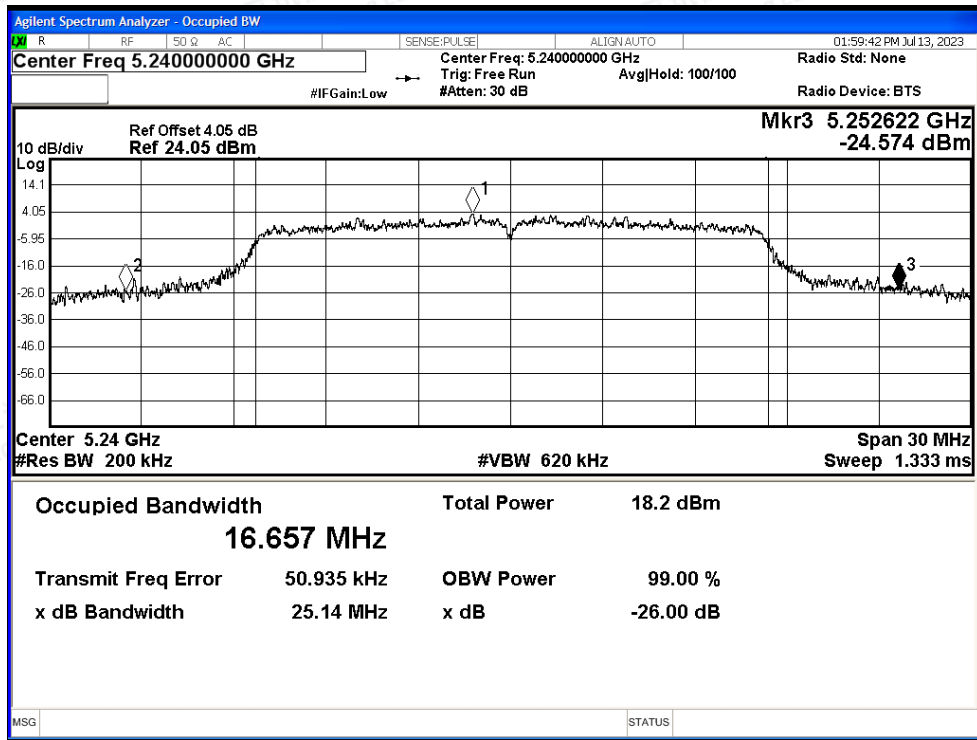


-26dB Bandwidth NVNT a 5200MHz Ant1

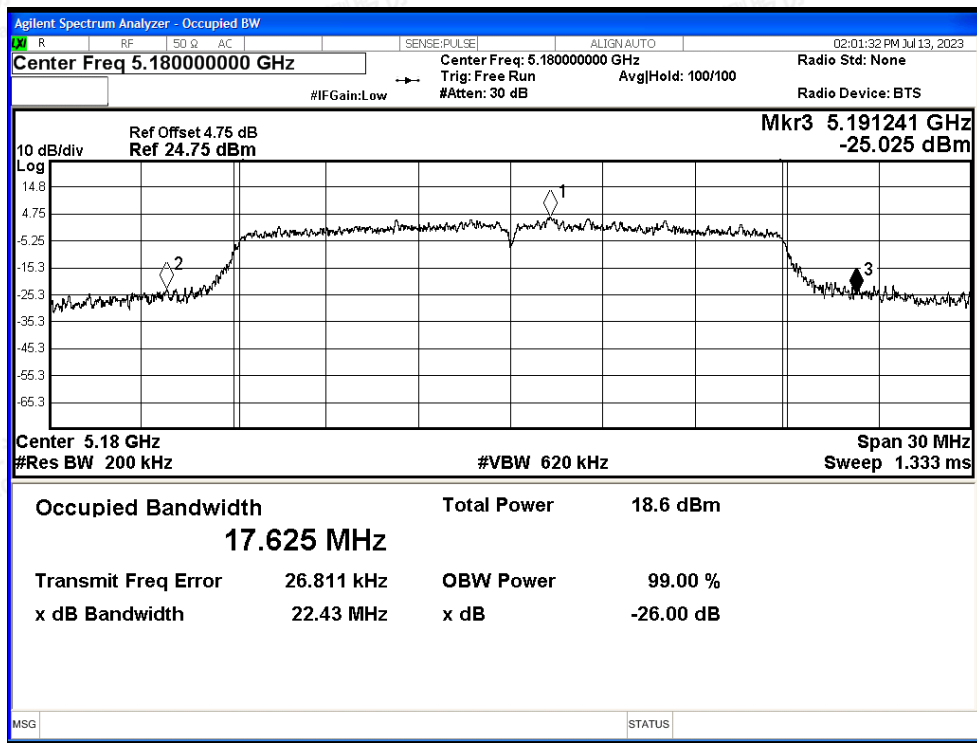




-26dB Bandwidth NVNT a 5240MHz Ant1

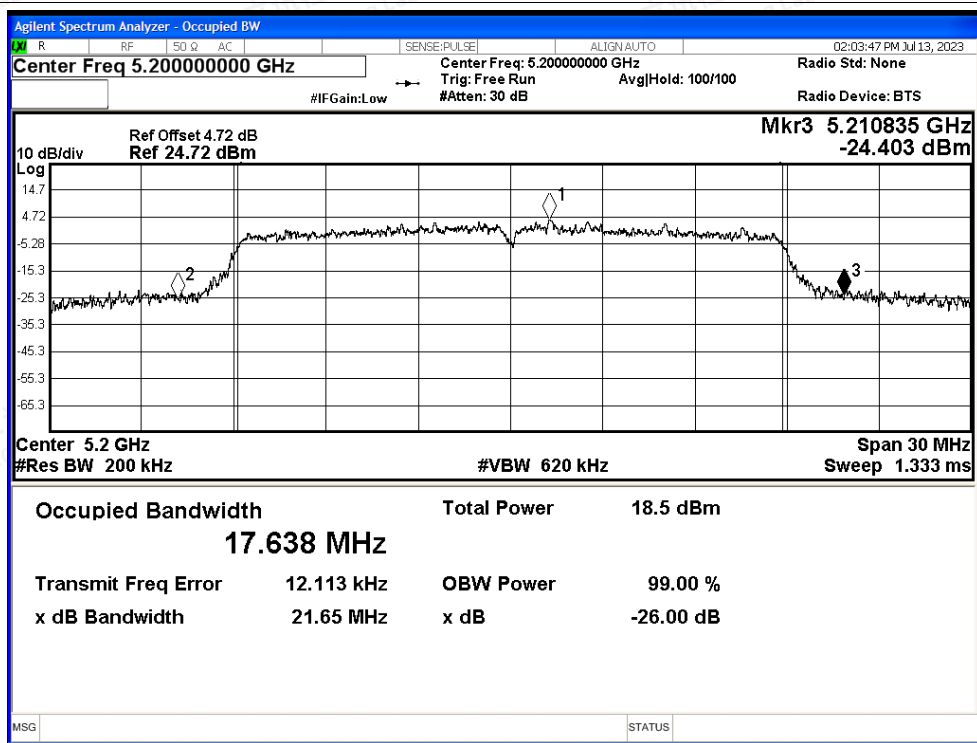


-26dB Bandwidth NVNT n20 5180MHz Ant1

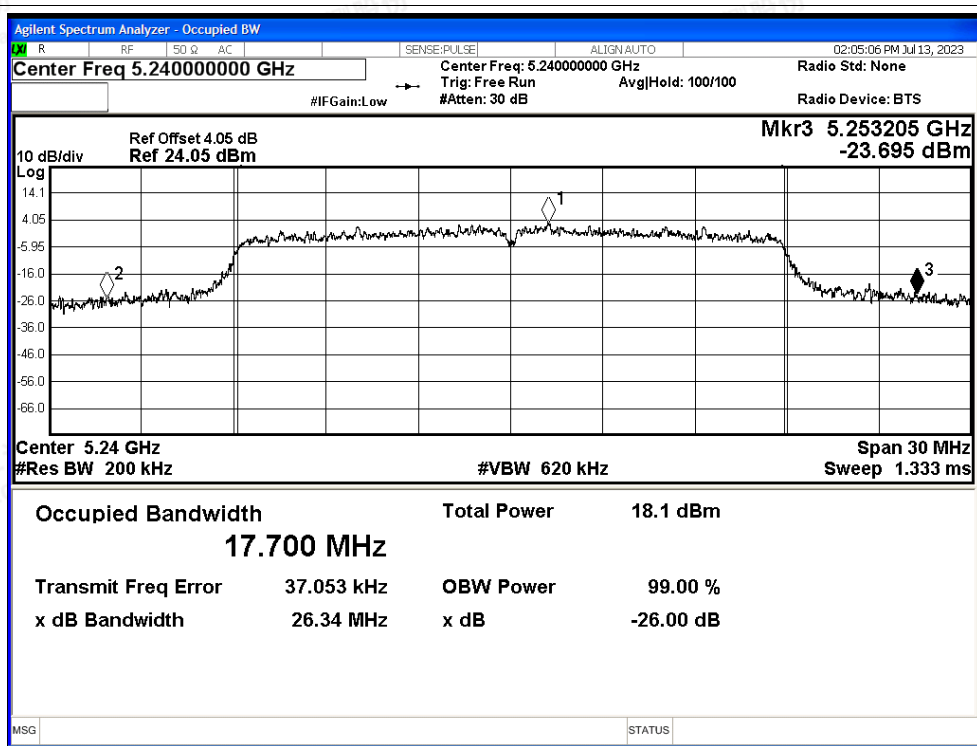




-26dB Bandwidth NVNT n20 5200MHz Ant1

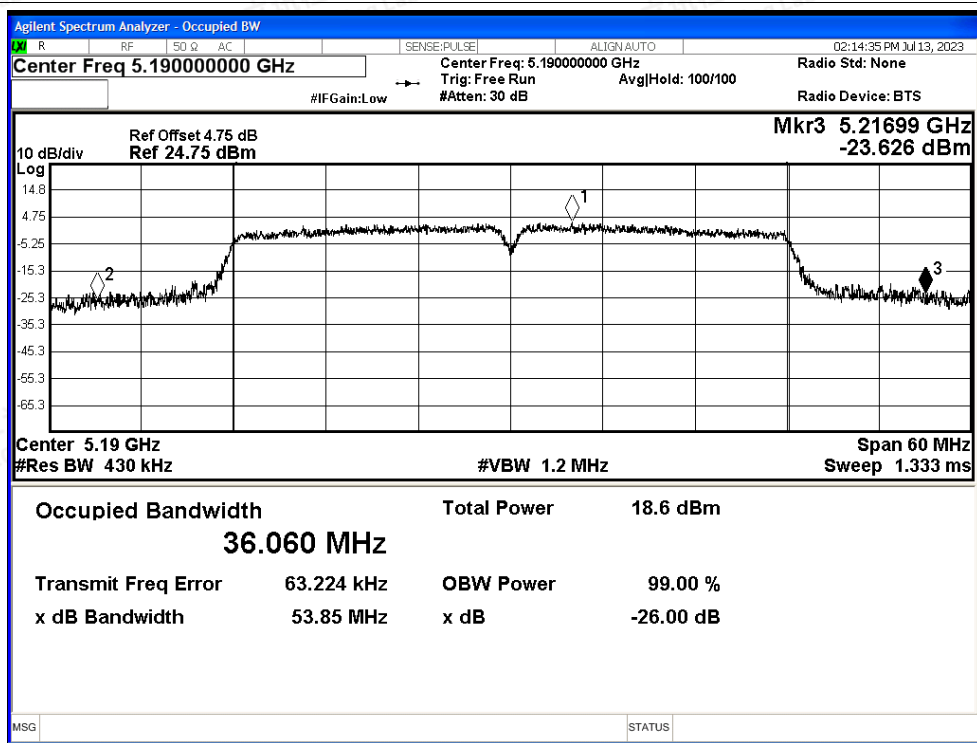


-26dB Bandwidth NVNT n20 5240MHz Ant1

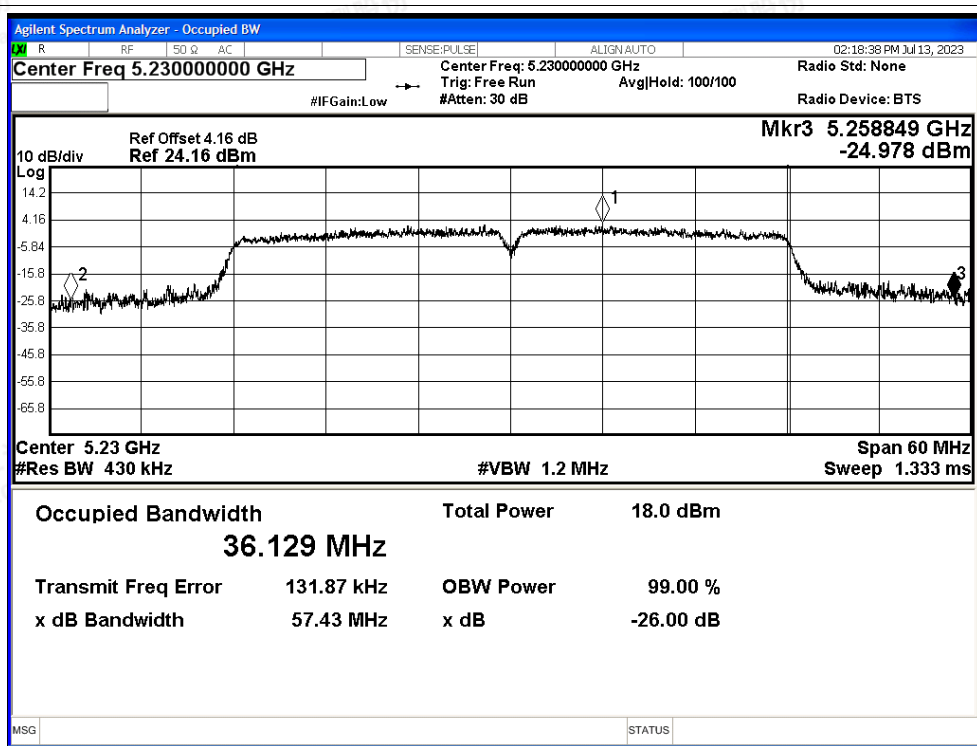




-26dB Bandwidth NVNT n40 5190MHz Ant1

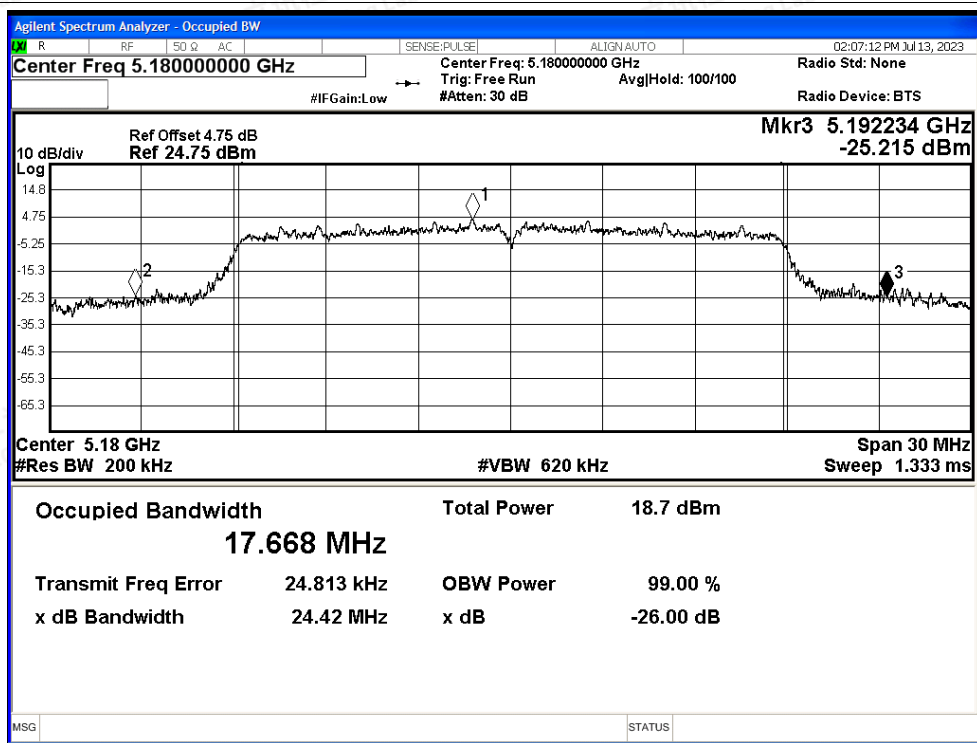


-26dB Bandwidth NVNT n40 5230MHz Ant1

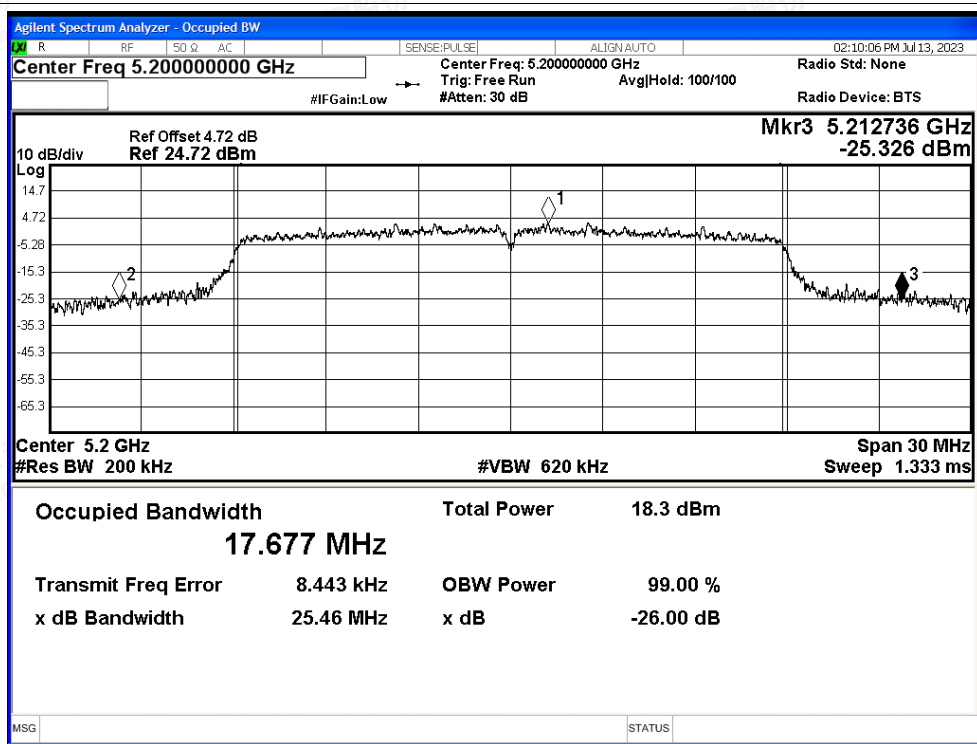




-26dB Bandwidth NVNT ac20 5180MHz Ant1

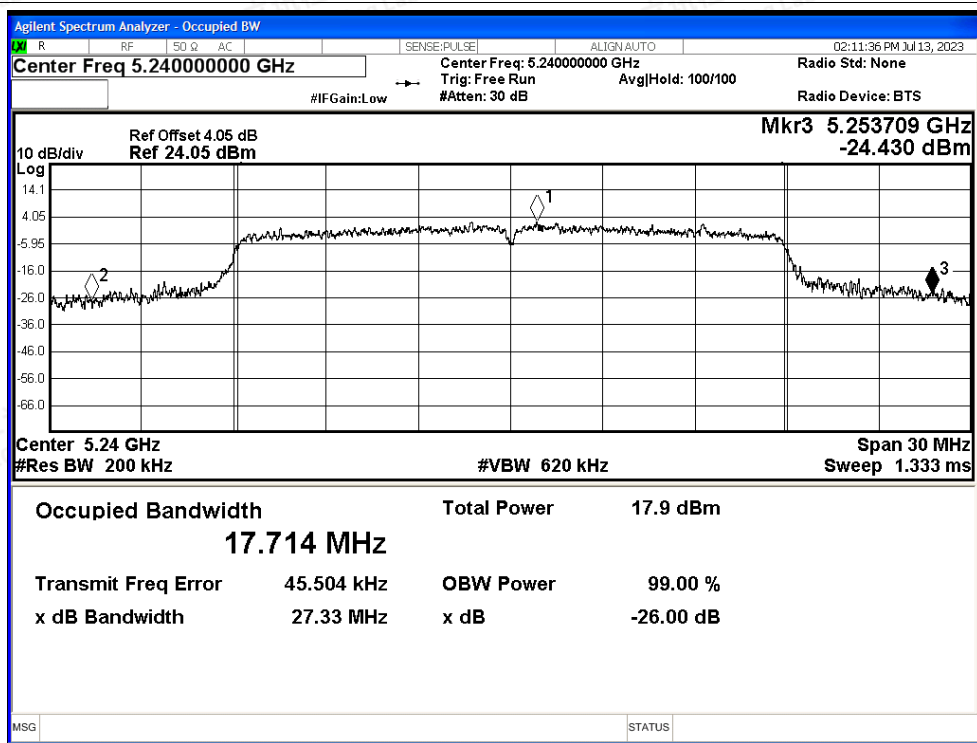


-26dB Bandwidth NVNT ac20 5200MHz Ant1

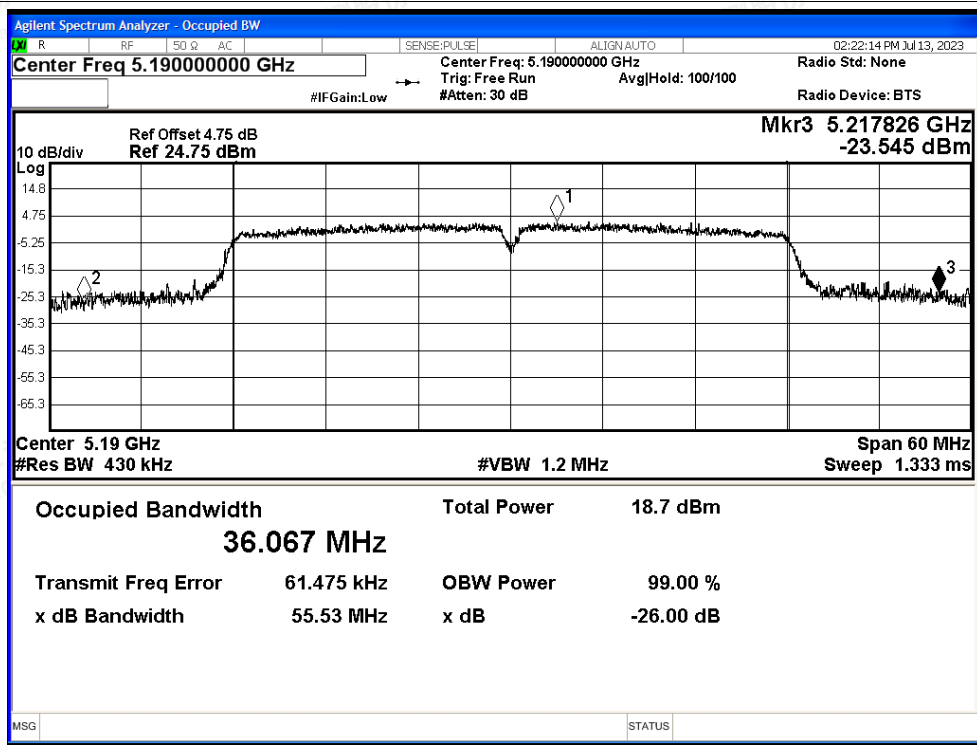




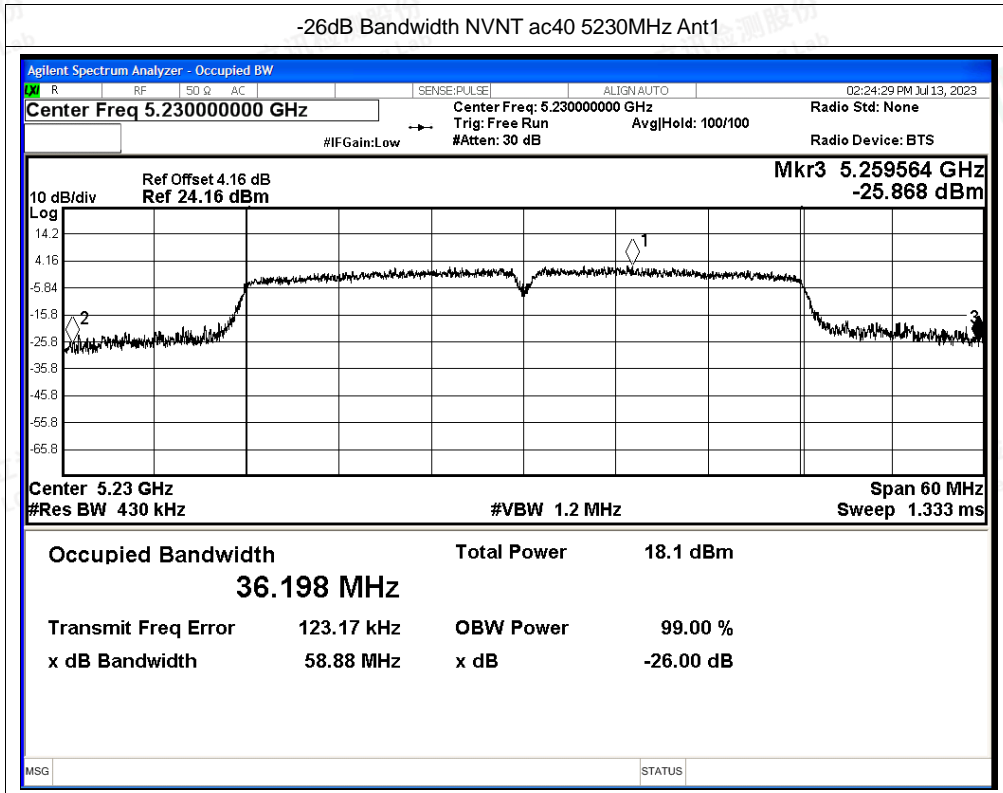
-26dB Bandwidth NVNT ac20 5240MHz Ant1



-26dB Bandwidth NVNT ac40 5190MHz Ant1









### D.2 Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	a	5180	Ant1	12.86	0.11	12.97	24	Pass
NVNT	a	5200	Ant1	12.81	0.11	12.92	24	Pass
NVNT	a	5240	Ant1	12.41	0.11	12.52	24	Pass
NVNT	n20	5180	Ant1	12.74	0.12	12.86	24	Pass
NVNT	n20	5200	Ant1	12.79	0.12	12.91	24	Pass
NVNT	n20	5240	Ant1	12.38	0.12	12.50	24	Pass
NVNT	n40	5190	Ant1	12.79	0.22	13.01	24	Pass
NVNT	n40	5230	Ant1	12.08	0.22	12.30	24	Pass
NVNT	ac20	5180	Ant1	12.77	0.12	12.89	24	Pass
NVNT	ac20	5200	Ant1	12.74	0.12	12.86	24	Pass
NVNT	ac20	5240	Ant1	12.37	0.11	12.48	24	Pass
NVNT	ac40	5190	Ant1	12.78	0.22	13.00	24	Pass
NVNT	ac40	5230	Ant1	12.16	0.22	12.38	24	Pass



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### D.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	5180	Ant1	3.08	0.11	3.19	11	Pass
NVNT	a	5200	Ant1	3.27	0.11	3.38	11	Pass
NVNT	a	5240	Ant1	3.15	0.11	3.26	11	Pass
NVNT	n20	5180	Ant1	2.89	0.12	3.01	11	Pass
NVNT	n20	5200	Ant1	2.85	0.12	2.97	11	Pass
NVNT	n20	5240	Ant1	2.59	0.12	2.71	11	Pass
NVNT	n40	5190	Ant1	-0.32	0.22	-0.1	11	Pass
NVNT	n40	5230	Ant1	-0.49	0.22	-0.27	11	Pass
NVNT	ac20	5180	Ant1	2.89	0.12	3.01	11	Pass
NVNT	ac20	5200	Ant1	2.94	0.12	3.06	11	Pass
NVNT	ac20	5240	Ant1	2.51	0.11	2.62	11	Pass
NVNT	ac40	5190	Ant1	-0.49	0.22	-0.27	11	Pass
NVNT	ac40	5230	Ant1	-1.15	0.22	-0.93	11	Pass

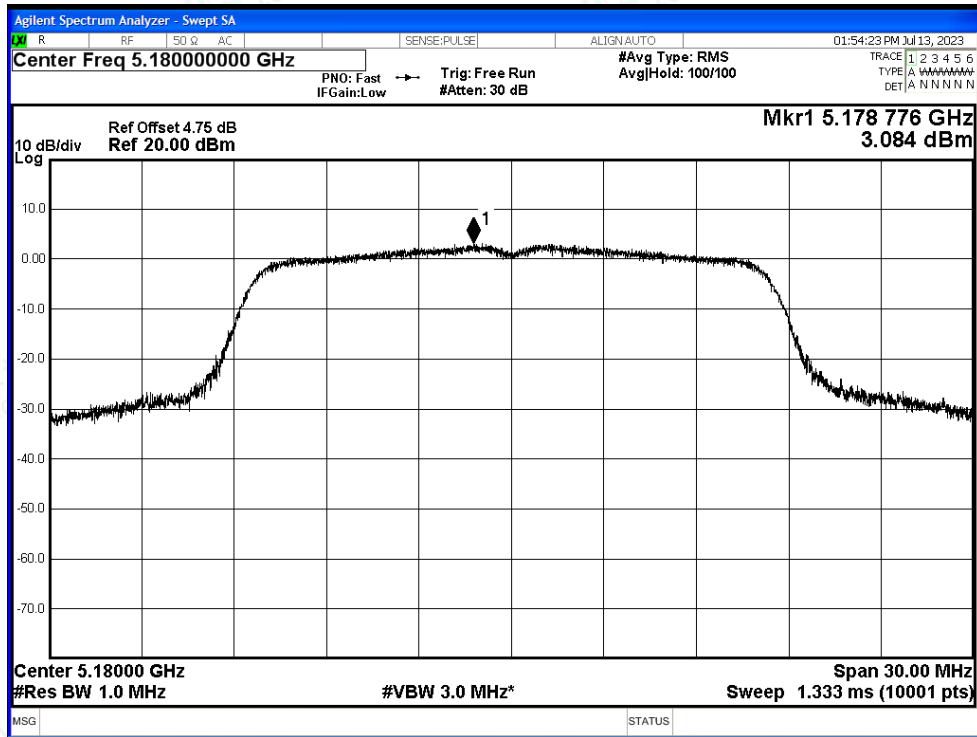


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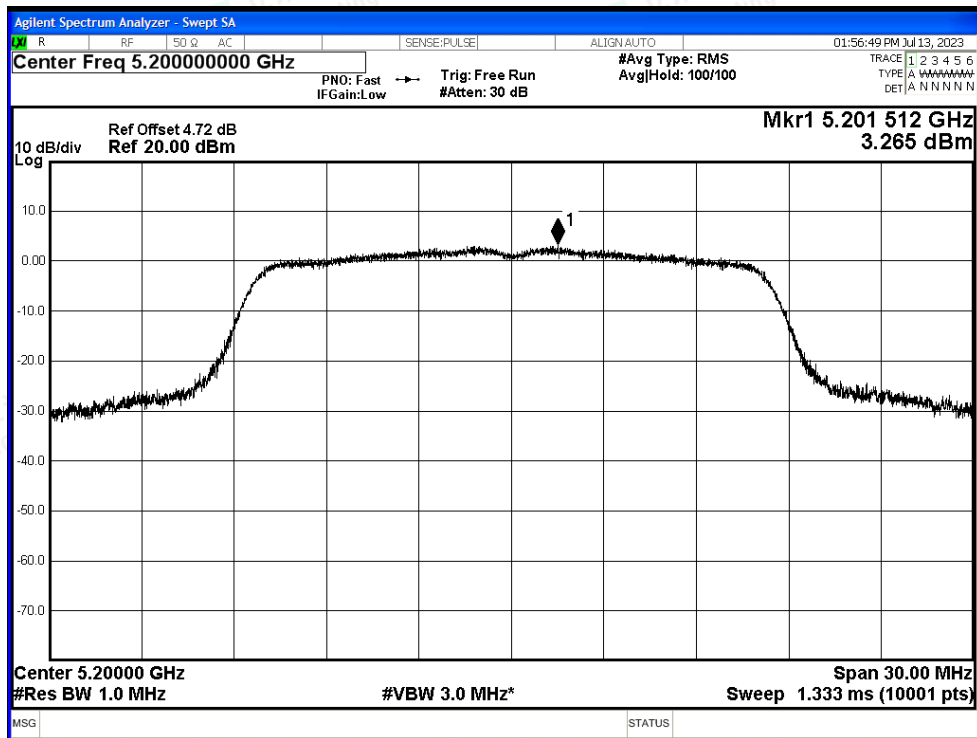


Test Graphs

PSD NVNT a 5180MHz Ant1

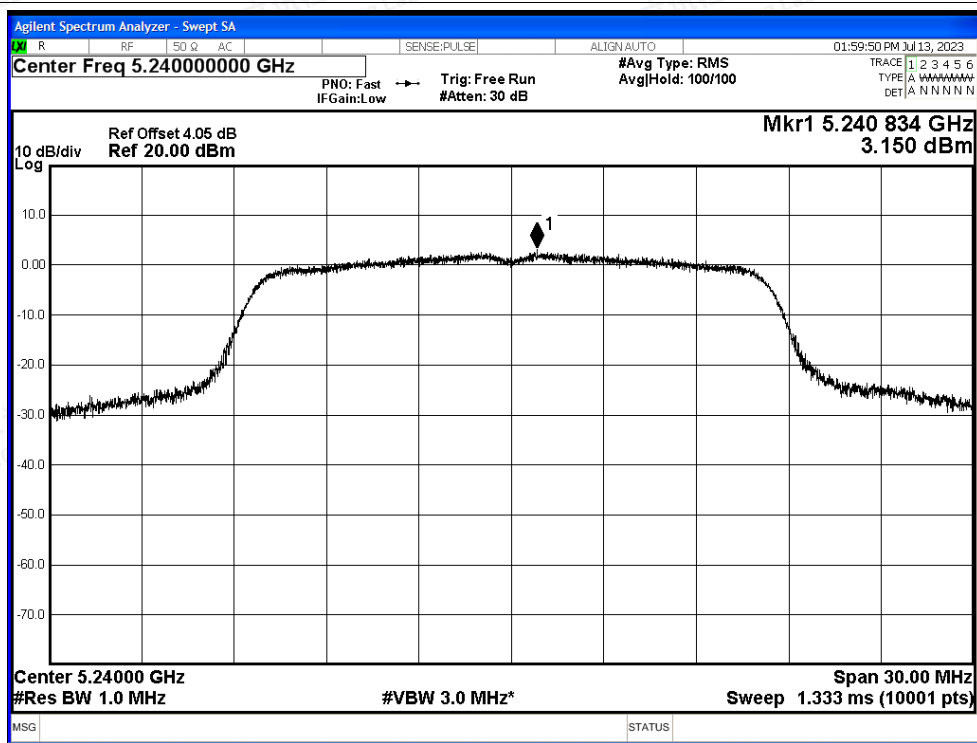


PSD NVNT a 5200MHz Ant1

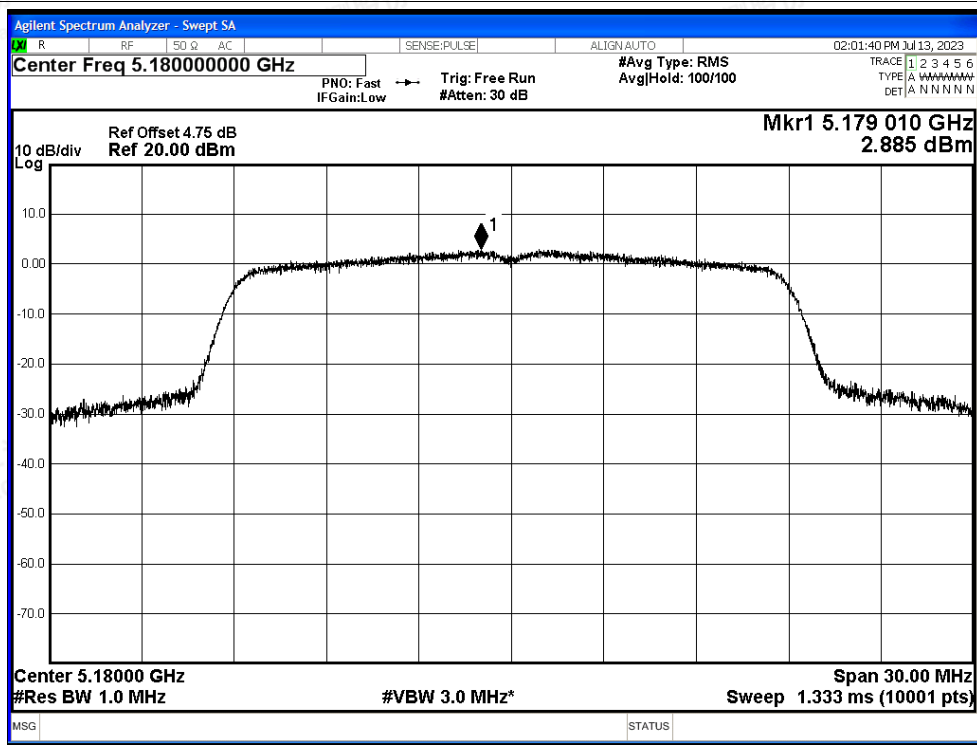


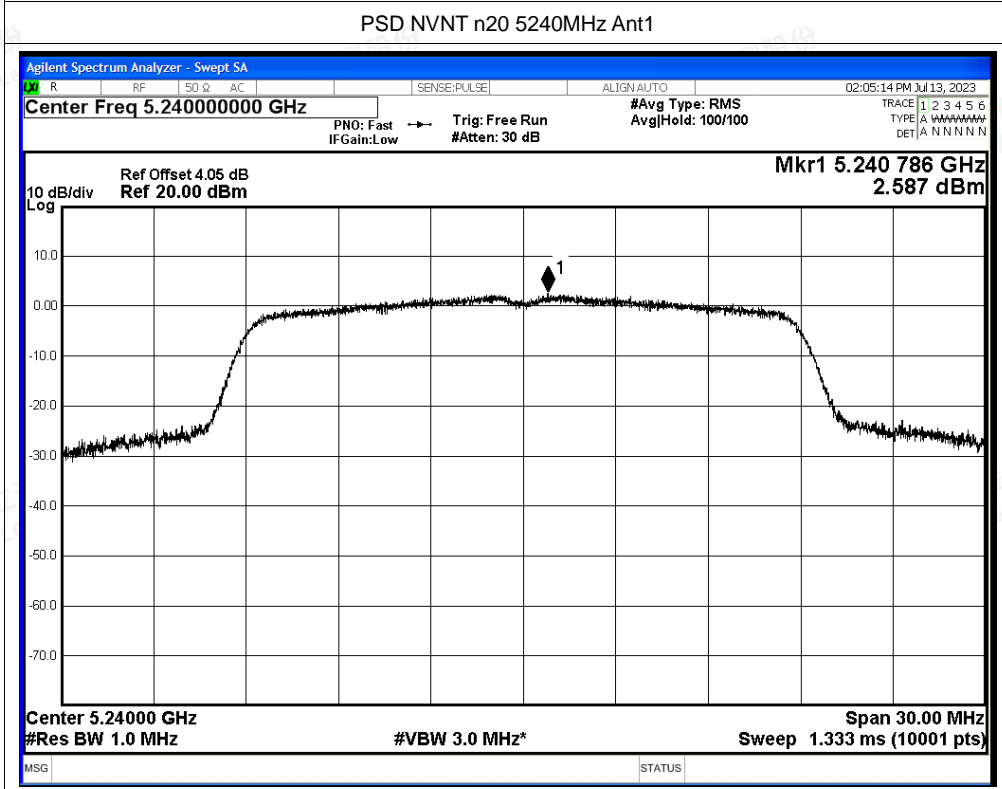
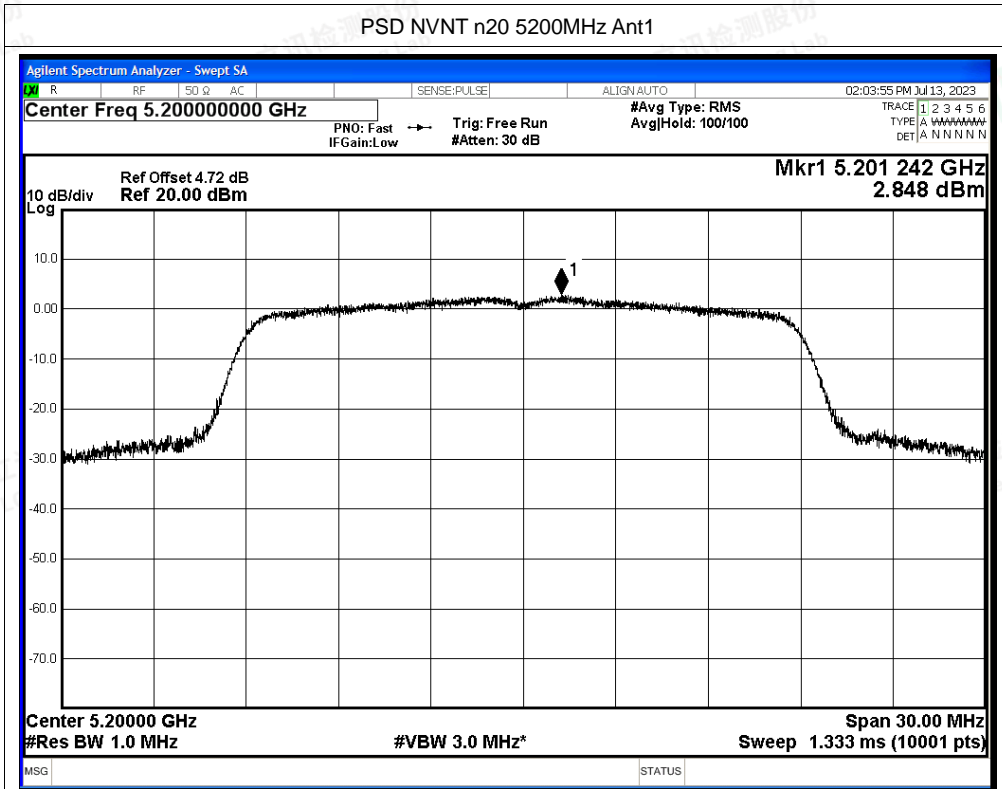


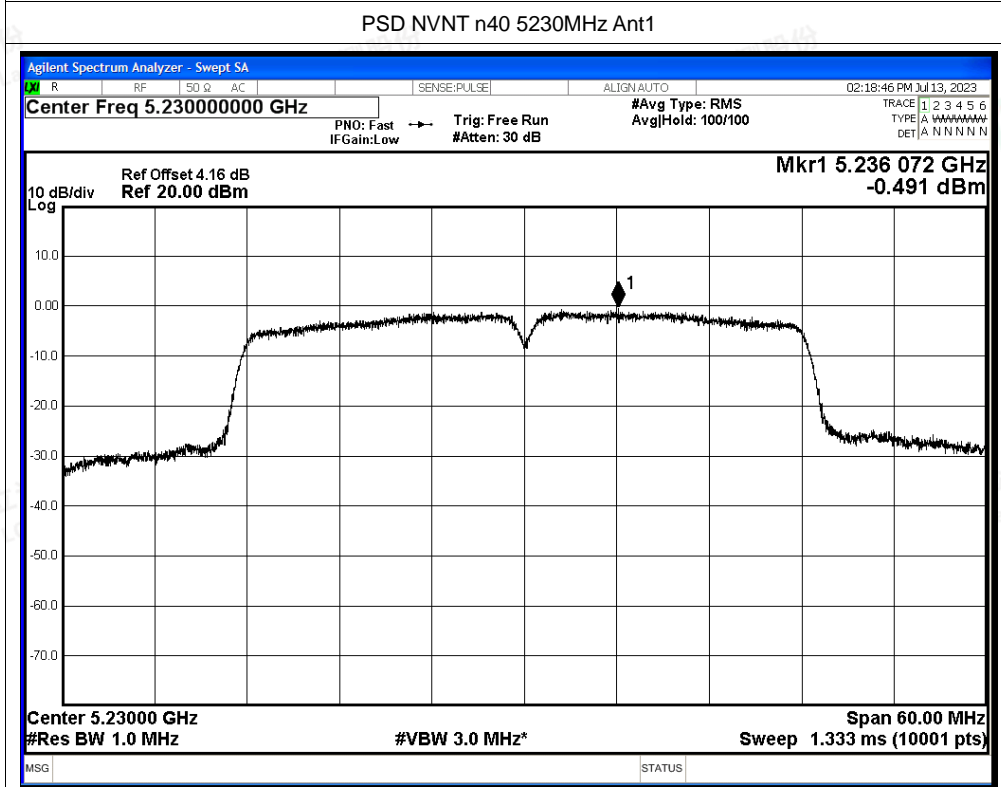
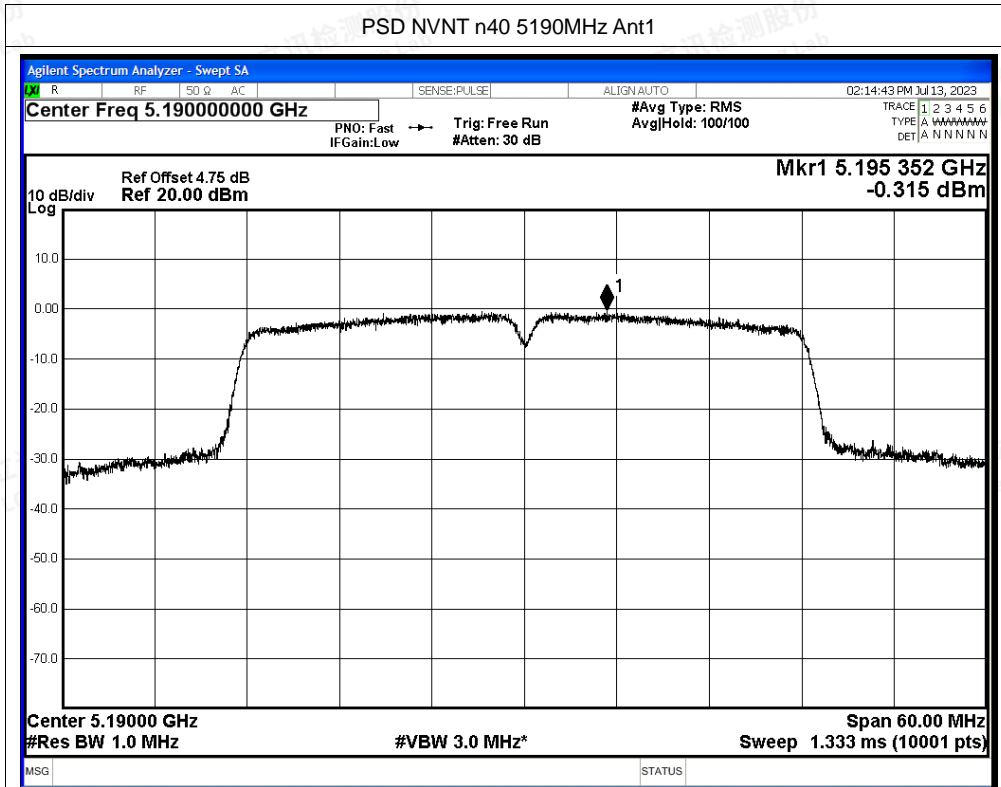
PSD NVNT a 5240MHz Ant1



PSD NVNT n20 5180MHz Ant1

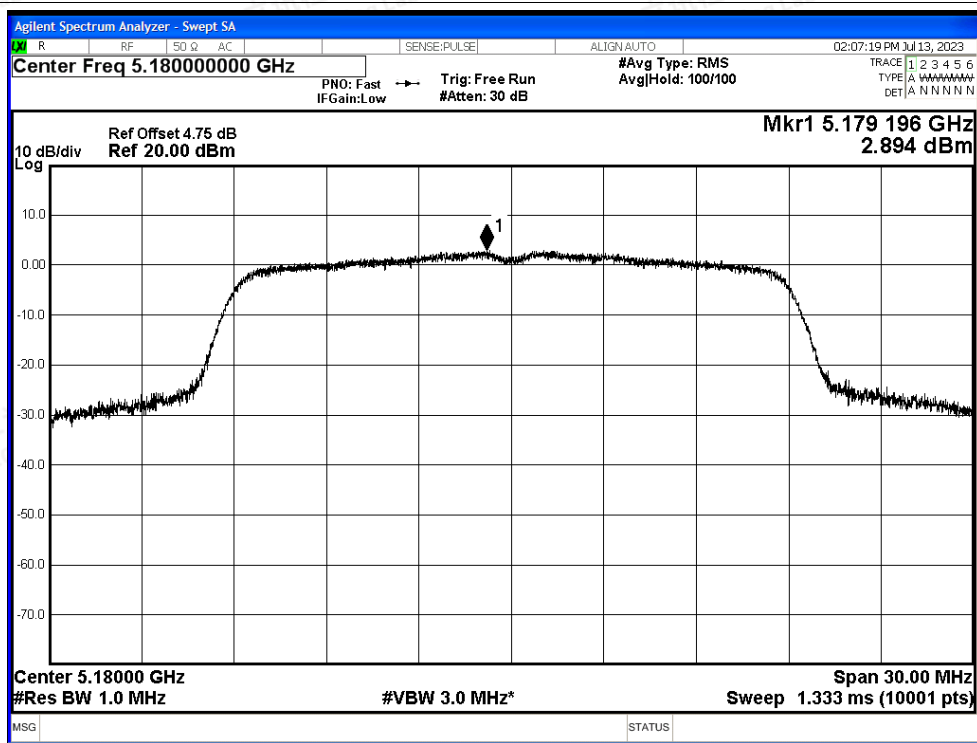




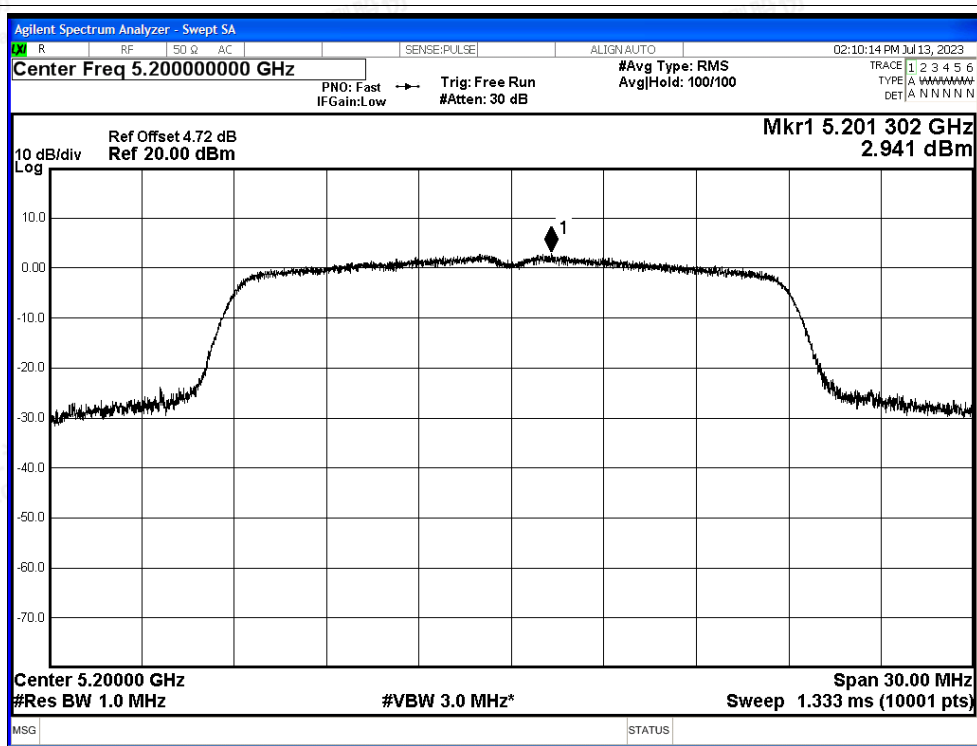




PSD NVNT ac20 5180MHz Ant1



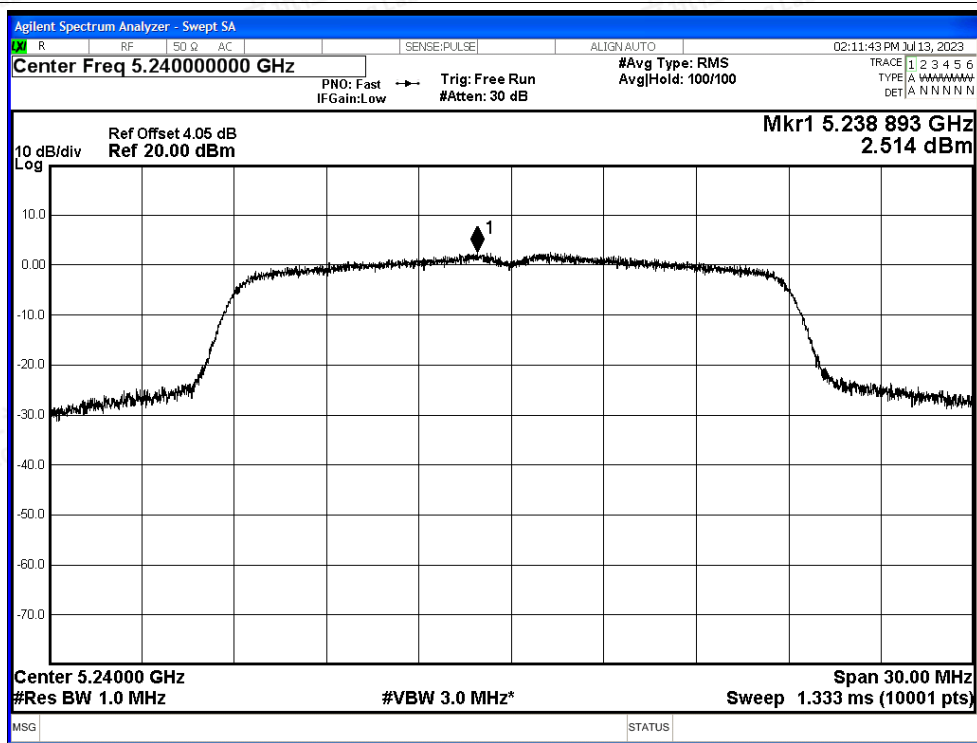
PSD NVNT ac20 5200MHz Ant1



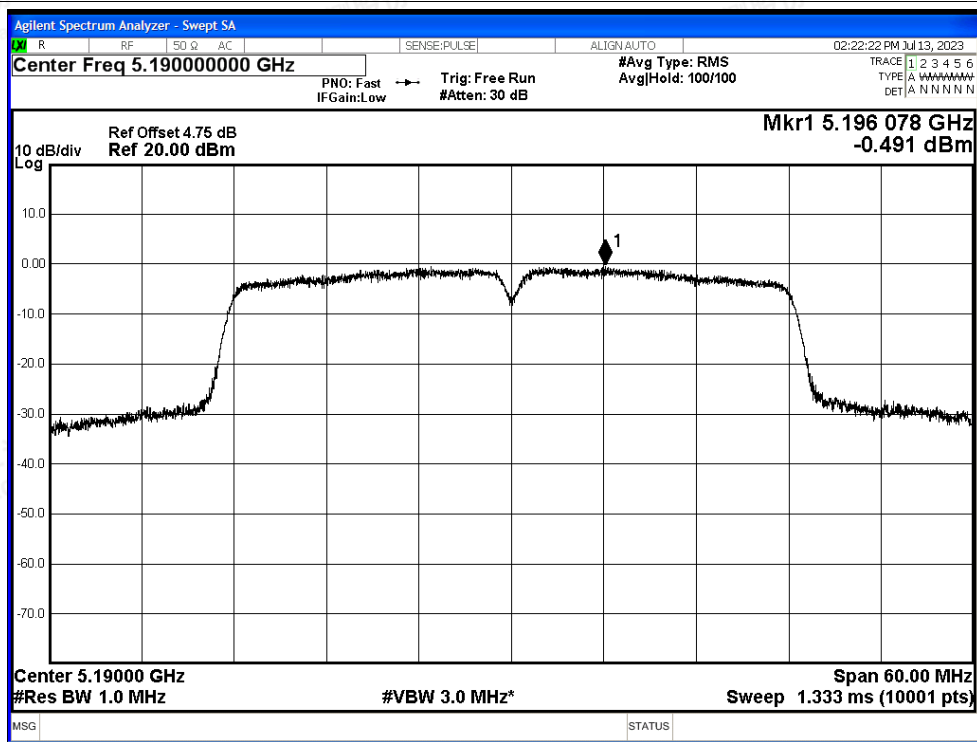


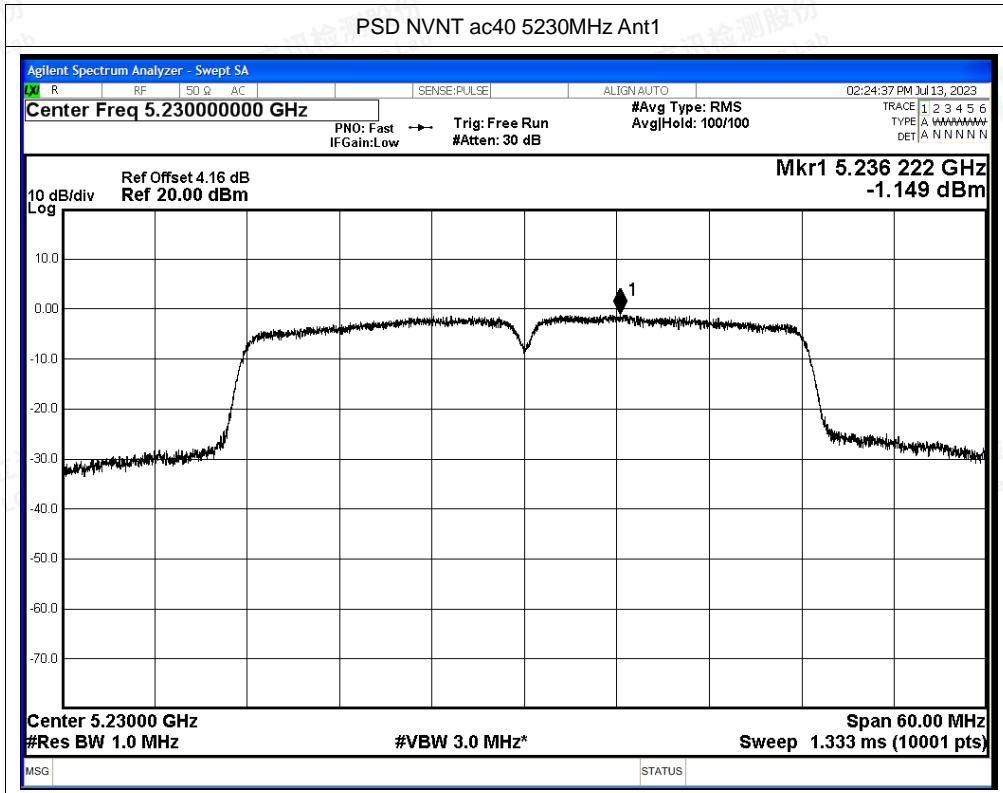


PSD NVNT ac20 5240MHz Ant1



PSD NVNT ac40 5190MHz Ant1







## D.4 Restrict Band

Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	a	5180	Ant1	4500	-48.92	2	48.31	Peak	68.2	Pass
NVNT	a	5180	Ant1	4500	-56.02	2	41.21	Average	54	Pass
NVNT	a	5180	Ant1	5149.6	-41.6	2	55.63	Peak	68.2	Pass
NVNT	a	5180	Ant1	5149.6	-49.33	2	47.9	Average	54	Pass
NVNT	a	5180	Ant1	5150	-42.21	2	55.02	Peak	68.2	Pass
NVNT	a	5180	Ant1	5150	-49.45	2	47.78	Average	54	Pass
NVNT	a	5240	Ant1	5350	-45	2	52.23	Peak	68.2	Pass
NVNT	a	5240	Ant1	5350	-53.56	2	43.67	Average	54	Pass
NVNT	a	5240	Ant1	5410.8	-44.8	2	52.43	Peak	68.2	Pass
NVNT	a	5240	Ant1	5350.08	-53.56	2	43.67	Average	54	Pass
NVNT	a	5240	Ant1	5460	-48.25	2	48.98	Peak	68.2	Pass
NVNT	a	5240	Ant1	5460	-55.54	2	41.69	Average	54	Pass
NVNT	n20	5180	Ant1	4500	-49.88	2	47.35	Peak	68.2	Pass
NVNT	n20	5180	Ant1	4500	-56.1	2	41.13	Average	54	Pass
NVNT	n20	5180	Ant1	5149.6	-41.05	2	56.18	Peak	68.2	Pass
NVNT	n20	5180	Ant1	5149.6	-49.09	2	48.14	Average	54	Pass
NVNT	n20	5180	Ant1	5150	-40.07	2	57.16	Peak	68.2	Pass
NVNT	n20	5180	Ant1	5150	-48.97	2	48.26	Average	54	Pass
NVNT	n20	5240	Ant1	5350	-47.9	2	49.33	Peak	68.2	Pass
NVNT	n20	5240	Ant1	5350	-53.59	2	43.64	Average	54	Pass
NVNT	n20	5240	Ant1	5351.04	-44.35	2	52.88	Peak	68.2	Pass
NVNT	n20	5240	Ant1	5351.28	-53.51	2	43.72	Average	54	Pass
NVNT	n20	5240	Ant1	5460	-46.28	2	50.95	Peak	68.2	Pass
NVNT	n20	5240	Ant1	5460	-55.78	2	41.45	Average	54	Pass
NVNT	n40	5190	Ant1	4500	-49.61	2	47.62	Peak	68.2	Pass
NVNT	n40	5190	Ant1	4500	-55.85	2	41.38	Average	54	Pass
NVNT	n40	5190	Ant1	4941.65	-45.3	2	51.93	Peak	68.2	Pass
NVNT	n40	5190	Ant1	5039.47	-54.27	2	42.96	Average	54	Pass
NVNT	n40	5190	Ant1	5150	-47.4	2	49.83	Peak	68.2	Pass
NVNT	n40	5190	Ant1	5150	-54.77	2	42.46	Average	54	Pass
NVNT	n40	5230	Ant1	5350	-46.43	2	50.8	Peak	68.2	Pass
NVNT	n40	5230	Ant1	5350	-53.63	2	43.6	Average	54	Pass
NVNT	n40	5230	Ant1	5380.35	-43.53	2	53.7	Peak	68.2	Pass
NVNT	n40	5230	Ant1	5378.46	-52.66	2	44.57	Average	54	Pass
NVNT	n40	5230	Ant1	5460	-47.38	2	49.85	Peak	68.2	Pass
NVNT	n40	5230	Ant1	5460	-55.34	2	41.89	Average	54	Pass
NVNT	ac20	5180	Ant1	4500	-49.21	2	48.02	Peak	68.2	Pass





NVNT	ac20	5180	Ant1	4500	-56.12	2	41.11	Average	54	Pass
NVNT	ac20	5180	Ant1	5148.9	-37.6	2	59.63	Peak	68.2	Pass
NVNT	ac20	5180	Ant1	5149.6	-48.97	2	48.26	Average	54	Pass
NVNT	ac20	5180	Ant1	5150	-41.3	2	55.93	Peak	68.2	Pass
NVNT	ac20	5180	Ant1	5150	-48.85	2	48.38	Average	54	Pass
NVNT	ac20	5240	Ant1	5350	-47.35	2	49.88	Peak	68.2	Pass
NVNT	ac20	5240	Ant1	5350	-53.58	2	43.65	Average	54	Pass
NVNT	ac20	5240	Ant1	5355.36	-44.61	2	52.62	Peak	68.2	Pass
NVNT	ac20	5240	Ant1	5392.32	-53.54	2	43.69	Average	54	Pass
NVNT	ac20	5240	Ant1	5460	-48.97	2	48.26	Peak	68.2	Pass
NVNT	ac20	5240	Ant1	5460	-55.73	2	41.5	Average	54	Pass
NVNT	ac40	5190	Ant1	4500	-48.03	2	49.2	Peak	68.2	Pass
NVNT	ac40	5190	Ant1	4500	-55.87	2	41.36	Average	54	Pass
NVNT	ac40	5190	Ant1	4985.45	-44.69	2	52.54	Peak	68.2	Pass
NVNT	ac40	5190	Ant1	5101.52	-53.99	2	43.24	Average	54	Pass
NVNT	ac40	5190	Ant1	5150	-46.03	2	51.2	Peak	68.2	Pass
NVNT	ac40	5190	Ant1	5150	-54.08	2	43.15	Average	54	Pass
NVNT	ac40	5230	Ant1	5350	-47.66	2	49.57	Peak	68.2	Pass
NVNT	ac40	5230	Ant1	5350	-53.72	2	43.51	Average	54	Pass
NVNT	ac40	5230	Ant1	5384.4	-44.62	2	52.61	Peak	68.2	Pass
NVNT	ac40	5230	Ant1	5380.35	-52.75	2	44.48	Average	54	Pass
NVNT	ac40	5230	Ant1	5460	-49.18	2	48.05	Peak	68.2	Pass
NVNT	ac40	5230	Ant1	5460	-55.27	2	41.96	Average	54	Pass

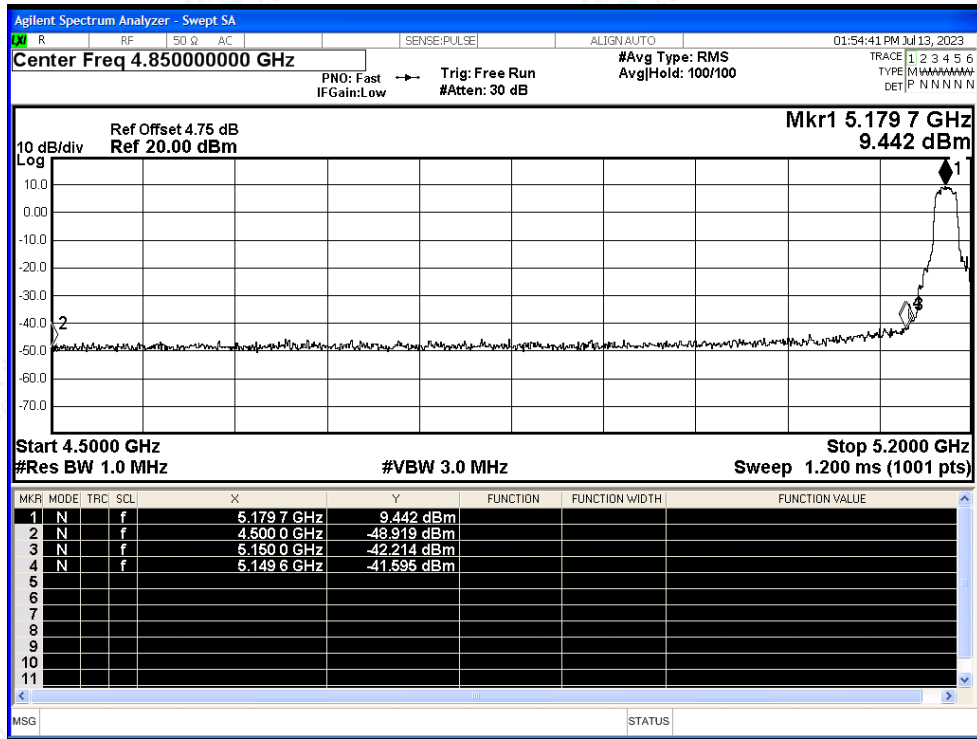


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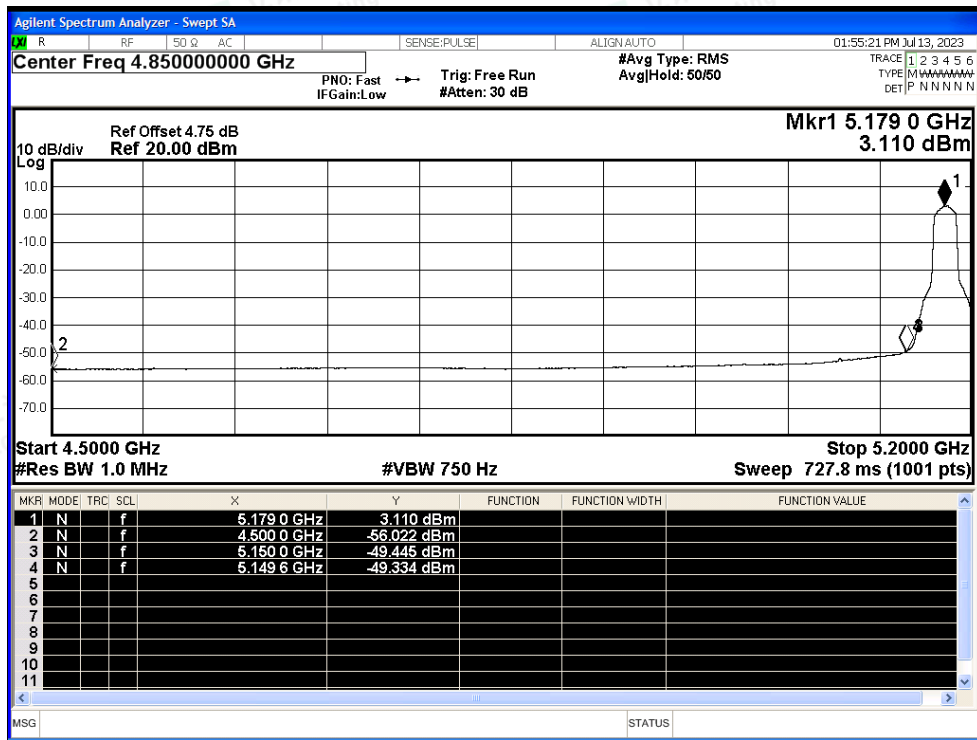


Test Graphs

Restrict Band NVNT a 5180MHz Ant1 Peak

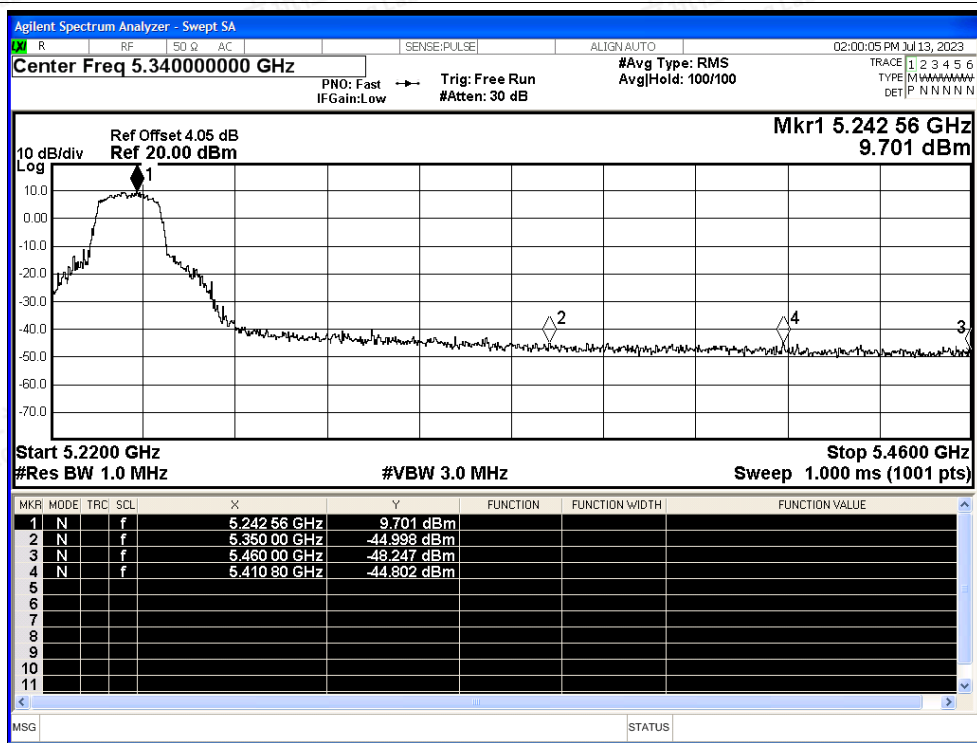


Restrict Band NVNT a 5180MHz Ant1 Average

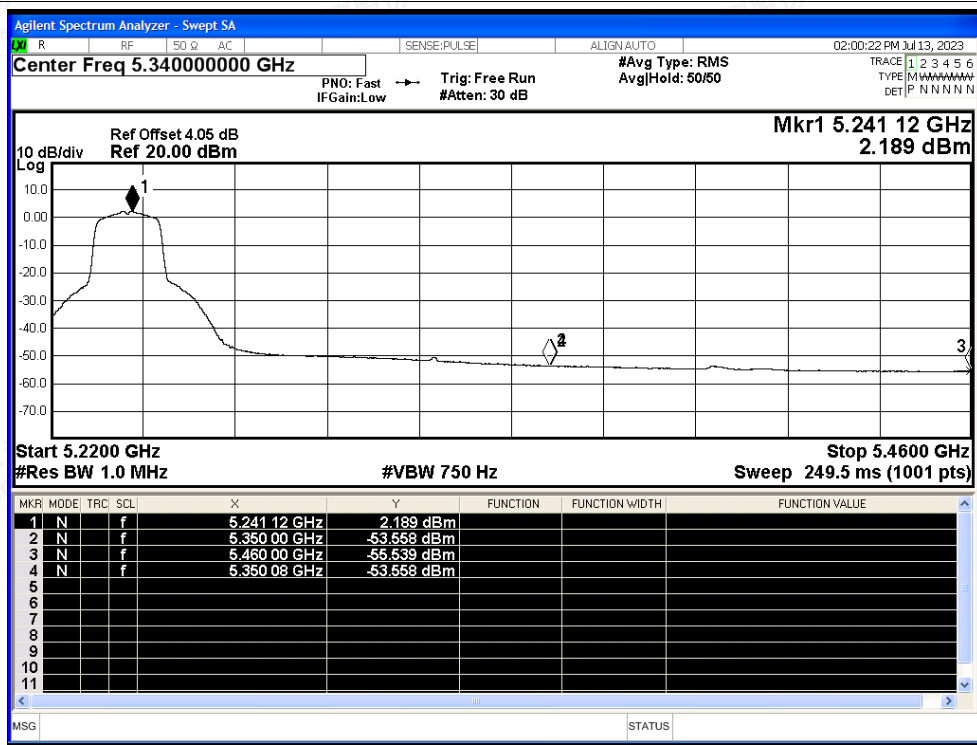




Restrict Band NVNT a 5240MHz Ant1 Peak

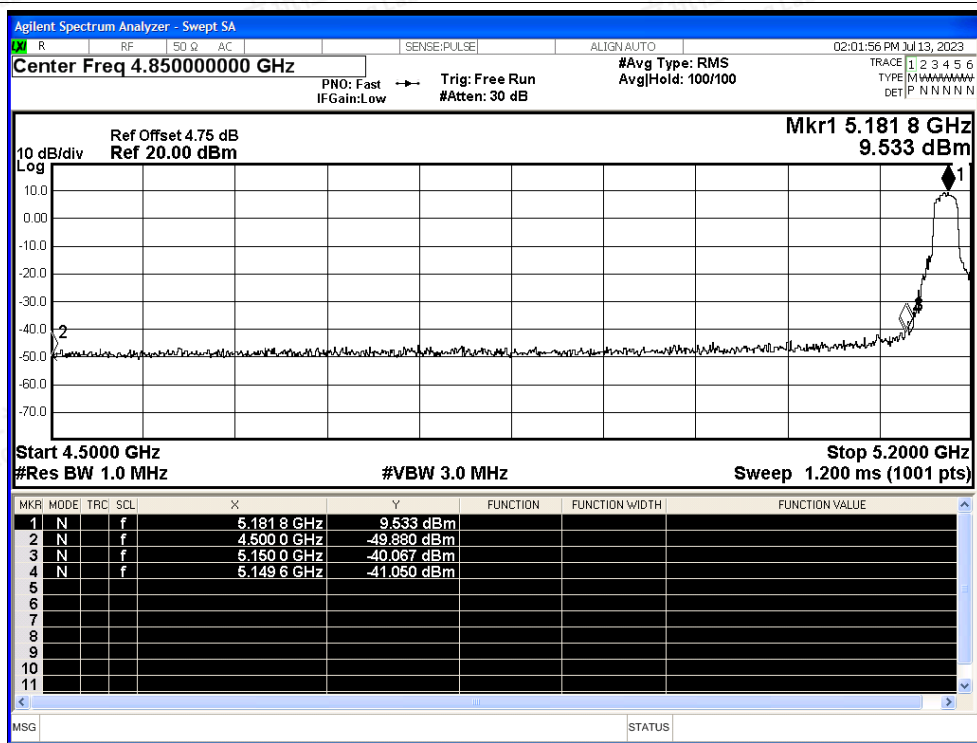


Restrict Band NVNT a 5240MHz Ant1 Average

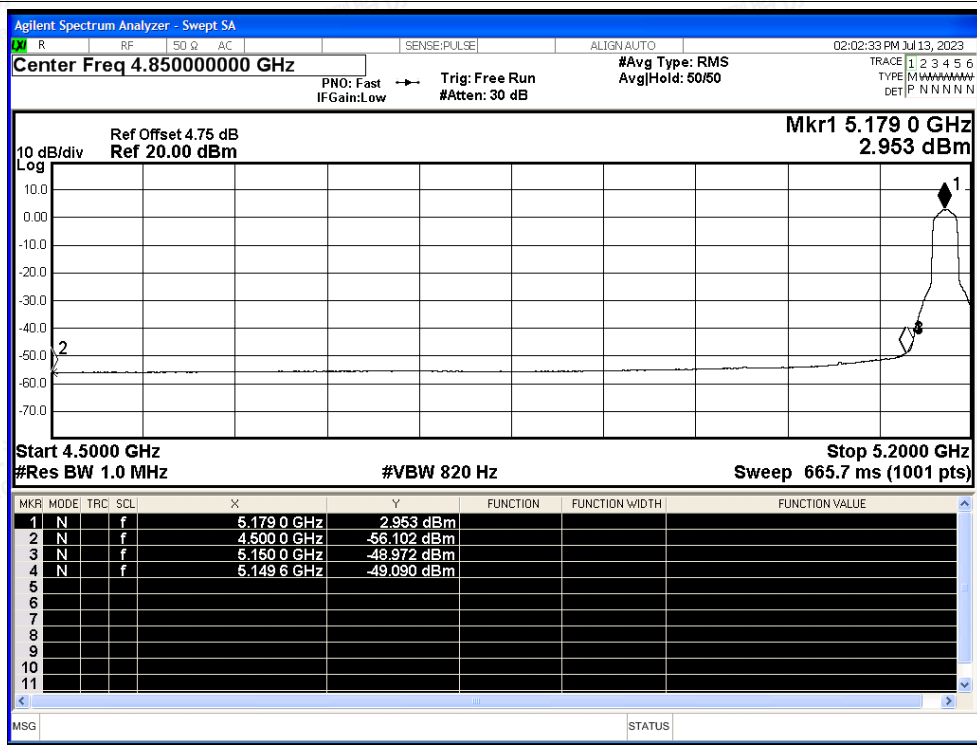




Restrict Band NVNT n20 5180MHz Ant1 Peak



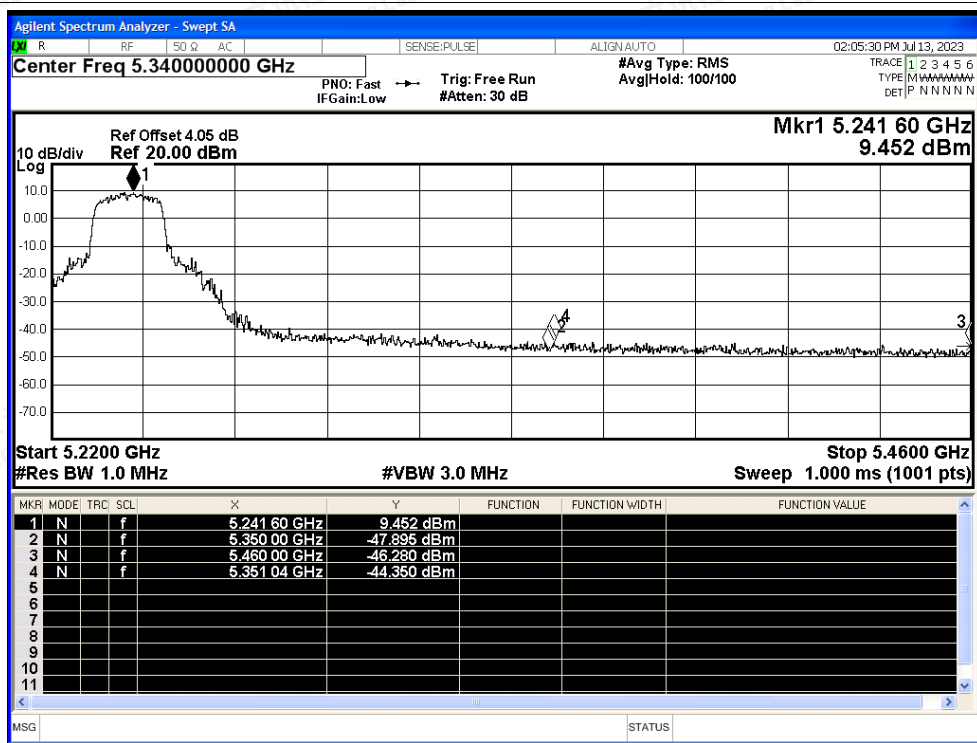
Restrict Band NVNT n20 5180MHz Ant1 Average



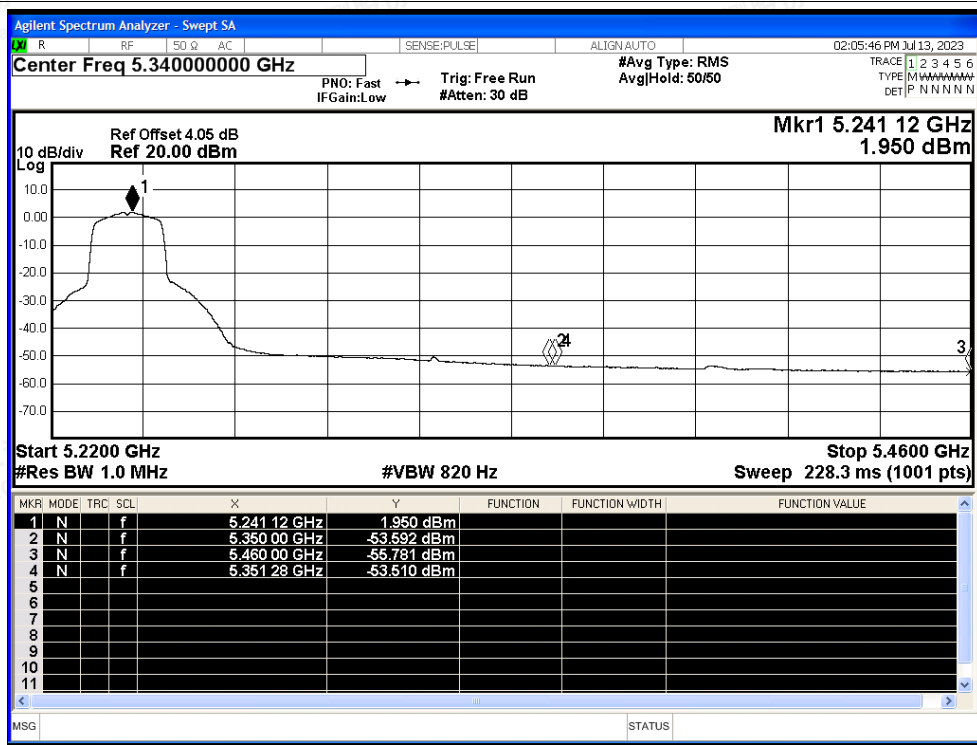




Restrict Band NVNT n20 5240MHz Ant1 Peak



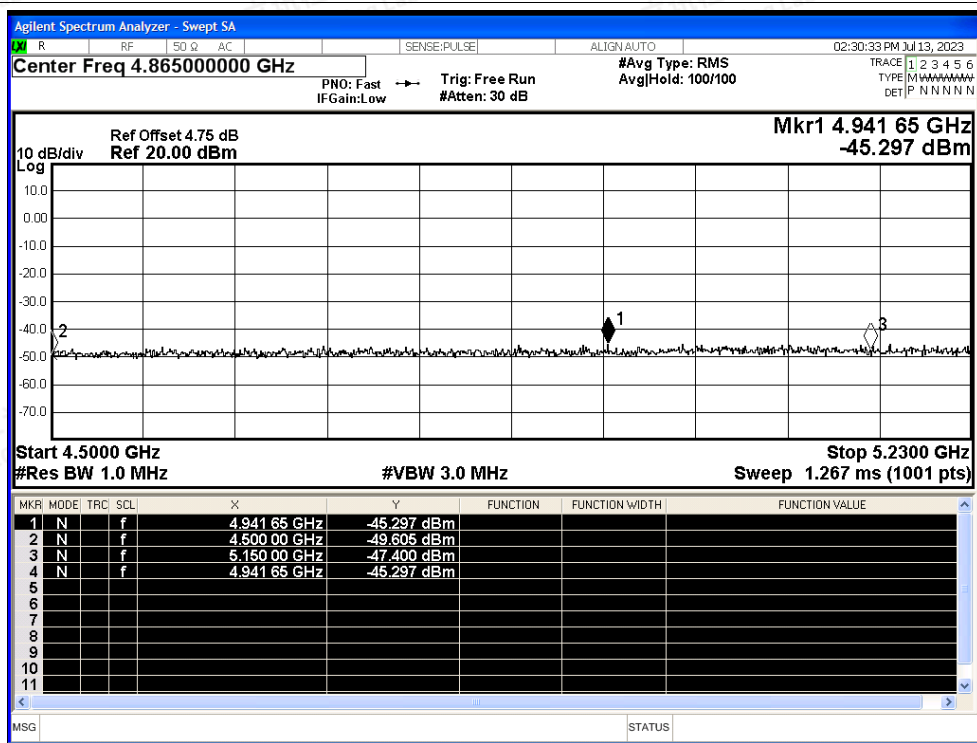
Restrict Band NVNT n20 5240MHz Ant1 Average



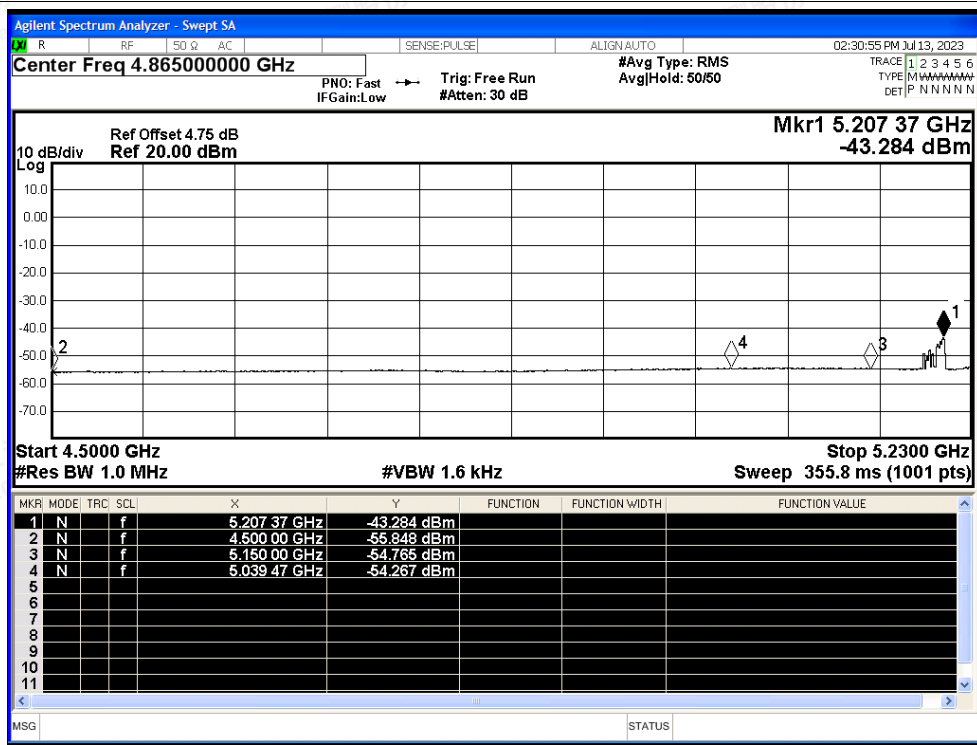




Restrict Band NVNT n40 5190MHz Ant1 Peak

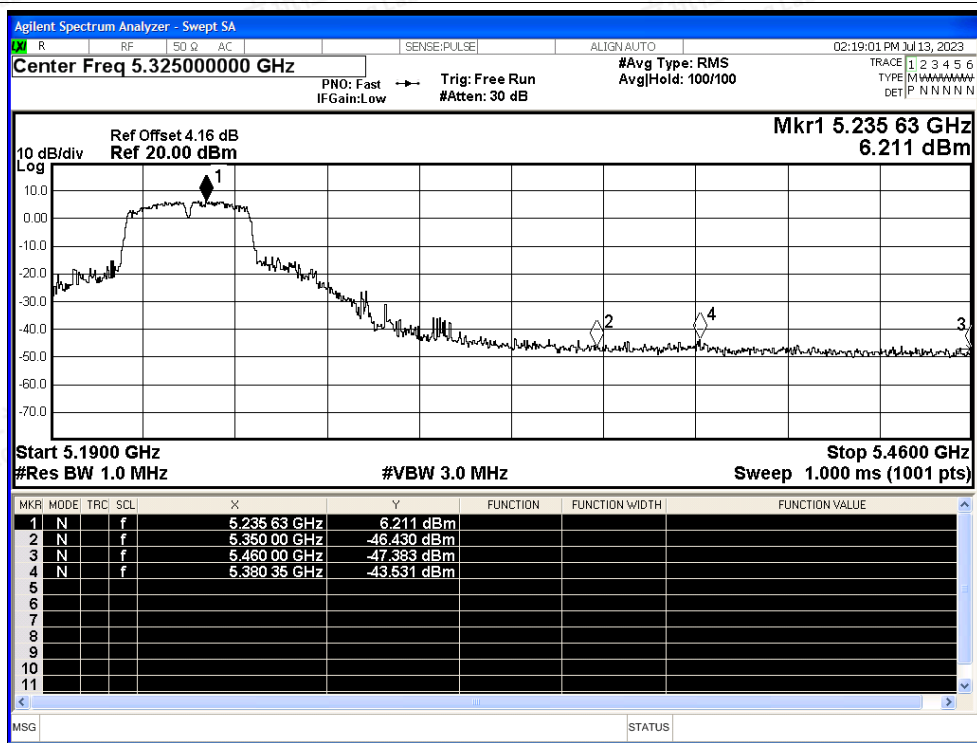


Restrict Band NVNT n40 5190MHz Ant1 Average

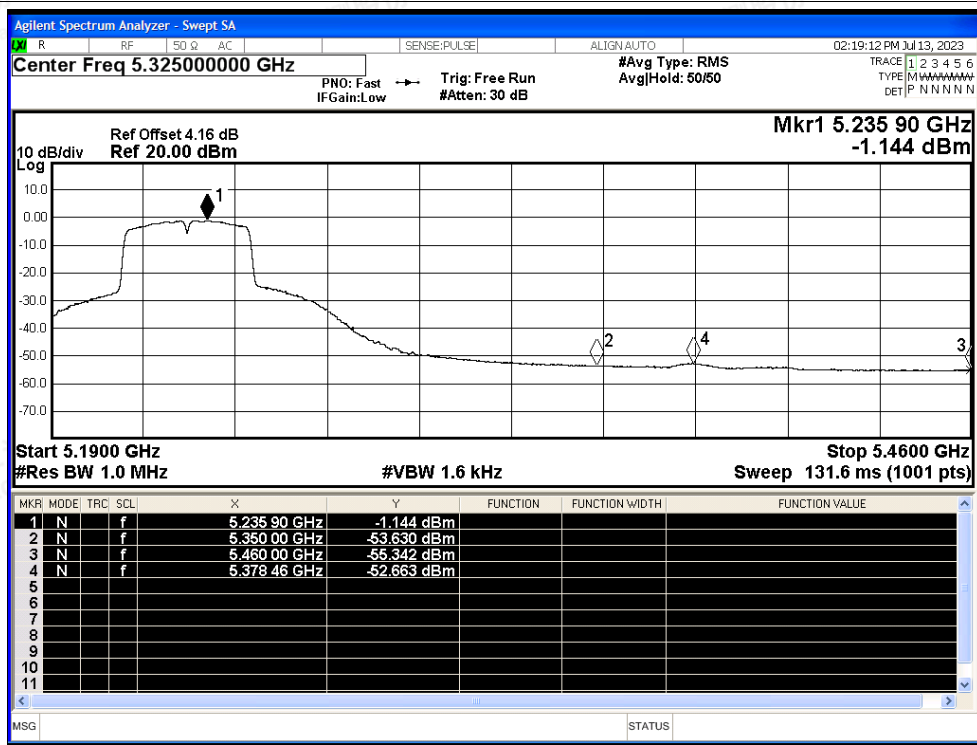




Restrict Band NVNT n40 5230MHz Ant1 Peak

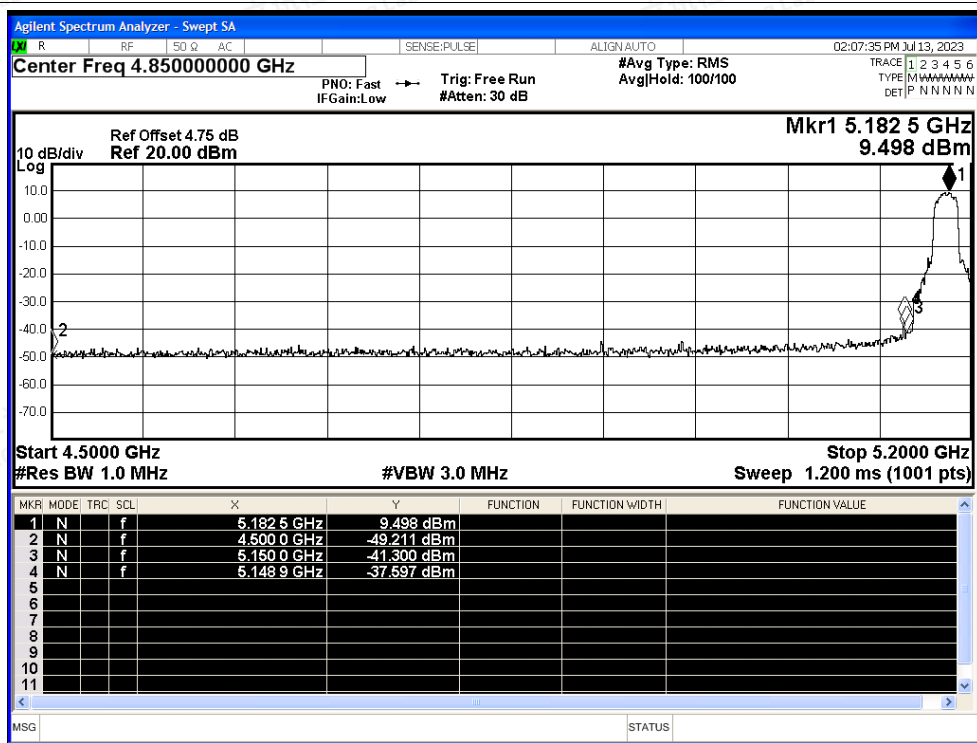


Restrict Band NVNT n40 5230MHz Ant1 Average

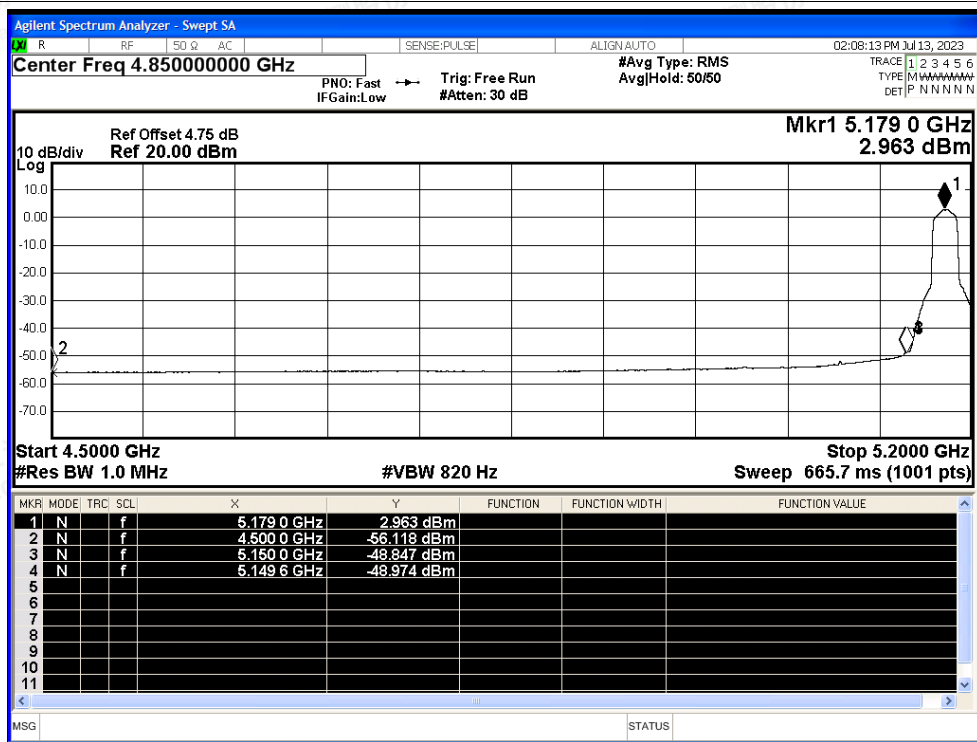




Restrict Band NVNT ac20 5180MHz Ant1 Peak

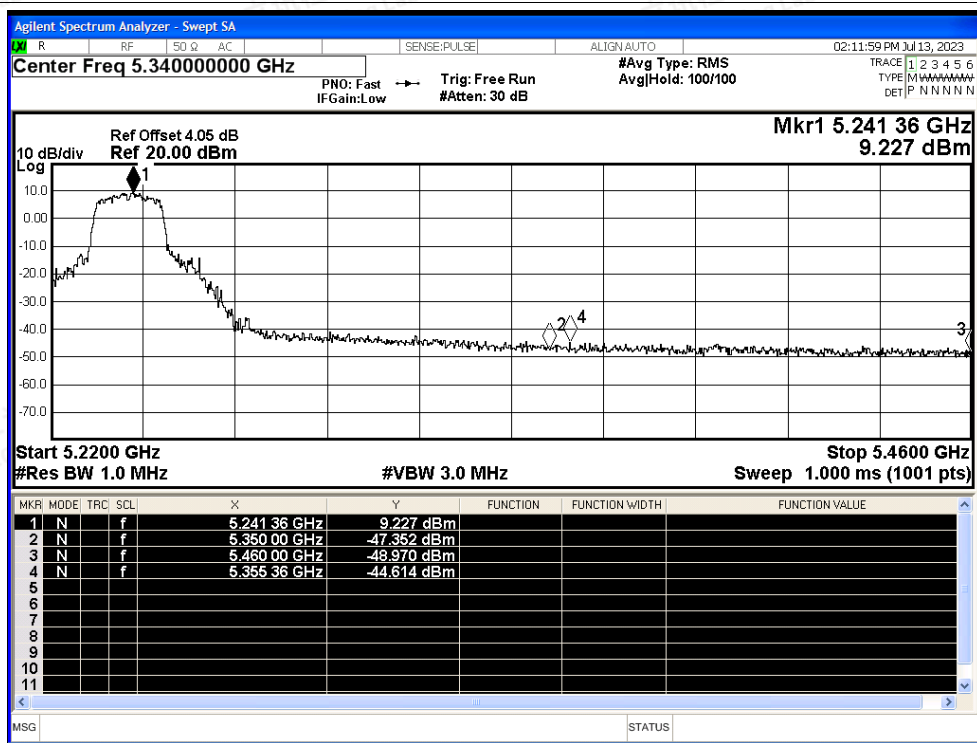


Restrict Band NVNT ac20 5180MHz Ant1 Average

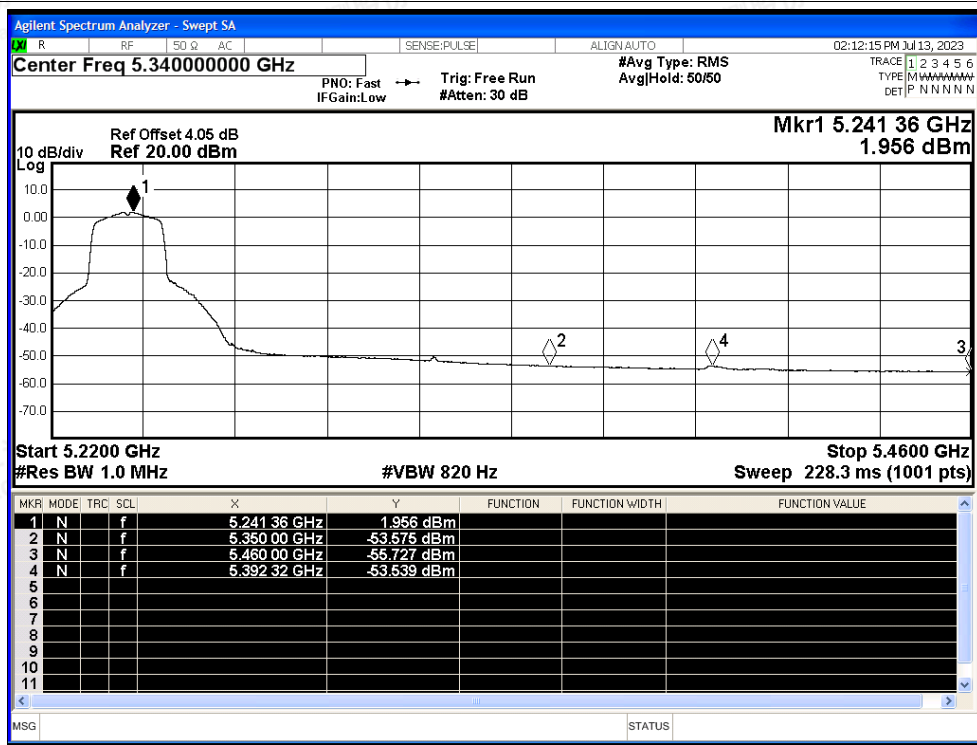




Restrict Band NVNT ac20 5240MHz Ant1 Peak

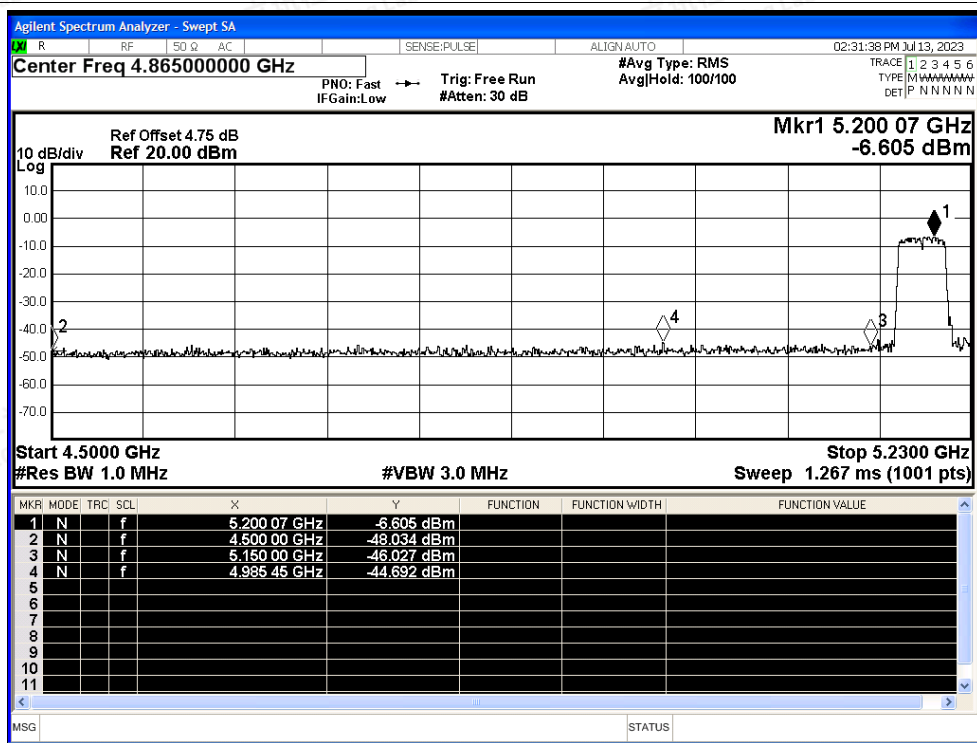


Restrict Band NVNT ac20 5240MHz Ant1 Average

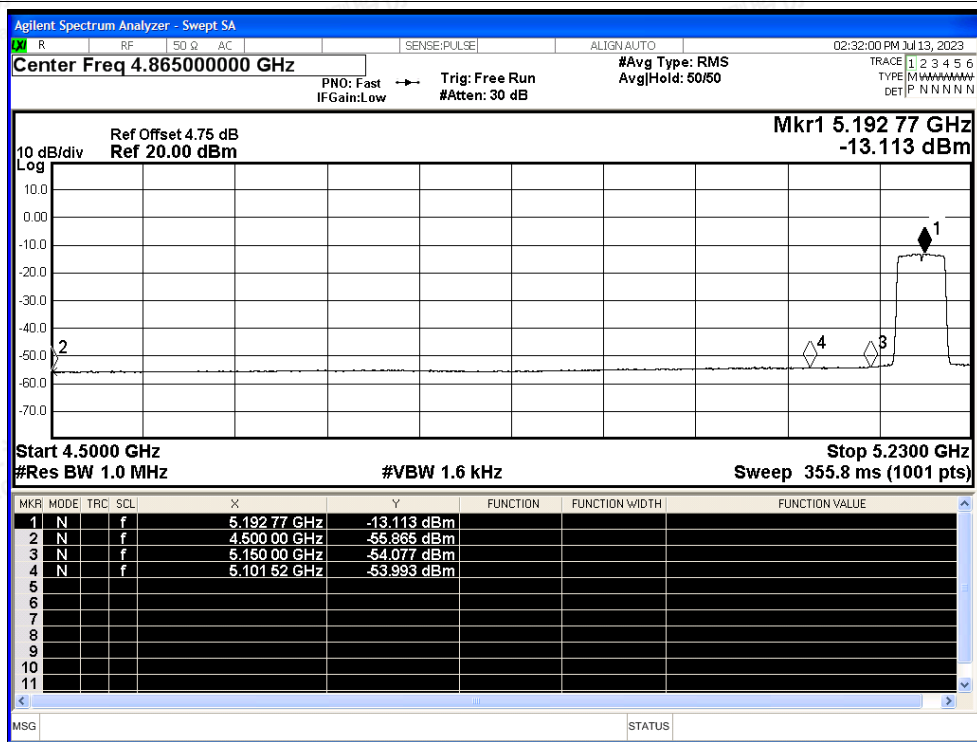




Restrict Band NVNT ac40 5190MHz Ant1 Peak

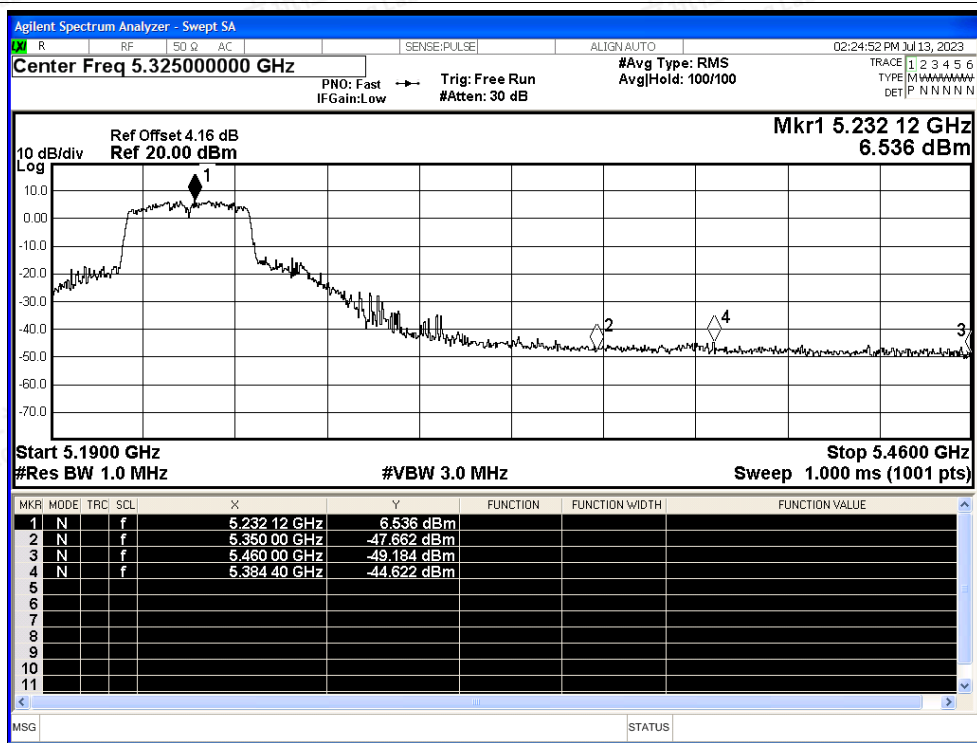


Restrict Band NVNT ac40 5190MHz Ant1 Average

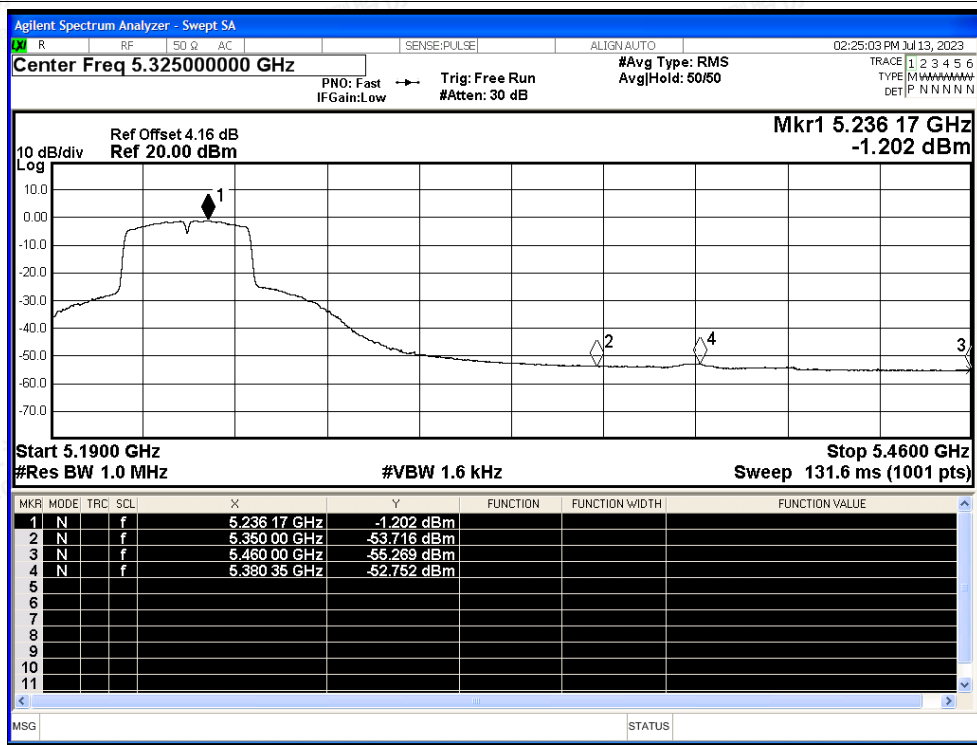




Restrict Band NVNT ac40 5230MHz Ant1 Peak



Restrict Band NVNT ac40 5230MHz Ant1 Average





### D.5 Frequency Stability

Condition	Mode	Frequency (MHz)	Antenna	Measured Frequency (MHz)	Frequency Error (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
NVNT	n40	5190	Ant1	5190	0	0	25	Pass
NVNT	n40	5230	Ant1	5229.96	-40000	-7.65	25	Pass
NVNT	ac20	5180	Ant1	5180.02	20000	3.86	25	Pass
NVNT	ac20	5200	Ant1	5200	0	0	25	Pass
NVNT	ac20	5240	Ant1	5239.98	-20000	-3.82	25	Pass
NVNT	ac40	5190	Ant1	5190	0	0	25	Pass
NVNT	ac40	5230	Ant1	5229.96	-40000	-7.65	25	Pass



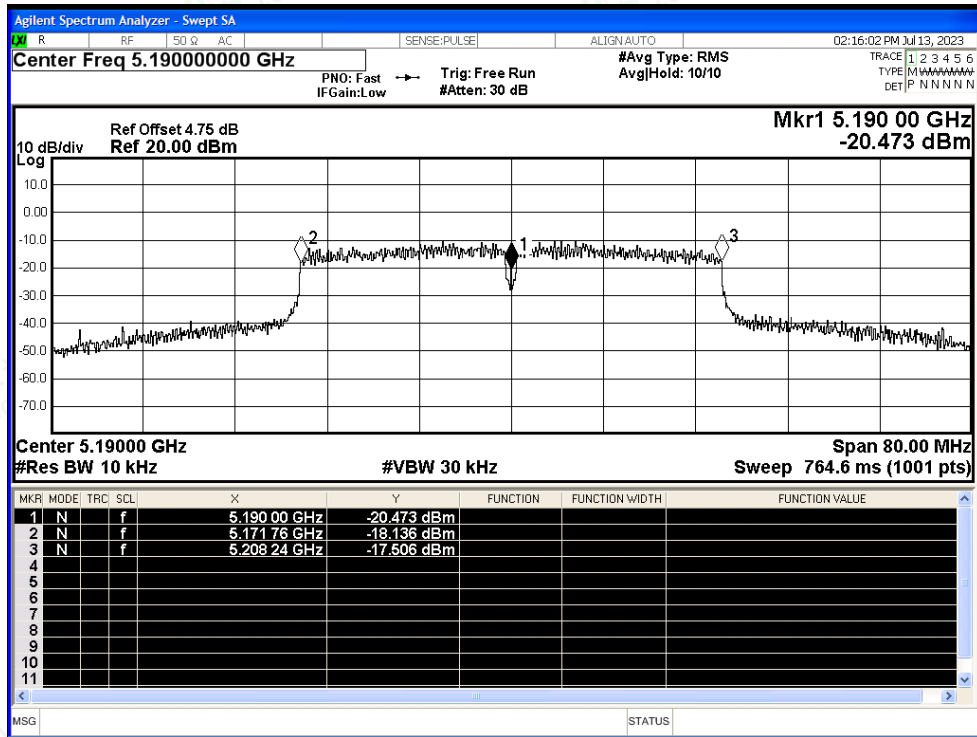
Shenzhen LCS Compliance Testing Laboratory Ltd.  
 Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China  
 Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com  
 Scan code to check authenticity



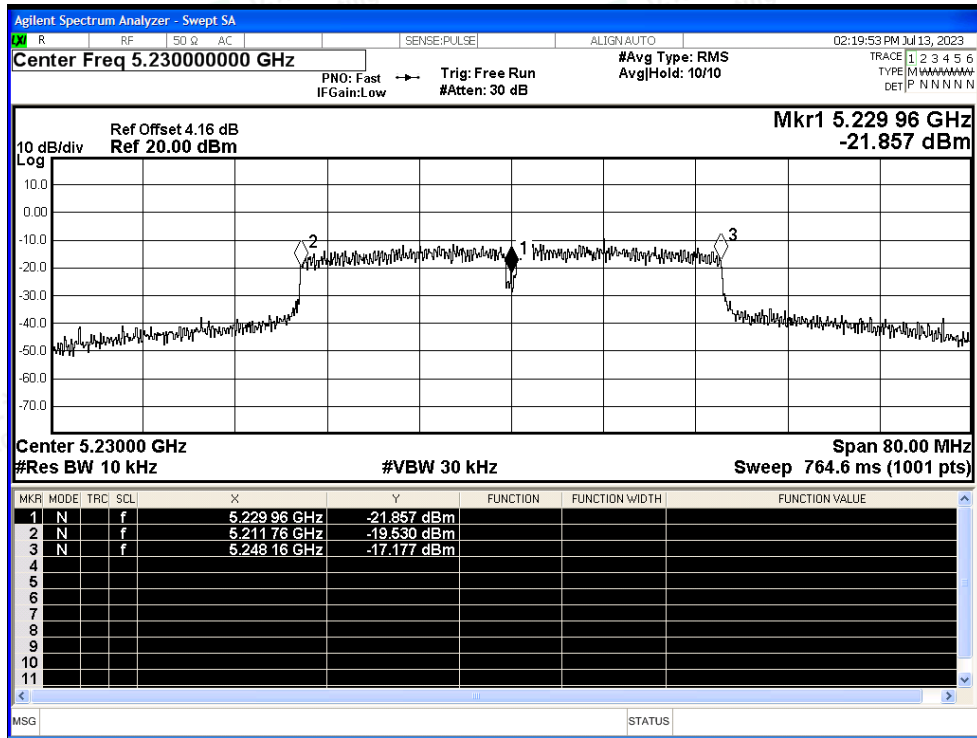


Test Graphs

Freq. Stability NVNT n40 5190MHz Ant1



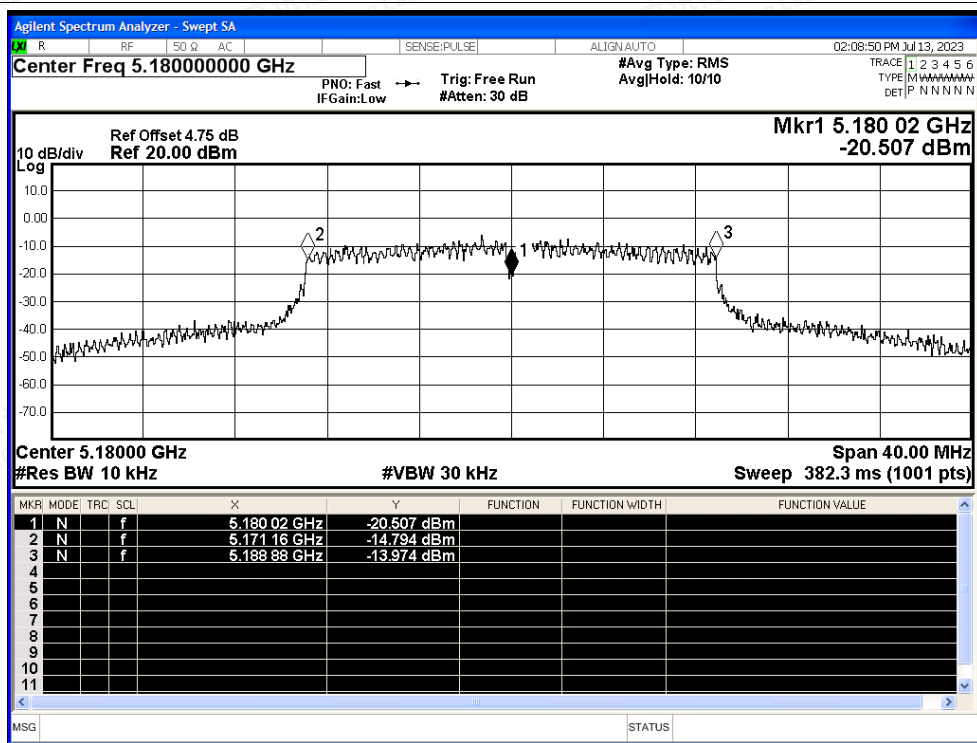
Freq. Stability NVNT n40 5230MHz Ant1



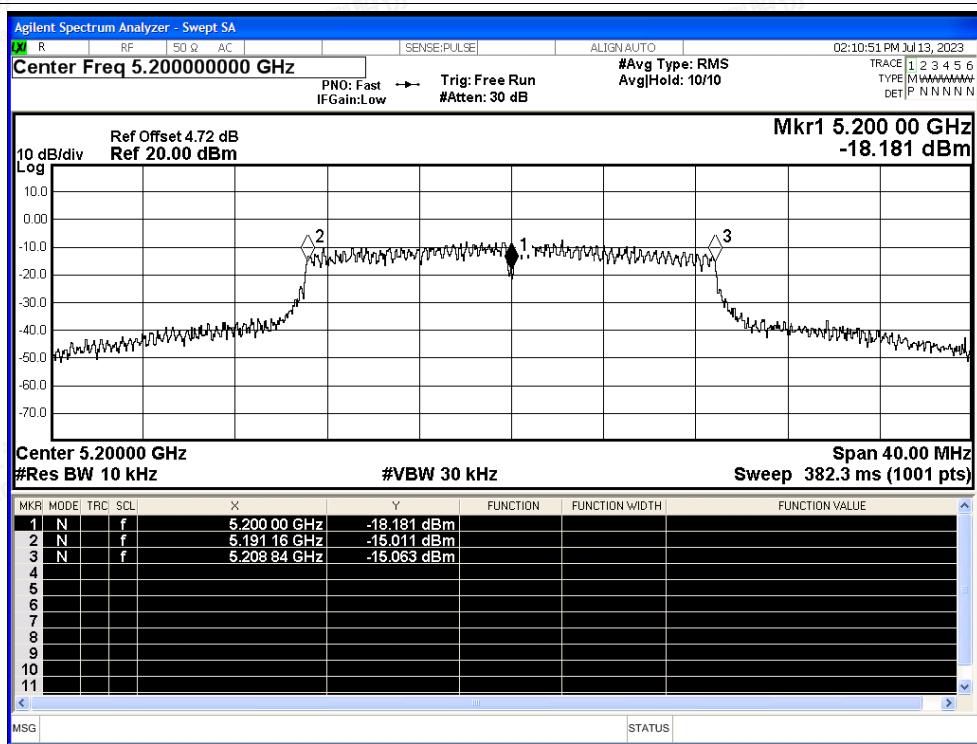




Freq. Stability NVNT ac20 5180MHz Ant1

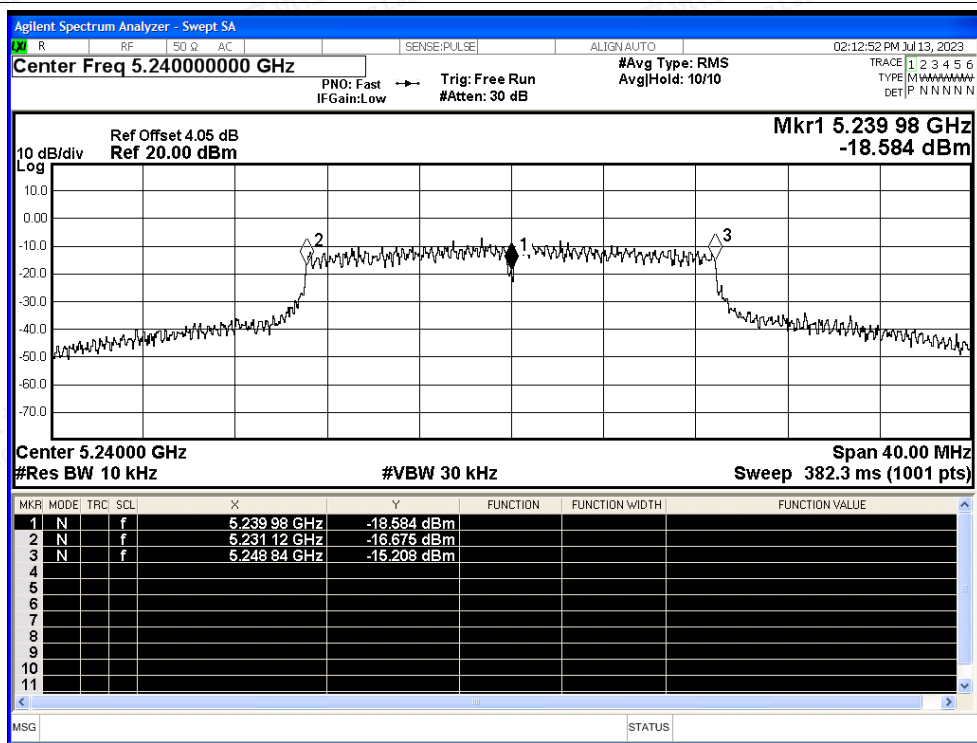


Freq. Stability NVNT ac20 5200MHz Ant1

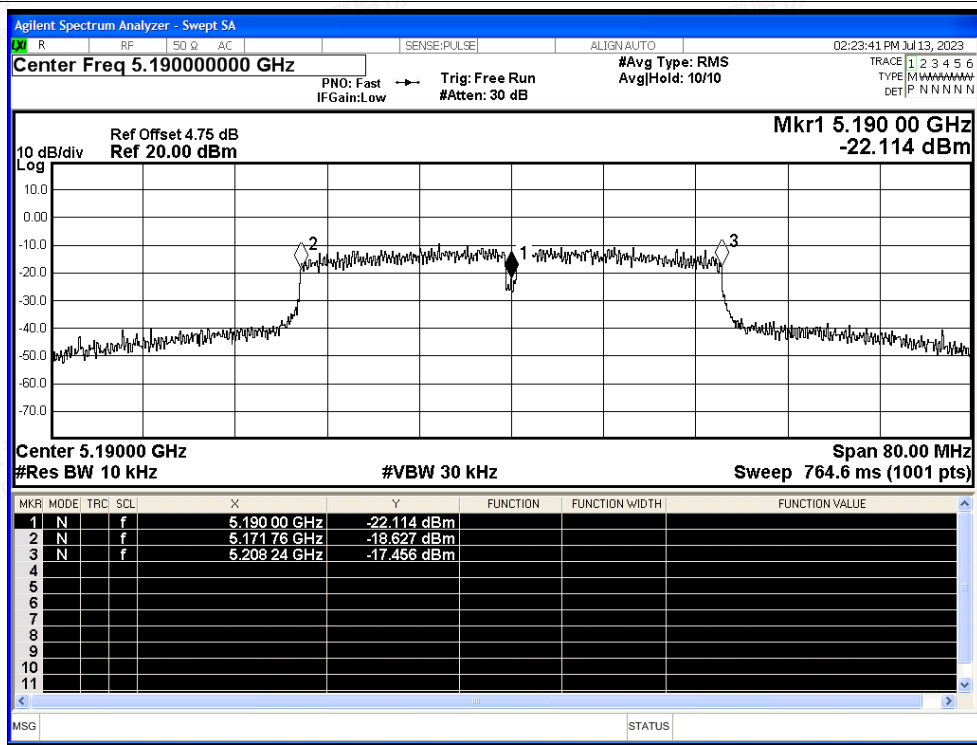




Freq. Stability NVNT ac20 5240MHz Ant1

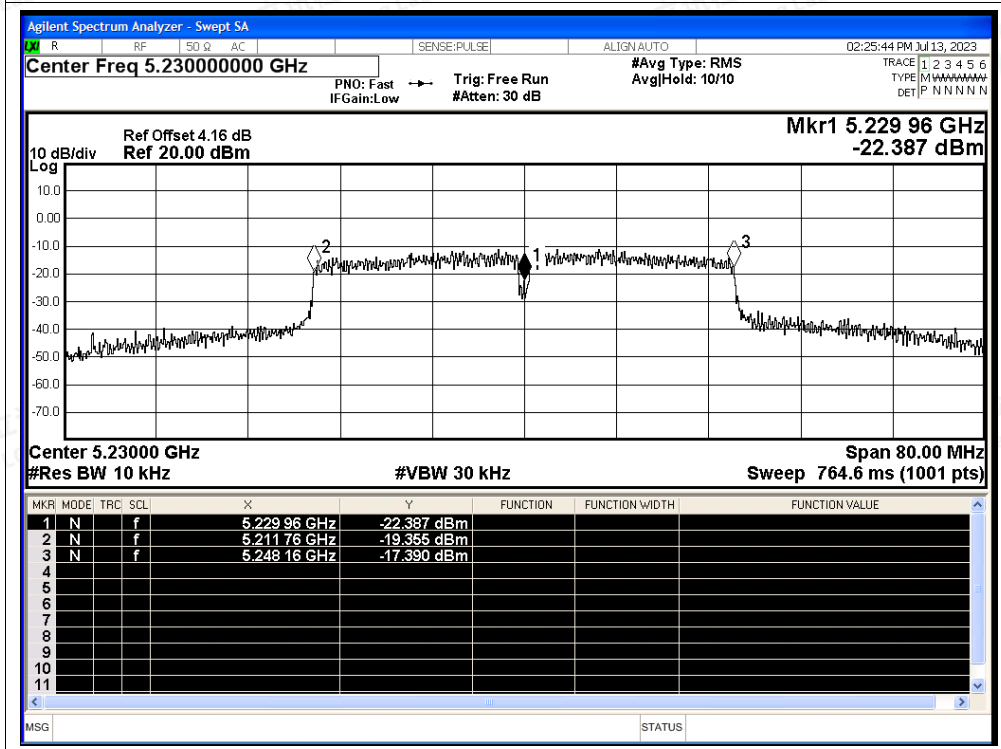


Freq. Stability NVNT ac40 5190MHz Ant1





Freq. Stability NVNT ac40 5230MHz Ant1





### D.6 Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	a	5180	Ant1	97.55	0.11	0.72
NVNT	a	5200	Ant1	97.55	0.11	0.72
NVNT	a	5240	Ant1	97.55	0.11	0.72
NVNT	n20	5180	Ant1	97.38	0.12	0.77
NVNT	n20	5200	Ant1	97.31	0.12	0.77
NVNT	n20	5240	Ant1	97.38	0.12	0.77
NVNT	n40	5190	Ant1	95.02	0.22	1.54
NVNT	n40	5230	Ant1	95.02	0.22	1.54
NVNT	ac20	5180	Ant1	97.36	0.12	0.77
NVNT	ac20	5200	Ant1	97.38	0.12	0.77
NVNT	ac20	5240	Ant1	97.45	0.11	0.77
NVNT	ac40	5190	Ant1	95.01	0.22	1.54
NVNT	ac40	5230	Ant1	95.02	0.22	1.54

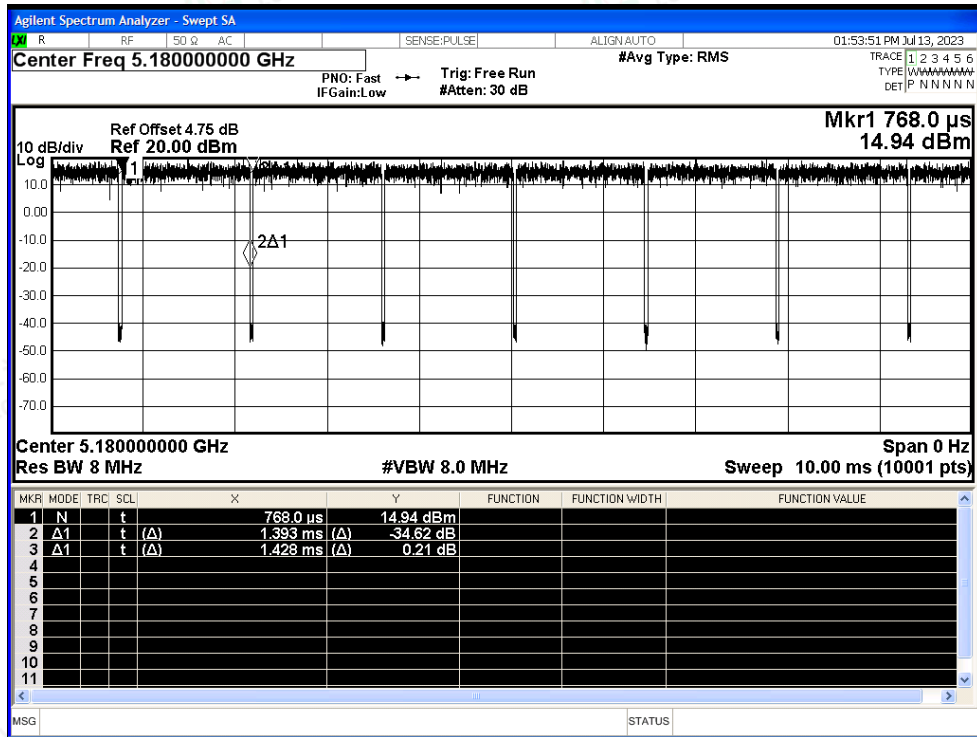


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 Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com  
 Scan code to check authenticity

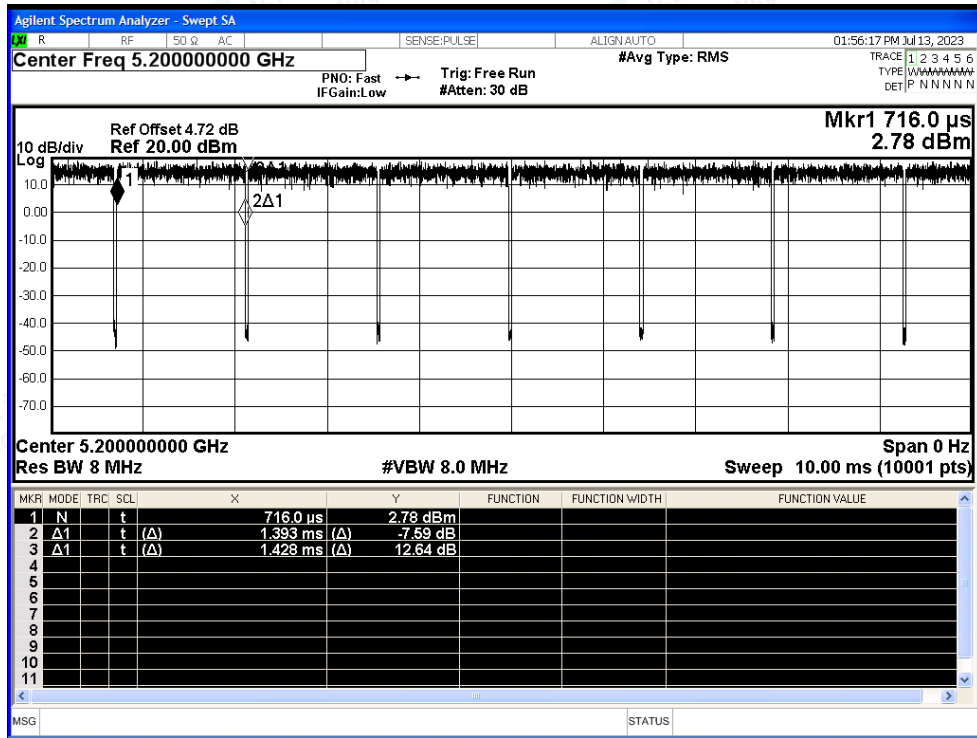


Test Graphs

Duty Cycle NVNT a 5180MHz Ant1

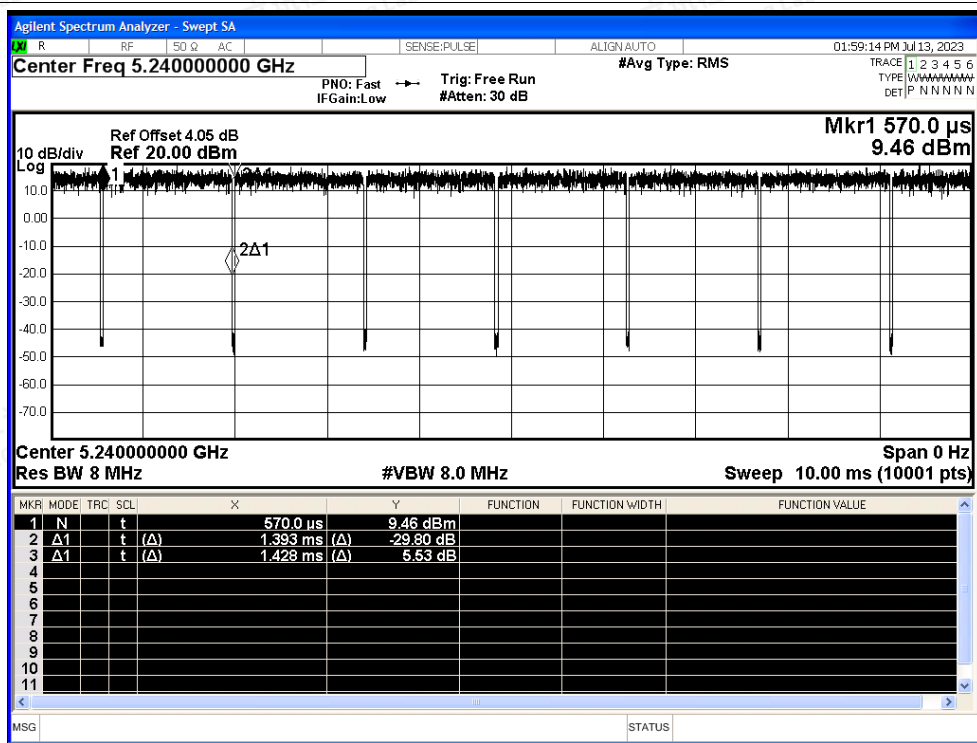


Duty Cycle NVNT a 5200MHz Ant1

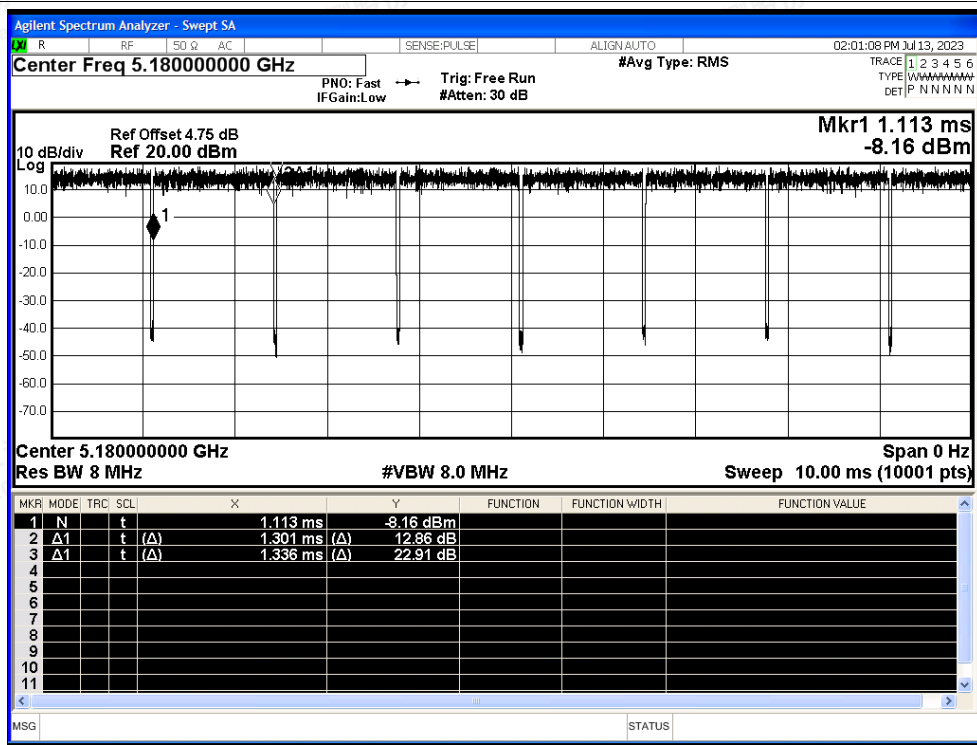




Duty Cycle NVNT a 5240MHz Ant1

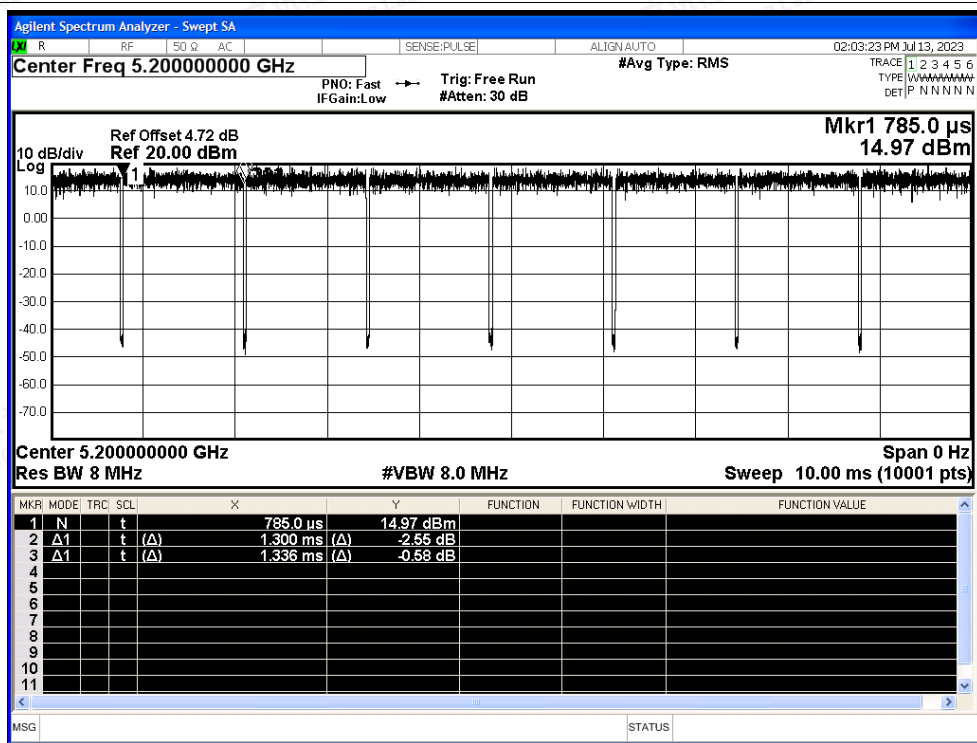


Duty Cycle NVNT n20 5180MHz Ant1

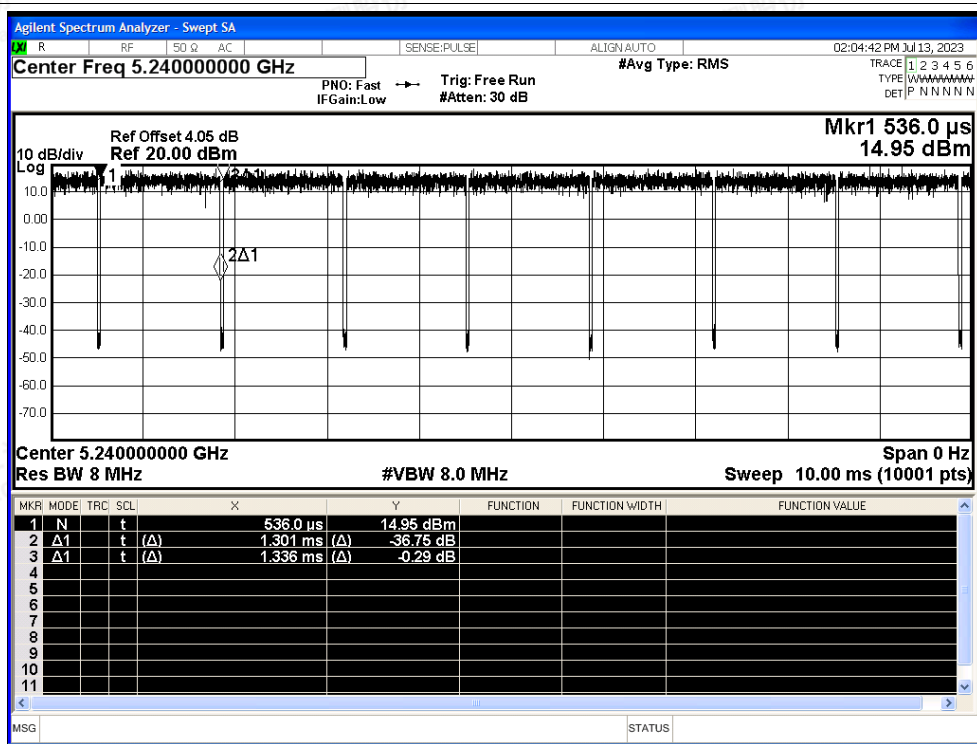




Duty Cycle NVNT n20 5200MHz Ant1



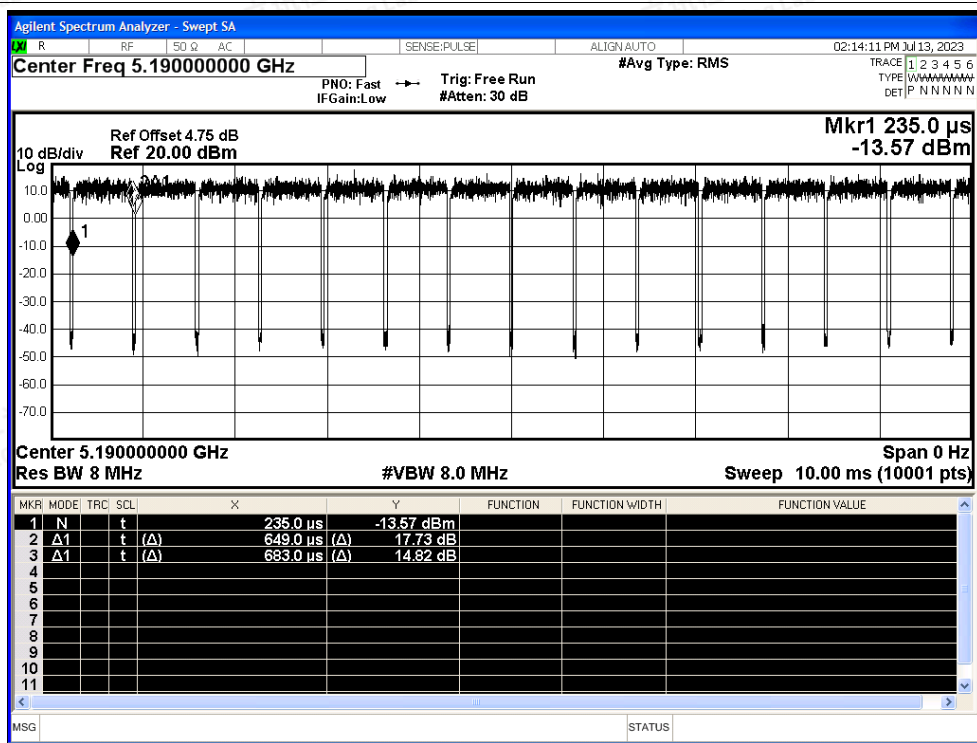
Duty Cycle NVNT n20 5240MHz Ant1



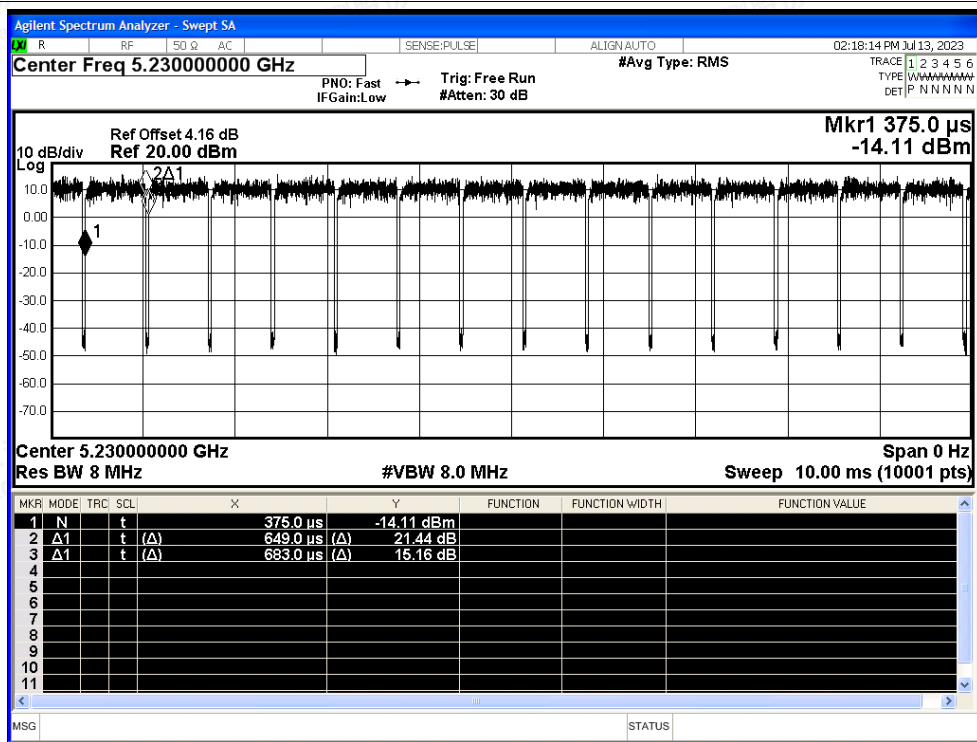




Duty Cycle NVNT n40 5190MHz Ant1



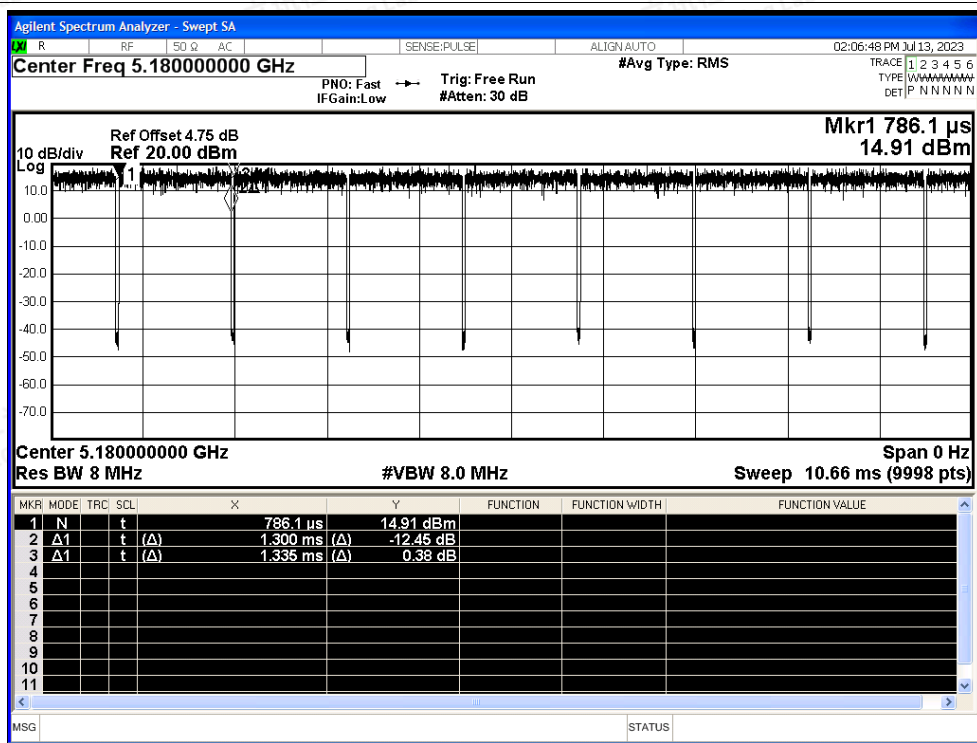
Duty Cycle NVNT n40 5230MHz Ant1



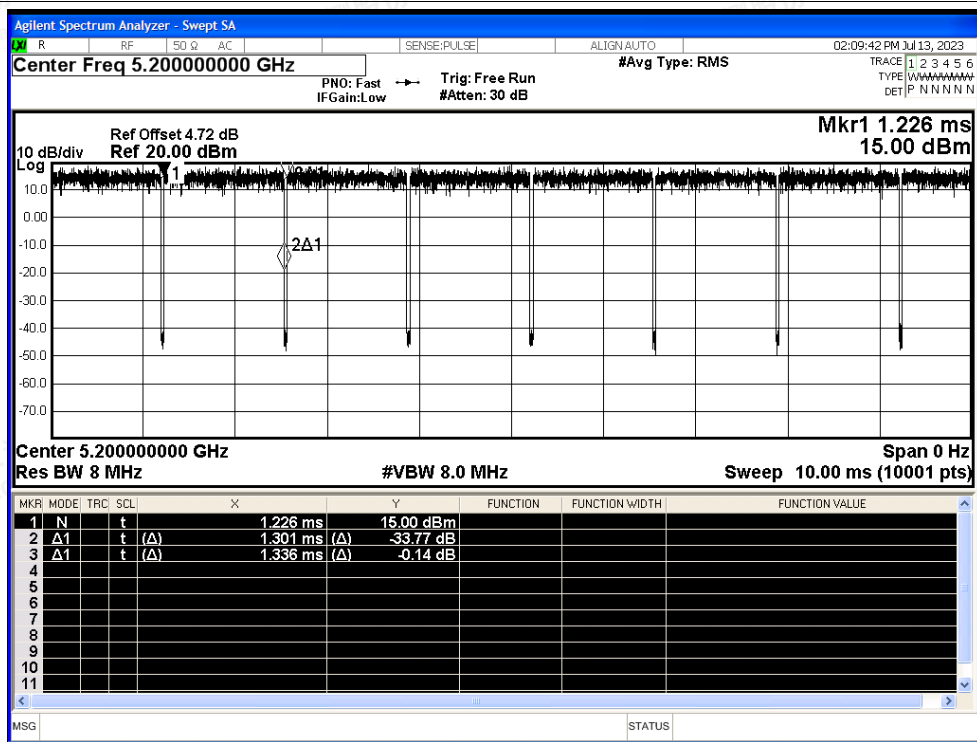




Duty Cycle NVNT ac20 5180MHz Ant1

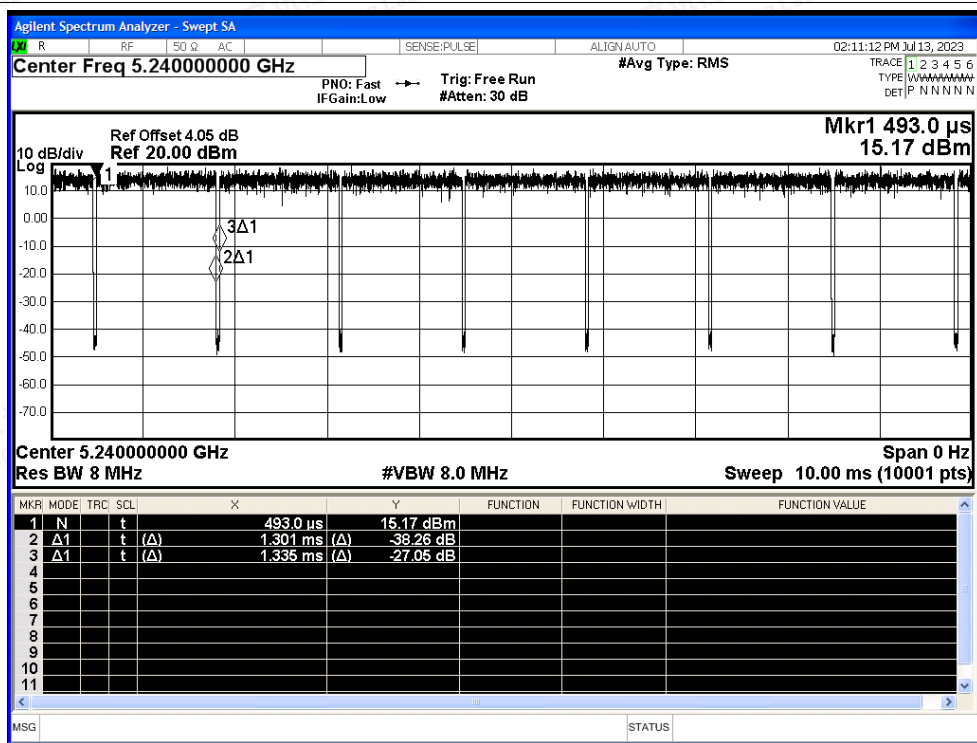


Duty Cycle NVNT ac20 5200MHz Ant1





Duty Cycle NVNT ac20 5240MHz Ant1



Duty Cycle NVNT ac40 5190MHz Ant1

