



Appendix B

RF Test Data for 5.2G WIFI (Conducted Measurement)

Product Name: Wireless USB Adapter

Test Model: OpenScope CP10

Environmental Conditions

Temperature:	24.1°C
Relative Humidity:	52.6%
ATM Pressure:	100.0 kPa
Test Engineer:	Wunder Wu
Supervised by:	Li Huan





B.1 26dB Bandwidth

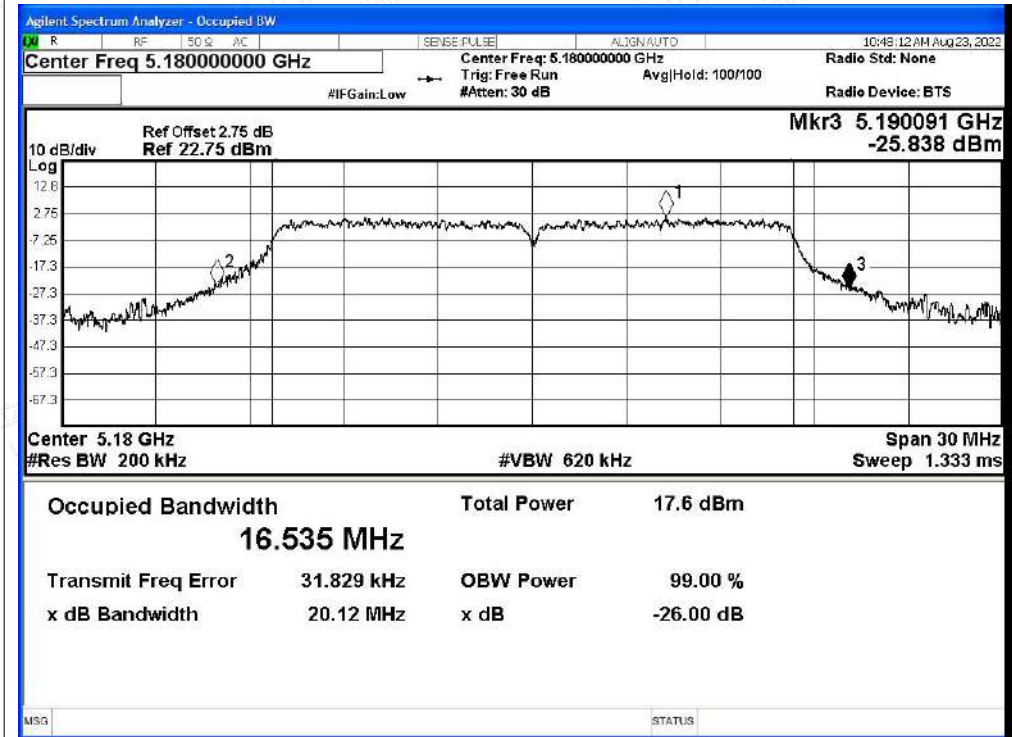
Condition	Mode	Frequency (MHz)	Antenna	26 dB Bandwidth (MHz)	Verdict
NVNT	a	5180	Ant1	20.118	Pass
NVNT	a	5200	Ant1	20.242	Pass
NVNT	a	5240	Ant1	20.337	Pass
NVNT	n20	5180	Ant1	20.932	Pass
NVNT	n20	5200	Ant1	21.113	Pass
NVNT	n20	5240	Ant1	21.1	Pass
NVNT	n40	5190	Ant1	41.982	Pass
NVNT	n40	5230	Ant1	42.038	Pass
NVNT	ac20	5180	Ant1	20.939	Pass
NVNT	ac20	5200	Ant1	21.081	Pass
NVNT	ac20	5240	Ant1	21.097	Pass
NVNT	ac40	5190	Ant1	41.411	Pass
NVNT	ac40	5230	Ant1	42.004	Pass
NVNT	ac80	5210	Ant1	82.124	Pass



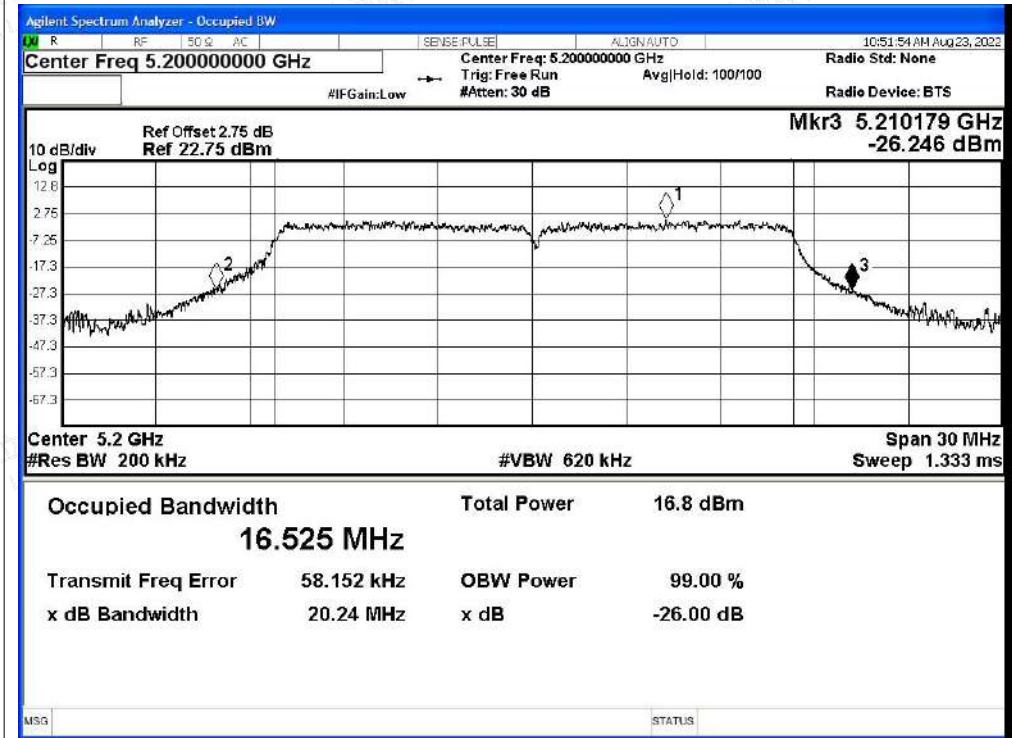


Test Graphs

26dB Bandwidth NVNT a 5180MHz Ant1

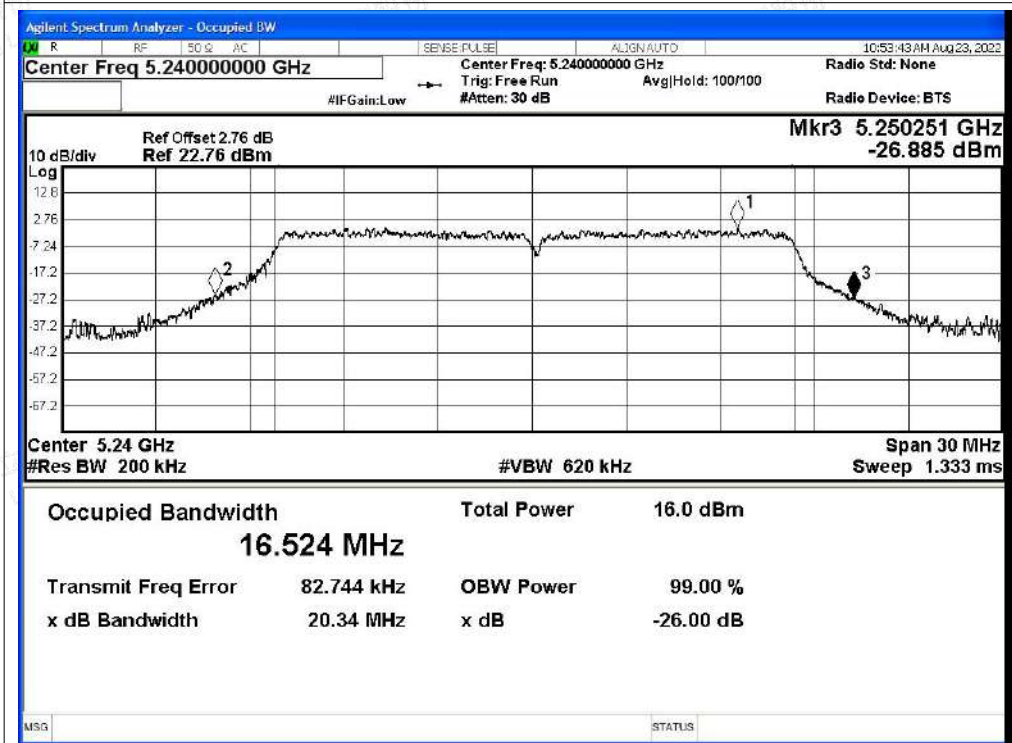


26dB Bandwidth NVNT a 5200MHz Ant1

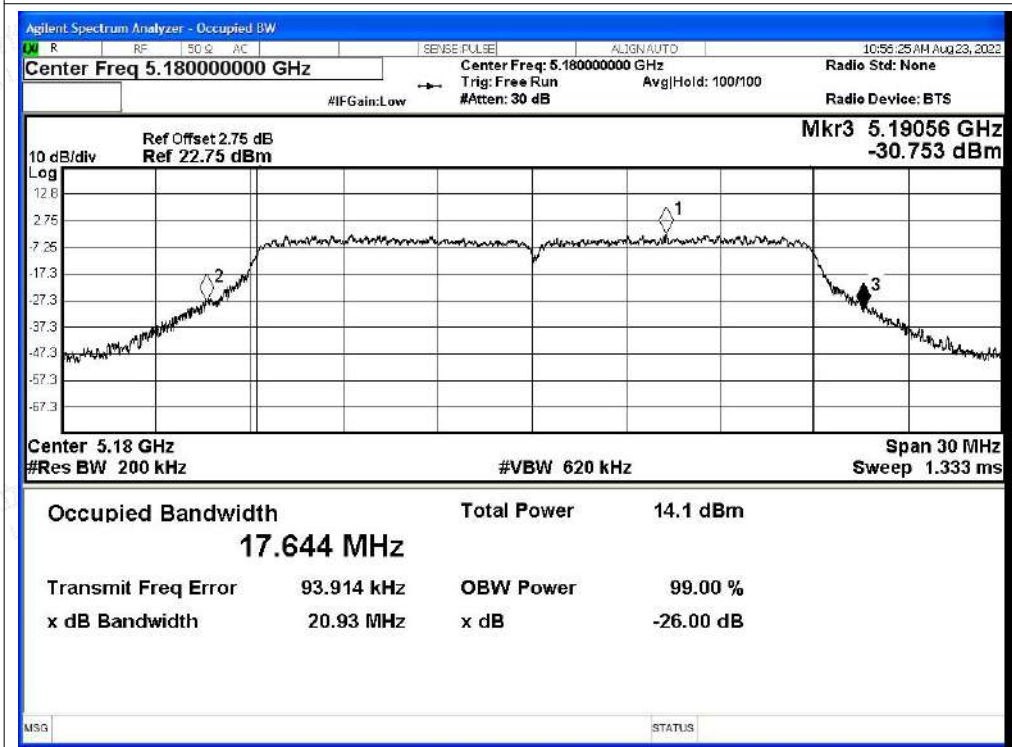


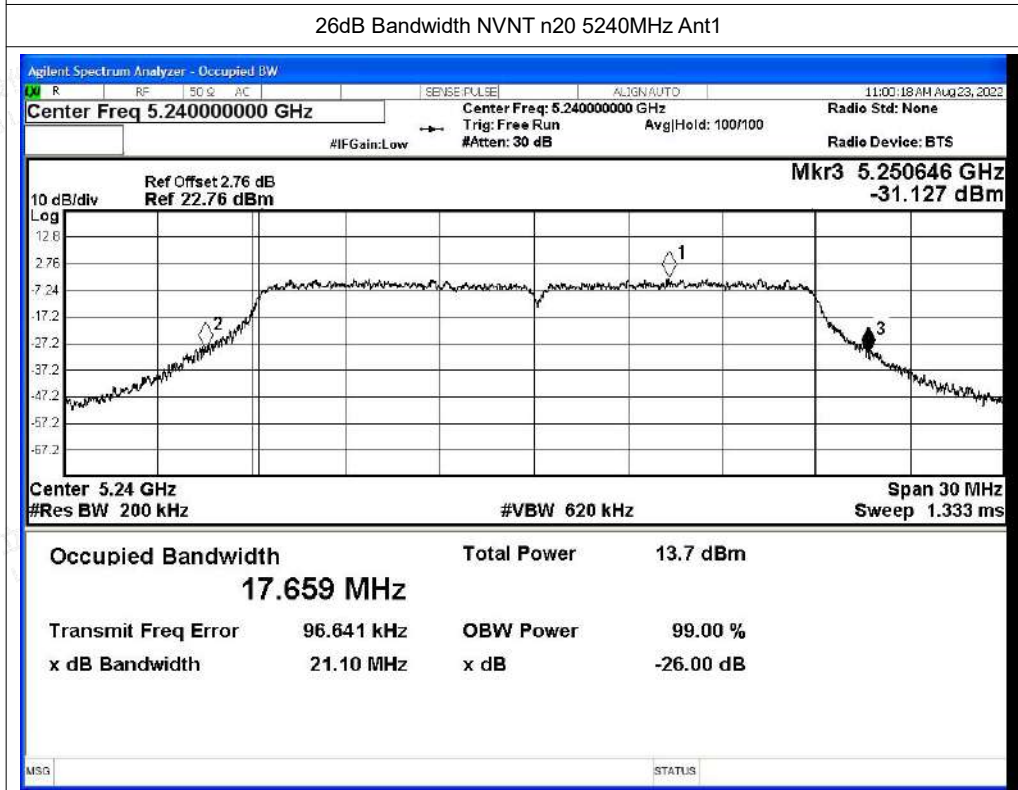
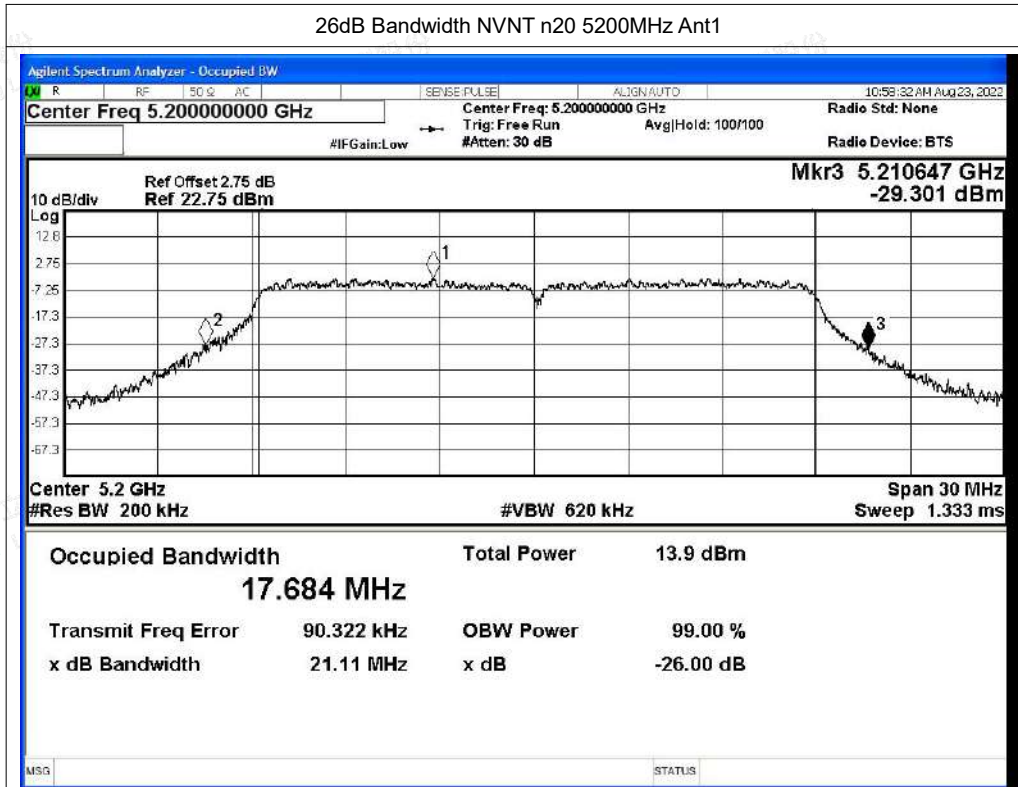


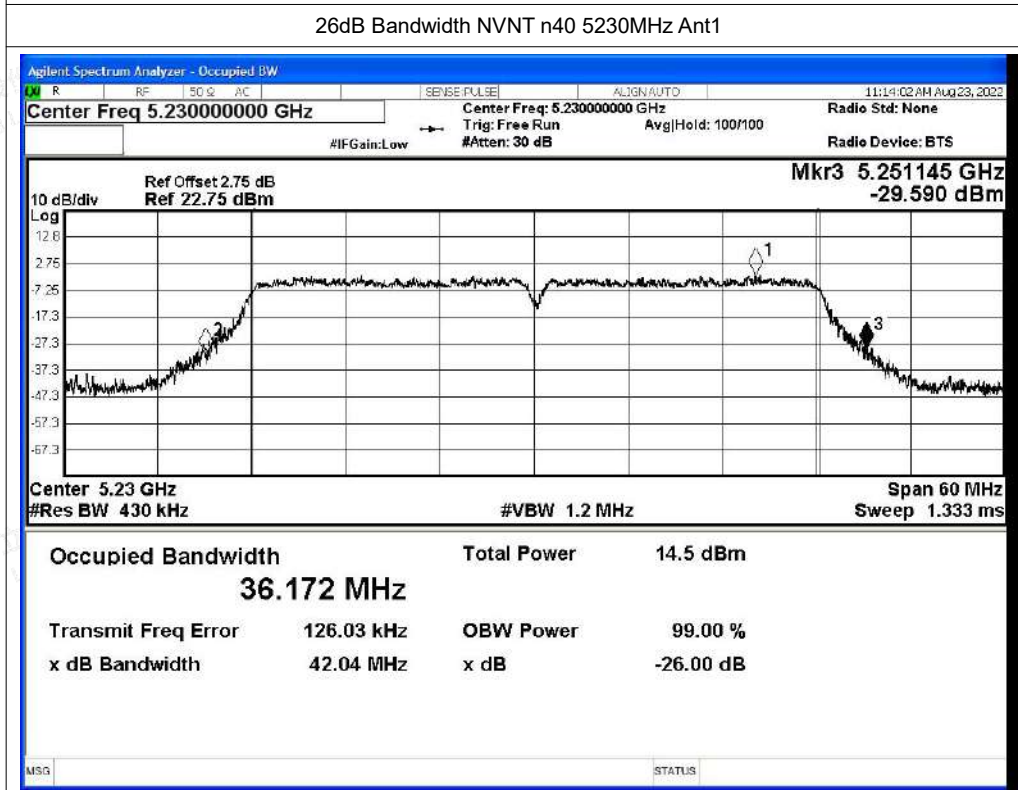
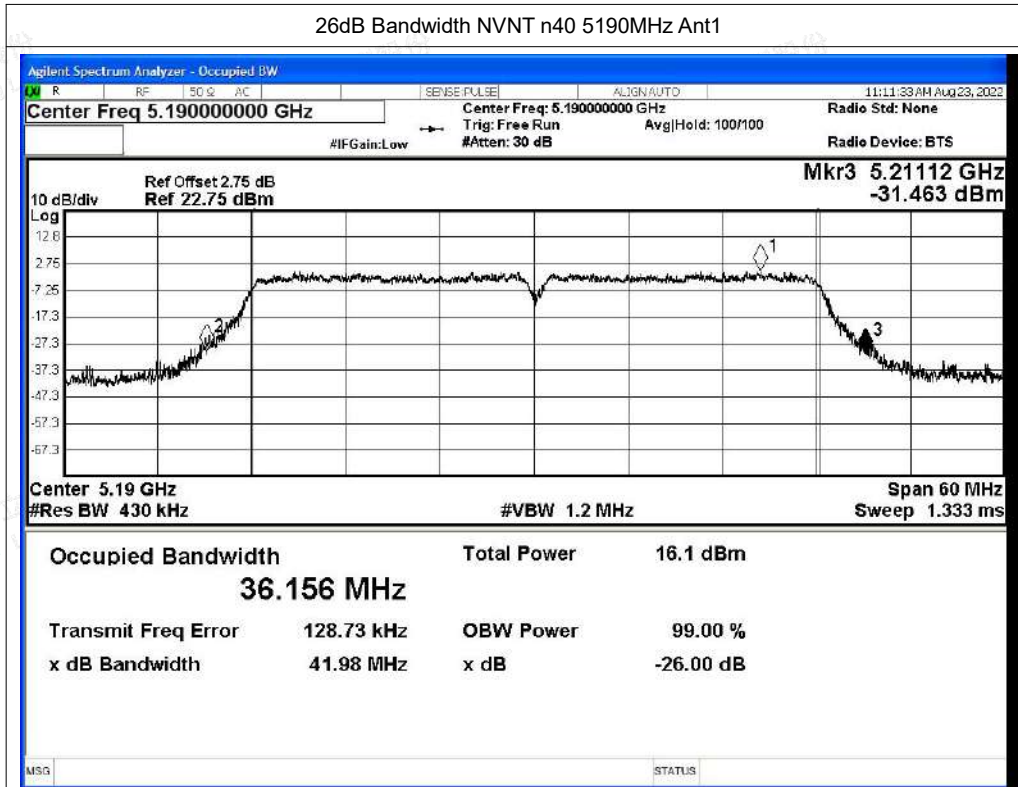
26dB Bandwidth NVNT a 5240MHz Ant1

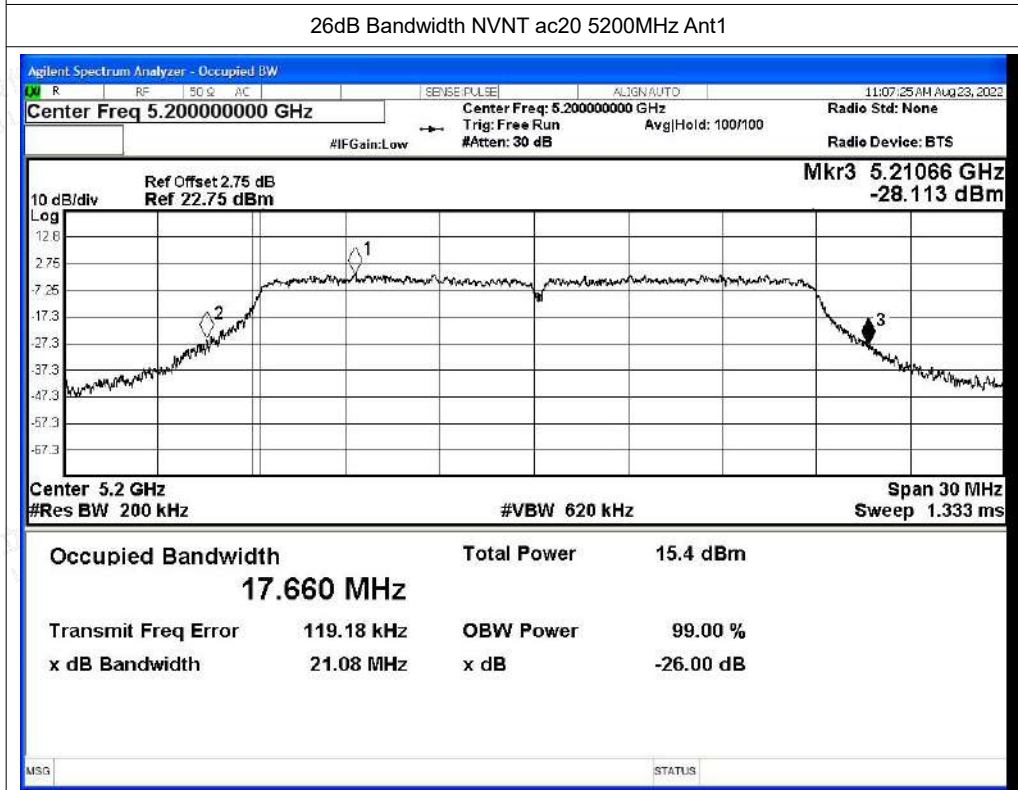
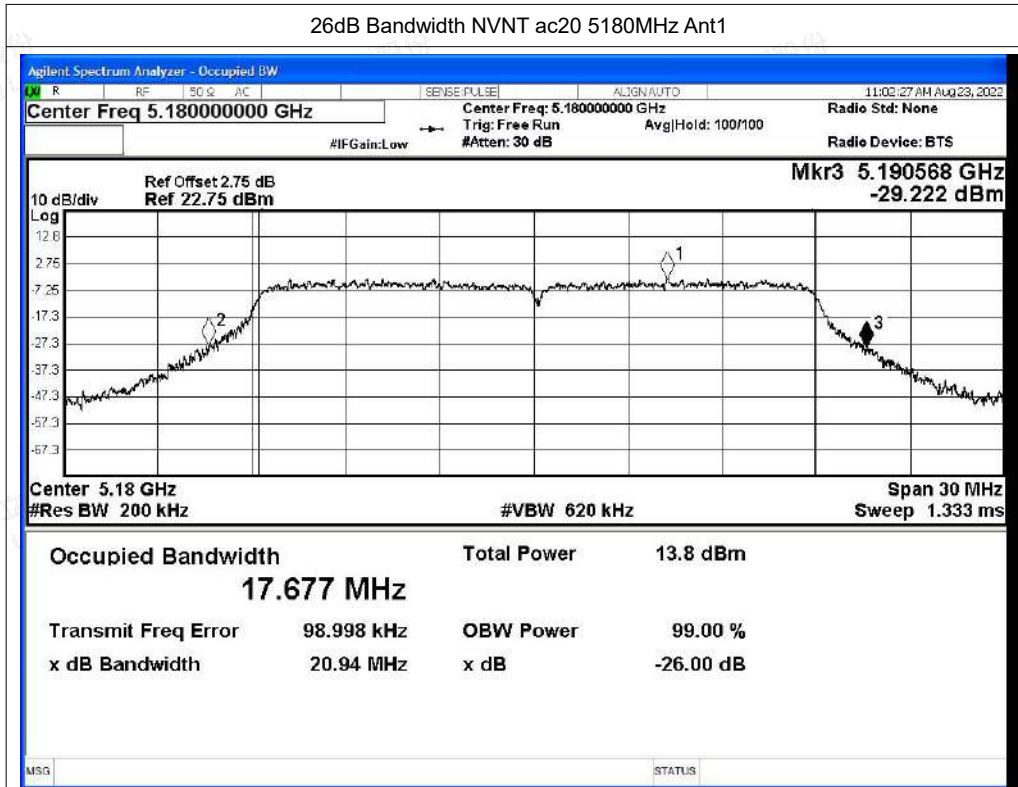


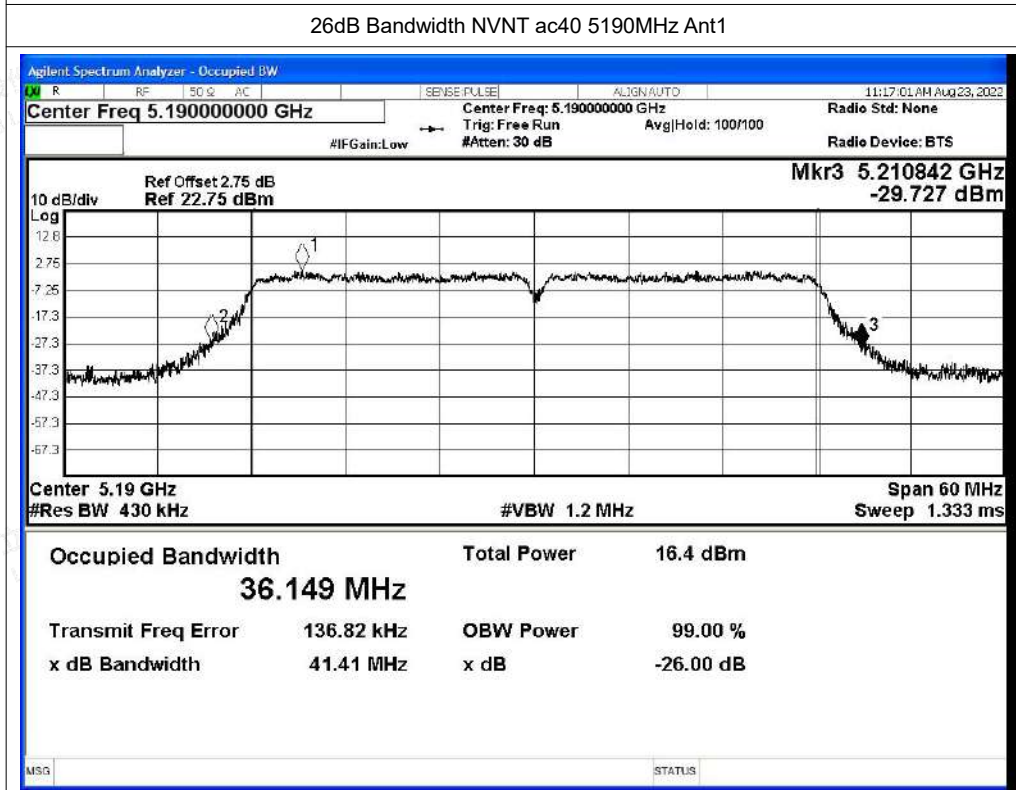
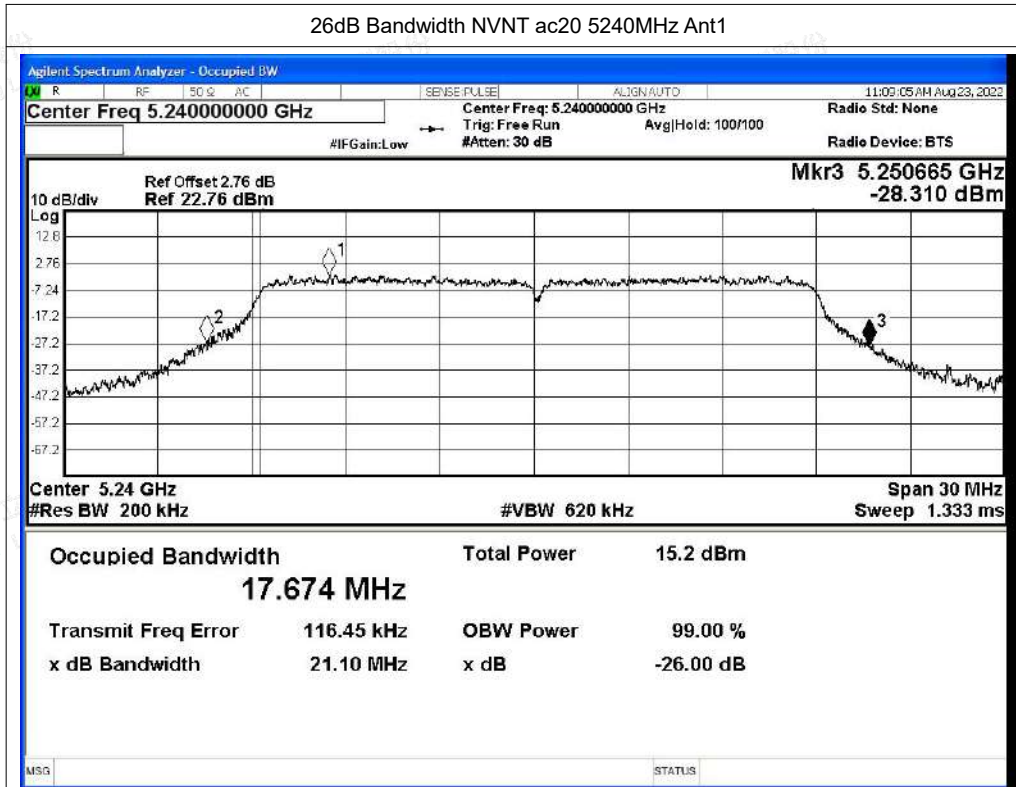
26dB Bandwidth NVNT n20 5180MHz Ant1

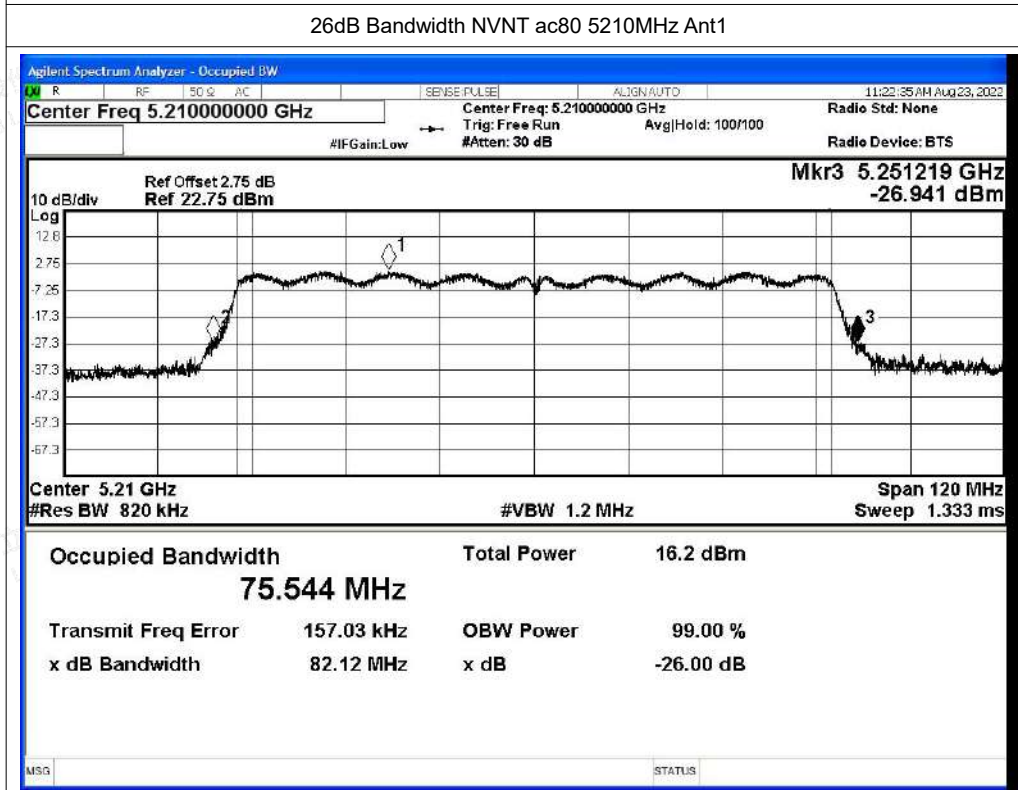
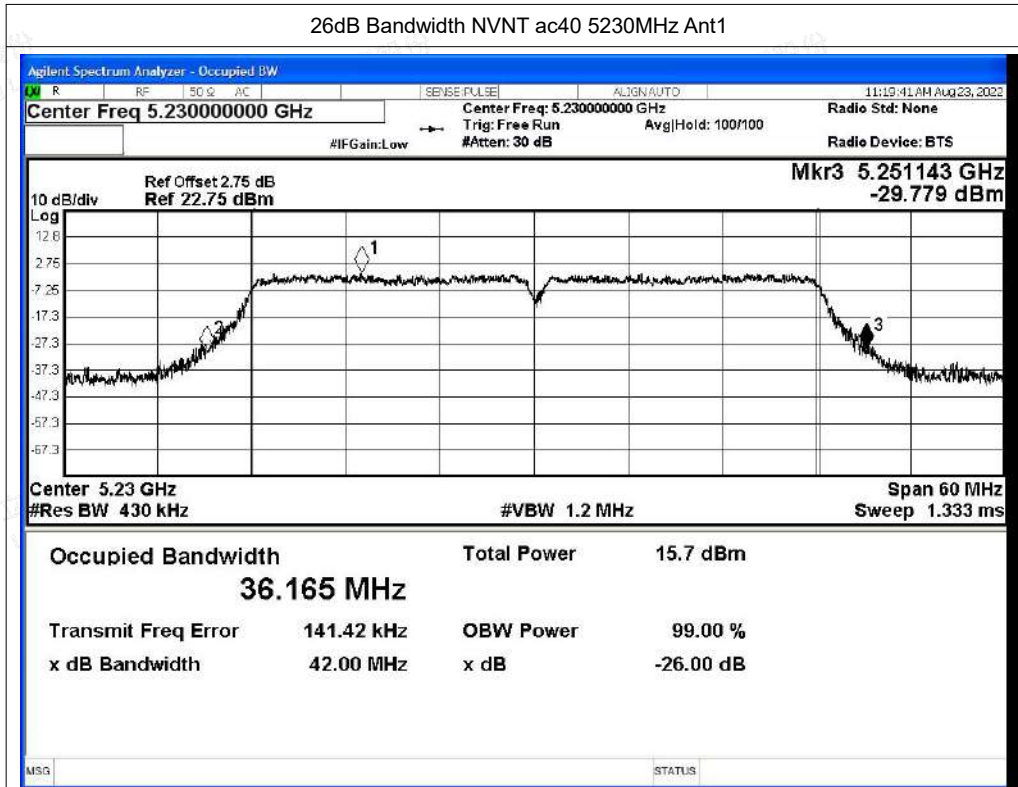














B.2 Occupied Channel Bandwidth

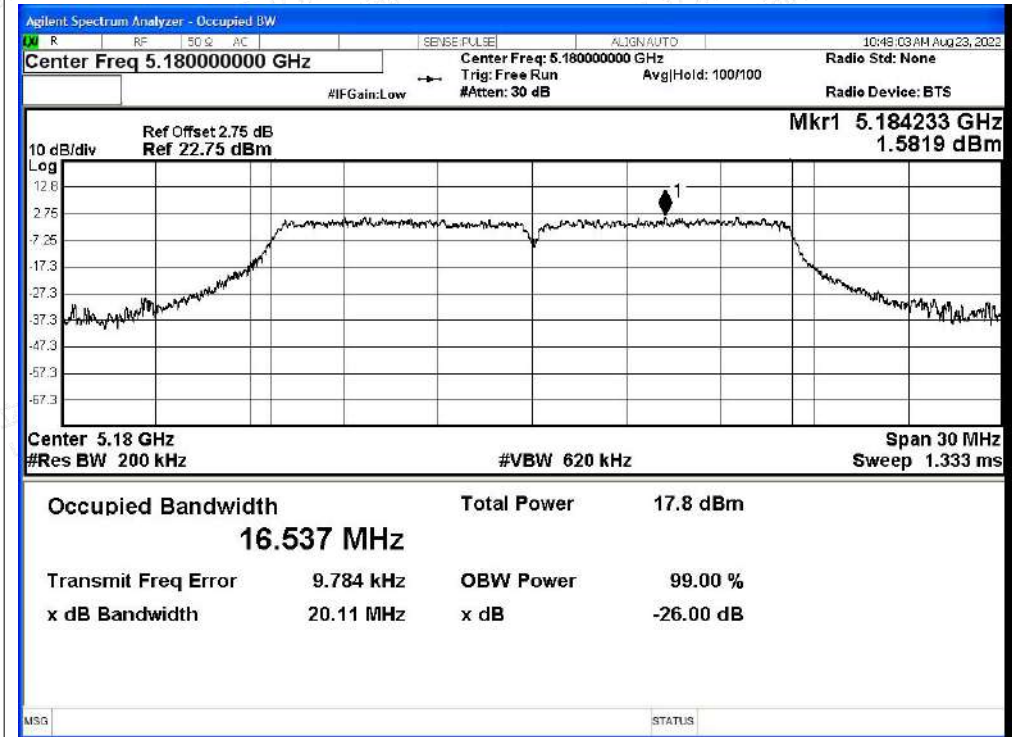
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	a	5180	Ant1	16.537
NVNT	a	5200	Ant1	16.553
NVNT	a	5240	Ant1	16.533
NVNT	n20	5180	Ant1	17.67
NVNT	n20	5200	Ant1	17.656
NVNT	n20	5240	Ant1	17.659
NVNT	n40	5190	Ant1	36.158
NVNT	n40	5230	Ant1	36.198
NVNT	ac20	5180	Ant1	17.655
NVNT	ac20	5200	Ant1	17.659
NVNT	ac20	5240	Ant1	17.666
NVNT	ac40	5190	Ant1	36.151
NVNT	ac40	5230	Ant1	36.187
NVNT	ac80	5210	Ant1	75.553



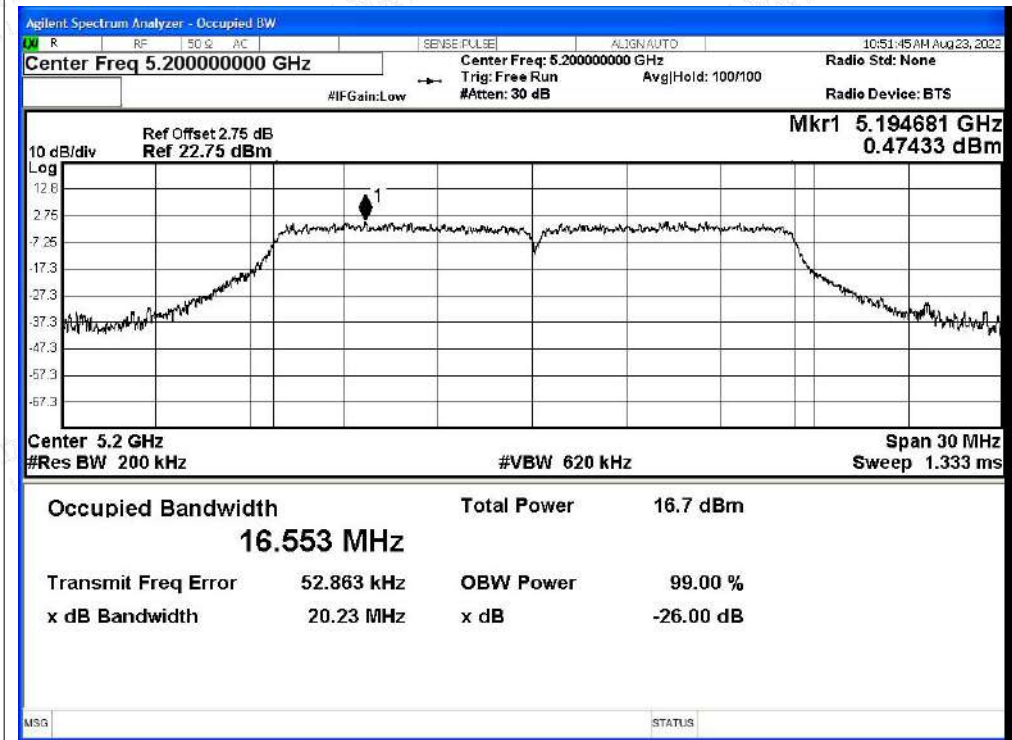


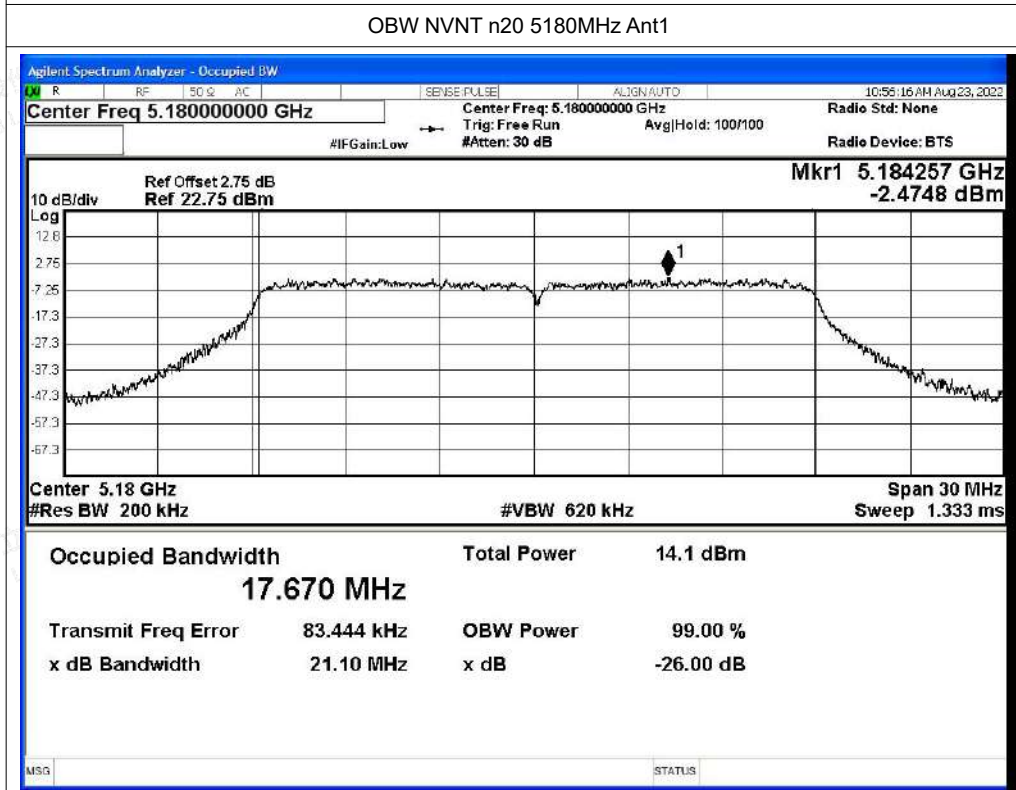
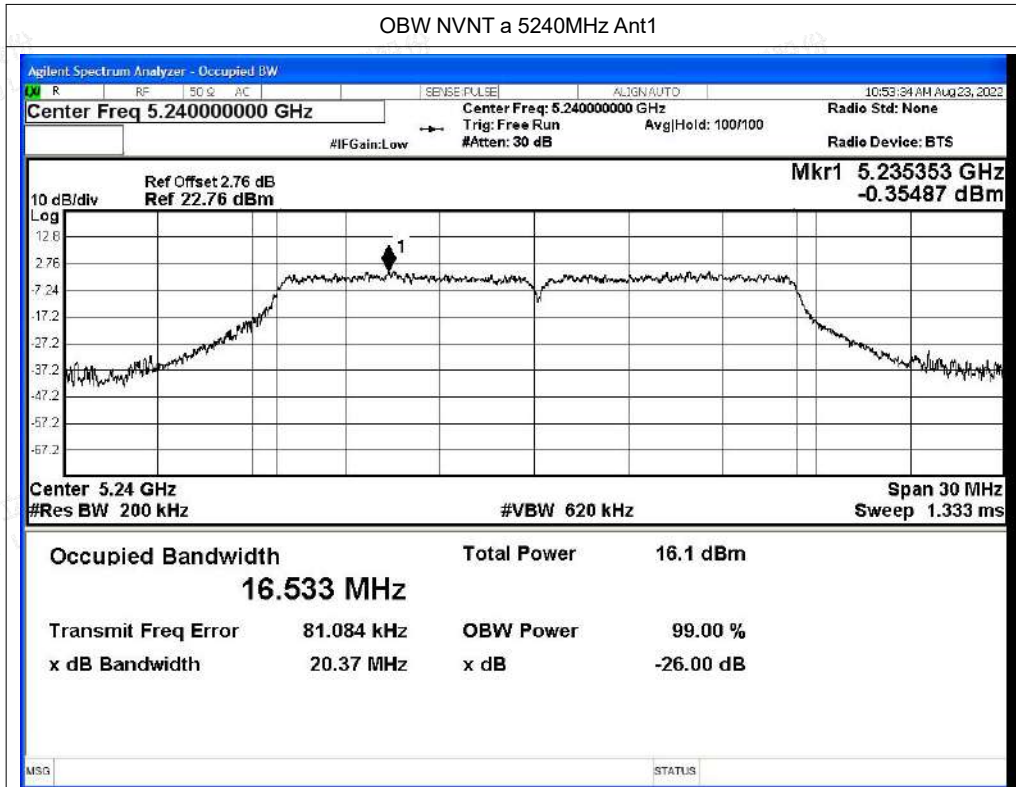
Test Graphs

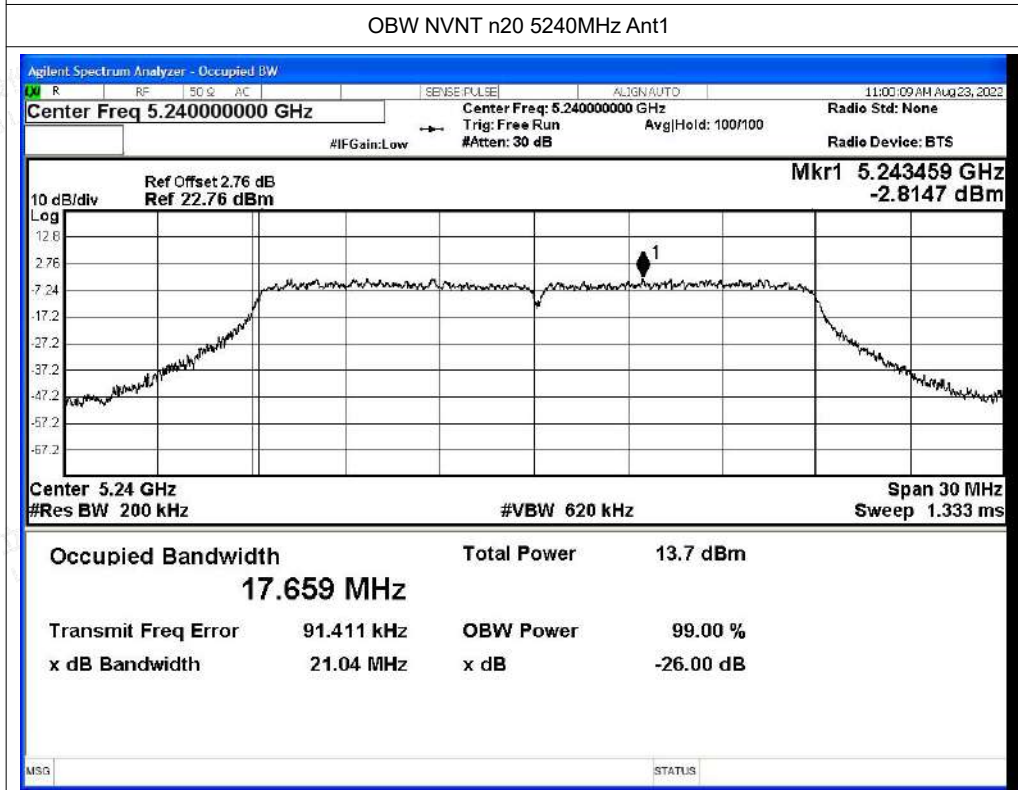
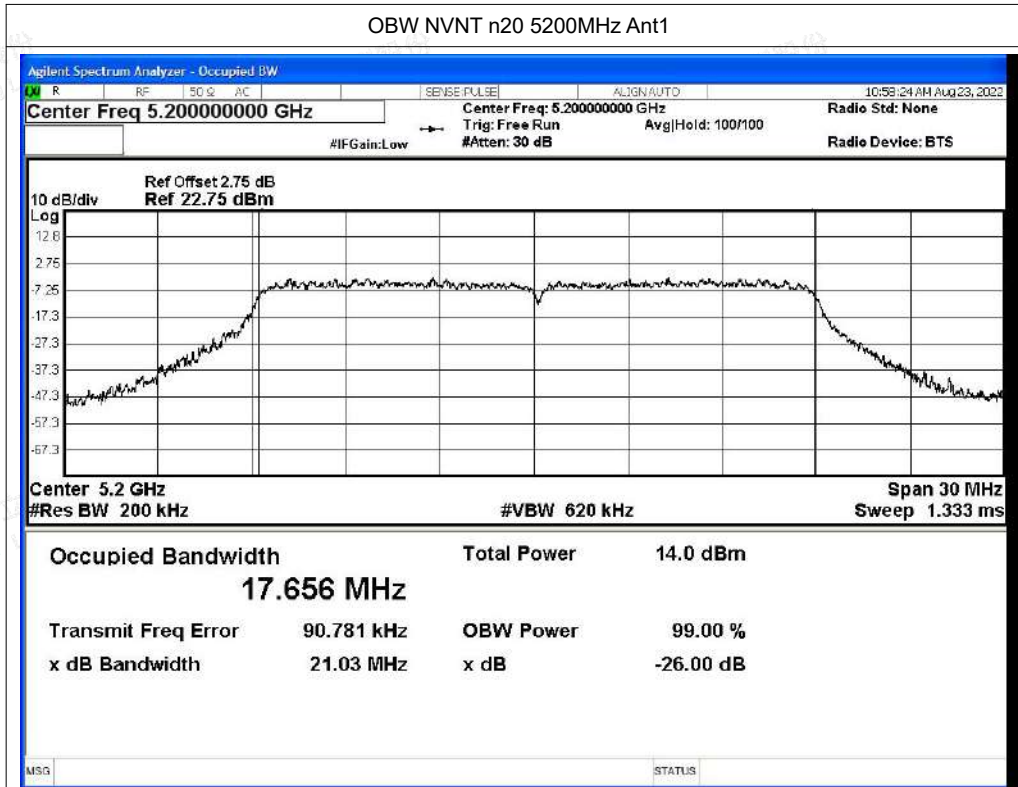
OBW NVNT a 5180MHz Ant1

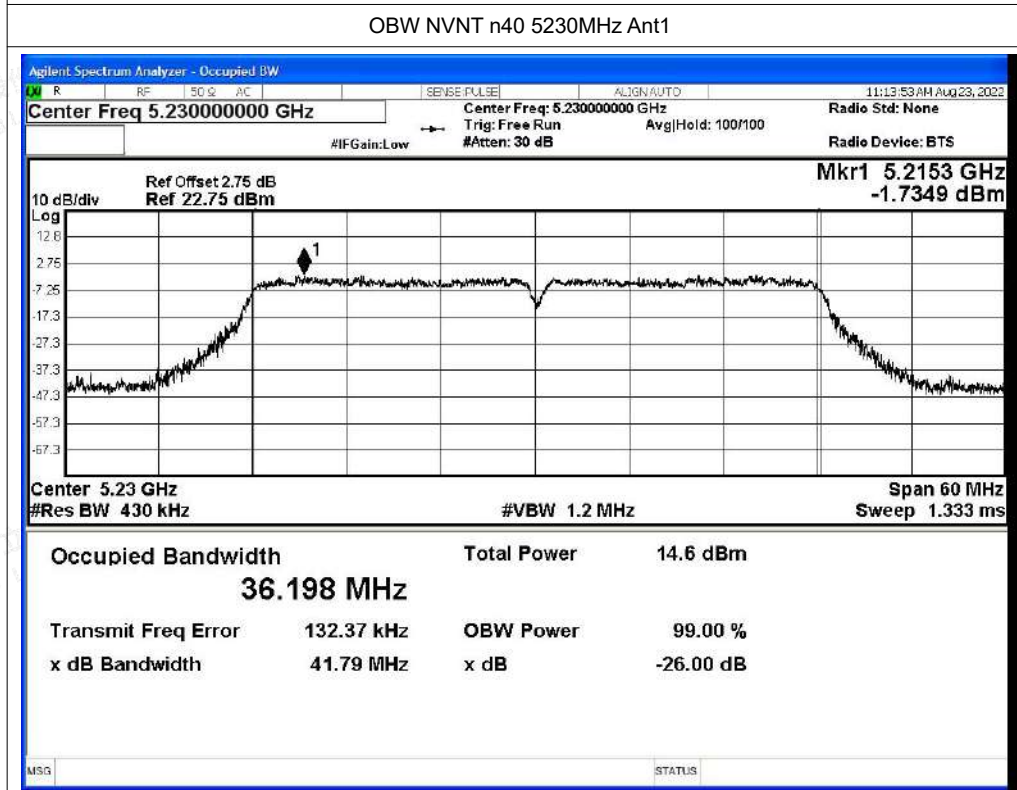
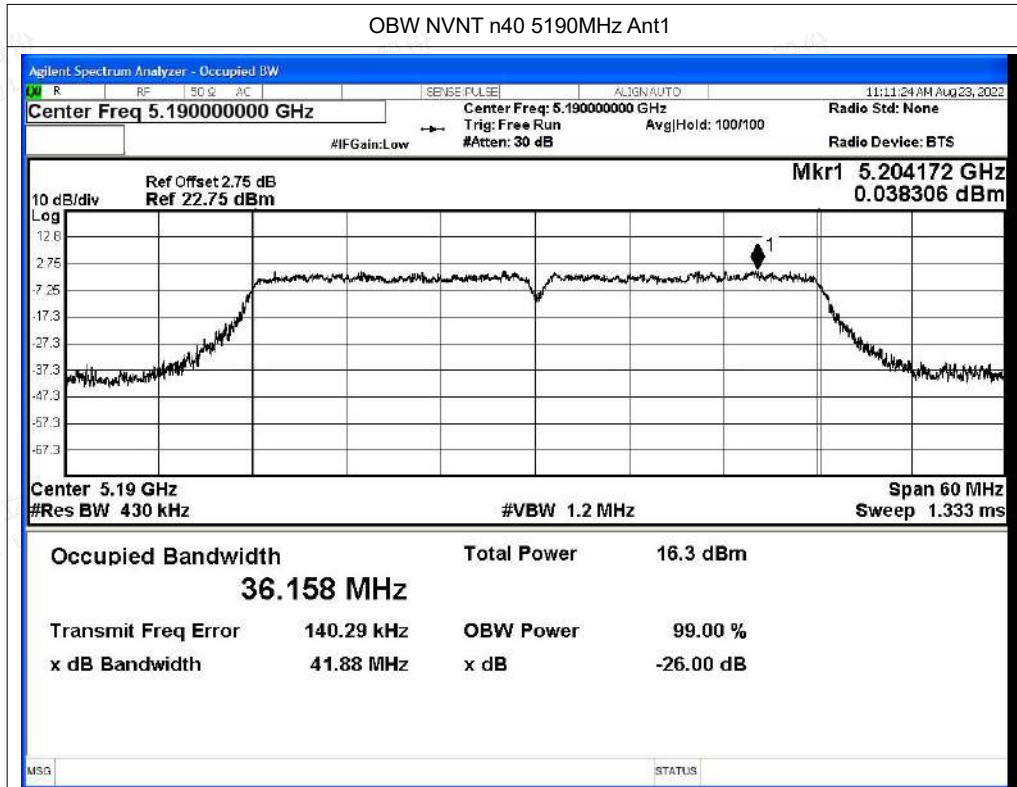


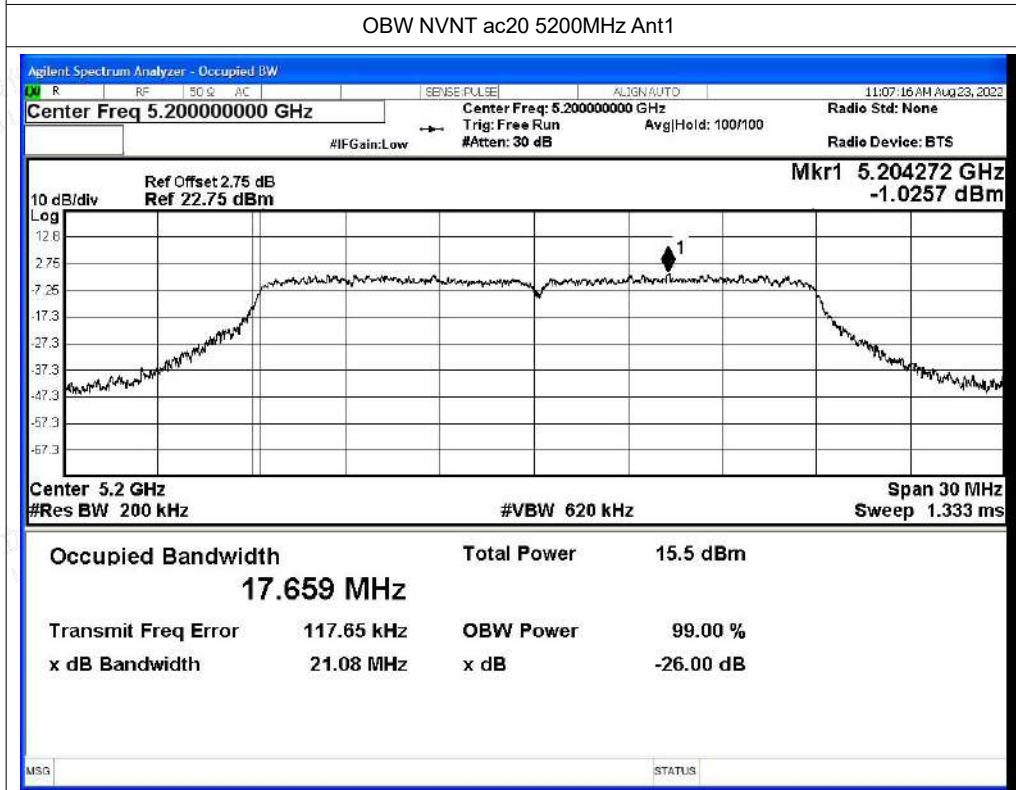
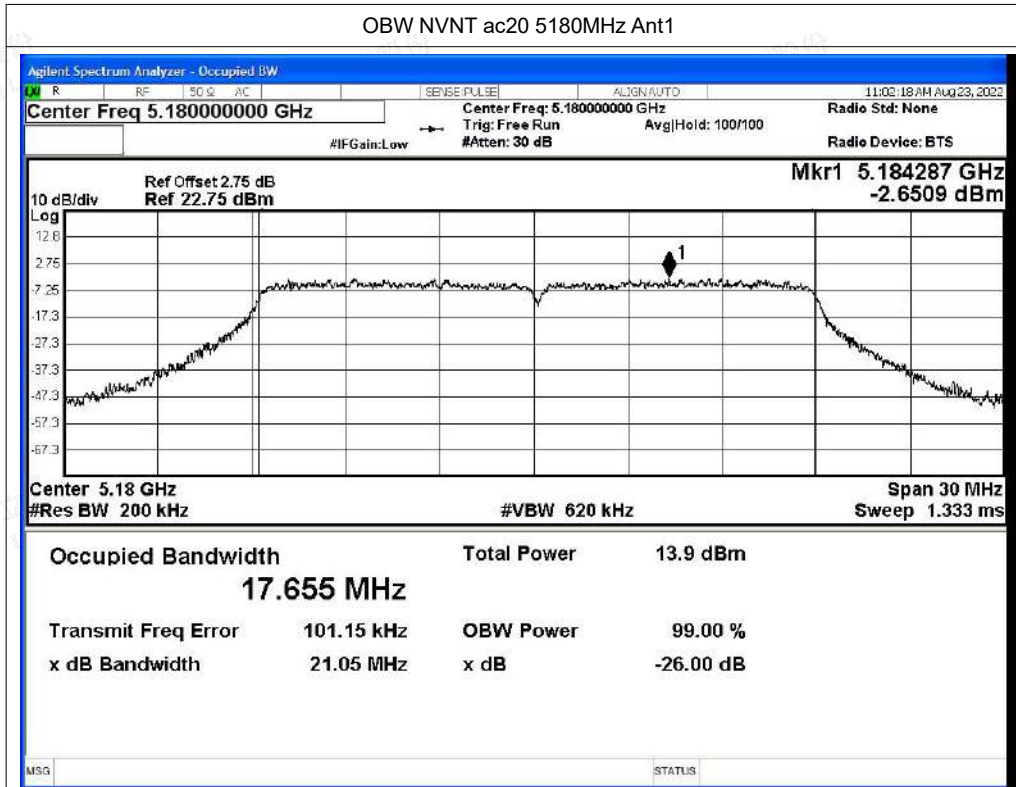
OBW NVNT a 5200MHz Ant1

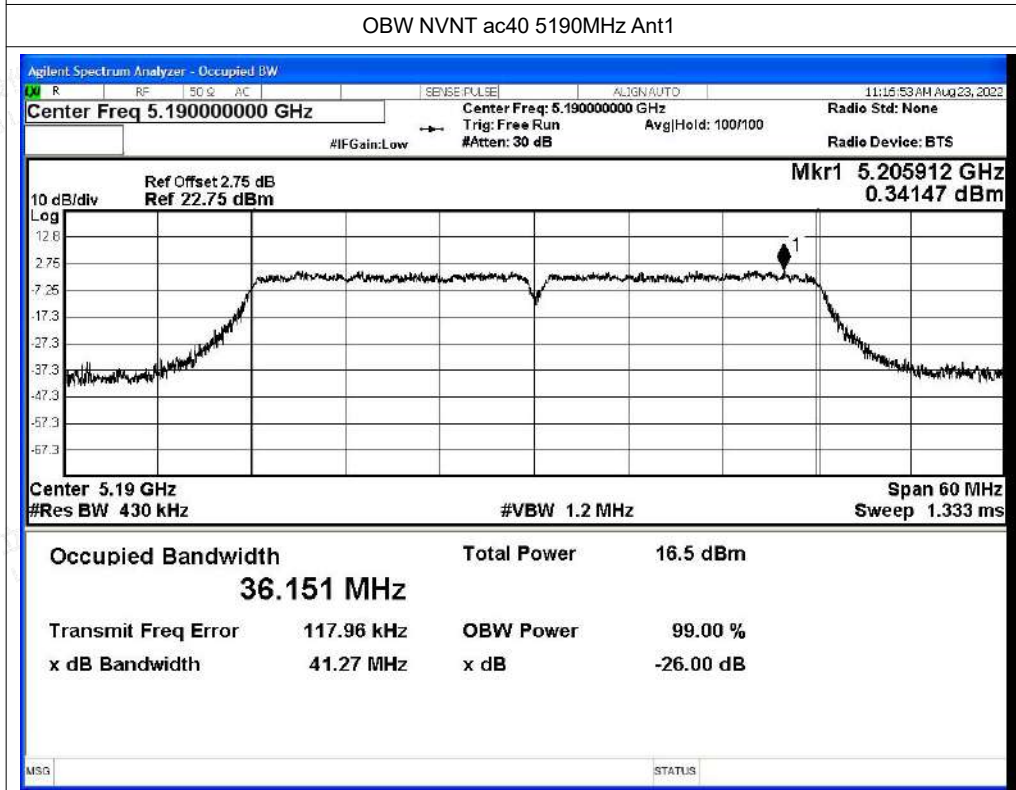
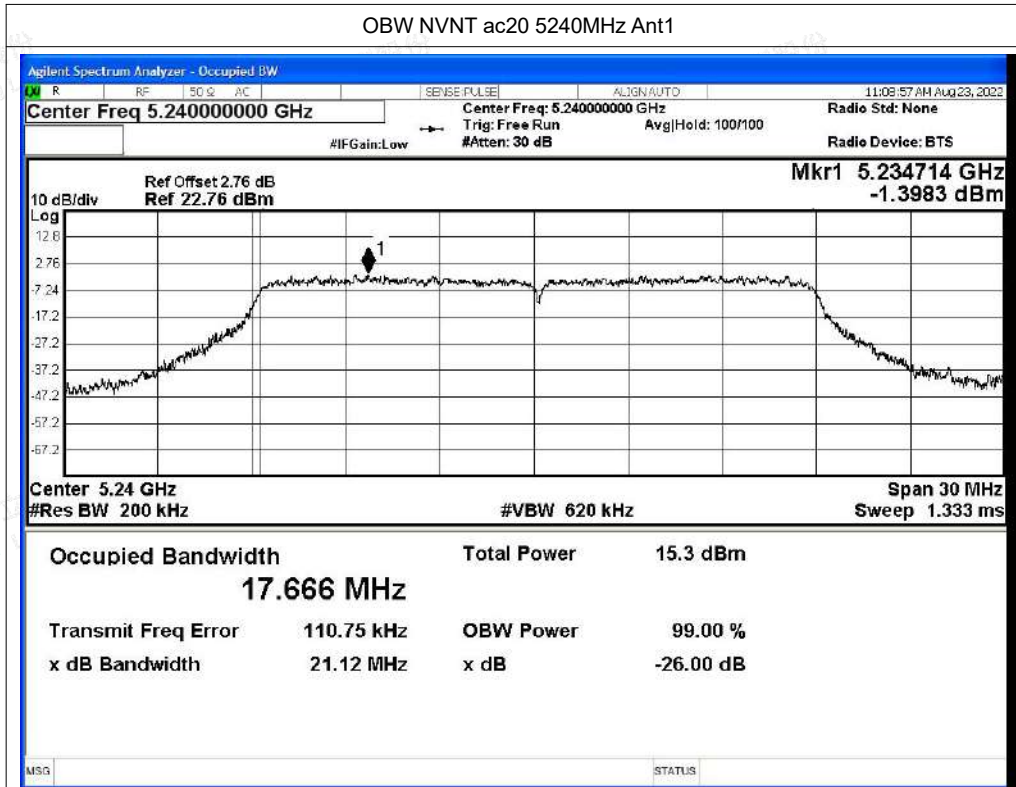


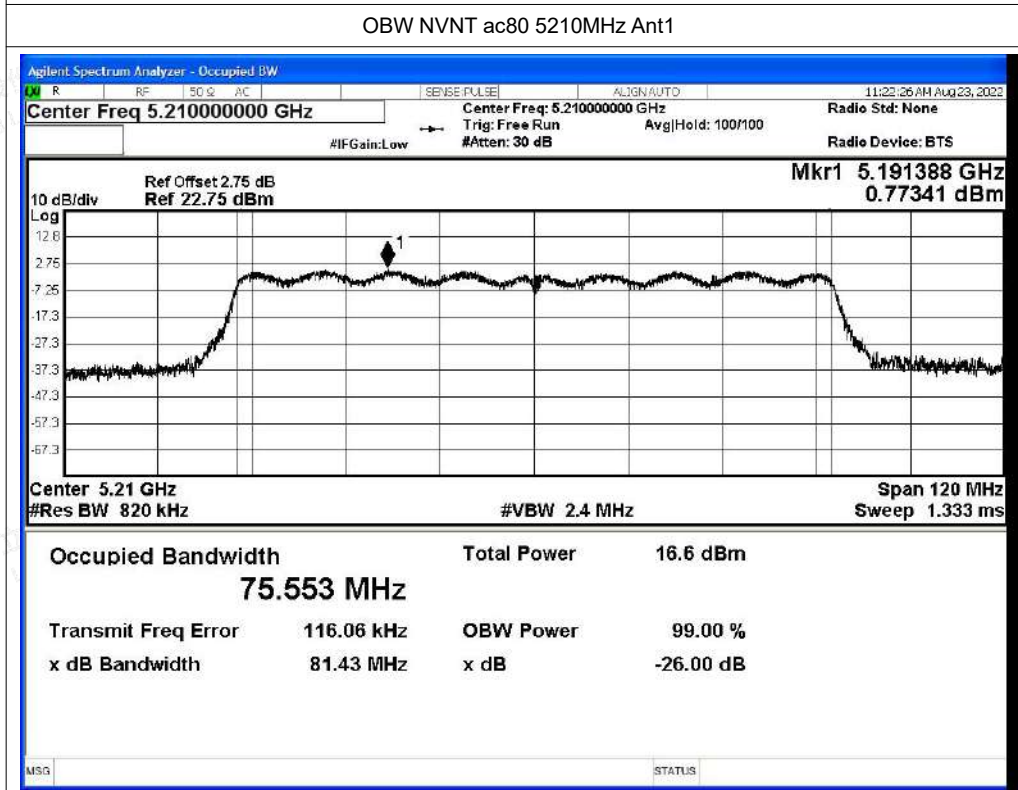
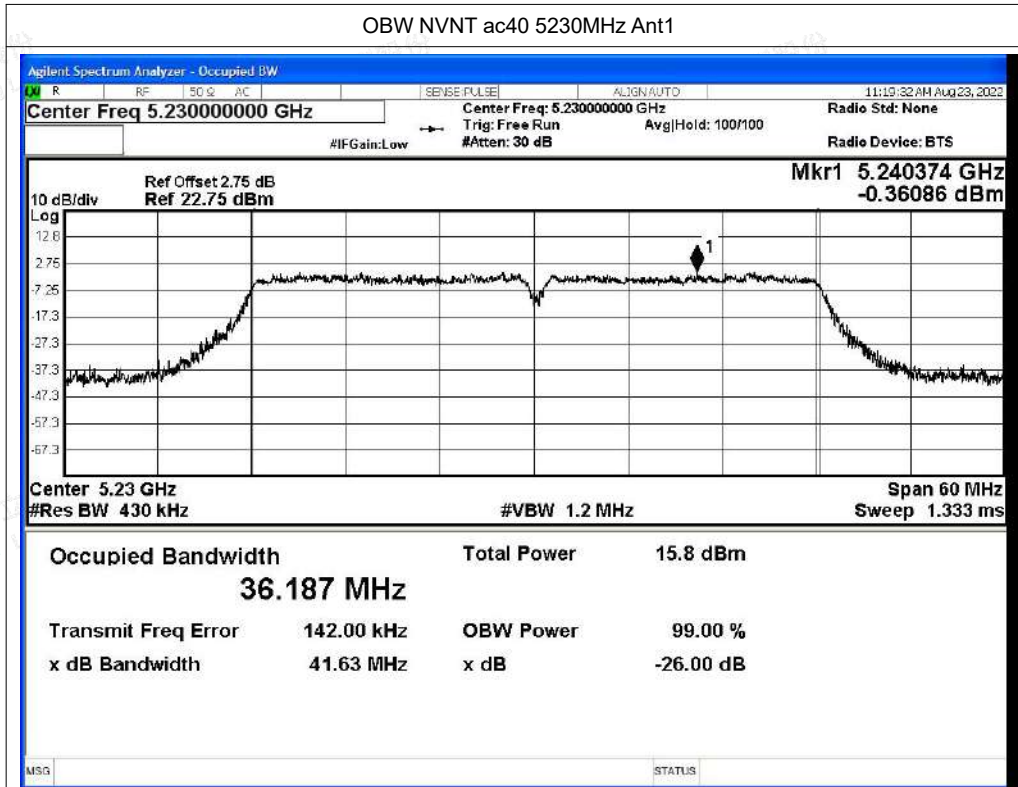














B.3 Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Gain [dBi]	EIRP [dBm]	Limit [dBm]	Verdict
NVNT	a	5180	Ant1	15.66	24	4.39	20.05	≤22.43	Pass
NVNT	a	5200	Ant1	15.25	24	4.39	19.64	≤22.43	Pass
NVNT	a	5240	Ant1	15.43	24	4.39	19.82	≤22.43	Pass
NVNT	n20	5180	Ant1	15.22	24	4.39	19.61	≤22.65	Pass
NVNT	n20	5200	Ant1	15.27	24	4.39	19.66	≤22.65	Pass
NVNT	n20	5240	Ant1	15.3	24	4.39	19.69	≤22.65	Pass
NVNT	n40	5190	Ant1	15.17	24	4.39	19.56	≤23.01	Pass
NVNT	n40	5230	Ant1	15.51	24	4.39	19.9	≤23.01	Pass
NVNT	ac20	5180	Ant1	15.05	24	4.39	19.44	≤23.01	Pass
NVNT	ac20	5200	Ant1	15.13	24	4.39	19.52	≤23.01	Pass
NVNT	ac20	5240	Ant1	15.18	24	4.39	19.57	≤23.01	Pass
NVNT	ac40	5190	Ant1	15.37	24	4.39	19.76	≤23.01	Pass
NVNT	ac40	5230	Ant1	17.91	24	4.39	22.3	≤23.01	Pass
NVNT	ac80	5210	Ant1	14.41	24	4.39	18.8	≤23.01	Pass





B.4 Maximum Power Spectral Density Level

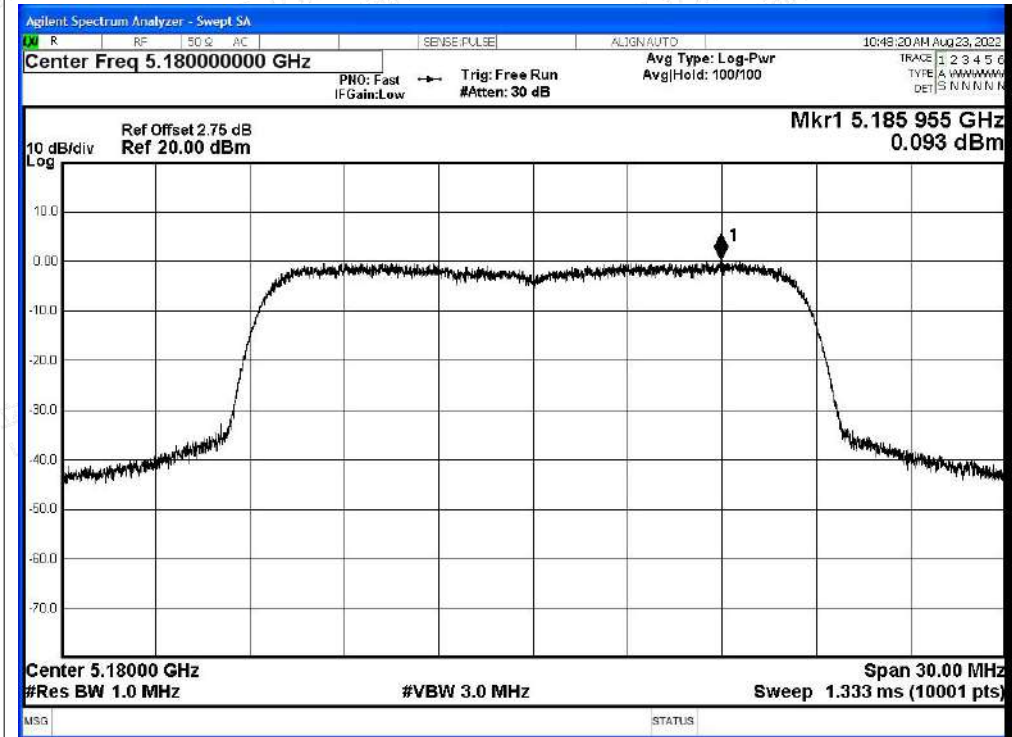
Condition	Mode	Frequency (MHz)	Antenna	Total PSD (dBm)	Gain [dBi]	EIRP PSD [dBm/MHz]	Limit (dBm)	Verdict
NVNT	a	5180	Ant1	0.09	4.39	4.48	10	Pass
NVNT	a	5200	Ant1	-0.73	4.39	3.66	10	Pass
NVNT	a	5240	Ant1	-1.31	4.39	3.08	10	Pass
NVNT	n20	5180	Ant1	-2.63	4.39	1.76	10	Pass
NVNT	n20	5200	Ant1	-2.16	4.39	2.23	10	Pass
NVNT	n20	5240	Ant1	-2.25	4.39	2.14	10	Pass
NVNT	n40	5190	Ant1	-4.83	4.39	-0.44	10	Pass
NVNT	n40	5230	Ant1	-6.49	4.39	-2.1	10	Pass
NVNT	ac20	5180	Ant1	-2.07	4.39	2.32	10	Pass
NVNT	ac20	5200	Ant1	-2.33	4.39	2.06	10	Pass
NVNT	ac20	5240	Ant1	-2.66	4.39	1.73	10	Pass
NVNT	ac40	5190	Ant1	-4.79	4.39	-0.4	10	Pass
NVNT	ac40	5230	Ant1	-5.41	4.39	-1.02	10	Pass
NVNT	ac80	5210	Ant1	-7.71	4.39	-3.32	10	Pass



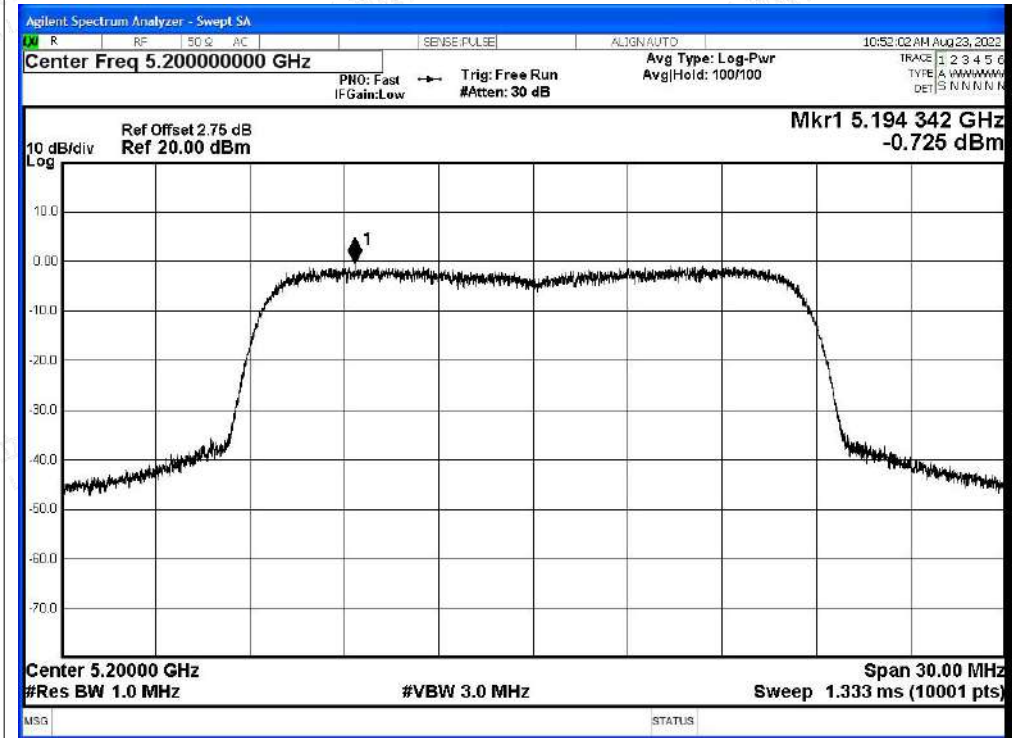


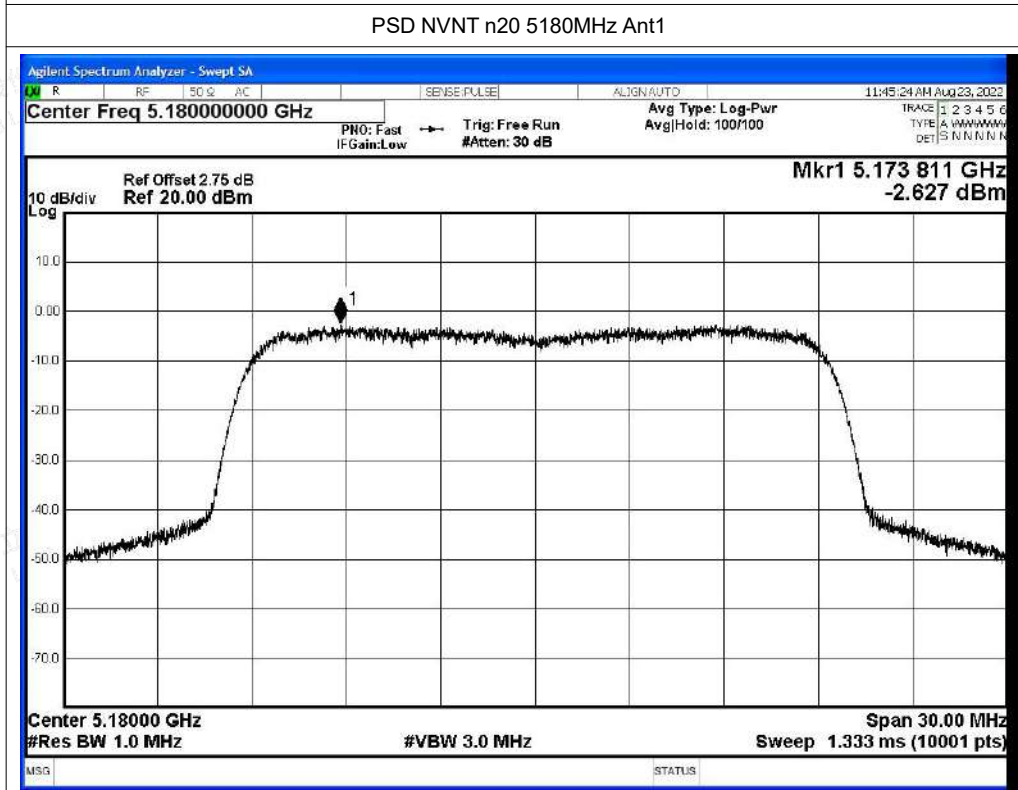
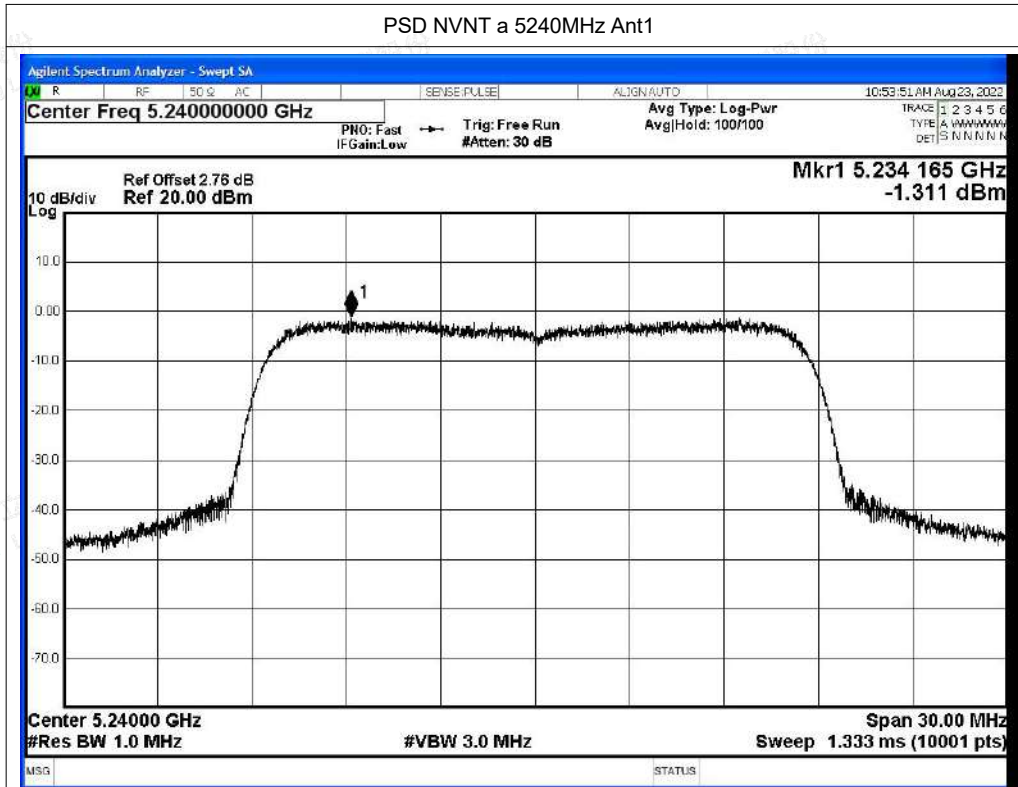
Test Graphs

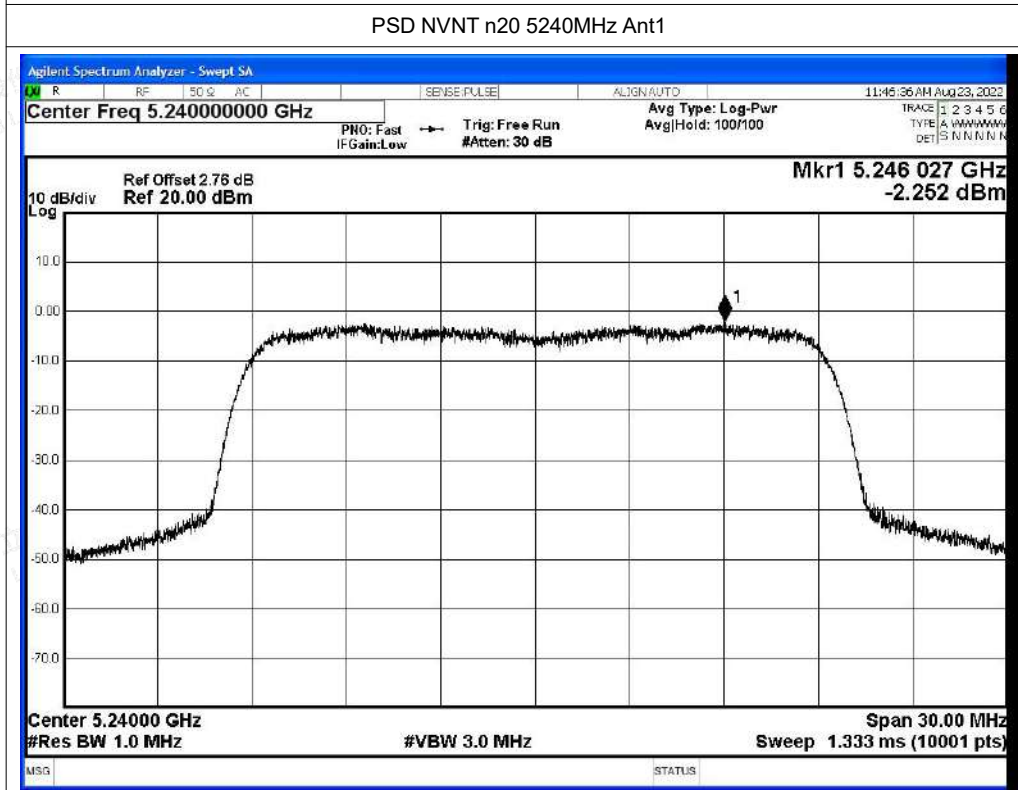
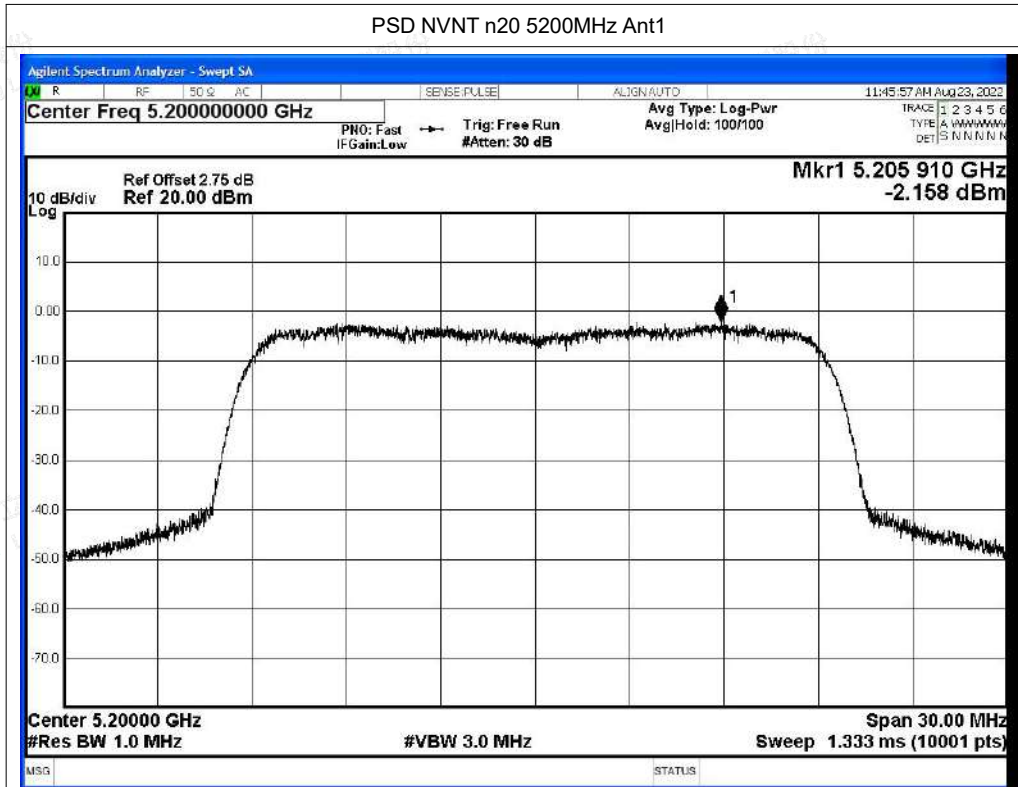
PSD NVNT a 5180MHz Ant1

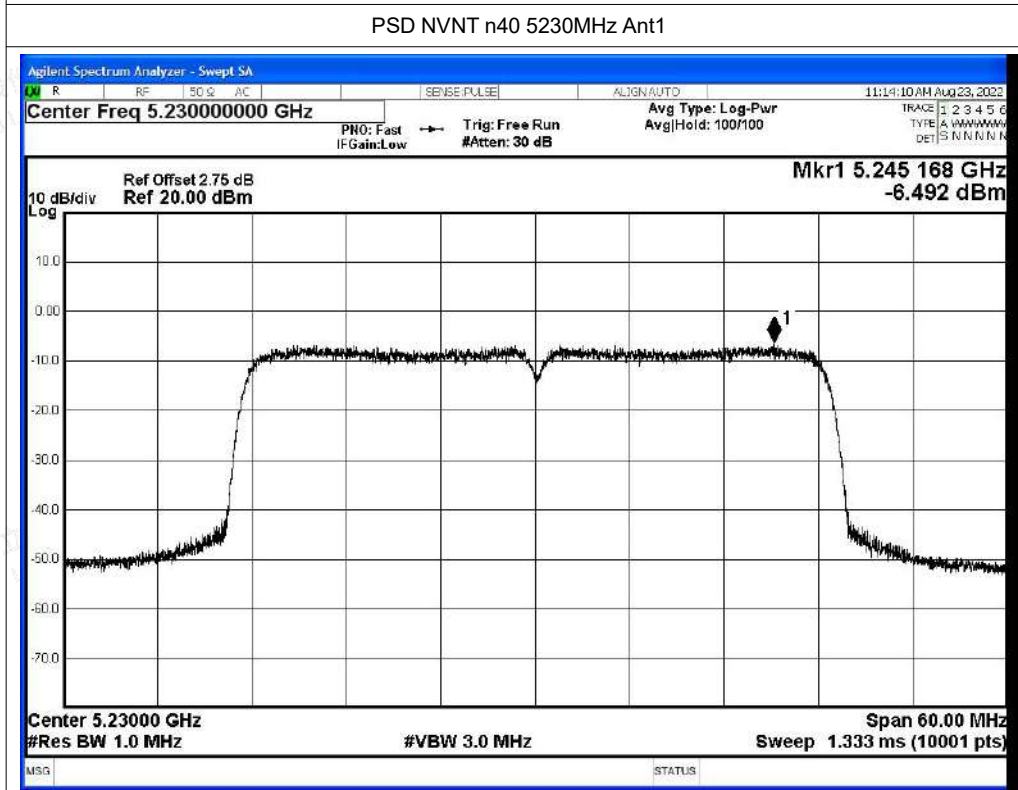
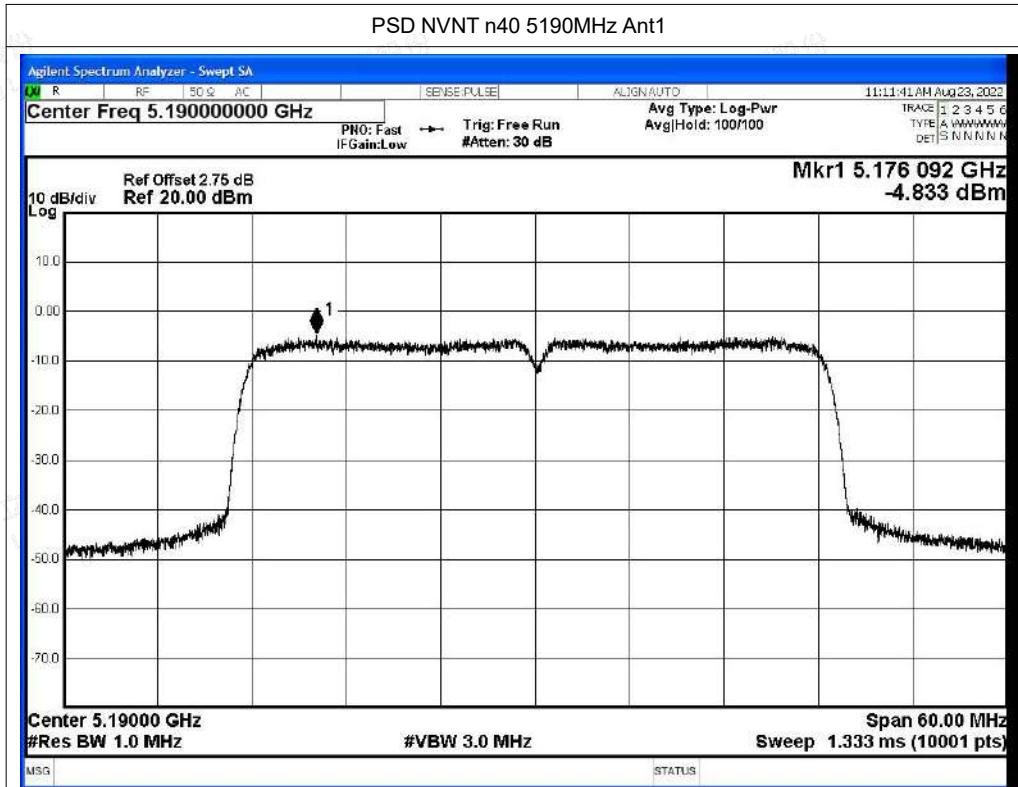


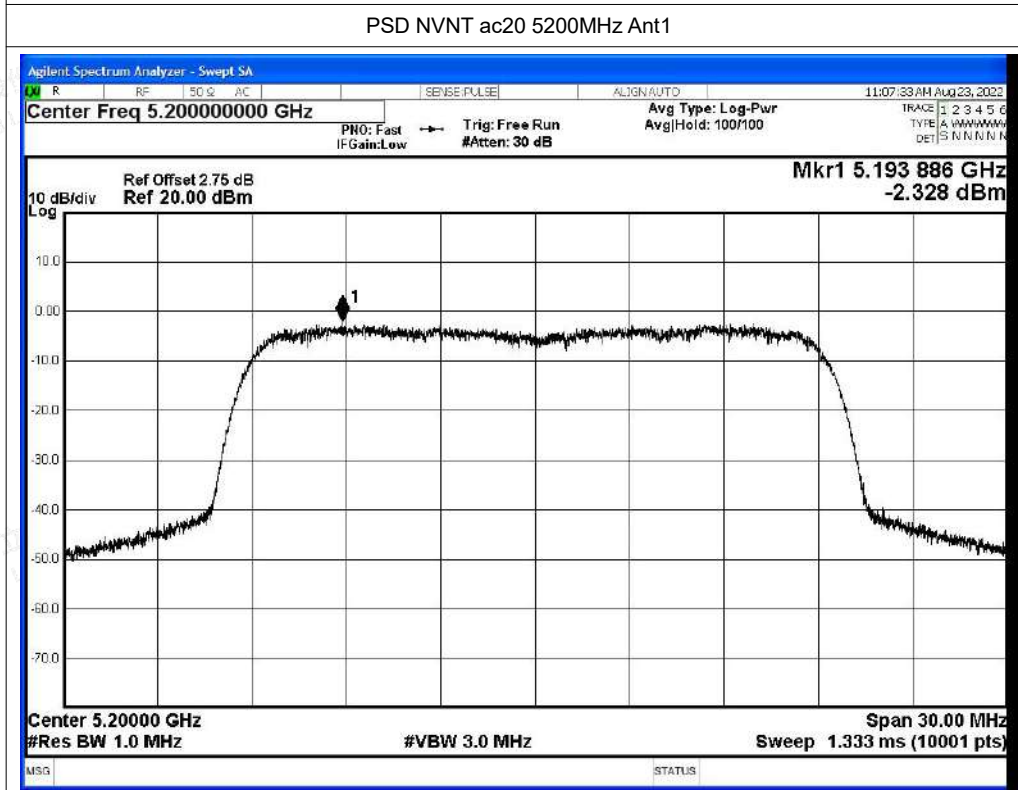
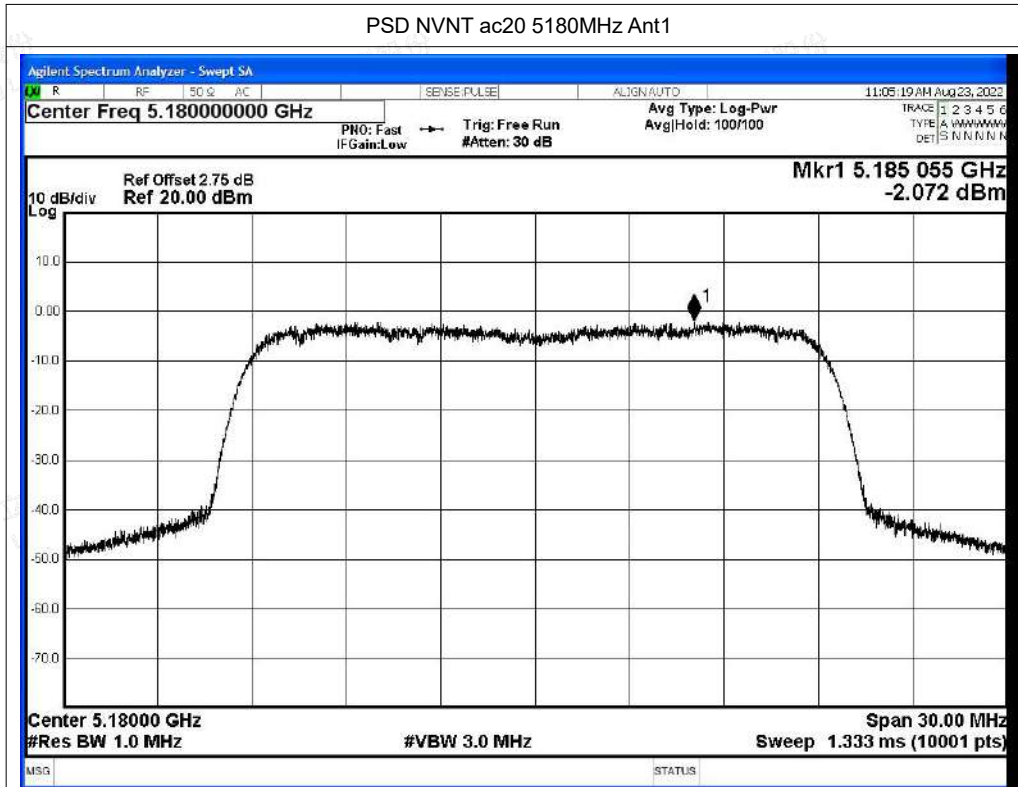
PSD NVNT a 5200MHz Ant1

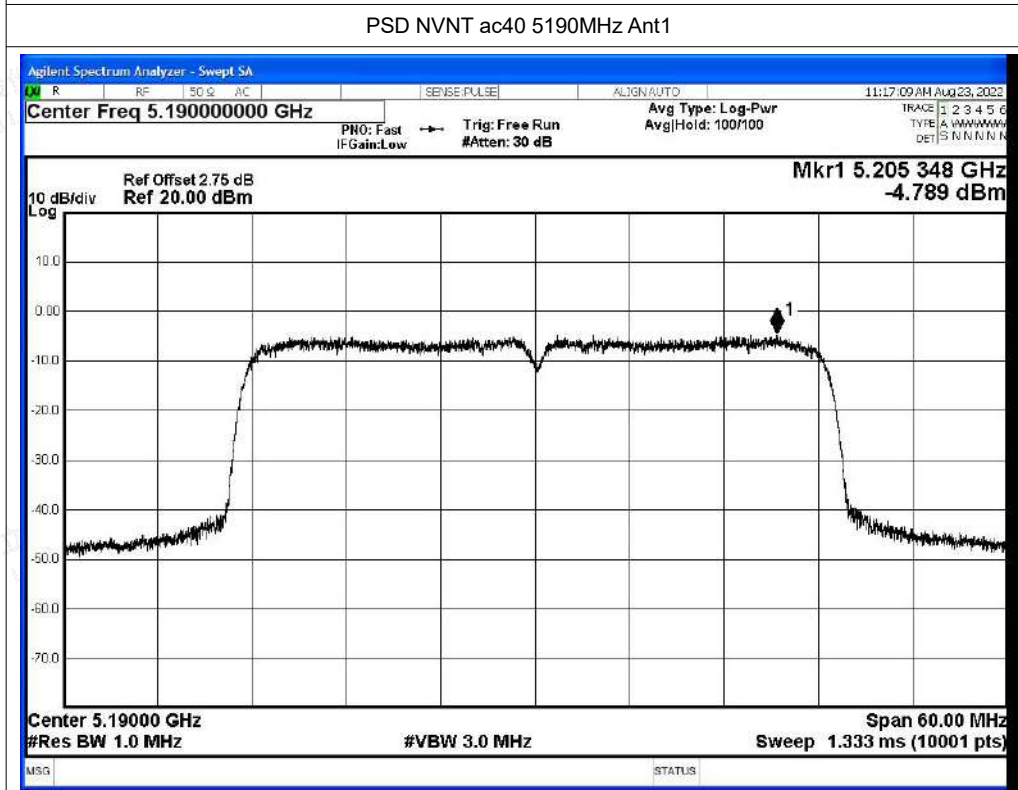
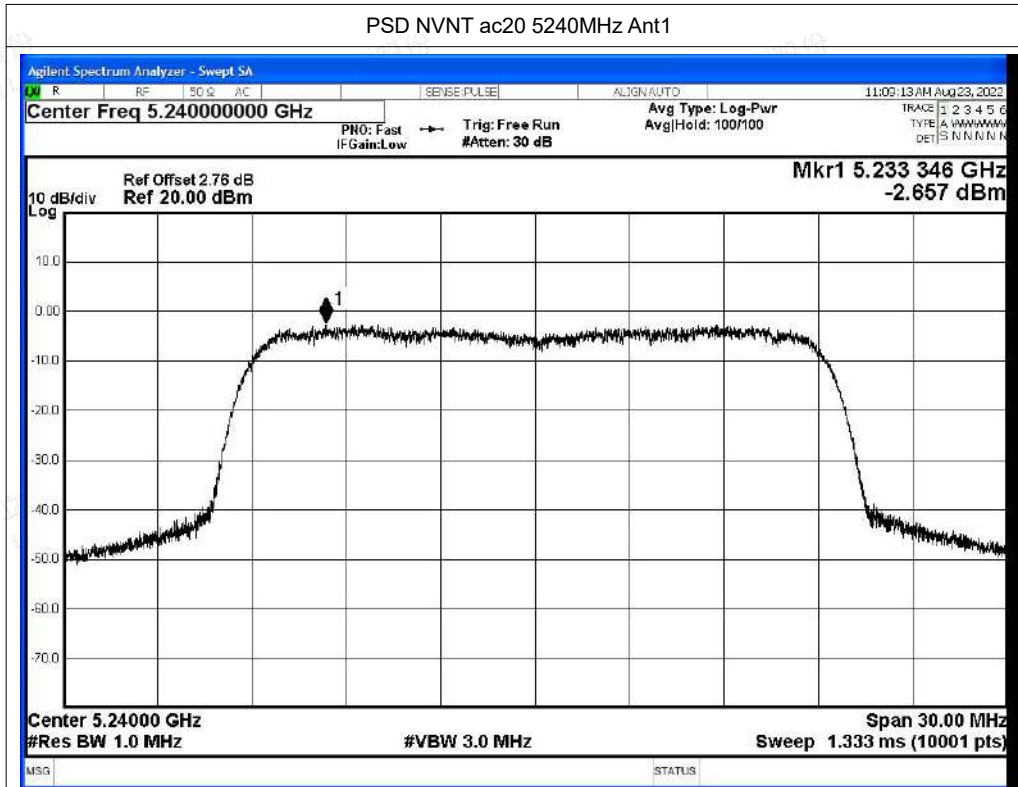


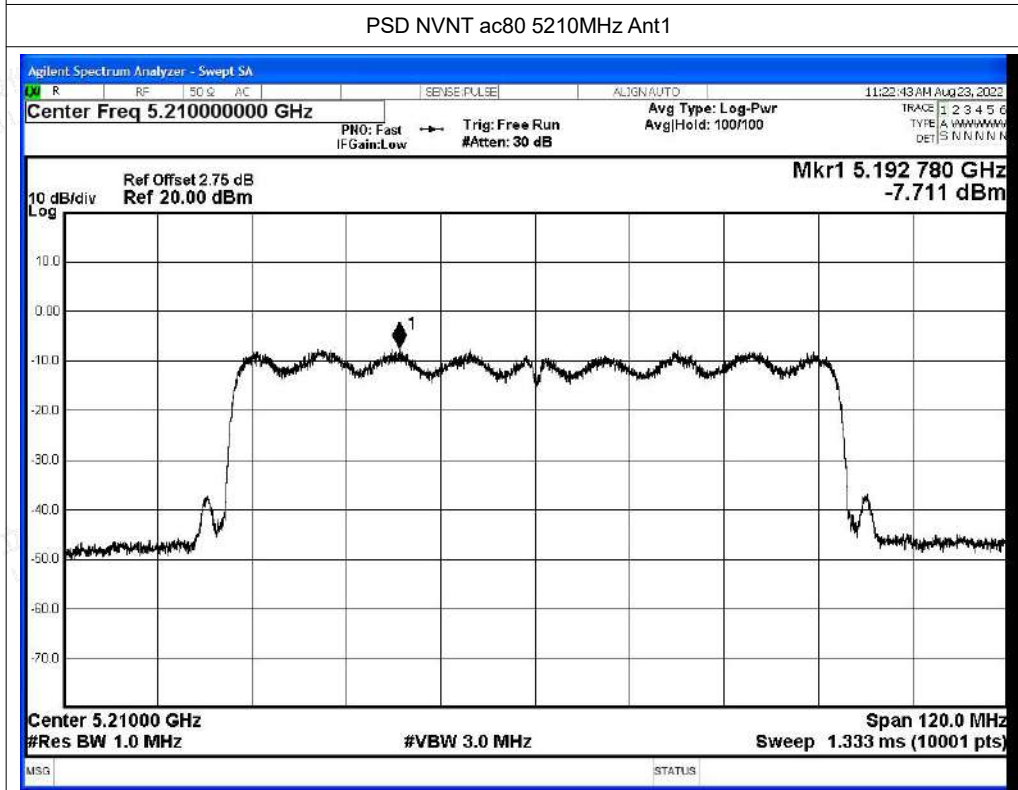
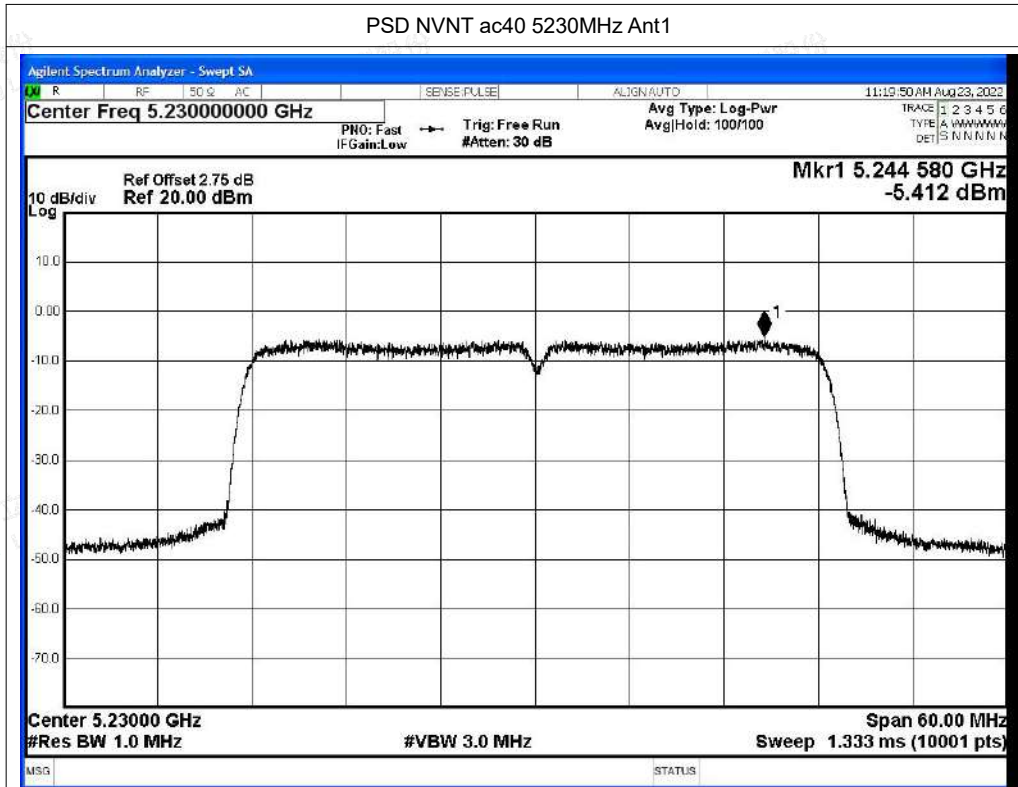














B.5 Restrict Band

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	-51.16	4.39	48.46	Peak	68.2	Pass
NVNT	a	5180	Ant1	4500	-60.74	4.39	38.88	Average	54	Pass
NVNT	a	5180	Ant1	5099.9	-45.73	4.39	53.89	Peak	68.2	Pass
NVNT	a	5180	Ant1	5149.6	-57.32	4.39	42.3	Average	54	Pass
NVNT	a	5180	Ant1	5150	-45.76	4.39	53.86	Peak	68.2	Pass
NVNT	a	5180	Ant1	5150	-57.3	4.39	42.32	Average	54	Pass
NVNT	a	5240	Ant1	5350	-49.61	4.39	50.01	Peak	68.2	Pass
NVNT	a	5240	Ant1	5350	-59.12	4.39	40.5	Average	54	Pass
NVNT	a	5240	Ant1	5438.4	-47	4.39	52.62	Peak	68.2	Pass
NVNT	a	5240	Ant1	5395.68	-58.21	4.39	41.41	Average	54	Pass
NVNT	a	5240	Ant1	5460	-49.05	4.39	50.57	Peak	68.2	Pass
NVNT	a	5240	Ant1	5460	-59.61	4.39	40.01	Average	54	Pass
NVNT	n20	5180	Ant1	4500	-51.14	4.39	48.48	Peak	68.2	Pass
NVNT	n20	5180	Ant1	4500	-60.7	4.39	38.92	Average	54	Pass
NVNT	n20	5180	Ant1	5076.8	-46.42	4.39	53.2	Peak	68.2	Pass
NVNT	n20	5180	Ant1	5144	-58.17	4.39	41.45	Average	54	Pass
NVNT	n20	5180	Ant1	5150	-48.58	4.39	51.04	Peak	68.2	Pass
NVNT	n20	5180	Ant1	5150	-58.28	4.39	41.34	Average	54	Pass
NVNT	n20	5240	Ant1	5350	-48.55	4.39	51.07	Peak	68.2	Pass
NVNT	n20	5240	Ant1	5350	-59.15	4.39	40.47	Average	54	Pass
NVNT	n20	5240	Ant1	5387.04	-46.42	4.39	53.2	Peak	68.2	Pass
NVNT	n20	5240	Ant1	5395.44	-58.67	4.39	40.95	Average	54	Pass
NVNT	n20	5240	Ant1	5460	-49.5	4.39	50.12	Peak	68.2	Pass
NVNT	n20	5240	Ant1	5460	-59.62	4.39	40	Average	54	Pass
NVNT	n40	5190	Ant1	4500	-50.71	4.39	48.91	Peak	68.2	Pass
NVNT	n40	5190	Ant1	4500	-60.55	4.39	39.07	Average	54	Pass
NVNT	n40	5190	Ant1	5148.97	-39.56	4.39	60.06	Peak	68.2	Pass
NVNT	n40	5190	Ant1	5149.7	-51.03	4.39	48.59	Average	54	Pass
NVNT	n40	5190	Ant1	5150	-39.67	4.39	59.95	Peak	68.2	Pass
NVNT	n40	5190	Ant1	5150	-50.71	4.39	48.91	Average	54	Pass
NVNT	n40	5230	Ant1	5350	-50.25	4.39	49.37	Peak	68.2	Pass
NVNT	n40	5230	Ant1	5350	-59.07	4.39	40.55	Average	54	Pass
NVNT	n40	5230	Ant1	5419.77	-45.72	4.39	53.9	Peak	68.2	Pass
NVNT	n40	5230	Ant1	5391.69	-58.51	4.39	41.11	Average	54	Pass
NVNT	n40	5230	Ant1	5460	-48.67	4.39	50.95	Peak	68.2	Pass
NVNT	n40	5230	Ant1	5460	-59.48	4.39	40.14	Average	54	Pass
NVNT	ac20	5180	Ant1	4500	-51.82	4.39	47.8	Peak	68.2	Pass
NVNT	ac20	5180	Ant1	4500	-60.69	4.39	38.93	Average	54	Pass
NVNT	ac20	5180	Ant1	5092.2	-46.08	4.39	53.54	Peak	68.2	Pass



Shenzhen LCS Compliance Testing Laboratory Ltd.

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Scan code to check authenticity



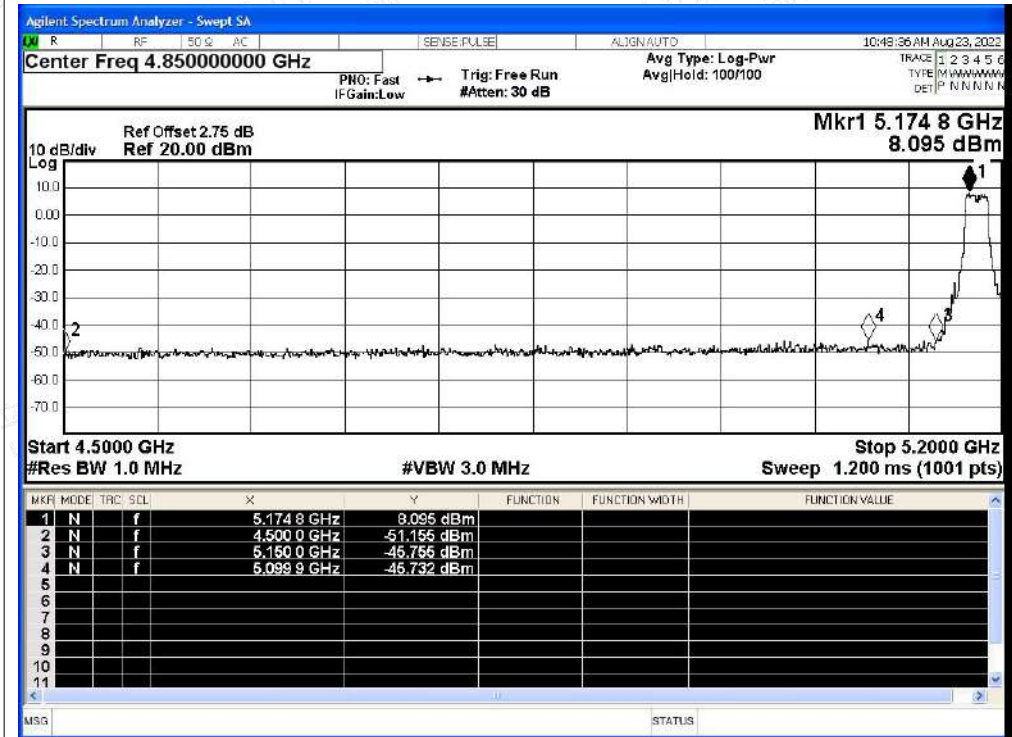
NVNT	ac20	5180	Ant1	5148.2	-57.96	4.39	41.66	Average	54	Pass
NVNT	ac20	5180	Ant1	5150	-50.01	4.39	49.61	Peak	68.2	Pass
NVNT	ac20	5180	Ant1	5150	-58.15	4.39	41.47	Average	54	Pass
NVNT	ac20	5240	Ant1	5350	-49.88	4.39	49.74	Peak	68.2	Pass
NVNT	ac20	5240	Ant1	5350	-59.05	4.39	40.57	Average	54	Pass
NVNT	ac20	5240	Ant1	5403.6	-46.76	4.39	52.86	Peak	68.2	Pass
NVNT	ac20	5240	Ant1	5400.72	-58.25	4.39	41.37	Average	54	Pass
NVNT	ac20	5240	Ant1	5460	-49.87	4.39	49.75	Peak	68.2	Pass
NVNT	ac20	5240	Ant1	5460	-59.63	4.39	39.99	Average	54	Pass
NVNT	ac40	5190	Ant1	4500	-49.14	4.39	50.48	Peak	68.2	Pass
NVNT	ac40	5190	Ant1	4500	-60.57	4.39	39.05	Average	54	Pass
NVNT	ac40	5190	Ant1	5149.7	-38.21	4.39	61.41	Peak	68.2	Pass
NVNT	ac40	5190	Ant1	5149.7	-50.44	4.39	49.18	Average	54	Pass
NVNT	ac40	5190	Ant1	5150	-37.48	4.39	62.14	Peak	68.2	Pass
NVNT	ac40	5190	Ant1	5150	-49.8	4.39	49.82	Average	54	Pass
NVNT	ac40	5230	Ant1	5350	-50.02	4.39	49.6	Peak	68.2	Pass
NVNT	ac40	5230	Ant1	5350	-58.66	4.39	40.96	Average	54	Pass
NVNT	ac40	5230	Ant1	5414.64	-46.11	4.39	53.51	Peak	68.2	Pass
NVNT	ac40	5230	Ant1	5398.98	-58.06	4.39	41.56	Average	54	Pass
NVNT	ac40	5230	Ant1	5460	-49.38	4.39	50.24	Peak	68.2	Pass
NVNT	ac40	5230	Ant1	5460	-59.06	4.39	40.56	Average	54	Pass
NVNT	ac80	5210	Ant1	5350	-49.52	4.39	50.1	Peak	68.2	Pass
NVNT	ac80	5210	Ant1	5350	-58.49	4.39	41.13	Average	54	Pass
NVNT	ac80	5210	Ant1	5439.21	-46.95	4.39	52.67	Peak	68.2	Pass
NVNT	ac80	5210	Ant1	5364.3	-57.54	4.39	42.08	Average	54	Pass
NVNT	ac80	5210	Ant1	5460	-49.55	4.39	50.07	Peak	68.2	Pass
NVNT	ac80	5210	Ant1	5460	-58.42	4.39	41.2	Average	54	Pass
NVNT	ac80	5210	Ant1	4500	-51.58	4.39	48.04	Peak	68.2	Pass
NVNT	ac80	5210	Ant1	4500	-60.05	4.39	39.57	Average	54	Pass
NVNT	ac80	5210	Ant1	5139.9	-35.62	4.39	64.00	Peak	68.2	Pass
NVNT	ac80	5210	Ant1	5145.43	-46.19	4.39	53.43	Average	54	Pass
NVNT	ac80	5210	Ant1	5150	-35.66	4.39	63.96	Peak	68.2	Pass
NVNT	ac80	5210	Ant1	5150	-46.95	4.39	52.67	Average	54	Pass



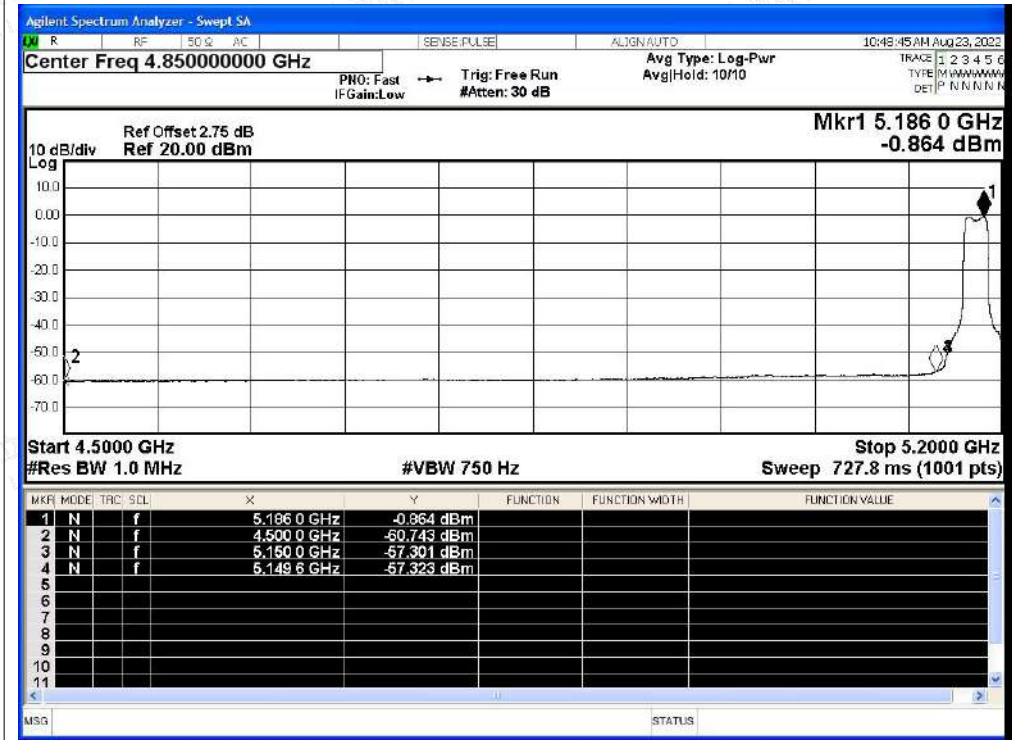


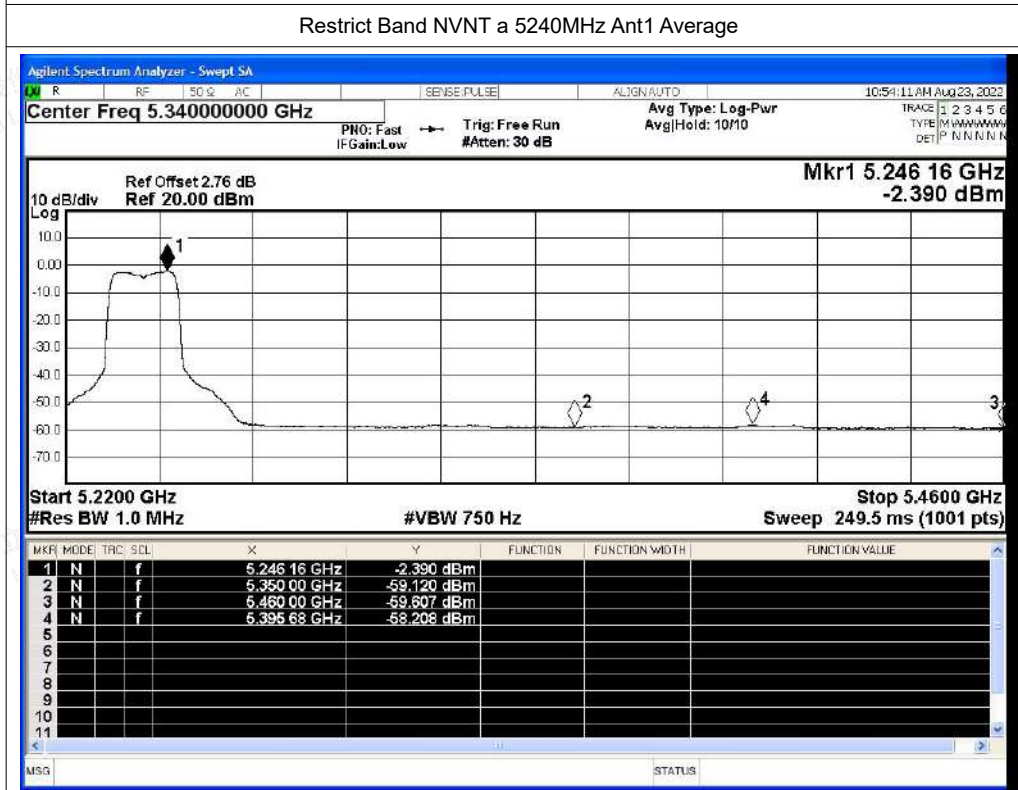
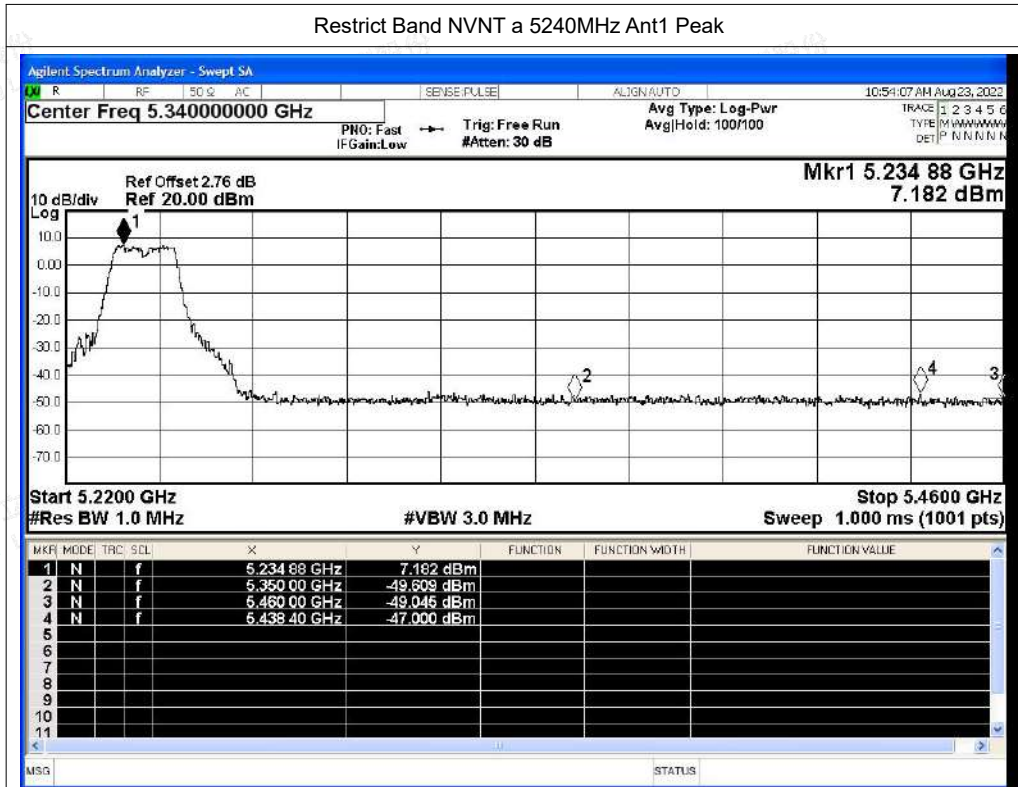
Test Graphs

Restrict Band NVNT a 5180MHz Ant1 Peak



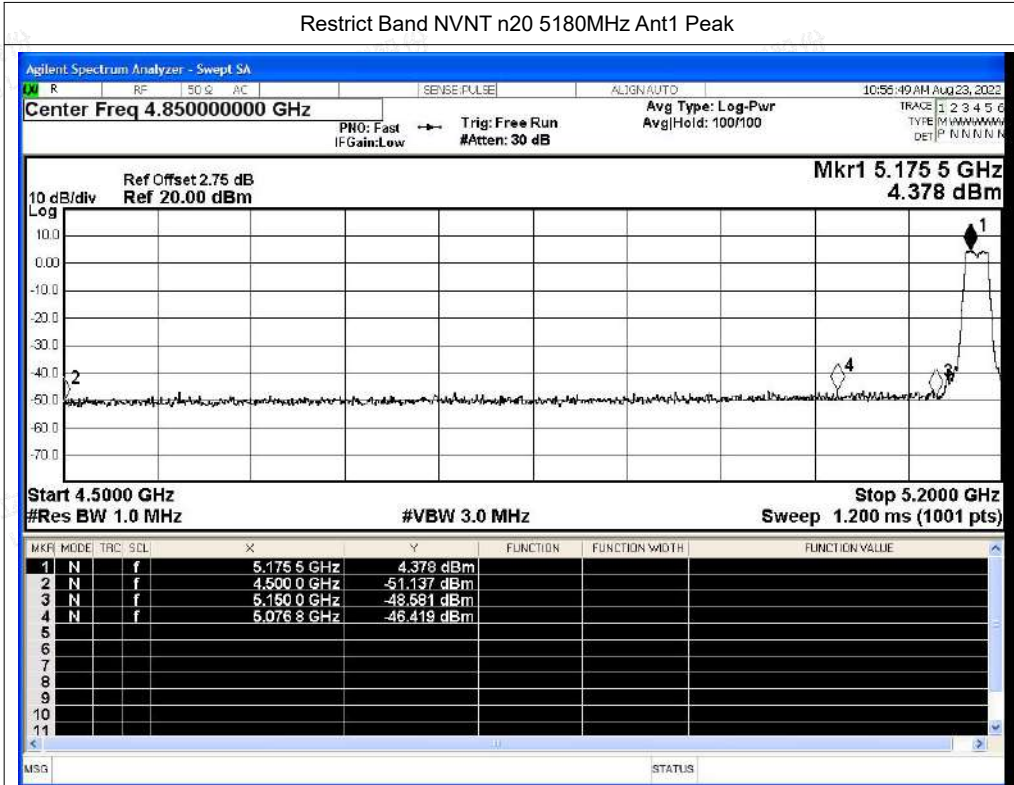
Restrict Band NVNT a 5180MHz Ant1 Average



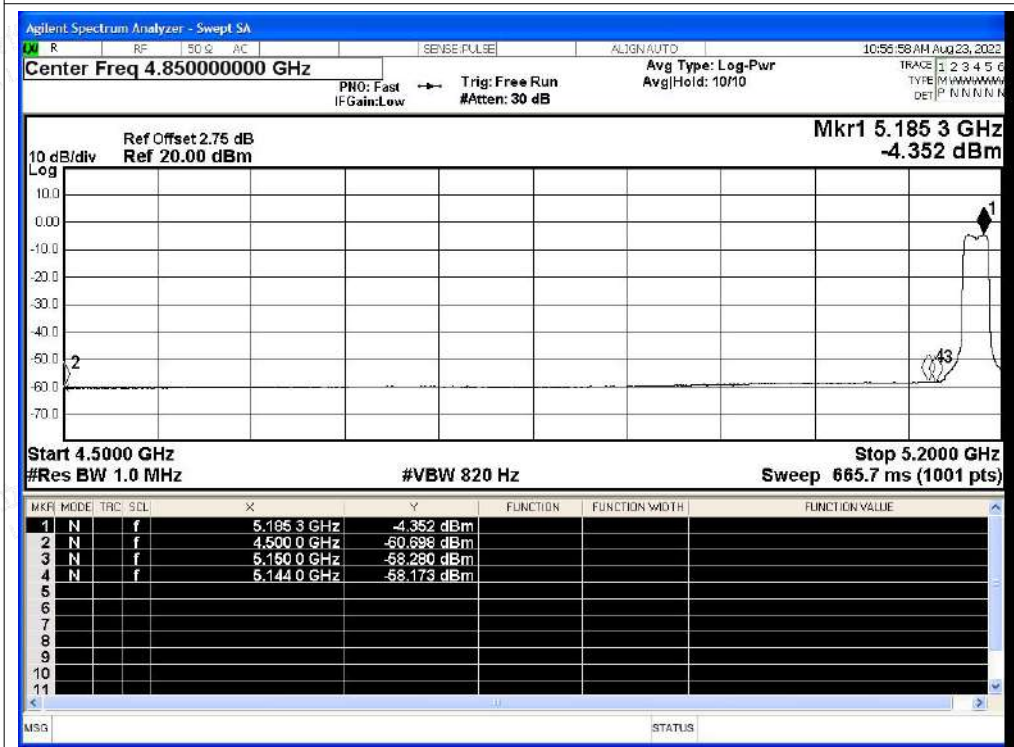




Restrict Band NVNT n20 5180MHz Ant1 Peak

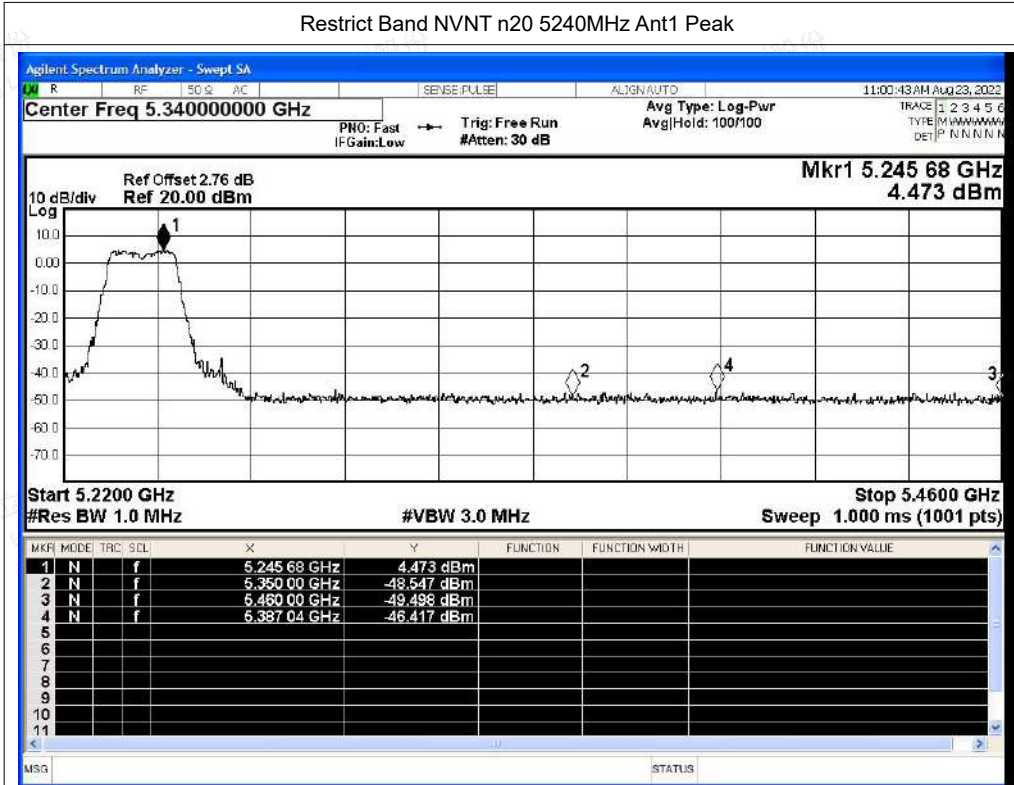


Restrict Band NVNT n20 5180MHz Ant1 Average

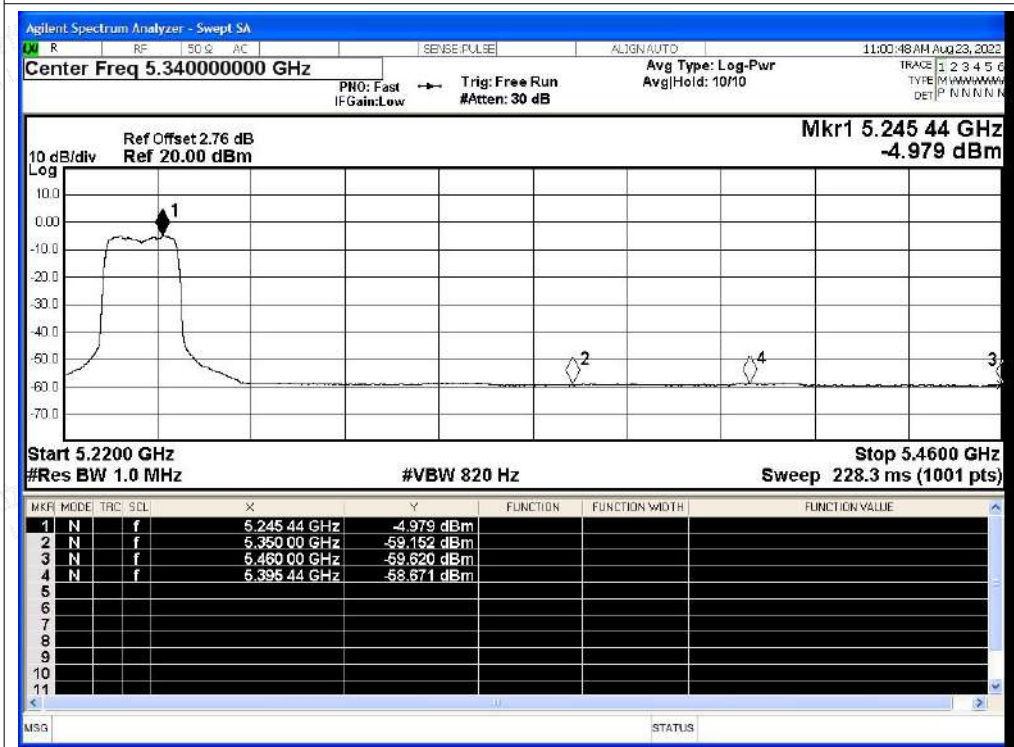




Restrict Band NVNT n20 5240MHz Ant1 Peak

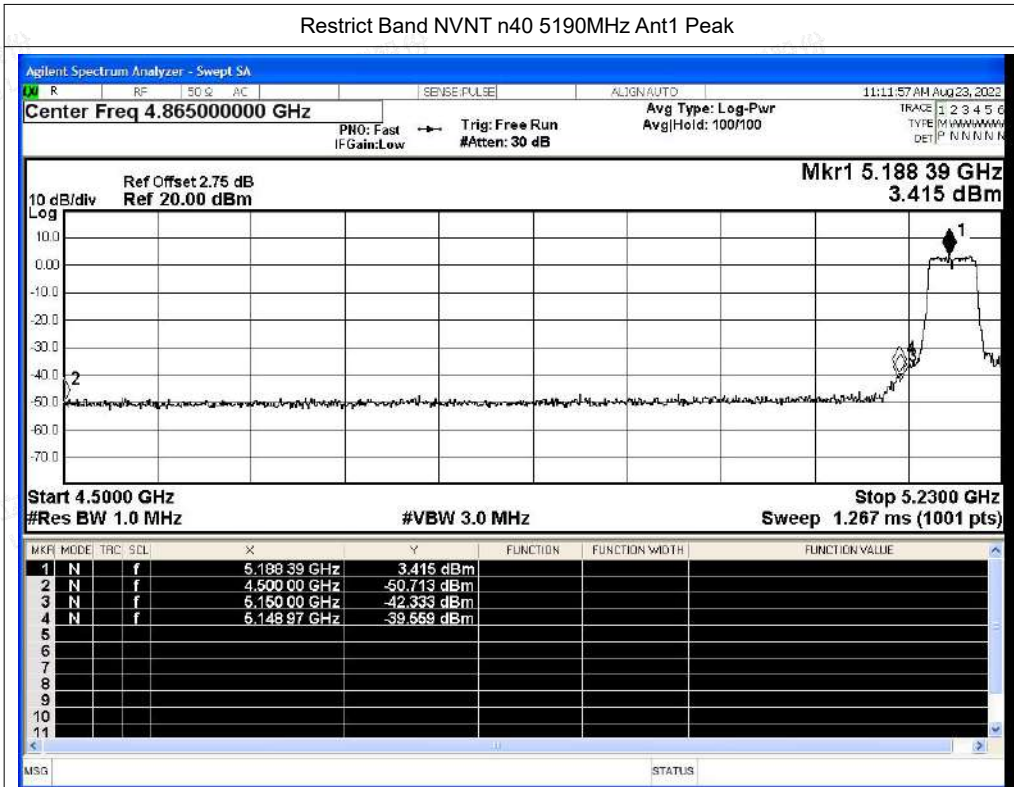


Restrict Band NVNT n20 5240MHz Ant1 Average

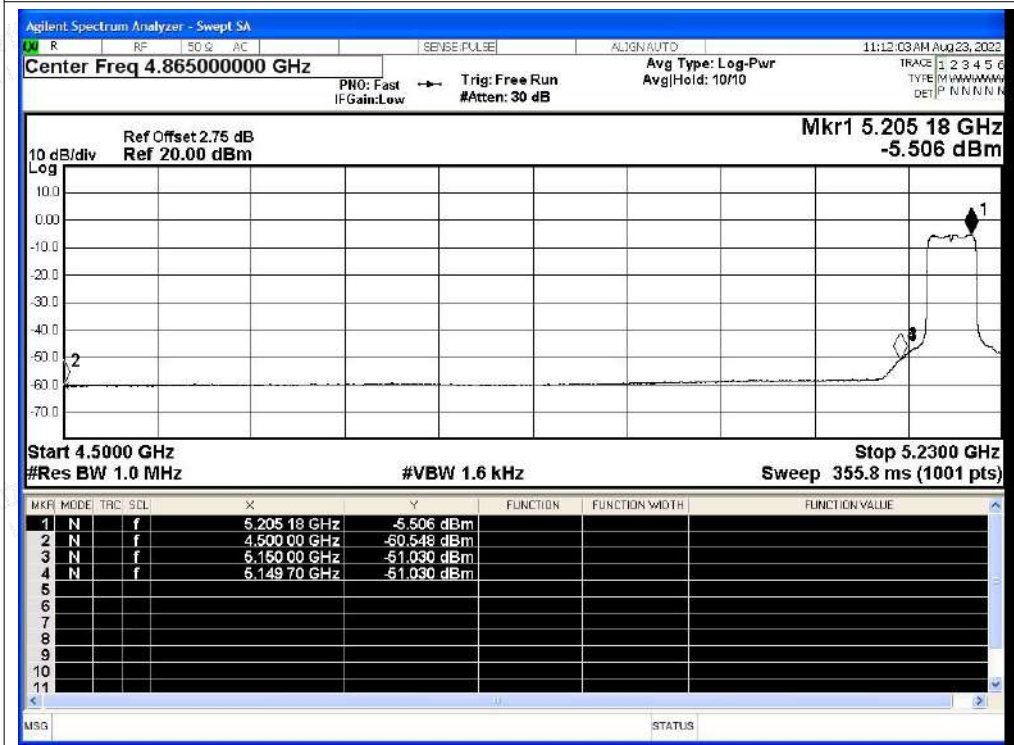




Restrict Band NVNT n40 5190MHz Ant1 Peak

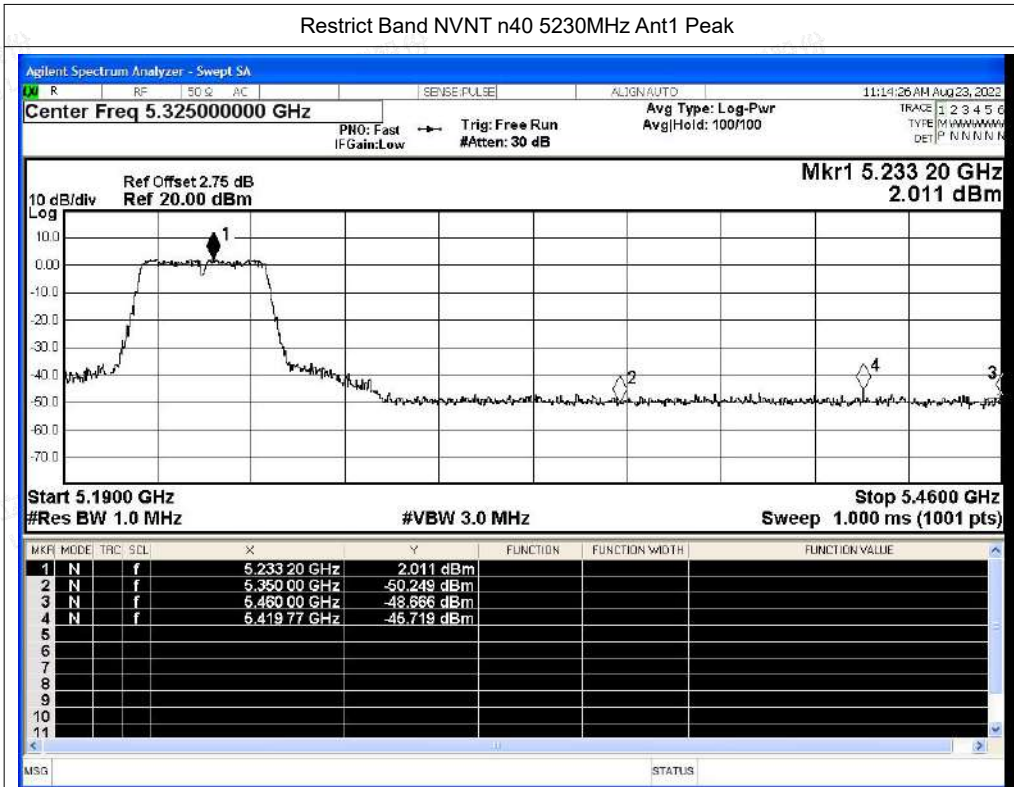


Restrict Band NVNT n40 5190MHz Ant1 Average

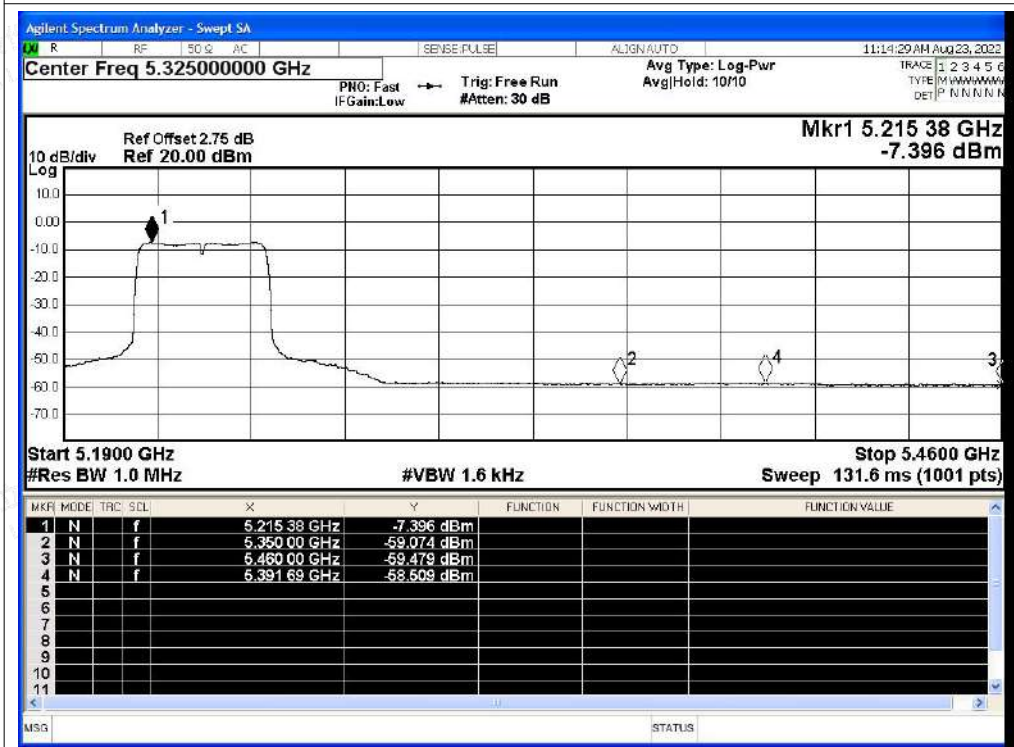


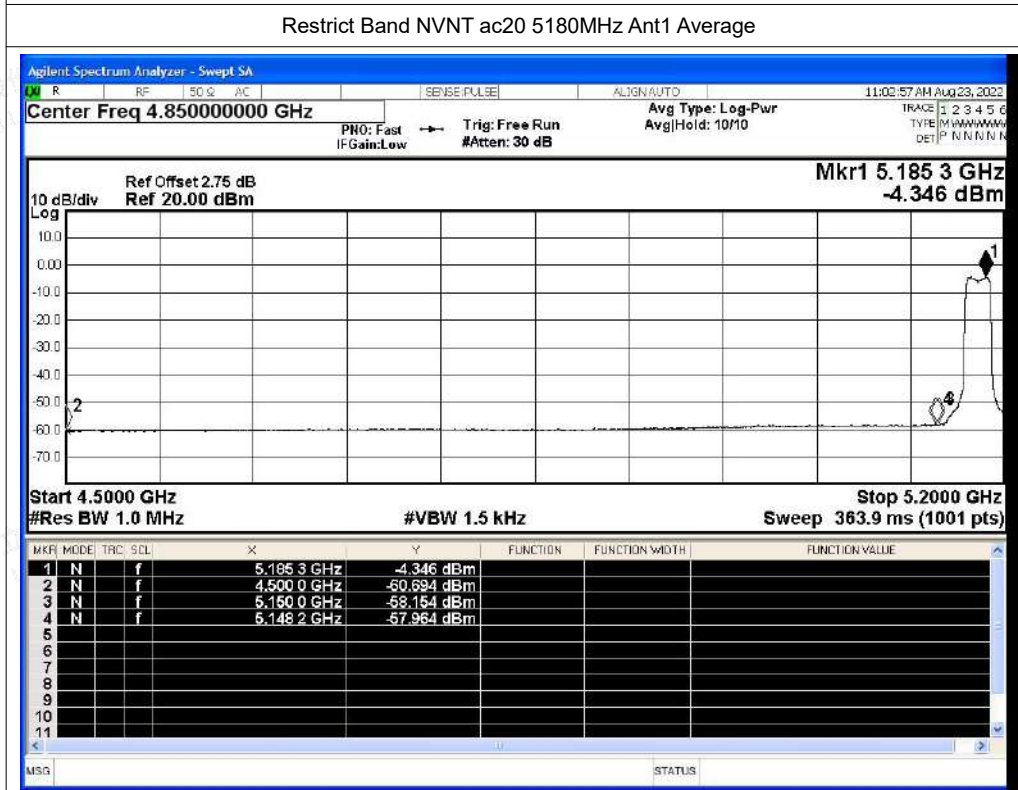
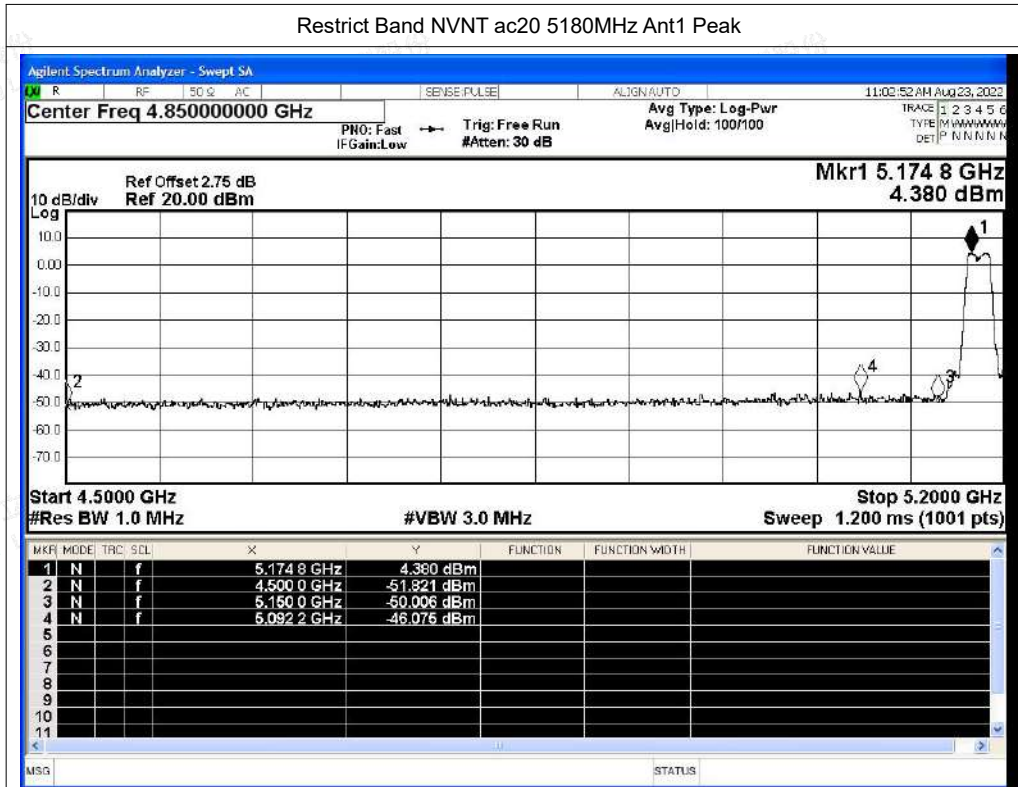


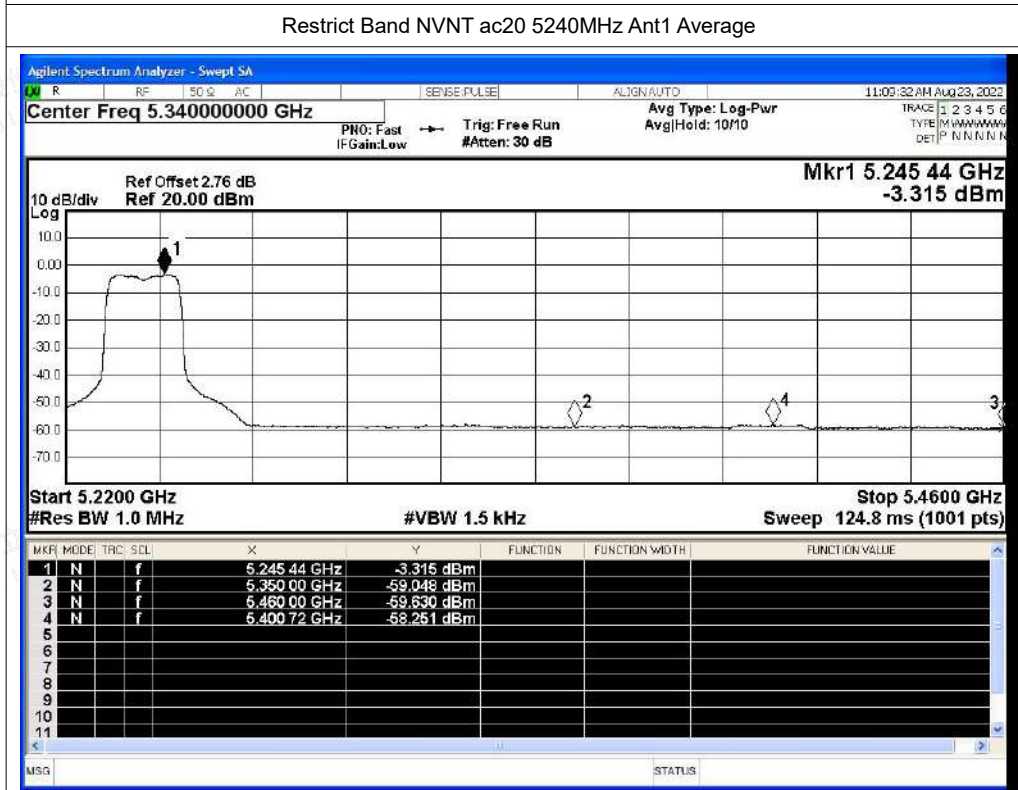
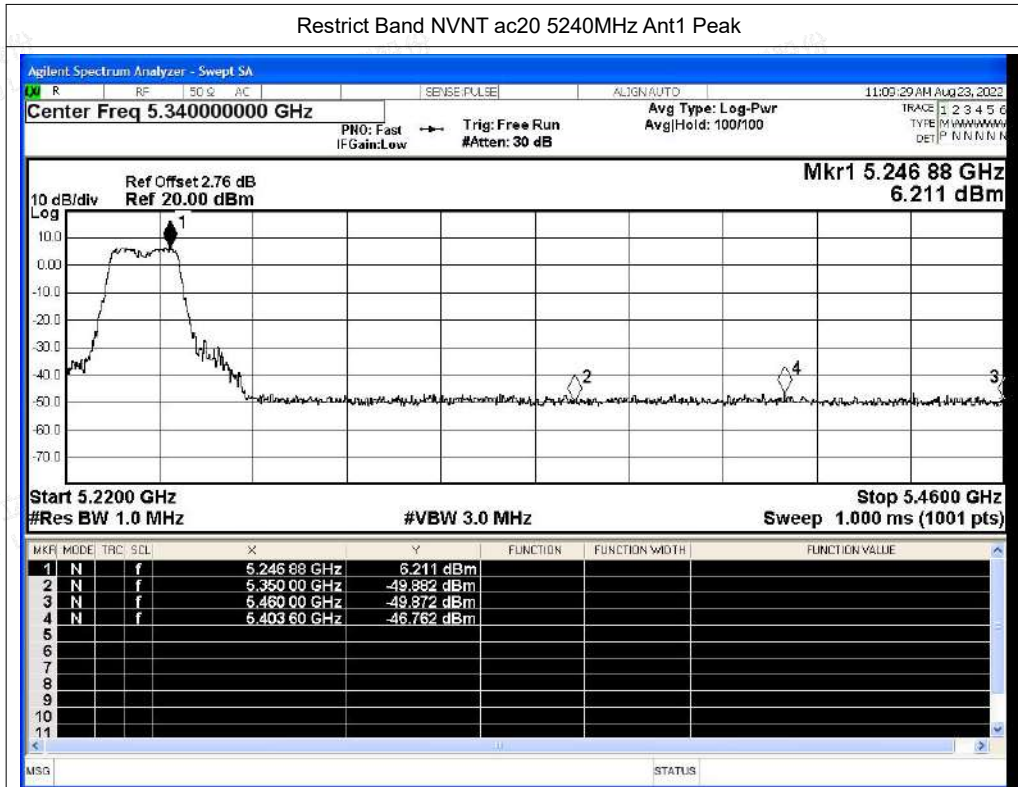
Restrict Band NVNT n40 5230MHz Ant1 Peak

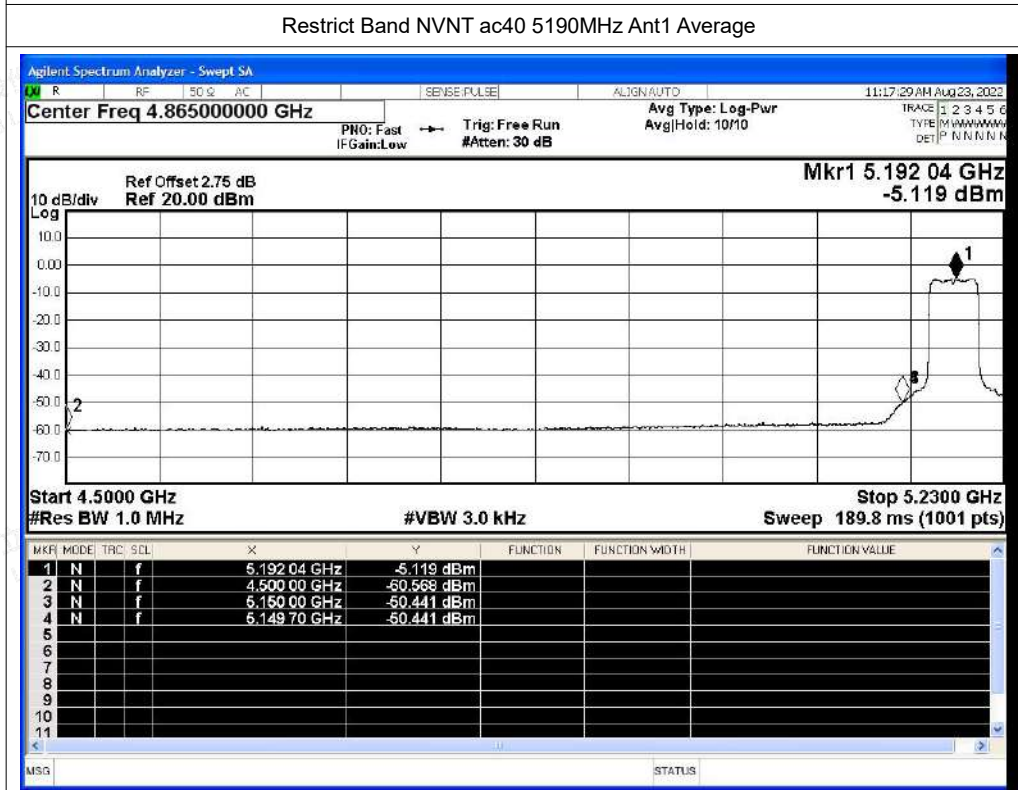
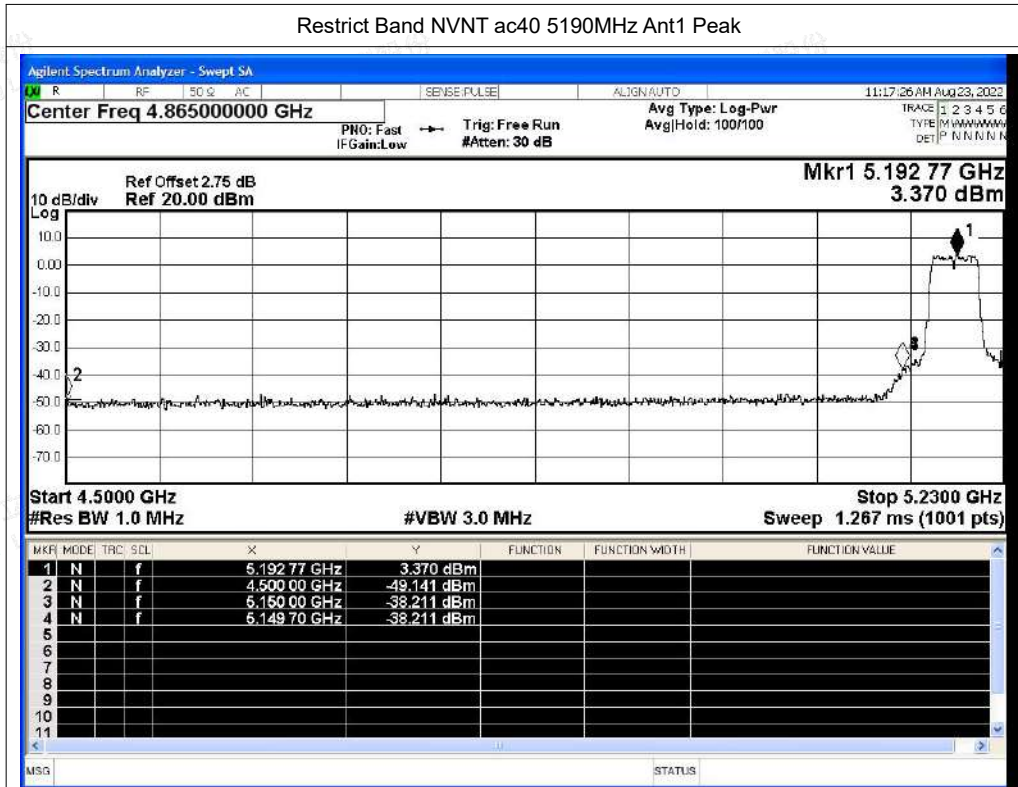


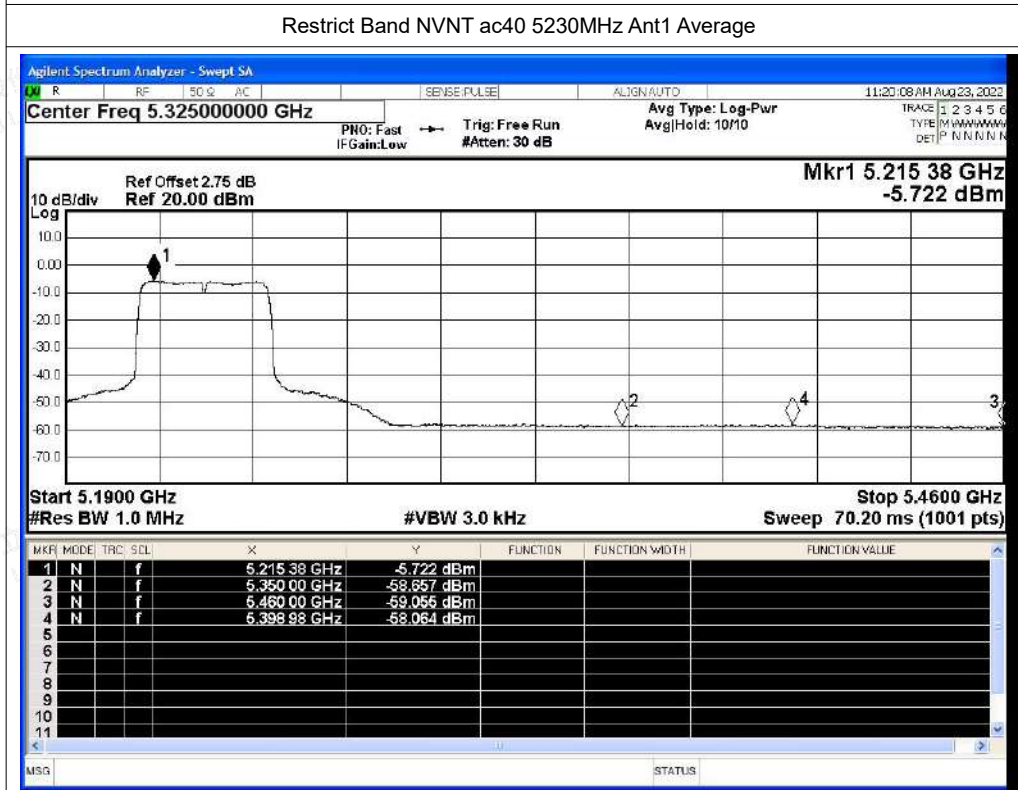
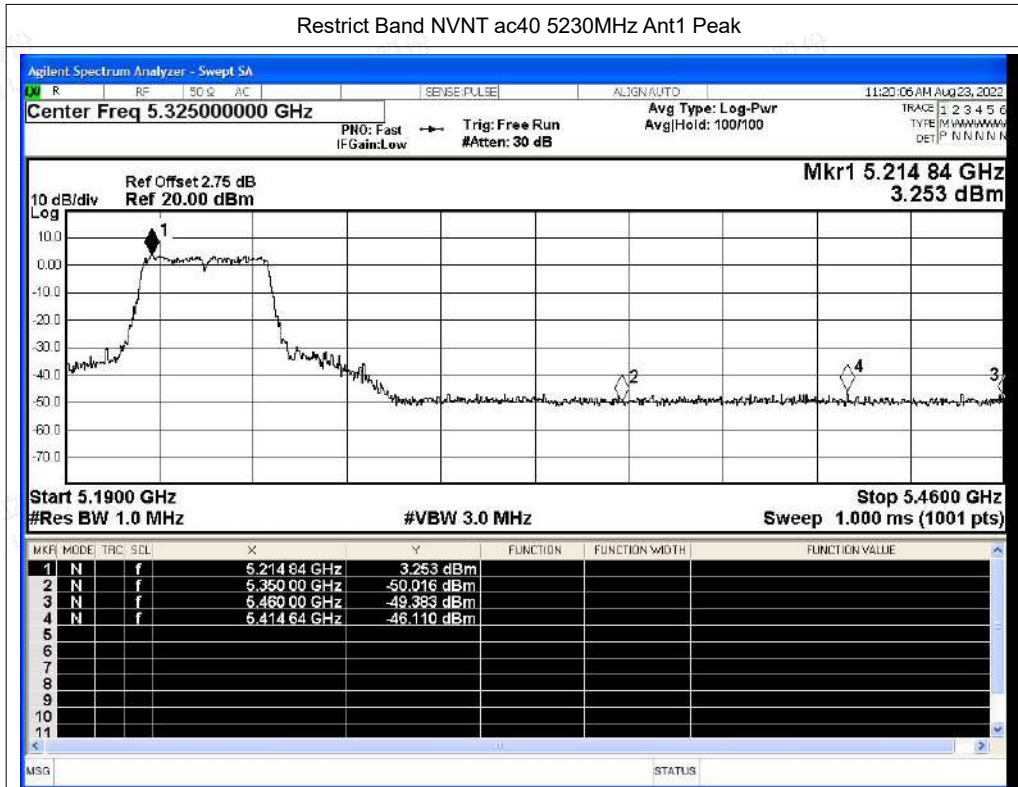
Restrict Band NVNT n40 5230MHz Ant1 Average

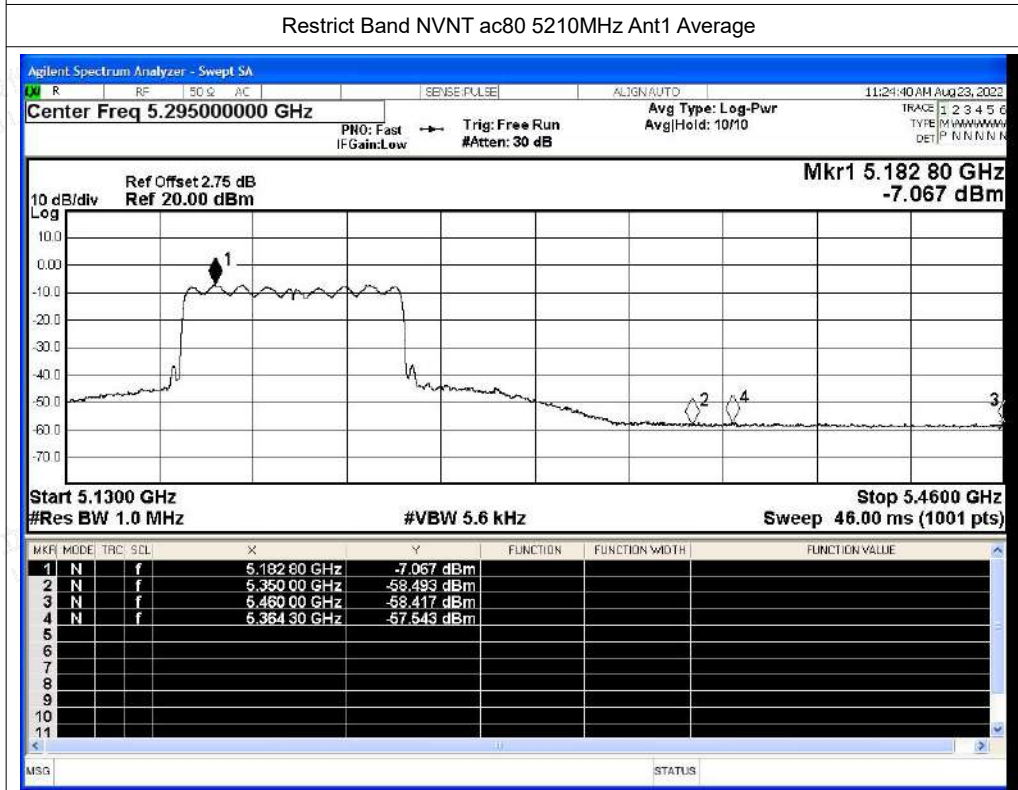
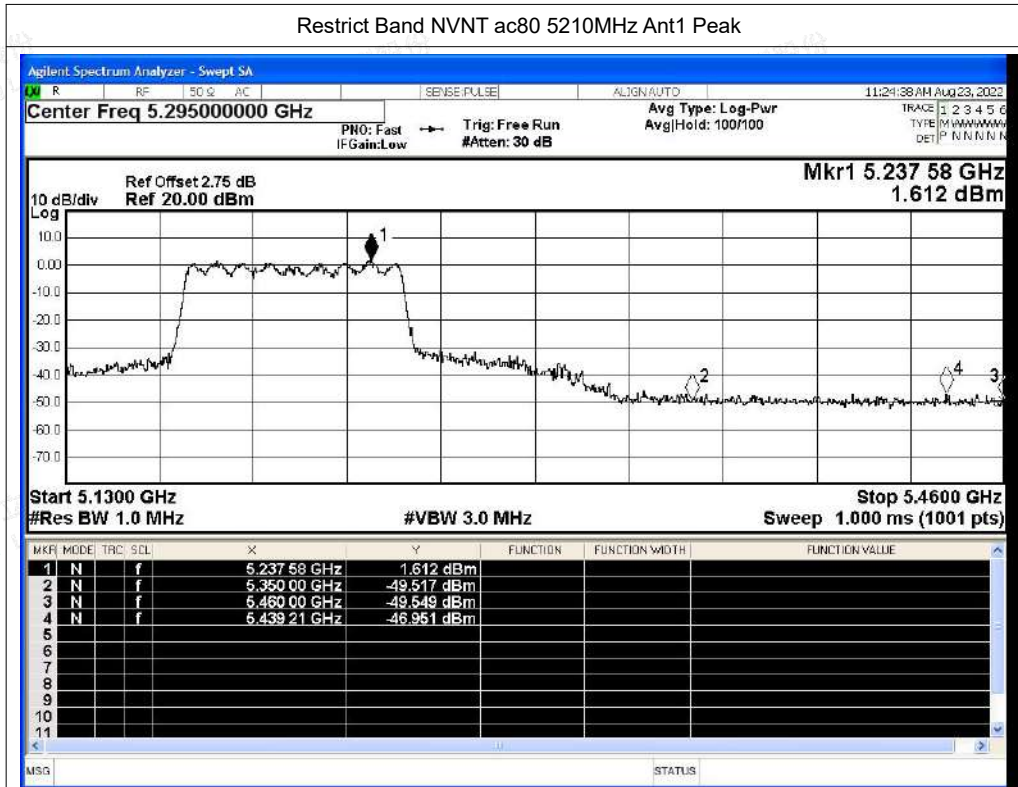


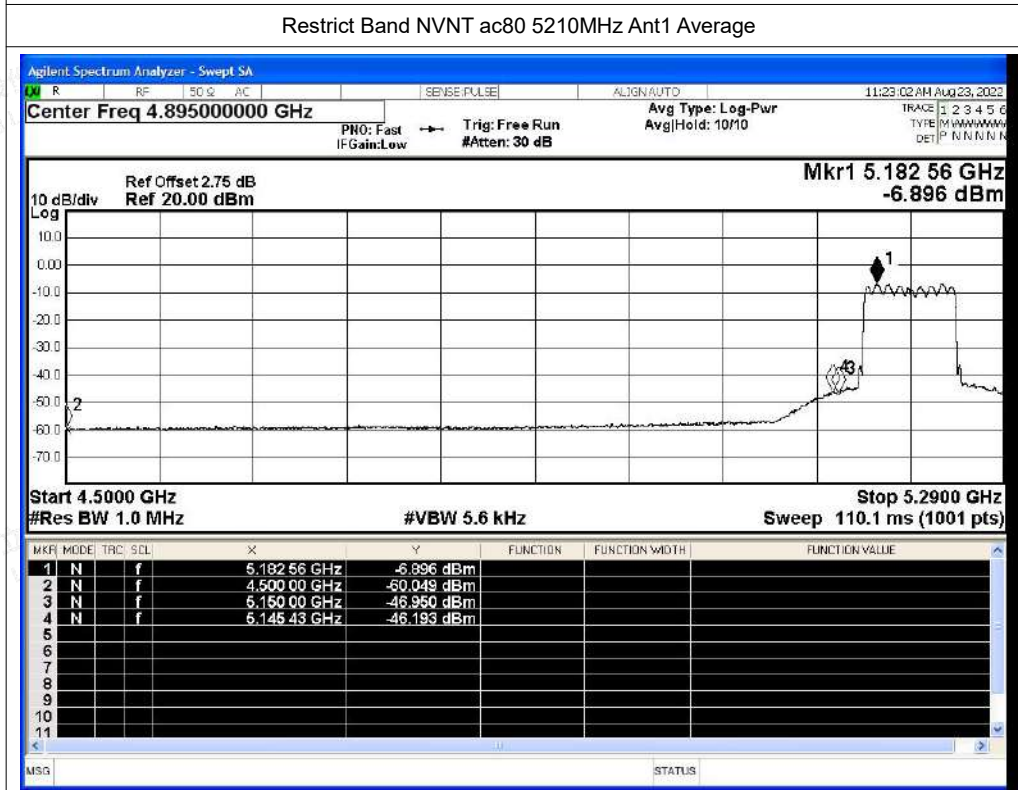
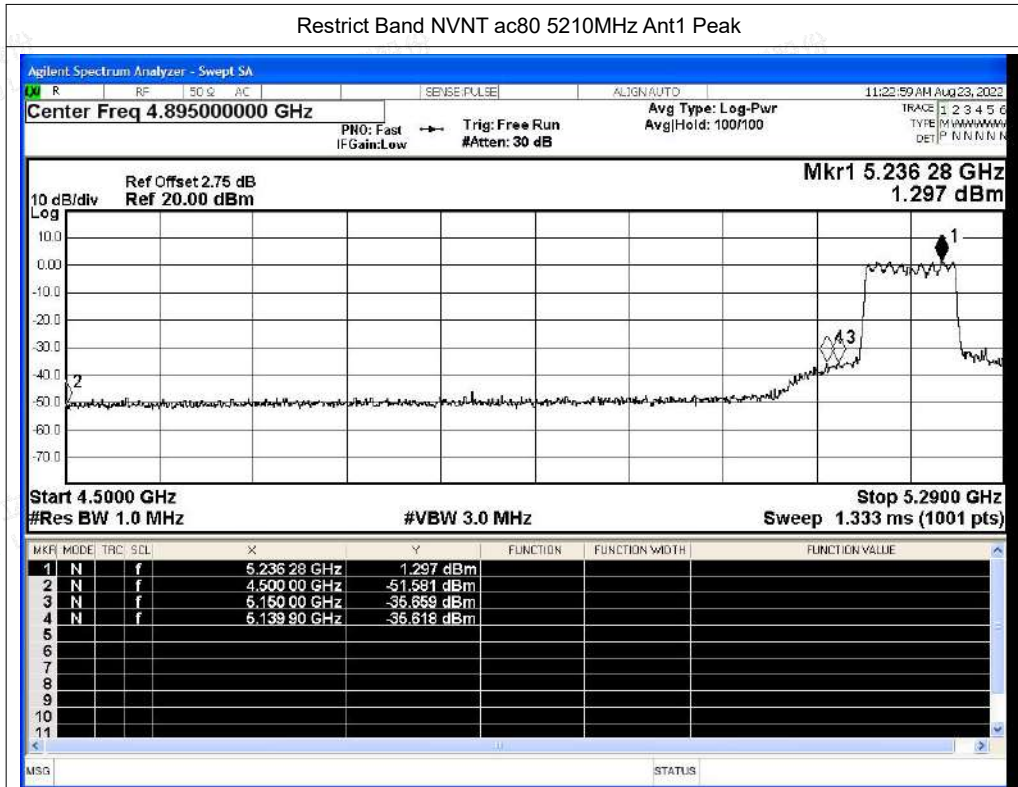














B.6 Frequency Stability

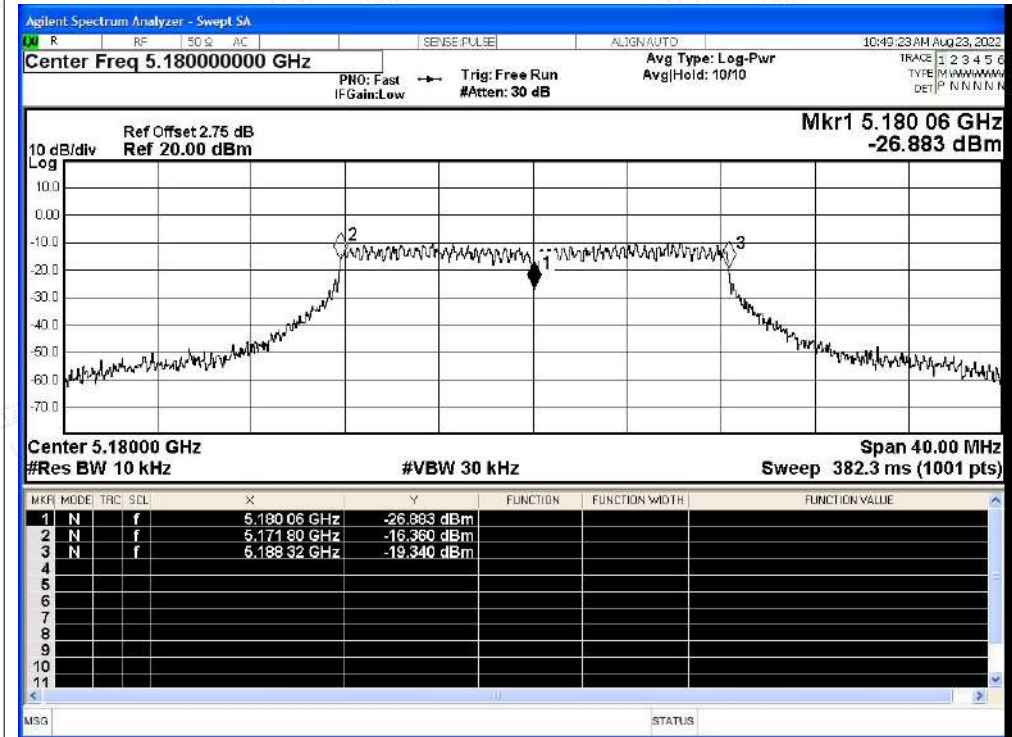
Condition	Mode	Frequency (MHz)	Antenna	Measured Frequency (MHz)	Frequency Error (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
NVNT	a	5180	Ant1	5180.06	60000	11.58	25	Pass
NVNT	a	5200	Ant1	5200.08	80000	15.38	25	Pass
NVNT	a	5240	Ant1	5240.12	120000	22.9	25	Pass
NVNT	n20	5180	Ant1	5180.1	100000	19.31	25	Pass
NVNT	n20	5200	Ant1	5200.06	60000	11.54	25	Pass
NVNT	n20	5240	Ant1	5240.08	80000	15.27	25	Pass
NVNT	n40	5190	Ant1	5190.12	120000	23.12	25	Pass
NVNT	n40	5230	Ant1	5230.08	80000	15.3	25	Pass
NVNT	ac20	5180	Ant1	5180.08	80000	15.44	25	Pass
NVNT	ac20	5200	Ant1	5200.1	100000	19.23	25	Pass
NVNT	ac20	5240	Ant1	5240.1	100000	19.08	25	Pass
NVNT	ac40	5190	Ant1	5190.08	80000	15.41	25	Pass
NVNT	ac40	5230	Ant1	5230.12	120000	22.94	25	Pass
NVNT	ac80	5210	Ant1	5210.08	80000	15.36	25	Pass



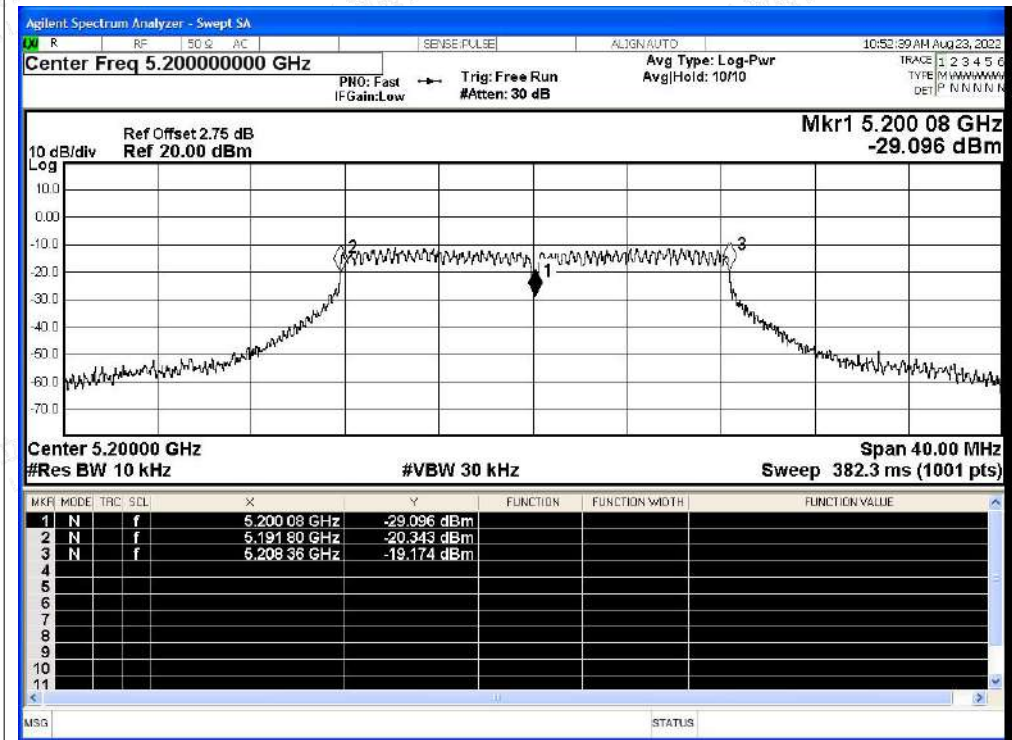


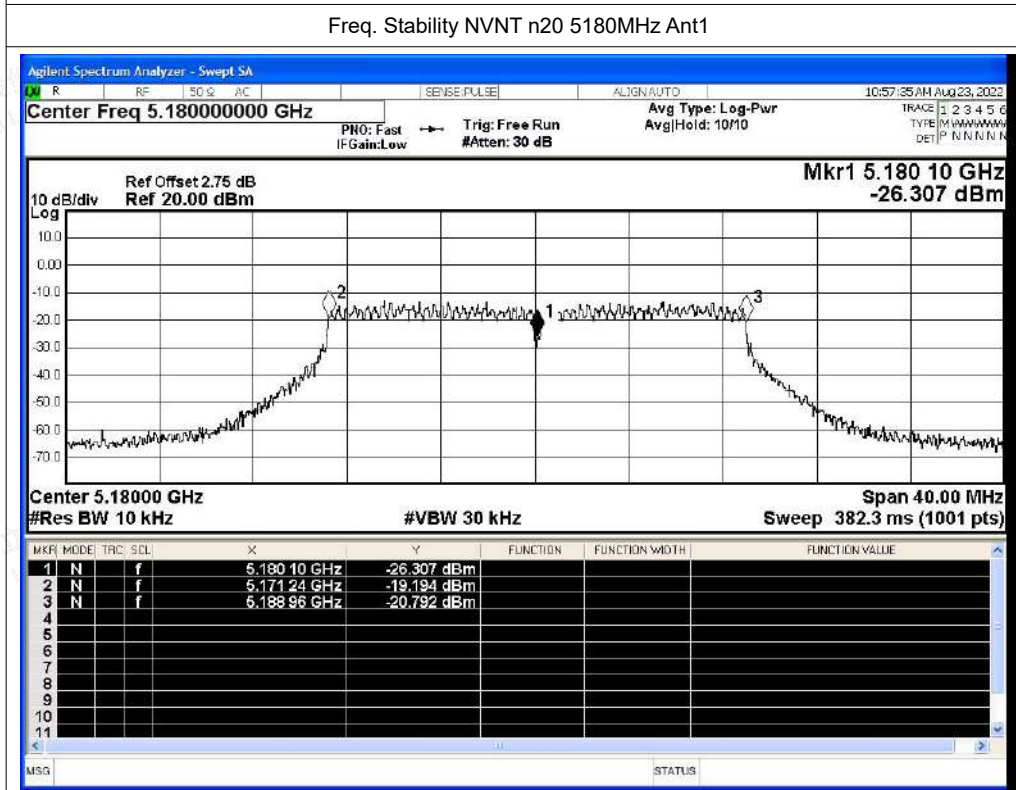
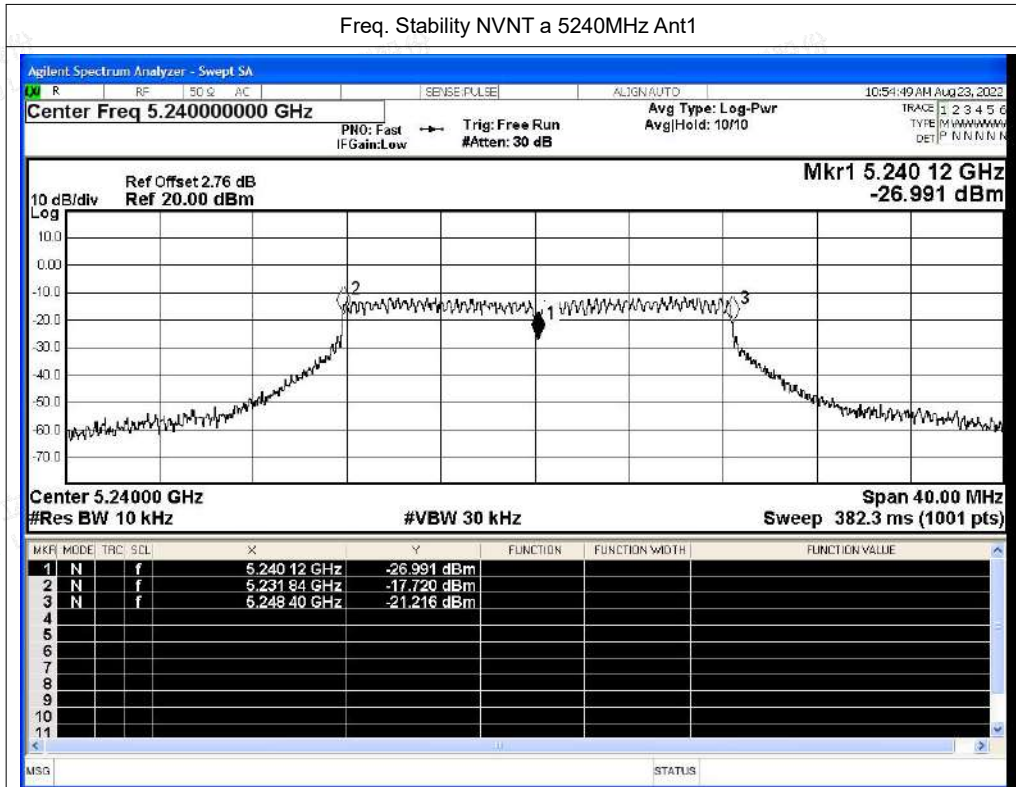
Test Graphs

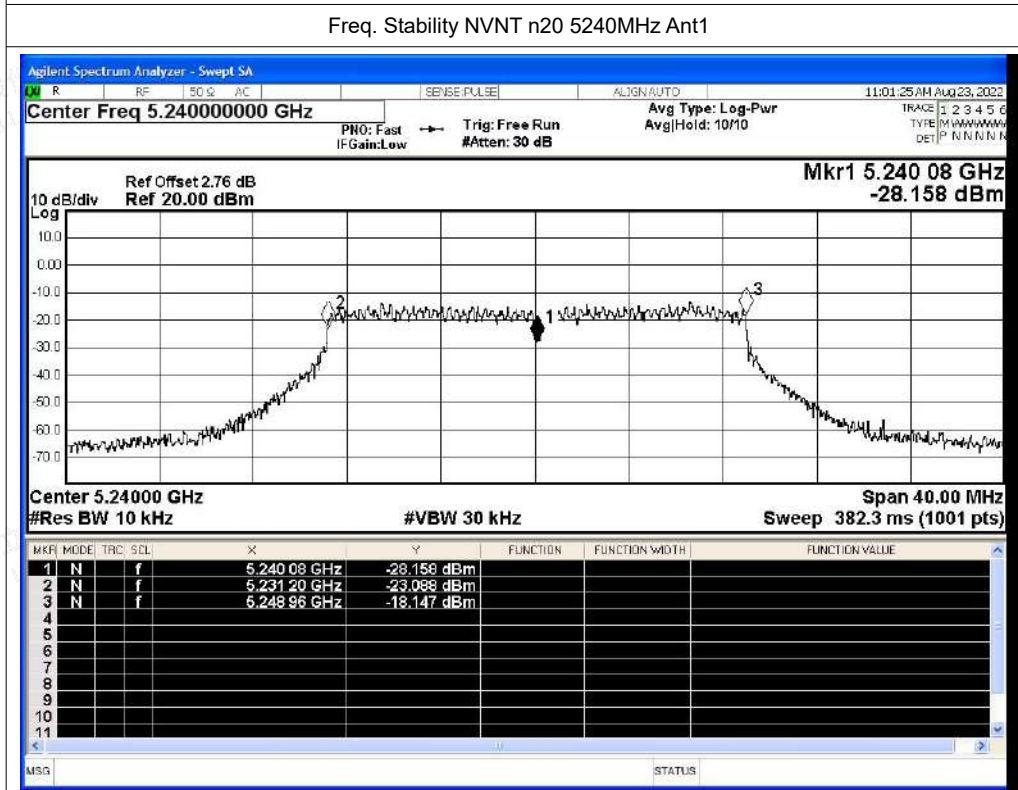
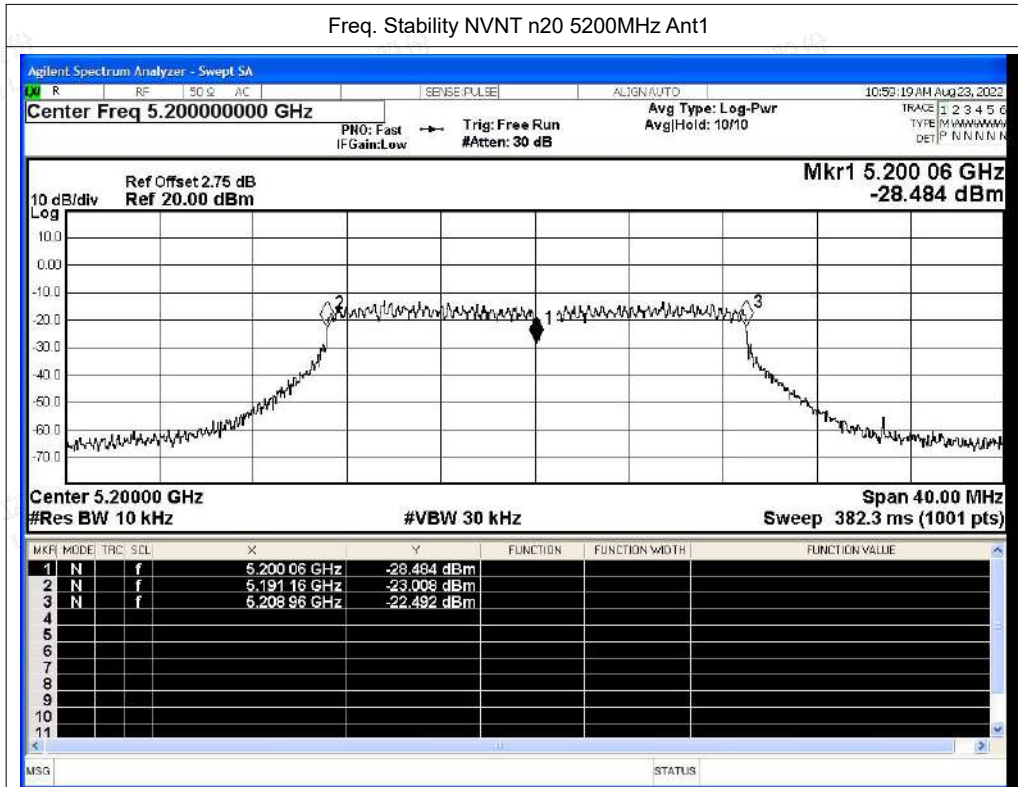
Freq. Stability NVNT a 5180MHz Ant1



Freq. Stability NVNT a 5200MHz Ant1

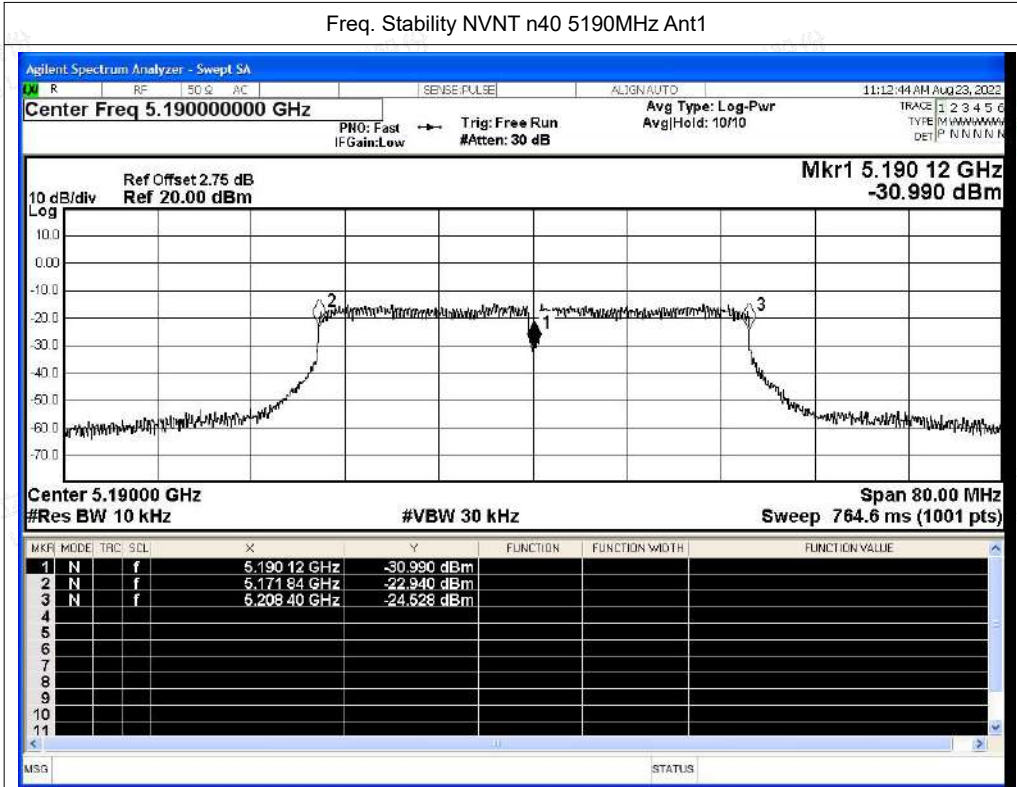




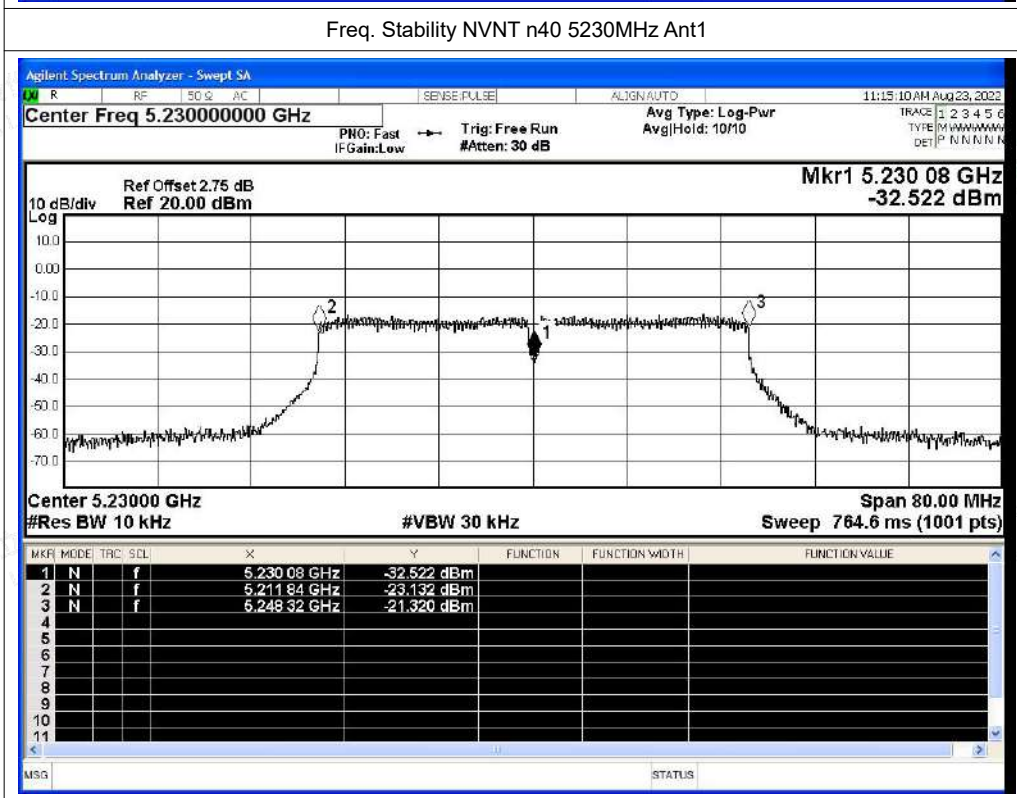


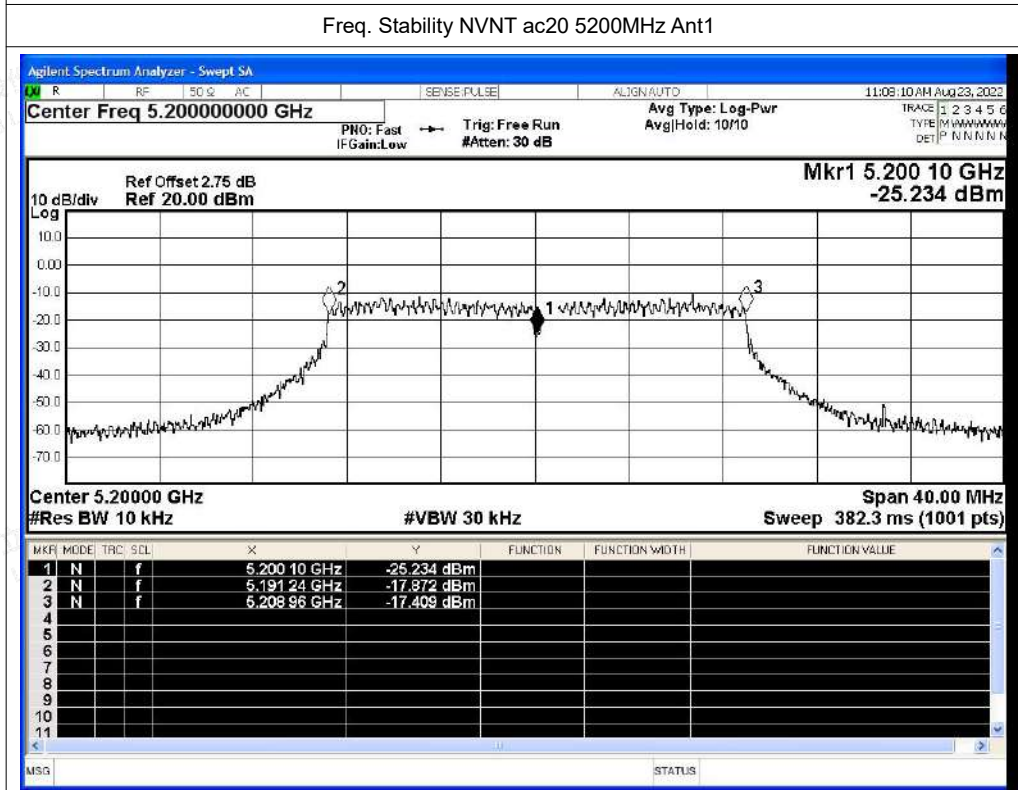
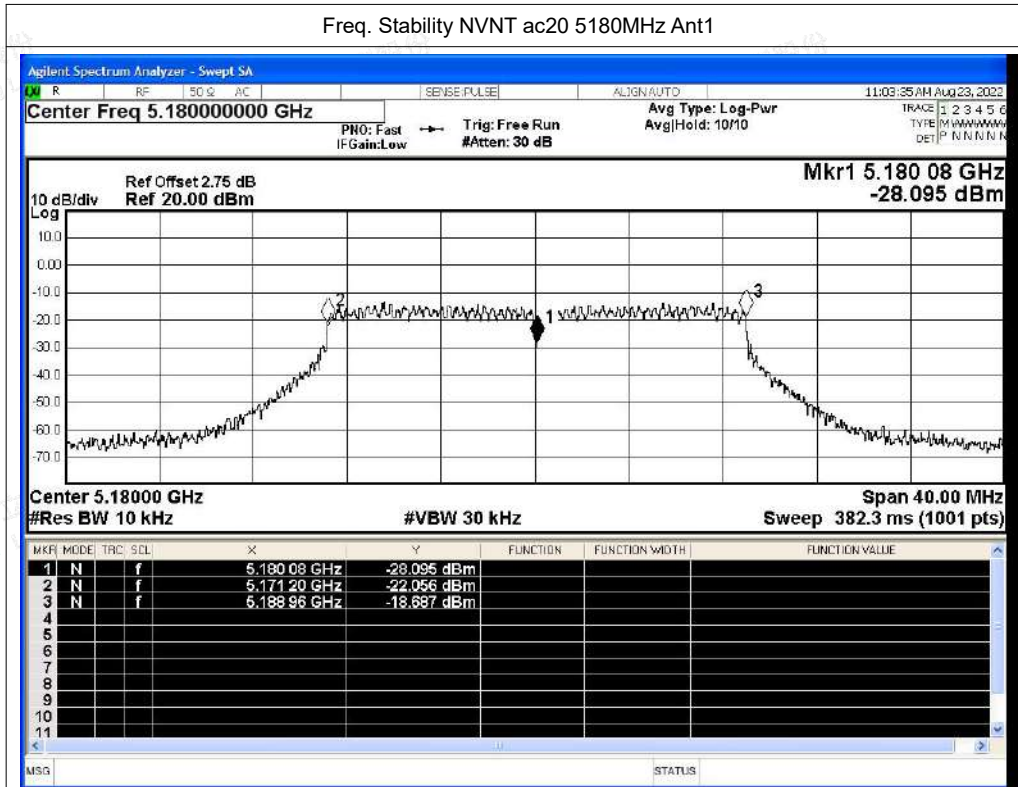


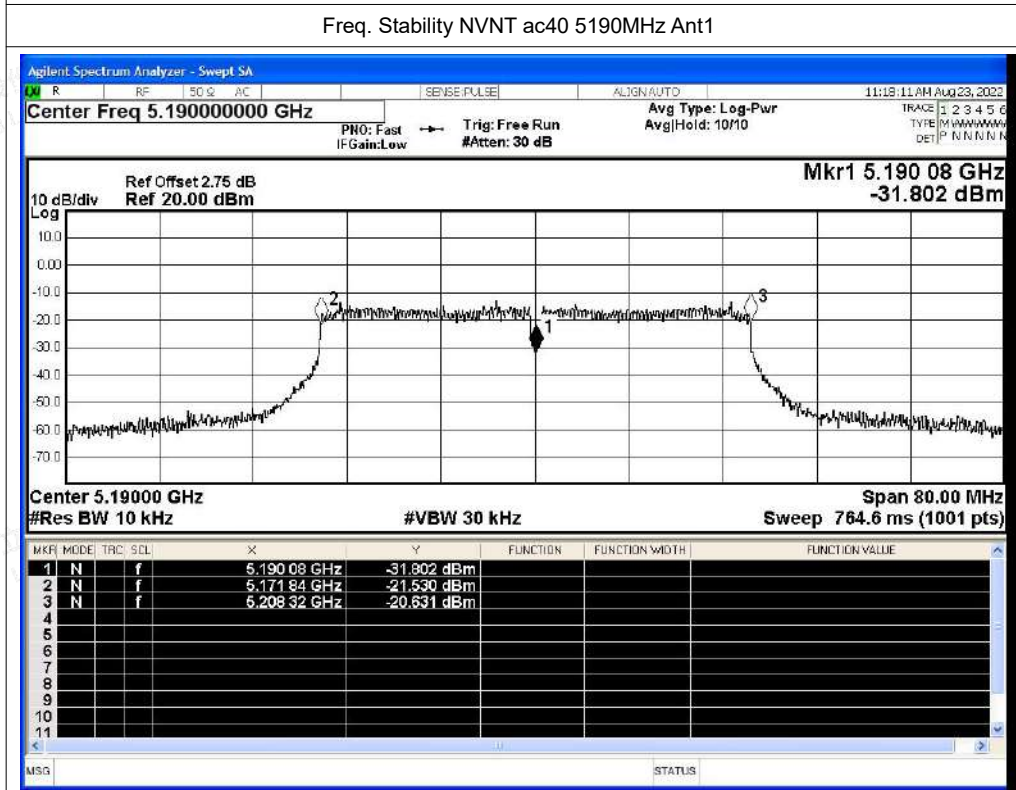
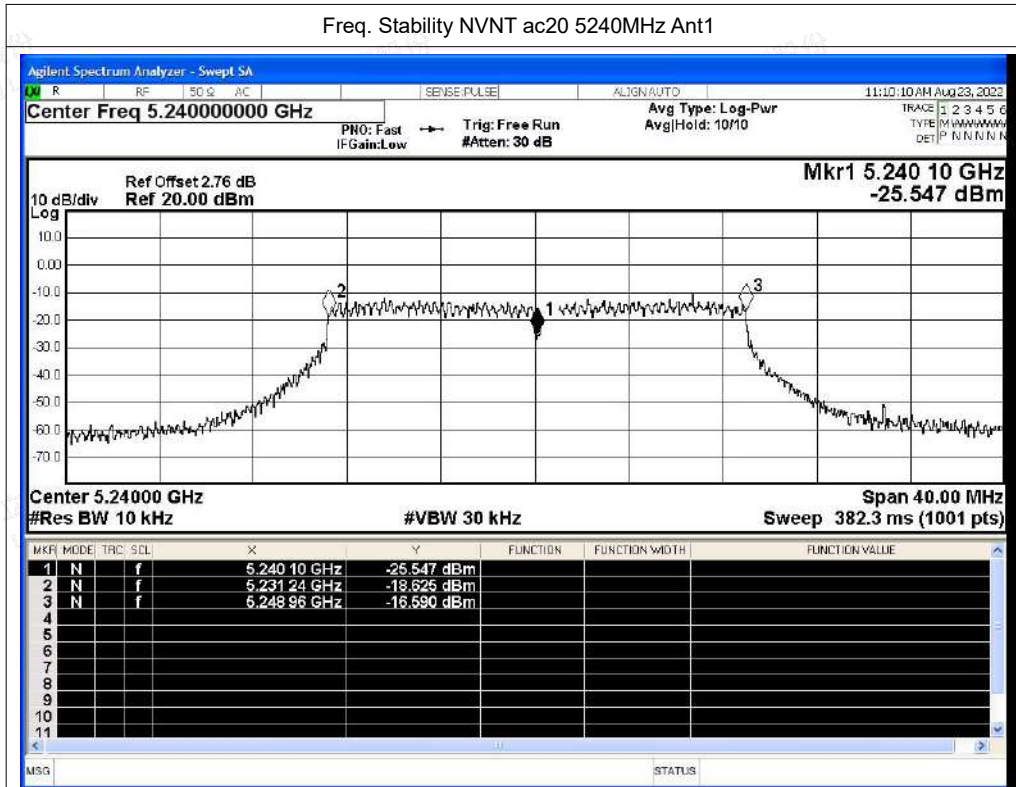
Freq. Stability NVNT n40 5190MHz Ant1

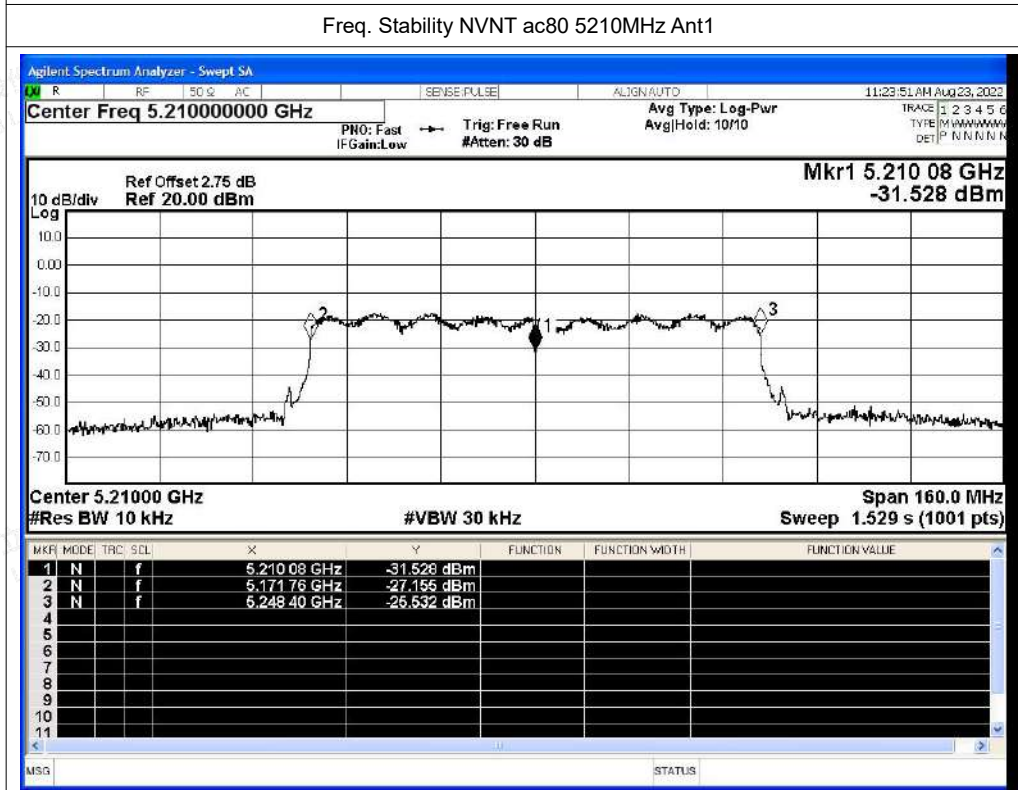
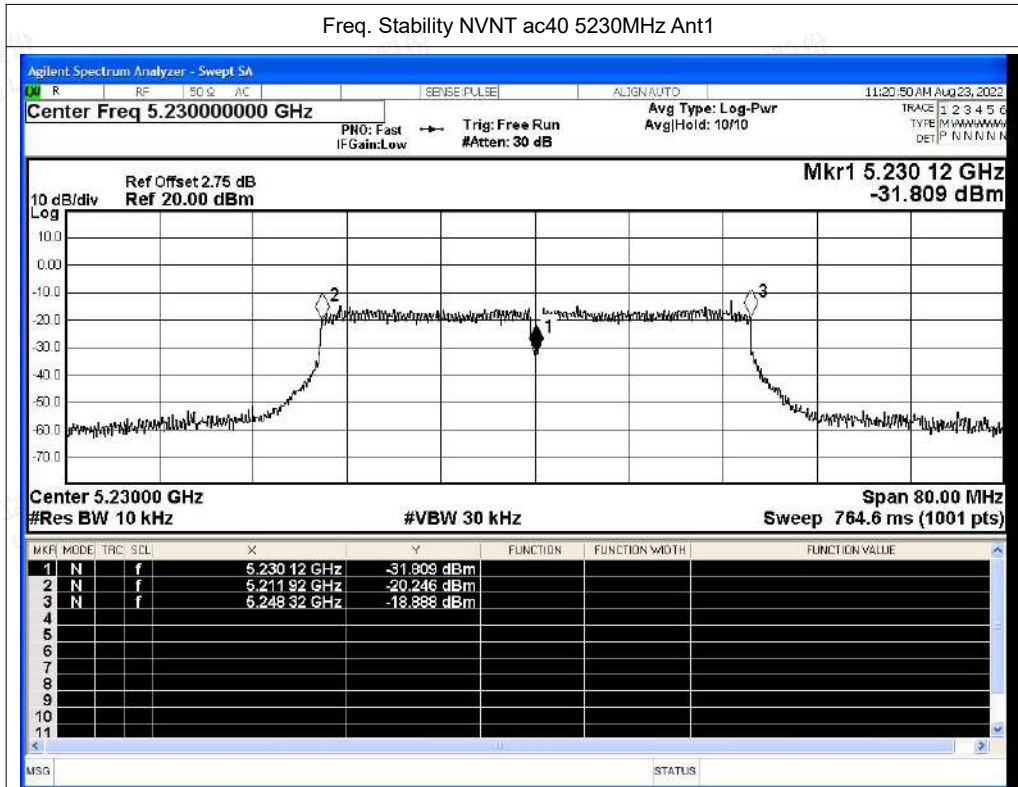


Freq. Stability NVNT n40 5230MHz Ant1











B.7 Duty Cycle

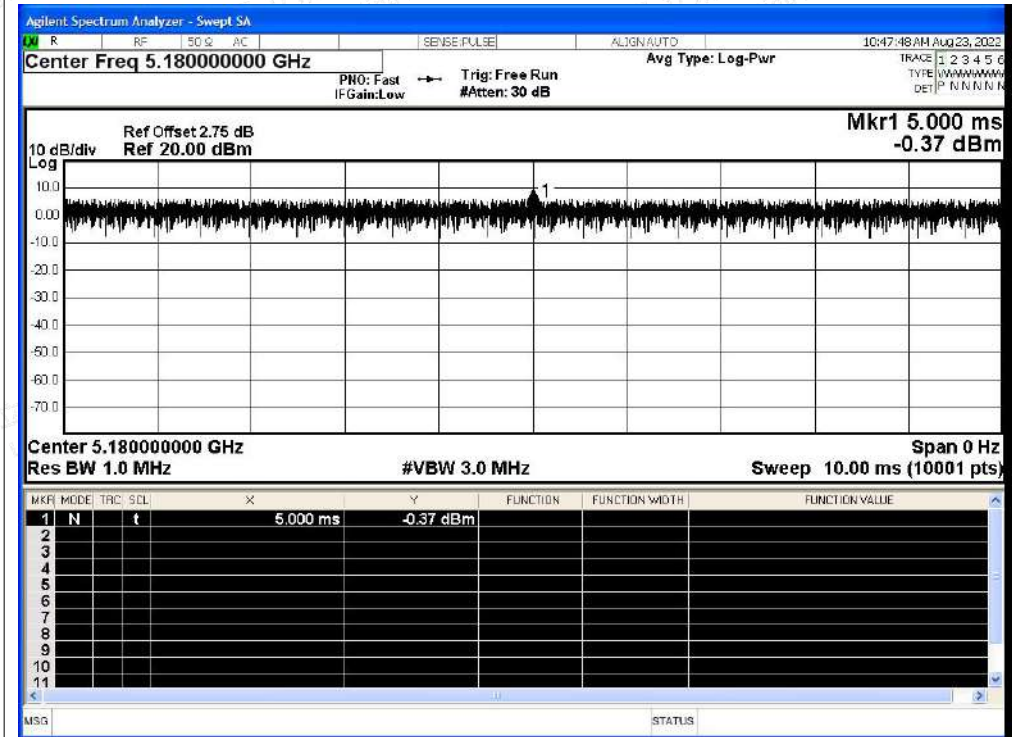
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	a	5180	Ant1	100	0	0
NVNT	a	5200	Ant1	100	0	0
NVNT	a	5240	Ant1	100	0	0
NVNT	n20	5180	Ant1	100	0	0
NVNT	n20	5200	Ant1	100	0	0
NVNT	n20	5240	Ant1	100	0	0
NVNT	n40	5190	Ant1	100	0	0
NVNT	n40	5230	Ant1	100	0	0
NVNT	ac20	5180	Ant1	100	0	0
NVNT	ac20	5200	Ant1	100	0	0
NVNT	ac20	5240	Ant1	100	0	0
NVNT	ac40	5190	Ant1	100	0	0
NVNT	ac40	5230	Ant1	100	0	0
NVNT	ac80	5210	Ant1	100	0	0





Test Graphs

Duty Cycle NVNT a 5180MHz Ant1



Duty Cycle NVNT a 5200MHz Ant1

