

FCC Appendix RF Test Data for 5.2GWIFI

Product Name: Smart Diagnostic System

Test Model: P806

Environmental Conditions

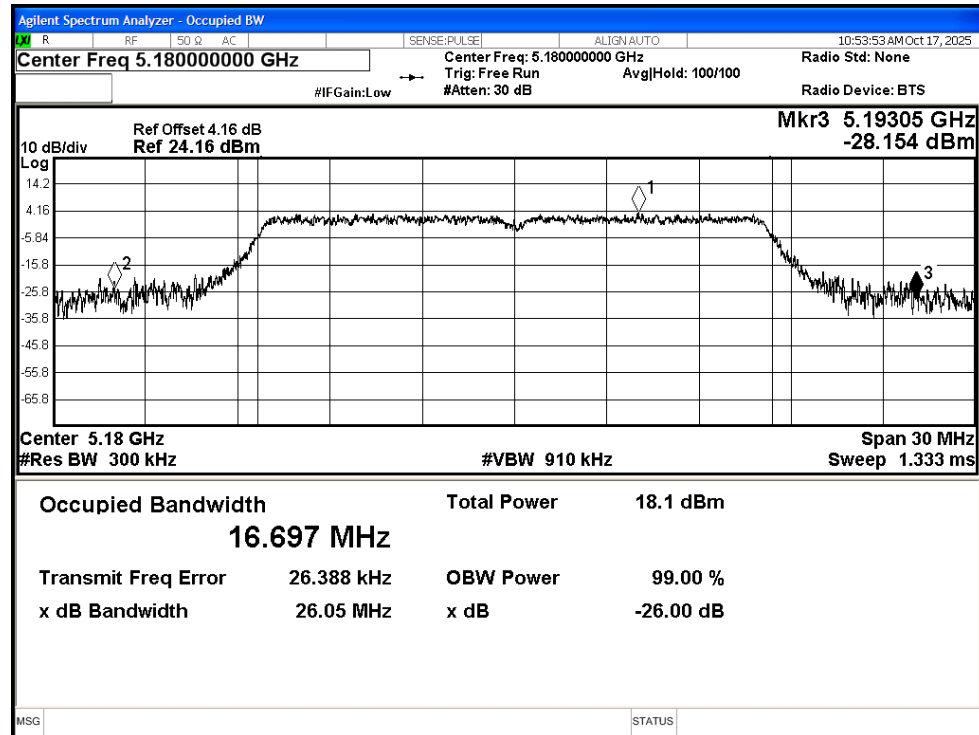
Temperature:	23.8° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Zoey Cao
Supervised by:	Eric Wang

1. -26dB Bandwidth

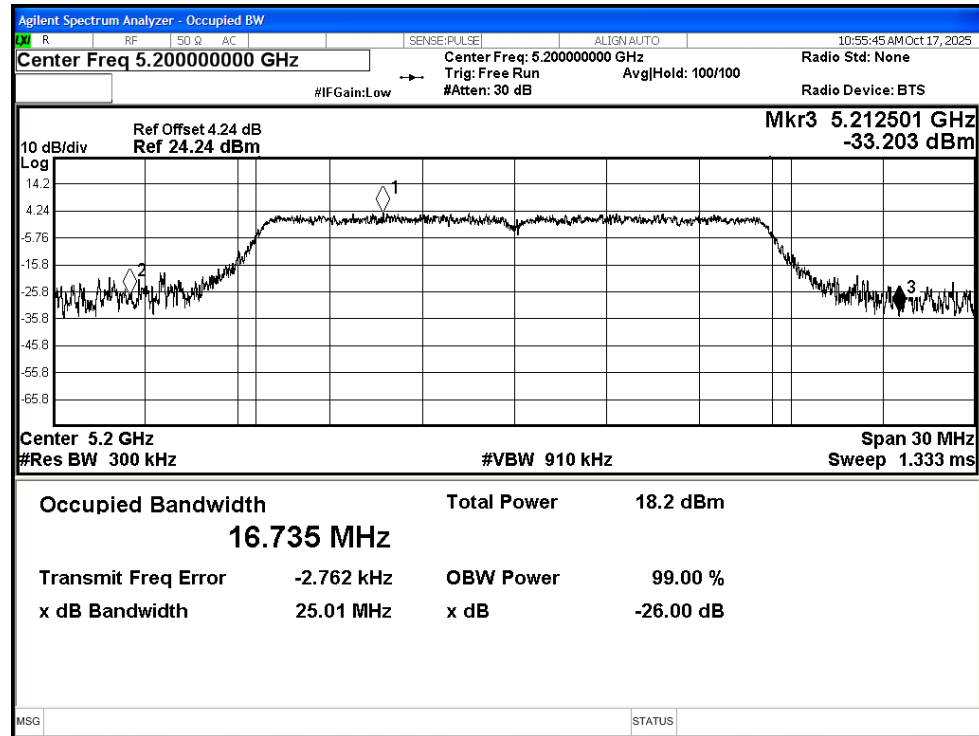
Condition	Mode	Frequency (MHz)	Antenna	-26 dB Bandwidth (MHz)	Limit -26 dB Bandwidth (MHz)	Verdict
NVNT	a	5180	Ant	26.048	---	Pass
NVNT	a	5200	Ant	25.008	---	Pass
NVNT	a	5240	Ant	26.918	---	Pass
NVNT	n20	5180	Ant	27.466	---	Pass
NVNT	n20	5200	Ant	27.972	---	Pass
NVNT	n20	5240	Ant	28.7	---	Pass
NVNT	n40	5190	Ant	47.088	---	Pass
NVNT	n40	5230	Ant	42.174	---	Pass
NVNT	ac20	5180	Ant	26.865	---	Pass
NVNT	ac20	5200	Ant	29.488	---	Pass
NVNT	ac20	5240	Ant	28.386	---	Pass
NVNT	ac40	5190	Ant	54.703	---	Pass
NVNT	ac40	5230	Ant	55.849	---	Pass
NVNT	ac80	5210	Ant	84.166	---	Pass

Test Graphs

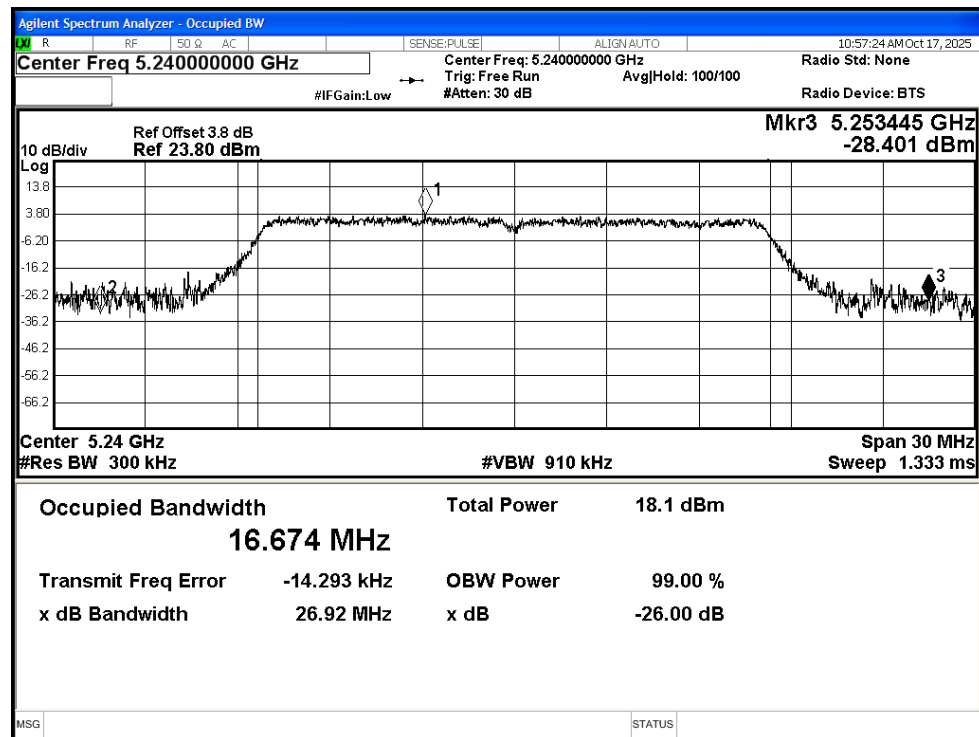
-26dB Bandwidth NVNT a 5180MHz Ant



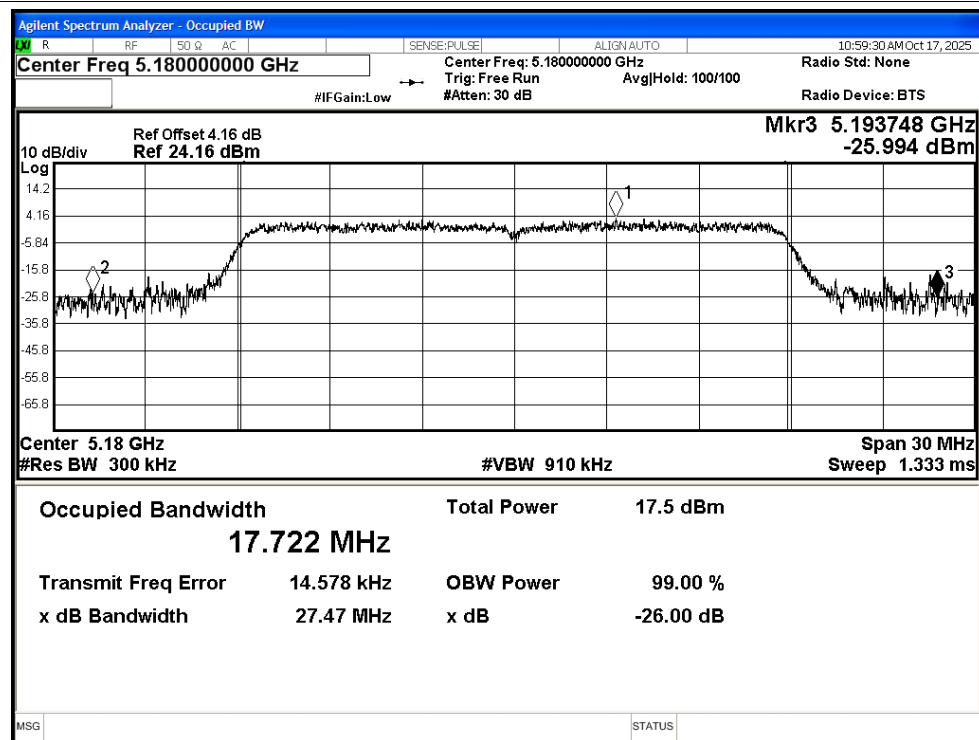
-26dB Bandwidth NVNT a 5200MHz Ant



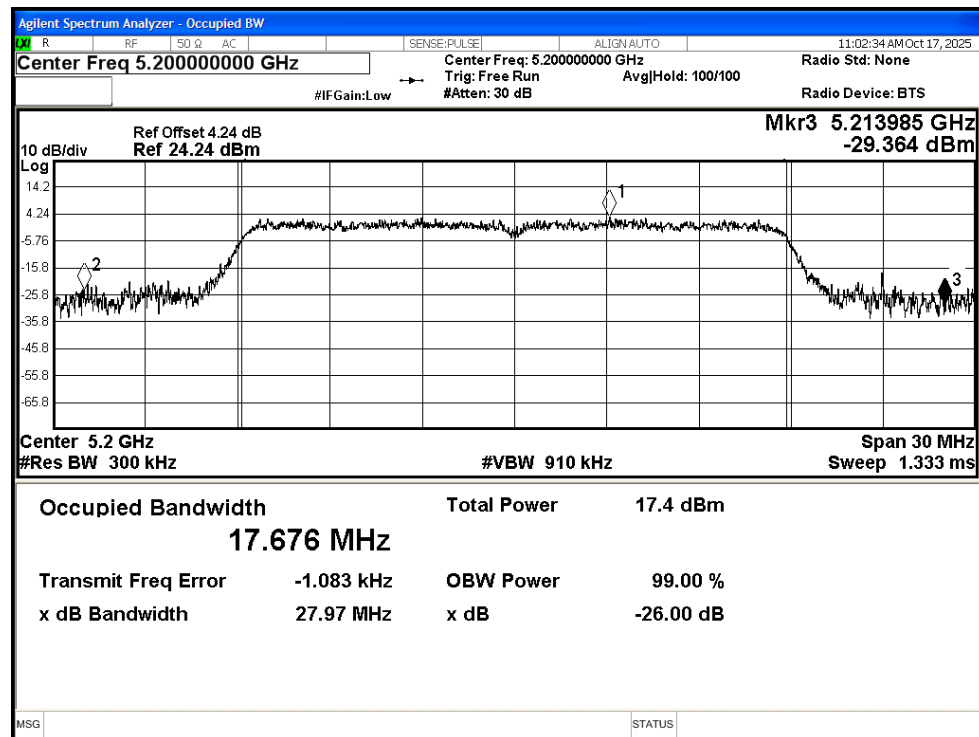
-26dB Bandwidth NVNT a 5240MHz Ant



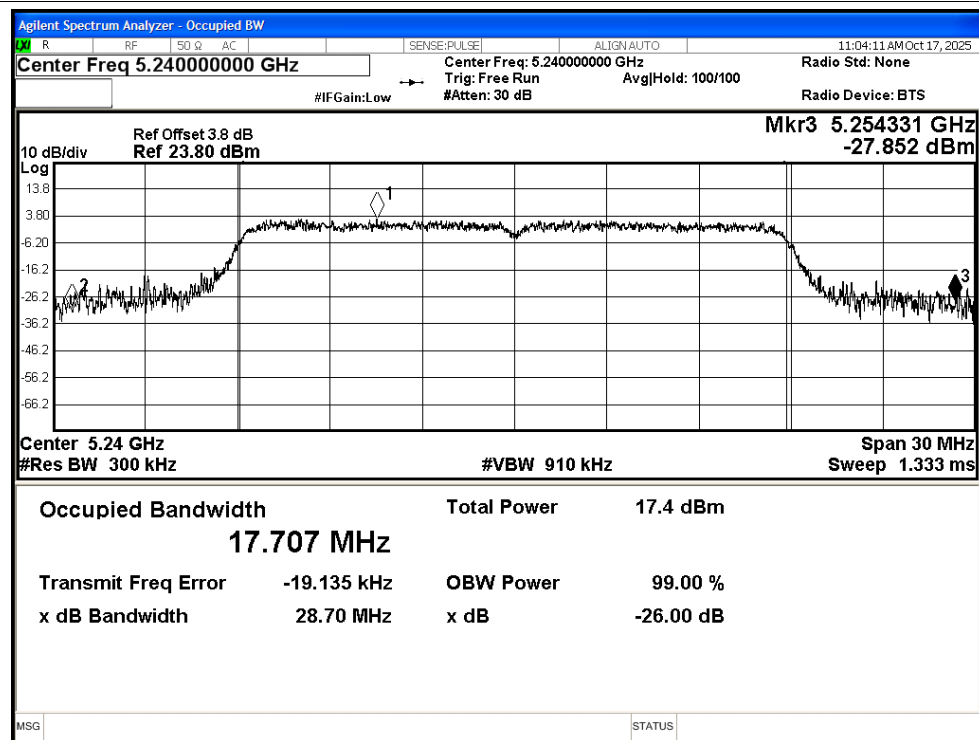
-26dB Bandwidth NVNT n20 5180MHz Ant



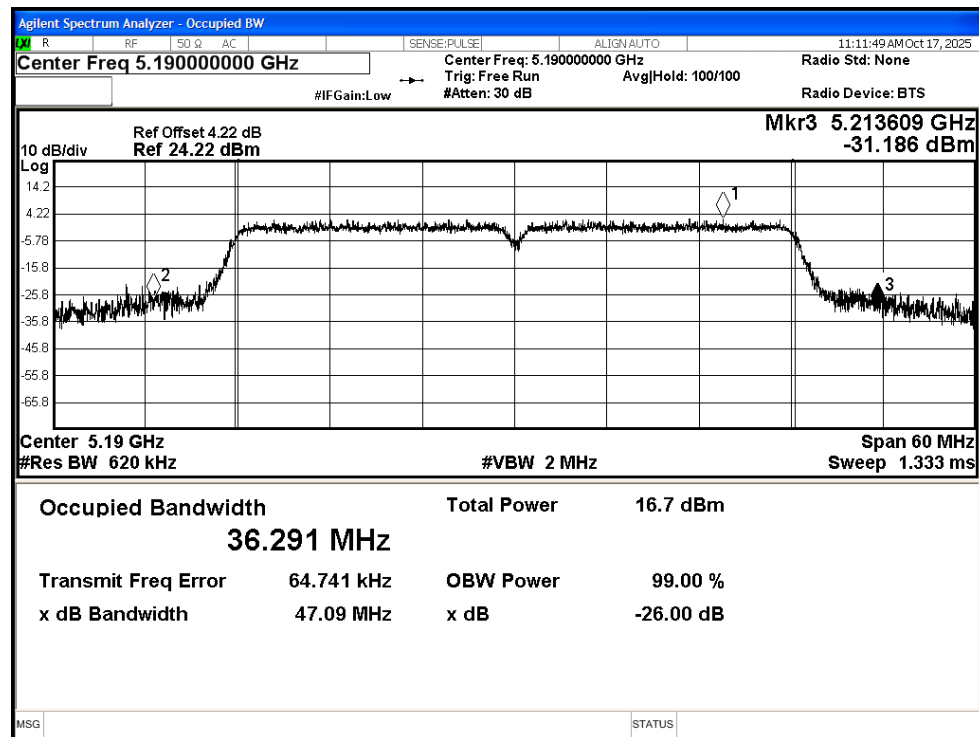
-26dB Bandwidth NVNT n20 5200MHz Ant



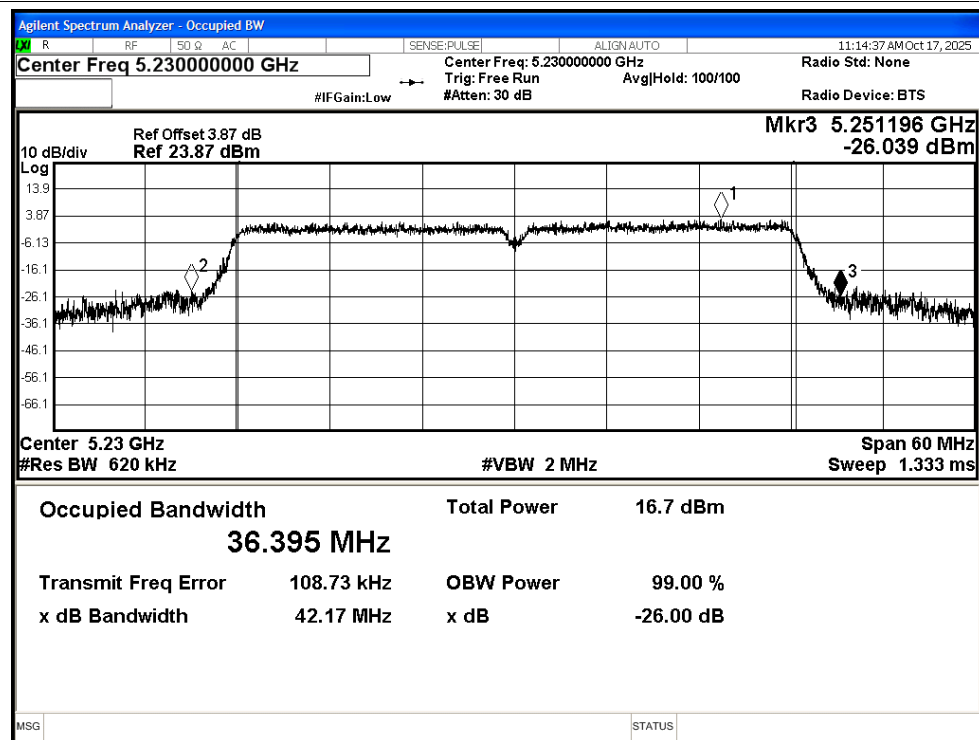
-26dB Bandwidth NVNT n20 5240MHz Ant



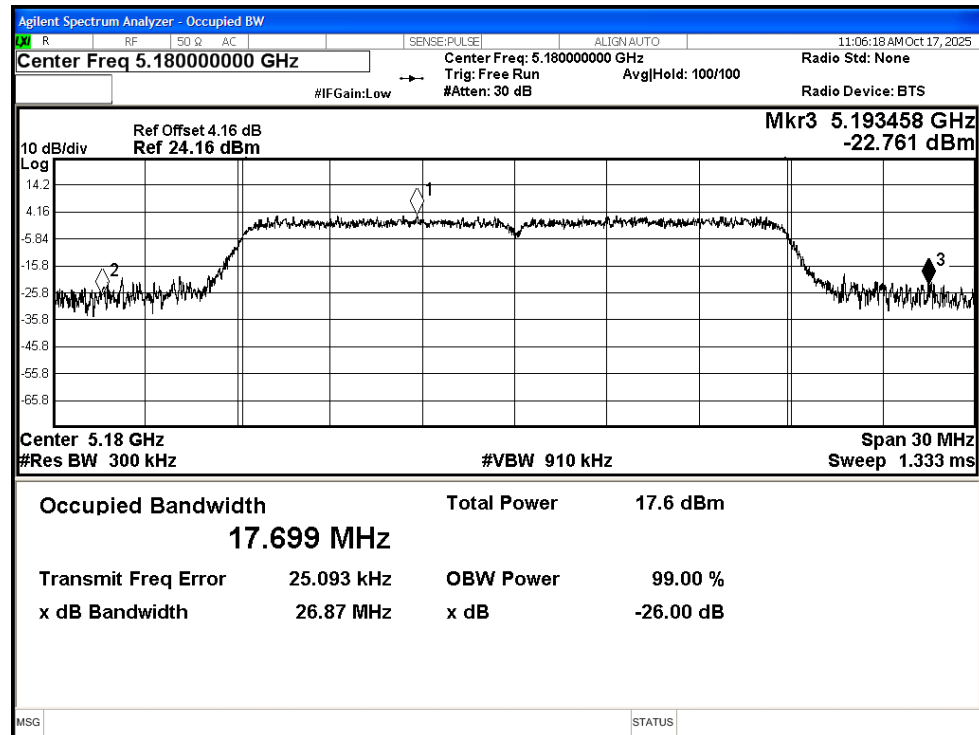
-26dB Bandwidth NVNT n40 5190MHz Ant



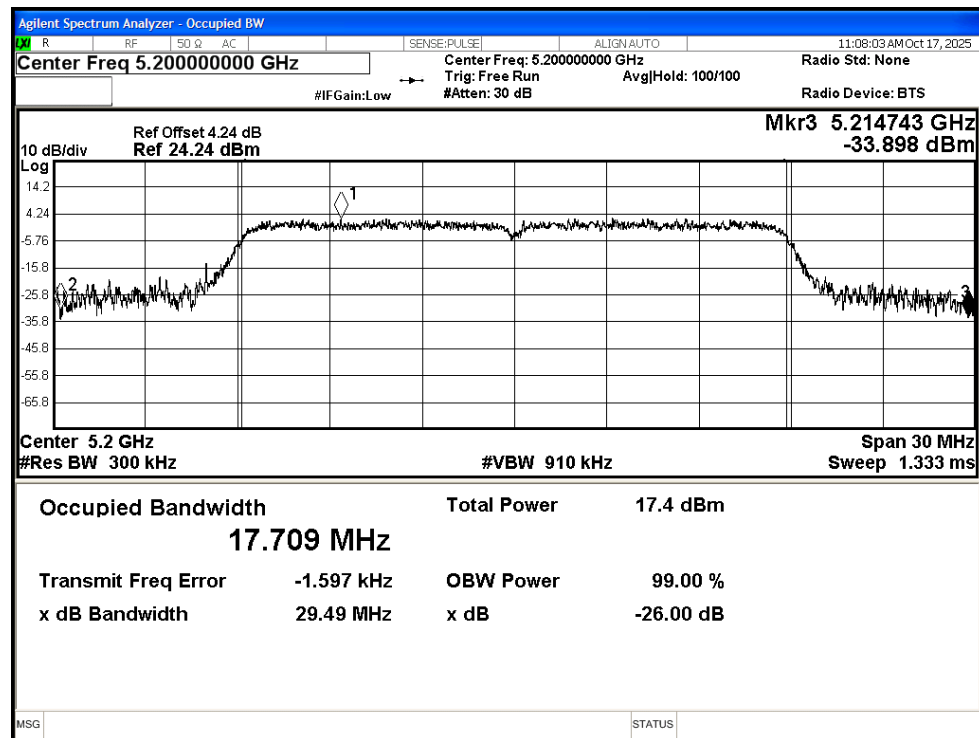
-26dB Bandwidth NVNT n40 5230MHz Ant



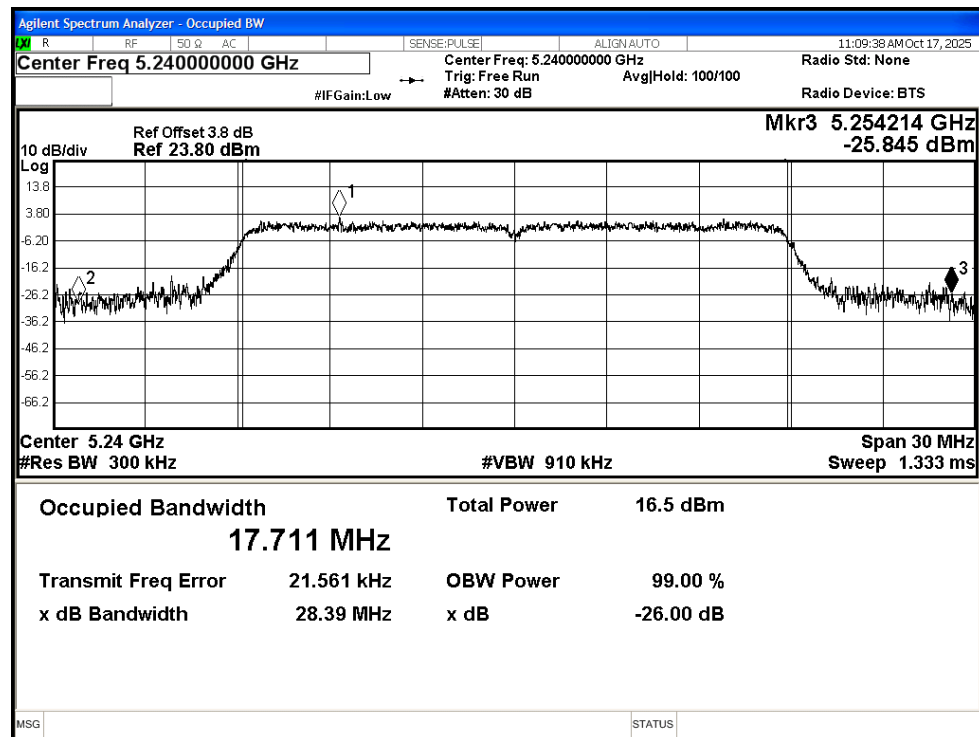
-26dB Bandwidth NVNT ac20 5180MHz Ant



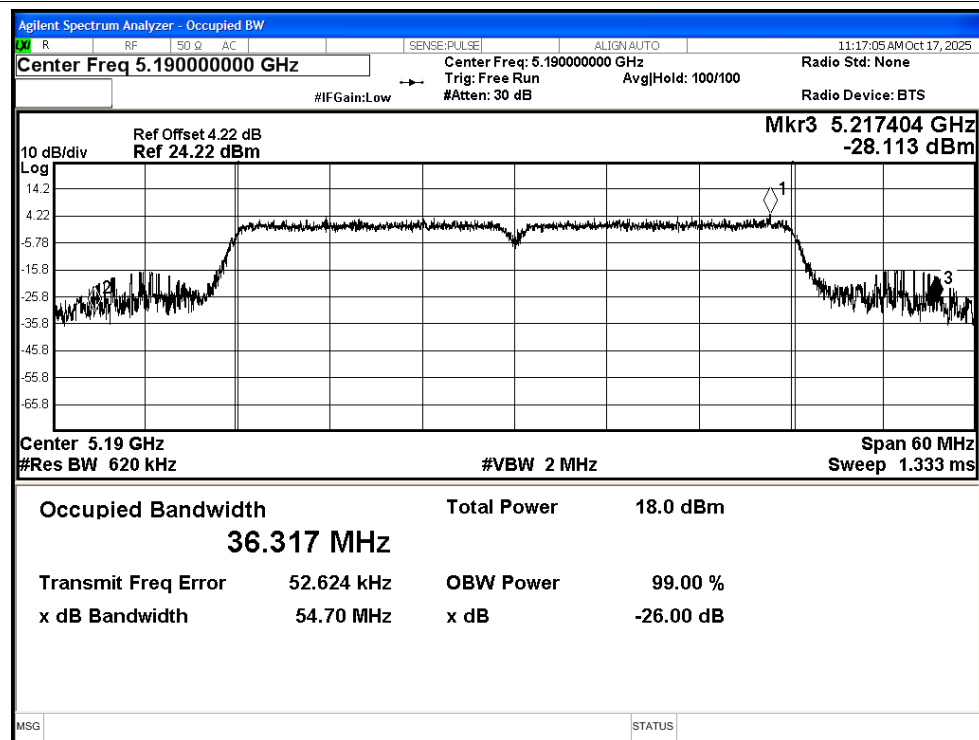
-26dB Bandwidth NVNT ac20 5200MHz Ant



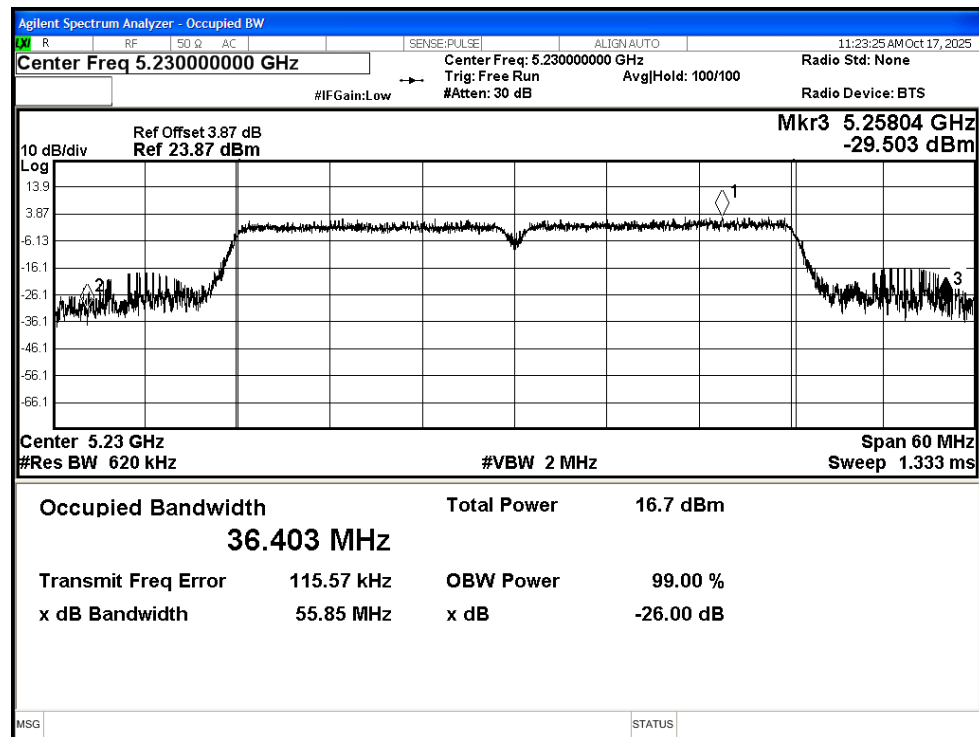
-26dB Bandwidth NVNT ac20 5240MHz Ant



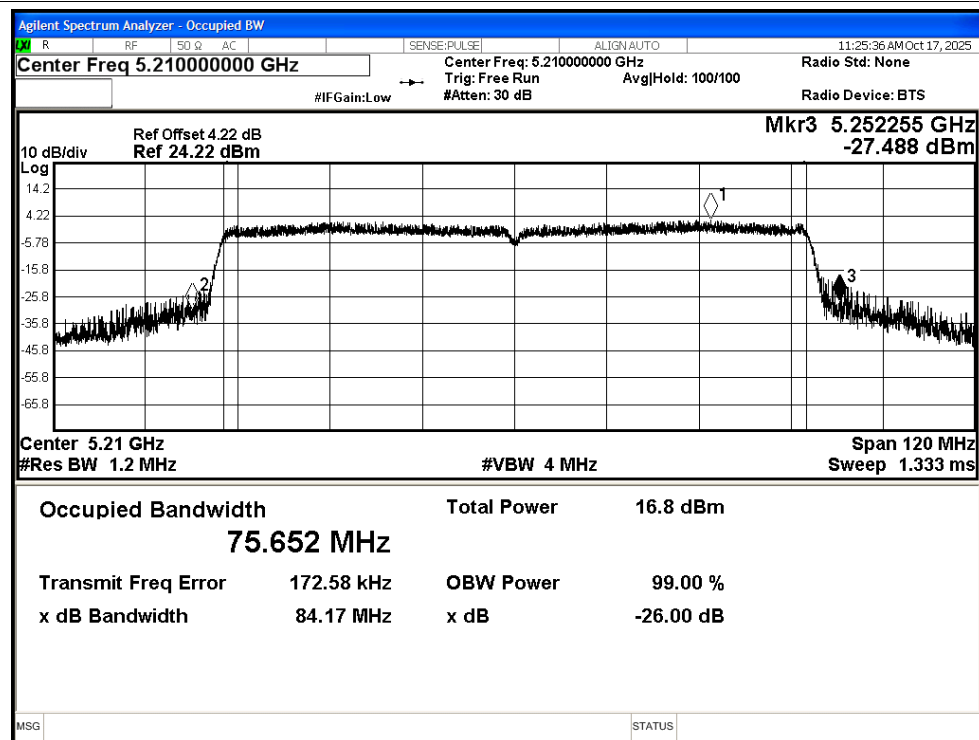
-26dB Bandwidth NVNT ac40 5190MHz Ant



-26dB Bandwidth NVNT ac40 5230MHz Ant



-26dB Bandwidth NVNT ac80 5210MHz Ant



2. Maximum Conducted Output Power

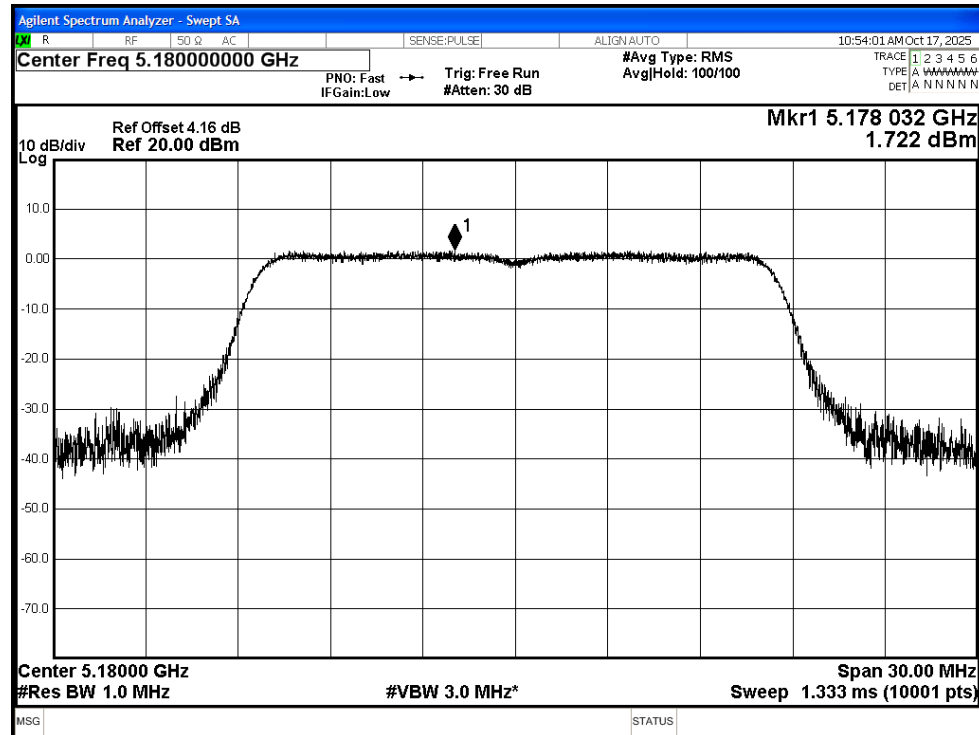
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	a	5180	Ant	12.43	0.24	12.67	24	Pass
NVNT	a	5200	Ant	12.46	0.24	12.7	24	Pass
NVNT	a	5240	Ant	12.05	0.24	12.29	24	Pass
NVNT	n20	5180	Ant	11.79	0.28	12.07	24	Pass
NVNT	n20	5200	Ant	11.79	0.28	12.07	24	Pass
NVNT	n20	5240	Ant	11.72	0.28	12	24	Pass
NVNT	n40	5190	Ant	10.11	0.55	10.66	24	Pass
NVNT	n40	5230	Ant	10.08	0.55	10.63	24	Pass
NVNT	ac20	5180	Ant	11.89	0.28	12.17	24	Pass
NVNT	ac20	5200	Ant	11.83	0.28	12.11	24	Pass
NVNT	ac20	5240	Ant	10.86	0.28	11.14	24	Pass
NVNT	ac40	5190	Ant	11.45	0.53	11.98	24	Pass
NVNT	ac40	5230	Ant	10.17	0.53	10.7	24	Pass
NVNT	ac80	5210	Ant	9.36	0.47	9.83	24	Pass

3. Maximum Power Spectral Density Level

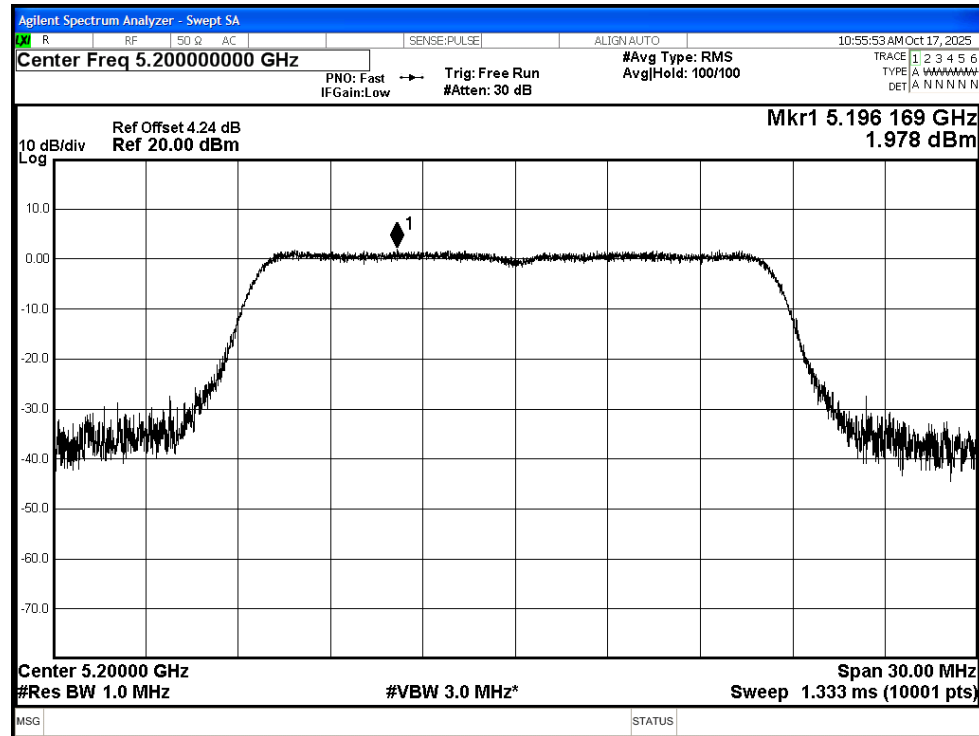
Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/MHz)	Duty Factor (dB)	Total PSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
NVNT	a	5180	Ant	1.72	0.24	1.96	11	Pass
NVNT	a	5200	Ant	1.98	0.24	2.22	11	Pass
NVNT	a	5240	Ant	1.83	0.24	2.07	11	Pass
NVNT	n20	5180	Ant	1.29	0.28	1.57	11	Pass
NVNT	n20	5200	Ant	0.87	0.28	1.15	11	Pass
NVNT	n20	5240	Ant	1.12	0.28	1.4	11	Pass
NVNT	n40	5190	Ant	-3.74	0.55	-3.19	11	Pass
NVNT	n40	5230	Ant	-3.21	0.55	-2.66	11	Pass
NVNT	ac20	5180	Ant	1.3	0.28	1.58	11	Pass
NVNT	ac20	5200	Ant	0.86	0.28	1.14	11	Pass
NVNT	ac20	5240	Ant	0.13	0.28	0.41	11	Pass
NVNT	ac40	5190	Ant	-2.02	0.53	-1.49	11	Pass
NVNT	ac40	5230	Ant	-3.19	0.53	-2.66	11	Pass
NVNT	ac80	5210	Ant	-6.38	0.47	-5.91	11	Pass

Test Graphs

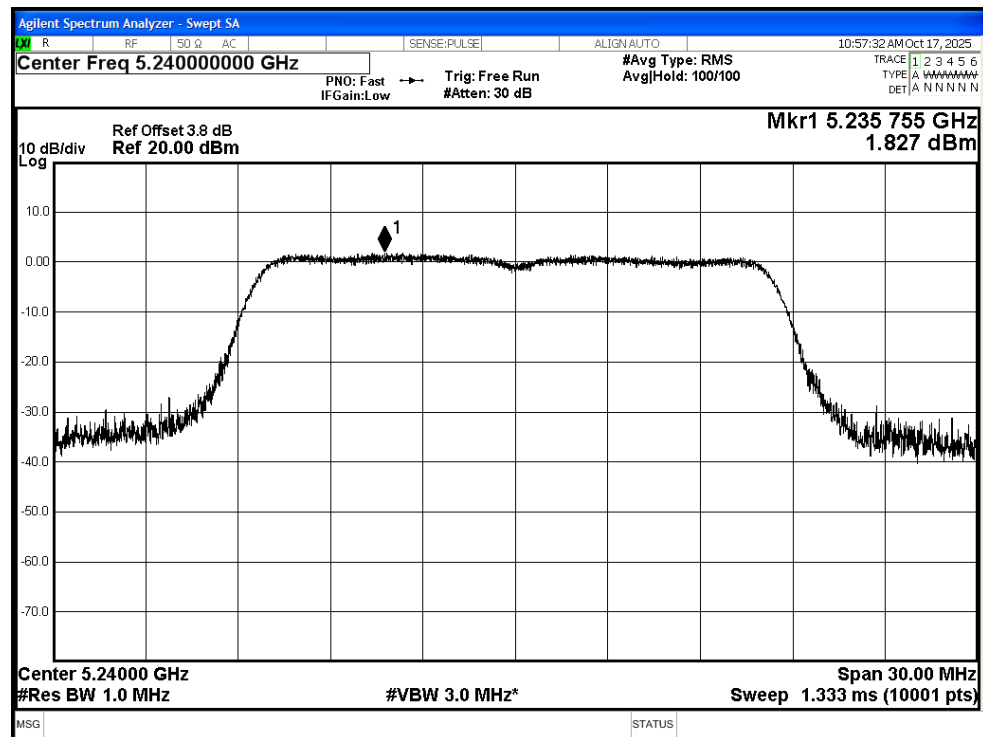
PSD NVNT a 5180MHz Ant



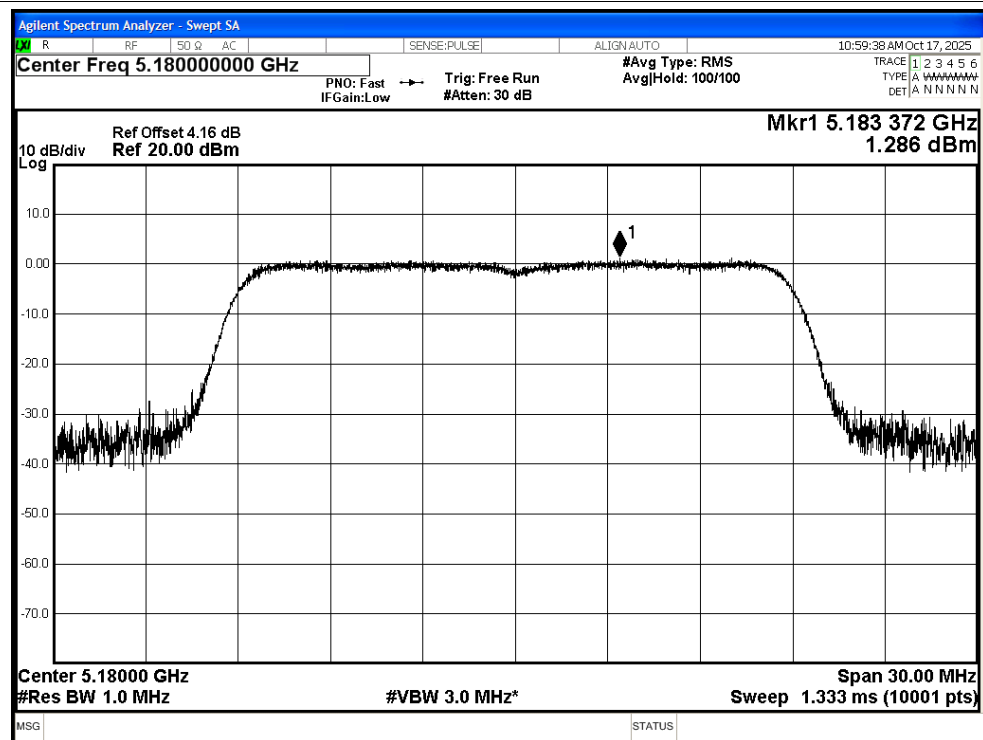
PSD NVNT a 5200MHz Ant



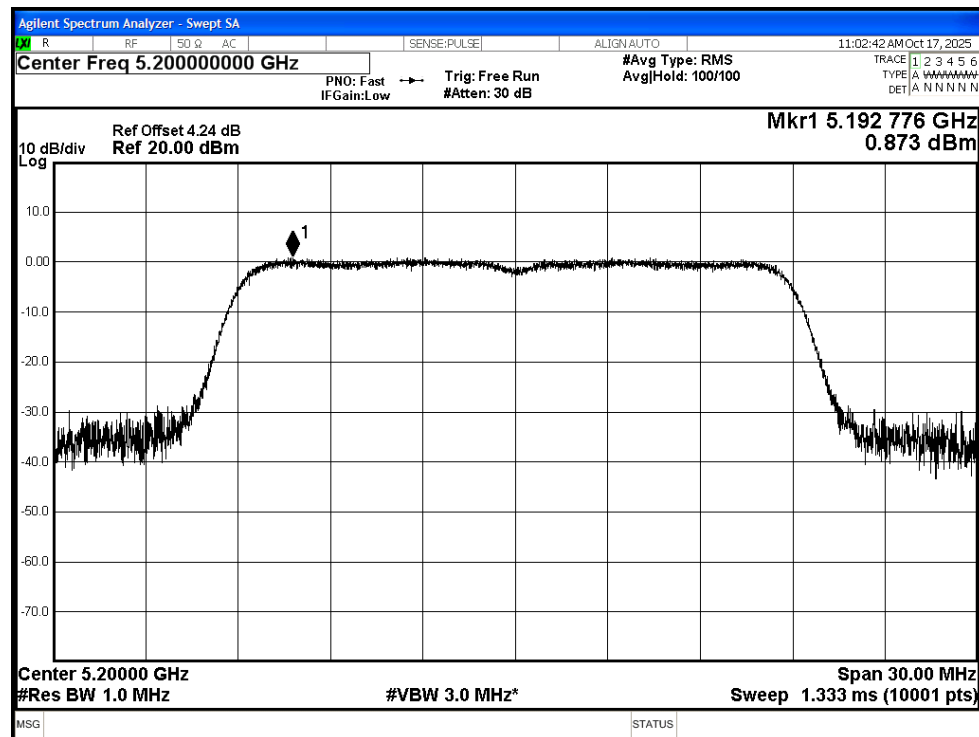
PSD NVNT a 5240MHz Ant



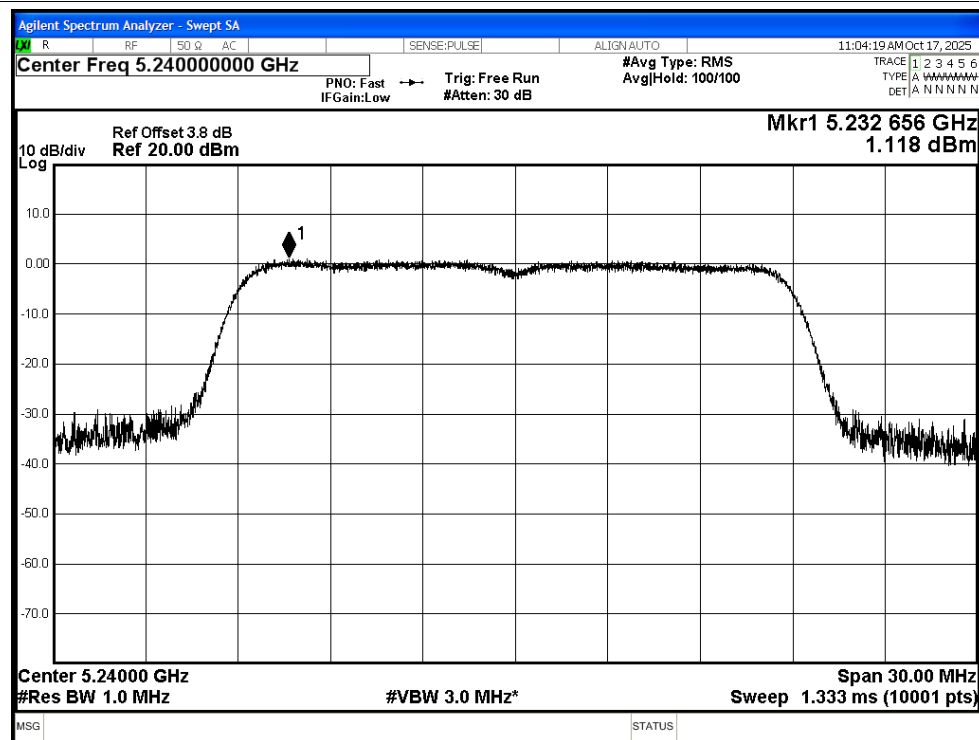
PSD NVNT n20 5180MHz Ant



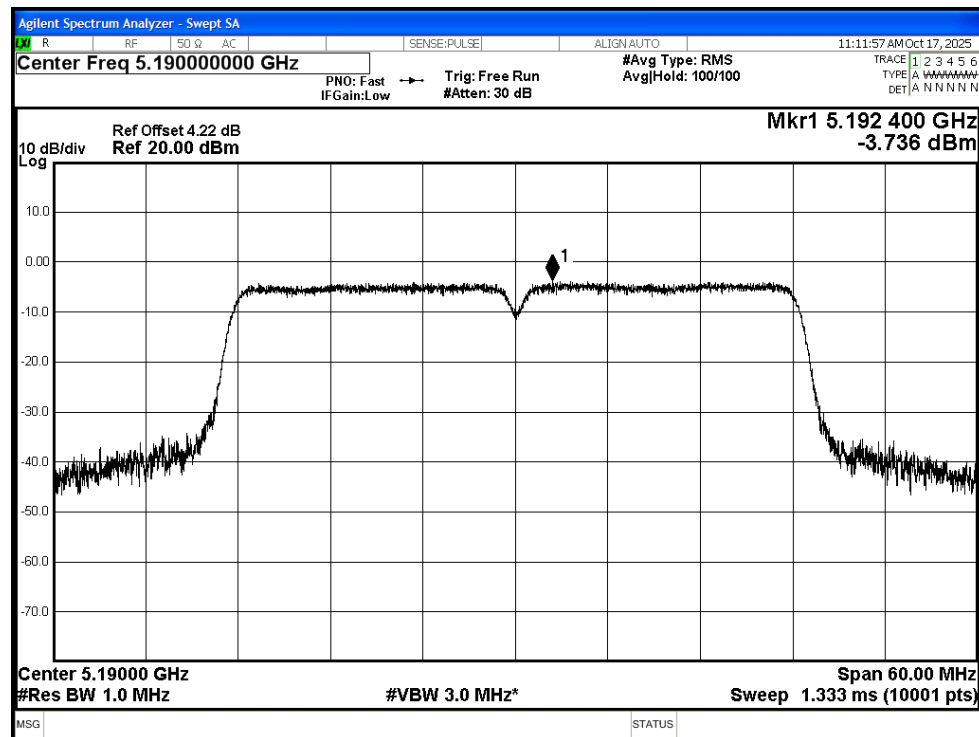
PSD NVNT n20 5200MHz Ant



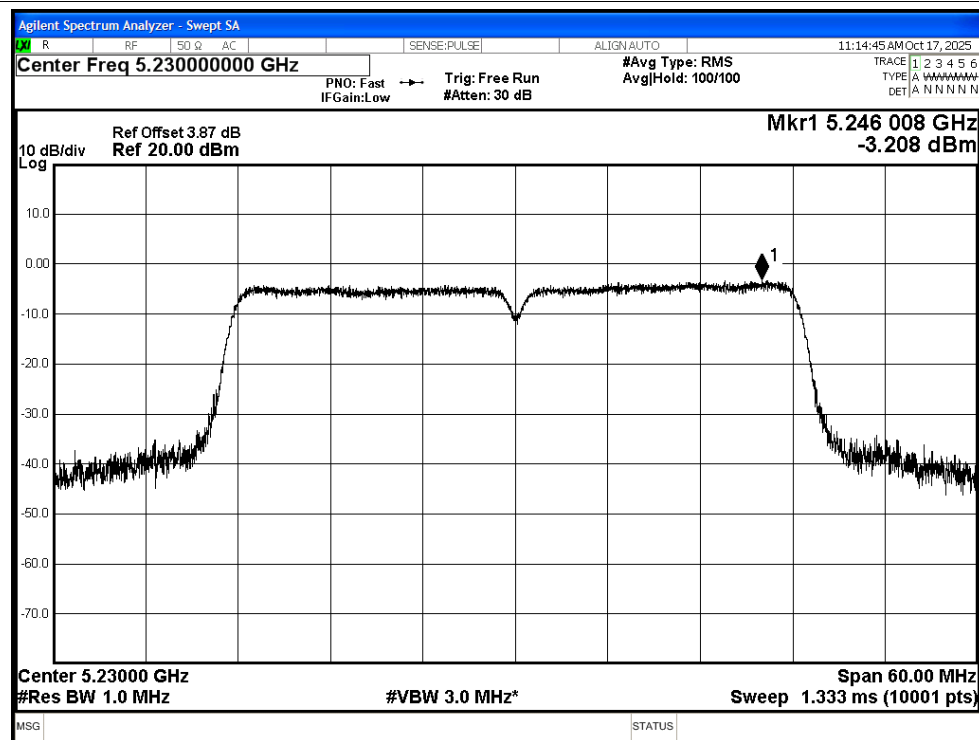
PSD NVNT n20 5240MHz Ant



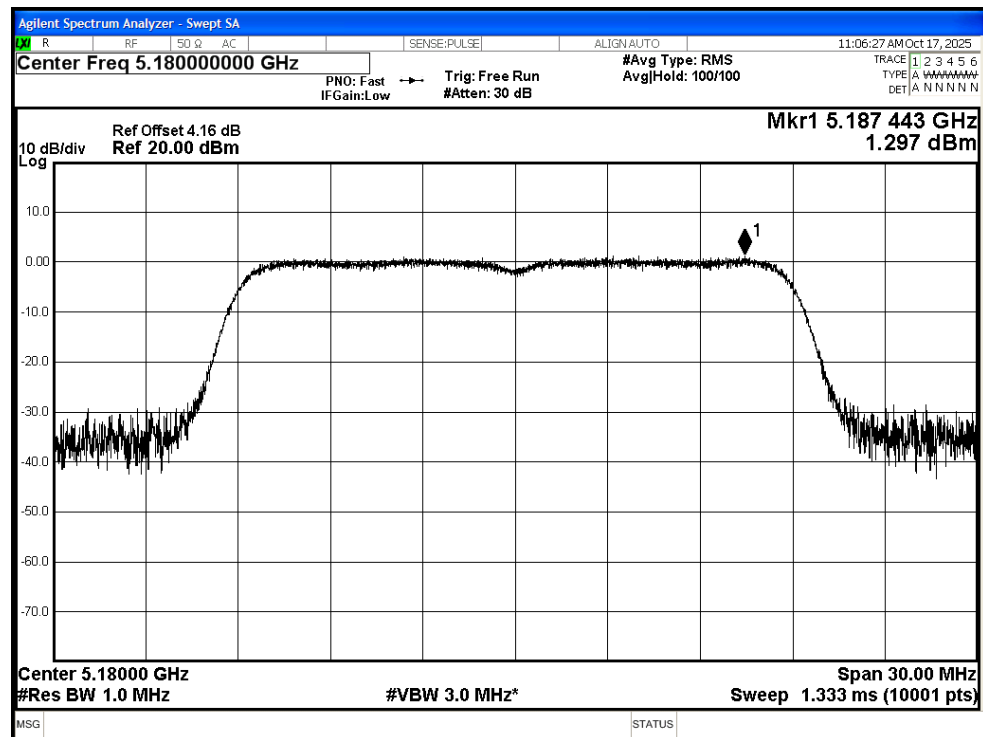
PSD NVNT n40 5190MHz Ant



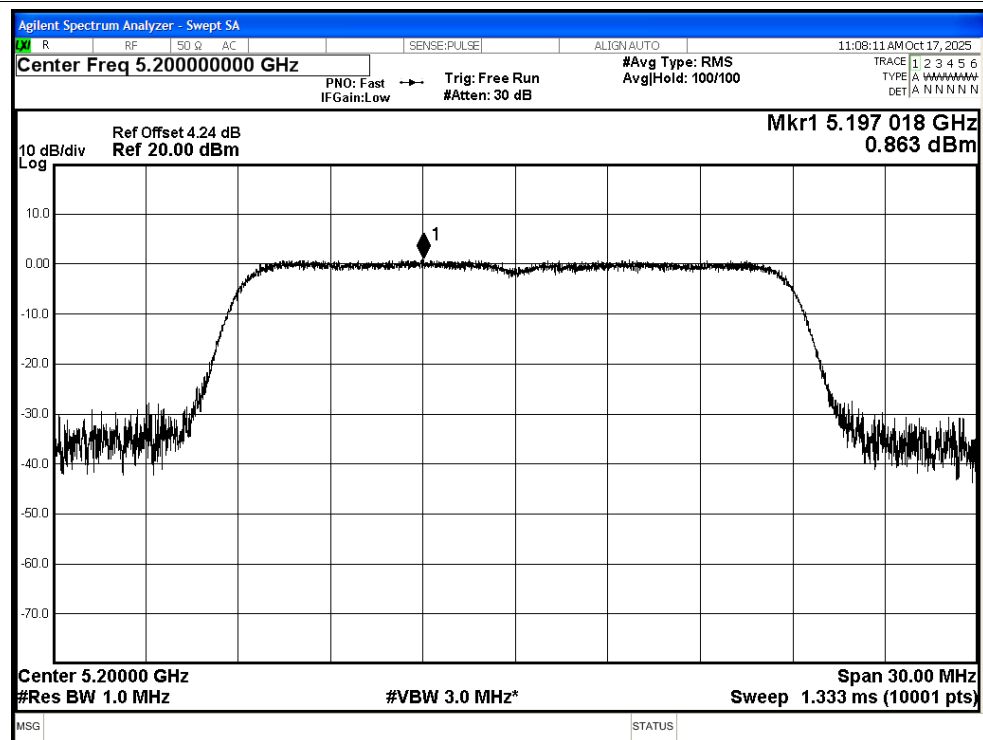
PSD NVNT n40 5230MHz Ant



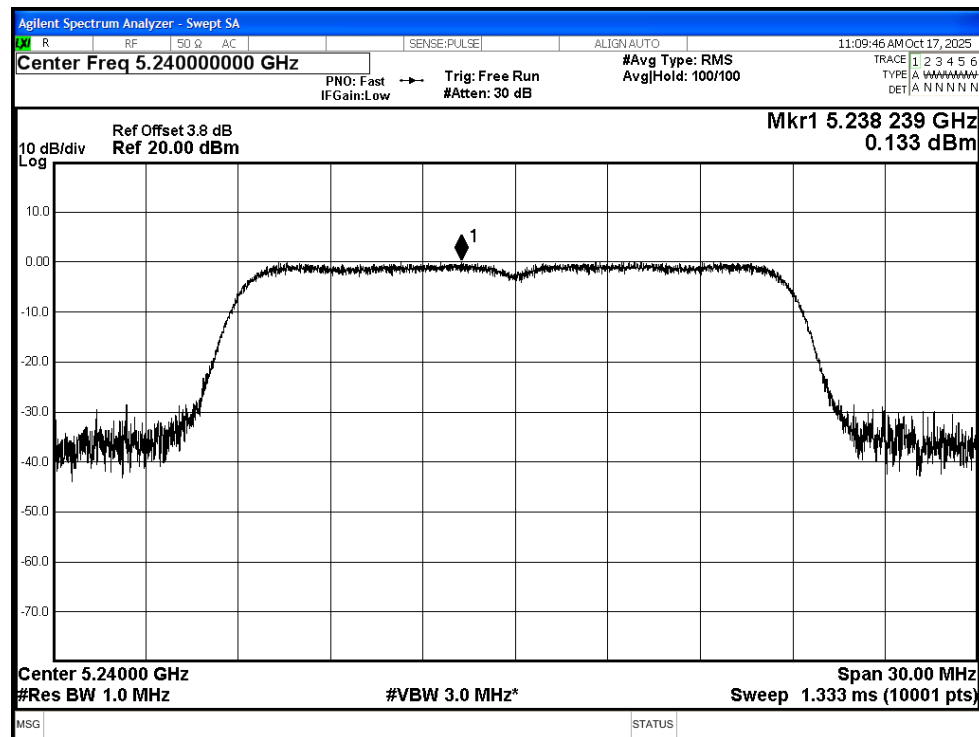
PSD NVNT ac20 5180MHz Ant



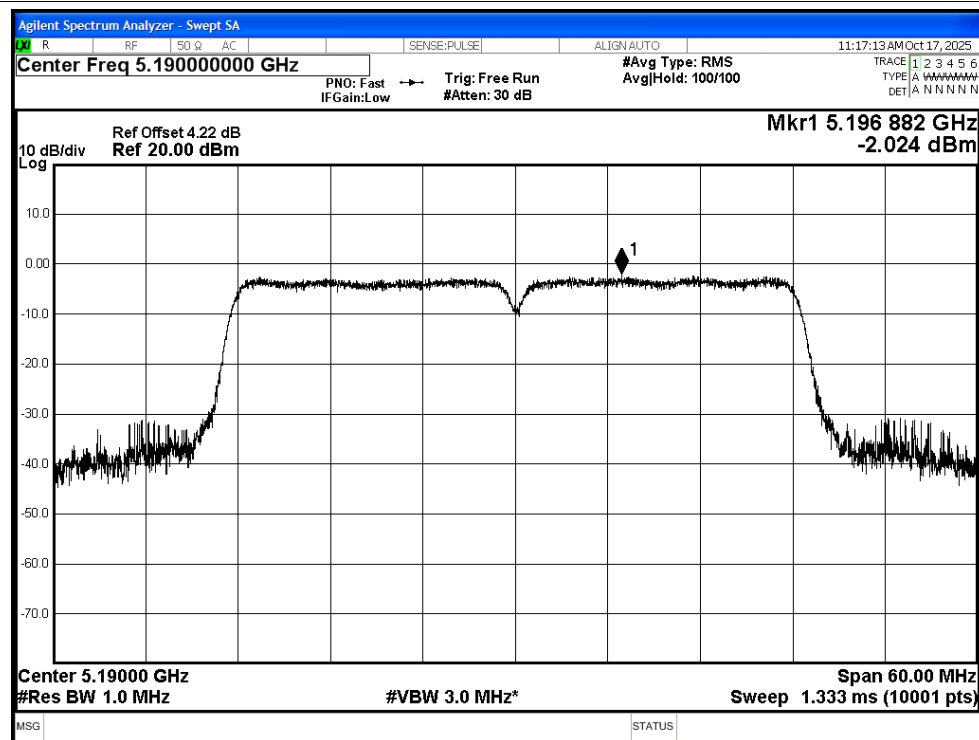
PSD NVNT ac20 5200MHz Ant



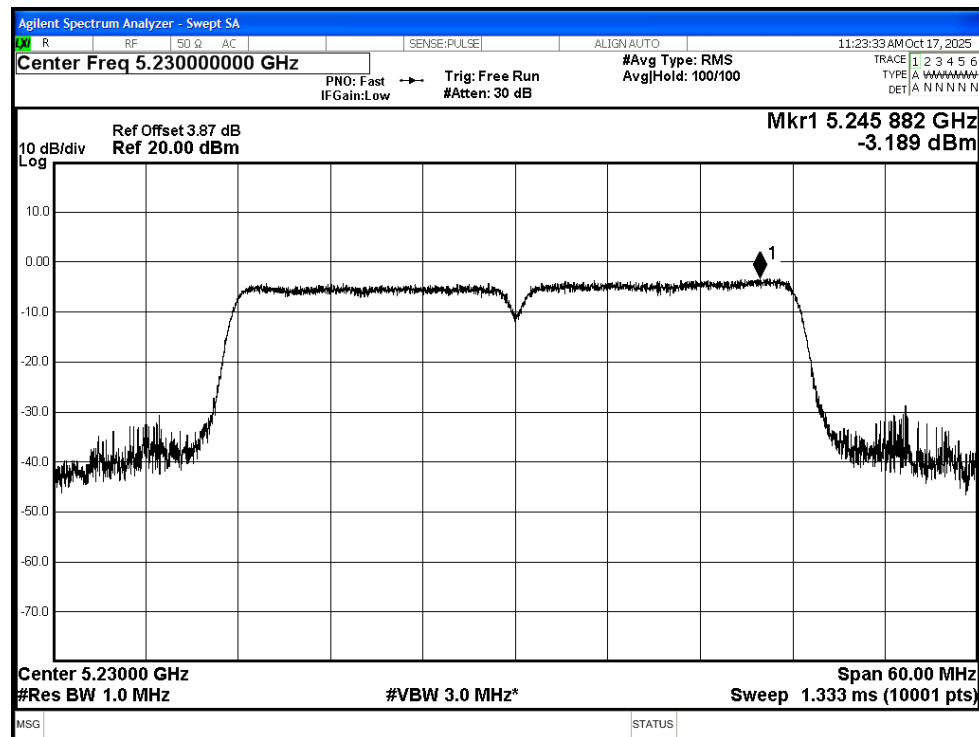
PSD NVNT ac20 5240MHz Ant



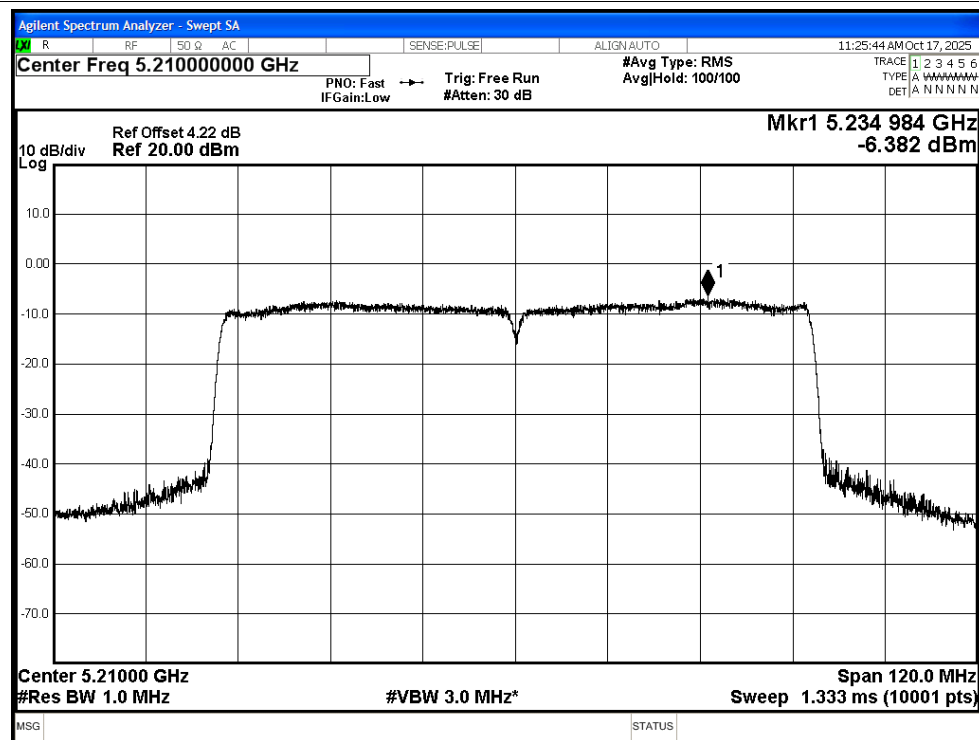
PSD NVNT ac40 5190MHz Ant



PSD NVNT ac40 5230MHz Ant



PSD NVNT ac80 5210MHz Ant



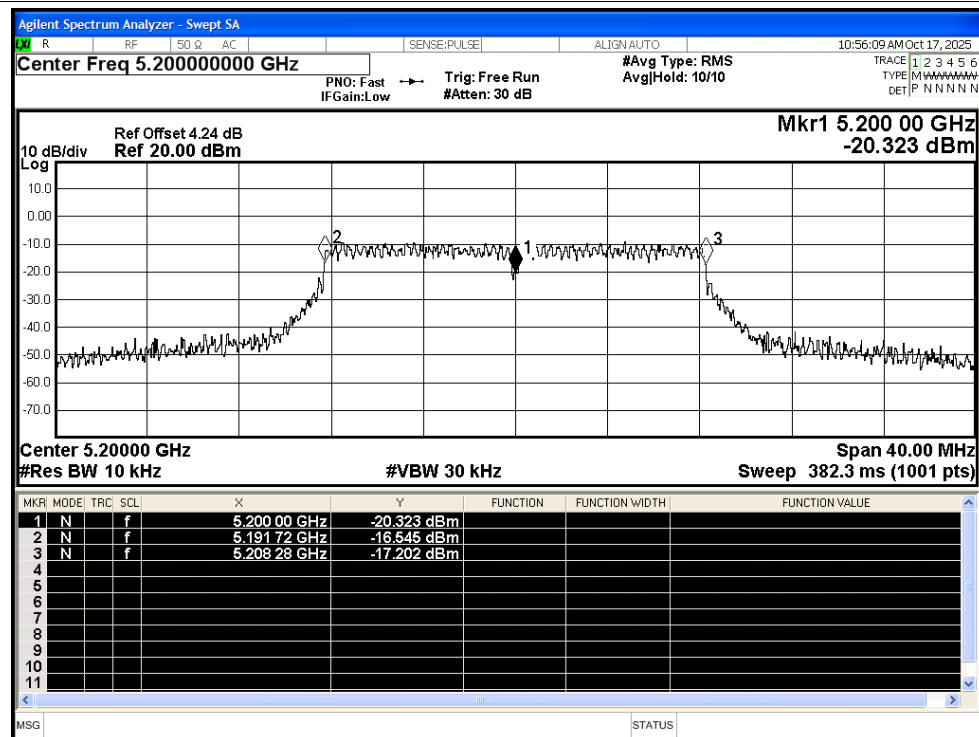
4. Restrict Band

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	5180	Ant	4500	-49.33	3.5	-	49.40	Peak	68.2	Pass
NVNT	a	5180	Ant	4500	-57.77	3.5	0.24	41.20	Average	54	Pass
NVNT	a	5180	Ant	5145.4	-39.64	3.5	-	59.09	Peak	68.2	Pass
NVNT	a	5180	Ant	5149.6	-49.96	3.5	0.24	49.01	Average	54	Pass
NVNT	a	5180	Ant	5150	-39.12	3.5	-	59.61	Peak	68.2	Pass
NVNT	a	5180	Ant	5150	-50.12	3.5	0.24	48.85	Average	54	Pass
NVNT	a	5240	Ant	5350	-47.68	3.5	-	51.05	Peak	68.2	Pass
NVNT	a	5240	Ant	5350	-56.49	3.5	0.24	42.48	Average	54	Pass
NVNT	a	5240	Ant	5448	-46.61	3.5	-	52.12	Peak	68.2	Pass
NVNT	a	5240	Ant	5352.48	-56.08	3.5	0.24	42.89	Average	54	Pass
NVNT	a	5240	Ant	5460	-49.17	3.5	-	49.56	Peak	68.2	Pass
NVNT	a	5240	Ant	5460	-57.64	3.5	0.24	41.33	Average	54	Pass
NVNT	n20	5180	Ant	4500	-50.06	3.5	-	48.67	Peak	68.2	Pass
NVNT	n20	5180	Ant	4500	-58.02	3.5	0.28	40.99	Average	54	Pass
NVNT	n20	5180	Ant	5149.6	-39.89	3.5	-	58.84	Peak	68.2	Pass
NVNT	n20	5180	Ant	5149.6	-51.17	3.5	0.28	47.84	Average	54	Pass
NVNT	n20	5180	Ant	5150	-40.81	3.5	-	57.92	Peak	68.2	Pass
NVNT	n20	5180	Ant	5150	-51.17	3.5	0.28	47.84	Average	54	Pass
NVNT	n20	5240	Ant	5350	-49.84	3.5	-	48.89	Peak	68.2	Pass
NVNT	n20	5240	Ant	5350	-56.59	3.5	0.28	42.42	Average	54	Pass
NVNT	n20	5240	Ant	5362.32	-46.3	3.5	-	52.43	Peak	68.2	Pass
NVNT	n20	5240	Ant	5449.2	-56.41	3.5	0.28	42.60	Average	54	Pass
NVNT	n20	5240	Ant	5460	-48.87	3.5	-	49.86	Peak	68.2	Pass
NVNT	n20	5240	Ant	5460	-57.06	3.5	0.28	41.95	Average	54	Pass
NVNT	n40	5190	Ant	4500	-48.05	3.5	-	50.68	Peak	68.2	Pass
NVNT	n40	5190	Ant	4500	-58.35	3.5	0.55	40.93	Average	54	Pass
NVNT	n40	5190	Ant	5148.97	-38.71	3.5	-	60.02	Peak	68.2	Pass
NVNT	n40	5190	Ant	5149.7	-51.96	3.5	0.55	47.32	Average	54	Pass
NVNT	n40	5190	Ant	5150	-40.03	3.5	-	58.70	Peak	68.2	Pass
NVNT	n40	5190	Ant	5150	-51.96	3.5	0.55	47.32	Average	54	Pass
NVNT	n40	5230	Ant	5350	-50.43	3.5	-	48.30	Peak	68.2	Pass
NVNT	n40	5230	Ant	5350	-56.62	3.5	0.55	42.66	Average	54	Pass
NVNT	n40	5230	Ant	5380.08	-45.85	3.5	-	52.88	Peak	68.2	Pass
NVNT	n40	5230	Ant	5362.53	-56.36	3.5	0.55	42.92	Average	54	Pass
NVNT	n40	5230	Ant	5460	-49.9	3.5	-	48.83	Peak	68.2	Pass
NVNT	n40	5230	Ant	5460	-56.93	3.5	0.55	42.35	Average	54	Pass
NVNT	ac20	5180	Ant	4500	-50	3.5	-	48.73	Peak	68.2	Pass
NVNT	ac20	5180	Ant	4500	-57.83	3.5	0.28	41.18	Average	54	Pass
NVNT	ac20	5180	Ant	5149.6	-38.3	3.5	-	60.43	Peak	68.2	Pass

NVNT	ac20	5180	Ant	5149.6	-50.59	3.5	0.28	48.42	Average	54	Pass
NVNT	ac20	5180	Ant	5150	-37.69	3.5	-	61.04	Peak	68.2	Pass
NVNT	ac20	5180	Ant	5150	-49.88	3.5	0.28	49.13	Average	54	Pass
NVNT	ac20	5240	Ant	5350	-49.14	3.5	-	49.59	Peak	68.2	Pass
NVNT	ac20	5240	Ant	5350	-57.25	3.5	0.28	41.76	Average	54	Pass
NVNT	ac20	5240	Ant	5418	-45.74	3.5	-	52.99	Peak	68.2	Pass
NVNT	ac20	5240	Ant	5375.28	-56.47	3.5	0.28	42.54	Average	54	Pass
NVNT	ac20	5240	Ant	5460	-48.41	3.5	-	50.32	Peak	68.2	Pass
NVNT	ac20	5240	Ant	5460	-57.33	3.5	0.28	41.68	Average	54	Pass
NVNT	ac40	5190	Ant	4500	-49.23	3.5	-	49.50	Peak	68.2	Pass
NVNT	ac40	5190	Ant	4500	-57.76	3.5	0.53	41.50	Average	54	Pass
NVNT	ac40	5190	Ant	5149.7	-38.15	3.5	-	60.58	Peak	68.2	Pass
NVNT	ac40	5190	Ant	5149.7	-52.68	3.5	0.53	46.58	Average	54	Pass
NVNT	ac40	5190	Ant	5150	-38.15	3.5	-	60.58	Peak	68.2	Pass
NVNT	ac40	5190	Ant	5150	-52.68	3.5	0.53	46.58	Average	54	Pass
NVNT	ac40	5230	Ant	5350	-47.09	3.5	-	51.64	Peak	68.2	Pass
NVNT	ac40	5230	Ant	5350	-57.22	3.5	0.53	42.04	Average	54	Pass
NVNT	ac40	5230	Ant	5451.36	-46.66	3.5	-	52.07	Peak	68.2	Pass
NVNT	ac40	5230	Ant	5439.21	-56.4	3.5	0.53	42.86	Average	54	Pass
NVNT	ac40	5230	Ant	5460	-49.03	3.5	-	49.70	Peak	68.2	Pass
NVNT	ac40	5230	Ant	5460	-57.72	3.5	0.53	41.54	Average	54	Pass
NVNT	ac80	5210	Ant	5350	-50.76	3.5	-	47.97	Peak	68.2	Pass
NVNT	ac80	5210	Ant	5350	-56.78	3.5	0.47	42.42	Average	54	Pass
NVNT	ac80	5210	Ant	5362.32	-46.1	3.5	-	52.63	Peak	68.2	Pass
NVNT	ac80	5210	Ant	5360.34	-55.79	3.5	0.47	43.41	Average	54	Pass
NVNT	ac80	5210	Ant	5460	-49.43	3.5	-	49.30	Peak	68.2	Pass
NVNT	ac80	5210	Ant	5460	-57.2	3.5	0.47	42.00	Average	54	Pass
NVNT	ac80	5210	Ant	4500	-49.55	3.5	-	49.18	Peak	68.2	Pass
NVNT	ac80	5210	Ant	4500	-57.74	3.5	0.47	41.46	Average	54	Pass
NVNT	ac80	5210	Ant	5136.74	-38.78	3.5	-	59.95	Peak	68.2	Pass
NVNT	ac80	5210	Ant	5137.53	-49.54	3.5	0.47	49.66	Average	54	Pass
NVNT	ac80	5210	Ant	5150	-42.97	3.5	-	55.76	Peak	68.2	Pass
NVNT	ac80	5210	Ant	5150	-49.95	3.5	0.47	49.25	Average	54	Pass

5. Frequency Stability

Condition	Mode	Frequency (MHz)	Antenna	Measured Frequency (MHz)	Frequency Error (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
NVNT	a	5180	Ant	5180	0	0	25	Pass
NVNT	a	5200	Ant	5200	0	0	25	Pass
NVNT	a	5240	Ant	5239.98	-20000	-3.82	25	Pass
NVNT	n20	5180	Ant	5180	0	0	25	Pass
NVNT	n20	5200	Ant	5200	0	0	25	Pass
NVNT	n20	5240	Ant	5240	0	0	25	Pass
NVNT	n40	5190	Ant	5190	0	0	25	Pass
NVNT	n40	5230	Ant	5230	0	0	25	Pass
NVNT	ac20	5180	Ant	5179.98	-20000	-3.86	25	Pass
NVNT	ac20	5200	Ant	5199.98	-20000	-3.85	25	Pass
NVNT	ac20	5240	Ant	5239.98	-20000	-3.82	25	Pass
NVNT	ac40	5190	Ant	5190	0	0	25	Pass
NVNT	ac40	5230	Ant	5230	0	0	25	Pass
NVNT	ac80	5210	Ant	5210	0	0	25	Pass



6. Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	a	5180	Ant	94.65	0.24	0.91
NVNT	a	5200	Ant	94.56	0.24	0.91
NVNT	a	5240	Ant	94.65	0.24	0.91
NVNT	n20	5180	Ant	93.77	0.28	1.07
NVNT	n20	5200	Ant	93.77	0.28	1.07
NVNT	n20	5240	Ant	93.77	0.28	1.07
NVNT	n40	5190	Ant	88.14	0.55	2.14
NVNT	n40	5230	Ant	88.14	0.55	2.14
NVNT	ac20	5180	Ant	93.83	0.28	1.06
NVNT	ac20	5200	Ant	93.72	0.28	1.06
NVNT	ac20	5240	Ant	93.72	0.28	1.06
NVNT	ac40	5190	Ant	88.48	0.53	2.1
NVNT	ac40	5230	Ant	88.48	0.53	2.1
NVNT	ac80	5210	Ant	89.65	0.47	1.86

