



Appendix RF Test Data for 5.2G WIFI

Product Name: AI Translator Earbuds

Test Model: A9

Environmental Conditions

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

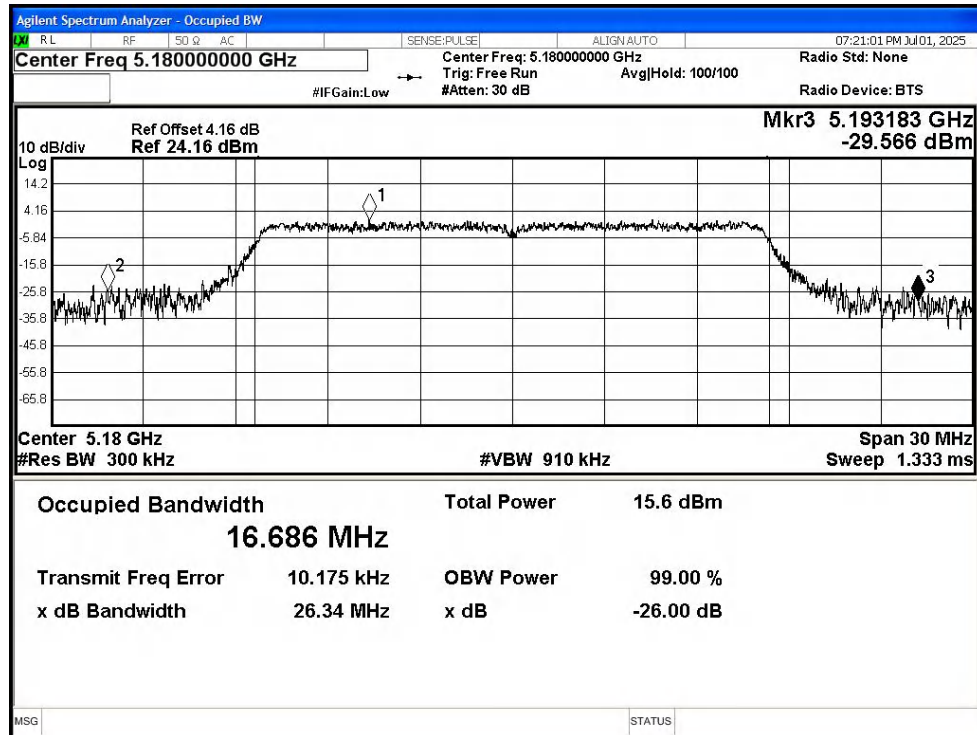


1. -26dB Bandwidth

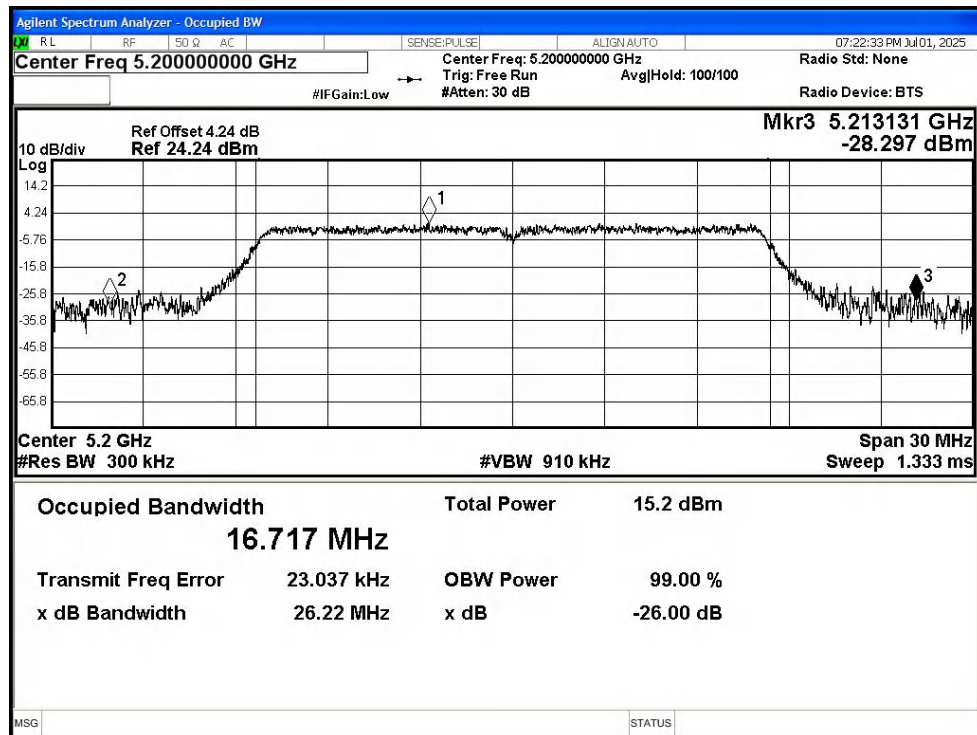
Condition	Mode	Frequency (MHz)	Antenna	-26 dB Bandwidth (MHz)	Limit -26 dB Bandwidth (MHz)	Verdict
NVNT	a	5180	Ant1	26.345	---	Pass
NVNT	a	5200	Ant1	26.215	---	Pass
NVNT	a	5240	Ant1	25.253	---	Pass
NVNT	n20	5180	Ant1	27.438	---	Pass
NVNT	n20	5200	Ant1	26.725	---	Pass
NVNT	n20	5240	Ant1	28.989	---	Pass
NVNT	n40	5190	Ant1	49.58	---	Pass
NVNT	n40	5230	Ant1	49.189	---	Pass

Test Graphs

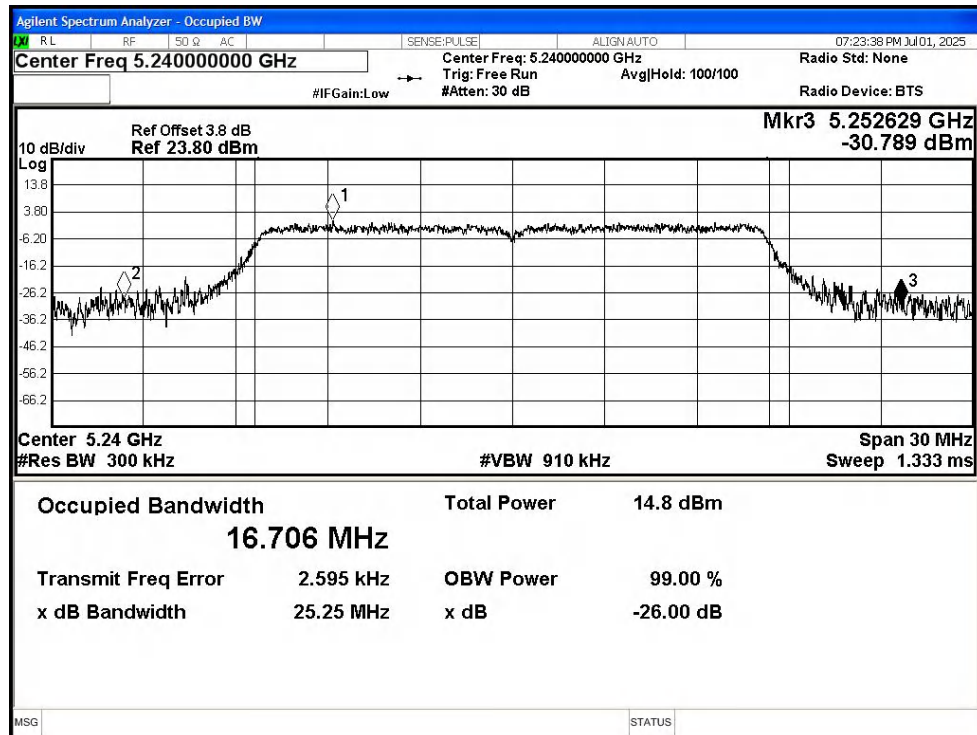
-26dB Bandwidth NVNT a 5180MHz Ant1



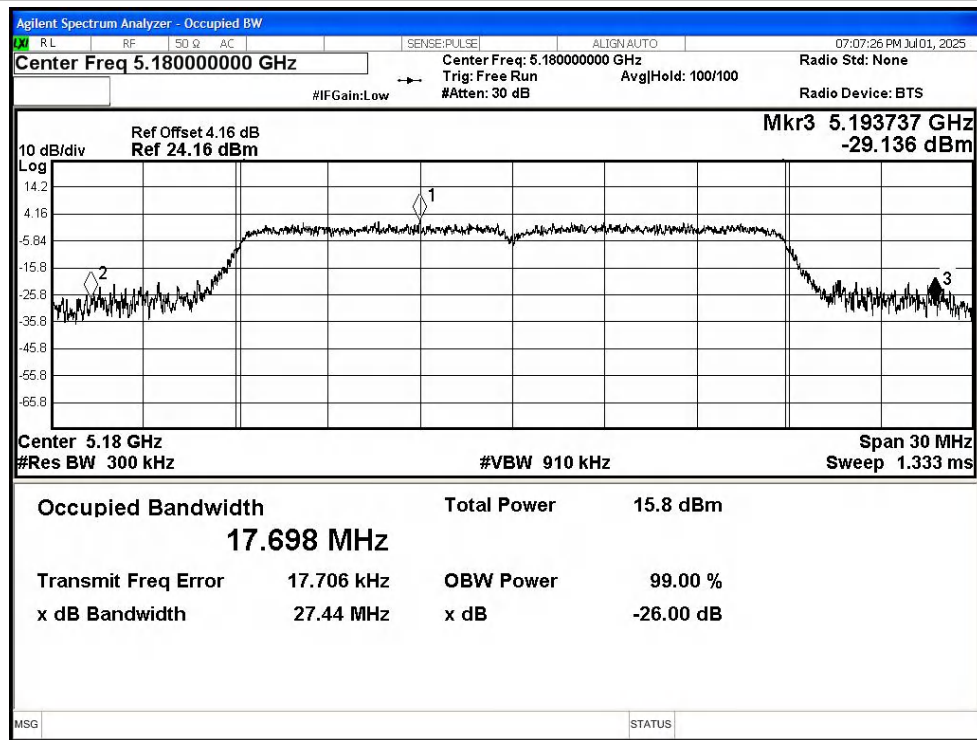
-26dB Bandwidth NVNT a 5200MHz Ant1



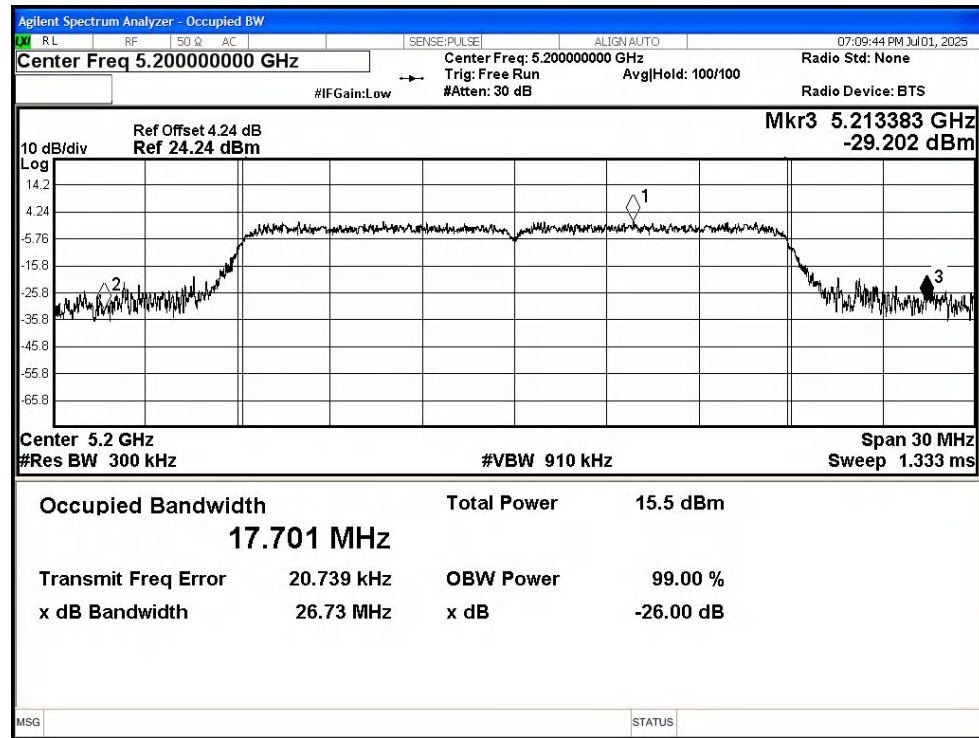
-26dB Bandwidth NVNT a 5240MHz Ant1



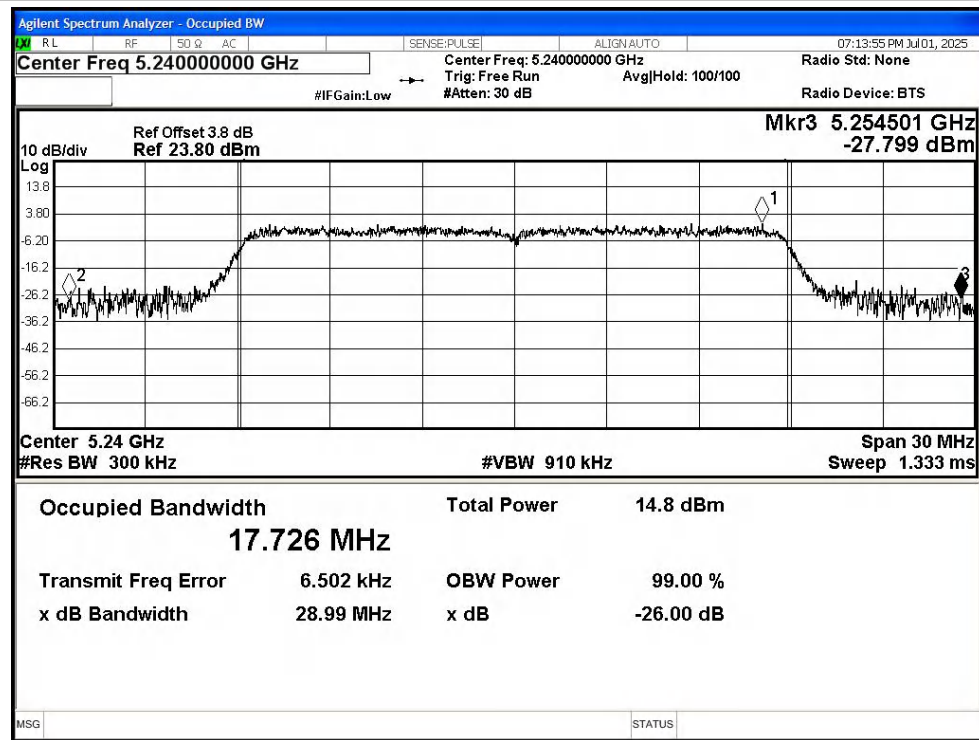
-26dB Bandwidth NVNT n20 5180MHz Ant1



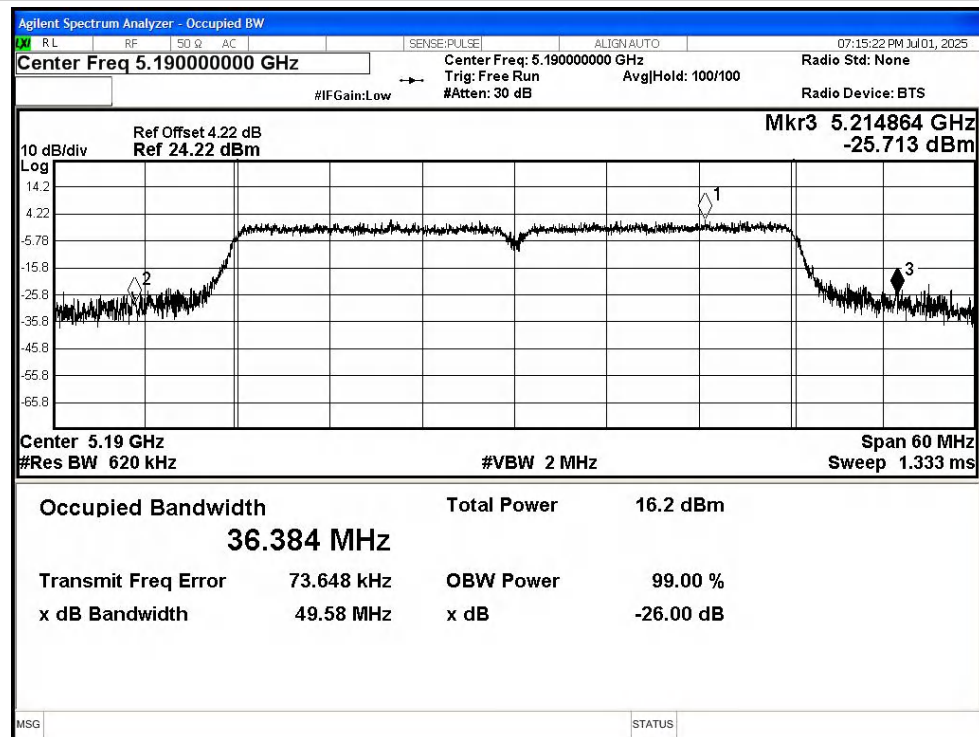
-26dB Bandwidth NVNT n20 5200MHz Ant1



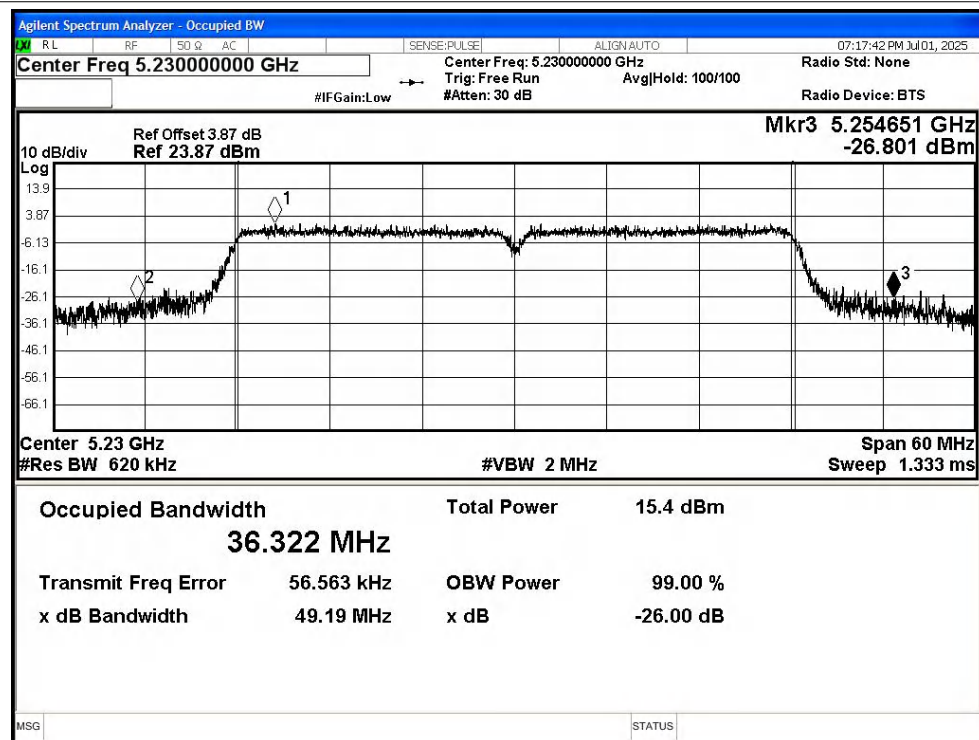
-26dB Bandwidth NVNT n20 5240MHz Ant1



-26dB Bandwidth NVNT n40 5190MHz Ant1



-26dB Bandwidth NVNT n40 5230MHz 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	5180	Ant1	9.88	0.24	10.12	24	Pass
NVNT	a	5200	Ant1	9.6	0.24	9.84	24	Pass
NVNT	a	5240	Ant1	9.03	0.24	9.27	24	Pass
NVNT	n20	5180	Ant1	9.7	0.23	9.93	24	Pass
NVNT	n20	5200	Ant1	9.97	0.23	10.2	24	Pass
NVNT	n20	5240	Ant1	9.2	0.23	9.43	24	Pass
NVNT	n40	5190	Ant1	9.68	0.44	10.12	24	Pass
NVNT	n40	5230	Ant1	8.4	0.44	8.84	24	Pass

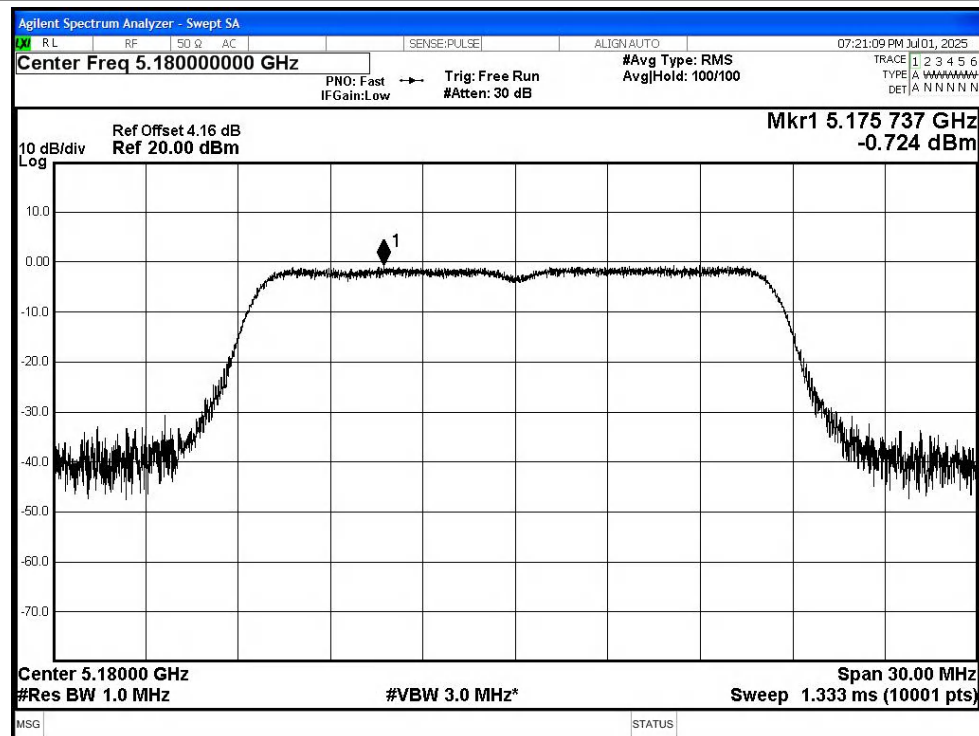


3. Maximum Power Spectral Density Level

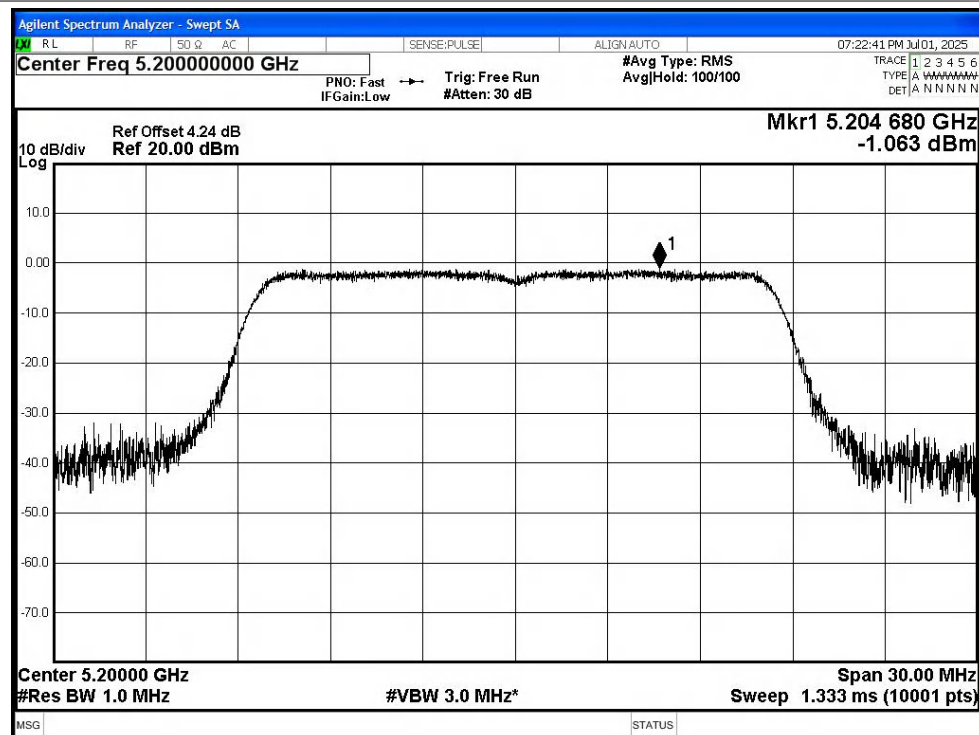
Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/MHz)	Duty Factor (dB)	Total PSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
NVNT	a	5180	Ant1	-0.72	0.24	-0.48	11	Pass
NVNT	a	5200	Ant1	-1.06	0.24	-0.82	11	Pass
NVNT	a	5240	Ant1	-1.47	0.24	-1.23	11	Pass
NVNT	n20	5180	Ant1	-0.38	0.23	-0.15	11	Pass
NVNT	n20	5200	Ant1	-0.88	0.23	-0.65	11	Pass
NVNT	n20	5240	Ant1	-1.45	0.23	-1.22	11	Pass
NVNT	n40	5190	Ant1	-3.94	0.44	-3.5	11	Pass
NVNT	n40	5230	Ant1	-4.59	0.44	-4.15	11	Pass

Test Graphs

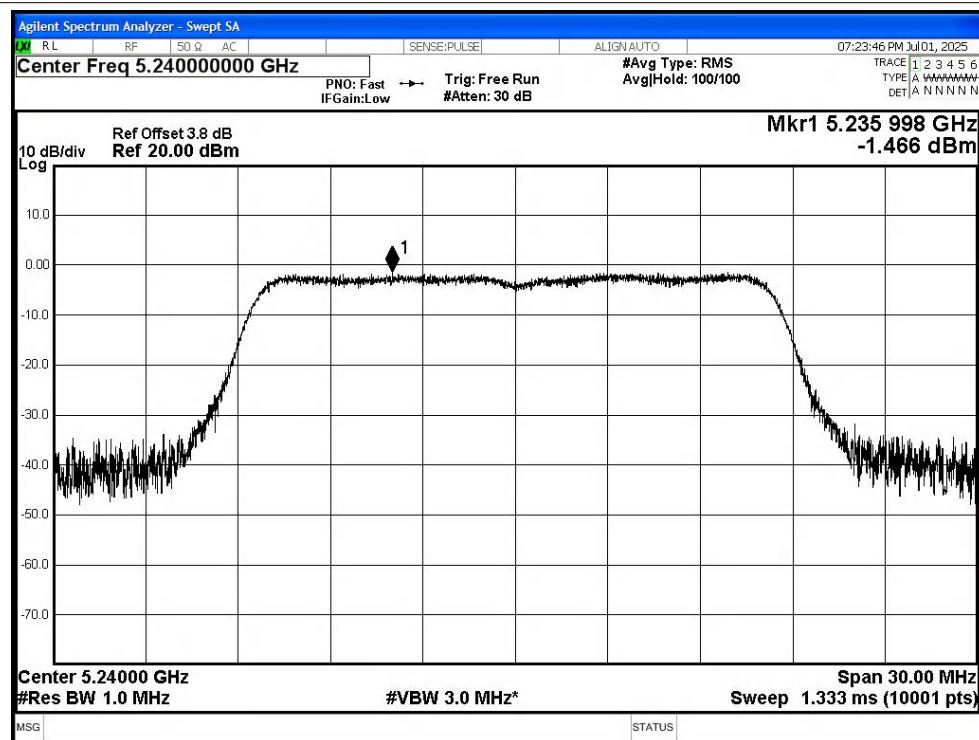
PSD NVNT a 5180MHz Ant1



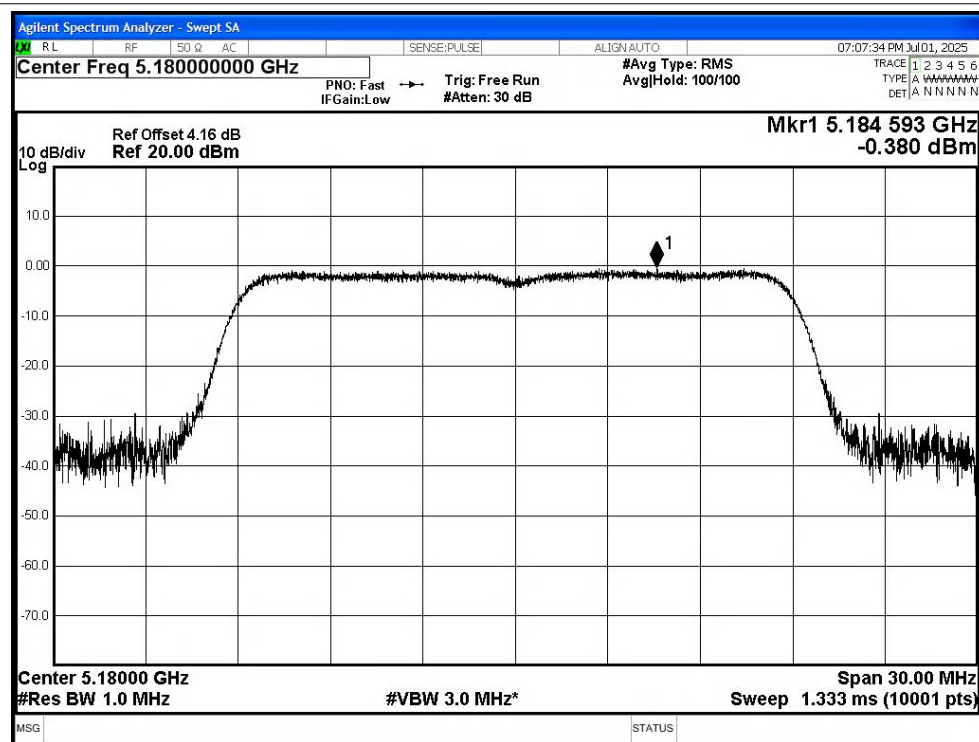
PSD NVNT a 5200MHz Ant1

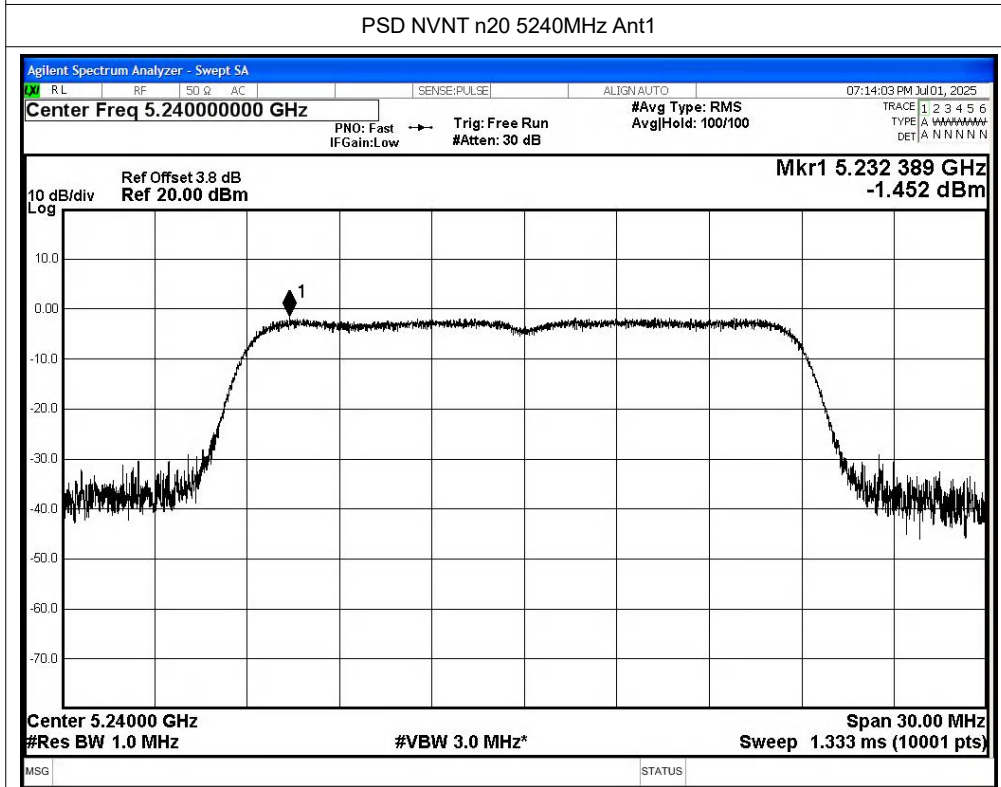
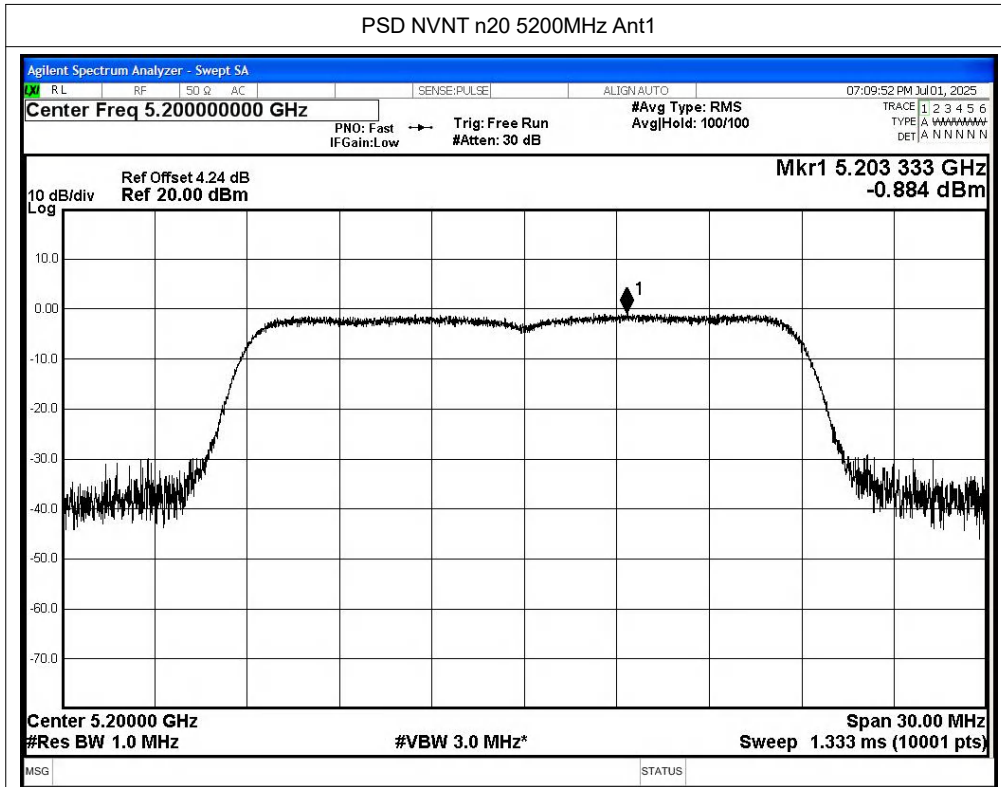


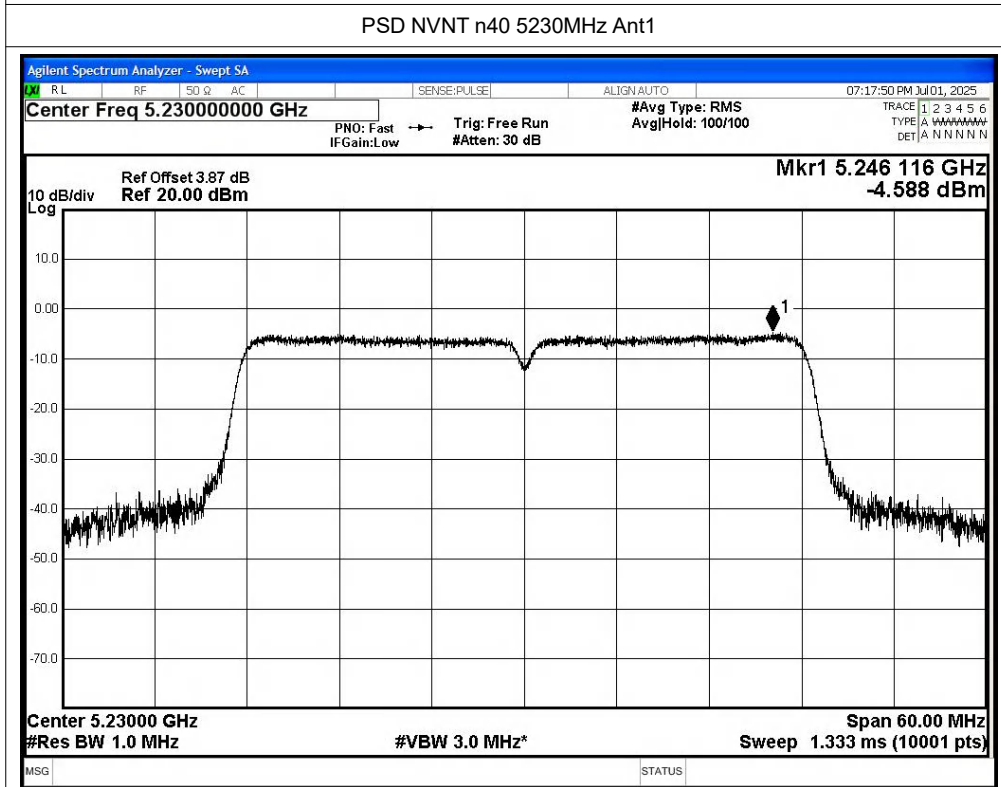
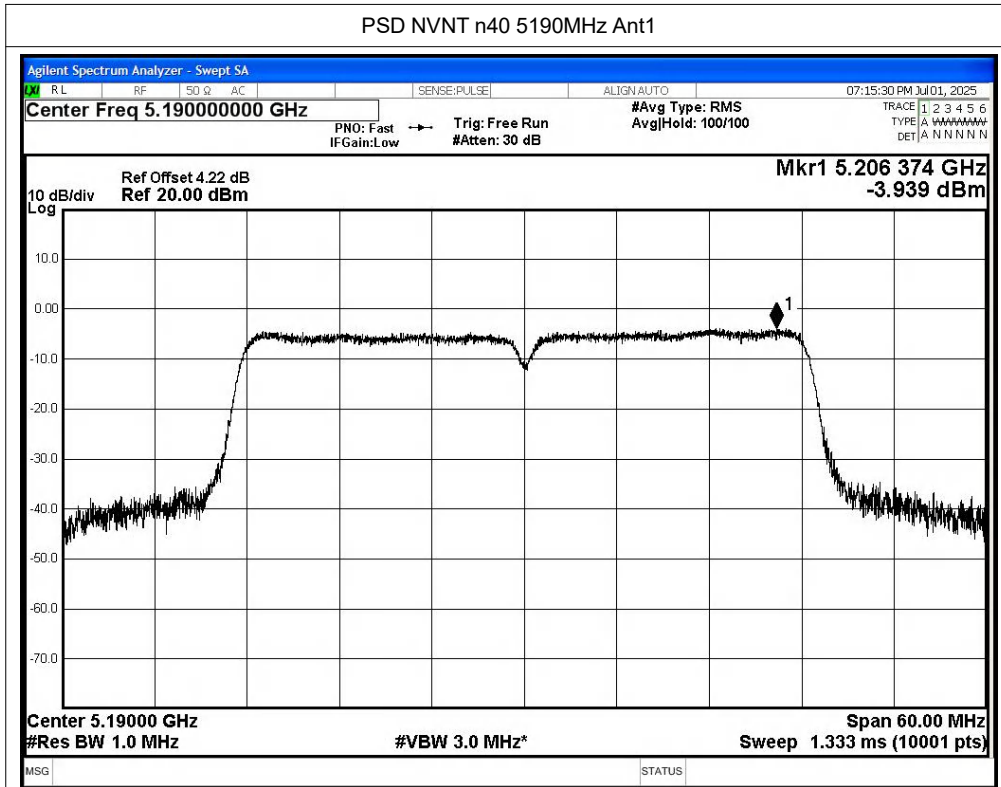
PSD NVNT a 5240MHz Ant1



PSD NVNT n20 5180MHz Ant1





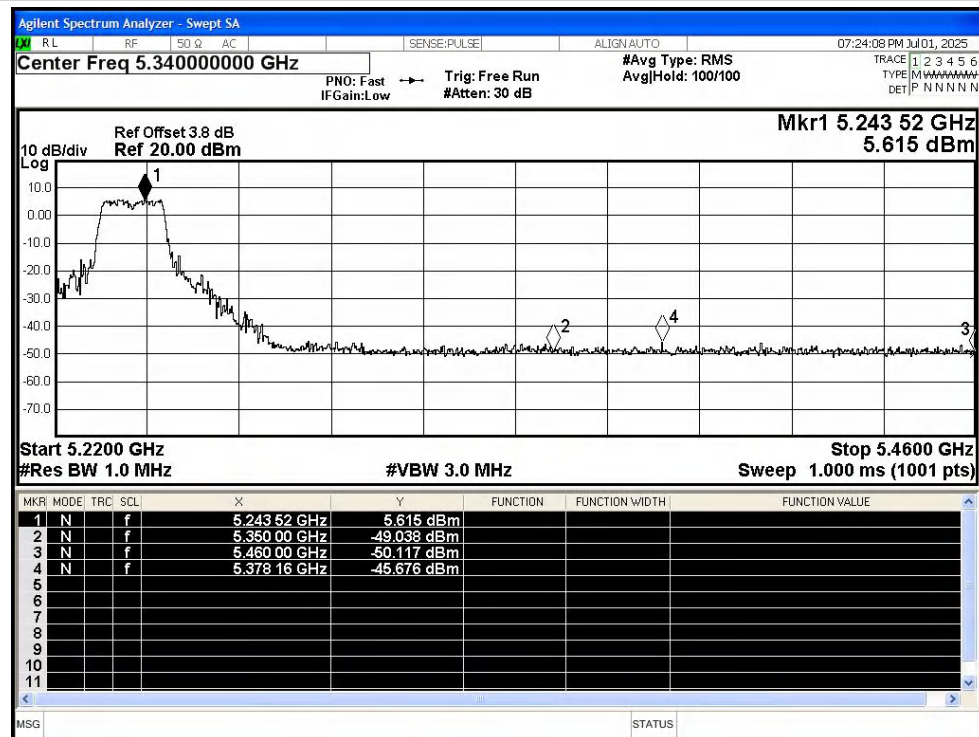




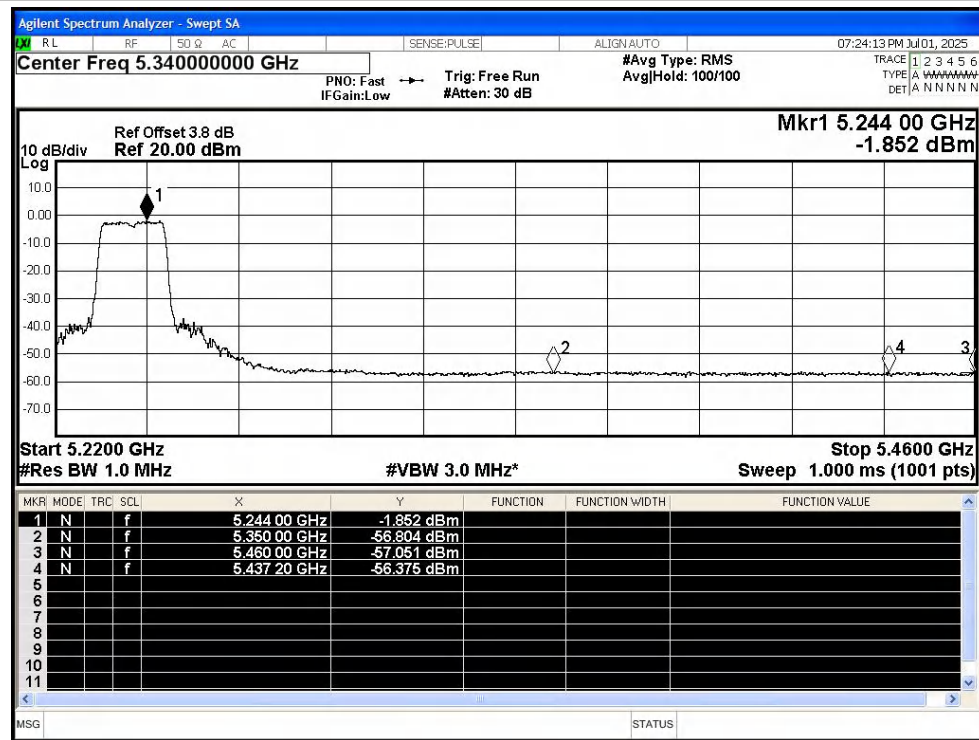
4. Restrict Band

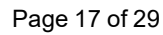
Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	a	5180	Ant1	4500	-49.04	2	-	48.19	Peak	68.2	Pass
NVNT	a	5180	Ant1	4500	-57.91	2	0.24	39.56	Average	54	Pass
NVNT	a	5180	Ant1	5149.6	-41.01	2	-	56.22	Peak	68.2	Pass
NVNT	a	5180	Ant1	5149.6	-51.39	2	0.24	46.08	Average	54	Pass
NVNT	a	5180	Ant1	5150	-39.01	2	-	58.22	Peak	68.2	Pass
NVNT	a	5180	Ant1	5150	-51.81	2	0.24	45.66	Average	54	Pass
NVNT	a	5240	Ant1	5350	-49.04	2	-	48.19	Peak	68.2	Pass
NVNT	a	5240	Ant1	5350	-56.8	2	0.24	40.67	Average	54	Pass
NVNT	a	5240	Ant1	5378.16	-45.68	2	-	51.55	Peak	68.2	Pass
NVNT	a	5240	Ant1	5437.2	-56.38	2	0.24	41.09	Average	54	Pass
NVNT	a	5240	Ant1	5460	-50.12	2	-	47.11	Peak	68.2	Pass
NVNT	a	5240	Ant1	5460	-57.05	2	0.24	40.42	Average	54	Pass
NVNT	n20	5180	Ant1	4500	-49.62	2	-	47.61	Peak	68.2	Pass
NVNT	n20	5180	Ant1	4500	-57.76	2	0.23	39.7	Average	54	Pass
NVNT	n20	5180	Ant1	5147.5	-36.49	2	-	60.74	Peak	68.2	Pass
NVNT	n20	5180	Ant1	5149.6	-50.22	2	0.23	47.24	Average	54	Pass
NVNT	n20	5180	Ant1	5150	-39.61	2	-	57.62	Peak	68.2	Pass
NVNT	n20	5180	Ant1	5150	-48.65	2	0.23	48.81	Average	54	Pass
NVNT	n20	5240	Ant1	5350	-47.04	2	-	50.19	Peak	68.2	Pass
NVNT	n20	5240	Ant1	5350	-56	2	0.23	41.46	Average	54	Pass
NVNT	n20	5240	Ant1	5361.36	-46.25	2	-	50.98	Peak	68.2	Pass
NVNT	n20	5240	Ant1	5350.08	-56	2	0.23	41.46	Average	54	Pass
NVNT	n20	5240	Ant1	5460	-50.03	2	-	47.2	Peak	68.2	Pass
NVNT	n20	5240	Ant1	5460	-57.5	2	0.23	39.96	Average	54	Pass
NVNT	n40	5190	Ant1	4500	-49.19	2	-	48.04	Peak	68.2	Pass
NVNT	n40	5190	Ant1	4500	-57.56	2	0.44	40.11	Average	54	Pass
NVNT	n40	5190	Ant1	5146.05	-37.05	2	-	60.18	Peak	68.2	Pass
NVNT	n40	5190	Ant1	5149.7	-50.18	2	0.44	47.49	Average	54	Pass
NVNT	n40	5190	Ant1	5150	-37.6	2	-	59.63	Peak	68.2	Pass
NVNT	n40	5190	Ant1	5150	-50.18	2	0.44	47.49	Average	54	Pass
NVNT	n40	5230	Ant1	5350	-49.05	2	-	48.18	Peak	68.2	Pass
NVNT	n40	5230	Ant1	5350	-57.07	2	0.44	40.6	Average	54	Pass
NVNT	n40	5230	Ant1	5360.91	-45.78	2	-	51.45	Peak	68.2	Pass
NVNT	n40	5230	Ant1	5351.46	-56.12	2	0.44	41.55	Average	54	Pass
NVNT	n40	5230	Ant1	5460	-50.51	2	-	46.72	Peak	68.2	Pass
NVNT	n40	5230	Ant1	5460	-57.01	2	0.44	40.66	Average	54	Pass

Restrict Band NVNT a 5240MHz Ant1 Peak

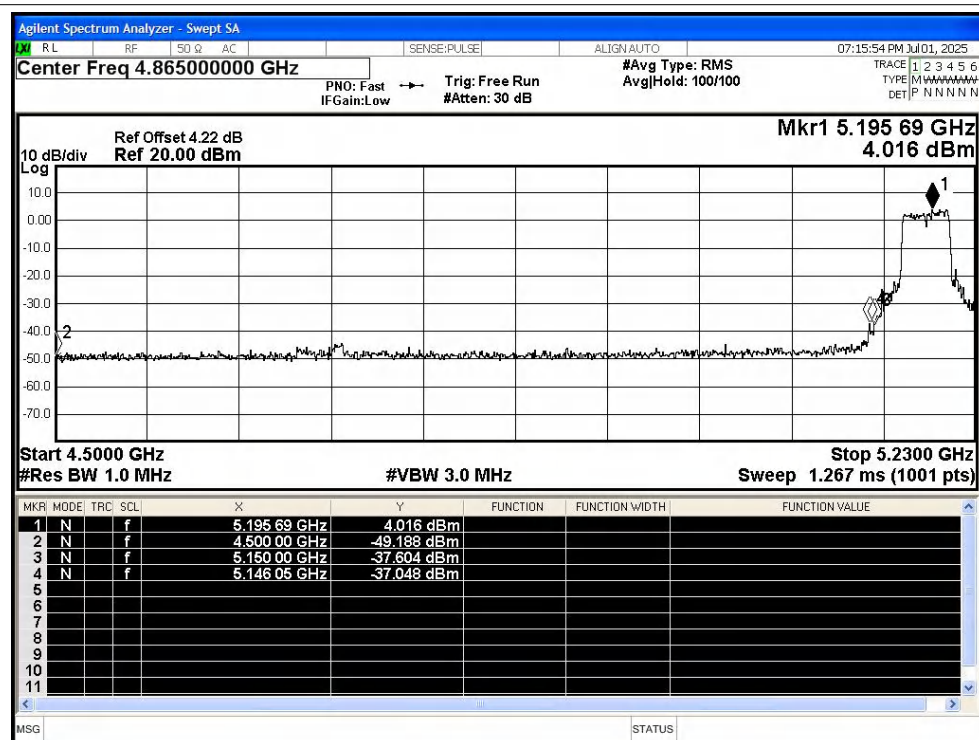


Restrict Band NVNT a 5240MHz Ant1 Average

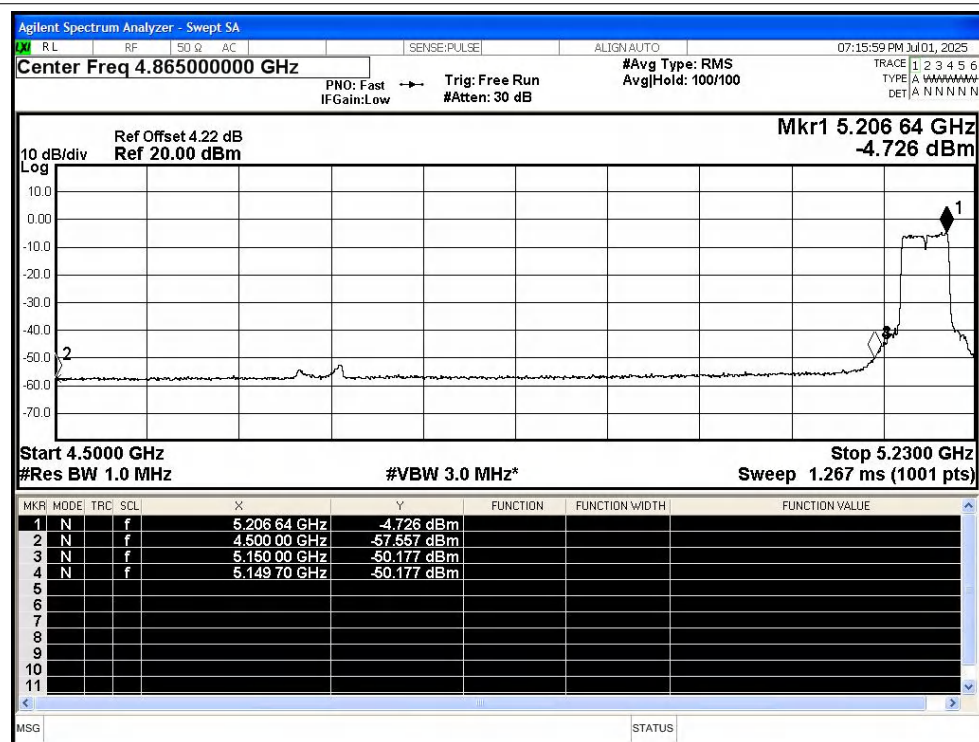




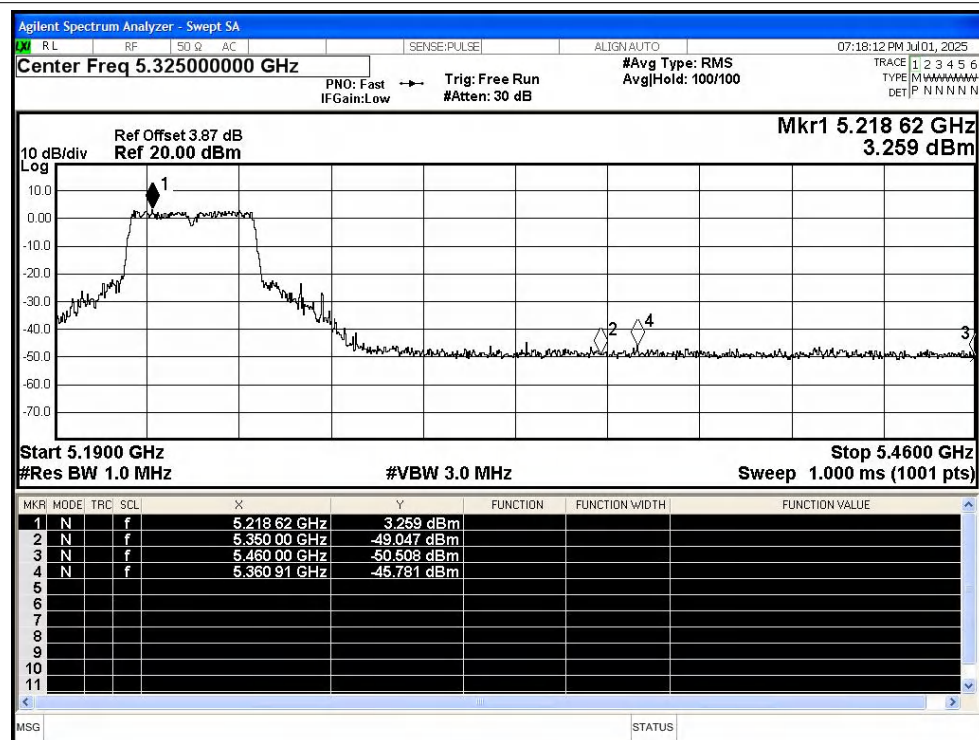
Restrict Band NVNT n40 5190MHz Ant1 Peak



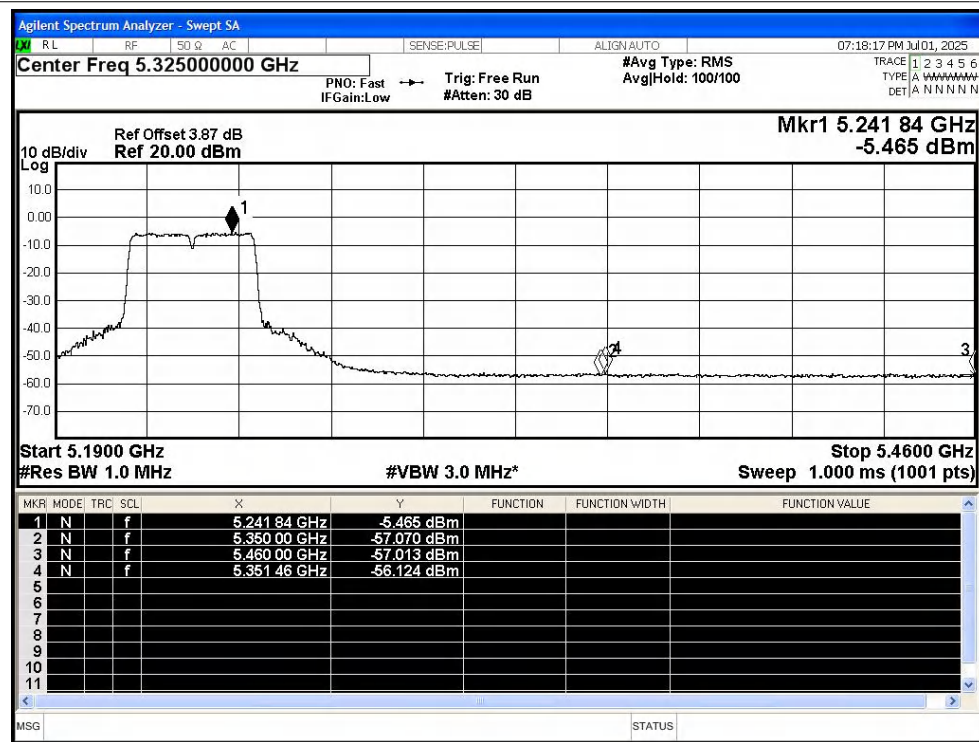
Restrict Band NVNT n40 5190MHz Ant1 Average



Restrict Band NVNT n40 5230MHz Ant1 Peak



Restrict Band NVNT n40 5230MHz Ant1 Average





5. Frequency Stability

Condition	Mode	Frequency (MHz)	Antenna	Measured Frequency (MHz)	Frequency Error (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
NVNT	a	5180	Ant1	5179.98	-20000	-3.86	25	Pass
NVNT	a	5200	Ant1	5199.98	-20000	-3.85	25	Pass
NVNT	a	5240	Ant1	5239.98	-20000	-3.82	25	Pass
NVNT	n20	5180	Ant1	5180	0	0	25	Pass
NVNT	n20	5200	Ant1	5199.98	-20000	-3.85	25	Pass
NVNT	n20	5240	Ant1	5239.98	-20000	-3.82	25	Pass
NVNT	n40	5190	Ant1	5189.96	-40000	-7.71	25	Pass
NVNT	n40	5230	Ant1	5230	0	0	25	Pass



6. Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	a	5180	Ant1	94.56	0.24	0.91
NVNT	a	5200	Ant1	94.56	0.24	0.91
NVNT	a	5240	Ant1	94.56	0.24	0.91
NVNT	n20	5180	Ant1	94.94	0.23	0.85
NVNT	n20	5200	Ant1	94.94	0.23	0.85
NVNT	n20	5240	Ant1	94.94	0.23	0.85
NVNT	n40	5190	Ant1	90.45	0.44	1.7
NVNT	n40	5230	Ant1	90.45	0.44	1.7

