



Appendix A

RF Test Data for 5.2GWIFI (Conducted Measurement)

Product Name: AURORA

Test Model: 7120+3120

Environmental Conditions

Temperature:	23.9℃
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Ling Zhu
Supervised by:	Li Huan





A.1 26dB Bandwidth

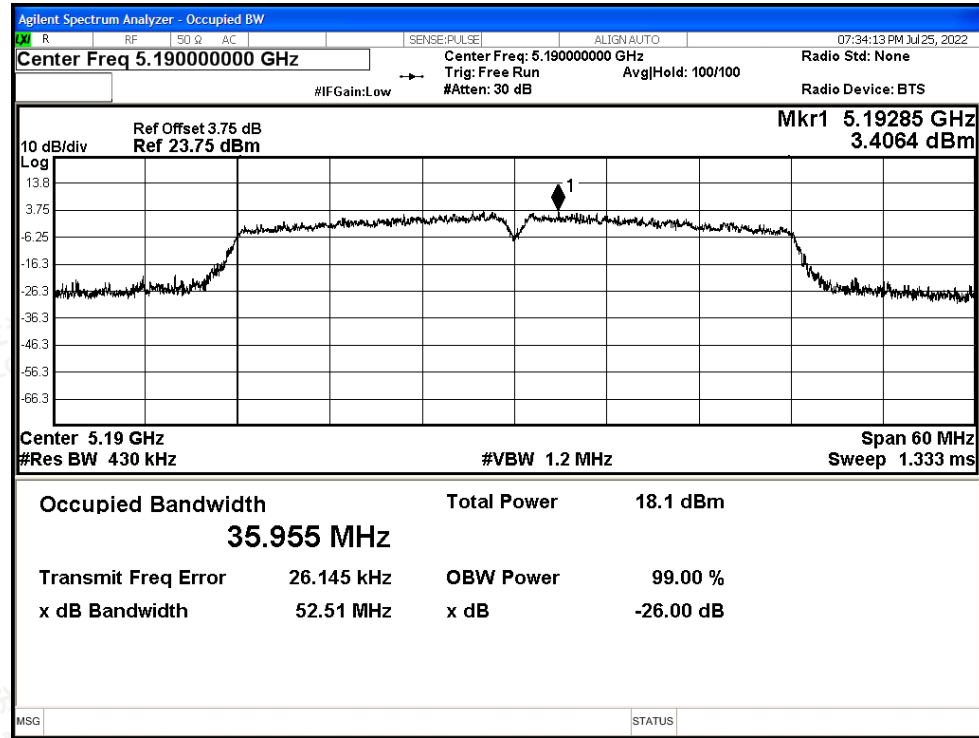
TestMode	Antenna	Channel	26db EBW [MHz]	Frequency (MHz)	Limit[MHz]	Verdict
11AC40SISO	Ant1	5190	52.51	5192.850	---	PASS
		5230	56.15	5228.914	---	PASS
11AC40SISO	Ant2	5190	54.72	5192.382	---	PASS
		5230	55.09	5231.836	---	PASS
11AC40SISO	Ant3	5190	53.87	5190.000	---	PASS
		5230	50.30	5234.116	---	PASS
11AC40SISO	Ant4	5190	49.46	5188.818	---	PASS
		5230	58.86	5228.488	---	PASS



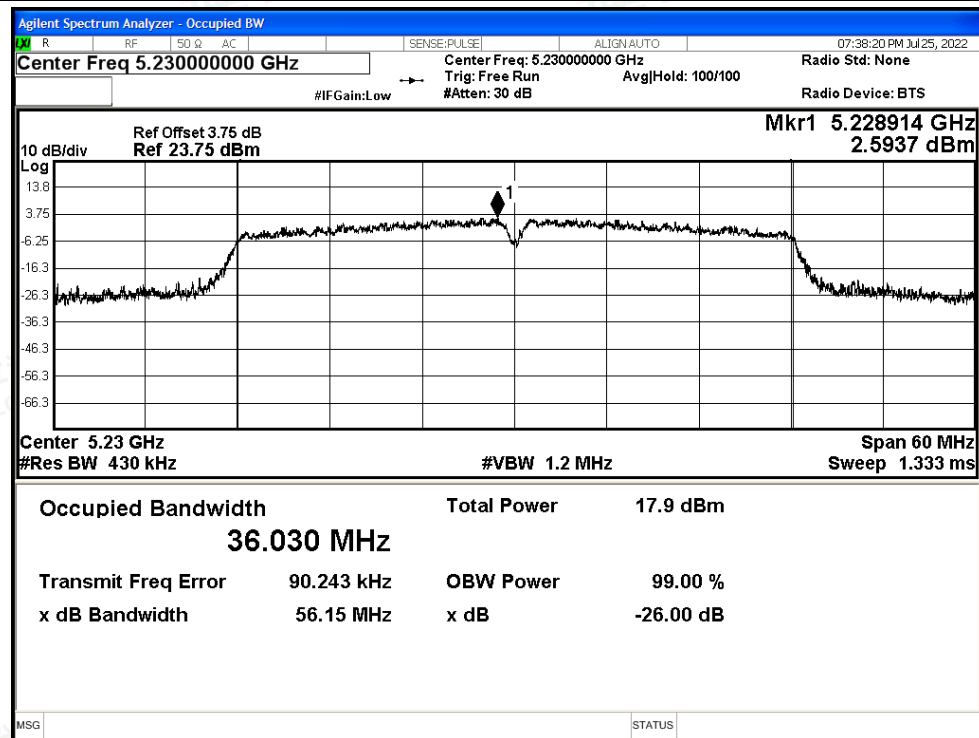


Test Graphs

OBW NVNT ac40 5190MHz Ant1



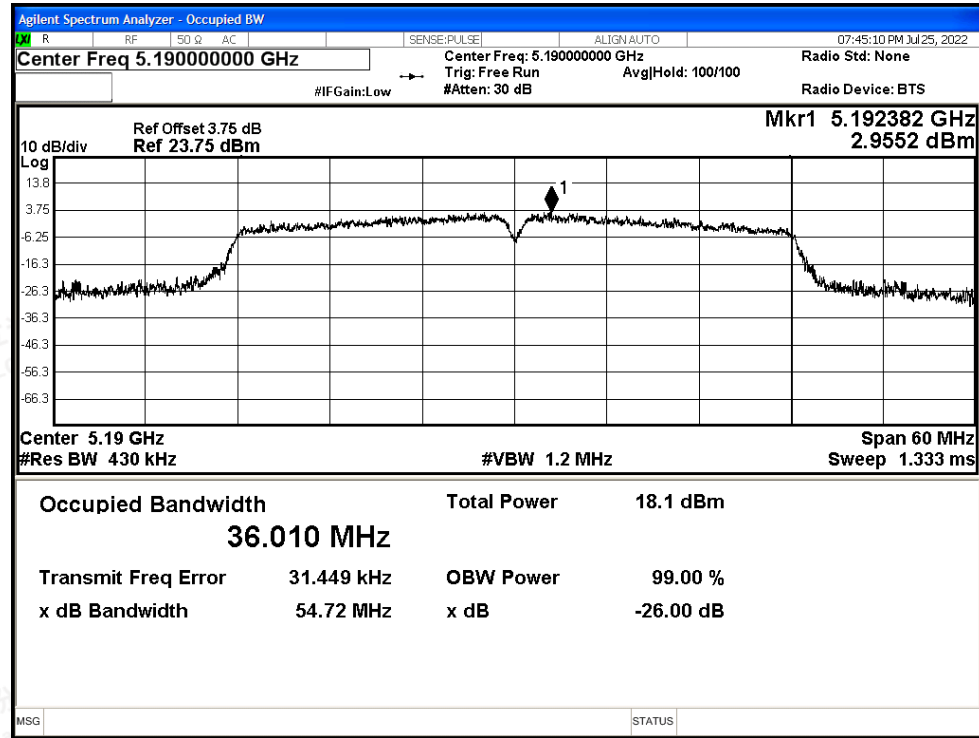
OBW NVNT ac40 5230MHz Ant1



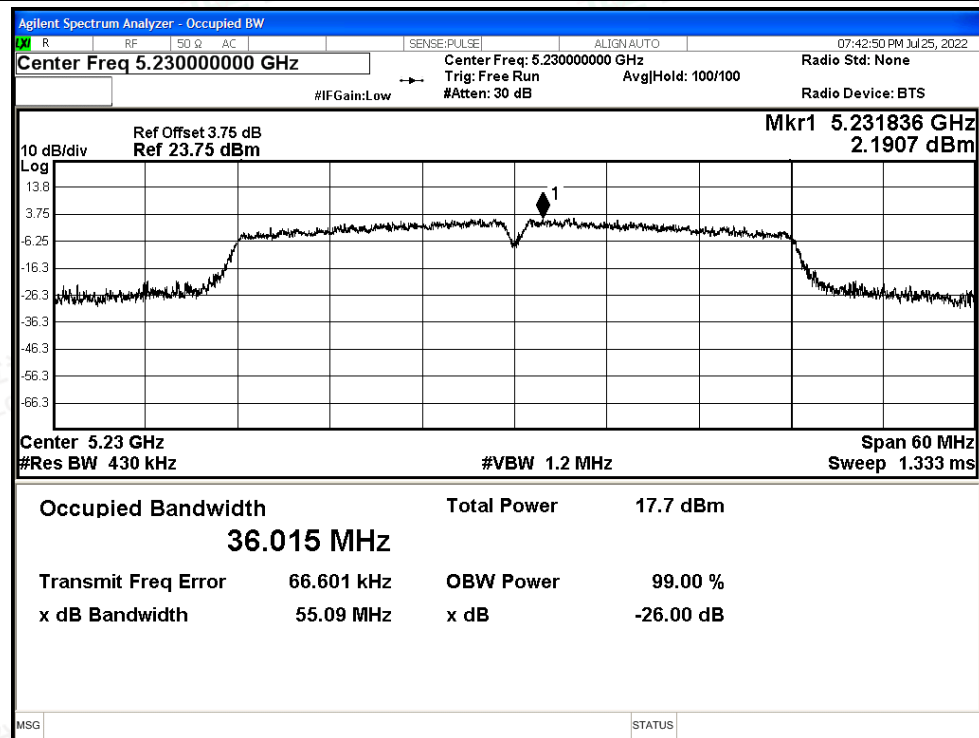


Test Graphs

OBW NVNT ac40 5190MHz Ant2



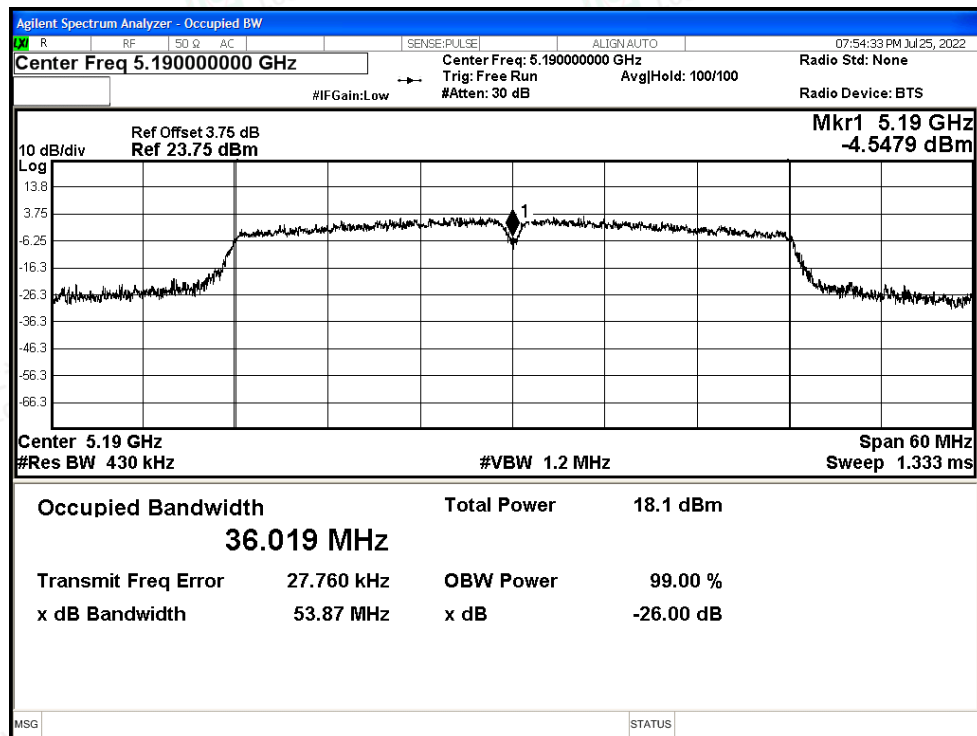
OBW NVNT ac40 5230MHz Ant2



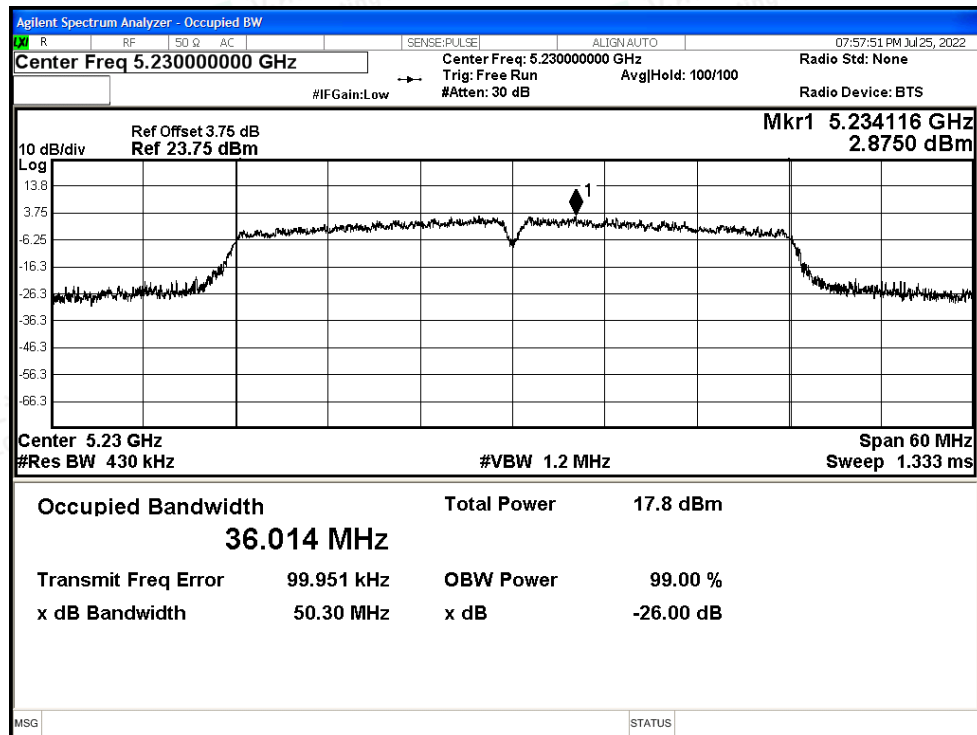


Test Graphs

OBW NVNT ac40 5190MHz Ant3



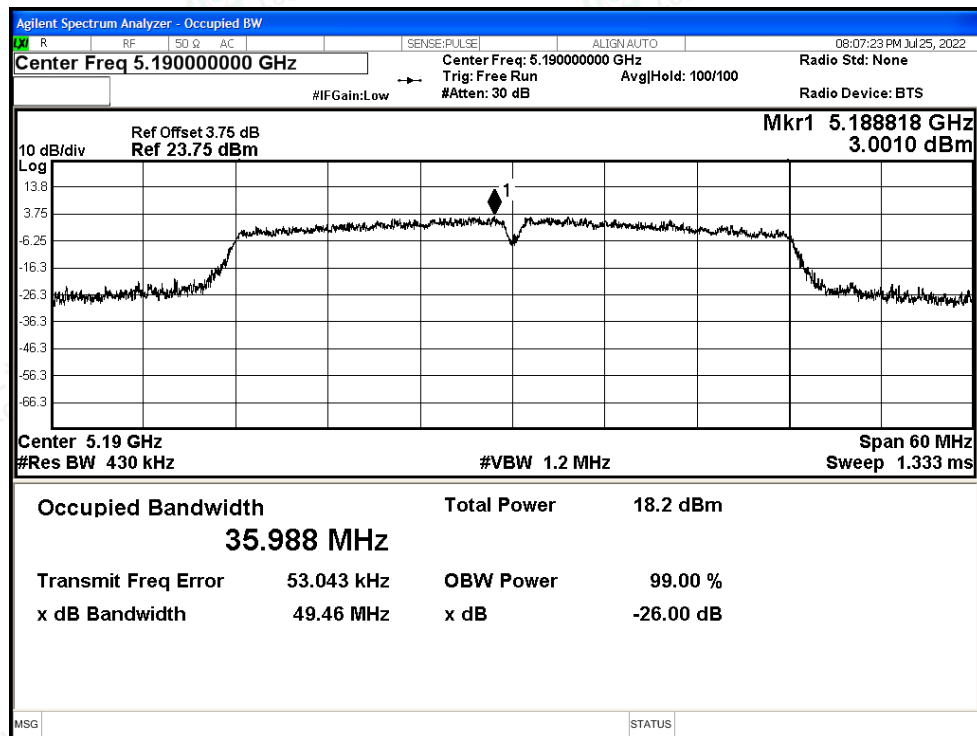
OBW NVNT ac40 5230MHz Ant3



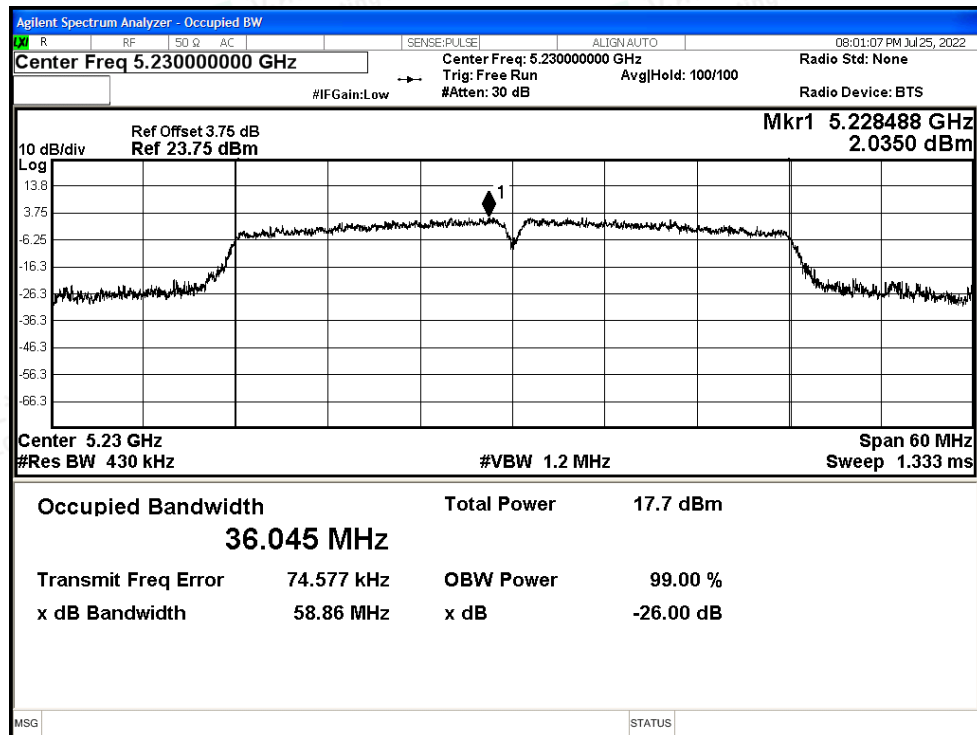


Test Graphs

OBW NVNT ac40 5190MHz Ant4



OBW NVNT ac40 5230MHz Ant4





A.2 Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	ac40	5190	Ant1	12.36	0.23	12.59	30	Pass
NVNT	ac40	5230	Ant1	12.02	0.23	12.25	30	Pass
NVNT	ac40	5190	Ant2	12.29	0.23	12.52	30	Pass
NVNT	ac40	5230	Ant2	11.77	0.22	11.99	30	Pass
NVNT	ac40	5190	Ant3	12.4	0.22	12.62	30	Pass
NVNT	ac40	5230	Ant3	11.97	0.22	12.19	30	Pass
NVNT	ac40	5190	Ant4	12.42	0.23	12.65	30	Pass
NVNT	ac40	5230	Ant4	11.94	0.23	12.17	30	Pass

MIMO

TestMode	Channel	Ant 1 [Dbm]	Ant 2 [Dbm]	Ant 3 [Dbm]	Ant 4 [Dbm]	MIMO [dBm]	Limit [dBm]	Verdict
11AC40	5190	12.59	12.52	12.62	12.65	18.62	24.98	PASS
	5230	12.25	11.99	12.19	12.17	18.17	24.98	PASS



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A.3 Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm)	Duty Factor (dB)	Total PSD (dBm)	Limit (dBm)	Verdict
NVNT	ac40	5190	Ant1	-1.96	0.23	-1.73	17.00	Pass
NVNT	ac40	5230	Ant1	-4.14	0.23	-3.91	17.00	Pass
NVNT	ac40	5190	Ant2	-3.38	0.23	-3.15	17.00	Pass
NVNT	ac40	5230	Ant2	-4.23	0.22	-4.01	17.00	Pass
NVNT	ac40	5190	Ant3	-3.1	0.22	-2.88	17.00	Pass
NVNT	ac40	5230	Ant3	-4.54	0.22	-4.32	17.00	Pass
NVNT	ac40	5190	Ant4	-3.85	0.23	-3.62	17.00	Pass
NVNT	ac40	5230	Ant4	-2.9	0.23	-2.67	17.00	Pass

MIMO

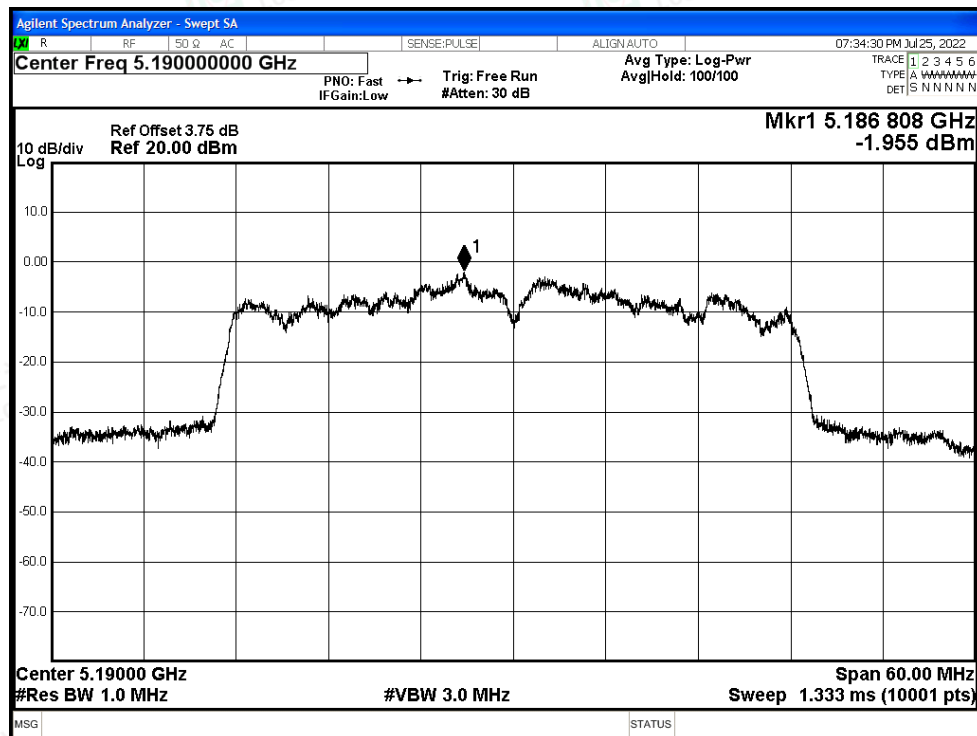
Test Mode	Channel	Frequency (MHz)	Ant 1 Power Density (Dbm /Mhz)	Ant 2 Power Density (Dbm /Mhz)	Ant 3 Power Density (Dbm /Mhz)	Ant 4 Power Density (Dbm /Mhz)	MIMO Power Density (dBm /MHz)	Limit (dBm /MHz)	Verdict
11AC40	38	5190	-1.73	-3.15	-2.88	-3.62	3.23	11.98	Pass
	46	5230	-3.91	-4.01	-4.32	-2.67	2.34		Pass



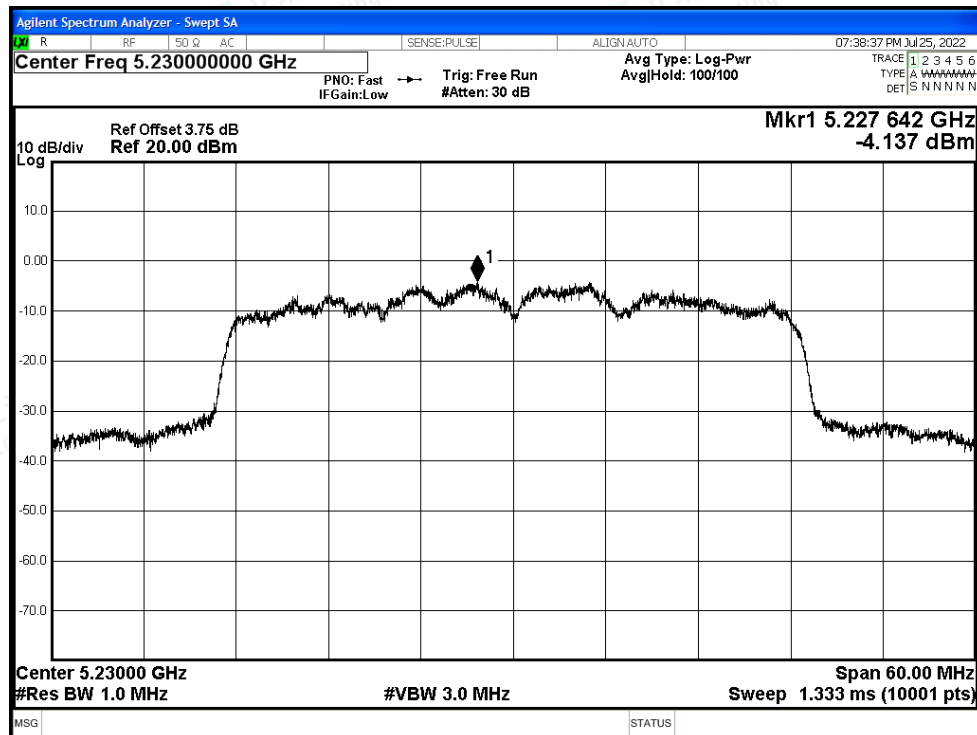


Test Graphs

PSD NVNT ac40 5190MHz Ant1



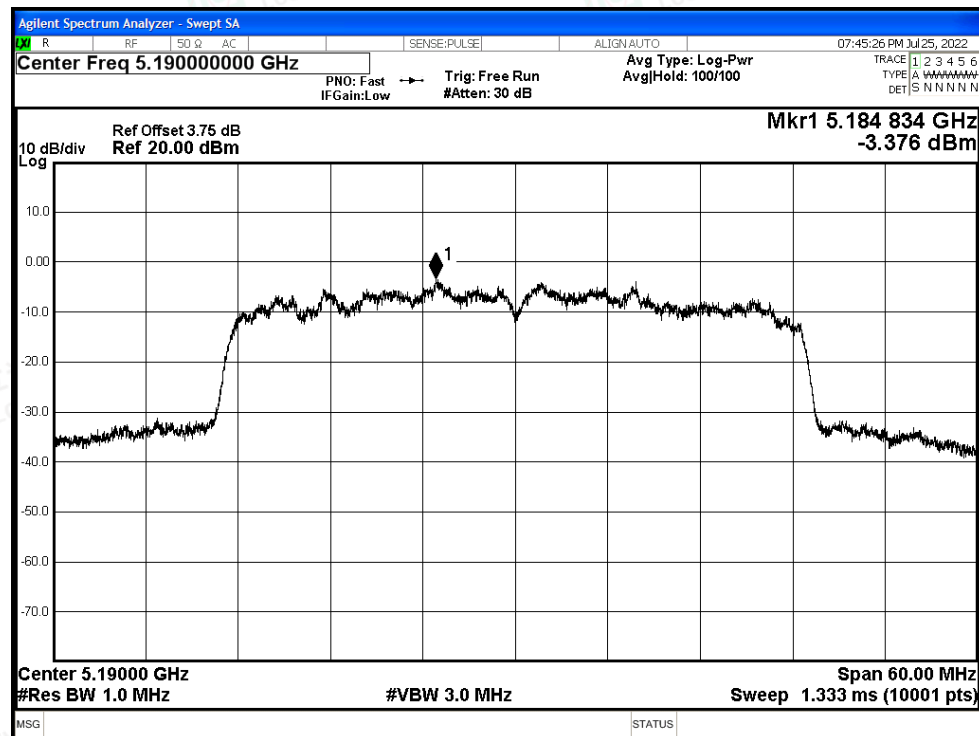
PSD NVNT ac40 5230MHz Ant1



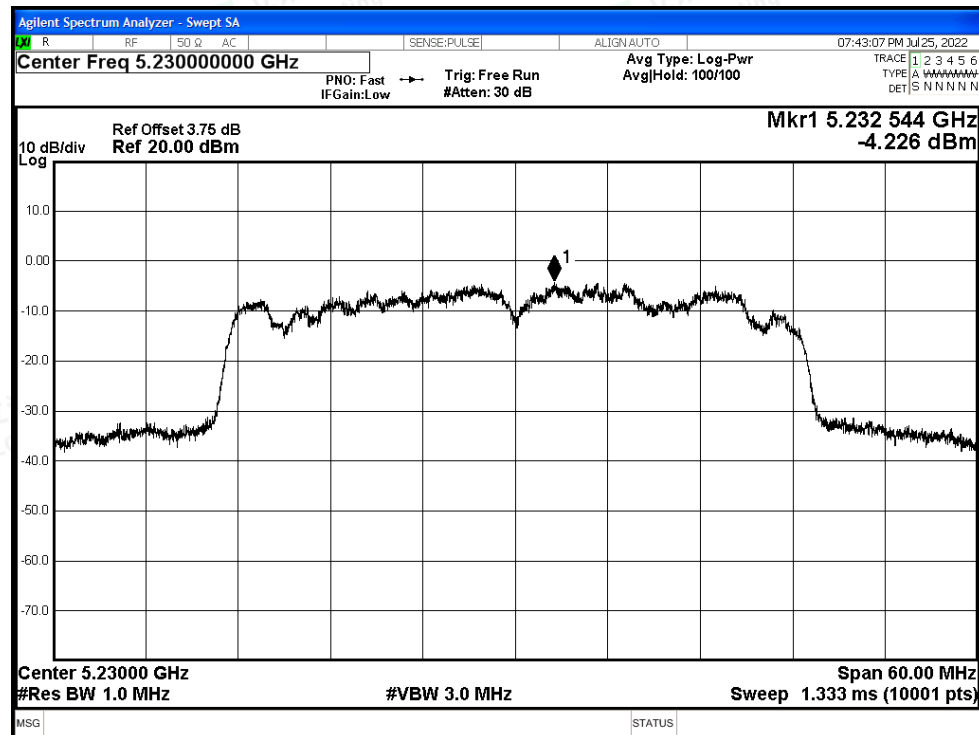


Test Graphs

PSD NVNT ac40 5190MHz Ant2



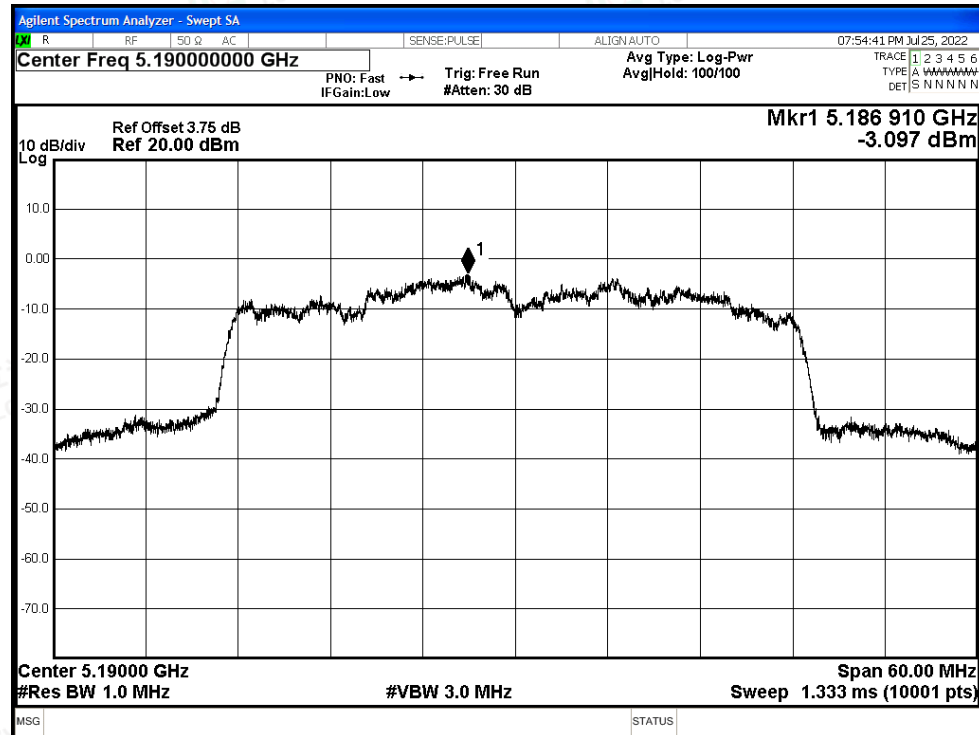
PSD NVNT ac40 5230MHz Ant2



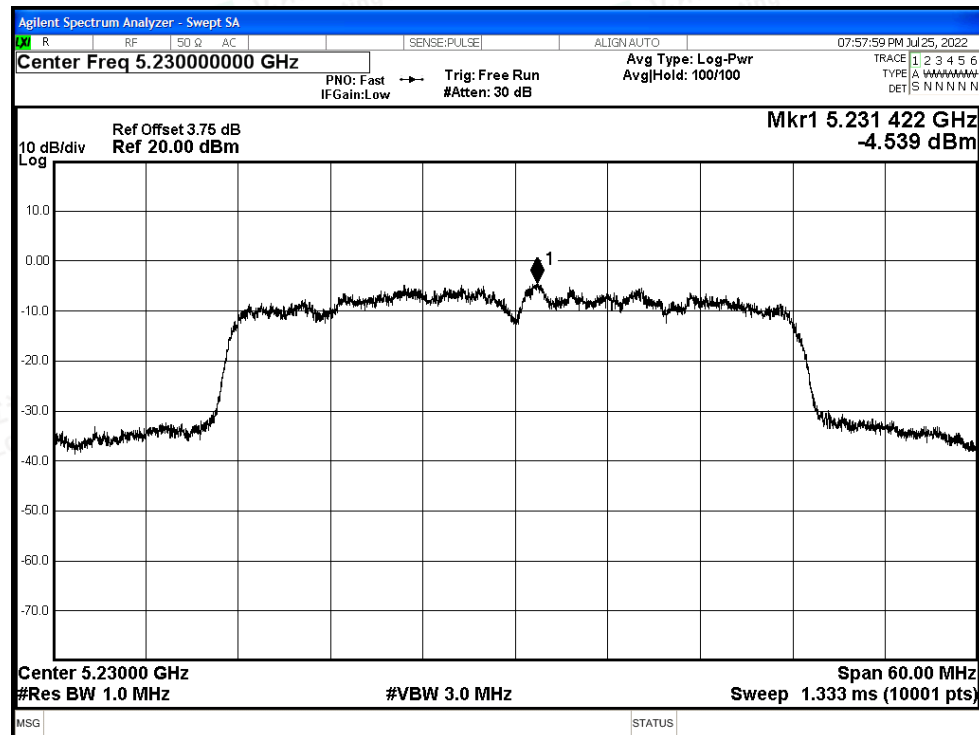


Test Graphs

PSD NVNT ac40 5190MHz Ant3



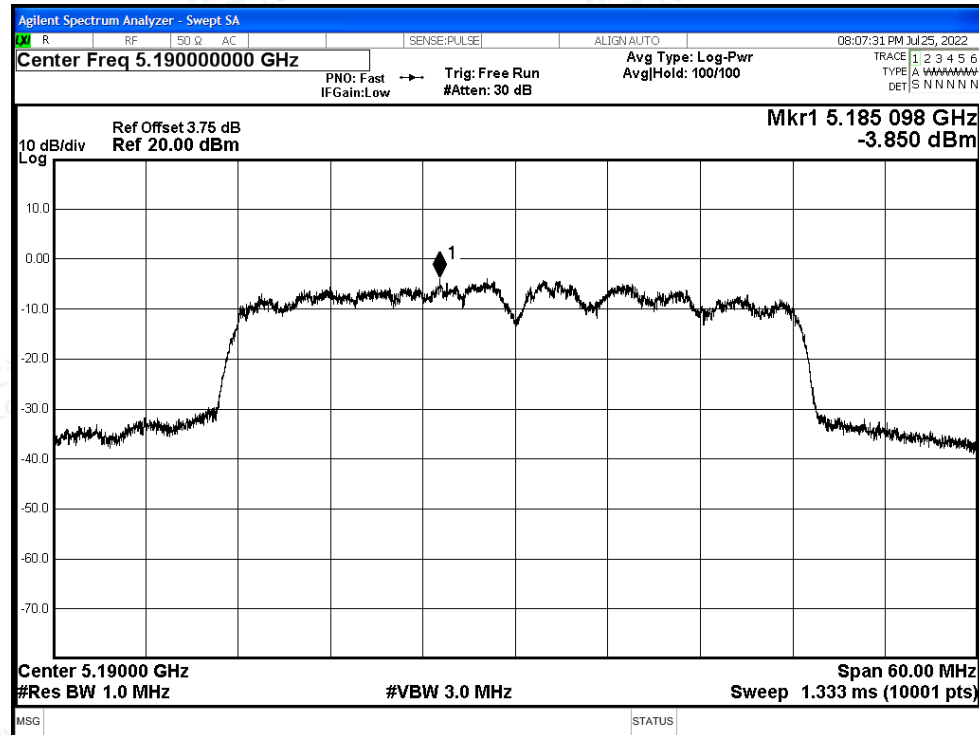
PSD NVNT ac40 5230MHz Ant3



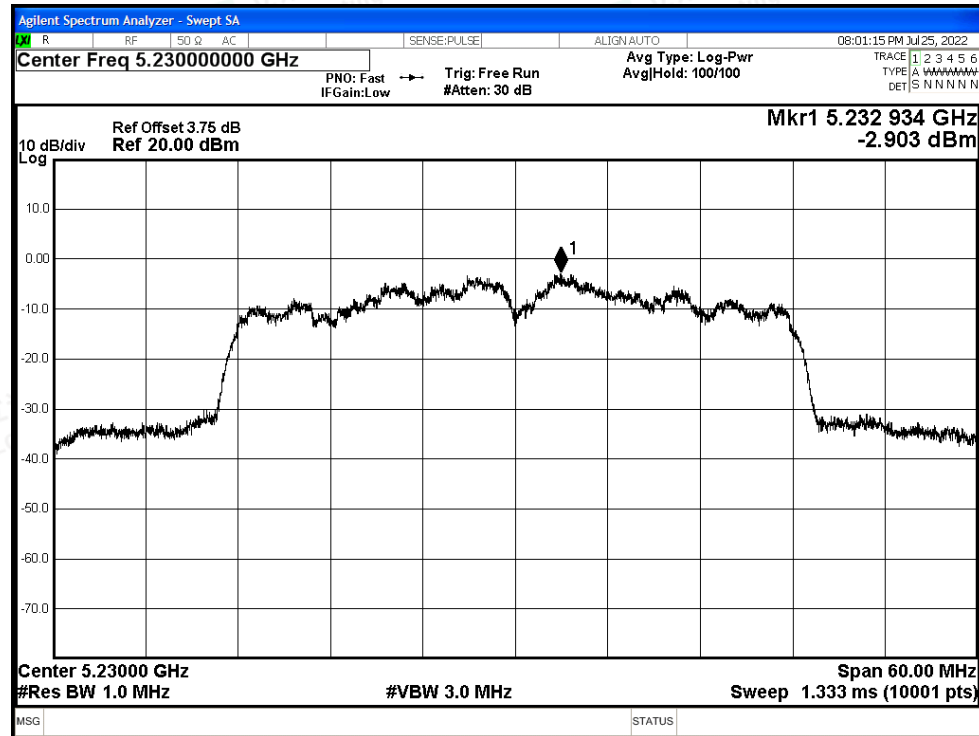


Test Graphs

PSD NVNT ac40 5190MHz Ant4



PSD NVNT ac40 5230MHz Ant4





A.4 Restrict Band

Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	ac40	5190	Ant1	4500	-63.13	5	37.10	Peak	68.2	Pass
NVNT	ac40	5190	Ant1	4500	-73.97	5	26.26	Average	54	Pass
NVNT	ac40	5190	Ant1	5149.7	-42.14	5	58.09	Peak	68.2	Pass
NVNT	ac40	5190	Ant1	5149.7	-61.08	5	39.15	Average	54	Pass
NVNT	ac40	5190	Ant1	5150	-42.14	5	58.09	Peak	68.2	Pass
NVNT	ac40	5190	Ant1	5150	-61.08	5	39.15	Average	54	Pass
NVNT	ac40	5230	Ant1	5350	-54.74	5	45.49	Peak	68.2	Pass
NVNT	ac40	5230	Ant1	5350	-64.39	5	35.84	Average	54	Pass
NVNT	ac40	5230	Ant1	5366.85	-53.1	5	47.13	Peak	68.2	Pass
NVNT	ac40	5230	Ant1	5350.11	-64.39	5	35.84	Average	54	Pass
NVNT	ac40	5230	Ant1	5460	-57.34	5	42.89	Peak	68.2	Pass
NVNT	ac40	5230	Ant1	5460	-68.1	5	32.13	Average	54	Pass

Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	ac40	5190	Ant2	4500	-64.13	5	36.10	Peak	68.2	Pass
NVNT	ac40	5190	Ant2	4500	-73.22	5	27.01	Average	54	Pass
NVNT	ac40	5190	Ant2	5146.78	-49.73	5	50.50	Peak	68.2	Pass
NVNT	ac40	5190	Ant2	5149.7	-63.54	5	36.69	Average	54	Pass
NVNT	ac40	5190	Ant2	5150	-54.42	5	45.81	Peak	68.2	Pass
NVNT	ac40	5190	Ant2	5150	-63.54	5	36.69	Average	54	Pass
NVNT	ac40	5230	Ant2	5350	-54.61	5	45.62	Peak	68.2	Pass
NVNT	ac40	5230	Ant2	5350	-64.84	5	35.39	Average	54	Pass
NVNT	ac40	5230	Ant2	5360.64	-54.3	5	45.93	Peak	68.2	Pass
NVNT	ac40	5230	Ant2	5350.11	-64.84	5	35.39	Average	54	Pass
NVNT	ac40	5230	Ant2	5460	-58.24	5	41.99	Peak	68.2	Pass
NVNT	ac40	5230	Ant2	5460	-68.65	5	31.58	Average	54	Pass

Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	ac40	5190	Ant3	4500	-63.81	5	36.42	Peak	68.2	Pass
NVNT	ac40	5190	Ant3	4500	-73.68	5	26.55	Average	54	Pass
NVNT	ac40	5190	Ant3	5149.7	-53.07	5	47.16	Peak	68.2	Pass
NVNT	ac40	5190	Ant3	5148.97	-64.19	5	36.04	Average	54	Pass
NVNT	ac40	5190	Ant3	5150	-53.07	5	47.16	Peak	68.2	Pass
NVNT	ac40	5190	Ant3	5150	-64.24	5	35.99	Average	54	Pass
NVNT	ac40	5230	Ant3	5350	-54.35	5	45.88	Peak	68.2	Pass



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NVNT	ac40	5230	Ant3	5350	-64.26	5	35.97	Average	54	Pass
NVNT	ac40	5230	Ant3	5358.75	-52.63	5	47.60	Peak	68.2	Pass
NVNT	ac40	5230	Ant3	5350.11	-64.26	5	35.97	Average	54	Pass
NVNT	ac40	5230	Ant3	5460	-59.05	5	41.18	Peak	68.2	Pass
NVNT	ac40	5230	Ant3	5460	-67.95	5	32.28	Average	54	Pass

Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	ac40	5190	Ant4	4500	-63.98	5	36.25	Peak	68.2	Pass
NVNT	ac40	5190	Ant4	4500	-73.39	5	26.84	Average	54	Pass
NVNT	ac40	5190	Ant4	5146.05	-52	5	48.23	Peak	68.2	Pass
NVNT	ac40	5190	Ant4	5149.7	-63.66	5	36.57	Average	54	Pass
NVNT	ac40	5190	Ant4	5150	-53.16	5	47.07	Peak	68.2	Pass
NVNT	ac40	5190	Ant4	5150	-63.66	5	36.57	Average	54	Pass
NVNT	ac40	5230	Ant4	5350	-56.14	5	44.09	Peak	68.2	Pass
NVNT	ac40	5230	Ant4	5350	-64.26	5	35.97	Average	54	Pass
NVNT	ac40	5230	Ant4	5374.41	-54.42	5	45.81	Peak	68.2	Pass
NVNT	ac40	5230	Ant4	5350.11	-64.26	5	35.97	Average	54	Pass
NVNT	ac40	5230	Ant4	5460	-59.31	5	40.92	Peak	68.2	Pass
NVNT	ac40	5230	Ant4	5460	-67.93	5	32.30	Average	54	Pass

MIMO-11AC40-5190

Spur Freq (MHz)	Ant 1 [Dbm]	Ant 2 [Dbm]	Ant 3 [Dbm]	Ant 4 [Dbm]	MIMO [dBm]	Gain (dBi)	MIMO (dBuV/m)	Limit (dBuV/m)	Detector	Verdict
4500	-63.13	-64.13	-63.81	-63.98	-57.72	11.02	48.53	68.2	Peak	Pass
4500	-73.97	-73.22	-73.68	-73.39	-67.54	11.02	38.71	54	Average	Pass
5150	-42.14	-54.42	-53.07	-53.16	-41.28	11.02	64.97	68.2	Peak	Pass
5150	-61.08	-63.54	-64.24	-63.66	-56.93	11.02	49.32	54	Average	Pass

MIMO-11AC40-5230

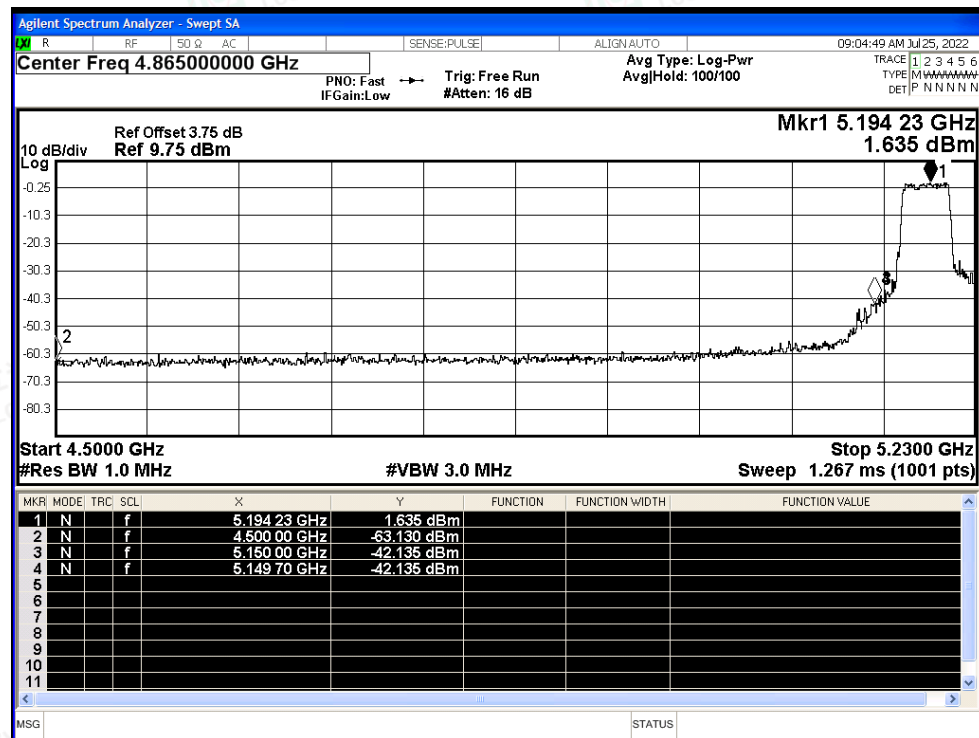
Spur Freq (MHz)	Ant 1 [Dbm]	Ant 2 [Dbm]	Ant 3 [Dbm]	Ant 4 [Dbm]	MIMO [dBm]	Gain (dBi)	MIMO (dBuV/m)	Limit (dBuV/m)	Detector	Verdict
5350	-54.74	-54.61	-54.35	-56.14	-48.89	11.02	57.36	68.2	Peak	Pass
5350	-64.39	-64.84	-64.26	-64.26	-58.41	11.02	47.84	54	Average	Pass
5460	-57.34	-58.24	-59.05	-59.31	-52.39	11.02	53.86	68.2	Peak	Pass
5460	-68.1	-68.65	-67.95	-67.93	-62.13	11.02	44.12	54	Average	Pass



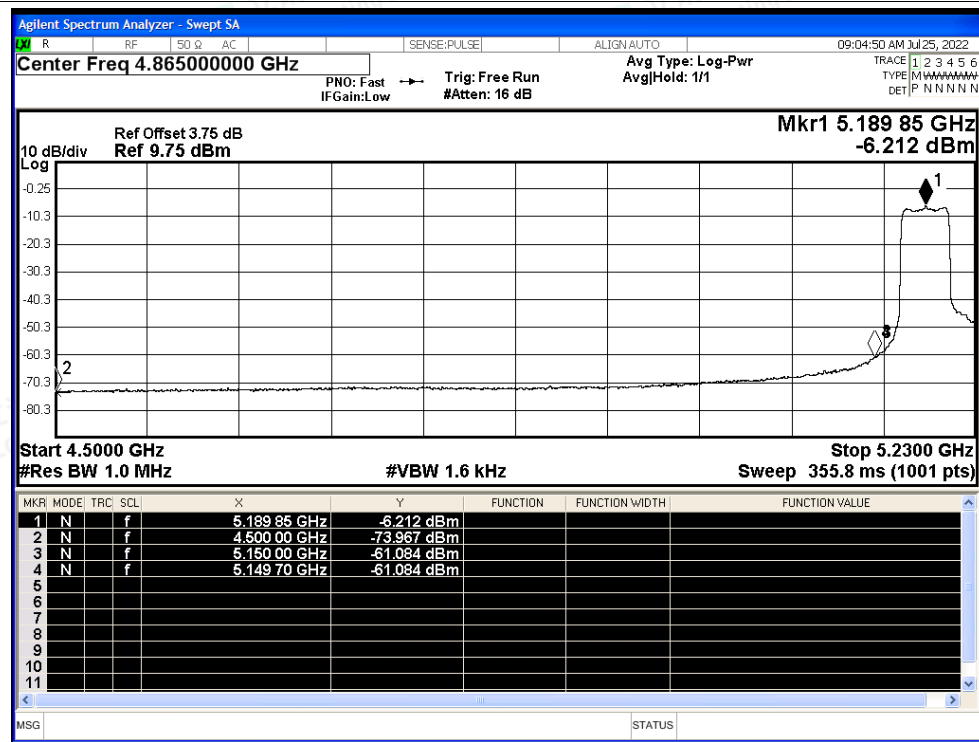


Test Graphs

Restrict Band NVNT ac40 5190MHz Ant1 Peak

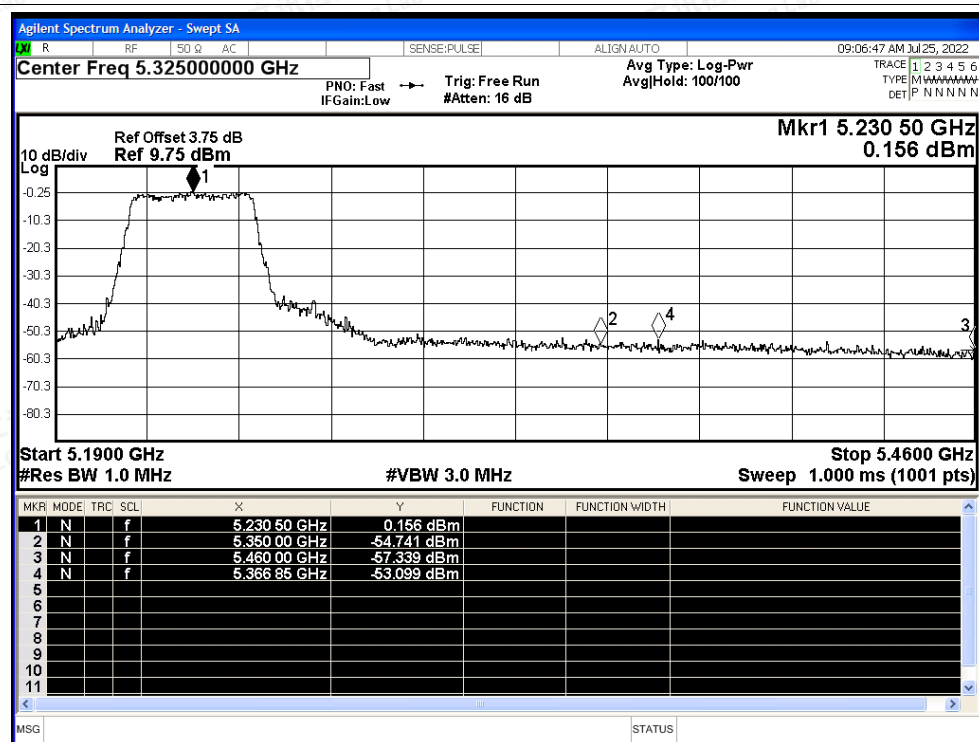


Restrict Band NVNT ac40 5190MHz Ant1 Average

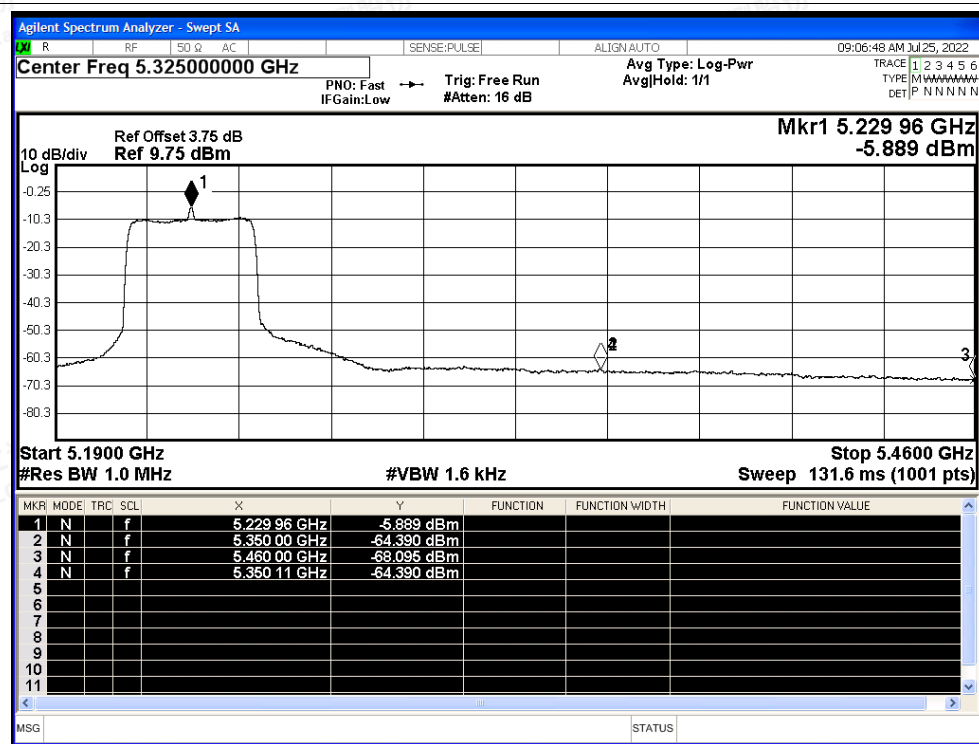




Restrict Band NVNT ac40 5230MHz Ant1 Peak



Restrict Band NVNT ac40 5230MHz Ant1 Average



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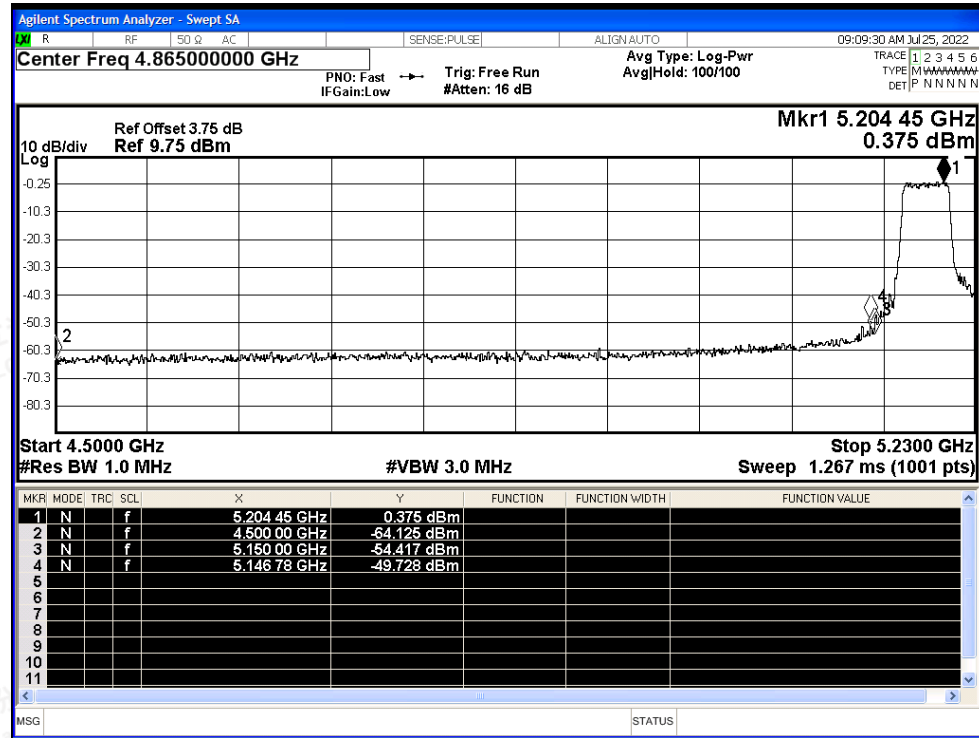
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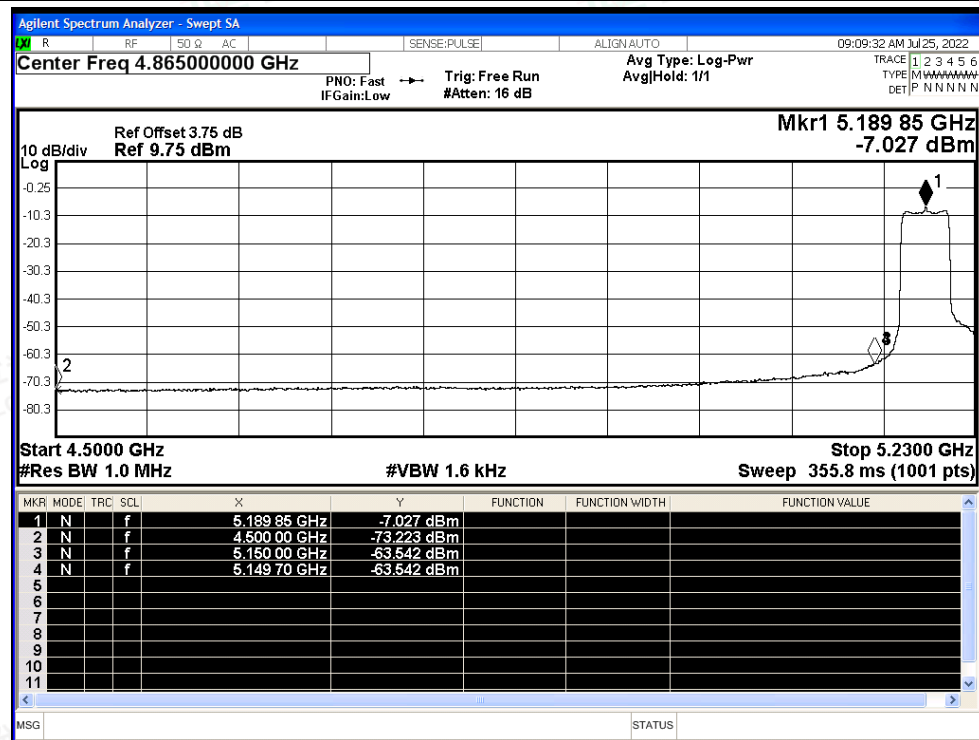


Test Graphs

Restrict Band NVNT ac40 5190MHz Ant2 Peak



Restrict Band NVNT ac40 5190MHz Ant2 Average



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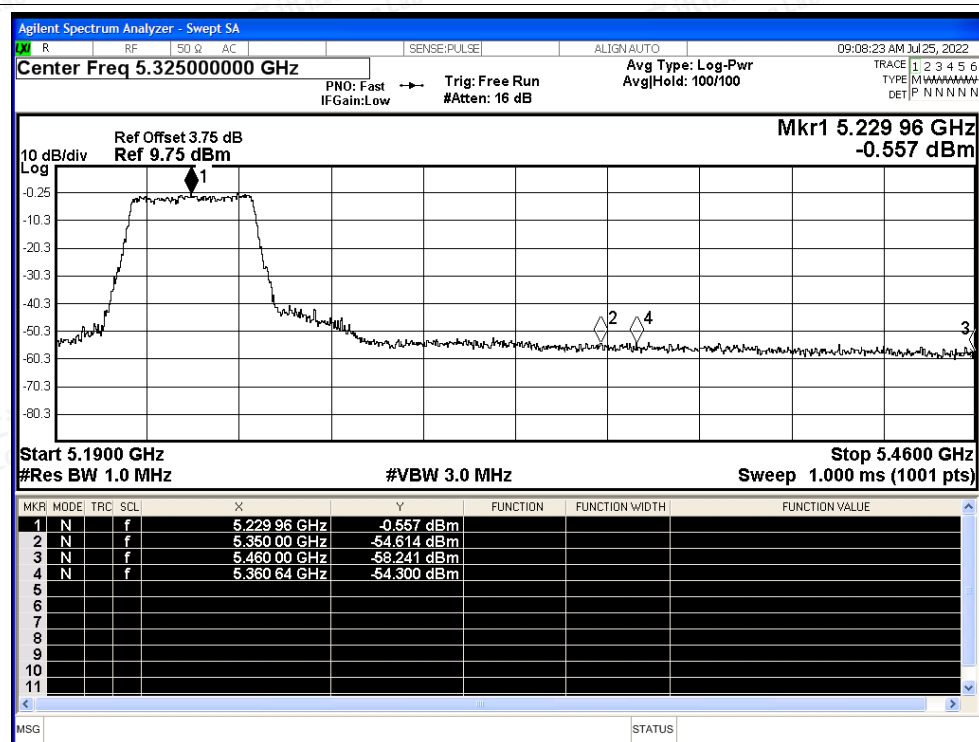
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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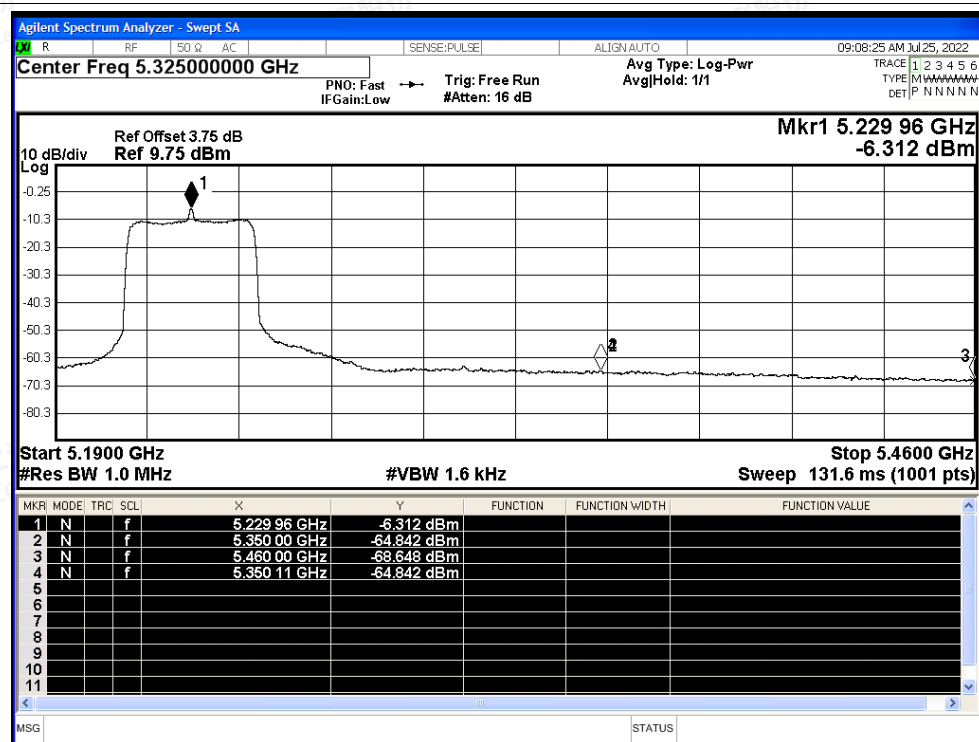
Scan code to check authenticity



Restrict Band NVNT ac40 5230MHz Ant2 Peak



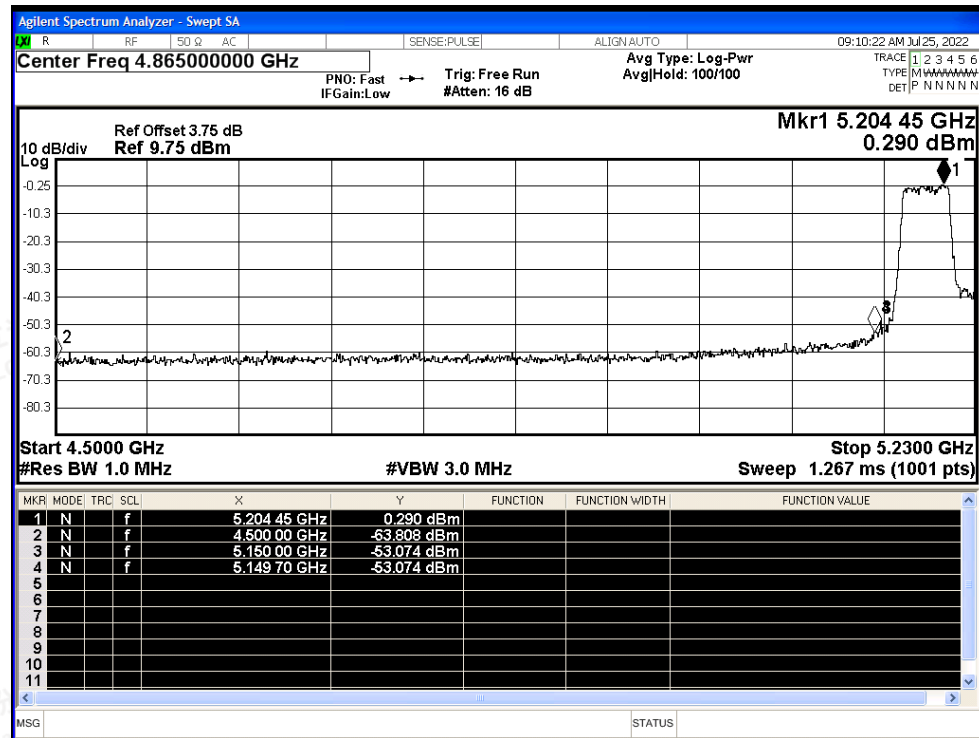
Restrict Band NVNT ac40 5230MHz Ant2 Average



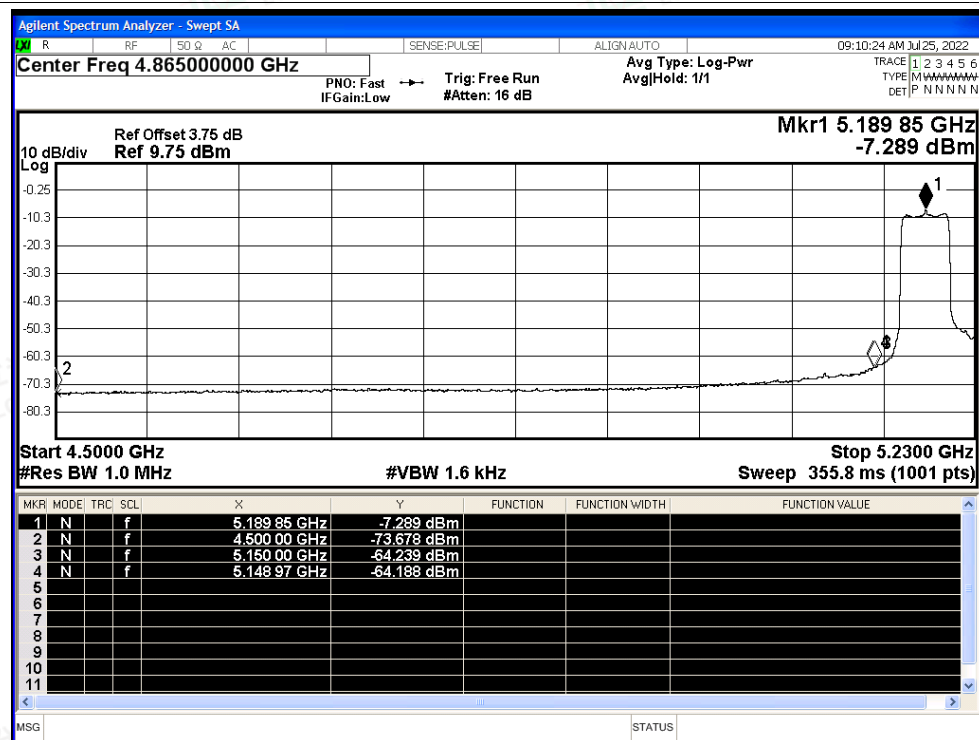


Test Graphs

Restrict Band NVNT ac40 5190MHz Ant3 Peak

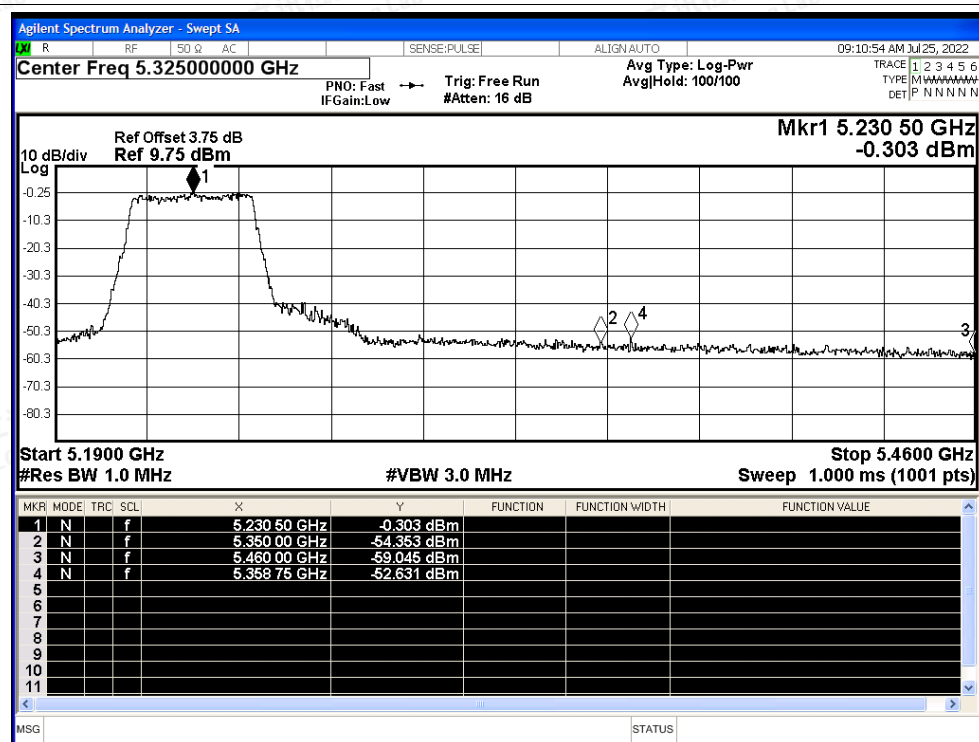


Restrict Band NVNT ac40 5190MHz Ant3 Average

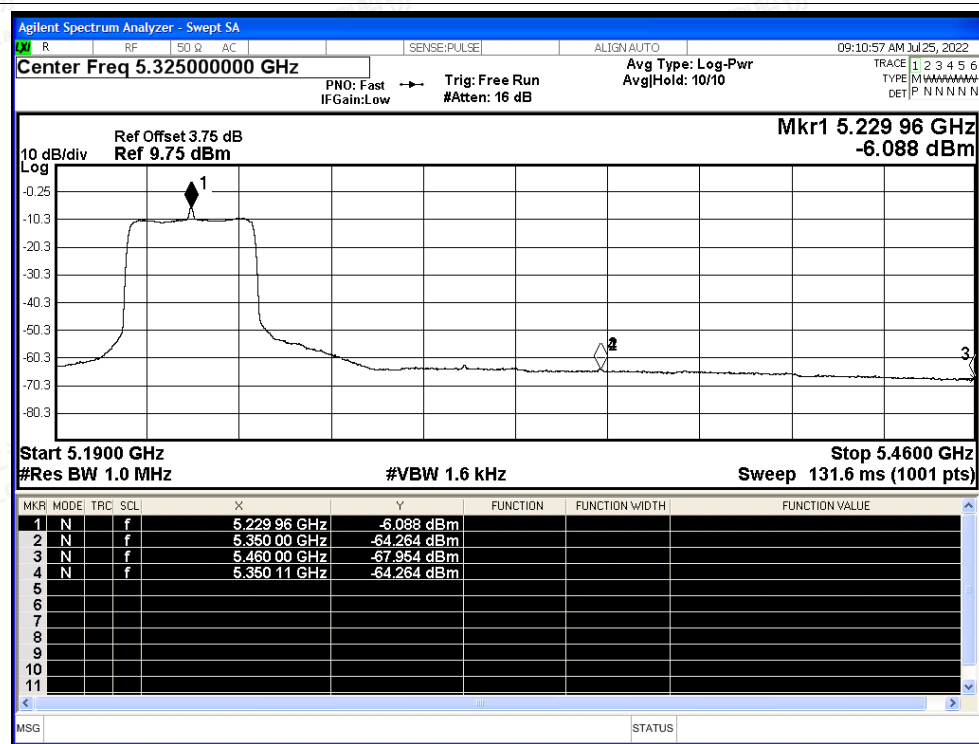




Restrict Band NVNT ac40 5230MHz Ant3 Peak



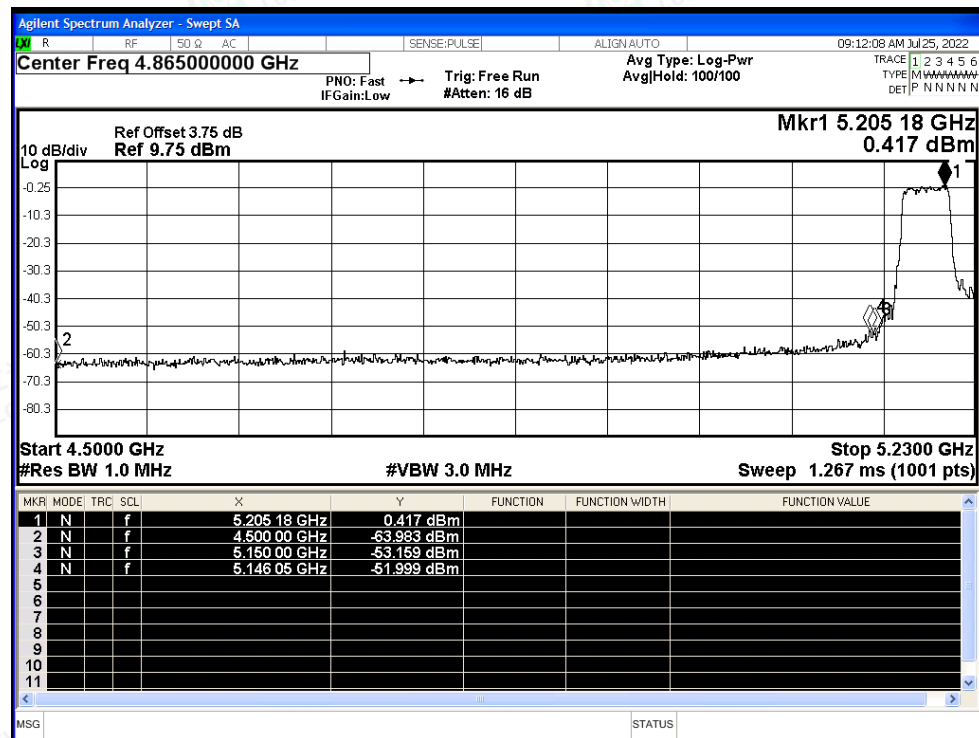
Restrict Band NVNT ac40 5230MHz Ant3 Average



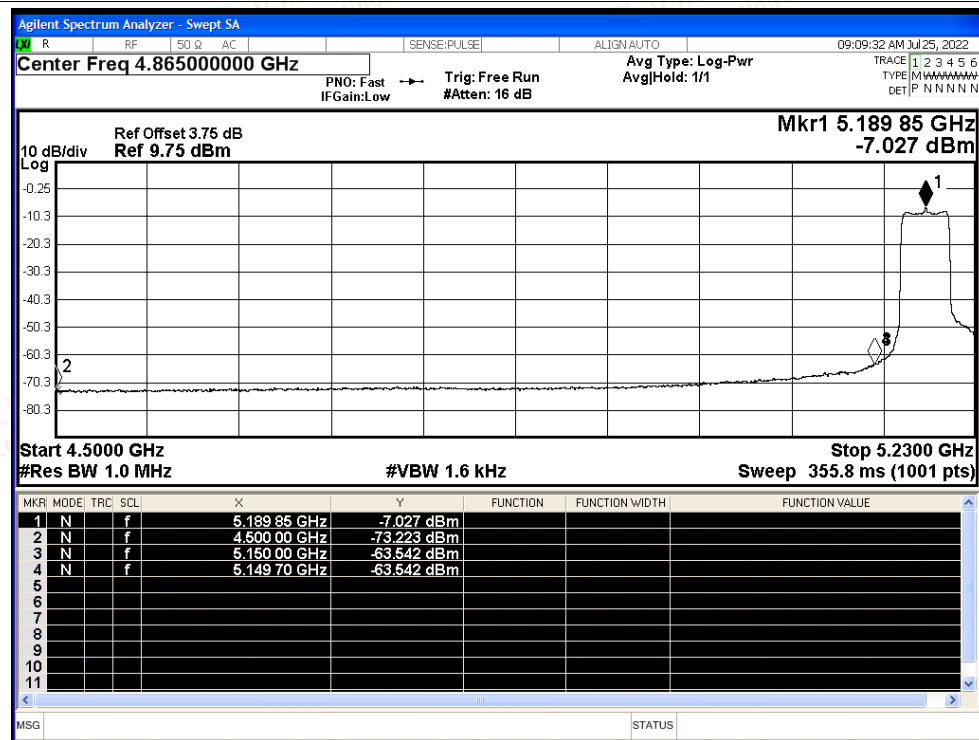


Test Graphs

Restrict Band NVNT ac40 5190MHz Ant4 Peak

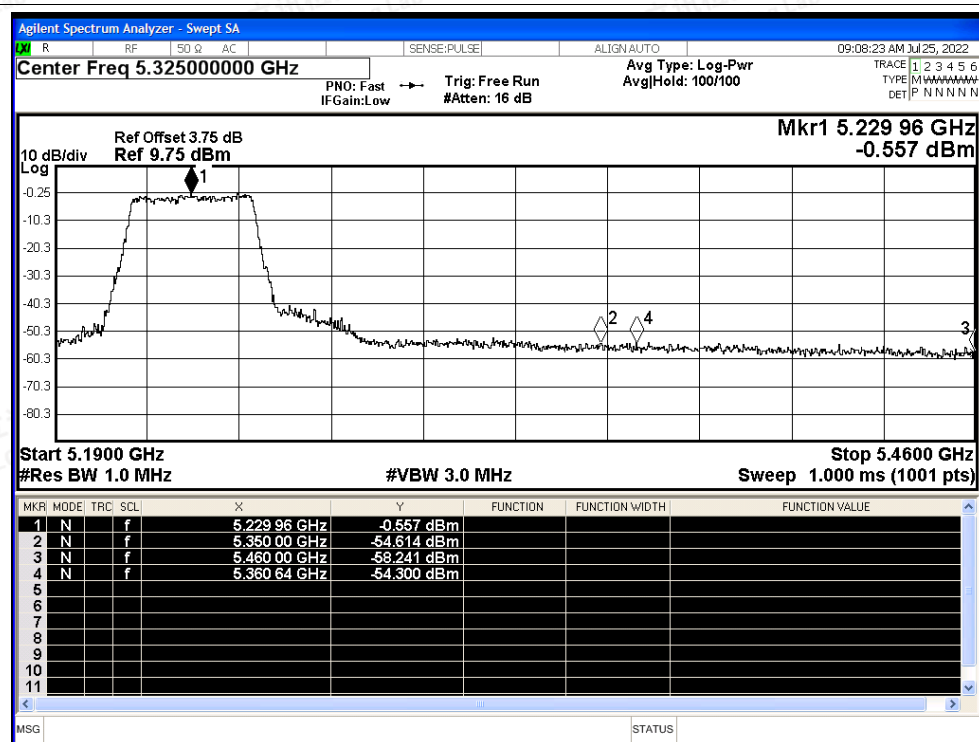


Restrict Band NVNT ac40 5190MHz Ant4 Average

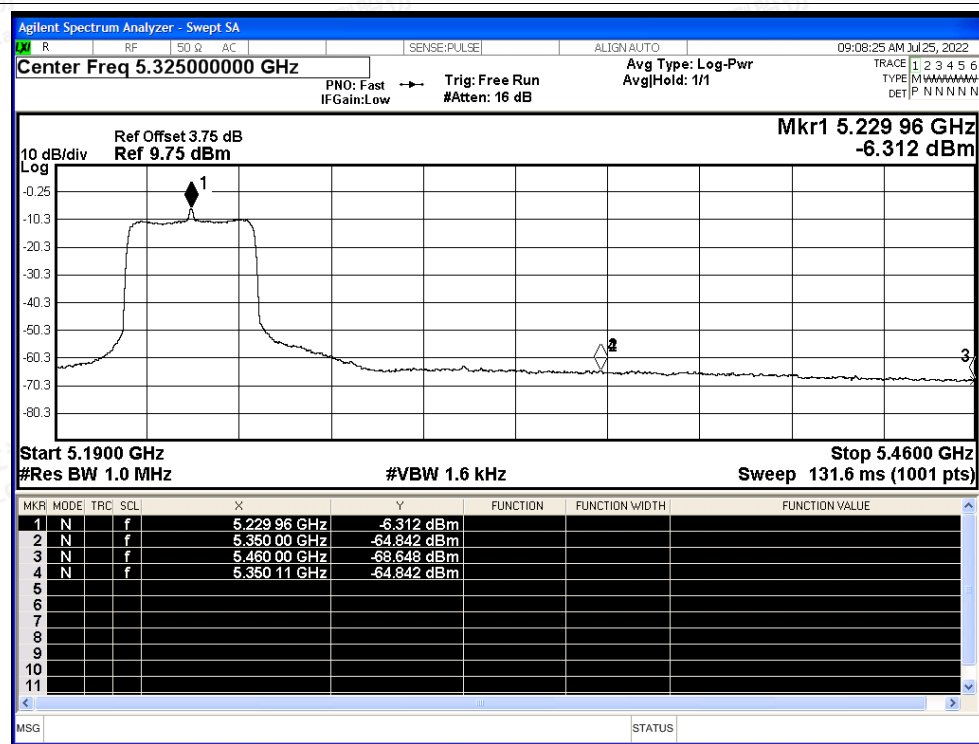




Restrict Band NVNT ac40 5230MHz Ant4 Peak



Restrict Band NVNT ac40 5230MHz Ant4 Average





A.5 Frequency Stability

Condition	Mode	Frequency (MHz)	Antenna	Measured Frequency (MHz)	Frequency Error (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
NVNT	ac40	5190	Ant1	5190	0	0	25	Pass
NVNT	ac40	5230	Ant1	5230	0	0	25	Pass
NVNT	ac40	5190	Ant2	5189.96	-40000	-7.71	25	Pass
NVNT	ac40	5230	Ant2	5230.04	40000	7.65	25	Pass
NVNT	ac40	5190	Ant3	5190	0	0	25	Pass
NVNT	ac40	5230	Ant3	5230.04	40000	7.65	25	Pass
NVNT	ac40	5190	Ant4	5190	0	0	25	Pass
NVNT	ac40	5230	Ant4	5230	0	0	25	Pass

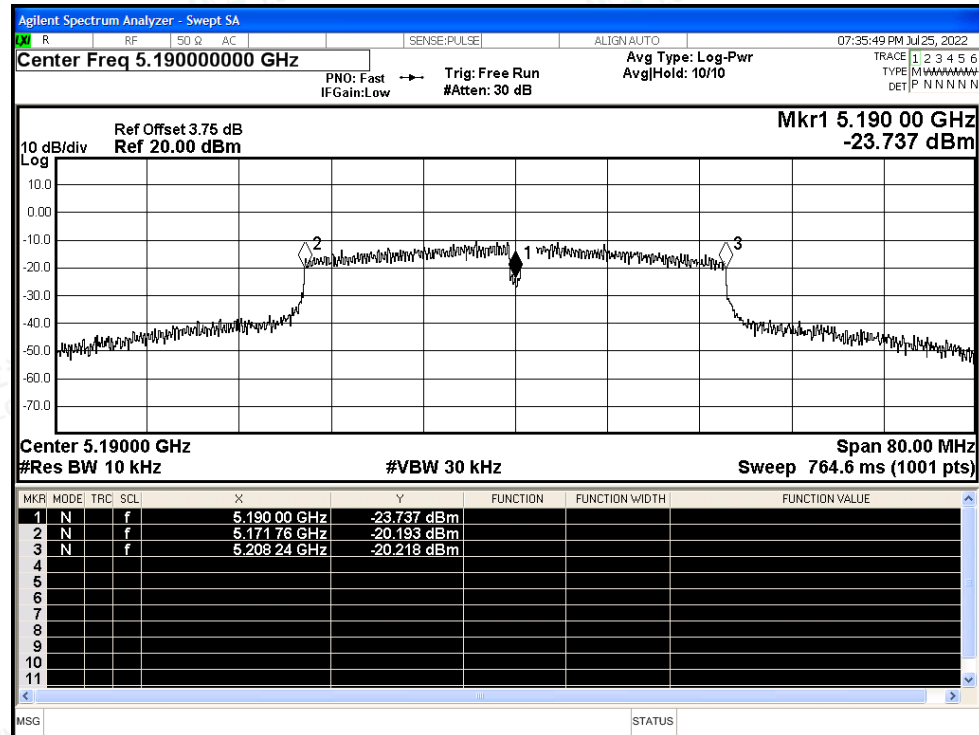


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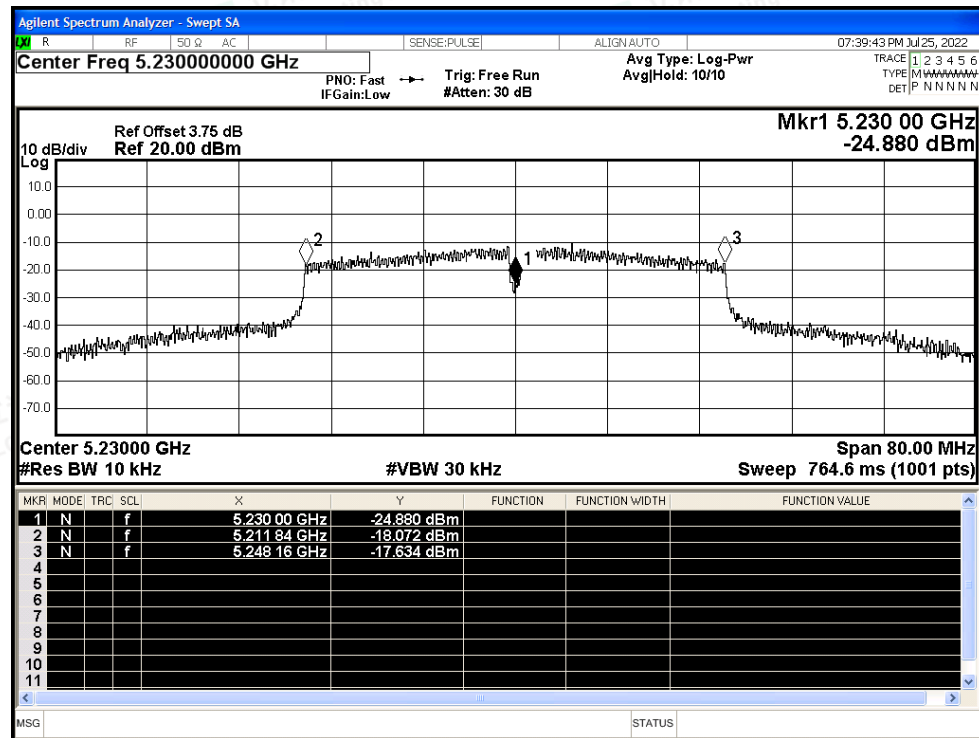


Test Graphs

Freq. Stability NVNT ac40 5190MHz Ant1



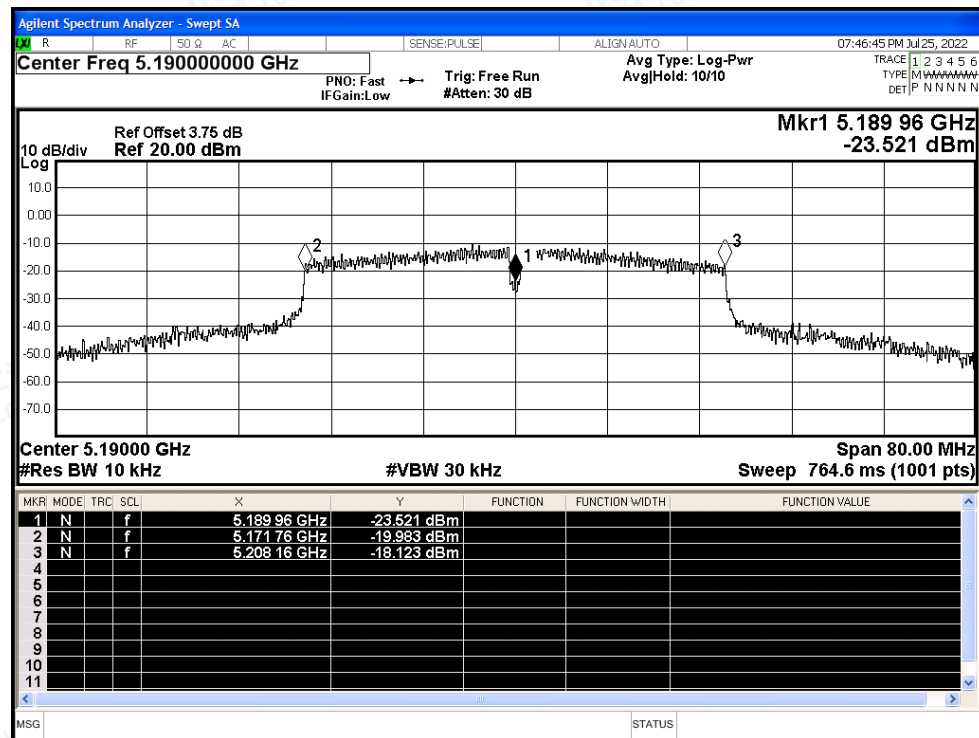
Freq. Stability NVNT ac40 5230MHz Ant1



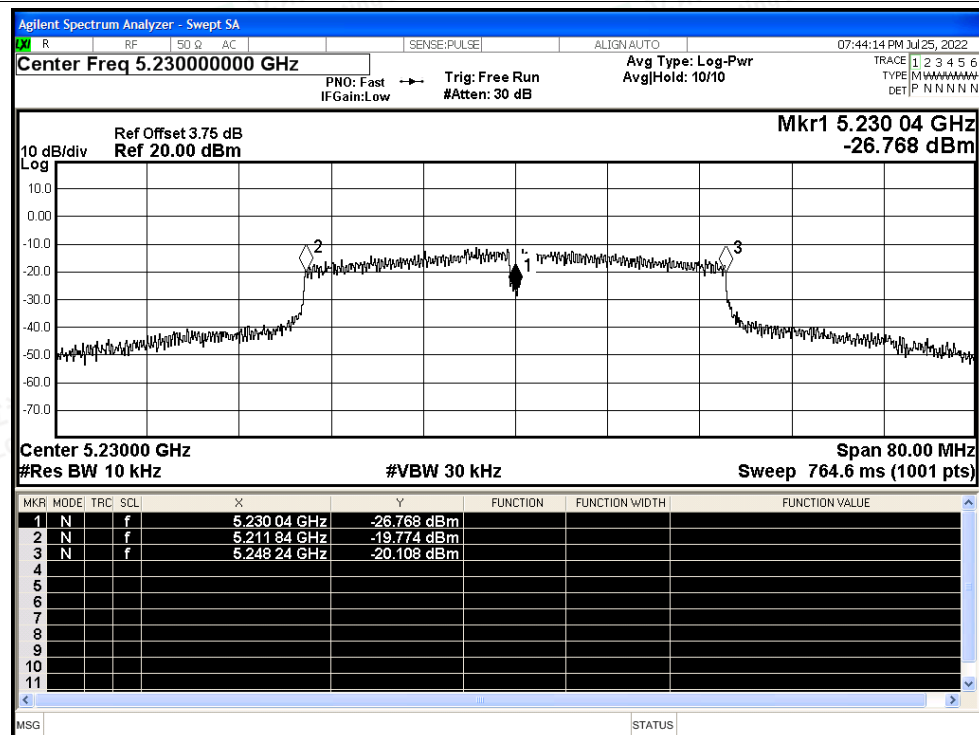


Test Graphs

Freq. Stability NVNT ac40 5190MHz Ant2



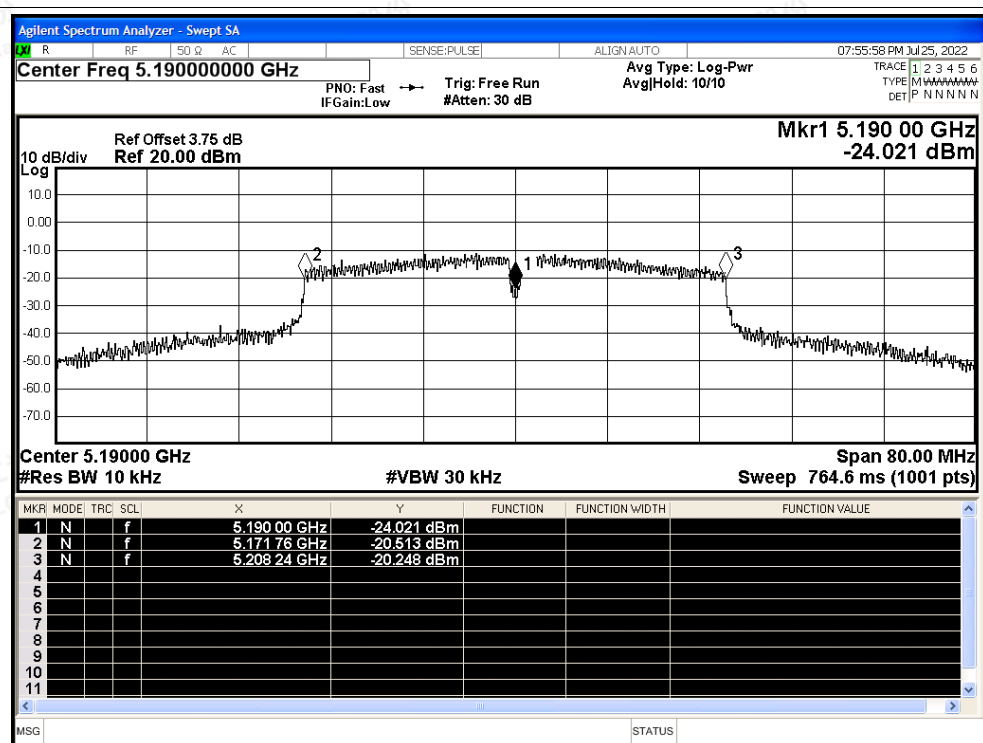
Freq. Stability NVNT ac40 5230MHz Ant2



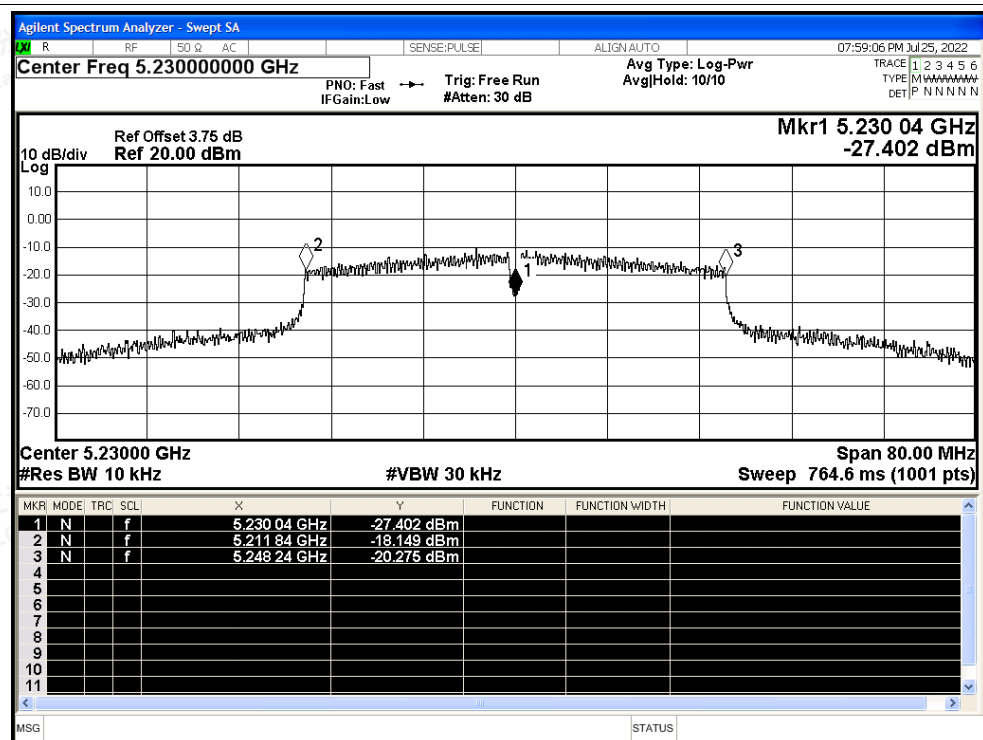
Test Graphs

Freq. Stability NVNT ac40 5190MHz Ant3





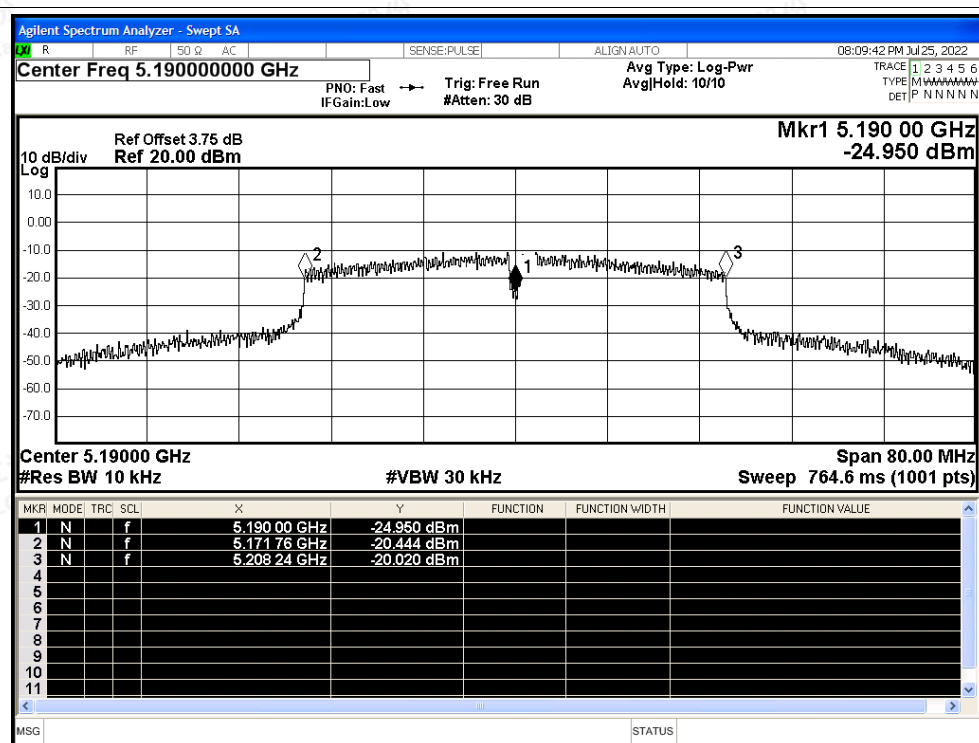
Freq. Stability NVNT ac40 5230MHz Ant3



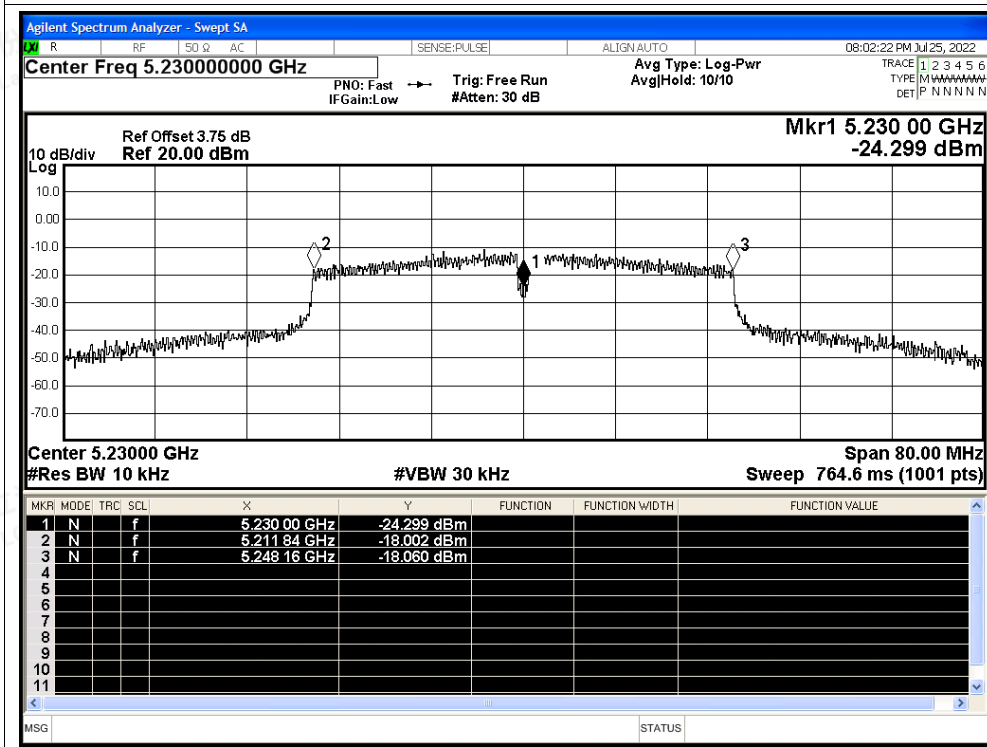
Test Graphs

Freq. Stability NVNT ac40 5190MHz Ant4





Freq. Stability NVNT ac40 5230MHz Ant4



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Scan code to check authenticity



A.6 Duty Cycle

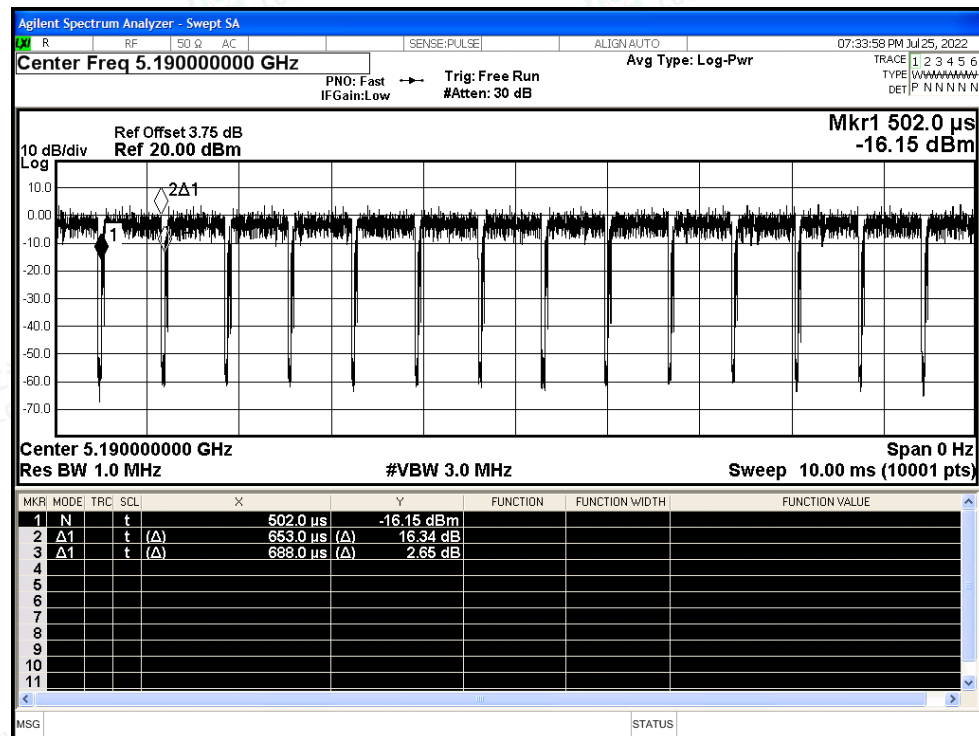
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	ac40	5190	Ant1	94.91	0.23	1.53
NVNT	ac40	5230	Ant1	94.91	0.23	1.53
NVNT	ac40	5190	Ant2	94.91	0.23	1.53
NVNT	ac40	5230	Ant2	95.06	0.22	1.53
NVNT	ac40	5190	Ant3	95.06	0.22	1.53
NVNT	ac40	5230	Ant3	95.06	0.22	1.53
NVNT	ac40	5190	Ant4	94.91	0.23	1.53
NVNT	ac40	5230	Ant4	94.91	0.23	1.53



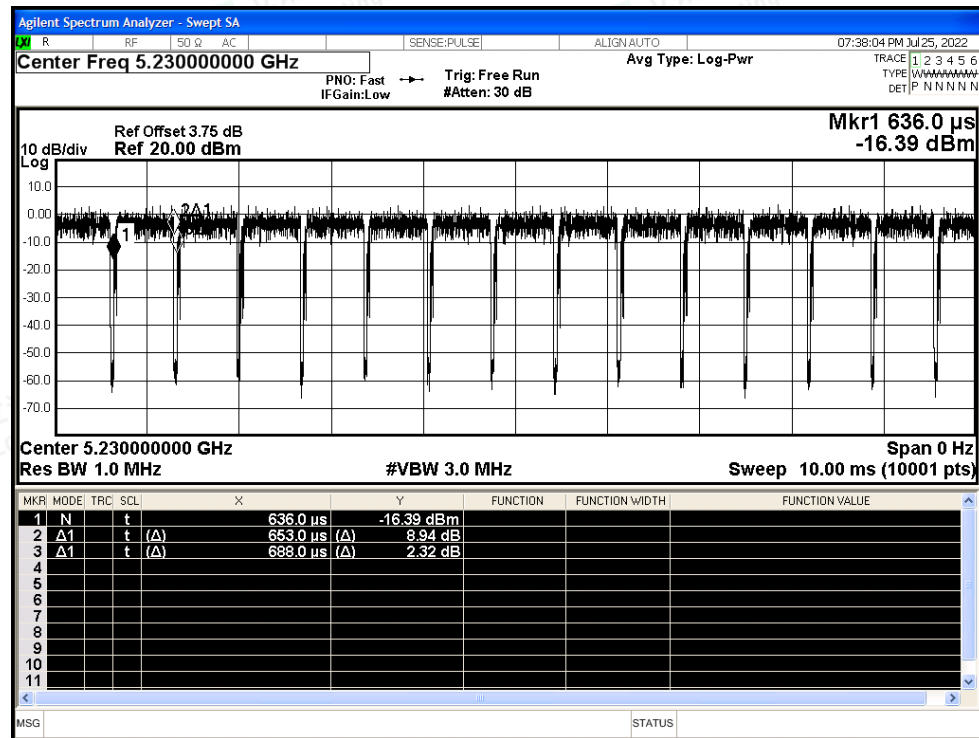


Test Graphs

Duty Cycle NVNT ac40 5190MHz Ant1



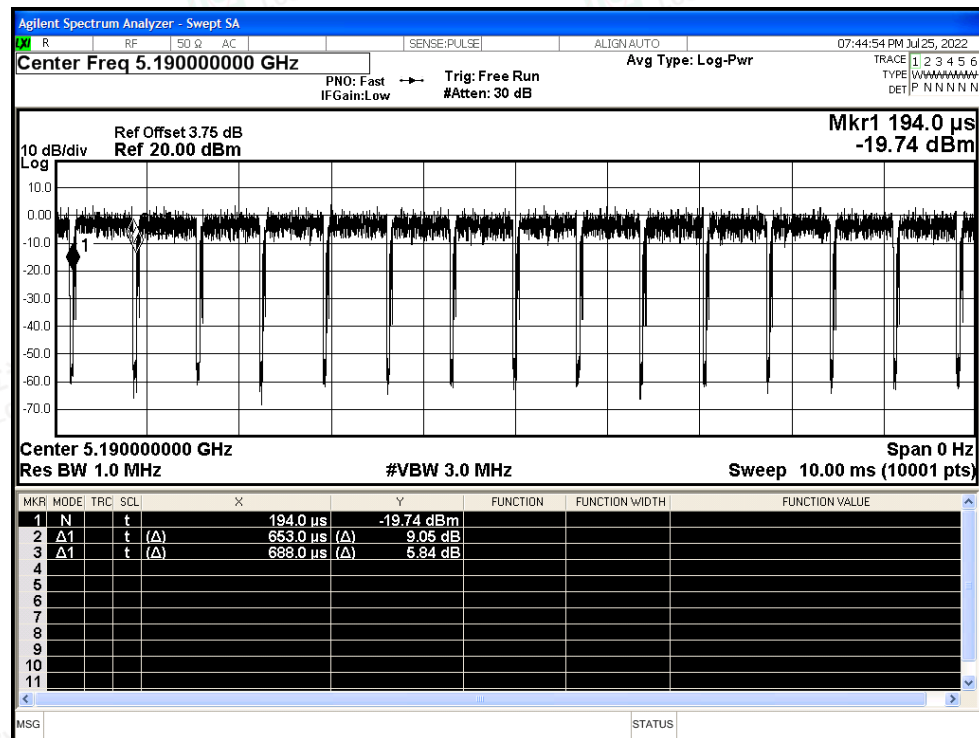
Duty Cycle NVNT ac40 5230MHz Ant1



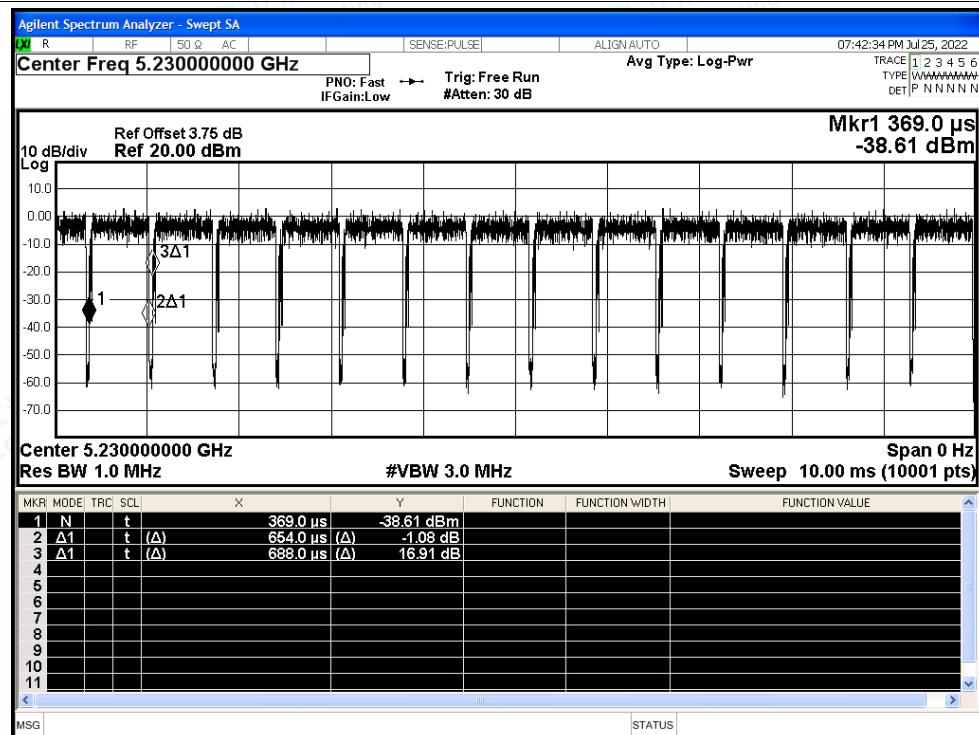


Test Graphs

Duty Cycle NVNT ac40 5190MHz Ant2



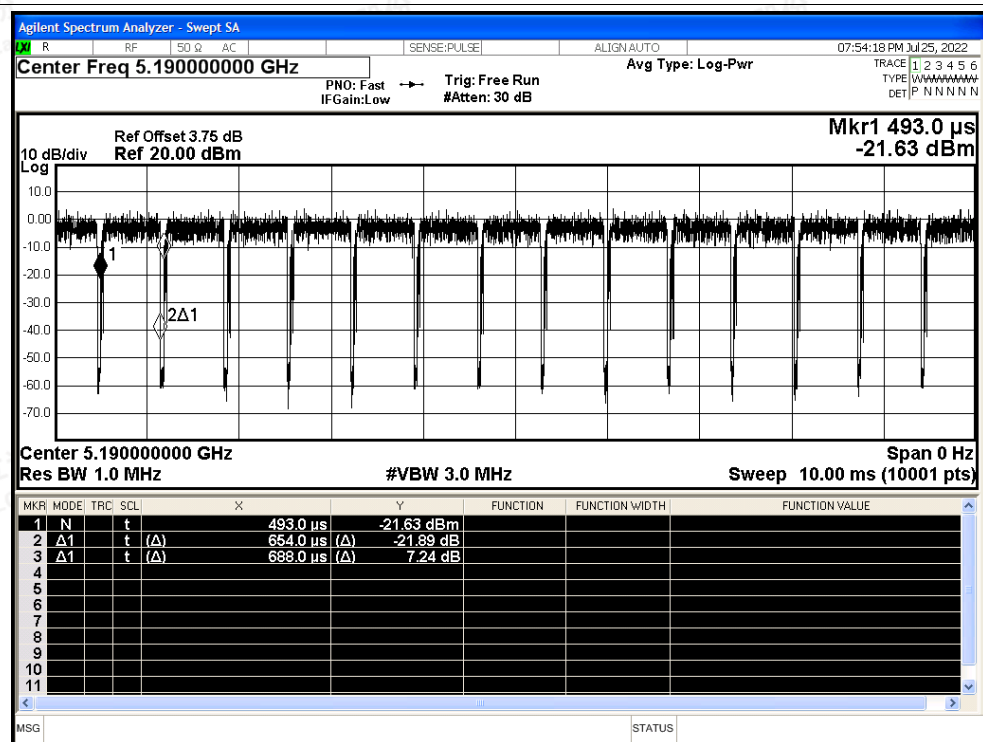
Duty Cycle NVNT ac40 5230MHz Ant2



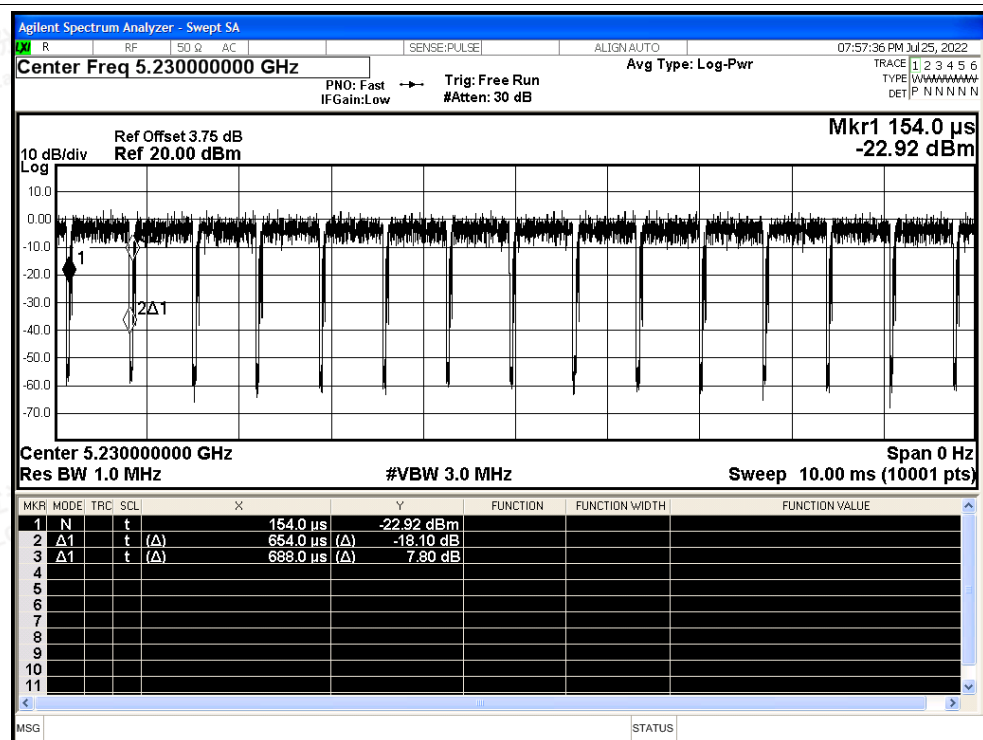
Test Graphs

Duty Cycle NVNT ac40 5190MHz Ant3





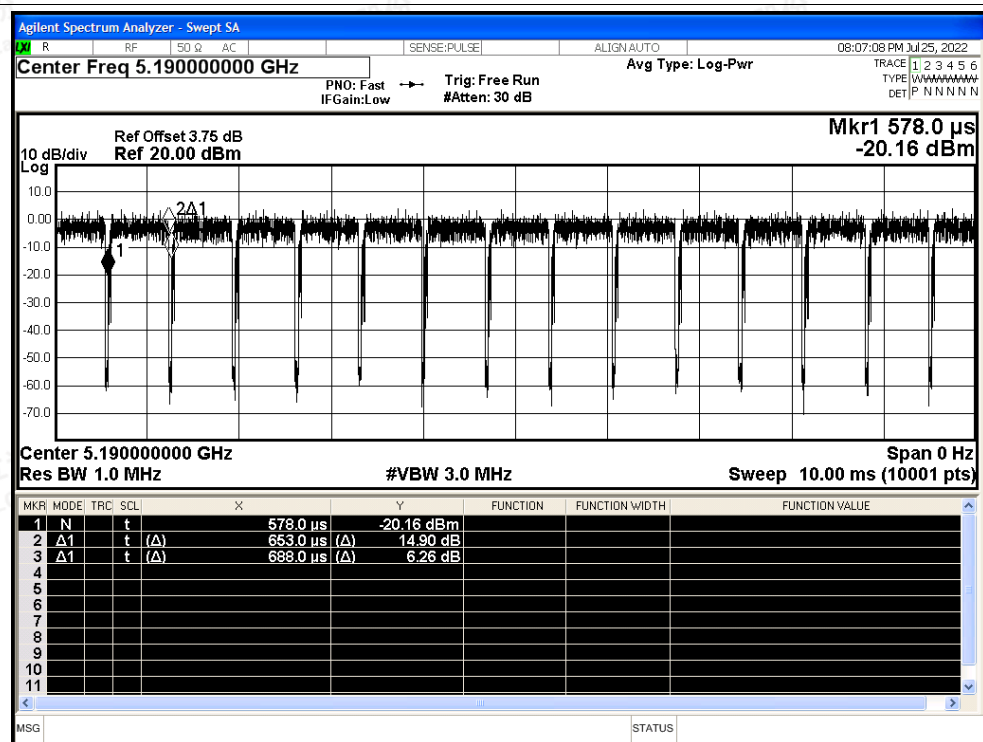
Duty Cycle NVNT ac40 5230MHz Ant3



Test Graphs

Duty Cycle NVNT ac40 5190MHz Ant4





Duty Cycle NVNT ac40 5230MHz Ant4

