



Appendix D

RF Test Data for 5.2GWIFI (Conducted Measurement)

Product Name: Motorcycle Diagnostic Tool

Test Model: MS80 Pro

Environmental Conditions

Temperature:	23.5°C
Relative Humidity:	52.8%
ATM Pressure:	100.0 kPa
Test Engineer:	Faith Li
Supervised by:	Can Kun





D.1 -26dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-26 dB Bandwidth (MHz)
NVNT	a	5180	Ant1	33.17
NVNT	a	5200	Ant1	34.27
NVNT	a	5240	Ant1	33.63
NVNT	n20	5180	Ant1	32.35
NVNT	n20	5200	Ant1	32.13
NVNT	n20	5240	Ant1	31.99
NVNT	ac20	5180	Ant1	34.32
NVNT	ac20	5200	Ant1	33.8
NVNT	ac20	5240	Ant1	36.05

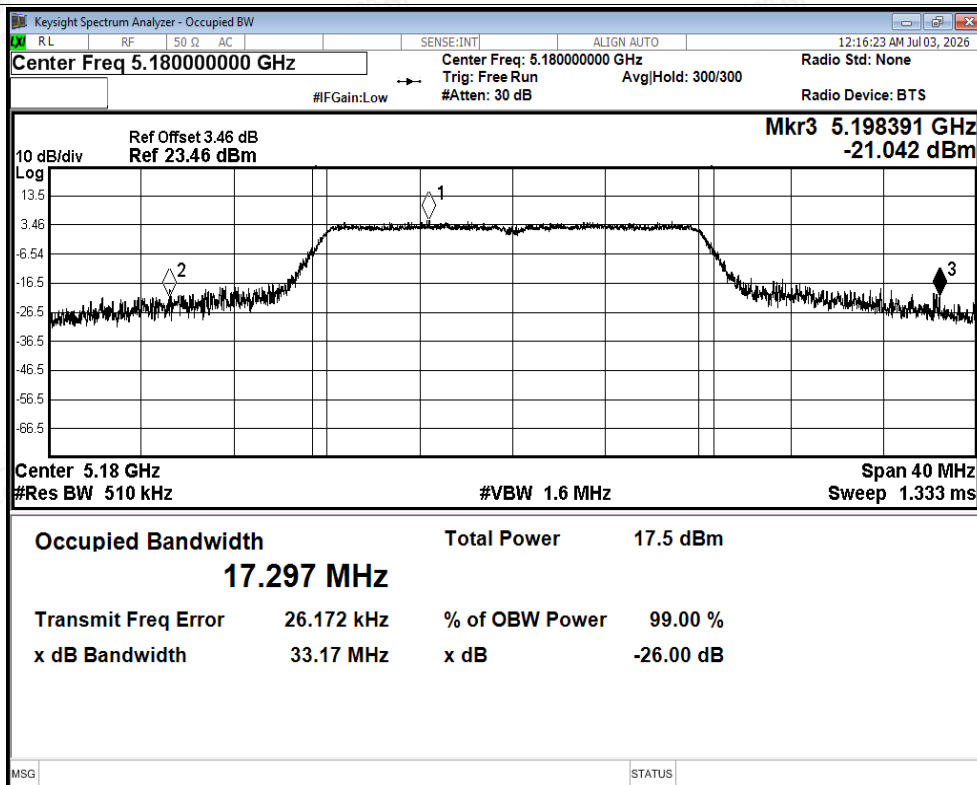


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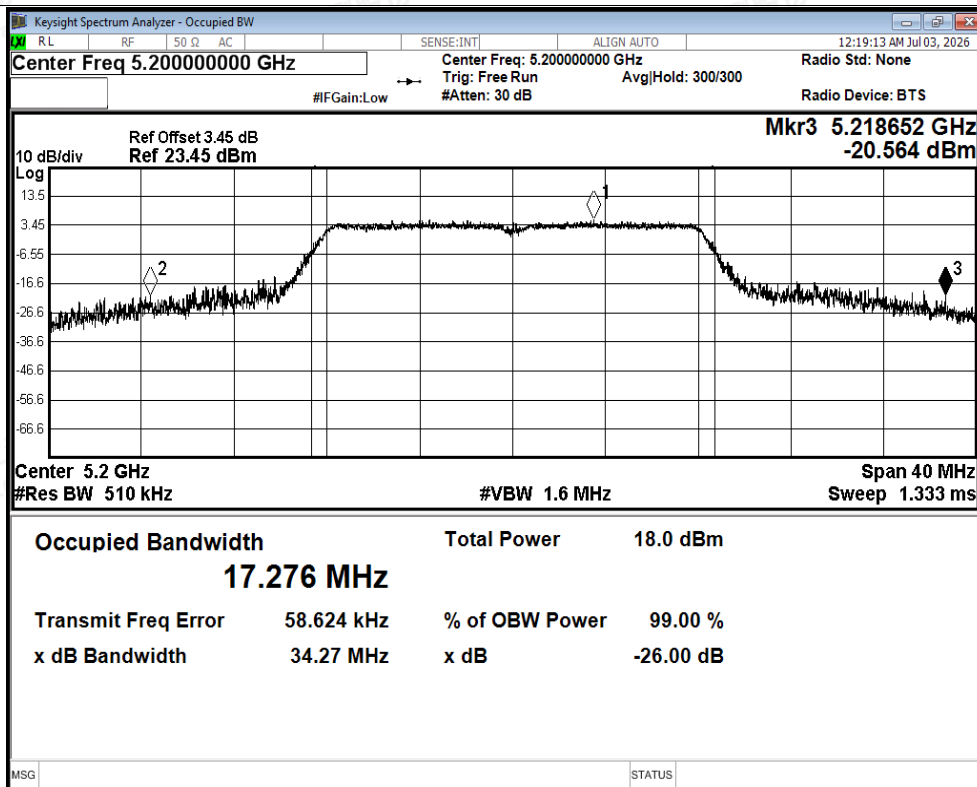
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-26dB Bandwidth NVNT a 5180MHz Ant1



-26dB Bandwidth NVNT a 5200MHz Ant1

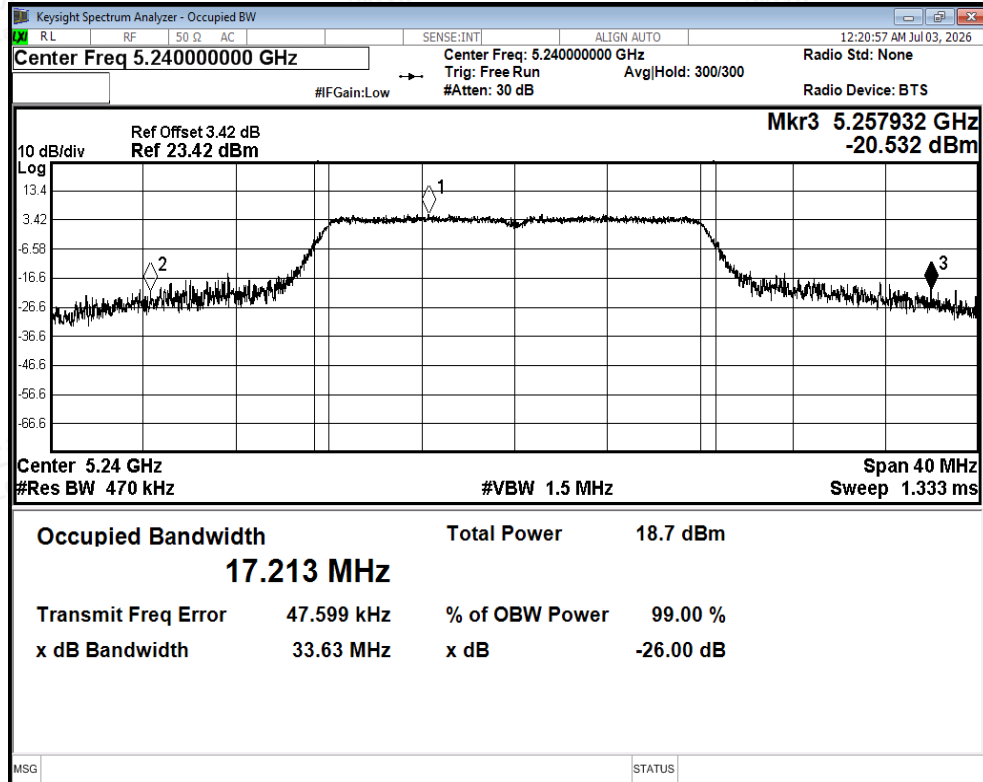


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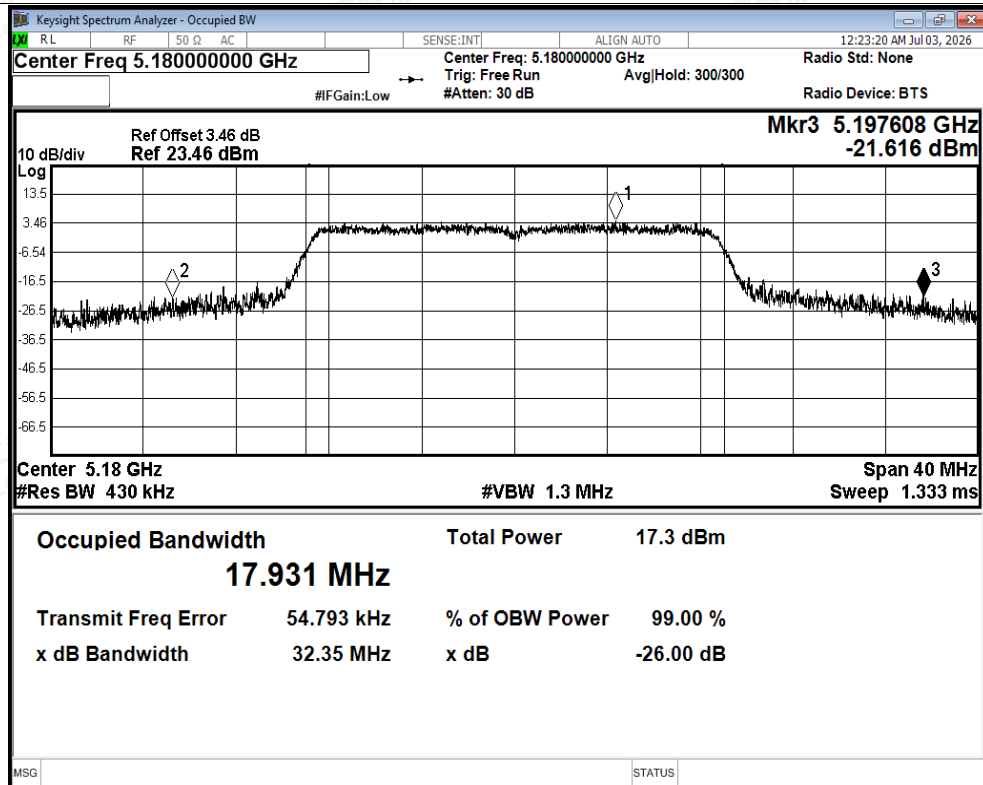
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-26dB Bandwidth NVNT a 5240MHz Ant1



-26dB Bandwidth NVNT n20 5180MHz Ant1

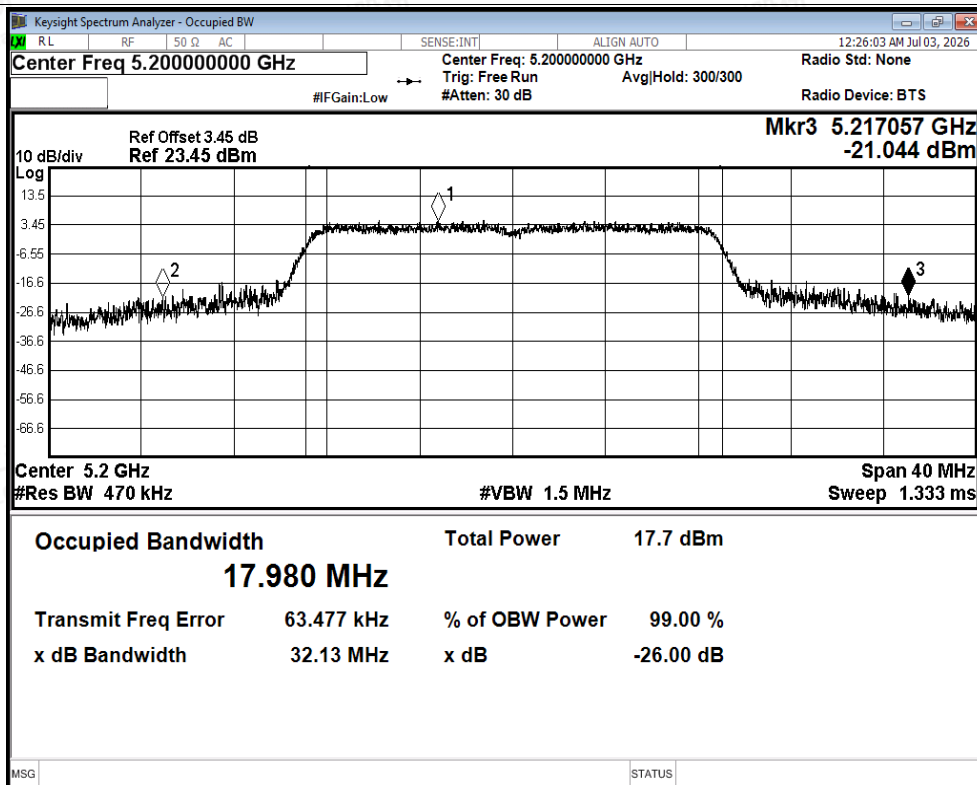


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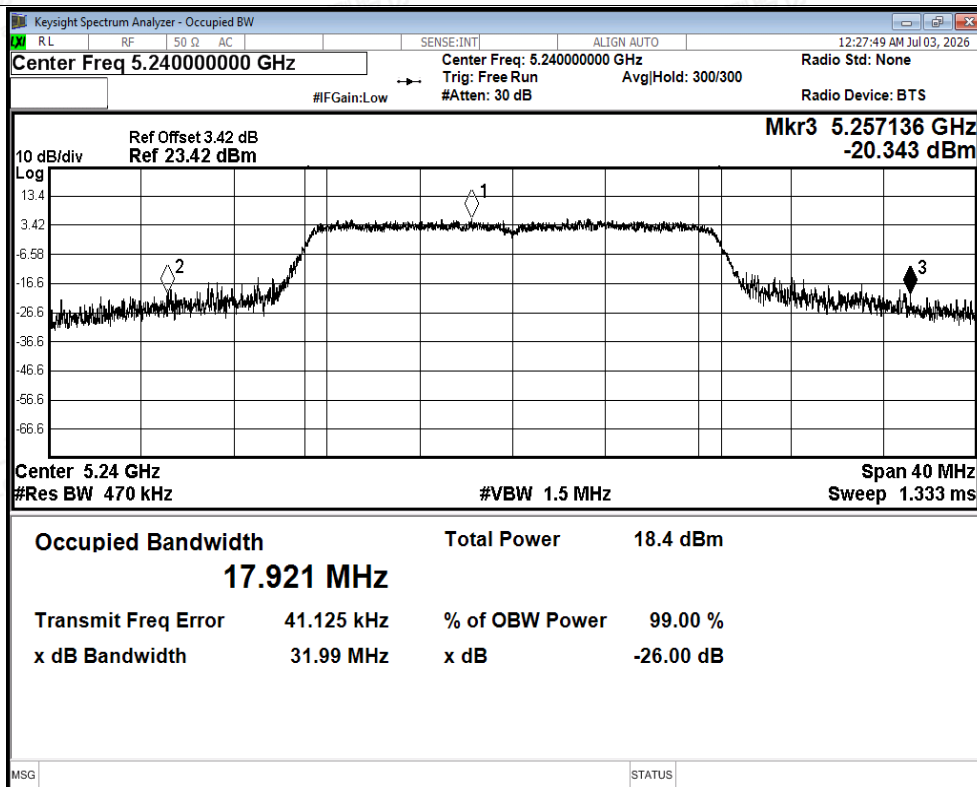
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-26dB Bandwidth NVNT n20 5200MHz Ant1



-26dB Bandwidth NVNT n20 5240MHz Ant1

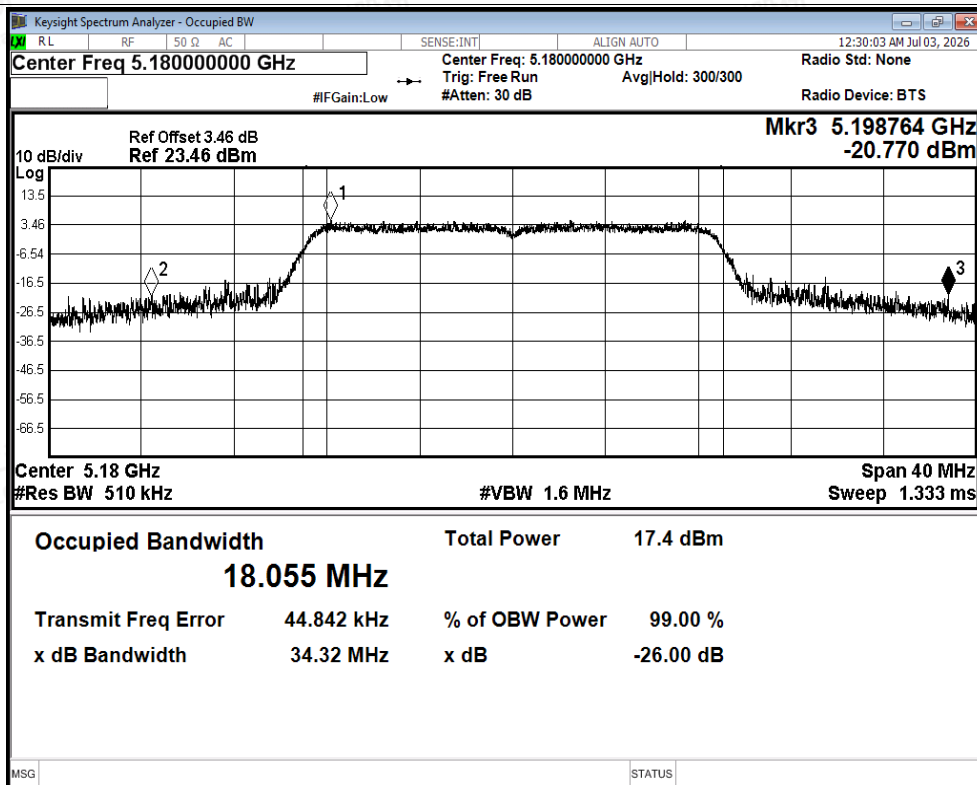


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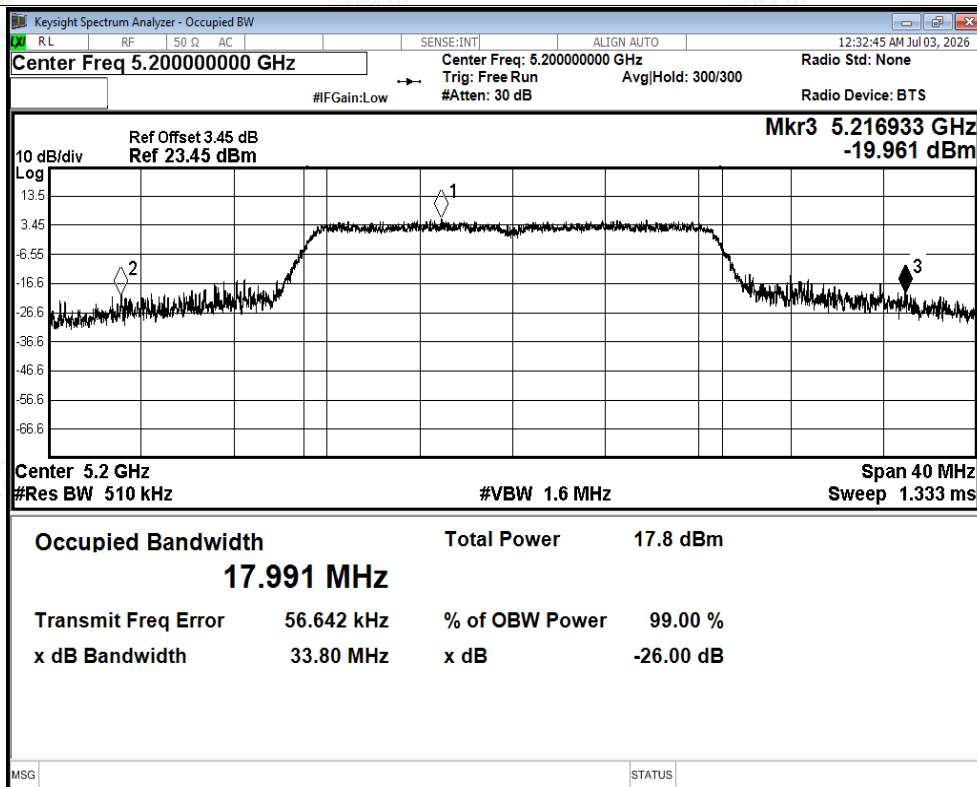
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-26dB Bandwidth NVNT ac20 5180MHz Ant1



-26dB Bandwidth NVNT ac20 5200MHz Ant1

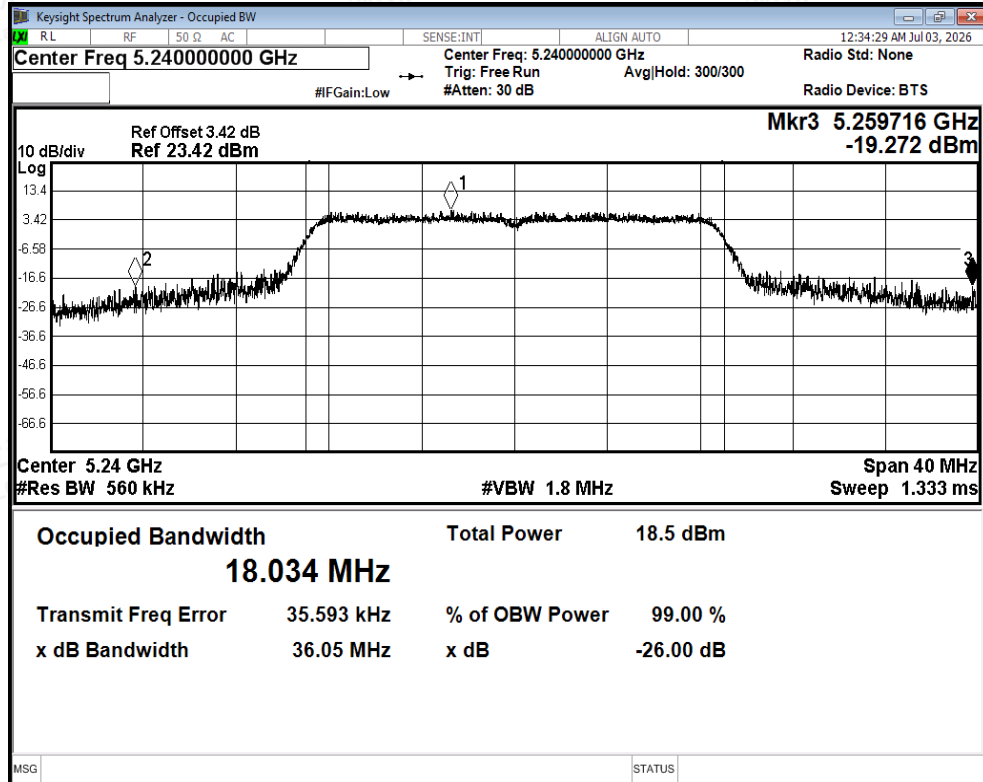


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-26dB Bandwidth NVNT ac20 5240MHz Ant1



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D.2 Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Conducted Power (dBm)	Limit Conducted(dBm)	Verdict
NVNT	a	5180	Ant1	11.15	0.18	11.33	24	Pass
NVNT	a	5200	Ant1	11.61	0.18	11.79	24	Pass
NVNT	a	5240	Ant1	12.26	0.18	12.44	24	Pass
NVNT	n20	5180	Ant1	10.68	0.25	10.93	24	Pass
NVNT	n20	5200	Ant1	10.84	0.22	11.06	24	Pass
NVNT	n20	5240	Ant1	11.58	0.22	11.8	24	Pass
NVNT	ac20	5180	Ant1	10.6	0.21	10.81	24	Pass
NVNT	ac20	5200	Ant1	10.99	0.25	11.24	24	Pass
NVNT	ac20	5240	Ant1	11.65	0.25	11.9	24	Pass





D.3 Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/MHz)	Duty Factor (dB)	Total Conducted PSD (dBm/MHz)	Limit Conducted (dBm/MHz)	Verdict
NVNT	a	5180	Ant1	-0.07	0.18	0.11	11	Pass
NVNT	a	5200	Ant1	0.36	0.18	0.54	11	Pass
NVNT	a	5240	Ant1	0.97	0.18	1.15	11	Pass
NVNT	n20	5180	Ant1	-0.89	0.25	-0.64	11	Pass
NVNT	n20	5200	Ant1	-0.42	0.22	-0.2	11	Pass
NVNT	n20	5240	Ant1	0.12	0.22	0.34	11	Pass
NVNT	ac20	5180	Ant1	-0.87	0.21	-0.66	11	Pass
NVNT	ac20	5200	Ant1	-0.4	0.25	-0.15	11	Pass
NVNT	ac20	5240	Ant1	0.16	0.25	0.41	11	Pass

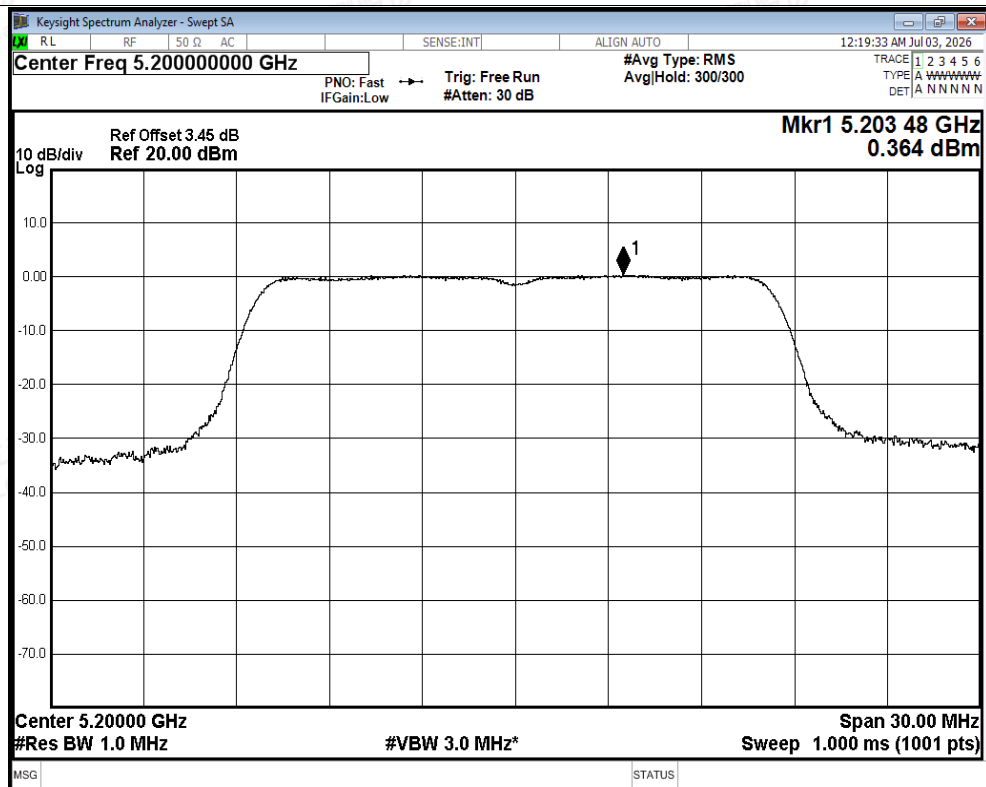
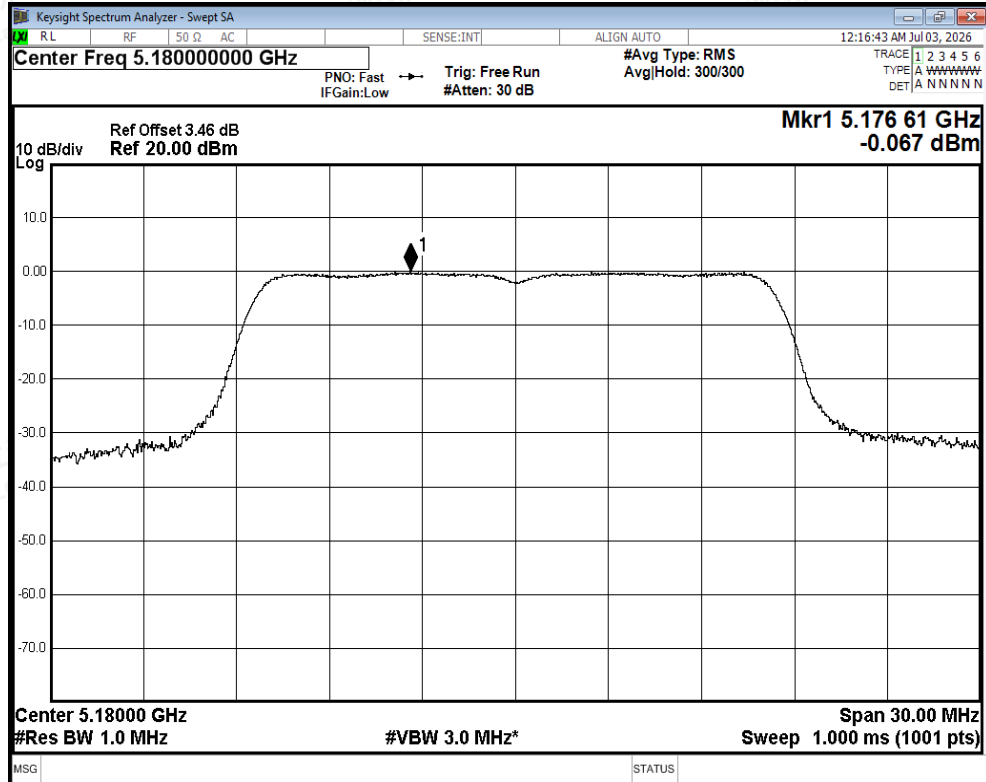


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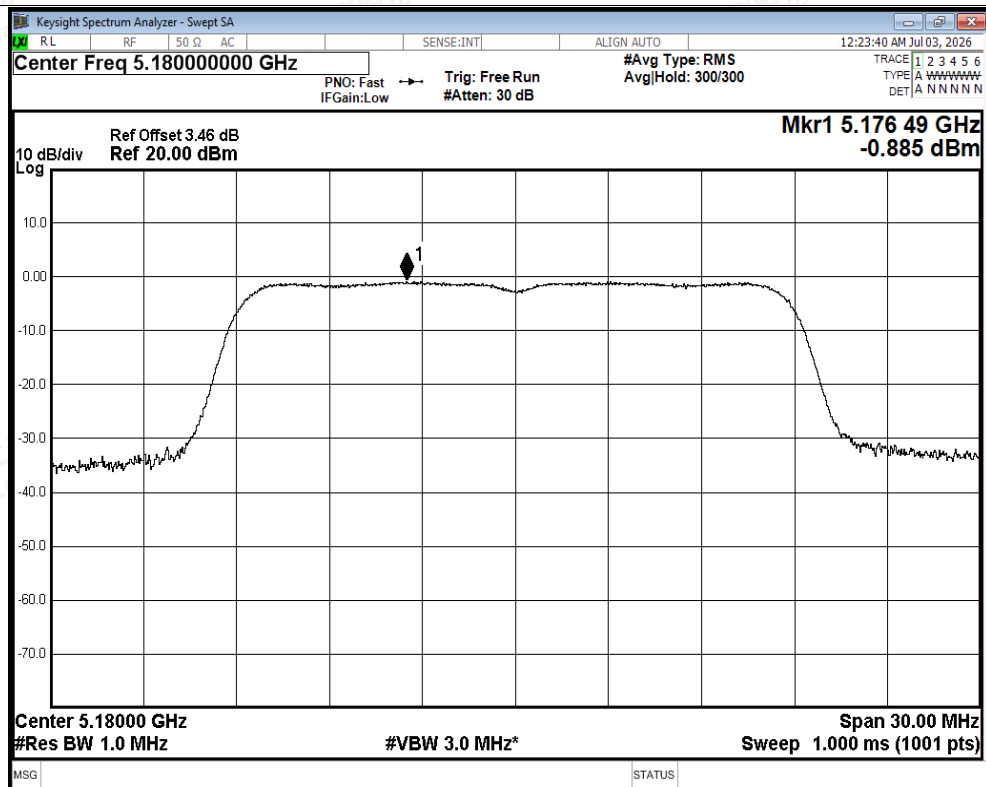
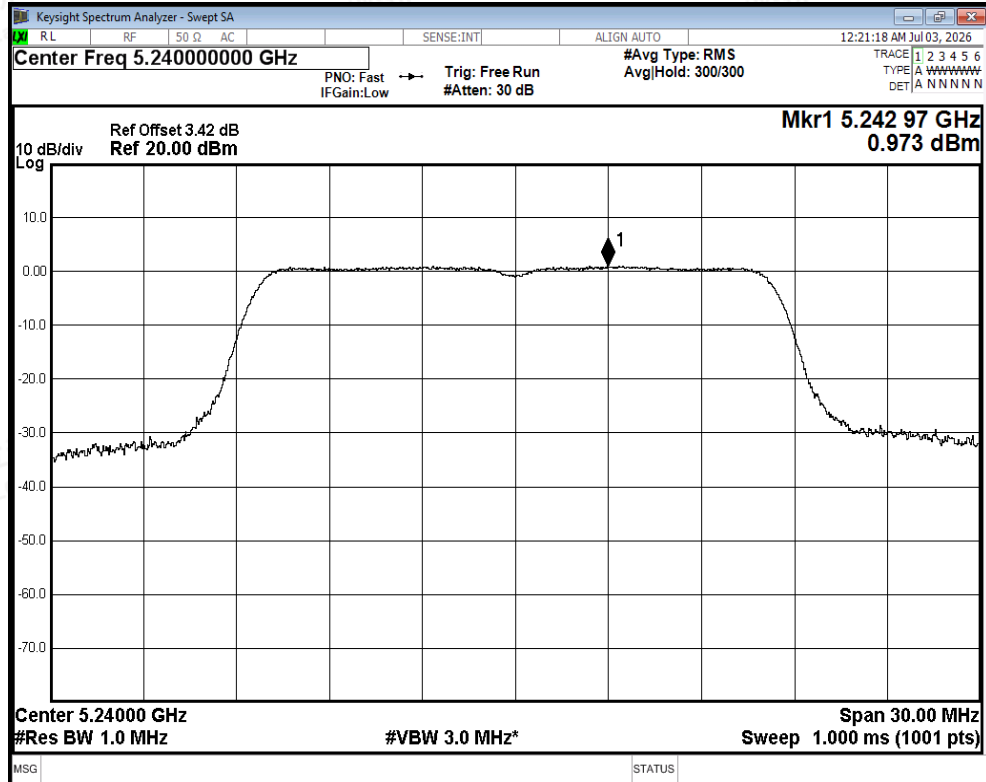


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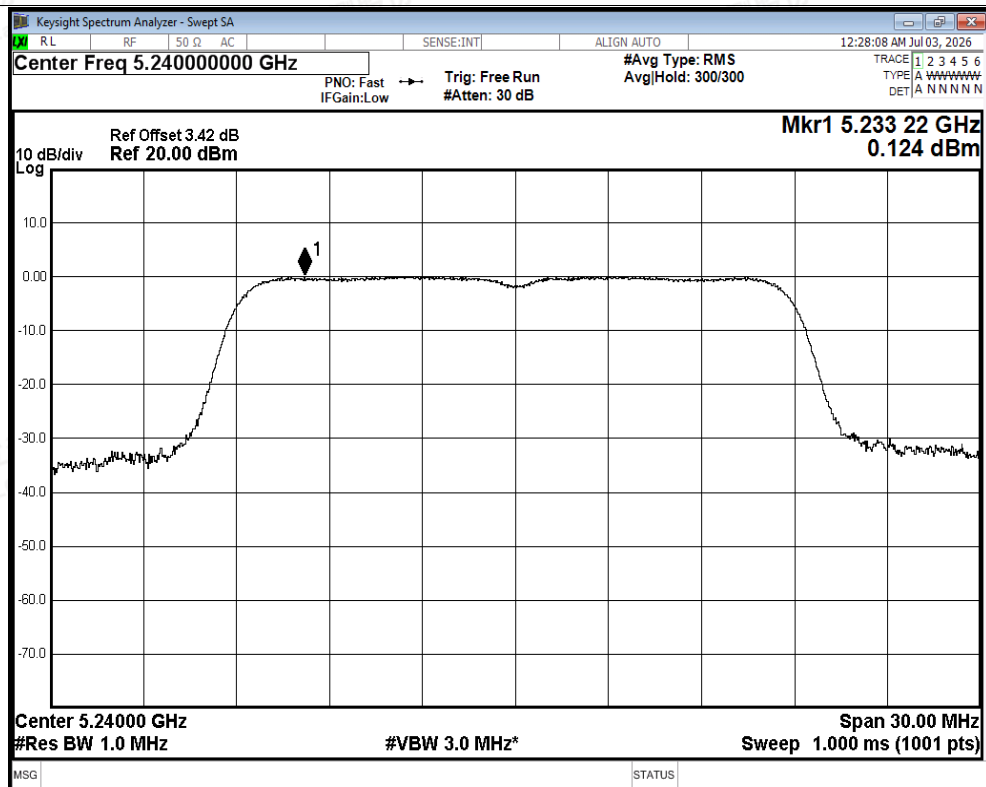
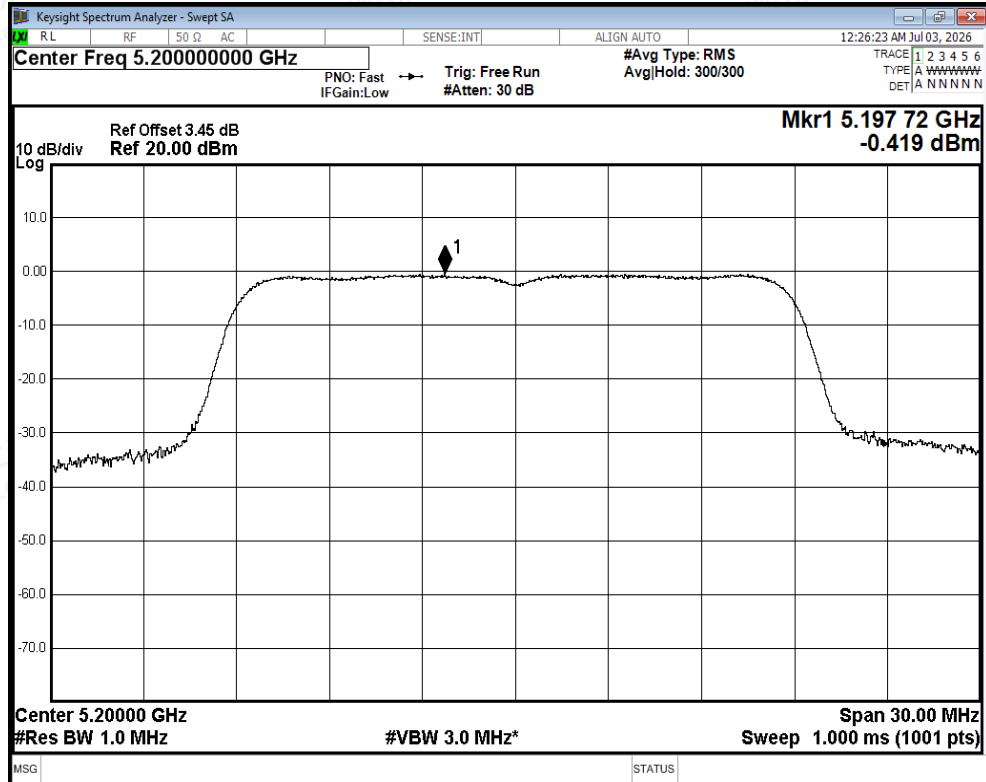


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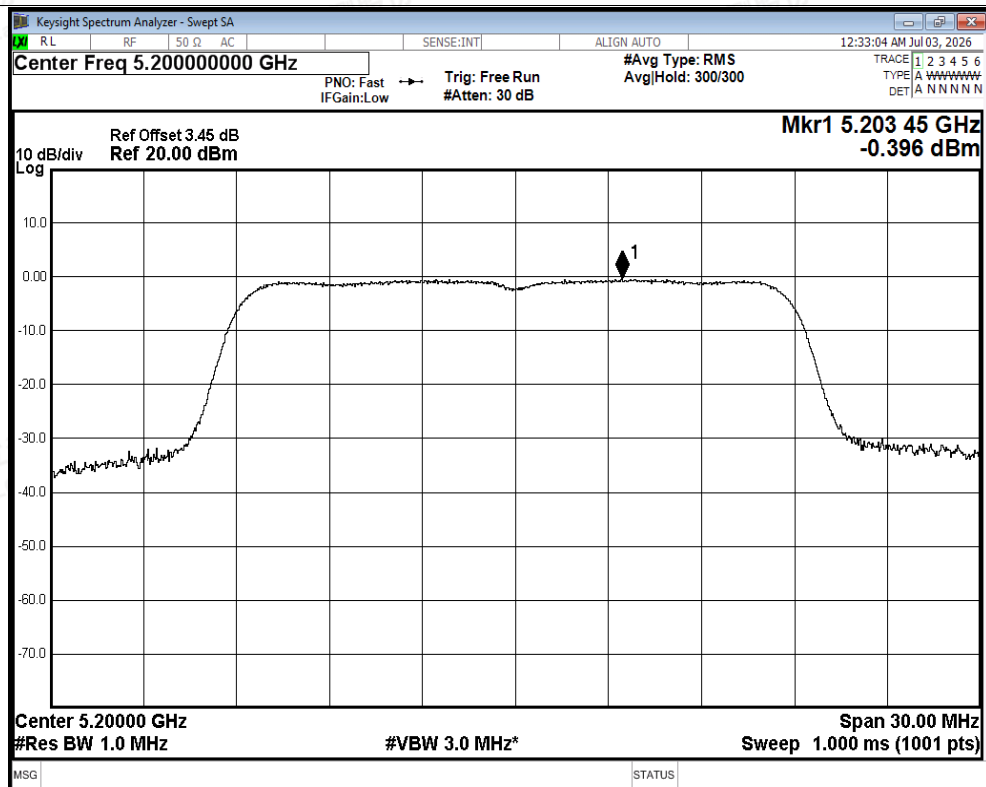
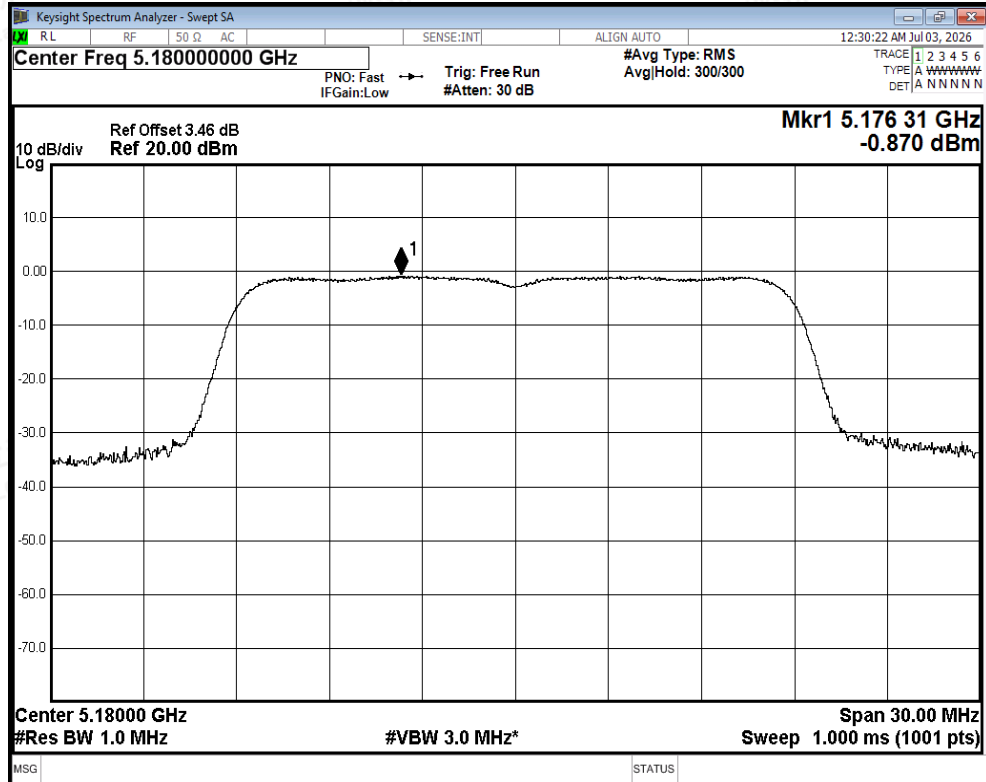


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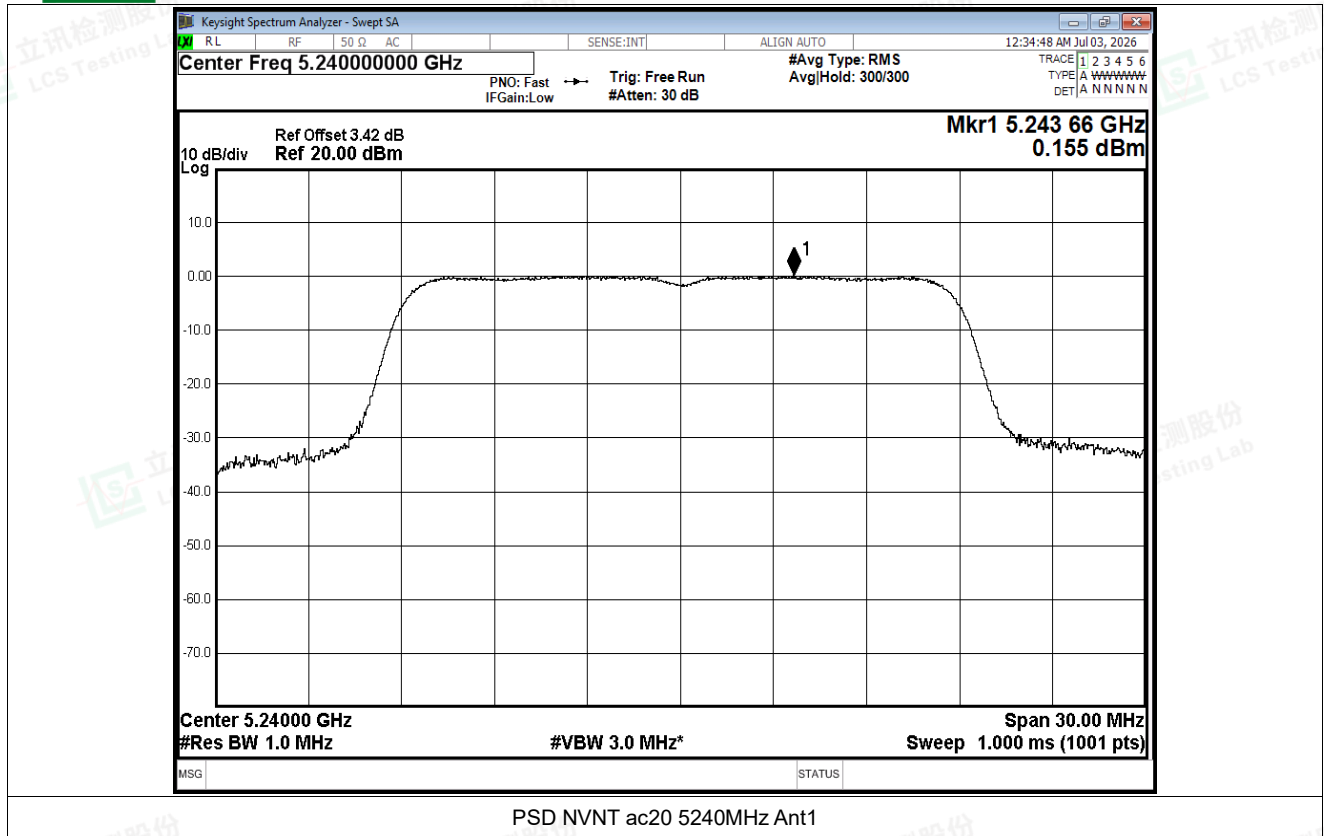


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D.4 Restrict Band

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	-50.39	2	46.84	Peak	68.2	Pass
NVNT	a	5180	Ant1	4500	-58.49	2	38.74	Average	54	Pass
NVNT	a	5180	Ant1	5149.6	-40.99	2	56.24	Peak	68.2	Pass
NVNT	a	5180	Ant1	5149.6	-48.32	2	48.91	Average	54	Pass
NVNT	a	5180	Ant1	5150	-41.89	2	55.34	Peak	68.2	Pass
NVNT	a	5180	Ant1	5150	-47.83	2	49.4	Average	54	Pass
NVNT	a	5240	Ant1	5350	-49.73	2	47.5	Peak	68.2	Pass
NVNT	a	5240	Ant1	5350	-56.16	2	41.07	Average	54	Pass
NVNT	a	5240	Ant1	5444.88	-46.85	2	50.38	Peak	68.2	Pass
NVNT	a	5240	Ant1	5351.04	-55.95	2	41.28	Average	54	Pass
NVNT	a	5240	Ant1	5460	-49.96	2	47.27	Peak	68.2	Pass
NVNT	a	5240	Ant1	5460	-56.84	2	40.39	Average	54	Pass
NVNT	n20	5180	Ant1	4500	-52.13	2	45.1	Peak	68.2	Pass
NVNT	n20	5180	Ant1	4500	-58.41	2	38.82	Average	54	Pass
NVNT	n20	5180	Ant1	5149.6	-39.89	2	57.34	Peak	68.2	Pass
NVNT	n20	5180	Ant1	5149.6	-45.87	2	51.36	Average	54	Pass
NVNT	n20	5180	Ant1	5150	-42.55	2	54.68	Peak	68.2	Pass
NVNT	n20	5180	Ant1	5150	-45.58	2	51.65	Average	54	Pass
NVNT	n20	5240	Ant1	5350	-50.13	2	47.1	Peak	68.2	Pass
NVNT	n20	5240	Ant1	5350	-56	2	41.23	Average	54	Pass
NVNT	n20	5240	Ant1	5433.36	-46.94	2	50.29	Peak	68.2	Pass
NVNT	n20	5240	Ant1	5350.08	-56	2	41.23	Average	54	Pass
NVNT	n20	5240	Ant1	5460	-49.48	2	47.75	Peak	68.2	Pass
NVNT	n20	5240	Ant1	5460	-56.79	2	40.44	Average	54	Pass
NVNT	ac20	5180	Ant1	4500	-51.76	2	45.47	Peak	68.2	Pass
NVNT	ac20	5180	Ant1	4500	-58.38	2	38.85	Average	54	Pass
NVNT	ac20	5180	Ant1	5148.9	-42.46	2	54.77	Peak	68.2	Pass
NVNT	ac20	5180	Ant1	5149.6	-46.08	2	51.15	Average	54	Pass
NVNT	ac20	5180	Ant1	5150	-40.77	2	56.46	Peak	68.2	Pass
NVNT	ac20	5180	Ant1	5150	-45.59	2	51.64	Average	54	Pass
NVNT	ac20	5240	Ant1	5350	-48.3	2	48.93	Peak	68.2	Pass
NVNT	ac20	5240	Ant1	5350	-56.37	2	40.86	Average	54	Pass
NVNT	ac20	5240	Ant1	5451.12	-46.78	2	50.45	Peak	68.2	Pass
NVNT	ac20	5240	Ant1	5351.04	-56.14	2	41.09	Average	54	Pass
NVNT	ac20	5240	Ant1	5460	-49.9	2	47.33	Peak	68.2	Pass
NVNT	ac20	5240	Ant1	5460	-56.66	2	40.57	Average	54	Pass

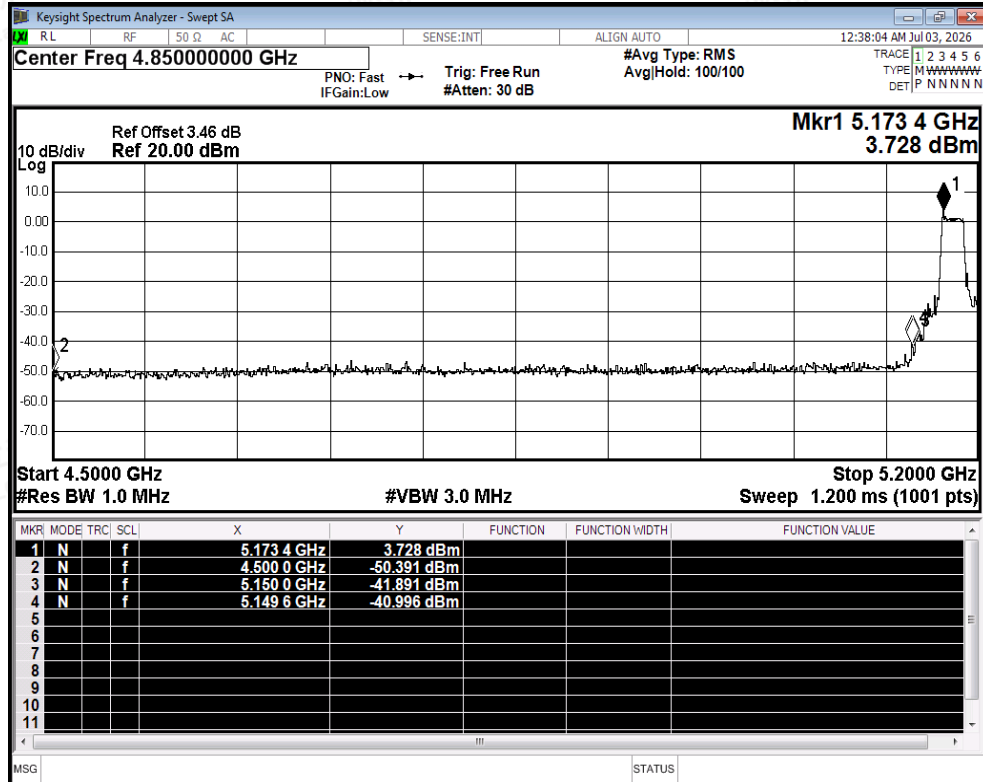


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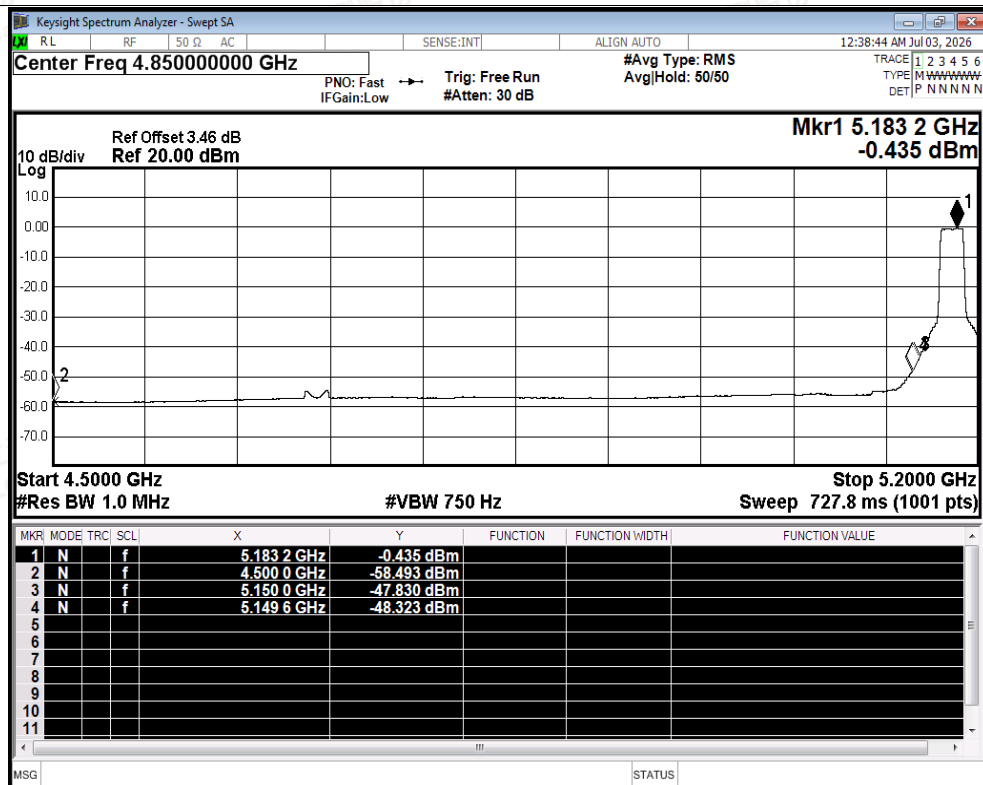
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Restrict Band NVNT a 5180MHz Ant1 Peak



Restrict Band NVNT a 5180MHz Ant1 Average

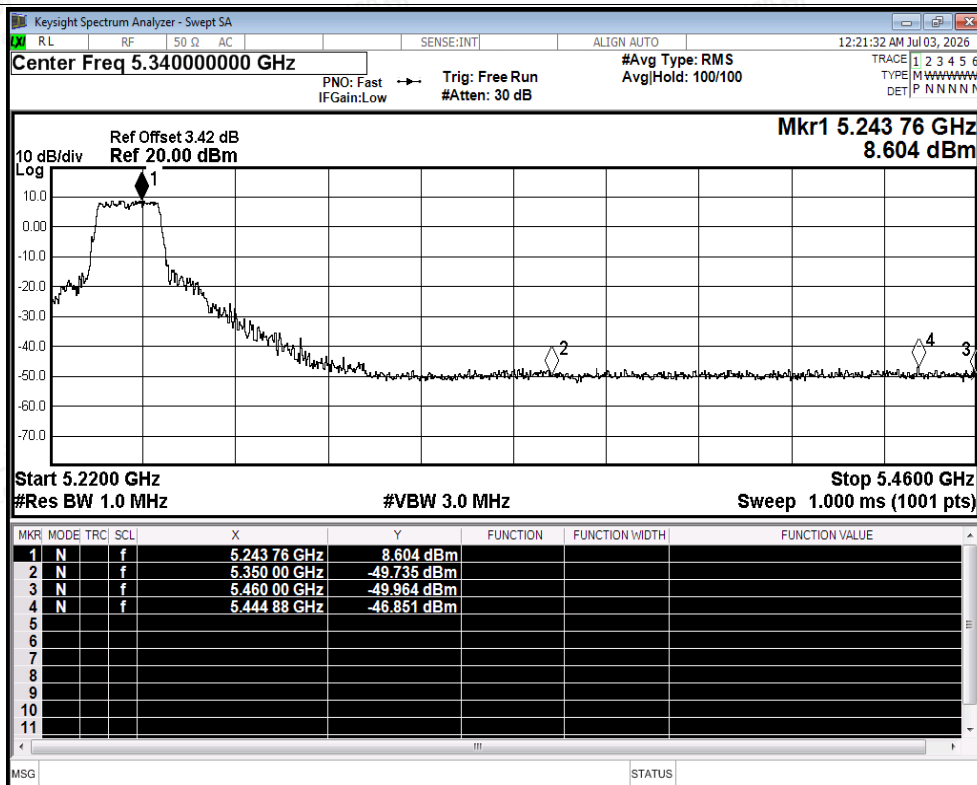


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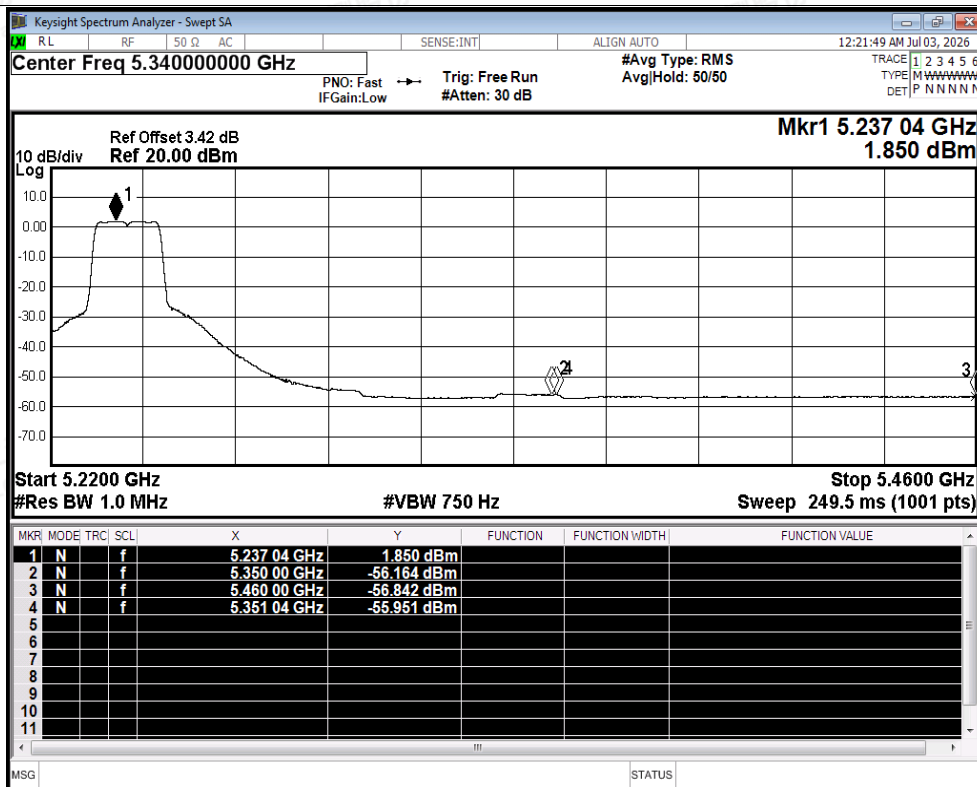
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Restrict Band NVNT a 5240MHz Ant1 Peak



Restrict Band NVNT a 5240MHz Ant1 Average

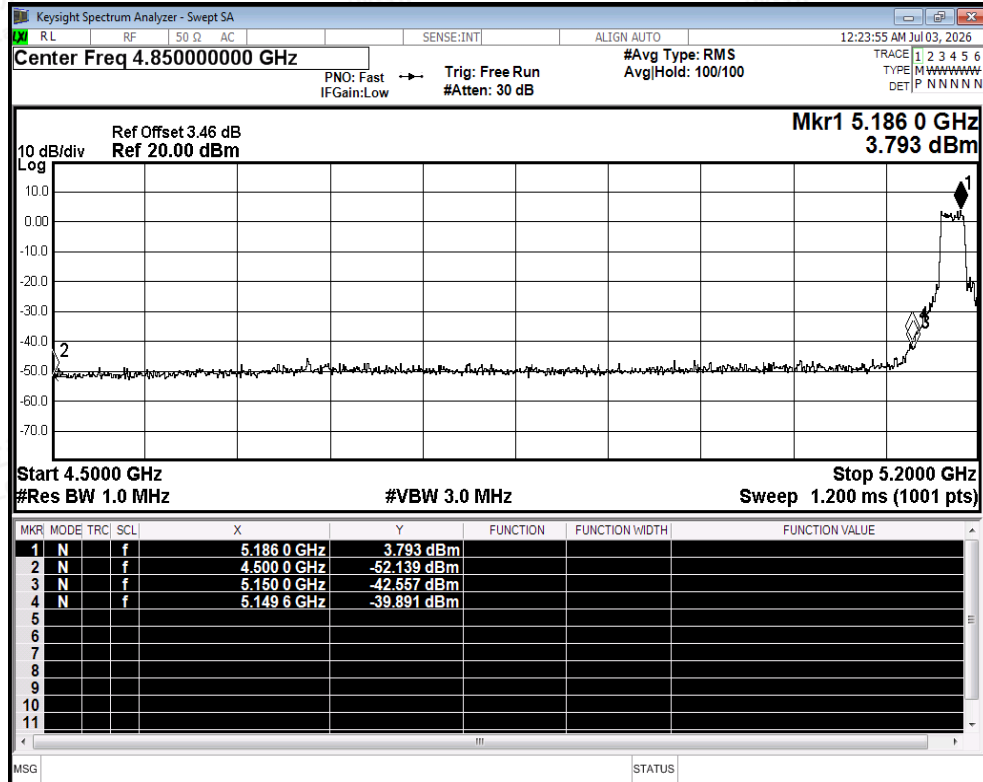


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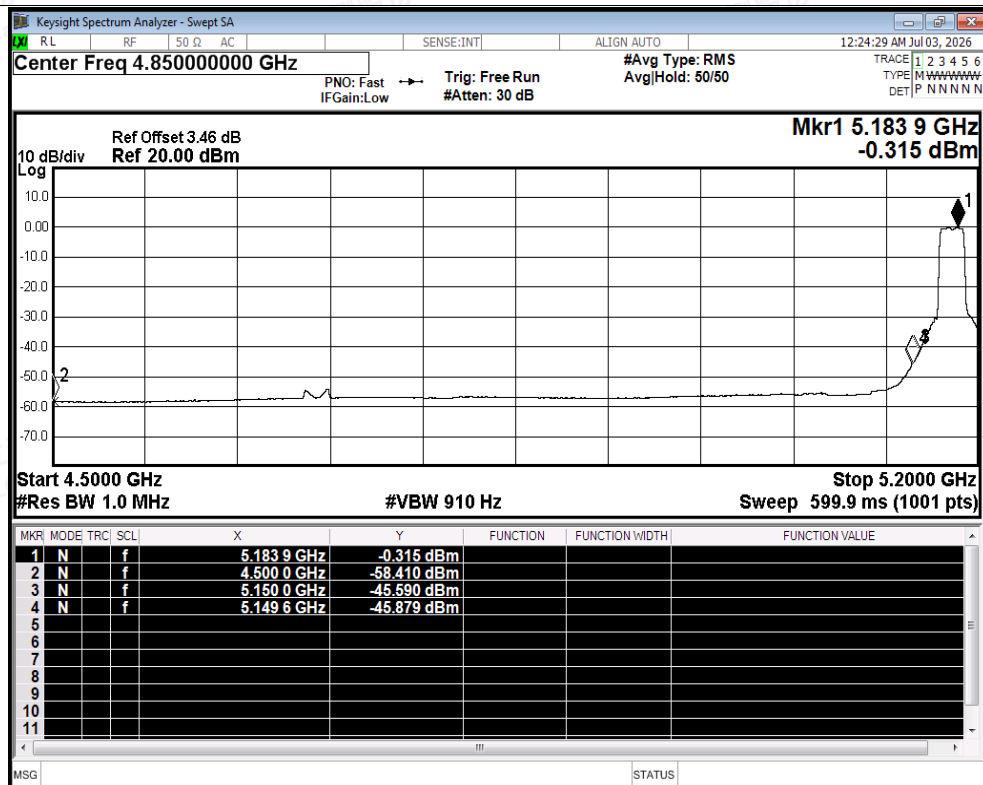
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Restrict Band NVNT n20 5180MHz Ant1 Peak



Restrict Band NVNT n20 5180MHz Ant1 Average

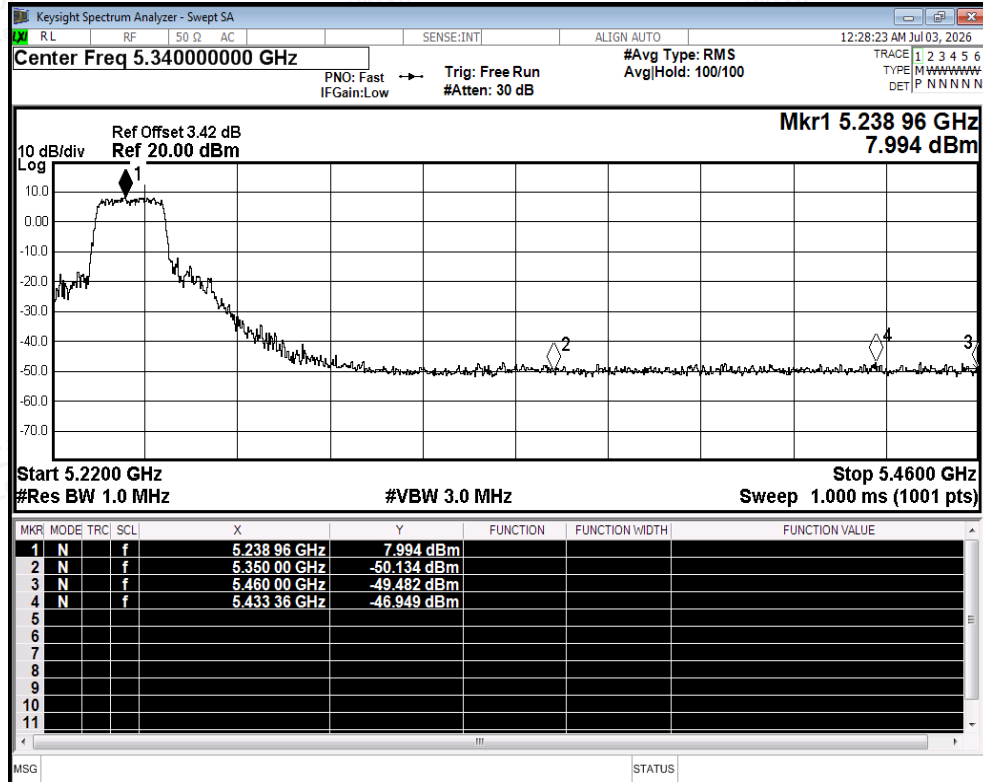


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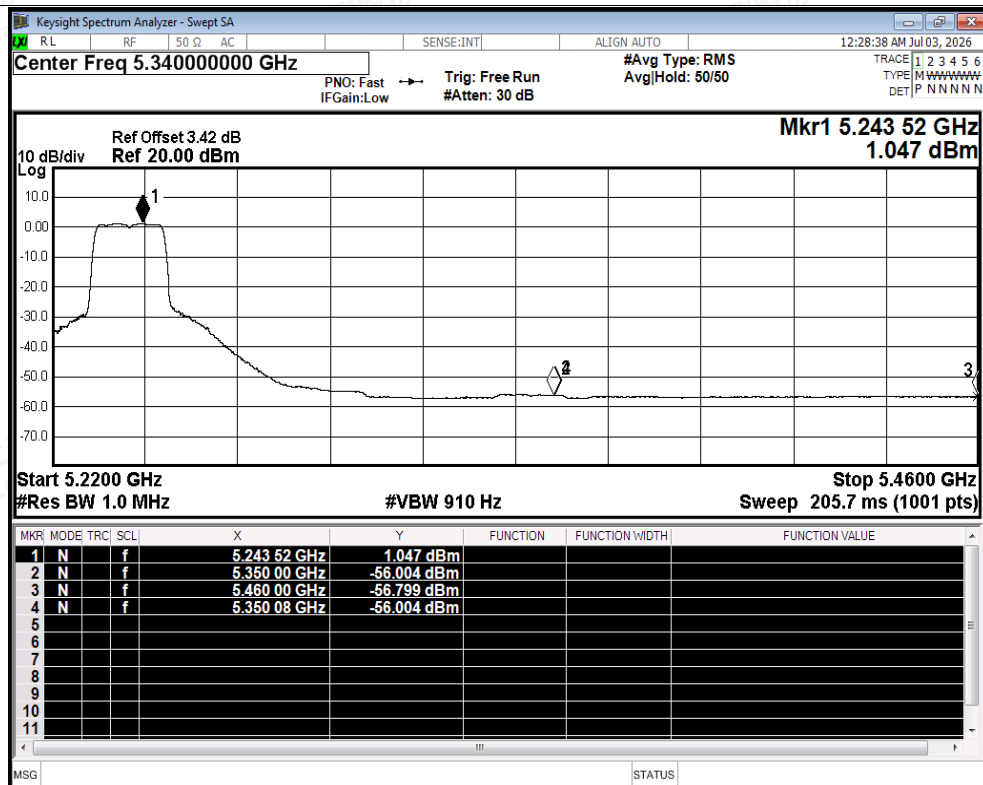
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Restrict Band NVNT n20 5240MHz Ant1 Peak



Restrict Band NVNT n20 5240MHz Ant1 Average

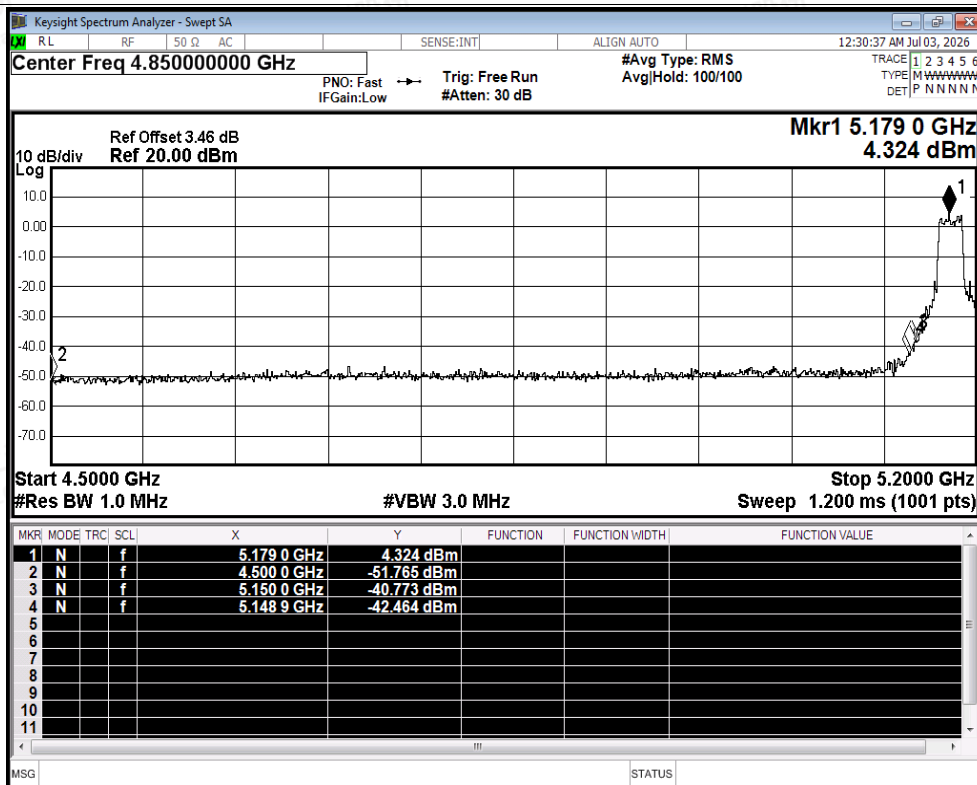


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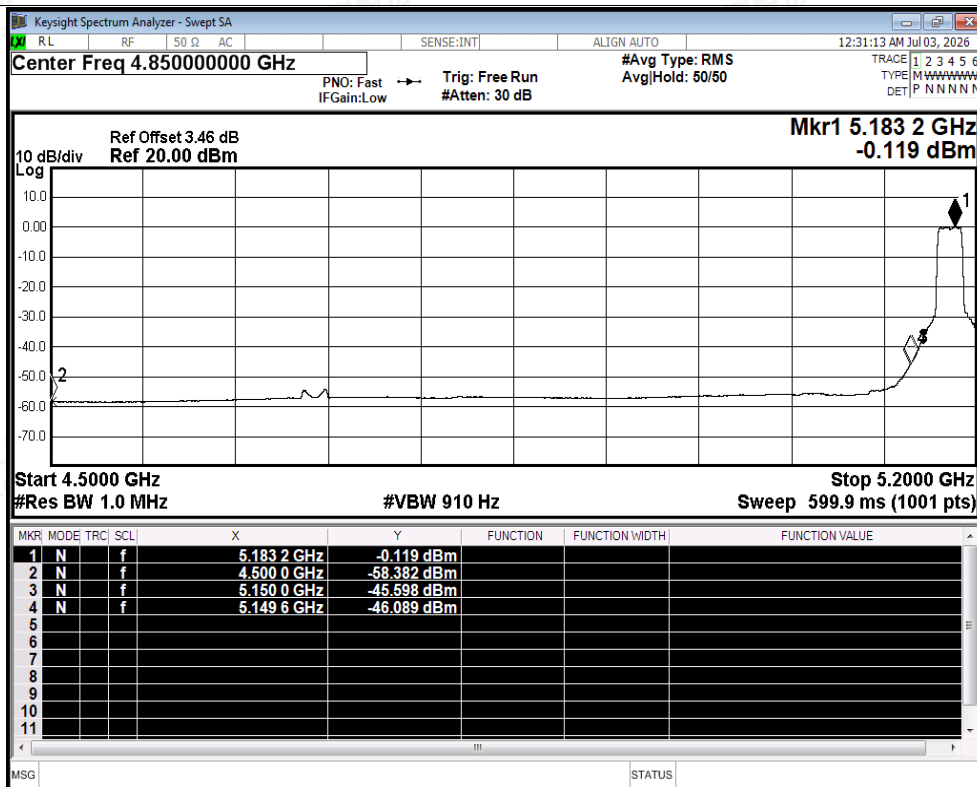
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Restrict Band NVNT ac20 5180MHz Ant1 Peak



Restrict Band NVNT ac20 5180MHz Ant1 Average

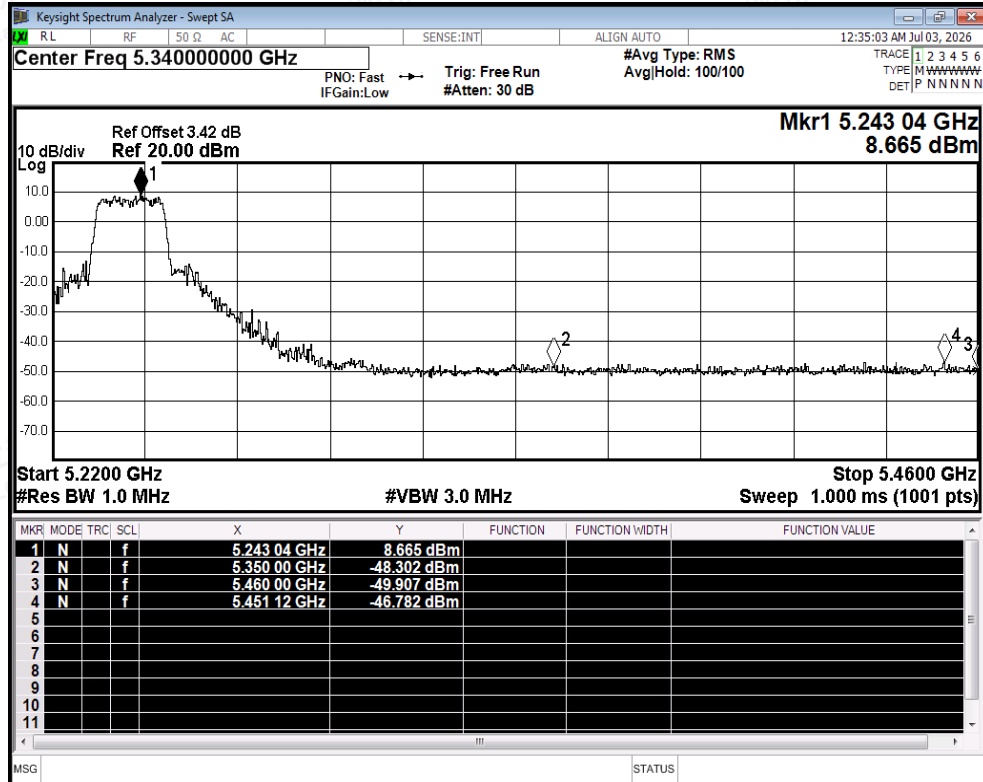


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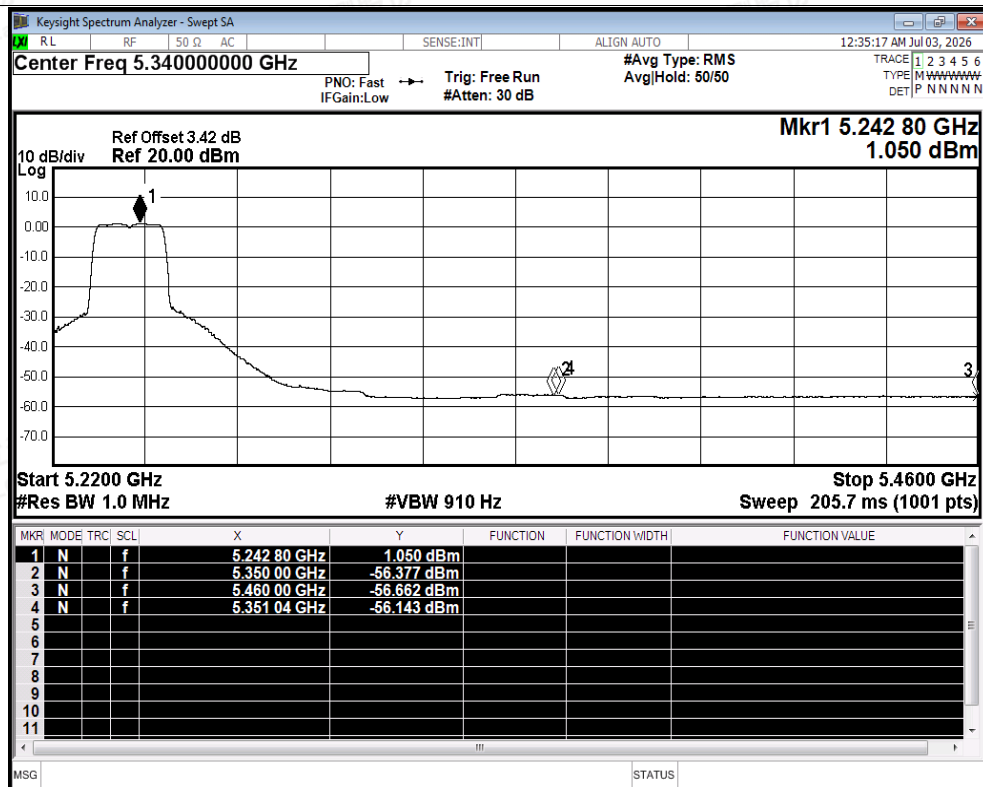
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Restrict Band NVNT ac20 5240MHz Ant1 Peak



Restrict Band NVNT ac20 5240MHz Ant1 Average



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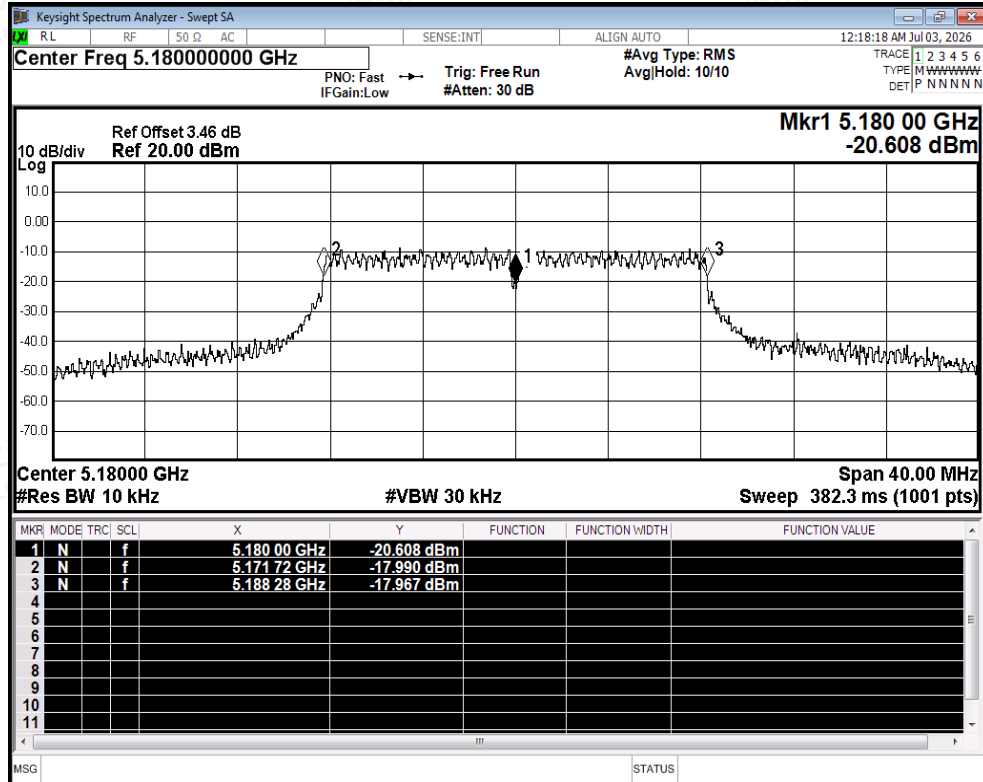
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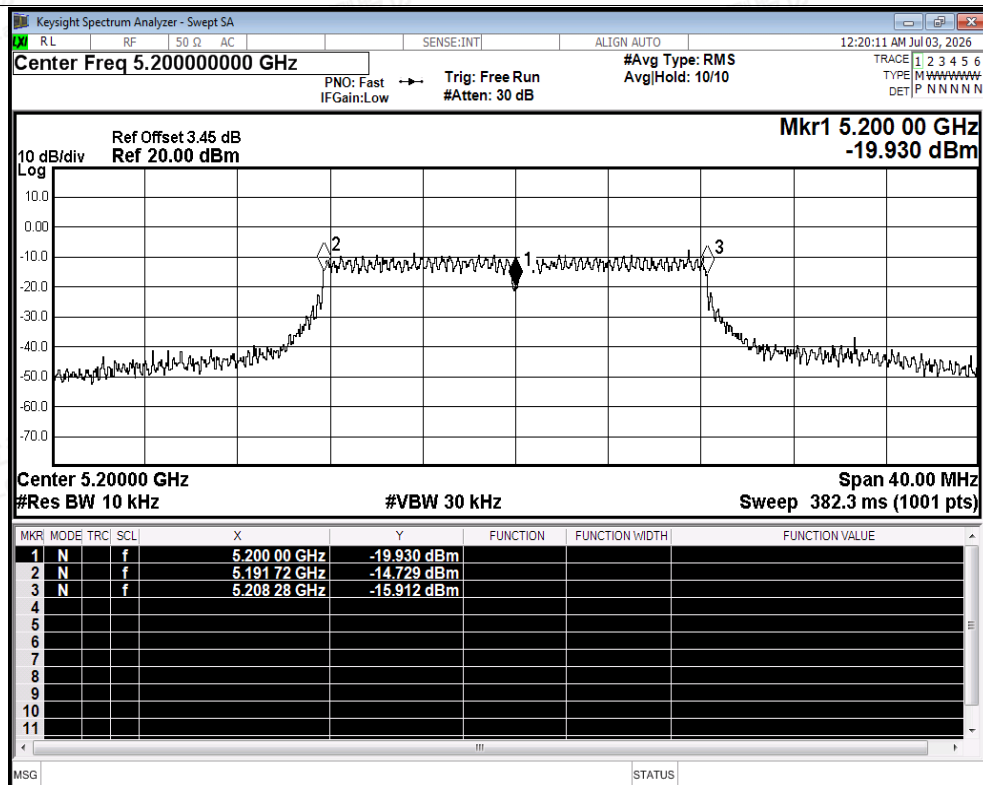
D.5 Frequency Stability

Condition	Mode	Frequency (MHz)	Antenna	Measured Frequency (MHz)	Frequency Error (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
NVNT	a	5180	Ant1	5180	0	0	25	Pass
NVNT	a	5200	Ant1	5200	0	0	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	5239.96	-40000	-7.63	25	Pass
NVNT	ac20	5180	Ant1	5180	0	0	25	Pass
NVNT	ac20	5200	Ant1	5200	0	0	25	Pass
NVNT	ac20	5240	Ant1	5239.98	-20000	-3.82	25	Pass





Freq. Stability NVNT a 5180MHz Ant1



Freq. Stability NVNT a 5200MHz Ant1

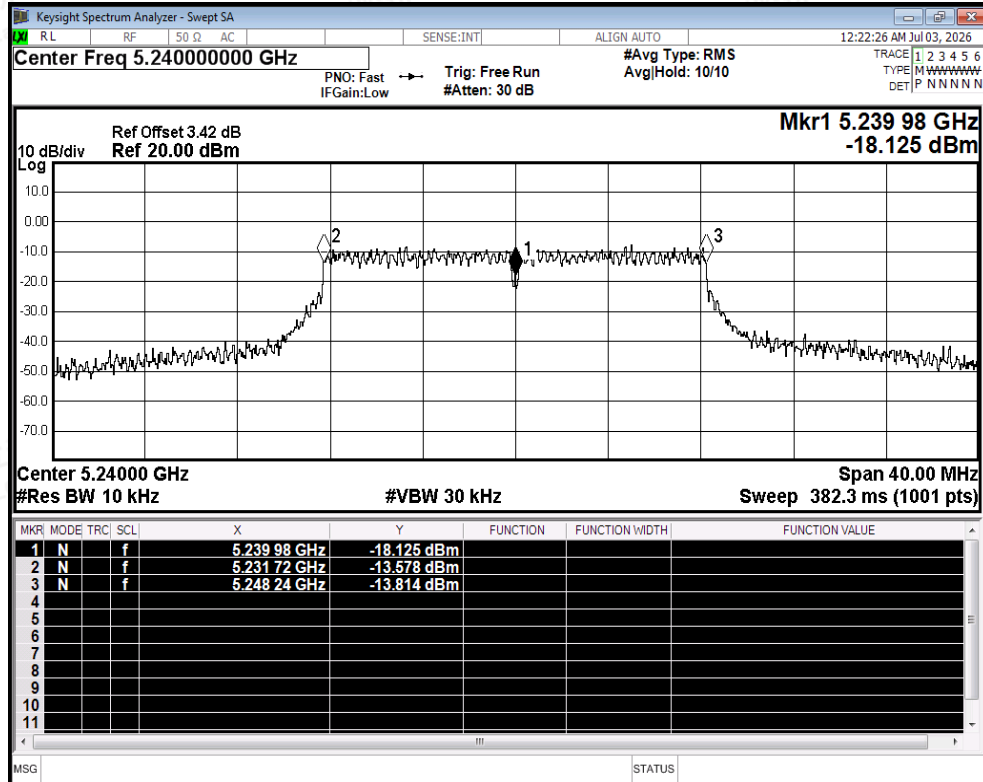


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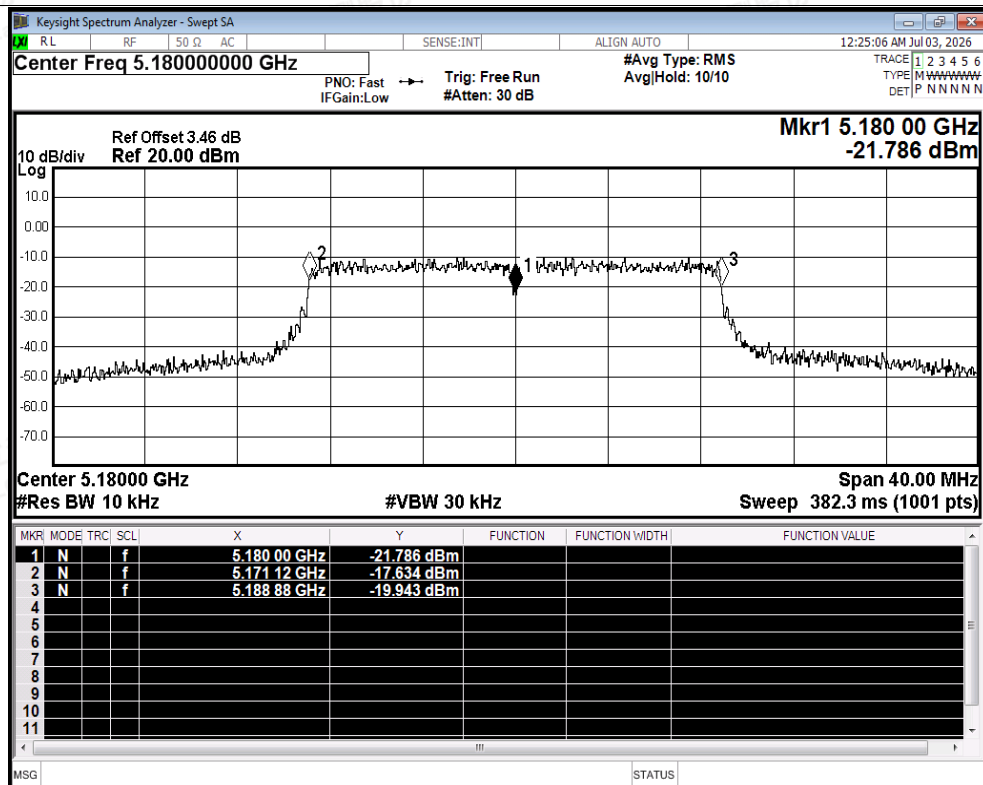
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Freq. Stability NVNT a 5240MHz Ant1



Freq. Stability NVNT n20 5180MHz Ant1

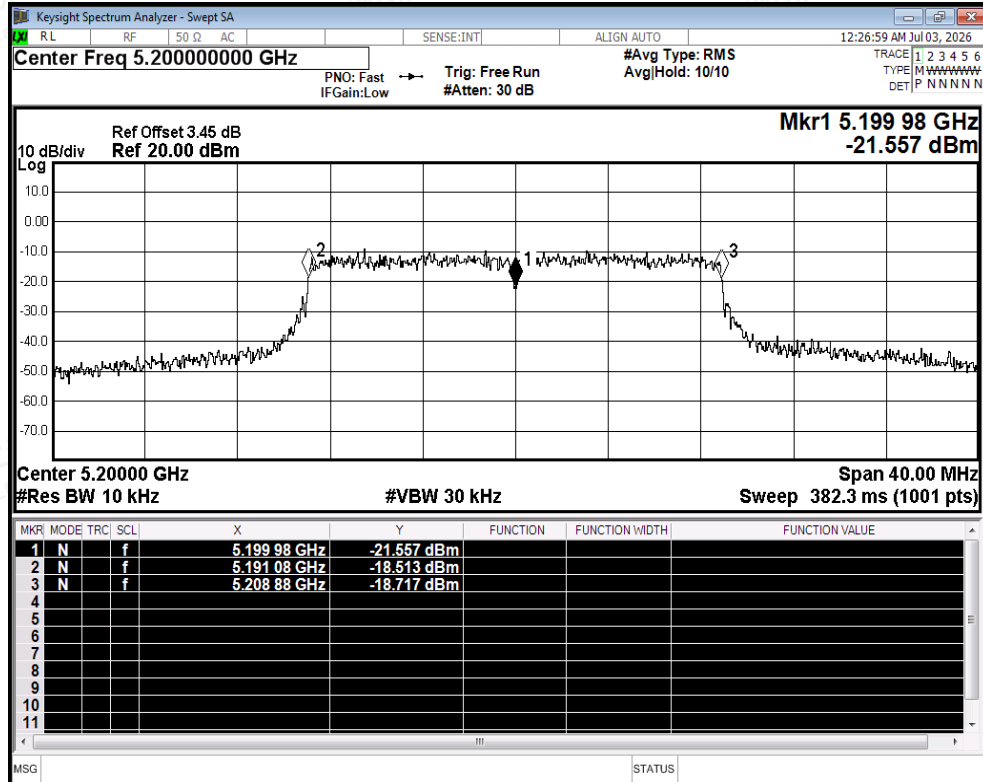


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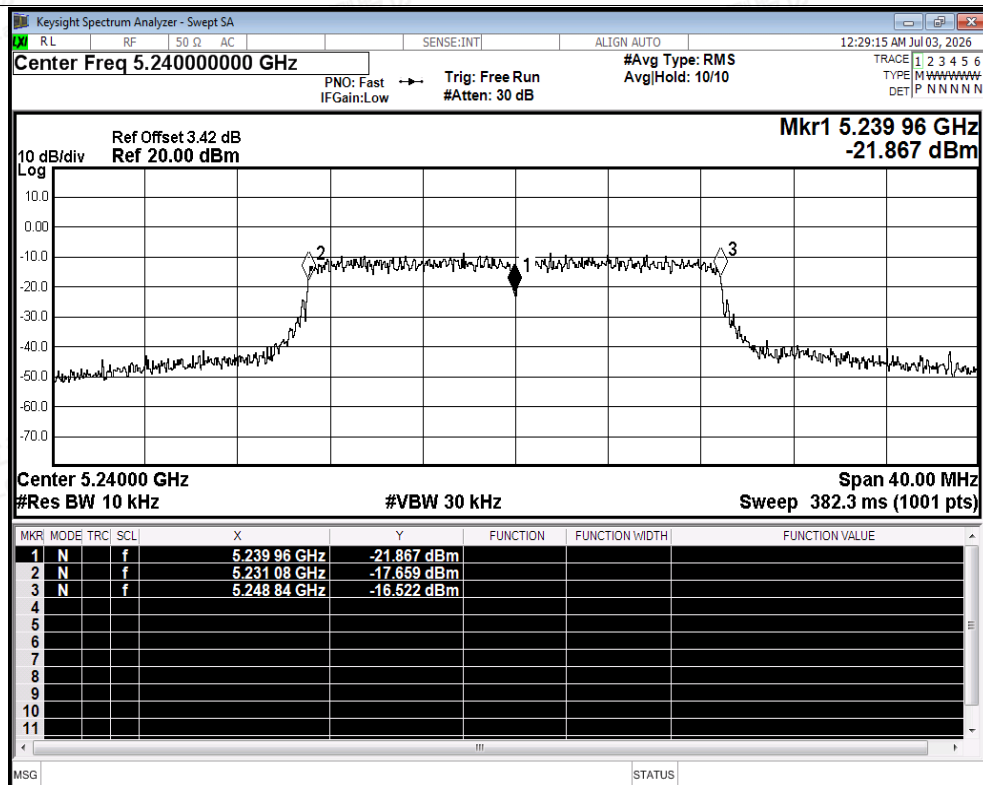
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Freq. Stability NVNT n20 5200MHz Ant1



Freq. Stability NVNT n20 5240MHz Ant1

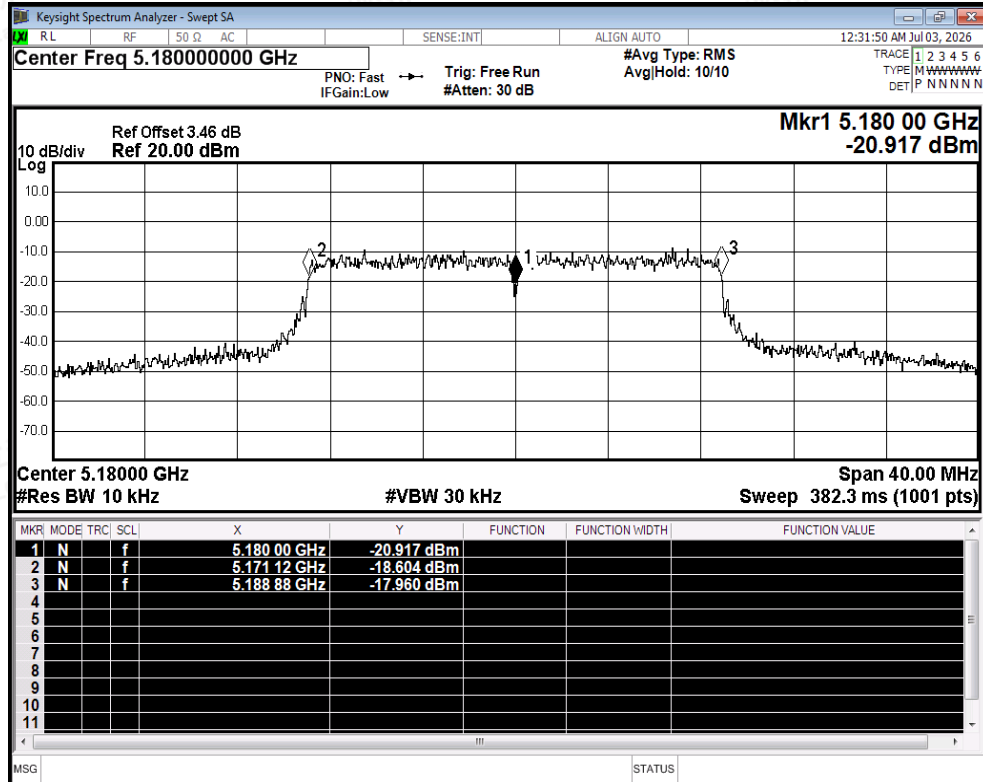


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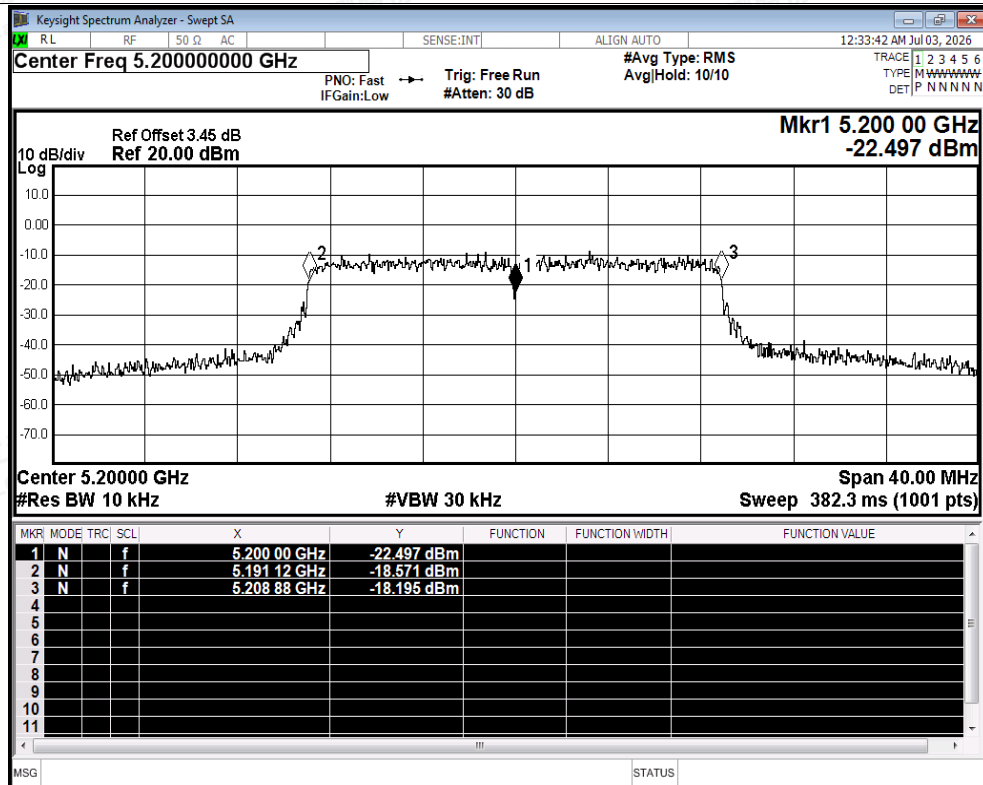
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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Freq. Stability NVNT ac20 5180MHz Ant1



Freq. Stability NVNT ac20 5200MHz Ant1

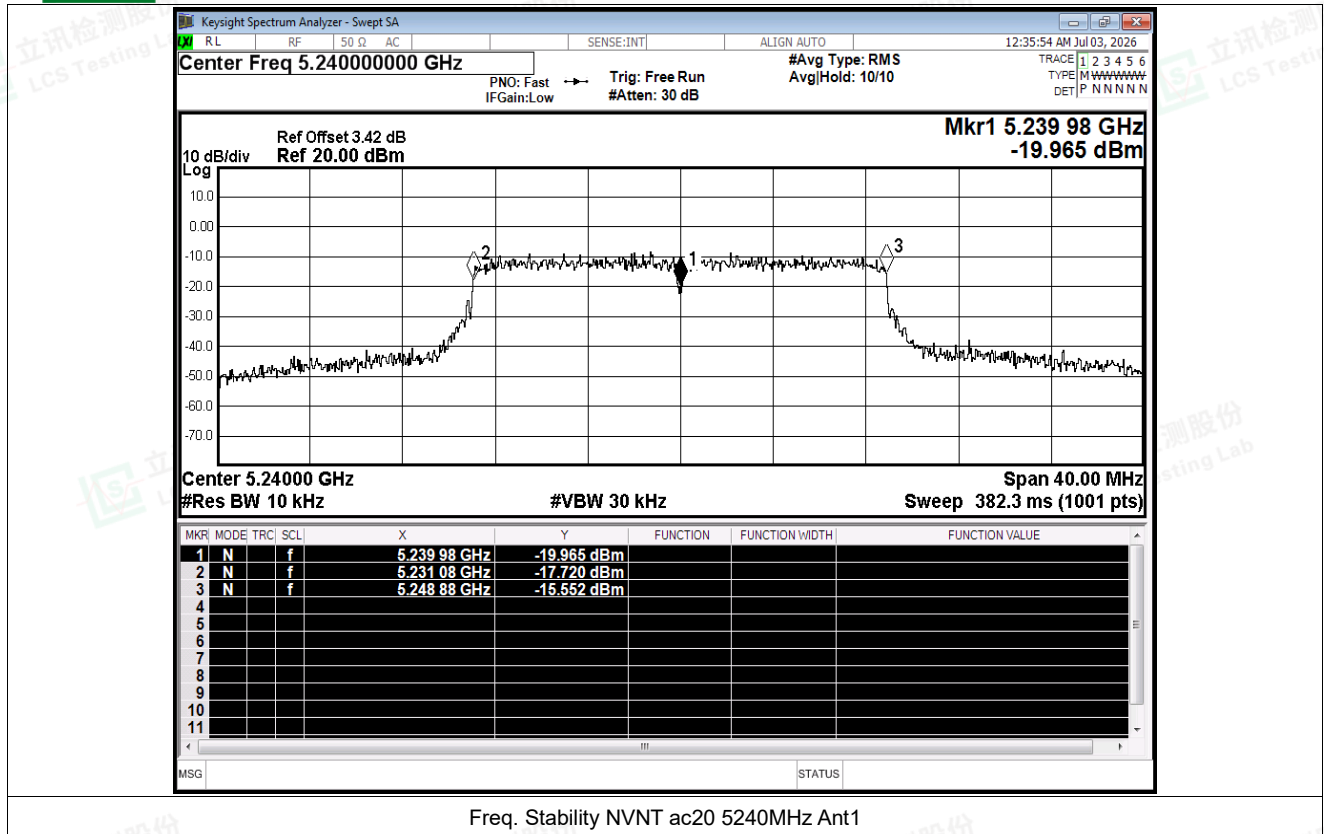


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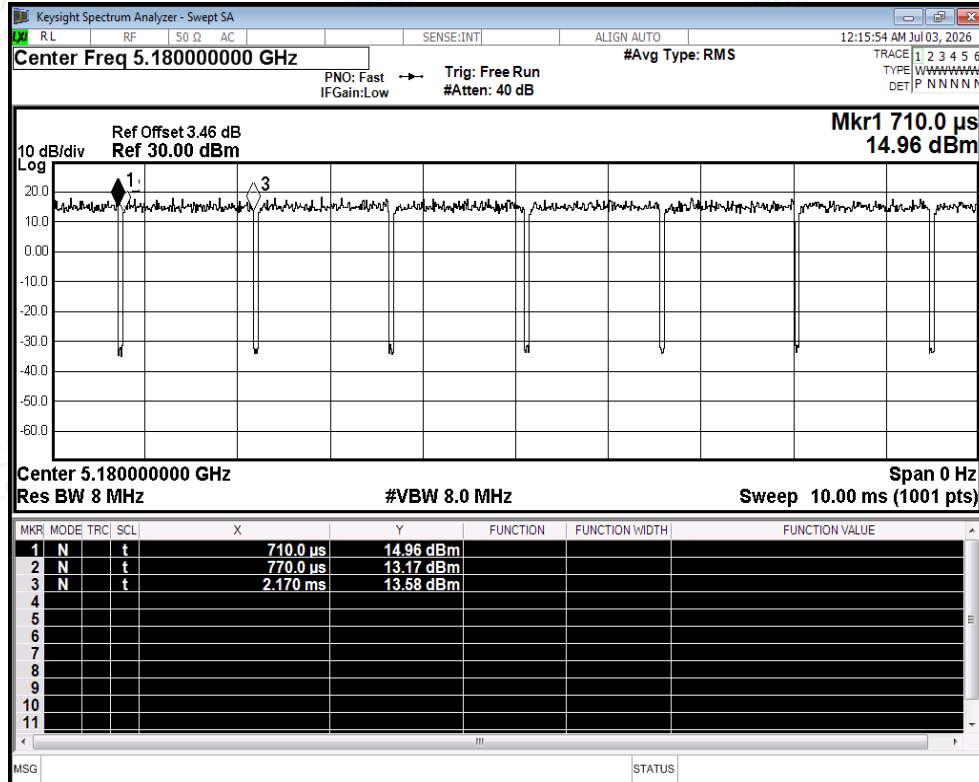
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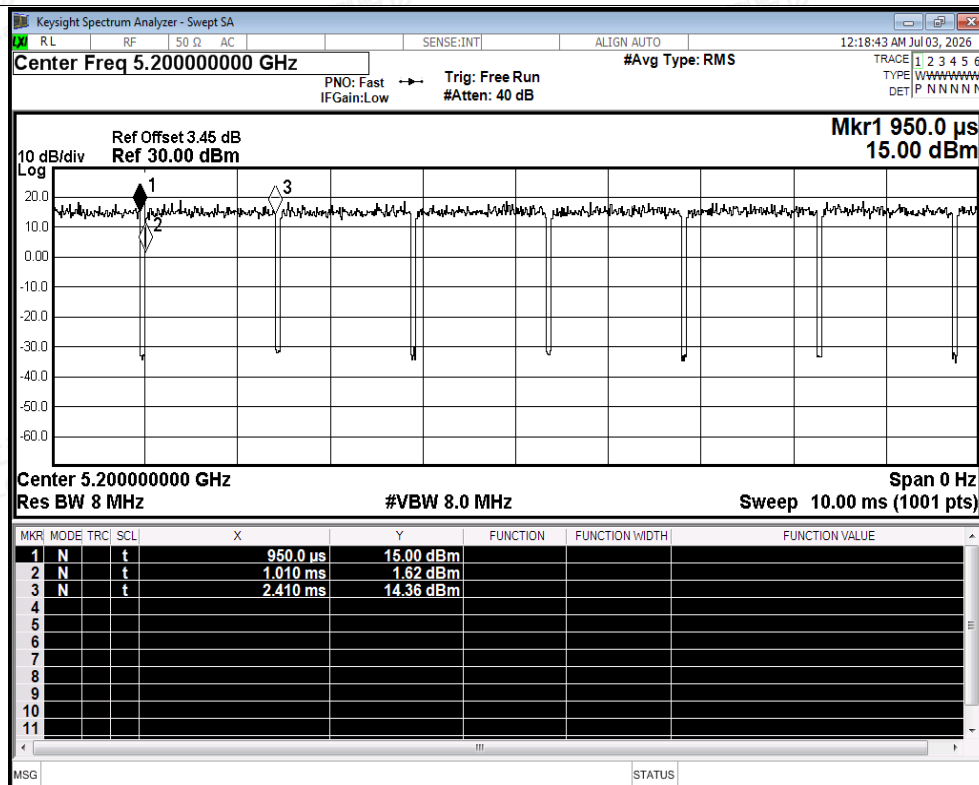
D.6 Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	a	5180	Ant1	95.89	0.18	0.71
NVNT	a	5200	Ant1	95.89	0.18	0.71
NVNT	a	5240	Ant1	95.89	0.18	0.71
NVNT	n20	5180	Ant1	94.4	0.25	0.85
NVNT	n20	5200	Ant1	95.16	0.22	0.85
NVNT	n20	5240	Ant1	95.16	0.22	0.85
NVNT	ac20	5180	Ant1	95.2	0.21	0.84
NVNT	ac20	5200	Ant1	94.44	0.25	0.84
NVNT	ac20	5240	Ant1	94.44	0.25	0.84





Duty Cycle NVNT a 5180MHz Ant1



Duty Cycle NVNT a 5200MHz Ant1

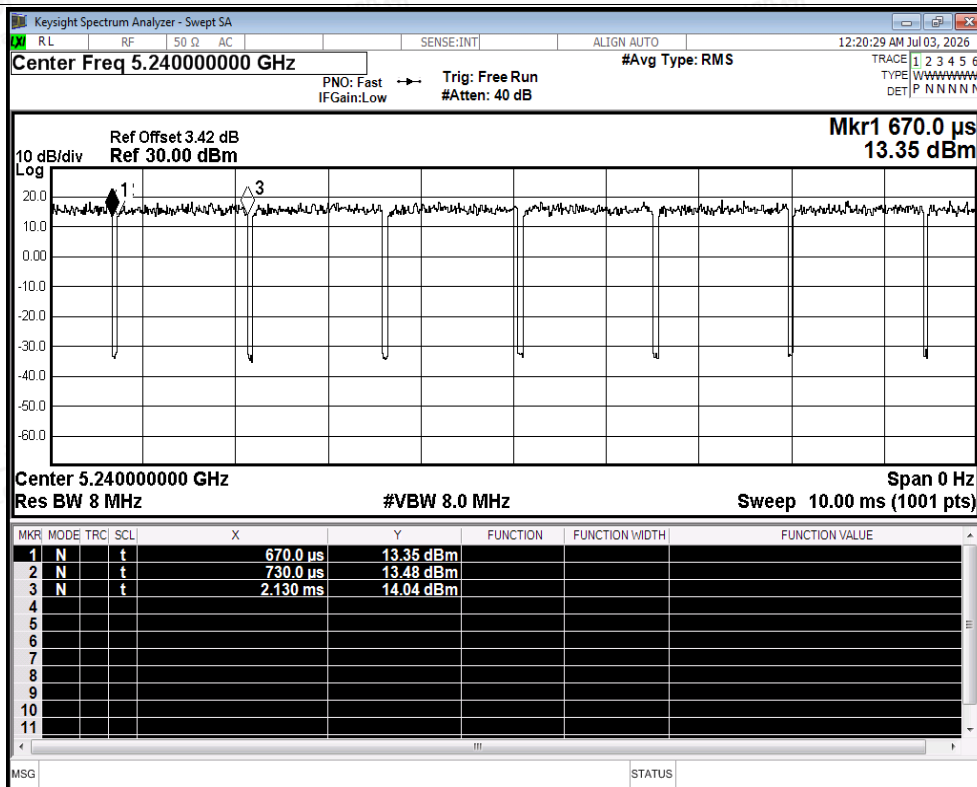


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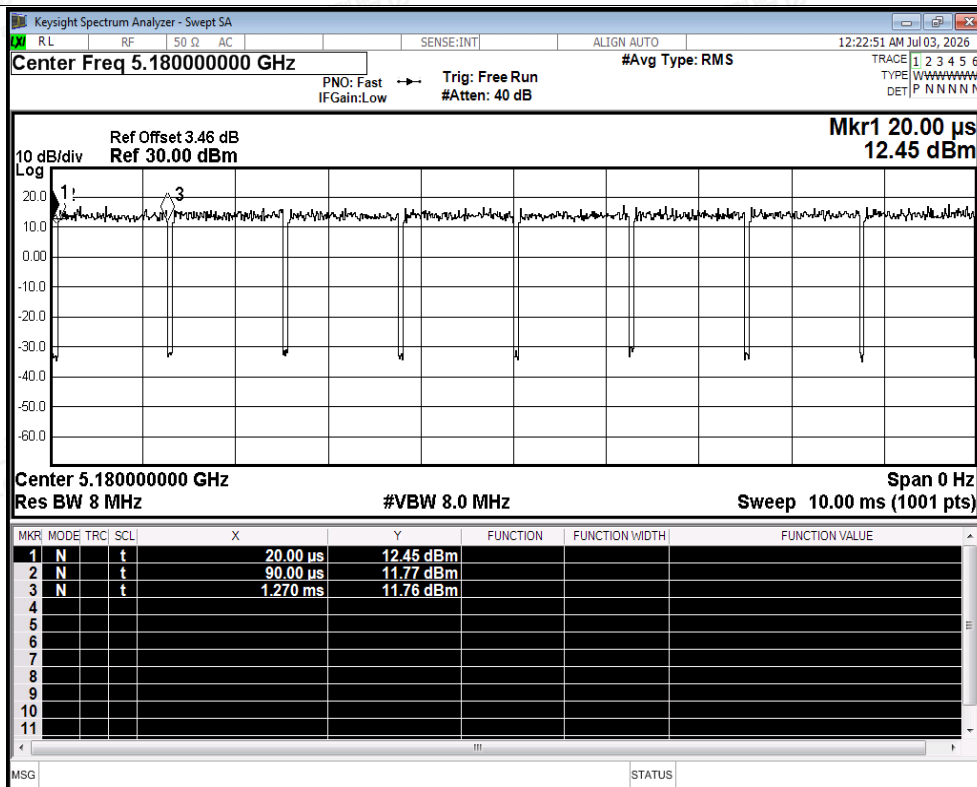
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Duty Cycle NVNT a 5240MHz Ant1



Duty Cycle NVNT n20 5180MHz Ant1

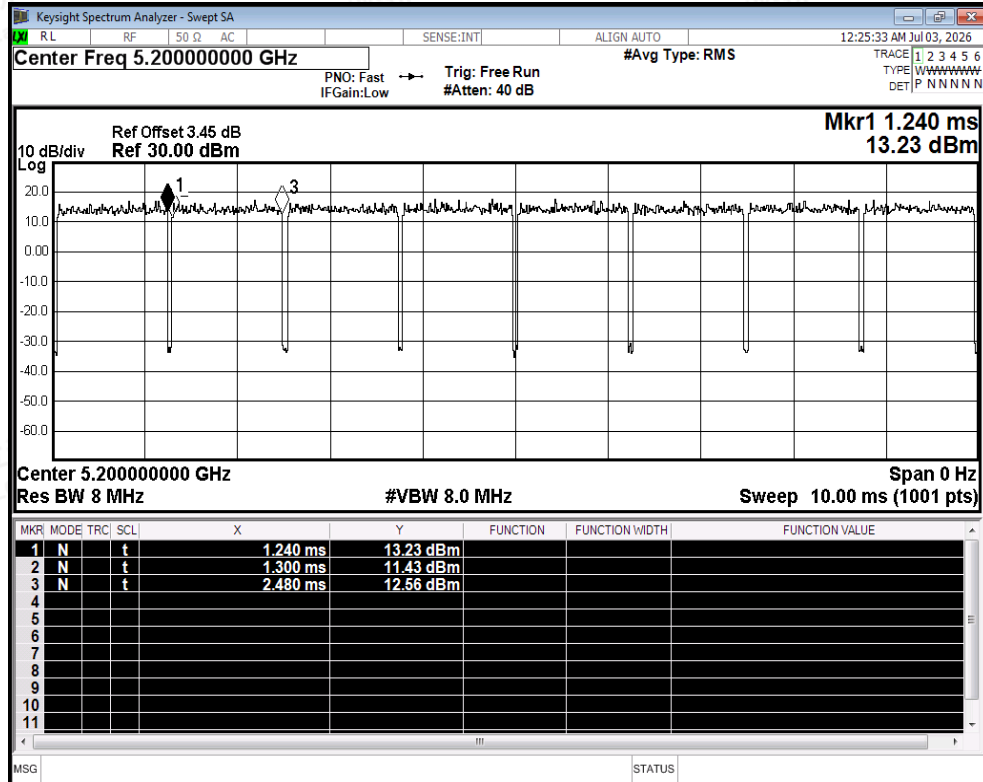


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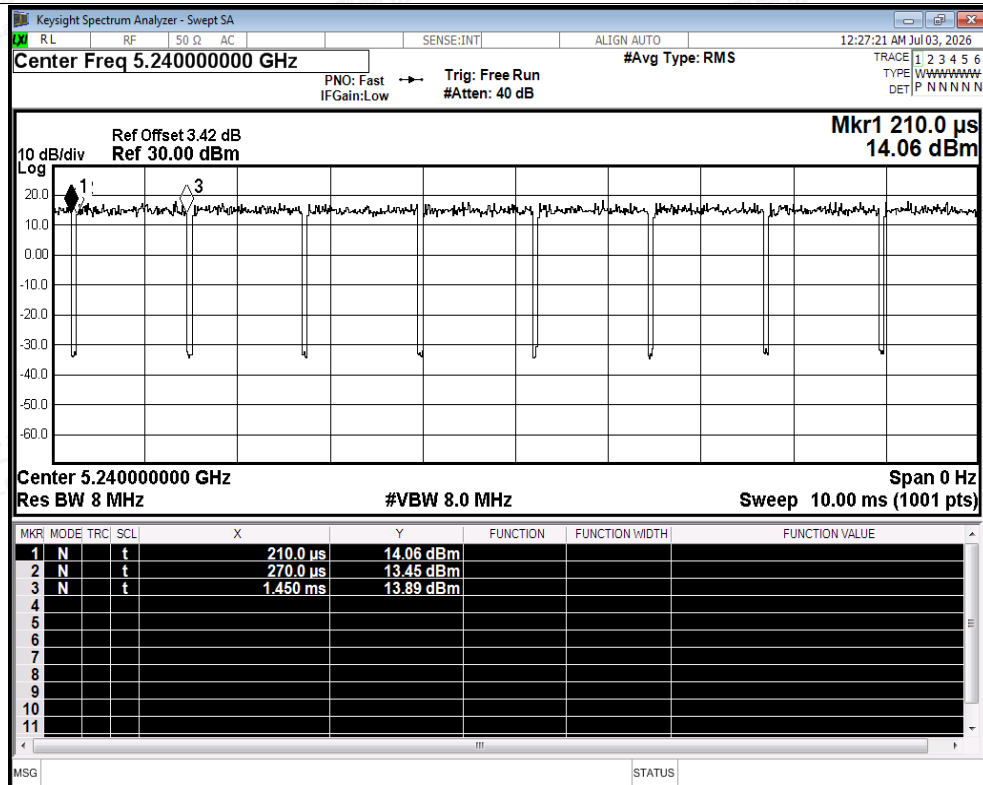
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Duty Cycle NVNT n20 5200MHz Ant1



Duty Cycle NVNT n20 5240MHz Ant1

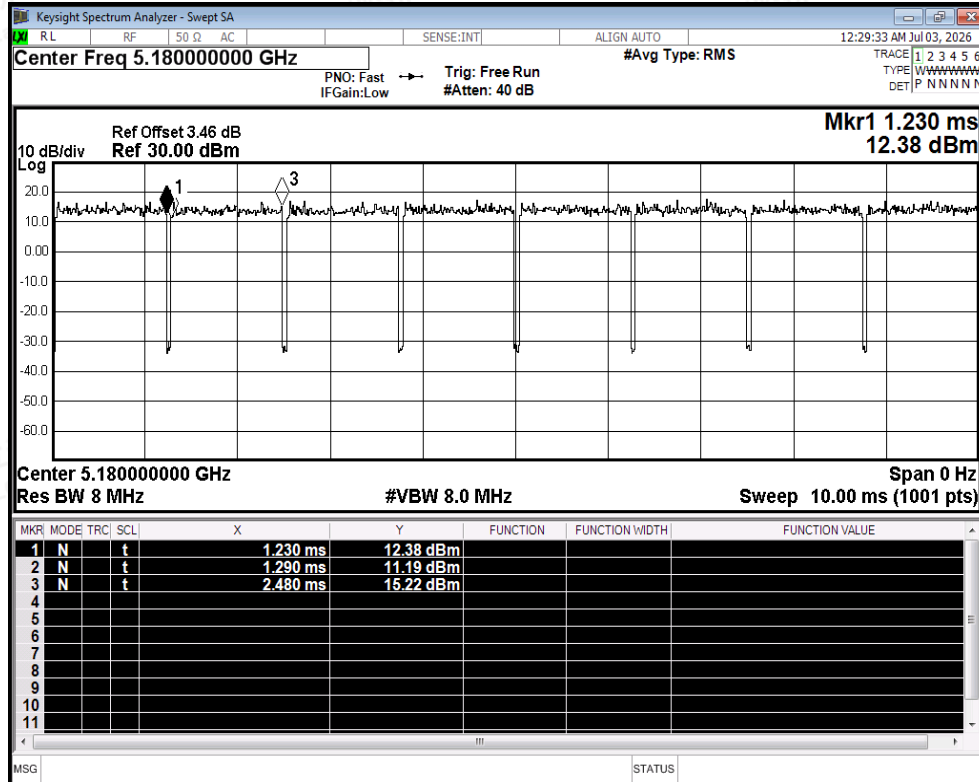


Shenzhen LCS Compliance Testing Laboratory Ltd.

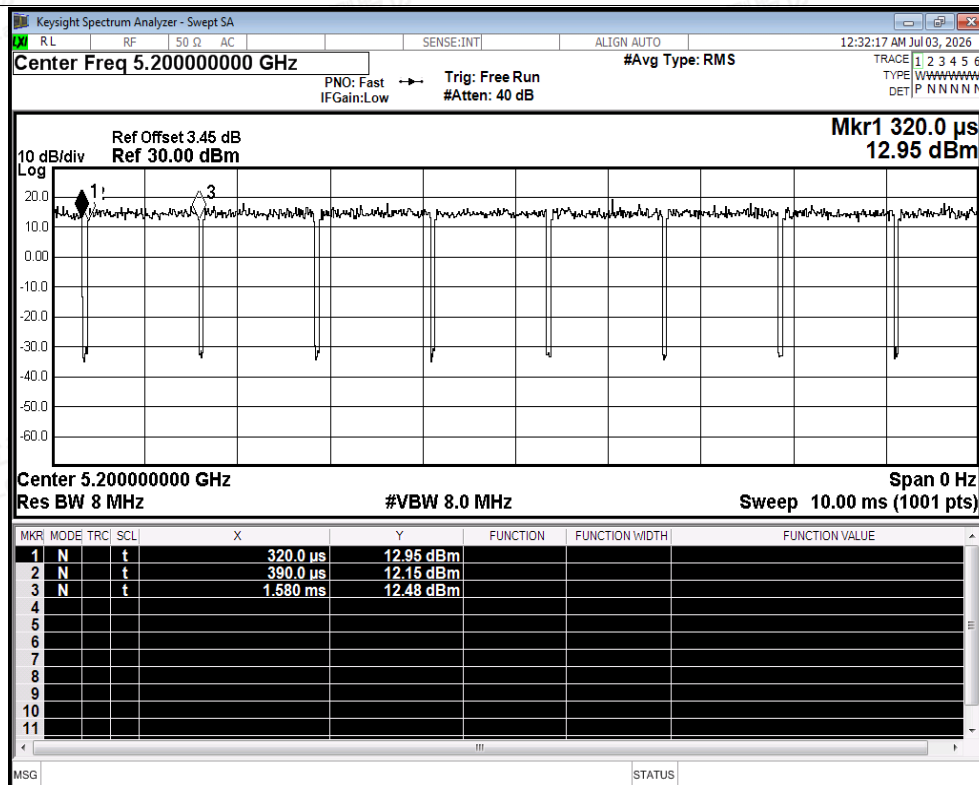
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Duty Cycle NVNT ac20 5180MHz Ant1



Duty Cycle NVNT ac20 5200MHz Ant1

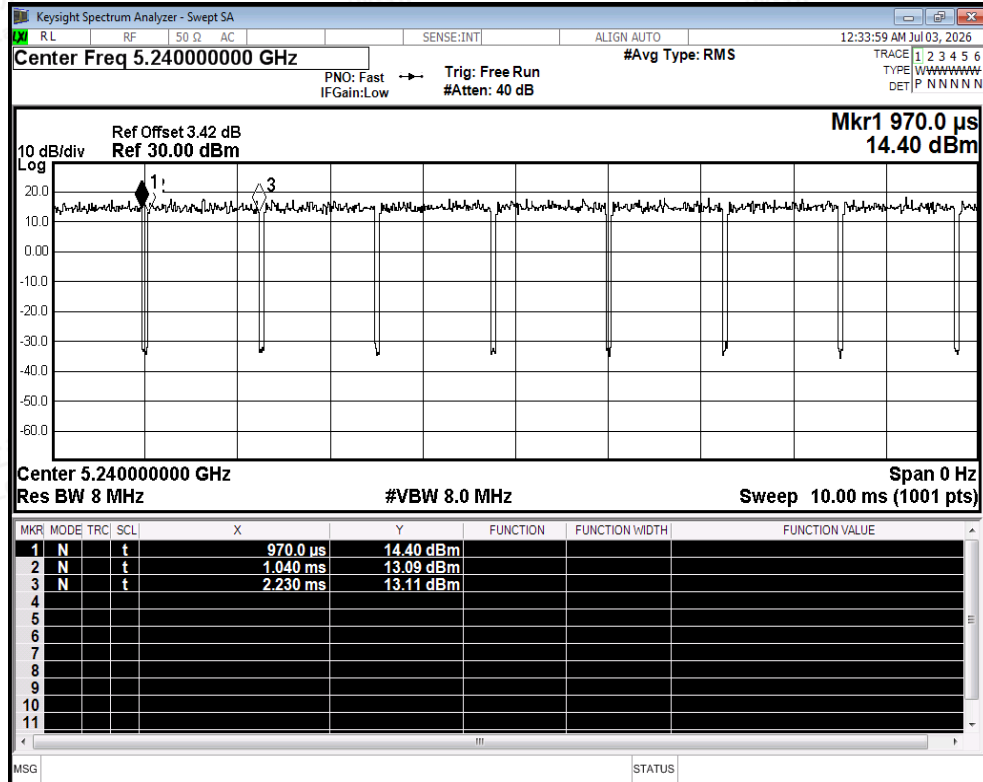


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