



Appendix D

RF Test Data for 5.3GWIFI (Conducted Measurement)

Product Name: Robot Vacuum Cleaner

Test Model: SL40

Environmental Conditions

Temperature:	23.8° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Paddi Chen
Supervised by:	Nick Peng



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D.1 -26dB Bandwidth

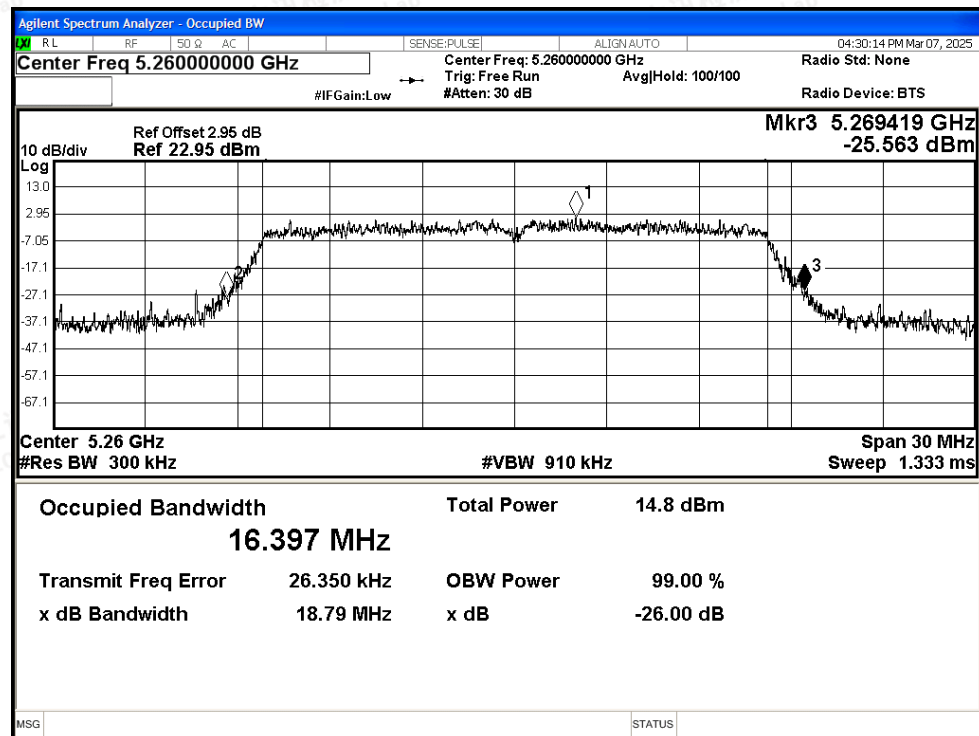
Condition	Mode	Frequency (MHz)	Antenna	-26 dB Bandwidth (MHz)	Limit -26 dB Bandwidth (MHz)	Verdict
NVNT	a	5260	Ant1	18.786	≥ 0.5	Pass
NVNT	a	5300	Ant1	19.113	≥ 0.5	Pass
NVNT	a	5320	Ant1	18.855	≥ 0.5	Pass
NVNT	n20	5260	Ant1	19.368	≥ 0.5	Pass
NVNT	n20	5300	Ant1	19.61	≥ 0.5	Pass
NVNT	n20	5320	Ant1	22.087	≥ 0.5	Pass
NVNT	n40	5270	Ant1	39.362	≥ 0.5	Pass
NVNT	n40	5310	Ant1	47.681	≥ 0.5	Pass





Test Graphs

-26dB Bandwidth NVNT a 5260MHz Ant1



-26dB Bandwidth NVNT a 5300MHz Ant1



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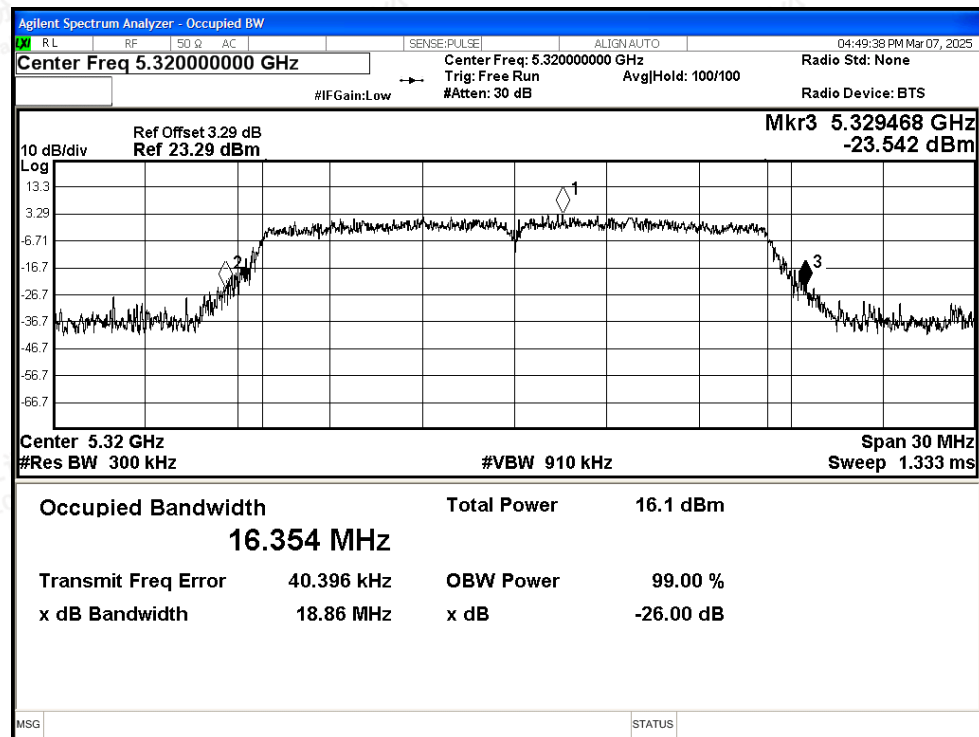
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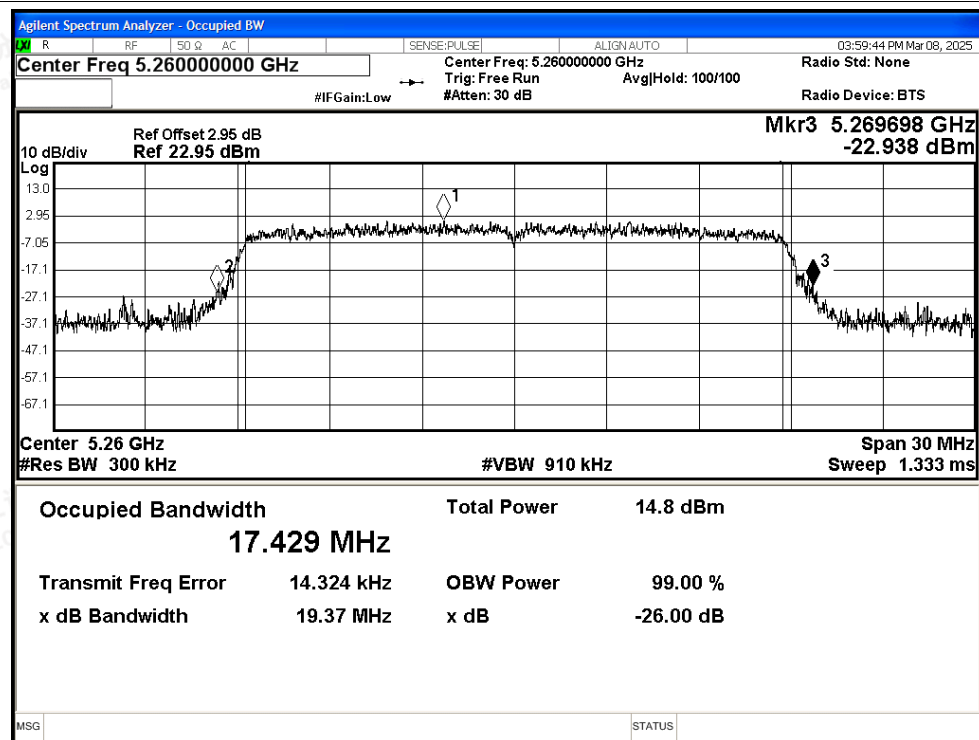
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-26dB Bandwidth NVNT a 5320MHz Ant1



-26dB Bandwidth NVNT n20 5260MHz Ant1



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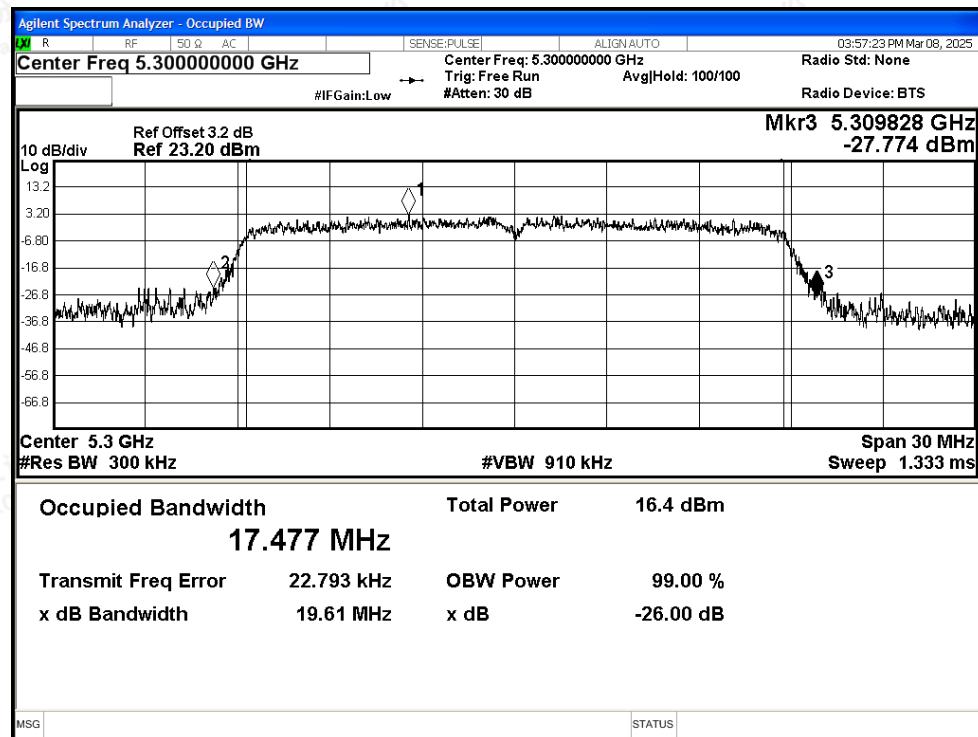
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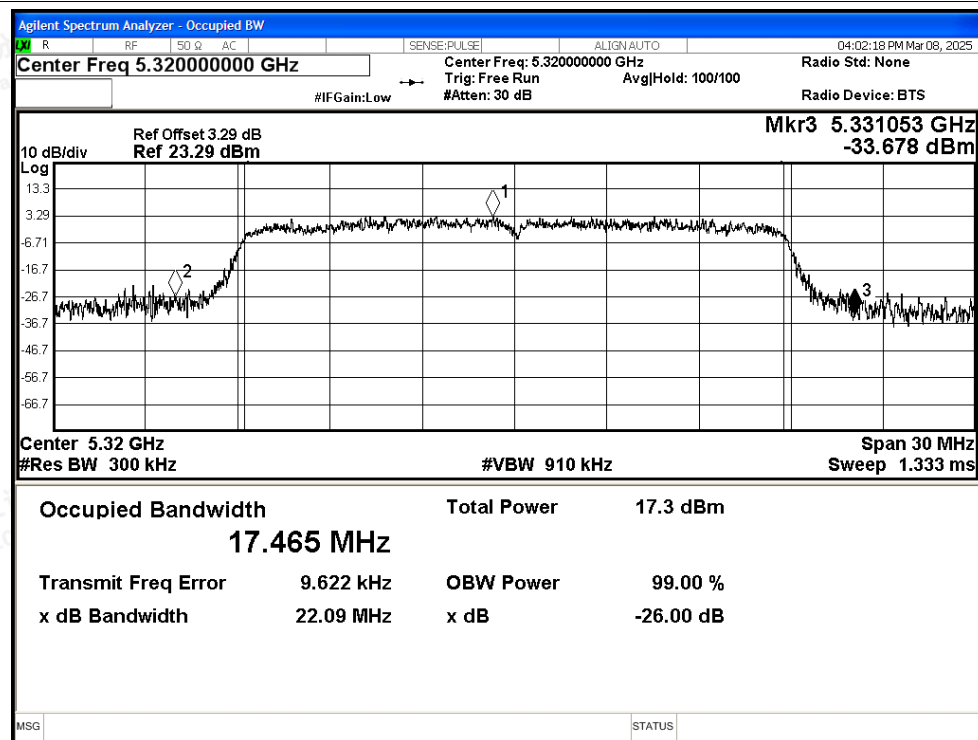
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-26dB Bandwidth NVNT n20 5300MHz Ant1



-26dB Bandwidth NVNT n20 5320MHz Ant1



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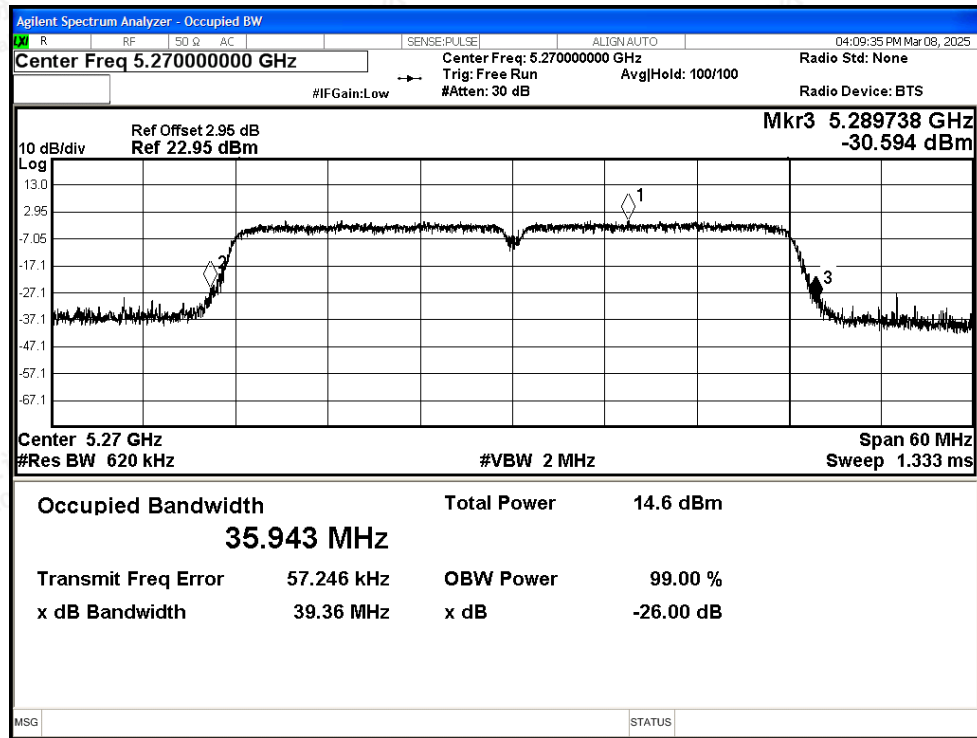
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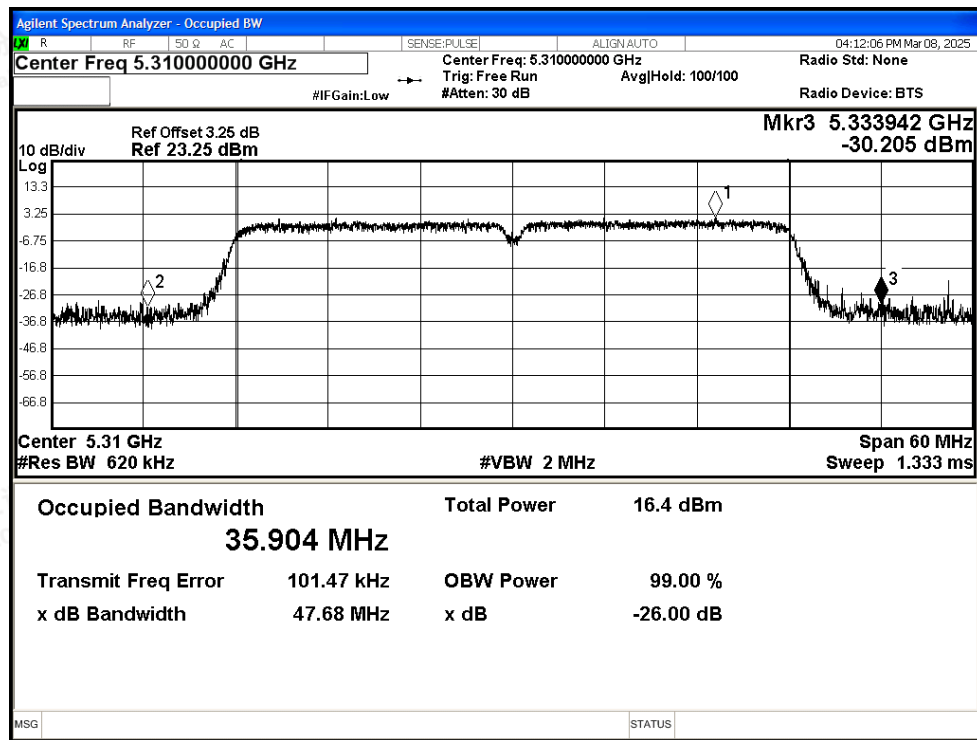
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-26dB Bandwidth NVNT n40 5270MHz Ant1



-26dB Bandwidth NVNT n40 5310MHz Ant1



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D.2 Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	a	5260	Ant1	4.62	6.96	11.58	18.22	Pass
NVNT	a	5300	Ant1	5	6.96	11.96	24	Pass
NVNT	a	5320	Ant1	4.12	6.96	11.08	24	Pass
NVNT	n20	5260	Ant1	3.92	6.96	10.88	24	Pass
NVNT	n20	5300	Ant1	4.03	7.71	11.74	24	Pass
NVNT	n20	5320	Ant1	4.57	6.96	11.53	24	Pass
NVNT	n40	5270	Ant1	6.36	3.17	9.53	24	Pass
NVNT	n40	5310	Ant1	8.68	3.17	11.85	24	Pass





D.3 Maximum Power Spectral Density Level

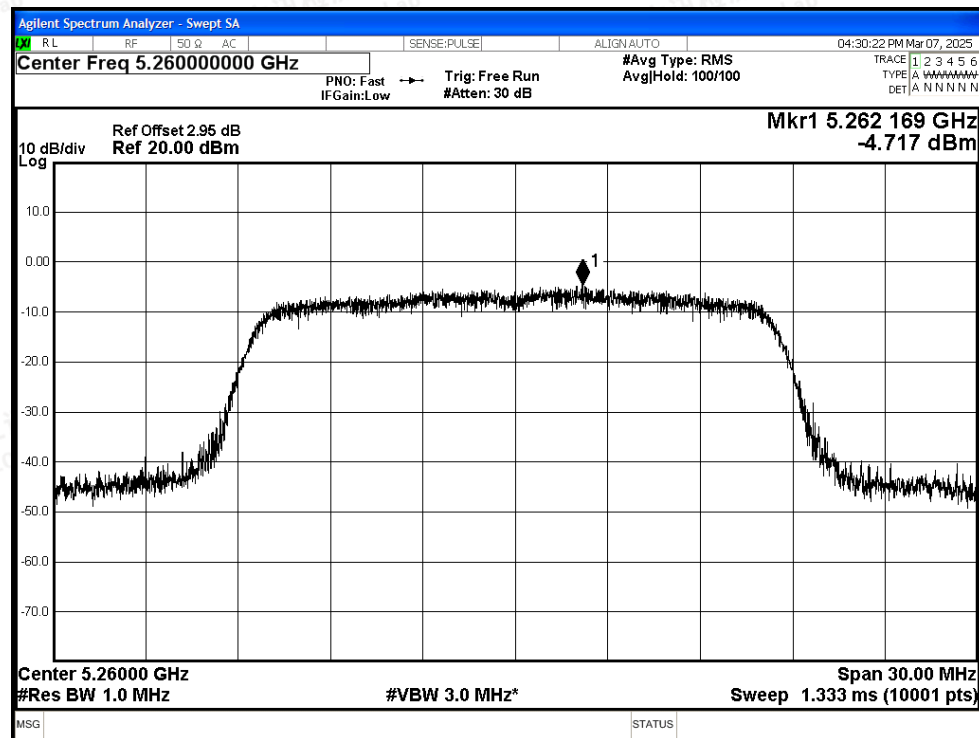
Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm)	Duty Factor (dB)	Total PSD (dBm)	Limit (dBm)	Verdict
NVNT	a	5260	Ant1	-4.72	6.96	2.24	11	Pass
NVNT	a	5300	Ant1	-4.36	6.96	2.6	11	Pass
NVNT	a	5320	Ant1	-4.38	6.96	2.58	11	Pass
NVNT	n20	5260	Ant1	-6.01	6.96	0.95	11	Pass
NVNT	n20	5300	Ant1	-3.06	7.71	4.65	11	Pass
NVNT	n20	5320	Ant1	-3.38	6.96	3.58	11	Pass
NVNT	n40	5270	Ant1	-6.96	3.17	-3.79	11	Pass
NVNT	n40	5310	Ant1	-5.52	3.17	-2.35	11	Pass



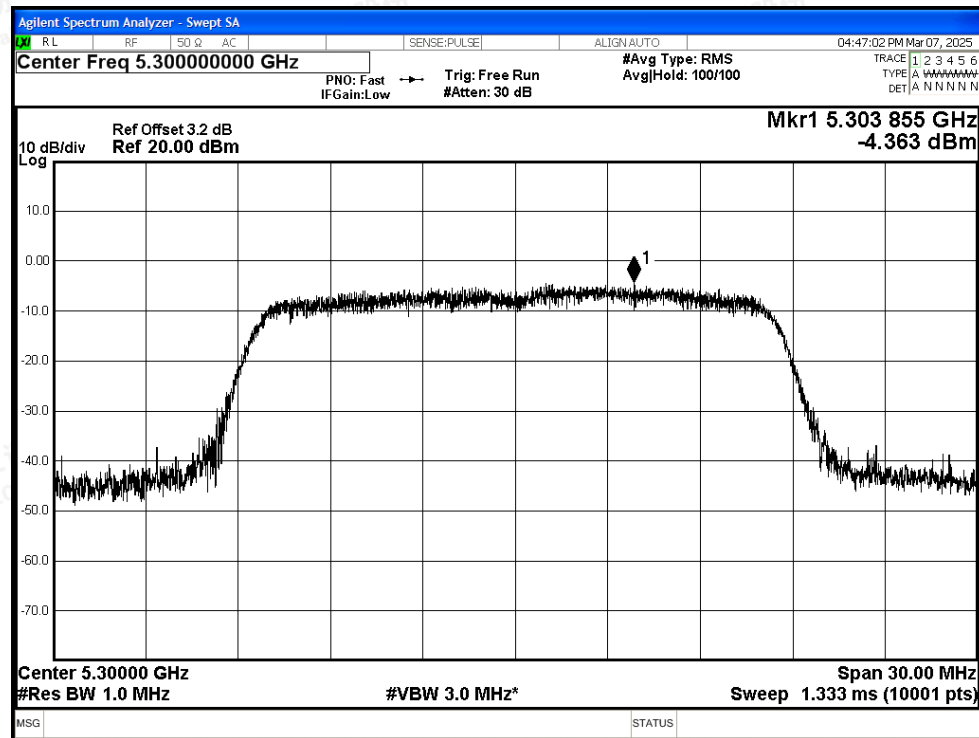


Test Graphs

PSD NVNT a 5260MHz Ant1

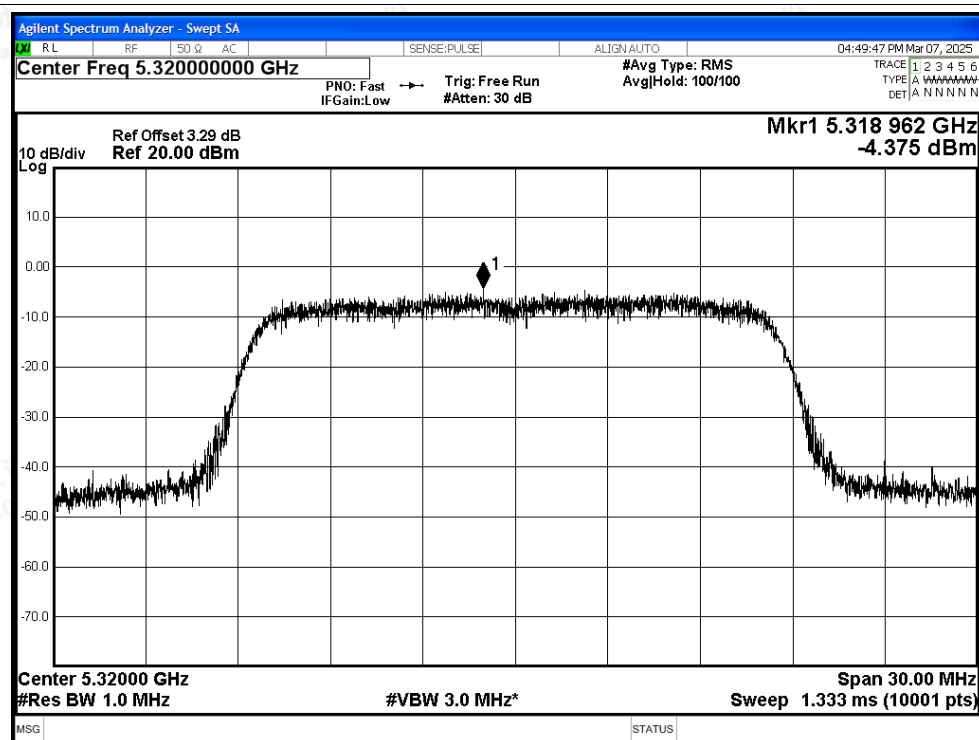


PSD NVNT a 5300MHz Ant1

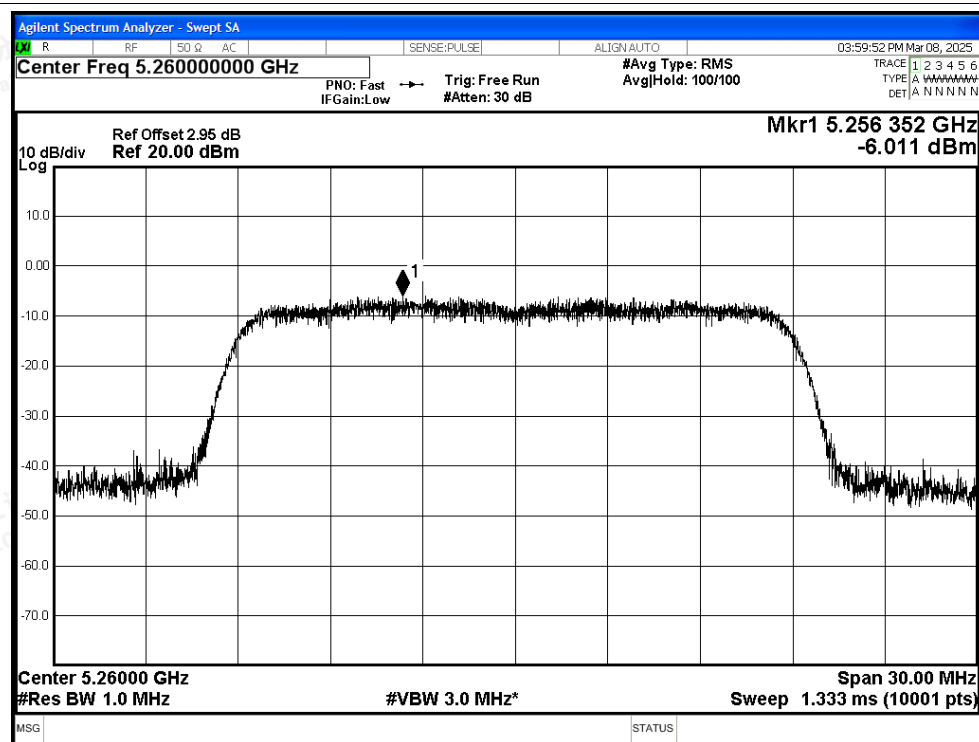




PSD NVNT a 5320MHz Ant1



PSD NVNT n20 5260MHz Ant1

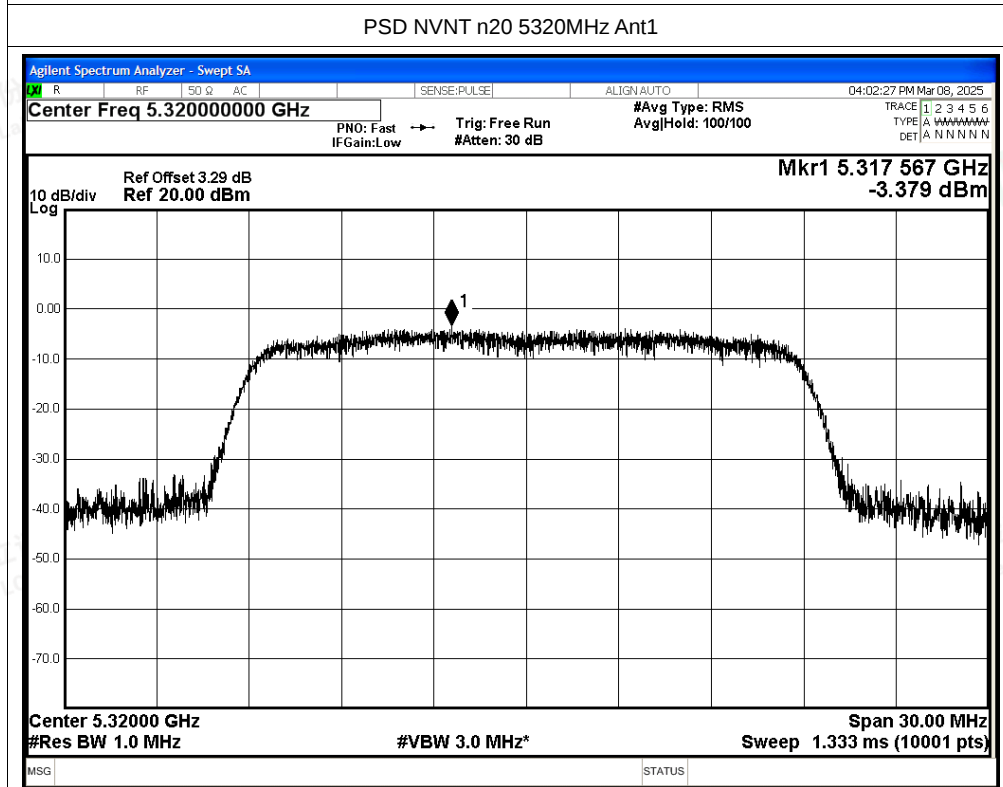
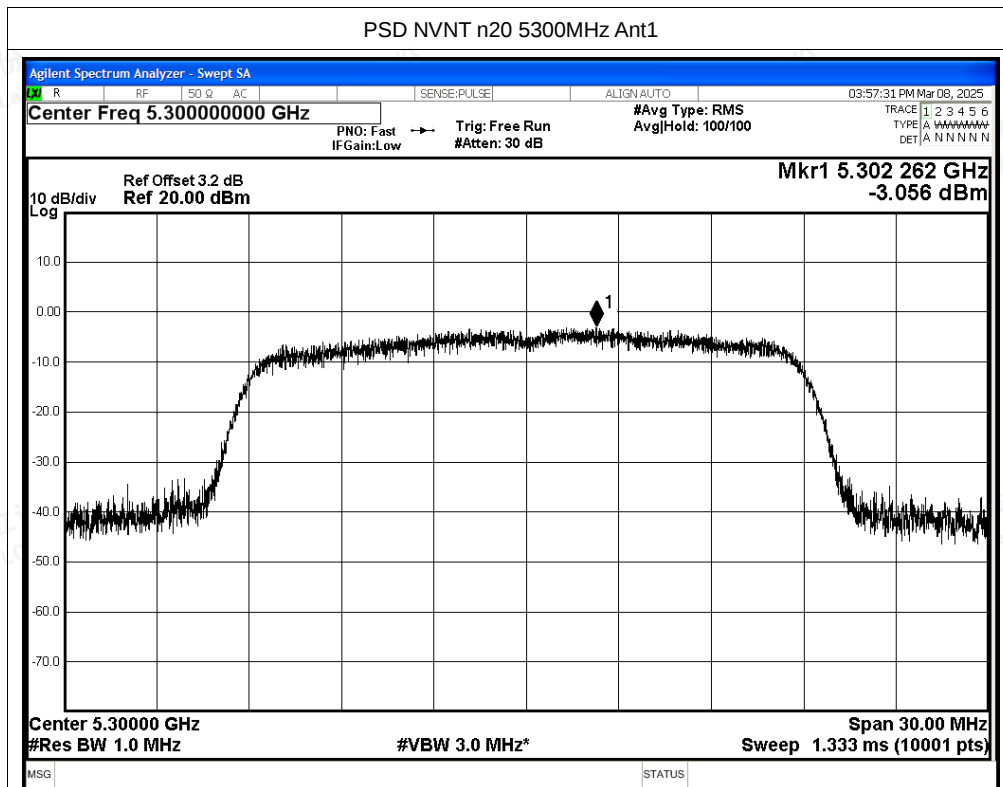


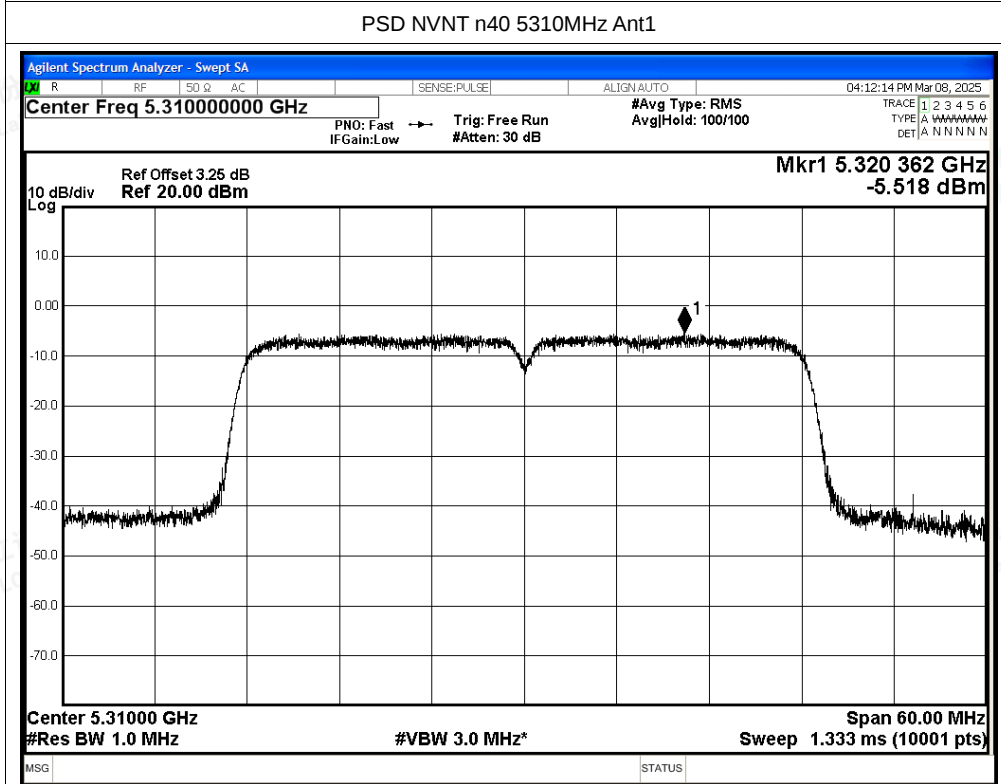
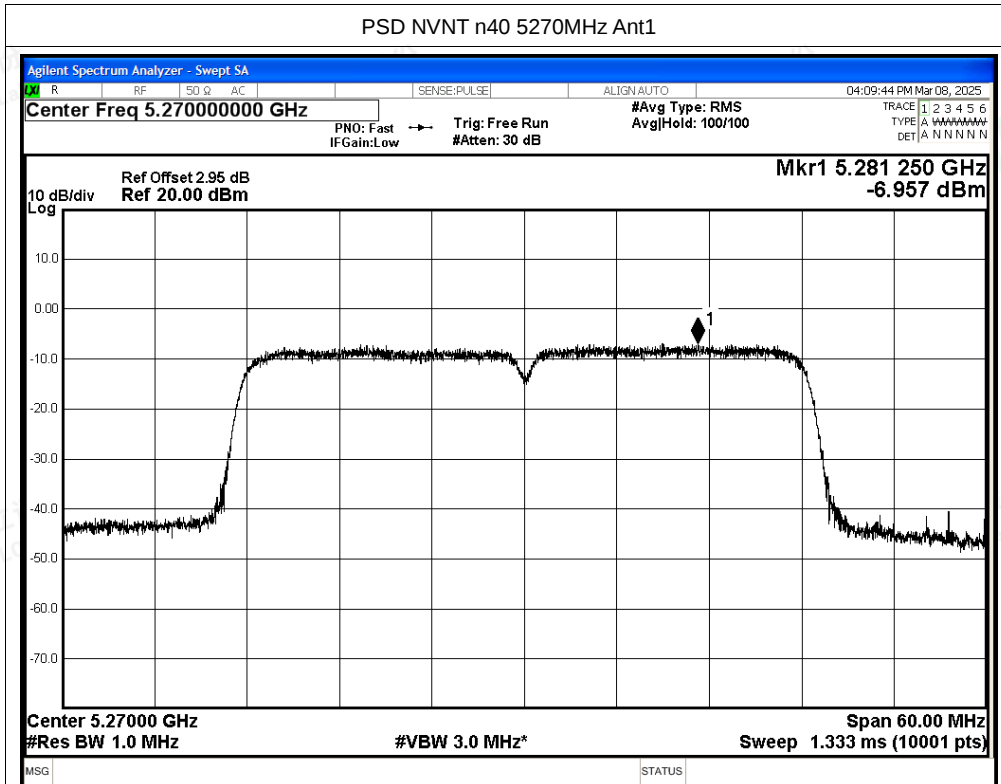
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D.4 Restrict Band

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	5260	Ant1	4500	-50.56	2.67	-	47.34	Peak	68.2	Pass
NVNT	a	5260	Ant1	4500	-58.75	2.67	6.96	46.11	Average	54	Pass
NVNT	a	5260	Ant1	5048.34	-46.47	2.67	-	51.43	Peak	68.2	Pass
NVNT	a	5260	Ant1	5107.62	-56.81	2.67	6.96	48.05	Average	54	Pass
NVNT	a	5260	Ant1	5150	-50.38	2.67	-	47.52	Peak	68.2	Pass
NVNT	a	5260	Ant1	5150	-57.94	2.67	6.96	46.92	Average	54	Pass
NVNT	a	5320	Ant1	5350	-40.54	2.67	-	57.36	Peak	68.2	Pass
NVNT	a	5320	Ant1	5350	-56.8	2.67	6.96	48.06	Average	54	Pass
NVNT	a	5320	Ant1	5351	-36.97	2.67	-	60.93	Peak	68.2	Pass
NVNT	a	5320	Ant1	5350.6	-55.64	2.67	6.96	49.22	Average	54	Pass
NVNT	a	5320	Ant1	5460	-49.32	2.67	-	48.58	Peak	68.2	Pass
NVNT	a	5320	Ant1	5460	-58.38	2.67	6.96	46.48	Average	54	Pass
NVNT	n20	5260	Ant1	4500	-50.42	2.67	-	47.48	Peak	68.2	Pass
NVNT	n20	5260	Ant1	4500	-59.08	2.67	6.96	45.78	Average	54	Pass
NVNT	n20	5260	Ant1	4867.38	-46.85	2.67	-	51.05	Peak	68.2	Pass
NVNT	n20	5260	Ant1	5144.28	-56.77	2.67	6.96	48.09	Average	54	Pass
NVNT	n20	5260	Ant1	5150	-46.98	2.67	-	50.92	Peak	68.2	Pass
NVNT	n20	5260	Ant1	5150	-58.04	2.67	6.96	46.82	Average	54	Pass
NVNT	n20	5320	Ant1	5350	-36.99	2.67	-	60.91	Peak	68.2	Pass
NVNT	n20	5320	Ant1	5350	-51.57	2.67	6.96	53.29	Average	54	Pass
NVNT	n20	5320	Ant1	5350.4	-34.3	2.67	-	63.6	Peak	68.2	Pass
NVNT	n20	5320	Ant1	5350.2	-50.51	2.67	6.96	54.35	Average	54	Pass
NVNT	n20	5320	Ant1	5460	-50.87	2.67	-	47.03	Peak	68.2	Pass
NVNT	n20	5320	Ant1	5460	-58.18	2.67	6.96	46.68	Average	54	Pass
NVNT	n40	5270	Ant1	4500	-49.71	2.67	-	48.19	Peak	68.2	Pass
NVNT	n40	5270	Ant1	4500	-59.07	2.67	3.17	42	Average	54	Pass
NVNT	n40	5270	Ant1	4721.13	-46.69	2.67	-	51.21	Peak	68.2	Pass
NVNT	n40	5270	Ant1	5060.52	-56.84	2.67	3.17	44.23	Average	54	Pass
NVNT	n40	5270	Ant1	5150	-49.41	2.67	-	48.49	Peak	68.2	Pass
NVNT	n40	5270	Ant1	5150	-57.05	2.67	3.17	44.02	Average	54	Pass
NVNT	n40	5310	Ant1	5350	-39.08	2.67	-	58.82	Peak	68.2	Pass
NVNT	n40	5310	Ant1	5350	-50.4	2.67	3.17	50.67	Average	54	Pass
NVNT	n40	5310	Ant1	5358	-33.84	2.67	-	64.06	Peak	68.2	Pass
NVNT	n40	5310	Ant1	5350.8	-49.83	2.67	3.17	51.24	Average	54	Pass
NVNT	n40	5310	Ant1	5460	-49.67	2.67	-	48.23	Peak	68.2	Pass
NVNT	n40	5310	Ant1	5460	-57.81	2.67	3.17	43.26	Average	54	Pass



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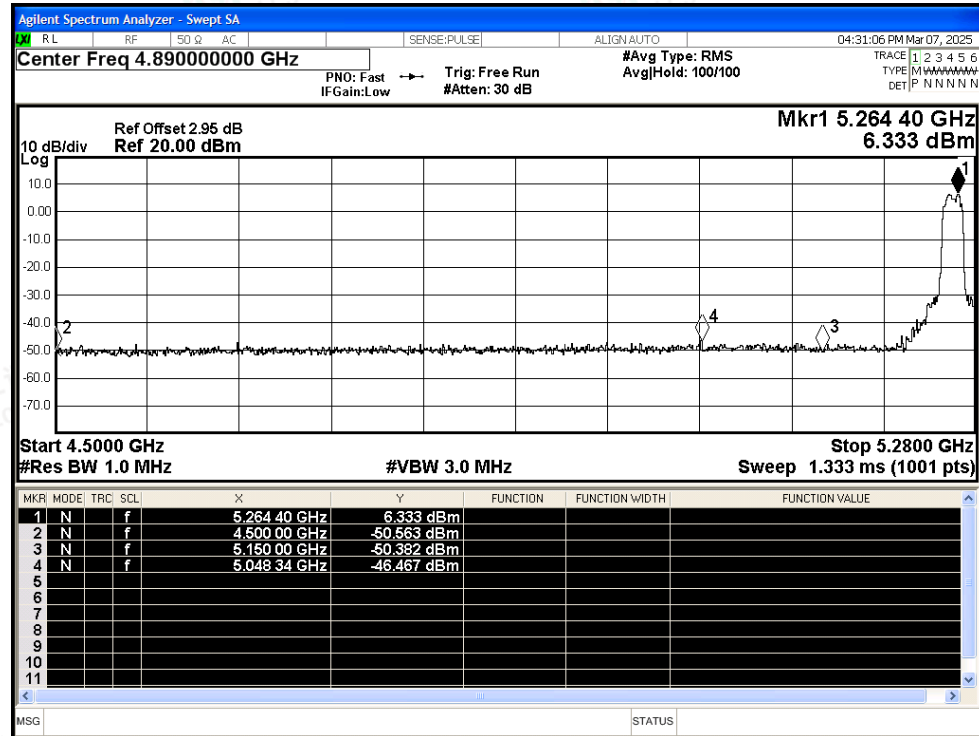
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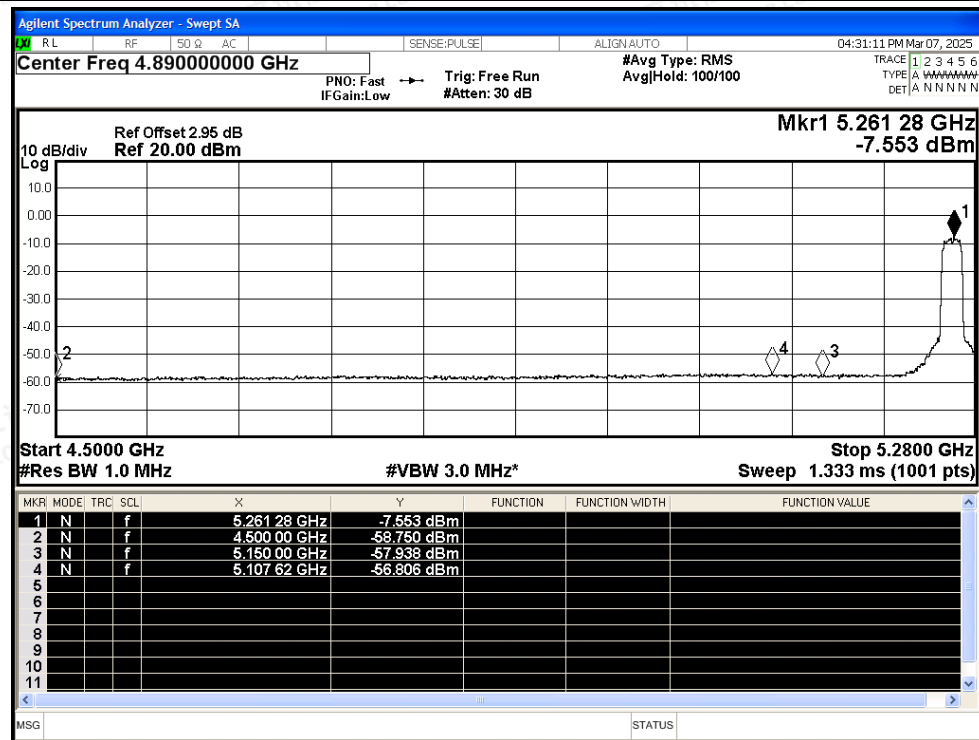


Test Graphs

Restrict Band NVNT a 5260MHz Ant1 Peak



Restrict Band NVNT a 5260MHz Ant1 Average



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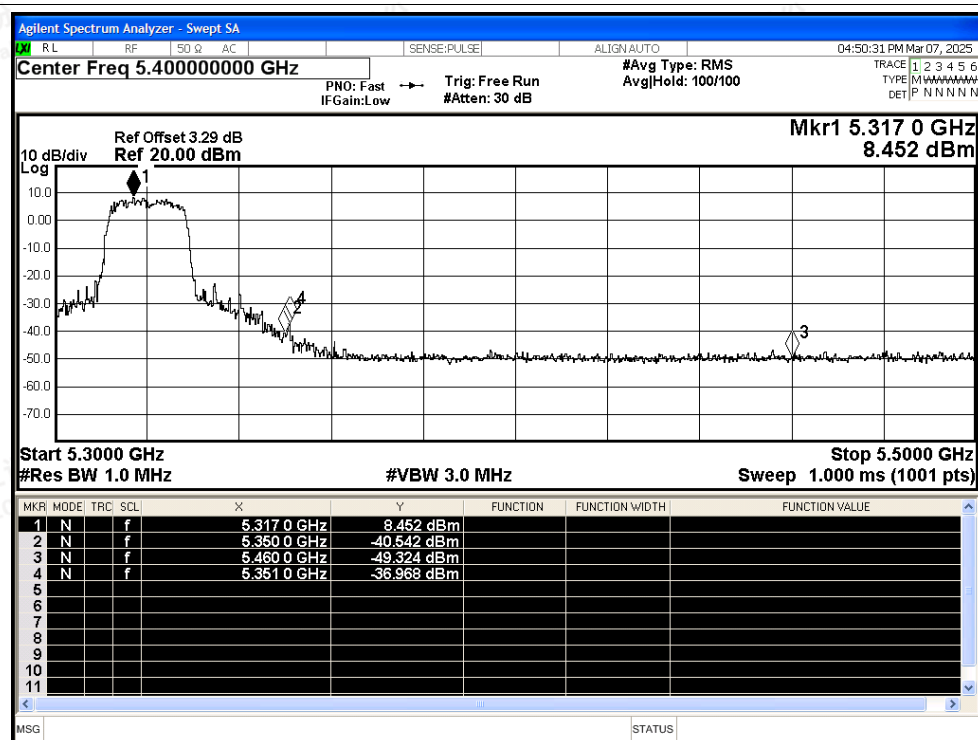
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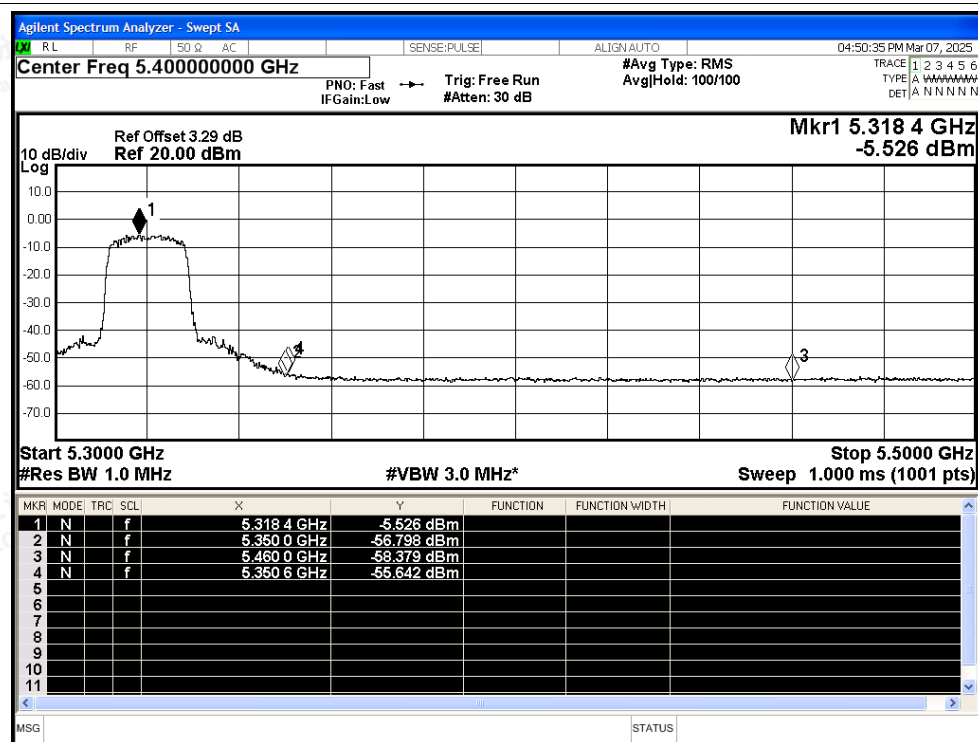
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Restrict Band NVNT a 5320MHz Ant1 Peak

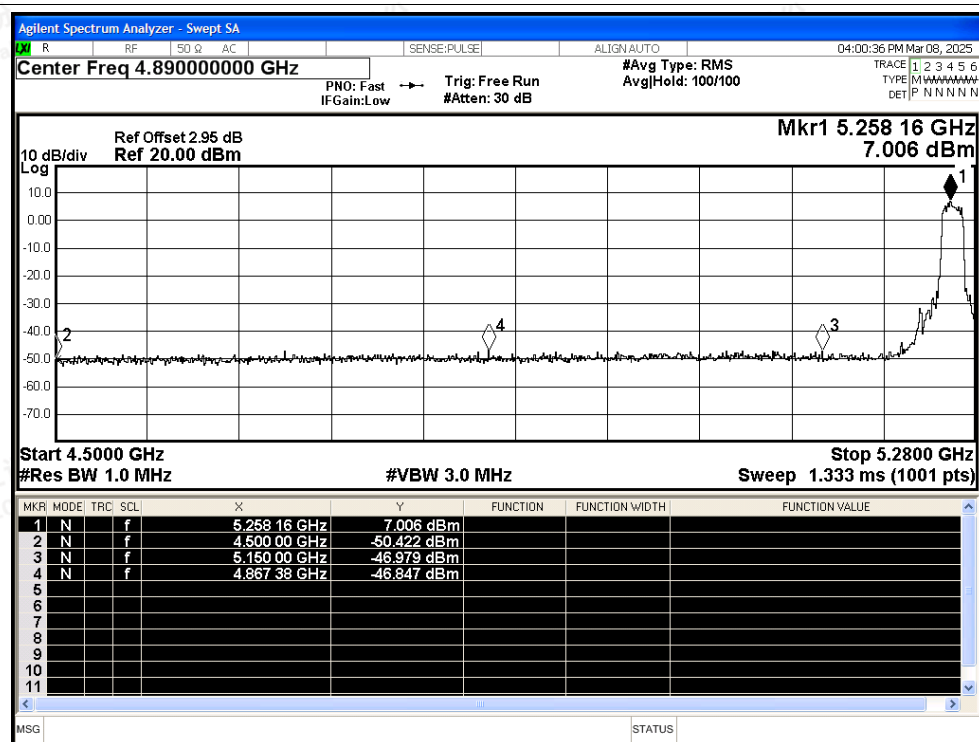


Restrict Band NVNT a 5320MHz Ant1 Average

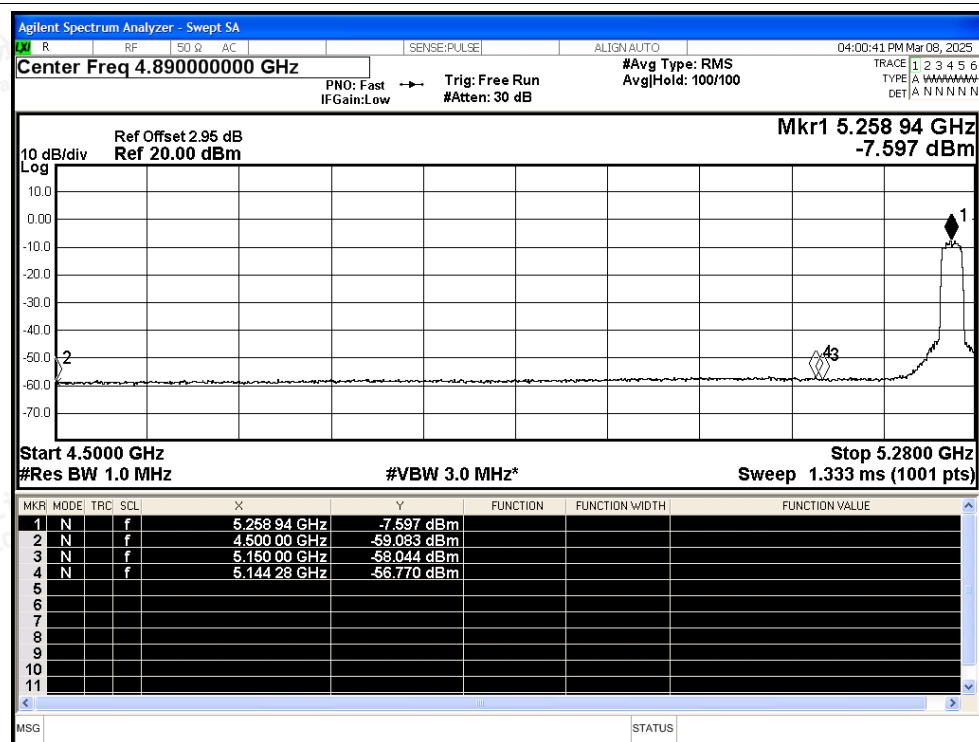




Restrict Band NVNT n20 5260MHz Ant1 Peak



Restrict Band NVNT n20 5260MHz Ant1 Average



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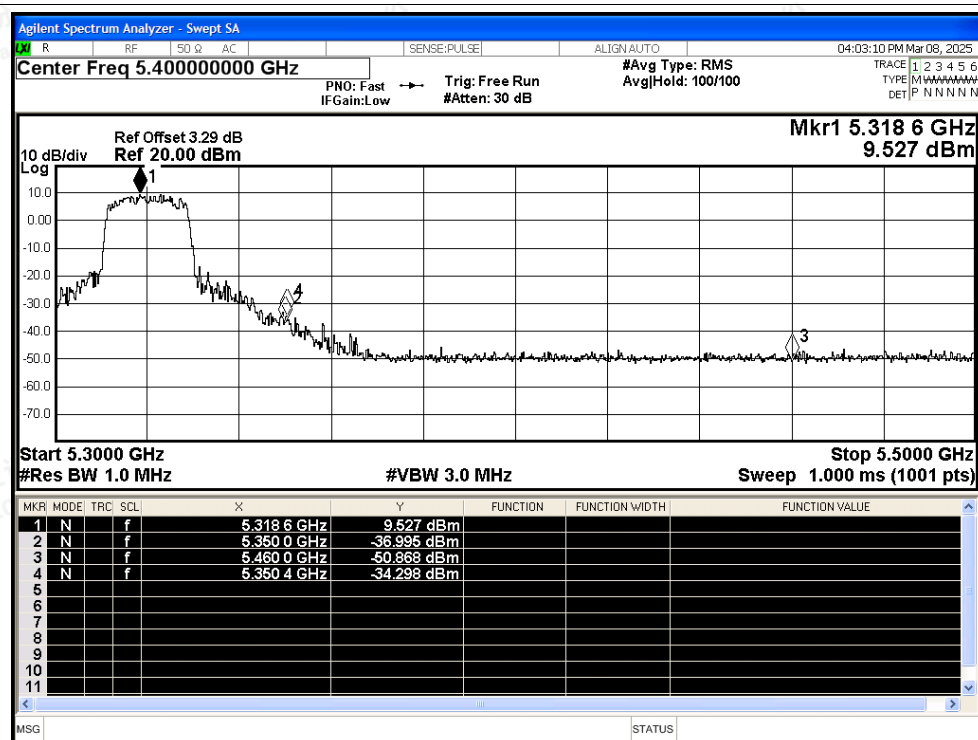
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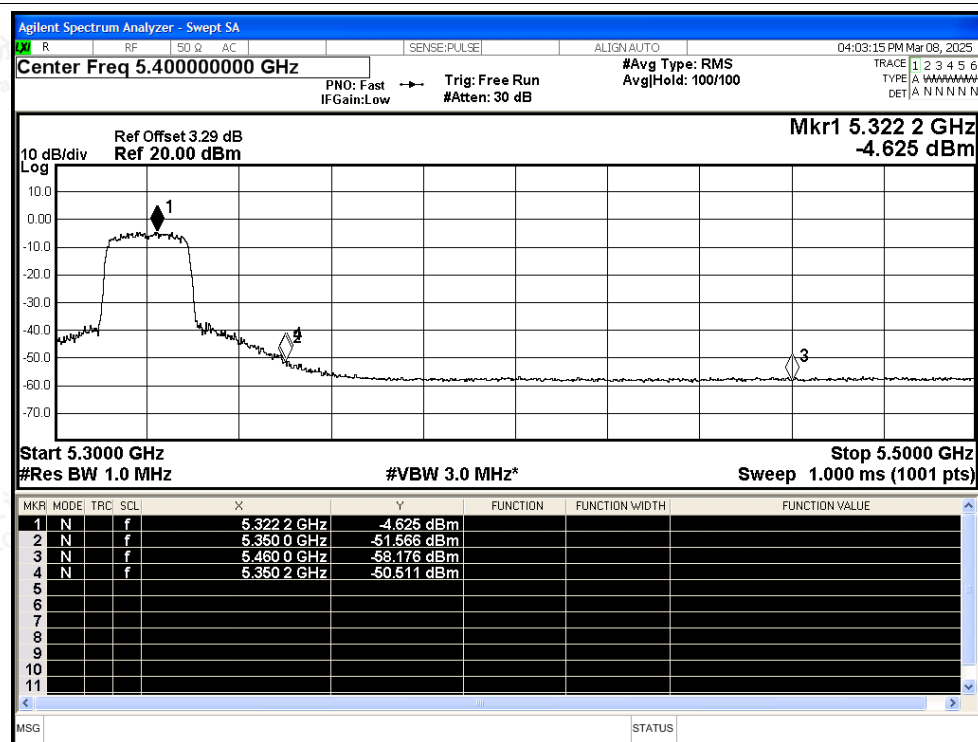
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Restrict Band NVNT n20 5320MHz Ant1 Peak

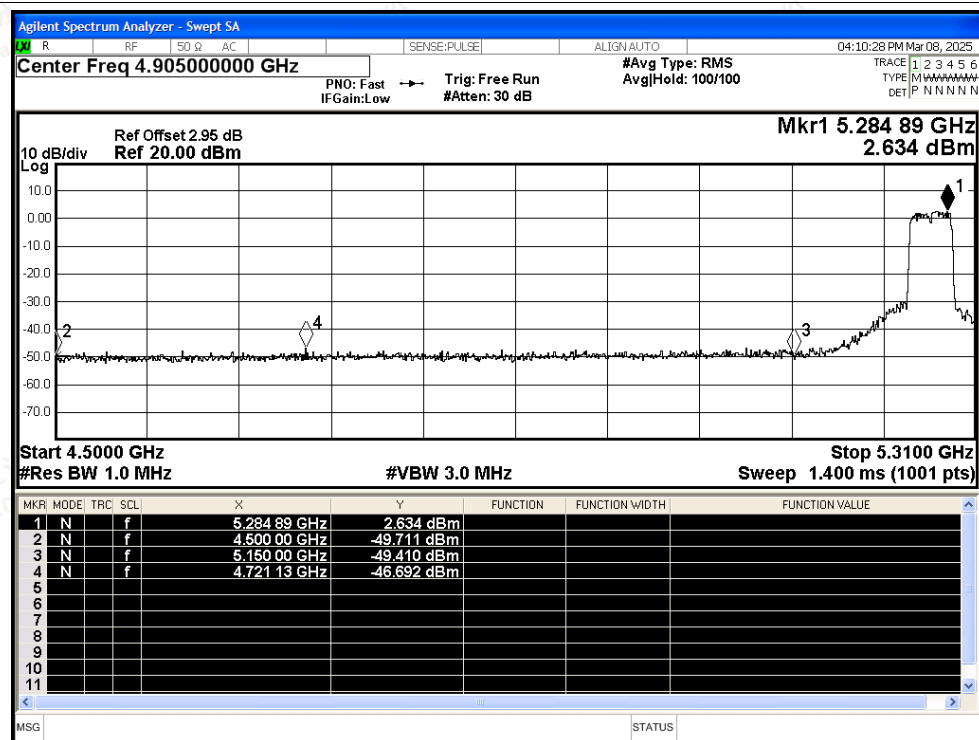


Restrict Band NVNT n20 5320MHz Ant1 Average

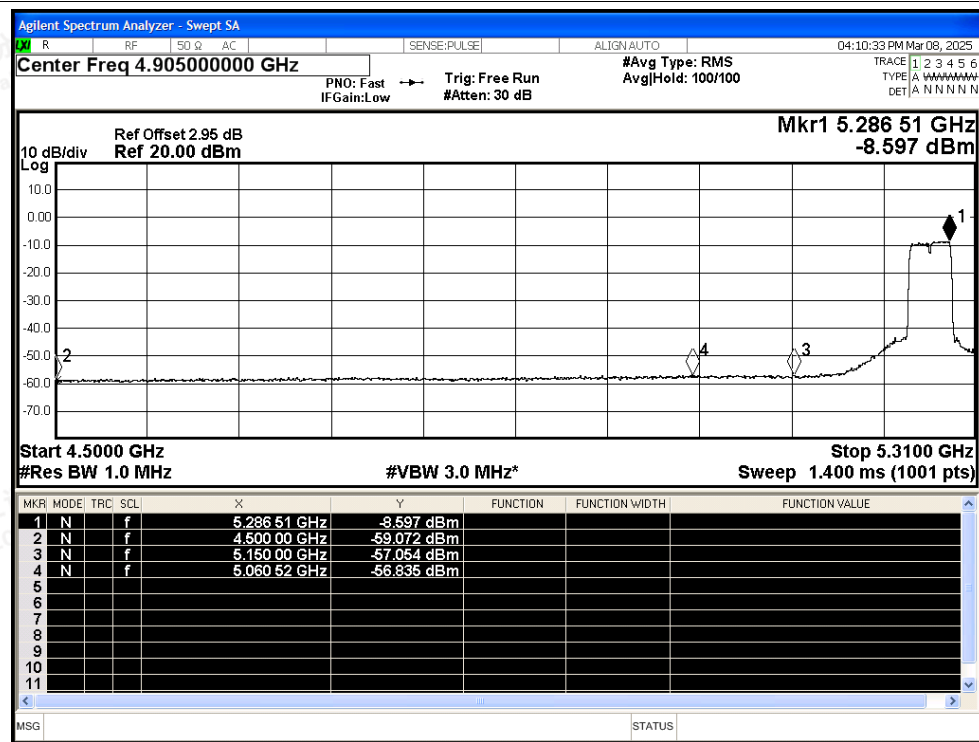




Restrict Band NVNT n40 5270MHz Ant1 Peak



Restrict Band NVNT n40 5270MHz Ant1 Average



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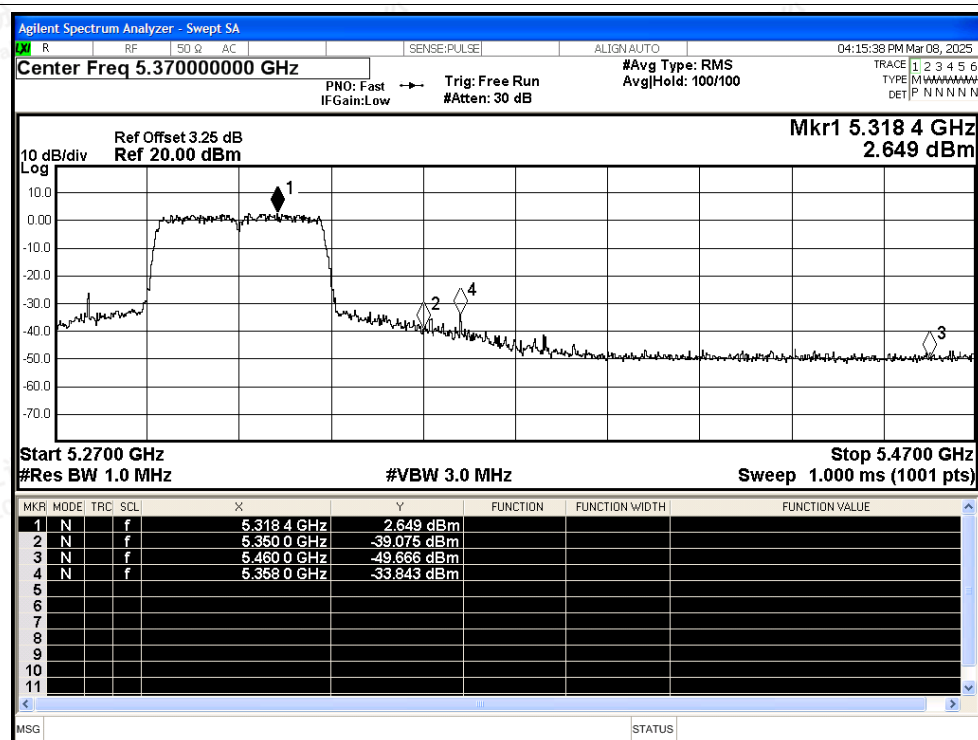
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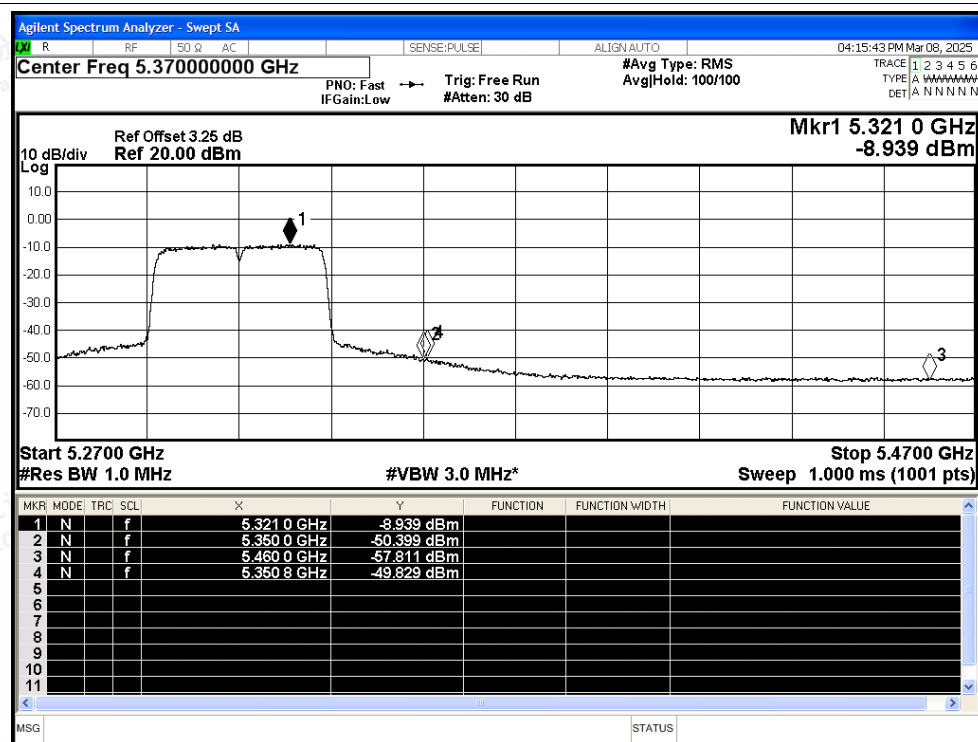
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Restrict Band NVNT n40 5310MHz Ant1 Peak



Restrict Band NVNT n40 5310MHz Ant1 Average





D.5 Frequency Stability

Condition	Mode	Frequency (MHz)	Antenna	Measured Frequency (MHz)	Frequency Error (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
NVNT	a	5260	Ant1	5259.98	-20000	-3.8	25	Pass
NVNT	a	5300	Ant1	5299.98	-20000	-3.77	25	Pass
NVNT	a	5320	Ant1	5319.98	-20000	-3.76	25	Pass
NVNT	n20	5260	Ant1	5260.02	20000	3.8	25	Pass
NVNT	n20	5300	Ant1	5300	0	0	25	Pass
NVNT	n20	5320	Ant1	5320.04	40000	7.52	25	Pass
NVNT	n40	5270	Ant1	5270	0	0	25	Pass
NVNT	n40	5310	Ant1	5310	0	0	25	Pass

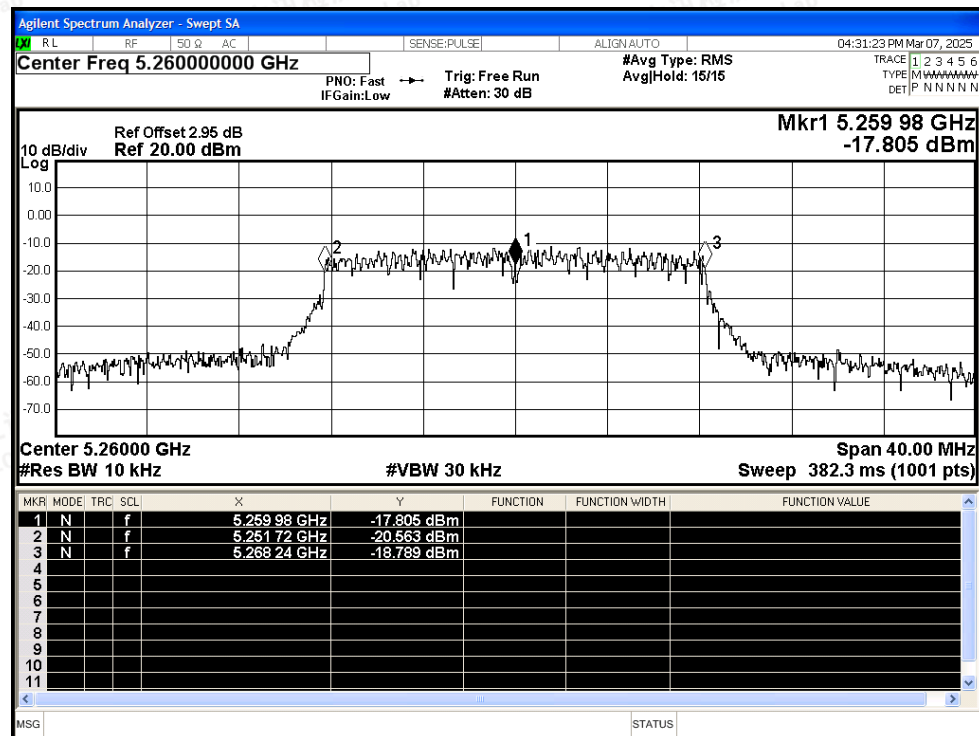


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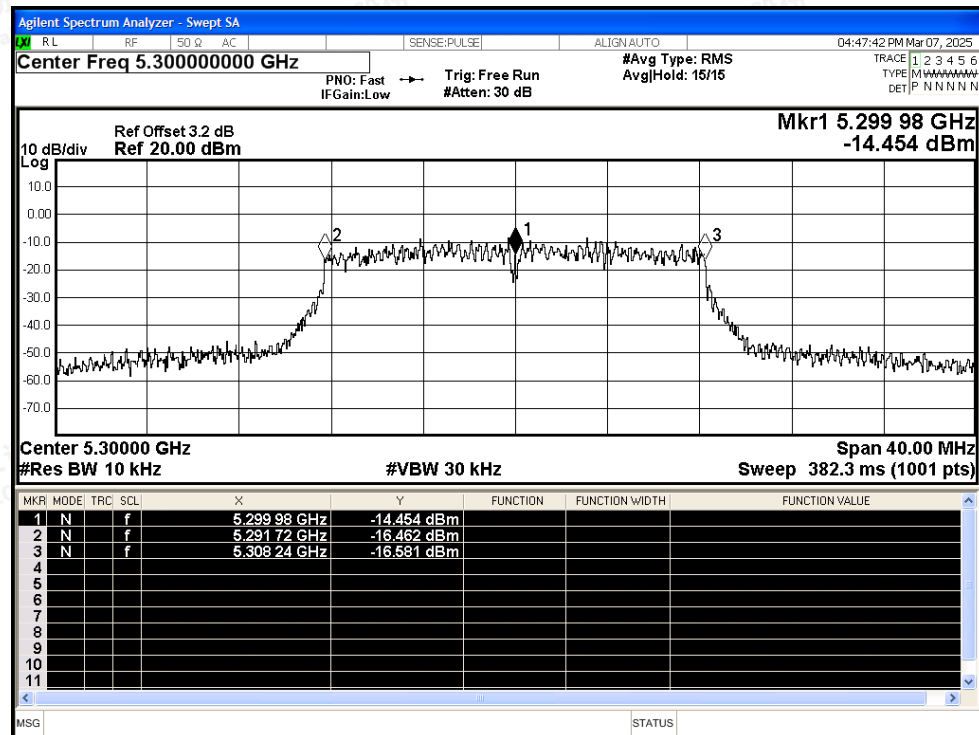


Test Graphs

Freq. Stability NVNT a 5260MHz Ant1



Freq. Stability NVNT a 5300MHz Ant1



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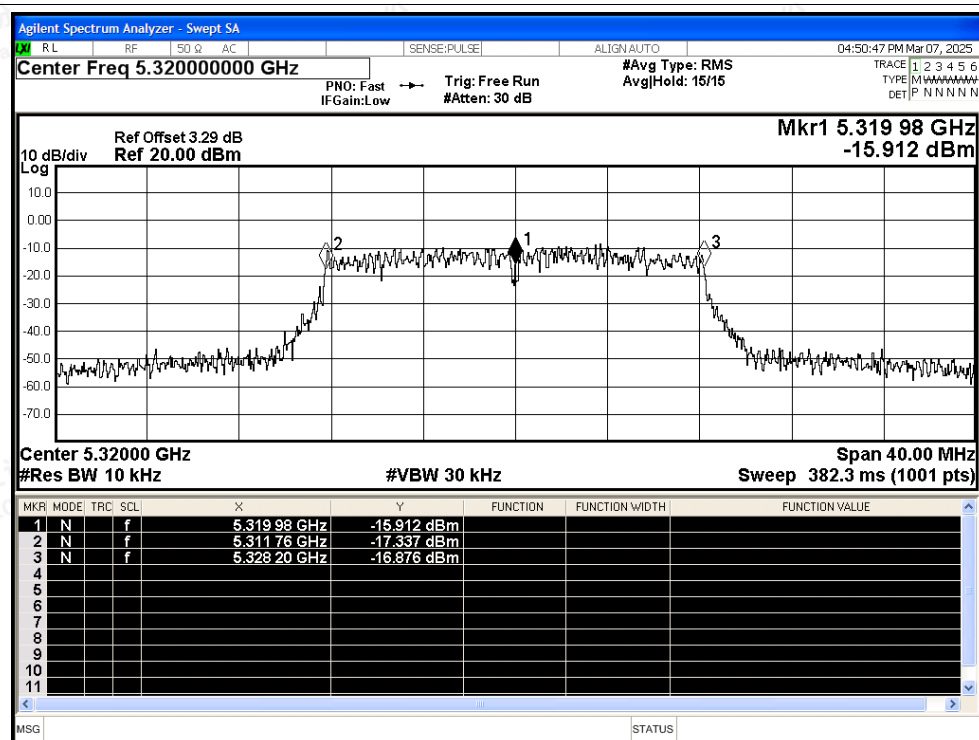
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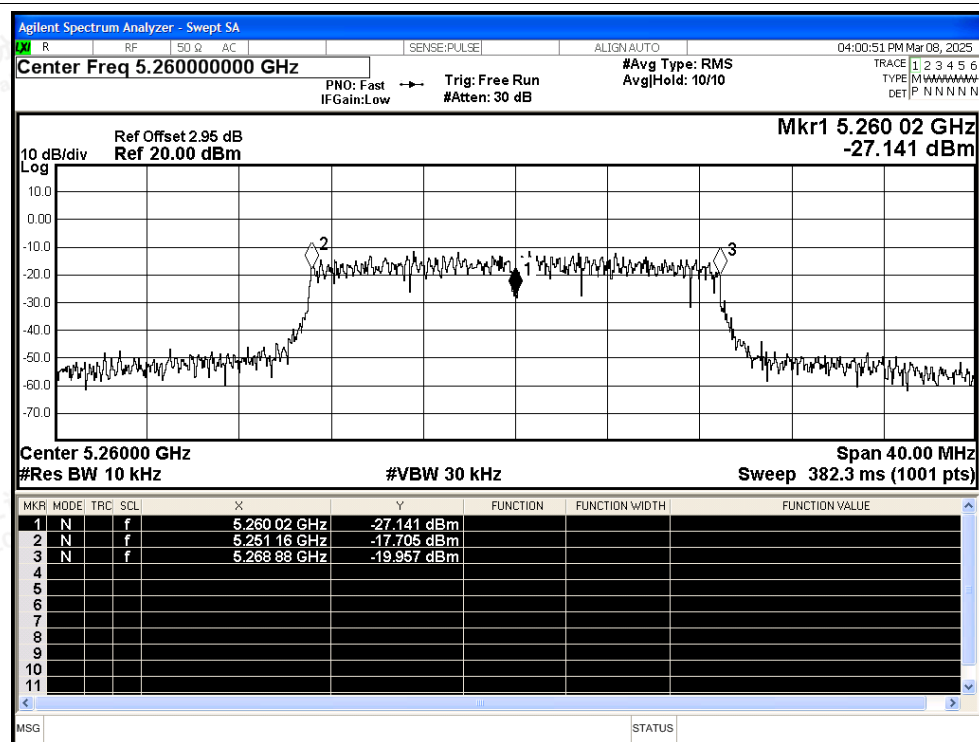
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Freq. Stability NVNT a 5320MHz Ant1



Freq. Stability NVNT n20 5260MHz Ant1



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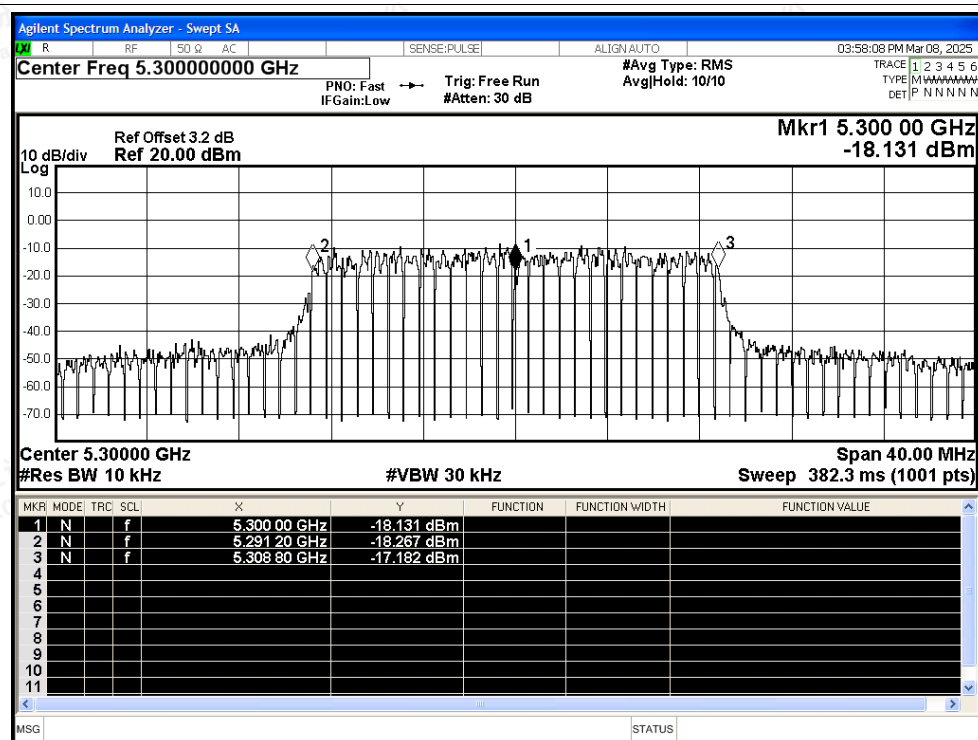
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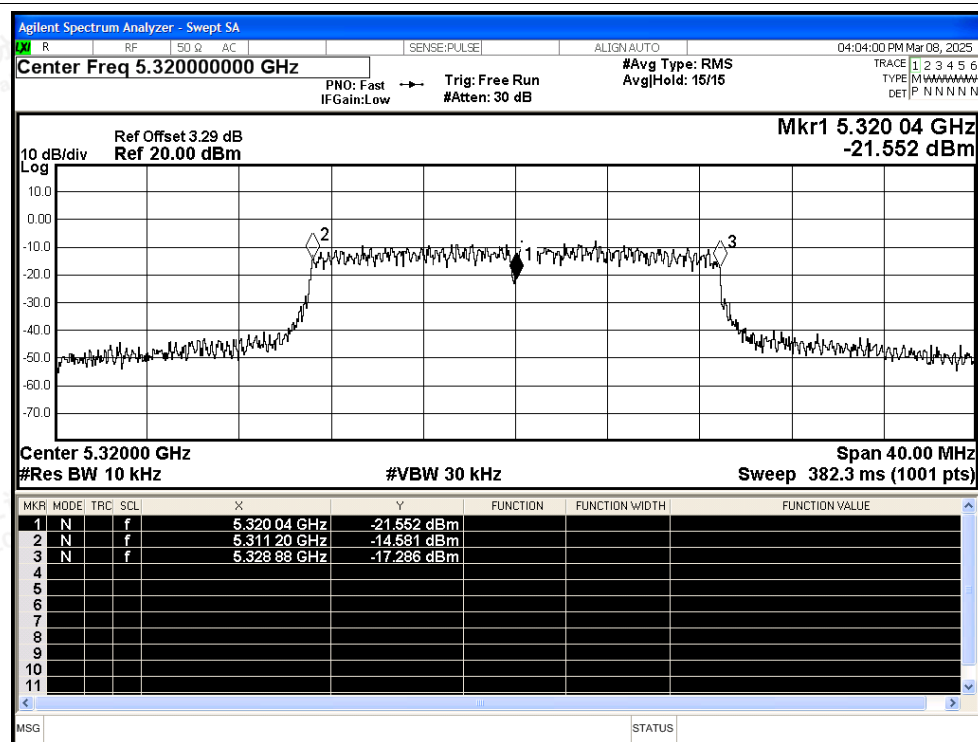
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Freq. Stability NVNT n20 5300MHz Ant1



Freq. Stability NVNT n20 5320MHz Ant1



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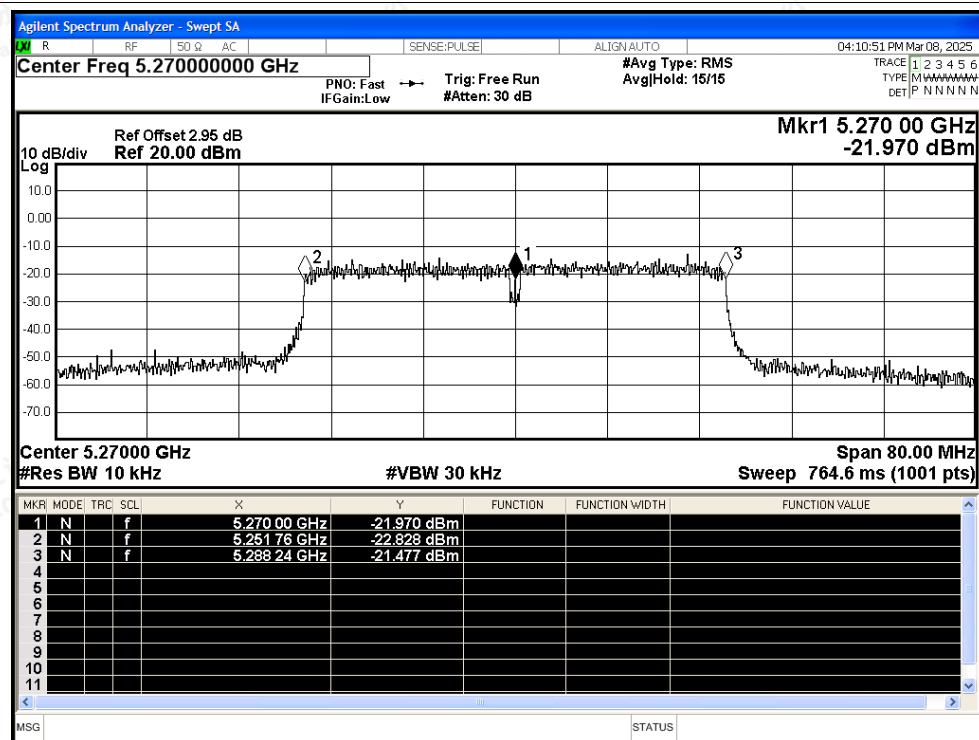
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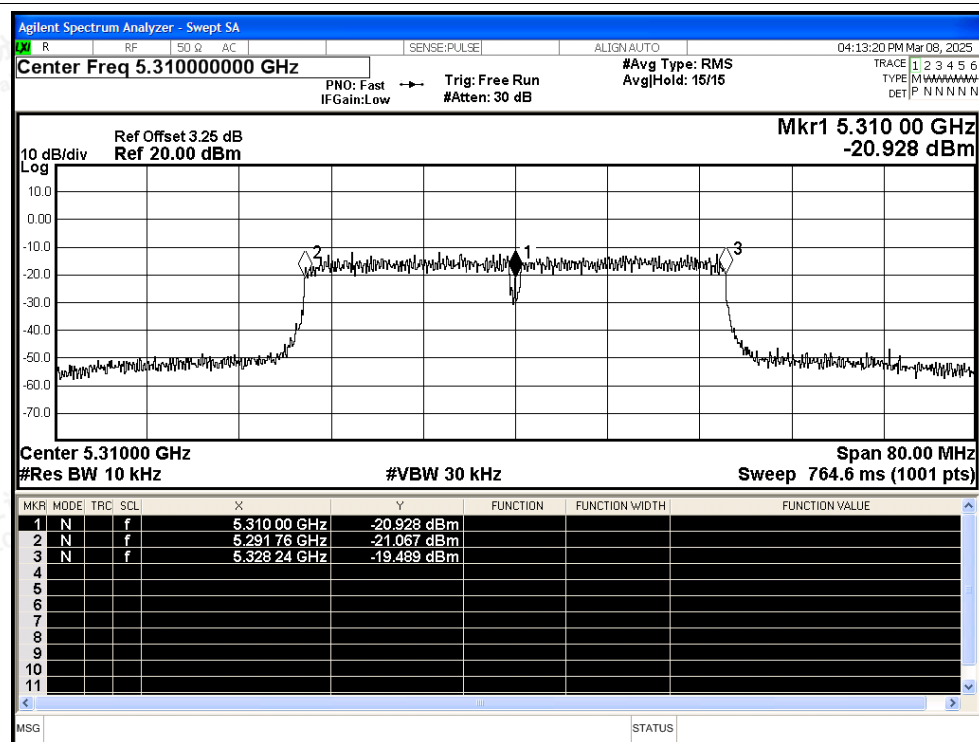
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Freq. Stability NVNT n40 5270MHz Ant1



Freq. Stability NVNT n40 5310MHz Ant1



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D.6 Duty Cycle

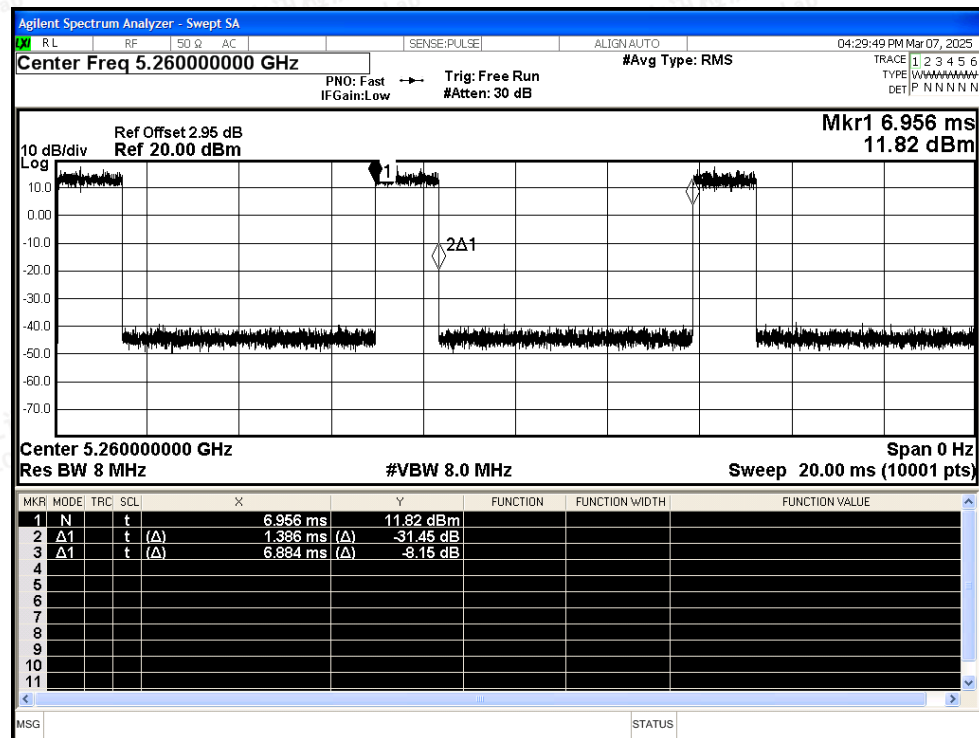
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	a	5260	Ant1	20.13	6.96	0.72
NVNT	a	5300	Ant1	20.13	6.96	0.72
NVNT	a	5320	Ant1	20.12	6.96	0.72
NVNT	n20	5260	Ant1	20.13	6.96	0.77
NVNT	n20	5300	Ant1	20.13	6.96	0.77
NVNT	n20	5320	Ant1	20.14	6.96	0.77
NVNT	n40	5270	Ant1	48.15	3.17	0.41
NVNT	n40	5310	Ant1	48.15	3.17	0.41



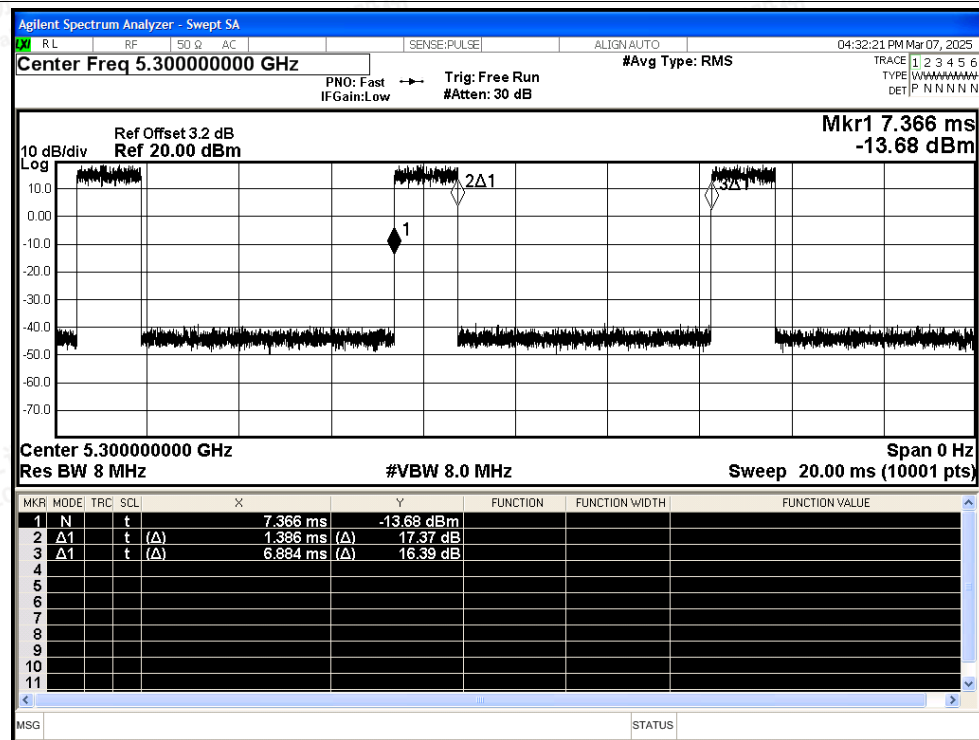


Test Graphs

Duty Cycle NVNT a 5260MHz Ant1



Duty Cycle NVNT a 5300MHz Ant1



Shenzhen LCS Compliance Testing Laboratory Ltd.

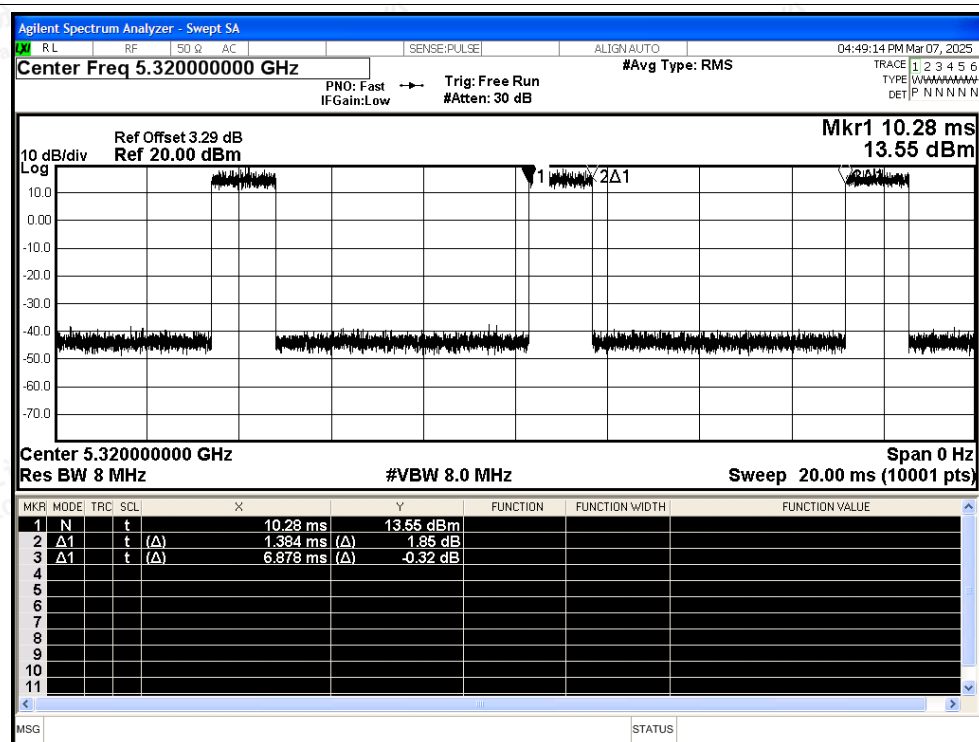
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

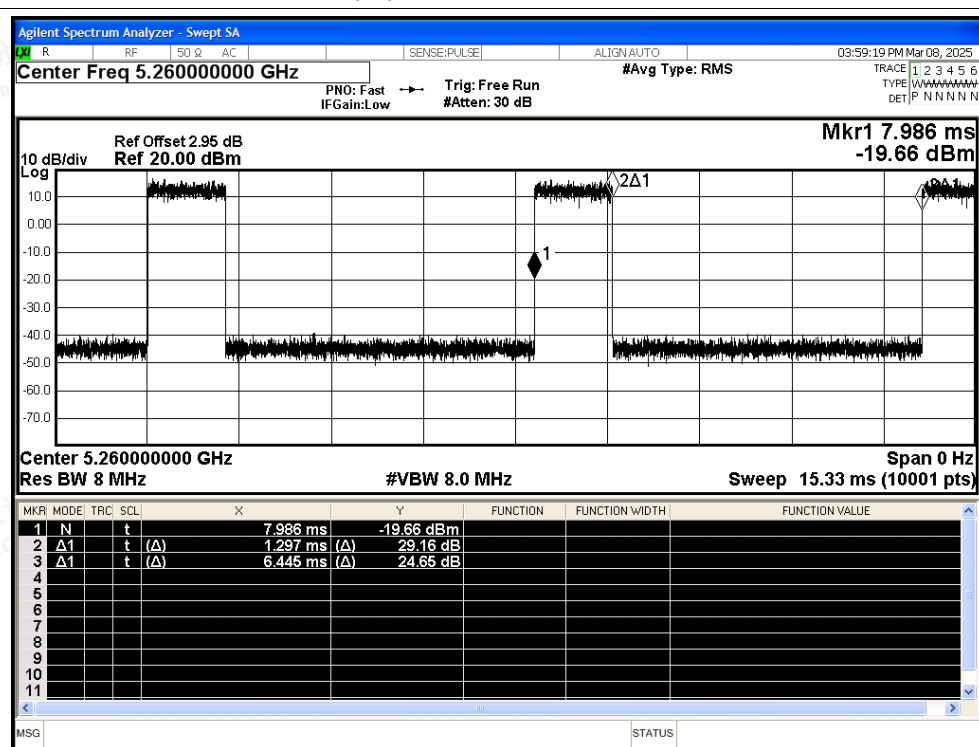
Scan code to check authenticity



Duty Cycle NVNT a 5320MHz Ant1



Duty Cycle NVNT n20 5260MHz Ant1



Shenzhen LCS Compliance Testing Laboratory Ltd.

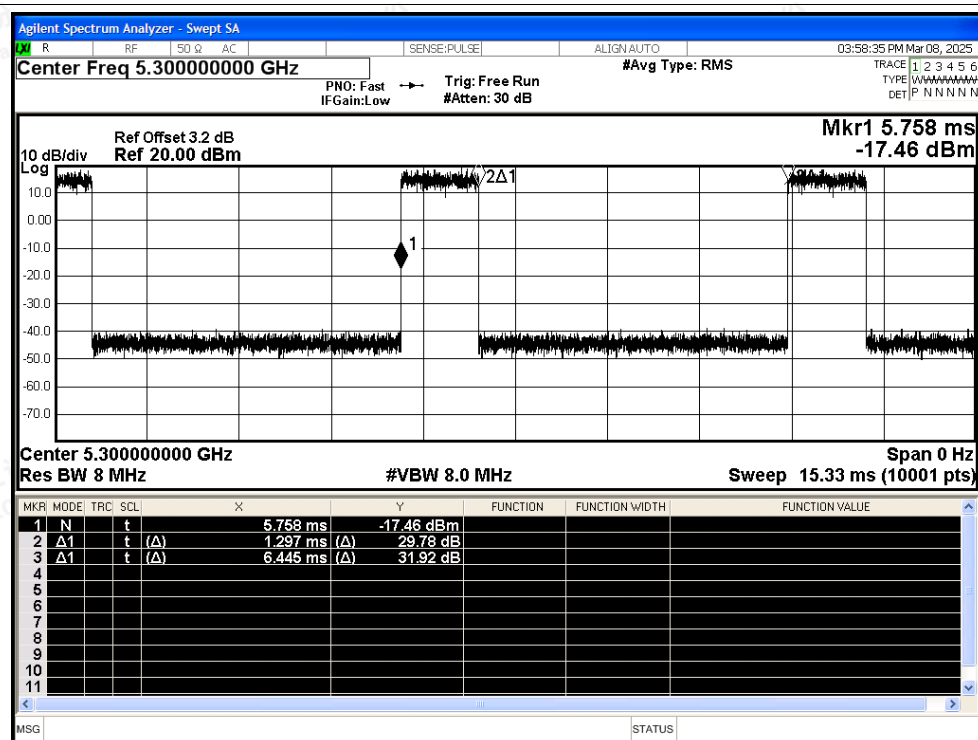
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

Tel: +(86) 0755-82591330 | E-mail: webmaster@lcs-cert.com | Web: www.lcs-cert.com

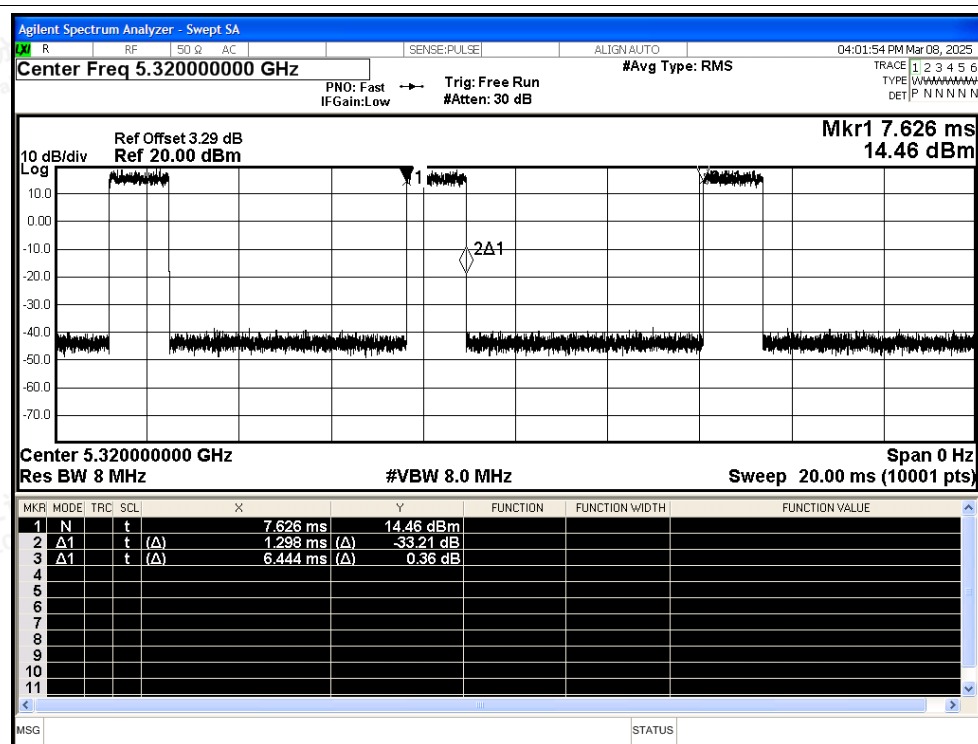
Scan code to check authenticity



Duty Cycle NVNT n20 5300MHz Ant1



Duty Cycle NVNT n20 5320MHz Ant1



Shenzhen LCS Compliance Testing Laboratory Ltd.

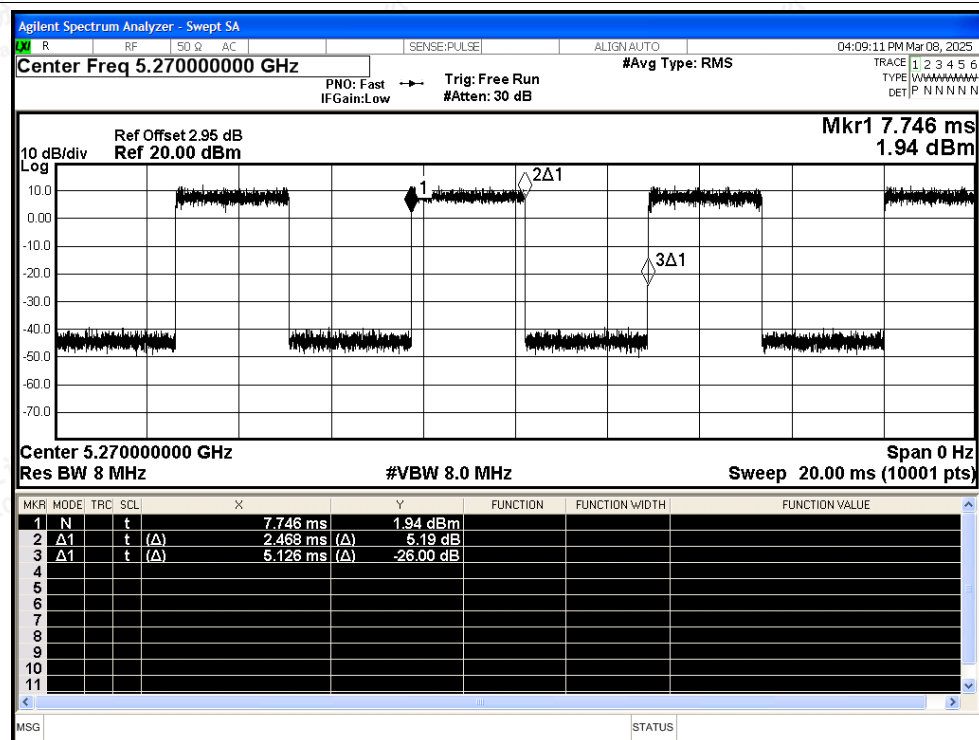
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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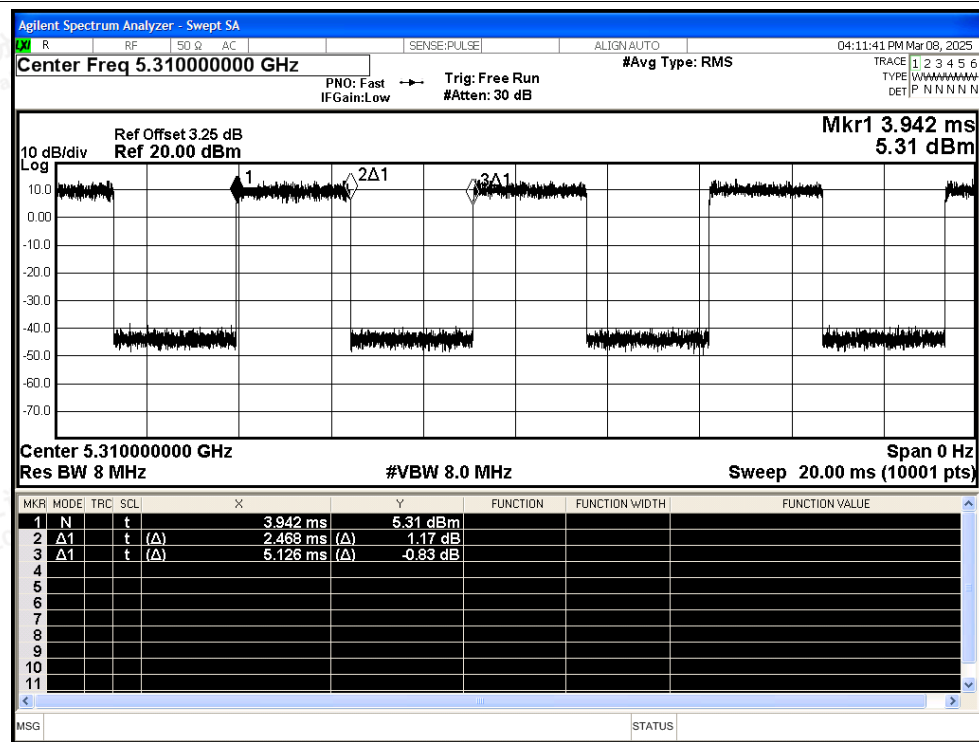
Scan code to check authenticity



Duty Cycle NVNT n40 5270MHz Ant1



Duty Cycle NVNT n40 5310MHz Ant1



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