



Appendix D

RF Test Data for 5.2GWIFI (Conducted Measurement)

Product Name: Smart Diagnostic System

Test Model: P902

Environmental Conditions

Temperature:	23.8 ° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Joker Hu
Supervised by:	Jack Cheng





D.1 -26dB Bandwidth

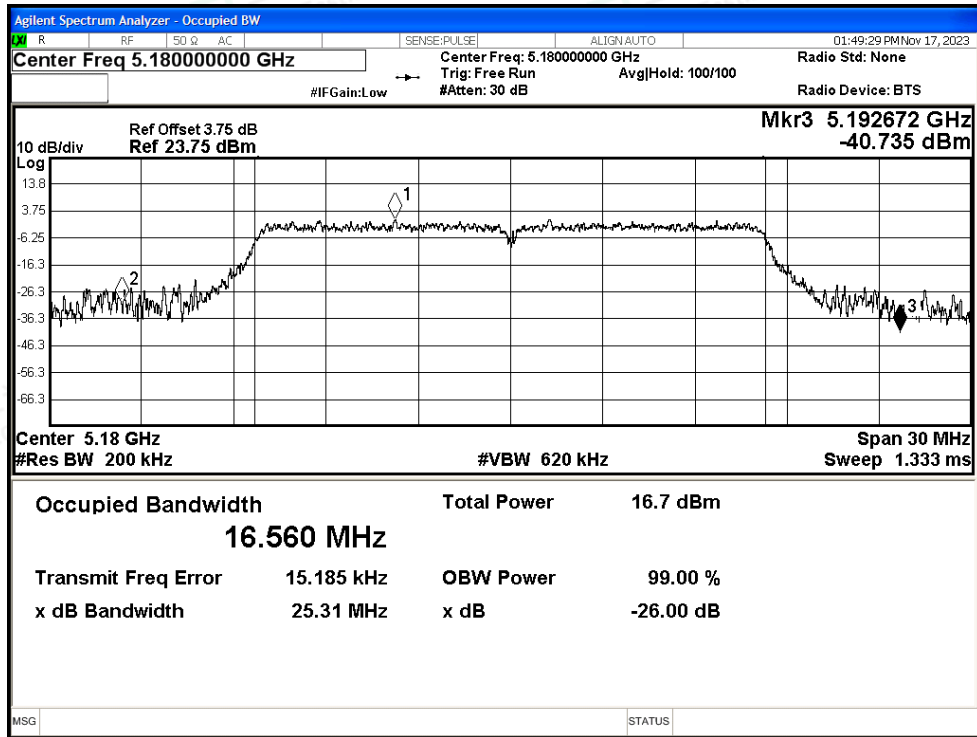
Condition	Mode	Frequency (MHz)	Antenna	-26 dB Bandwidth (MHz)	Limit -26 dB Bandwidth (MHz)	Verdict
NVNT	a	5180	Ant0	25.313	>=0.5	Pass
NVNT	a	5200	Ant0	23.24	>=0.5	Pass
NVNT	a	5240	Ant0	27.853	>=0.5	Pass
NVNT	n20	5180	Ant0	25.499	>=0.5	Pass
NVNT	n20	5200	Ant0	26.981	>=0.5	Pass
NVNT	n20	5240	Ant0	28.51	>=0.5	Pass
NVNT	n40	5190	Ant0	47.489	>=0.5	Pass
NVNT	n40	5230	Ant0	50.234	>=0.5	Pass
NVNT	ac20	5180	Ant0	26.878	>=0.5	Pass
NVNT	ac20	5200	Ant0	27.22	>=0.5	Pass
NVNT	ac20	5240	Ant0	27.951	>=0.5	Pass
NVNT	ac40	5190	Ant0	44.334	>=0.5	Pass
NVNT	ac40	5230	Ant0	44.803	>=0.5	Pass
NVNT	ac80	5210	Ant0	82.403	>=0.5	Pass



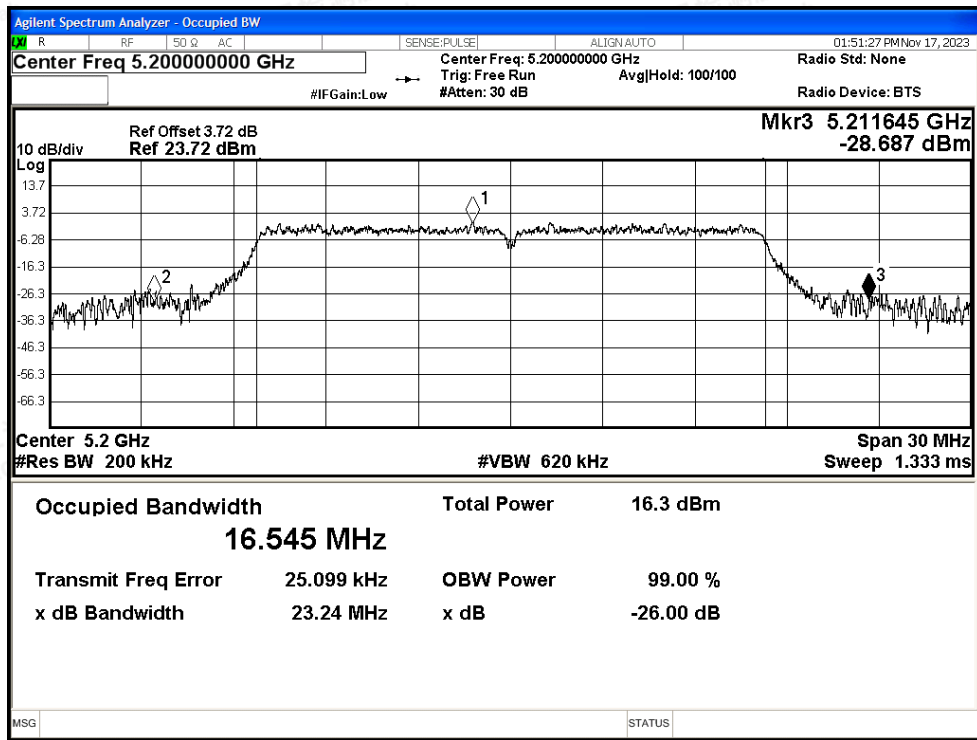


Test Graphs

-26dB Bandwidth NVNT a 5180MHz Ant0

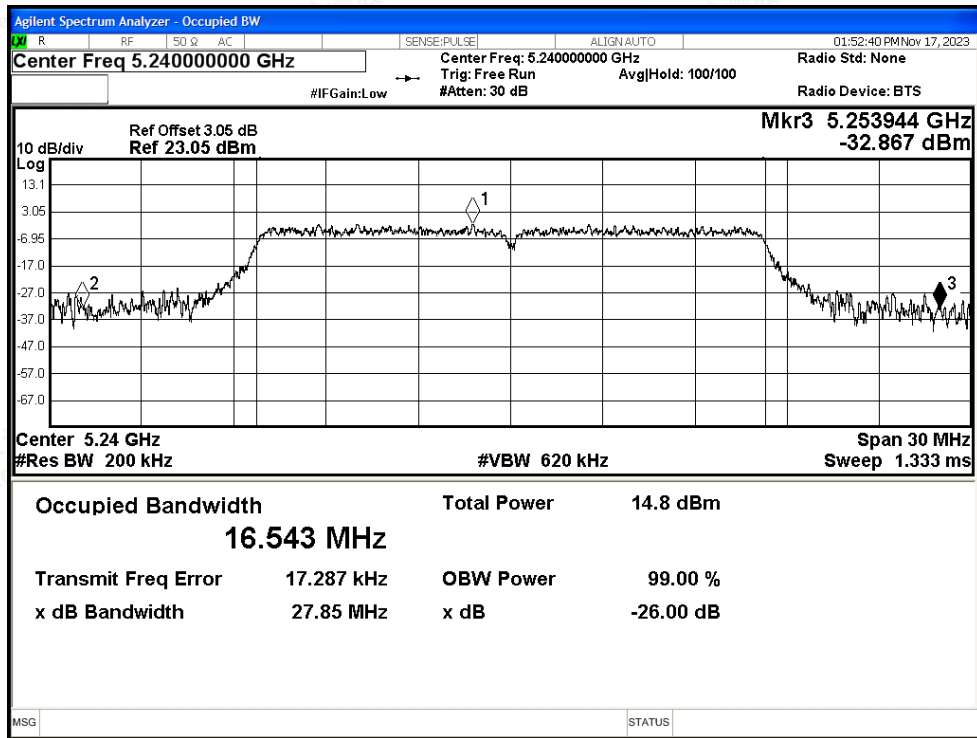


-26dB Bandwidth NVNT a 5200MHz Ant0

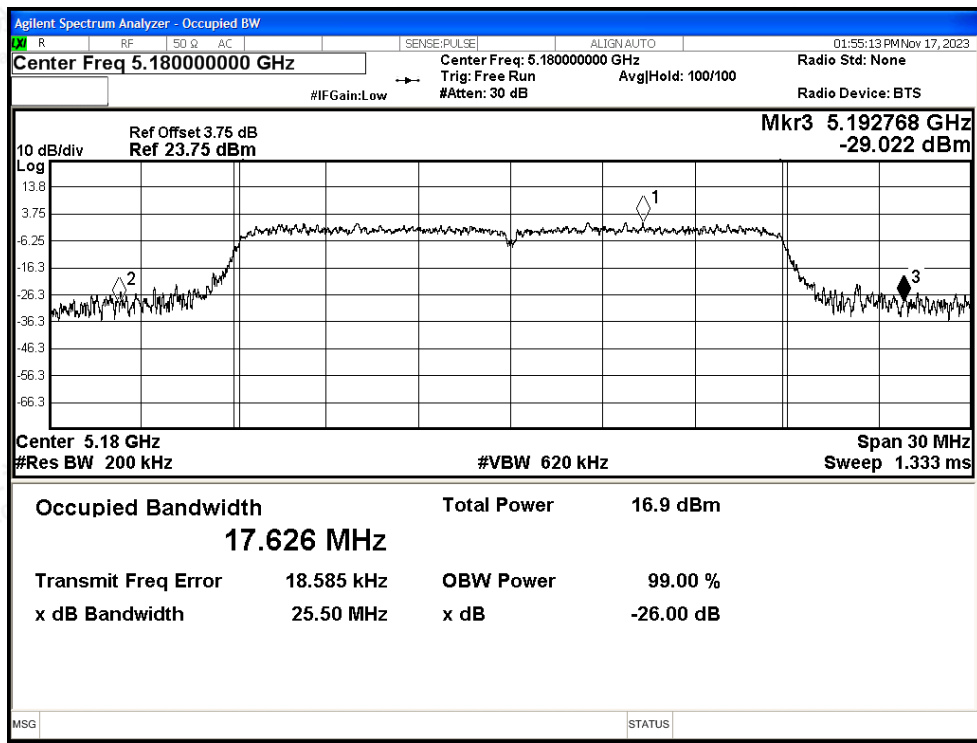




-26dB Bandwidth NVNT a 5240MHz Ant0



-26dB Bandwidth NVNT n20 5180MHz Ant0



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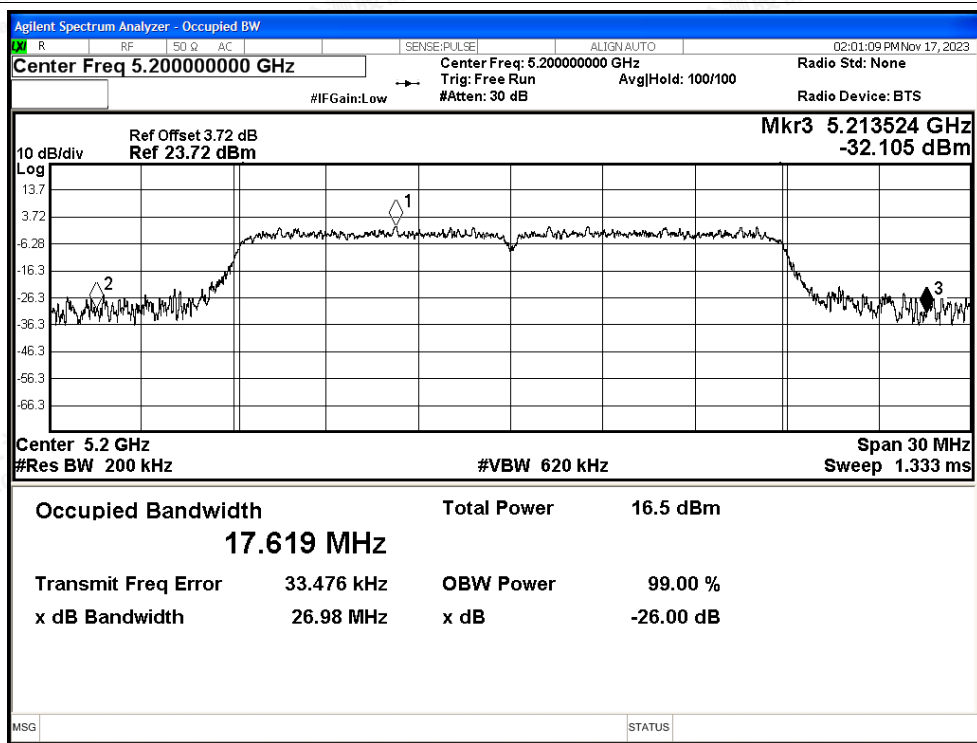
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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

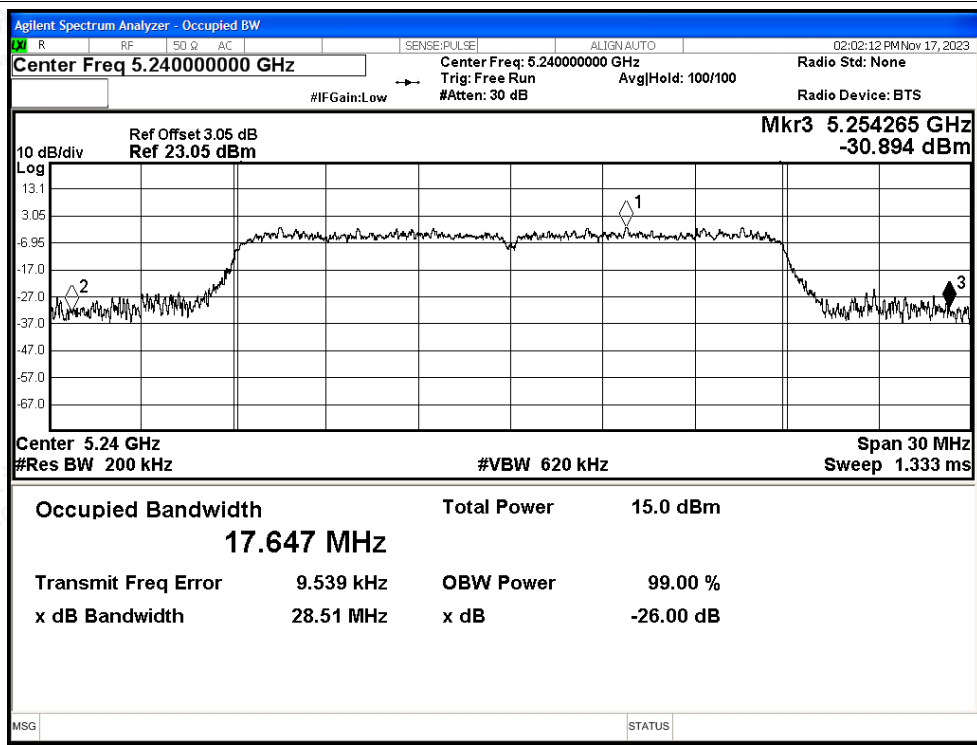
Scan code to check authenticity



-26dB Bandwidth NVNT n20 5200MHz Ant0



-26dB Bandwidth NVNT n20 5240MHz Ant0



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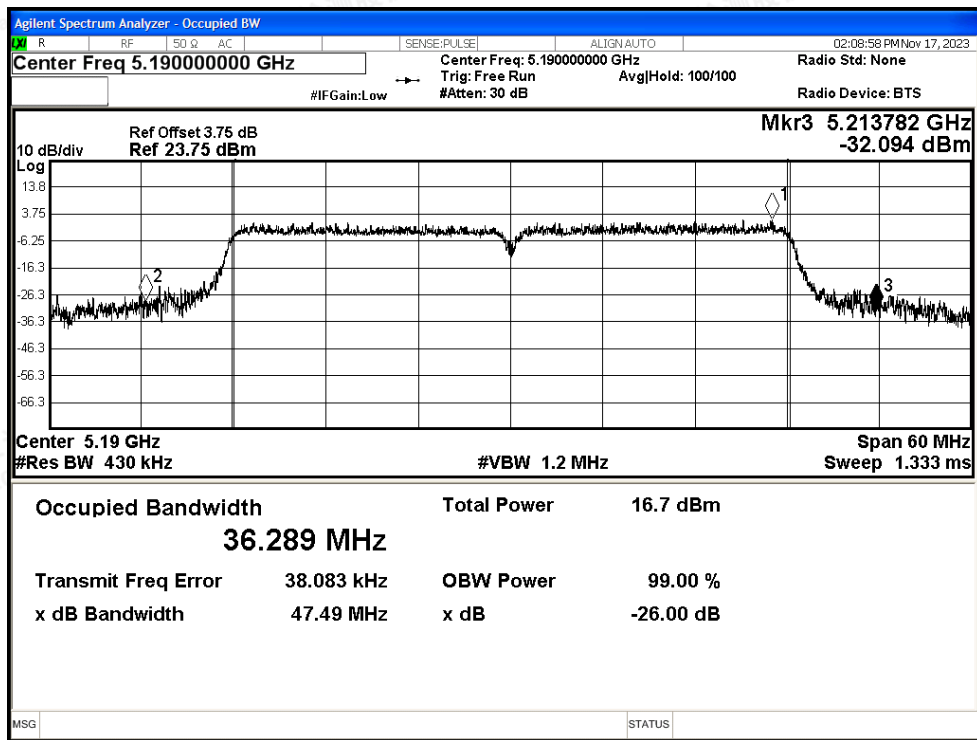
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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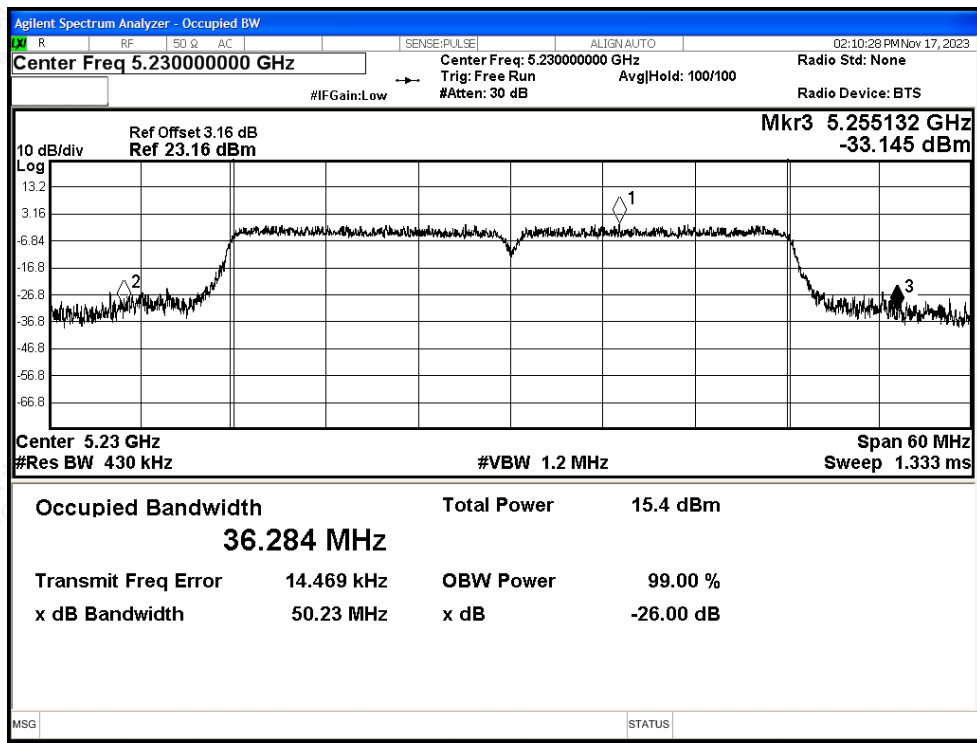
Scan code to check authenticity



-26dB Bandwidth NVNT n40 5190MHz Ant0



-26dB Bandwidth NVNT n40 5230MHz Ant0



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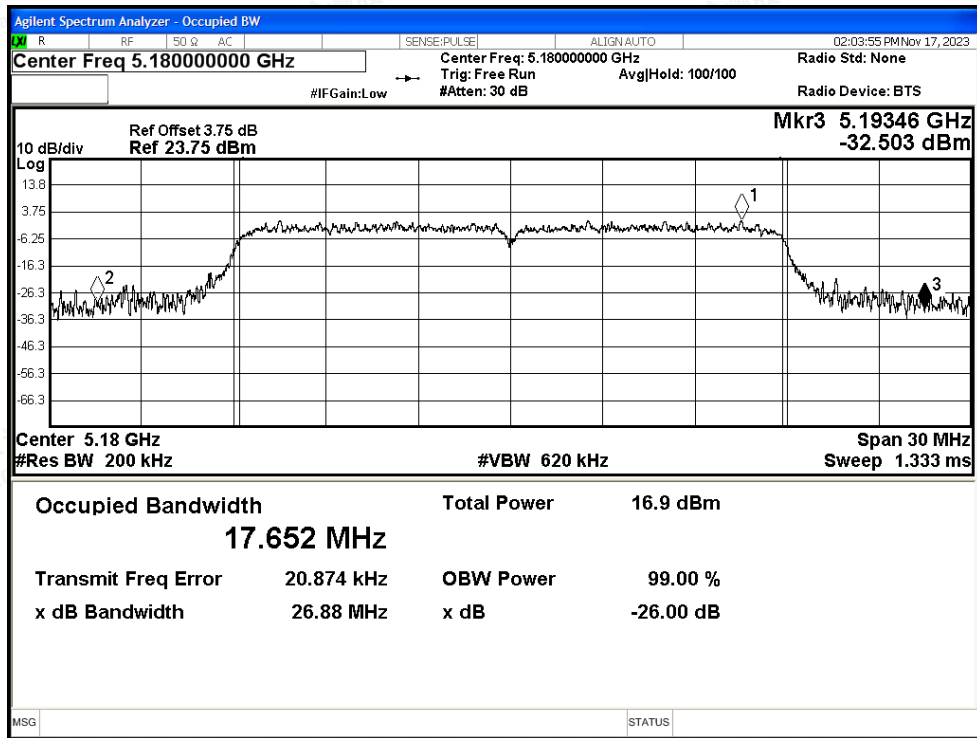
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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

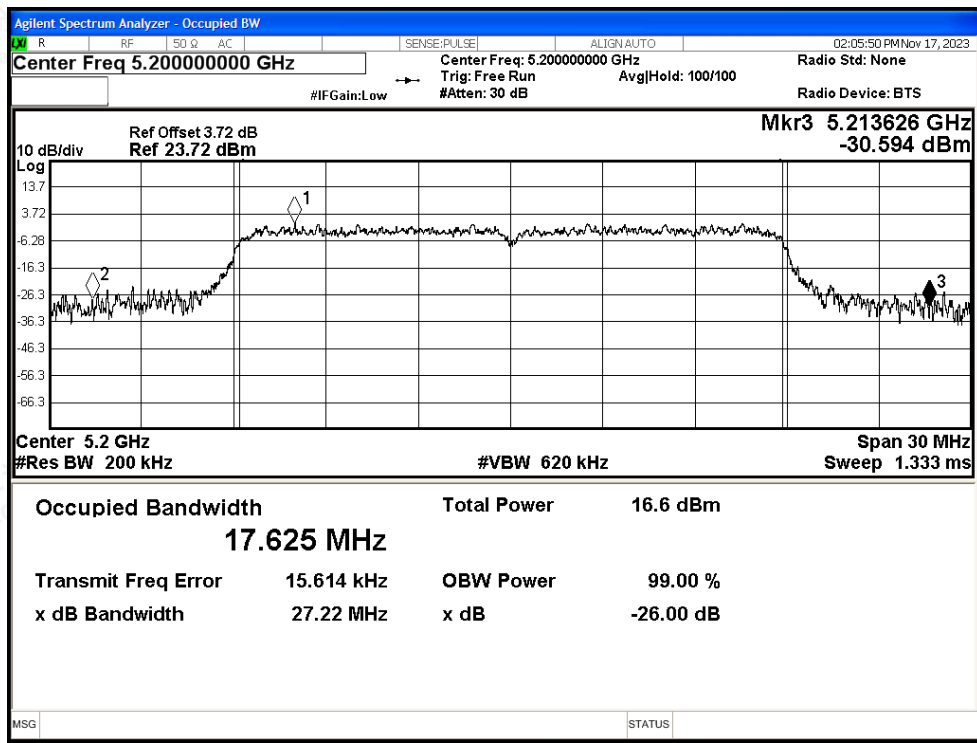
Scan code to check authenticity



-26dB Bandwidth NVNT ac20 5180MHz Ant0



-26dB Bandwidth NVNT ac20 5200MHz Ant0



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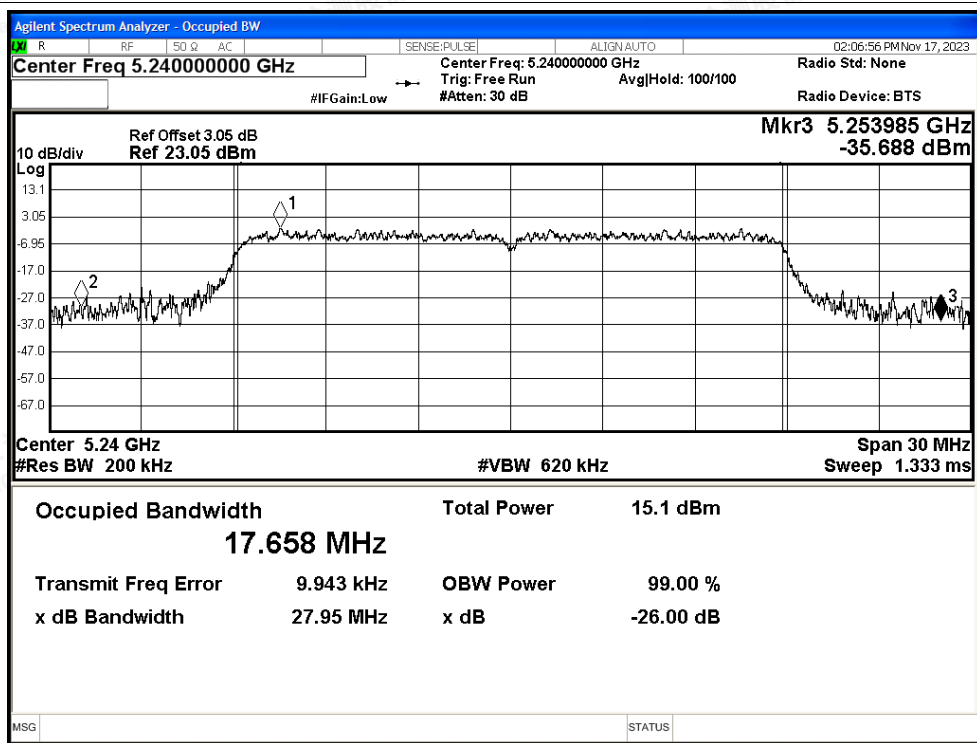
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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

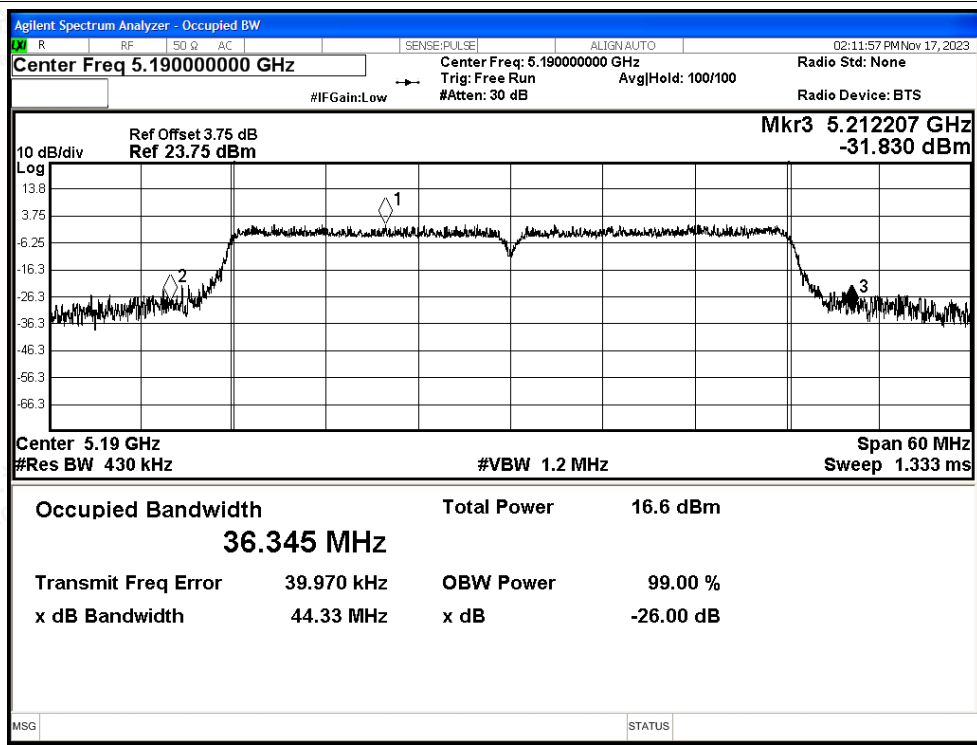
Scan code to check authenticity



-26dB Bandwidth NVNT ac20 5240MHz Ant0

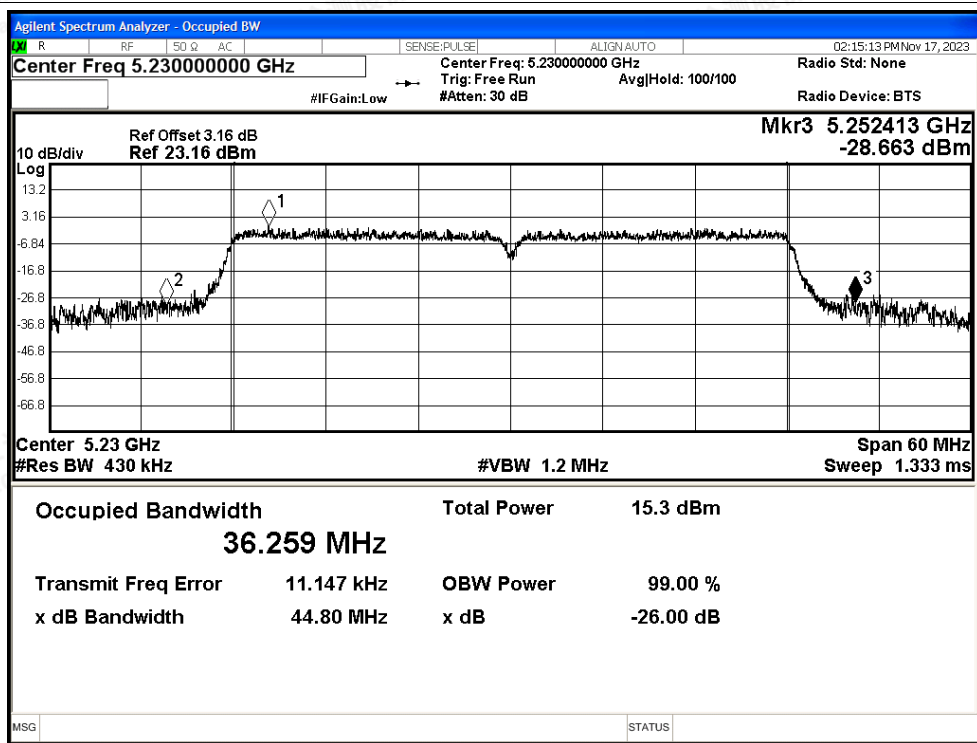


-26dB Bandwidth NVNT ac40 5190MHz Ant0

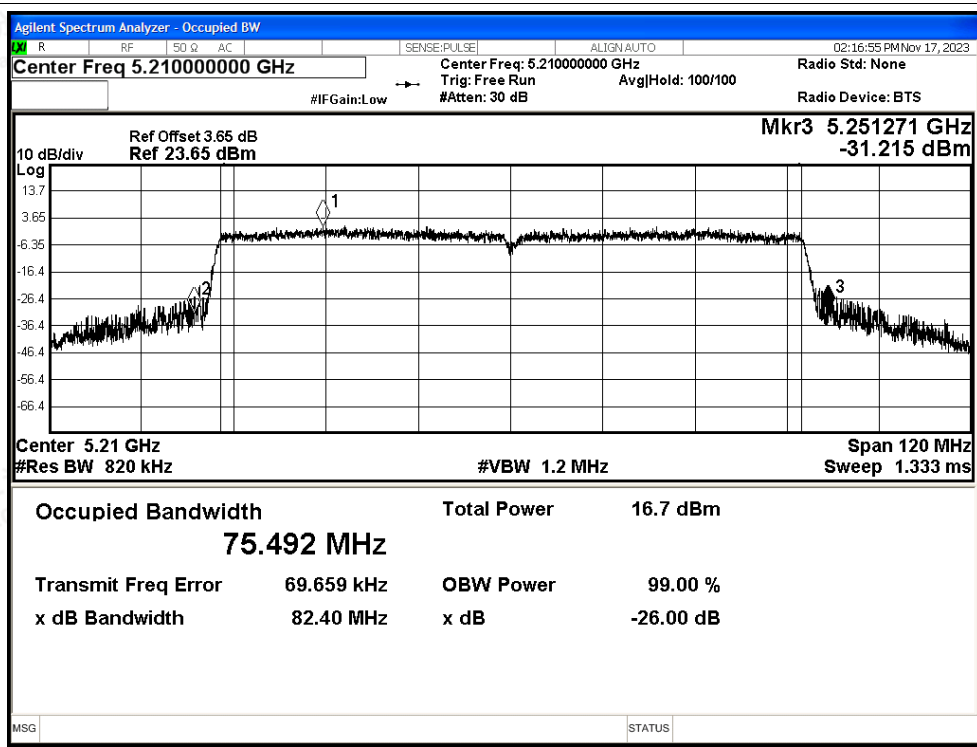




-26dB Bandwidth NVNT ac40 5230MHz Ant0



-26dB Bandwidth NVNT ac80 5210MHz Ant0





D.2 Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	a	5180	Ant0	11.24	24	Pass
NVNT	a	5200	Ant0	10.75	24	Pass
NVNT	a	5240	Ant0	9.19	24	Pass
NVNT	n20	5180	Ant0	11.63	24	Pass
NVNT	n20	5200	Ant0	10.93	24	Pass
NVNT	n20	5240	Ant0	9.61	24	Pass
NVNT	n40	5190	Ant0	11.12	24	Pass
NVNT	n40	5230	Ant0	9.69	24	Pass
NVNT	ac20	5180	Ant0	11.42	24	Pass
NVNT	ac20	5200	Ant0	11.08	24	Pass
NVNT	ac20	5240	Ant0	9.54	24	Pass
NVNT	ac40	5190	Ant0	11.07	24	Pass
NVNT	ac40	5230	Ant0	9.66	24	Pass
NVNT	ac80	5210	Ant0	10.31	24	Pass





D.3 Maximum Power Spectral Density Level

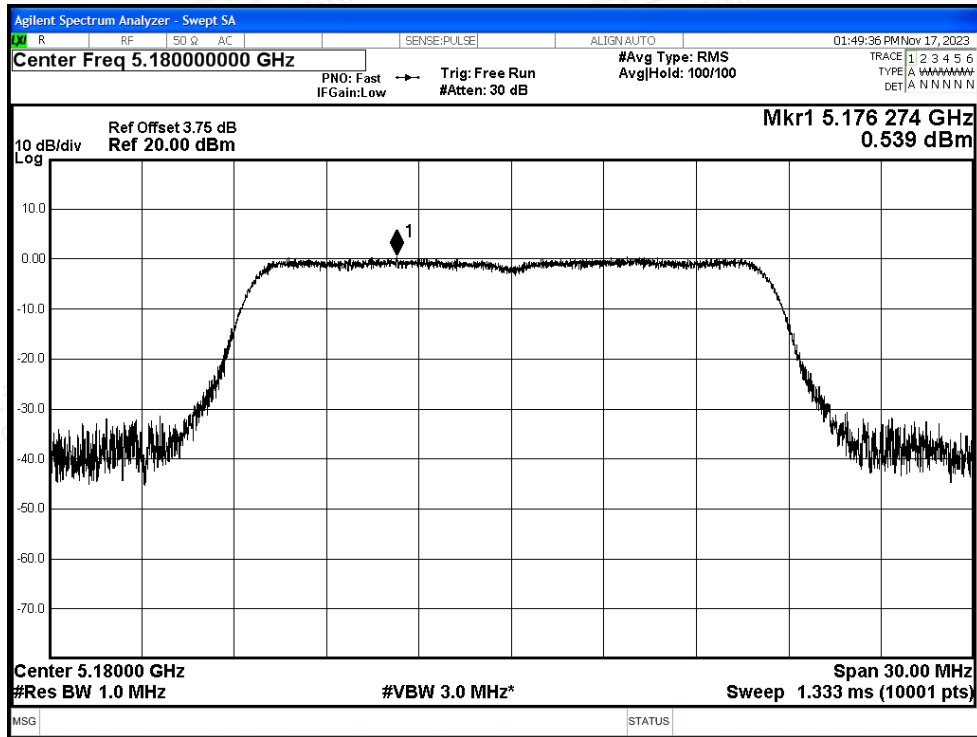
Condition	Mode	Frequency (MHz)	Antenna	Total PSD (dBm)	Limit (dBm)	Verdict
NVNT	a	5180	Ant0	0.73	11	Pass
NVNT	a	5200	Ant0	0.11	11	Pass
NVNT	a	5240	Ant0	-1.5	11	Pass
NVNT	n20	5180	Ant0	0.58	11	Pass
NVNT	n20	5200	Ant0	0.16	11	Pass
NVNT	n20	5240	Ant0	-1.12	11	Pass
NVNT	n40	5190	Ant0	-2.43	11	Pass
NVNT	n40	5230	Ant0	-3.62	11	Pass
NVNT	ac20	5180	Ant0	0.45	11	Pass
NVNT	ac20	5200	Ant0	0.35	11	Pass
NVNT	ac20	5240	Ant0	-1.14	11	Pass
NVNT	ac40	5190	Ant0	-2.51	11	Pass
NVNT	ac40	5230	Ant0	-4.02	11	Pass
NVNT	ac80	5210	Ant0	-5.96	11	Pass



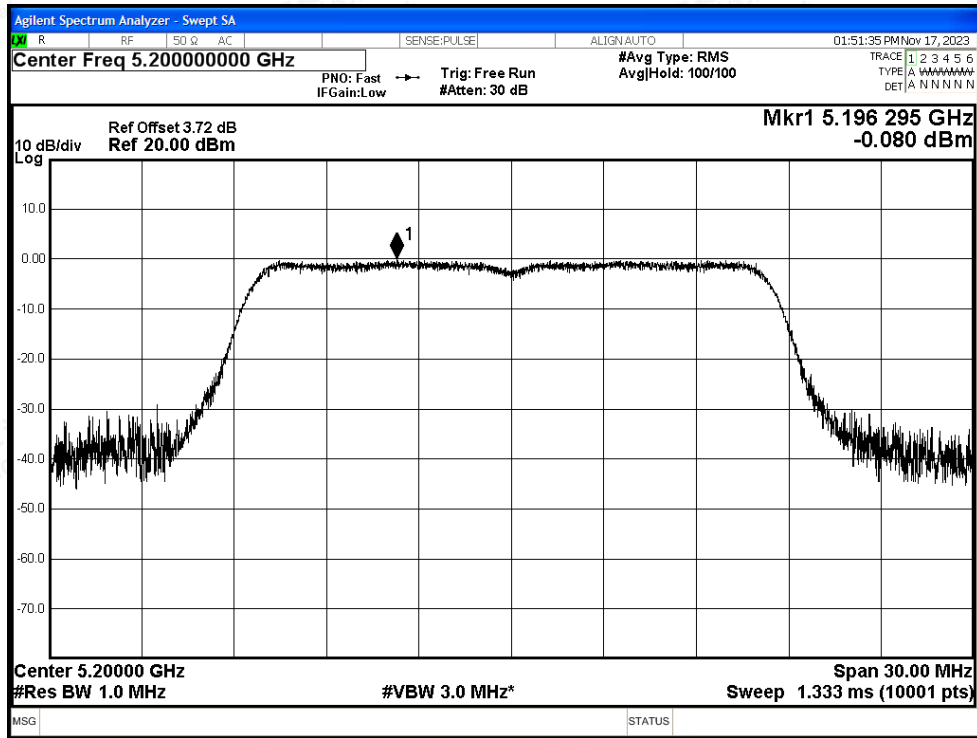


Test Graphs

PSD NVNT a 5180MHz Ant0

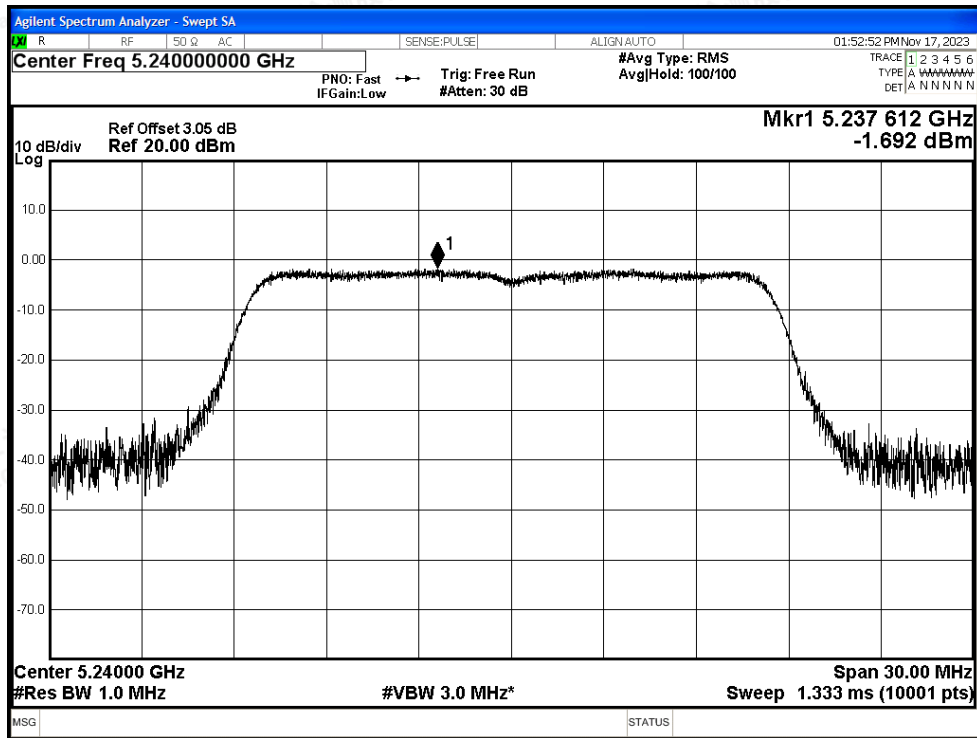


PSD NVNT a 5200MHz Ant0

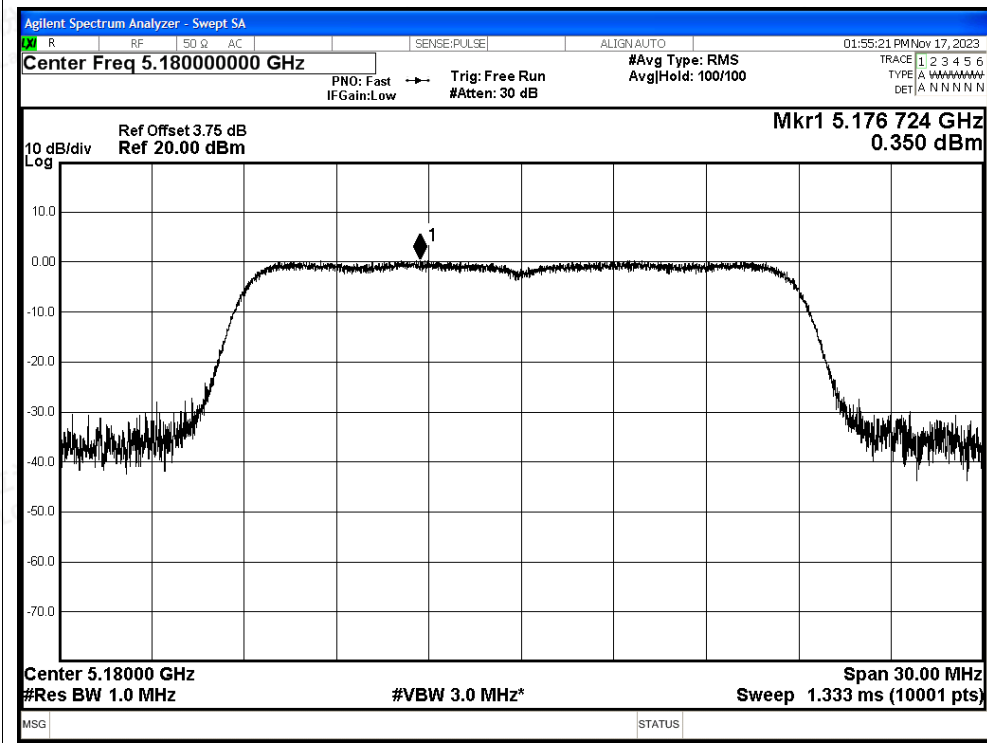


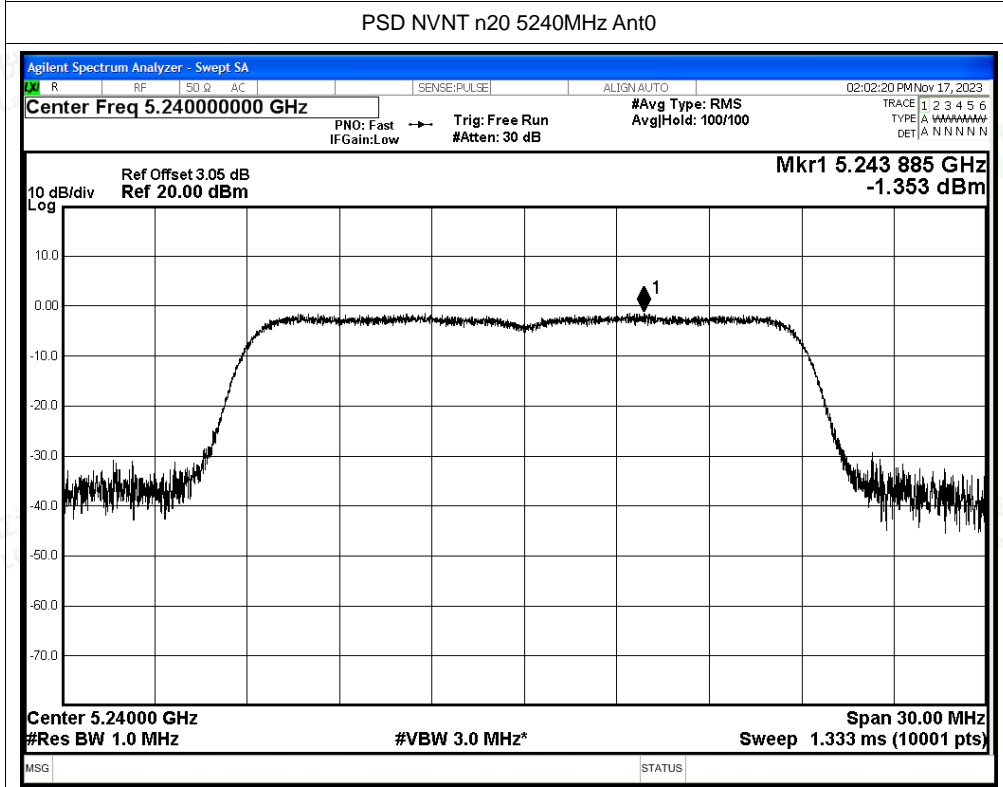
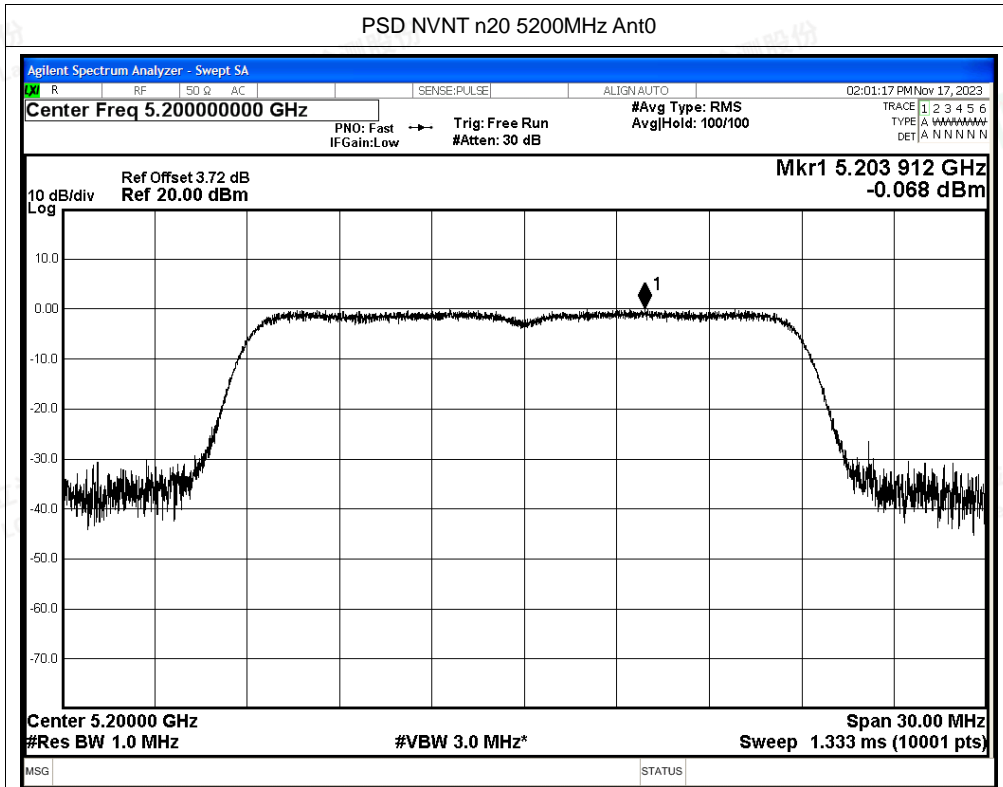


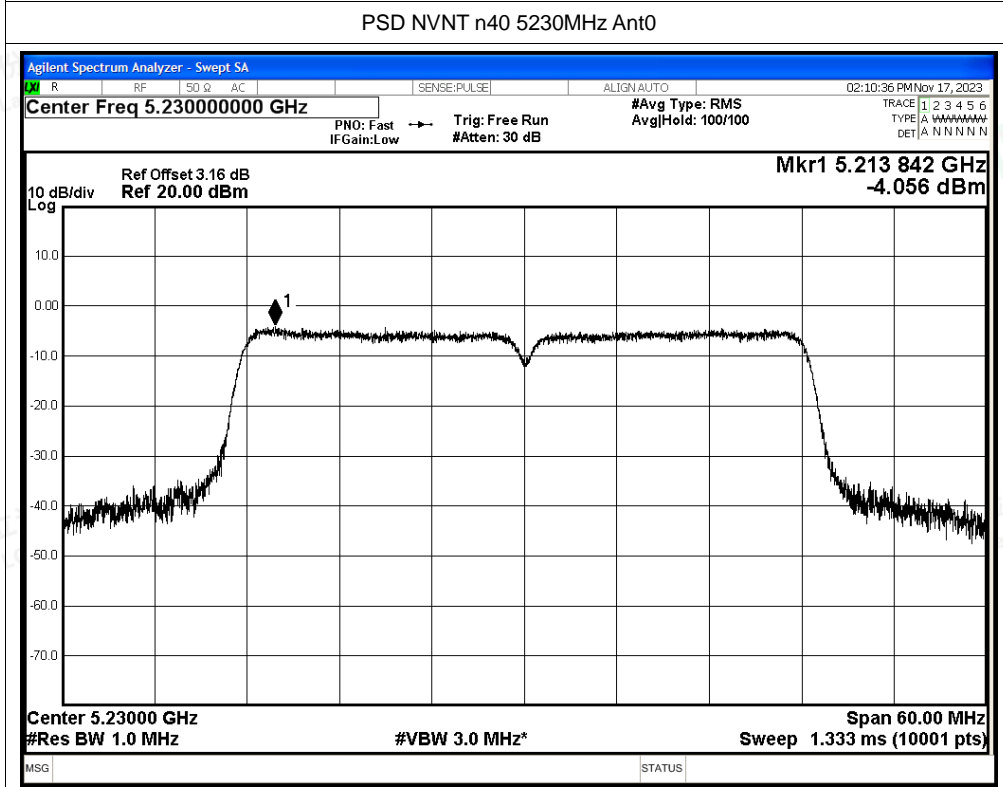
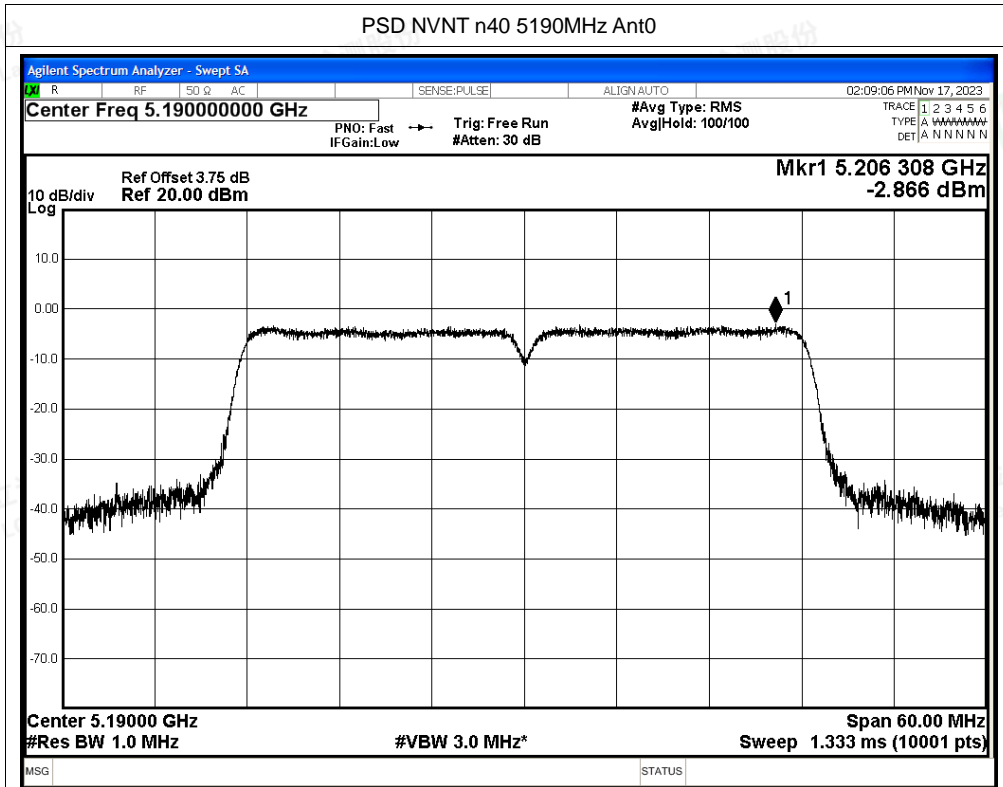
PSD NVNT a 5240MHz Ant0



PSD NVNT n20 5180MHz Ant0

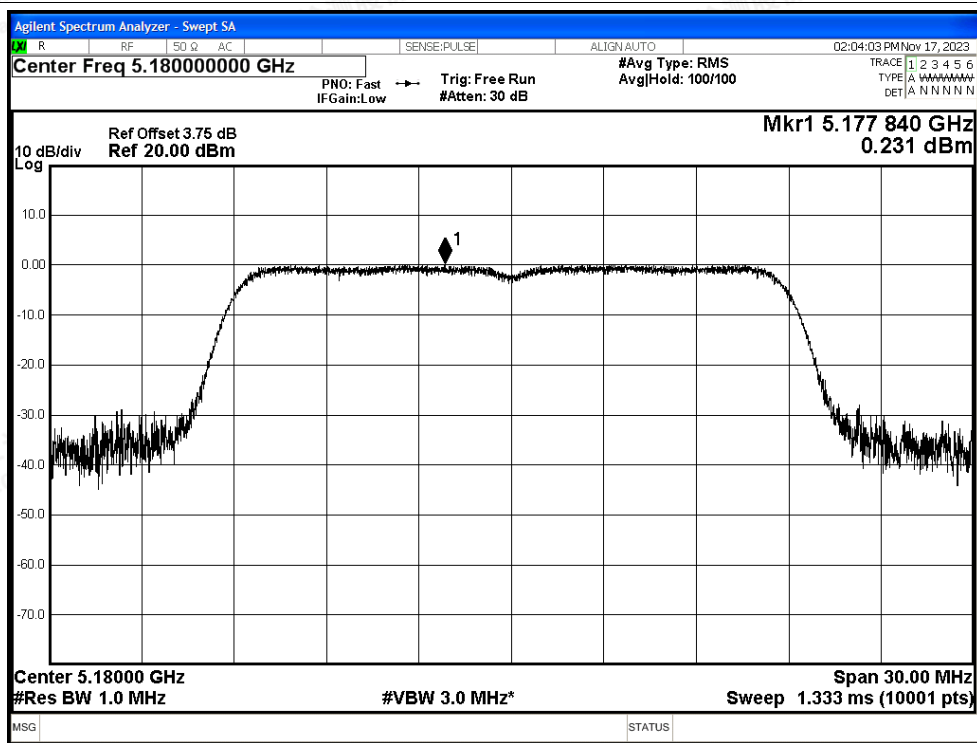




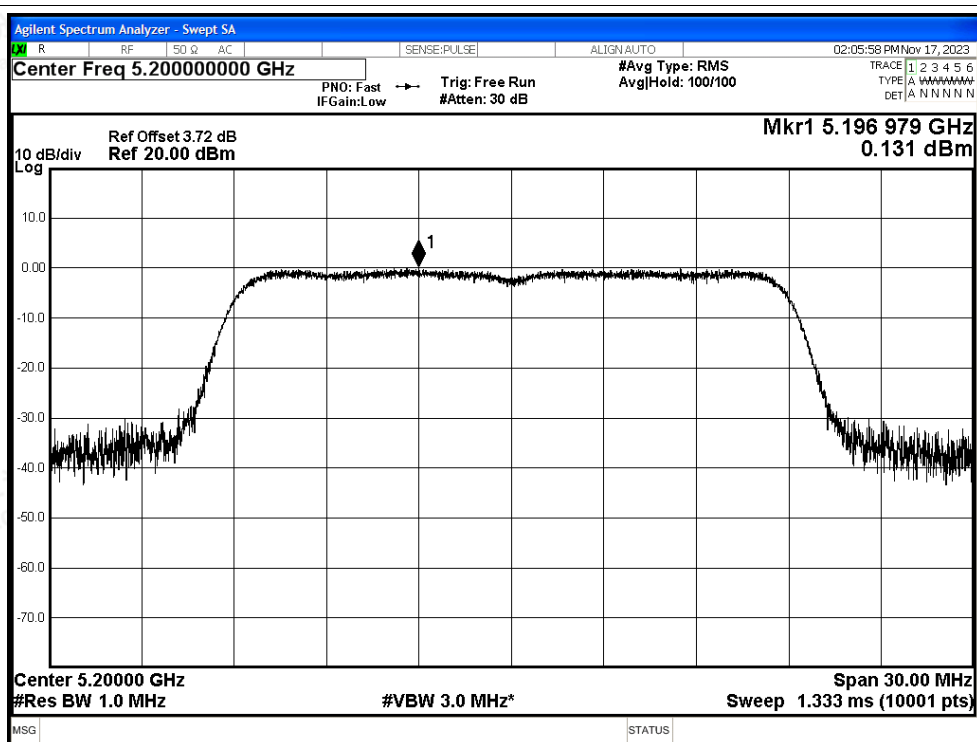


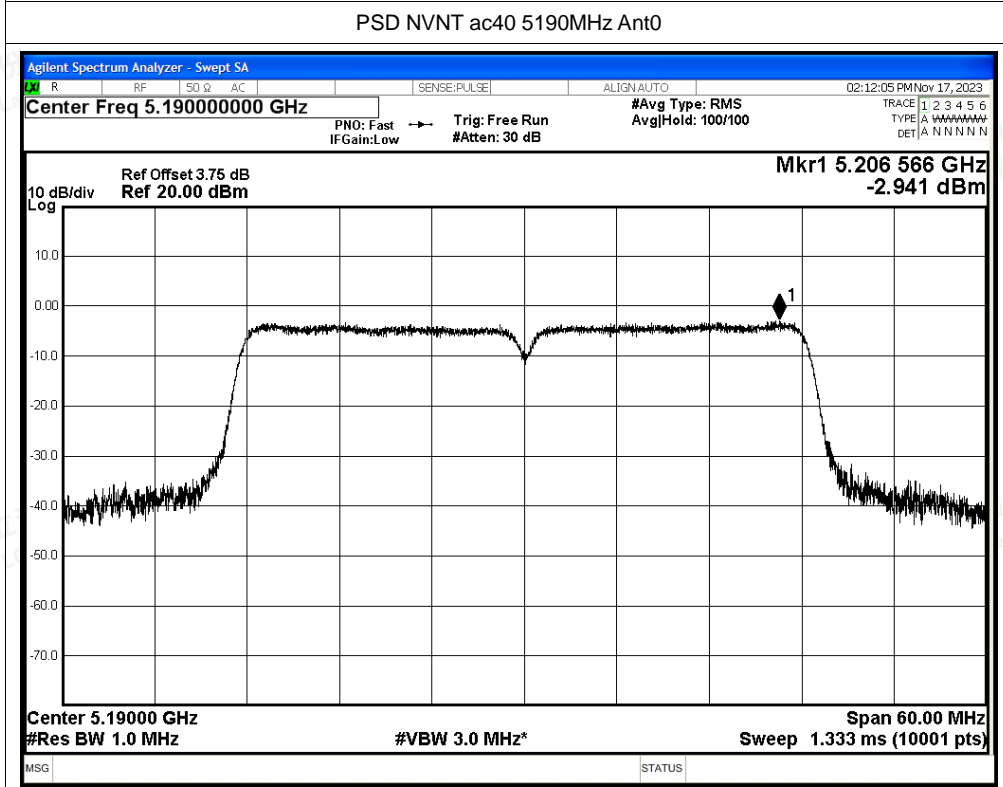
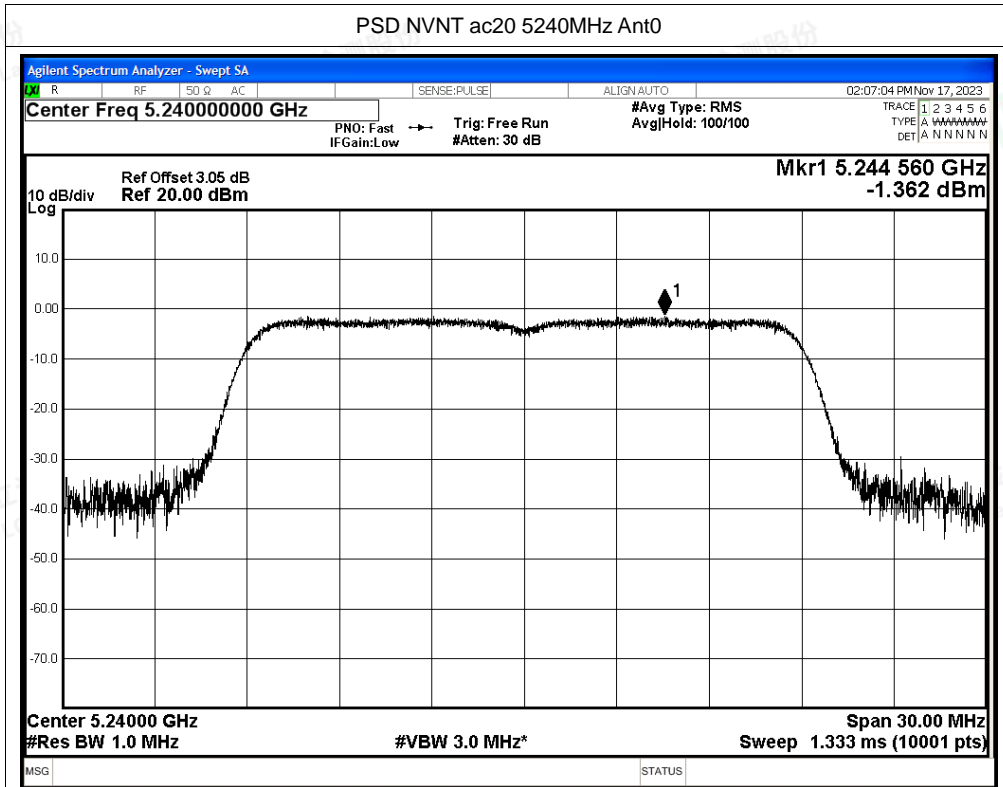


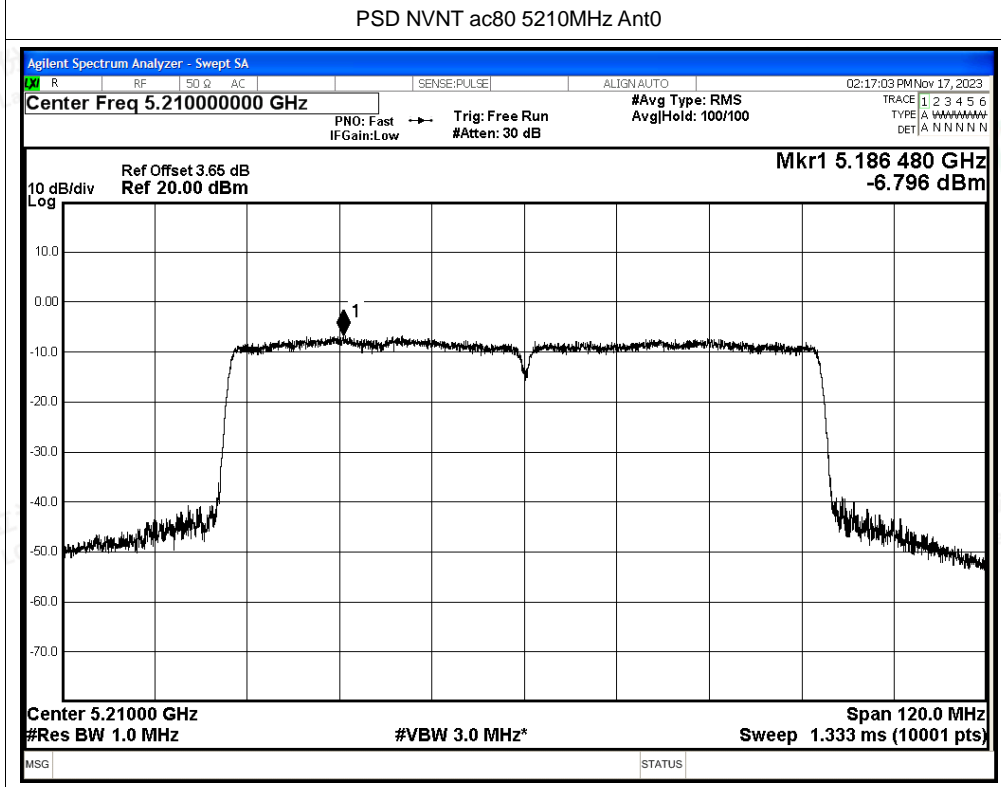
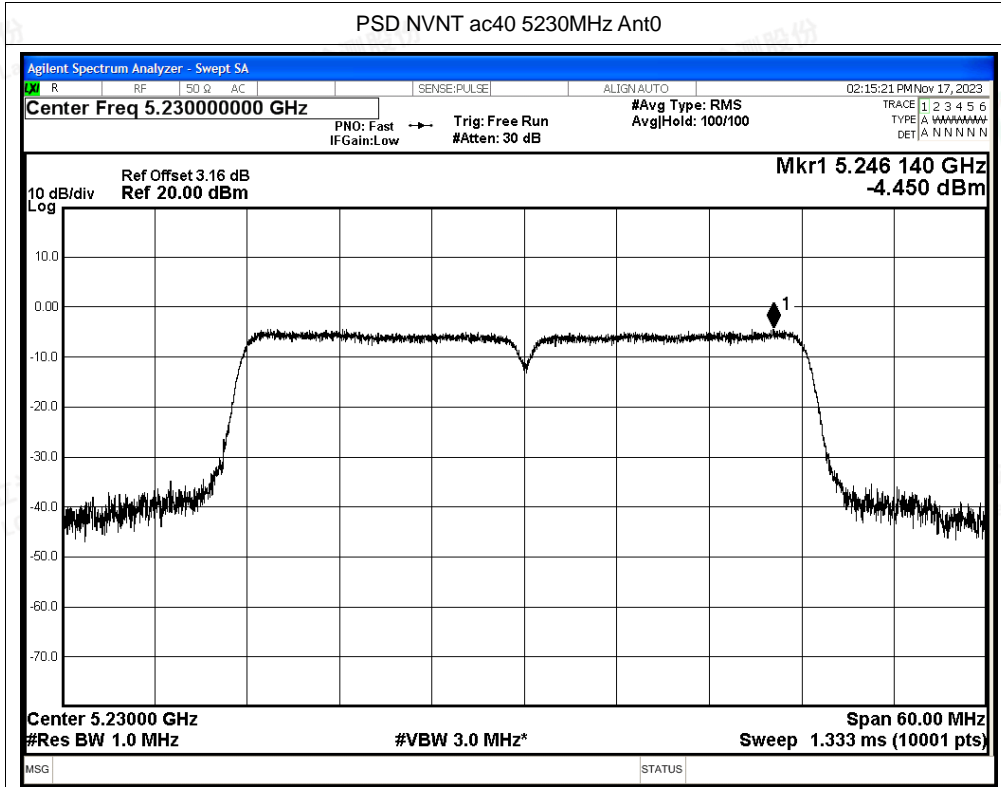
PSD NVNT ac20 5180MHz Ant0



PSD NVNT ac20 5200MHz Ant0









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	Ant0	4500	-49.21	2	48.02	Peak	68.2	Pass
NVNT	a	5180	Ant0	4500	-57.26	2	39.97	Average	54	Pass
NVNT	a	5180	Ant0	5146.8	-40.2	2	57.03	Peak	68.2	Pass
NVNT	a	5180	Ant0	5149.6	-49.7	2	47.53	Average	54	Pass
NVNT	a	5180	Ant0	5150	-40.26	2	56.97	Peak	68.2	Pass
NVNT	a	5180	Ant0	5150	-49	2	48.23	Average	54	Pass
NVNT	a	5240	Ant0	5350	-49.89	2	47.34	Peak	68.2	Pass
NVNT	a	5240	Ant0	5350	-56.89	2	40.34	Average	54	Pass
NVNT	a	5240	Ant0	5388.48	-47.28	2	49.95	Peak	68.2	Pass
NVNT	a	5240	Ant0	5351.52	-56.78	2	40.45	Average	54	Pass
NVNT	a	5240	Ant0	5460	-50.56	2	46.67	Peak	68.2	Pass
NVNT	a	5240	Ant0	5460	-57.06	2	40.17	Average	54	Pass
NVNT	n20	5180	Ant0	4500	-50.15	2	47.08	Peak	68.2	Pass
NVNT	n20	5180	Ant0	4500	-57.23	2	40	Average	54	Pass
NVNT	n20	5180	Ant0	5148.2	-33.47	2	63.76	Peak	68.2	Pass
NVNT	n20	5180	Ant0	5149.6	-44.71	2	52.52	Average	54	Pass
NVNT	n20	5180	Ant0	5150	-35.35	2	61.88	Peak	68.2	Pass
NVNT	n20	5180	Ant0	5150	-45.22	2	52.01	Average	54	Pass
NVNT	n20	5240	Ant0	5350	-50.17	2	47.06	Peak	68.2	Pass
NVNT	n20	5240	Ant0	5350	-56.78	2	40.45	Average	54	Pass
NVNT	n20	5240	Ant0	5392.56	-46.47	2	50.76	Peak	68.2	Pass
NVNT	n20	5240	Ant0	5351.28	-56.42	2	40.81	Average	54	Pass
NVNT	n20	5240	Ant0	5460	-50.04	2	47.19	Peak	68.2	Pass
NVNT	n20	5240	Ant0	5460	-57.16	2	40.07	Average	54	Pass
NVNT	n40	5190	Ant0	4500	-48.92	2	48.31	Peak	68.2	Pass
NVNT	n40	5190	Ant0	4500	-57.02	2	40.21	Average	54	Pass
NVNT	n40	5190	Ant0	5148.24	-33	2	64.23	Peak	68.2	Pass
NVNT	n40	5190	Ant0	5149.7	-46.19	2	51.04	Average	54	Pass
NVNT	n40	5190	Ant0	5150	-38.53	2	58.7	Peak	68.2	Pass
NVNT	n40	5190	Ant0	5150	-46.19	2	51.04	Average	54	Pass
NVNT	n40	5230	Ant0	5350	-49.34	2	47.89	Peak	68.2	Pass
NVNT	n40	5230	Ant0	5350	-56.46	2	40.77	Average	54	Pass
NVNT	n40	5230	Ant0	5363.61	-46.46	2	50.77	Peak	68.2	Pass
NVNT	n40	5230	Ant0	5350.92	-56.42	2	40.81	Average	54	Pass
NVNT	n40	5230	Ant0	5460	-50.07	2	47.16	Peak	68.2	Pass
NVNT	n40	5230	Ant0	5460	-56.92	2	40.31	Average	54	Pass
NVNT	ac20	5180	Ant0	4500	-49.28	2	47.95	Peak	68.2	Pass
NVNT	ac20	5180	Ant0	4500	-57.05	2	40.18	Average	54	Pass



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NVNT	ac20	5180	Ant0	5149.6	-37.82	2	59.41	Peak	68.2	Pass
NVNT	ac20	5180	Ant0	5149.6	-46.47	2	50.76	Average	54	Pass
NVNT	ac20	5180	Ant0	5150	-37.46	2	59.77	Peak	68.2	Pass
NVNT	ac20	5180	Ant0	5150	-46.33	2	50.9	Average	54	Pass
NVNT	ac20	5240	Ant0	5350	-48.21	2	49.02	Peak	68.2	Pass
NVNT	ac20	5240	Ant0	5350	-56.6	2	40.63	Average	54	Pass
NVNT	ac20	5240	Ant0	5399.76	-47.32	2	49.91	Peak	68.2	Pass
NVNT	ac20	5240	Ant0	5350.08	-56.6	2	40.63	Average	54	Pass
NVNT	ac20	5240	Ant0	5460	-50.28	2	46.95	Peak	68.2	Pass
NVNT	ac20	5240	Ant0	5460	-57.02	2	40.21	Average	54	Pass
NVNT	ac40	5190	Ant0	4500	-50.43	2	46.8	Peak	68.2	Pass
NVNT	ac40	5190	Ant0	4500	-56.8	2	40.43	Average	54	Pass
NVNT	ac40	5190	Ant0	5148.24	-35.52	2	61.71	Peak	68.2	Pass
NVNT	ac40	5190	Ant0	5148.97	-45.71	2	51.52	Average	54	Pass
NVNT	ac40	5190	Ant0	5150	-35.91	2	61.32	Peak	68.2	Pass
NVNT	ac40	5190	Ant0	5150	-45.83	2	51.4	Average	54	Pass
NVNT	ac40	5230	Ant0	5350	-49.61	2	47.62	Peak	68.2	Pass
NVNT	ac40	5230	Ant0	5350	-56.74	2	40.49	Average	54	Pass
NVNT	ac40	5230	Ant0	5392.23	-47.1	2	50.13	Peak	68.2	Pass
NVNT	ac40	5230	Ant0	5414.1	-56.39	2	40.84	Average	54	Pass
NVNT	ac40	5230	Ant0	5460	-50.62	2	46.61	Peak	68.2	Pass
NVNT	ac40	5230	Ant0	5460	-56.77	2	40.46	Average	54	Pass
NVNT	ac80	5210	Ant0	5350	-48.83	2	48.4	Peak	68.2	Pass
NVNT	ac80	5210	Ant0	5350	-55.39	2	41.84	Average	54	Pass
NVNT	ac80	5210	Ant0	5445.15	-45.91	2	51.32	Peak	68.2	Pass
NVNT	ac80	5210	Ant0	5350.11	-55.39	2	41.84	Average	54	Pass
NVNT	ac80	5210	Ant0	5460	-50.22	2	47.01	Peak	68.2	Pass
NVNT	ac80	5210	Ant0	5460	-55.83	2	41.4	Average	54	Pass
NVNT	ac80	5210	Ant0	4500	-51.47	2	45.76	Peak	68.2	Pass
NVNT	ac80	5210	Ant0	4500	-56.77	2	40.46	Average	54	Pass
NVNT	ac80	5210	Ant0	5149.38	-38.23	2	59	Peak	68.2	Pass
NVNT	ac80	5210	Ant0	5148.59	-46.86	2	50.37	Average	54	Pass
NVNT	ac80	5210	Ant0	5150	-35.87	2	61.36	Peak	68.2	Pass
NVNT	ac80	5210	Ant0	5150	-46.82	2	50.41	Average	54	Pass

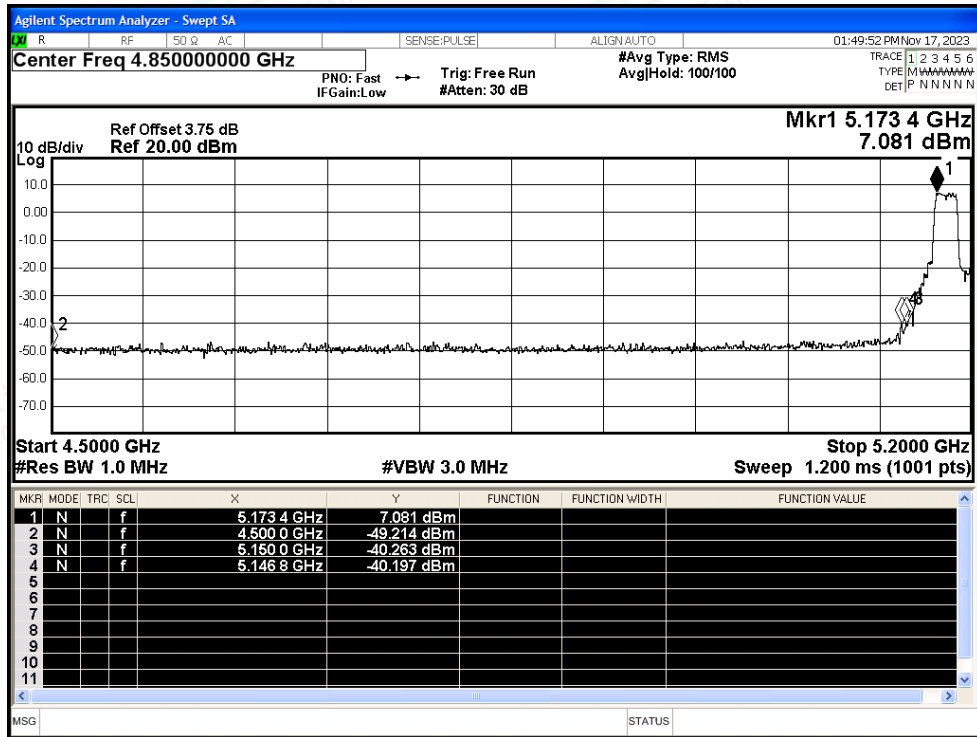


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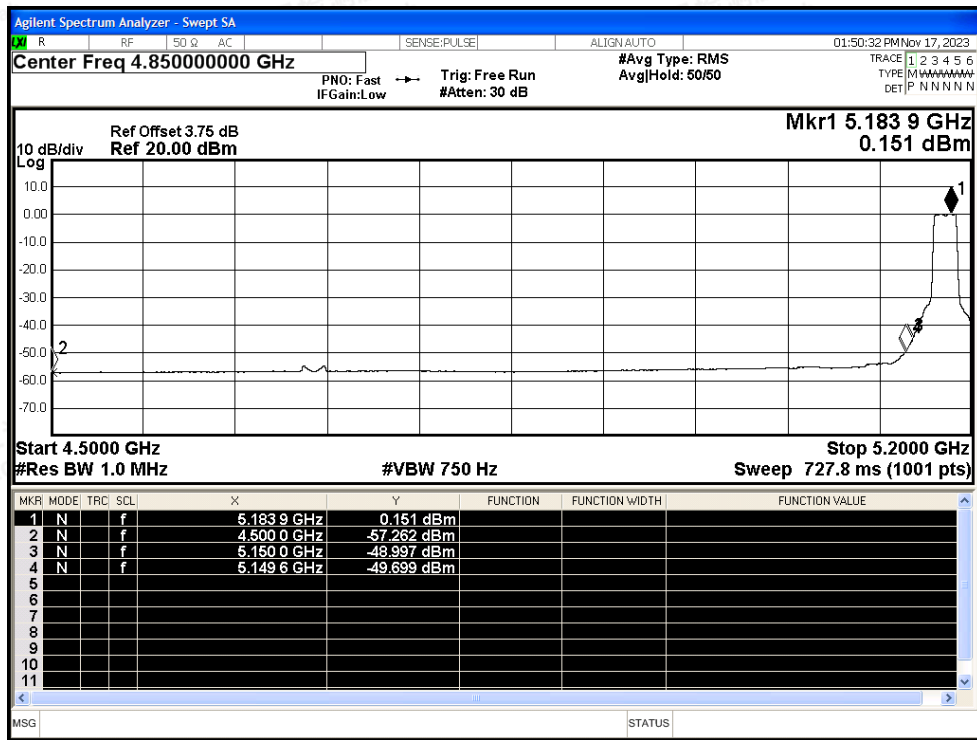


Test Graphs

Restrict Band NVNT a 5180MHz Ant0 Peak

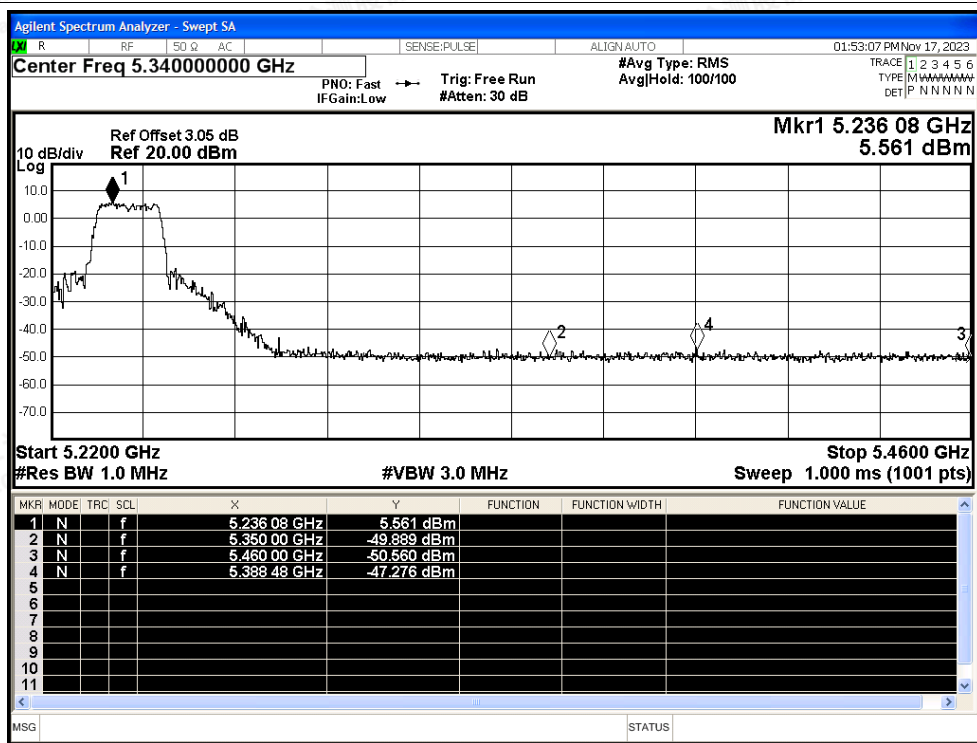


Restrict Band NVNT a 5180MHz Ant0 Average

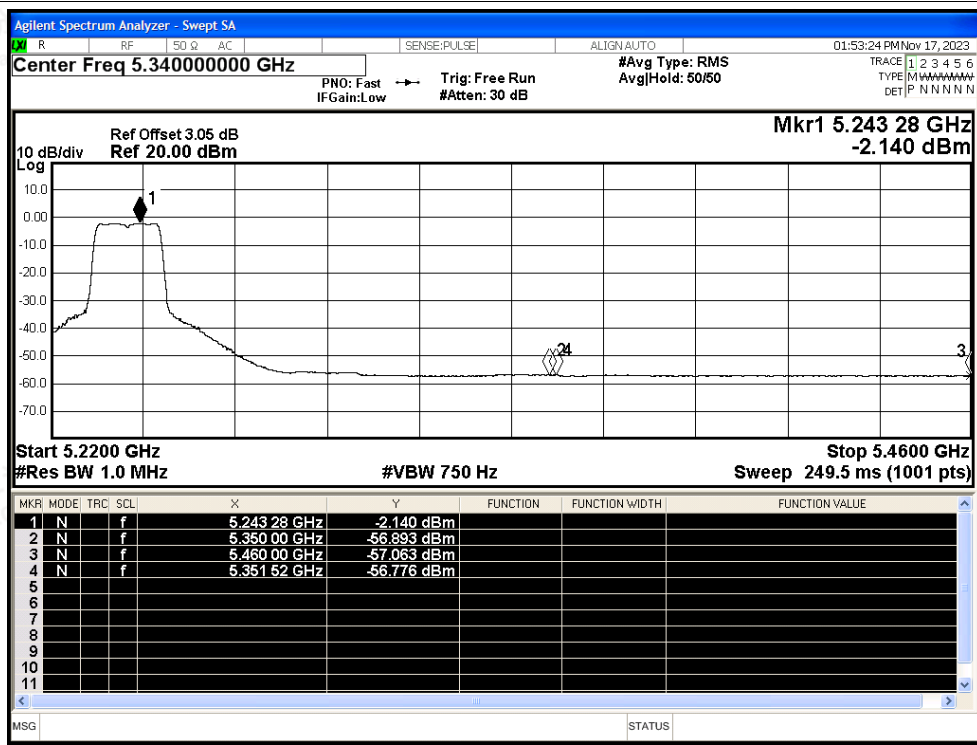




Restrict Band NVNT a 5240MHz Ant0 Peak

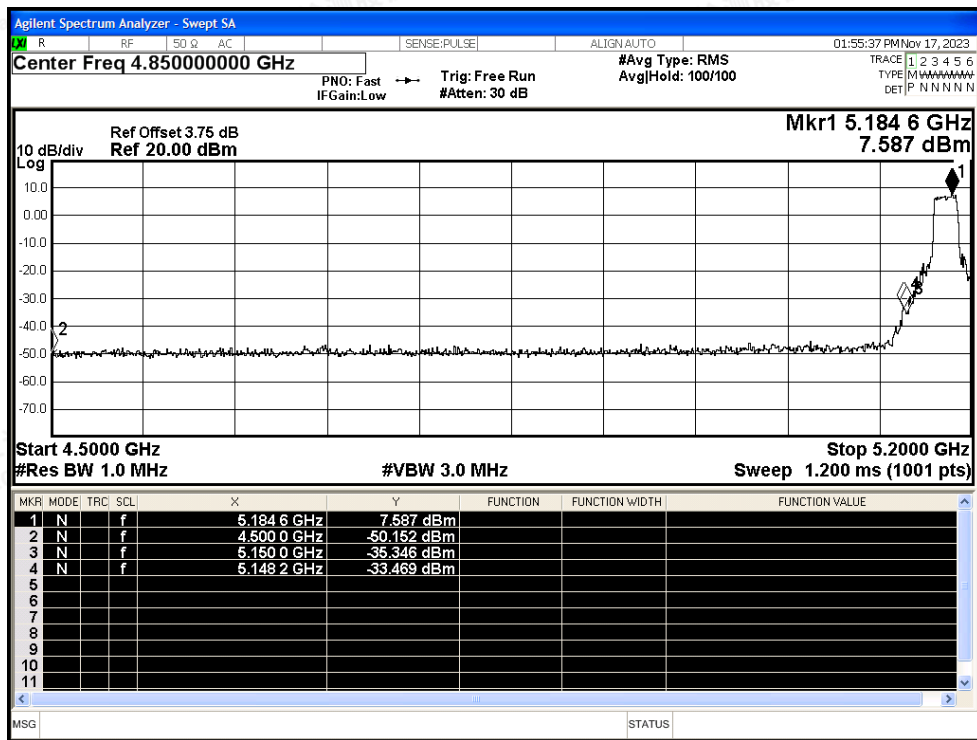


Restrict Band NVNT a 5240MHz Ant0 Average

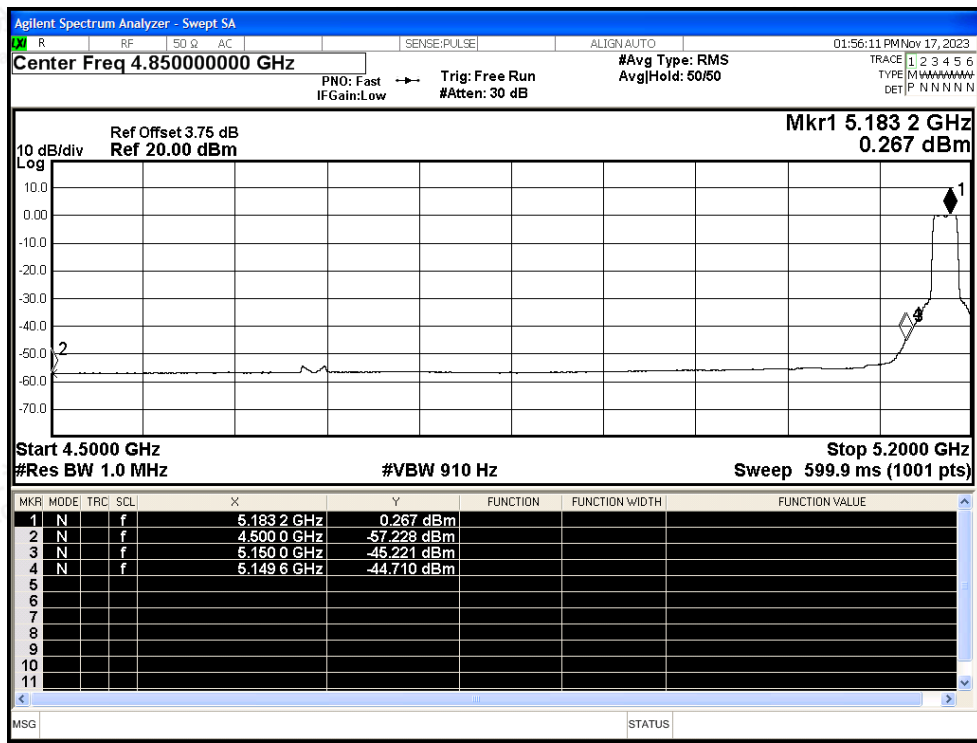




Restrict Band NVNT n20 5180MHz Ant0 Peak

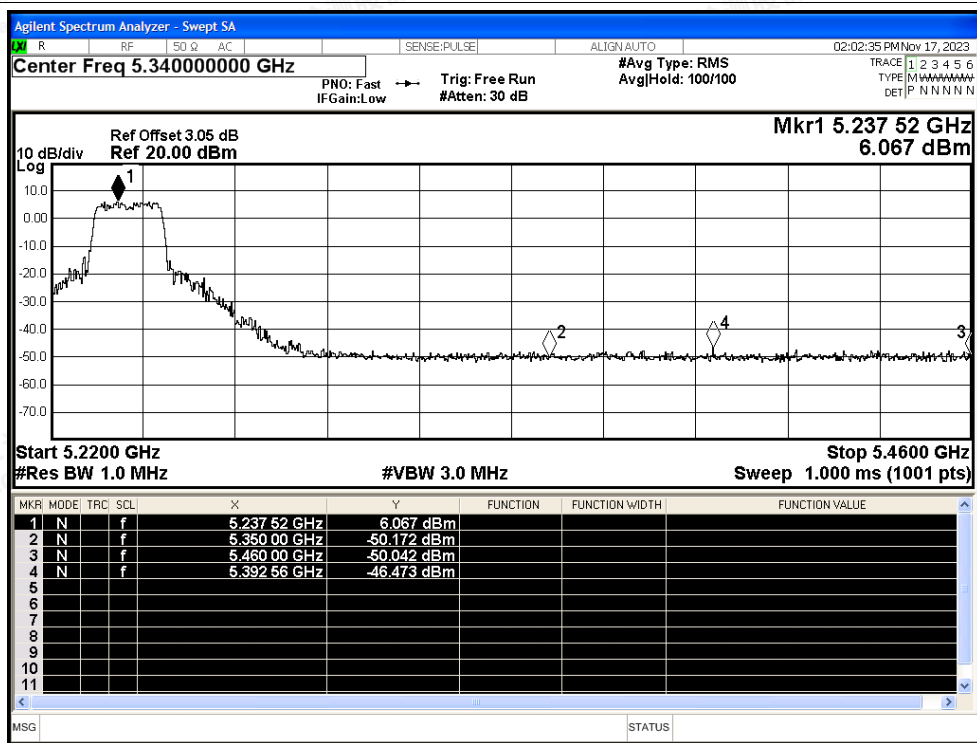


Restrict Band NVNT n20 5180MHz Ant0 Average

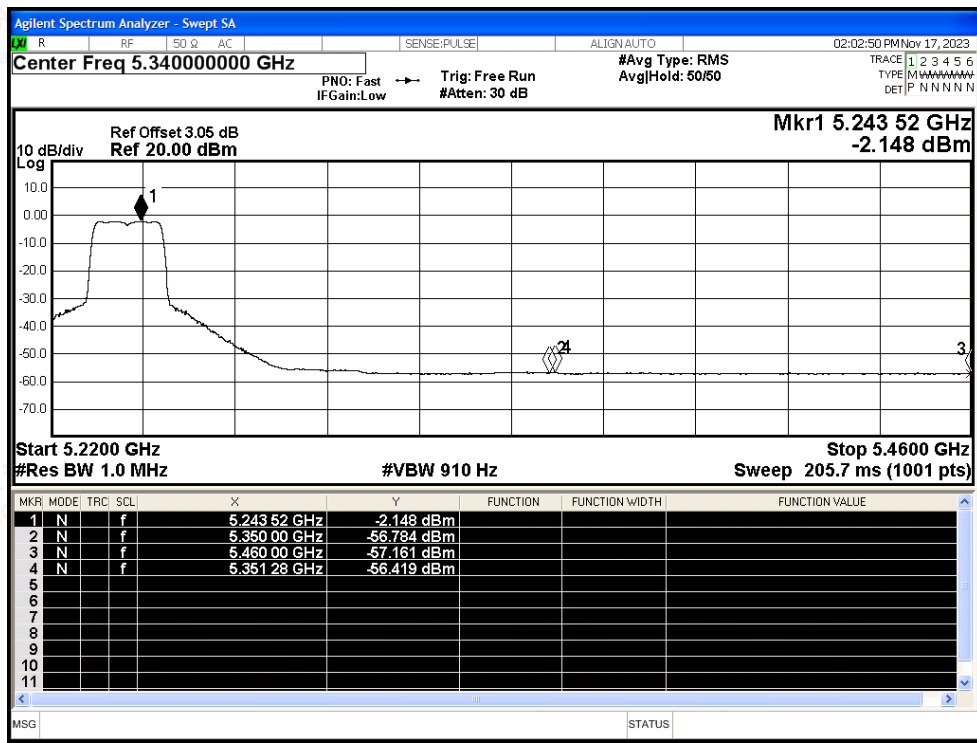




Restrict Band NVNT n20 5240MHz Ant0 Peak



Restrict Band NVNT n20 5240MHz Ant0 Average



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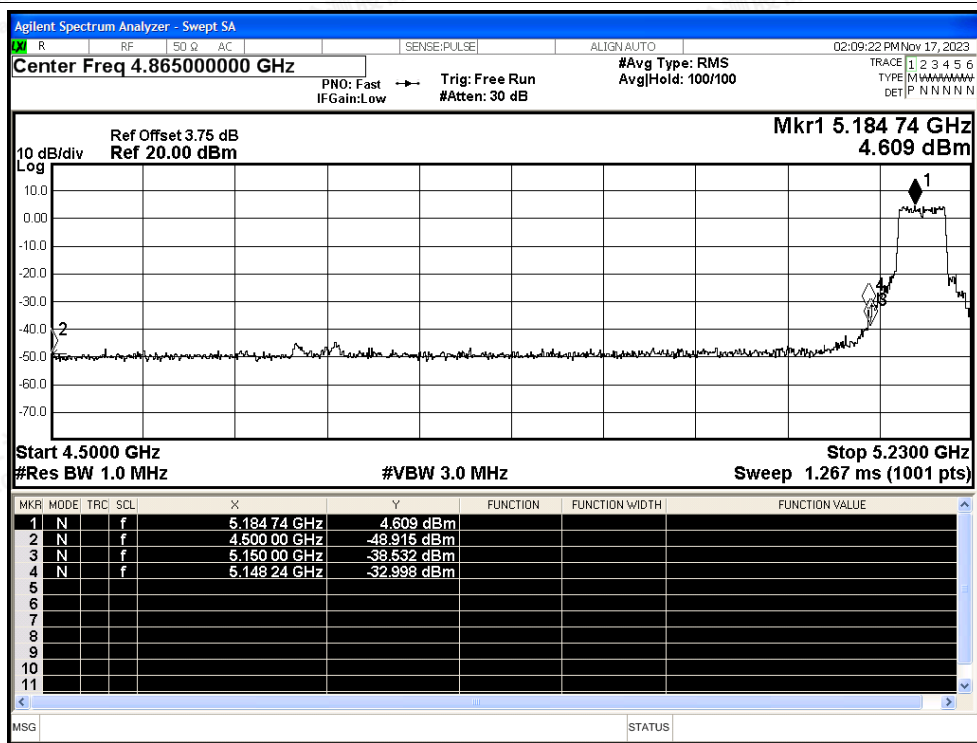
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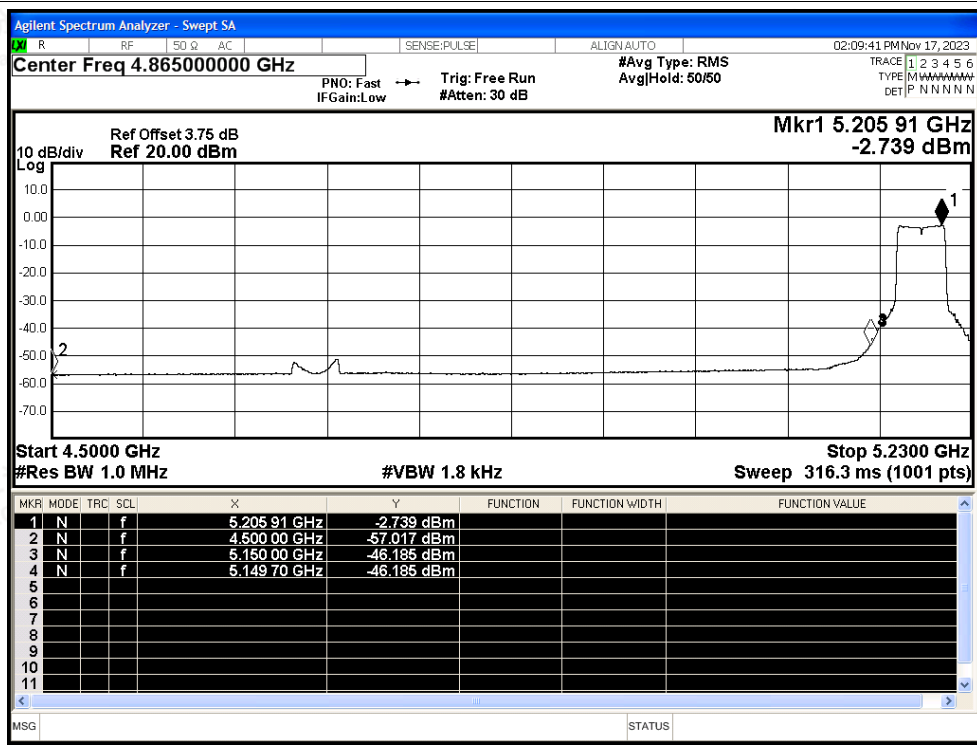
Scan code to check authenticity



Restrict Band NVNT n40 5190MHz Ant0 Peak

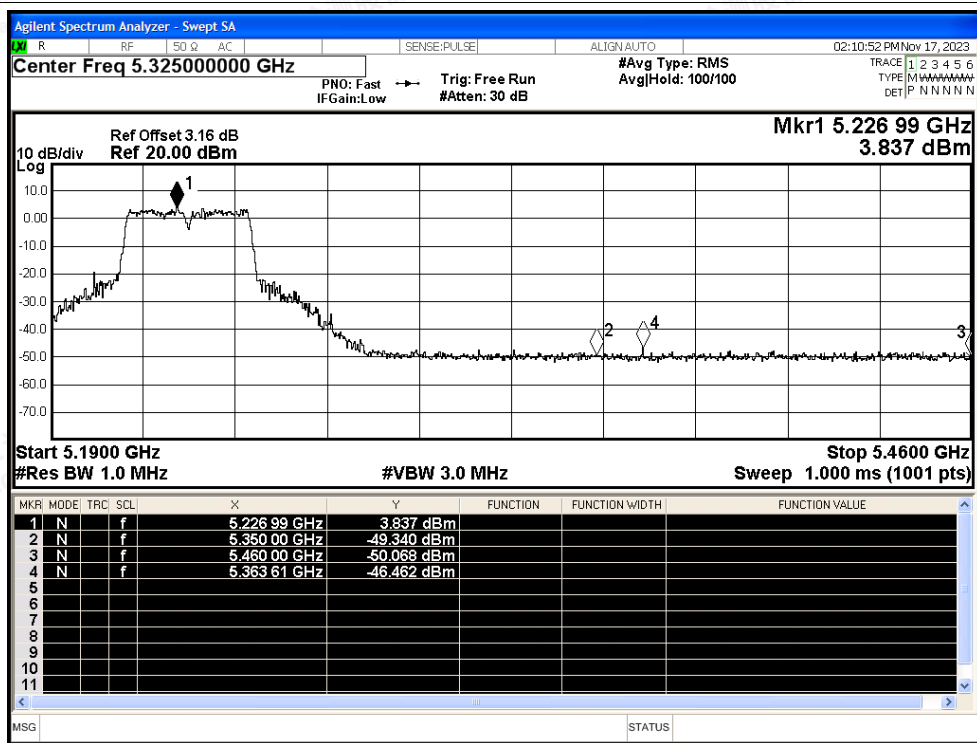


Restrict Band NVNT n40 5190MHz Ant0 Average

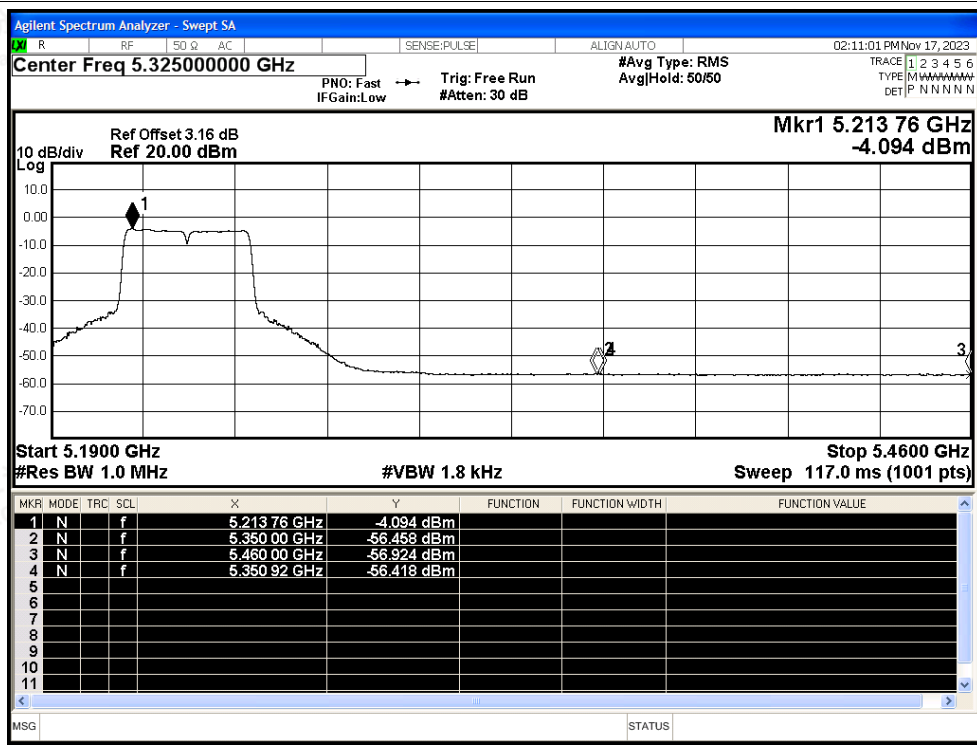




Restrict Band NVNT n40 5230MHz Ant0 Peak

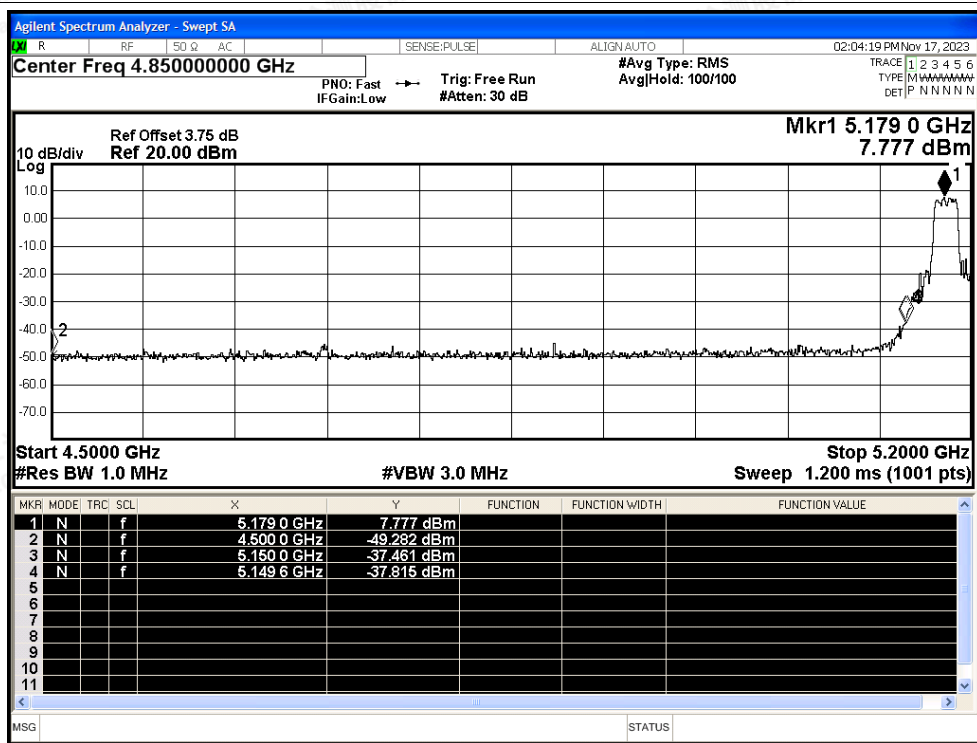


Restrict Band NVNT n40 5230MHz Ant0 Average

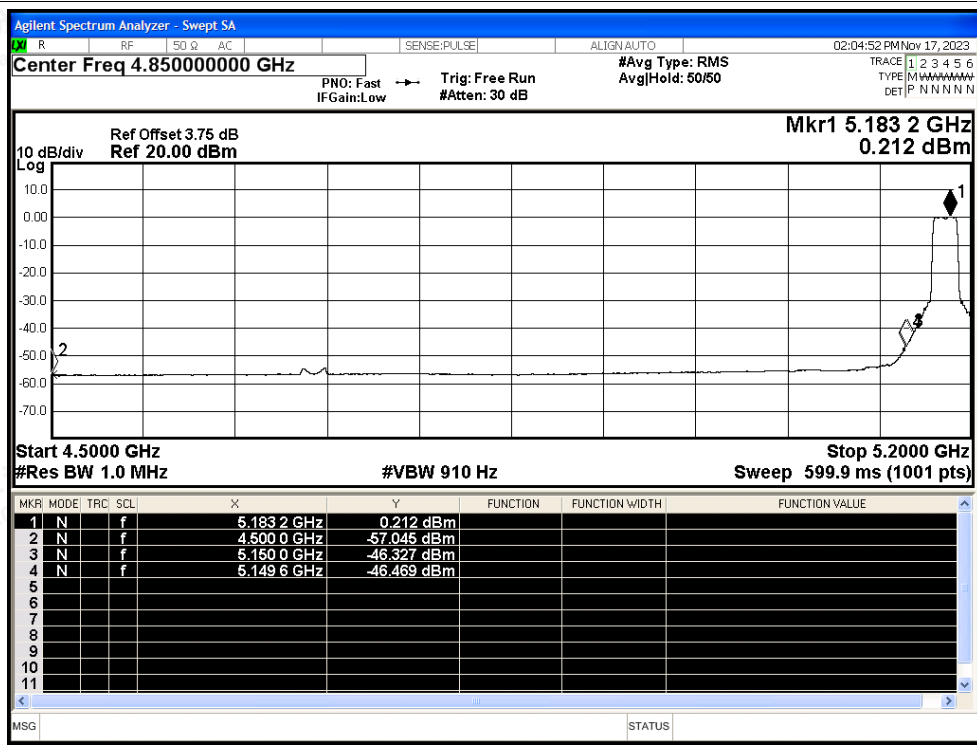




Restrict Band NVNT ac20 5180MHz Ant0 Peak

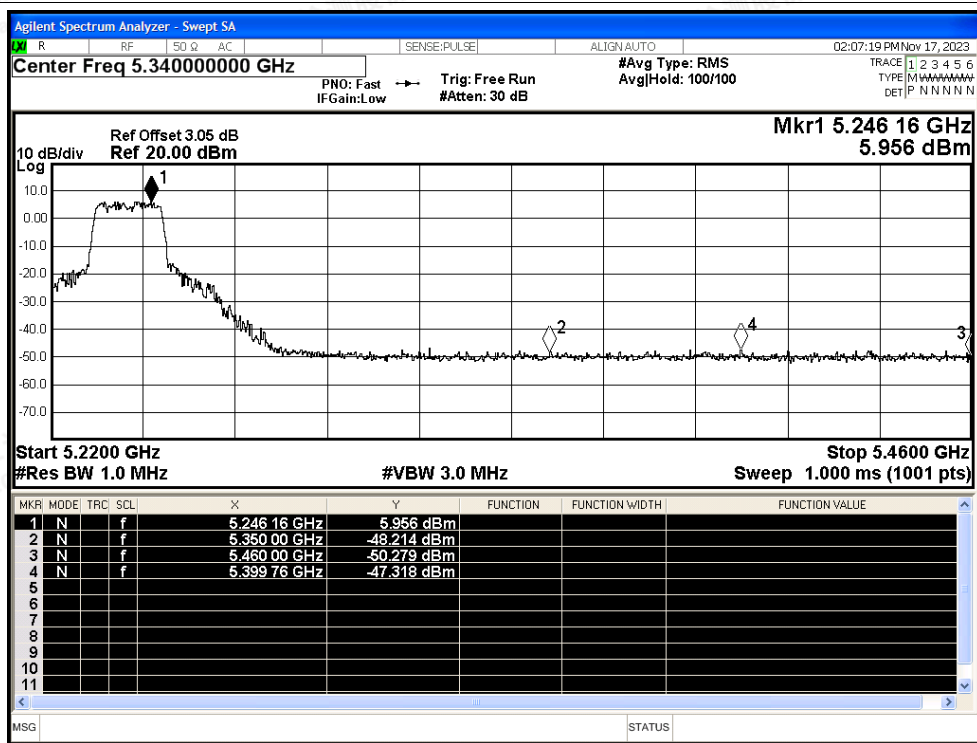


Restrict Band NVNT ac20 5180MHz Ant0 Average

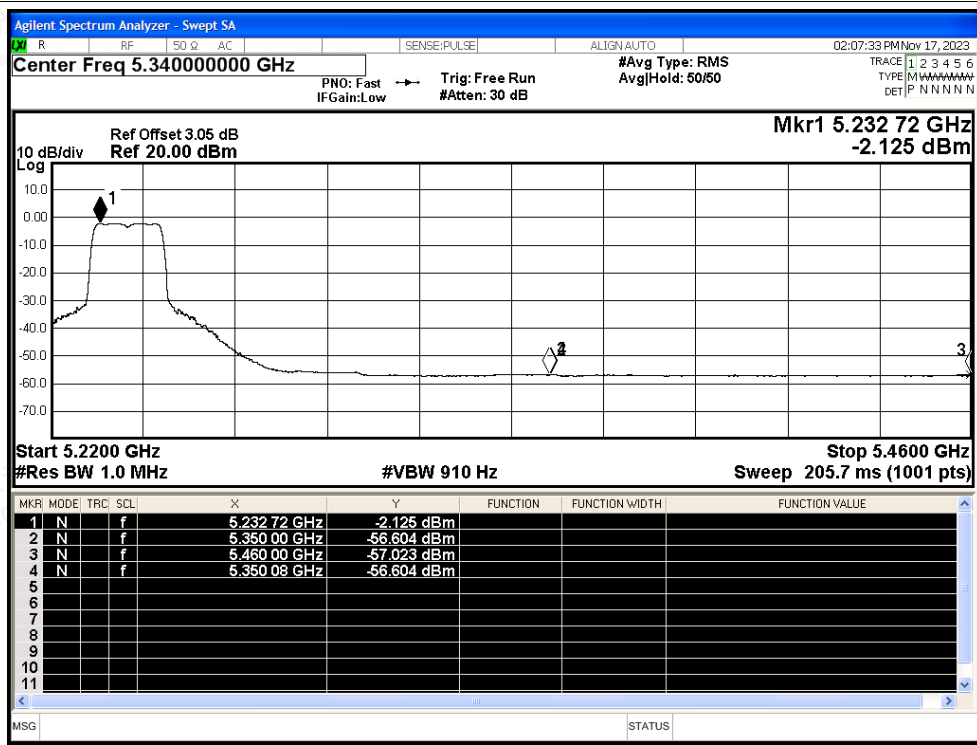




Restrict Band NVNT ac20 5240MHz Ant0 Peak



Restrict Band NVNT ac20 5240MHz Ant0 Average



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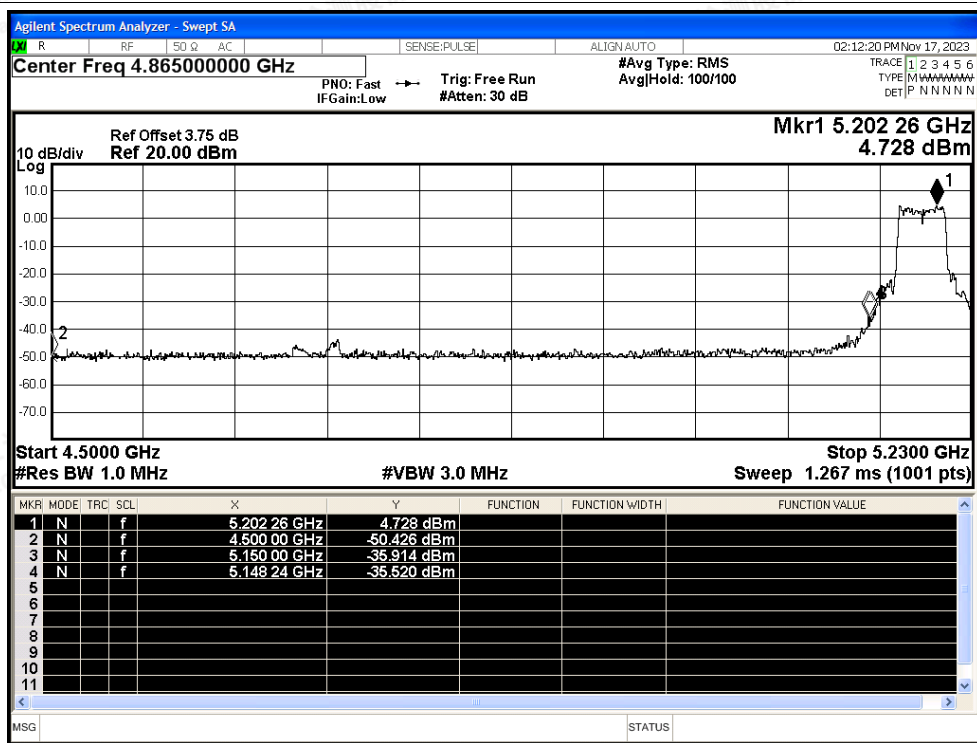
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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

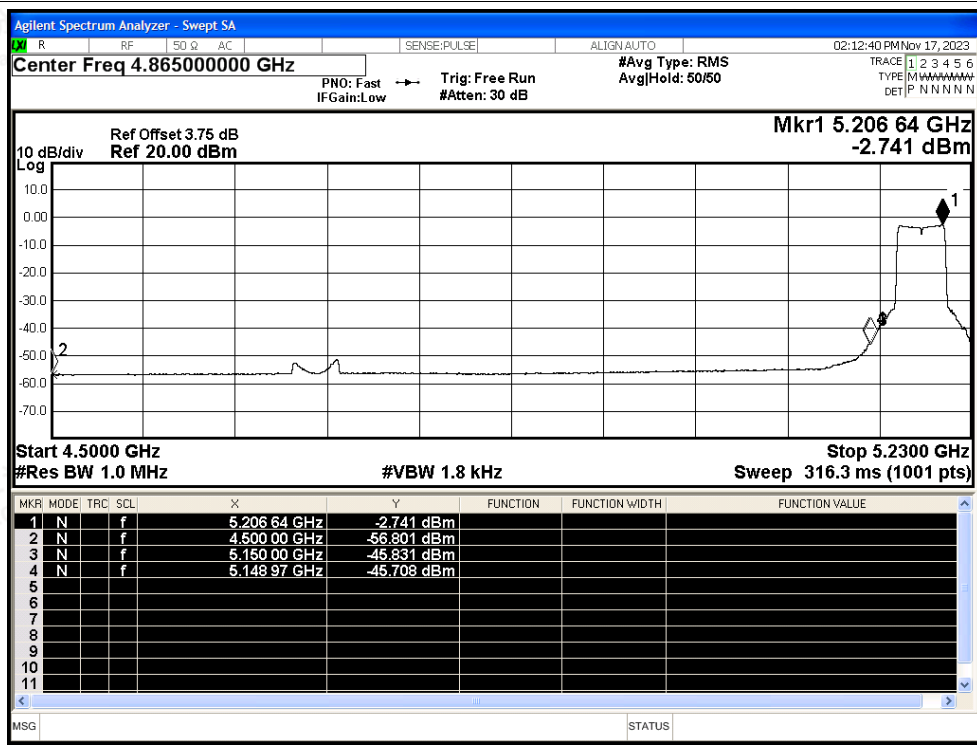
Scan code to check authenticity



Restrict Band NVNT ac40 5190MHz Ant0 Peak

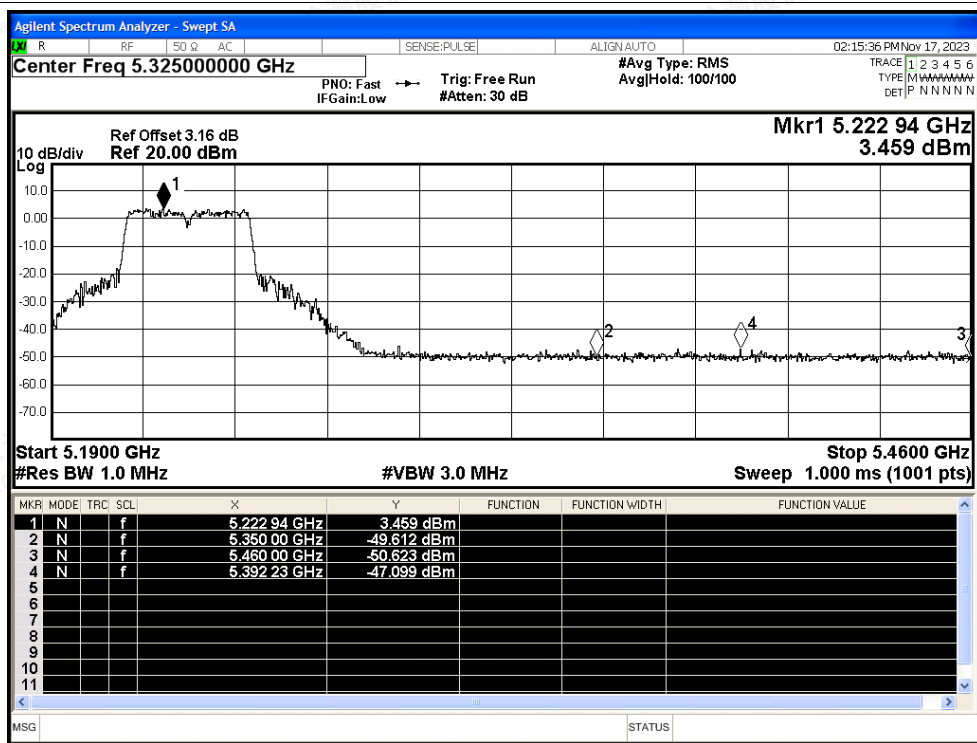


Restrict Band NVNT ac40 5190MHz Ant0 Average

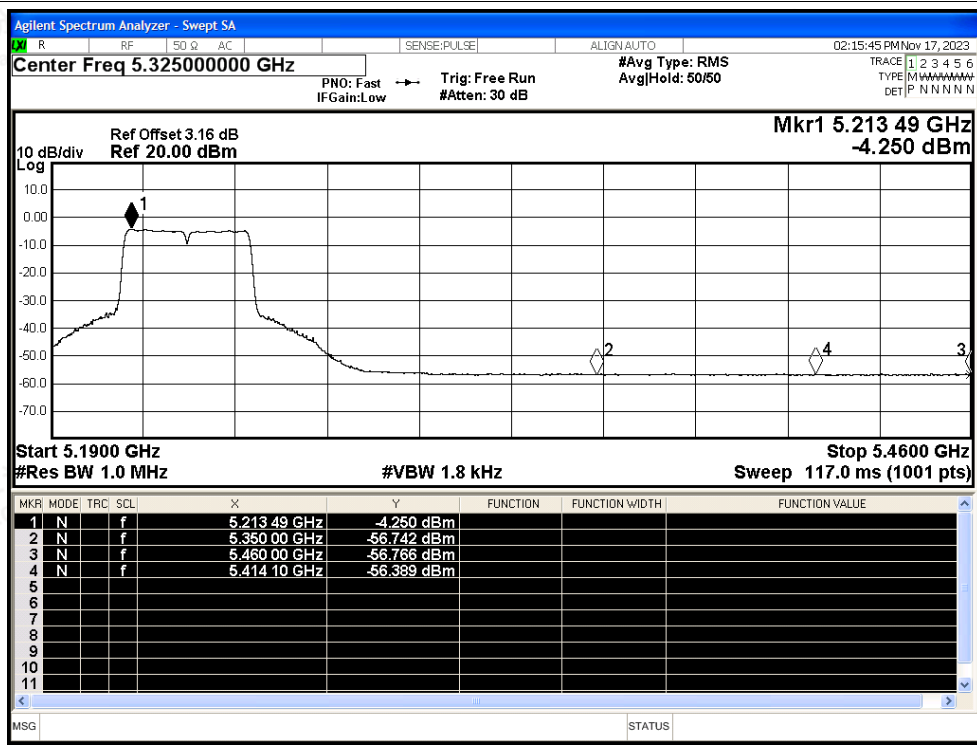




Restrict Band NVNT ac40 5230MHz Ant0 Peak

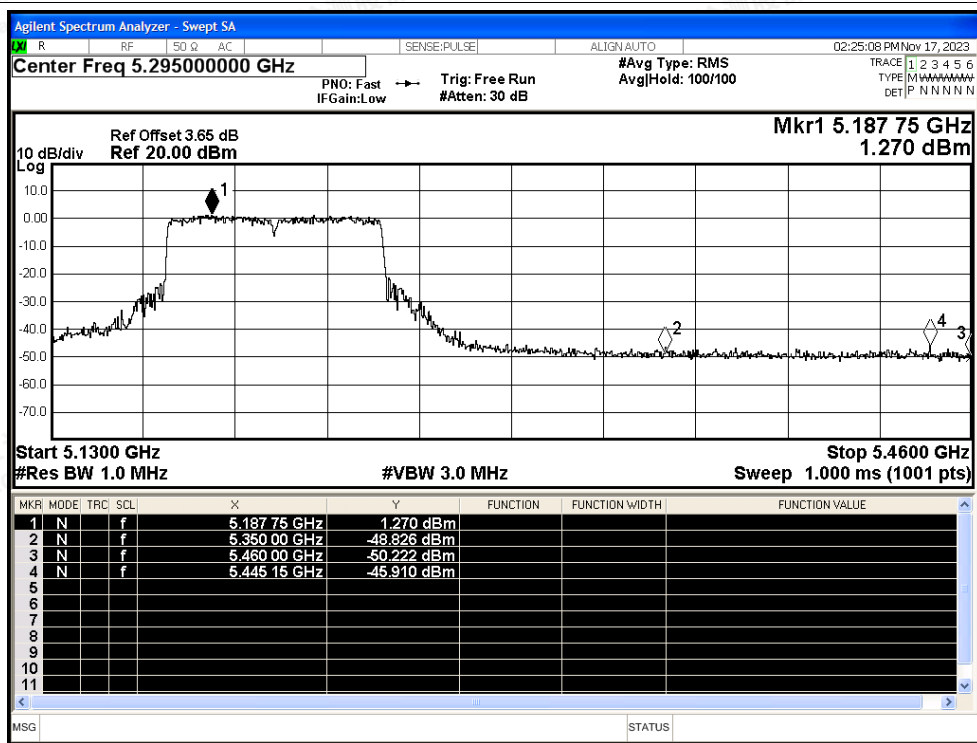


Restrict Band NVNT ac40 5230MHz Ant0 Average

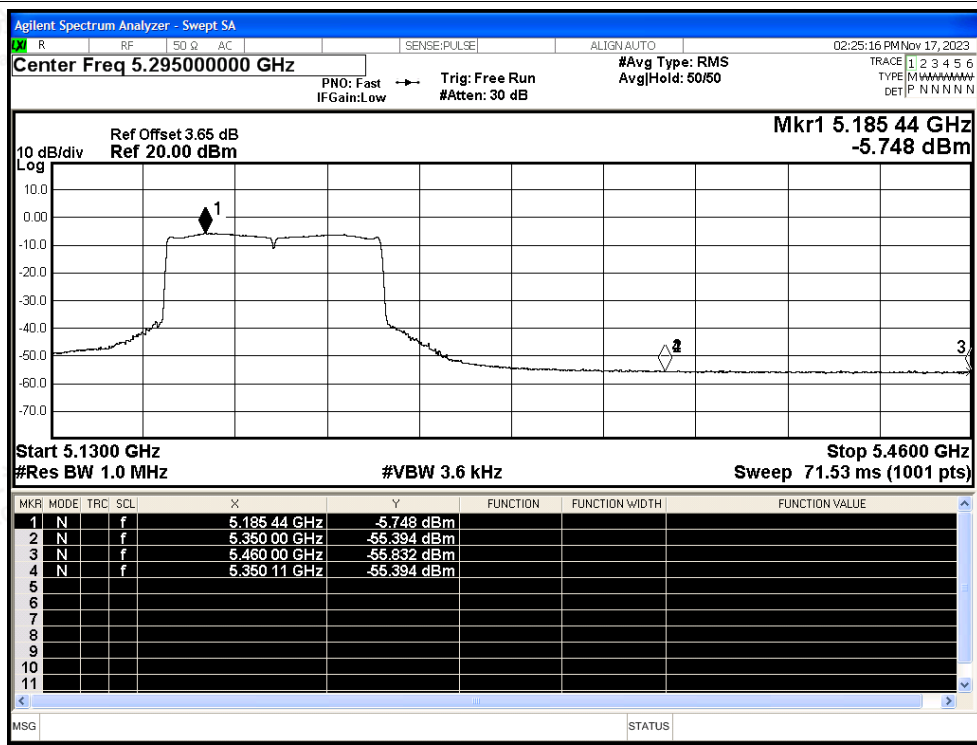




Restrict Band NVNT ac80 5210MHz Ant0 Peak

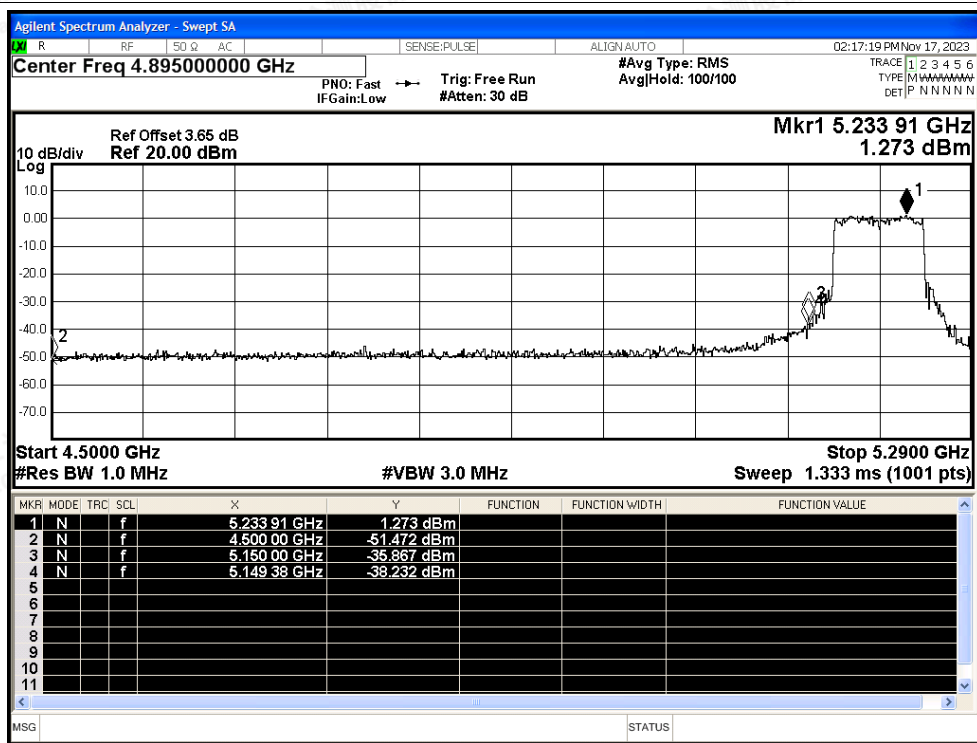


Restrict Band NVNT ac80 5210MHz Ant0 Average

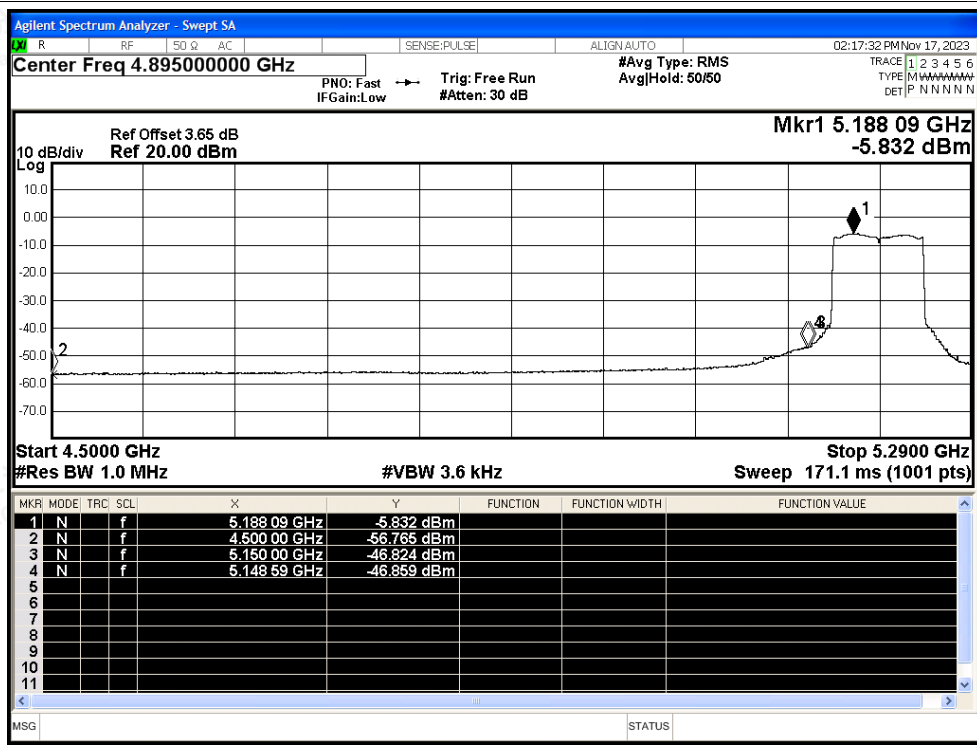




Restrict Band NVNT ac80 5210MHz Ant0 Peak



Restrict Band NVNT ac80 5210MHz Ant0 Average





D.5 Frequency Stability

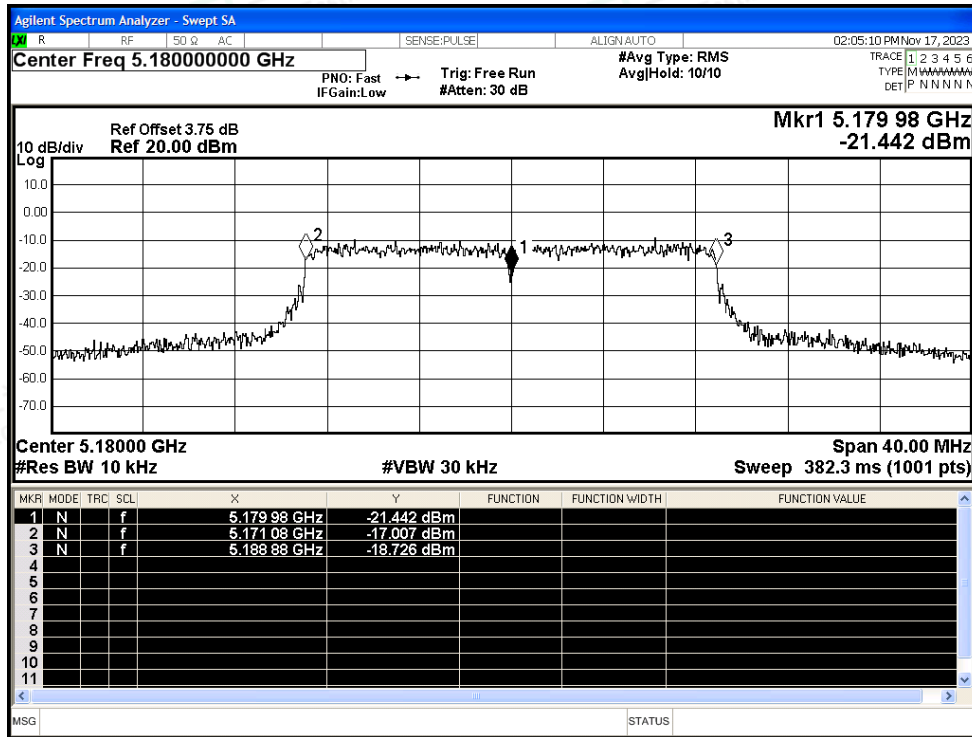
Condition	Mode	Frequency (MHz)	Antenna	Measured Frequency (MHz)	Frequency Error (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
NVNT	ac20	5180	Ant0	5179.98	-20000	-3.86	25	Pass
NVNT	ac20	5200	Ant0	5200	0	0	25	Pass
NVNT	ac20	5240	Ant0	5240	0	0	25	Pass
NVNT	ac40	5190	Ant0	5190	0	0	25	Pass
NVNT	ac40	5230	Ant0	5229.96	-40000	-7.65	25	Pass
NVNT	ac80	5210	Ant0	5210	0	0	25	Pass



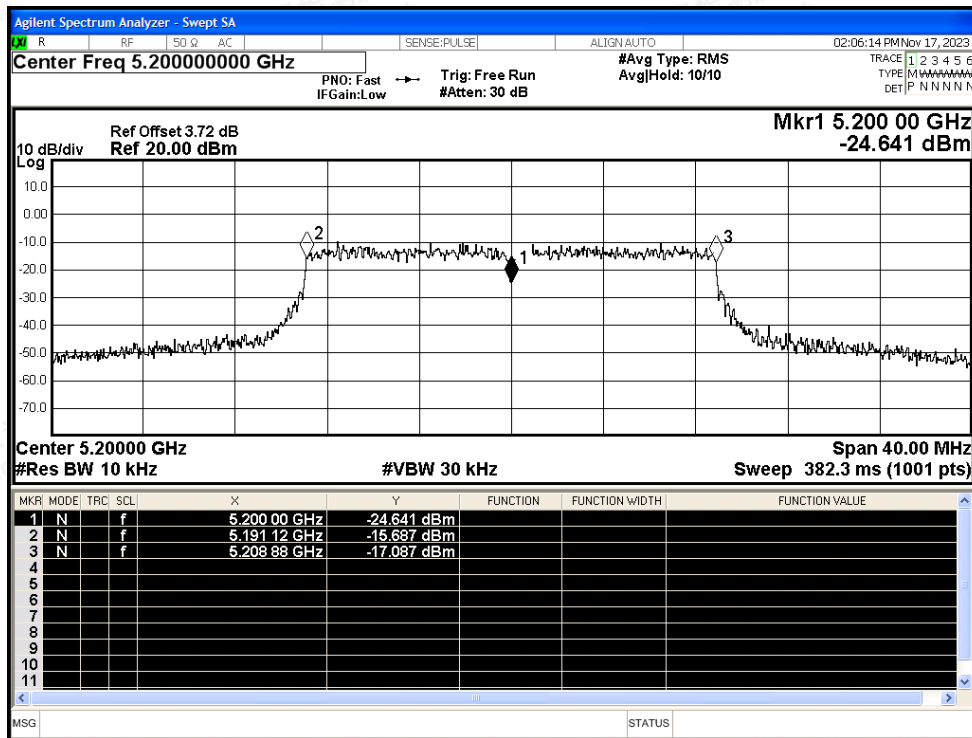


Test Graphs

Freq. Stability NVNT ac20 5180MHz Ant0



Freq. Stability NVNT ac20 5200MHz Ant0



Shenzhen LCS Compliance Testing Laboratory Ltd.

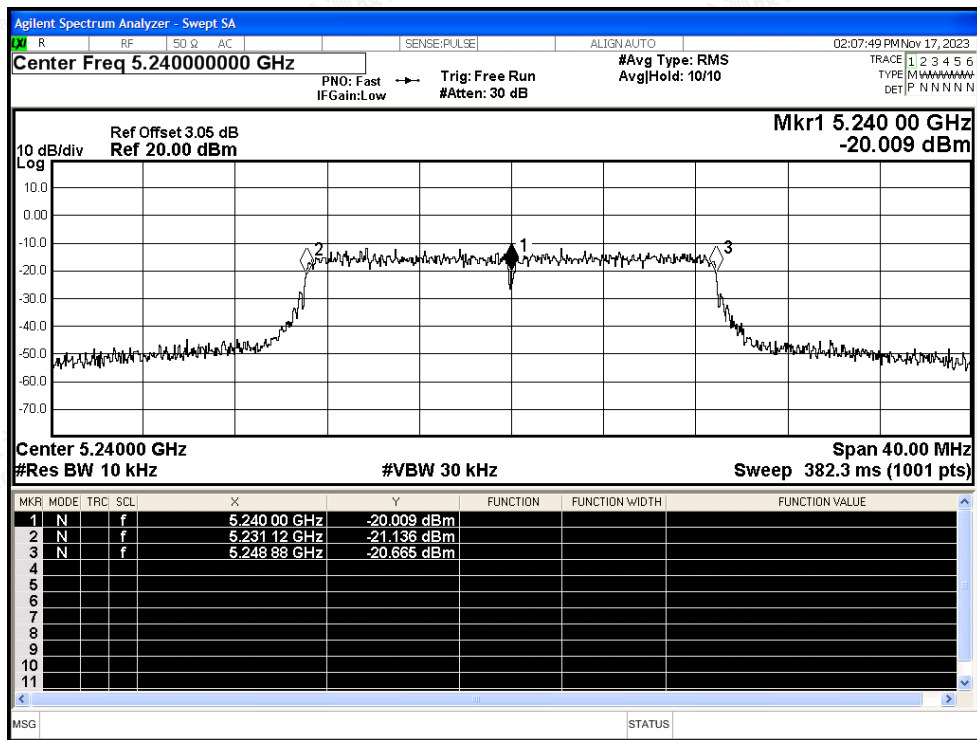
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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

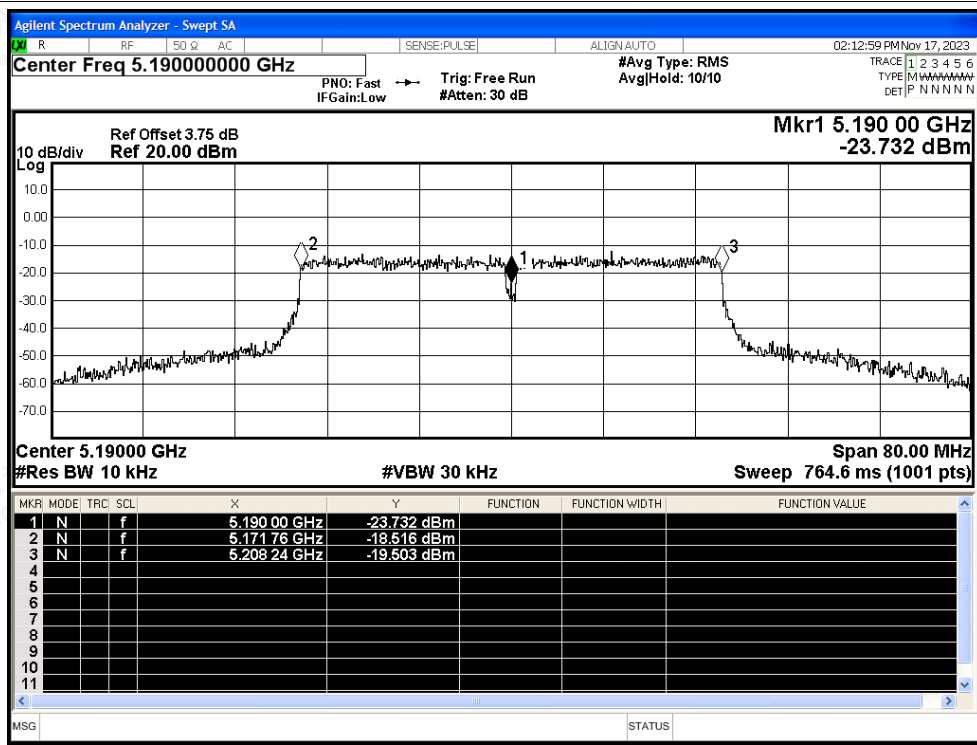
Scan code to check authenticity



Freq. Stability NVNT ac20 5240MHz Ant0

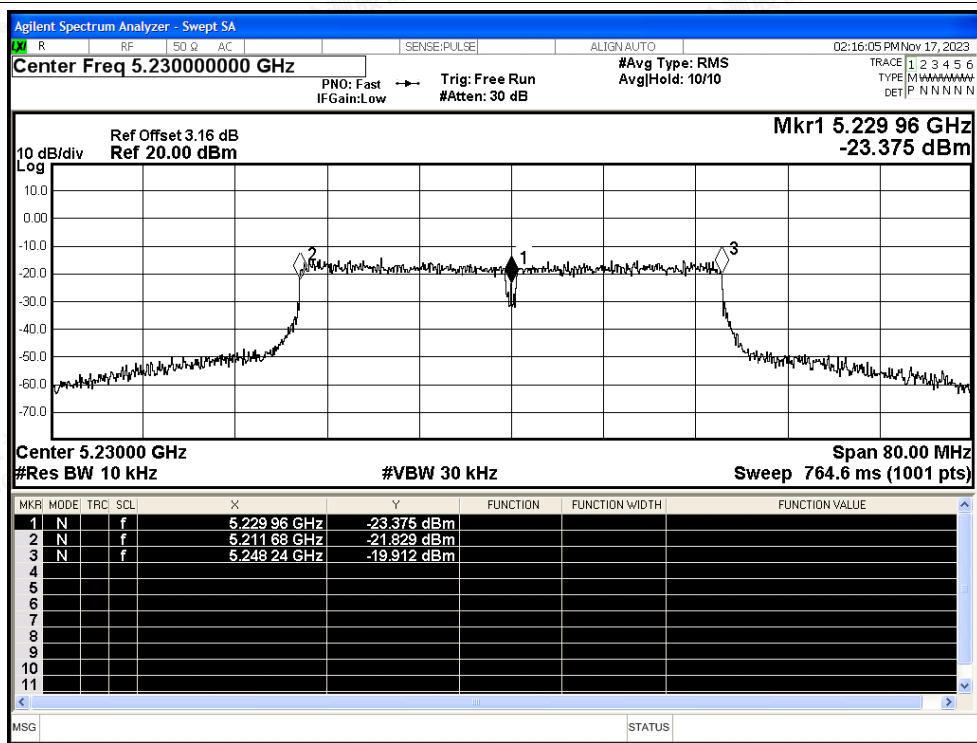


Freq. Stability NVNT ac40 5190MHz Ant0

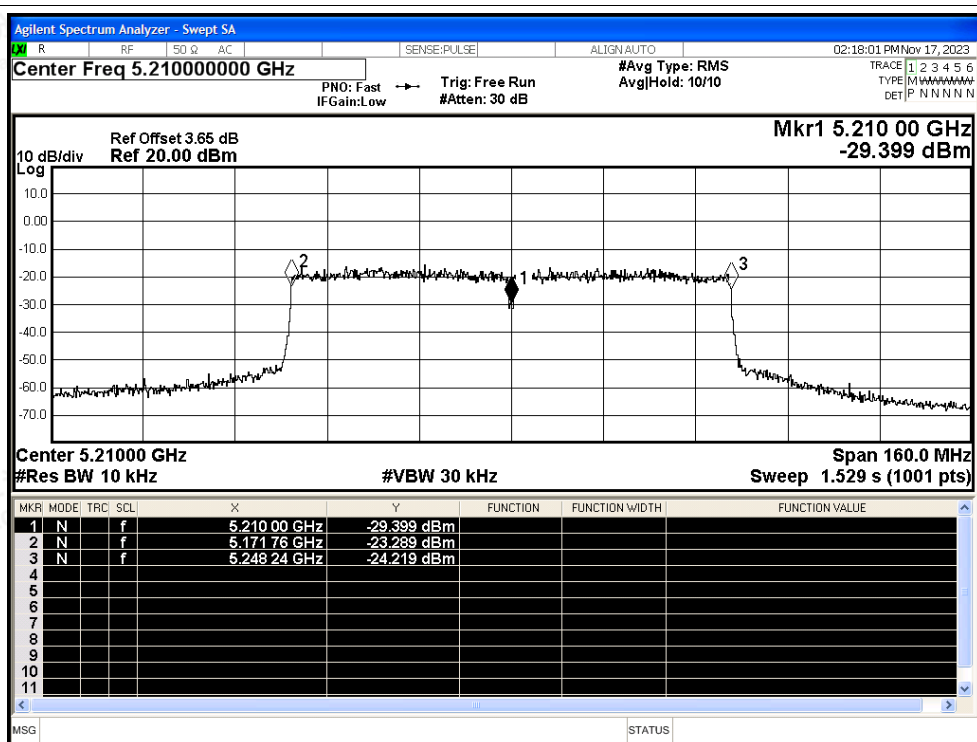




Freq. Stability NVNT ac40 5230MHz Ant0



Freq. Stability NVNT ac80 5210MHz Ant0





D.6 Duty Cycle

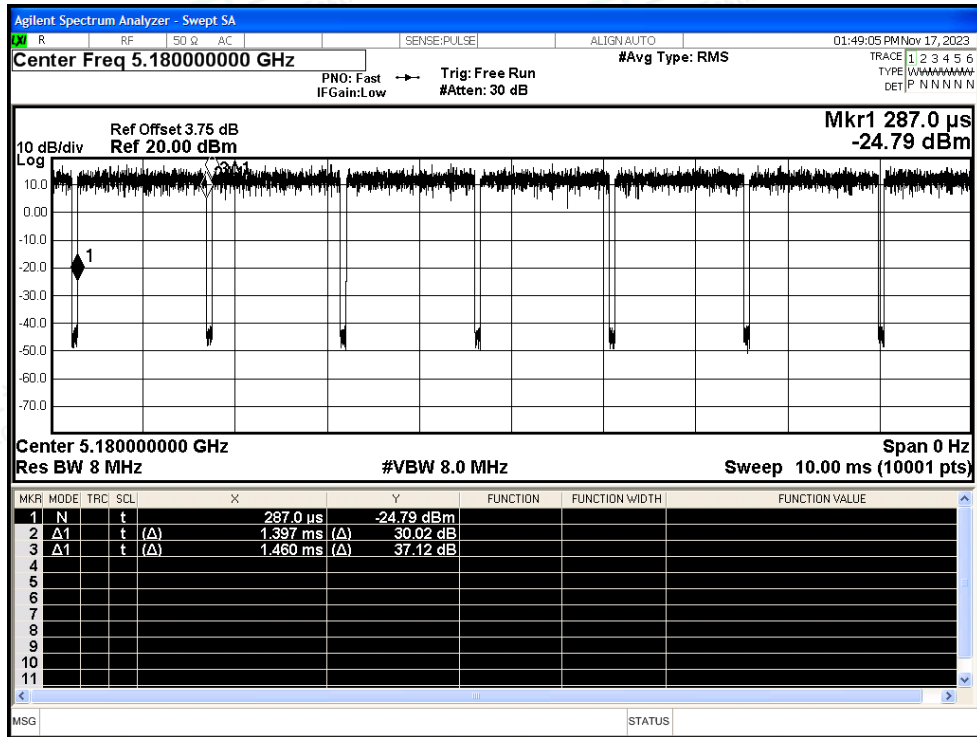
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	a	5180	Ant0	95.68	0.19	0.72
NVNT	a	5200	Ant0	95.68	0.19	0.72
NVNT	a	5240	Ant0	95.75	0.19	0.72
NVNT	n20	5180	Ant0	94.94	0.23	0.85
NVNT	n20	5200	Ant0	94.94	0.23	0.85
NVNT	n20	5240	Ant0	94.94	0.23	0.85
NVNT	n40	5190	Ant0	90.45	0.44	1.7
NVNT	n40	5230	Ant0	90.45	0.44	1.7
NVNT	ac20	5180	Ant0	95.06	0.22	0.84
NVNT	ac20	5200	Ant0	94.96	0.22	0.84
NVNT	ac20	5240	Ant0	95.04	0.22	0.84
NVNT	ac40	5190	Ant0	90.56	0.43	1.68
NVNT	ac40	5230	Ant0	90.56	0.43	1.68
NVNT	ac80	5210	Ant0	82.4	0.84	3.39



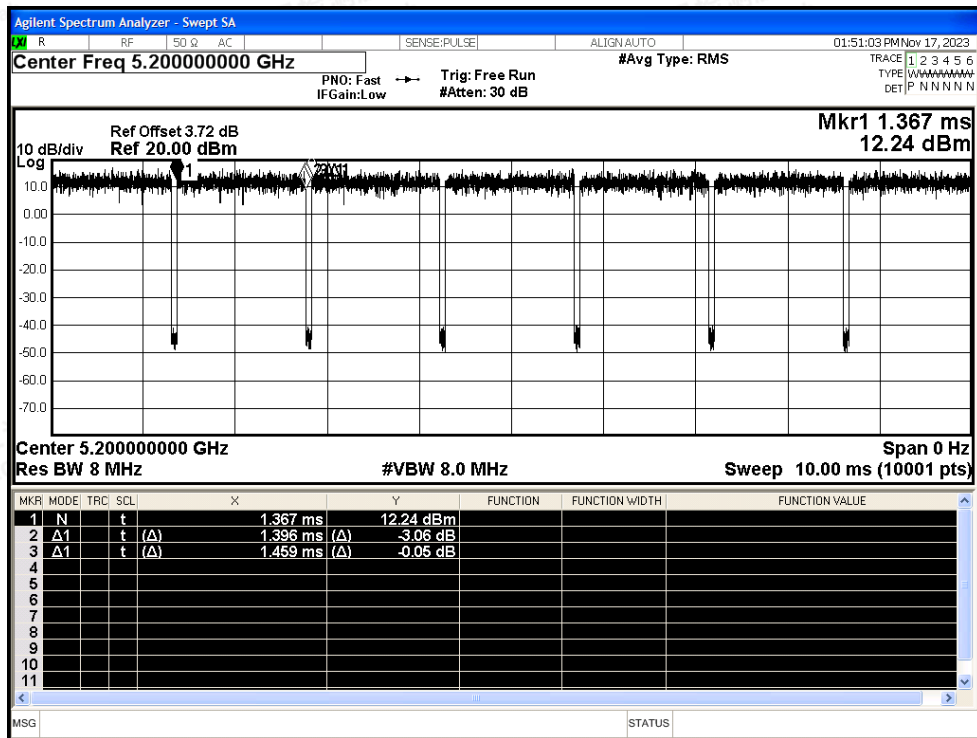


Test Graphs

Duty Cycle NVNT a 5180MHz Ant0



Duty Cycle NVNT a 5200MHz Ant0



Shenzhen LCS Compliance Testing Laboratory Ltd.

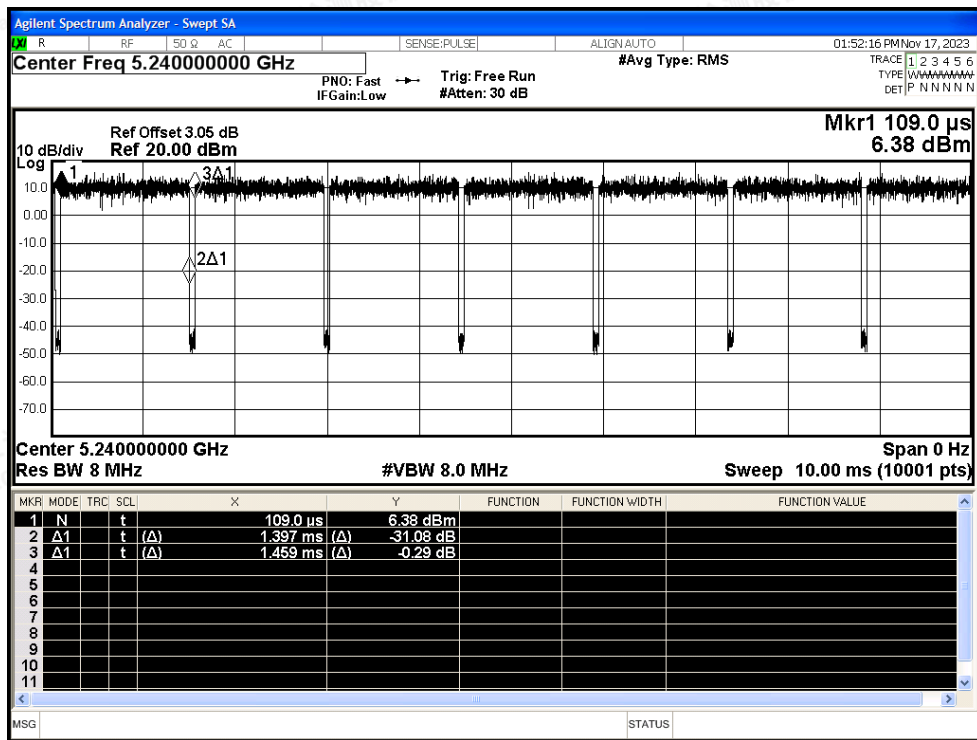
Add: 101, 201 Bldg A & 301 Bldg C, Juji Industrial Park Yabianxueziwei, Shajing Street, Baoan District, Shenzhen, 518000, China

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

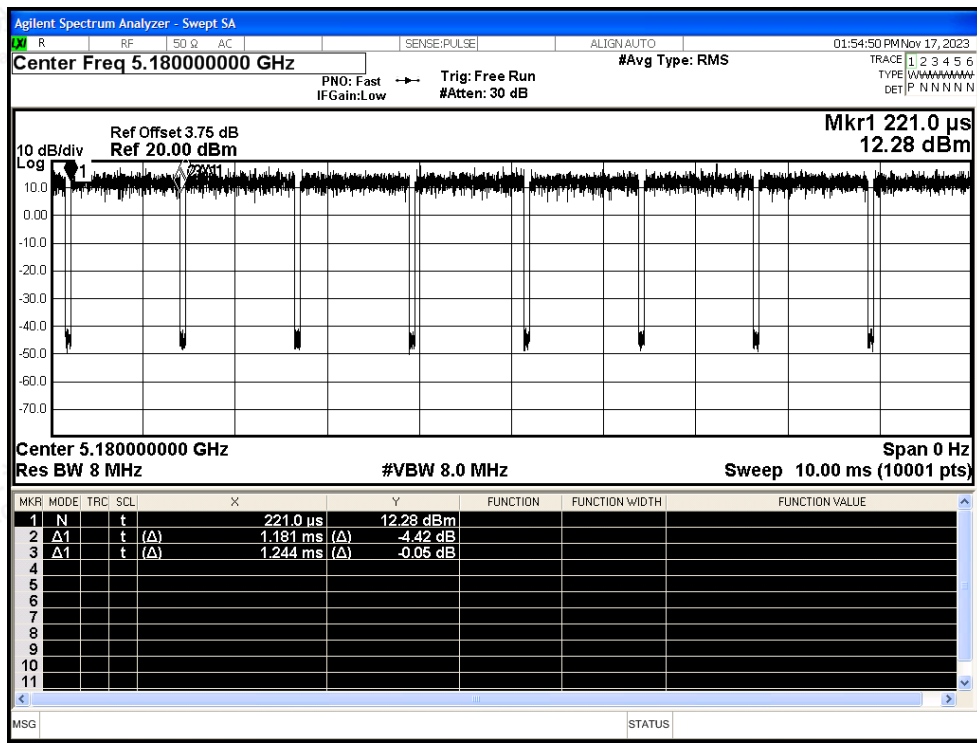
Scan code to check authenticity



Duty Cycle NVNT a 5240MHz Ant0

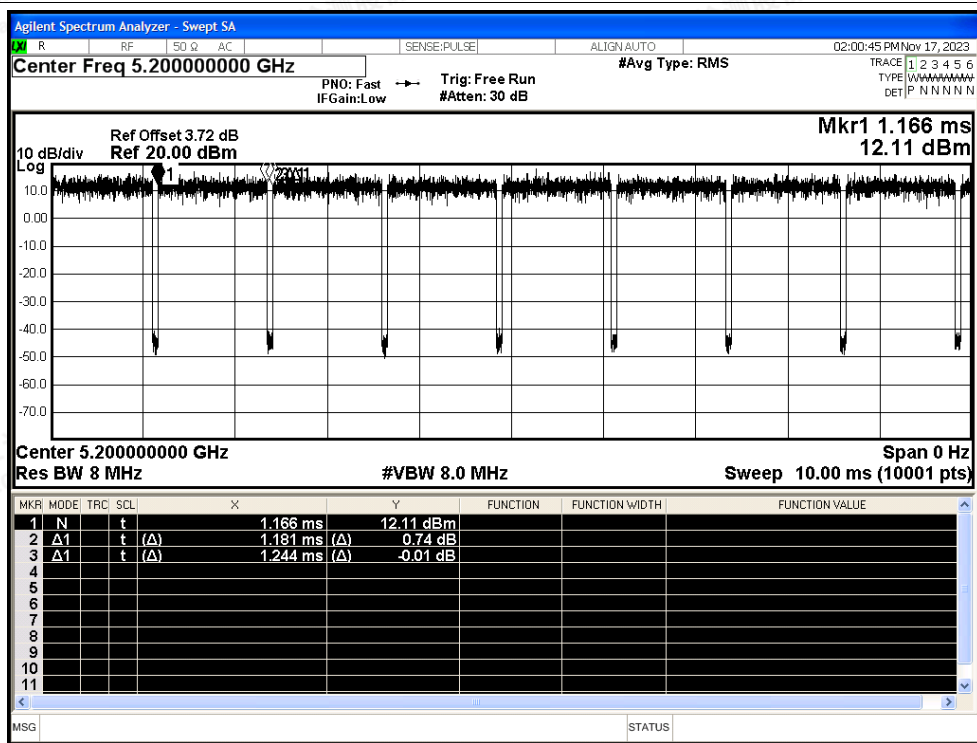


Duty Cycle NVNT n20 5180MHz Ant0

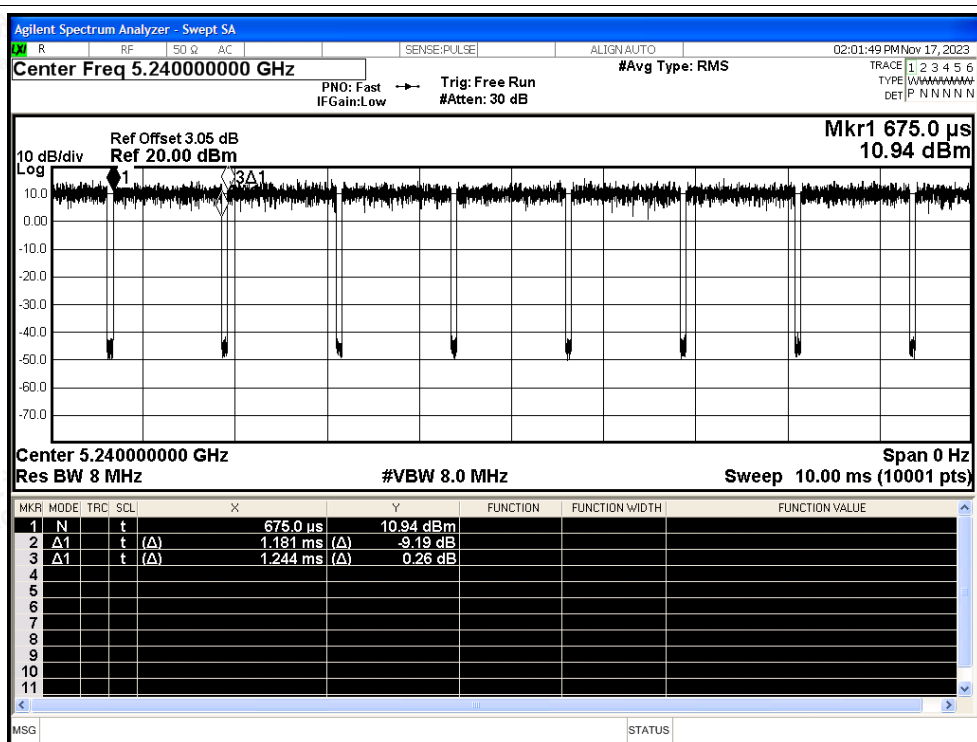




Duty Cycle NVNT n20 5200MHz Ant0

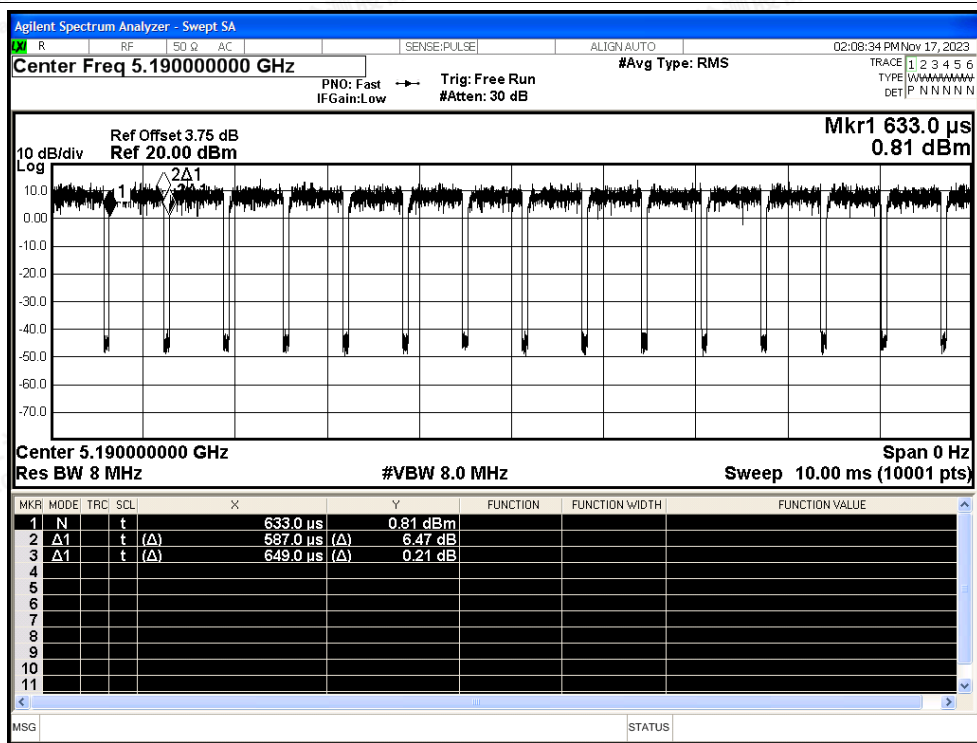


Duty Cycle NVNT n20 5240MHz Ant0

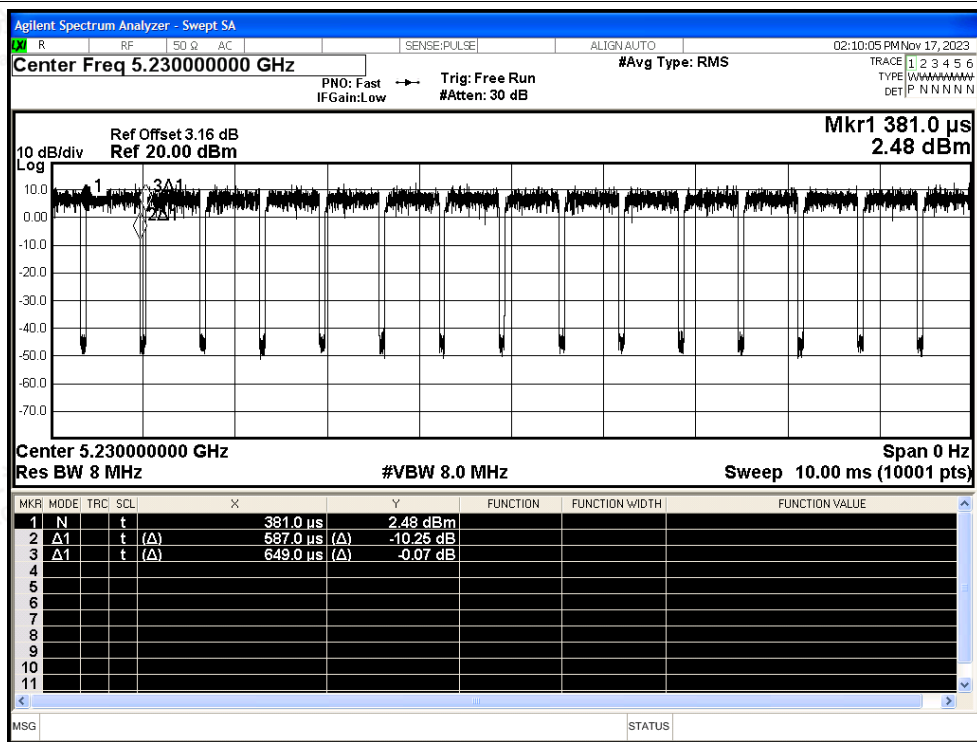


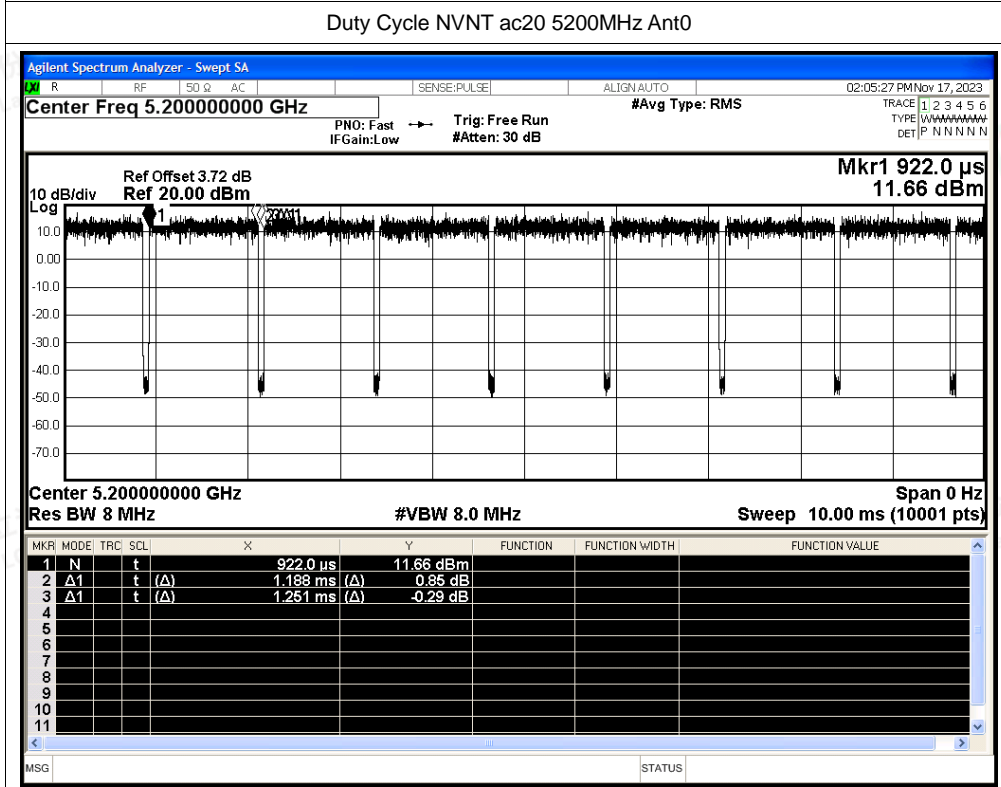
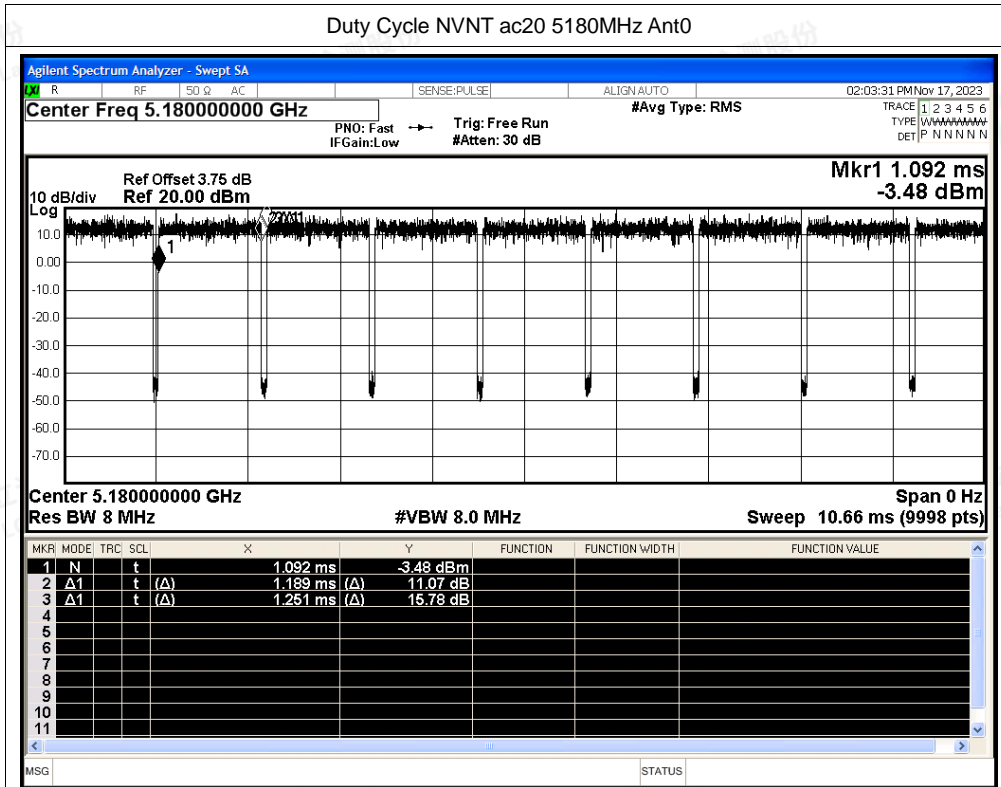


Duty Cycle NVNT n40 5190MHz Ant0



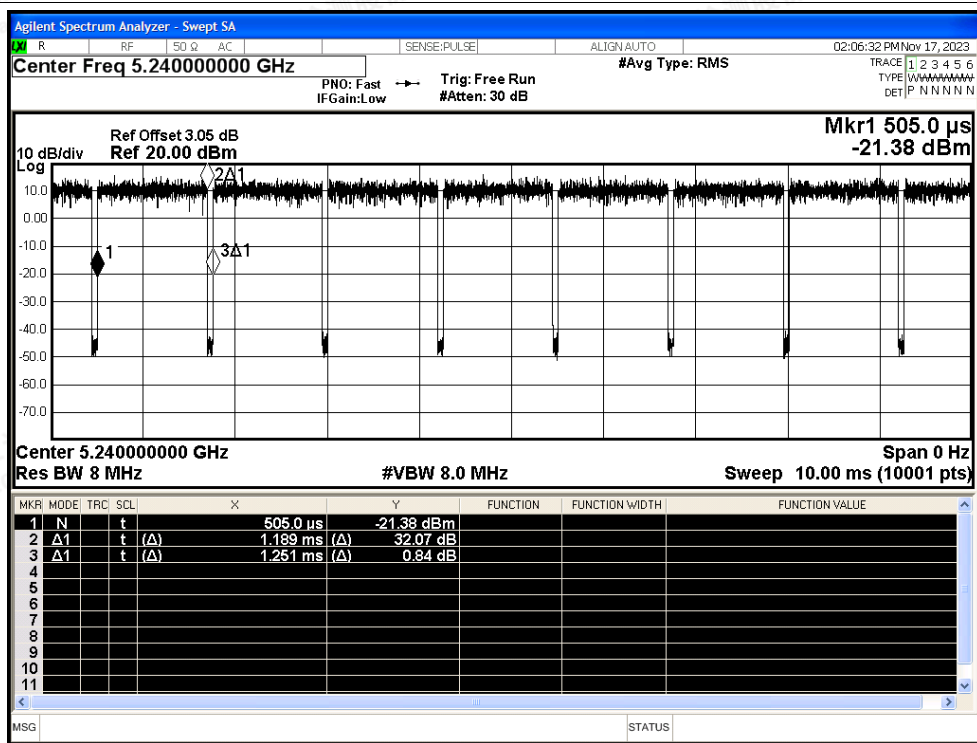
Duty Cycle NVNT n40 5230MHz Ant0



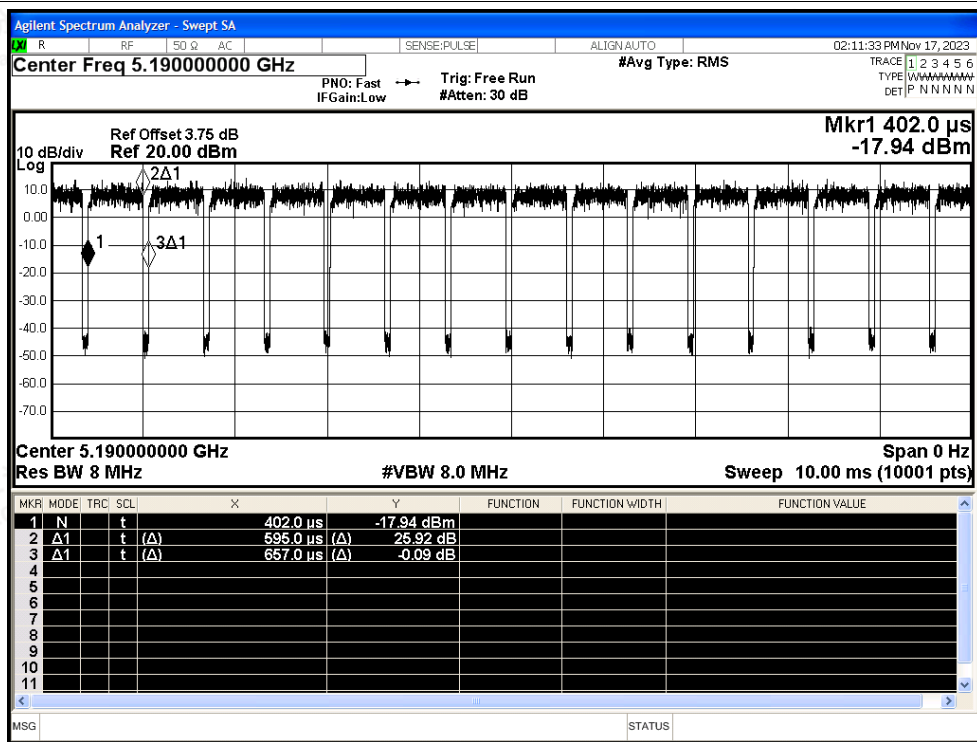




Duty Cycle NVNT ac20 5240MHz Ant0

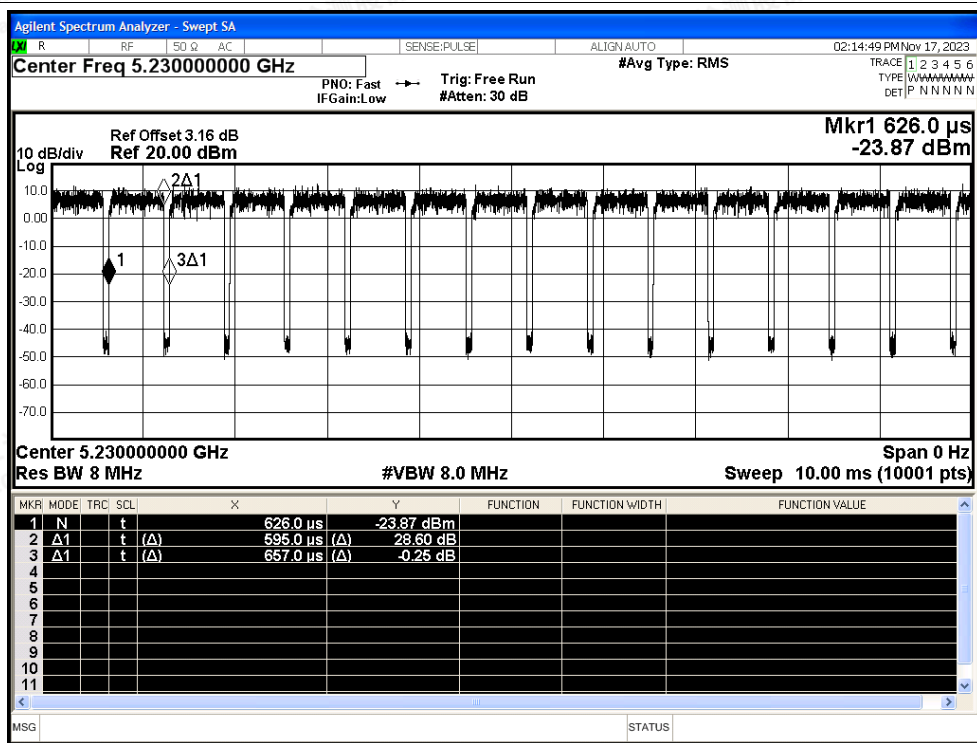


Duty Cycle NVNT ac40 5190MHz Ant0





Duty Cycle NVNT ac40 5230MHz Ant0



Duty Cycle NVNT ac80 5210MHz Ant0

