



Appendix C

RF Test Data for 5.2GWIFI (Conducted Measurement)

Product Name: Wi-Fi Smart Fingerprint Lock

Test Model: WFP-F

Environmental Conditions

Temperature:	23.8° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Taylor Hu
Supervised by:	Li Huan



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C.1 -26dB Bandwidth

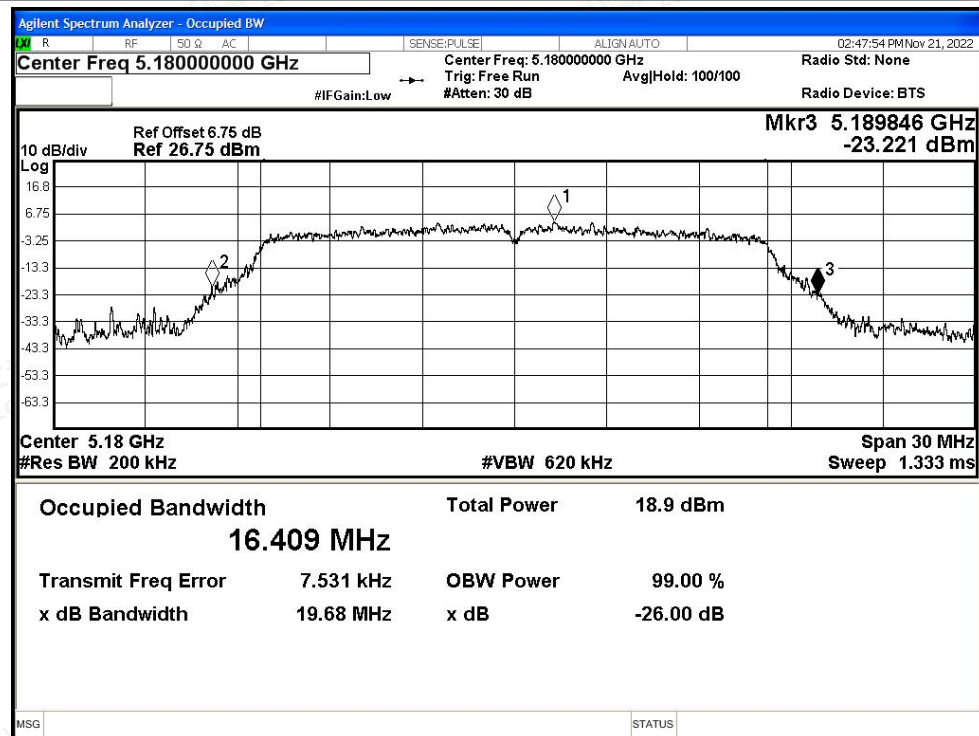
Condition	Mode	Frequency (MHz)	Antenna	-26 dB Bandwidth (MHz)	Limit -26 dB Bandwidth (MHz)	Verdict
NVNT	a	5180	Ant1	19.677	≥ 0.5	Pass
NVNT	a	5200	Ant1	19.663	≥ 0.5	Pass
NVNT	a	5240	Ant1	19.524	≥ 0.5	Pass
NVNT	n20	5180	Ant1	20.059	≥ 0.5	Pass
NVNT	n20	5200	Ant1	20.08	≥ 0.5	Pass
NVNT	n20	5240	Ant1	19.99	≥ 0.5	Pass



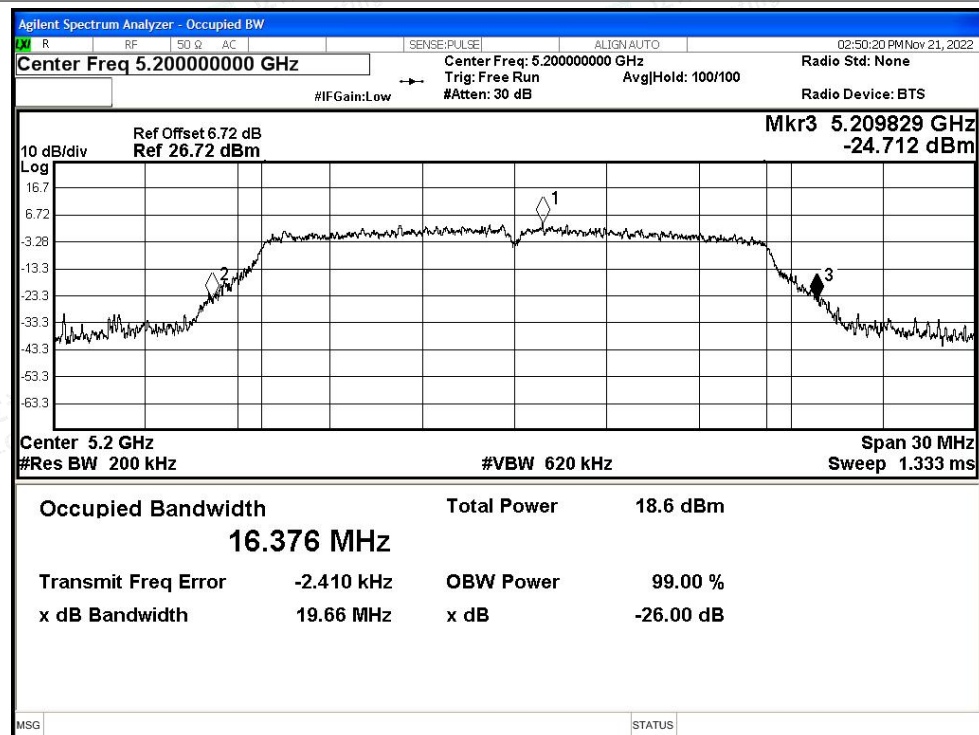


Test Graphs

-26dB Bandwidth NVNT a 5180MHz Ant1

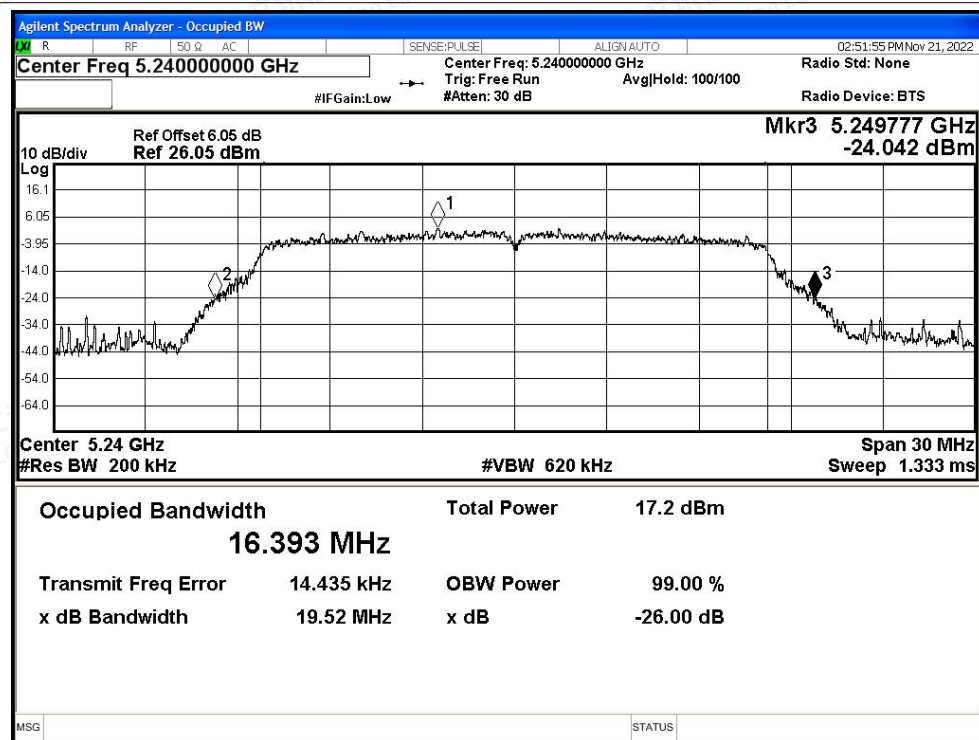


-26dB Bandwidth NVNT a 5200MHz Ant1

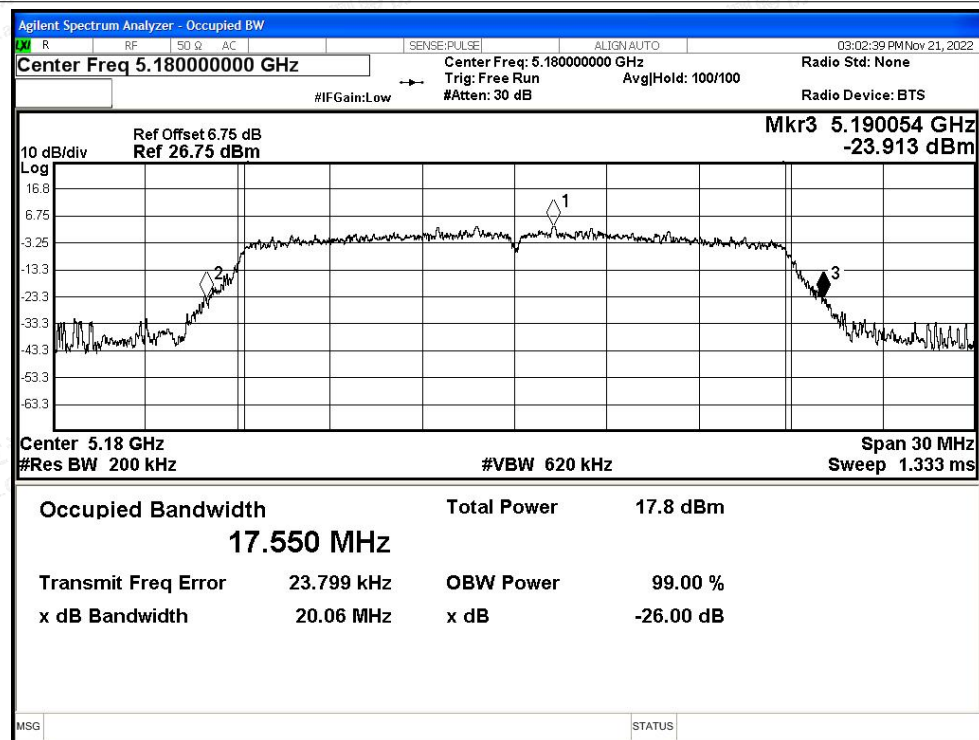


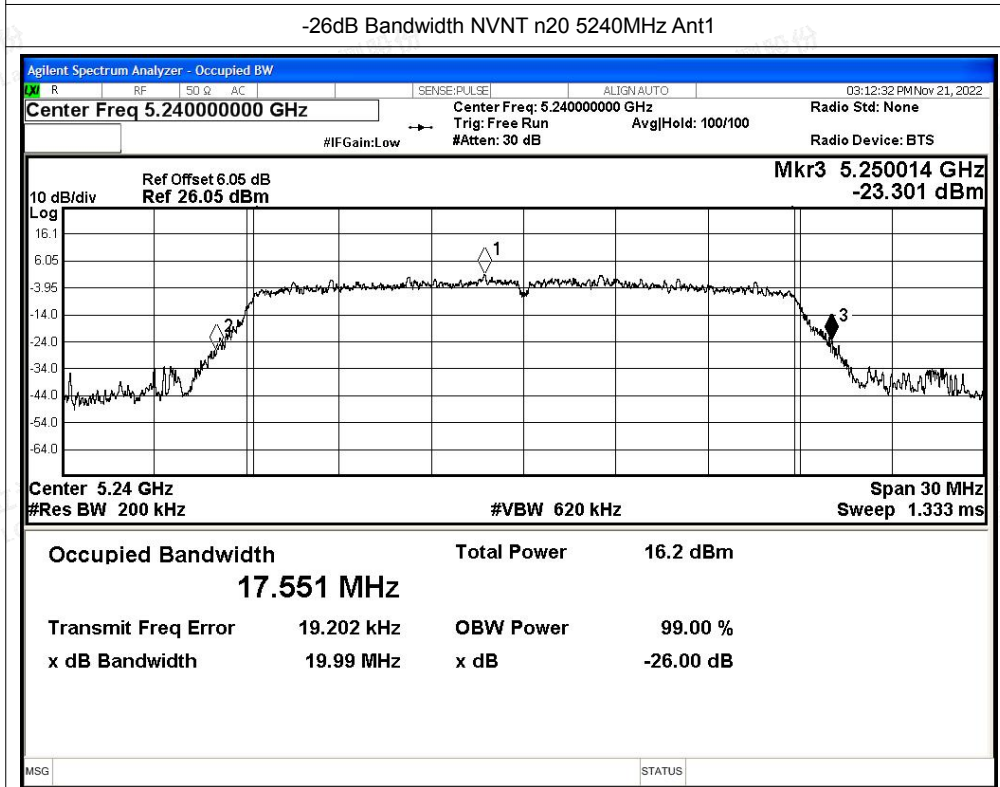
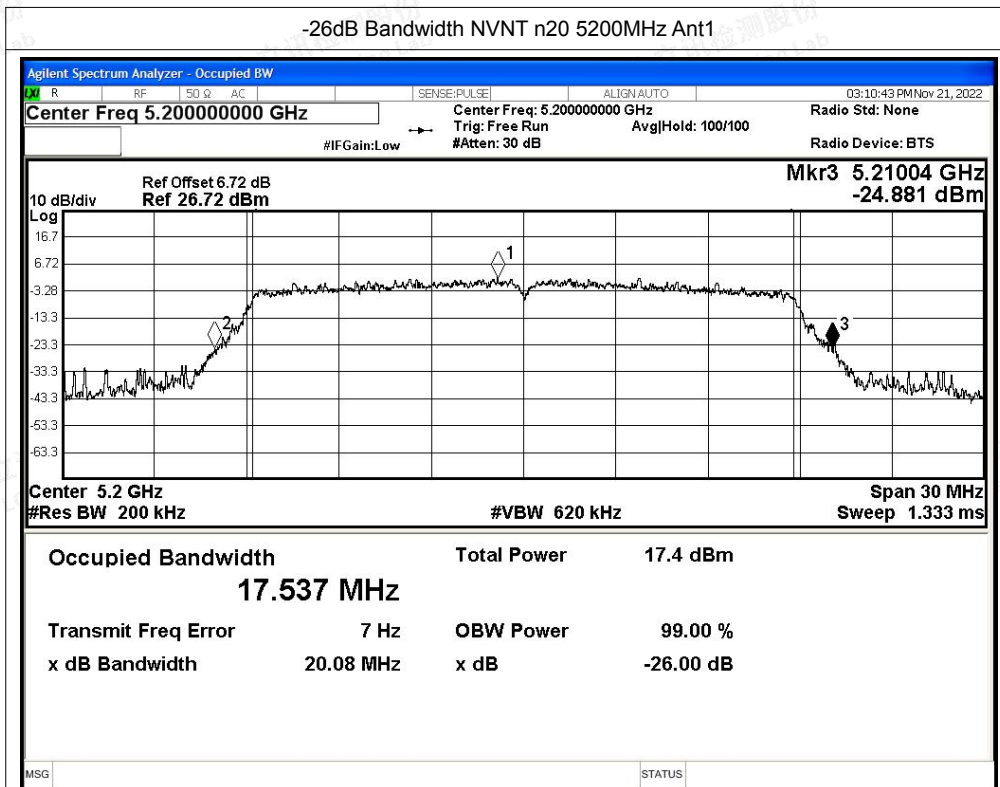


-26dB Bandwidth NVNT a 5240MHz Ant1



-26dB Bandwidth NVNT n20 5180MHz Ant1







C.2 Occupied Channel Bandwidth

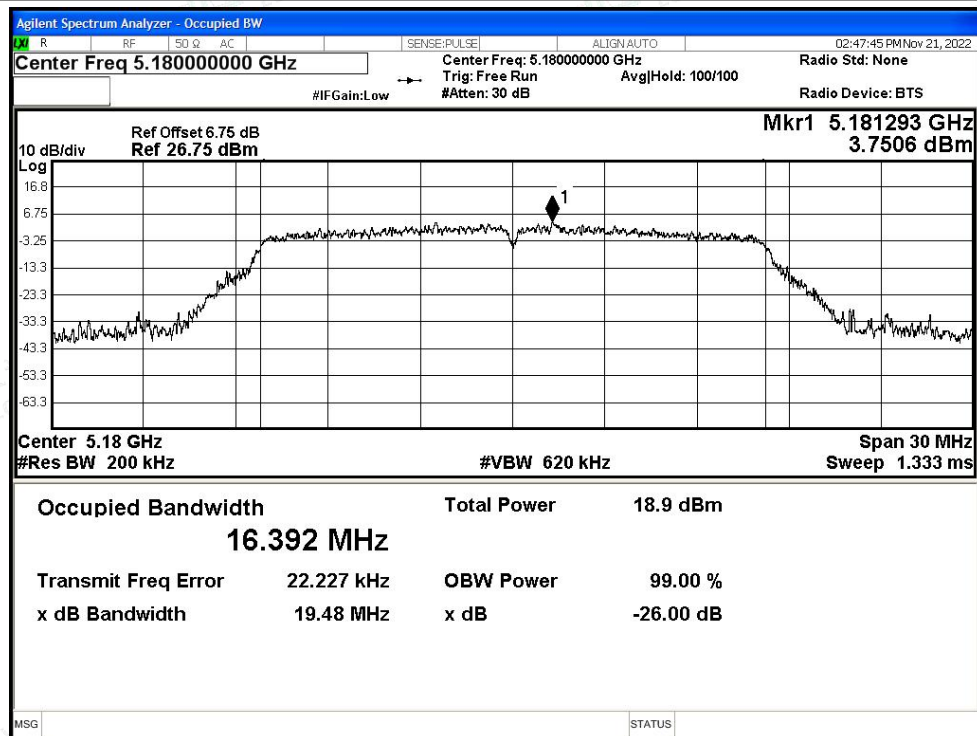
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	a	5180	Ant1	16.392
NVNT	a	5200	Ant1	16.388
NVNT	a	5240	Ant1	16.397
NVNT	n20	5180	Ant1	17.531
NVNT	n20	5200	Ant1	17.539
NVNT	n20	5240	Ant1	17.548



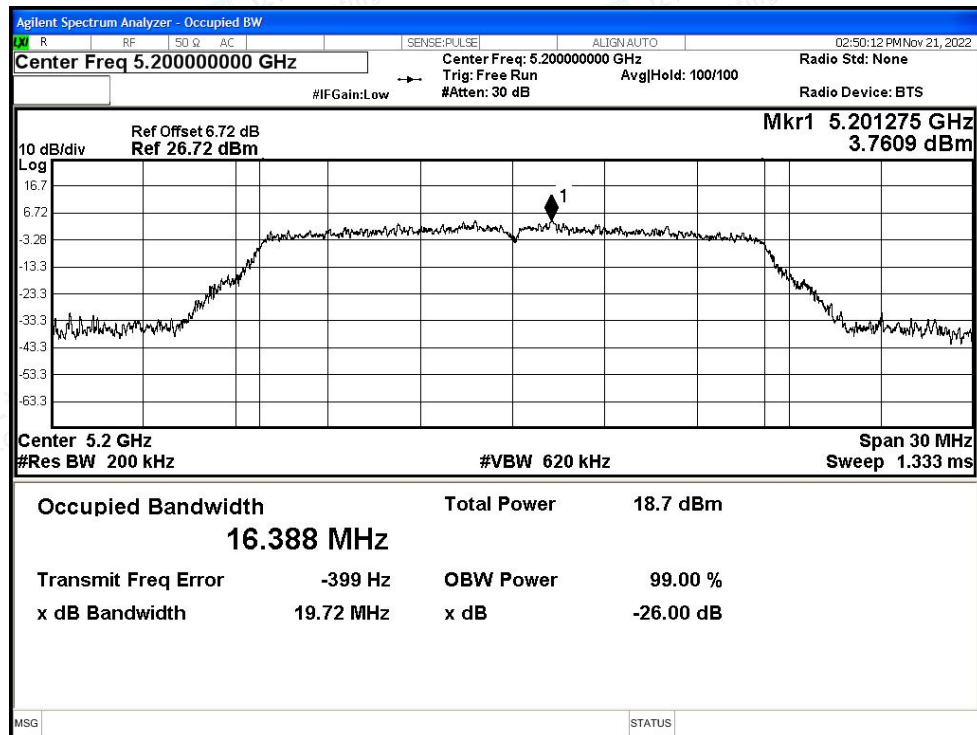


Test Graphs

OBW NVNT a 5180MHz Ant1

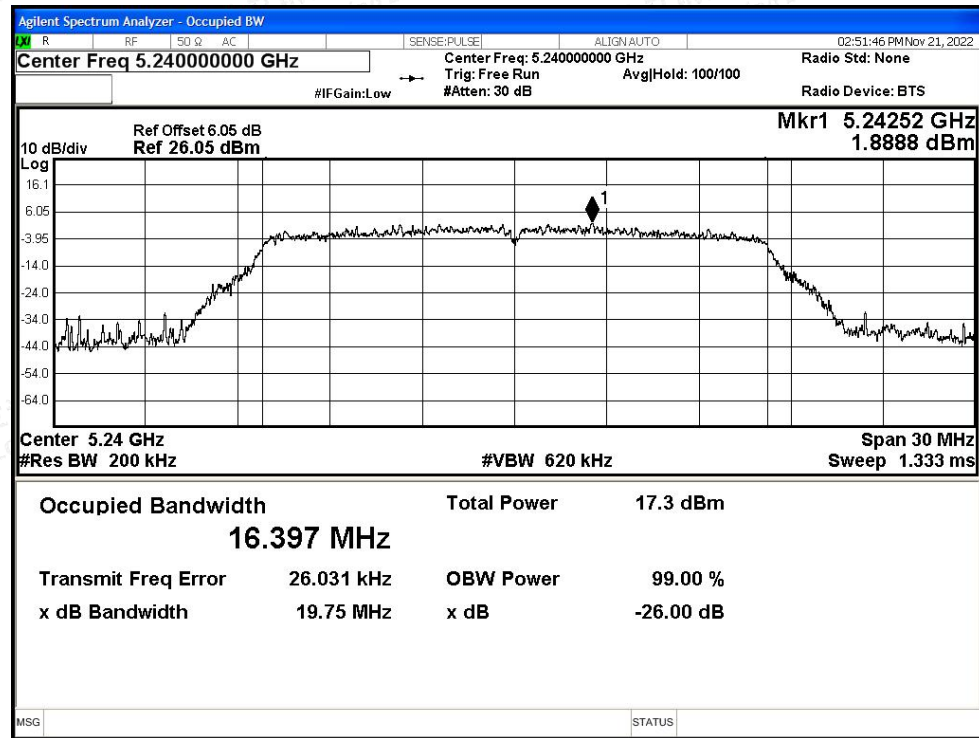


OBW NVNT a 5200MHz Ant1

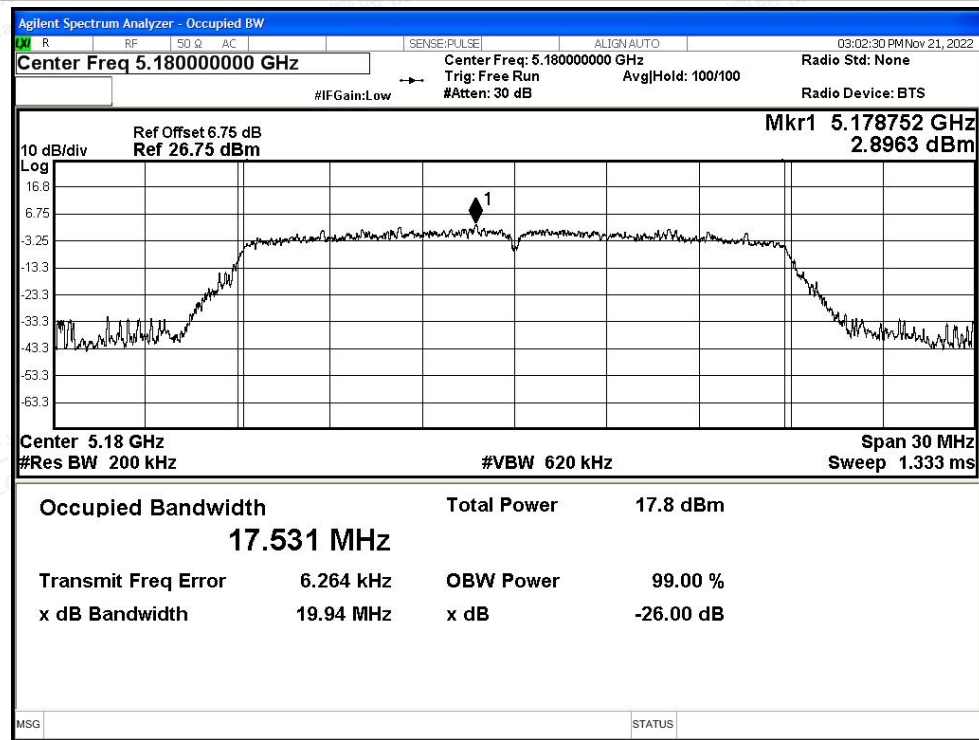




OBW NVNT a 5240MHz Ant1



OBW NVNT n20 5180MHz Ant1



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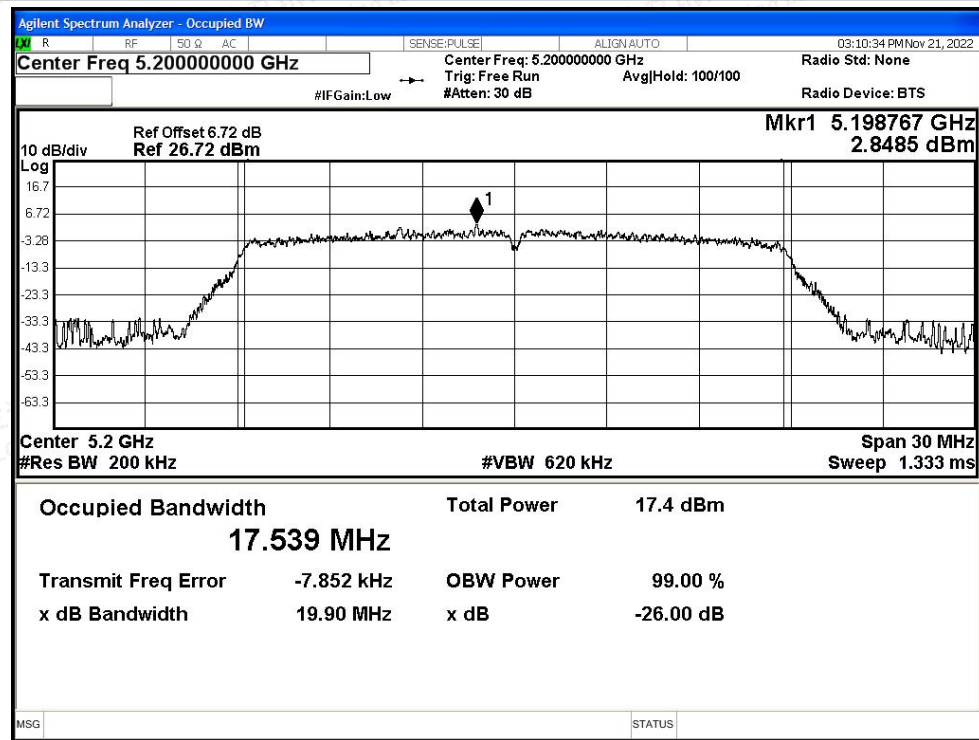
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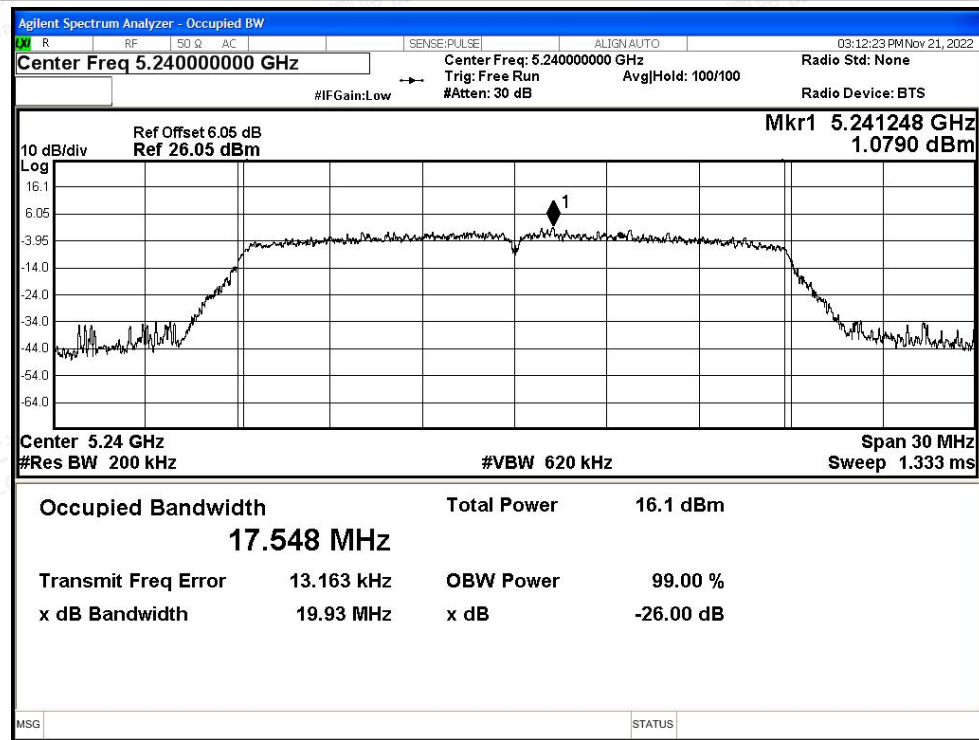
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OBW NVNT n20 5200MHz Ant1



OBW NVNT n20 5240MHz Ant1



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C.3 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	13.23	0.13	13.36	24	Pass
NVNT	a	5200	Ant1	13.05	0.13	13.18	24	Pass
NVNT	a	5240	Ant1	12.72	0.13	12.85	24	Pass
NVNT	n20	5180	Ant1	12.09	0.15	12.24	24	Pass
NVNT	n20	5200	Ant1	11.9	0.15	12.05	24	Pass
NVNT	n20	5240	Ant1	10.39	0.15	10.54	24	Pass

EIRP

Test Mode	Antenna	Frequency[MHz]	Maximum conducted output power [dBm]	Antenna Gain	Report EIRP Power(dBm)	Limit [dBm]	Verdict
a	Ant0	5180	13.36	3.28	16.64	---	PASS
		5200	13.18	3.28	16.46	---	PASS
		5240	12.85	3.28	16.13	---	PASS
n20	Ant0	5180	12.24	3.28	15.52	---	PASS
		5200	12.05	3.28	15.33	---	PASS
		5240	10.54	3.28	13.82	---	PASS





C.4 Maximum Power Spectral Density Level

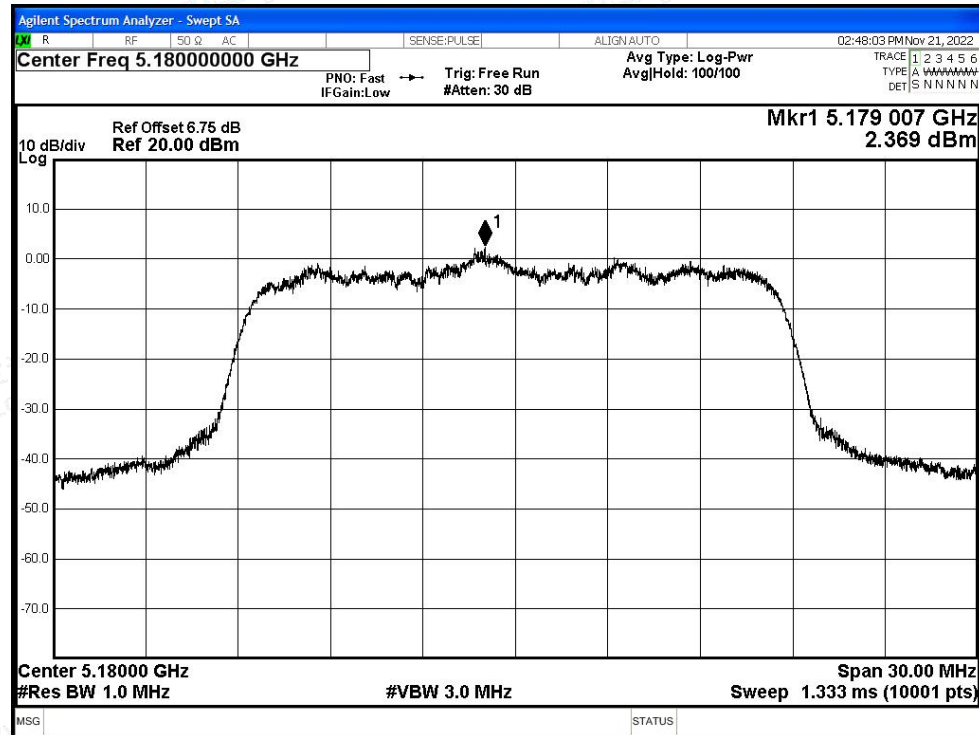
Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm)	Duty Factor (dB)	Gain [dBi]	Total PSD (dBm)	Limit (dBm)	Verdict
NVNT	a	5180	Ant1	2.37	0.13	3.28	5.78	11	Pass
NVNT	a	5200	Ant1	0.88	0.13	3.28	4.29	11	Pass
NVNT	a	5240	Ant1	-0.66	0.13	3.28	2.75	11	Pass
NVNT	n20	5180	Ant1	-0.79	0.15	3.28	2.64	11	Pass
NVNT	n20	5200	Ant1	-0.02	0.15	3.28	3.41	11	Pass
NVNT	n20	5240	Ant1	-2.09	0.15	3.28	1.34	11	Pass



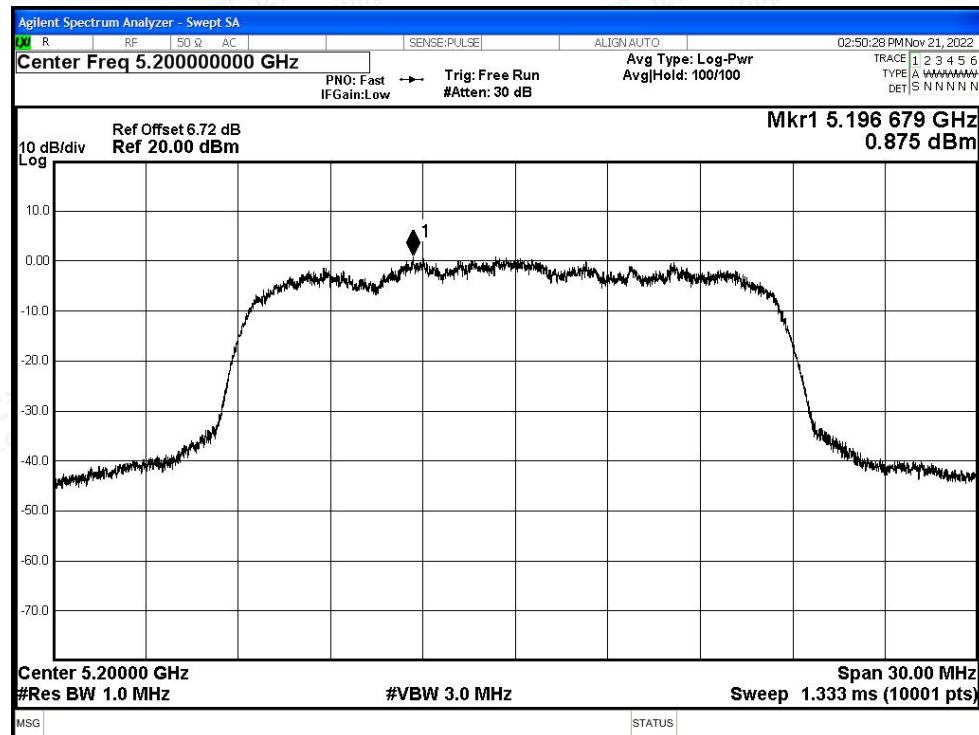


Test Graphs

PSD NVNT a 5180MHz Ant1

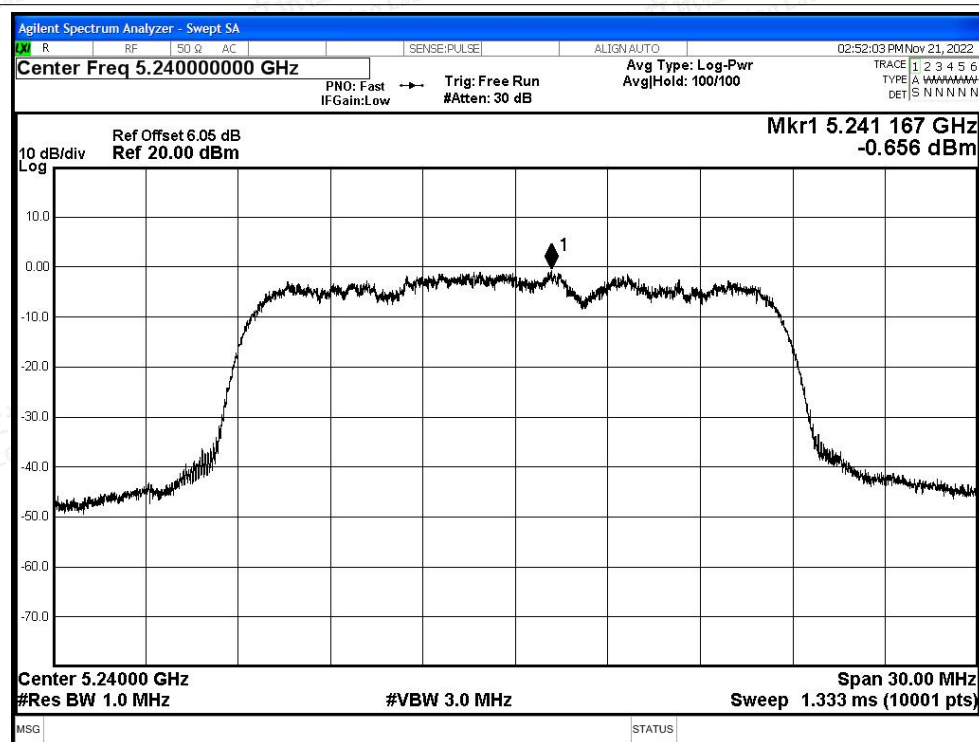


PSD NVNT a 5200MHz Ant1

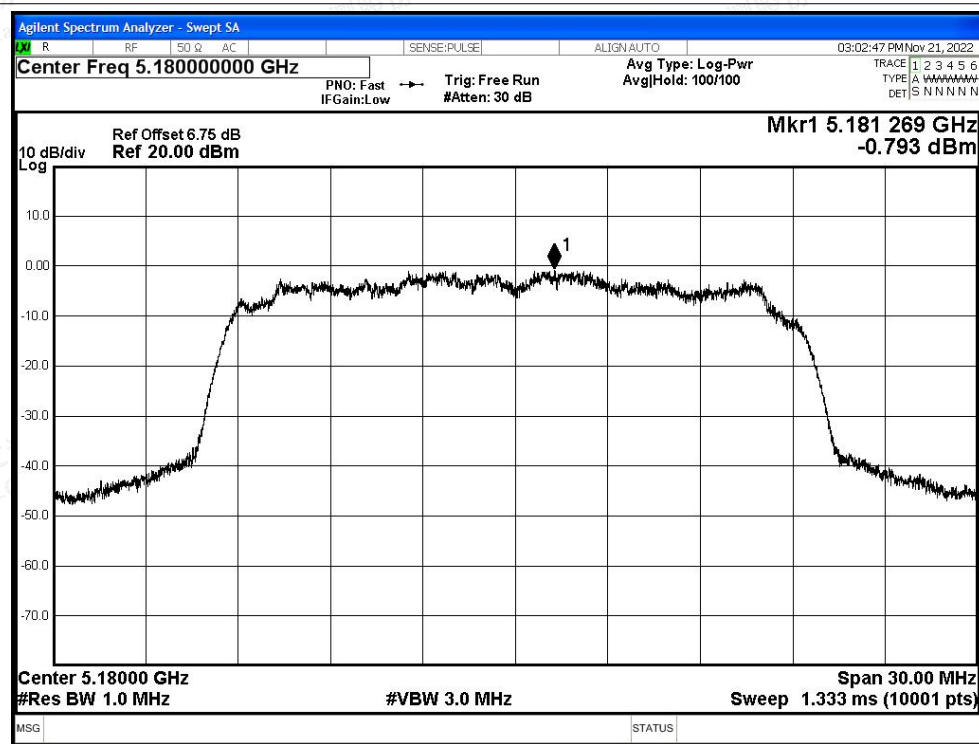


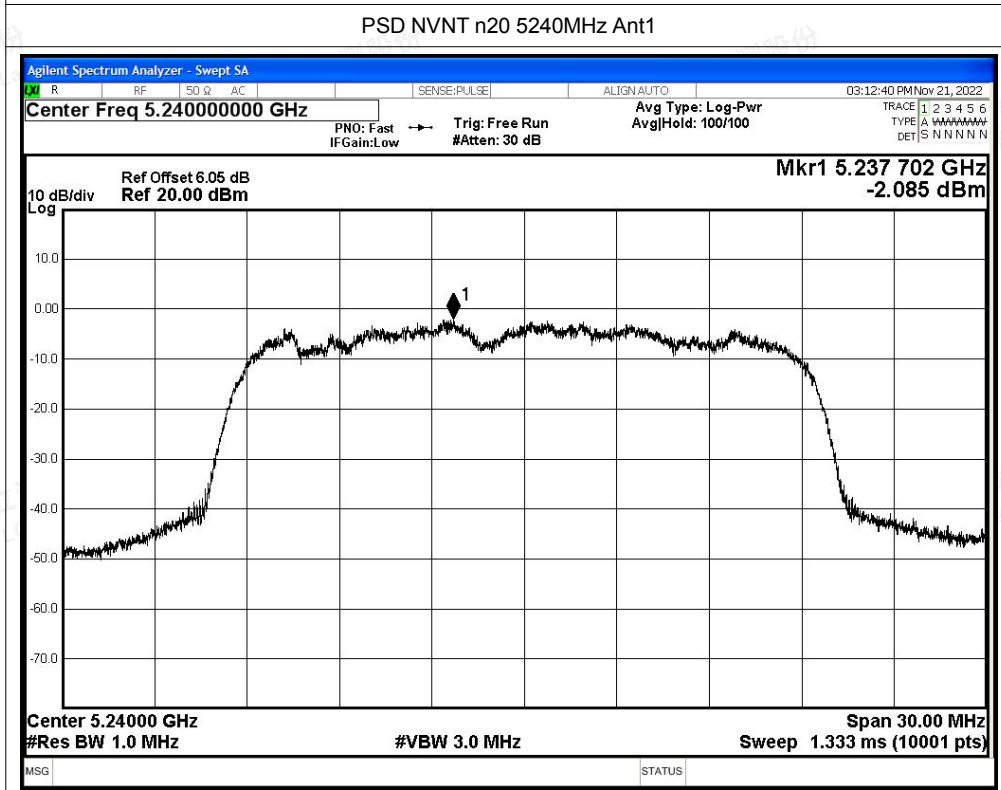
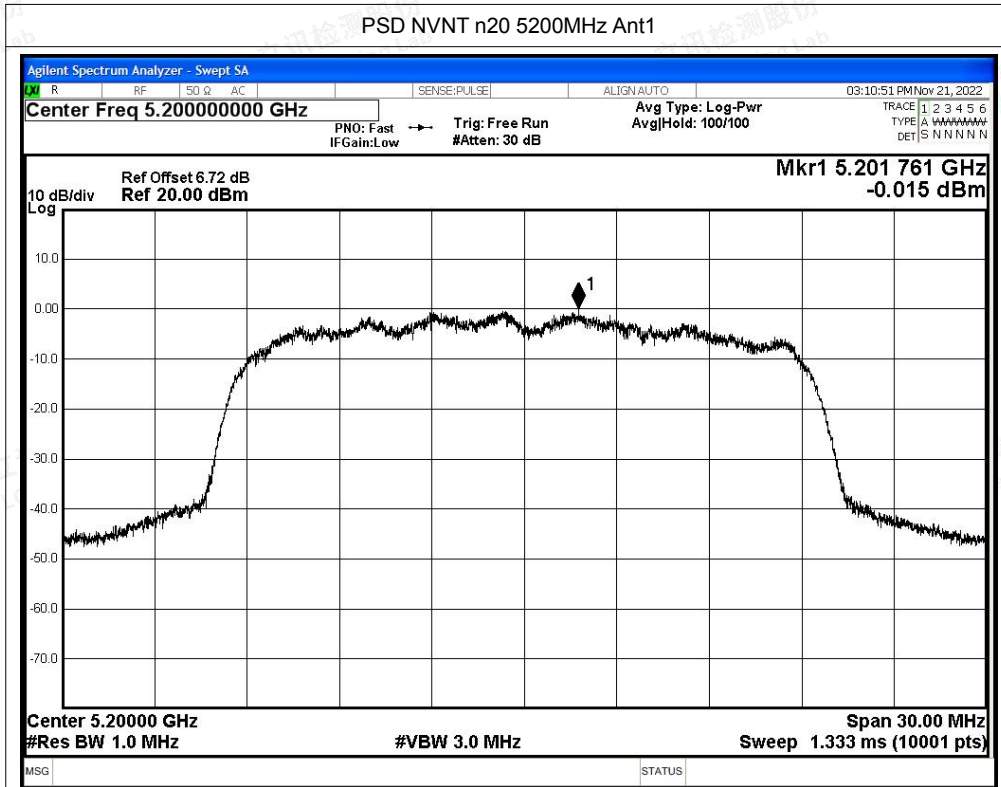


PSD NVNT a 5240MHz Ant1



PSD NVNT n20 5180MHz Ant1







C.5 Restrict Band

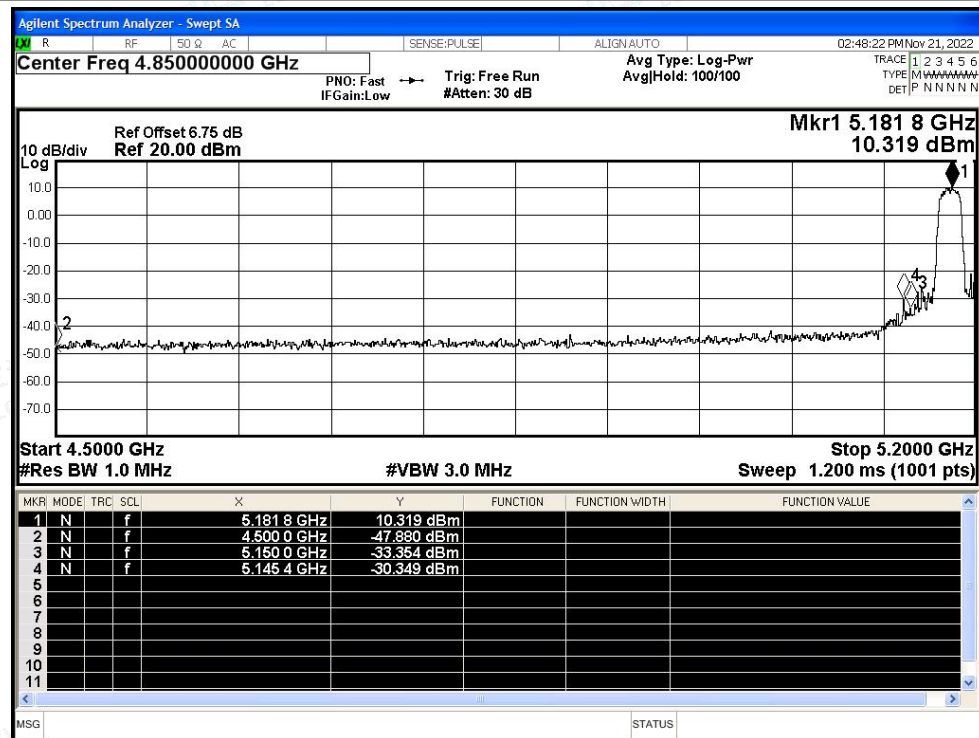
Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	a	5180	Ant1	4500	-47.88	3.28	50.63	Peak	68.2	Pass
NVNT	a	5180	Ant1	4500	-56.69	3.28	41.82	Average	54	Pass
NVNT	a	5180	Ant1	5145.4	-30.35	3.28	68.16	Peak	68.2	Pass
NVNT	a	5180	Ant1	5149.6	-49.89	3.28	48.62	Average	54	Pass
NVNT	a	5180	Ant1	5150	-33.35	3.28	65.16	Peak	68.2	Pass
NVNT	a	5180	Ant1	5150	-49.74	3.28	48.77	Average	54	Pass
NVNT	a	5240	Ant1	5350	-45.37	3.28	53.14	Peak	68.2	Pass
NVNT	a	5240	Ant1	5350	-55.53	3.28	42.98	Average	54	Pass
NVNT	a	5240	Ant1	5369.76	-43.76	3.28	54.75	Peak	68.2	Pass
NVNT	a	5240	Ant1	5352.48	-55.47	3.28	43.04	Average	54	Pass
NVNT	a	5240	Ant1	5460	-46.76	3.28	51.75	Peak	68.2	Pass
NVNT	a	5240	Ant1	5460	-56.39	3.28	42.12	Average	54	Pass
NVNT	n20	5180	Ant1	4500	-46.31	3.28	52.2	Peak	68.2	Pass
NVNT	n20	5180	Ant1	4500	-56.73	3.28	41.78	Average	54	Pass
NVNT	n20	5180	Ant1	5149.6	-37.42	3.28	61.09	Peak	68.2	Pass
NVNT	n20	5180	Ant1	5148.2	-52.1	3.28	46.41	Average	54	Pass
NVNT	n20	5180	Ant1	5150	-40.98	3.28	57.53	Peak	68.2	Pass
NVNT	n20	5180	Ant1	5150	-52.11	3.28	46.4	Average	54	Pass
NVNT	n20	5240	Ant1	5350	-46.8	3.28	51.71	Peak	68.2	Pass
NVNT	n20	5240	Ant1	5350	-55.71	3.28	42.8	Average	54	Pass
NVNT	n20	5240	Ant1	5360.64	-44.22	3.28	54.29	Peak	68.2	Pass
NVNT	n20	5240	Ant1	5350.8	-55.46	3.28	43.05	Average	54	Pass
NVNT	n20	5240	Ant1	5460	-46.61	3.28	51.9	Peak	68.2	Pass
NVNT	n20	5240	Ant1	5460	-56.3	3.28	42.21	Average	54	Pass



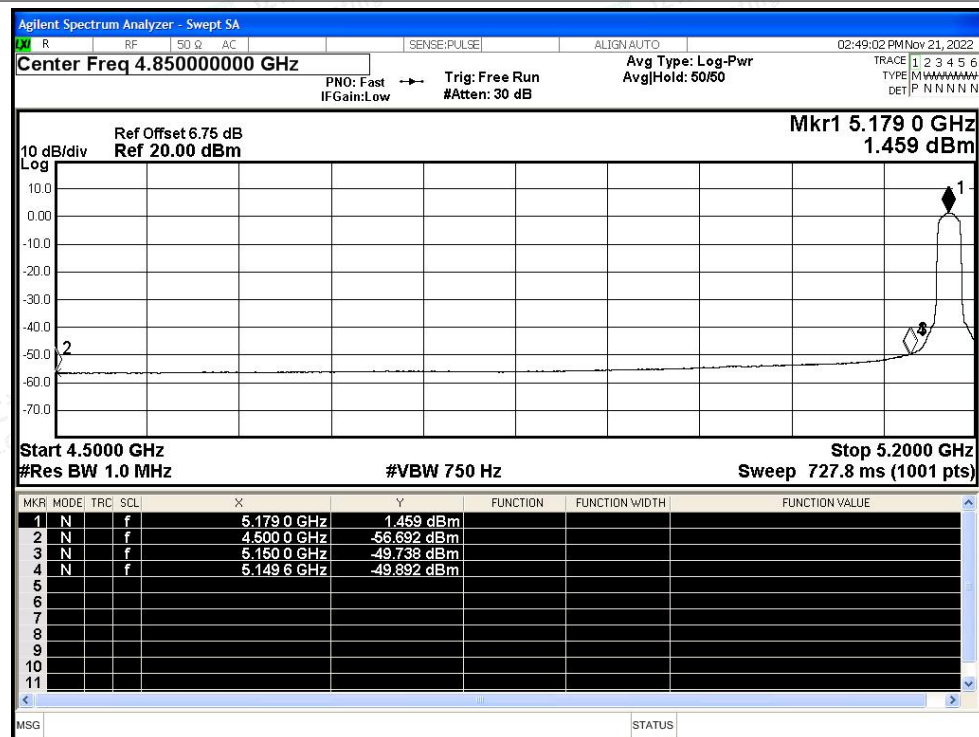


Test Graphs

Restrict Band NVNT a 5180MHz Ant1 Peak

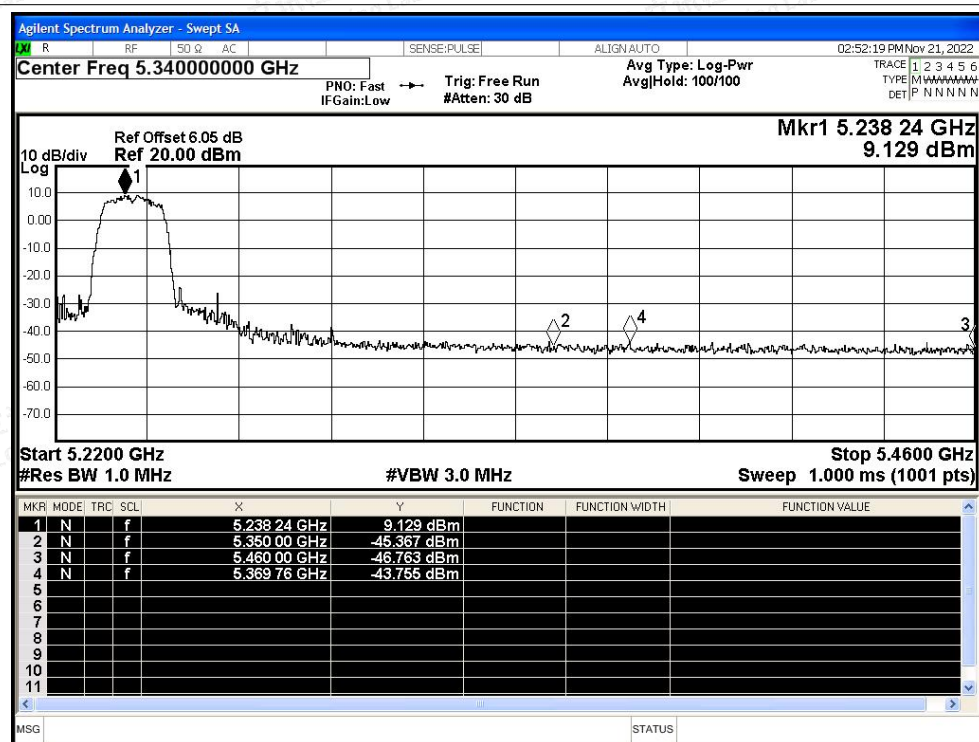


Restrict Band NVNT a 5180MHz Ant1 Average

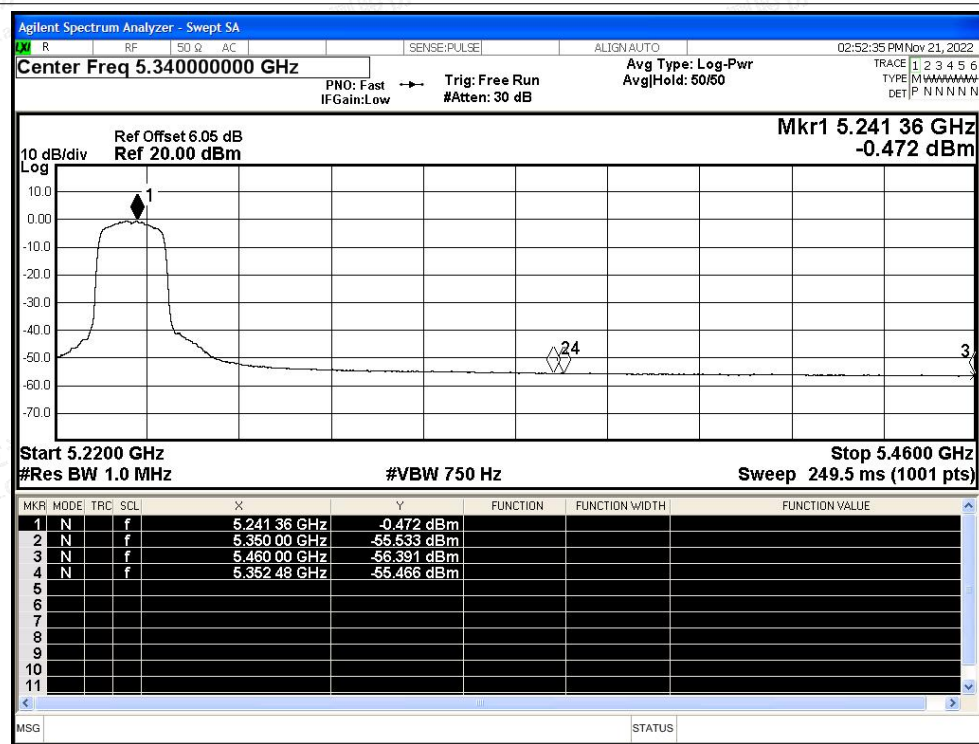




Restrict Band NVNT a 5240MHz Ant1 Peak



Restrict Band NVNT a 5240MHz Ant1 Average



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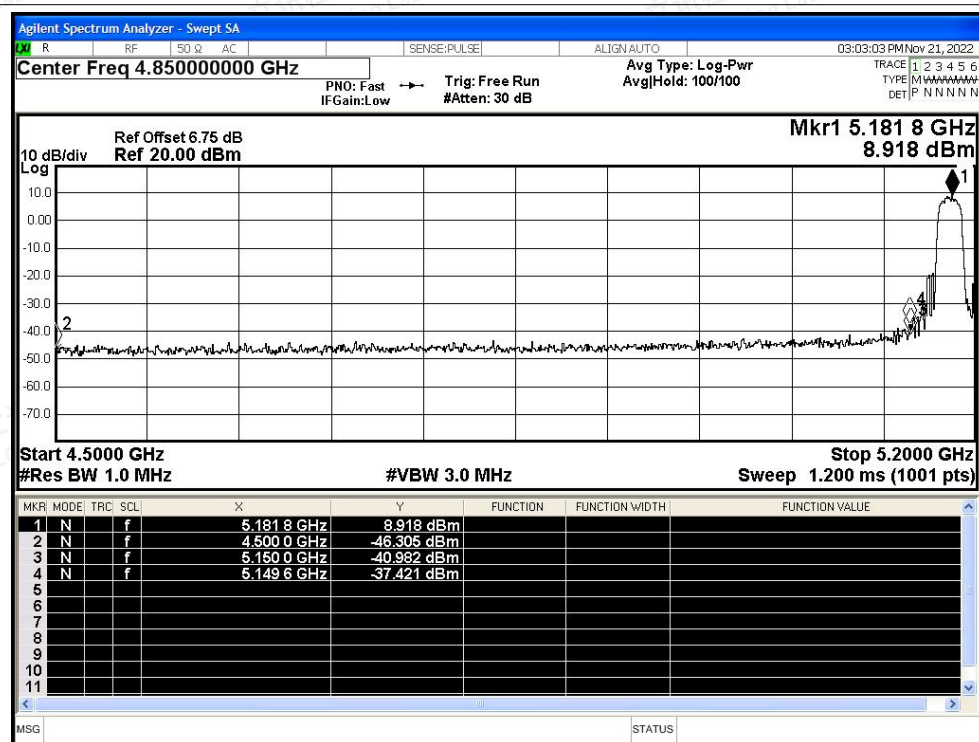
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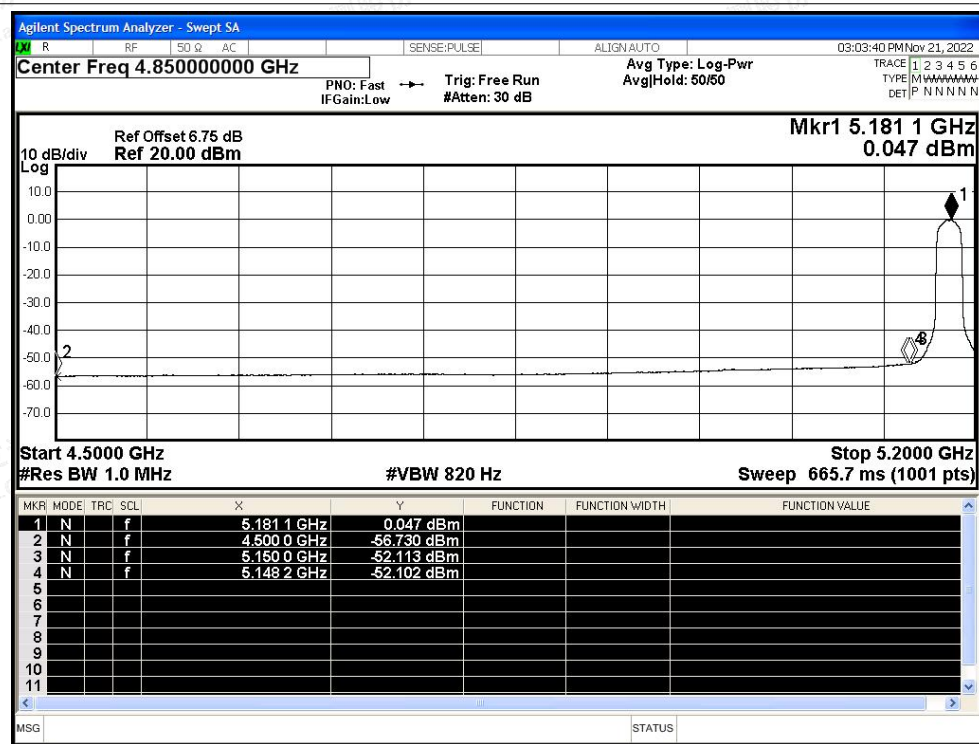
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Restrict Band NVNT n20 5180MHz Ant1 Peak



Restrict Band NVNT n20 5180MHz Ant1 Average



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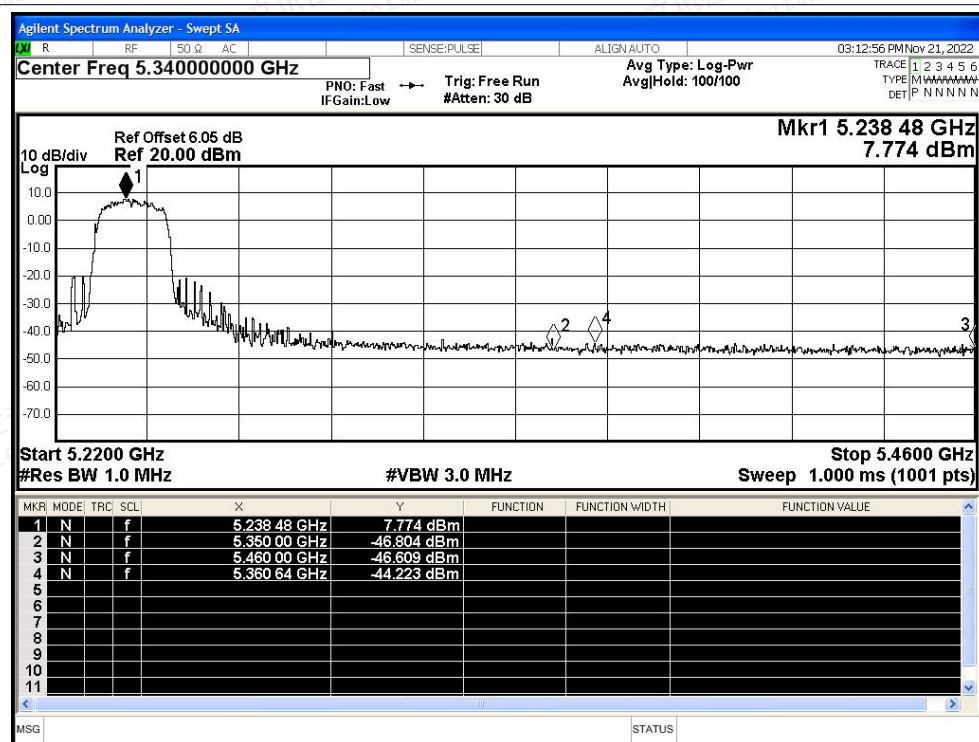
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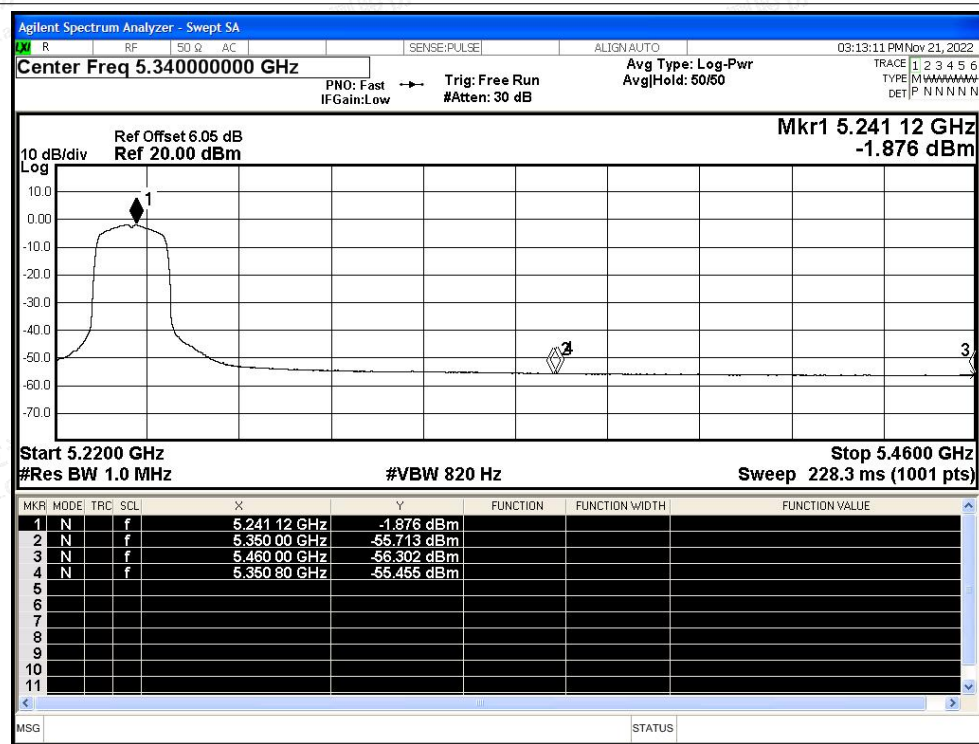
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Restrict Band NVNT n20 5240MHz Ant1 Peak



Restrict Band NVNT n20 5240MHz Ant1 Average



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C.6 Frequency Stability

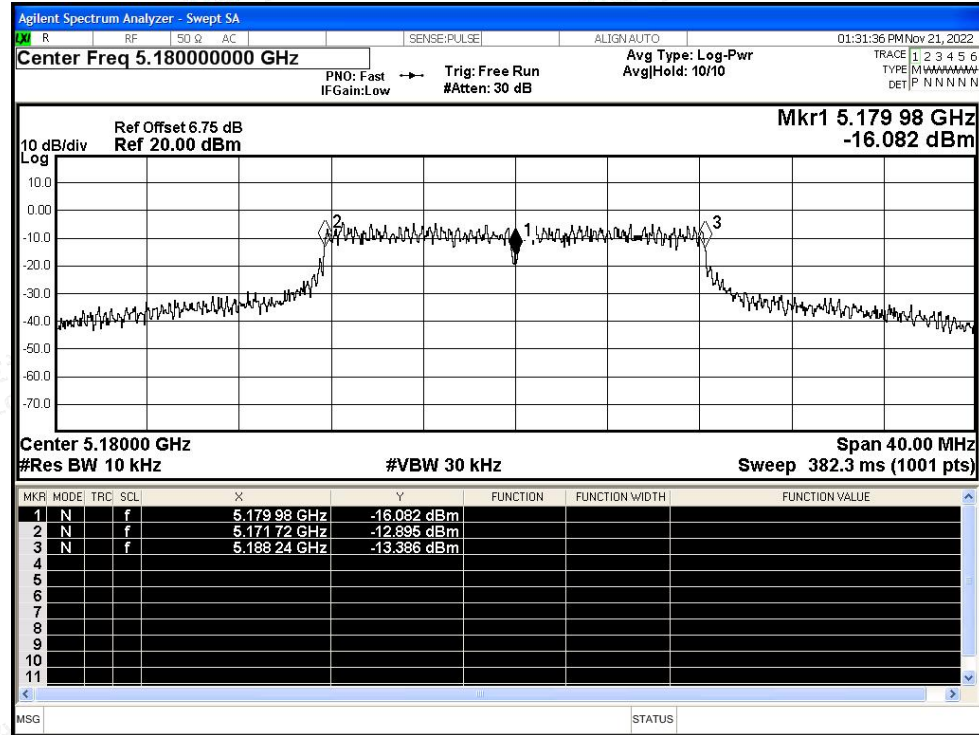
Condition	Mode	Frequency (MHz)	Antenna	Measured Frequency (MHz)	Frequency Error (Hz)	Deviation (ppm)	Limit (ppm)	Verdict
NVNT	a	5180	Ant1	5179.98	-20000	-3.86	25	Pass
NVNT	a	5200	Ant1	5199.98	-20000	-3.85	25	Pass
NVNT	a	5240	Ant1	5239.98	-20000	-3.82	25	Pass



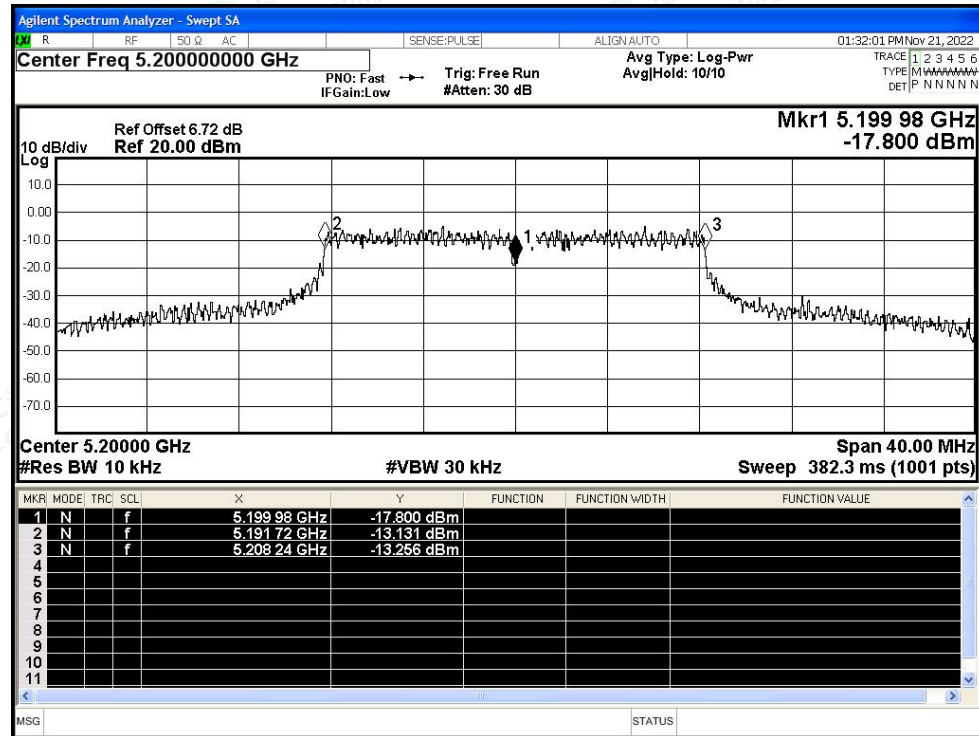


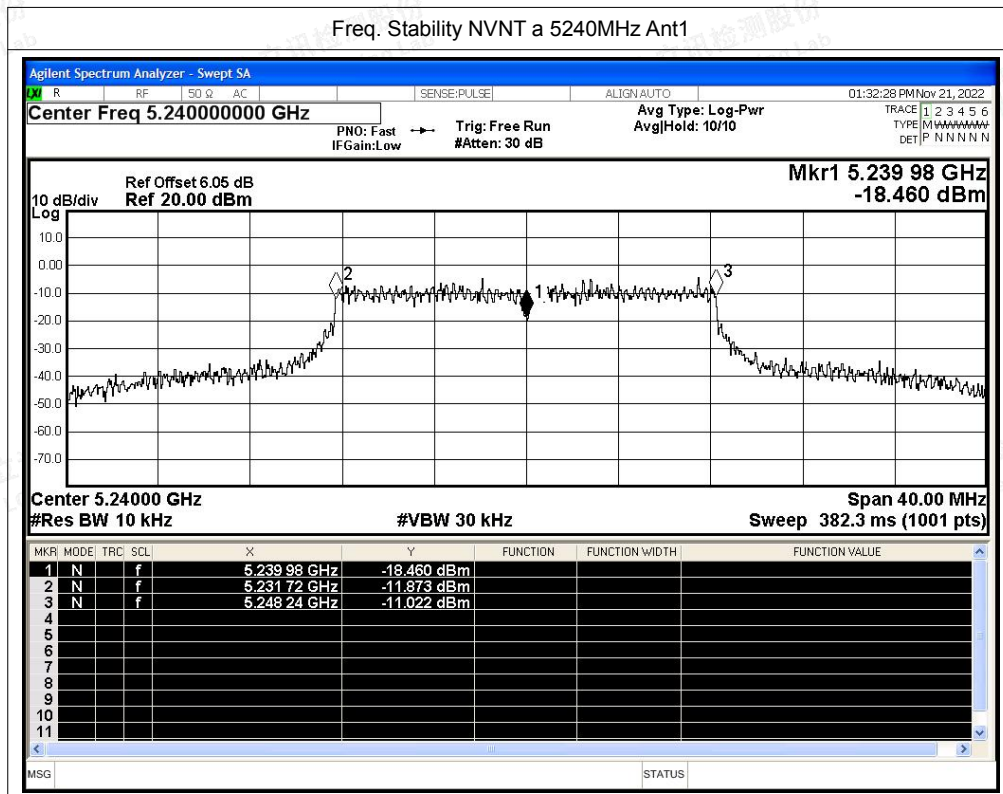
Test Graphs

Freq. Stability NVNT a 5180MHz Ant1



Freq. Stability NVNT a 5200MHz Ant1







C.7 Duty Cycle

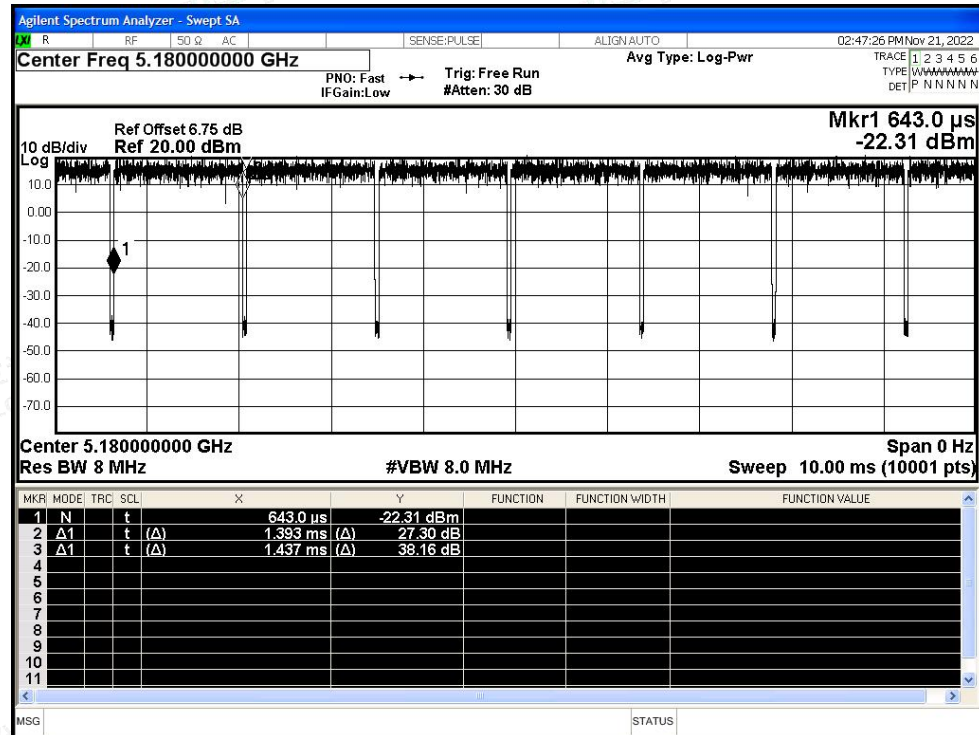
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	a	5180	Ant1	96.94	0.13	0.72
NVNT	a	5200	Ant1	96.94	0.13	0.72
NVNT	a	5240	Ant1	96.94	0.13	0.72
NVNT	n20	5180	Ant1	96.7	0.15	0.78
NVNT	n20	5200	Ant1	96.7	0.15	0.78
NVNT	n20	5240	Ant1	96.7	0.15	0.78



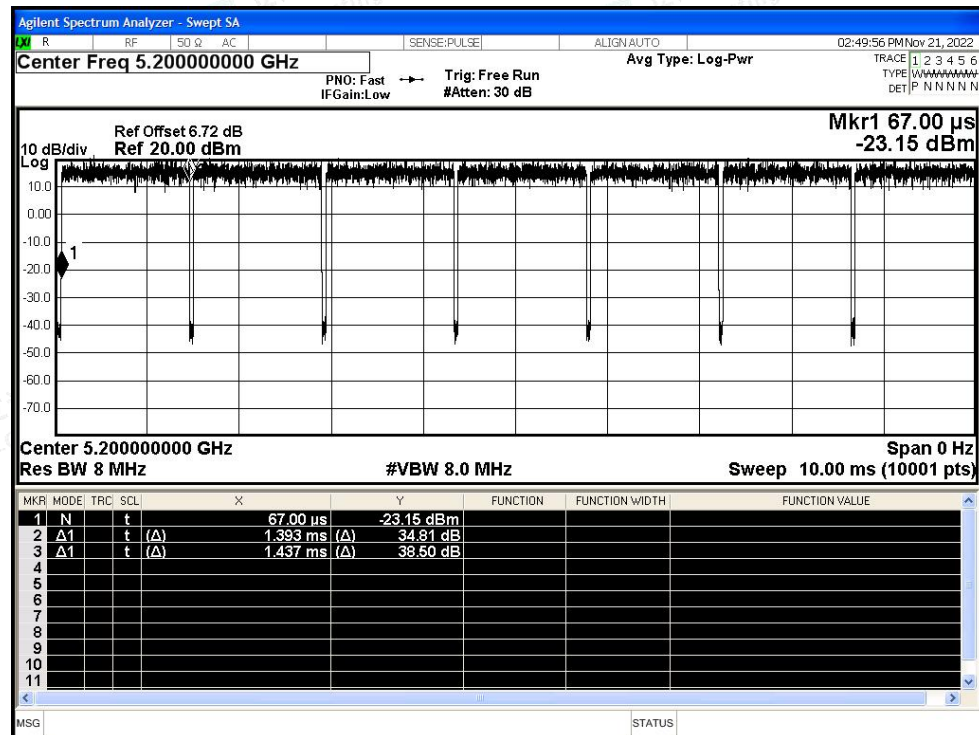


Test Graphs

Duty Cycle NVNT a 5180MHz Ant1



Duty Cycle NVNT a 5200MHz Ant1



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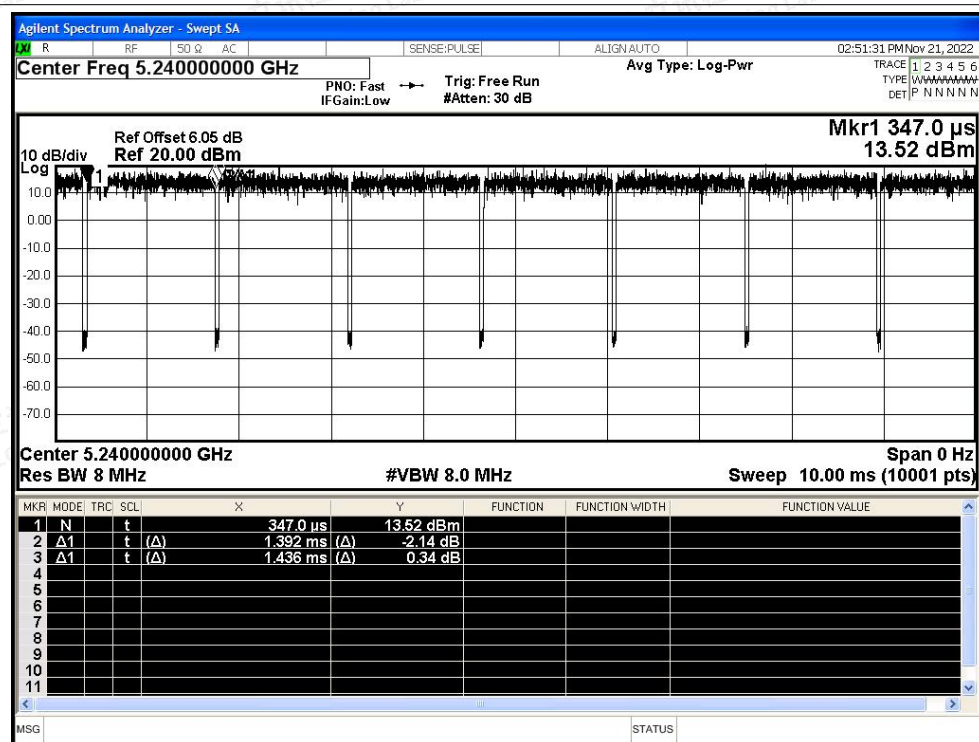
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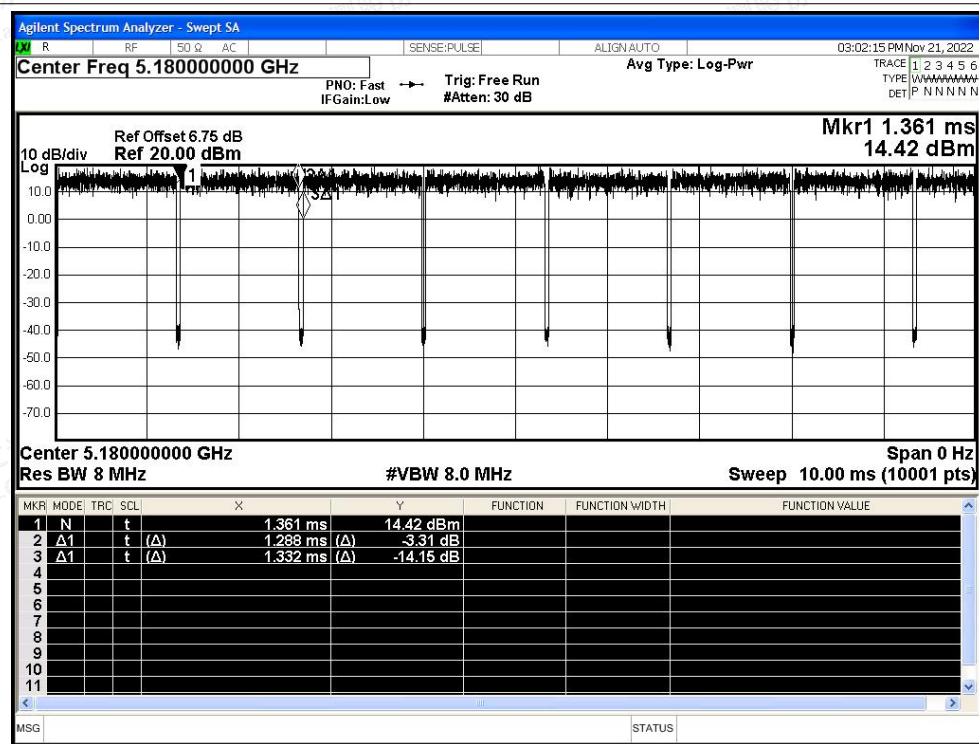
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Duty Cycle NVNT a 5240MHz Ant1

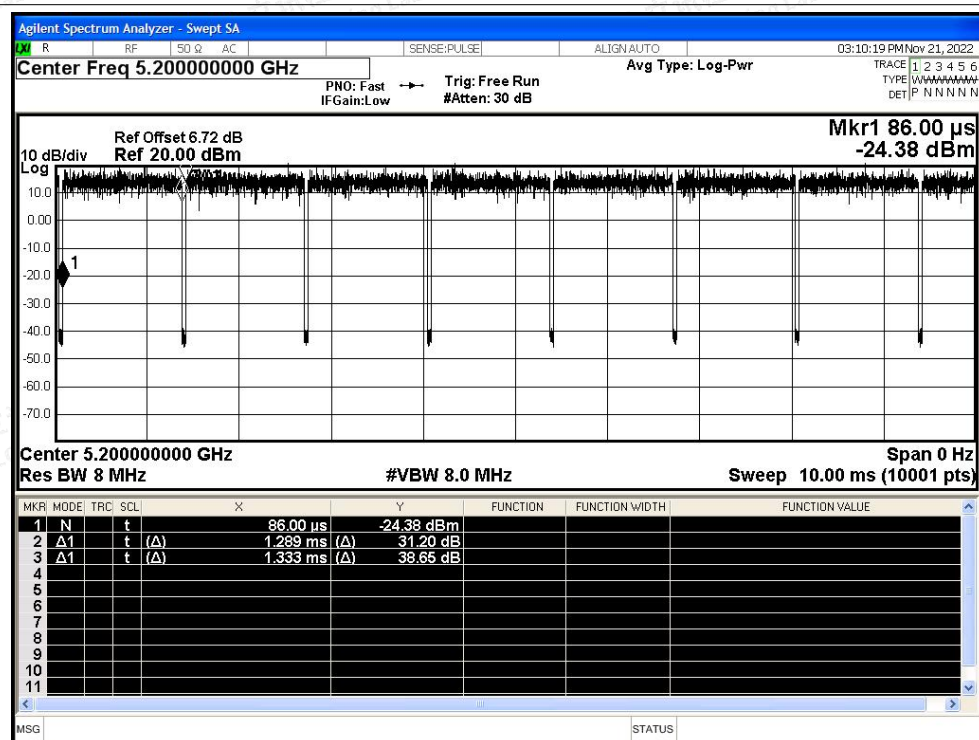


Duty Cycle NVNT n20 5180MHz Ant1

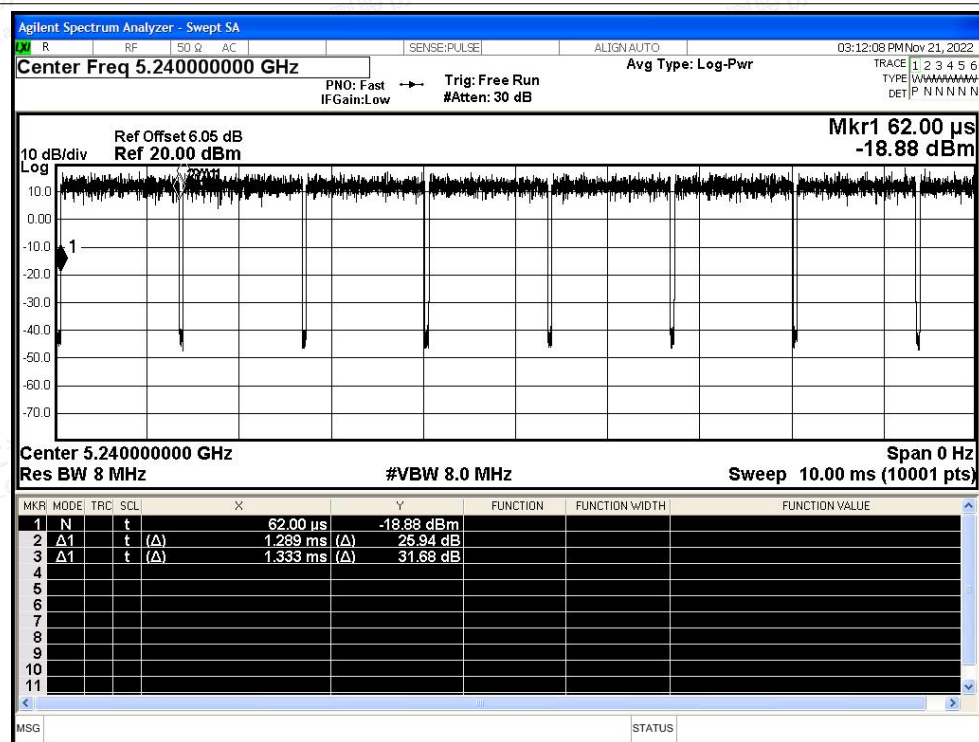




Duty Cycle NVNT n20 5200MHz Ant1



Duty Cycle NVNT n20 5240MHz Ant1



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