



Appendix D

RF Test Data for 5.2GWIFI (Conducted Measurement)

Product Name: Set top box

Test Model: BOXY

Environmental Conditions

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





D.1 -26dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-26 dB Bandwidth (MHz)	Limit -26 dB Bandwidth (MHz)	Verdict
NVNT	a	5180	Ant0	29.916	>=0.5	Pass
NVNT	a	5200	Ant0	29.186	>=0.5	Pass
NVNT	a	5240	Ant0	29.615	>=0.5	Pass
NVNT	n20	5180	Ant0	29.876	>=0.5	Pass
NVNT	n20	5200	Ant0	29.734	>=0.5	Pass
NVNT	n20	5240	Ant0	30	>=0.5	Pass
NVNT	n40	5190	Ant0	59.273	>=0.5	Pass
NVNT	n40	5230	Ant0	59.47	>=0.5	Pass
NVNT	ac20	5180	Ant0	30	>=0.5	Pass
NVNT	ac20	5200	Ant0	29.433	>=0.5	Pass
NVNT	ac20	5240	Ant0	30	>=0.5	Pass
NVNT	ac40	5190	Ant0	59.614	>=0.5	Pass
NVNT	ac40	5230	Ant0	59.617	>=0.5	Pass
NVNT	ac80	5210	Ant0	119.424	>=0.5	Pass

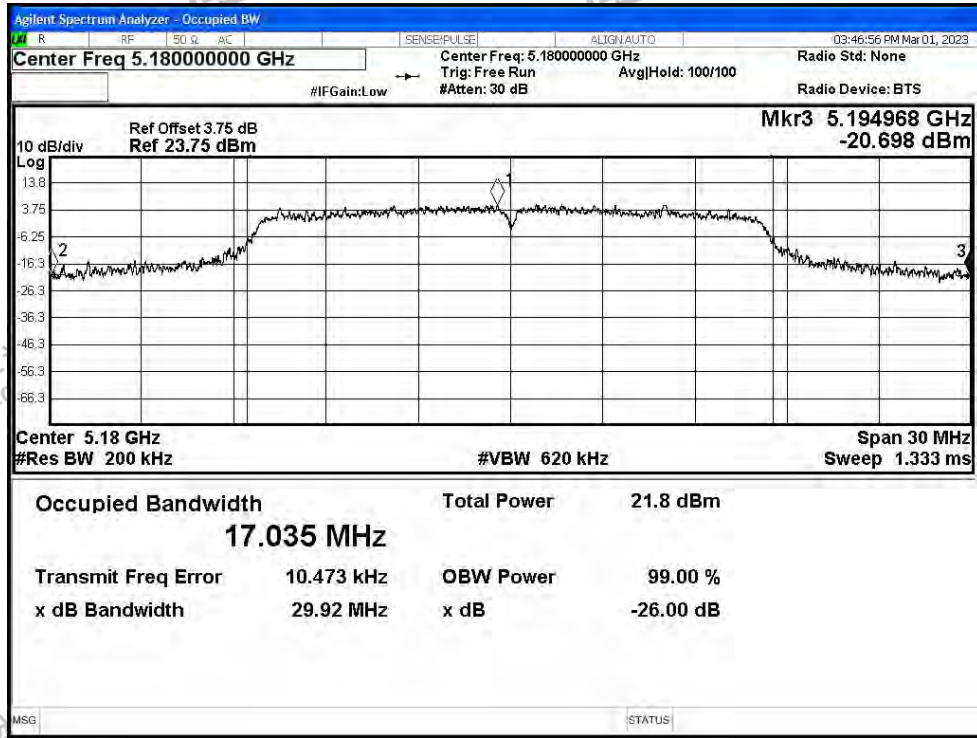


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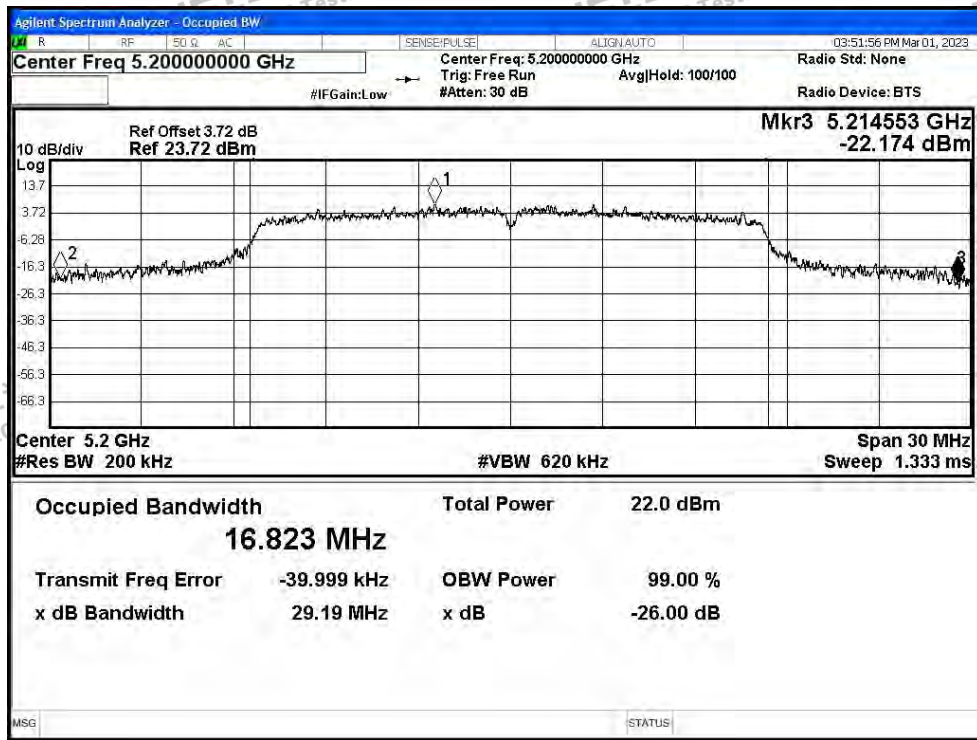


Test Graphs

-26dB Bandwidth NVNT a 5180MHz Ant0

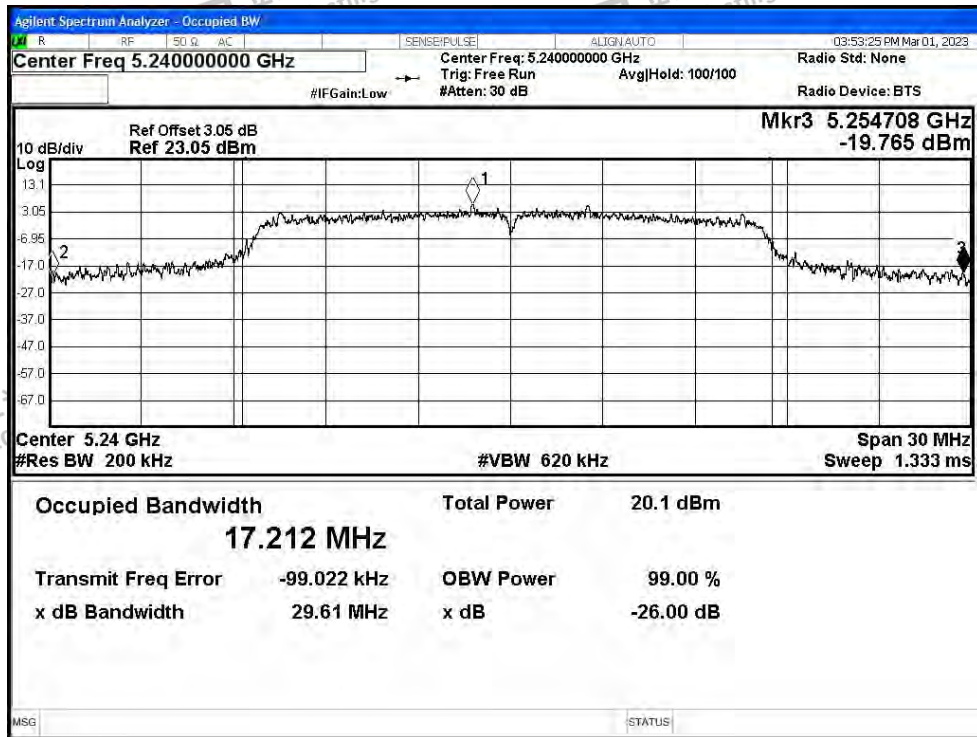


-26dB Bandwidth NVNT a 5200MHz Ant0

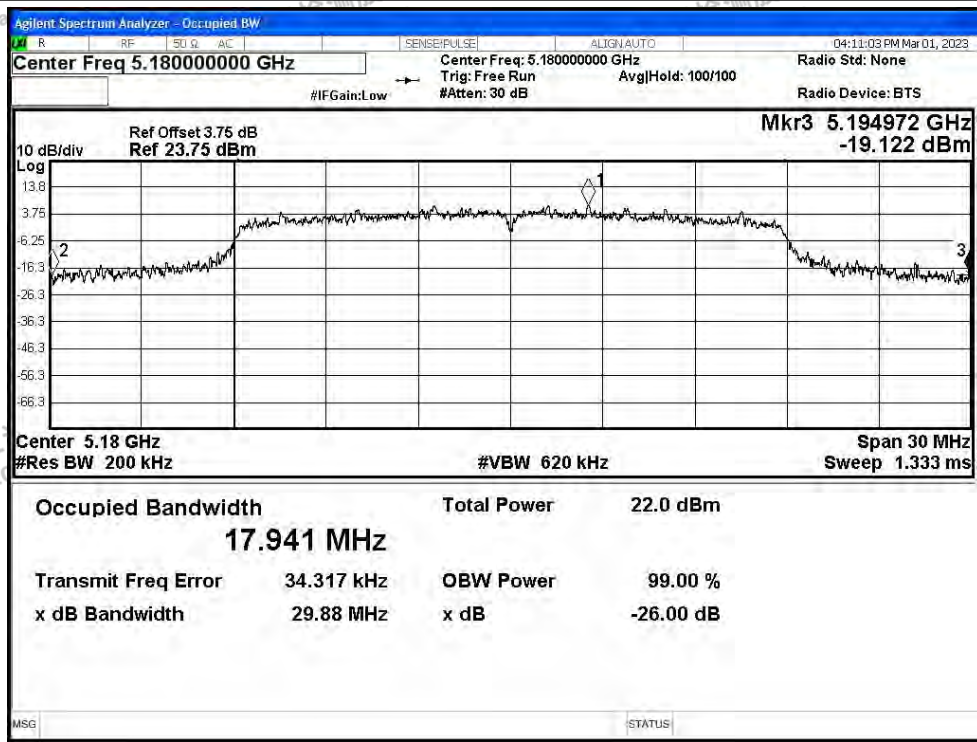




-26dB Bandwidth NVNT a 5240MHz Ant0

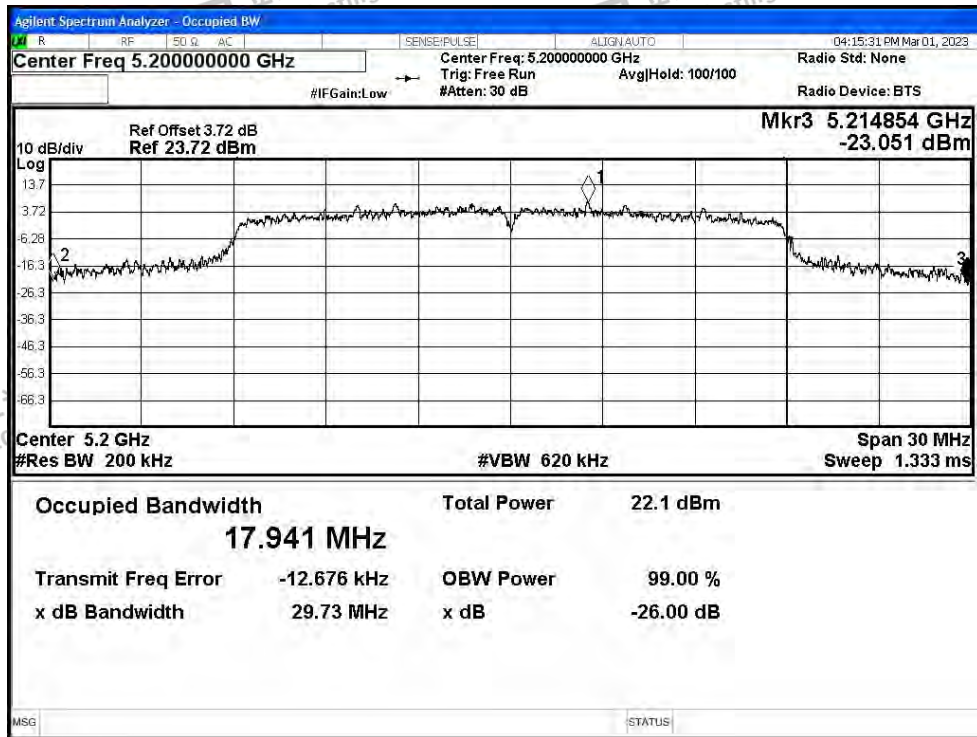


-26dB Bandwidth NVNT n20 5180MHz Ant0

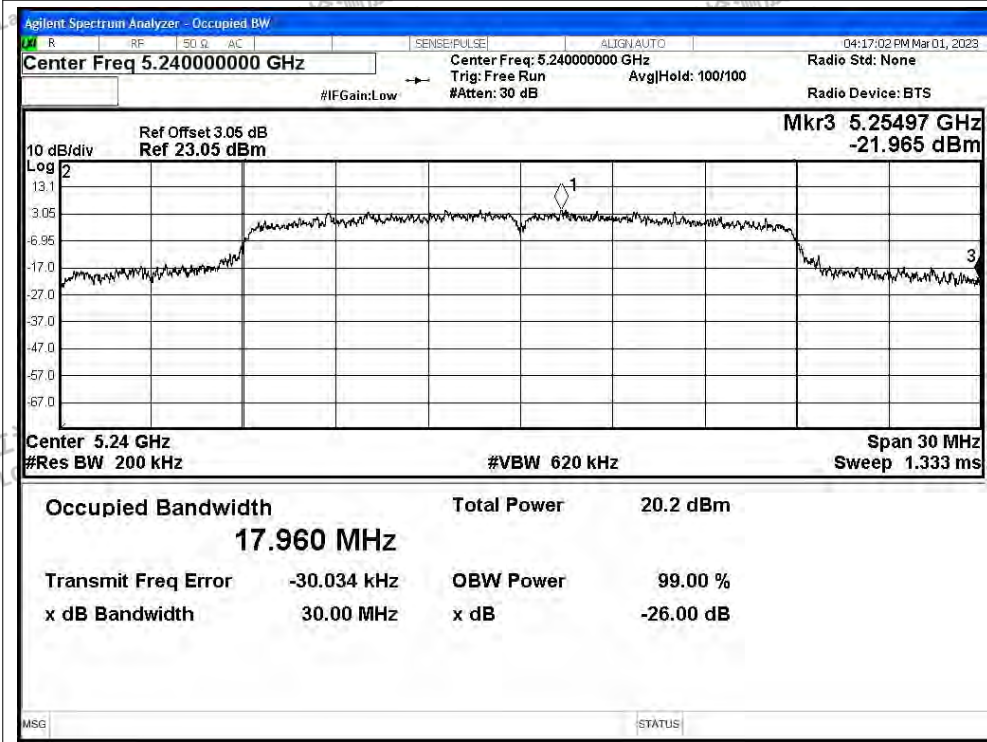




-26dB Bandwidth NVNT n20 5200MHz Ant0

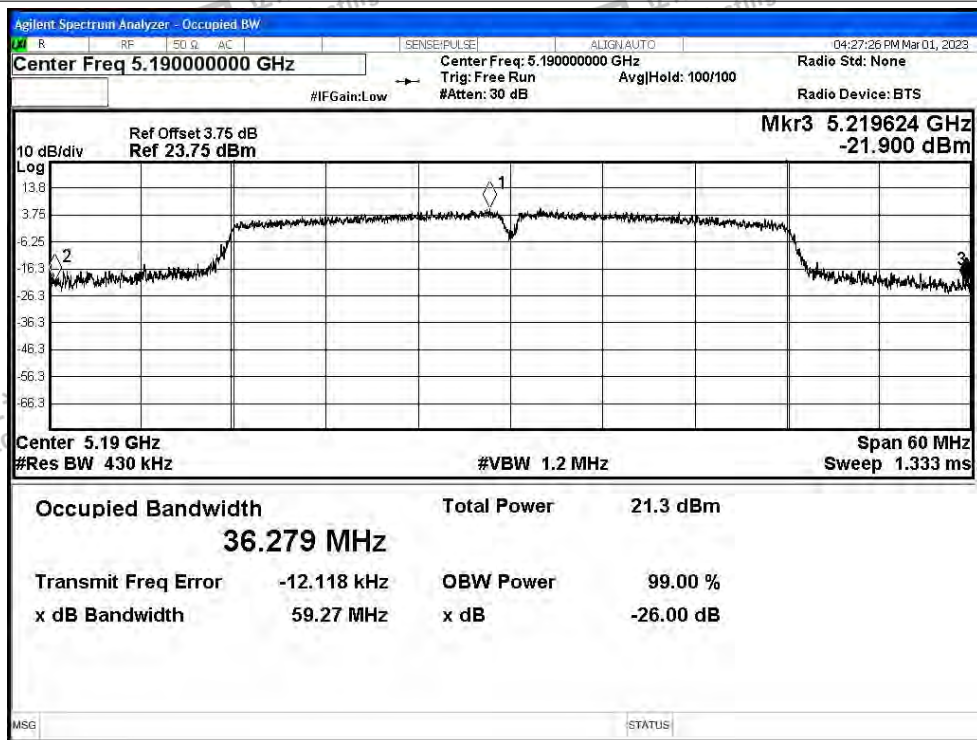


-26dB Bandwidth NVNT n20 5240MHz Ant0

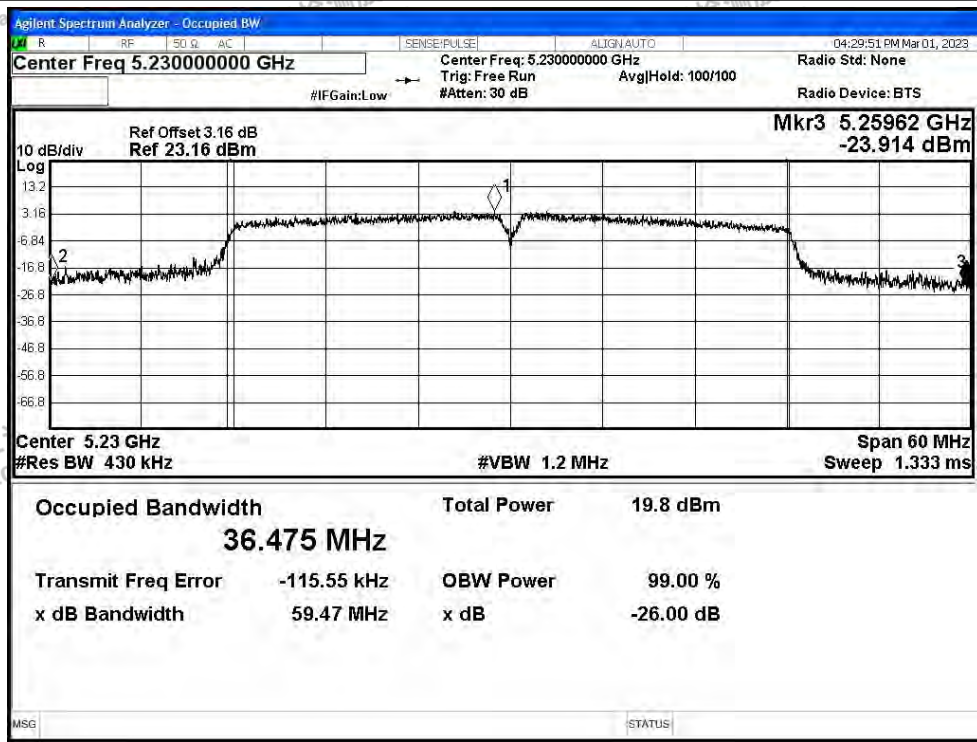




-26dB Bandwidth NVNT n40 5190MHz Ant0

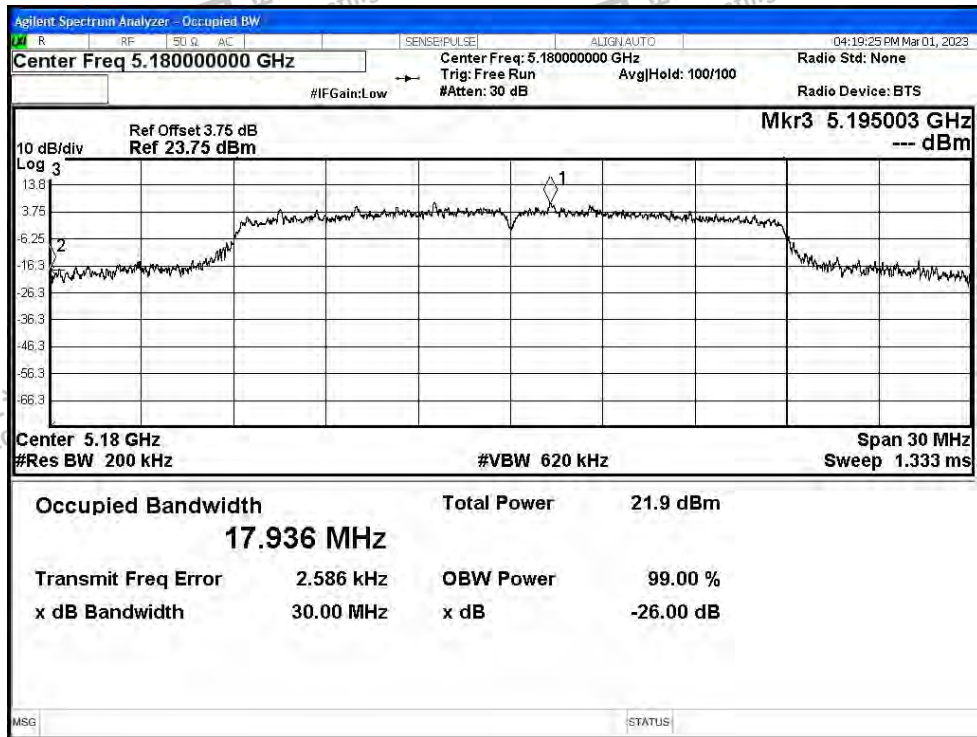


-26dB Bandwidth NVNT n40 5230MHz Ant0

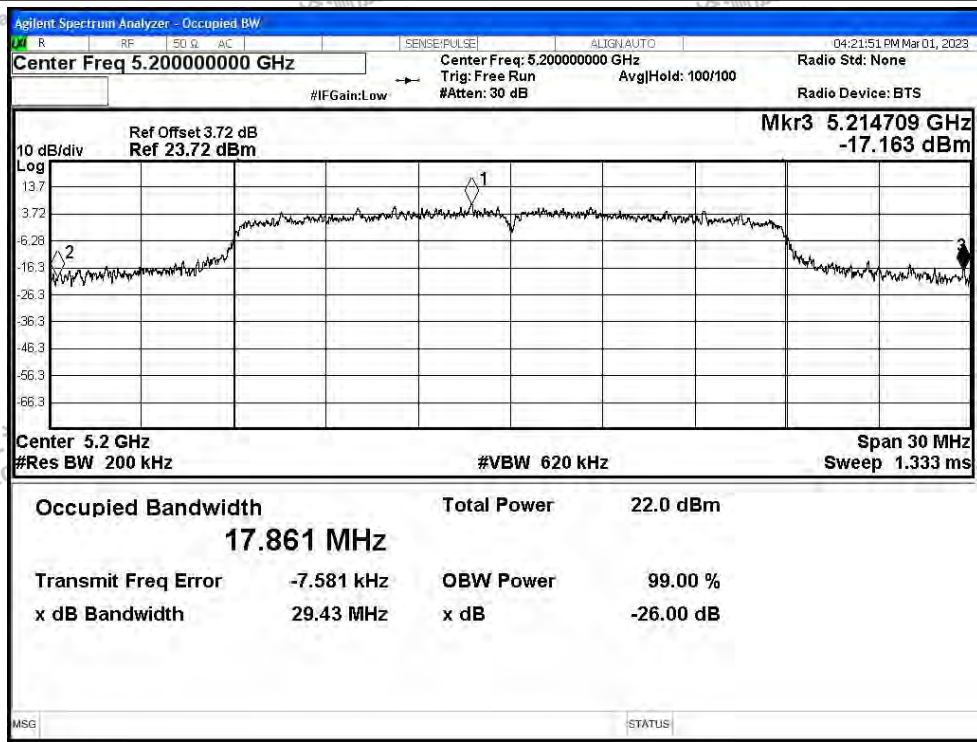




-26dB Bandwidth NVNT ac20 5180MHz Ant0

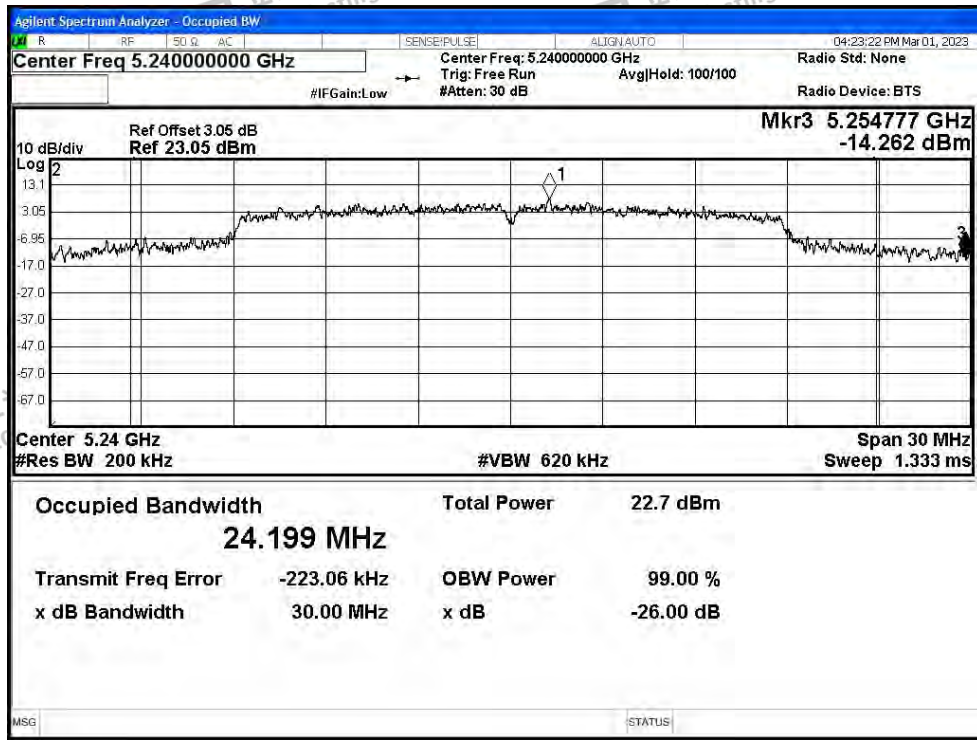


-26dB Bandwidth NVNT ac20 5200MHz Ant0

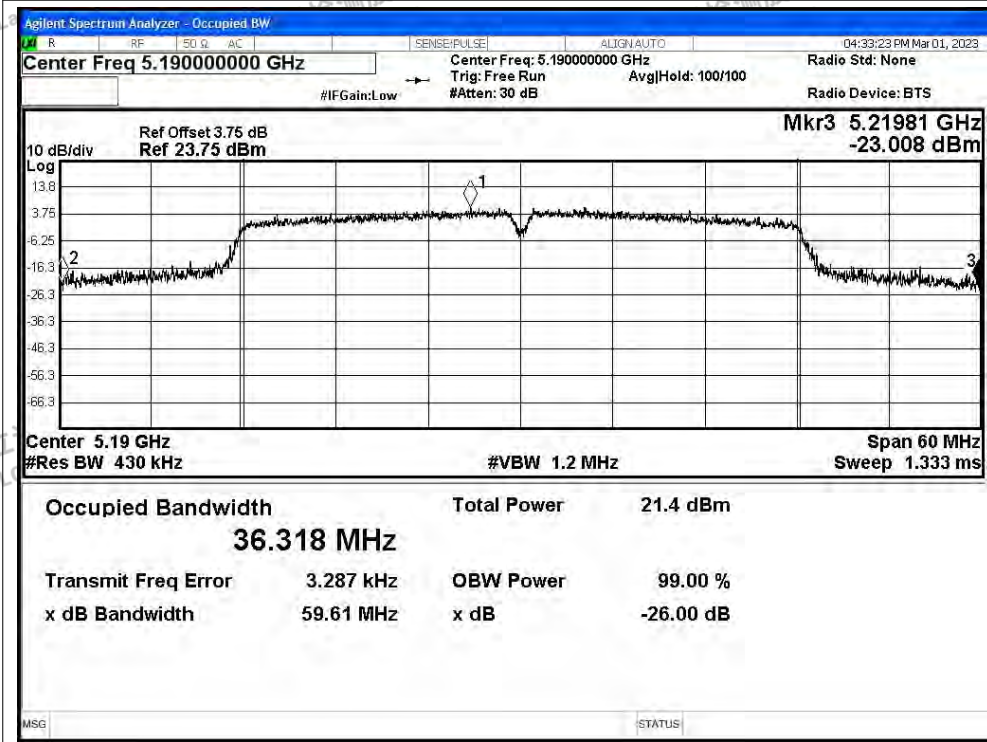




-26dB Bandwidth NVNT ac20 5240MHz Ant0

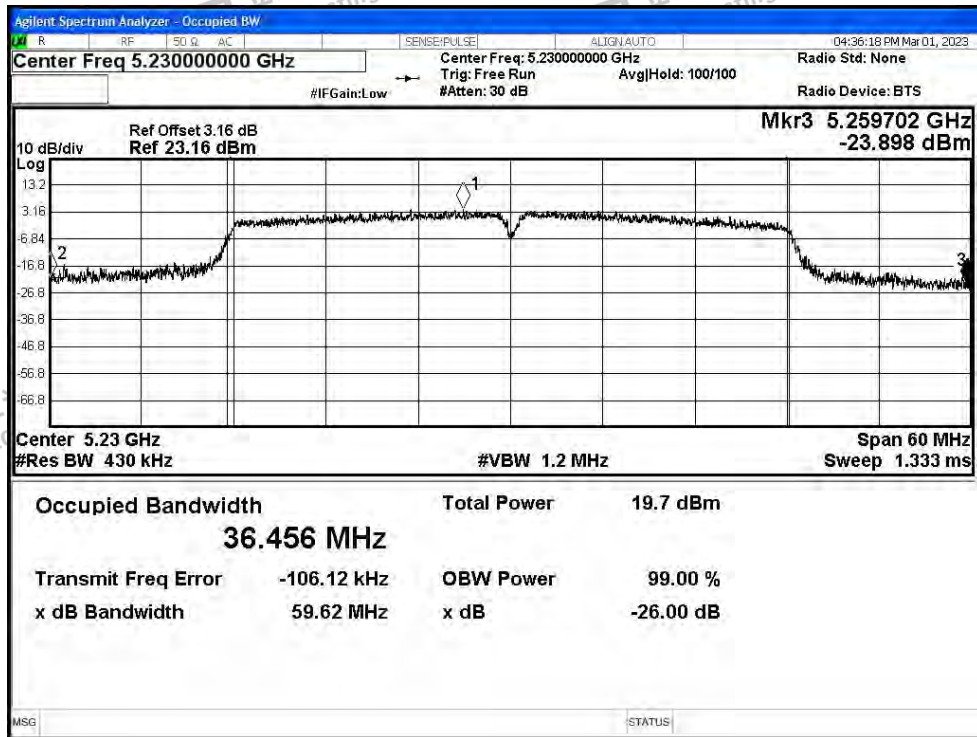


-26dB Bandwidth NVNT ac40 5190MHz Ant0

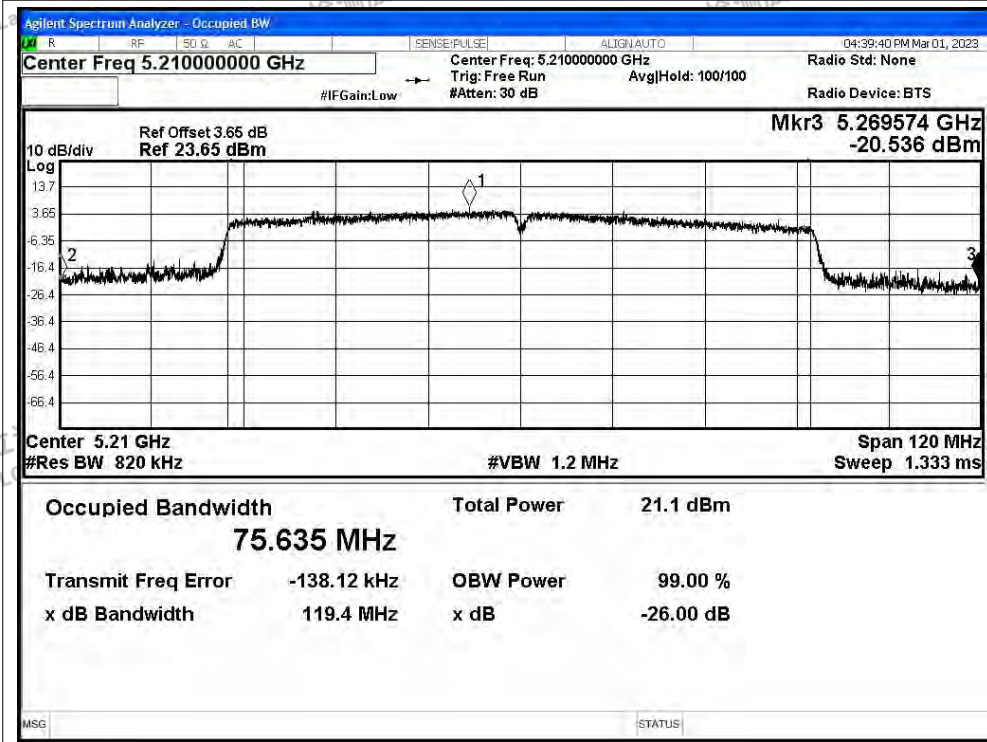




-26dB Bandwidth NVNT ac40 5230MHz Ant0



-26dB Bandwidth NVNT ac80 5210MHz Ant0





Condition	Mode	Frequency (MHz)	Antenna	-26 dB Bandwidth (MHz)	Limit -26 dB Bandwidth (MHz)	Verdict
NVNT	a	5180	Ant1	29.996	>=0.5	Pass
NVNT	a	5200	Ant1	29.74	>=0.5	Pass
NVNT	a	5240	Ant1	30	>=0.5	Pass
NVNT	n20	5180	Ant1	29.483	>=0.5	Pass
NVNT	n20	5200	Ant1	28.502	>=0.5	Pass
NVNT	n20	5240	Ant1	30	>=0.5	Pass
NVNT	n40	5190	Ant1	59.99	>=0.5	Pass
NVNT	n40	5230	Ant1	59.709	>=0.5	Pass
NVNT	ac20	5180	Ant1	29.61	>=0.5	Pass
NVNT	ac20	5200	Ant1	29.35	>=0.5	Pass
NVNT	ac20	5240	Ant1	30	>=0.5	Pass
NVNT	ac40	5190	Ant1	59.954	>=0.5	Pass
NVNT	ac40	5230	Ant1	60	>=0.5	Pass
NVNT	ac80	5210	Ant1	119.985	>=0.5	Pass

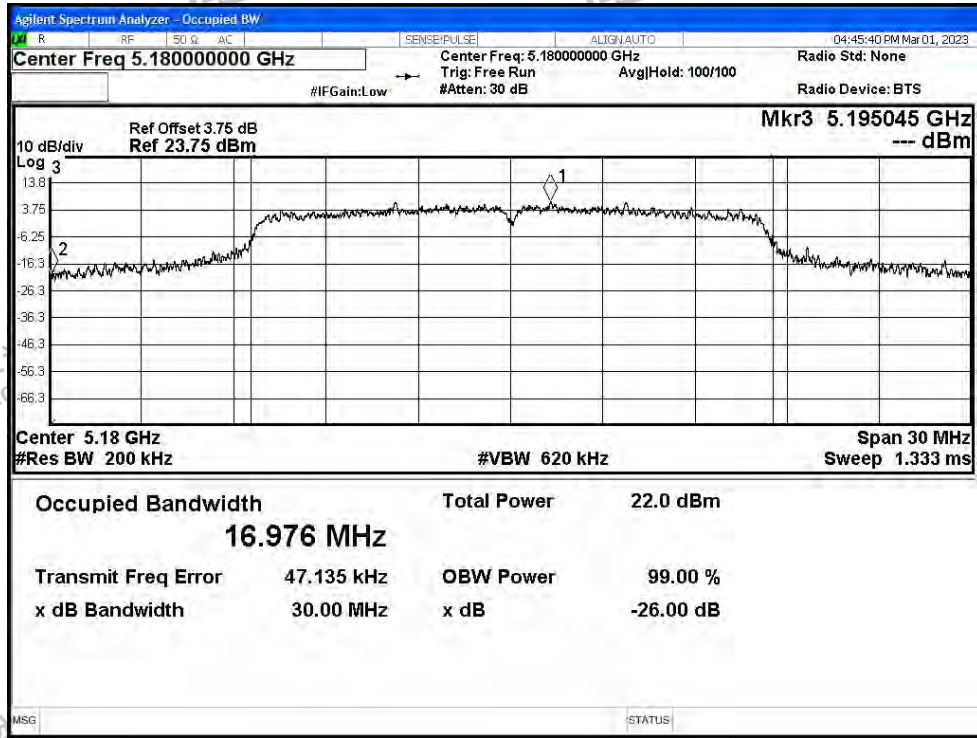


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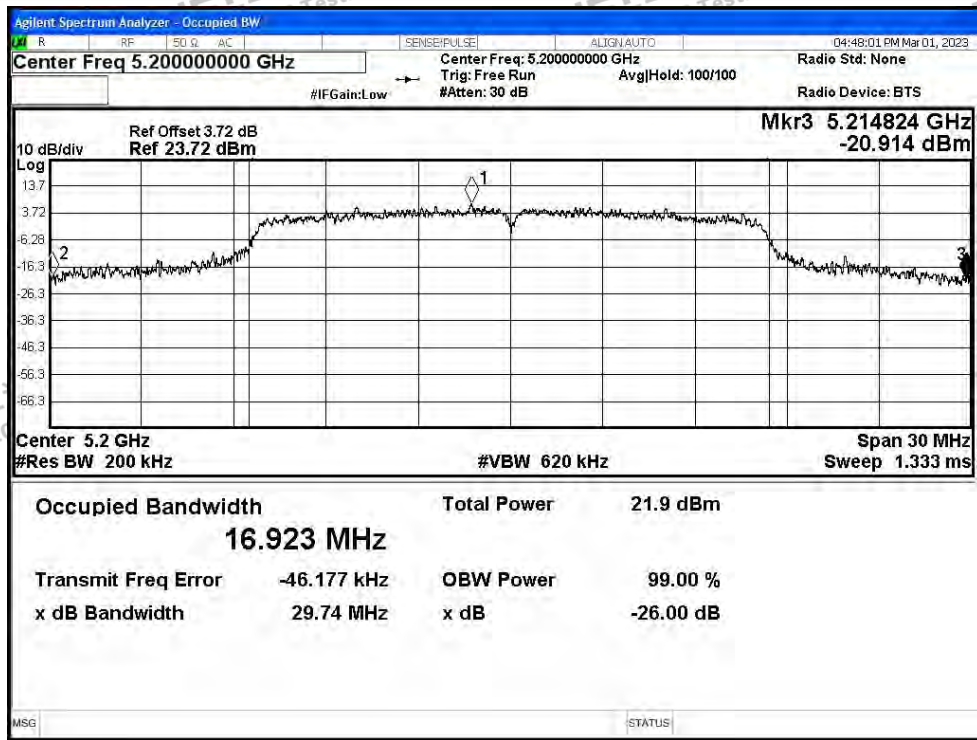


Test Graphs

-26dB Bandwidth NVNT a 5180MHz Ant1

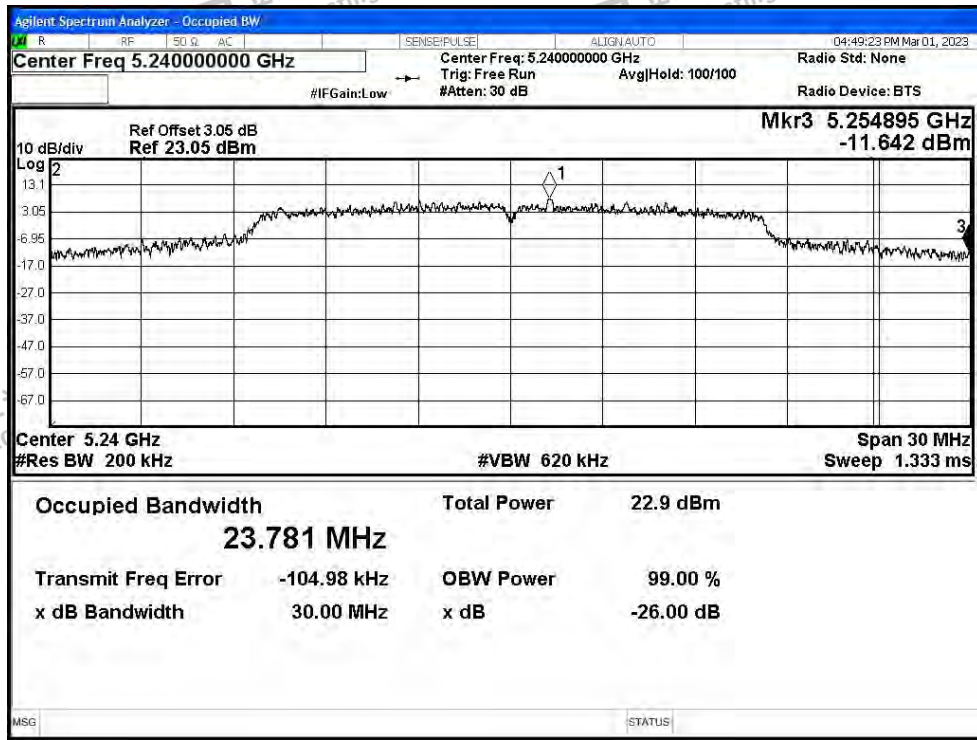


-26dB Bandwidth NVNT a 5200MHz Ant1

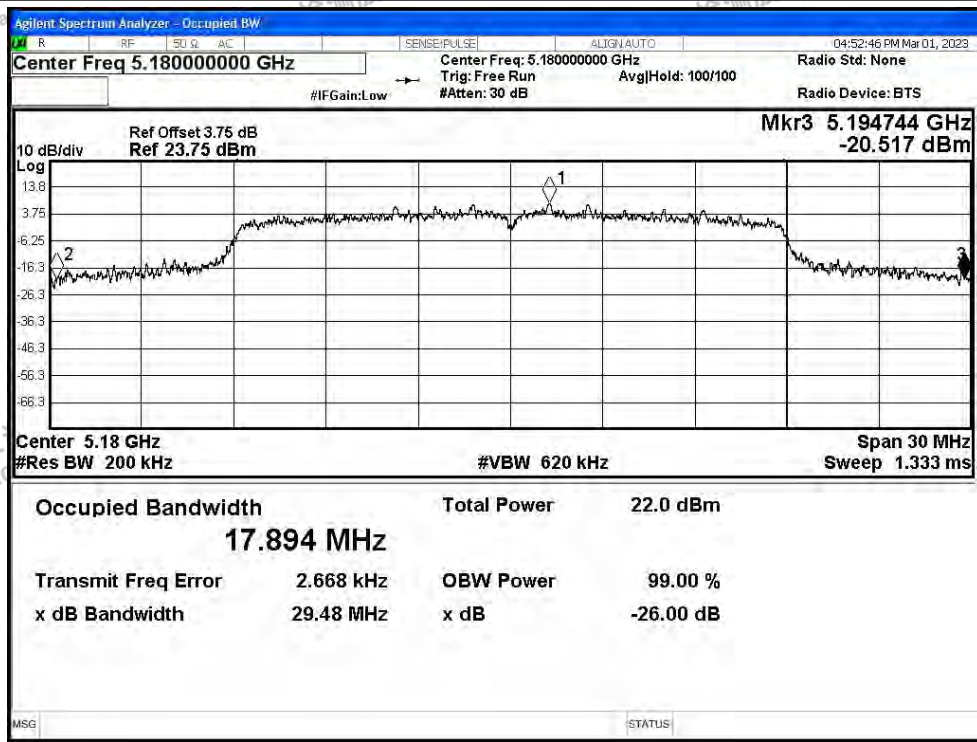




-26dB Bandwidth NVNT a 5240MHz Ant1

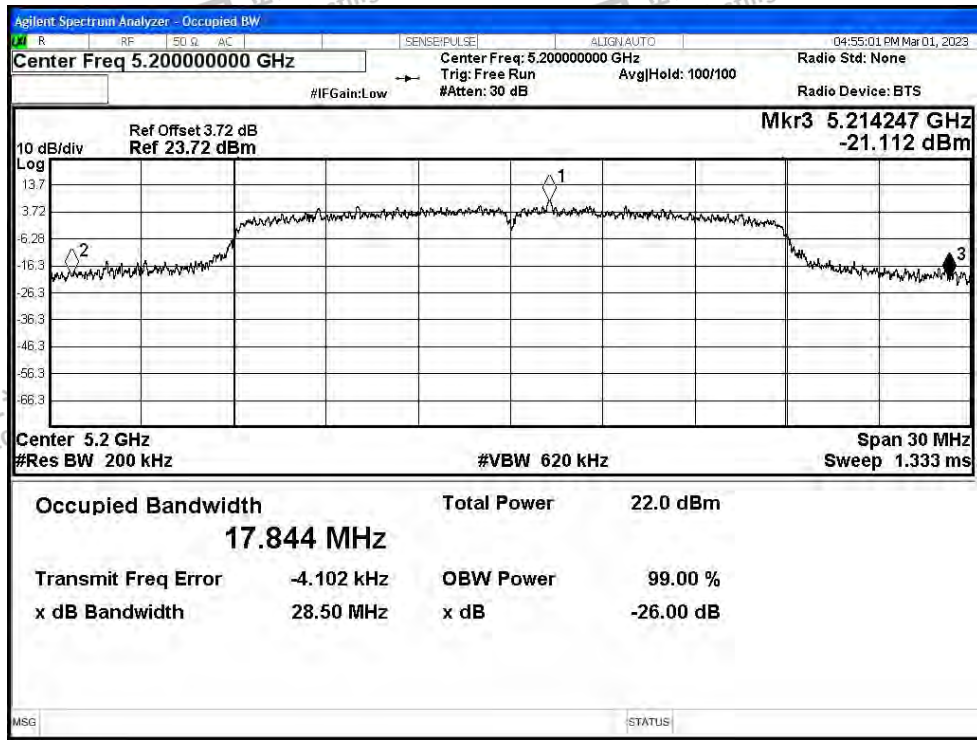


-26dB Bandwidth NVNT n20 5180MHz Ant1

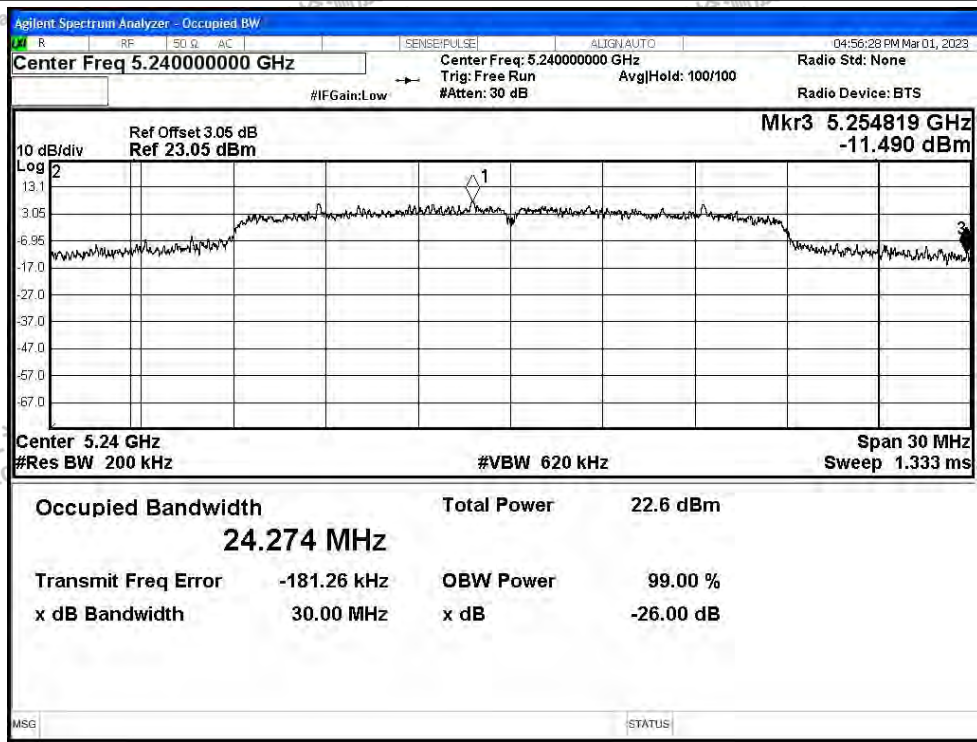




-26dB Bandwidth NVNT n20 5200MHz Ant1

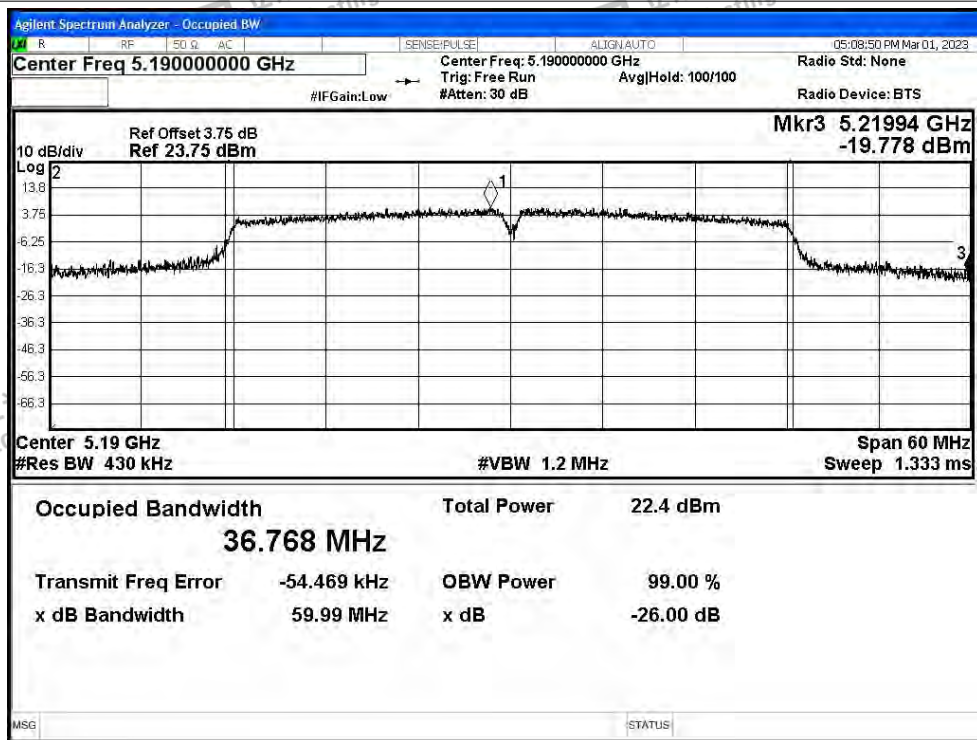


-26dB Bandwidth NVNT n20 5240MHz Ant1

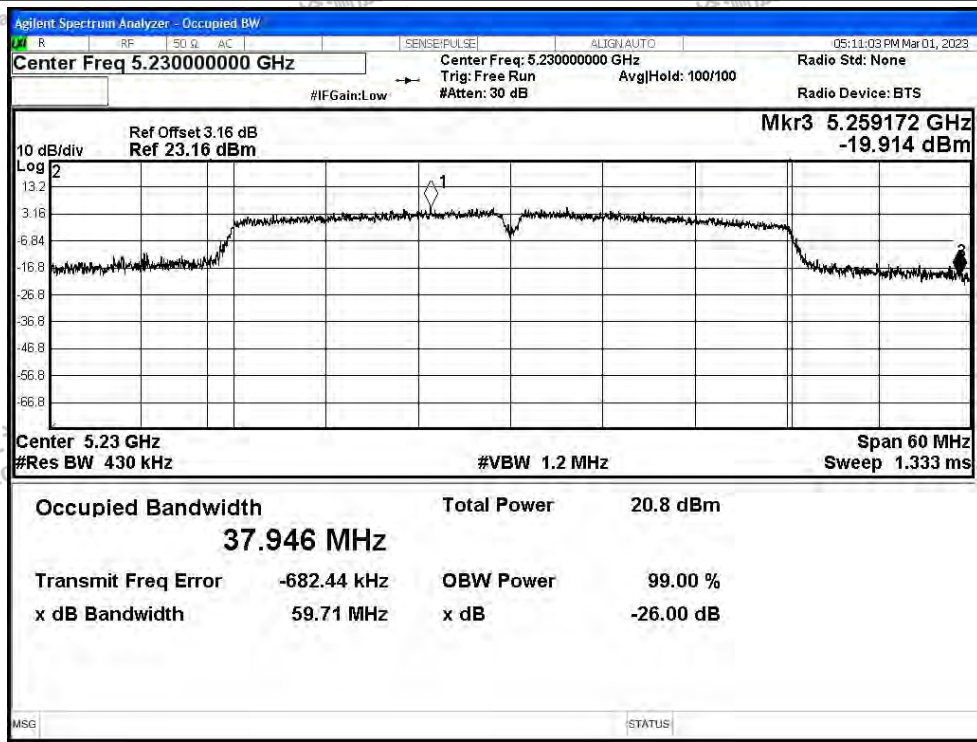




-26dB Bandwidth NVNT n40 5190MHz Ant1

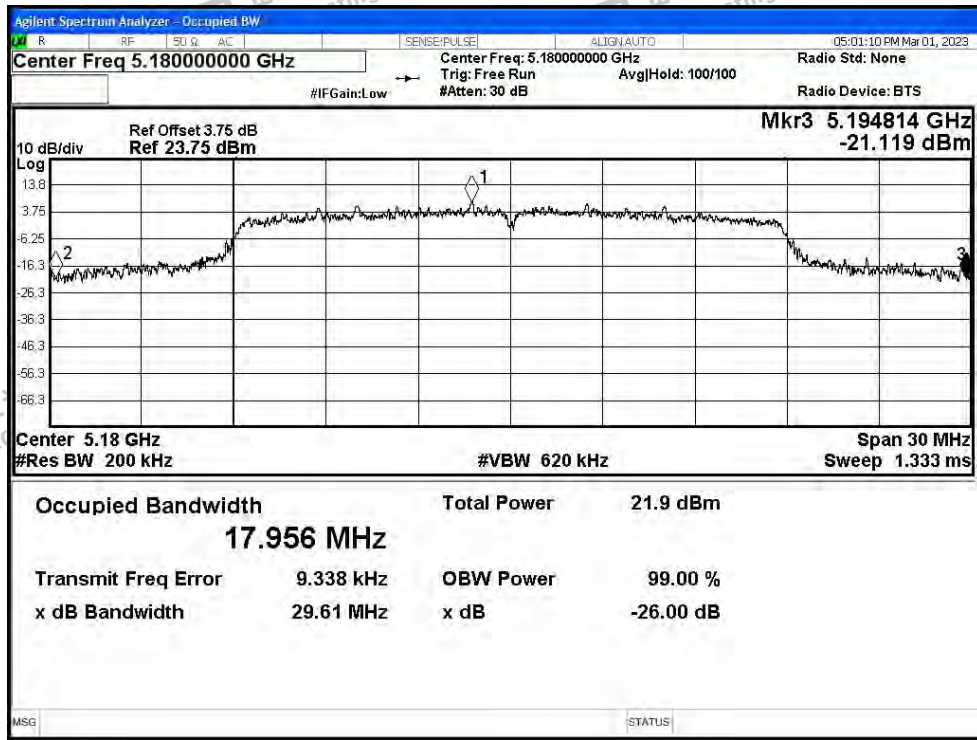


-26dB Bandwidth NVNT n40 5230MHz Ant1

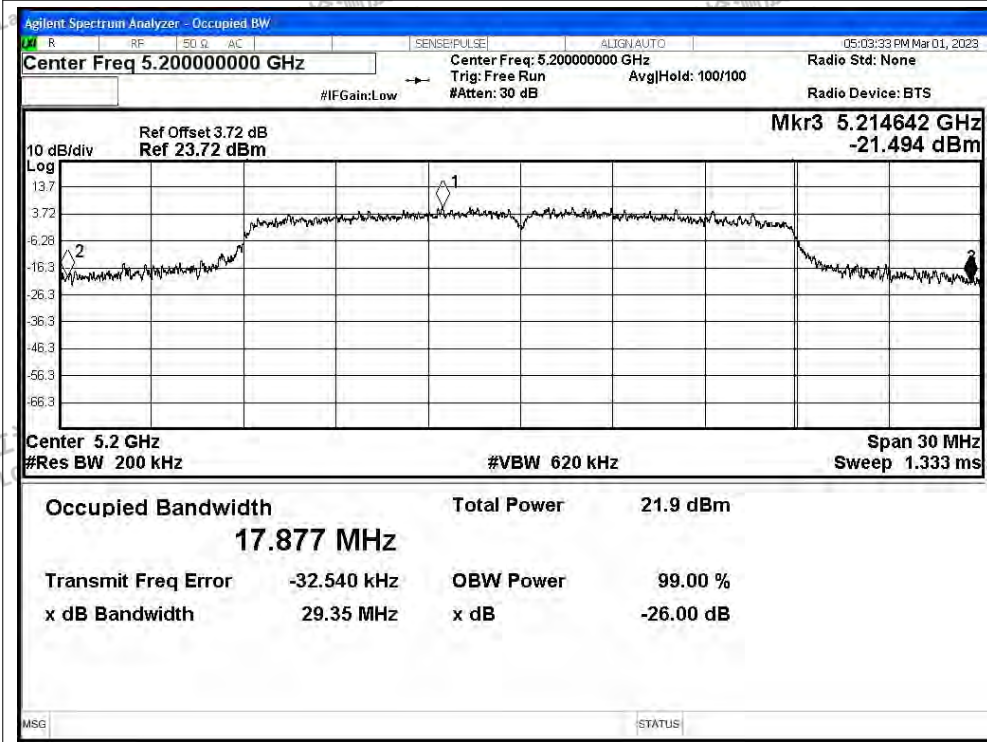




-26dB Bandwidth NVNT ac20 5180MHz Ant1

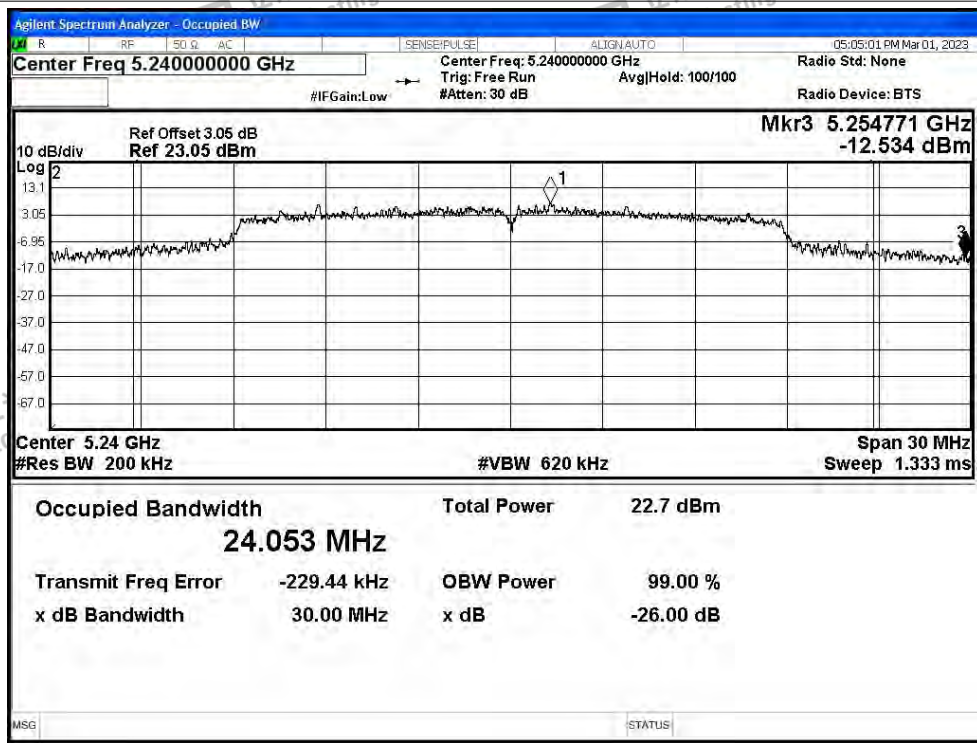


-26dB Bandwidth NVNT ac20 5200MHz Ant1

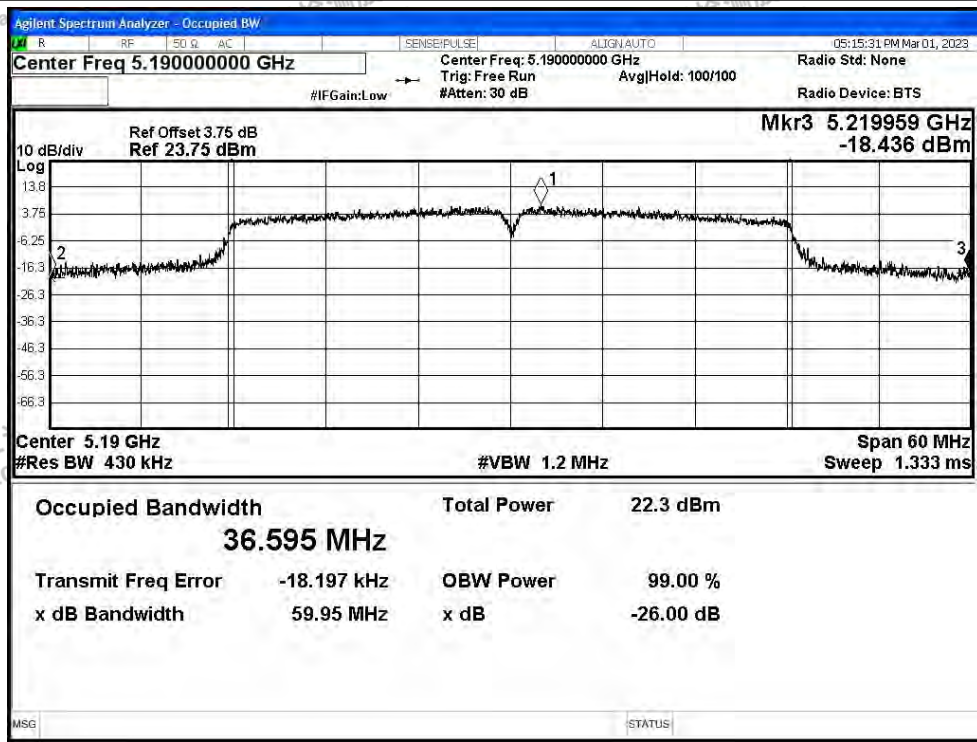




-26dB Bandwidth NVNT ac20 5240MHz Ant1

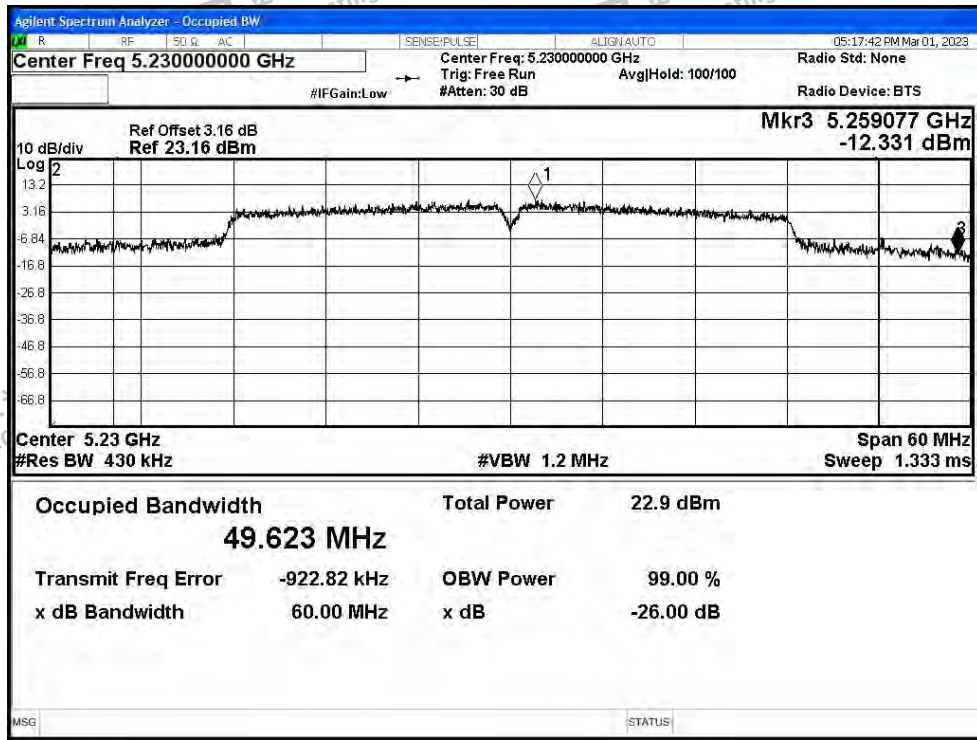


-26dB Bandwidth NVNT ac40 5190MHz Ant1

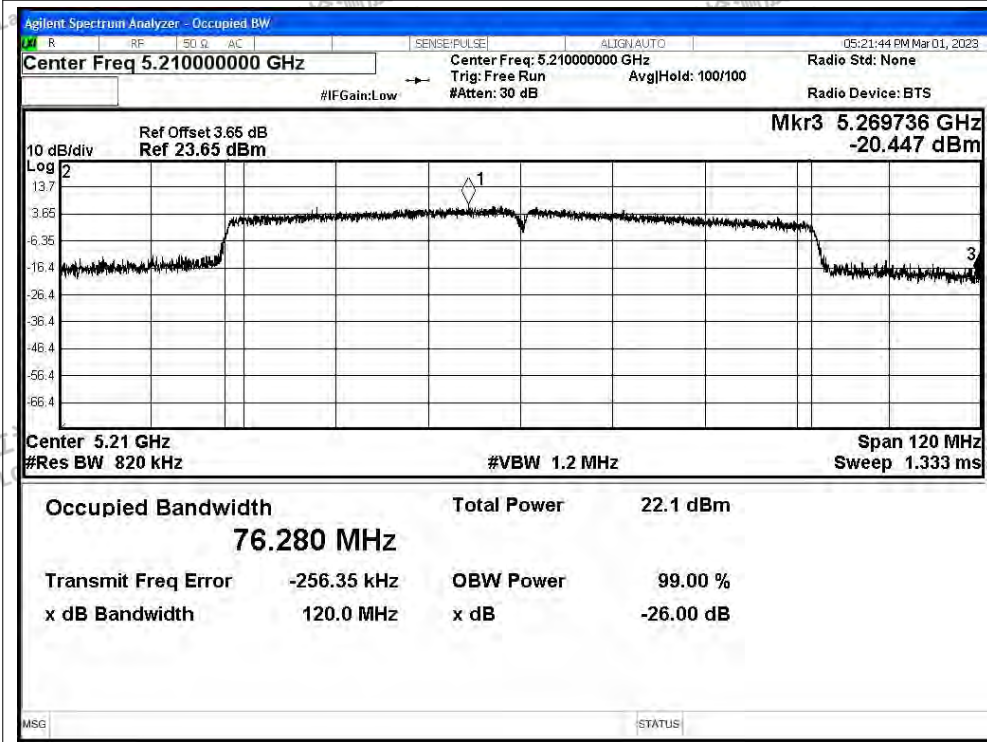




-26dB Bandwidth NVNT ac40 5230MHz Ant1



-26dB Bandwidth NVNT ac80 5210MHz Ant1





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	5180	Ant0	16.05	0.13	16.18	24	Pass
NVNT	a	5200	Ant0	16.19	0.13	16.32	24	Pass
NVNT	a	5240	Ant0	16.61	0.14	16.75	24	Pass
NVNT	n20	5180	Ant0	16.03	0.14	16.17	24	Pass
NVNT	n20	5200	Ant0	16.06	0.14	16.20	24	Pass
NVNT	n20	5240	Ant0	16.48	0.14	16.62	24	Pass
NVNT	n40	5190	Ant0	15.4	0.28	15.68	24	Pass
NVNT	n40	5230	Ant0	13.55	0.28	13.83	24	Pass
NVNT	ac20	5180	Ant0	16.05	0.15	16.20	24	Pass
NVNT	ac20	5200	Ant0	16.16	0.14	16.30	24	Pass
NVNT	ac20	5240	Ant0	16.43	0.14	16.57	24	Pass
NVNT	ac40	5190	Ant0	15.27	0.28	15.55	24	Pass
NVNT	ac40	5230	Ant0	13.65	0.28	13.93	24	Pass
NVNT	ac80	5210	Ant0	15.32	0.55	15.87	24	Pass

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	a	5180	Ant1	16.17	0.13	16.3	24	Pass
NVNT	a	5200	Ant1	16.24	0.13	16.37	24	Pass
NVNT	a	5240	Ant1	16.67	0.13	16.8	24	Pass
NVNT	n20	5180	Ant1	15.99	0.14	16.13	24	Pass
NVNT	n20	5200	Ant1	16.09	0.14	16.23	24	Pass
NVNT	n20	5240	Ant1	16.38	0.14	16.52	24	Pass
NVNT	n40	5190	Ant1	16.26	0.29	16.55	24	Pass
NVNT	n40	5230	Ant1	16.46	0.29	16.75	24	Pass
NVNT	ac20	5180	Ant1	16.01	0.14	16.15	24	Pass
NVNT	ac20	5200	Ant1	16.11	0.14	16.25	24	Pass
NVNT	ac20	5240	Ant1	16.37	0.14	16.51	24	Pass
NVNT	ac40	5190	Ant1	16.27	0.28	16.55	24	Pass
NVNT	ac40	5230	Ant1	16.44	0.28	16.72	24	Pass
NVNT	ac80	5210	Ant1	15.12	0.55	15.67	24	Pass



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MIMO

Condition	Mode	Frequency (MHz)	Total Power (dBm)			Limit (dBm)	Verdict
			Ant0	Ant1	Ant0+Ant1		
NVNT	n20	5180	16.17	16.13	19.16	24	Pass
NVNT	n20	5200	16.20	16.23	19.23	24	Pass
NVNT	n20	5240	16.62	16.52	19.58	24	Pass
NVNT	n40	5190	15.68	16.55	19.15	24	Pass
NVNT	n40	5230	13.83	16.75	18.54	24	Pass
NVNT	ac20	5180	16.20	16.15	19.19	24	Pass
NVNT	ac20	5200	16.30	16.25	19.29	24	Pass
NVNT	ac20	5240	16.57	16.51	19.55	24	Pass
NVNT	ac40	5190	15.55	16.55	19.09	24	Pass
NVNT	ac40	5230	13.93	16.72	18.56	24	Pass
NVNT	ac80	5210	15.87	15.67	18.78	24	Pass



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D.3 Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/MHz)	Duty Factor (dB)	Total PSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
NVNT	a	5180	Ant0	4.34	0.13	4.47	11	Pass
NVNT	a	5200	Ant0	4.06	0.13	4.19	11	Pass
NVNT	a	5240	Ant0	2.22	0.14	2.36	11	Pass
NVNT	n20	5180	Ant0	3.94	0.14	4.08	11	Pass
NVNT	n20	5200	Ant0	4.06	0.14	4.2	11	Pass
NVNT	n20	5240	Ant0	2	0.14	2.14	11	Pass
NVNT	n40	5190	Ant0	-2.49	0.28	-2.21	11	Pass
NVNT	n40	5230	Ant0	-2.04	0.28	-1.76	11	Pass
NVNT	ac20	5180	Ant0	3.17	0.15	3.32	11	Pass
NVNT	ac20	5200	Ant0	4.58	0.14	4.72	11	Pass
NVNT	ac20	5240	Ant0	4.21	0.14	4.35	11	Pass
NVNT	ac40	5190	Ant0	-1.76	0.28	-1.48	11	Pass
NVNT	ac40	5230	Ant0	-2.67	0.28	-2.39	11	Pass
NVNT	ac80	5210	Ant0	-6.34	0.55	-5.79	11	Pass

Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/MHz)	Duty Factor (dB)	Total PSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
NVNT	a	5180	Ant1	4.22	0.13	4.35	11	Pass
NVNT	a	5200	Ant1	4.04	0.13	4.17	11	Pass
NVNT	a	5240	Ant1	4.78	0.13	4.91	11	Pass
NVNT	n20	5180	Ant1	3.58	0.14	3.72	11	Pass
NVNT	n20	5200	Ant1	4.53	0.14	4.67	11	Pass
NVNT	n20	5240	Ant1	4.25	0.14	4.39	11	Pass
NVNT	n40	5190	Ant1	-0.58	0.29	-0.29	11	Pass
NVNT	n40	5230	Ant1	-0.95	0.29	-0.66	11	Pass
NVNT	ac20	5180	Ant1	4.1	0.14	4.24	11	Pass
NVNT	ac20	5200	Ant1	3.46	0.14	3.6	11	Pass
NVNT	ac20	5240	Ant1	4.41	0.14	4.55	11	Pass
NVNT	ac40	5190	Ant1	-0.53	0.28	-0.25	11	Pass
NVNT	ac40	5230	Ant1	0.3	0.28	0.58	11	Pass
NVNT	ac80	5210	Ant1	-6.44	0.55	-5.89	11	Pass



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MIMO

Condition	Mode	Frequency (MHz)	Total PSD (dBm/MHz)			Limit (dBm/MHz)	Verdict
			Ant0	Ant1	Ant0+Ant1		
NVNT	n20	5180	4.08	3.72	6.91	11	Pass
NVNT	n20	5200	4.2	4.67	7.45	11	Pass
NVNT	n20	5240	2.14	4.39	6.42	11	Pass
NVNT	n40	5190	-2.21	-0.29	1.87	11	Pass
NVNT	n40	5230	-1.76	-0.66	1.84	11	Pass
NVNT	ac20	5180	3.32	4.24	6.81	11	Pass
NVNT	ac20	5200	4.72	3.6	7.21	11	Pass
NVNT	ac20	5240	4.35	4.55	7.46	11	Pass
NVNT	ac40	5190	-1.48	-0.25	2.19	11	Pass
NVNT	ac40	5230	-2.39	0.58	2.35	11	Pass
NVNT	ac80	5210	-5.79	-5.89	-2.83	11	Pass

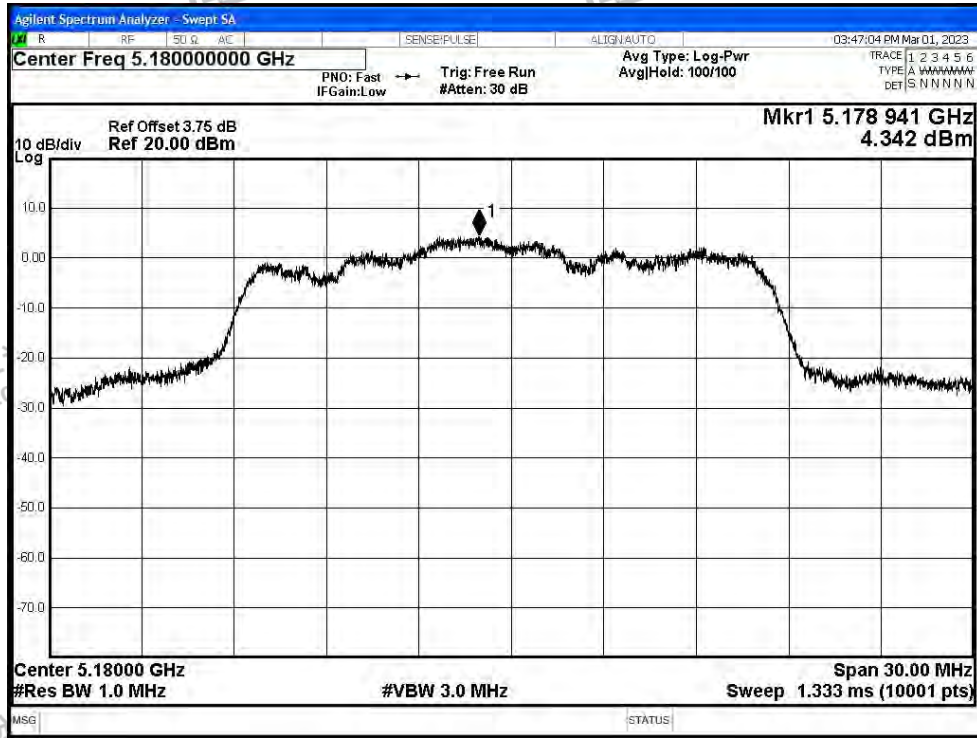


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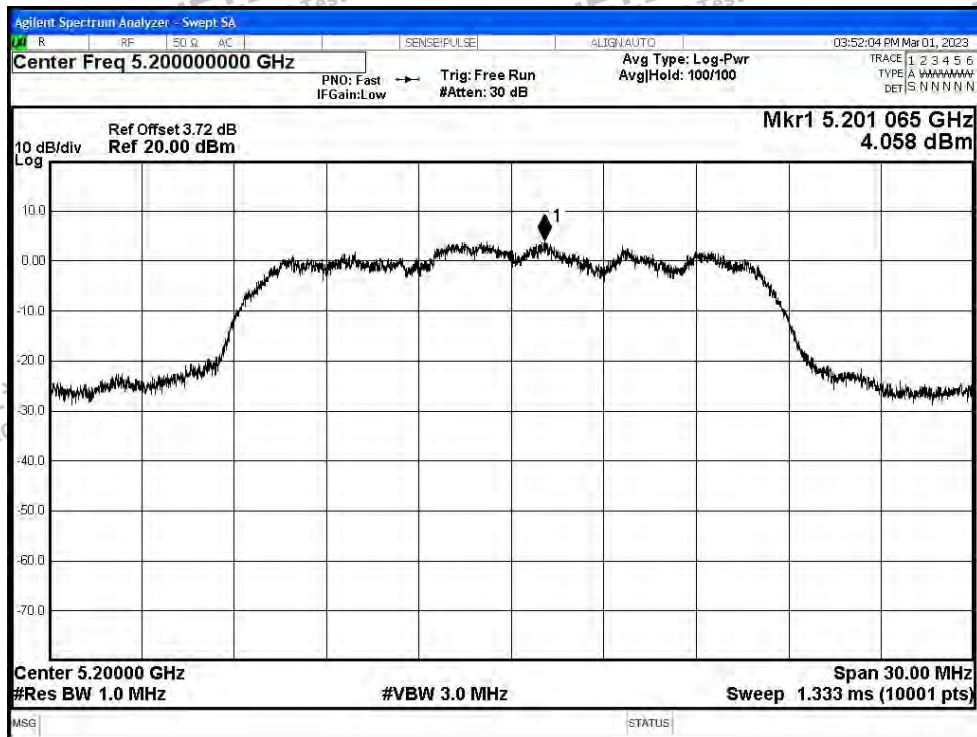


Test Graphs

PSD NVNT a 5180MHz Ant0

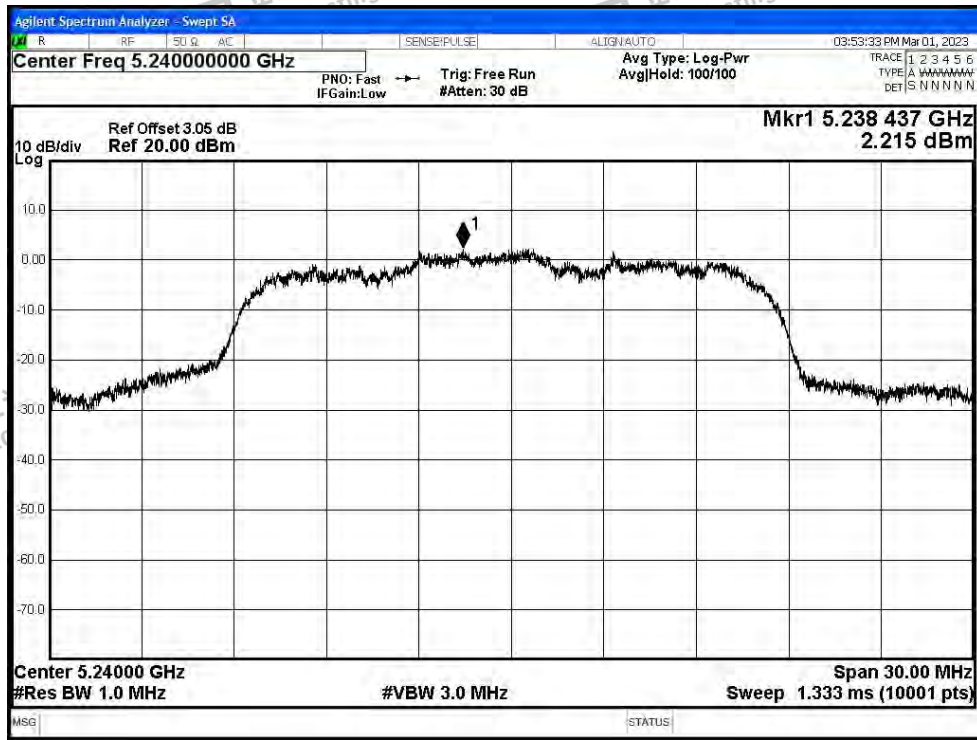


PSD NVNT a 5200MHz Ant0

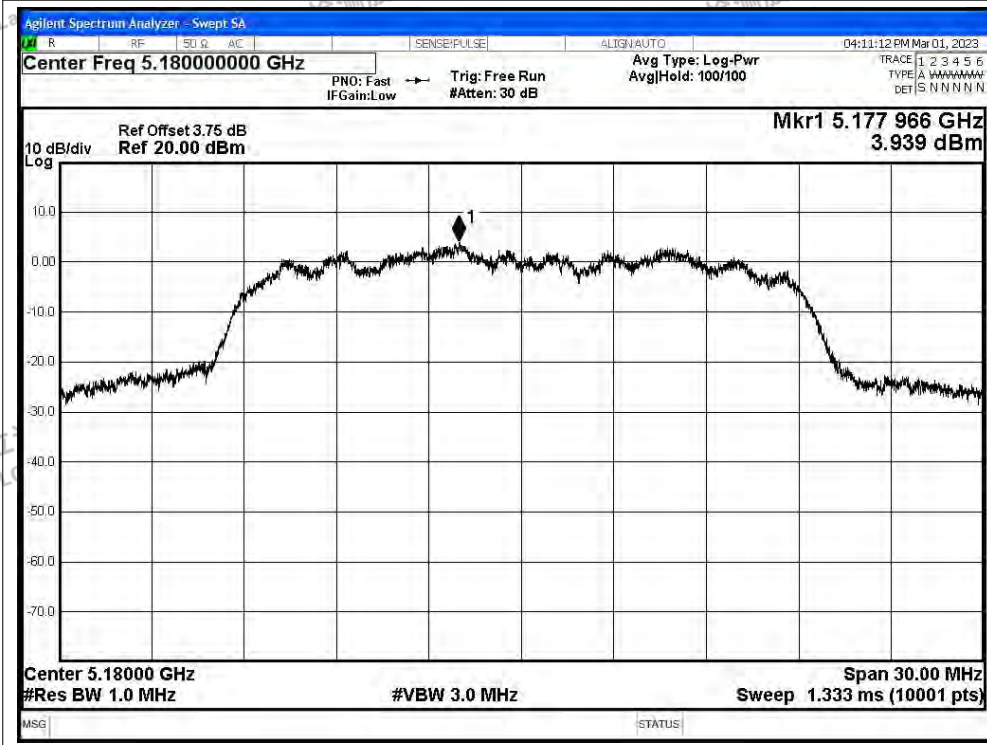




PSD NVNT a 5240MHz Ant0

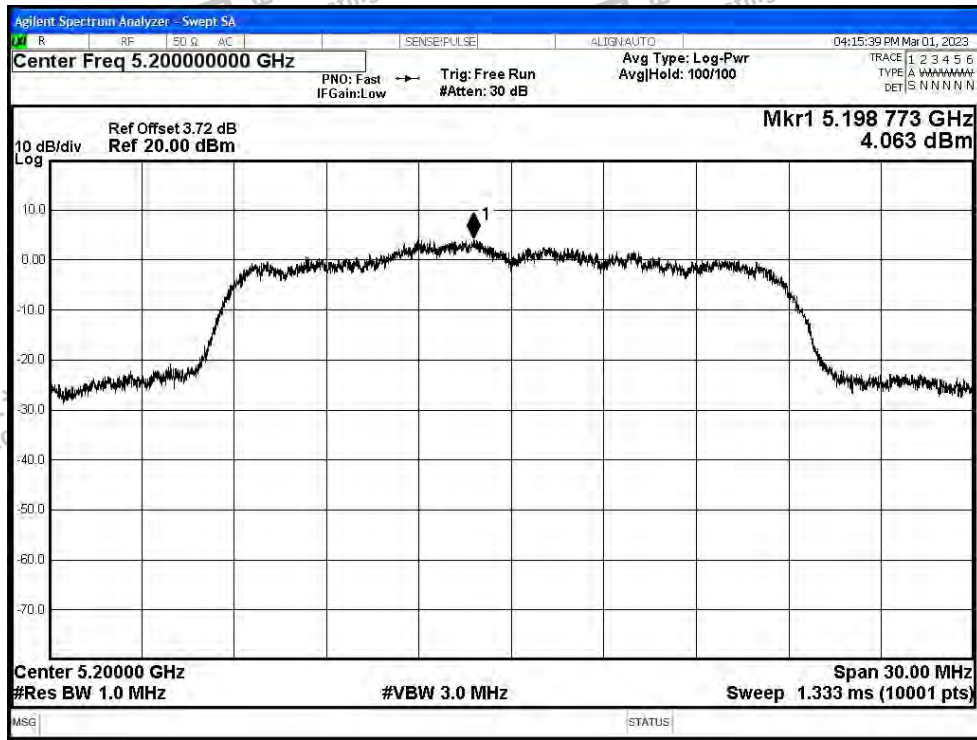


PSD NVNT n20 5180MHz Ant0

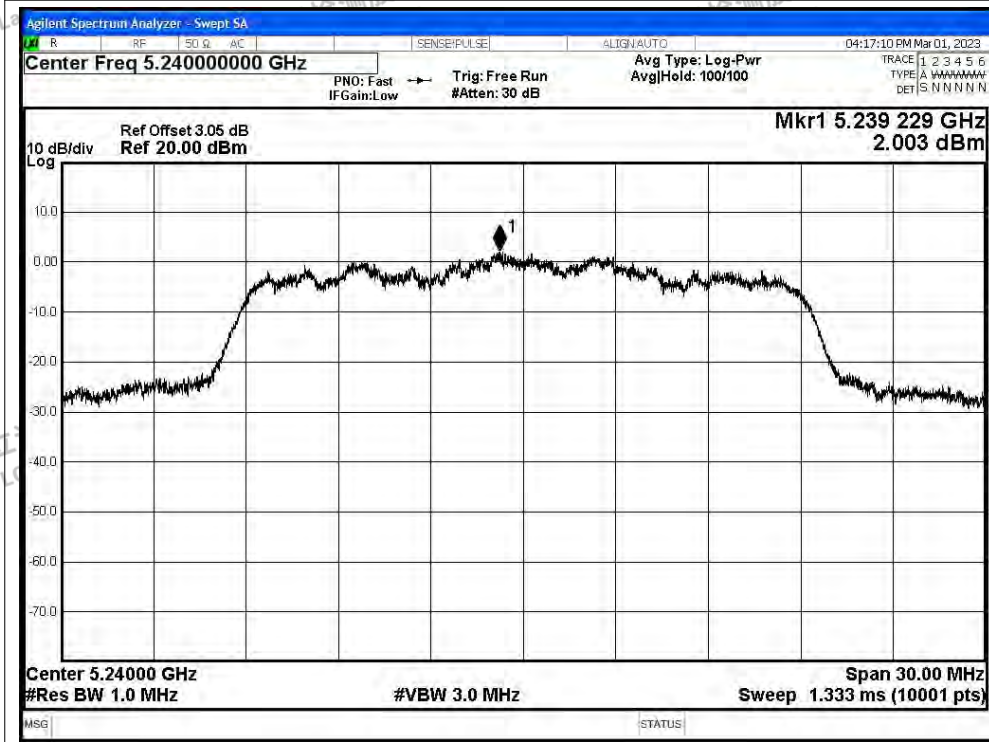




PSD NVNT n20 5200MHz Ant0

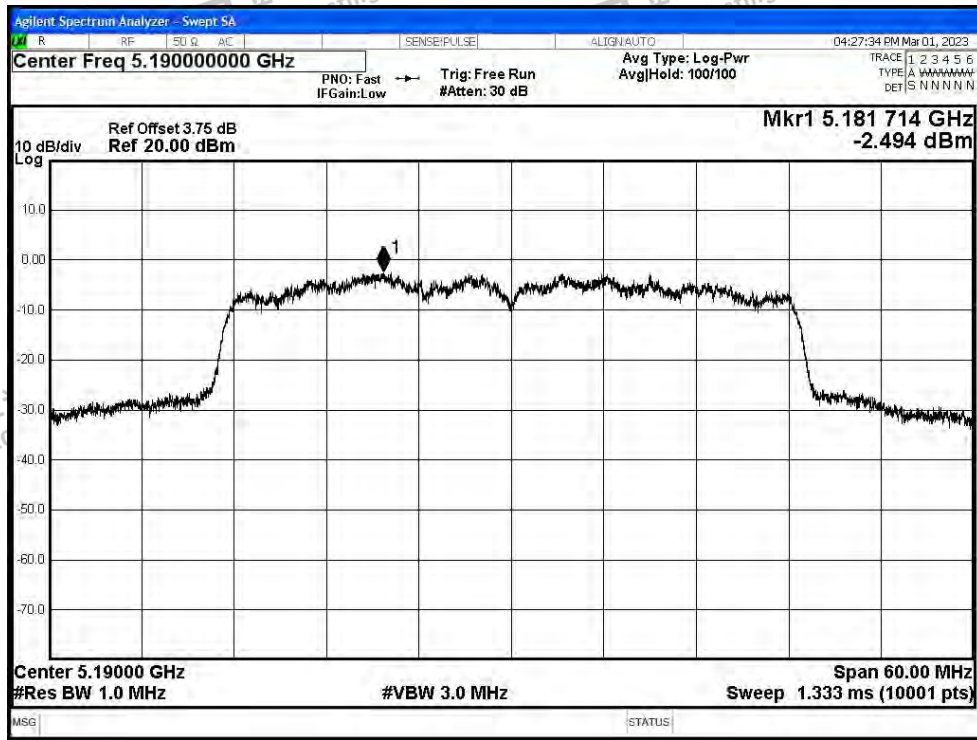


PSD NVNT n20 5240MHz Ant0

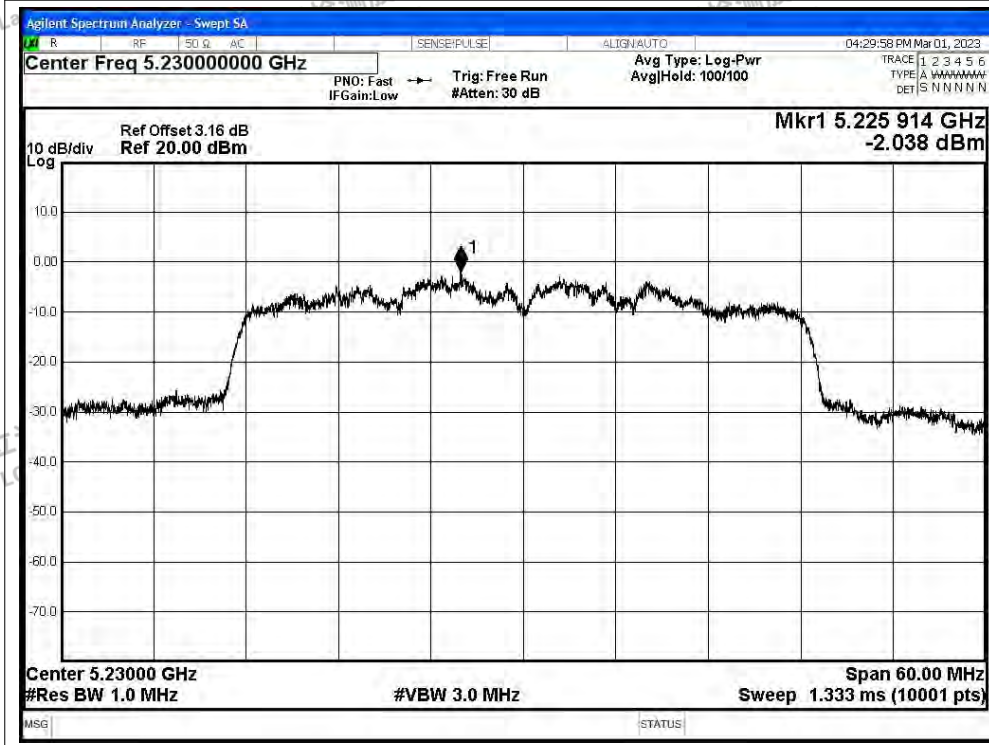




PSD NVNT n40 5190MHz Ant0

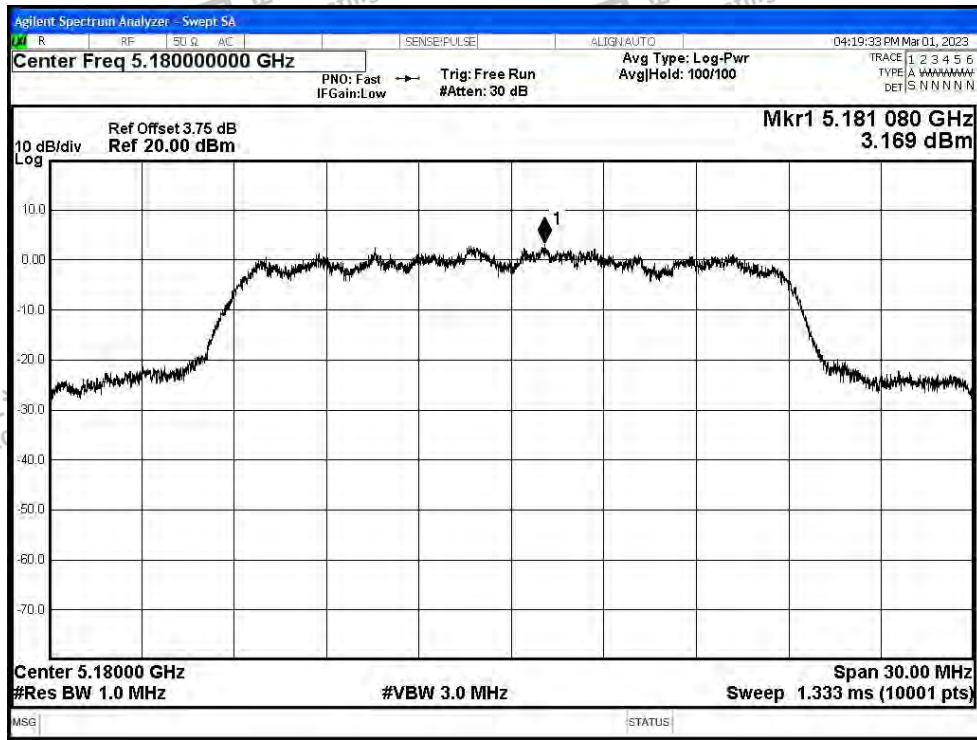


PSD NVNT n40 5230MHz Ant0

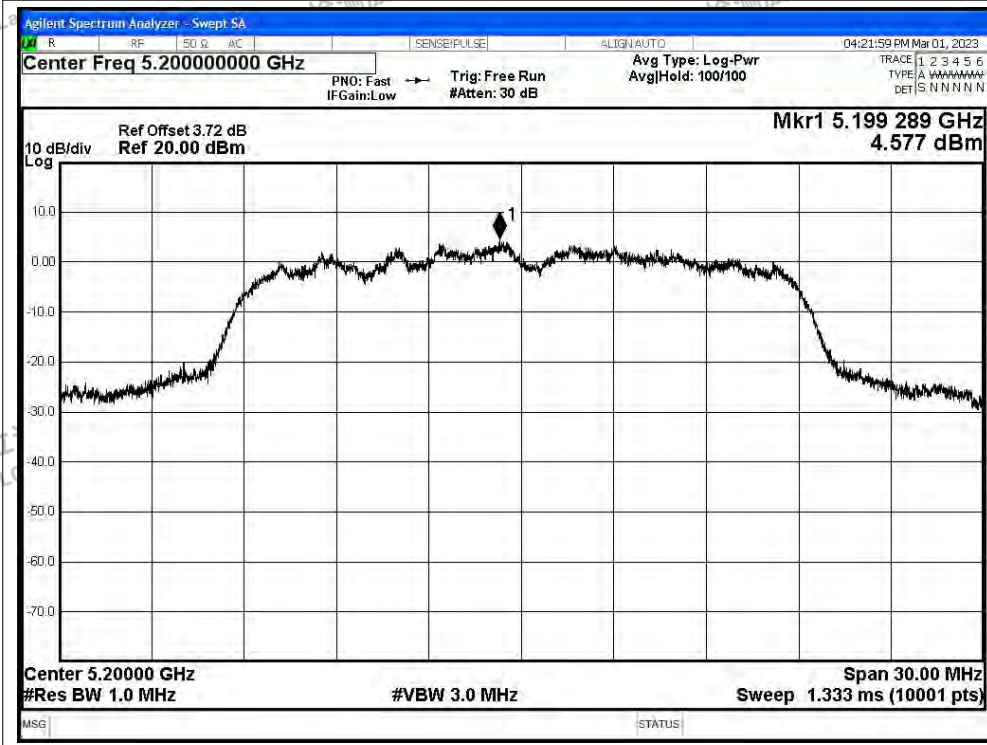




PSD NVNT ac20 5180MHz Ant0

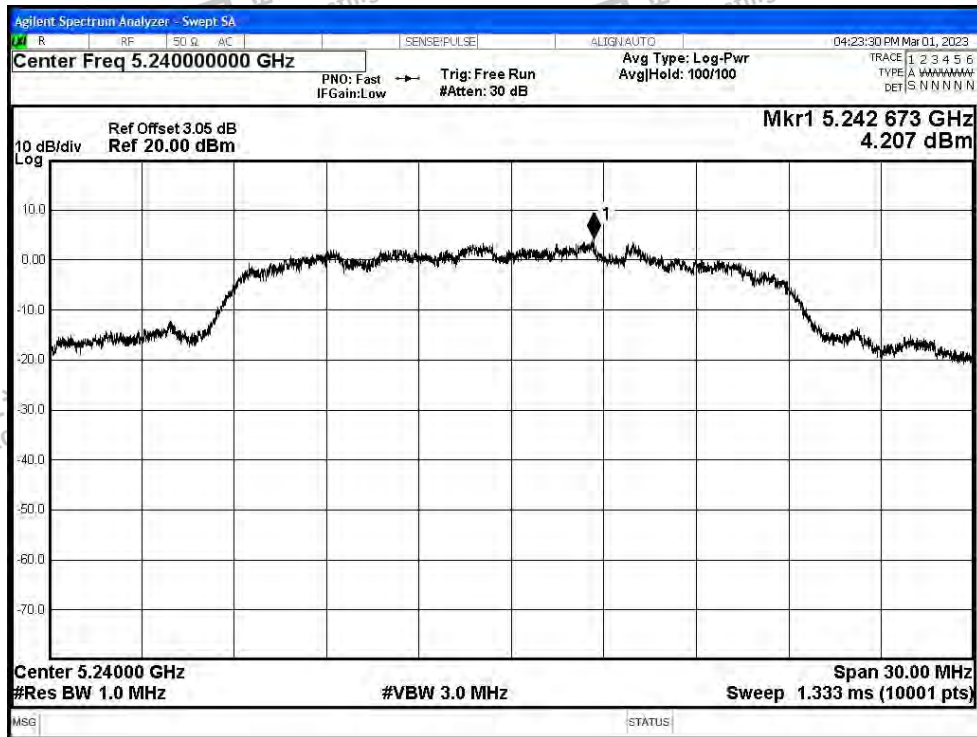


PSD NVNT ac20 5200MHz Ant0

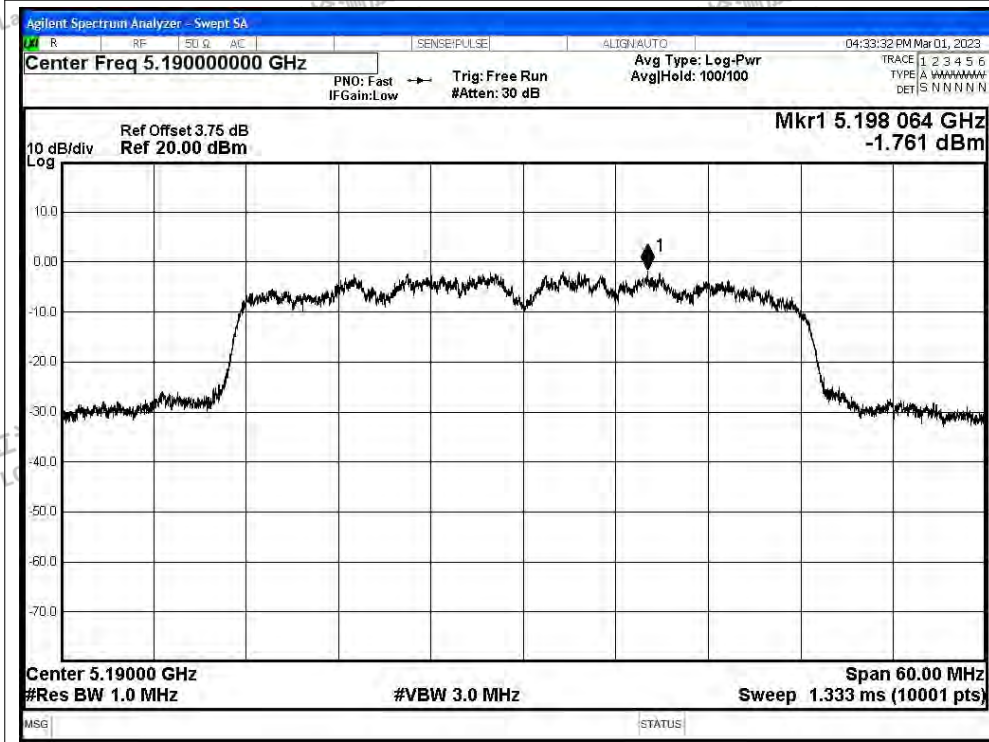




PSD NVNT ac20 5240MHz Ant0

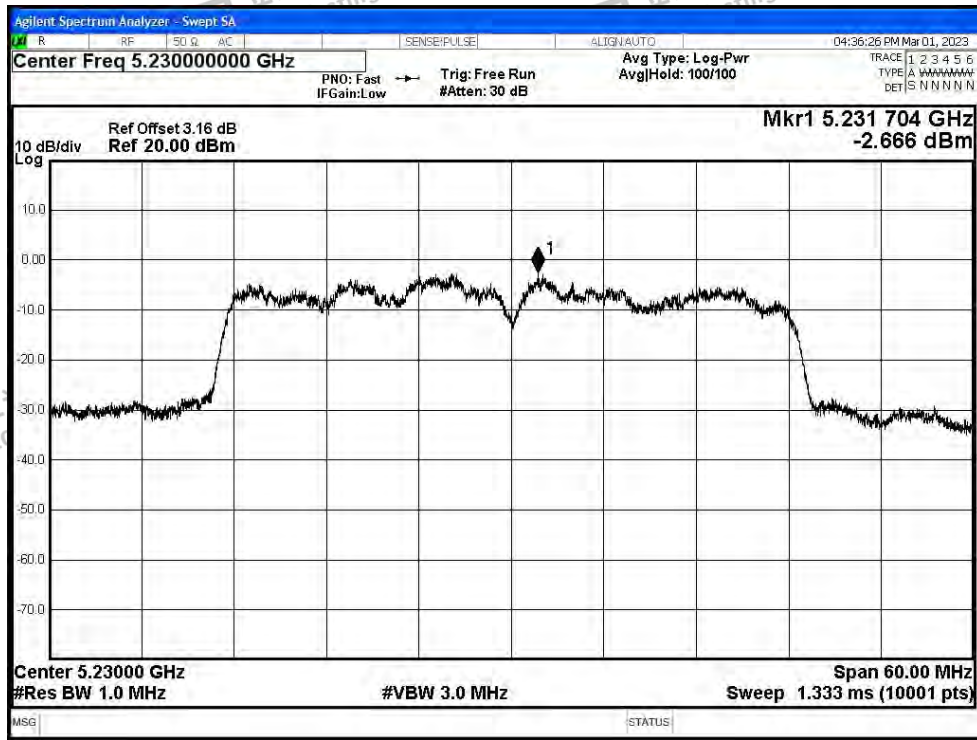


PSD NVNT ac40 5190MHz Ant0





PSD NVNT ac40 5230MHz Ant0



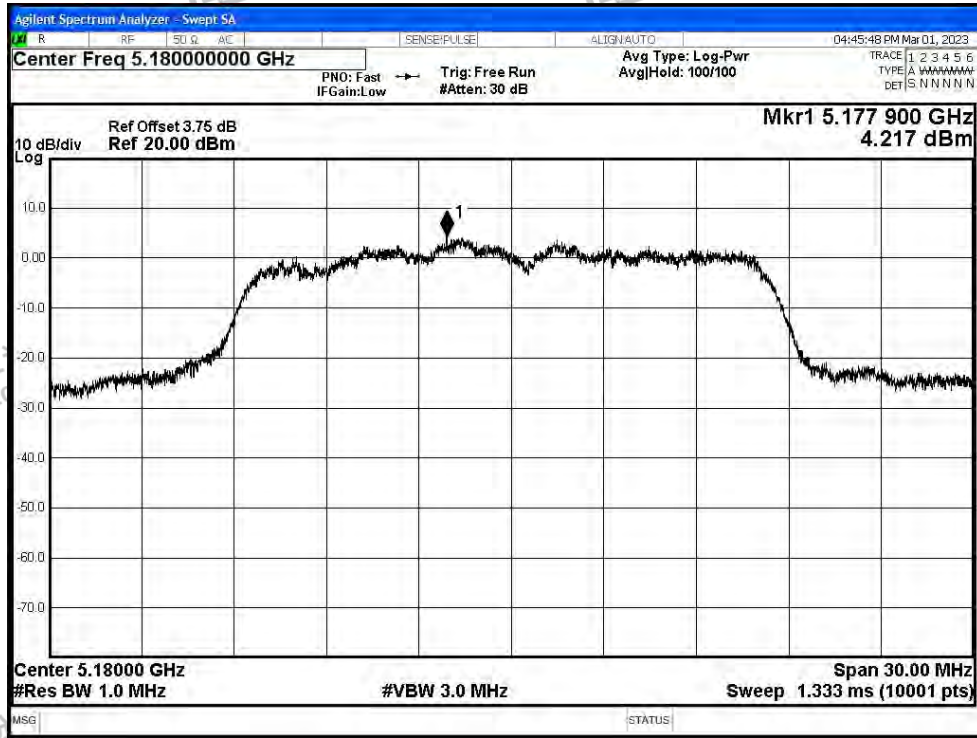
PSD NVNT ac80 5210MHz Ant0



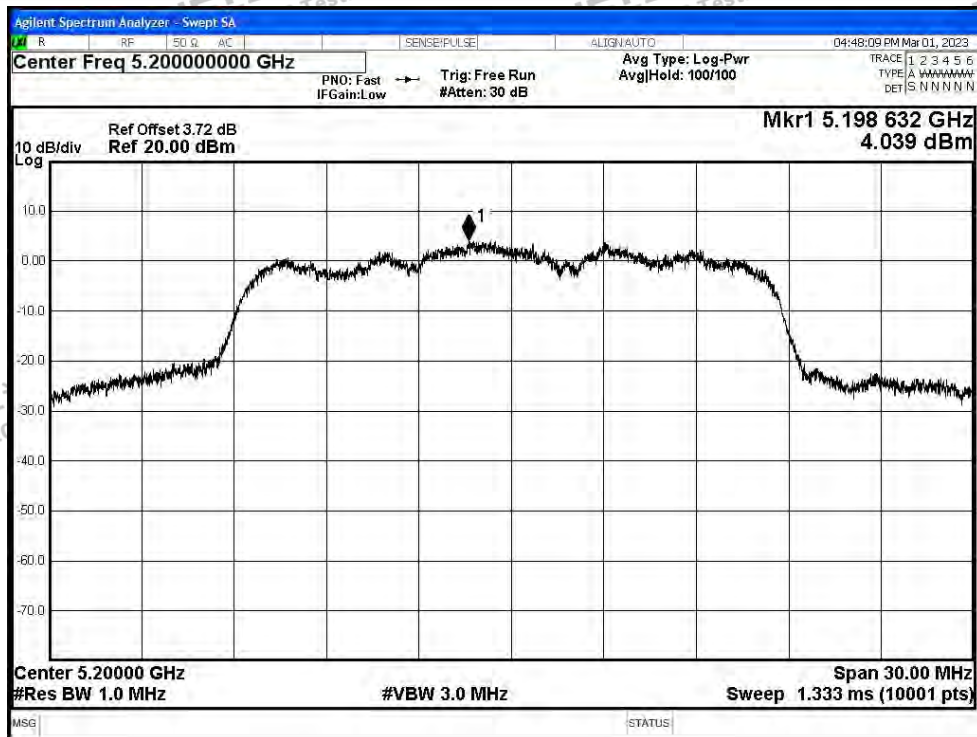


Test Graphs

PSD NVNT a 5180MHz Ant1

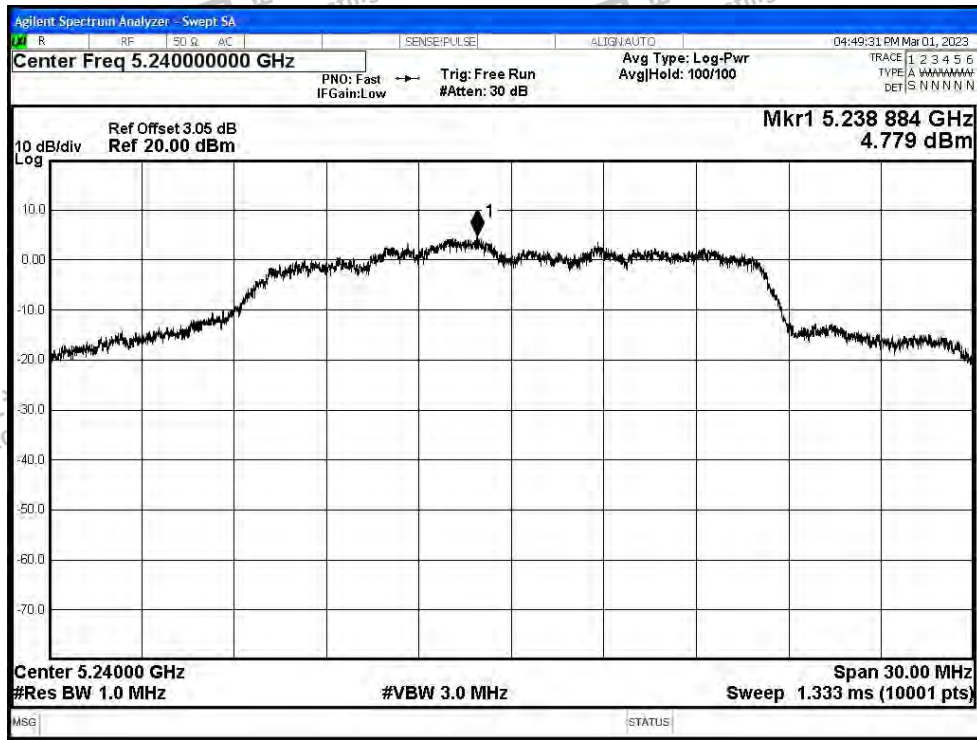


PSD NVNT a 5200MHz Ant1

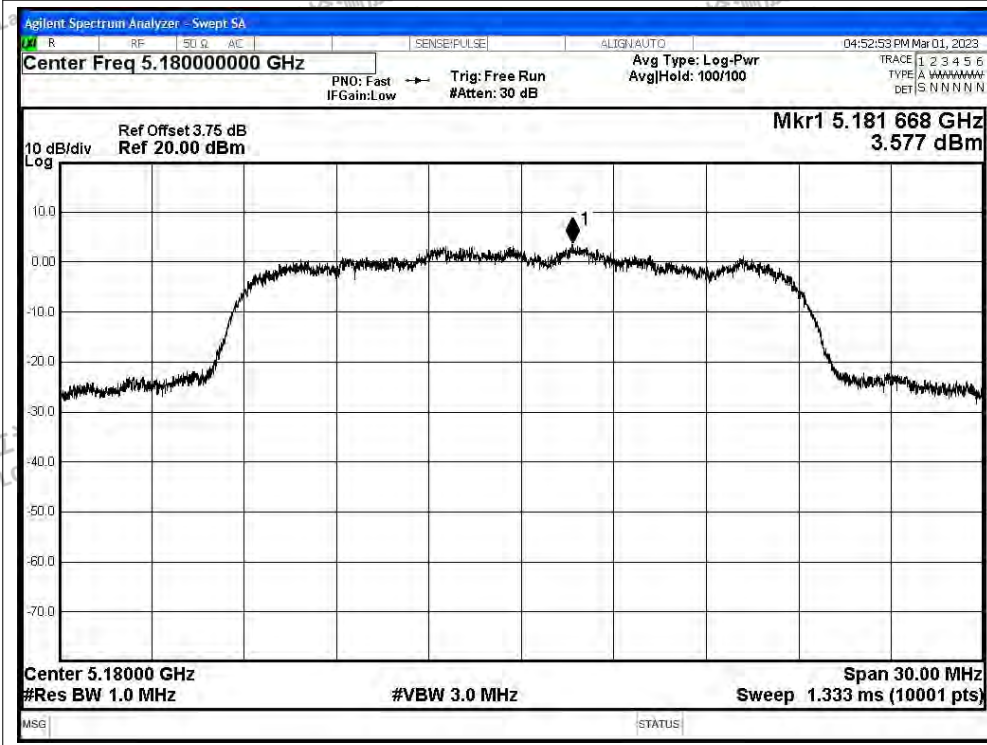




PSD NVNT a 5240MHz Ant1

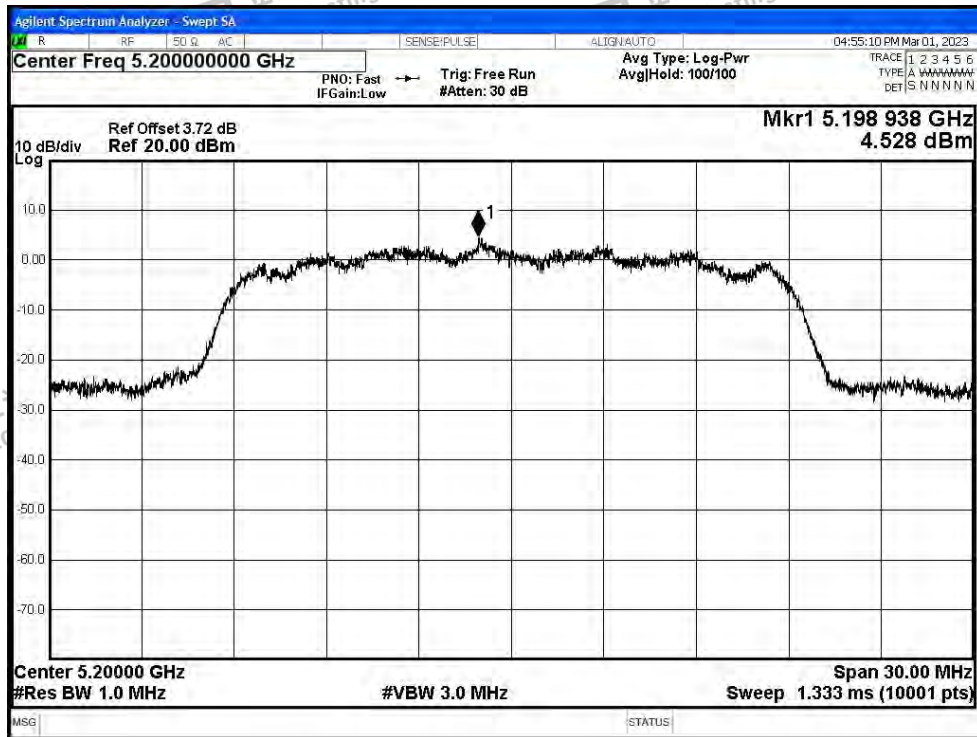


PSD NVNT n20 5180MHz Ant1

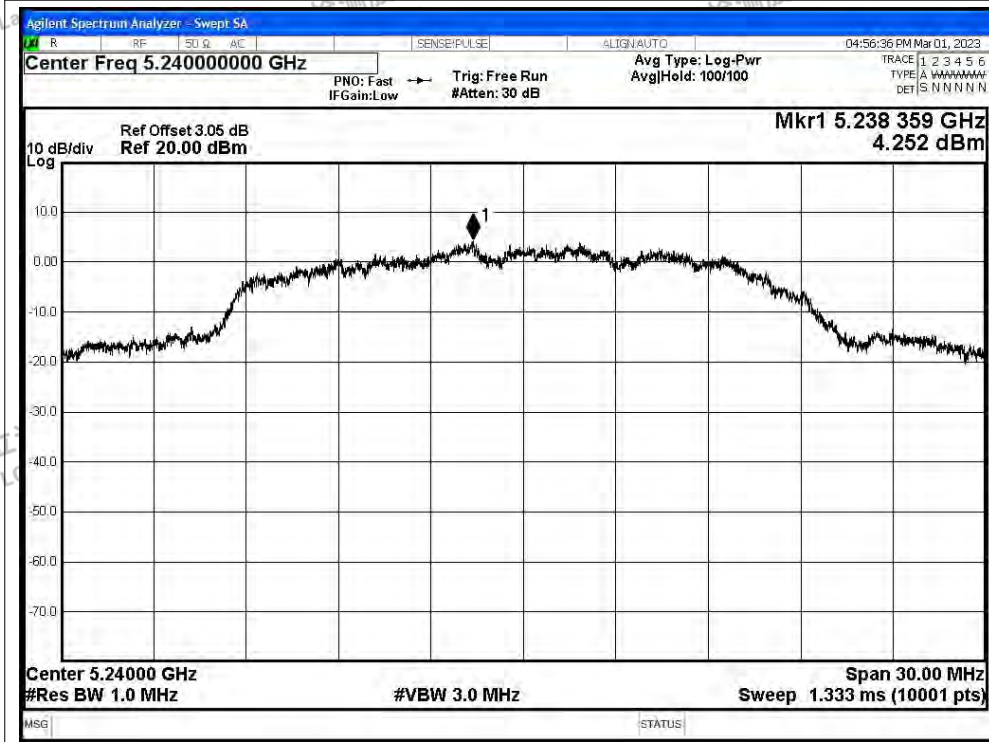




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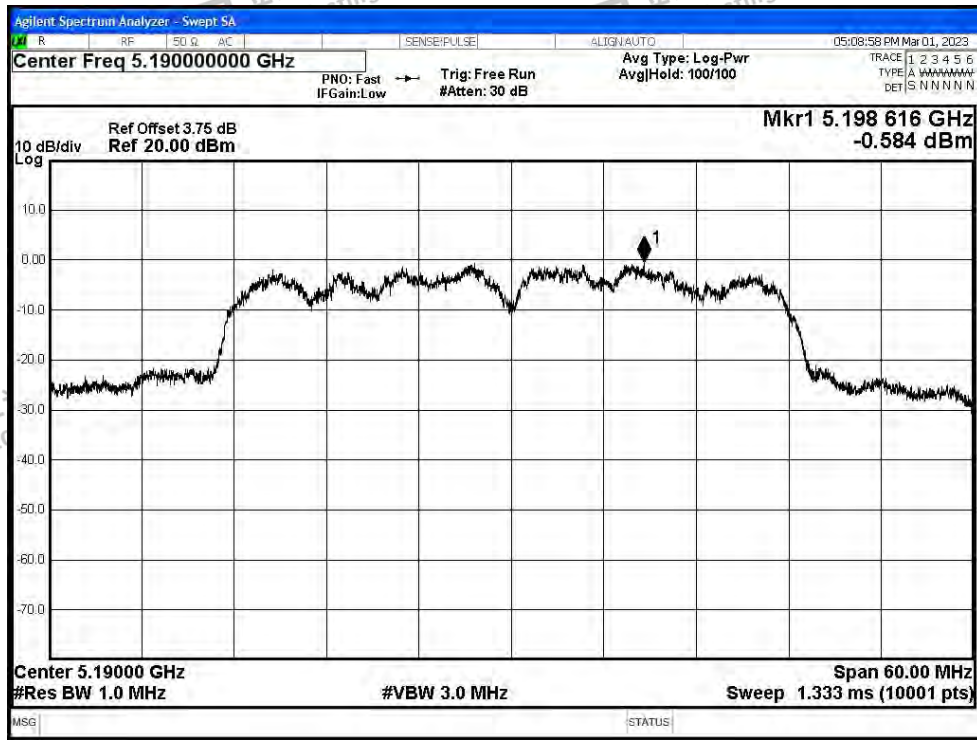


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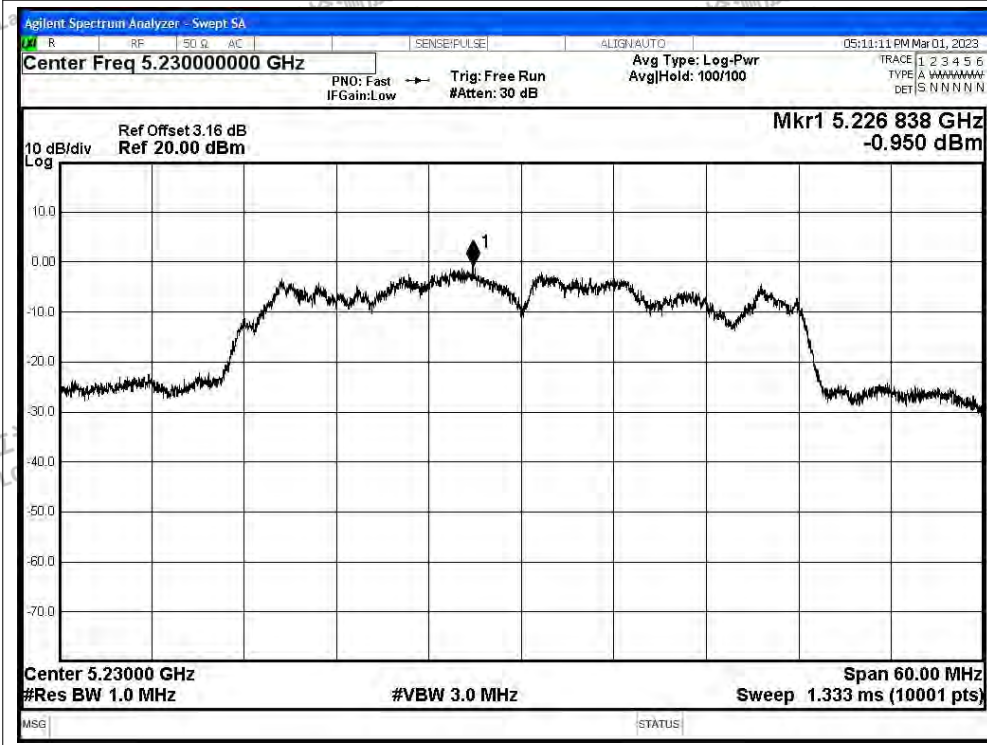




PSD NVNT n40 5190MHz Ant1

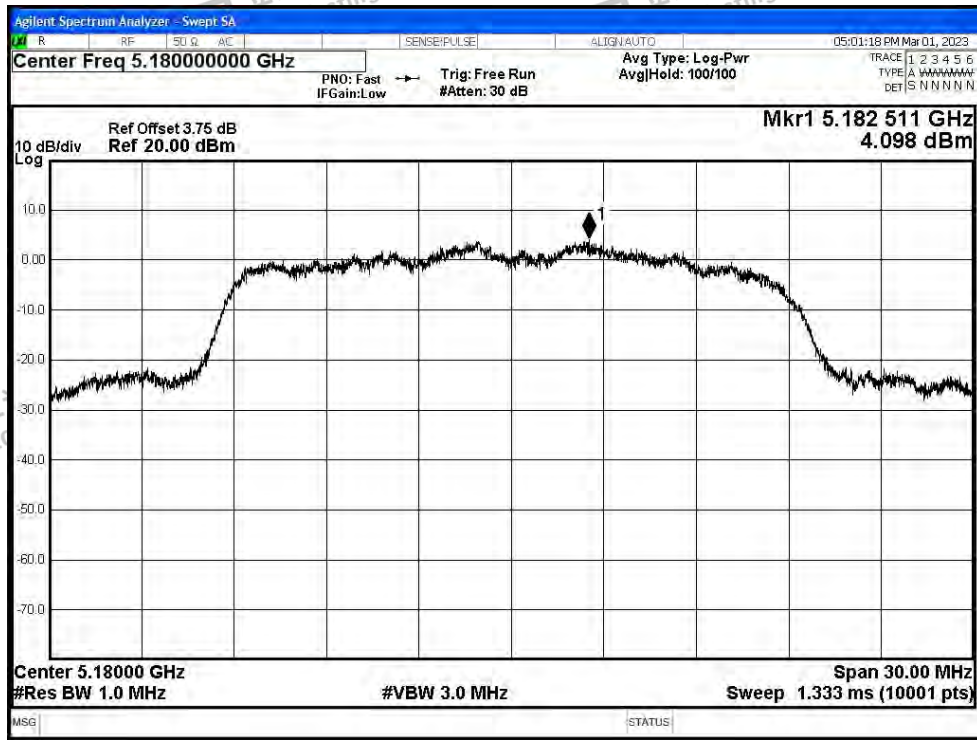


PSD NVNT n40 5230MHz Ant1

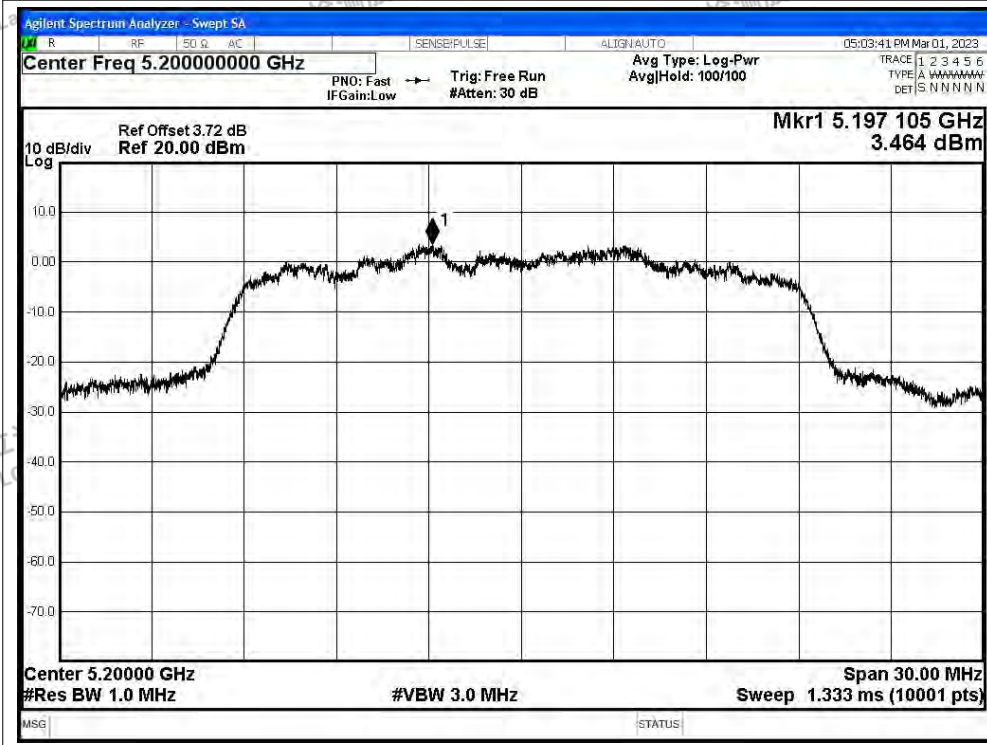




PSD NVNT ac20 5180MHz Ant1

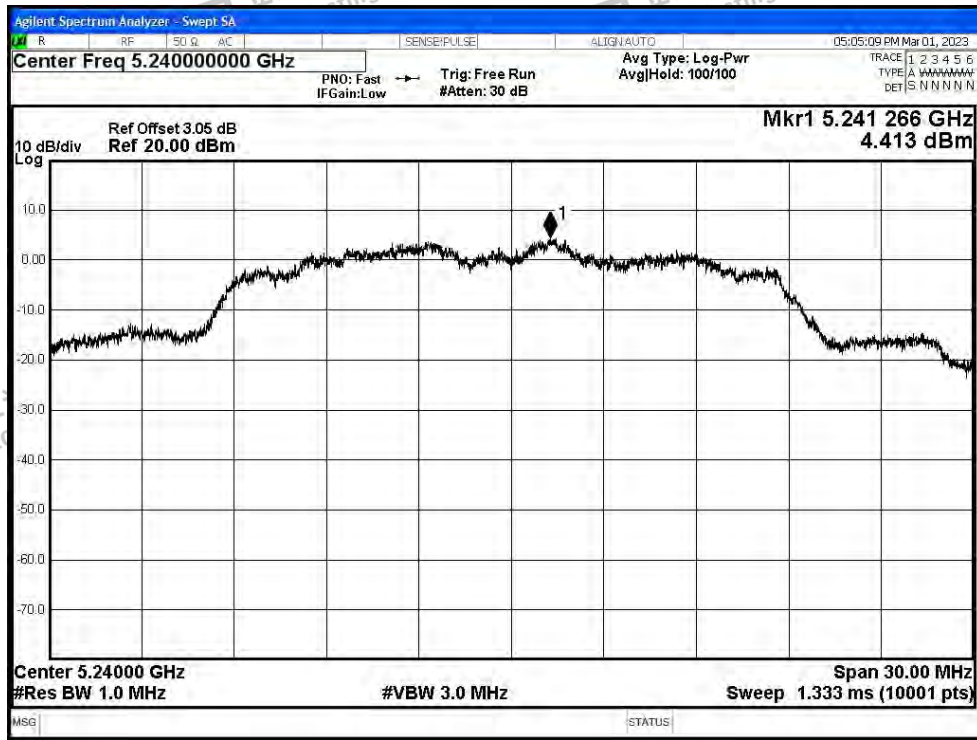


PSD NVNT ac20 5200MHz Ant1





PSD NVNT ac20 5240MHz Ant1

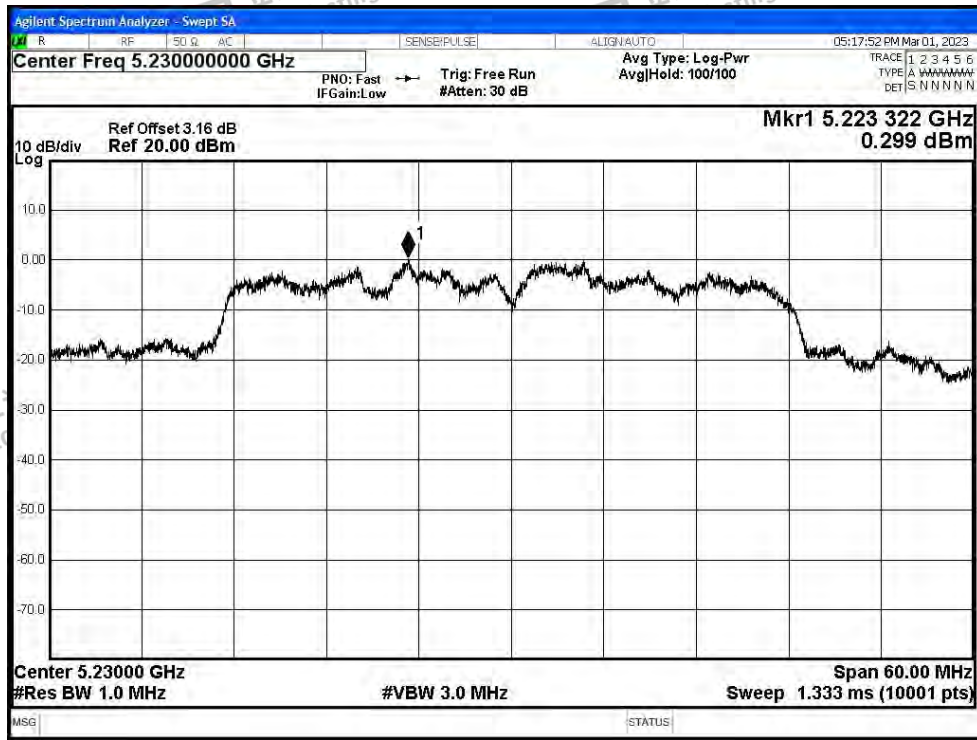


PSD NVNT ac40 5190MHz Ant1





PSD NVNT ac40 5230MHz Ant1



PSD NVNT ac80 5210MHz Ant1

