Appendix E

RF Test Data for 5.3G WIFI (Conducted Measurement)

Product Name: LAVA Guitar

Test Model: LAVA ME PLAY

Environmental Conditions

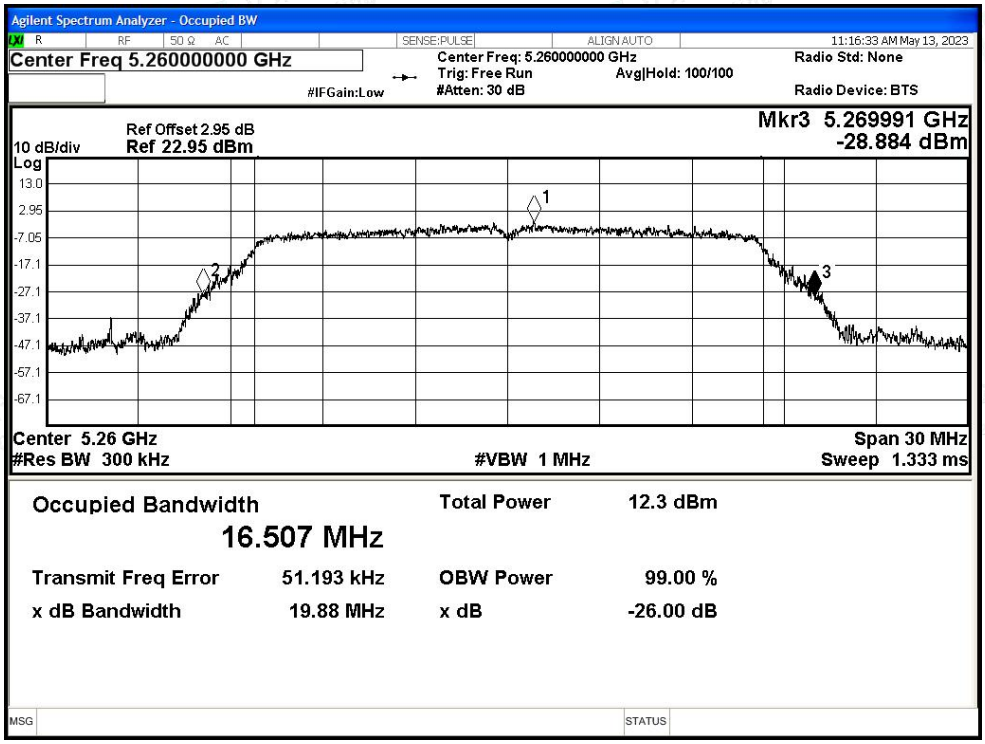
Temperature:	23.8 ° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Nick Peng
Supervised by:	Li Huan

E.1 -26dB Bandwidth

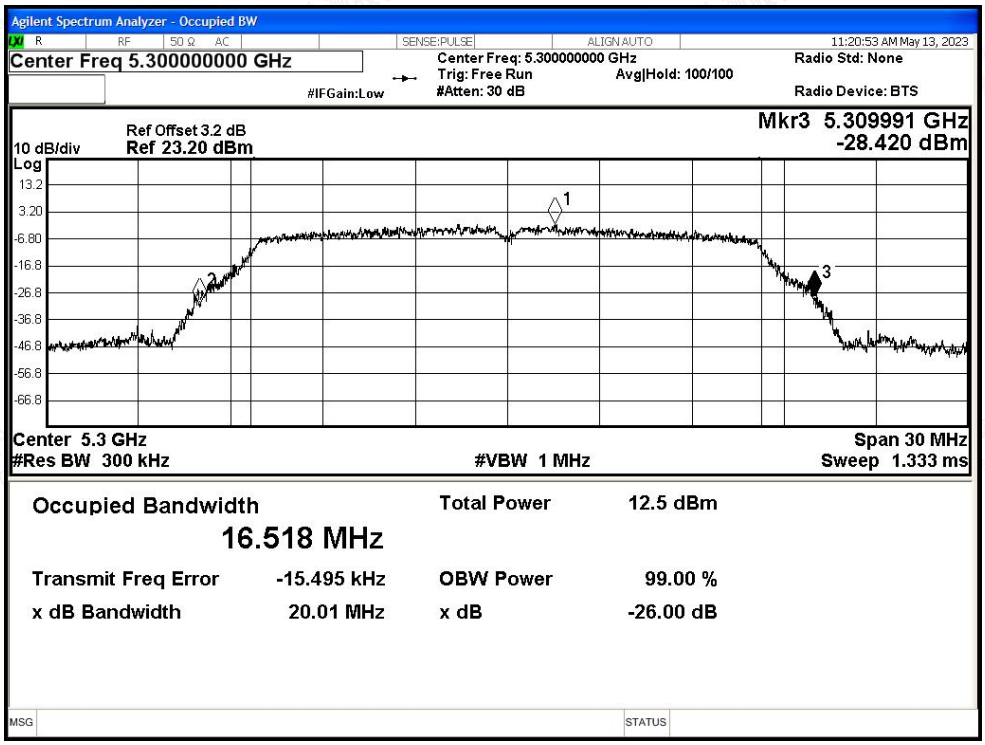
Condition	Mode	Frequency (MHz)	Antenna	-26 dB Bandwidth (MHz)	Limit -26 dB Bandwidth (MHz)	Verdict
NVNT	a	5260	Ant0	19.879	>=0.5	Pass
NVNT	a	5300	Ant0	20.012	>=0.5	Pass
NVNT	a	5320	Ant0	20.008	>=0.5	Pass
NVNT	n20	5260	Ant0	20.351	>=0.5	Pass
NVNT	n20	5300	Ant0	20.305	>=0.5	Pass
NVNT	n20	5320	Ant0	20.306	>=0.5	Pass
NVNT	n40	5270	Ant0	39.578	>=0.5	Pass
NVNT	n40	5310	Ant0	40.132	>=0.5	Pass
NVNT	ac20	5260	Ant0	20.235	>=0.5	Pass
NVNT	ac20	5300	Ant0	20.376	>=0.5	Pass
NVNT	ac20	5320	Ant0	20.395	>=0.5	Pass
NVNT	ac40	5270	Ant0	39.499	>=0.5	Pass
NVNT	ac40	5310	Ant0	40.017	>=0.5	Pass
NVNT	ac80	5290	Ant0	79.49	>=0.5	Pass

Test Graphs

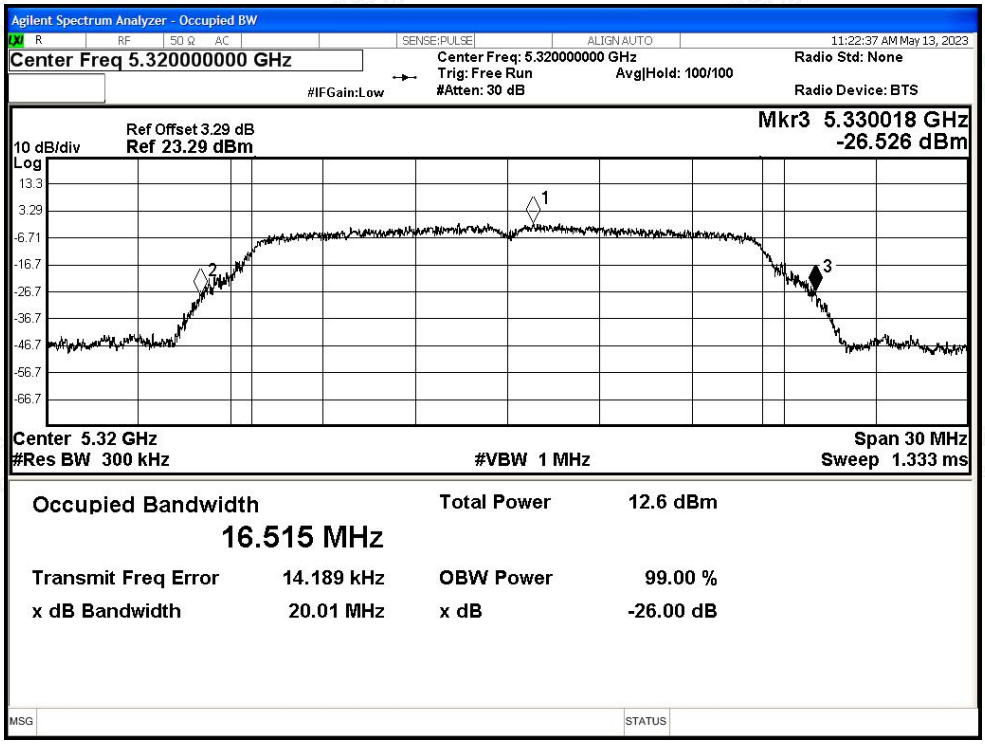
-26dB Bandwidth NVNT a 5260MHz Ant0



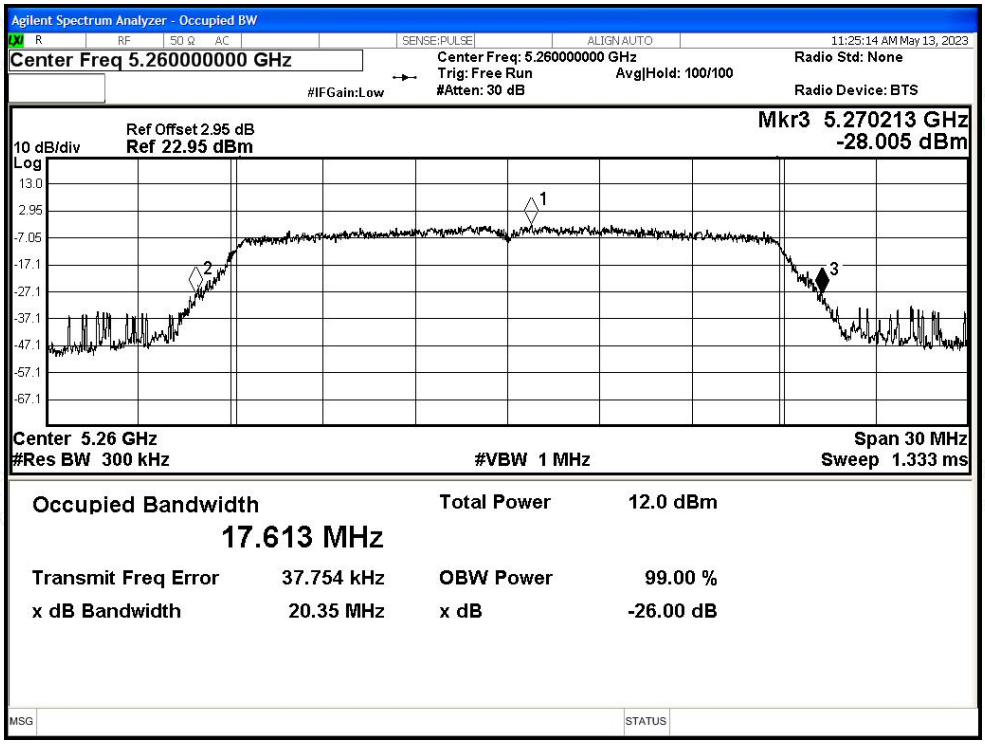
-26dB Bandwidth NVNT a 5300MHz Ant0



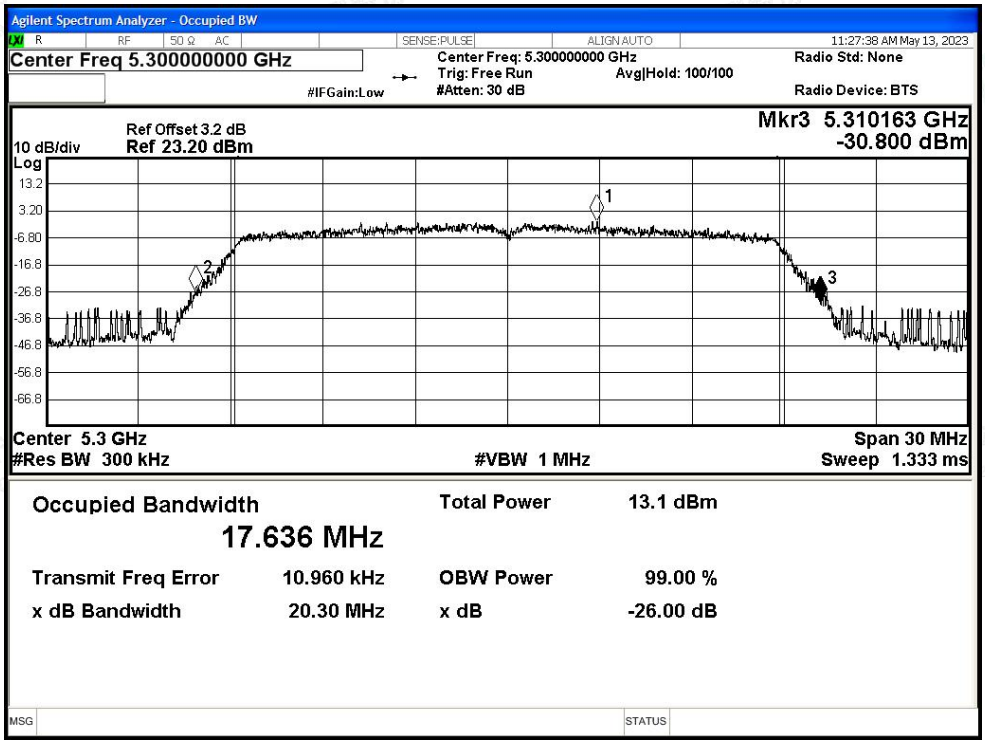
-26dB Bandwidth NVNT a 5320MHz Ant0



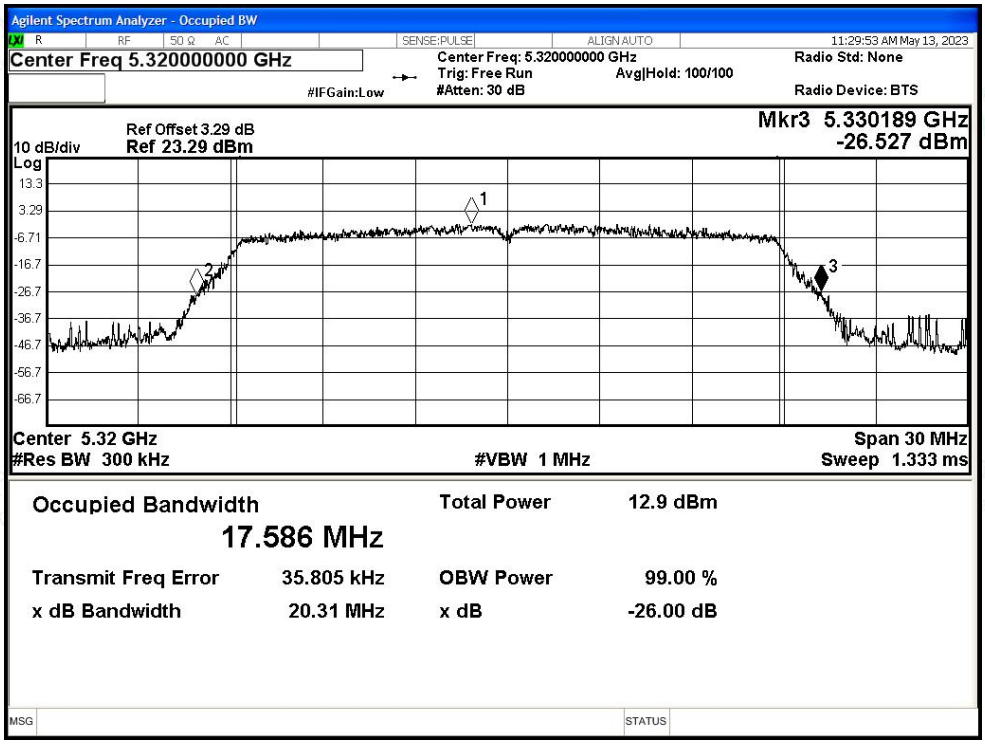
-26dB Bandwidth NVNT n20 5260MHz Ant0



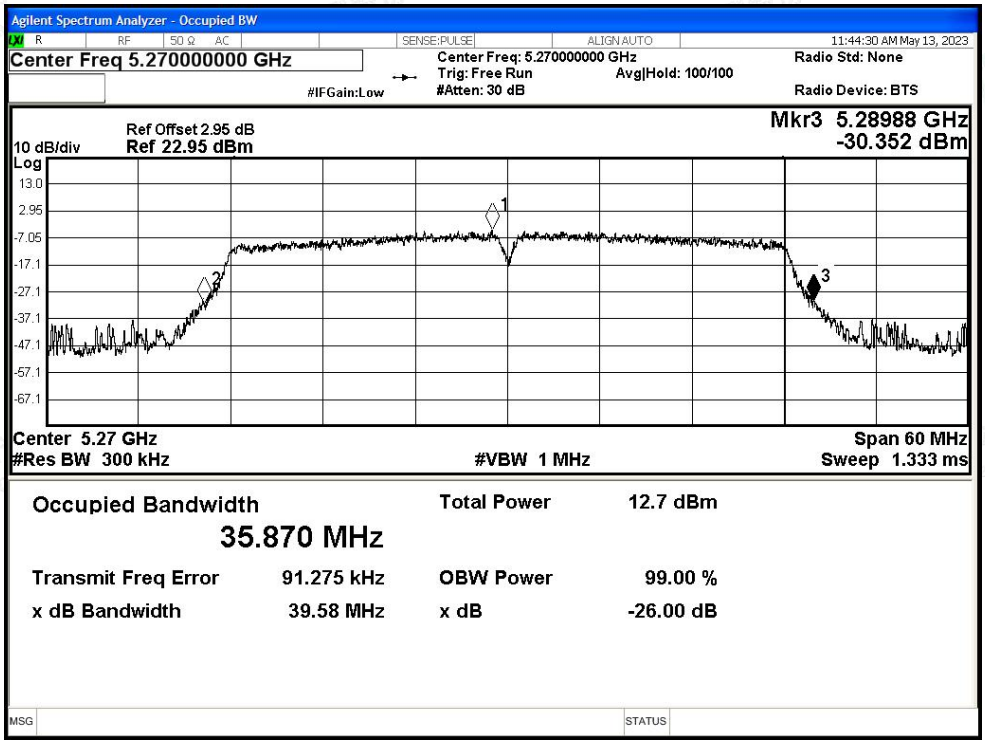
-26dB Bandwidth NVNT n20 5300MHz Ant0



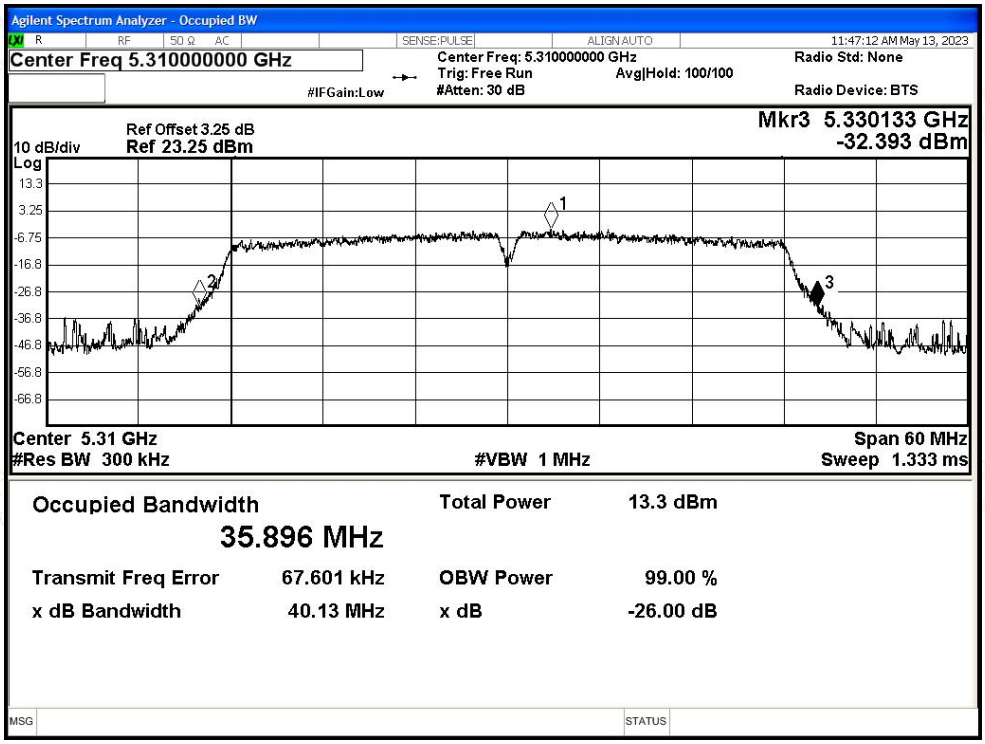
-26dB Bandwidth NVNT n20 5320MHz Ant0



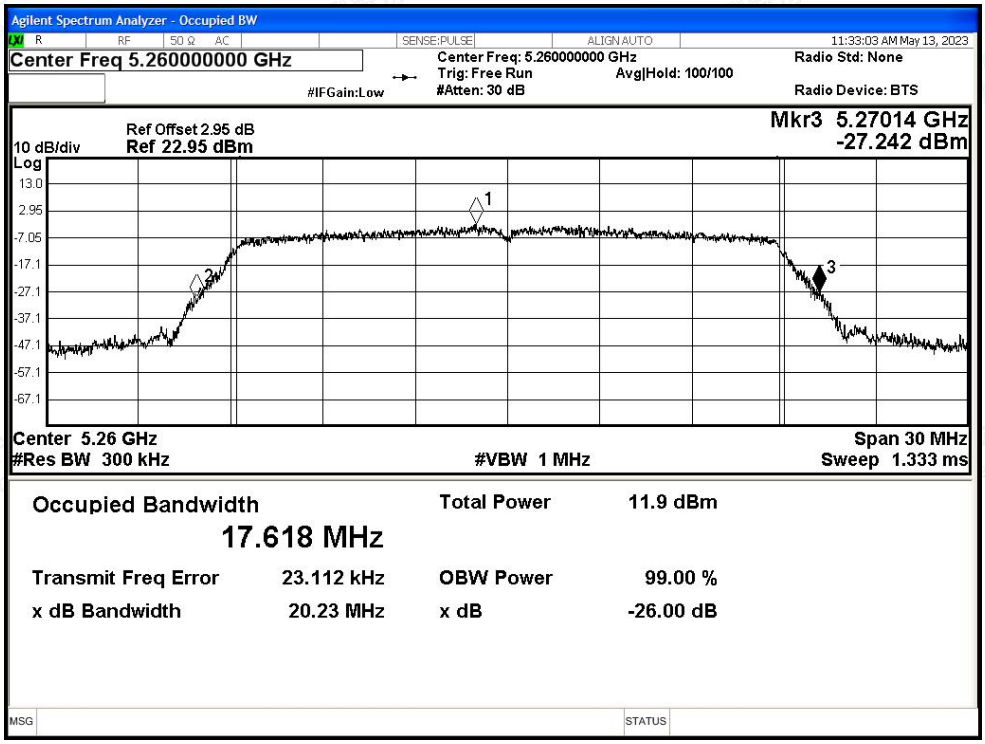
-26dB Bandwidth NVNT n40 5270MHz Ant0



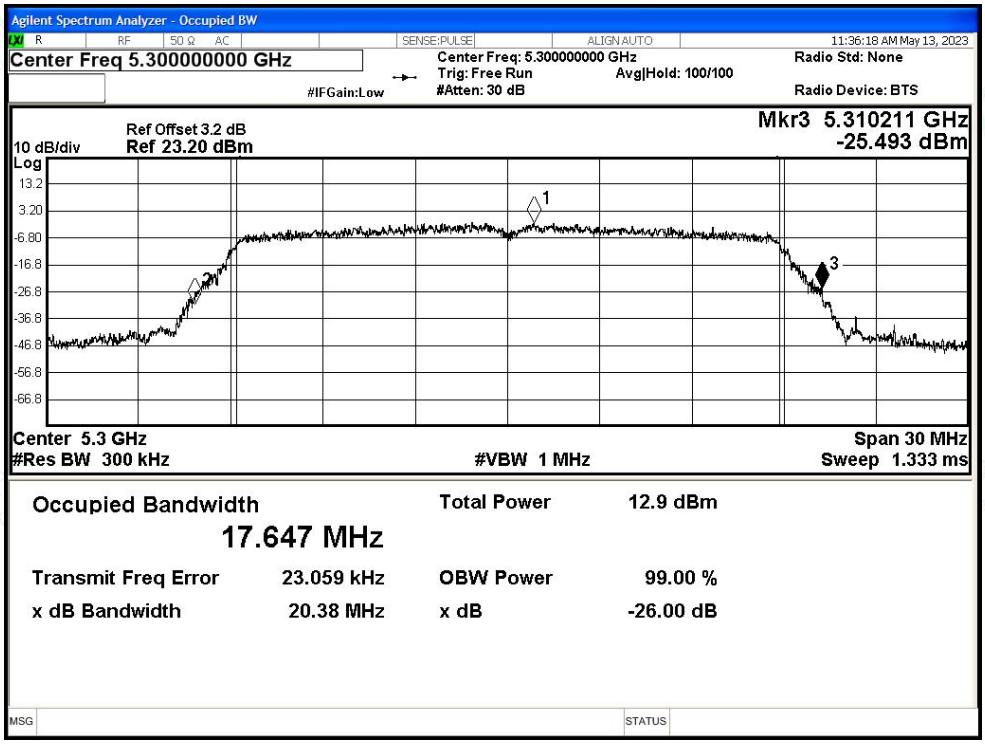
-26dB Bandwidth NVNT n40 5310MHz Ant0



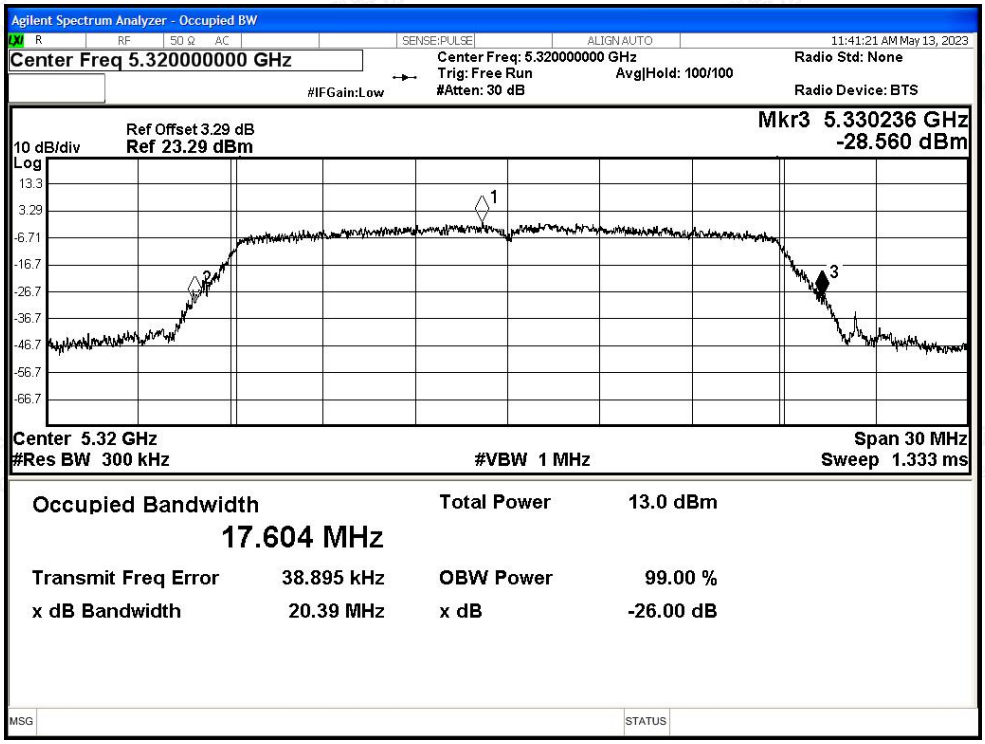
-26dB Bandwidth NVNT ac20 5260MHz Ant0



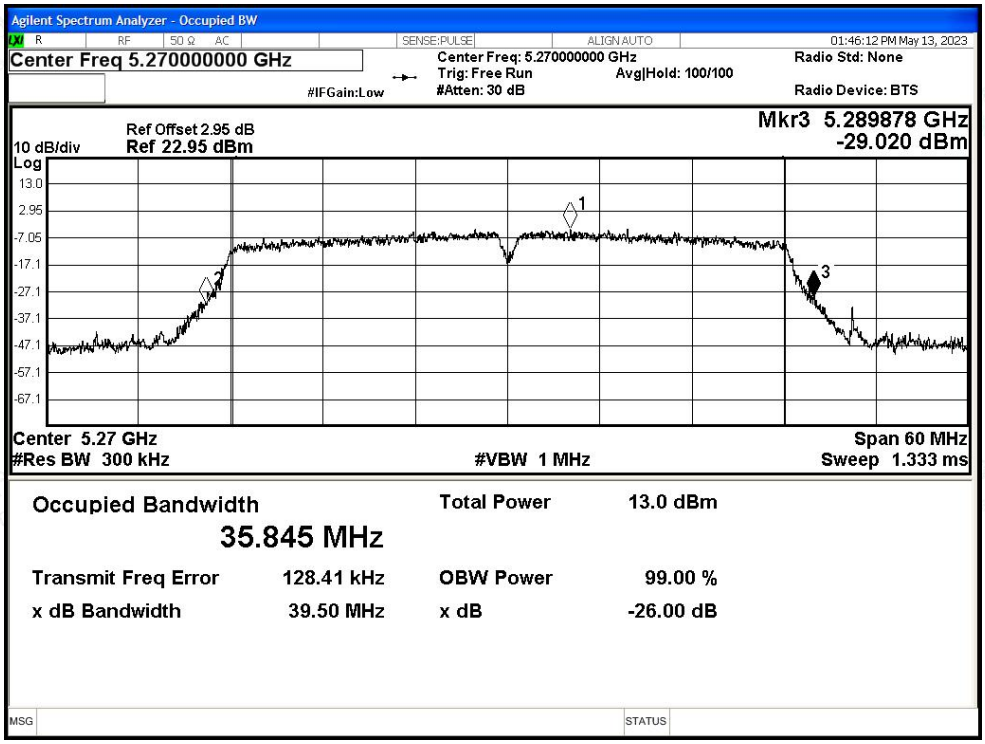
-26dB Bandwidth NVNT ac20 5300MHz Ant0



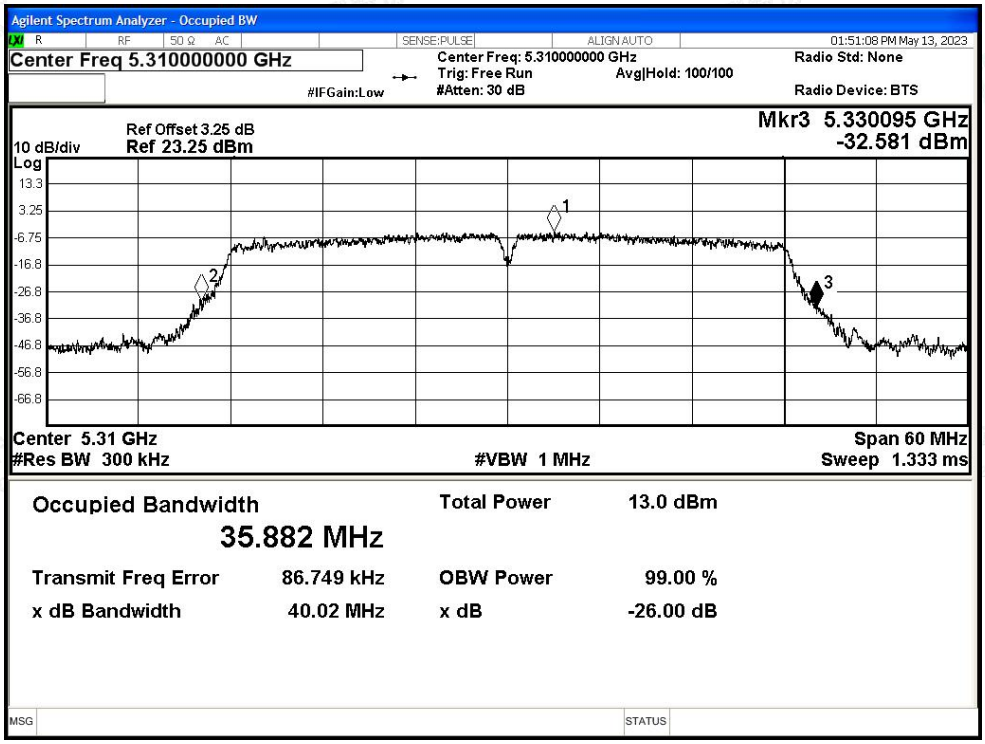
-26dB Bandwidth NVNT ac20 5320MHz Ant0



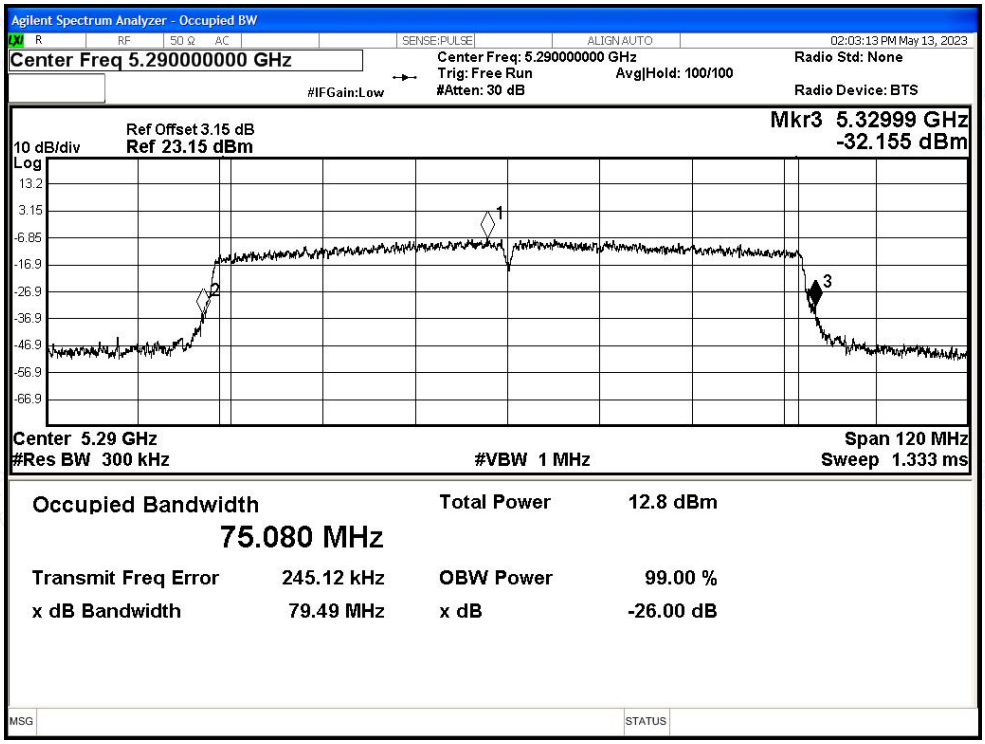
-26dB Bandwidth NVNT ac40 5270MHz Ant0



-26dB Bandwidth NVNT ac40 5310MHz Ant0



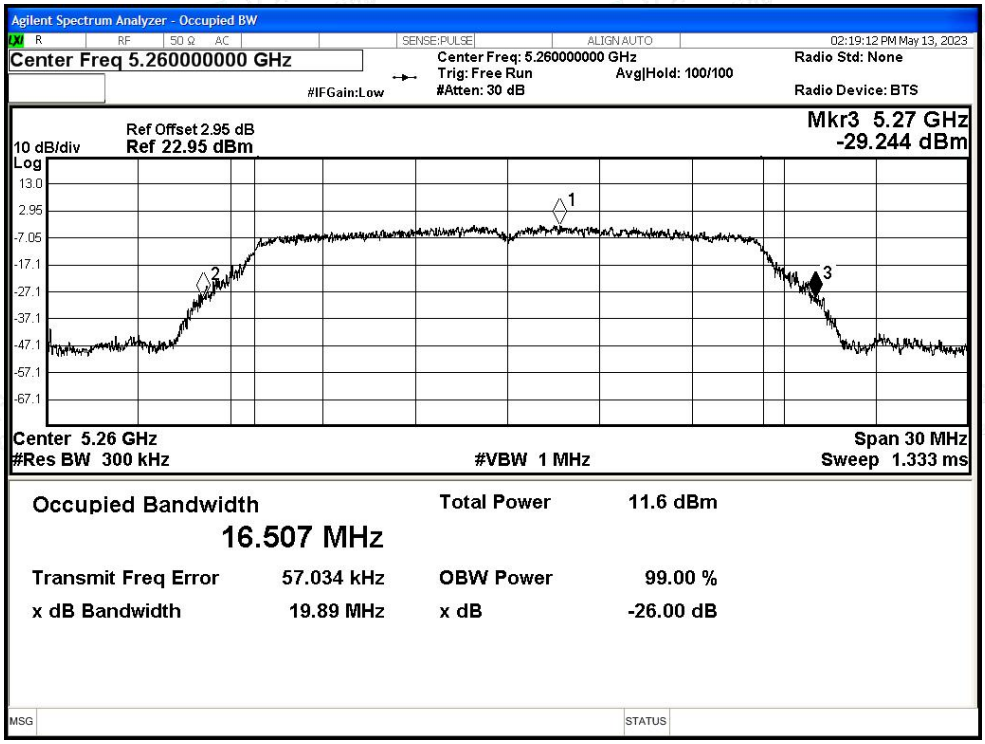
-26dB Bandwidth NVNT ac80 5290MHz Ant0



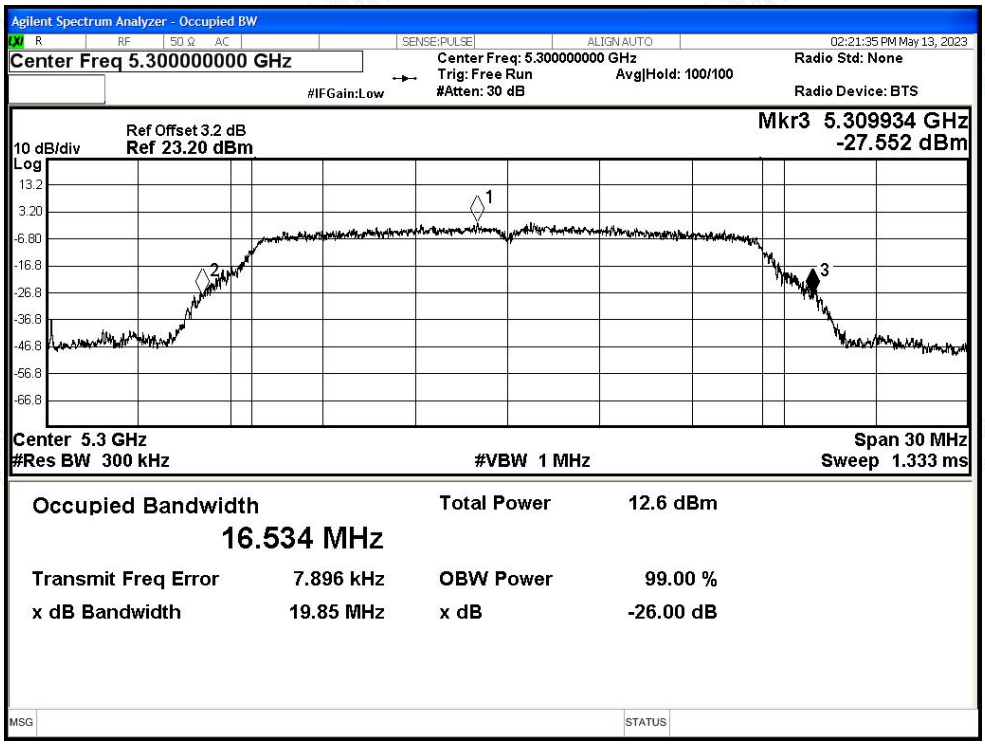
Condition	Mode	Frequency (MHz)	Antenna	-26 dB Bandwidth (MHz)	Limit -26 dB Bandwidth (MHz)	Verdict
NVNT	a	5260	Ant1	19.886	>=0.5	Pass
NVNT	a	5300	Ant1	19.852	>=0.5	Pass
NVNT	a	5320	Ant1	19.998	>=0.5	Pass
NVNT	n20	5260	Ant1	20.186	>=0.5	Pass
NVNT	n20	5300	Ant1	20.25	>=0.5	Pass
NVNT	n20	5320	Ant1	20.186	>=0.5	Pass
NVNT	n40	5270	Ant1	39.447	>=0.5	Pass
NVNT	n40	5310	Ant1	39.792	>=0.5	Pass
NVNT	ac20	5260	Ant1	20.239	>=0.5	Pass
NVNT	ac20	5300	Ant1	20.326	>=0.5	Pass
NVNT	ac20	5320	Ant1	20.477	>=0.5	Pass
NVNT	ac40	5270	Ant1	39.512	>=0.5	Pass
NVNT	ac40	5310	Ant1	39.702	>=0.5	Pass
NVNT	ac80	5290	Ant1	79.032	>=0.5	Pass

Test Graphs

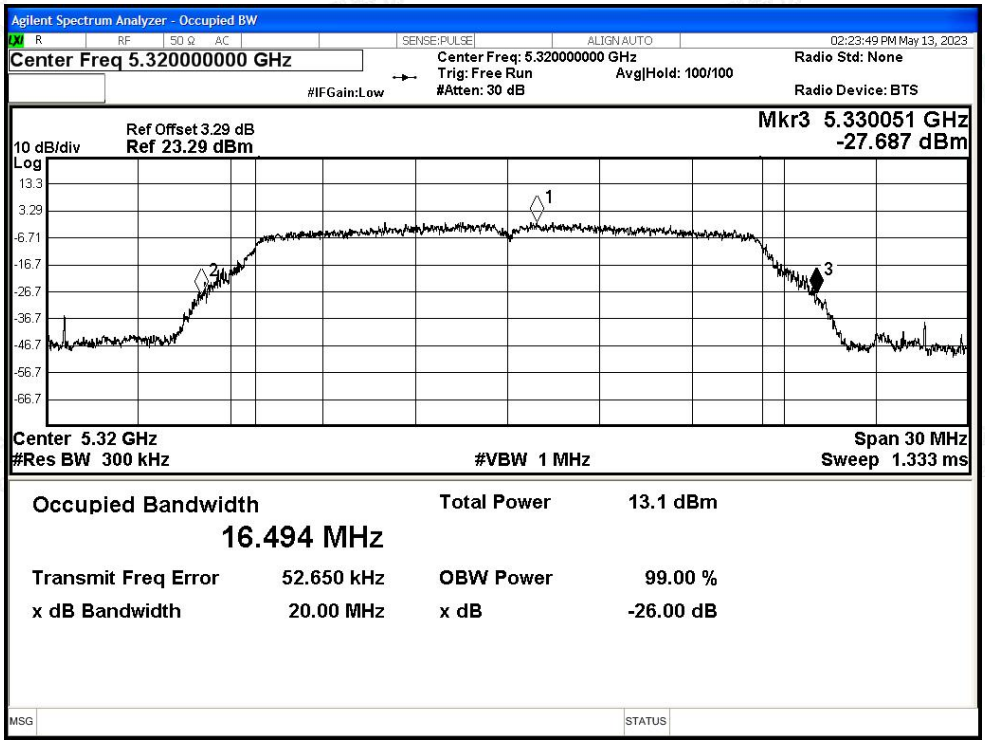
-26dB Bandwidth NVNT a 5260MHz Ant1



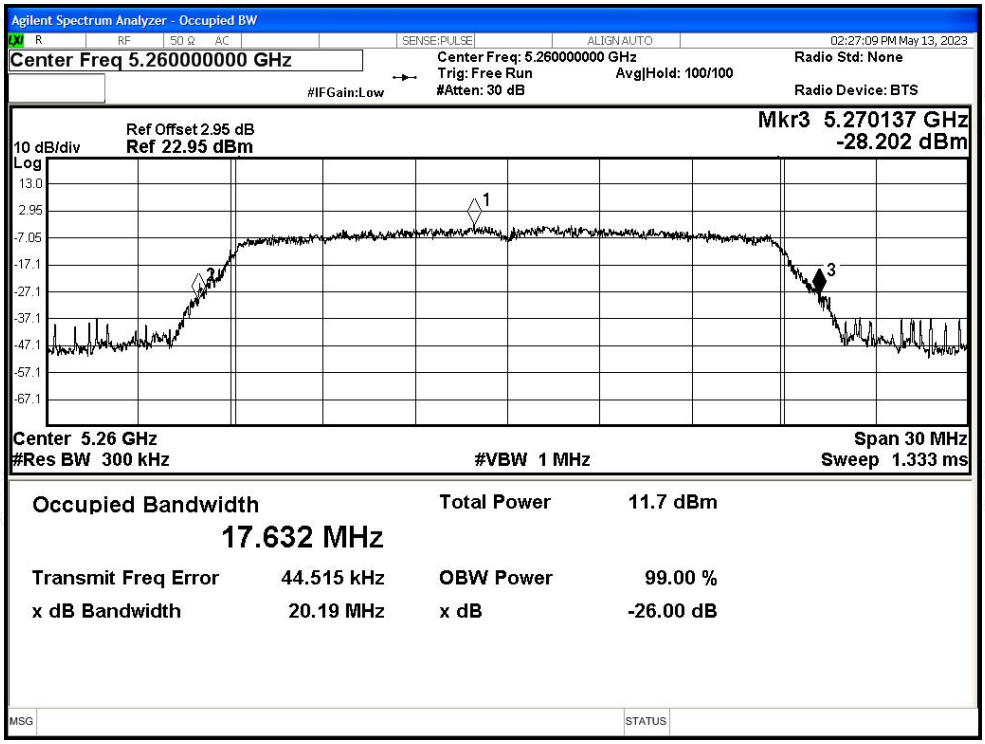
-26dB Bandwidth NVNT a 5300MHz Ant1



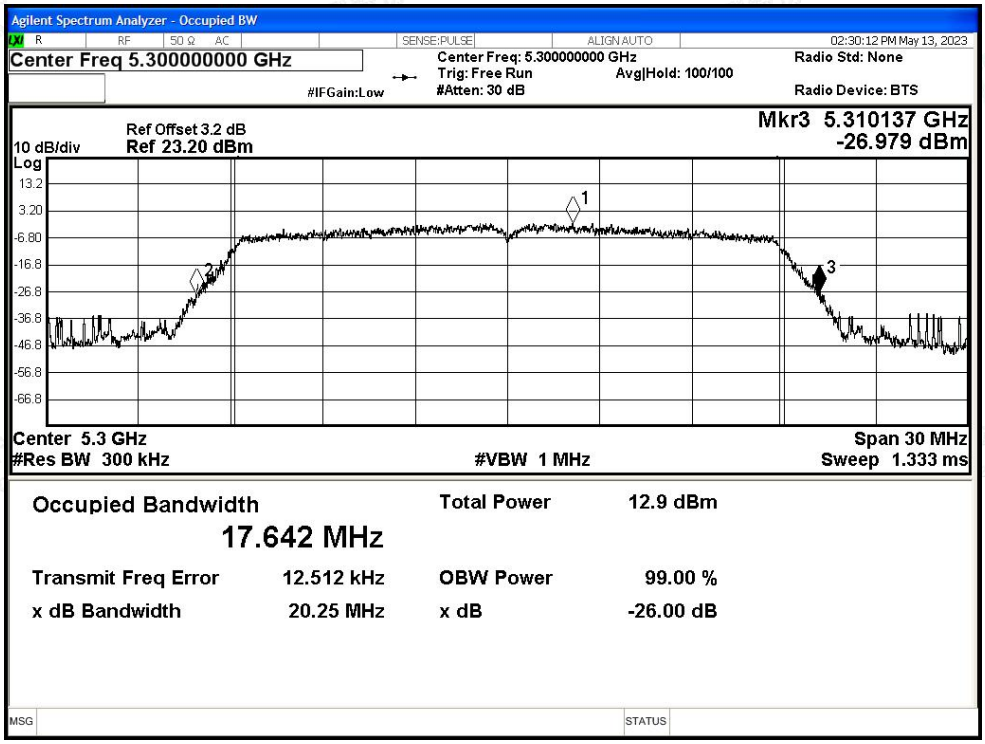
-26dB Bandwidth NVNT a 5320MHz Ant1



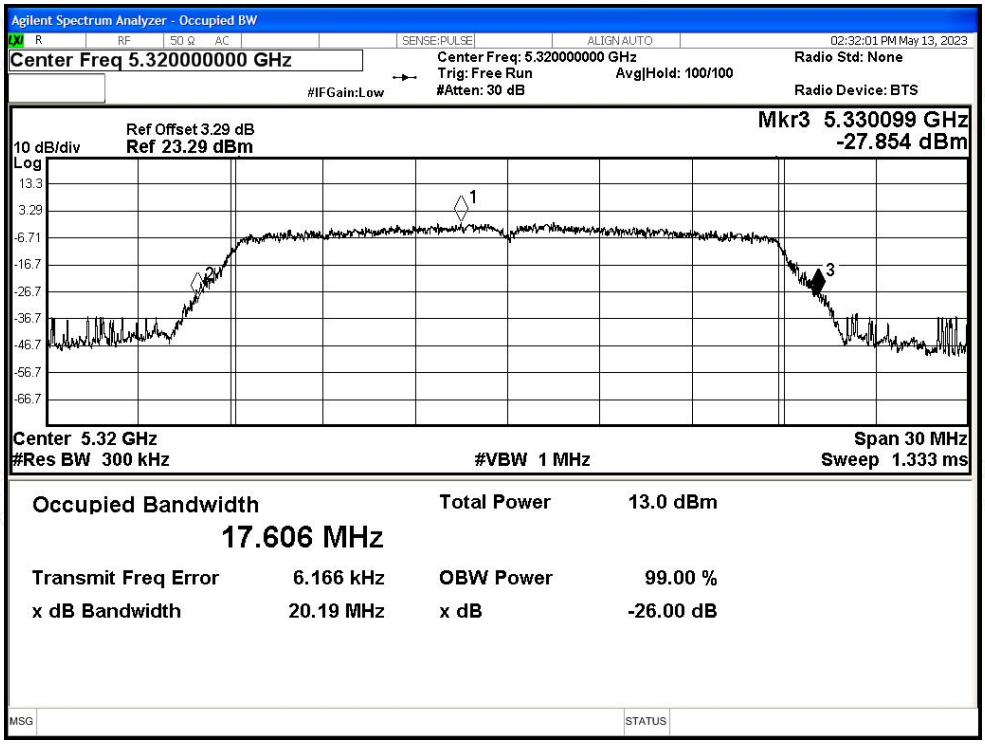
-26dB Bandwidth NVNT n20 5260MHz Ant1



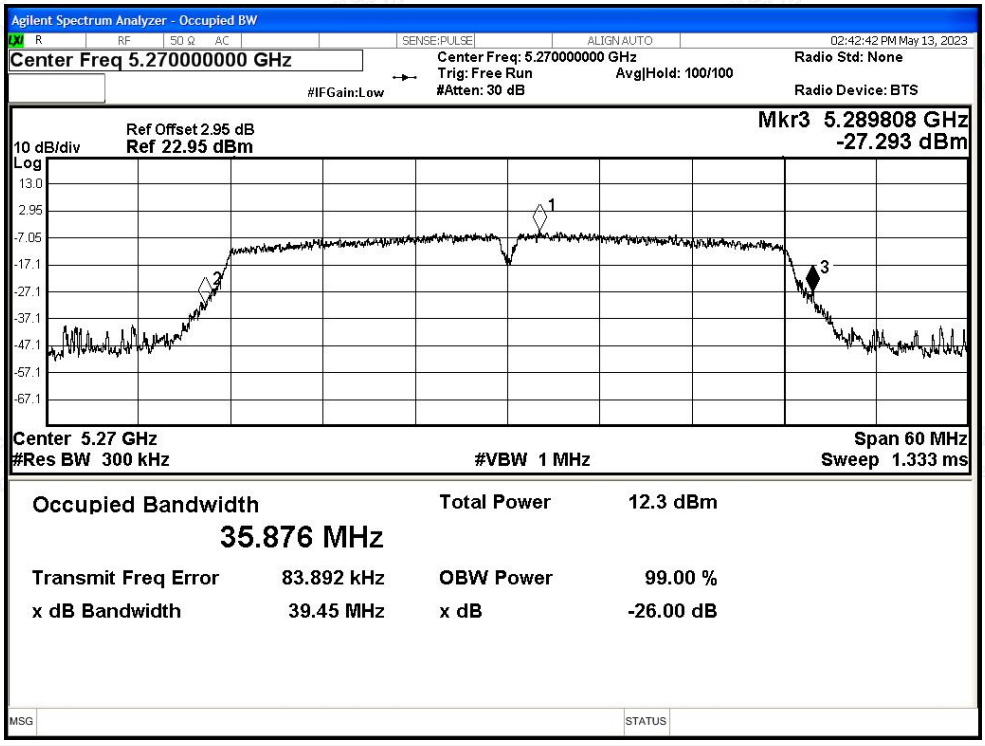
-26dB Bandwidth NVNT n20 5300MHz Ant1



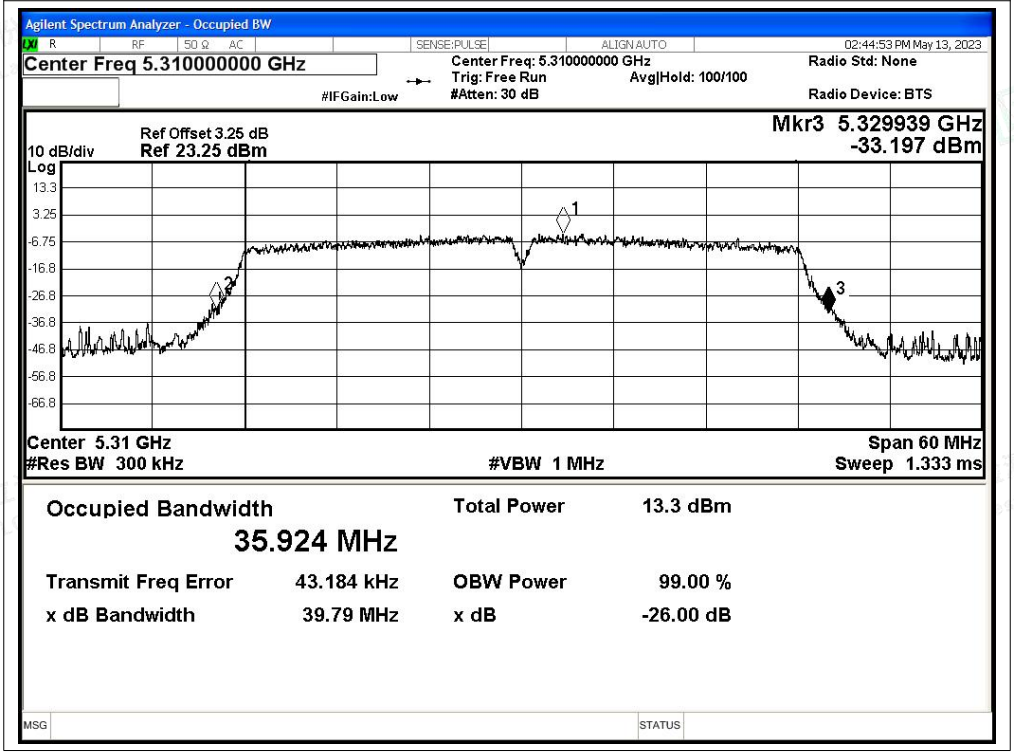
-26dB Bandwidth NVNT n20 5320MHz Ant1



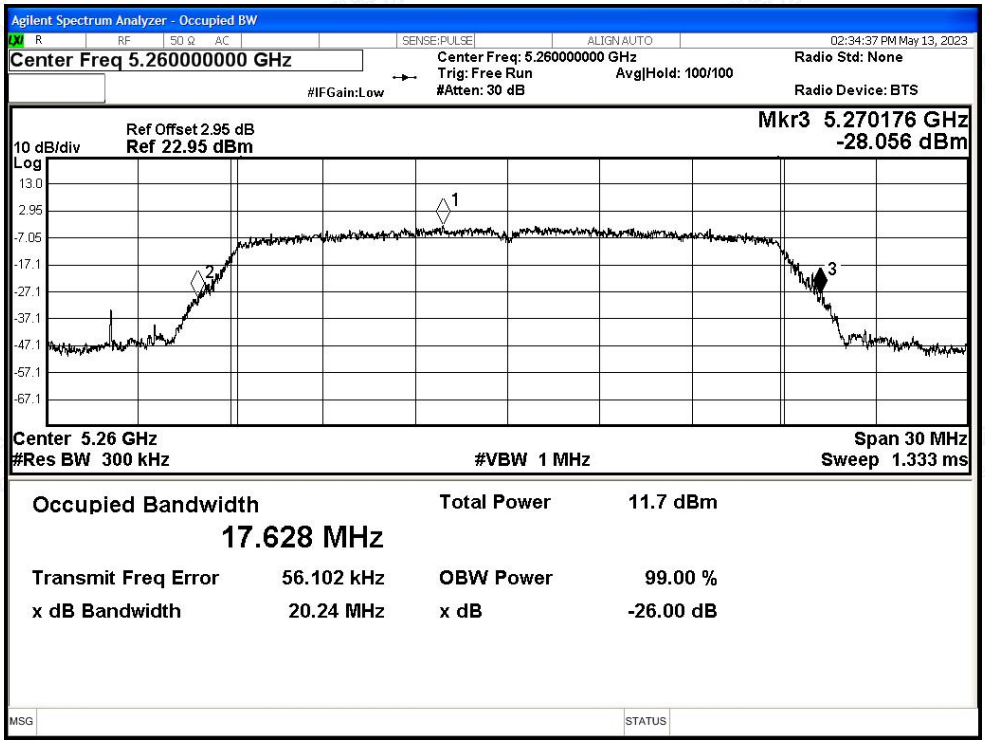
-26dB Bandwidth NVNT n40 5270MHz Ant1



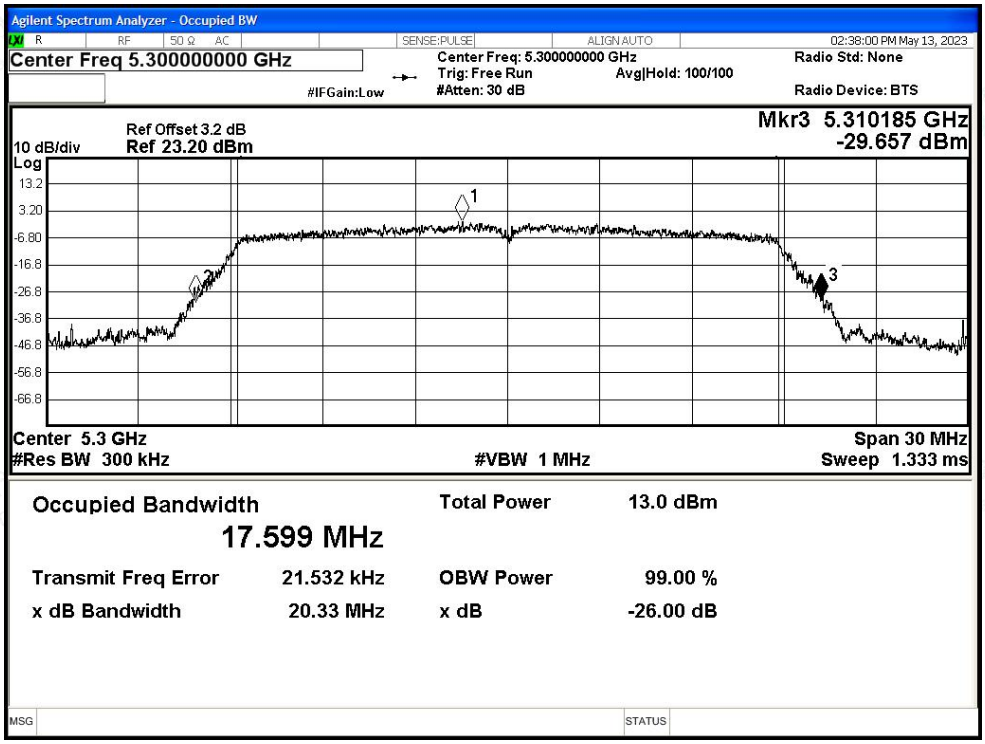
-26dB Bandwidth NVNT n40 5310MHz Ant1



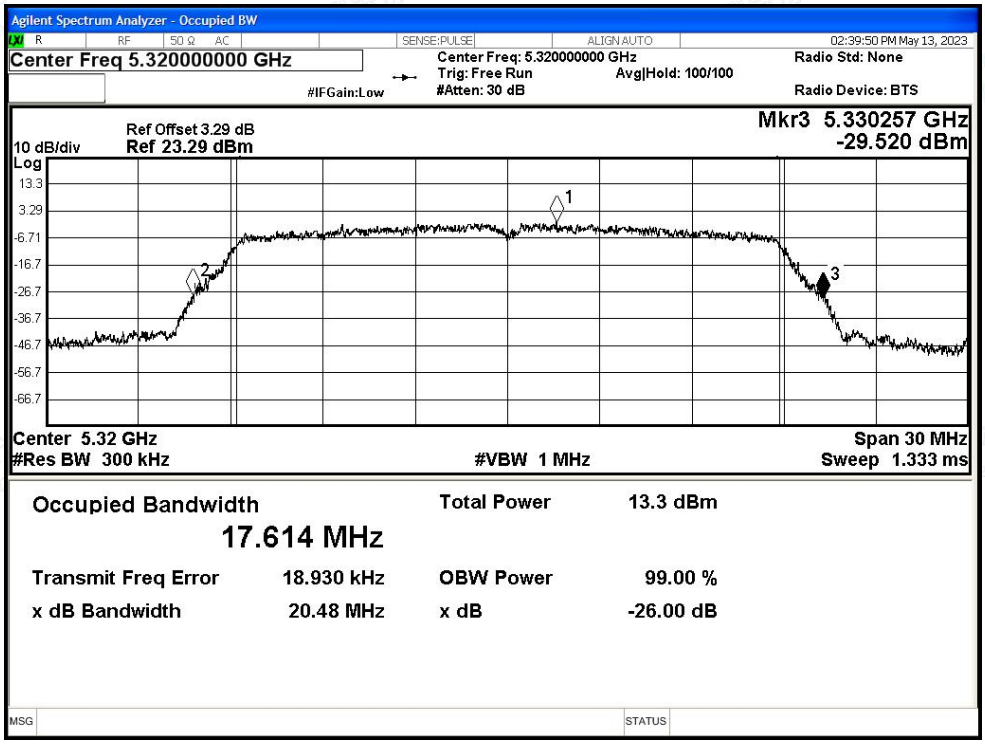
-26dB Bandwidth NVNT ac20 5260MHz Ant1



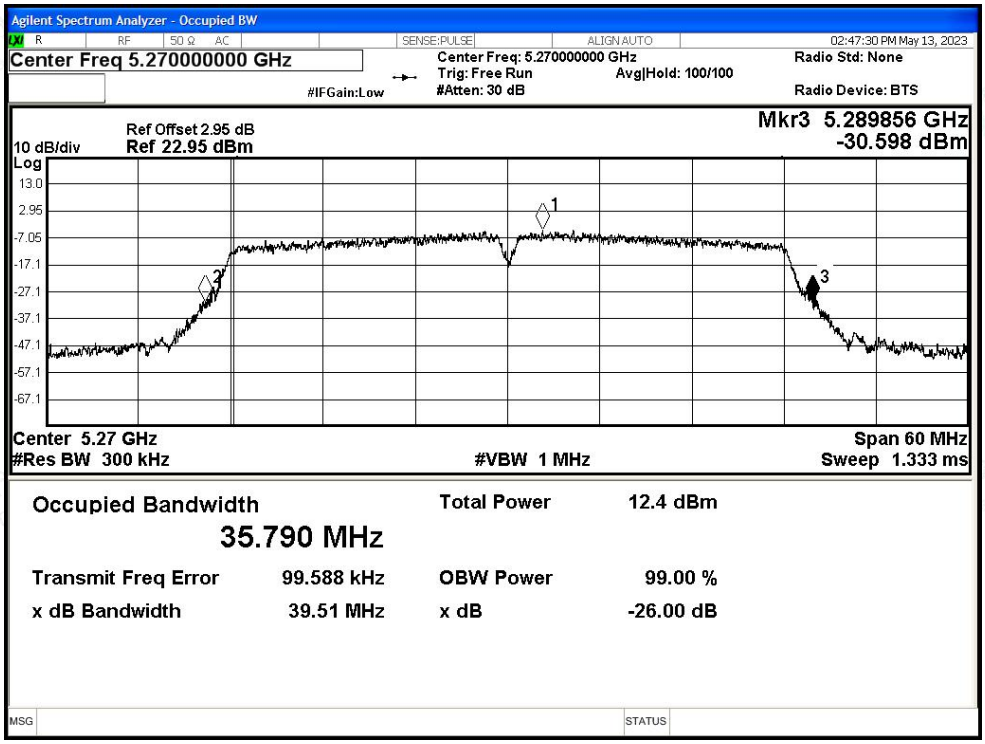
-26dB Bandwidth NVNT ac20 5300MHz Ant1



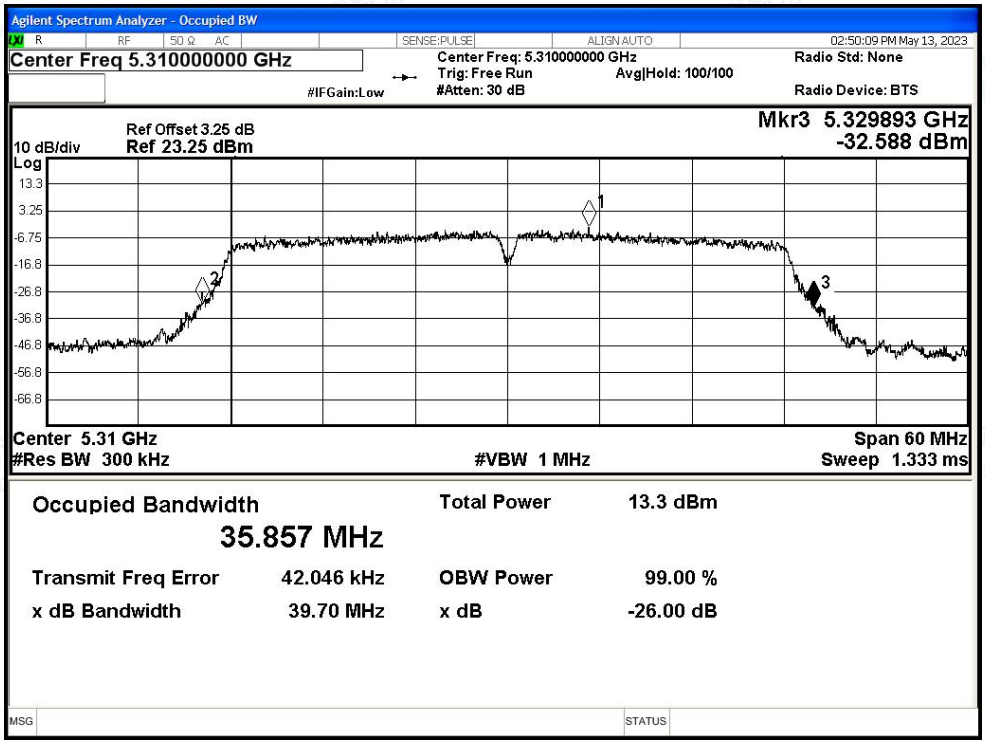
-26dB Bandwidth NVNT ac20 5320MHz Ant1



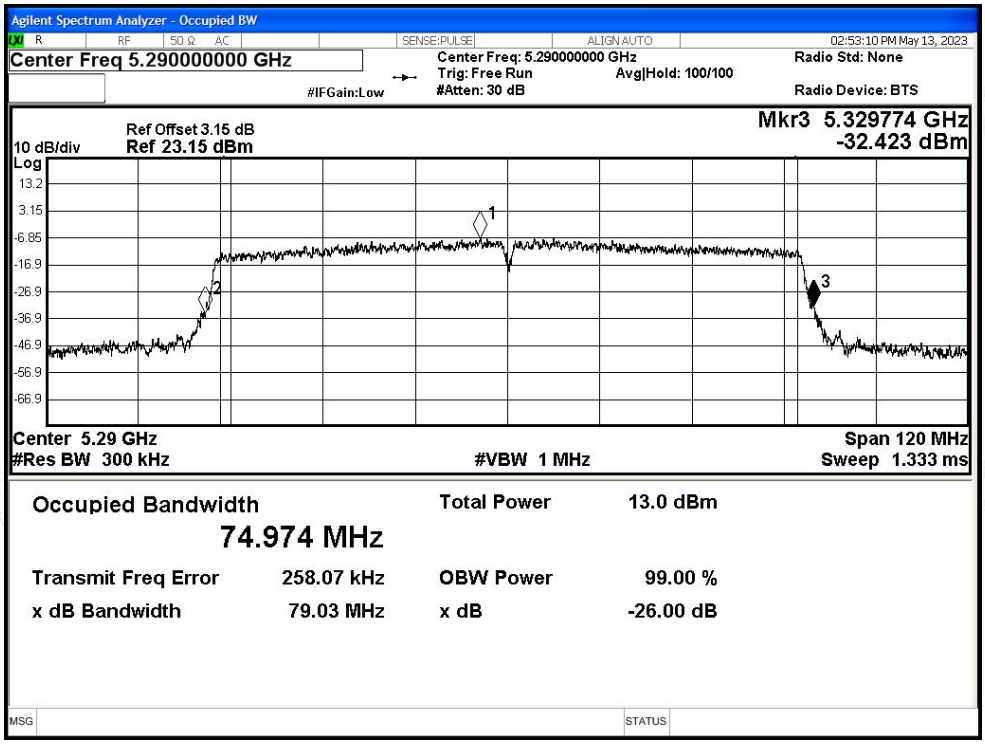
-26dB Bandwidth NVNT ac40 5270MHz Ant1



-26dB Bandwidth NVNT ac40 5310MHz Ant1



-26dB Bandwidth NVNT ac80 5290MHz Ant1



E.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	Ant0	4.91	0.14	5.05	24	Pass
NVNT	a	5300	Ant0	5.87	0.13	6.00	24	Pass
NVNT	a	5320	Ant0	6.35	0.14	6.49	24	Pass
NVNT	n20	5260	Ant0	4.78	0.14	4.92	24	Pass
NVNT	n20	5300	Ant0	5.88	0.14	6.02	24	Pass
NVNT	n20	5320	Ant0	6.15	0.14	6.29	24	Pass
NVNT	n40	5270	Ant0	6.07	0.27	6.34	24	Pass
NVNT	n40	5310	Ant0	6.43	0.29	6.72	24	Pass
NVNT	ac20	5260	Ant0	4.88	0.14	5.02	24	Pass
NVNT	ac20	5300	Ant0	6.25	0.14	6.39	24	Pass
NVNT	ac20	5320	Ant0	6.22	0.14	6.36	24	Pass
NVNT	ac40	5270	Ant0	5.04	0.28	5.32	24	Pass
NVNT	ac40	5310	Ant0	5.15	0.28	5.43	24	Pass
NVNT	ac80	5290	Ant0	5.91	0.55	6.46	24	Pass

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	a	5260	Ant1	4.80	0.13	4.93	24	Pass
NVNT	a	5300	Ant1	5.78	0.14	5.92	24	Pass
NVNT	a	5320	Ant1	6.15	0.13	6.28	24	Pass
NVNT	n20	5260	Ant1	4.59	0.15	4.74	24	Pass
NVNT	n20	5300	Ant1	5.74	0.15	5.89	24	Pass
NVNT	n20	5320	Ant1	5.93	0.14	6.07	24	Pass
NVNT	n40	5270	Ant1	5.85	0.28	6.13	24	Pass
NVNT	n40	5310	Ant1	6.27	0.28	6.55	24	Pass
NVNT	ac20	5260	Ant1	4.73	0.14	4.87	24	Pass
NVNT	ac20	5300	Ant1	6.08	0.14	6.22	24	Pass
NVNT	ac20	5320	Ant1	6.15	0.14	6.29	24	Pass
NVNT	ac40	5270	Ant1	4.82	0.28	5.10	24	Pass
NVNT	ac40	5310	Ant1	5.06	0.28	5.34	24	Pass
NVNT	ac80	5290	Ant1	5.88	0.55	6.43	24	Pass

MIMO

Test Mode	Channel	Frequency (MHz)	Ant 0 Conducted Power (dBm)	Ant 1 Conducted Power (dBm)	MIMO Conducted Power (dBm)	Limit (dBm)	Verdict
n20	52	5260	4.92	4.74	7.84	24	Pass
	60	5300	6.02	5.89	8.97		Pass
	64	5320	6.29	6.07	9.19		Pass
N40	54	5270	6.34	6.13	9.25		Pass
	62	5310	6.72	6.55	9.65		Pass
ac20	52	5260	5.02	4.87	7.96		Pass
	60	5300	6.39	6.22	9.32		Pass
	64	5320	6.36	6.29	9.34		Pass
ac40	54	5270	5.32	5.10	8.22		Pass
	62	5310	5.43	5.34	8.40		Pass
ac80	58	5290	6.46	6.43	9.46		Pass

E.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	5260	Ant0	-3.03	0.14	-2.89	11	Pass
NVNT	a	5300	Ant0	-3.09	0.13	-2.96	11	Pass
NVNT	a	5320	Ant0	-2.66	0.14	-2.52	11	Pass
NVNT	n20	5260	Ant0	-3.09	0.14	-2.95	11	Pass
NVNT	n20	5300	Ant0	-2.07	0.14	-1.93	11	Pass
NVNT	n20	5320	Ant0	-2.67	0.14	-2.53	11	Pass
NVNT	n40	5270	Ant0	-6.15	0.27	-5.88	11	Pass
NVNT	n40	5310	Ant0	-5.44	0.29	-5.15	11	Pass
NVNT	ac20	5260	Ant0	-3.72	0.14	-3.58	11	Pass
NVNT	ac20	5300	Ant0	-2.56	0.14	-2.42	11	Pass
NVNT	ac20	5320	Ant0	-2.51	0.14	-2.37	11	Pass
NVNT	ac40	5270	Ant0	-5.55	0.28	-5.27	11	Pass
NVNT	ac40	5310	Ant0	-5.91	0.28	-5.63	11	Pass
NVNT	ac80	5290	Ant0	-9.17	0.55	-8.62	11	Pass

Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/MHz)	Duty Factor (dB)	Total PSD (dBm/MHz)	Limit (dBm/MHz)	Verdict
NVNT	a	5260	Ant1	-3.67	0.13	-3.54	11	Pass
NVNT	a	5300	Ant1	-2.58	0.14	-2.44	11	Pass
NVNT	a	5320	Ant1	-2.27	0.13	-2.14	11	Pass
NVNT	n20	5260	Ant1	-3.76	0.15	-3.61	11	Pass
NVNT	n20	5300	Ant1	-2.45	0.15	-2.3	11	Pass
NVNT	n20	5320	Ant1	-2.74	0.14	-2.6	11	Pass
NVNT	n40	5270	Ant1	-5.95	0.28	-5.67	11	Pass
NVNT	n40	5310	Ant1	-5.26	0.28	-4.98	11	Pass
NVNT	ac20	5260	Ant1	-3.88	0.14	-3.74	11	Pass
NVNT	ac20	5300	Ant1	-2.59	0.14	-2.45	11	Pass
NVNT	ac20	5320	Ant1	-2.39	0.14	-2.25	11	Pass
NVNT	ac40	5270	Ant1	-6.36	0.28	-6.08	11	Pass
NVNT	ac40	5310	Ant1	-5.65	0.28	-5.37	11	Pass
NVNT	ac80	5290	Ant1	-9.38	0.55	-8.83	11	Pass

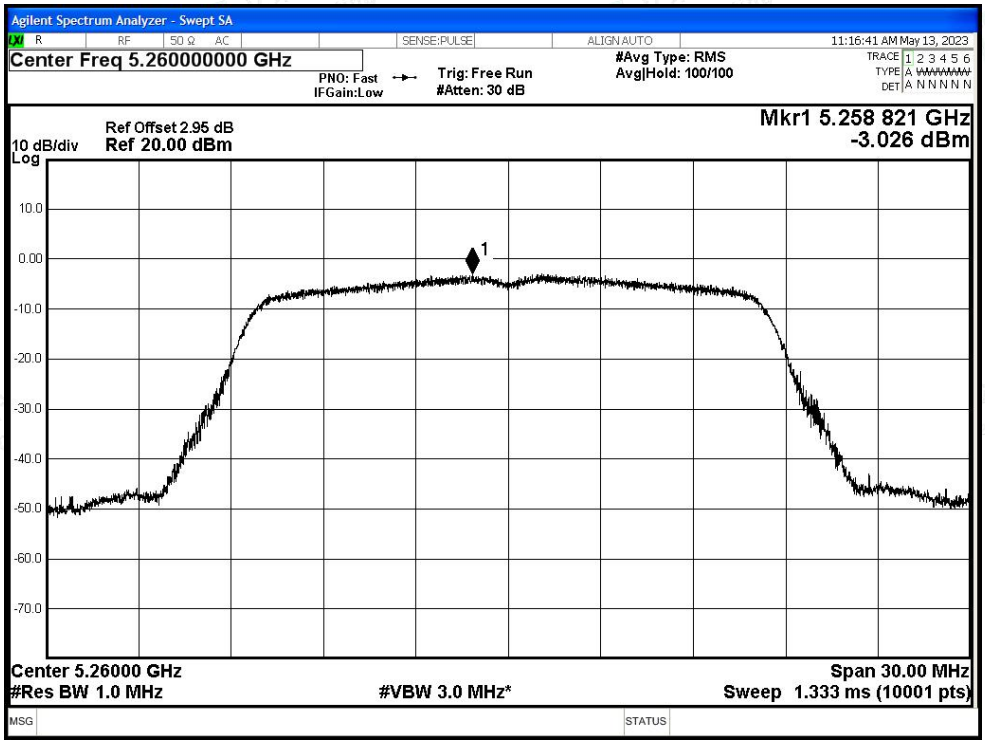
MIMO

Test Mode	Channel	Frequency (MHz)	Ant 0 Conducted Power (dBm/MHz)	Ant 1 Conducted Power (dBm/MHz)	MIMO AV Conducted Power (dBm/MHz)	Limit (dBm/MHz)	Verdict
n20	52	5260	-2.95	-3.61	-0.26	10.79	Pass
	60	5300	-1.93	-2.3	0.90	10.79	Pass
	64	5320	-2.53	-2.6	0.45	10.79	Pass
N40	54	5270	-5.88	-5.67	-2.76	10.79	Pass
	62	5310	-5.15	-4.98	-2.05	10.79	Pass
ac20	52	5260	-3.58	-3.74	-0.65	10.79	Pass
	60	5300	-2.42	-2.45	0.58	10.79	Pass
	64	5320	-2.37	-2.25	0.70	10.79	Pass
ac40	54	5270	-5.27	-6.08	-2.65	10.79	Pass
	62	5310	-5.63	-5.37	-2.49	10.79	Pass
ac80	58	5290	-8.62	-8.83	-5.71	10.79	Pass

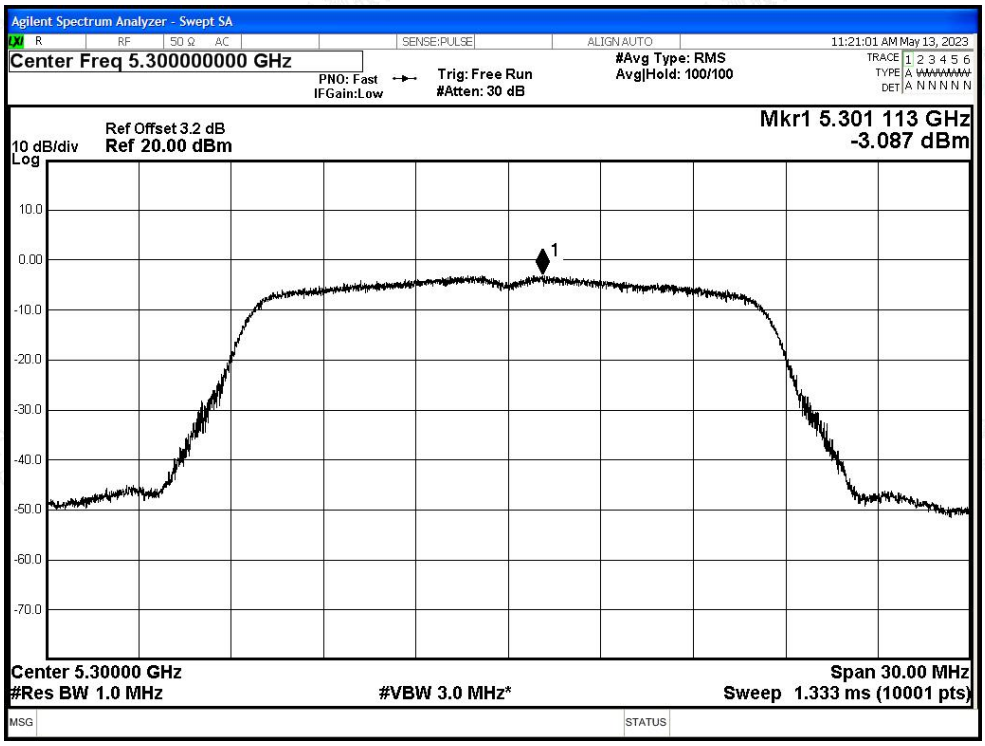
Note：The Duty Cycle Factor is compensated in the graph.

Test Graphs

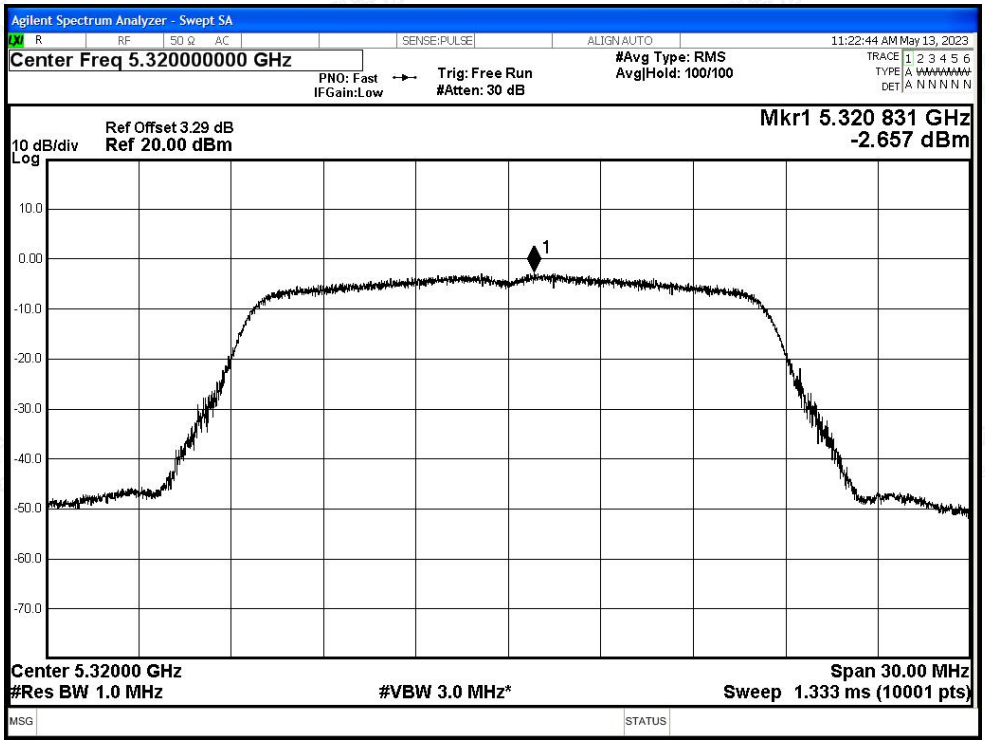
PSD NVNT a 5260MHz Ant0



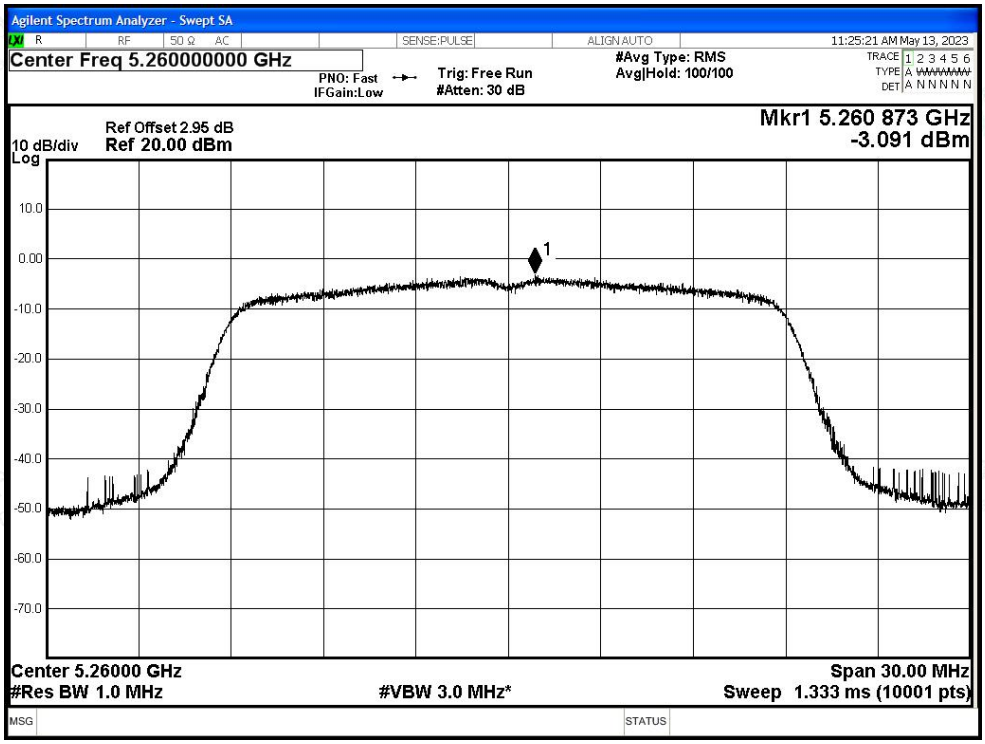
PSD NVNT a 5300MHz Ant0



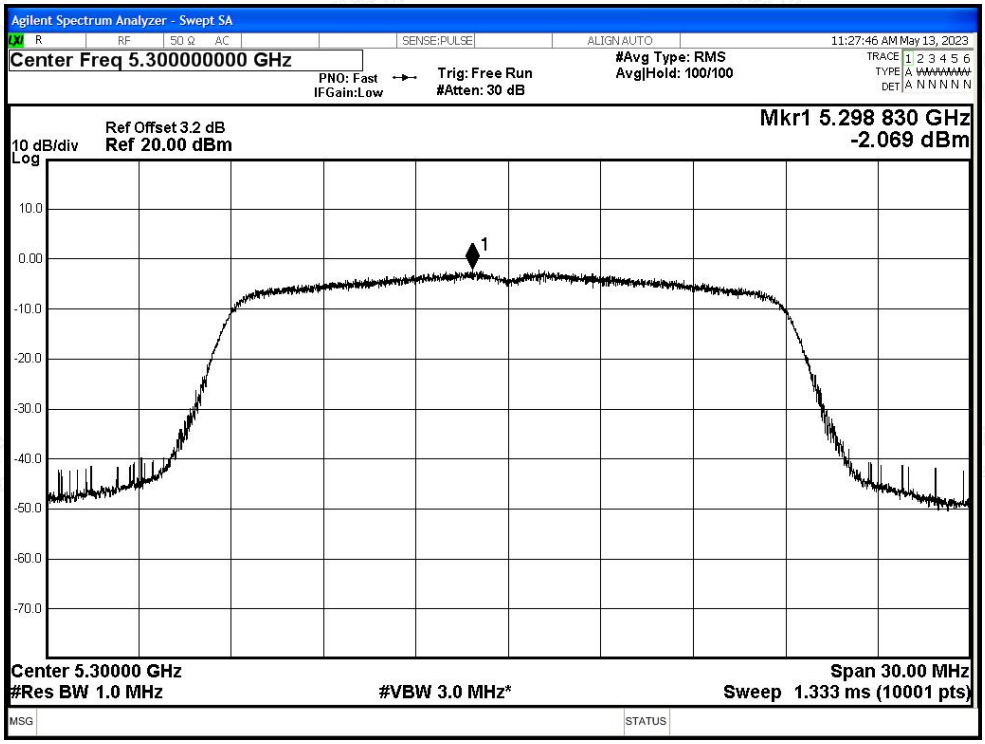
PSD NVNT a 5320MHz Ant0



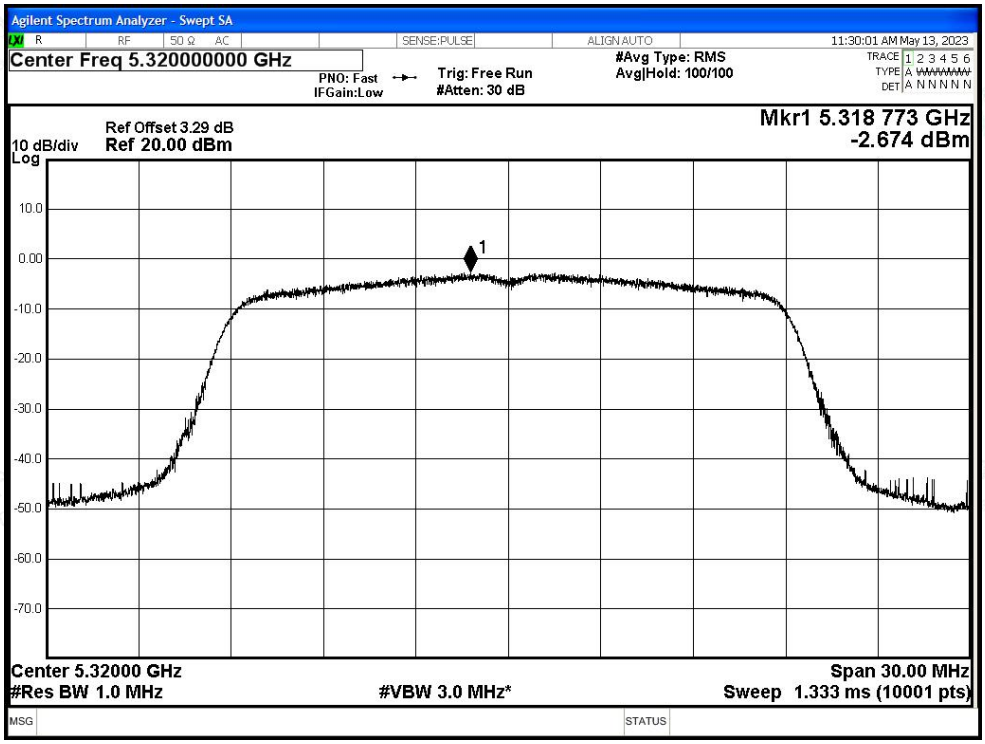
PSD NVNT n20 5260MHz Ant0



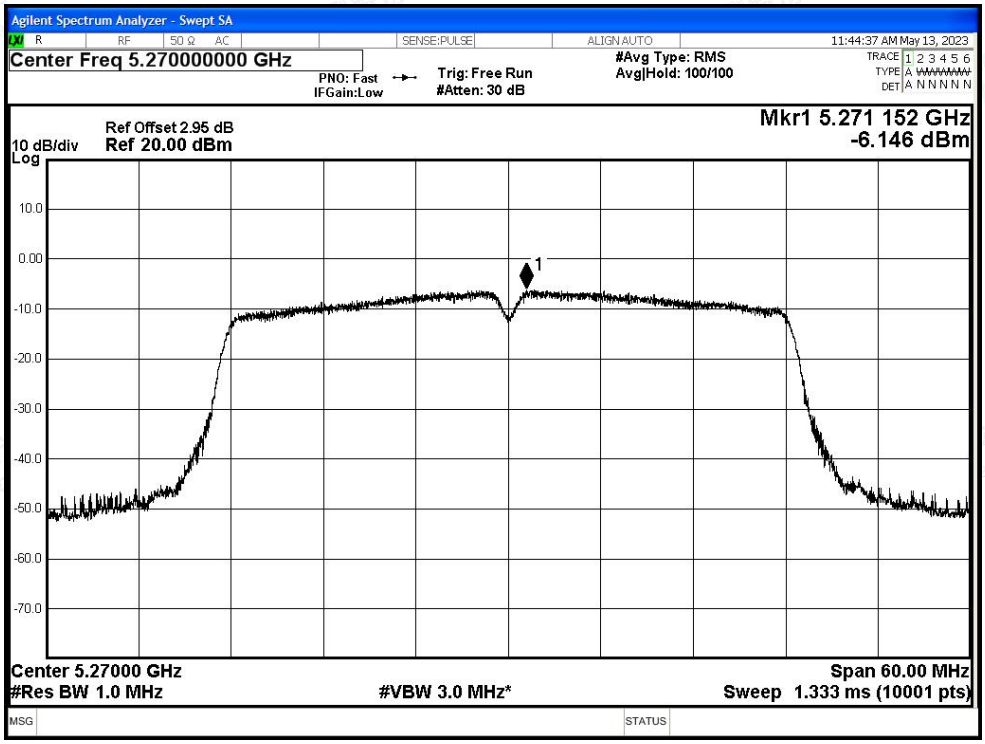
PSD NVNT n20 5300MHz Ant0



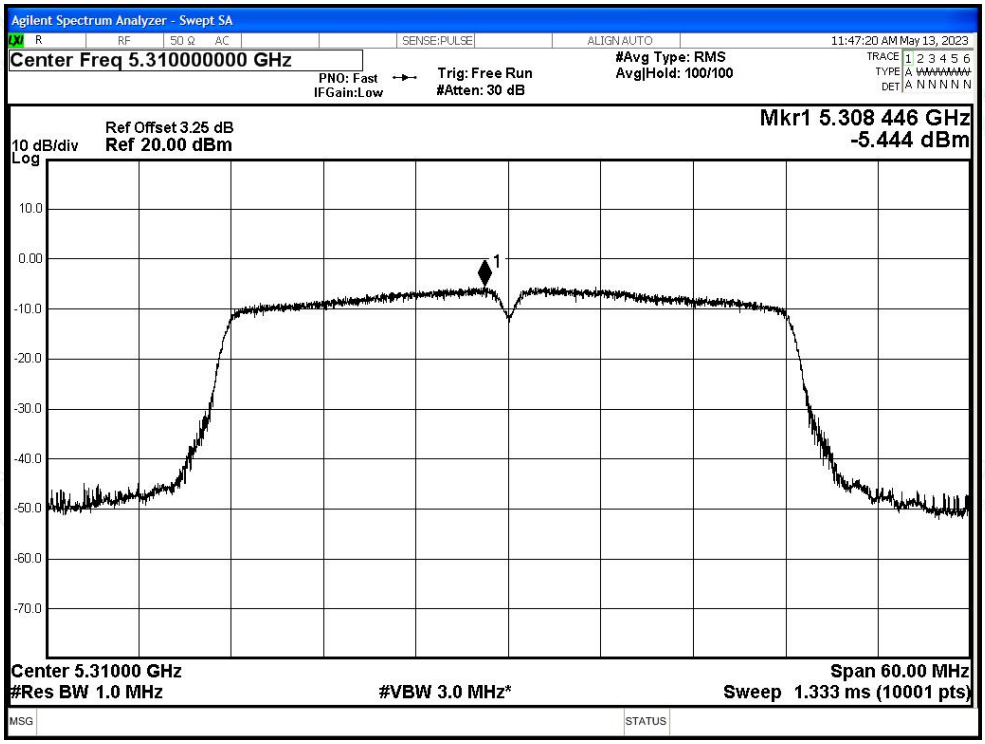
PSD NVNT n20 5320MHz Ant0



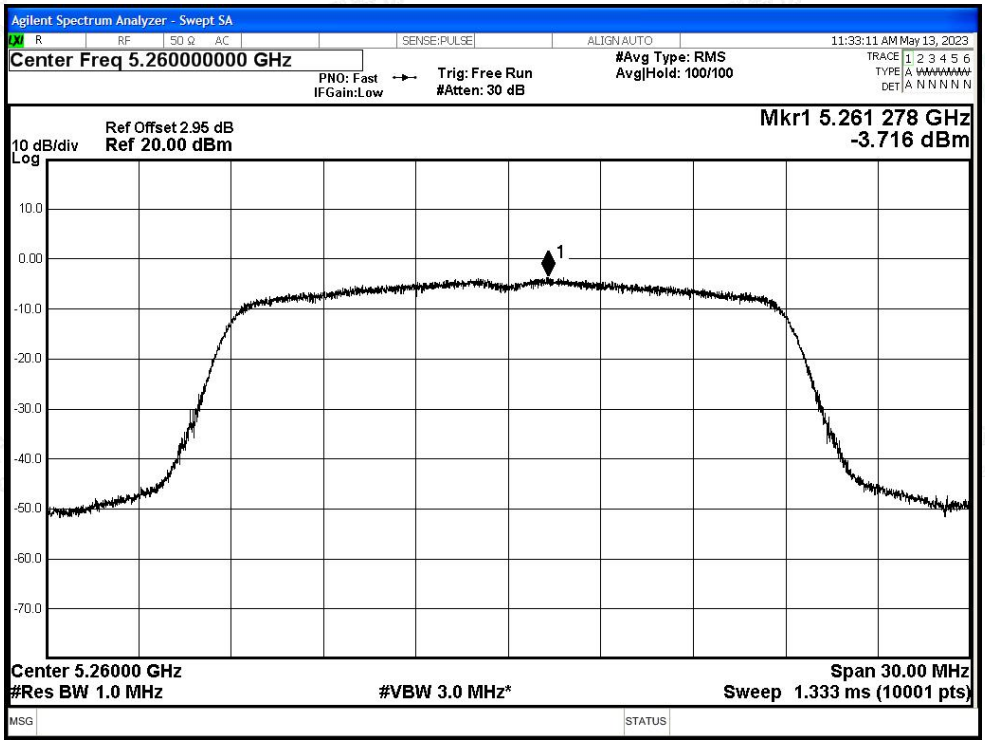
PSD NVNT n40 5270MHz Ant0



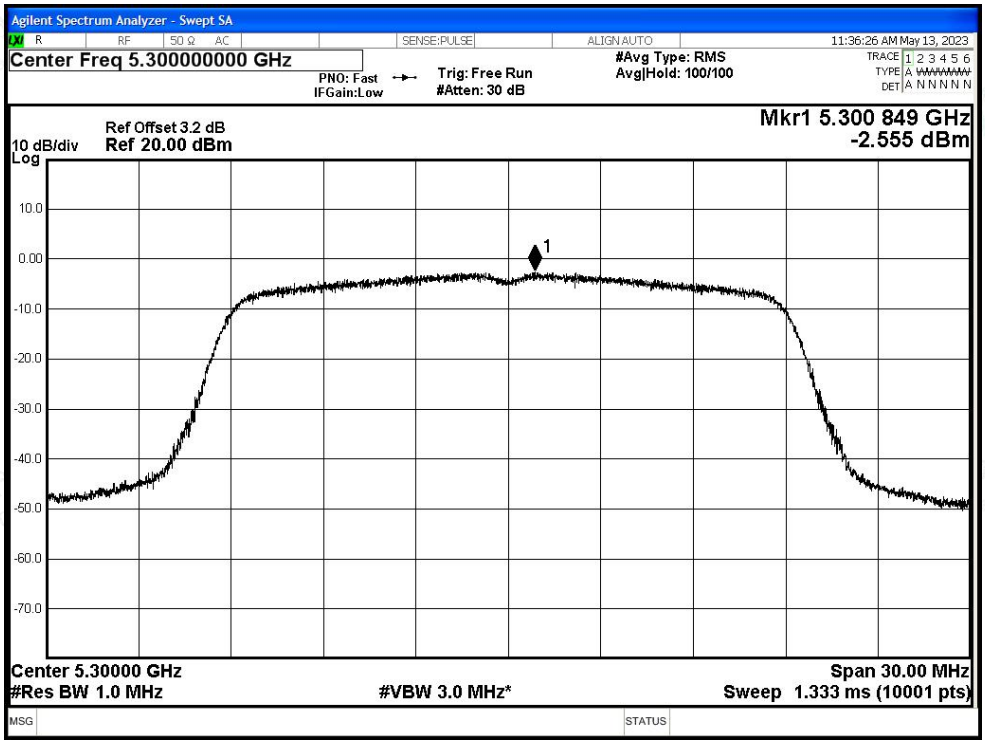
PSD NVNT n40 5310MHz Ant0



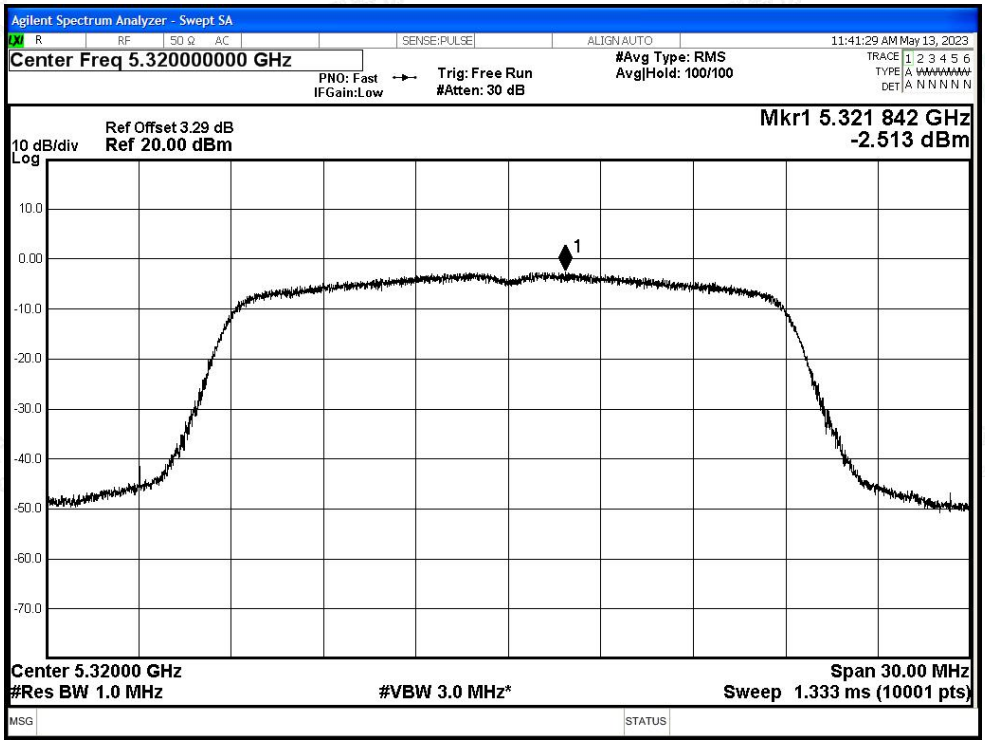
PSD NVNT ac20 5260MHz Ant0



PSD NVNT ac20 5300MHz Ant0



PSD NVNT ac20 5320MHz Ant0



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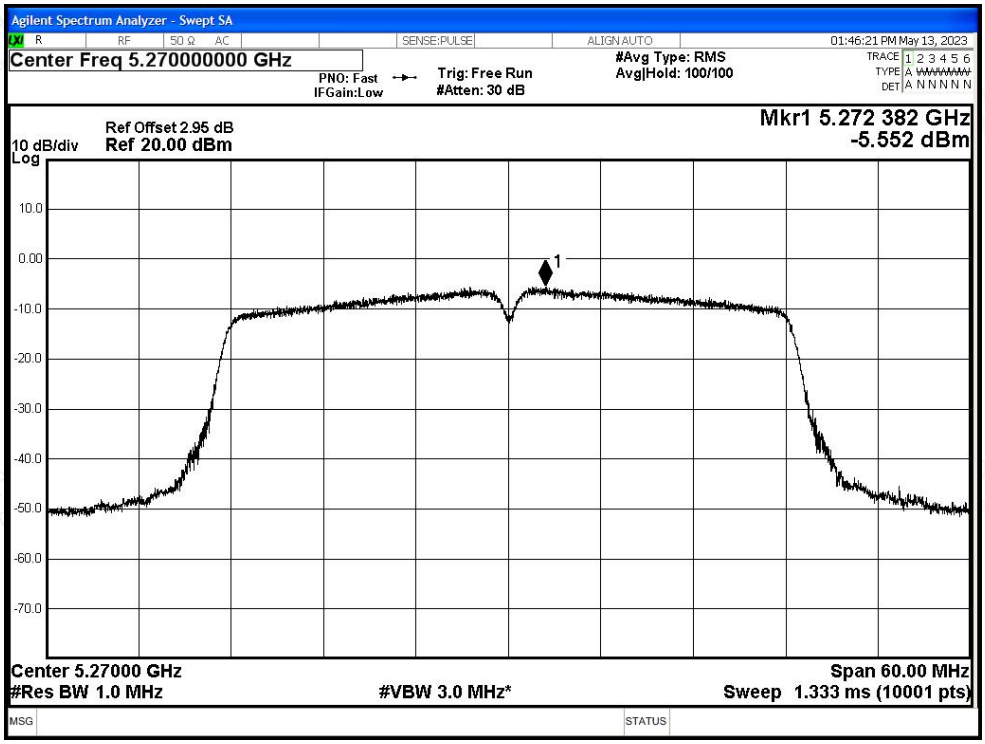
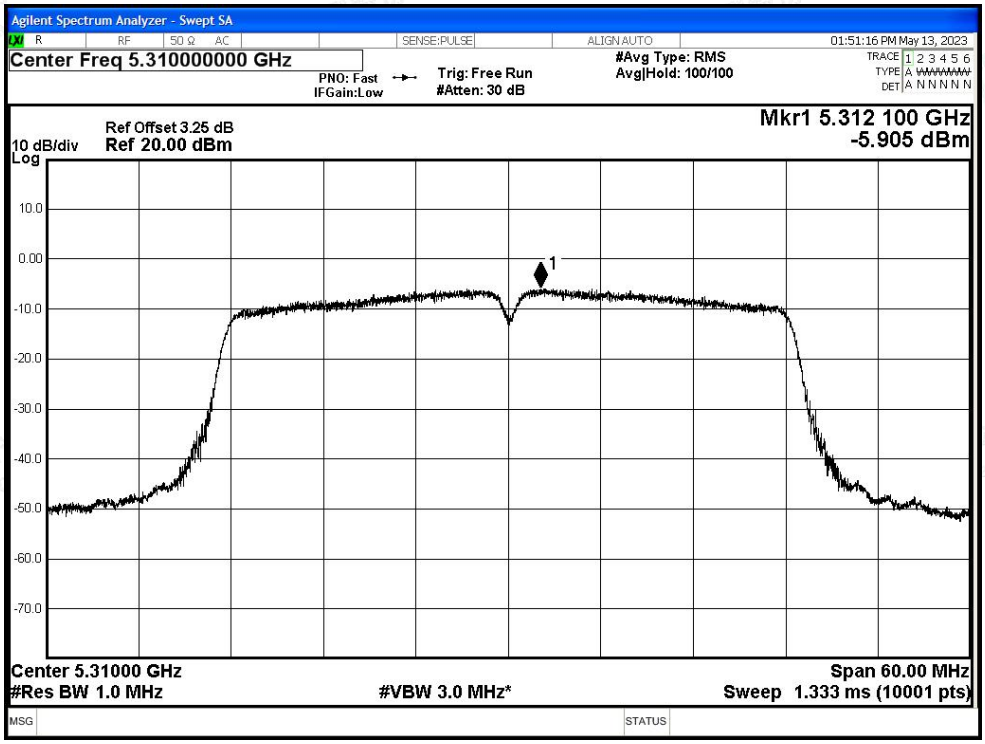
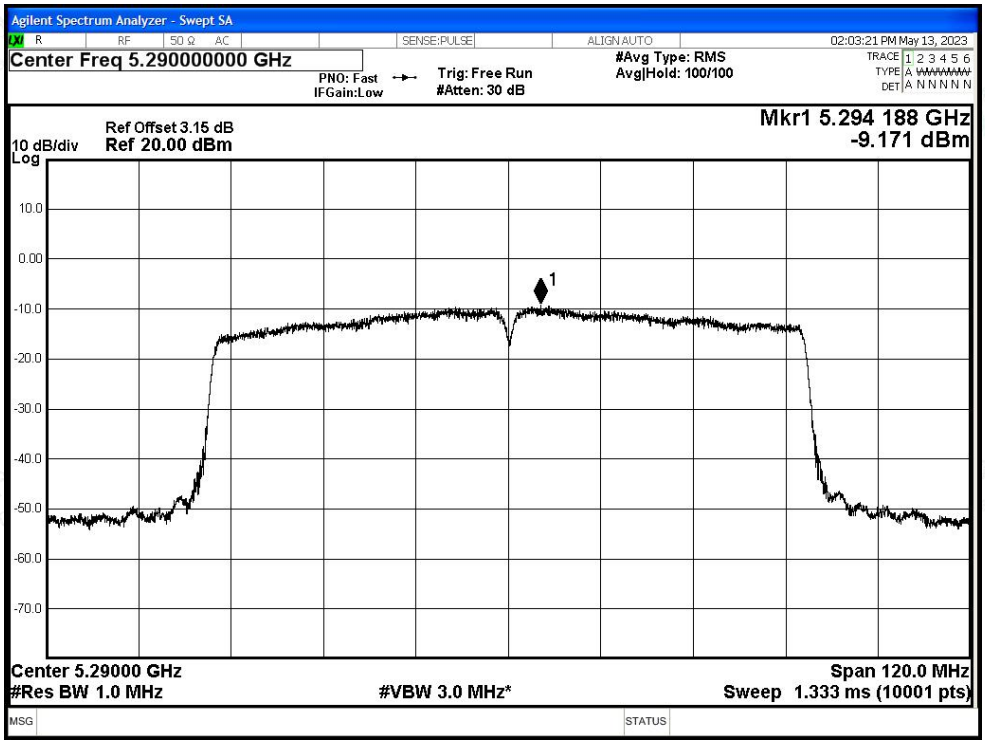


PSD NVNT ac40 5310MHz Ant0

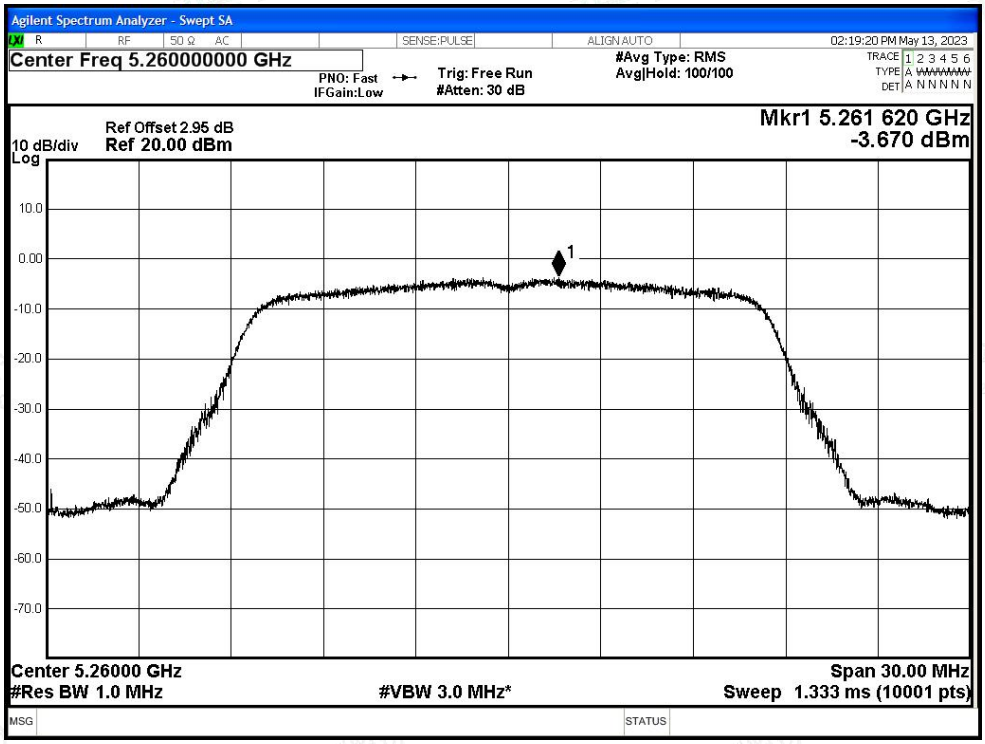


PSD NVNT ac80 5290MHz Ant0

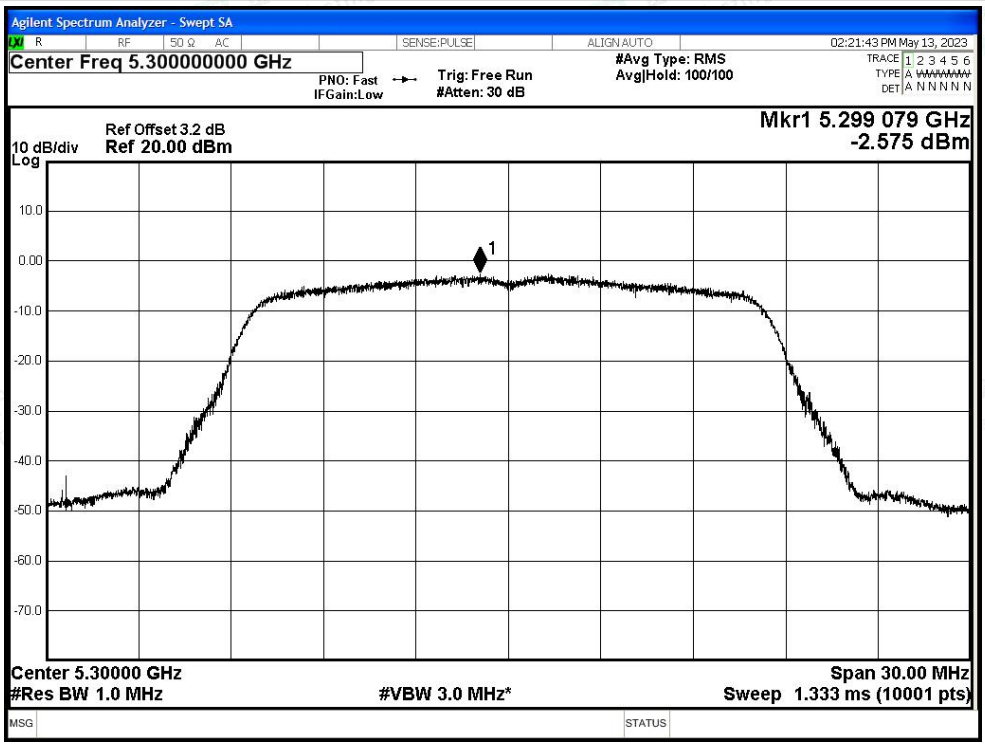


Test Graphs

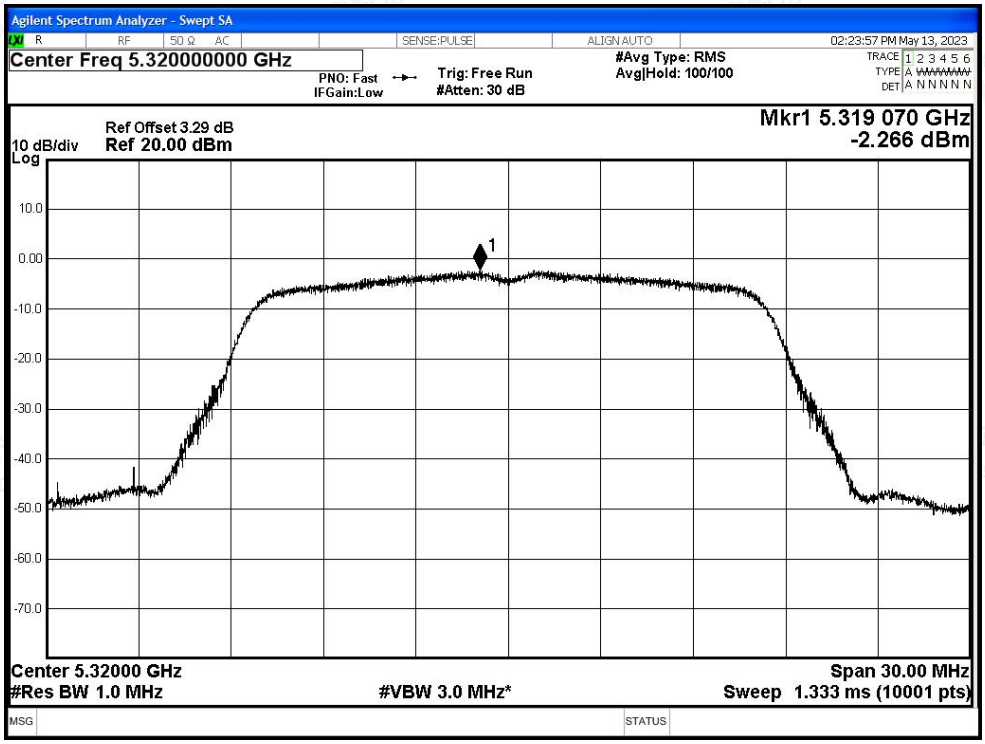
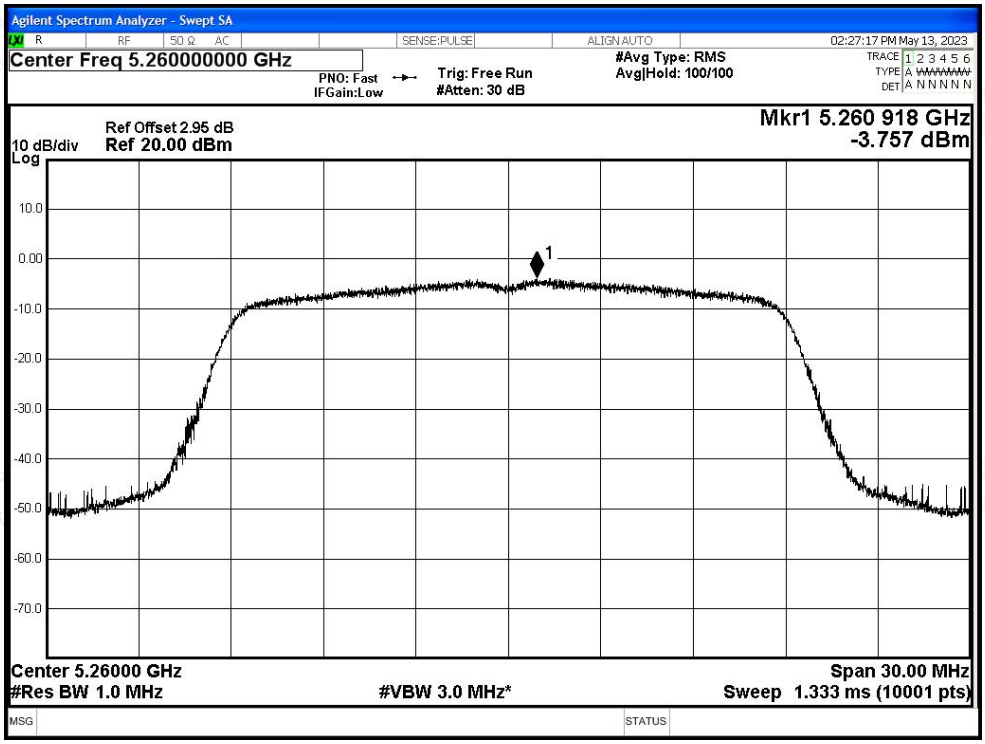
PSD NVNT a 5260MHz Ant1



PSD NVNT a 5300MHz Ant1



PSD NVNT a 5320MHz Ant1



PSD NVNT n20 5260MHz Ant1