Appendix C

RF Test Data for 2.4GWIFI (Conducted Measurement)

Product Name: IPTV Set-Top Box

Test Model: SML-5045W6

Environmental Conditions

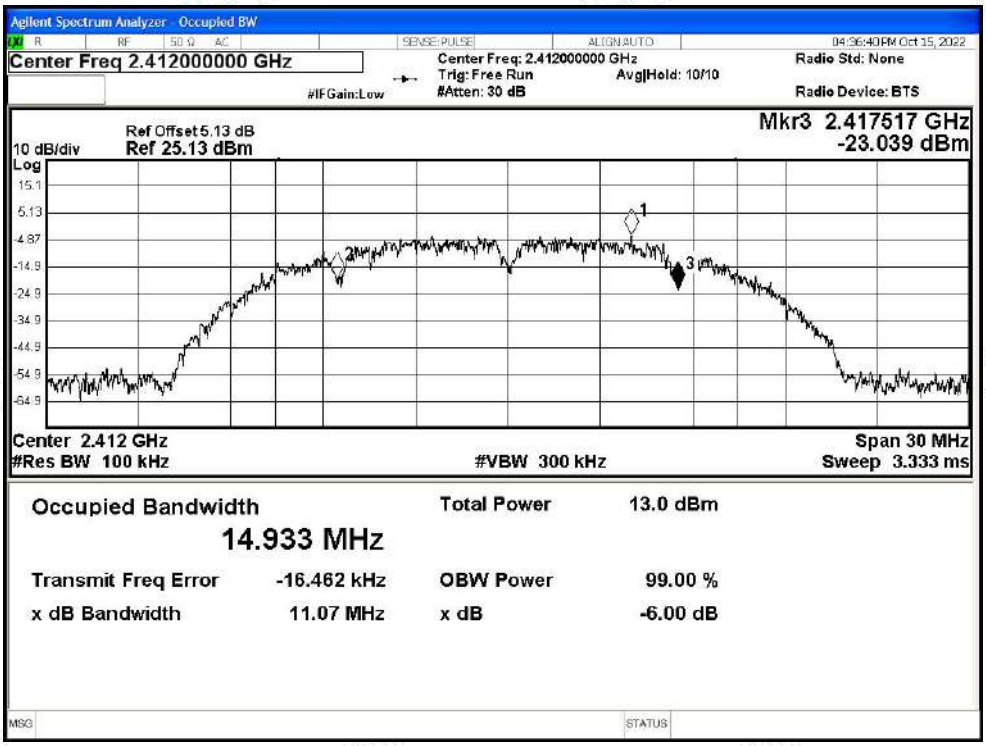
Temperature:	23.8° C
Relative Humidity:	52.1%
ATM Pressure:	100.0 kPa
Test Engineer:	Ling Zhu
Supervised by:	Li Huan

C.1 -6dB Bandwidth

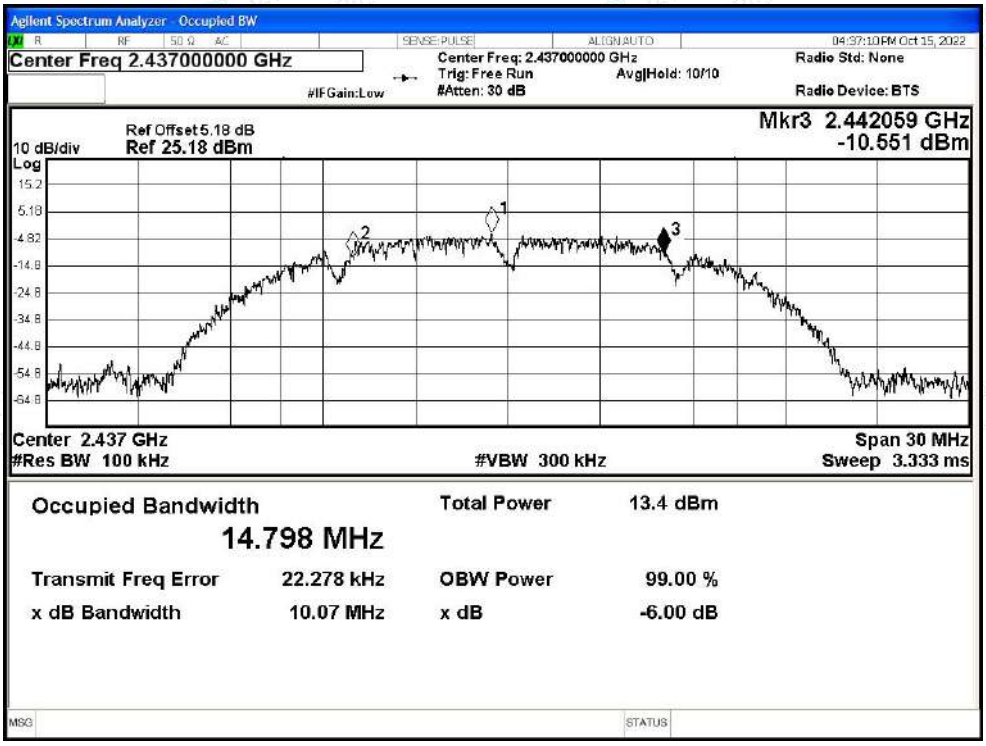
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant0	11.067	>=0.5	Pass
NVNT	b	2437	Ant0	10.074	>=0.5	Pass
NVNT	b	2462	Ant0	10.067	>=0.5	Pass
NVNT	g	2412	Ant0	16.06	>=0.5	Pass
NVNT	g	2437	Ant0	16.471	>=0.5	Pass
NVNT	g	2462	Ant0	16.274	>=0.5	Pass
NVNT	n20	2412	Ant0	17.665	>=0.5	Pass
NVNT	n20	2437	Ant0	17.601	>=0.5	Pass
NVNT	n20	2462	Ant0	17.297	>=0.5	Pass
NVNT	n40	2422	Ant0	35.326	>=0.5	Pass
NVNT	n40	2437	Ant0	36.283	>=0.5	Pass
NVNT	n40	2452	Ant0	35.998	>=0.5	Pass
NVNT	ax20	2412	Ant0	18.702	>=0.5	Pass
NVNT	ax20	2437	Ant0	18.617	>=0.5	Pass
NVNT	ax20	2462	Ant0	17.877	>=0.5	Pass
NVNT	ax40	2422	Ant0	37.909	>=0.5	Pass
NVNT	ax40	2437	Ant0	37.941	>=0.5	Pass
NVNT	ax40	2452	Ant0	37.903	>=0.5	Pass

Test Graphs

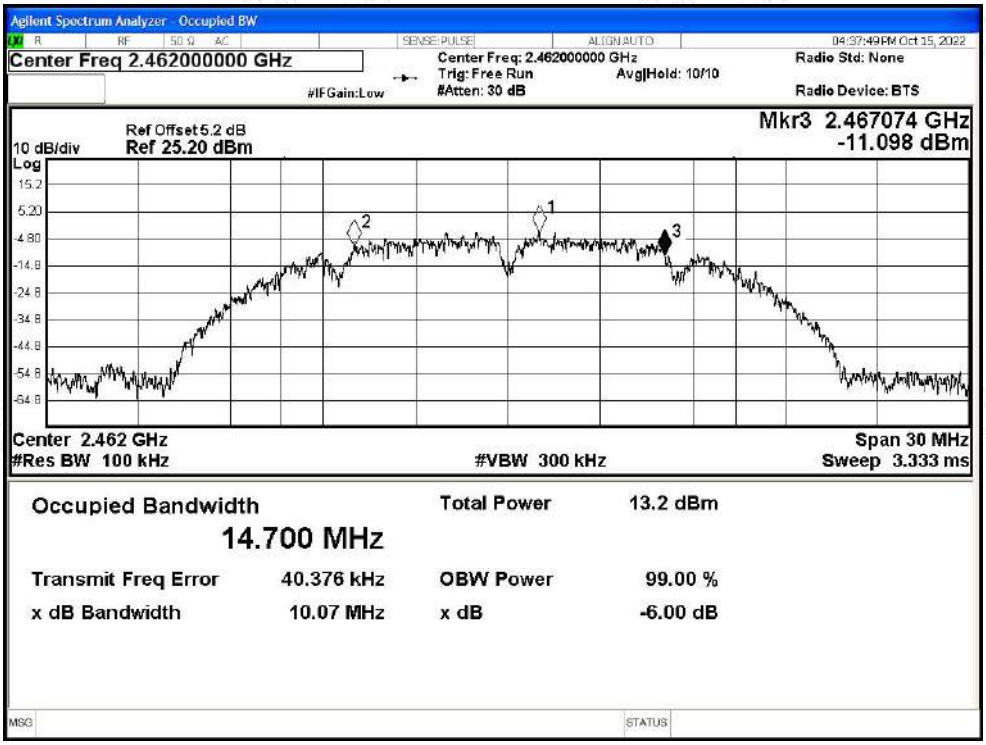
-6dB Bandwidth NVNT b 2412MHz Ant0



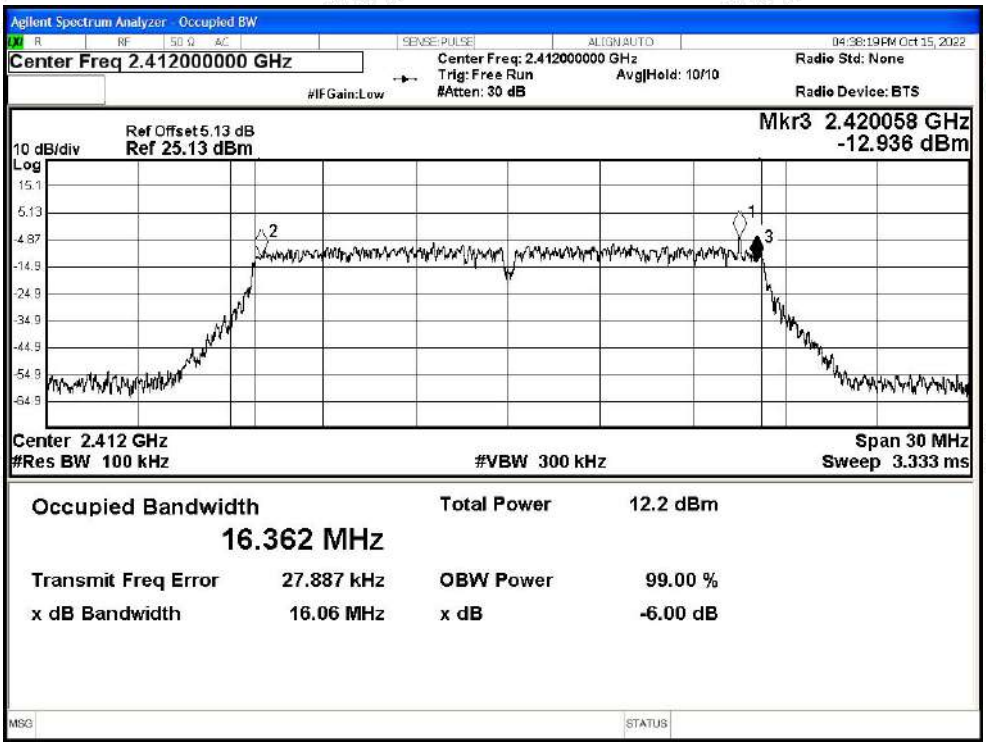
-6dB Bandwidth NVNT b 2437MHz Ant0



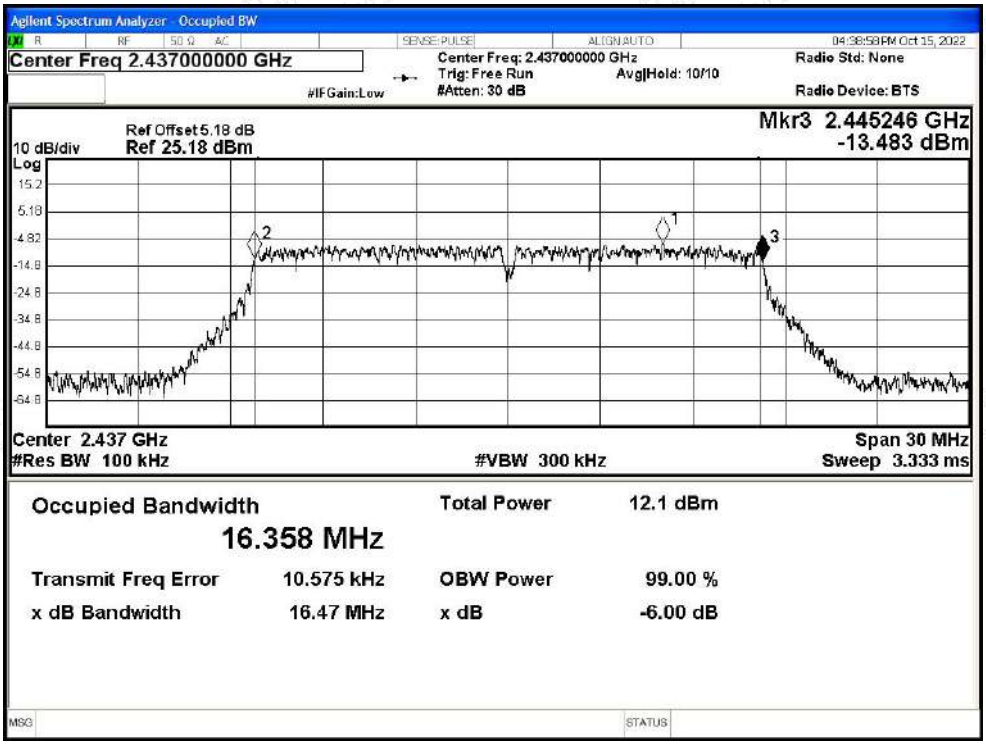
-6dB Bandwidth NVNT b 2462MHz Ant0



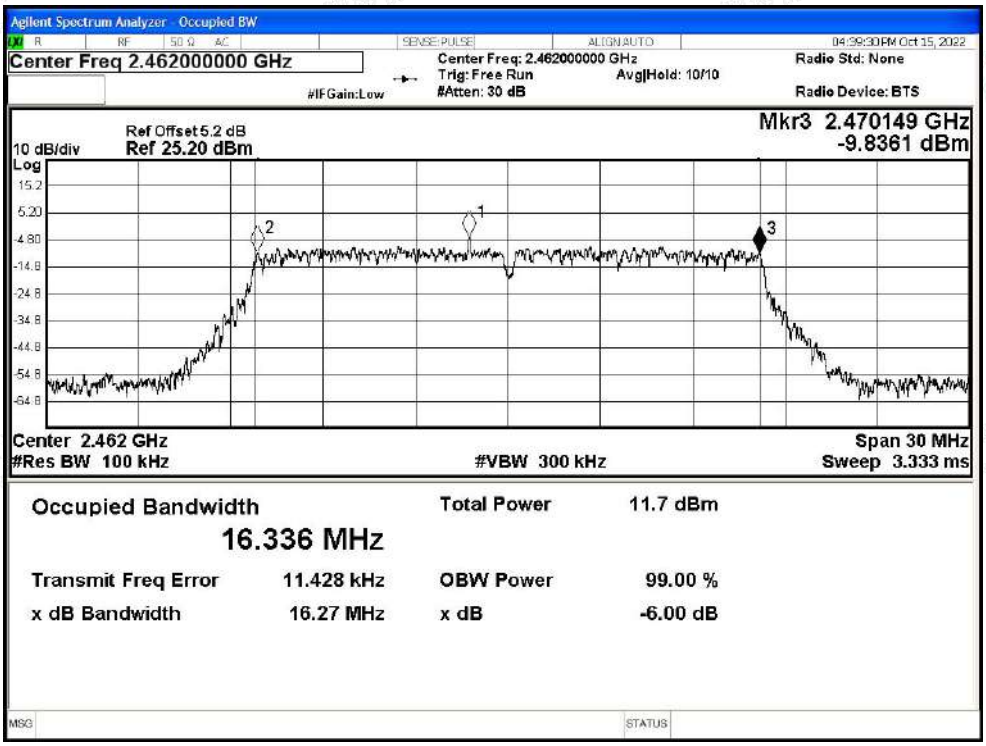
-6dB Bandwidth NVNT g 2412MHz Ant0



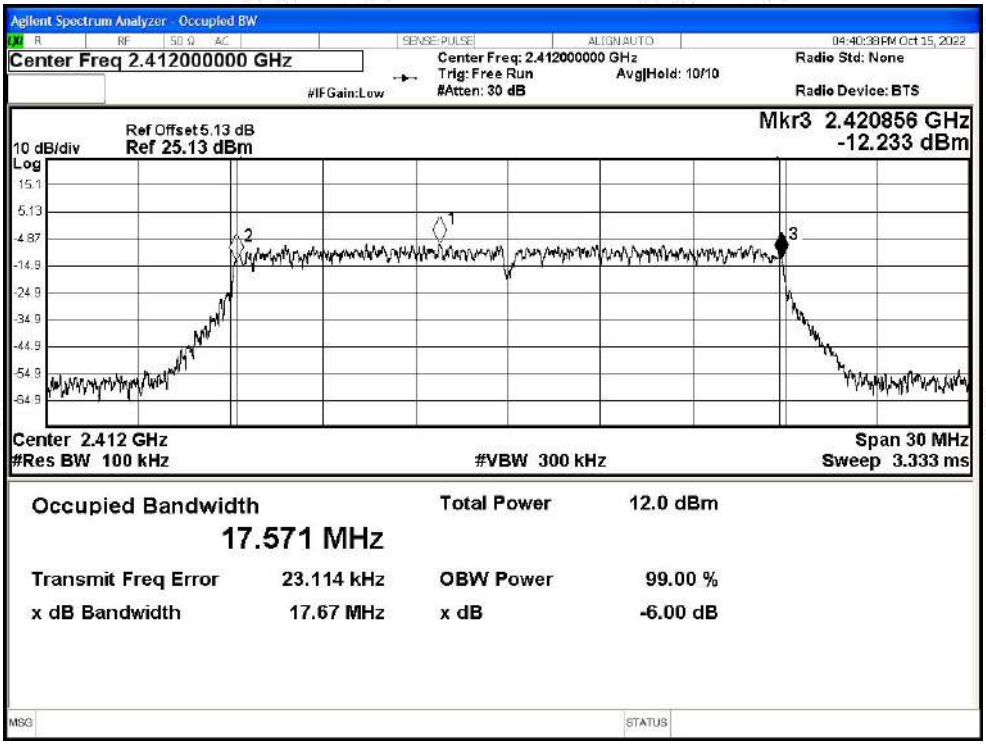
-6dB Bandwidth NVNT g 2437MHz Ant0



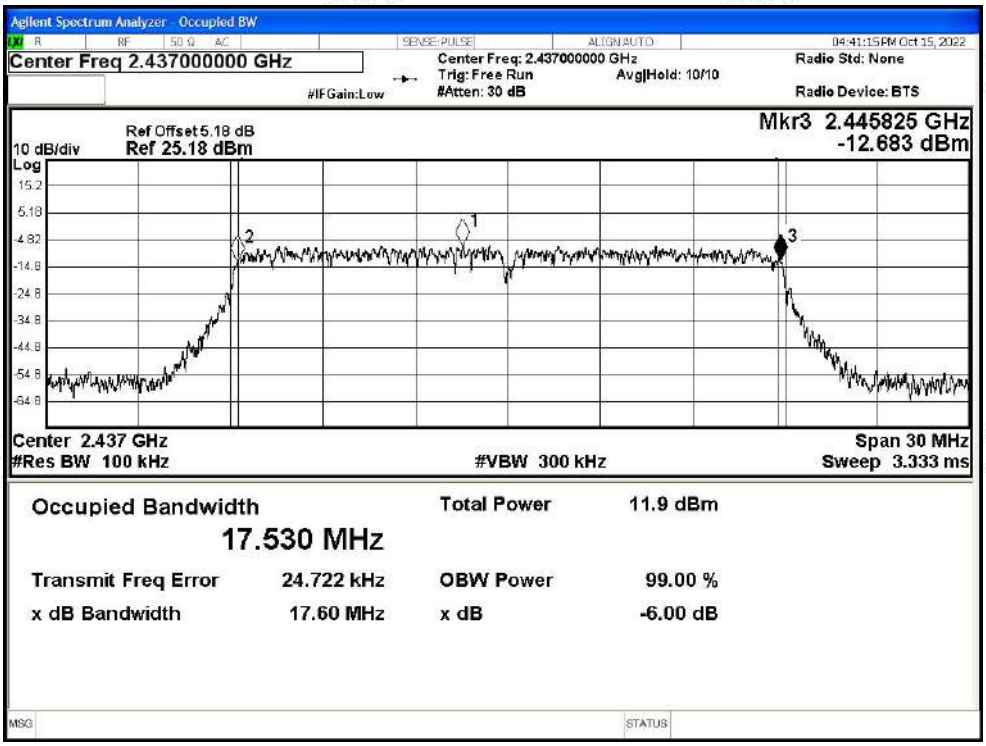
-6dB Bandwidth NVNT g 2462MHz Ant0



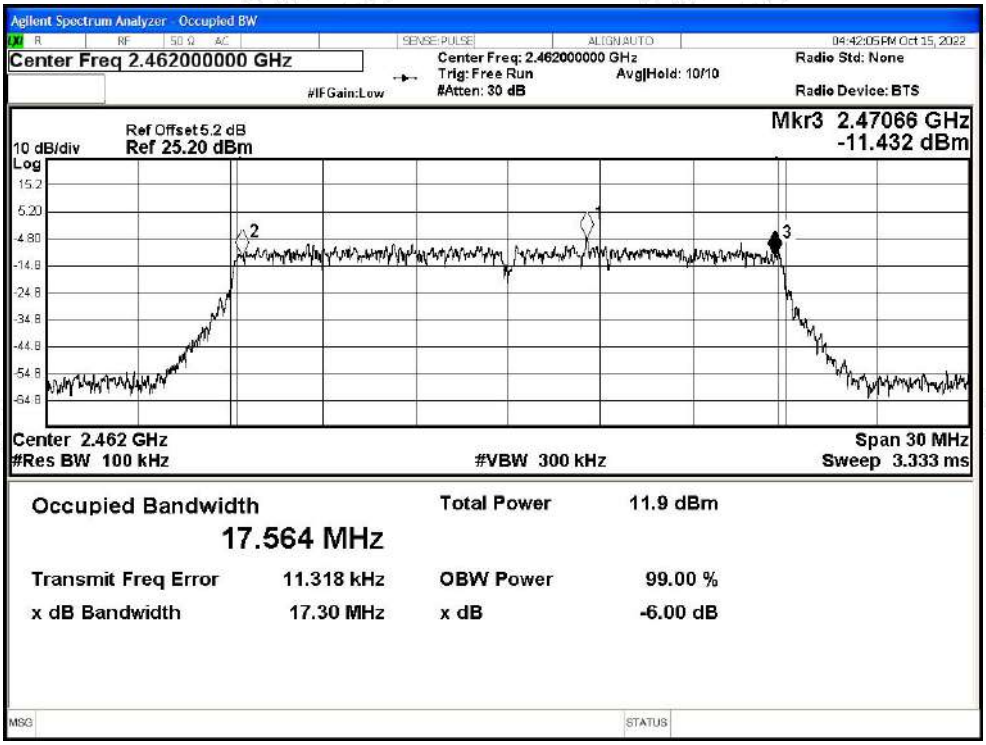
-6dB Bandwidth NVNT n20 2412MHz Ant0



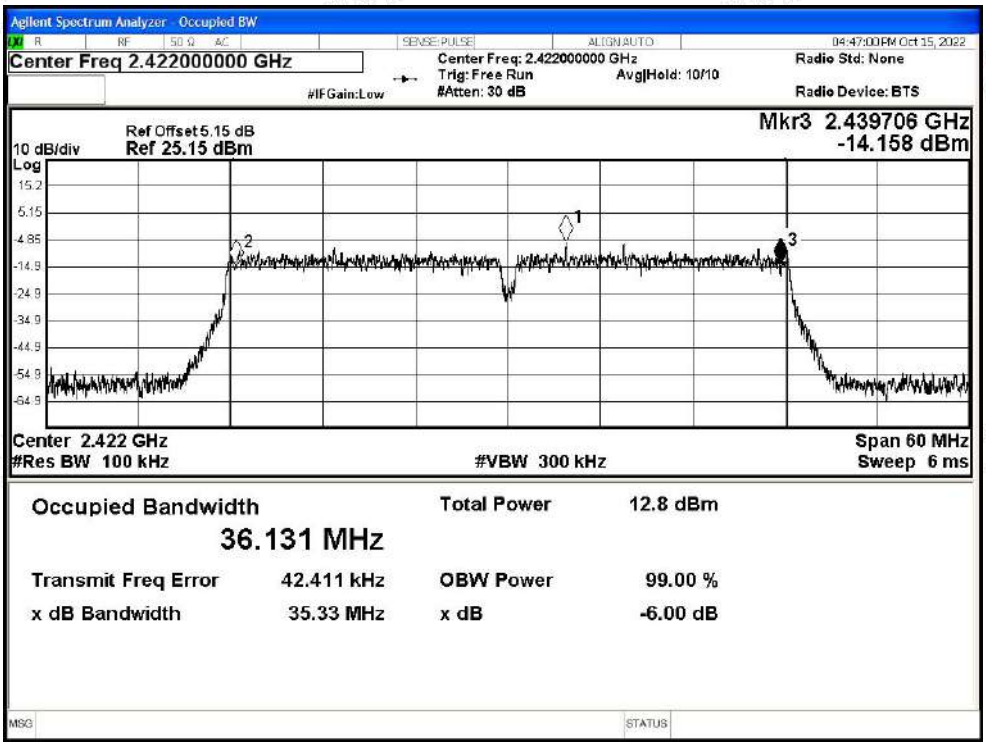
-6dB Bandwidth NVNT n20 2437MHz Ant0



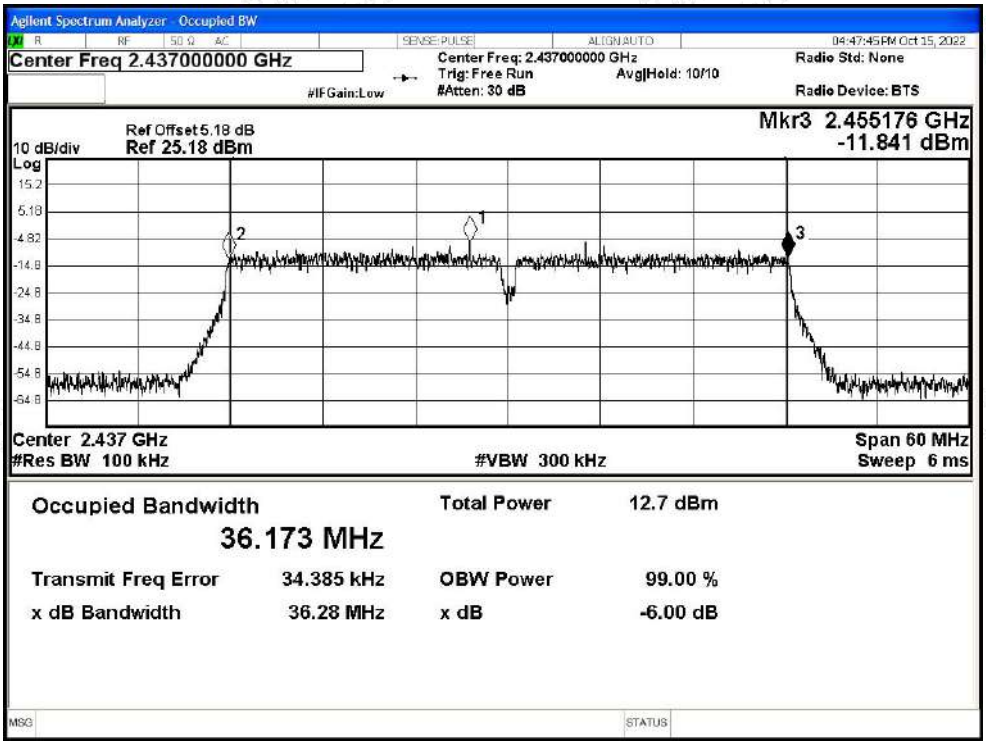
-6dB Bandwidth NVNT n20 2462MHz Ant0



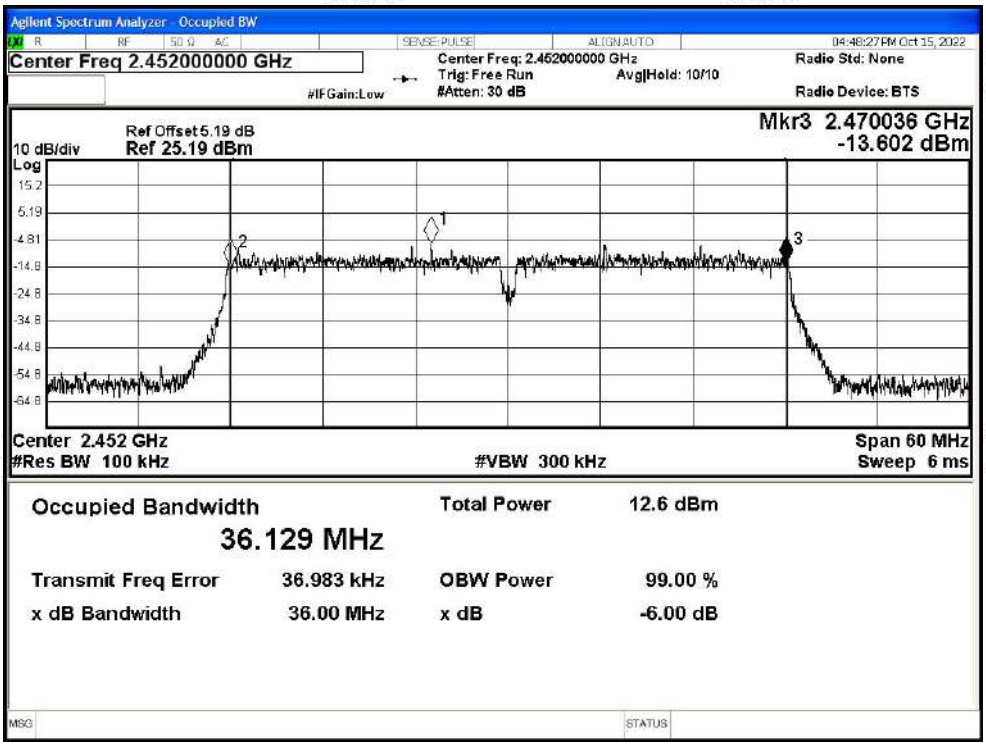
-6dB Bandwidth NVNT n40 2422MHz Ant0



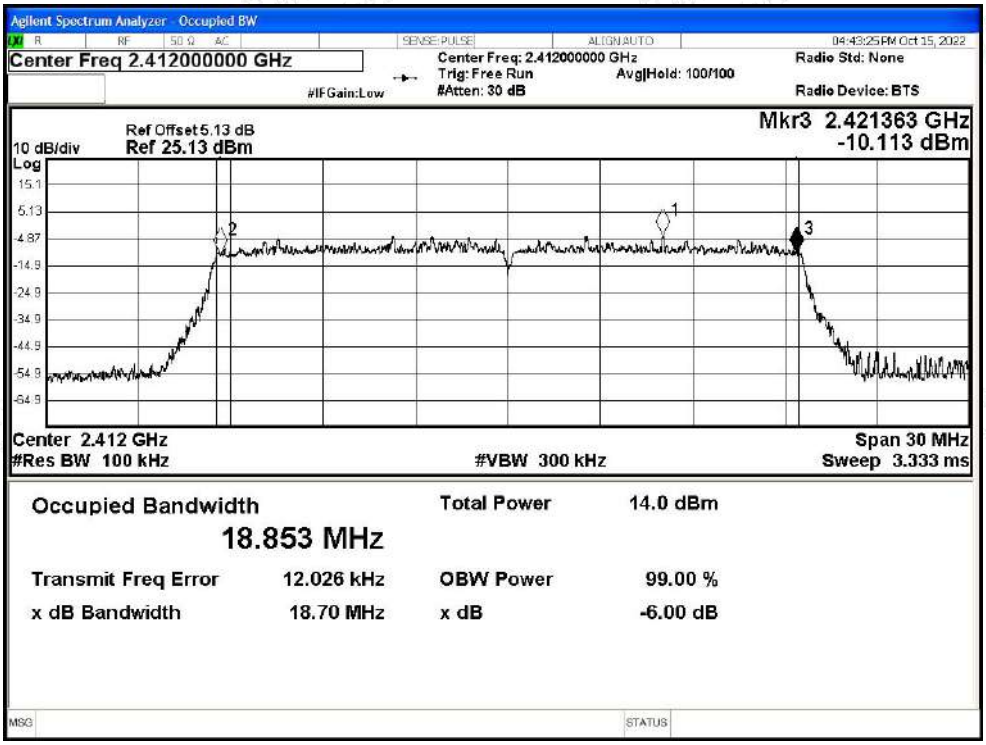
-6dB Bandwidth NVNT n40 2437MHz Ant0



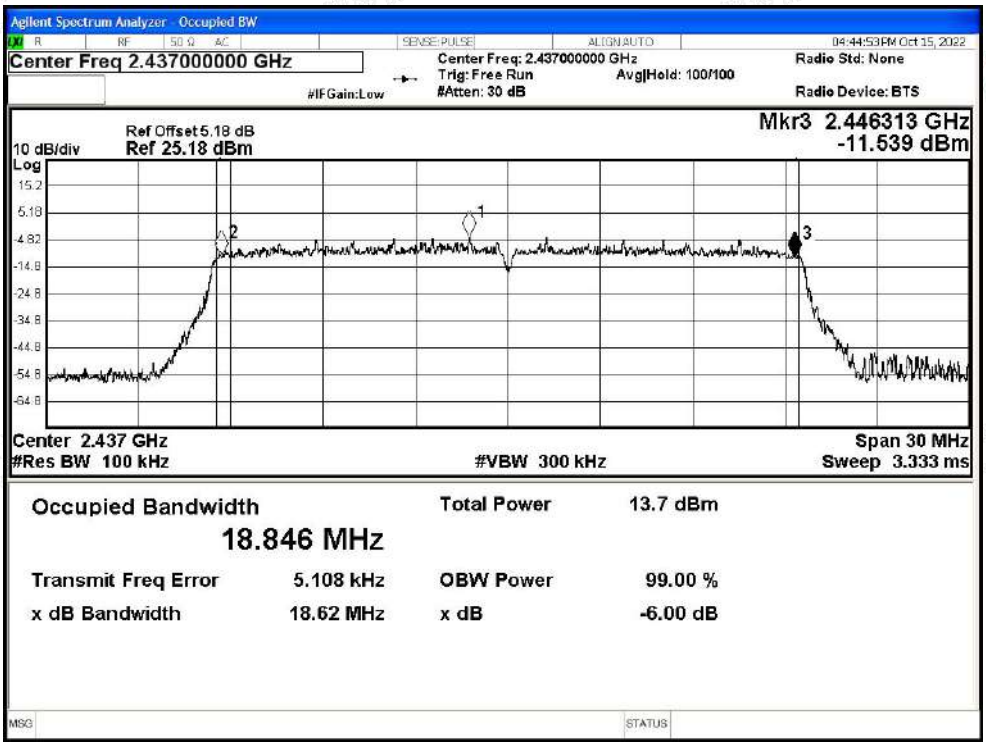
-6dB Bandwidth NVNT n40 2452MHz Ant0



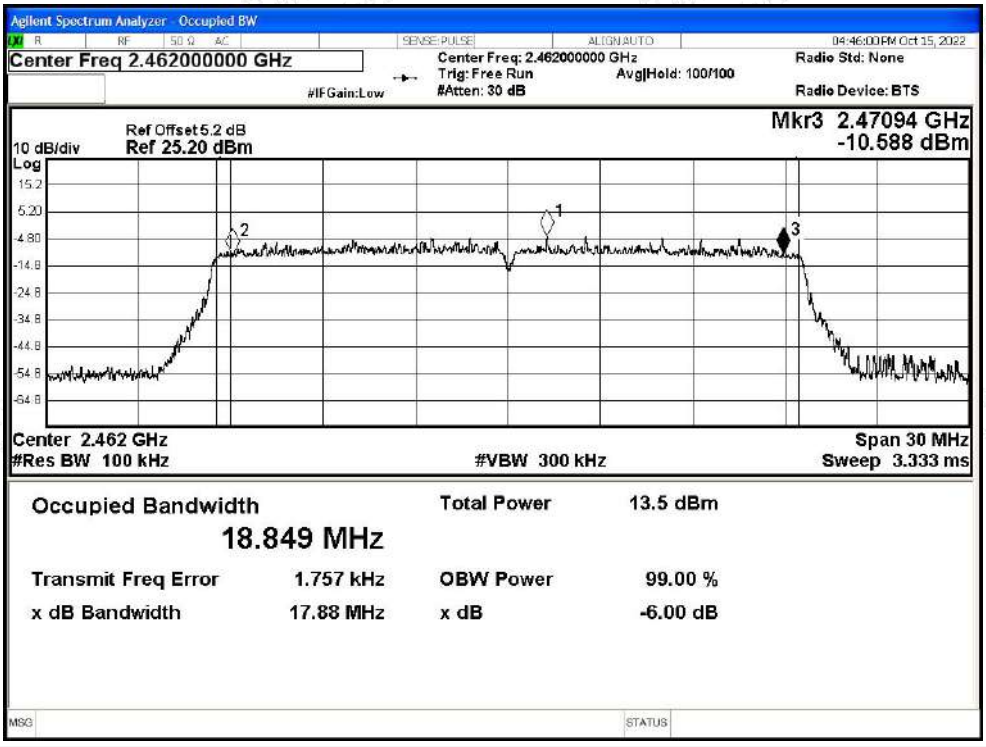
-6dB Bandwidth NVNT ax20 2412MHz Ant0



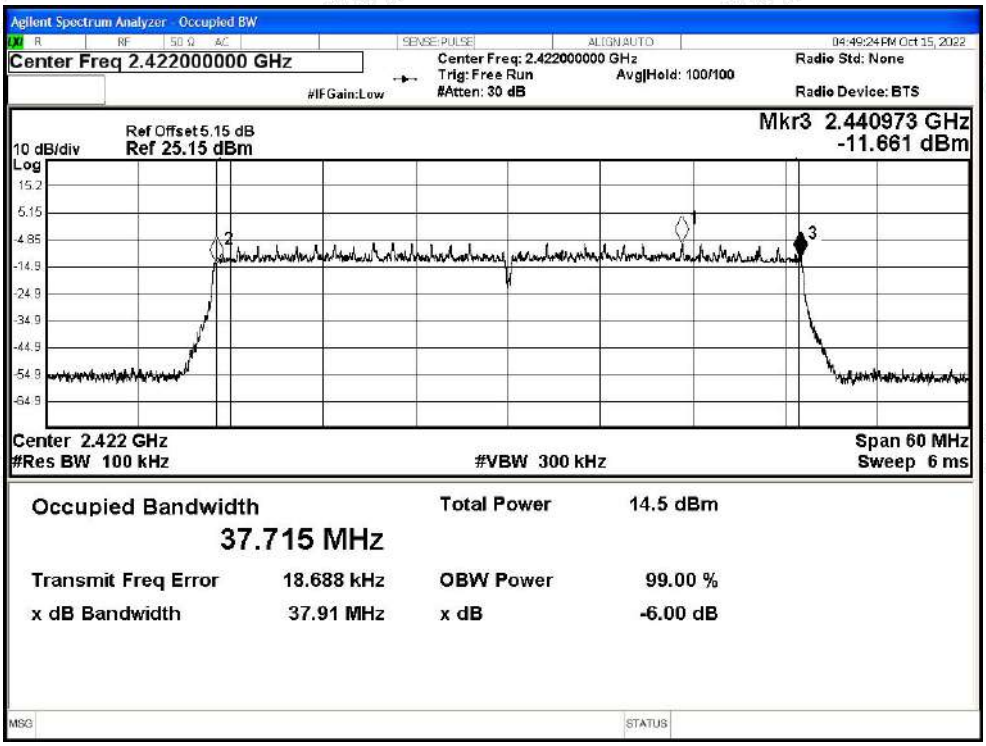
-6dB Bandwidth NVNT ax20 2437MHz Ant0



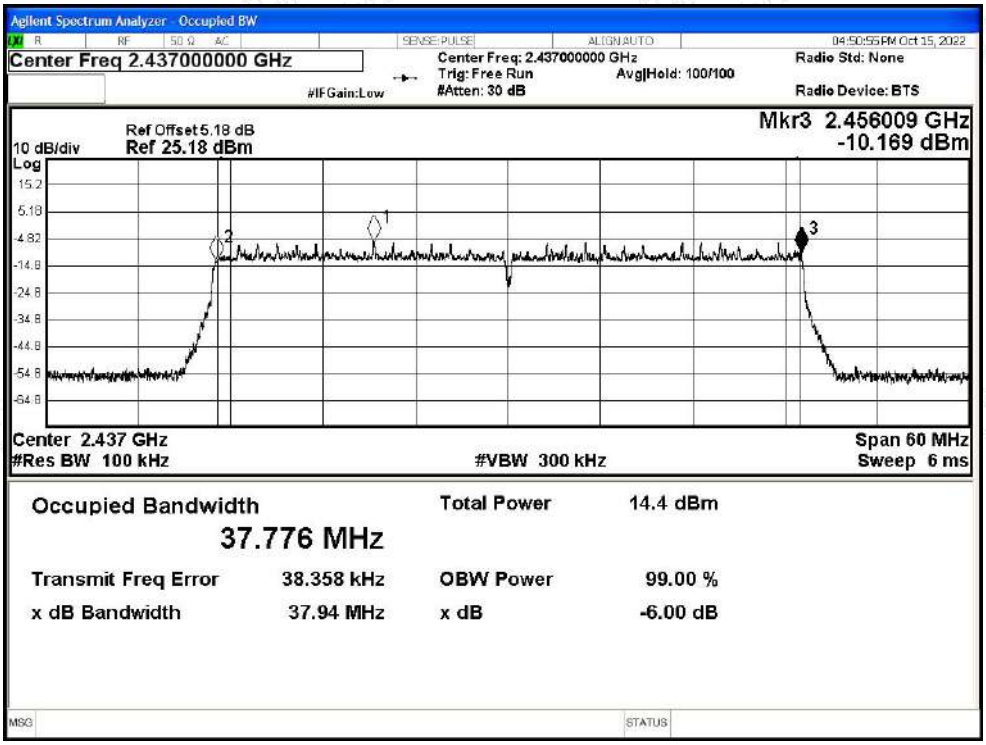
-6dB Bandwidth NVNT ax20 2462MHz Ant0



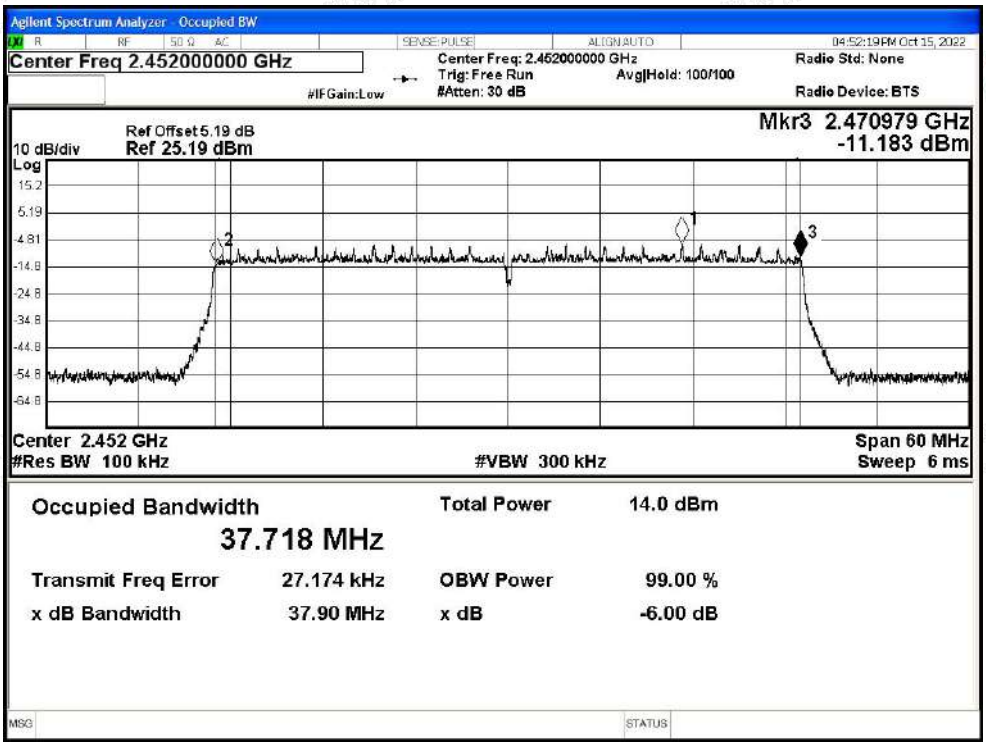
-6dB Bandwidth NVNT ax40 2422MHz Ant0



-6dB Bandwidth NVNT ax40 2437MHz Ant0



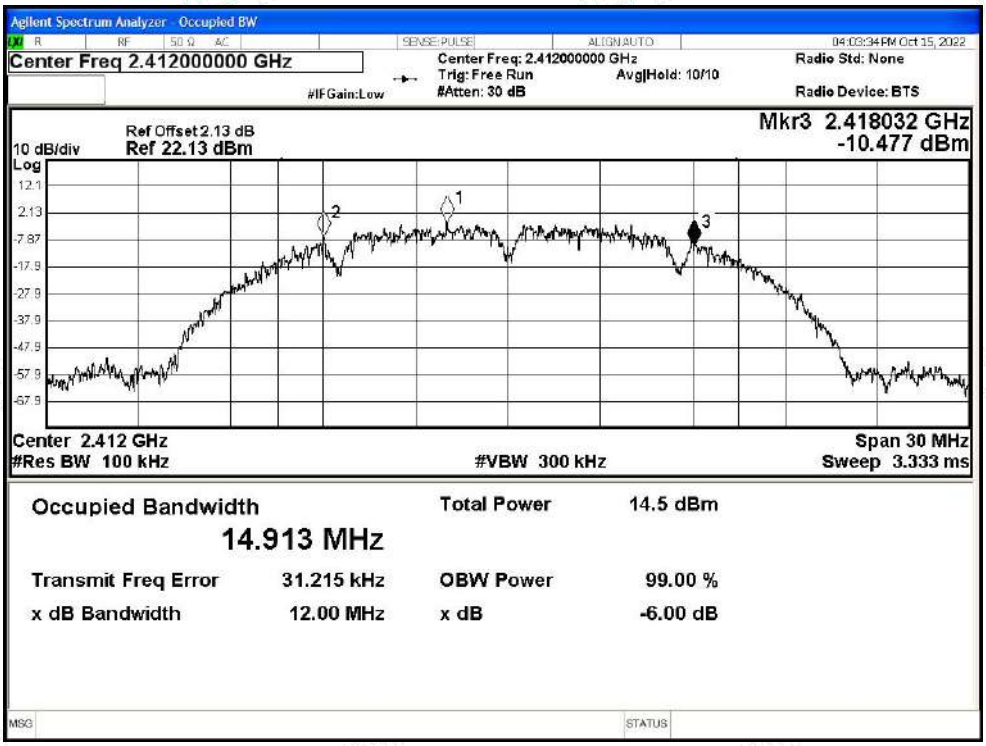
-6dB Bandwidth NVNT ax40 2452MHz Ant0



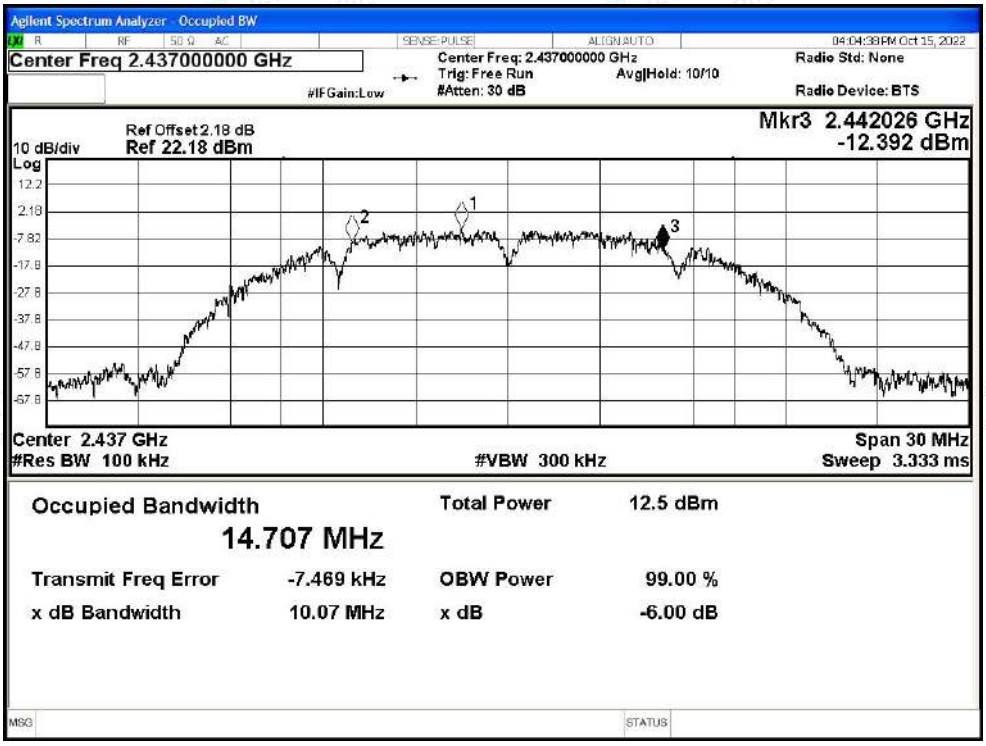
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	12.001	>=0.5	Pass
NVNT	b	2437	Ant1	10.067	>=0.5	Pass
NVNT	b	2462	Ant1	9.71	>=0.5	Pass
NVNT	g	2412	Ant1	16.388	>=0.5	Pass
NVNT	g	2437	Ant1	16.323	>=0.5	Pass
NVNT	g	2462	Ant1	16.3	>=0.5	Pass
NVNT	n20	2412	Ant1	17.69	>=0.5	Pass
NVNT	n20	2437	Ant1	17.518	>=0.5	Pass
NVNT	n20	2462	Ant1	17.145	>=0.5	Pass
NVNT	n40	2422	Ant1	35.537	>=0.5	Pass
NVNT	n40	2437	Ant1	36.325	>=0.5	Pass
NVNT	n40	2452	Ant1	36.011	>=0.5	Pass
NVNT	ax20	2412	Ant1	17.541	>=0.5	Pass
NVNT	ax20	2437	Ant1	17.294	>=0.5	Pass
NVNT	ax20	2462	Ant1	16.925	>=0.5	Pass
NVNT	ax40	2422	Ant1	37.931	>=0.5	Pass
NVNT	ax40	2437	Ant1	37.95	>=0.5	Pass
NVNT	ax40	2452	Ant1	37.918	>=0.5	Pass

Test Graphs

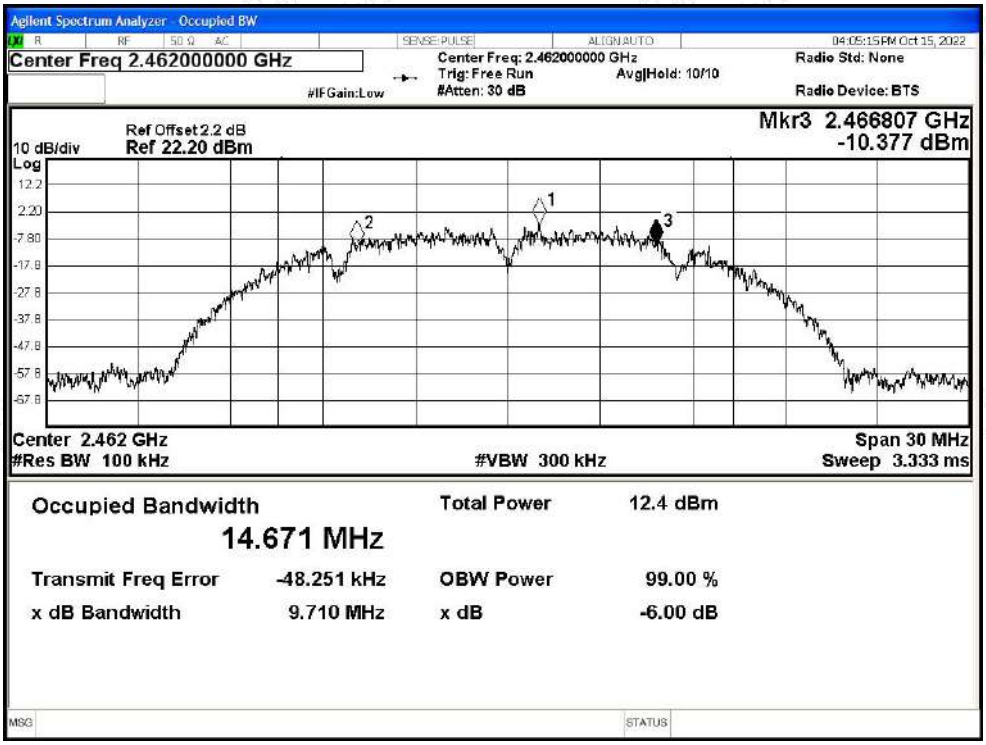
-6dB Bandwidth NVNT b 2412MHz Ant1



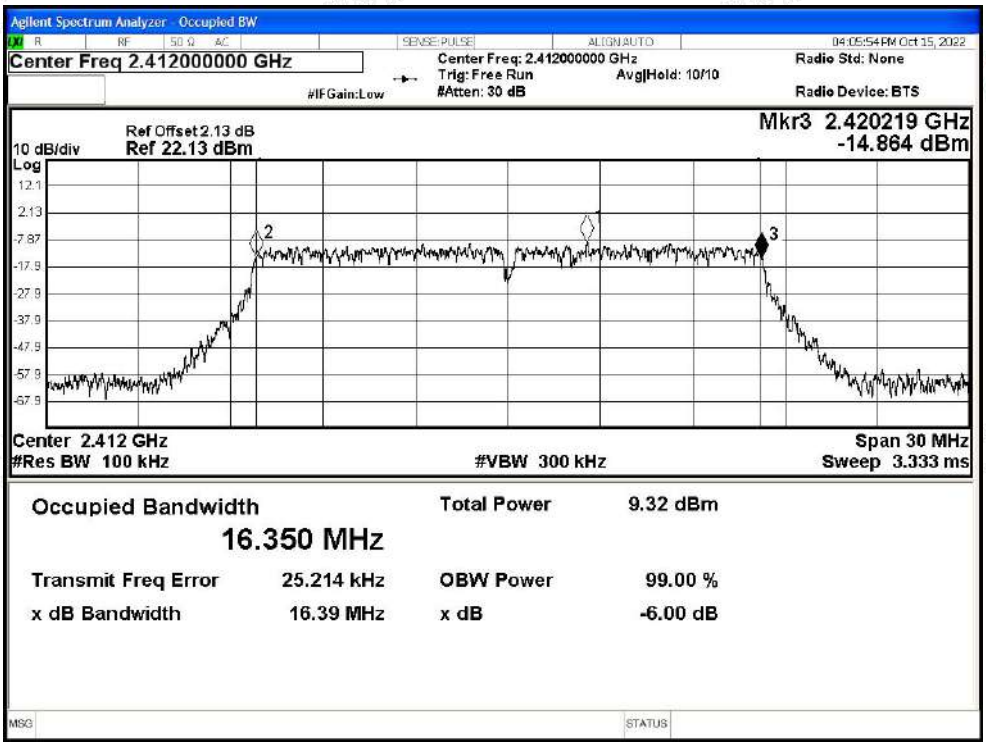
-6dB Bandwidth NVNT b 2437MHz Ant1



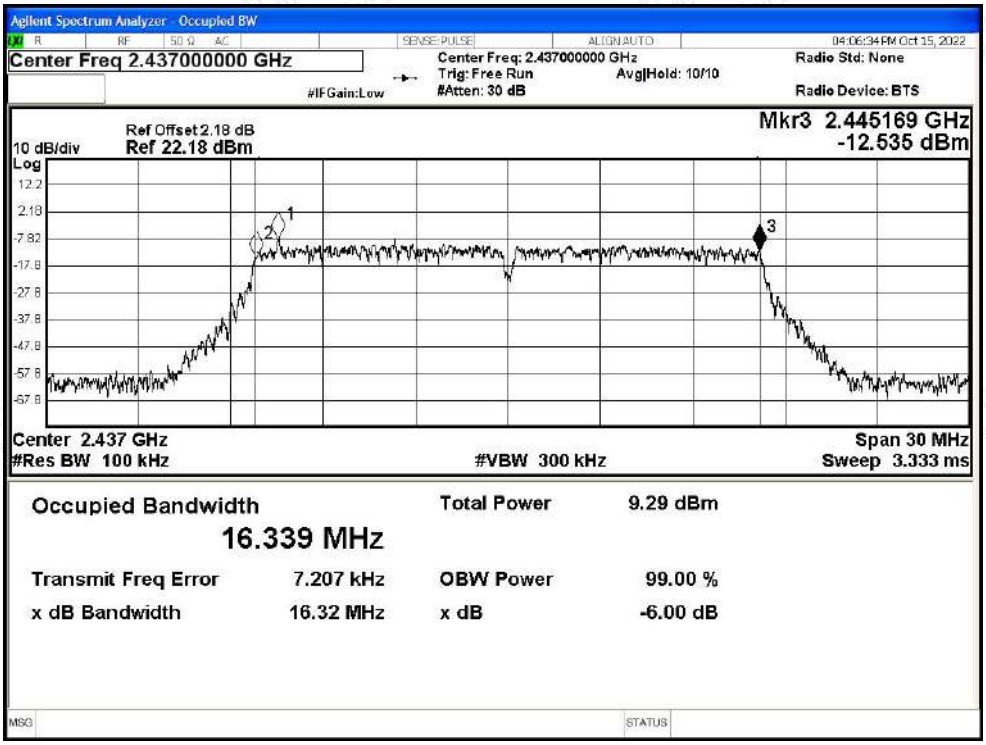
-6dB Bandwidth NVNT b 2462MHz Ant1



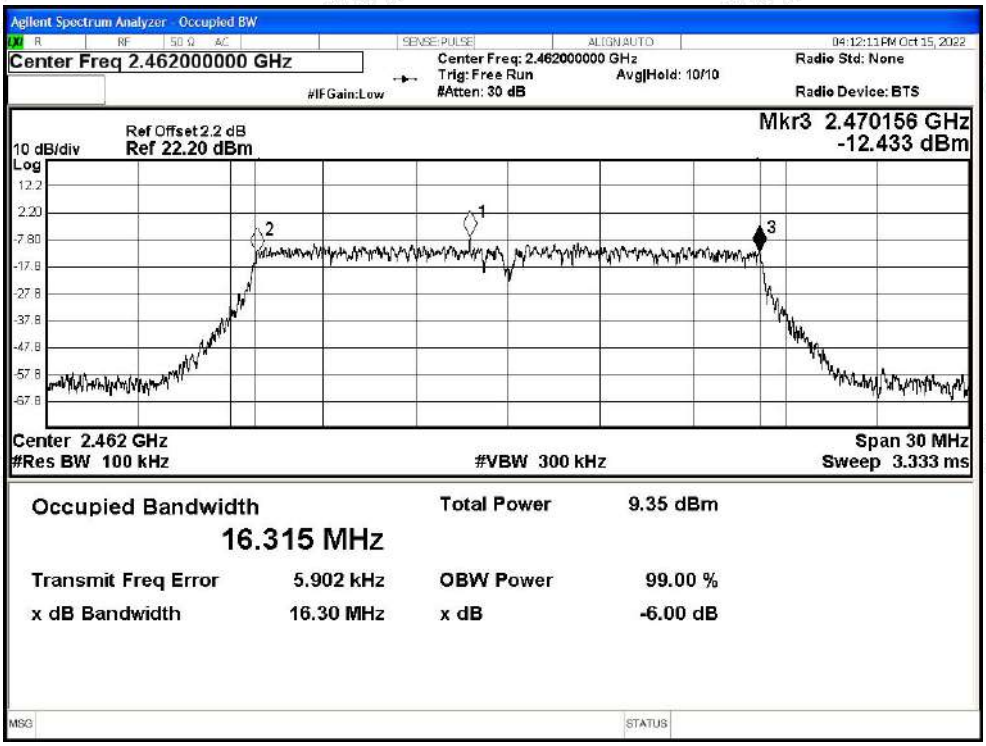
-6dB Bandwidth NVNT g 2412MHz Ant1



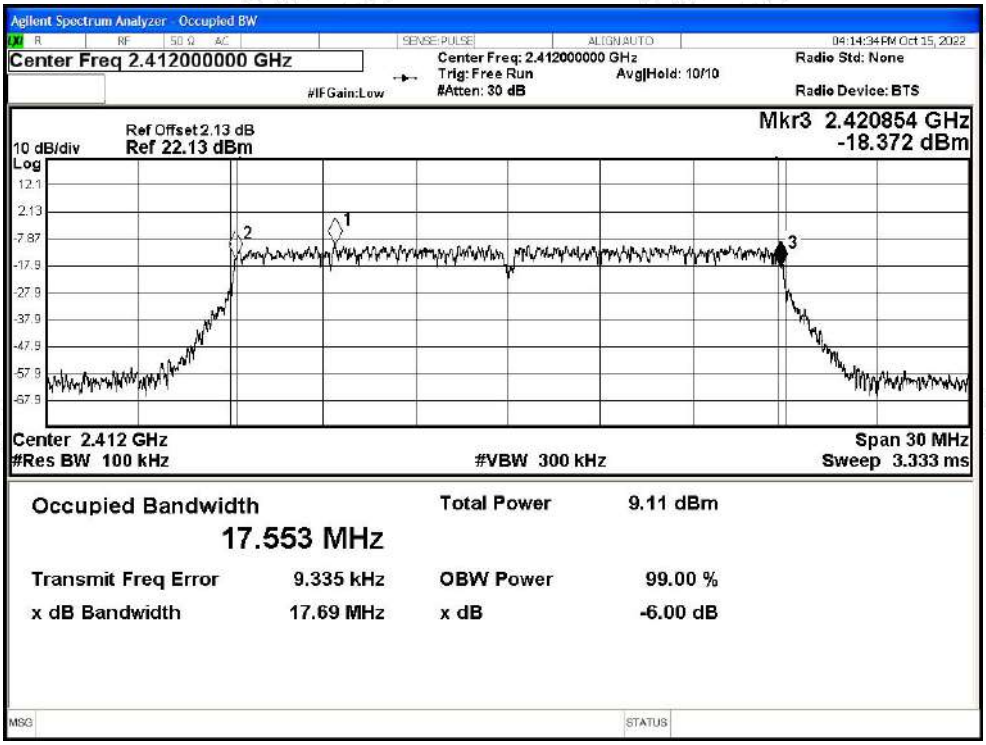
-6dB Bandwidth NVNT g 2437MHz Ant1



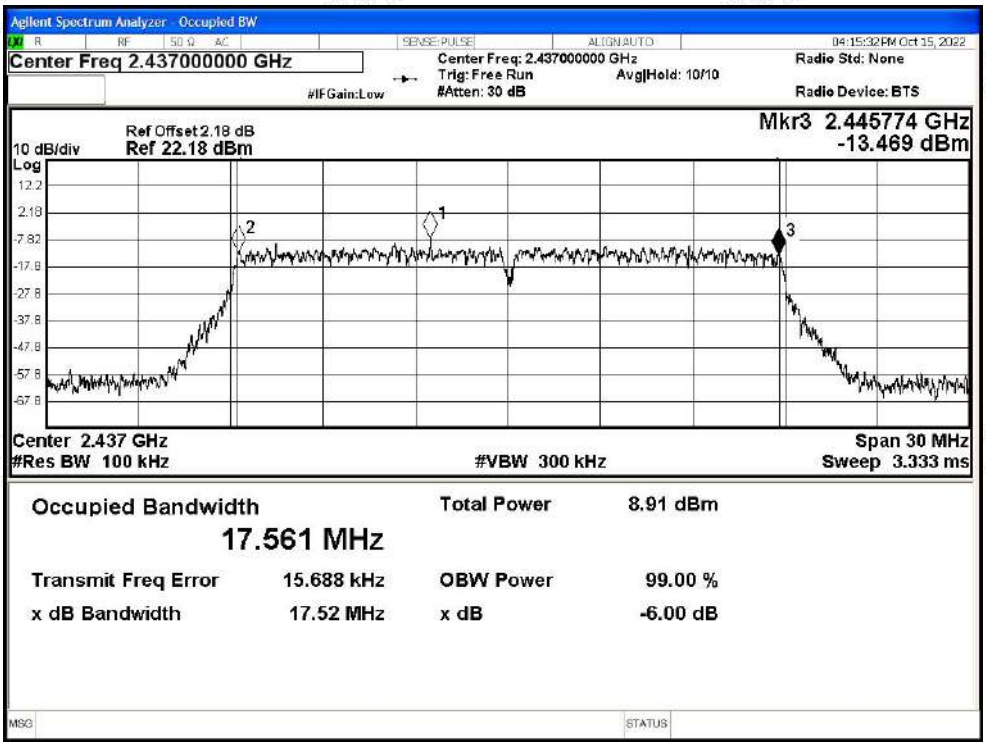
-6dB Bandwidth NVNT g 2462MHz Ant1



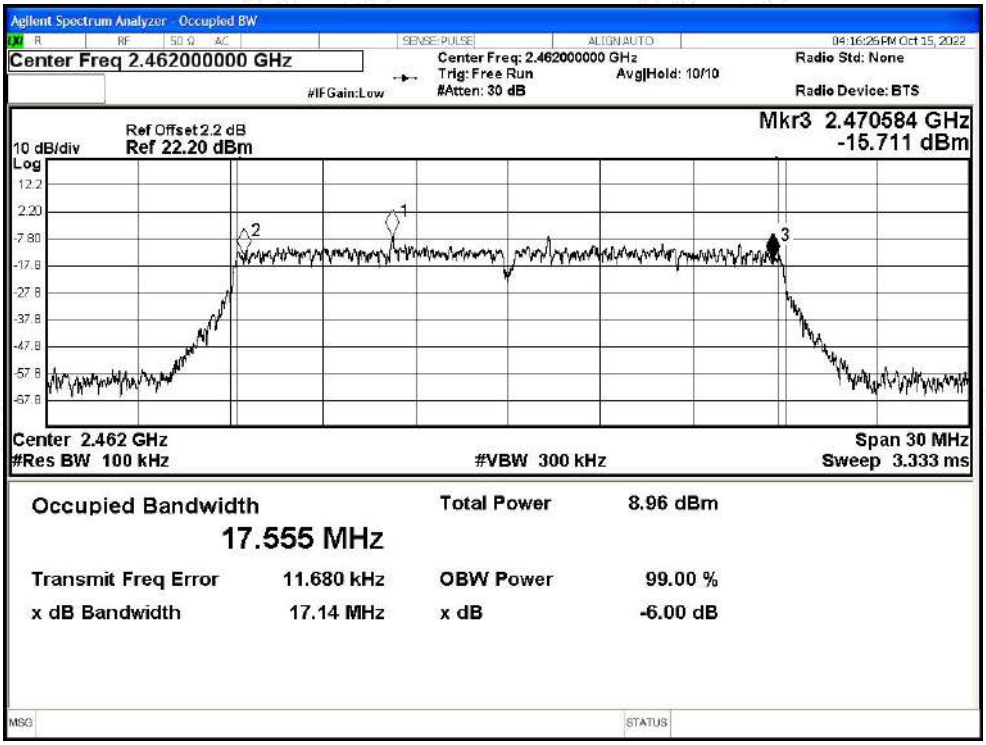
-6dB Bandwidth NVNT n20 2412MHz Ant1



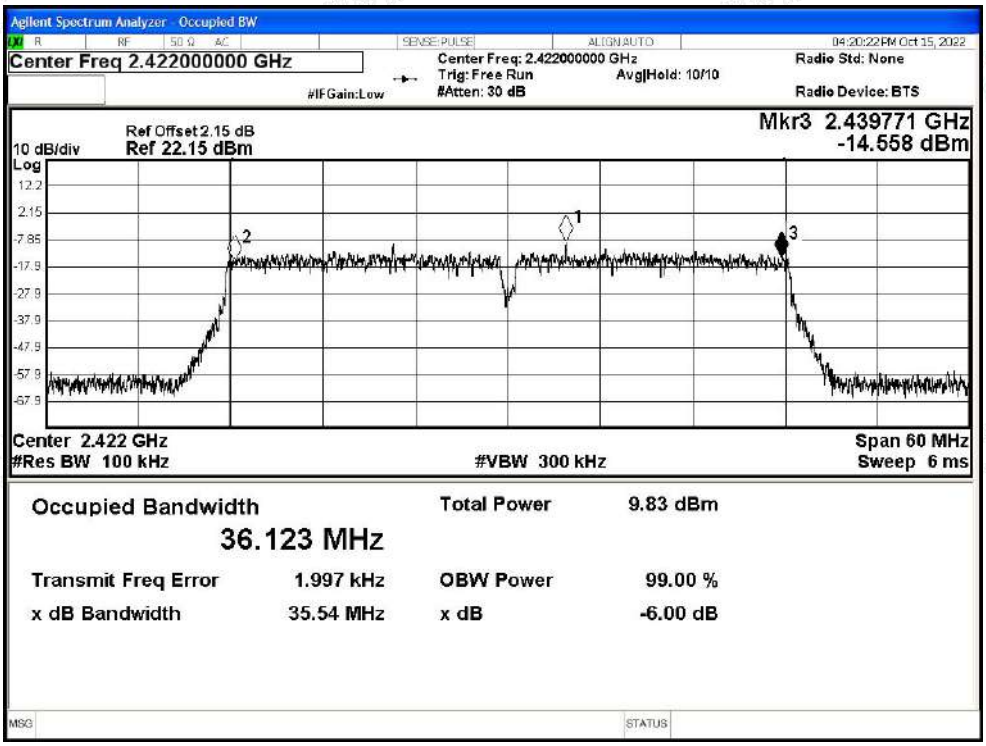
-6dB Bandwidth NVNT n20 2437MHz Ant1



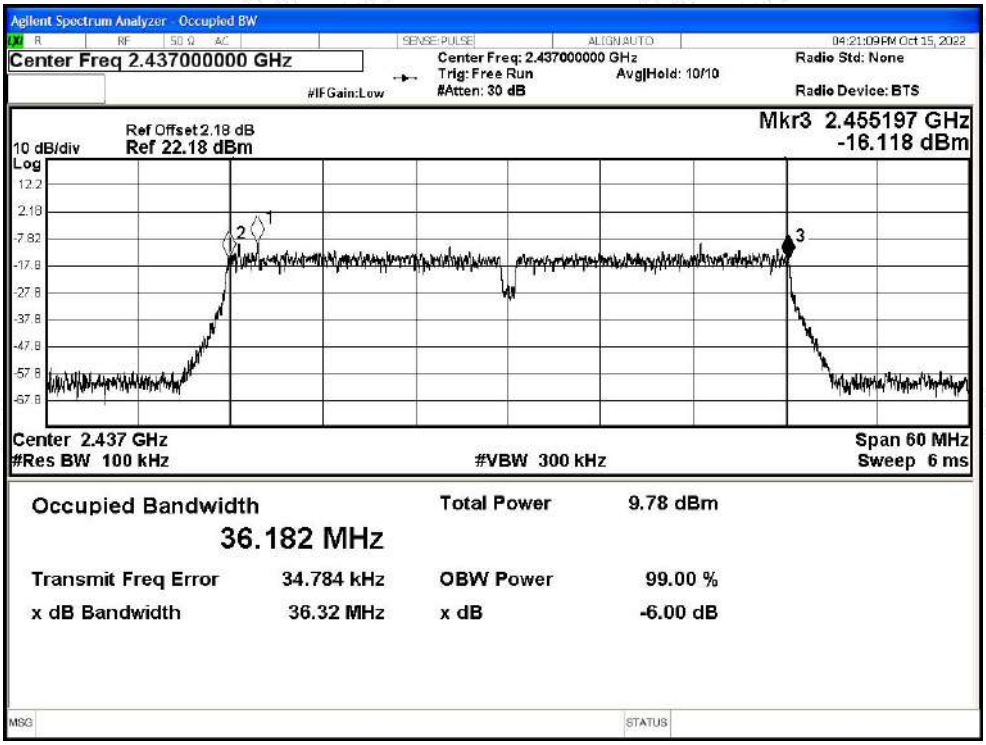
-6dB Bandwidth NVNT n20 2462MHz Ant1



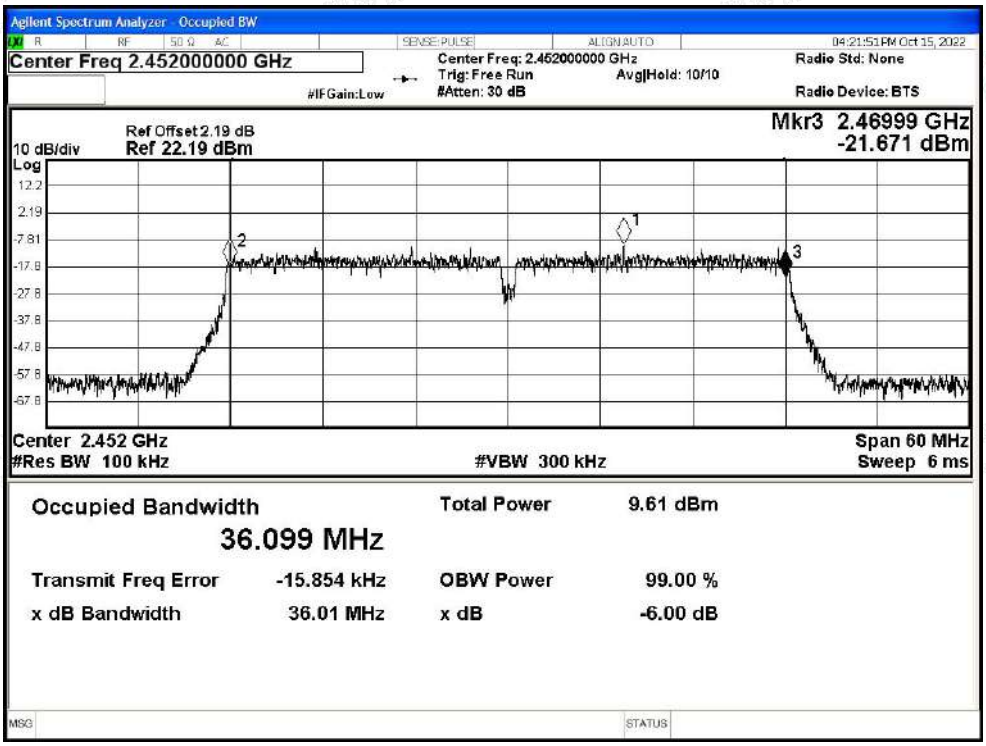
-6dB Bandwidth NVNT n40 2422MHz Ant1



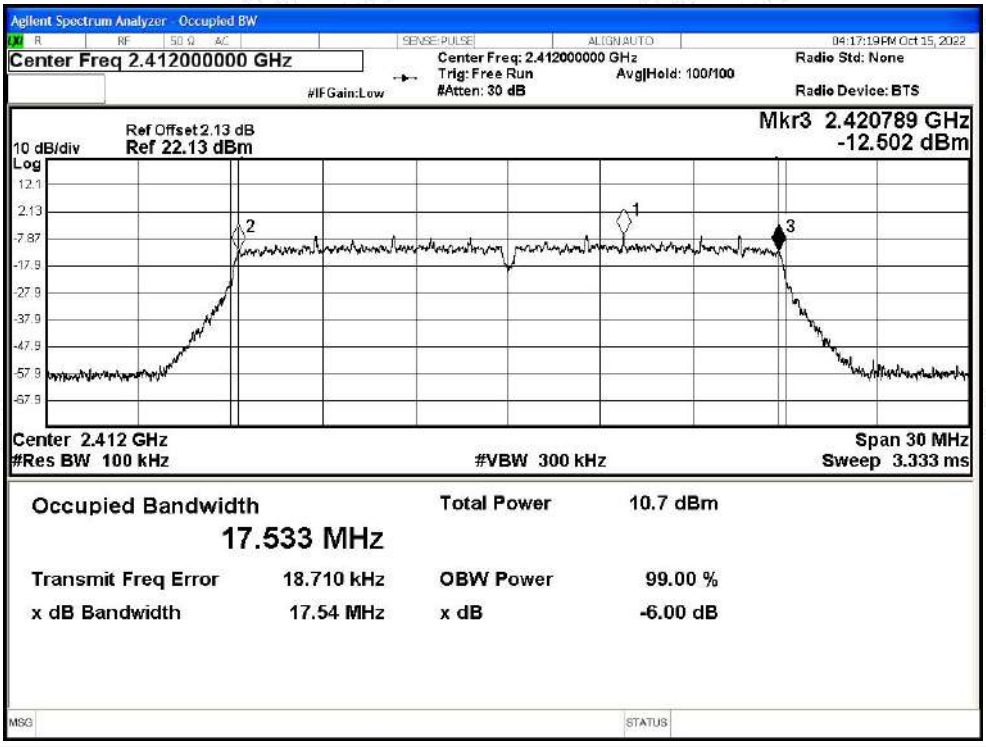
-6dB Bandwidth NVNT n40 2437MHz Ant1



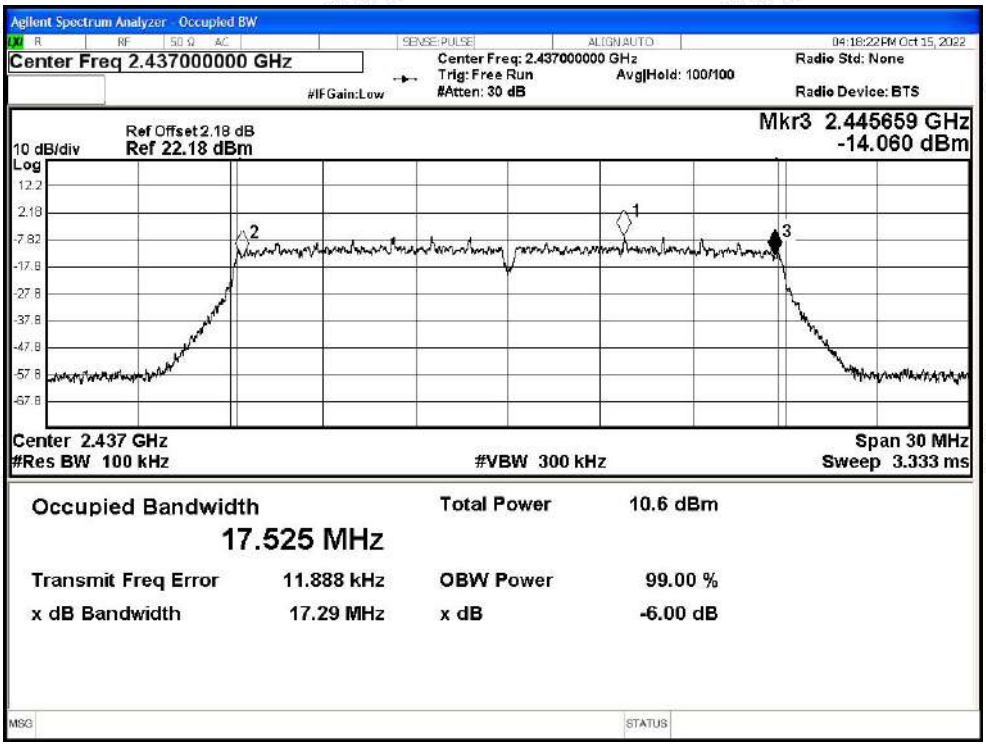
-6dB Bandwidth NVNT n40 2452MHz Ant1



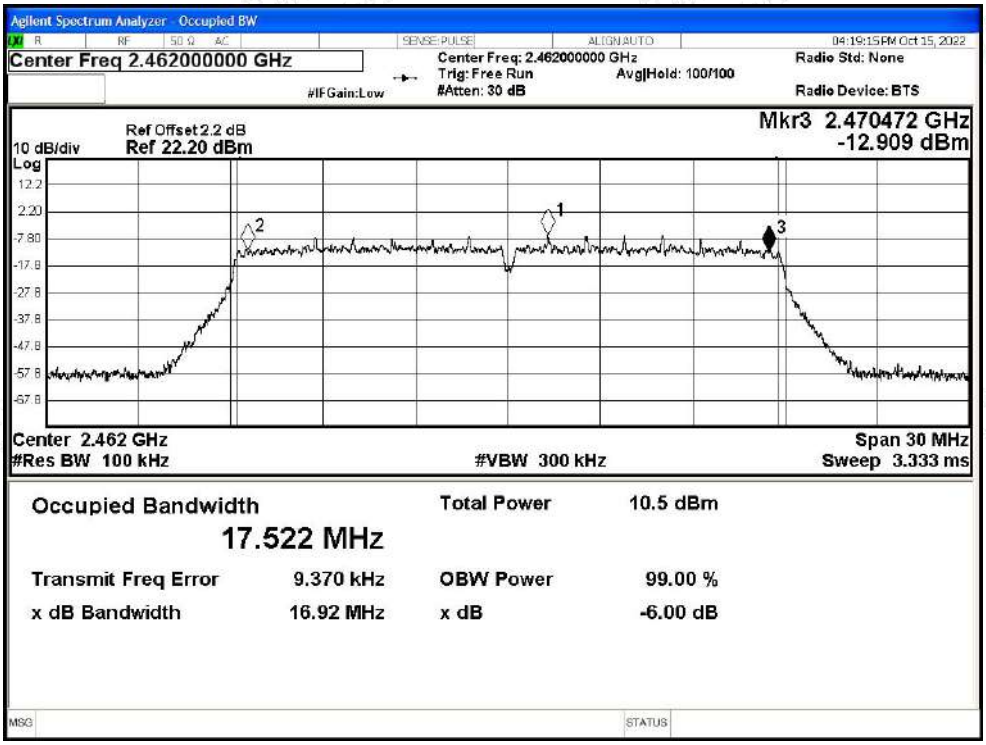
-6dB Bandwidth NVNT ax20 2412MHz Ant1



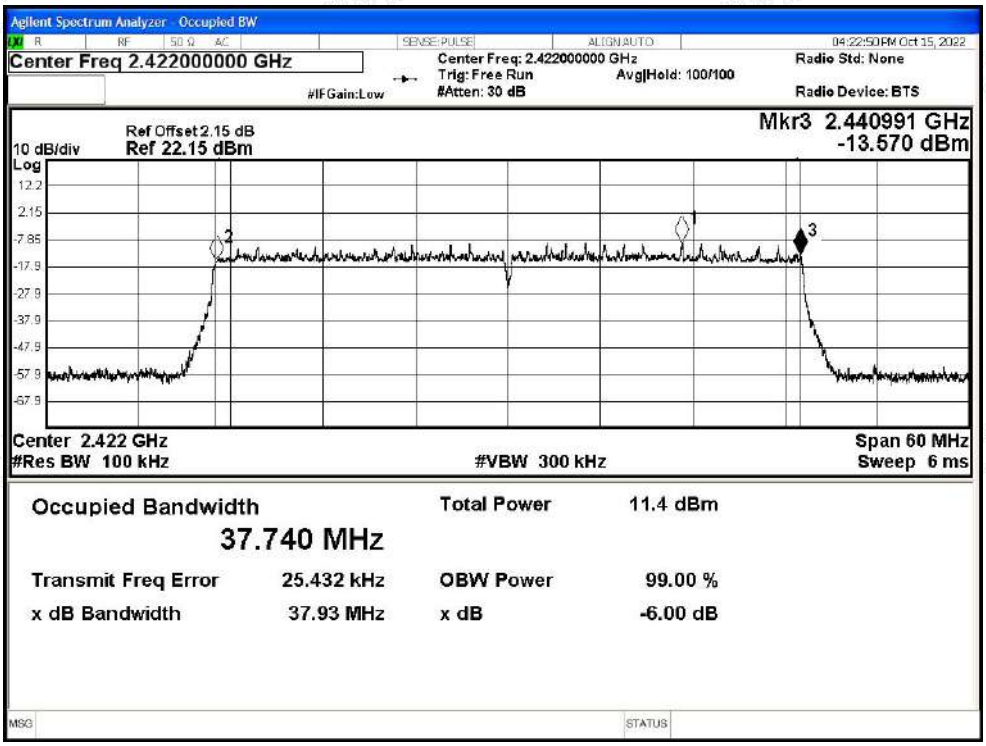
-6dB Bandwidth NVNT ax20 2437MHz Ant1



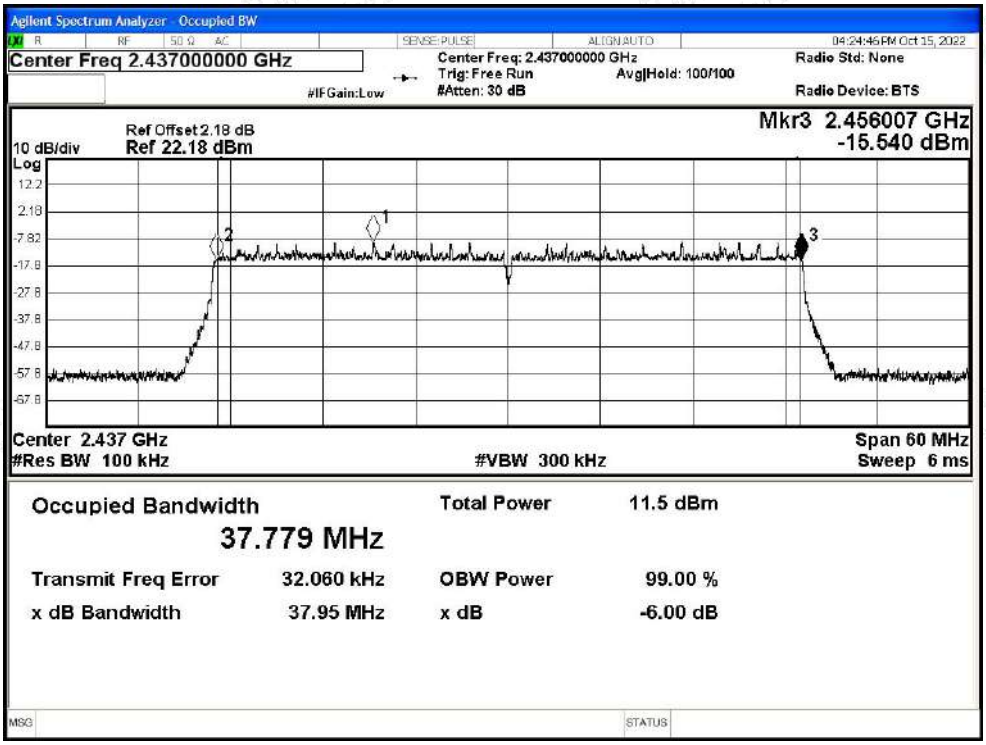
-6dB Bandwidth NVNT ax20 2462MHz Ant1



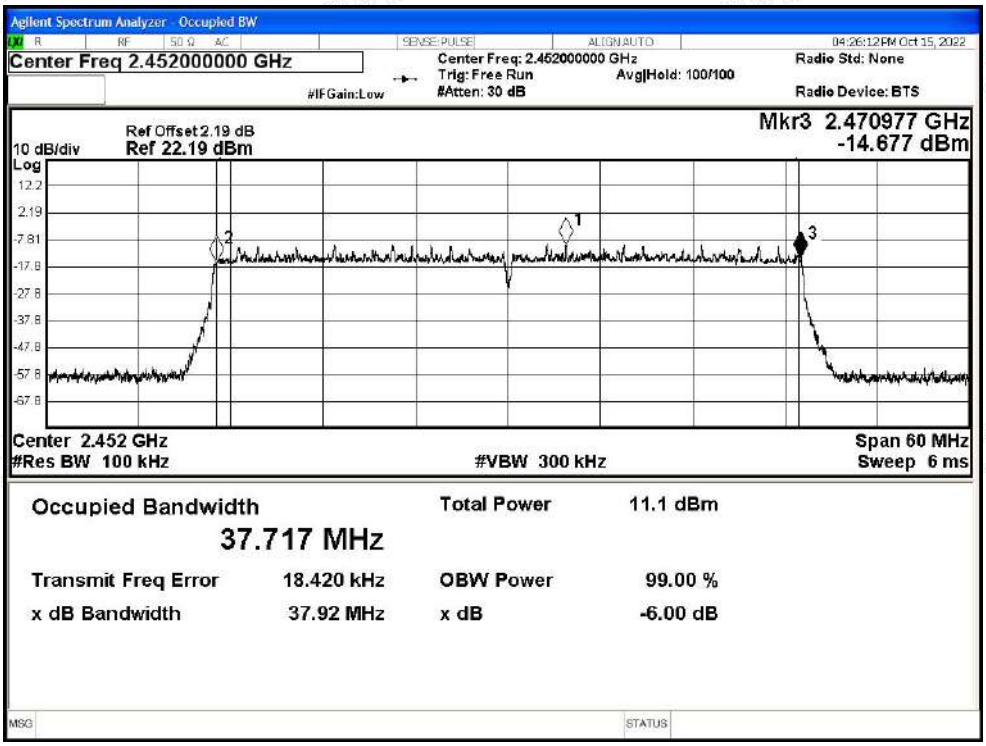
-6dB Bandwidth NVNT ax40 2422MHz Ant1



-6dB Bandwidth NVNT ax40 2437MHz Ant1



-6dB Bandwidth NVNT ax40 2452MHz Ant1

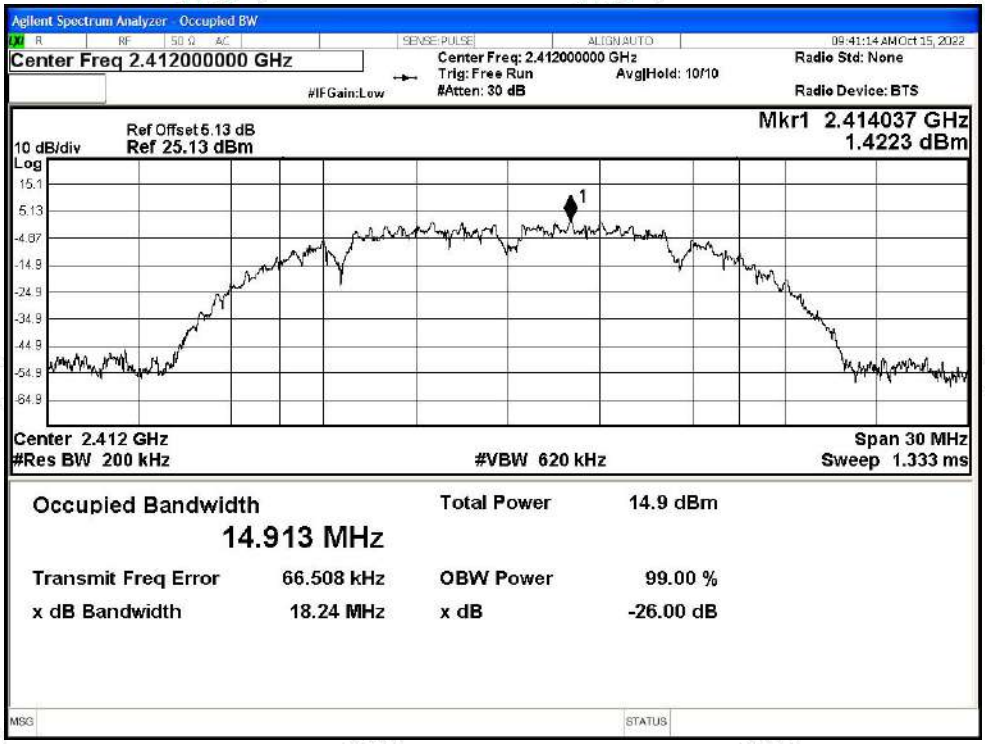


C.2 Occupied Channel Bandwidth

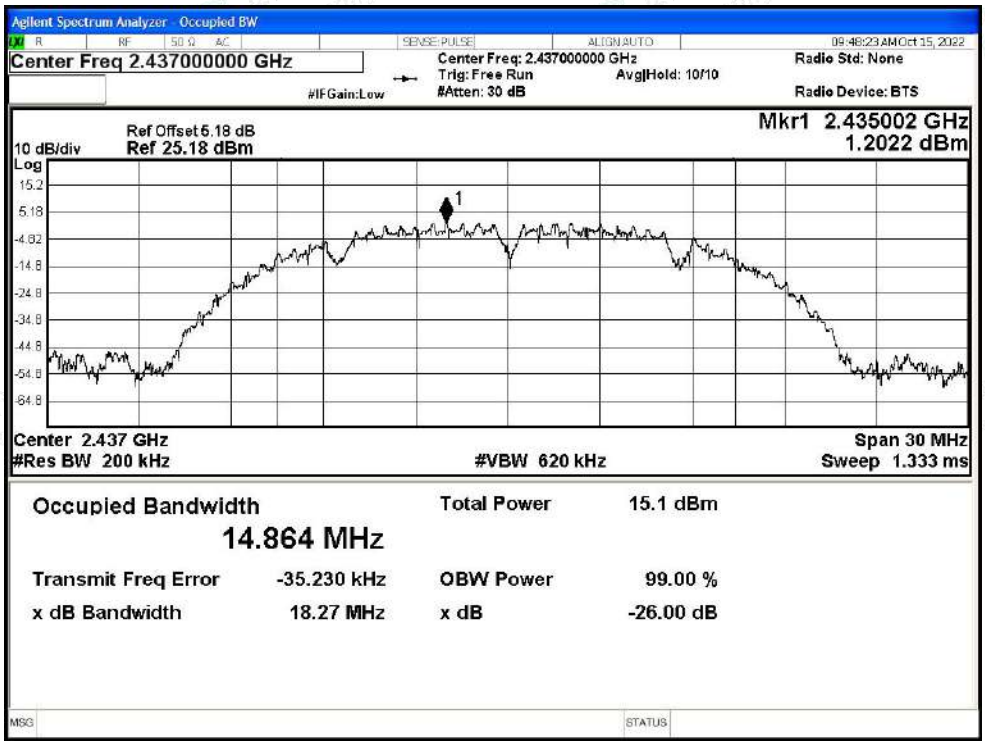
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	b	2412	Ant0	14.913
NVNT	b	2437	Ant0	14.864
NVNT	b	2462	Ant0	14.716
NVNT	g	2412	Ant0	16.366
NVNT	g	2437	Ant0	16.349
NVNT	g	2462	Ant0	16.345
NVNT	n20	2412	Ant0	17.568
NVNT	n20	2437	Ant0	17.594
NVNT	n20	2462	Ant0	17.562
NVNT	n40	2422	Ant0	36.112
NVNT	n40	2437	Ant0	36.111
NVNT	n40	2452	Ant0	36.096
NVNT	ax20	2412	Ant0	18.887
NVNT	ax20	2437	Ant0	18.867
NVNT	ax20	2462	Ant0	18.864
NVNT	ax40	2422	Ant0	37.766
NVNT	ax40	2437	Ant0	37.741
NVNT	ax40	2452	Ant0	37.741

Test Graphs

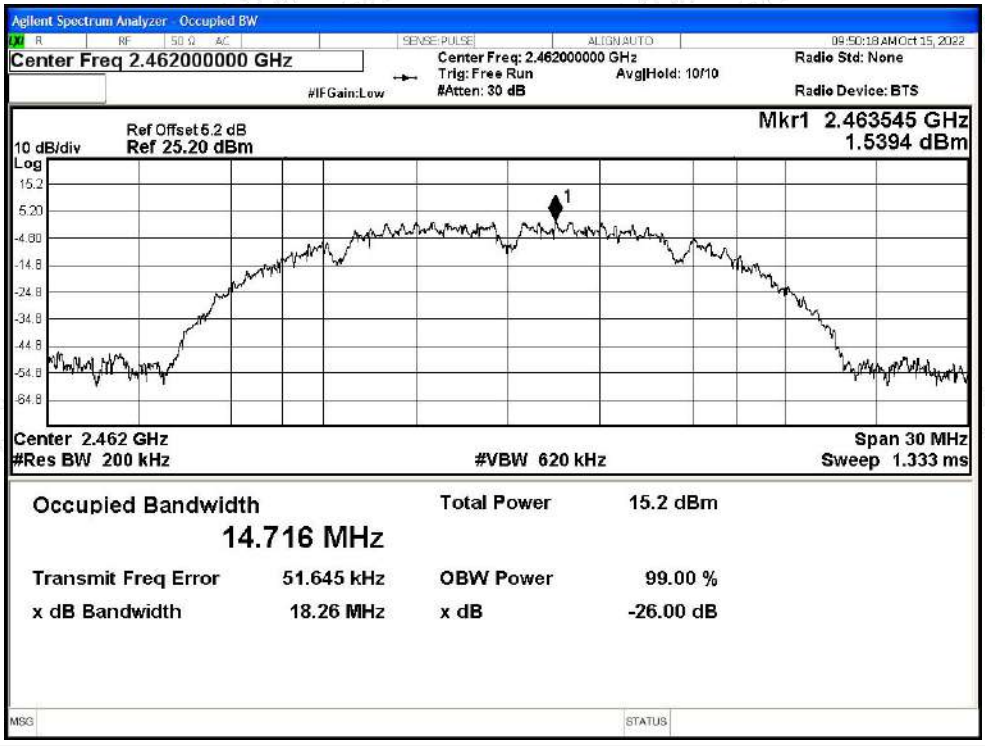
OBW NVNT b 2412MHz Ant0



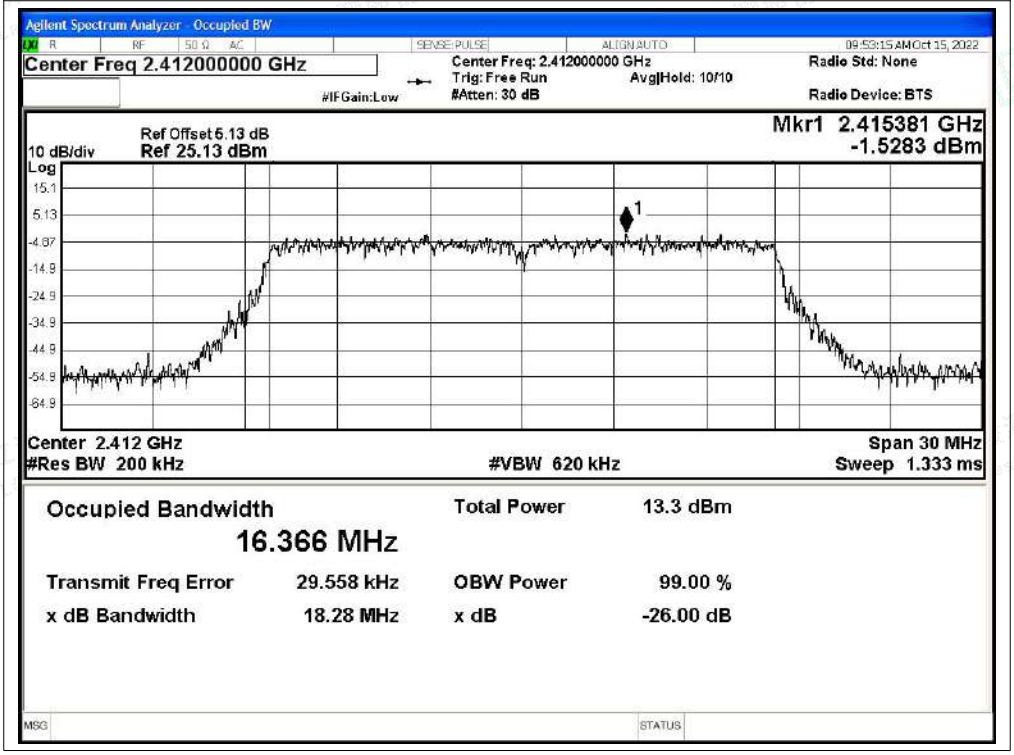
OBW NVNT b 2437MHz Ant0



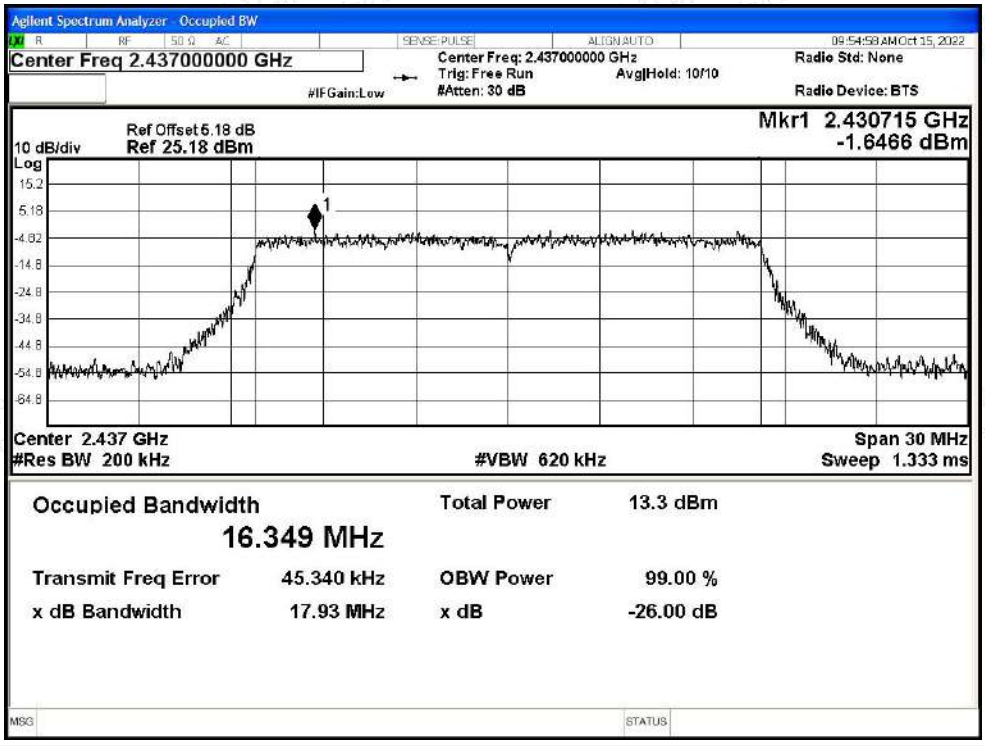
OBW NVNT b 2462MHz Ant0



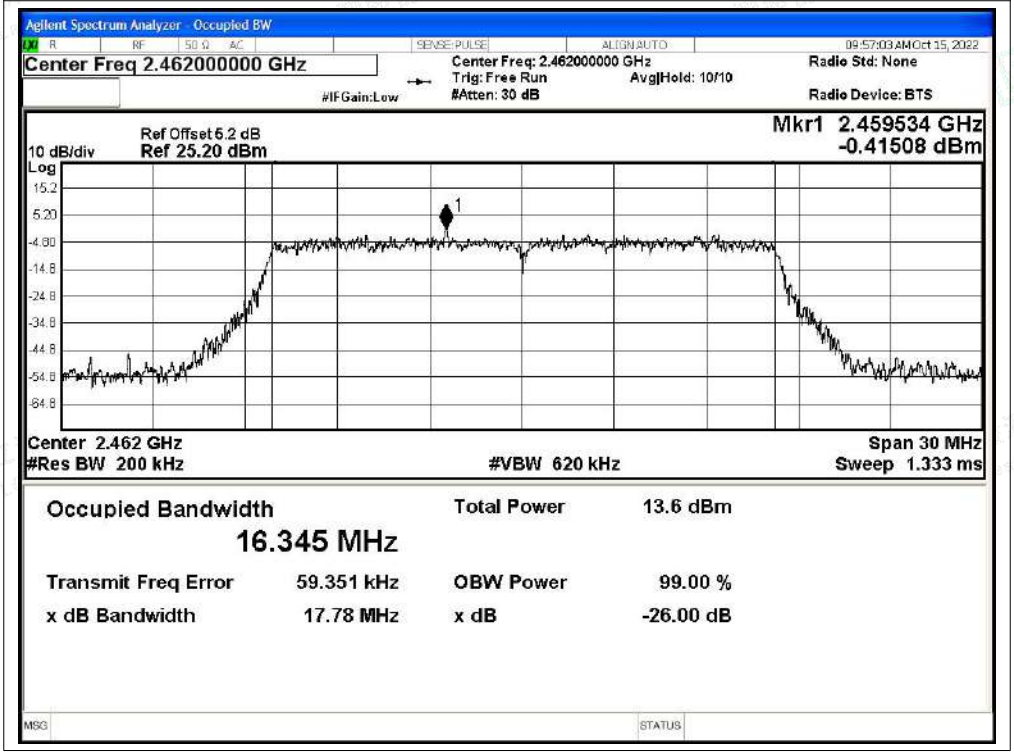
OBW NVNT g 2412MHz Ant0



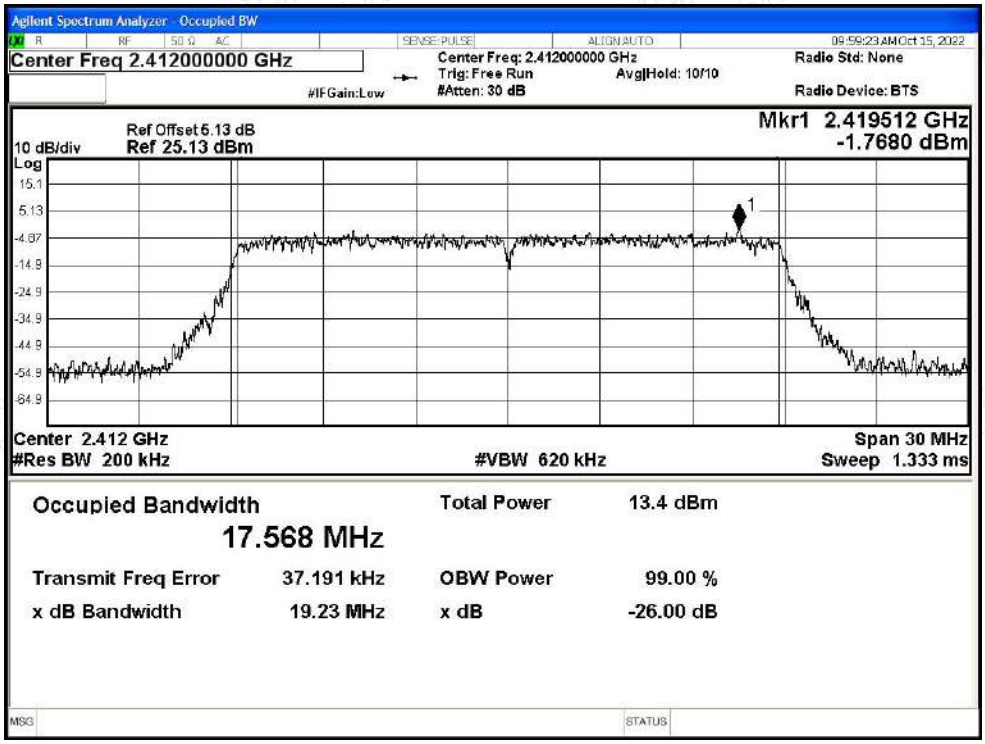
OBW NVNT g 2437MHz Ant0



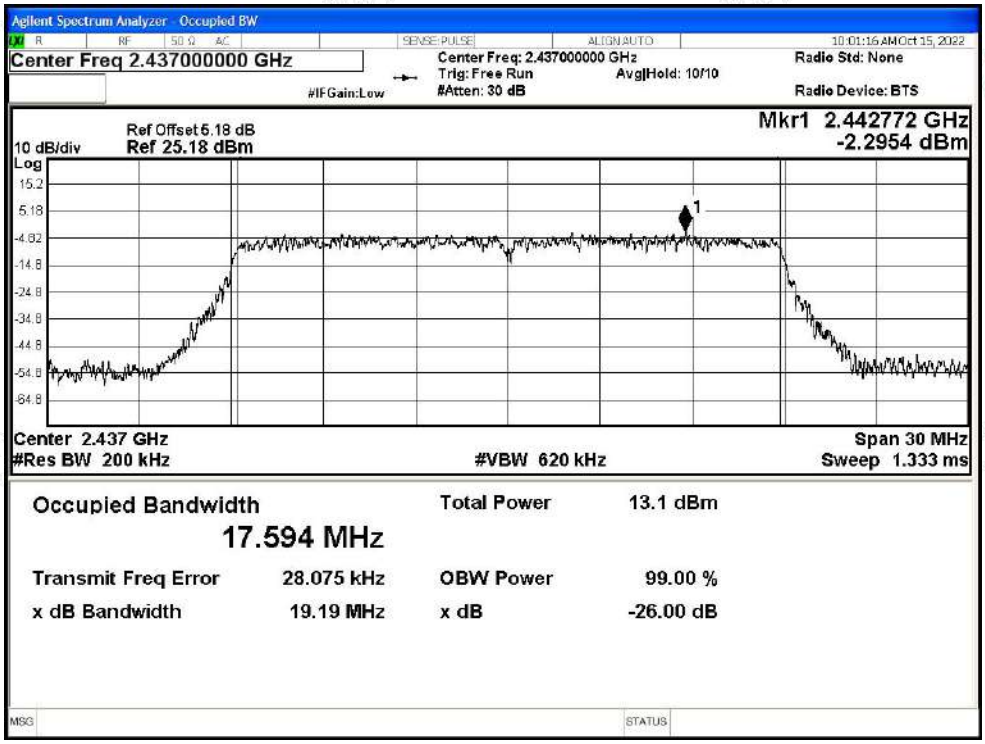
OBW NVNT g 2462MHz Ant0



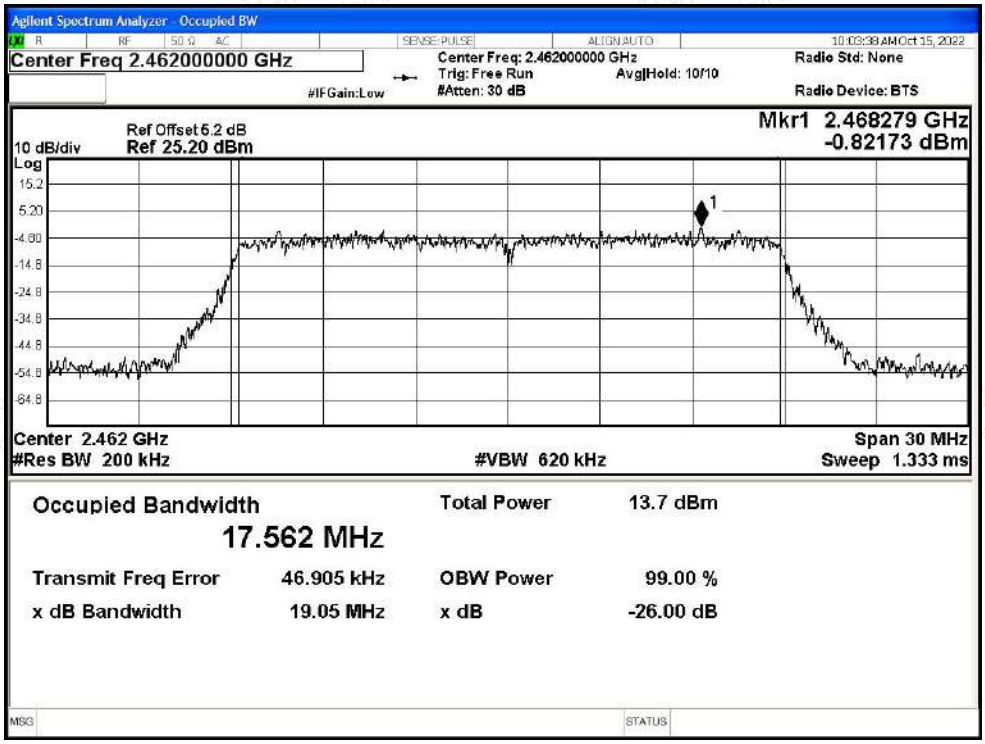
OBW NVNT n20 2412MHz Ant0



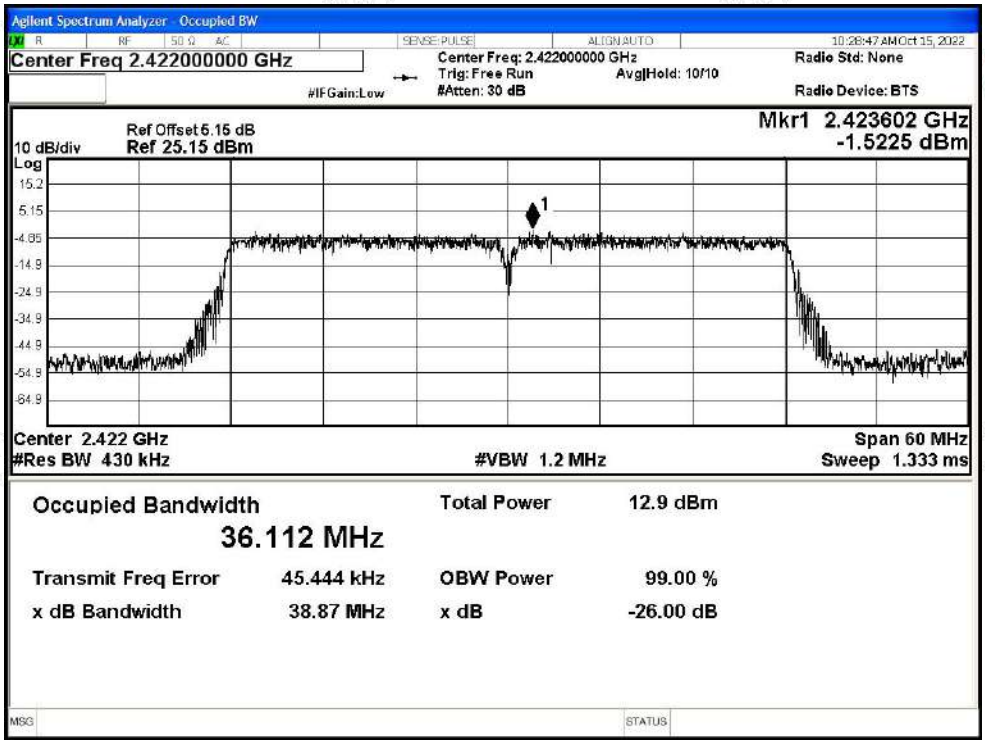
OBW NVNT n20 2437MHz Ant0



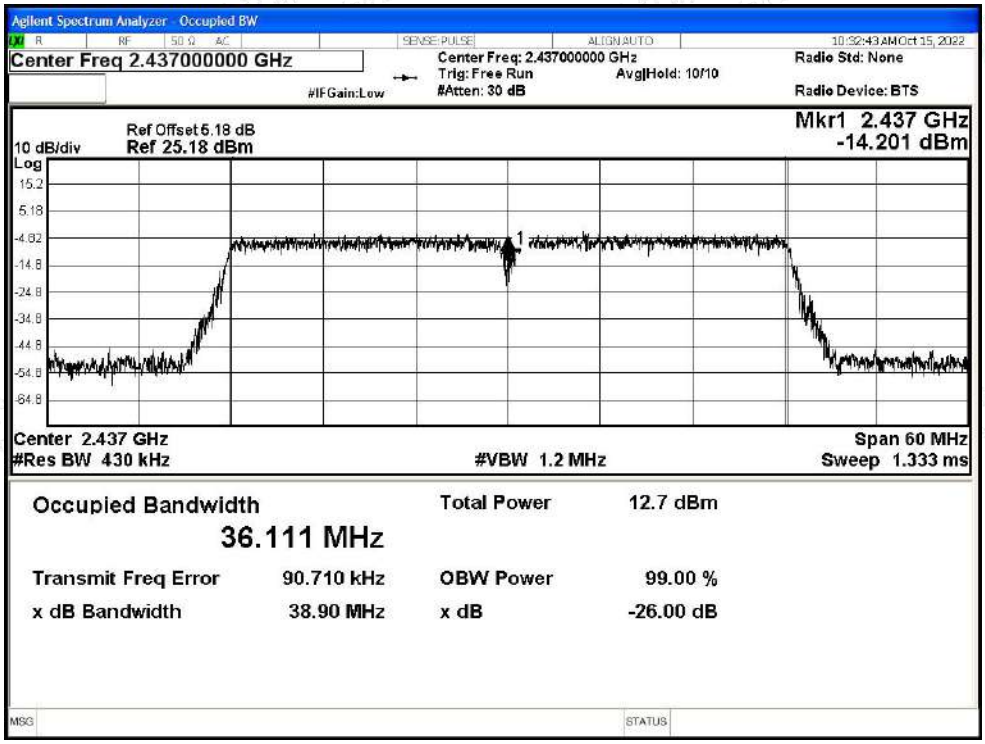
OBW NVNT n20 2462MHz Ant0



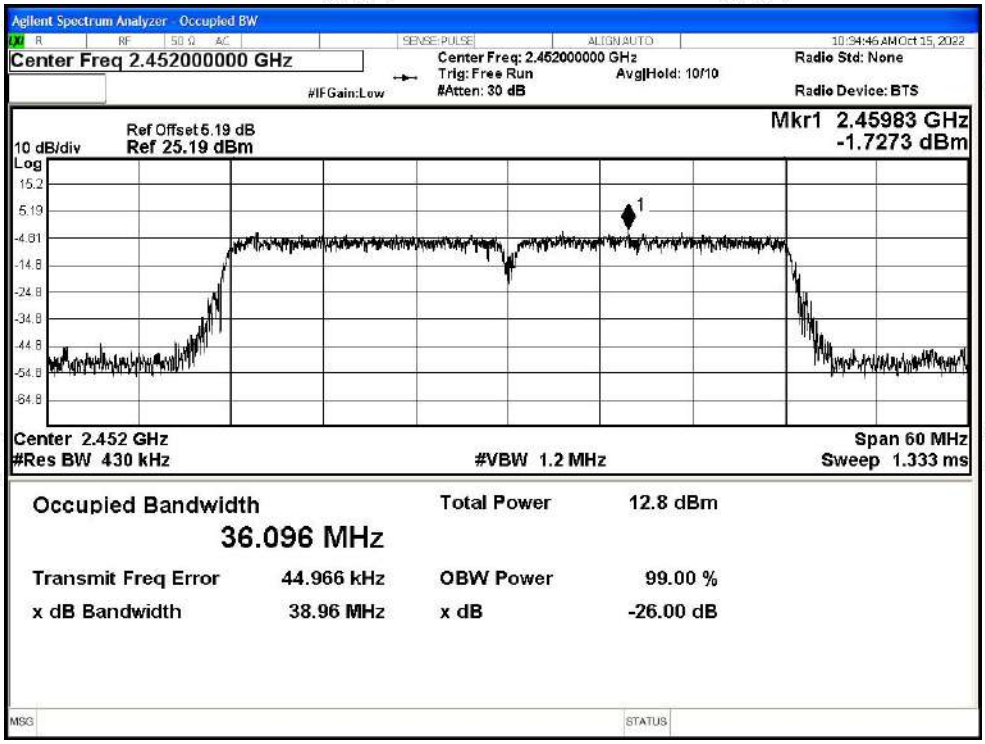
OBW NVNT n40 2422MHz Ant0



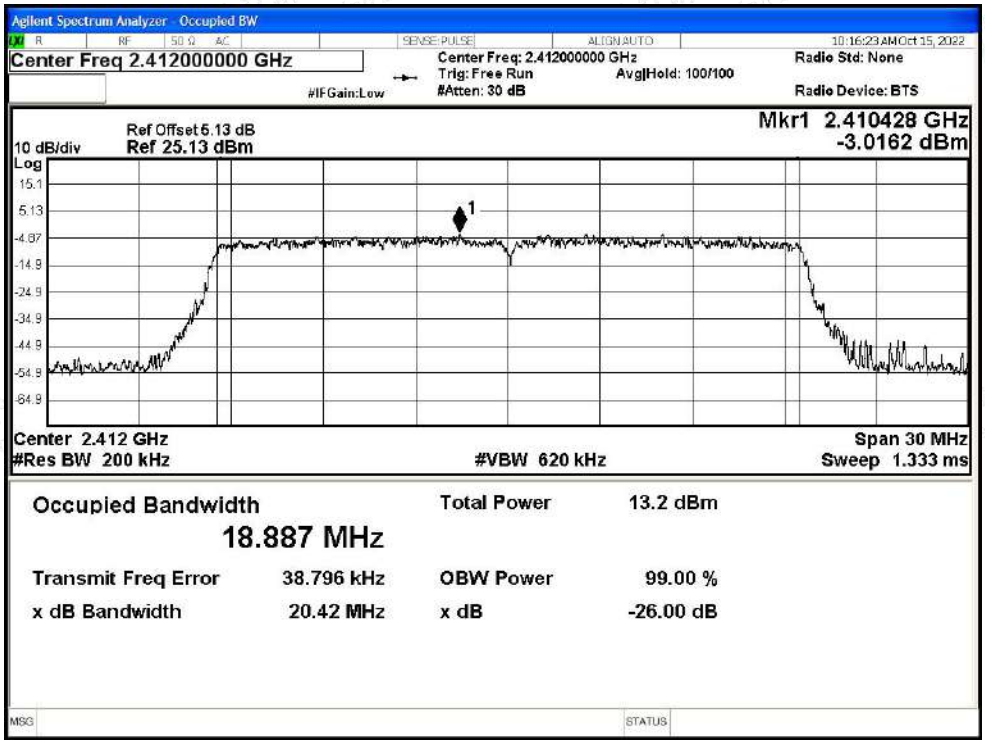
OBW NVNT n40 2437MHz Ant0



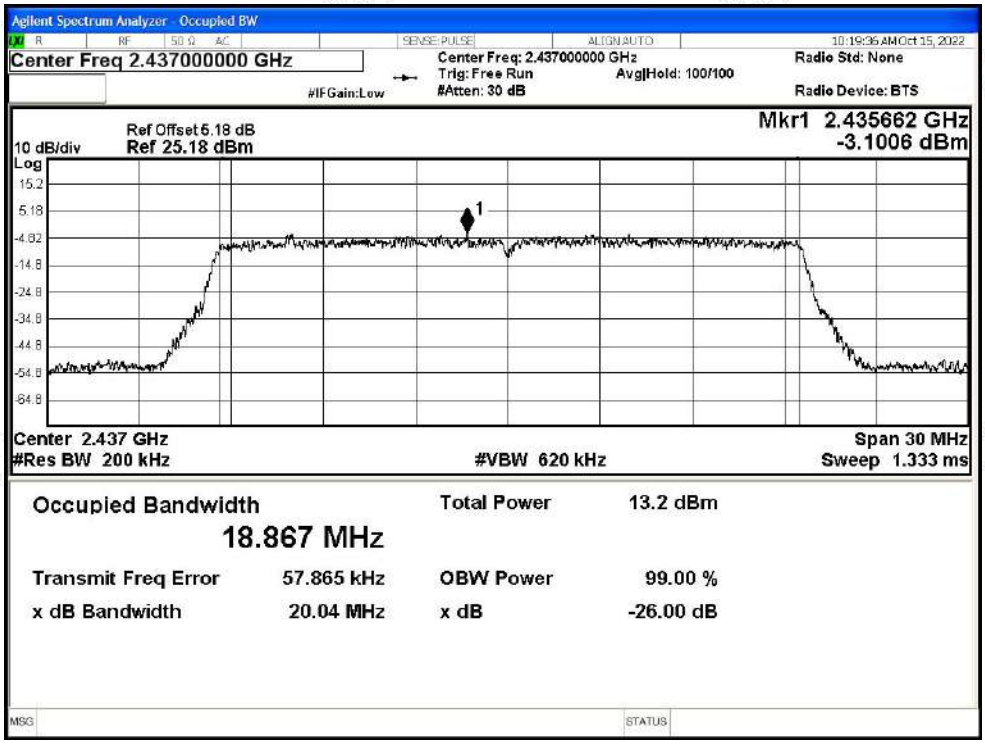
OBW NVNT n40 2452MHz Ant0



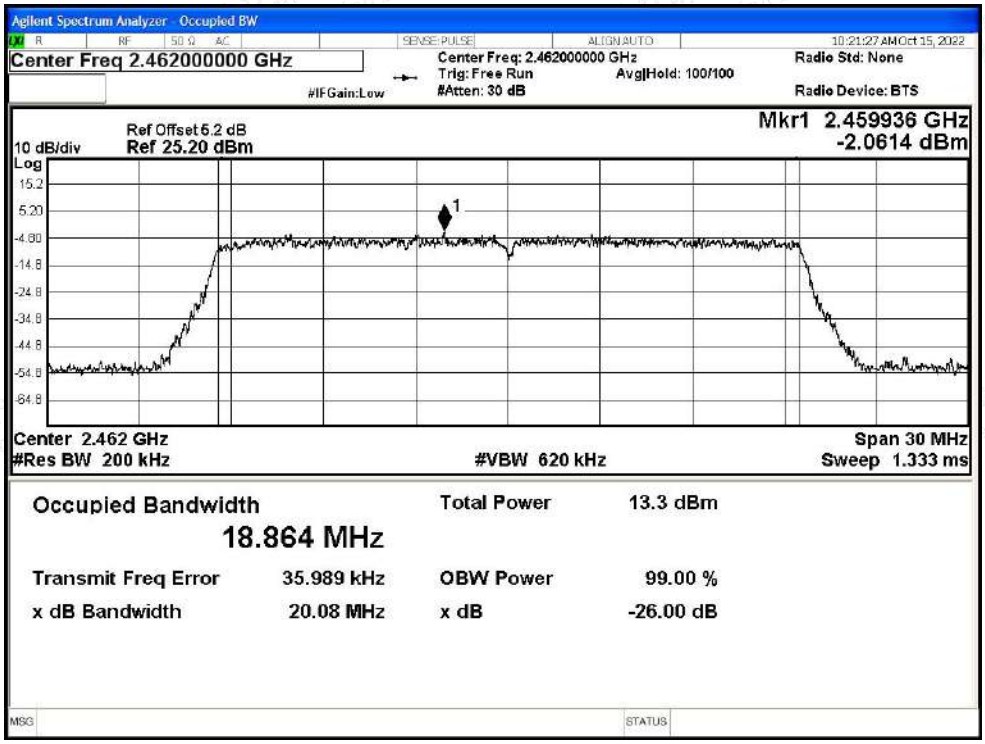
OBW NVNT ax20 2412MHz Ant0



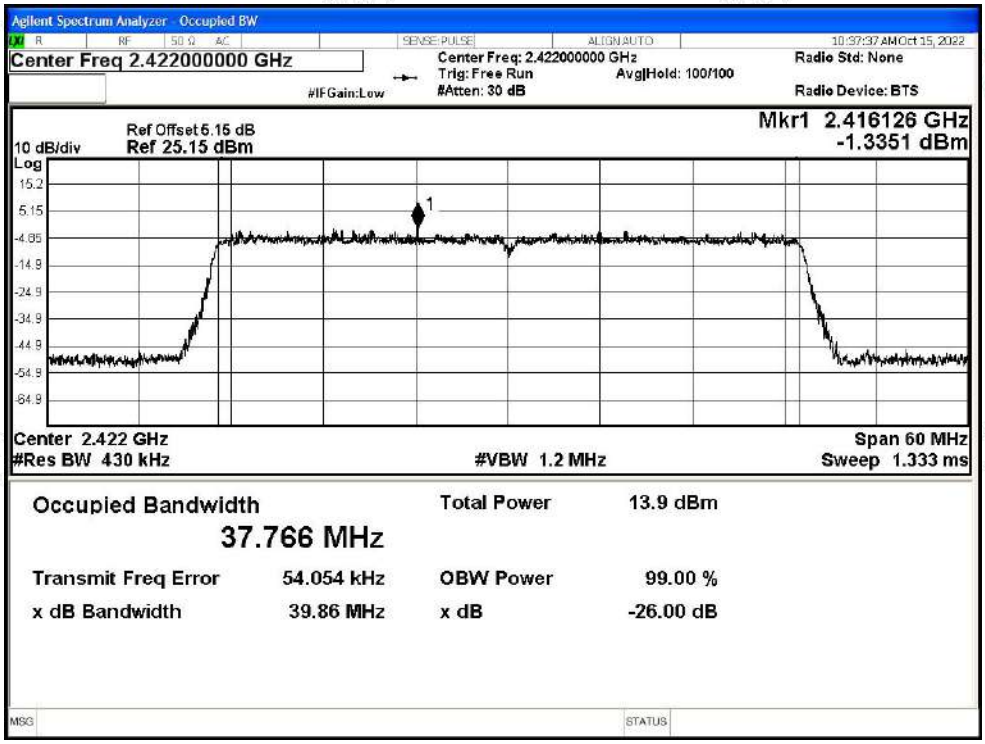
OBW NVNT ax20 2437MHz Ant0



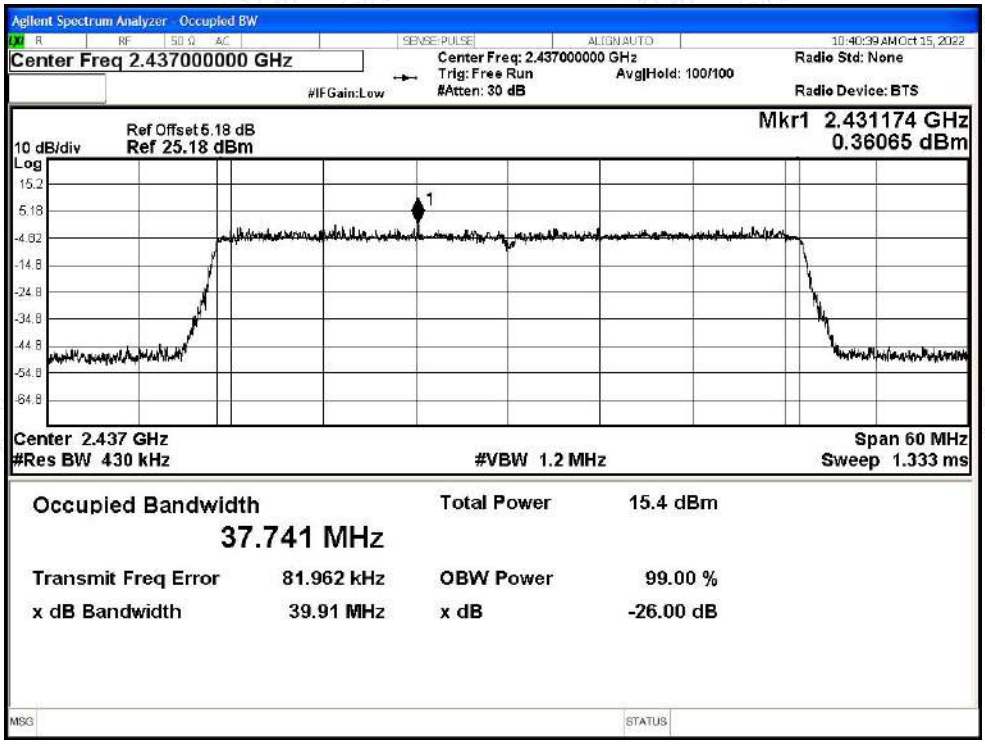
OBW NVNT ax20 2462MHz Ant0



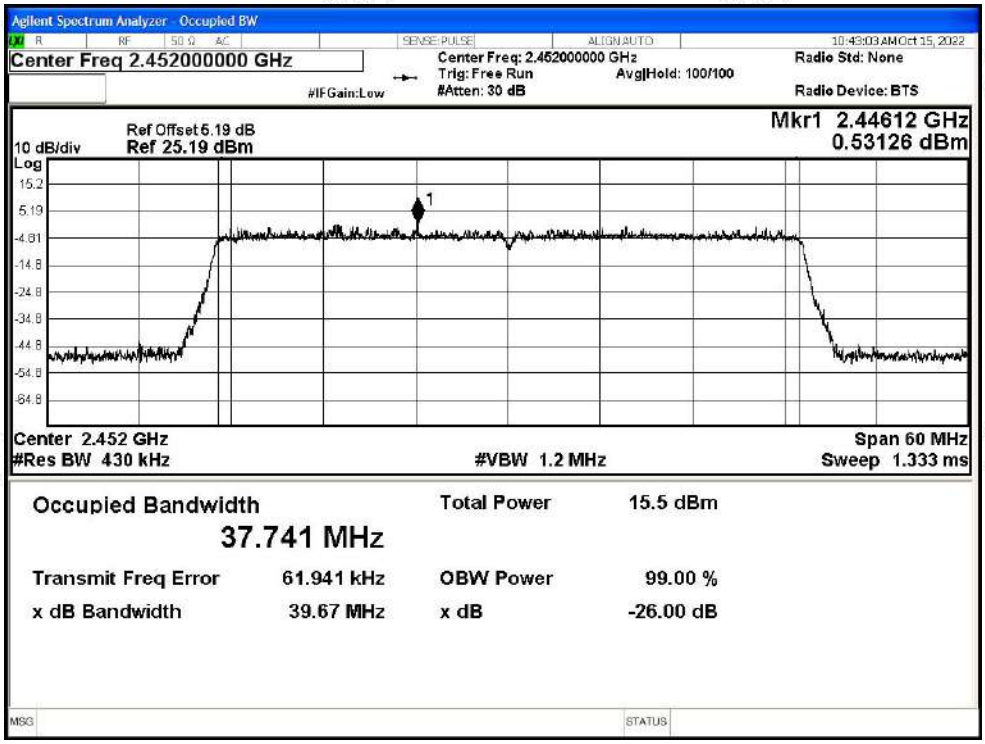
OBW NVNT ax40 2422MHz Ant0



OBW NVNT ax40 2437MHz Ant0



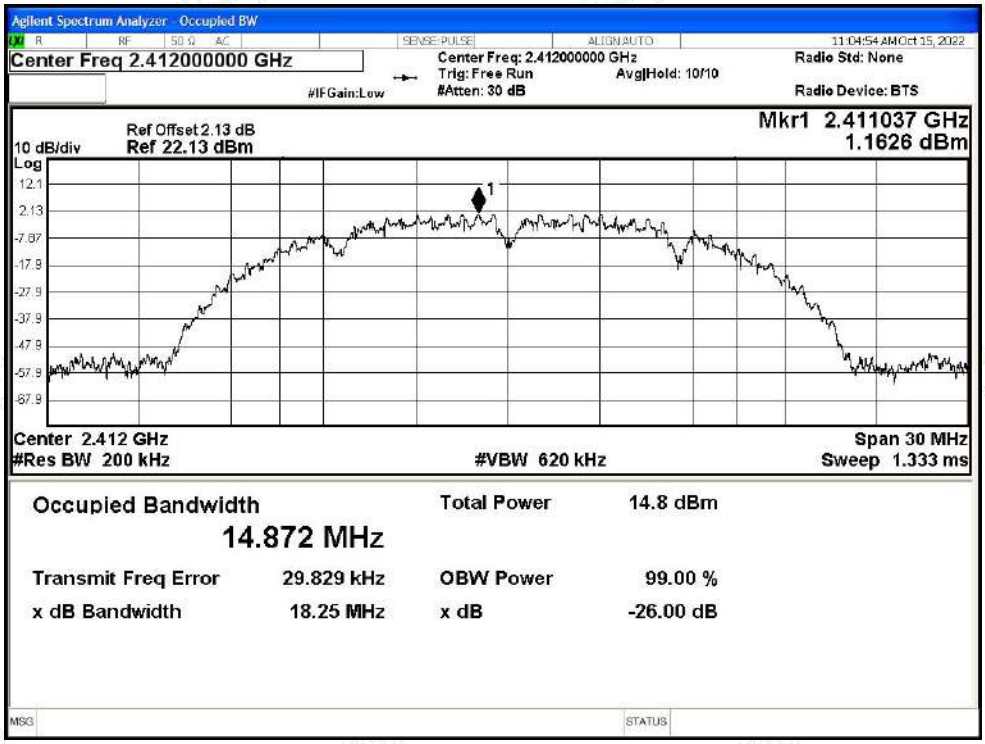
OBW NVNT ax40 2452MHz Ant0



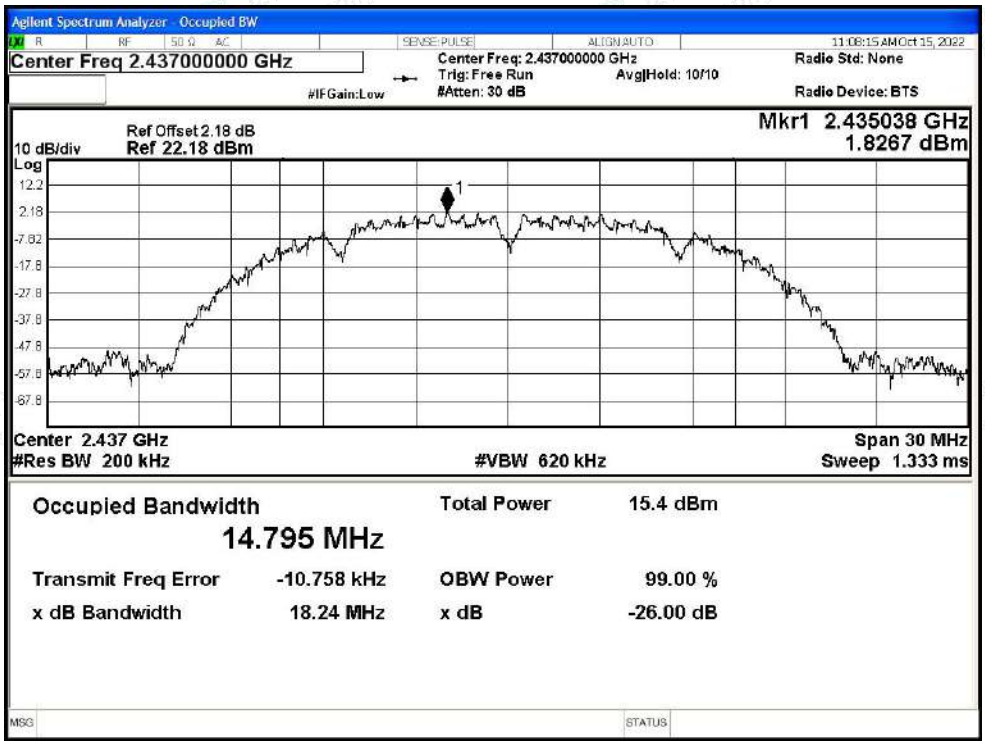
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	b	2412	Ant1	14.872
NVNT	b	2437	Ant1	14.795
NVNT	b	2462	Ant1	14.764
NVNT	g	2412	Ant1	16.327
NVNT	g	2437	Ant1	16.344
NVNT	g	2462	Ant1	16.343
NVNT	n20	2412	Ant1	17.579
NVNT	n20	2437	Ant1	17.566
NVNT	n20	2462	Ant1	17.56
NVNT	n40	2422	Ant1	36.1
NVNT	n40	2437	Ant1	36.169
NVNT	n40	2452	Ant1	36.12
NVNT	ax20	2412	Ant1	18.891
NVNT	ax20	2437	Ant1	18.896
NVNT	ax20	2462	Ant1	18.884
NVNT	ax40	2422	Ant1	37.716
NVNT	ax40	2437	Ant1	37.772
NVNT	ax40	2452	Ant1	37.719

Test Graphs

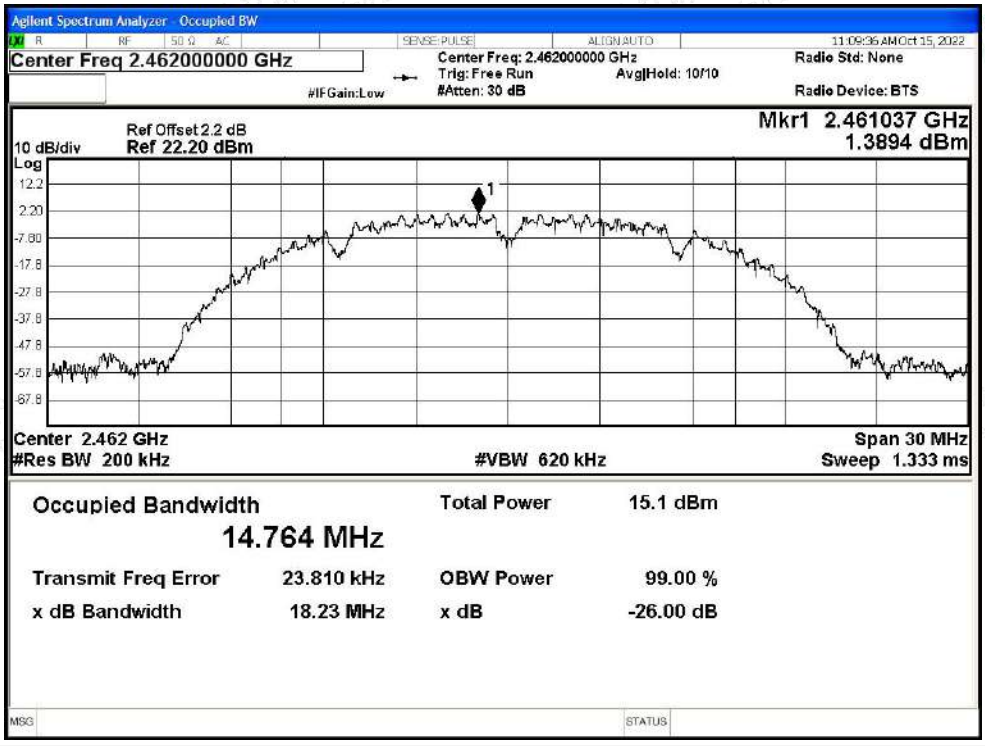
OBW NVNT b 2412MHz Ant1



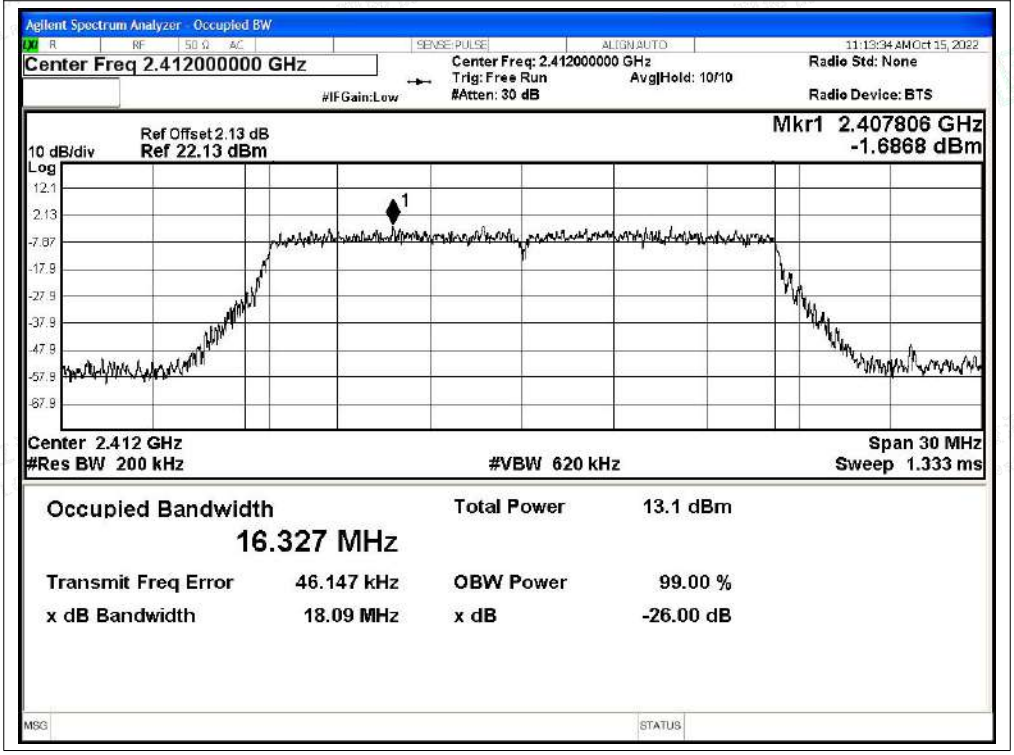
OBW NVNT b 2437MHz Ant1



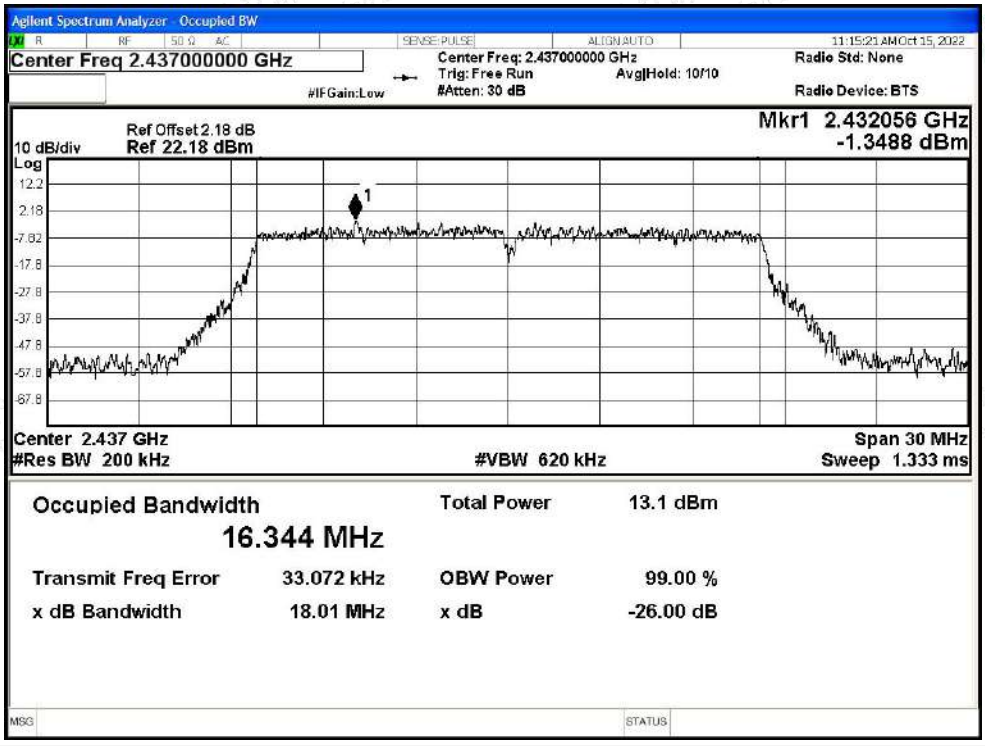
OBW NVNT b 2462MHz Ant1



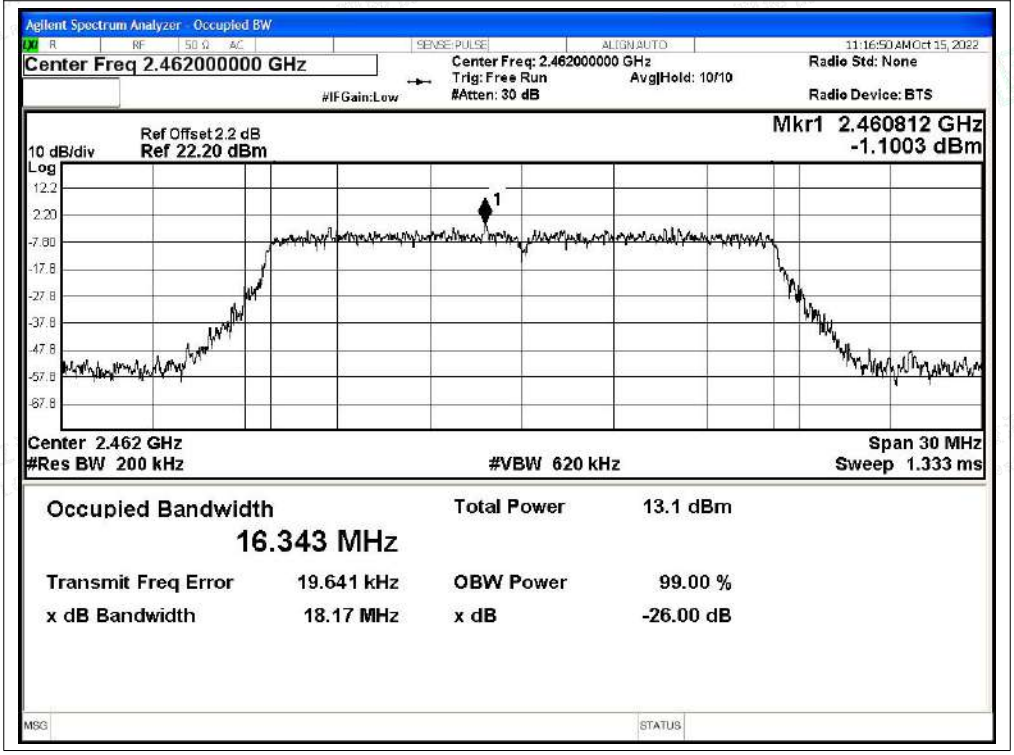
OBW NVNT g 2412MHz Ant1



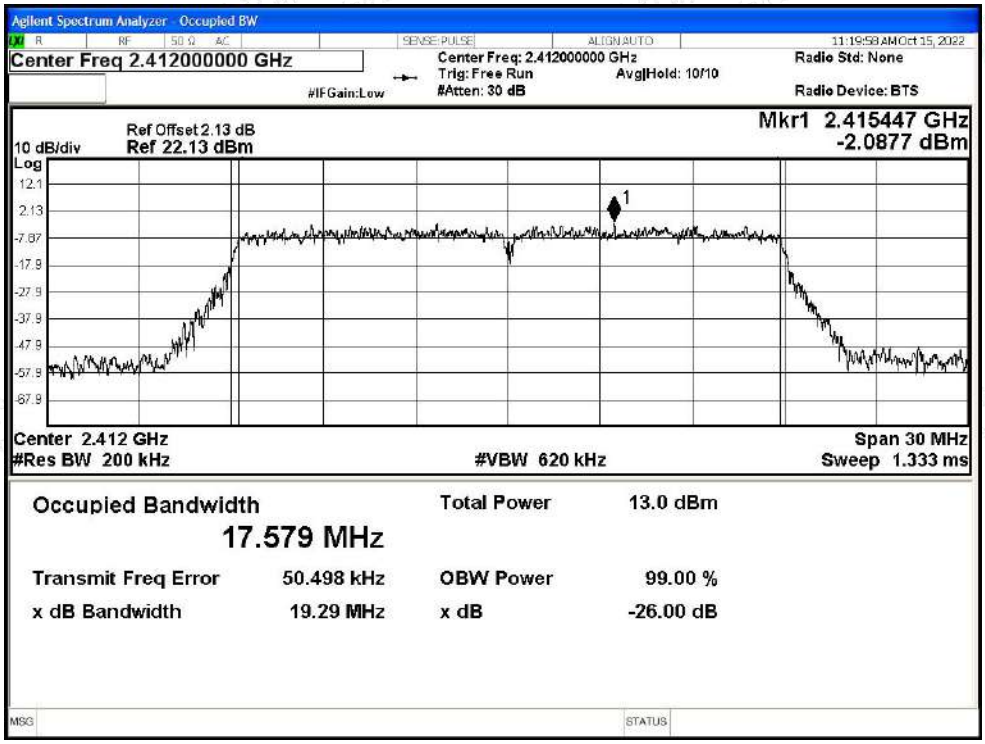
OBW NVNT g 2437MHz Ant1



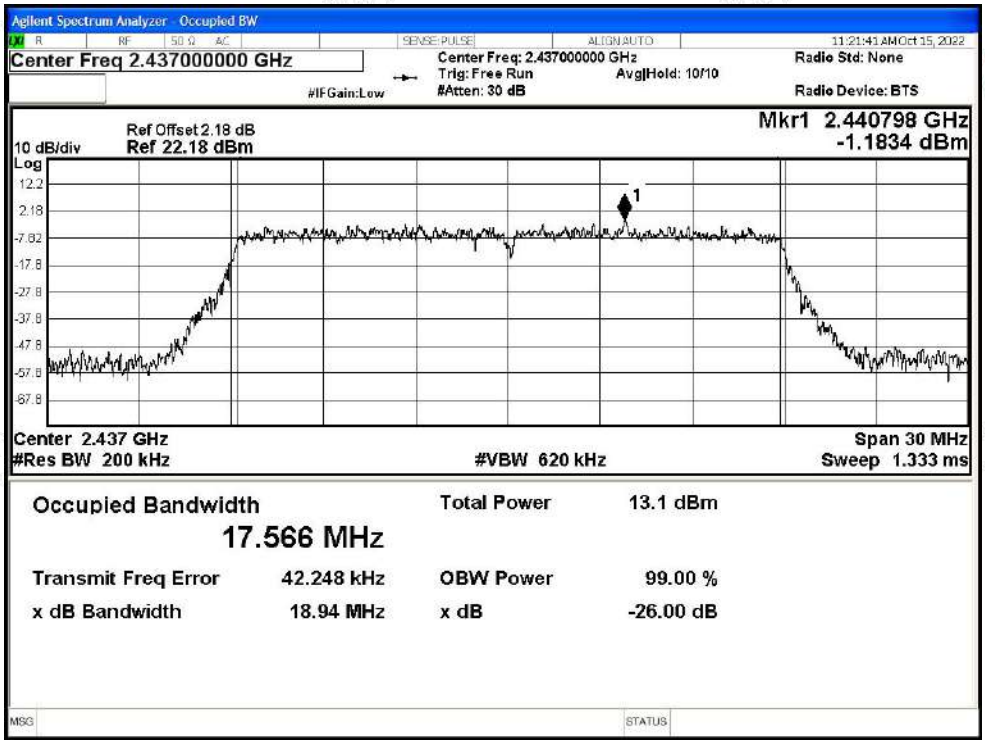
OBW NVNT g 2462MHz Ant1



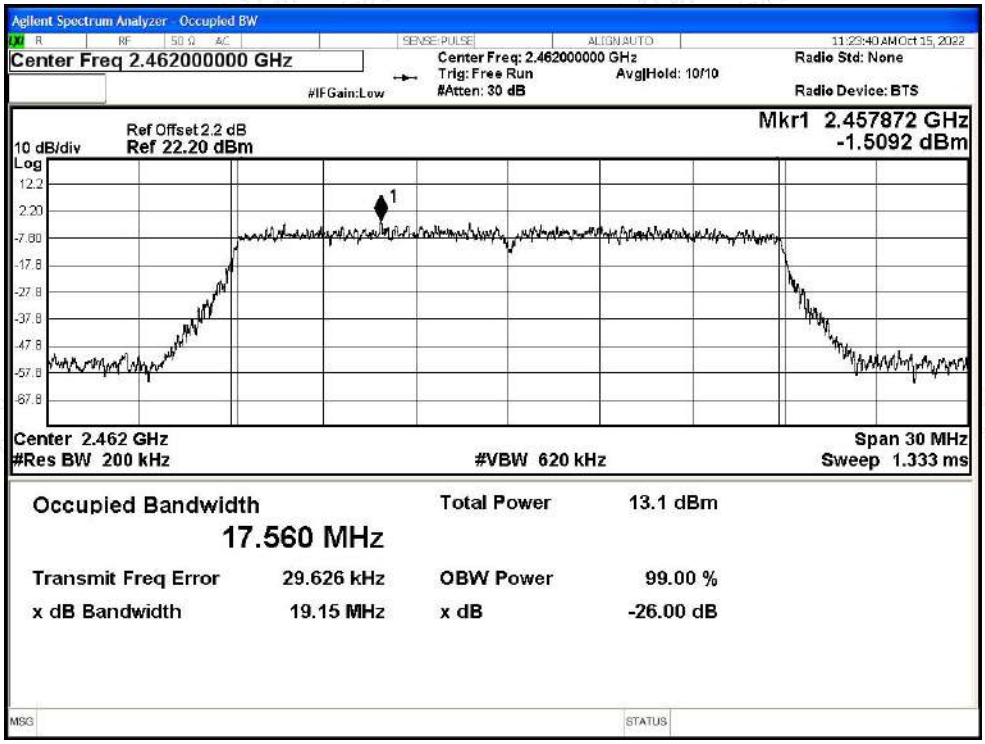
OBW NVNT n20 2412MHz Ant1



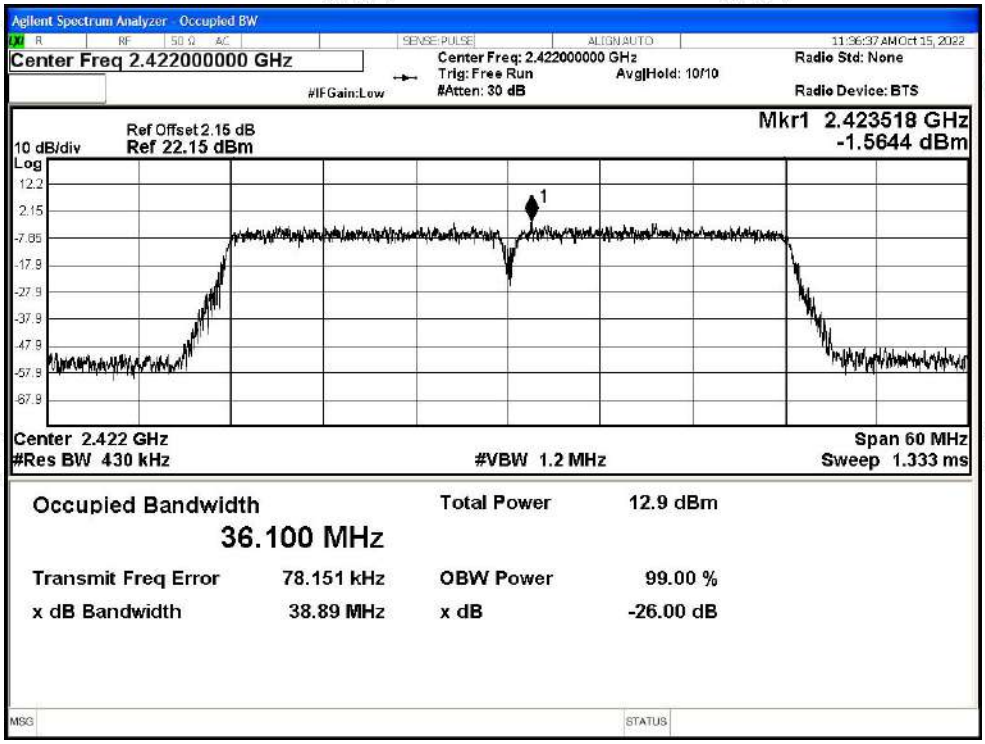
OBW NVNT n20 2437MHz Ant1



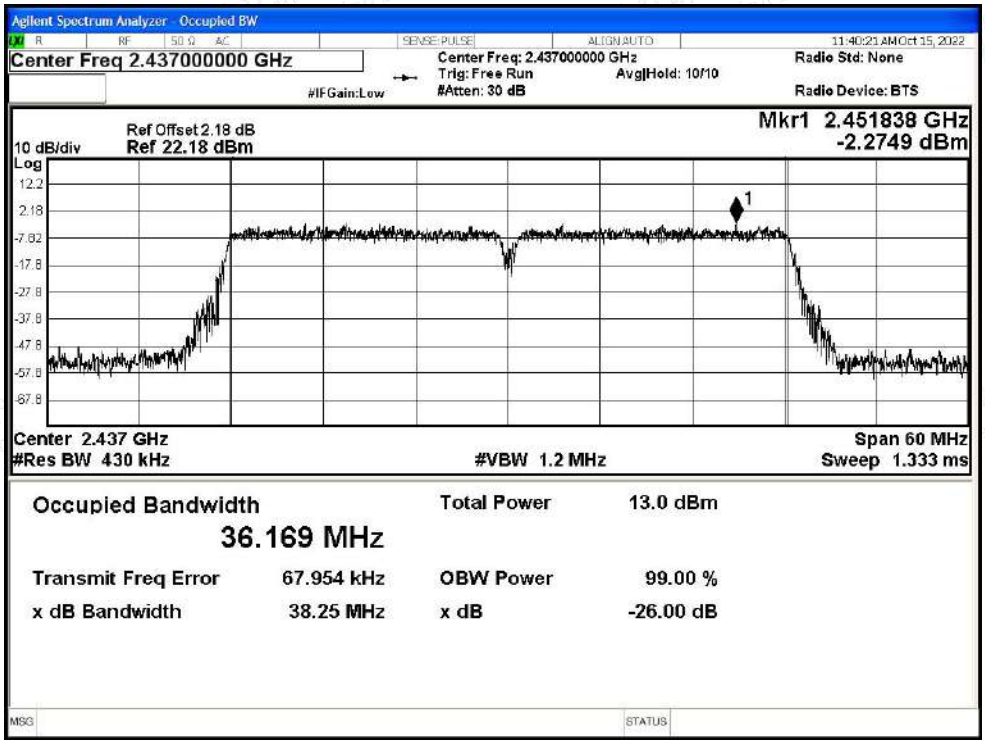
OBW NVNT n20 2462MHz Ant1



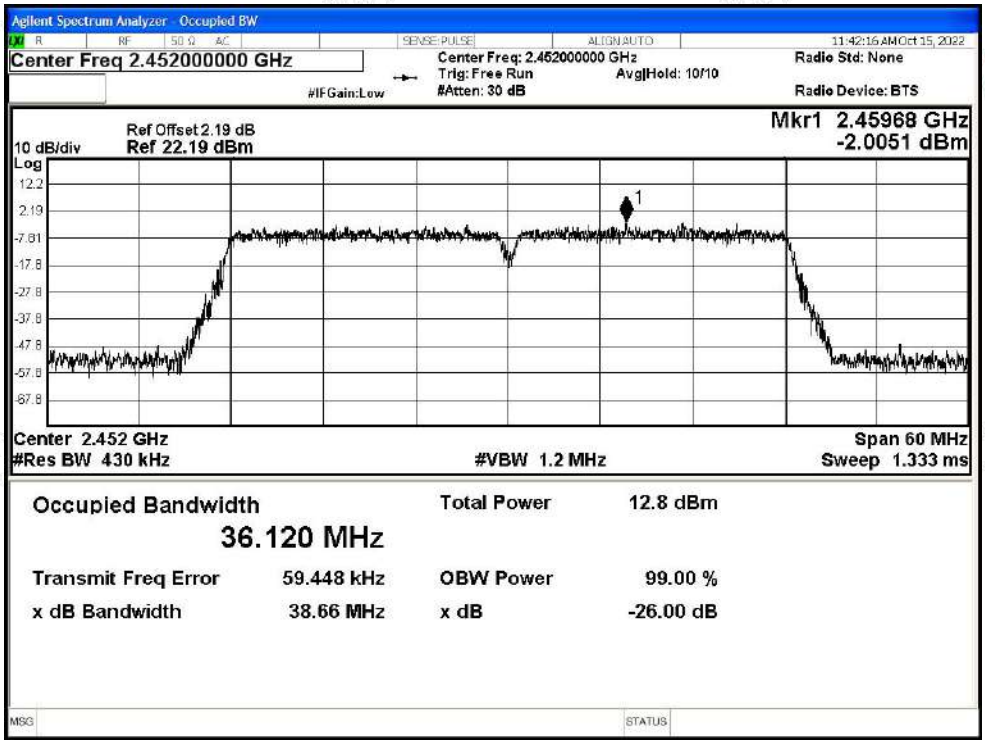
OBW NVNT n40 2422MHz Ant1



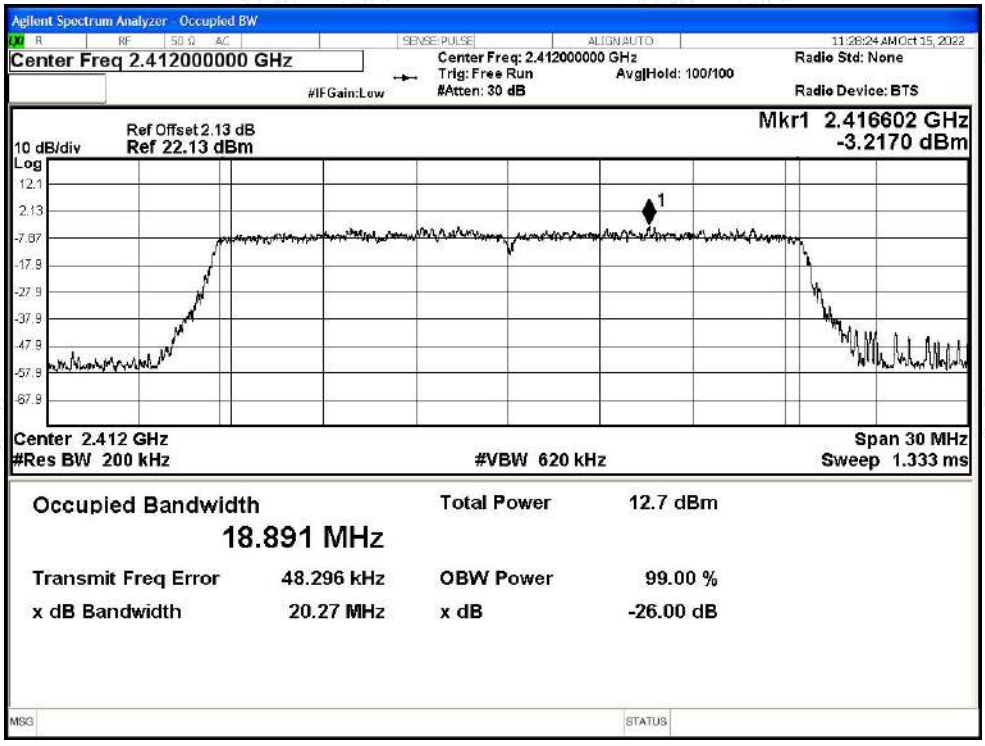
OBW NVNT n40 2437MHz Ant1



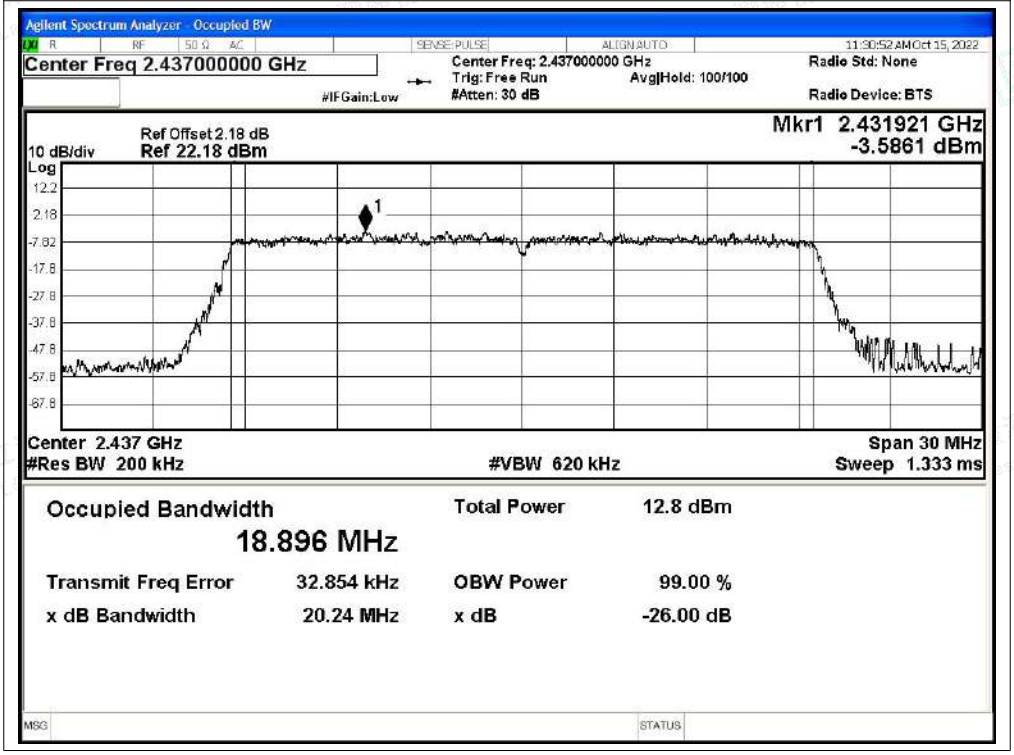
OBW NVNT n40 2452MHz Ant1



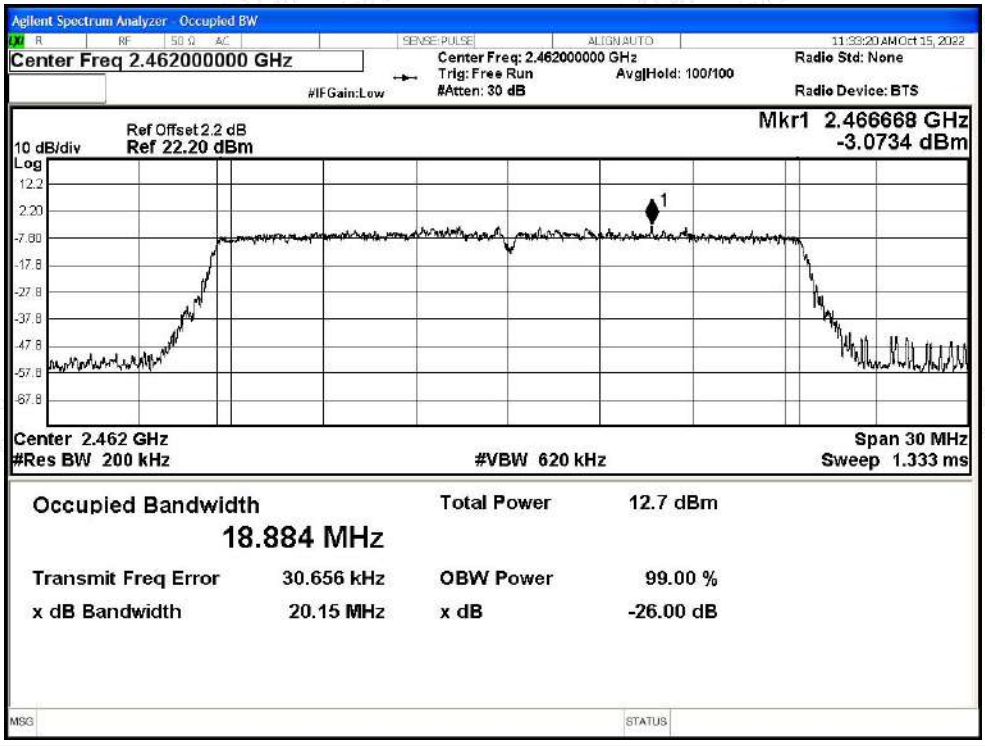
OBW NVNT ax20 2412MHz Ant1



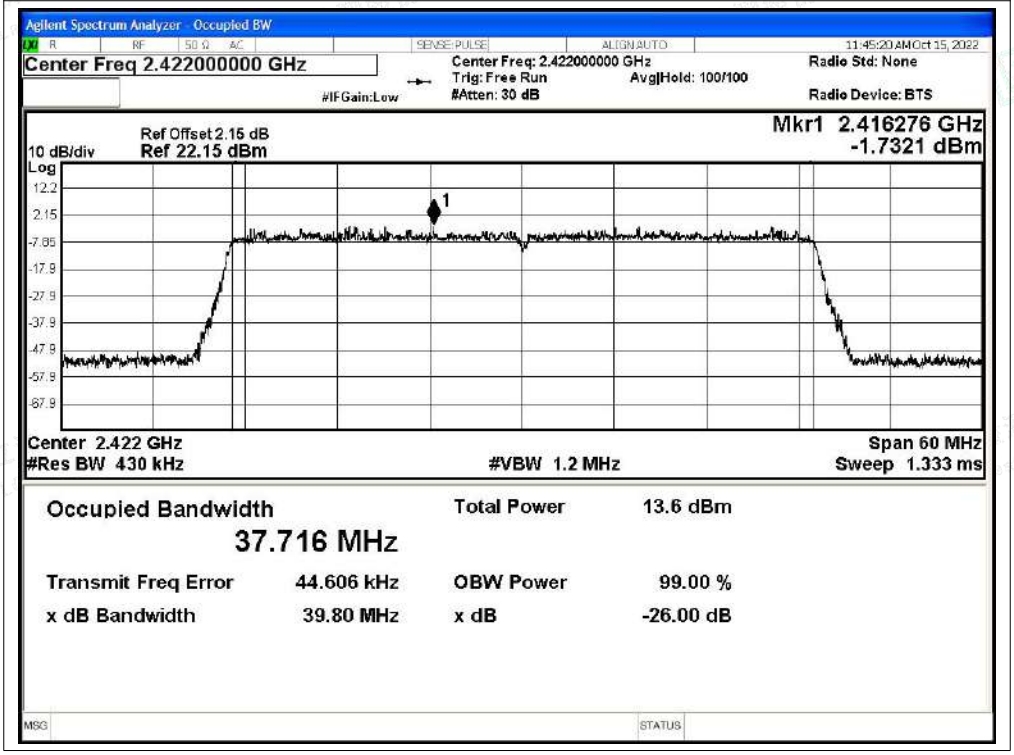
OBW NVNT ax20 2437MHz Ant1



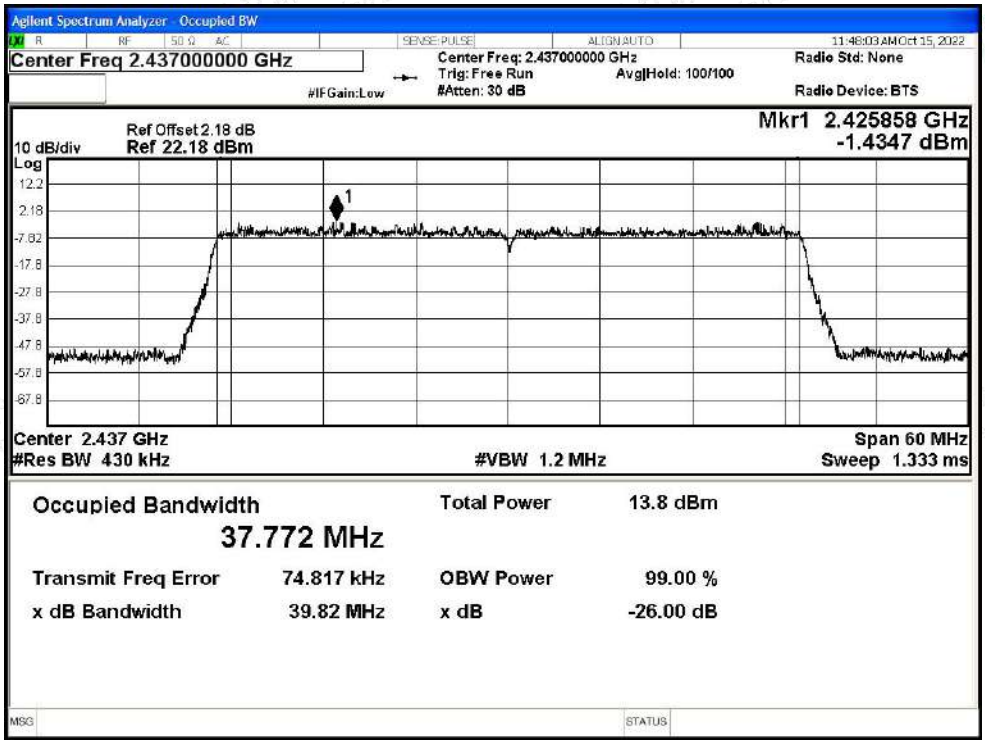
OBW NVNT ax20 2462MHz Ant1



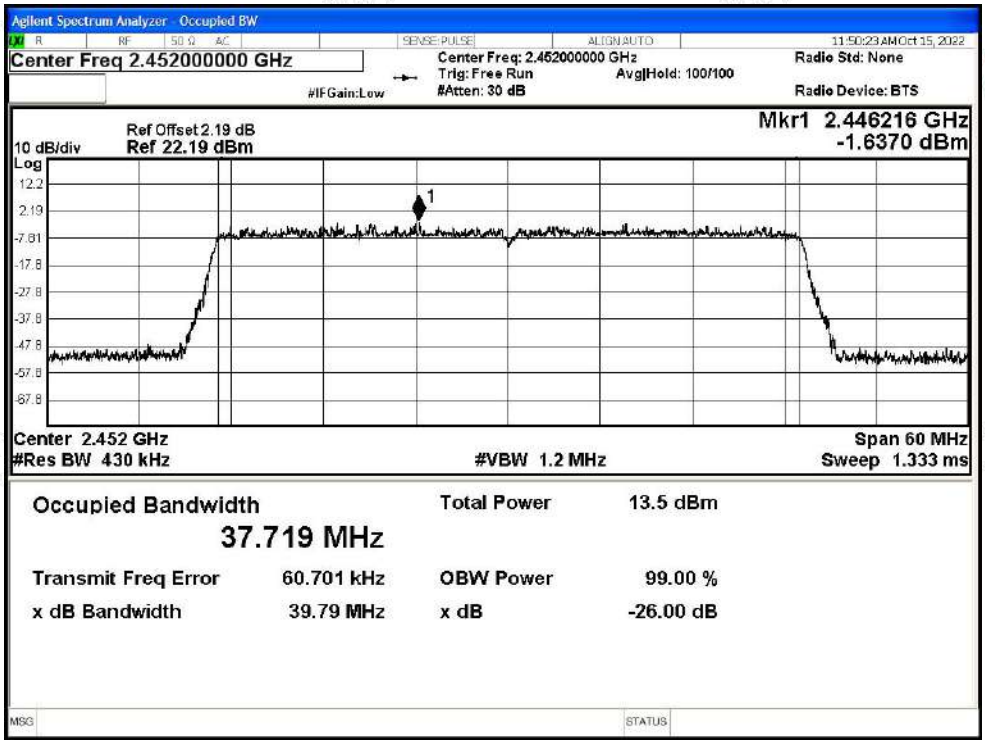
OBW NVNT ax40 2422MHz Ant1



OBW NVNT ax40 2437MHz Ant1



OBW NVNT ax40 2452MHz Ant1



C.3 Maximum Peak Conducted Output Power and e.i.r.p.

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Verdict
NVNT	b	2412	Ant0	12.02	≤30	3.31	15.33	≤36.00	Pass
NVNT	b	2437	Ant0	12.57	≤30	3.31	15.88	≤36.00	Pass
NVNT	b	2462	Ant0	12.67	≤30	3.31	15.98	≤36.00	Pass
NVNT	g	2412	Ant0	12.99	≤30	3.31	16.3	≤36.00	Pass
NVNT	g	2437	Ant0	12.73	≤30	3.31	16.04	≤36.00	Pass
NVNT	g	2462	Ant0	12.84	≤30	3.31	16.15	≤36.00	Pass
NVNT	n20	2412	Ant0	13.05	≤30	3.31	16.36	≤36.00	Pass
NVNT	n20	2437	Ant0	12.76	≤30	3.31	16.07	≤36.00	Pass
NVNT	n20	2462	Ant0	12.02	≤30	3.31	15.33	≤36.00	Pass
NVNT	n40	2422	Ant0	11.85	≤30	3.31	15.16	≤36.00	Pass
NVNT	n40	2437	Ant0	11.93	≤30	3.31	15.24	≤36.00	Pass
NVNT	n40	2452	Ant0	11.9	≤30	3.31	15.21	≤36.00	Pass
NVNT	ax20	2412	Ant0	12.32	≤30	3.31	15.63	≤36.00	Pass
NVNT	ax20	2437	Ant0	12.17	≤30	3.31	15.48	≤36.00	Pass
NVNT	ax20	2462	Ant0	12.47	≤30	3.31	15.78	≤36.00	Pass
NVNT	ax40	2422	Ant0	12.76	≤30	3.31	16.07	≤36.00	Pass
NVNT	ax40	2437	Ant0	12.65	≤30	3.31	15.96	≤36.00	Pass
NVNT	ax40	2452	Ant0	12.72	≤30	3.31	16.03	≤36.00	Pass

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Verdict
NVNT	b	2412	Ant1	12.1	≤30	2.1	14.12	≤36.00	Pass
NVNT	b	2437	Ant1	12.71	≤30	2.1	14.67	≤36.00	Pass
NVNT	b	2462	Ant1	12.29	≤30	2.1	14.77	≤36.00	Pass
NVNT	g	2412	Ant1	12.22	≤30	2.1	15.09	≤36.00	Pass
NVNT	g	2437	Ant1	12.47	≤30	2.1	14.83	≤36.00	Pass
NVNT	g	2462	Ant1	12.3	≤30	2.1	14.94	≤36.00	Pass
NVNT	n20	2412	Ant1	12.37	≤30	2.1	15.15	≤36.00	Pass
NVNT	n20	2437	Ant1	12.31	≤30	2.1	14.86	≤36.00	Pass
NVNT	n20	2462	Ant1	13.03	≤30	2.1	14.12	≤36.00	Pass
NVNT	n40	2422	Ant1	11.93	≤30	2.1	13.95	≤36.00	Pass
NVNT	n40	2437	Ant1	12.1	≤30	2.1	14.03	≤36.00	Pass
NVNT	n40	2452	Ant1	11.78	≤30	2.1	14	≤36.00	Pass
NVNT	ax20	2412	Ant1	11.73	≤30	2.1	14.42	≤36.00	Pass
NVNT	ax20	2437	Ant1	11.95	≤30	2.1	14.27	≤36.00	Pass
NVNT	ax20	2462	Ant1	11.73	≤30	2.1	14.57	≤36.00	Pass
NVNT	ax40	2422	Ant1	12.49	≤30	2.1	14.86	≤36.00	Pass

NVNT	ax40	2437	Ant1	12.69	≤30	2.1	14.75	≤36.00	Pass
NVNT	ax40	2452	Ant1	12.34	≤30	2.1	14.82	≤36.00	Pass

MIMO

TestMode	Channel	Result[dBm]			Limit[dBm]	Directional Gain (dBi)	EIRP (dBm)	EIRP Limit [dBm]	Verdict
		Ant0	Ant1	MIMO					
n20	2412	13.05	12.37	15.73	≤30.00	3.31	19.04	≤36.00	PASS
	2437	12.76	12.31	15.55	≤30.00	3.31	18.86	≤36.00	PASS
	2462	12.02	13.03	15.56	≤30.00	3.31	18.87	≤36.00	PASS
n40	2422	11.85	11.93	14.90	≤30.00	3.31	18.21	≤36.00	PASS
	2437	11.93	12.1	15.03	≤30.00	3.31	18.34	≤36.00	PASS
	2452	11.9	11.78	14.85	≤30.00	3.31	18.16	≤36.00	PASS
ax20	2412	12.32	11.73	15.05	≤30.00	3.31	18.36	≤36.00	PASS
	2437	12.17	11.95	15.07	≤30.00	3.31	18.38	≤36.00	PASS
	2462	12.47	11.73	15.13	≤30.00	3.31	18.44	≤36.00	PASS
ax40	2422	12.76	12.49	15.64	≤30.00	3.31	18.95	≤36.00	PASS
	2437	12.65	12.69	15.68	≤30.00	3.31	18.99	≤36.00	PASS
	2452	12.72	12.34	15.54	≤30.00	3.31	18.85	≤36.00	PASS

C.4 Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	b	2412	Ant0	-16.54	≤8	Pass
NVNT	b	2437	Ant0	-16.11	≤8	Pass
NVNT	b	2462	Ant0	-16.09	≤8	Pass
NVNT	g	2412	Ant0	-18.62	≤8	Pass
NVNT	g	2437	Ant0	-19.28	≤8	Pass
NVNT	g	2462	Ant0	-19.39	≤8	Pass
NVNT	n20	2412	Ant0	-17.33	≤8	Pass
NVNT	n20	2437	Ant0	-17.71	≤8	Pass
NVNT	n20	2462	Ant0	-17.27	≤8	Pass
NVNT	n40	2422	Ant0	-19.1	≤8	Pass
NVNT	n40	2437	Ant0	-19.71	≤8	Pass
NVNT	n40	2452	Ant0	-20.15	≤8	Pass
NVNT	ax20	2412	Ant0	-18.13	≤8	Pass
NVNT	ax20	2437	Ant0	-18.72	≤8	Pass
NVNT	ax20	2462	Ant0	-18.59	≤8	Pass
NVNT	ax40	2422	Ant0	-21.27	≤8	Pass
NVNT	ax40	2437	Ant0	-21.07	≤8	Pass
NVNT	ax40	2452	Ant0	-21.61	≤8	Pass

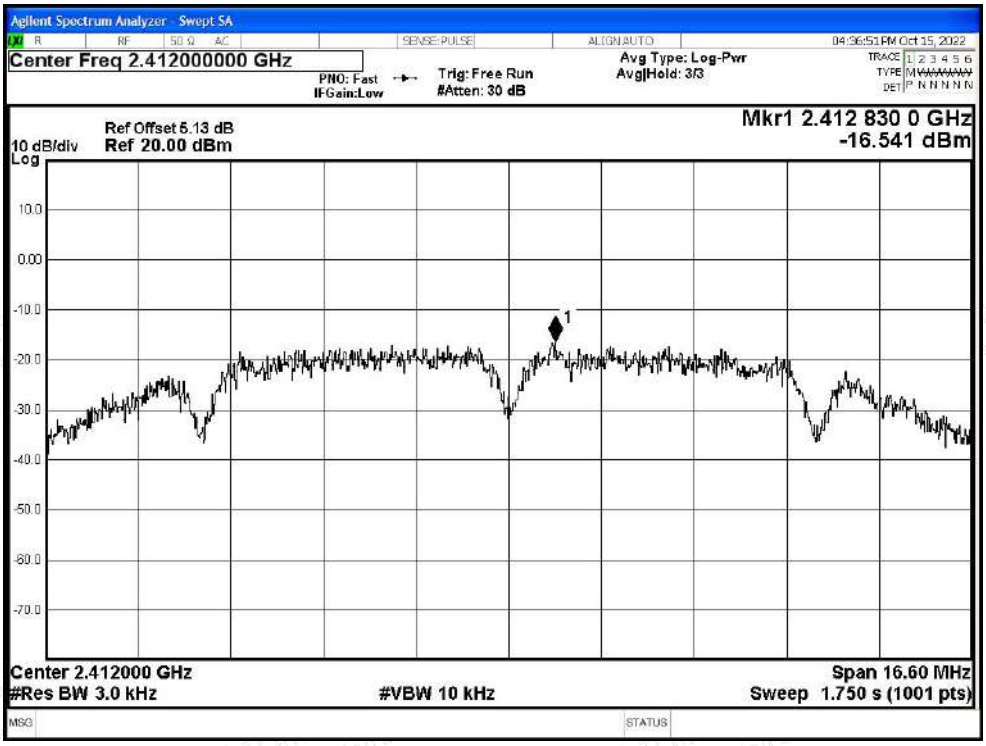
Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	b	2412	Ant1	-15	≤8	Pass
NVNT	b	2437	Ant1	-17.1	≤8	Pass
NVNT	b	2462	Ant1	-17.03	≤8	Pass
NVNT	g	2412	Ant1	-22.23	≤8	Pass
NVNT	g	2437	Ant1	-22	≤8	Pass
NVNT	g	2462	Ant1	-21.98	≤8	Pass
NVNT	n20	2412	Ant1	-20.71	≤8	Pass
NVNT	n20	2437	Ant1	-21.21	≤8	Pass
NVNT	n20	2462	Ant1	-21.36	≤8	Pass
NVNT	n40	2422	Ant1	-22.5	≤8	Pass
NVNT	n40	2437	Ant1	-21.65	≤8	Pass
NVNT	n40	2452	Ant1	-22.93	≤8	Pass
NVNT	ax20	2412	Ant1	-21.52	≤8	Pass
NVNT	ax20	2437	Ant1	-21.69	≤8	Pass
NVNT	ax20	2462	Ant1	-21.68	≤8	Pass
NVNT	ax40	2422	Ant1	-24.23	≤8	Pass
NVNT	ax40	2437	Ant1	-24.23	≤8	Pass
NVNT	ax40	2452	Ant1	-24.37	≤8	Pass

MIMO

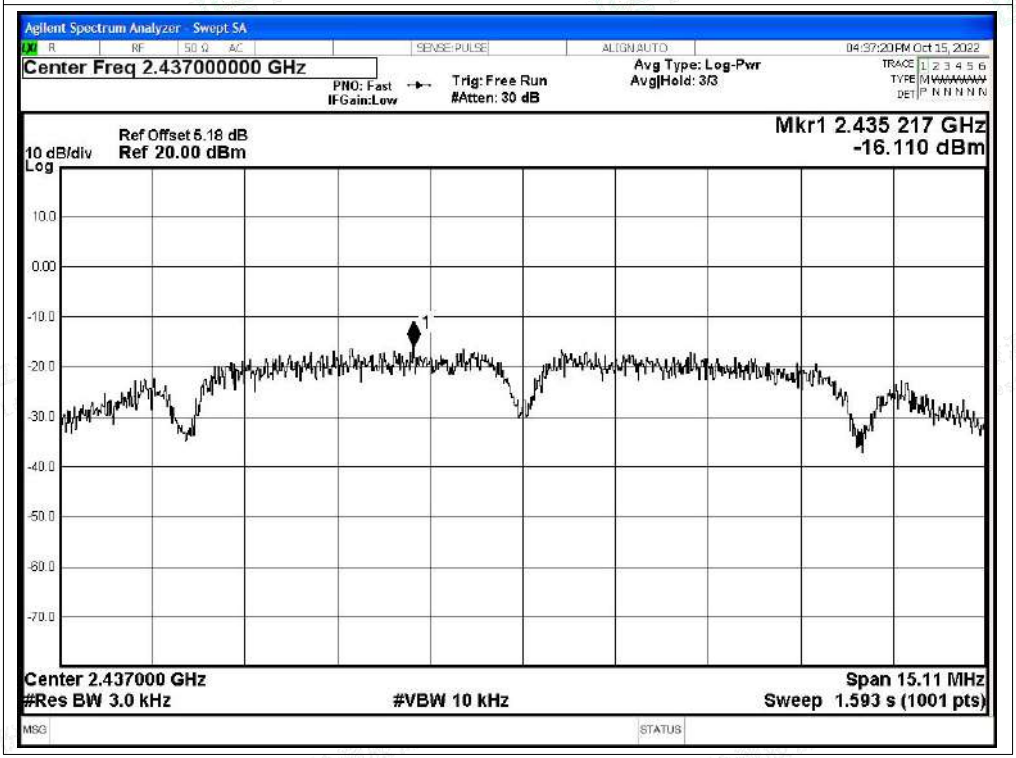
TestMode	Channel	Result[dBm/3kHz]			Limit[dBm/3kHz]	Verdict
		Ant0	Ant1	MIMO		
n20	2412	-17.33	-20.71	-15.69	≤7.68	PASS
	2437	-17.71	-21.21	-16.11	≤7.68	PASS
	2462	-17.27	-21.36	-15.84	≤7.68	PASS
n40	2422	-19.1	-22.5	-17.47	≤7.68	PASS
	2437	-19.71	-21.65	-17.56	≤7.68	PASS
	2452	-20.15	-22.93	-18.31	≤7.68	PASS
ax20	2412	-18.13	-21.52	-16.49	≤7.68	PASS
	2437	-18.72	-21.69	-16.95	≤7.68	PASS
	2462	-18.59	-21.68	-16.86	≤7.68	PASS
ax40	2422	-21.27	-24.23	-19.49	≤7.68	PASS
	2437	-21.07	-24.23	-19.36	≤7.68	PASS
	2452	-21.61	-24.37	-19.76	≤7.68	PASS

Test Graphs

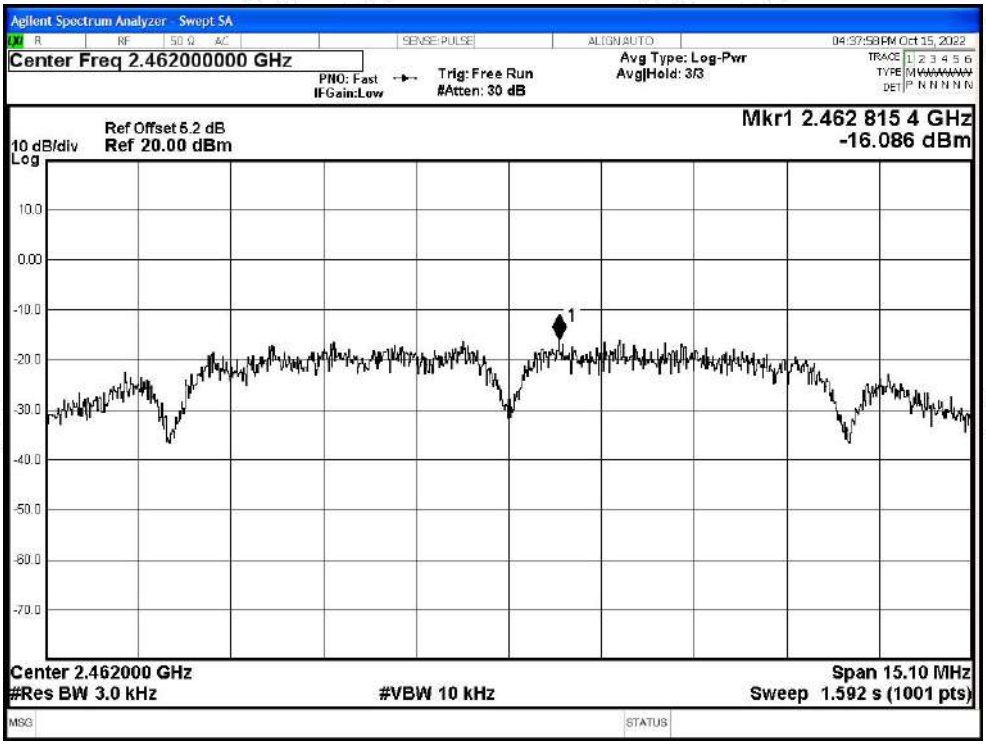
PSD NVNT b 2412MHz Ant0



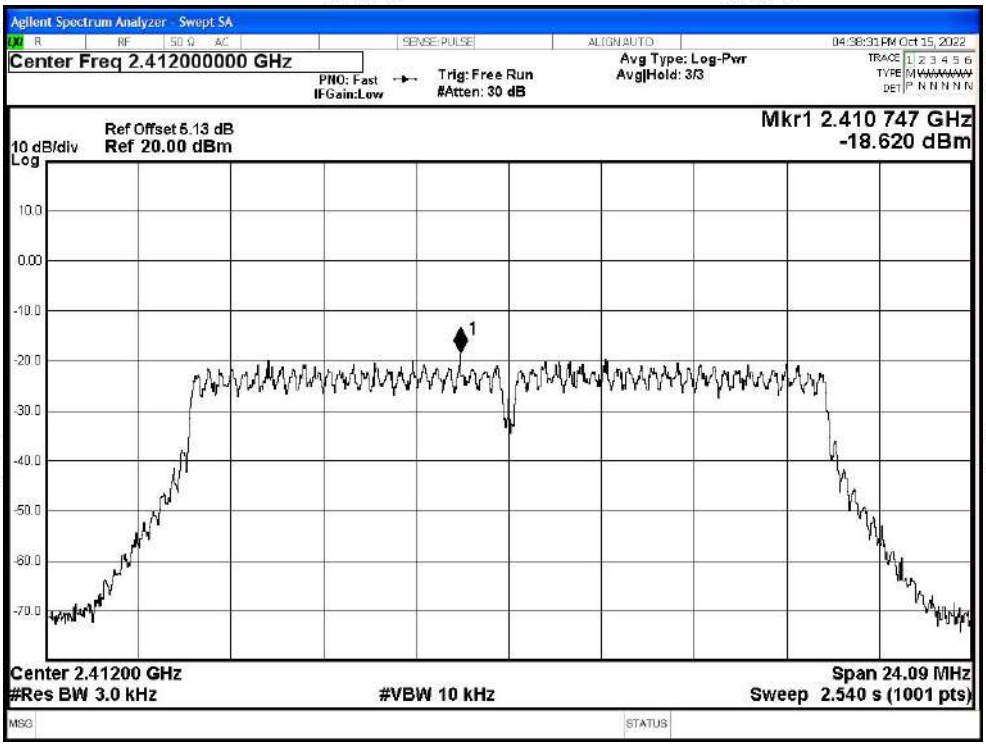
PSD NVNT b 2437MHz Ant0



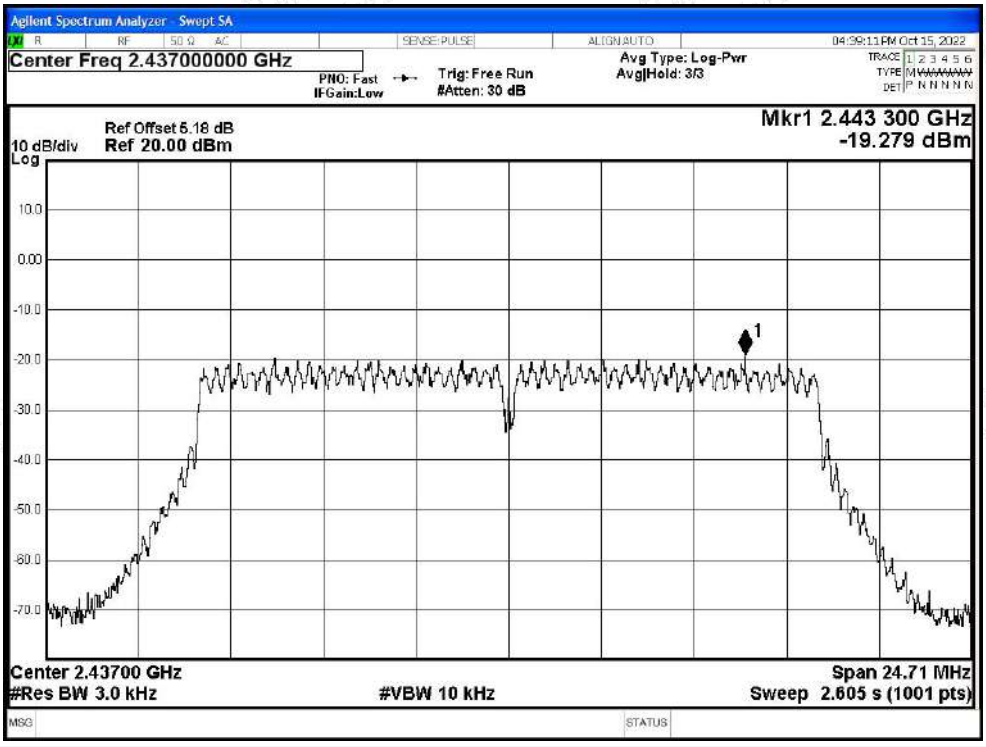
PSD NVNT b 2462MHz Ant0



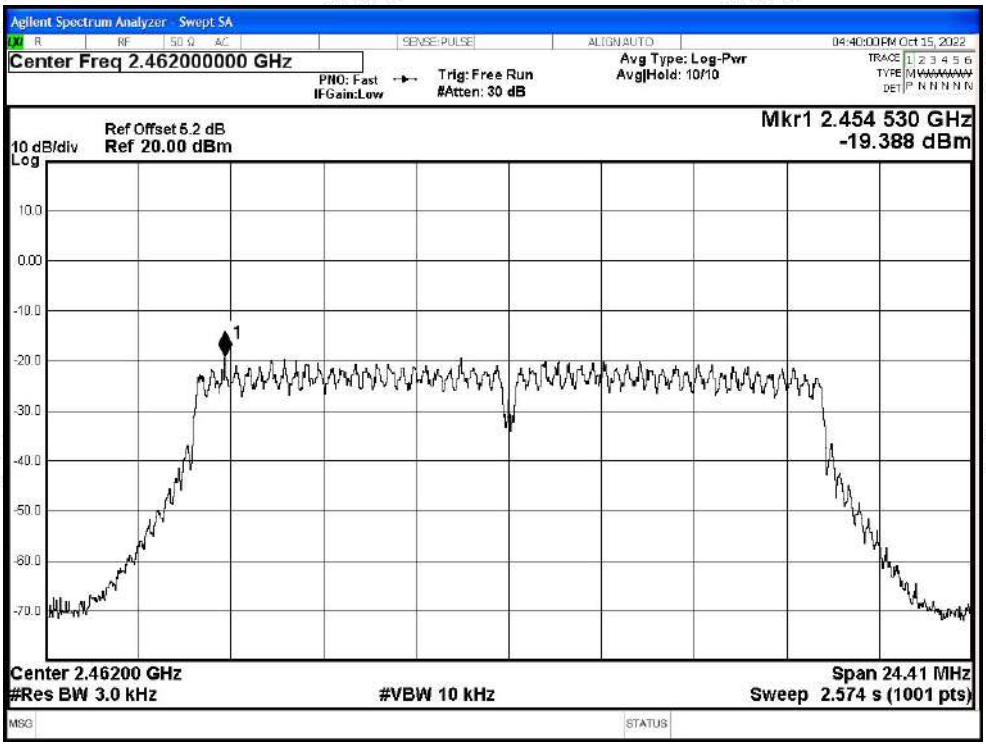
PSD NVNT g 2412MHz Ant0



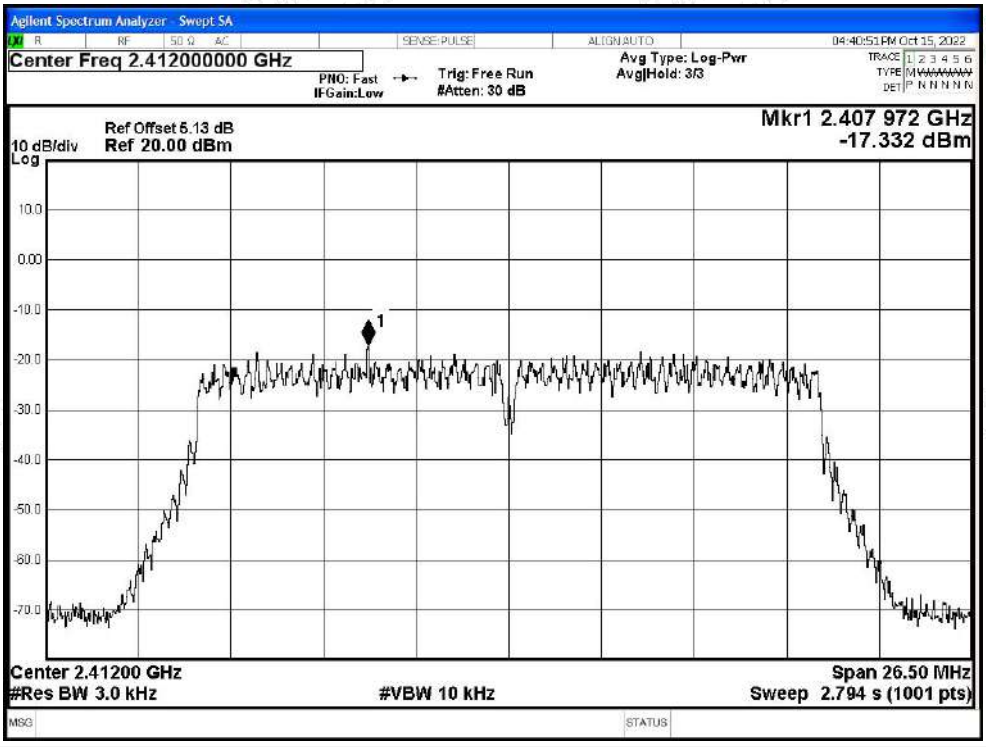
PSD NVNT g 2437MHz Ant0



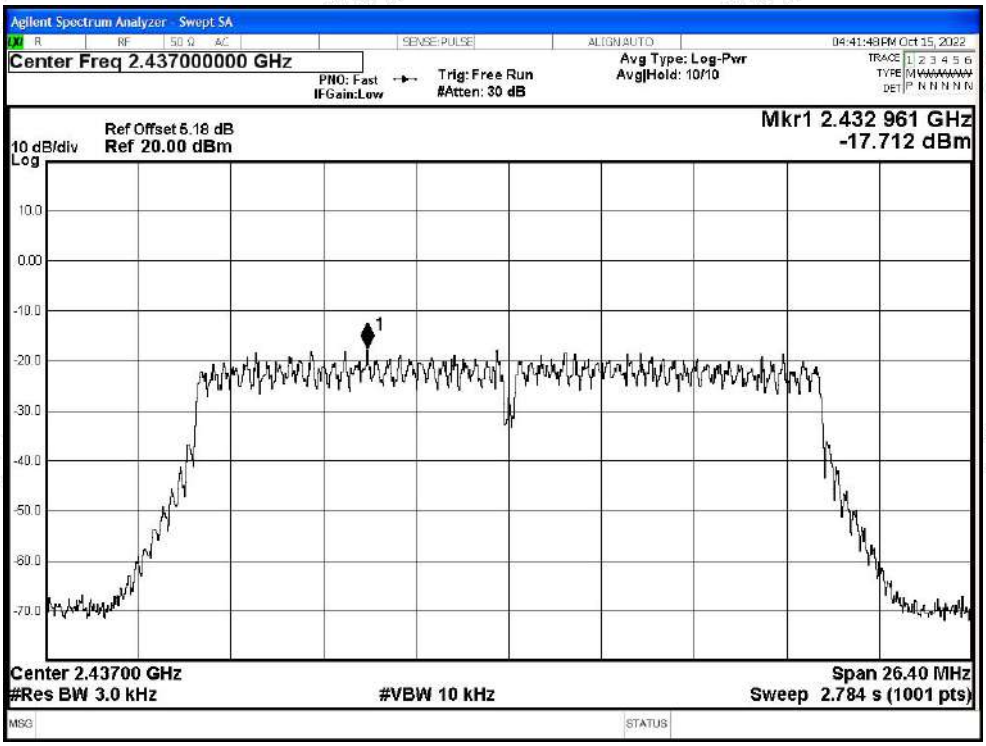
PSD NVNT g 2462MHz Ant0



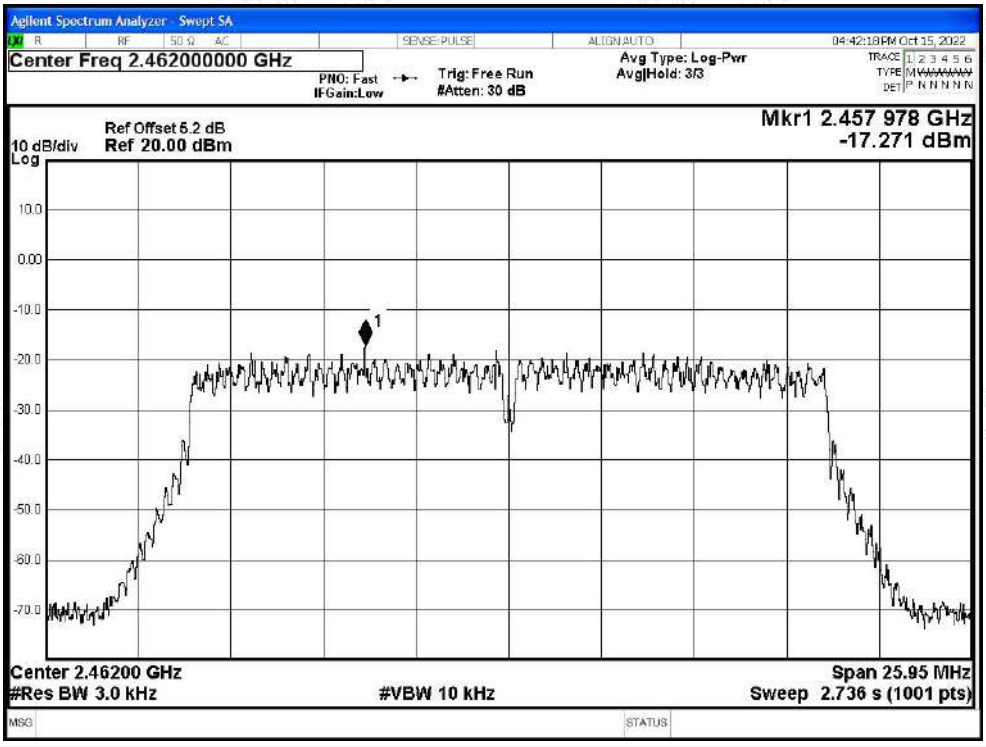
PSD NVNT n20 2412MHz Ant0



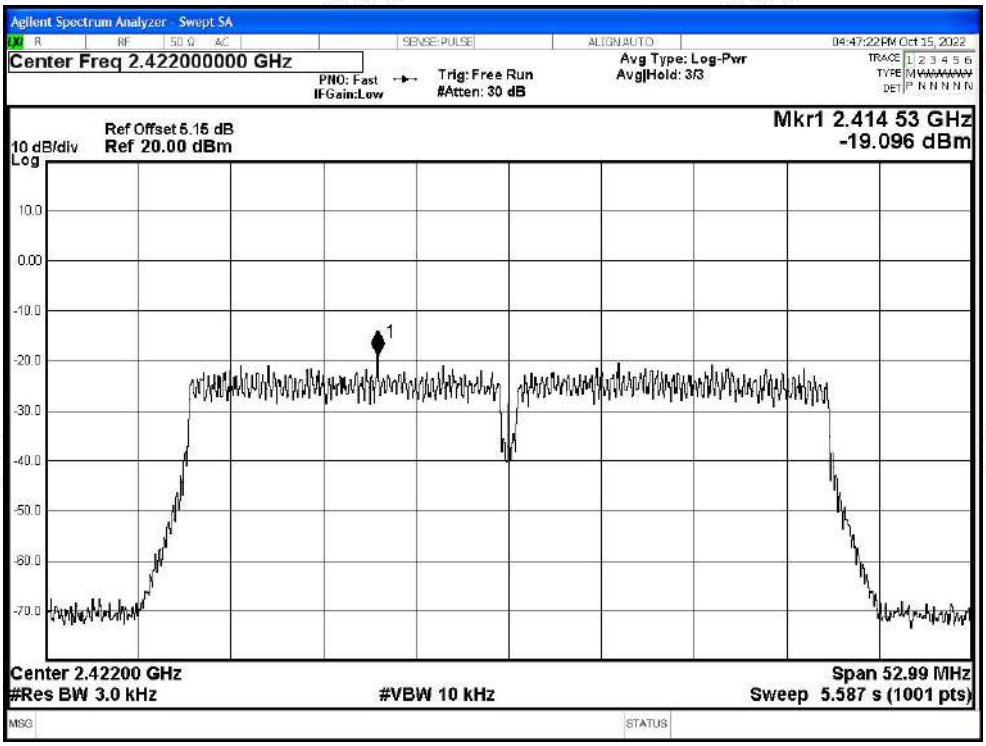
PSD NVNT n20 2437MHz Ant0



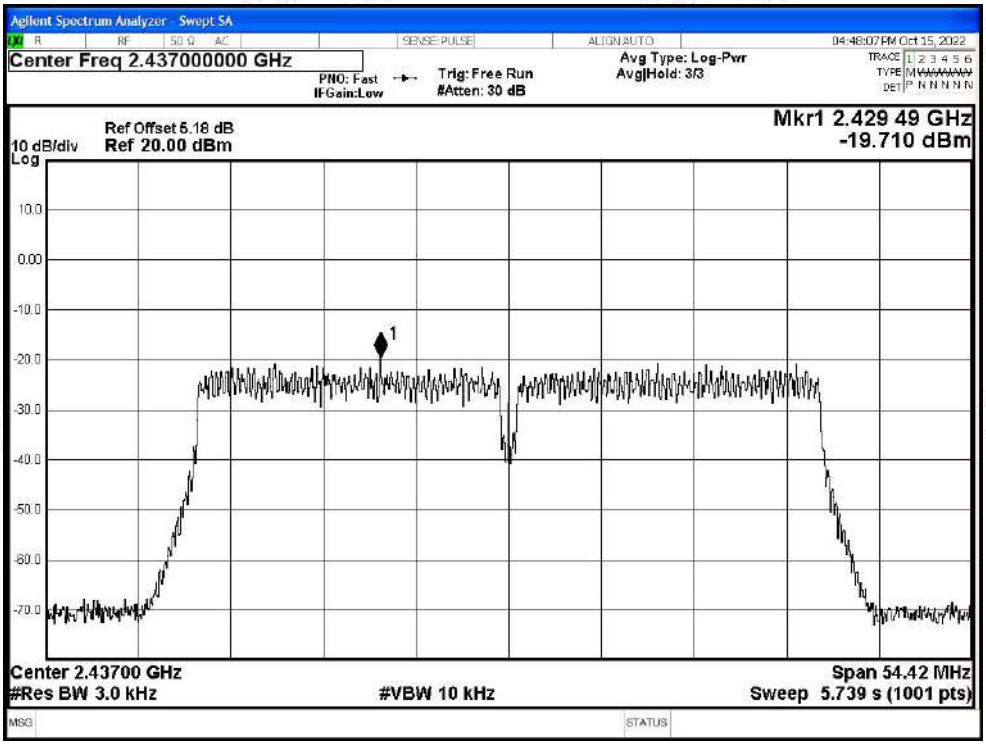
PSD NVNT n20 2462MHz Ant0



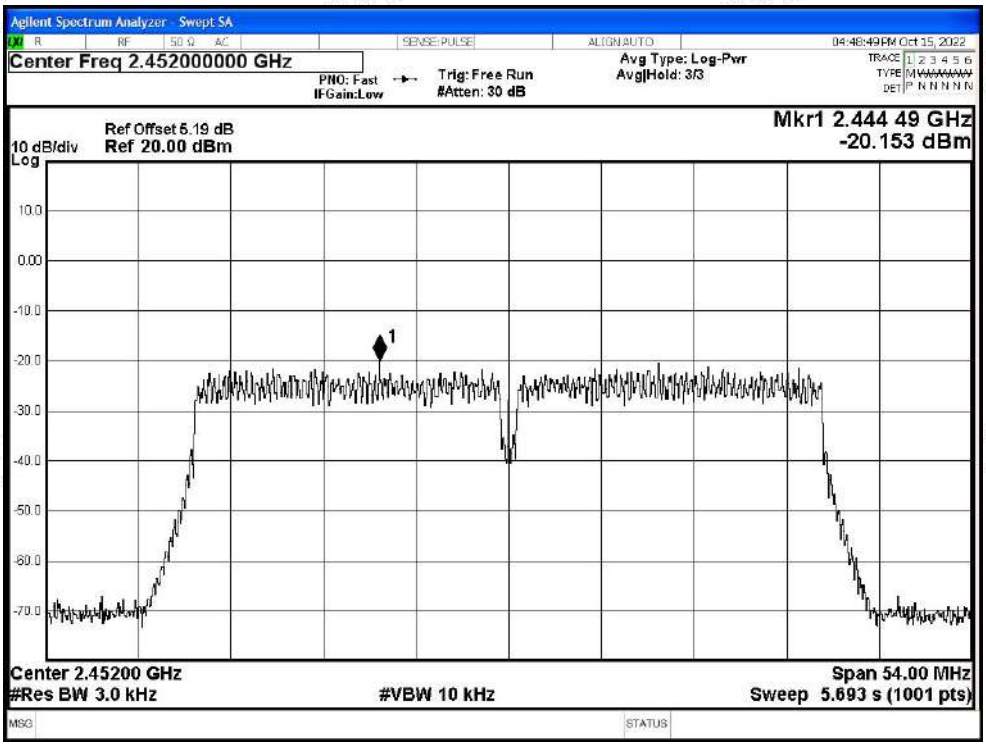
PSD NVNT n40 2422MHz Ant0



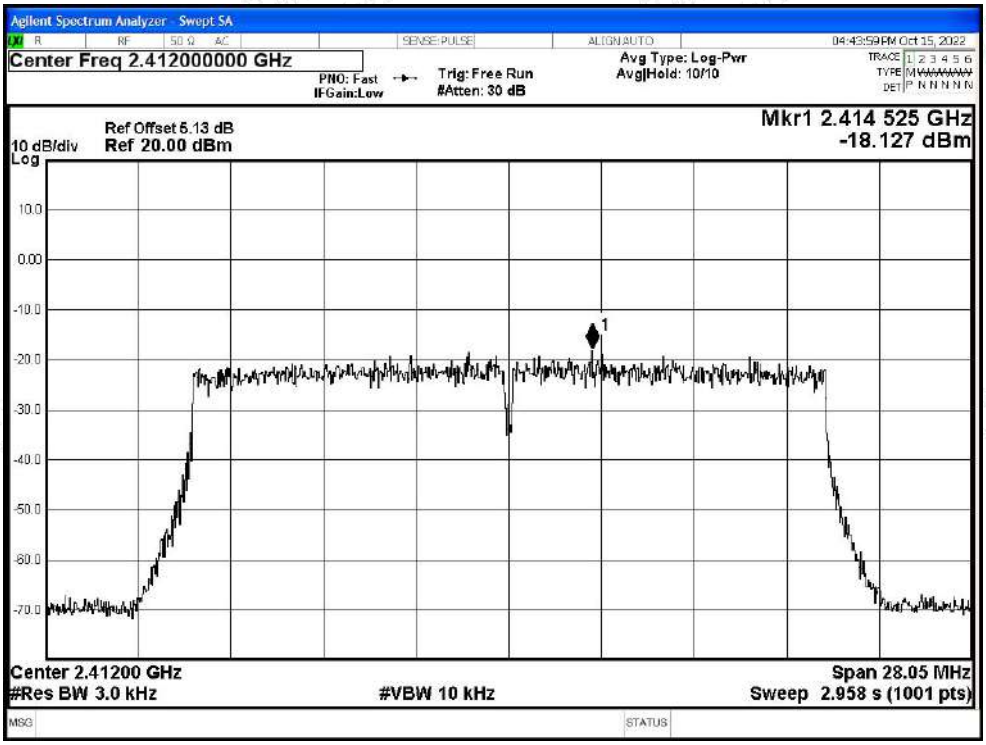
PSD NVNT n40 2437MHz Ant0



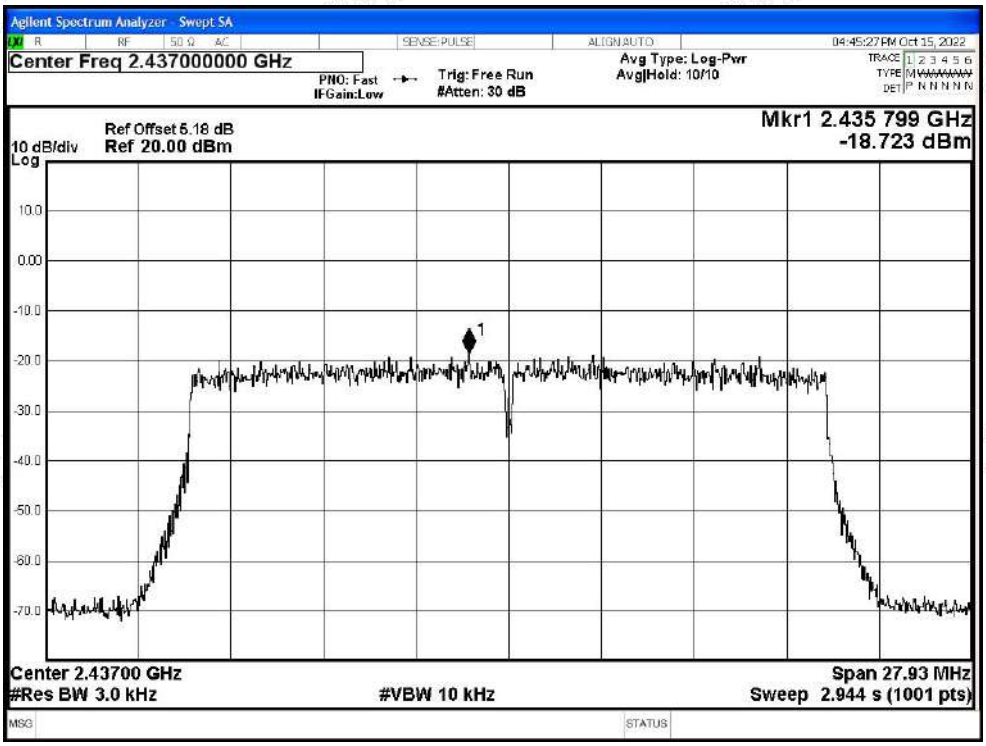
PSD NVNT n40 2452MHz Ant0



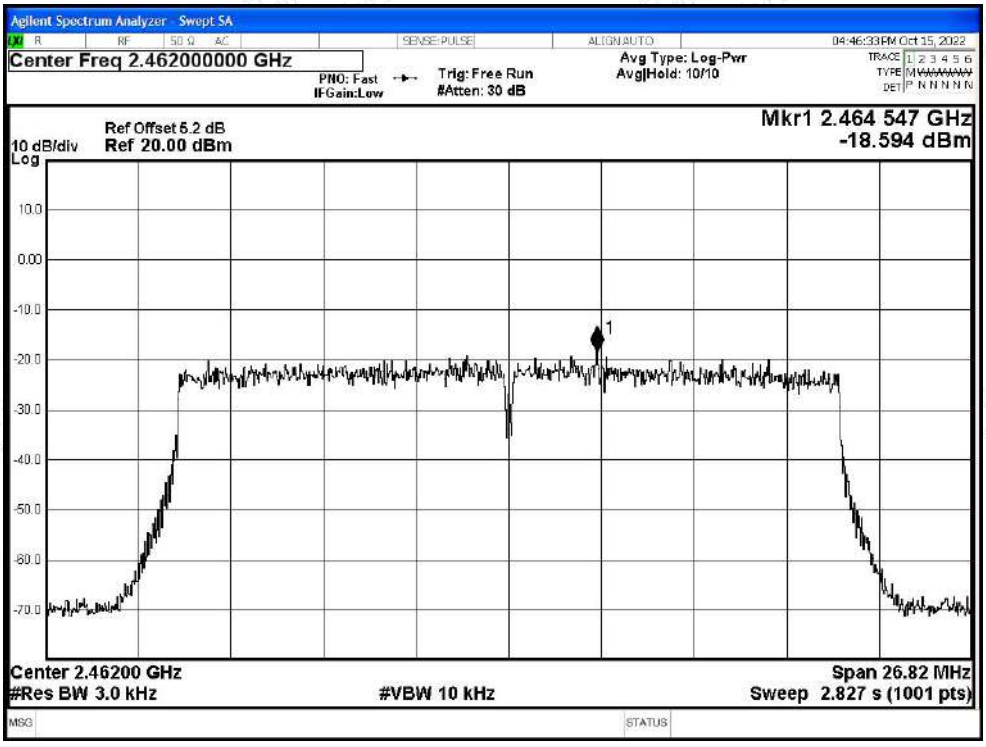
PSD NVNT ax20 2412MHz Ant0



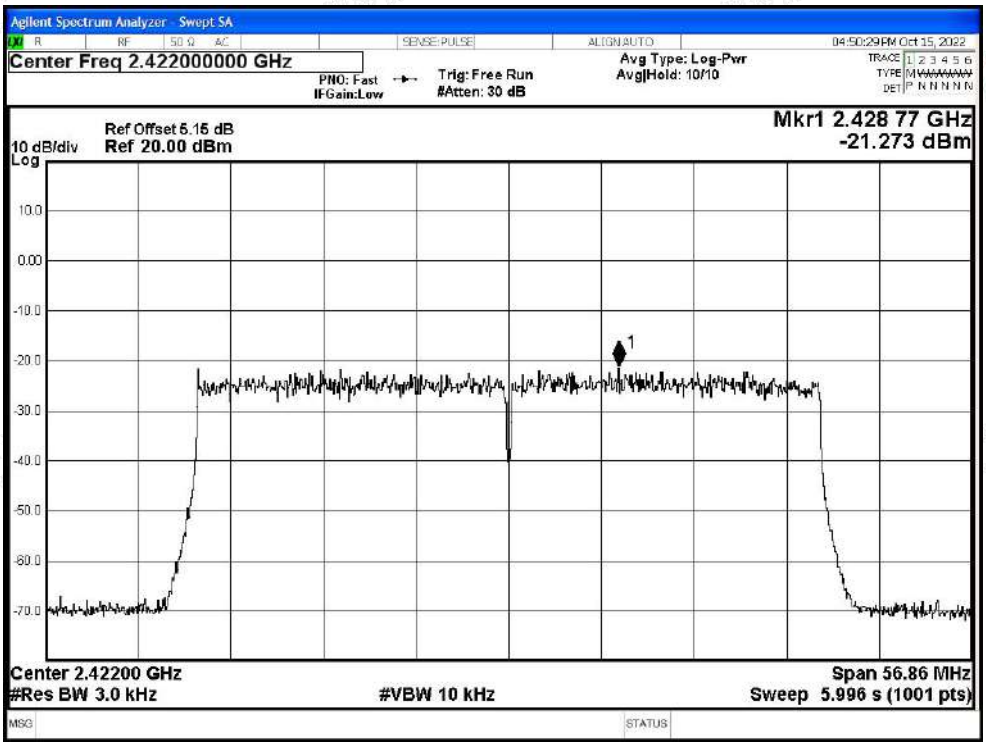
PSD NVNT ax20 2437MHz Ant0



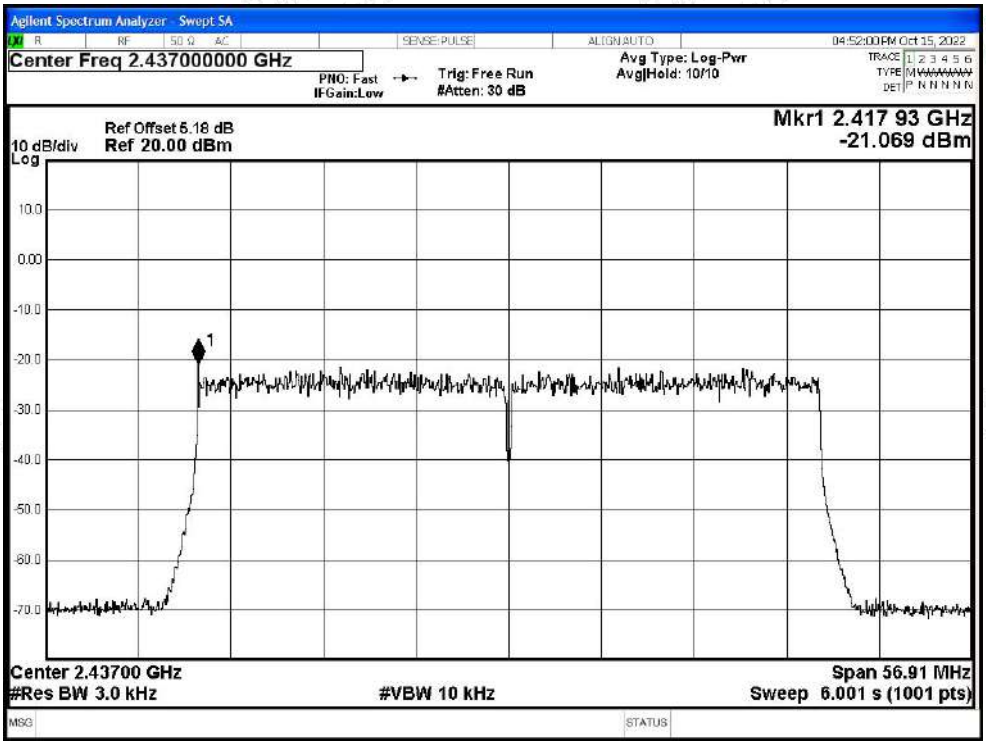
PSD NVNT ax20 2462MHz Ant0



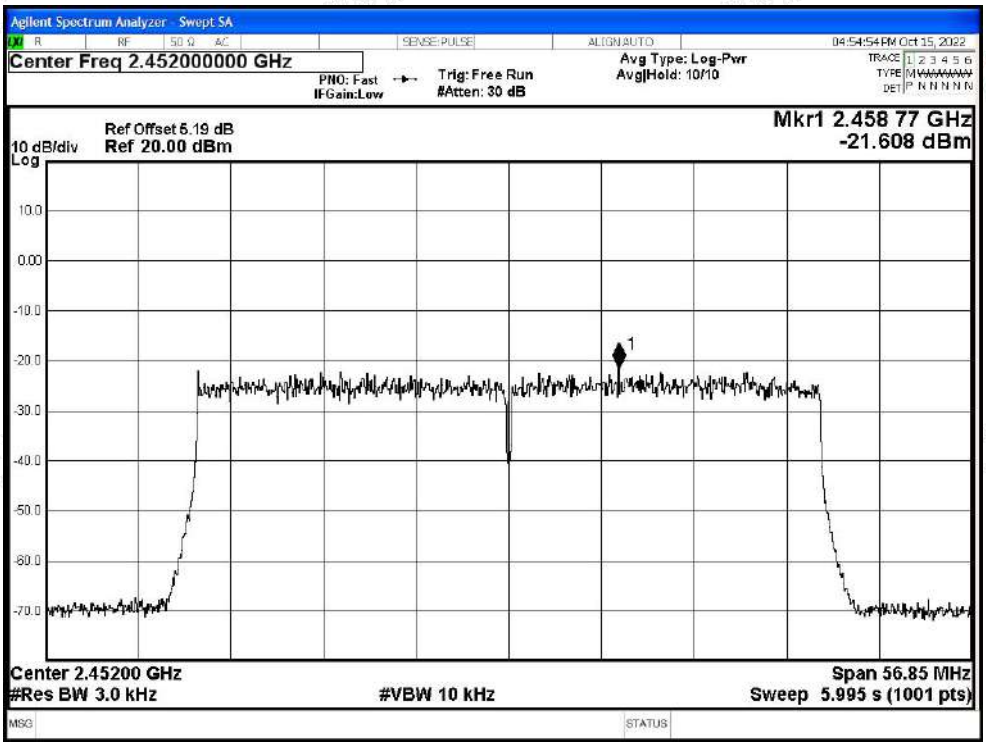
PSD NVNT ax40 2422MHz Ant0



PSD NVNT ax40 2437MHz Ant0

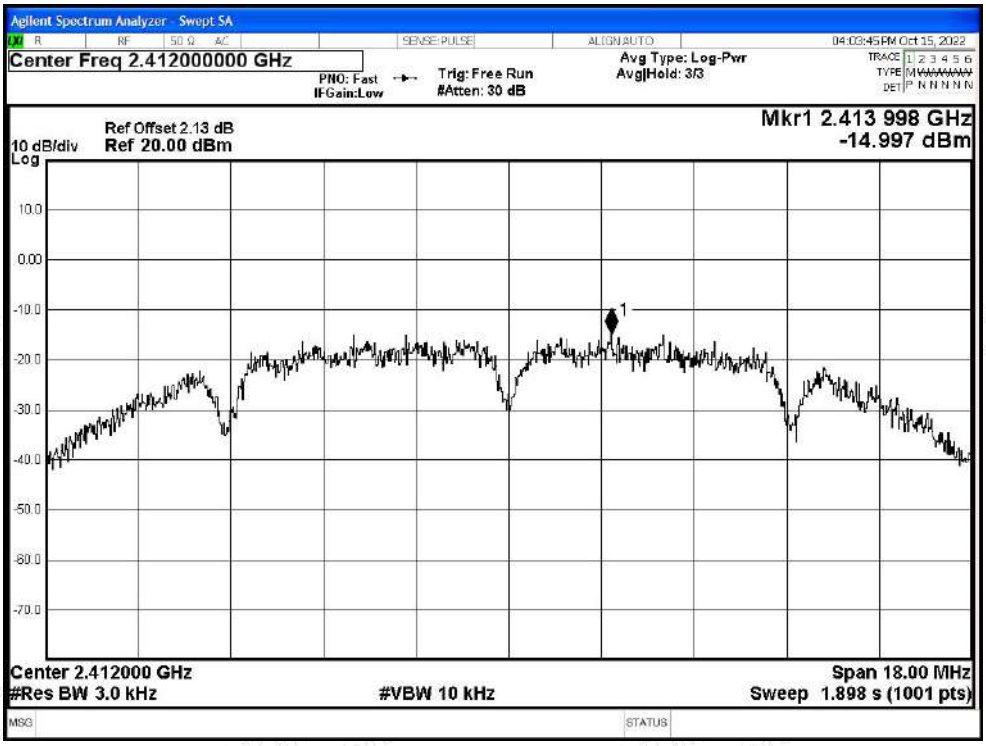


PSD NVNT ax40 2452MHz Ant0

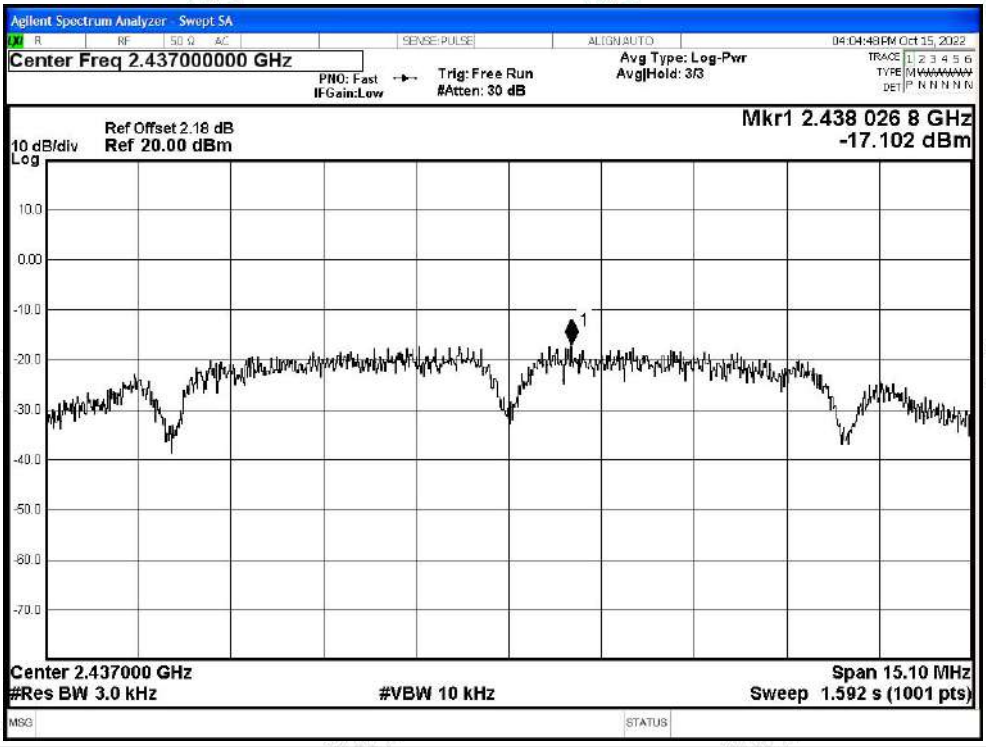


Test Graphs

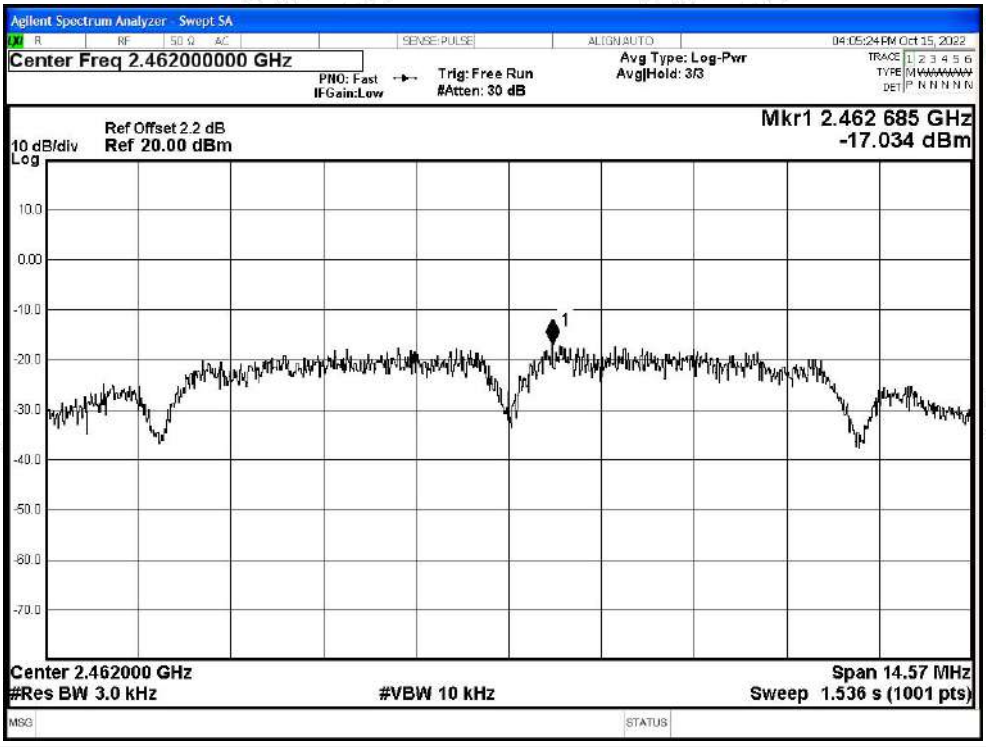
PSD NVNT b 2412MHz Ant1



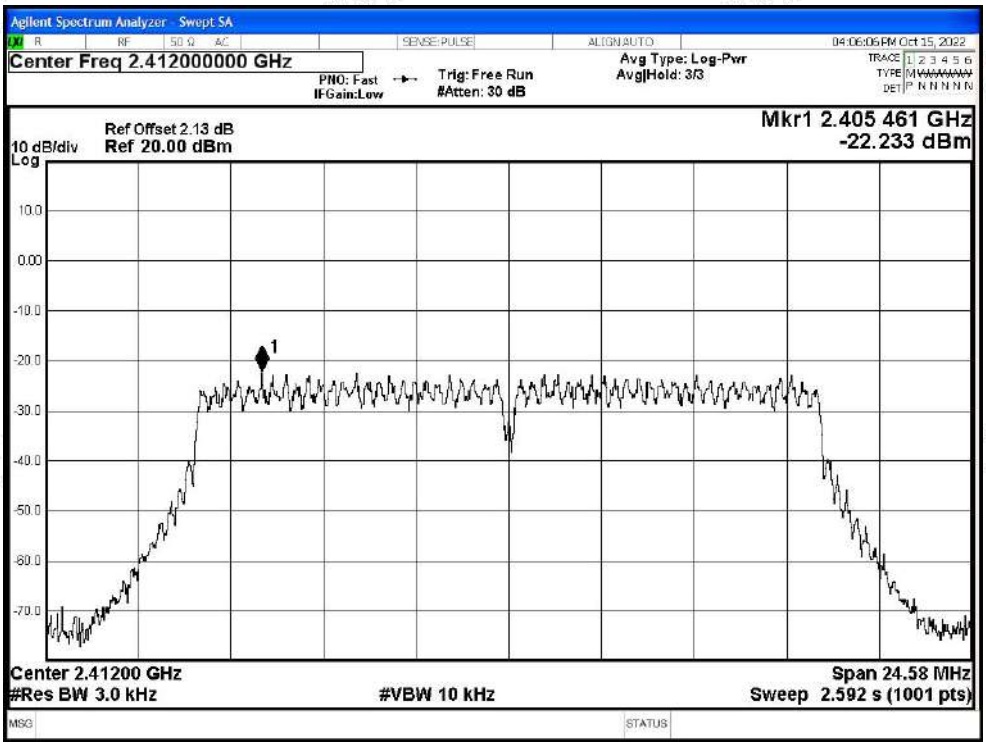
PSD NVNT b 2437MHz Ant1



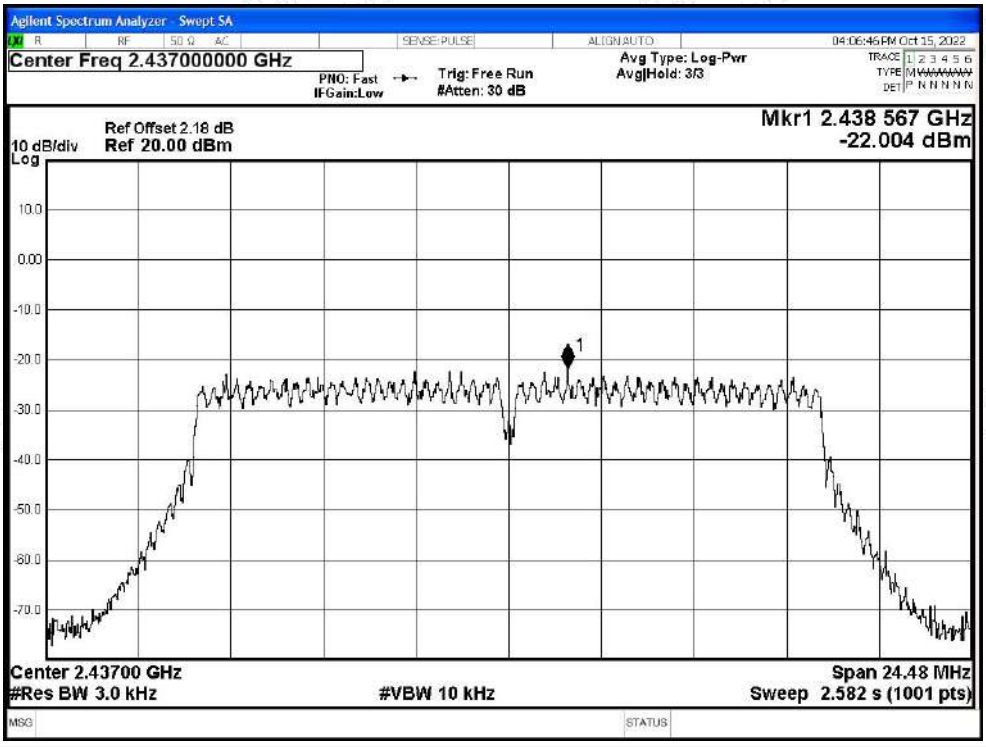
PSD NVNT b 2462MHz Ant1



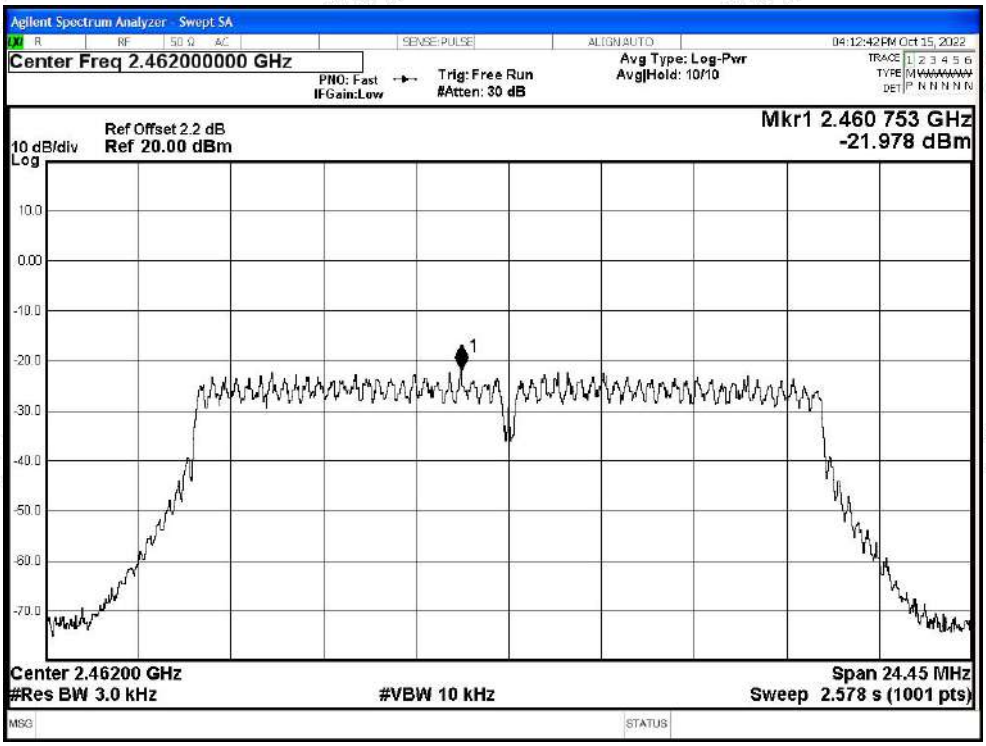
PSD NVNT g 2412MHz Ant1



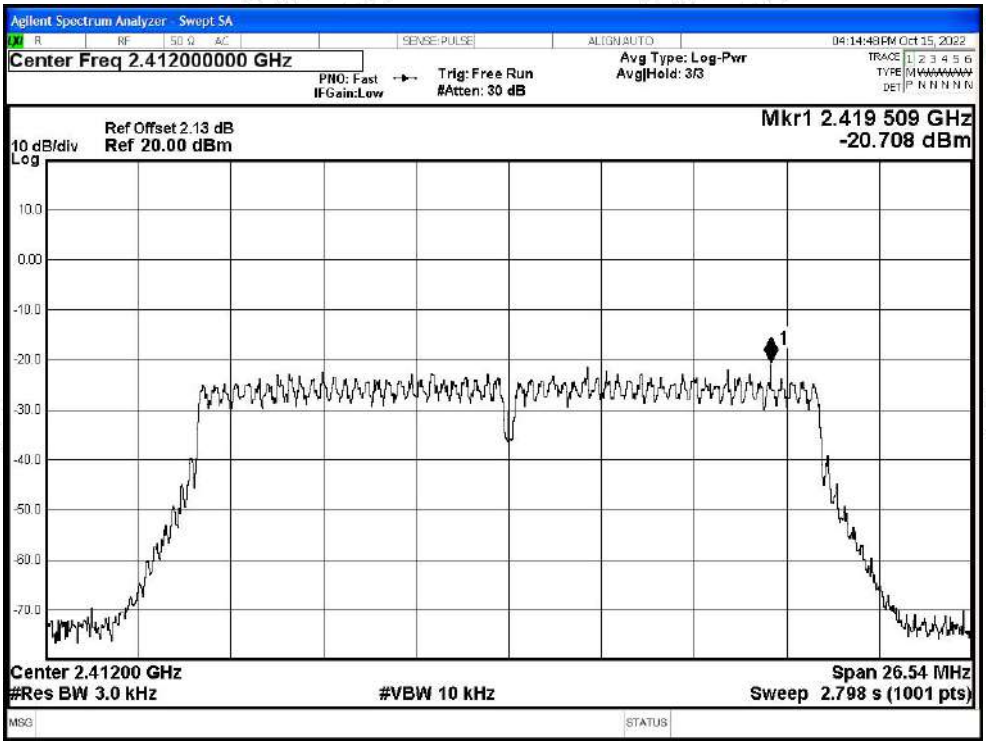
PSD NVNT g 2437MHz Ant1



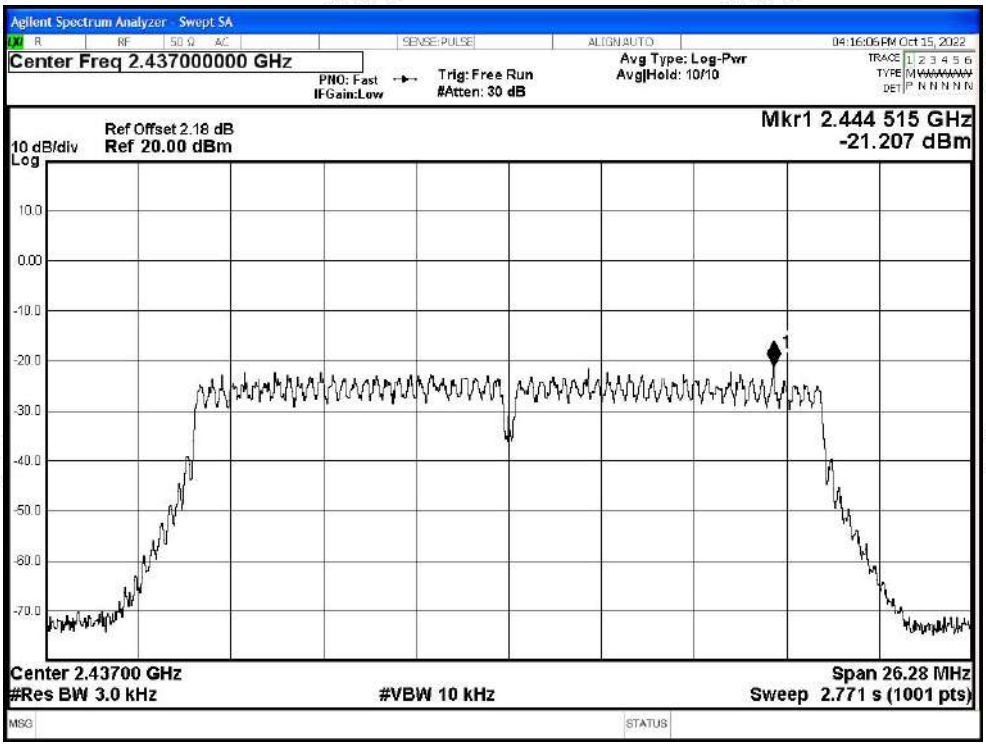
PSD NVNT g 2462MHz Ant1



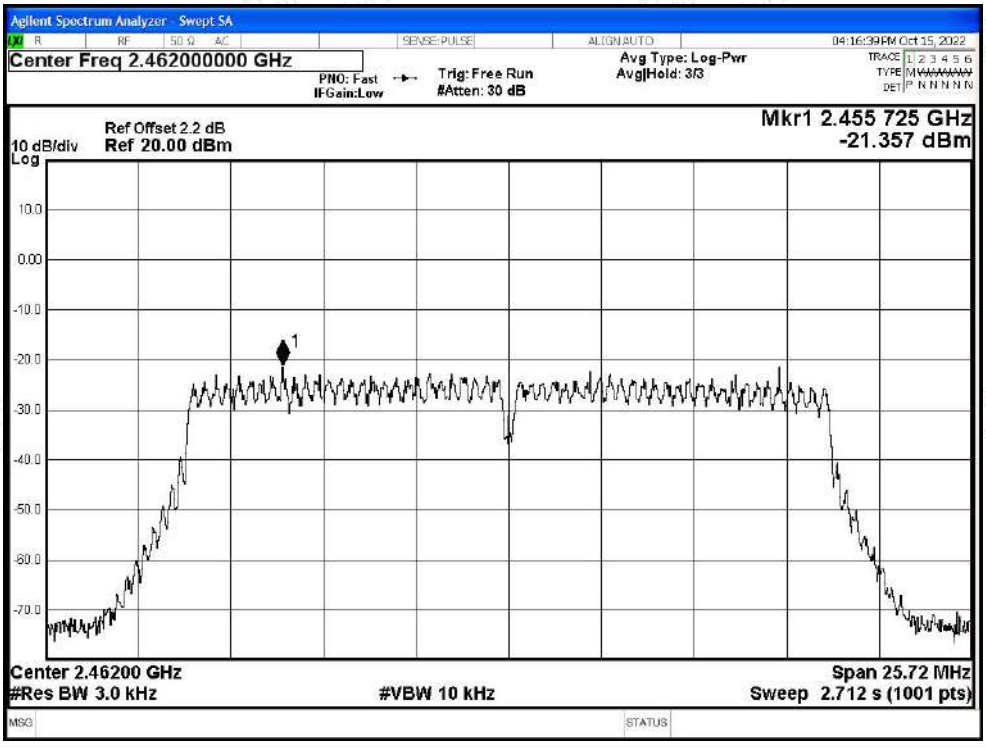
PSD NVNT n20 2412MHz Ant1



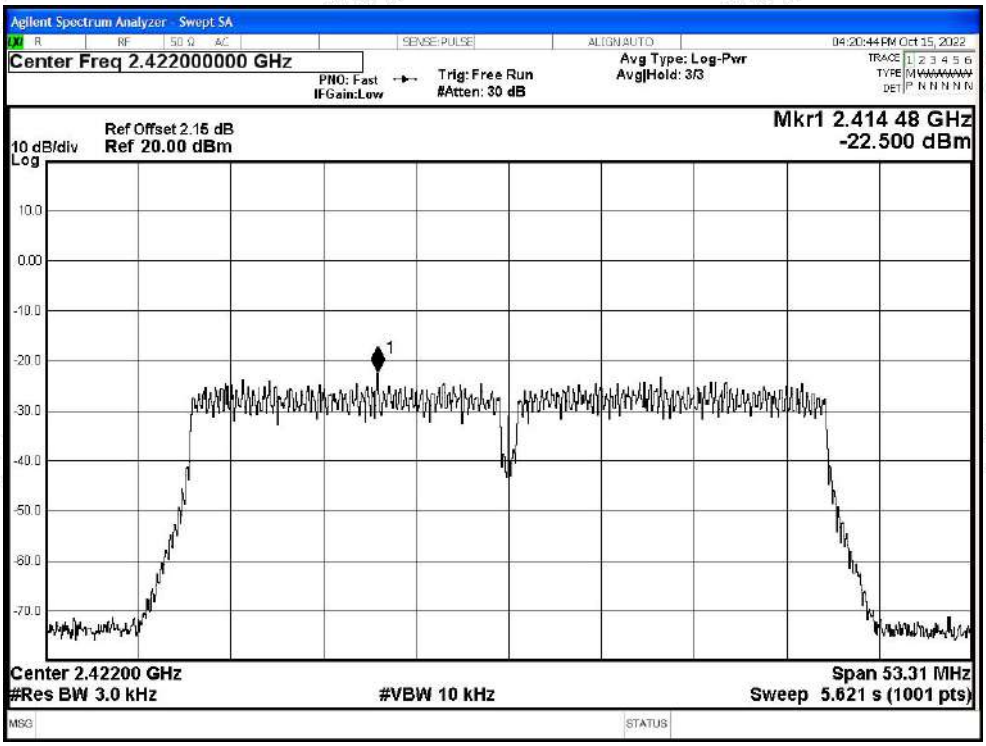
PSD NVNT n20 2437MHz Ant1



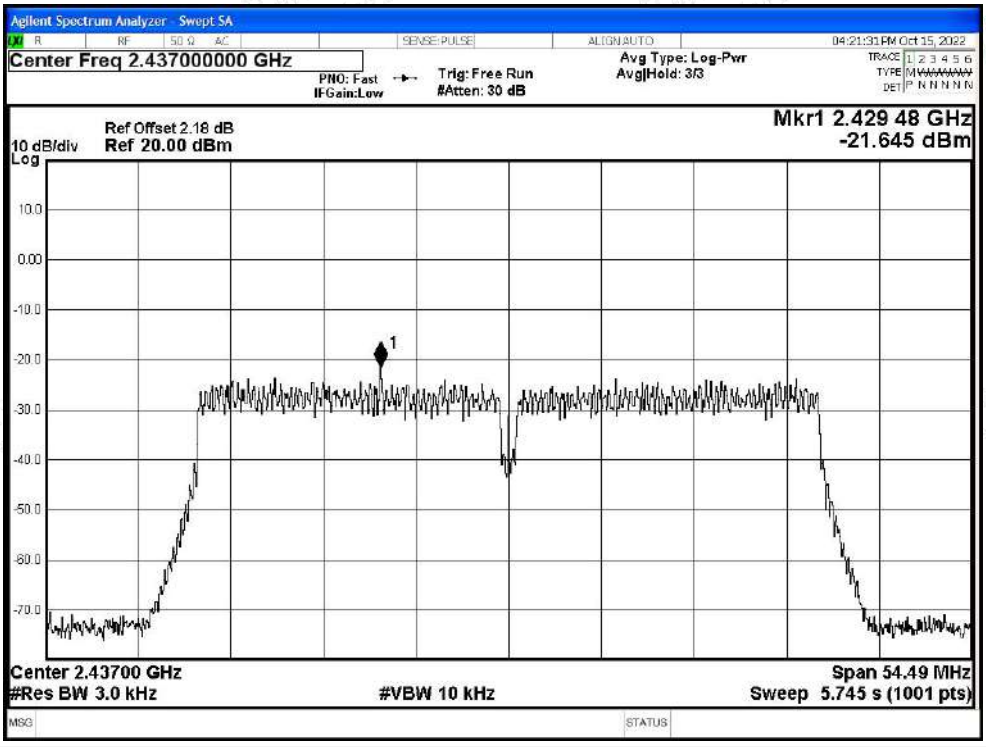
PSD NVNT n20 2462MHz Ant1



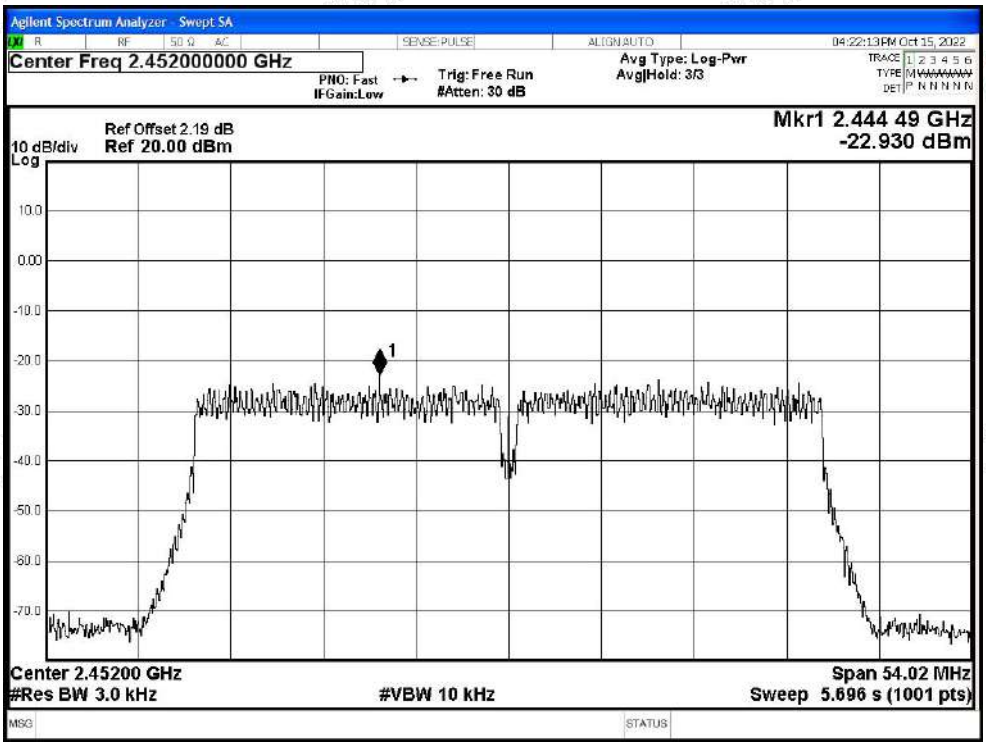
PSD NVNT n40 2422MHz Ant1



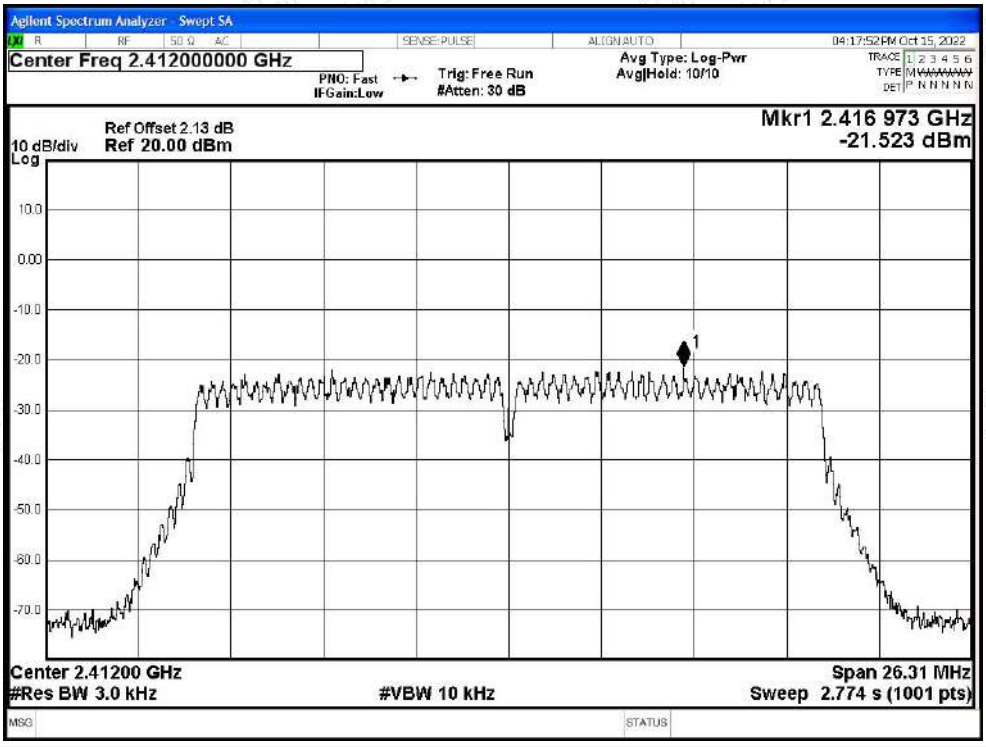
PSD NVNT n40 2437MHz Ant1



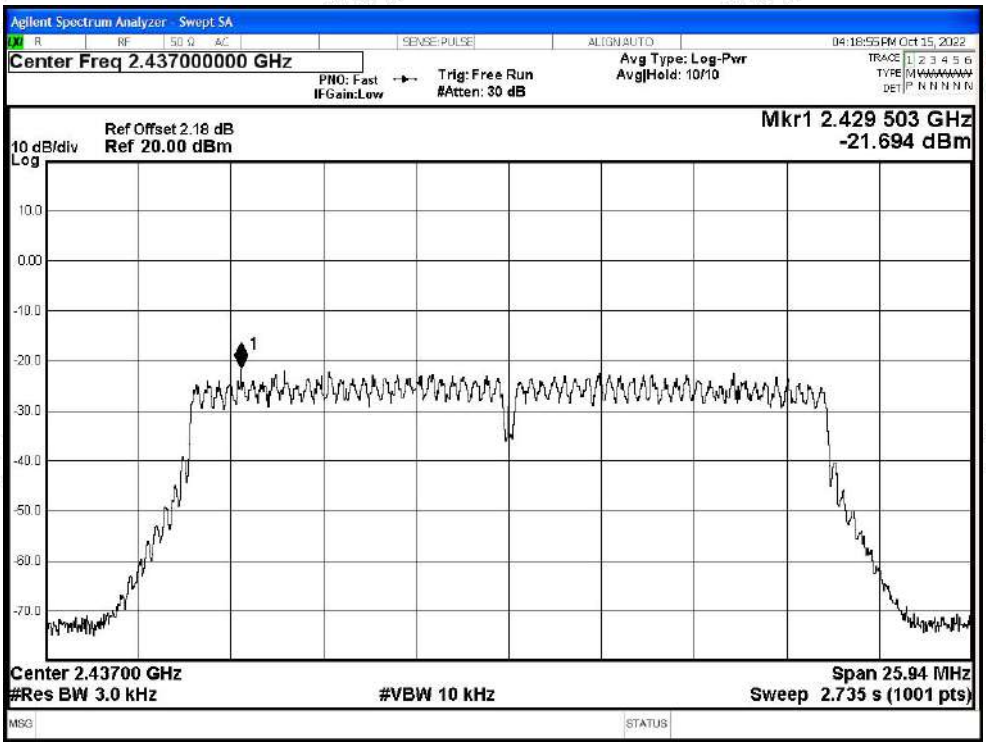
PSD NVNT n40 2452MHz Ant1



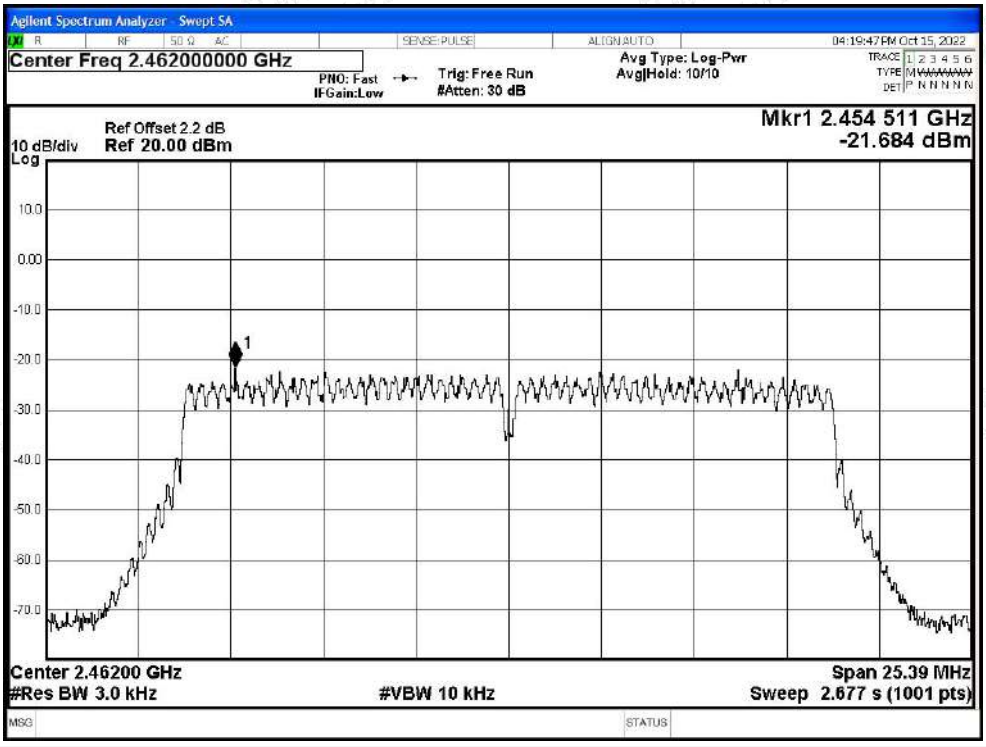
PSD NVNT ax20 2412MHz Ant1



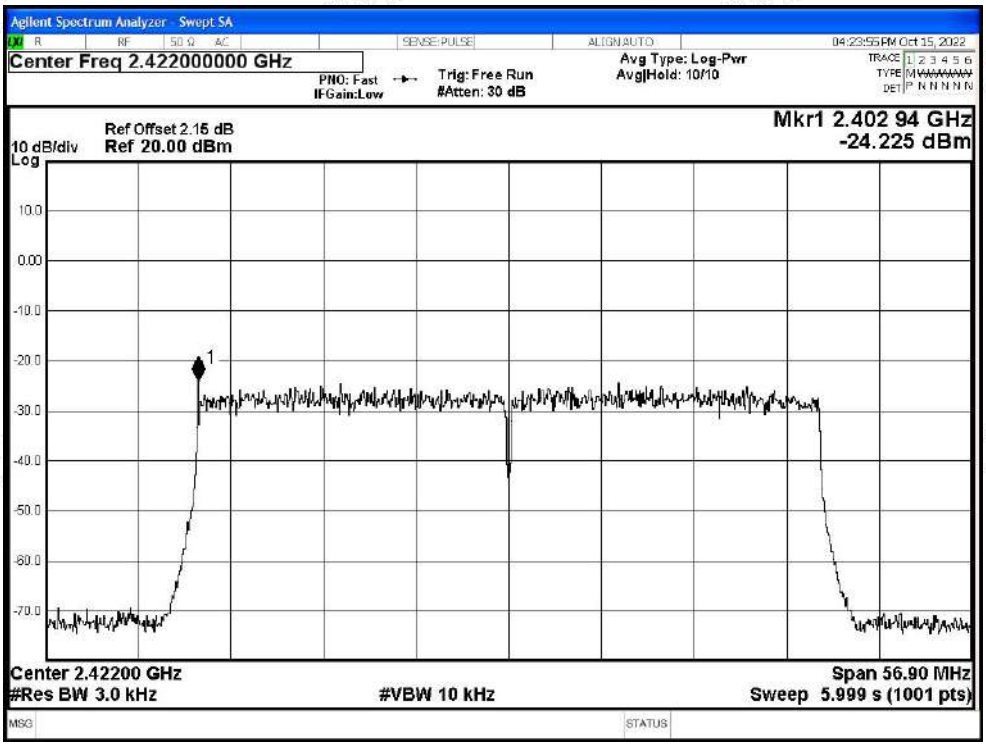
PSD NVNT ax20 2437MHz Ant1



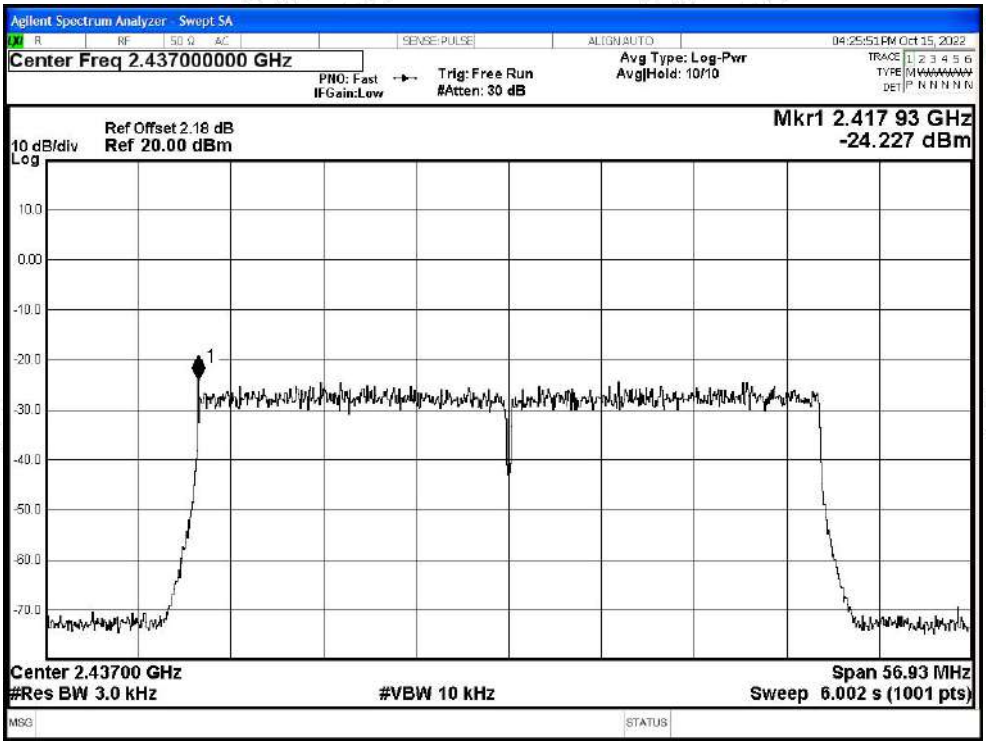
PSD NVNT ax20 2462MHz Ant1



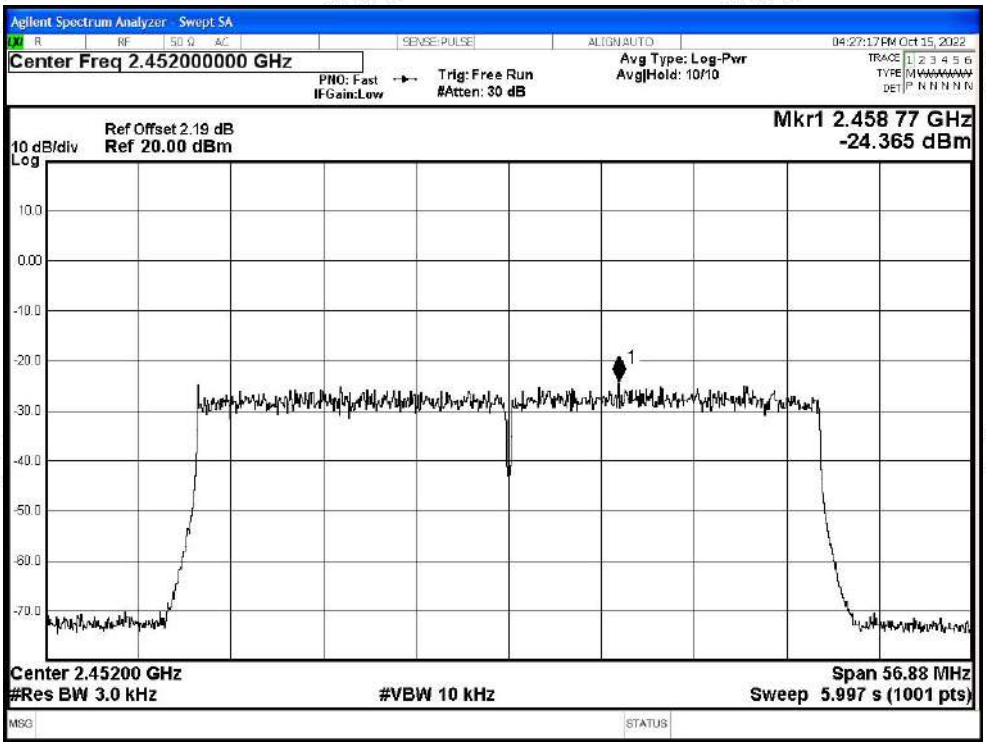
PSD NVNT ax40 2422MHz Ant1



PSD NVNT ax40 2437MHz Ant1



PSD NVNT ax40 2452MHz Ant1



C.5 Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant0	-48.53	-20	Pass
NVNT	b	2462	Ant0	-55.01	-20	Pass
NVNT	g	2412	Ant0	-50.91	-20	Pass
NVNT	g	2462	Ant0	-51.69	-20	Pass
NVNT	n20	2412	Ant0	-50.95	-20	Pass
NVNT	n20	2462	Ant0	-50.43	-20	Pass
NVNT	n40	2422	Ant0	-44.91	-20	Pass
NVNT	n40	2452	Ant0	-45.87	-20	Pass
NVNT	ax20	2412	Ant0	-48.02	-20	Pass
NVNT	ax20	2462	Ant0	-46.12	-20	Pass
NVNT	ax40	2422	Ant0	-42.84	-20	Pass
NVNT	ax40	2452	Ant0	-44.24	-20	Pass