Appendix A

RF Test Data for 2.4GWIFI (Conducted Measurement)

Product Name: Vilo 6 Mesh Wi-Fi System

Test Model: VL6WF02

Environmental Conditions

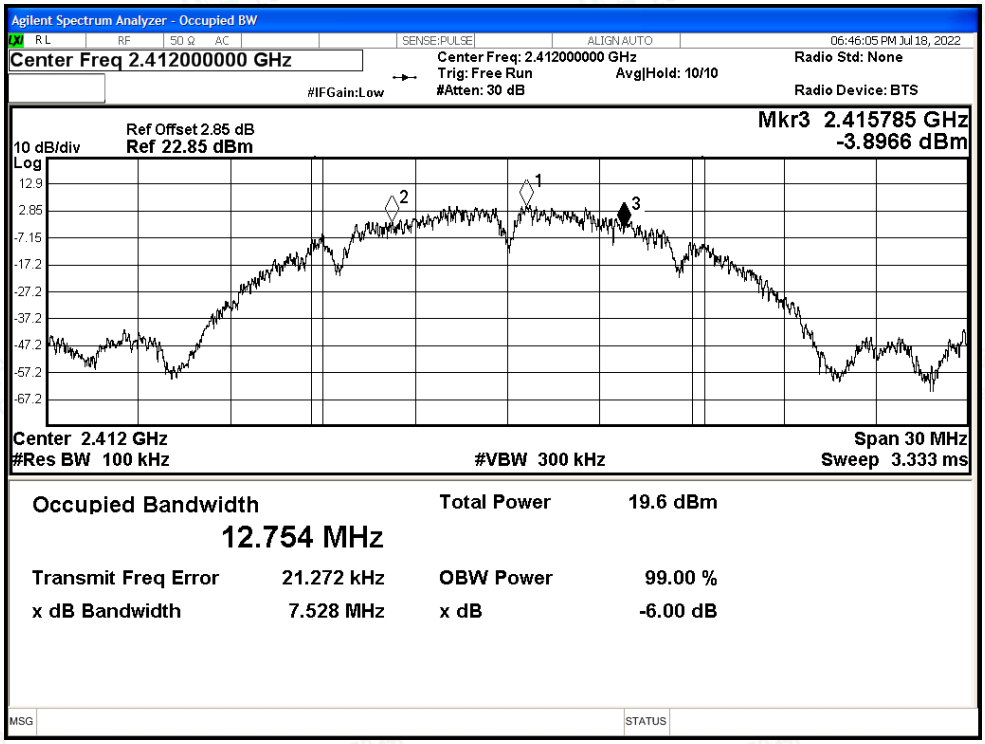
Temperature:	24.1℃
Relative Humidity:	52.4%
ATM Pressure:	100.0 kPa
Test Engineer:	monkey.Li Monkey Li
Supervised by:	Lihu Li Huan

A.1 -6dB Bandwidth

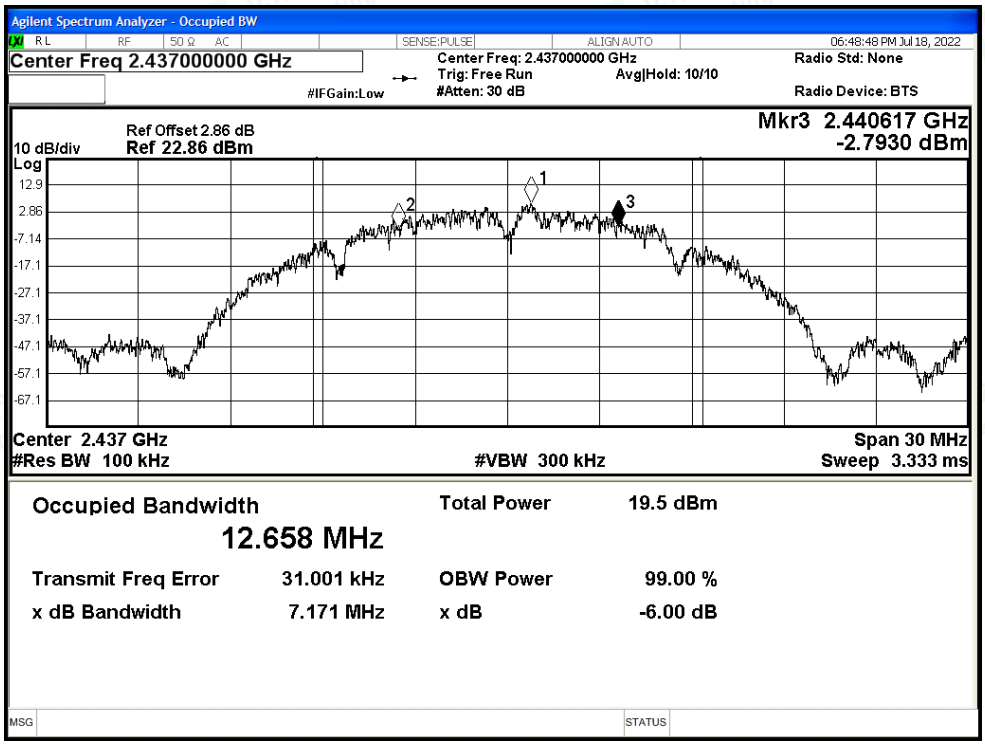
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant0	7.528	>=0.5	Pass
NVNT	b	2437	Ant0	7.171	>=0.5	Pass
NVNT	b	2462	Ant0	7.411	>=0.5	Pass
NVNT	g	2412	Ant0	16.312	>=0.5	Pass
NVNT	g	2437	Ant0	15.81	>=0.5	Pass
NVNT	g	2462	Ant0	16.065	>=0.5	Pass
NVNT	n20	2412	Ant0	17.552	>=0.5	Pass
NVNT	n20	2437	Ant0	9.866	>=0.5	Pass
NVNT	n20	2462	Ant0	17.542	>=0.5	Pass
NVNT	n40	2422	Ant0	25.042	>=0.5	Pass
NVNT	n40	2437	Ant0	31.264	>=0.5	Pass
NVNT	n40	2452	Ant0	33.177	>=0.5	Pass
NVNT	ax20	2412	Ant0	17.916	>=0.5	Pass
NVNT	ax20	2437	Ant0	15.29	>=0.5	Pass
NVNT	ax20	2462	Ant0	16.271	>=0.5	Pass
NVNT	ax40	2422	Ant0	34.24	>=0.5	Pass
NVNT	ax40	2437	Ant0	35.016	>=0.5	Pass
NVNT	ax40	2452	Ant0	33.979	>=0.5	Pass

Test Graphs

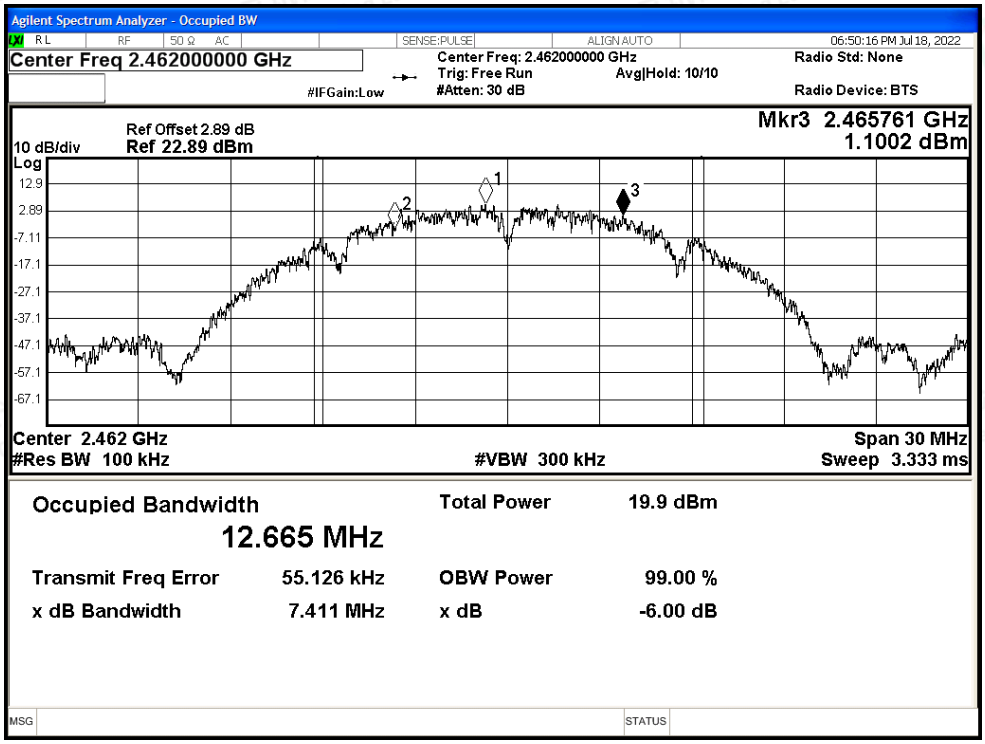
-6dB Bandwidth NVNT b 2412MHz Ant0



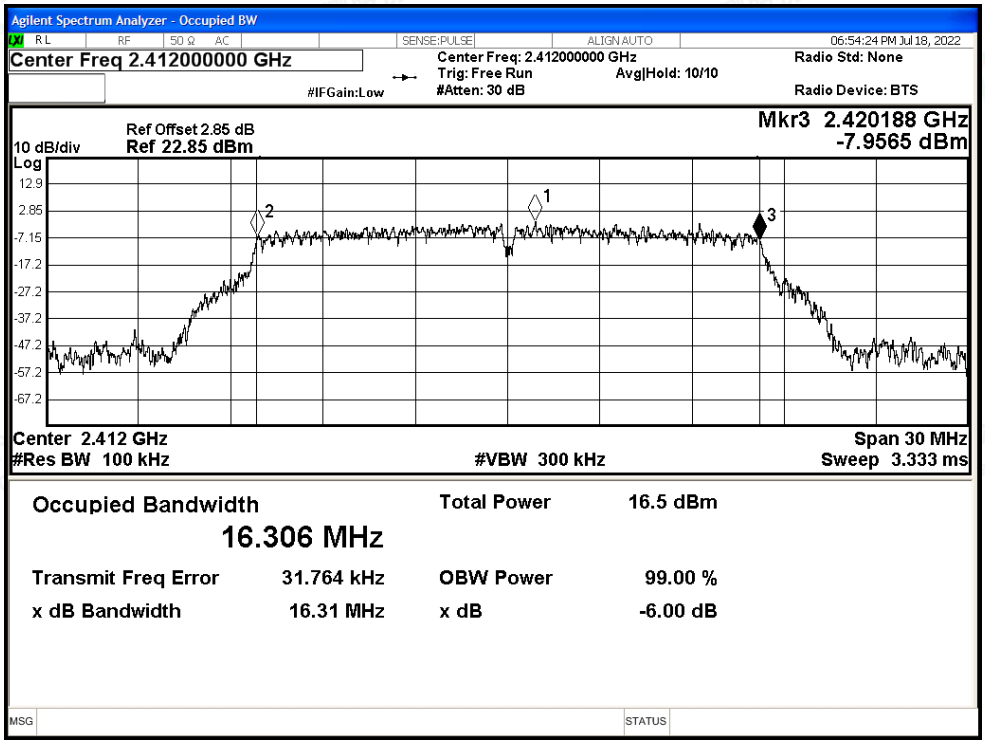
-6dB Bandwidth NVNT b 2437MHz Ant0



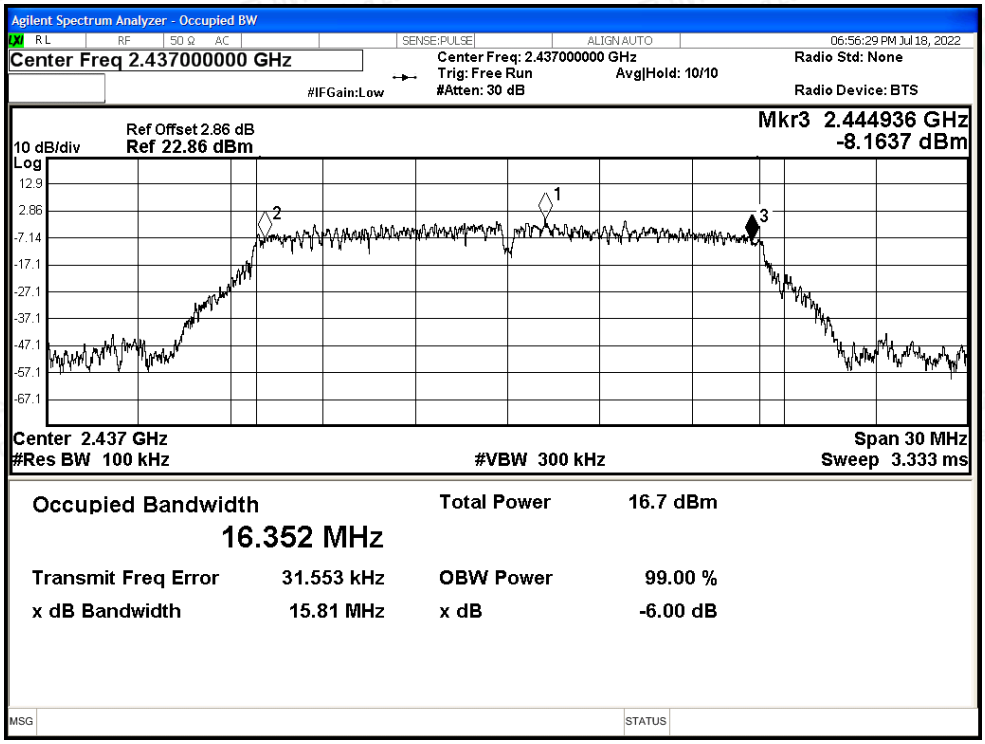
-6dB Bandwidth NVNT b 2462MHz Ant0



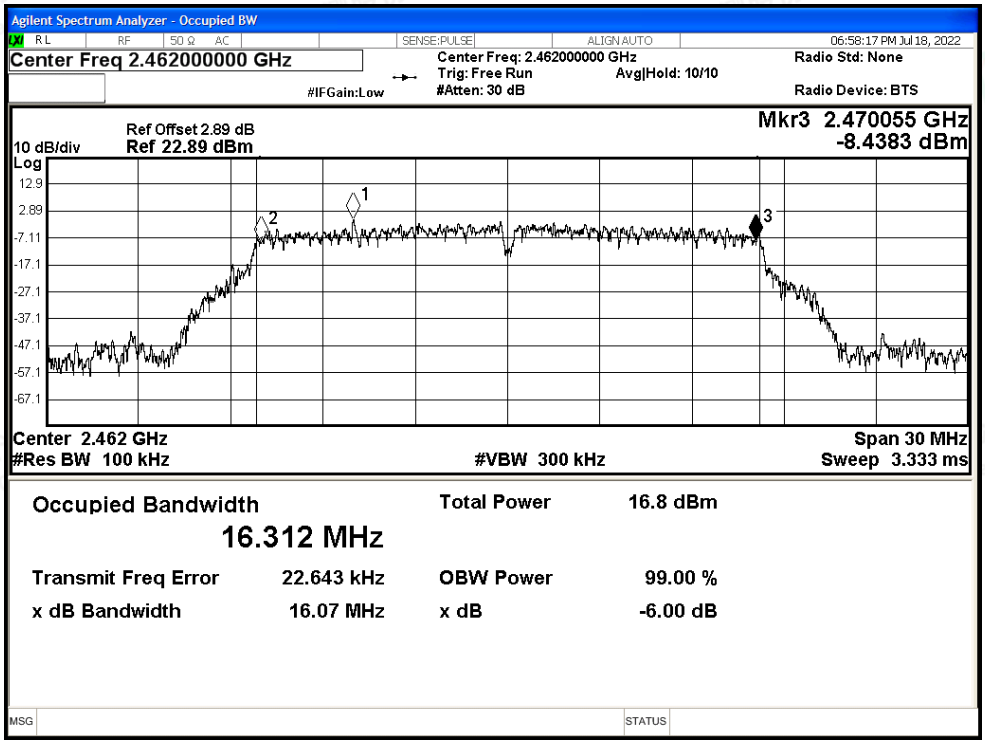
-6dB Bandwidth NVNT g 2412MHz Ant0



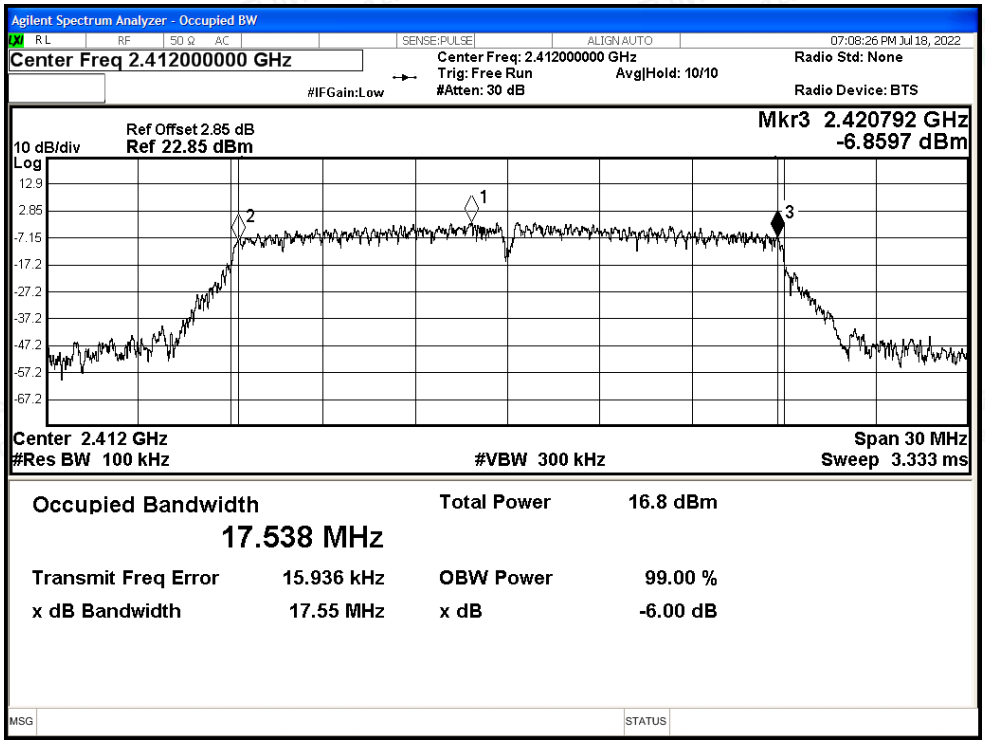
-6dB Bandwidth NVNT g 2437MHz Ant0



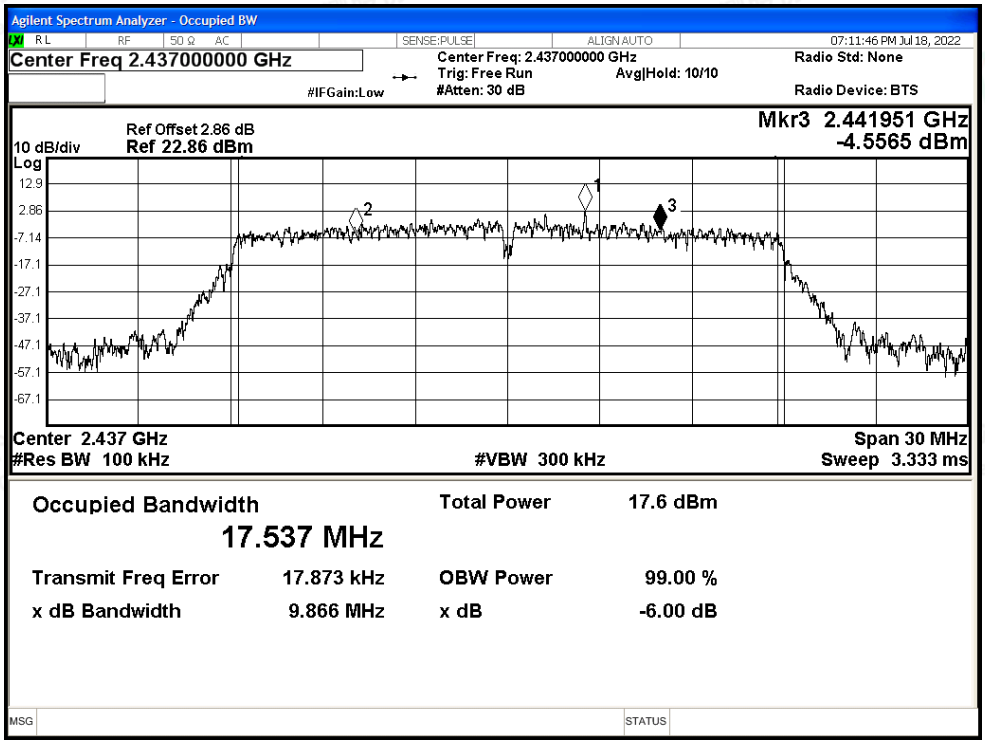
-6dB Bandwidth NVNT g 2462MHz Ant0



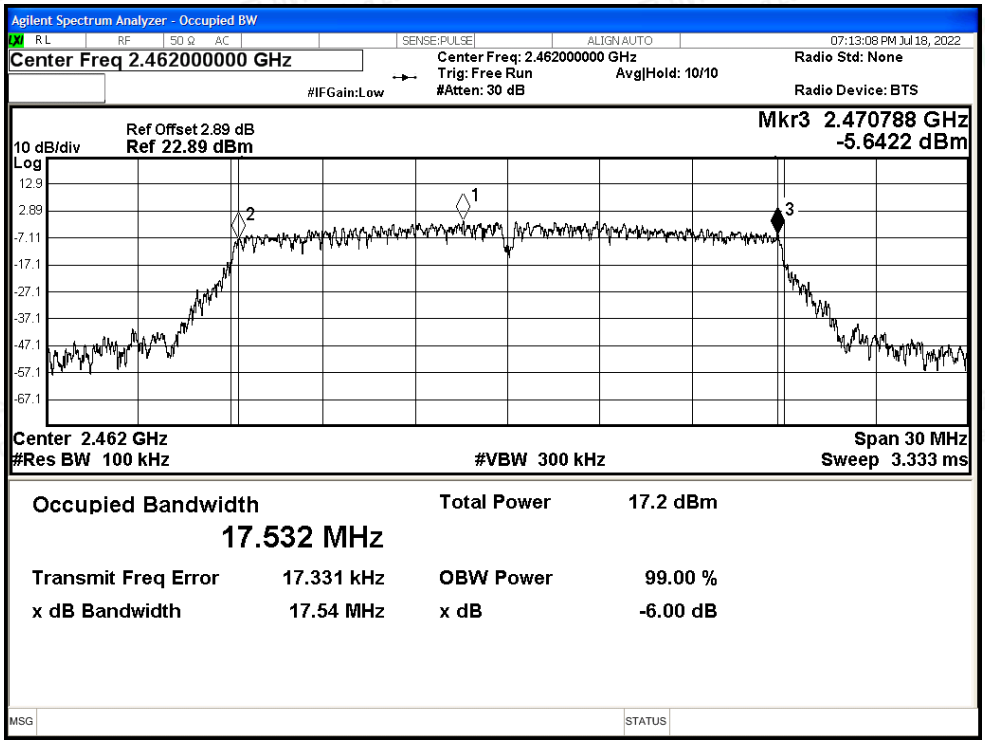
-6dB Bandwidth NVNT n20 2412MHz Ant0



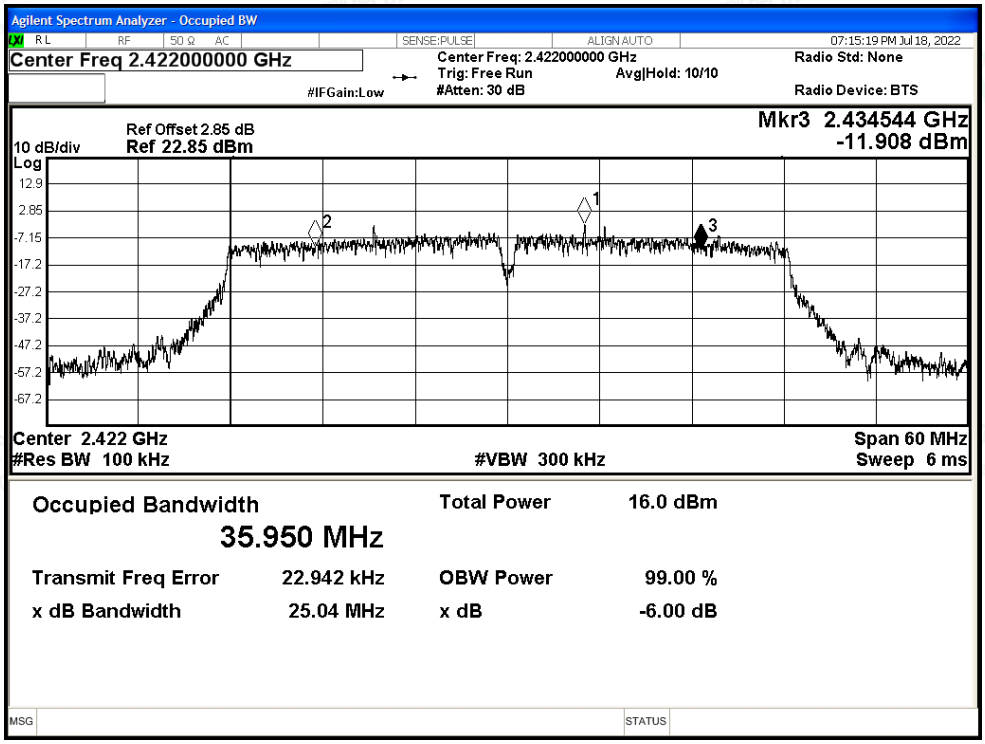
-6dB Bandwidth NVNT n20 2437MHz Ant0



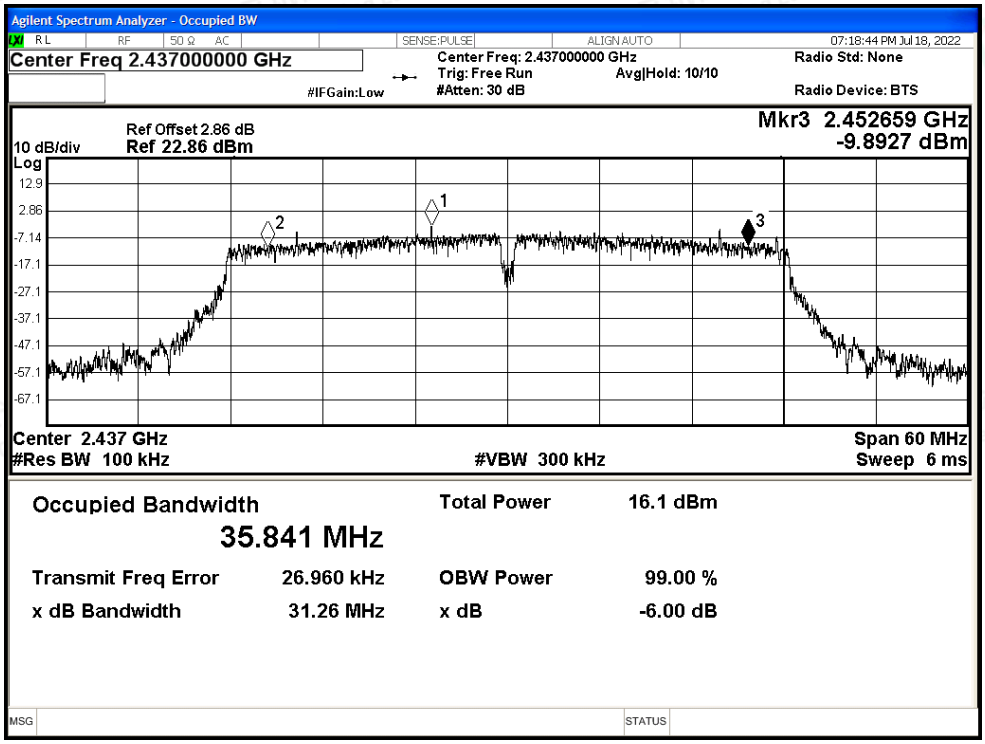
-6dB Bandwidth NVNT n20 2462MHz Ant0



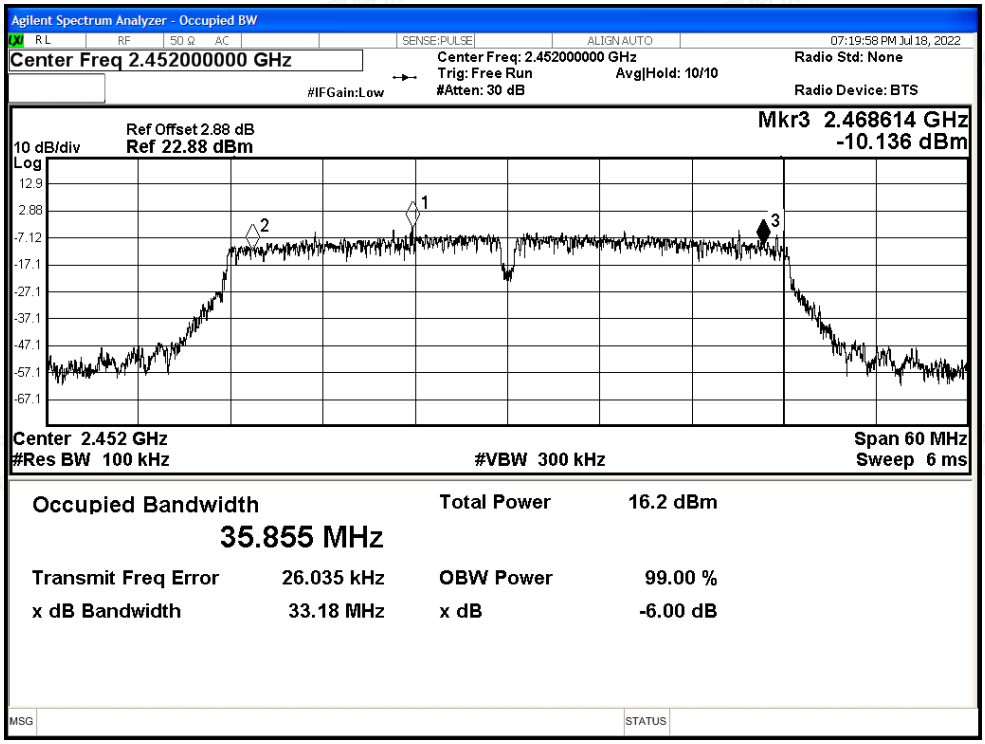
-6dB Bandwidth NVNT n40 2422MHz Ant0



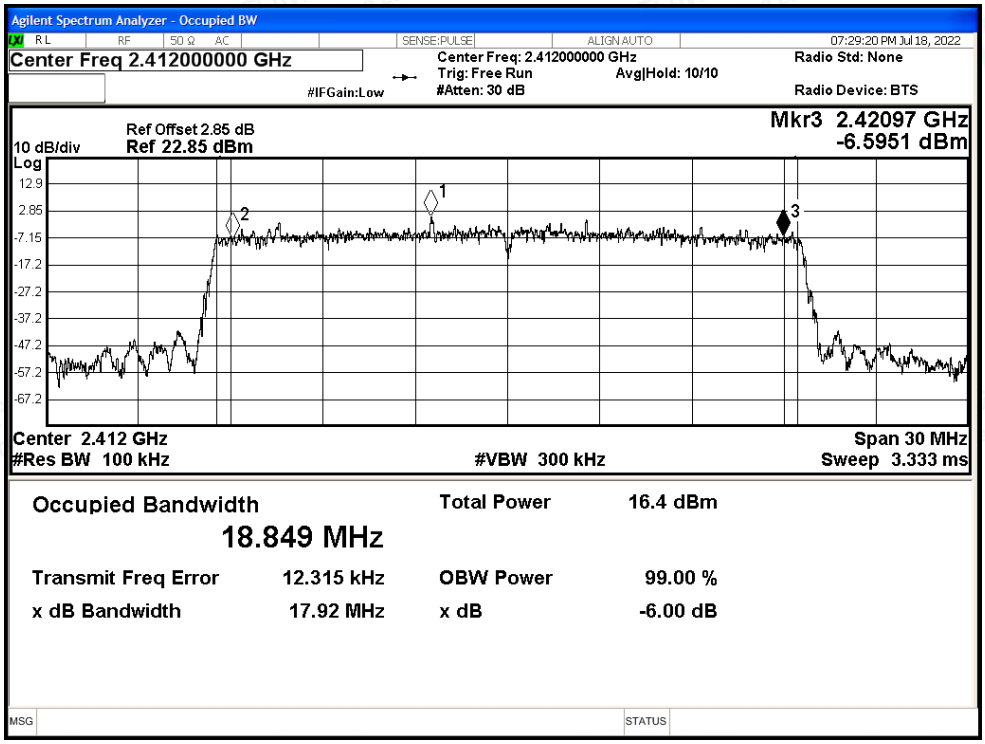
-6dB Bandwidth NVNT n40 2437MHz Ant0



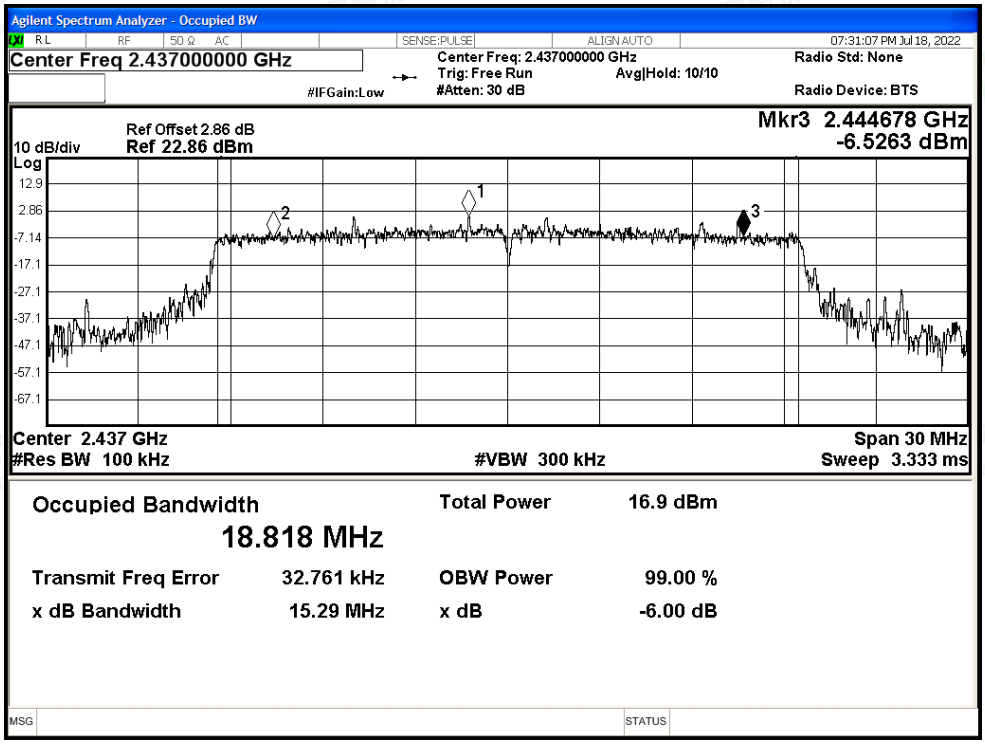
-6dB Bandwidth NVNT n40 2452MHz Ant0



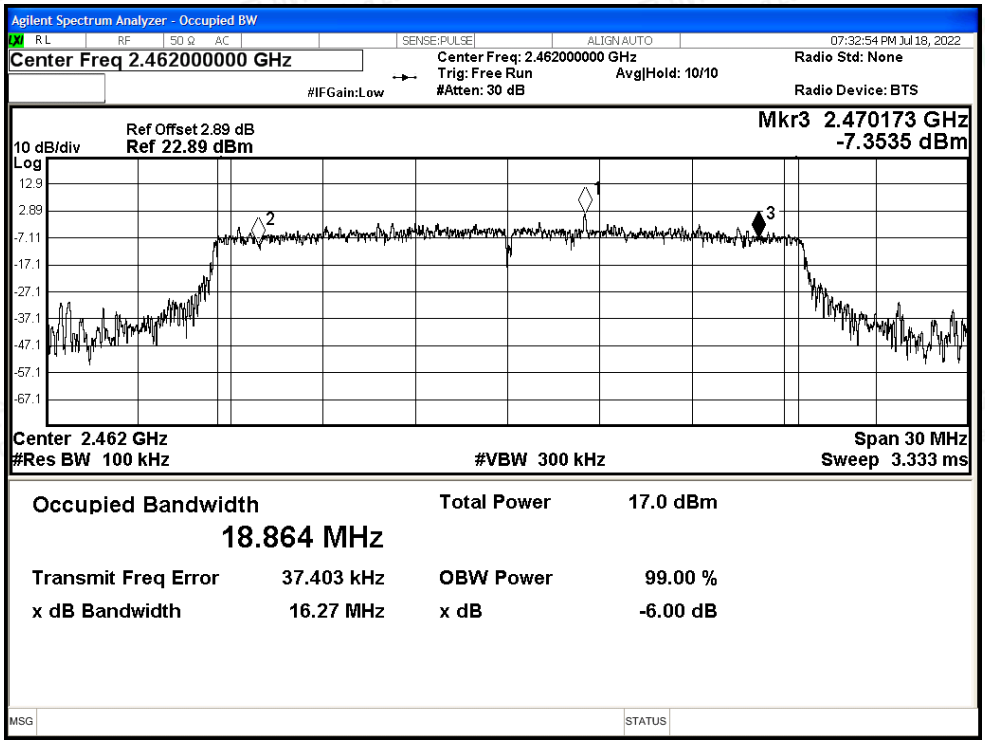
-6dB Bandwidth NVNT ax20 2412MHz Ant0



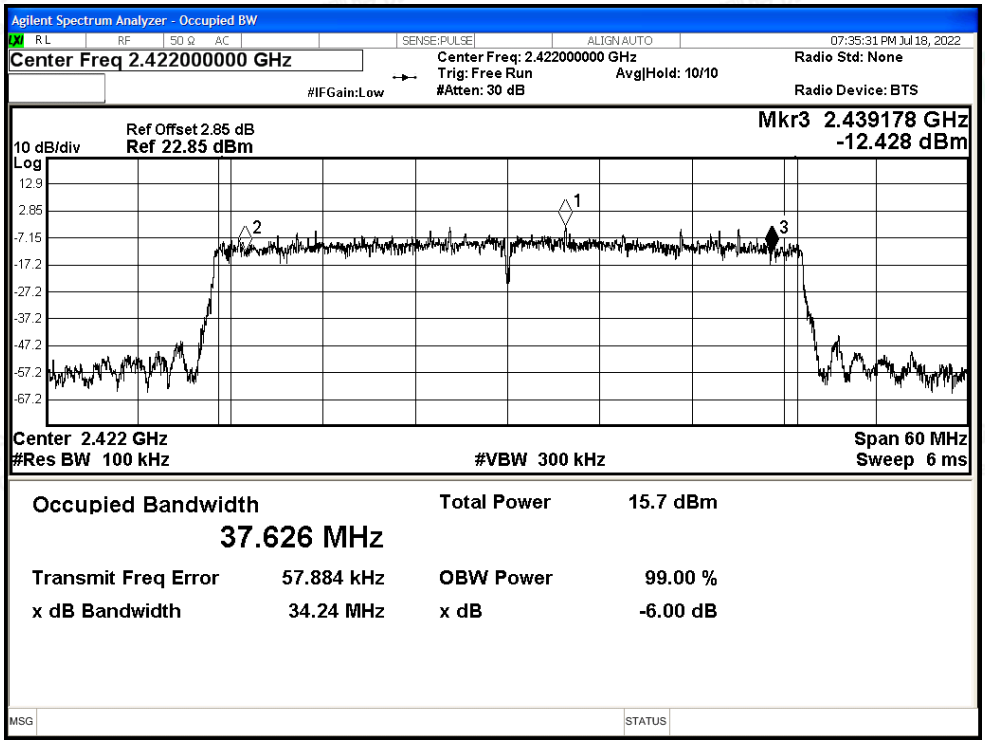
-6dB Bandwidth NVNT ax20 2437MHz Ant0



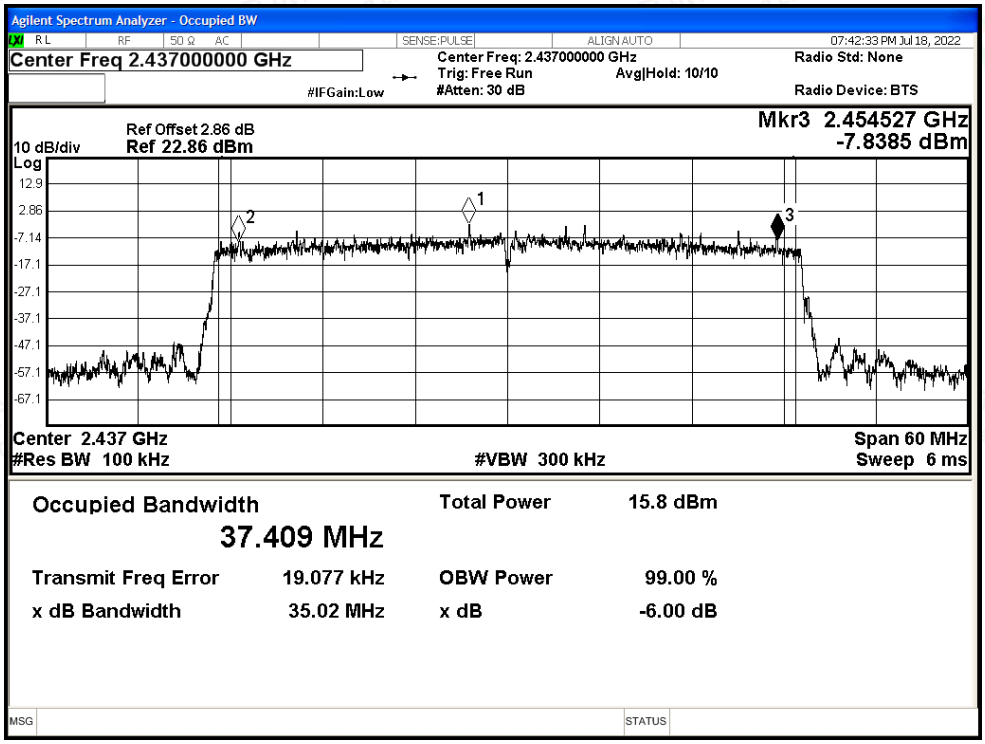
-6dB Bandwidth NVNT ax20 2462MHz Ant0



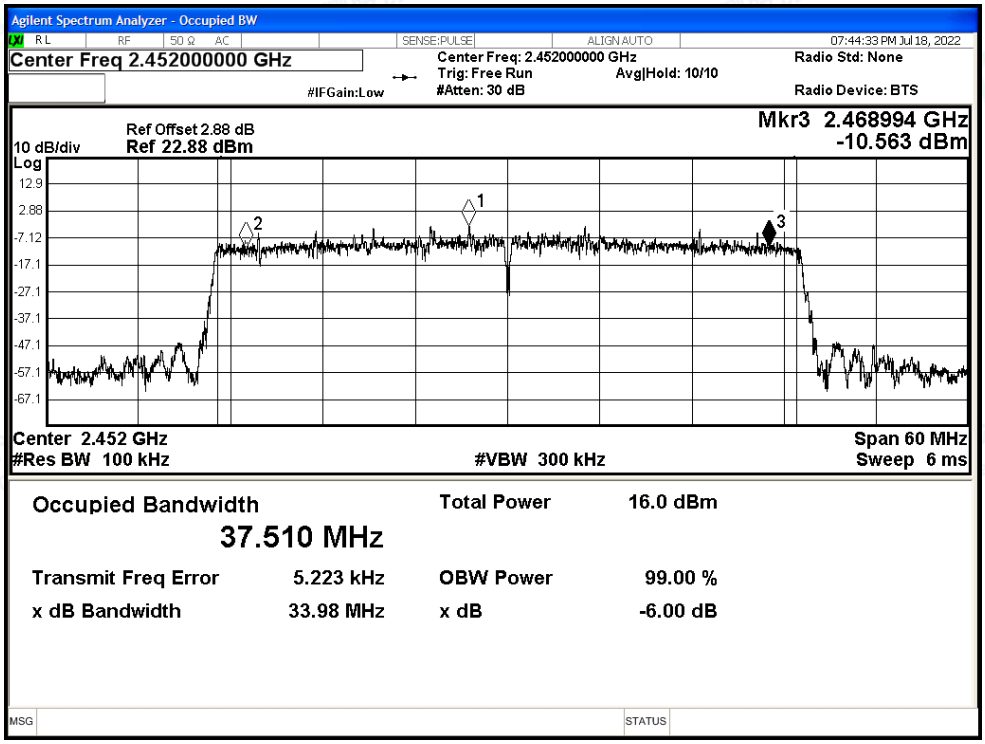
-6dB Bandwidth NVNT ax40 2422MHz Ant0



-6dB Bandwidth NVNT ax40 2437MHz Ant0



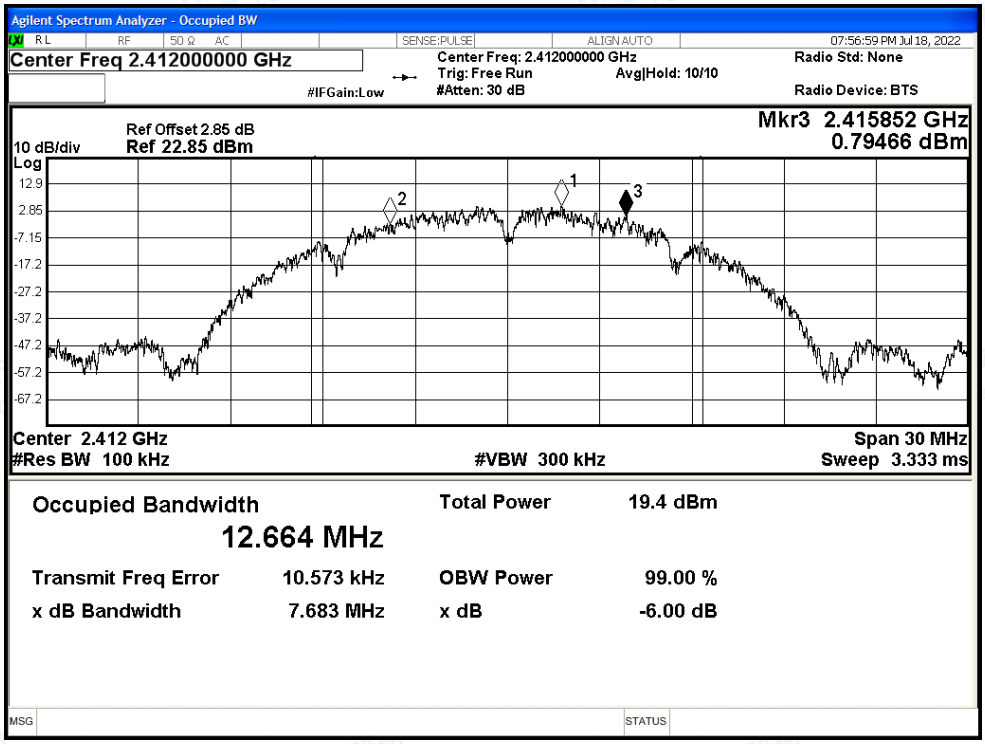
-6dB Bandwidth NVNT ax40 2452MHz Ant0



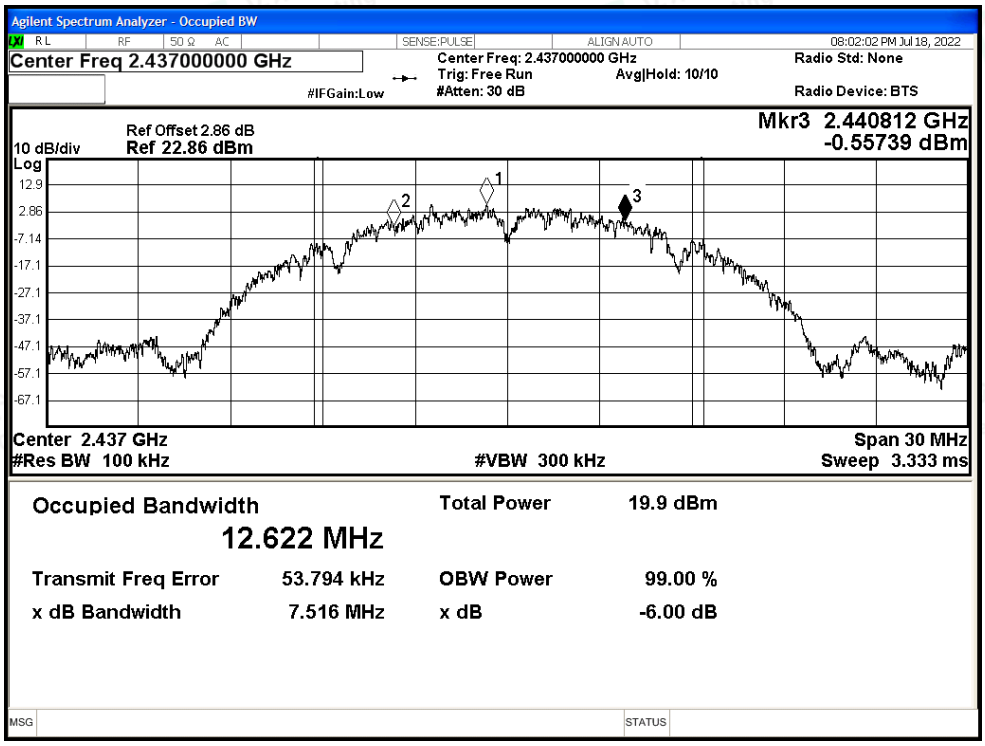
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	7.683	>=0.5	Pass
NVNT	b	2437	Ant1	7.516	>=0.5	Pass
NVNT	b	2462	Ant1	7.191	>=0.5	Pass
NVNT	g	2412	Ant1	15.913	>=0.5	Pass
NVNT	g	2437	Ant1	16.274	>=0.5	Pass
NVNT	g	2462	Ant1	15.496	>=0.5	Pass
NVNT	n20	2412	Ant1	10.642	>=0.5	Pass
NVNT	n20	2437	Ant1	17.149	>=0.5	Pass
NVNT	n20	2462	Ant1	15.879	>=0.5	Pass
NVNT	n40	2422	Ant1	28.55	>=0.5	Pass
NVNT	n40	2437	Ant1	29.429	>=0.5	Pass
NVNT	n40	2452	Ant1	30.03	>=0.5	Pass
NVNT	ax20	2412	Ant1	17.446	>=0.5	Pass
NVNT	ax20	2437	Ant1	17.791	>=0.5	Pass
NVNT	ax20	2462	Ant1	17.044	>=0.5	Pass
NVNT	ax40	2422	Ant1	35.926	>=0.5	Pass
NVNT	ax40	2437	Ant1	37.484	>=0.5	Pass
NVNT	ax40	2452	Ant1	34.214	>=0.5	Pass

Test Graphs

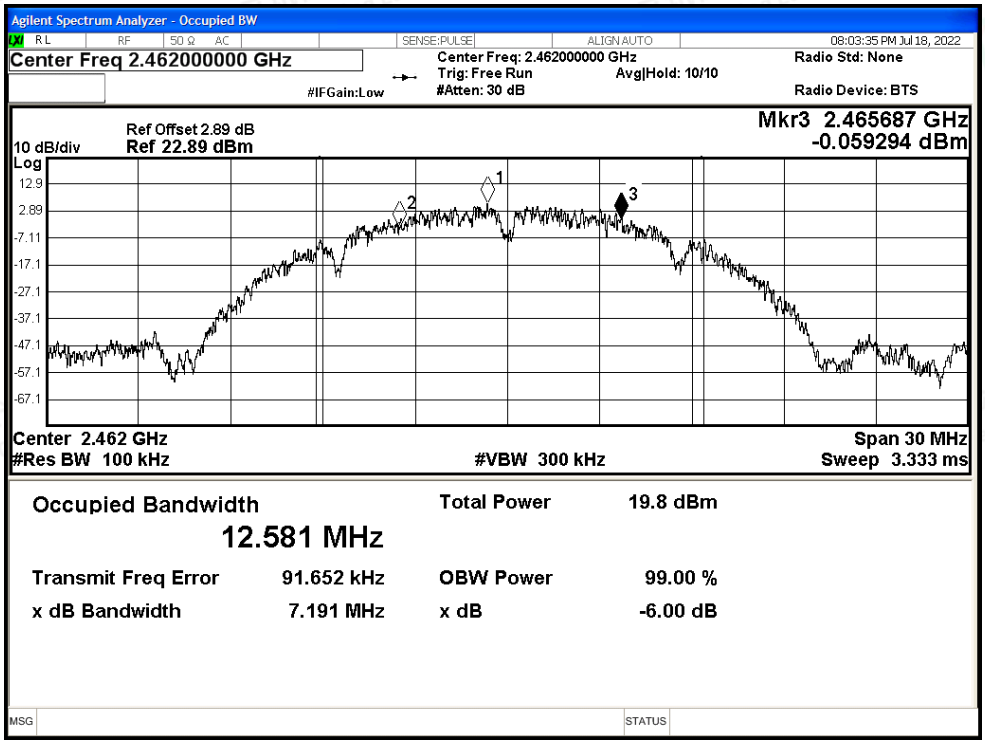
-6dB Bandwidth NVNT b 2412MHz Ant1



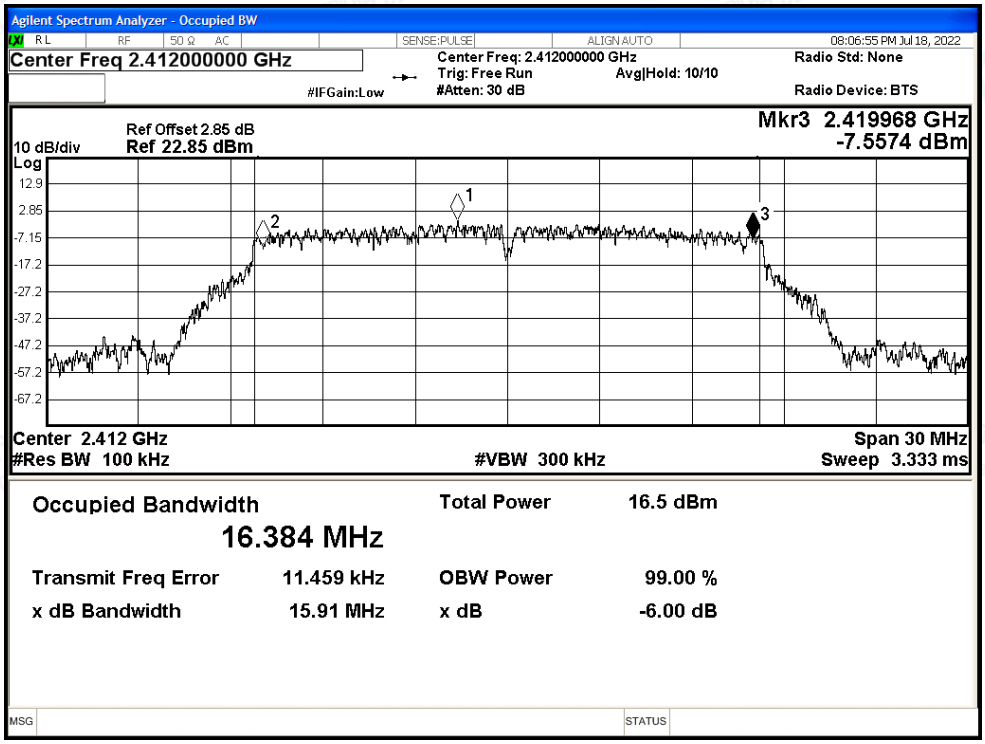
-6dB Bandwidth NVNT b 2437MHz Ant1



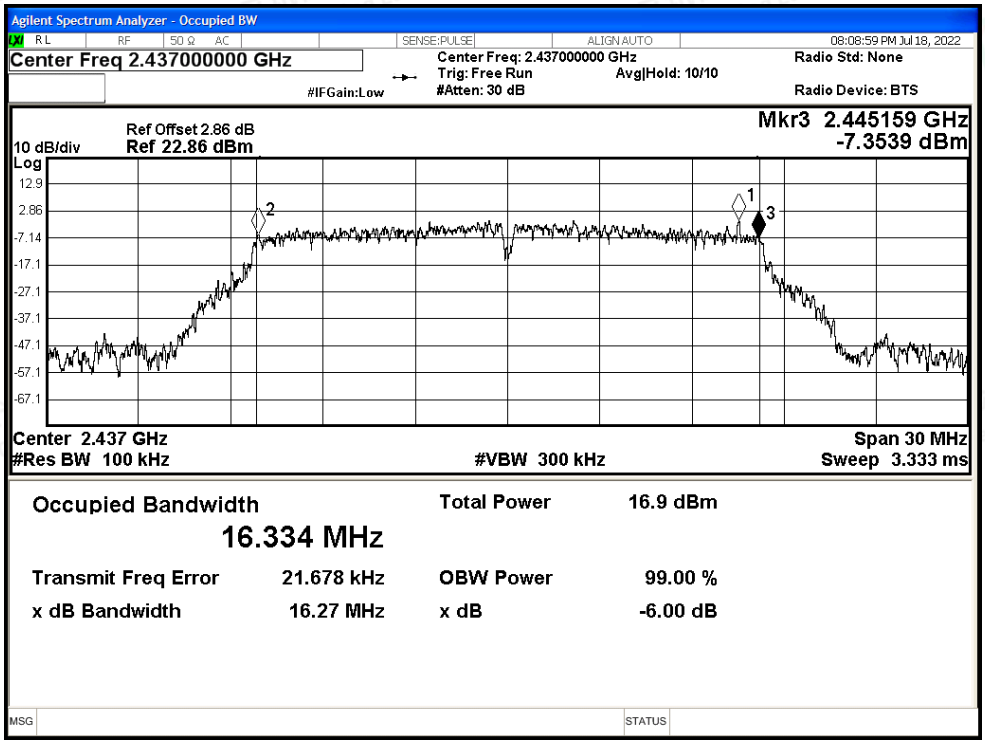
-6dB Bandwidth NVNT b 2462MHz Ant1



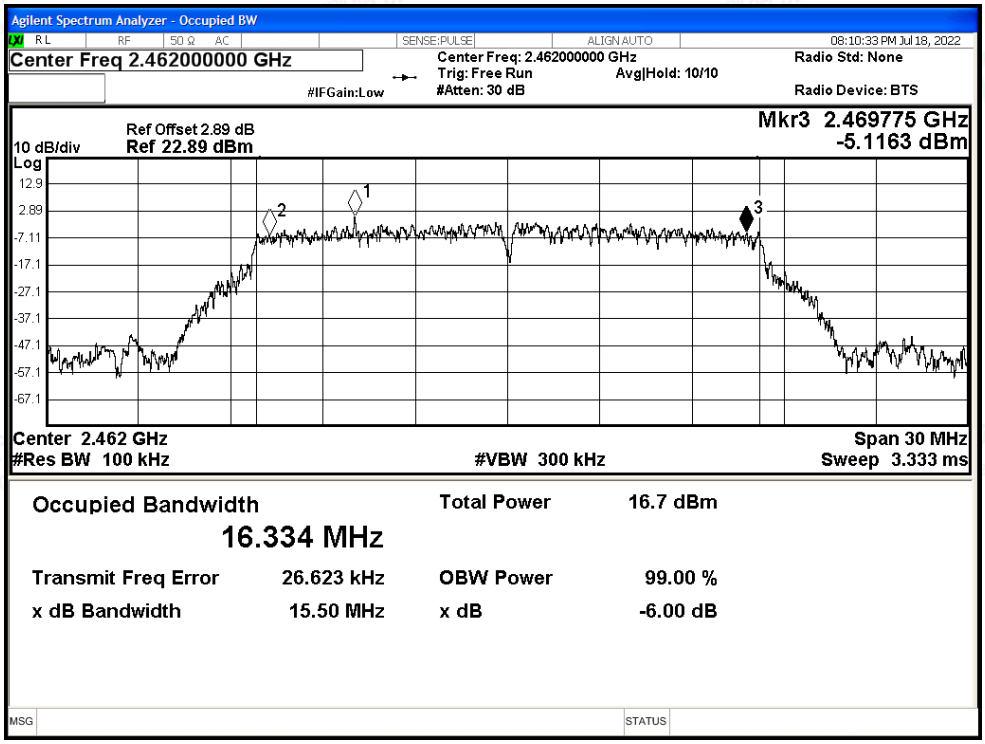
-6dB Bandwidth NVNT g 2412MHz Ant1



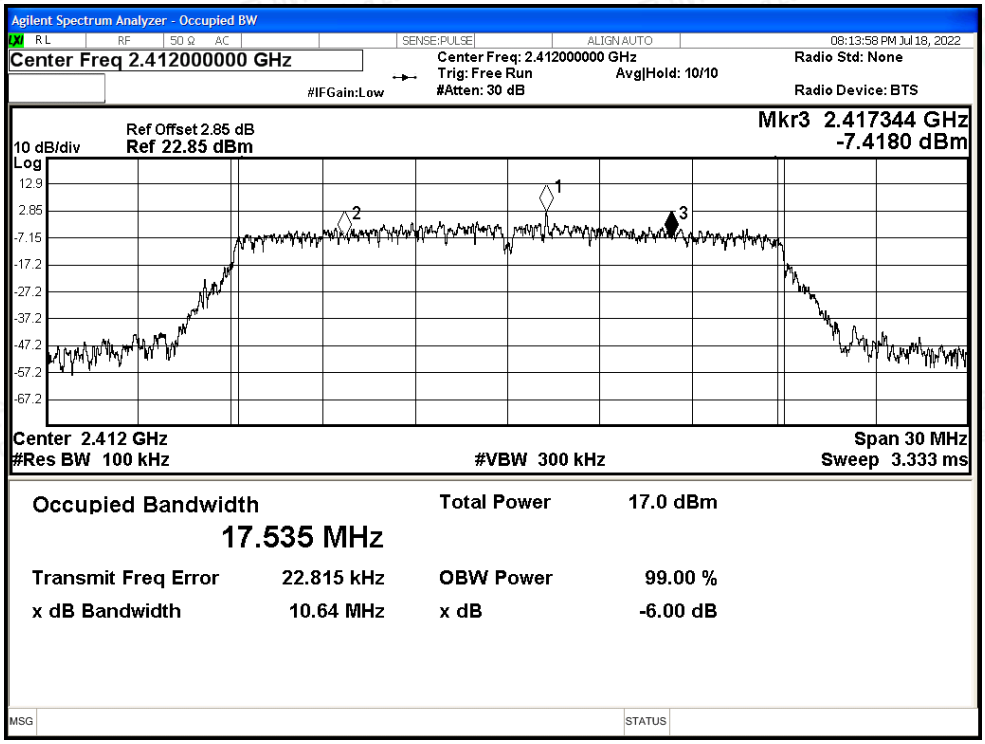
-6dB Bandwidth NVNT g 2437MHz Ant1



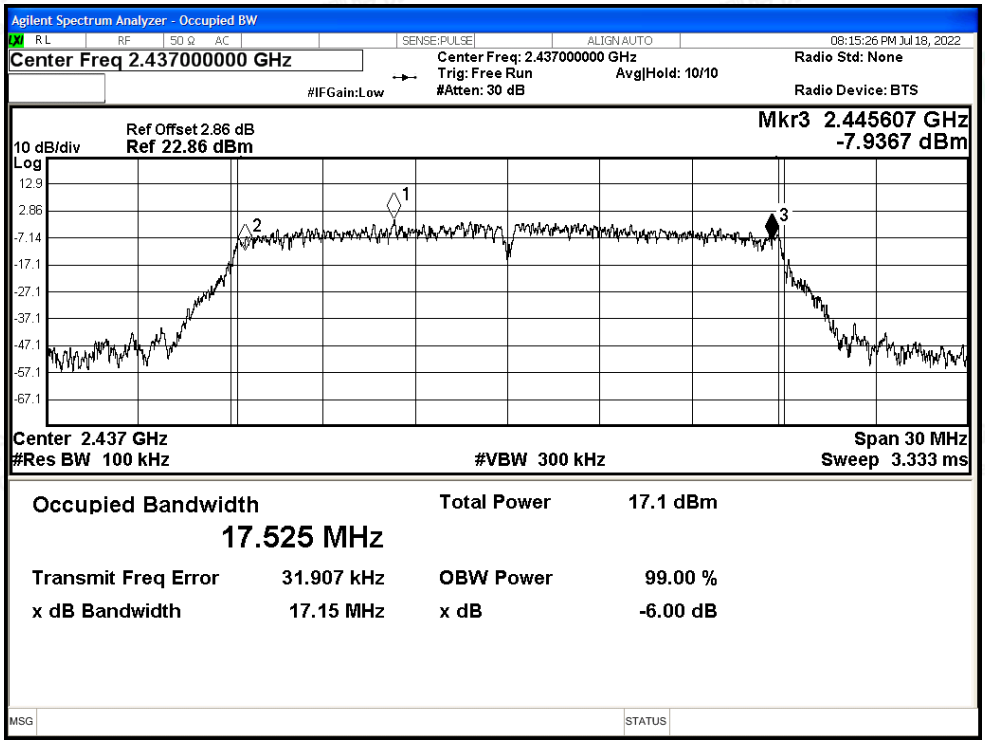
-6dB Bandwidth NVNT g 2462MHz Ant1



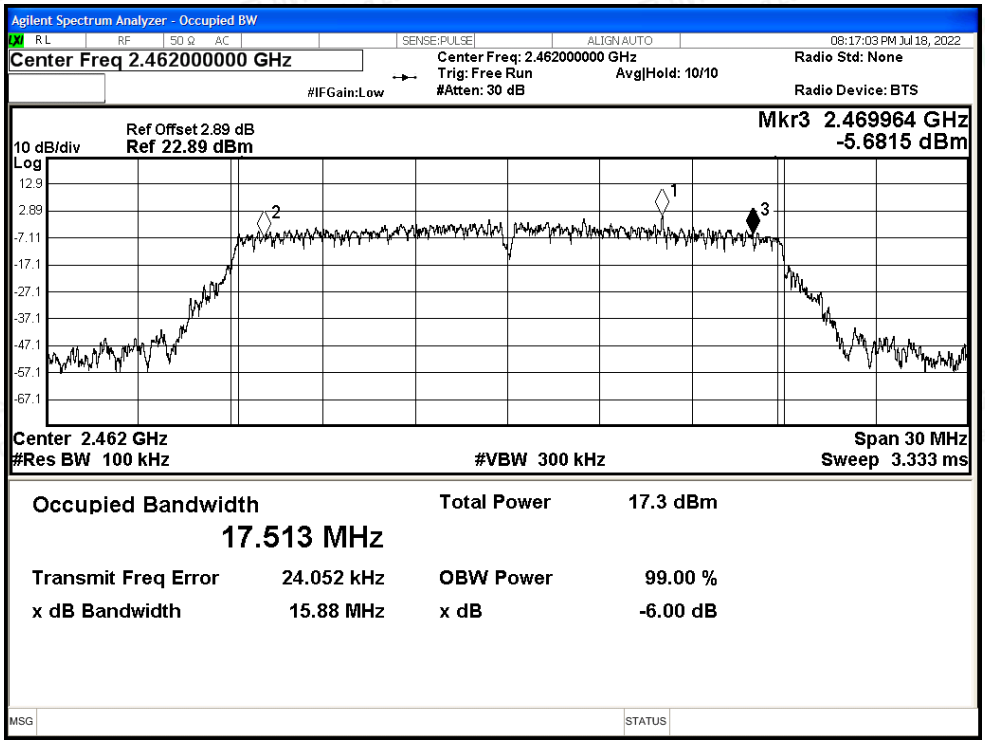
-6dB Bandwidth NVNT n20 2412MHz Ant1



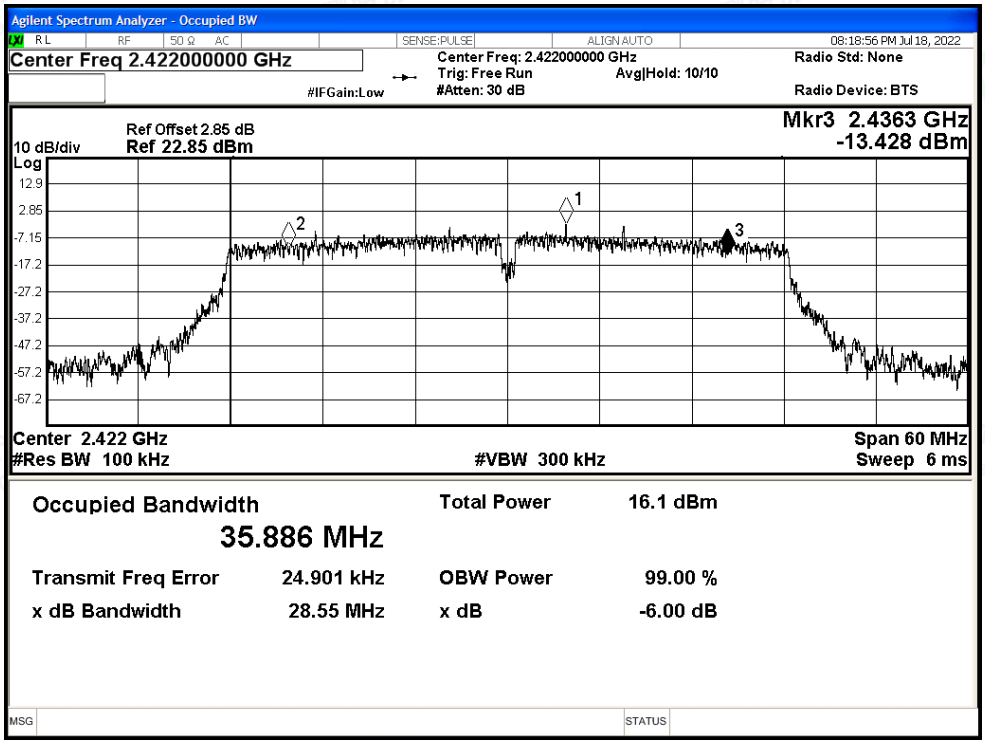
-6dB Bandwidth NVNT n20 2437MHz Ant1



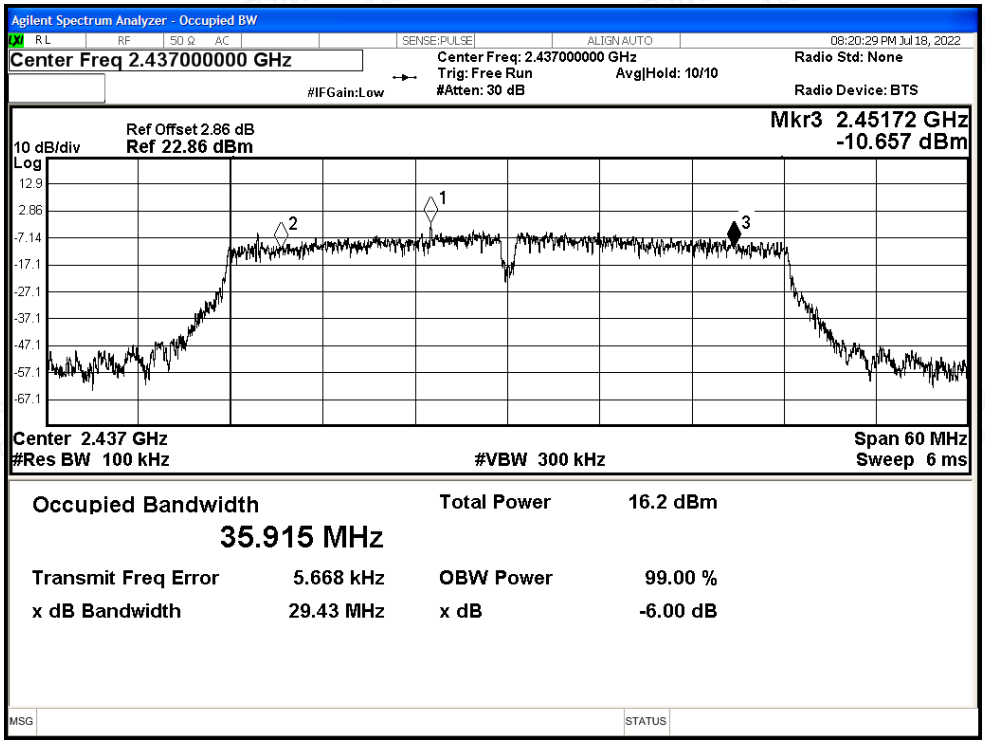
-6dB Bandwidth NVNT n20 2462MHz Ant1



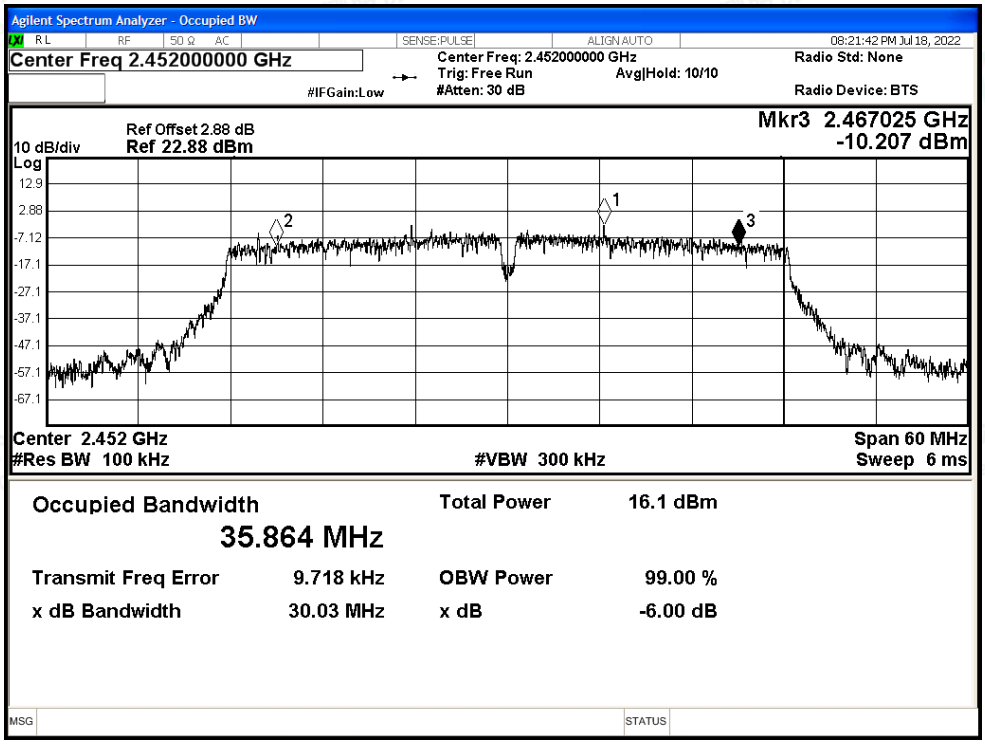
-6dB Bandwidth NVNT n40 2422MHz Ant1



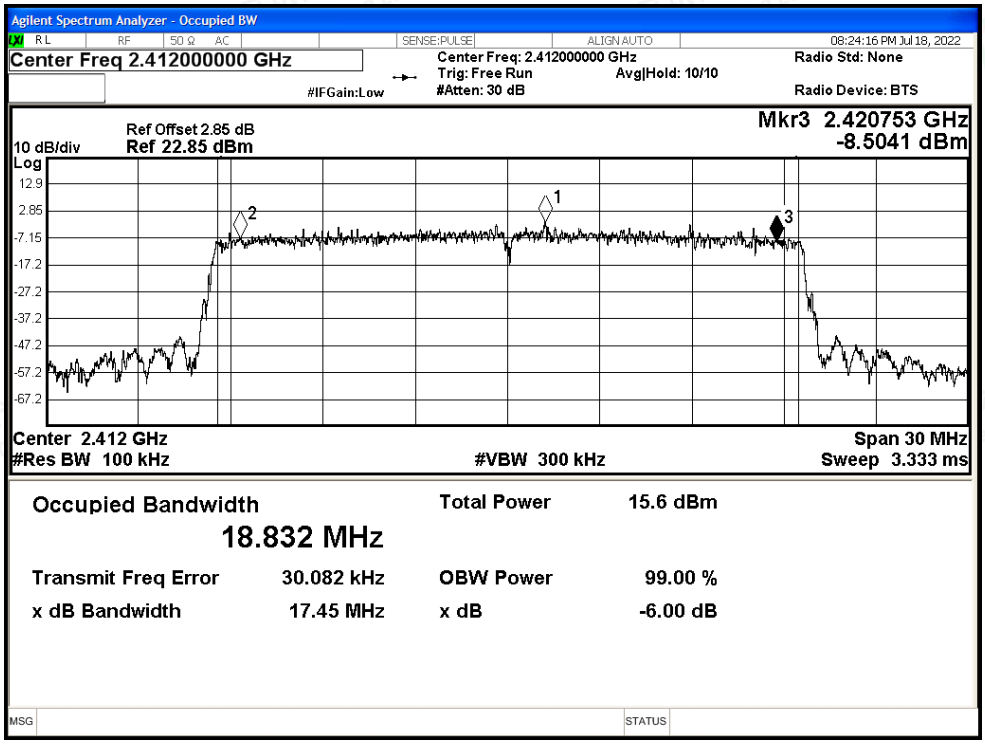
-6dB Bandwidth NVNT n40 2437MHz Ant1



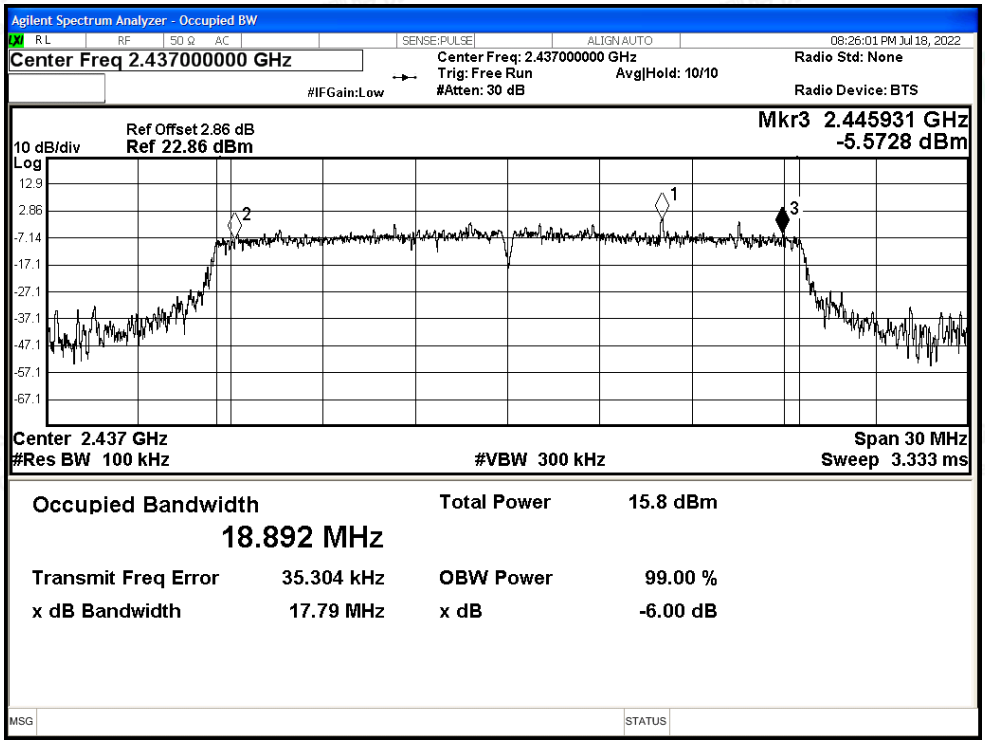
-6dB Bandwidth NVNT n40 2452MHz Ant1



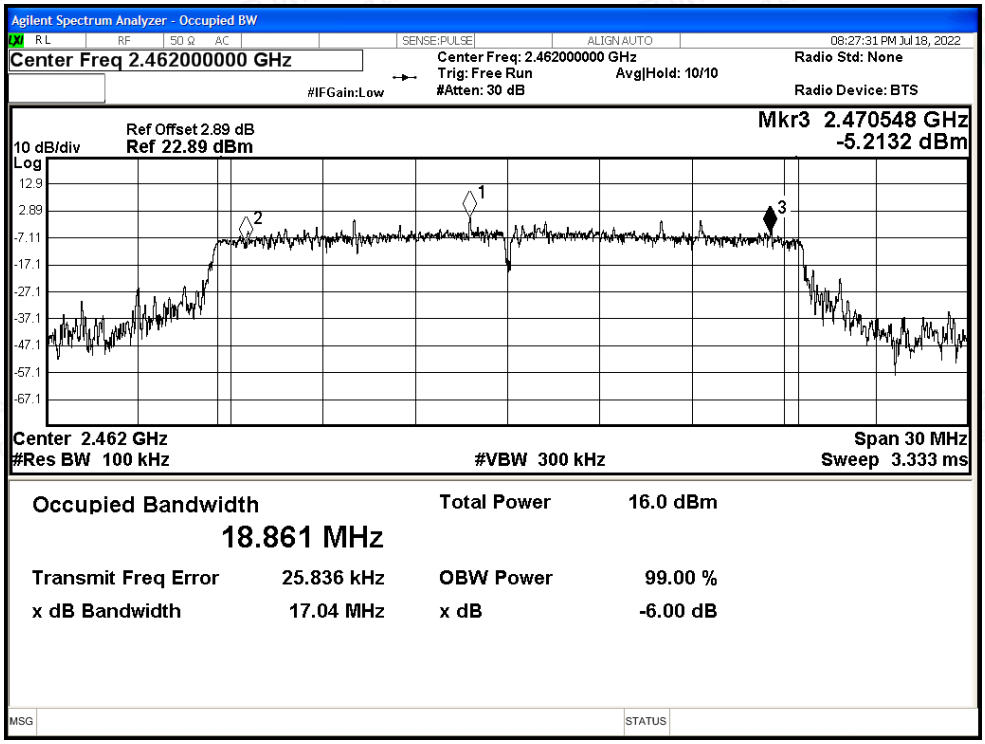
-6dB Bandwidth NVNT ax20 2412MHz Ant1



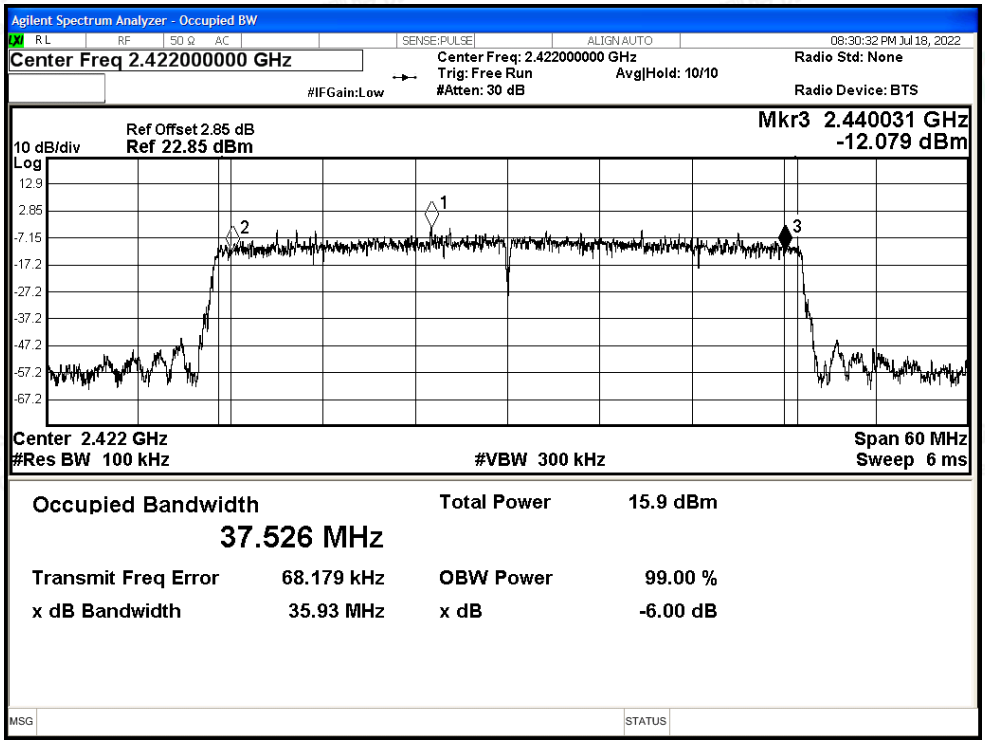
-6dB Bandwidth NVNT ax20 2437MHz Ant1



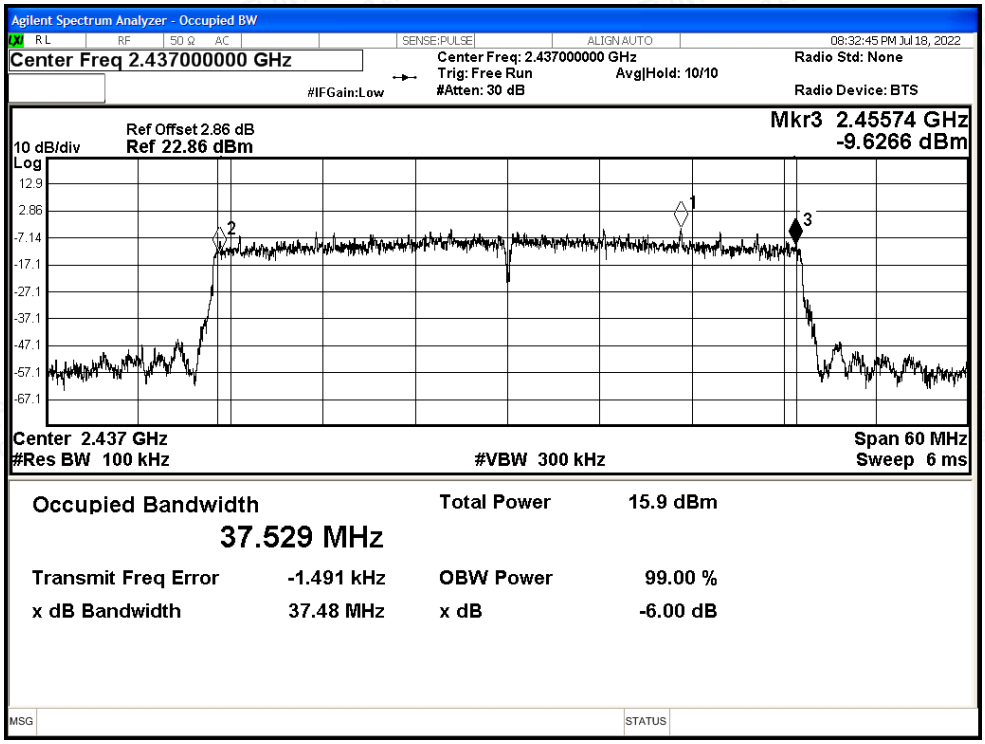
-6dB Bandwidth NVNT ax20 2462MHz Ant1



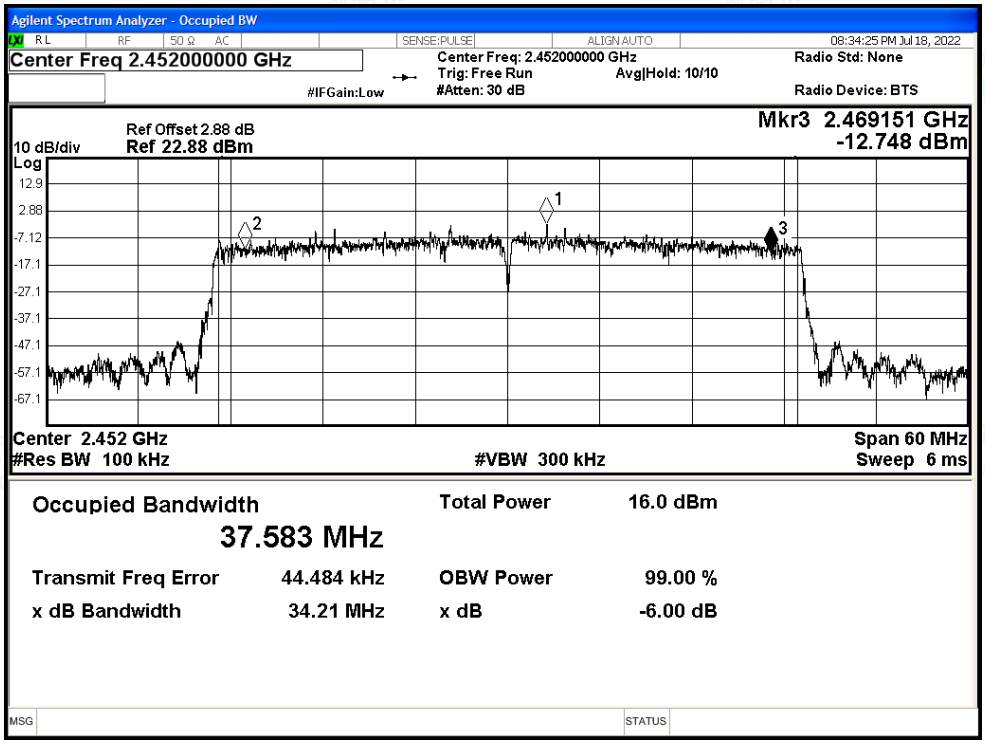
-6dB Bandwidth NVNT ax40 2422MHz Ant1



-6dB Bandwidth NVNT ax40 2437MHz Ant1



-6dB Bandwidth NVNT ax40 2452MHz Ant1

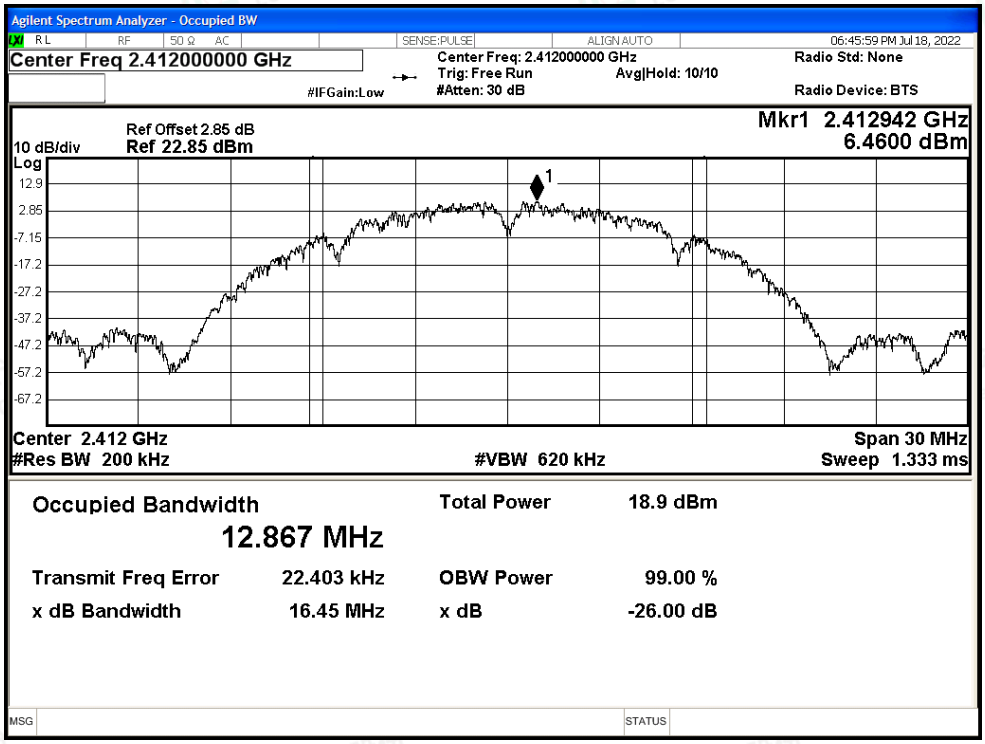


A.2 Occupied Channel Bandwidth

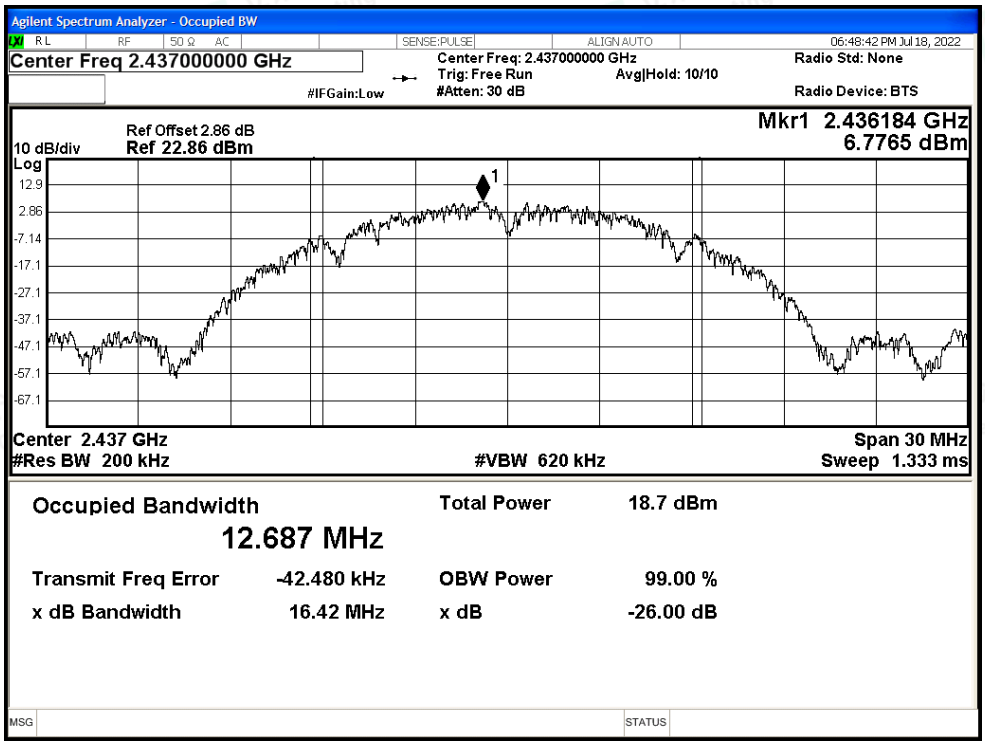
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	b	2412	Ant0	12.867
NVNT	b	2437	Ant0	12.687
NVNT	b	2462	Ant0	12.75
NVNT	g	2412	Ant0	16.365
NVNT	g	2437	Ant0	16.345
NVNT	g	2462	Ant0	16.367
NVNT	n20	2412	Ant0	17.534
NVNT	n20	2437	Ant0	17.501
NVNT	n20	2462	Ant0	17.607
NVNT	n40	2422	Ant0	35.926
NVNT	n40	2437	Ant0	35.857
NVNT	n40	2452	Ant0	35.905
NVNT	ax20	2412	Ant0	18.791
NVNT	ax20	2437	Ant0	18.861
NVNT	ax20	2462	Ant0	18.864
NVNT	ax40	2422	Ant0	37.642
NVNT	ax40	2437	Ant0	37.569
NVNT	ax40	2452	Ant0	37.546

Test Graphs

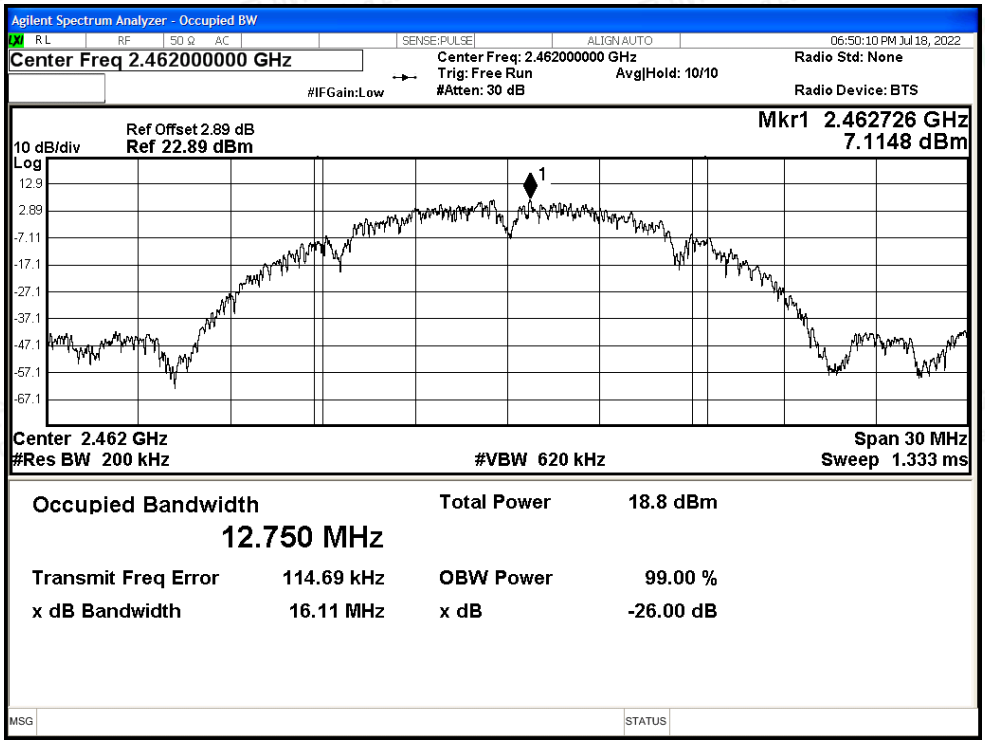
OBW NVNT b 2412MHz Ant0



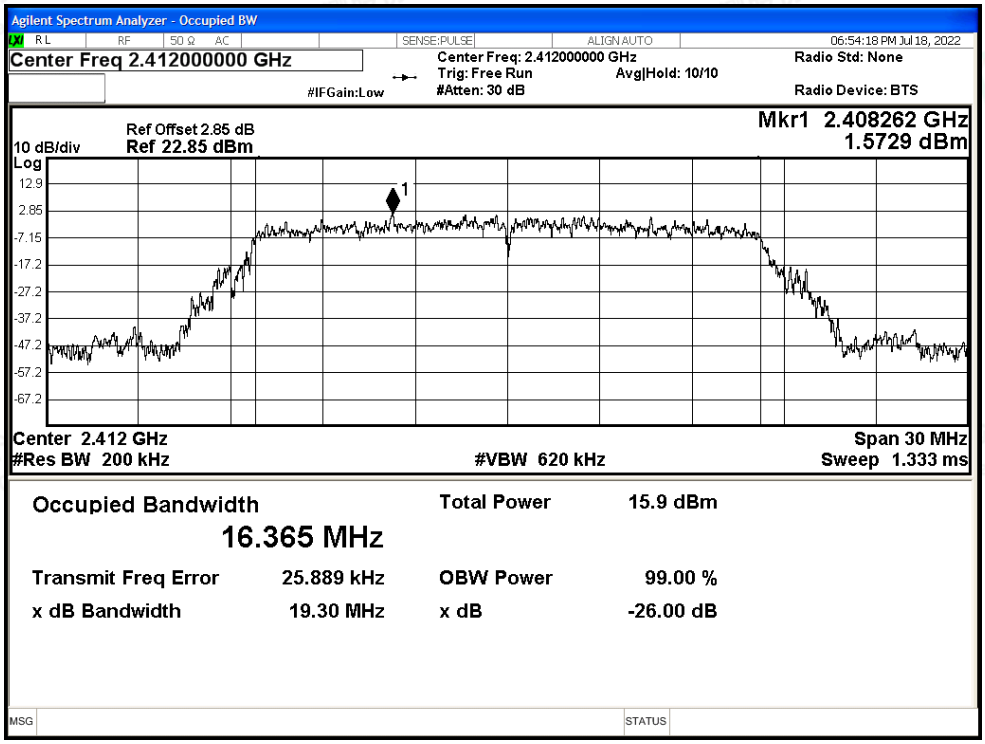
OBW NVNT b 2437MHz Ant0



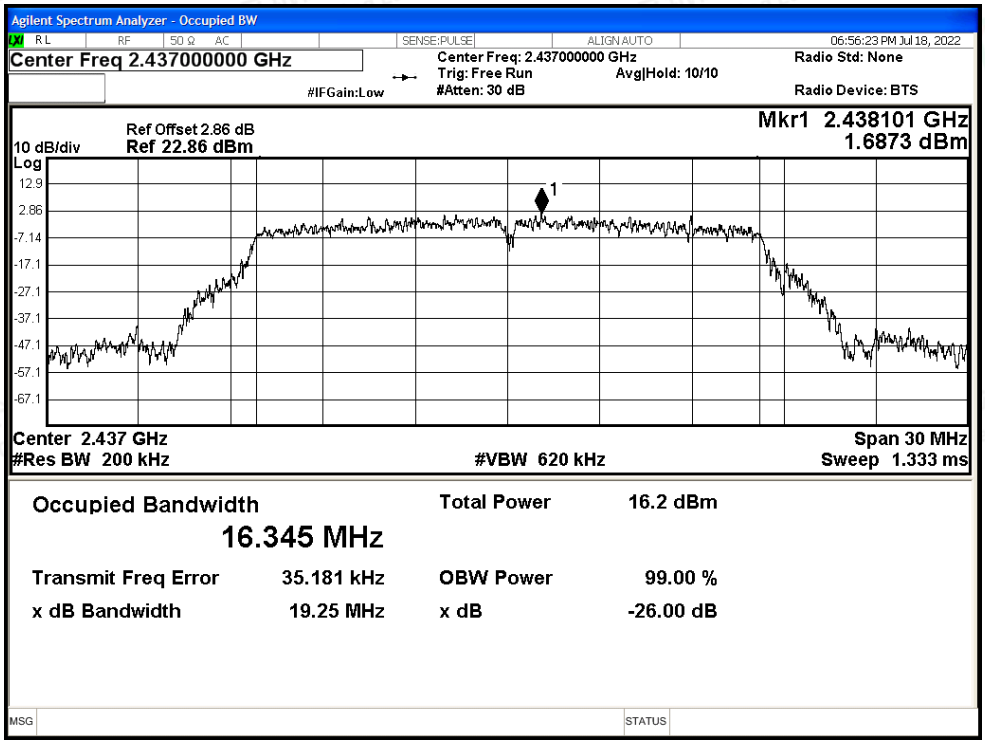
OBW NVNT b 2462MHz Ant0



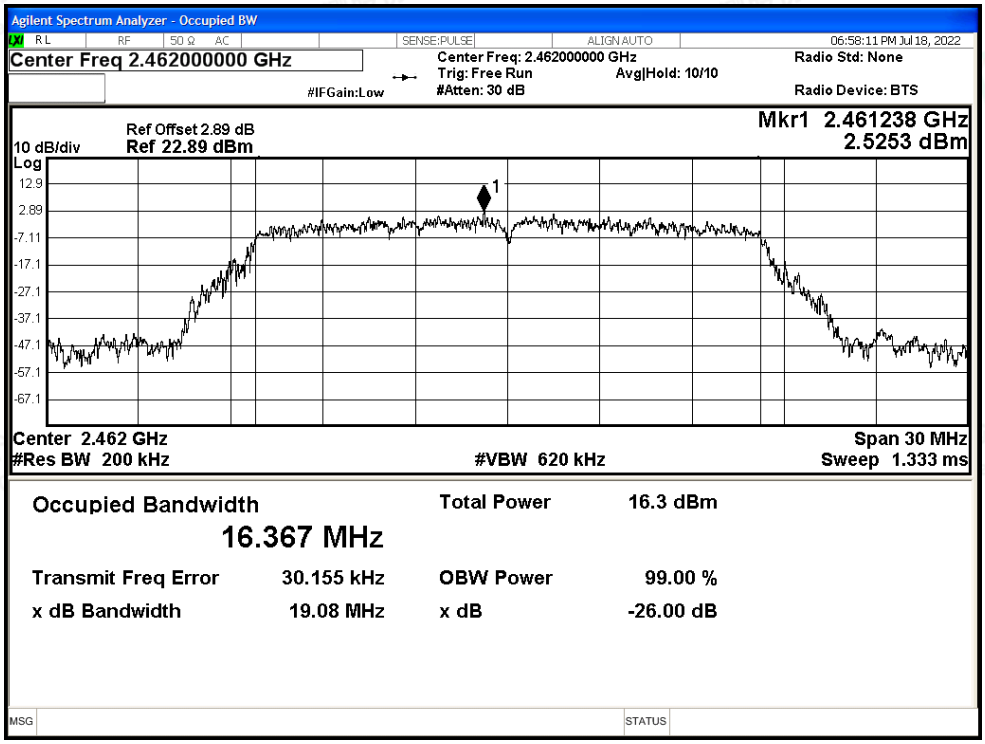
OBW NVNT g 2412MHz Ant0



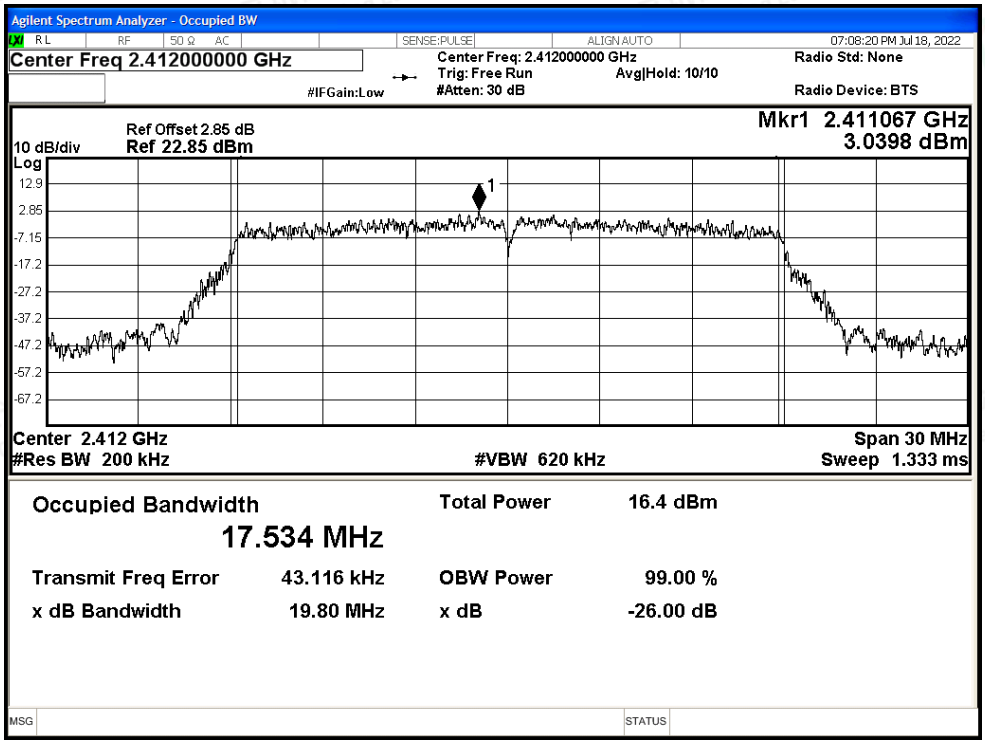
OBW NVNT g 2437MHz Ant0



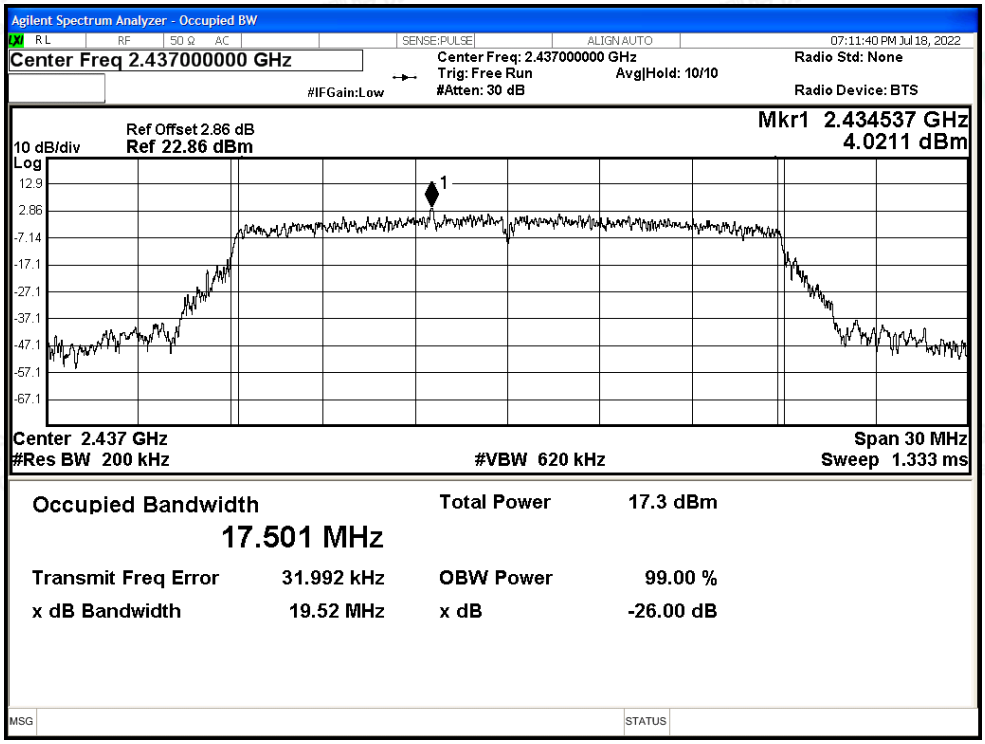
OBW NVNT g 2462MHz Ant0



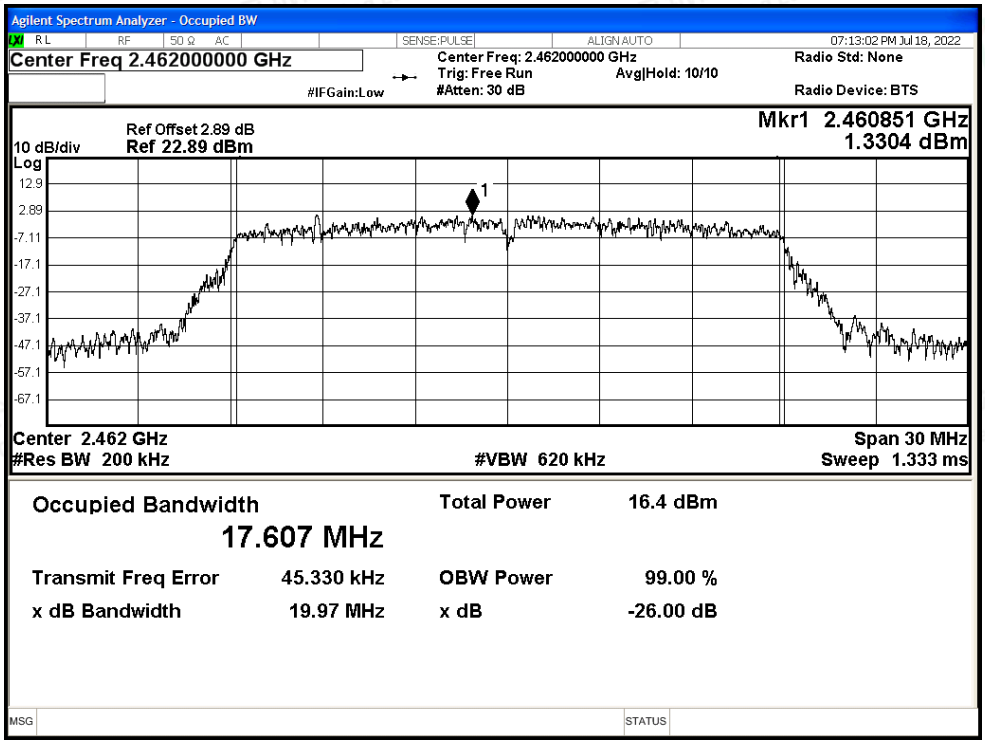
OBW NVNT n20 2412MHz Ant0



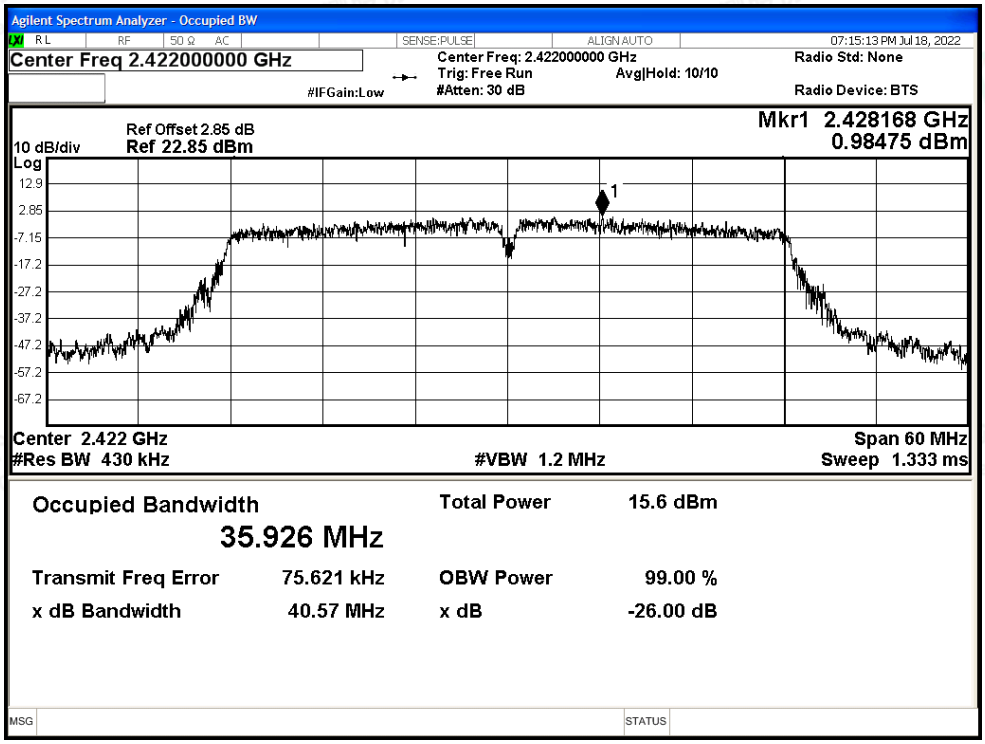
OBW NVNT n20 2437MHz Ant0



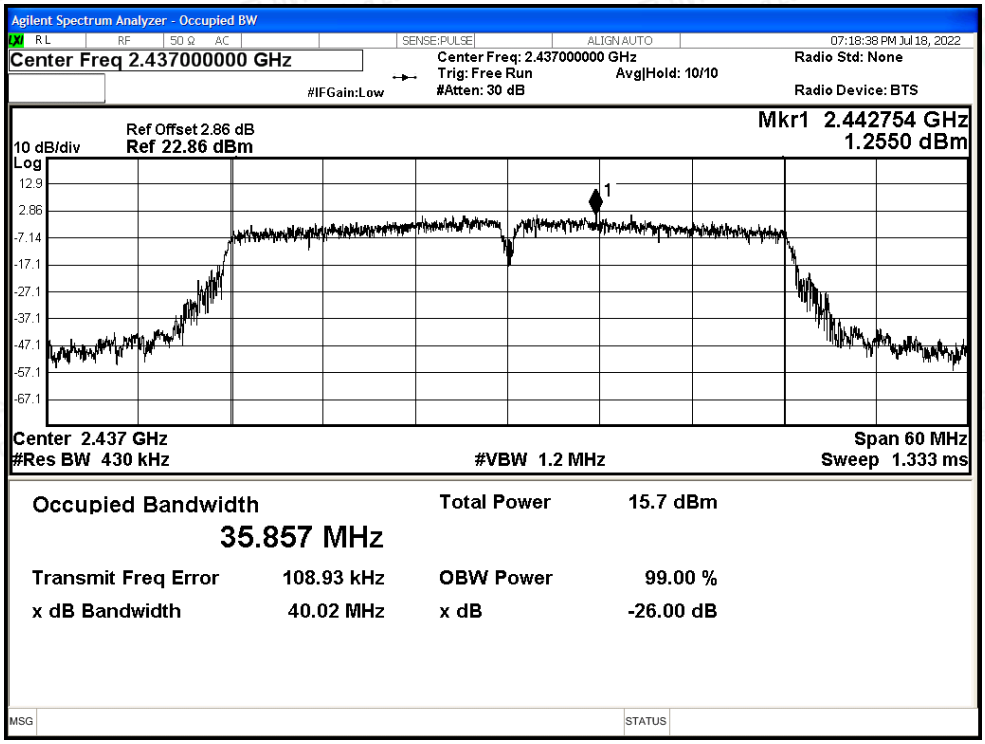
OBW NVNT n20 2462MHz Ant0



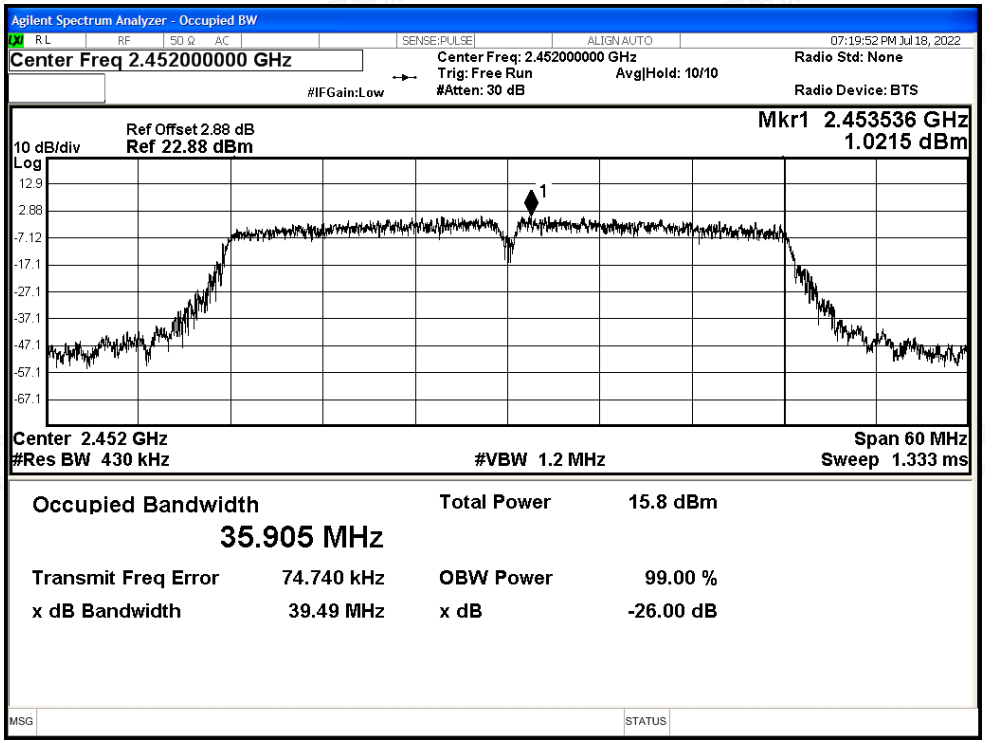
OBW NVNT n40 2422MHz Ant0



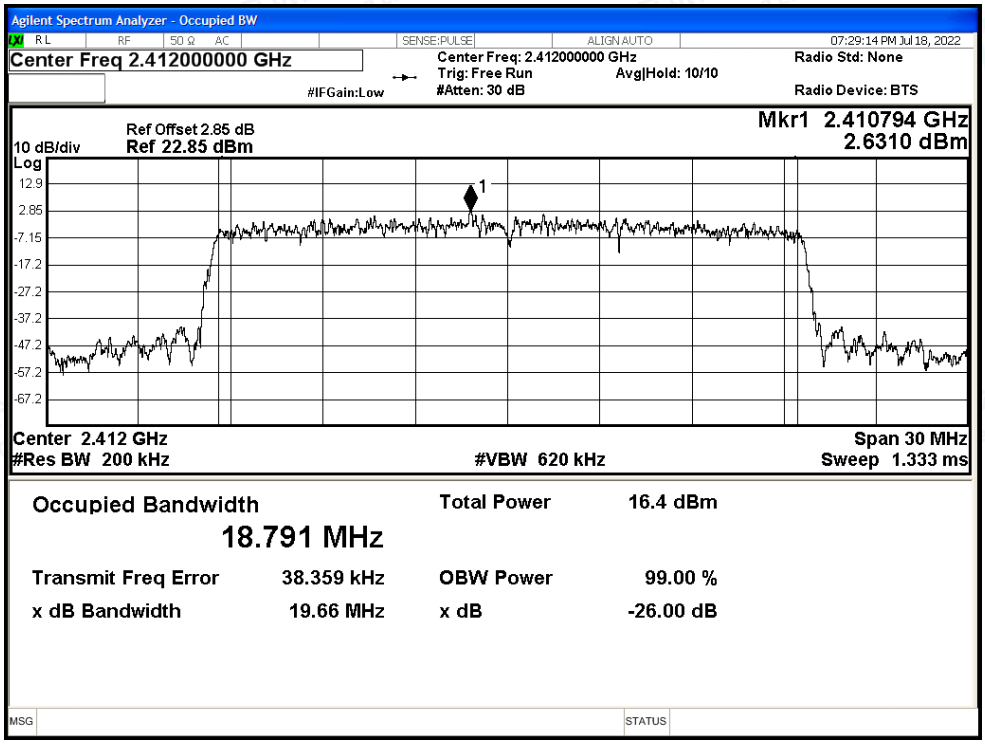
OBW NVNT n40 2437MHz Ant0



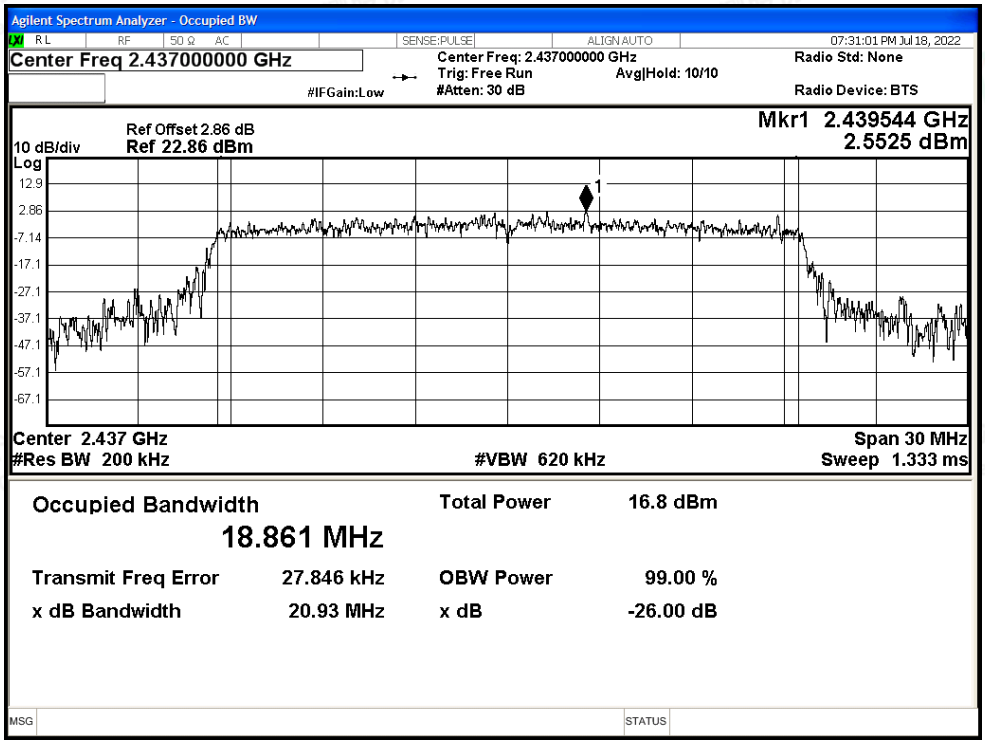
OBW NVNT n40 2452MHz Ant0



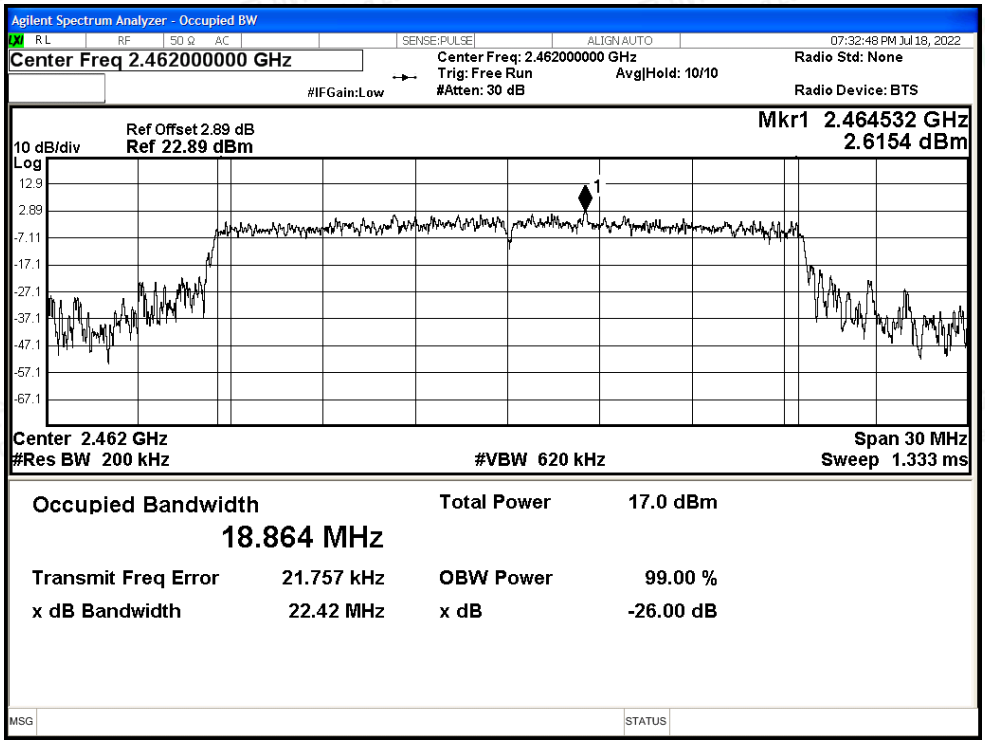
OBW NVNT ax20 2412MHz Ant0



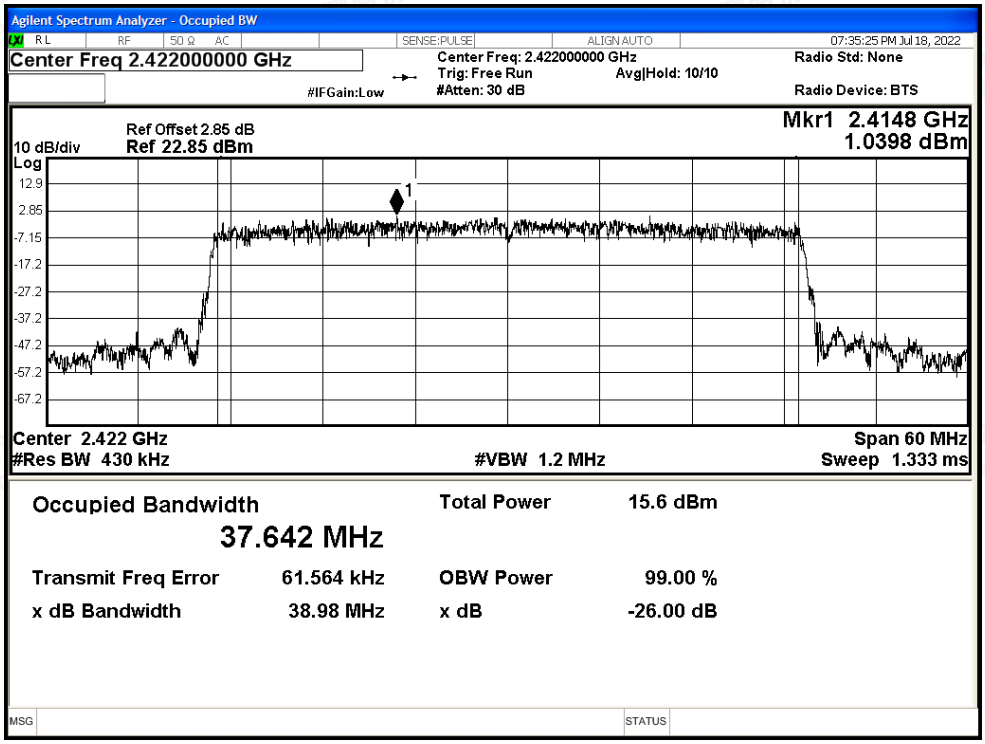
OBW NVNT ax20 2437MHz Ant0



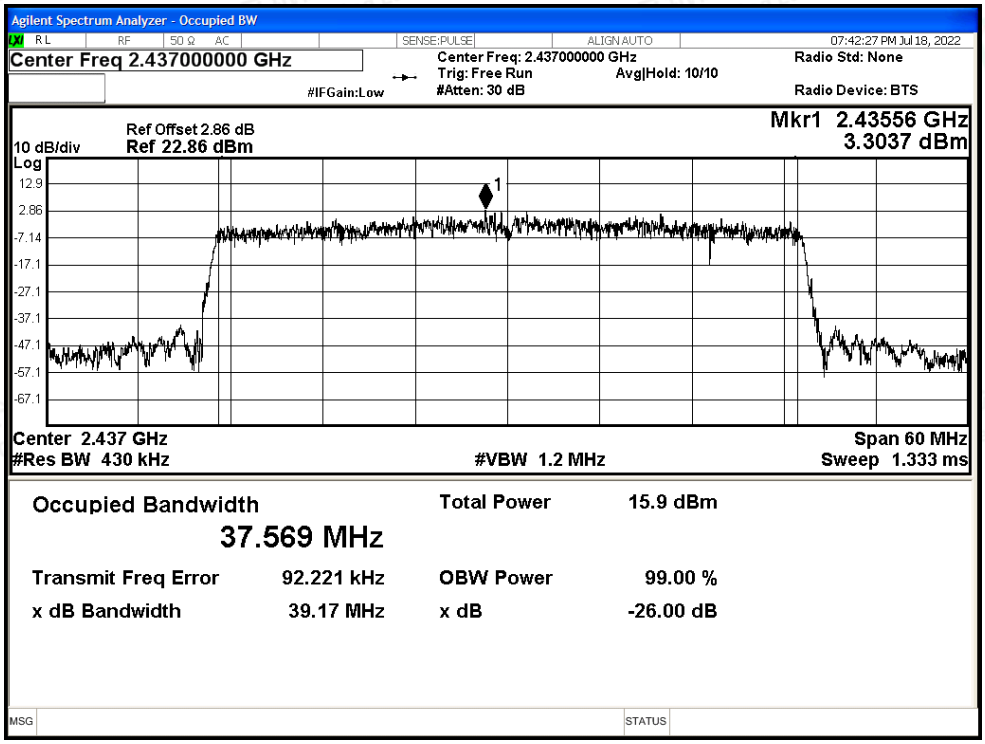
OBW NVNT ax20 2462MHz Ant0



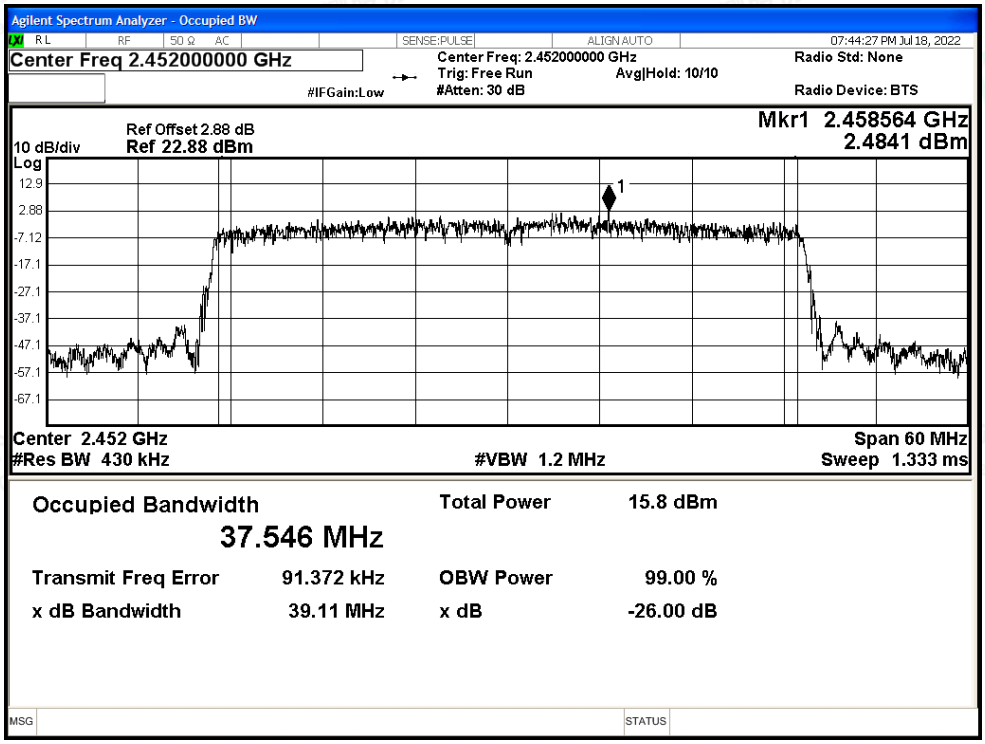
OBW NVNT ax40 2422MHz Ant0



OBW NVNT ax40 2437MHz Ant0



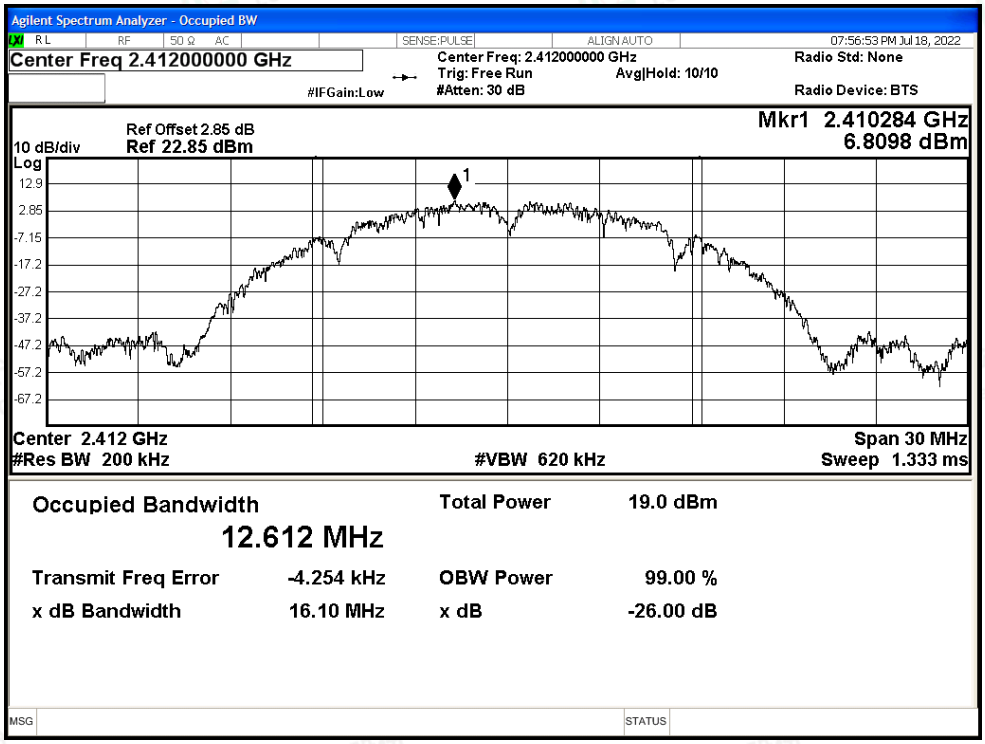
OBW NVNT ax40 2452MHz Ant0



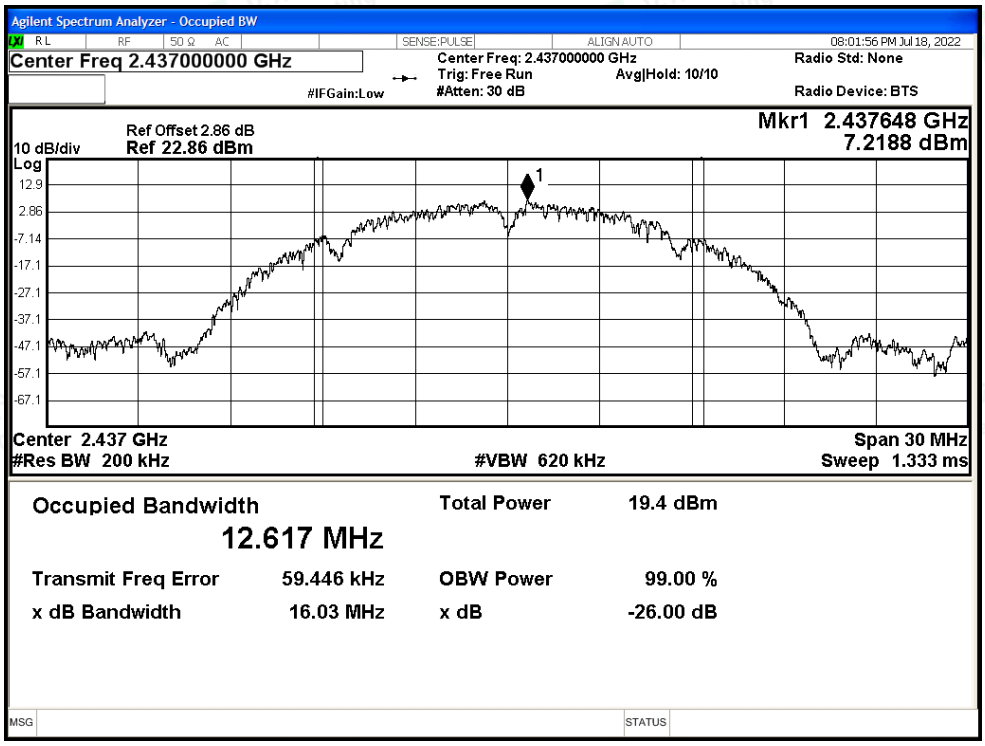
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	b	2412	Ant1	12.612
NVNT	b	2437	Ant1	12.617
NVNT	b	2462	Ant1	12.655
NVNT	g	2412	Ant1	16.386
NVNT	g	2437	Ant1	16.375
NVNT	g	2462	Ant1	16.344
NVNT	n20	2412	Ant1	17.608
NVNT	n20	2437	Ant1	17.57
NVNT	n20	2462	Ant1	17.569
NVNT	n40	2422	Ant1	35.929
NVNT	n40	2437	Ant1	35.882
NVNT	n40	2452	Ant1	35.897
NVNT	ax20	2412	Ant1	18.802
NVNT	ax20	2437	Ant1	18.972
NVNT	ax20	2462	Ant1	18.835
NVNT	ax40	2422	Ant1	37.604
NVNT	ax40	2437	Ant1	37.6
NVNT	ax40	2452	Ant1	37.548

Test Graphs

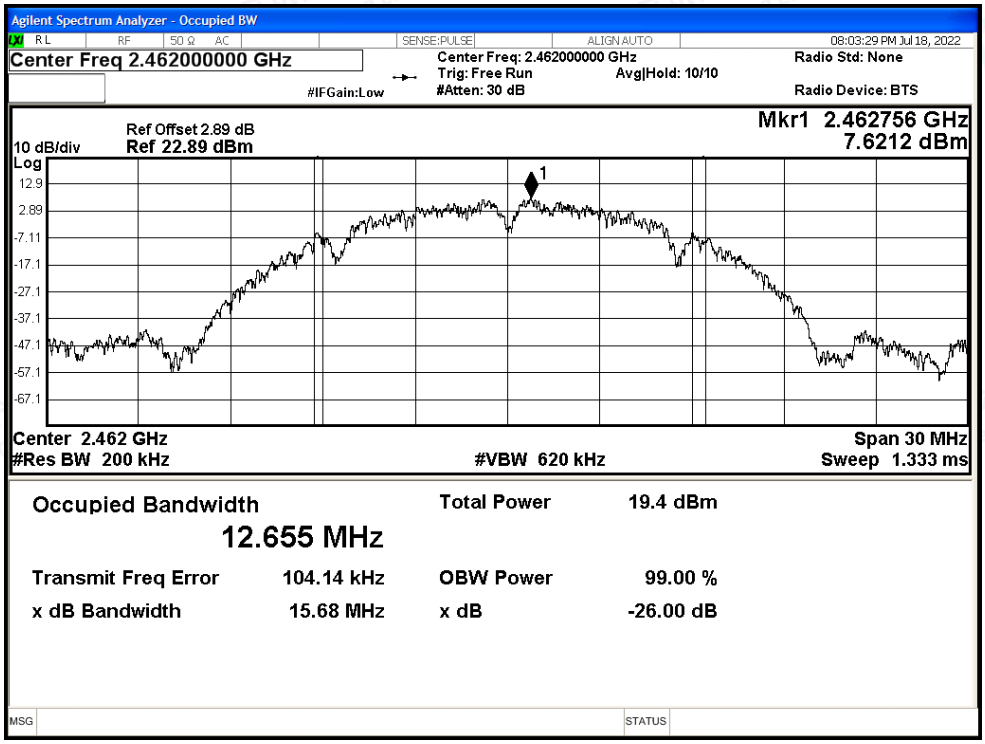
OBW NVNT b 2412MHz Ant1



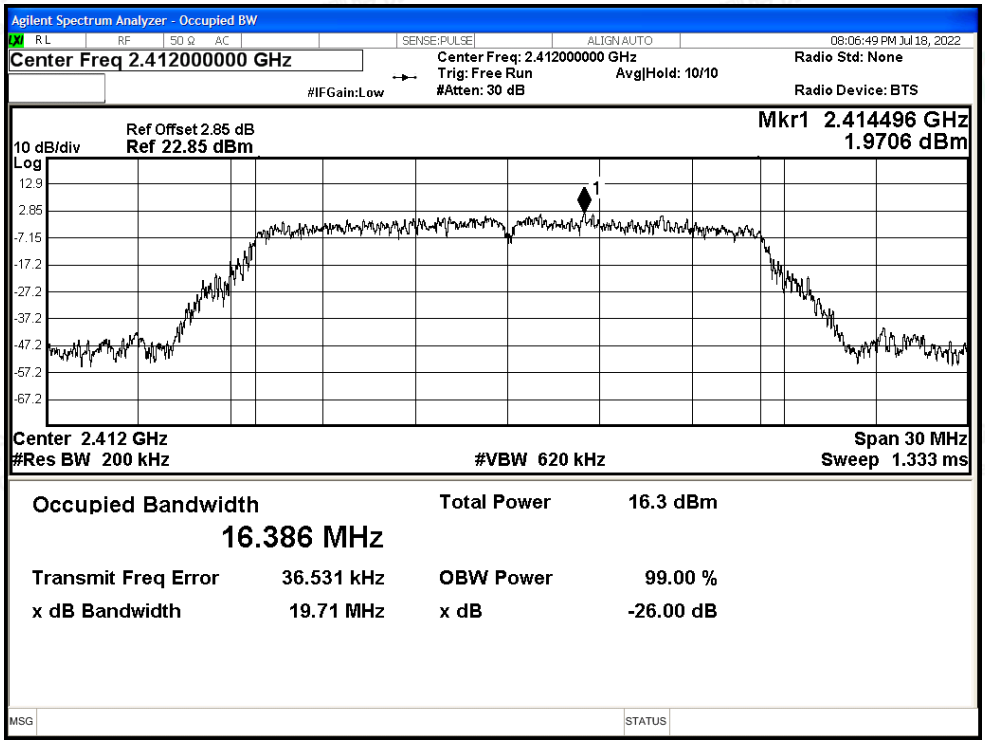
OBW NVNT b 2437MHz Ant1



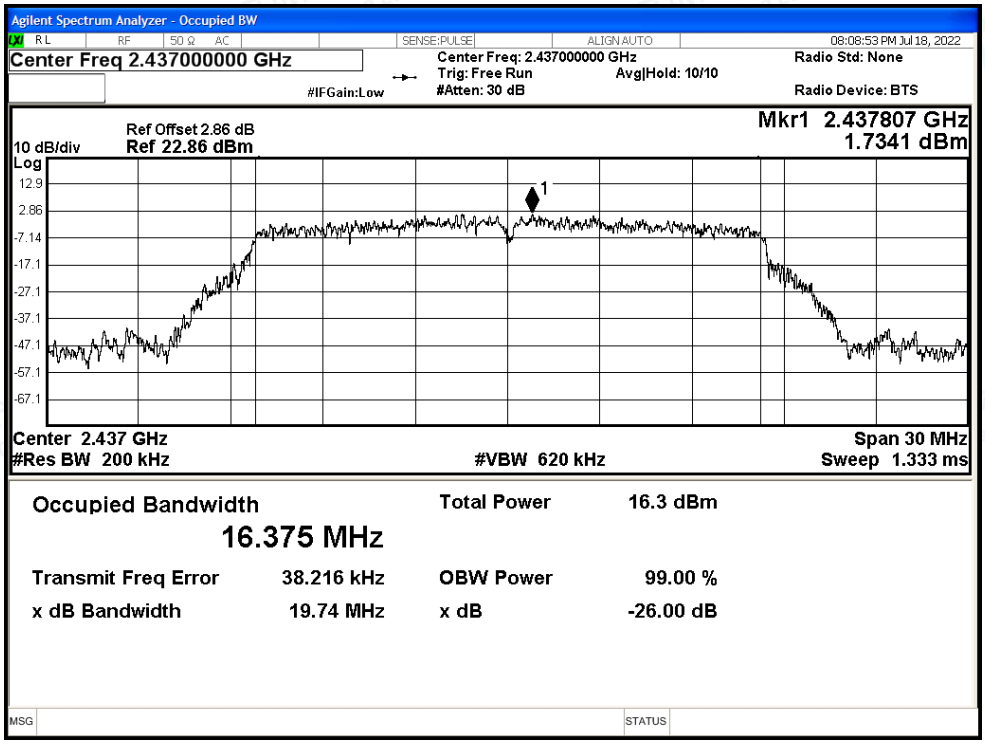
OBW NVNT b 2462MHz Ant1



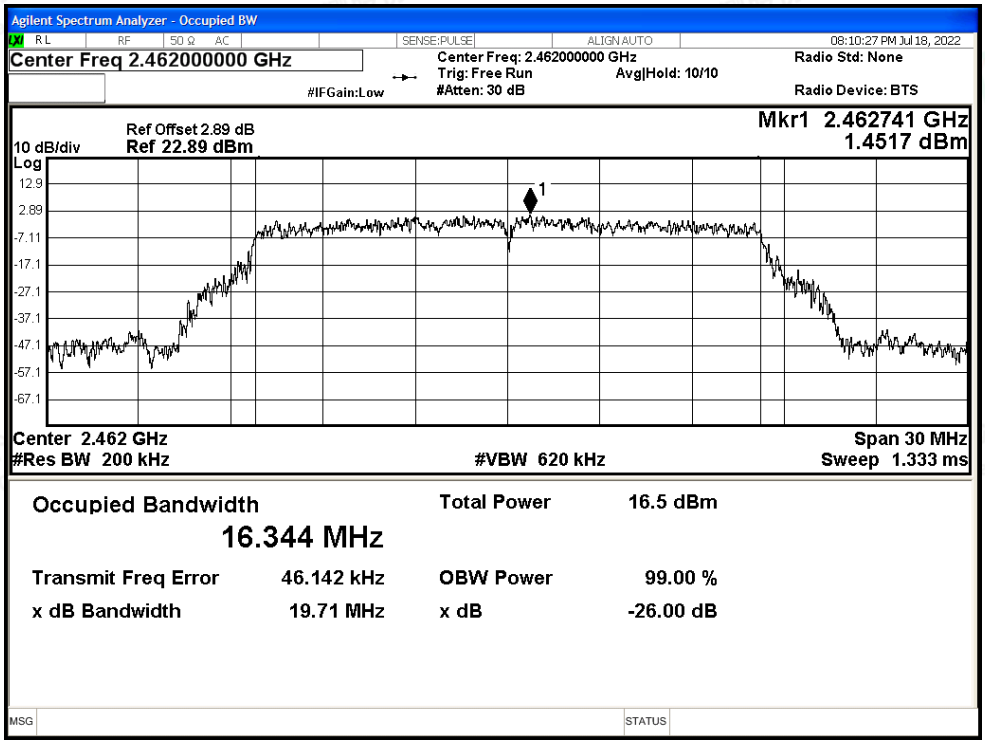
OBW NVNT g 2412MHz Ant1



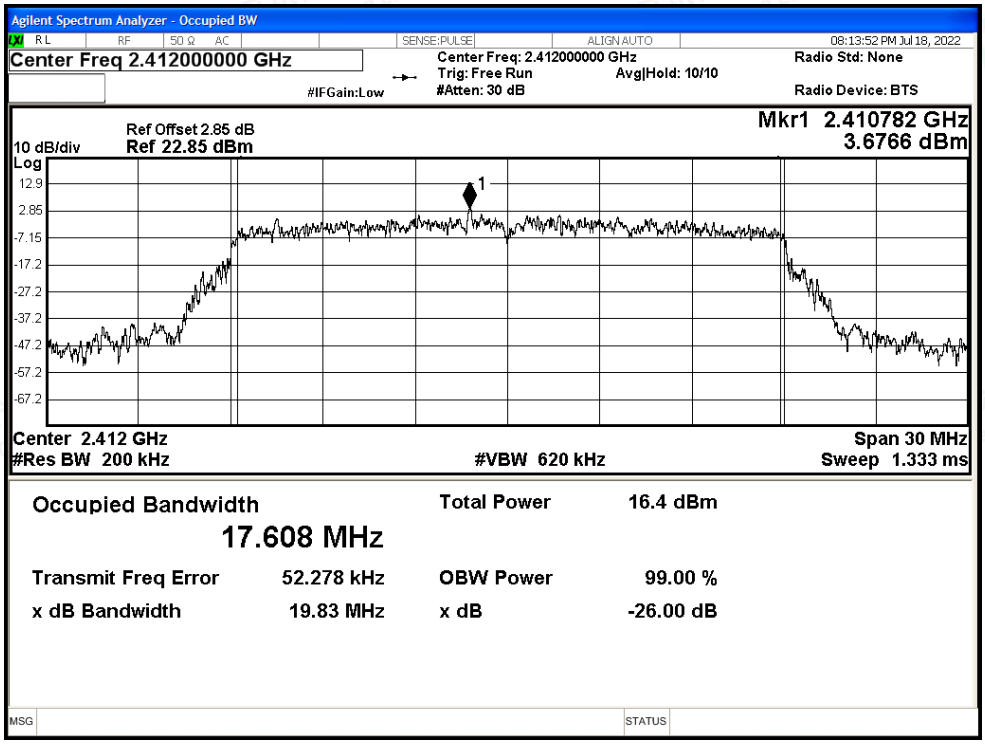
OBW NVNT g 2437MHz Ant1



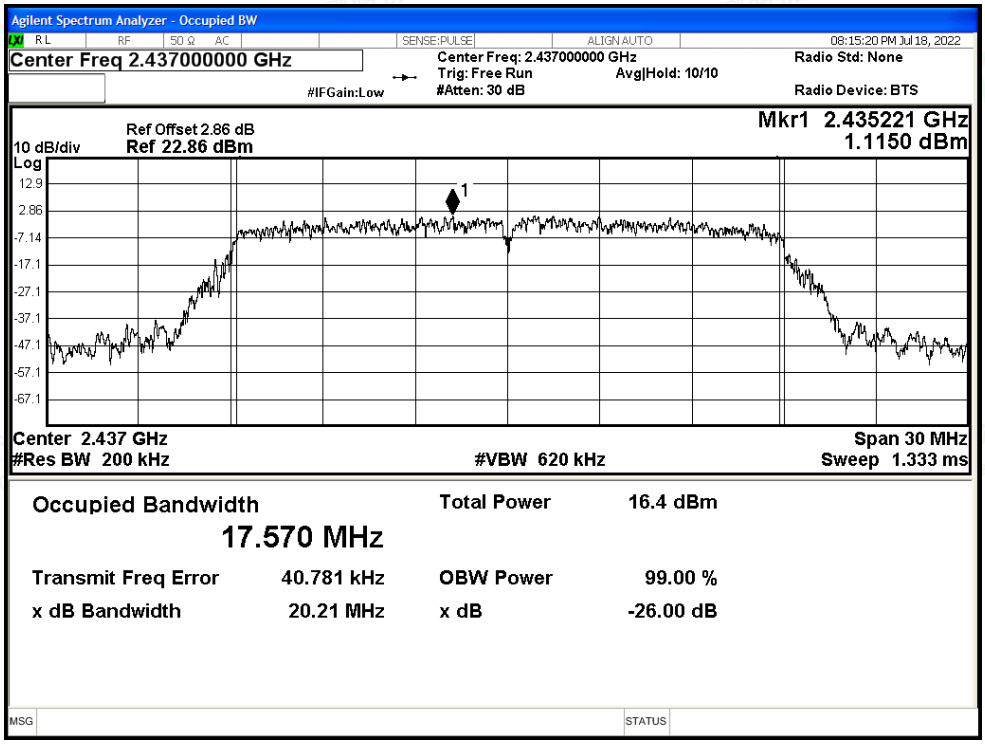
OBW NVNT g 2462MHz Ant1



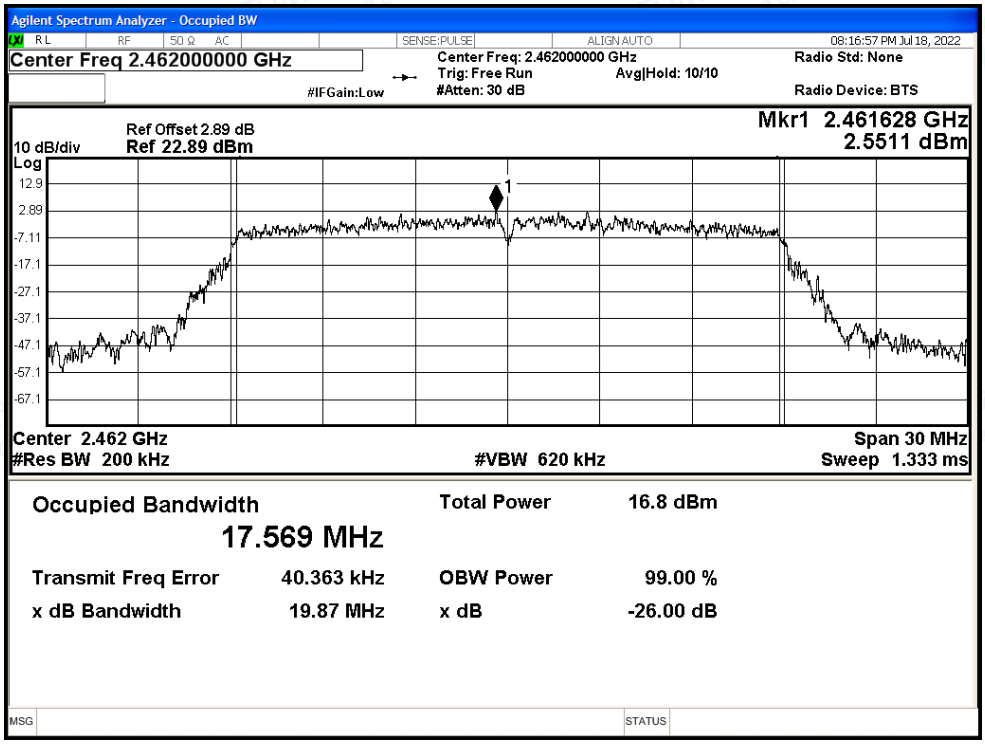
OBW NVNT n20 2412MHz Ant1



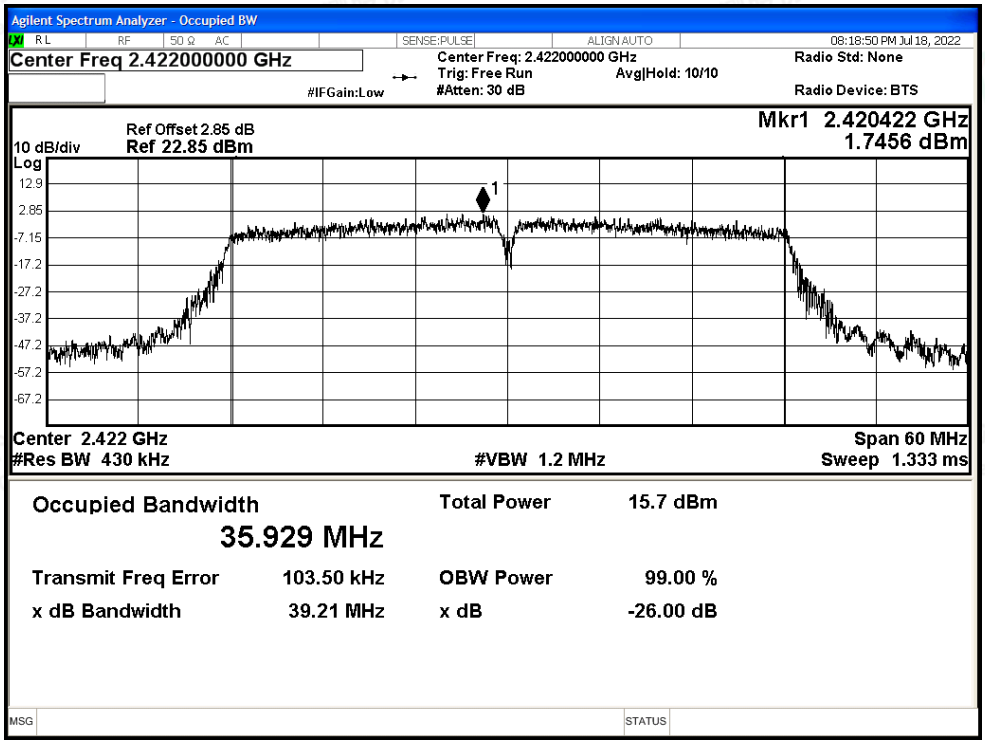
OBW NVNT n20 2437MHz Ant1



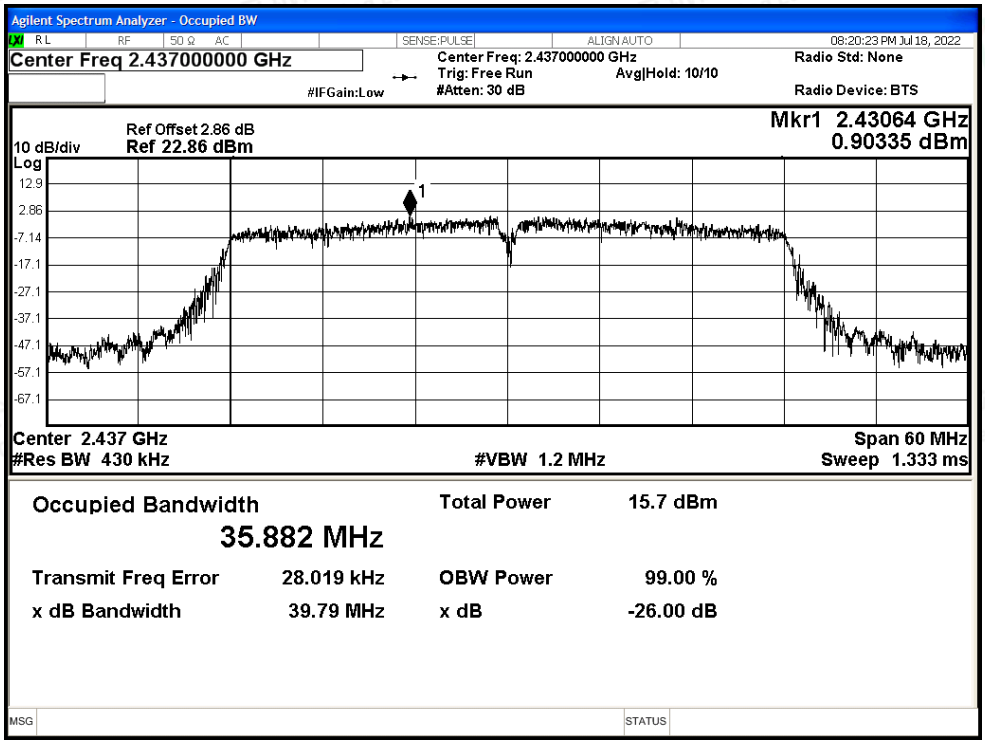
OBW NVNT n20 2462MHz Ant1



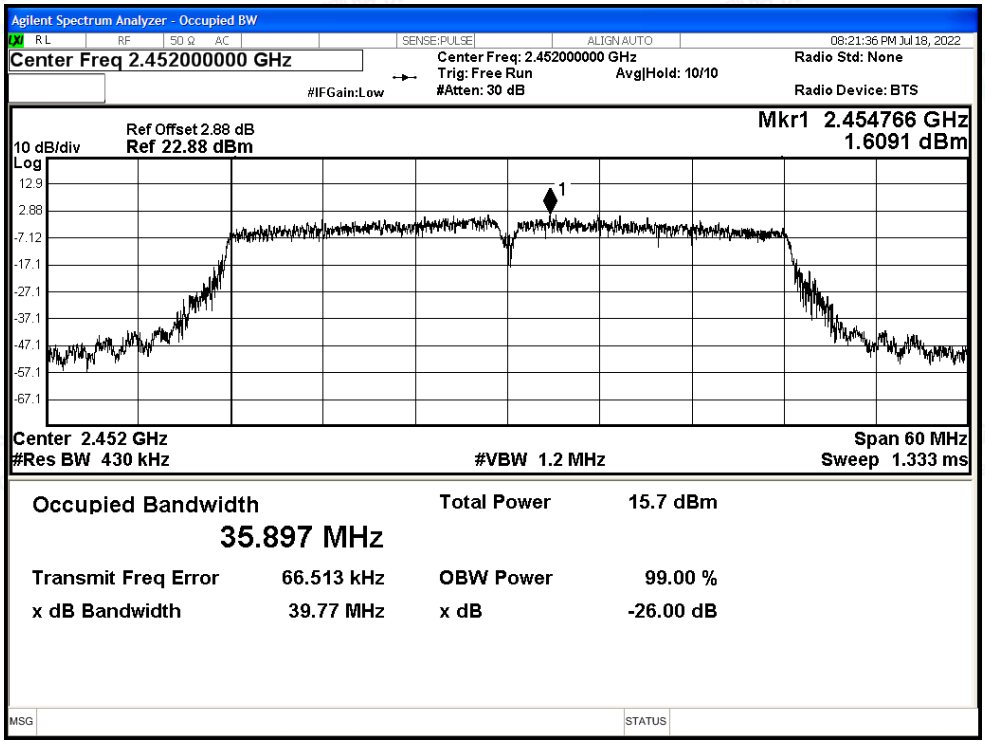
OBW NVNT n40 2422MHz Ant1



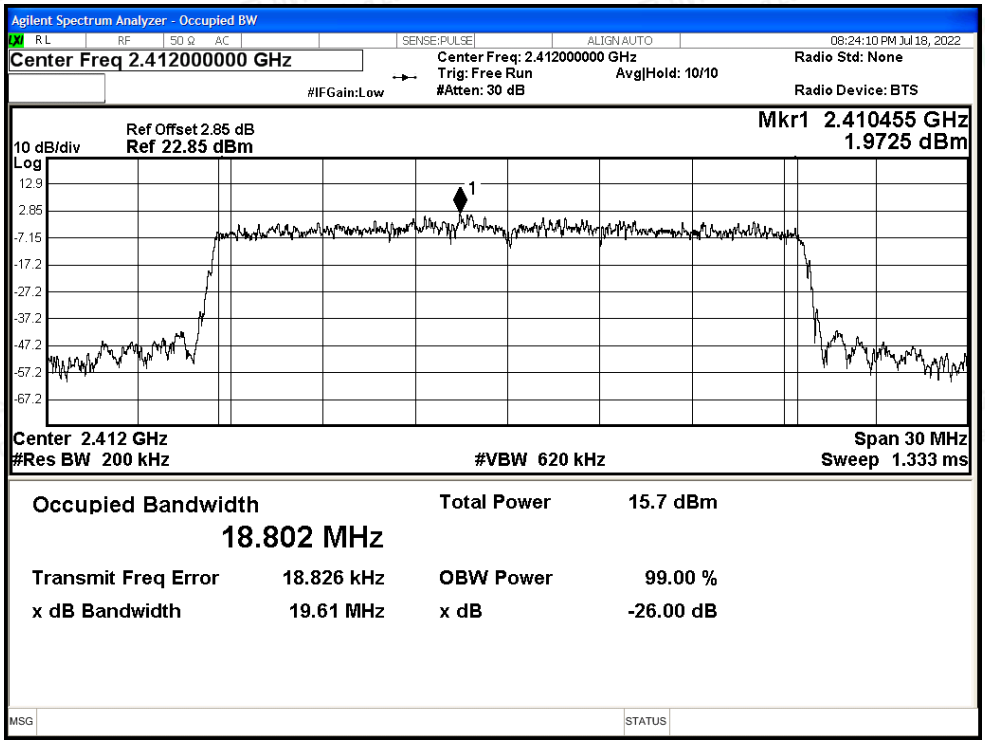
OBW NVNT n40 2437MHz Ant1



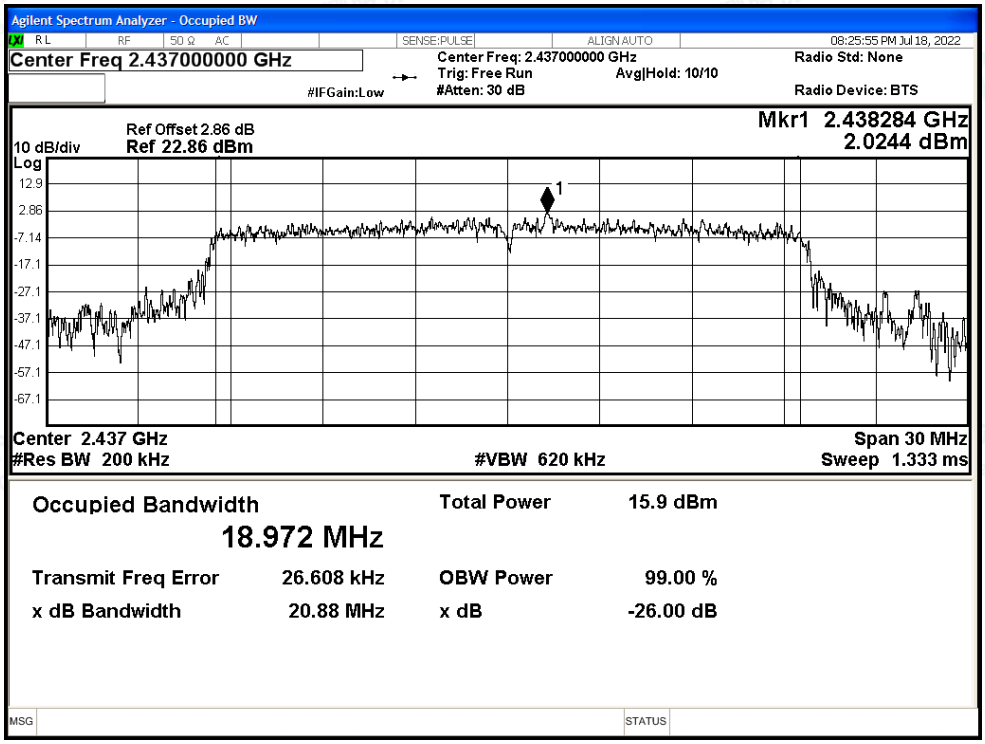
OBW NVNT n40 2452MHz Ant1



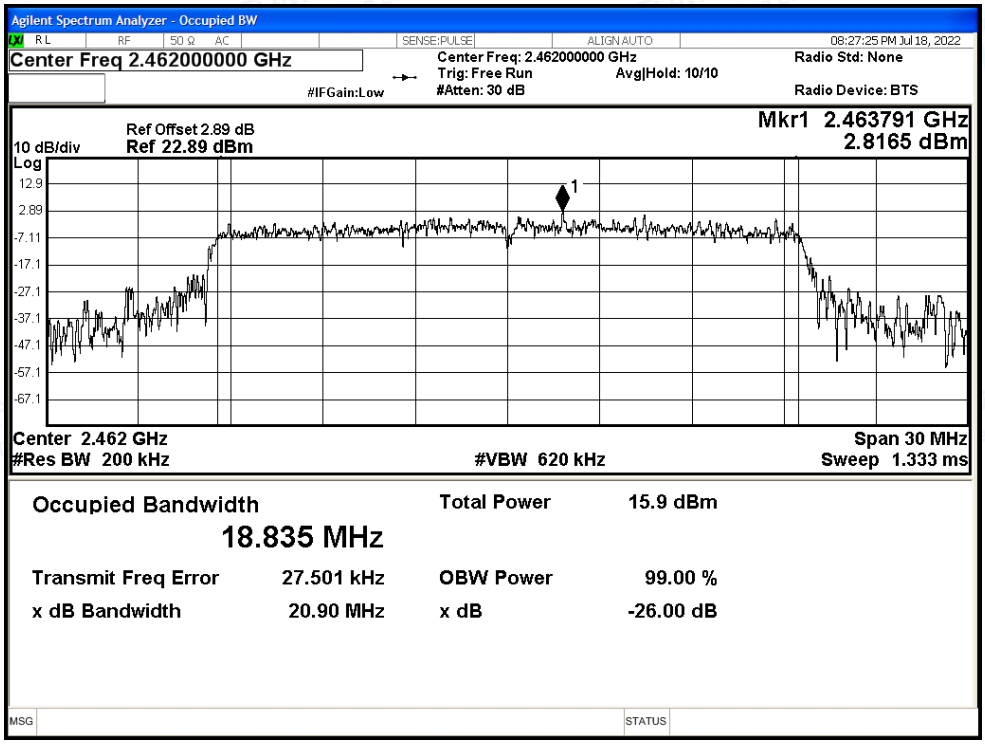
OBW NVNT ax20 2412MHz Ant1



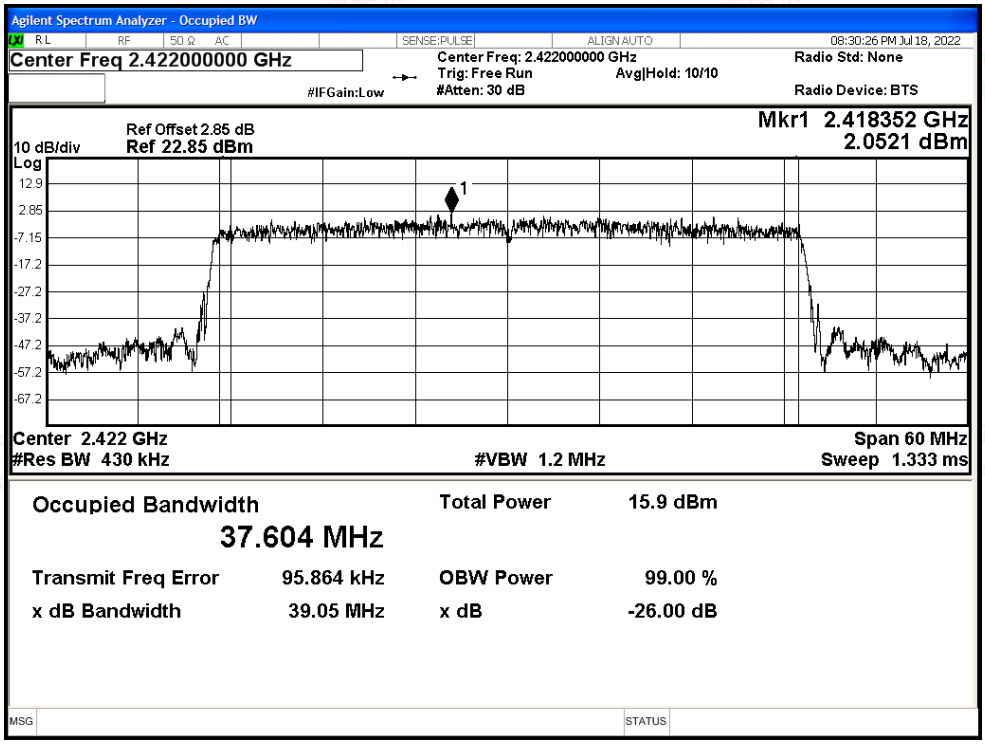
OBW NVNT ax20 2437MHz Ant1



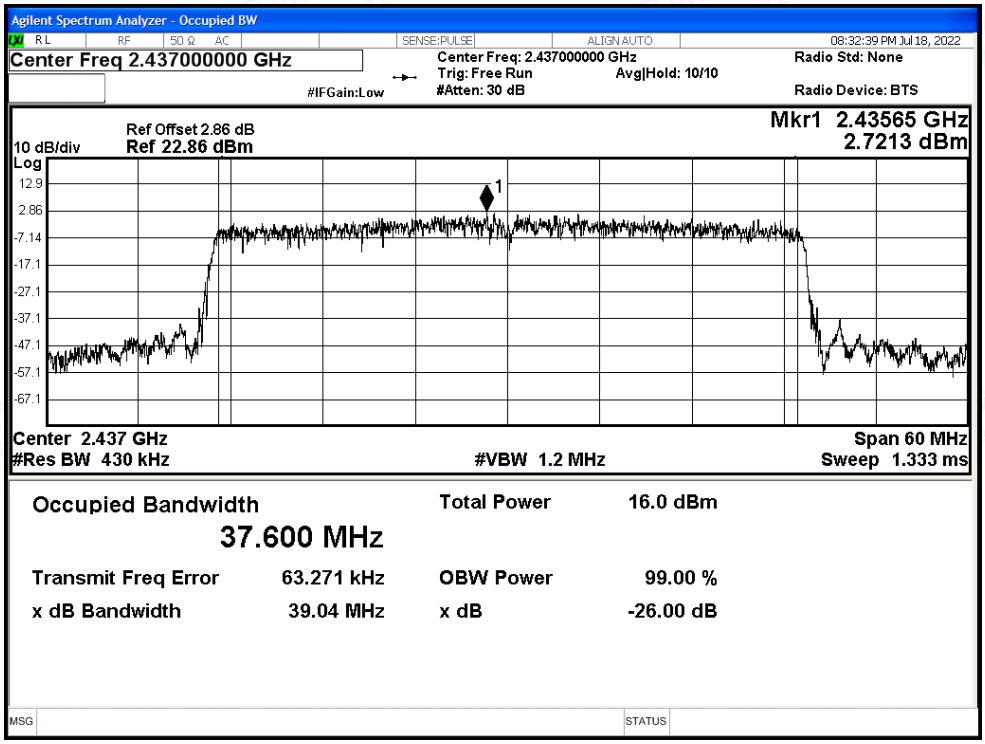
OBW NVNT ax20 2462MHz Ant1



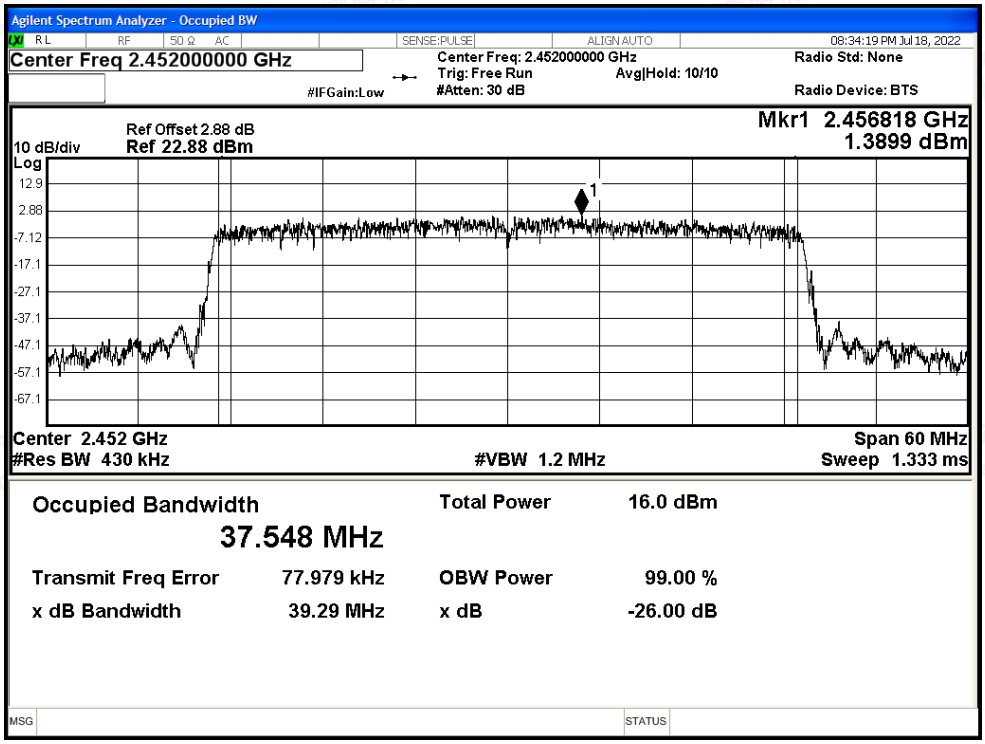
OBW NVNT ax40 2422MHz Ant1



OBW NVNT ax40 2437MHz Ant1



OBW NVNT ax40 2452MHz Ant1



A.3 Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant0	16.18	30	Pass
NVNT	b	2437	Ant0	16.35	30	Pass
NVNT	b	2462	Ant0	16.36	30	Pass
NVNT	g	2412	Ant0	15.32	30	Pass
NVNT	g	2437	Ant0	15.46	30	Pass
NVNT	g	2462	Ant0	15.61	30	Pass
NVNT	n20	2412	Ant0	15.59	30	Pass
NVNT	n20	2437	Ant0	16.3	30	Pass
NVNT	n20	2462	Ant0	17.65	30	Pass
NVNT	n40	2422	Ant0	14.6	30	Pass
NVNT	n40	2437	Ant0	14.58	30	Pass
NVNT	n40	2452	Ant0	14.73	30	Pass
NVNT	ax20	2412	Ant0	15.83	30	Pass
NVNT	ax20	2437	Ant0	15.93	30	Pass
NVNT	ax20	2462	Ant0	16.22	30	Pass
NVNT	ax40	2422	Ant0	14.6	30	Pass
NVNT	ax40	2437	Ant0	14.61	30	Pass
NVNT	ax40	2452	Ant0	14.9	30	Pass

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	16.24	30	Pass
NVNT	b	2437	Ant1	16.43	30	Pass
NVNT	b	2462	Ant1	16.27	30	Pass
NVNT	g	2412	Ant1	15.36	30	Pass
NVNT	g	2437	Ant1	15.42	30	Pass
NVNT	g	2462	Ant1	15.47	30	Pass
NVNT	n20	2412	Ant1	15.8	30	Pass
NVNT	n20	2437	Ant1	15.83	30	Pass
NVNT	n20	2462	Ant1	16.65	30	Pass
NVNT	n40	2422	Ant1	14.63	30	Pass
NVNT	n40	2437	Ant1	14.92	30	Pass
NVNT	n40	2452	Ant1	14.8	30	Pass
NVNT	ax20	2412	Ant1	14.87	30	Pass
NVNT	ax20	2437	Ant1	15.06	30	Pass
NVNT	ax20	2462	Ant1	15.19	30	Pass
NVNT	ax40	2422	Ant1	14.85	30	Pass
NVNT	ax40	2437	Ant1	14.85	30	Pass
NVNT	ax40	2452	Ant1	15.13	30	Pass

MIMO

Condition	Mode	Frequency (MHz)	Total Power (dBm)			Limit (dBm)	Verdict
			Ant0	Ant1	Ant0+Ant1		
NVNT	n20	2412	15.59	15.8	18.71	27.78	Pass
NVNT	n20	2437	16.3	15.83	19.08	27.78	Pass
NVNT	n20	2462	17.65	16.65	20.19	27.78	Pass
NVNT	n40	2422	14.6	14.63	17.63	27.78	Pass
NVNT	n40	2437	14.58	14.92	17.76	27.78	Pass
NVNT	n40	2452	14.73	14.8	17.78	27.78	Pass
NVNT	ax20	2412	15.83	14.87	18.39	27.78	Pass
NVNT	ax20	2437	15.93	15.06	18.53	27.78	Pass
NVNT	ax20	2462	16.22	15.19	18.75	27.78	Pass
NVNT	ax40	2422	14.6	14.85	17.74	27.78	Pass
NVNT	ax40	2437	14.61	14.85	17.74	27.78	Pass
NVNT	ax40	2452	14.9	15.13	18.03	27.78	Pass

A.4 Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Duty Factor (dB)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	b	2412	Ant0	-6.51	0	-6.51	8	Pass
NVNT	b	2437	Ant0	-7.79	0	-7.79	8	Pass
NVNT	b	2462	Ant0	-7.17	0	-7.17	8	Pass
NVNT	g	2412	Ant0	-11.99	0	-11.99	8	Pass
NVNT	g	2437	Ant0	-11.92	0	-11.92	8	Pass
NVNT	g	2462	Ant0	-11.91	0	-11.91	8	Pass
NVNT	n20	2412	Ant0	-12.2	0	-12.2	8	Pass
NVNT	n20	2437	Ant0	-10.11	0	-10.11	8	Pass
NVNT	n20	2462	Ant0	-12.19	0	-12.19	8	Pass
NVNT	n40	2422	Ant0	-16.95	0	-16.95	8	Pass
NVNT	n40	2437	Ant0	-15.93	0	-15.93	8	Pass
NVNT	n40	2452	Ant0	-13.39	0	-13.39	8	Pass
NVNT	ax20	2412	Ant0	-14.14	0	-14.14	8	Pass
NVNT	ax20	2437	Ant0	-12.42	0	-12.42	8	Pass
NVNT	ax20	2462	Ant0	-13.1	0	-13.1	8	Pass
NVNT	ax40	2422	Ant0	-18.2	0	-18.2	8	Pass
NVNT	ax40	2437	Ant0	-17.07	0	-17.07	8	Pass
NVNT	ax40	2452	Ant0	-17.33	0	-17.33	8	Pass

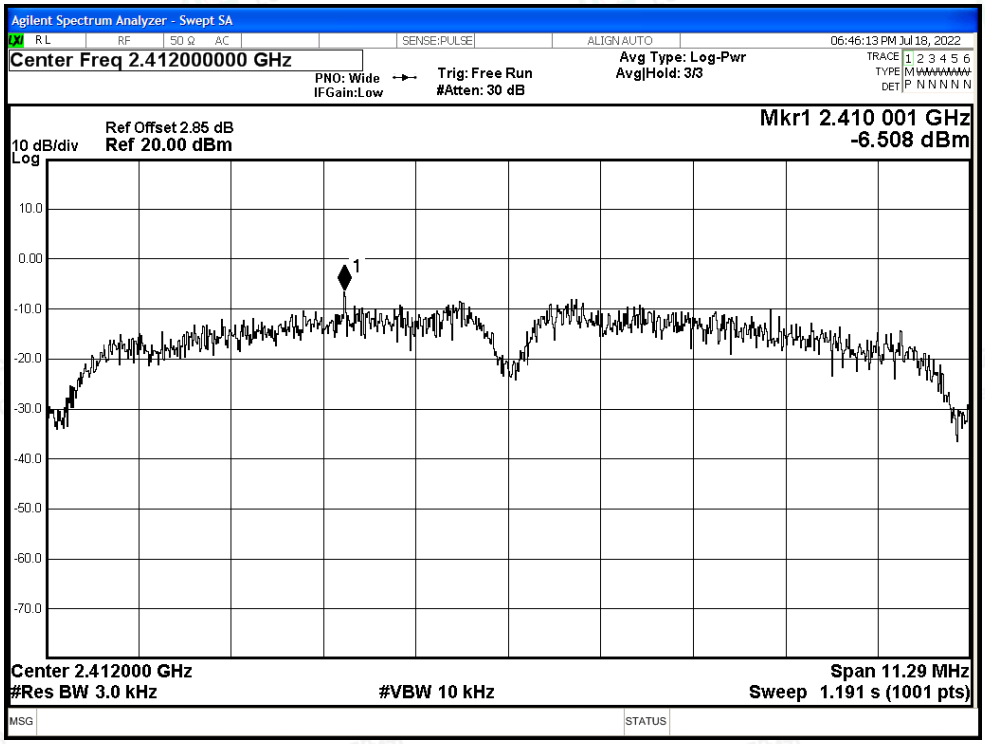
Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Duty Factor (dB)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	b	2412	Ant1	-7.26	0	-7.26	8	Pass
NVNT	b	2437	Ant1	-9.98	0	-9.98	8	Pass
NVNT	b	2462	Ant1	-7.15	0	-7.15	8	Pass
NVNT	g	2412	Ant1	-12.3	0	-12.3	8	Pass
NVNT	g	2437	Ant1	-12.11	0	-12.11	8	Pass
NVNT	g	2462	Ant1	-11.16	0	-11.16	8	Pass
NVNT	n20	2412	Ant1	-11.56	0	-11.56	8	Pass
NVNT	n20	2437	Ant1	-11.7	0	-11.7	8	Pass
NVNT	n20	2462	Ant1	-12.81	0	-12.81	8	Pass
NVNT	n40	2422	Ant1	-15.68	0	-15.68	8	Pass
NVNT	n40	2437	Ant1	-15.99	0	-15.99	8	Pass
NVNT	n40	2452	Ant1	-14.9	0	-14.9	8	Pass
NVNT	ax20	2412	Ant1	-15.22	0	-15.22	8	Pass
NVNT	ax20	2437	Ant1	-15.14	0	-15.14	8	Pass
NVNT	ax20	2462	Ant1	-14.49	0	-14.49	8	Pass
NVNT	ax40	2422	Ant1	-17.99	0	-17.99	8	Pass
NVNT	ax40	2437	Ant1	-17.56	0	-17.56	8	Pass
NVNT	ax40	2452	Ant1	-17.32	0	-17.32	8	Pass

MIMO

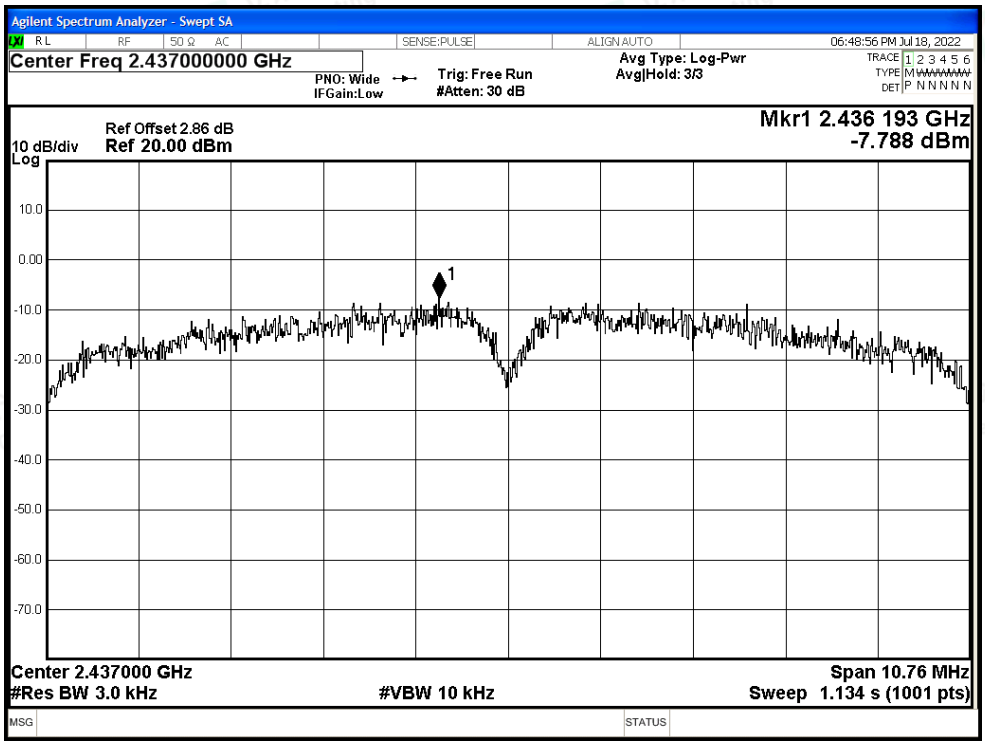
Condition	Mode	Frequency (MHz)	Total PSD (dBm/3kHz)			Limit (dBm)	Verdict
			Ant0	Ant1	Ant0+Ant1		
NVNT	n20	2412	-12.2	-11.56	-8.86	5.78	Pass
NVNT	n20	2437	-10.11	-11.7	-7.82	5.78	Pass
NVNT	n20	2462	-12.19	-12.81	-9.48	5.78	Pass
NVNT	n40	2422	-16.95	-15.68	-13.26	5.78	Pass
NVNT	n40	2437	-15.93	-15.99	-12.95	5.78	Pass
NVNT	n40	2452	-13.39	-14.9	-11.07	5.78	Pass
NVNT	ax20	2412	-14.14	-15.22	-11.64	5.78	Pass
NVNT	ax20	2437	-12.42	-15.14	-10.56	5.78	Pass
NVNT	ax20	2462	-13.1	-14.49	-10.73	5.78	Pass
NVNT	ax40	2422	-18.2	-17.99	-15.08	5.78	Pass
NVNT	ax40	2437	-17.07	-17.56	-14.30	5.78	Pass
NVNT	ax40	2452	-17.33	-17.32	-14.31	5.78	Pass

Test Graphs

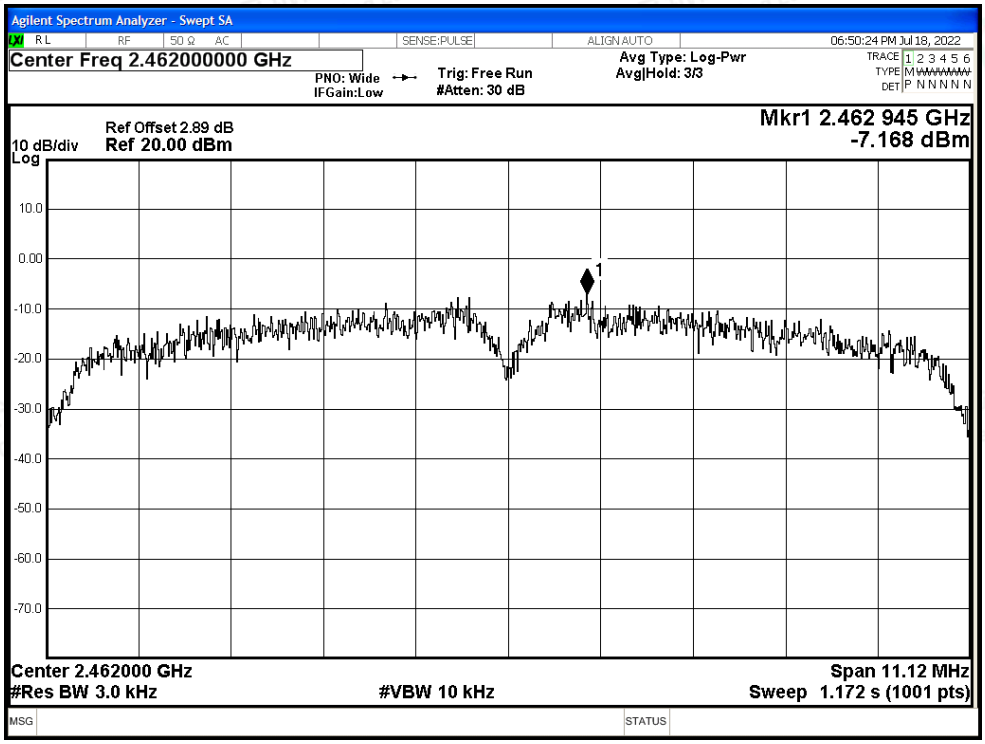
PSD NVNT b 2412MHz Ant0



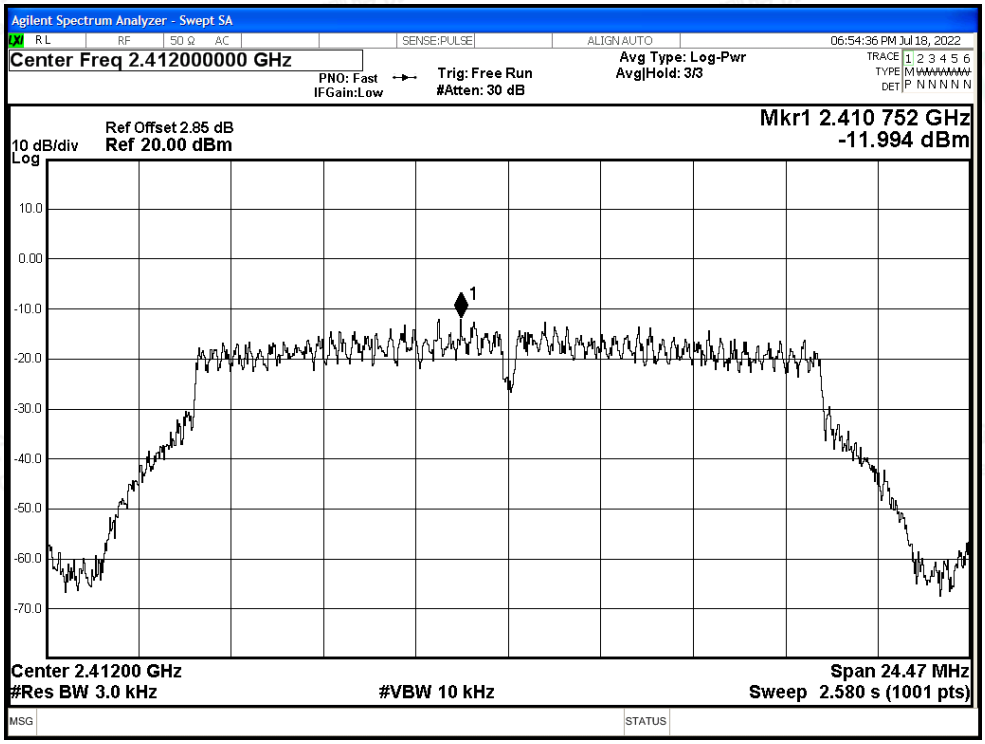
PSD NVNT b 2437MHz Ant0



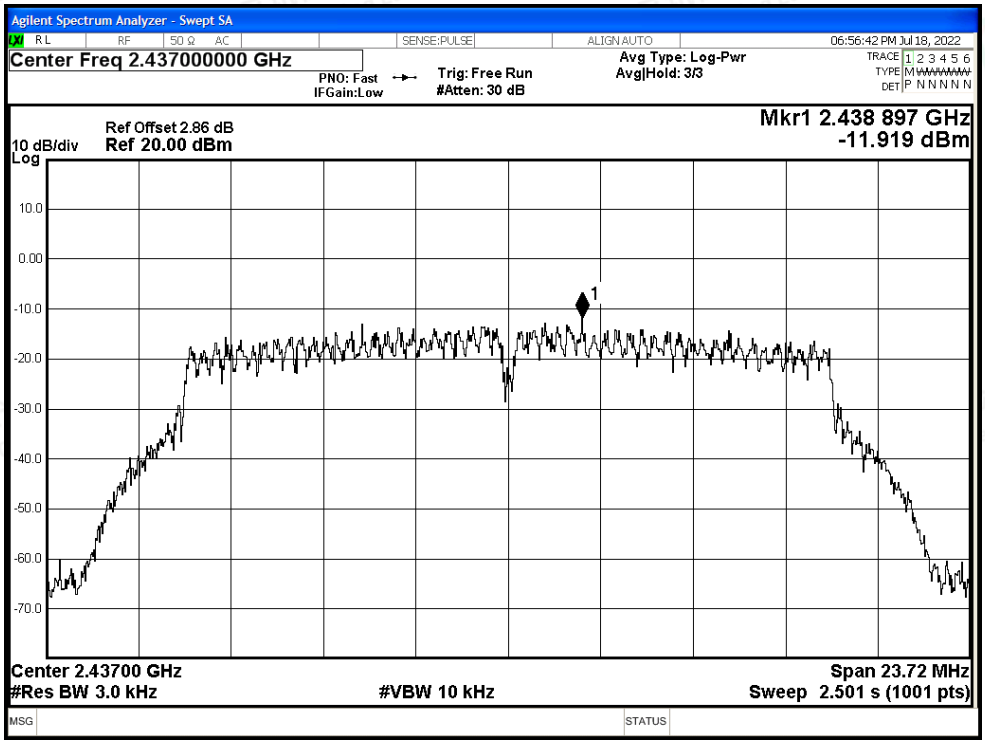
PSD NVNT b 2462MHz Ant0



PSD NVNT g 2412MHz Ant0



PSD NVNT g 2437MHz Ant0



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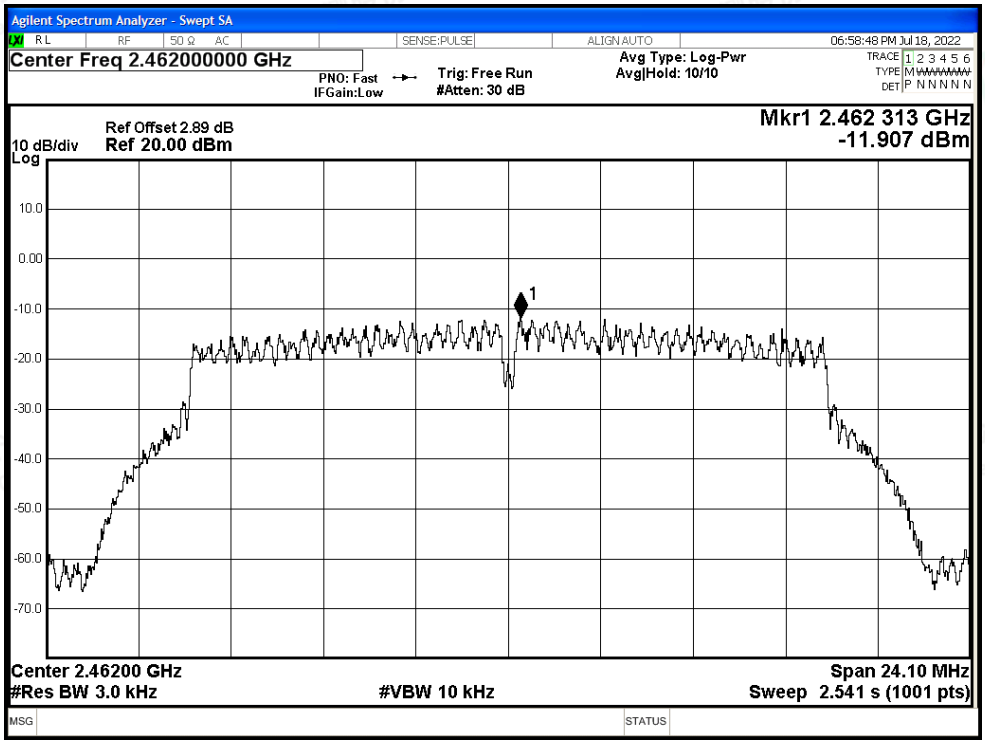

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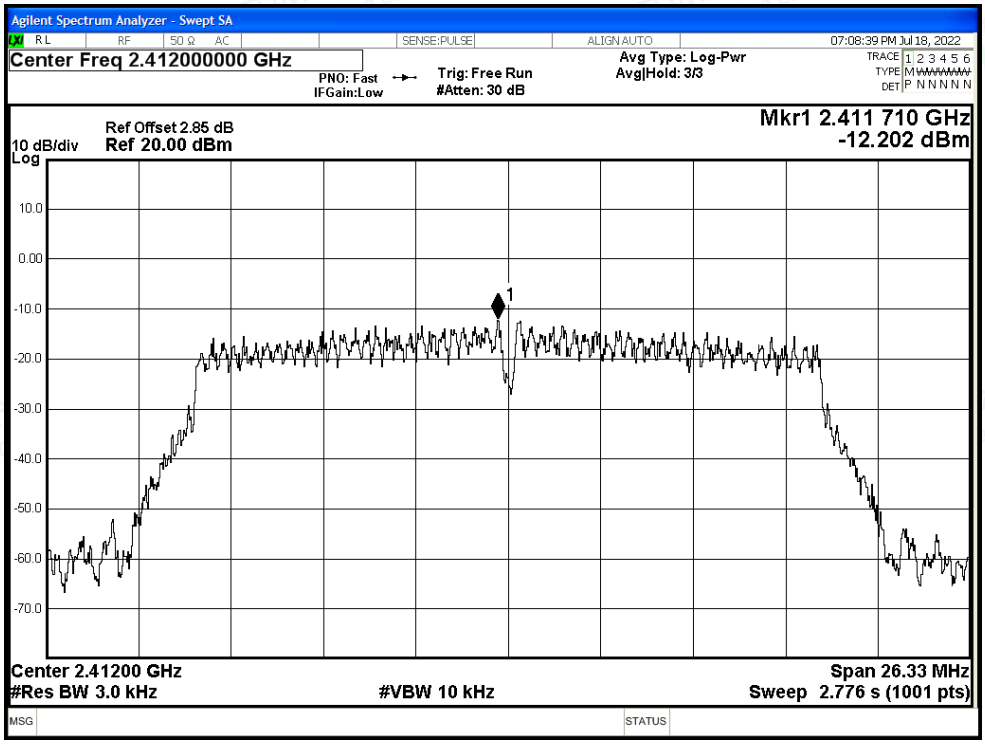

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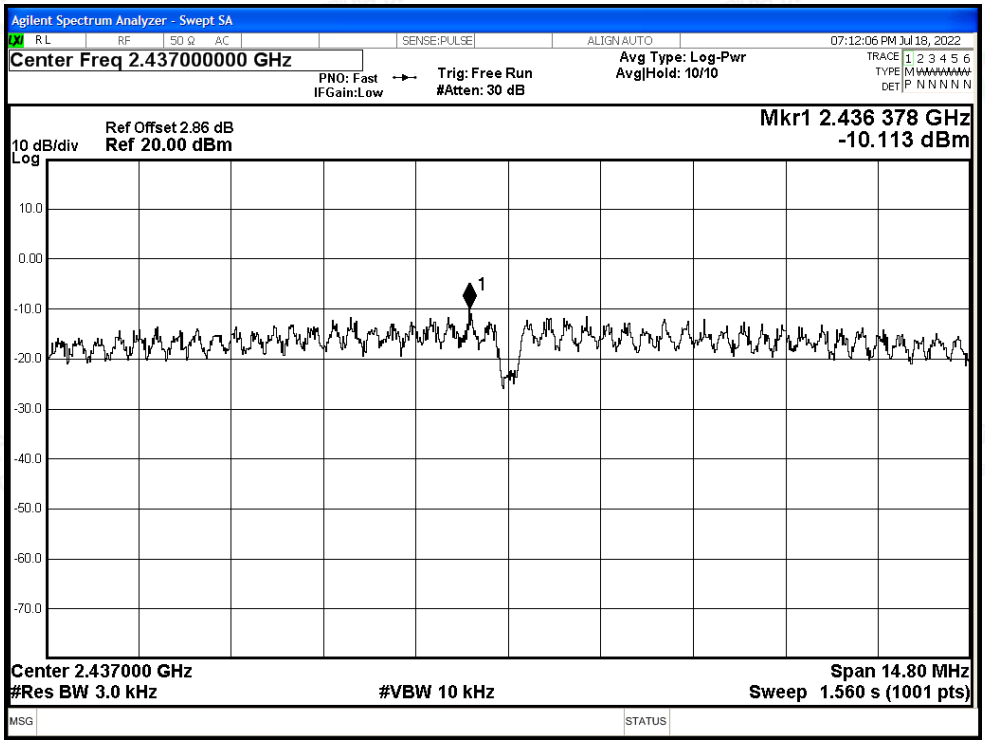

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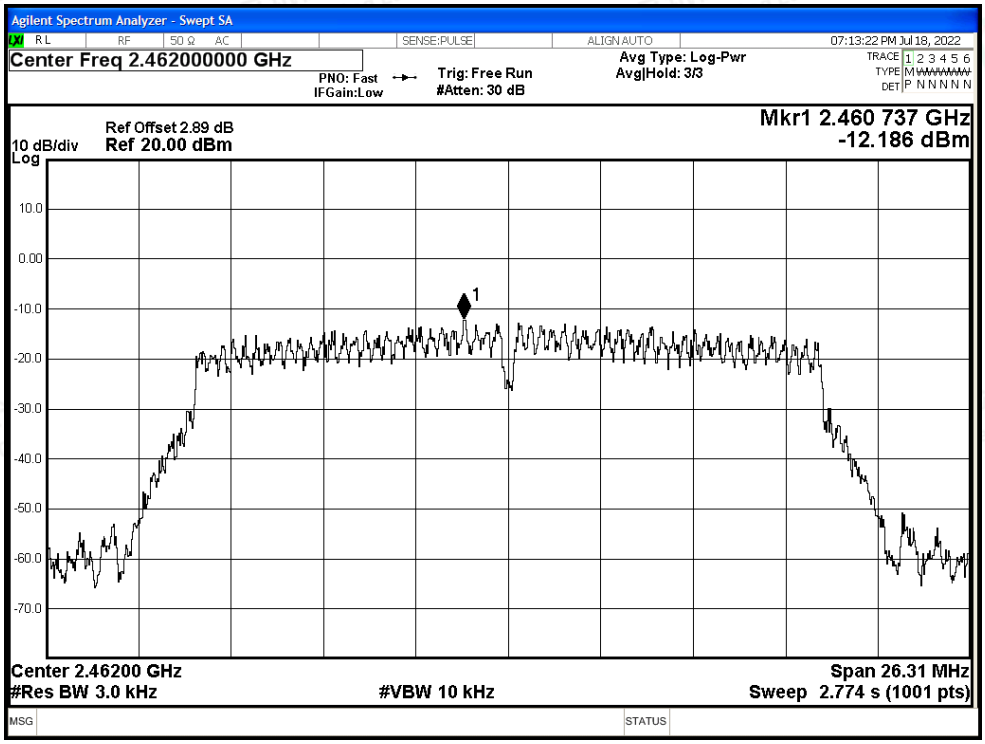
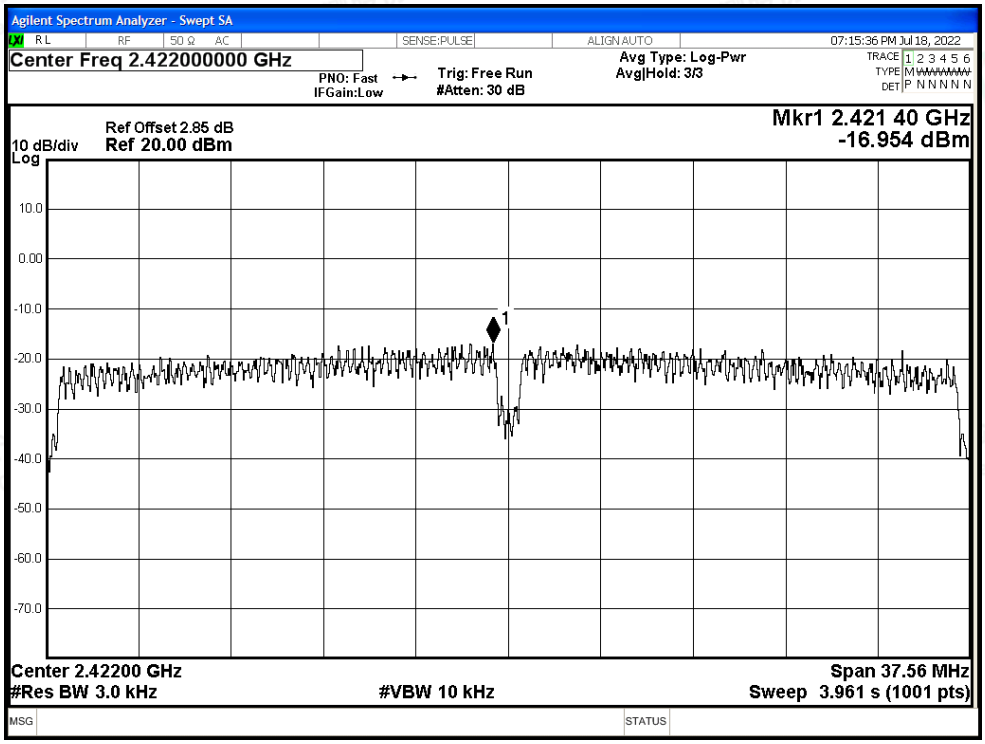


PSD NVNT n40 2422MHz Ant0



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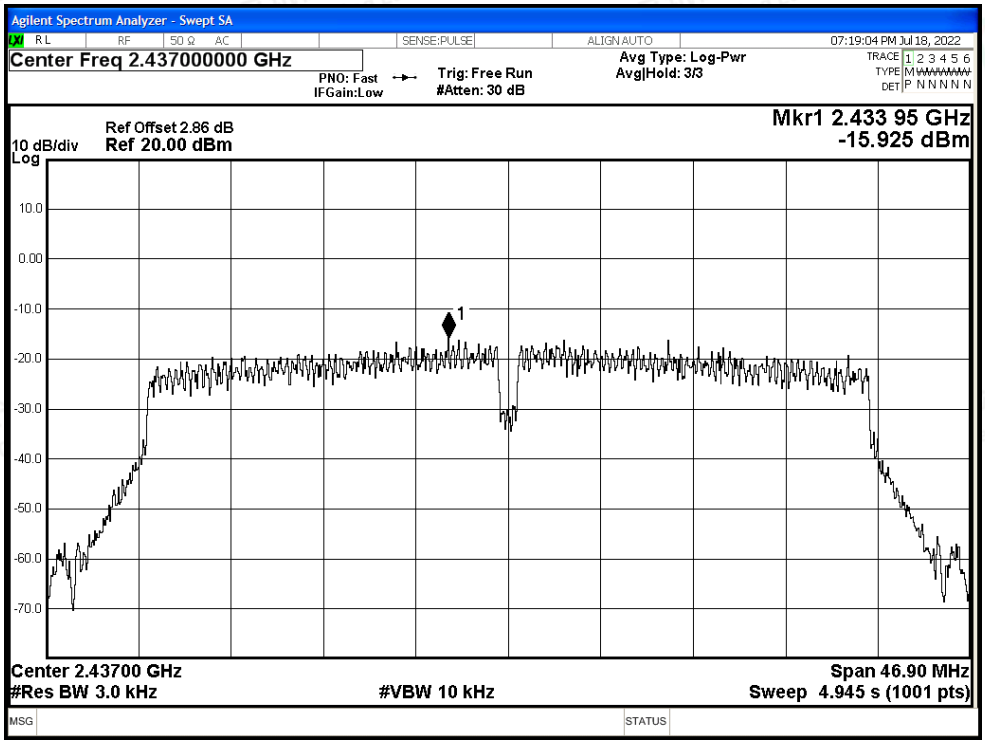

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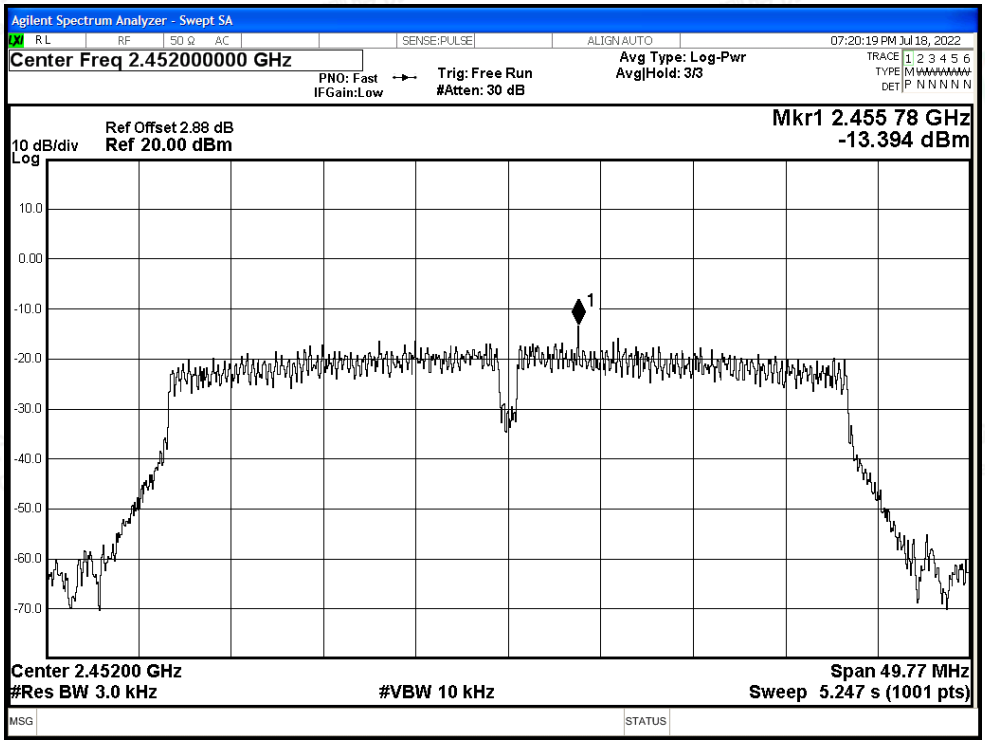
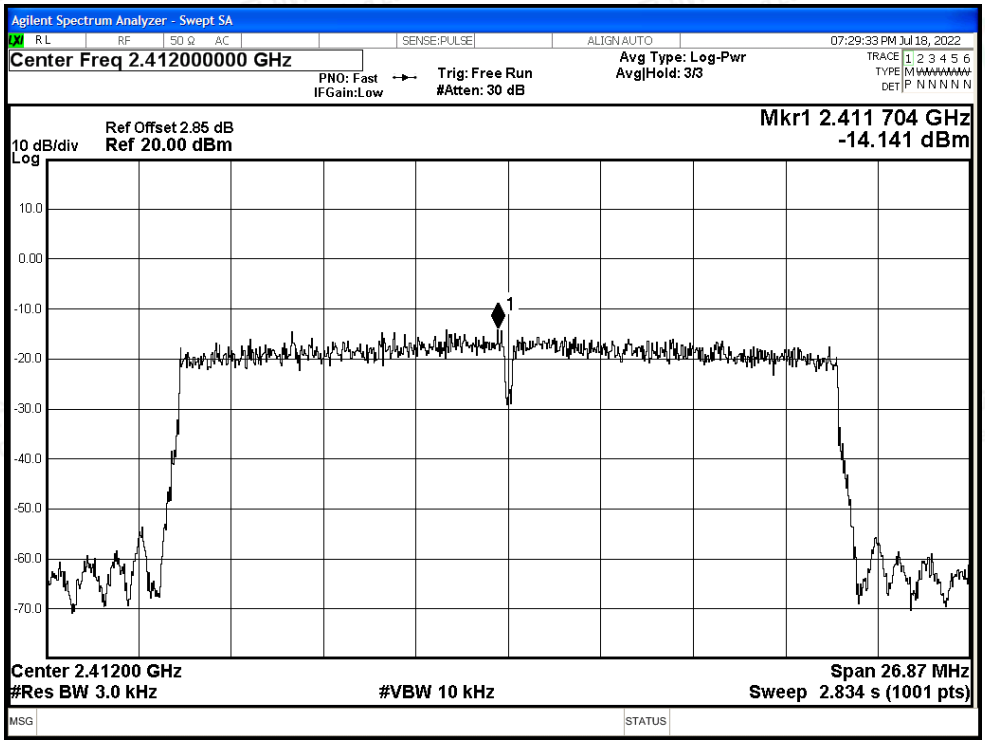
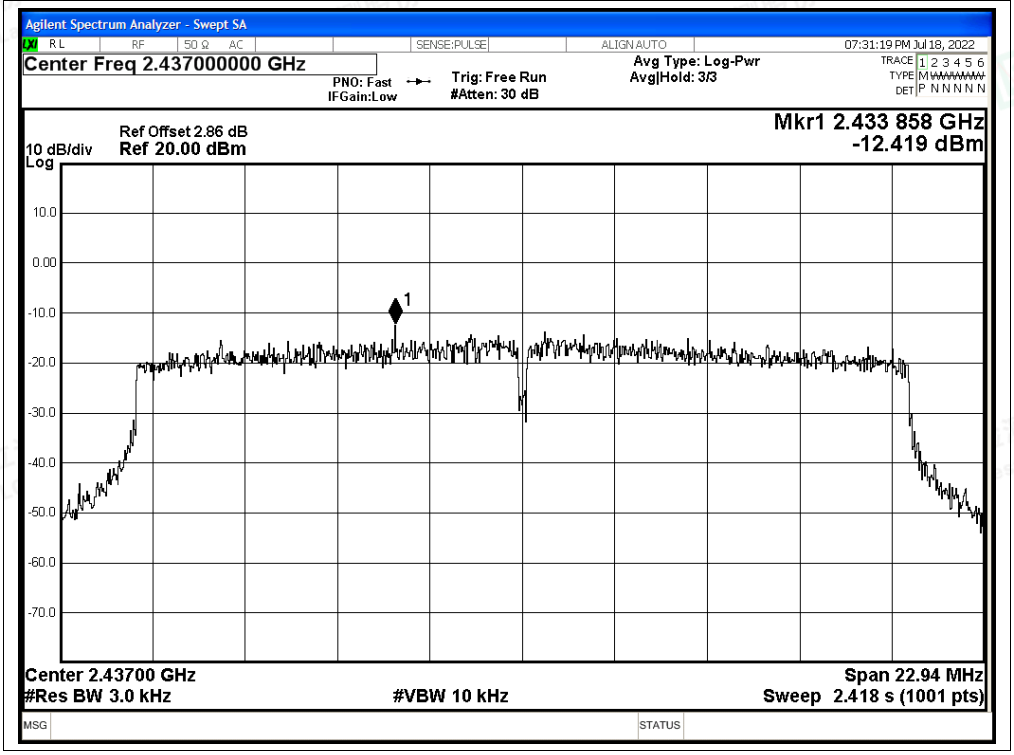


PSD NVNT ax20 2412MHz Ant0



PSD NVNT ax20 2437MHz Ant0



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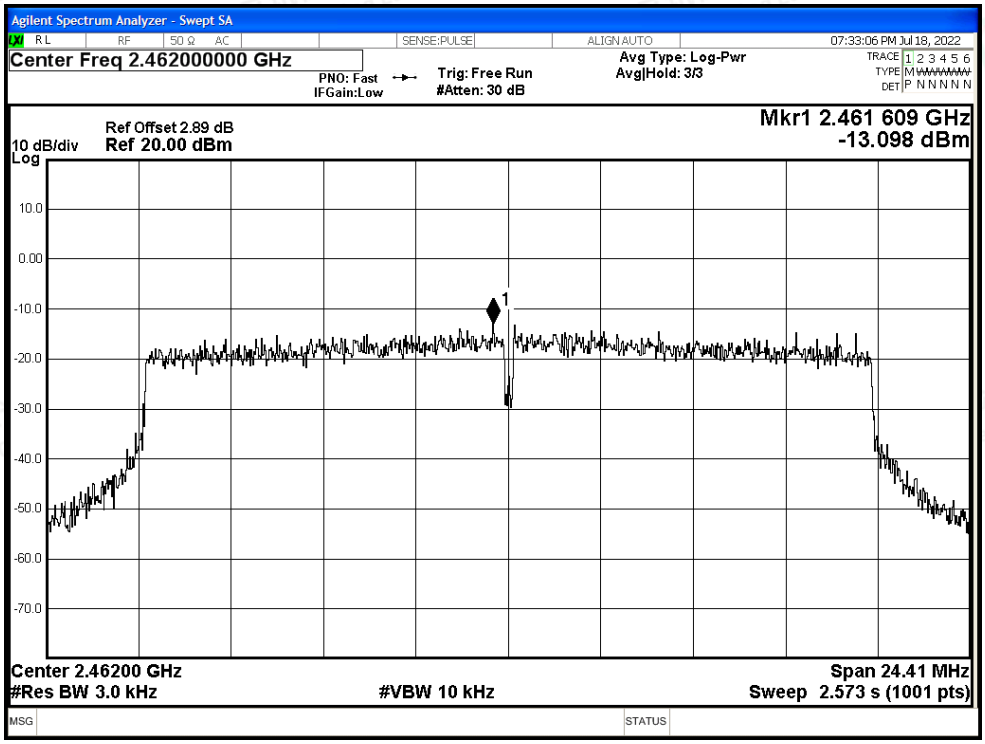

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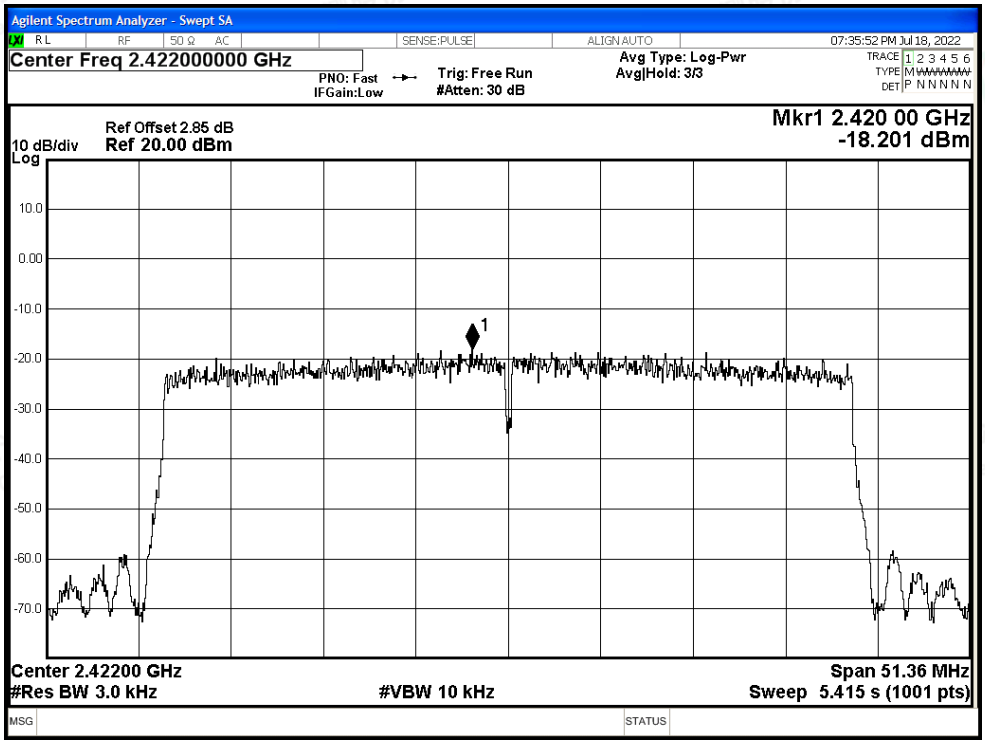
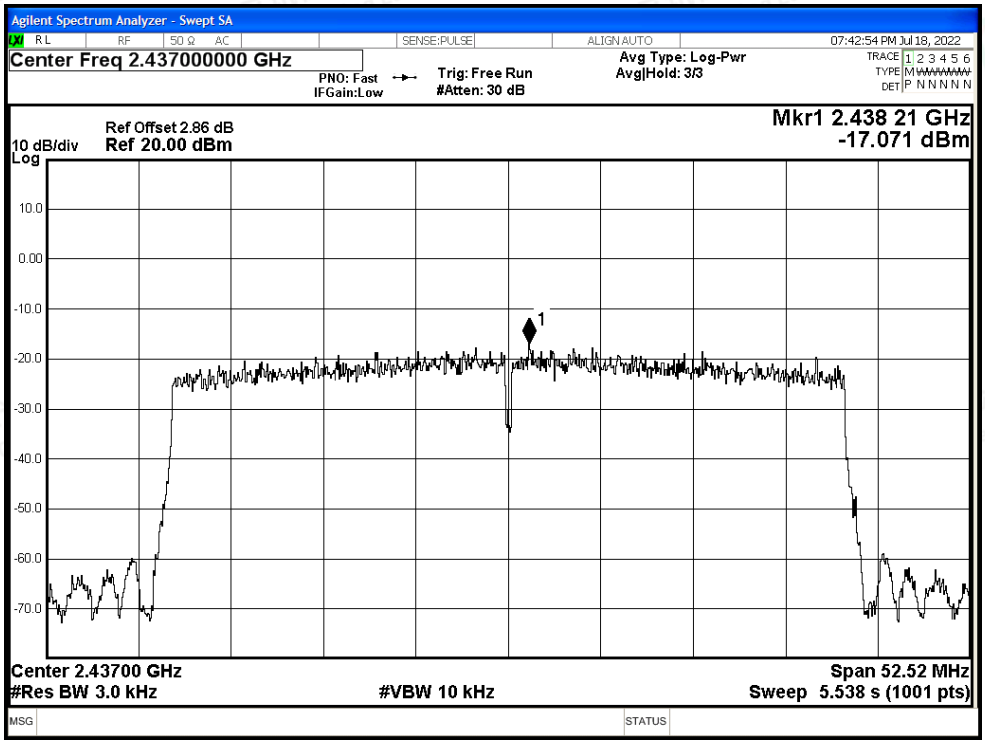


PSD NVNT ax40 2437MHz Ant0



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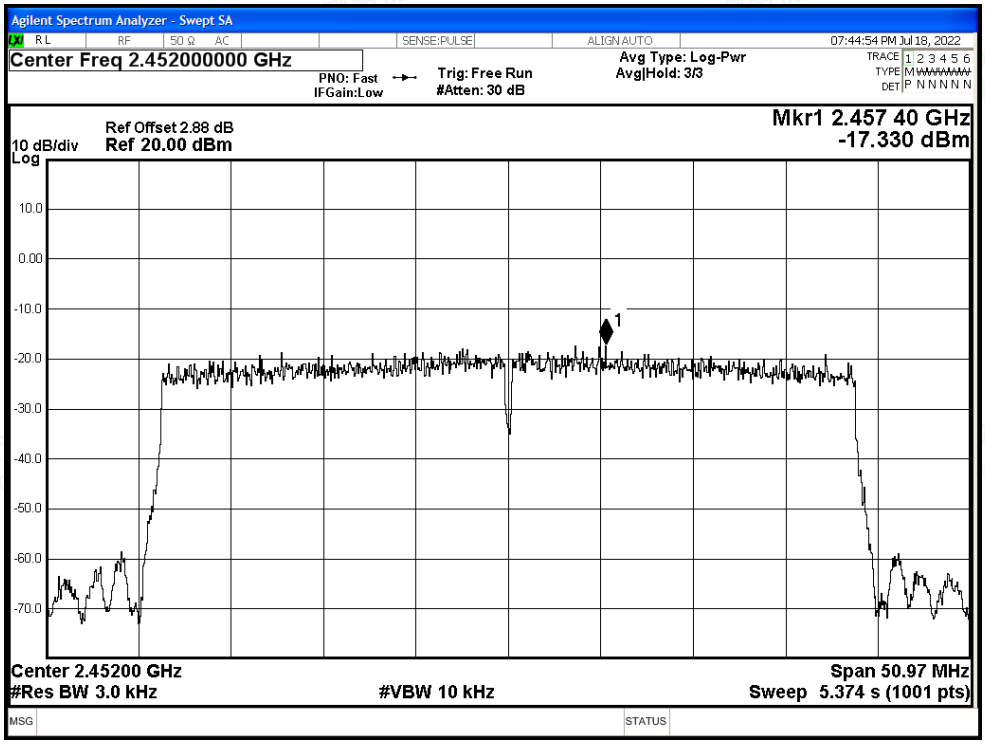
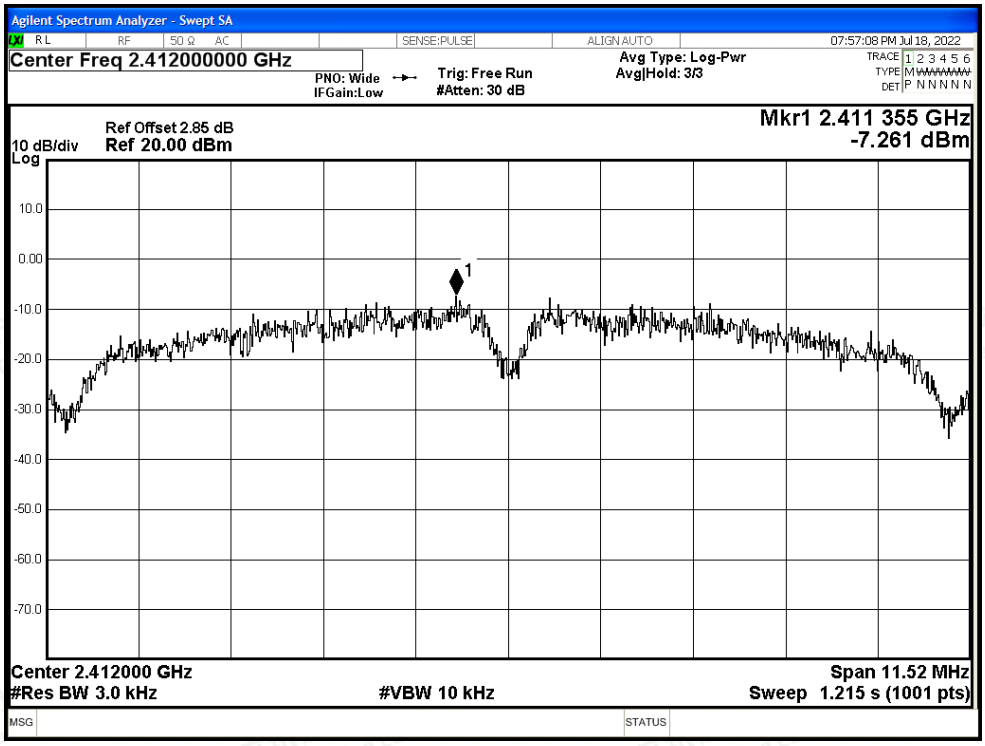
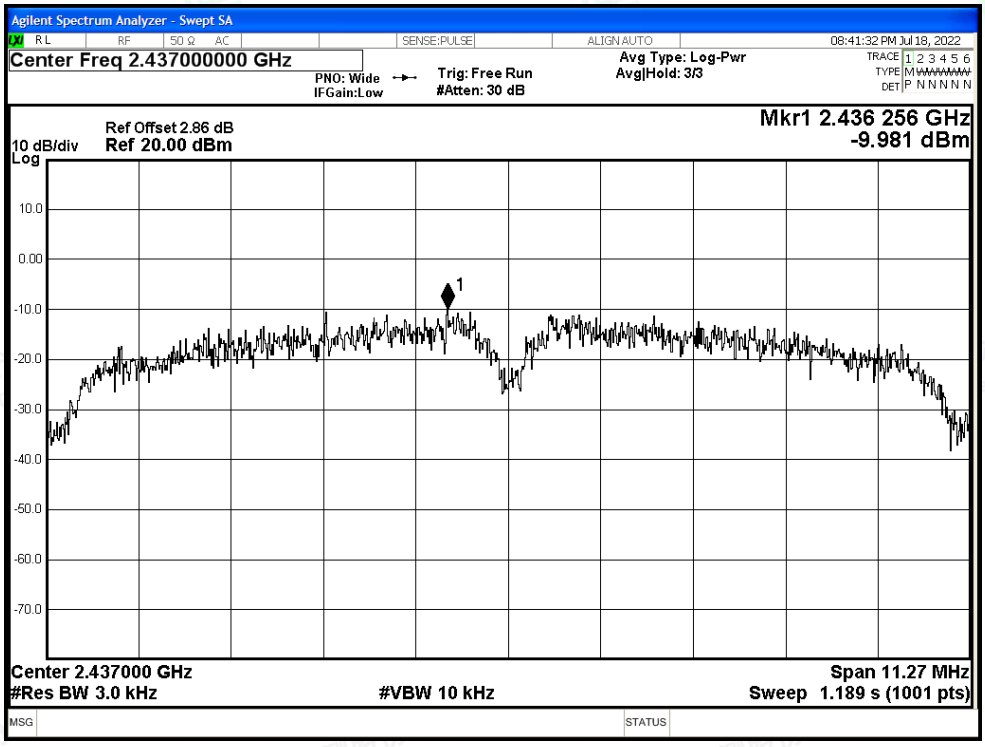


Test Graphs

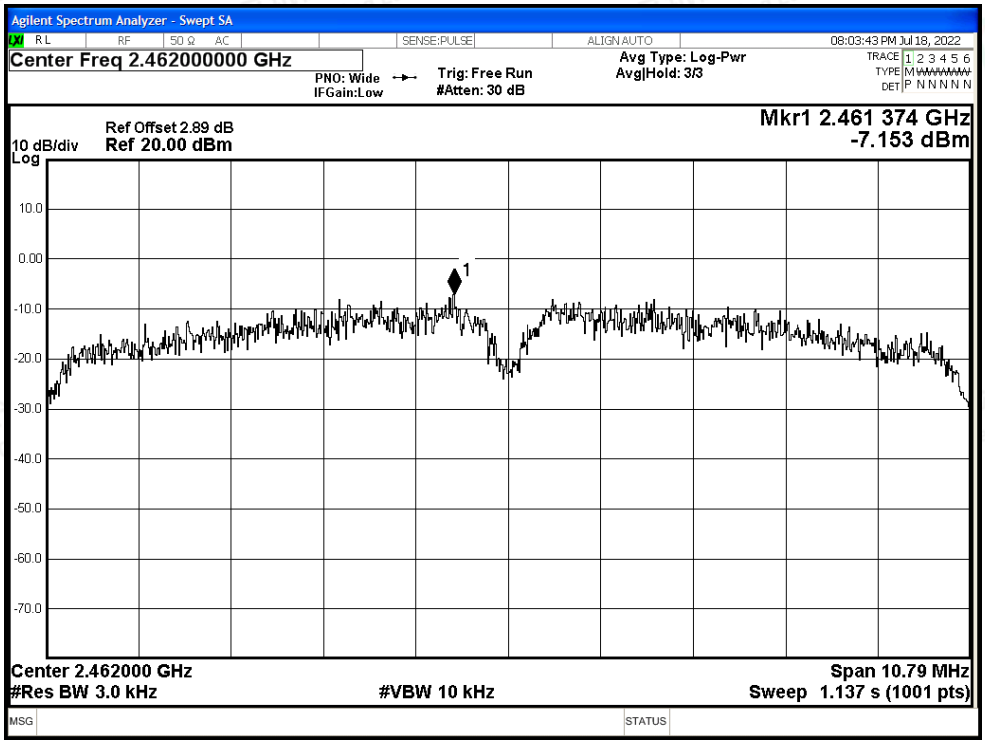
PSD NVNT b 2412MHz Ant1



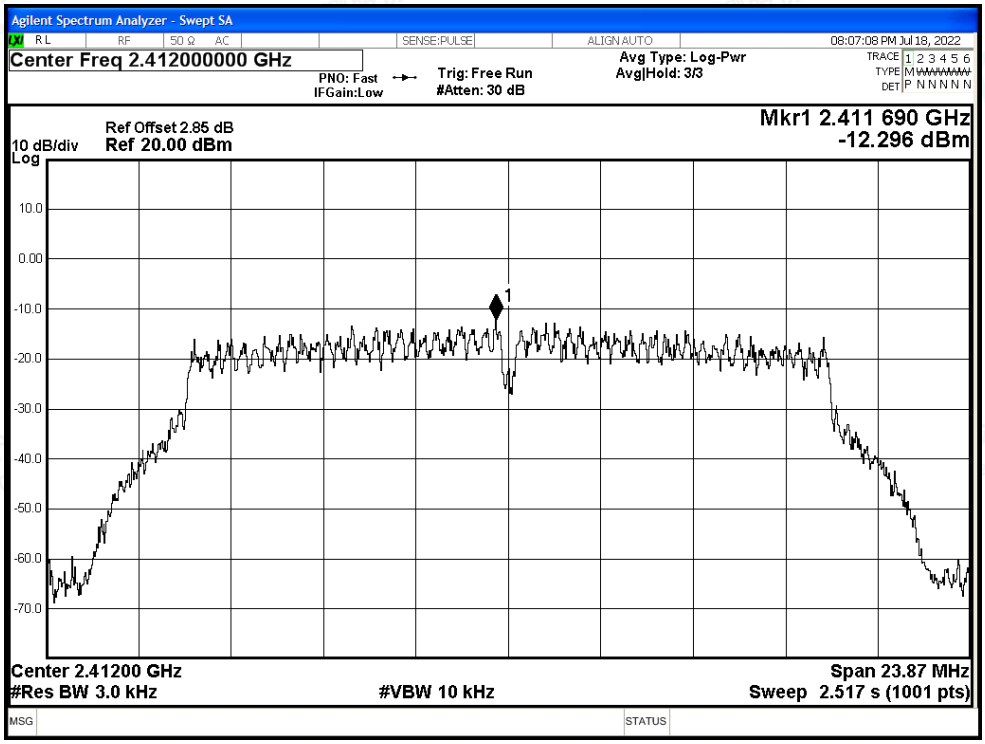
PSD NVNT b 2437MHz Ant1



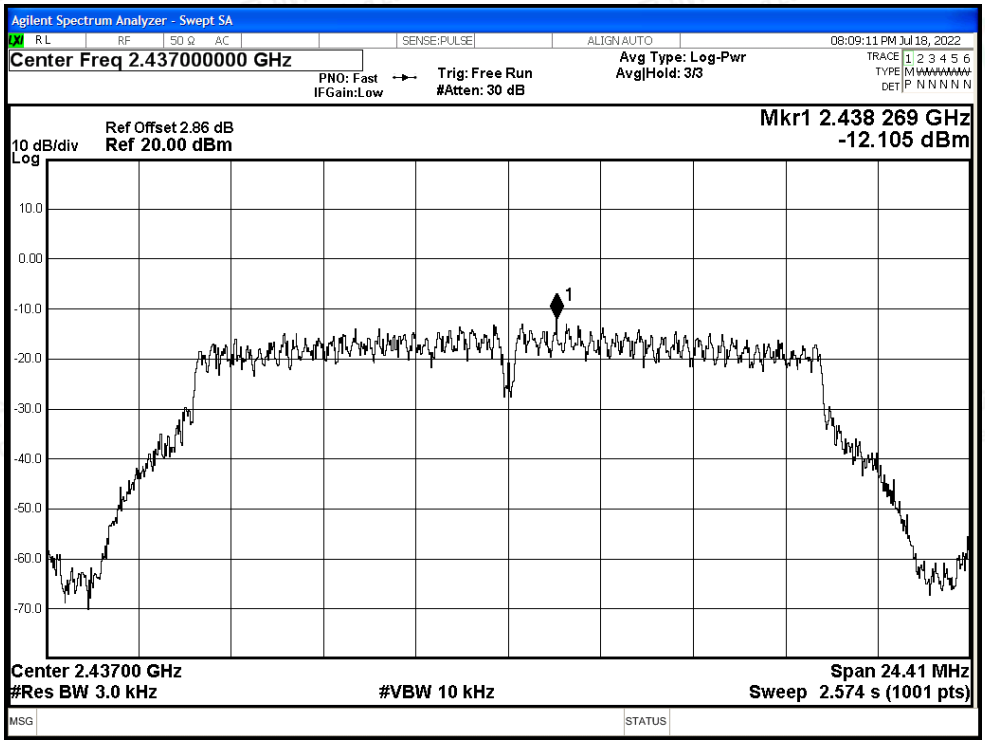
PSD NVNT b 2462MHz Ant1



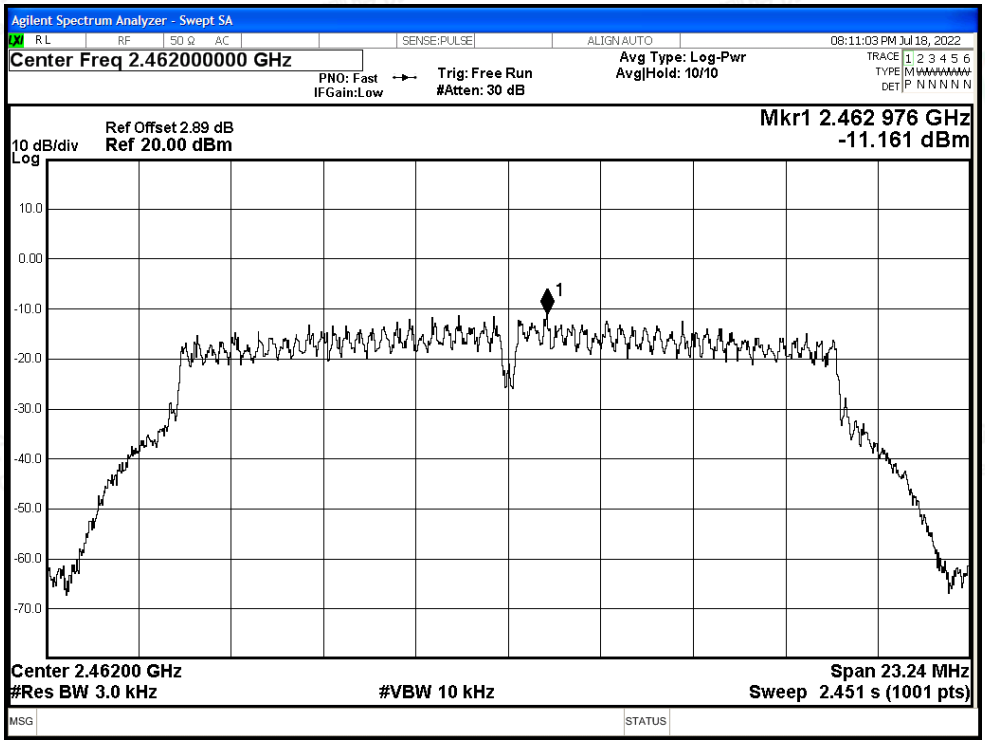
PSD NVNT g 2412MHz Ant1



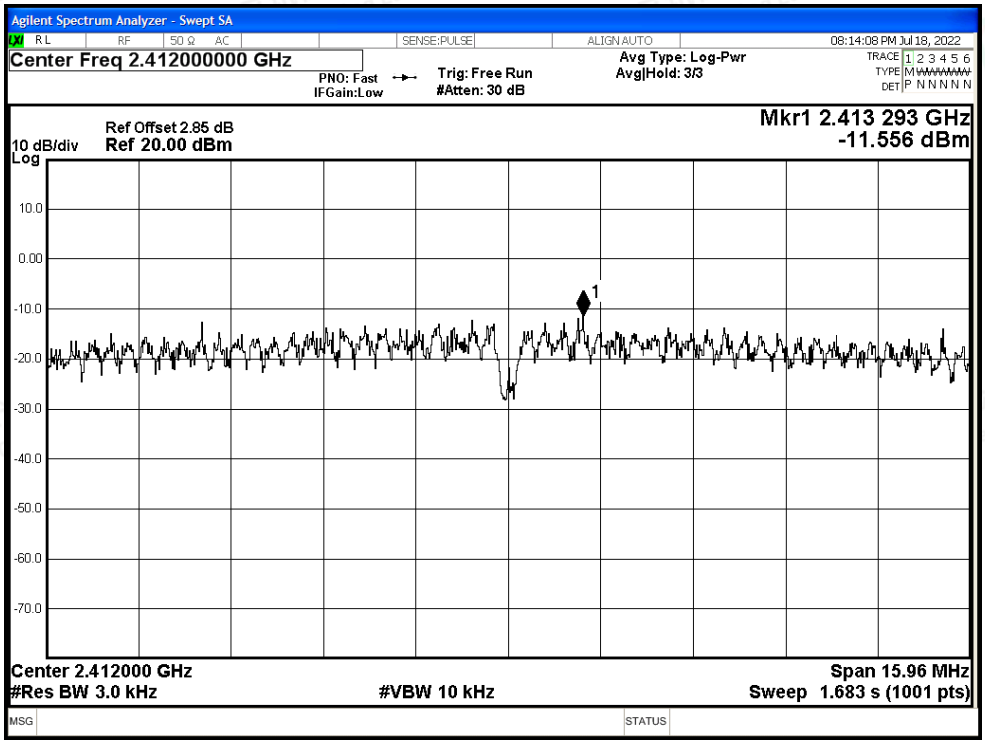
PSD NVNT g 2437MHz Ant1



PSD NVNT g 2462MHz Ant1



PSD NVNT n20 2412MHz Ant1



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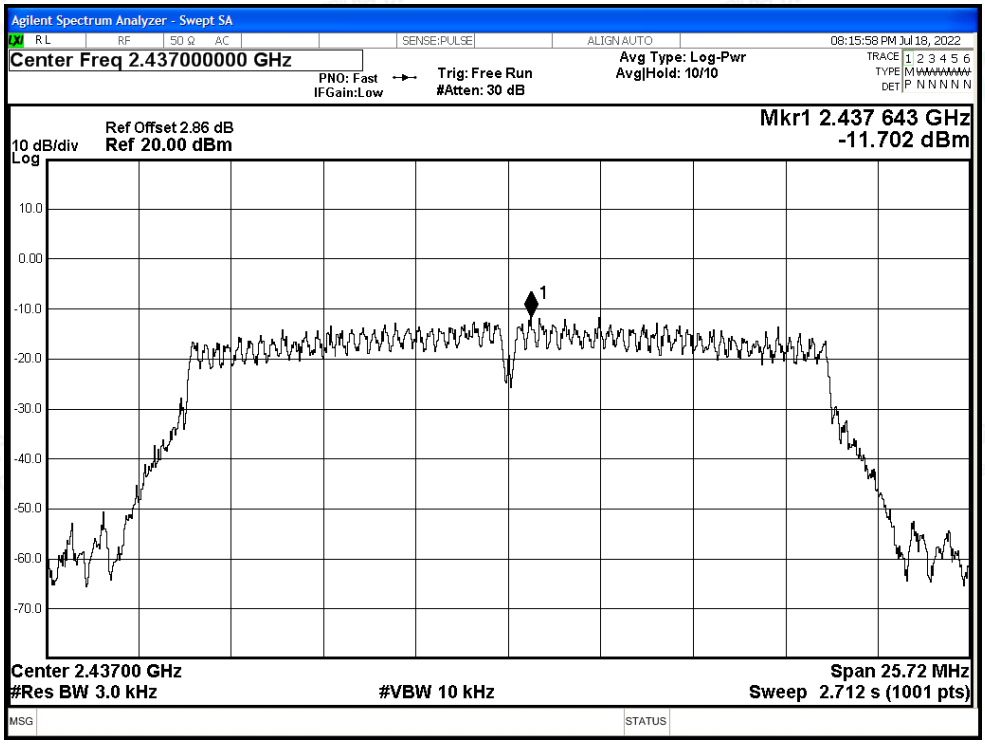
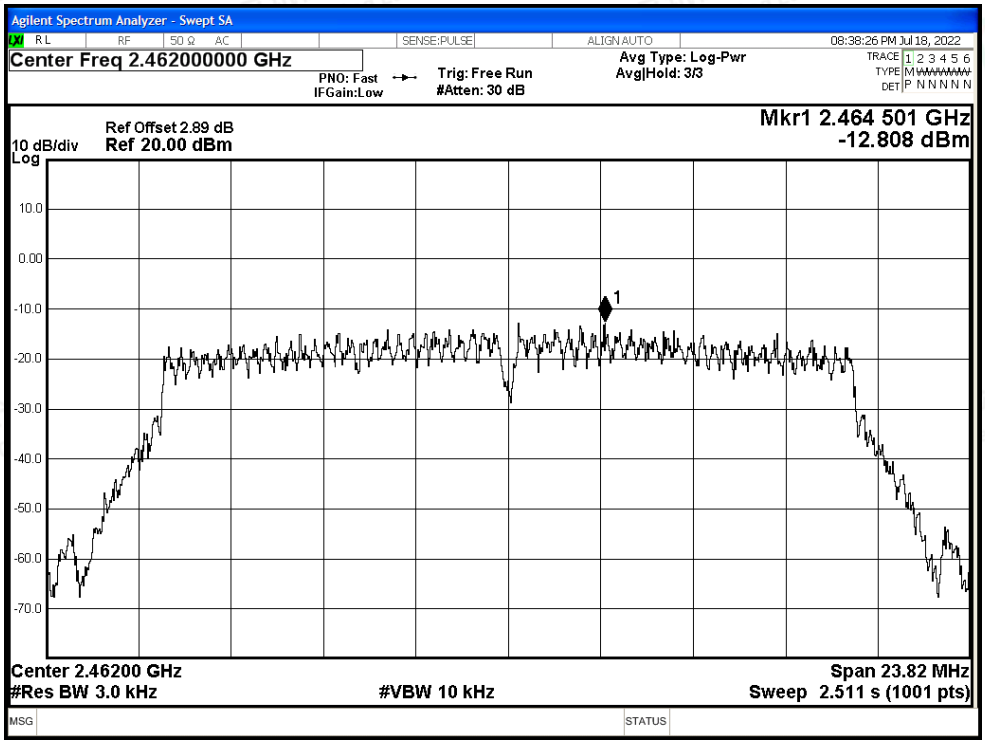
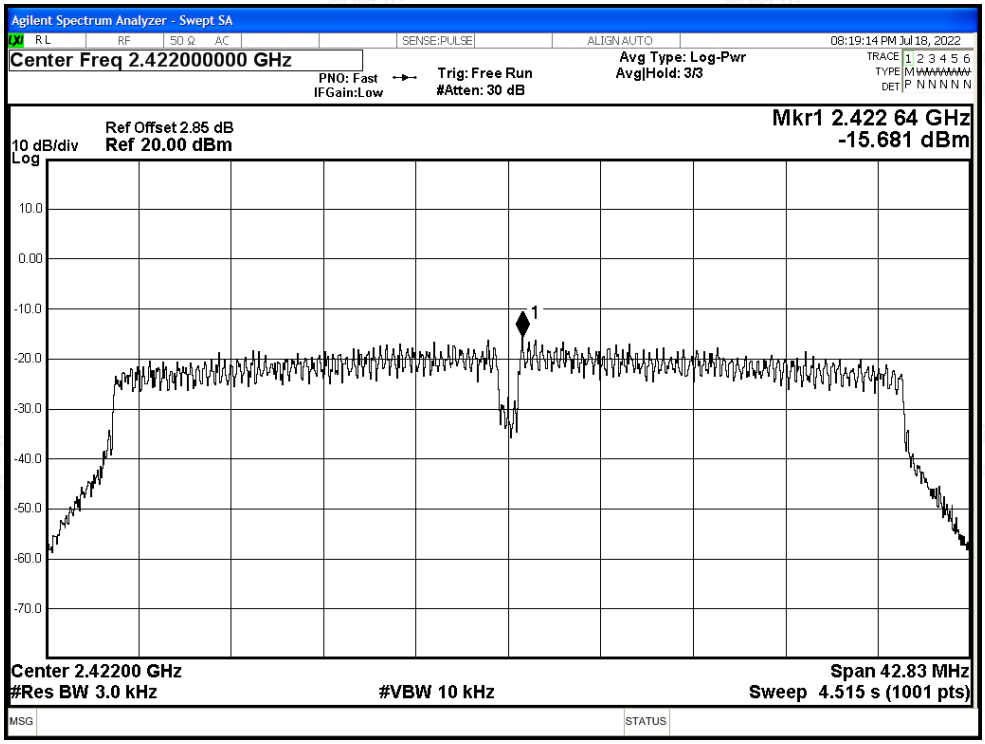


PSD NVNT n20 2462MHz Ant1



PSD NVNT n40 2422MHz Ant1



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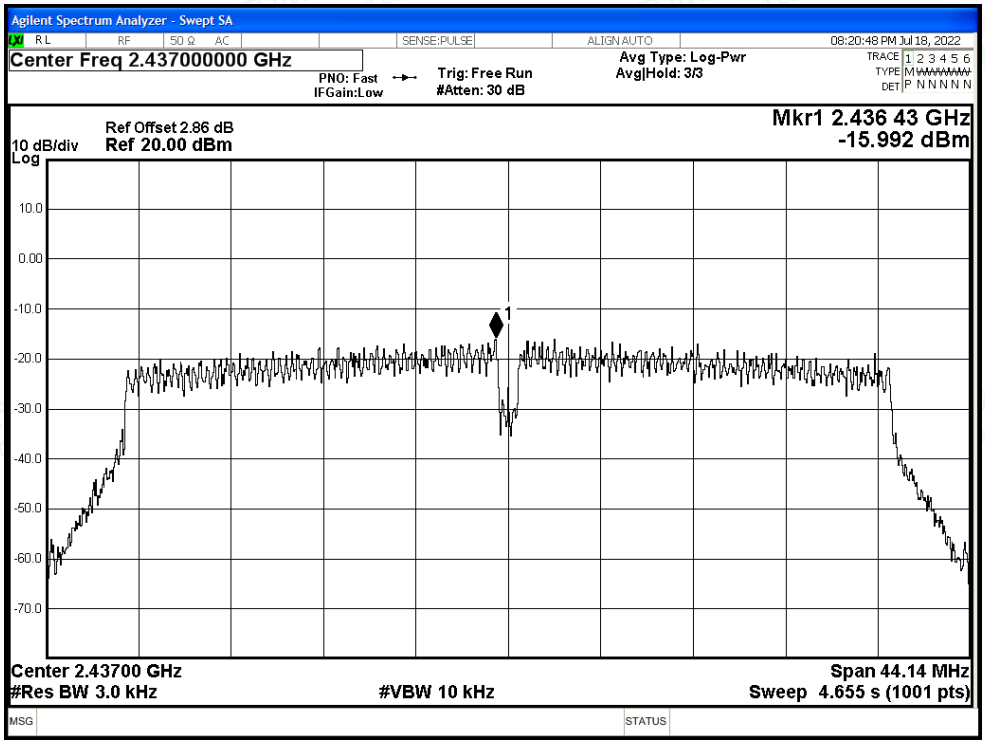

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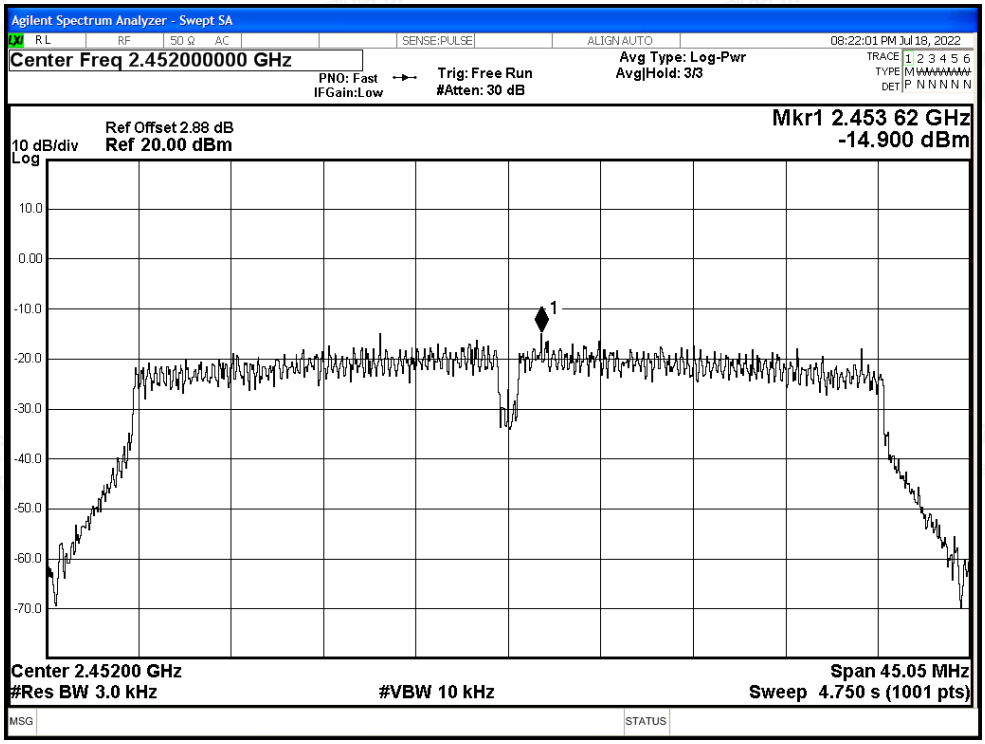
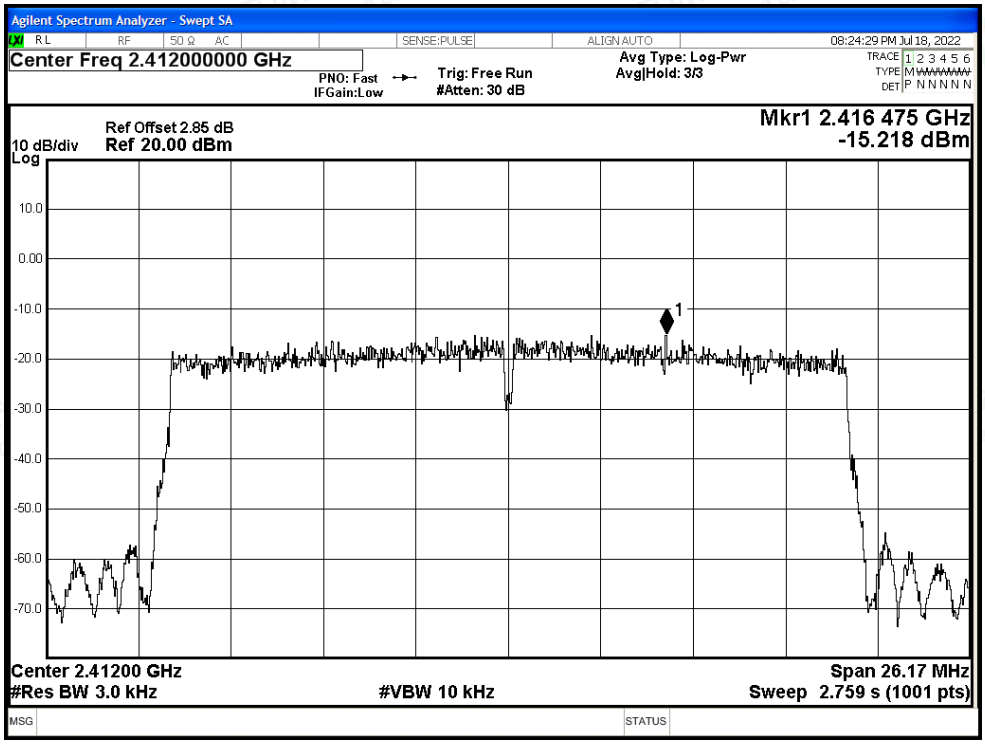


PSD NVNT ax20 2412MHz Ant1



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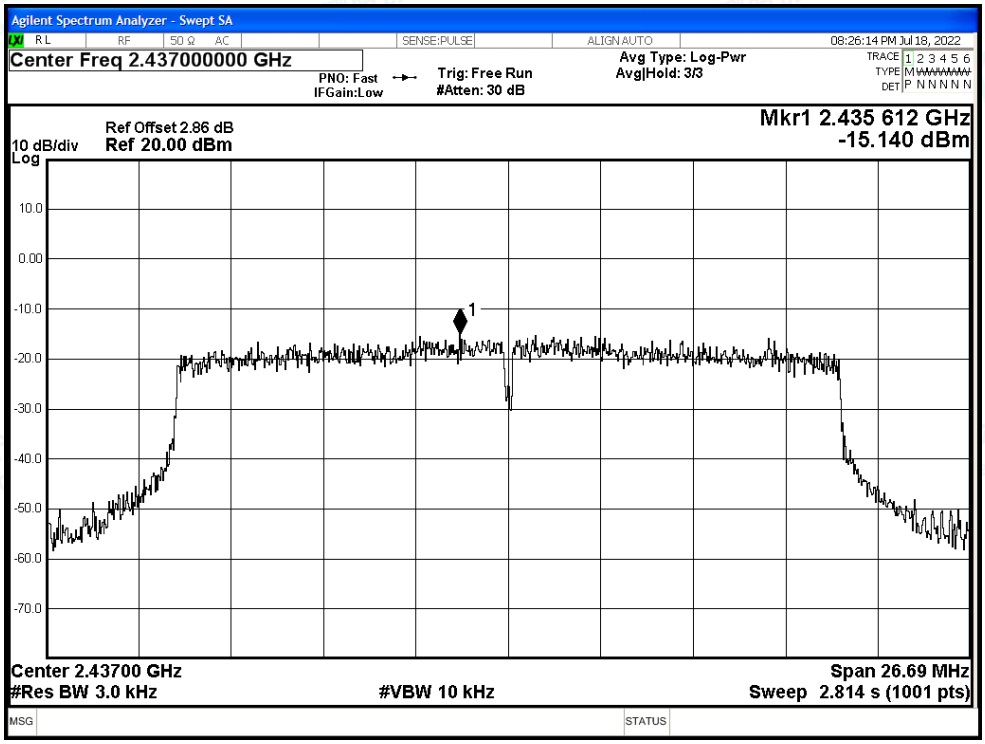

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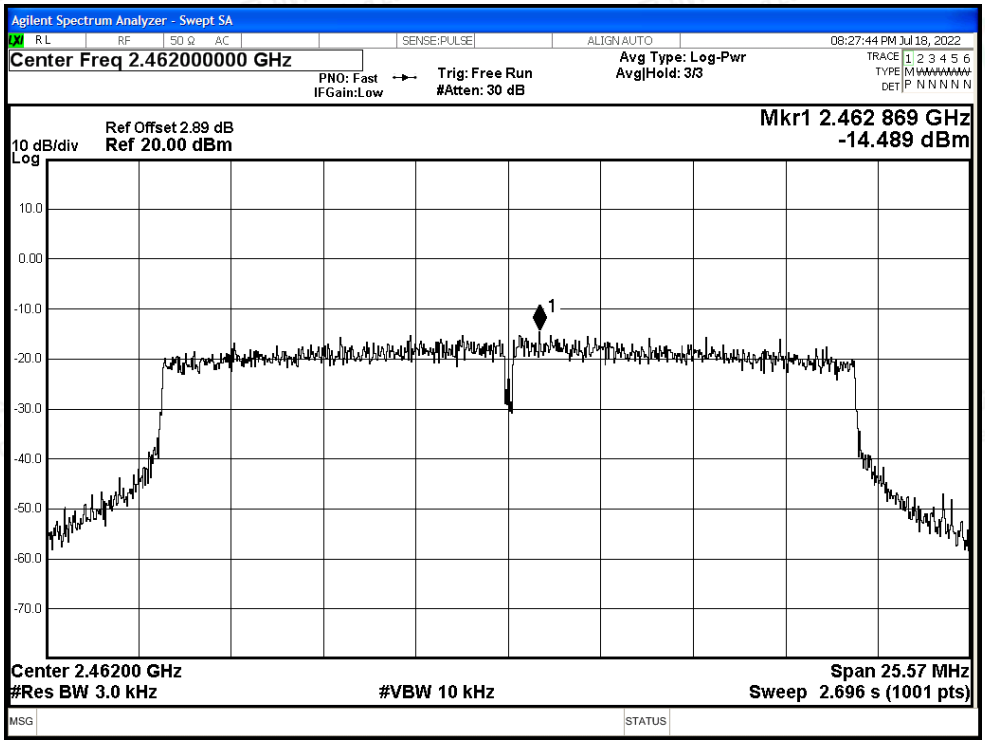

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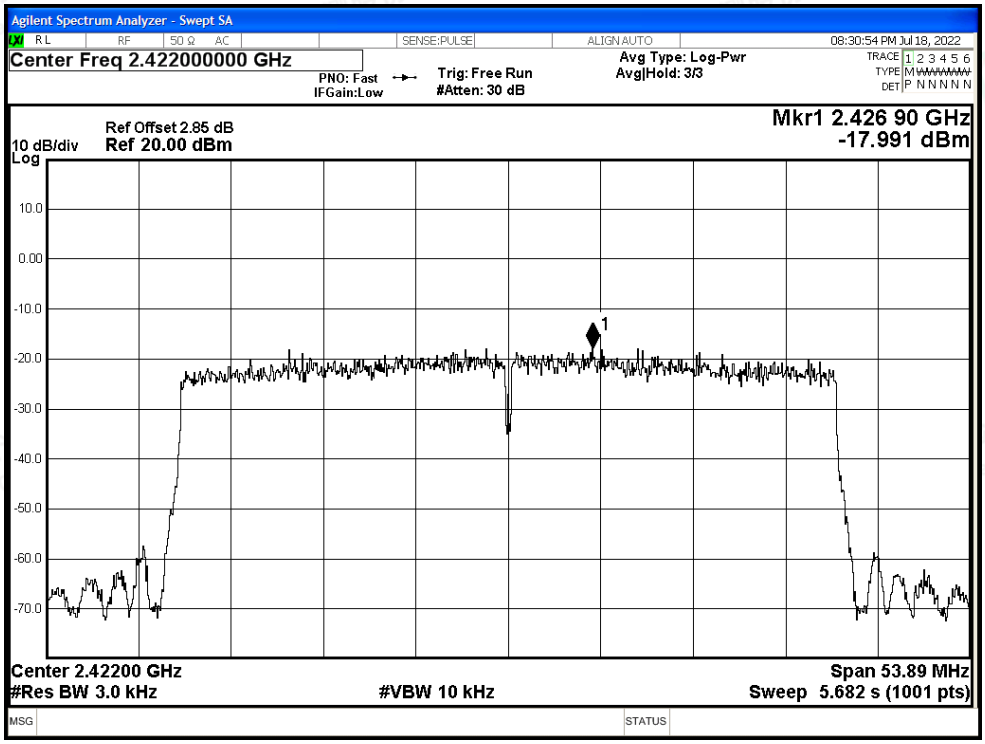

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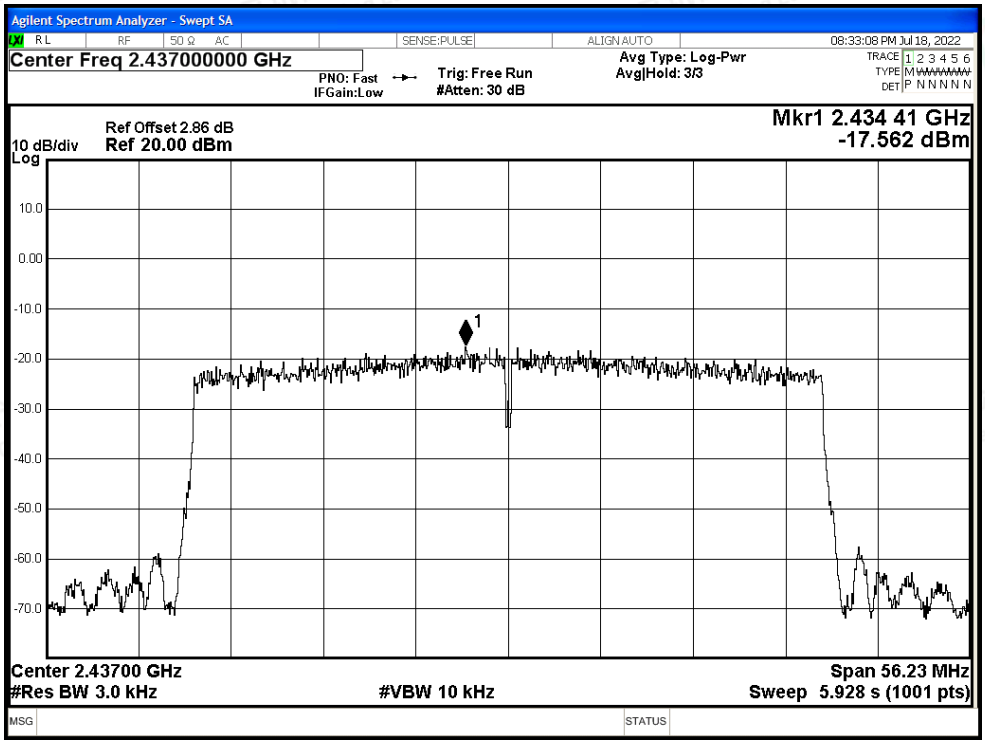

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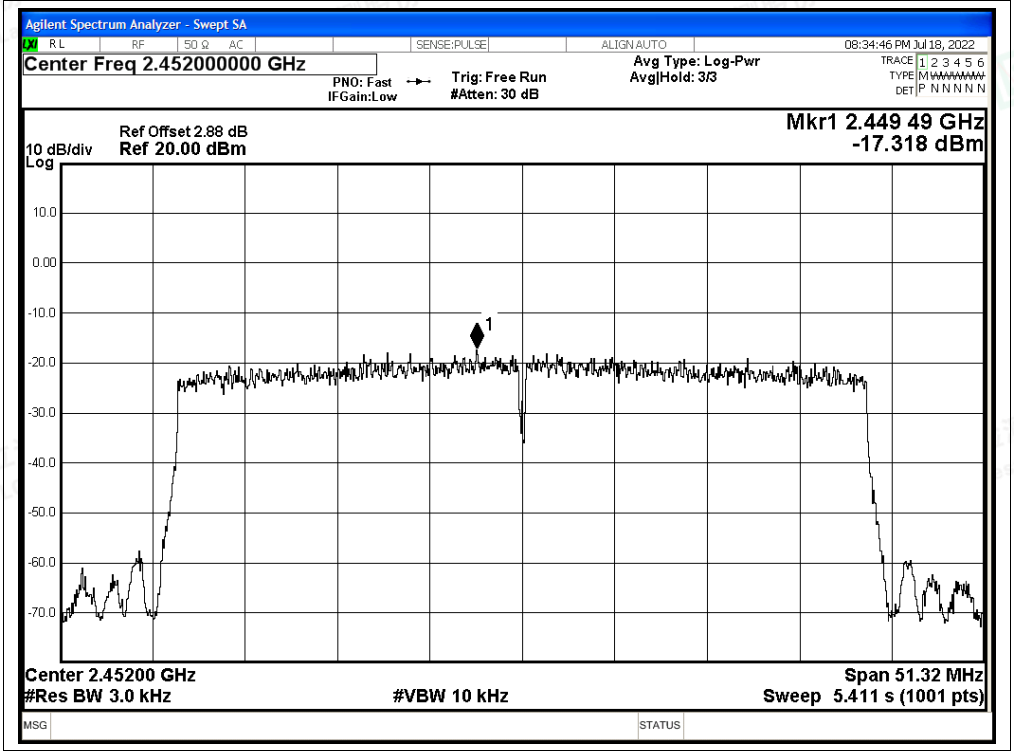
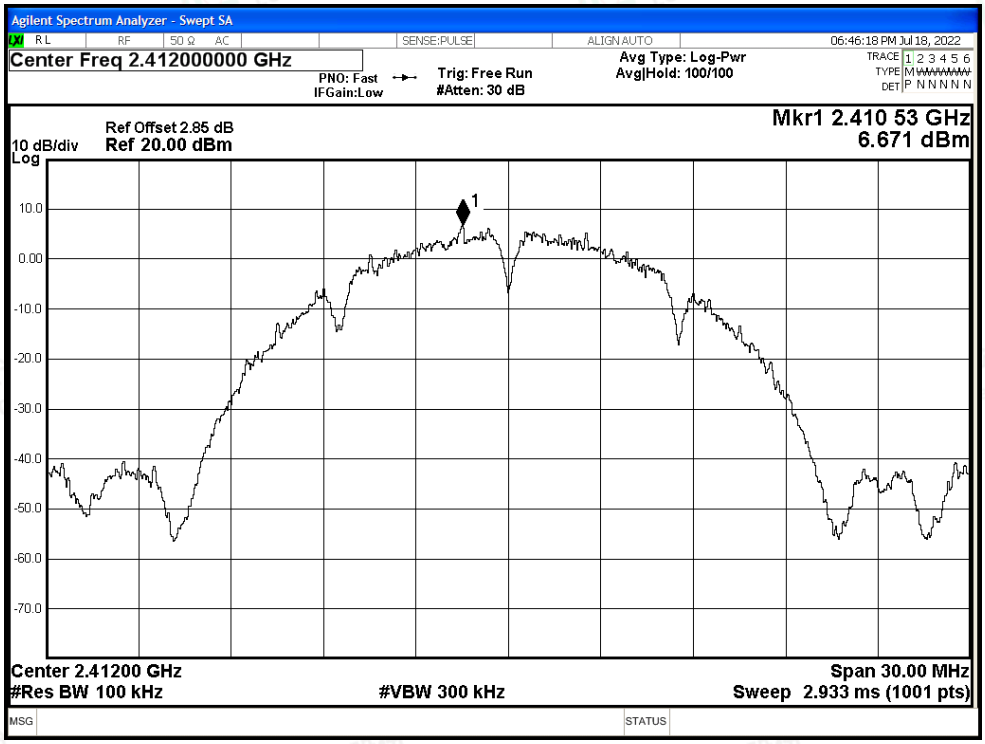


A.5 Band Edge

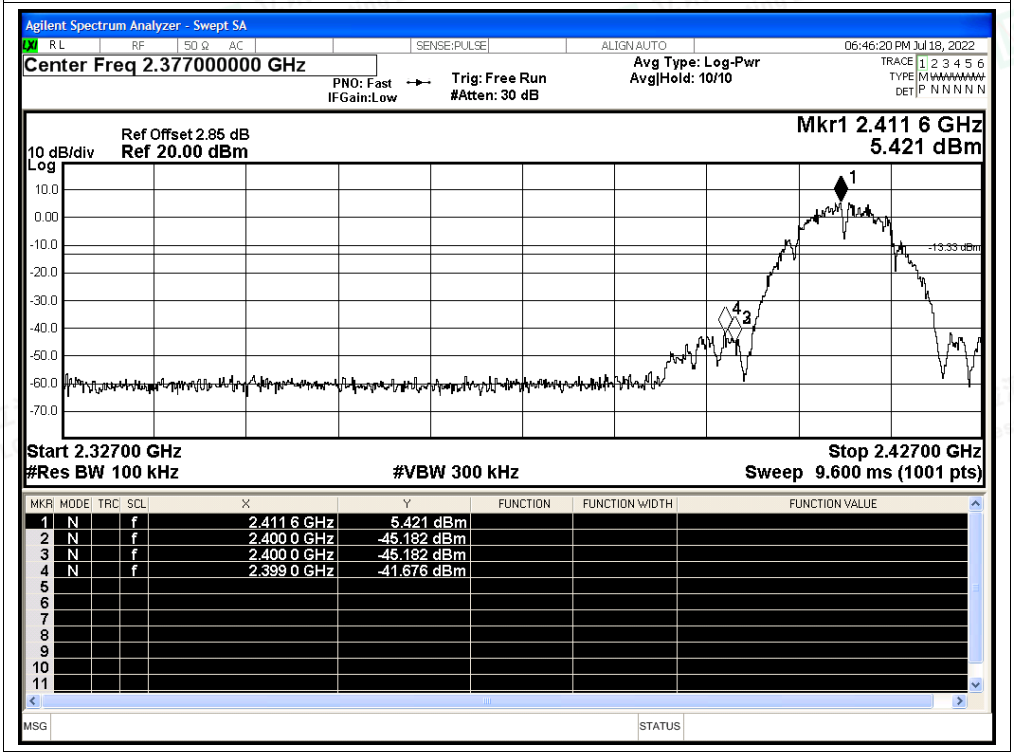
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant0	-48.35	-20	Pass
NVNT	b	2462	Ant0	-62	-20	Pass
NVNT	g	2412	Ant0	-44.34	-20	Pass
NVNT	g	2462	Ant0	-56.33	-20	Pass
NVNT	n20	2412	Ant0	-45.47	-20	Pass
NVNT	n20	2462	Ant0	-55.75	-20	Pass
NVNT	n40	2422	Ant0	-43.13	-20	Pass
NVNT	n40	2452	Ant0	-51.09	-20	Pass
NVNT	ax20	2412	Ant0	-48.48	-20	Pass
NVNT	ax20	2462	Ant0	-56.08	-20	Pass
NVNT	ax40	2422	Ant0	-47.18	-20	Pass
NVNT	ax40	2452	Ant0	-50.58	-20	Pass

Test Graphs

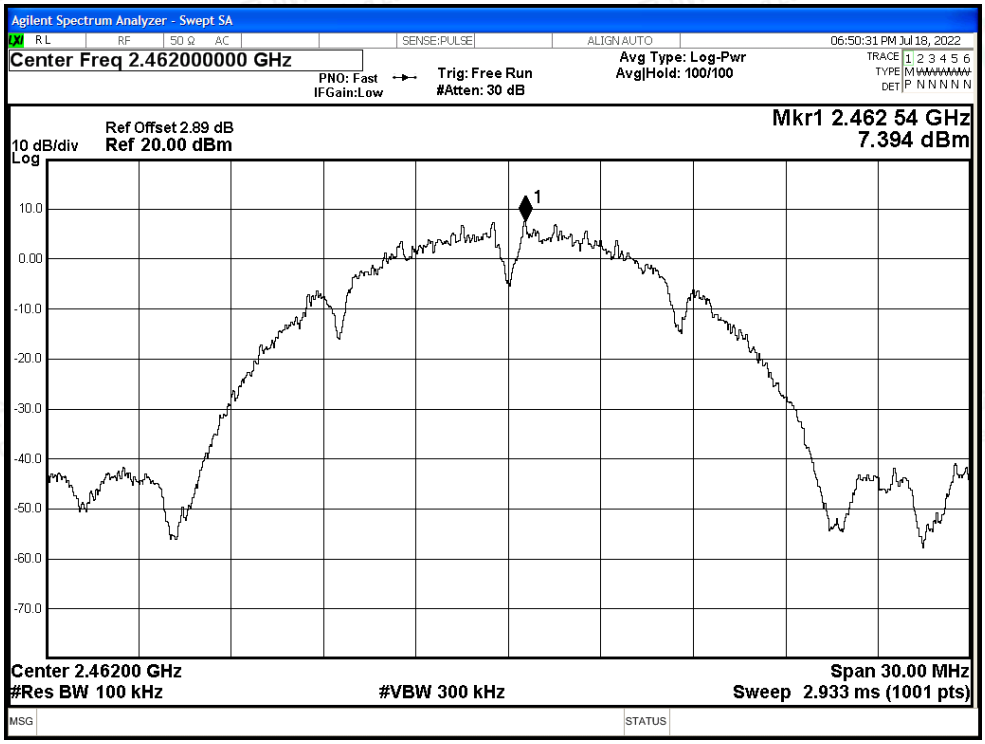
Band Edge NVNT b 2412MHz Ant0 Ref



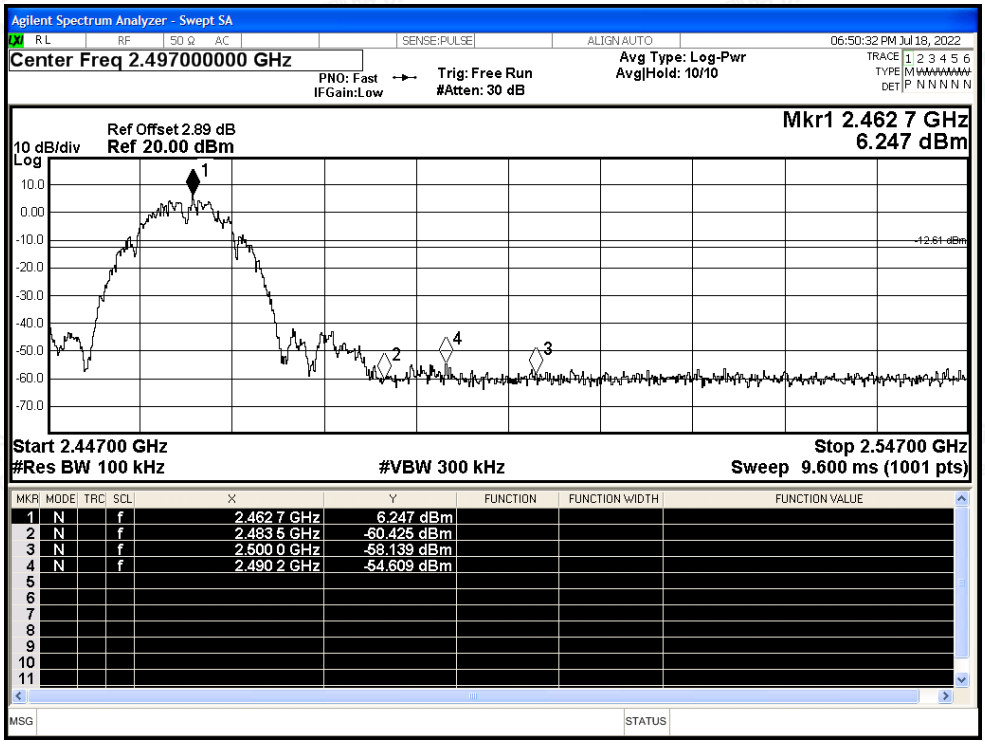
Band Edge NVNT b 2412MHz Ant0 Emission



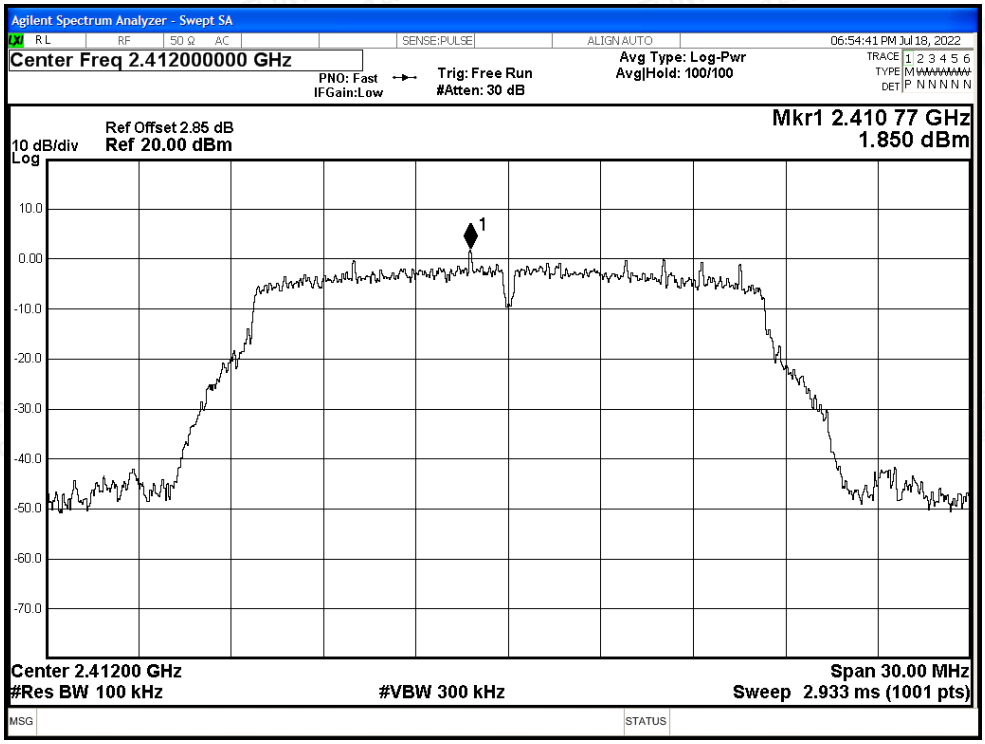
Band Edge NVNT b 2462MHz Ant0 Ref



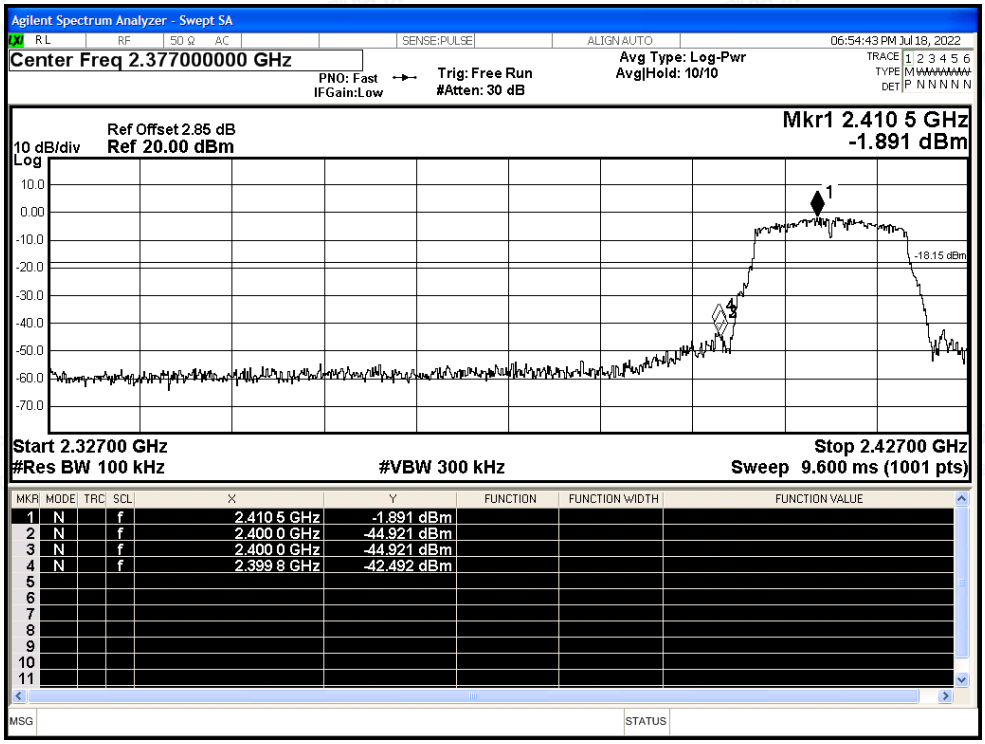
Band Edge NVNT b 2462MHz Ant0 Emission



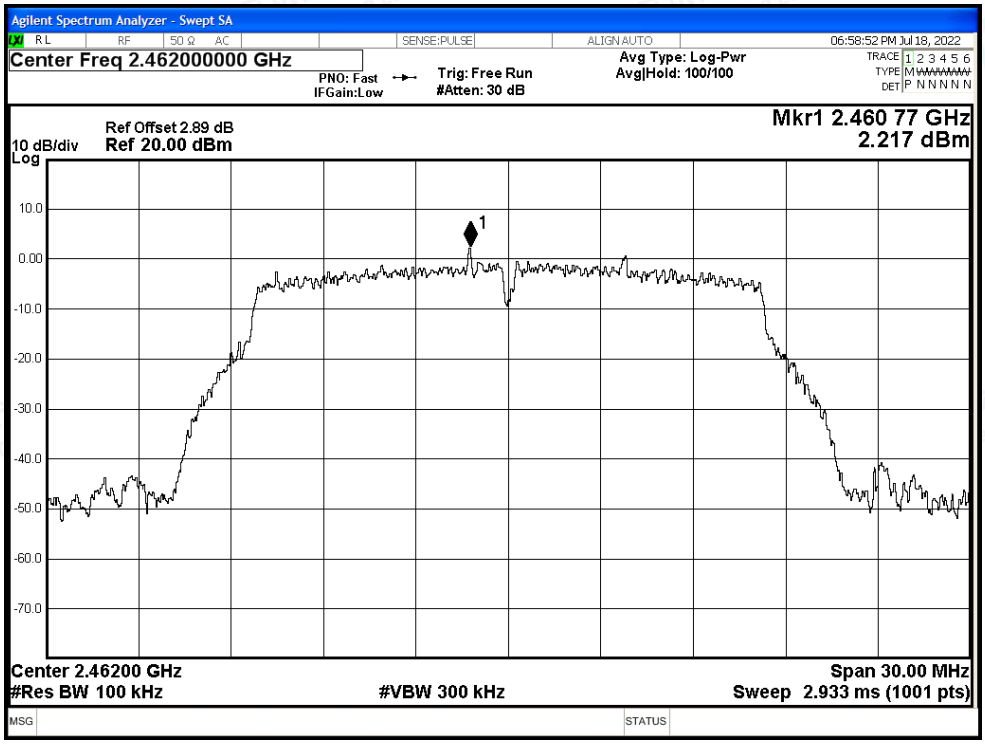
Band Edge NVNT g 2412MHz Ant0 Ref



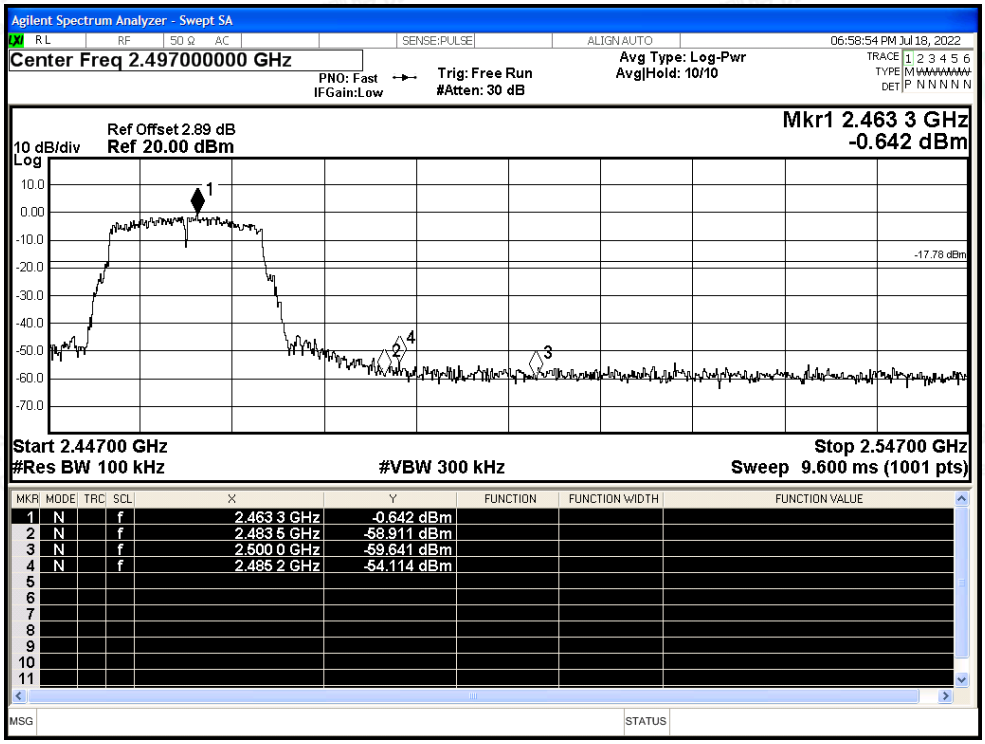
Band Edge NVNT g 2412MHz Ant0 Emission



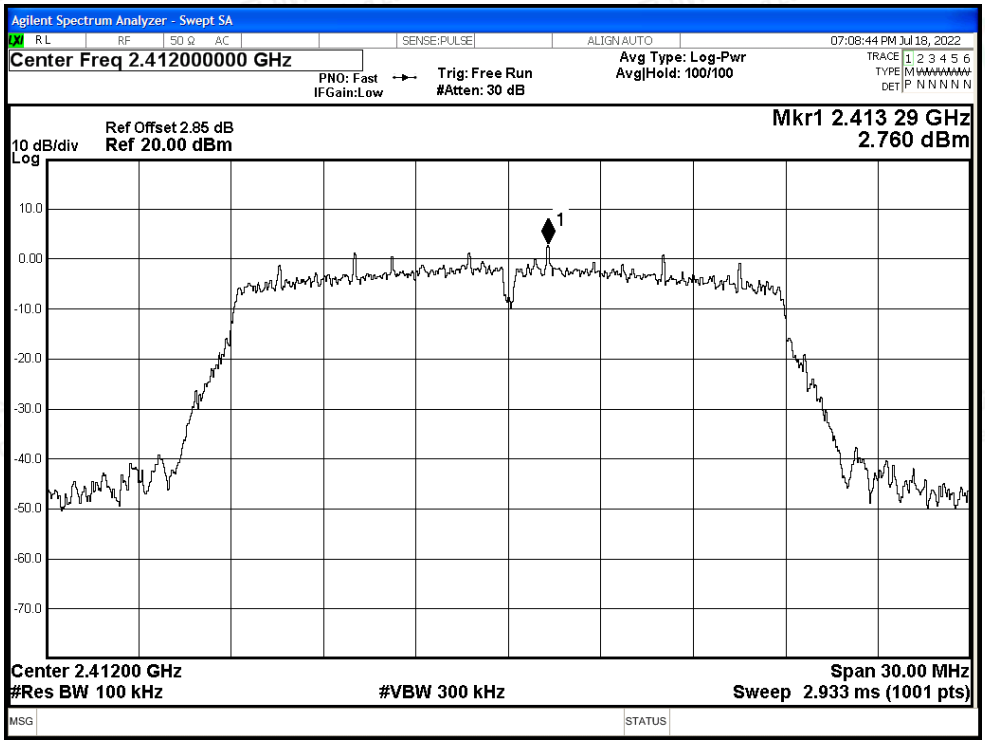
Band Edge NVNT g 2462MHz Ant0 Ref



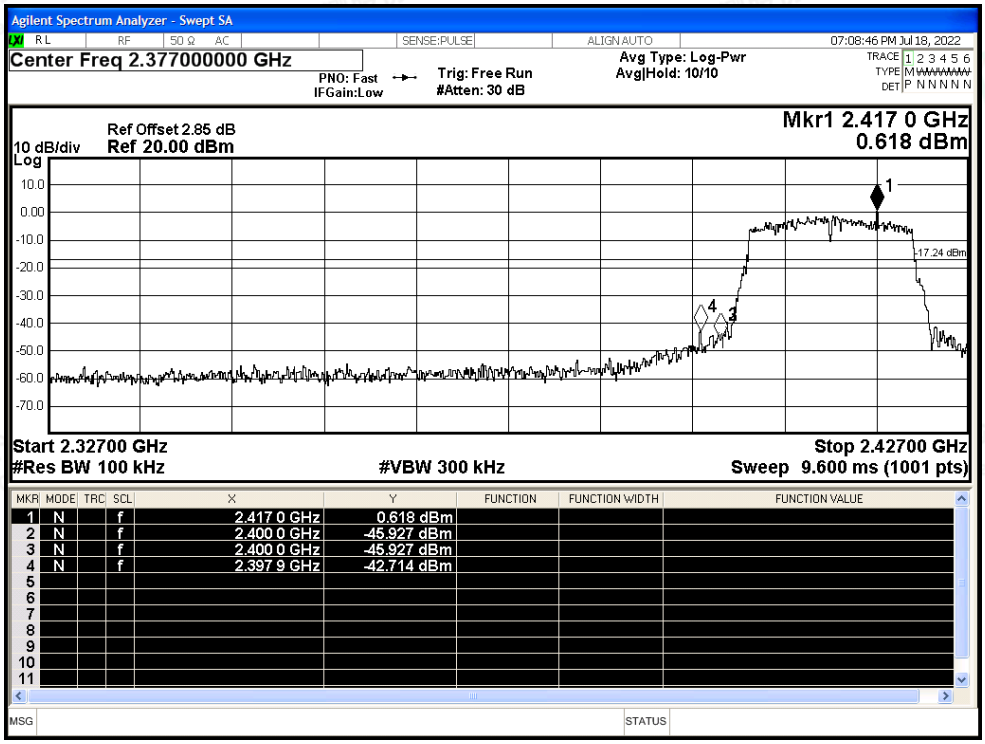
Band Edge NVNT g 2462MHz Ant0 Emission



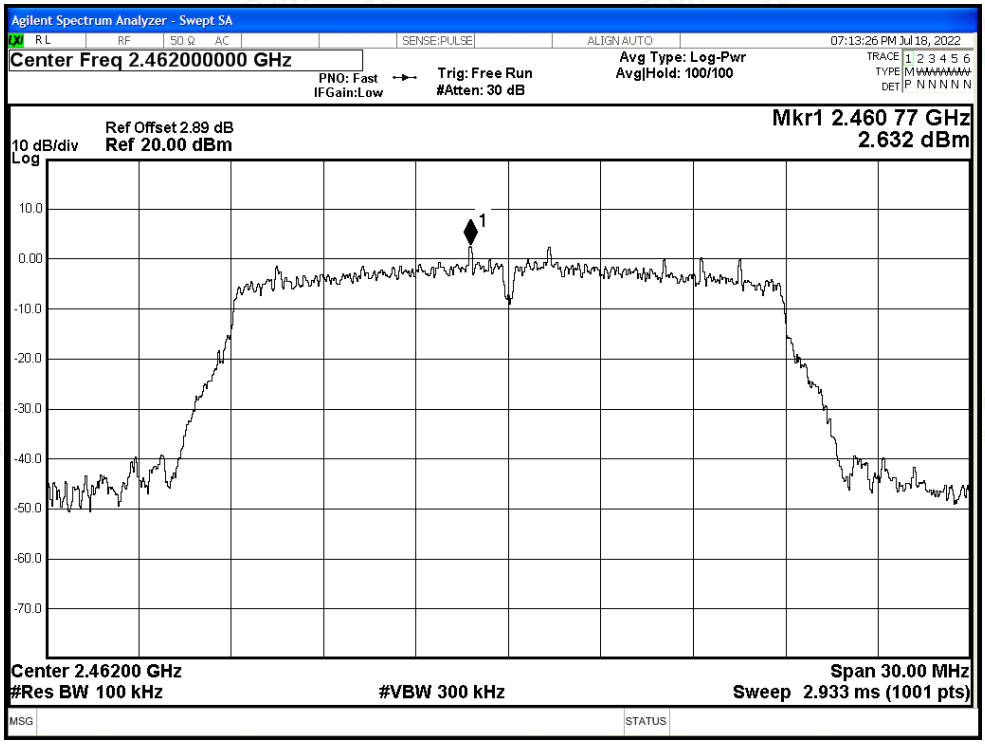
Band Edge NVNT n20 2412MHz Ant0 Ref



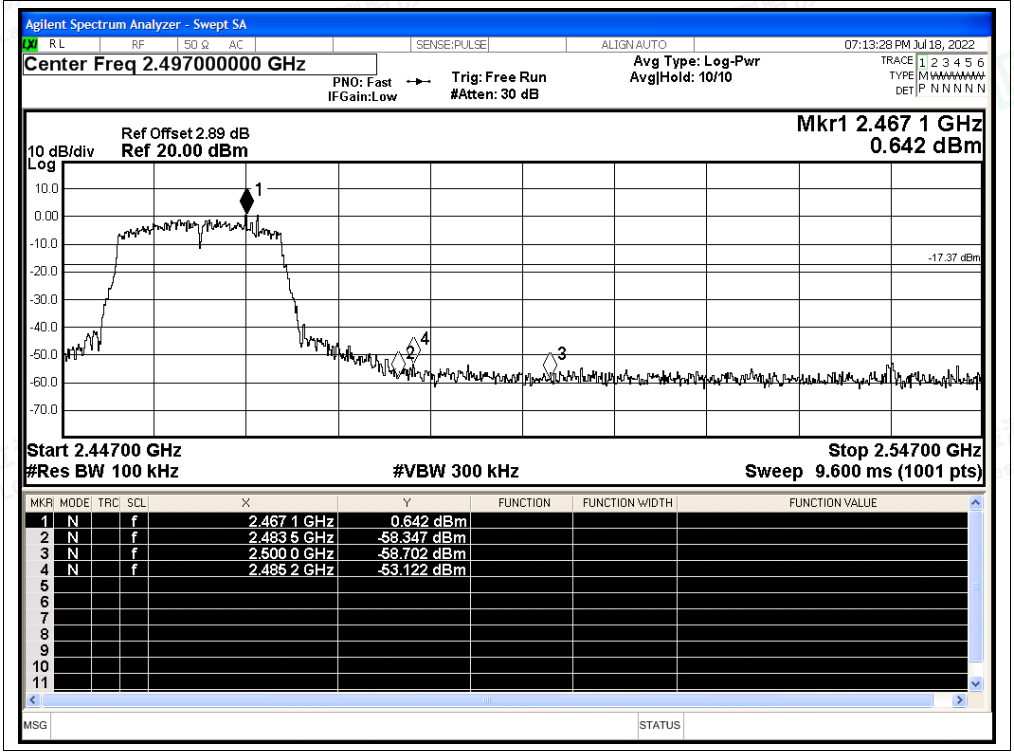
Band Edge NVNT n20 2412MHz Ant0 Emission



Band Edge NVNT n20 2462MHz Ant0 Ref



Band Edge NVNT n20 2462MHz Ant0 Emission



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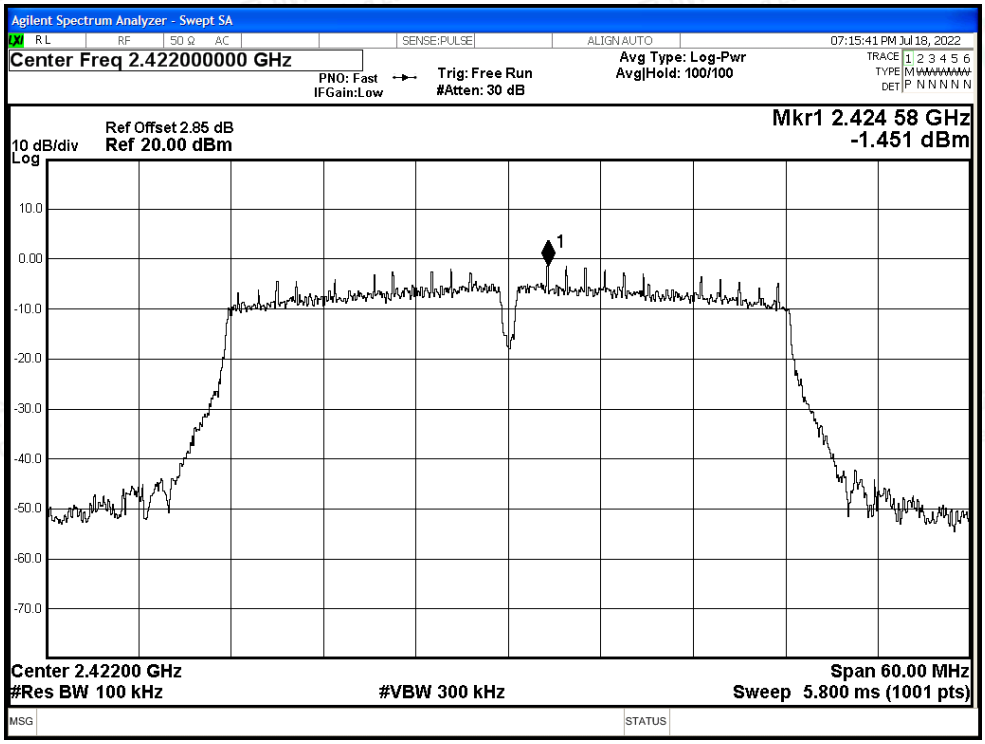
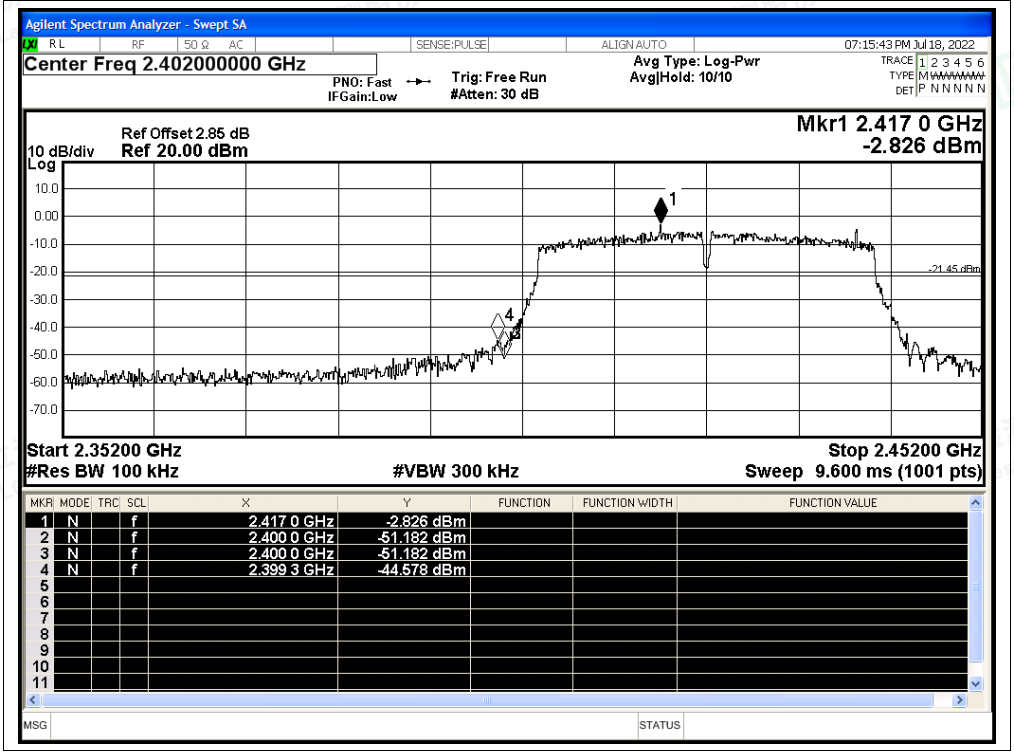
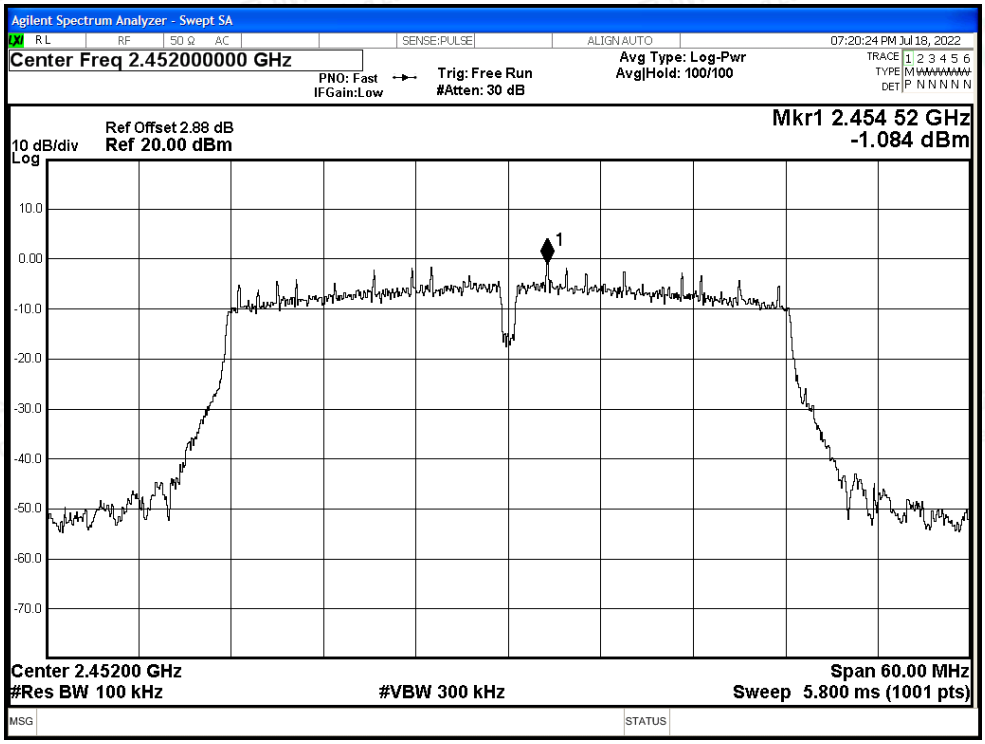


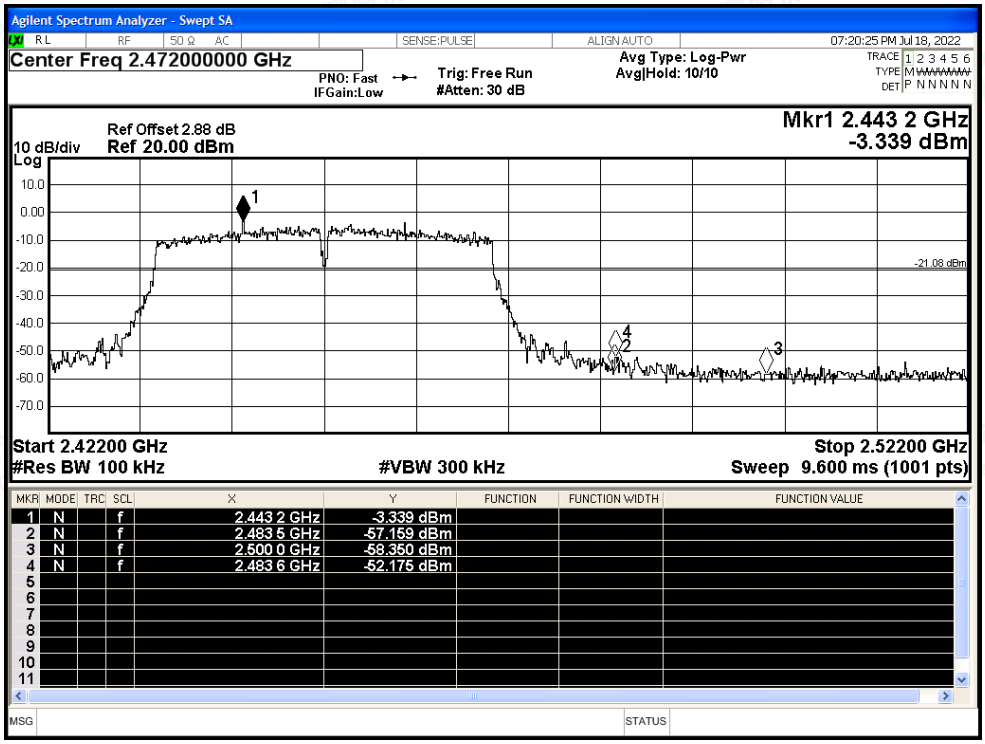
Band Edge NVNT n40 2422MHz Ant0 Emission



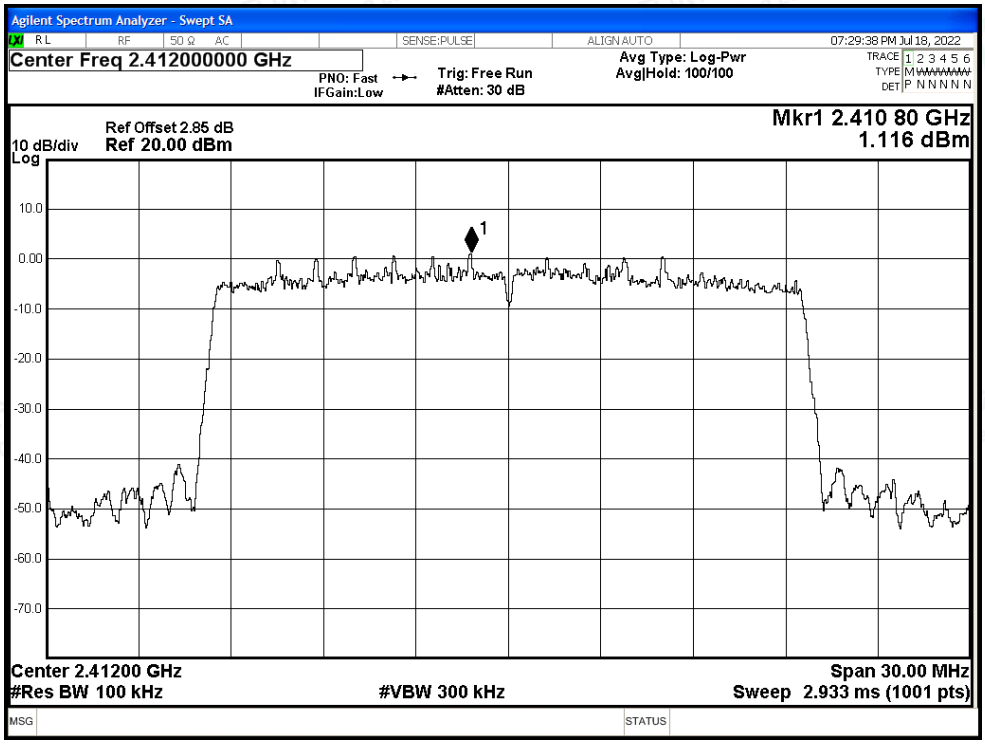
Band Edge NVNT n40 2452MHz Ant0 Ref



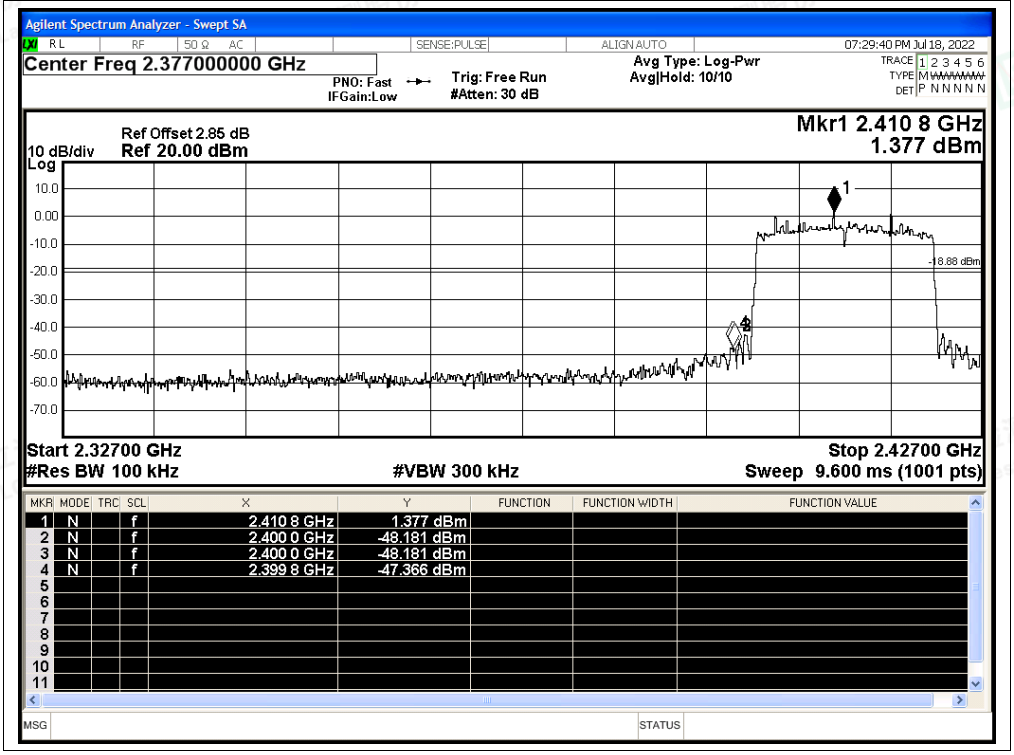
Band Edge NVNT n40 2452MHz Ant0 Emission



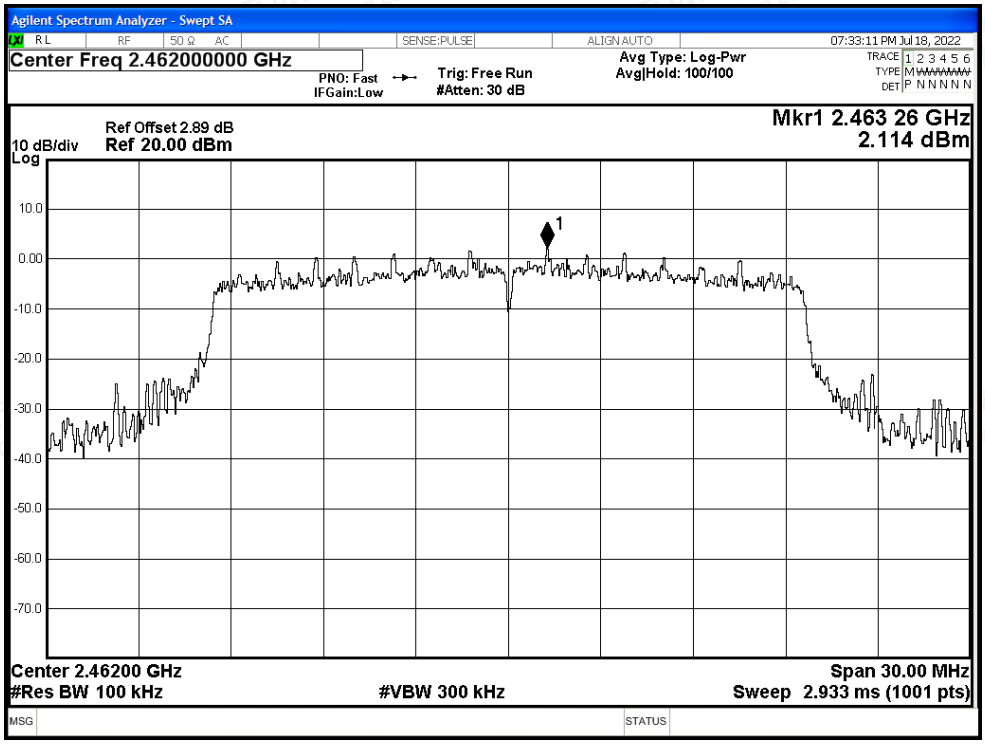
Band Edge NVNT ax20 2412MHz Ant0 Ref



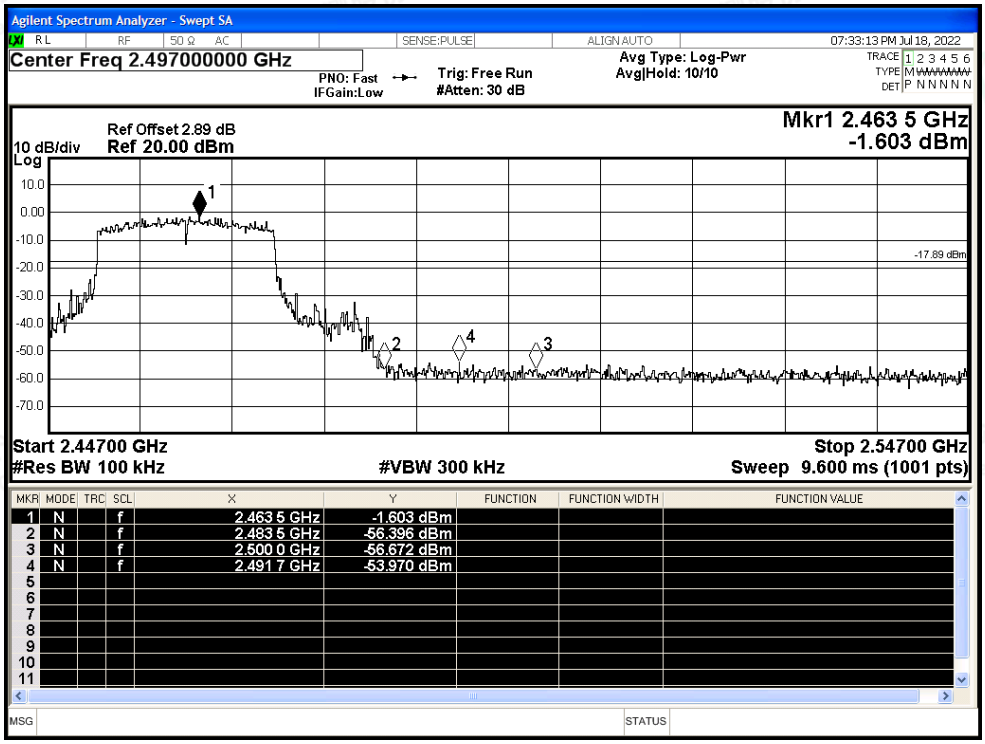
Band Edge NVNT ax20 2412MHz Ant0 Emission



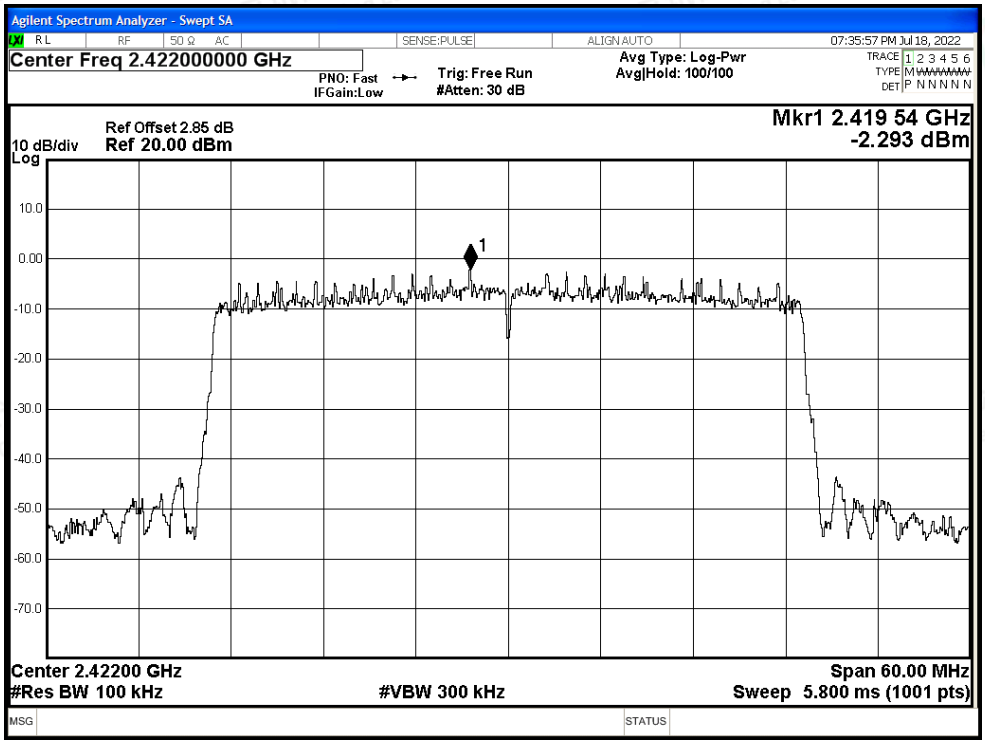
Band Edge NVNT ax20 2462MHz Ant0 Ref



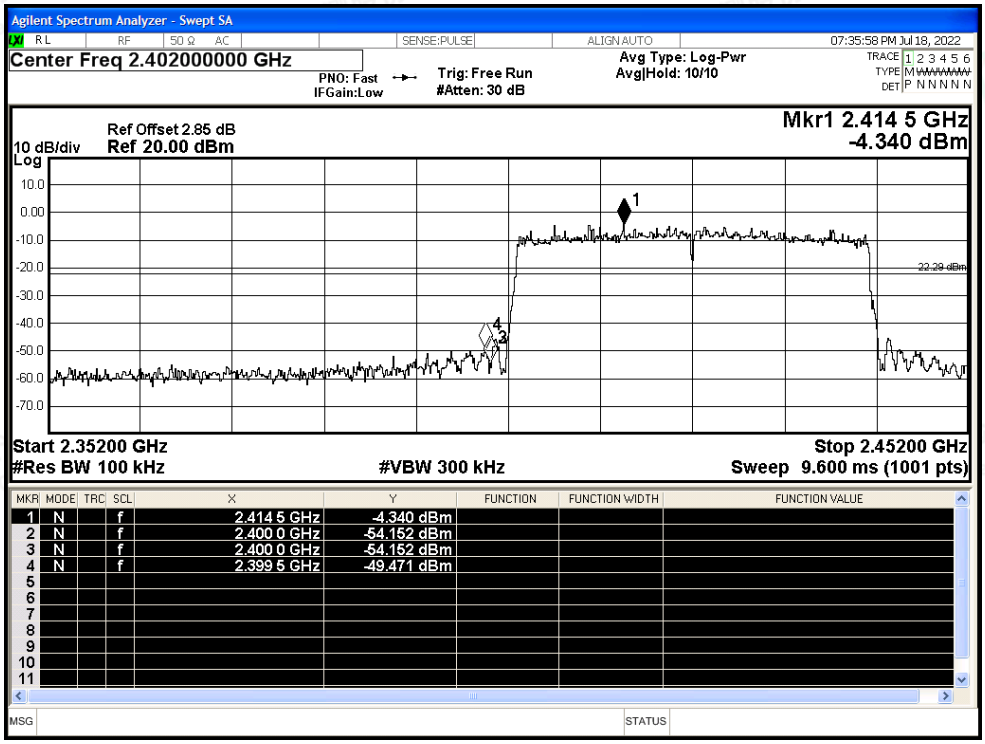
Band Edge NVNT ax20 2462MHz Ant0 Emission



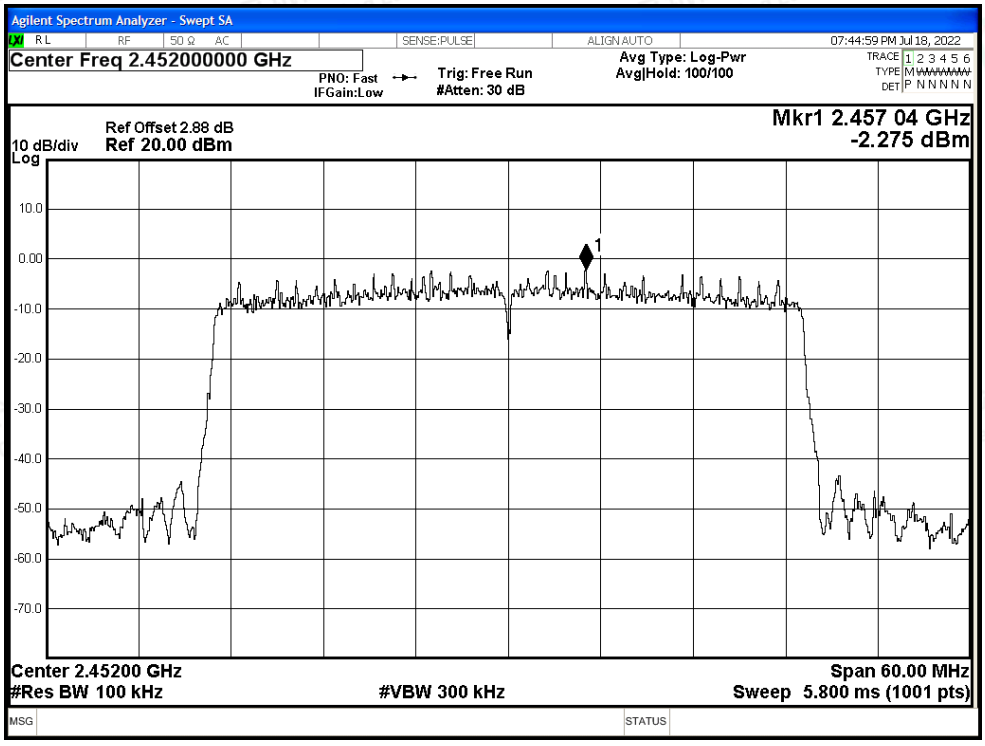
Band Edge NVNT ax40 2422MHz Ant0 Ref



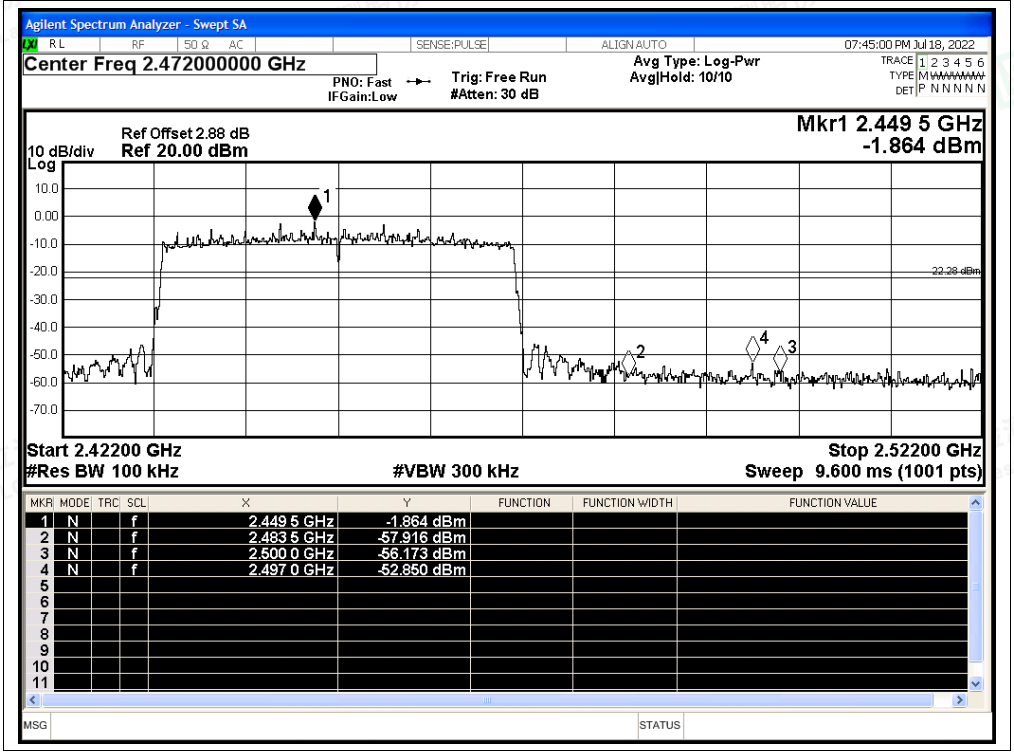
Band Edge NVNT ax40 2422MHz Ant0 Emission



Band Edge NVNT ax40 2452MHz Ant0 Ref



Band Edge NVNT ax40 2452MHz Ant0 Emission



Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-50.17	-20	Pass
NVNT	b	2462	Ant1	-63.1	-20	Pass
NVNT	g	2412	Ant1	-42.23	-20	Pass
NVNT	g	2462	Ant1	-57.08	-20	Pass
NVNT	n20	2412	Ant1	-45.78	-20	Pass
NVNT	n20	2462	Ant1	-56.79	-20	Pass
NVNT	n40	2422	Ant1	-44.5	-20	Pass
NVNT	n40	2452	Ant1	-50.09	-20	Pass
NVNT	ax20	2412	Ant1	-47.33	-20	Pass
NVNT	ax40	2422	Ant1	-46.78	-20	Pass
NVNT	ax40	2452	Ant1	-51.78	-20	Pass