

RF Test Data for 2.4G WiFi (Conducted Measurements)

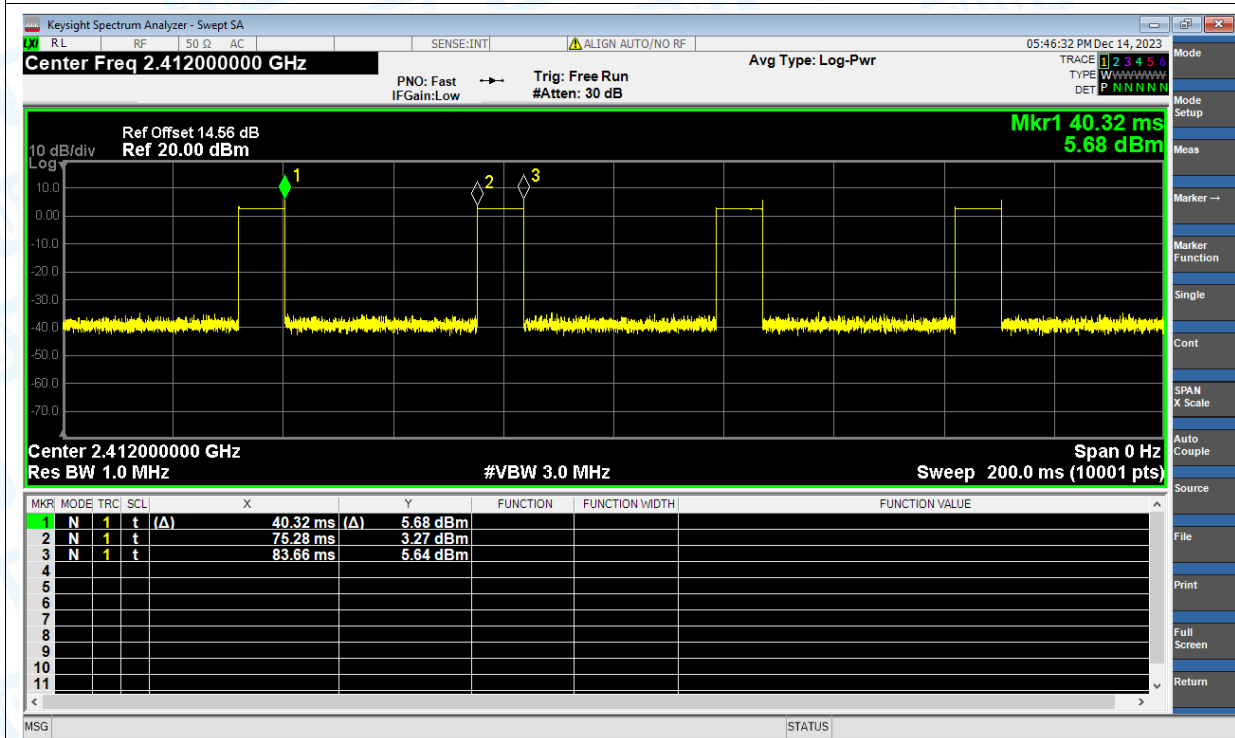
General Description of EUT	
Product Name:	Door/window sensor with siren
Test Model:	WL-19KWT
Sample ID:	HC-C-202312-0035-01-01-2#
Environmental Conditions	
Temperature:	24℃
Relative Humidity:	50%
Test Voltage:	DC 3V
Test Engineer:	Zhouzhen
Note: For a more detailed features description, please refer to the report TBR-C-202312-0035-5 The report only show the worst case data.	

Duty Cycle

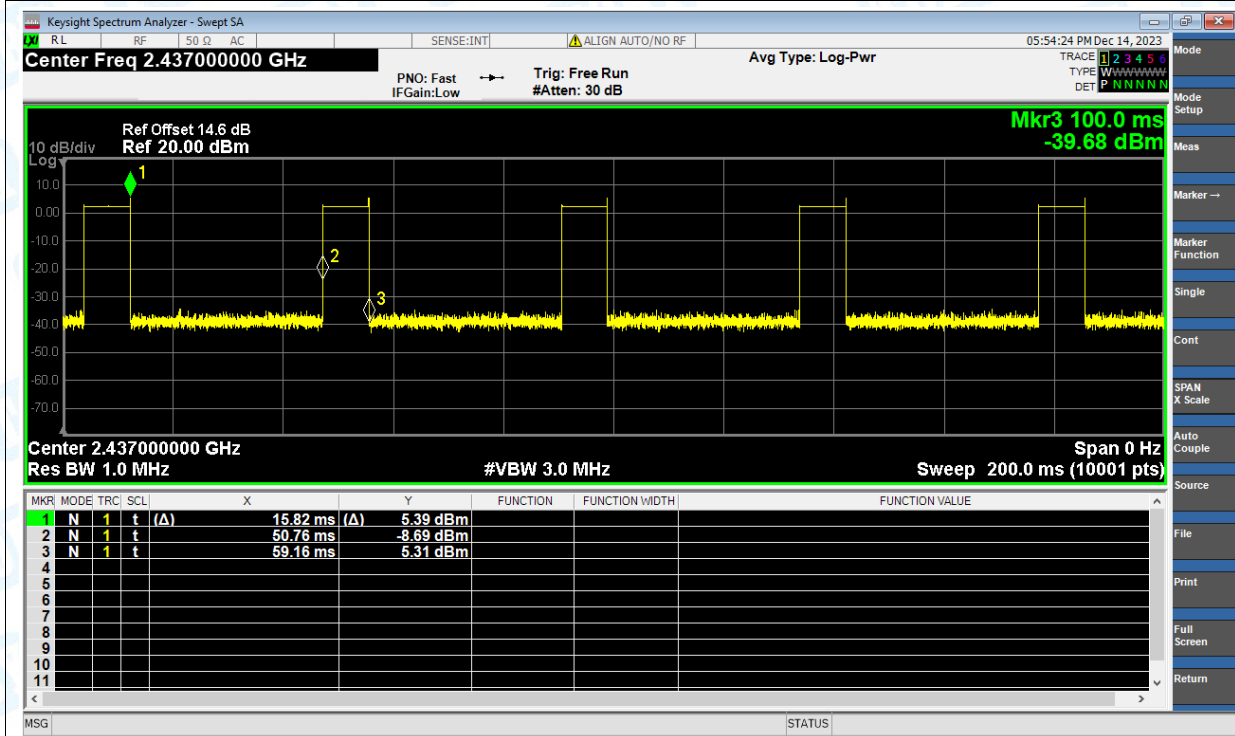
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	b	2412	Ant1	19.34	7.14	0.12
NVNT	b	2437	Ant1	19.38	7.13	0.12
NVNT	b	2462	Ant1	19.34	7.14	0.12
NVNT	g	2412	Ant1	10.01	10	0.71
NVNT	g	2437	Ant1	9.94	10.03	0.72
NVNT	g	2462	Ant1	9.95	10.02	0.72
NVNT	n(HT20)	2412	Ant1	9.95	10.02	0.77
NVNT	n(HT20)	2437	Ant1	9.95	10.02	0.77
NVNT	n(HT20)	2462	Ant1	9.95	10.02	0.77
NVNT	n(HT40)	2422	Ant1	9.95	10.02	1.54
NVNT	n(HT40)	2437	Ant1	9.94	10.03	1.54
NVNT	n(HT40)	2452	Ant1	9.87	10.06	1.55

Test Graphs

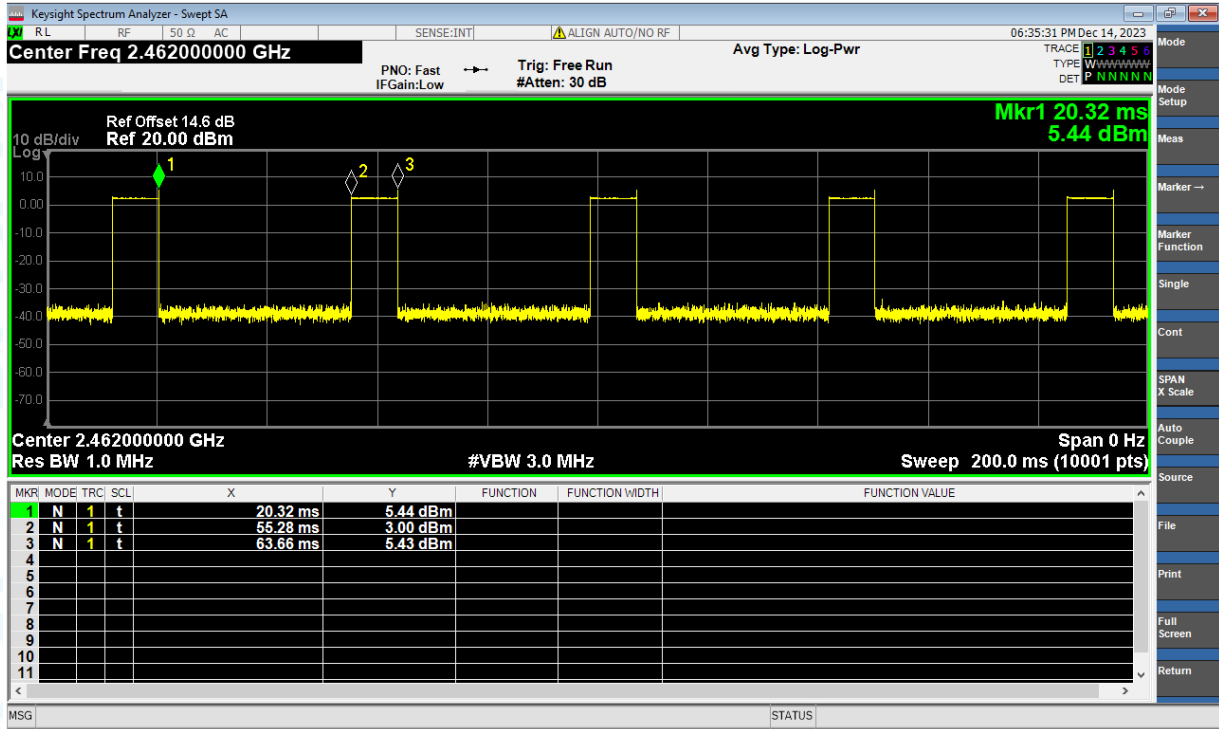
Duty Cycle NVNT b 2412MHz Ant1



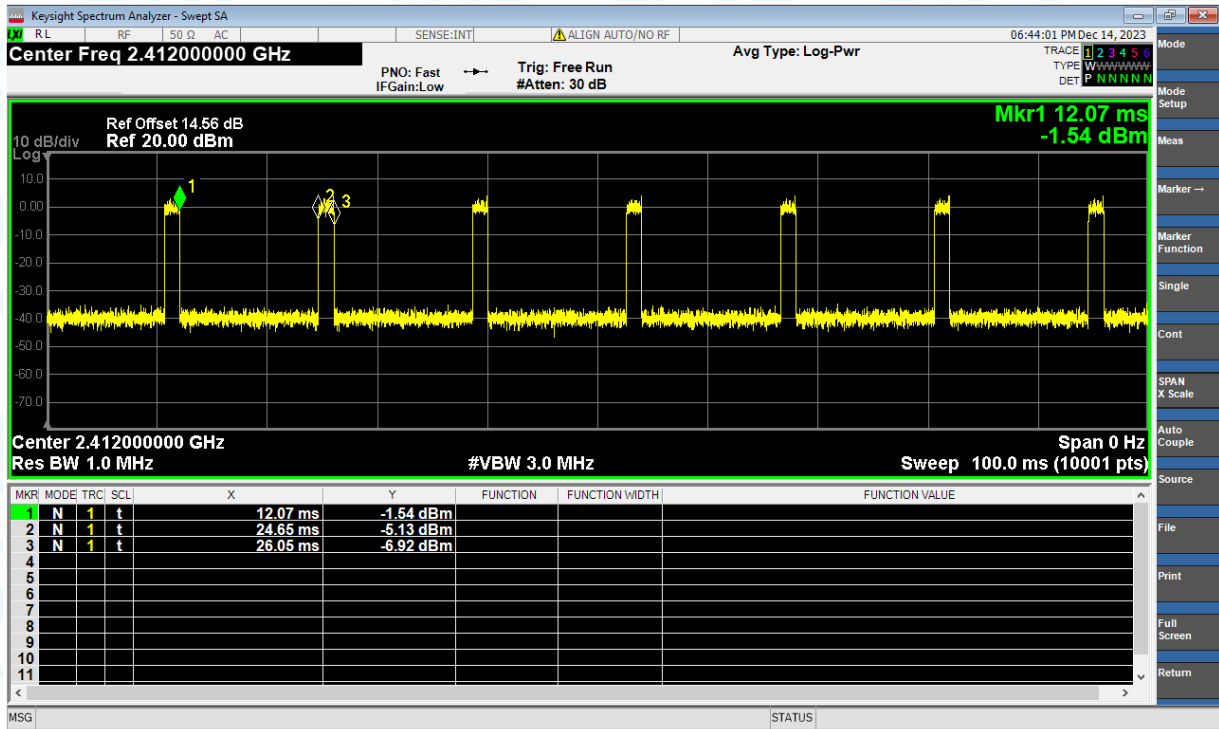
Duty Cycle NVNT b 2437MHz Ant1



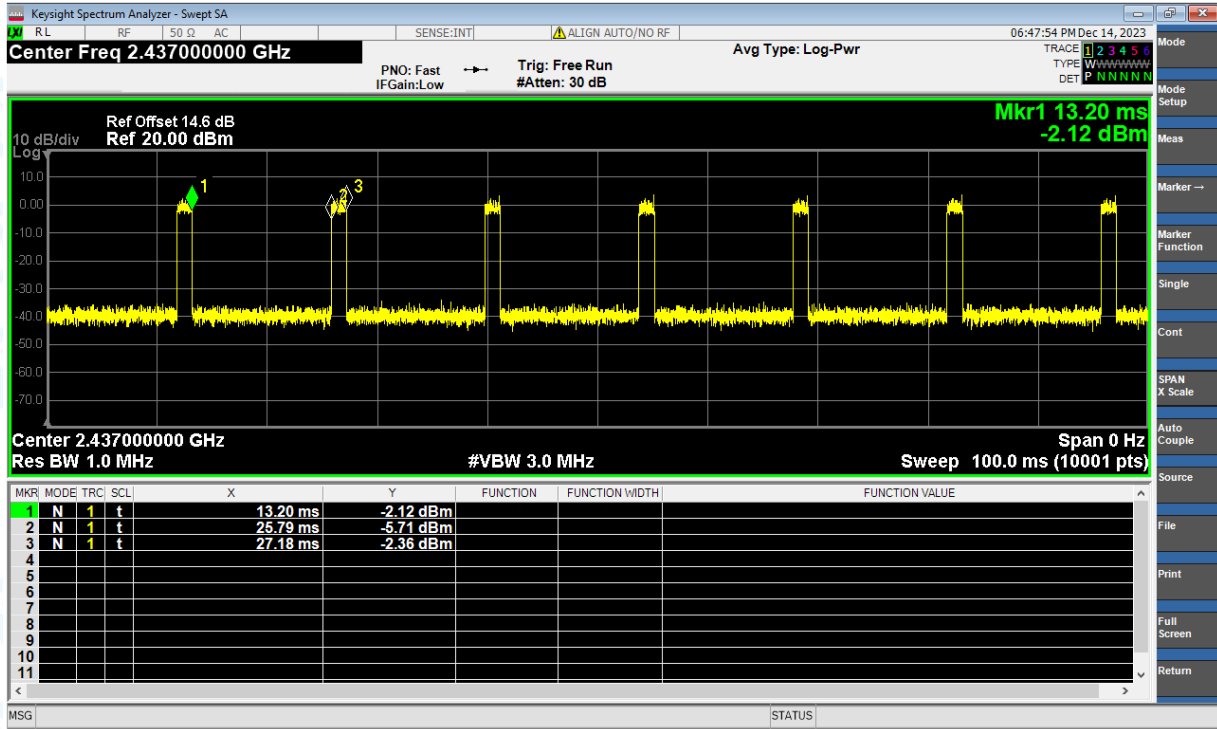
Duty Cycle NVNT b 2462MHz Ant1



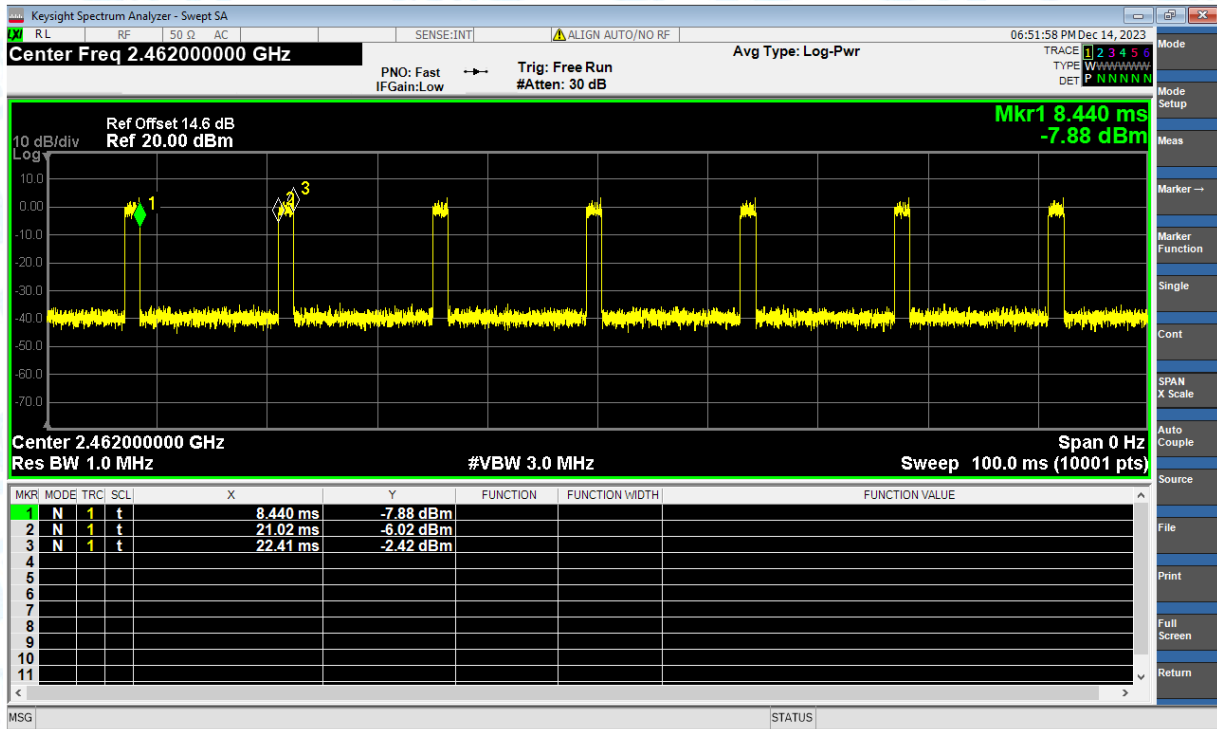
Duty Cycle NVNT g 2412MHz Ant1



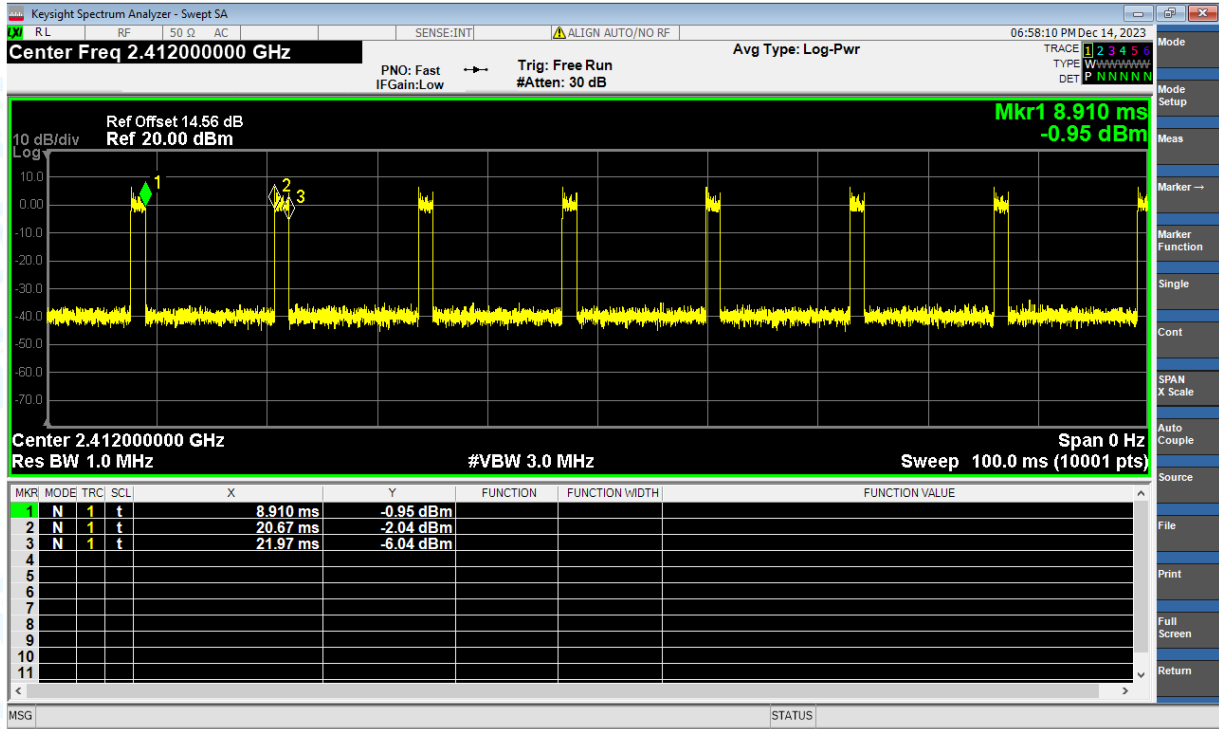
Duty Cycle NVNT g 2437MHz Ant1



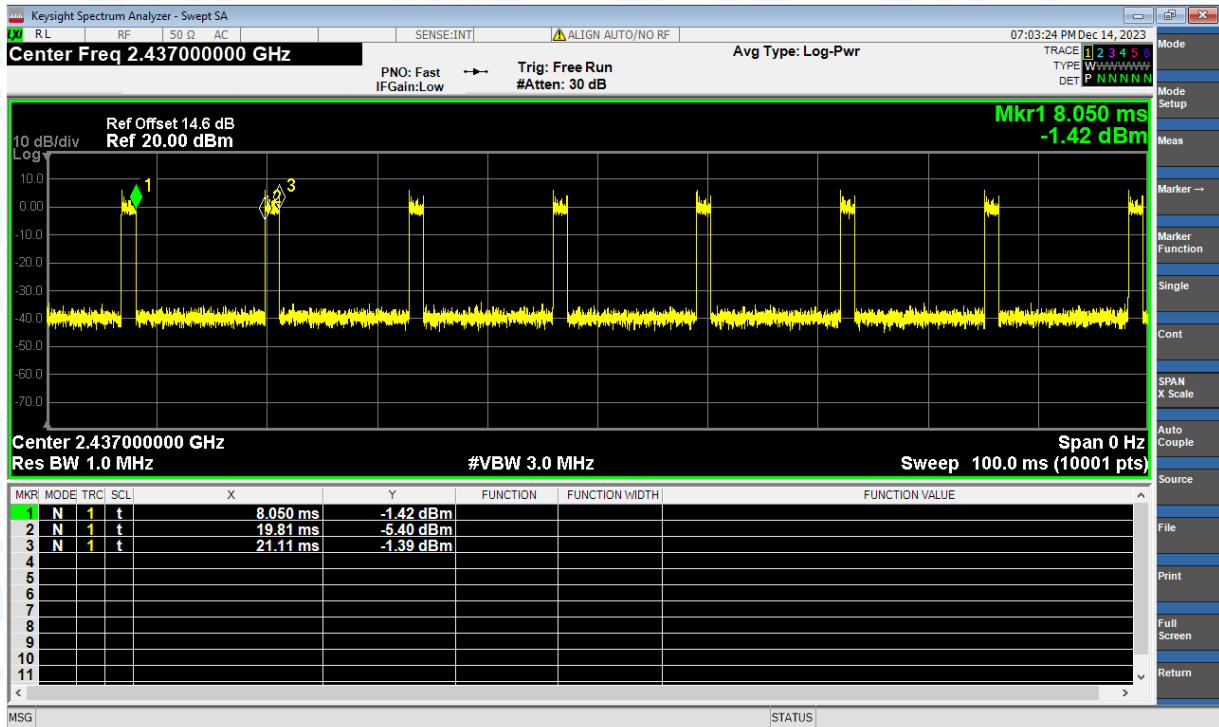
Duty Cycle NVNT g 2462MHz Ant1



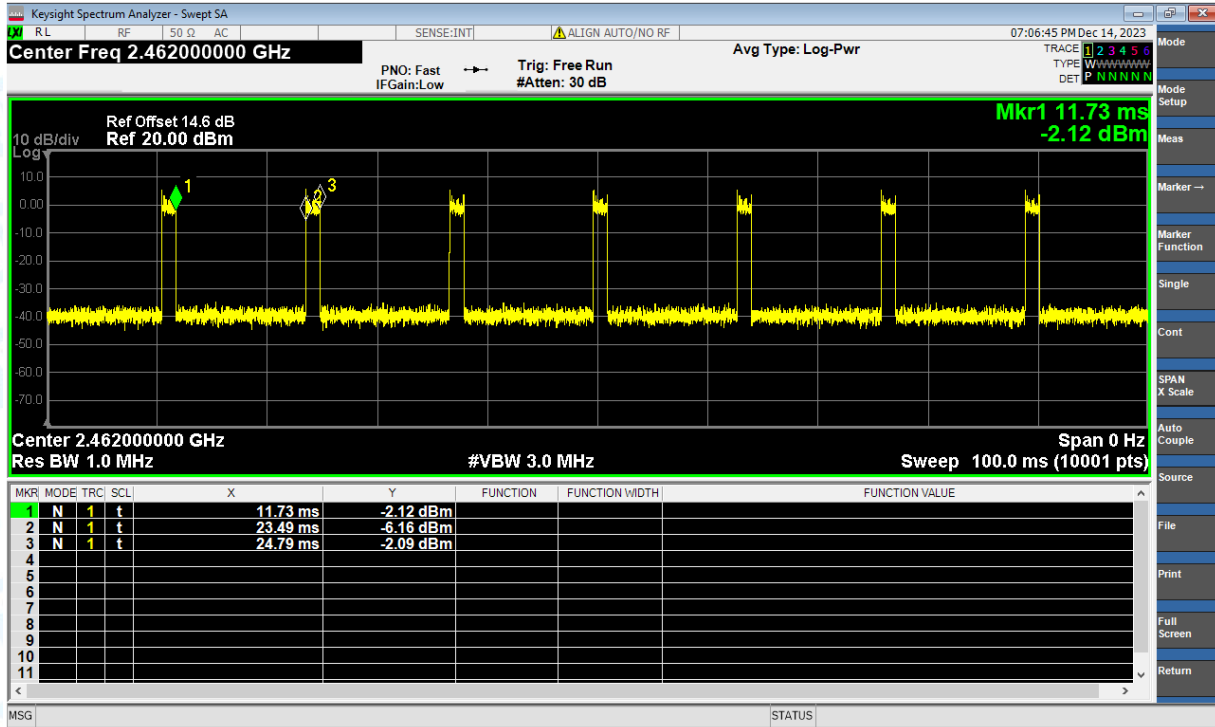
Duty Cycle NVNT n(HT20) 2412MHz Ant1



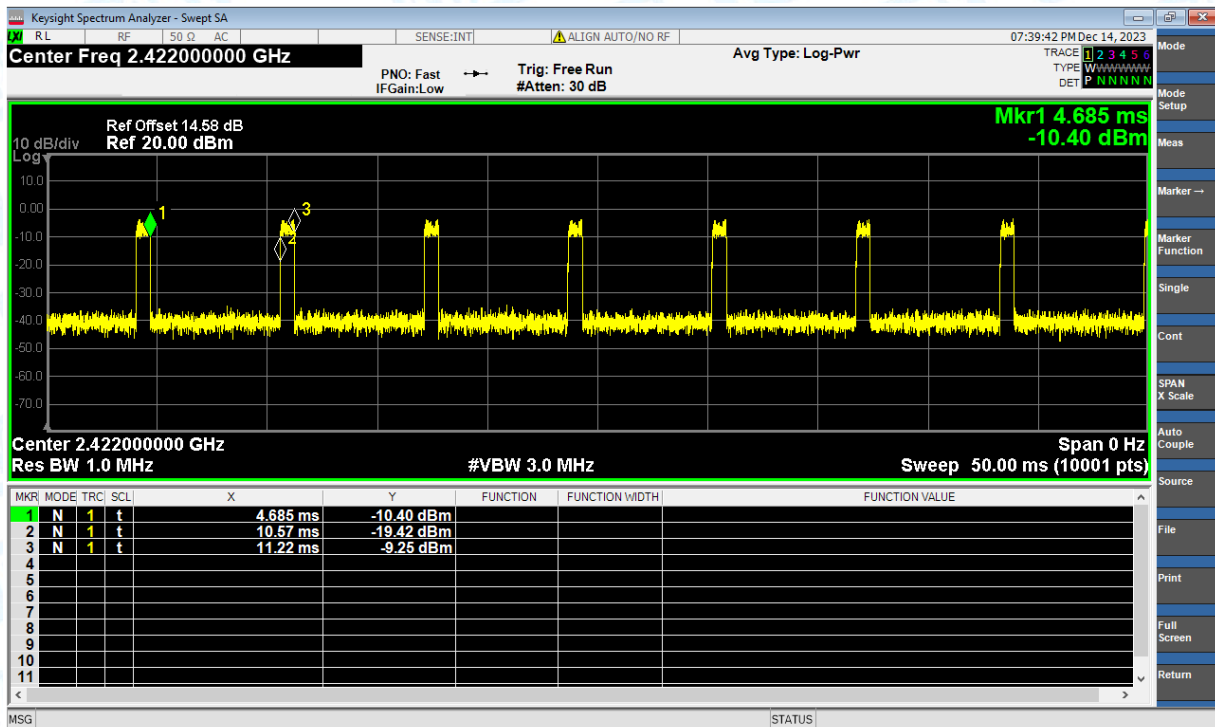
Duty Cycle NVNT n(HT20) 2437MHz Ant1



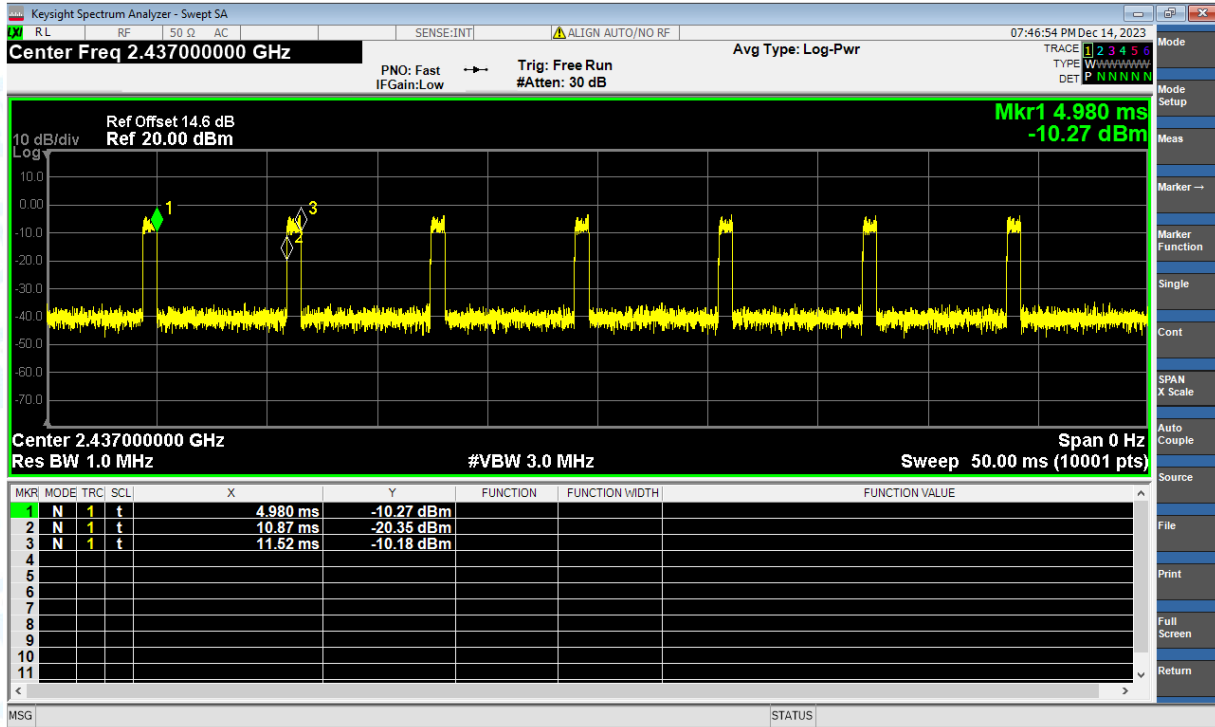
Duty Cycle NVNT n(HT20) 2462MHz Ant1



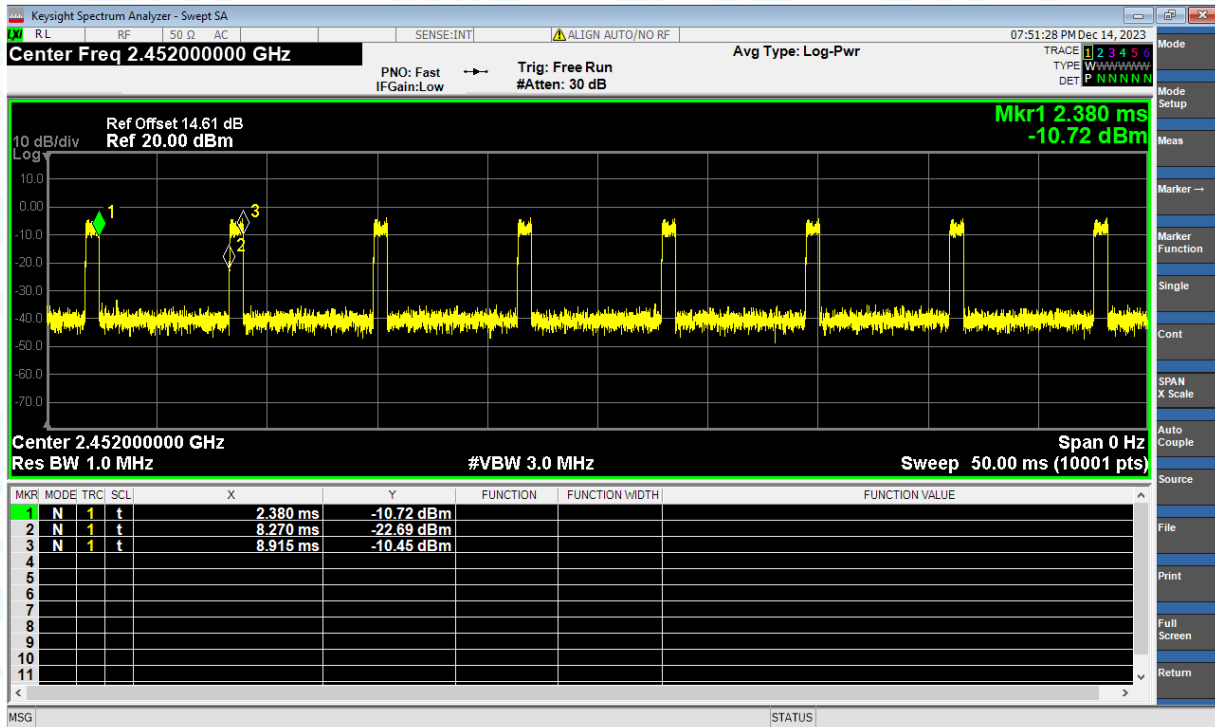
Duty Cycle NVNT n(HT40) 2422MHz Ant1



Duty Cycle NVNT n(HT40) 2437MHz Ant1



Duty Cycle NVNT n(HT40) 2452MHz Ant1



Maximum Conducted Output Power

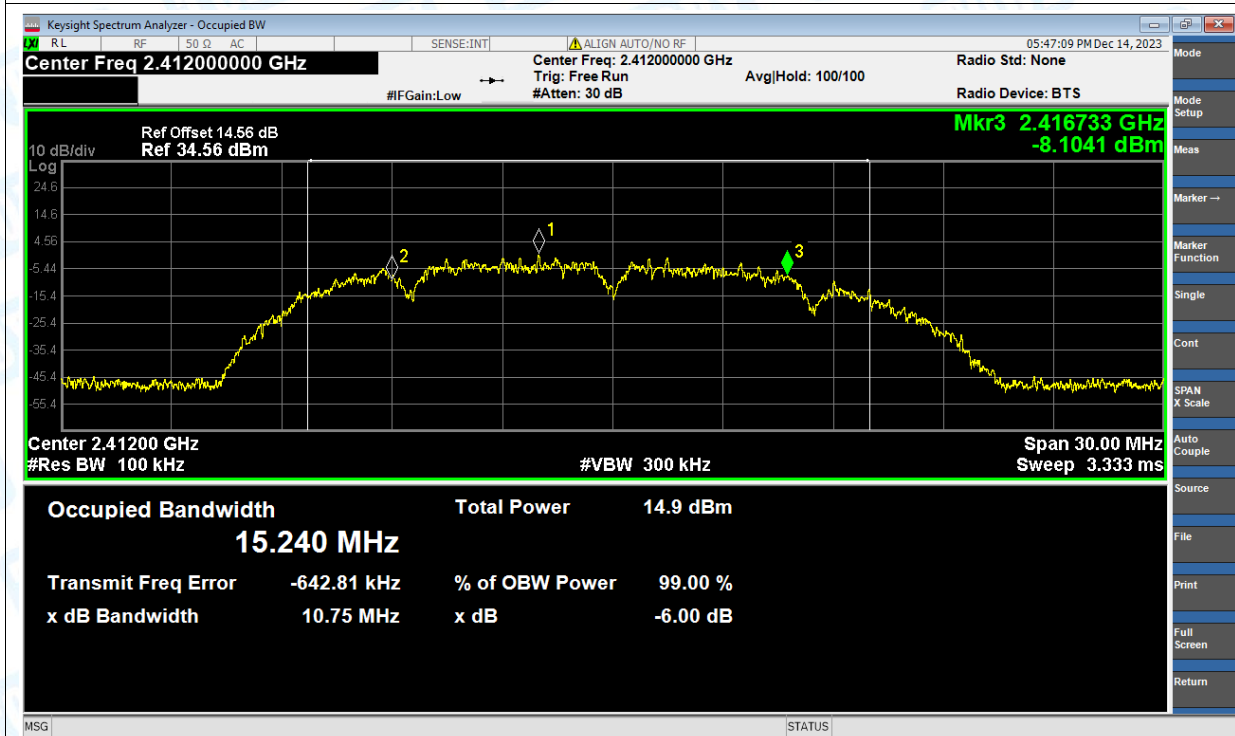
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	8.78	7.14	15.92	30	Pass
NVNT	b	2437	Ant1	8.3	7.13	15.43	30	Pass
NVNT	b	2462	Ant1	8.27	7.14	15.41	30	Pass
NVNT	g	2412	Ant1	5.97	10	15.97	30	Pass
NVNT	g	2437	Ant1	5.35	10.03	15.38	30	Pass
NVNT	g	2462	Ant1	5.03	10.02	15.05	30	Pass
NVNT	n(HT20)	2412	Ant1	6.14	10.02	16.16	30	Pass
NVNT	n(HT20)	2437	Ant1	5.55	10.02	15.57	30	Pass
NVNT	n(HT20)	2462	Ant1	5	10.02	15.02	30	Pass
NVNT	n(HT40)	2422	Ant1	5.33	10.02	15.35	30	Pass
NVNT	n(HT40)	2437	Ant1	5.1	10.03	15.13	30	Pass
NVNT	n(HT40)	2452	Ant1	4.91	10.06	14.97	30	Pass

-6dB Bandwidth

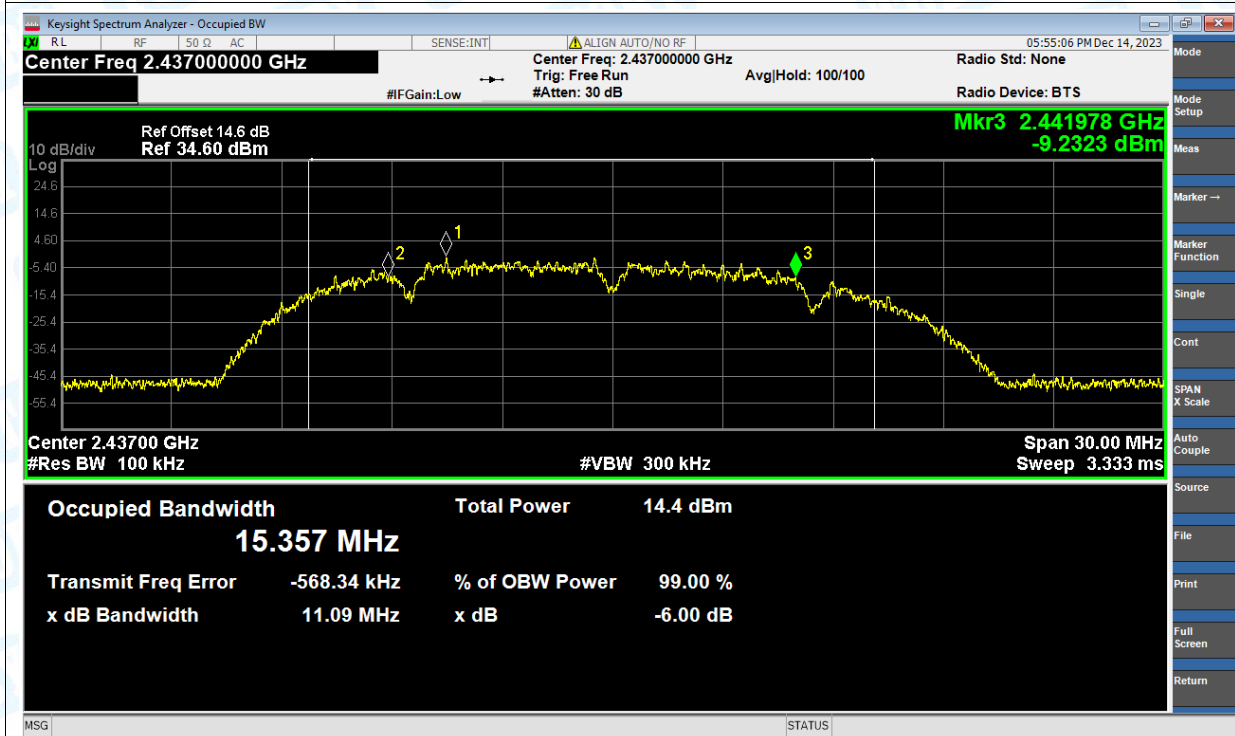
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	10.75	0.5	Pass
NVNT	b	2437	Ant1	11.09	0.5	Pass
NVNT	b	2462	Ant1	10.21	0.5	Pass
NVNT	g	2412	Ant1	16.62	0.5	Pass
NVNT	g	2437	Ant1	16.65	0.5	Pass
NVNT	g	2462	Ant1	17.3	0.5	Pass
NVNT	n(HT20)	2412	Ant1	17.98	0.5	Pass
NVNT	n(HT20)	2437	Ant1	18.17	0.5	Pass
NVNT	n(HT20)	2462	Ant1	18.32	0.5	Pass
NVNT	n(HT40)	2422	Ant1	30.04	0.5	Pass
NVNT	n(HT40)	2437	Ant1	32.62	0.5	Pass
NVNT	n(HT40)	2452	Ant1	27.06	0.5	Pass

Test Graphs

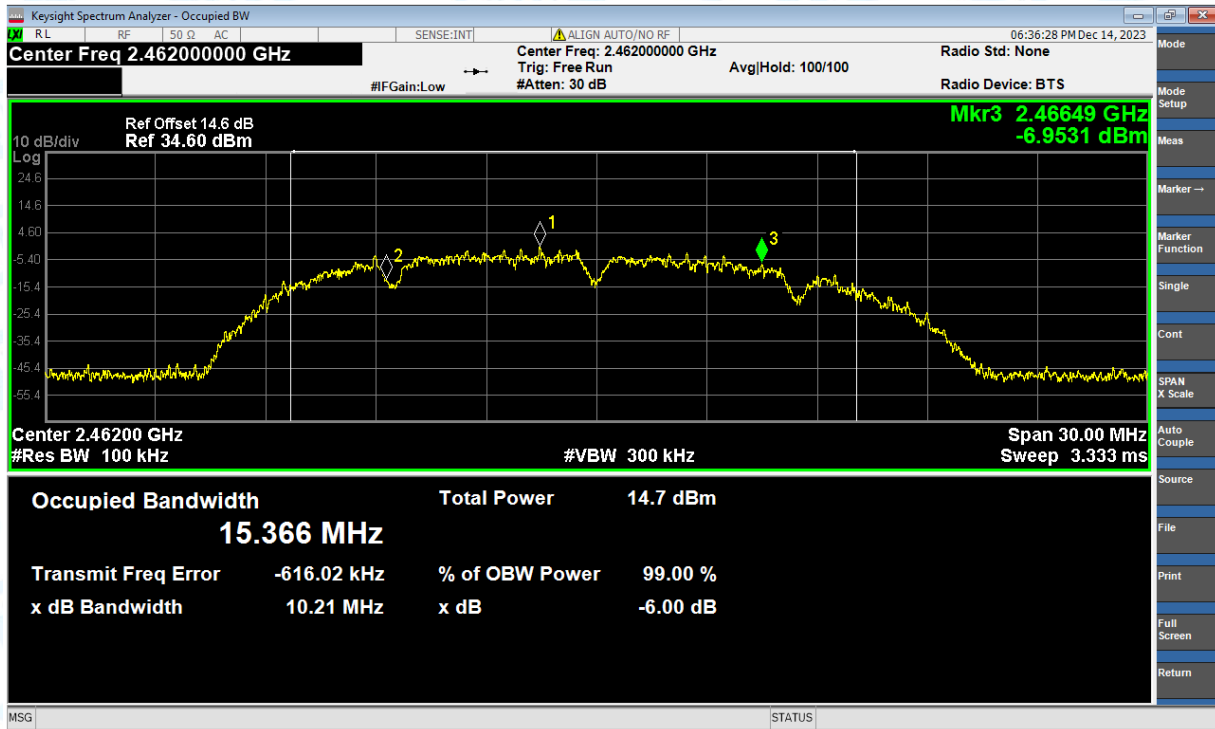
-6dB Bandwidth NVNT b 2412MHz Ant1



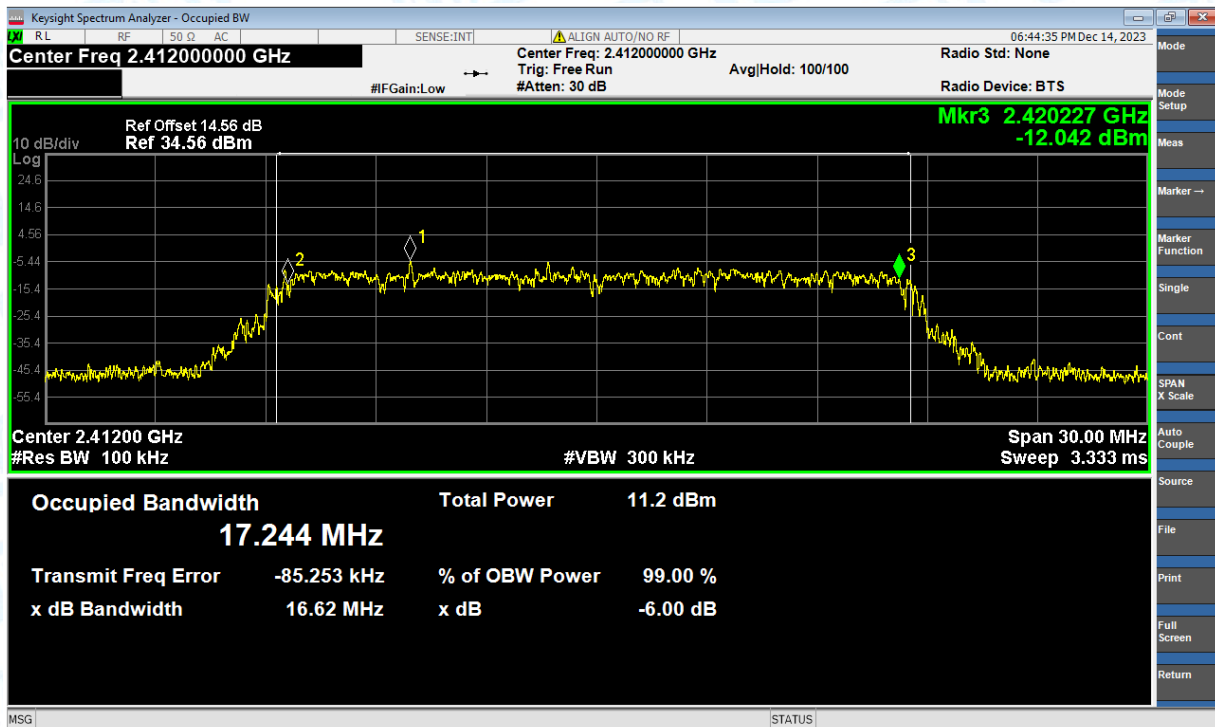
-6dB Bandwidth NVNT b 2437MHz Ant1



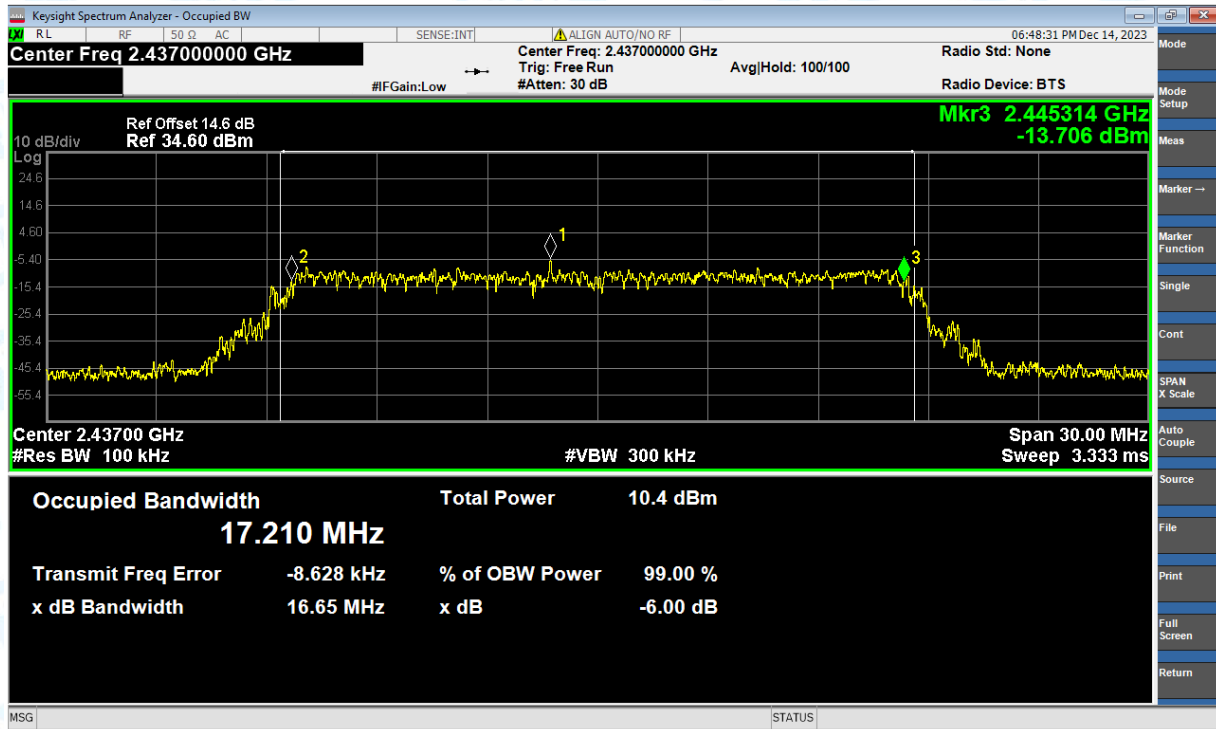
-6dB Bandwidth NVNT b 2462MHz Ant1



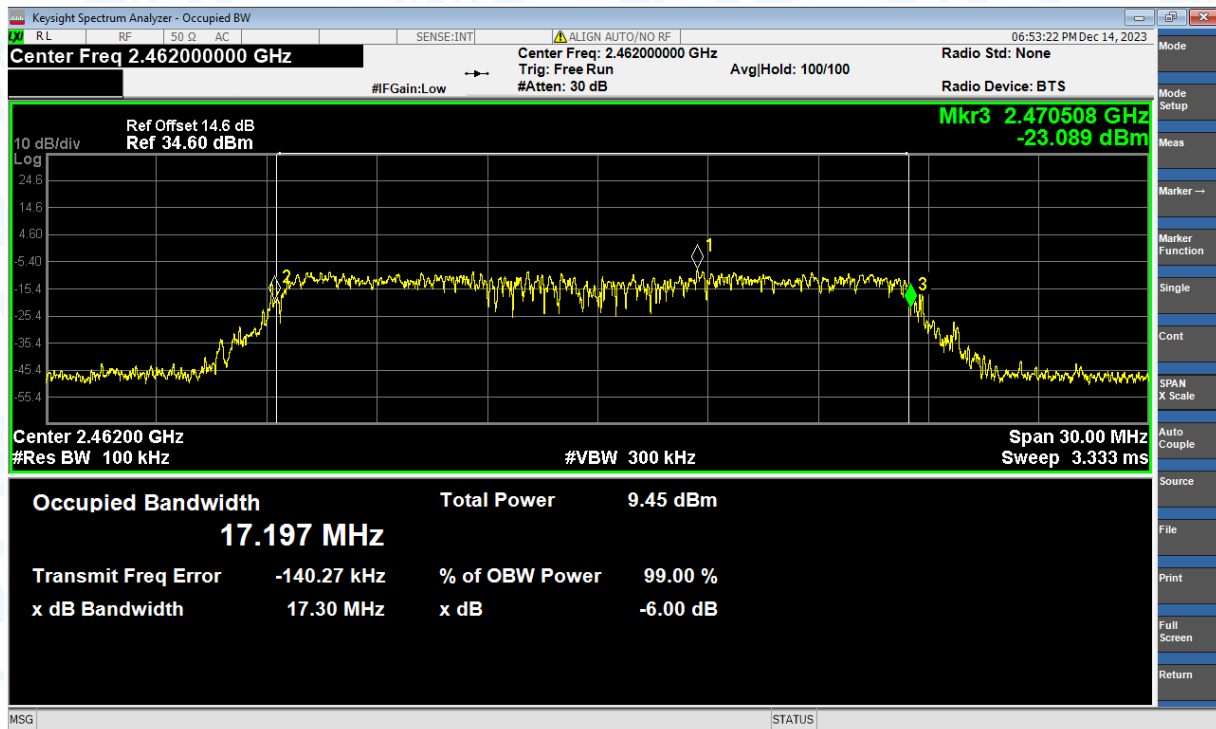
-6dB Bandwidth NVNT g 2412MHz Ant1



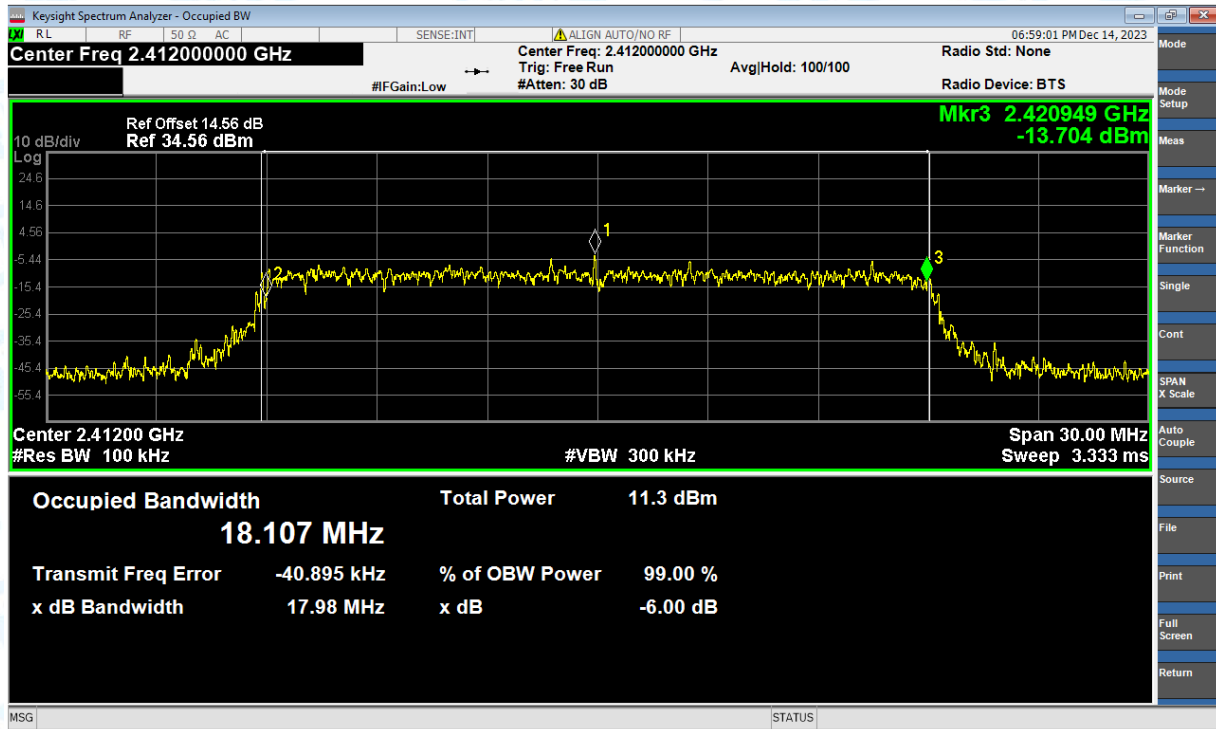
-6dB Bandwidth NVNT g 2437MHz Ant1



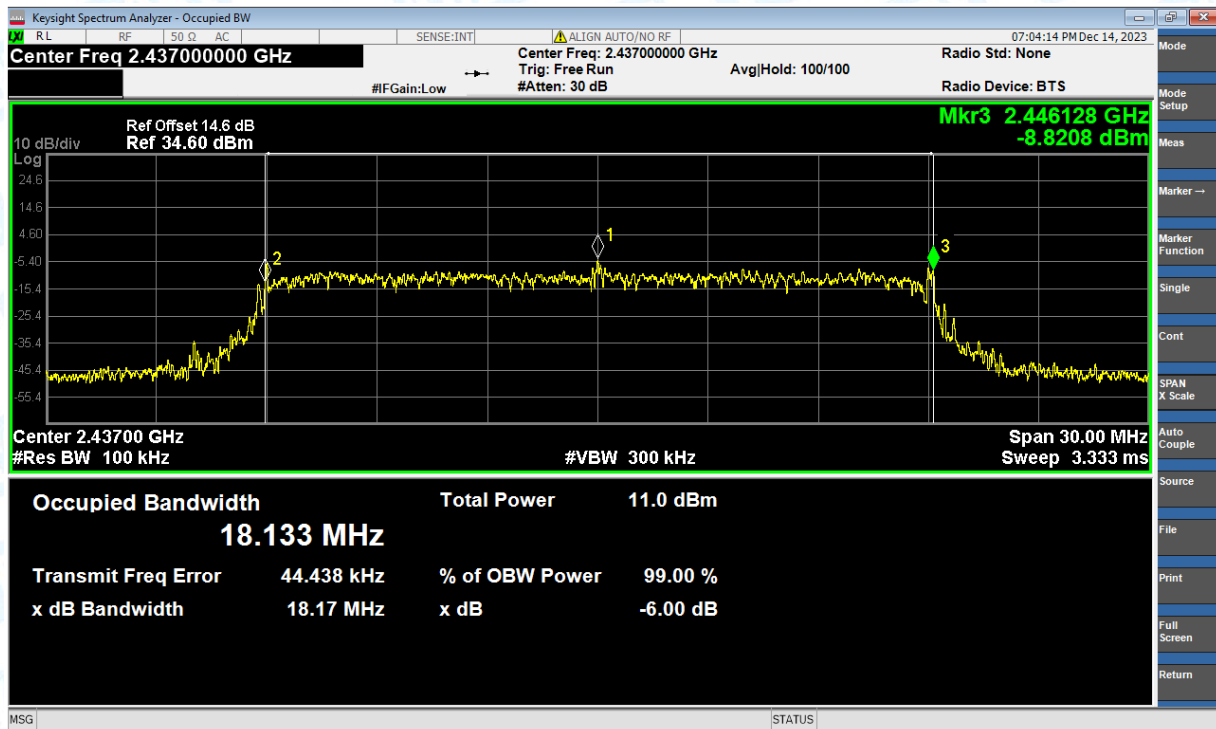
-6dB Bandwidth NVNT g 2462MHz Ant1



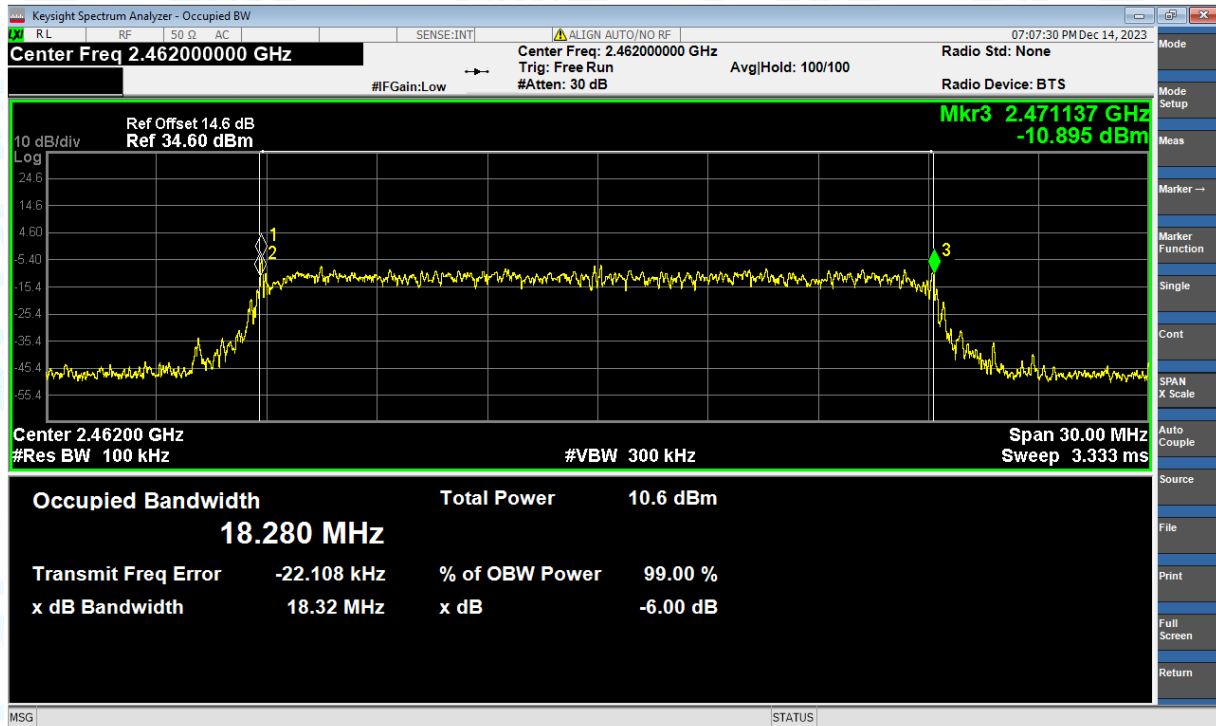
-6dB Bandwidth NVNT n(HT20) 2412MHz Ant1



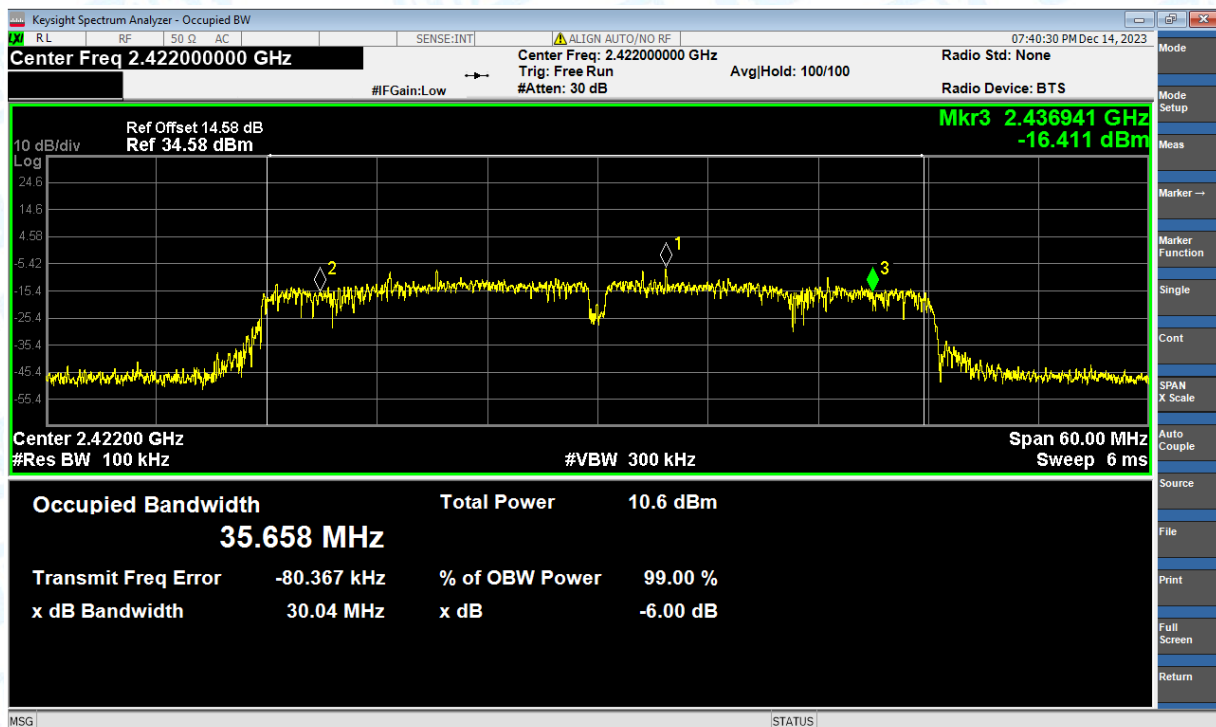
-6dB Bandwidth NVNT n(HT20) 2437MHz Ant1



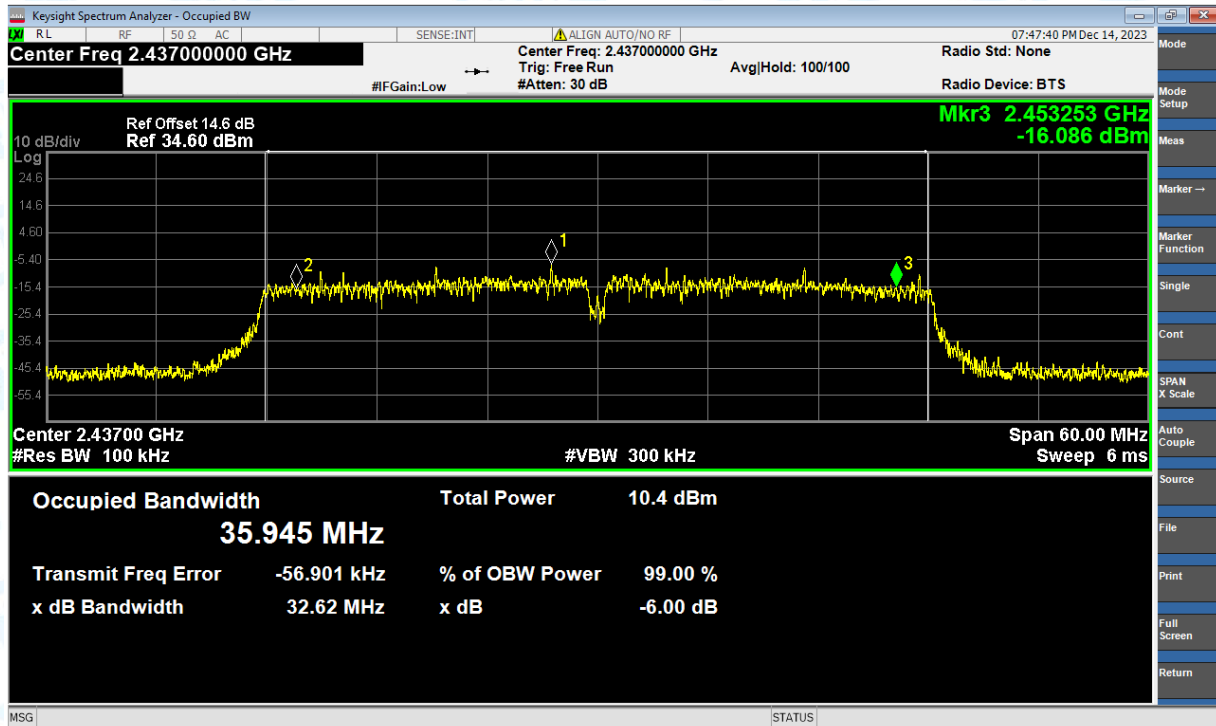
-6dB Bandwidth NVNT n(HT20) 2462MHz Ant1



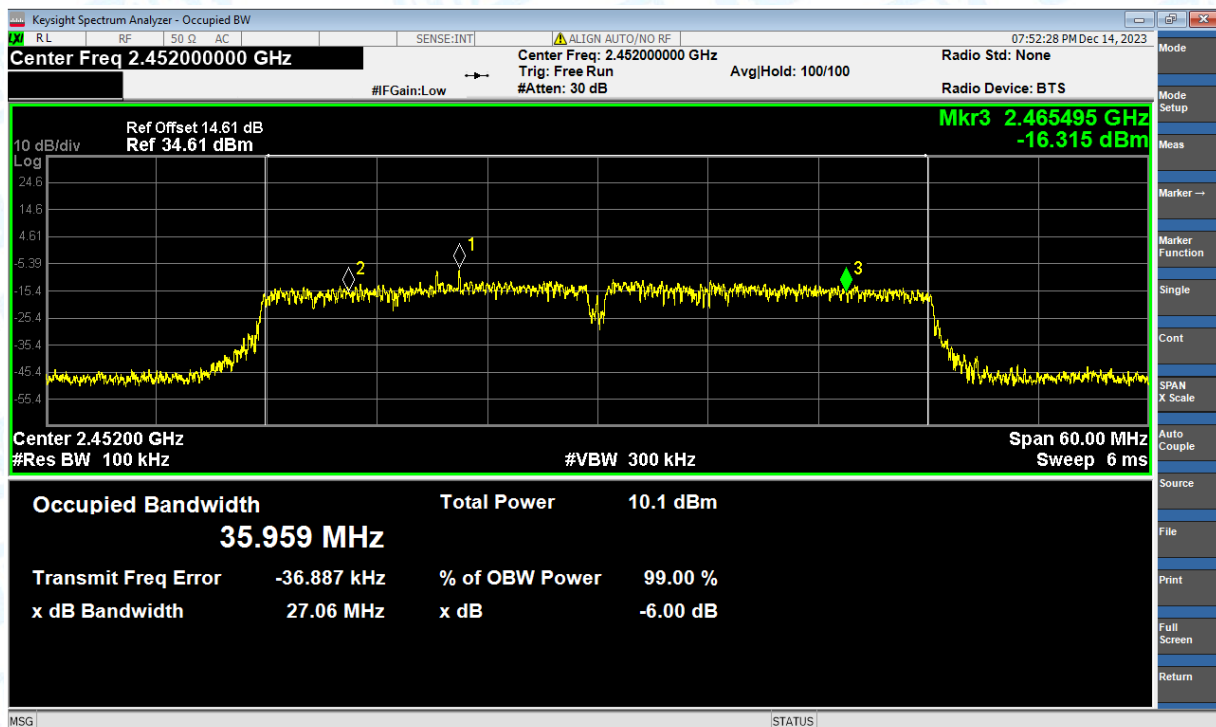
-6dB Bandwidth NVNT n(HT40) 2422MHz Ant1



-6dB Bandwidth NVNT n(HT40) 2437MHz Ant1



-6dB Bandwidth NVNT n(HT40) 2452MHz Ant1

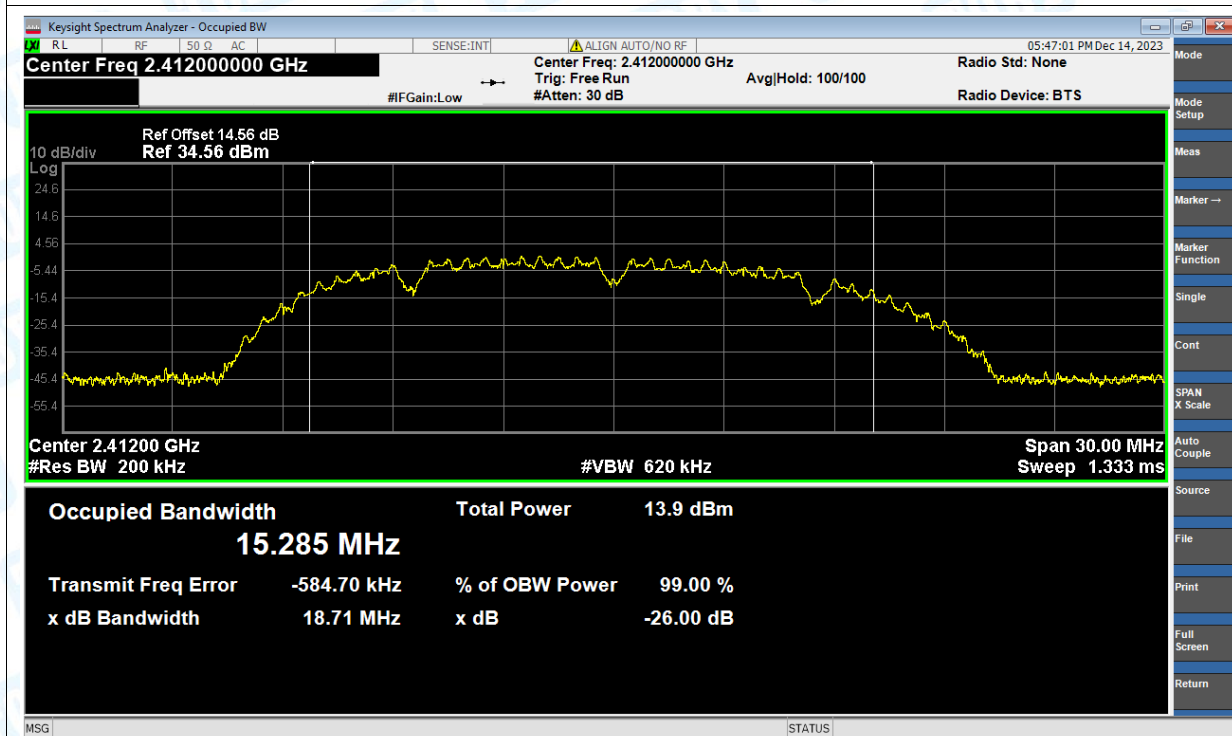


Occupied Channel Bandwidth

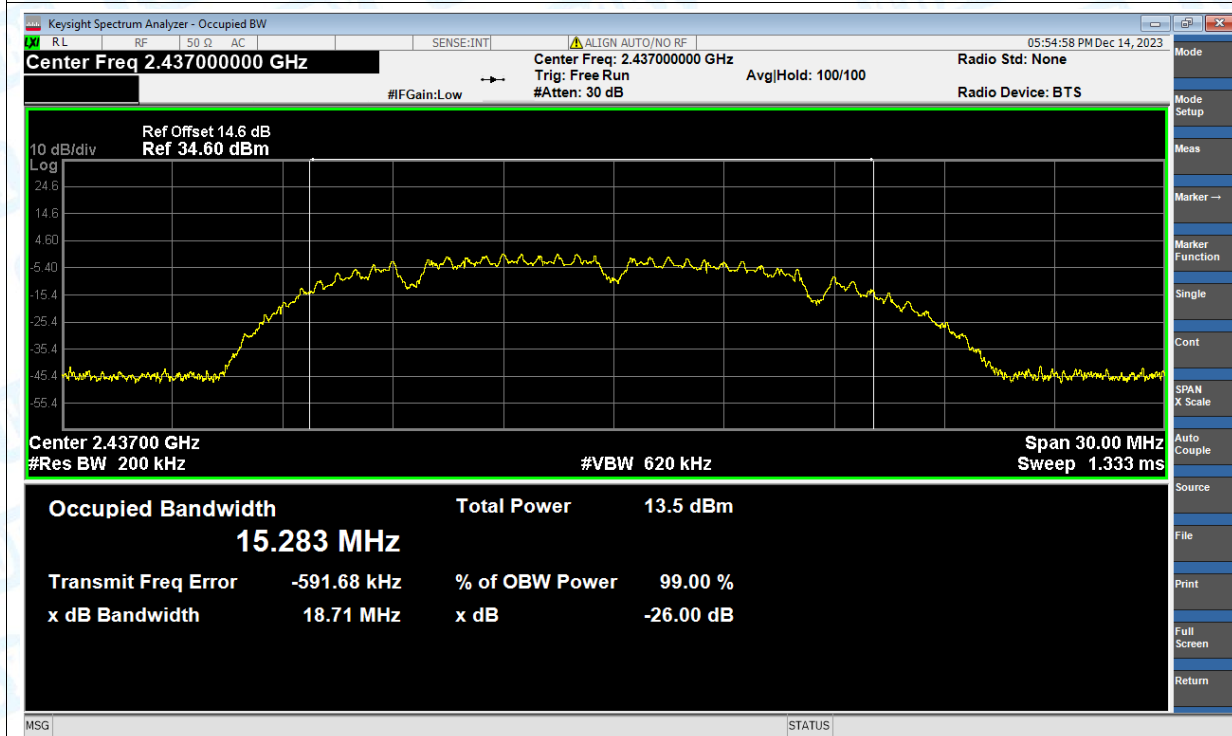
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	b	2412	Ant1	15.285
NVNT	b	2437	Ant1	15.283
NVNT	b	2462	Ant1	15.319
NVNT	g	2412	Ant1	17.189
NVNT	g	2437	Ant1	17.172
NVNT	g	2462	Ant1	17.336
NVNT	n(HT20)	2412	Ant1	18.196
NVNT	n(HT20)	2437	Ant1	17.964
NVNT	n(HT20)	2462	Ant1	18.254
NVNT	n(HT40)	2422	Ant1	35.99
NVNT	n(HT40)	2437	Ant1	35.895
NVNT	n(HT40)	2452	Ant1	36.004

Test Graphs

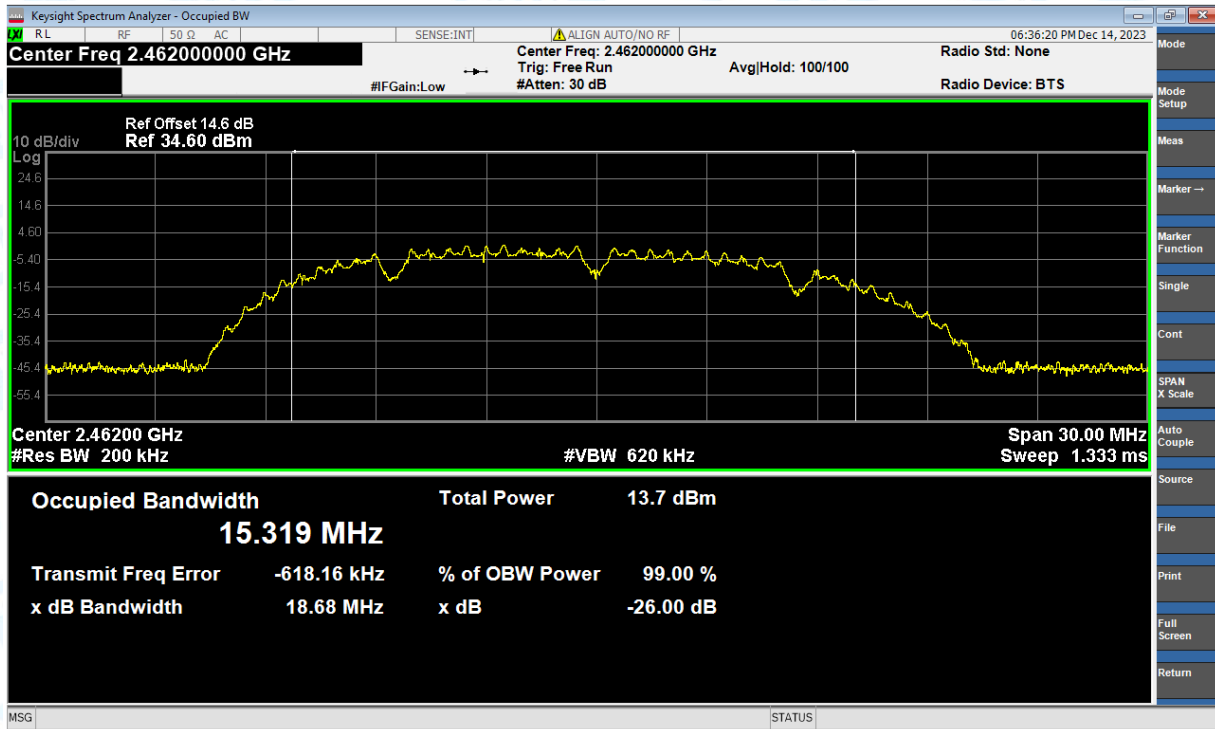
OBW NVNT b 2412MHz Ant1



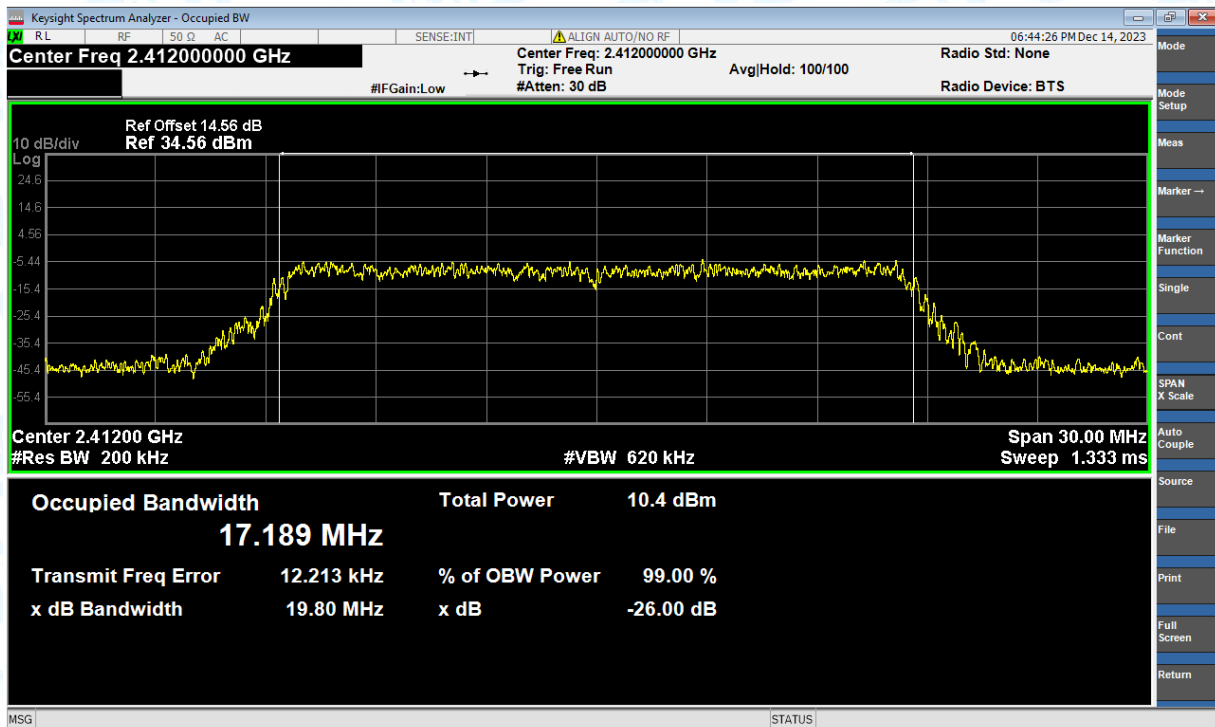
OBW NVNT b 2437MHz Ant1



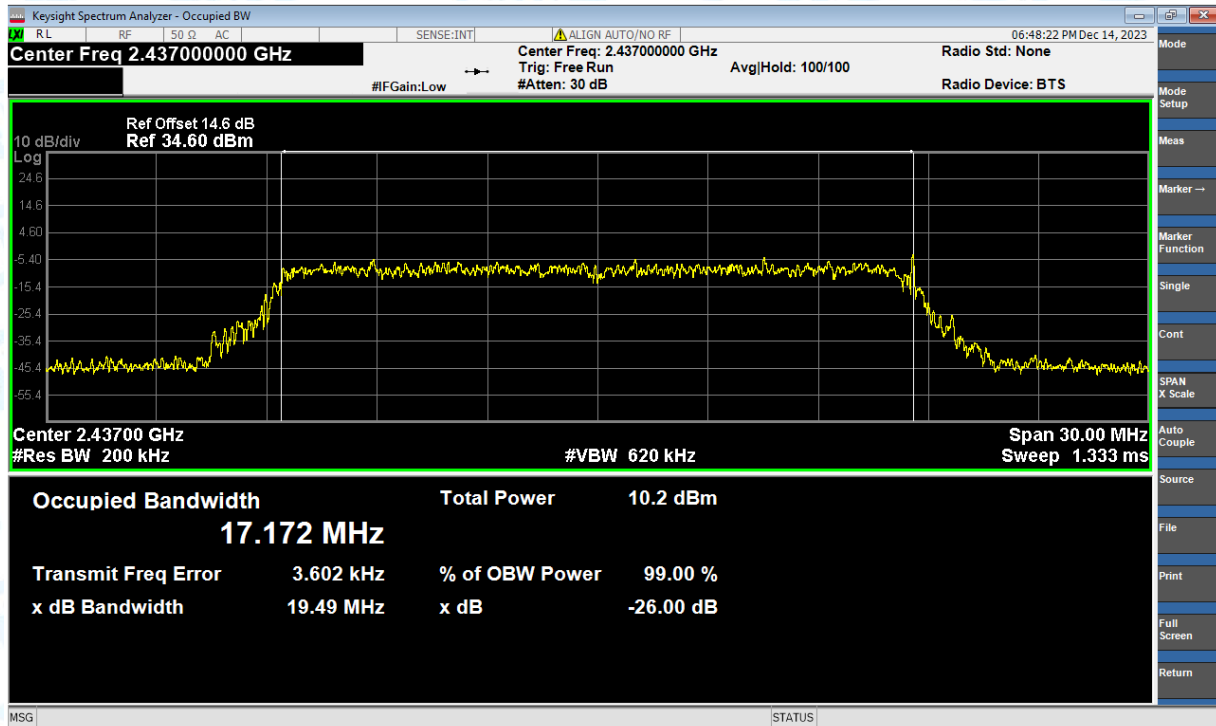
OBW NVNT b 2462MHz Ant1



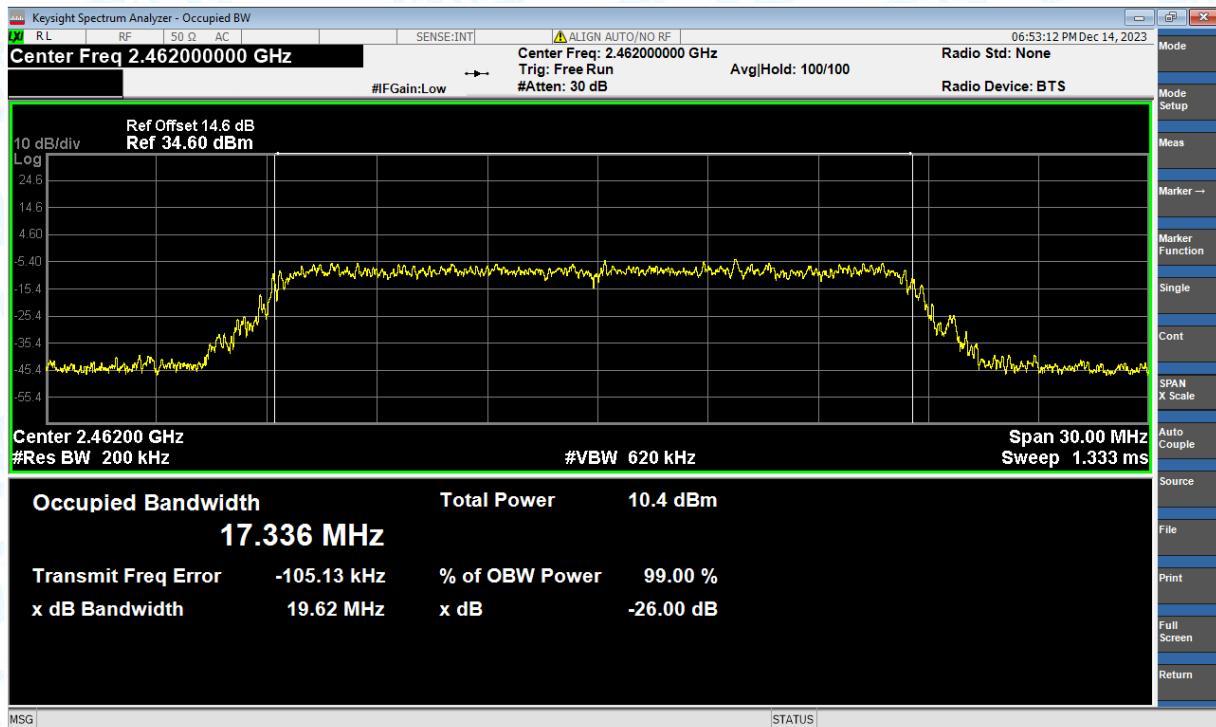
OBW NVNT g 2412MHz Ant1



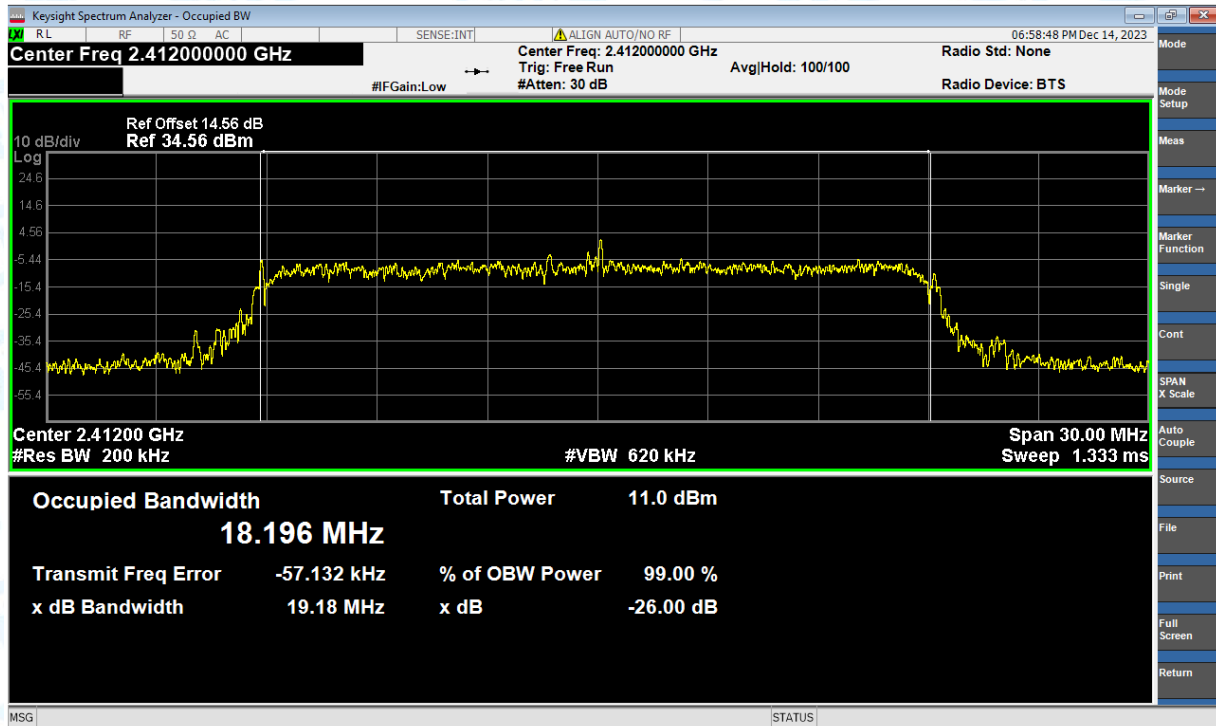
OBW NVNT g 2437MHz Ant1



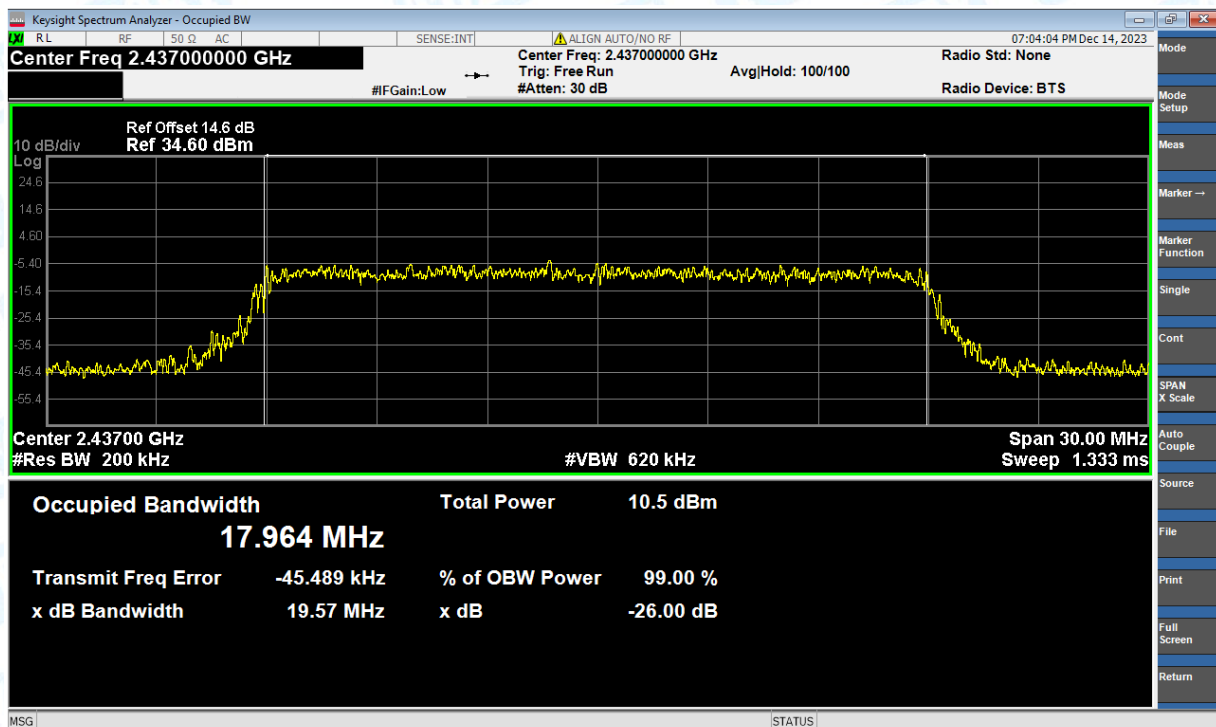
OBW NVNT g 2462MHz Ant1



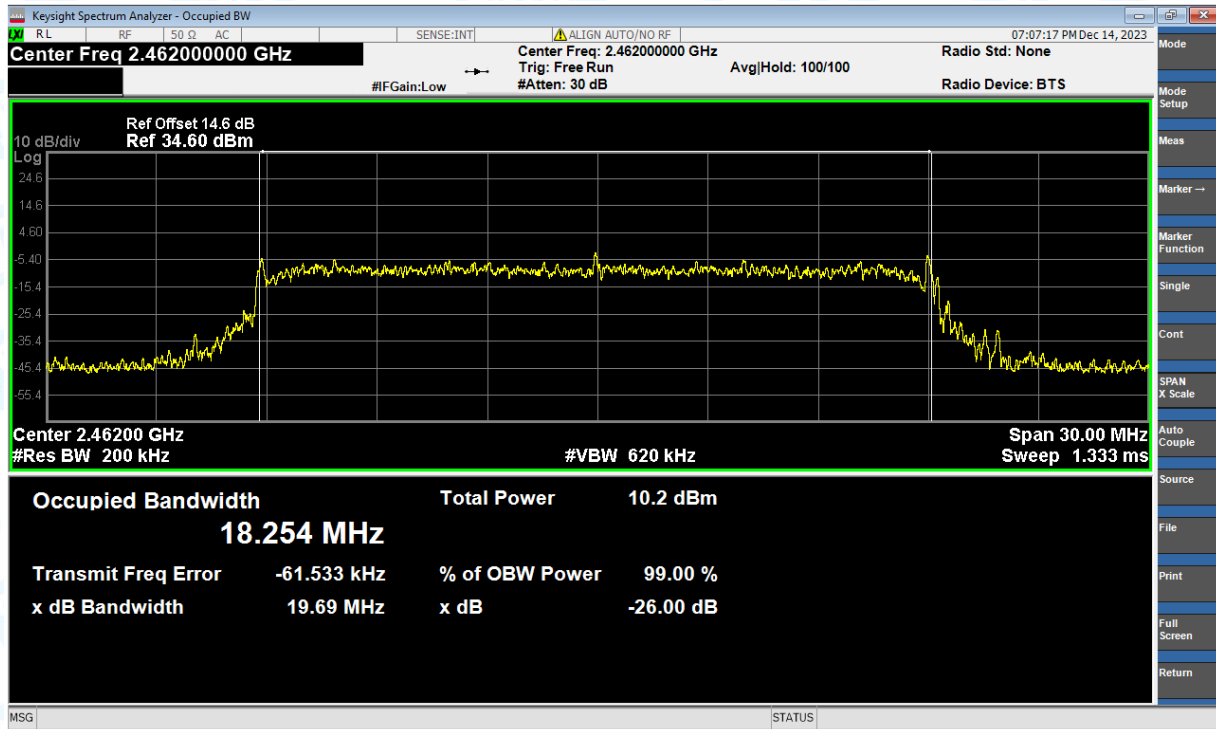
OBW NVNT n(HT20) 2412MHz Ant1



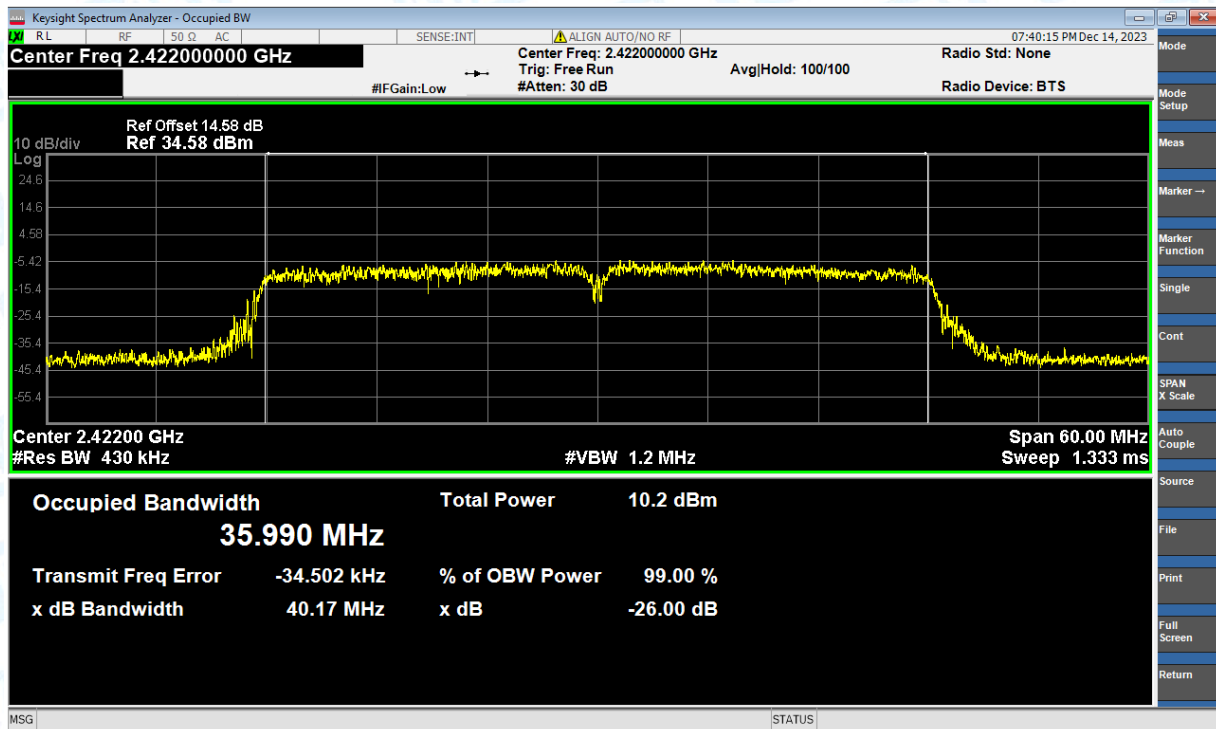
OBW NVNT n(HT20) 2437MHz Ant1



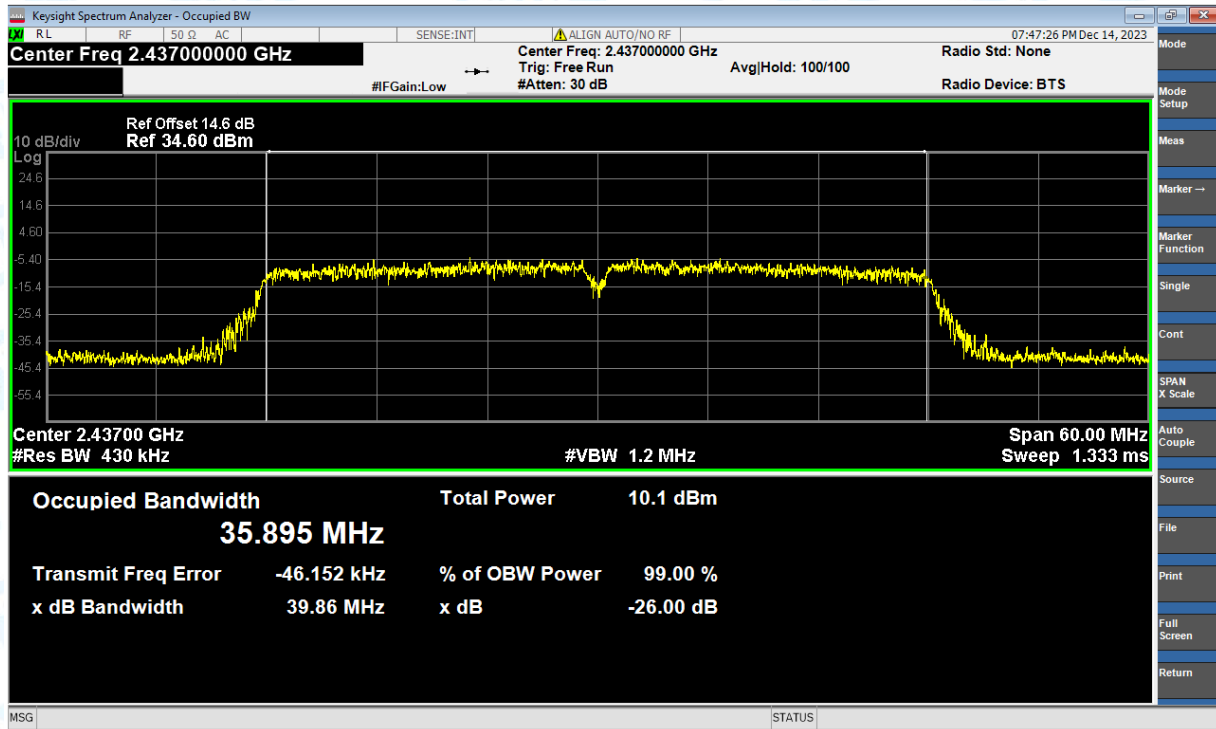
OBW NVNT n(HT20) 2462MHz Ant1



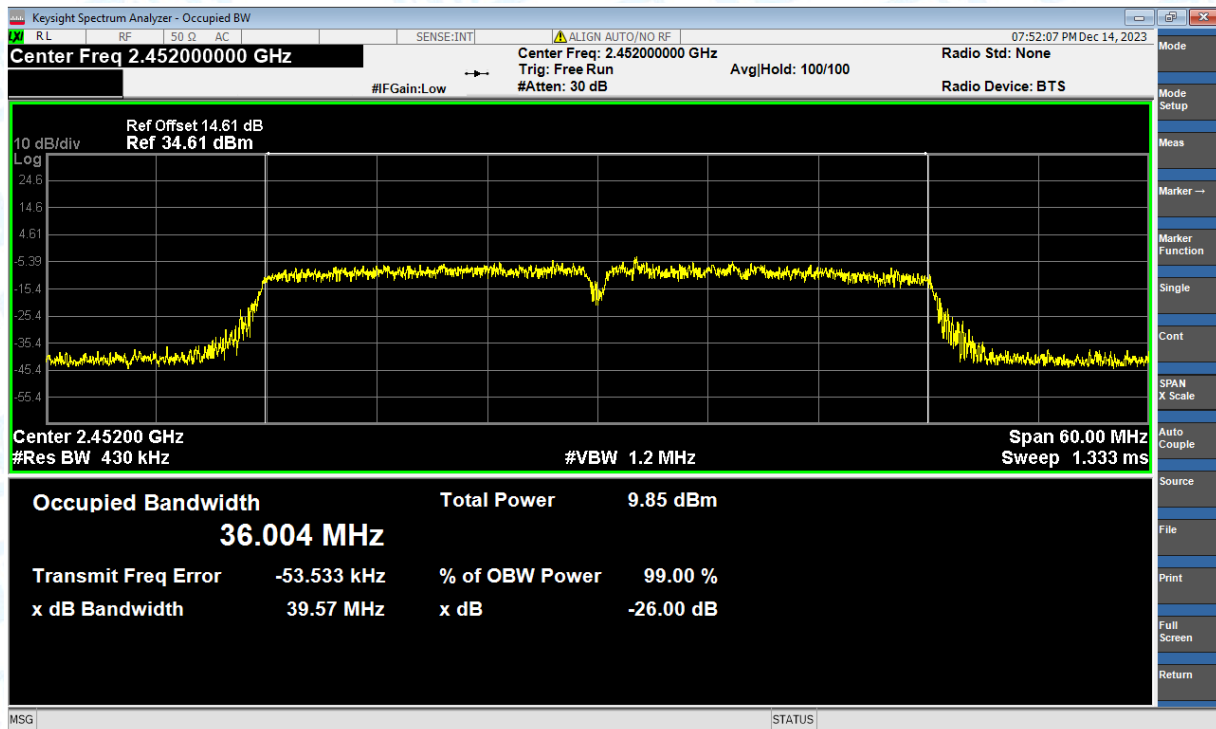
OBW NVNT n(HT40) 2422MHz Ant1



OBW NVNT n(HT40) 2437MHz Ant1



OBW NVNT n(HT40) 2452MHz Ant1

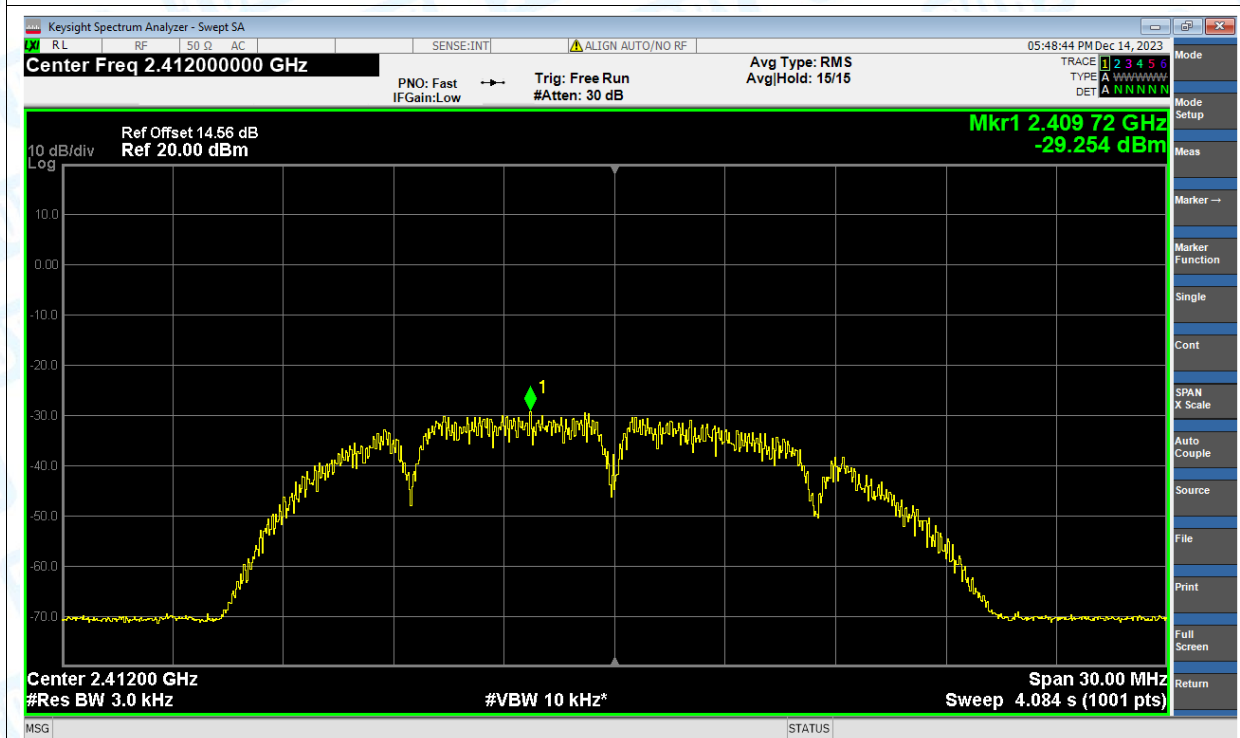


Maximum Power Spectral Density Level

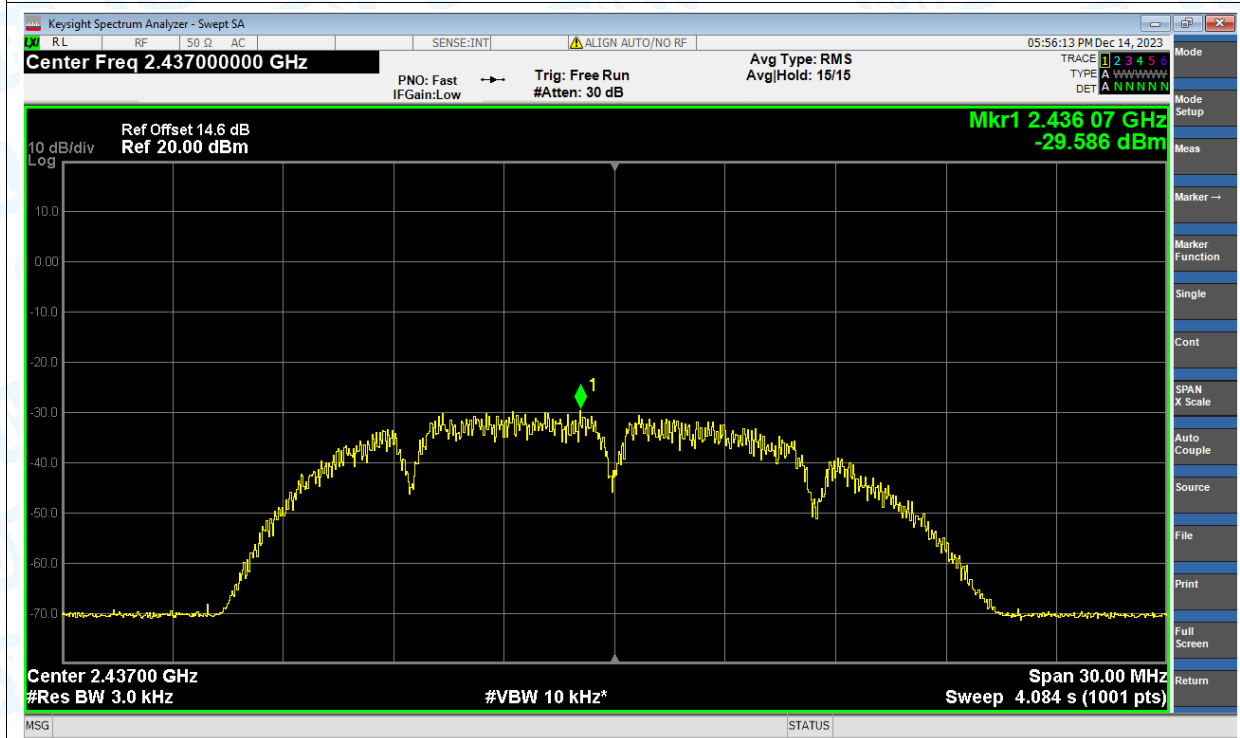
Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	-29.254	8	Pass
NVNT	b	2437	Ant1	-29.586	8	Pass
NVNT	b	2462	Ant1	-29.049	8	Pass
NVNT	g	2412	Ant1	-36.562	8	Pass
NVNT	g	2437	Ant1	-36.362	8	Pass
NVNT	g	2462	Ant1	-36.808	8	Pass
NVNT	n(HT20)	2412	Ant1	-36.155	8	Pass
NVNT	n(HT20)	2437	Ant1	-36.551	8	Pass
NVNT	n(HT20)	2462	Ant1	-37.959	8	Pass
NVNT	n(HT40)	2422	Ant1	-39.725	8	Pass
NVNT	n(HT40)	2437	Ant1	-40.554	8	Pass
NVNT	n(HT40)	2452	Ant1	-39.34	8	Pass

Test Graphs

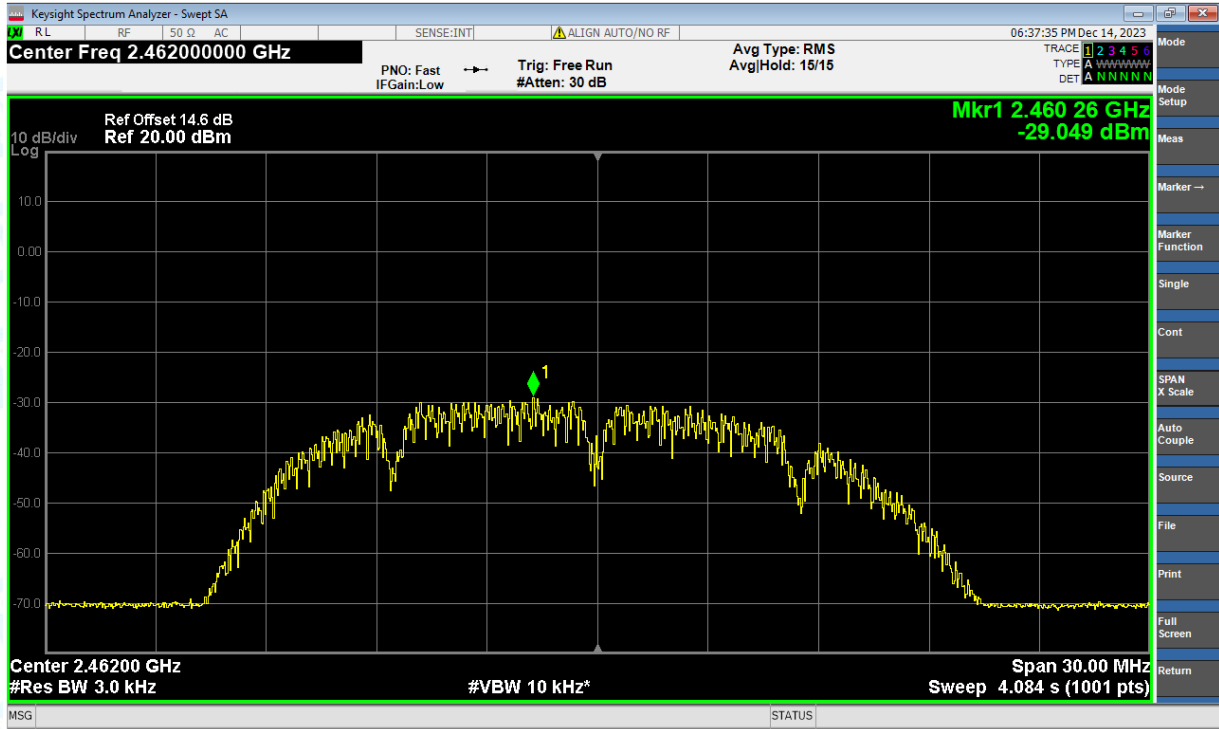
PSD NVNT b 2412MHz Ant1



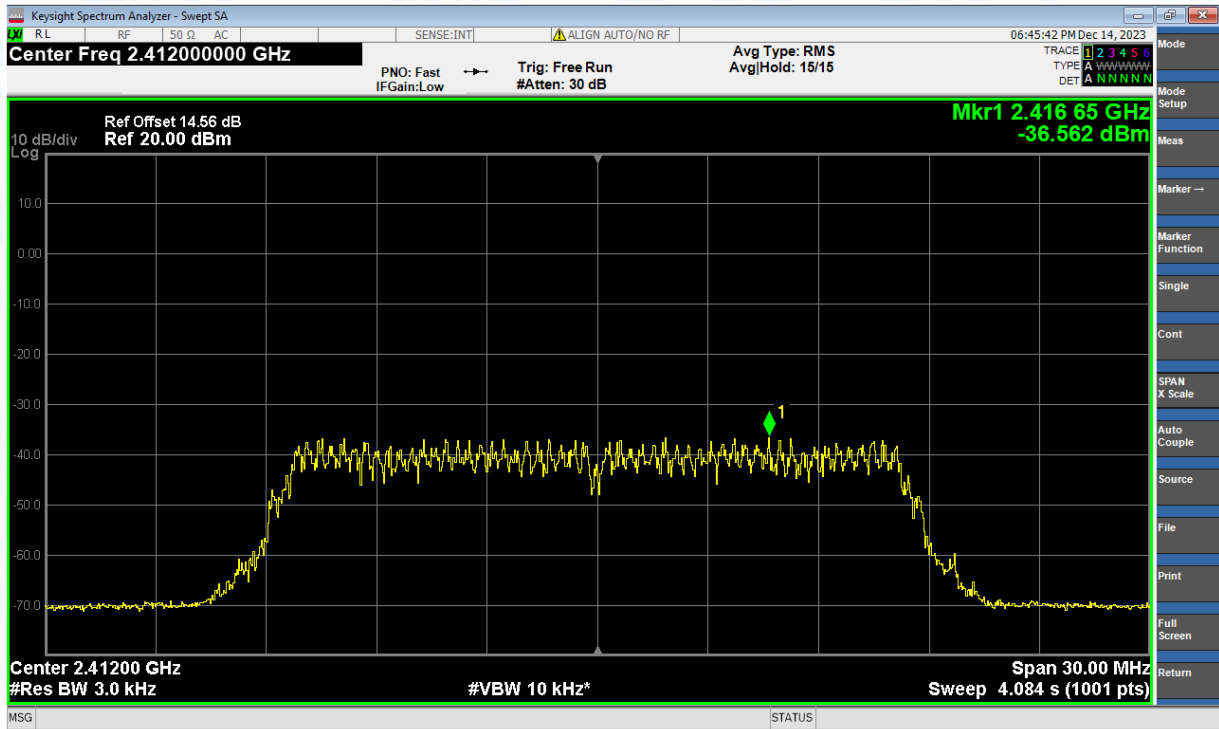
PSD NVNT b 2437MHz Ant1



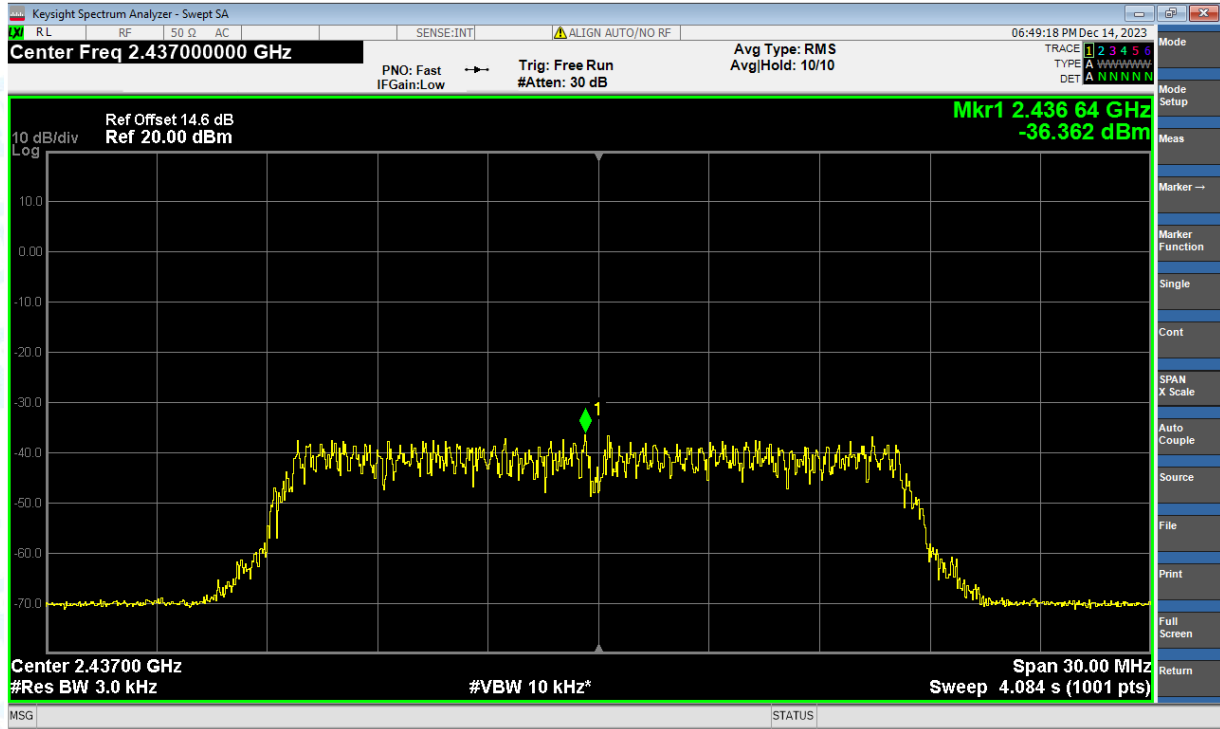
PSD NVNT b 2462MHz Ant1



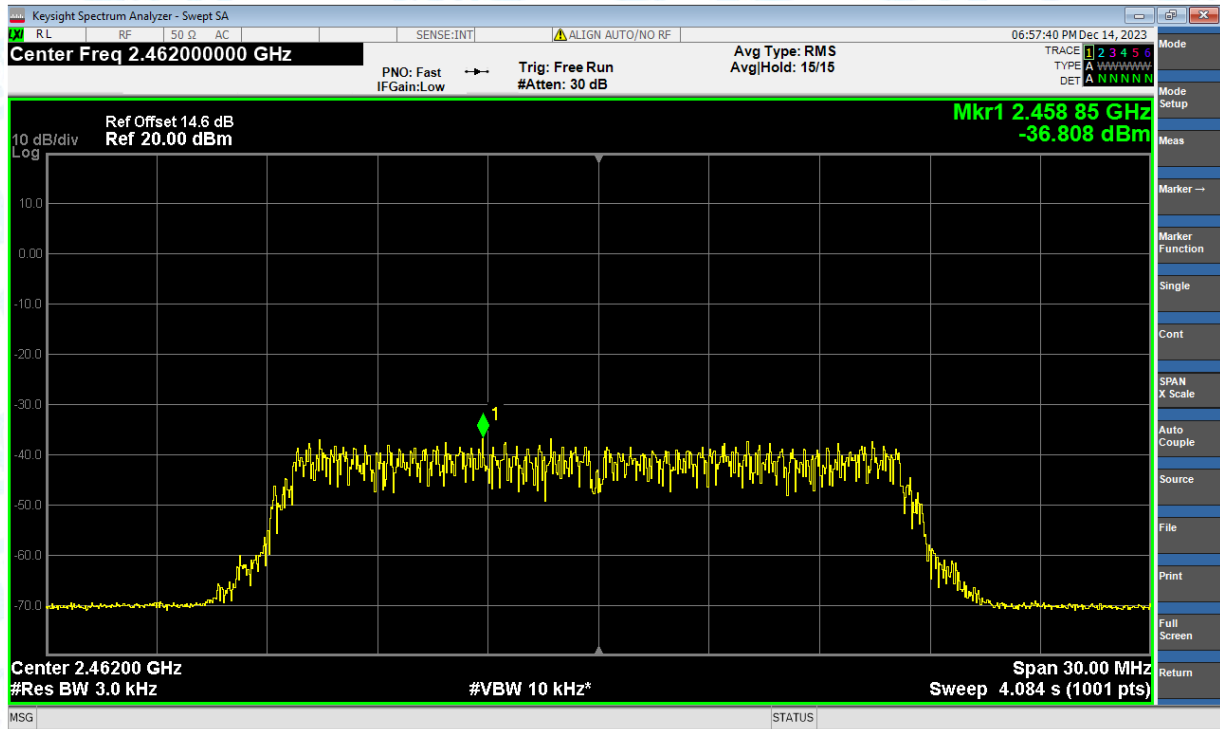
PSD NVNT g 2412MHz Ant1



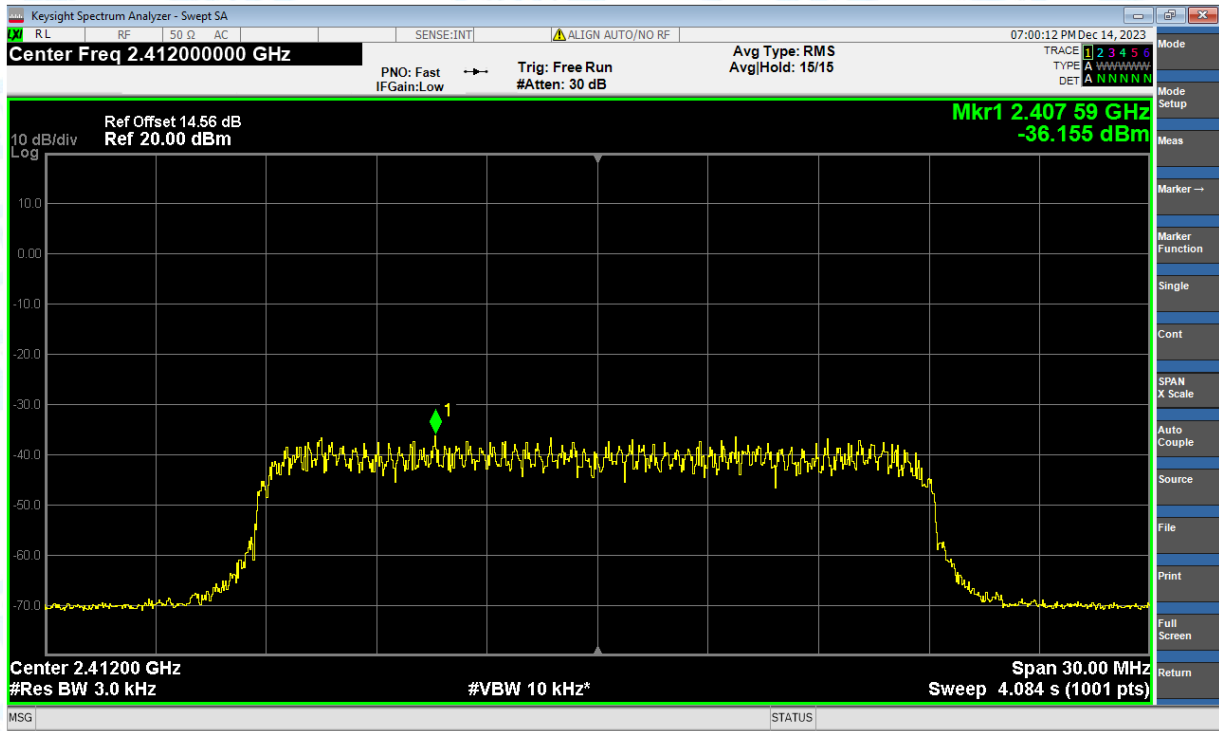
PSD NVNT g 2437MHz Ant1



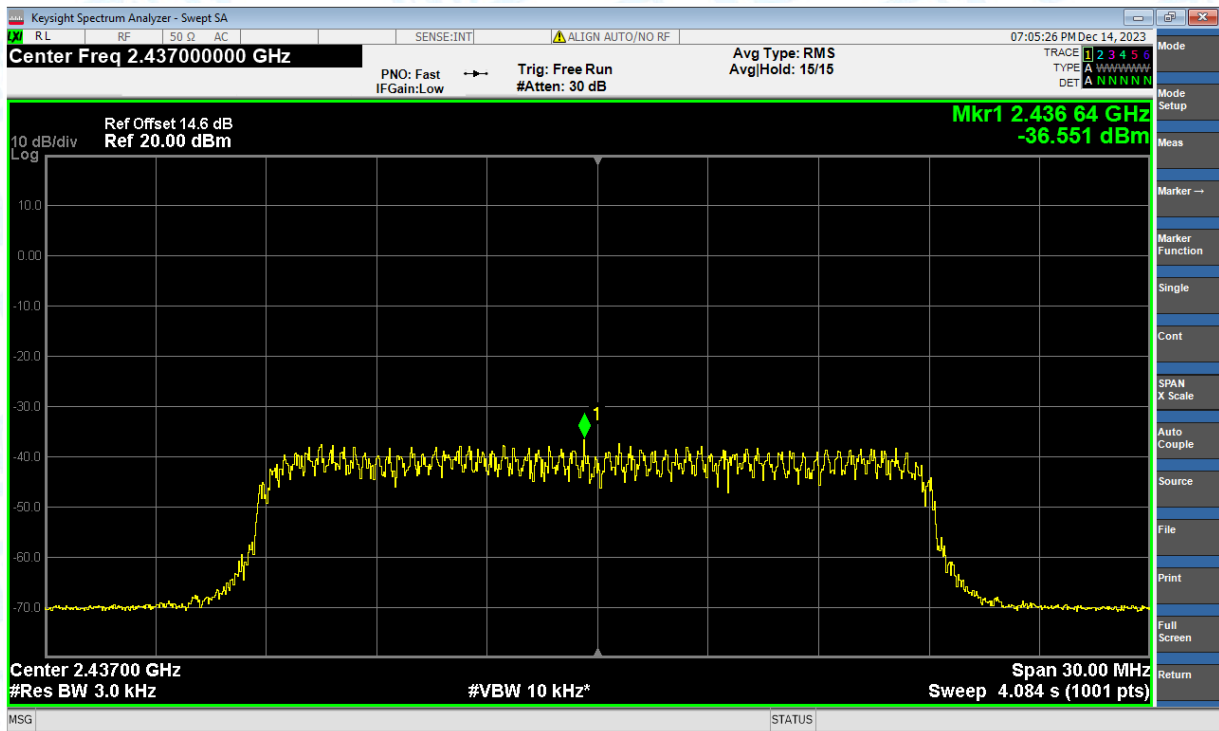
PSD NVNT g 2462MHz Ant1



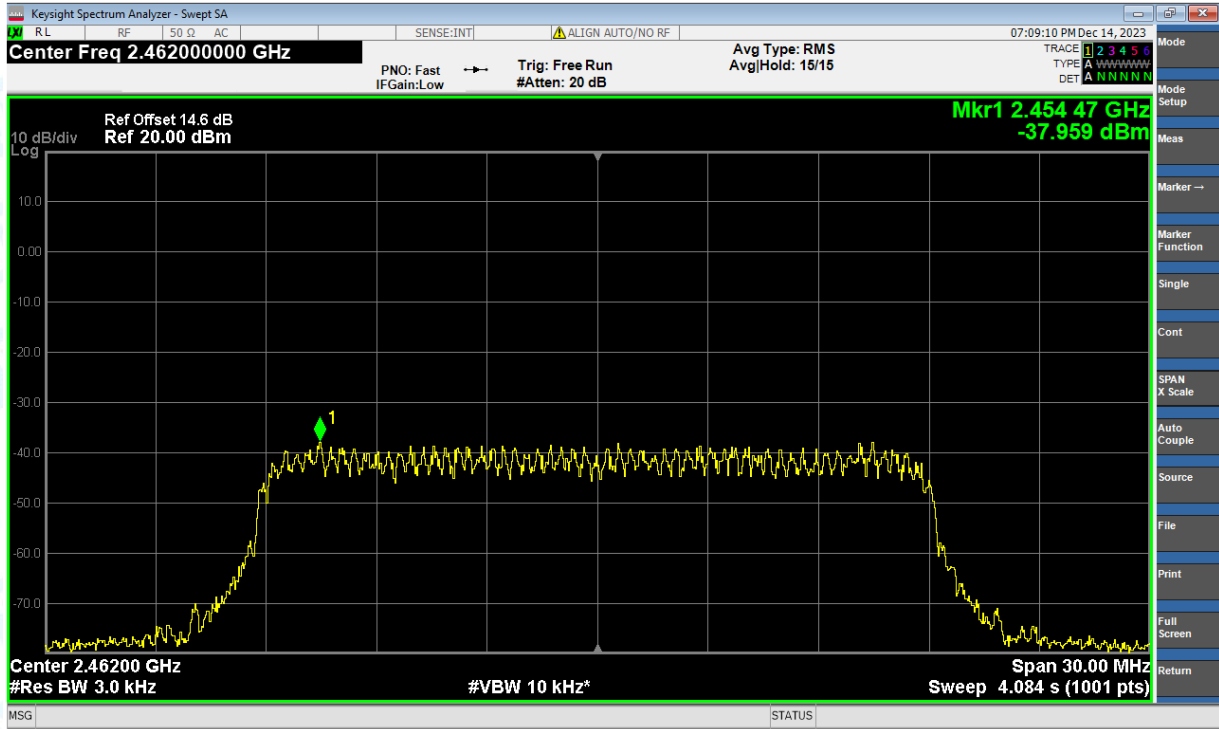
PSD NVNT n(HT20) 2412MHz Ant1



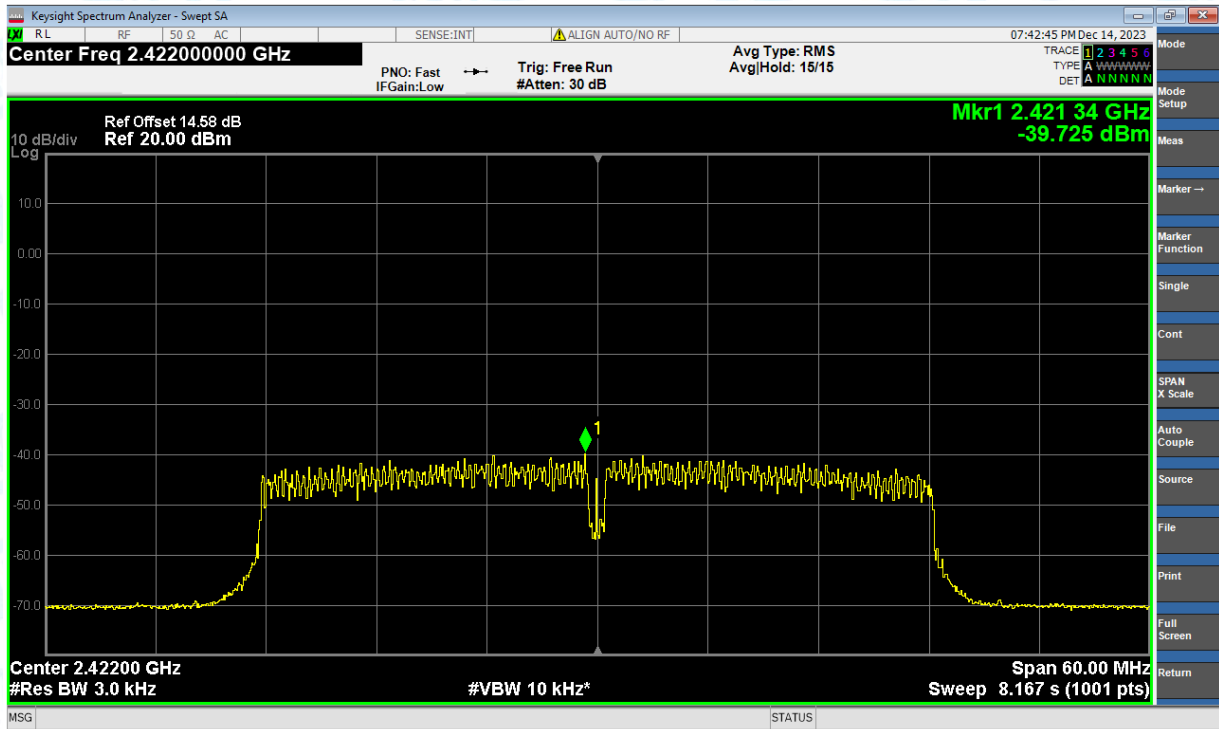
PSD NVNT n(HT20) 2437MHz Ant1



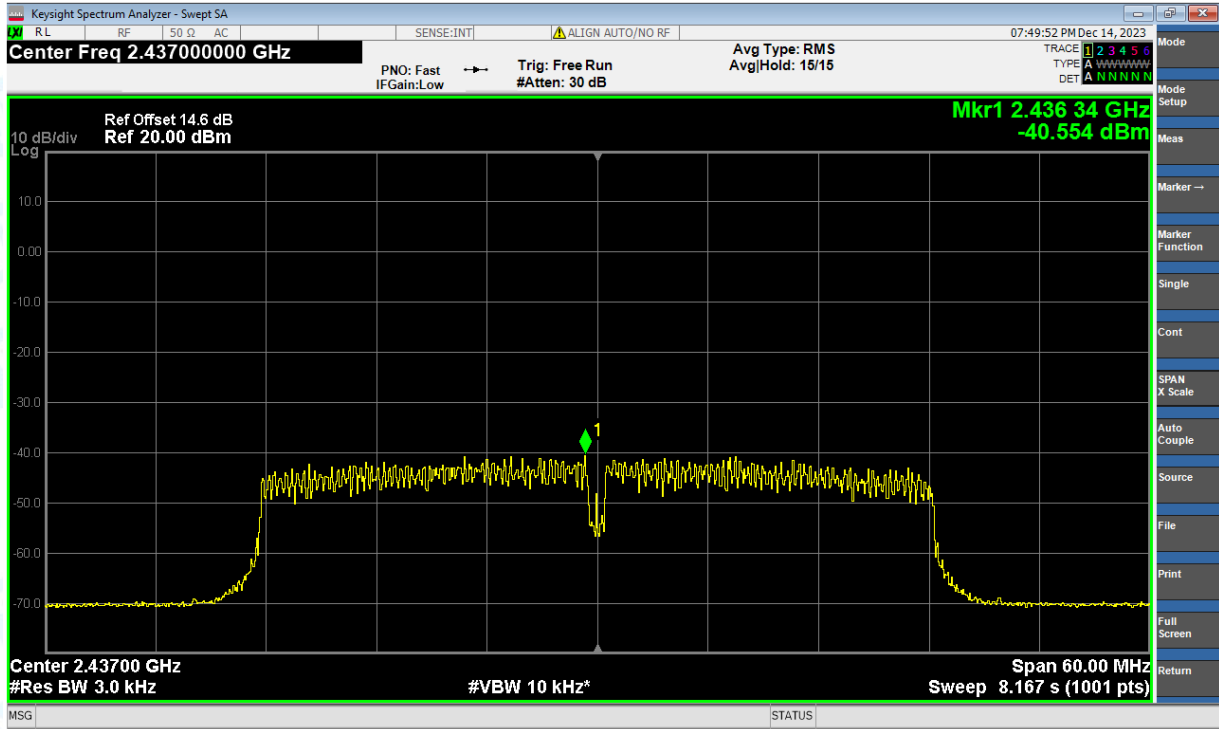
PSD NVNT n(HT20) 2462MHz Ant1



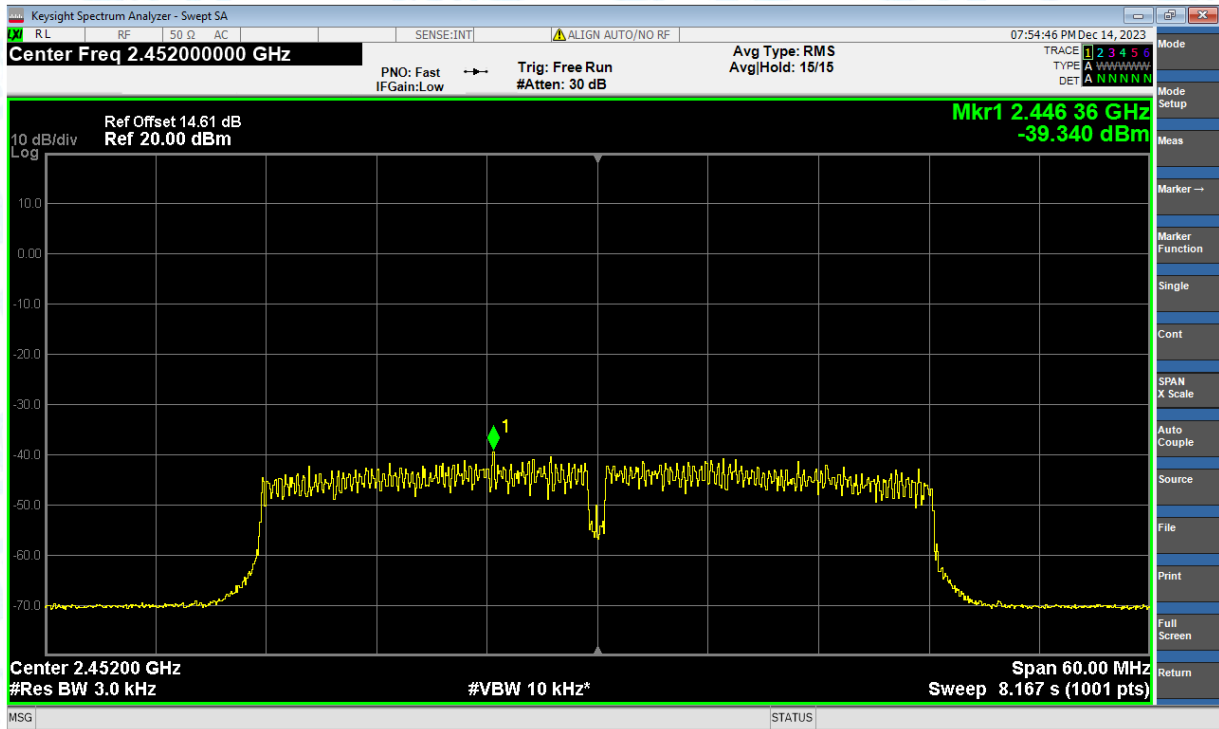
PSD NVNT n(HT40) 2422MHz Ant1



PSD NVNT n(HT40) 2437MHz Ant1



PSD NVNT n(HT40) 2452MHz Ant1

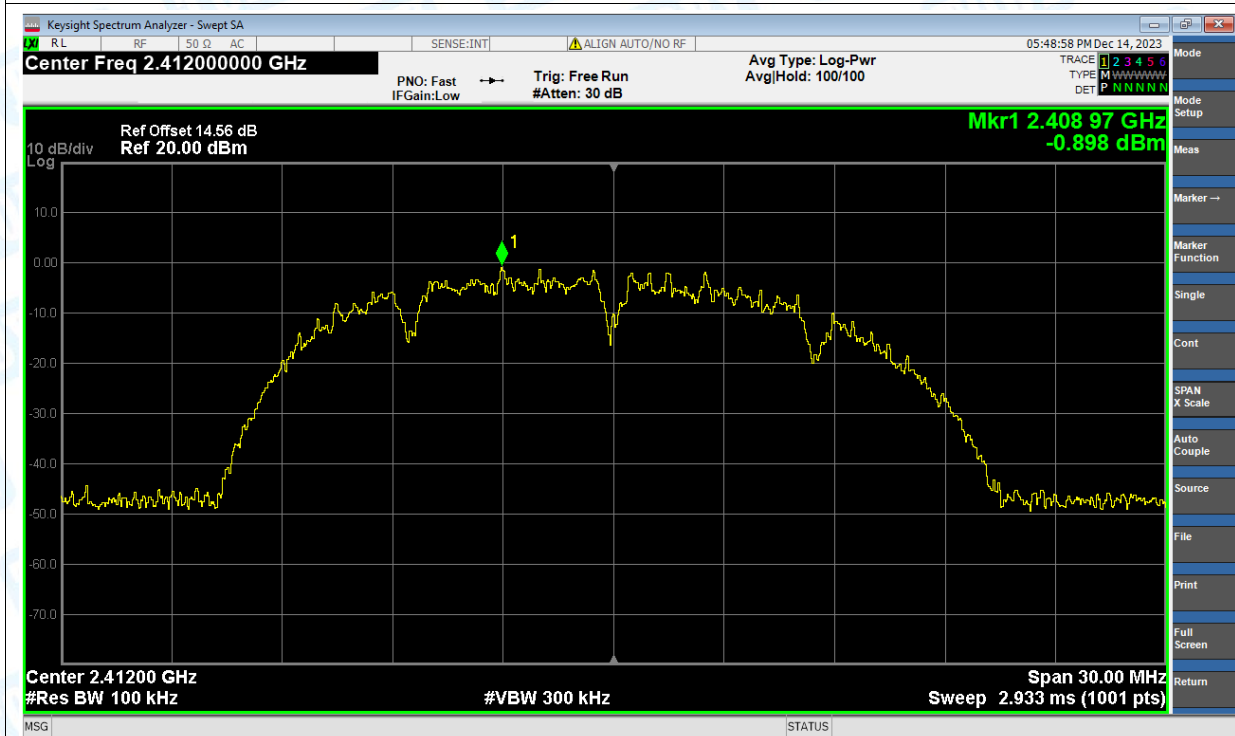


Band Edge

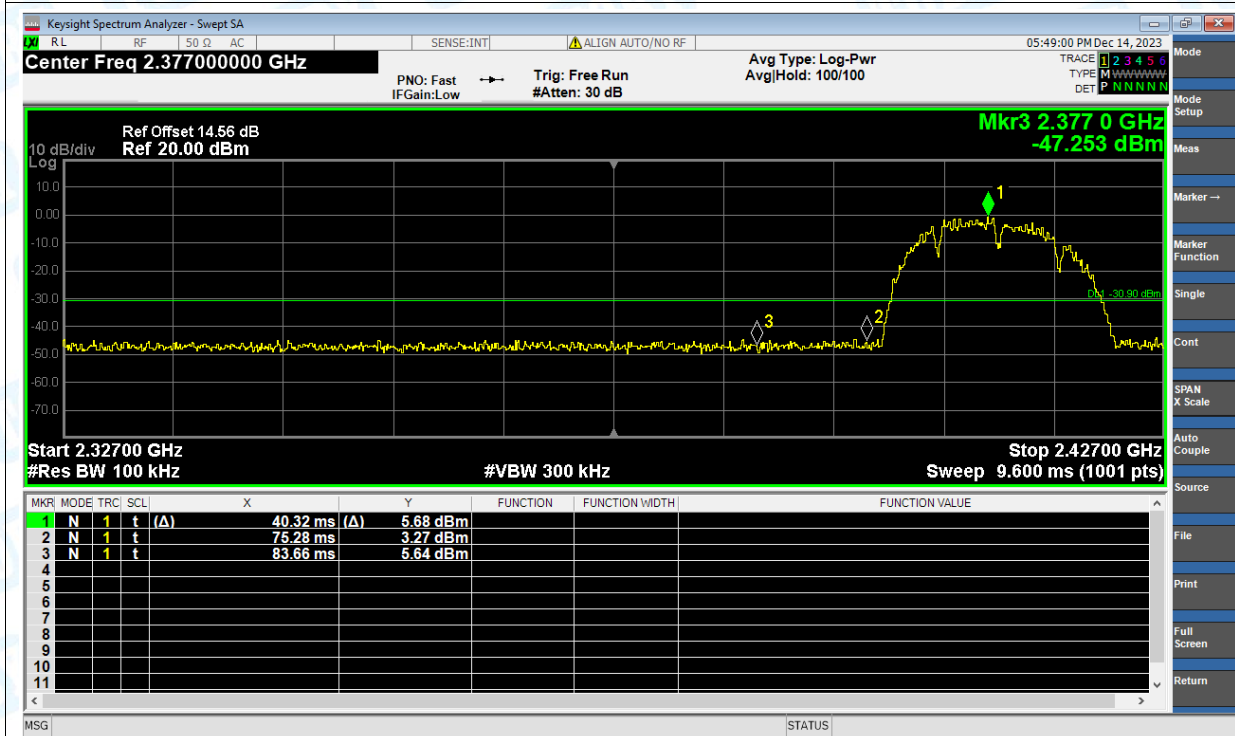
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-43.74	-30	Pass
NVNT	b	2462	Ant1	-44.03	-30	Pass
NVNT	g	2412	Ant1	-37.24	-30	Pass
NVNT	g	2462	Ant1	-39.55	-30	Pass
NVNT	n(HT20)	2412	Ant1	-36.19	-30	Pass
NVNT	n(HT20)	2462	Ant1	-42.46	-30	Pass
NVNT	n(HT40)	2422	Ant1	-36.18	-30	Pass
NVNT	n(HT40)	2452	Ant1	-36.48	-30	Pass

Test Graphs

Band Edge NVNT b 2412MHz Ant1 Ref



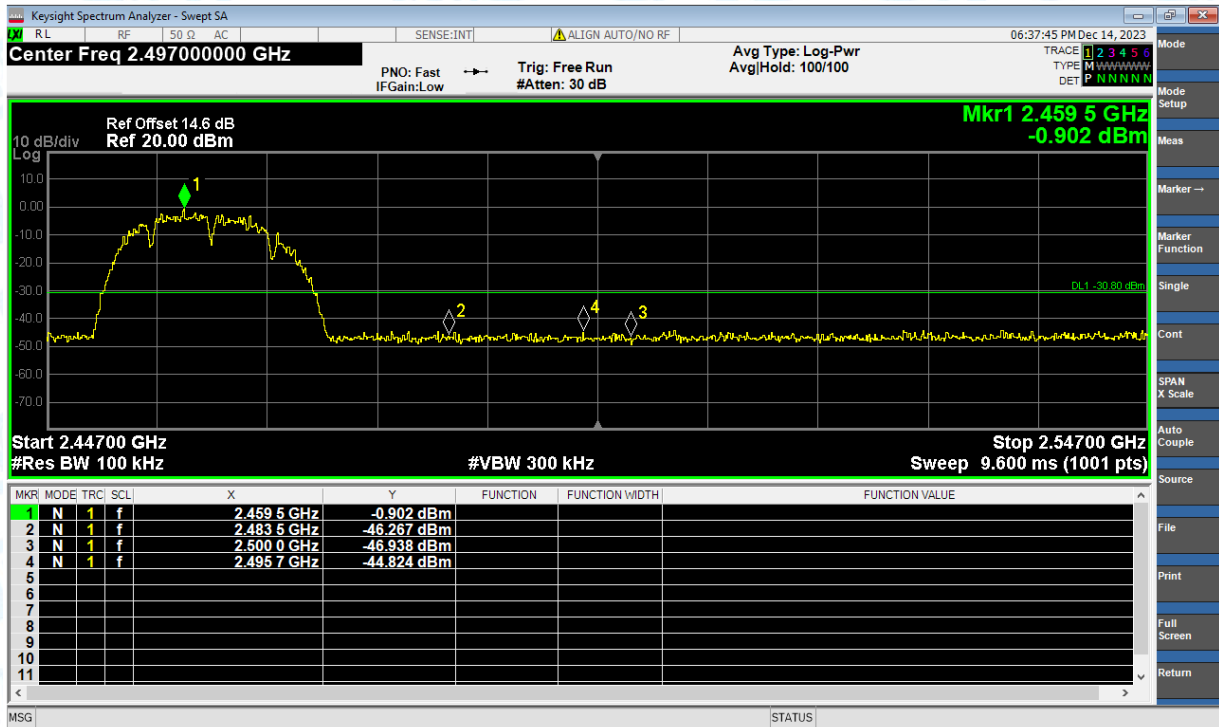
Band Edge NVNT b 2412MHz Ant1 Emission



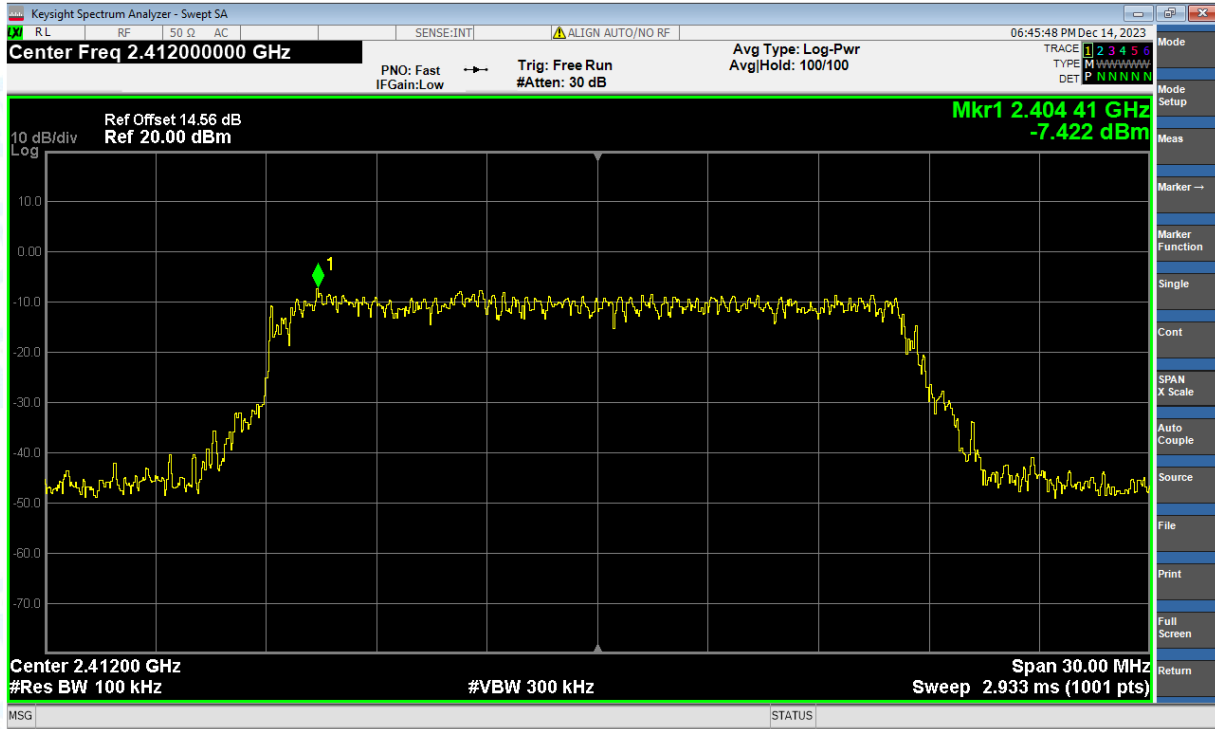
Band Edge NVNT b 2462MHz Ant1 Ref



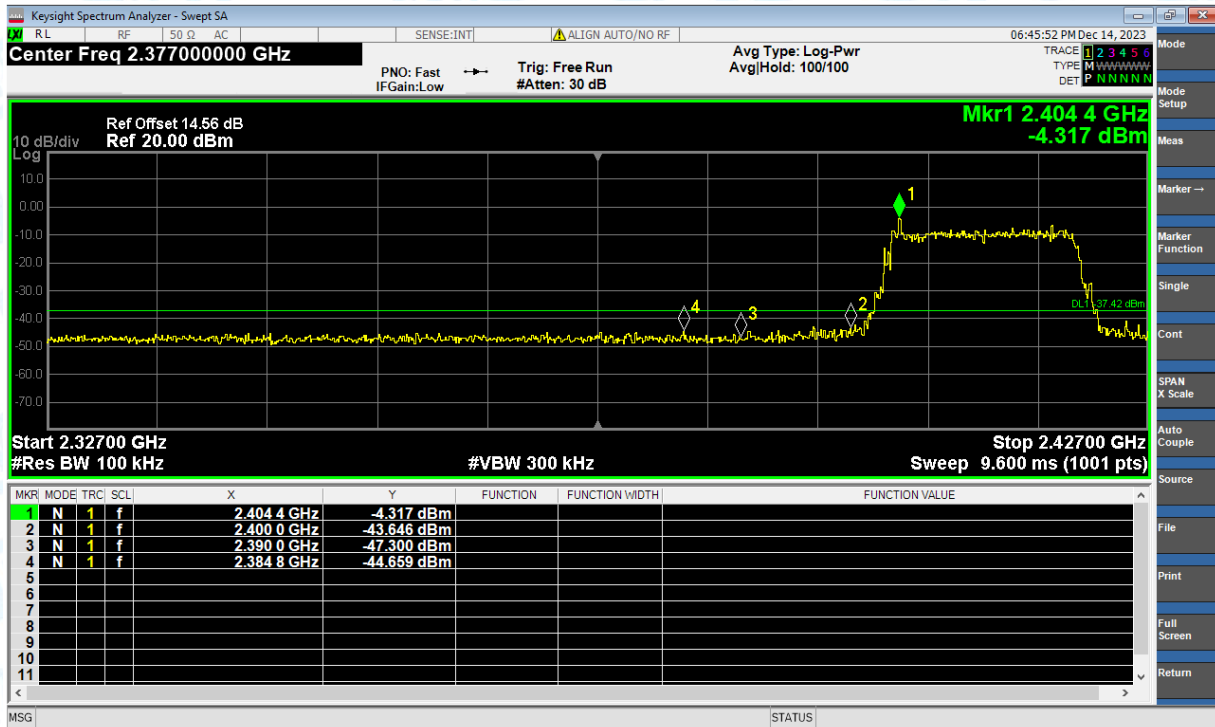
Band Edge NVNT b 2462MHz Ant1 Emission



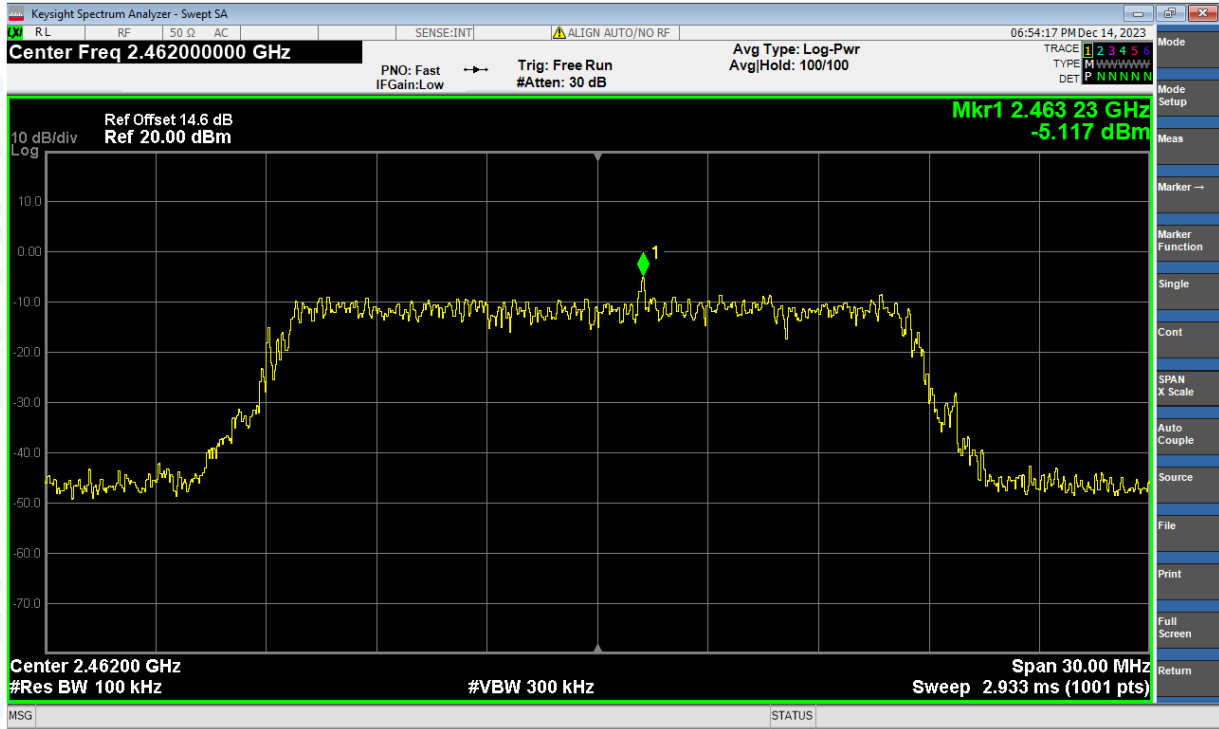
Band Edge NVNT g 2412MHz Ant1 Ref



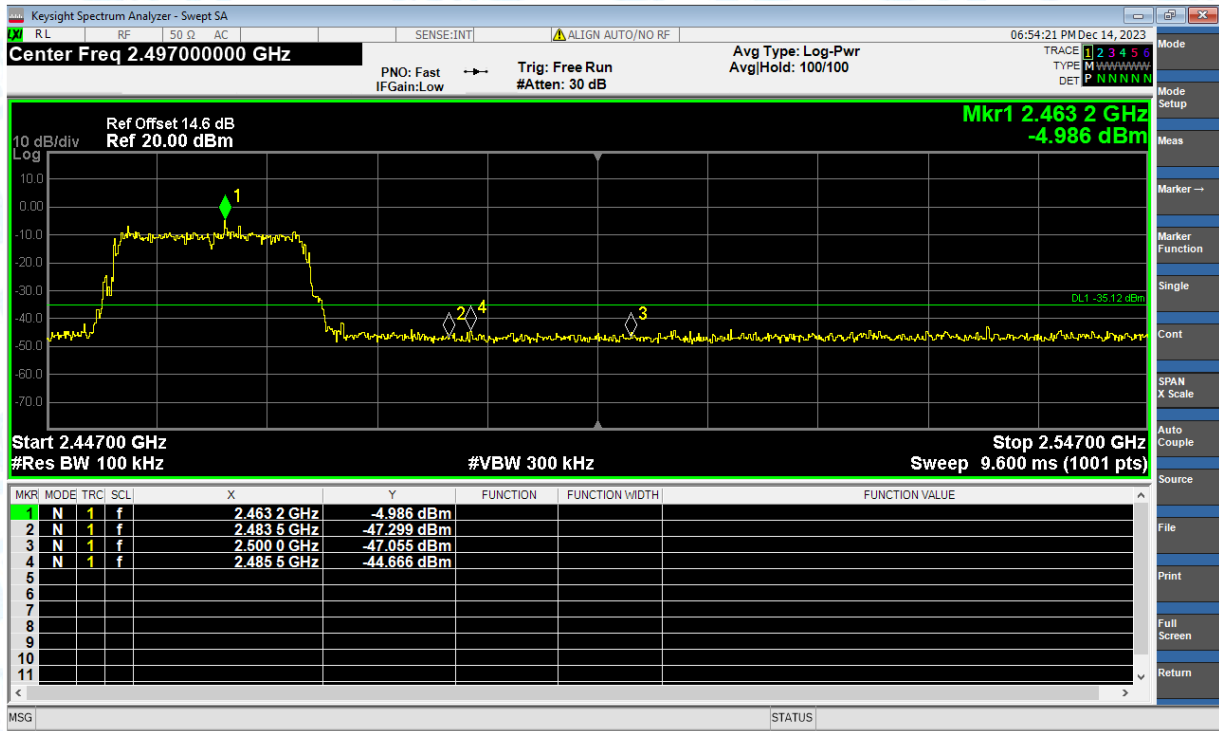
Band Edge NVNT g 2412MHz Ant1 Emission



Band Edge NVNT g 2462MHz Ant1 Ref



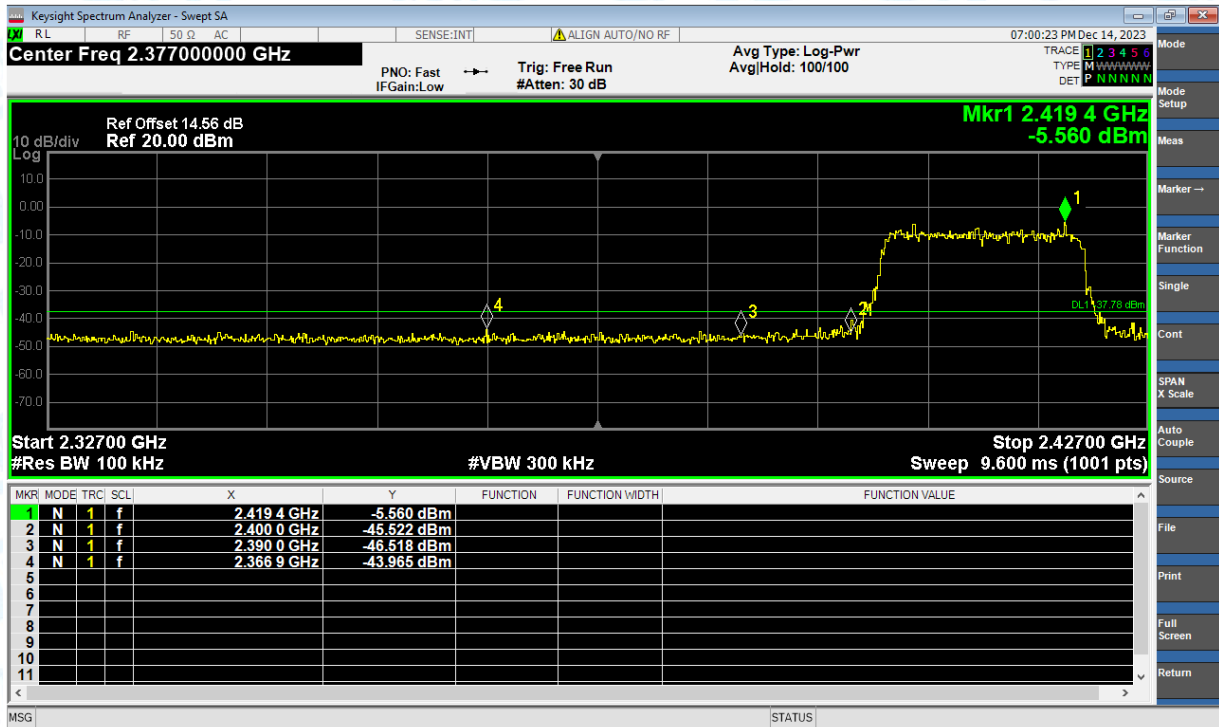
Band Edge NVNT g 2462MHz Ant1 Emission



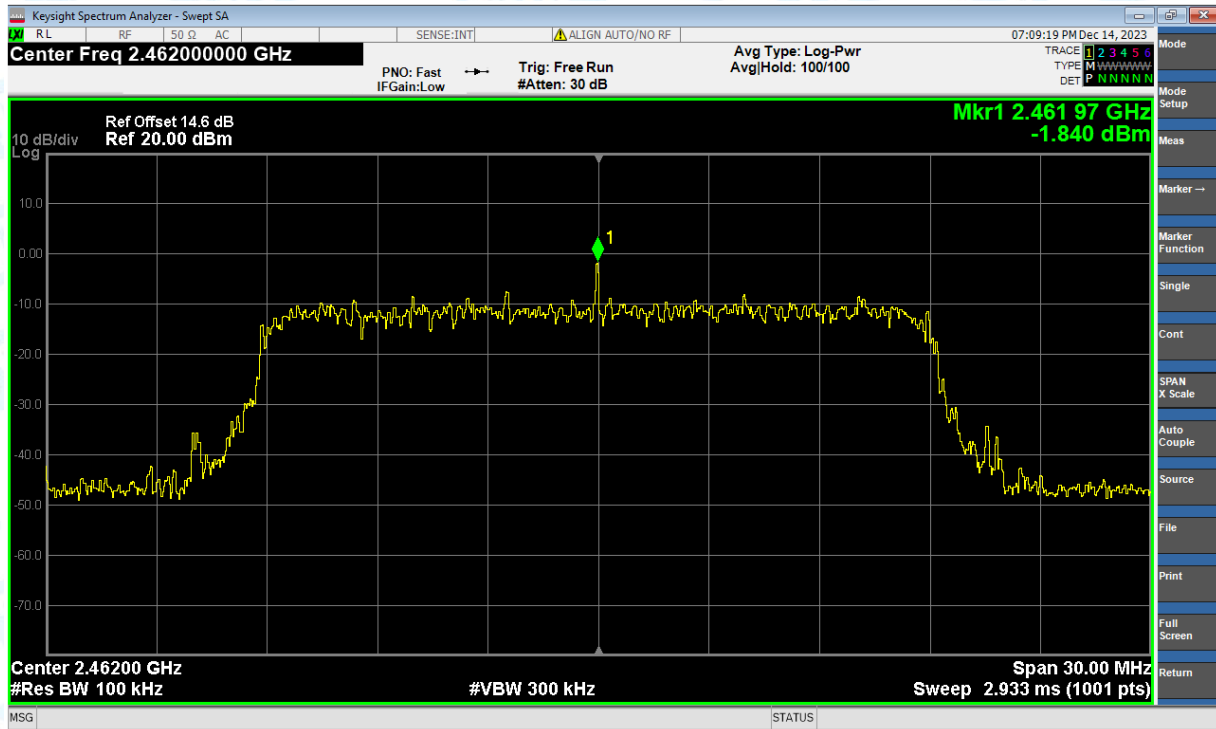
Band Edge NVNT n(HT20) 2412MHz Ant1 Ref



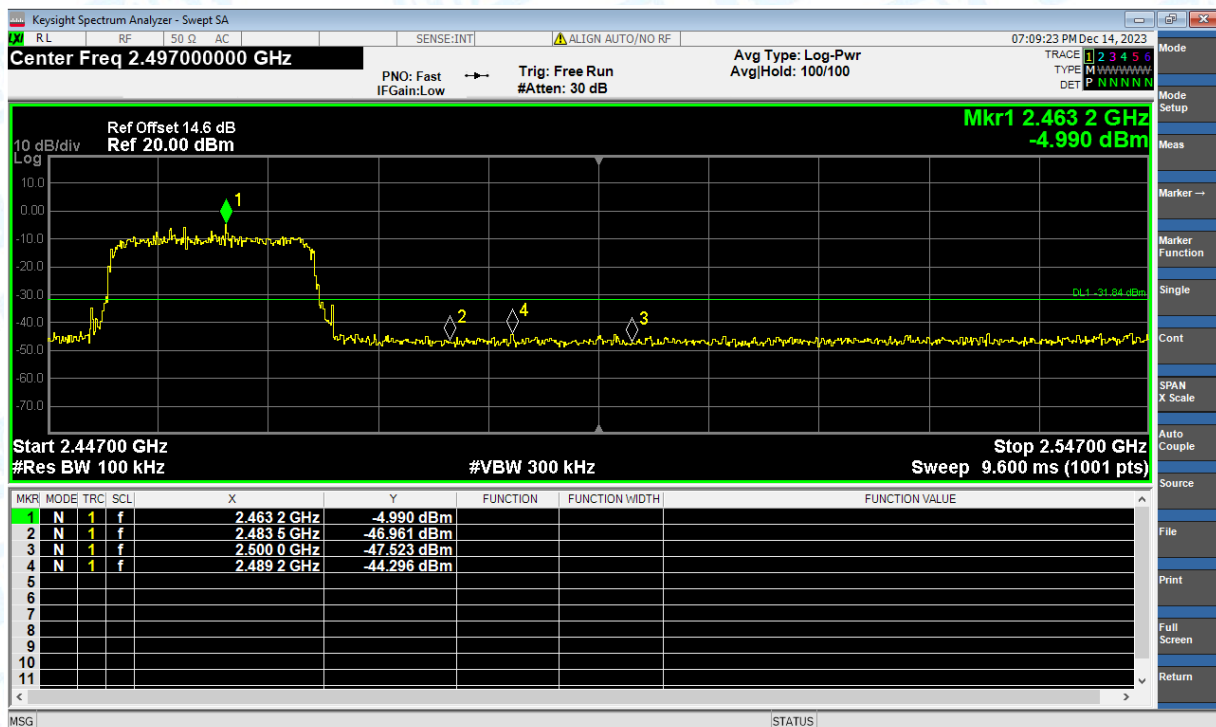
Band Edge NVNT n(HT20) 2412MHz Ant1 Emission



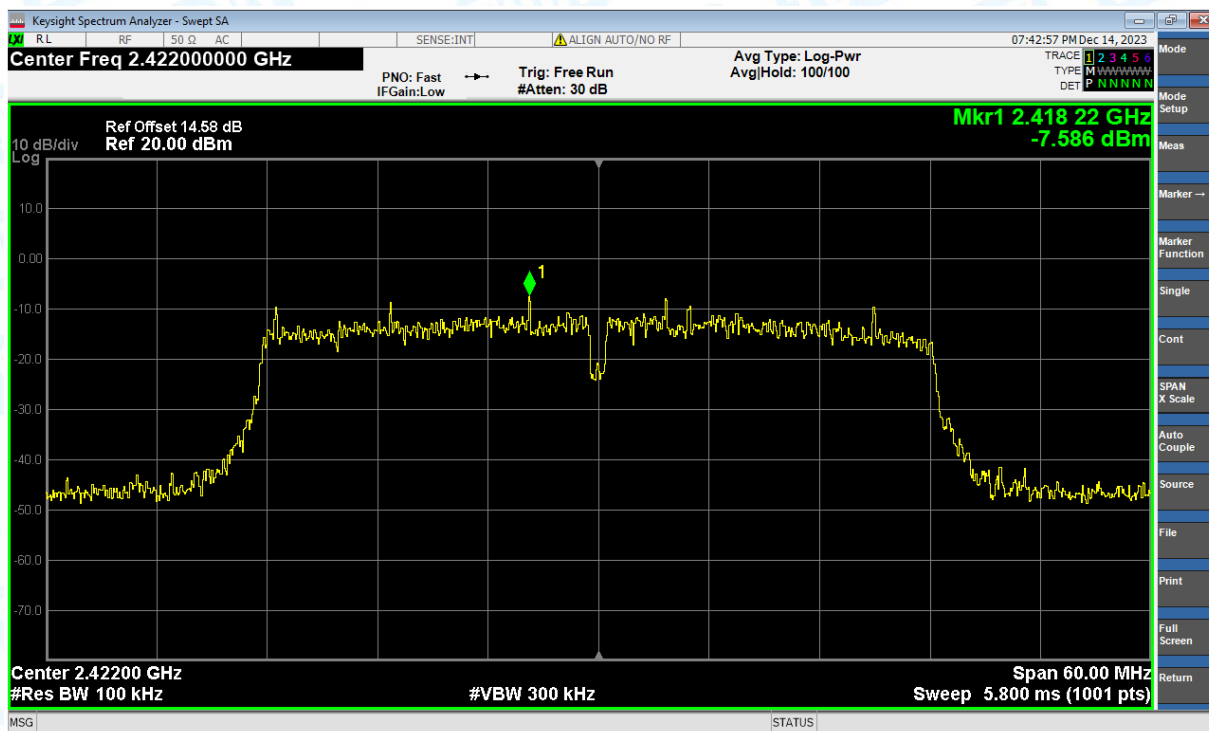
Band Edge NVNT n(HT20) 2462MHz Ant1 Ref



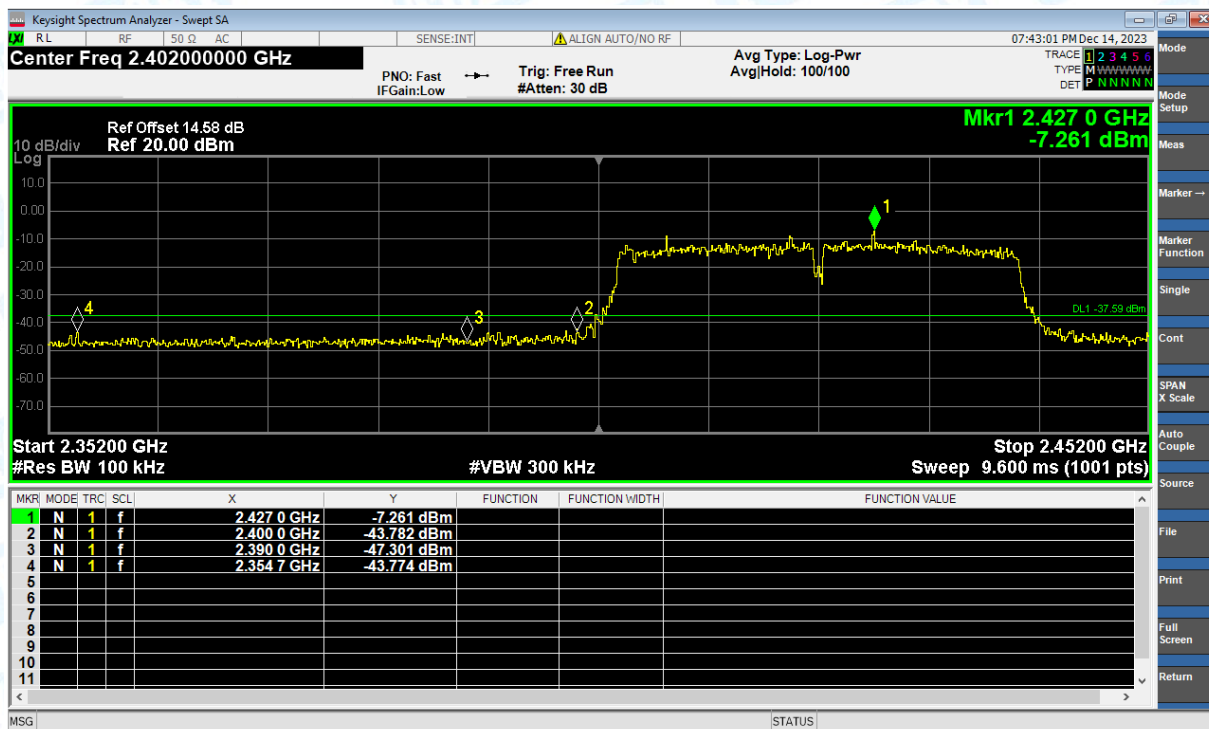
Band Edge NVNT n(HT20) 2462MHz Ant1 Emission



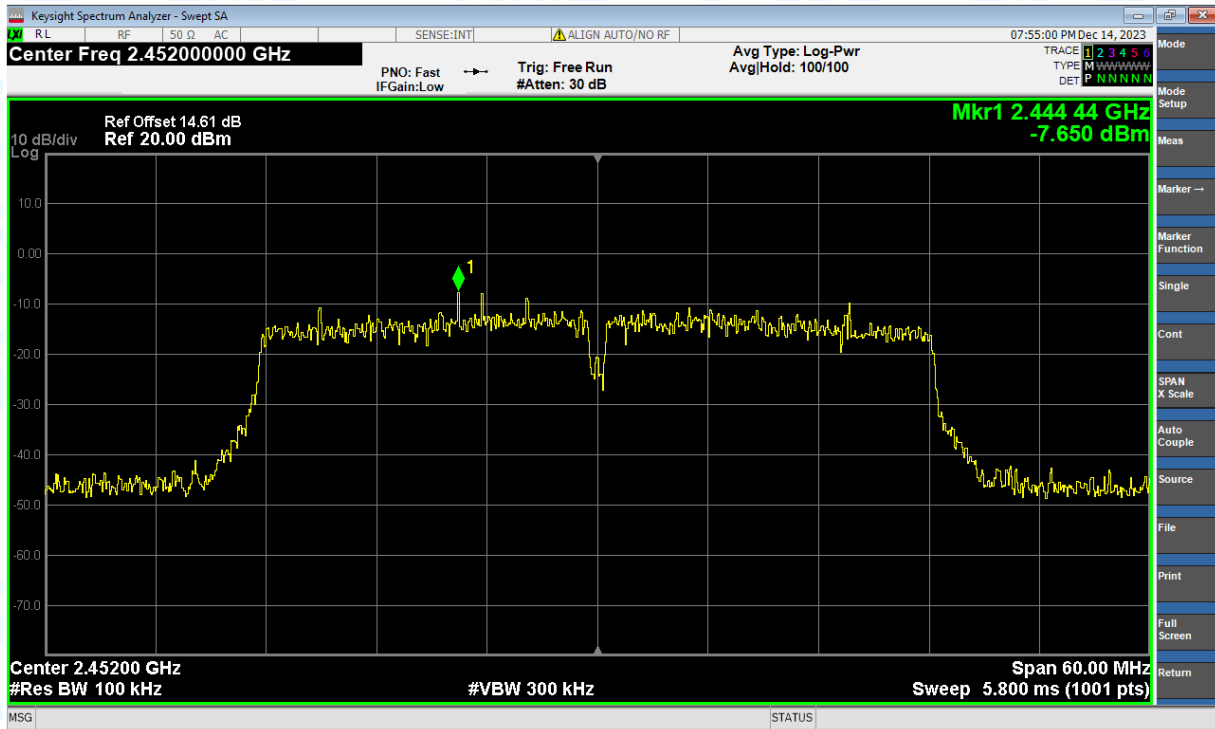
Band Edge NVNT n(HT40) 2422MHz Ant1 Ref



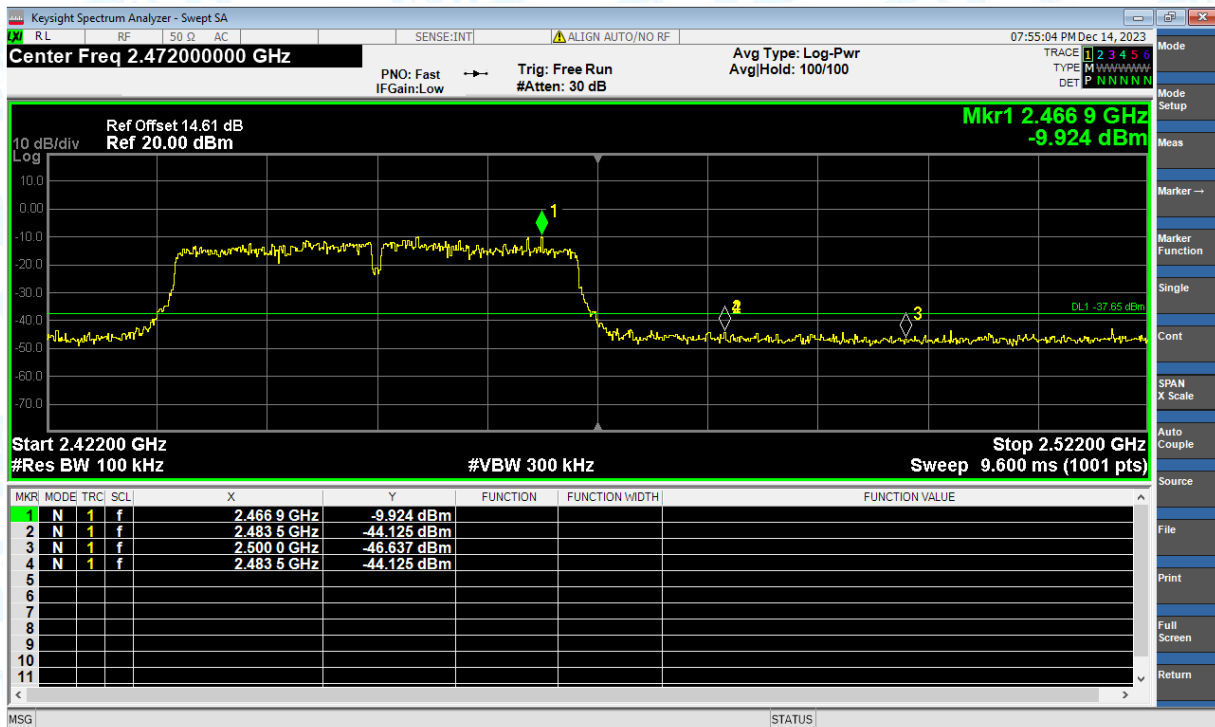
Band Edge NVNT n(HT40) 2422MHz Ant1 Emission



Band Edge NVNT n(HT40) 2452MHz Ant1 Ref



Band Edge NVNT n(HT40) 2452MHz Ant1 Emission



Conducted RF Spurious Emission

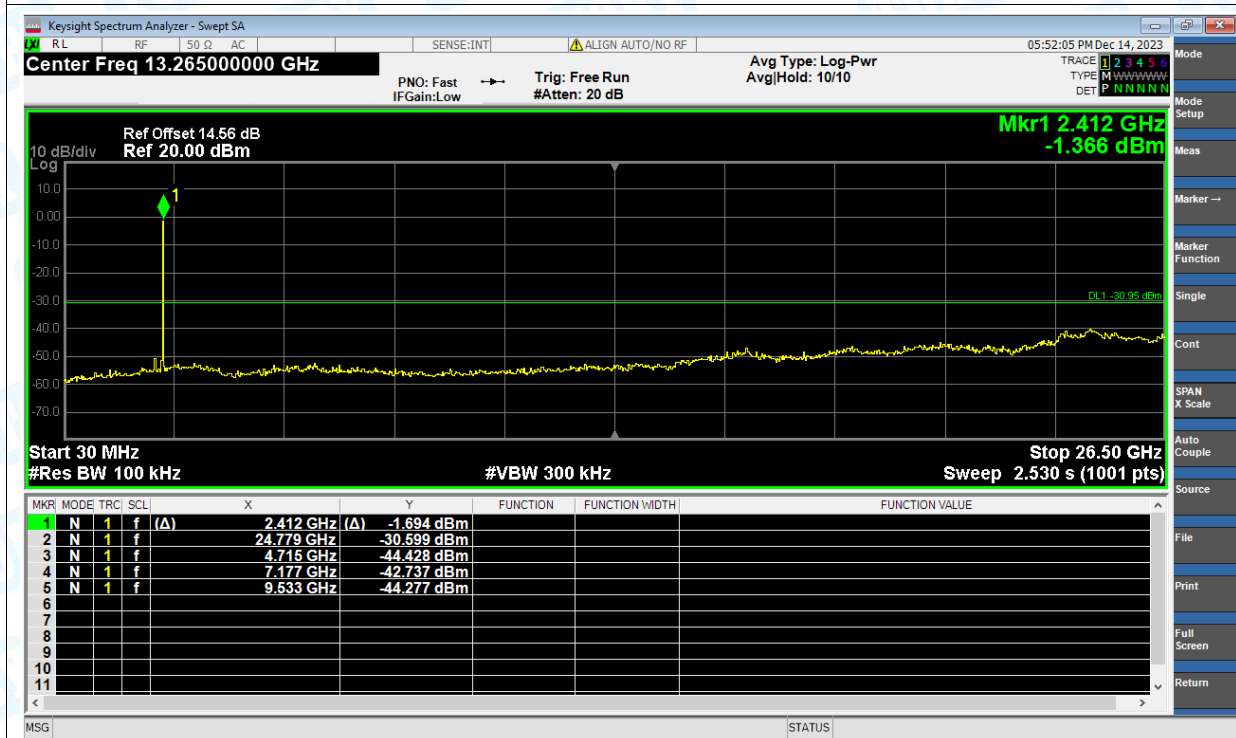
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-39.09	-30	Pass
NVNT	b	2437	Ant1	-38.28	-30	Pass
NVNT	b	2462	Ant1	-39.72	-30	Pass
NVNT	g	2412	Ant1	-31.81	-30	Pass
NVNT	g	2437	Ant1	-33.71	-30	Pass
NVNT	g	2462	Ant1	-32.61	-30	Pass
NVNT	n(HT20)	2412	Ant1	-35.86	-30	Pass
NVNT	n(HT20)	2437	Ant1	-34.93	-30	Pass
NVNT	n(HT20)	2462	Ant1	-31.61	-30	Pass
NVNT	n(HT40)	2422	Ant1	-31.39	-30	Pass
NVNT	n(HT40)	2437	Ant1	-32.49	-30	Pass
NVNT	n(HT40)	2452	Ant1	-32.3	-30	Pass

Test Graphs

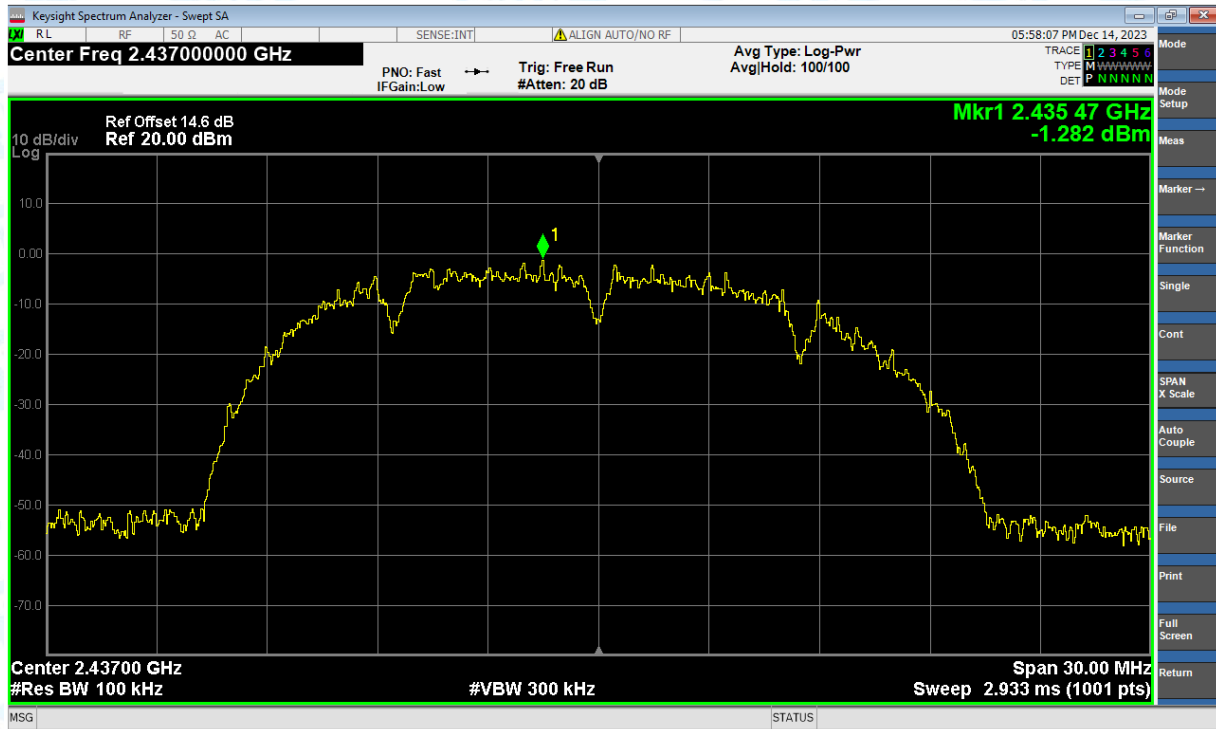
Tx. Spurious NVNT b 2412MHz Ant1 Ref



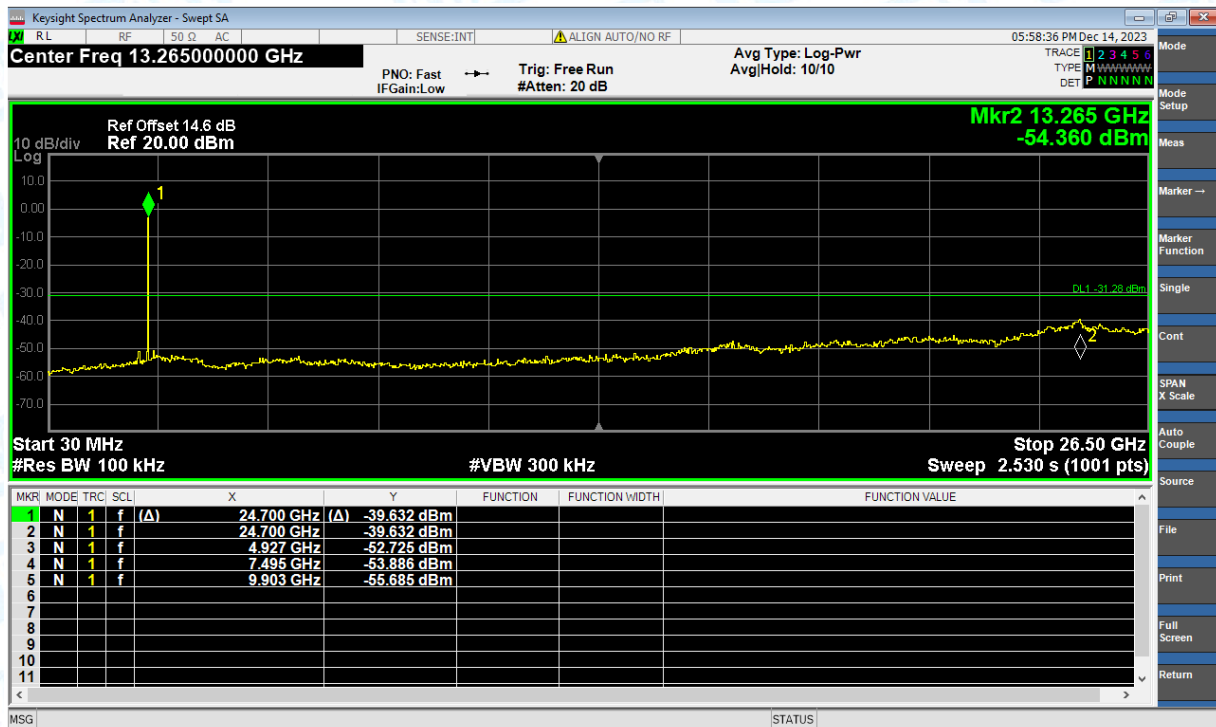
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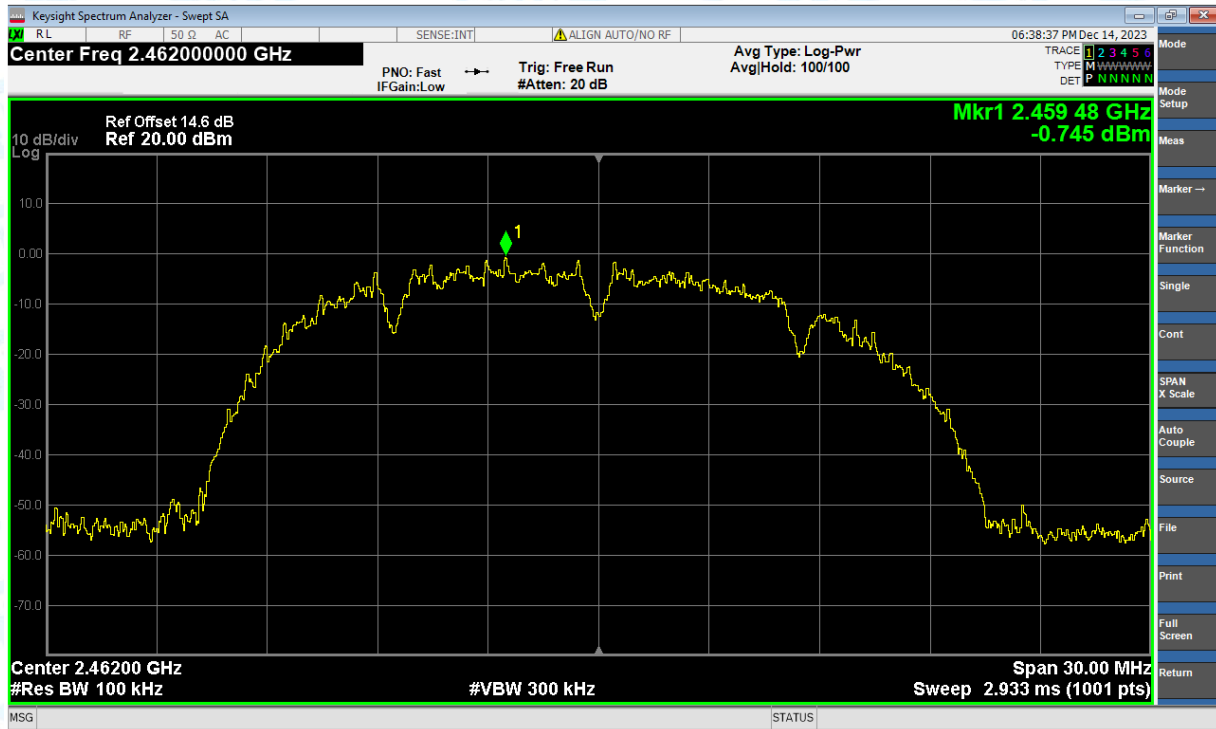
Tx. Spurious NVNT b 2437MHz Ant1 Ref



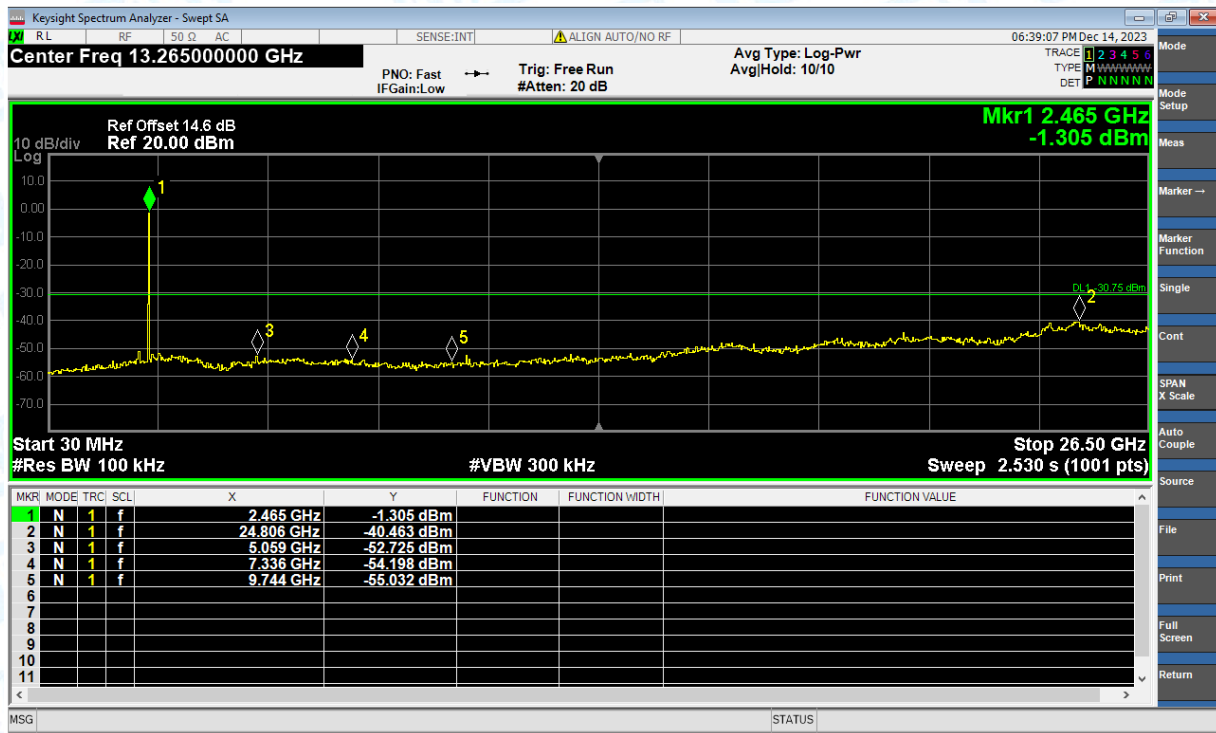
Tx. Spurious NVNT b 2437MHz Ant1 Emission



Tx. Spurious NVNT b 2462MHz Ant1 Ref



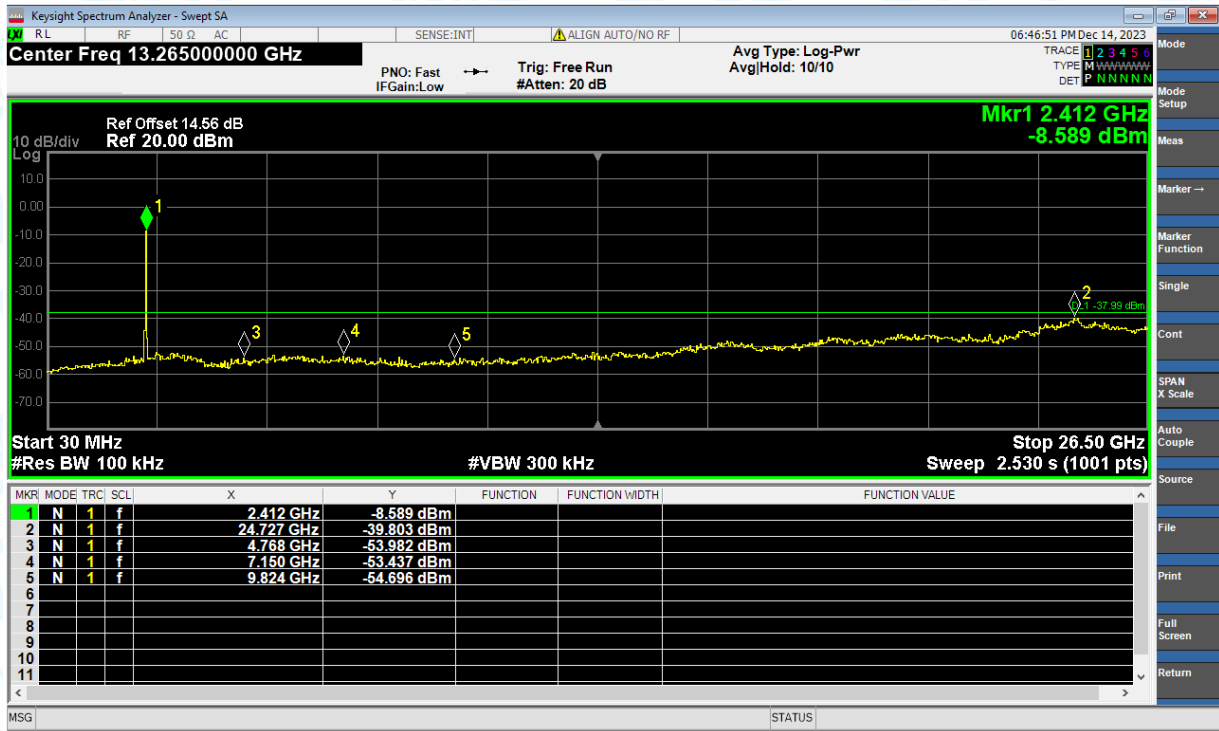
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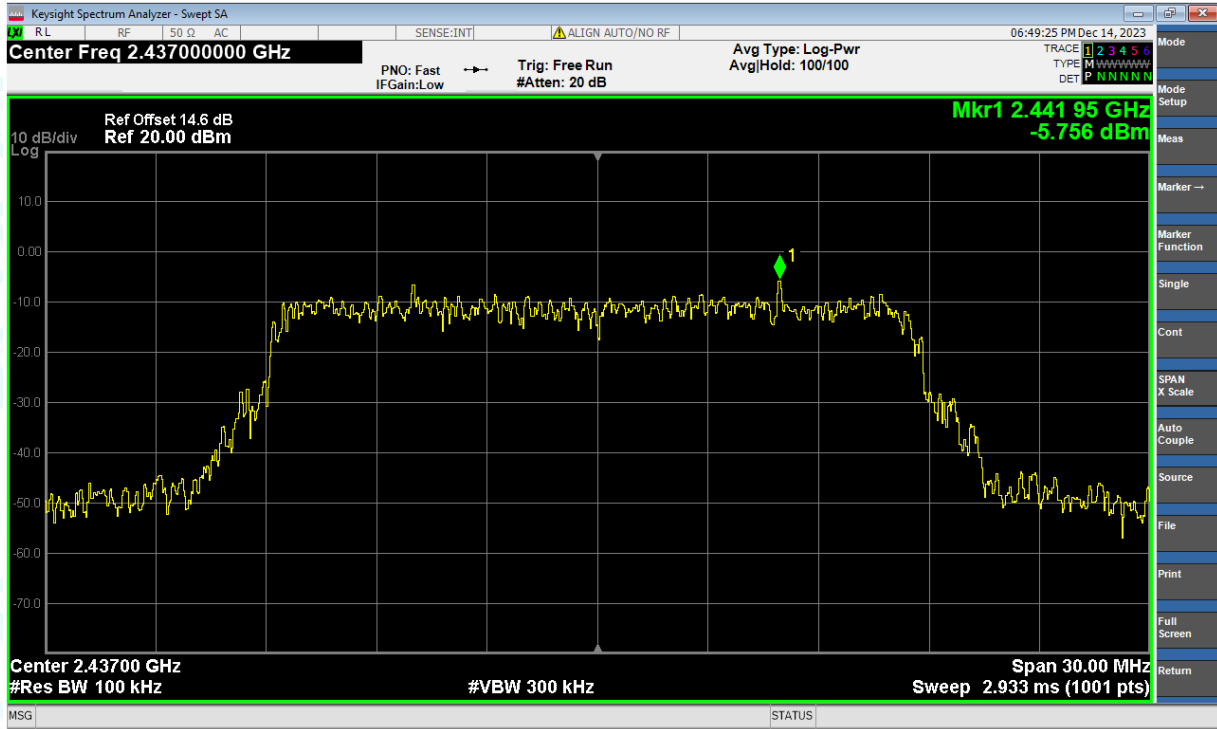
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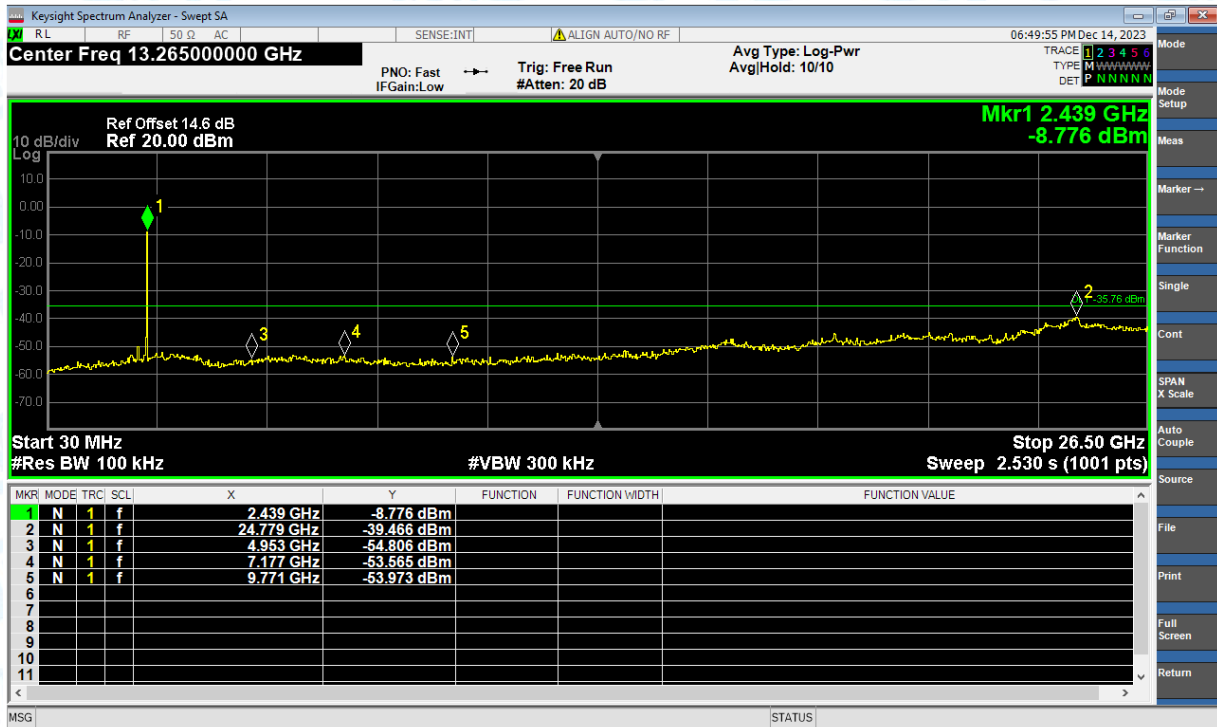
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Tx. Spurious NVNT g 2437MHz Ant1 Ref



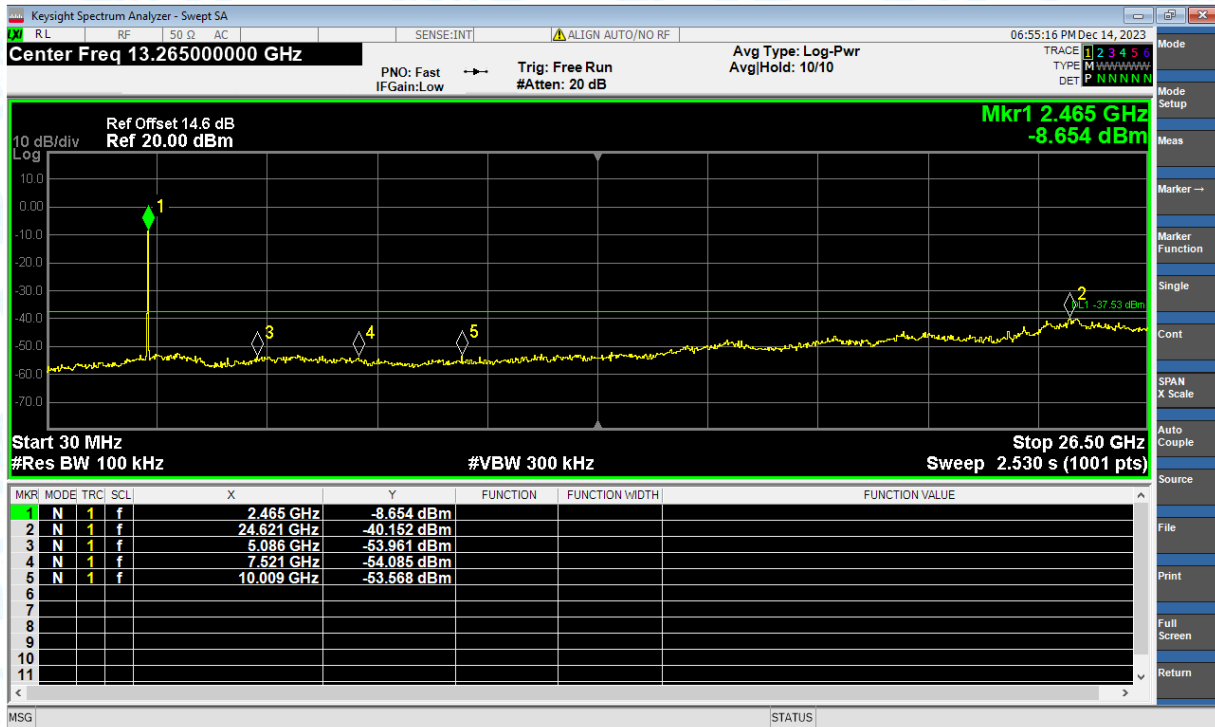
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Tx. Spurious NVNT g 2462MHz Ant1 Ref



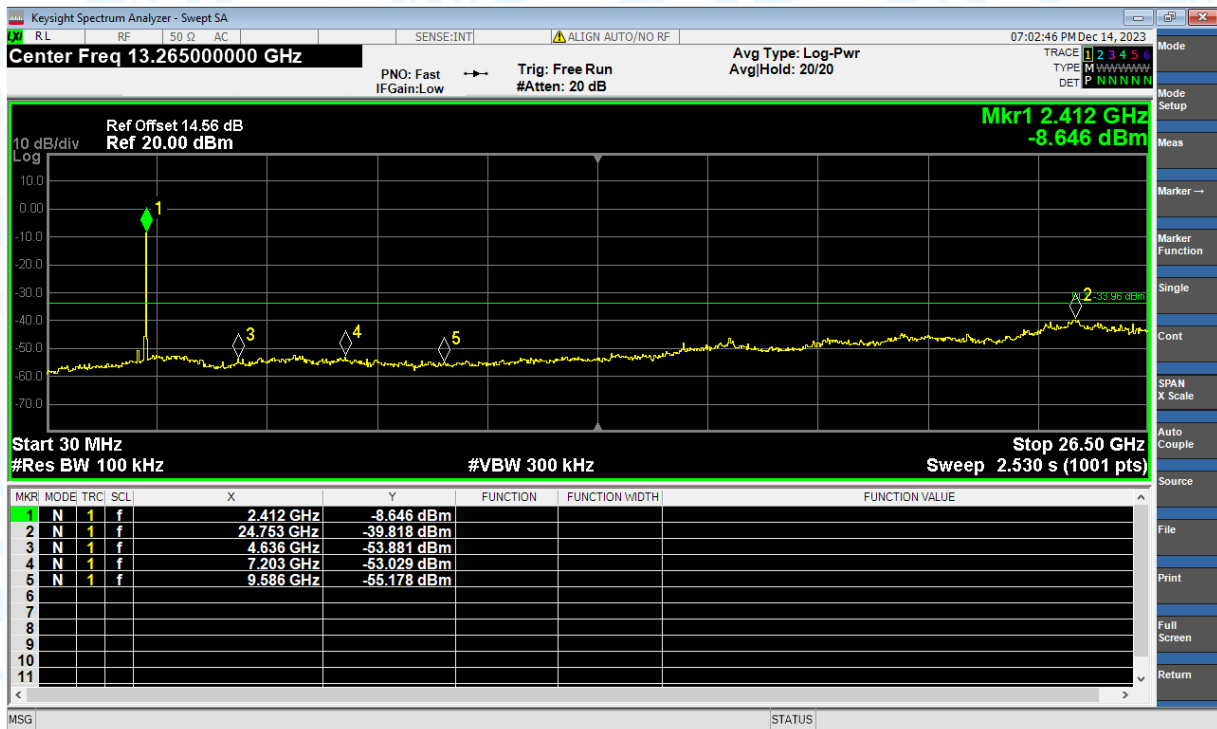
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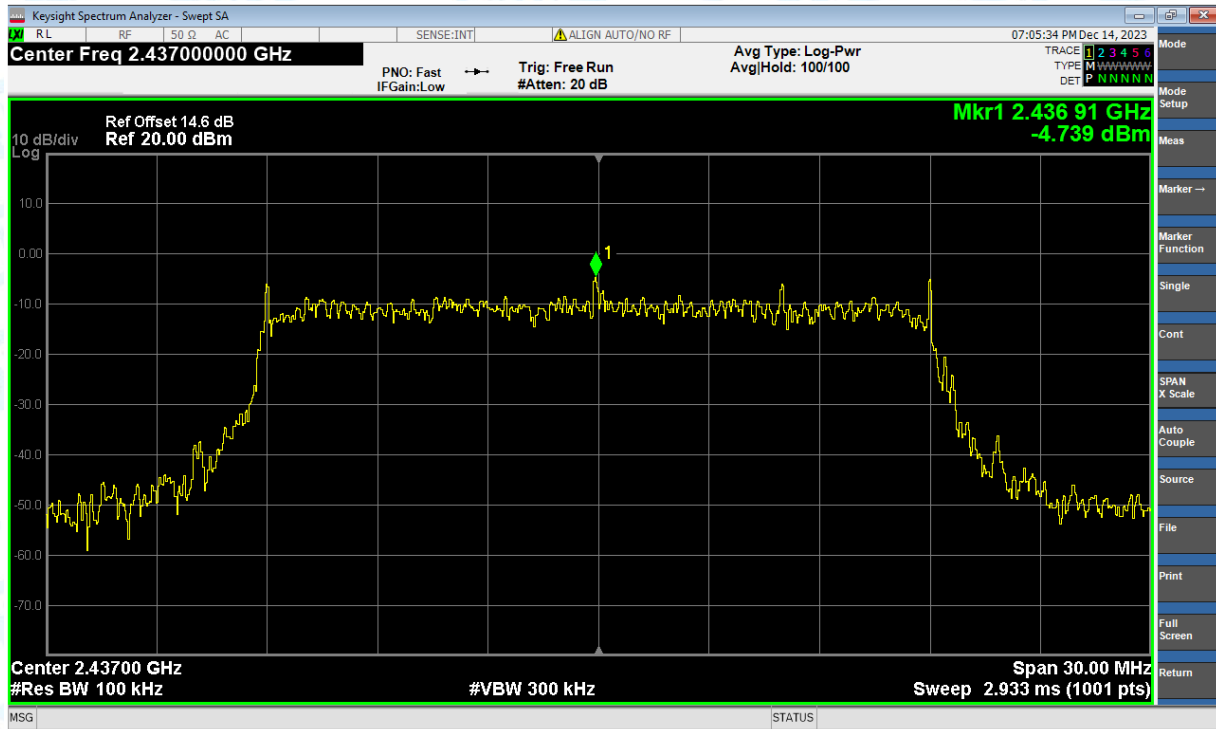
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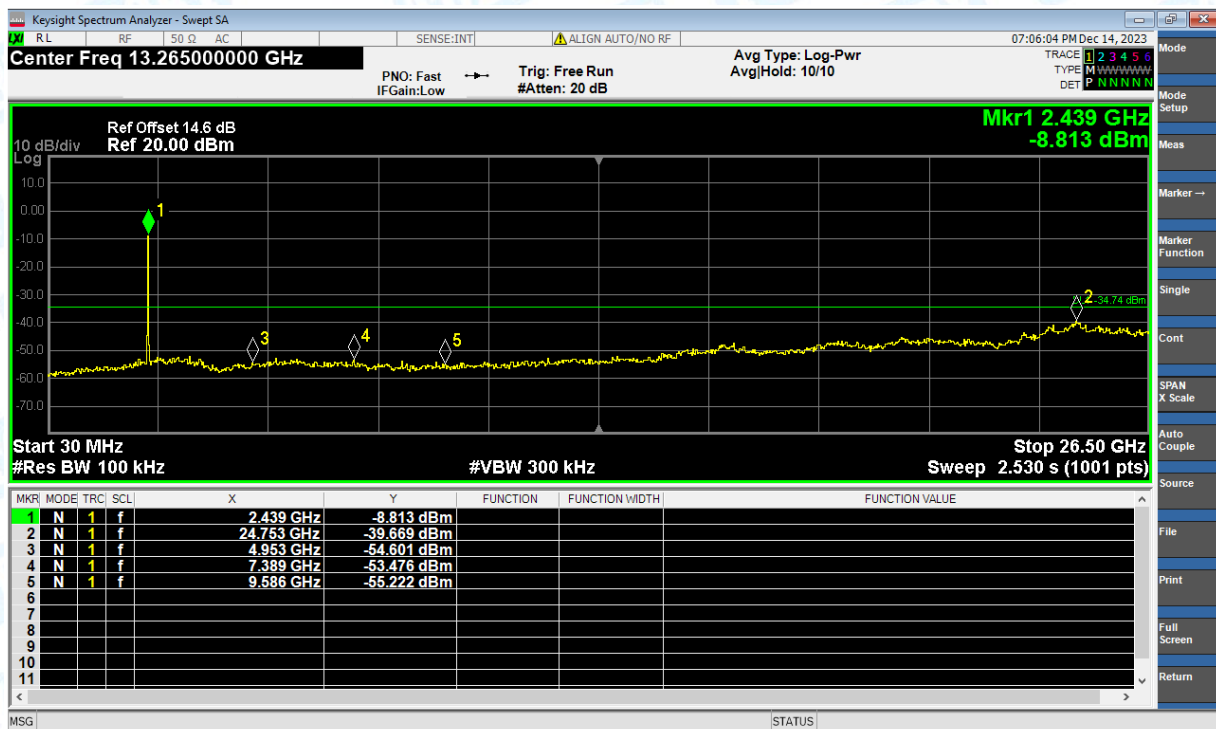
Tx. Spurious NVNT n(HT20) 2412MHz Ant1 Emission



Tx. Spurious NVNT n(HT20) 2437MHz Ant1 Ref



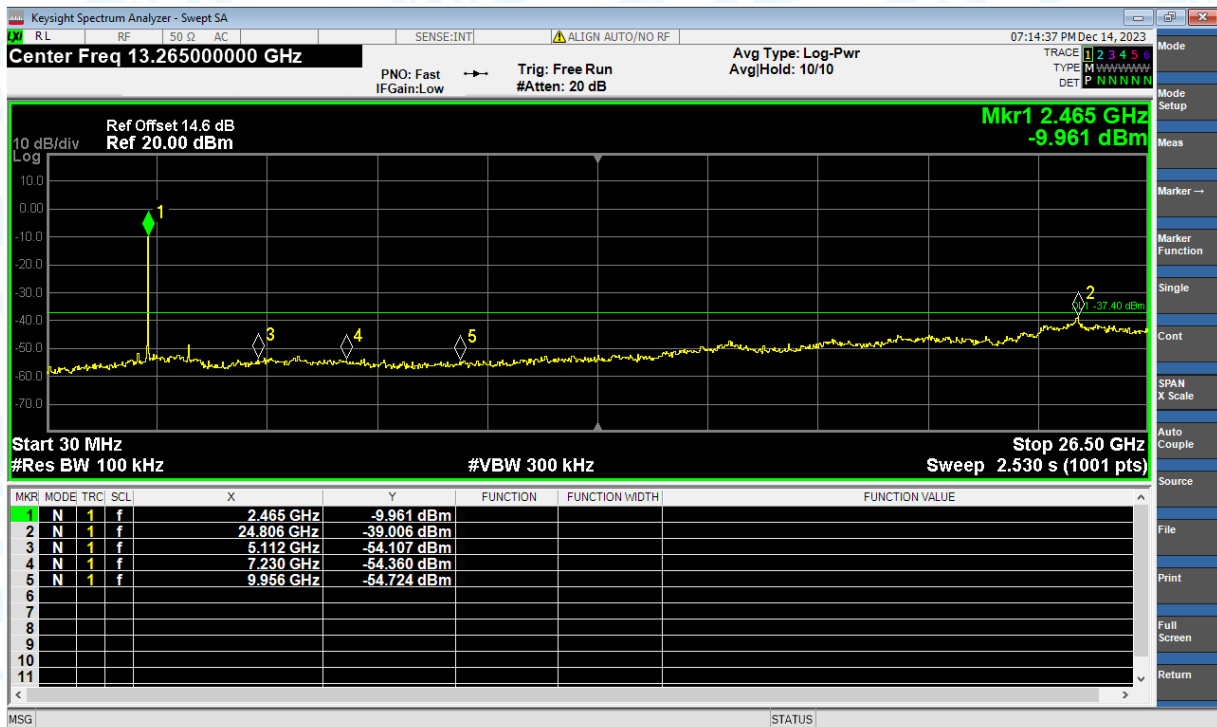
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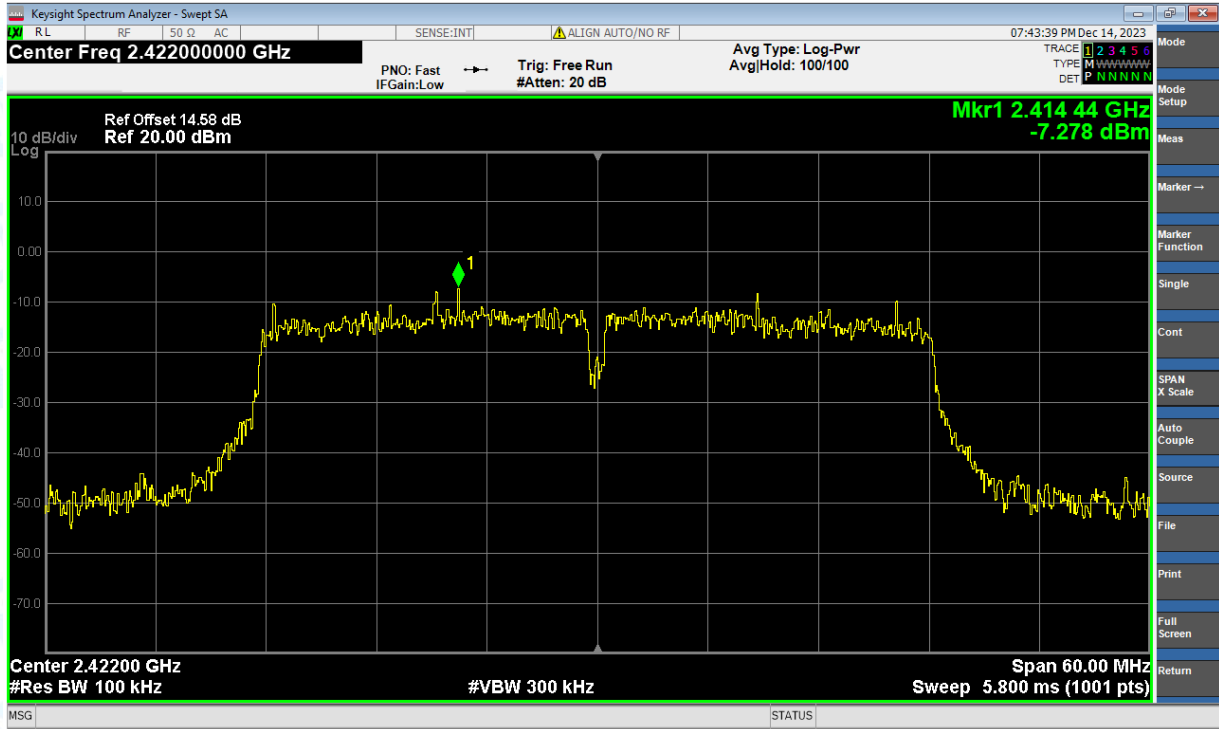
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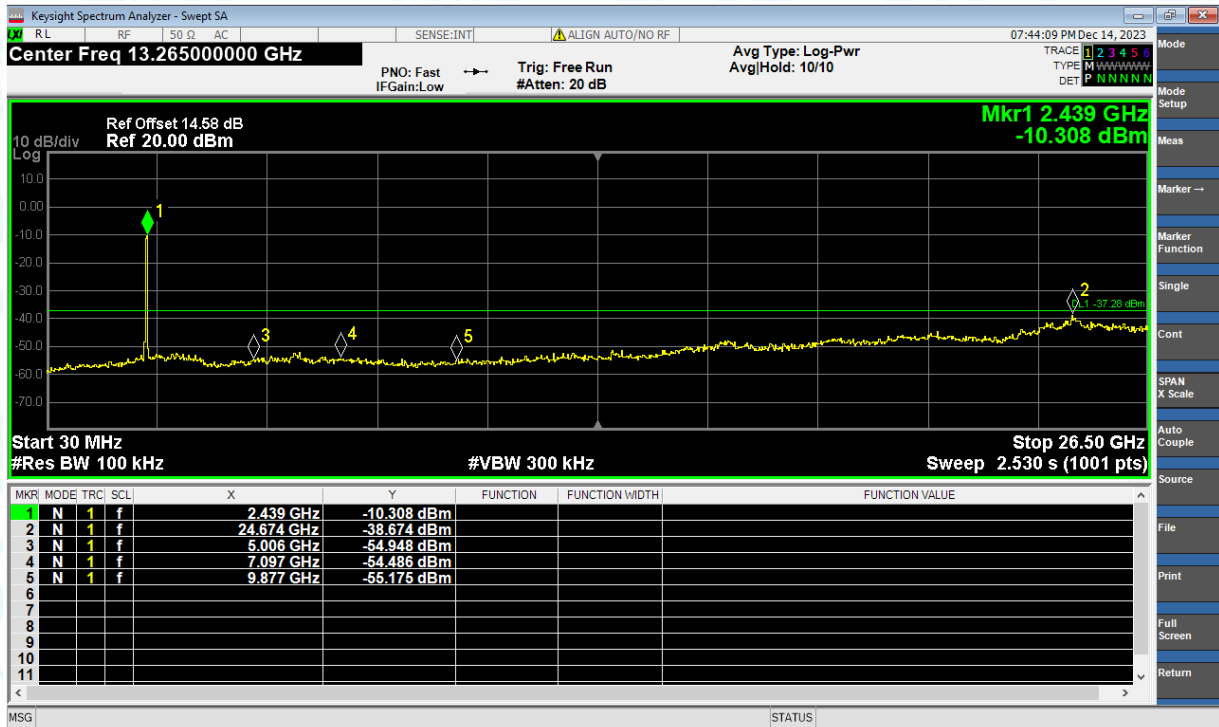
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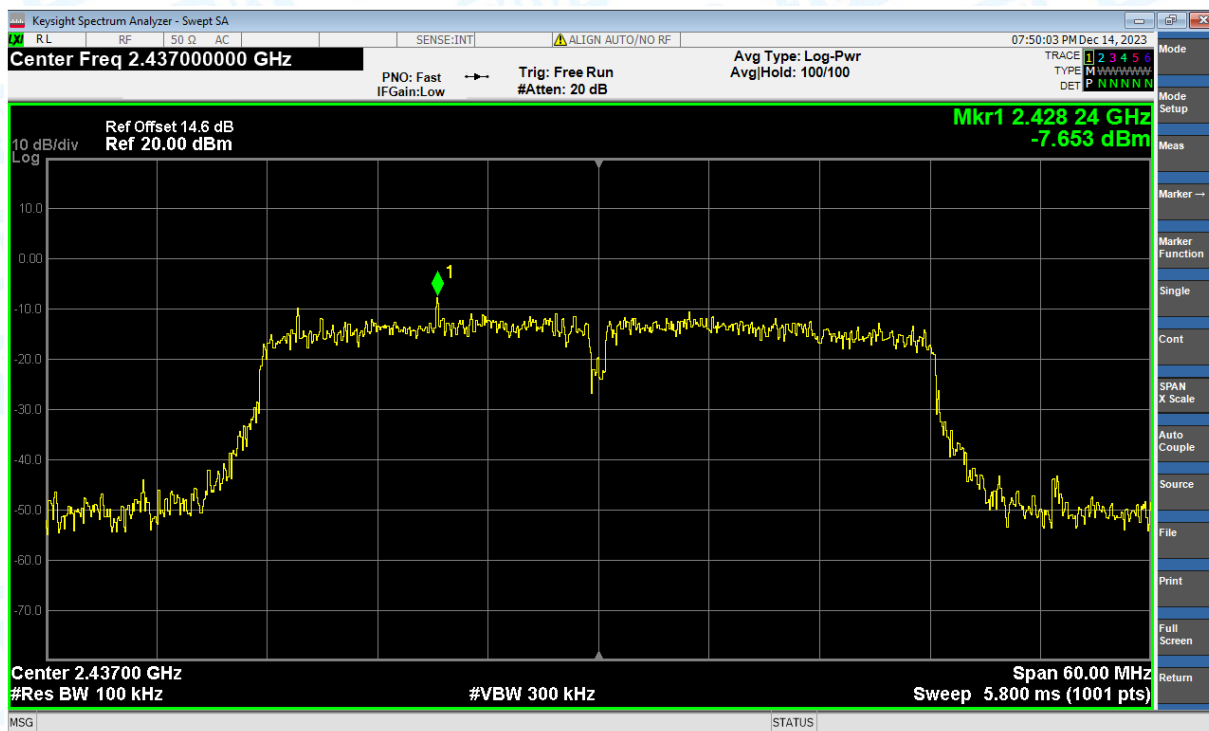
Tx. Spurious NVNT n(HT40) 2422MHz Ant1 Ref



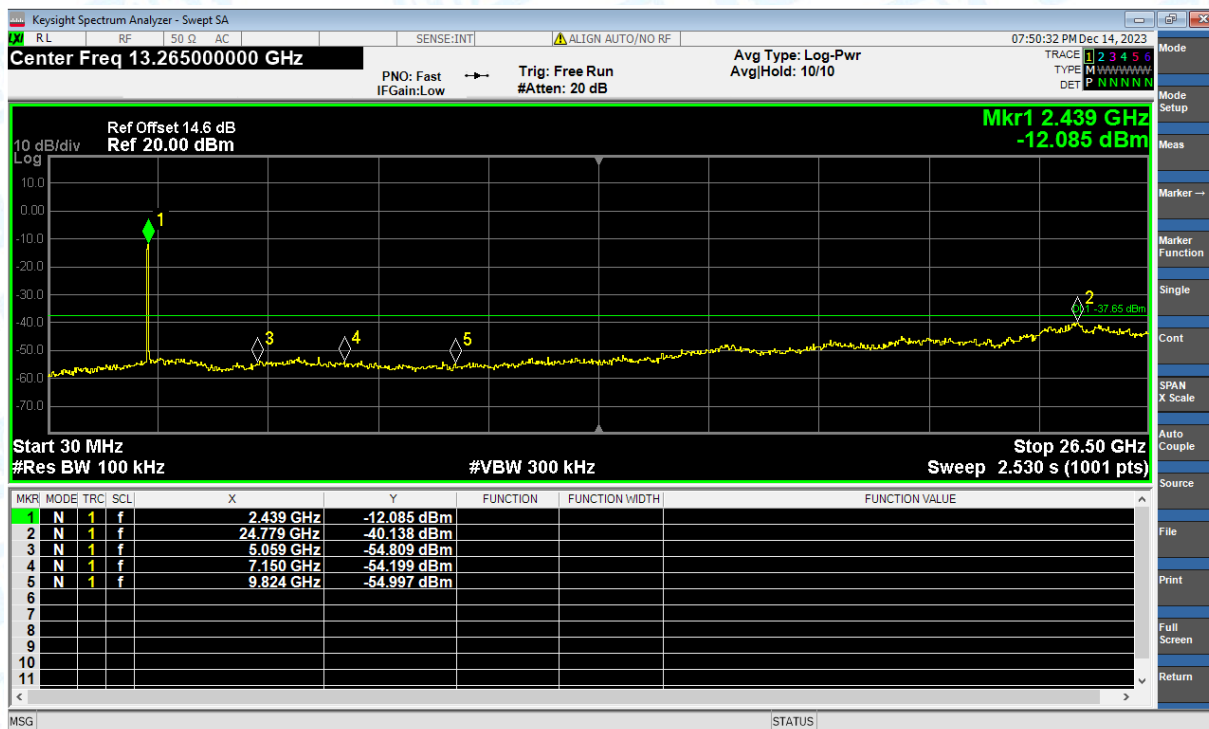
Tx. Spurious NVNT n(HT40) 2422MHz Ant1 Emission



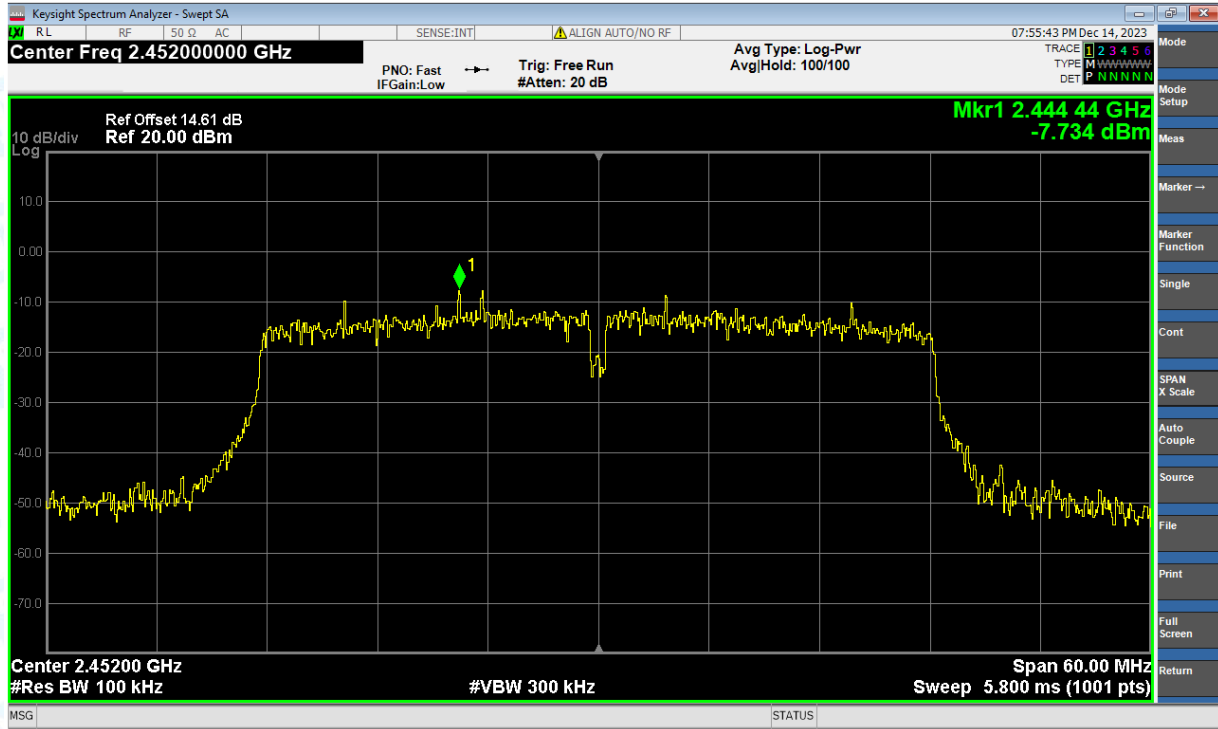
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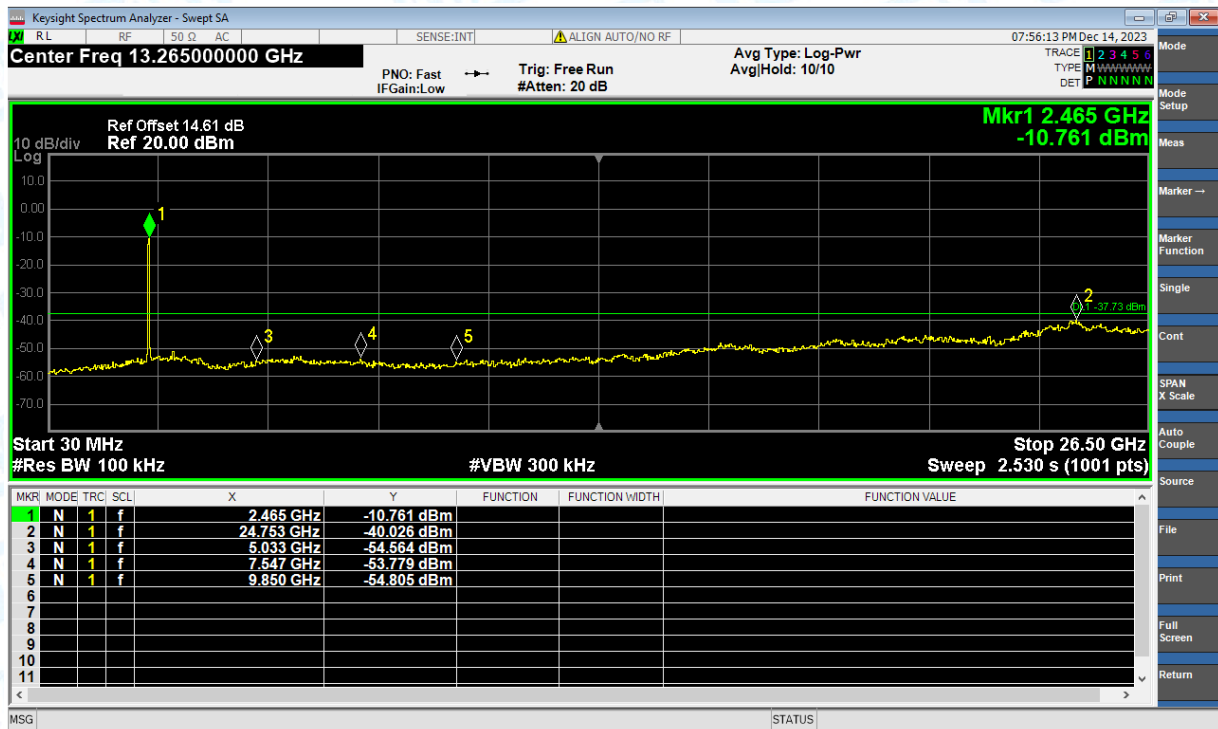
Tx. Spurious NVNT n(HT40) 2437MHz Ant1 Emission



Tx. Spurious NVNT n(HT40) 2452MHz Ant1 Ref



Tx. Spurious NVNT n(HT40) 2452MHz Ant1 Emission



Restrict Band

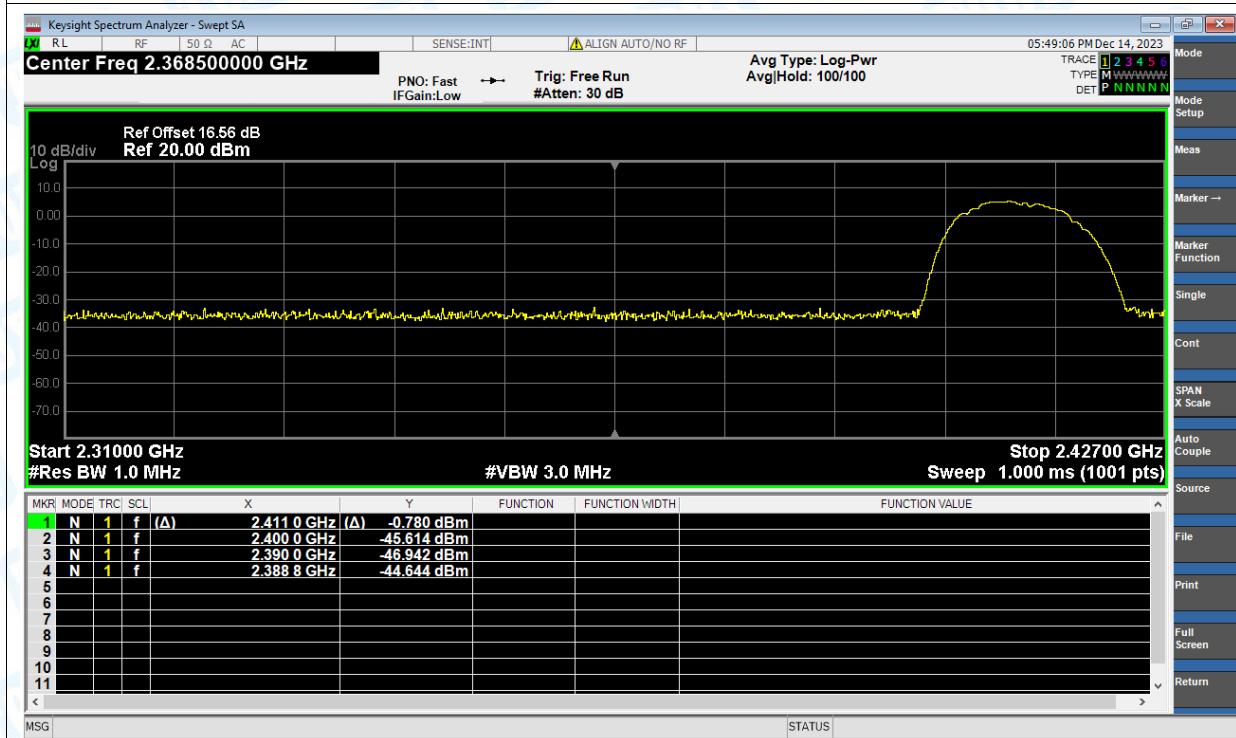
Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	b	2412	Ant1	2310	-34.13	2	63.13	Peak	74	Pass
NVNT	b	2412	Ant1	2310	-45.52	2	51.74	Average	54	Pass
NVNT	b	2412	Ant1	2366.394	-32.83	2	64.43	Peak	74	Pass
NVNT	b	2412	Ant1	2385.582	-45.26	2	52	Average	54	Pass
NVNT	b	2412	Ant1	2390	-35.6	2	61.66	Peak	74	Pass
NVNT	b	2412	Ant1	2390	-45.32	2	51.94	Average	54	Pass
NVNT	b	2462	Ant1	2483.5	-35.22	2	62.04	Peak	74	Pass
NVNT	b	2462	Ant1	2483.5	-45.22	2	52.04	Average	54	Pass
NVNT	b	2462	Ant1	2499.788	-32.38	2	64.88	Peak	74	Pass
NVNT	b	2462	Ant1	2485.054	-45.11	2	52.15	Average	54	Pass
NVNT	b	2462	Ant1	2500	-35.56	2	61.7	Peak	74	Pass
NVNT	b	2462	Ant1	2500	-45.3	2	51.96	Average	54	Pass
NVNT	g	2412	Ant1	2310	-36.7	2	60.56	Peak	74	Pass
NVNT	g	2412	Ant1	2310	-45.12	2	52.14	Average	54	Pass
NVNT	g	2412	Ant1	2343.345	-33.05	2	64.21	Peak	74	Pass
NVNT	g	2412	Ant1	2389.326	-44.59	2	52.67	Average	54	Pass
NVNT	g	2412	Ant1	2390	-36.05	2	61.21	Peak	74	Pass
NVNT	g	2412	Ant1	2390	-44.83	2	52.43	Average	54	Pass
NVNT	g	2462	Ant1	2483.5	-34.79	2	62.47	Peak	74	Pass
NVNT	g	2462	Ant1	2483.5	-44.68	2	52.58	Average	54	Pass
NVNT	g	2462	Ant1	2498.781	-31.96	2	65.3	Peak	74	Pass
NVNT	g	2462	Ant1	2495.654	-44.61	2	52.65	Average	54	Pass
NVNT	g	2462	Ant1	2500	-34.93	2	62.33	Peak	74	Pass
NVNT	g	2462	Ant1	2500	-44.97	2	52.29	Average	54	Pass
NVNT	n(HT20)	2412	Ant1	2310	-34.74	2	62.52	Peak	74	Pass
NVNT	n(HT20)	2412	Ant1	2310	-45.21	2	52.05	Average	54	Pass
NVNT	n(HT20)	2412	Ant1	2389.794	-32.87	2	64.39	Peak	74	Pass
NVNT	n(HT20)	2412	Ant1	2389.911	-44.23	2	53.03	Average	54	Pass
NVNT	n(HT20)	2412	Ant1	2390	-36.22	2	61.04	Peak	74	Pass
NVNT	n(HT20)	2412	Ant1	2390	-44.32	2	52.94	Average	54	Pass
NVNT	n(HT20)	2462	Ant1	2483.5	-34.55	2	62.71	Peak	74	Pass
NVNT	n(HT20)	2462	Ant1	2483.5	-44.52	2	52.74	Average	54	Pass
NVNT	n(HT20)	2462	Ant1	2491.52	-33.02	2	64.24	Peak	74	Pass
NVNT	n(HT20)	2462	Ant1	2483.517	-44.52	2	52.74	Average	54	Pass
NVNT	n(HT20)	2462	Ant1	2500	-34.88	2	62.38	Peak	74	Pass
NVNT	n(HT20)	2462	Ant1	2500	-44.84	2	52.42	Average	54	Pass
NVNT	n(HT40)	2422	Ant1	2310	-44.65	2	52.61	Peak	74	Pass
NVNT	n(HT40)	2422	Ant1	2310	-54.97	2	42.29	Average	54	Pass
NVNT	n(HT40)	2422	Ant1	2389.946	-37.8	2	59.46	Peak	74	Pass
NVNT	n(HT40)	2422	Ant1	2389.662	-46.39	2	50.87	Average	54	Pass
NVNT	n(HT40)	2422	Ant1	2390	-39.91	2	57.35	Peak	74	Pass
NVNT	n(HT40)	2422	Ant1	2390	-46.72	2	50.54	Average	54	Pass

NVNT	n(HT40)	2452	Ant1	2483.5	-38.71	2	58.55	Peak	74	Pass
NVNT	n(HT40)	2452	Ant1	2483.5	-47.78	2	49.48	Average	54	Pass
NVNT	n(HT40)	2452	Ant1	2486.272	-38.21	2	59.05	Peak	74	Pass
NVNT	n(HT40)	2452	Ant1	2483.542	-47.78	2	49.48	Average	54	Pass
NVNT	n(HT40)	2452	Ant1	2500	-45.66	2	51.6	Peak	74	Pass
NVNT	n(HT40)	2452	Ant1	2500	-53.35	2	43.91	Average	54	Pass

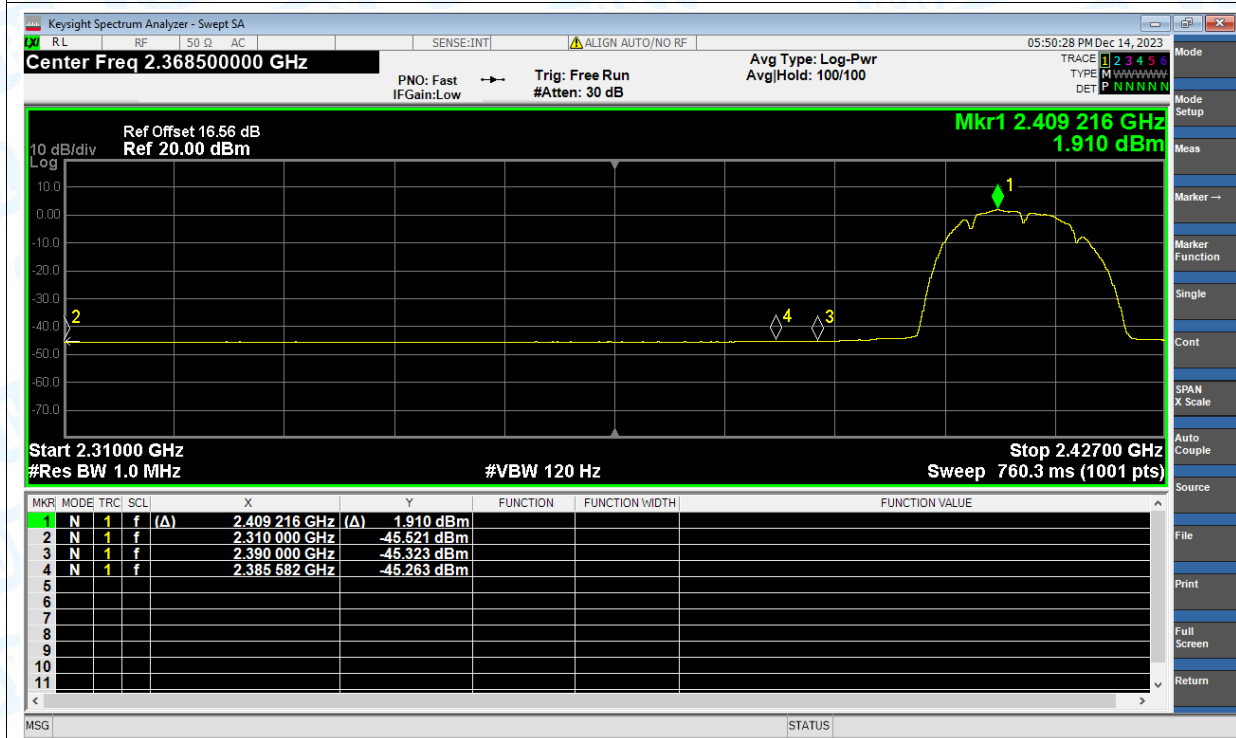
Note: The Duty Cycle Factor is compensated in the graph.

Test Graphs

Restrict Band NVNT b 2412MHz Ant1 Peak



Restrict Band NVNT b 2412MHz Ant1 Average



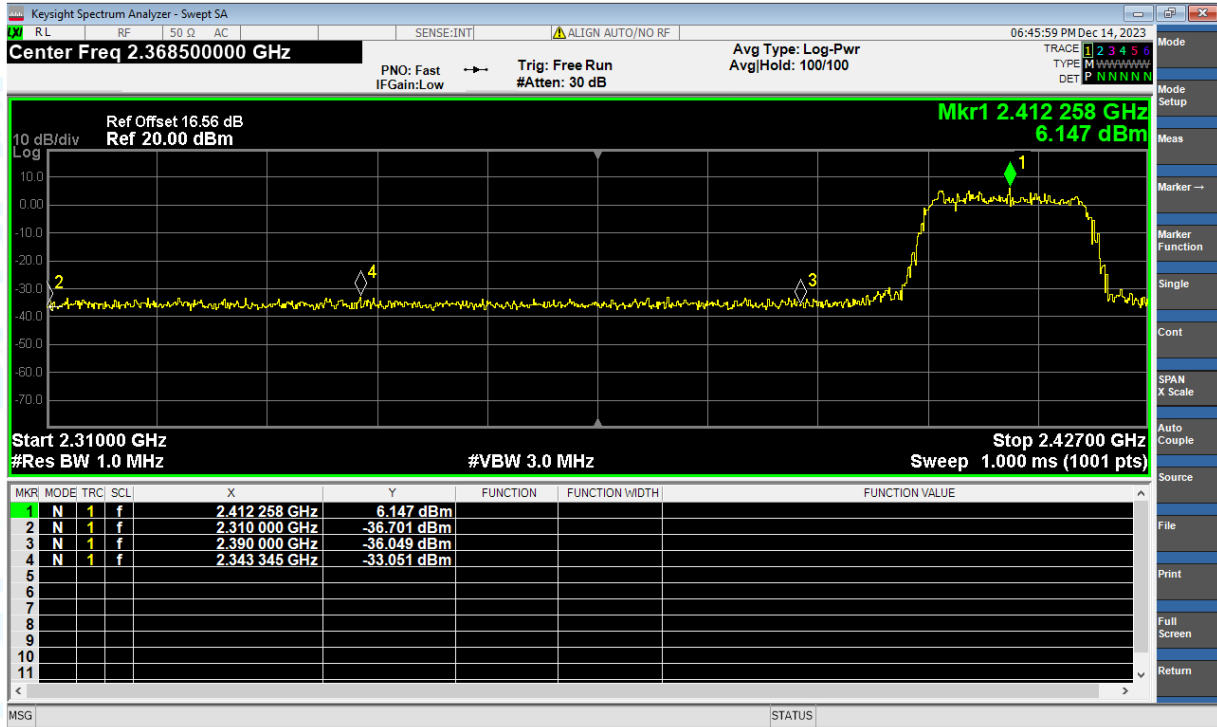
Restrict Band NVNT b 2462MHz Ant1 Peak



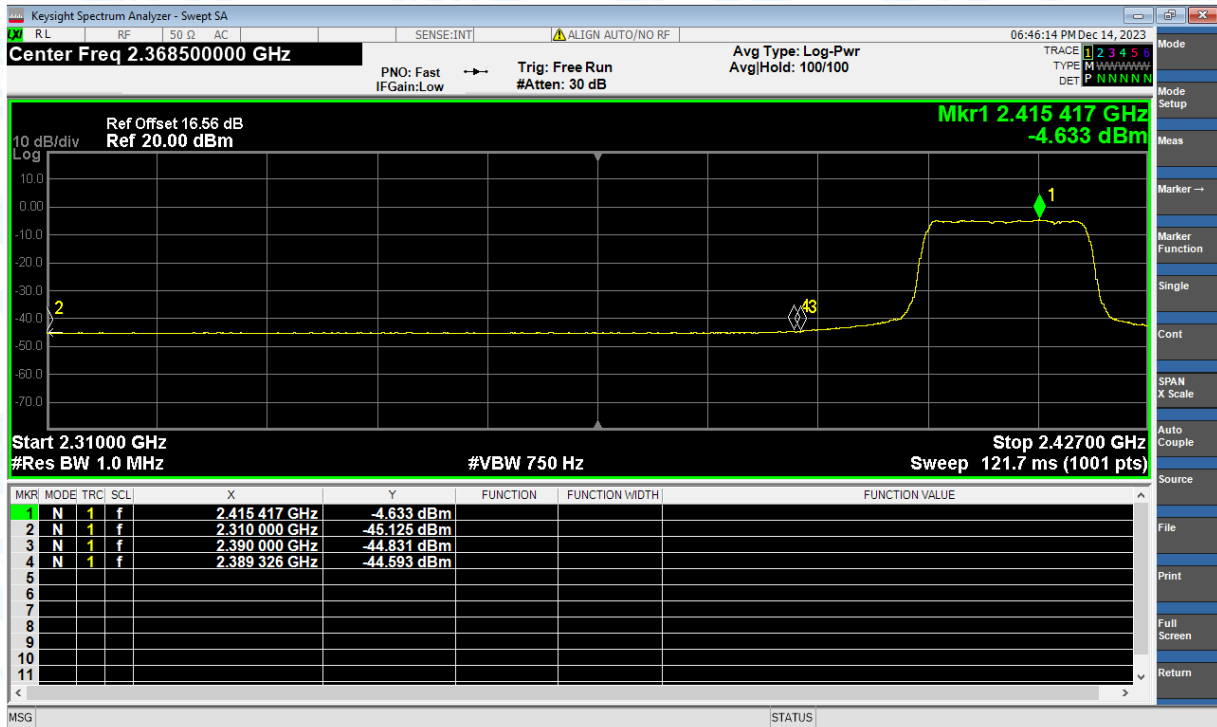
Restrict Band NVNT b 2462MHz Ant1 Average



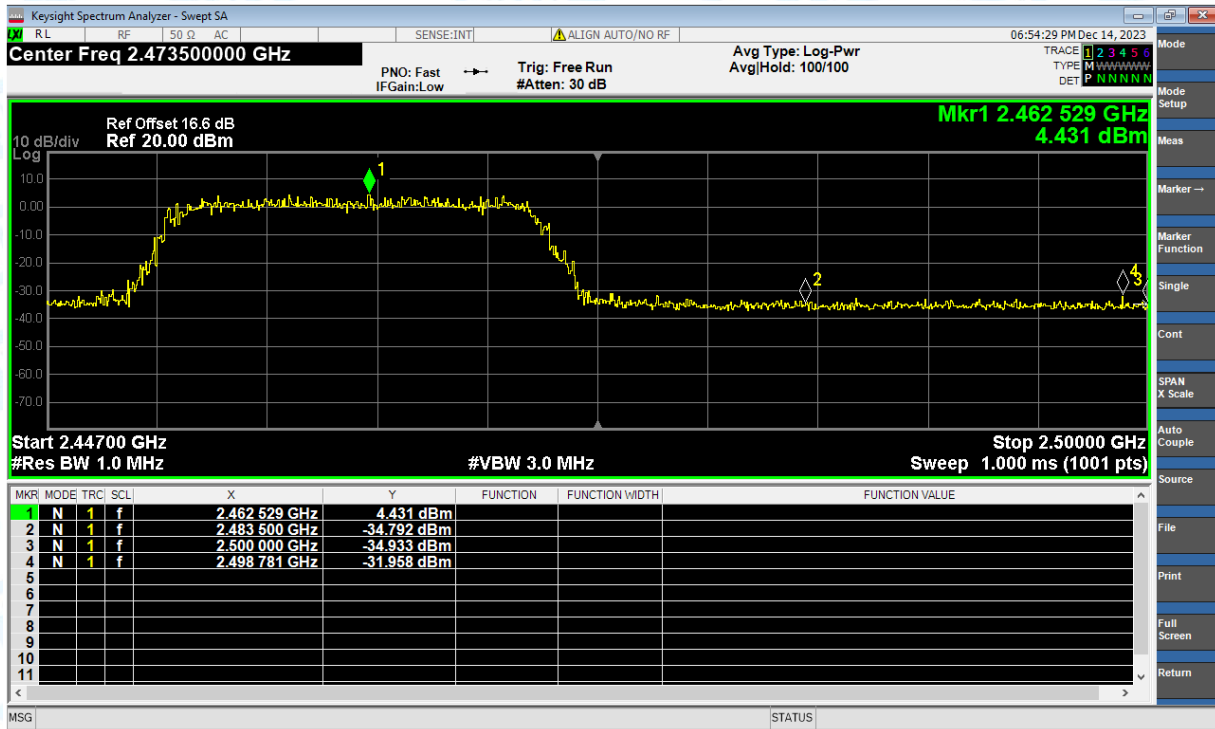
Restrict Band NVNT g 2412MHz Ant1 Peak



Restrict Band NVNT g 2412MHz Ant1 Average



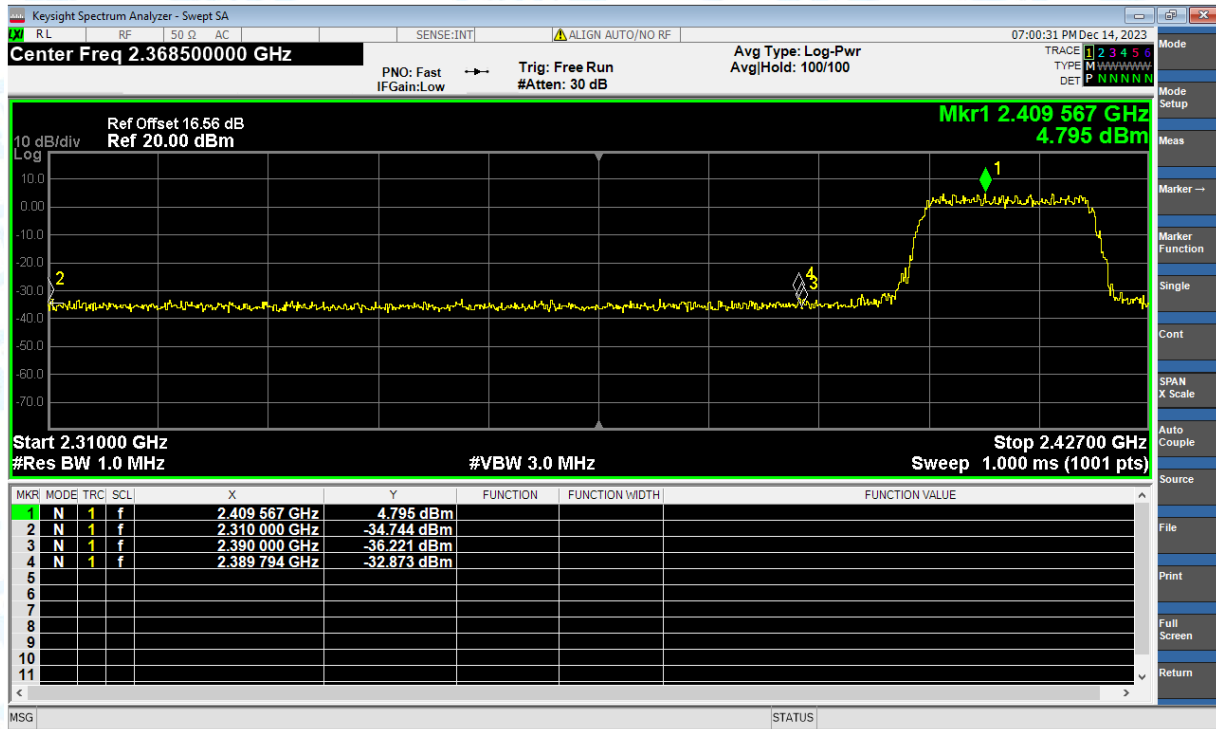
Restrict Band NVNT g 2462MHz Ant1 Peak



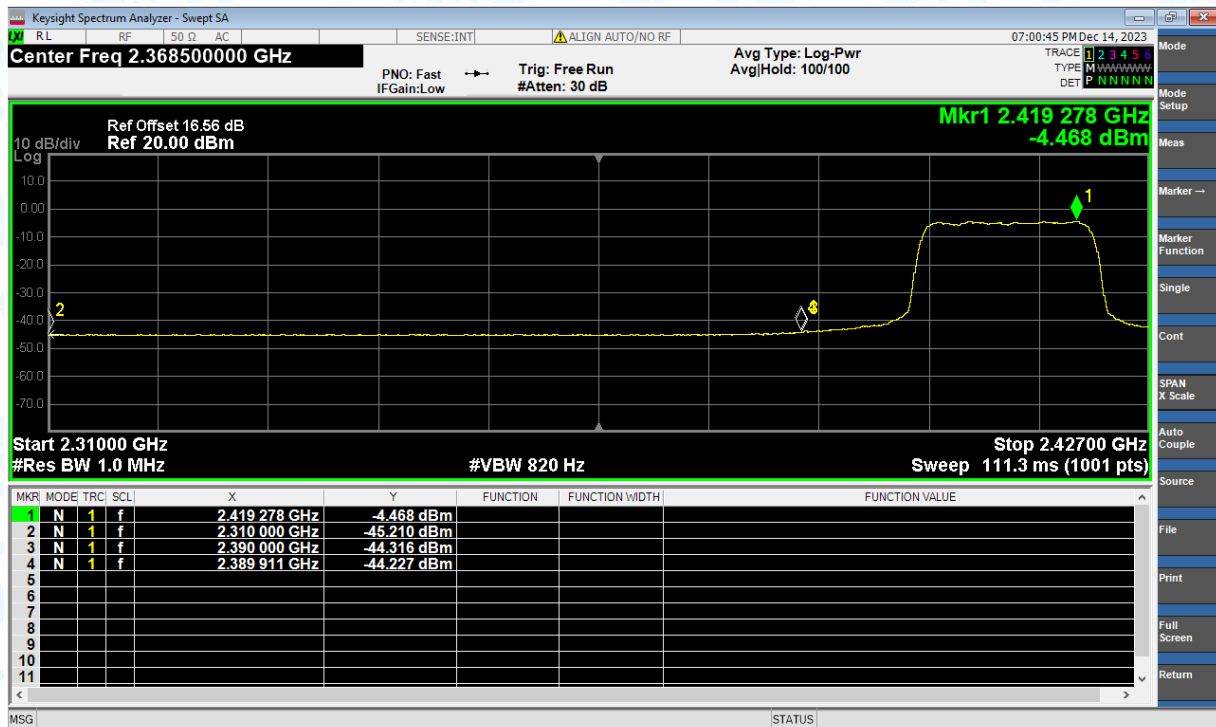
Restrict Band NVNT g 2462MHz Ant1 Average



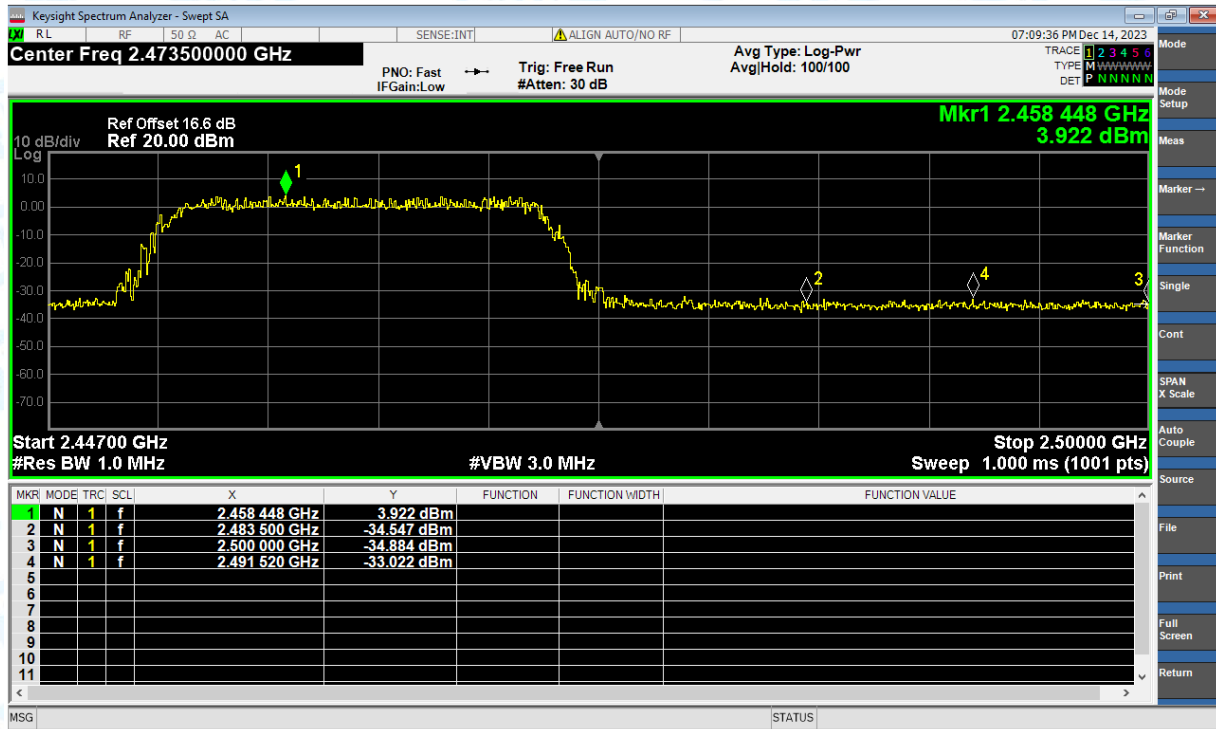
Restrict Band NVNT n(HT20) 2412MHz Ant1 Peak



Restrict Band NVNT n(HT20) 2412MHz Ant1 Average



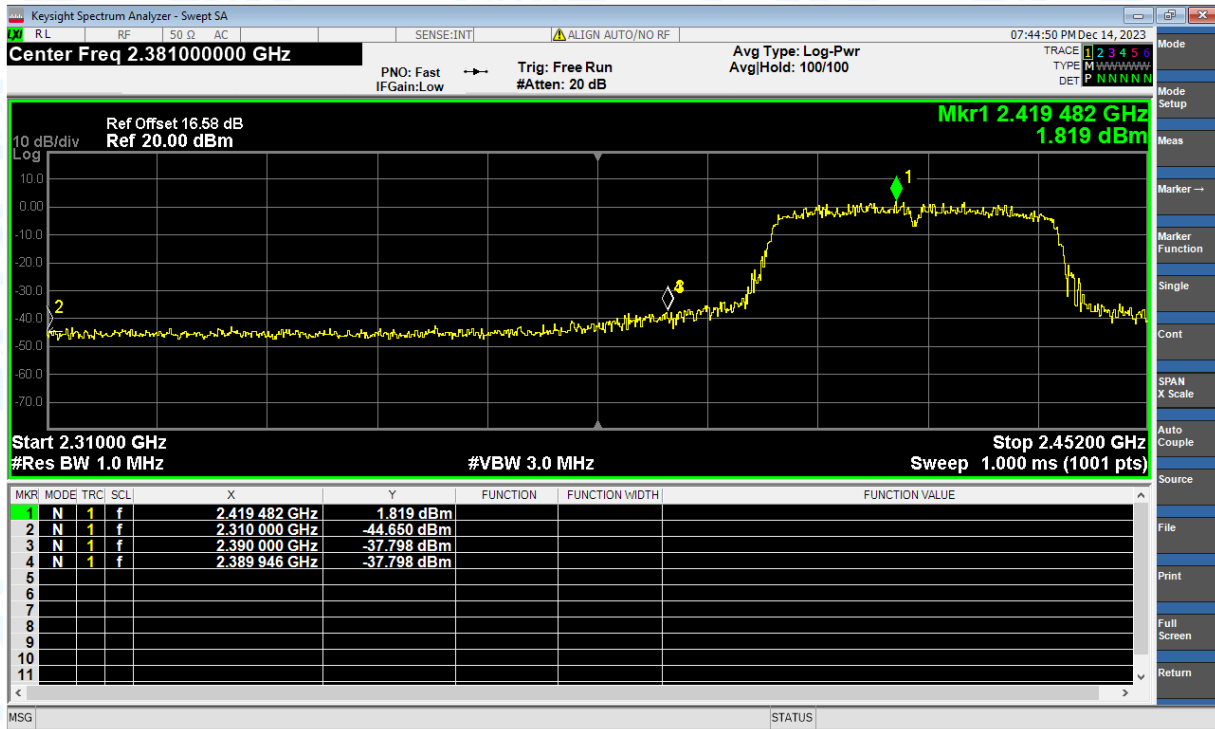
Restrict Band NVNT n(HT20) 2462MHz Ant1 Peak



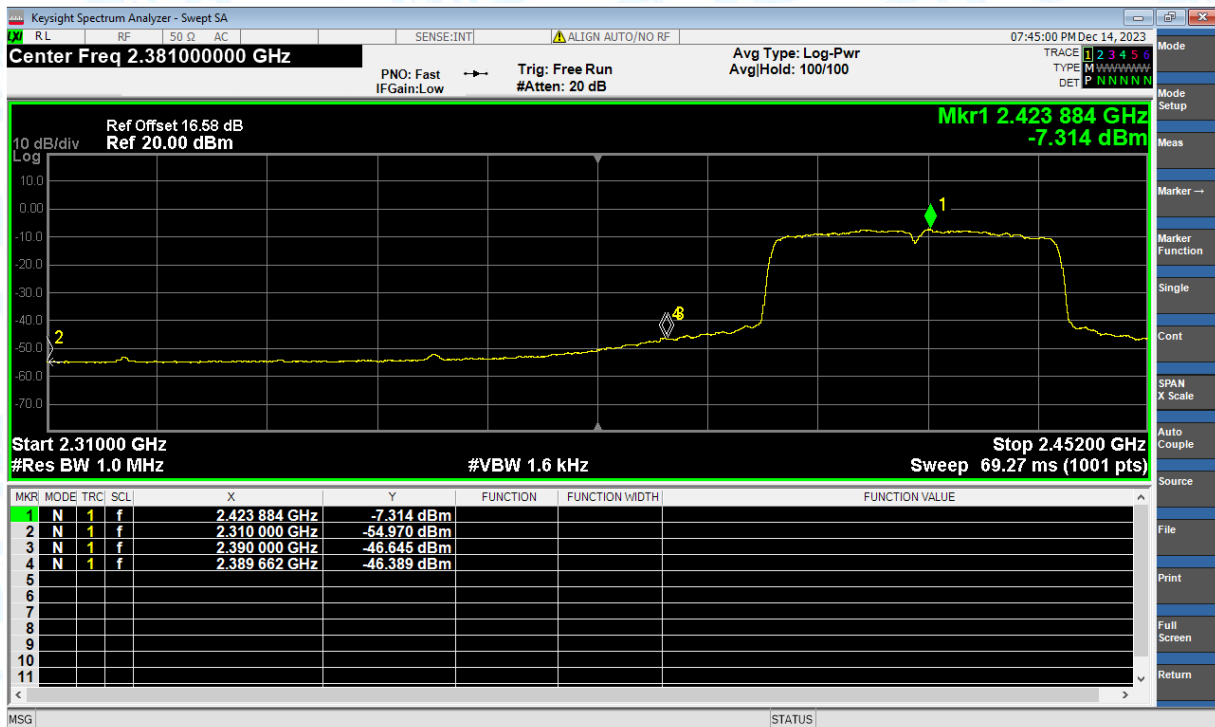
Restrict Band NVNT n(HT20) 2462MHz Ant1 Average



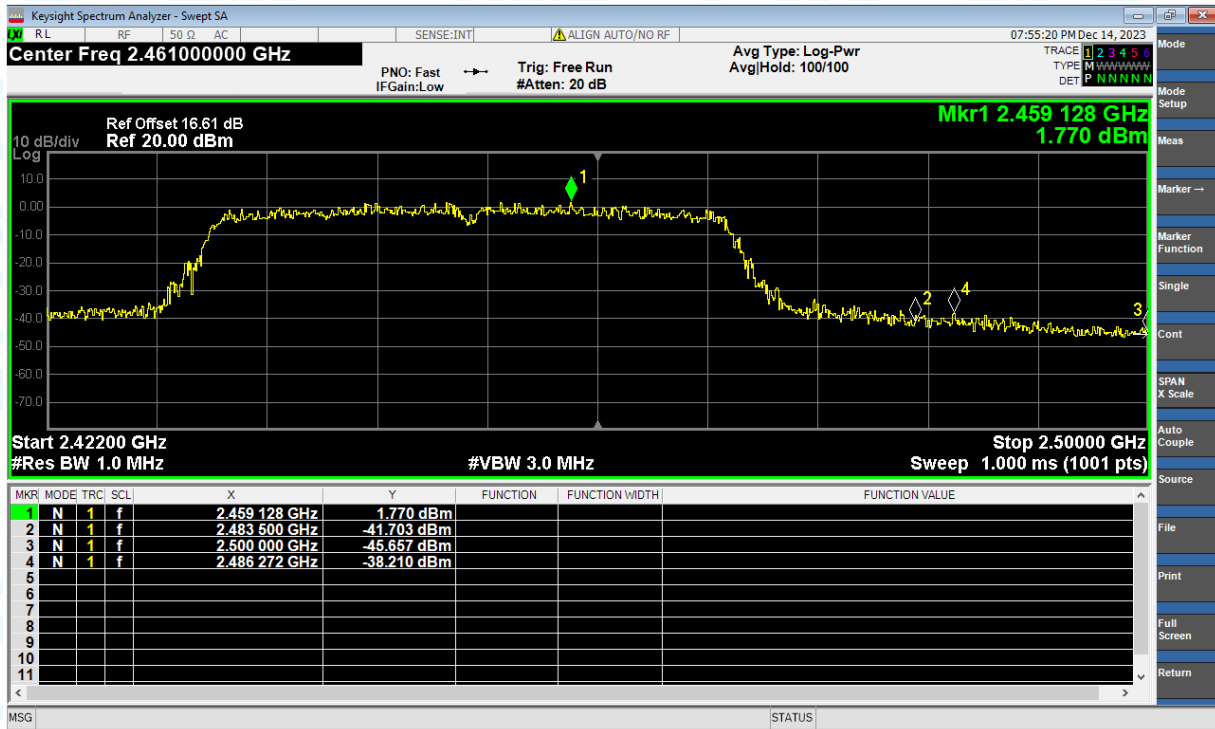
Restrict Band NVNT n(HT40) 2422MHz Ant1 Peak



Restrict Band NVNT n(HT40) 2422MHz Ant1 Average



Restrict Band NVNT n(HT40) 2452MHz Ant1 Peak



Restrict Band NVNT n(HT40) 2452MHz Ant1 Average

