RF Test Data for 2.4G WiFi (Conducted Measurements)

General Description of EUT	
Product Name:	USB WiFi Dongle
Test Model:	XTC-600
Sample ID:	HC-C-202407-0095-01-01-2#
Environmental Conditions	
Temperature:	23.8℃
Relative Humidity:	48%
Test Voltage:	DC 5V
Test Engineer:	ZKN ZHOU
Note: For a more detailed features description, please refer to the report TBR-C-202407-0095-2 The report only show the worst case data.	

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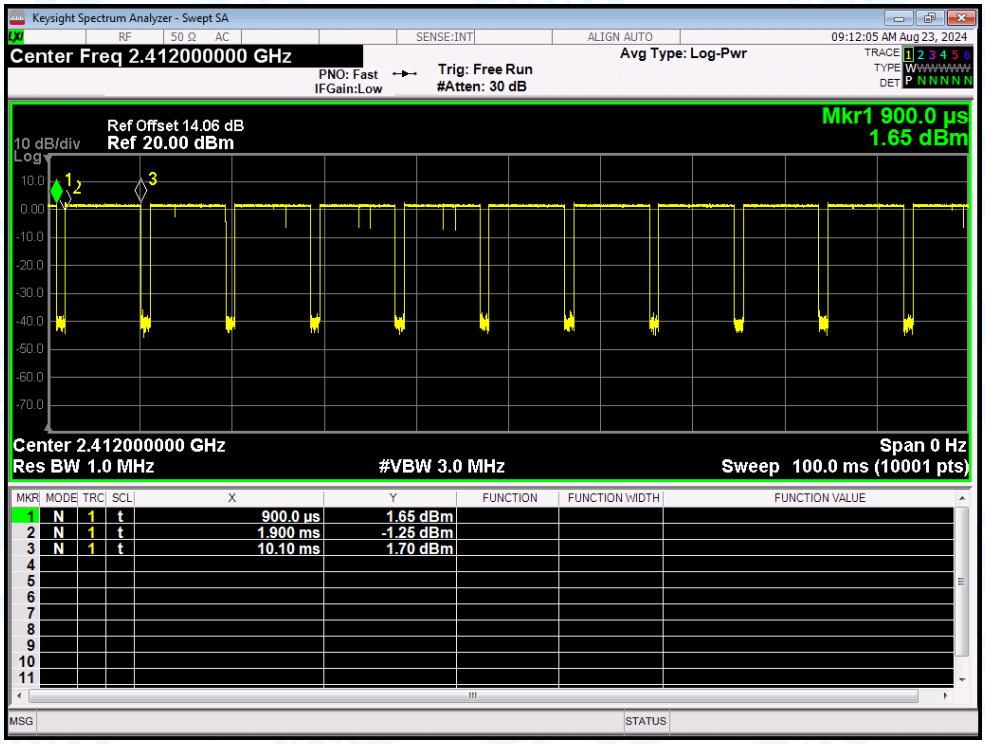
1. Duty Cycle

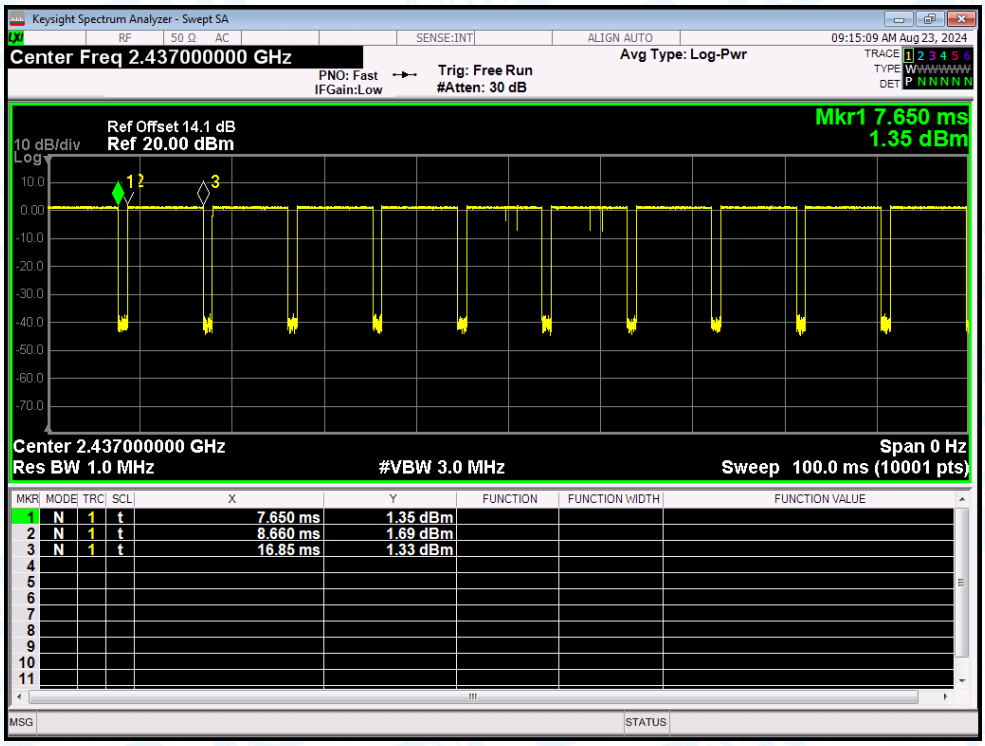
Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	b	2412	Ant1	89.13	0.5	0.12
NVNT	b	2437	Ant1	89.02	0.51	0.12
NVNT	b	2462	Ant1	89.12	0.5	0.12
NVNT	g	2412	Ant1	57.63	2.39	0.74
NVNT	g	2437	Ant1	57.63	2.39	0.74
NVNT	g	2462	Ant1	57.63	2.39	0.74
NVNT	n(HT20)	2412	Ant1	55.7	2.54	0.79
NVNT	n(HT20)	2437	Ant1	55.95	2.52	0.79
NVNT	n(HT20)	2462	Ant1	56.14	2.51	0.78
NVNT	n(HT40)	2422	Ant1	38.04	4.2	1.61
NVNT	n(HT40)	2437	Ant1	38.04	4.2	1.61
NVNT	n(HT40)	2452	Ant1	38.41	4.16	1.59

Test Graphs

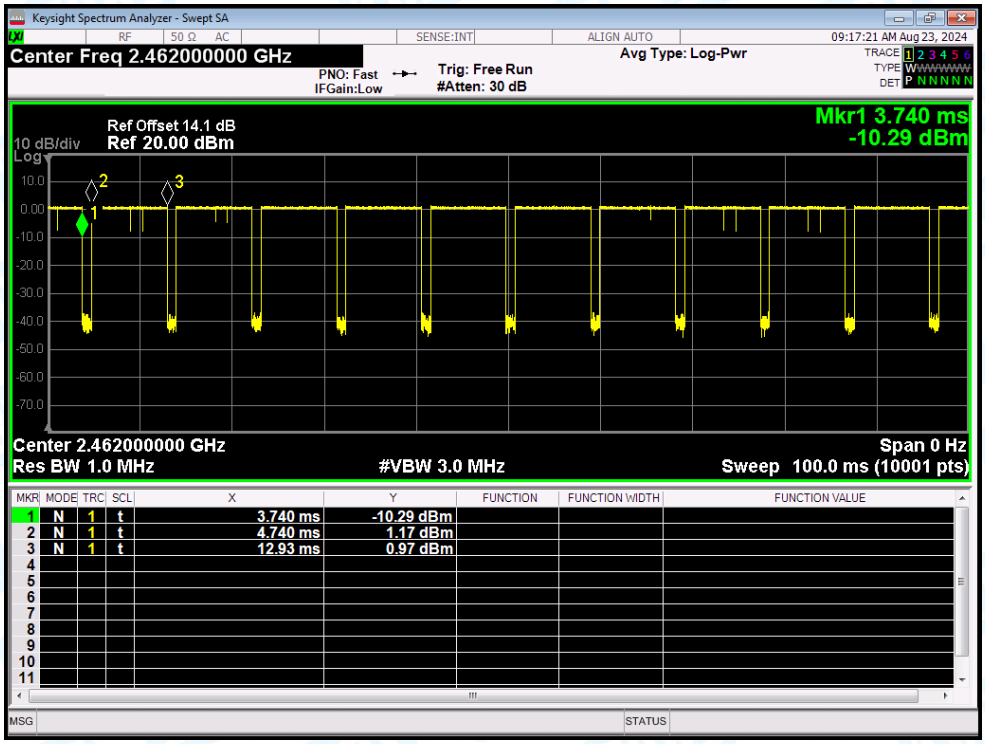
Duty Cycle NVNT b 2412MHz Ant1



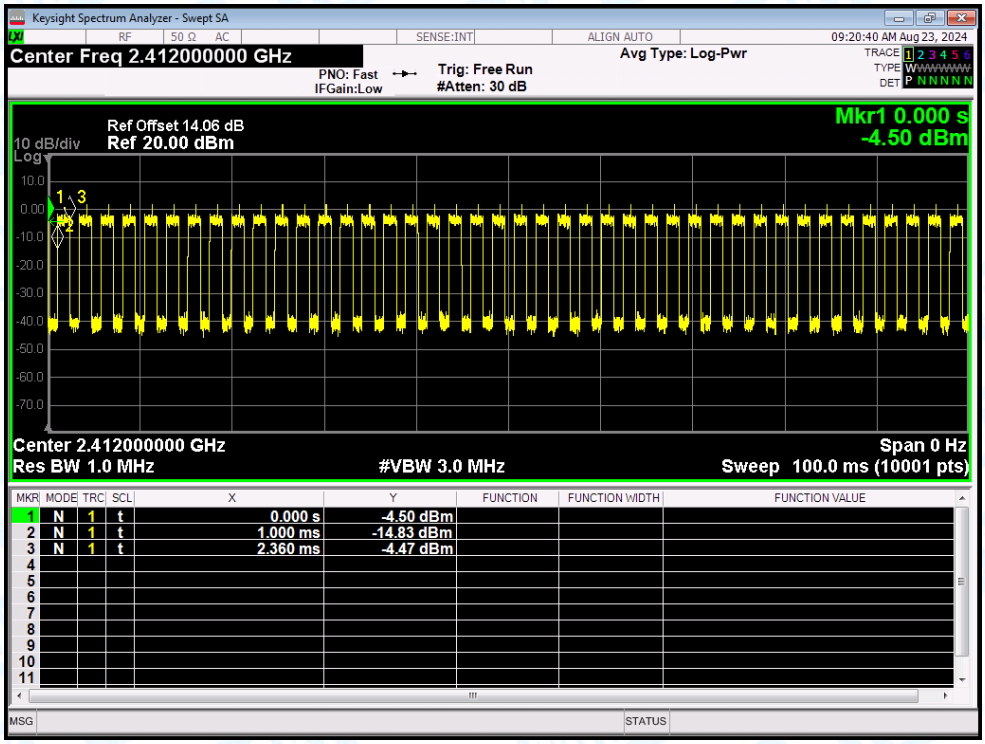
Duty Cycle NVNT b 2437MHz Ant1



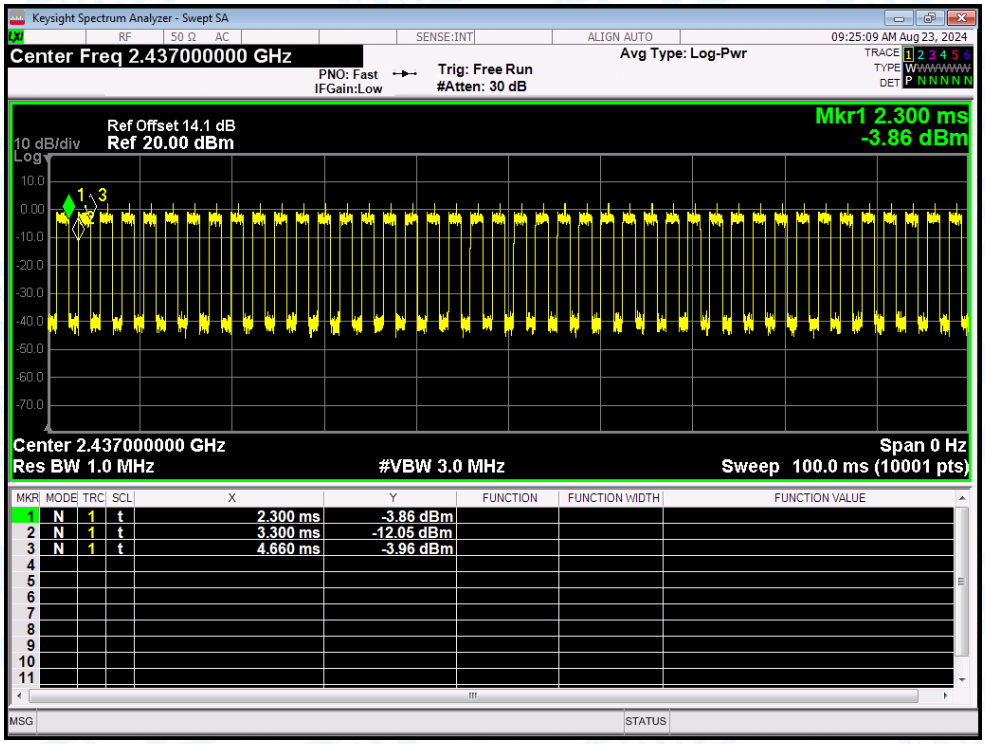
Duty Cycle NVNT b 2462MHz Ant1



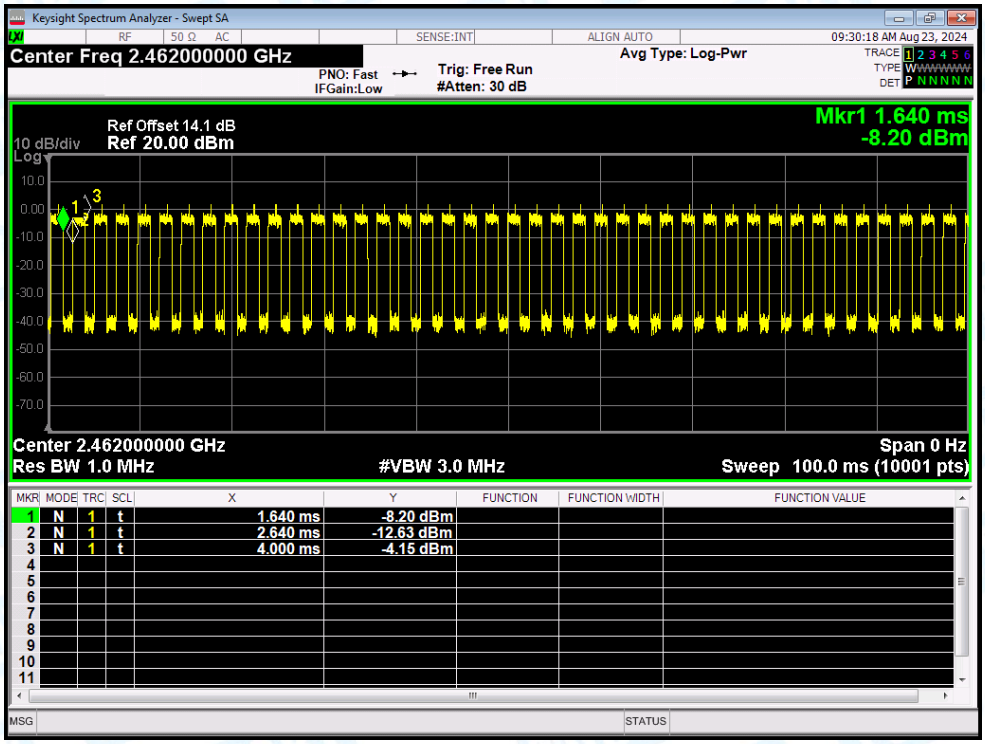
Duty Cycle NVNT g 2412MHz Ant1



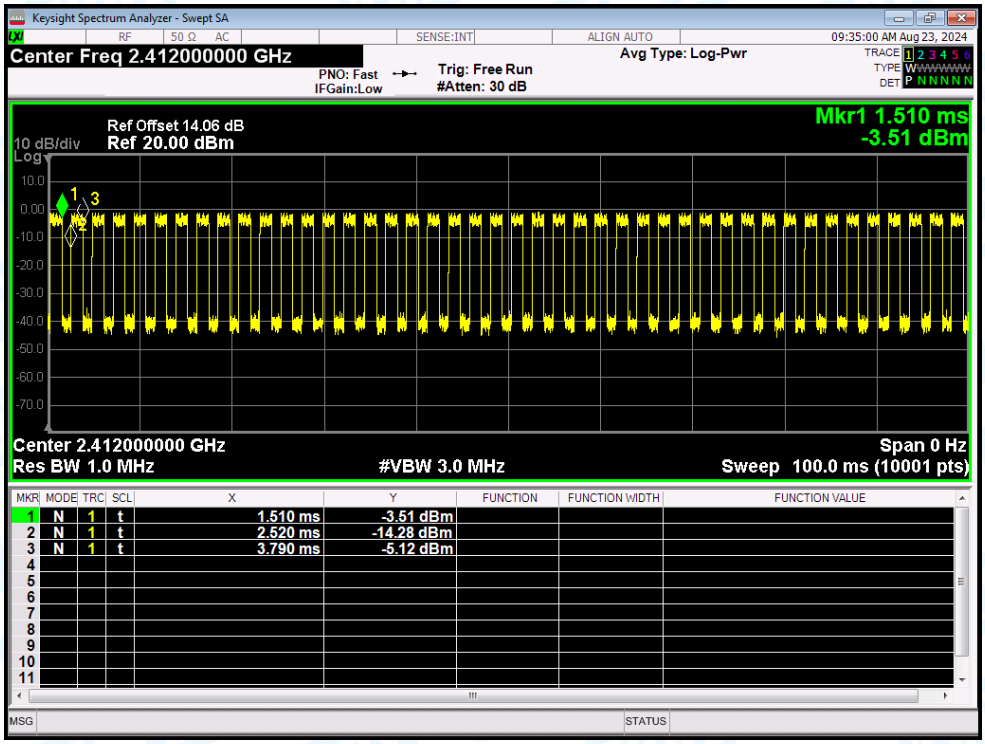
Duty Cycle NVNT g 2437MHz Ant1



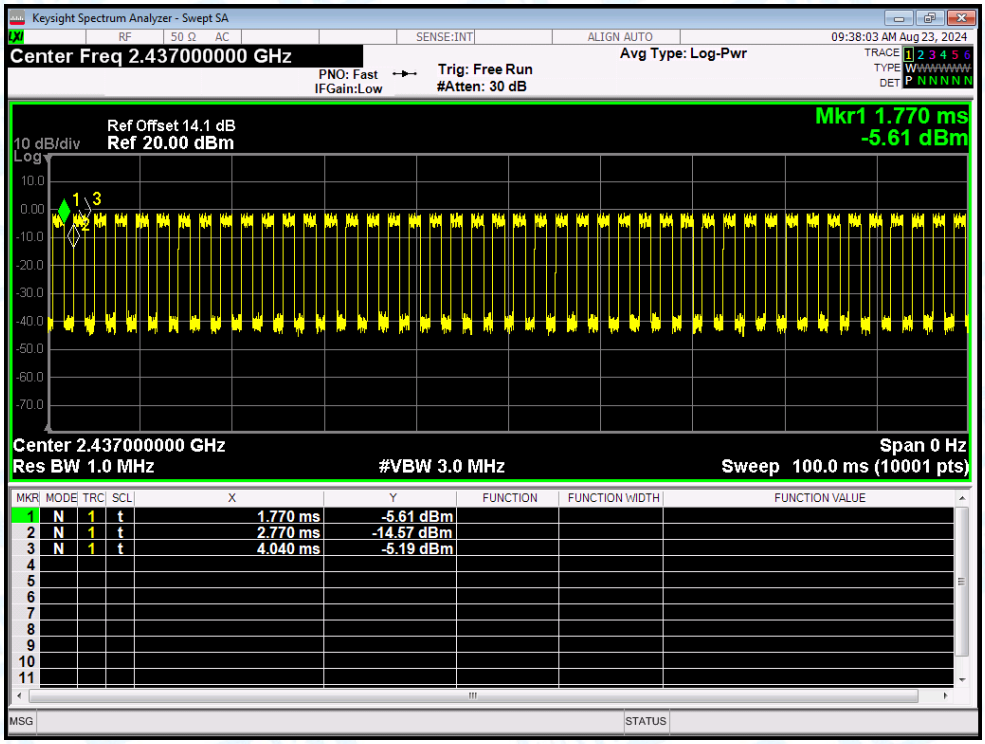
Duty Cycle NVNT g 2462MHz Ant1



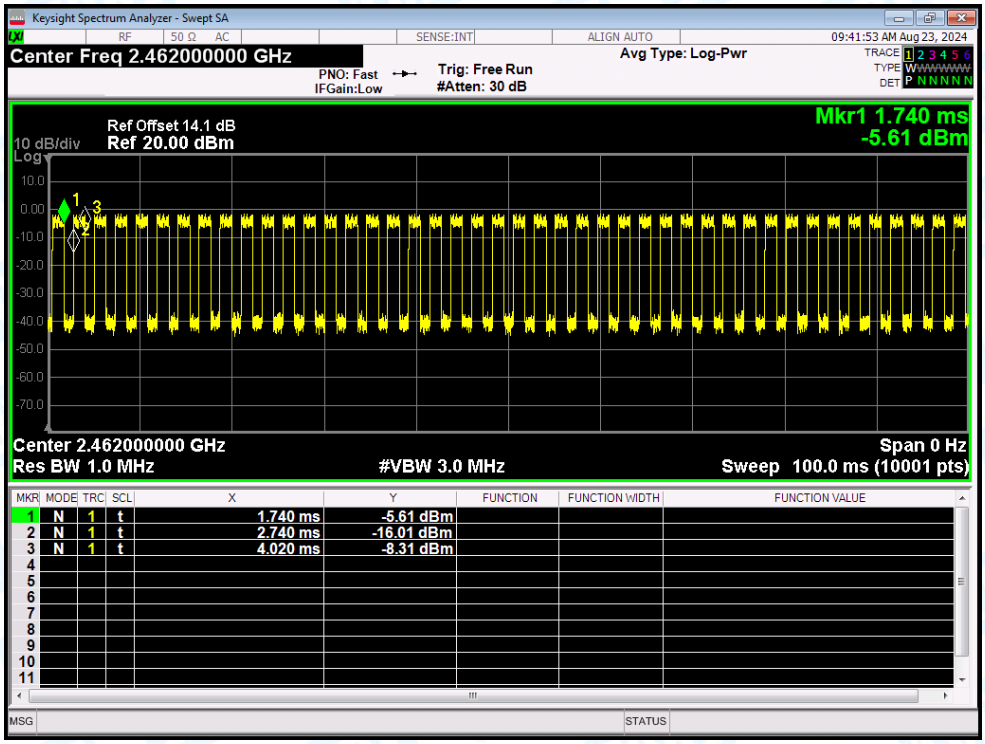
Duty Cycle NVNT n(HT20) 2412MHz Ant1



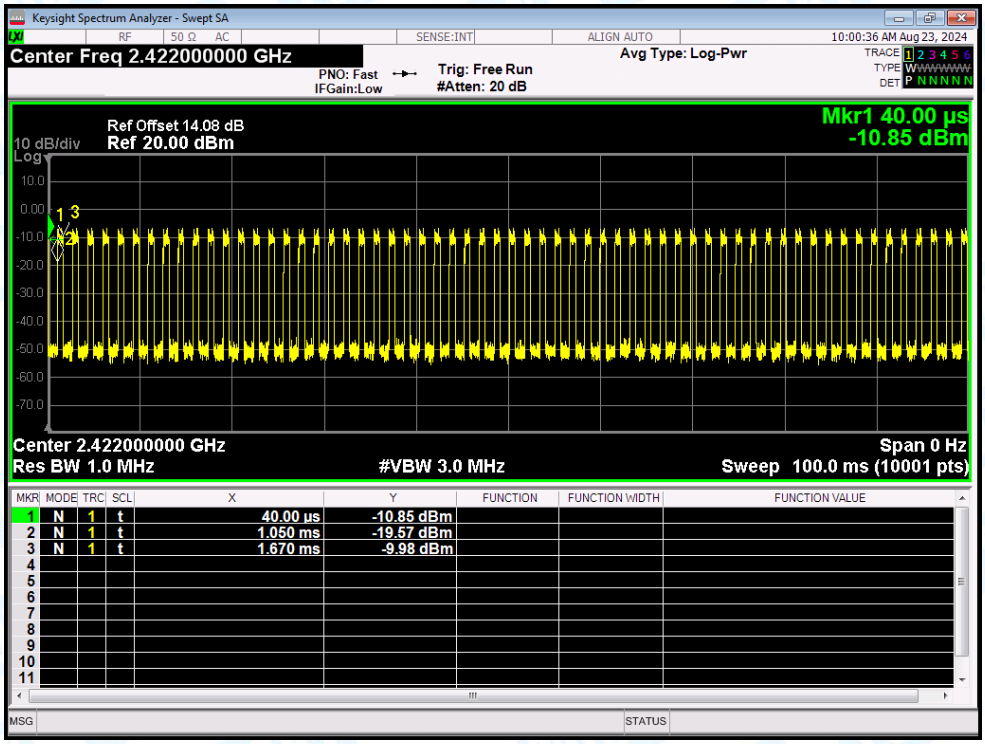
Duty Cycle NVNT n(HT20) 2437MHz Ant1



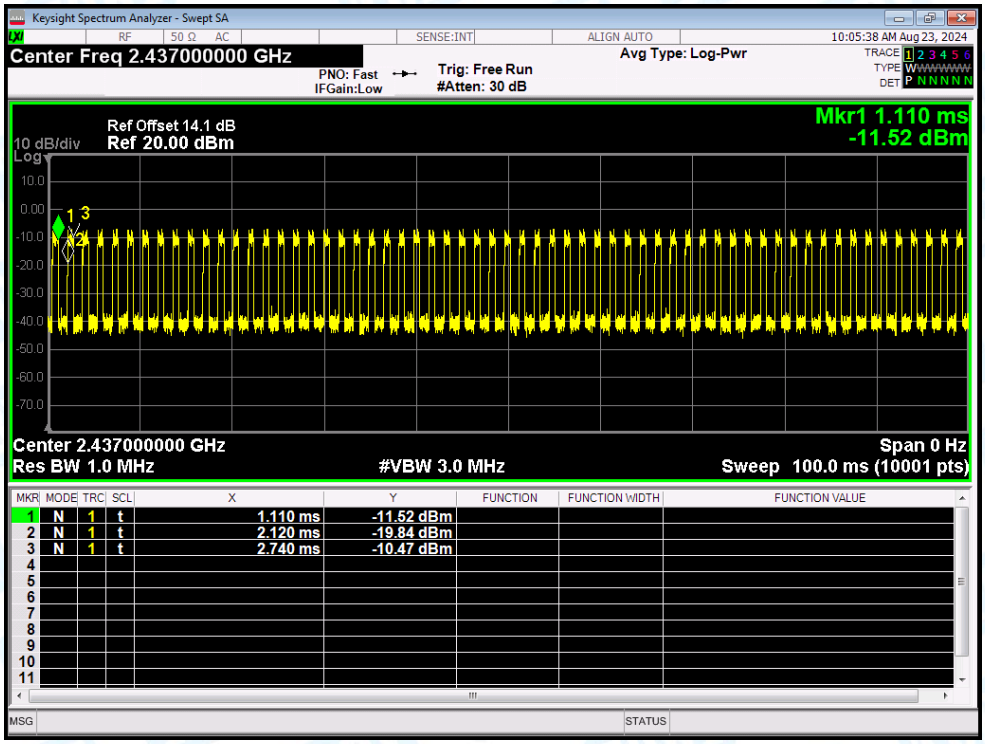
Duty Cycle NVNT n(HT20) 2462MHz Ant1



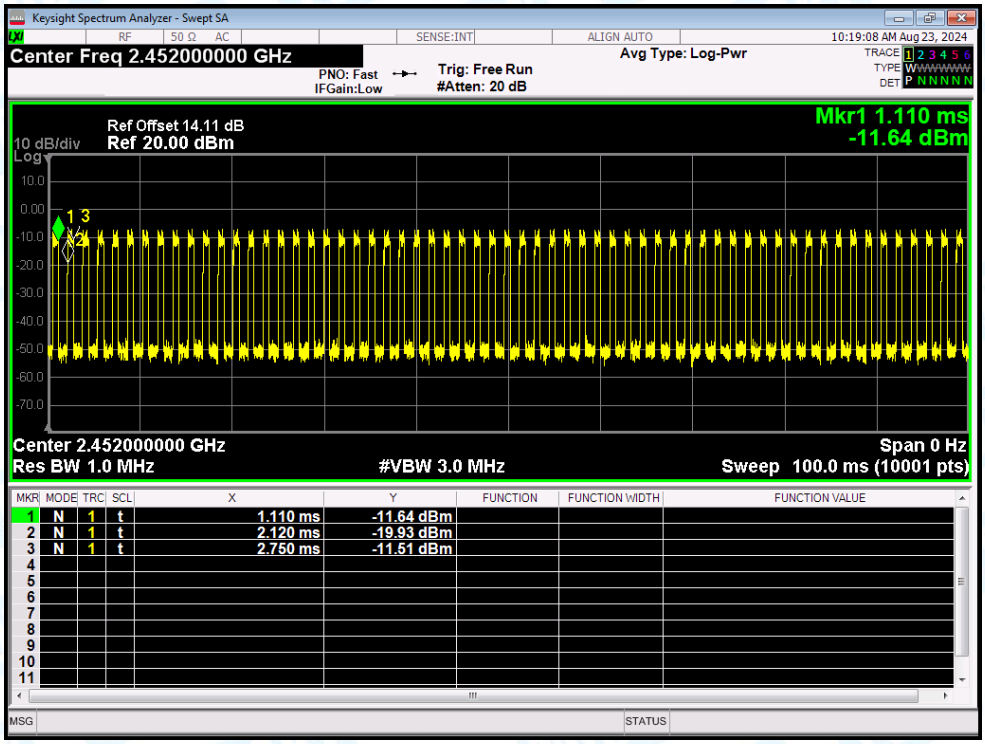
Duty Cycle NVNT n(HT40) 2422MHz Ant1



Duty Cycle NVNT n(HT40) 2437MHz Ant1



Duty Cycle NVNT n(HT40) 2452MHz Ant1



2. Maximum Conducted Output Power

Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	6.94	30	Pass
NVNT	b	2437	Ant1	6.45	30	Pass
NVNT	b	2462	Ant1	5.78	30	Pass
NVNT	g	2412	Ant1	4.47	30	Pass
NVNT	g	2437	Ant1	4.90	30	Pass
NVNT	g	2462	Ant1	4.50	30	Pass
NVNT	n(HT20)	2412	Ant1	4.64	30	Pass
NVNT	n(HT20)	2437	Ant1	4.26	30	Pass
NVNT	n(HT20)	2462	Ant1	3.83	30	Pass
NVNT	n(HT40)	2422	Ant1	3.74	30	Pass
NVNT	n(HT40)	2437	Ant1	3.55	30	Pass
NVNT	n(HT40)	2452	Ant1	3.14	30	Pass

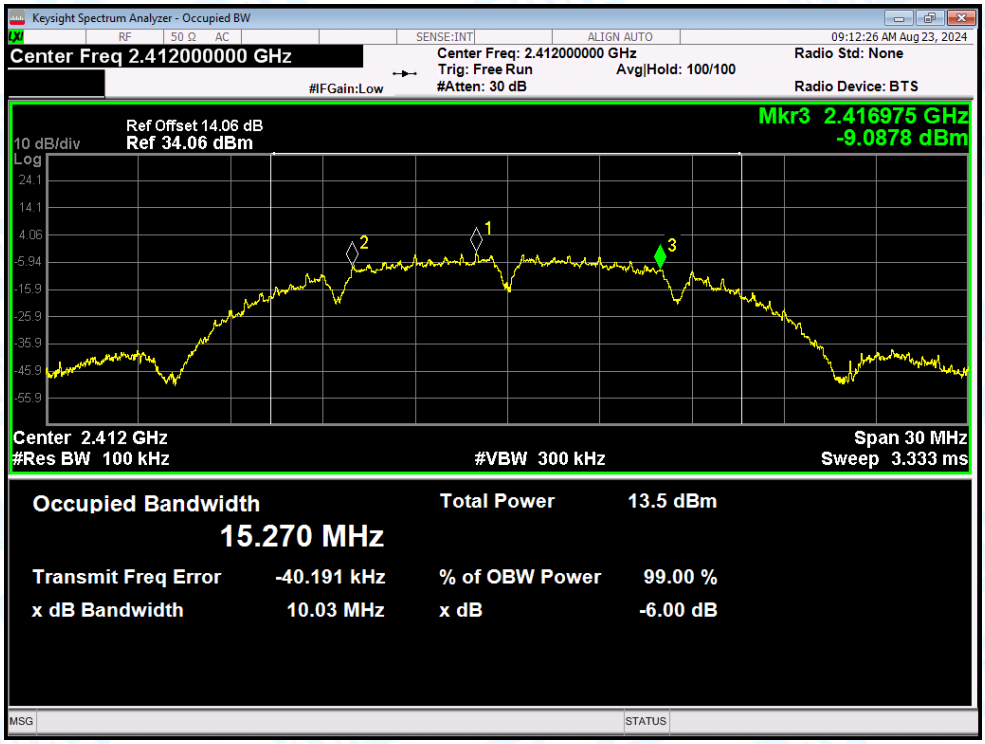
Note：The Duty Cycle Factor is compensated in the graph.

3. -6dB Bandwidth

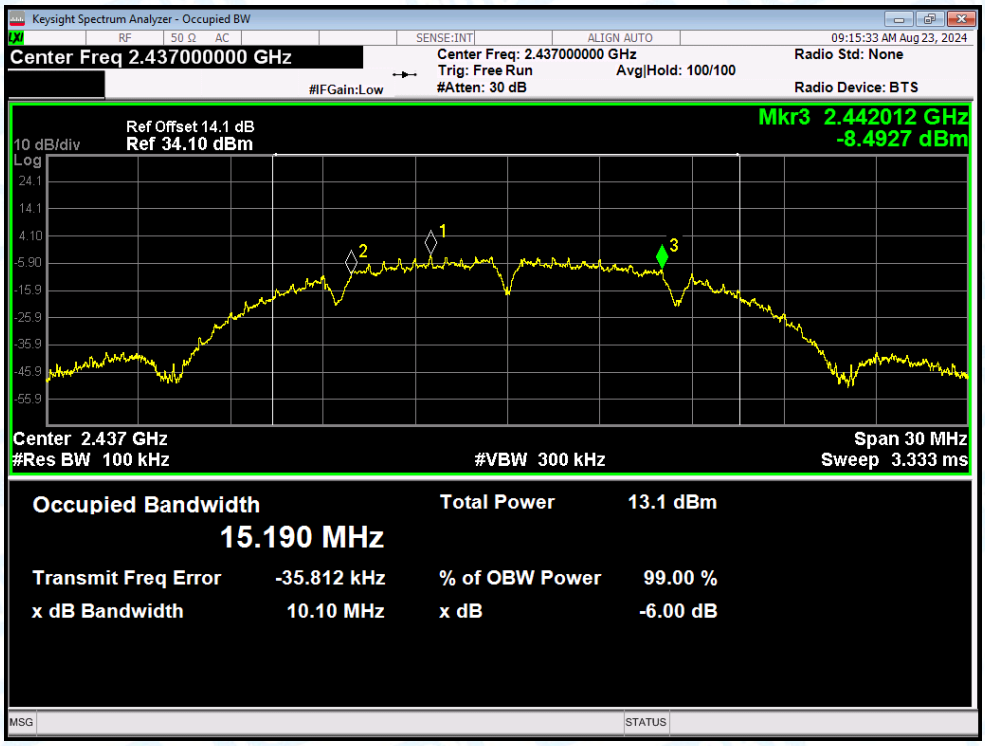
Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	10.03	0.5	Pass
NVNT	b	2437	Ant1	10.1	0.5	Pass
NVNT	b	2462	Ant1	10.07	0.5	Pass
NVNT	g	2412	Ant1	16.34	0.5	Pass
NVNT	g	2437	Ant1	16.43	0.5	Pass
NVNT	g	2462	Ant1	16.41	0.5	Pass
NVNT	n(HT20)	2412	Ant1	17.65	0.5	Pass
NVNT	n(HT20)	2437	Ant1	17.61	0.5	Pass
NVNT	n(HT20)	2462	Ant1	17.35	0.5	Pass
NVNT	n(HT40)	2422	Ant1	35.62	0.5	Pass
NVNT	n(HT40)	2437	Ant1	35.88	0.5	Pass
NVNT	n(HT40)	2452	Ant1	35.31	0.5	Pass

Test Graphs

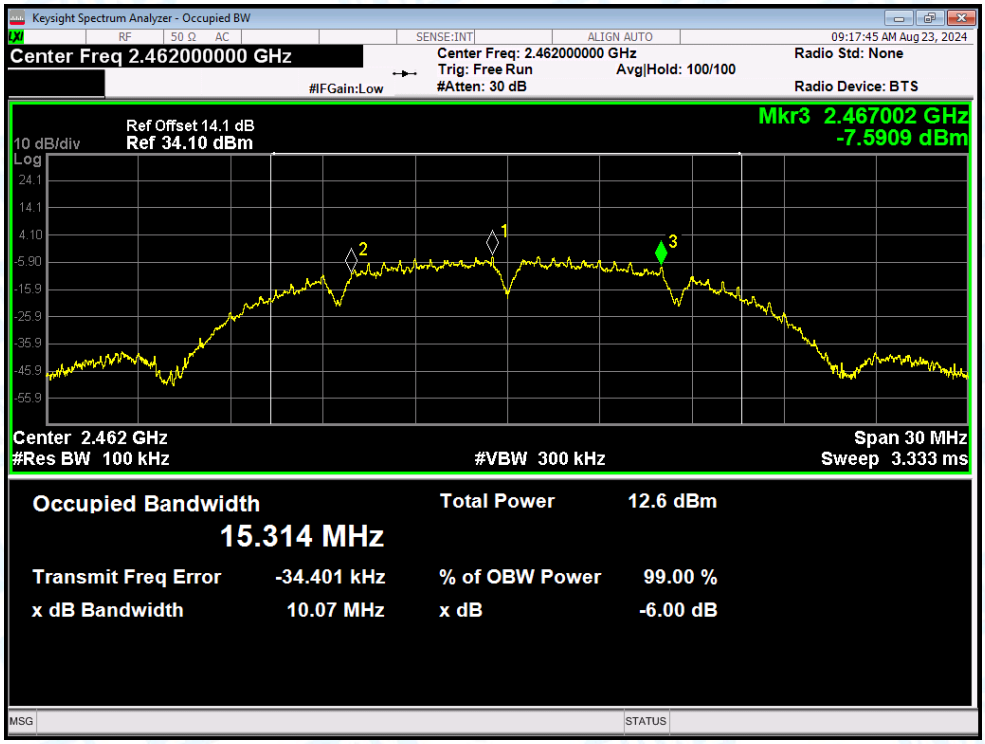
-6dB Bandwidth NVNT b 2412MHz Ant1



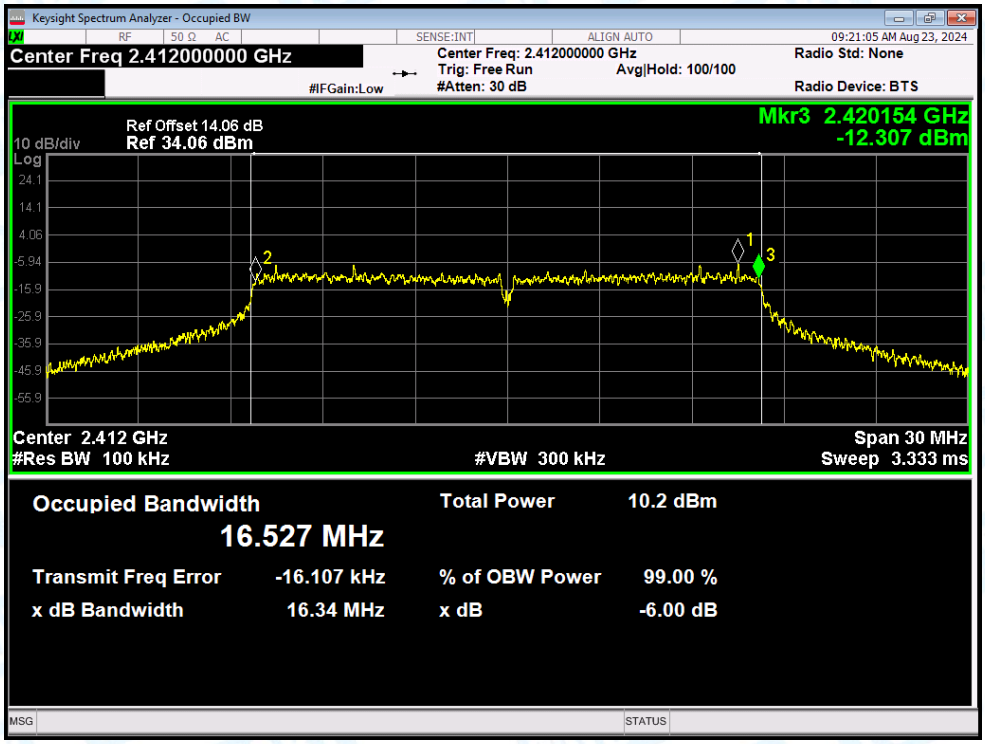
-6dB Bandwidth NVNT b 2437MHz Ant1



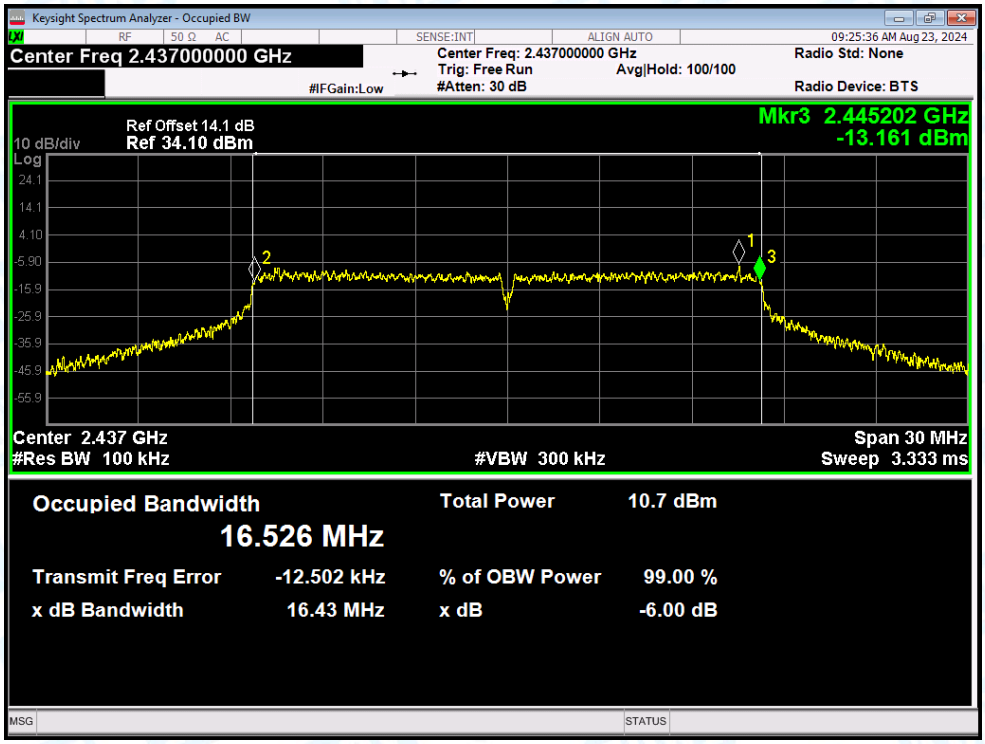
-6dB Bandwidth NVNT b 2462MHz Ant1



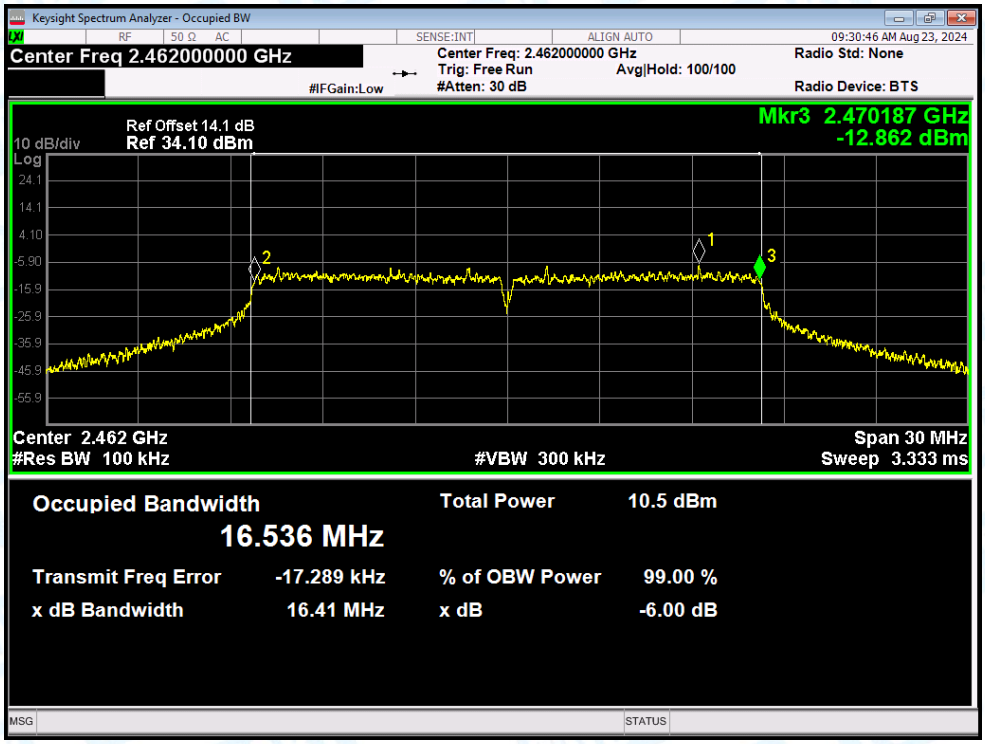
-6dB Bandwidth NVNT g 2412MHz Ant1



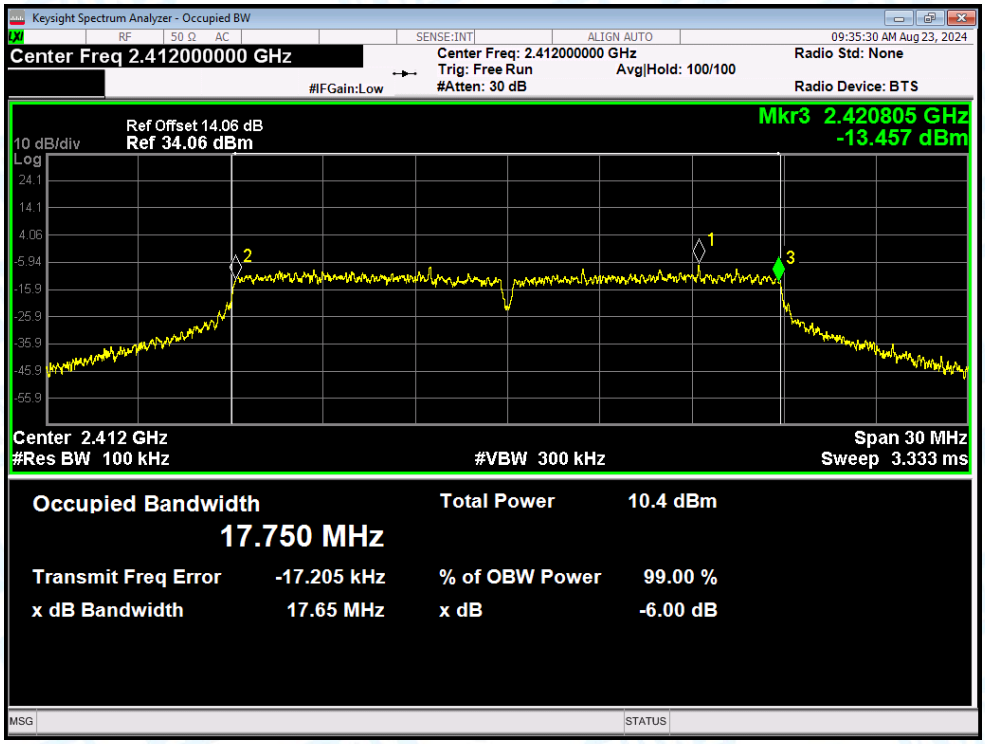
-6dB Bandwidth NVNT g 2437MHz Ant1



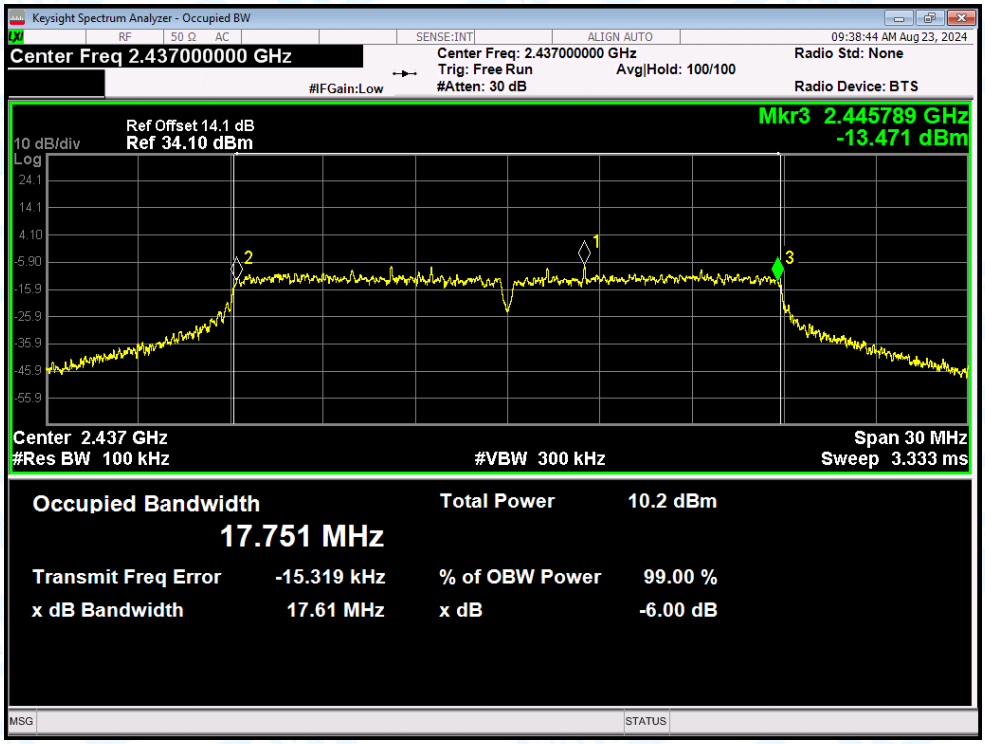
-6dB Bandwidth NVNT g 2462MHz Ant1



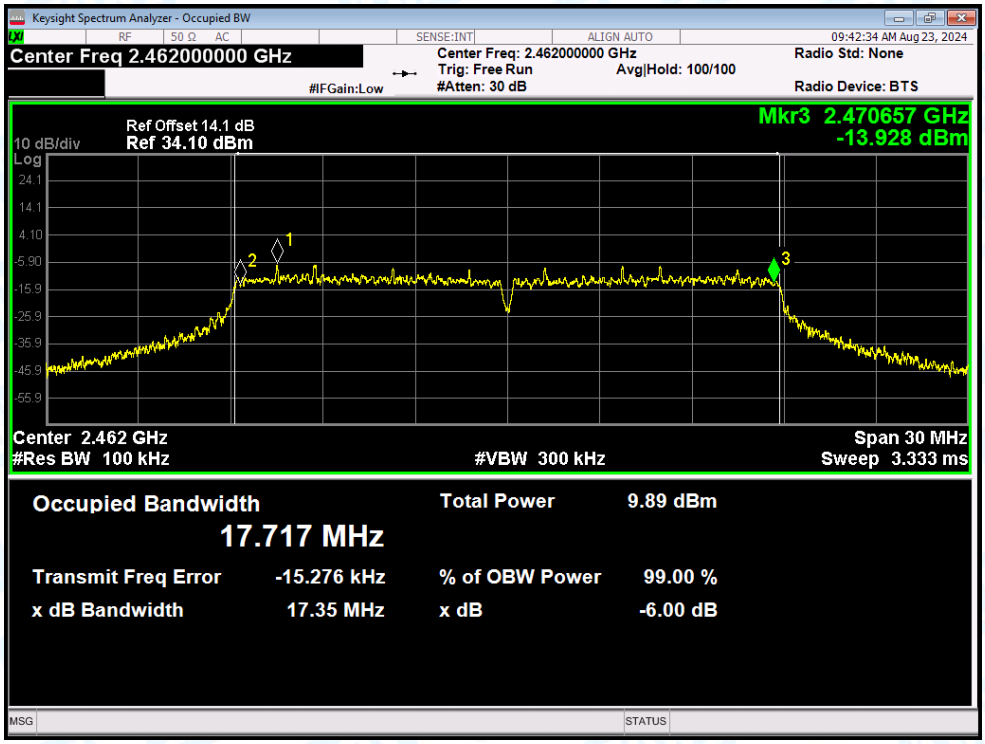
-6dB Bandwidth NVNT n(HT20) 2412MHz Ant1



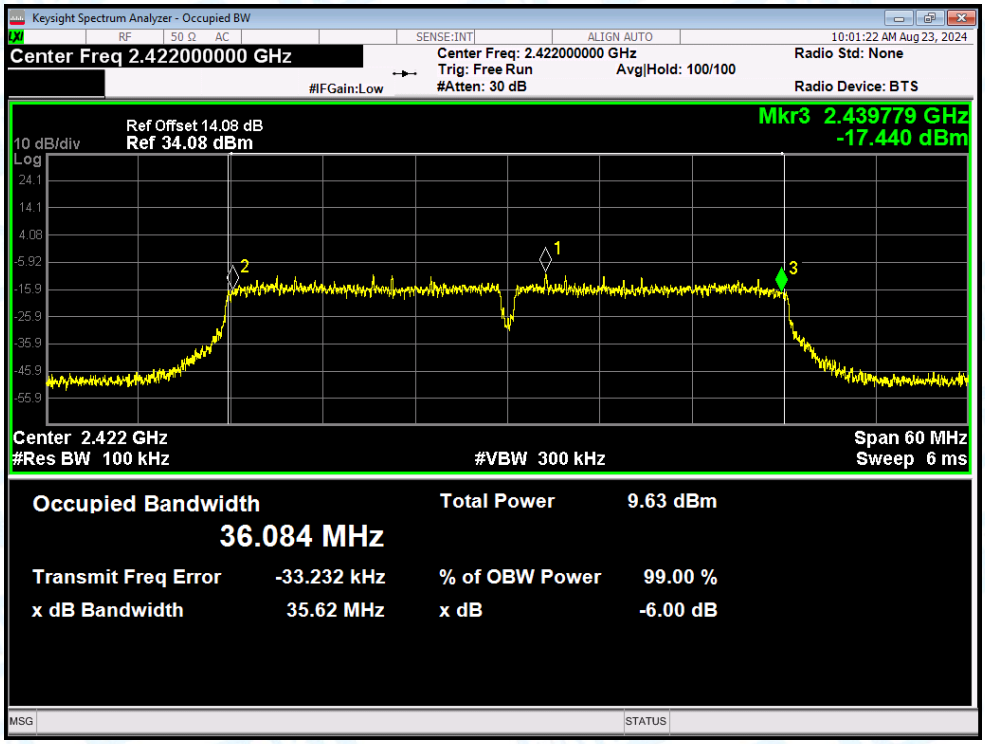
-6dB Bandwidth NVNT n(HT20) 2437MHz Ant1



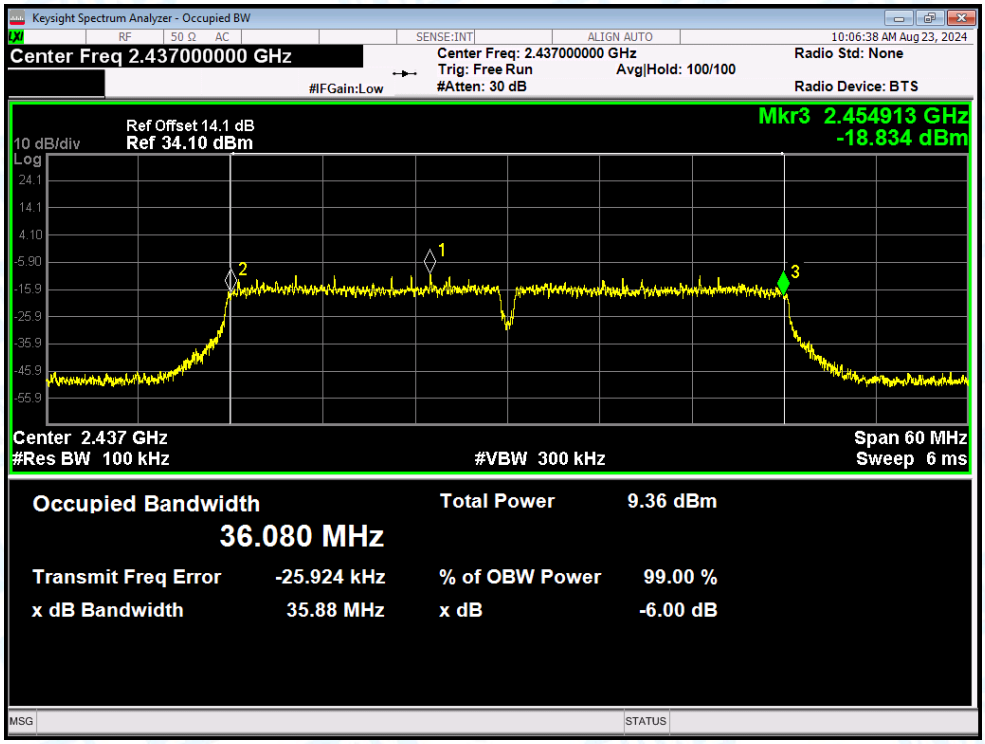
-6dB Bandwidth NVNT n(HT20) 2462MHz Ant1



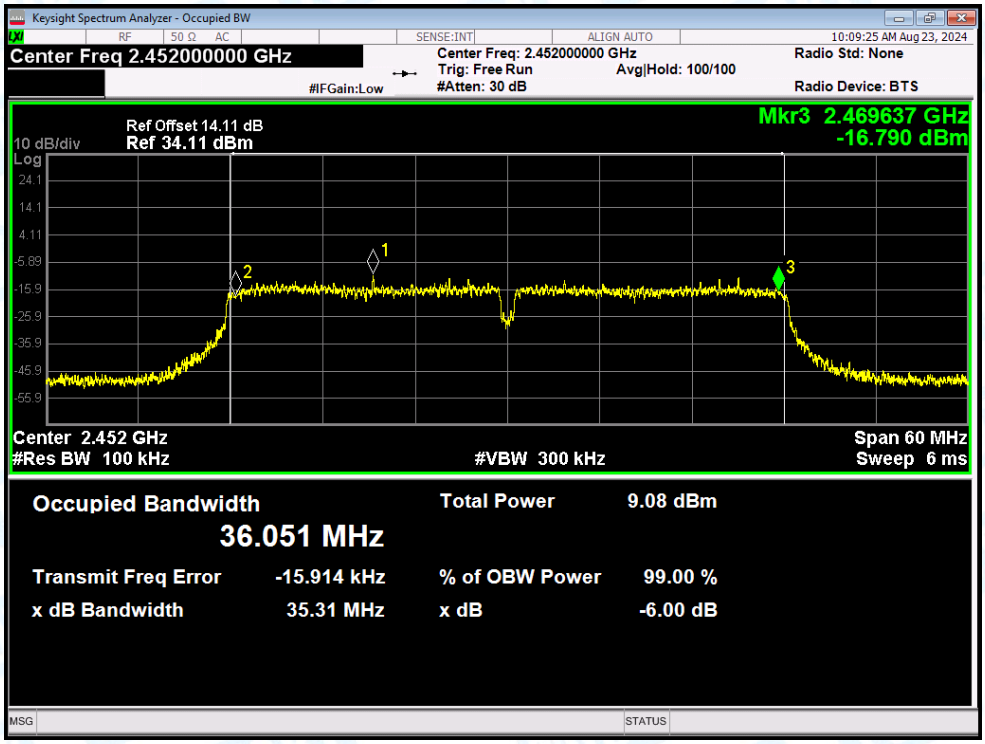
-6dB Bandwidth NVNT n(HT40) 2422MHz Ant1



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



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

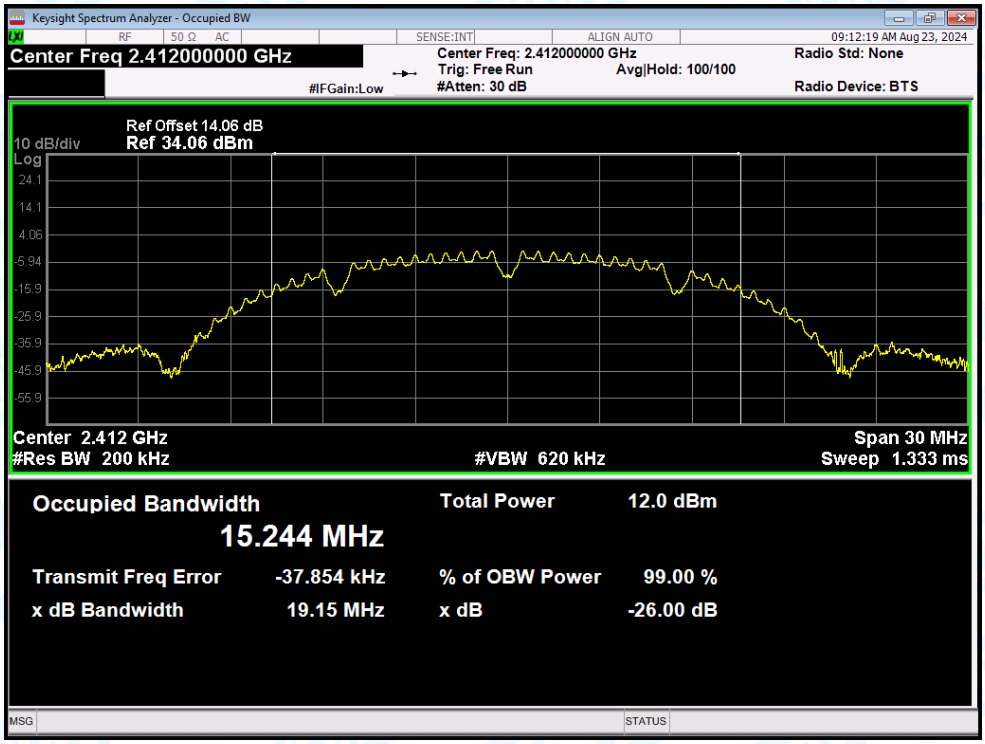


4. Occupied Channel Bandwidth

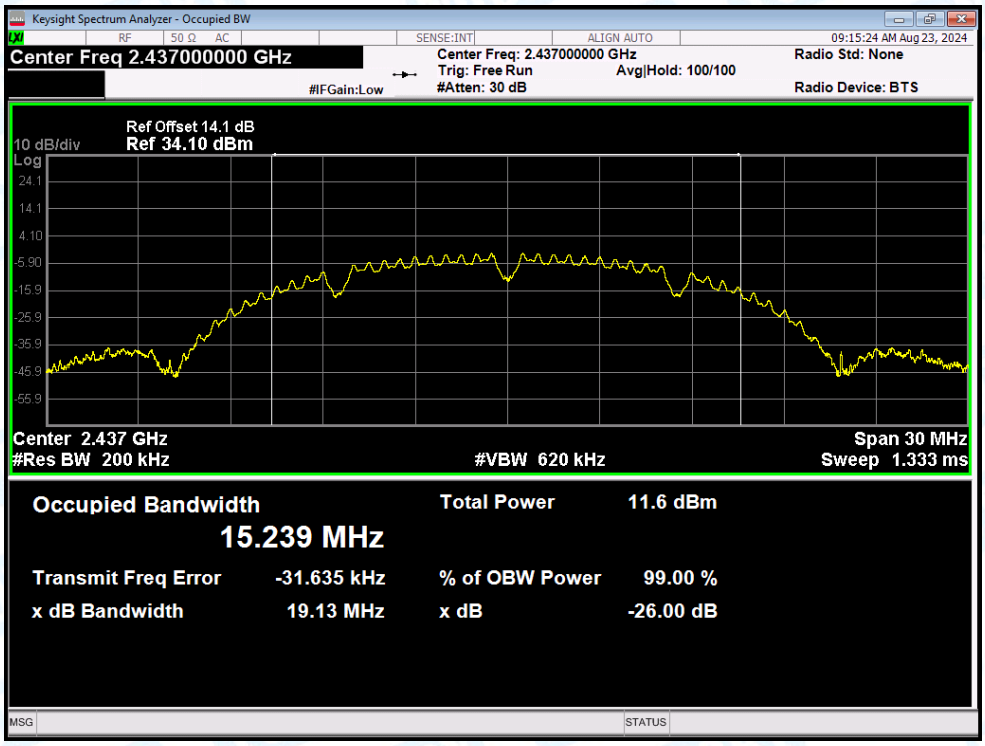
Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	b	2412	Ant1	15.244
NVNT	b	2437	Ant1	15.239
NVNT	b	2462	Ant1	15.248
NVNT	g	2412	Ant1	16.722
NVNT	g	2437	Ant1	16.701
NVNT	g	2462	Ant1	16.742
NVNT	n(HT20)	2412	Ant1	17.872
NVNT	n(HT20)	2437	Ant1	17.863
NVNT	n(HT20)	2462	Ant1	17.895
NVNT	n(HT40)	2422	Ant1	36.202
NVNT	n(HT40)	2437	Ant1	36.208
NVNT	n(HT40)	2452	Ant1	36.182

Test Graphs

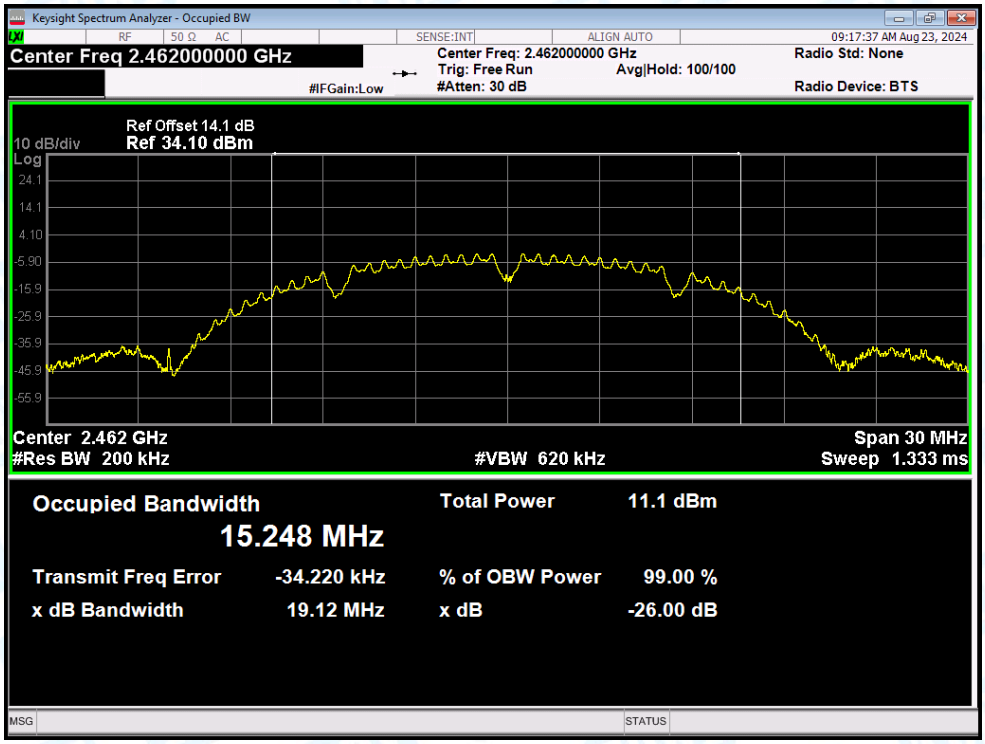
OBW NVNT b 2412MHz Ant1



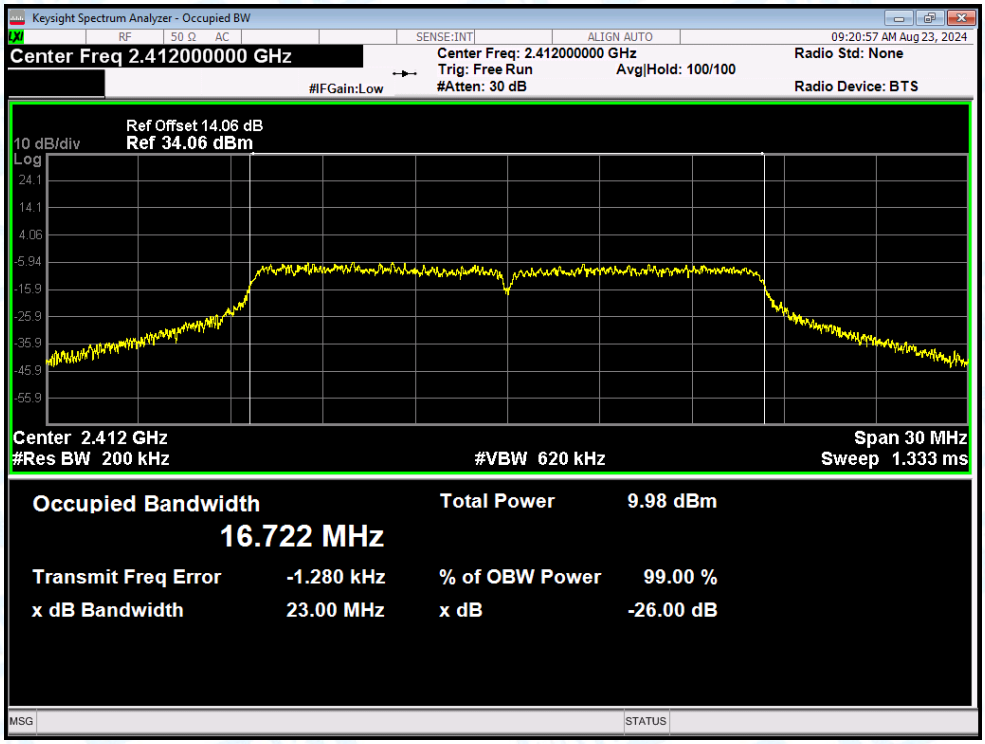
OBW NVNT b 2437MHz Ant1



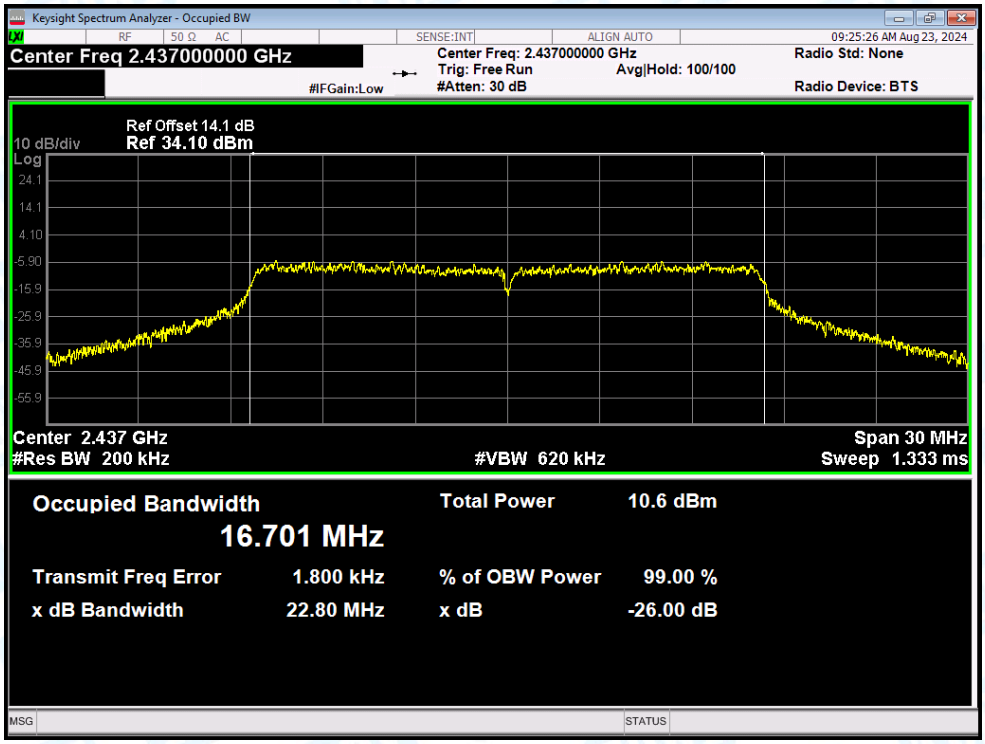
OBW NVNT b 2462MHz Ant1



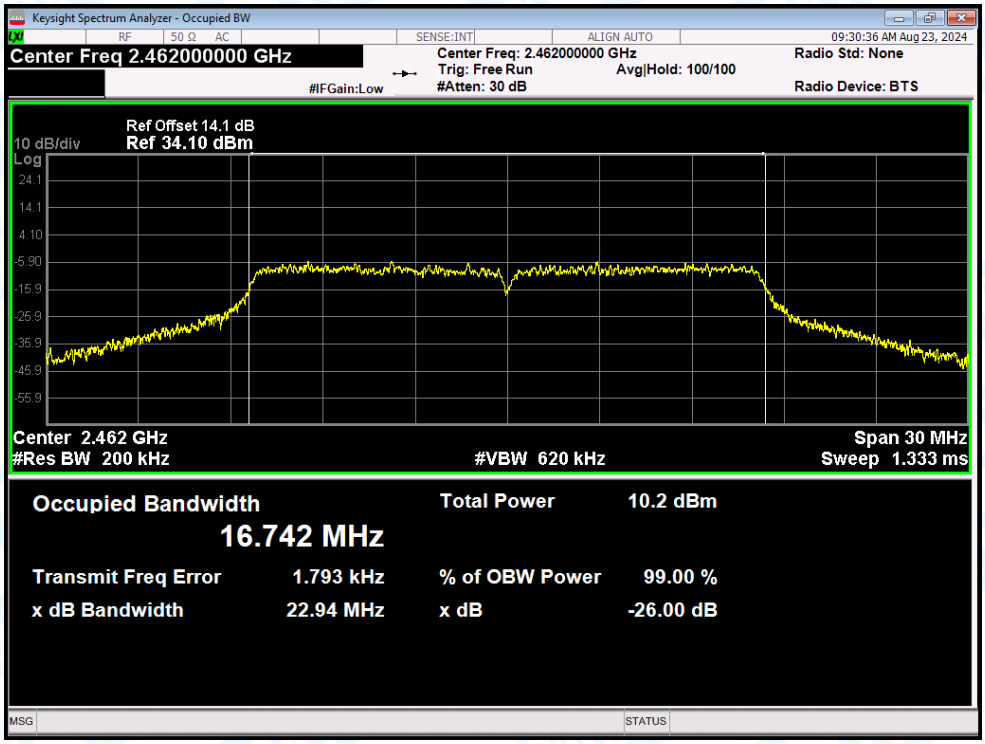
OBW NVNT g 2412MHz Ant1



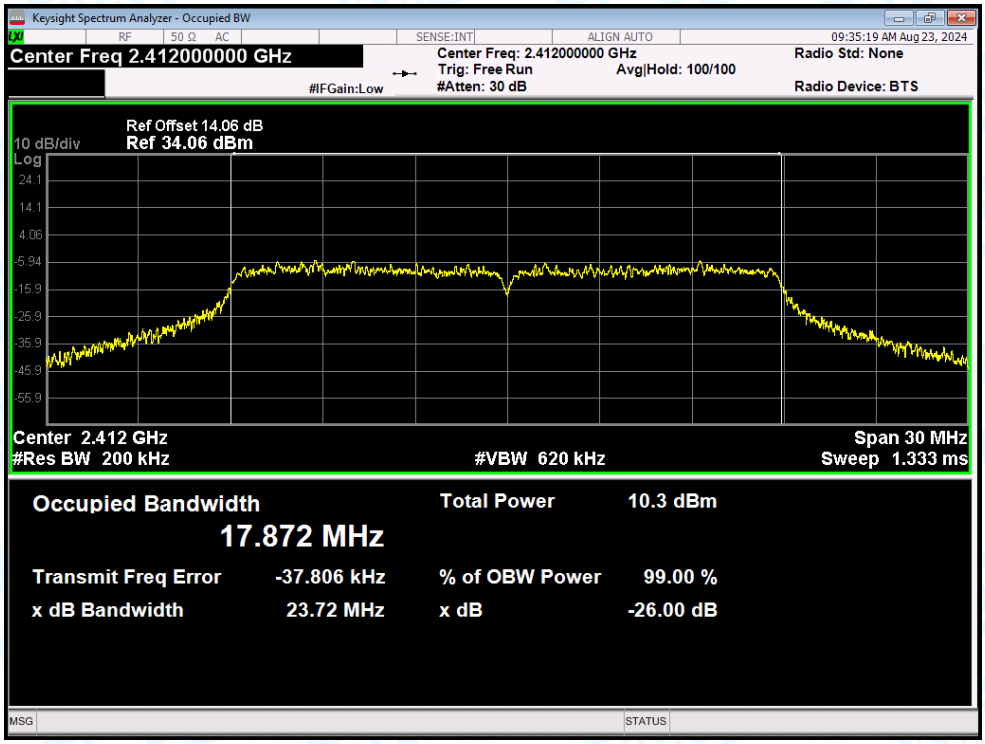
OBW NVNT g 2437MHz Ant1



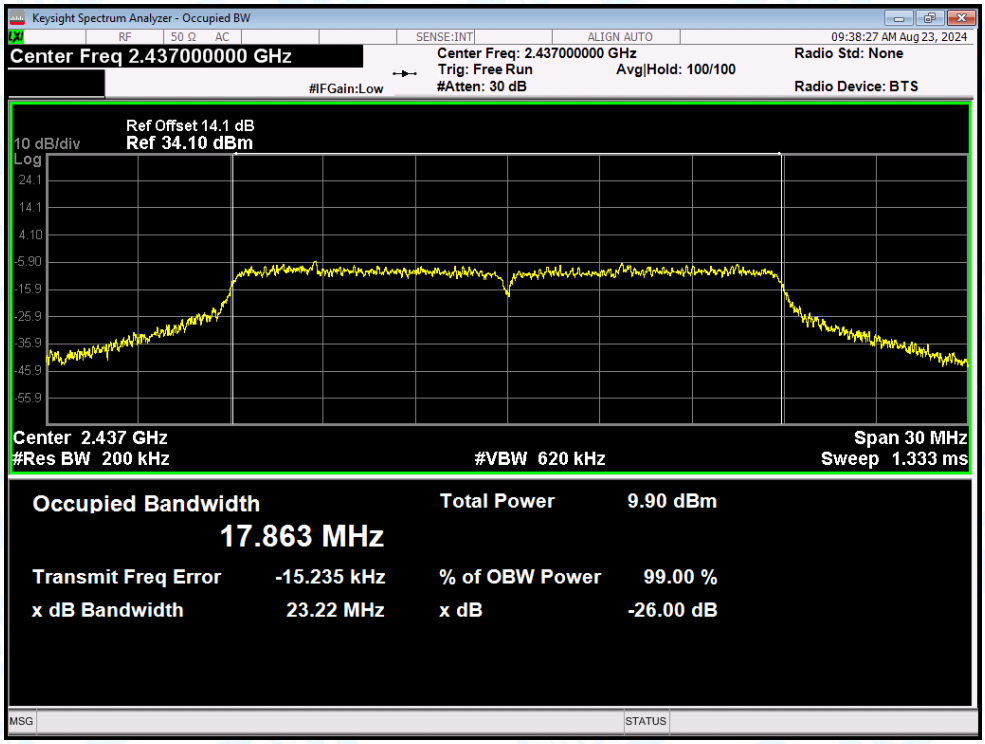
OBW NVNT g 2462MHz Ant1



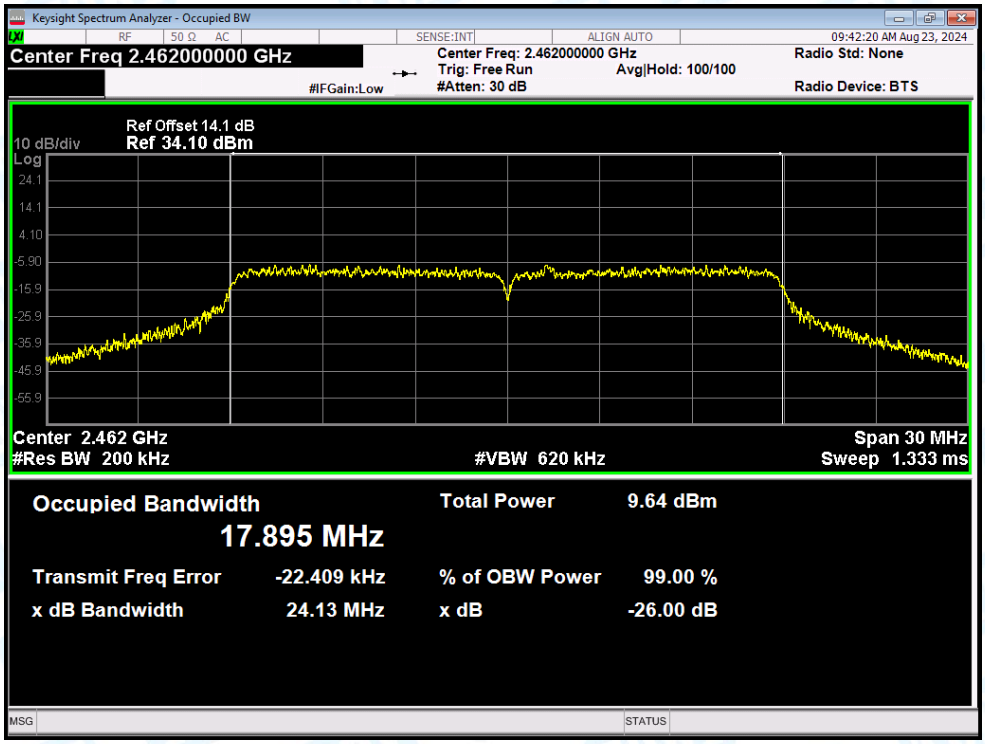
OBW NVNT n(HT20) 2412MHz Ant1



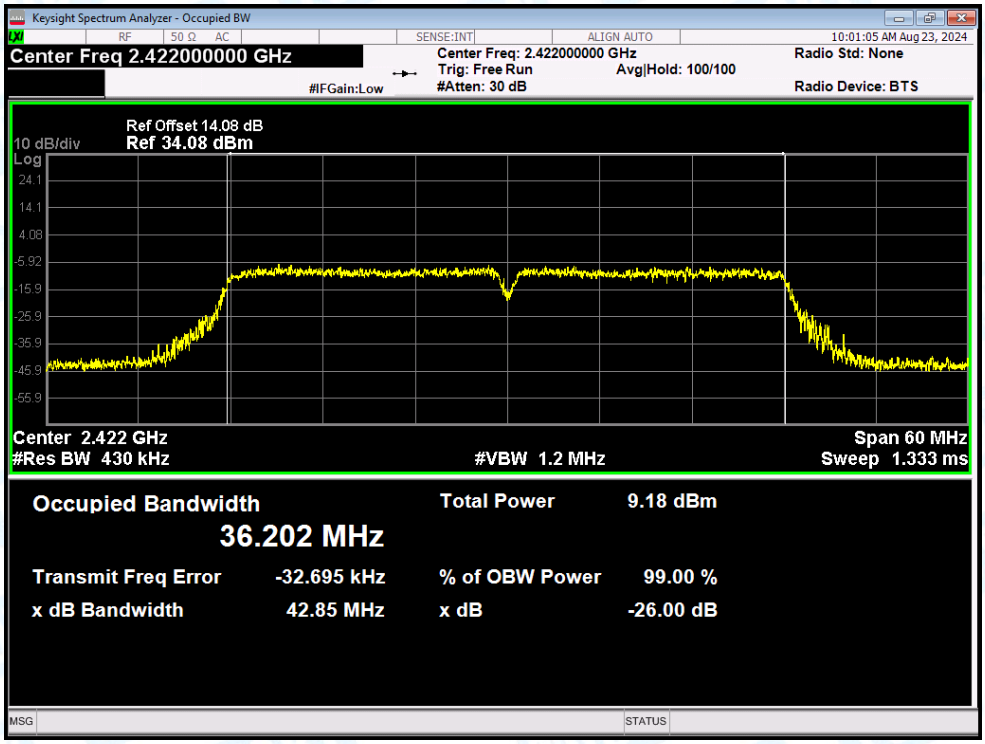
OBW NVNT n(HT20) 2437MHz Ant1



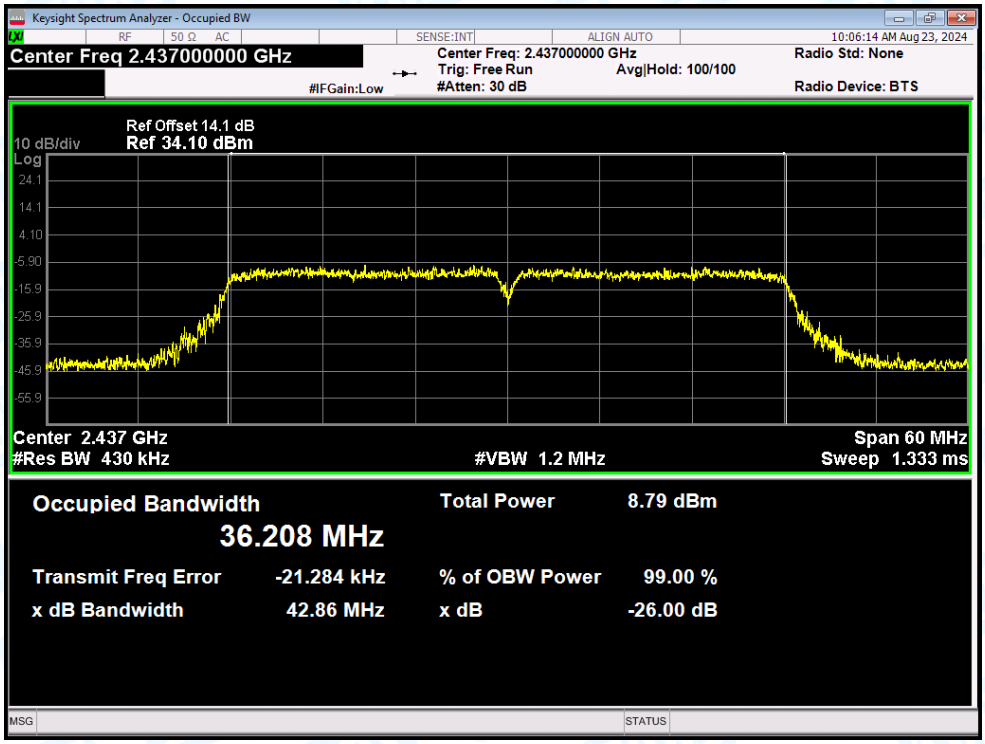
OBW NVNT n(HT20) 2462MHz Ant1



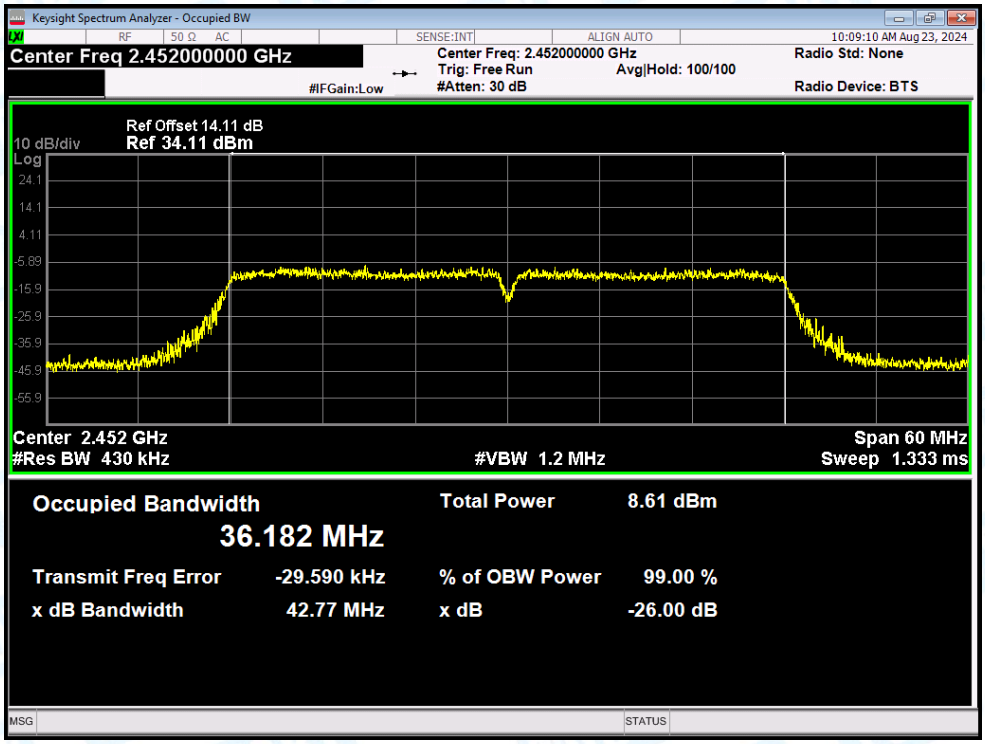
OBW NVNT n(HT40) 2422MHz Ant1



OBW NVNT n(HT40) 2437MHz Ant1



OBW NVNT n(HT40) 2452MHz Ant1



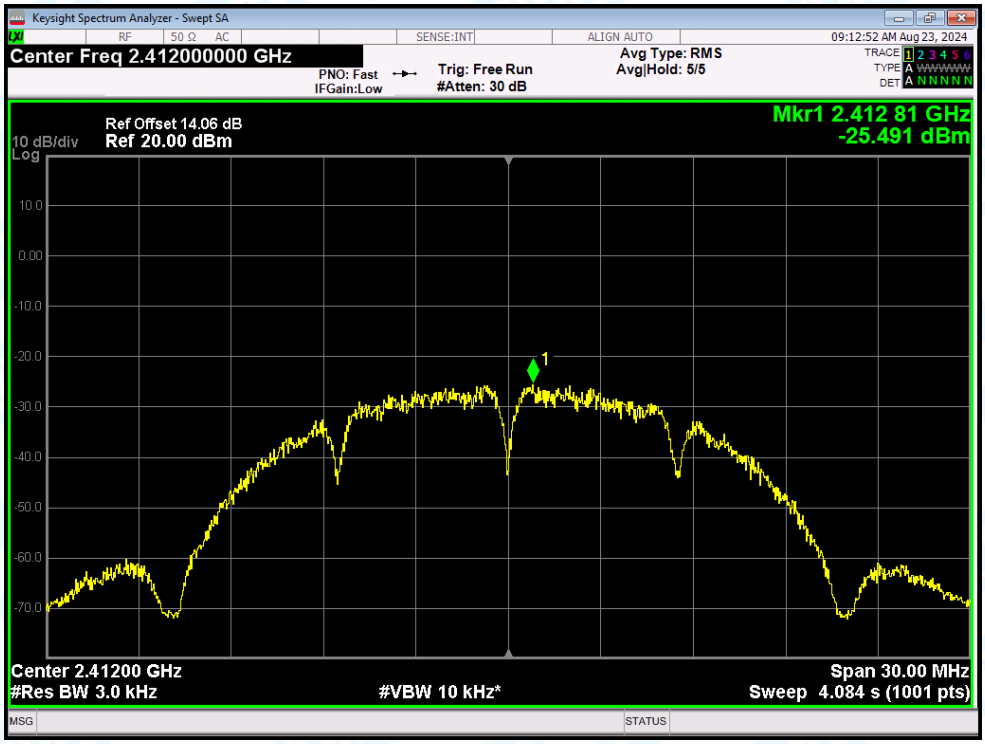
5. Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Max PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	b	2412	Ant1	-25.491	8	Pass
NVNT	b	2437	Ant1	-25.678	8	Pass
NVNT	b	2462	Ant1	-26.318	8	Pass
NVNT	g	2412	Ant1	-31.3	8	Pass
NVNT	g	2437	Ant1	-30.695	8	Pass
NVNT	g	2462	Ant1	-30.519	8	Pass
NVNT	n(HT20)	2412	Ant1	-31.004	8	Pass
NVNT	n(HT20)	2437	Ant1	-30.316	8	Pass
NVNT	n(HT20)	2462	Ant1	-32.294	8	Pass
NVNT	n(HT40)	2422	Ant1	-36.822	8	Pass
NVNT	n(HT40)	2437	Ant1	-37.006	8	Pass
NVNT	n(HT40)	2452	Ant1	-37.051	8	Pass

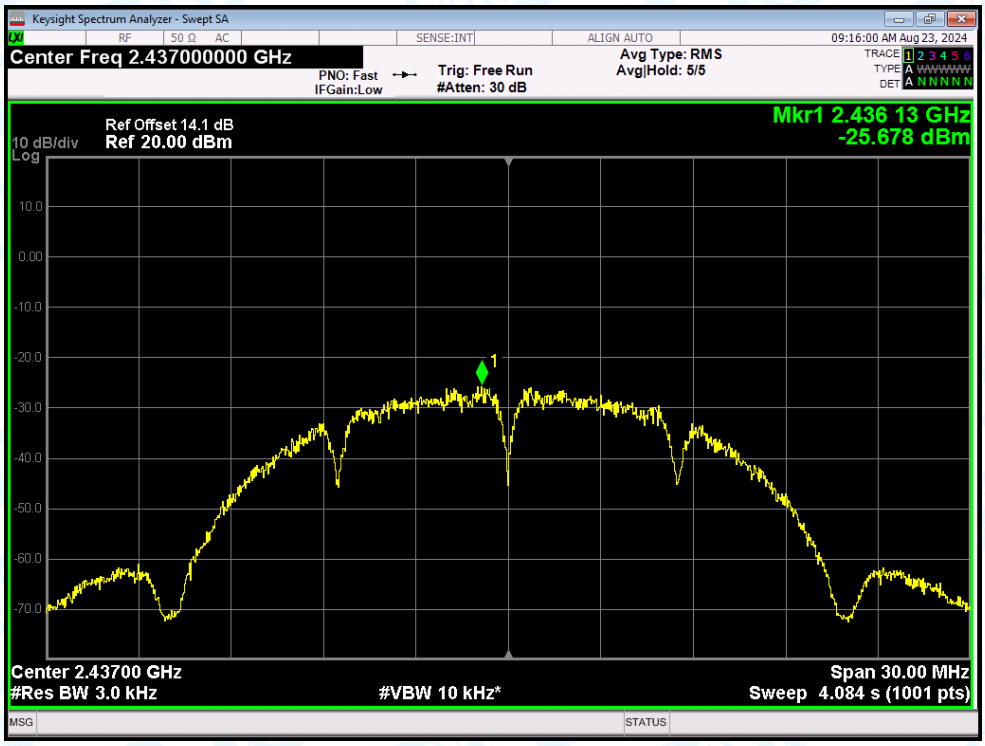
Note：The Duty Cycle Factor is compensated in the graph.

Test Graphs

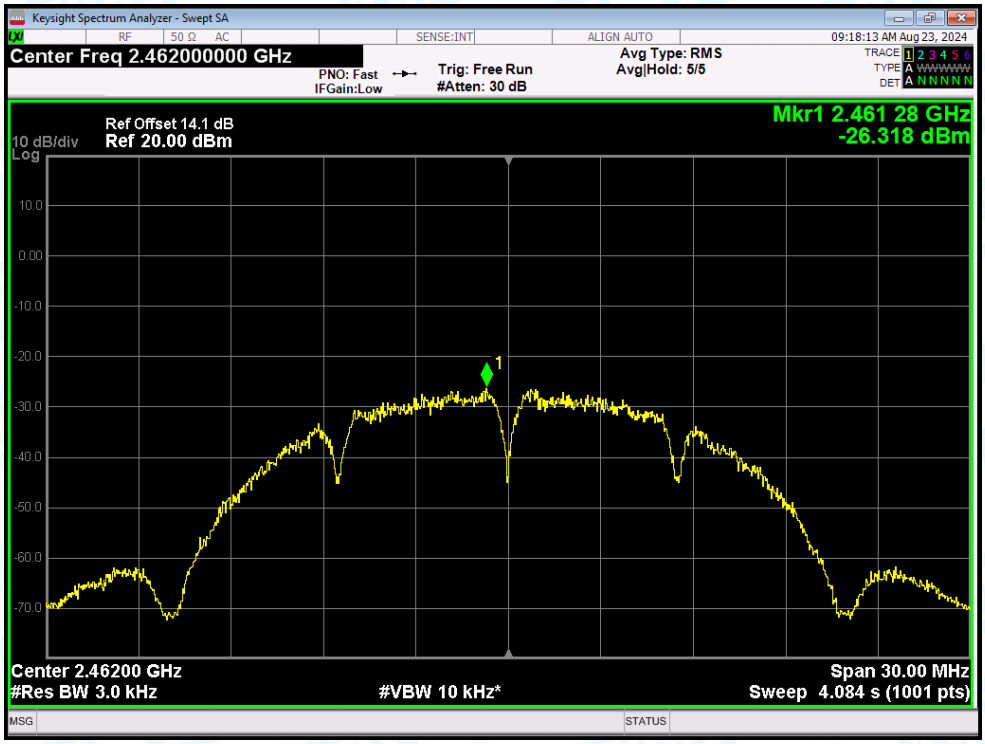
PSD NVNT b 2412MHz Ant1



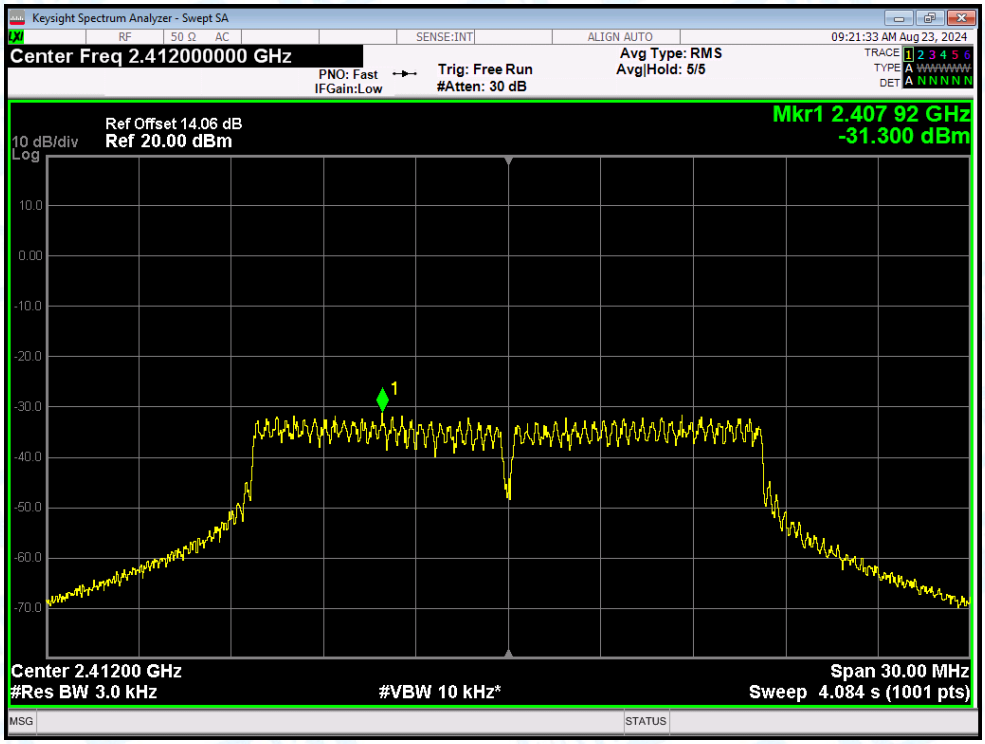
PSD NVNT b 2437MHz Ant1



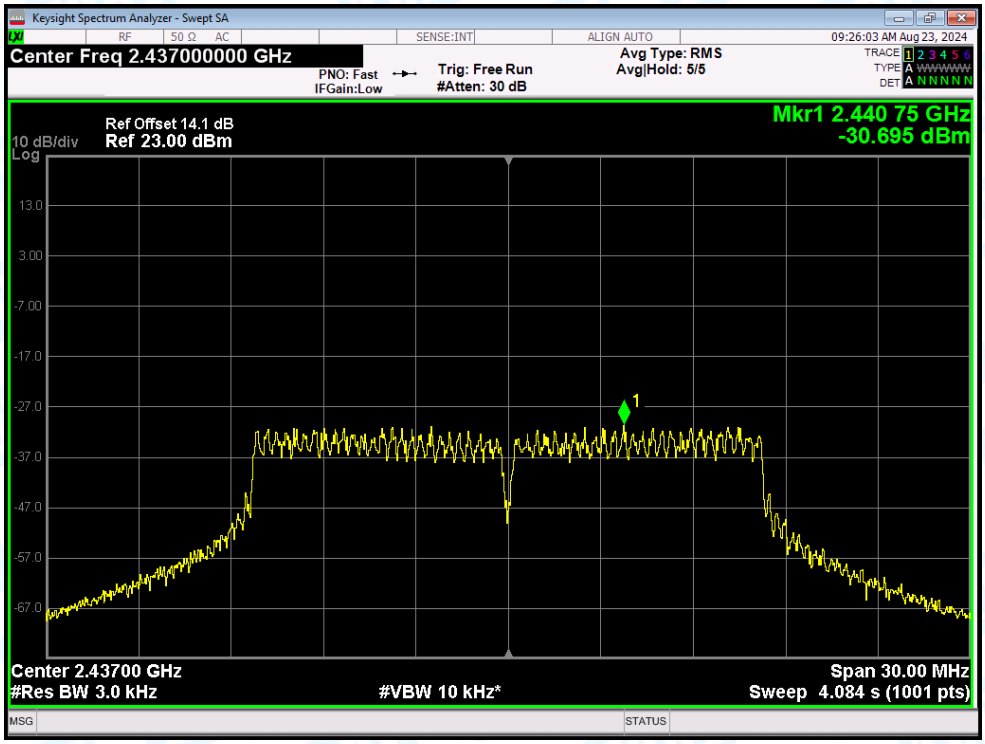
PSD NVNT b 2462MHz Ant1



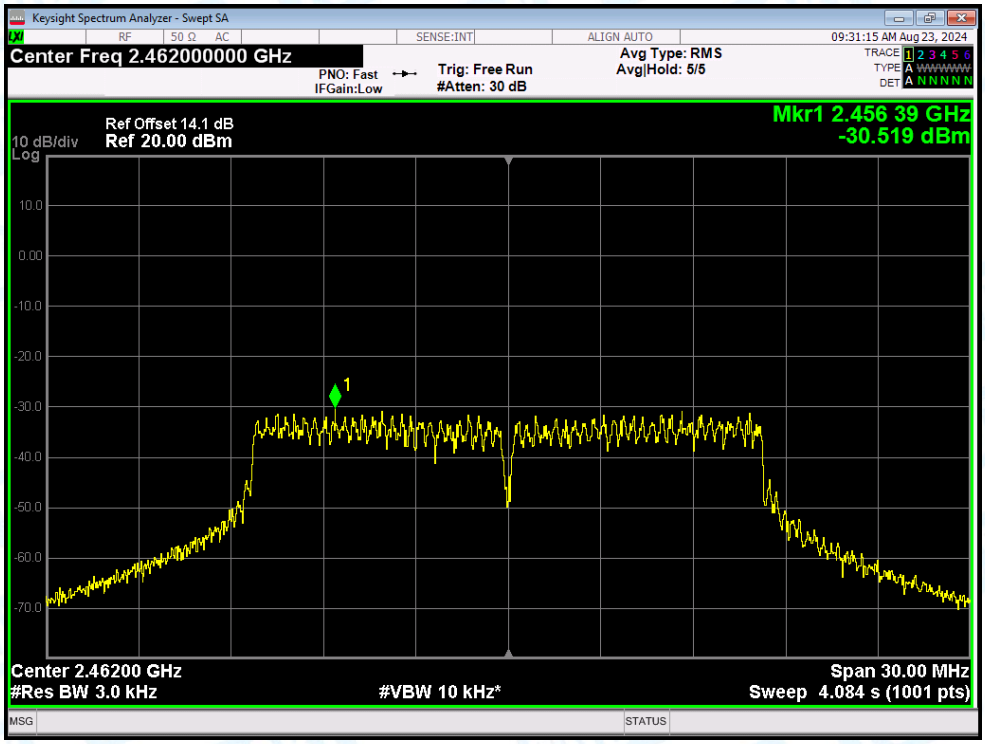
PSD NVNT g 2412MHz Ant1



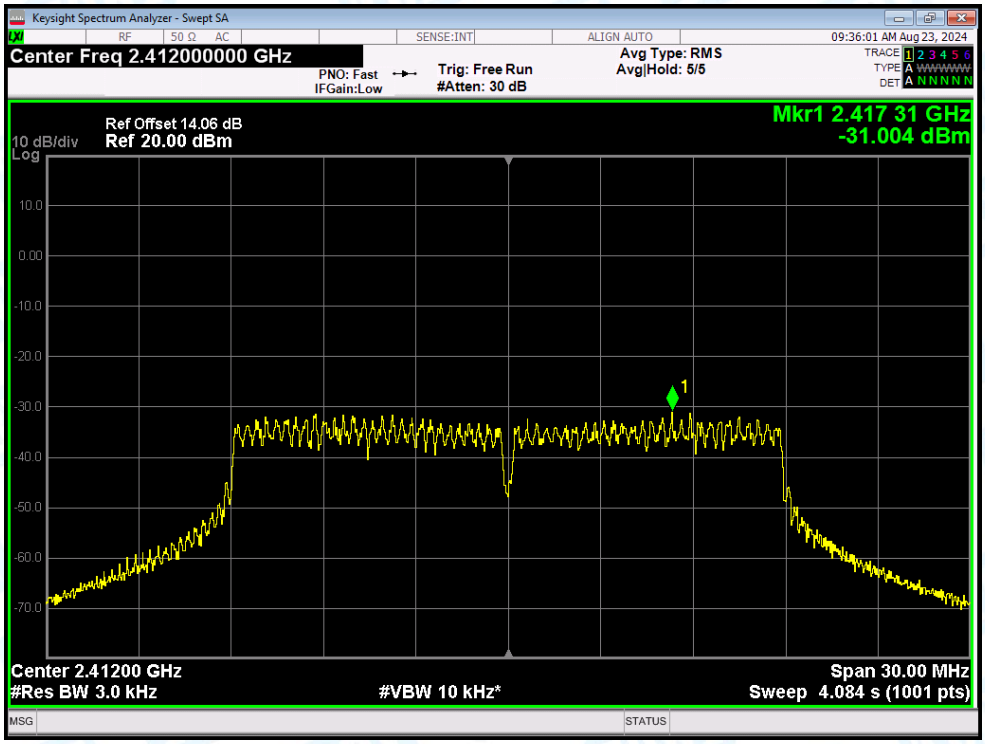
PSD NVNT g 2437MHz Ant1



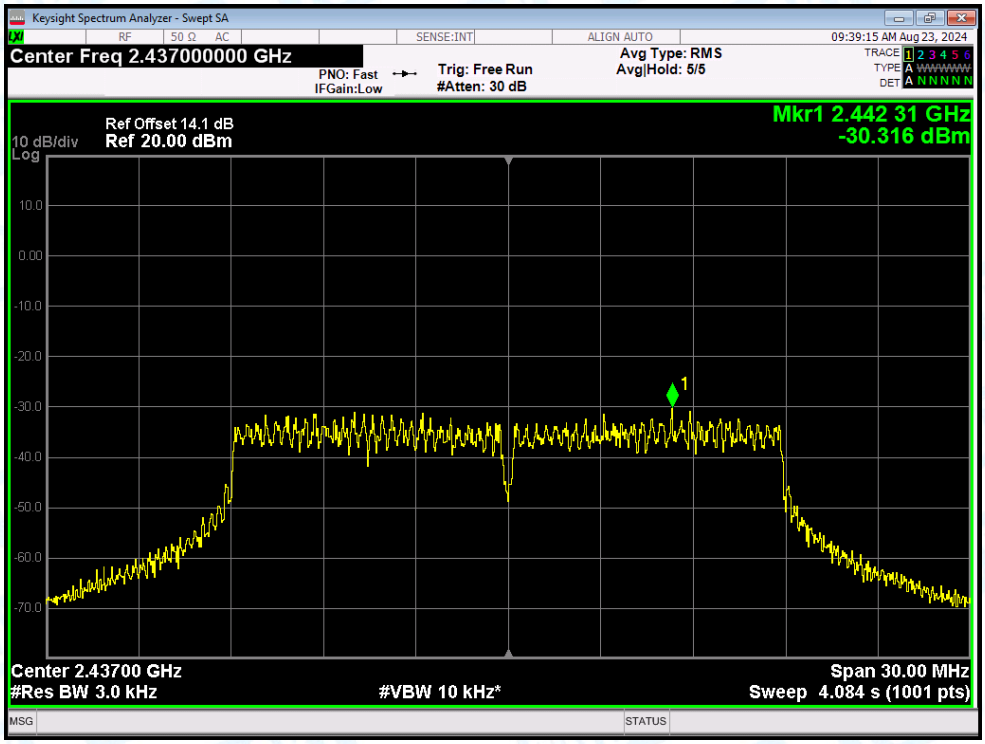
PSD NVNT g 2462MHz Ant1



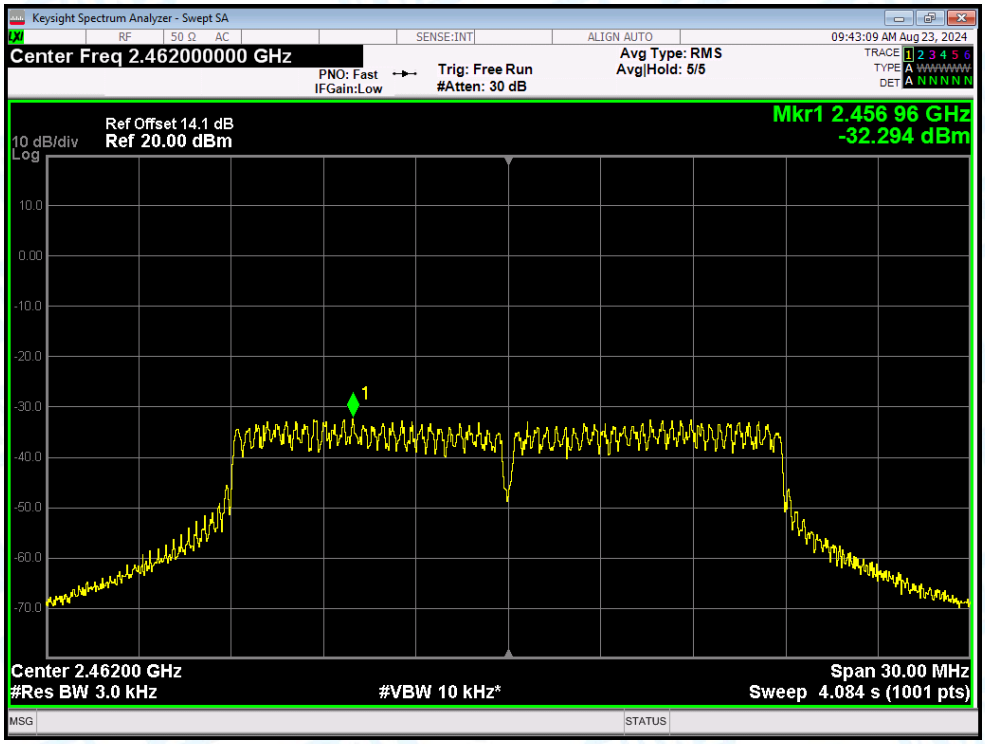
PSD NVNT n(HT20) 2412MHz Ant1



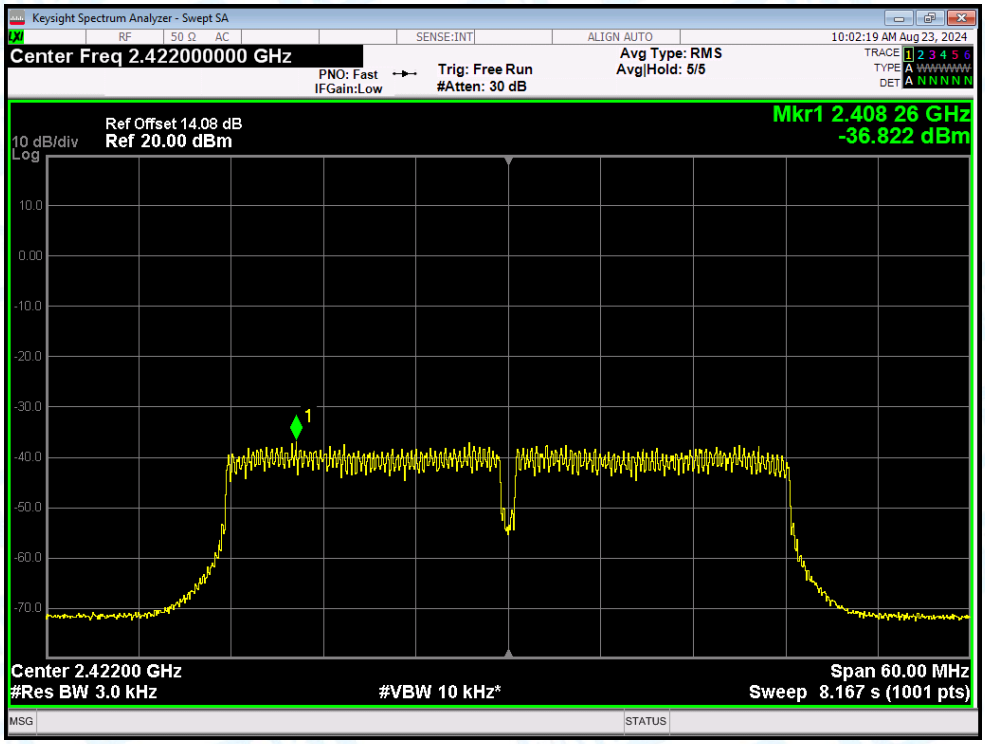
PSD NVNT n(HT20) 2437MHz Ant1



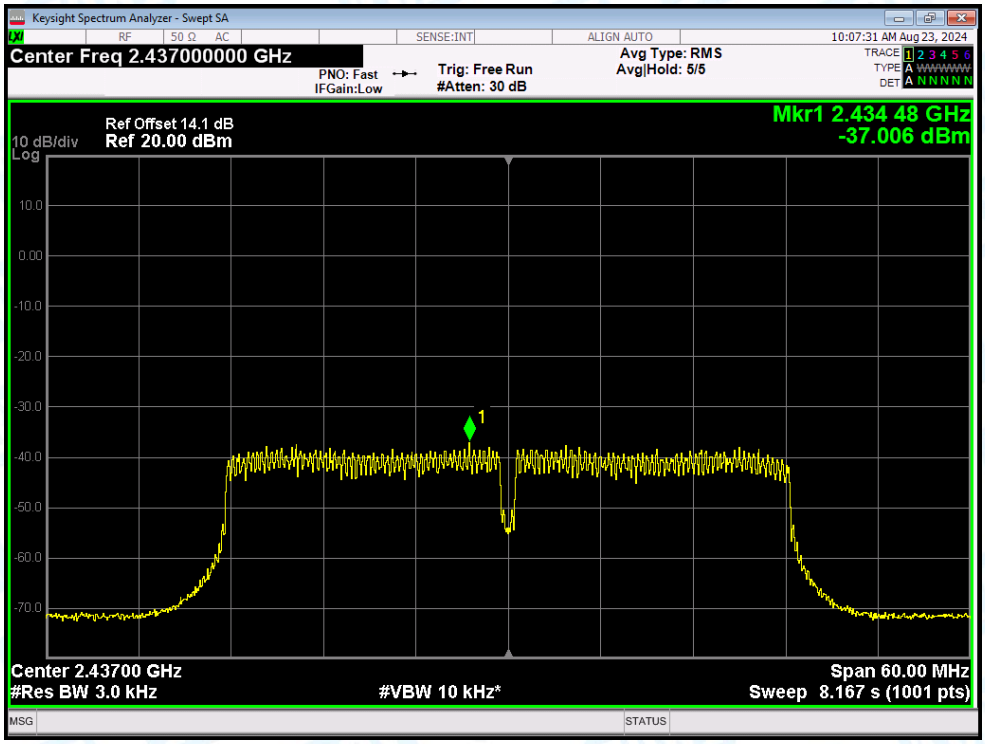
PSD NVNT n(HT20) 2462MHz Ant1



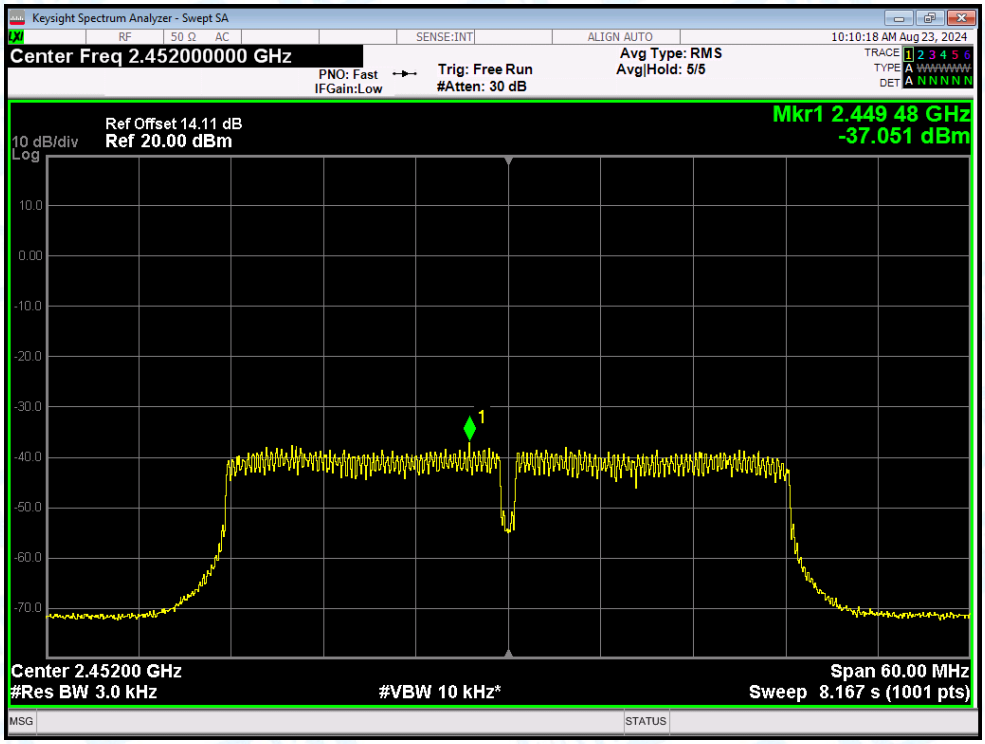
PSD NVNT n(HT40) 2422MHz Ant1



PSD NVNT n(HT40) 2437MHz Ant1



PSD NVNT n(HT40) 2452MHz Ant1

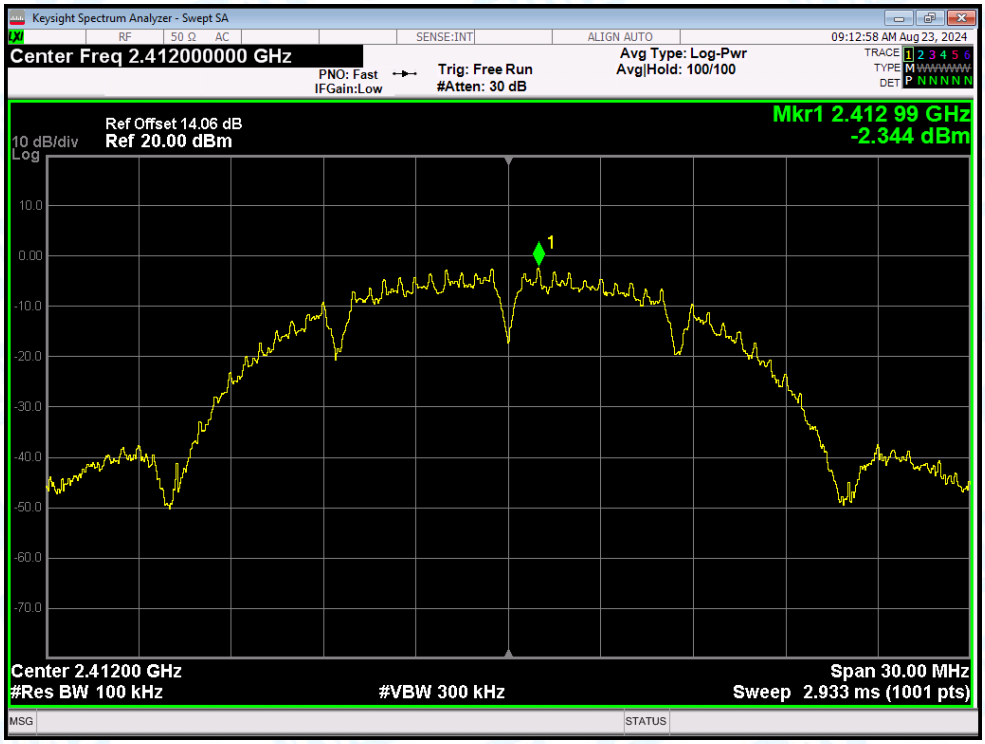


6. Band Edge

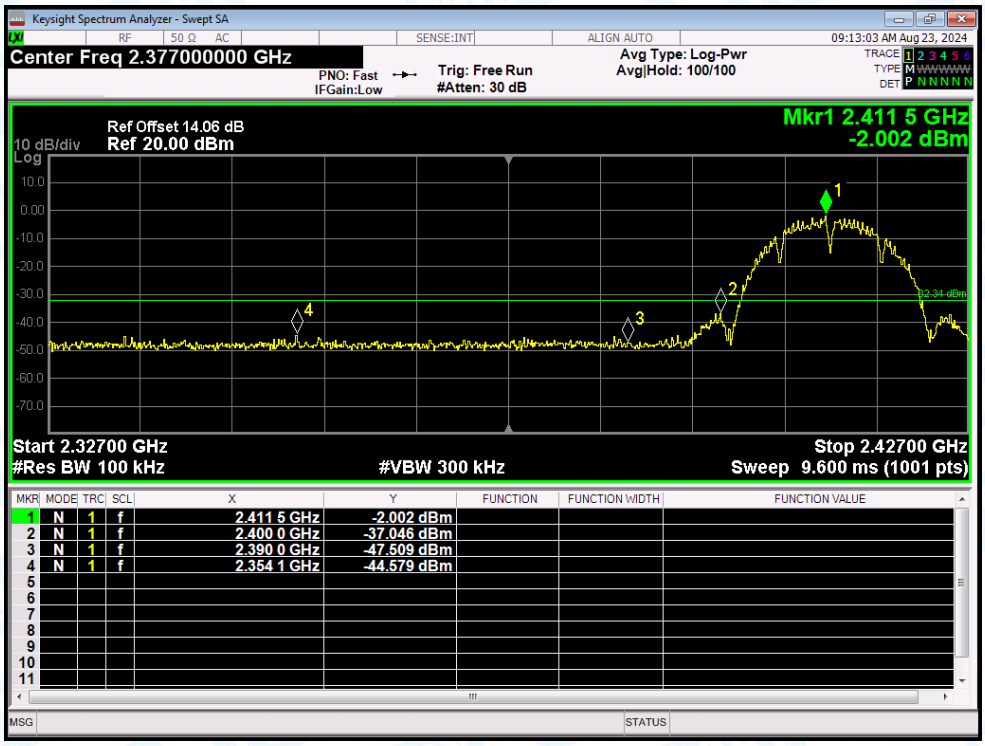
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-42.24	-30	Pass
NVNT	b	2462	Ant1	-41.9	-30	Pass
NVNT	g	2412	Ant1	-38.16	-30	Pass
NVNT	g	2462	Ant1	-37.24	-30	Pass
NVNT	n(HT20)	2412	Ant1	-39.29	-30	Pass
NVNT	n(HT20)	2462	Ant1	-37.24	-30	Pass
NVNT	n(HT40)	2422	Ant1	-35.37	-30	Pass
NVNT	n(HT40)	2452	Ant1	-34.73	-30	Pass

Test Graphs

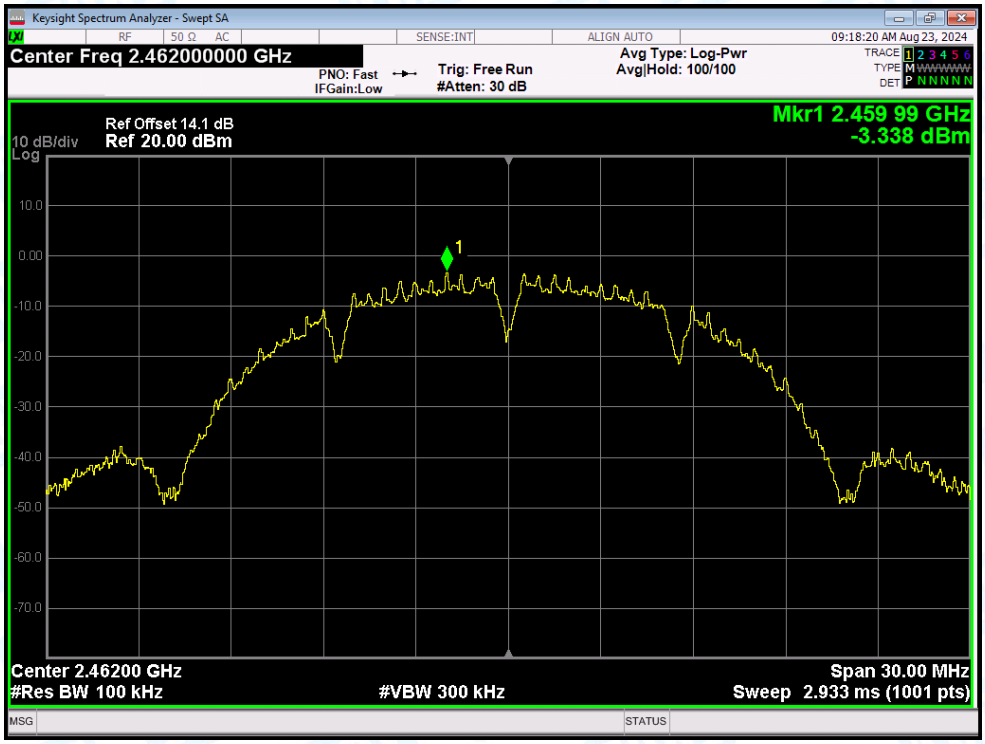
Band Edge NVNT b 2412MHz Ant1 Ref



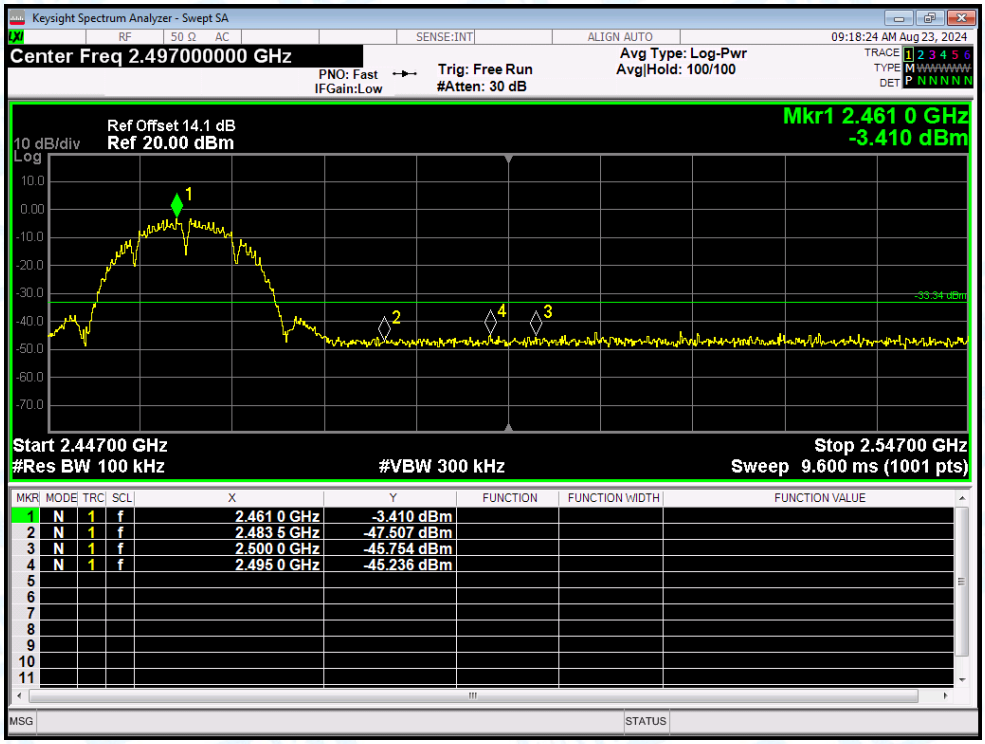
Band Edge NVNT b 2412MHz Ant1 Emission



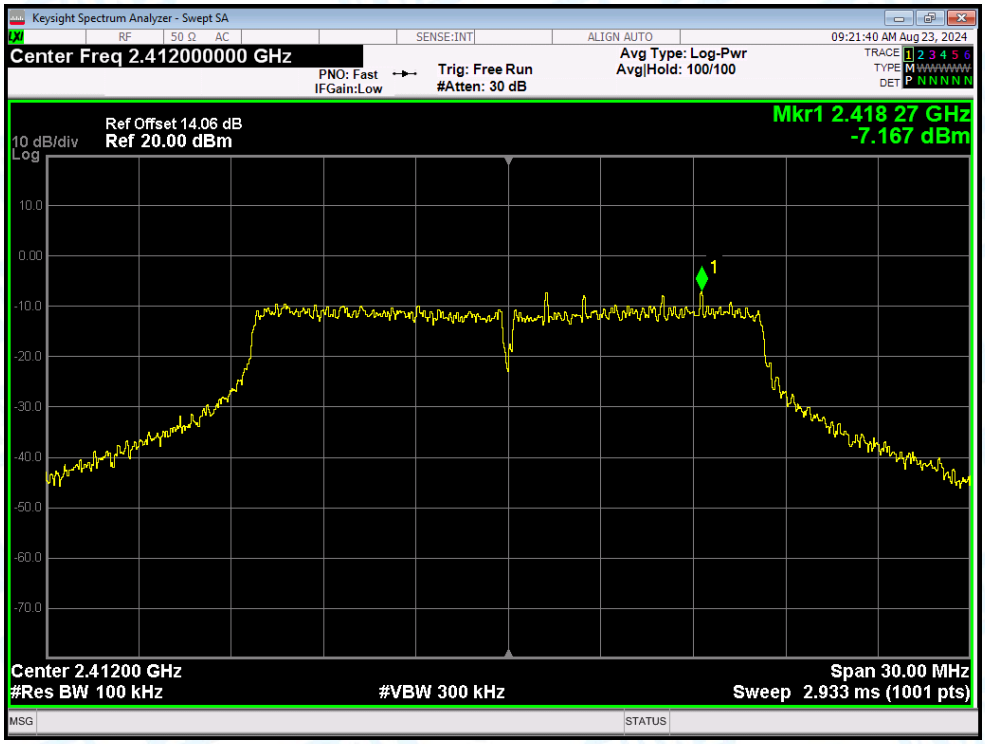
Band Edge NVNT b 2462MHz Ant1 Ref



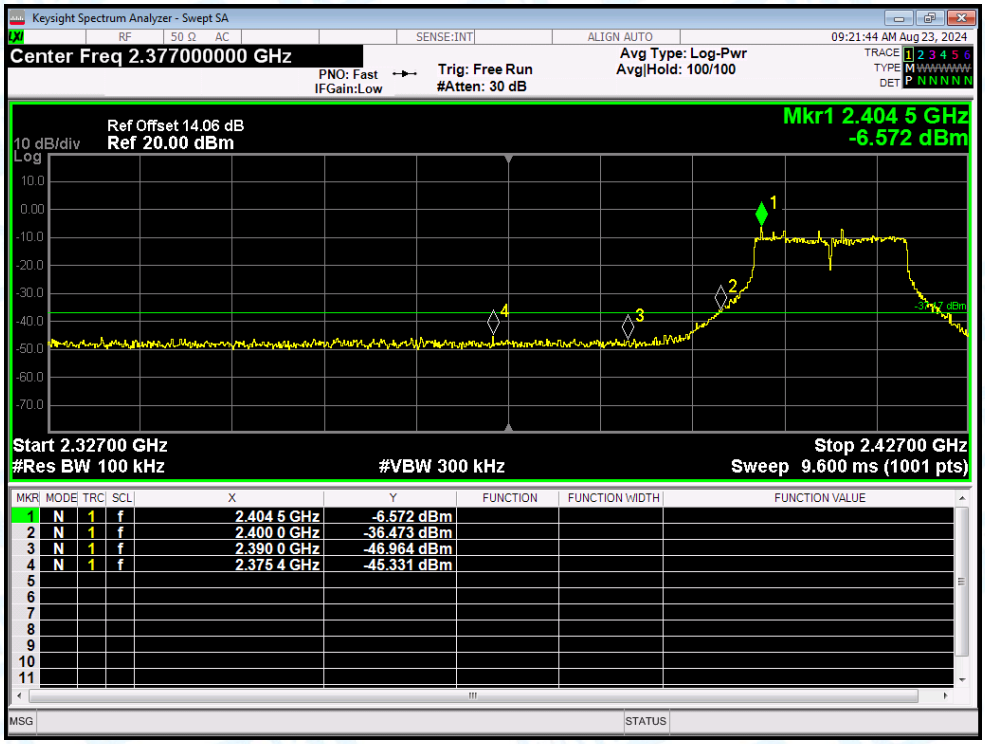
Band Edge NVNT b 2462MHz Ant1 Emission



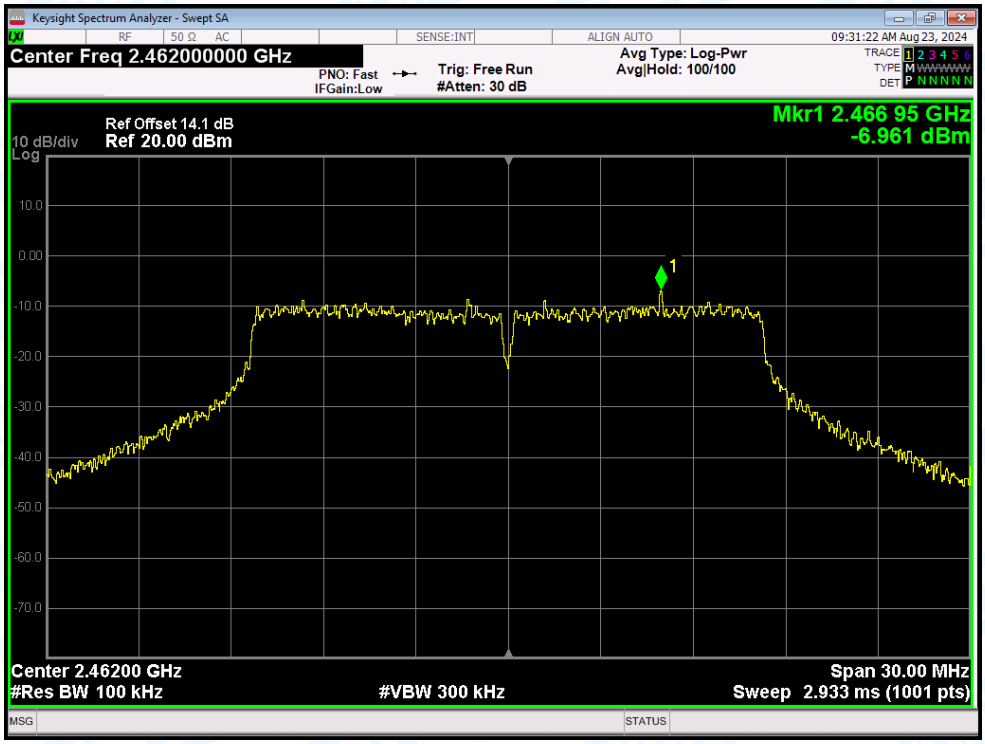
Band Edge NVNT g 2412MHz Ant1 Ref



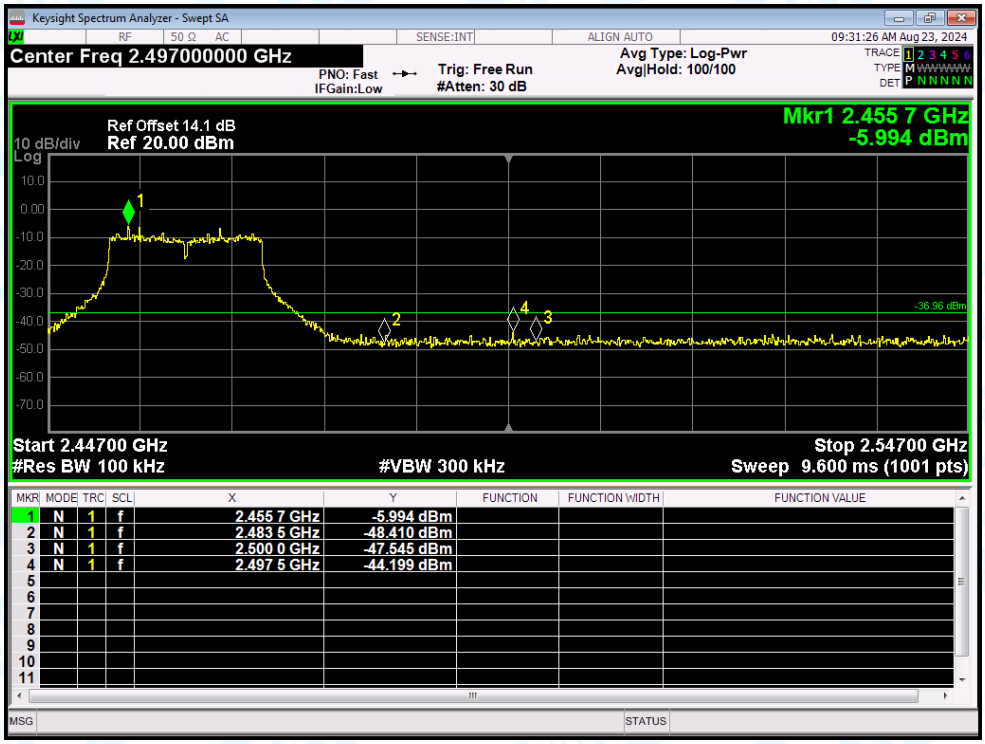
Band Edge NVNT g 2412MHz Ant1 Emission



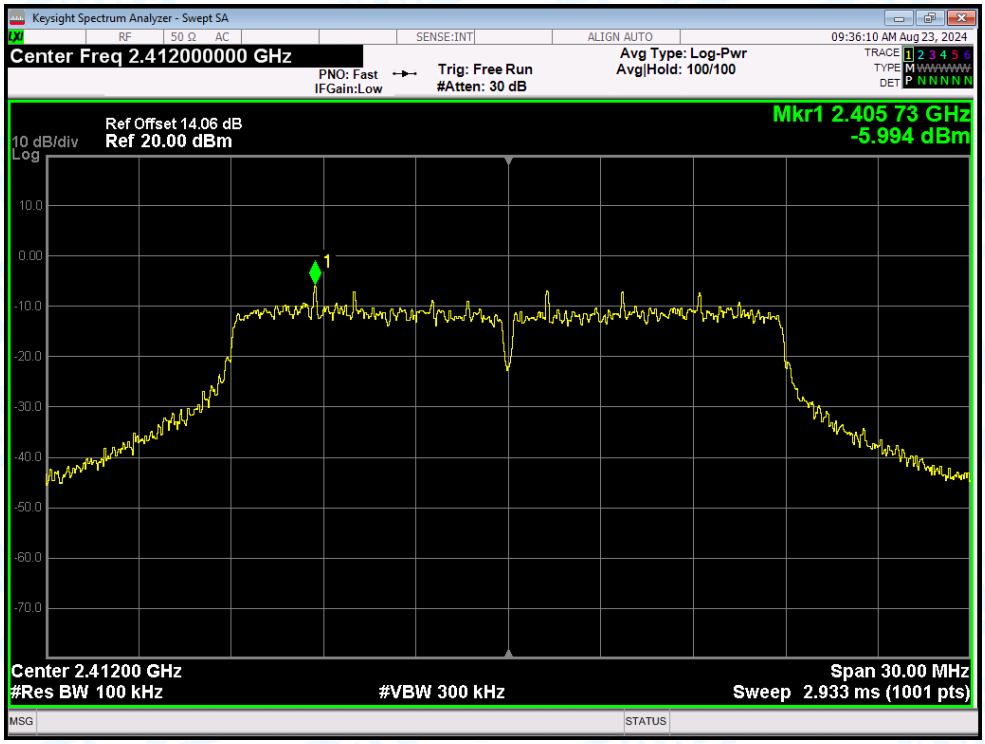
Band Edge NVNT g 2462MHz Ant1 Ref



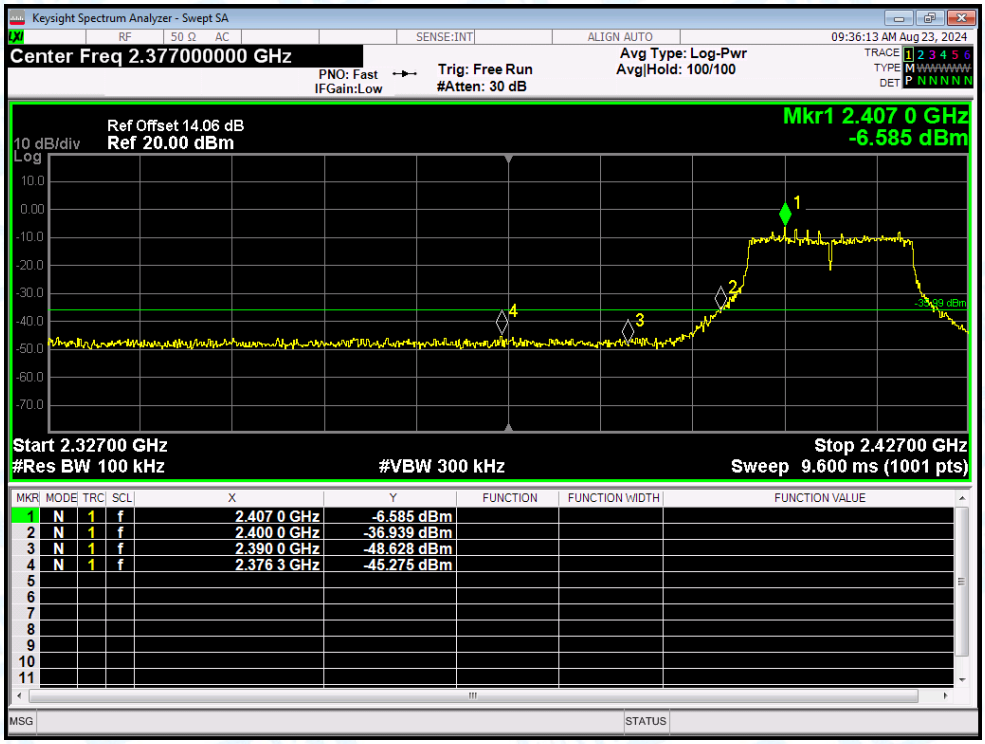
Band Edge NVNT g 2462MHz Ant1 Emission



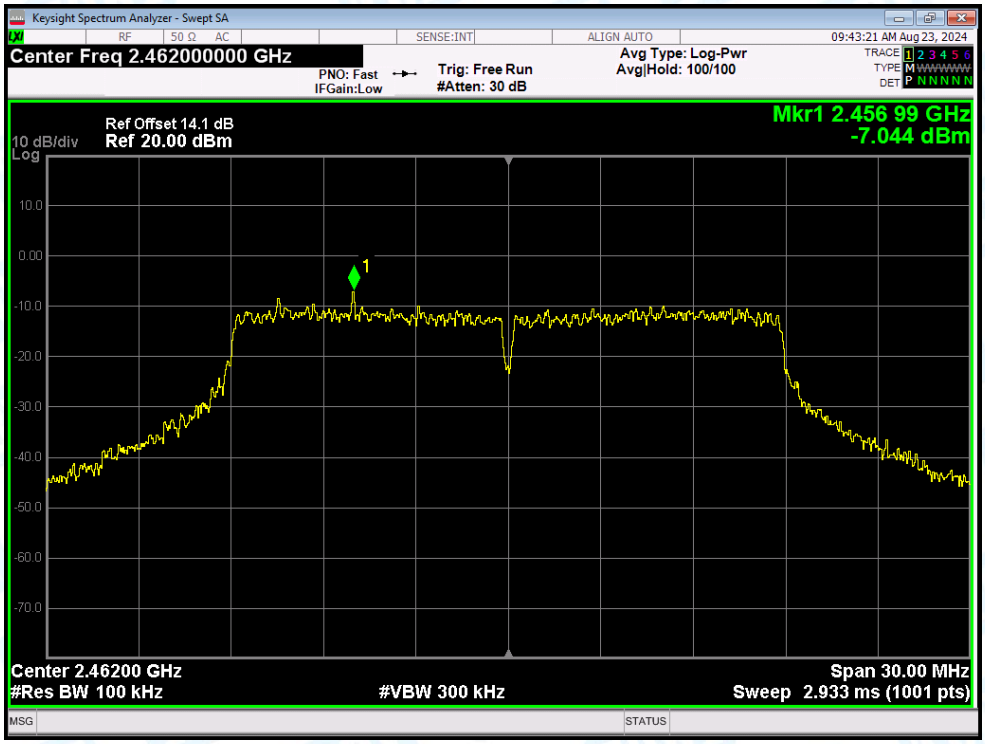
Band Edge NVNT n(HT20) 2412MHz Ant1 Ref



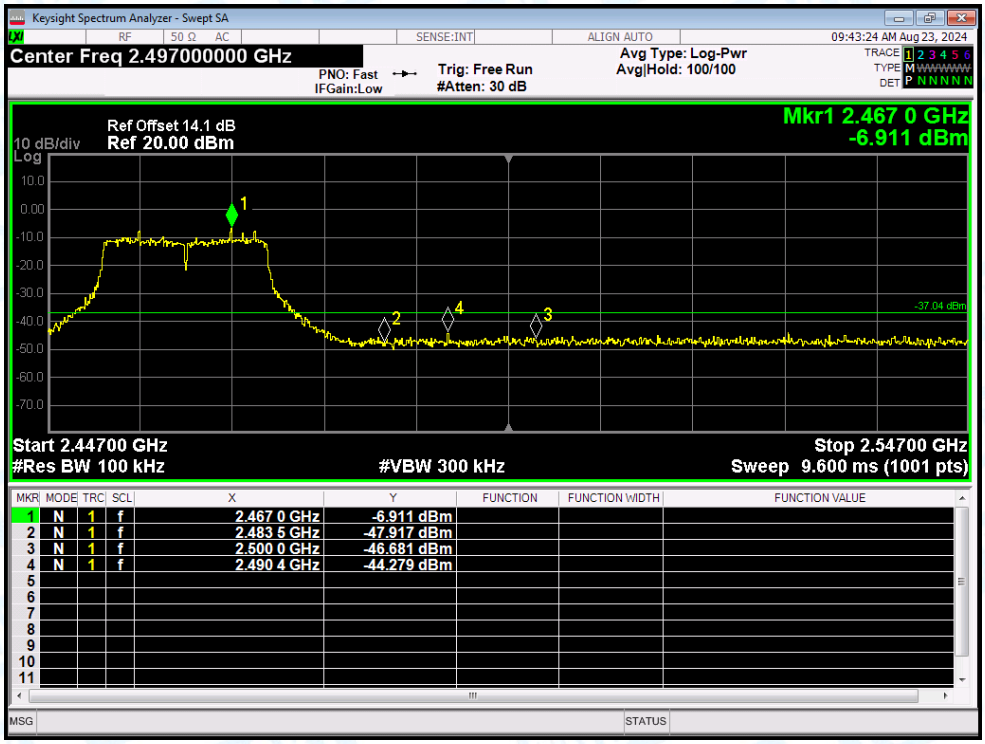
Band Edge NVNT n(HT20) 2412MHz Ant1 Emission



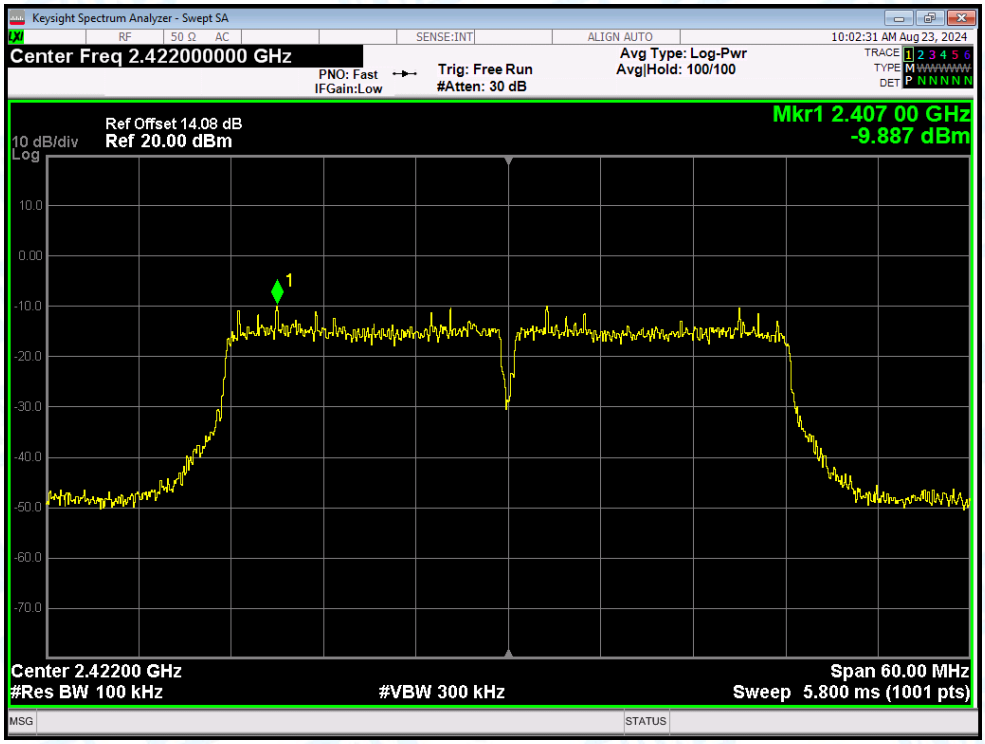
Band Edge NVNT n(HT20) 2462MHz Ant1 Ref



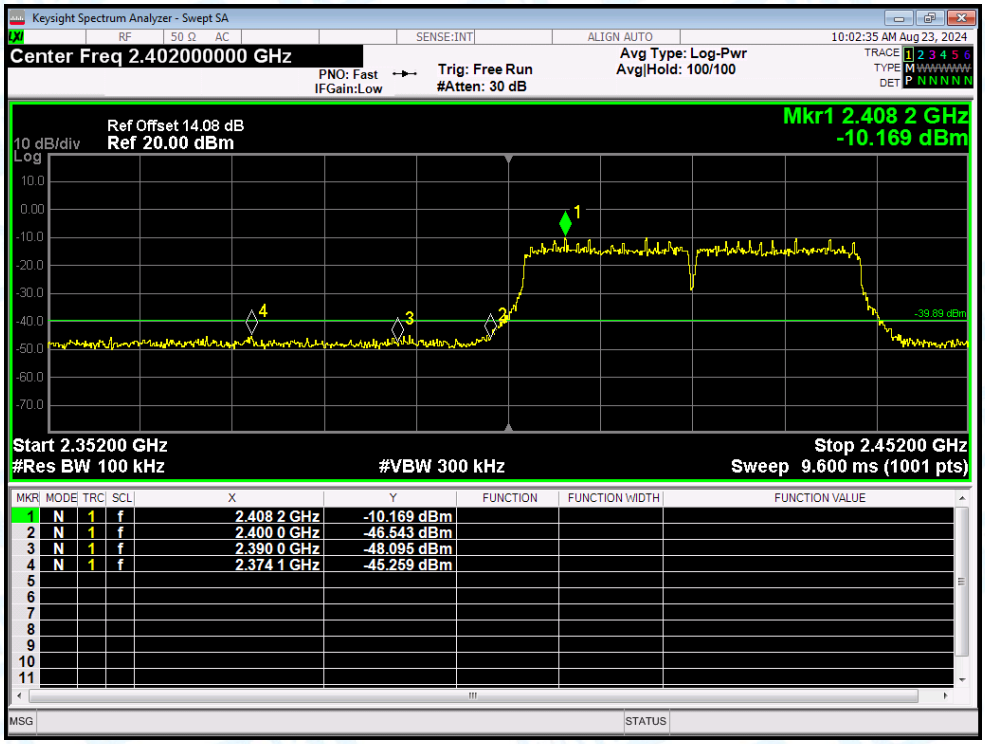
Band Edge NVNT n(HT20) 2462MHz Ant1 Emission



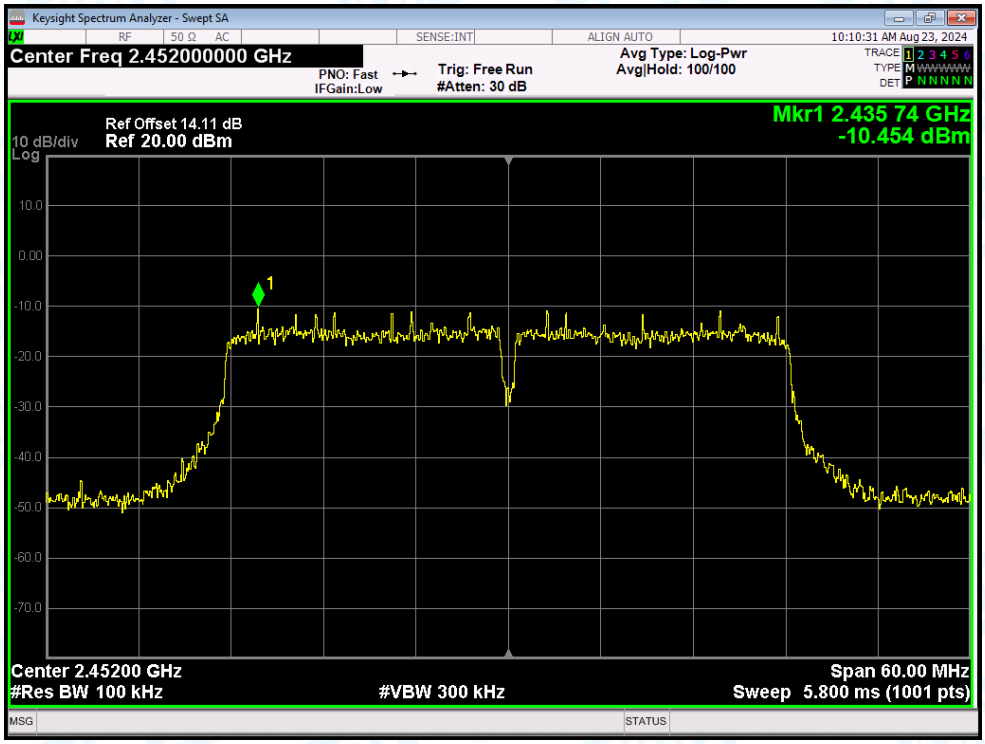
Band Edge NVNT n(HT40) 2422MHz Ant1 Ref



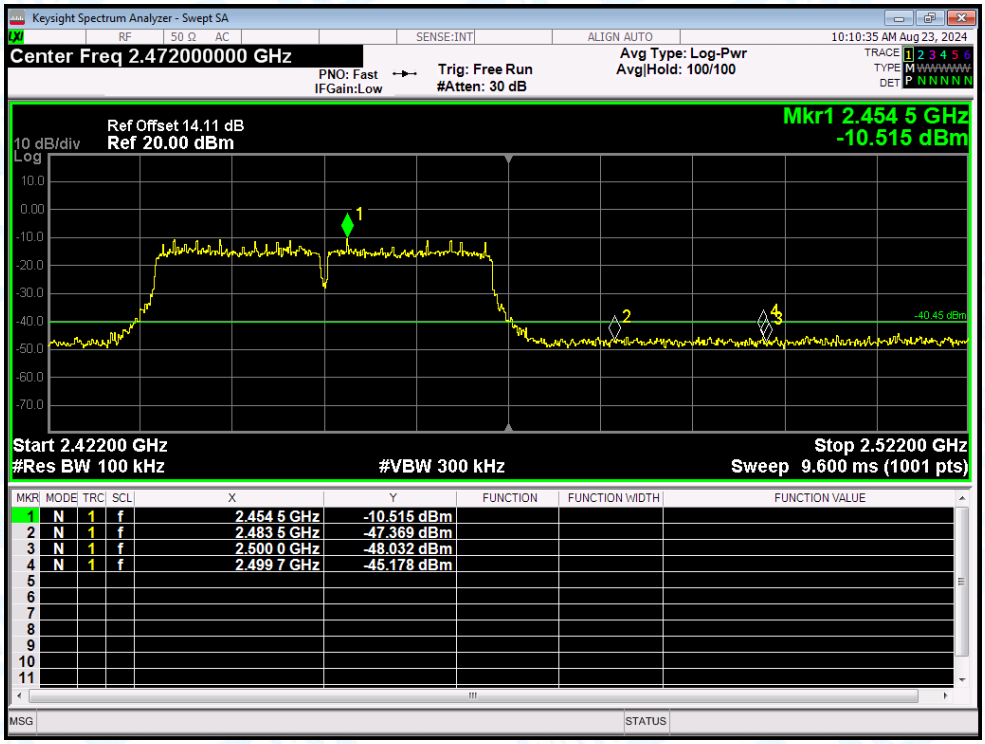
Band Edge NVNT n(HT40) 2422MHz Ant1 Emission



Band Edge NVNT n(HT40) 2452MHz Ant1 Ref



Band Edge NVNT n(HT40) 2452MHz Ant1 Emission

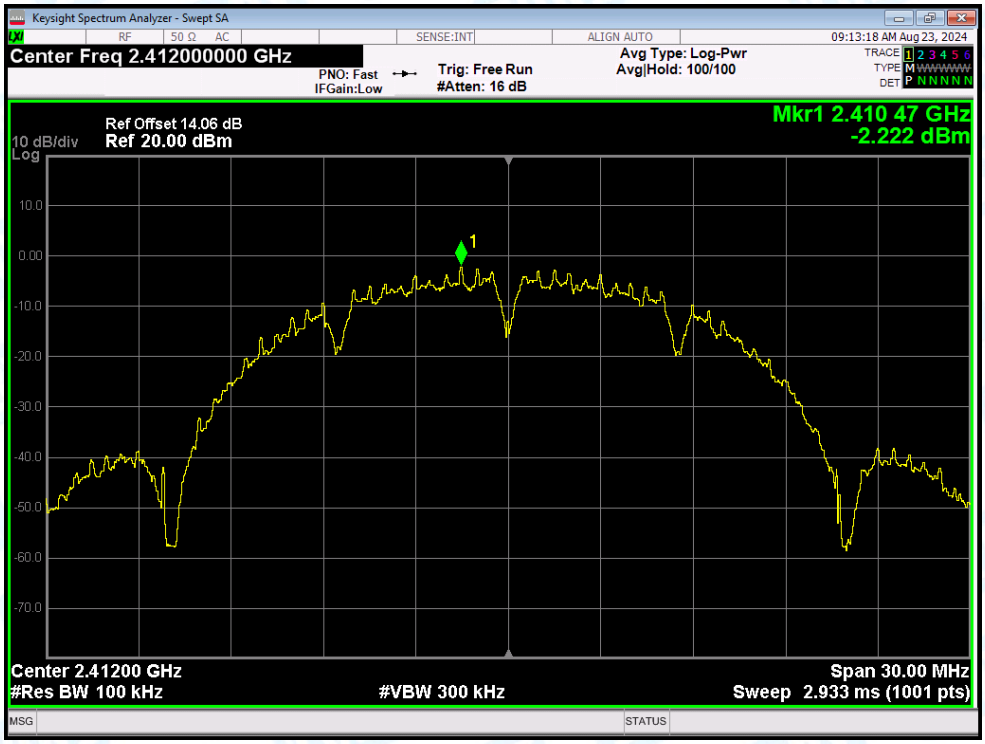


7. Conducted RF Spurious Emission

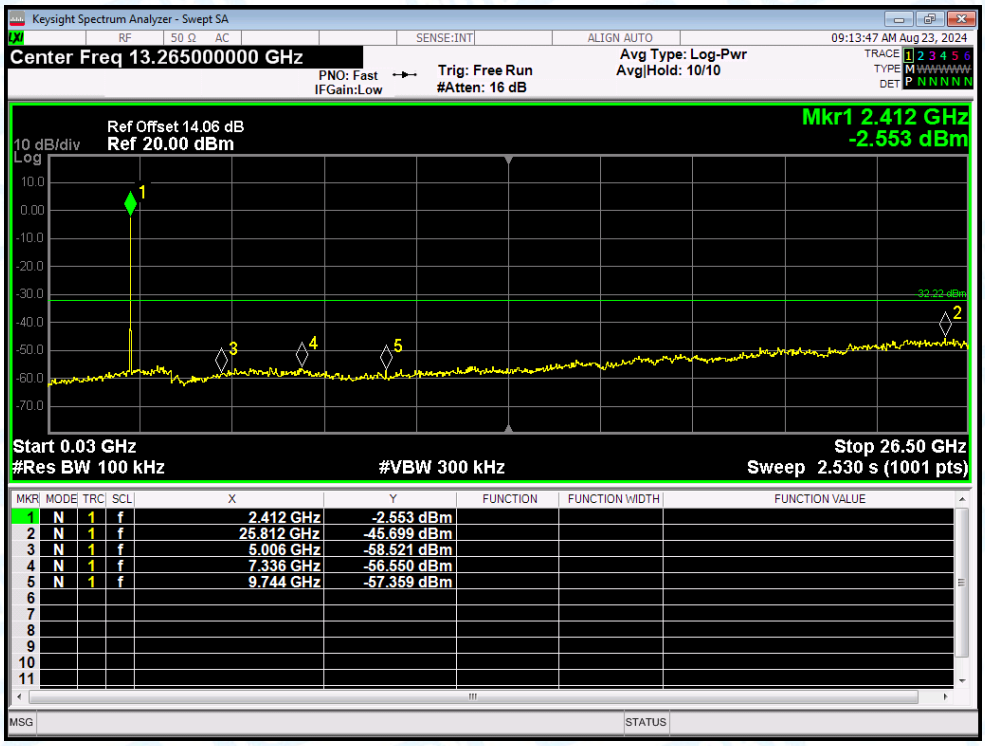
Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-43.48	-30	Pass
NVNT	b	2437	Ant1	-43.6	-30	Pass
NVNT	b	2462	Ant1	-43.11	-30	Pass
NVNT	g	2412	Ant1	-39.34	-30	Pass
NVNT	g	2437	Ant1	-39.43	-30	Pass
NVNT	g	2462	Ant1	-39.06	-30	Pass
NVNT	n(HT20)	2412	Ant1	-38.72	-30	Pass
NVNT	n(HT20)	2437	Ant1	-38.62	-30	Pass
NVNT	n(HT20)	2462	Ant1	-39	-30	Pass
NVNT	n(HT40)	2422	Ant1	-35.84	-30	Pass
NVNT	n(HT40)	2437	Ant1	-35.77	-30	Pass
NVNT	n(HT40)	2452	Ant1	-35.09	-30	Pass

Test Graphs

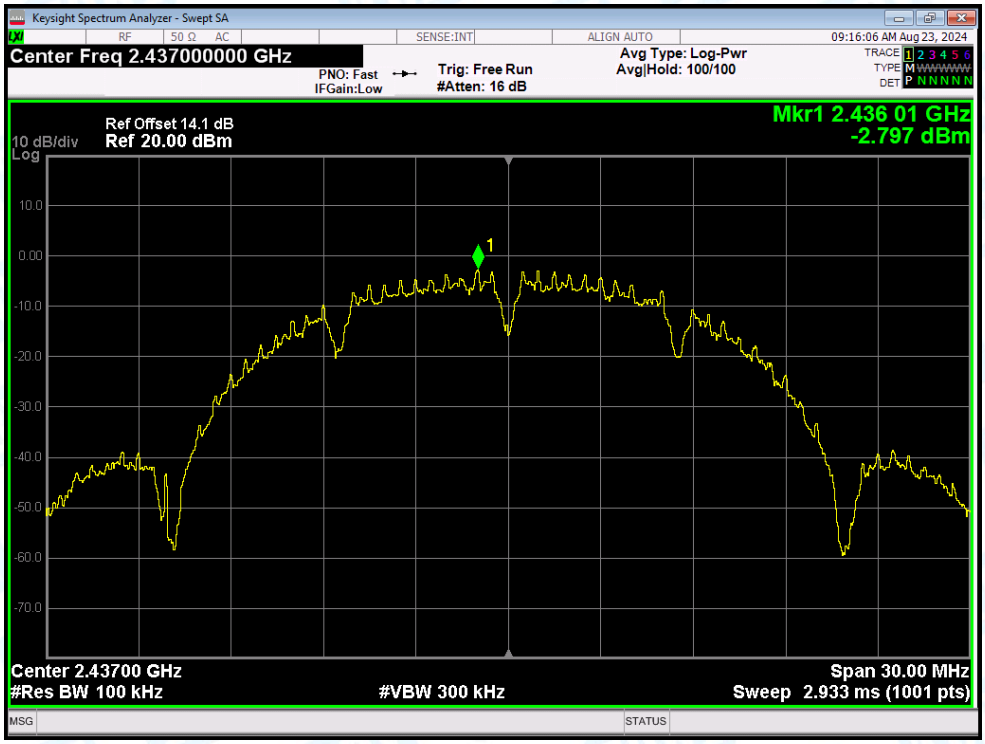
Tx. Spurious NVNT b 2412MHz Ant1 Ref



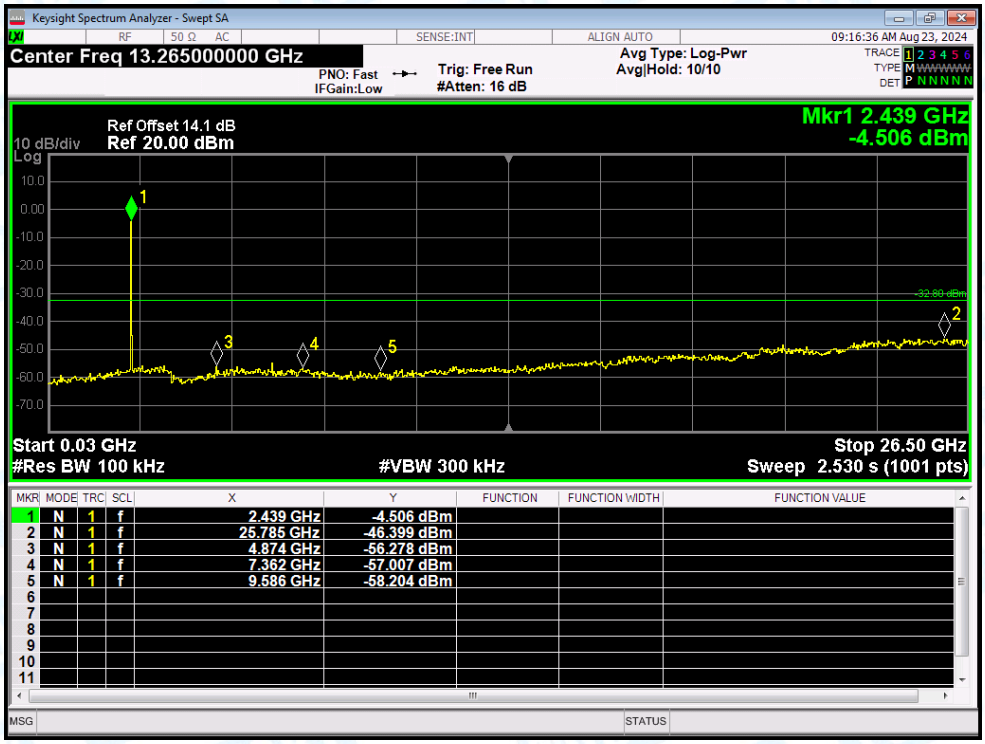
Tx. Spurious NVNT b 2412MHz Ant1 Emission



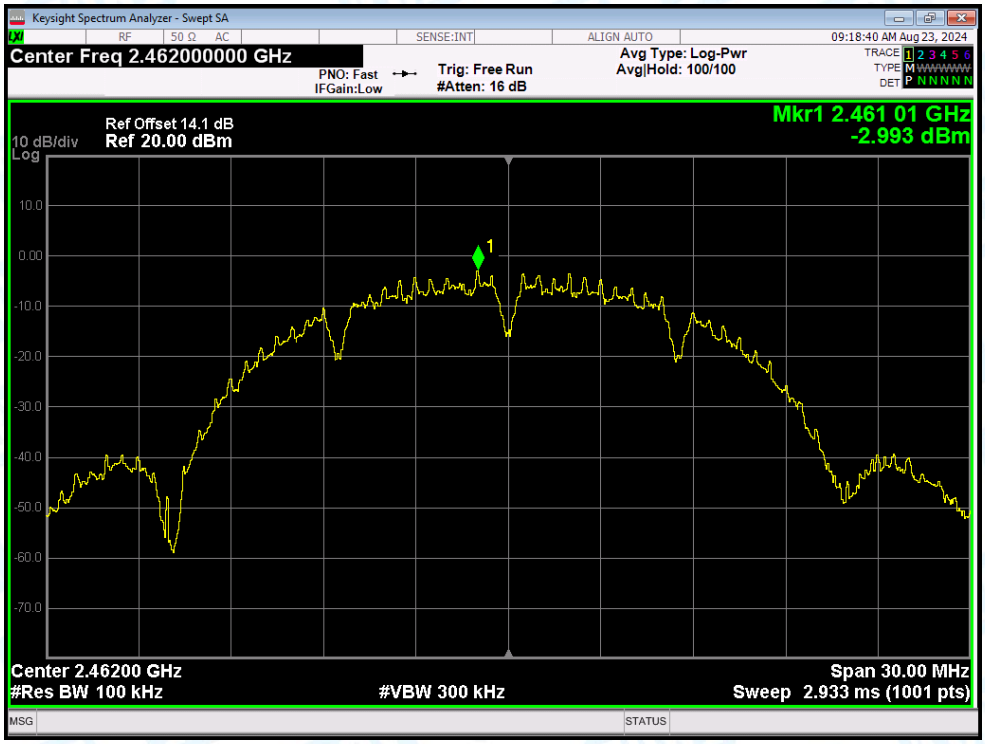
Tx. Spurious NVNT b 2437MHz Ant1 Ref



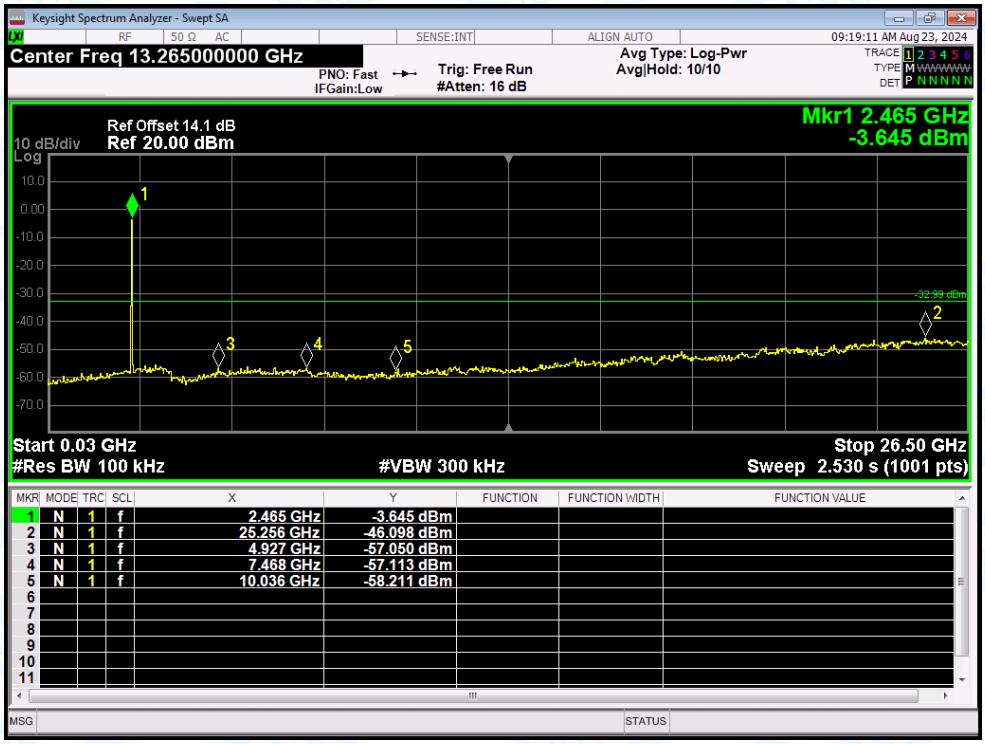
Tx. Spurious NVNT b 2437MHz Ant1 Emission



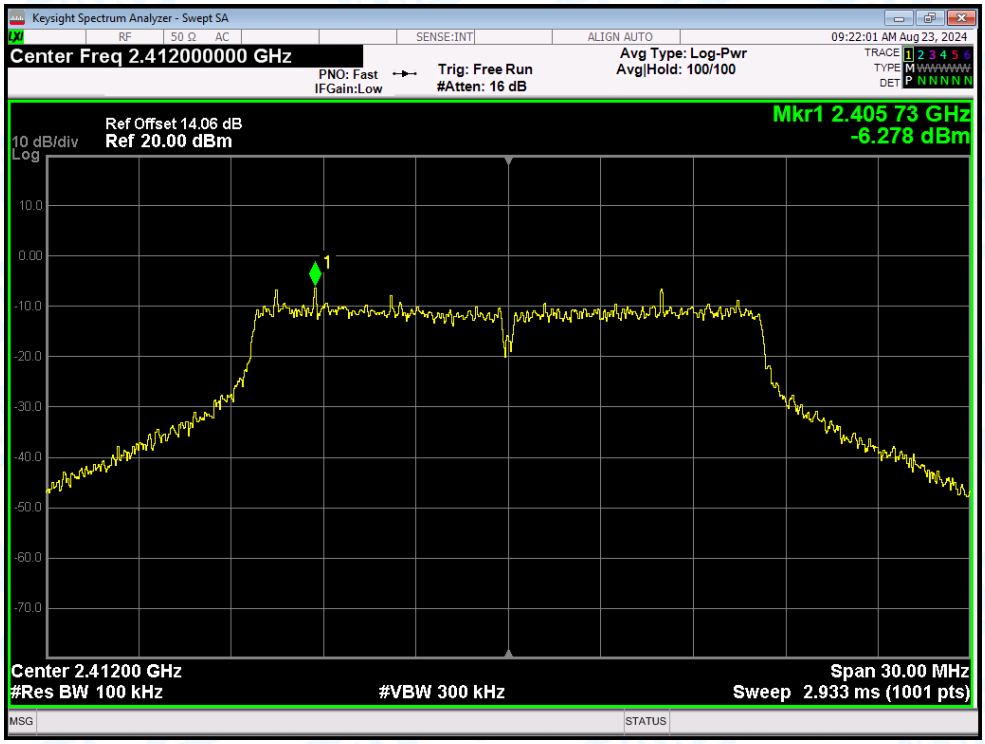
Tx. Spurious NVNT b 2462MHz Ant1 Ref



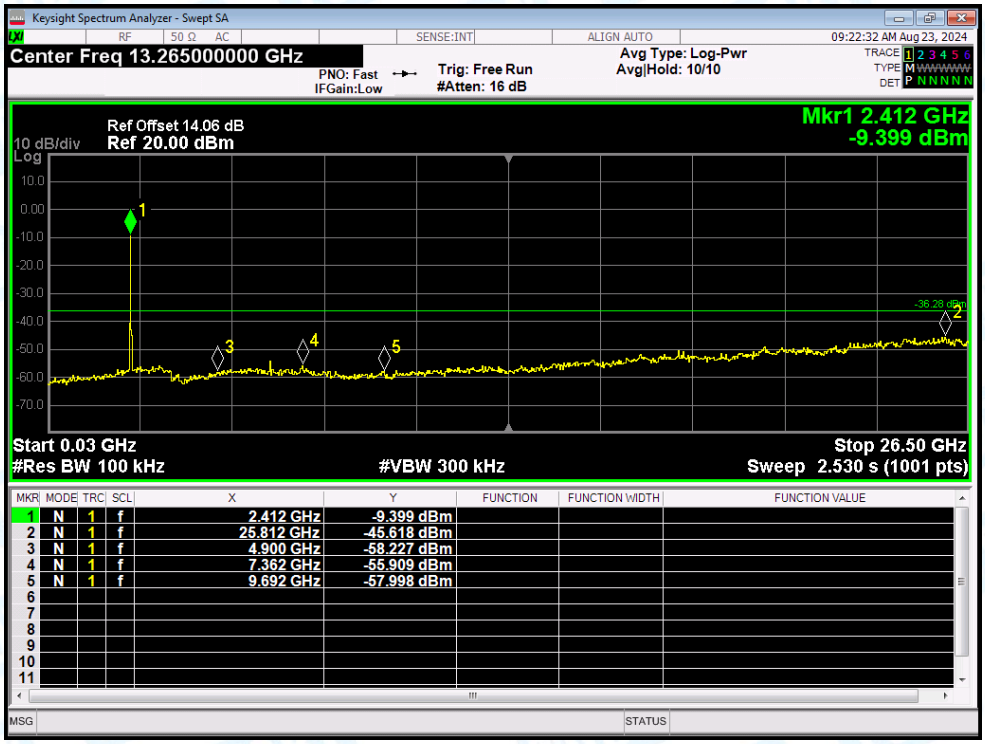
Tx. Spurious NVNT b 2462MHz Ant1 Emission



Tx. Spurious NVNT g 2412MHz Ant1 Ref

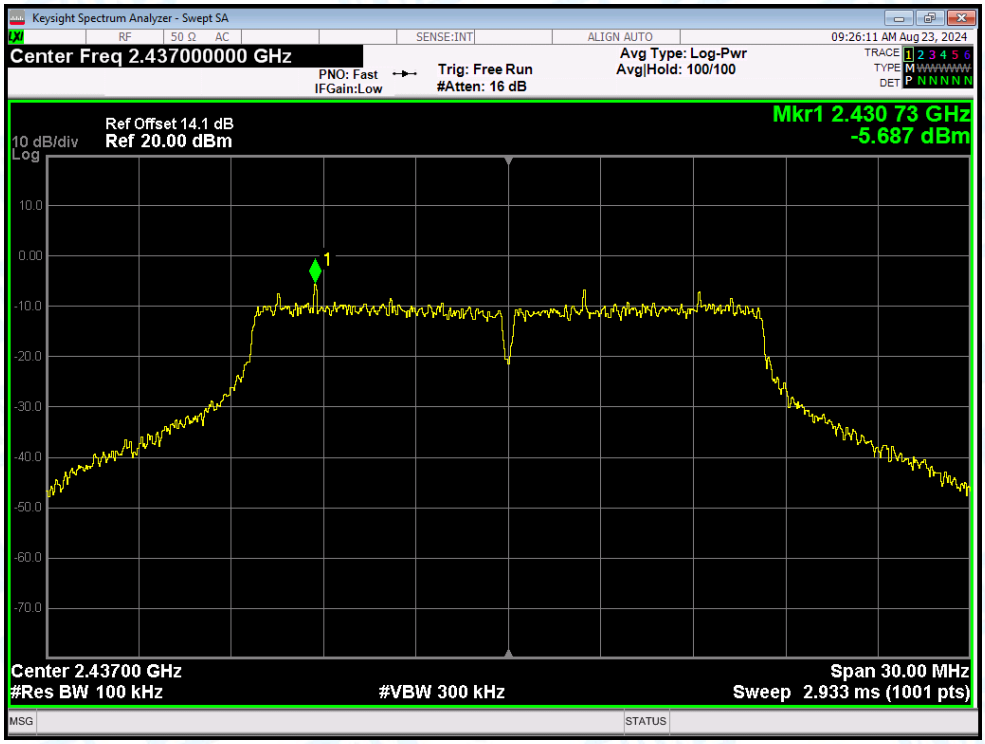


Tx. Spurious NVNT g 2412MHz Ant1 Emission

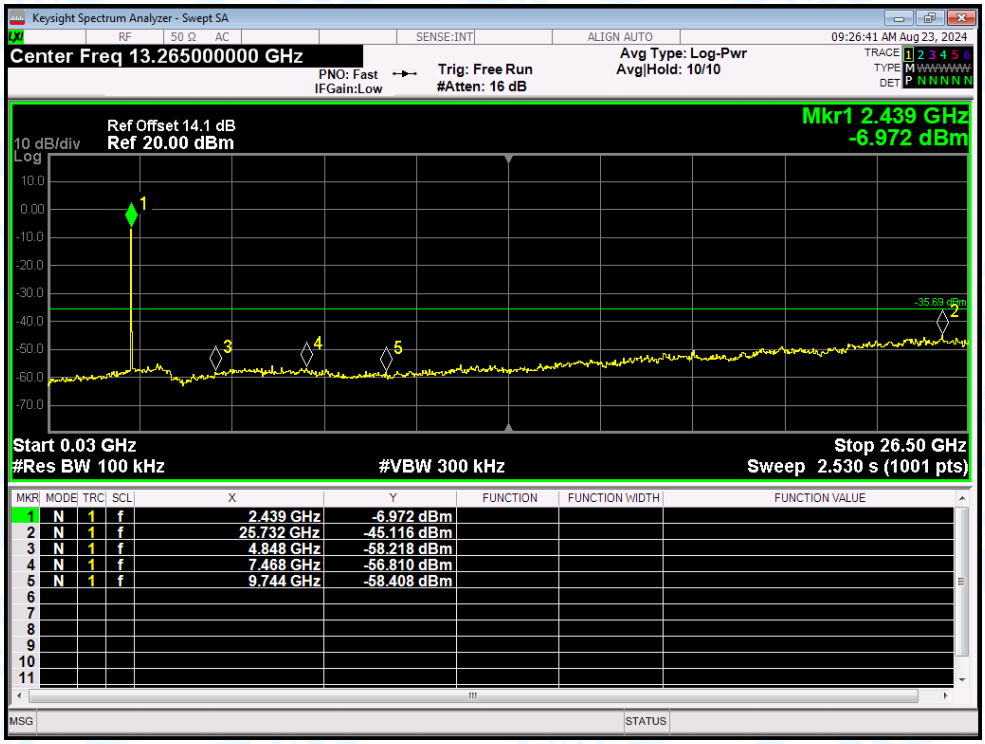


MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.412 GHz	-9.399 dBm			
2	N	1	f	25.812 GHz	-45.618 dBm			
3	N	1	f	4.900 GHz	-58.227 dBm			
4	N	1	f	7.362 GHz	-55.909 dBm			
5	N	1	f	9.692 GHz	-57.998 dBm			
6								
7								
8								
9								
10								
11								

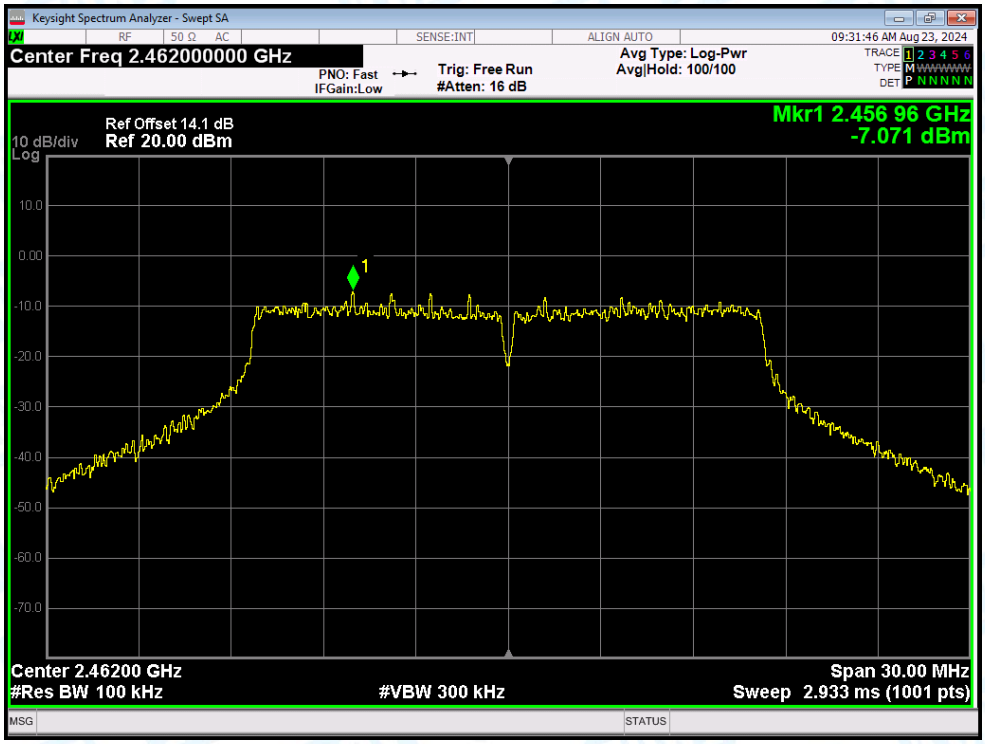
Tx. Spurious NVNT g 2437MHz Ant1 Ref



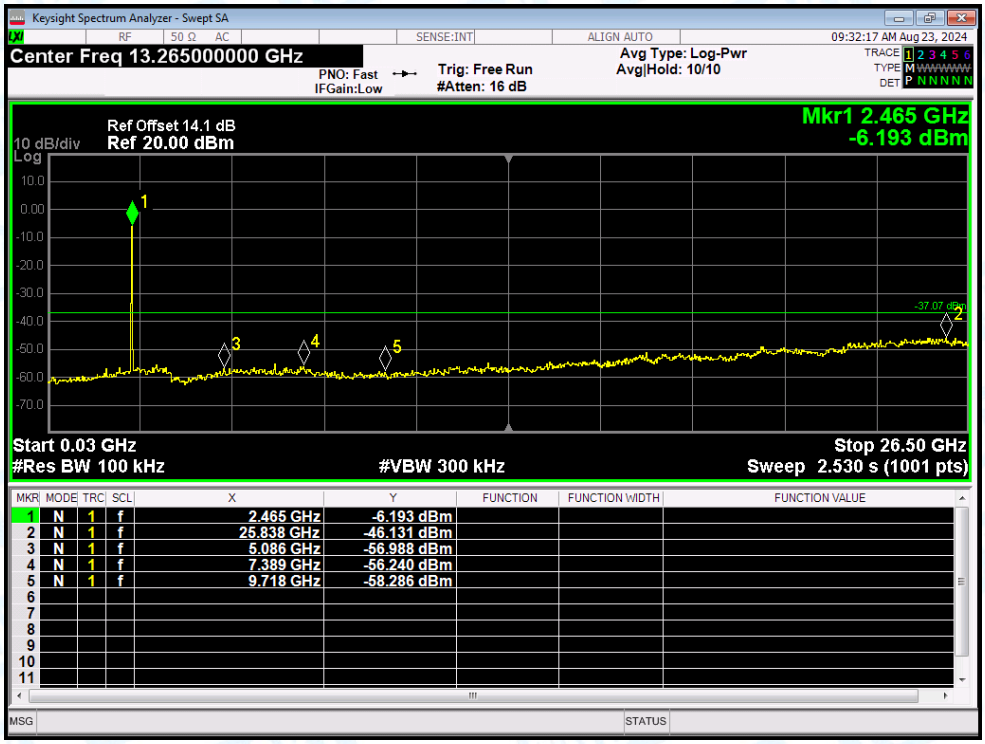
Tx. Spurious NVNT g 2437MHz Ant1 Emission



Tx. Spurious NVNT g 2462MHz Ant1 Ref

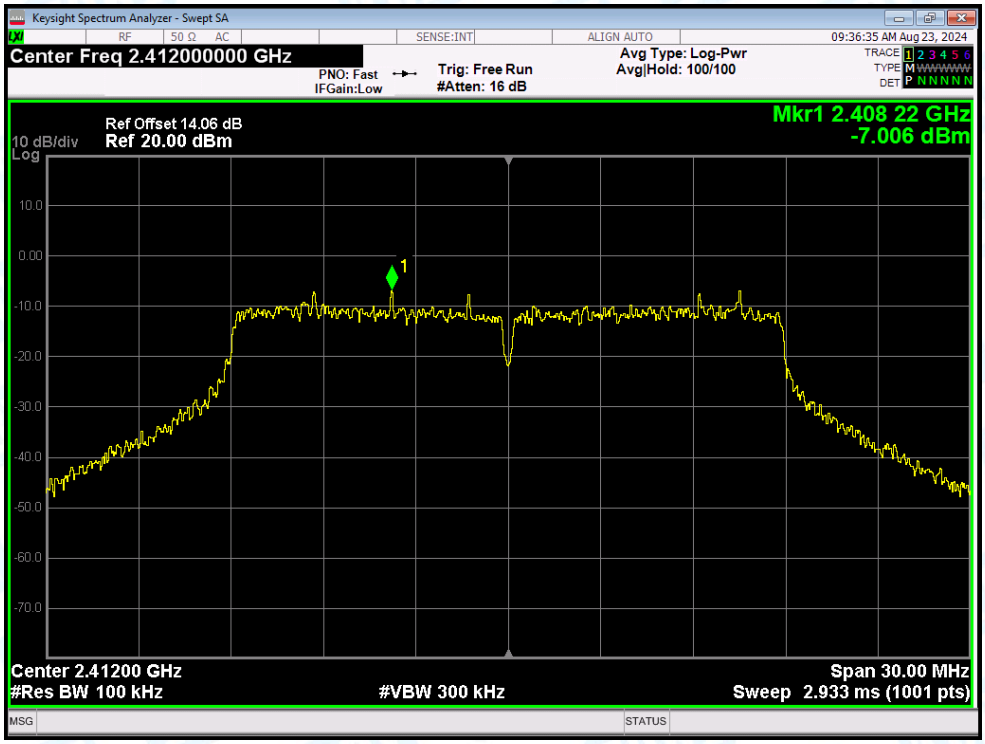


Tx. Spurious NVNT g 2462MHz Ant1 Emission

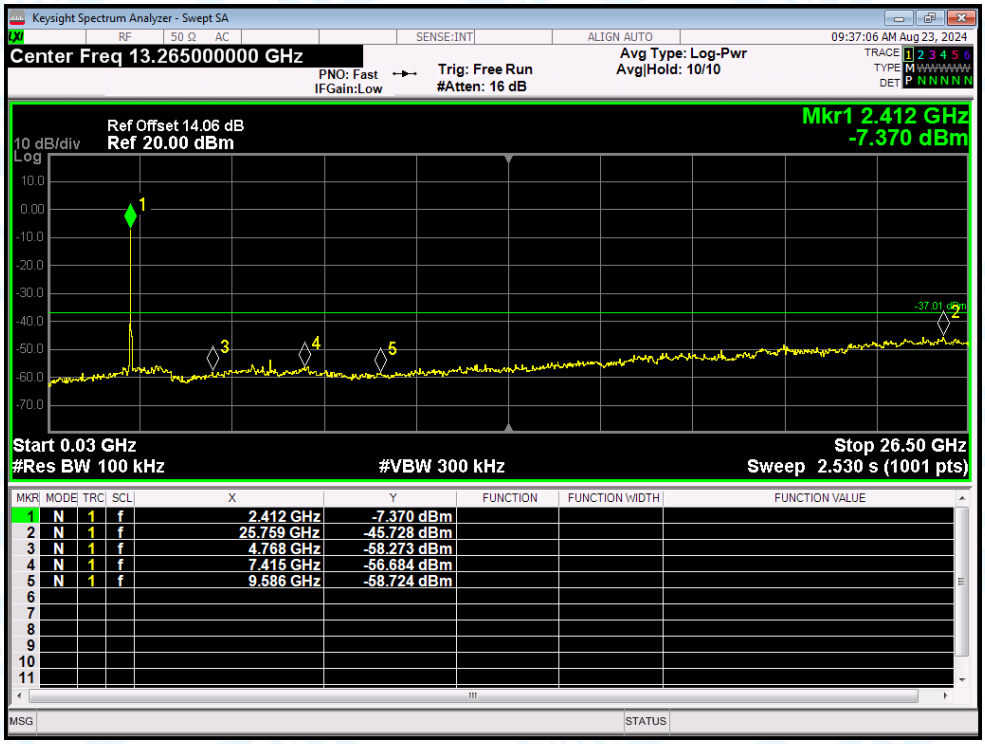


MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.465 GHz	-6.193 dBm			
2	N	1	f	25.838 GHz	-46.131 dBm			
3	N	1	f	5.086 GHz	-56.988 dBm			
4	N	1	f	7.389 GHz	-56.240 dBm			
5	N	1	f	9.718 GHz	-58.286 dBm			
6								
7								
8								
9								
10								
11								

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



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



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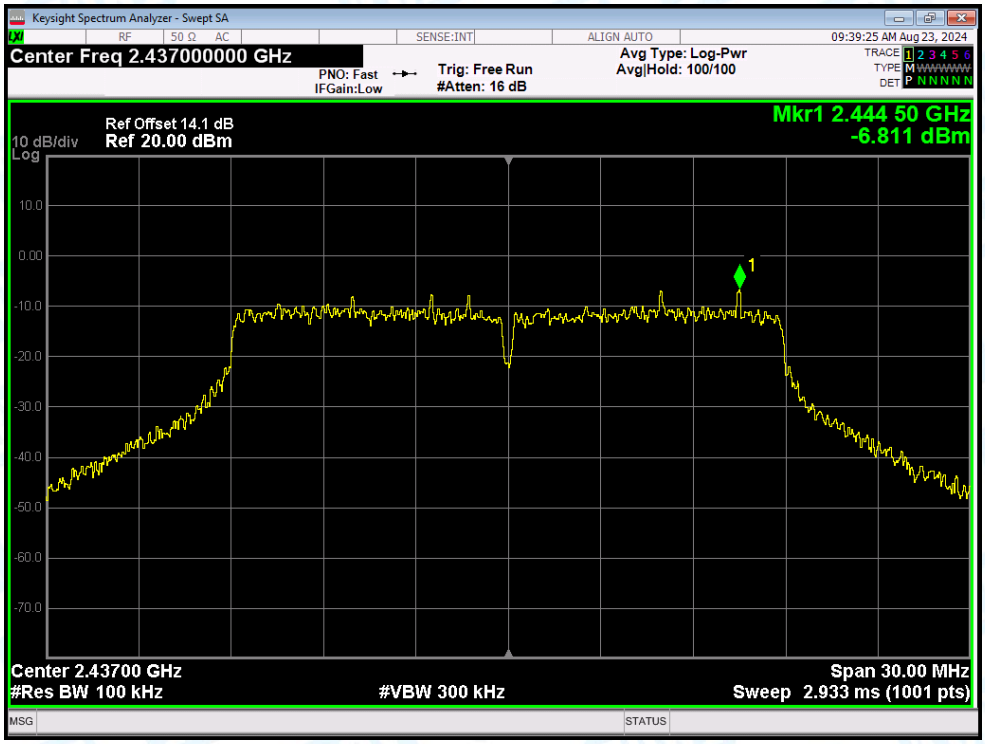
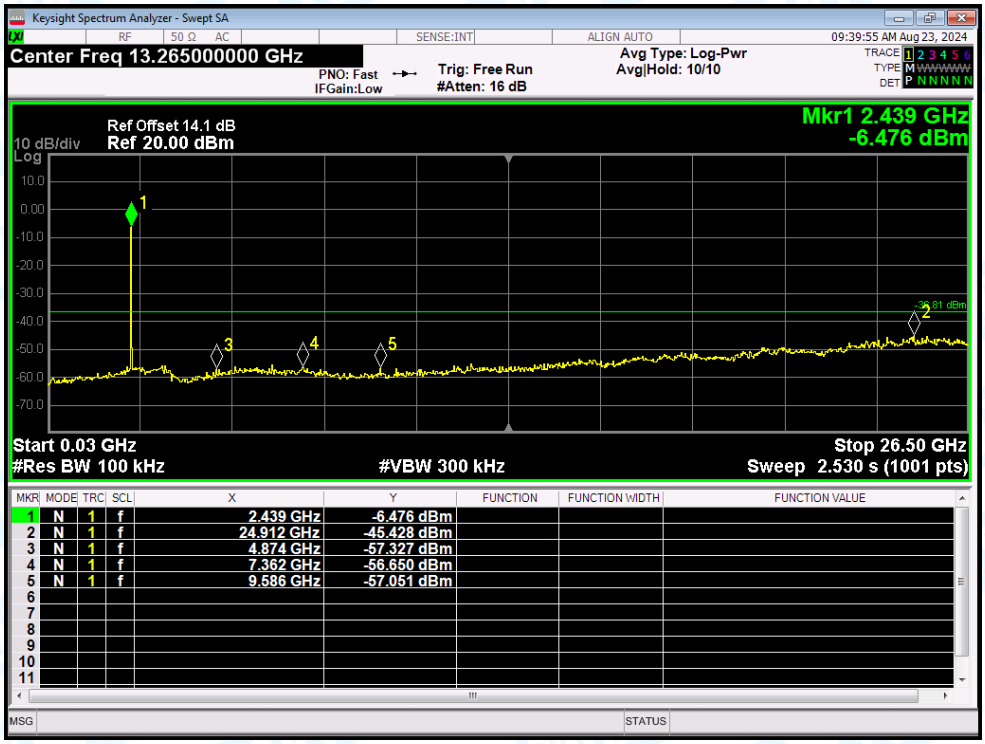
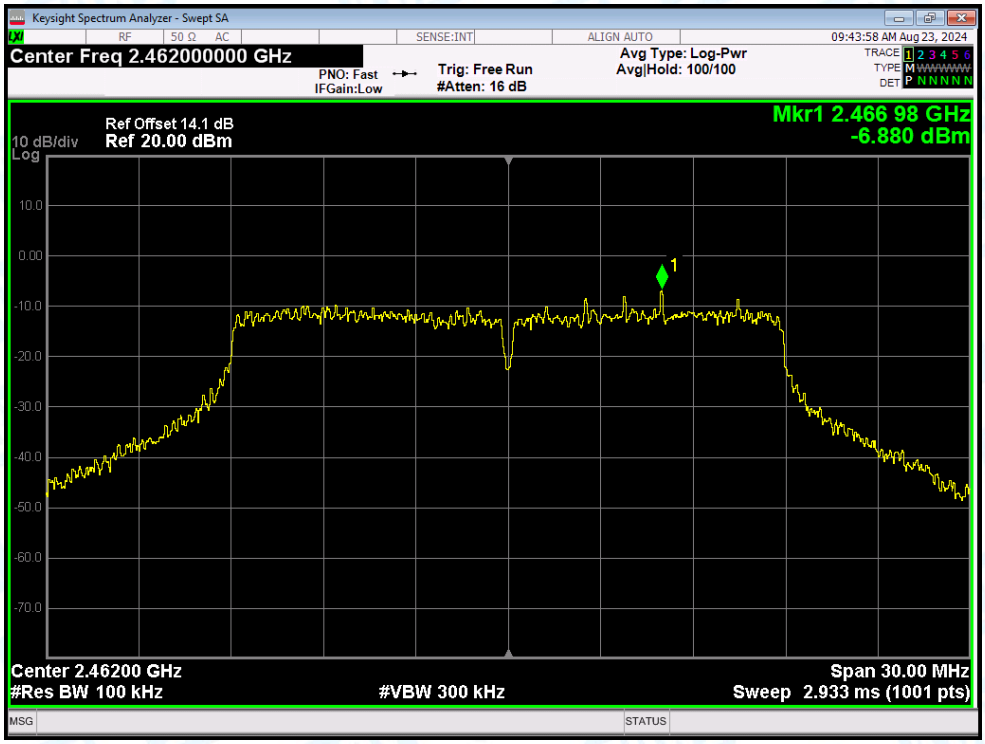


Tx. Spurious NVNT n(HT20) 2437MHz Ant1 Emission

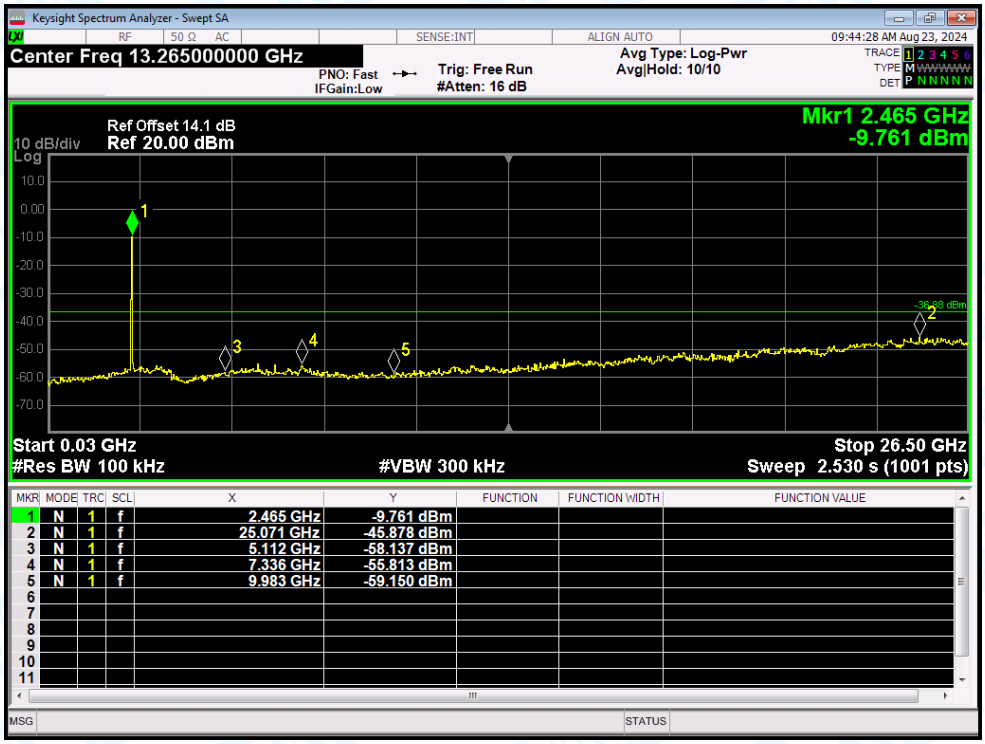


MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.439 GHz	-6.476 dBm			
2	N	1	f	24.912 GHz	-45.428 dBm			
3	N	1	f	4.874 GHz	-57.327 dBm			
4	N	1	f	7.362 GHz	-56.650 dBm			
5	N	1	f	9.586 GHz	-57.051 dBm			
6								
7								
8								
9								
10								
11								

Tx. Spurious NVNT n(HT20) 2462MHz Ant1 Ref

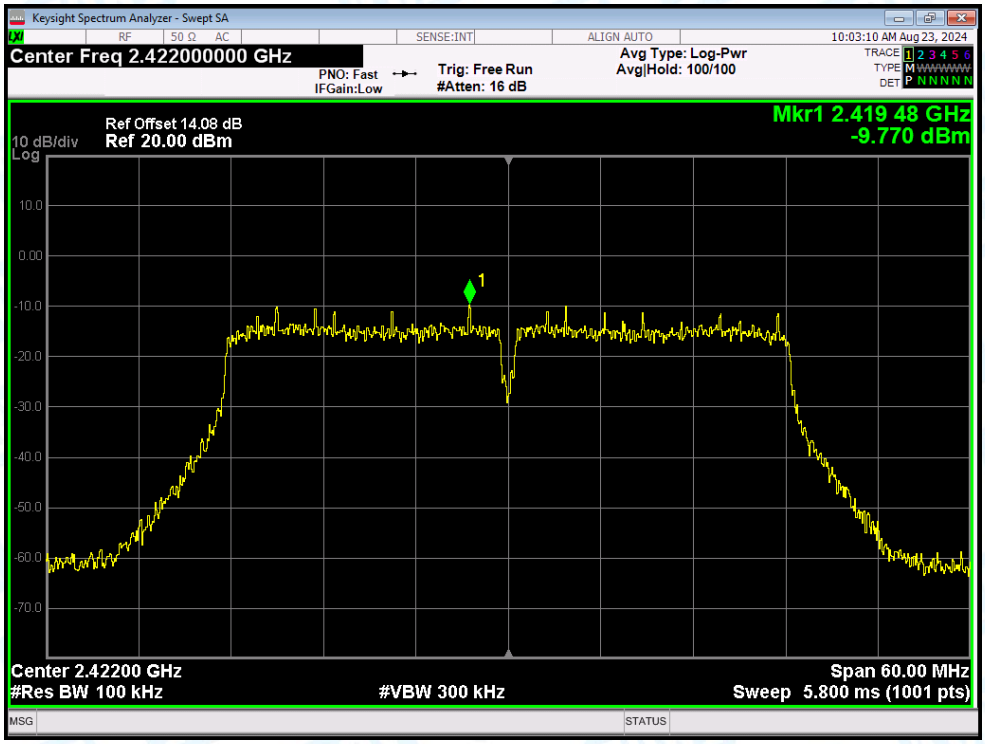


Tx. Spurious NVNT n(HT20) 2462MHz Ant1 Emission

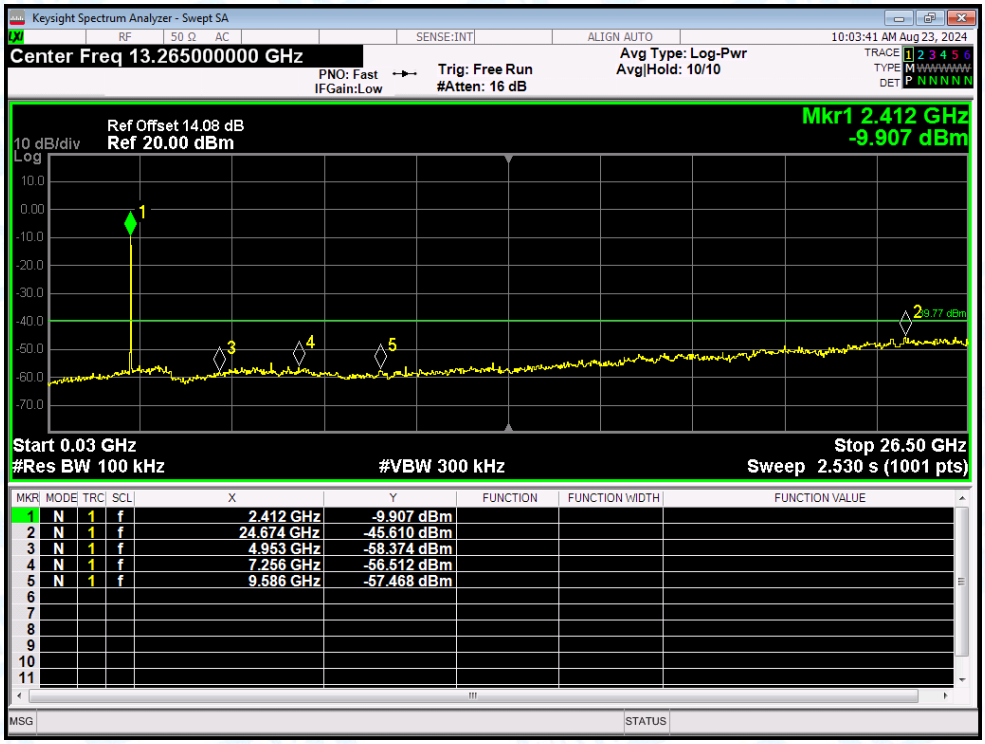


MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.465 GHz	-9.761 dBm			
2	N	1	f	25.071 GHz	-45.878 dBm			
3	N	1	f	5.112 GHz	-58.137 dBm			
4	N	1	f	7.336 GHz	-55.813 dBm			
5	N	1	f	9.983 GHz	-59.150 dBm			
6								
7								
8								
9								
10								
11								

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

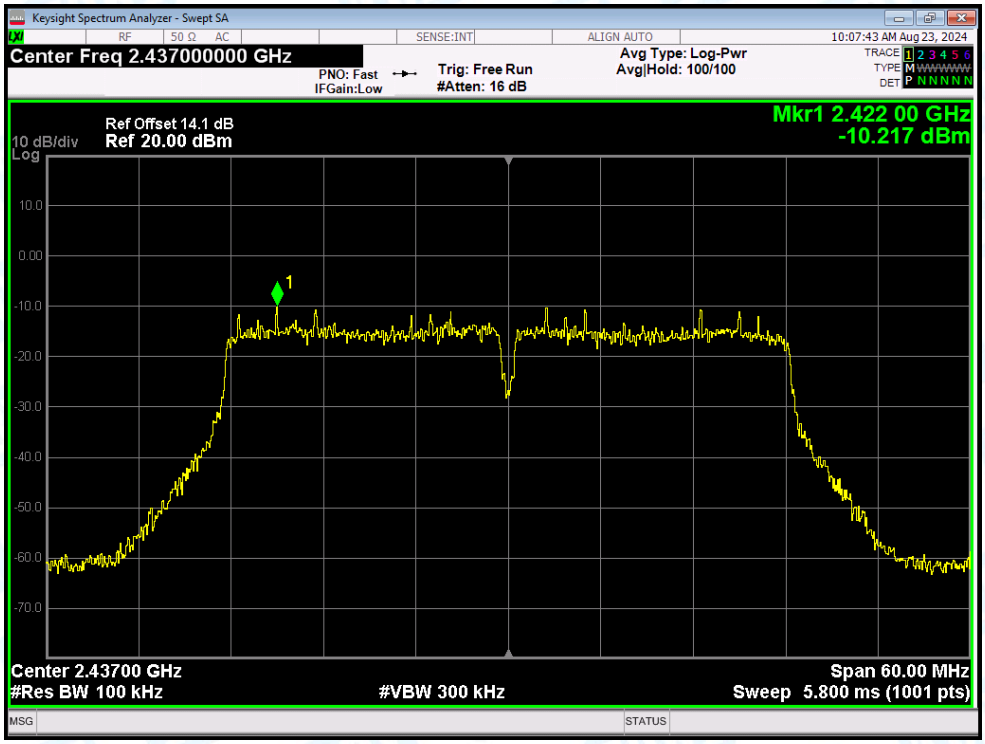


Tx. Spurious NVNT n(HT40) 2422MHz Ant1 Emission

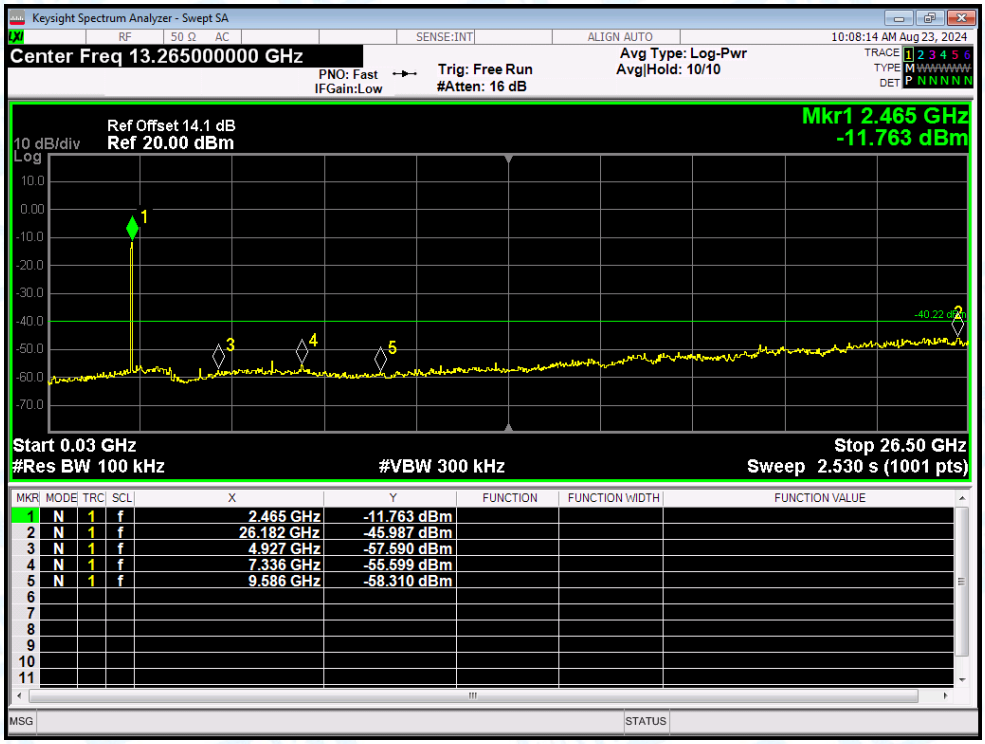


MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.412 GHz	-9.907 dBm			
2	N	1	f	24.674 GHz	-45.610 dBm			
3	N	1	f	4.953 GHz	-58.374 dBm			
4	N	1	f	7.256 GHz	-56.512 dBm			
5	N	1	f	9.586 GHz	-57.468 dBm			
6								
7								
8								
9								
10								
11								

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

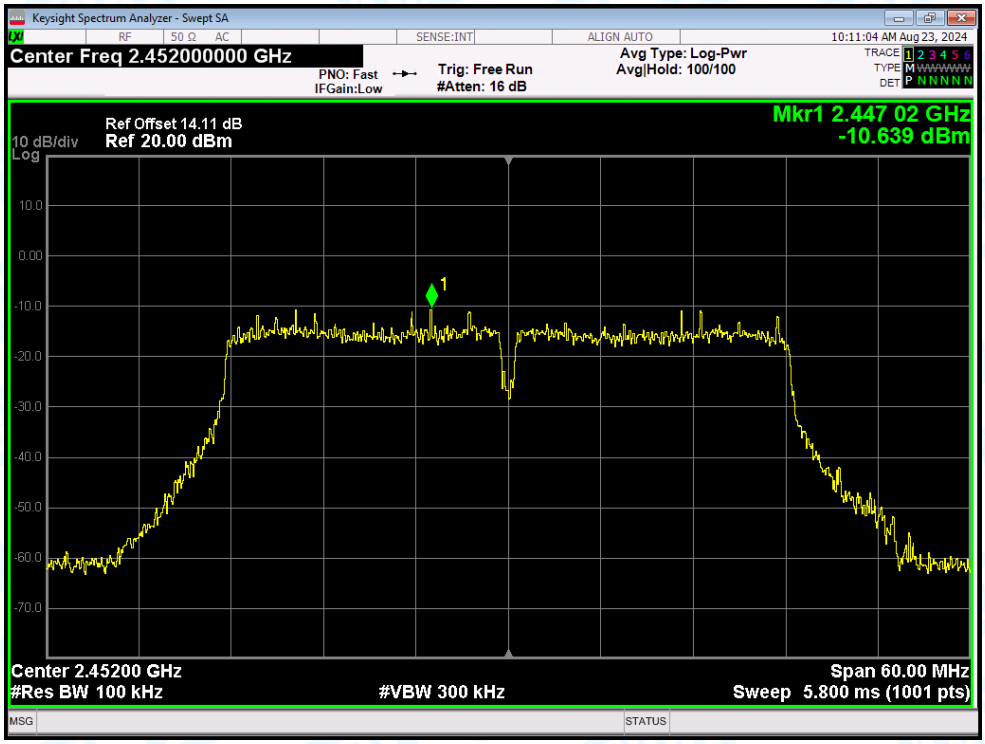


Tx. Spurious NVNT n(HT40) 2437MHz Ant1 Emission

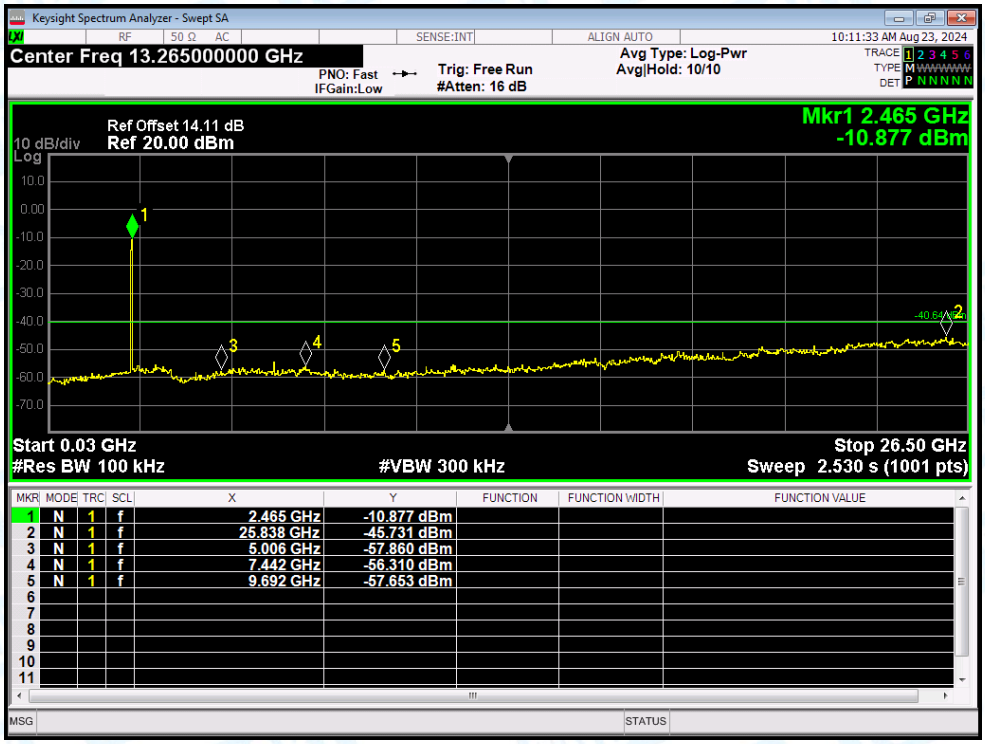


MKR	MODE	TRC	SCL	X	Y	FUNCTION	FUNCTION WIDTH	FUNCTION VALUE
1	N	1	f	2.465 GHz	-11.763 dBm			
2	N	1	f	26.182 GHz	-45.987 dBm			
3	N	1	f	4.927 GHz	-57.590 dBm			
4	N	1	f	7.336 GHz	-55.599 dBm			
5	N	1	f	9.586 GHz	-58.310 dBm			
6								
7								
8								
9								
10								
11								

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



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



8. Restrict Band

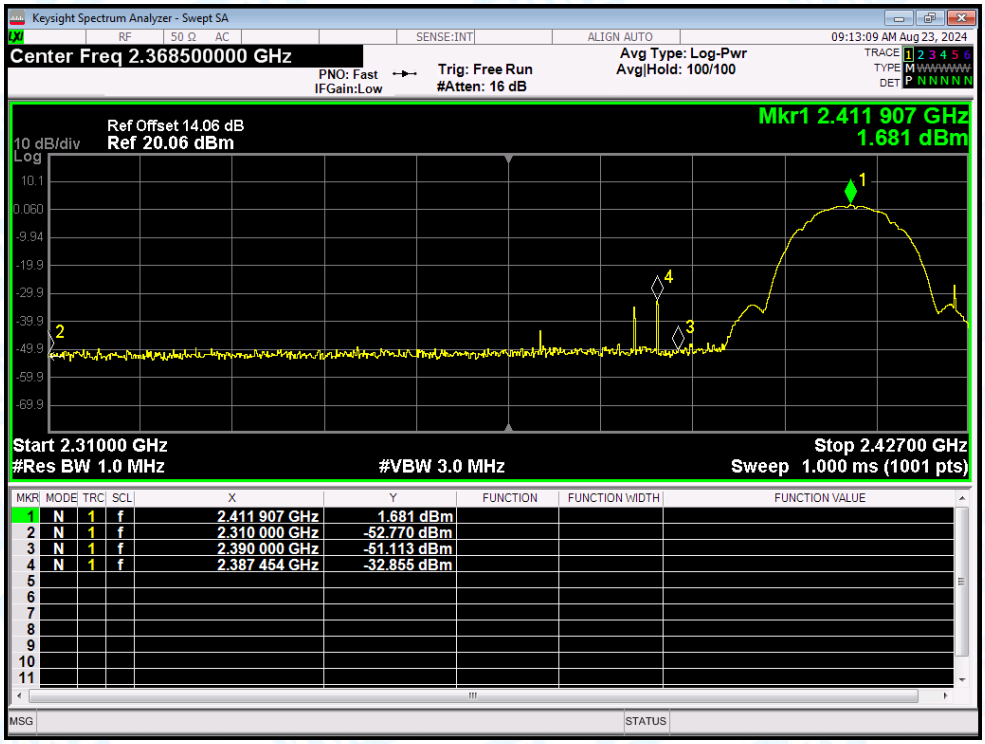
Condition	Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor (dB)	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
NVNT	b	2412	Ant1	2310	-52.77	2	-	44.49	Peak	74	Pass
NVNT	b	2412	Ant1	2310	-60.39	2	0.5	37.37	Average	54	Pass
NVNT	b	2412	Ant1	2387.454	-32.86	2	-	64.4	Peak	74	Pass
NVNT	b	2412	Ant1	2385.933	-57.61	2	0.5	40.15	Average	54	Pass
NVNT	b	2412	Ant1	2390	-51.11	2	-	46.15	Peak	74	Pass
NVNT	b	2412	Ant1	2390	-58.8	2	0.5	38.96	Average	54	Pass
NVNT	b	2462	Ant1	2483.5	-50.09	2	-	47.17	Peak	74	Pass
NVNT	b	2462	Ant1	2483.5	-59.6	2	0.5	38.16	Average	54	Pass
NVNT	b	2462	Ant1	2488.446	-35.62	2	-	61.64	Peak	74	Pass
NVNT	b	2462	Ant1	2486.273	-55.2	2	0.5	42.56	Average	54	Pass
NVNT	b	2462	Ant1	2500	-51.76	2	-	45.5	Peak	74	Pass
NVNT	b	2462	Ant1	2500	-58.99	2	0.5	38.77	Average	54	Pass
NVNT	g	2412	Ant1	2310	-52.67	2	-	44.59	Peak	74	Pass
NVNT	g	2412	Ant1	2310	-59.97	2	2.39	39.68	Average	54	Pass
NVNT	g	2412	Ant1	2382.657	-47.15	2	-	50.11	Peak	74	Pass
NVNT	g	2412	Ant1	2383.476	-57.55	2	2.39	42.1	Average	54	Pass
NVNT	g	2412	Ant1	2390	-50.06	2	-	47.2	Peak	74	Pass
NVNT	g	2412	Ant1	2390	-57.61	2	2.39	42.04	Average	54	Pass
NVNT	g	2462	Ant1	2483.5	-48.5	2	-	48.76	Peak	74	Pass
NVNT	g	2462	Ant1	2483.5	-58.04	2	2.39	41.61	Average	54	Pass
NVNT	g	2462	Ant1	2496.025	-46.24	2	-	51.02	Peak	74	Pass
NVNT	g	2462	Ant1	2484.948	-57.35	2	2.39	42.3	Average	54	Pass
NVNT	g	2462	Ant1	2500	-48.91	2	-	48.35	Peak	74	Pass
NVNT	g	2462	Ant1	2500	-59.09	2	2.39	40.56	Average	54	Pass
NVNT	n(HT20)	2412	Ant1	2310	-51.8	2	-	45.46	Peak	74	Pass
NVNT	n(HT20)	2412	Ant1	2310	-60.16	2	2.54	39.64	Average	54	Pass
NVNT	n(HT20)	2412	Ant1	2382.072	-47.37	2	-	49.89	Peak	74	Pass
NVNT	n(HT20)	2412	Ant1	2382.657	-57.65	2	2.54	42.15	Average	54	Pass
NVNT	n(HT20)	2412	Ant1	2390	-50.26	2	-	47	Peak	74	Pass
NVNT	n(HT20)	2412	Ant1	2390	-58.24	2	2.54	41.56	Average	54	Pass
NVNT	n(HT20)	2462	Ant1	2483.5	-49.3	2	-	47.96	Peak	74	Pass
NVNT	n(HT20)	2462	Ant1	2483.5	-58	2	2.51	41.77	Average	54	Pass
NVNT	n(HT20)	2462	Ant1	2492.739	-47.28	2	-	49.98	Peak	74	Pass
NVNT	n(HT20)	2462	Ant1	2489.824	-57.71	2	2.51	42.06	Average	54	Pass
NVNT	n(HT20)	2462	Ant1	2500	-49.4	2	-	47.86	Peak	74	Pass
NVNT	n(HT20)	2462	Ant1	2500	-58.72	2	2.51	41.05	Average	54	Pass
NVNT	n(HT40)	2422	Ant1	2310	-52.37	2	-	44.89	Peak	74	Pass
NVNT	n(HT40)	2422	Ant1	2310	-60.88	2	4.2	40.58	Average	54	Pass
NVNT	n(HT40)	2422	Ant1	2389.804	-46.96	2	-	50.3	Peak	74	Pass
NVNT	n(HT40)	2422	Ant1	2388.384	-58.95	2	4.2	42.51	Average	54	Pass
NVNT	n(HT40)	2422	Ant1	2390	-50.51	2	-	46.75	Peak	74	Pass

NVNT	n(HT40)	2422	Ant1	2390	-59.87	2	4.2	41.59	Average	54	Pass
NVNT	n(HT40)	2452	Ant1	2483.5	-56.62	2	-	40.64	Peak	74	Pass
NVNT	n(HT40)	2452	Ant1	2483.5	-64.89	2	4.16	36.53	Average	54	Pass
NVNT	n(HT40)	2452	Ant1	2483.698	-51.22	2	-	46.04	Peak	74	Pass
NVNT	n(HT40)	2452	Ant1	2483.698	-64.18	2	4.16	37.24	Average	54	Pass
NVNT	n(HT40)	2452	Ant1	2500	-57.05	2	-	40.21	Peak	74	Pass
NVNT	n(HT40)	2452	Ant1	2500	-65.66	2	4.16	35.76	Average	54	Pass

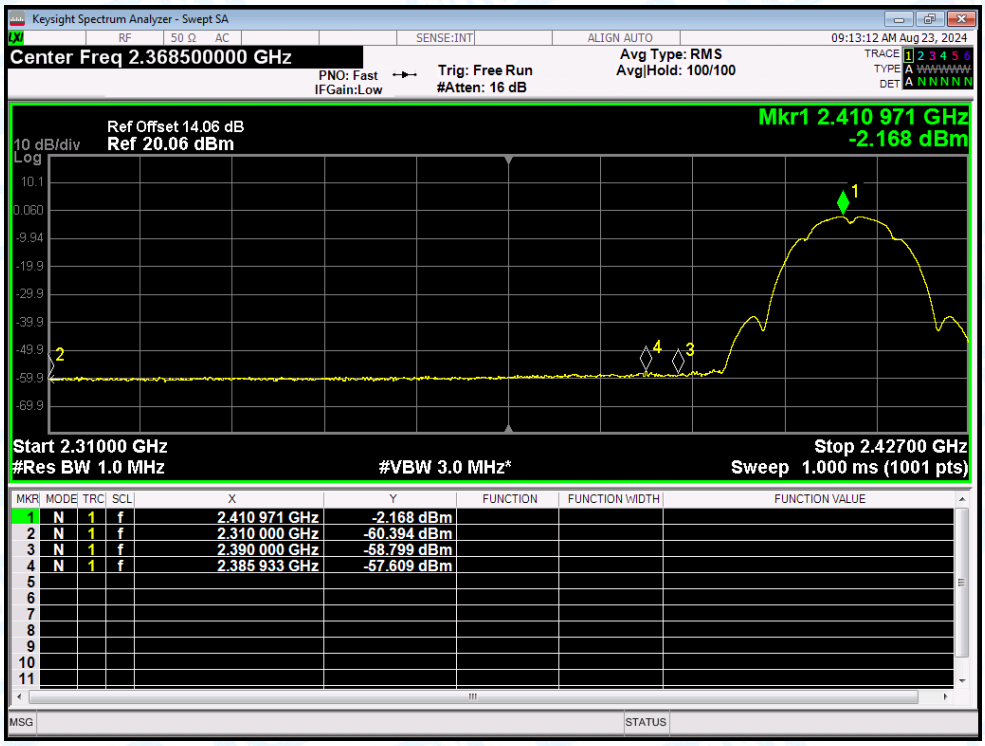
Note：The Duty Cycle Factor is compensated in the graph.

Test Graphs

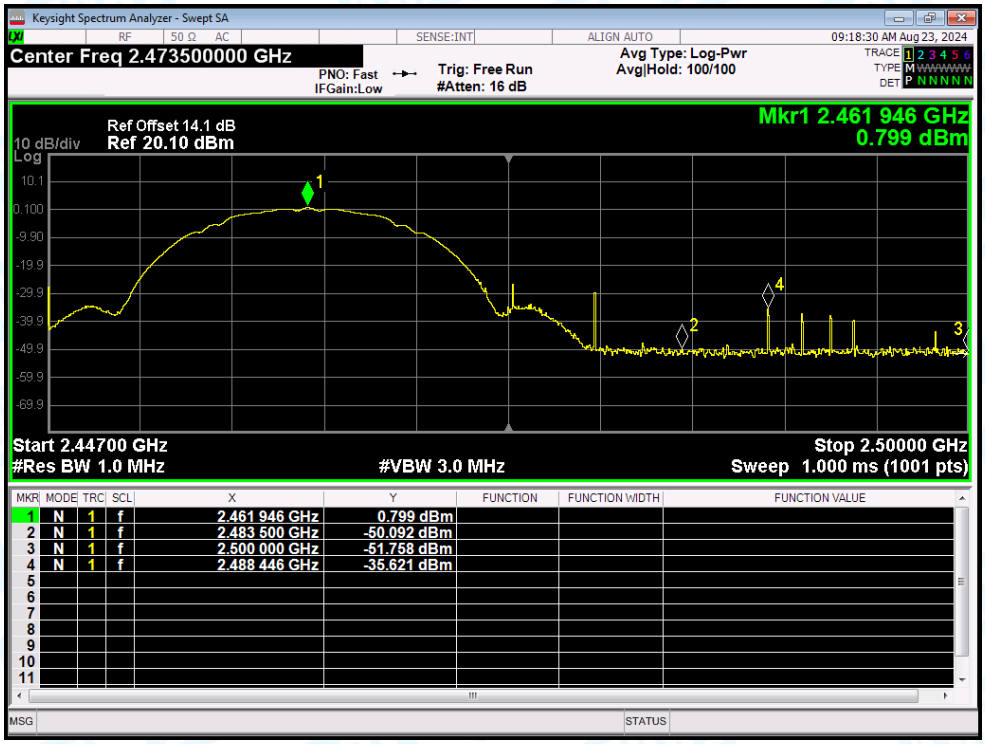
Restrict Band NVNT b 2412MHz Ant1 Peak



Restrict Band NVNT b 2412MHz Ant1 Average

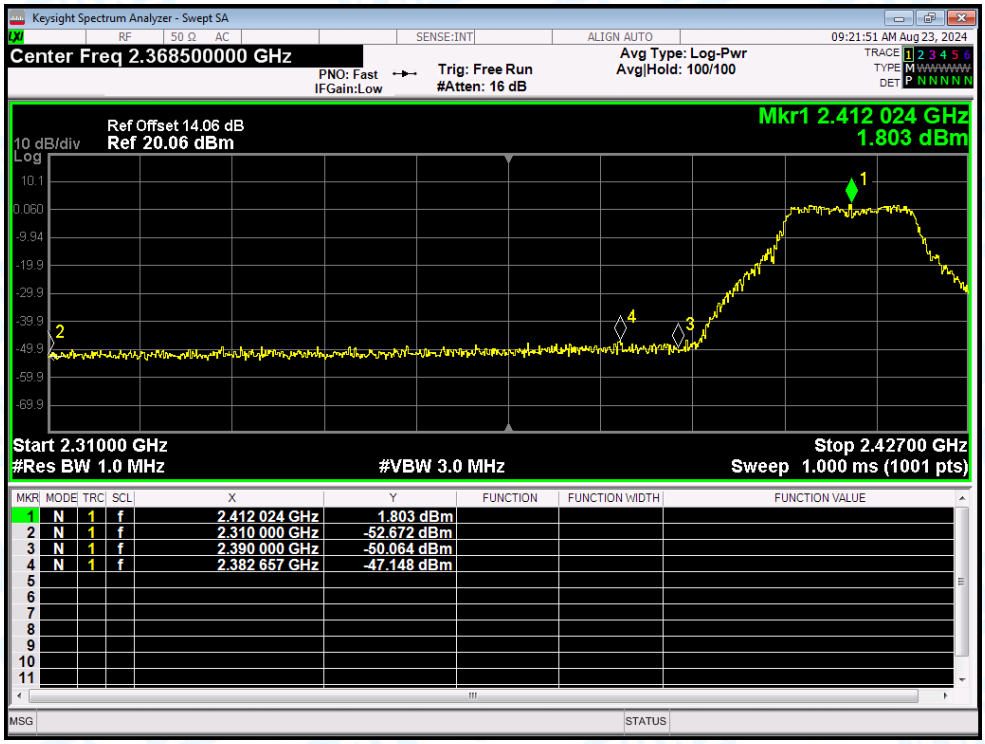


Restrict Band NVNT b 2462MHz Ant1 Peak

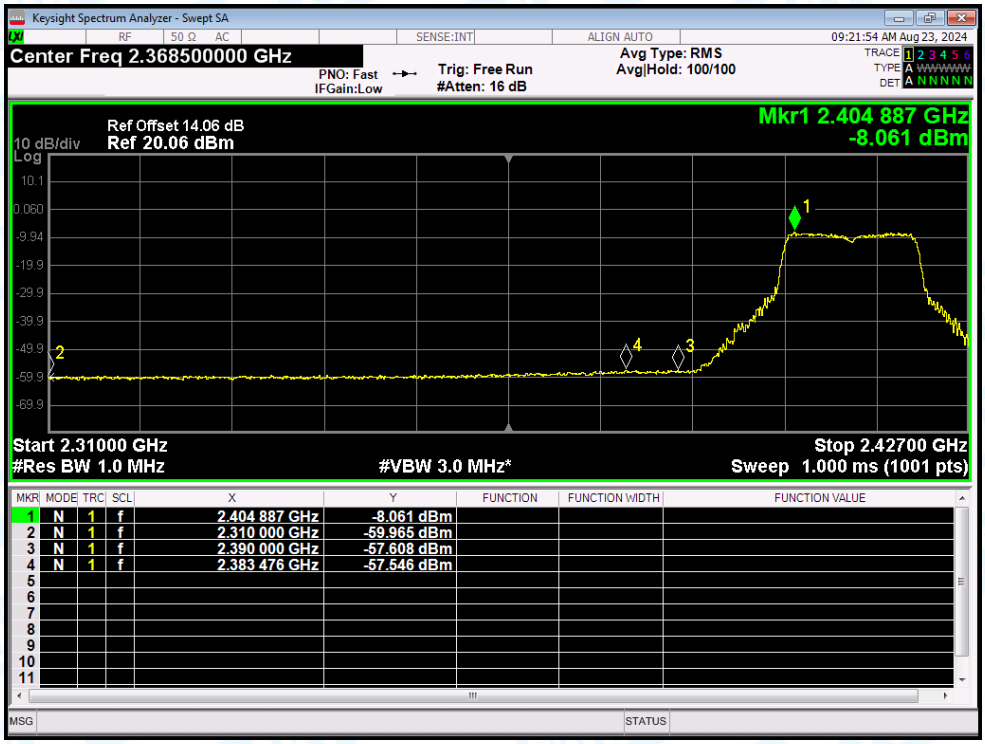


Restrict Band NVNT b 2462MHz Ant1 Average

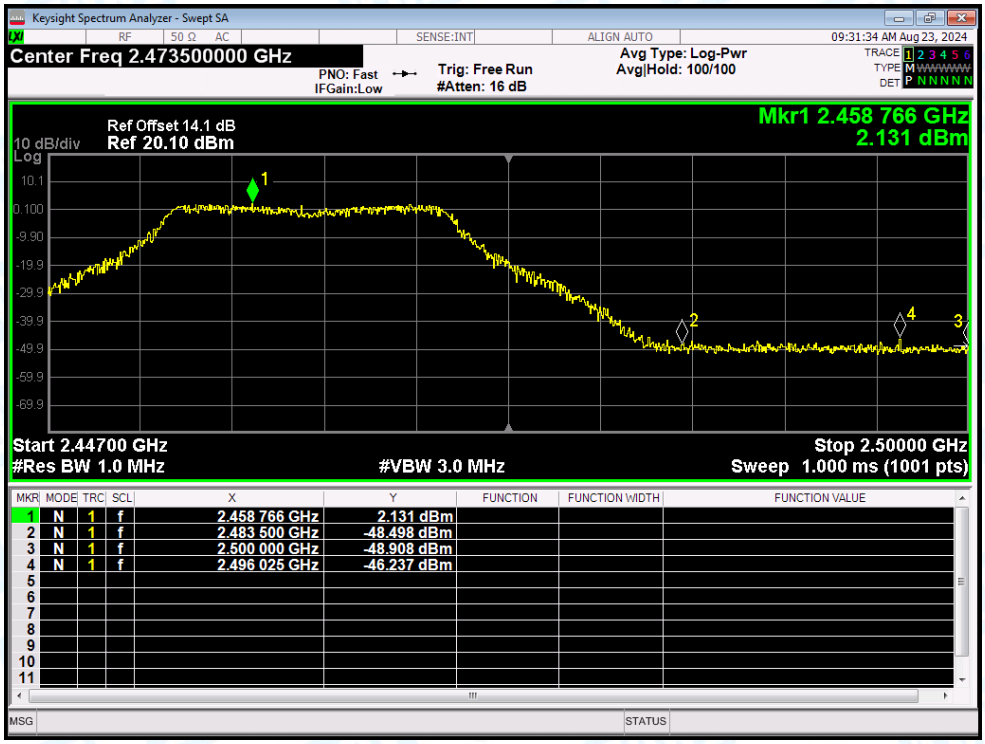
Restrict Band NVNT g 2412MHz Ant1 Peak



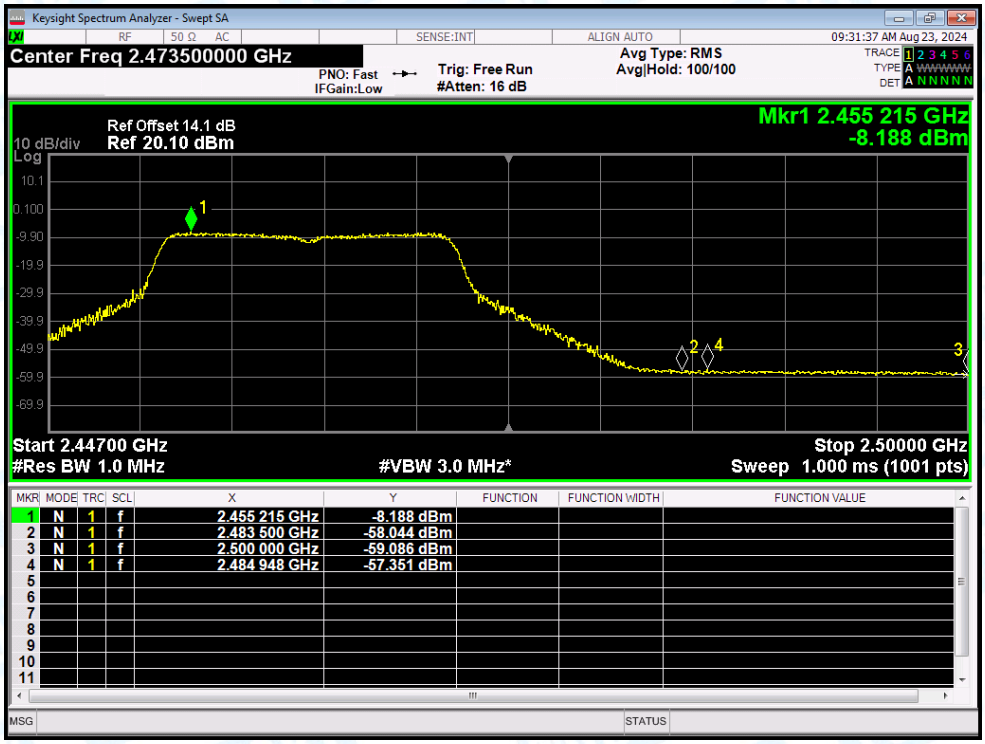
Restrict Band NVNT g 2412MHz Ant1 Average



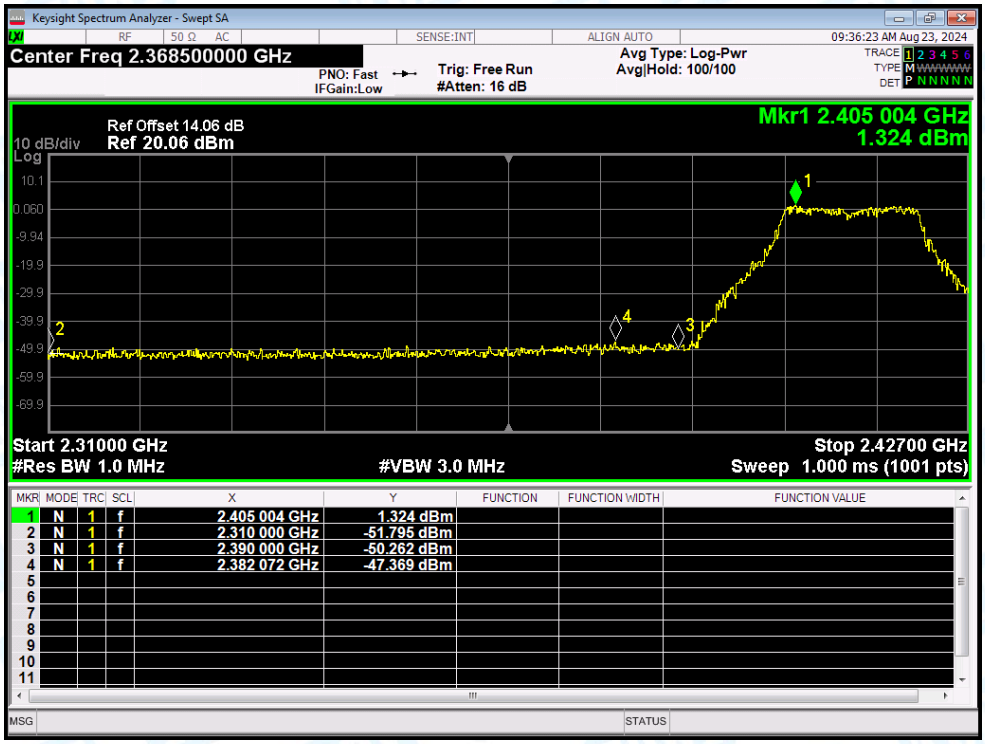
Restrict Band NVNT g 2462MHz Ant1 Peak



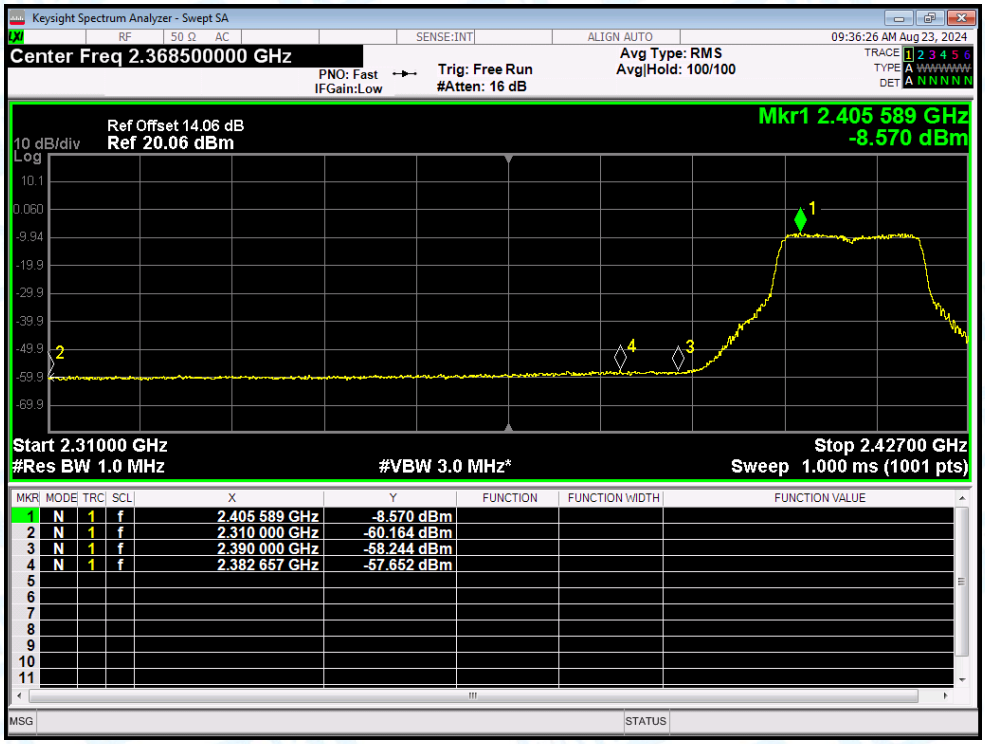
Restrict Band NVNT g 2462MHz Ant1 Average



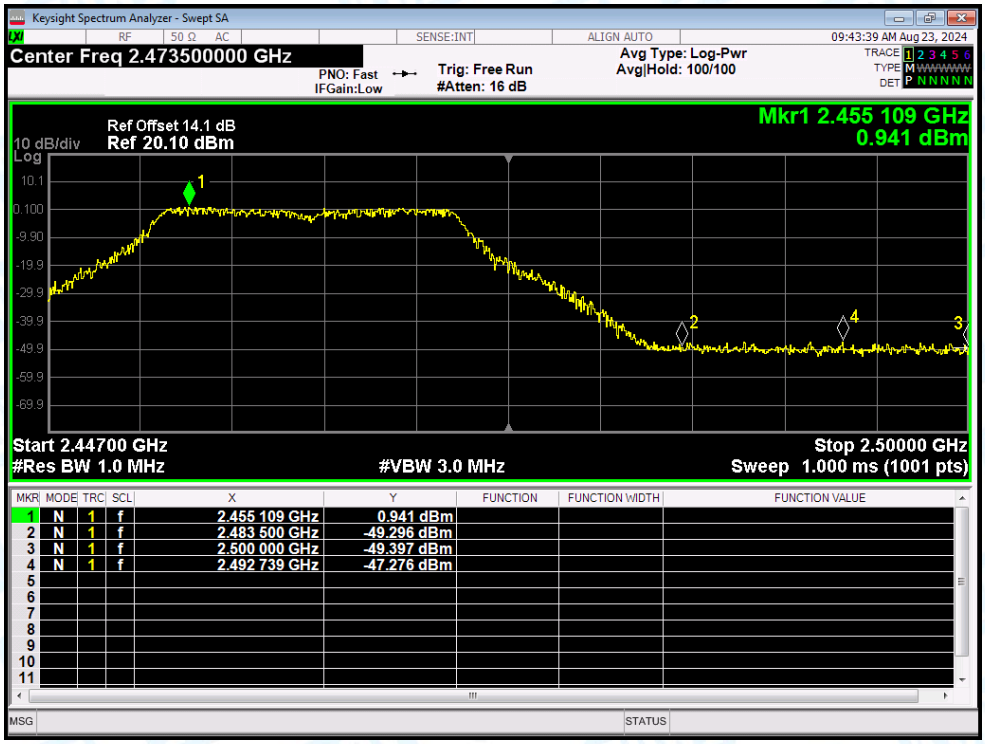
Restrict Band NVNT n(HT20) 2412MHz Ant1 Peak



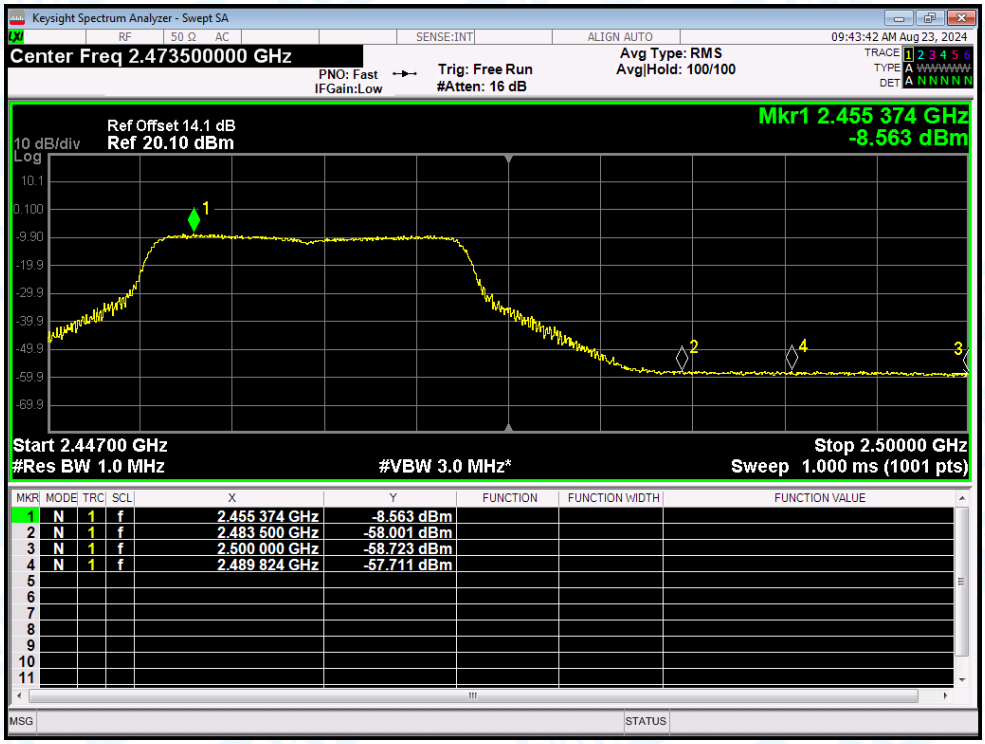
Restrict Band NVNT n(HT20) 2412MHz Ant1 Average



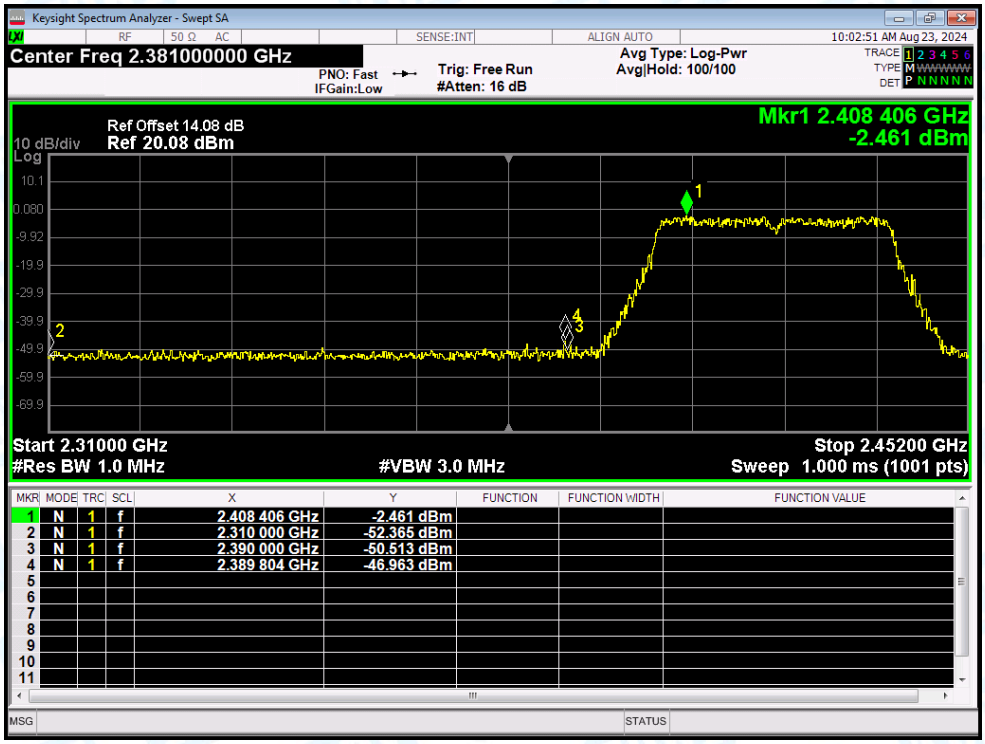
Restrict Band NVNT n(HT20) 2462MHz Ant1 Peak



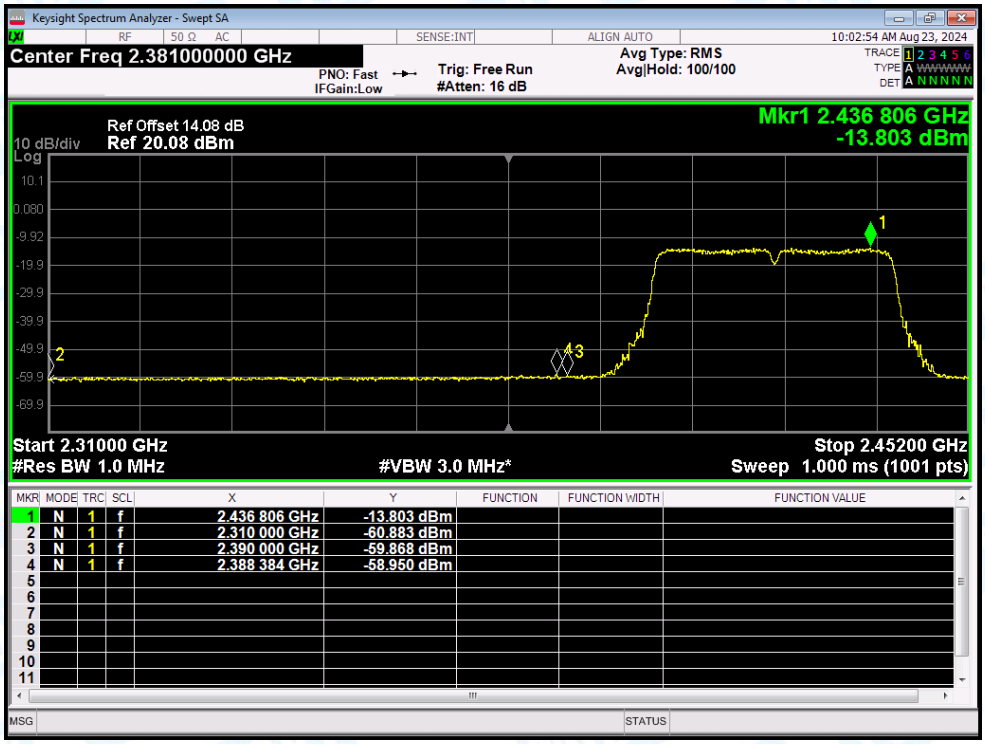
Restrict Band NVNT n(HT20) 2462MHz Ant1 Average



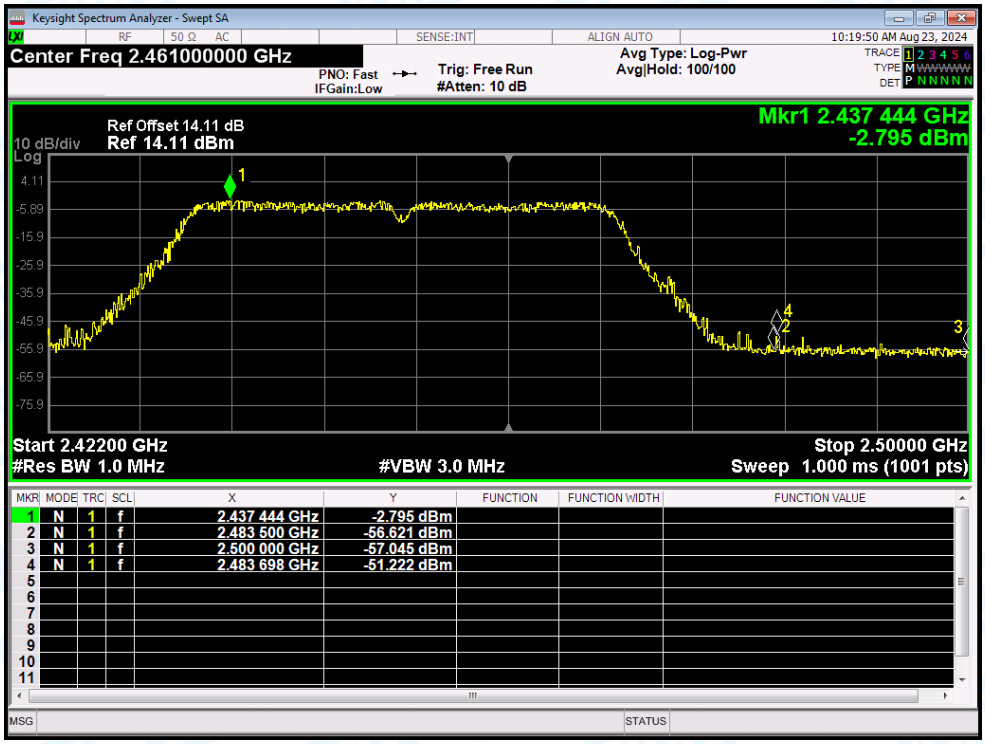
Restrict Band NVNT n(HT40) 2422MHz Ant1 Peak



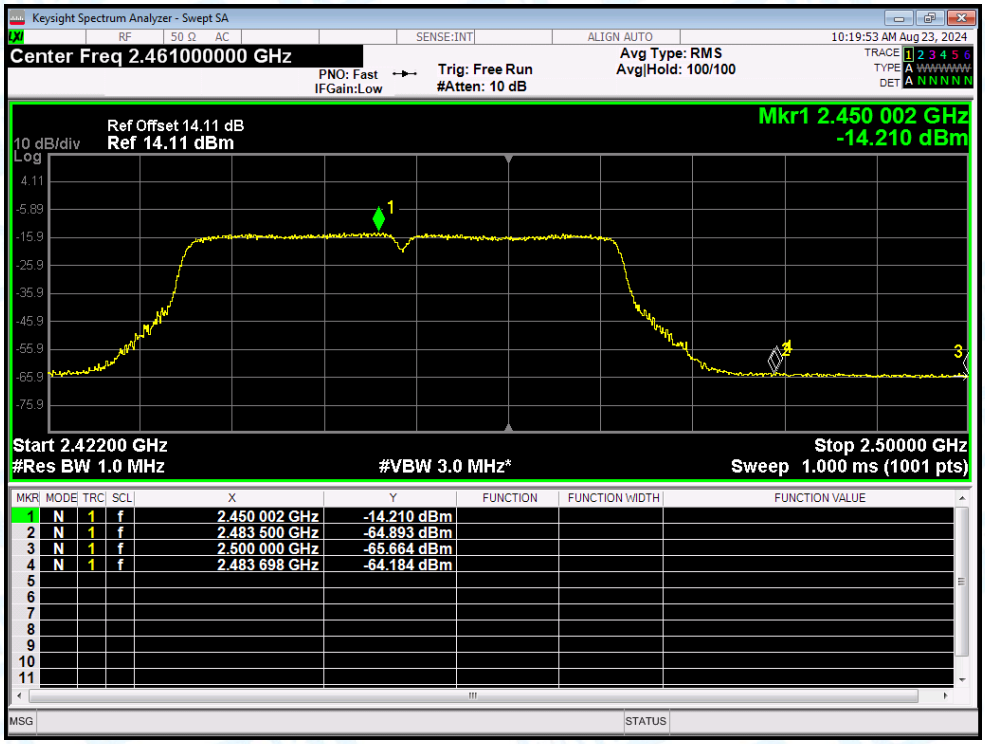
Restrict Band NVNT n(HT40) 2422MHz Ant1 Average



Restrict Band NVNT n(HT40) 2452MHz Ant1 Peak



Restrict Band NVNT n(HT40) 2452MHz Ant1 Average



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