Appendix: 2.4G Wi-Fi

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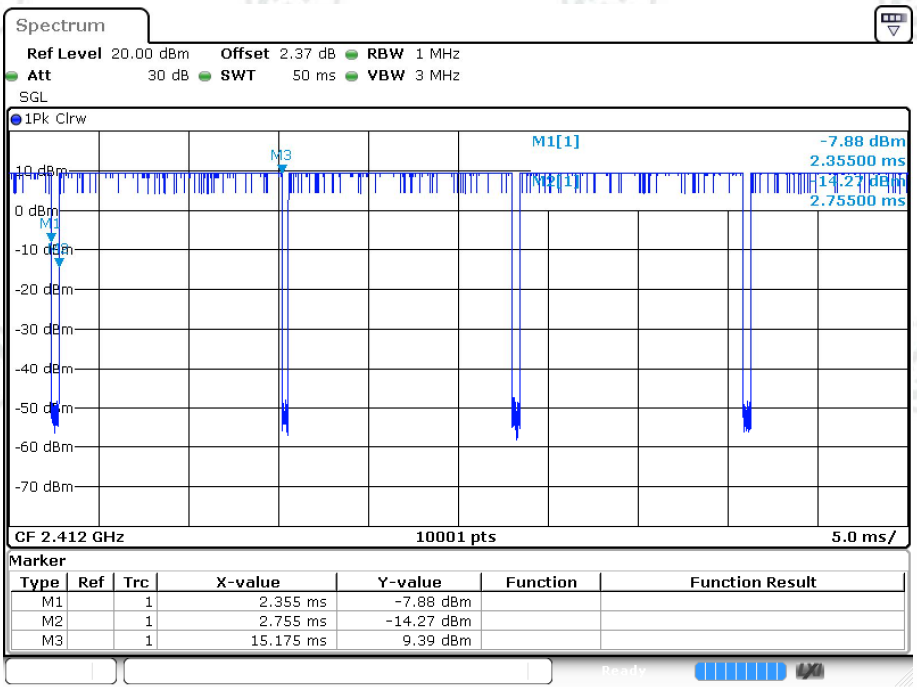
Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	b	2412	Ant1	96.88	0.14	0.08
NVNT	b	2437	Ant1	96.84	0.14	0.08
NVNT	b	2462	Ant1	97.26	0.12	0.08
NVNT	b	2412	Ant2	96.73	0.14	0.08
NVNT	b	2437	Ant2	96.5	0.15	0.08
NVNT	b	2462	Ant2	96.62	0.15	0.08
NVNT	g	2412	Ant1	94.42	0.25	0.48
NVNT	g	2437	Ant1	94.77	0.23	0.48
NVNT	g	2462	Ant1	91.73	0.37	0.48
NVNT	g	2412	Ant2	94.86	0.23	0.48
NVNT	g	2437	Ant2	91.41	0.39	0.48
NVNT	g	2462	Ant2	90.29	0.44	0.48
NVNT	n20	2412	Sum	92.4	0.34	0.52
NVNT	n20	2437	Sum	91.61	0.38	0.52
NVNT	n20	2462	Sum	94.03	0.27	0.52
NVNT	n40	2422	Sum	81.13	0.91	1.06
NVNT	n40	2437	Sum	80.44	0.95	1.06
NVNT	n40	2452	Sum	89.41	0.49	1.06

Test Graphs

Duty Cycle NVNT b 2412MHz Ant1

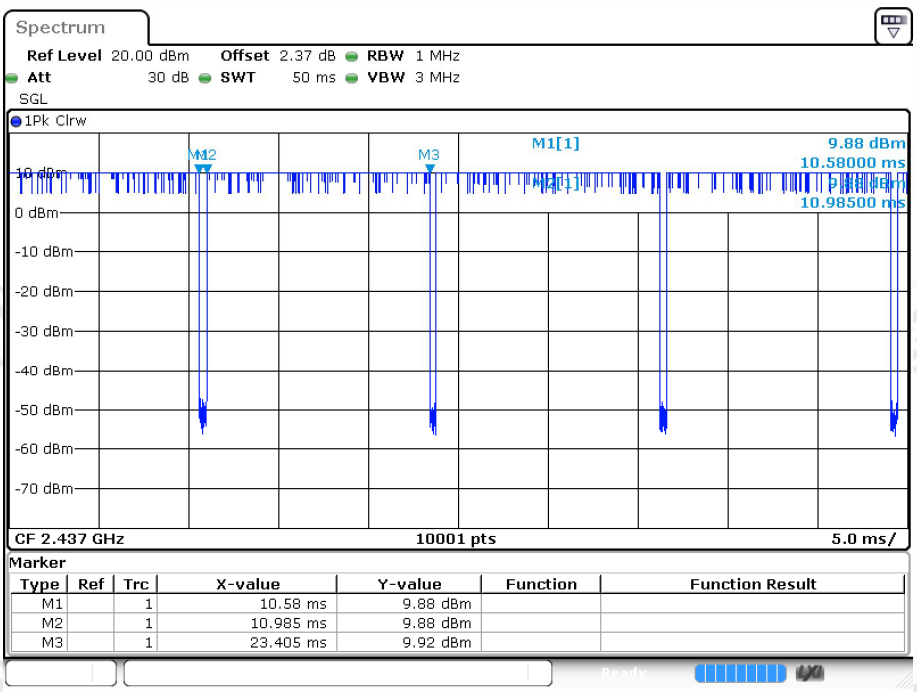


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.355 ms	-7.88 dBm		
M2		1	2.755 ms	-14.27 dBm		
M3		1	15.175 ms	9.39 dBm		

Date: 10.APR.2025 22:30:13

Duty Cycle NVNT b 2437MHz Ant1

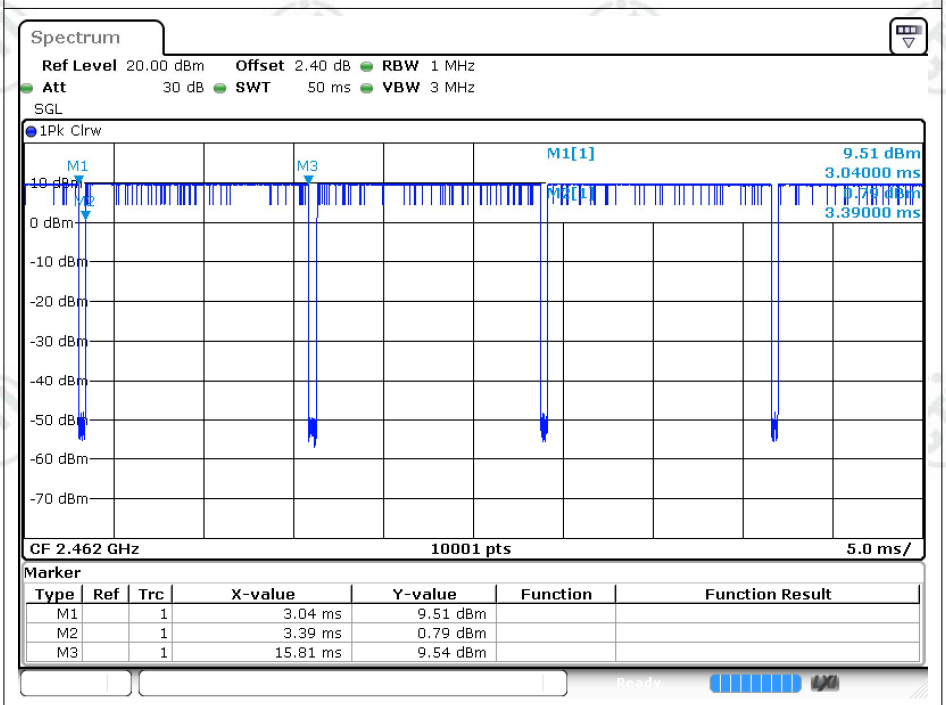


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	10.58 ms	9.88 dBm		
M2		1	10.985 ms	9.88 dBm		
M3		1	23.405 ms	9.92 dBm		

Date: 10.APR.2025 22:32:18

Duty Cycle NVNT b 2462MHz Ant1

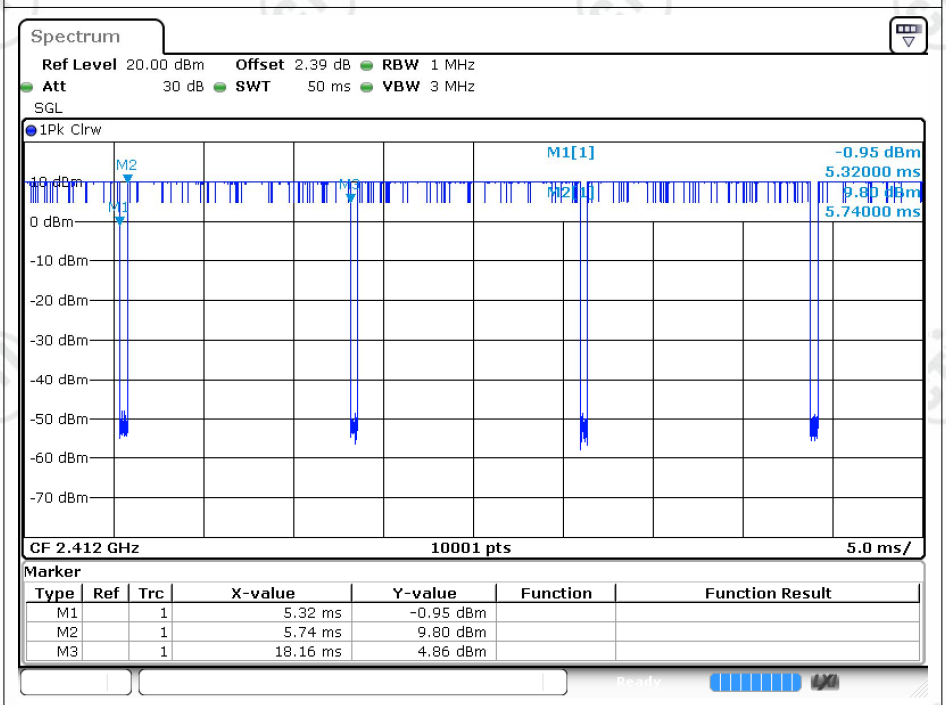


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	3.04 ms	9.51 dBm		
M2		1	3.39 ms	0.79 dBm		
M3		1	15.81 ms	9.54 dBm		

Date: 10.APR.2025 22:35:36

Duty Cycle NVNT b 2412MHz Ant2

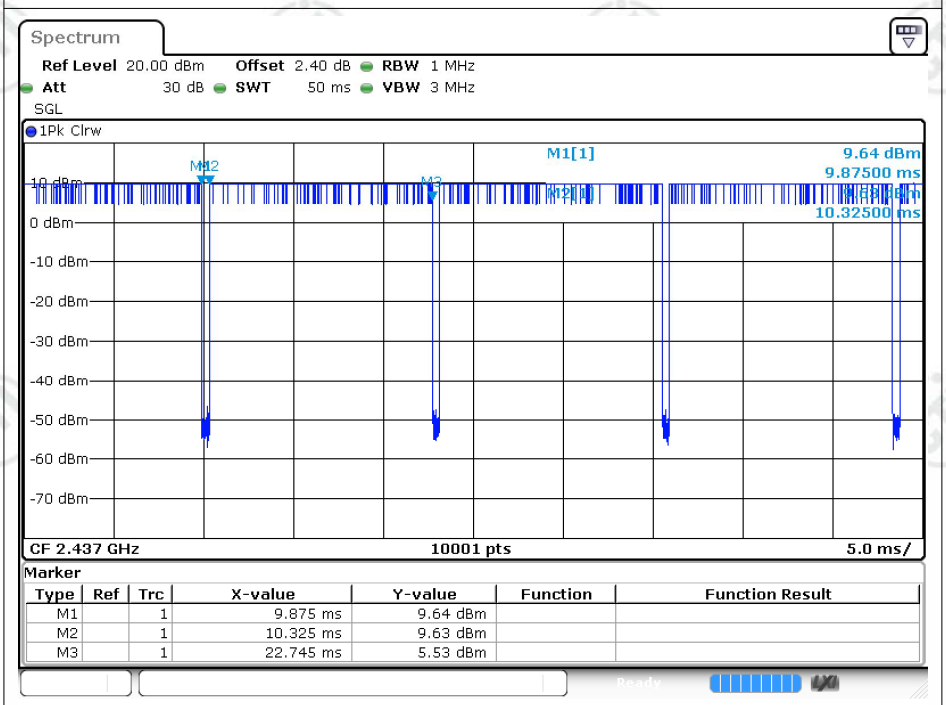


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	5.32 ms	-0.95 dBm		
M2		1	5.74 ms	9.80 dBm		
M3		1	18.16 ms	4.86 dBm		

Date: 10.APR.2025 22:53:14

Duty Cycle NVNT b 2437MHz Ant2

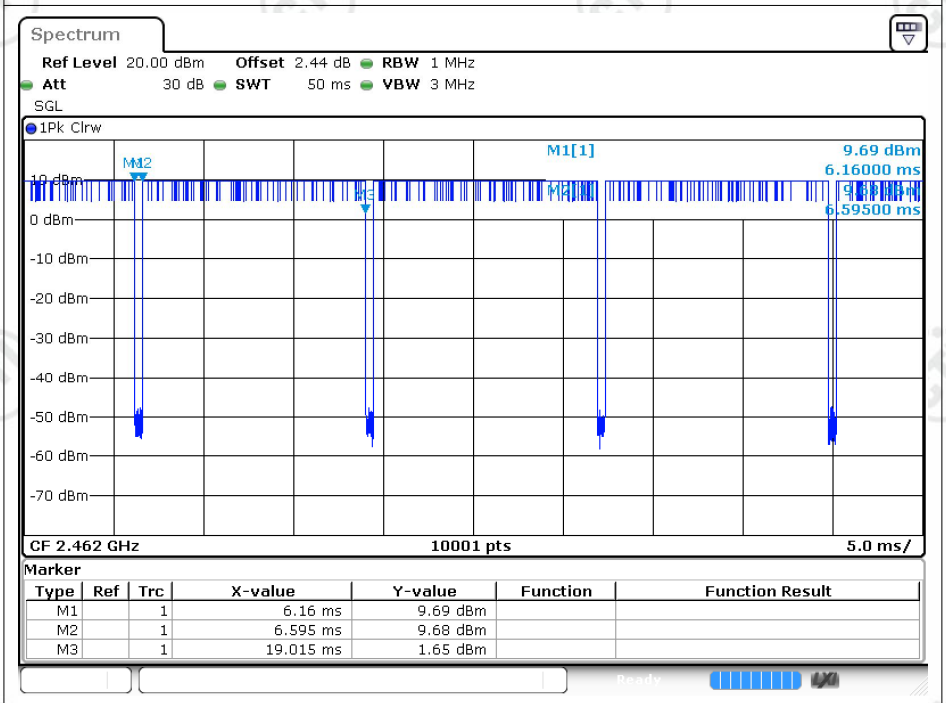


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	9.875 ms	9.64 dBm		
M2		1	10.325 ms	9.63 dBm		
M3		1	22.745 ms	5.53 dBm		

Date: 10.APR.2025 22:55:03

Duty Cycle NVNT b 2462MHz Ant2

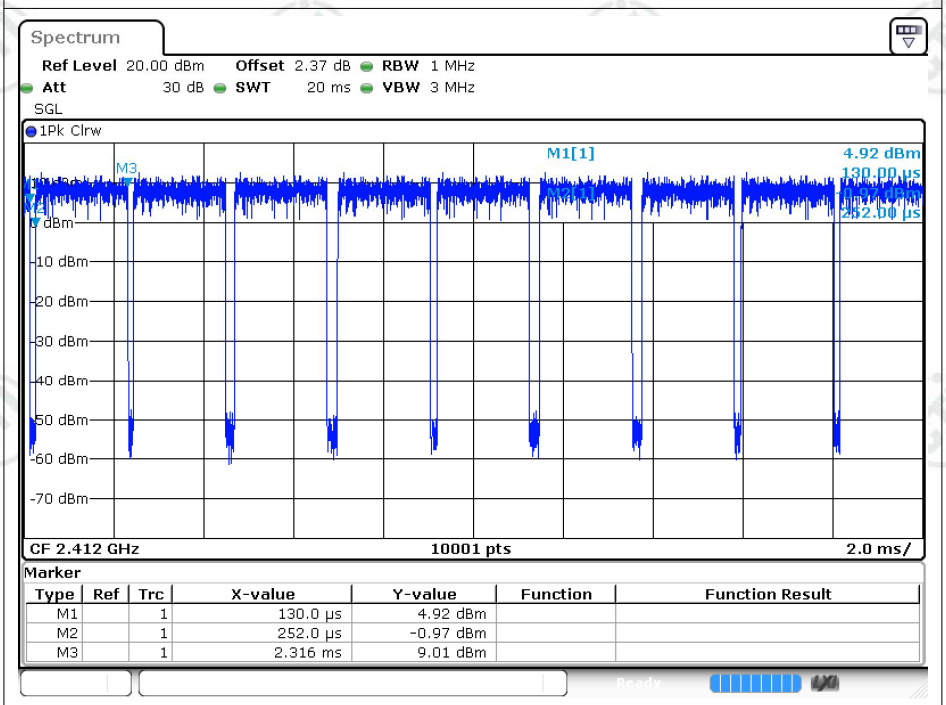


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	6.16 ms	9.69 dBm		
M2		1	6.595 ms	9.68 dBm		
M3		1	19.015 ms	1.65 dBm		

Date: 10.APR.2025 22:57:23

Duty Cycle NVNT g 2412MHz Ant1

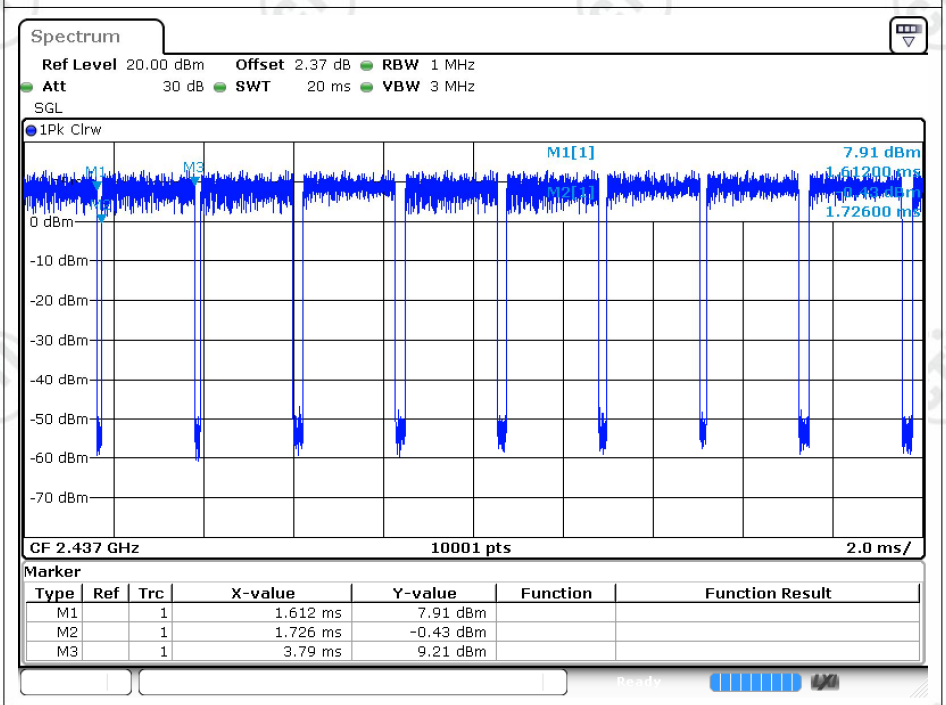


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	130.0 µs	4.92 dBm		
M2		1	252.0 µs	-0.97 dBm		
M3		1	2.316 ms	9.01 dBm		

Date: 10.APR.2025 22:39:23

Duty Cycle NVNT g 2437MHz Ant1

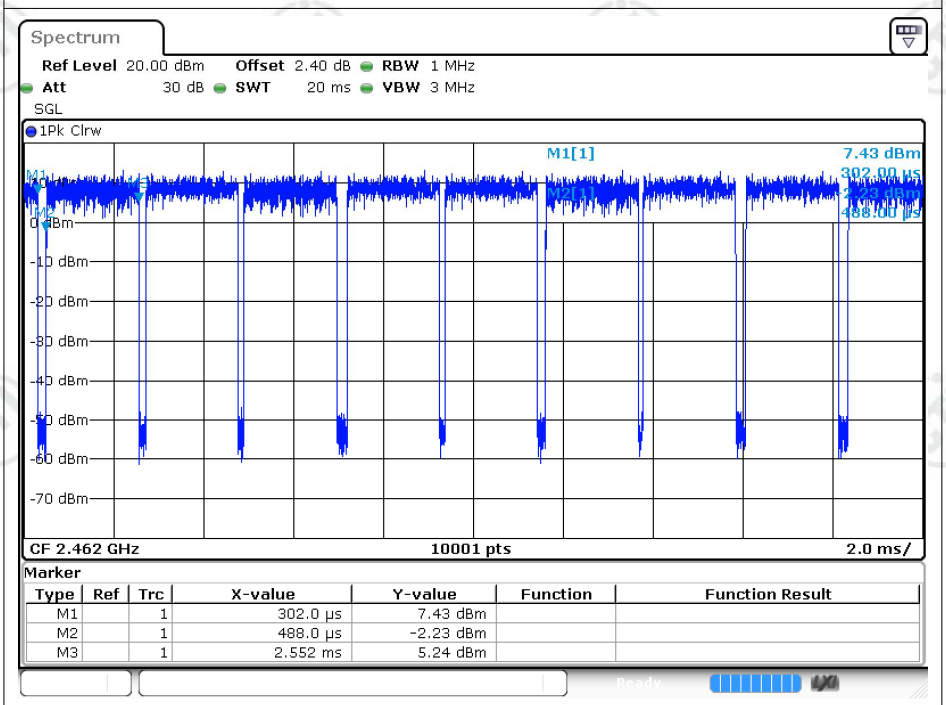


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	1.612 ms	7.91 dBm		
M2		1	1.726 ms	-0.43 dBm		
M3		1	3.79 ms	9.21 dBm		

Date: 10.APR.2025 22:41:23

Duty Cycle NVNT g 2462MHz Ant1

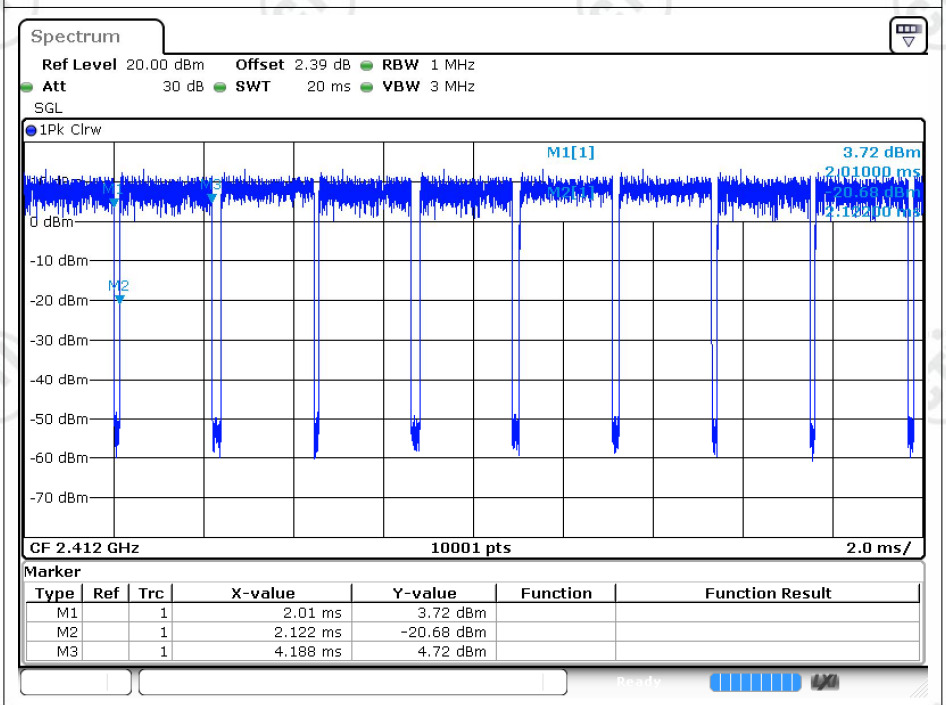


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	302.0 µs	7.43 dBm		
M2		1	488.0 µs	-2.23 dBm		
M3		1	2.552 ms	5.24 dBm		

Date: 10.APR.2025 22:44:33

Duty Cycle NVNT g 2412MHz Ant2

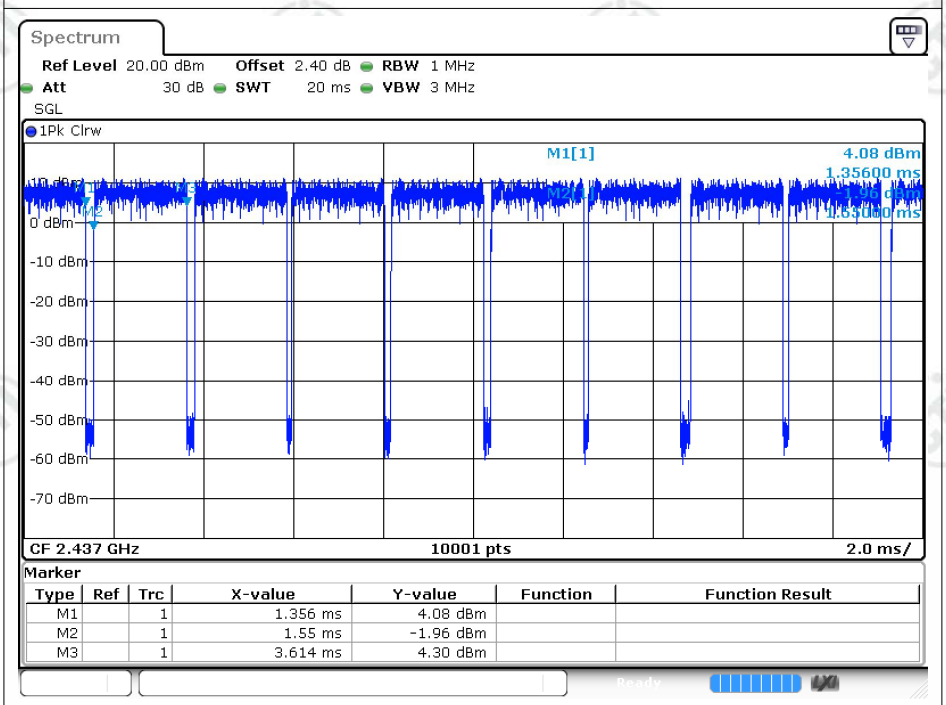


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.01 ms	3.72 dBm		
M2		1	2.122 ms	-20.68 dBm		
M3		1	4.188 ms	4.72 dBm		

Date: 10.APR.2025 22:59:25

Duty Cycle NVNT g 2437MHz Ant2

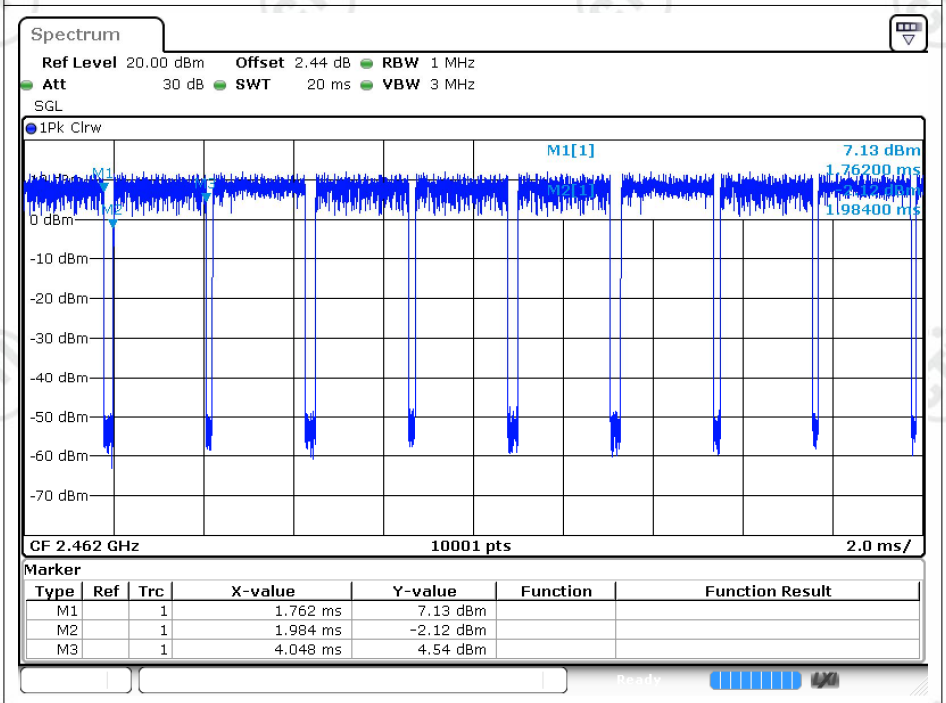


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	1.356 ms	4.08 dBm		
M2		1	1.55 ms	-1.96 dBm		
M3		1	3.614 ms	4.30 dBm		

Date: 10.APR.2025 23:01:34

Duty Cycle NVNT g 2462MHz Ant2

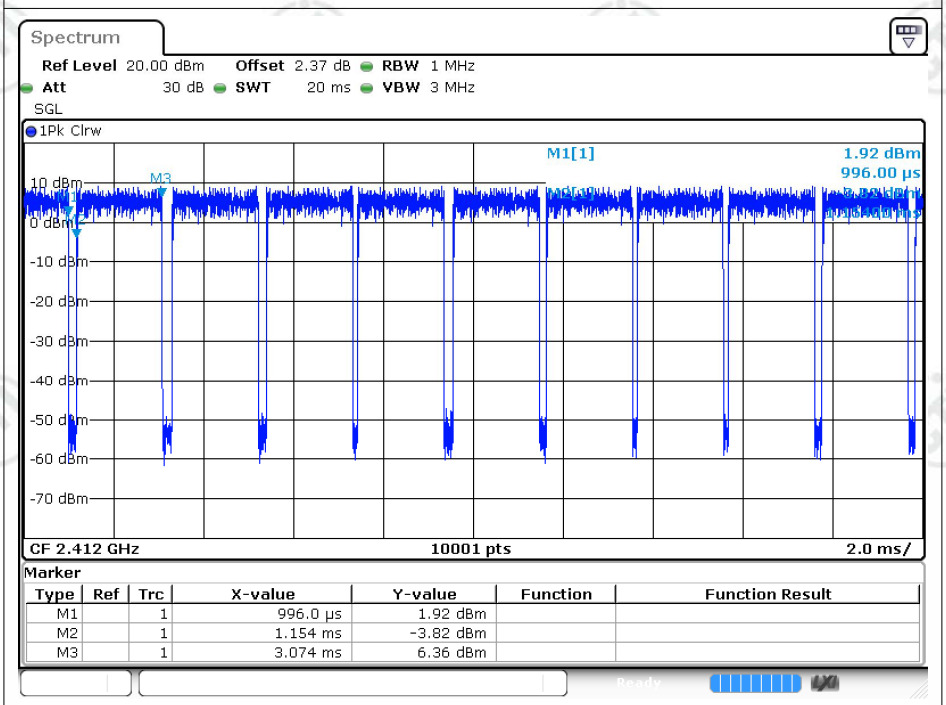


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	1.762 ms	7.13 dBm		
M2		1	1.984 ms	-2.12 dBm		
M3		1	4.048 ms	4.54 dBm		

Date: 10.APR.2025 23:03:50

Duty Cycle NVNT n20 2412MHz Sum

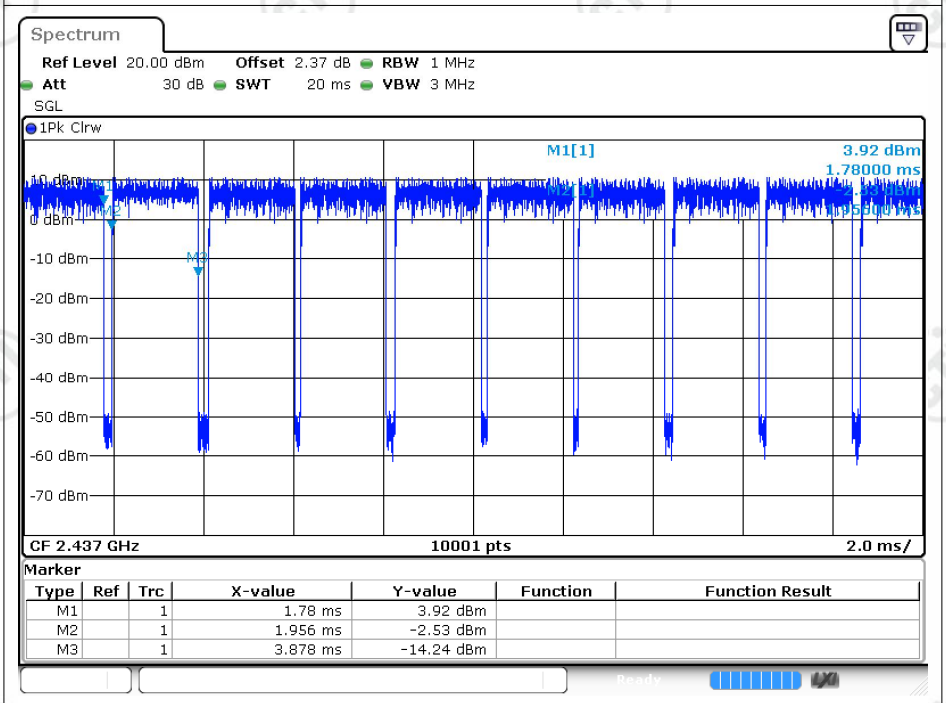


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	996.0 µs	1.92 dBm		
M2		1	1.154 ms	-3.82 dBm		
M3		1	3.074 ms	6.36 dBm		

Date: 10.APR.2025 23:14:06

Duty Cycle NVNT n20 2437MHz Sum

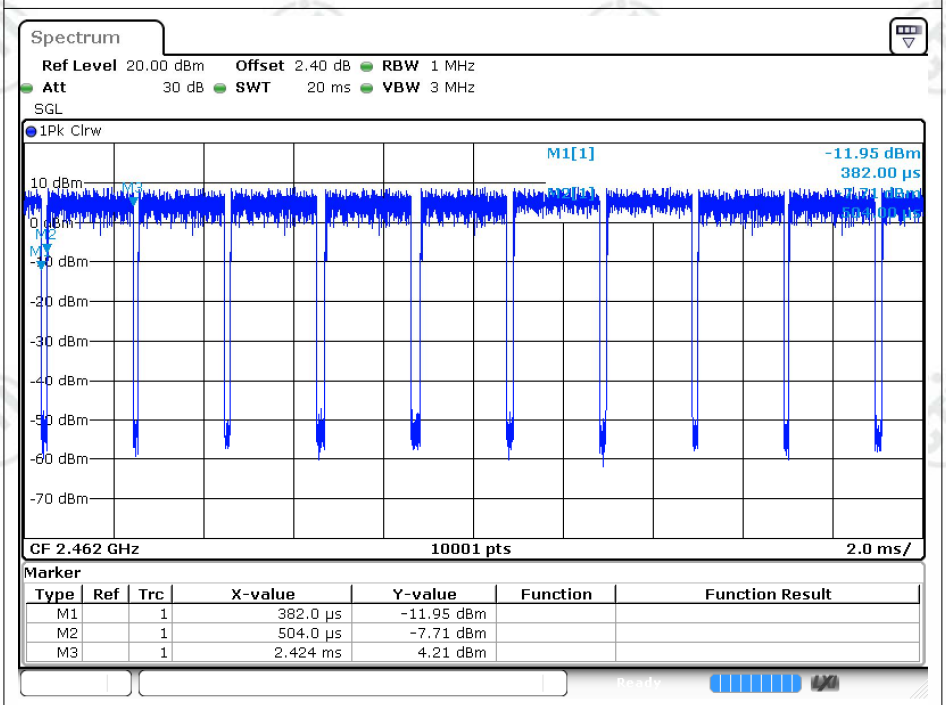


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	1.78 ms	3.92 dBm		
M2		1	1.956 ms	-2.53 dBm		
M3		1	3.878 ms	-14.24 dBm		

Date: 10.APR.2025 23:18:38

Duty Cycle NVNT n20 2462MHz Sum

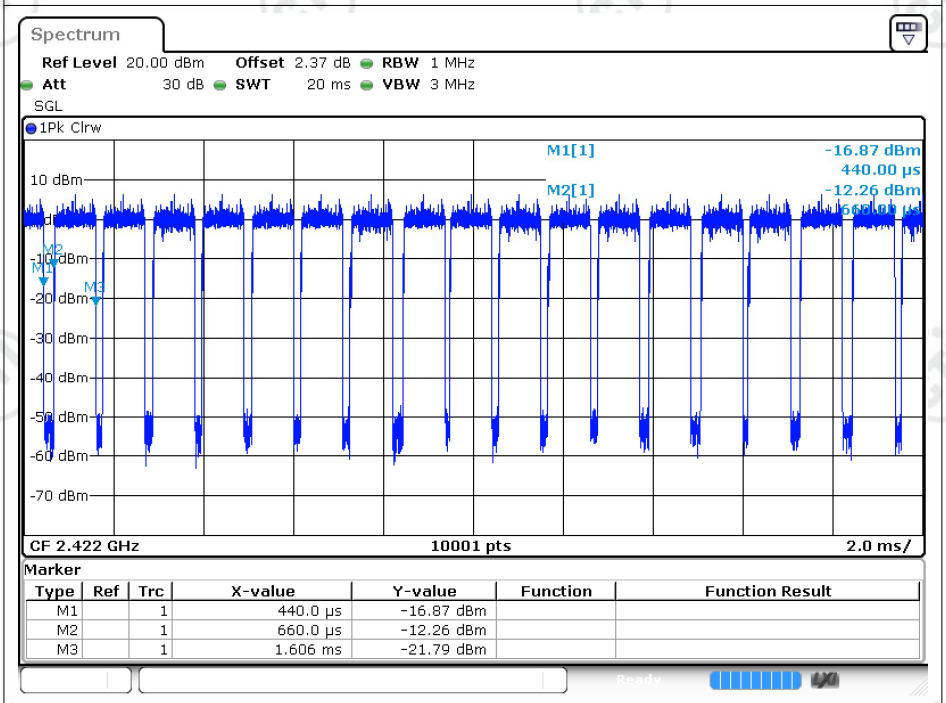


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	382.0 µs	-11.95 dBm		
M2		1	504.0 µs	-7.71 dBm		
M3		1	2.424 ms	4.21 dBm		

Date: 10.APR.2025 23:24:50

Duty Cycle NVNT n40 2422MHz Sum

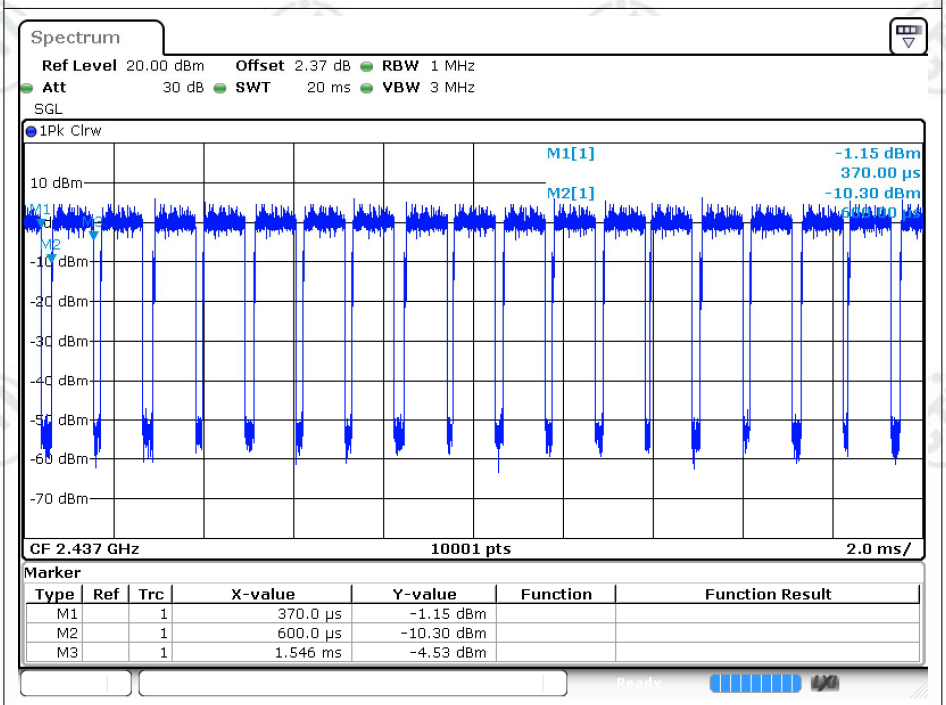


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	440.0 µs	-16.87 dBm		
M2		1	660.0 µs	-12.26 dBm		
M3		1	1.606 ms	-21.79 dBm		

Date: 10.APR.2025 23:38:16

Duty Cycle NVNT n40 2437MHz Sum

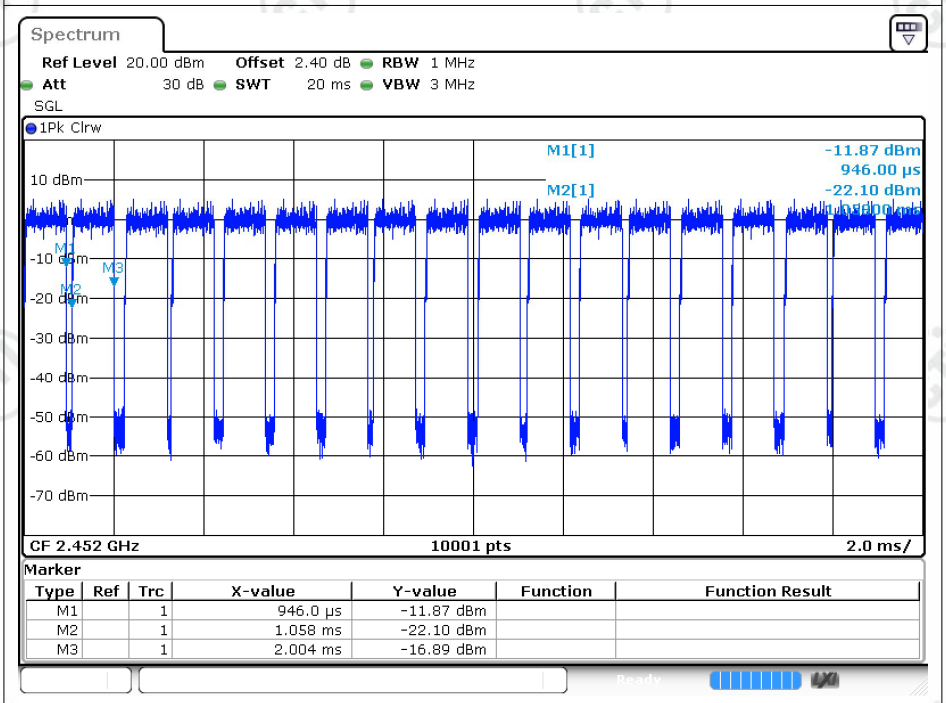


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	370.0 µs	-1.15 dBm		
M2		1	600.0 µs	-10.30 dBm		
M3		1	1.546 ms	-4.53 dBm		

Date: 10.APR.2025 23:42:44

Duty Cycle NVNT n40 2452MHz Sum



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	946.0 µs	-11.87 dBm		
M2		1	1.058 ms	-22.10 dBm		
M3		1	2.004 ms	-16.89 dBm		

Date: 10.APR.2025 23:49:19

Maximum Peak Conducted Output Power

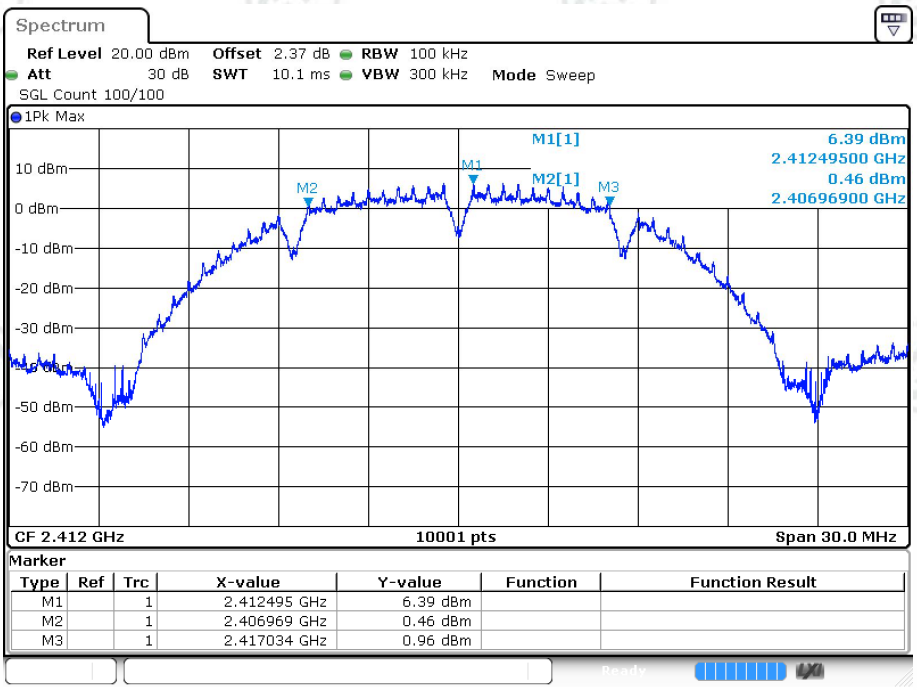
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Duty Factor (dB)	Total Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	15.21	0	15.21	30	Pass
NVNT	b	2437	Ant1	15.22	0	15.22	30	Pass
NVNT	b	2462	Ant1	15.56	0	15.56	30	Pass
NVNT	b	2412	Ant2	15.47	0	15.47	30	Pass
NVNT	b	2437	Ant2	15.61	0	15.61	30	Pass
NVNT	b	2462	Ant2	15.83	0	**15.83**	30	Pass
NVNT	g	2412	Ant1	14.64	0	14.64	30	Pass
NVNT	g	2437	Ant1	14.66	0	14.66	30	Pass
NVNT	g	2462	Ant1	14.4	0	14.4	30	Pass
NVNT	g	2412	Ant2	14.33	0	14.33	30	Pass
NVNT	g	2437	Ant2	14.42	0	14.42	30	Pass
NVNT	g	2462	Ant2	14.45	0	14.45	30	Pass
NVNT	n20	2412	Ant1	13.2	0	13.2	30	Pass
NVNT	n20	2412	Ant2	12.92	0	12.92	30	Pass
NVNT	n20	2412	Sum	16.07	0	16.07	30	Pass
NVNT	n20	2437	Ant1	13.37	0	13.37	30	Pass
NVNT	n20	2437	Ant2	11.39	0	11.39	30	Pass
NVNT	n20	2437	Sum	15.5	0	15.5	30	Pass
NVNT	n20	2462	Ant1	13.34	0	13.34	30	Pass
NVNT	n20	2462	Ant2	13.73	0	13.73	30	Pass
NVNT	n20	2462	Sum	16.55	0	16.55	30	Pass
NVNT	n40	2422	Ant1	13.7	0	13.7	30	Pass
NVNT	n40	2422	Ant2	12.58	0	12.58	30	Pass
NVNT	n40	2422	Sum	16.19	0	16.19	30	Pass
NVNT	n40	2437	Ant1	13.58	0	13.58	30	Pass
NVNT	n40	2437	Ant2	11.66	0	11.66	30	Pass
NVNT	n40	2437	Sum	15.74	0	15.74	30	Pass
NVNT	n40	2452	Ant1	13.43	0	13.43	30	Pass
NVNT	n40	2452	Ant2	14.27	0	14.27	30	Pass
NVNT	n40	2452	Sum	16.88	0	**16.88**	30	Pass

-6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	10.065	0.5	Pass
NVNT	b	2437	Ant1	10.071	0.5	Pass
NVNT	b	2462	Ant1	10.056	0.5	Pass
NVNT	b	2412	Ant2	10.092	0.5	Pass
NVNT	b	2437	Ant2	10.077	0.5	Pass
NVNT	b	2462	Ant2	10.089	0.5	Pass
NVNT	g	2412	Ant1	15.06	0.5	Pass
NVNT	g	2437	Ant1	15.081	0.5	Pass
NVNT	g	2462	Ant1	15.117	0.5	Pass
NVNT	g	2412	Ant2	15.111	0.5	Pass
NVNT	g	2437	Ant2	15.084	0.5	Pass
NVNT	g	2462	Ant2	14.328	0.5	Pass
NVNT	n20	2412	Ant1	15.039	0.5	Pass
NVNT	n20	2412	Ant2	13.407	0.5	Pass
NVNT	n20	2437	Ant1	13.368	0.5	Pass
NVNT	n20	2437	Ant2	15.087	0.5	Pass
NVNT	n20	2462	Ant1	15.915	0.5	Pass
NVNT	n20	2462	Ant2	13.155	0.5	Pass
NVNT	n40	2422	Ant1	28.746	0.5	Pass
NVNT	n40	2422	Ant2	35.016	0.5	Pass
NVNT	n40	2437	Ant1	26.904	0.5	Pass
NVNT	n40	2437	Ant2	35.046	0.5	Pass
NVNT	n40	2452	Ant1	35.058	0.5	Pass
NVNT	n40	2452	Ant2	26.322	0.5	Pass

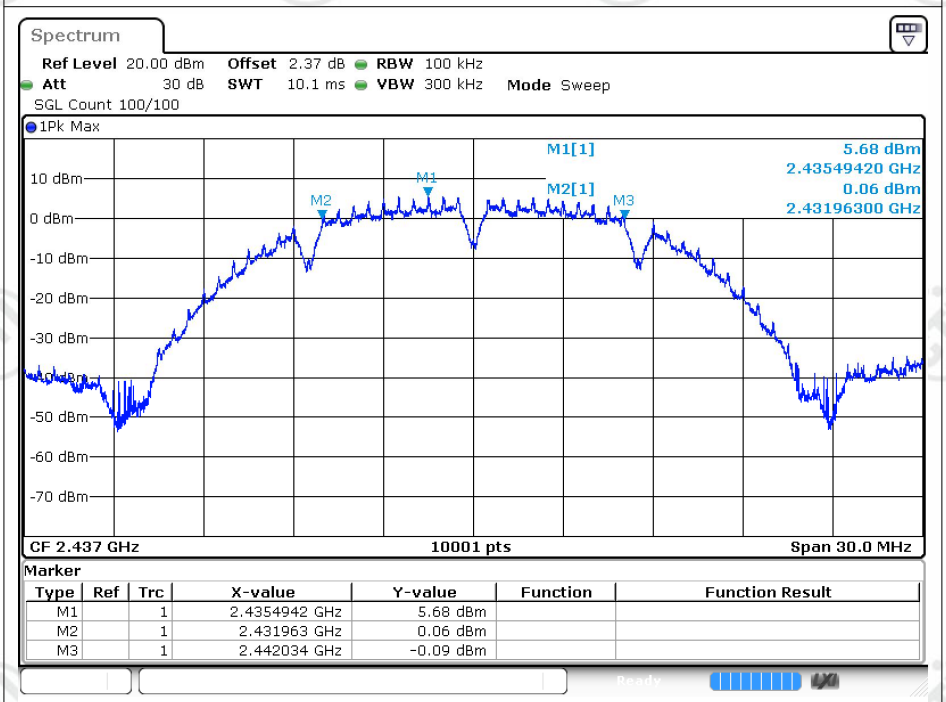
Test Graphs

-6dB Bandwidth NVNT b 2412MHz Ant1



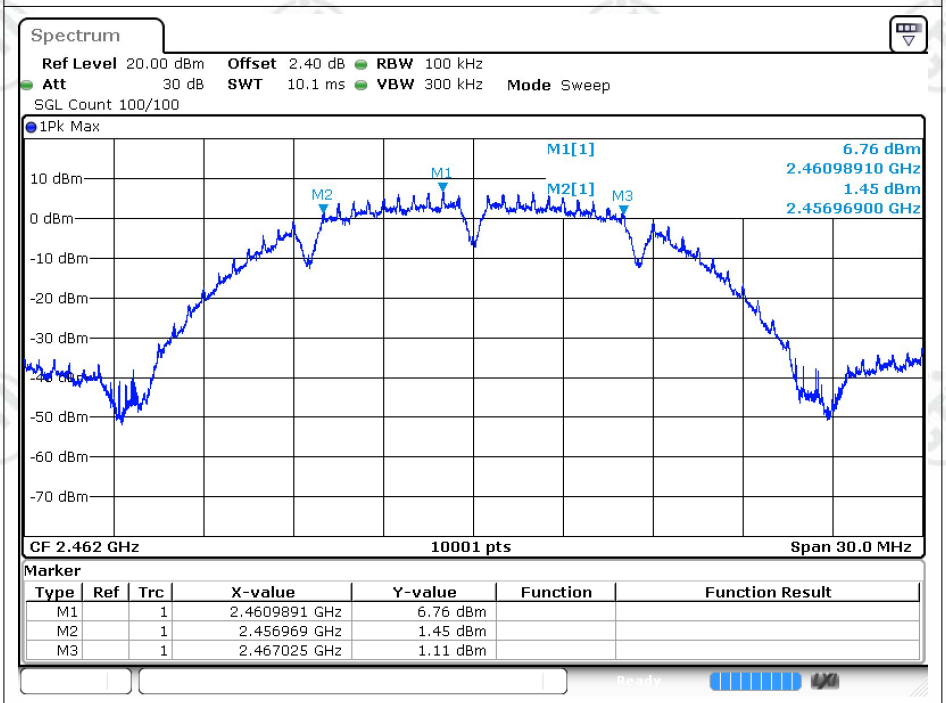
Date: 10.APR.2025 22:30:29

-6dB Bandwidth NVNT b 2437MHz Ant1



Date: 10.APR.2025 22:33:16

-6dB Bandwidth NVNT b 2462MHz Ant1

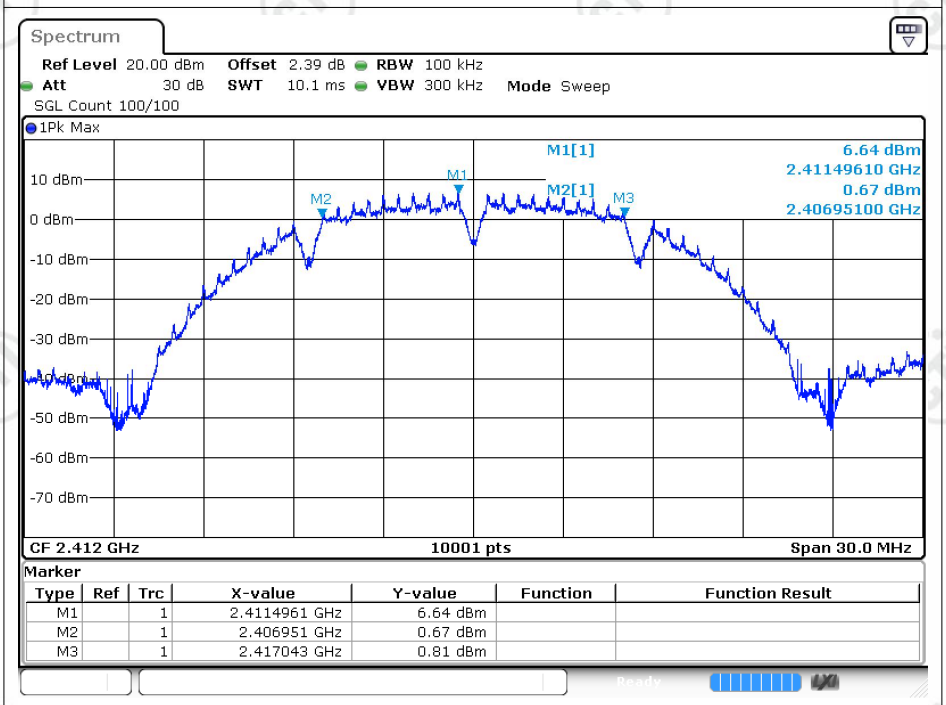


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.4609891 GHz	6.76 dBm		
M2		1	2.456969 GHz	1.45 dBm		
M3		1	2.467025 GHz	1.11 dBm		

Date: 10.APR.2025 22:36:07

-6dB Bandwidth NVNT b 2412MHz Ant2

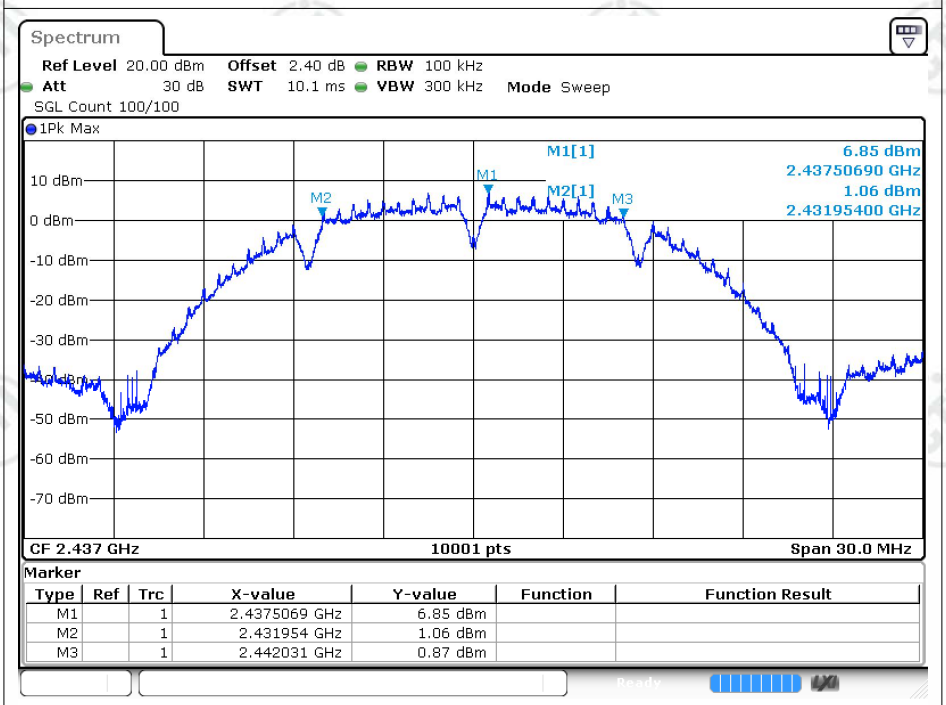


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.4114961 GHz	6.64 dBm		
M2		1	2.406951 GHz	0.67 dBm		
M3		1	2.417043 GHz	0.81 dBm		

Date: 10.APR.2025 22:53:30

-6dB Bandwidth NVNT b 2437MHz Ant2

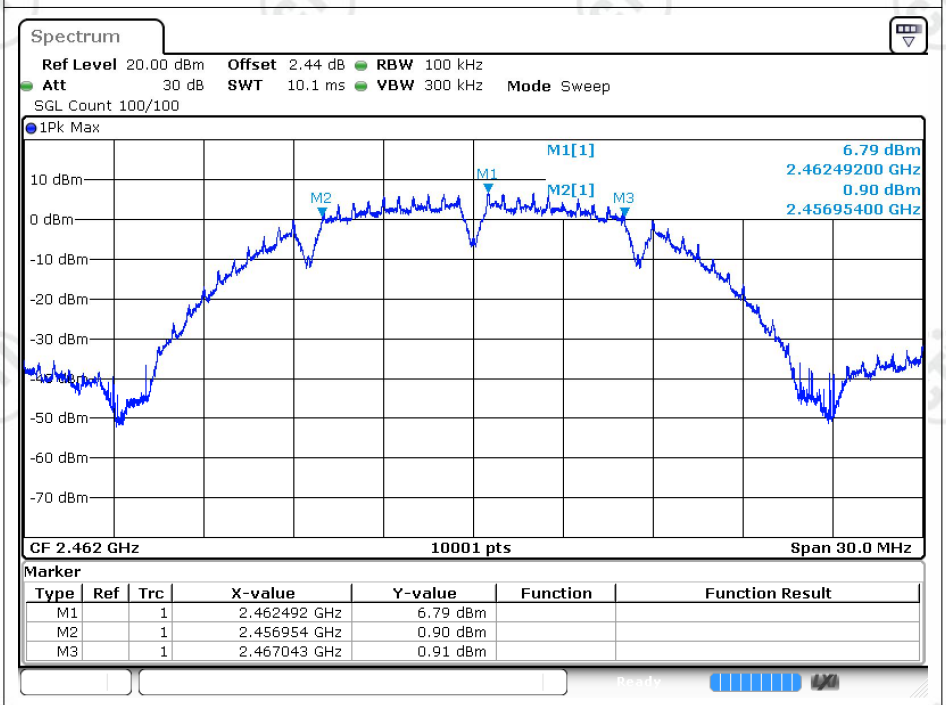


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.4375069 GHz	6.85 dBm		
M2		1	2.431954 GHz	1.06 dBm		
M3		1	2.442031 GHz	0.87 dBm		

Date: 10.APR.2025 22:55:32

-6dB Bandwidth NVNT b 2462MHz Ant2

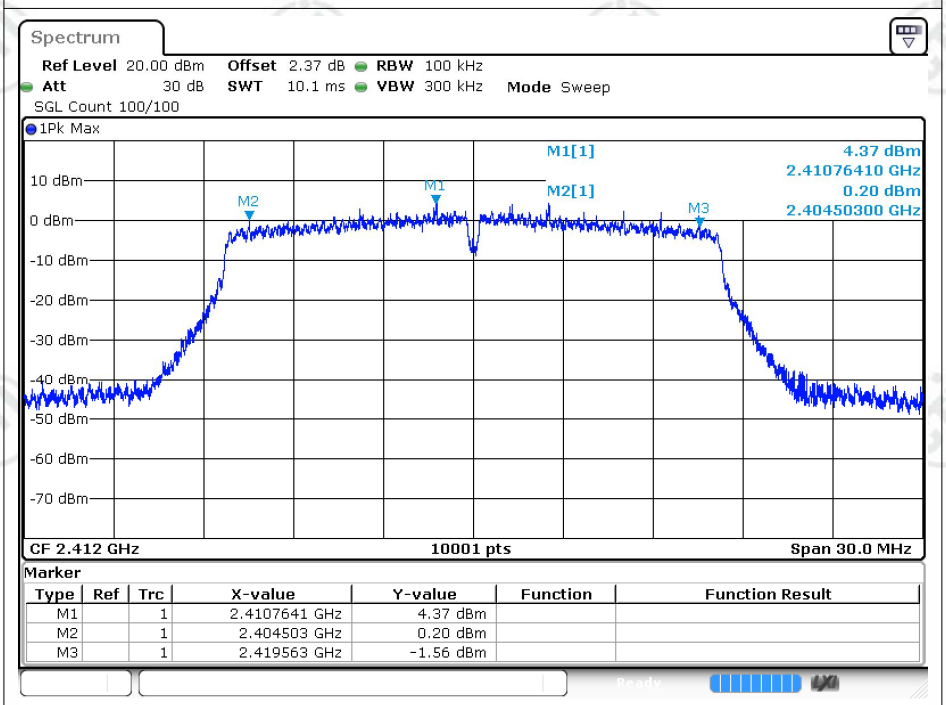


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.462492 GHz	6.79 dBm		
M2		1	2.456954 GHz	0.90 dBm		
M3		1	2.467043 GHz	0.91 dBm		

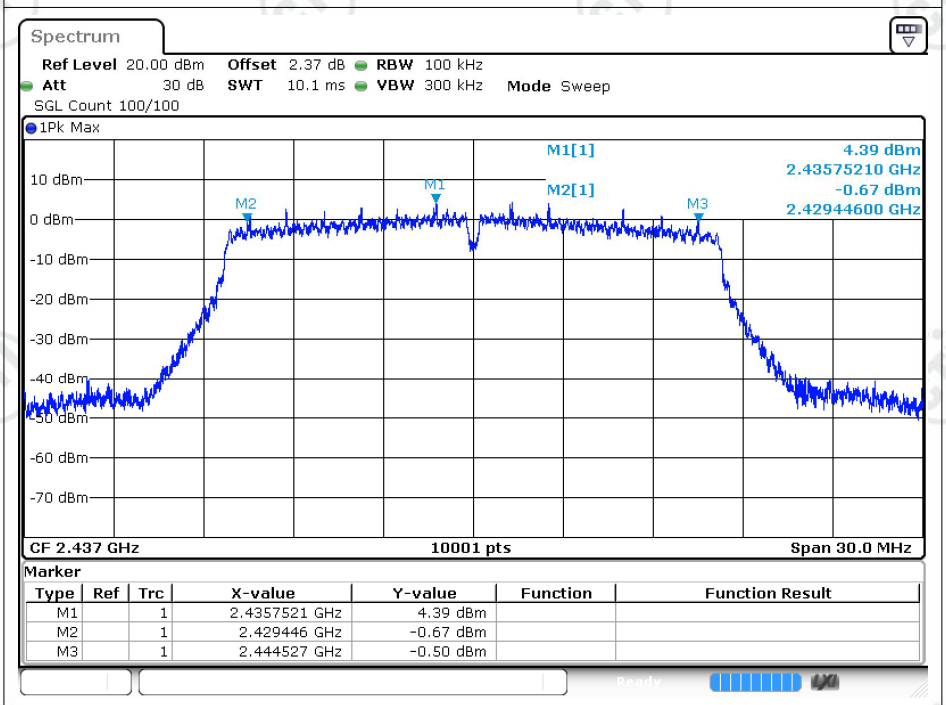
Date: 10.APR.2025 22:57:51

-6dB Bandwidth NVNT g 2412MHz Ant1



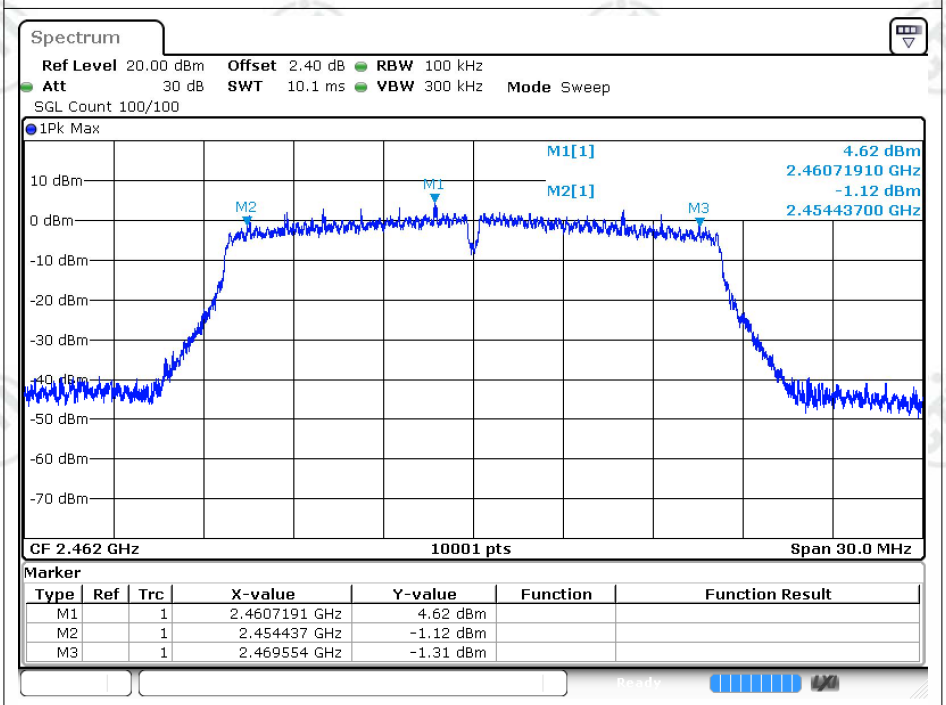
Date: 10.APR.2025 22:39:42

-6dB Bandwidth NVNT g 2437MHz Ant1



Date: 10.APR.2025 22:42:05

-6dB Bandwidth NVNT g 2462MHz Ant1



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.4607191 GHz	4.62 dBm		
M2		1	2.454437 GHz	-1.12 dBm		
M3		1	2.469554 GHz	-1.31 dBm		

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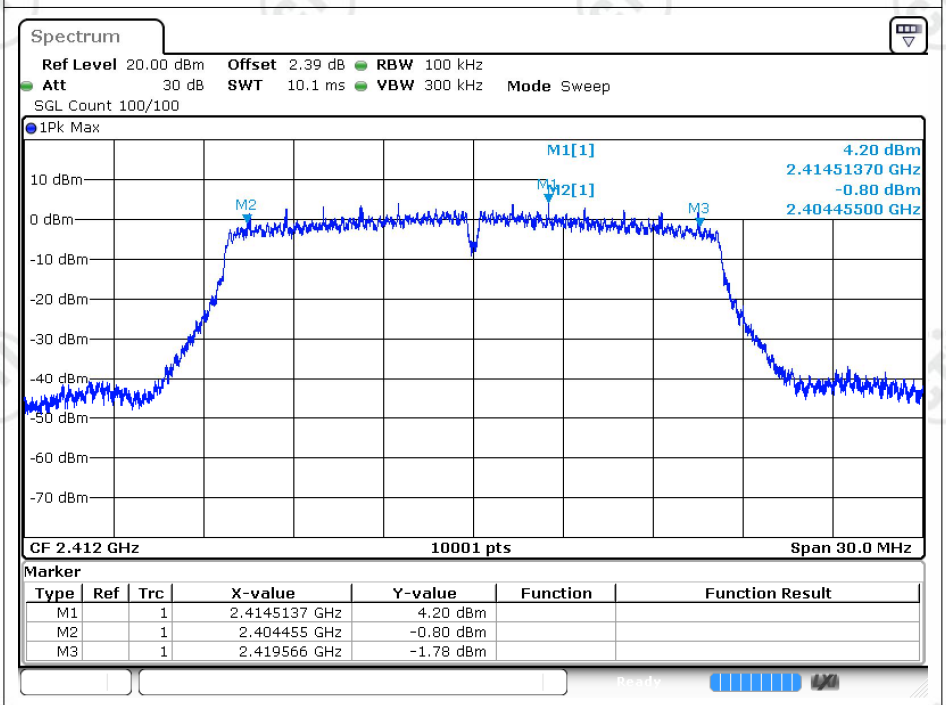
-6dB Bandwidth NVNT g 2412MHz Ant2



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.4145137 GHz	4.20 dBm		
M2		1	2.404455 GHz	-0.80 dBm		
M3		1	2.419566 GHz	-1.78 dBm		

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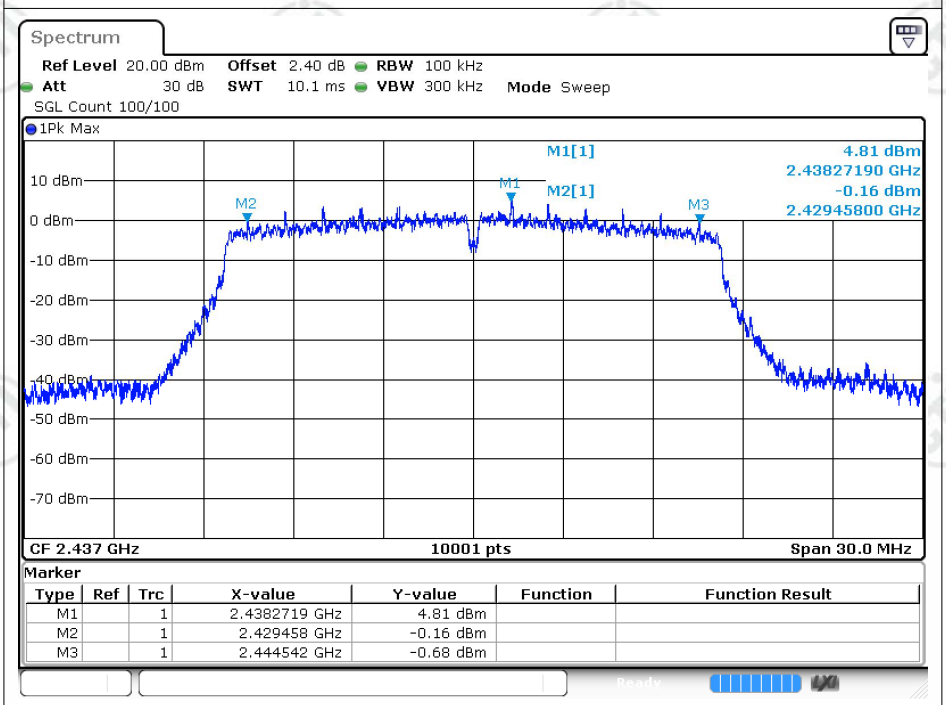
-6dB Bandwidth NVNT g 2437MHz Ant2



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.4382719 GHz	4.81 dBm		
M2		1	2.429458 GHz	-0.16 dBm		
M3		1	2.444542 GHz	-0.68 dBm		

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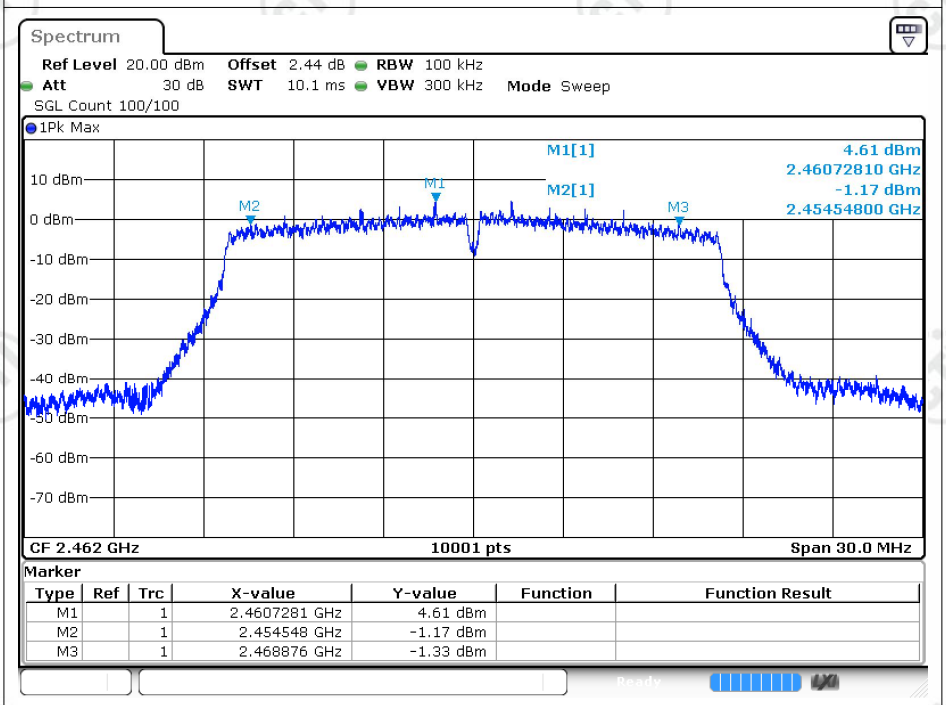
-6dB Bandwidth NVNT g 2462MHz Ant2



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.4607281 GHz	4.61 dBm		
M2		1	2.454548 GHz	-1.17 dBm		
M3		1	2.468876 GHz	-1.33 dBm		

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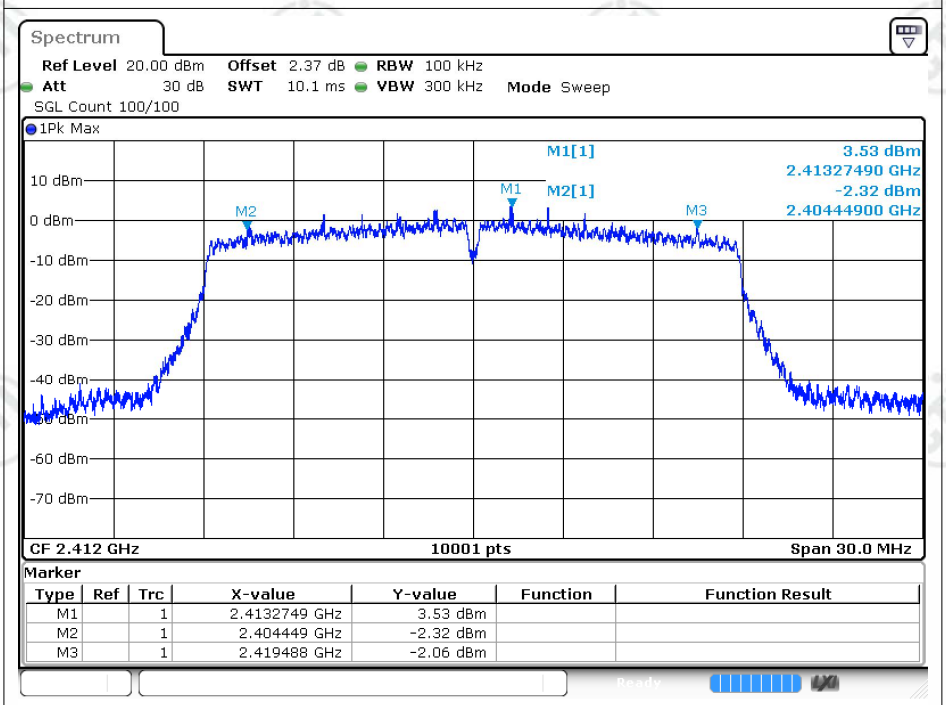
-6dB Bandwidth NVNT n20 2412MHz Ant1



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.4132749 GHz	3.53 dBm		
M2		1	2.404449 GHz	-2.32 dBm		
M3		1	2.419488 GHz	-2.06 dBm		

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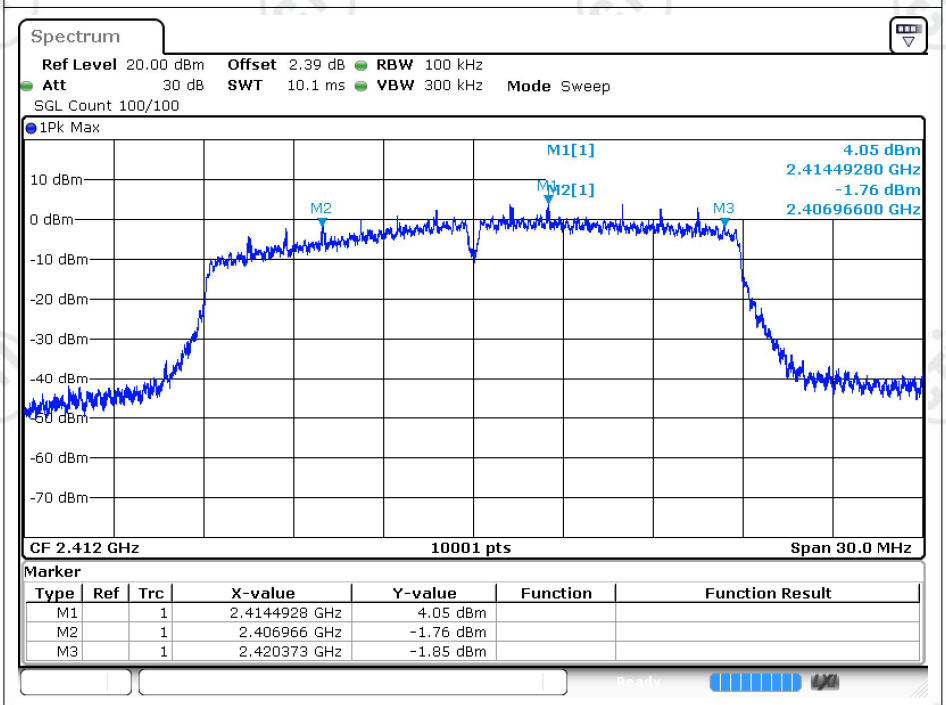
-6dB Bandwidth NVNT n20 2412MHz Ant2



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.4144928 GHz	4.05 dBm		
M2		1	2.406966 GHz	-1.76 dBm		
M3		1	2.420373 GHz	-1.85 dBm		

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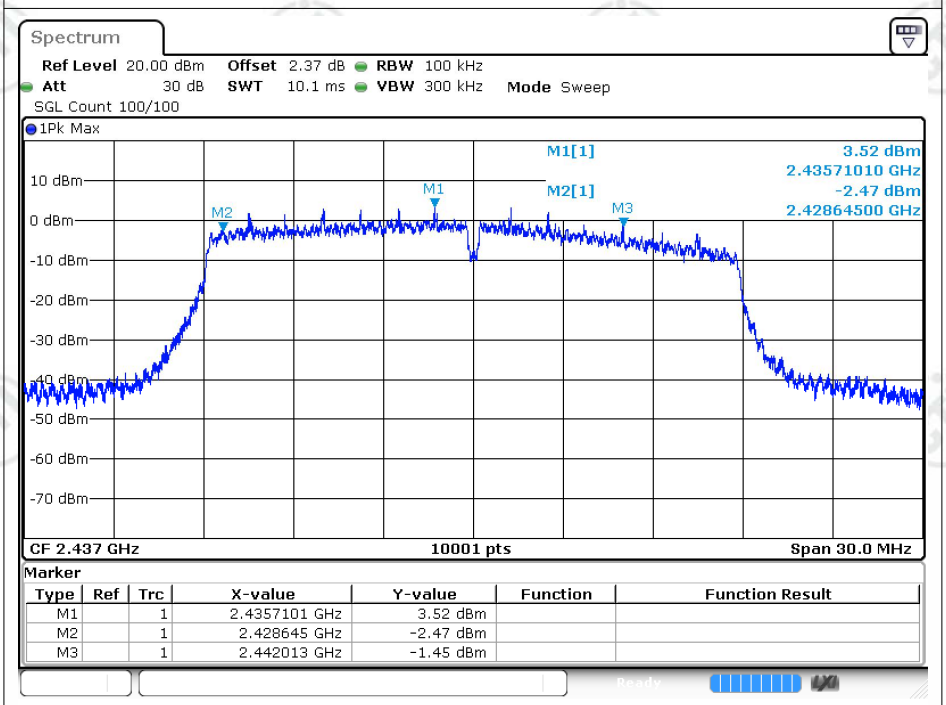
-6dB Bandwidth NVNT n20 2437MHz Ant1



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Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.4357101 GHz	3.52 dBm		
M2		1	2.428645 GHz	-2.47 dBm		
M3		1	2.442013 GHz	-1.45 dBm		

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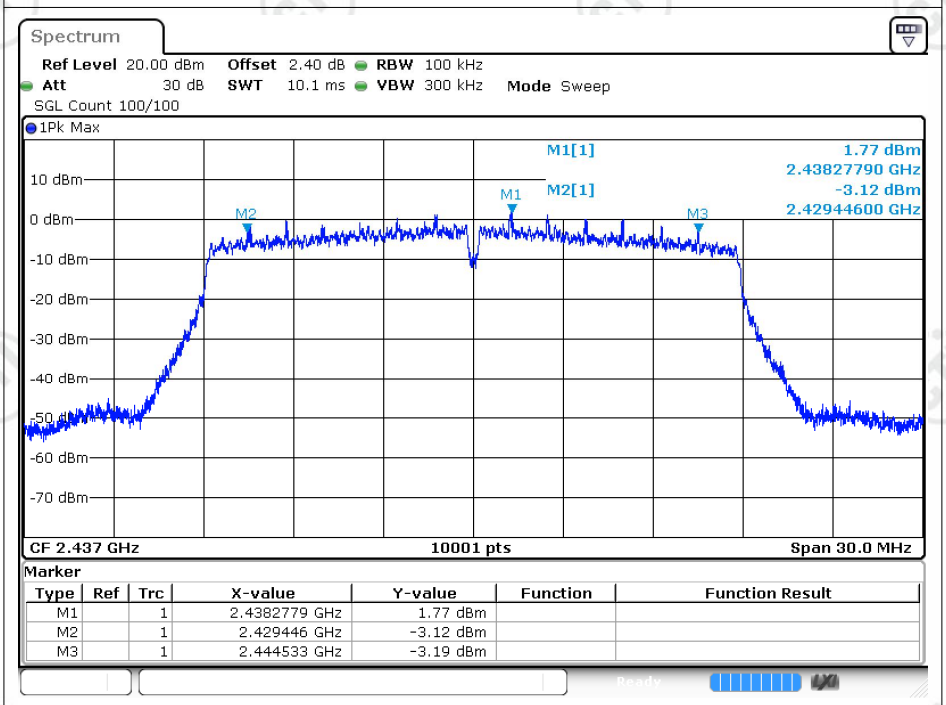
-6dB Bandwidth NVNT n20 2437MHz Ant2



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.4382779 GHz	1.77 dBm		
M2		1	2.429446 GHz	-3.12 dBm		
M3		1	2.444533 GHz	-3.19 dBm		

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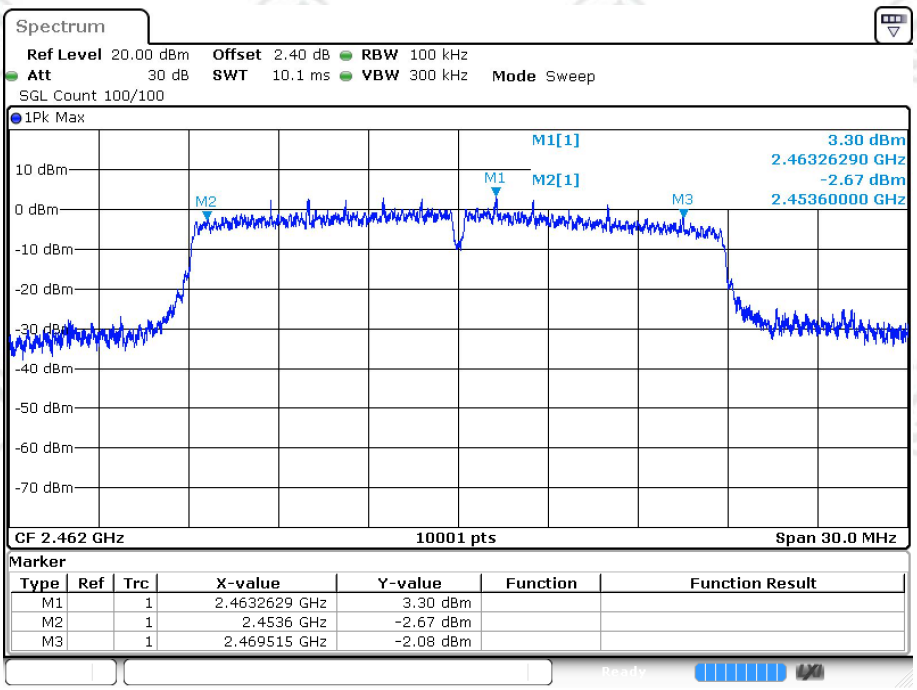
-6dB Bandwidth NVNT n20 2462MHz Ant1



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.4632629 GHz	3.30 dBm		
M2		1	2.4536 GHz	-2.67 dBm		
M3		1	2.469515 GHz	-2.08 dBm		

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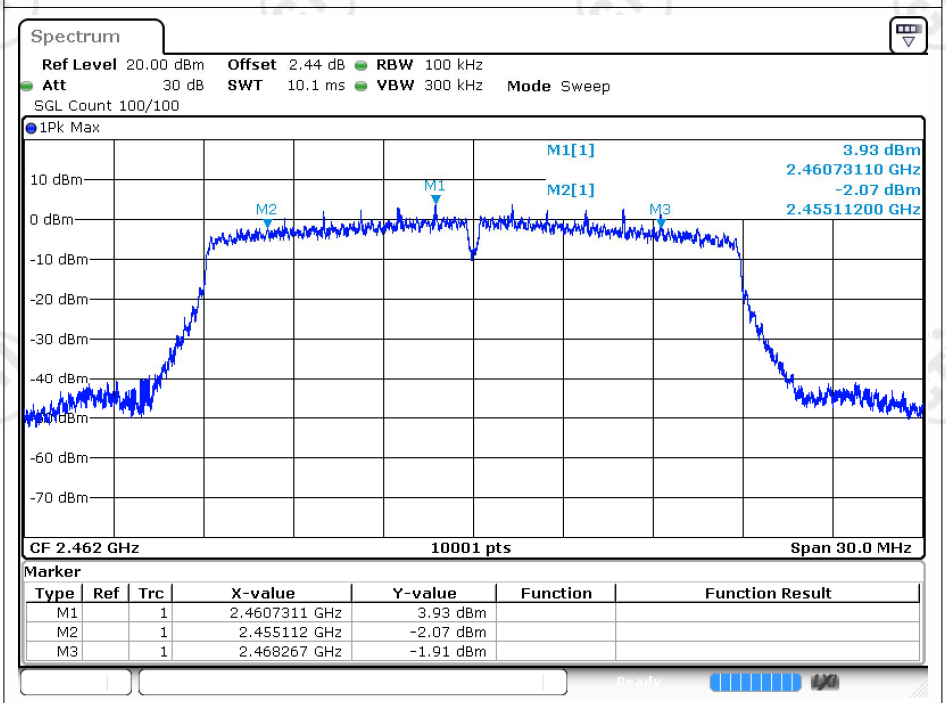
-6dB Bandwidth NVNT n20 2462MHz Ant2



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.4607311 GHz	3.93 dBm		
M2		1	2.455112 GHz	-2.07 dBm		
M3		1	2.468267 GHz	-1.91 dBm		

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