Appendix: 2.4G Wi-Fi

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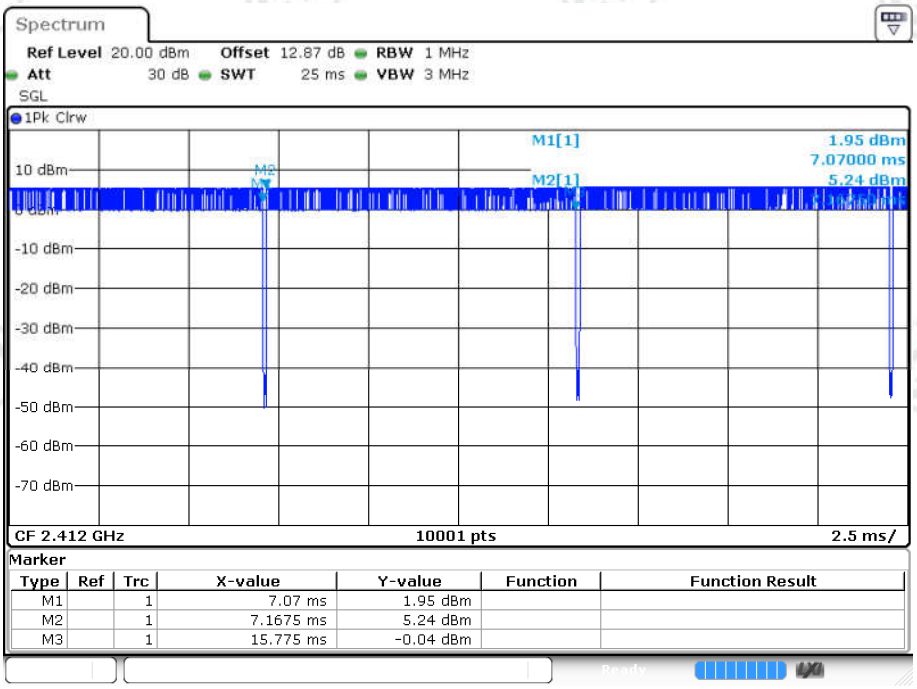
Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor (dB)	1/T (kHz)
NVNT	b	2412	Ant1	98.88	0	0.12
NVNT	b	2437	Ant1	98.86	0	0.12
NVNT	b	2462	Ant1	98.86	0	0.12
NVNT	g	2412	Ant1	93.46	0.29	0.7
NVNT	g	2437	Ant1	93.46	0.29	0.7
NVNT	g	2462	Ant1	93.46	0.29	0.7
NVNT	n20	2412	Ant1	93.04	0.31	0.75
NVNT	n20	2437	Ant1	93.04	0.31	0.75
NVNT	n20	2462	Ant1	93.04	0.31	0.75

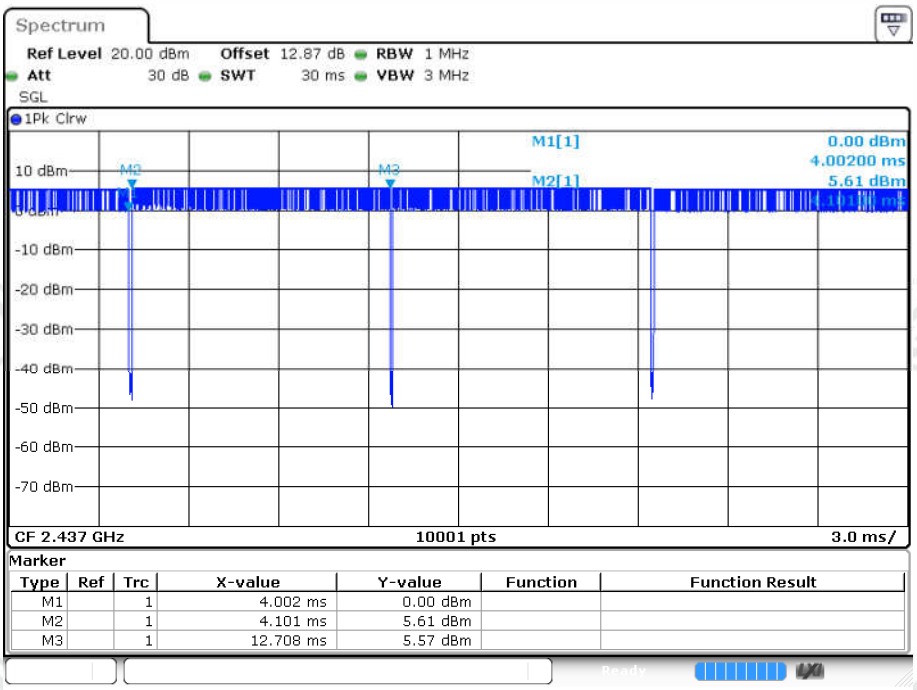
Test Graphs

Duty Cycle NVNT b 2412MHz Ant1



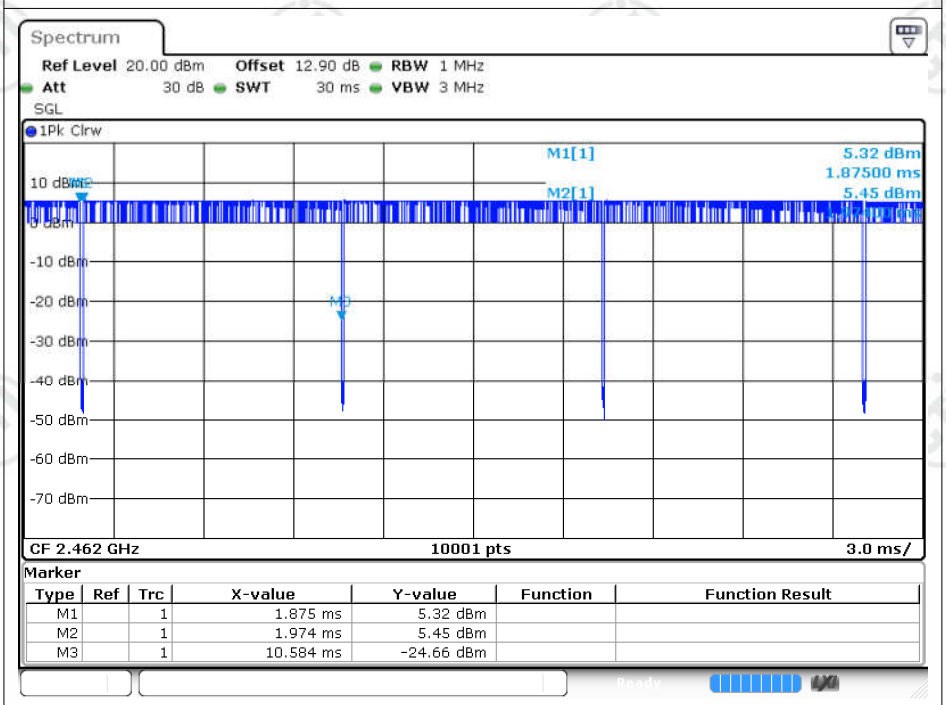
Date: 12.APR.2024 17:35:03

Duty Cycle NVNT b 2437MHz Ant1



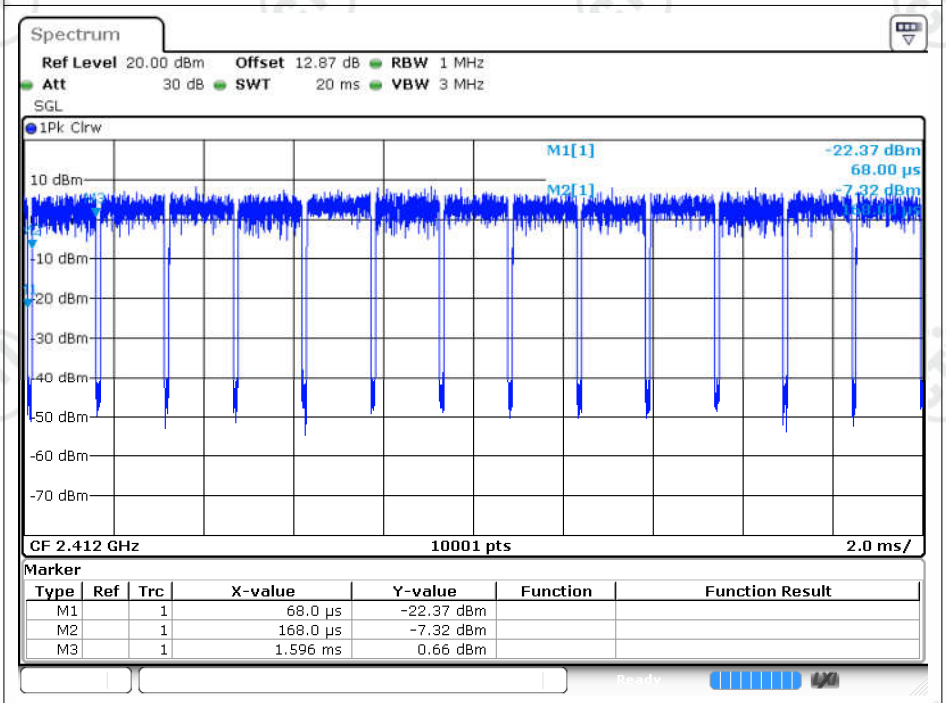
Date: 12.APR.2024 17:36:39

Duty Cycle NVNT b 2462MHz Ant1



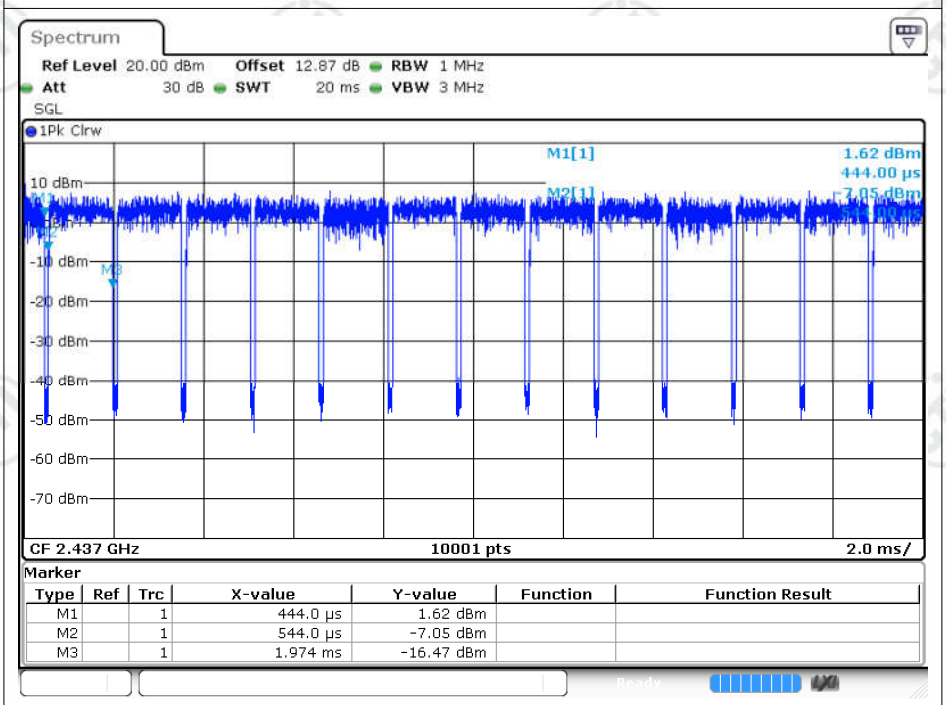
Date: 12.APR.2024 17:38:51

Duty Cycle NVNT g 2412MHz Ant1



Date: 12.APR.2024 17:43:28

Duty Cycle NVNT g 2437MHz Ant1

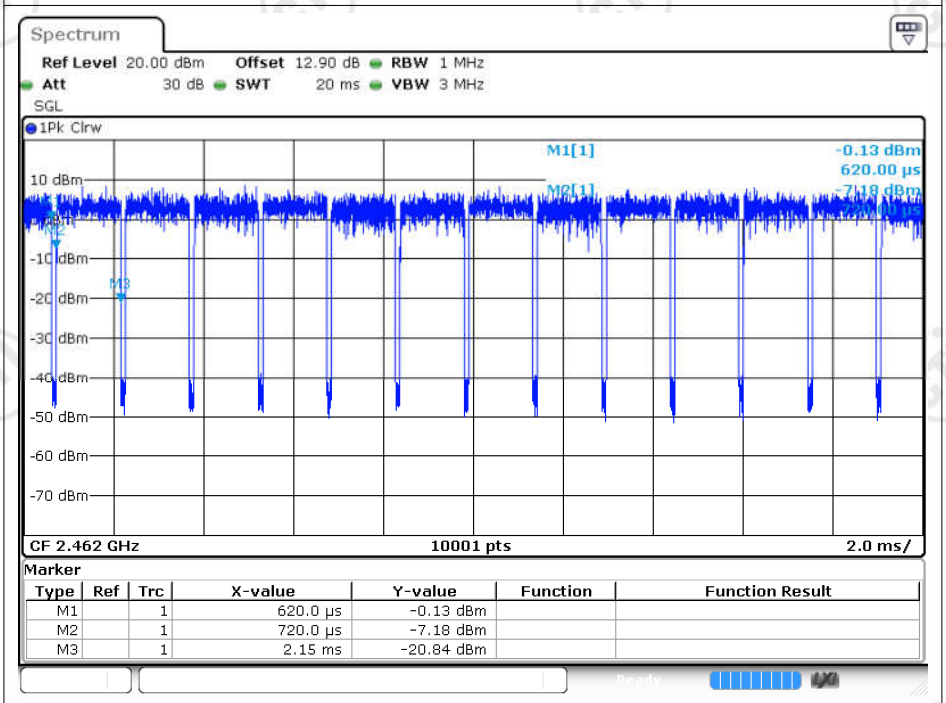


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	444.0 µs	1.62 dBm		
M2		1	544.0 µs	-7.05 dBm		
M3		1	1.974 ms	-16.47 dBm		

Date: 12.APR.2024 17:44:03

Duty Cycle NVNT g 2462MHz Ant1

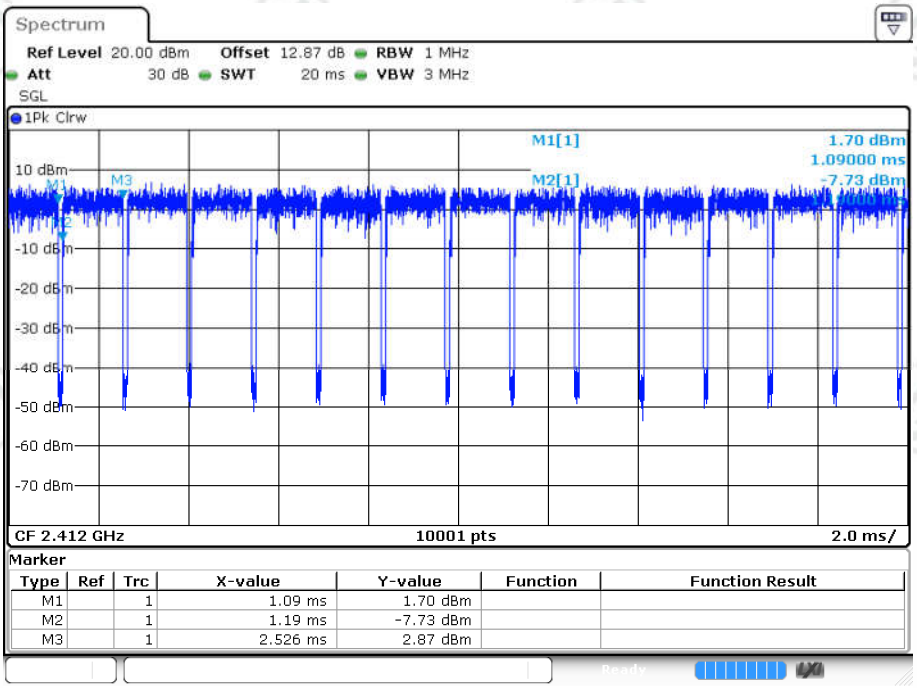


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	620.0 µs	-0.13 dBm		
M2		1	720.0 µs	-7.18 dBm		
M3		1	2.15 ms	-20.84 dBm		

Date: 12.APR.2024 17:46:21

Duty Cycle NVNT n20 2412MHz Ant1

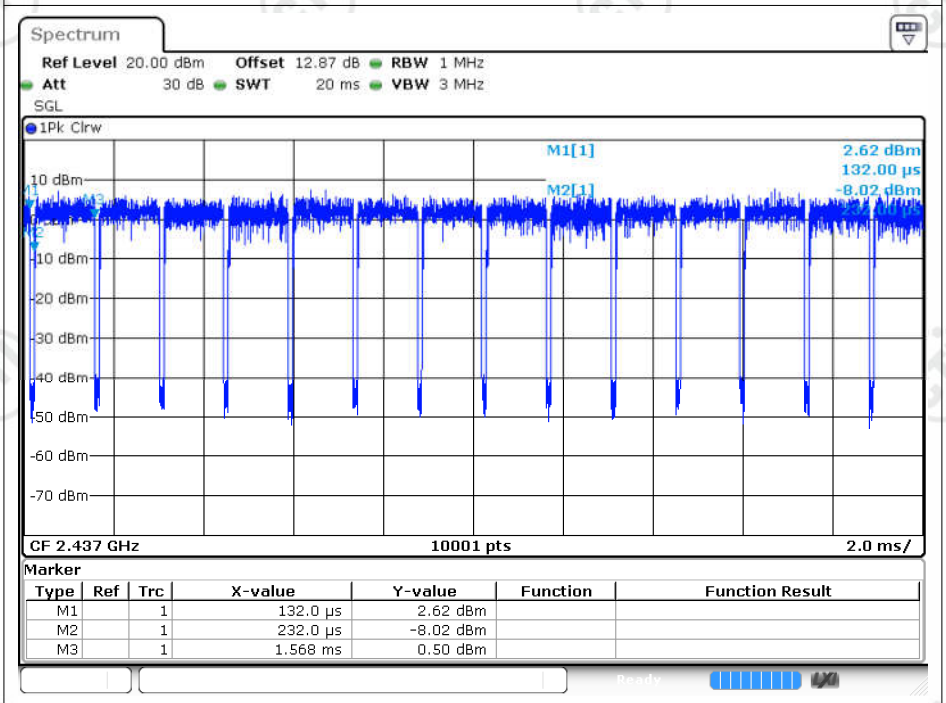


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	1.09 ms	1.70 dBm		
M2		1	1.19 ms	-7.73 dBm		
M3		1	2.526 ms	2.87 dBm		

Date: 12.APR.2024 17:48:55

Duty Cycle NVNT n20 2437MHz Ant1

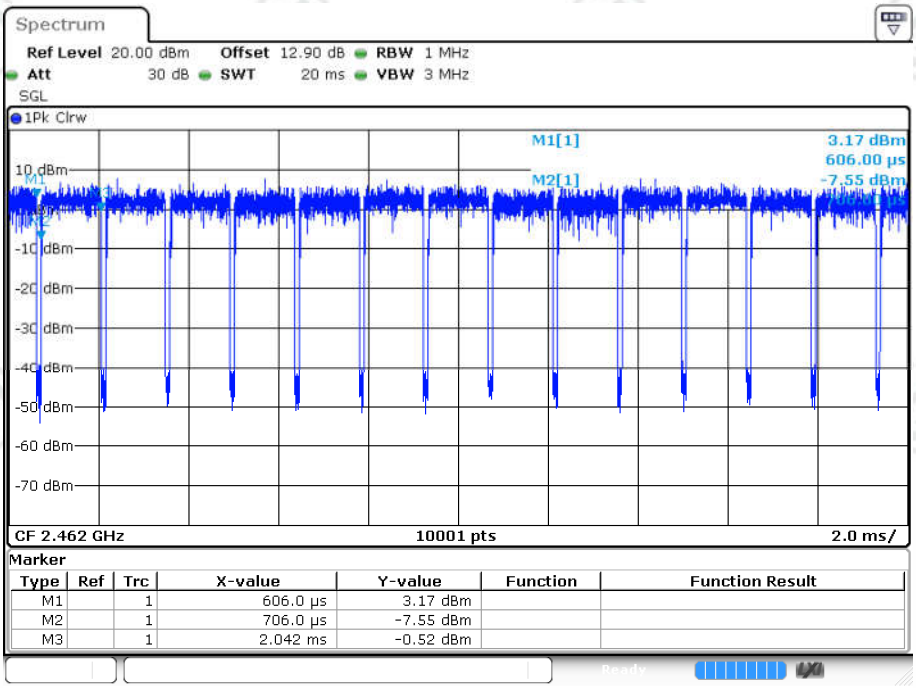


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	132.0 µs	2.62 dBm		
M2		1	232.0 µs	-8.02 dBm		
M3		1	1.568 ms	0.50 dBm		

Date: 12.APR.2024 17:52:07

Duty Cycle NVNT n20 2462MHz Ant1



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	606.0 µs	3.17 dBm		
M2		1	706.0 µs	-7.55 dBm		
M3		1	2.042 ms	-0.52 dBm		

Date: 12.APR.2024 17:54:13

Maximum Peak Conducted Output Power

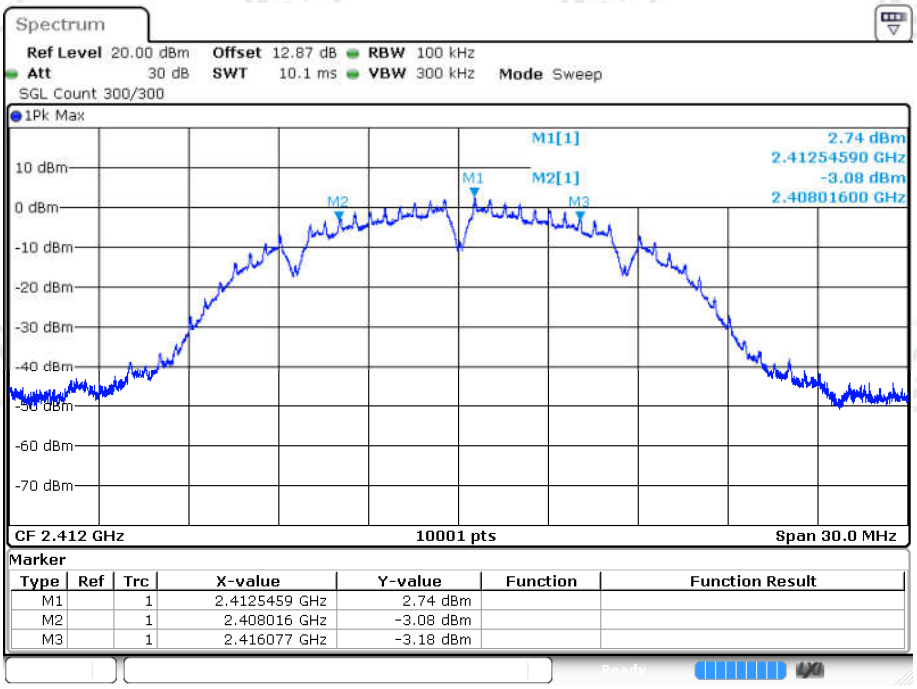
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	12.4	30	Pass
NVNT	b	2437	Ant1	12.45	30	Pass
NVNT	b	2462	Ant1	12.18	30	Pass
NVNT	g	2412	Ant1	**12.92**	30	Pass
NVNT	g	2437	Ant1	12.85	30	Pass
NVNT	g	2462	Ant1	12.8	30	Pass
NVNT	n20	2412	Ant1	11.93	30	Pass
NVNT	n20	2437	Ant1	12	30	Pass
NVNT	n20	2462	Ant1	11.85	30	Pass

-6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	8.061	0.5	Pass
NVNT	b	2437	Ant1	9.003	0.5	Pass
NVNT	b	2462	Ant1	9.015	0.5	Pass
NVNT	g	2412	Ant1	15.093	0.5	Pass
NVNT	g	2437	Ant1	15.093	0.5	Pass
NVNT	g	2462	Ant1	15.105	0.5	Pass
NVNT	n20	2412	Ant1	15.114	0.5	Pass
NVNT	n20	2437	Ant1	15.099	0.5	Pass
NVNT	n20	2462	Ant1	15.075	0.5	Pass

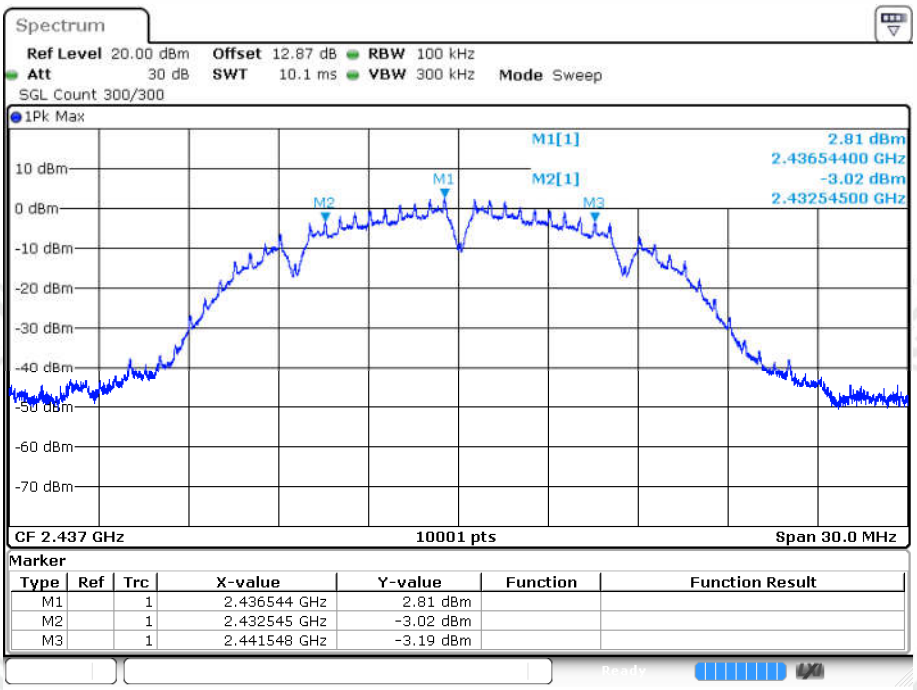
Test Graphs

-6dB Bandwidth NVNT b 2412MHz Ant1



Date: 12.APR.2024 17:33:32

-6dB Bandwidth NVNT b 2437MHz Ant1



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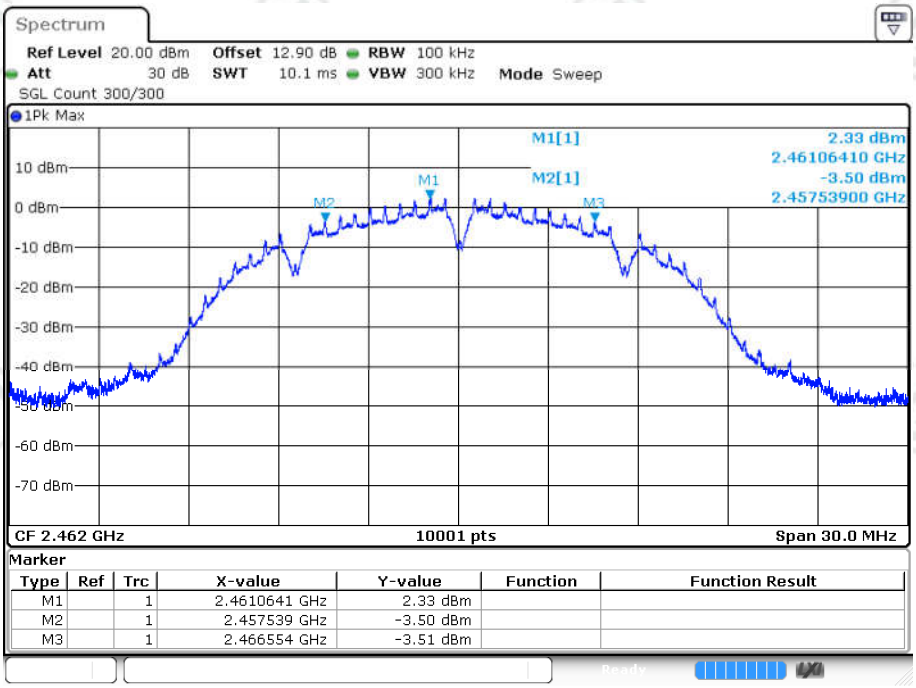
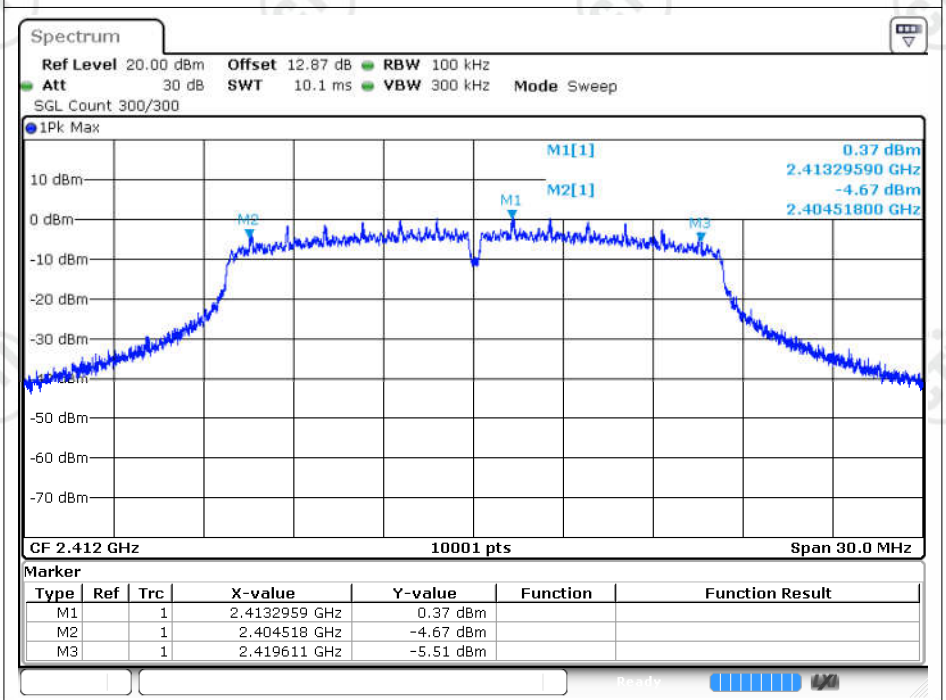
-6dB Bandwidth NVNT b 2462MHz Ant1



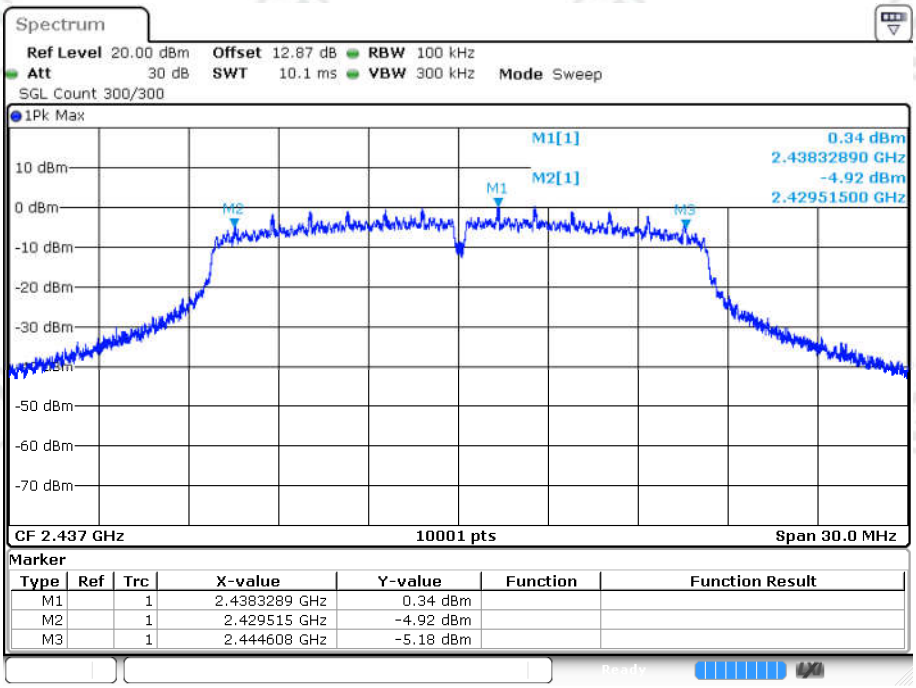
Date: 12.APR.2024 17:39:18

-6dB Bandwidth NVNT g 2412MHz Ant1



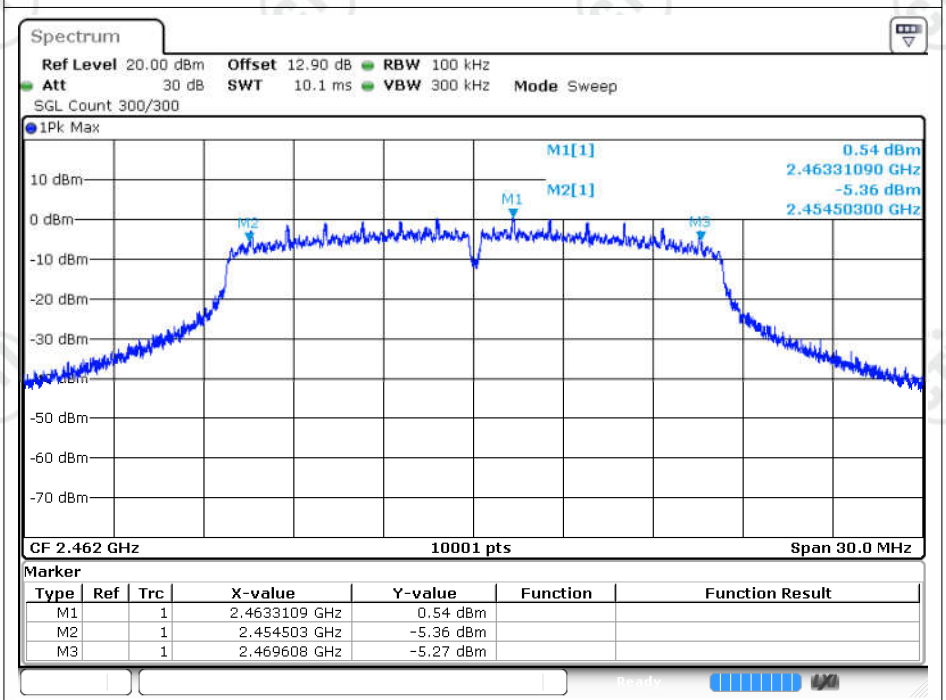
Date: 12.APR.2024 17:41:25

-6dB Bandwidth NVNT g 2437MHz Ant1



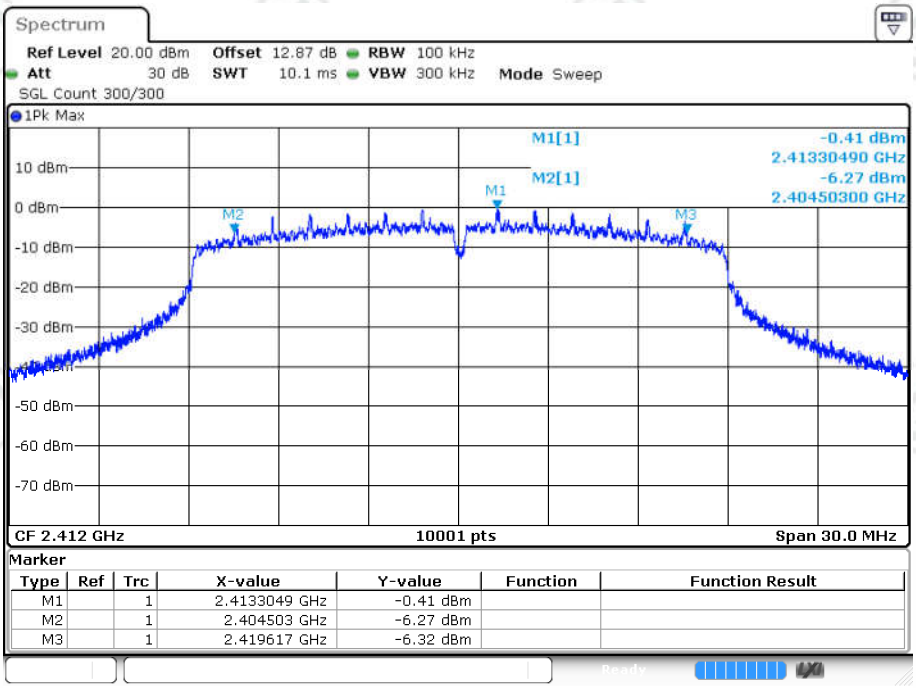
Date: 12.APR.2024 17:44:28

-6dB Bandwidth NVNT g 2462MHz Ant1



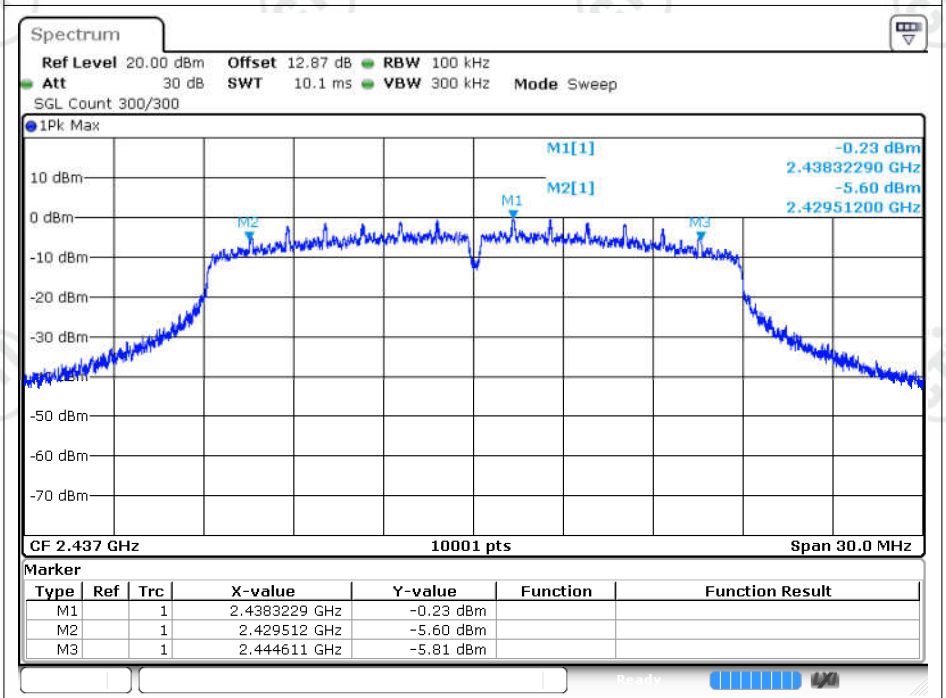
Date: 12.APR.2024 17:46:48

-6dB Bandwidth NVNT n20 2412MHz Ant1



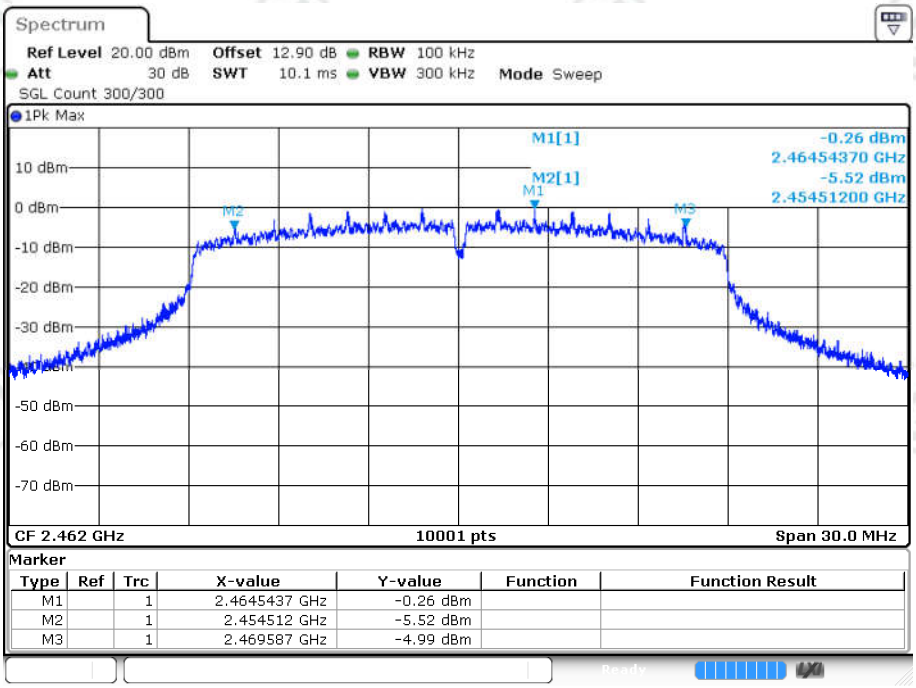
Date: 12.APR.2024 17:49:19

-6dB Bandwidth NVNT n20 2437MHz Ant1



Date: 12.APR.2024 17:52:32

-6dB Bandwidth NVNT n20 2462MHz Ant1



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.4645437 GHz	-0.26 dBm		
M2		1	2.454512 GHz	-5.52 dBm		
M3		1	2.469587 GHz	-4.99 dBm		

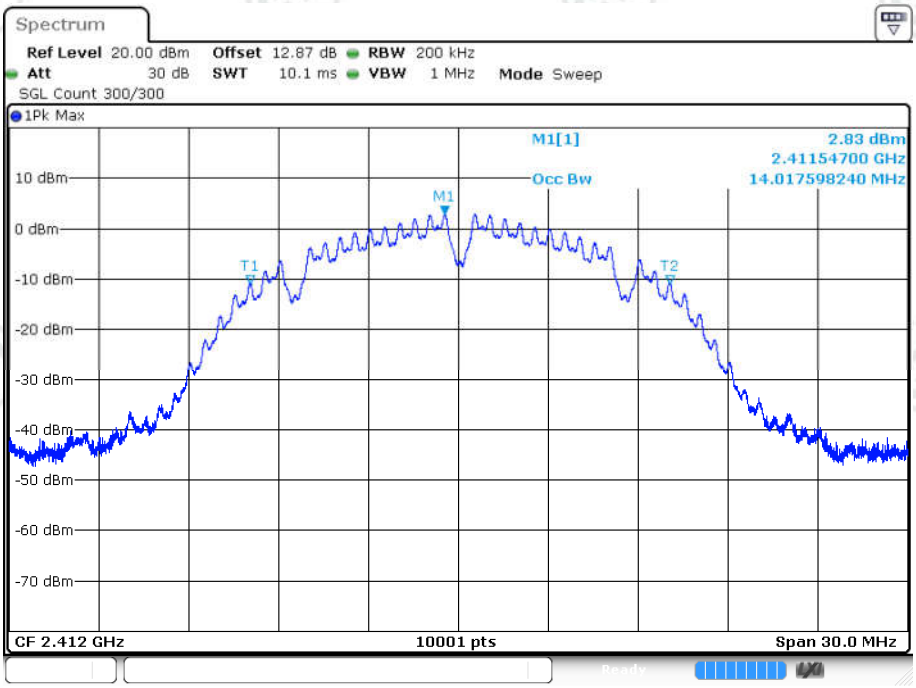
Date: 12.APR.2024 17:54:40

Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	b	2412	Ant1	14.018
NVNT	b	2437	Ant1	14.021
NVNT	b	2462	Ant1	14.018
NVNT	g	2412	Ant1	16.309
NVNT	g	2437	Ant1	16.312
NVNT	g	2462	Ant1	16.309
NVNT	n20	2412	Ant1	17.44
NVNT	n20	2437	Ant1	17.443
NVNT	n20	2462	Ant1	17.446

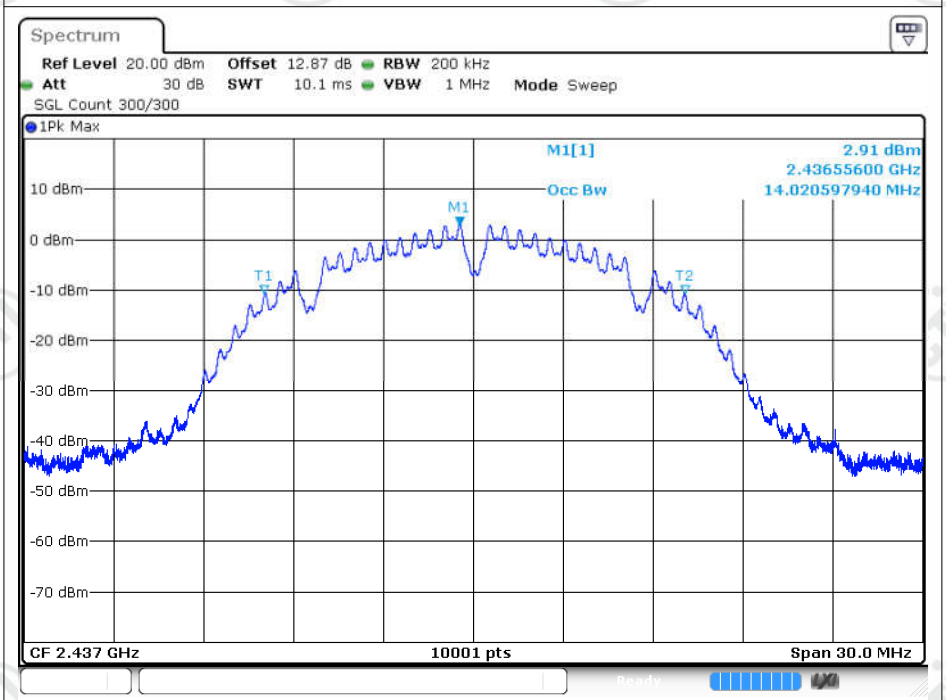
Test Graphs

OBW NVNT b 2412MHz Ant1



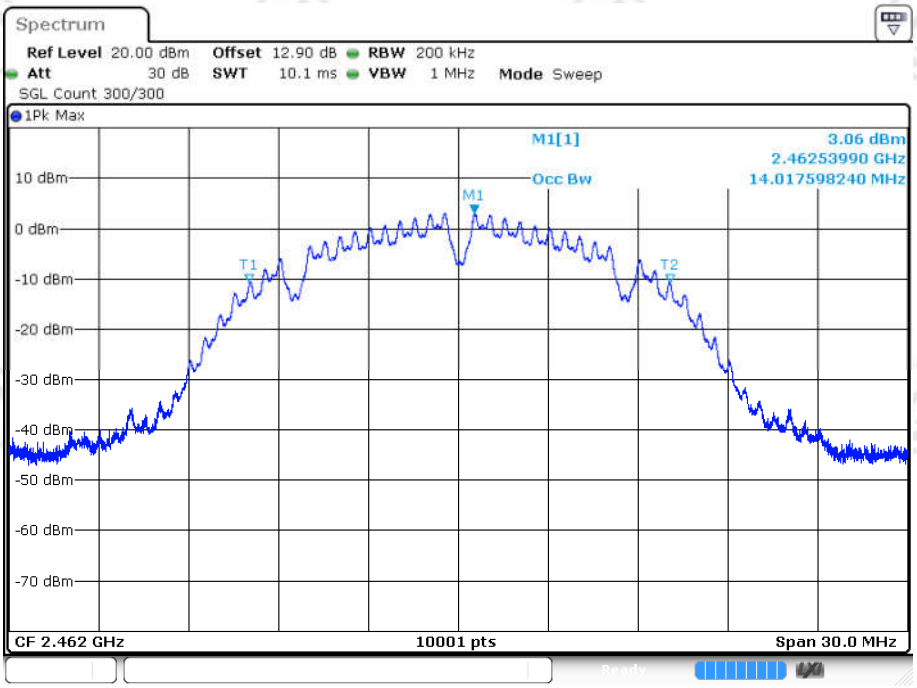
Date: 12.APR.2024 17:33:21

OBW NVNT b 2437MHz Ant1



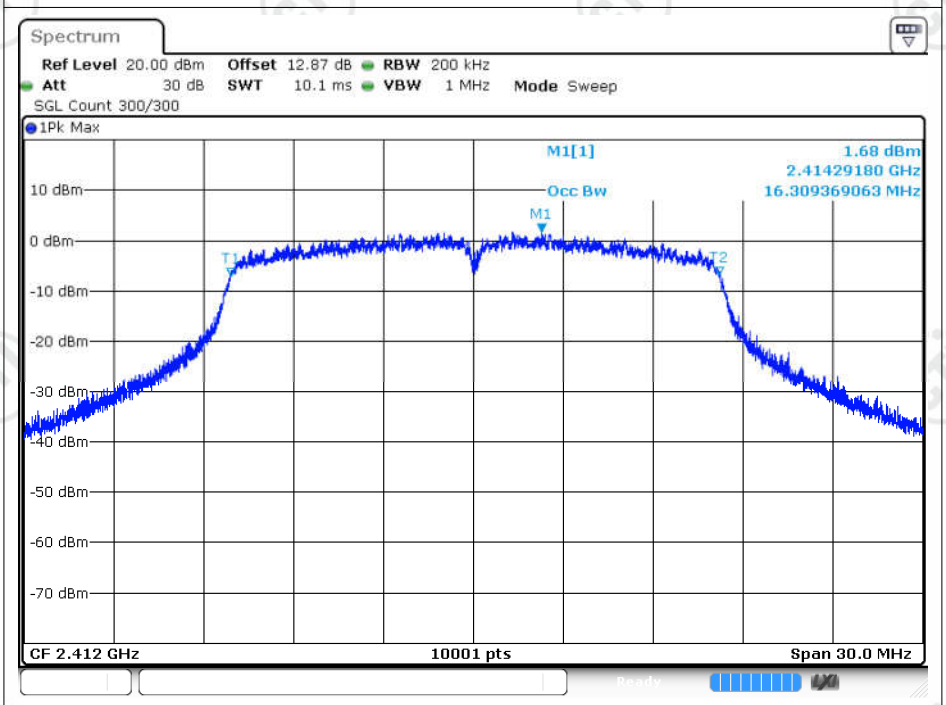
Date: 12.APR.2024 17:36:53

OBW NVNT b 2462MHz Ant1



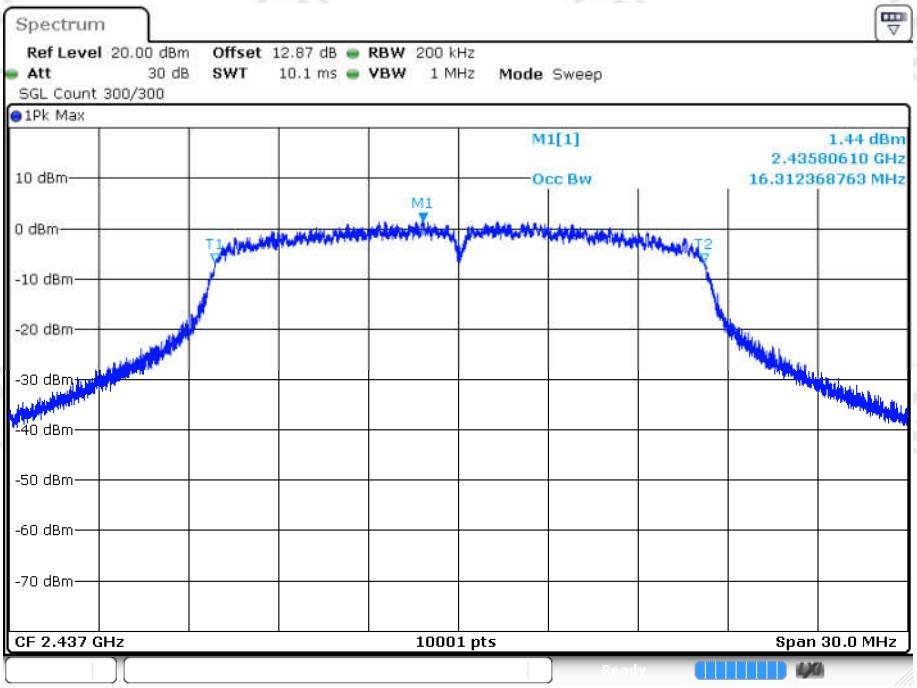
Date: 12.APR.2024 17:39:06

OBW NVNT g 2412MHz Ant1



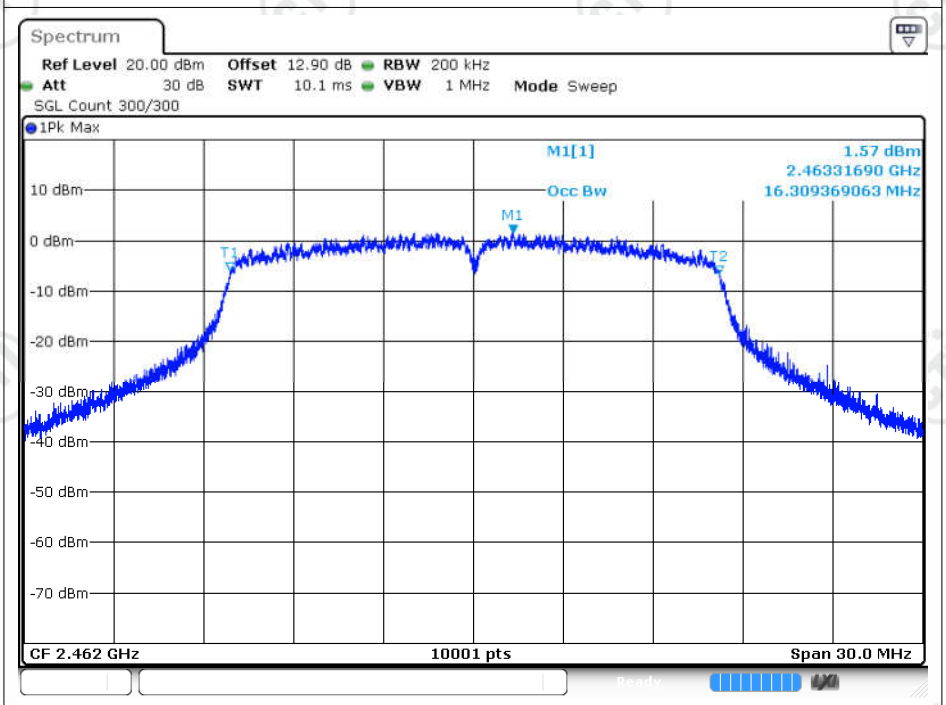
Date: 12.APR.2024 17:41:14

OBW NVNT g 2437MHz Ant1



Date: 12.APR.2024 17:44:17

OBW NVNT g 2462MHz Ant1



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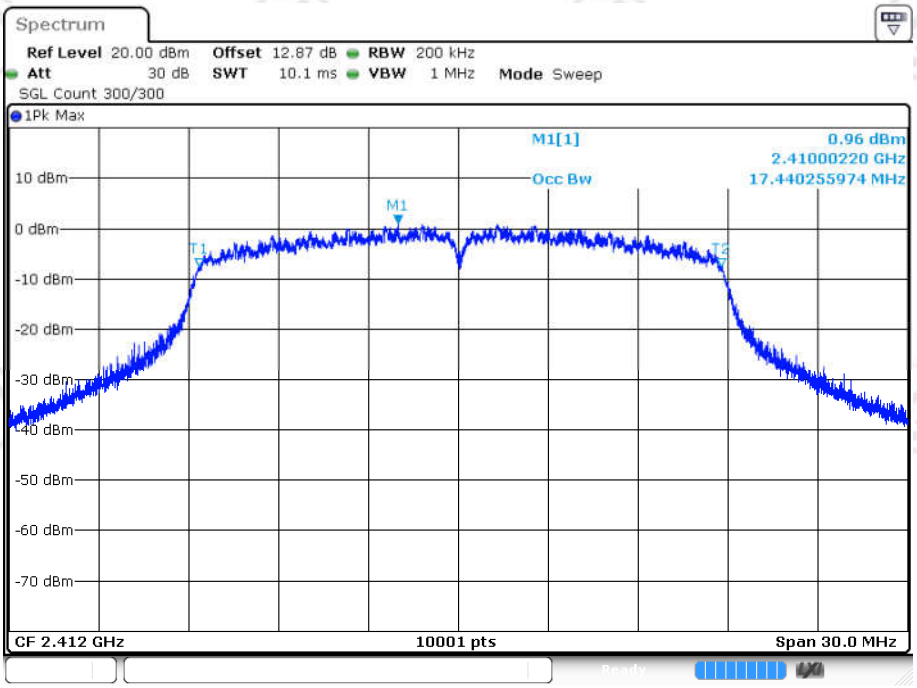
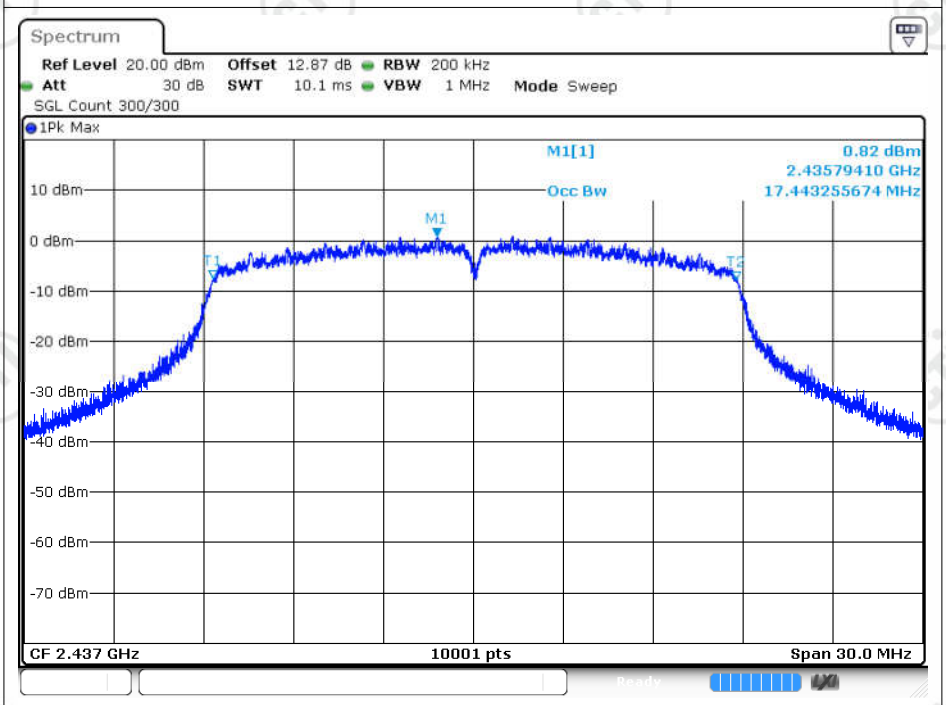
OBW NVNT n20 2412MHz Ant1



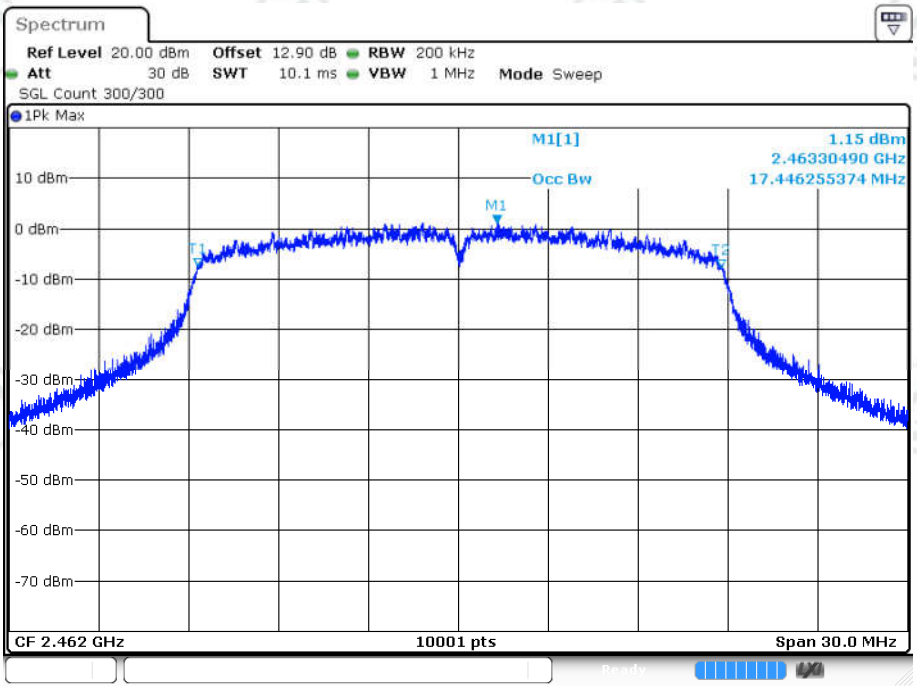
Date: 12.APR.2024 17:49:08

OBW NVNT n20 2437MHz Ant1



Date: 12.APR.2024 17:52:21

OBW NVNT n20 2462MHz Ant1



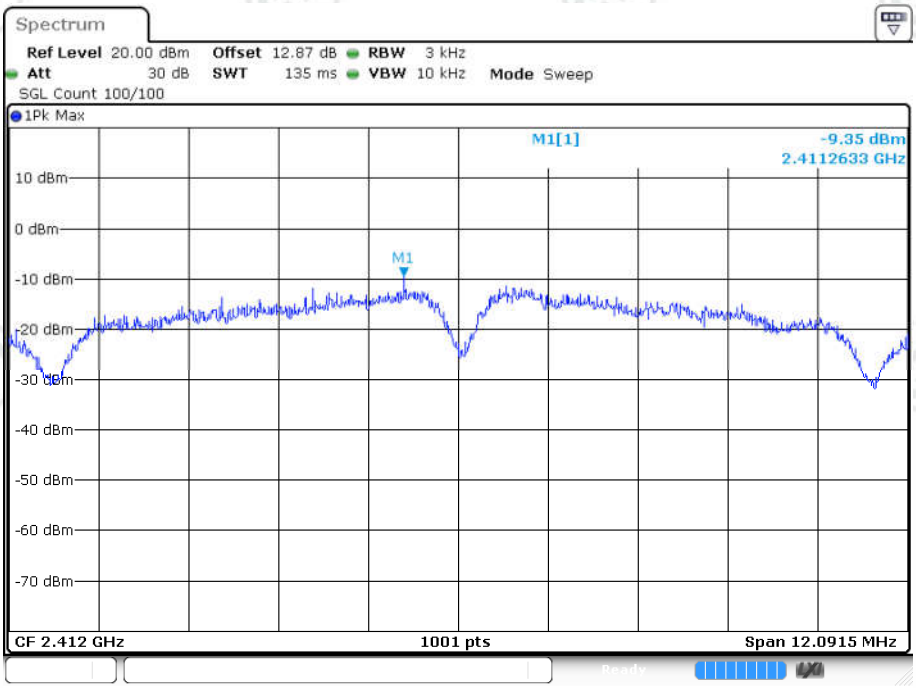
Date: 12.APR.2024 17:54:28

Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	b	2412	Ant1	-9.35	8	Pass
NVNT	b	2437	Ant1	-9.89	8	Pass
NVNT	b	2462	Ant1	-9.53	8	Pass
NVNT	g	2412	Ant1	-13.49	8	Pass
NVNT	g	2437	Ant1	-13.43	8	Pass
NVNT	g	2462	Ant1	-11.99	8	Pass
NVNT	n20	2412	Ant1	-13.37	8	Pass
NVNT	n20	2437	Ant1	-13.5	8	Pass
NVNT	n20	2462	Ant1	-12.88	8	Pass

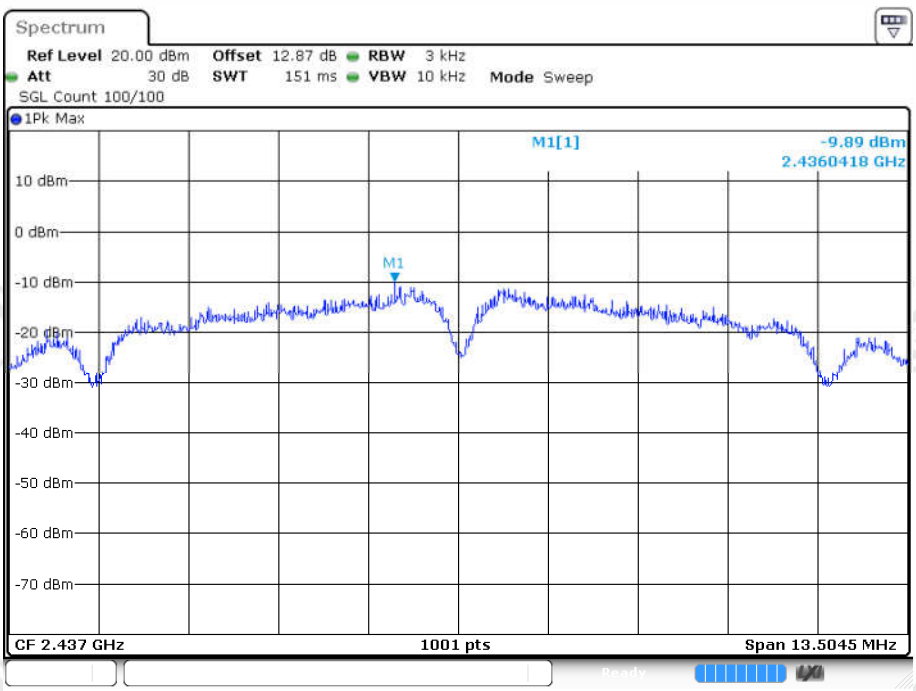
Test Graphs

PSD NVNT b 2412MHz Ant1



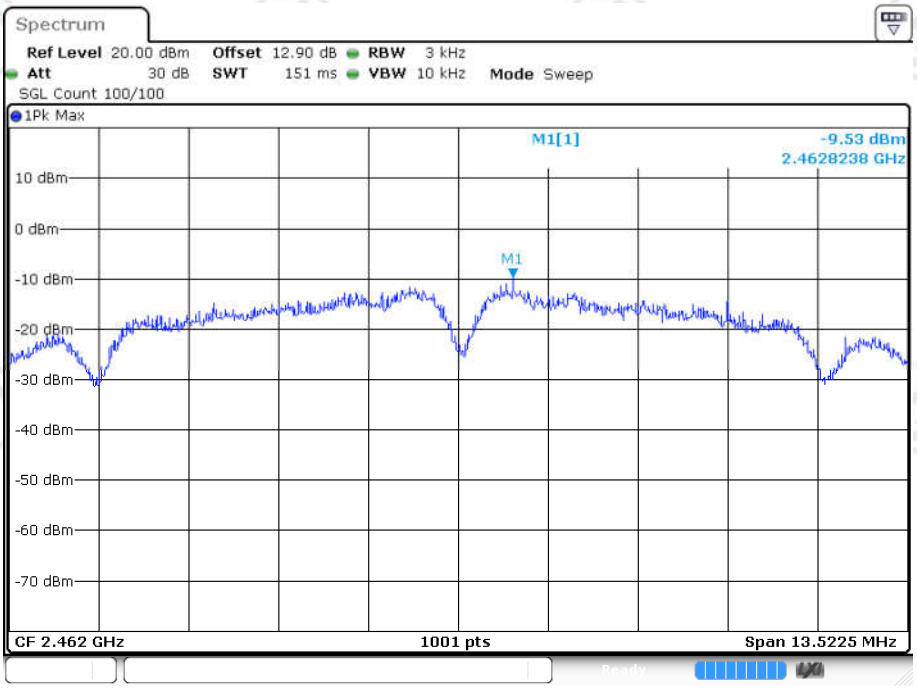
Date: 12.APR.2024 17:33:52

PSD NVNT b 2437MHz Ant1



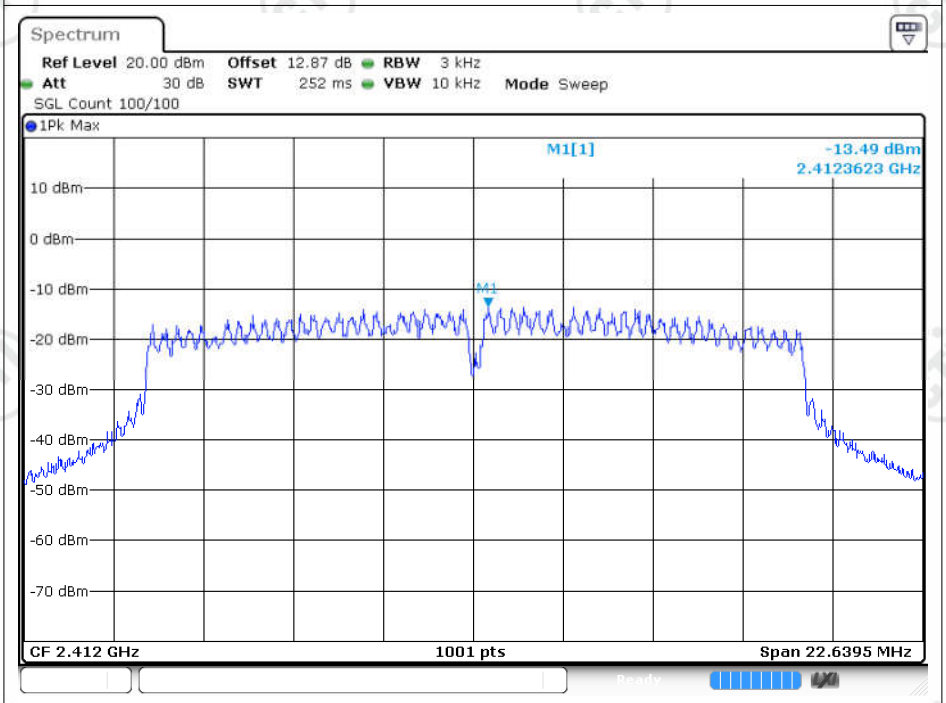
Date: 12.APR.2024 17:37:47

PSD NVNT b 2462MHz Ant1



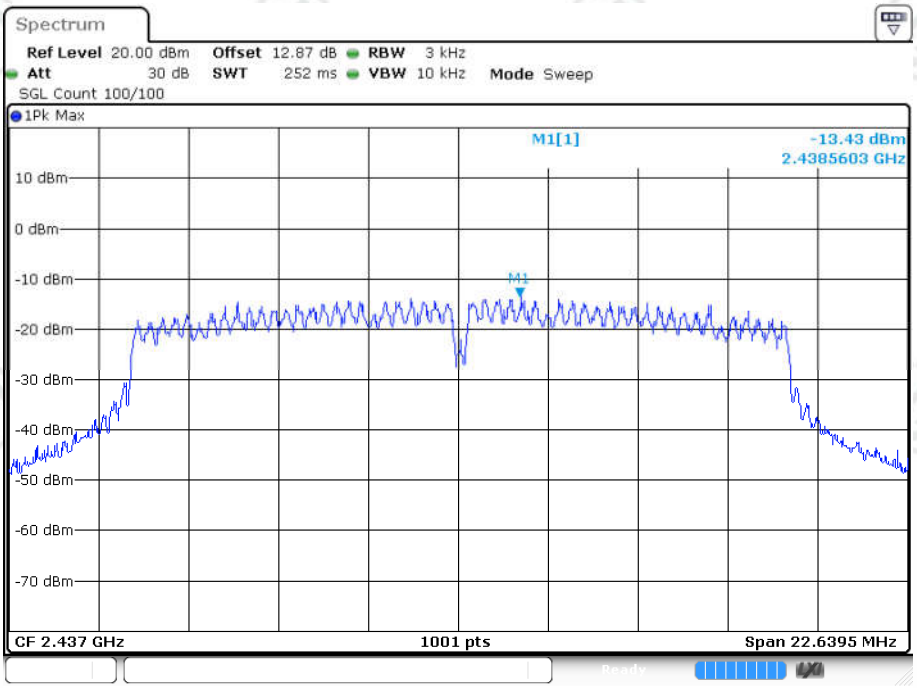
Date: 12.APR.2024 17:39:40

PSD NVNT g 2412MHz Ant1



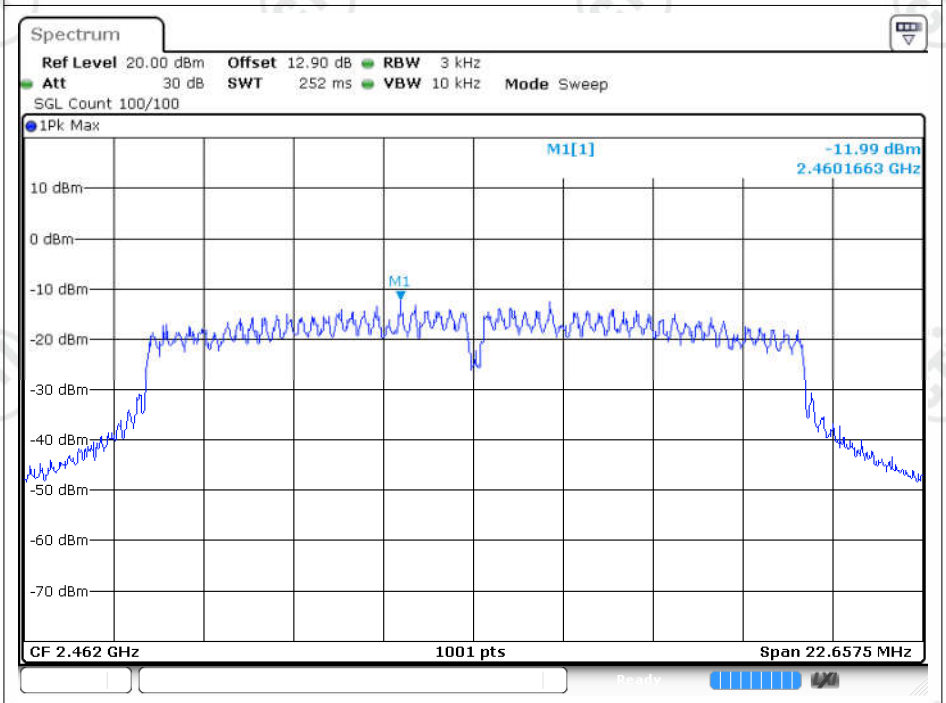
Date: 12.APR.2024 17:41:59

PSD NVNT g 2437MHz Ant1



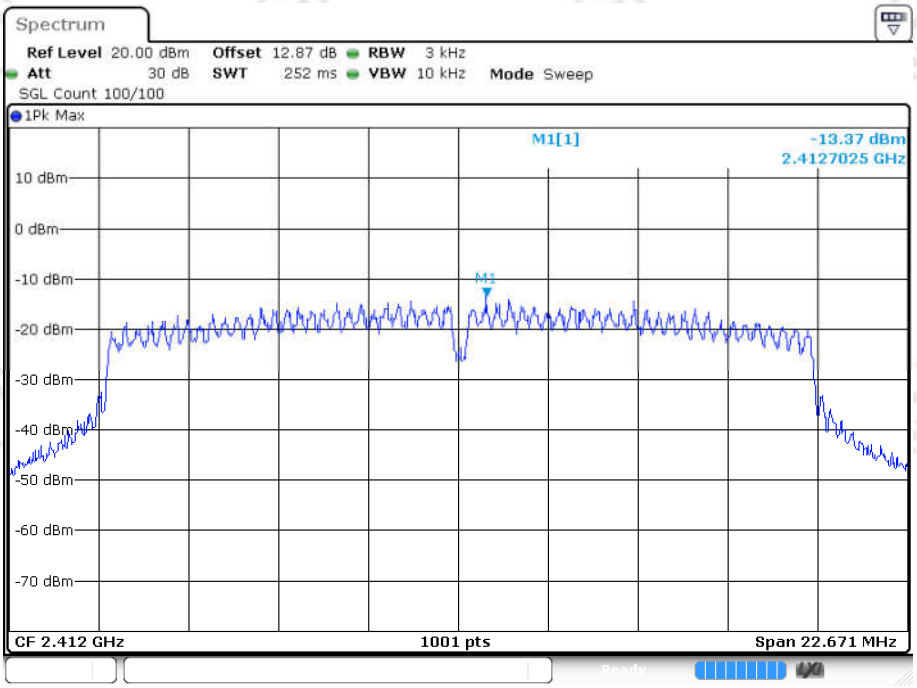
Date: 12.APR.2024 17:45:22

PSD NVNT g 2462MHz Ant1



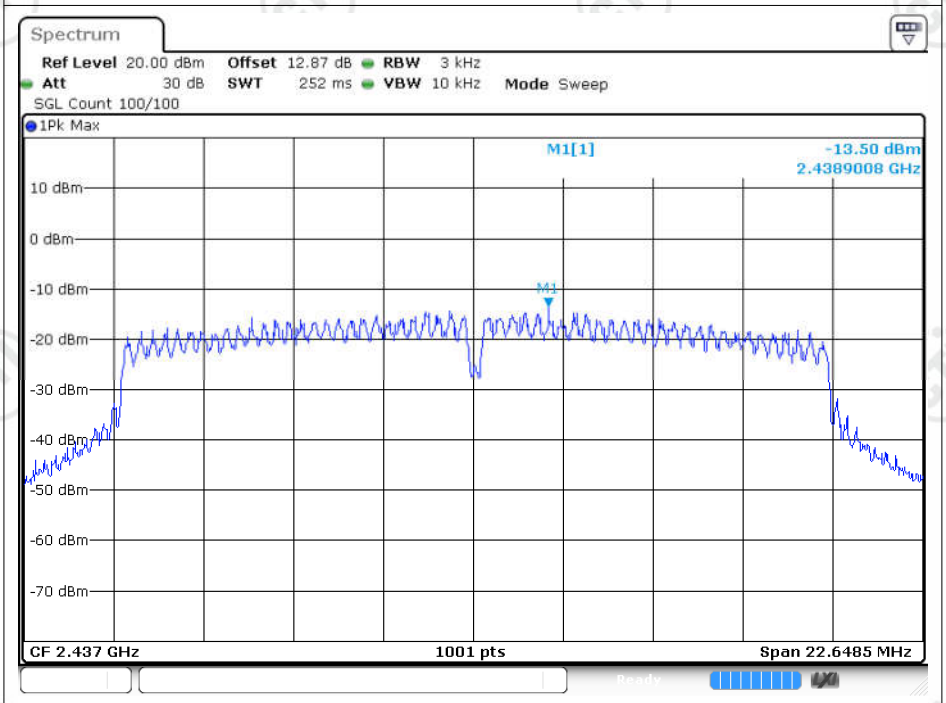
Date: 12.APR.2024 17:47:22

PSD NVNT n20 2412MHz Ant1



Date: 12.APR.2024 17:49:53

PSD NVNT n20 2437MHz Ant1



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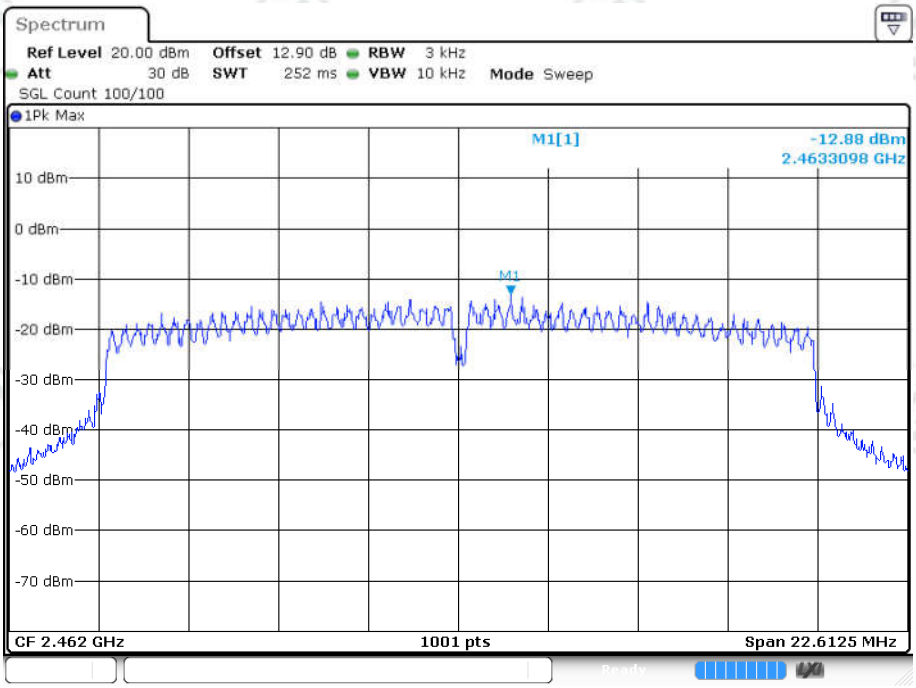
PSD NVNT n20 2462MHz Ant1



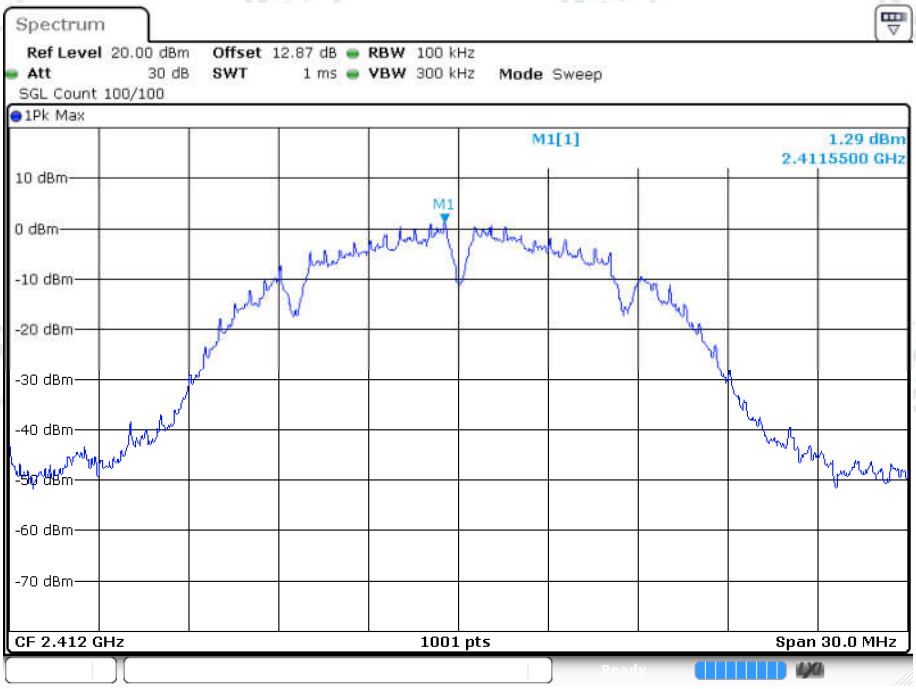
Date: 12.APR.2024 17:55:14

Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-45.74	-20	Pass
NVNT	b	2462	Ant1	-49.61	-20	Pass
NVNT	g	2412	Ant1	-34.5	-20	Pass
NVNT	g	2462	Ant1	-44.99	-20	Pass
NVNT	n20	2412	Ant1	-34.86	-20	Pass
NVNT	n20	2462	Ant1	-44.64	-20	Pass

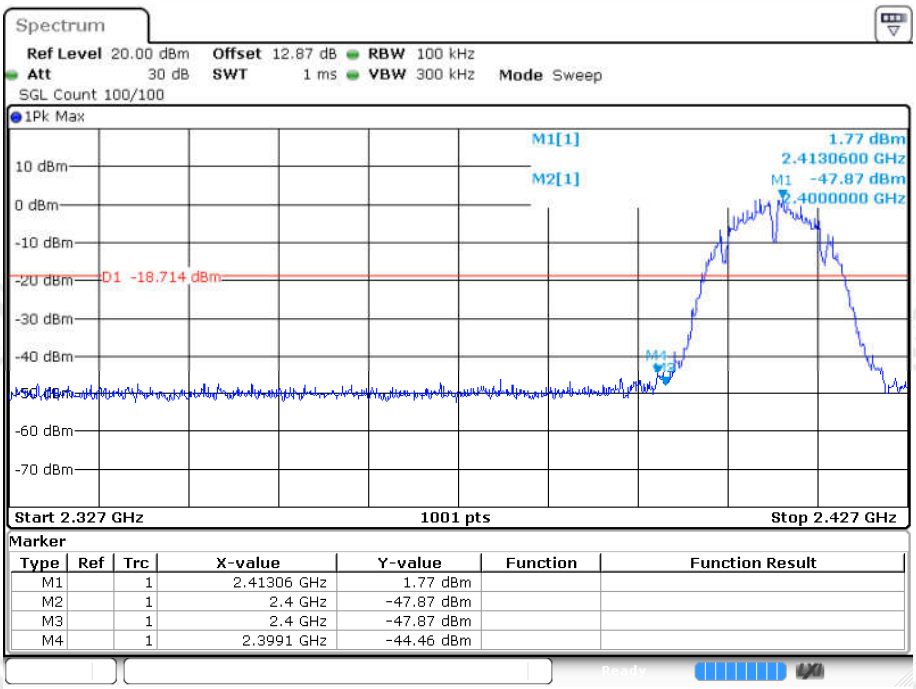
Test Graphs

Band Edge NVNT b 2412MHz Ant1 Ref



Date: 12.APR.2024 17:33:56

Band Edge NVNT b 2412MHz Ant1 Emission

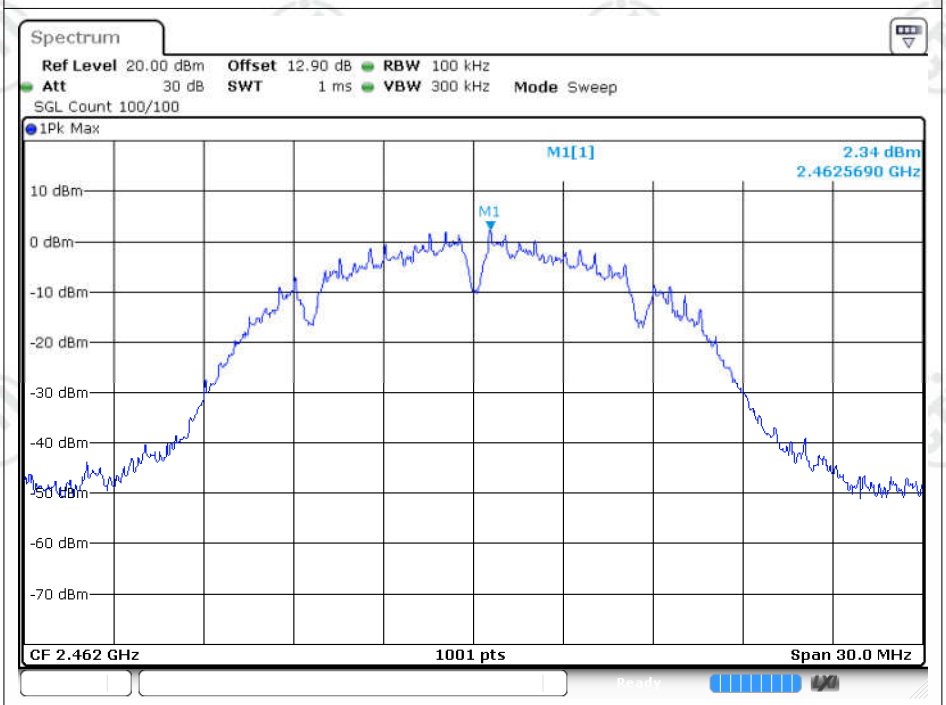


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.41306 GHz	1.77 dBm		
M2		1	2.4 GHz	-47.87 dBm		
M3		1	2.4 GHz	-47.87 dBm		
M4		1	2.3991 GHz	-44.46 dBm		

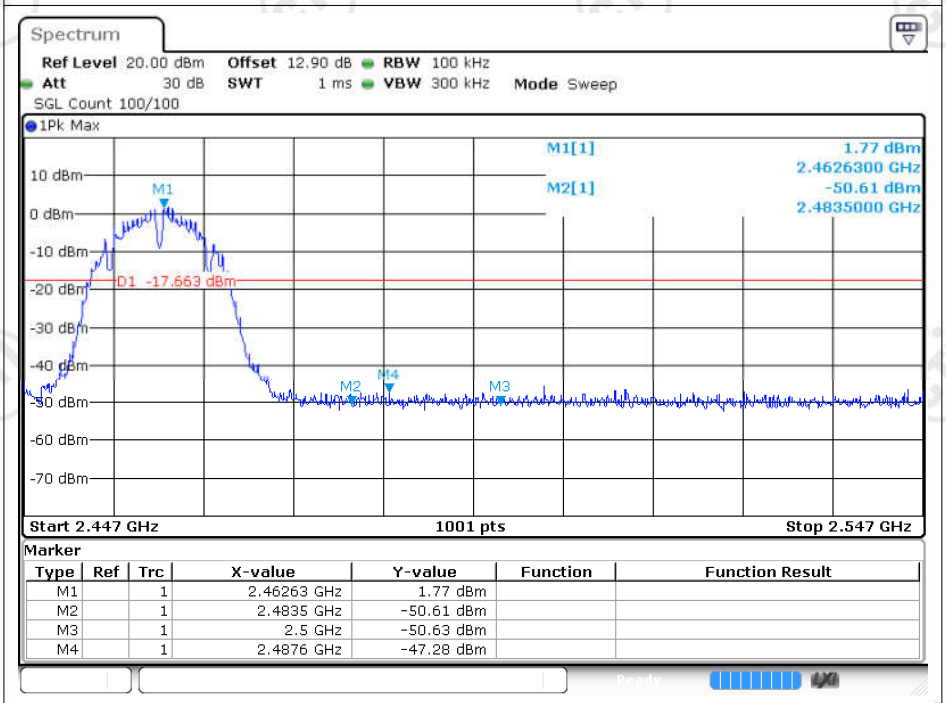
Date: 12.APR.2024 17:33:57

Band Edge NVNT b 2462MHz Ant1 Ref



Date: 12.APR.2024 17:39:44

Band Edge NVNT b 2462MHz Ant1 Emission

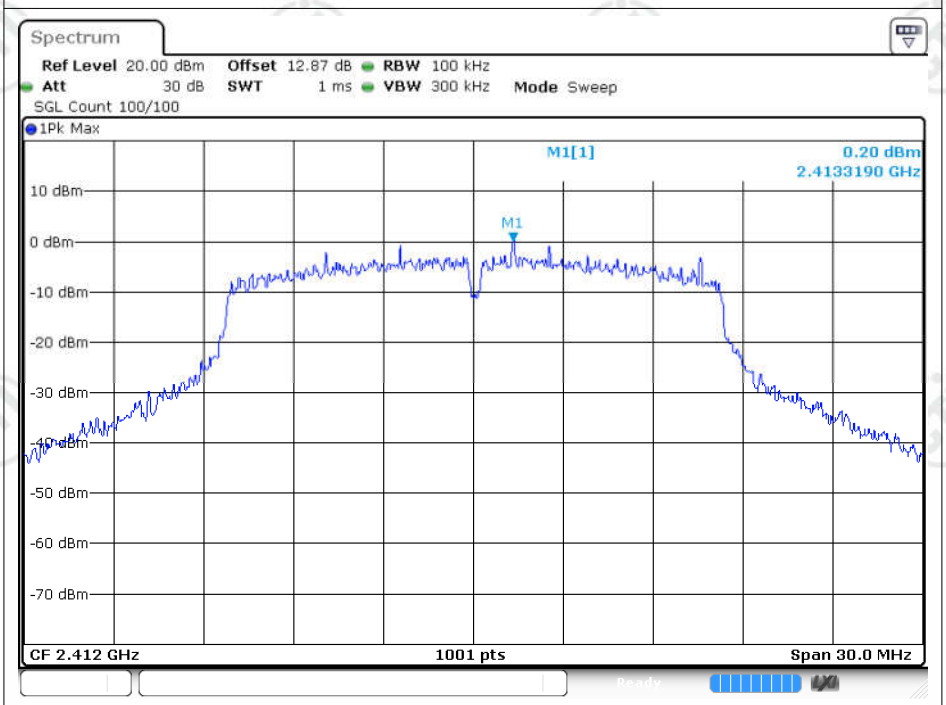


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.46263 GHz	1.77 dBm		
M2		1	2.4835 GHz	-50.61 dBm		
M3		1	2.5 GHz	-50.63 dBm		
M4		1	2.4876 GHz	-47.28 dBm		

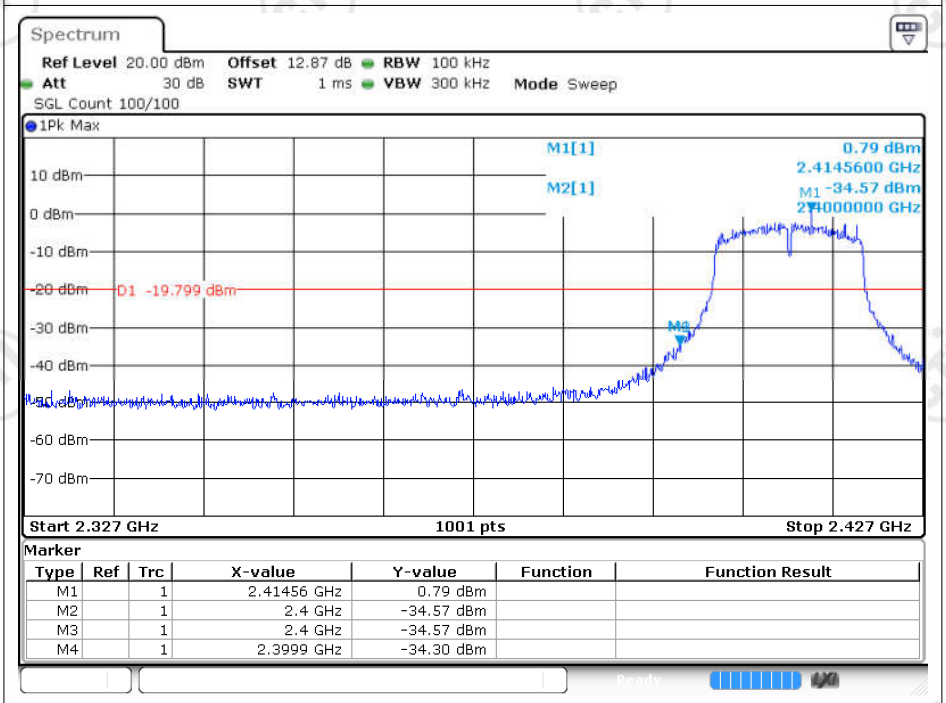
Date: 12.APR.2024 17:39:45

Band Edge NVNT g 2412MHz Ant1 Ref



Date: 12.APR.2024 17:42:02

Band Edge NVNT g 2412MHz Ant1 Emission

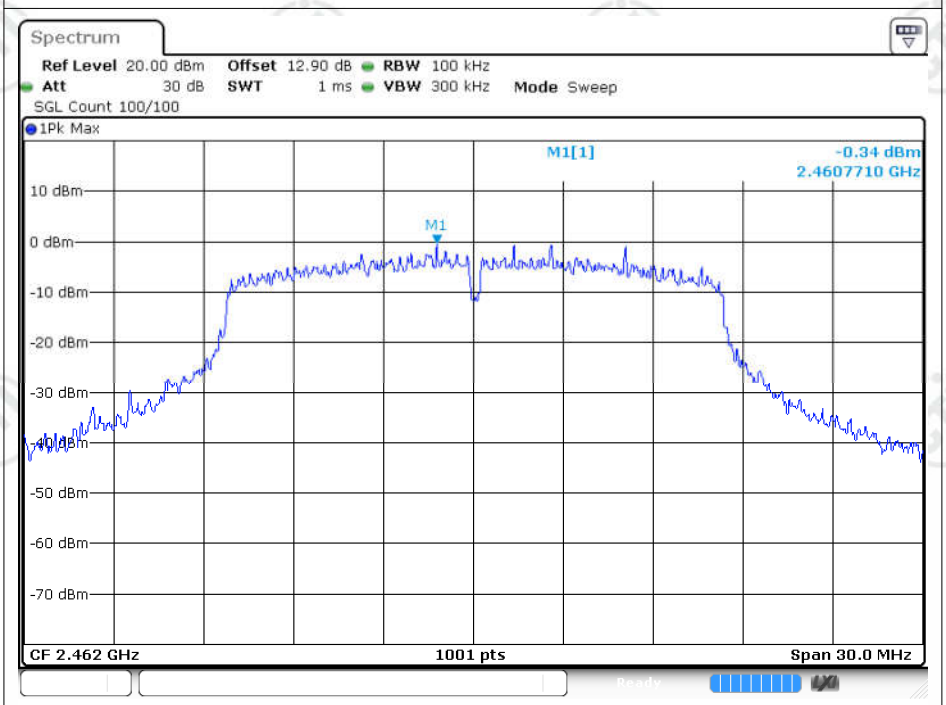


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.41456 GHz	0.79 dBm		
M2		1	2.4 GHz	-34.57 dBm		
M3		1	2.4 GHz	-34.57 dBm		
M4		1	2.3999 GHz	-34.30 dBm		

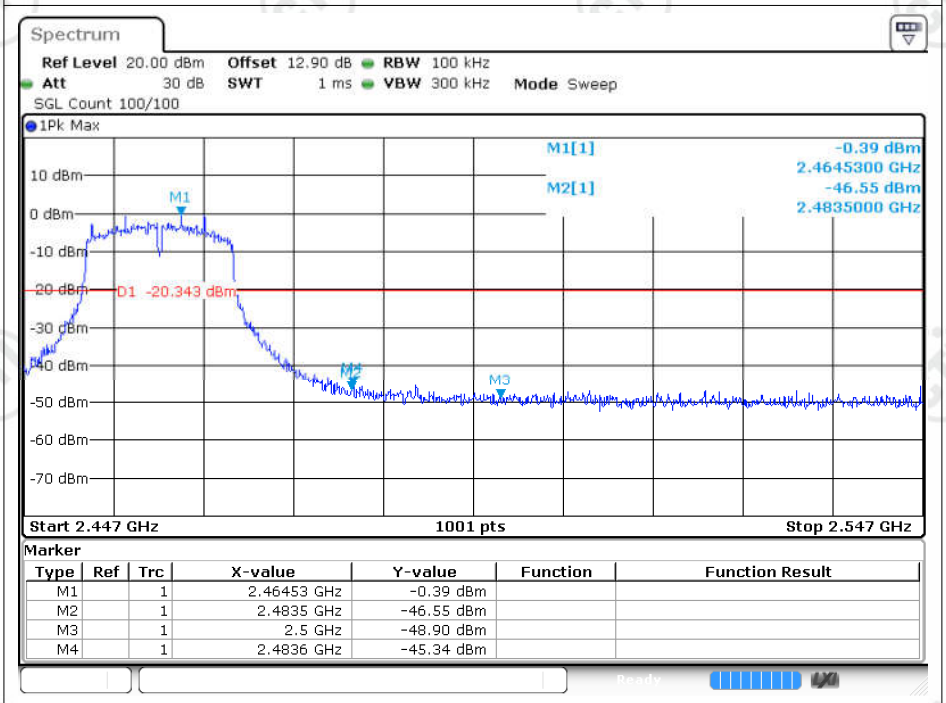
Date: 12.APR.2024 17:42:04

Band Edge NVNT g 2462MHz Ant1 Ref



Date: 12.APR.2024 17:47:26

Band Edge NVNT g 2462MHz Ant1 Emission

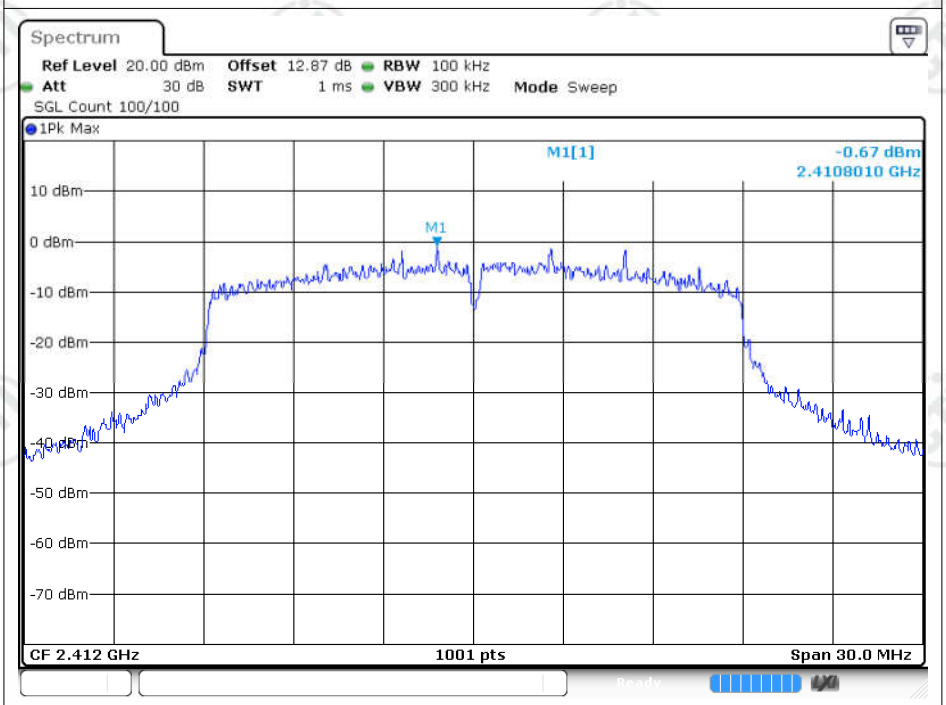


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.46453 GHz	-0.39 dBm		
M2		1	2.4835 GHz	-46.55 dBm		
M3		1	2.5 GHz	-48.90 dBm		
M4		1	2.4836 GHz	-45.34 dBm		

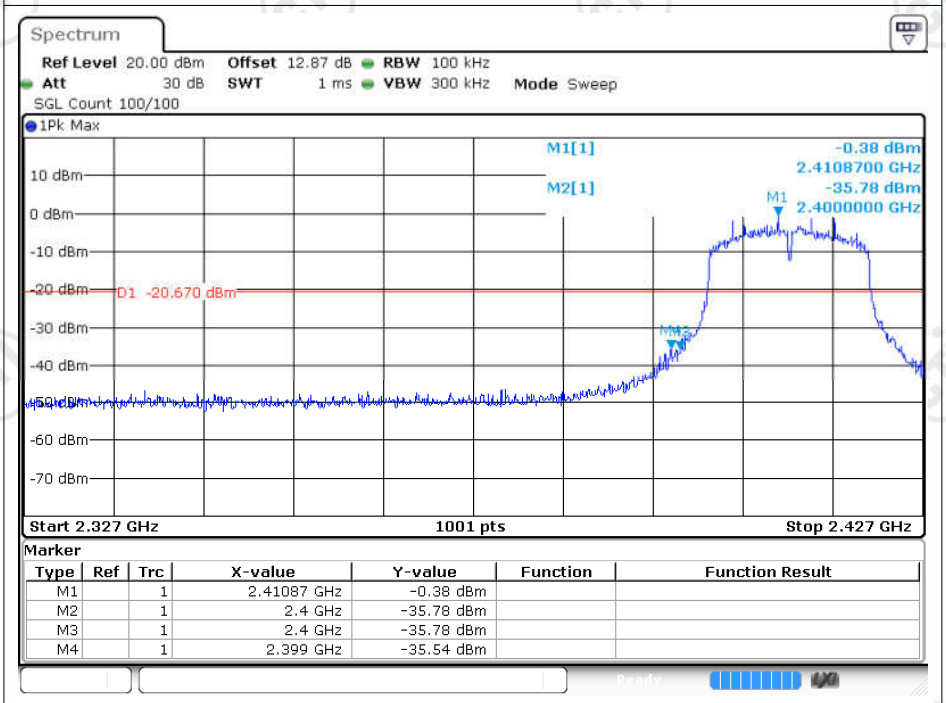
Date: 12.APR.2024 17:47:27

Band Edge NVNT n20 2412MHz Ant1 Ref



Date: 12.APR.2024 17:49:56

Band Edge NVNT n20 2412MHz Ant1 Emission

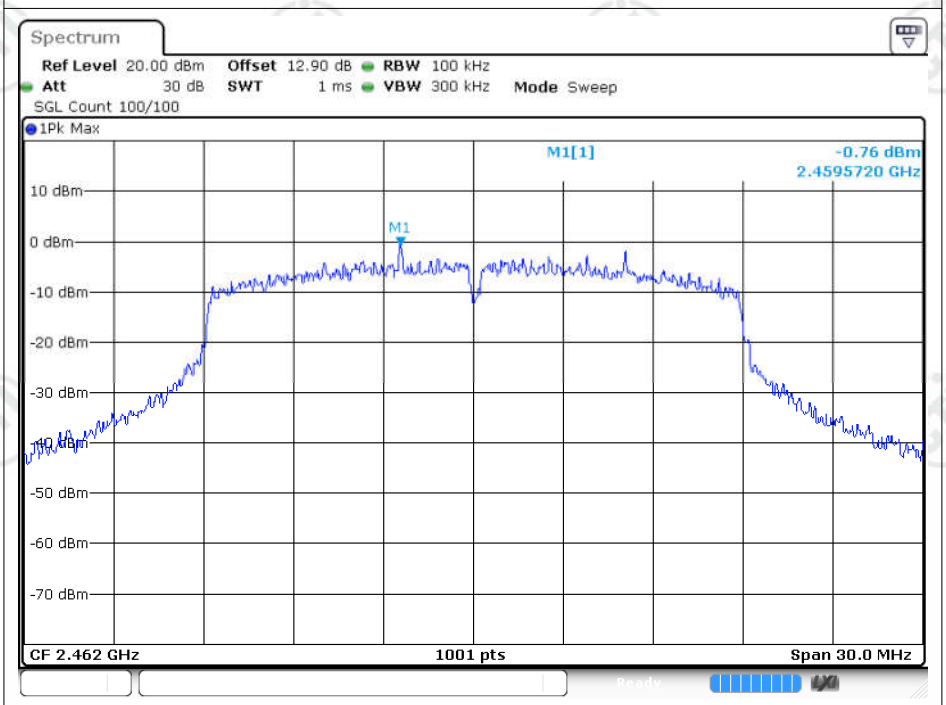


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.41087 GHz	-0.38 dBm		
M2		1	2.4 GHz	-35.78 dBm		
M3		1	2.4 GHz	-35.78 dBm		
M4		1	2.399 GHz	-35.54 dBm		

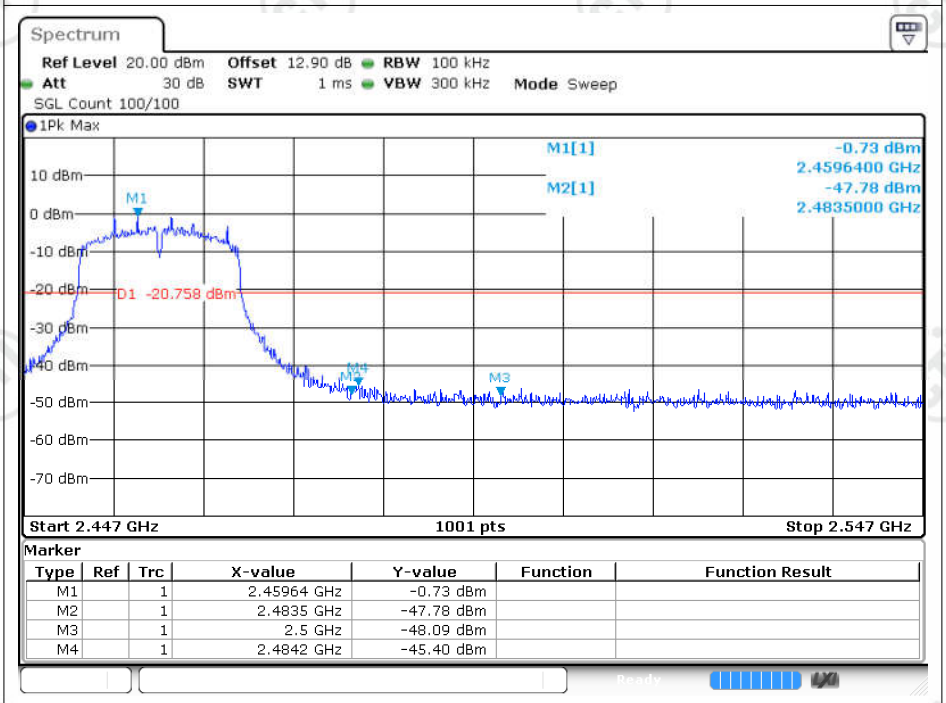
Date: 12.APR.2024 17:49:58

Band Edge NVNT n20 2462MHz Ant1 Ref



Date: 12.APR.2024 17:55:18

Band Edge NVNT n20 2462MHz Ant1 Emission



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.45964 GHz	-0.73 dBm		
M2		1	2.4835 GHz	-47.78 dBm		
M3		1	2.5 GHz	-48.09 dBm		
M4		1	2.4842 GHz	-45.40 dBm		

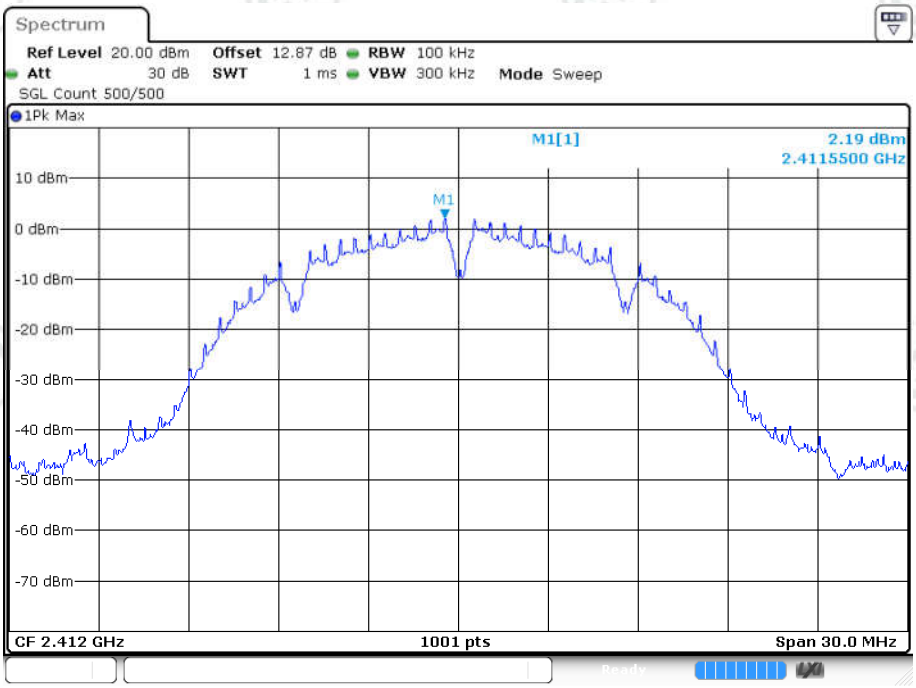
Date: 12.APR.2024 17:55:20

Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-42.66	-20	Pass
NVNT	b	2437	Ant1	-42.86	-20	Pass
NVNT	b	2462	Ant1	-43.16	-20	Pass
NVNT	g	2412	Ant1	-39.99	-20	Pass
NVNT	g	2437	Ant1	-41.14	-20	Pass
NVNT	g	2462	Ant1	-40.89	-20	Pass
NVNT	n20	2412	Ant1	-39.58	-20	Pass
NVNT	n20	2437	Ant1	-40.48	-20	Pass
NVNT	n20	2462	Ant1	-40.38	-20	Pass

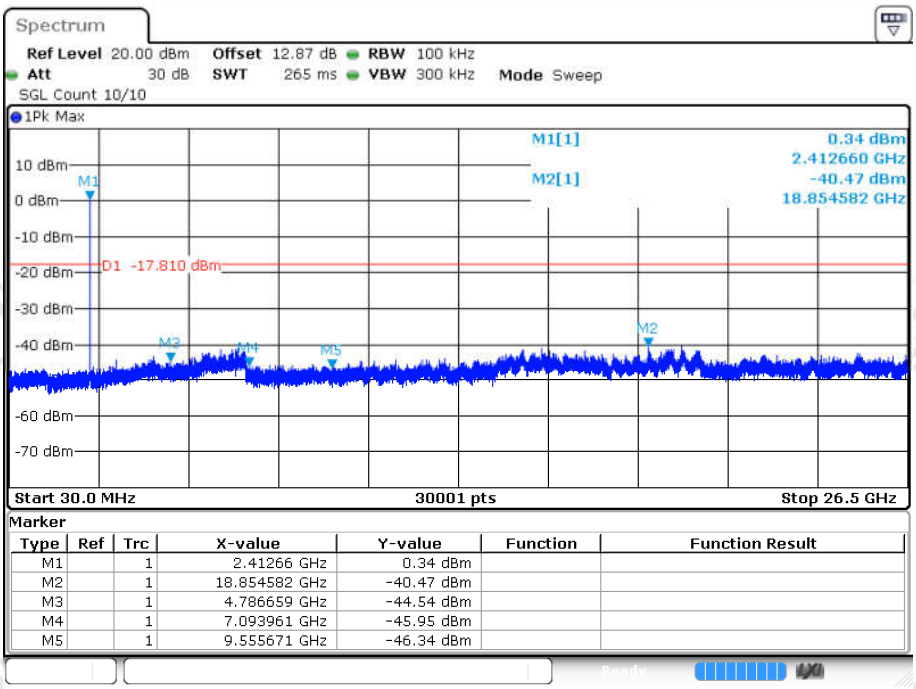
Test Graphs

Tx. Spurious NVNT b 2412MHz Ant1 Ref



Date: 12.APR.2024 17:34:05

Tx. Spurious NVNT b 2412MHz Ant1 Emission

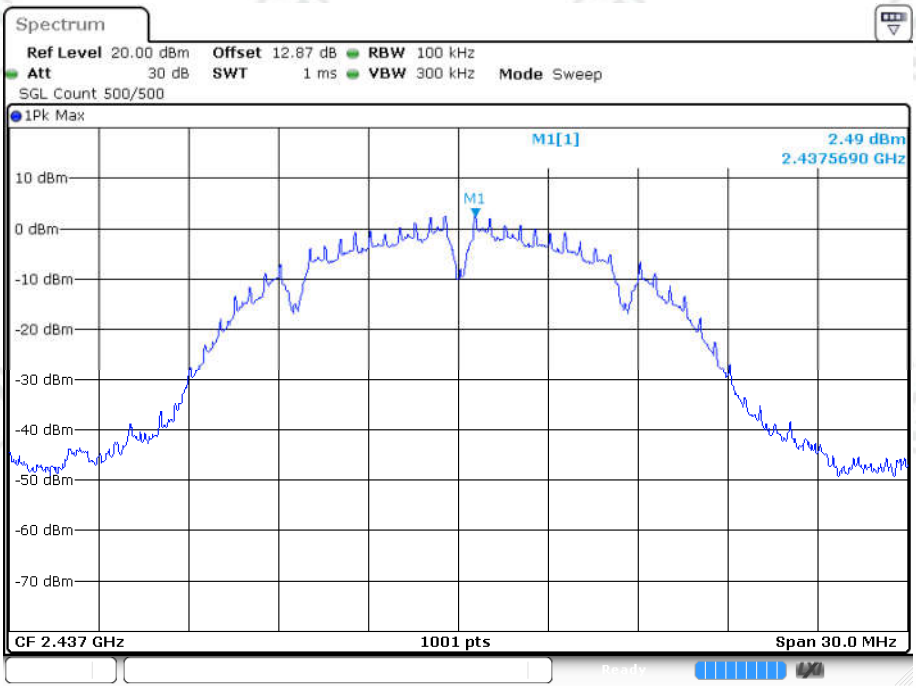


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.41266 GHz	0.34 dBm		
M2		1	18.854582 GHz	-40.47 dBm		
M3		1	4.786659 GHz	-44.54 dBm		
M4		1	7.093961 GHz	-45.95 dBm		
M5		1	9.555671 GHz	-46.34 dBm		

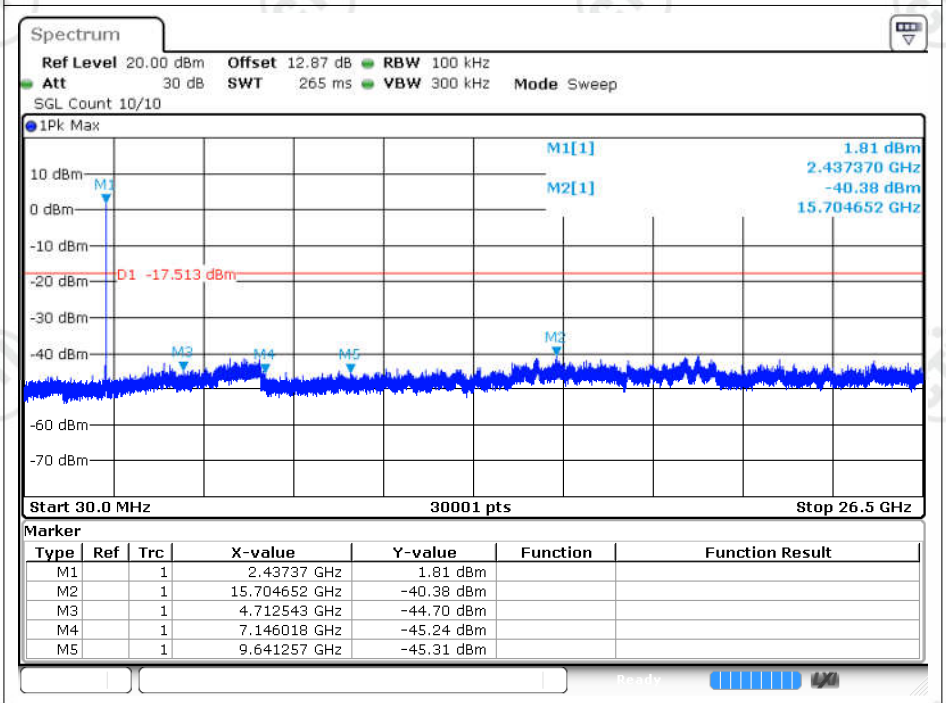
Date: 12.APR.2024 17:34:16

Tx. Spurious NVNT b 2437MHz Ant1 Ref



Date: 12.APR.2024 17:37:13

Tx. Spurious NVNT b 2437MHz Ant1 Emission

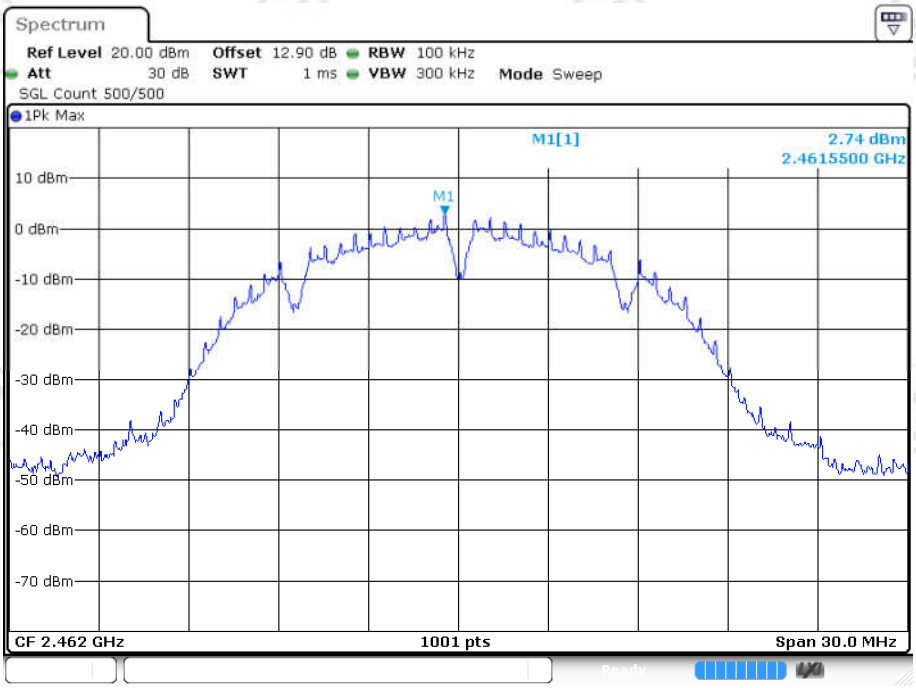


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.43737 GHz	1.81 dBm		
M2		1	15.704652 GHz	-40.38 dBm		
M3		1	4.712543 GHz	-44.70 dBm		
M4		1	7.146018 GHz	-45.24 dBm		
M5		1	9.641257 GHz	-45.31 dBm		

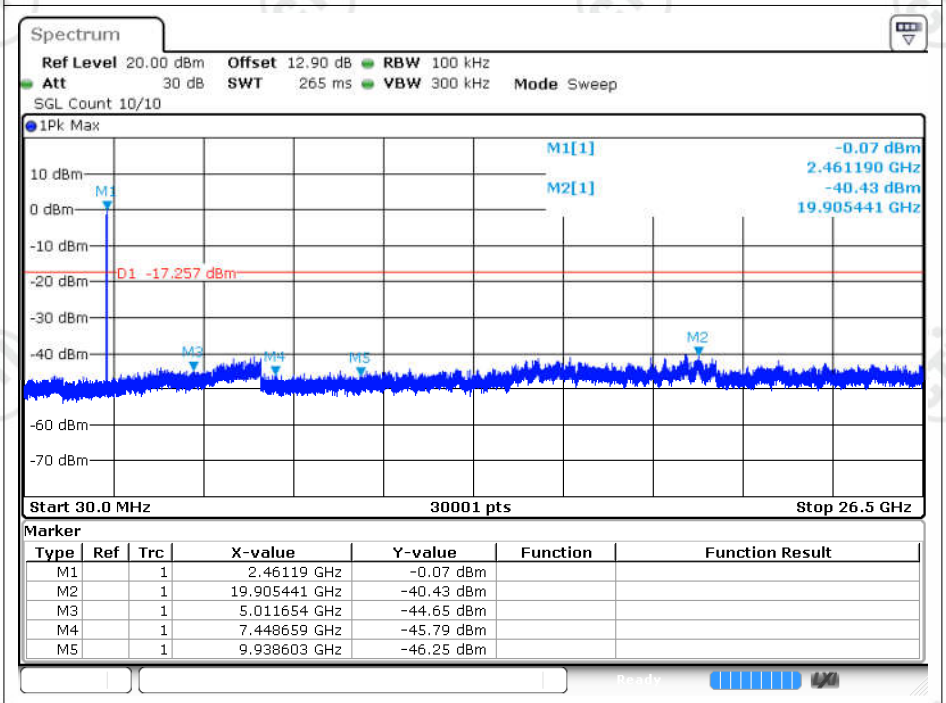
Date: 12.APR.2024 17:37:25

Tx. Spurious NVNT b 2462MHz Ant1 Ref



Date: 12.APR.2024 17:39:56

Tx. Spurious NVNT b 2462MHz Ant1 Emission

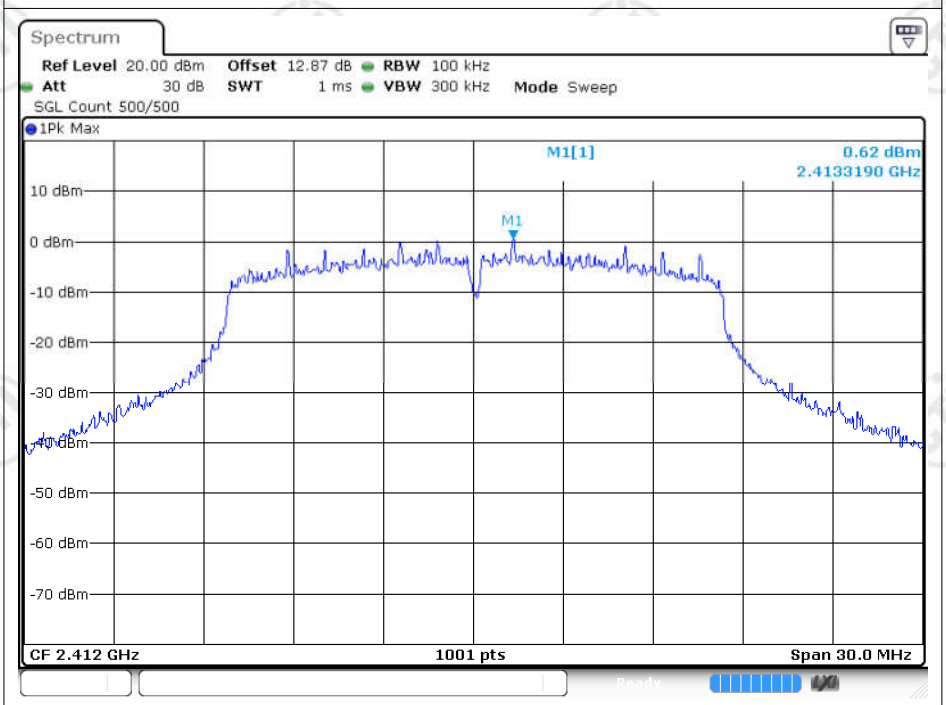


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.46119 GHz	-0.07 dBm		
M2		1	19.905441 GHz	-40.43 dBm		
M3		1	5.011654 GHz	-44.65 dBm		
M4		1	7.448659 GHz	-45.79 dBm		
M5		1	9.938603 GHz	-46.25 dBm		

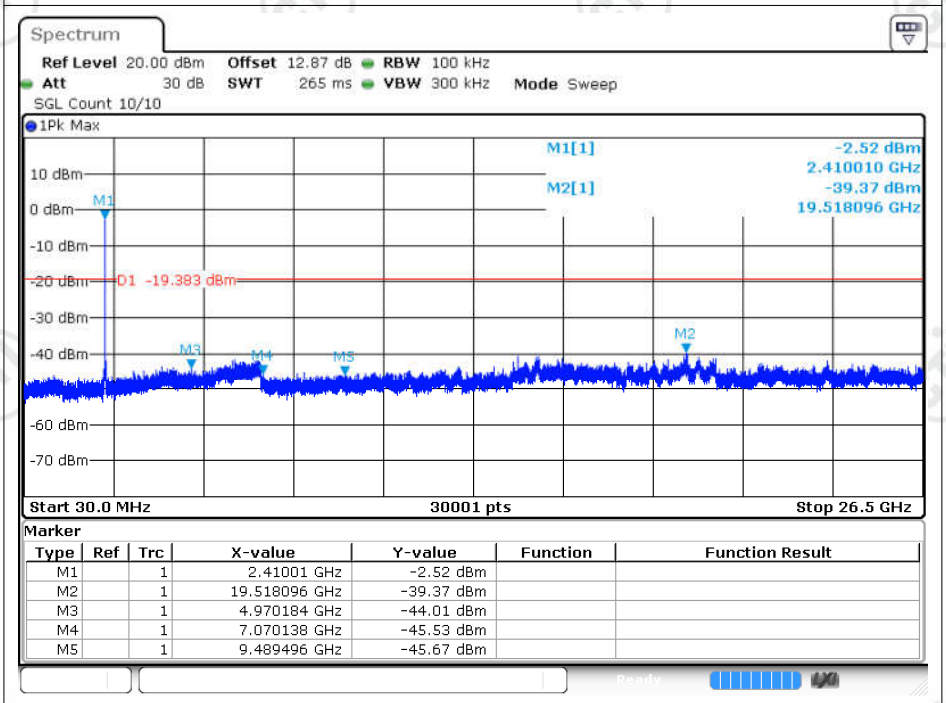
Date: 12.APR.2024 17:40:07

Tx. Spurious NVNT g 2412MHz Ant1 Ref



Date: 12.APR.2024 17:42:12

Tx. Spurious NVNT g 2412MHz Ant1 Emission

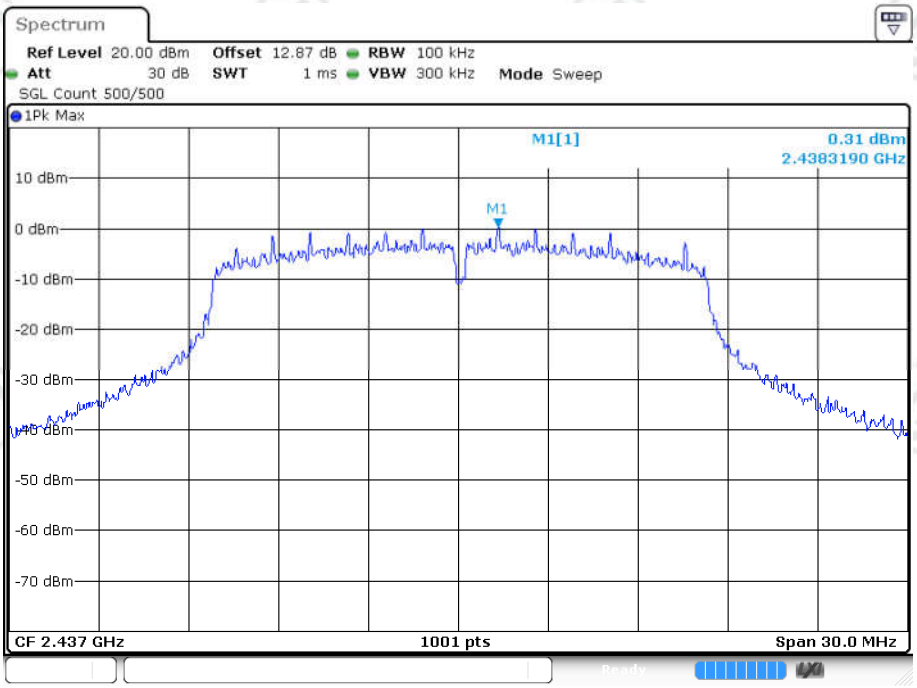


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.41001 GHz	-2.52 dBm		
M2		1	19.518096 GHz	-39.37 dBm		
M3		1	4.970184 GHz	-44.01 dBm		
M4		1	7.070138 GHz	-45.53 dBm		
M5		1	9.489496 GHz	-45.67 dBm		

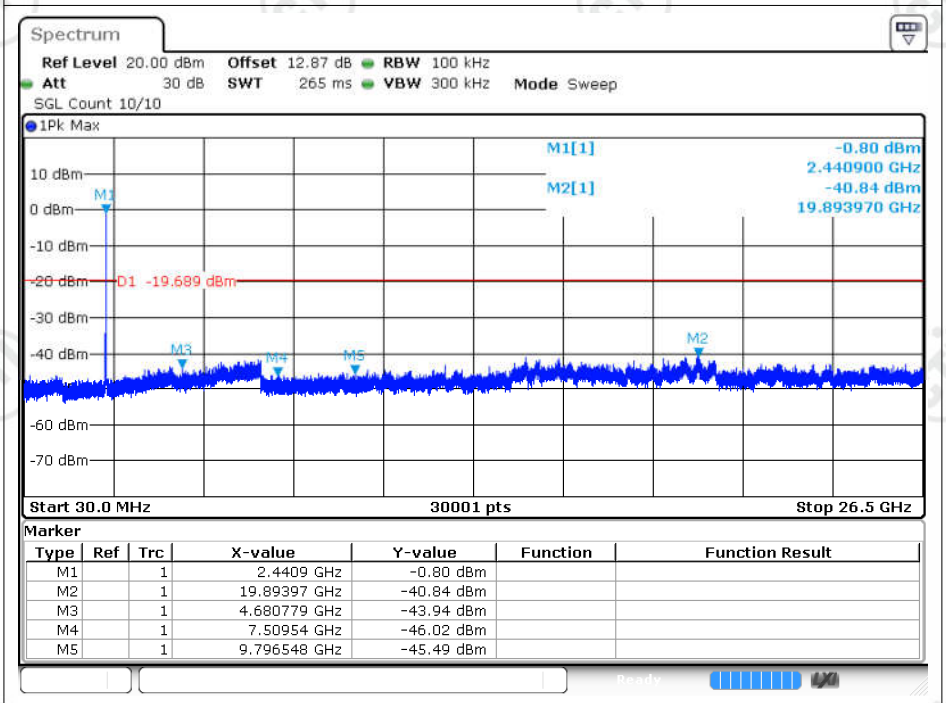
Date: 12.APR.2024 17:42:23

Tx. Spurious NVNT g 2437MHz Ant1 Ref



Date: 12.APR.2024 17:44:36

Tx. Spurious NVNT g 2437MHz Ant1 Emission

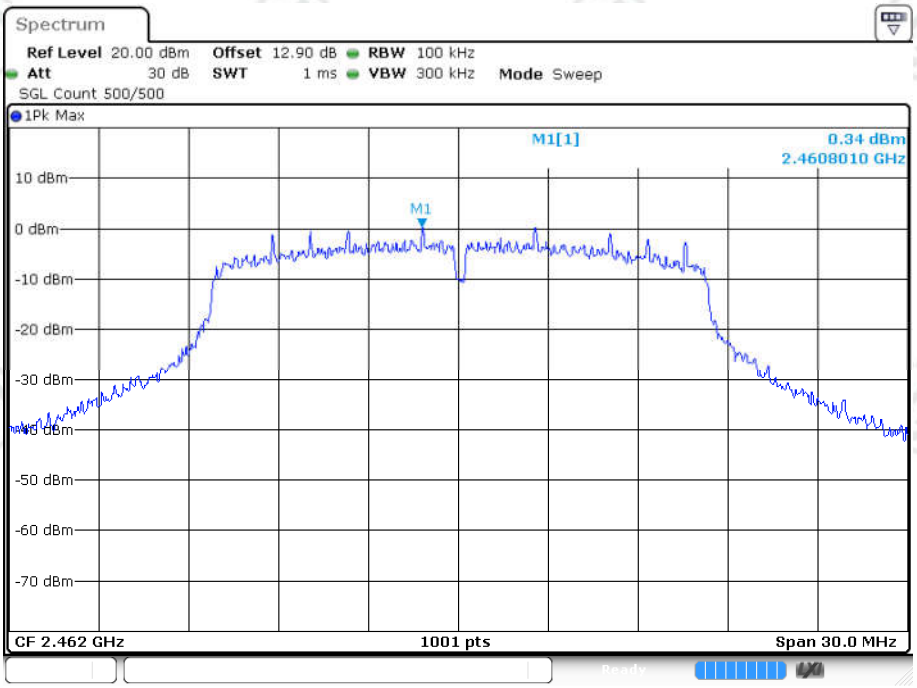


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.4409 GHz	-0.80 dBm		
M2		1	19.89397 GHz	-40.84 dBm		
M3		1	4.680779 GHz	-43.94 dBm		
M4		1	7.50954 GHz	-46.02 dBm		
M5		1	9.796548 GHz	-45.49 dBm		

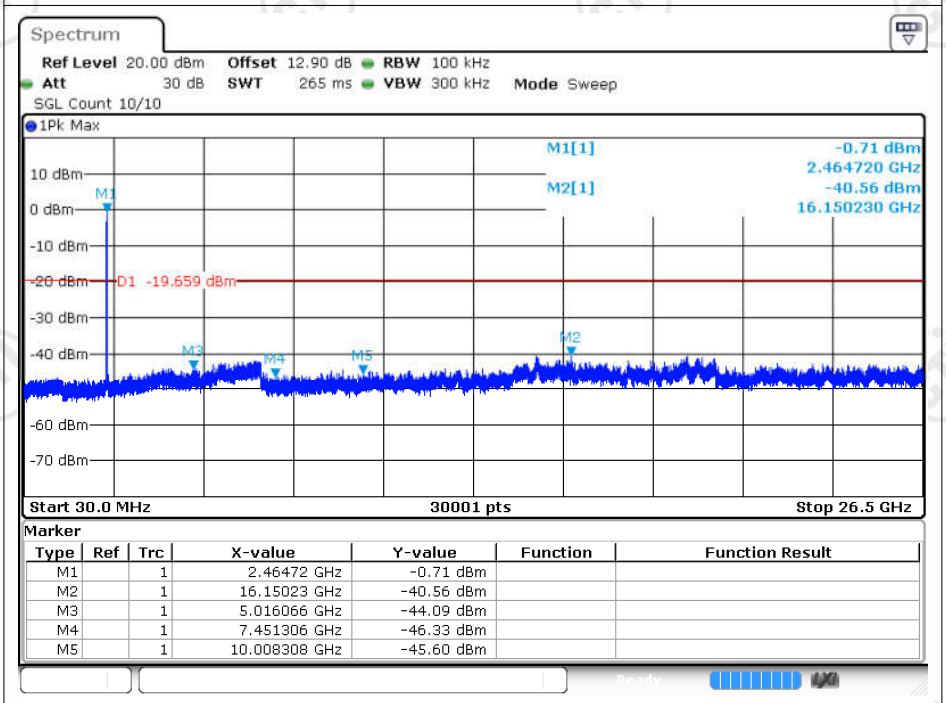
Date: 12.APR.2024 17:44:47

Tx. Spurious NVNT g 2462MHz Ant1 Ref



Date: 12.APR.2024 17:47:38

Tx. Spurious NVNT g 2462MHz Ant1 Emission

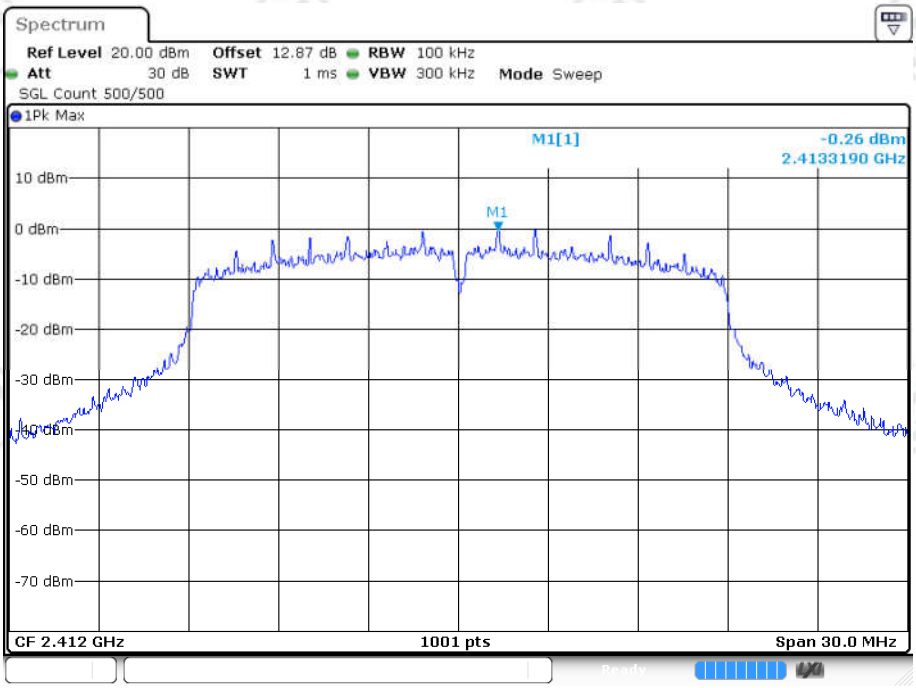


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.46472 GHz	-0.71 dBm		
M2		1	16.15023 GHz	-40.56 dBm		
M3		1	5.016066 GHz	-44.09 dBm		
M4		1	7.451306 GHz	-46.33 dBm		
M5		1	10.008308 GHz	-45.60 dBm		

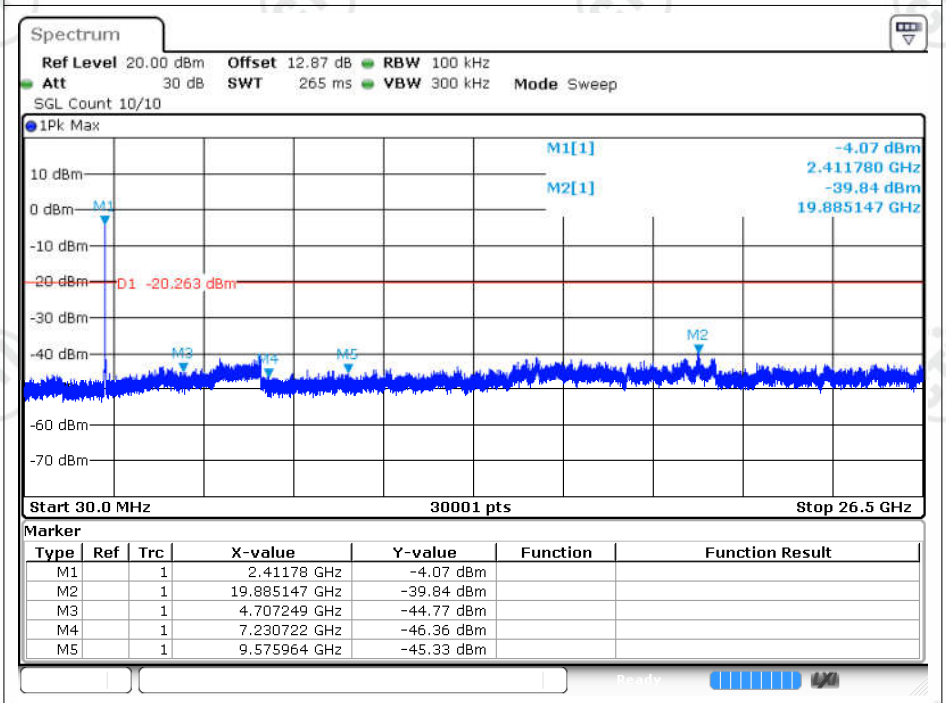
Date: 12.APR.2024 17:47:49

Tx. Spurious NVNT n20 2412MHz Ant1 Ref



Date: 12.APR.2024 17:50:06

Tx. Spurious NVNT n20 2412MHz Ant1 Emission

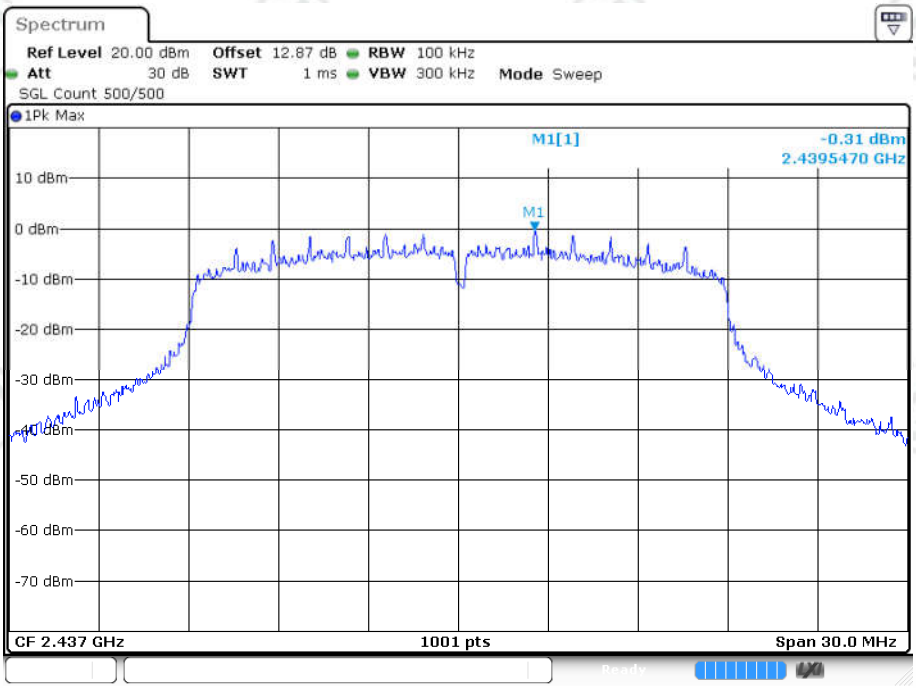


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.41178 GHz	-4.07 dBm		
M2		1	19.885147 GHz	-39.84 dBm		
M3		1	4.707249 GHz	-44.77 dBm		
M4		1	7.230722 GHz	-46.36 dBm		
M5		1	9.575964 GHz	-45.33 dBm		

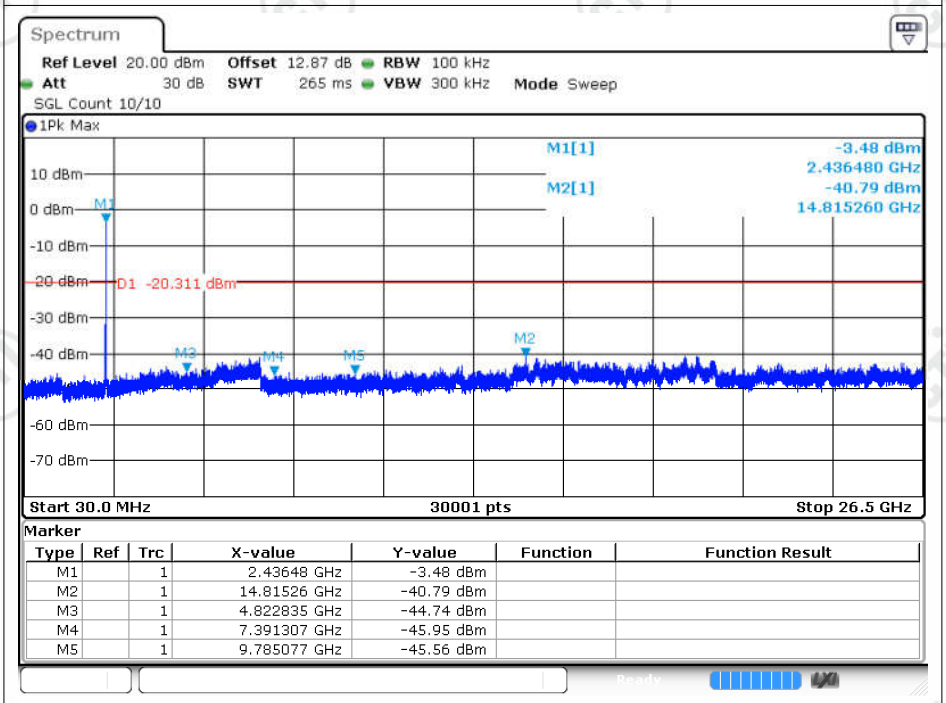
Date: 12.APR.2024 17:50:17

Tx. Spurious NVNT n20 2437MHz Ant1 Ref



Date: 12.APR.2024 17:52:40

Tx. Spurious NVNT n20 2437MHz Ant1 Emission

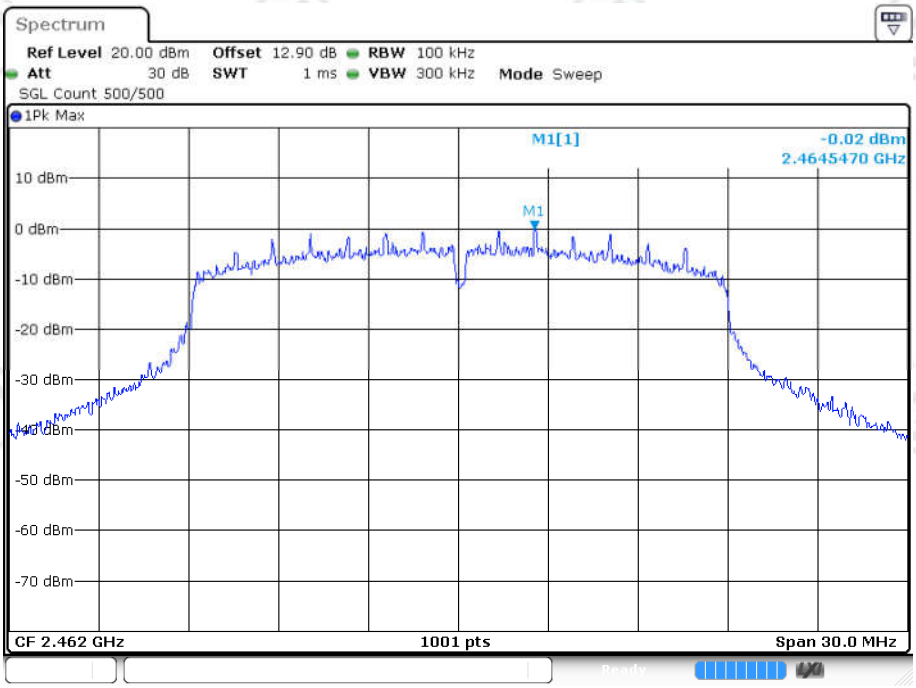


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.43648 GHz	-3.48 dBm		
M2		1	14.81526 GHz	-40.79 dBm		
M3		1	4.822835 GHz	-44.74 dBm		
M4		1	7.391307 GHz	-45.95 dBm		
M5		1	9.785077 GHz	-45.56 dBm		

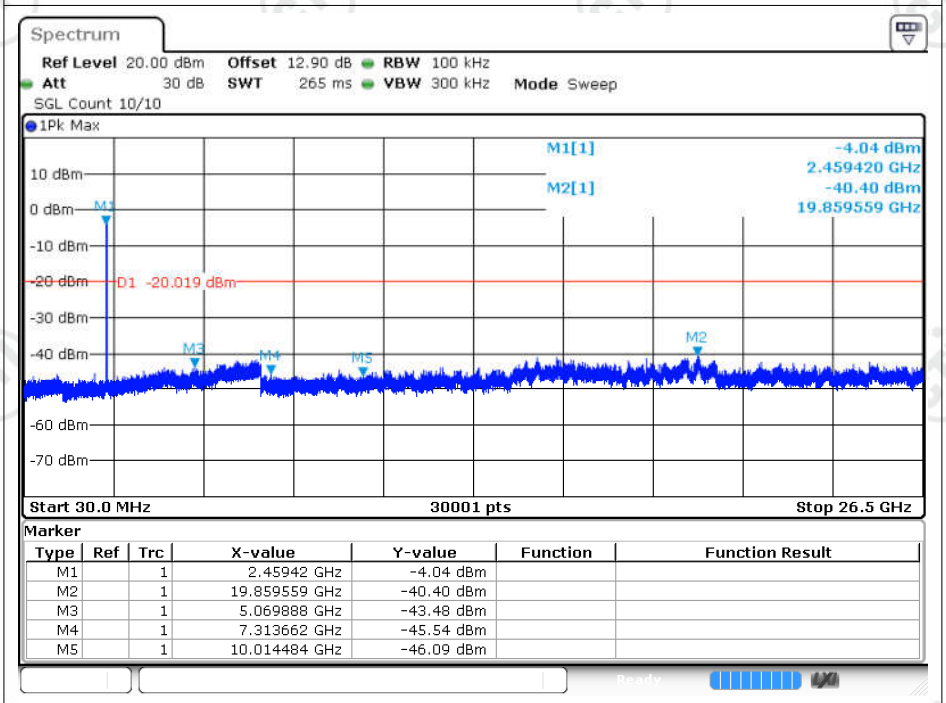
Date: 12.APR.2024 17:52:52

Tx. Spurious NVNT n20 2462MHz Ant1 Ref



Date: 12.APR.2024 17:56:43

Tx. Spurious NVNT n20 2462MHz Ant1 Emission



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.45942 GHz	-4.04 dBm		
M2		1	19.859559 GHz	-40.40 dBm		
M3		1	5.069888 GHz	-43.48 dBm		
M4		1	7.313662 GHz	-45.54 dBm		
M5		1	10.014484 GHz	-46.09 dBm		

Date: 12.APR.2024 17:56:54

*** End of Report ***