Appendix: 2.4G Wi-Fi

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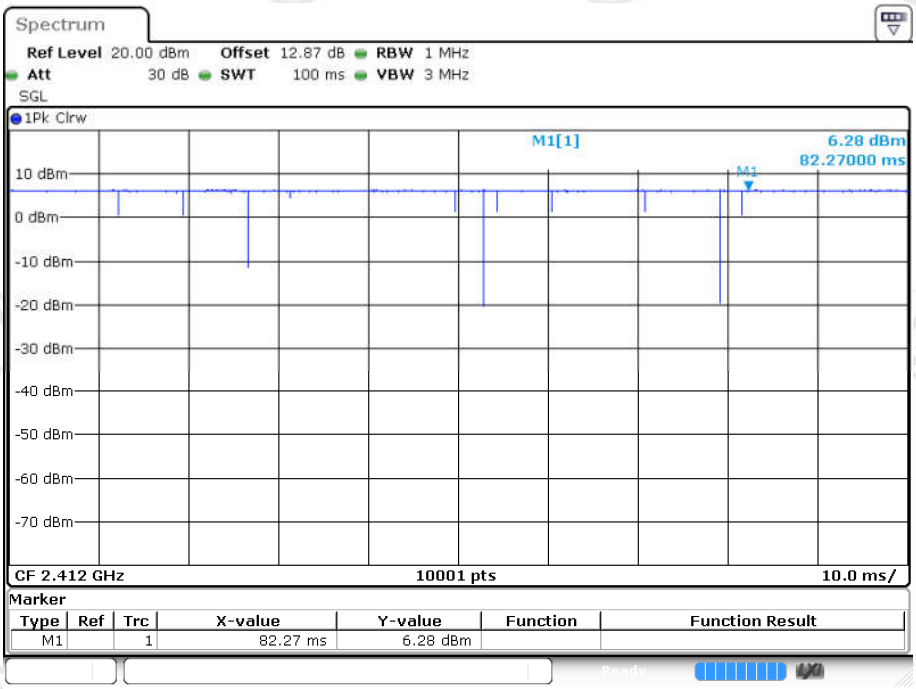
Duty Cycle

Condition	Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Duty Cycle Correction Factor (dB)	1/T (kHz)
NVNT	b	2412	Ant1	100	0	0
NVNT	b	2437	Ant1	100	0	0
NVNT	b	2462	Ant1	100	0	0
NVNT	g	2412	Ant1	99.71	0	0.18
NVNT	g	2437	Ant1	99.71	0	0.18
NVNT	g	2462	Ant1	99.6	0	0.18
NVNT	n20	2412	Ant1	99.69	0	0.2
NVNT	n20	2437	Ant1	99.69	0	0.2
NVNT	n20	2462	Ant1	99.69	0	0.2

Note:Duty Cycle Correction Factor (dB)=-10*Duty Cycle;

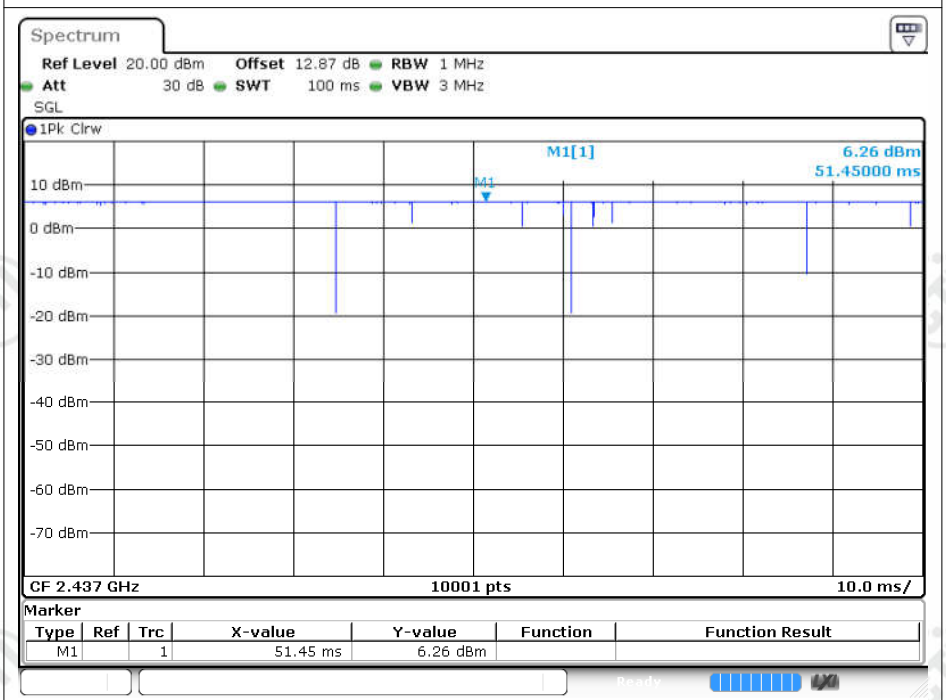
Test Graphs

Duty Cycle NVNT b 2412MHz Ant1



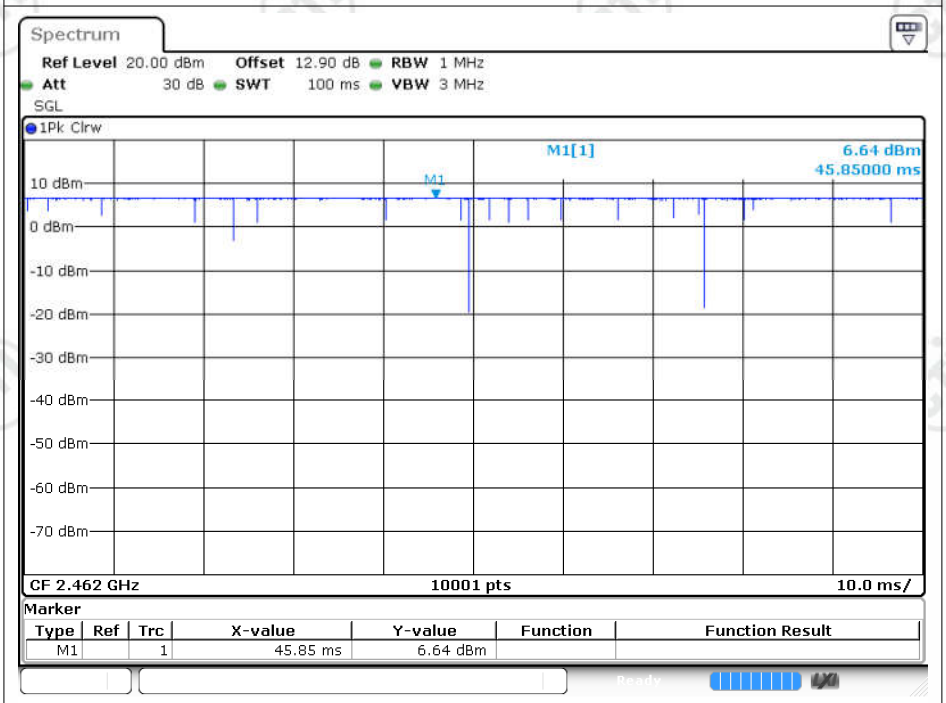
Date: 17.AUG.2024 12:46:22

Duty Cycle NVNT b 2437MHz Ant1



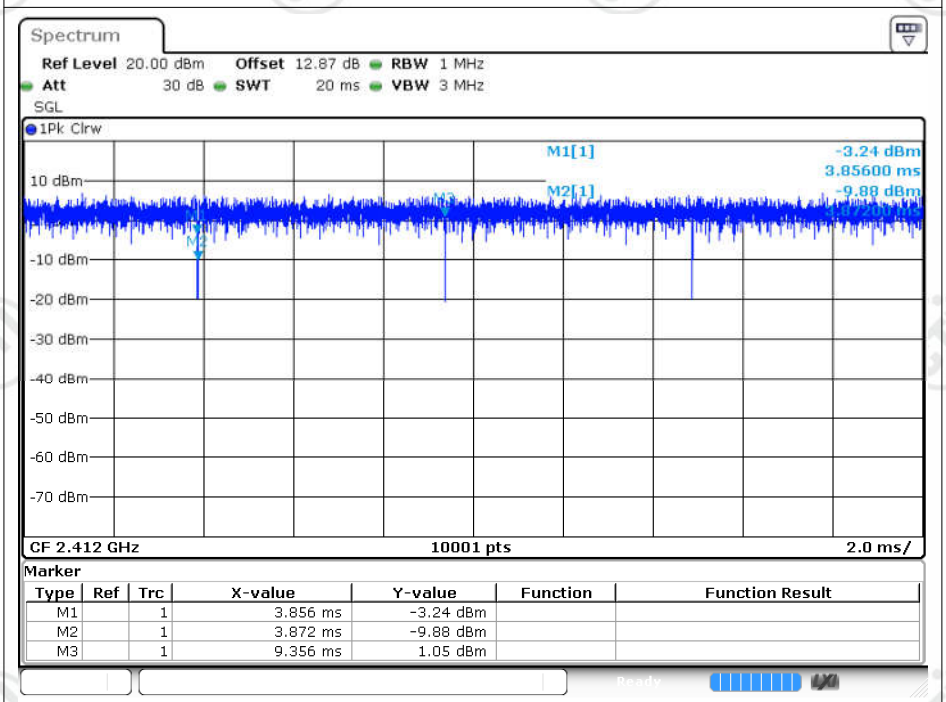
Date: 17.AUG.2024 12:48:16

Duty Cycle NVNT b 2462MHz Ant1



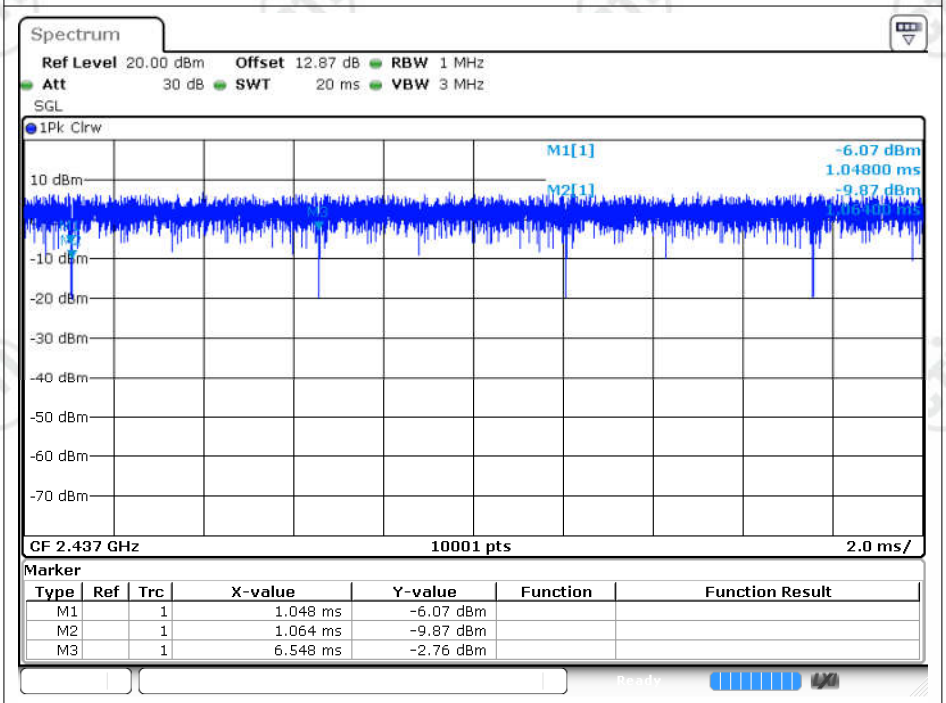
Date: 17.AUG.2024 12:43:32

Duty Cycle NVNT g 2412MHz Ant1



Date: 17.AUG.2024 13:01:30

Duty Cycle NVNT g 2437MHz Ant1

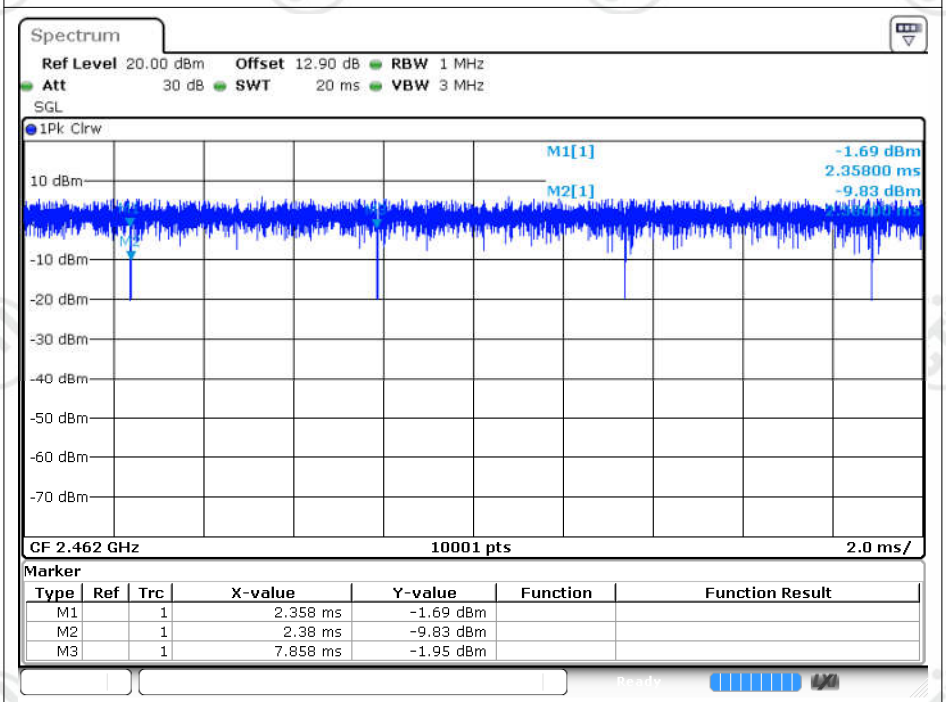


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	1.048 ms	-6.07 dBm		
M2		1	1.064 ms	-9.87 dBm		
M3		1	6.548 ms	-2.76 dBm		

Date: 17.AUG.2024 13:00:58

Duty Cycle NVNT g 2462MHz Ant1

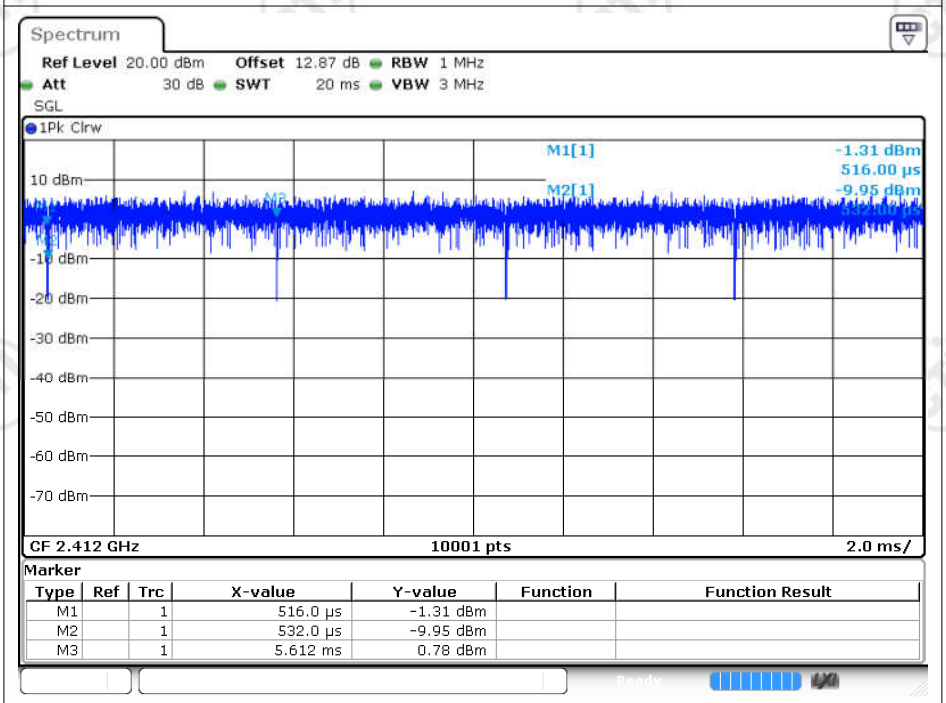


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.358 ms	-1.69 dBm		
M2		1	2.38 ms	-9.83 dBm		
M3		1	7.858 ms	-1.95 dBm		

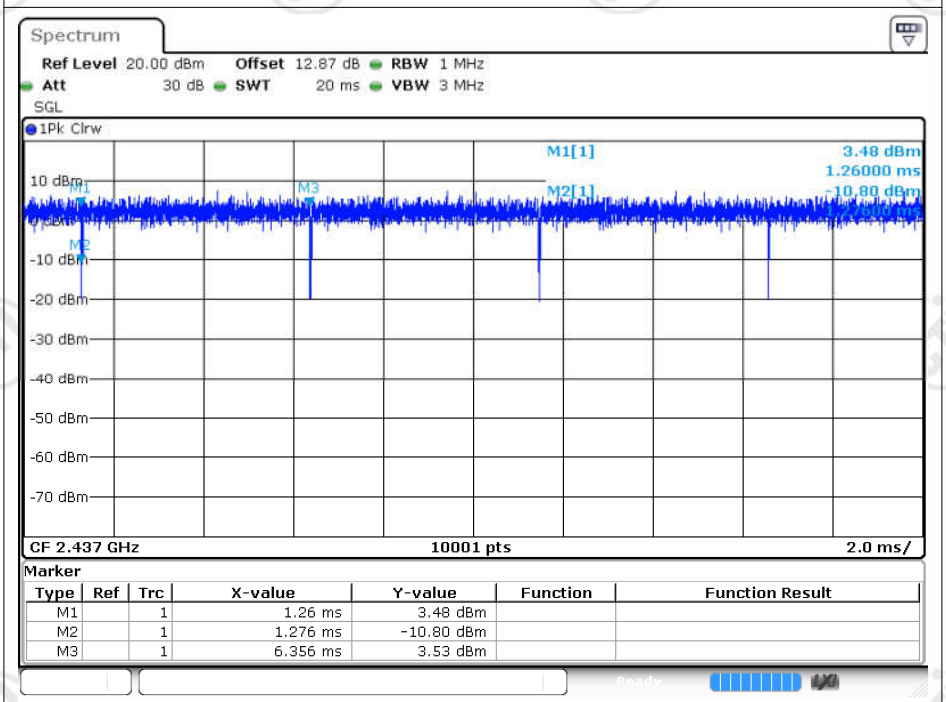
Date: 17.AUG.2024 13:01:52

Duty Cycle NVNT n20 2412MHz Ant1



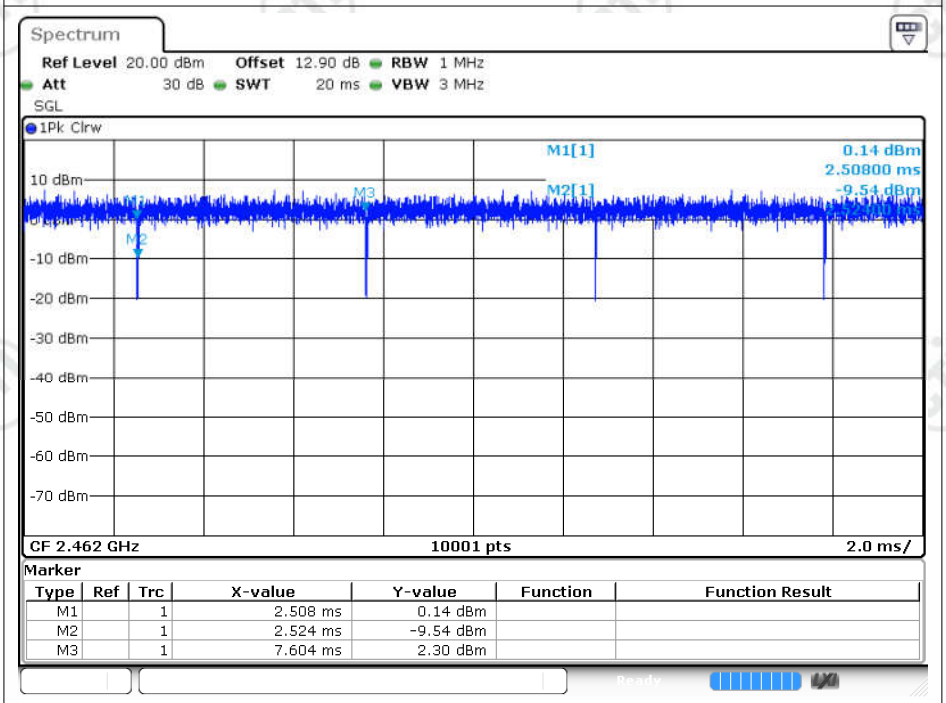
Date: 17.AUG.2024 13:04:37

Duty Cycle NVNT n20 2437MHz Ant1



Date: 17.AUG.2024 13:06:40

Duty Cycle NVNT n20 2462MHz Ant1



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.508 ms	0.14 dBm		
M2		1	2.524 ms	-9.54 dBm		
M3		1	7.604 ms	2.30 dBm		

Date: 17.AUG.2024 13:08:34

Maximum Peak Conducted Output Power

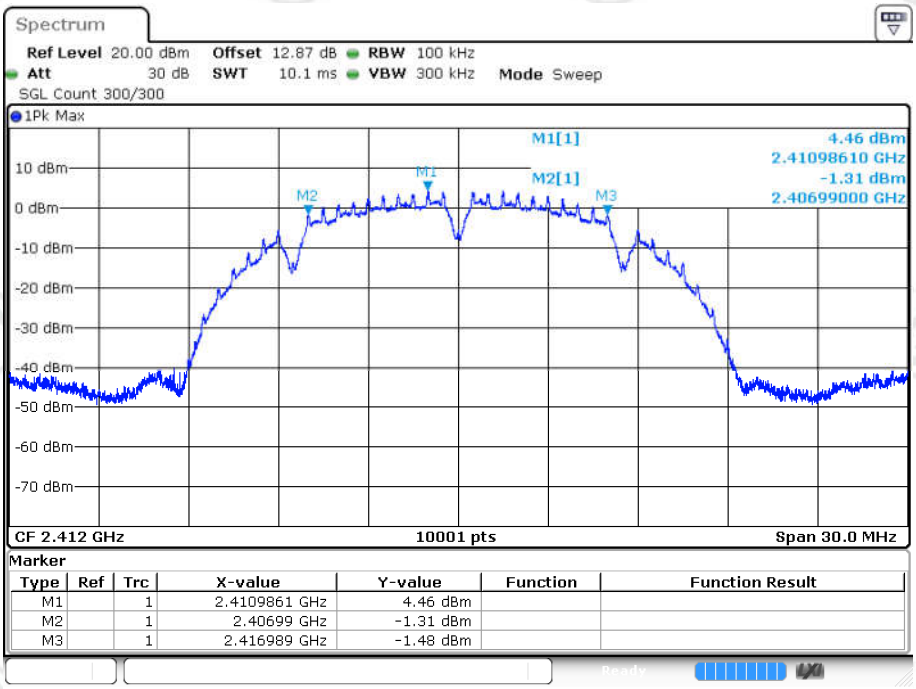
Condition	Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
NVNT	b	2412	Ant1	**12.51**	30	Pass
NVNT	b	2437	Ant1	12.27	30	Pass
NVNT	b	2462	Ant1	12.39	30	Pass
NVNT	g	2412	Ant1	11.42	30	Pass
NVNT	g	2437	Ant1	11.73	30	Pass
NVNT	g	2462	Ant1	11.46	30	Pass
NVNT	n20	2412	Ant1	11.31	30	Pass
NVNT	n20	2437	Ant1	11.51	30	Pass
NVNT	n20	2462	Ant1	11.35	30	Pass

-6dB Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
NVNT	b	2412	Ant1	9.999	0.5	Pass
NVNT	b	2437	Ant1	9.54	0.5	Pass
NVNT	b	2462	Ant1	9.54	0.5	Pass
NVNT	g	2412	Ant1	16.341	0.5	Pass
NVNT	g	2437	Ant1	16.335	0.5	Pass
NVNT	g	2462	Ant1	16.338	0.5	Pass
NVNT	n20	2412	Ant1	17.07	0.5	Pass
NVNT	n20	2437	Ant1	17.523	0.5	Pass
NVNT	n20	2462	Ant1	17.13	0.5	Pass

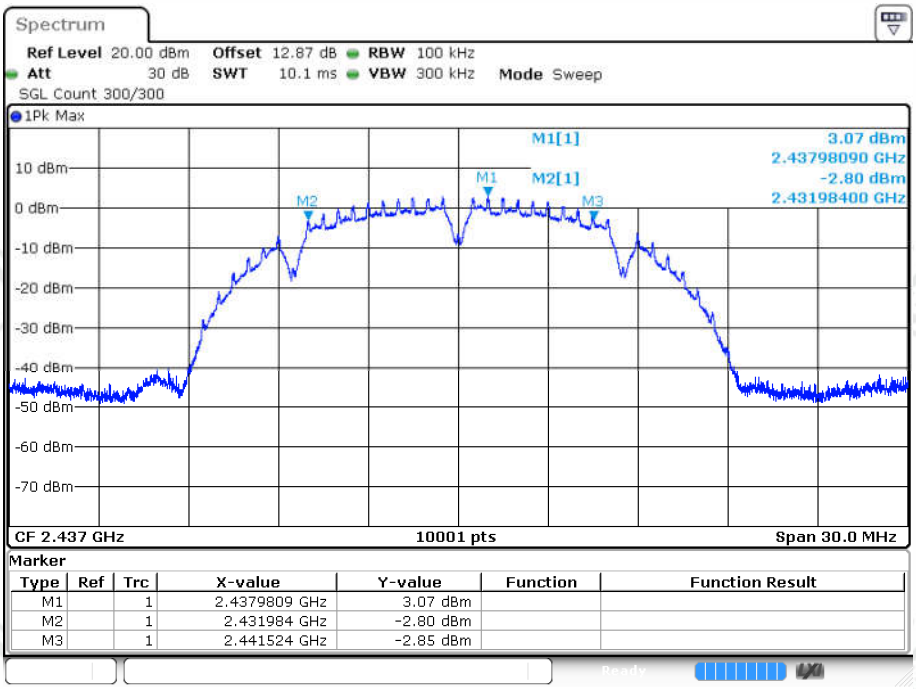
Test Graphs

-6dB Bandwidth NVNT b 2412MHz Ant1



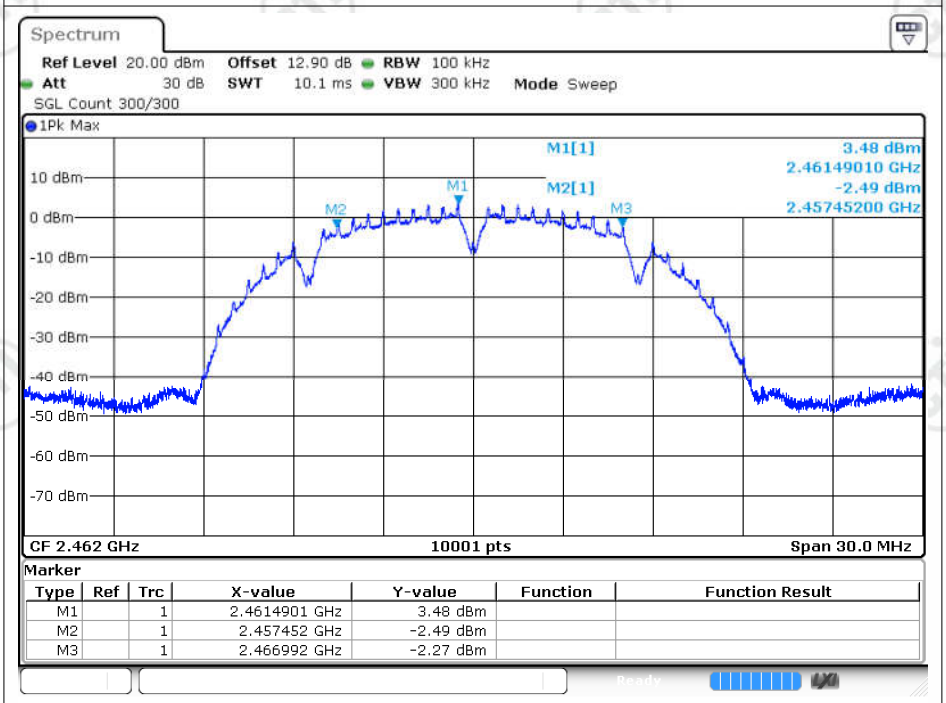
Date: 17.AUG.2024 12:40:59

-6dB Bandwidth NVNT b 2437MHz Ant1



Date: 17.AUG.2024 12:48:45

-6dB Bandwidth NVNT b 2462MHz Ant1

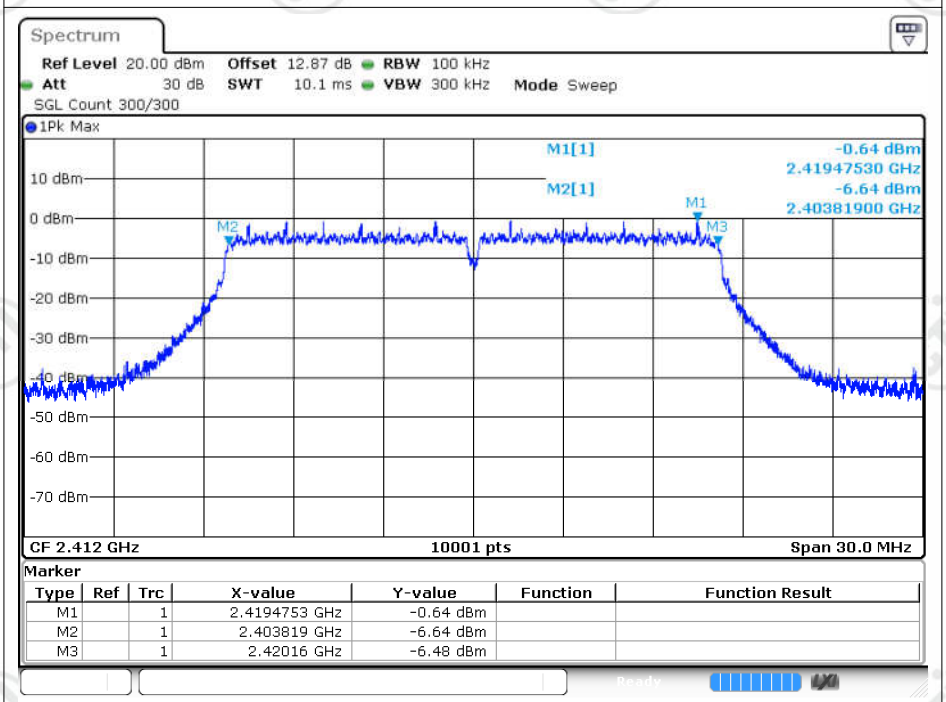


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.4614901 GHz	3.48 dBm		
M2		1	2.457452 GHz	-2.49 dBm		
M3		1	2.466992 GHz	-2.27 dBm		

Date: 17.AUG.2024 12:43:59

-6dB Bandwidth NVNT g 2412MHz Ant1

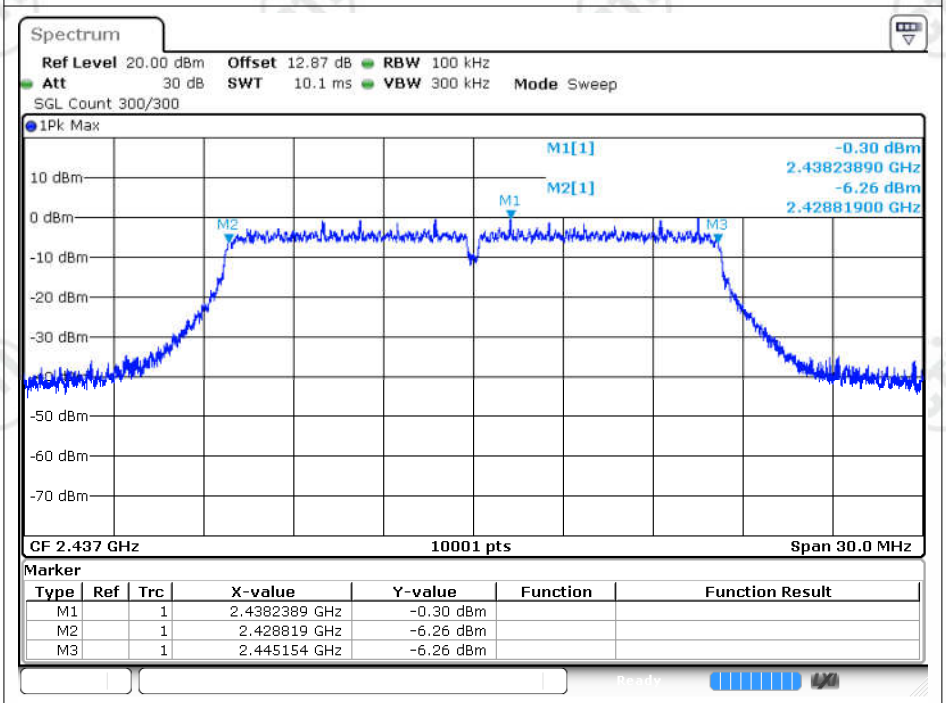


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.4194753 GHz	-0.64 dBm		
M2		1	2.403819 GHz	-6.64 dBm		
M3		1	2.42016 GHz	-6.48 dBm		

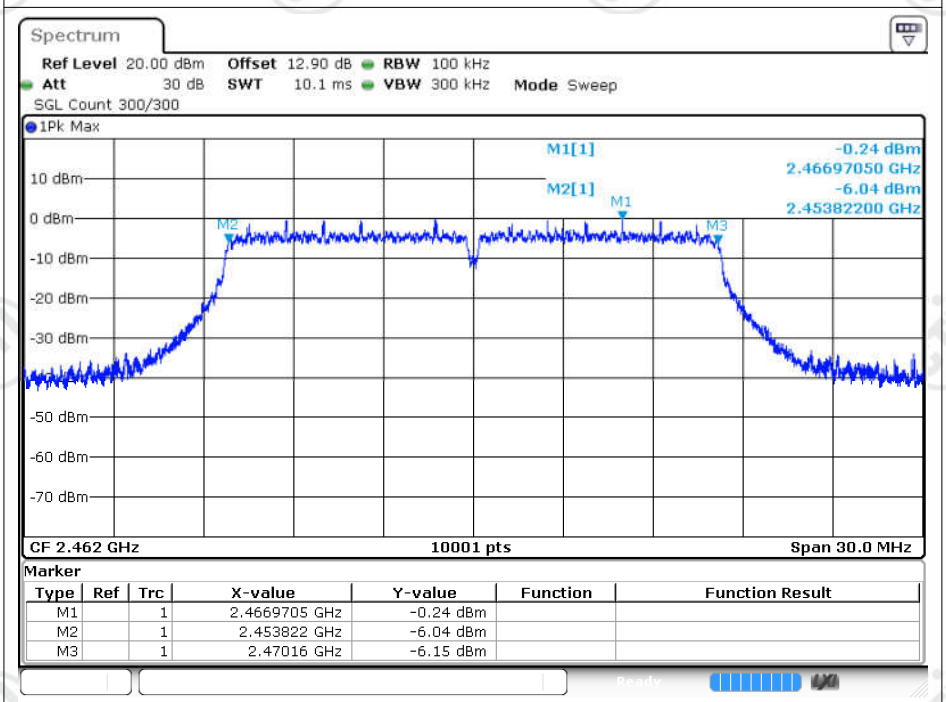
Date: 17.AUG.2024 12:50:13

-6dB Bandwidth NVNT g 2437MHz Ant1



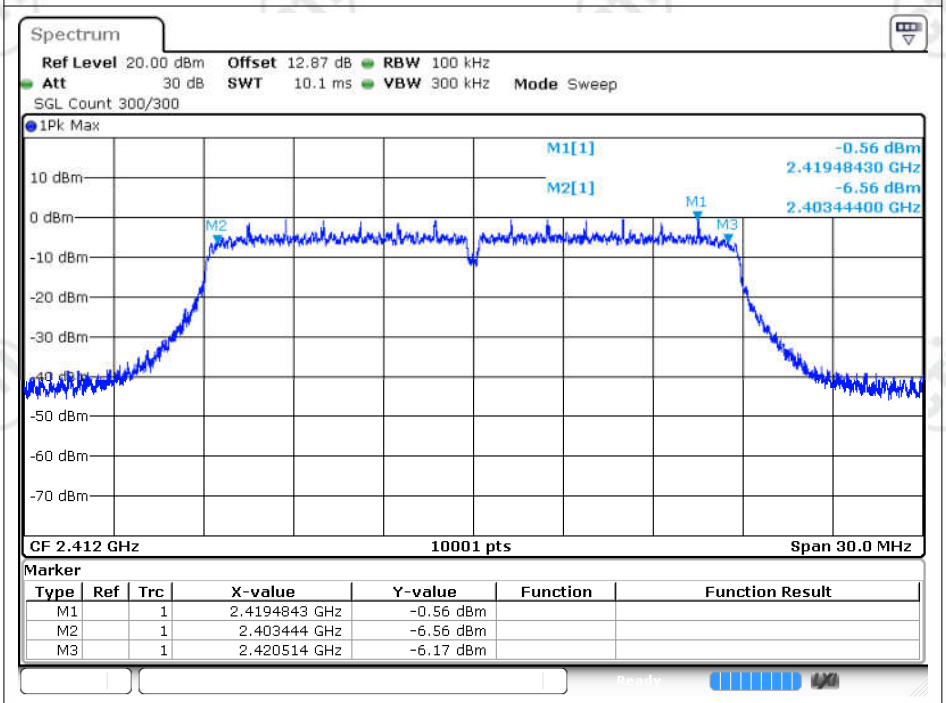
Date: 17.AUG.2024 12:52:39

-6dB Bandwidth NVNT g 2462MHz Ant1



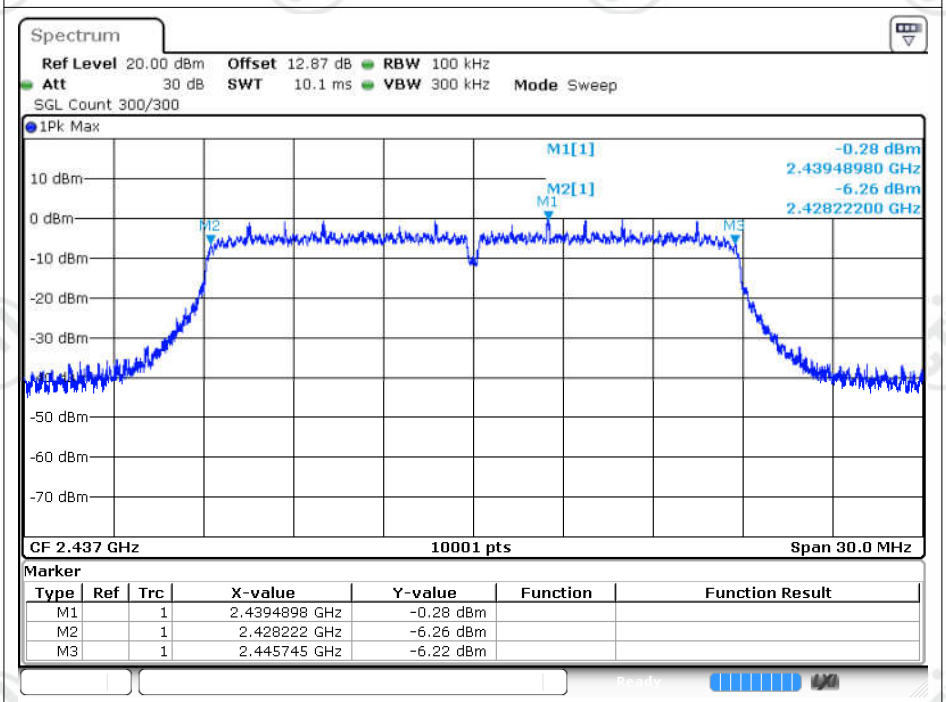
Date: 17.AUG.2024 13:02:42

-6dB Bandwidth NVNT n20 2412MHz Ant1



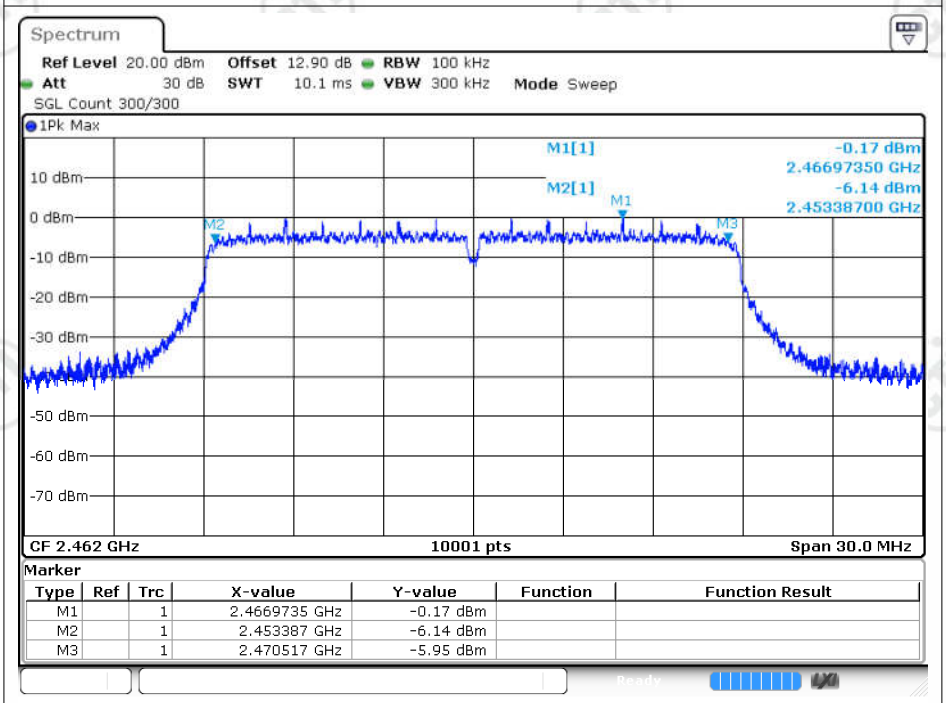
Date: 17.AUG.2024 13:05:13

-6dB Bandwidth NVNT n20 2437MHz Ant1



Date: 17.AUG.2024 13:07:10

-6dB Bandwidth NVNT n20 2462MHz Ant1

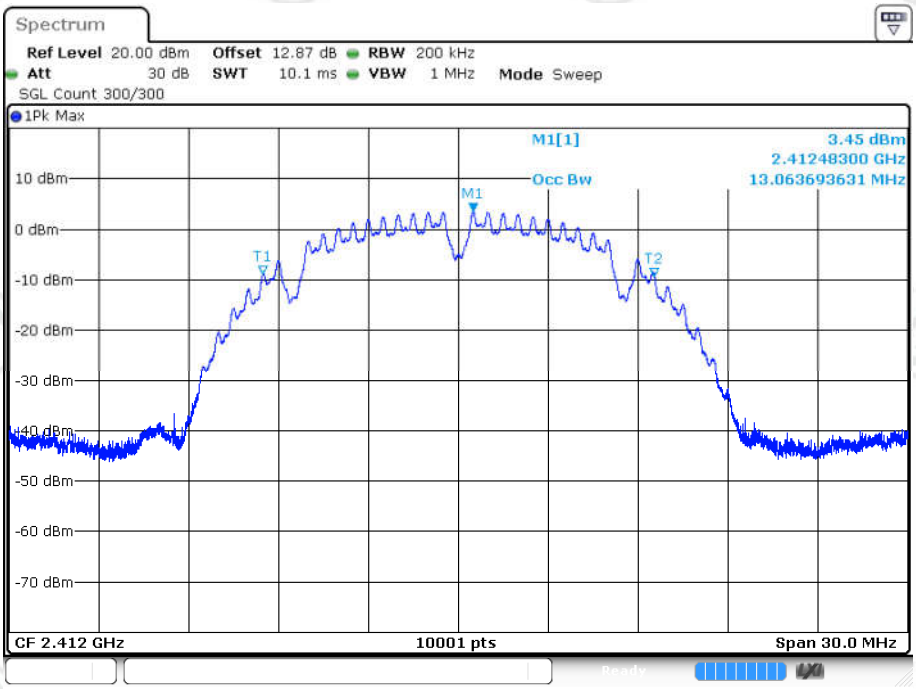


Occupied Channel Bandwidth

Condition	Mode	Frequency (MHz)	Antenna	99% OBW (MHz)
NVNT	b	2412	Ant1	13.064
NVNT	b	2437	Ant1	13.064
NVNT	b	2462	Ant1	13.061
NVNT	g	2412	Ant1	16.516
NVNT	g	2437	Ant1	16.522
NVNT	g	2462	Ant1	16.534
NVNT	n20	2412	Ant1	17.551
NVNT	n20	2437	Ant1	17.563
NVNT	n20	2462	Ant1	17.56

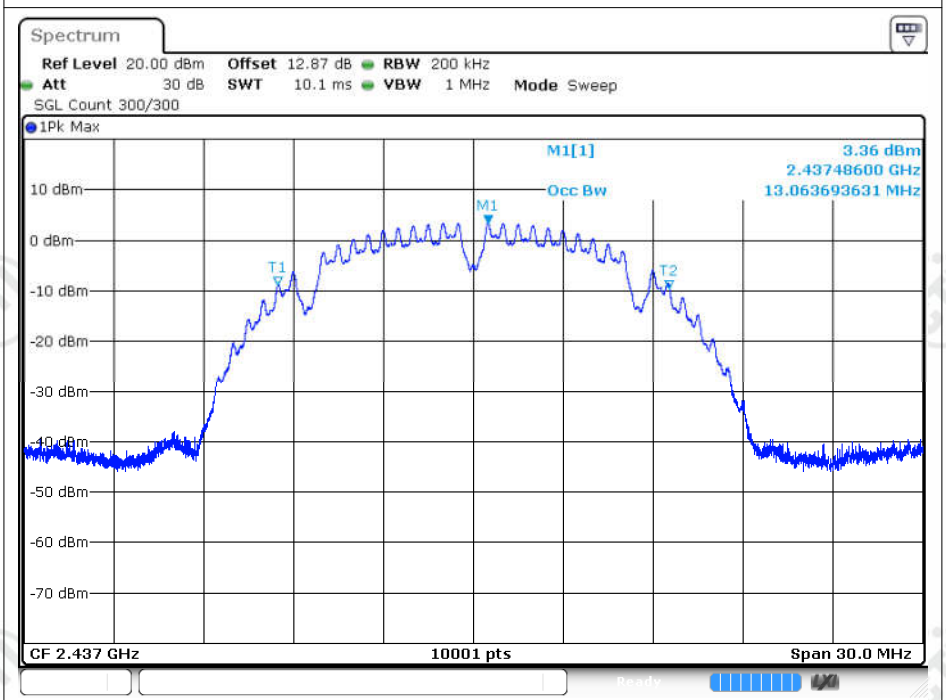
Test Graphs

OBW NVNT b 2412MHz Ant1



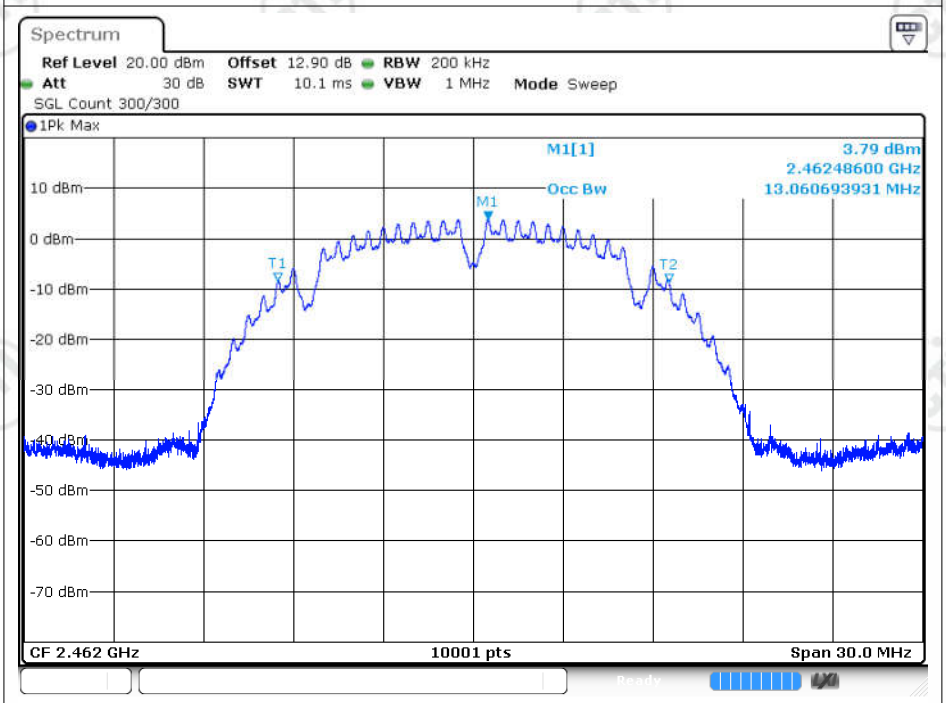
Date: 17.AUG.2024 12:46:37

OBW NVNT b 2437MHz Ant1



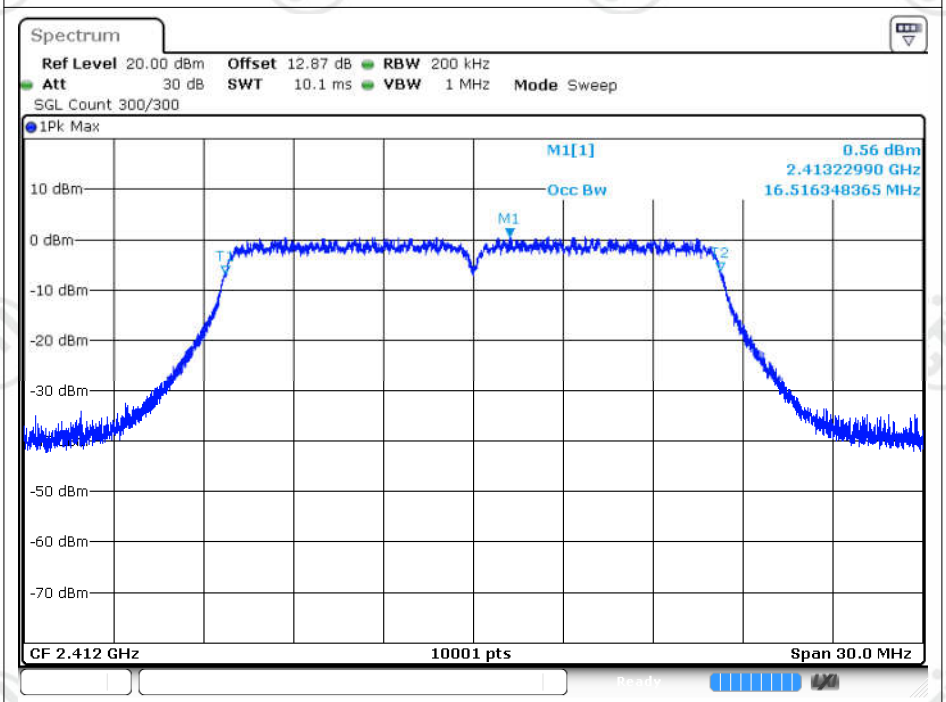
Date: 17.AUG.2024 12:48:33

OBW NVNT b 2462MHz Ant1



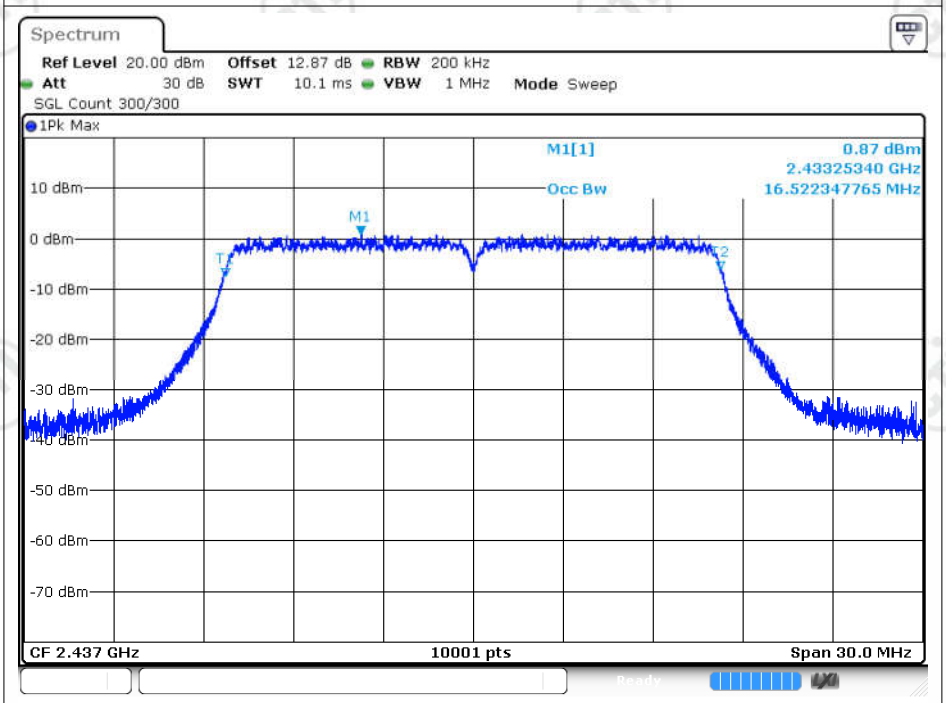
Date: 17.AUG.2024 12:43:47

OBW NVNT g 2412MHz Ant1



Date: 17.AUG.2024 12:50:02

OBW NVNT g 2437MHz Ant1



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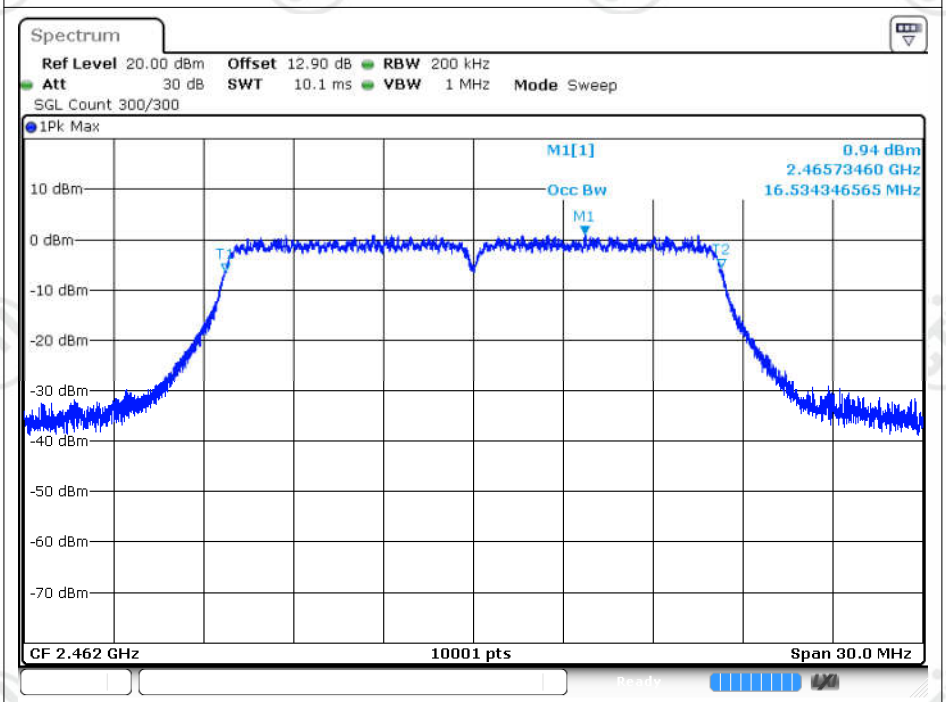
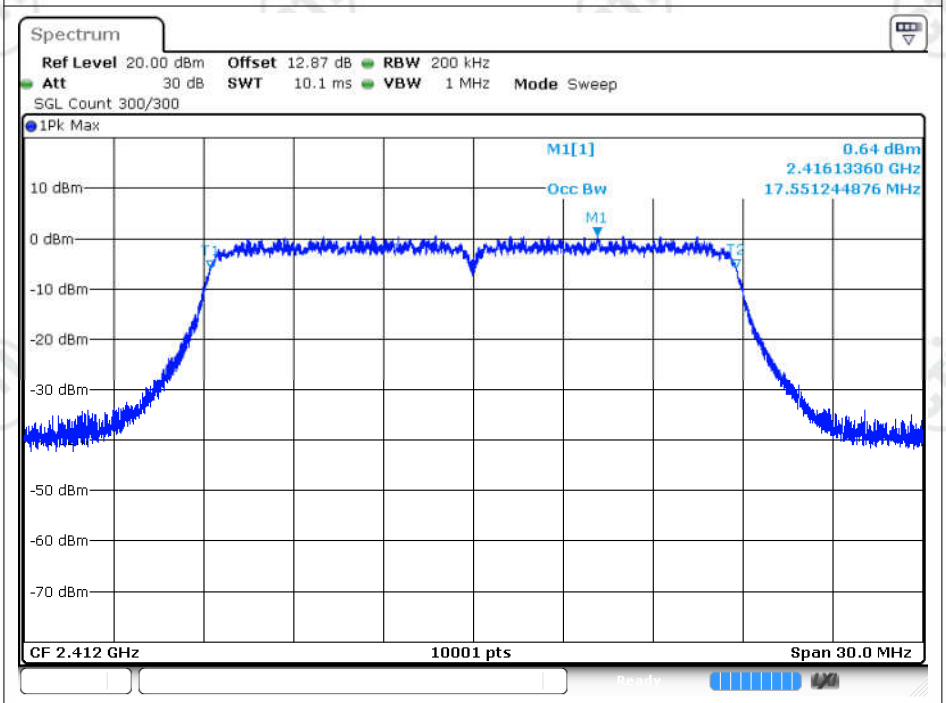
OBW NVNT g 2462MHz Ant1



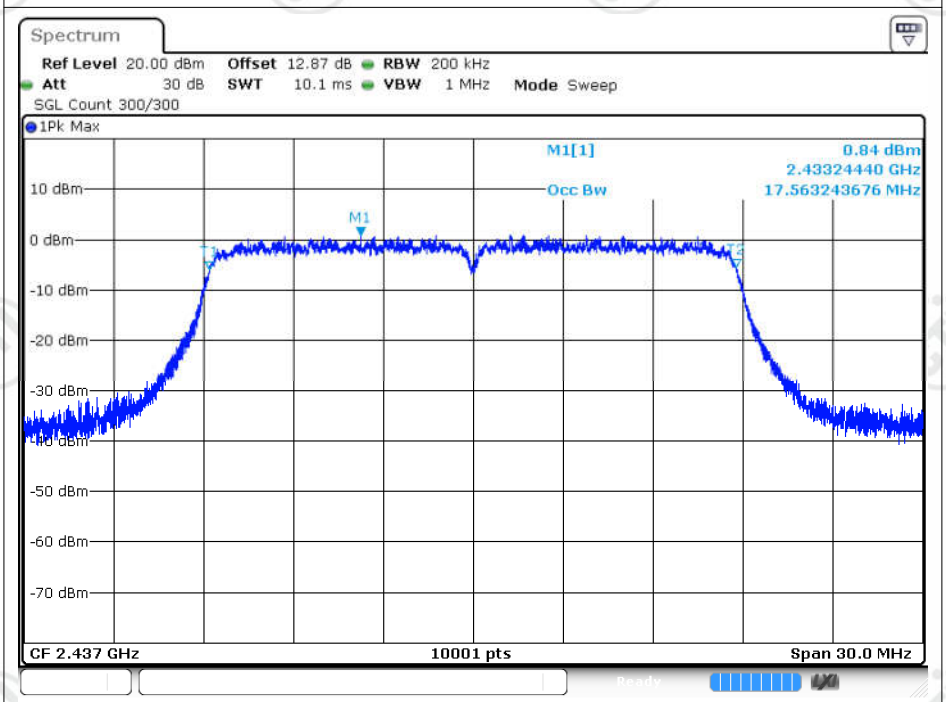
Date: 17.AUG.2024 13:02:30

OBW NVNT n20 2412MHz Ant1



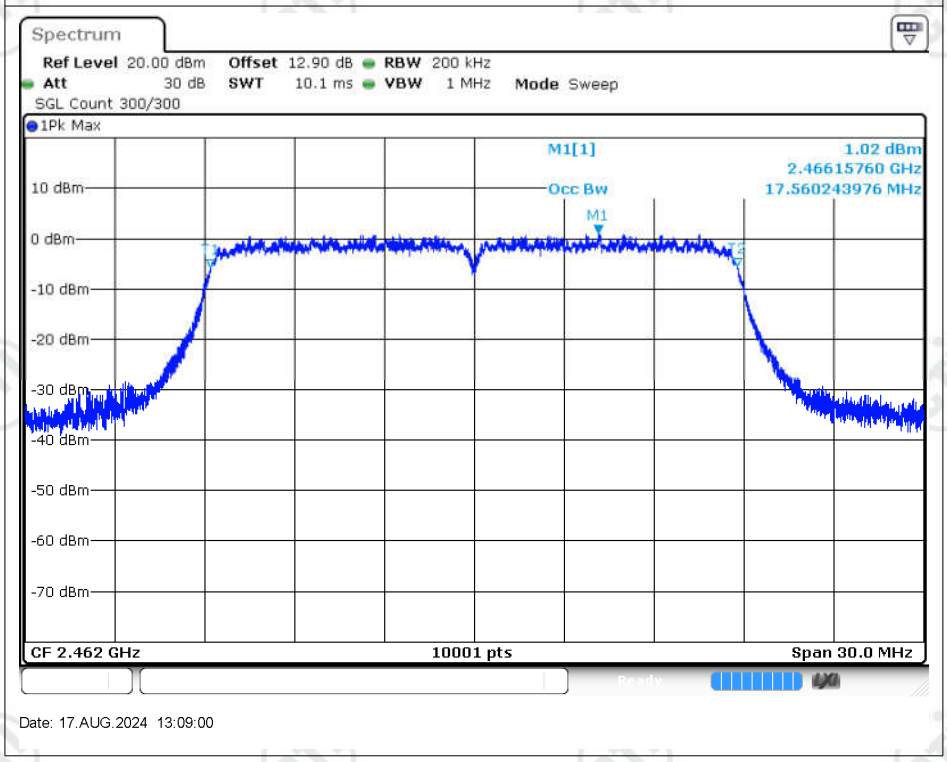
Date: 17.AUG.2024 13:05:02

OBW NVNT n20 2437MHz Ant1



Date: 17.AUG.2024 13:06:59

OBW NVNT n20 2462MHz Ant1

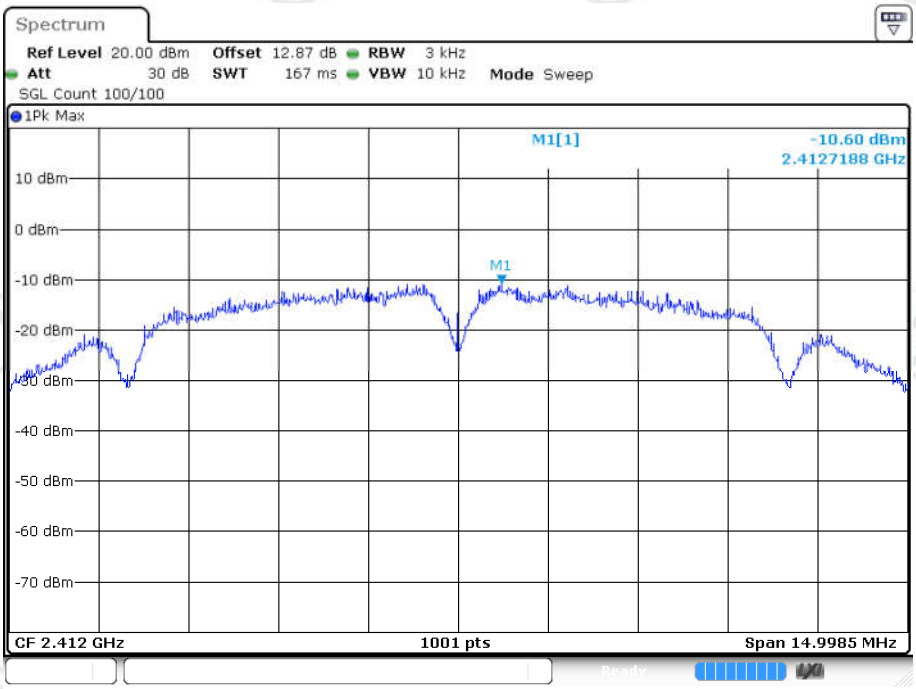


Maximum Power Spectral Density Level

Condition	Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3kHz)	Limit (dBm/3kHz)	Verdict
NVNT	b	2412	Ant1	-10.6	8	Pass
NVNT	b	2437	Ant1	-10.24	8	Pass
NVNT	b	2462	Ant1	-9.59	8	Pass
NVNT	g	2412	Ant1	-14.04	8	Pass
NVNT	g	2437	Ant1	-13.46	8	Pass
NVNT	g	2462	Ant1	-13.46	8	Pass
NVNT	n20	2412	Ant1	-12.83	8	Pass
NVNT	n20	2437	Ant1	-12.63	8	Pass
NVNT	n20	2462	Ant1	-12.64	8	Pass

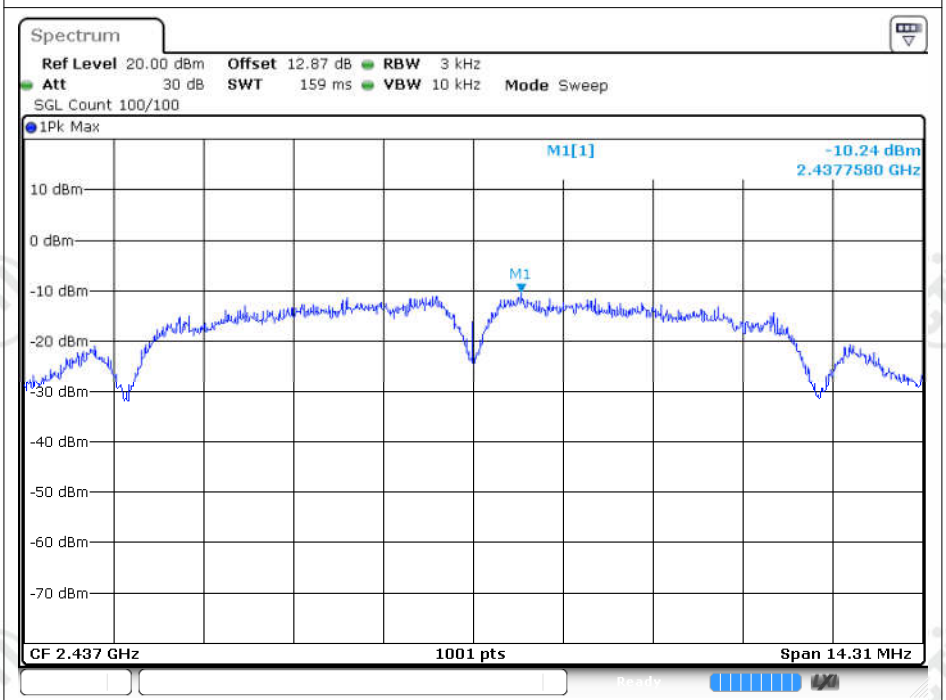
Test Graphs

PSD NVNT b 2412MHz Ant1



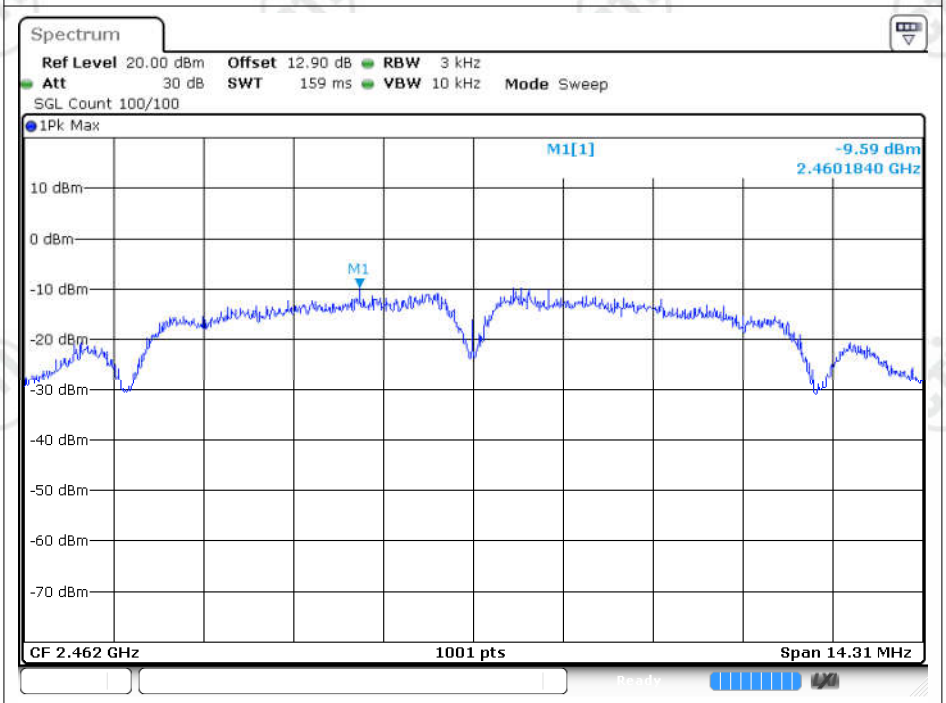
Date: 17.AUG.2024 12:47:20

PSD NVNT b 2437MHz Ant1



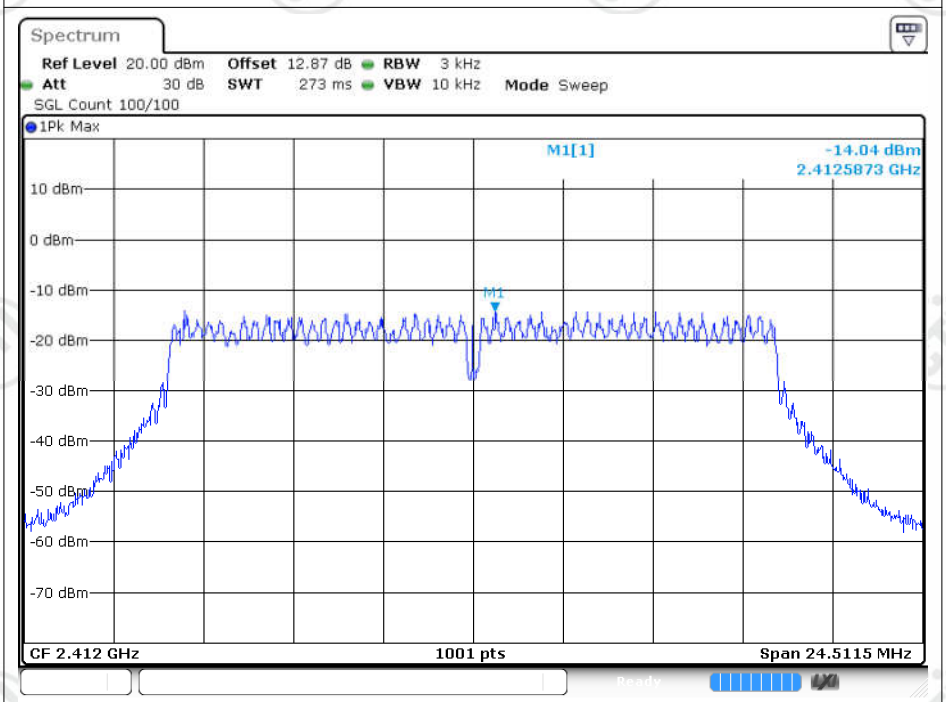
Date: 17.AUG.2024 12:49:11

PSD NVNT b 2462MHz Ant1



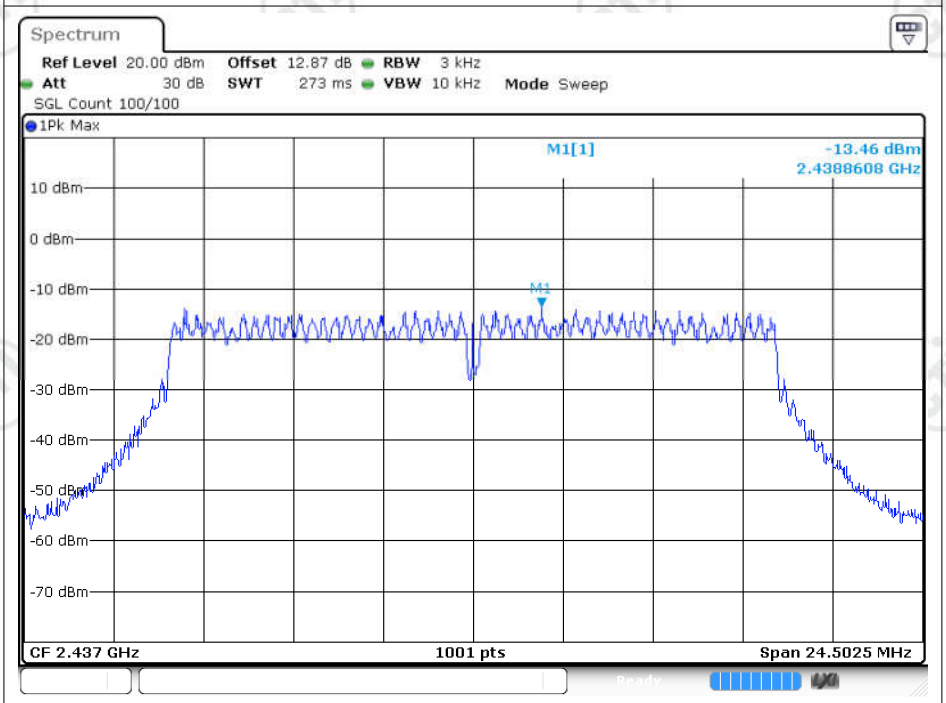
Date: 17.AUG.2024 12:44:22

PSD NVNT g 2412MHz Ant1



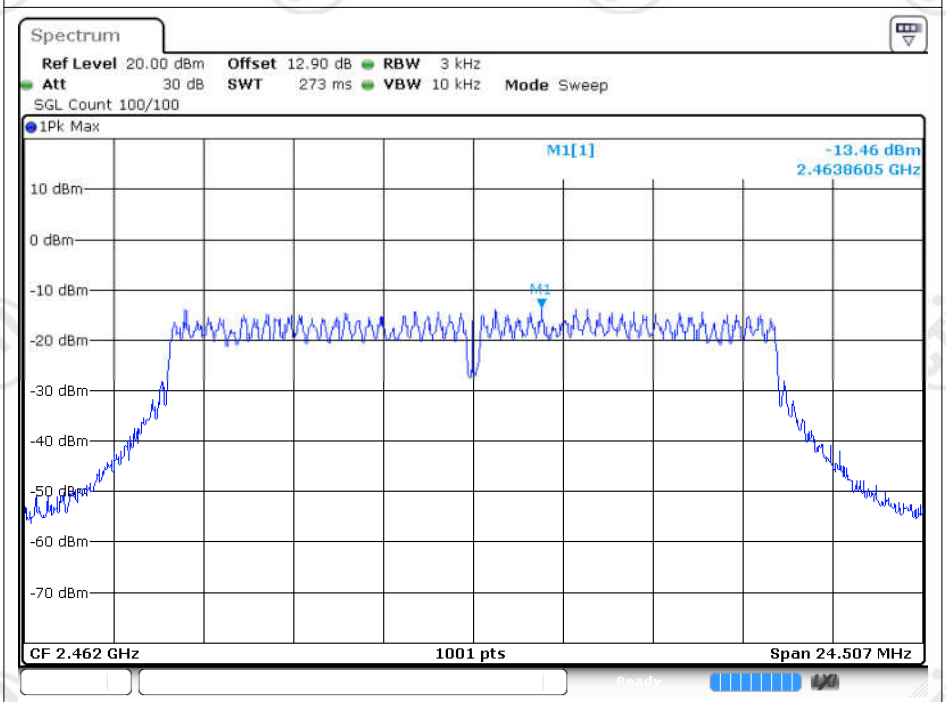
Date: 17.AUG.2024 12:50:49

PSD NVNT g 2437MHz Ant1



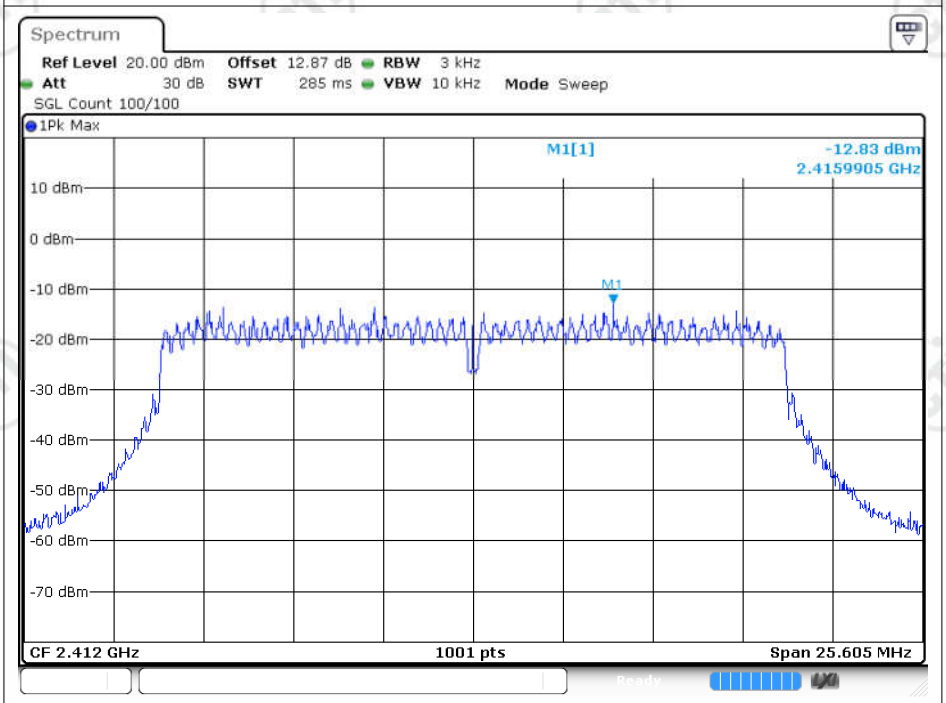
Date: 17.AUG.2024 12:53:35

PSD NVNT g 2462MHz Ant1



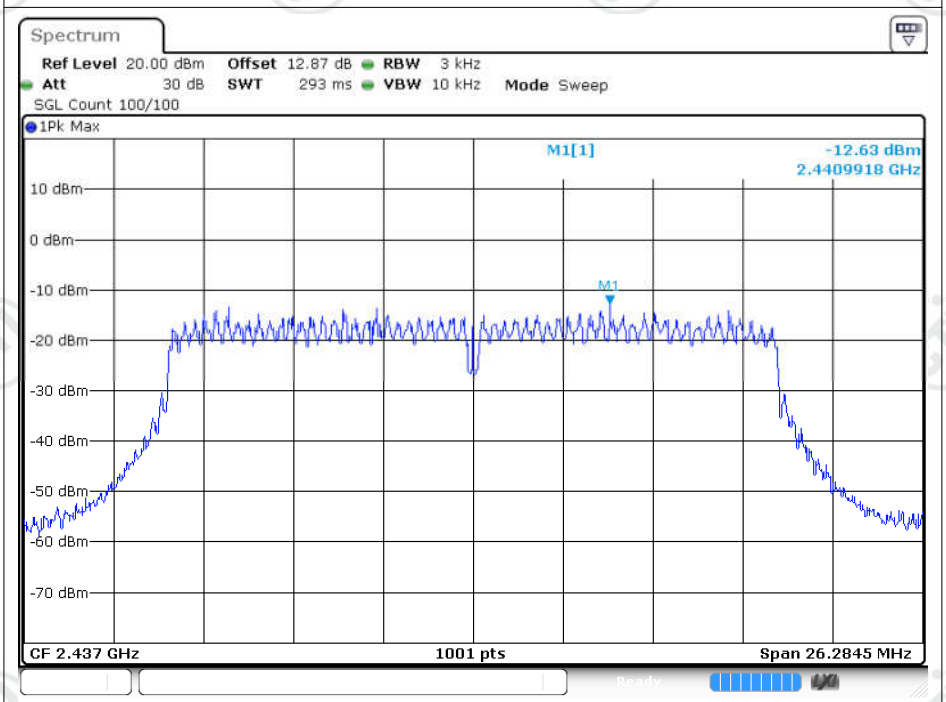
Date: 17.AUG.2024 13:03:19

PSD NVNT n20 2412MHz Ant1



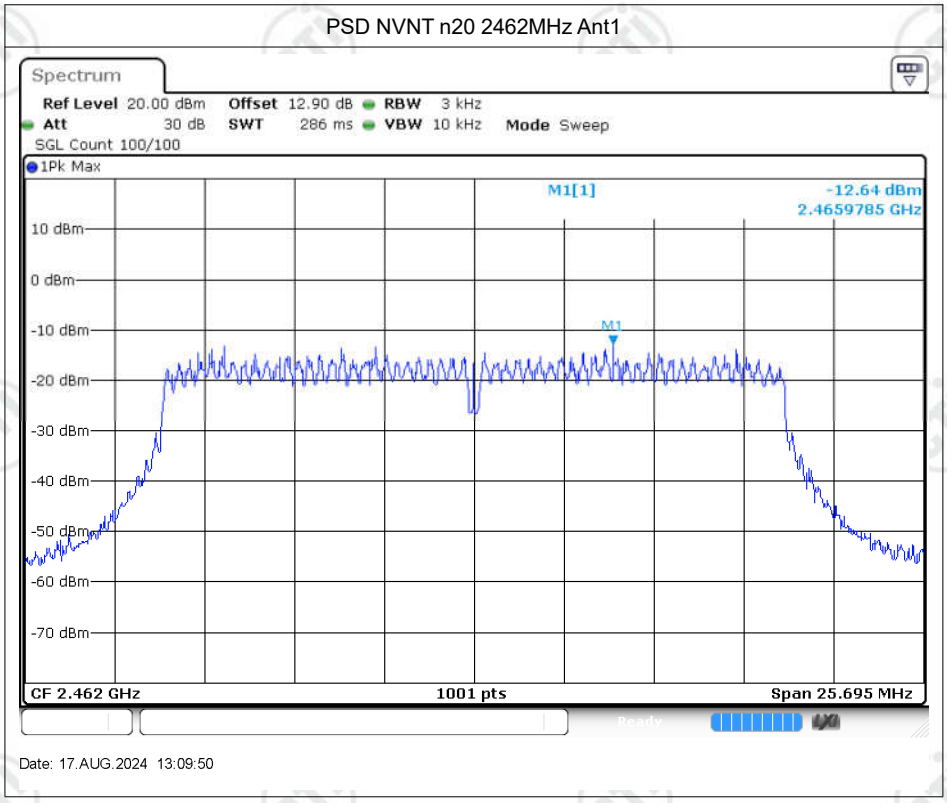
Date: 17.AUG.2024 13:05:51

PSD NVNT n20 2437MHz Ant1



Date: 17.AUG.2024 13:08:09

PSD NVNT n20 2462MHz Ant1

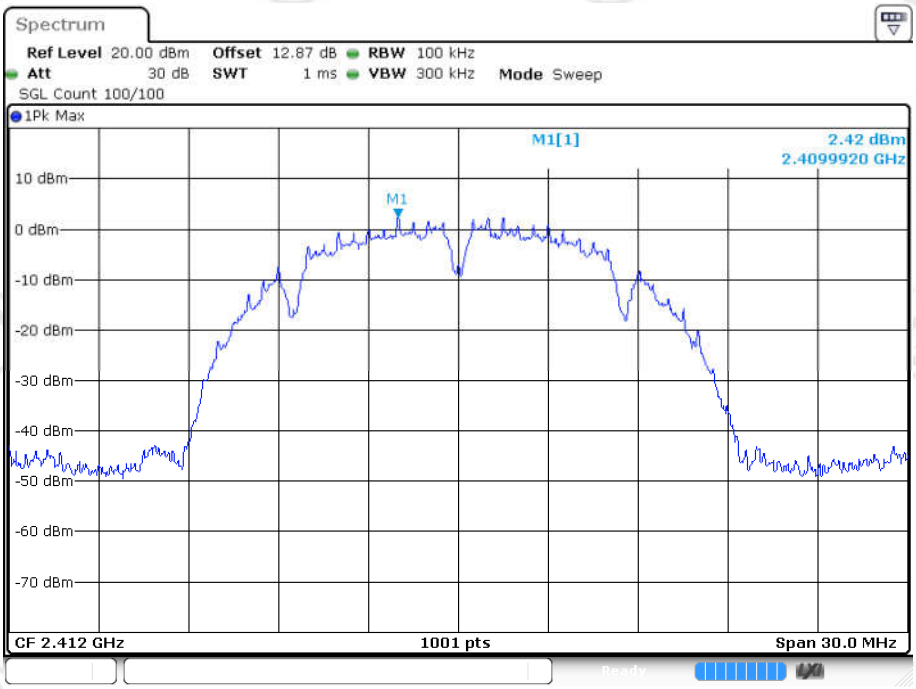


Band Edge

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-46.22	-20	Pass
NVNT	b	2462	Ant1	-48.02	-20	Pass
NVNT	g	2412	Ant1	-40.37	-20	Pass
NVNT	g	2462	Ant1	-41.63	-20	Pass
NVNT	n20	2412	Ant1	-38.63	-20	Pass
NVNT	n20	2462	Ant1	-41.64	-20	Pass

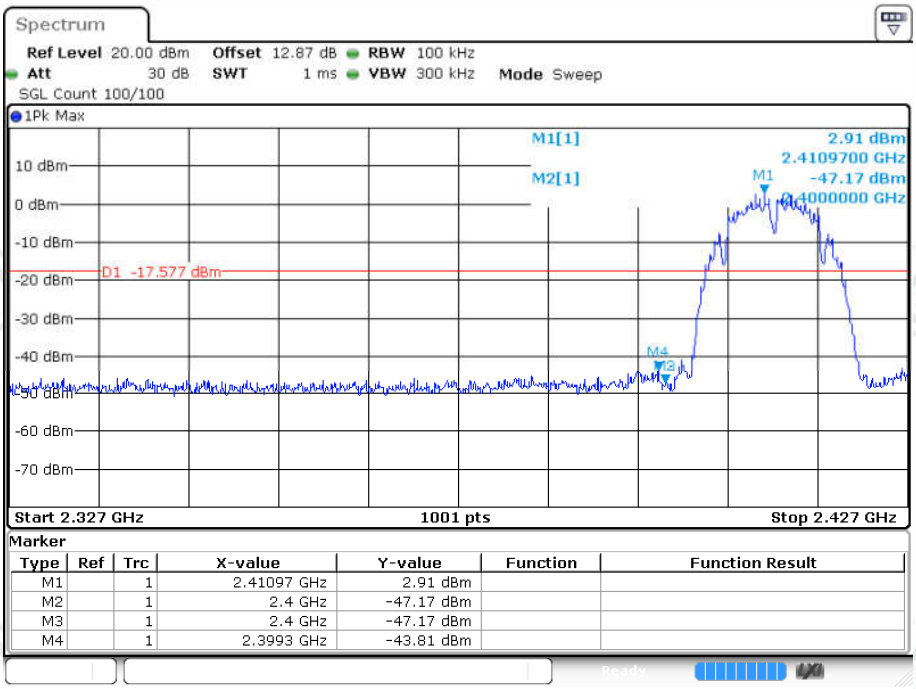
Test Graphs

Band Edge NVNT b 2412MHz Ant1 Ref



Date: 17.AUG.2024 12:47:24

Band Edge NVNT b 2412MHz Ant1 Emission

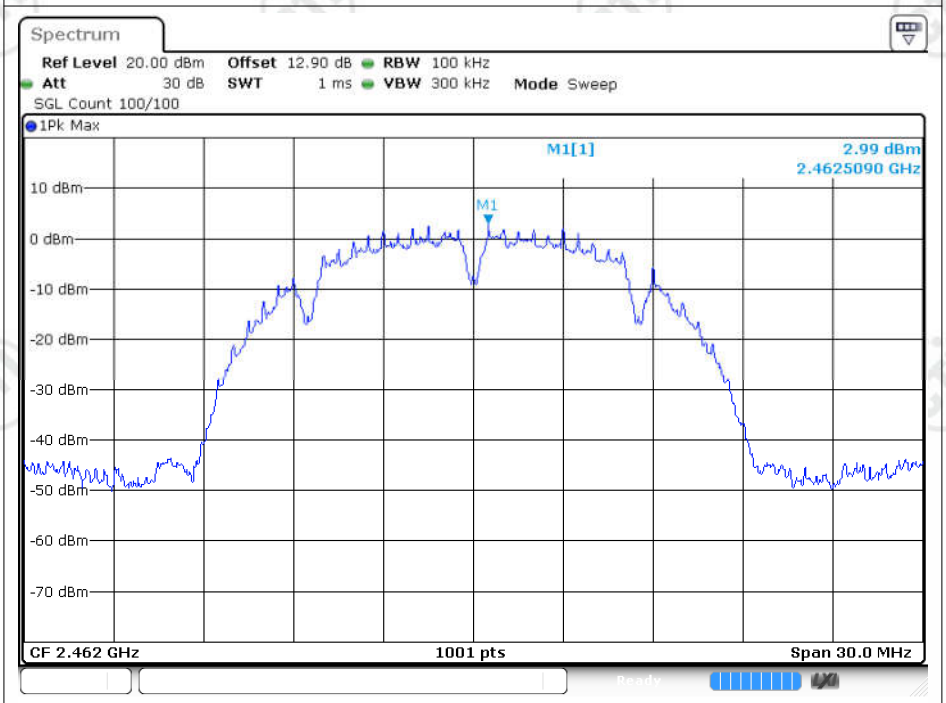


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.41097 GHz	2.91 dBm		
M2		1	2.4 GHz	-47.17 dBm		
M3		1	2.4 GHz	-47.17 dBm		
M4		1	2.3993 GHz	-43.81 dBm		

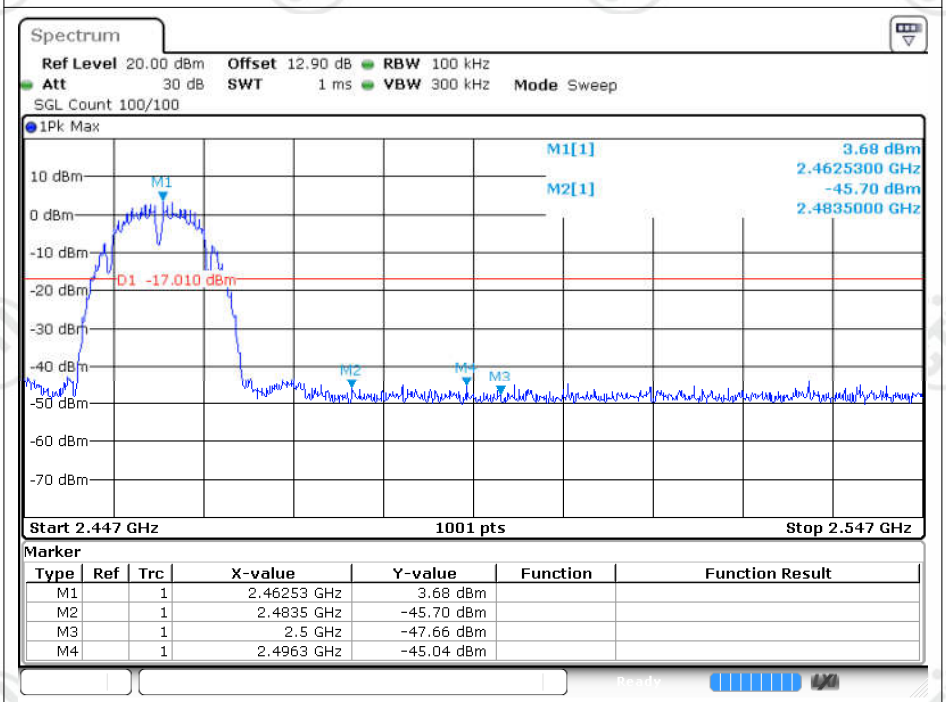
Date: 17.AUG.2024 12:47:26

Band Edge NVNT b 2462MHz Ant1 Ref



Date: 17.AUG.2024 12:44:26

Band Edge NVNT b 2462MHz Ant1 Emission

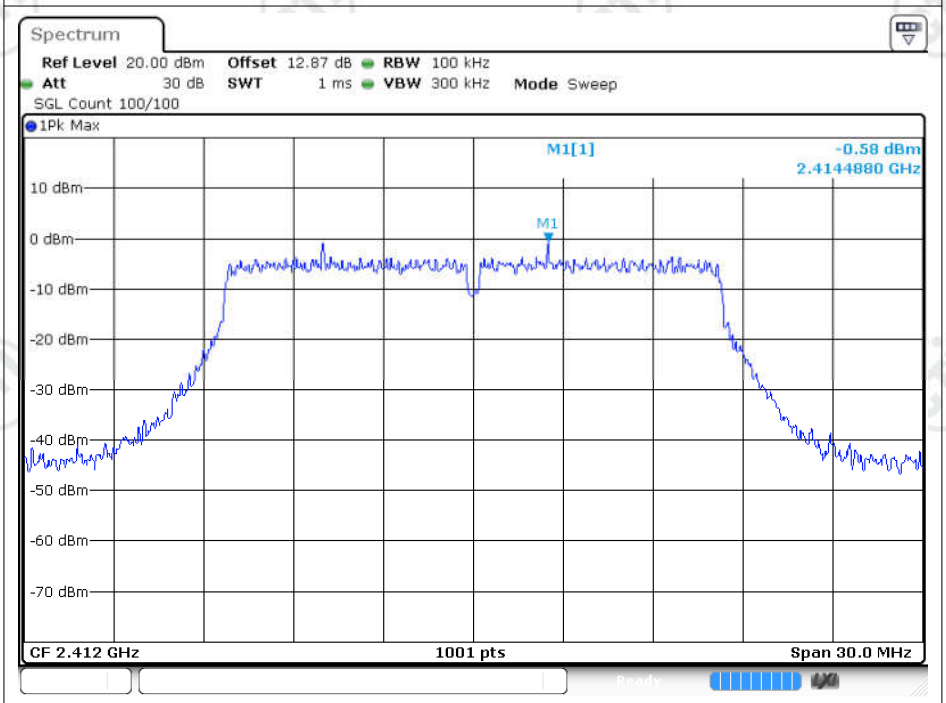


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.46253 GHz	3.68 dBm		
M2		1	2.4835 GHz	-45.70 dBm		
M3		1	2.5 GHz	-47.66 dBm		
M4		1	2.4963 GHz	-45.04 dBm		

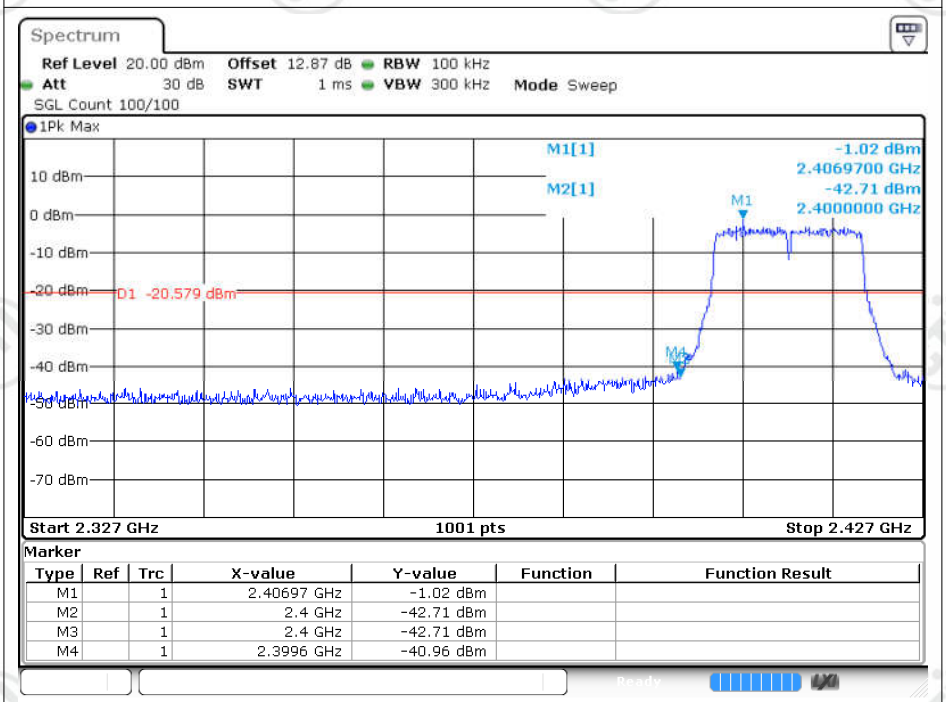
Date: 17.AUG.2024 12:44:27

Band Edge NVNT g 2412MHz Ant1 Ref



Date: 17.AUG.2024 12:50:53

Band Edge NVNT g 2412MHz Ant1 Emission

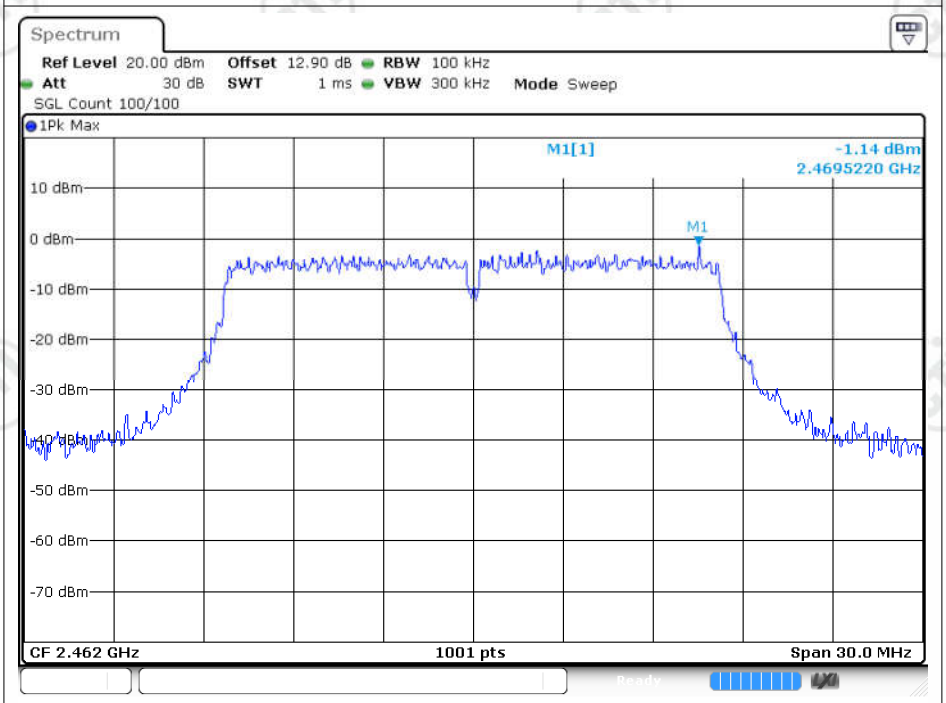


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.40697 GHz	-1.02 dBm		
M2		1	2.4 GHz	-42.71 dBm		
M3		1	2.4 GHz	-42.71 dBm		
M4		1	2.3996 GHz	-40.96 dBm		

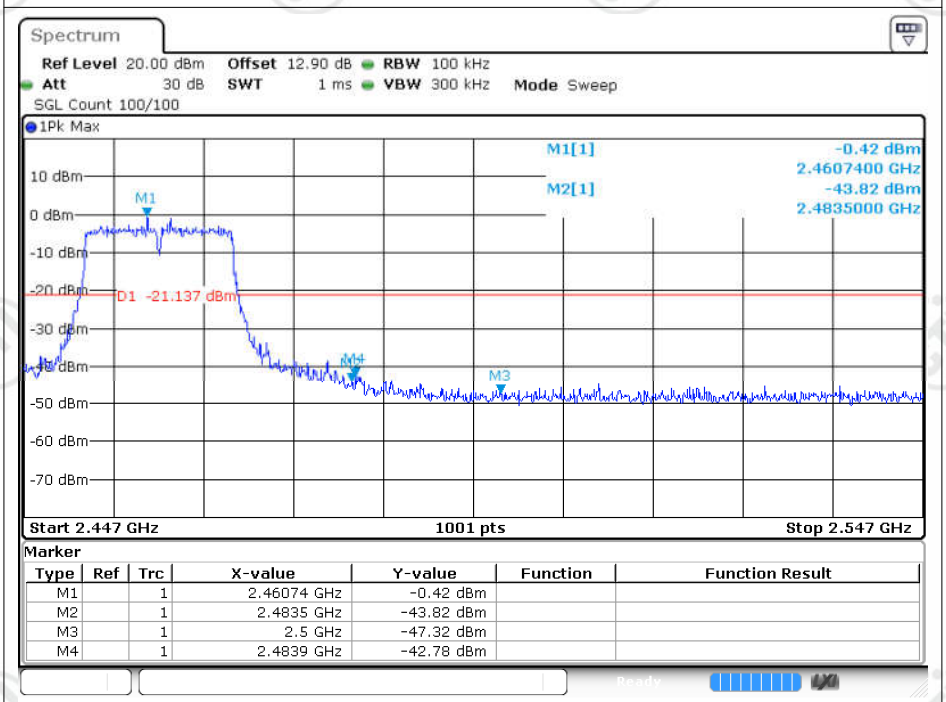
Date: 17.AUG.2024 12:50:54

Band Edge NVNT g 2462MHz Ant1 Ref



Date: 17.AUG.2024 13:03:23

Band Edge NVNT g 2462MHz Ant1 Emission

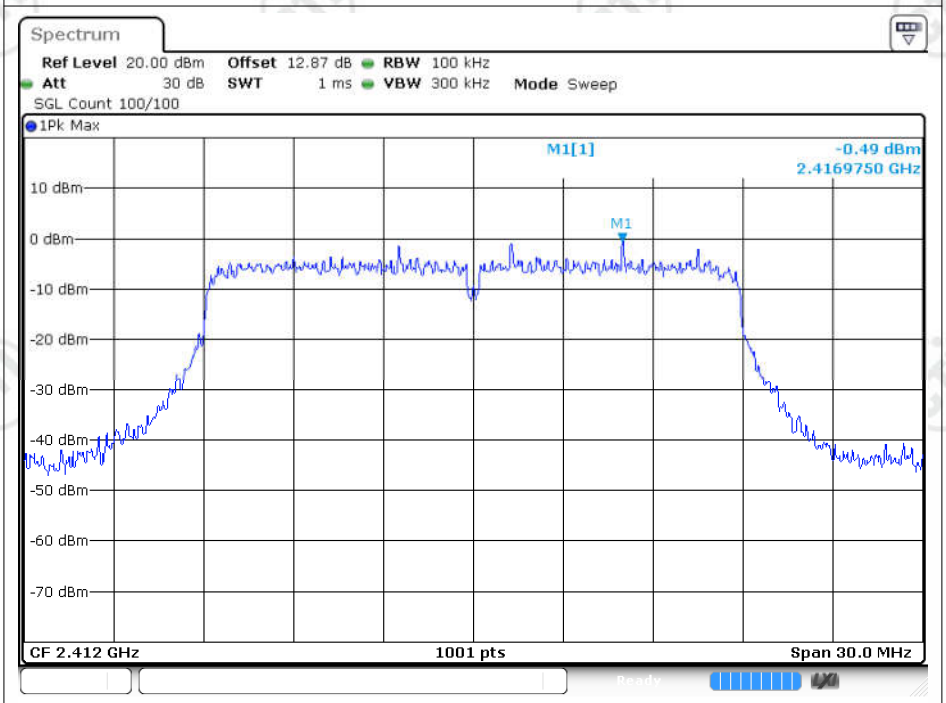


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.46074 GHz	-0.42 dBm		
M2		1	2.4835 GHz	-43.82 dBm		
M3		1	2.5 GHz	-47.32 dBm		
M4		1	2.4839 GHz	-42.78 dBm		

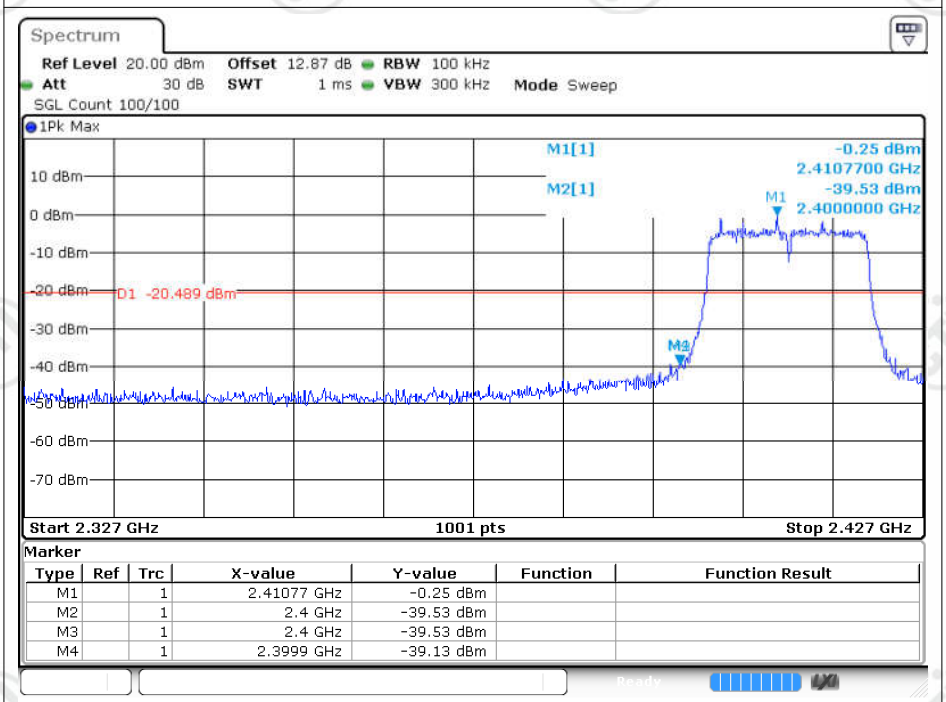
Date: 17.AUG.2024 13:03:24

Band Edge NVNT n20 2412MHz Ant1 Ref



Date: 17.AUG.2024 13:05:54

Band Edge NVNT n20 2412MHz Ant1 Emission

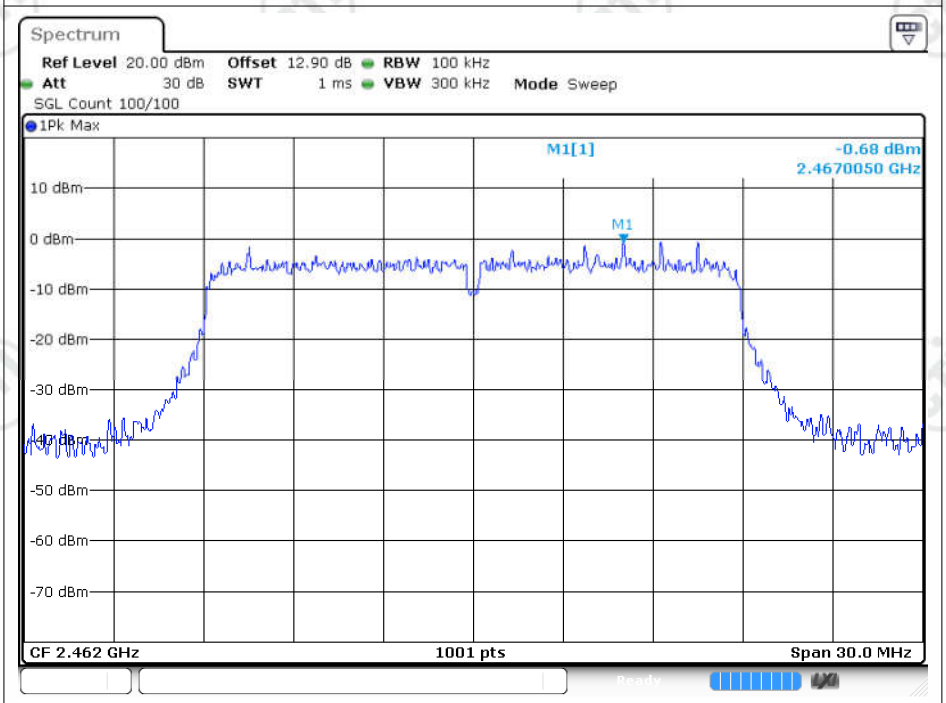


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.41077 GHz	-0.25 dBm		
M2		1	2.4 GHz	-39.53 dBm		
M3		1	2.4 GHz	-39.53 dBm		
M4		1	2.3999 GHz	-39.13 dBm		

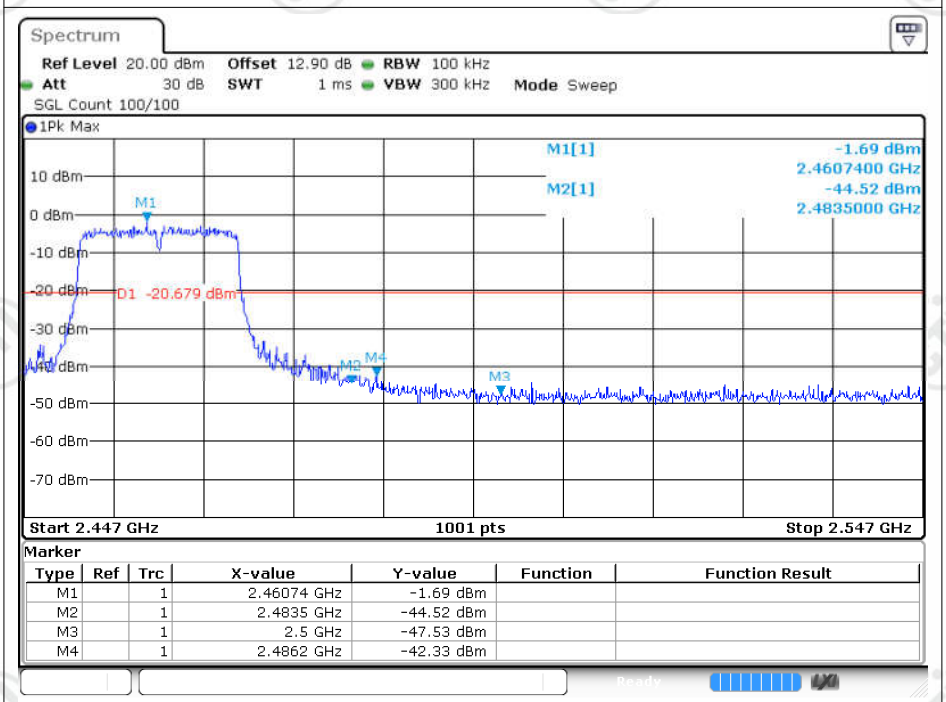
Date: 17.AUG.2024 13:05:56

Band Edge NVNT n20 2462MHz Ant1 Ref



Date: 17.AUG.2024 13:09:54

Band Edge NVNT n20 2462MHz Ant1 Emission



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.46074 GHz	-1.69 dBm		
M2		1	2.4835 GHz	-44.52 dBm		
M3		1	2.5 GHz	-47.53 dBm		
M4		1	2.4862 GHz	-42.33 dBm		

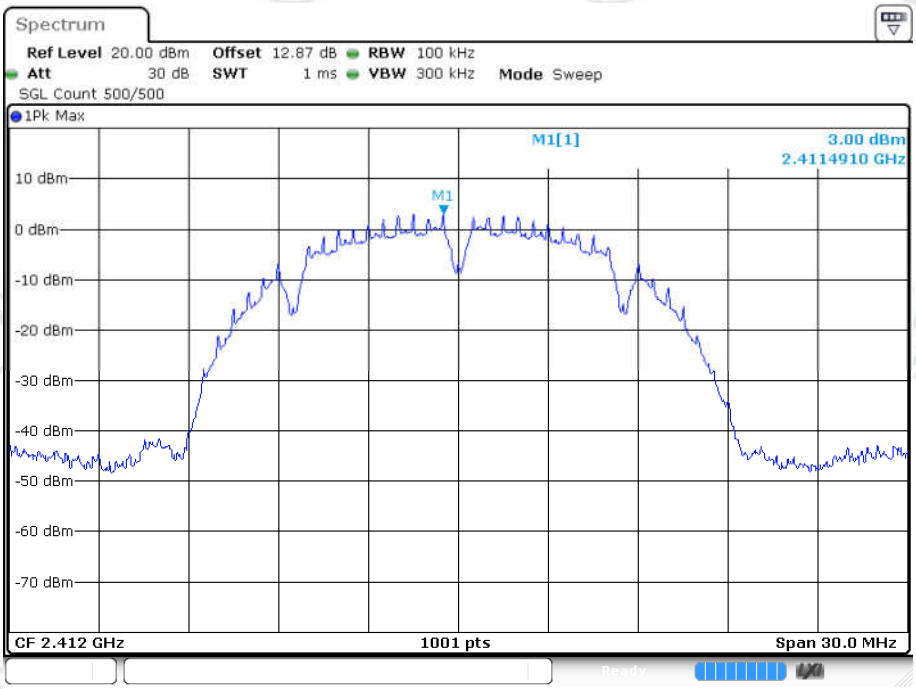
Date: 17.AUG.2024 13:09:55

Conducted RF Spurious Emission

Condition	Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
NVNT	b	2412	Ant1	-41.95	-20	Pass
NVNT	b	2437	Ant1	-42.93	-20	Pass
NVNT	b	2462	Ant1	-40.48	-20	Pass
NVNT	g	2412	Ant1	-37.87	-20	Pass
NVNT	g	2437	Ant1	-38.32	-20	Pass
NVNT	g	2462	Ant1	-38.78	-20	Pass
NVNT	n20	2412	Ant1	-37.56	-20	Pass
NVNT	n20	2437	Ant1	-38.63	-20	Pass
NVNT	n20	2462	Ant1	-38.19	-20	Pass

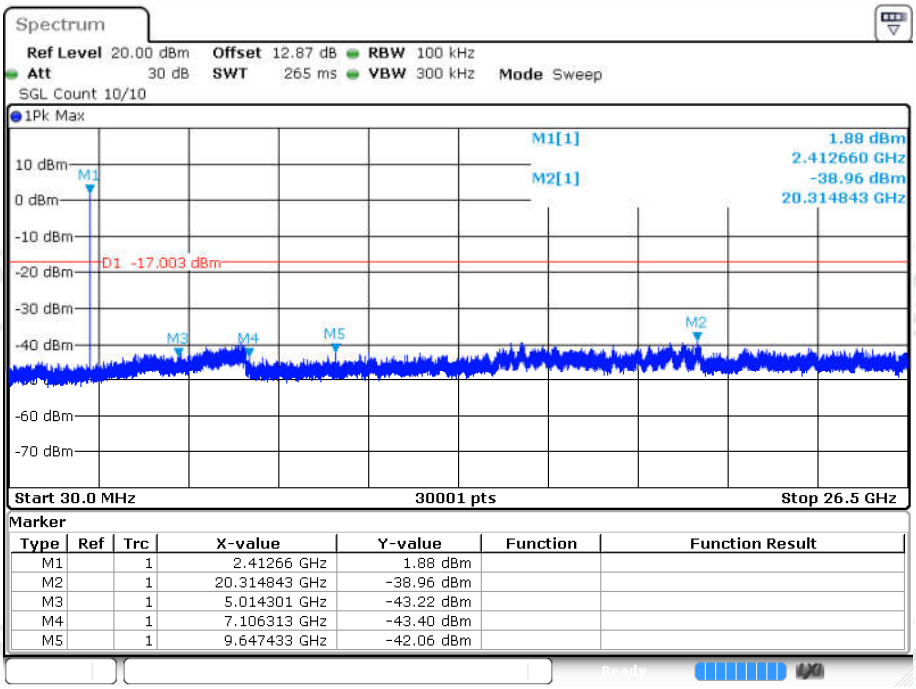
Test Graphs

Tx. Spurious NVNT b 2412MHz Ant1 Ref



Date: 17.AUG.2024 12:47:35

Tx. Spurious NVNT b 2412MHz Ant1 Emission

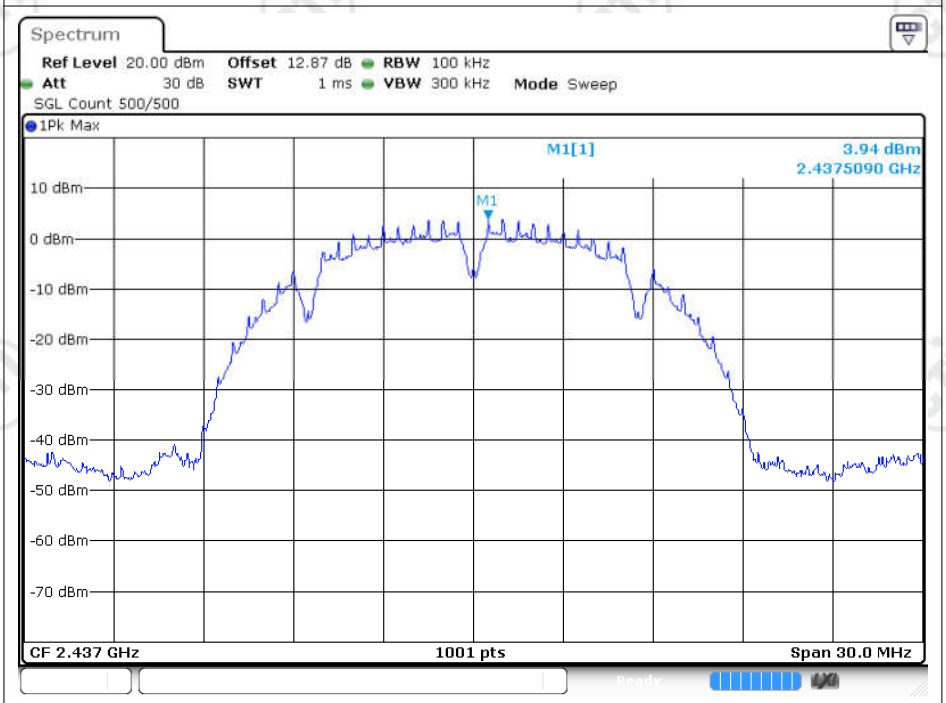


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.41266 GHz	1.88 dBm		
M2		1	20.314843 GHz	-38.96 dBm		
M3		1	5.014301 GHz	-43.22 dBm		
M4		1	7.106313 GHz	-43.40 dBm		
M5		1	9.647433 GHz	-42.06 dBm		

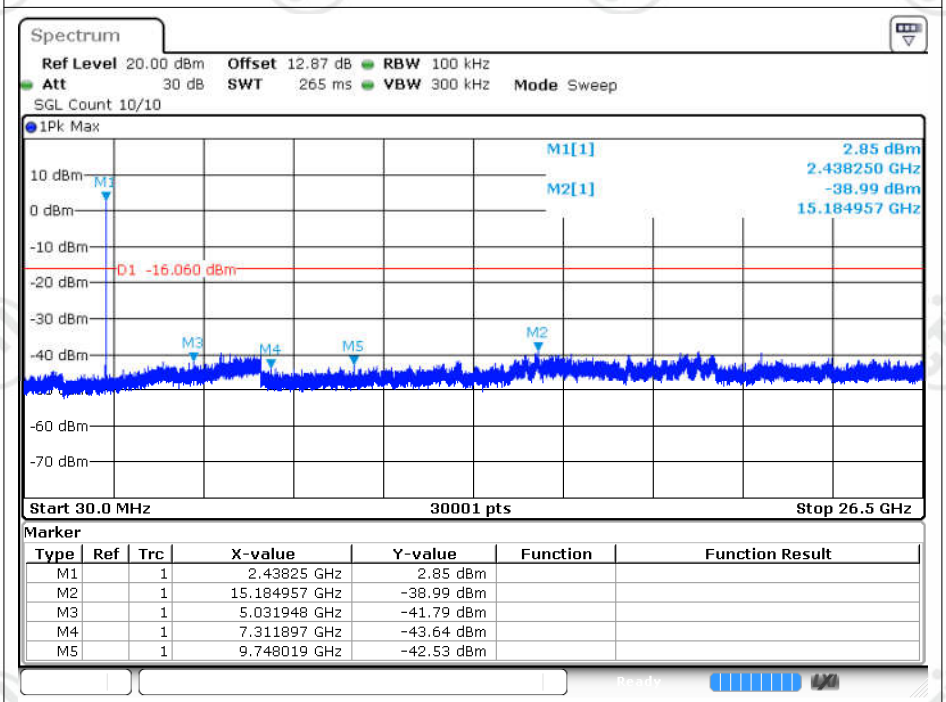
Date: 17.AUG.2024 12:47:46

Tx. Spurious NVNT b 2437MHz Ant1 Ref



Date: 17.AUG.2024 12:42:32

Tx. Spurious NVNT b 2437MHz Ant1 Emission

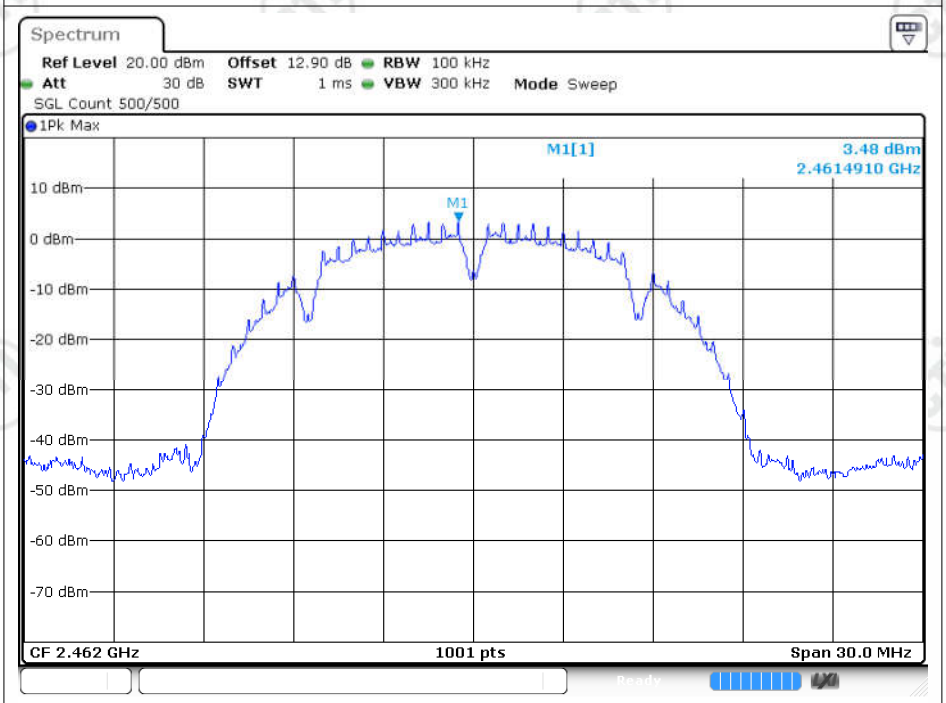


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.43825 GHz	2.85 dBm		
M2		1	15.184957 GHz	-38.99 dBm		
M3		1	5.031948 GHz	-41.79 dBm		
M4		1	7.311897 GHz	-43.64 dBm		
M5		1	9.748019 GHz	-42.53 dBm		

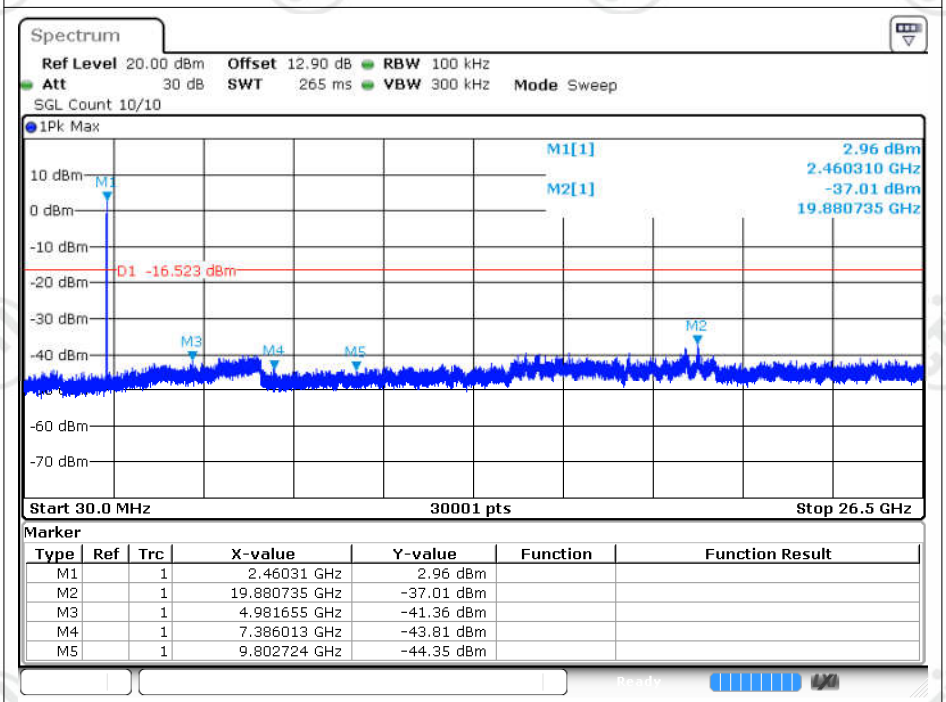
Date: 17.AUG.2024 12:42:43

Tx. Spurious NVNT b 2462MHz Ant1 Ref



Date: 17.AUG.2024 12:44:37

Tx. Spurious NVNT b 2462MHz Ant1 Emission

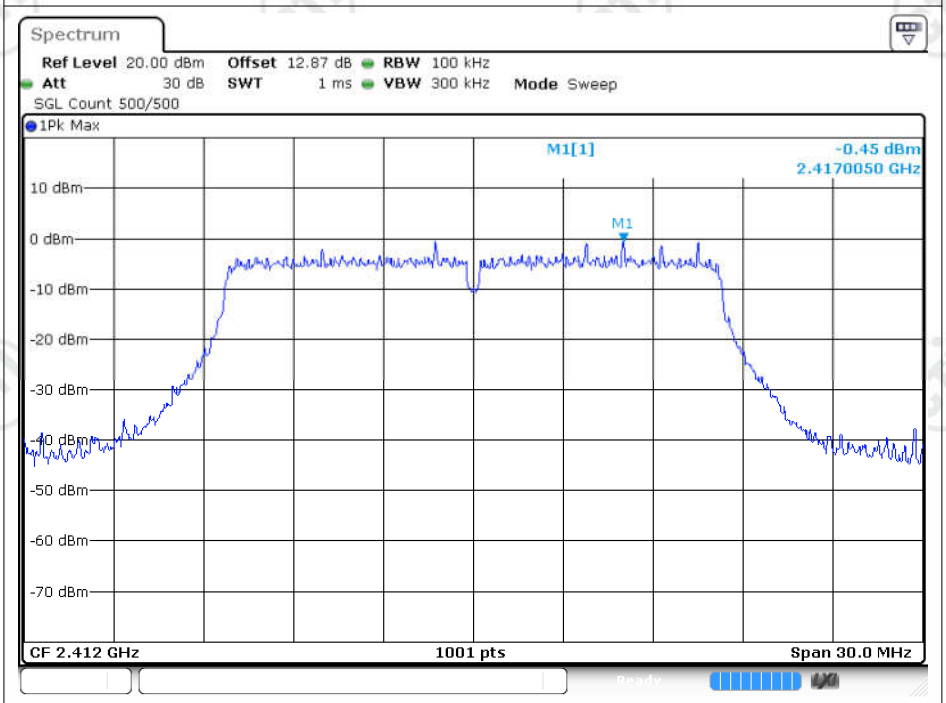


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.46031 GHz	2.96 dBm		
M2		1	19.880735 GHz	-37.01 dBm		
M3		1	4.981655 GHz	-41.36 dBm		
M4		1	7.386013 GHz	-43.81 dBm		
M5		1	9.802724 GHz	-44.35 dBm		

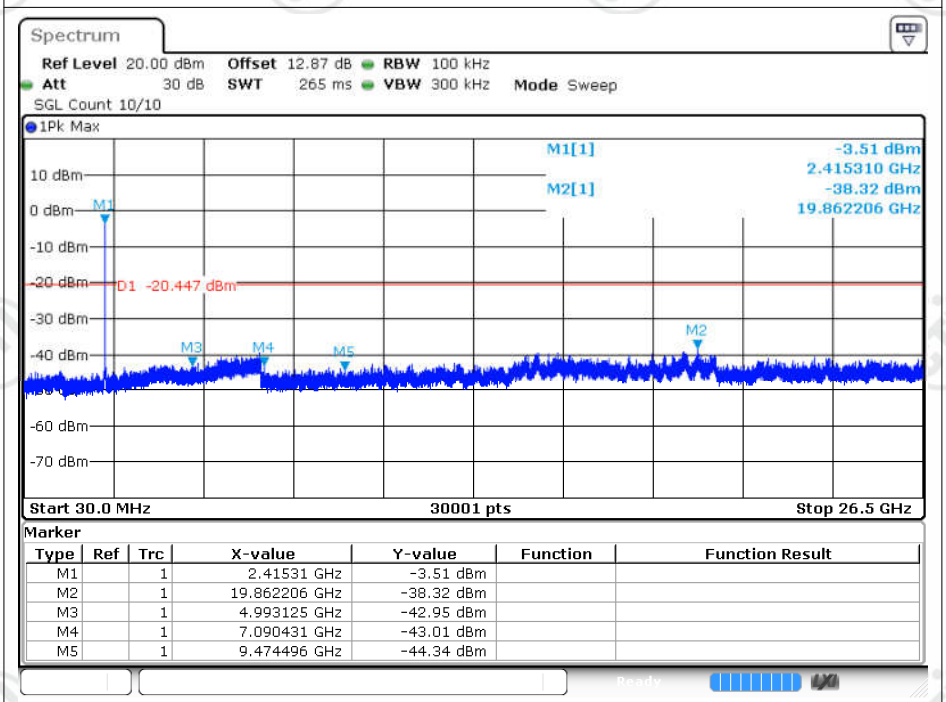
Date: 17.AUG.2024 12:44:49

Tx. Spurious NVNT g 2412MHz Ant1 Ref



Date: 17.AUG.2024 12:51:02

Tx. Spurious NVNT g 2412MHz Ant1 Emission

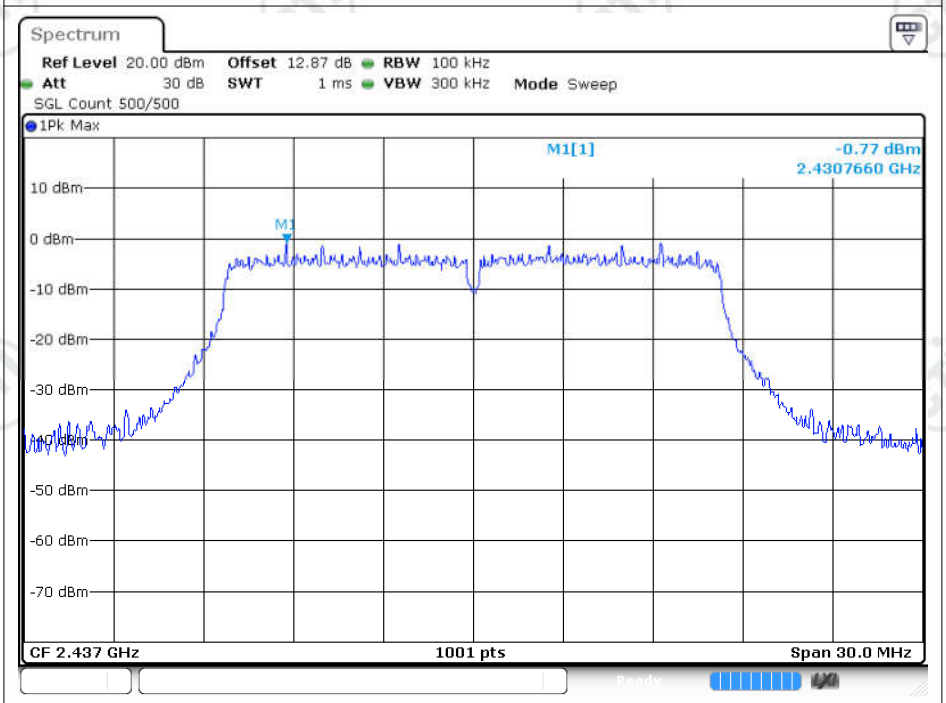


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.41531 GHz	-3.51 dBm		
M2		1	19.862206 GHz	-38.32 dBm		
M3		1	4.993125 GHz	-42.95 dBm		
M4		1	7.090431 GHz	-43.01 dBm		
M5		1	9.474496 GHz	-44.34 dBm		

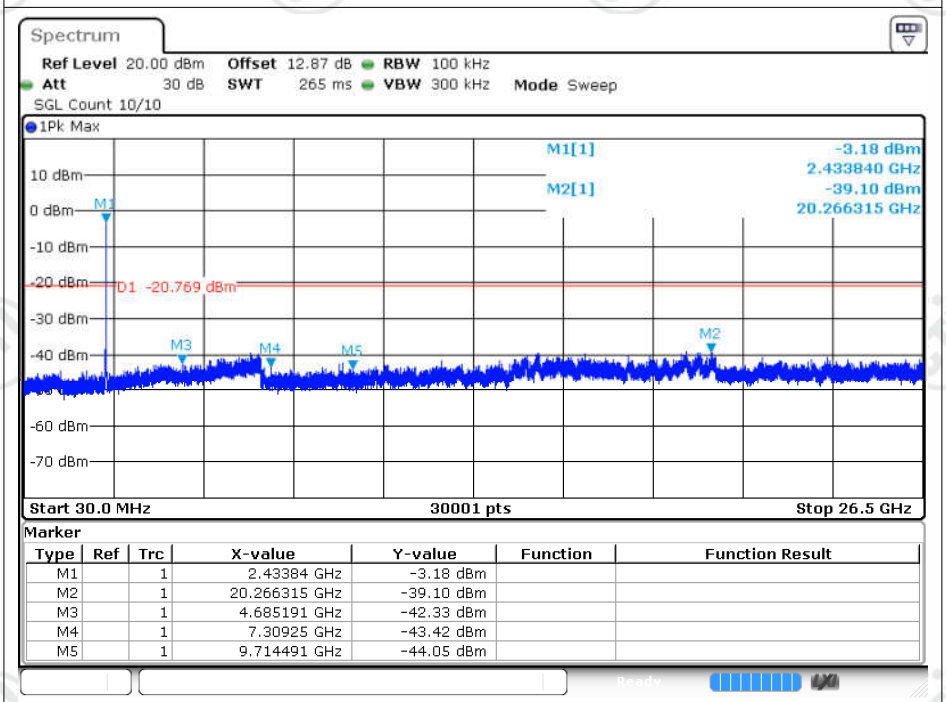
Date: 17.AUG.2024 12:51:13

Tx. Spurious NVNT g 2437MHz Ant1 Ref



Date: 17.AUG.2024 12:52:47

Tx. Spurious NVNT g 2437MHz Ant1 Emission

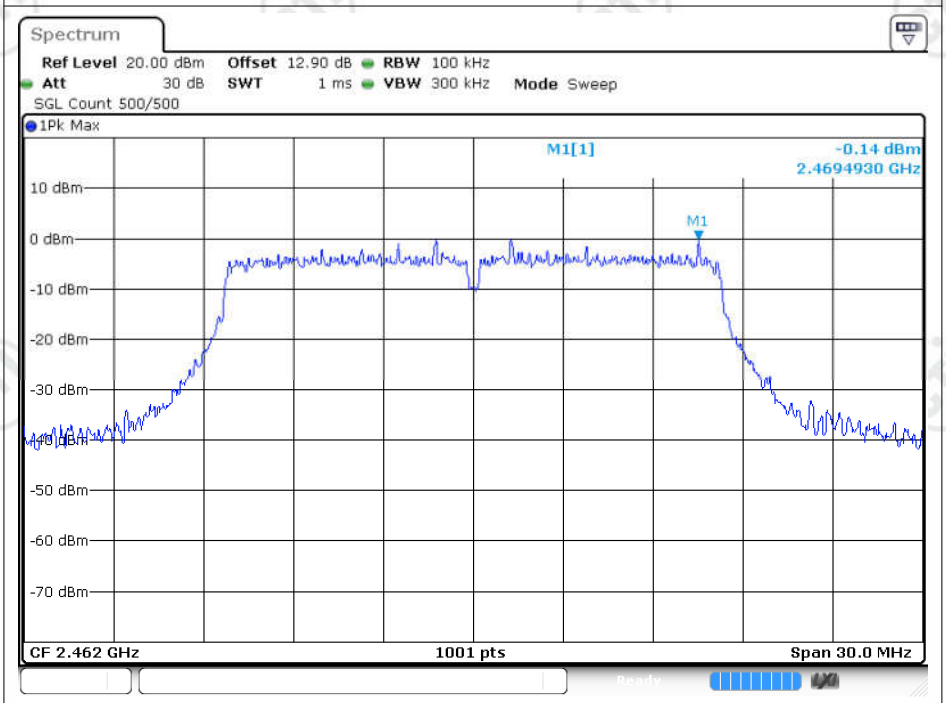


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.43384 GHz	-3.18 dBm		
M2		1	20.266315 GHz	-39.10 dBm		
M3		1	4.685191 GHz	-42.33 dBm		
M4		1	7.30925 GHz	-43.42 dBm		
M5		1	9.714491 GHz	-44.05 dBm		

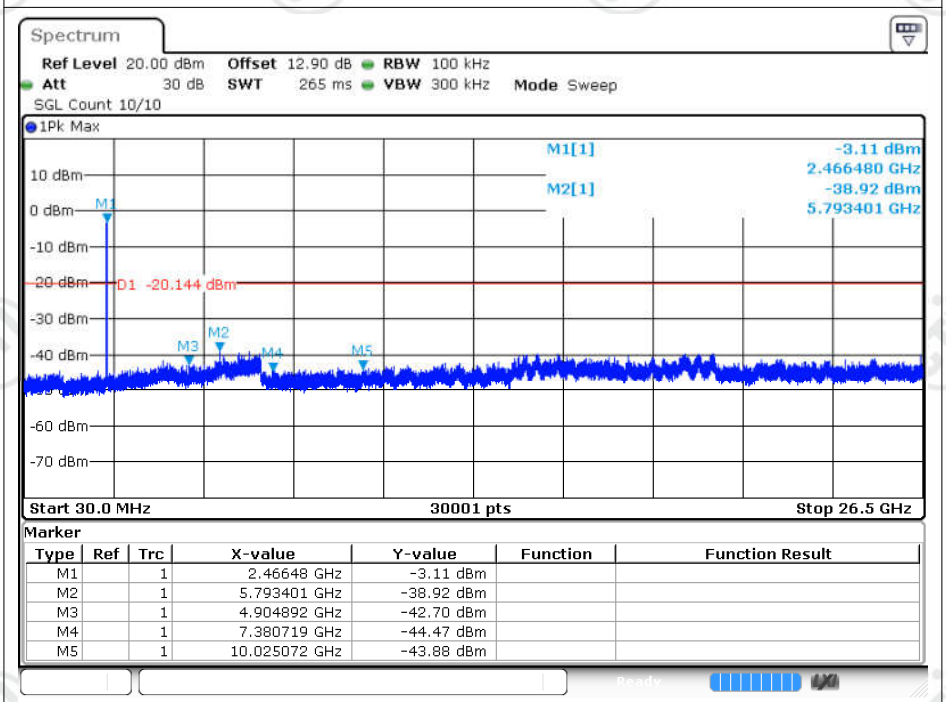
Date: 17.AUG.2024 12:52:58

Tx. Spurious NVNT g 2462MHz Ant1 Ref



Date: 17.AUG.2024 13:03:34

Tx. Spurious NVNT g 2462MHz Ant1 Emission

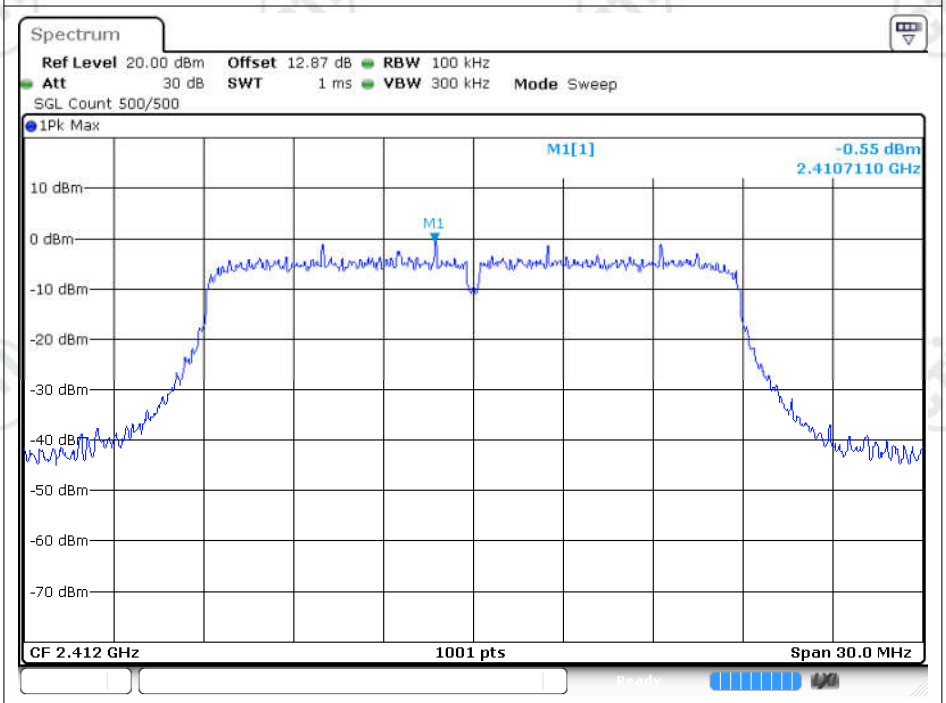


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.46648 GHz	-3.11 dBm		
M2		1	5.793401 GHz	-38.92 dBm		
M3		1	4.904892 GHz	-42.70 dBm		
M4		1	7.380719 GHz	-44.47 dBm		
M5		1	10.025072 GHz	-43.88 dBm		

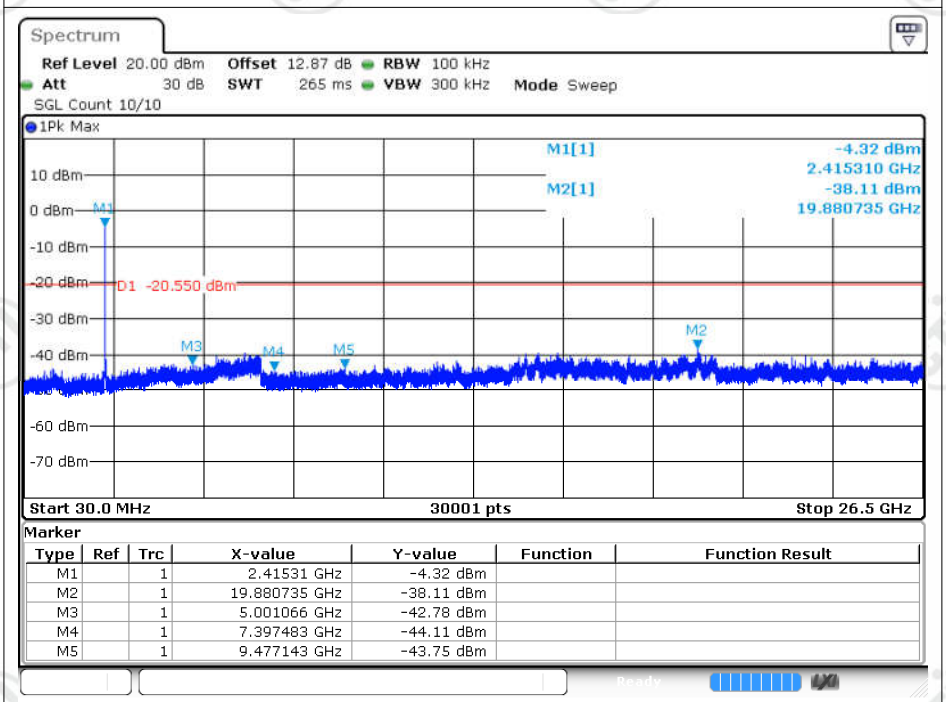
Date: 17.AUG.2024 13:03:46

Tx. Spurious NVNT n20 2412MHz Ant1 Ref



Date: 17.AUG.2024 13:06:03

Tx. Spurious NVNT n20 2412MHz Ant1 Emission

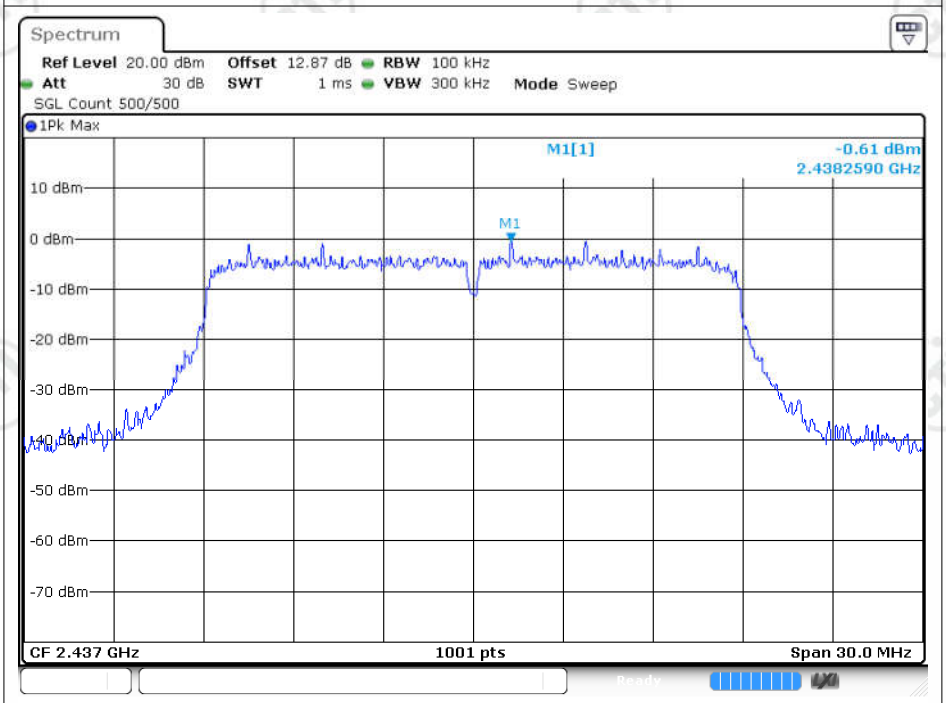


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.41531 GHz	-4.32 dBm		
M2		1	19.880735 GHz	-38.11 dBm		
M3		1	5.001066 GHz	-42.78 dBm		
M4		1	7.397483 GHz	-44.11 dBm		
M5		1	9.477143 GHz	-43.75 dBm		

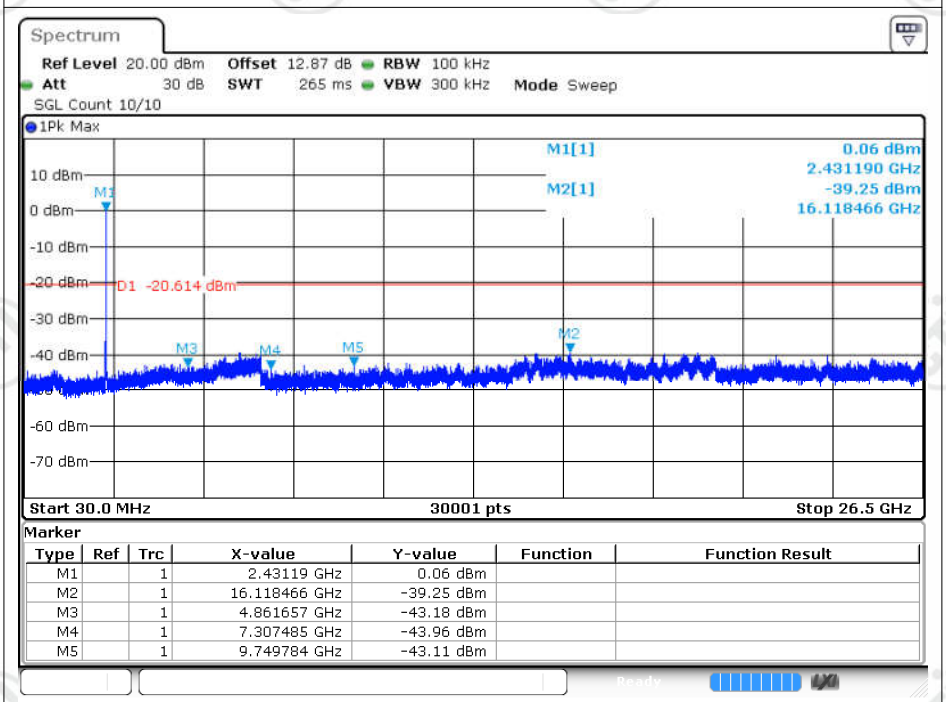
Date: 17.AUG.2024 13:06:15

Tx. Spurious NVNT n20 2437MHz Ant1 Ref



Date: 17.AUG.2024 13:07:18

Tx. Spurious NVNT n20 2437MHz Ant1 Emission

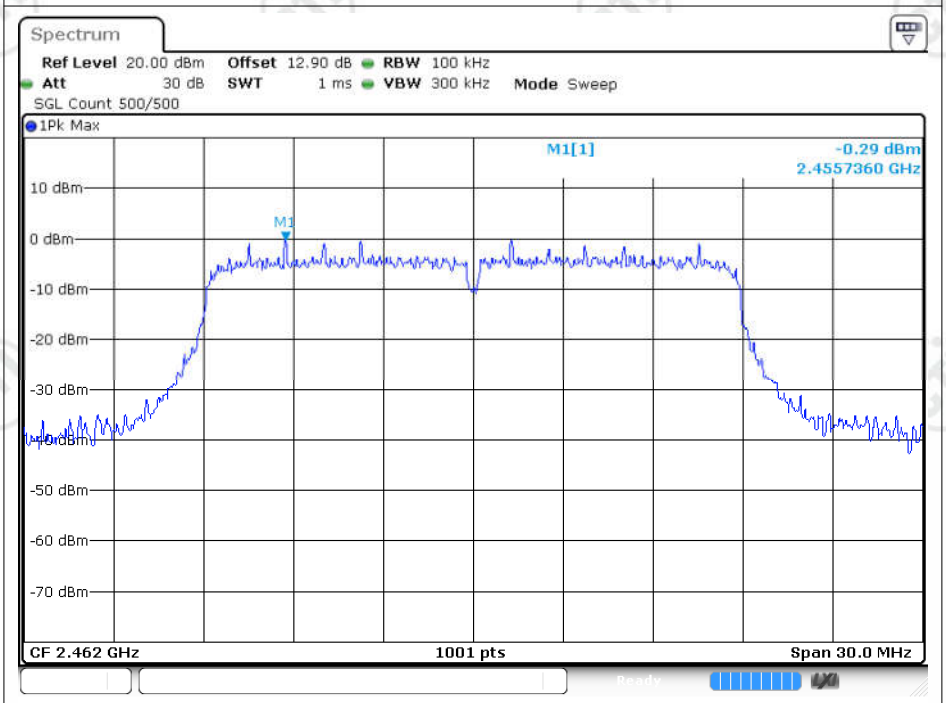


Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.43119 GHz	0.06 dBm		
M2		1	16.118466 GHz	-39.25 dBm		
M3		1	4.861657 GHz	-43.18 dBm		
M4		1	7.307485 GHz	-43.96 dBm		
M5		1	9.749784 GHz	-43.11 dBm		

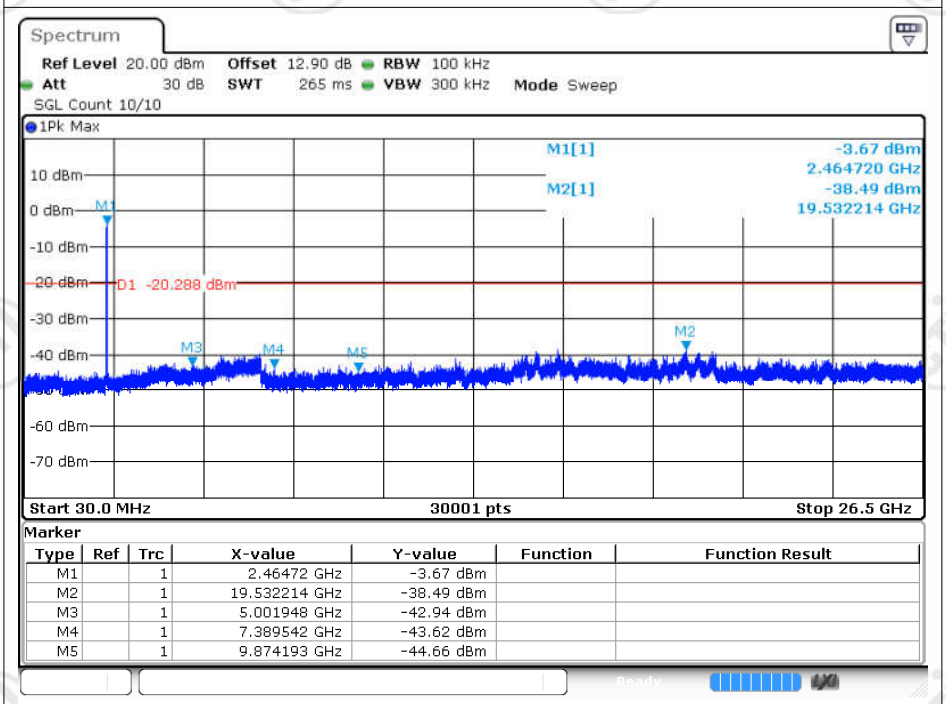
Date: 17.AUG.2024 13:07:29

Tx. Spurious NVNT n20 2462MHz Ant1 Ref



Date: 17.AUG.2024 13:10:06

Tx. Spurious NVNT n20 2462MHz Ant1 Emission



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.46472 GHz	-3.67 dBm		
M2		1	19.532214 GHz	-38.49 dBm		
M3		1	5.001948 GHz	-42.94 dBm		
M4		1	7.389542 GHz	-43.62 dBm		
M5		1	9.874193 GHz	-44.66 dBm		

Date: 17.AUG.2024 13:10:17

*** End of Report ***