Appendix C

RF Test Data for 2.4GWIFI (Conducted Measurement)

Product Name: Hidden wifi Car Dashcam

Trade Mark: N/A

Test Model: D97

Environmental Conditions

Temperature:	24.6° C
Relative Humidity:	52.4%
ATM Pressure:	100.0 kPa
Test Engineer:	Emiya lin
Supervised by:	Simba Haung

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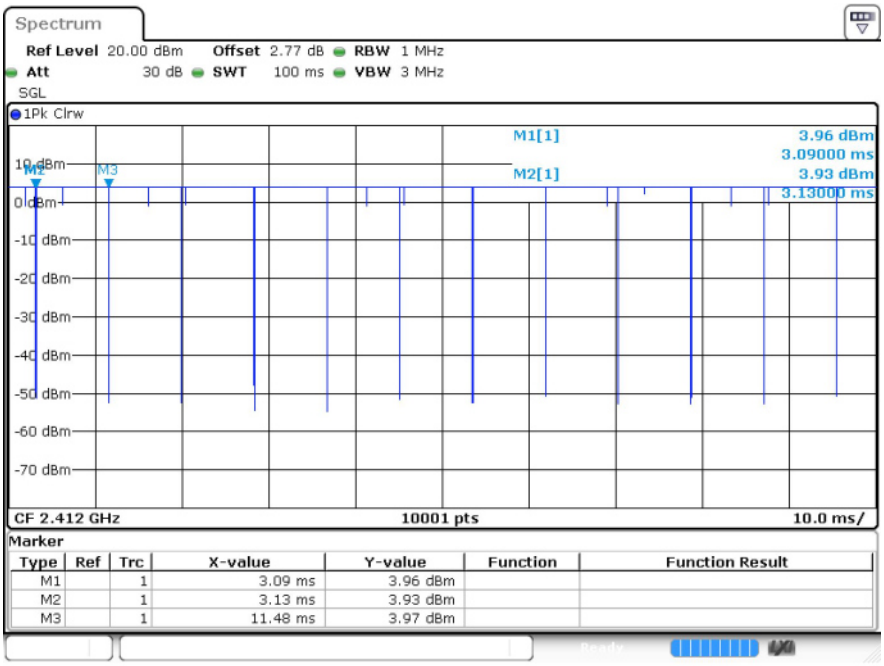
1 Duty Cycle

1.1 Test Result

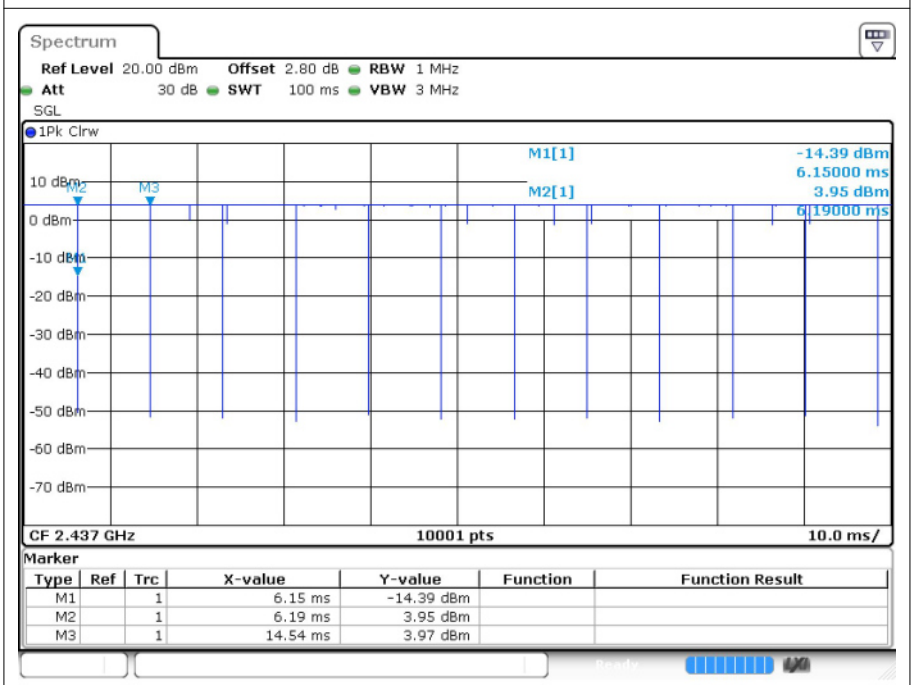
Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor	1/T (kHz)
b	2412	Ant1	99.61	0.02	0.12
b	2437	Ant1	99.61	0.02	0.12
b	2462	Ant1	99.61	0.02	0.12
g	2412	Ant1	87.1	0.6	4.55
g	2437	Ant1	86.88	0.61	4.55
g	2462	Ant1	86.94	0.61	4.76
n20	2412	Ant1	87.58	0.58	4.35
n20	2437	Ant1	87.6	0.57	4.35
n20	2462	Ant1	87.6	0.57	4.17

1.2 Test Graphs

Test Graphs
b 2412MHz Ant1

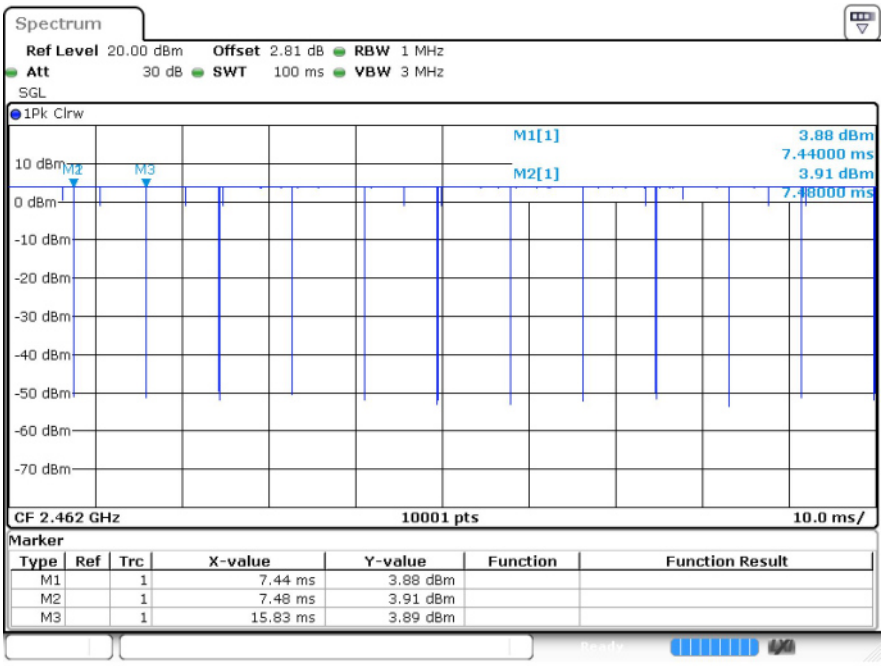


b 2437MHz Ant1

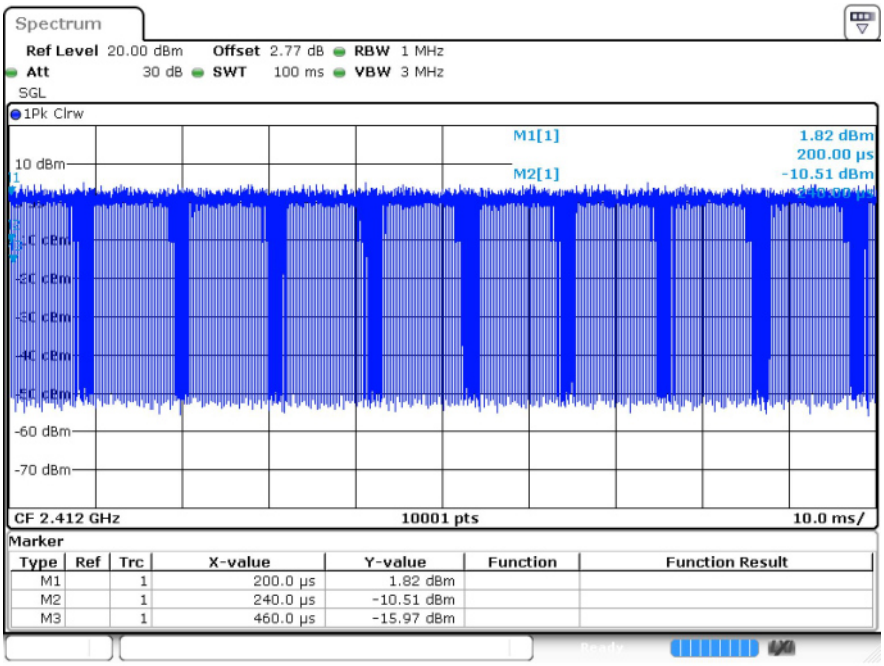


Test Graphs

b 2462MHz Ant1

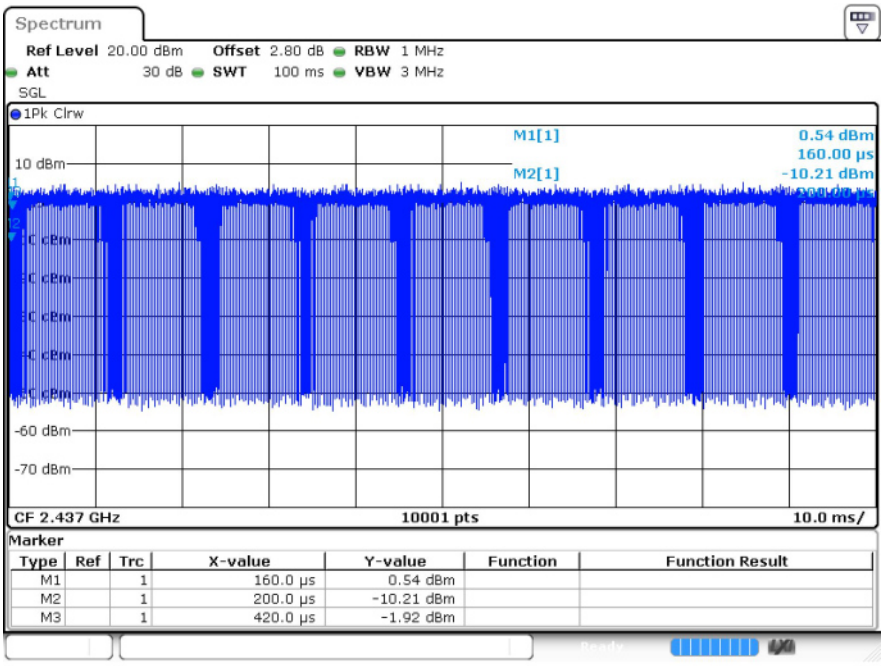


g 2412MHz Ant1

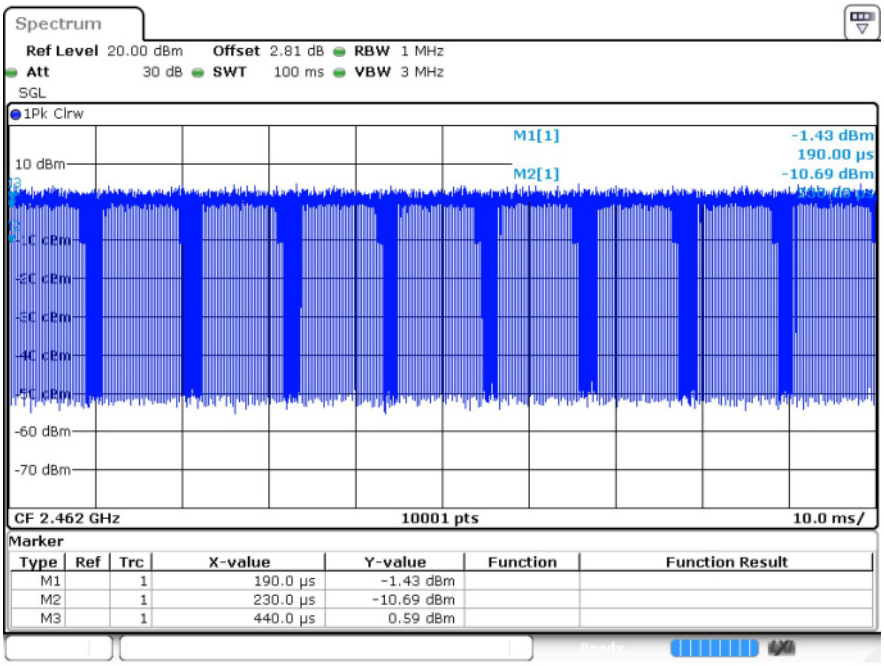


Test Graphs

g 2437MHz Ant1

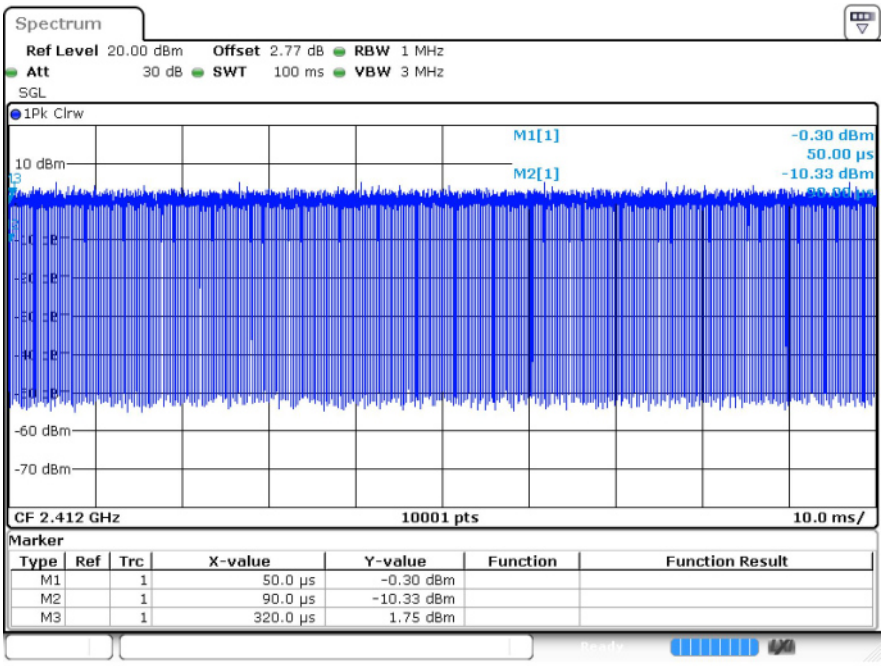


g 2462MHz Ant1

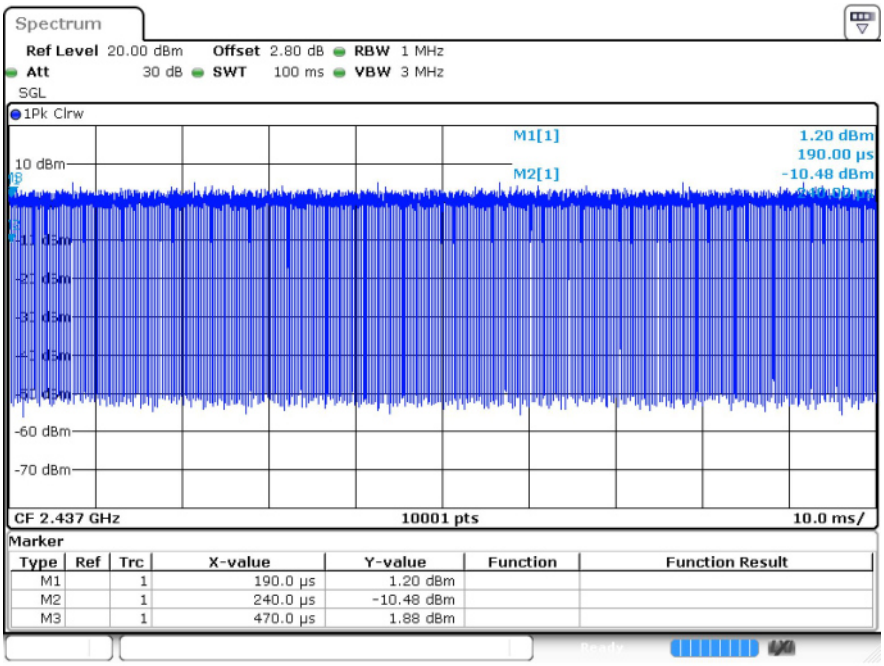


Test Graphs

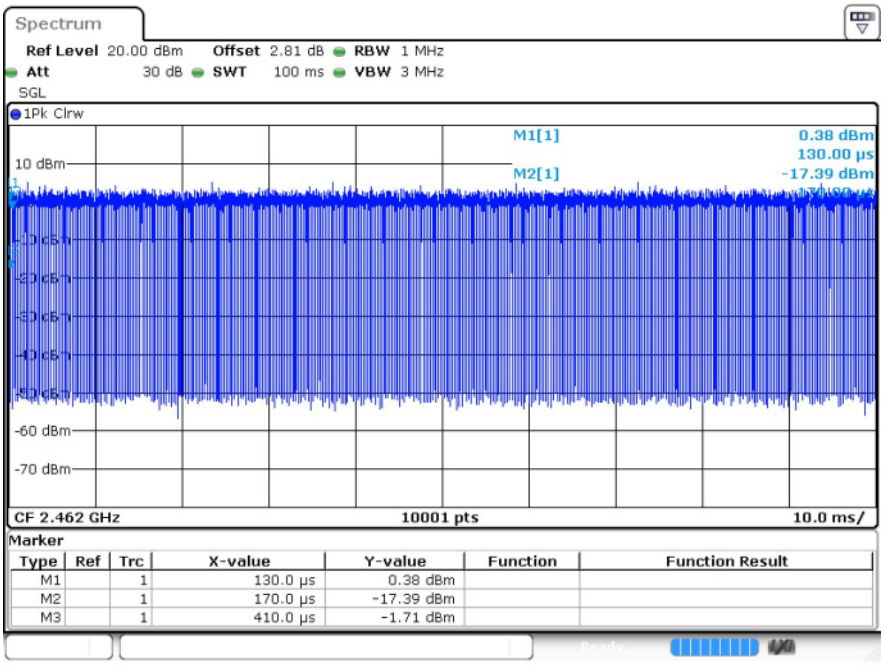
n20 2412MHz Ant1



n20 2437MHz Ant1



Test Graphs
n20 2462MHz Ant1



2 Maximum Conducted Output Power

2.1 Test Result

Mode	Frequency (MHz)	Antenna	Conducted Power (dBm)	Limit (dBm)	Verdict
b	2412	Ant1	14.4	30	Pass
b	2437	Ant1	14.3	30	Pass
b	2462	Ant1	14.31	30	Pass
g	2412	Ant1	14.18	30	Pass
g	2437	Ant1	14.21	30	Pass
g	2462	Ant1	14.19	30	Pass
n20	2412	Ant1	14.14	30	Pass
n20	2437	Ant1	14.07	30	Pass
n20	2462	Ant1	14.14	30	Pass

3 -6dB Bandwidth

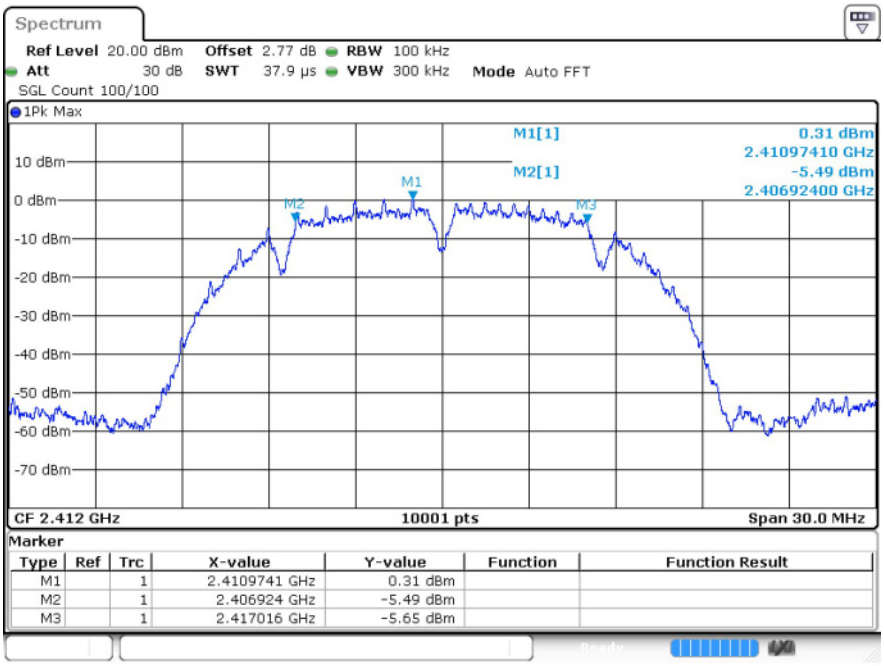
3.1 Test Result

Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
b	2412	Ant1	10.092	0.5	Pass
b	2437	Ant1	10.086	0.5	Pass
b	2462	Ant1	10.089	0.5	Pass
g	2412	Ant1	15.111	0.5	Pass
g	2437	Ant1	15.117	0.5	Pass
g	2462	Ant1	15.129	0.5	Pass
n20	2412	Ant1	15.108	0.5	Pass
n20	2437	Ant1	13.842	0.5	Pass
n20	2462	Ant1	15.114	0.5	Pass

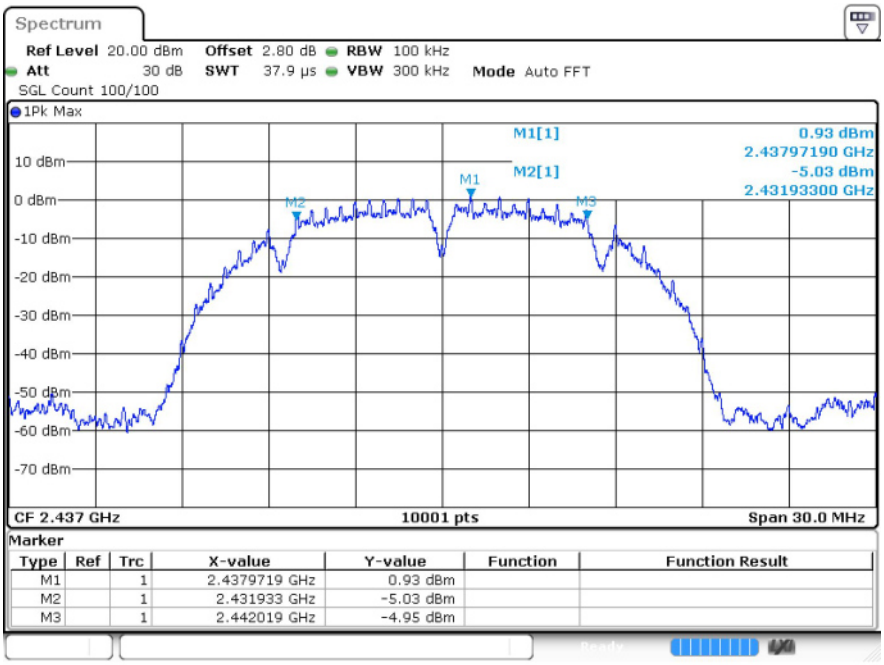
3.2 Test Graphs

Test Graphs

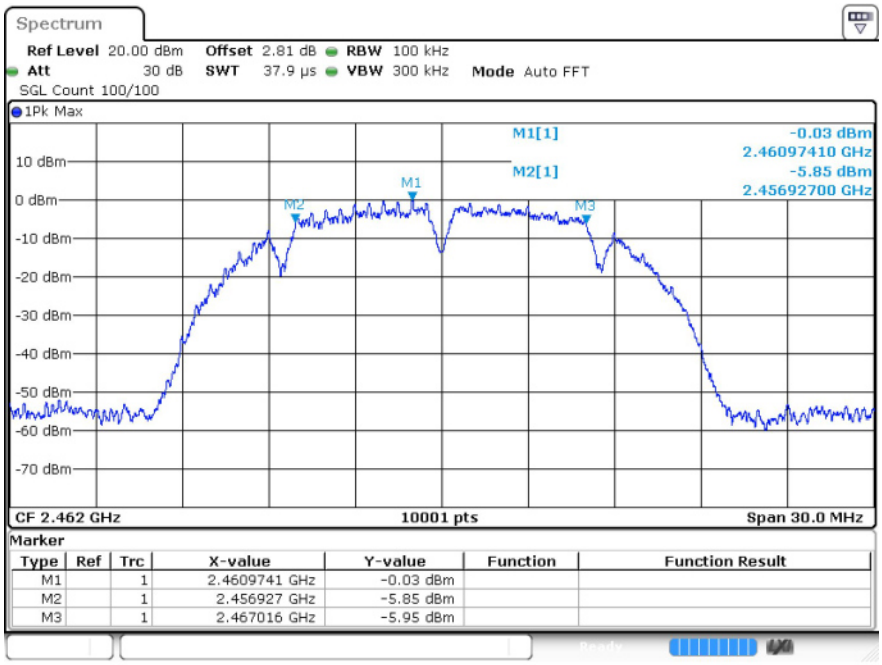
b 2412MHz Ant1



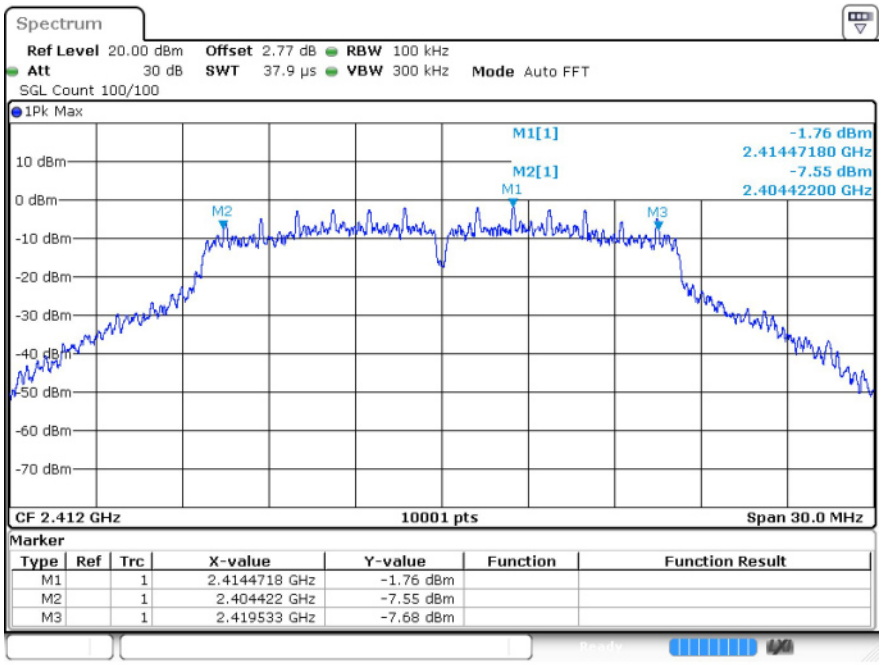
b 2437MHz Ant1



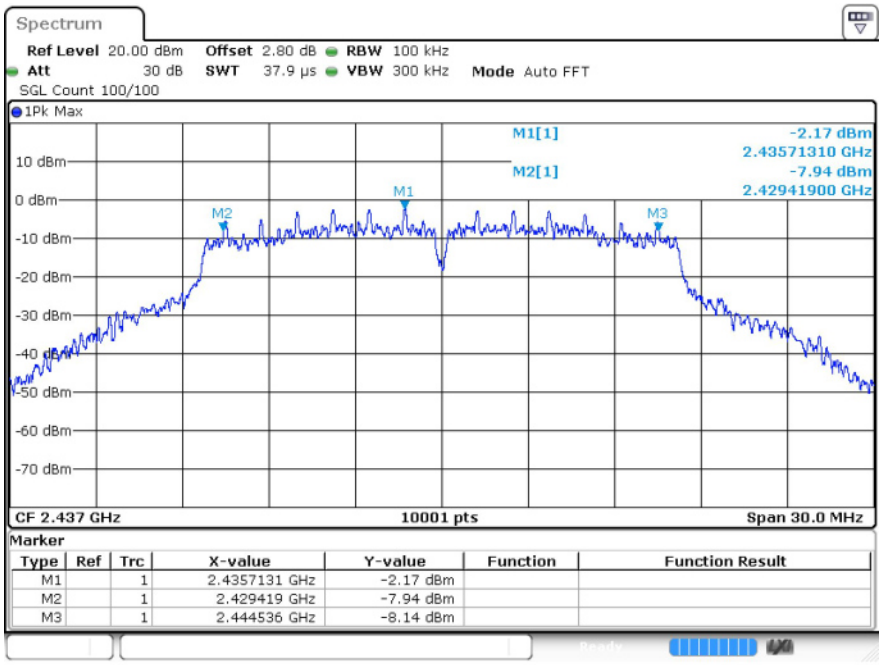
b 2462MHz Ant1



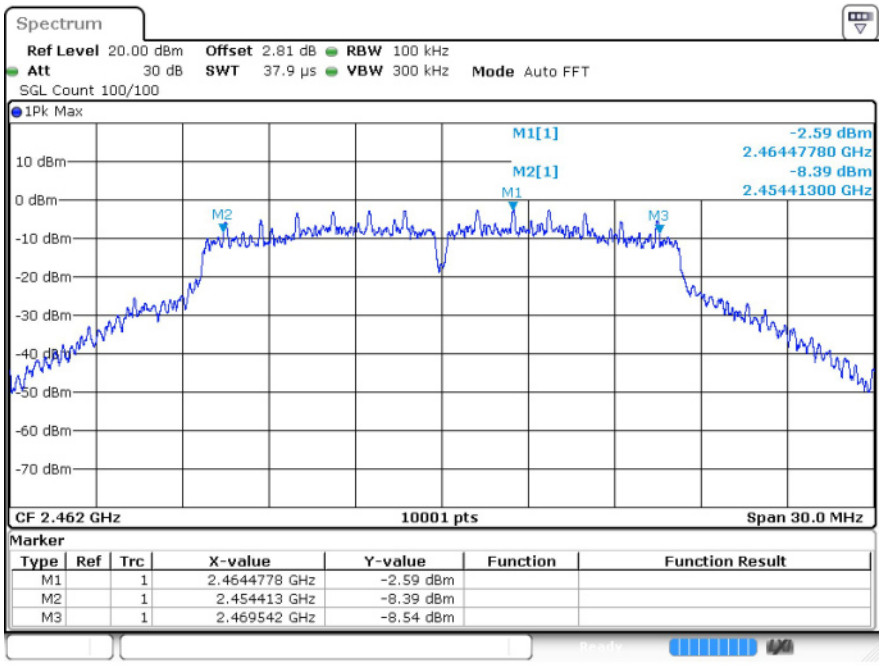
g 2412MHz Ant1



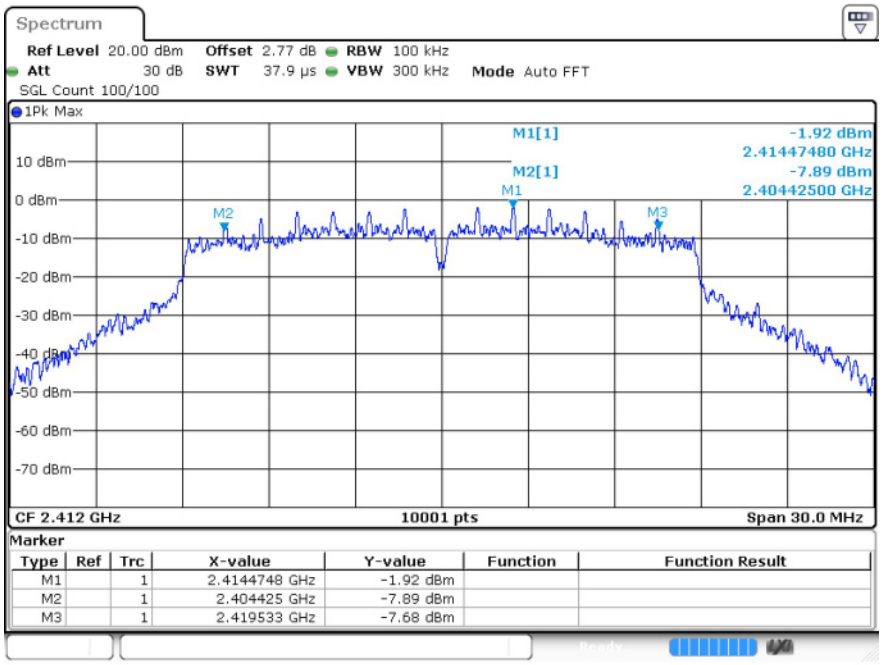
g 2437MHz Ant1



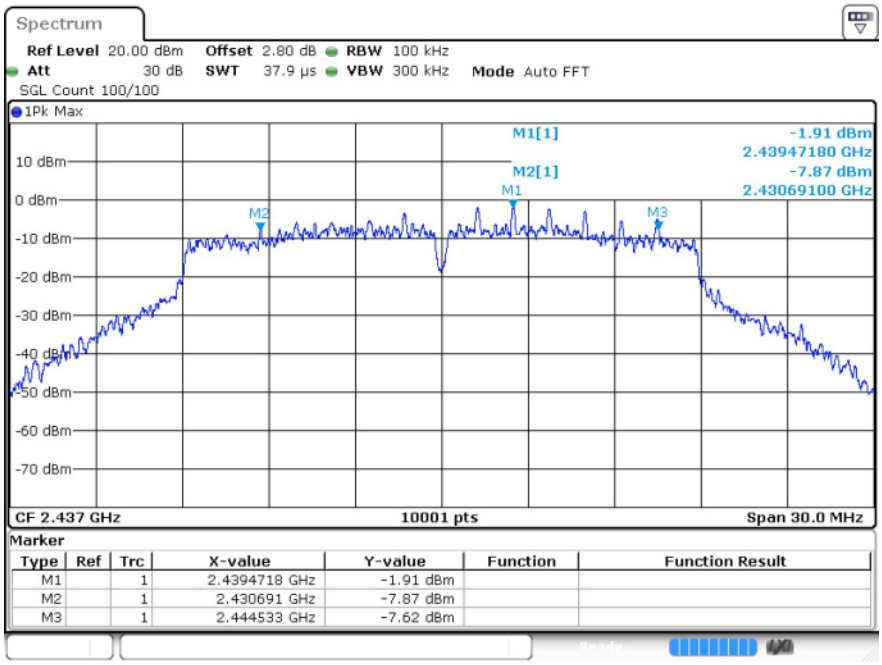
g 2462MHz Ant1



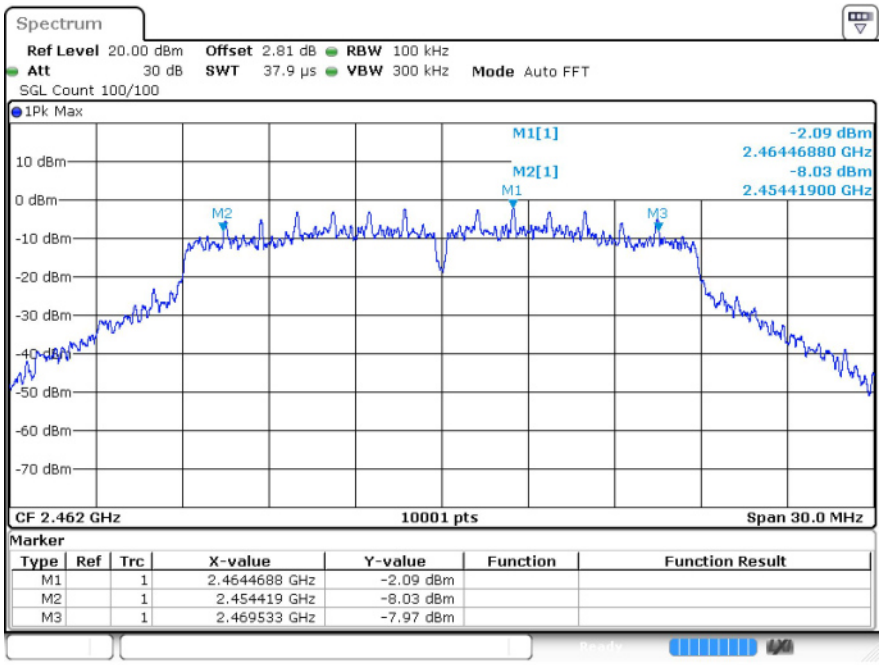
n20 2412MHz Ant1



n20 2437MHz Ant1



n20 2462MHz Ant1

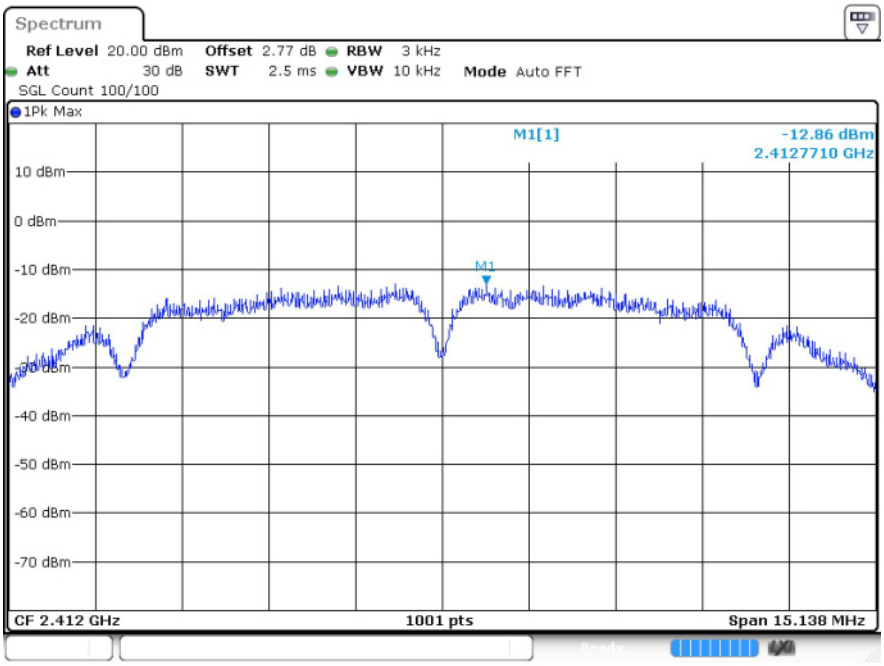
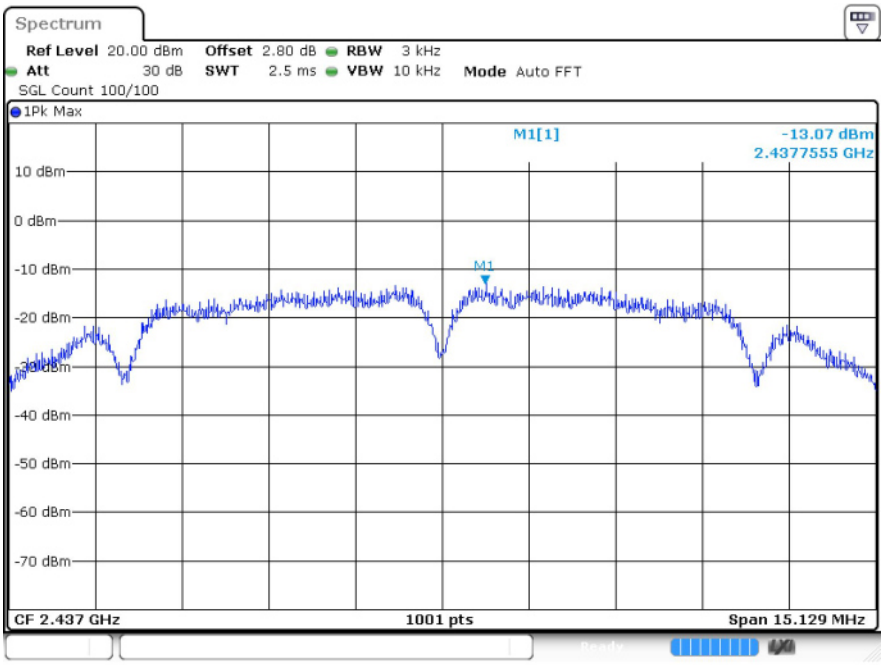


4 Maximum Power Spectral Density Level

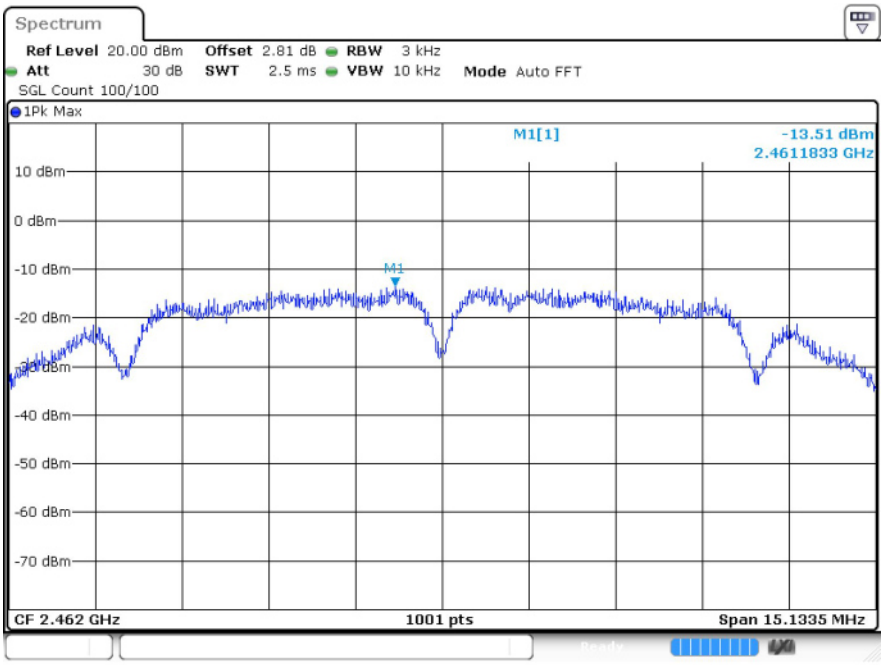
4.1 Test Result

Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3-100kHz)	Limit (dBm/3kHz)	Verdict
b	2412	Ant1	-12.86	≤8	Pass
b	2437	Ant1	-13.07	≤8	Pass
b	2462	Ant1	-13.51	≤8	Pass
g	2412	Ant1	-15.85	≤8	Pass
g	2437	Ant1	-17.11	≤8	Pass
g	2462	Ant1	-16.23	≤8	Pass
n20	2412	Ant1	-16.1	≤8	Pass
n20	2437	Ant1	-16.44	≤8	Pass
n20	2462	Ant1	-16.34	≤8	Pass

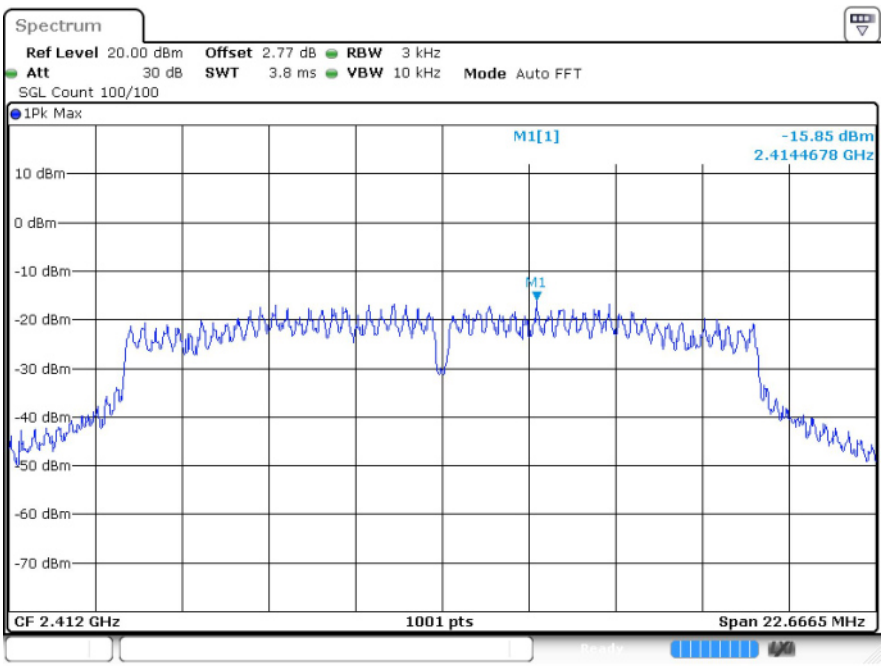
4.2 Test Graphs

Test Graphs
b 2412MHz Ant1

b 2437MHz Ant1


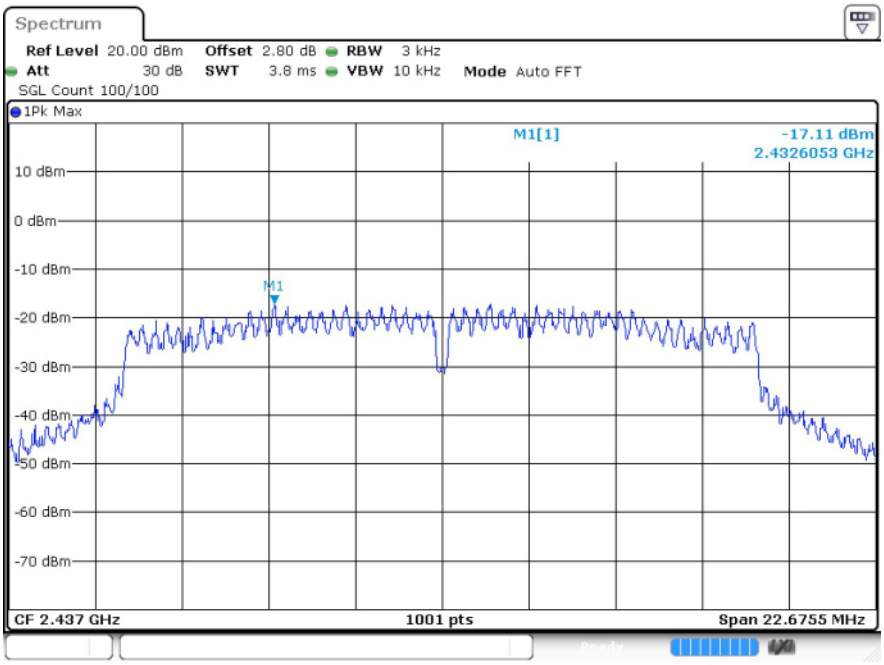
b 2462MHz Ant1



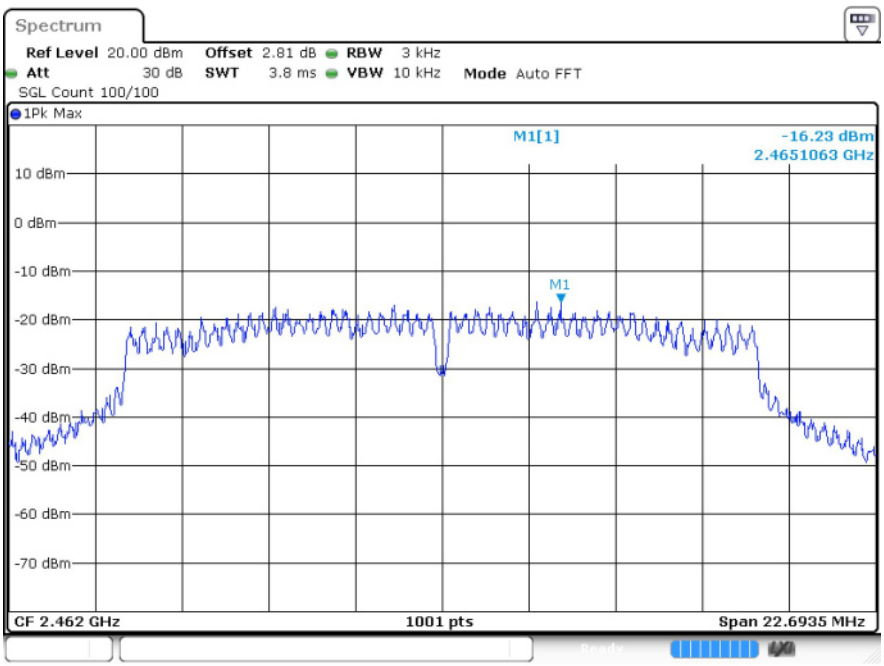
g 2412MHz Ant1



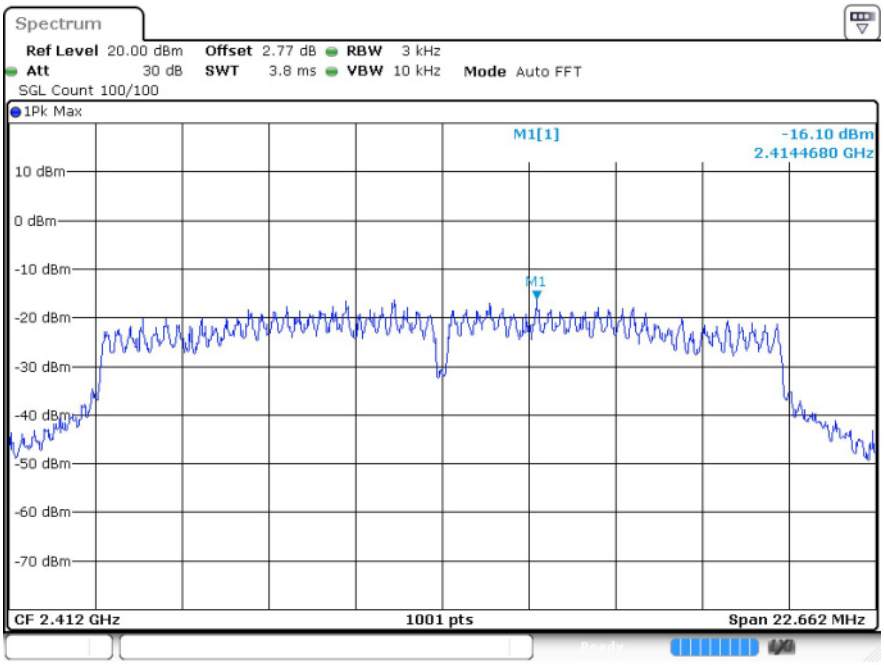
g 2437MHz Ant1



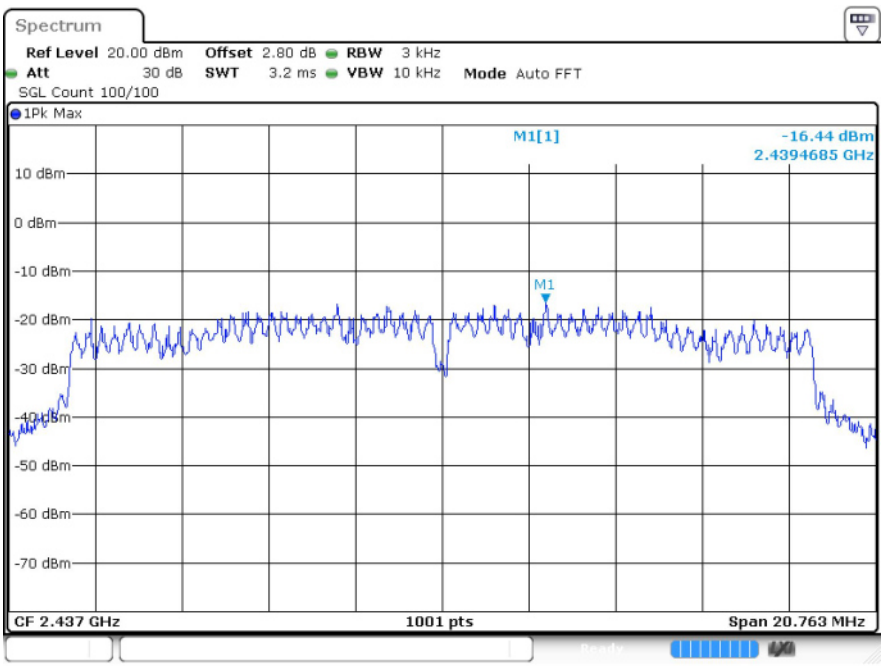
g 2462MHz Ant1



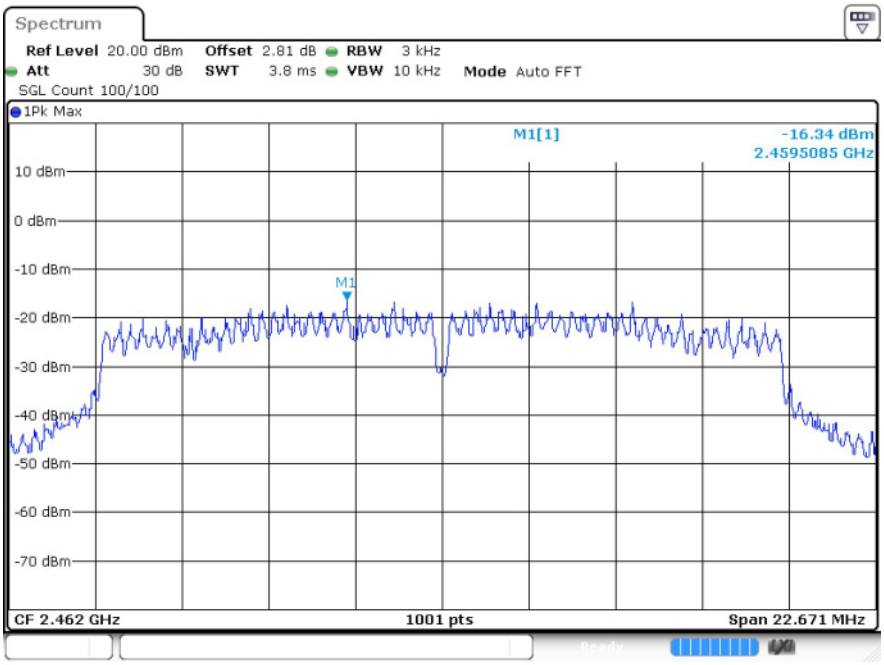
n20 2412MHz Ant1



n20 2437MHz Ant1



n20 2462MHz Ant1



5 Band Edge

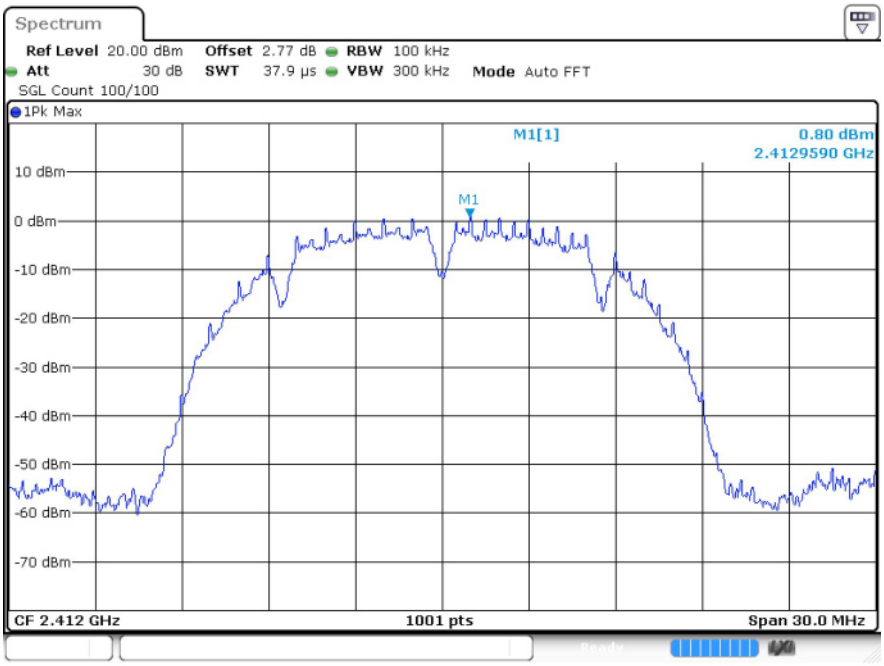
5.1 Test Result

Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
b	2412	Ant1	-54.13	-20	Pass
b	2462	Ant1	-54.68	-20	Pass
g	2412	Ant1	-52.79	-20	Pass
g	2462	Ant1	-52.64	-20	Pass
n20	2412	Ant1	-52.84	-20	Pass
n20	2462	Ant1	-53	-20	Pass

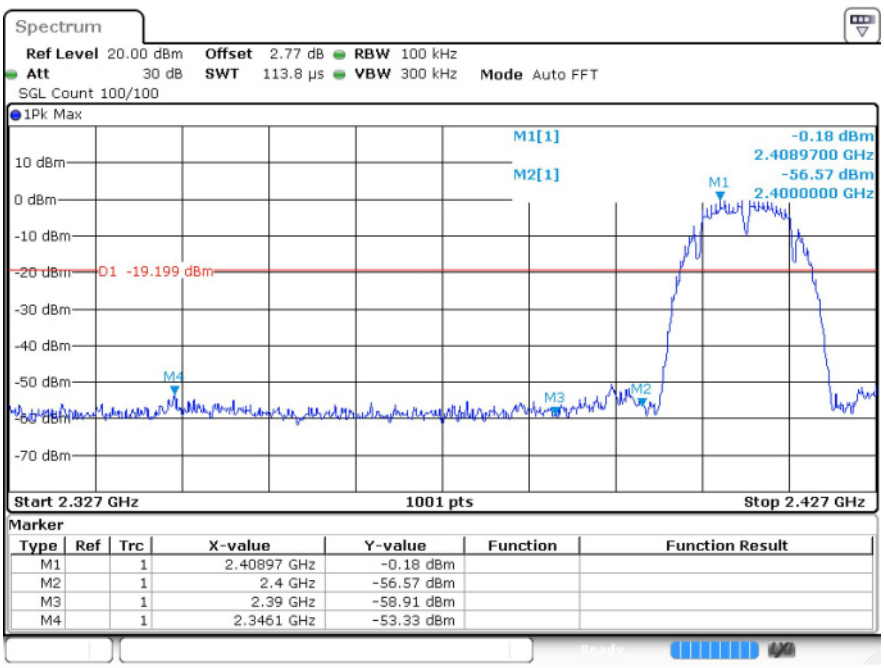
5.2 Test Graphs

Test Graphs

b 2412MHz Ant1 Ref



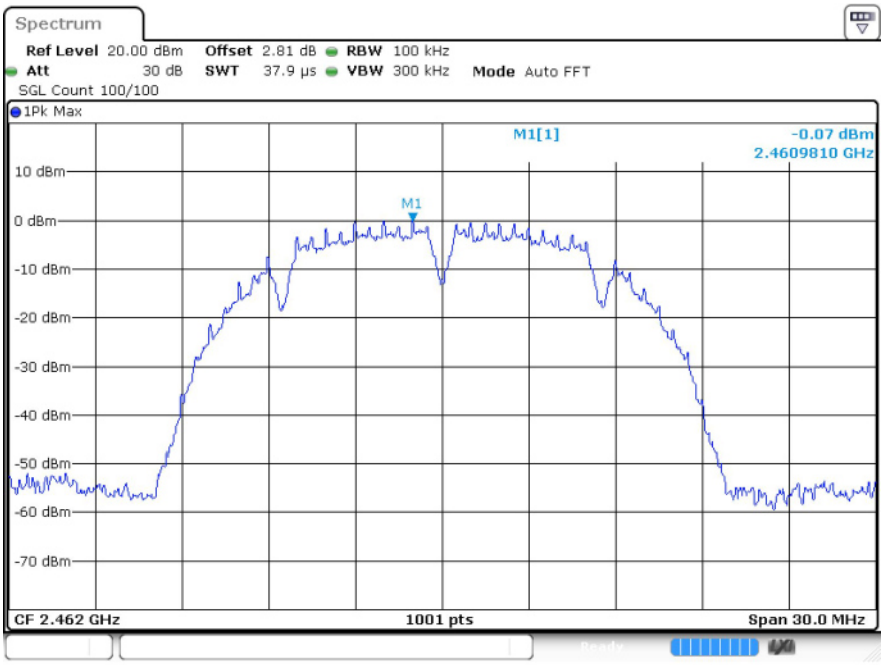
b 2412MHz Ant1 Emission



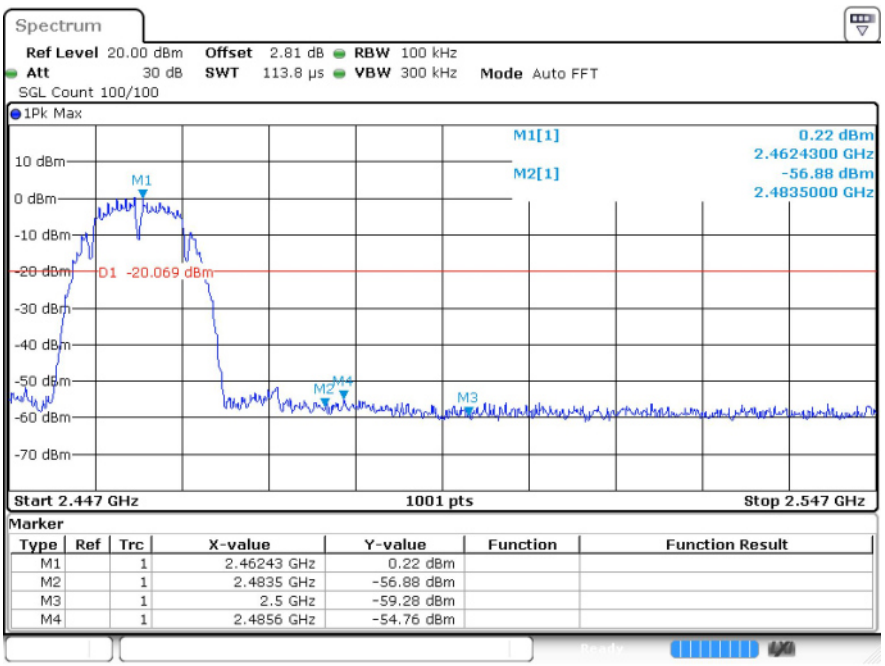
Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.40897 GHz	-0.18 dBm		
M2		1	2.4 GHz	-56.57 dBm		
M3		1	2.39 GHz	-58.91 dBm		
M4		1	2.3461 GHz	-53.33 dBm		

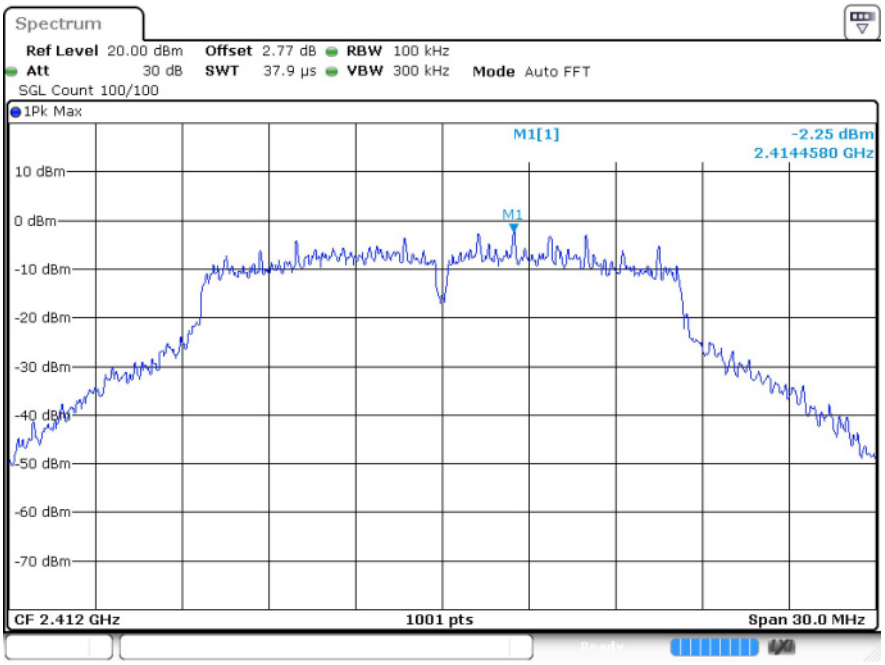
b 2462MHz Ant1 Ref



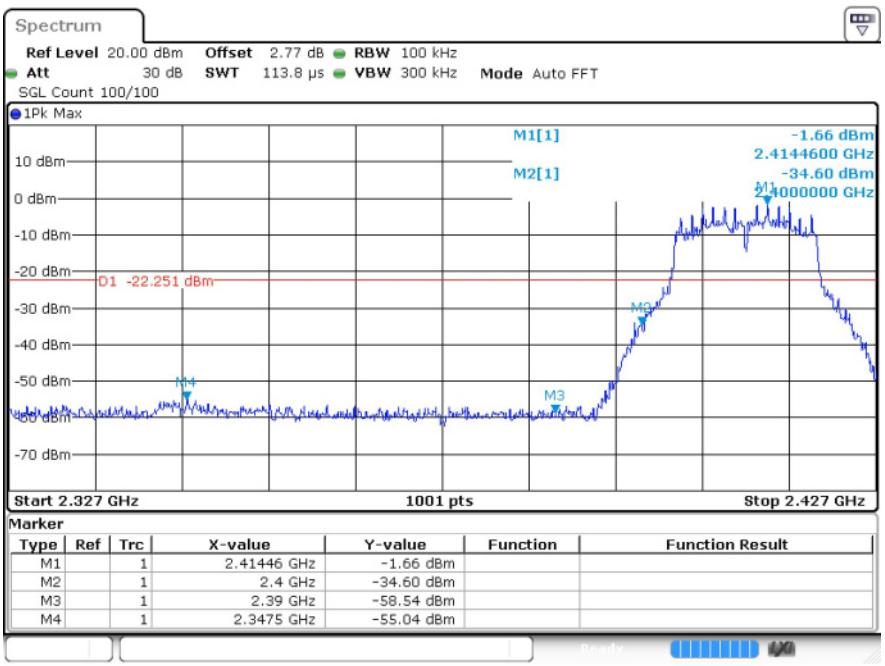
b 2462MHz Ant1 Emission



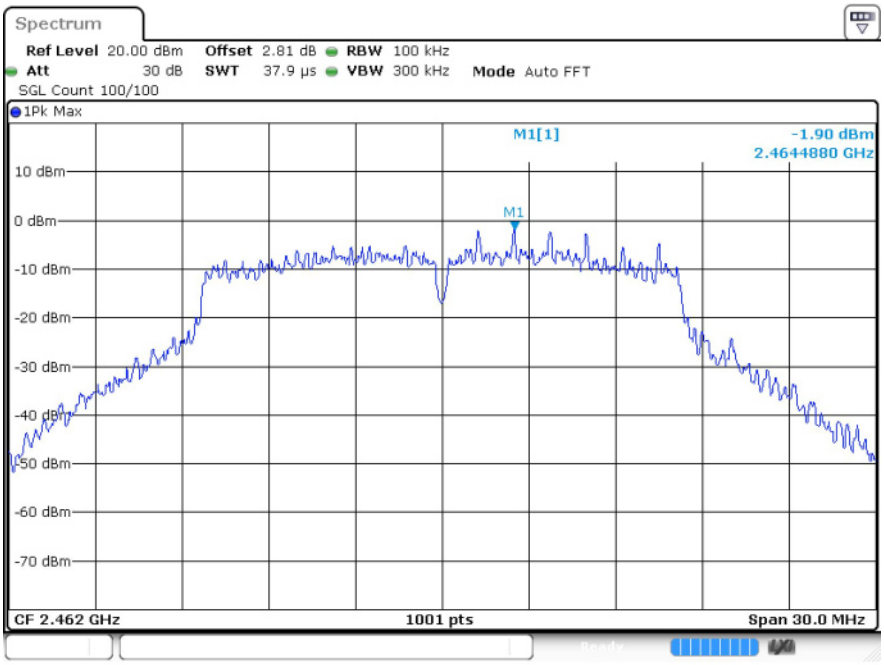
g 2412MHz Ant1 Ref



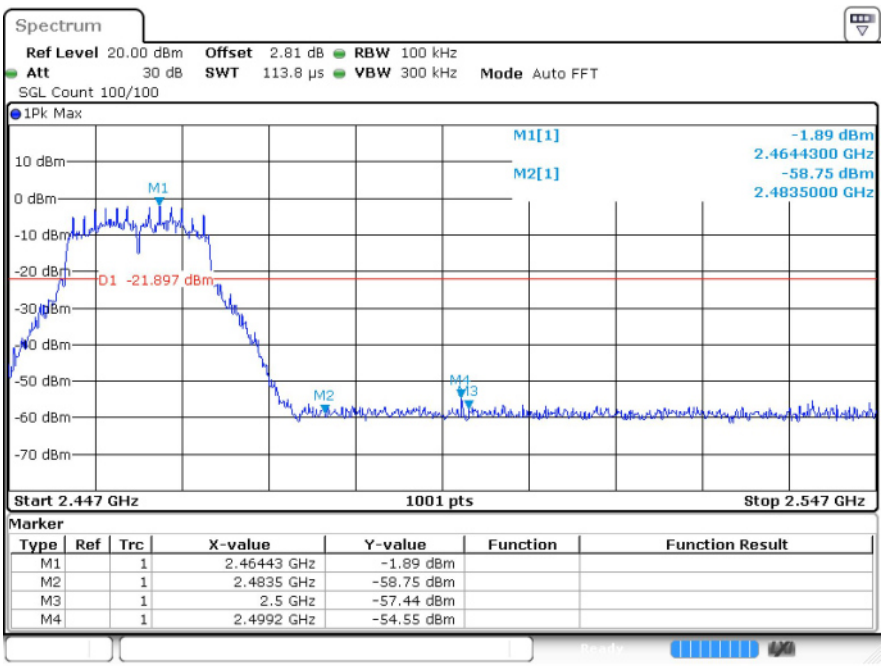
g 2412MHz Ant1 Emission



g 2462MHz Ant1 Ref



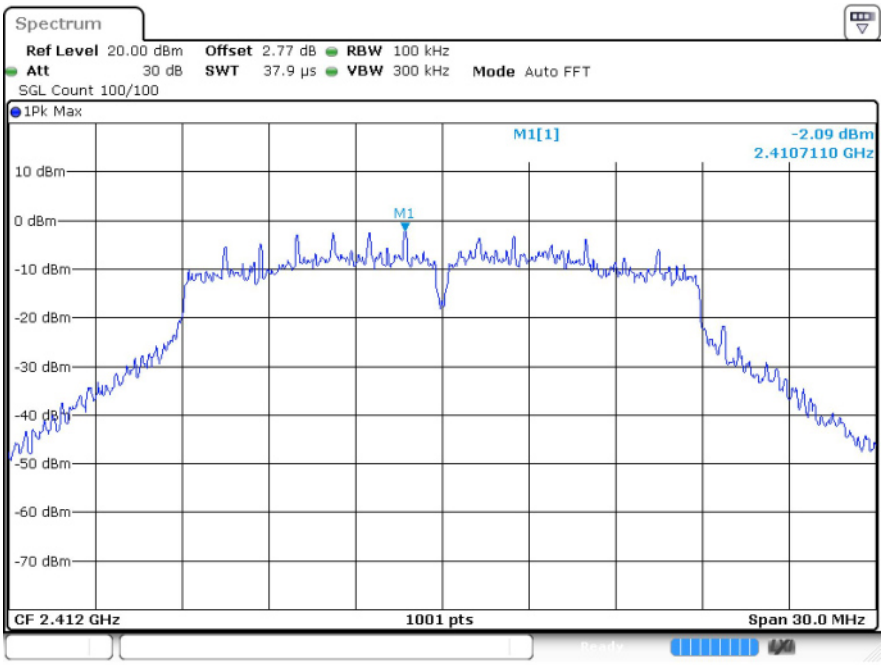
g 2462MHz Ant1 Emission



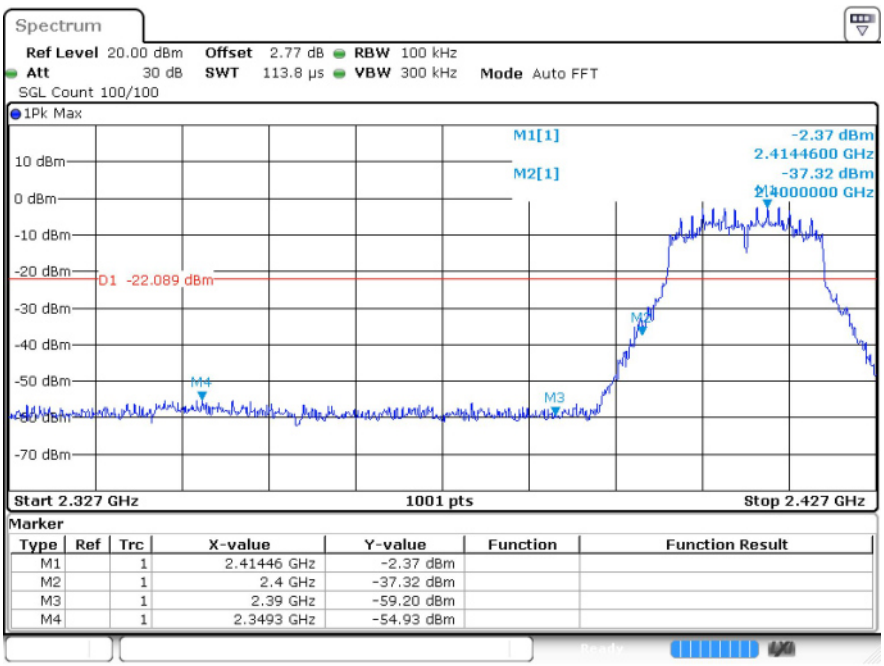
Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.46443 GHz	-1.89 dBm		
M2		1	2.4835 GHz	-58.75 dBm		
M3		1	2.5 GHz	-57.44 dBm		
M4		1	2.4992 GHz	-54.55 dBm		

n20 2412MHz Ant1 Ref



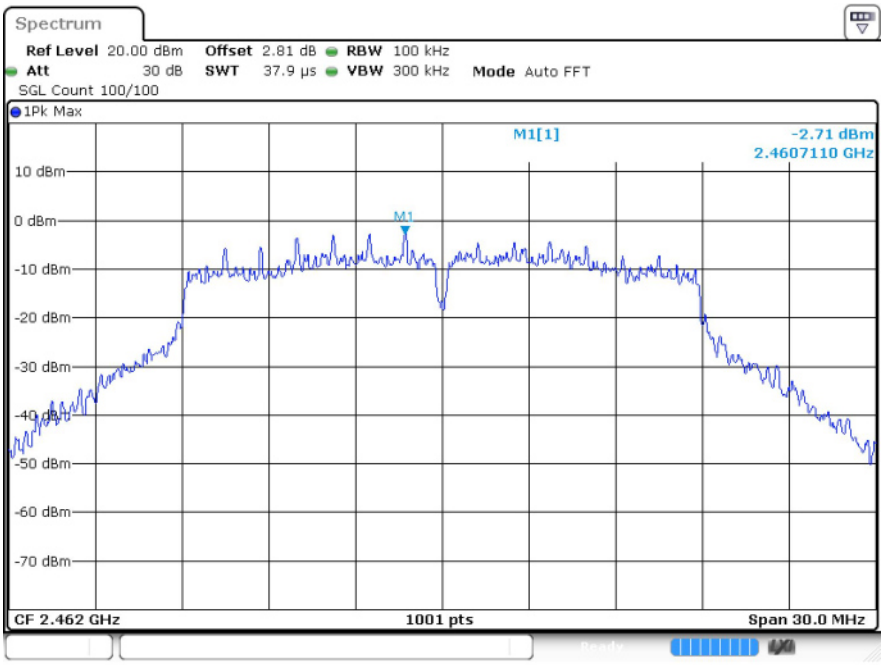
n20 2412MHz Ant1 Emission



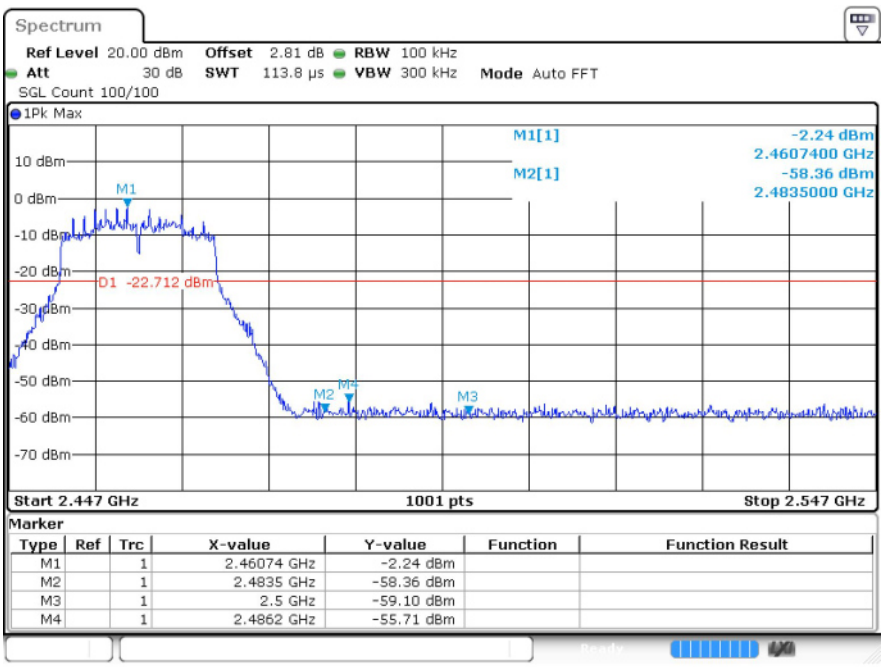
Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.41446 GHz	-2.37 dBm		
M2		1	2.4 GHz	-37.32 dBm		
M3		1	2.39 GHz	-59.20 dBm		
M4		1	2.3493 GHz	-54.93 dBm		

n20 2462MHz Ant1 Ref



n20 2462MHz Ant1 Emission



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.46074 GHz	-2.24 dBm		
M2		1	2.4835 GHz	-58.36 dBm		
M3		1	2.5 GHz	-59.10 dBm		
M4		1	2.4862 GHz	-55.71 dBm		

6 Conducted RF Spurious Emission

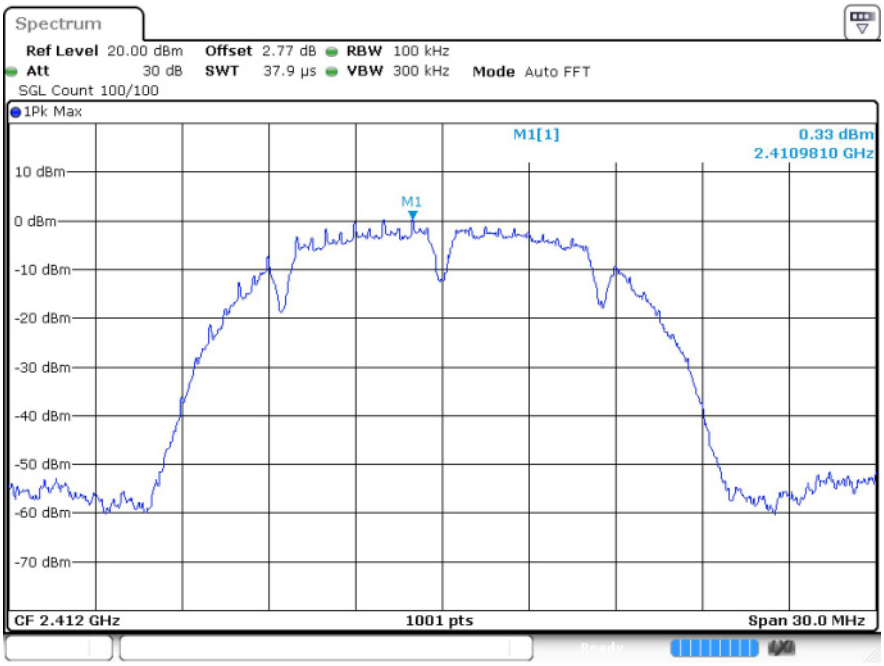
6.1 Test Result

Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
b	2412	Ant1	-42.48	-20	Pass
b	2437	Ant1	-42.86	-20	Pass
b	2462	Ant1	-41.95	-20	Pass
g	2412	Ant1	-41.95	-20	Pass
g	2437	Ant1	-40.75	-20	Pass
g	2462	Ant1	-40.89	-20	Pass
n20	2412	Ant1	-39.15	-20	Pass
n20	2437	Ant1	-40.96	-20	Pass
n20	2462	Ant1	-40.12	-20	Pass

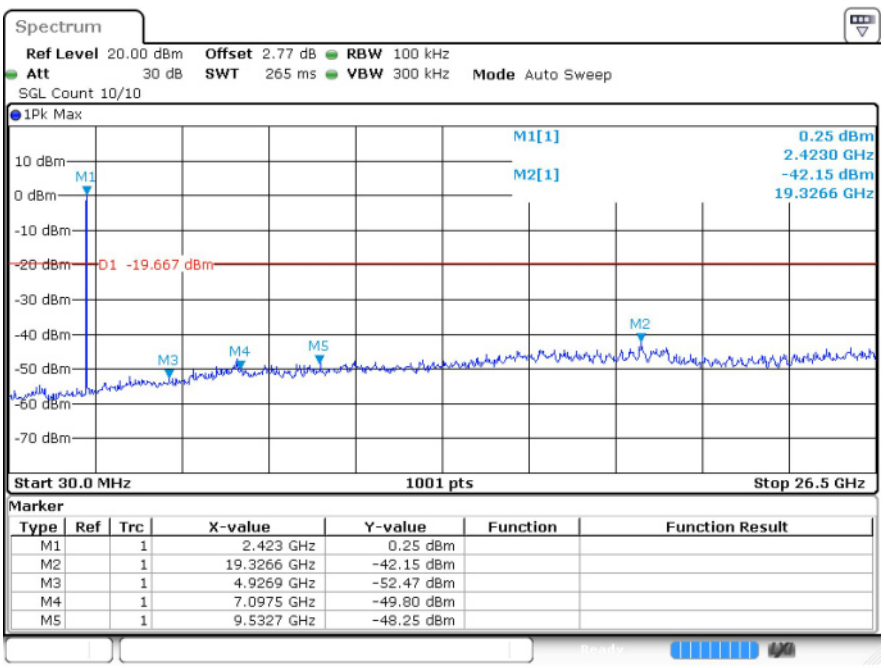
6.2 Test Graphs

Test Graphs

b 2412MHz Ant1 Ref



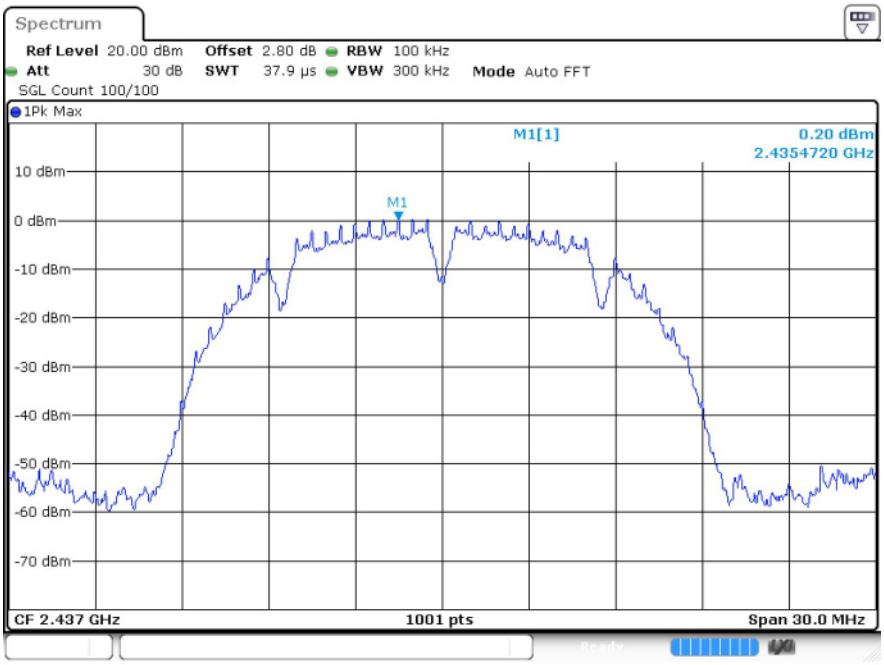
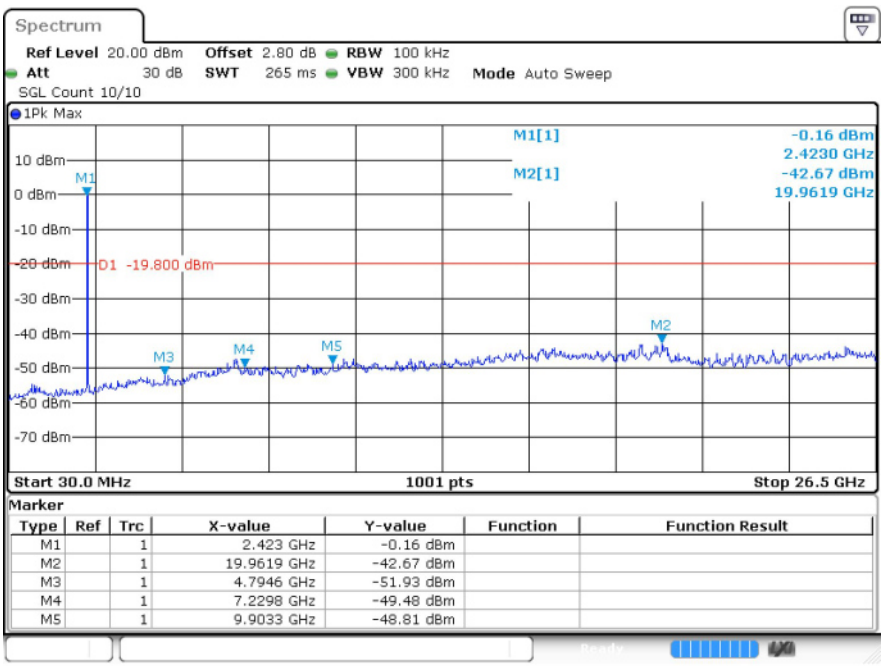
b 2412MHz Ant1 Emission



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.423 GHz	0.25 dBm		
M2		1	19.3266 GHz	-42.15 dBm		
M3		1	4.9269 GHz	-52.47 dBm		
M4		1	7.0975 GHz	-49.80 dBm		
M5		1	9.5327 GHz	-48.25 dBm		

b 2437MHz Ant1 Ref



b 2437MHz Ant1 Emission