Appendix C

RF Test Data for 2.4GWIFI (Conducted Measurement)

Product Name: VIDEO WALKIE-TALKIE

Trade Mark: N/A

Test Model: JK200

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

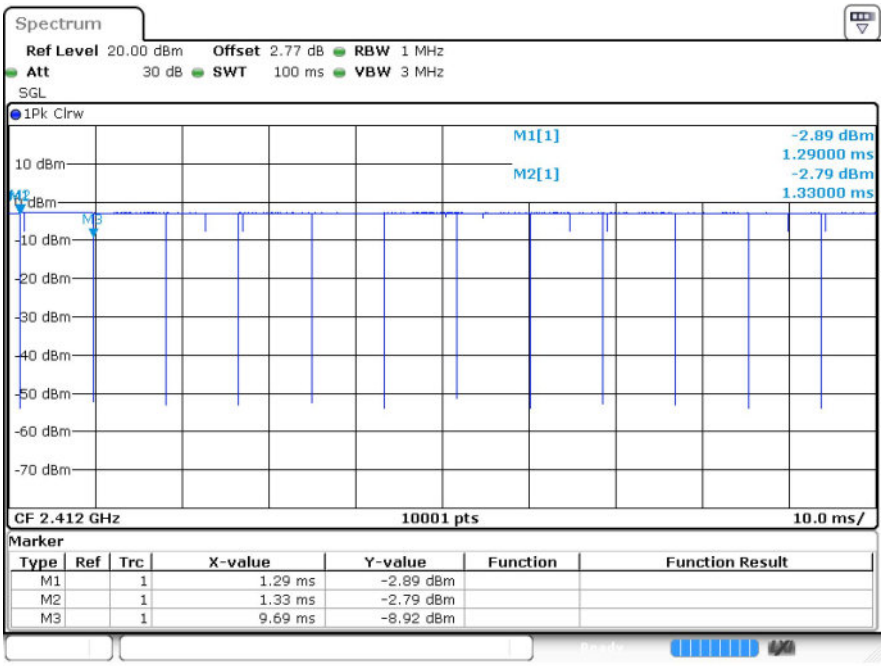
1.1 Test Result

Mode	Frequency (MHz)	Antenna	Duty Cycle (%)	Correction Factor	1/T (kHz)
b	2412	Ant1	99.6	0.02	0.12
b	2437	Ant1	99.6	0.02	0.12
b	2462	Ant1	99.6	0.02	0.12
g	2412	Ant1	86.8	0.61	4.76
g	2437	Ant1	86.86	0.61	4.76
g	2462	Ant1	86.84	0.61	4.76
n20	2412	Ant1	87.52	0.58	4.35
n20	2437	Ant1	87.48	0.58	4.35
n20	2462	Ant1	87.48	0.58	4.35

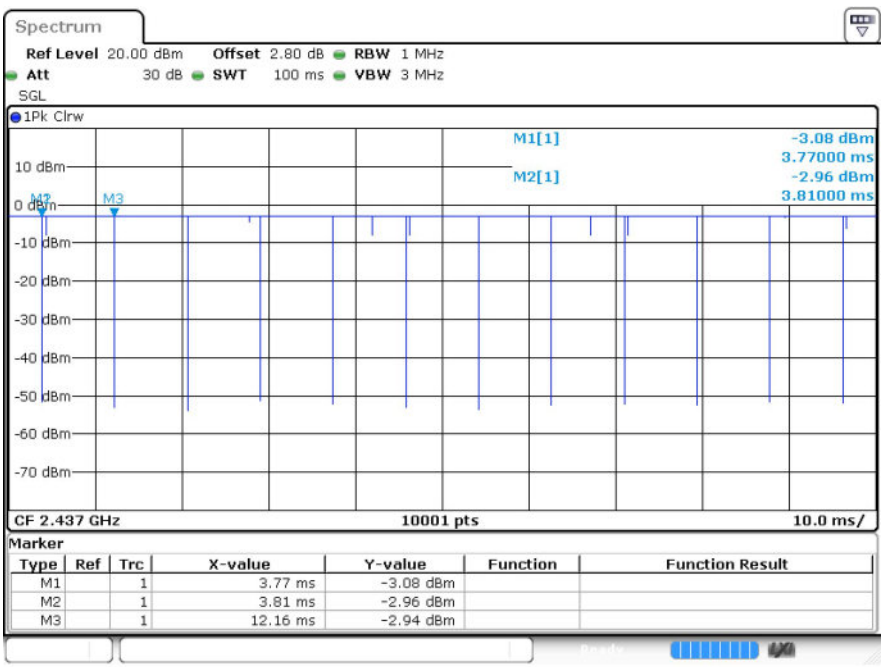
1.2 Test Graphs

Test Graphs

b 2412MHz Ant1

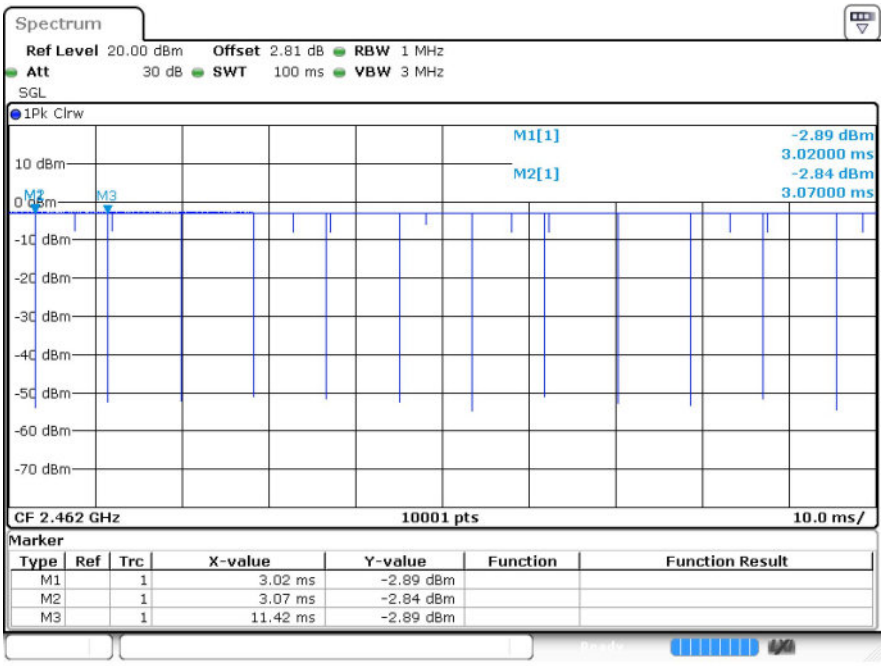


b 2437MHz Ant1

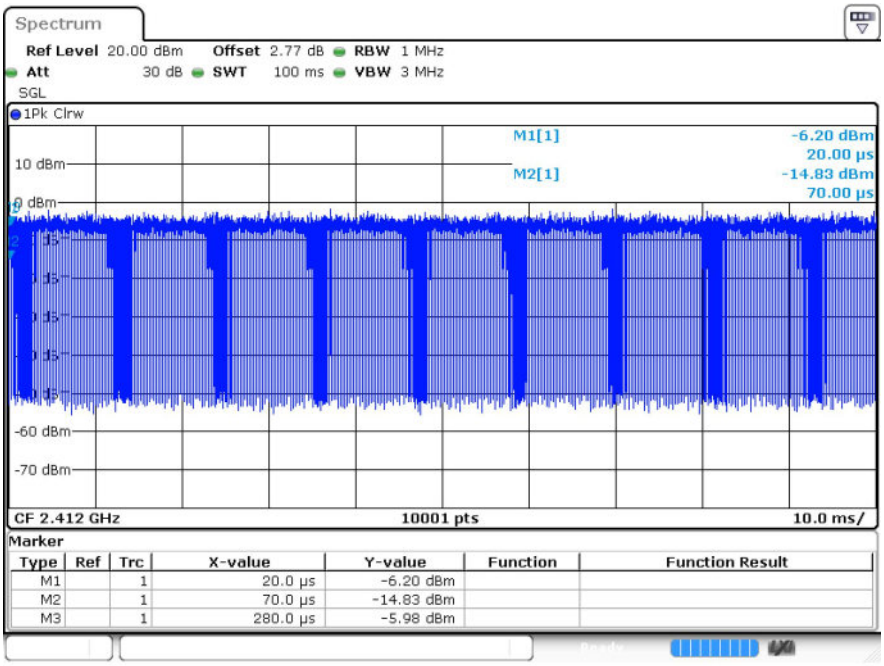


Test Graphs

b 2462MHz Ant1

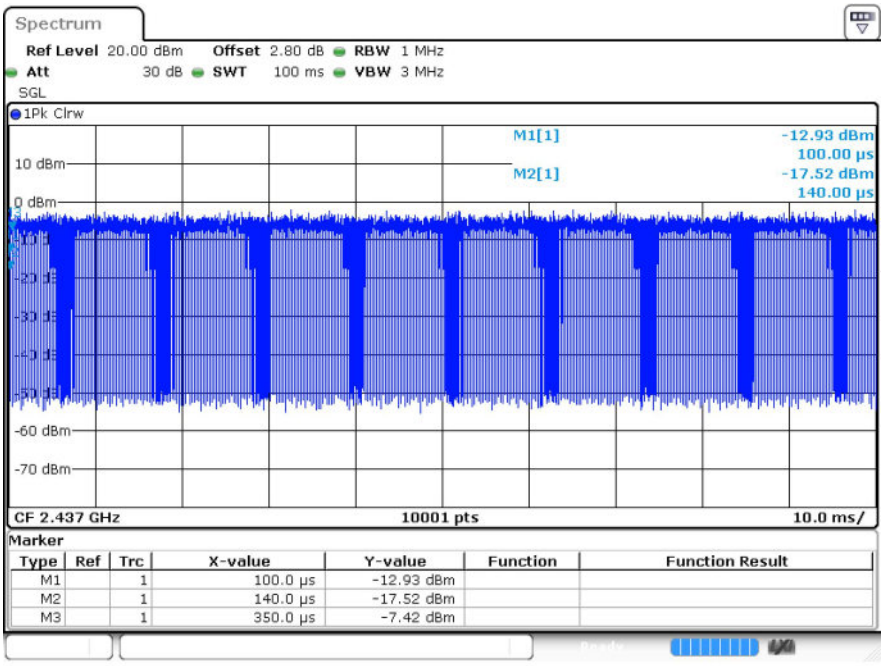


g 2412MHz Ant1

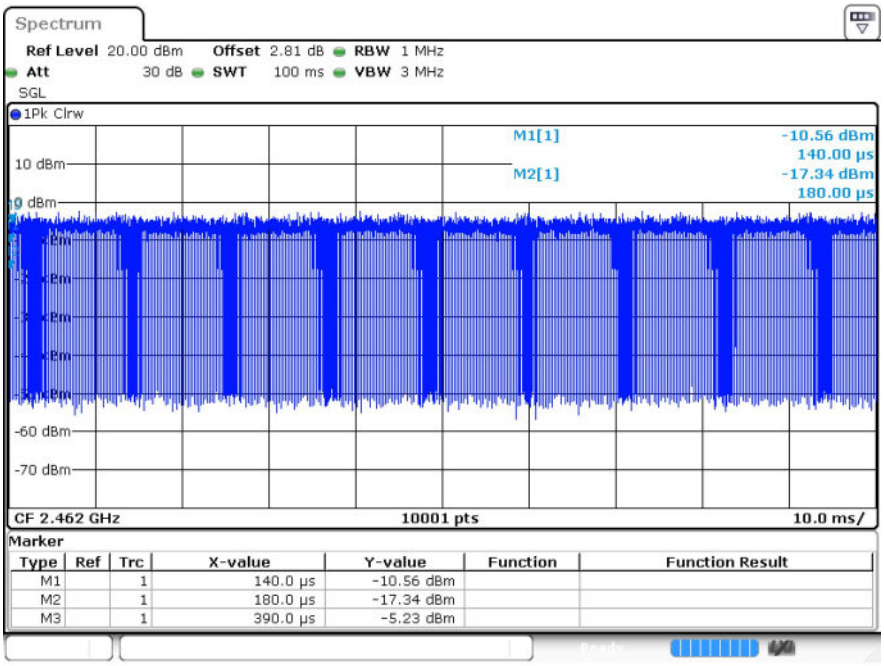


Test Graphs

g 2437MHz Ant1

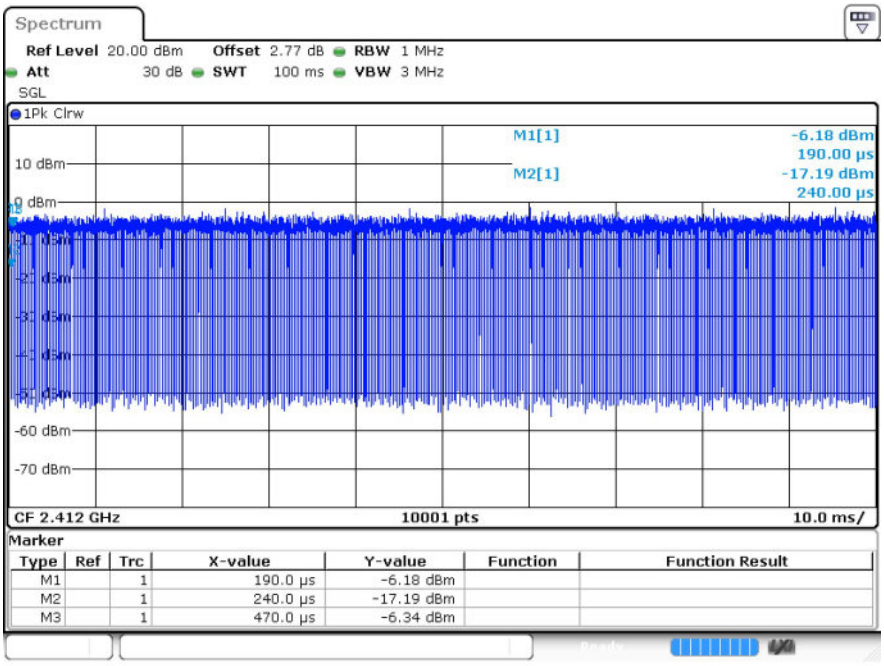


g 2462MHz Ant1

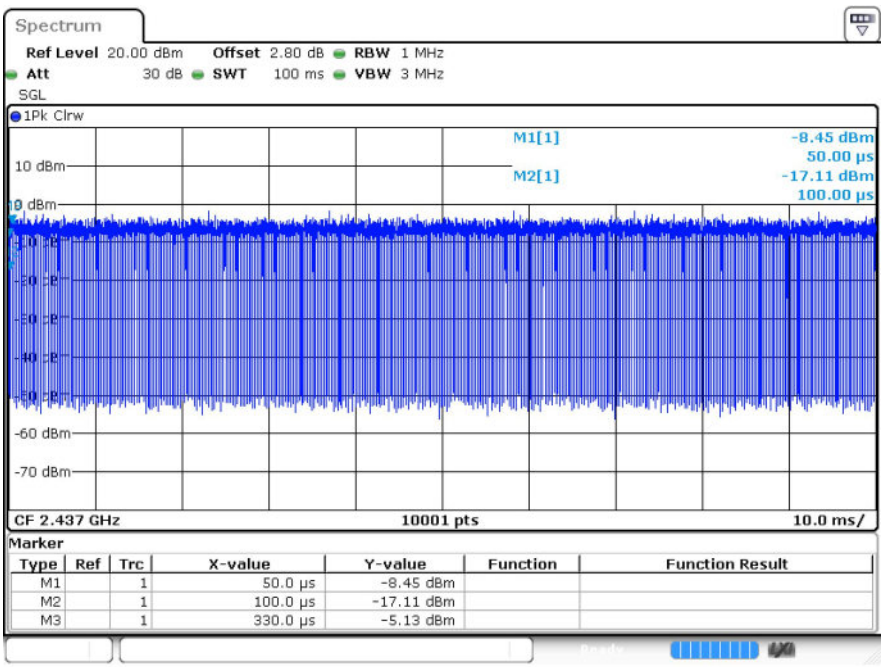


Test Graphs

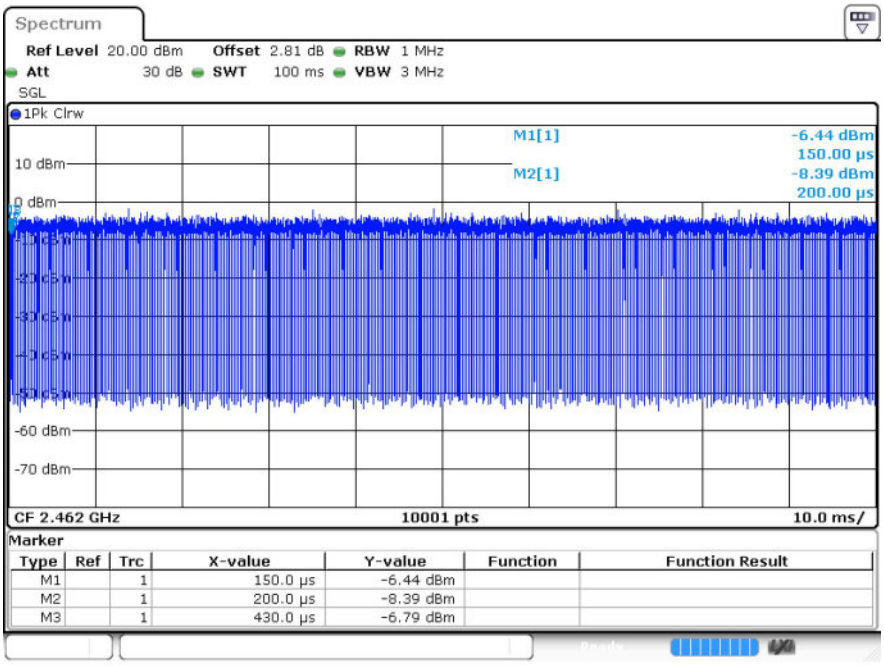
n20 2412MHz Ant1



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	7.61	30	Pass
b	2437	Ant1	7.54	30	Pass
b	2462	Ant1	7.63	30	Pass
g	2412	Ant1	7.35	30	Pass
g	2437	Ant1	7.3	30	Pass
g	2462	Ant1	7.13	30	Pass
n20	2412	Ant1	7.13	30	Pass
n20	2437	Ant1	7.05	30	Pass
n20	2462	Ant1	7.27	30	Pass

3 -6dB Bandwidth

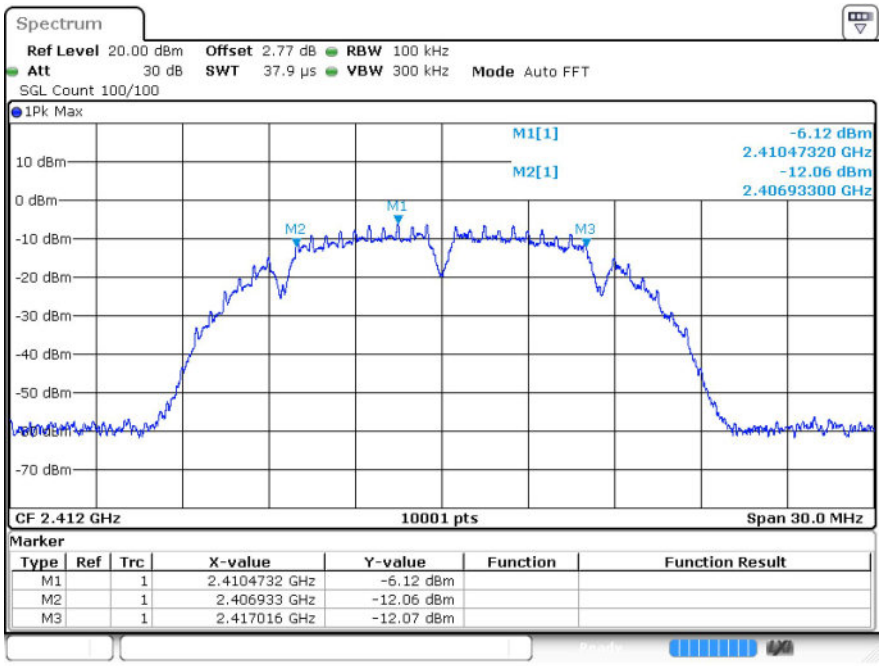
3.1 Test Result

Mode	Frequency (MHz)	Antenna	-6 dB Bandwidth (MHz)	Limit -6 dB Bandwidth (MHz)	Verdict
b	2412	Ant1	10.083	0.5	Pass
b	2437	Ant1	10.089	0.5	Pass
b	2462	Ant1	10.077	0.5	Pass
g	2412	Ant1	15.108	0.5	Pass
g	2437	Ant1	15.117	0.5	Pass
g	2462	Ant1	15.108	0.5	Pass
n20	2412	Ant1	15.108	0.5	Pass
n20	2437	Ant1	15.108	0.5	Pass
n20	2462	Ant1	15.024	0.5	Pass

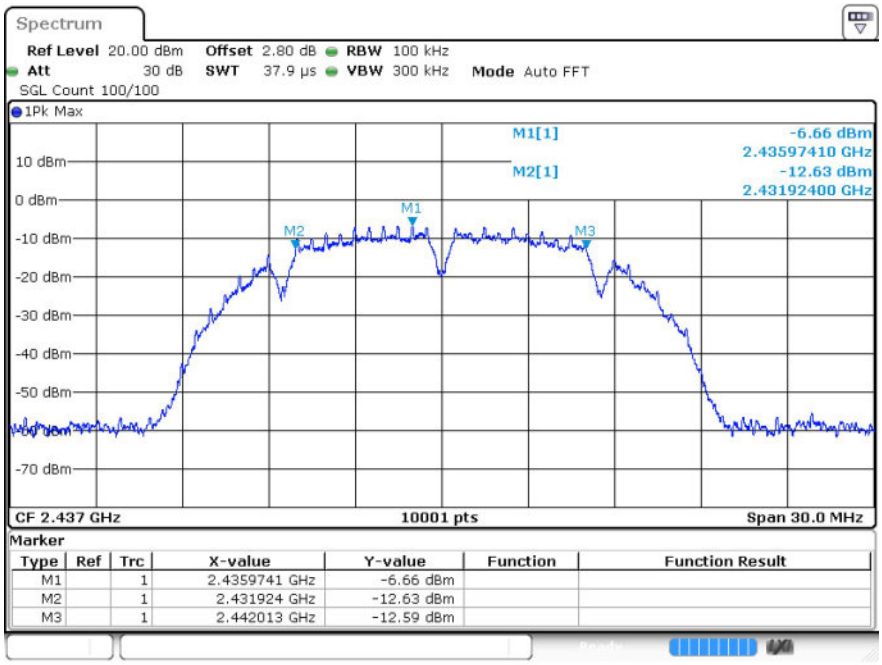
3.2 Test Graphs

Test Graphs

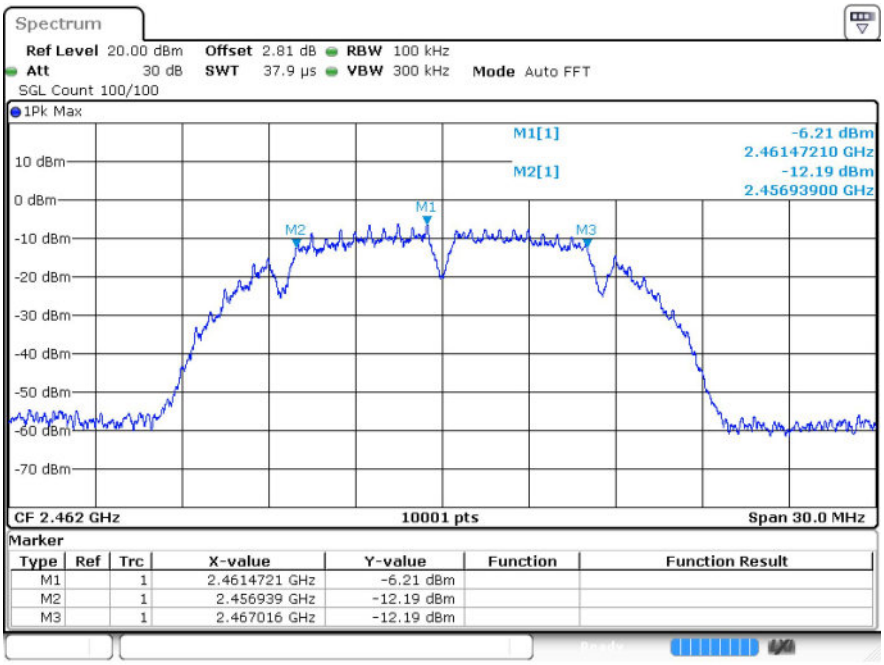
b 2412MHz Ant1



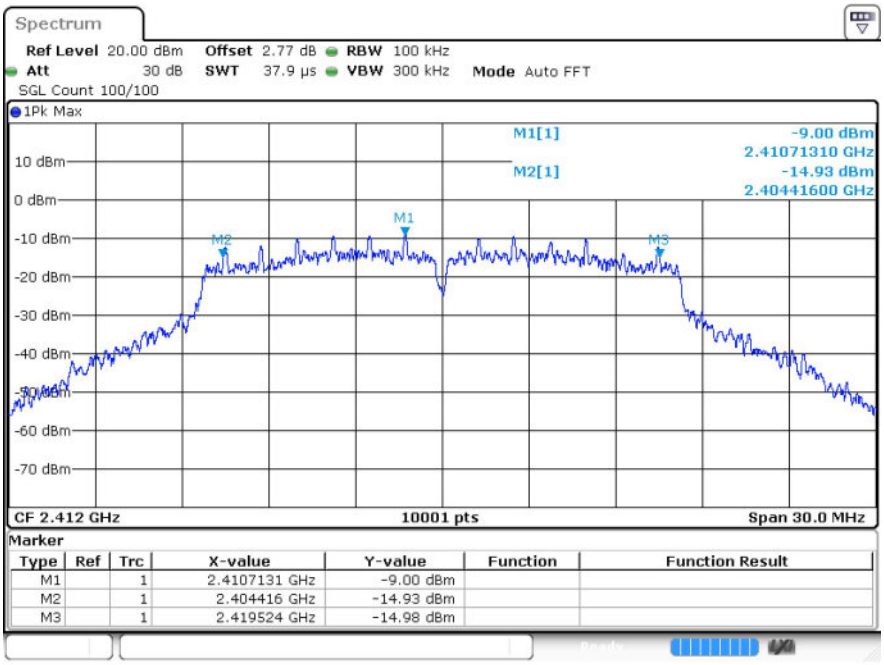
b 2437MHz Ant1



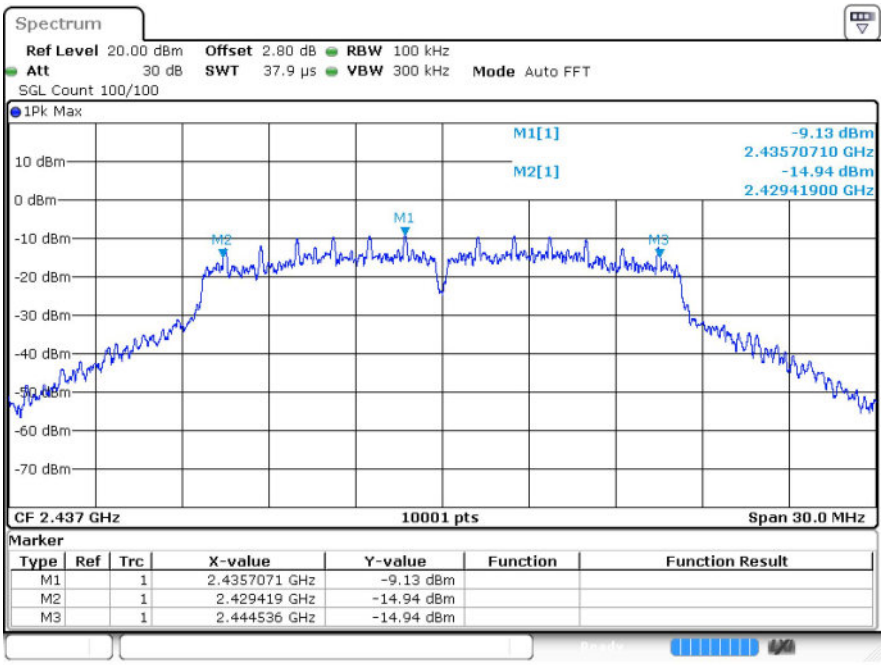
b 2462MHz Ant1



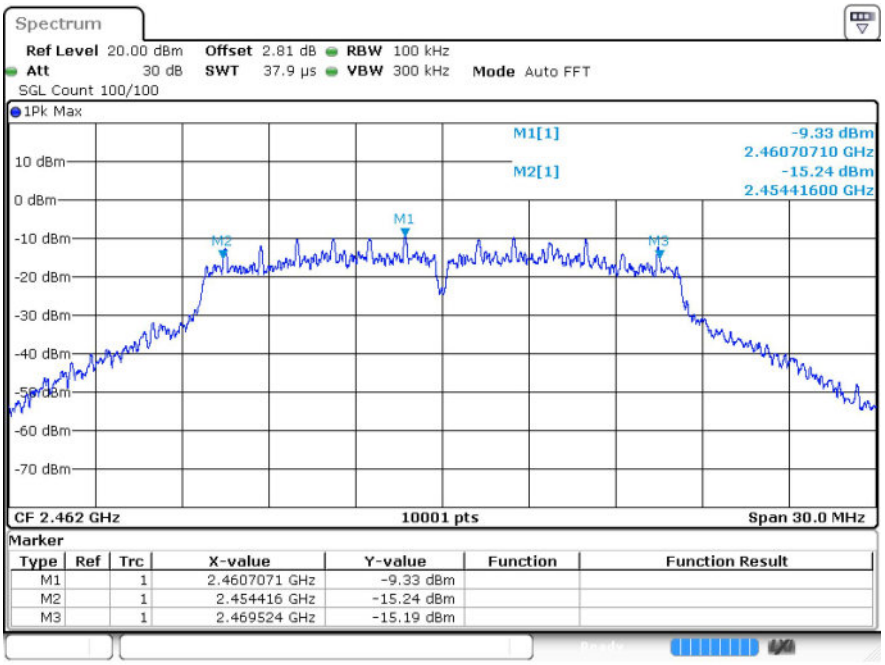
g 2412MHz Ant1



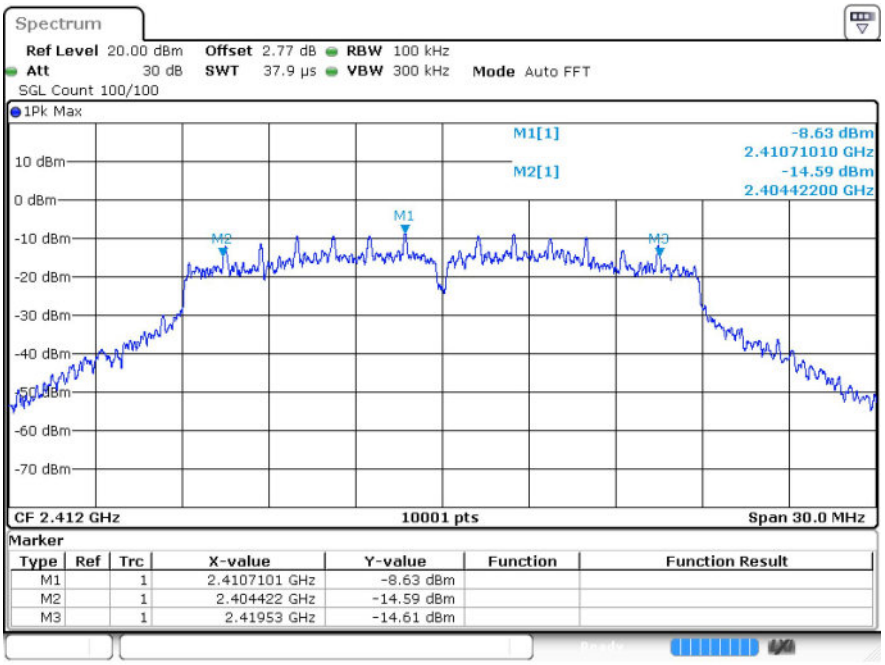
g 2437MHz Ant1



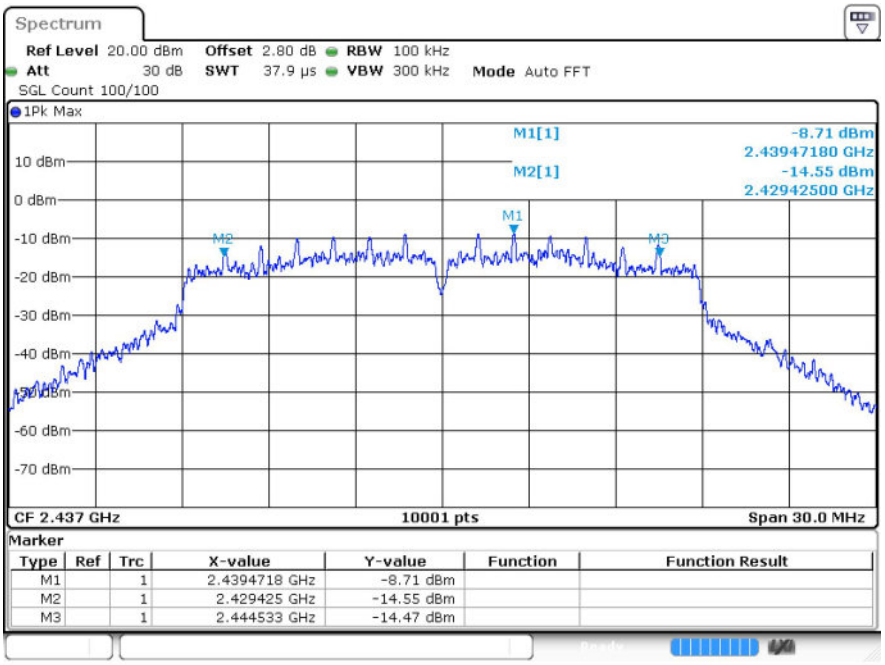
g 2462MHz Ant1



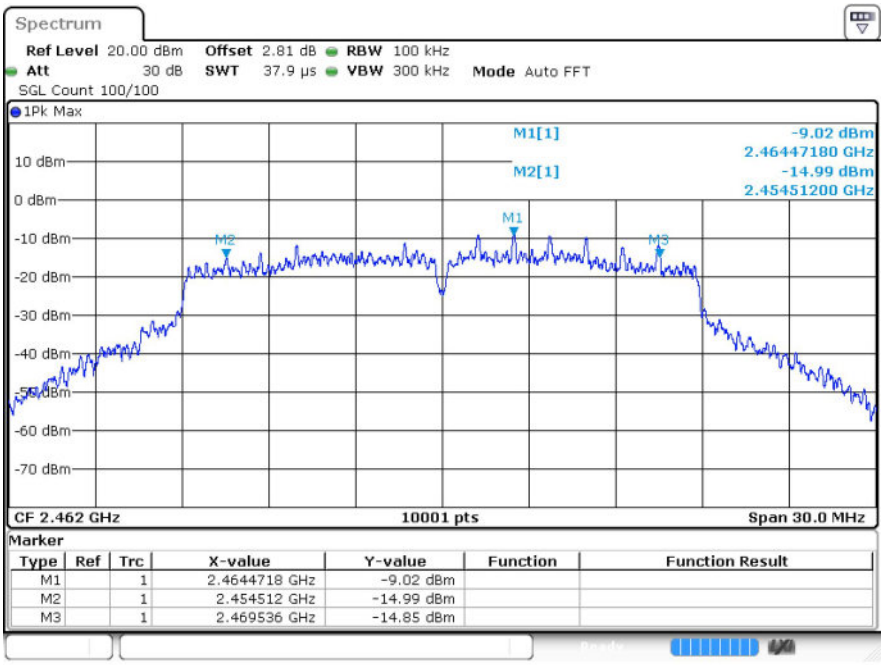
n20 2412MHz Ant1



n20 2437MHz Ant1



n20 2462MHz Ant1

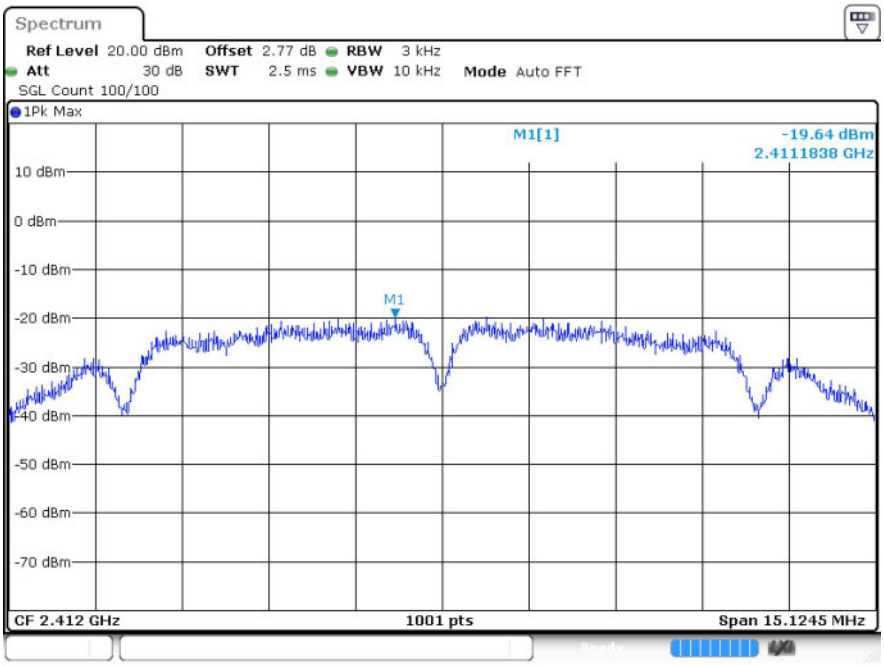
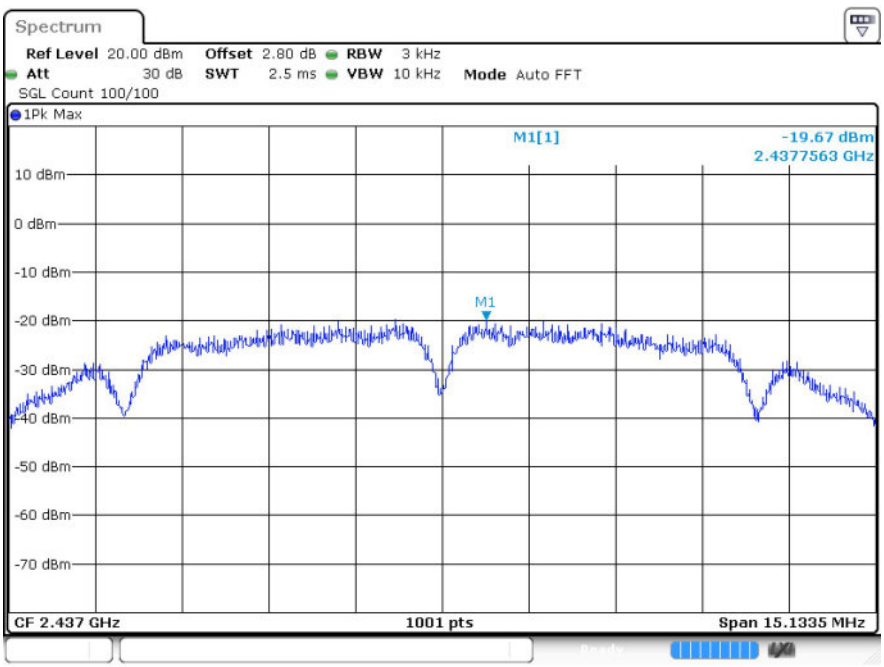


4 Maximum Power Spectral Density Level

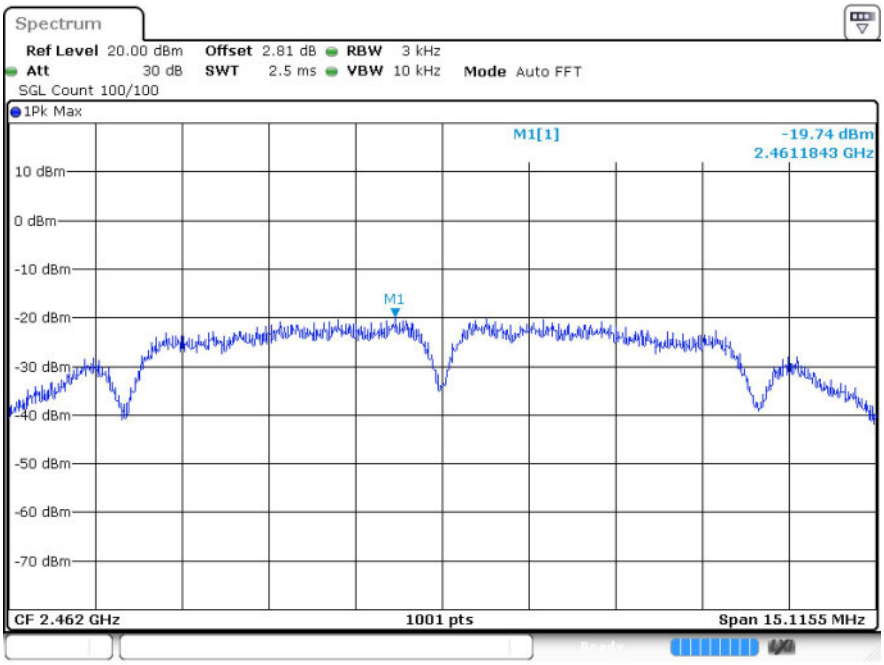
4.1 Test Result

Mode	Frequency (MHz)	Antenna	Conducted PSD (dBm/3-100kHz)	Limit (dBm/3kHz)	Verdict
b	2412	Ant1	-19.64	≤8	Pass
b	2437	Ant1	-19.67	≤8	Pass
b	2462	Ant1	-19.74	≤8	Pass
g	2412	Ant1	-23.16	≤8	Pass
g	2437	Ant1	-22.25	≤8	Pass
g	2462	Ant1	-22.44	≤8	Pass
n20	2412	Ant1	-23.08	≤8	Pass
n20	2437	Ant1	-23.68	≤8	Pass
n20	2462	Ant1	-22.87	≤8	Pass

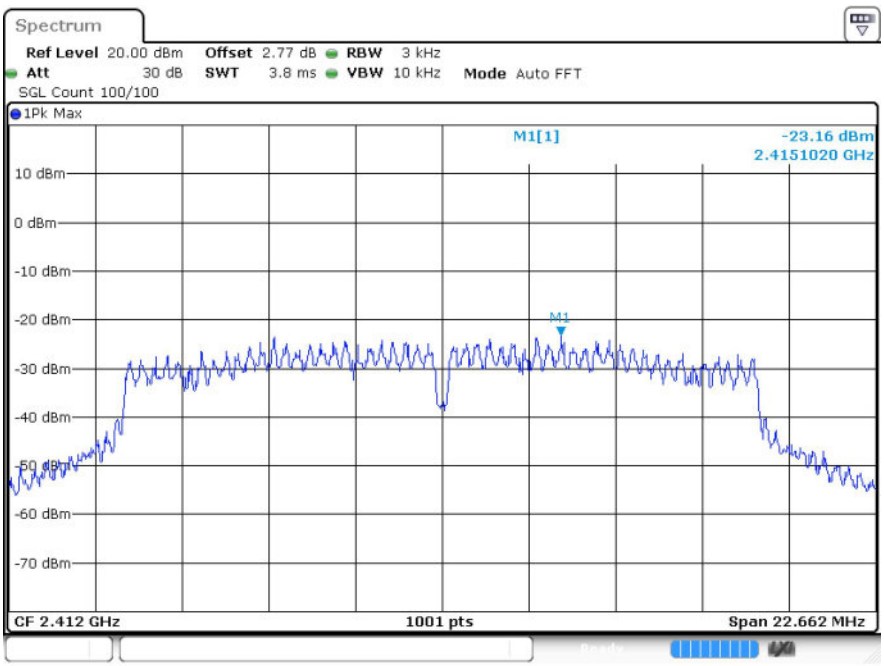
4.2 Test Graphs

Test Graphs
b 2412MHz Ant1

b 2437MHz Ant1


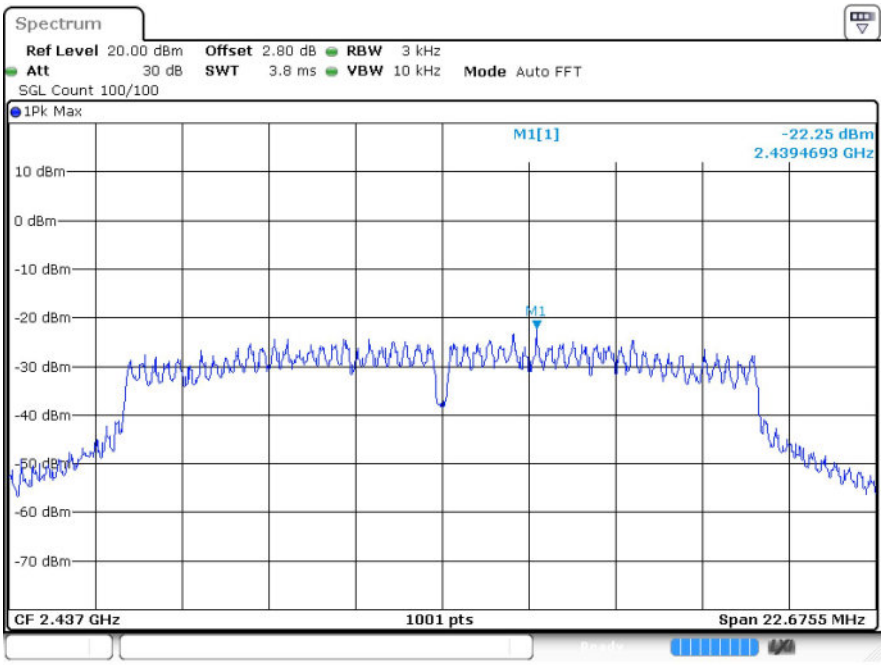
b 2462MHz Ant1



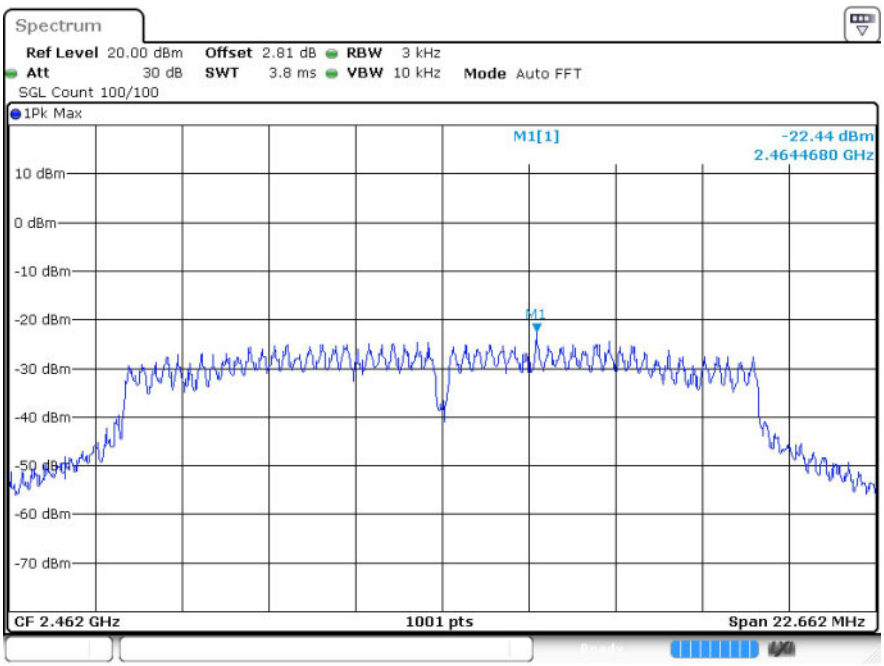
g 2412MHz Ant1



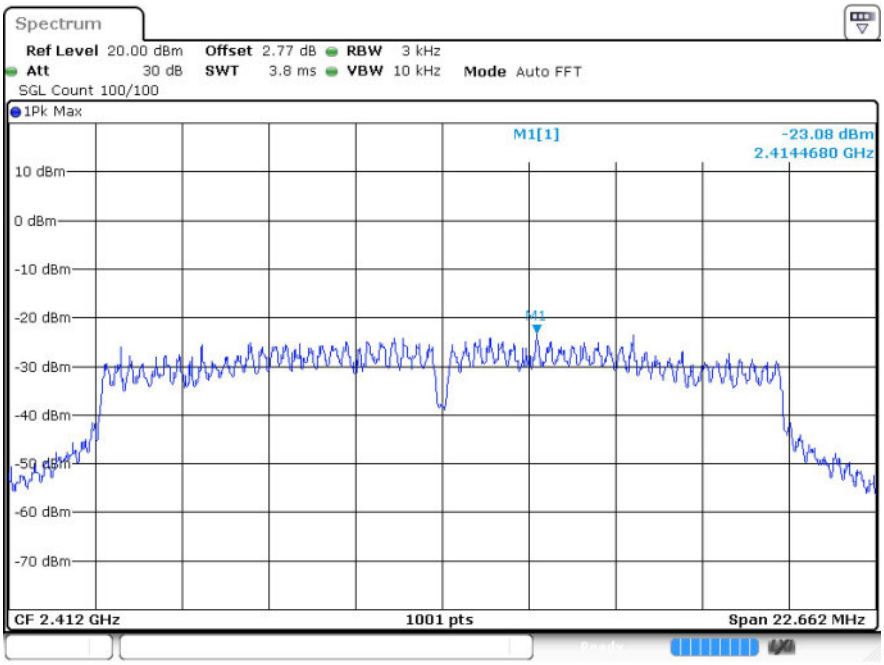
g 2437MHz Ant1



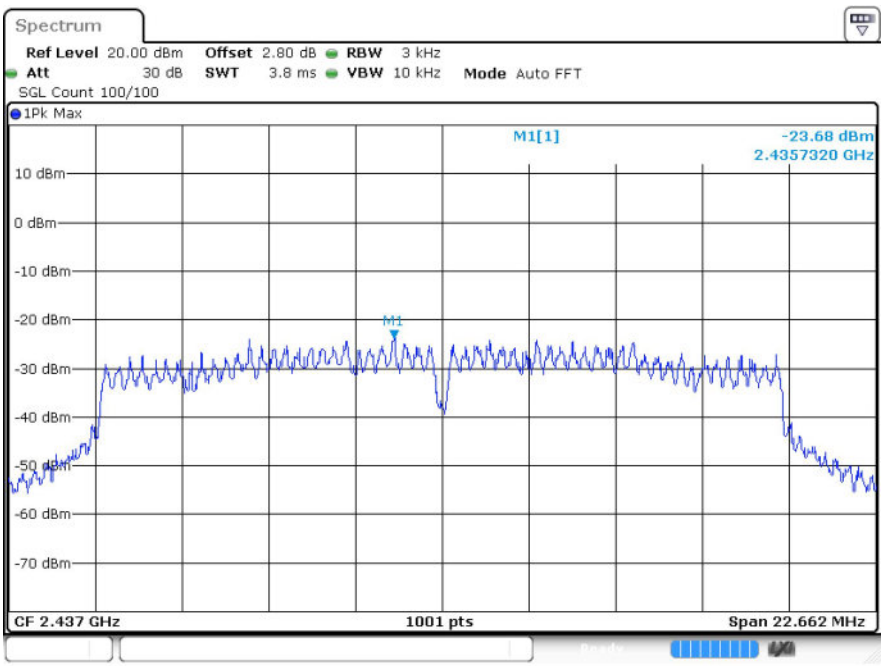
g 2462MHz Ant1



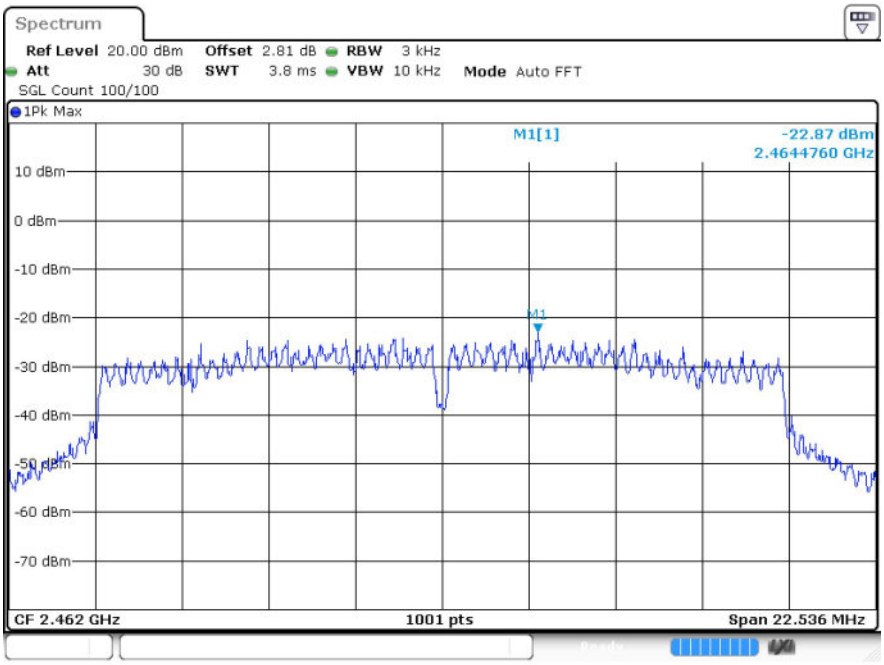
n20 2412MHz Ant1



n20 2437MHz Ant1



n20 2462MHz Ant1



5 Band Edge

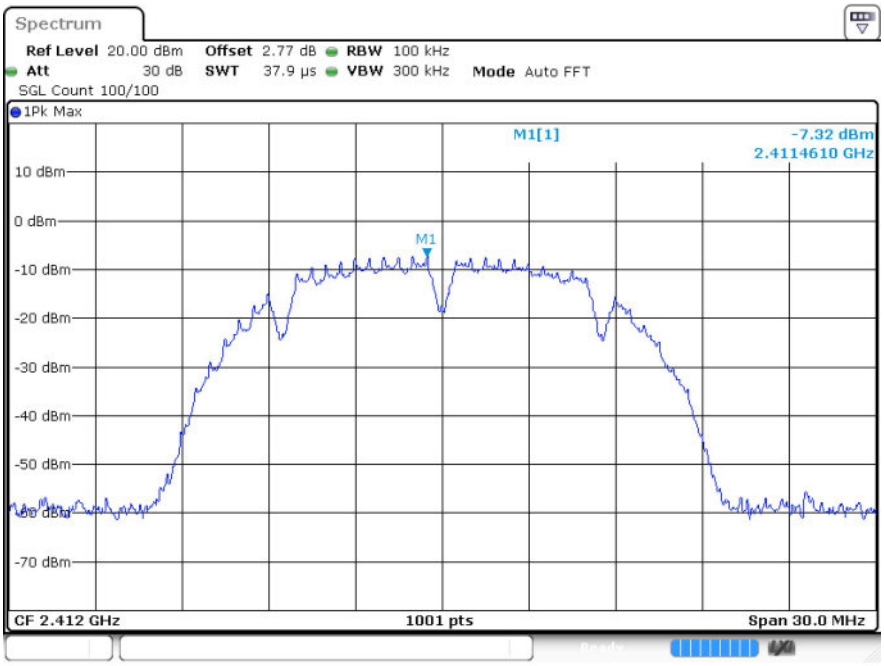
5.1 Test Result

Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
b	2412	Ant1	-48.15	-20	Pass
b	2462	Ant1	-49.26	-20	Pass
g	2412	Ant1	-46.26	-20	Pass
g	2462	Ant1	-47.2	-20	Pass
n20	2412	Ant1	-45.22	-20	Pass
n20	2462	Ant1	-46.42	-20	Pass

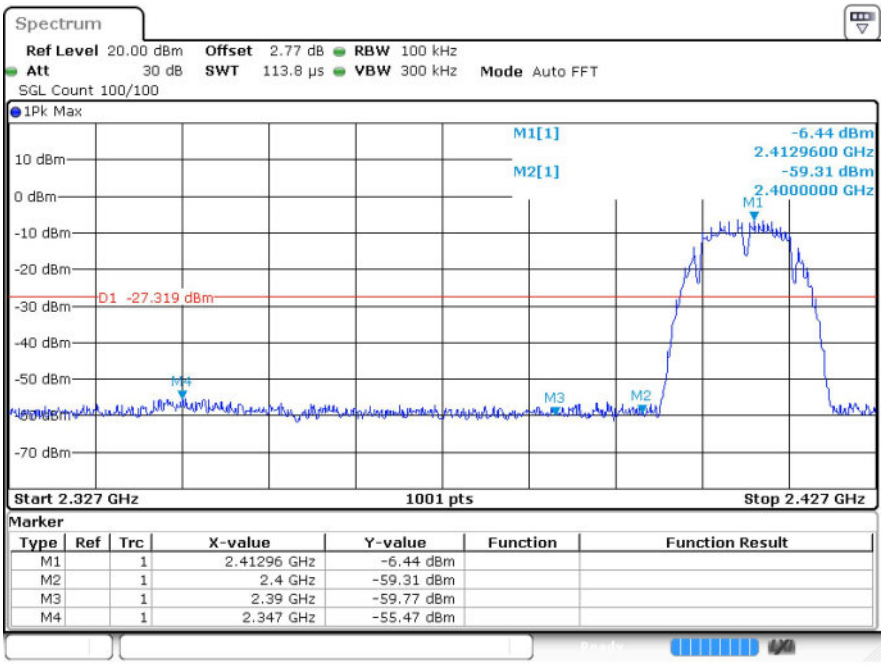
5.2 Test Graphs

Test Graphs

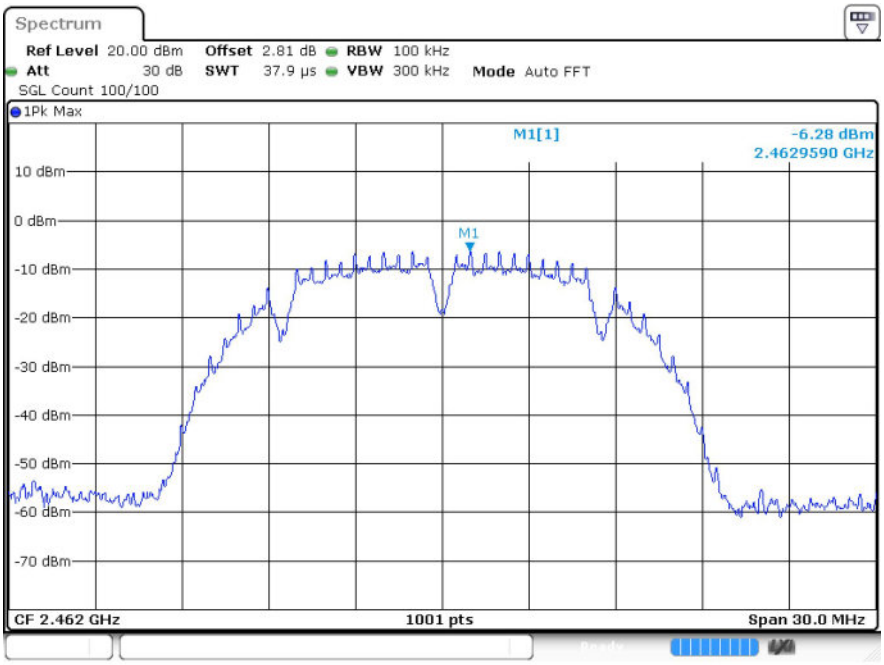
b 2412MHz Ant1 Ref



b 2412MHz Ant1 Emission



b 2462MHz Ant1 Ref

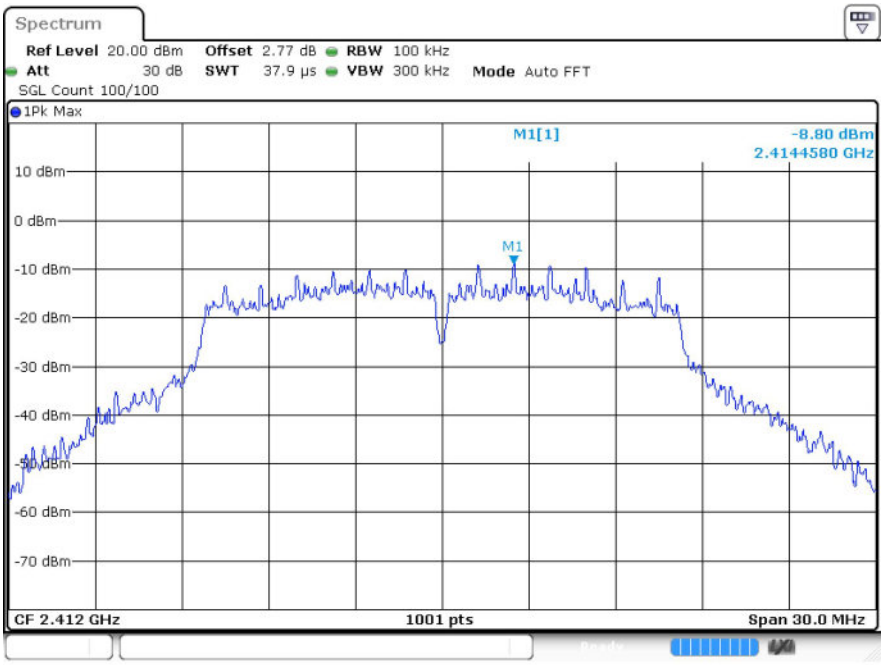


b 2462MHz Ant1 Emission

Marker

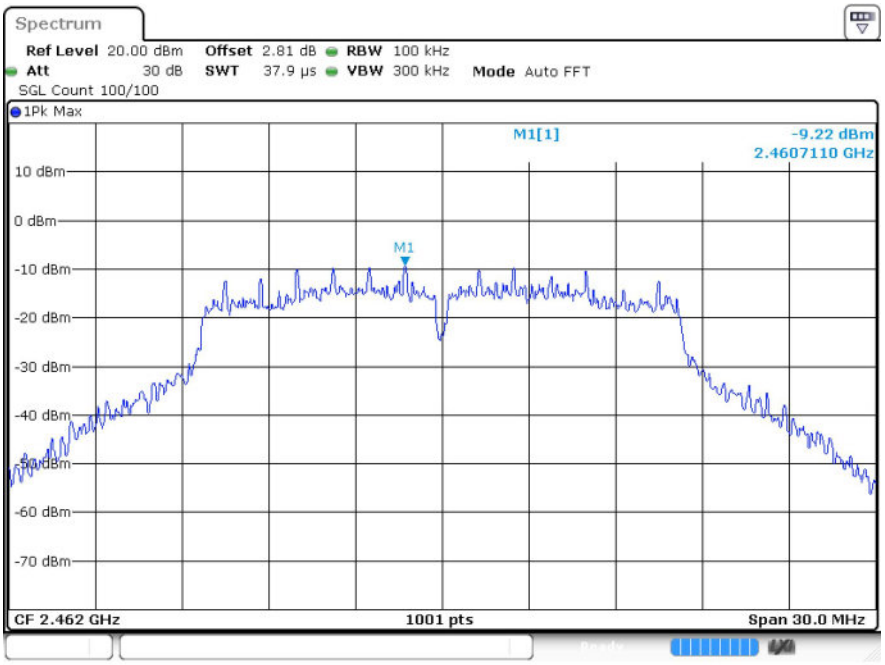
Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.46094 GHz	-5.70 dBm		
M2		1	2.4835 GHz	-57.75 dBm		
M3		1	2.5 GHz	-58.56 dBm		
M4		1	2.4955 GHz	-55.54 dBm		

g 2412MHz Ant1 Ref

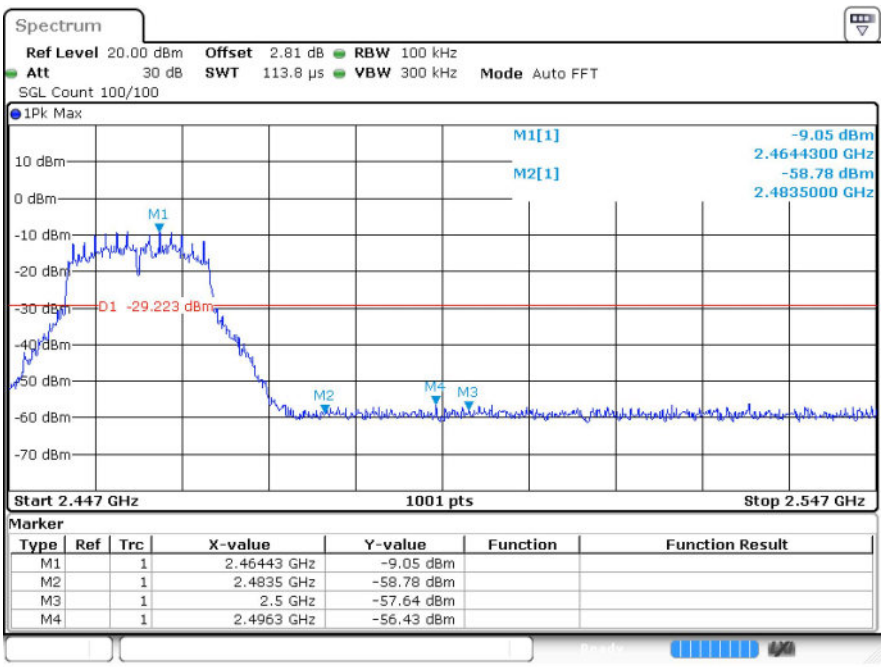


g 2412MHz Ant1 Emission

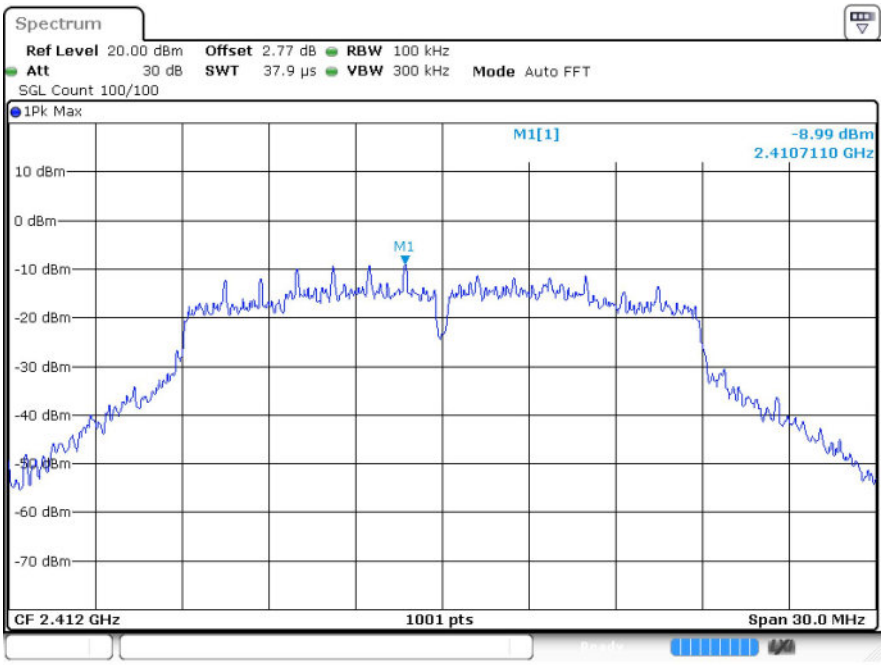
g 2462MHz Ant1 Ref



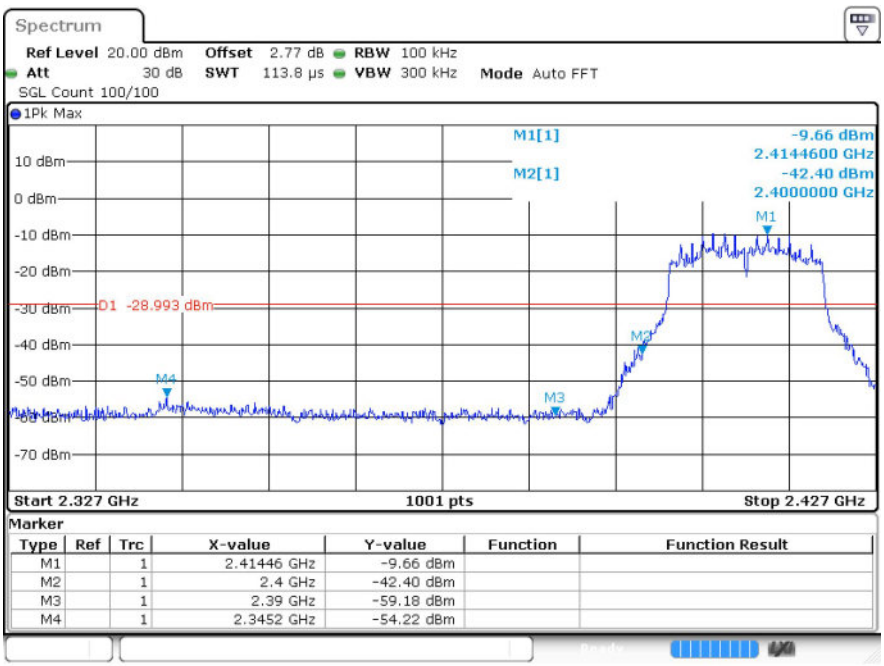
g 2462MHz Ant1 Emission



n20 2412MHz Ant1 Ref



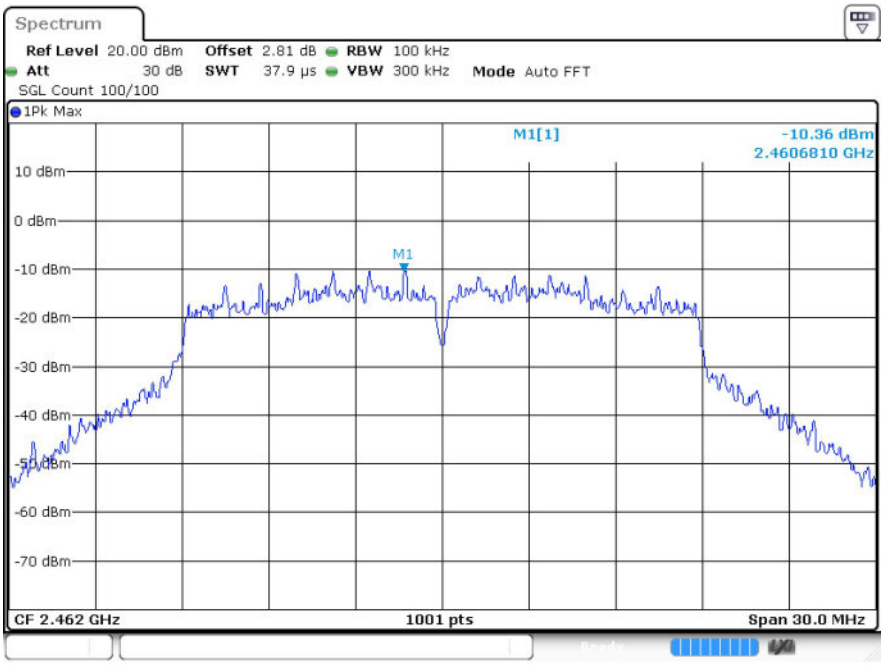
n20 2412MHz Ant1 Emission



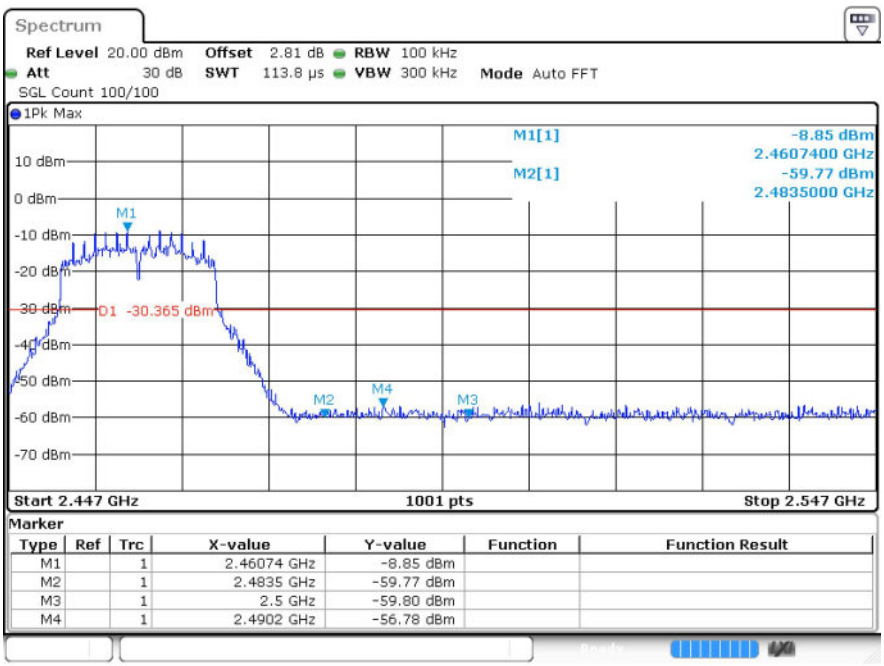
Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.41446 GHz	-9.66 dBm		
M2		1	2.4 GHz	-42.40 dBm		
M3		1	2.39 GHz	-59.18 dBm		
M4		1	2.3452 GHz	-54.22 dBm		

n20 2462MHz Ant1 Ref



n20 2462MHz Ant1 Emission



6 Conducted RF Spurious Emission

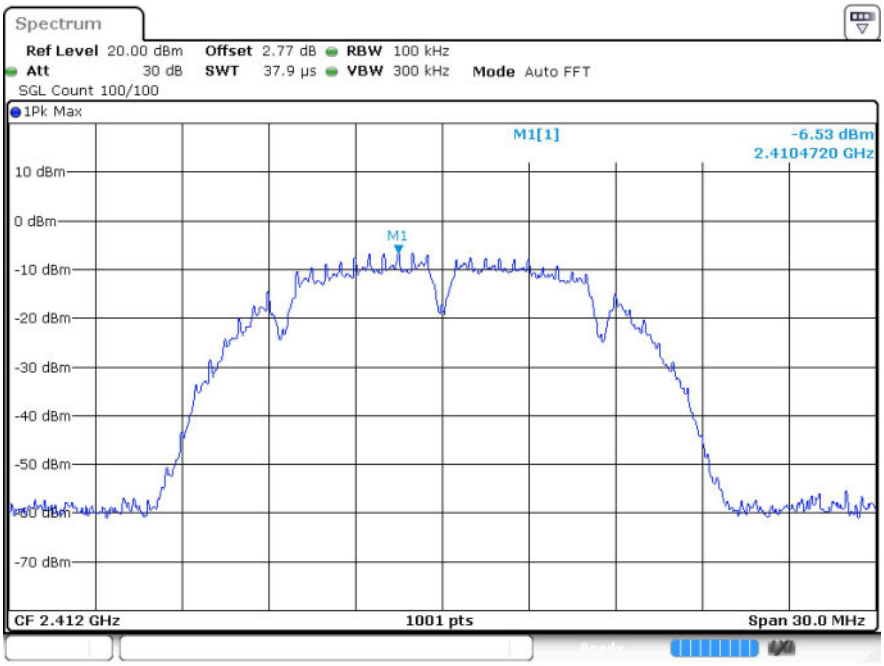
6.1 Test Result

Mode	Frequency (MHz)	Antenna	Max Value (dBc)	Limit (dBc)	Verdict
b	2412	Ant1	-35.57	-20	Pass
b	2437	Ant1	-35.59	-20	Pass
b	2462	Ant1	-37.05	-20	Pass
g	2412	Ant1	-35.27	-20	Pass
g	2437	Ant1	-34.86	-20	Pass
g	2462	Ant1	-34.19	-20	Pass
n20	2412	Ant1	-34.44	-20	Pass
n20	2437	Ant1	-33.84	-20	Pass
n20	2462	Ant1	-34.01	-20	Pass

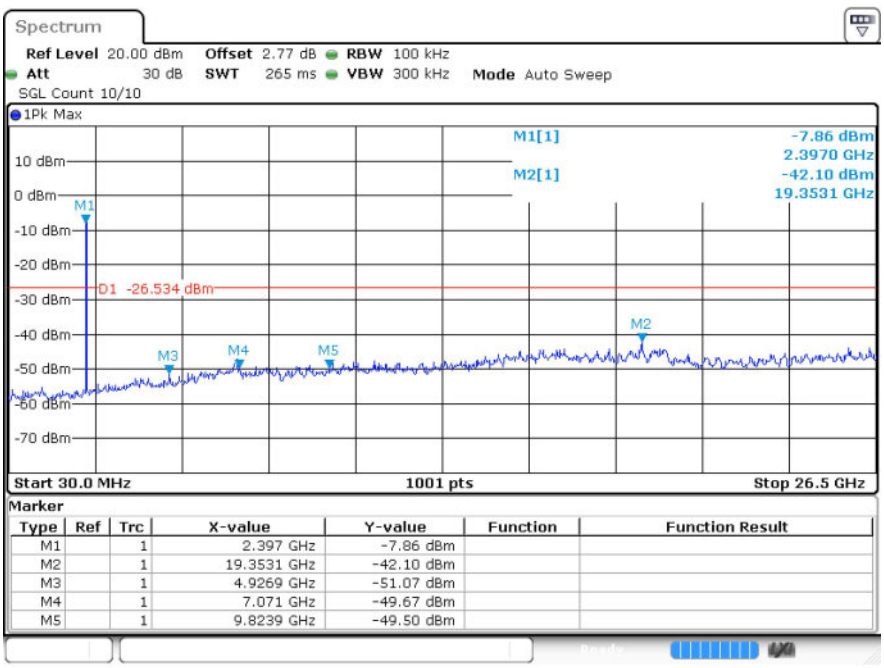
6.2 Test Graphs

Test Graphs

b 2412MHz Ant1 Ref



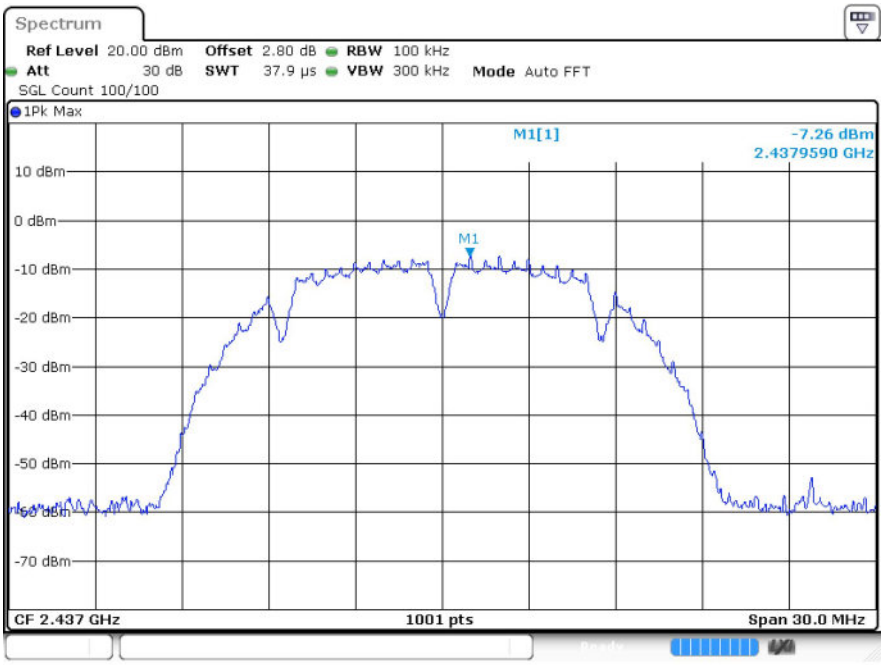
b 2412MHz Ant1 Emission



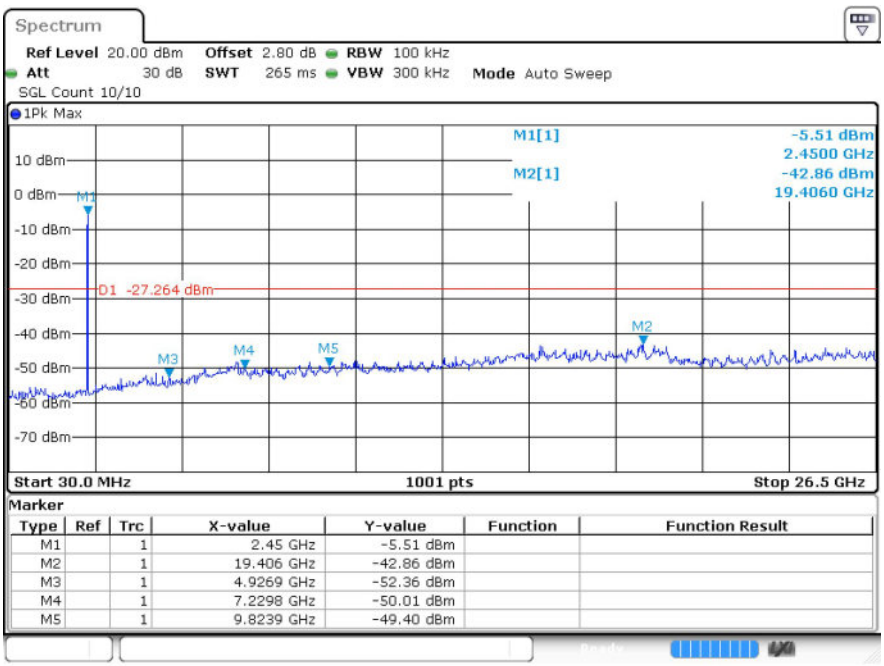
Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.397 GHz	-7.86 dBm		
M2		1	19.3531 GHz	-42.10 dBm		
M3		1	4.9269 GHz	-51.07 dBm		
M4		1	7.071 GHz	-49.67 dBm		
M5		1	9.8239 GHz	-49.50 dBm		

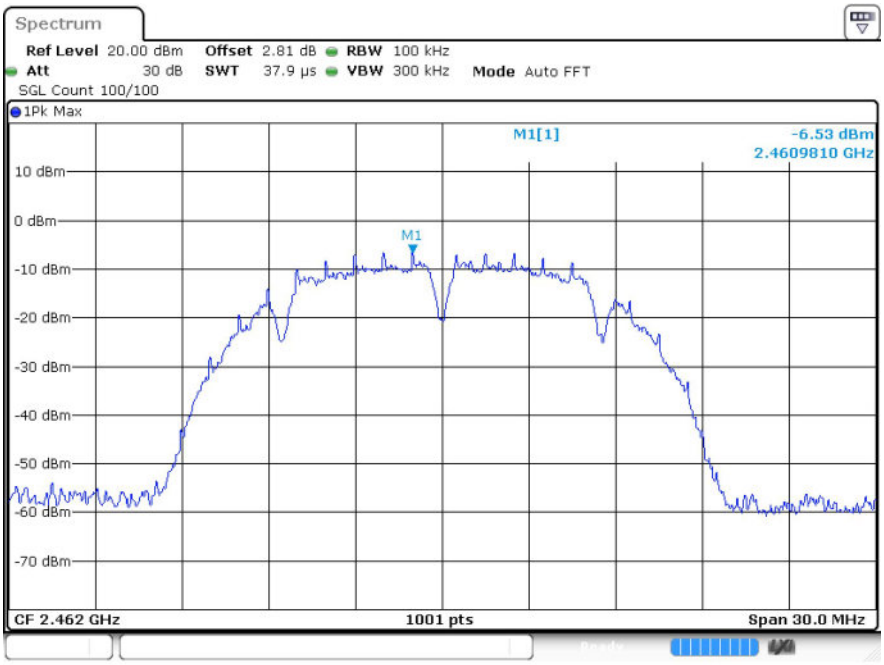
b 2437MHz Ant1 Ref



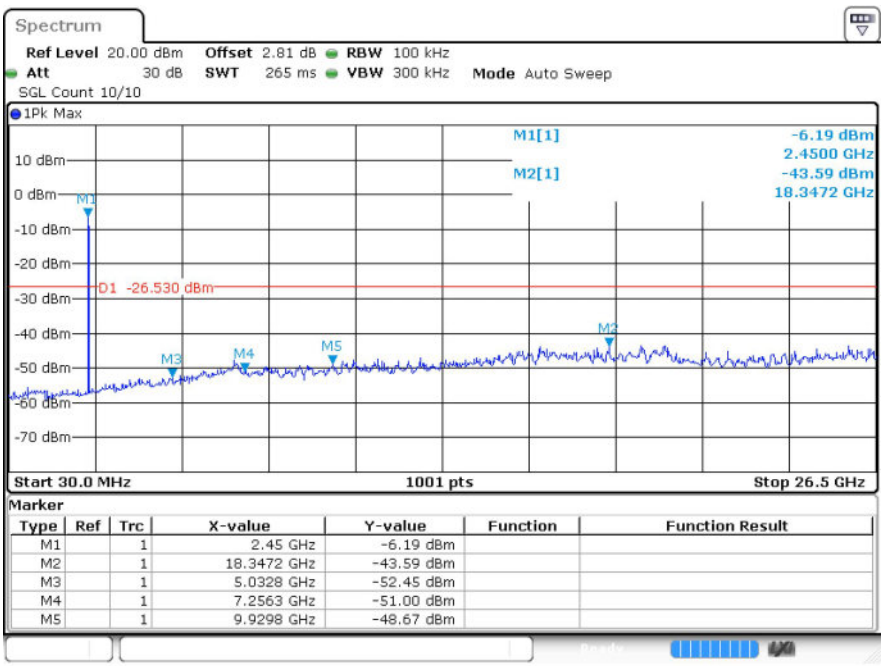
b 2437MHz Ant1 Emission



b 2462MHz Ant1 Ref



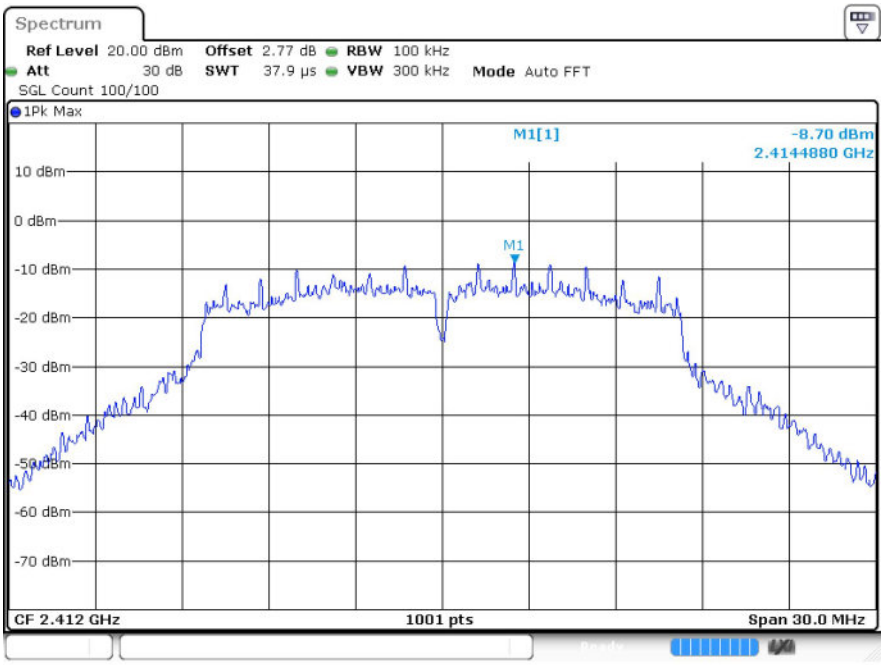
b 2462MHz Ant1 Emission



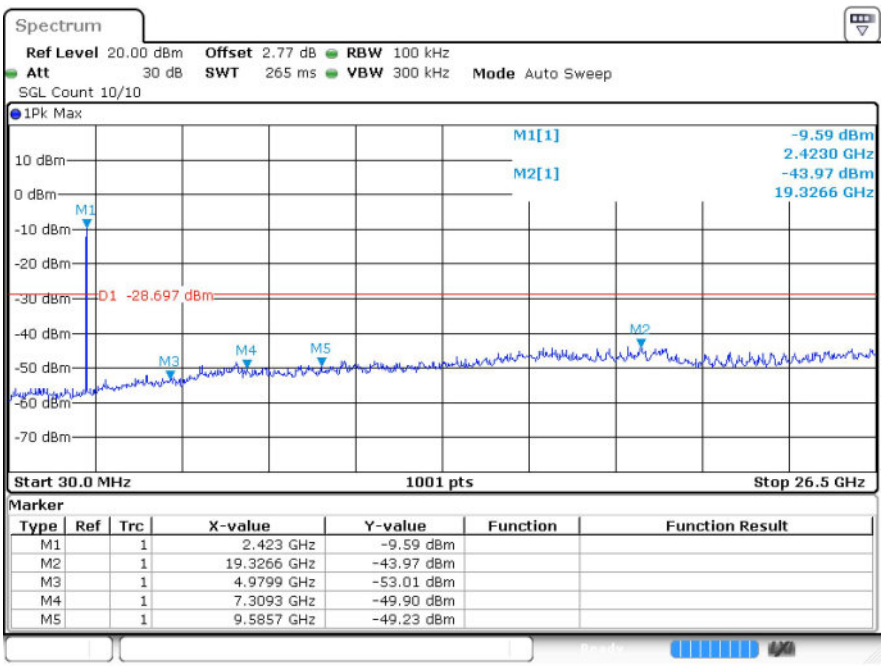
Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.45 GHz	-6.19 dBm		
M2		1	18.3472 GHz	-43.59 dBm		
M3		1	5.0328 GHz	-52.45 dBm		
M4		1	7.2563 GHz	-51.00 dBm		
M5		1	9.9298 GHz	-48.67 dBm		

g 2412MHz Ant1 Ref

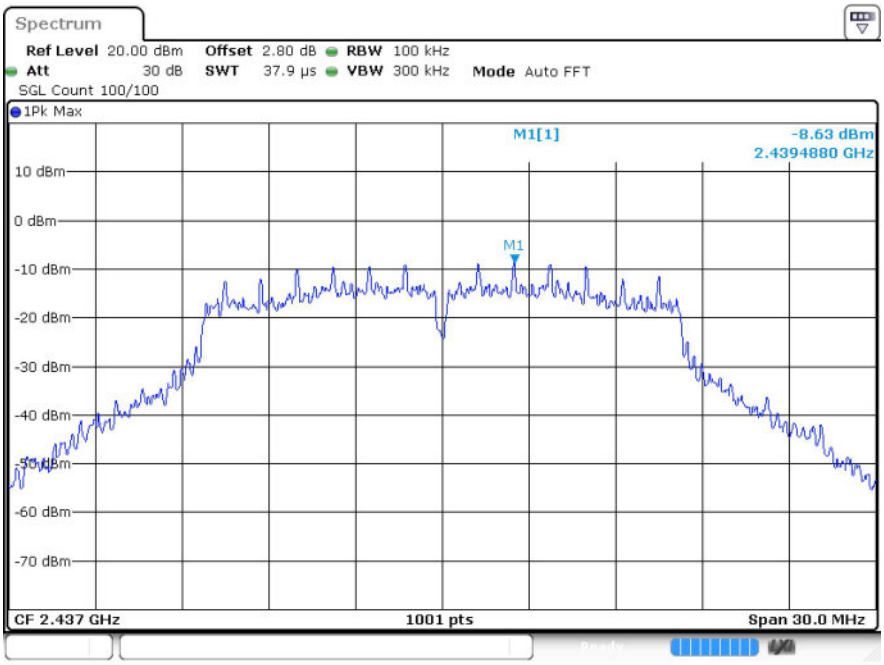


g 2412MHz Ant1 Emission

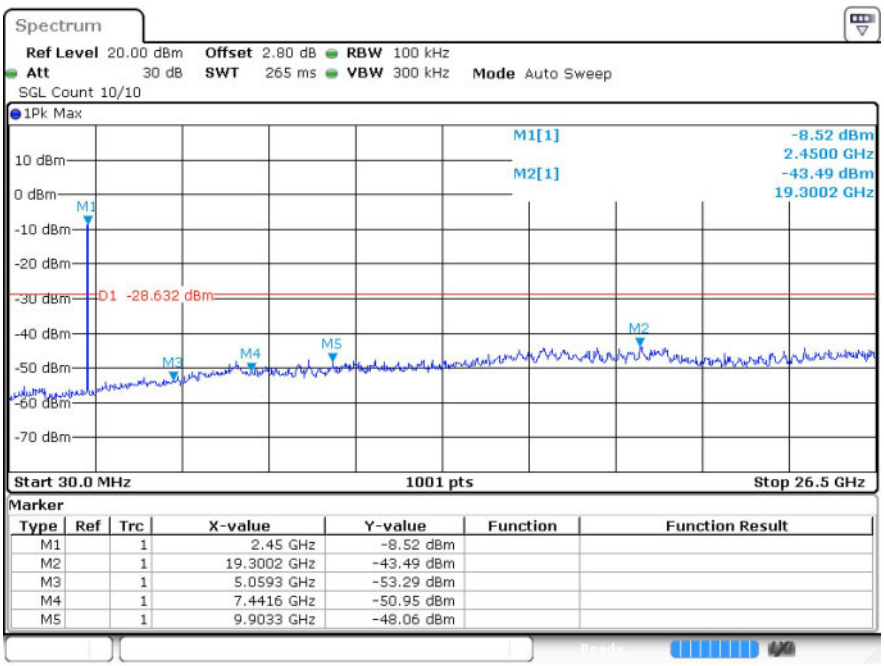


Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.423 GHz	-9.59 dBm		
M2		1	19.3266 GHz	-43.97 dBm		
M3		1	4.9799 GHz	-53.01 dBm		
M4		1	7.3093 GHz	-49.90 dBm		
M5		1	9.5857 GHz	-49.23 dBm		

g 2437MHz Ant1 Ref



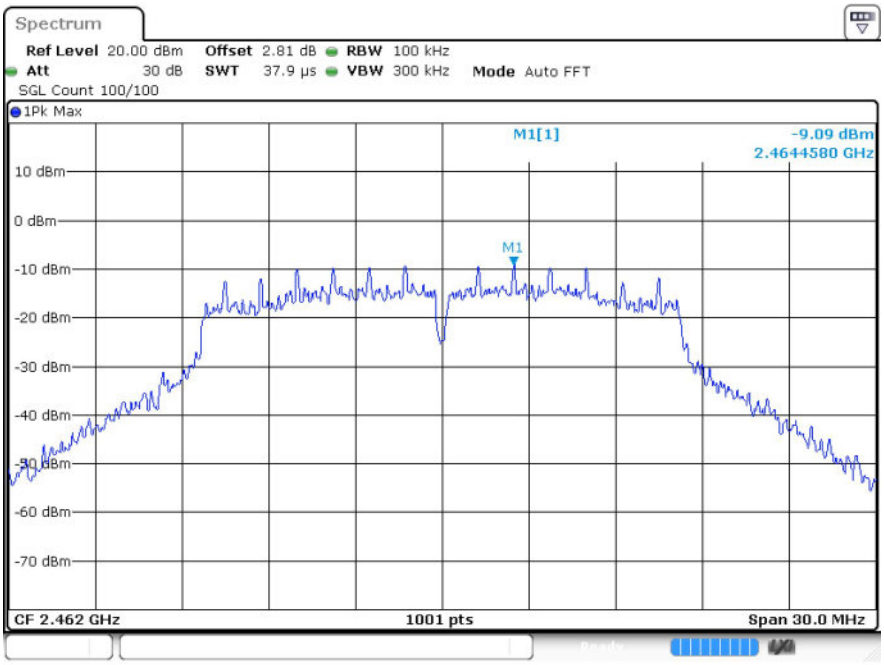
g 2437MHz Ant1 Emission



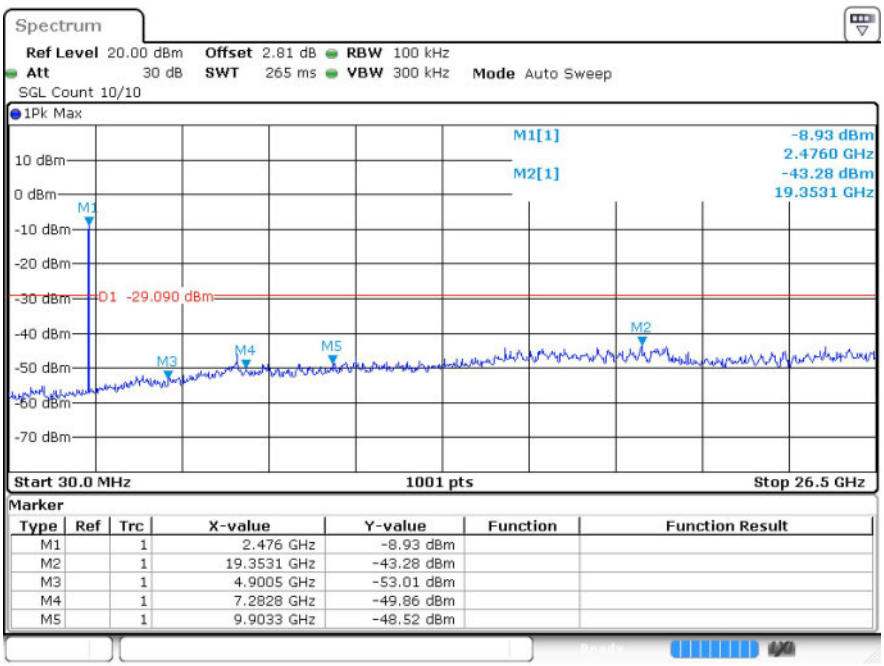
Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.45 GHz	-8.52 dBm		
M2		1	19.3002 GHz	-43.49 dBm		
M3		1	5.0593 GHz	-53.29 dBm		
M4		1	7.4416 GHz	-50.95 dBm		
M5		1	9.9033 GHz	-48.06 dBm		

g 2462MHz Ant1 Ref



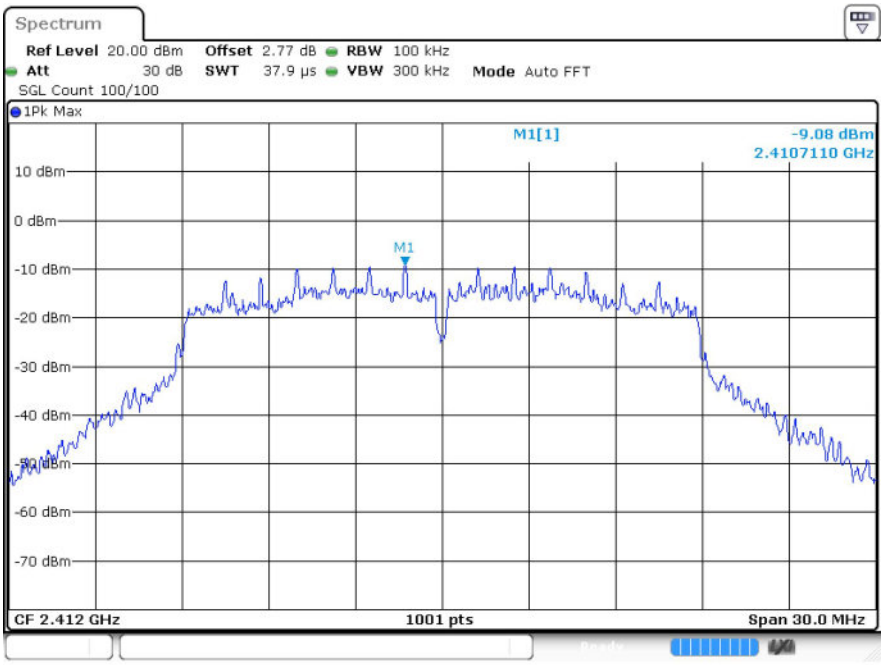
g 2462MHz Ant1 Emission



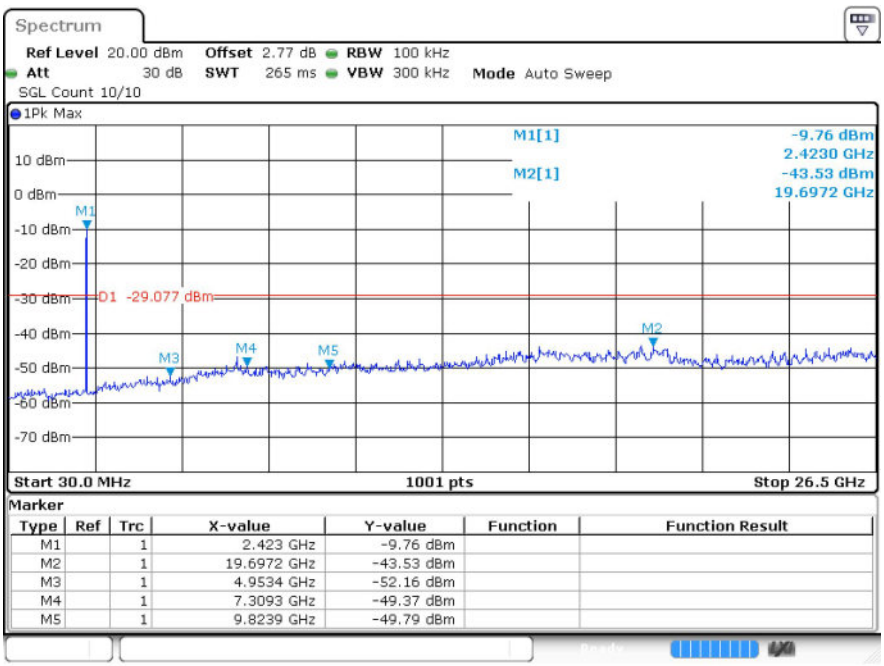
Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.476 GHz	-8.93 dBm		
M2		1	19.3531 GHz	-43.28 dBm		
M3		1	4.9005 GHz	-53.01 dBm		
M4		1	7.2828 GHz	-49.86 dBm		
M5		1	9.9033 GHz	-48.52 dBm		

n20 2412MHz Ant1 Ref



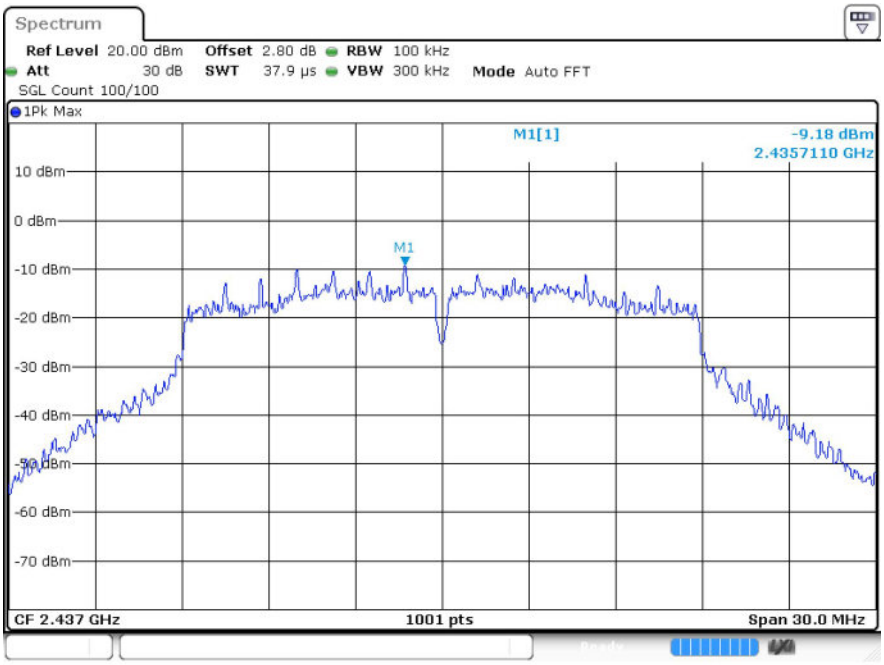
n20 2412MHz Ant1 Emission



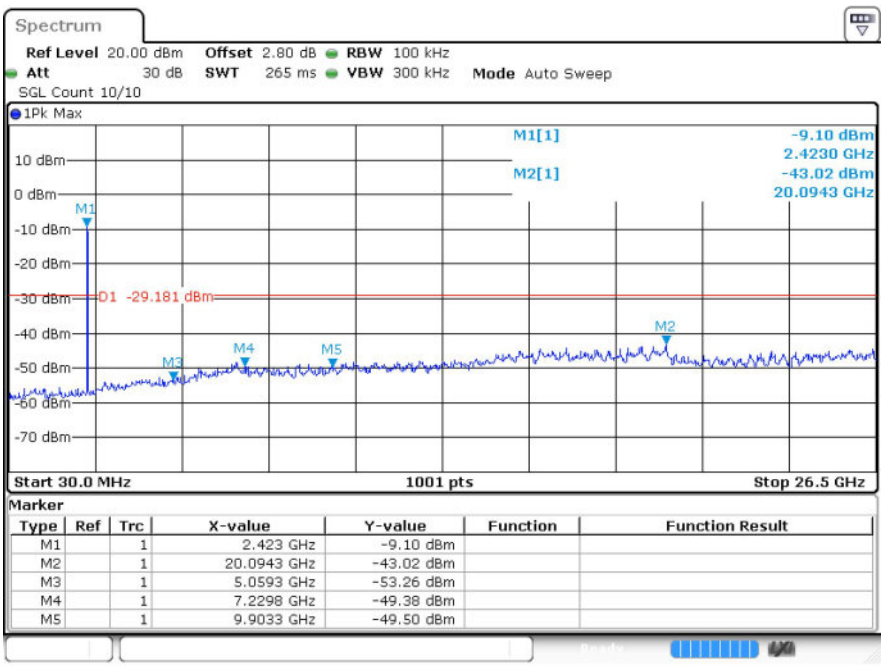
Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.423 GHz	-9.76 dBm		
M2		1	19.6972 GHz	-43.53 dBm		
M3		1	4.9534 GHz	-52.16 dBm		
M4		1	7.3093 GHz	-49.37 dBm		
M5		1	9.8239 GHz	-49.79 dBm		

n20 2437MHz Ant1 Ref



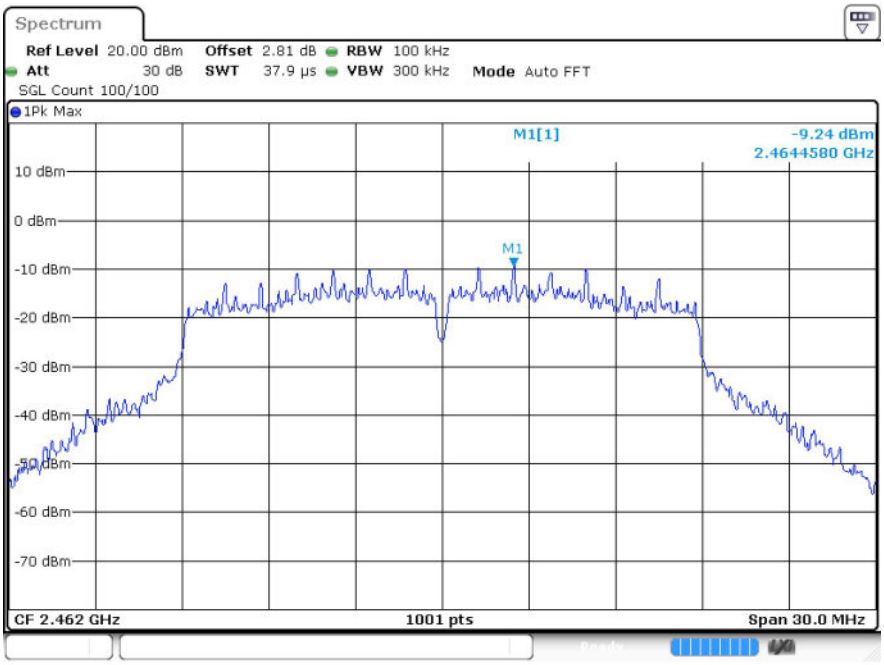
n20 2437MHz Ant1 Emission



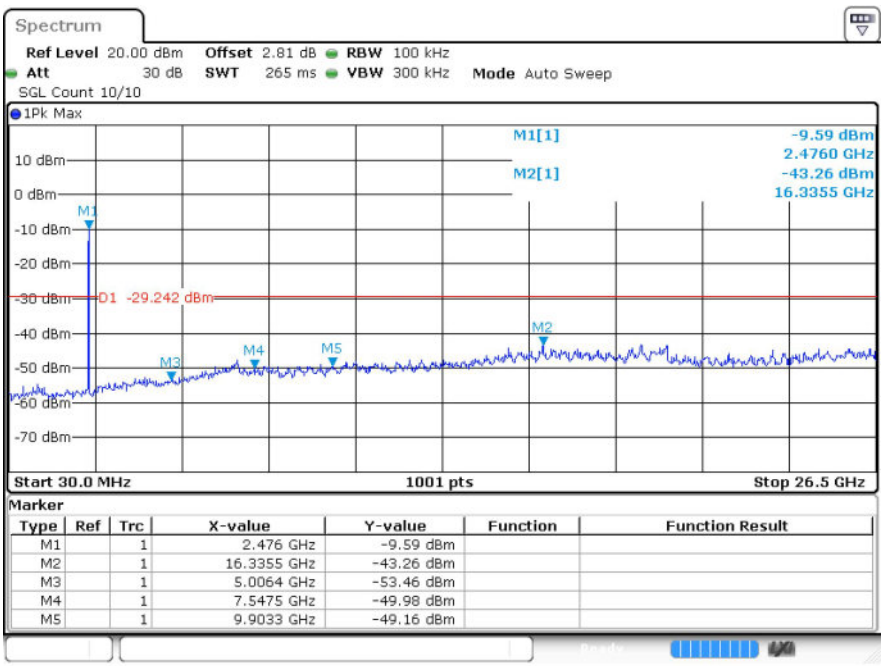
Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.423 GHz	-9.10 dBm		
M2		1	20.0943 GHz	-43.02 dBm		
M3		1	5.0593 GHz	-53.26 dBm		
M4		1	7.2298 GHz	-49.38 dBm		
M5		1	9.9033 GHz	-49.50 dBm		

n20 2462MHz Ant1 Ref



n20 2462MHz Ant1 Emission



Marker

Type	Ref	Trc	X-value	Y-value	Function	Function Result
M1		1	2.476 GHz	-9.59 dBm		
M2		1	16.3355 GHz	-43.26 dBm		
M3		1	5.0064 GHz	-53.46 dBm		
M4		1	7.5475 GHz	-49.98 dBm		
M5		1	9.9033 GHz	-49.16 dBm		

7 Restrict Band

7.1 Test Result

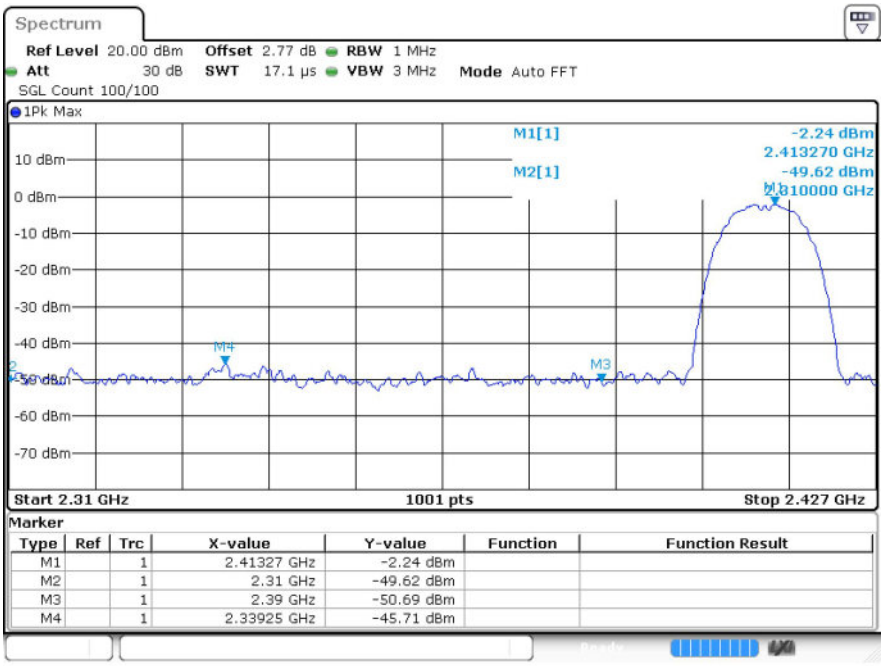
Mode	Frequency (MHz)	Antenna	Spur Freq (MHz)	Power (dBm)	Gain (dBi)	Duty Factor	E (dBuV/m)	Detector	Limit (dBuV/m)	Verdict
b	2412	Ant1	2310	-49.62	2.62	-	48.23	Peak	74	Pass
b	2412	Ant1	2310	-57.04	2.62	0	40.81	Average	54	Pass
b	2412	Ant1	2339.25	-45.7	2.62	-	52.15	Peak	74	Pass
b	2412	Ant1	2338.782	-53.93	2.62	0	43.92	Average	54	Pass
b	2412	Ant1	2390	-50.69	2.62	-	47.16	Peak	74	Pass
b	2412	Ant1	2390	-57.6	2.62	0	40.25	Average	54	Pass
b	2462	Ant1	2483.5	-49.97	2.62	-	47.88	Peak	74	Pass
b	2462	Ant1	2483.5	-55.9	2.62	0	41.95	Average	54	Pass
b	2462	Ant1	2488.764	-46.27	2.62	-	51.58	Peak	74	Pass
b	2462	Ant1	2486.432	-55.57	2.62	0	42.28	Average	54	Pass
b	2462	Ant1	2500	-50.42	2.62	-	47.43	Peak	74	Pass
b	2462	Ant1	2500	-56.35	2.62	0	41.50	Average	54	Pass
g	2412	Ant1	2310	-46.76	2.62	-	51.09	Peak	74	Pass
g	2412	Ant1	2310	-56.85	2.62	0.61	41.61	Average	54	Pass
g	2412	Ant1	2310	-46.75	2.62	-	51.10	Peak	74	Pass
g	2412	Ant1	2337.495	-54.24	2.62	0.61	44.22	Average	54	Pass
g	2412	Ant1	2390	-48.38	2.62	-	49.47	Peak	74	Pass
g	2412	Ant1	2390	-57.07	2.62	0.61	41.39	Average	54	Pass
g	2462	Ant1	2483.5	-49.42	2.62	-	48.43	Peak	74	Pass
g	2462	Ant1	2483.5	-57.42	2.62	0.61	41.04	Average	54	Pass
g	2462	Ant1	2488.764	-46.65	2.62	-	51.20	Peak	74	Pass
g	2462	Ant1	2491.679	-55.47	2.62	0.61	42.99	Average	54	Pass
g	2462	Ant1	2500	-47.28	2.62	-	50.57	Peak	74	Pass
g	2462	Ant1	2500	-56.27	2.62	0.61	42.19	Average	54	Pass
n20	2412	Ant1	2310	-49.85	2.62	-	48.00	Peak	74	Pass
n20	2412	Ant1	2310	-56.21	2.62	0.58	42.22	Average	54	Pass
n20	2412	Ant1	2338.197	-45.93	2.62	-	51.92	Peak	74	Pass
n20	2412	Ant1	2340.888	-54.92	2.62	0.58	43.51	Average	54	Pass
n20	2412	Ant1	2390	-51.77	2.62	-	46.08	Peak	74	Pass
n20	2412	Ant1	2390	-56.99	2.62	0.58	41.44	Average	54	Pass
n20	2462	Ant1	2483.5	-50.46	2.62	-	47.39	Peak	74	Pass
n20	2462	Ant1	2483.5	-55.32	2.62	0.58	43.11	Average	54	Pass
n20	2462	Ant1	2498.198	-47.02	2.62	-	50.83	Peak	74	Pass
n20	2462	Ant1	2483.57	-55.31	2.62	0.58	43.12	Average	54	Pass

n20	2462	Ant1	2500	-49.26	2.62	-	48.59	Peak	74	Pass
n20	2462	Ant1	2500	-56.23	2.62	0.58	42.20	Average	54	Pass

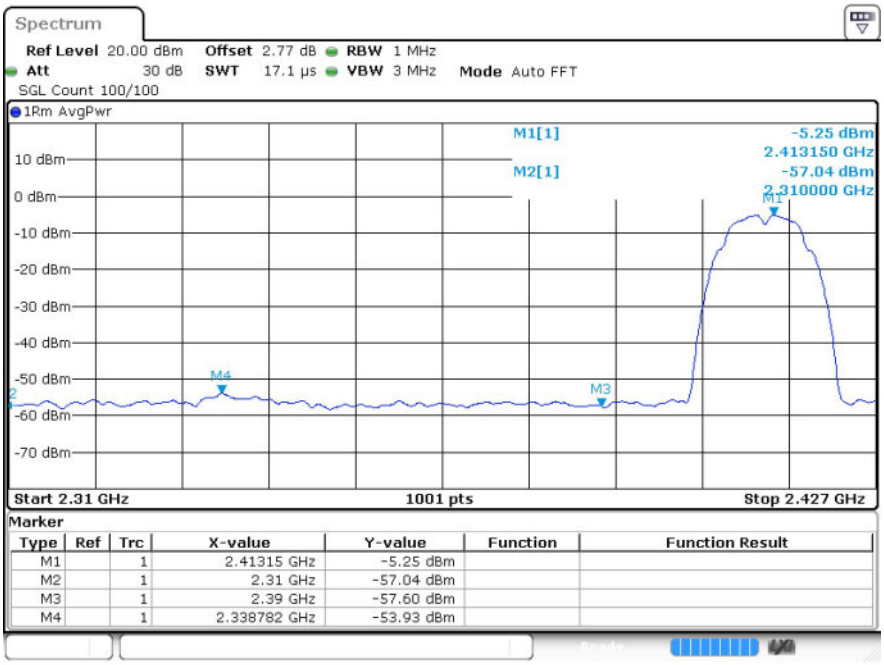
7.2 Test Graphs

Test Graphs

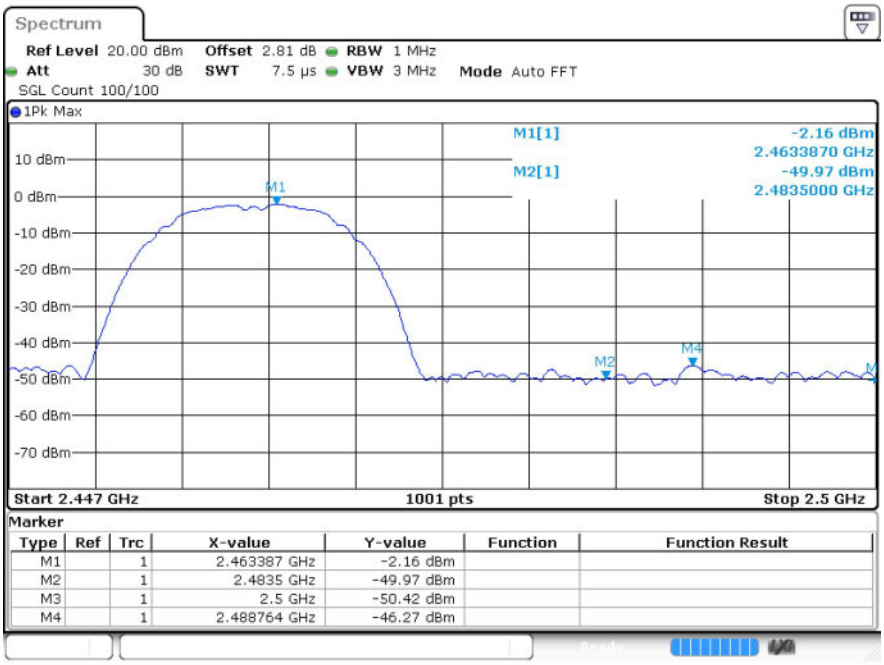
b 2412MHz Ant1 Peak



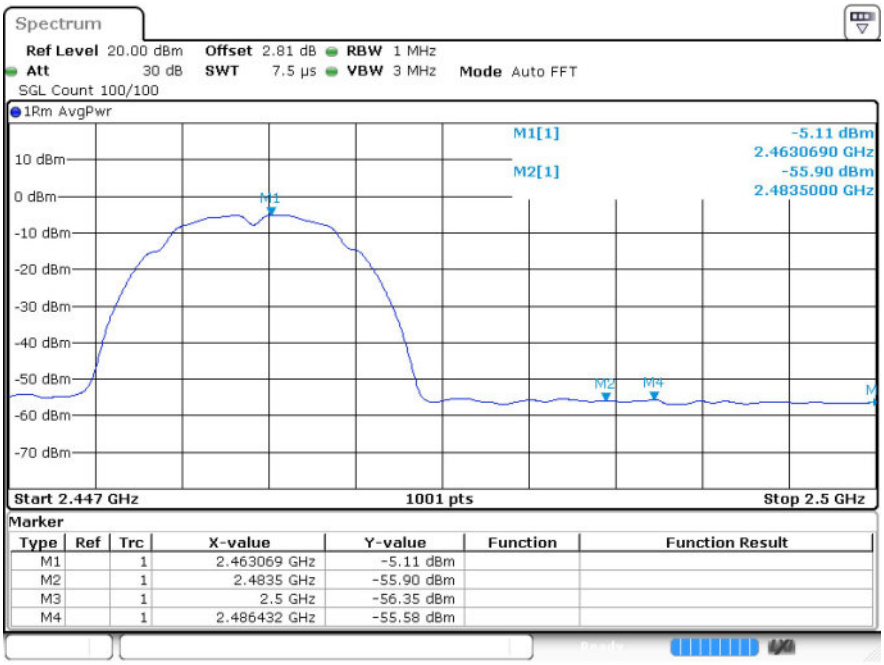
b 2412MHz Ant1 Average



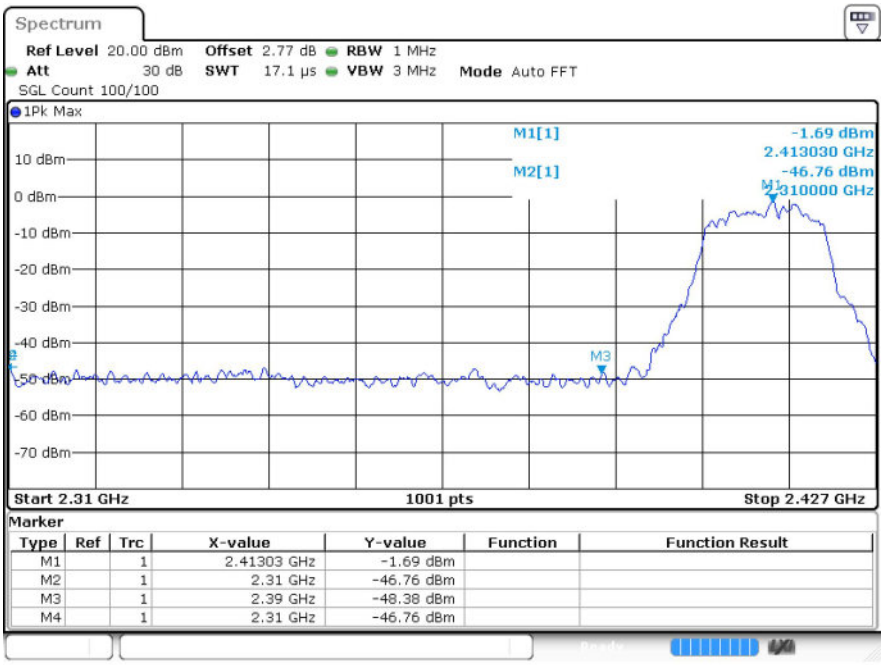
b 2462MHz Ant1 Peak



b 2462MHz Ant1 Average



g 2412MHz Ant1 Peak



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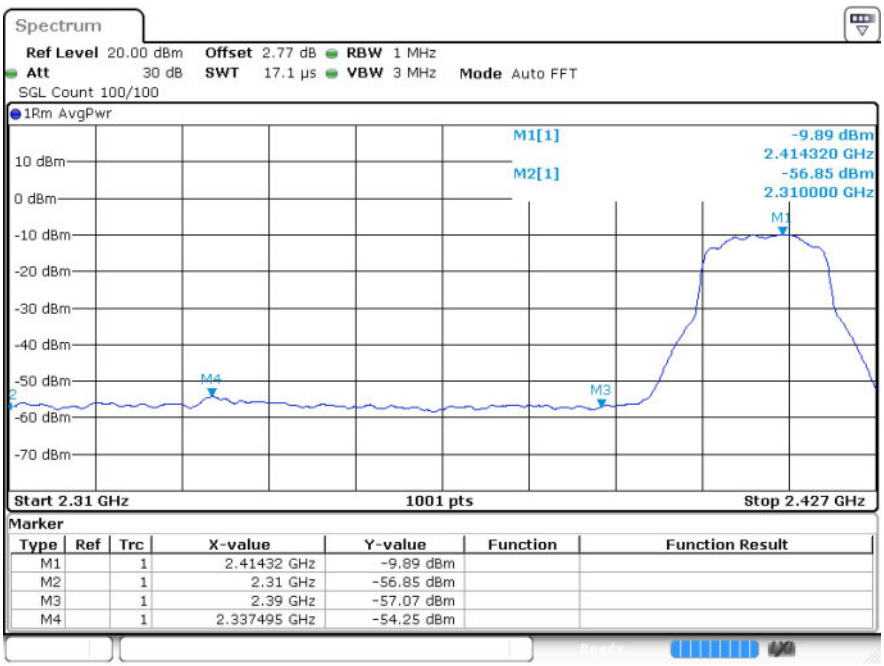
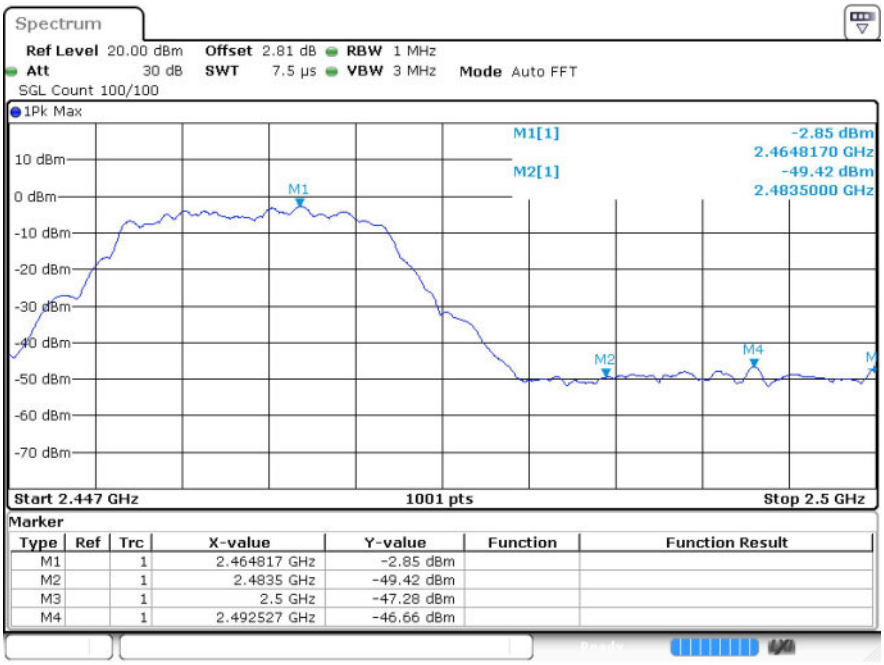
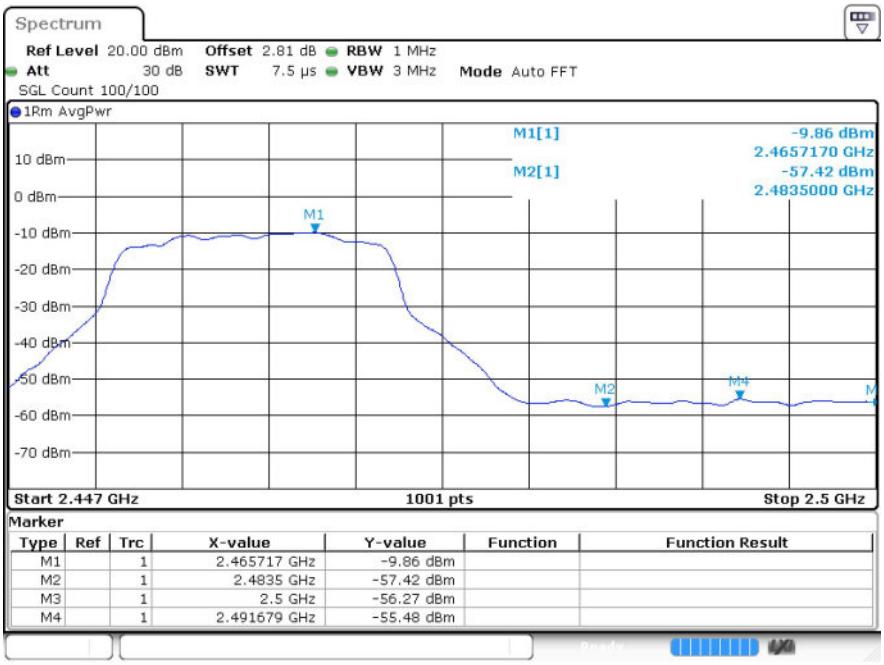


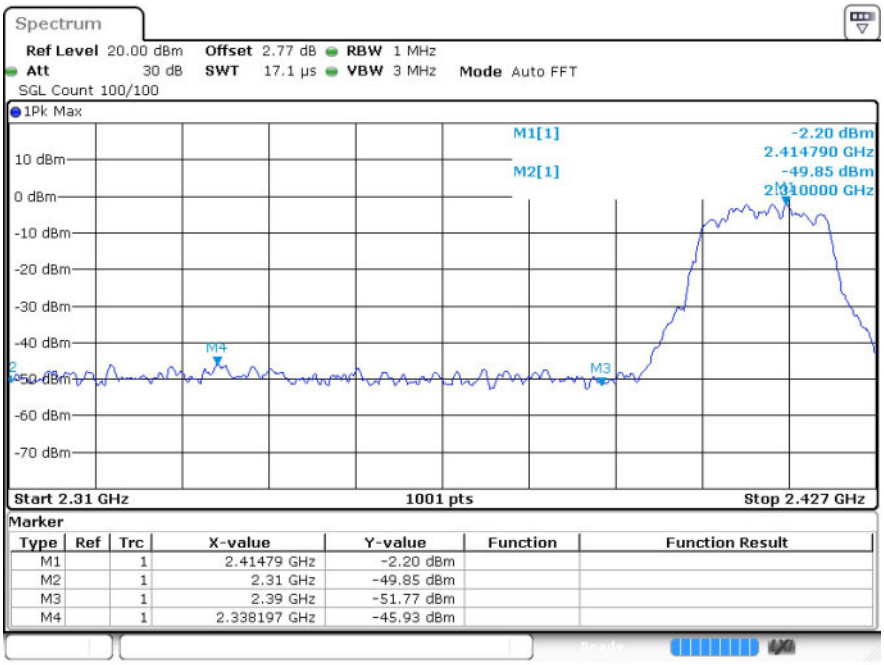
g 2462MHz Ant1 Peak



g 2462MHz Ant1 Average



n20 2412MHz Ant1 Peak



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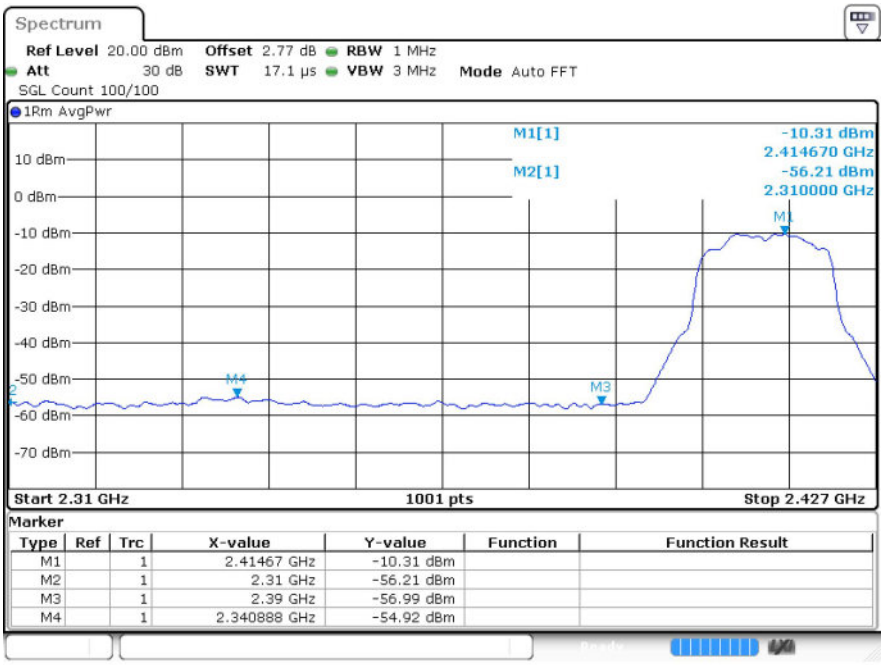
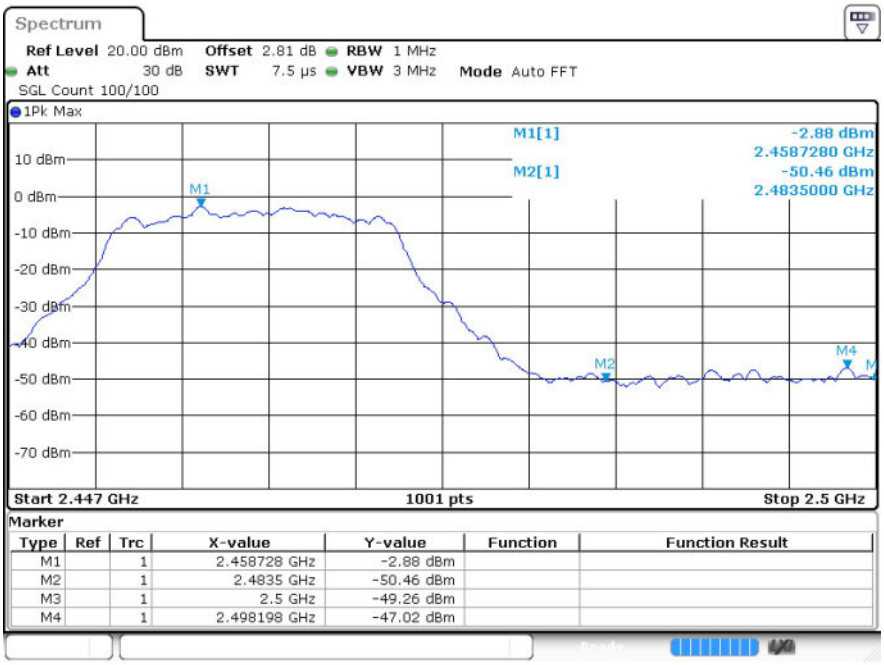
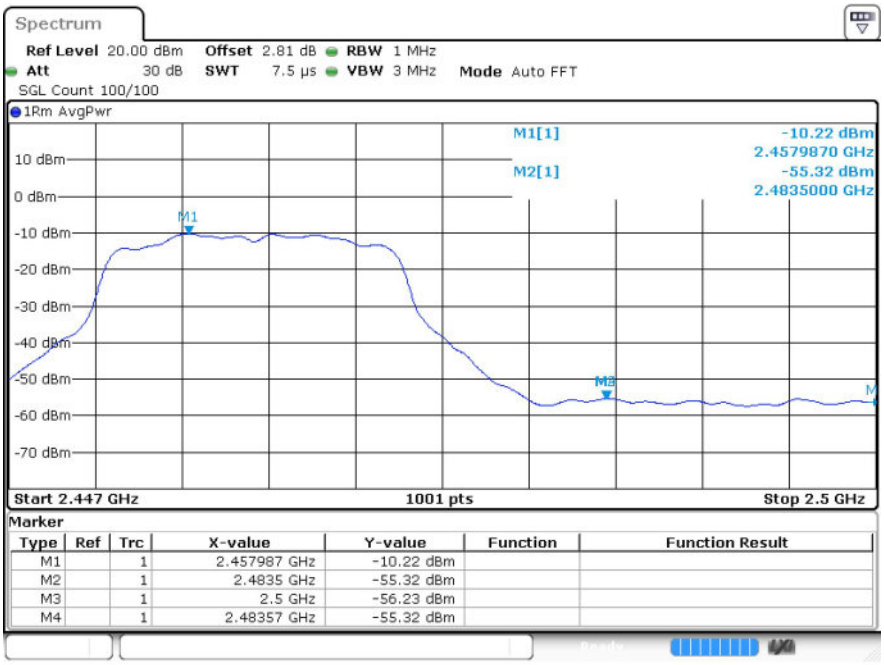


n20 2462MHz Ant1 Peak



n20 2462MHz Ant1 Average



---The End---