

BAND EDGE COMPLIANCE



XMR 2023.02.14.0

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Attenuator	Fairview Microwave	SA4018-20	TYE	2022-09-13	2023-09-13
Block - DC	Fairview Microwave	SD3239	ANE	2023-02-16	2024-02-16
Cable	Micro-Coax	UFD150A-1-0720-200200	TXG	2022-12-08	2023-12-08
Generator - Signal	Agilent	N5173B	TIW	2020-07-17	2023-07-17
Analyzer - Spectrum Analyzer	Agilent	N9010A	AFL	2023-03-17	2024-03-17

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer.

The spurious RF conducted emissions at the edges of the authorized bands were measured with the EUT set to low and high transmit frequencies in each available band. The channels closest to the band edges were selected. The EUT was transmitting at the data rate(s) listed in the datasheet.

The spectrum was scanned below the lower band edge and above the higher band edge.

An RMS detector was used to match the method called out for Output Power. Because the reference level was taken with an RMS detector, the attenuation requirement is -30 dBc.

BAND EDGE COMPLIANCE



TSTx 2022.06.03.0 XMR 2023.02.14.0

EUT: V700		Work Order: WTVD0085	
Serial Number: BWL7-000968		Date: 04/26/2023	
Customer: Motorola Solutions, Inc.		Temperature: 20.1°C	
Attendees: Navaid Karimi		Humidity: 46.8%	
Project: None		Barometric Pres.: 1010 mbar	
Tested by: Marty Martin		Power: 4.2VDC via Battery	
		Job Site: TX07	
TEST SPECIFICATIONS			
FCC 15.247:2023		Test Method	
RSS-247 Issue 2:2017		ANSI C63.10:2013	
		ANSI C63.10:2013	
COMMENTS			
All measurement path losses were accounted for in the reference level offset including any attenuators, filters, and DC blocks.			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	WTVD0085-1	Signature <i>Marty Martin</i>	
		Value (dBc)	Limit ≤ (dBc) Result
2400 MHz - 2483.5 MHz Band			
802.11(b) 1 Mbps			
Low Channel 1, 2412 MHz		-44.65	-30 Pass
High Channel 11, 2462 MHz		-55.01	-30 Pass
802.11(b) 11 Mbps			
Low Channel 1, 2412 MHz		-45.39	-30 Pass
High Channel 11, 2462 MHz		-57.8	-30 Pass
802.11(g) 6 Mbps			
Low Channel 1, 2412 MHz		-34.62	-30 Pass
High Channel 11, 2462 MHz		-49.4	-30 Pass
802.11(g) 36 Mbps			
Low Channel 1, 2412 MHz		-35.14	-30 Pass
High Channel 11, 2462 MHz		-49.75	-30 Pass
802.11(g) 54 Mbps			
Low Channel 1, 2412 MHz		-35.53	-30 Pass
High Channel 11, 2462 MHz		-50.46	-30 Pass
802.11(n) MCS0			
Low Channel 1, 2412 MHz		-33.76	-30 Pass
High Channel 11, 2462 MHz		-49.54	-30 Pass
802.11(n) MCS7			
Low Channel 1, 2412 MHz		-34.55	-30 Pass
High Channel 11, 2462 MHz		-50.68	-30 Pass

BAND EDGE COMPLIANCE

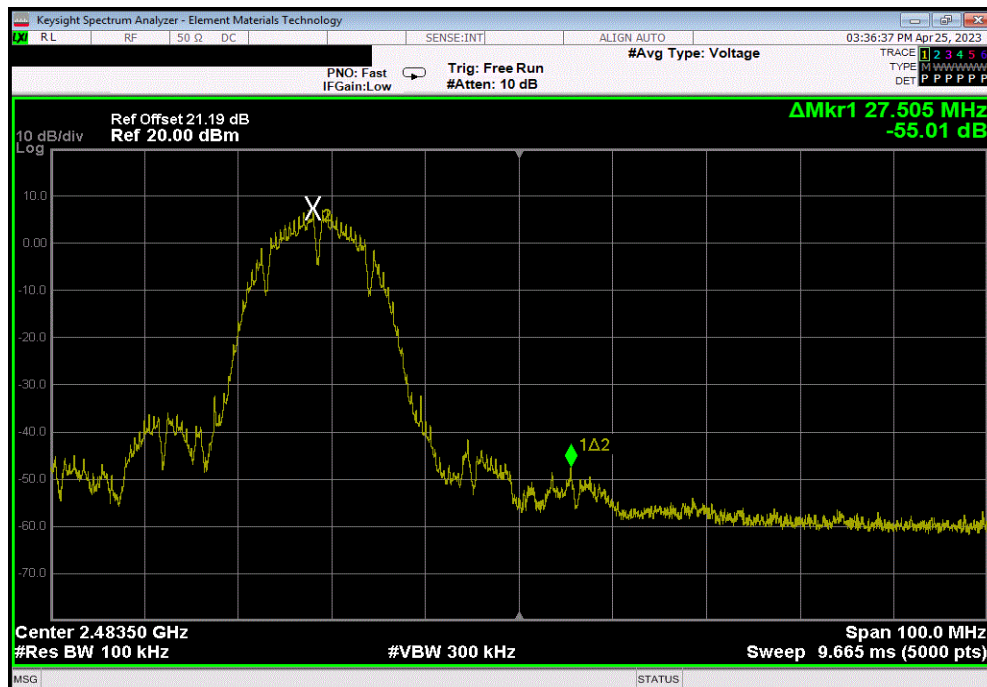


TbTx 2022.06.03.0 XMt 2023.02.14.0

2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz						
	Value (dBc)	Limit ≤ (dBc)	Result			
	-44.65	-30	Pass			



2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz						
	Value (dBc)	Limit ≤ (dBc)	Result			
	-55.01	-30	Pass			

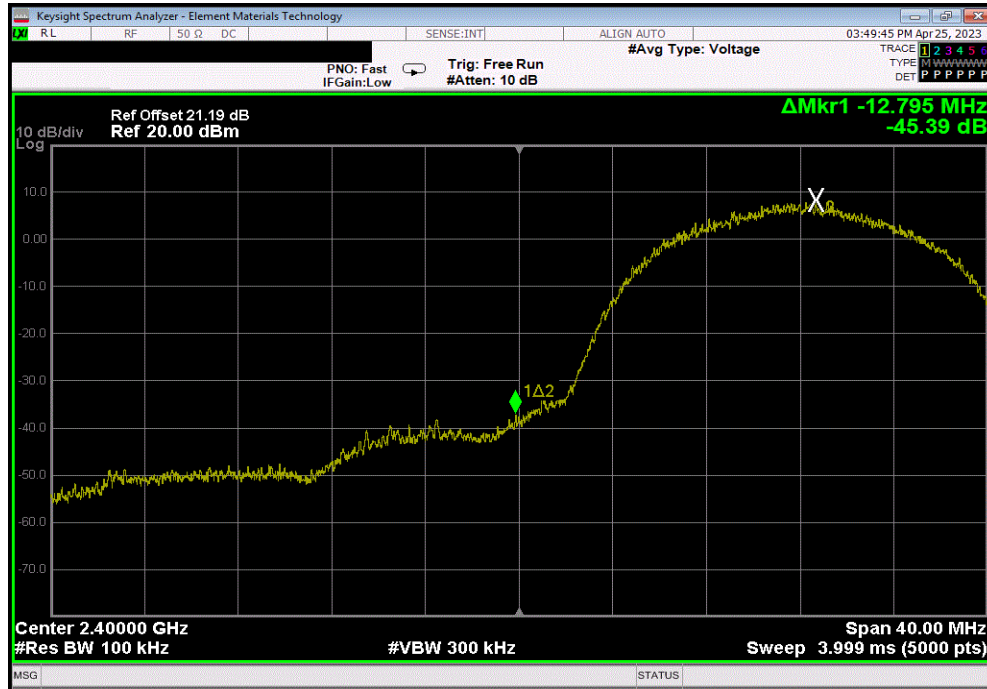


BAND EDGE COMPLIANCE

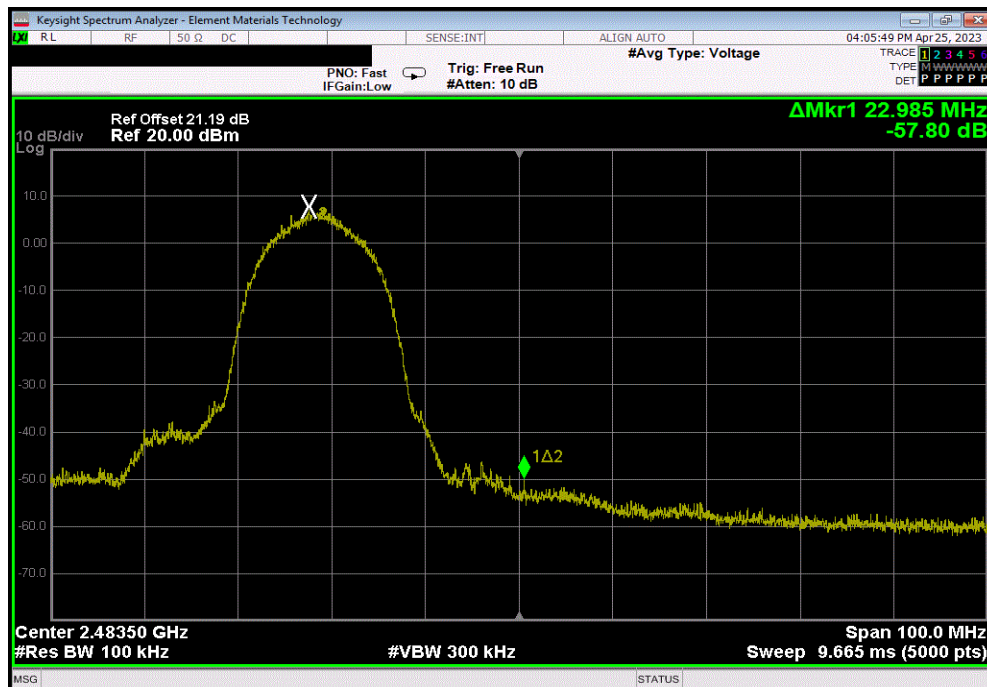


TbTx 2022.06.03.0 XMt 2023.02.14.0

2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz						
	Value (dBc)	Limit ≤ (dBc)	Result			
	-45.39	-30	Pass			



2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz						
	Value (dBc)	Limit ≤ (dBc)	Result			
	-57.8	-30	Pass			

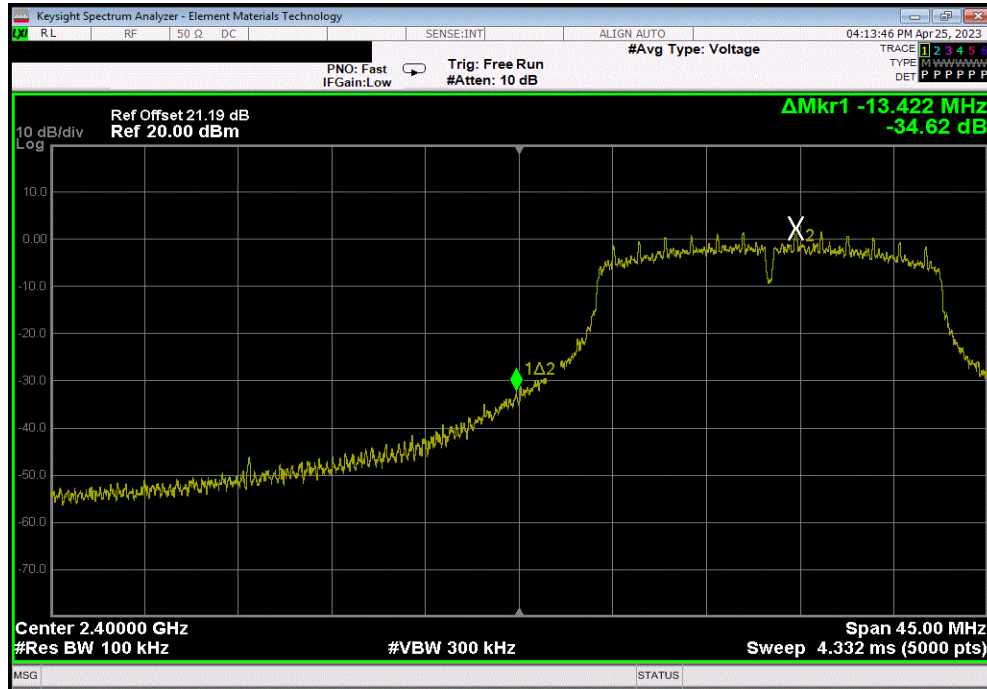


BAND EDGE COMPLIANCE

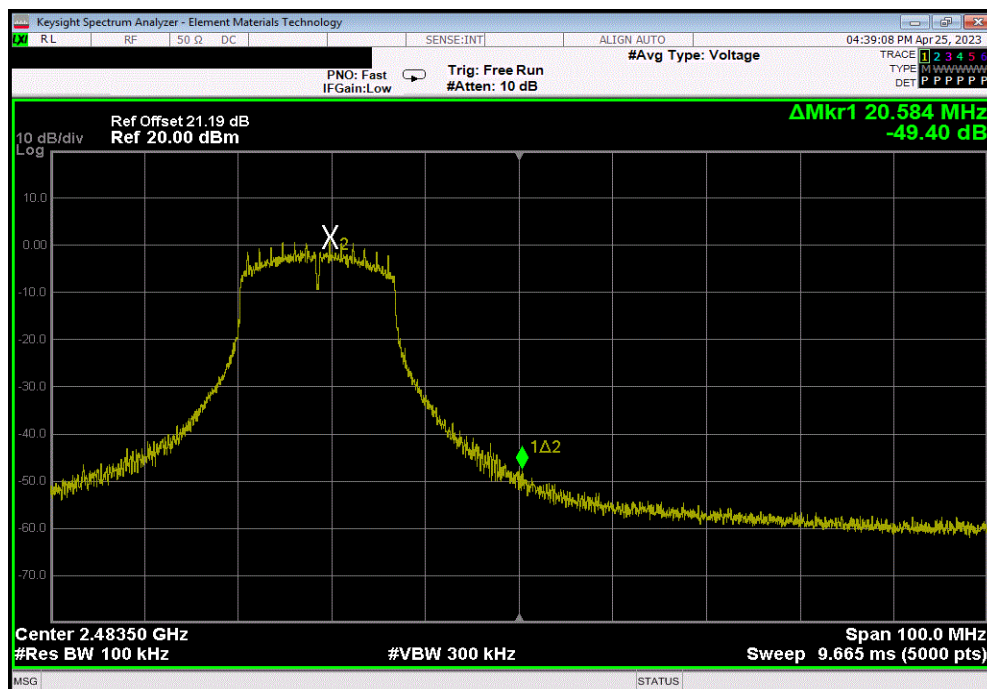


TbTx 2022.06.03.0 XMt 2023.02.14.0

2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz						
	Value (dBc)	Limit ≤ (dBc)	Result			
	-34.62	-30	Pass			



2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz						
	Value (dBc)	Limit ≤ (dBc)	Result			
	-49.4	-30	Pass			

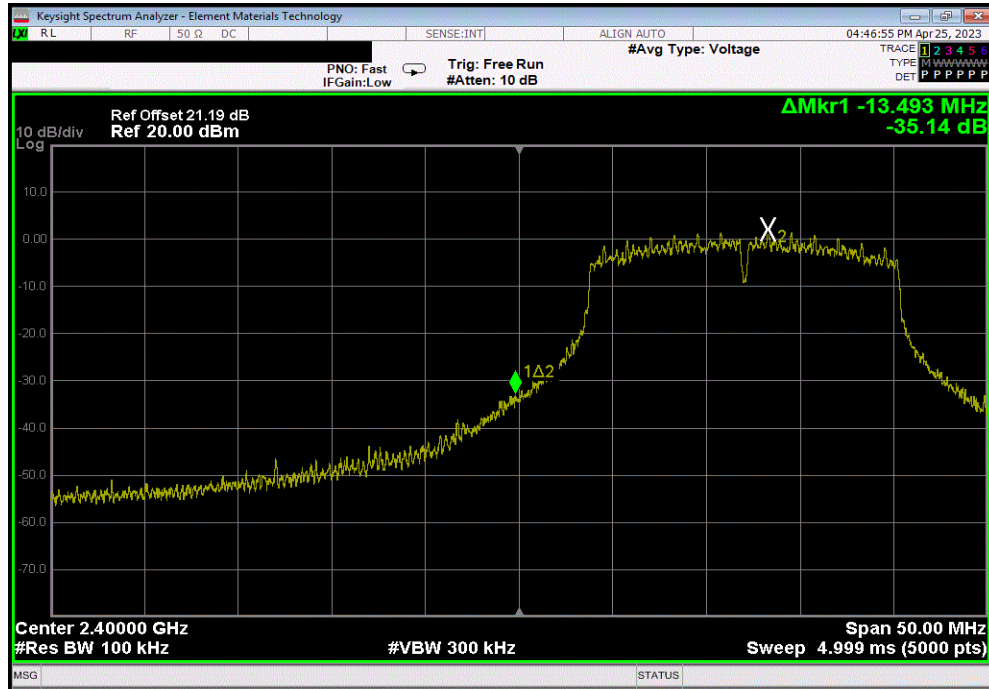


BAND EDGE COMPLIANCE

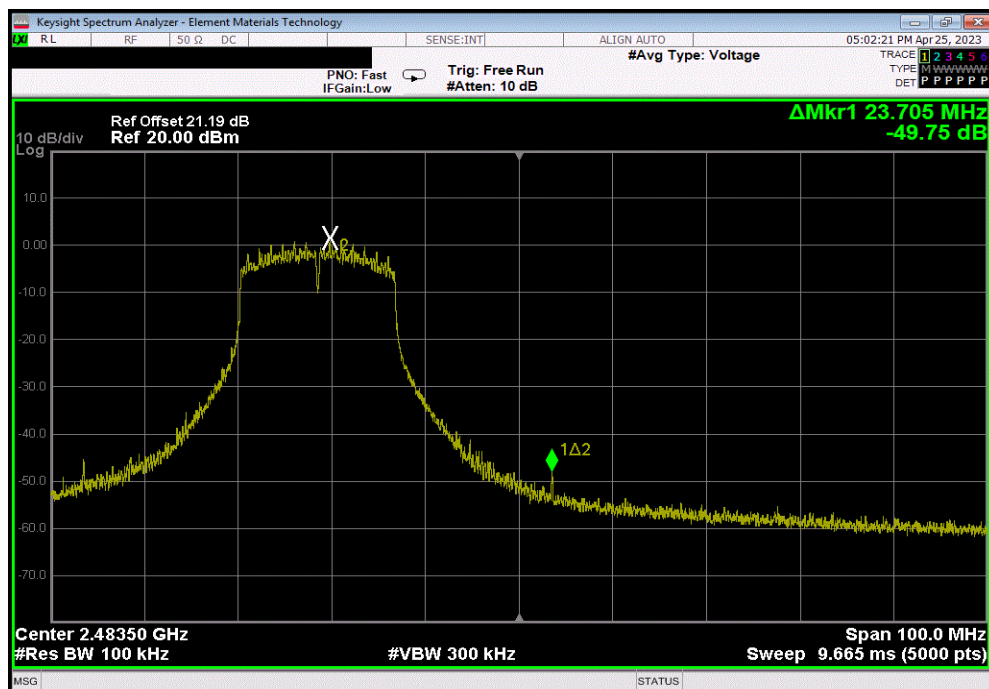


TbTtX 2022.06.03.0 XMt 2023.02.14.0

2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz						
	Value	Limit				
	(dBc)	≤ (dBc)	Result			
	-35.14	-30	Pass			



2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz						
	Value	Limit				
	(dBc)	≤ (dBc)	Result			
	-49.75	-30	Pass			

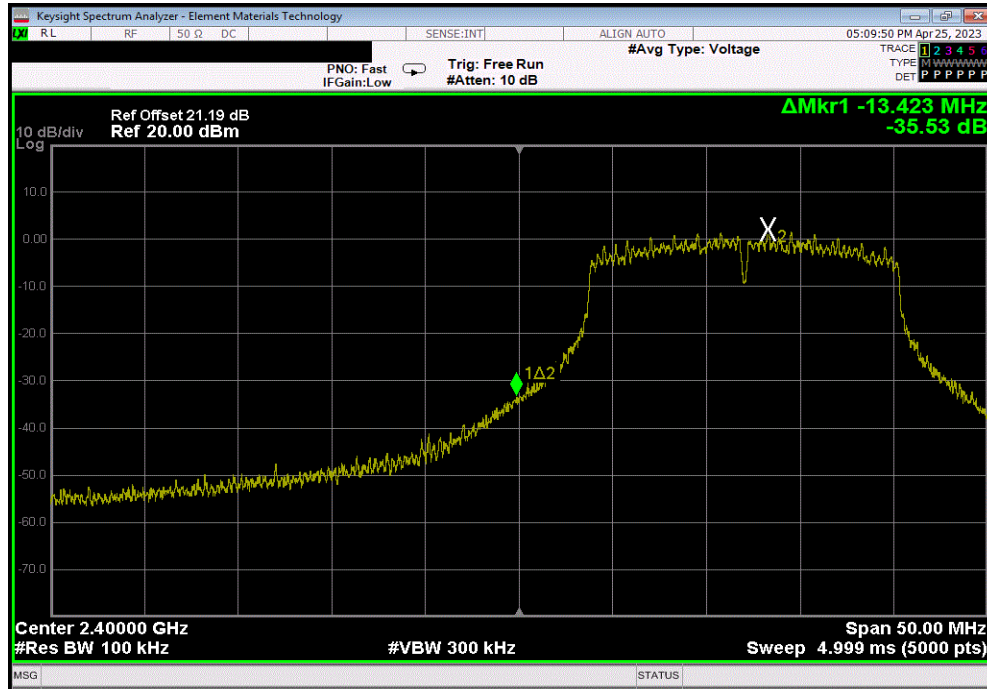


BAND EDGE COMPLIANCE

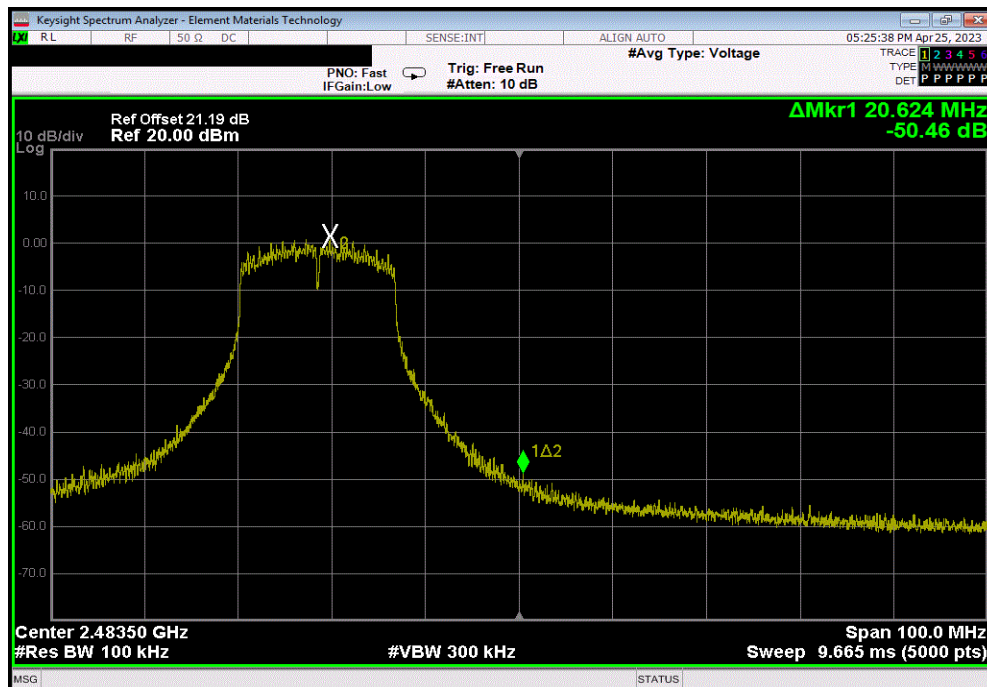


TbTtx 2022.06.03.0 XMt 2023.02.14.0

2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz						
	Value	Limit				
	(dBc)	≤ (dBc)	Result			
	-35.53	-30	Pass			



2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz						
	Value	Limit				
	(dBc)	≤ (dBc)	Result			
	-50.46	-30	Pass			

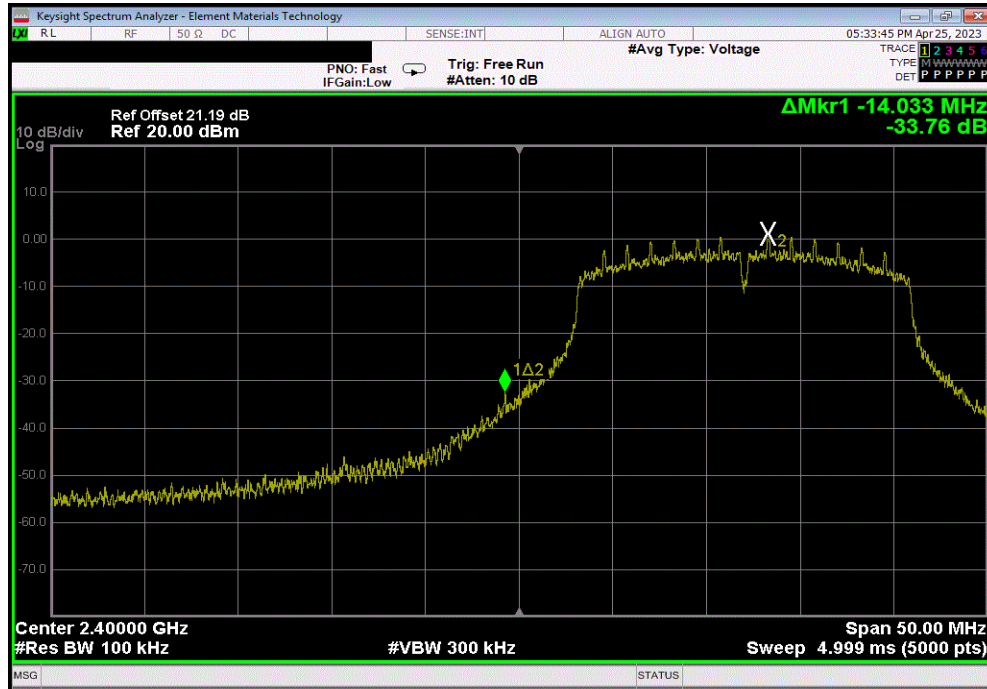


BAND EDGE COMPLIANCE

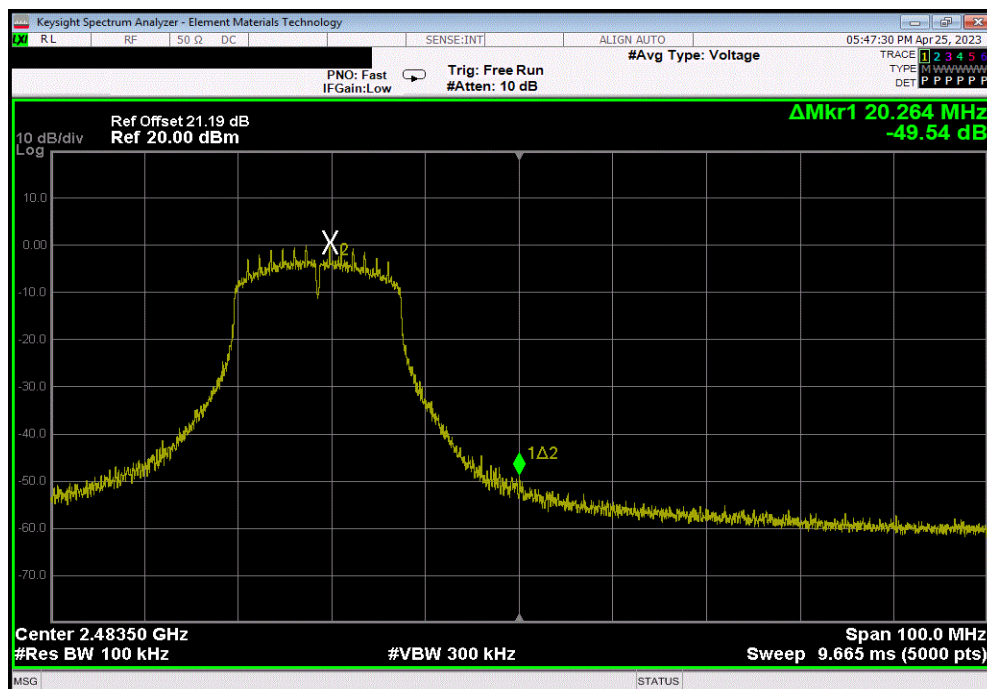


TbTtX 2022.06.03.0 XMt 2023.02.14.0

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz						
	Value	Limit				
	(dBc)	≤ (dBc)	Result			
	-33.76	-30	Pass			



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz						
	Value	Limit				
	(dBc)	≤ (dBc)	Result			
	-49.54	-30	Pass			

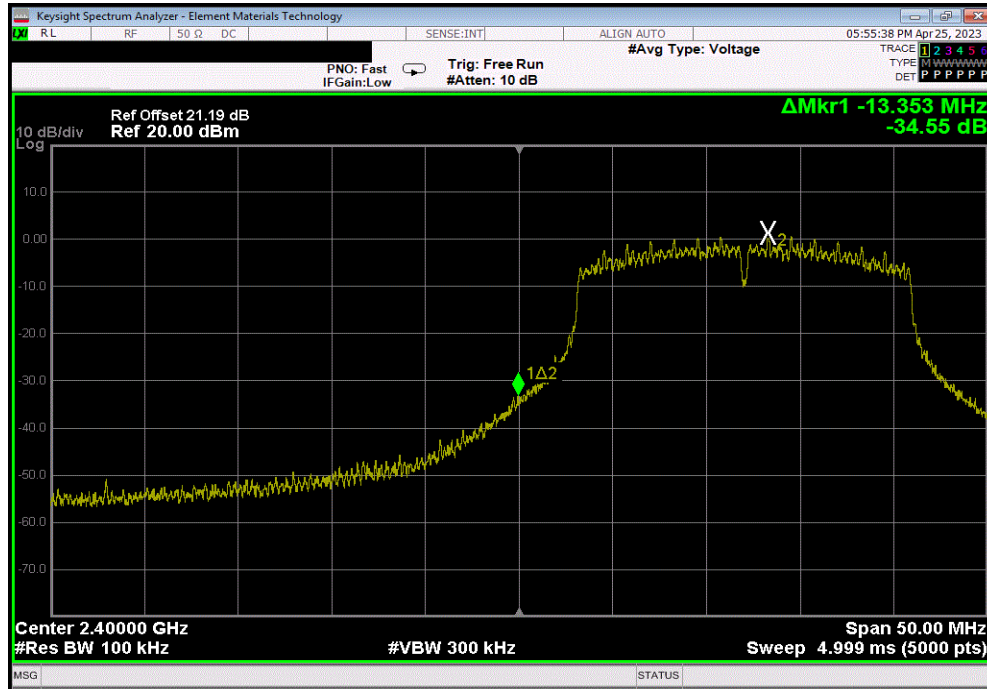


BAND EDGE COMPLIANCE

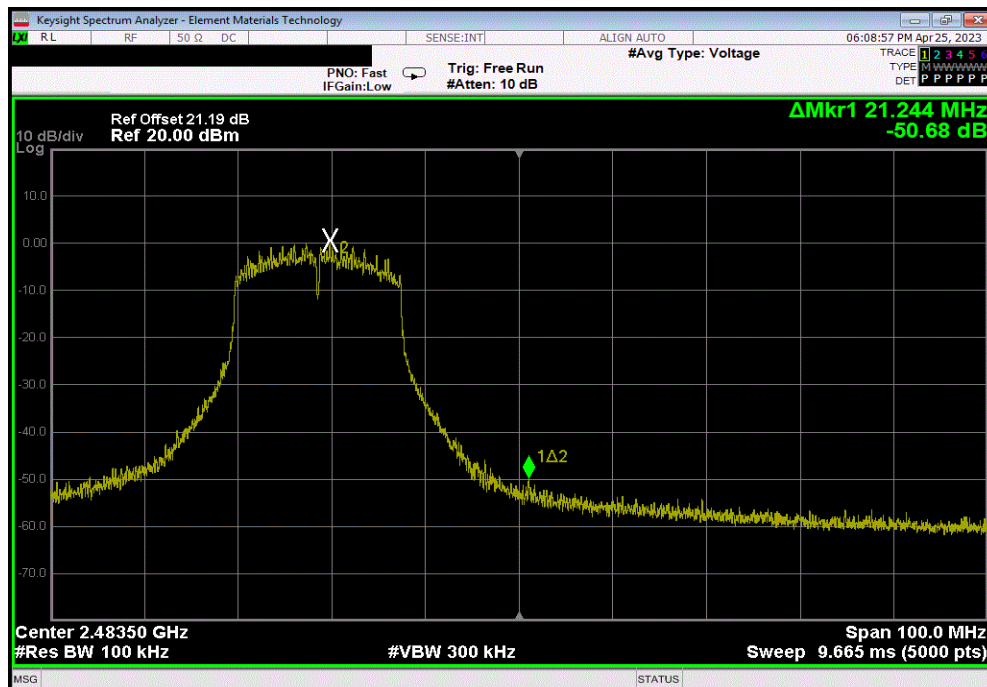


TbTtX 2022.06.03.0 XMt 2023.02.14.0

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1, 2412 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-34.55	-30	Pass



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, High Channel 11, 2462 MHz						
				Value (dBc)	Limit ≤ (dBc)	Result
				-50.68	-30	Pass



POWER SPECTRAL DENSITY



XMIT 2023.02.14.0

Testing was performed using the mode(s) of operation and configuration(s) noted within the report. The individuals and/or the organization requesting the test provided the modes, configurations and settings used to complete the evaluation. The actual test parameters are specified in the test data, this includes items such as investigated frequency range (scanned) and test levels. The testing methods and performance specifications, as well as the test site used for the evaluation are indicated in the test data.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
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Block - DC	Fairview Microwave	SD3239	ANE	2023-02-16	2024-02-16
Cable	Micro-Coax	UFD150A-1-0720-200200	TXG	2022-12-08	2023-12-08
Generator - Signal	Agilent	N5173B	TIW	2020-07-17	2023-07-17
Analyzer - Spectrum Analyzer	Agilent	N9010A	AFL	2023-03-17	2024-03-17

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer.

The maximum power spectral density measurements was measured using the channels and modes as called out on the following data sheets.

Per the procedure outlined in ANSI C63.10 the peak power spectral density was measured in a 3 kHz RBW.

POWER SPECTRAL DENSITY



TSTx 2022.06.03.0 XMR 2023.02.14.0

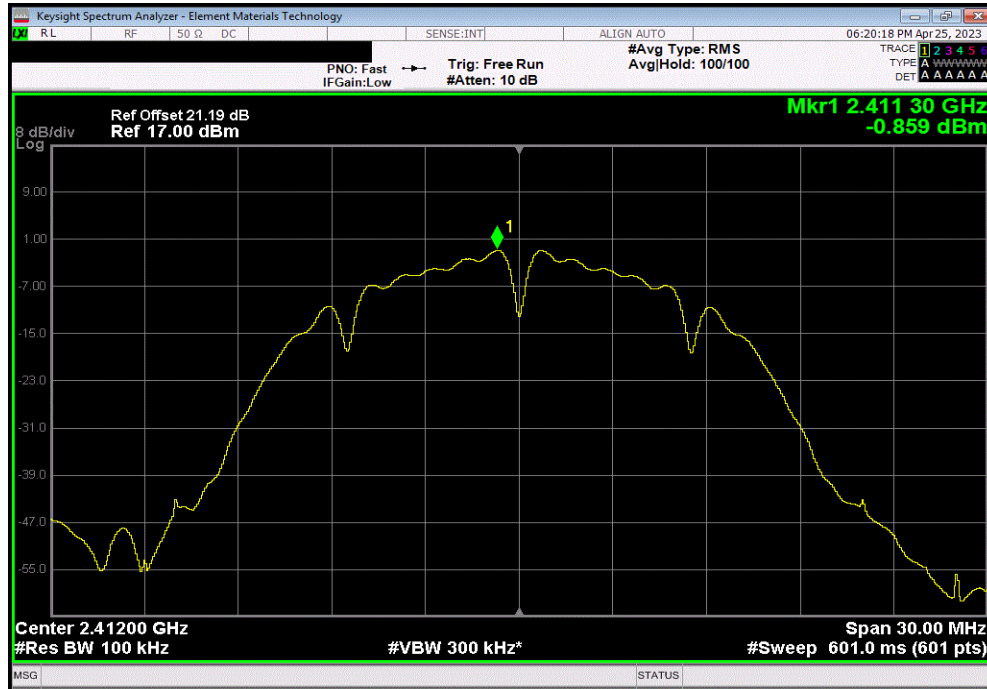
EUT: V700			Work Order: WTV00085				
Serial Number: BWL7-000968			Date: 04/26/2023				
Customer: Motorola Solutions, Inc.			Temperature: 21.1°C				
Attendees: Navaid Karimi			Humidity: 45.6%				
Project: None			Barometric Pres.: 1010 mbar				
Tested by: Marty Martin		Power: 4.2VDC via Battery	Job Site: TX07				
TEST SPECIFICATIONS			Test Method				
FCC 15.247:2023		ANSI C63.10:2013					
RSS-247 Issue 2:2017		ANSI C63.10:2013					
COMMENTS							
All measurement path losses were accounted for in the reference level offset including any attenuators, filters, and DC blocks.							
DEVIATIONS FROM TEST STANDARD							
None							
Configuration #	WTV00085-1	Signature 					
		Value dBm/100kHz	dBm/100kHz To dBm/3kHz	Duty Cycle Factor (dB)	Value dBm/3kHz	Limit ≤ (dBm/3kHz)	Results
2400 MHz - 2483.5 MHz Band							
802.11(b) 1 Mbps							
	Low Channel 1, 2412 MHz	-0.859	-15.2	0	-16.1	8	Pass
	Mid Channel 6, 2437 MHz	-1.009	-15.2	0	-16.2	8	Pass
	High Channel 11, 2462 MHz	-1.453	-15.2	0	-16.7	8	Pass
802.11(b) 11 Mbps							
	Low Channel 1, 2412 MHz	-1.759	-15.2	0.2	-16.8	8	Pass
	Mid Channel 6, 2437 MHz	-1.925	-15.2	0.2	-16.9	8	Pass
	High Channel 11, 2462 MHz	-2.431	-15.2	0.2	-17.4	8	Pass
802.11(g) 6 Mbps							
	Low Channel 1, 2412 MHz	-7.454	-15.2	0.2	-22.5	8	Pass
	Mid Channel 6, 2437 MHz	-7.499	-15.2	0.2	-22.5	8	Pass
	High Channel 11, 2462 MHz	-7.93	-15.2	0.2	-22.9	8	Pass
802.11(g) 36 Mbps							
	Low Channel 1, 2412 MHz	-7.189	-15.2	0.7	-21.7	8	Pass
	Mid Channel 6, 2437 MHz	-7.349	-15.2	0.7	-21.8	8	Pass
	High Channel 11, 2462 MHz	-7.893	-15.2	0.7	-22.4	8	Pass
802.11(g) 54 Mbps							
	Low Channel 1, 2412 MHz	-7.387	-15.2	1	-21.6	8	Pass
	Mid Channel 6, 2437 MHz	-7.465	-15.2	0.9	-21.8	8	Pass
	High Channel 11, 2462 MHz	-7.908	-15.2	0.9	-22.2	8	Pass
802.11(n) MCS0							
	Low Channel 1, 2412 MHz	-8.069	-15.2	0.9	-22.4	8	Pass
	Mid Channel 6, 2437 MHz	-8.588	-15.2	0.2	-23.6	8	Pass
	High Channel 11, 2462 MHz	-9.051	-15.2	0.2	-24.1	8	Pass
802.11(n) MCS7							
	Low Channel 1, 2412 MHz	-7.726	-15.2	1	-21.9	8	Pass
	Mid Channel 6, 2437 MHz	-7.87	-15.2	1	-22.1	8	Pass
	High Channel 11, 2462 MHz	-8.481	-15.2	1	-22.7	8	Pass

POWER SPECTRAL DENSITY

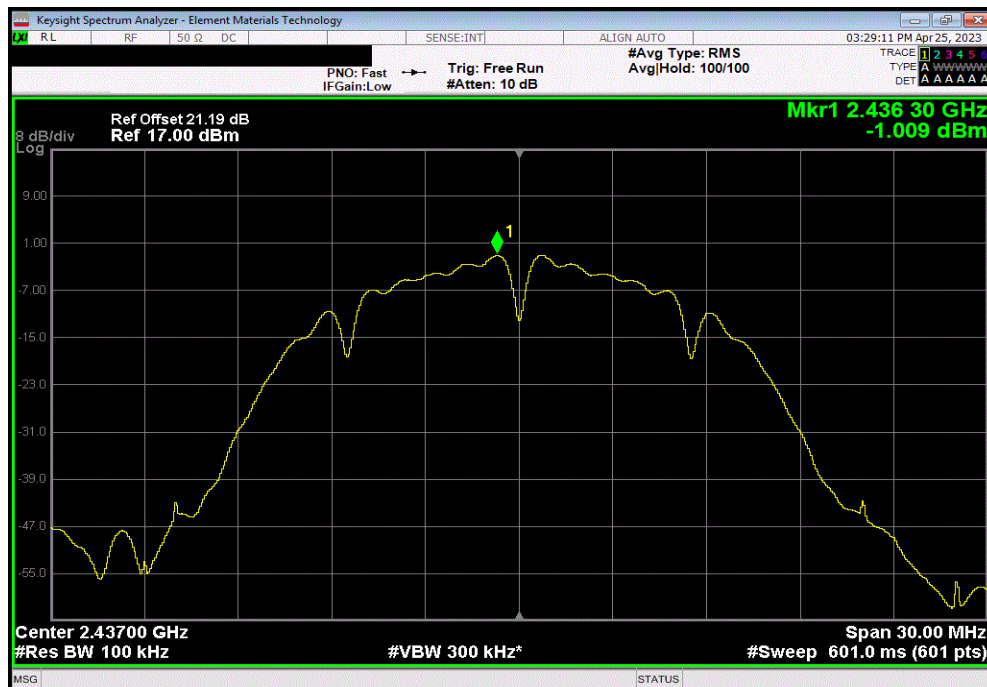


TbTx 2022.06.03.0 XM8 2023.02.14.0

2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz						
Value	dBm/100kHz	Duty Cycle	Value	Limit	Results	
dBm/100kHz	To dBm/3kHz	Factor (dB)	dBm/3kHz	≤ (dBm/3kHz)		
	-0.859	-15.2	0	-16.1	8	Pass



2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz						
Value	dBm/100kHz	Duty Cycle	Value	Limit	Results	
dBm/100kHz	To dBm/3kHz	Factor (dB)	dBm/3kHz	≤ (dBm/3kHz)		
	-1.009	-15.2	0	-16.2	8	Pass

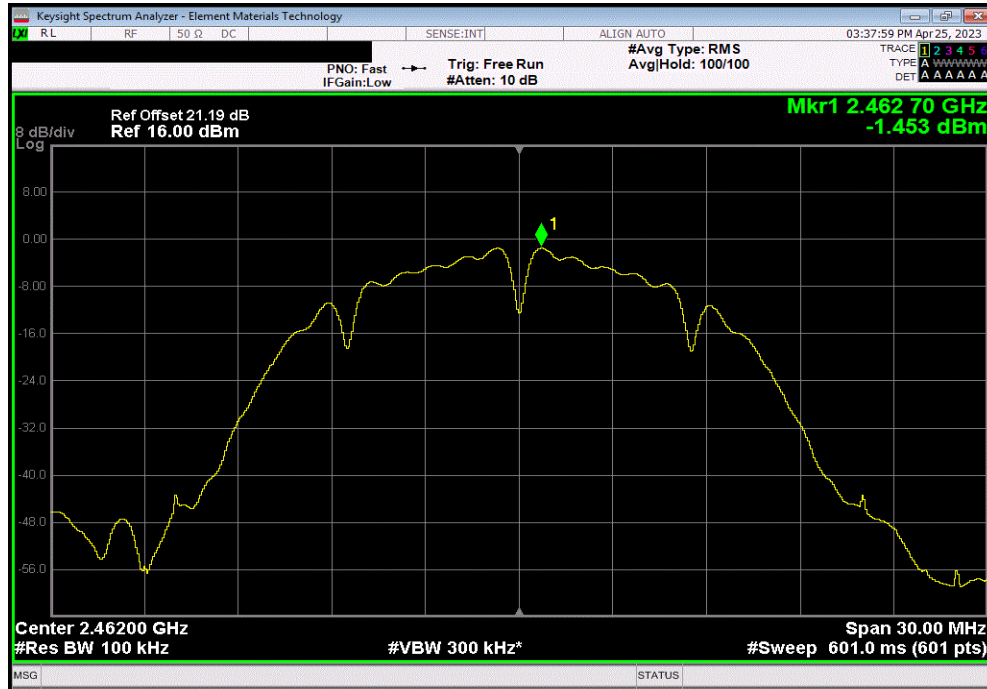


POWER SPECTRAL DENSITY

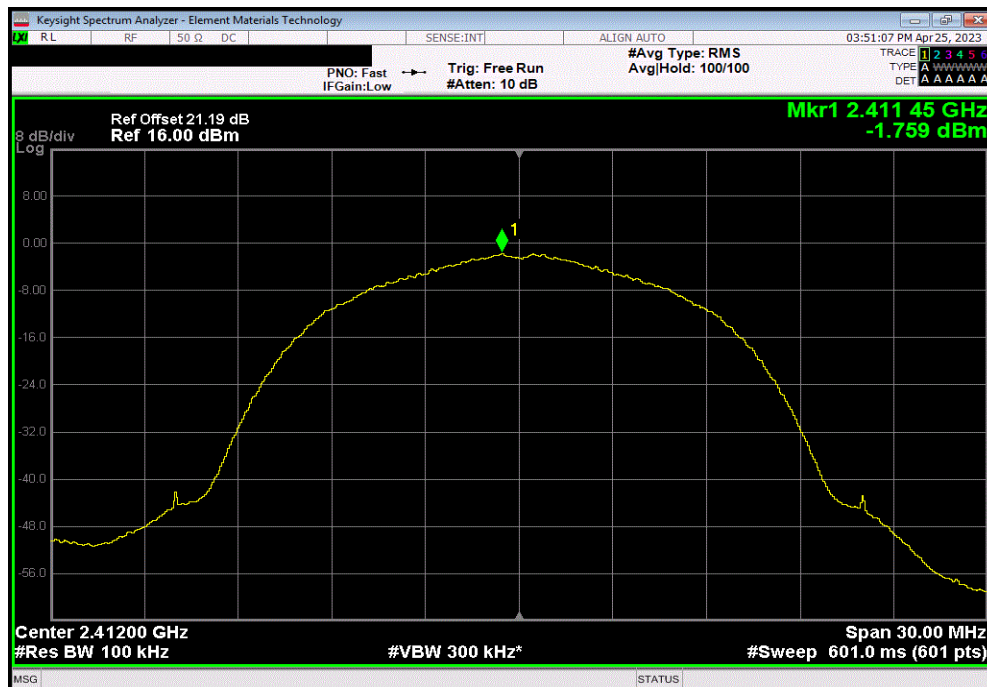


TbTtx 2022.06.03.0 XMt 2023.02.14.0

2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz						
Value	dBm/100kHz	Duty Cycle	Value	Limit	Results	
		Factor (dB)				
	-1.453	-15.2	0	-16.7	8	Pass



2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz						
Value	dBm/100kHz	Duty Cycle	Value	Limit	Results	
		Factor (dB)				
	-1.759	-15.2	0.2	-16.8	8	Pass

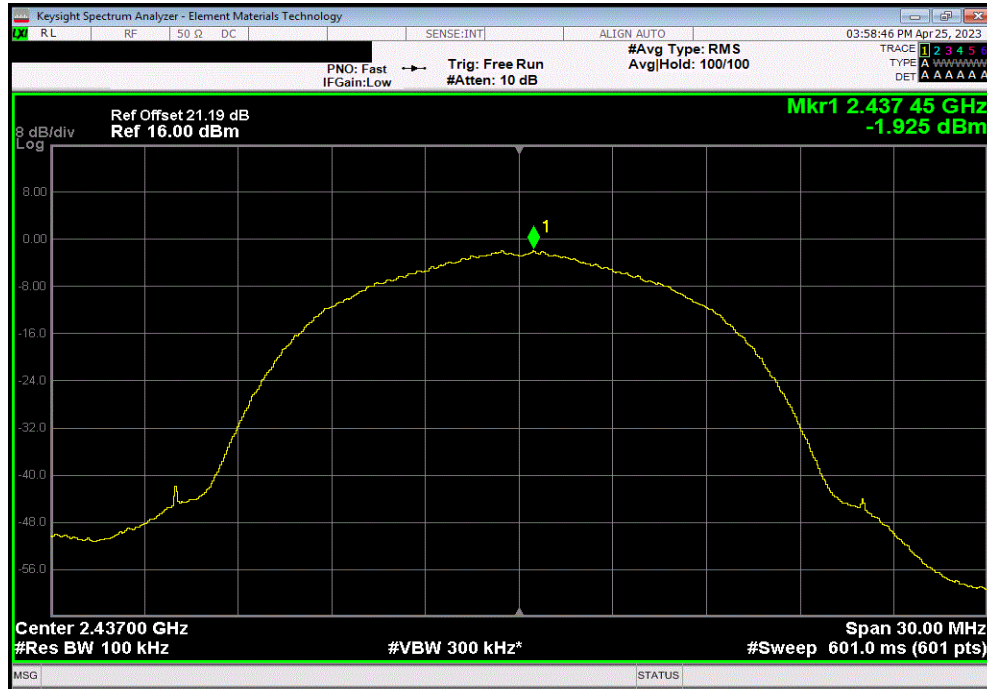


POWER SPECTRAL DENSITY

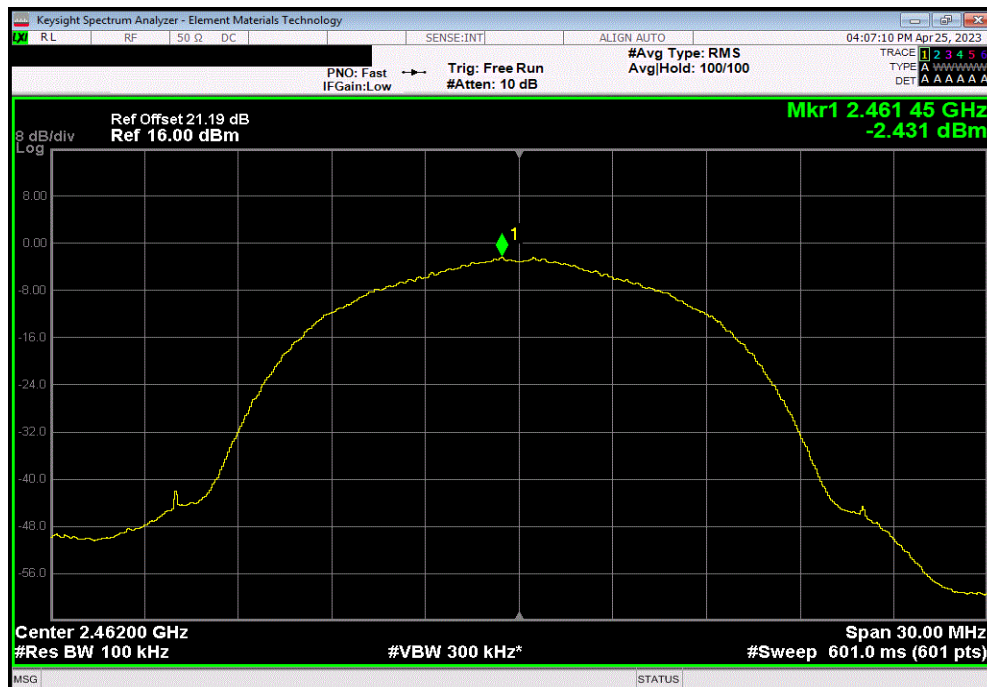


TbTx 2022.06.03.0 XM8 2023.02.14.0

2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz						
Value	dBm/100kHz	Duty Cycle	Value	Limit	Results	
dBm/100kHz	To dBm/3kHz	Factor (dB)	dBm/3kHz	≤ (dBm/3kHz)		
	-1.925	-15.2	0.2	-16.9	8	Pass



2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz						
Value	dBm/100kHz	Duty Cycle	Value	Limit	Results	
dBm/100kHz	To dBm/3kHz	Factor (dB)	dBm/3kHz	≤ (dBm/3kHz)		
	-2.431	-15.2	0.2	-17.4	8	Pass

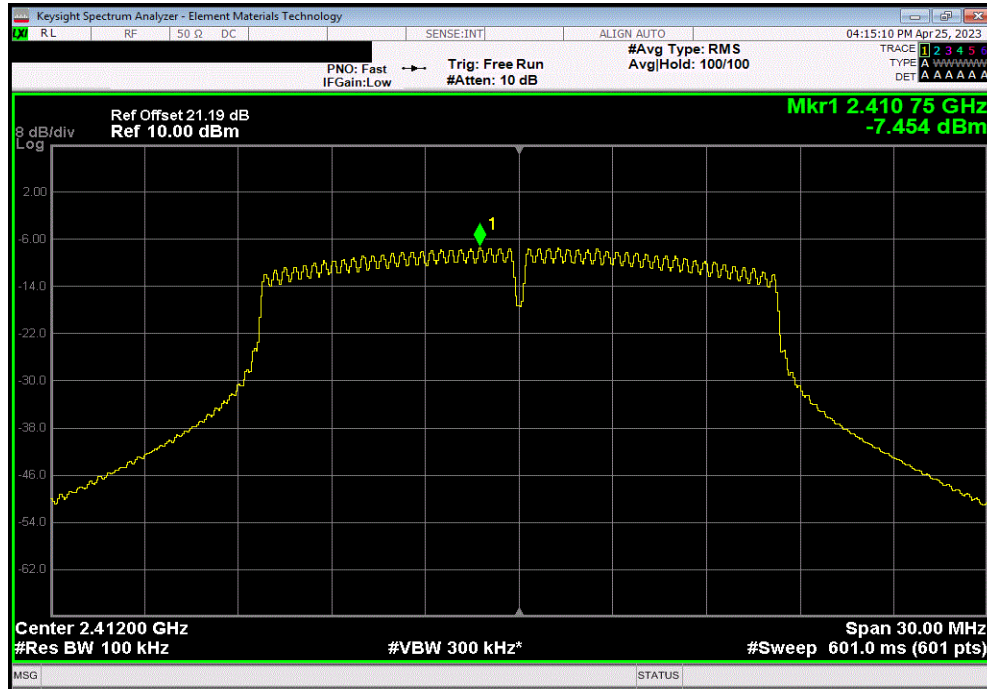


POWER SPECTRAL DENSITY

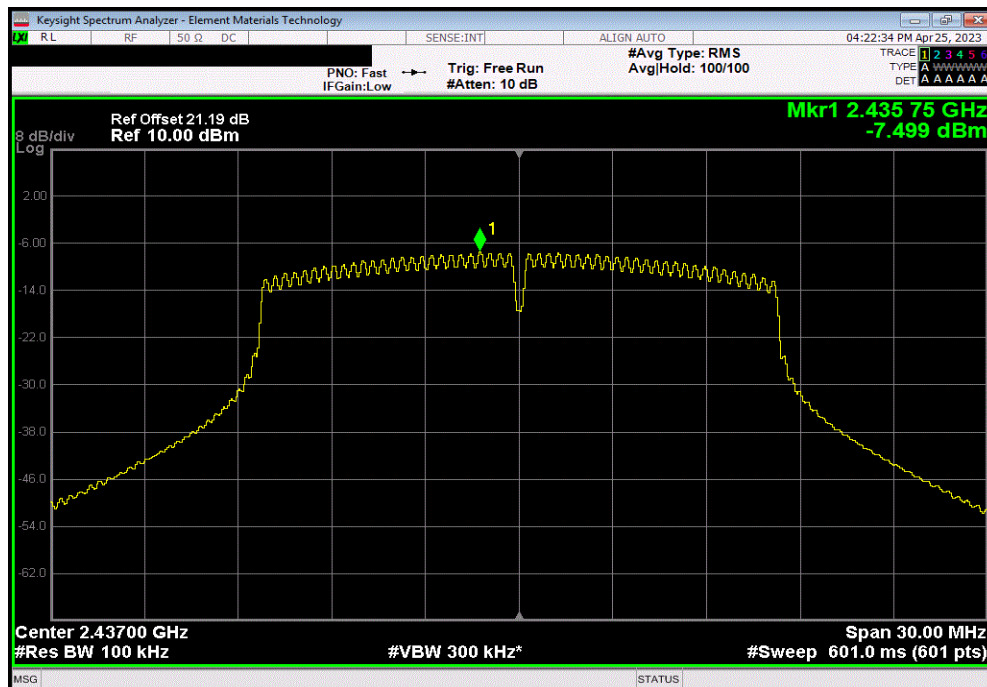


TbTx 2022.06.03.0 XMt 2023.02.14.0

2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz						
Value	dBm/100kHz	Duty Cycle	Value	Limit	Results	
	To dBm/3kHz	Factor (dB)	dBm/3kHz	≤ (dBm/3kHz)		
	-7.454	0.2	-22.5	8	Pass	



2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz						
Value	dBm/100kHz	Duty Cycle	Value	Limit	Results	
	To dBm/3kHz	Factor (dB)	dBm/3kHz	≤ (dBm/3kHz)		
	-7.499	0.2	-22.5	8	Pass	

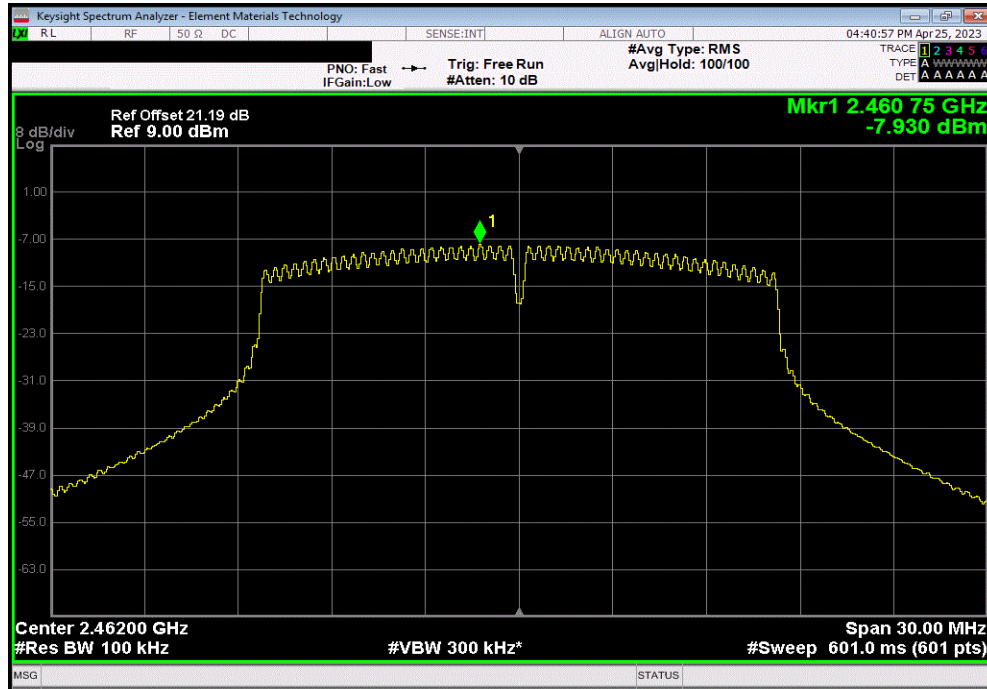


POWER SPECTRAL DENSITY

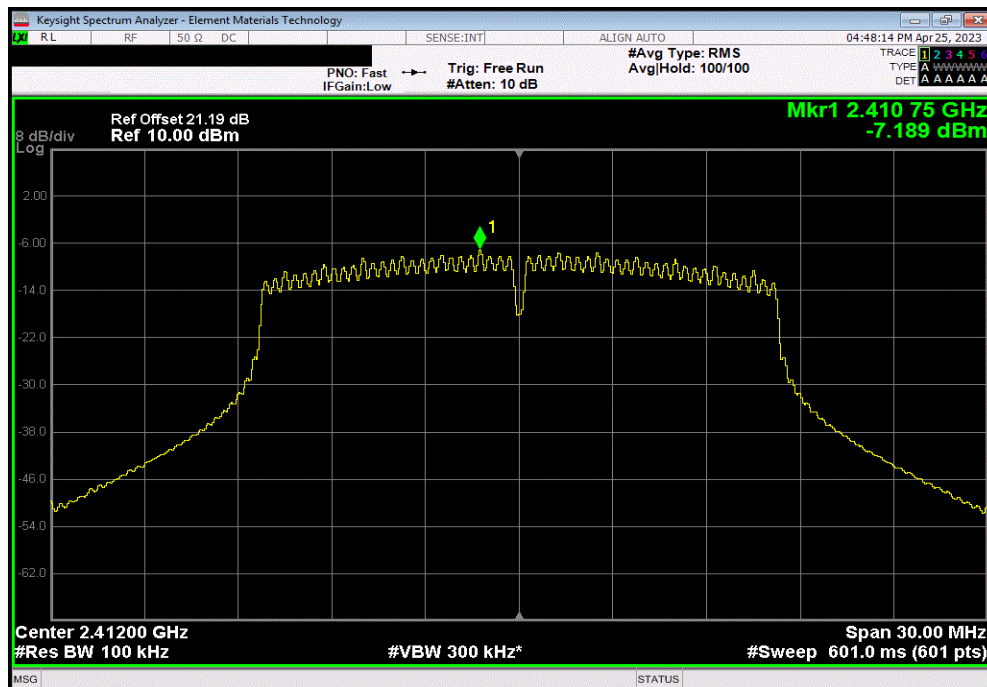


TbTtx 2022.06.03.0 XM8 2023.02.14.0

2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz						
Value	dBm/100kHz	Duty Cycle	Value	Limit	Results	
dBm/100kHz	To dBm/3kHz	Factor (dB)	dBm/3kHz	≤ (dBm/3kHz)		
	-7.93	-15.2	0.2	-22.9	8	Pass



2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz						
Value	dBm/100kHz	Duty Cycle	Value	Limit	Results	
dBm/100kHz	To dBm/3kHz	Factor (dB)	dBm/3kHz	≤ (dBm/3kHz)		
	-7.189	-15.2	0.7	-21.7	8	Pass

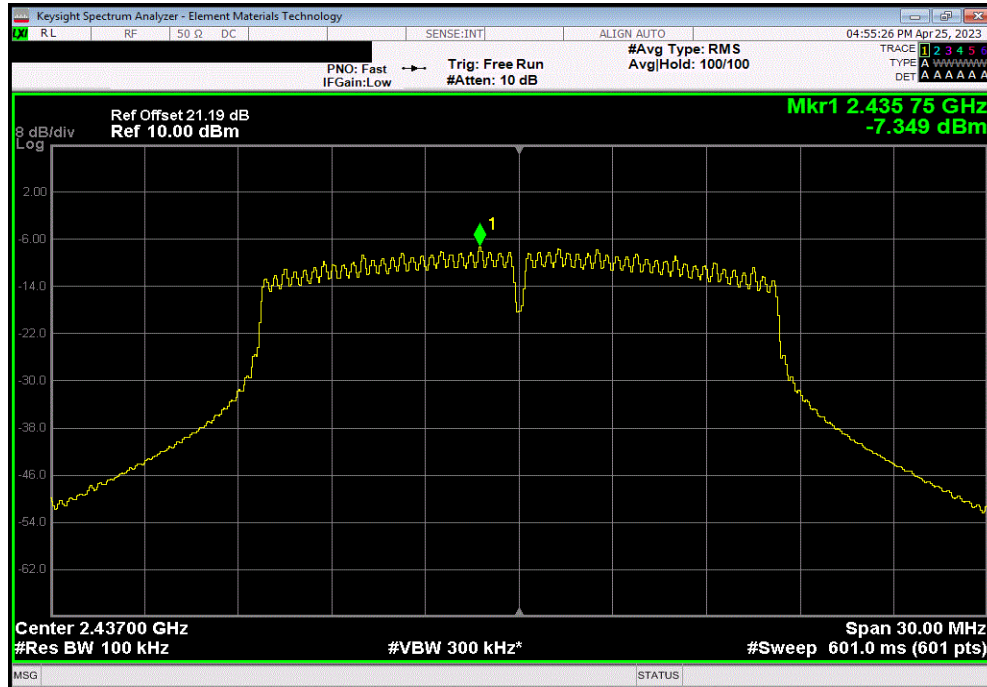


POWER SPECTRAL DENSITY

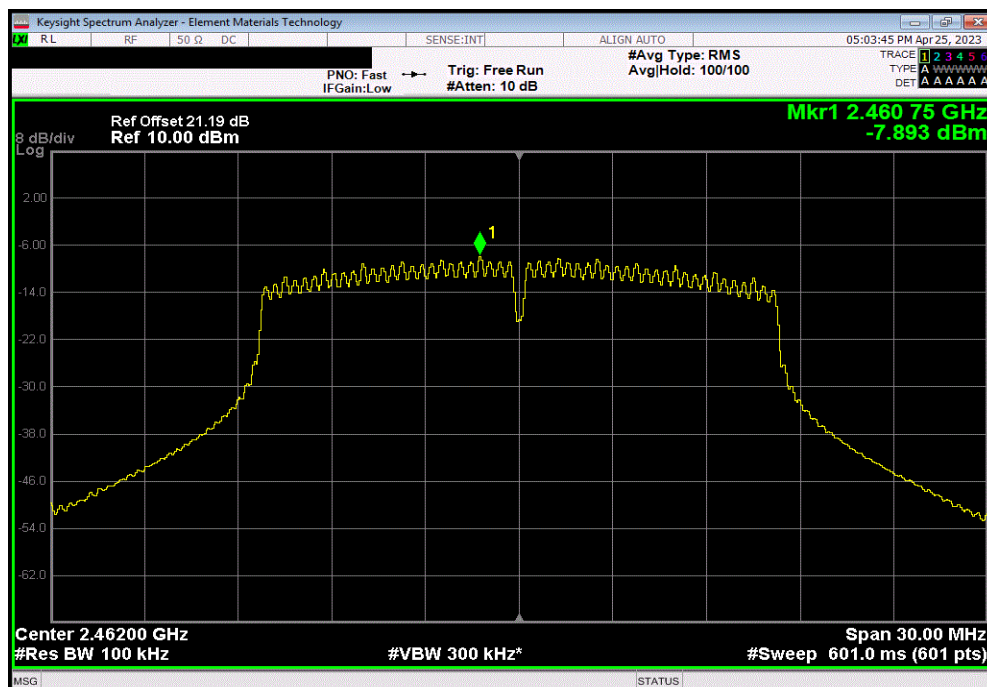


TbTx 2022.06.03.0 XMR 2023.02.14.0

2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz						
Value	dBm/100kHz	Duty Cycle	Value	Limit	Results	
	To dBm/3kHz	Factor (dB)	dBm/3kHz	≤ (dBm/3kHz)		
	-7.349	-15.2	0.7	-21.8	8	Pass



2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz						
Value	dBm/100kHz	Duty Cycle	Value	Limit	Results	
	To dBm/3kHz	Factor (dB)	dBm/3kHz	≤ (dBm/3kHz)		
	-7.893	-15.2	0.7	-22.4	8	Pass

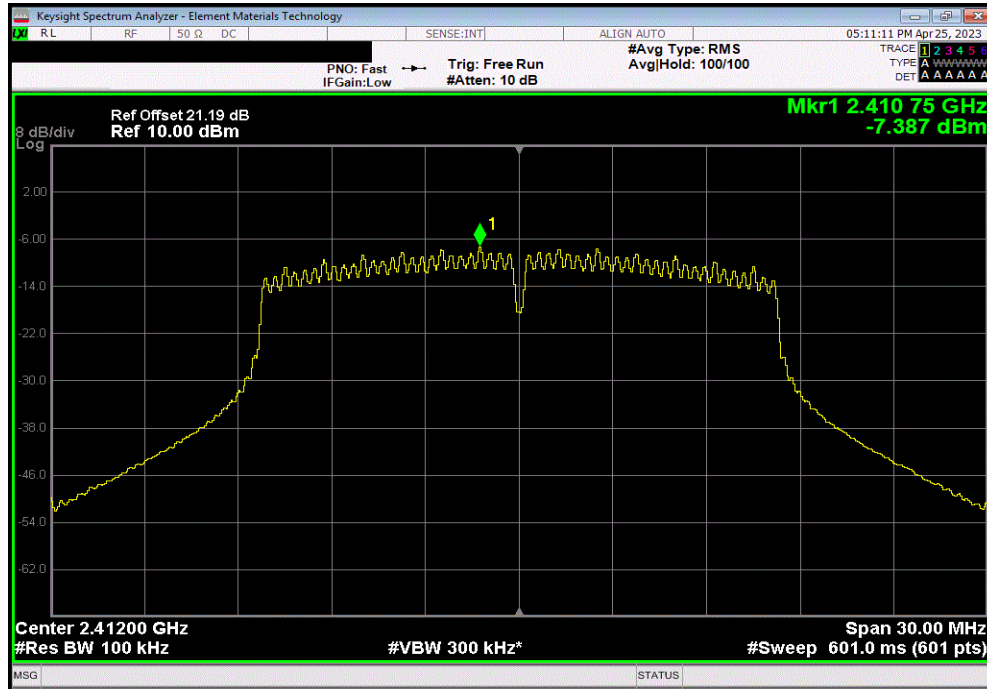


POWER SPECTRAL DENSITY

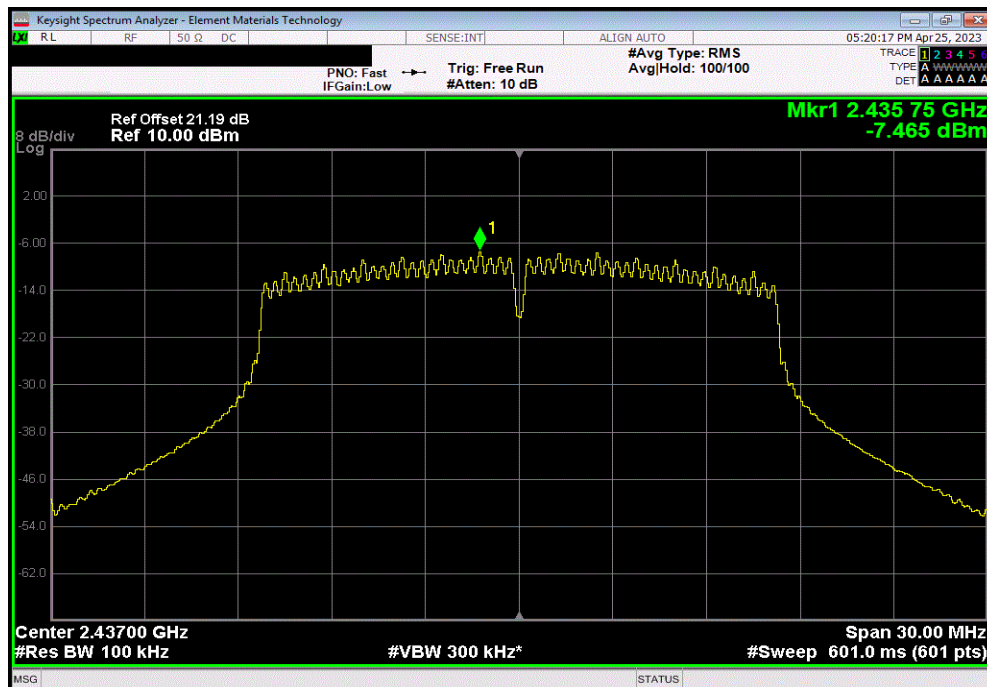


TbTx 2022.06.03.0 XM8 2023.02.14.0

2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz						
Value	dBm/100kHz	Duty Cycle	Value	Limit	Results	
		Factor (dB)				
	-7.387	-15.2	1	-21.6	8	Pass



2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz						
Value	dBm/100kHz	Duty Cycle	Value	Limit	Results	
		Factor (dB)				
	-7.465	-15.2	0.9	-21.8	8	Pass

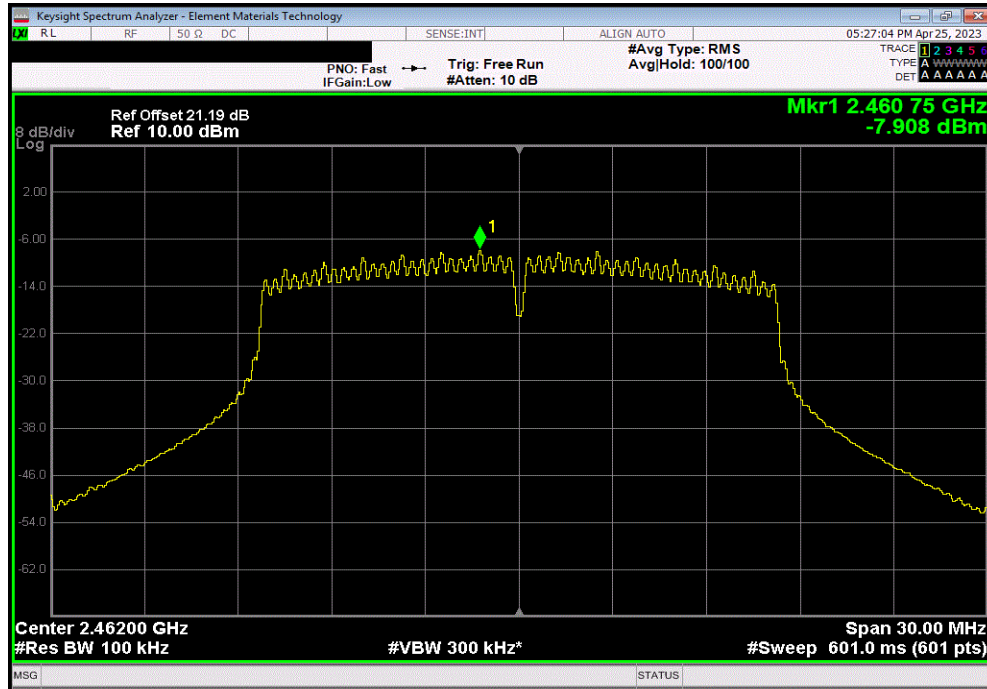


POWER SPECTRAL DENSITY

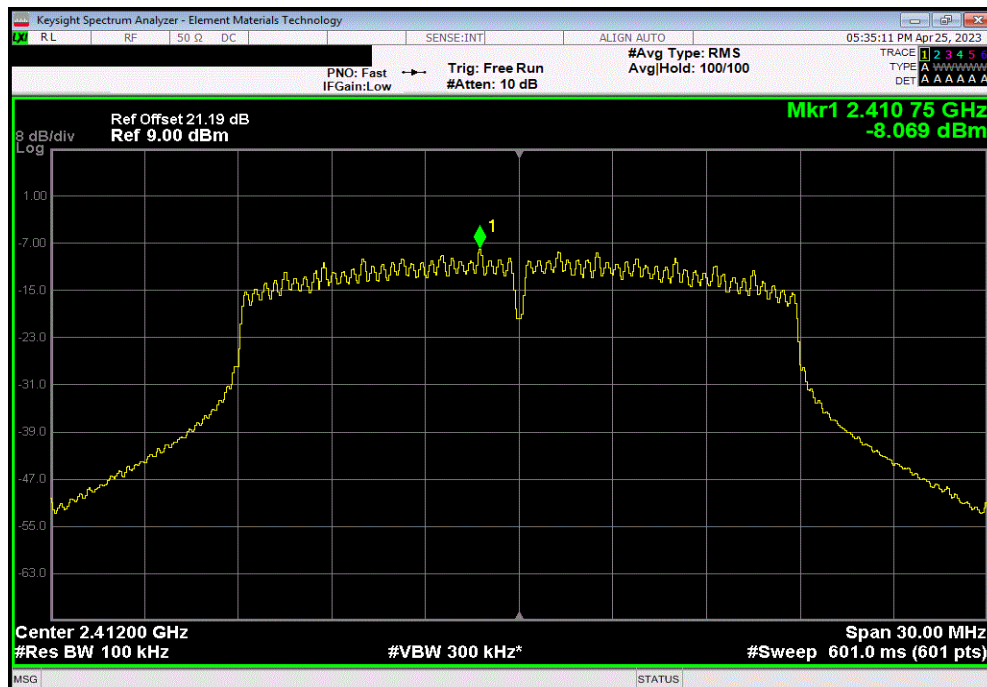


TbTx 2022.06.03.0 XMR 2023.02.14.0

2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz						
Value	dBm/100kHz	Duty Cycle	Value	Limit	Results	
	To dBm/3kHz	Factor (dB)	dBm/3kHz	≤ (dBm/3kHz)		
	-7.908	0.9	-22.2	8	Pass	



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz						
Value	dBm/100kHz	Duty Cycle	Value	Limit	Results	
	To dBm/3kHz	Factor (dB)	dBm/3kHz	≤ (dBm/3kHz)		
	-8.069	0.9	-22.4	8	Pass	

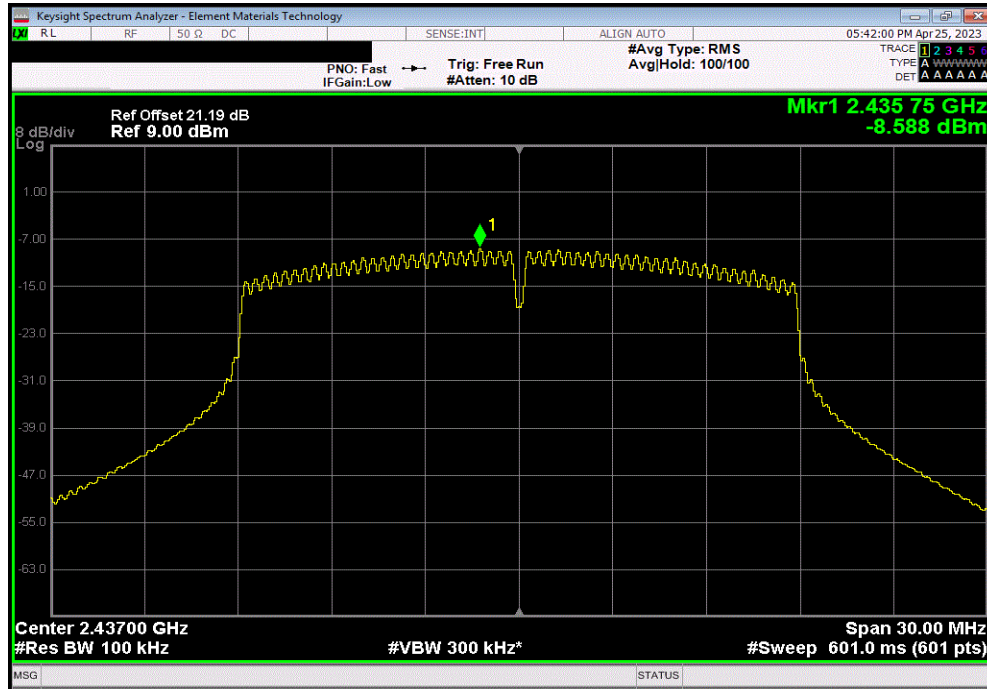


POWER SPECTRAL DENSITY

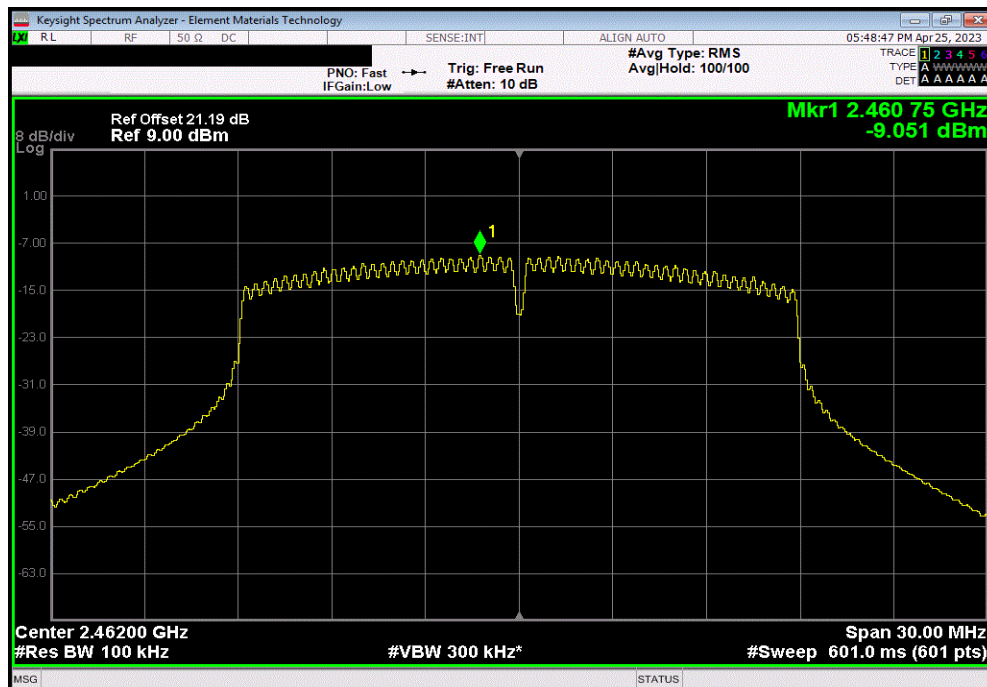


TbTtx 2022.06.03.0 XMt 2023.02.14.0

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Mid Channel 6, 2437 MHz						
Value	dBm/100kHz	Duty Cycle	Value	Limit	Results	
dBm/100kHz	To dBm/3kHz	Factor (dB)	dBm/3kHz	≤ (dBm/3kHz)		
	-8.588	-15.2	0.2	-23.6	8	Pass



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz						
Value	dBm/100kHz	Duty Cycle	Value	Limit	Results	
dBm/100kHz	To dBm/3kHz	Factor (dB)	dBm/3kHz	≤ (dBm/3kHz)		
	-9.051	-15.2	0.2	-24.1	8	Pass

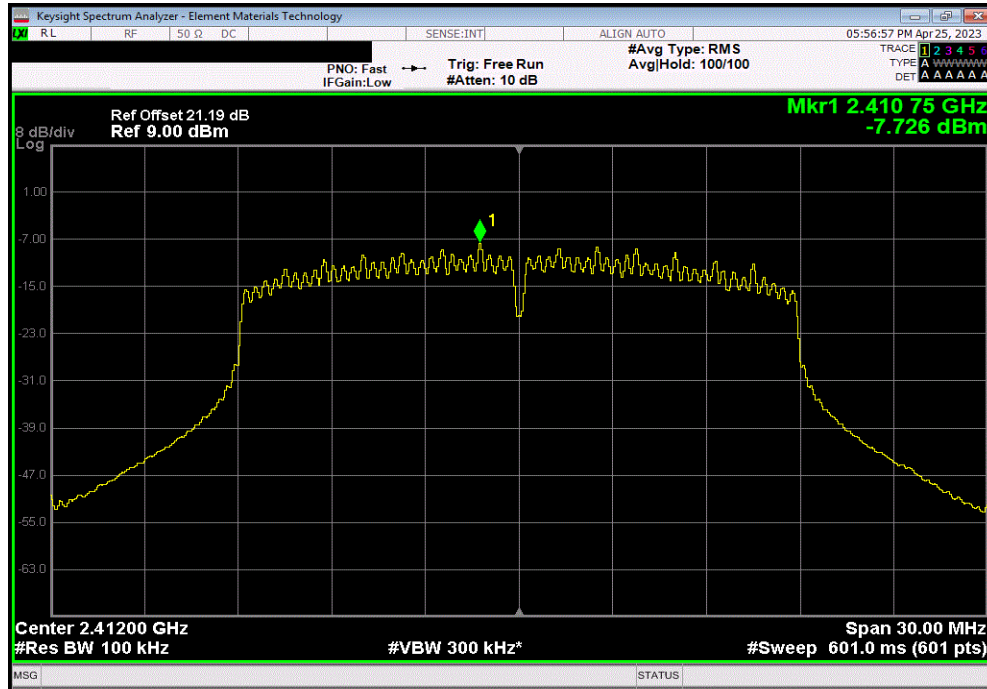


POWER SPECTRAL DENSITY

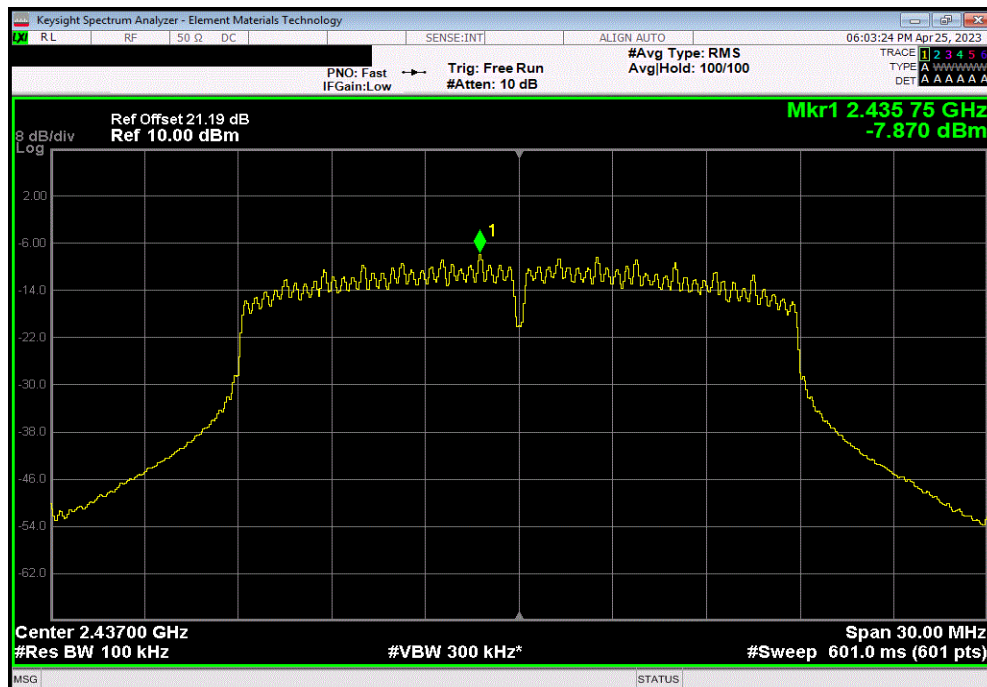


TbTtx 2022.06.03.0 XMt 2023.02.14.0

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1, 2412 MHz						
Value	dBm/100kHz	Duty Cycle	Value	Limit	Results	
	To dBm/3kHz	Factor (dB)		≤ (dBm/3kHz)		
	-7.726	1	-21.9	8	Pass	



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Mid Channel 6, 2437 MHz						
Value	dBm/100kHz	Duty Cycle	Value	Limit	Results	
	To dBm/3kHz	Factor (dB)		≤ (dBm/3kHz)		
	-7.87	1	-22.1	8	Pass	



POWER SPECTRAL DENSITY



TbTx 2022.06.03.0 XMR 2023.02.14.0

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, High Channel 11, 2462 MHz						
Value	dBm/100kHz	Duty Cycle	Value	Limit	Results	
	To dBm/3kHz	Factor (dB)	dBm/3kHz	≤ (dBm/3kHz)		
	-8.481	1	-22.7	8	Pass	

