

# OCCUPIED BANDWIDTH



XMI 2017.12.13

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
Cable	ESM Cable Corp.	TTBJ141 KMKM-72	MNU	15-Mar-18	15-Mar-19
Block - DC	Fairview Microwave	SD3379	AMI	12-Sep-17	12-Sep-18
Attenuator	S.M. Electronics	SA26B-20	RFW	13-Feb-18	13-Feb-19
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFN	27-Apr-18	27-Apr-19

## TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The EUT was set to the channels and modes listed in the datasheet.

The 6dB occupied bandwidth was measured using 100 kHz resolution bandwidth and 300 kHz video bandwidth. The 99.0% occupied bandwidth was also measured at the same time which can be needed during Output Power depending on the applicable method.

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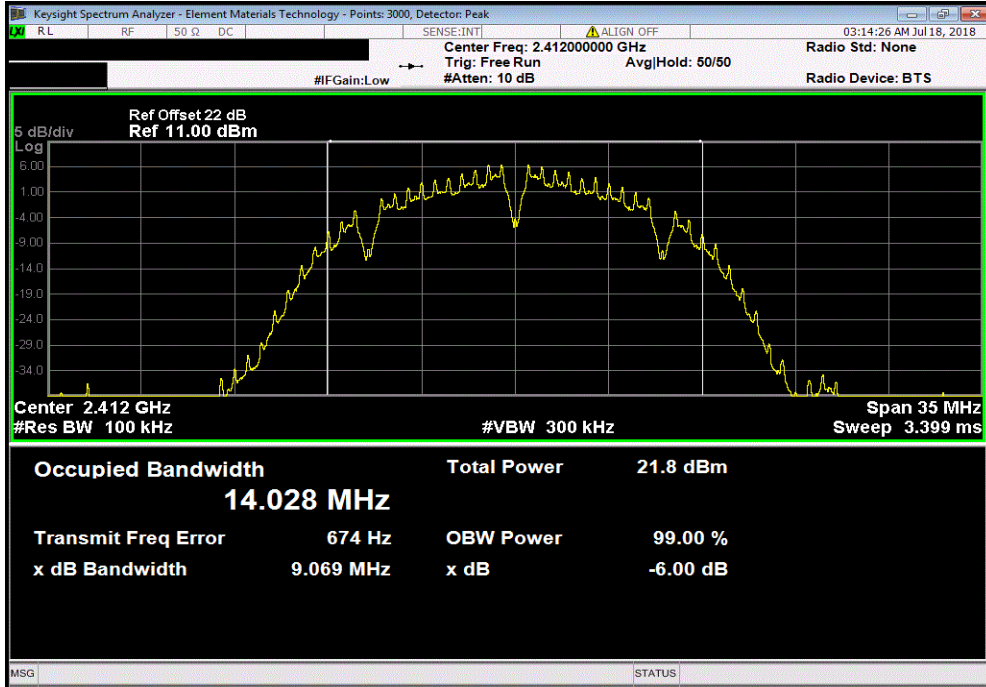
EUT: MyCareLink Relay Home Communicator 24960		Work Order: MDTR0649	
Serial Number: MEA9984DEM		Date: 17-Jul-18	
Customer: Medtronic, Inc.		Temperature: 21.4 °C	
Attendees: Taylor Dowden		Humidity: 49.3% RH	
Project: None		Barometric Pres.: 1024 mbar	
Tested by: Kyle McMullan		Power: 110VAC/60Hz	
		Job Site: MN08	
TEST SPECIFICATIONS			
FCC 15.247:2018		ANSI C63.10:2013	
TEST METHOD			
COMMENTS			
None			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	3	Signature <i>Kyle McMullan</i>	
		Value	Limit (>)
2400 MHz - 2483.5 MHz Band			
802.11(b) 1 Mbps			
Low Channel 1, 2412 MHz		9.069 MHz	500 kHz
Mid Channel 6, 2437 MHz		9.064 MHz	500 kHz
High Channel 11, 2462 MHz		8.575 MHz	500 kHz
802.11(b) 11 Mbps			
Low Channel 1, 2412 MHz		8.173 MHz	500 kHz
Mid Channel 6, 2437 MHz		9.33 MHz	500 kHz
High Channel 11, 2462 MHz		9.345 MHz	500 kHz
802.11(g) 6 Mbps			
Low Channel 1, 2412 MHz		15.122 MHz	500 kHz
Mid Channel 6, 2437 MHz		15.125 MHz	500 kHz
High Channel 11, 2462 MHz		15.124 MHz	500 kHz
802.11(g) 36 Mbps			
Low Channel 1, 2412 MHz		15.127 MHz	500 kHz
Mid Channel 6, 2437 MHz		15.933 MHz	500 kHz
High Channel 11, 2462 MHz		15.127 MHz	500 kHz
802.11(g) 54 Mbps			
Low Channel 1, 2412 MHz		15.148 MHz	500 kHz
Mid Channel 6, 2437 MHz		15.134 MHz	500 kHz
High Channel 11, 2462 MHz		15.463 MHz	500 kHz
802.11(n) MCS0			
Low Channel 1, 2412 MHz		15.121 MHz	500 kHz
Mid Channel 6, 2437 MHz		15.127 MHz	500 kHz
High Channel 11, 2462 MHz		15.127 MHz	500 kHz
802.11(n) MCS7			
Low Channel 1, 2412 MHz		15.678 MHz	500 kHz
Mid Channel 6, 2437 MHz		15.653 MHz	500 kHz
High Channel 11, 2462 MHz		15.39 MHz	500 kHz

# OCCUPIED BANDWIDTH

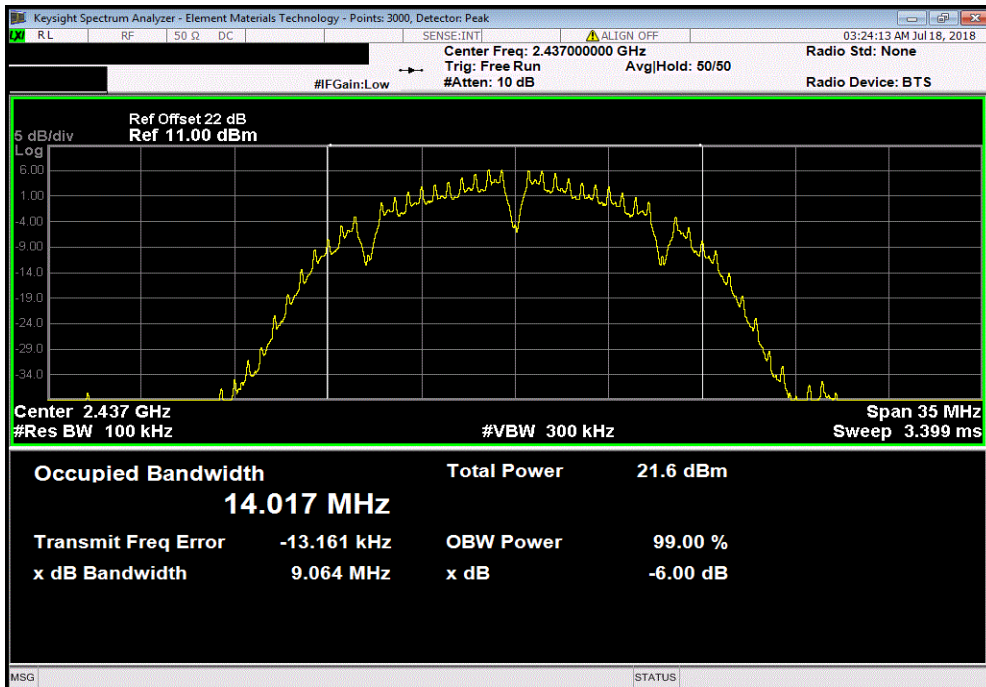


TMTX 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz						
				Value	Limit	Result
				9.069 MHz	500 kHz	Pass



2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz						
				Value	Limit	Result
				9.064 MHz	500 kHz	Pass

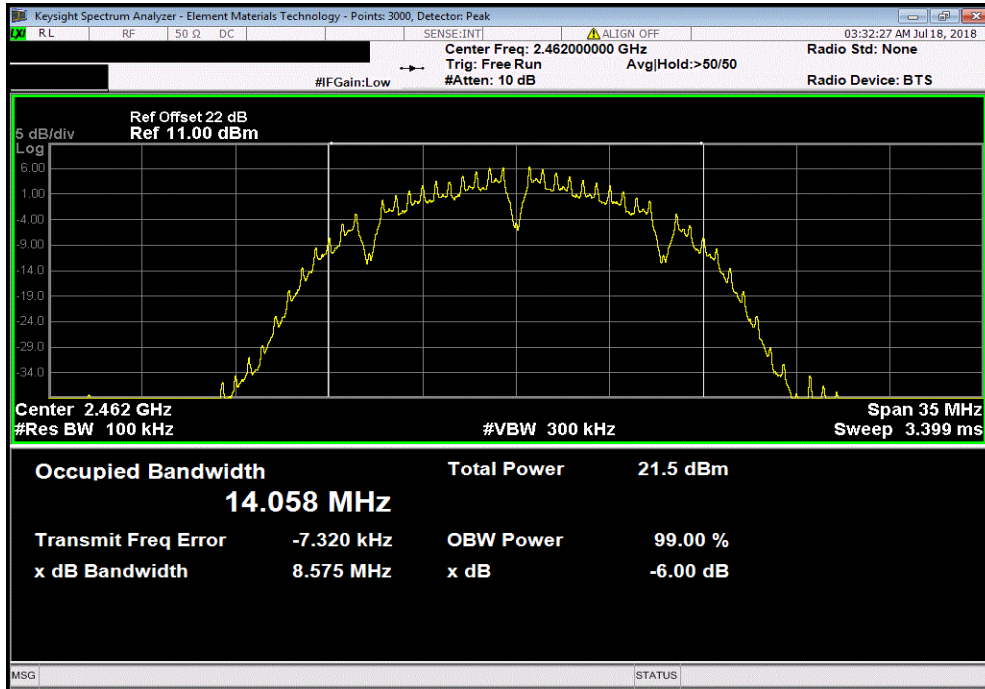


# OCCUPIED BANDWIDTH

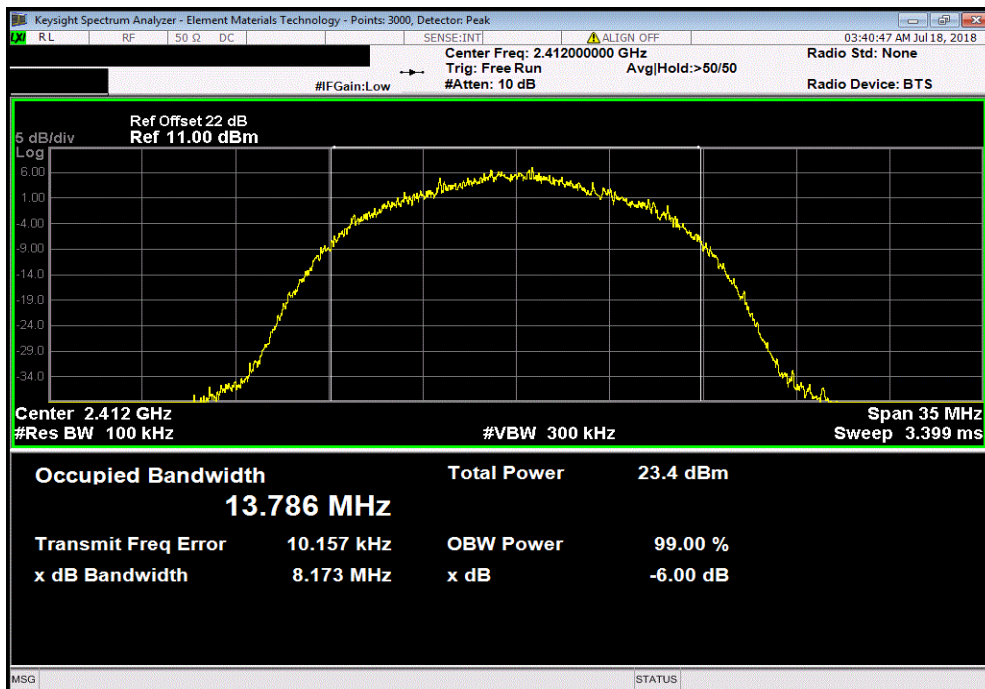


TMTX 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz						
				Value	Limit	Result
				8.575 MHz	500 kHz	Pass



2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz						
				Value	Limit	Result
				8.173 MHz	500 kHz	Pass

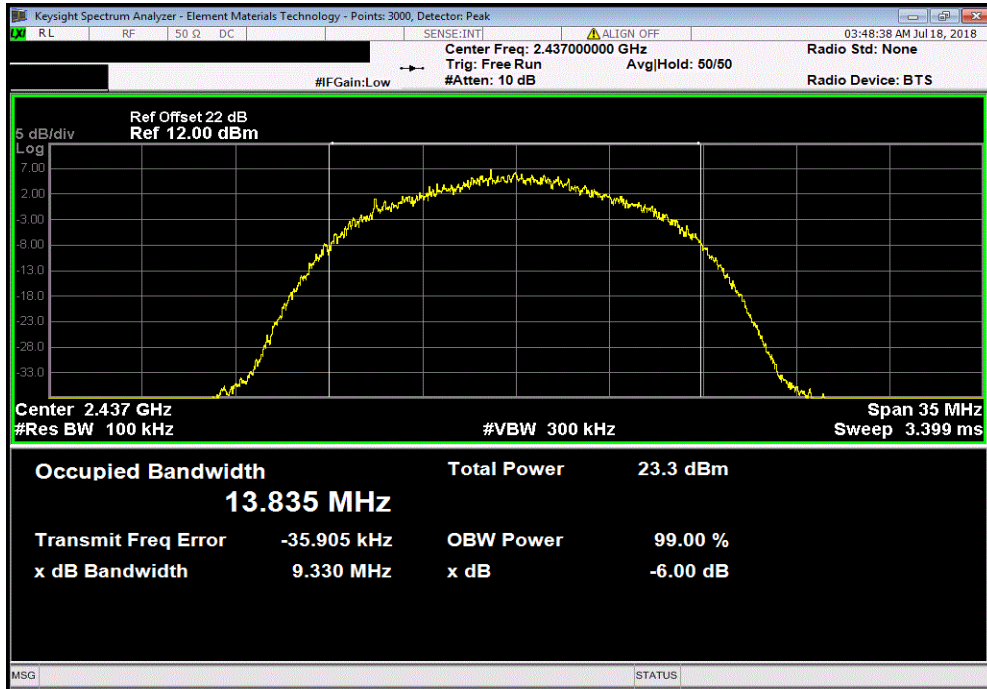


# OCCUPIED BANDWIDTH

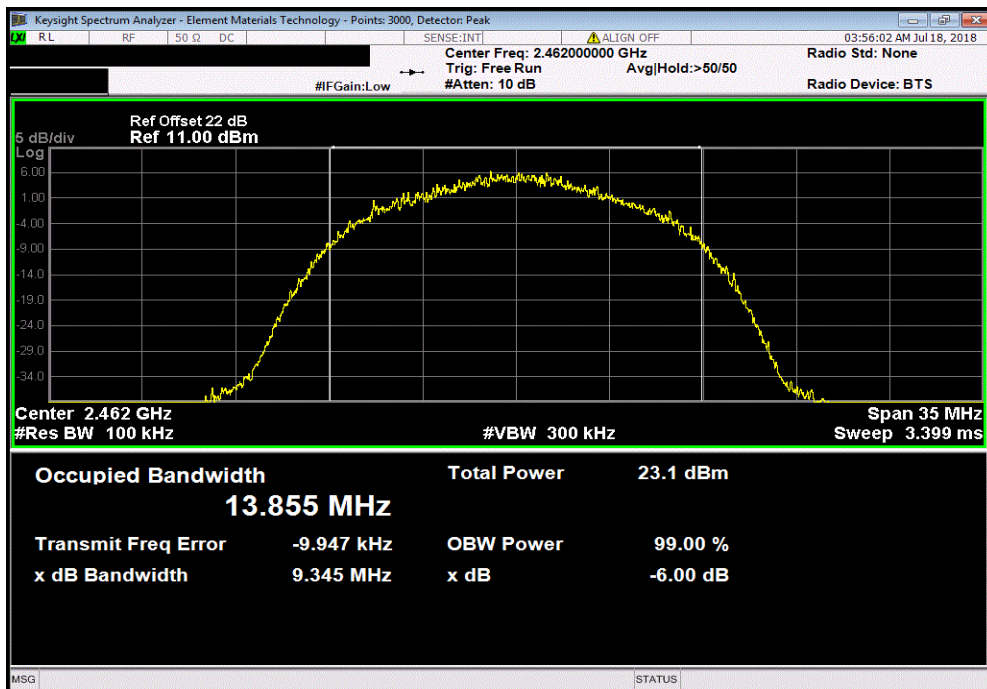


TMTX 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz						
	Value	Limit	Result			
		(>)				
	9.33 MHz	500 kHz	Pass			



2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz						
	Value	Limit	Result			
		(>)				
	9.345 MHz	500 kHz	Pass			

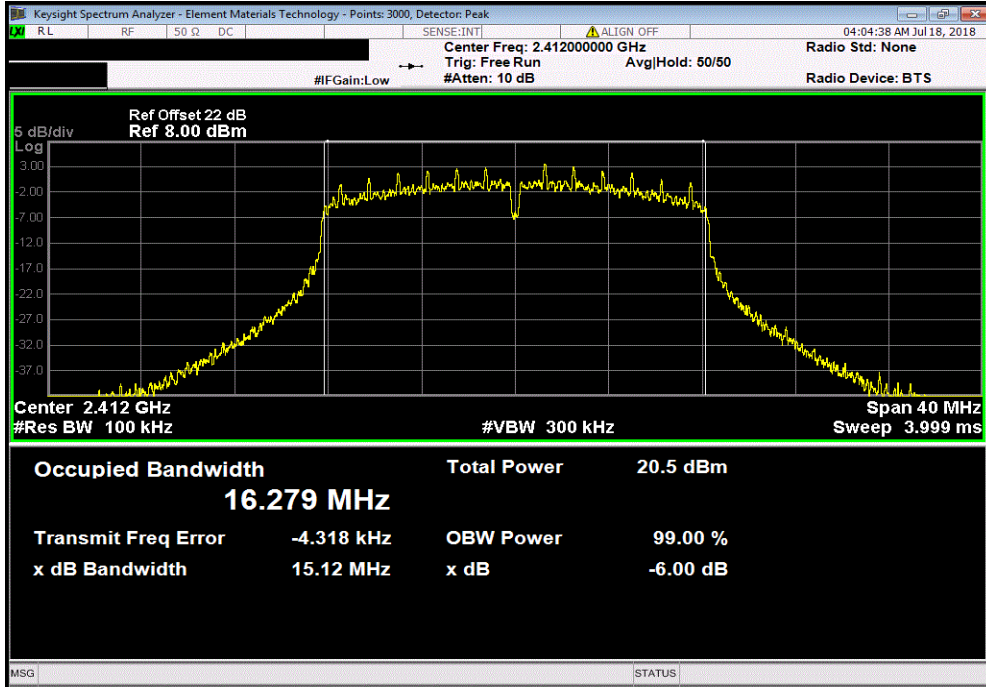


# OCCUPIED BANDWIDTH

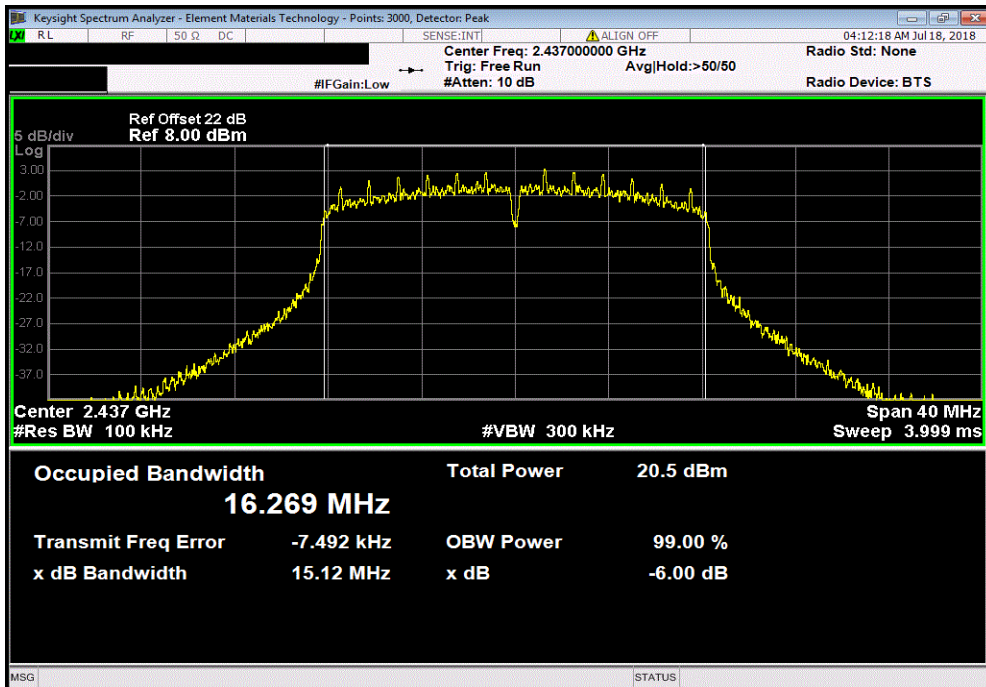


TMTX 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz						
				Value	Limit	Result
				15.122 MHz	500 kHz	Pass



2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz						
				Value	Limit	Result
				15.125 MHz	500 kHz	Pass



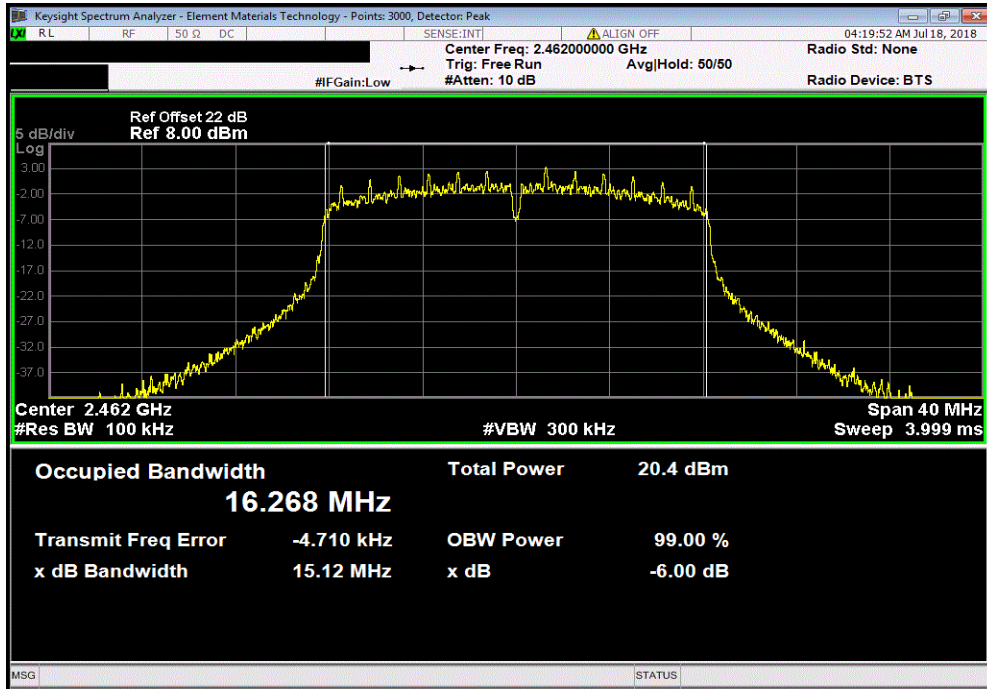


# OCCUPIED BANDWIDTH

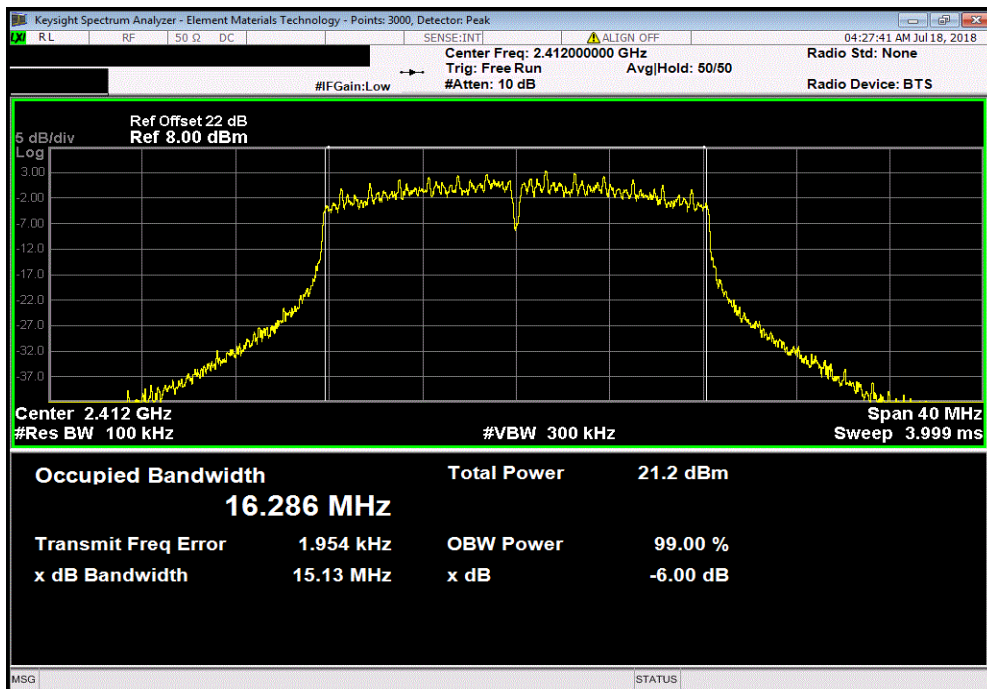


TMTX 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz						
				Value	Limit	Result
				15.124 MHz	500 kHz	Pass



2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz						
				Value	Limit	Result
				15.127 MHz	500 kHz	Pass

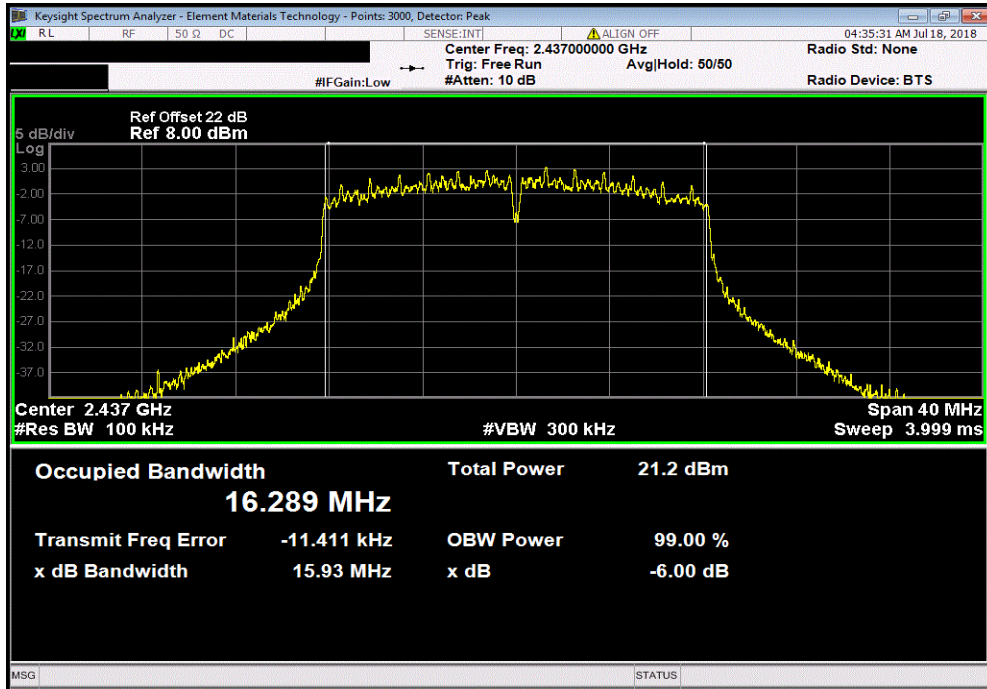


# OCCUPIED BANDWIDTH

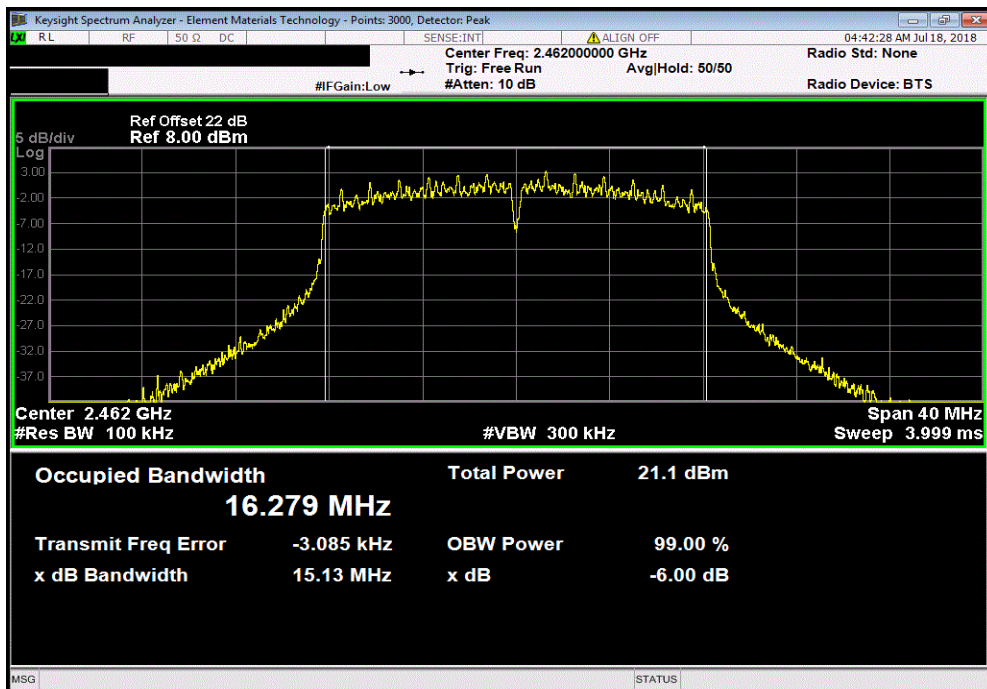


TMTx 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz						
				Value	Limit	Result
				15.933 MHz	500 kHz	Pass



2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz						
				Value	Limit	Result
				15.127 MHz	500 kHz	Pass



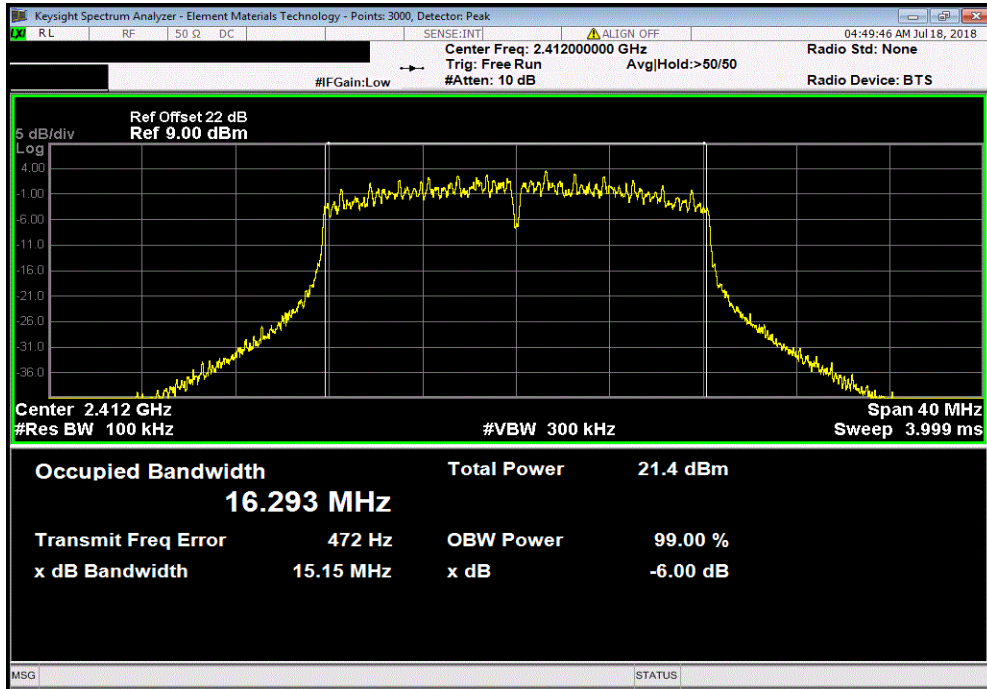


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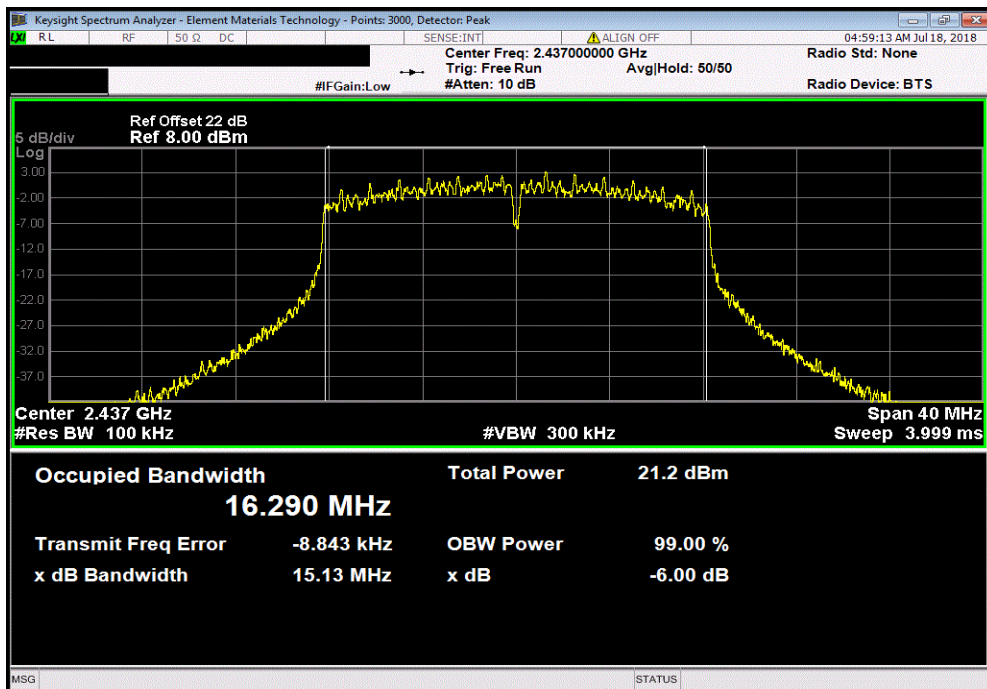


TMTX 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz						
				Value	Limit	Result
				15.148 MHz	500 kHz	Pass



2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz						
				Value	Limit	Result
				15.134 MHz	500 kHz	Pass

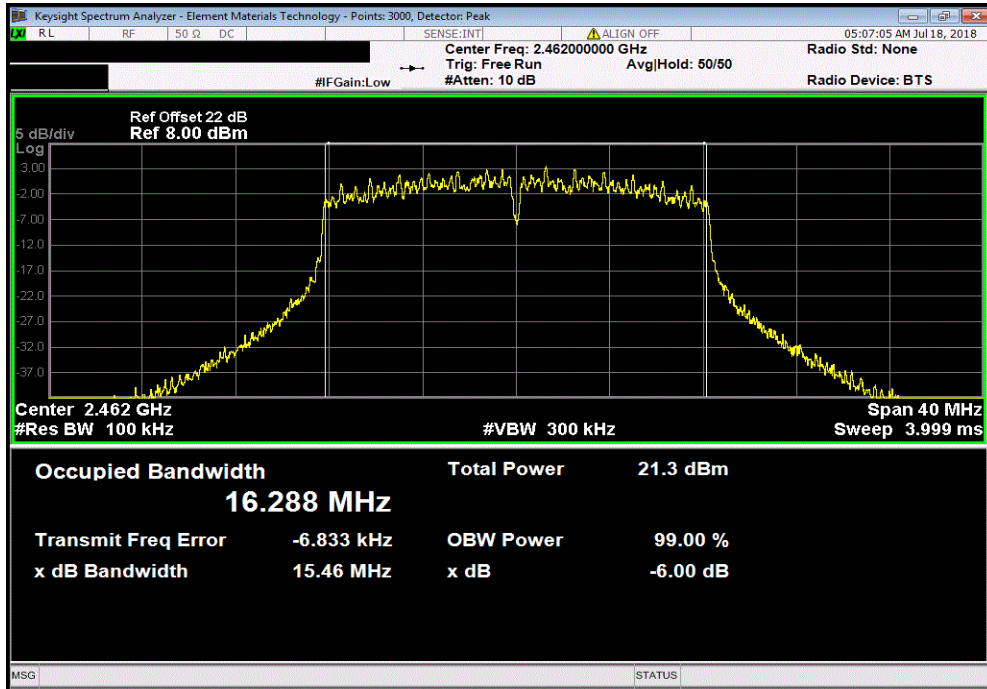


# OCCUPIED BANDWIDTH

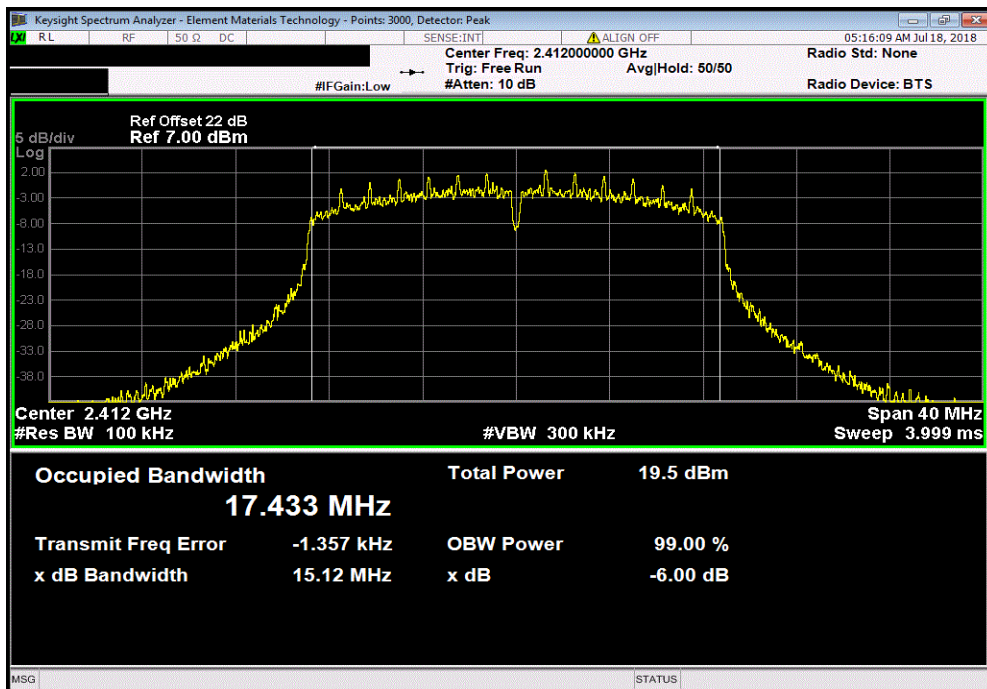


TMTX 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz						
	Value	Limit	Result			
		(>)				
	15.463 MHz	500 kHz	Pass			



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz						
	Value	Limit	Result			
		(>)				
	15.121 MHz	500 kHz	Pass			

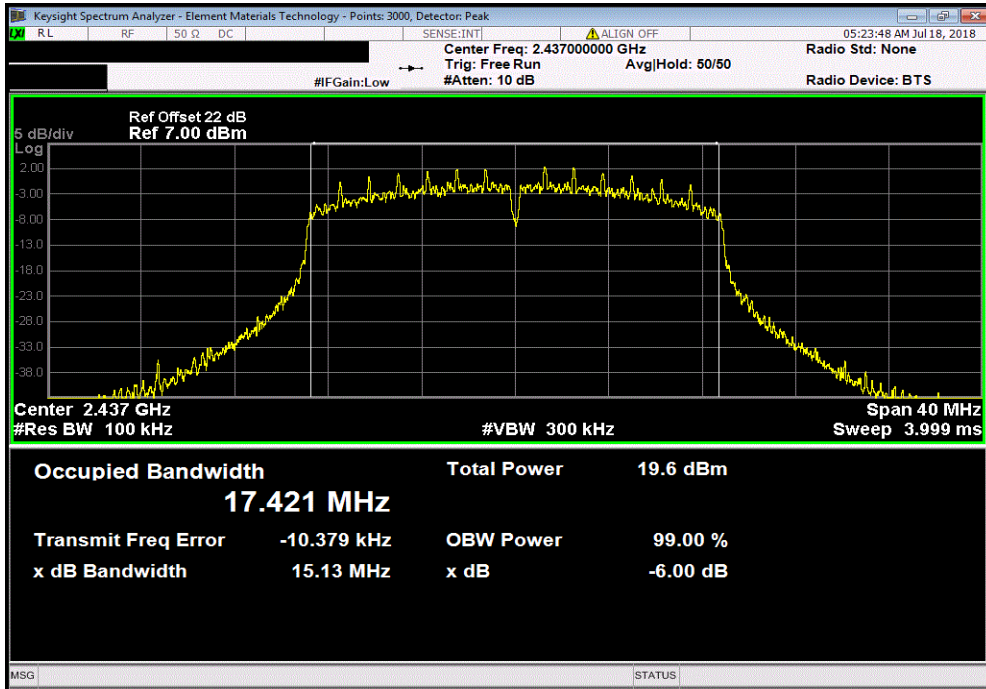


# OCCUPIED BANDWIDTH

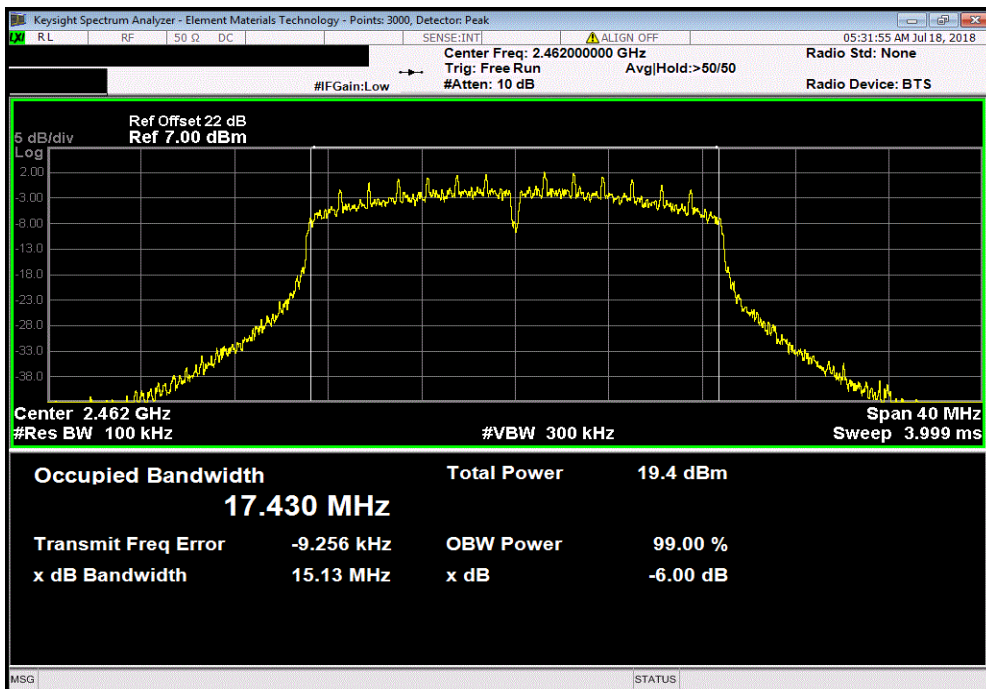


TMTX 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Mid Channel 6, 2437 MHz						
	Value	Limit	Result			
		(>)				
	15.127 MHz	500 kHz	Pass			



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz						
	Value	Limit	Result			
		(>)				
	15.127 MHz	500 kHz	Pass			

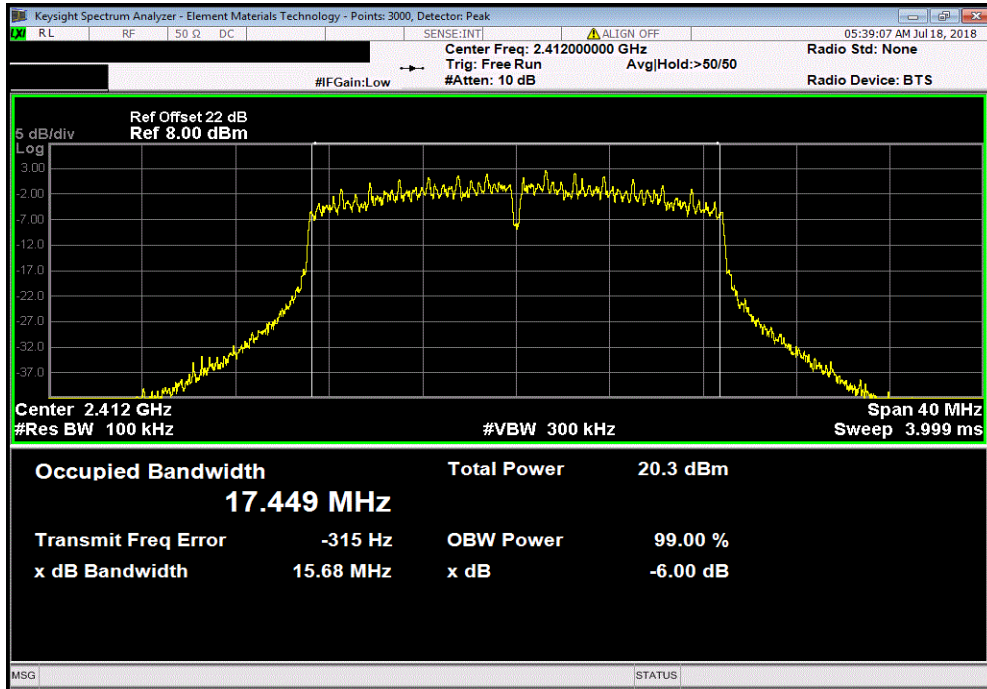


# OCCUPIED BANDWIDTH

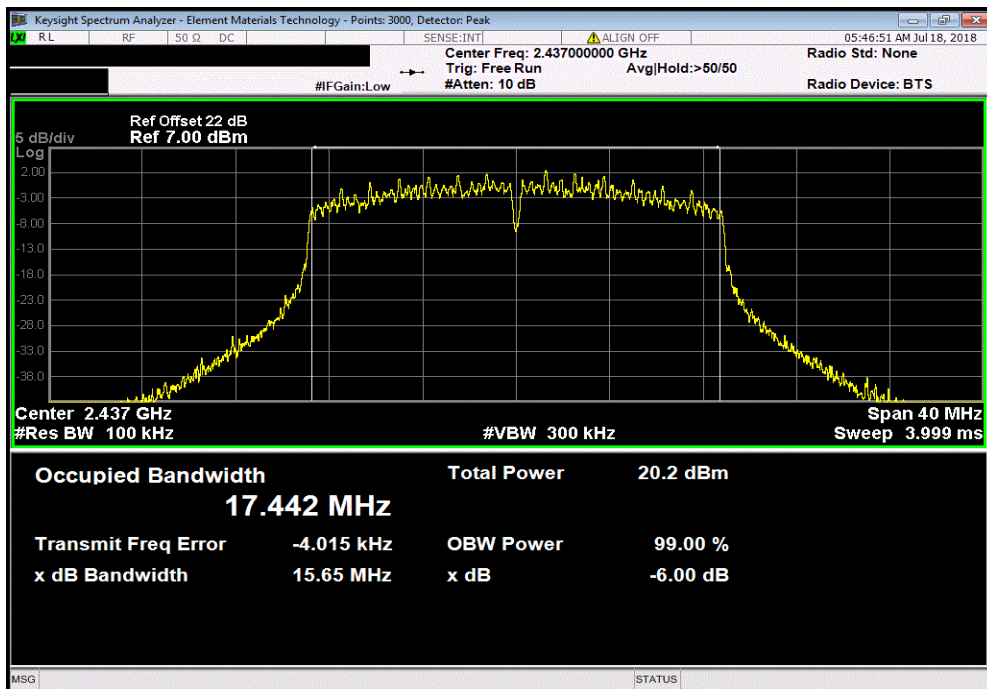


TMTX 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1, 2412 MHz						
				Value	Limit	Result
				15.678 MHz	500 kHz	Pass



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Mid Channel 6, 2437 MHz						
				Value	Limit	Result
				15.653 MHz	500 kHz	Pass

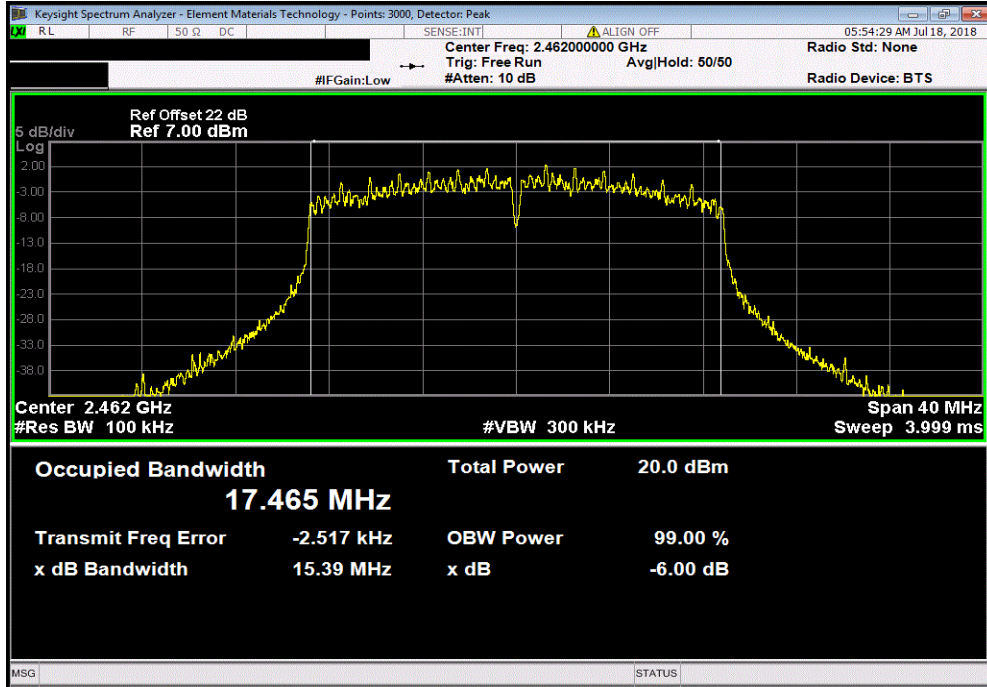


# OCCUPIED BANDWIDTH



TMTX 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, High Channel 11, 2462 MHz		
Value	Limit	Result
15.39 MHz	(>) 500 kHz	Pass



# OUTPUT POWER



XMIT 2017.12.13

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
Generator - Signal	Agilent	E4422B	TGQ	15-Mar-18	15-Mar-21
Cable	ESM Cable Corp.	TTBJ141 KMKM-72	MNU	15-Mar-18	15-Mar-19
Attenuator	S.M. Electronics	SA26B-20	RFW	13-Feb-18	13-Feb-19
Block - DC	Fairview Microwave	SD3379	AMI	12-Sep-17	12-Sep-18
Analyzer - Spectrum Analyzer	Keysight	N9010A (EXA)	AFQ	19-Dec-17	19-Dec-18

## TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The fundamental emission output power (maximum average conducted output power) was measured using the channels and modes as called out on the following data sheets. The transmit power was set to its default maximum.

Prior to measuring output power; the emission bandwidth (B) and the transmission pulse duration (T) were measured. Both are required to determine the method of measuring Maximum Conducted Output Power. The transmission pulse duration (T) was measured using a zero span on the spectrum analyzer to see the pulses in the time domain.

The method AVGSA-2 in section 11.9.2.2.4 of ANSI C63.10:2013 was used to make the measurement. This method uses trace averaging across ON and OFF times of the EUT transmissions in the spectrum analyzer channel power function using an RMS detector. Following the measurement a duty cycle correction was applied by adding  $[10 \log (1 / D)]$ , where D is the duty cycle, to the measured power to compute the average power during the actual transmission times.

**De Facto EIRP Limit:** The EUT meets the de facto EIRP limit of +36 dBm.



# OUTPUT POWER



TbTx 2017.12.14 XMt 2017.12.13

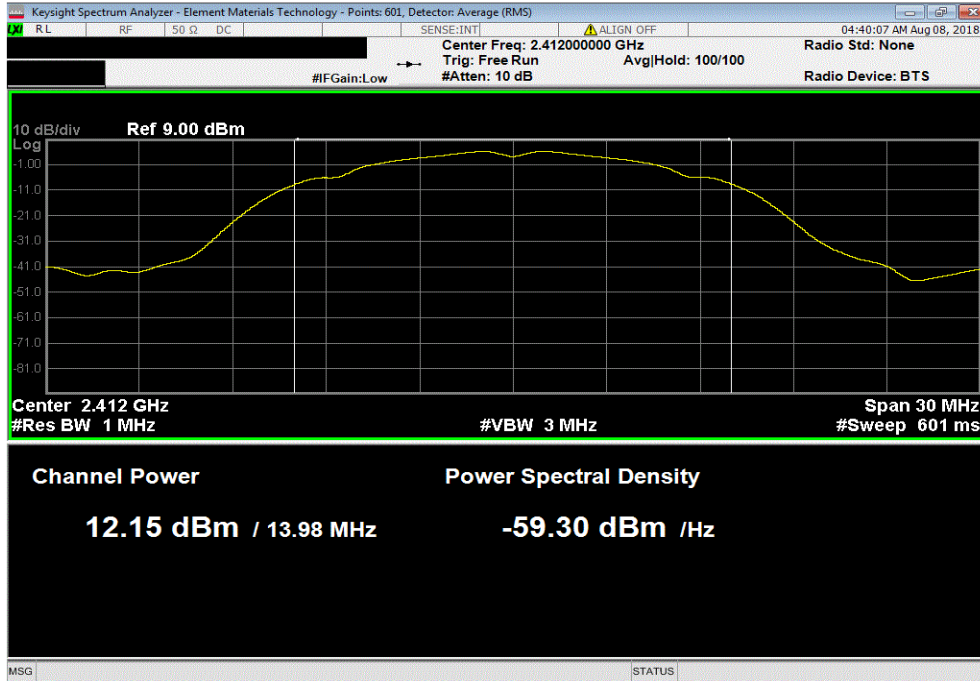
EUT: MyCareLink Relay Home Communicator 24960		Work Order: MDTR0649				
Serial Number: MEA9984DEM		Date: 8-Aug-18				
Customer: Medtronic, Inc.		Temperature: 22.7 °C				
Attendees: Taylor Dowden		Humidity: 55.5% RH				
Project: None		Barometric Pres.: 1016 mbar				
Tested by: Dustin Sparks		Power: 110VAC/60Hz				
Job Site: MN08						
TEST SPECIFICATIONS						
FCC 15.247:2018		ANSI C63.10:2013				
TEST METHOD						
COMMENTS						
None						
DEVIATIONS FROM TEST STANDARD						
None						
Configuration #	3	Signature <i>Dustin Sparks</i>				
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Value (dBm)	Limit < (dBm)	Results
2400 MHz - 2483.5 MHz Band						
802.11(b) 1 Mbps						
	Low Channel 1, 2412 MHz	12.154	0	12.2	30	Pass
	Mid Channel 6, 2437 MHz	12.107	0.1	12.2	30	Pass
	High Channel 11, 2462 MHz	12.008	0	12.1	30	Pass
802.11(b) 11 Mbps						
	Low Channel 1, 2412 MHz	11.754	0.5	12.2	30	Pass
	Mid Channel 6, 2437 MHz	11.776	0.5	12.2	30	Pass
	High Channel 11, 2462 MHz	11.708	0.5	12.2	30	Pass
802.11(g) 6 Mbps						
	Low Channel 1, 2412 MHz	13.237	0.3	13.5	30	Pass
	Mid Channel 6, 2437 MHz	13.143	0.3	13.4	30	Pass
	High Channel 11, 2462 MHz	13.048	0.3	13.3	30	Pass
802.11(g) 36 Mbps						
	Low Channel 1, 2412 MHz	12.061	1.4	13.5	30	Pass
	Mid Channel 6, 2437 MHz	11.996	1.5	13.4	30	Pass
	High Channel 11, 2462 MHz	11.813	1.5	13.3	30	Pass
802.11(g) 54 Mbps						
	Low Channel 1, 2412 MHz	11.516	2	13.5	30	Pass
	Mid Channel 6, 2437 MHz	11.488	2	13.4	30	Pass
	High Channel 11, 2462 MHz	11.369	2	13.3	30	Pass
802.11(n) MCS0						
	Low Channel 1, 2412 MHz	12.072	0.3	12.4	30	Pass
	Mid Channel 6, 2437 MHz	12.078	0.3	12.4	30	Pass
	High Channel 11, 2462 MHz	11.902	0.3	12.2	30	Pass
802.11(n) MCS7						
	Low Channel 1, 2412 MHz	10.403	2.1	12.5	30	Pass
	Mid Channel 6, 2437 MHz	10.362	2.1	12.4	30	Pass
	High Channel 11, 2462 MHz	10.156	2.1	12.2	30	Pass

# OUTPUT POWER

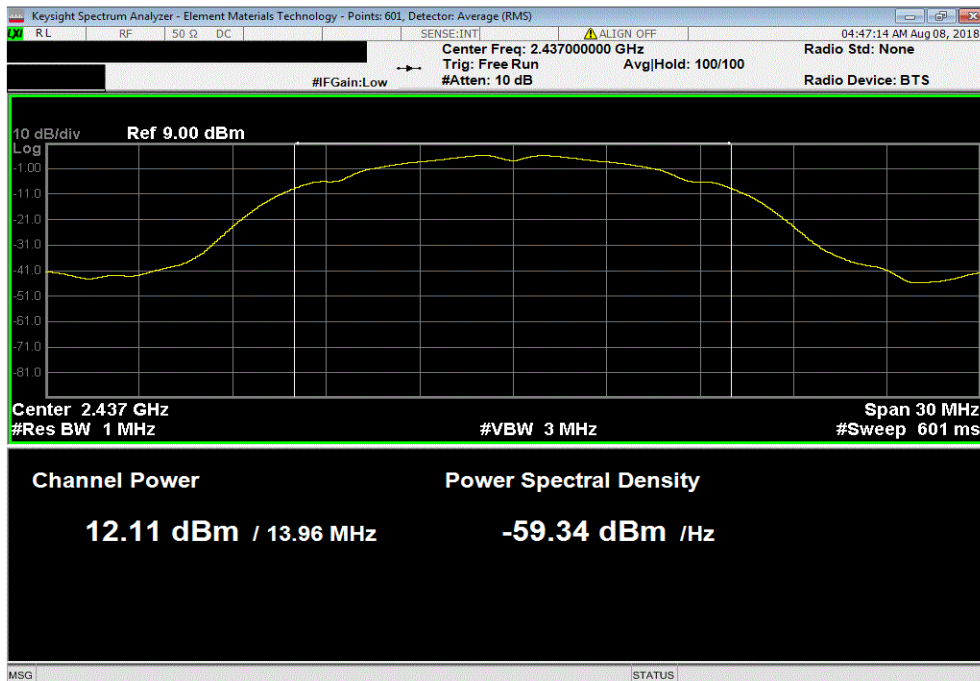


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2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz						
Avg Cond	Duty Cycle	Value	Limit	Results		
Pwr (dBm)	Factor (dB)	(dBm)	< (dBm)			
12.154	0	12.2	30	Pass		



2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz						
Avg Cond	Duty Cycle	Value	Limit	Results		
Pwr (dBm)	Factor (dB)	(dBm)	< (dBm)			
12.107	0.1	12.2	30	Pass		

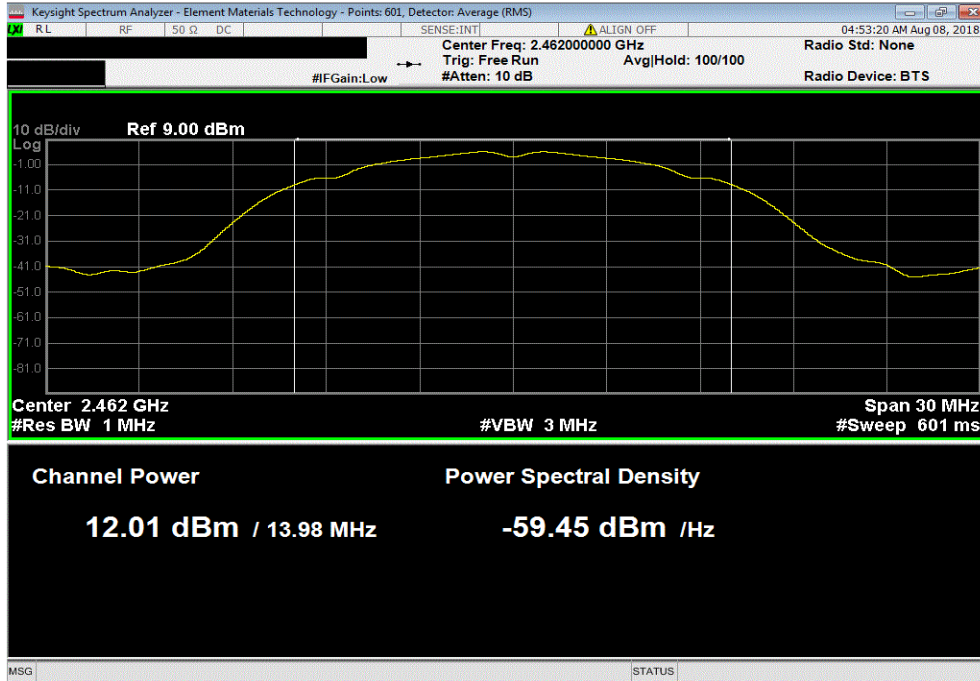


# OUTPUT POWER

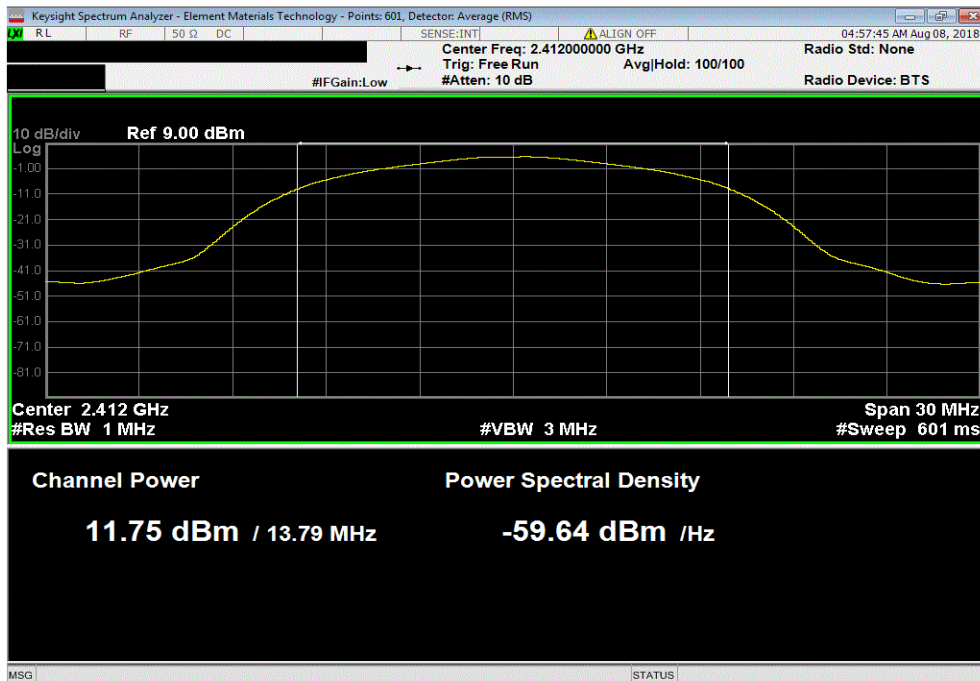


TMTX 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz						
Avg Cond	Duty Cycle	Value	Limit	Results		
Pwr (dBm)	Factor (dB)	(dBm)	< (dBm)			
12.008	0	12.1	30	Pass		



2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz						
Avg Cond	Duty Cycle	Value	Limit	Results		
Pwr (dBm)	Factor (dB)	(dBm)	< (dBm)			
11.754	0.5	12.2	30	Pass		

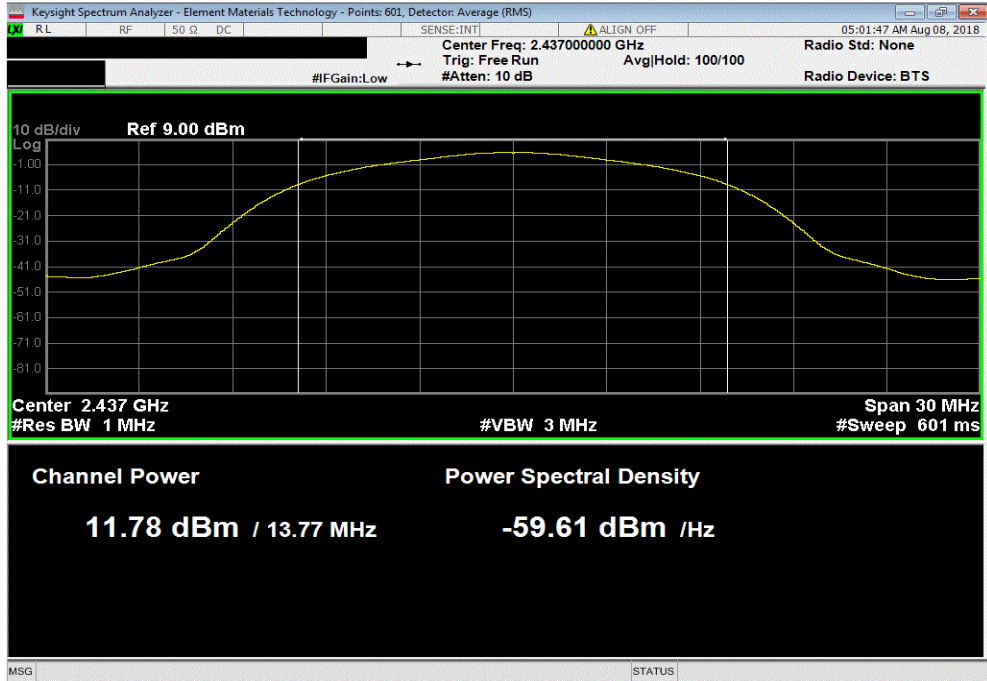


# OUTPUT POWER

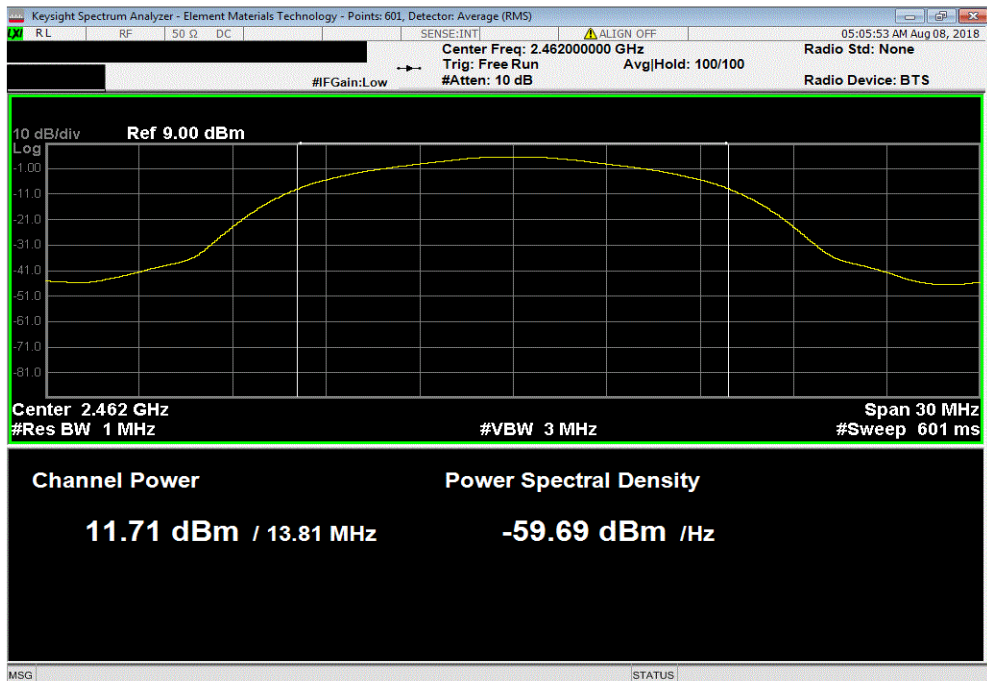


TMTX 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz						
Avg Cond	Duty Cycle	Value	Limit	Results		
Pwr (dBm)	Factor (dB)	(dBm)	< (dBm)			
11.776	0.5	12.2	30	Pass		



2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz						
Avg Cond	Duty Cycle	Value	Limit	Results		
Pwr (dBm)	Factor (dB)	(dBm)	< (dBm)			
11.708	0.5	12.2	30	Pass		

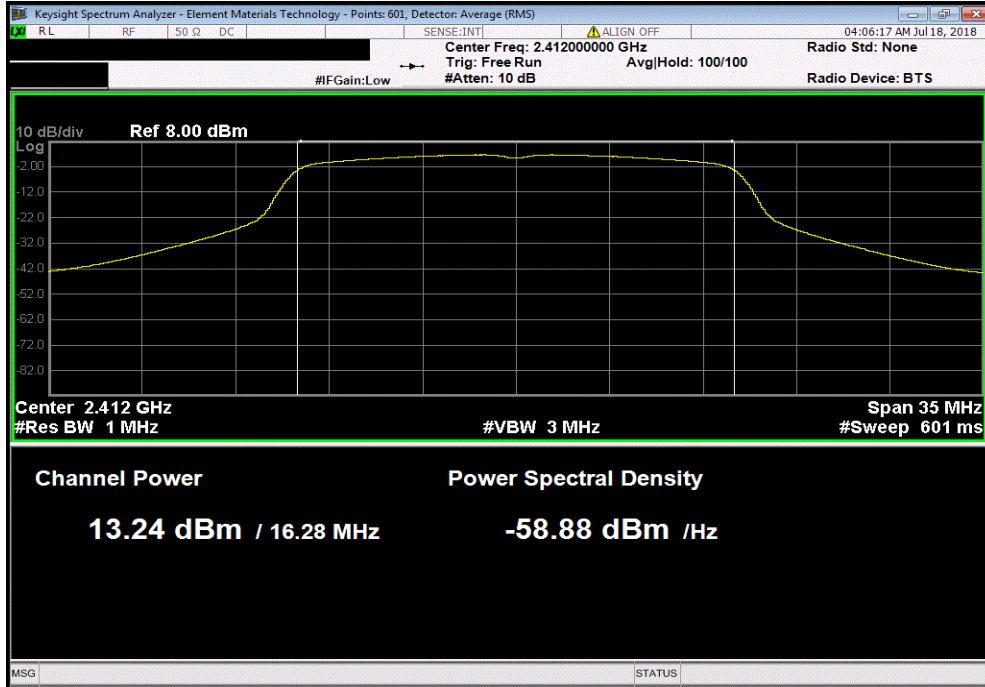


# OUTPUT POWER

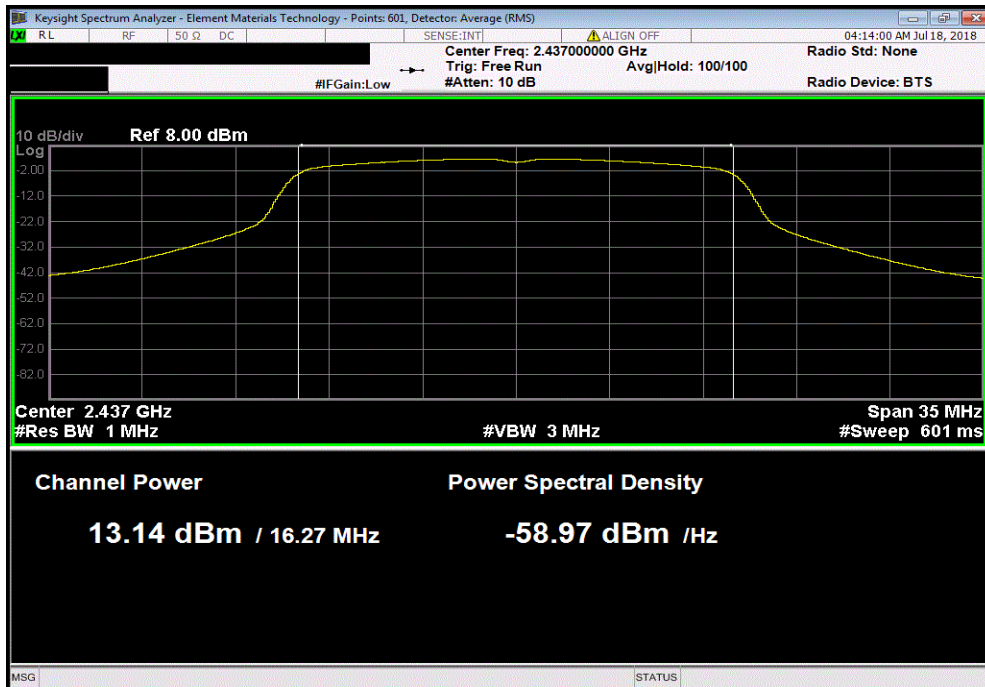


TMTX 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz						
Avg Cond	Duty Cycle	Value	Limit	Results		
Pwr (dBm)	Factor (dB)	(dBm)	< (dBm)			
13.237	0.3	13.5	30	Pass		



2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz						
Avg Cond	Duty Cycle	Value	Limit	Results		
Pwr (dBm)	Factor (dB)	(dBm)	< (dBm)			
13.143	0.3	13.4	30	Pass		

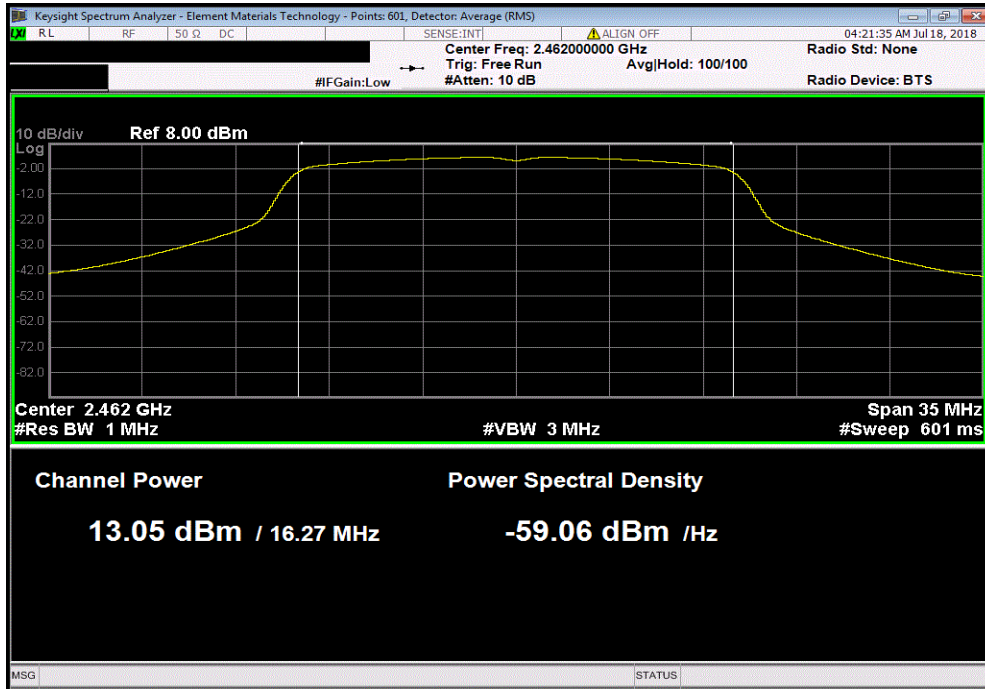


# OUTPUT POWER

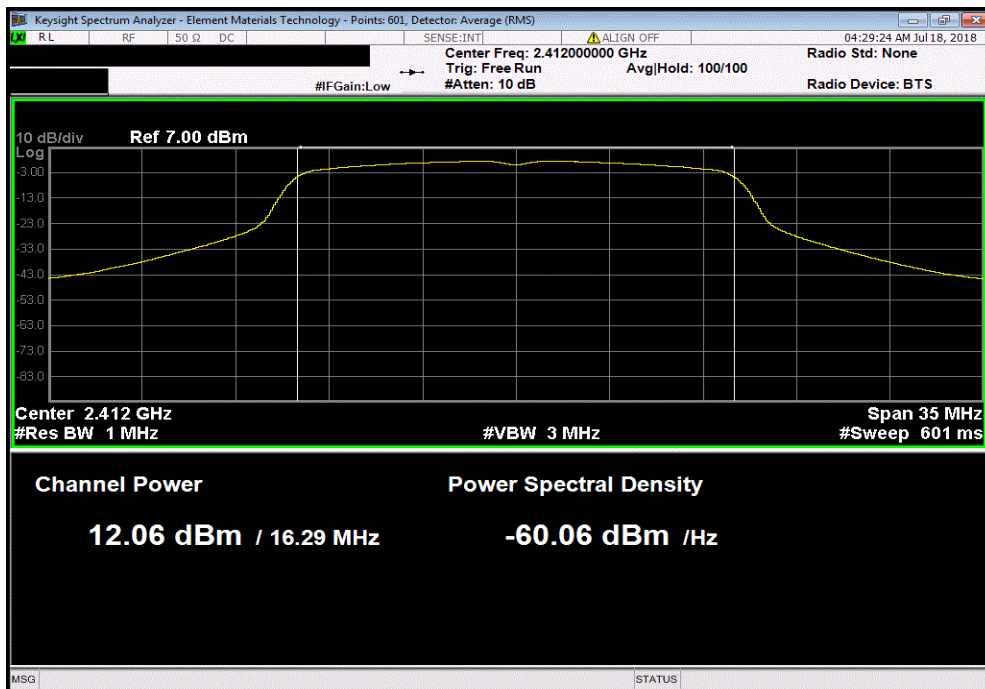


TMTX 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz						
Avg Cond	Duty Cycle	Value	Limit	Results		
Pwr (dBm)	Factor (dB)	(dBm)	< (dBm)			
13.048	0.3	13.3	30	Pass		



2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz						
Avg Cond	Duty Cycle	Value	Limit	Results		
Pwr (dBm)	Factor (dB)	(dBm)	< (dBm)			
12.061	1.4	13.5	30	Pass		



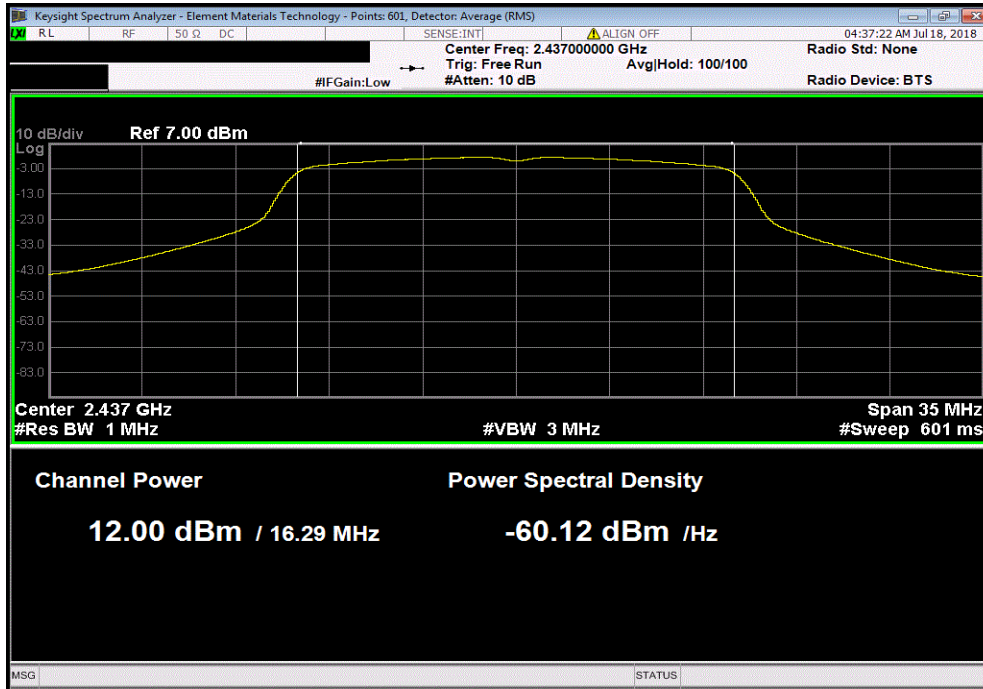


# OUTPUT POWER

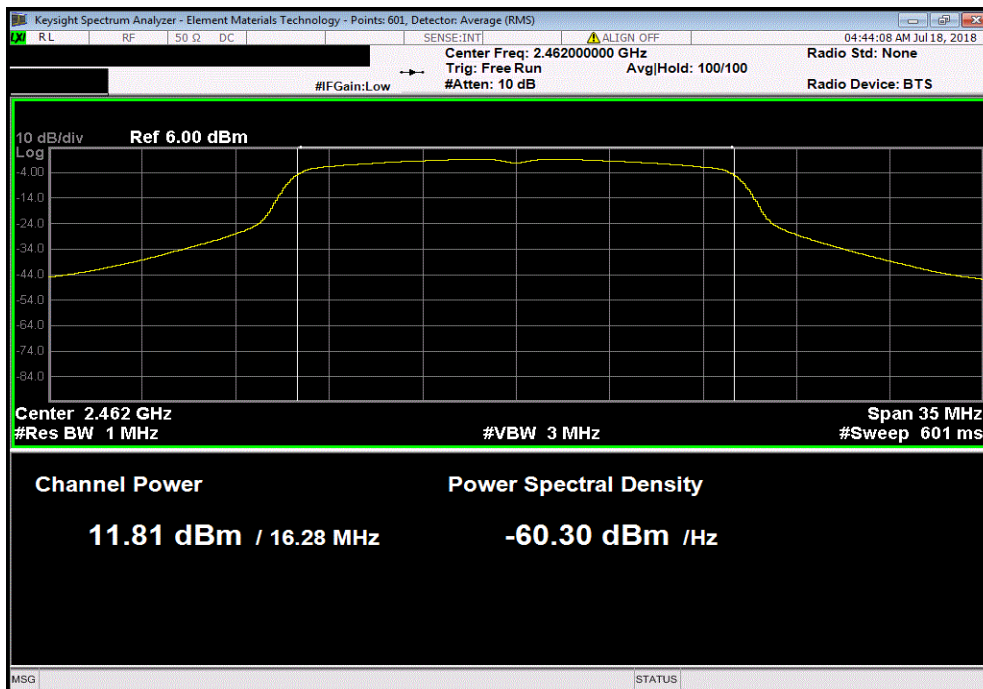


TMTX 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz						
Avg Cond	Duty Cycle	Value	Limit	Results		
Pwr (dBm)	Factor (dB)	(dBm)	< (dBm)			
11.996	1.5	13.4	30	Pass		



2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz						
Avg Cond	Duty Cycle	Value	Limit	Results		
Pwr (dBm)	Factor (dB)	(dBm)	< (dBm)			
11.813	1.5	13.3	30	Pass		

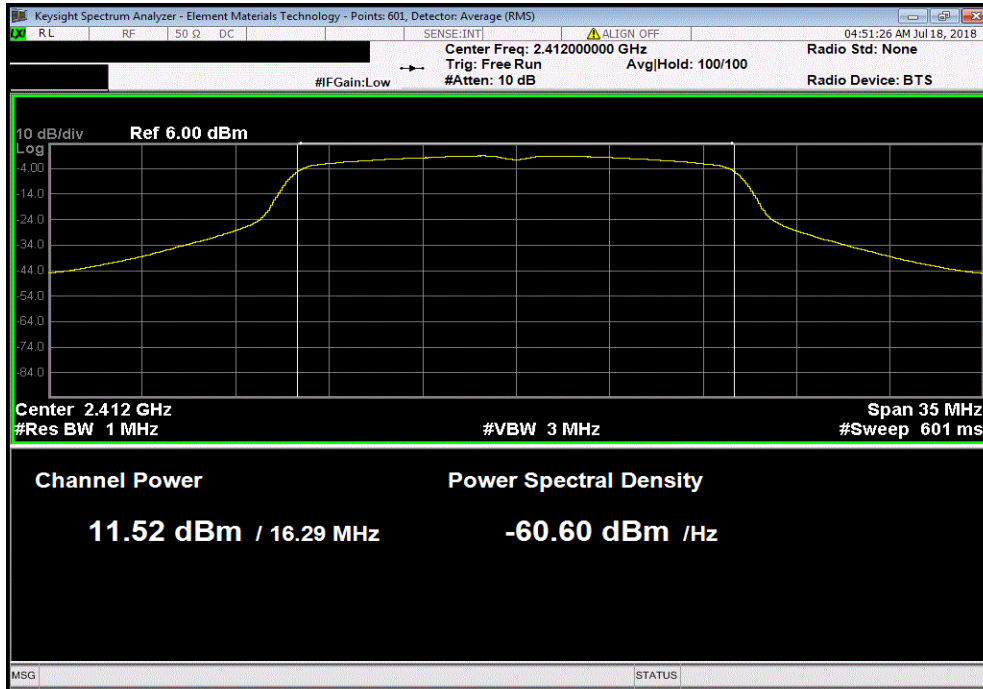


# OUTPUT POWER

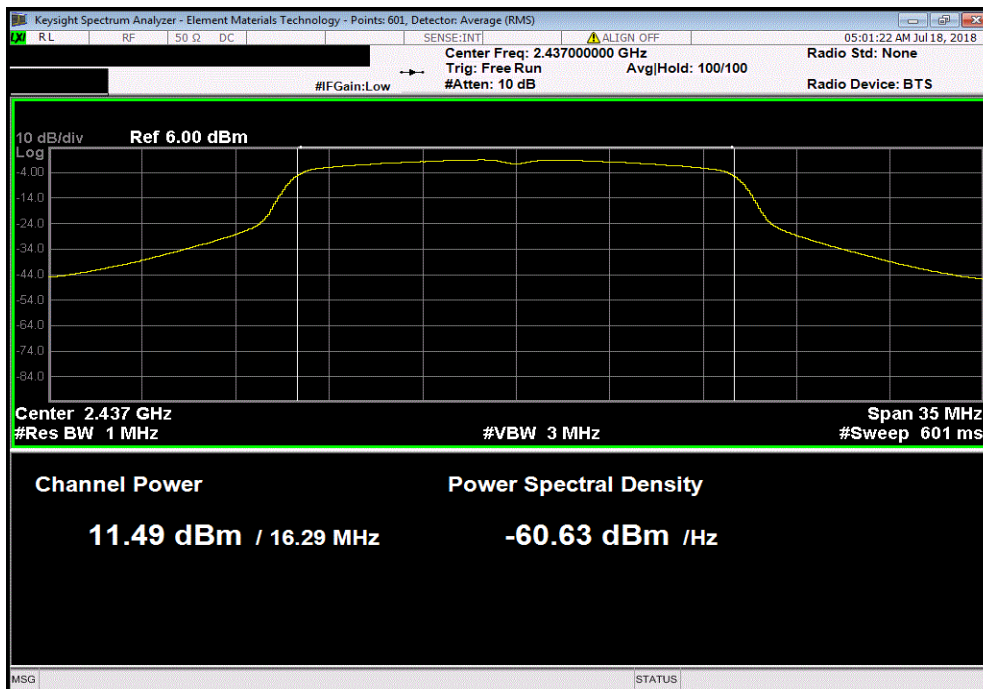


TMTX 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz						
Avg Cond	Duty Cycle	Value	Limit	Results		
Pwr (dBm)	Factor (dB)	(dBm)	< (dBm)			
11.516	2	13.5	30	Pass		



2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz						
Avg Cond	Duty Cycle	Value	Limit	Results		
Pwr (dBm)	Factor (dB)	(dBm)	< (dBm)			
11.488	2	13.4	30	Pass		

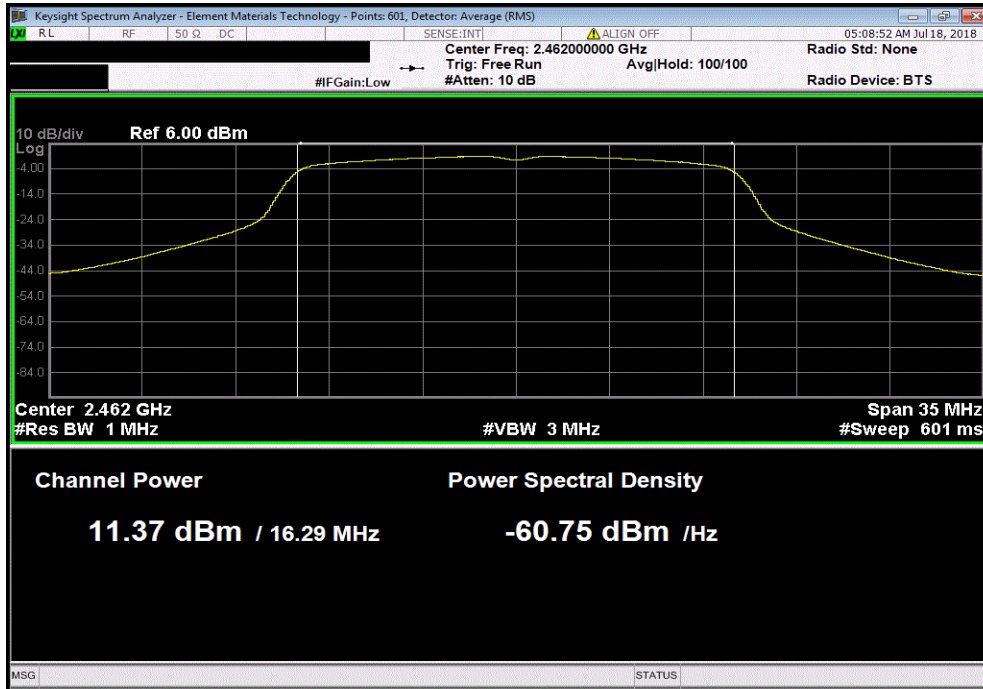


# OUTPUT POWER

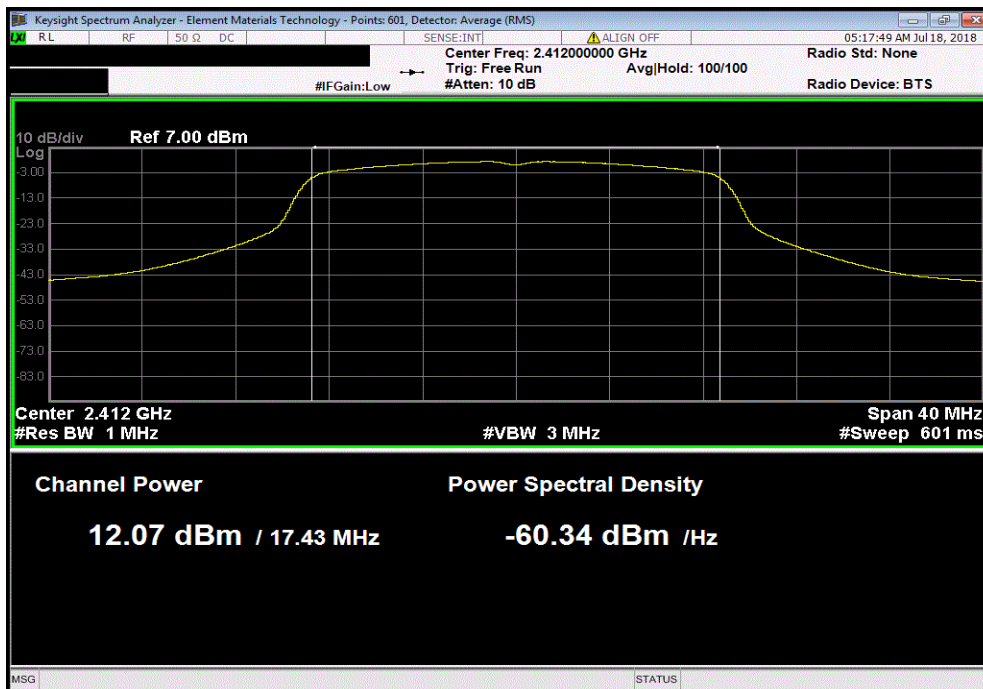


TMTX 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz						
Avg Cond	Duty Cycle	Value	Limit	Results		
Pwr (dBm)	Factor (dB)	(dBm)	< (dBm)			
11.369	2	13.3	30	Pass		



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz						
Avg Cond	Duty Cycle	Value	Limit	Results		
Pwr (dBm)	Factor (dB)	(dBm)	< (dBm)			
12.072	0.3	12.4	30	Pass		

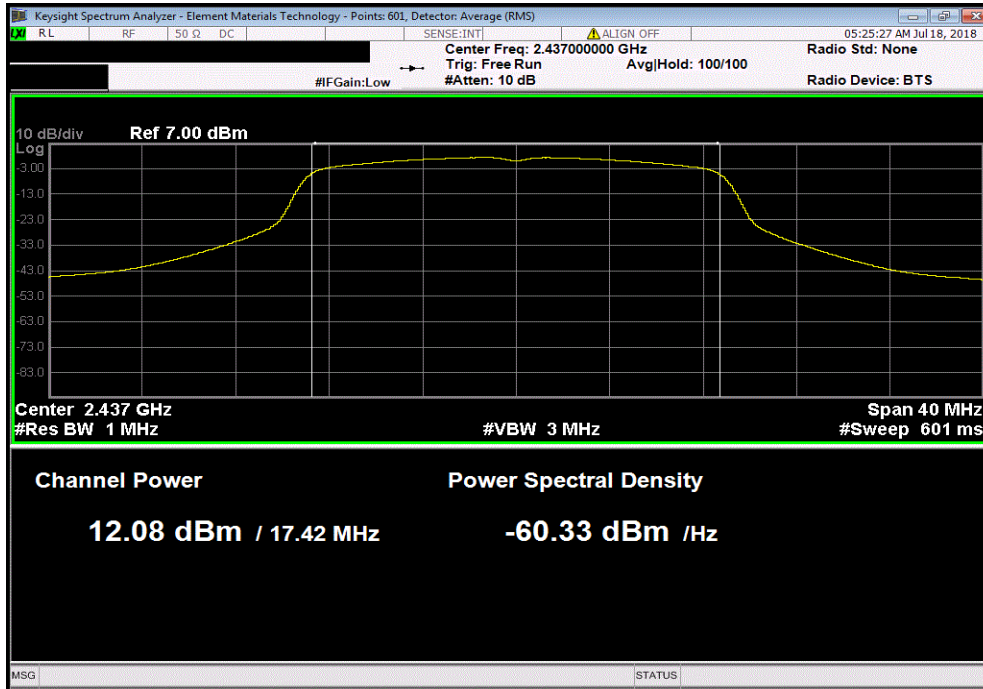


# OUTPUT POWER

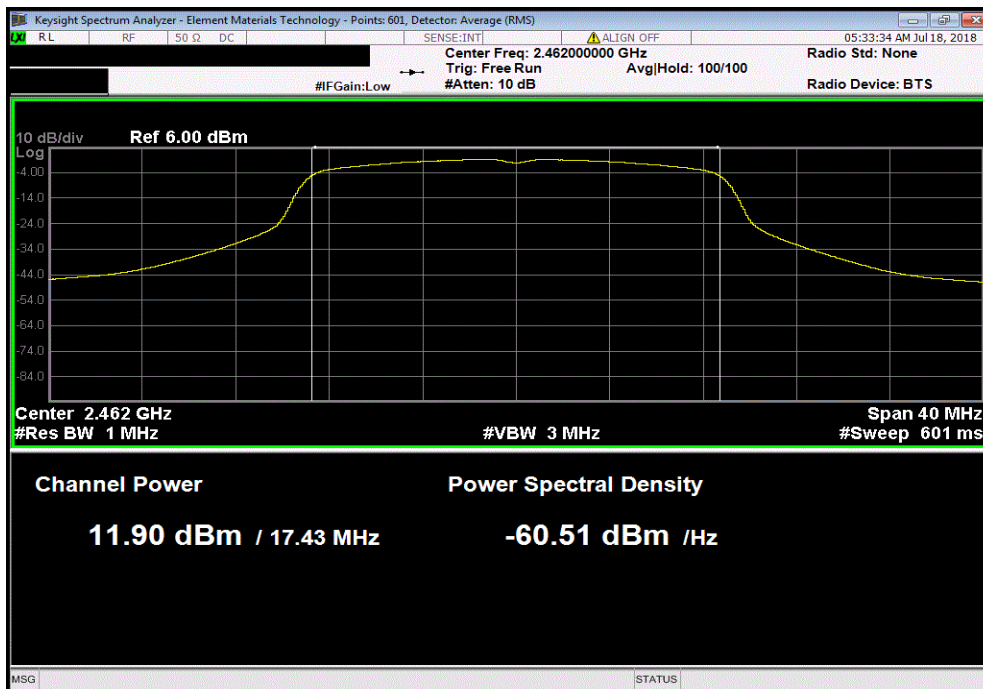


TMTx 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Mid Channel 6, 2437 MHz						
Avg Cond	Duty Cycle	Value	Limit	Results		
Pwr (dBm)	Factor (dB)	(dBm)	< (dBm)			
12.078	0.3	12.4	30	Pass		



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz						
Avg Cond	Duty Cycle	Value	Limit	Results		
Pwr (dBm)	Factor (dB)	(dBm)	< (dBm)			
11.902	0.3	12.2	30	Pass		

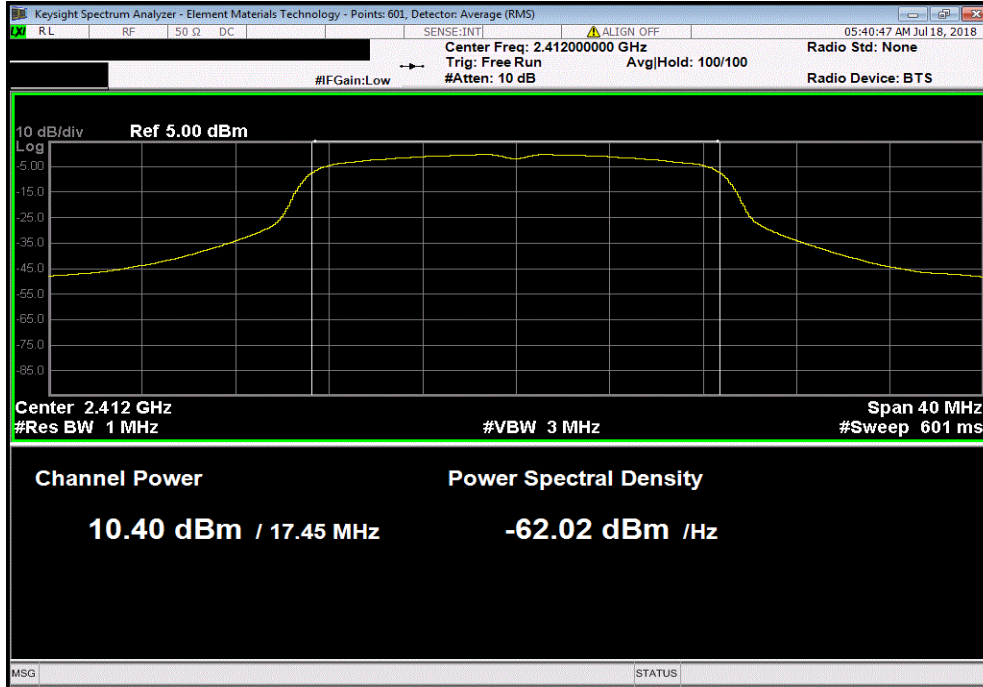


# OUTPUT POWER

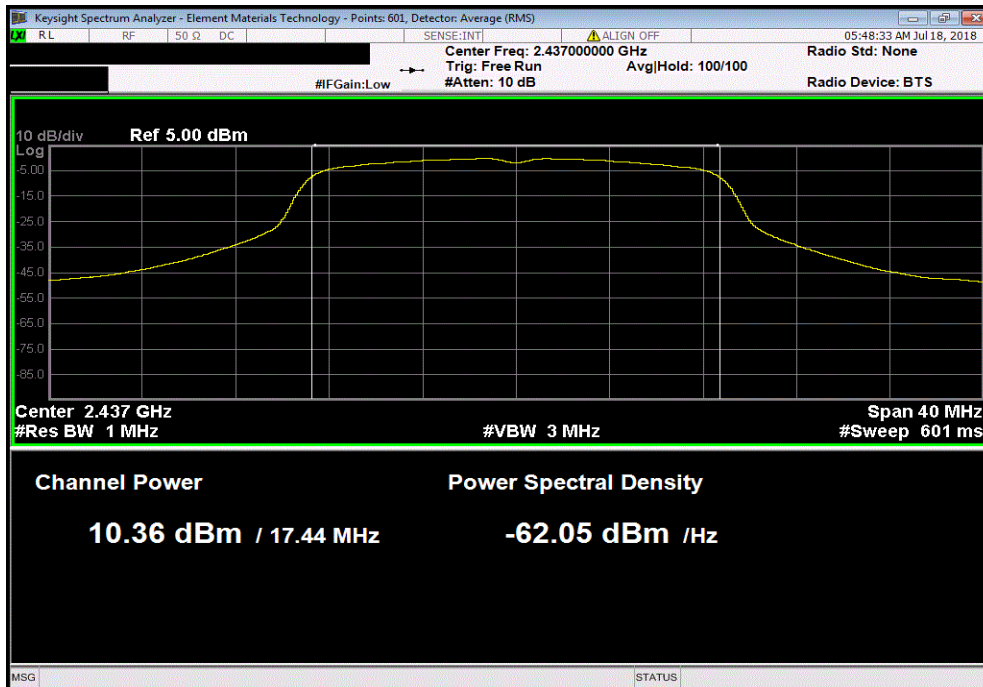


TMTX 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1, 2412 MHz						
Avg Cond	Duty Cycle		Value	Limit		Results
Pwr (dBm)	Factor (dB)		(dBm)	< (dBm)		
10.403	2.1		12.5	30		Pass



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Mid Channel 6, 2437 MHz						
Avg Cond	Duty Cycle		Value	Limit		Results
Pwr (dBm)	Factor (dB)		(dBm)	< (dBm)		
10.362	2.1		12.4	30		Pass

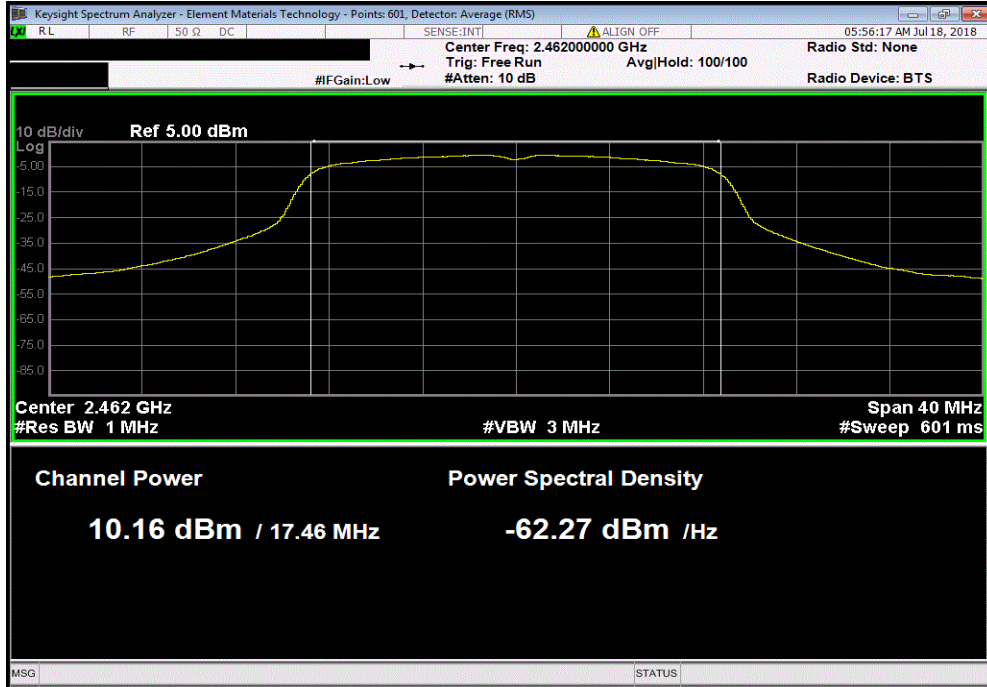


# OUTPUT POWER



TMTX 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, High Channel 11, 2462 MHz						
Avg Cond	Duty Cycle	Value	Limit	Results		
Pwr (dBm)	Factor (dB)	(dBm)	< (dBm)			
10.156	2.1	12.2	30	Pass		





# POWER SPECTRAL DENSITY



XMI 2017.12.13

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
Generator - Signal	Agilent	E4422B	TGQ	15-Mar-18	15-Mar-21
Cable	ESM Cable Corp.	TTBJ141 KMKM-72	MNU	15-Mar-18	15-Mar-19
Attenuator	S.M. Electronics	SA26B-20	RFW	13-Feb-18	13-Feb-19
Block - DC	Fairview Microwave	SD3379	AMI	12-Sep-17	12-Sep-18
Analyzer - Spectrum Analyzer	Keysight	N9010A (EXA)	AFQ	19-Dec-17	19-Dec-18

## 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



TbTx 2017.12.14 XMt 2017.12.13

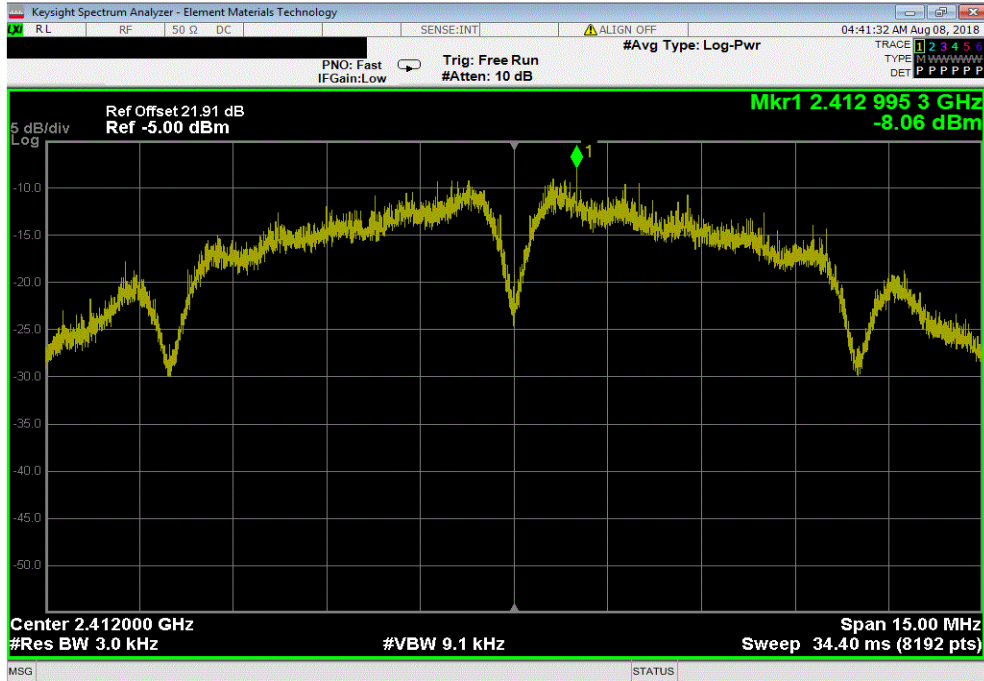
EUT: MyCareLink Relay Home Communicator 24960		Work Order: MDTR0649		
Serial Number: MEA9984DEM		Date: 8-Aug-18		
Customer: Medtronic, Inc.		Temperature: 22.7 °C		
Attendees: Taylor Dowden		Humidity: 56% RH		
Project: None		Barometric Pres.: 1015 mbar		
Tested by: Dustin Sparks		Power: 110VAC/60Hz		
		Job Site: MN08		
TEST SPECIFICATIONS				
FCC 15.247:2018		ANSI C63.10:2013		
TEST METHOD				
COMMENTS				
None				
DEVIATIONS FROM TEST STANDARD				
None				
Configuration #	3	Signature <i>Dustin Sparks</i>		
		Value dBm/3kHz	Limit < dBm/3kHz	Results
2400 MHz - 2483.5 MHz Band				
802.11(b) 1 Mbps				
	Low Channel 1, 2412 MHz	-8.059	8	Pass
	Mid Channel 6, 2437 MHz	-8.506	8	Pass
	High Channel 11, 2462 MHz	-8.564	8	Pass
802.11(b) 11 Mbps				
	Low Channel 1, 2412 MHz	-10.005	8	Pass
	Mid Channel 6, 2437 MHz	-9.365	8	Pass
	High Channel 11, 2462 MHz	-9.51	8	Pass
802.11(g) 6 Mbps				
	Low Channel 1, 2412 MHz	-10.882	8	Pass
	Mid Channel 6, 2437 MHz	-10.65	8	Pass
	High Channel 11, 2462 MHz	-11.469	8	Pass
802.11(g) 36 Mbps				
	Low Channel 1, 2412 MHz	-10.542	8	Pass
	Mid Channel 6, 2437 MHz	-12.142	8	Pass
	High Channel 11, 2462 MHz	-10.852	8	Pass
802.11(g) 54 Mbps				
	Low Channel 1, 2412 MHz	-11.773	8	Pass
	Mid Channel 6, 2437 MHz	-11.958	8	Pass
	High Channel 11, 2462 MHz	-11.577	8	Pass
802.11(n) MCS0				
	Low Channel 1, 2412 MHz	-11.659	8	Pass
	Mid Channel 6, 2437 MHz	-12.54	8	Pass
	High Channel 11, 2462 MHz	-11.895	8	Pass
802.11(n) MCS7				
	Low Channel 1, 2412 MHz	-13.198	8	Pass
	Mid Channel 6, 2437 MHz	-13.161	8	Pass
	High Channel 11, 2462 MHz	-12.094	8	Pass

# POWER SPECTRAL DENSITY

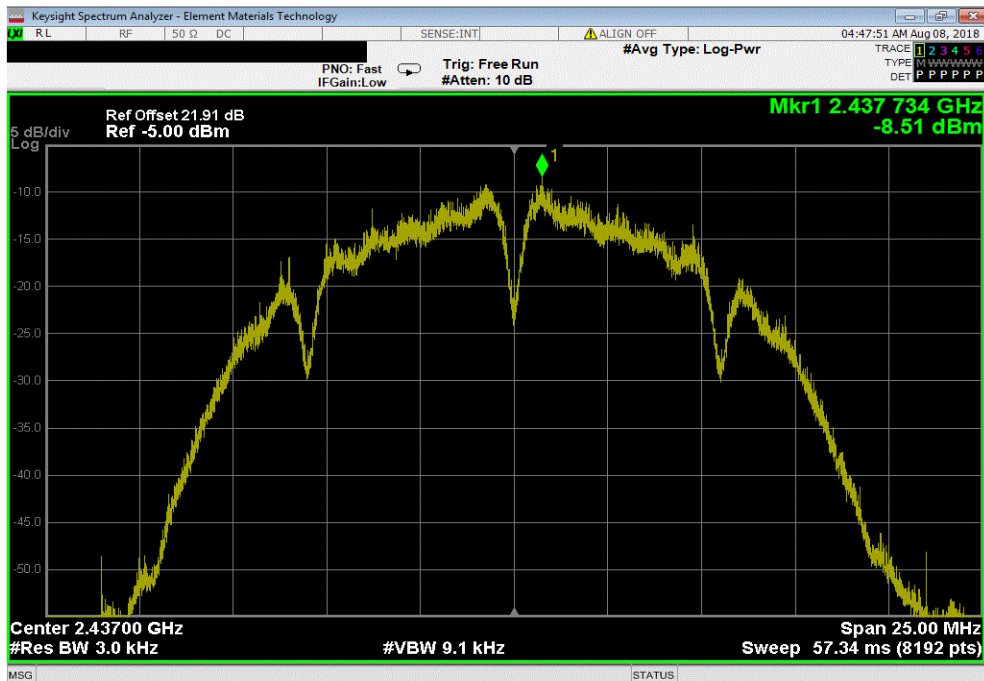


TMTX 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz						
	Value	Limit	Results			
	dBm/3kHz	< dBm/3kHz				
	-8.059	8	Pass			



2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz						
	Value	Limit	Results			
	dBm/3kHz	< dBm/3kHz				
	-8.506	8	Pass			

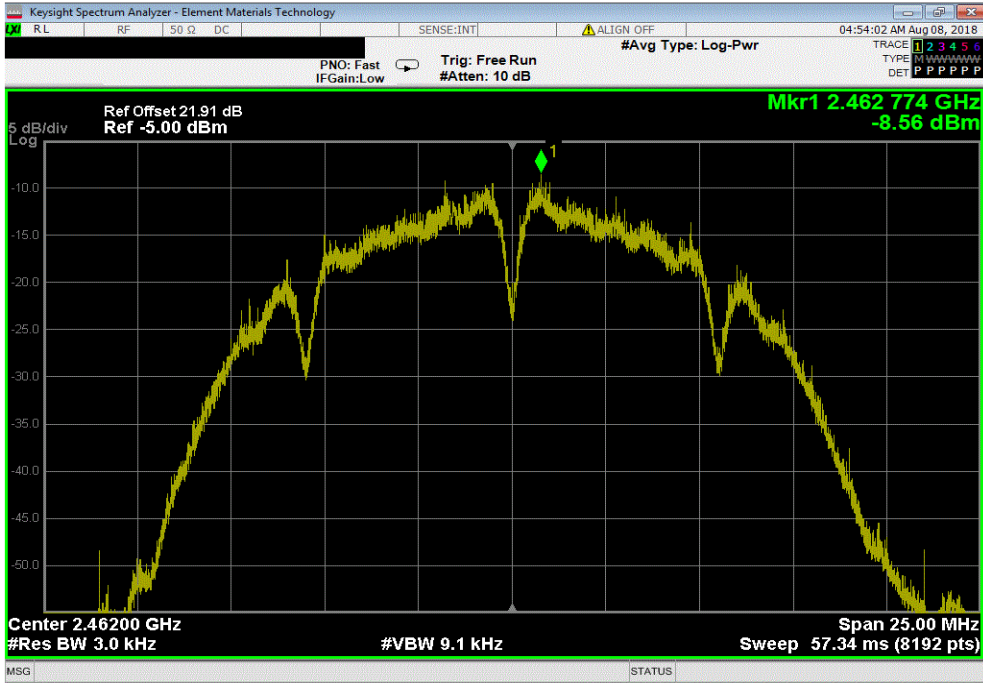


# POWER SPECTRAL DENSITY

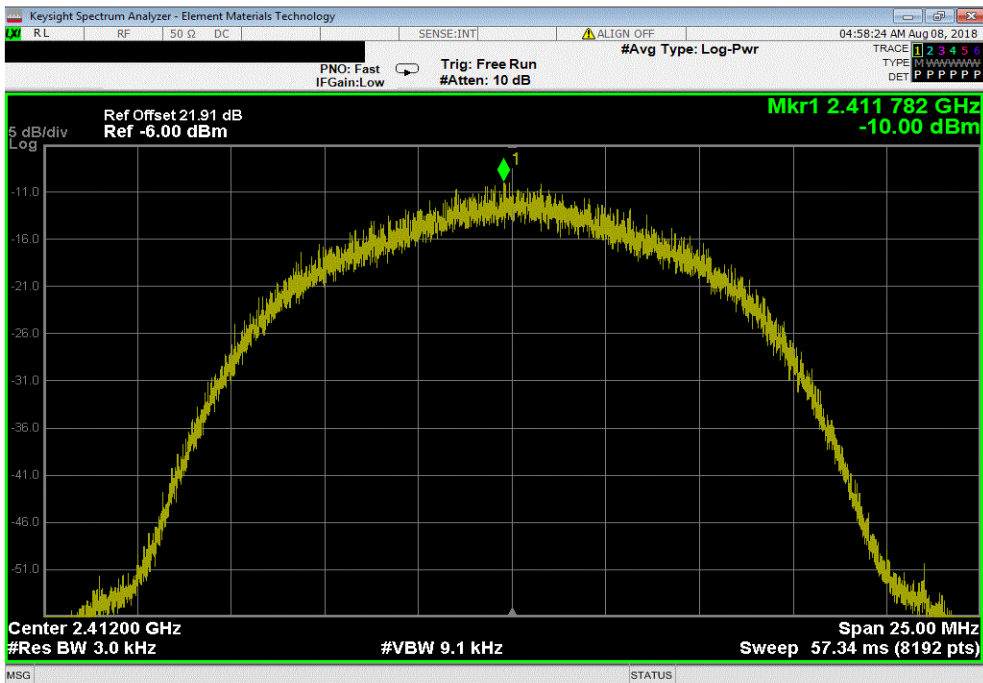


TMTX 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz						
	Value	Limit	Results			
	dBm/3kHz	< dBm/3kHz				
	-8.564	8	Pass			



2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz						
	Value	Limit	Results			
	dBm/3kHz	< dBm/3kHz				
	-10.005	8	Pass			

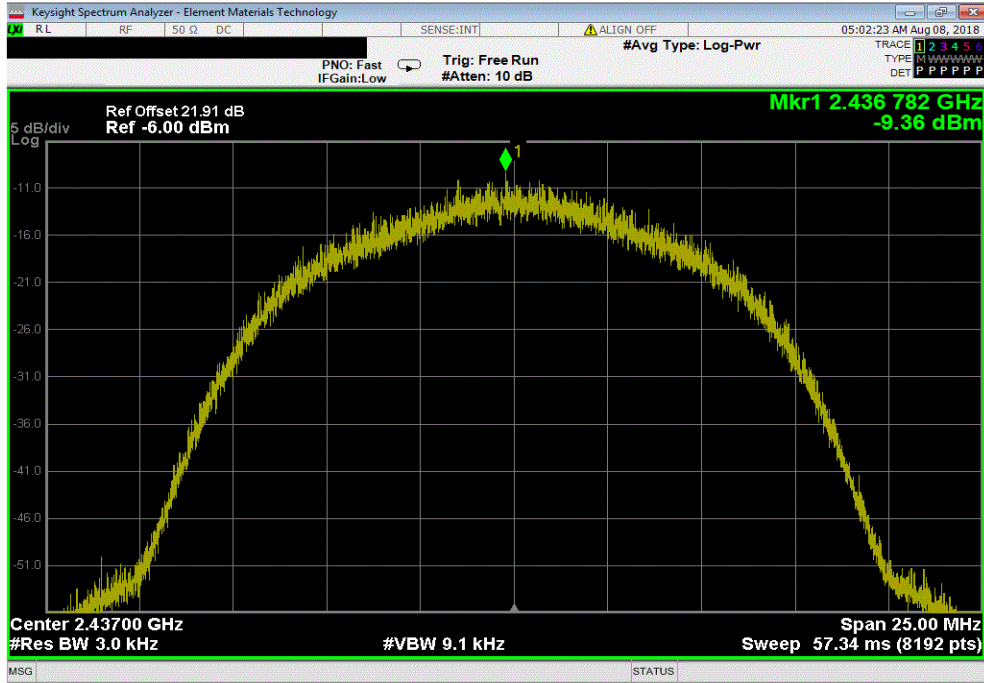


# POWER SPECTRAL DENSITY

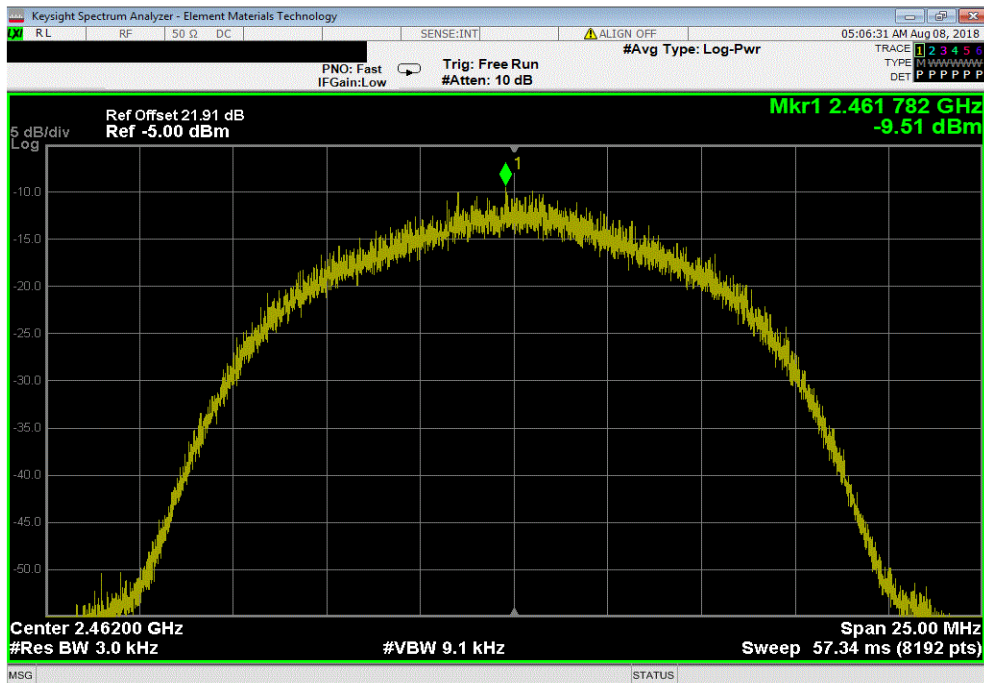


TMTX 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz						
	Value	Limit	Results			
	dBm/3kHz	< dBm/3kHz				
	-9.365	8	Pass			



2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz						
	Value	Limit	Results			
	dBm/3kHz	< dBm/3kHz				
	-9.51	8	Pass			

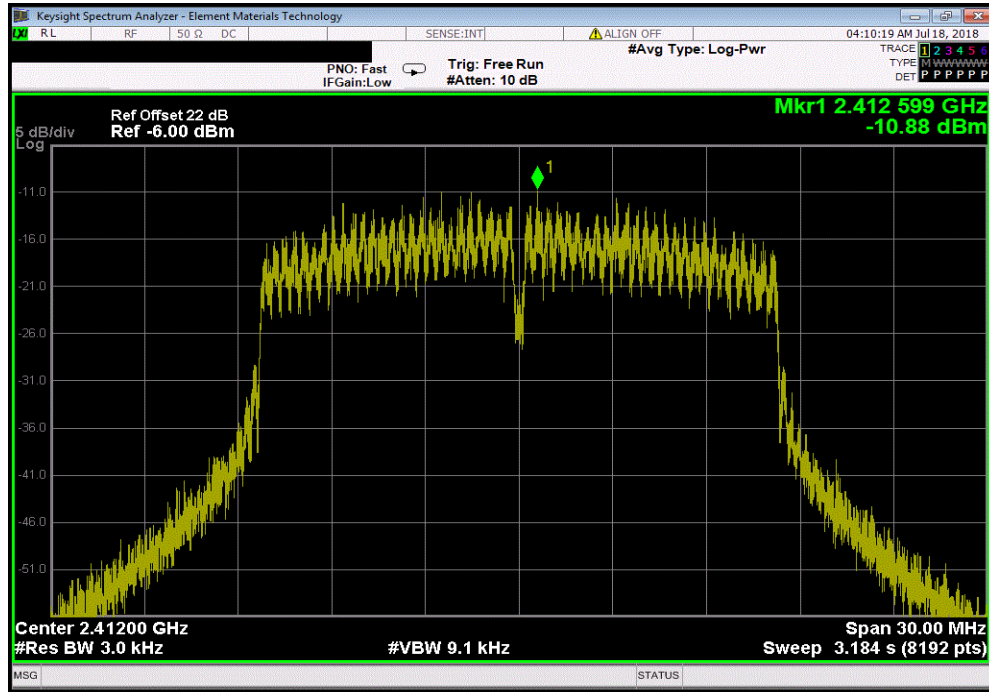


# POWER SPECTRAL DENSITY

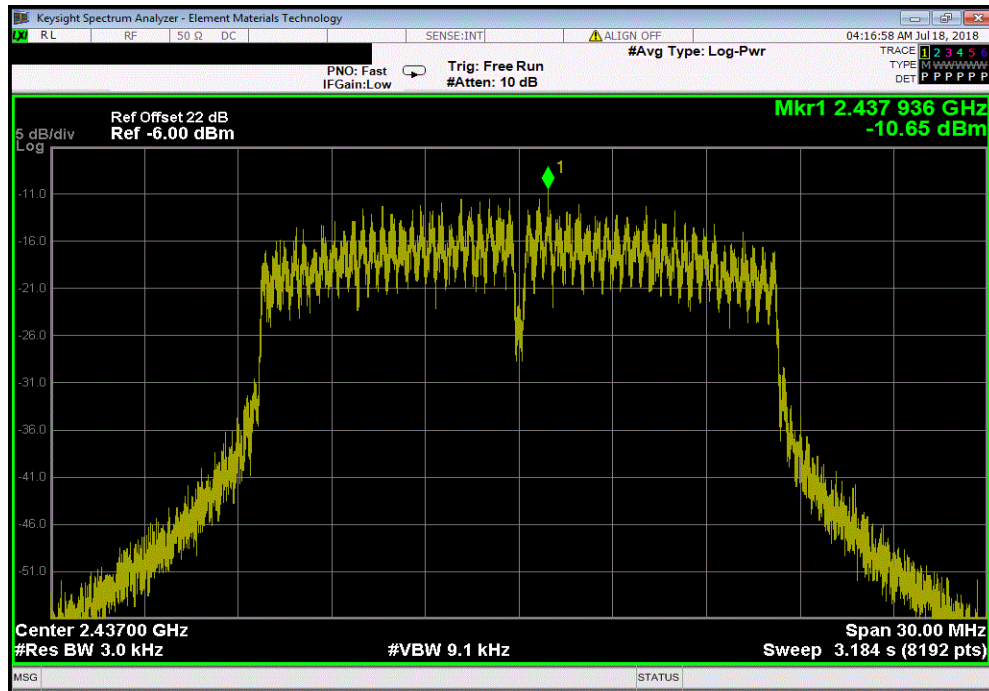


TMTX 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz						
	Value	Limit	Results			
	dBm/3kHz	< dBm/3kHz				
	-10.882	8	Pass			



2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz						
	Value	Limit	Results			
	dBm/3kHz	< dBm/3kHz				
	-10.65	8	Pass			



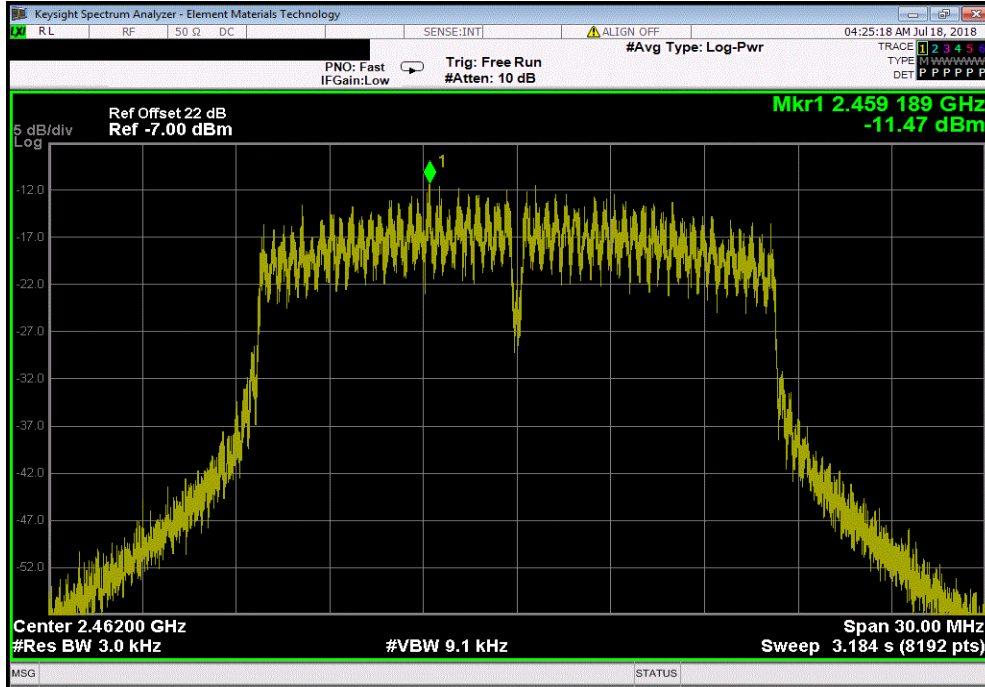


# POWER SPECTRAL DENSITY

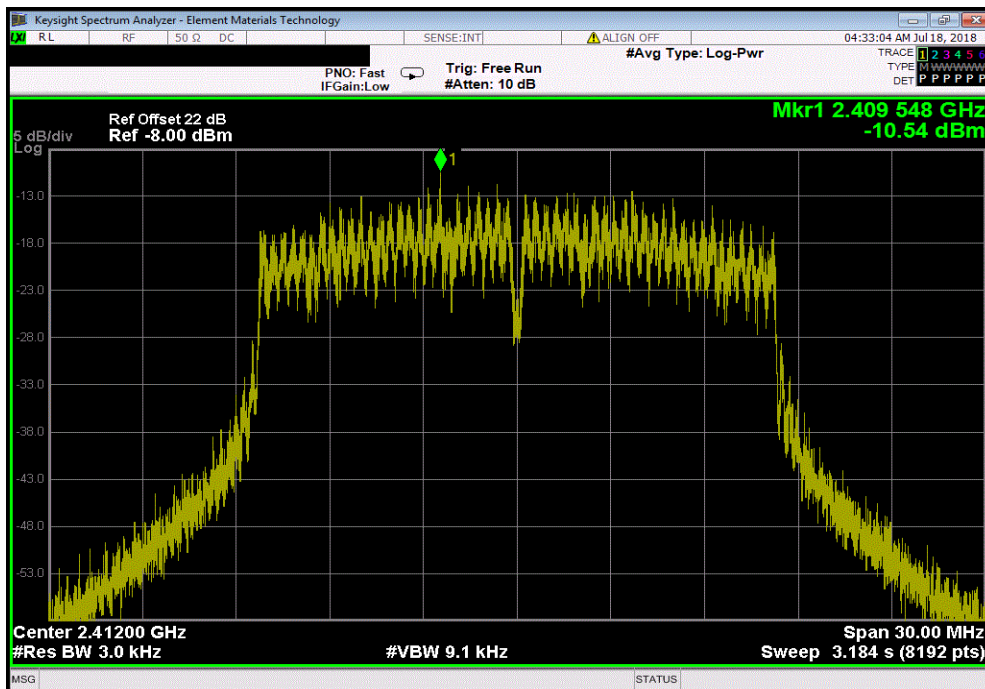


TMTX 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz			
	Value	Limit	Results
	dBm/3kHz	< dBm/3kHz	
	-11.469	8	Pass



2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz			
	Value	Limit	Results
	dBm/3kHz	< dBm/3kHz	
	-10.542	8	Pass

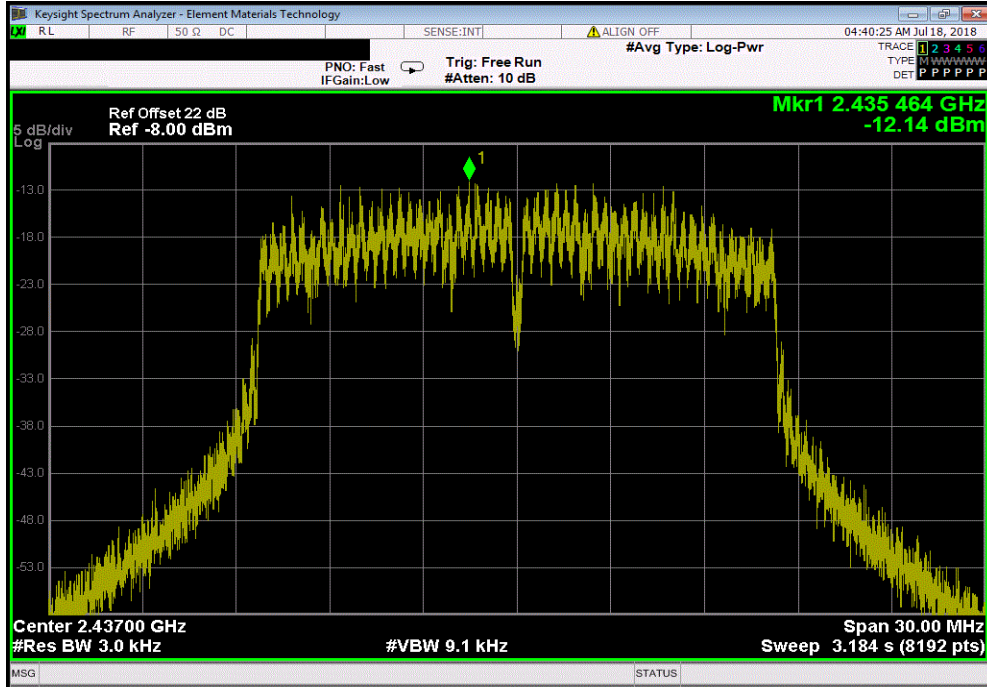


# POWER SPECTRAL DENSITY

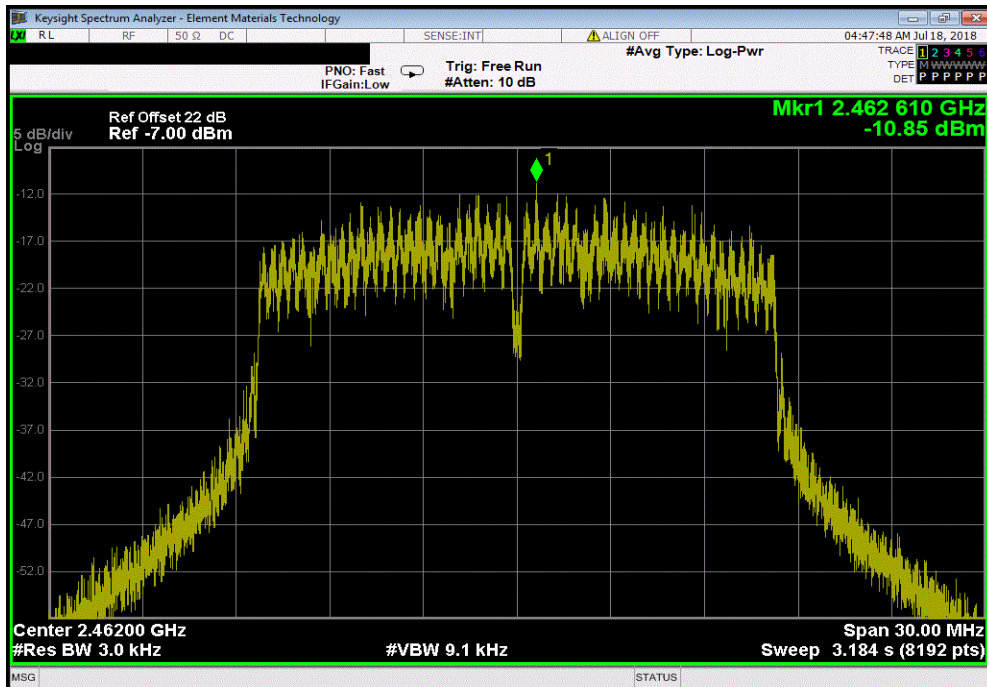


TMTX 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz						
	Value	Limit	Results			
	dBm/3kHz	< dBm/3kHz				
	-12.142	8	Pass			



2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz						
	Value	Limit	Results			
	dBm/3kHz	< dBm/3kHz				
	-10.852	8	Pass			

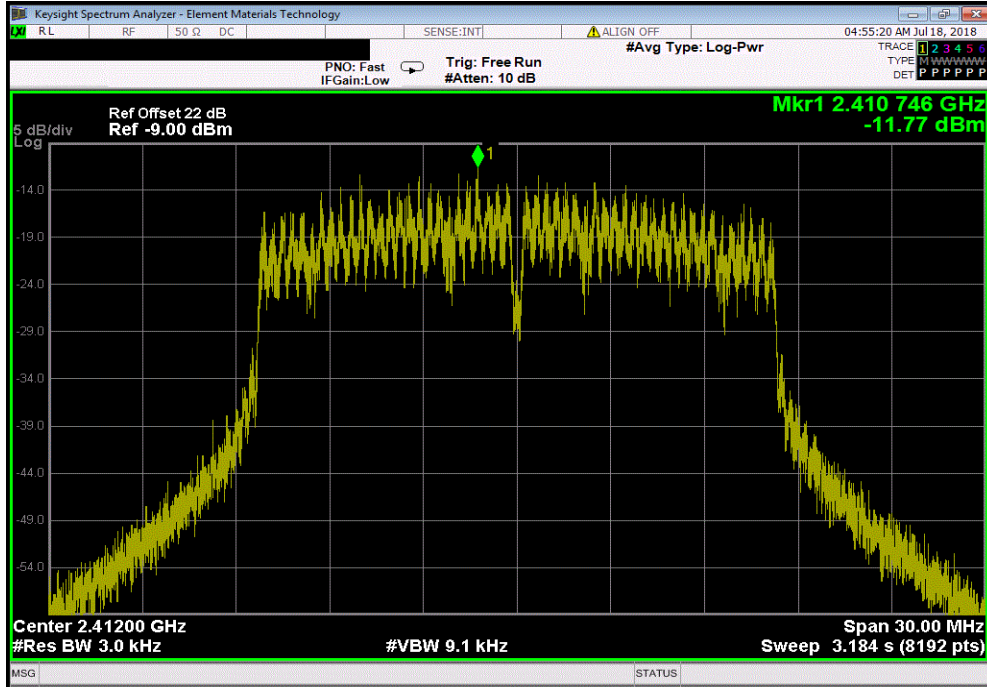


# POWER SPECTRAL DENSITY

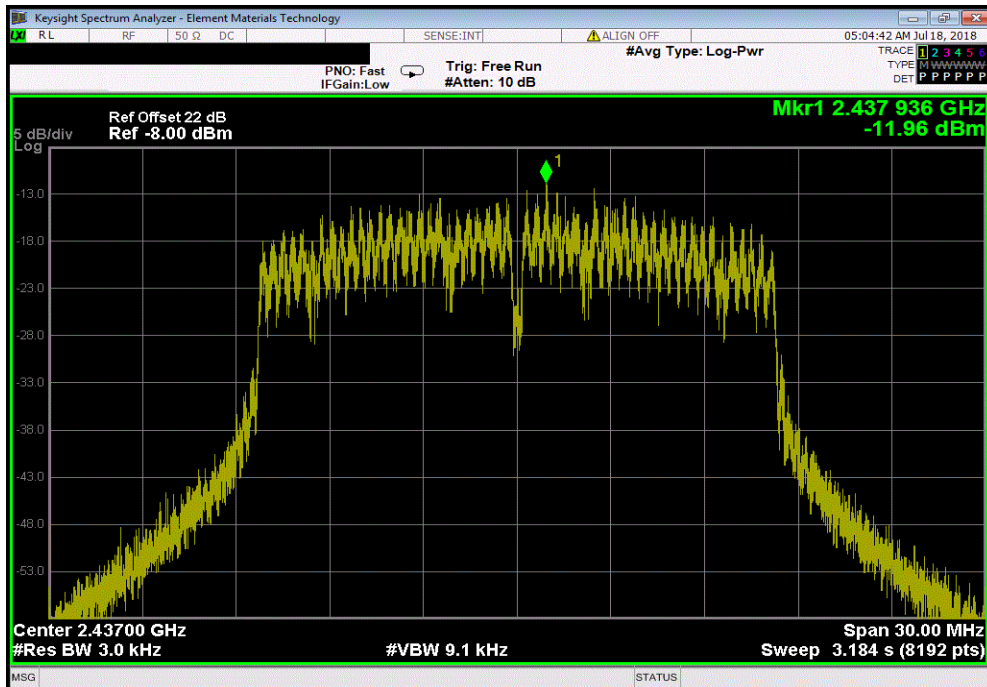


TMTX 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz						
	Value	Limit	Results			
	dBm/3kHz	< dBm/3kHz				
	-11.773	8	Pass			



2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz						
	Value	Limit	Results			
	dBm/3kHz	< dBm/3kHz				
	-11.958	8	Pass			

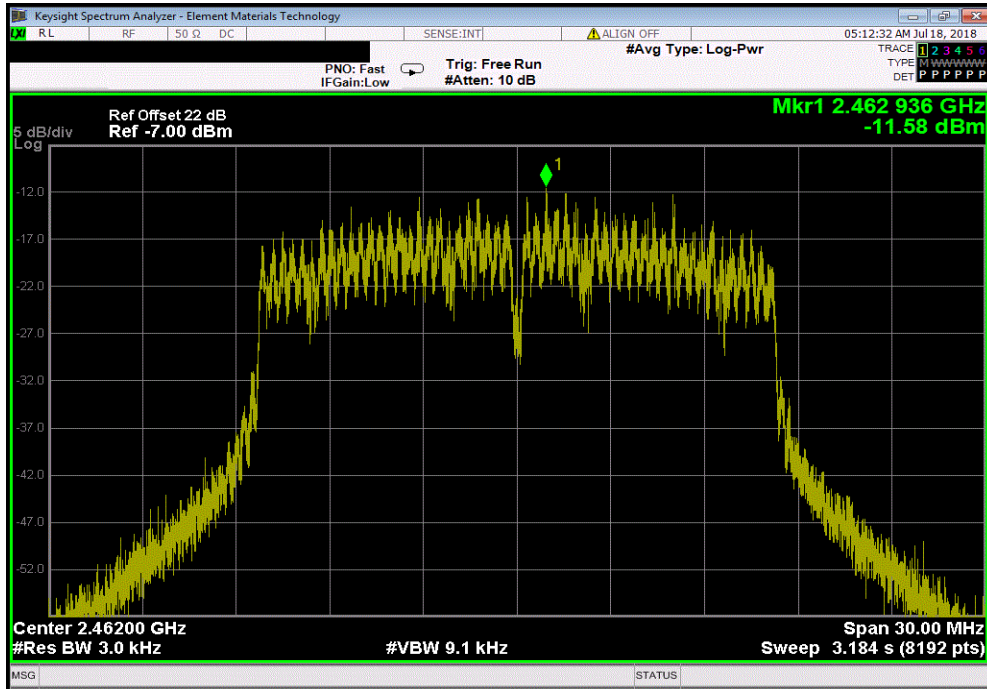


# POWER SPECTRAL DENSITY

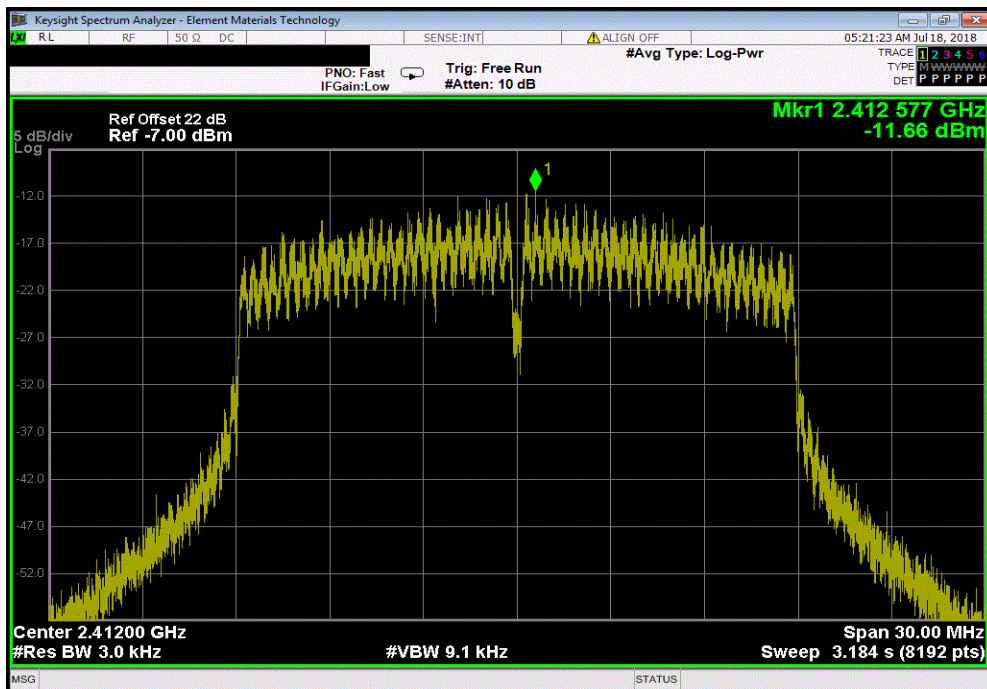


TMTX 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz						
	Value	Limit	Results			
	dBm/3kHz	< dBm/3kHz				
	-11.577	8	Pass			



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz						
	Value	Limit	Results			
	dBm/3kHz	< dBm/3kHz				
	-11.659	8	Pass			



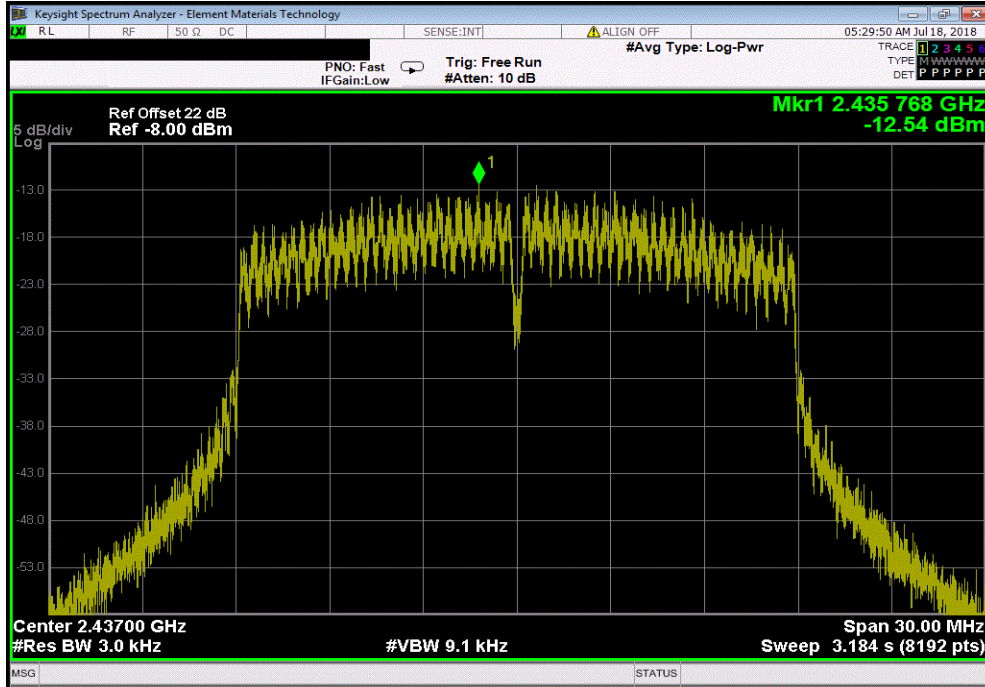


# POWER SPECTRAL DENSITY

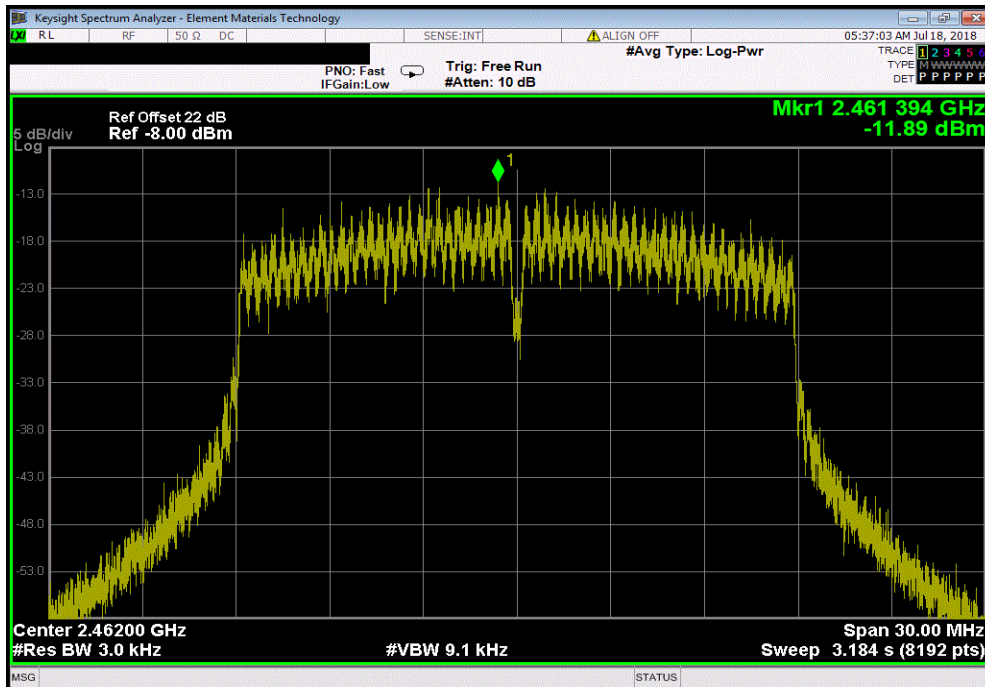


TMTX 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Mid Channel 6, 2437 MHz						
	Value	Limit	Results			
	dBm/3kHz	< dBm/3kHz				
	-12.54	8	Pass			



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz						
	Value	Limit	Results			
	dBm/3kHz	< dBm/3kHz				
	-11.895	8	Pass			

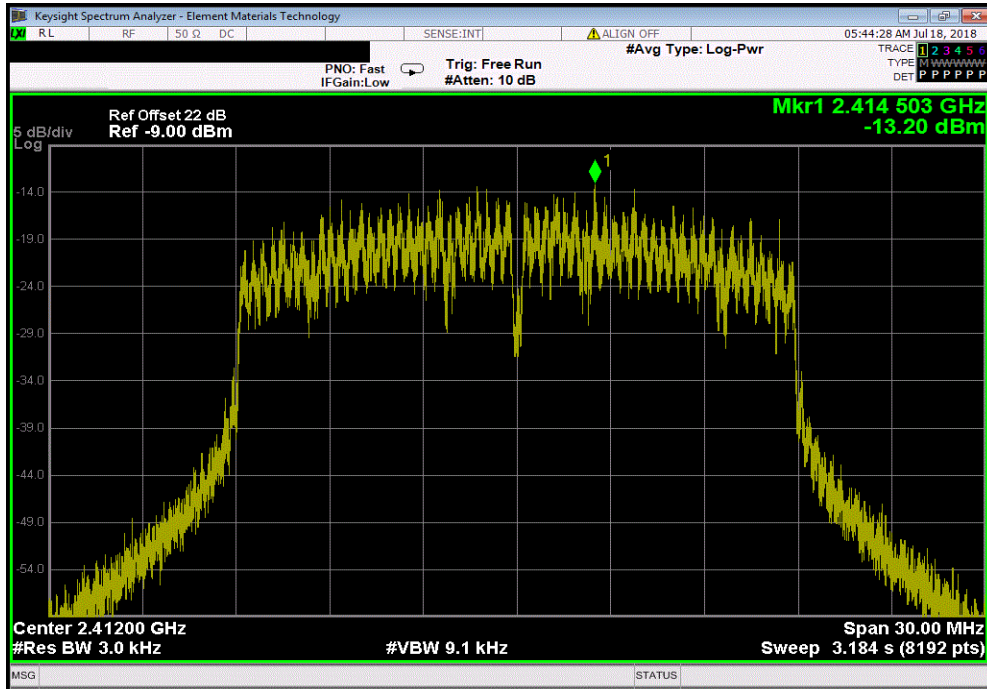


# POWER SPECTRAL DENSITY

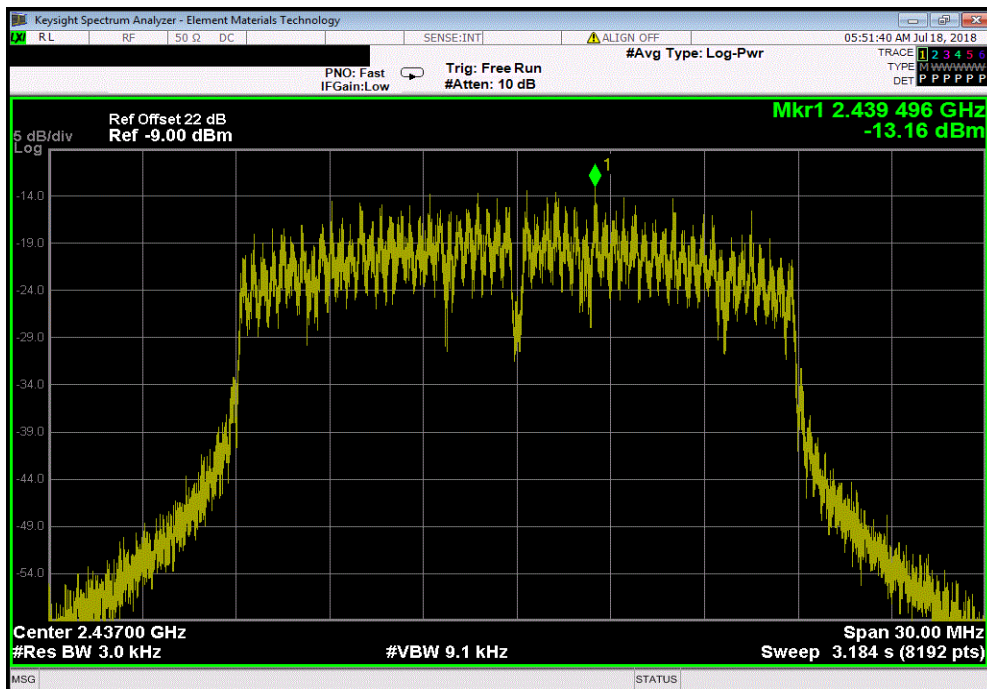


TMTX 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1, 2412 MHz						
	Value	Limit	Results			
	dBm/3kHz	< dBm/3kHz				
	-13.198	8	Pass			



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Mid Channel 6, 2437 MHz						
	Value	Limit	Results			
	dBm/3kHz	< dBm/3kHz				
	-13.161	8	Pass			



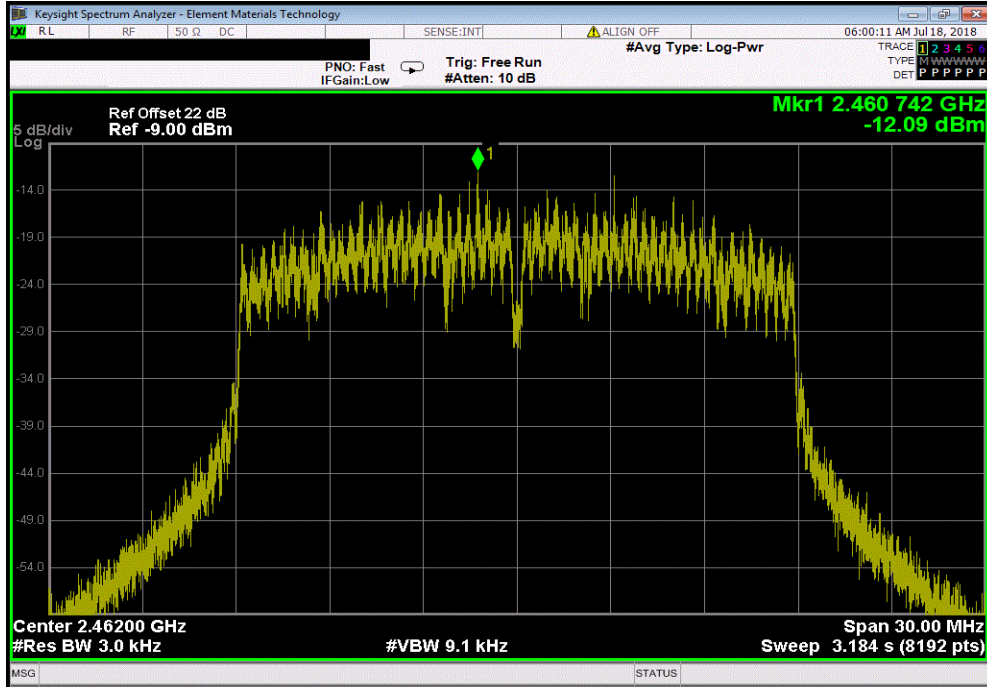


# POWER SPECTRAL DENSITY



TMTX 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, High Channel 11, 2462 MHz						
		Value	Limit			
		dBm/3kHz	< dBm/3kHz	Results		
		-12.094	8	Pass		



# BAND EDGE COMPLIANCE



XMIT 2017.12.13

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
Generator - Signal	Agilent	E4422B	TGQ	15-Mar-18	15-Mar-21
Block - DC	Fairview Microwave	SD3379	AMI	12-Sep-17	12-Sep-18
Attenuator	S.M. Electronics	SA26B-20	RFW	13-Feb-18	13-Feb-19
Cable	ESM Cable Corp.	TTBJ141 KMKM-72	MNU	15-Mar-18	15-Mar-19
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFN	27-Apr-18	27-Apr-19

## 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.

# BAND EDGE COMPLIANCE



TbTx 2017.12.14 XMt 2017.12.13

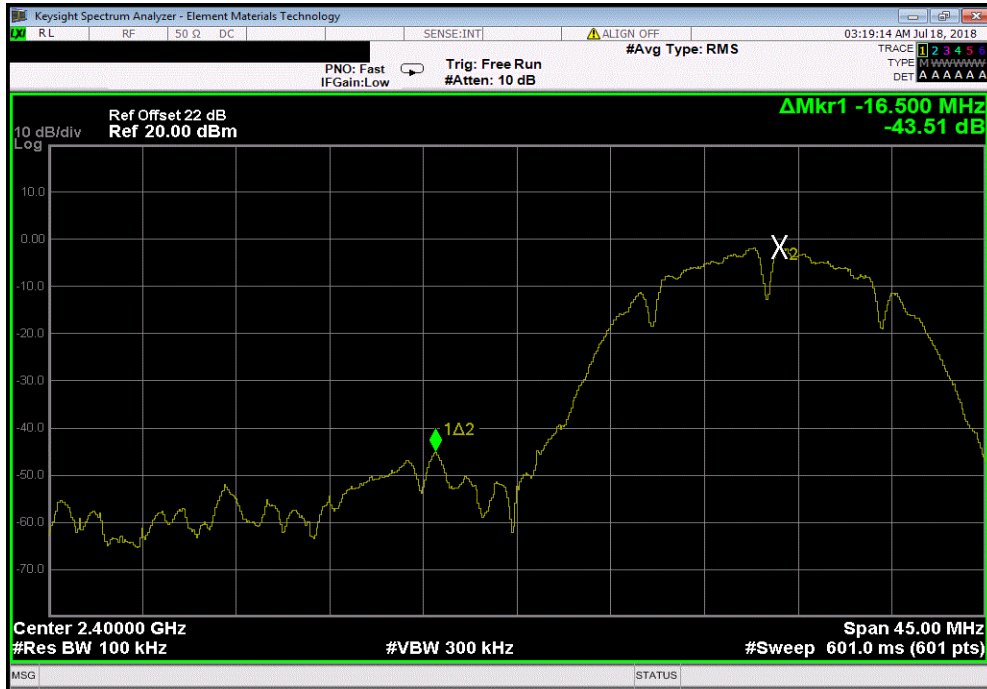
EUT: MyCareLink Relay Home Communicator 24960		Work Order: MDTR0649
Serial Number: MEA9984DEM		Date: 17-Jul-18
Customer: Medtronic, Inc.		Temperature: 21.5 °C
Attendees: Taylor Dowden		Humidity: 49.6% RH
Project: None		Barometric Pres.: 1024 mbar
Tested by: Kyle McMullan	Power: 110VAC/60Hz	Job Site: MN08
TEST SPECIFICATIONS		
FCC 15.247:2018		ANSI C63.10:2013
TEST METHOD		
COMMENTS		
None		
DEVIATIONS FROM TEST STANDARD		
None		
Configuration #	3	Signature <i>Kyle McMullan</i>
		Value (dBc)      Limit ≤ (dBc)      Result
2400 MHz - 2483.5 MHz Band		
802.11(b) 1 Mbps		
Low Channel 1, 2412 MHz		-43.51      -30      Pass
High Channel 11, 2462 MHz		-53.45      -30      Pass
802.11(b) 11 Mbps		
Low Channel 1, 2412 MHz		-46.18      -30      Pass
High Channel 11, 2462 MHz		-55.24      -30      Pass
802.11(g) 6 Mbps		
Low Channel 1, 2412 MHz		-35.15      -30      Pass
High Channel 11, 2462 MHz		-49.85      -30      Pass
802.11(g) 36 Mbps		
Low Channel 1, 2412 MHz		-36.17      -30      Pass
High Channel 11, 2462 MHz		-49.77      -30      Pass
802.11(g) 54 Mbps		
Low Channel 1, 2412 MHz		-35.75      -30      Pass
High Channel 11, 2462 MHz		-49.61      -30      Pass
802.11(n) MCS0		
Low Channel 1, 2412 MHz		-34.77      -30      Pass
High Channel 11, 2462 MHz		-49.12      -30      Pass
802.11(n) MCS7		
Low Channel 1, 2412 MHz		-35.93      -30      Pass
High Channel 11, 2462 MHz		-49.43      -30      Pass

# BAND EDGE COMPLIANCE

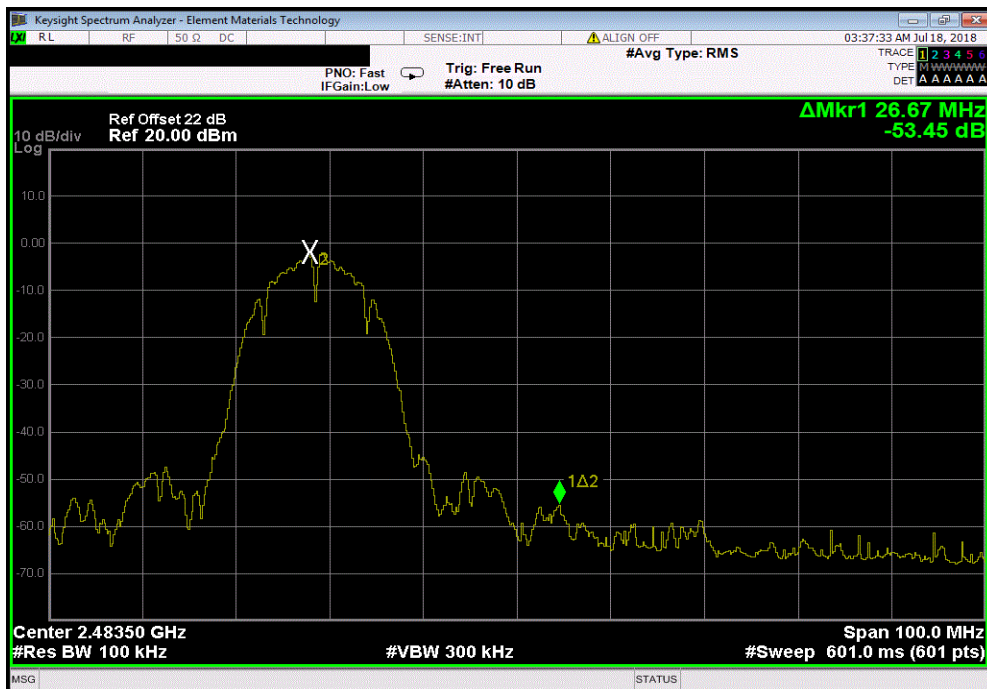


TMTX 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz						
	Value (dBc)	Limit ≤ (dBc)	Result			
	-43.51	-30	Pass			



2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz						
	Value (dBc)	Limit ≤ (dBc)	Result			
	-53.45	-30	Pass			

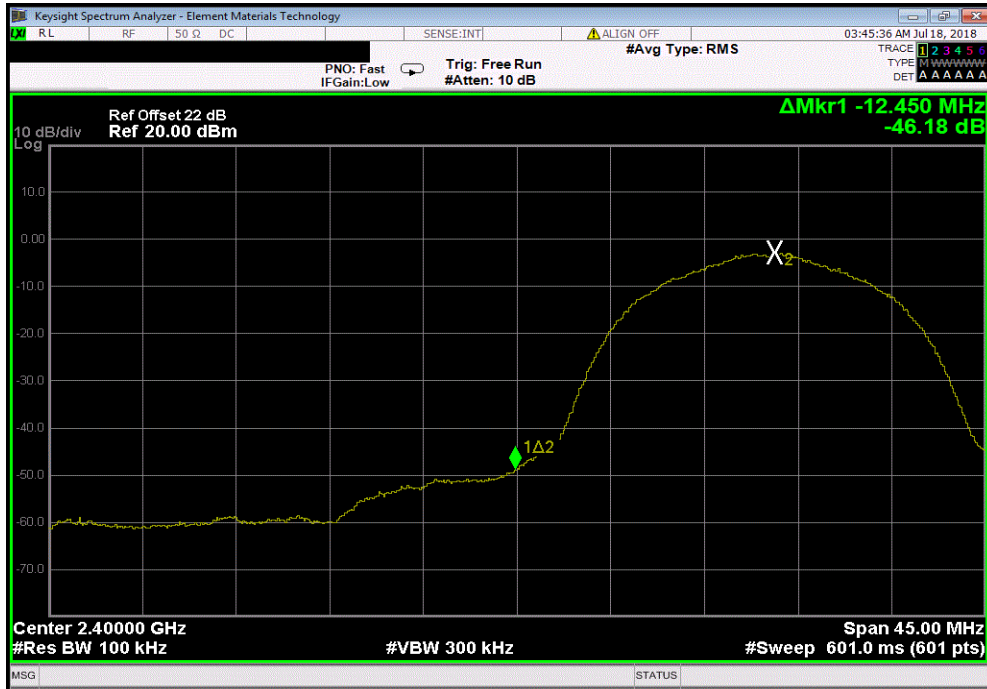


# BAND EDGE COMPLIANCE

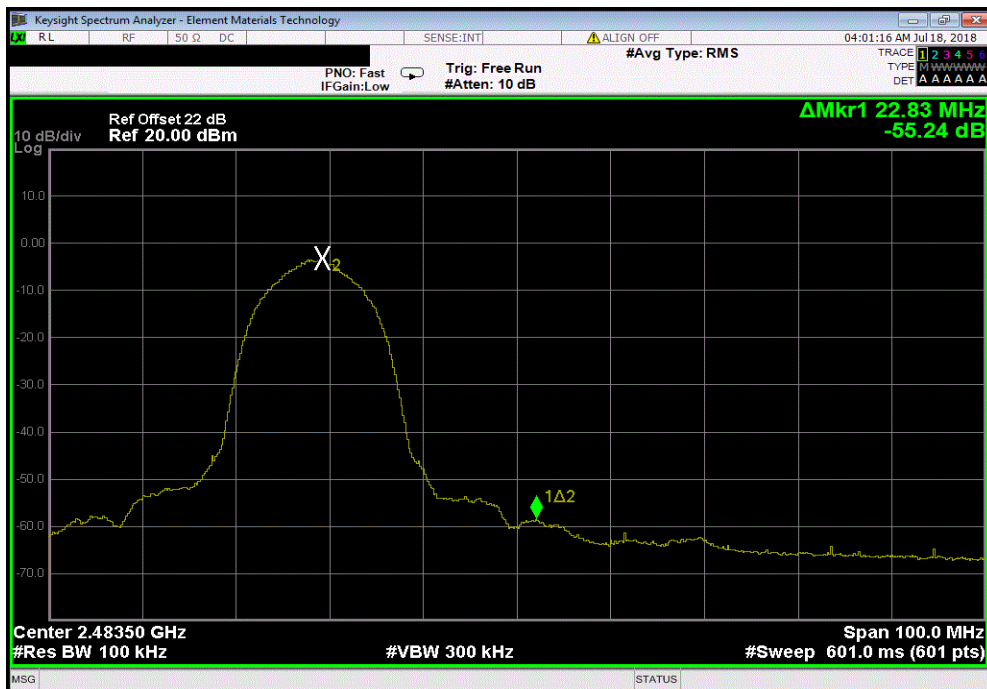


TMTX 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz						
	Value (dBc)	Limit ≤ (dBc)	Result			
	-46.18	-30	Pass			



2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz						
	Value (dBc)	Limit ≤ (dBc)	Result			
	-55.24	-30	Pass			

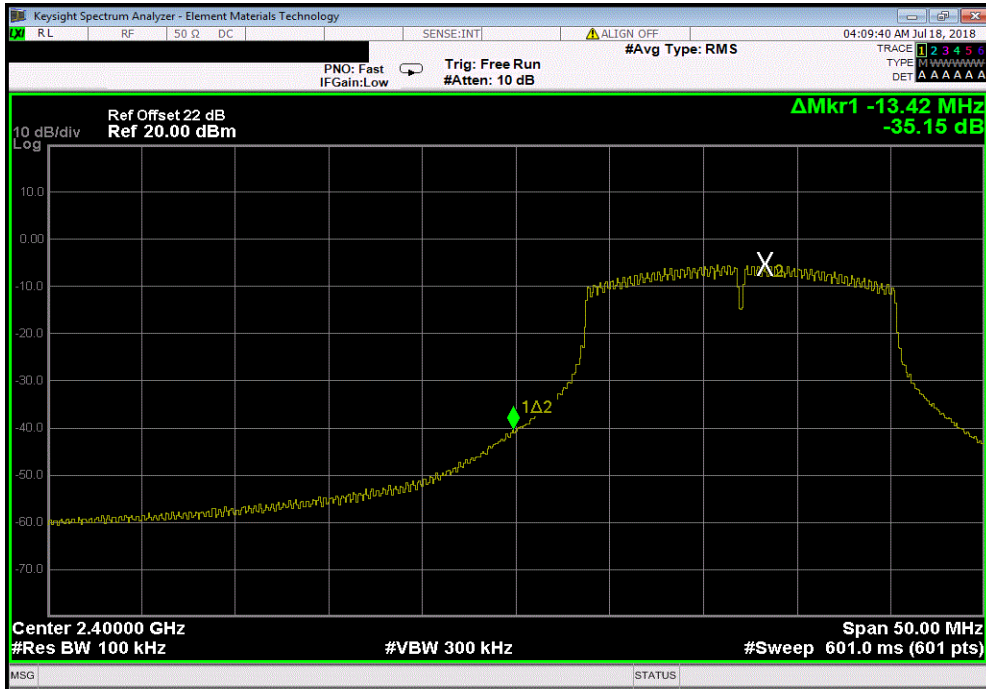


# BAND EDGE COMPLIANCE

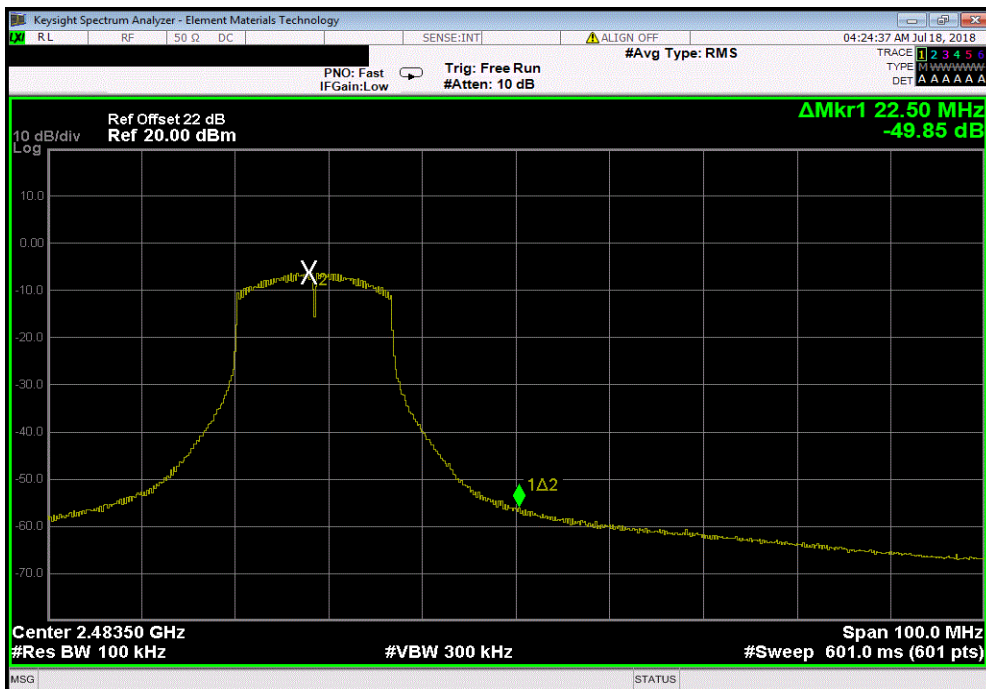


TMTX 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz						
	Value (dBc)	Limit ≤ (dBc)	Result			
	-35.15	-30	Pass			



2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz						
	Value (dBc)	Limit ≤ (dBc)	Result			
	-49.85	-30	Pass			



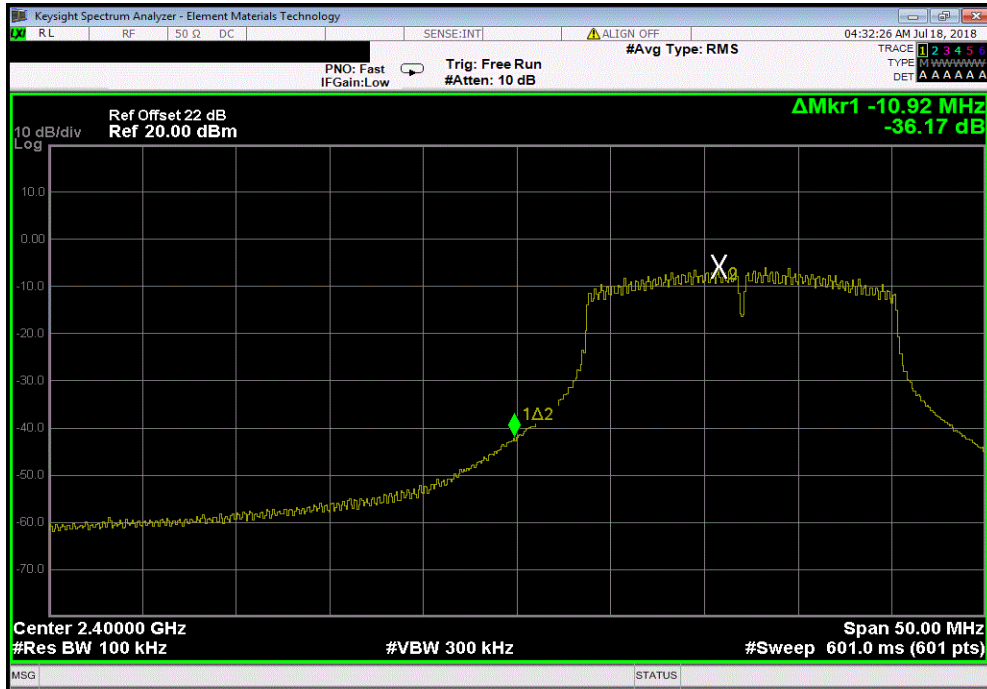


# BAND EDGE COMPLIANCE

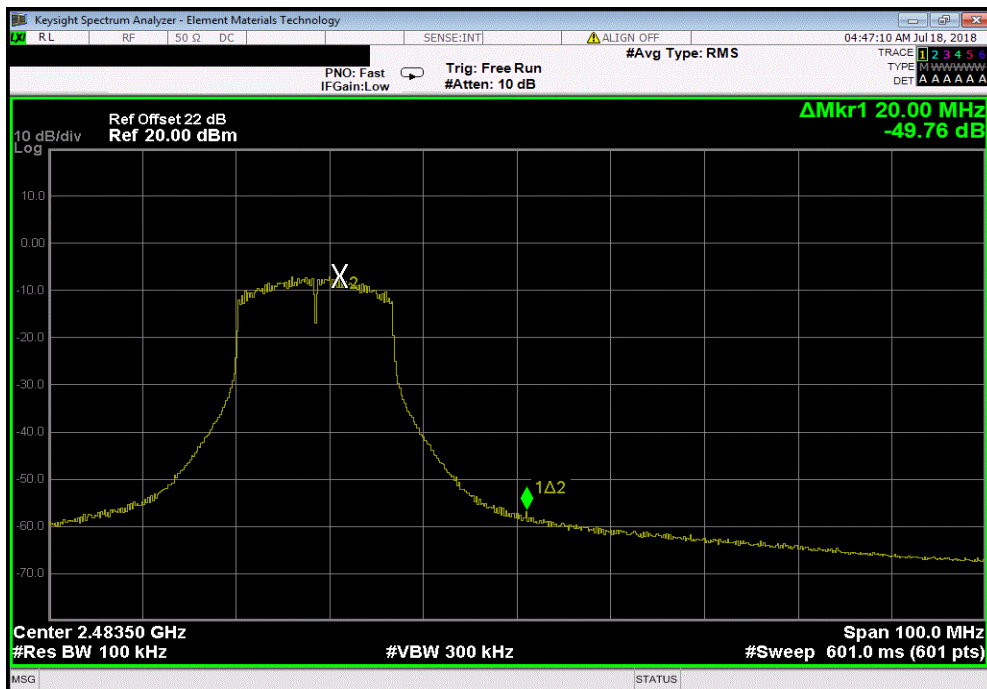


TMTX 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz						
	Value	Limit	Result			
	(dBc)	≤ (dBc)				
	-36.17	-30	Pass			



2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz						
	Value	Limit	Result			
	(dBc)	≤ (dBc)				
	-49.77	-30	Pass			

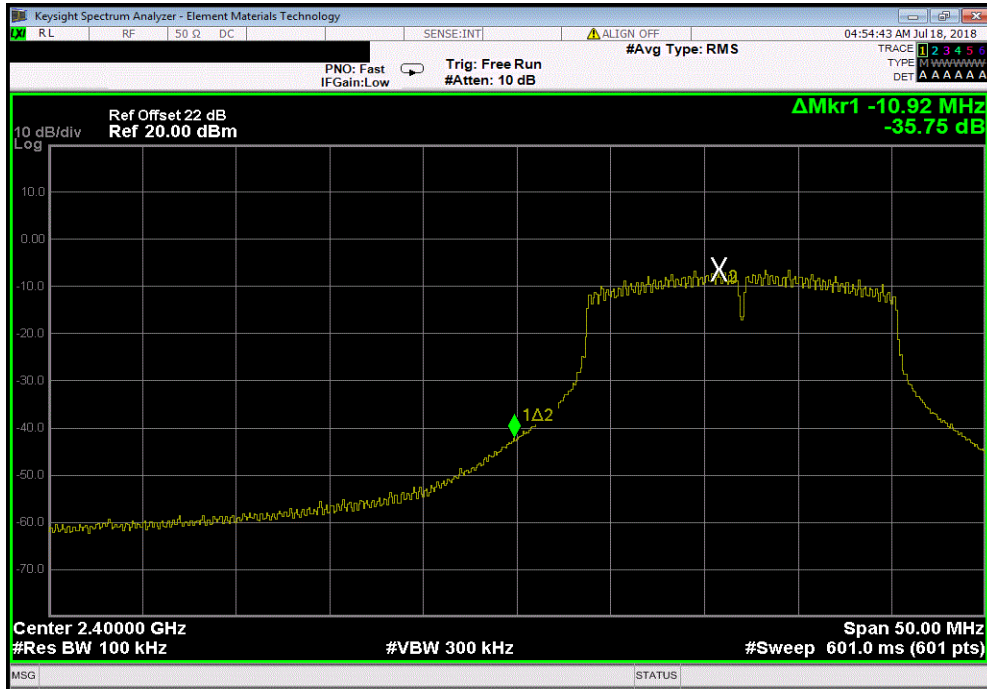


# BAND EDGE COMPLIANCE

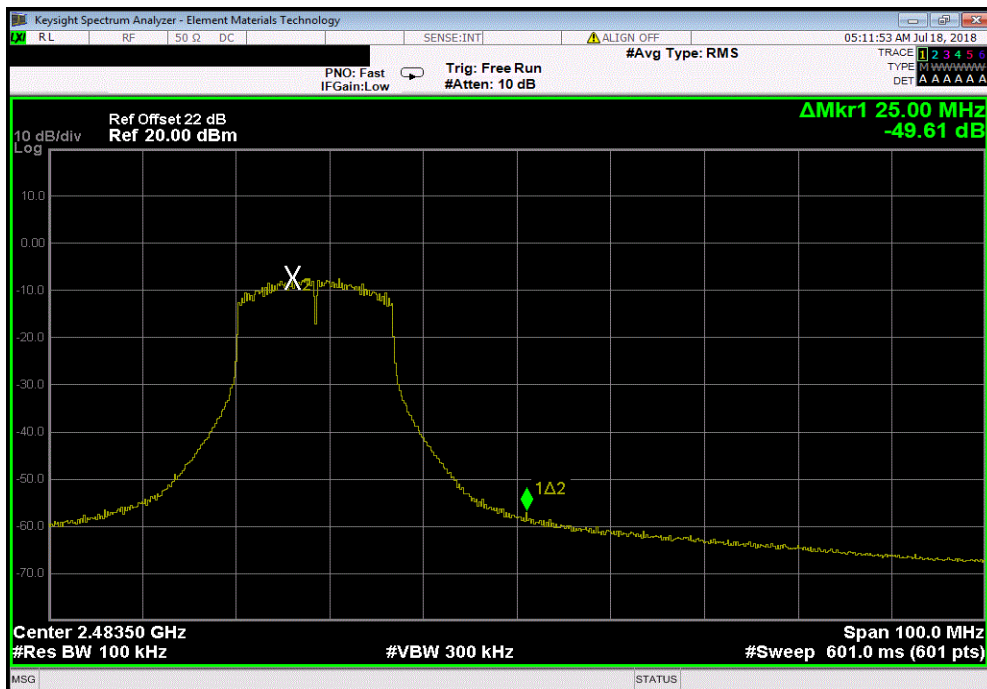


TMTX 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz						
	Value	Limit				
	(dBc)	≤ (dBc)				Result
	-35.75	-30				Pass



2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz						
	Value	Limit				
	(dBc)	≤ (dBc)				Result
	-49.61	-30				Pass

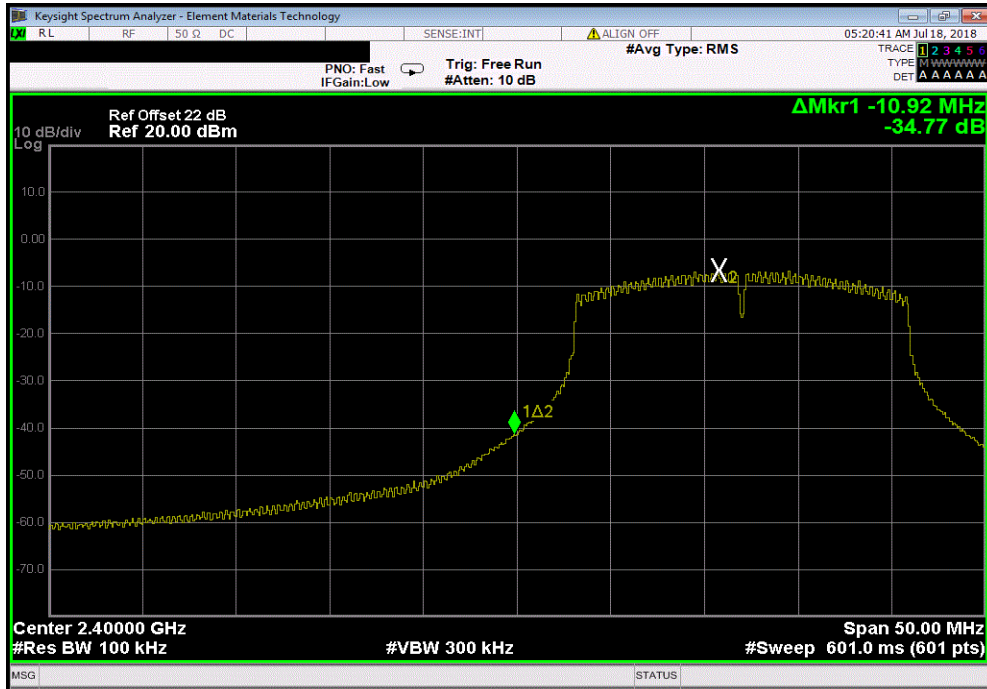


# BAND EDGE COMPLIANCE

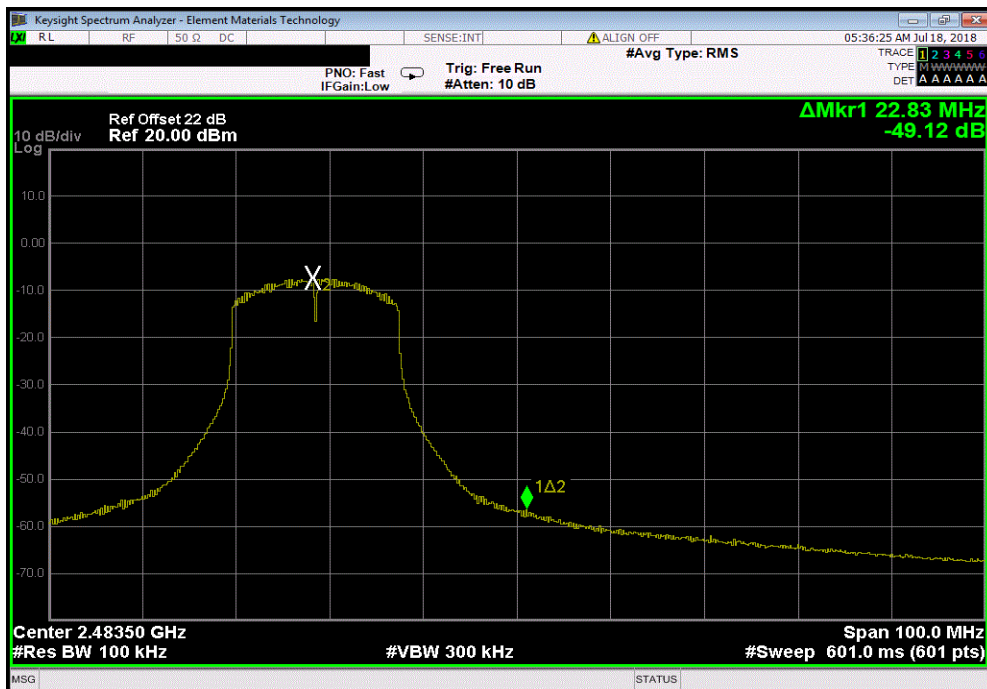


TMTX 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz						
	Value (dBc)	Limit ≤ (dBc)	Result			
	-34.77	-30	Pass			



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz						
	Value (dBc)	Limit ≤ (dBc)	Result			
	-49.12	-30	Pass			

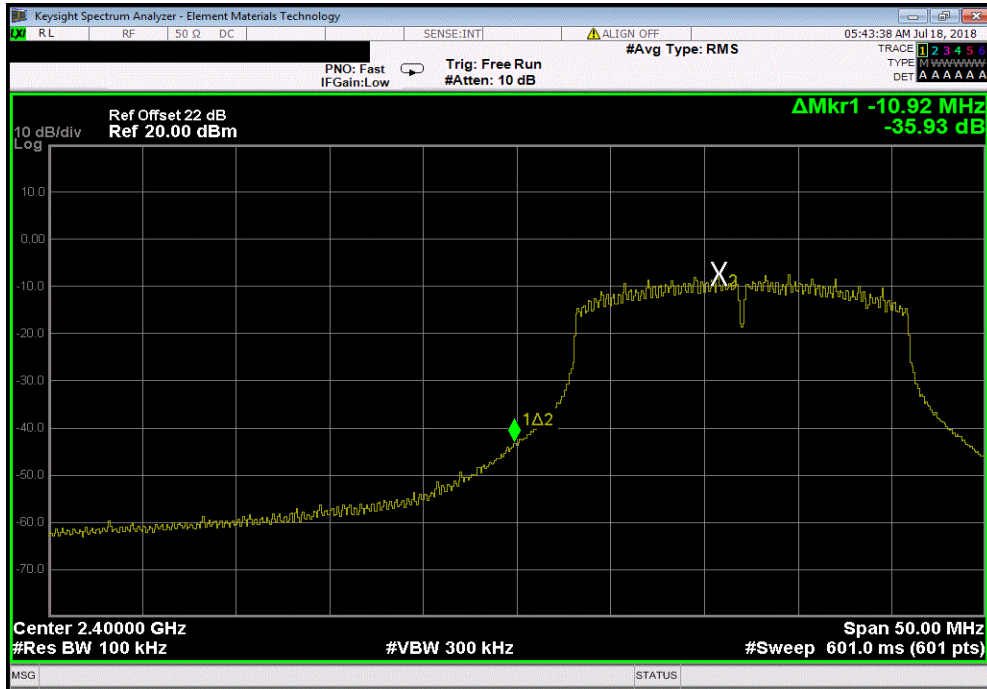


# BAND EDGE COMPLIANCE



TMTX 2017.12.14 XMI 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1, 2412 MHz						
	Value	Limit				
	(dBc)	≤ (dBc)				Result
	-35.93	-30				Pass



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, High Channel 11, 2462 MHz						
	Value	Limit				
	(dBc)	≤ (dBc)				Result
	-49.43	-30				Pass

