

OCCUPIED BANDWIDTH



XMM 2019.09.05

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	18-Sep-19	18-Sep-20
Block - DC	Fairview Microwave	SD3379	AMT	18-Sep-19	18-Sep-20
Cable	Micro-Coax	UFD150A-1-0720-200200	TXG	18-Sep-19	18-Sep-20
Generator - Signal	Keysight	N5171B-506	TEW	2-May-18	2-May-21
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFO	5-May-19	5-May-20

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.

OCCUPIED BANDWIDTH



TWTx 2019.08.30.0 XMM 2019.09.05

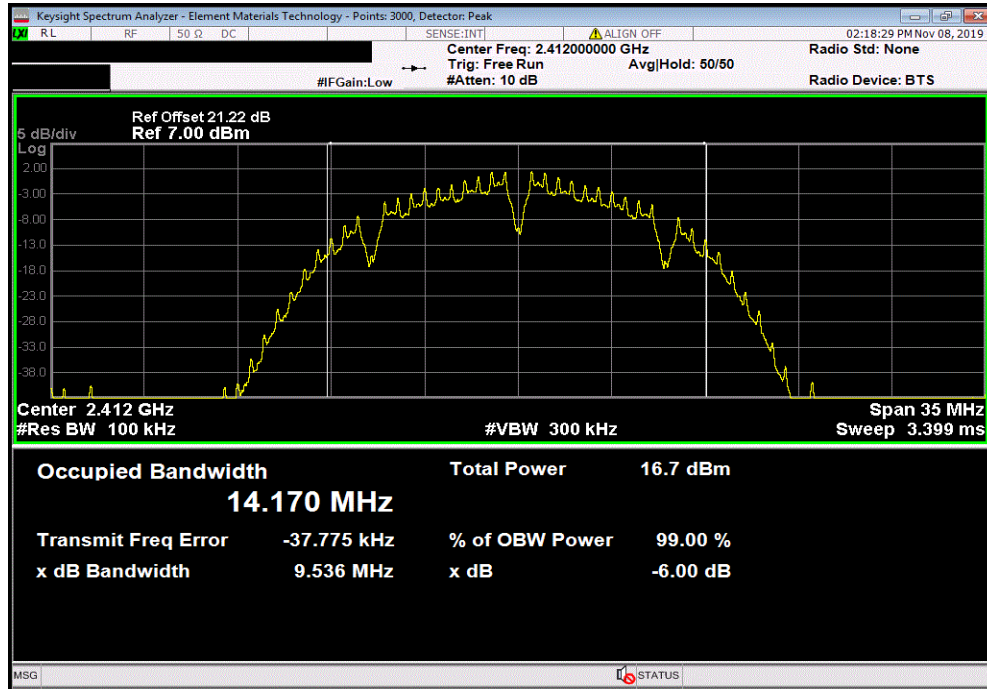
EUT: V300		Work Order: WTV0027	
Serial Number: 63		Date: 8-Nov-19	
Customer: WatchGuard Video		Temperature: 23.2 °C	
Attendees: Navaid Karimi		Humidity: 26.2% RH	
Project: None		Barometric Pres.: 1035 mbar	
Tested by: Jonathan Kiefer		Power: Battery	
		Job Site: TX09	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2019		ANSI C63.10:2013	
COMMENTS			
Reference Offset 21.22 dB (20dB attenuator+dc block+cable).			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	3	Signature <i>Jonathan Kiefer</i>	
		Value	Limit (>)
2400 MHz - 2483.5 MHz Band			
802.11(b) 1 Mbps			
	Low Channel 1, 2412 MHz	9.536 MHz	500 kHz
	Mid Channel 6, 2437 MHz	9.056 MHz	500 kHz
	High Channel 11, 2462 MHz	8.566 MHz	500 kHz
802.11(b) 11 Mbps			
	Low Channel 1, 2412 MHz	9.616 MHz	500 kHz
	Mid Channel 6, 2437 MHz	8.948 MHz	500 kHz
	High Channel 11, 2462 MHz	8.681 MHz	500 kHz
802.11(g) 6 Mbps			
	Low Channel 1, 2412 MHz	15.128 MHz	500 kHz
	Mid Channel 6, 2437 MHz	15.124 MHz	500 kHz
	High Channel 11, 2462 MHz	15.116 MHz	500 kHz
802.11(g) 36 Mbps			
	Low Channel 1, 2412 MHz	15.731 MHz	500 kHz
	Mid Channel 6, 2437 MHz	15.689 MHz	500 kHz
	High Channel 11, 2462 MHz	15.701 MHz	500 kHz
802.11(g) 54 Mbps			
	Low Channel 1, 2412 MHz	15.472 MHz	500 kHz
	Mid Channel 6, 2437 MHz	15.472 MHz	500 kHz
	High Channel 11, 2462 MHz	15.703 MHz	500 kHz
802.11(n) MCS0			
	Low Channel 1, 2412 MHz	15.102 MHz	500 kHz
	Mid Channel 6, 2437 MHz	15.324 MHz	500 kHz
	High Channel 11, 2462 MHz	15.128 MHz	500 kHz
802.11(n) MCS7			
	Low Channel 1, 2412 MHz	16.295 MHz	500 kHz
	Mid Channel 6, 2437 MHz	16.02 MHz	500 kHz
	High Channel 11, 2462 MHz	15.716 MHz	500 kHz

OCCUPIED BANDWIDTH

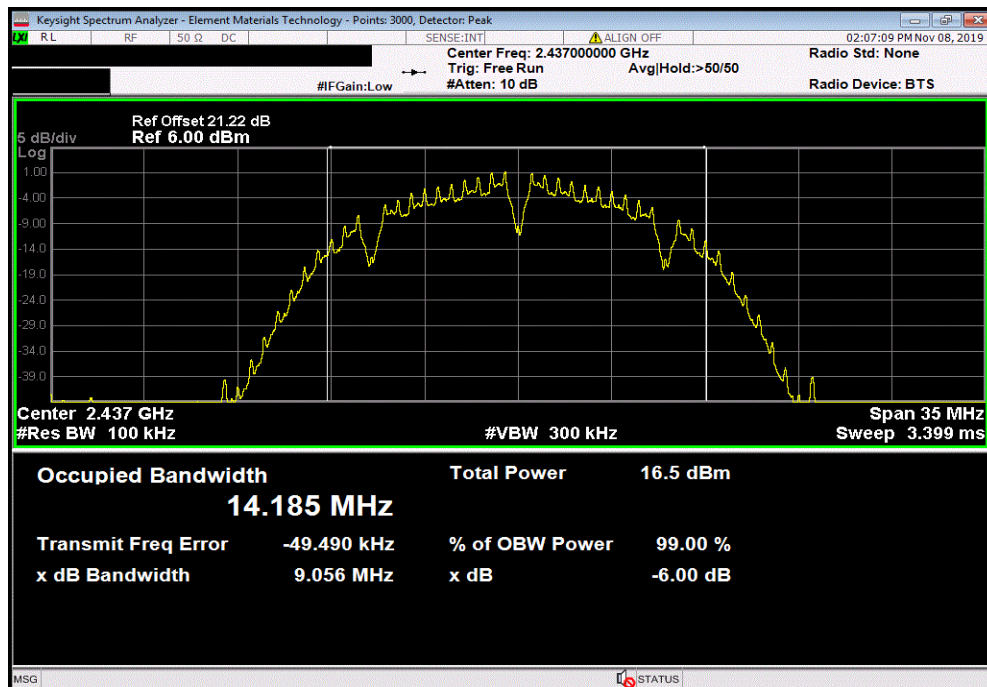


TbTx 2019.08.30.0 XMI 2019.09.05

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



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

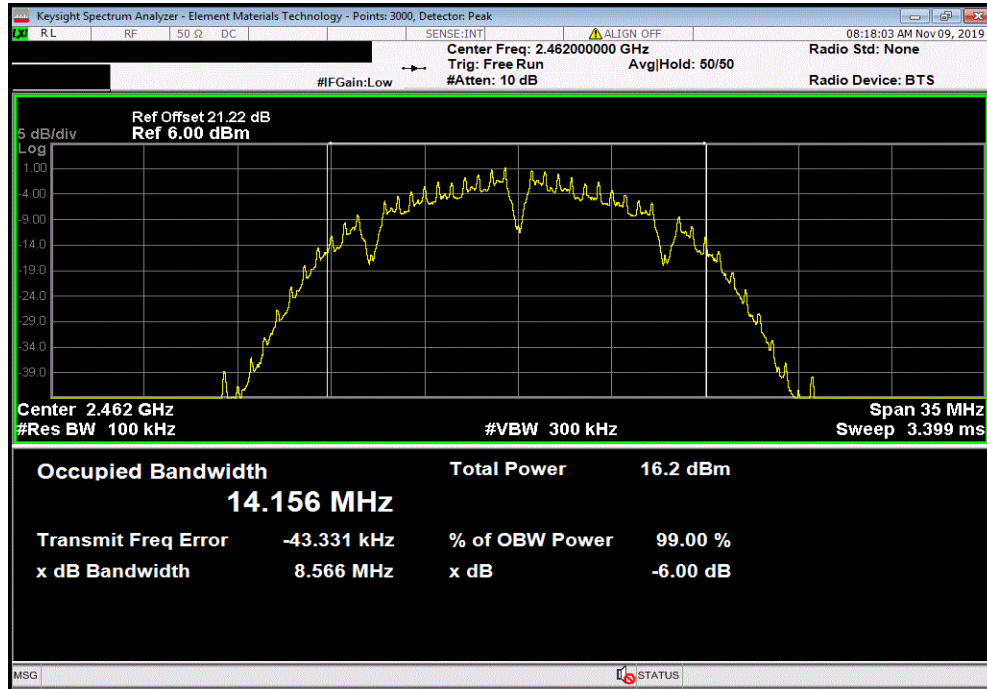


OCCUPIED BANDWIDTH

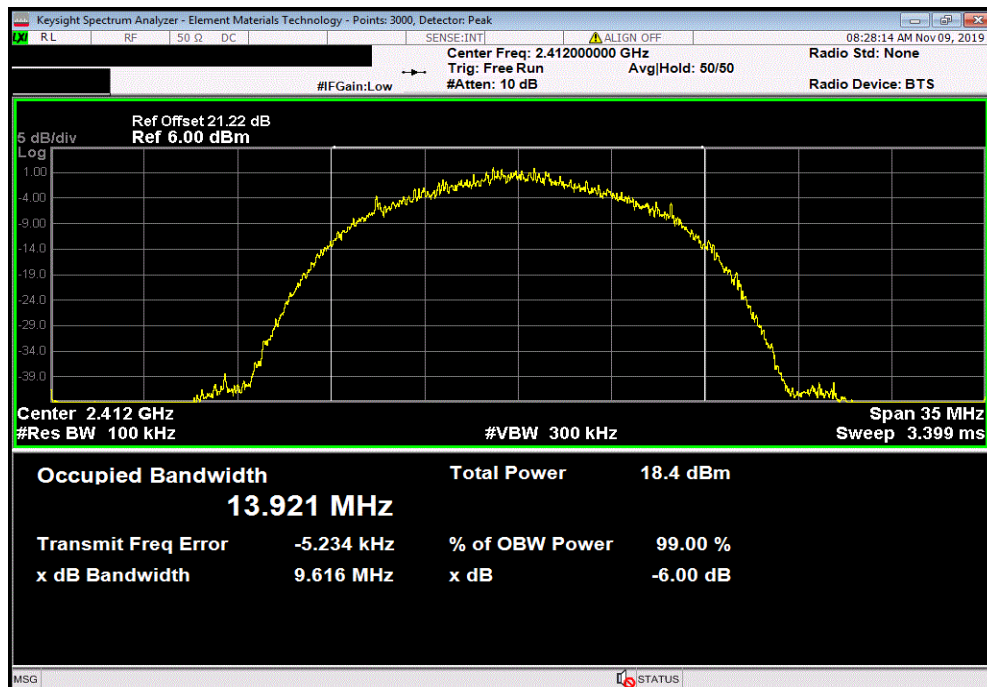


TbTtx 2019.08.30.0 XMI 2019.09.05

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



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

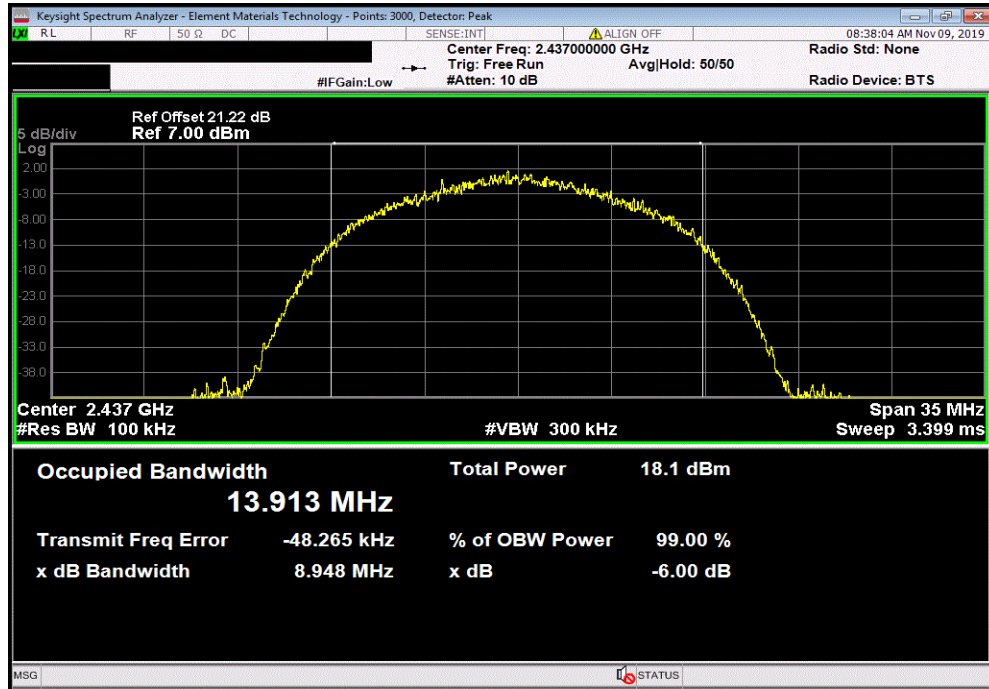


OCCUPIED BANDWIDTH

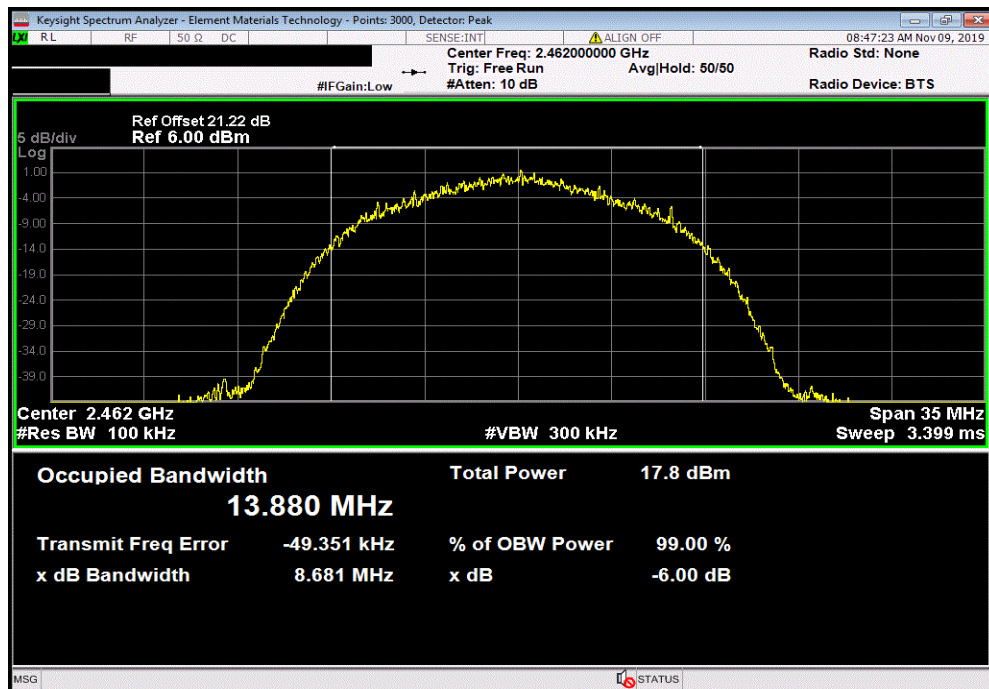


TbTx 2019.08.30.0 XMI 2019.09.05

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



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



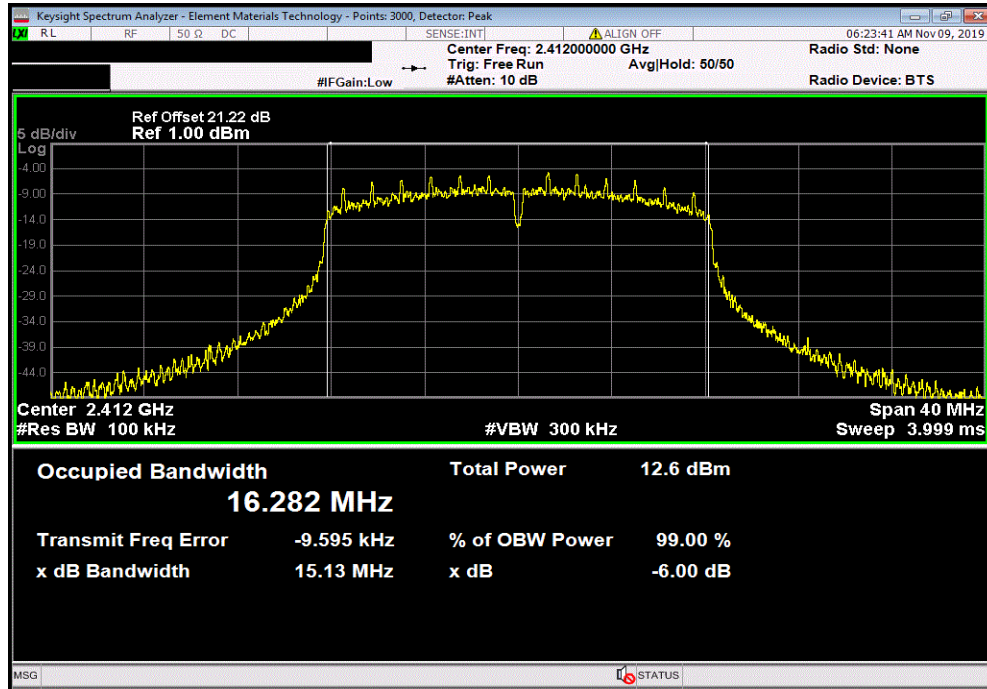
OCCUPIED BANDWIDTH



TbTx 2019.08.30.0 XMI 2019.09.05

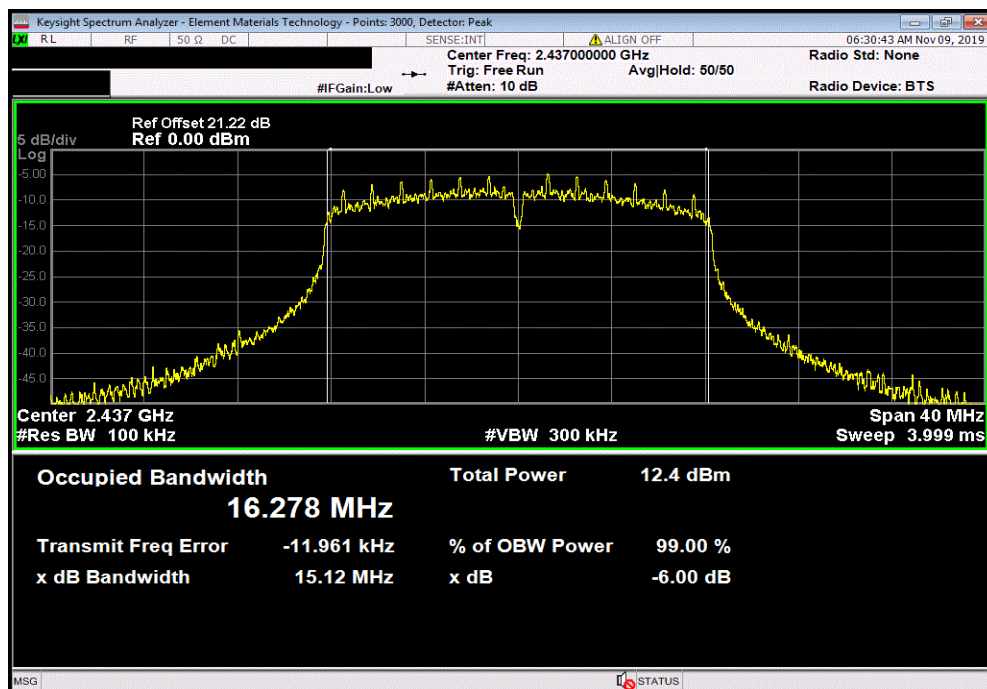
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz

			Value	Limit	Result
			15.128 MHz	(>) 500 kHz	Pass



2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz

			Value	Limit	Result
			15.124 MHz	(>) 500 kHz	Pass

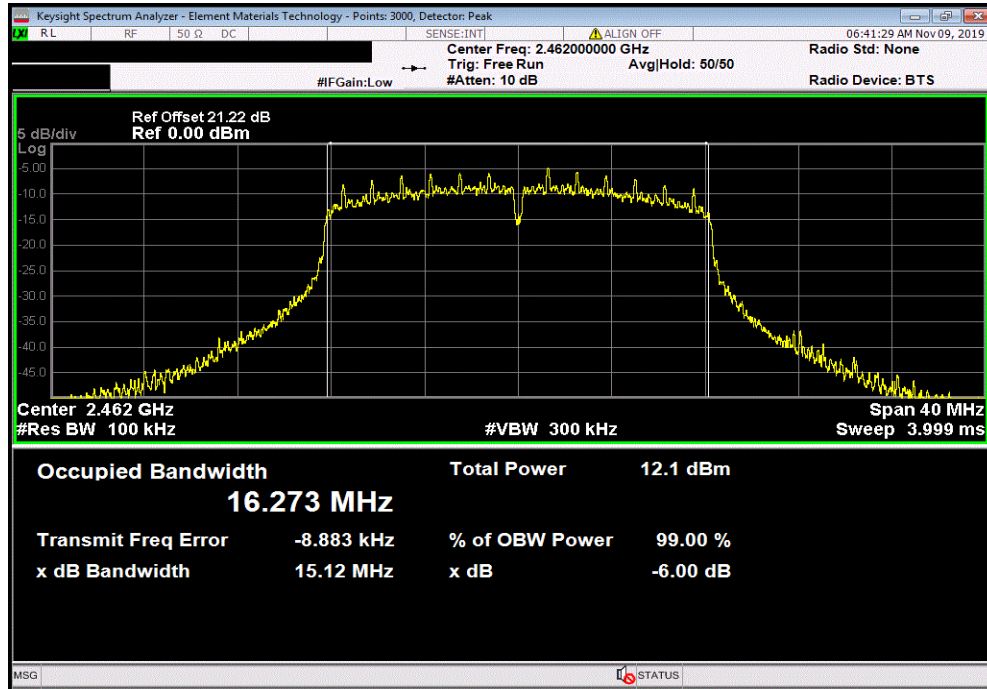


OCCUPIED BANDWIDTH

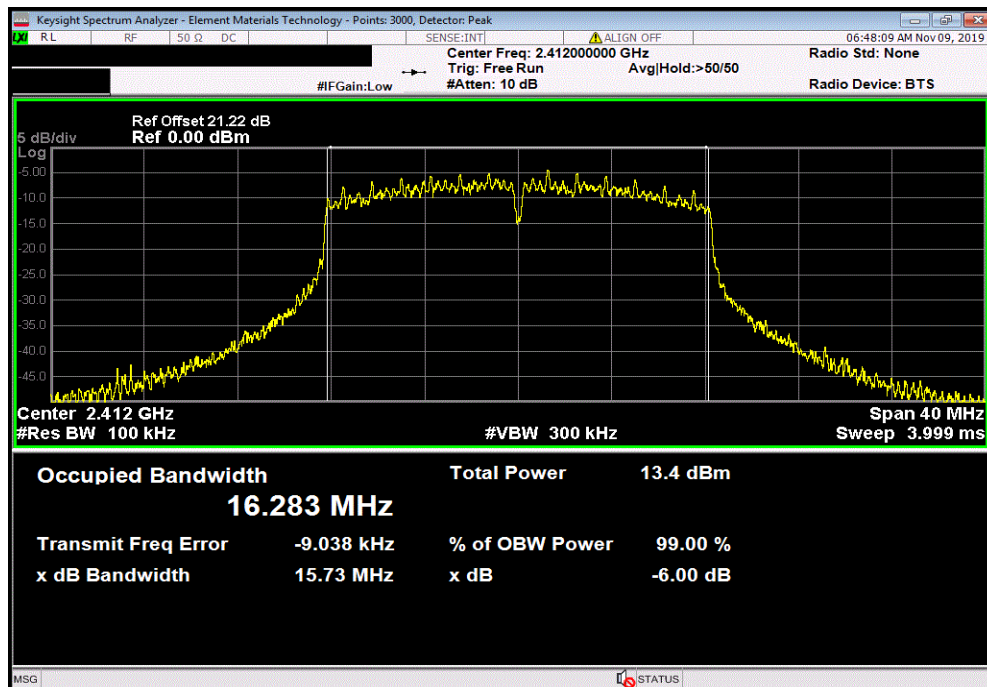


TbTx 2019.08.30.0 XMI 2019.09.05

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



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

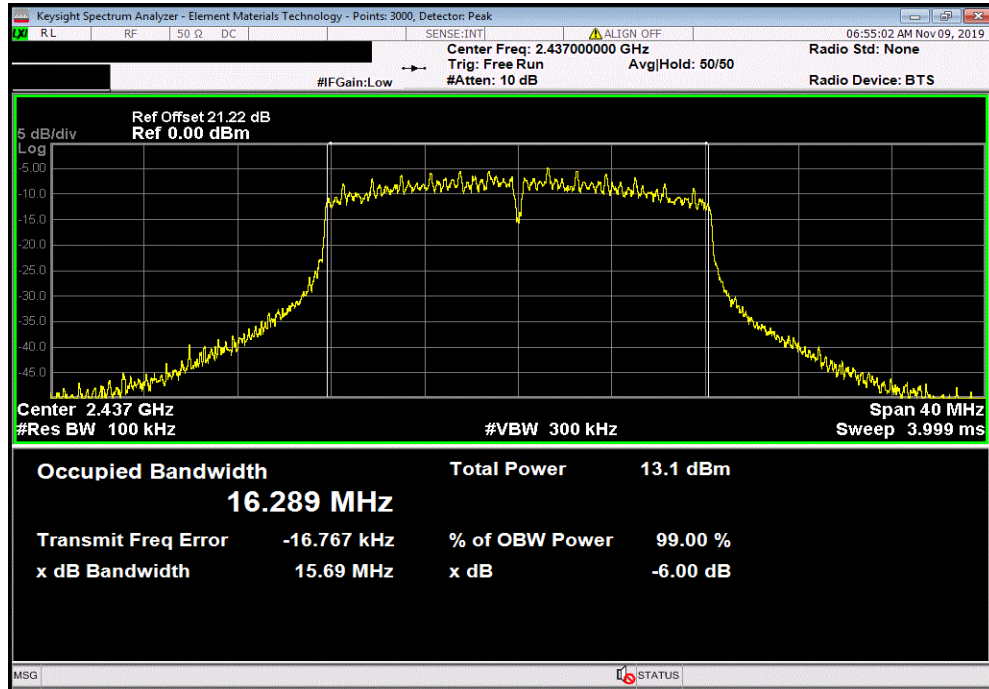


OCCUPIED BANDWIDTH

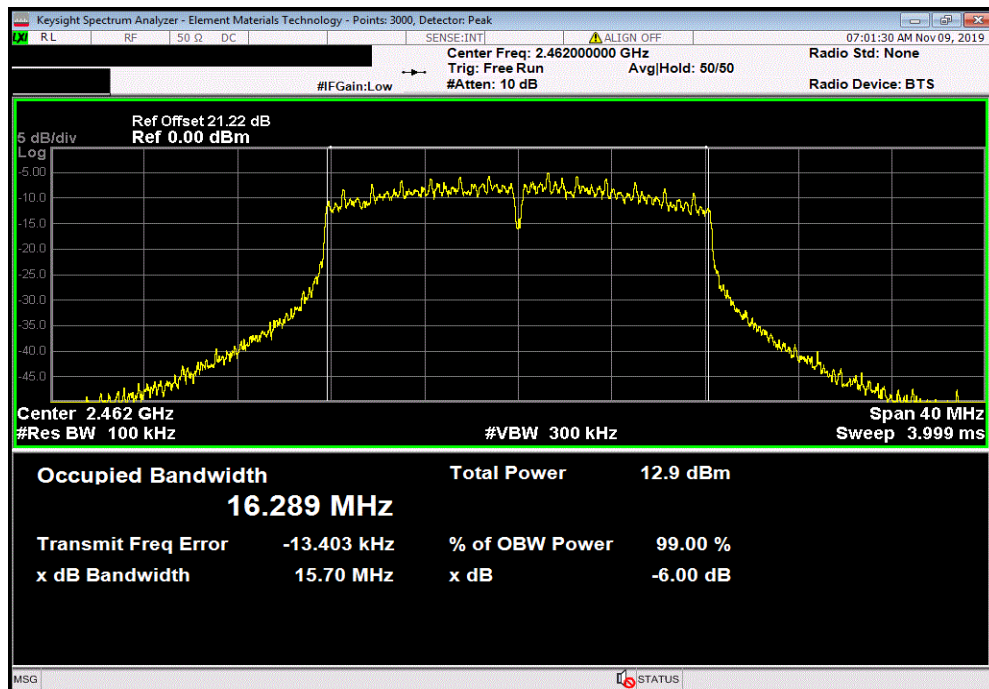


TbTx 2019.08.30.0 XMI 2019.09.05

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



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

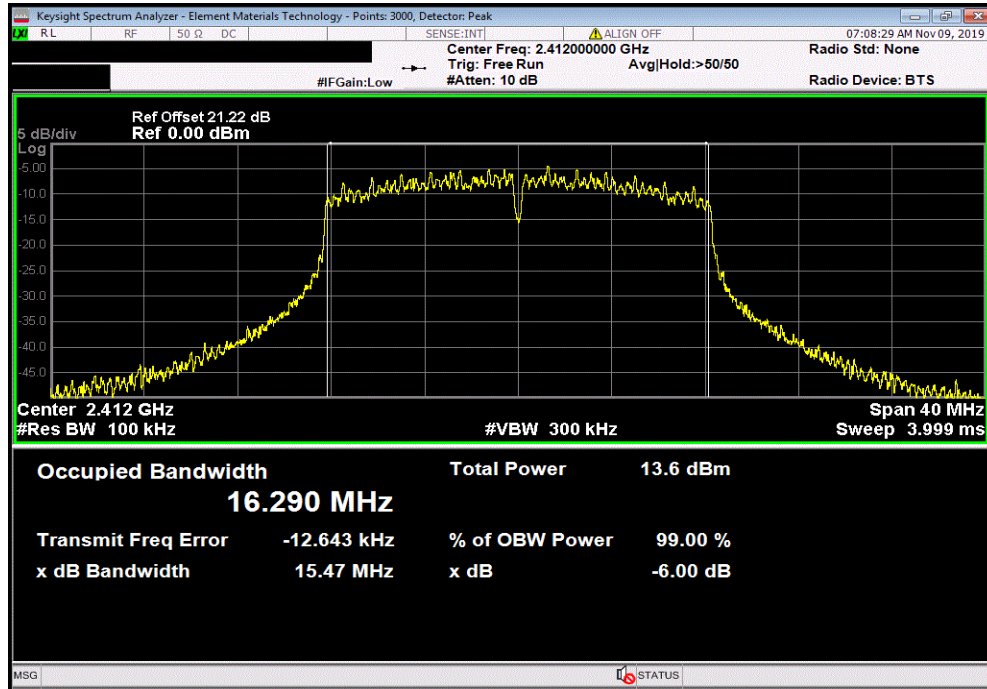


OCCUPIED BANDWIDTH

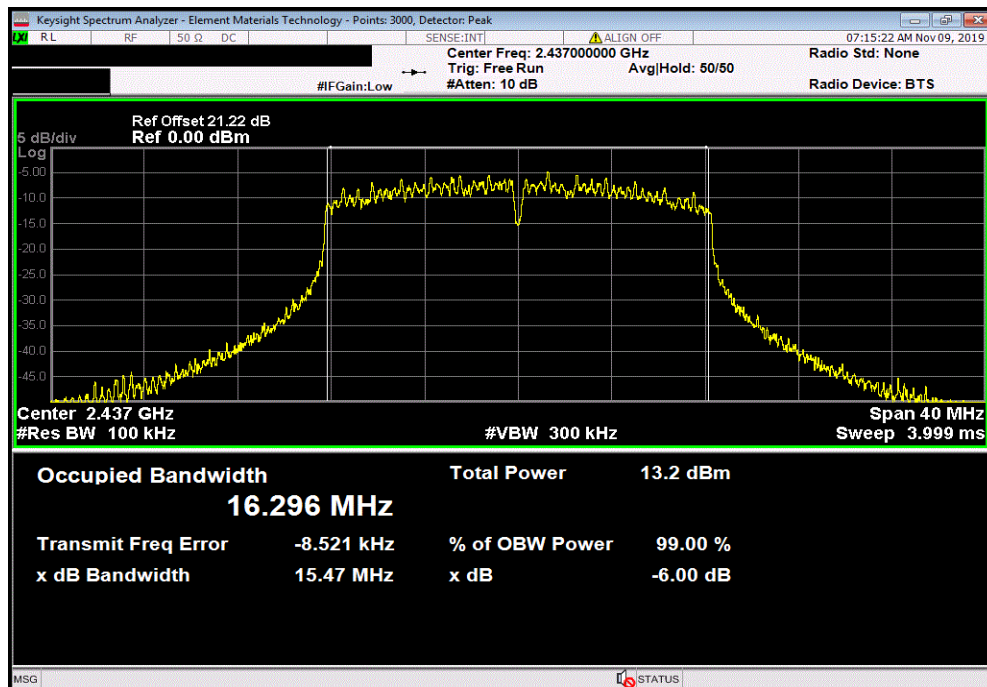


TbTx 2019.08.30.0 XMt 2019.09.05

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



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

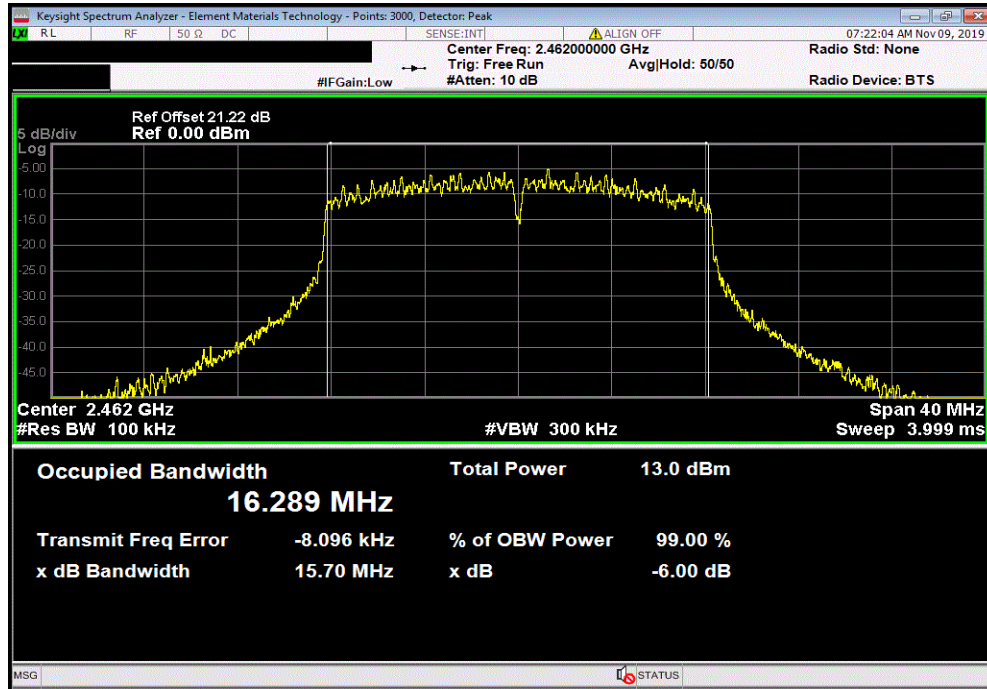


OCCUPIED BANDWIDTH

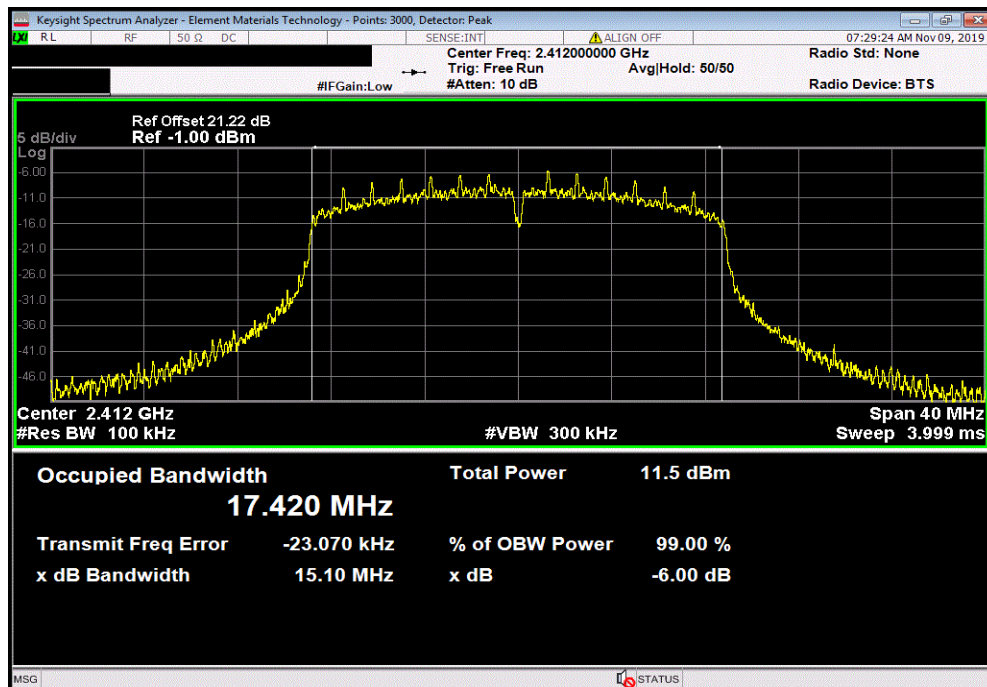


TbTx 2019.08.30.0 XMt 2019.09.05

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



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

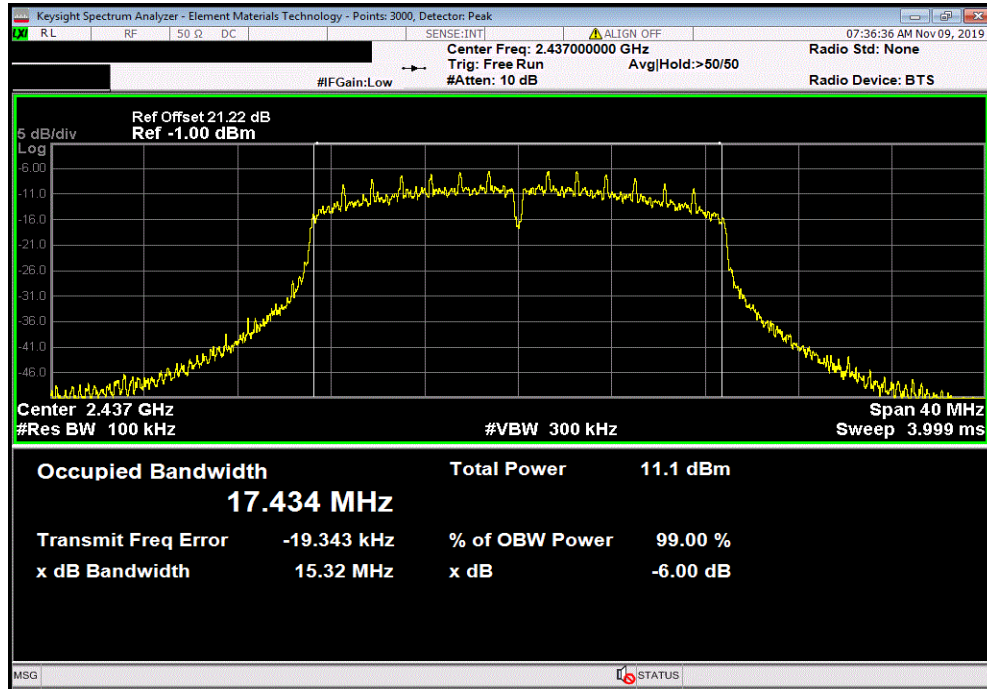


OCCUPIED BANDWIDTH

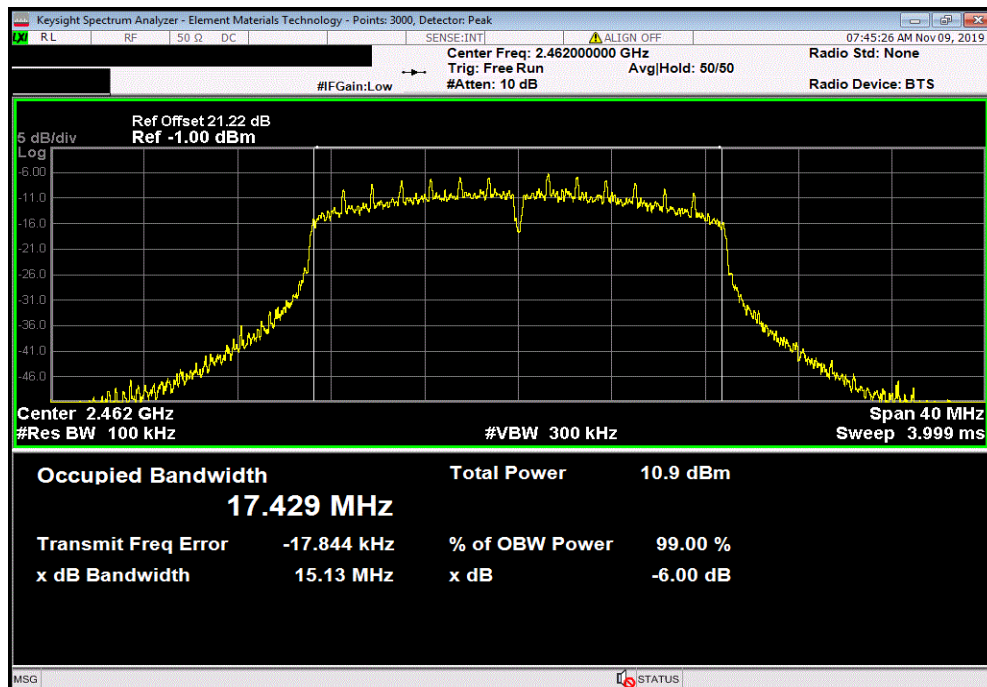


TbTx 2019.08.30.0 XMI 2019.09.05

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



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

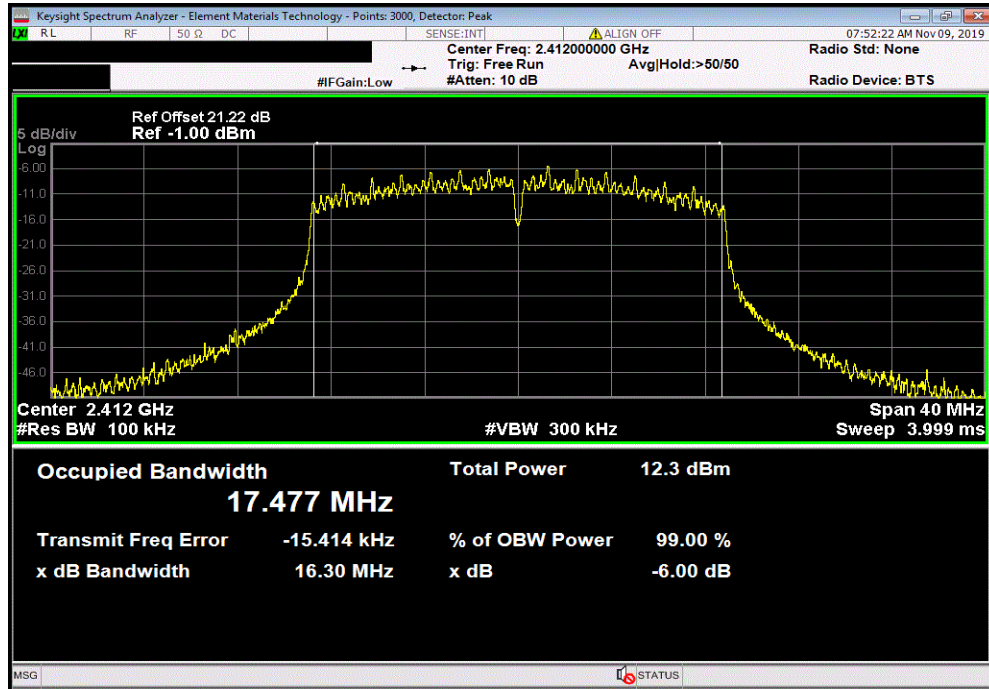


OCCUPIED BANDWIDTH

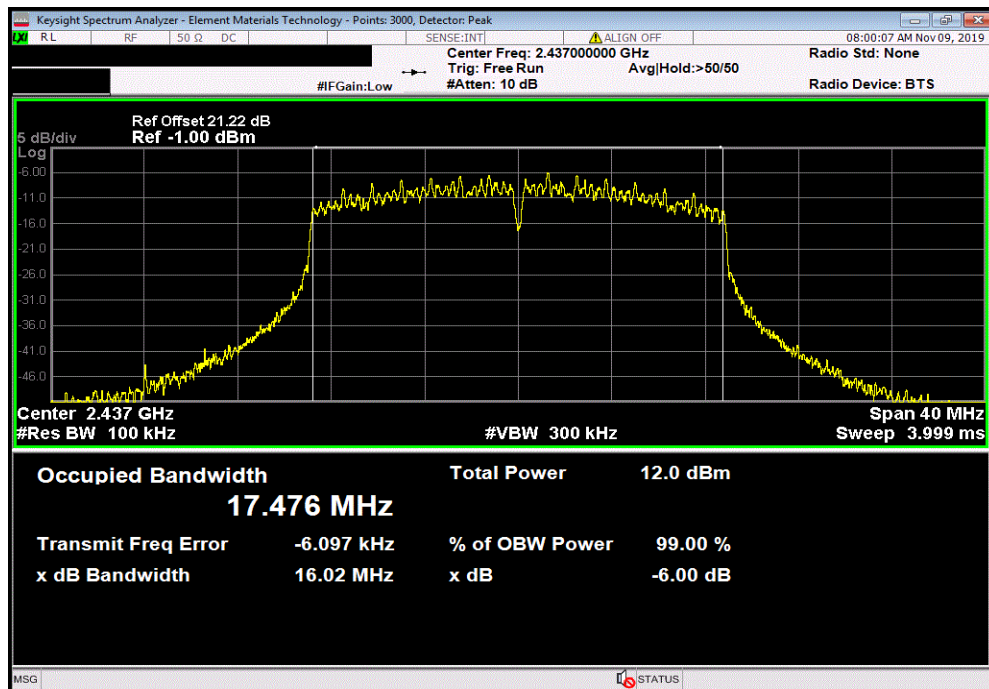


TbTx 2019.08.30.0 XMI 2019.09.05

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



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

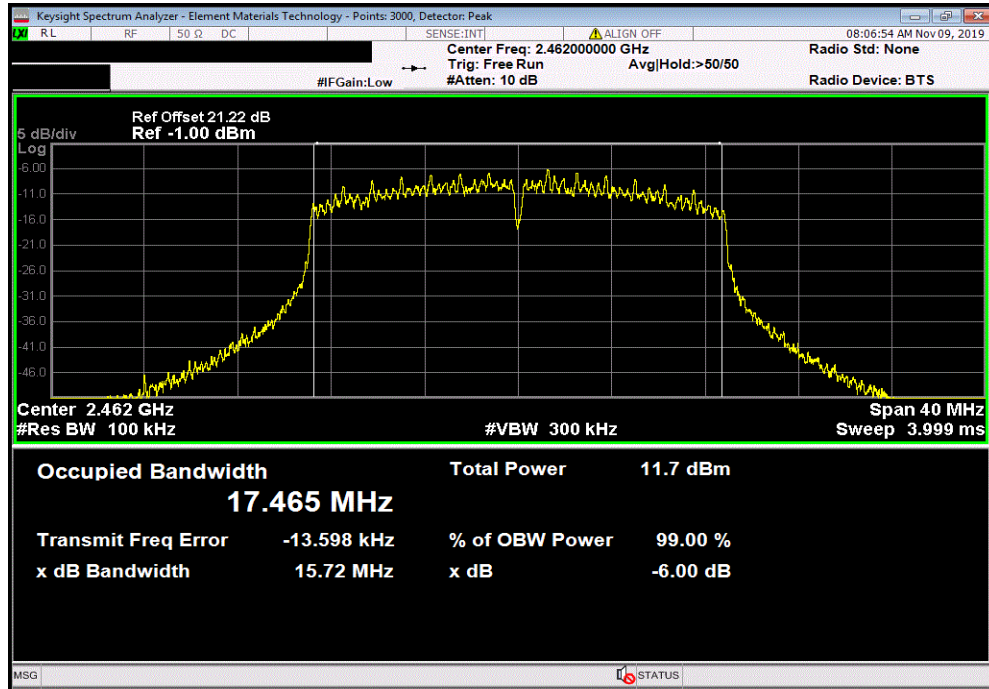


OCCUPIED BANDWIDTH



TbTx 2019.08.30.0 XMI 2019.09.05

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



OUTPUT POWER



XMIT 2019.09.05

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	18-Sep-19	18-Sep-20
Block - DC	Fairview Microwave	SD3379	AMT	18-Sep-19	18-Sep-20
Cable	Micro-Coax	UFD150A-1-0720-200200	TXG	18-Sep-19	18-Sep-20
Generator - Signal	Keysight	N5171B-506	TEW	2-May-18	2-May-21
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFO	5-May-19	5-May-20

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.

OUTPUT POWER



TMTx 2019.08.30.0 XMI 2019.09.05

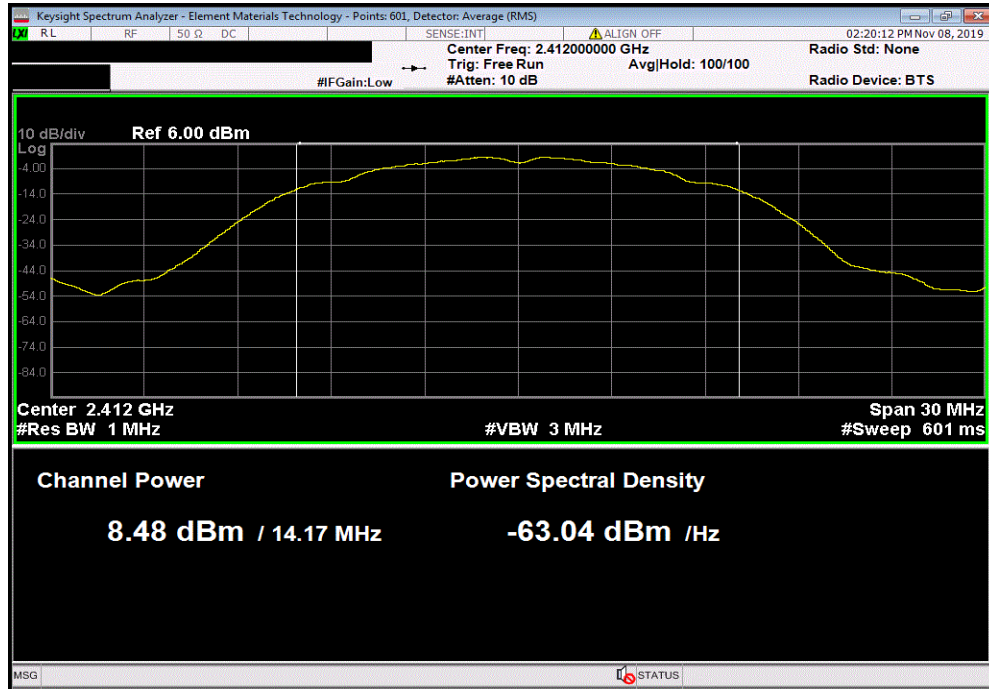
EUT: V300		Work Order: WTV0027	
Serial Number: 63		Date: 8-Nov-19	
Customer: WatchGuard Video		Temperature: 23.2 °C	
Attendees: Navaid Karimi		Humidity: 26.2% RH	
Project: None		Barometric Pres.: 1035 mbar	
Tested by: Jonathan Kiefer		Power: Battery	
Job Site: TX09			
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2019		ANSI C63.10:2013	
COMMENTS			
Reference Offset 21.22 dB (20dB attenuator+dc block+cable).			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	3	Signature <i>Jonathan Kiefer</i>	
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)
		Out Pwr (dBm)	Limit (dBm)
			Result
2400 MHz - 2483.5 MHz Band			
802.11(b) 1 Mbps			
	Low Channel 1, 2412 MHz	8.476	4
	Mid Channel 6, 2437 MHz	7.975	4
	High Channel 11, 2462 MHz	7.163	4
802.11(b) 11 Mbps			
	Low Channel 1, 2412 MHz	8.471	4
	Mid Channel 6, 2437 MHz	7.776	4
	High Channel 11, 2462 MHz	7.281	4.1
802.11(g) 6 Mbps			
	Low Channel 1, 2412 MHz	5.345	0.1
	Mid Channel 6, 2437 MHz	5.107	0.1
	High Channel 11, 2462 MHz	4.805	0.1
802.11(g) 36 Mbps			
	Low Channel 1, 2412 MHz	4.845	0.7
	Mid Channel 6, 2437 MHz	4.521	0.7
	High Channel 11, 2462 MHz	4.302	0.7
802.11(g) 54 Mbps			
	Low Channel 1, 2412 MHz	4.585	0.9
	Mid Channel 6, 2437 MHz	4.277	0.9
	High Channel 11, 2462 MHz	4.044	0.9
802.11(n) MCS0			
	Low Channel 1, 2412 MHz	4.097	0.1
	Mid Channel 6, 2437 MHz	3.701	0
	High Channel 11, 2462 MHz	3.494	0
802.11(n) MCS7			
	Low Channel 1, 2412 MHz	3.284	1
	Mid Channel 6, 2437 MHz	2.982	1
	High Channel 11, 2462 MHz	2.804	1

OUTPUT POWER

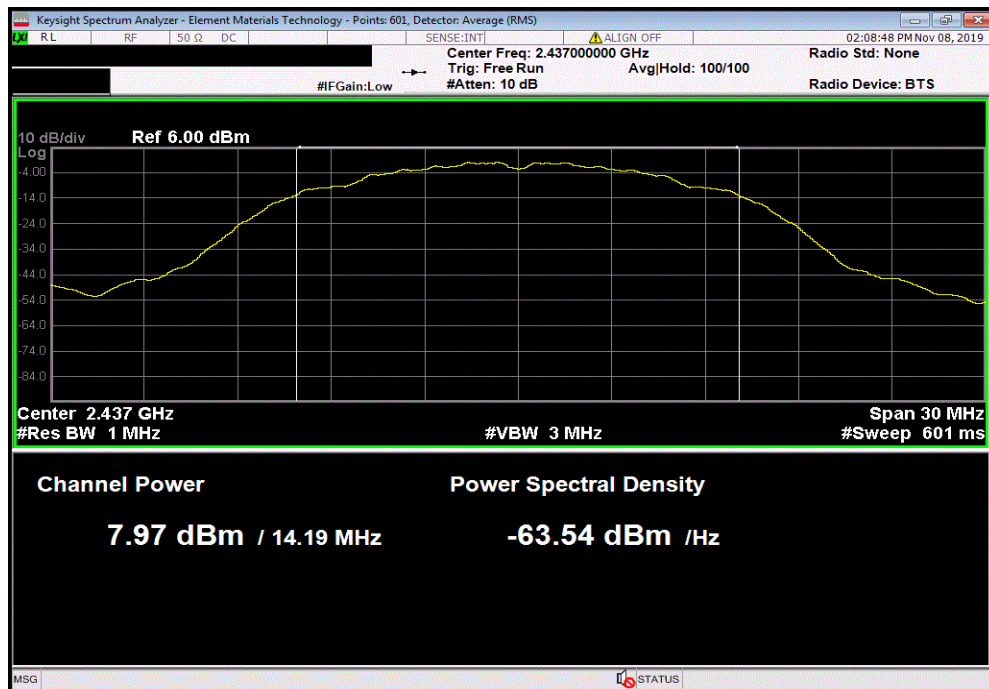


TbTx 2019.08.30.0 XMI 2019.09.05

2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result	
	8.476	4	12.5	30	Pass	



2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result	
	7.975	4	12	30	Pass	

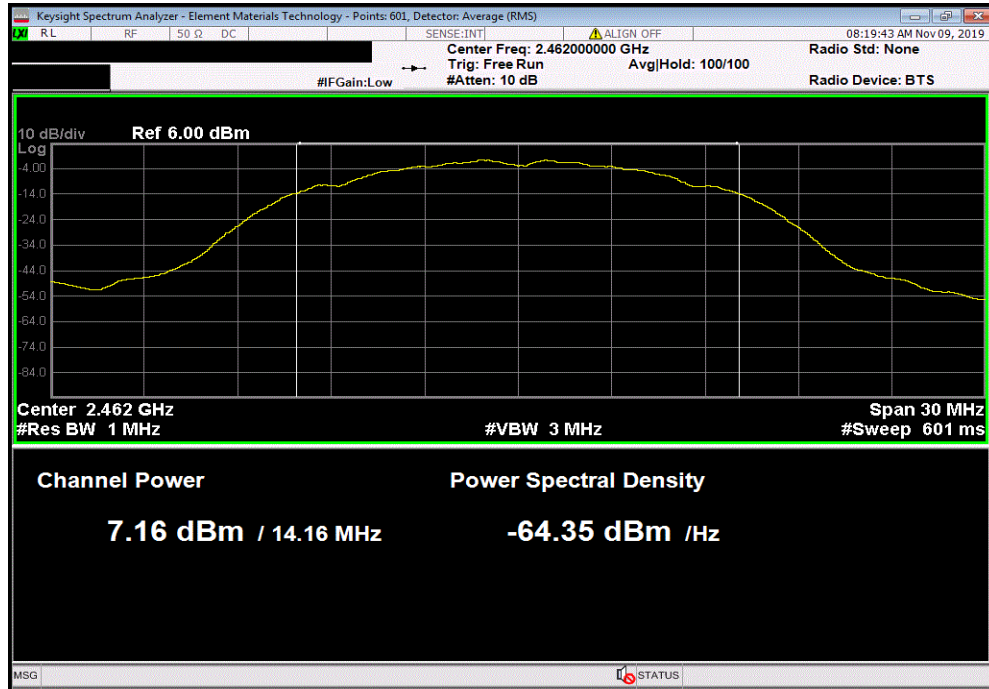


OUTPUT POWER

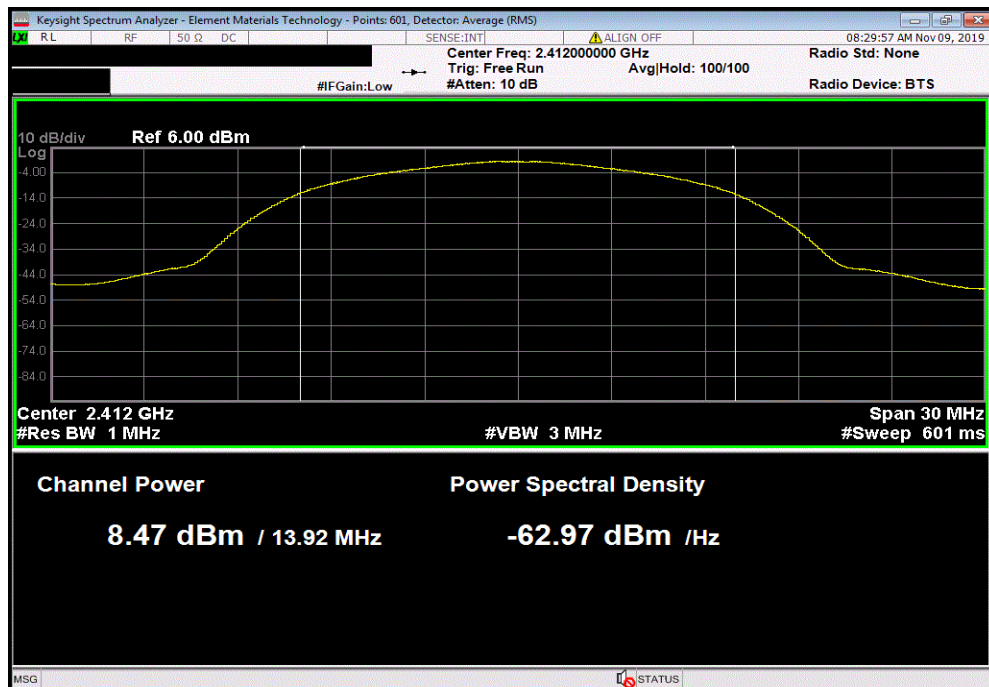


TbTx 2019.08.30.0 XMI 2019.09.05

2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result	
	7.163	4	11.2	30	Pass	



2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result	
	8.471	4	12.5	30	Pass	

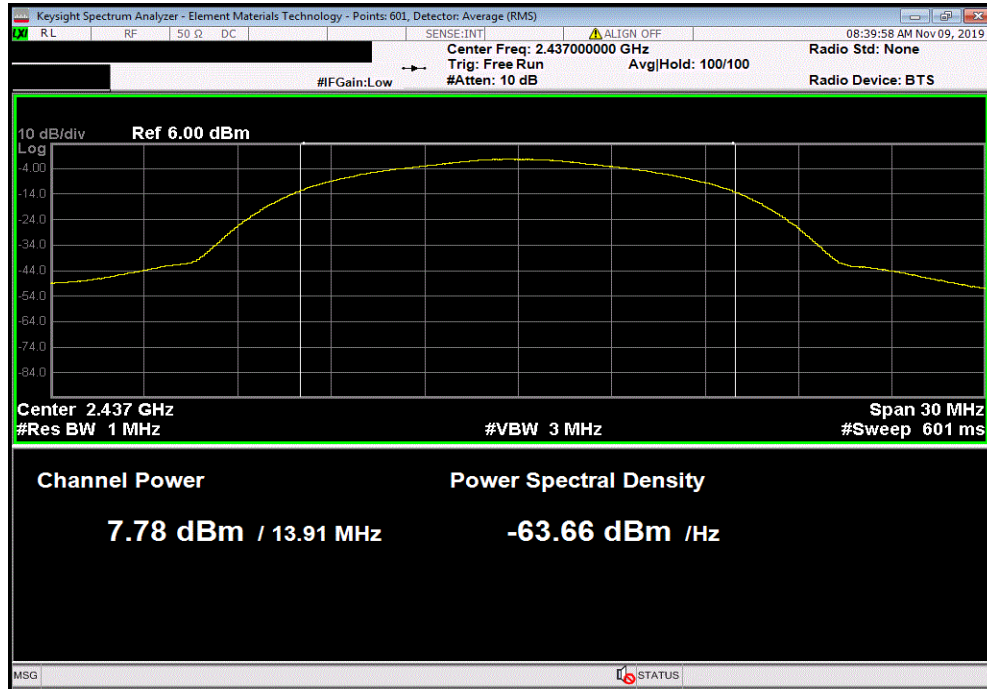


OUTPUT POWER

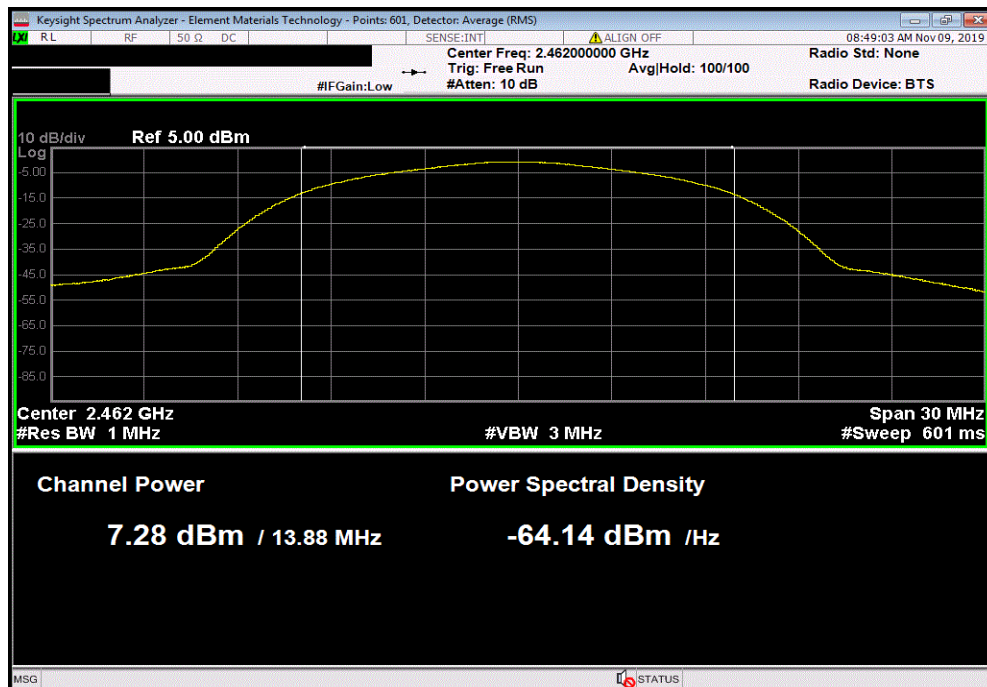


TbTx 2019.08.30.0 XMI 2019.09.05

2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result	
	7.776	4	11.8	30	Pass	



2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result	
	7.281	4.1	11.3	30	Pass	

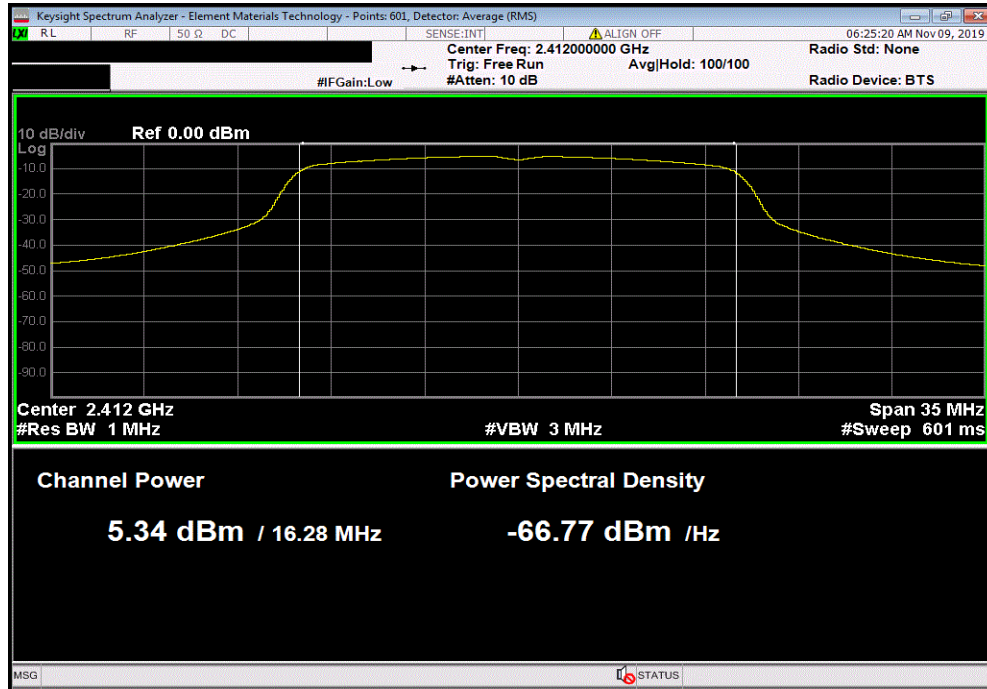


OUTPUT POWER

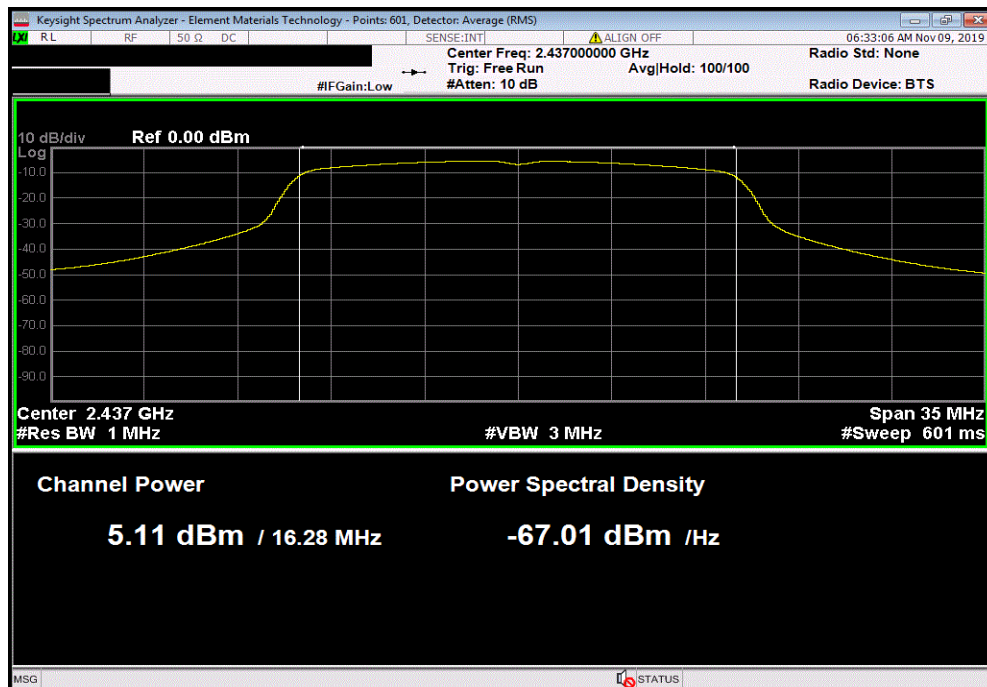


TbTx 2019.08.30.0 XMI 2019.09.05

2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result	
	5.345	0.1	5.5	30	Pass	



2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result	
	5.107	0.1	5.2	30	Pass	

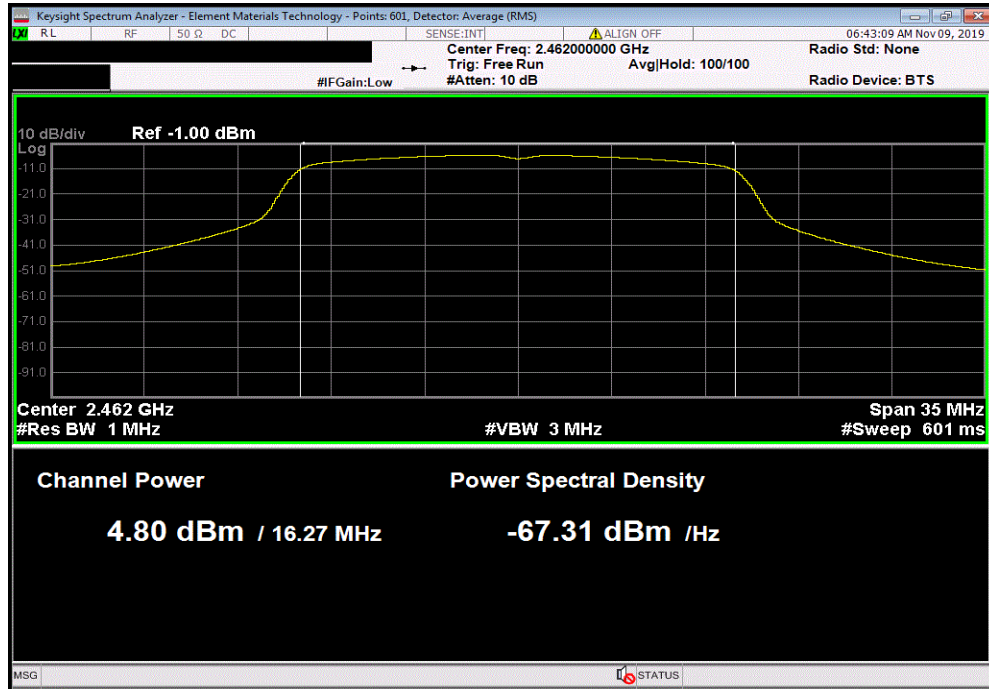


OUTPUT POWER

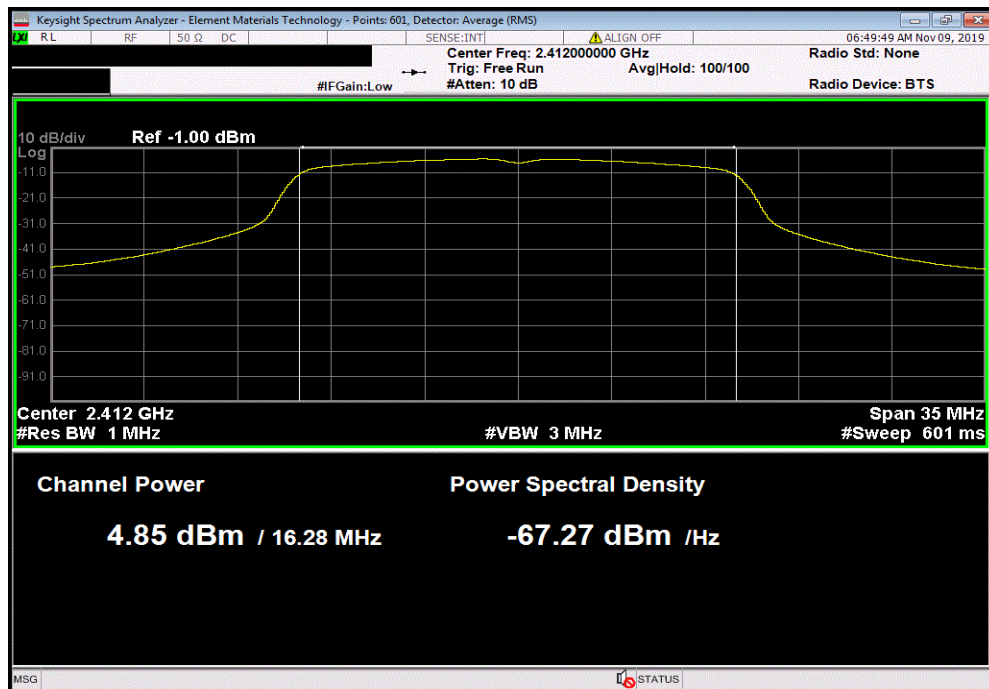


TbTx 2019.08.30.0 XMI 2019.09.05

2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result	
	4.805	0.1	4.9	30	Pass	



2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result	
	4.845	0.7	5.5	30	Pass	

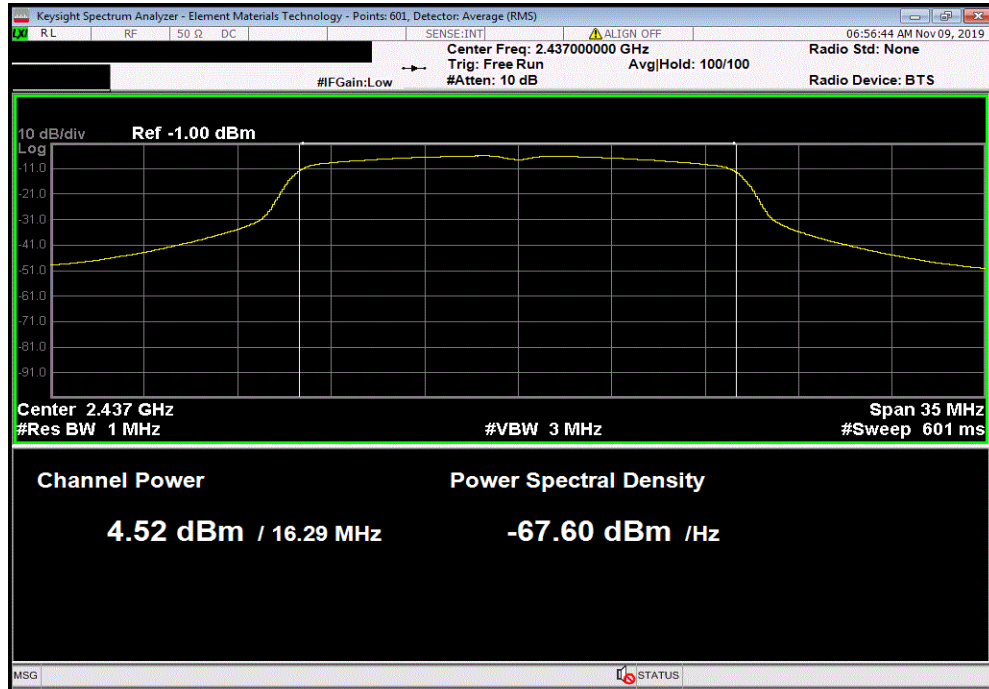


OUTPUT POWER

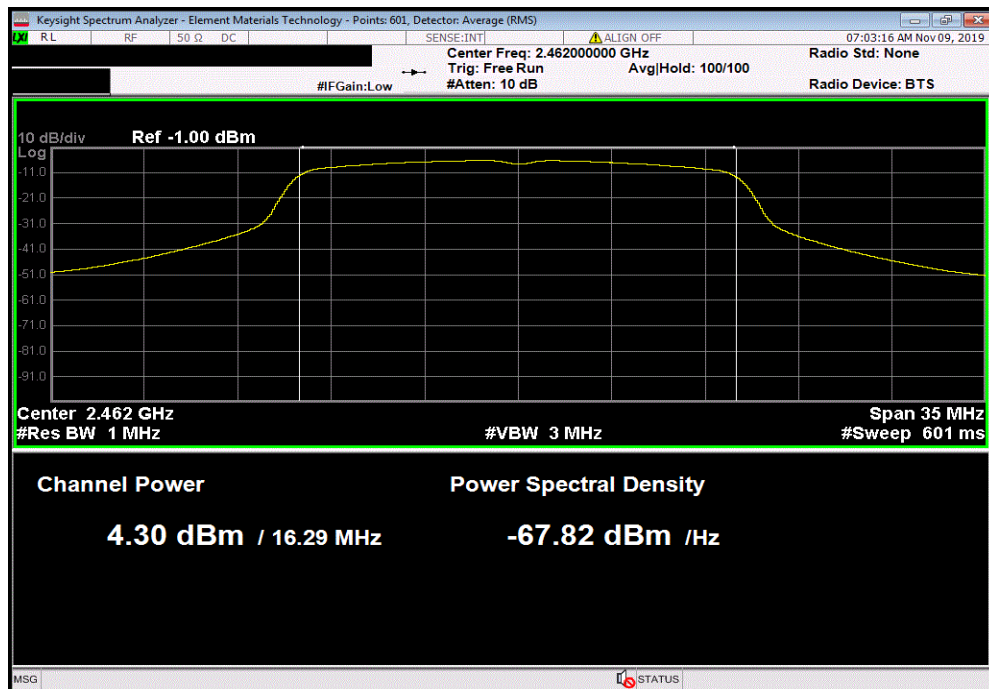


TbTx 2019.08.30.0 XMI 2019.09.05

2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result	
	4.521	0.7	5.2	30	Pass	



2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result	
	4.302	0.7	5	30	Pass	

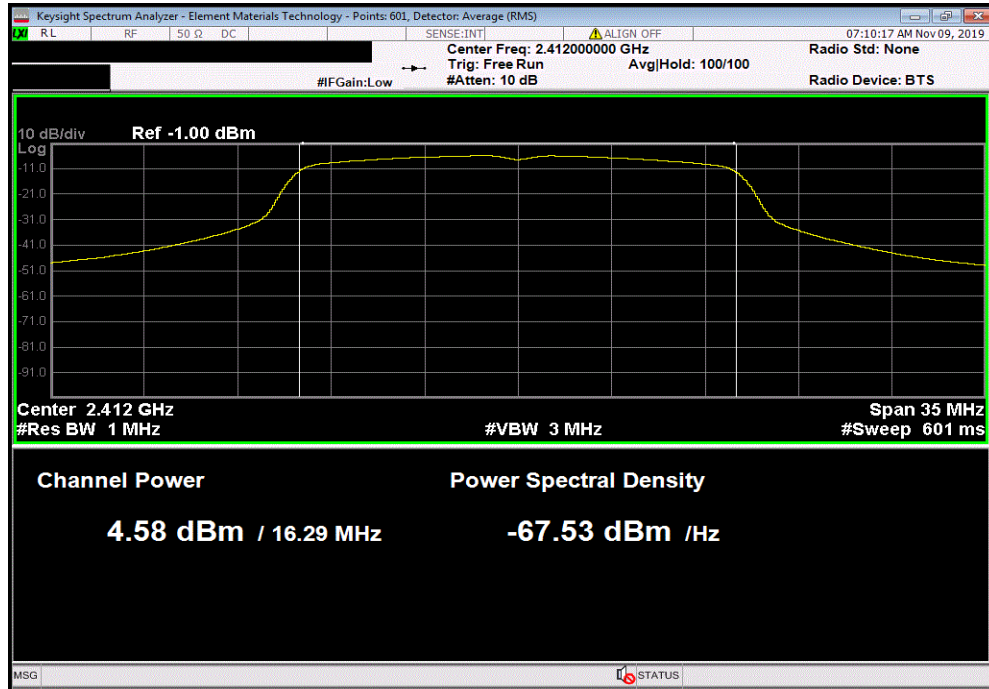


OUTPUT POWER

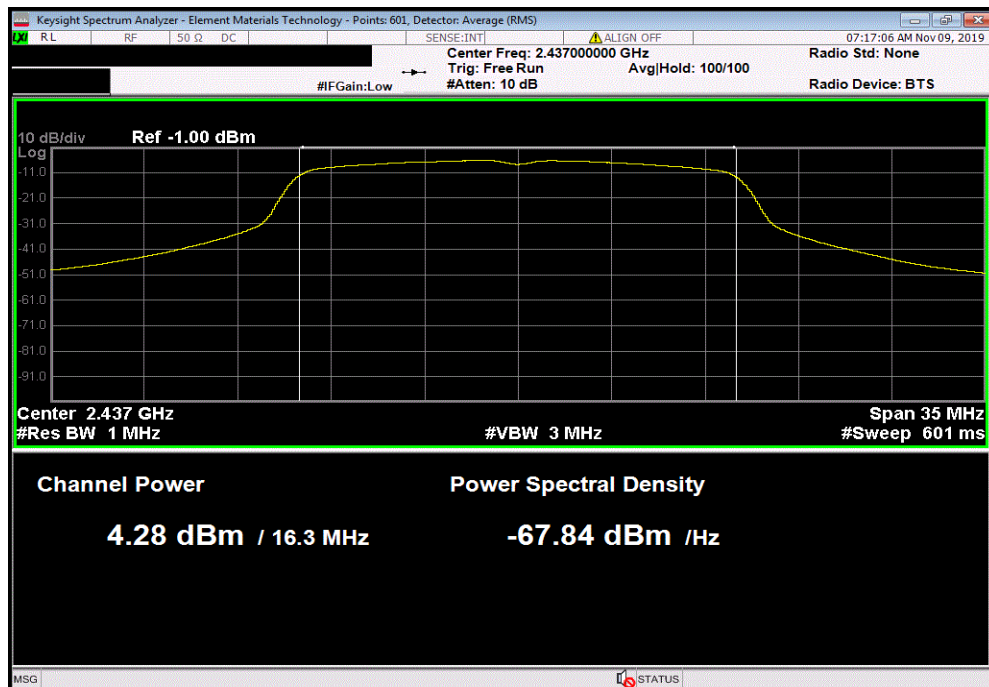


TbTx 2019.08.30.0 XMI 2019.09.05

2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result	
	4.585	0.9	5.5	30	Pass	



2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result	
	4.277	0.9	5.2	30	Pass	

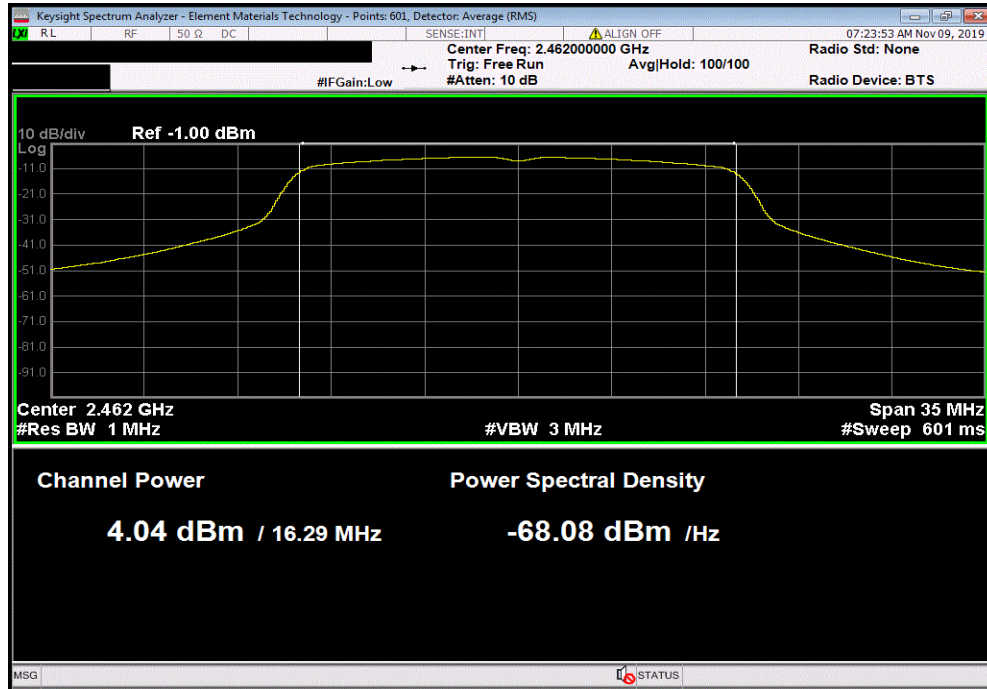


OUTPUT POWER

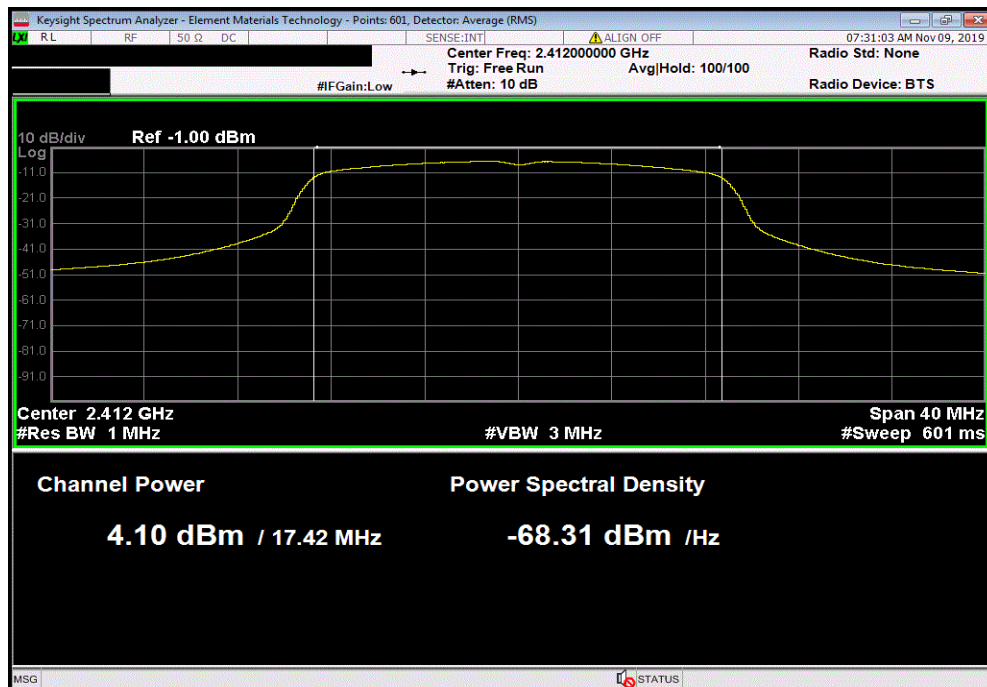


TbTx 2019.08.30.0 XMI 2019.09.05

2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result	
	4.044	0.9	5	30	Pass	



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result	
	4.097	0.1	4.2	30	Pass	

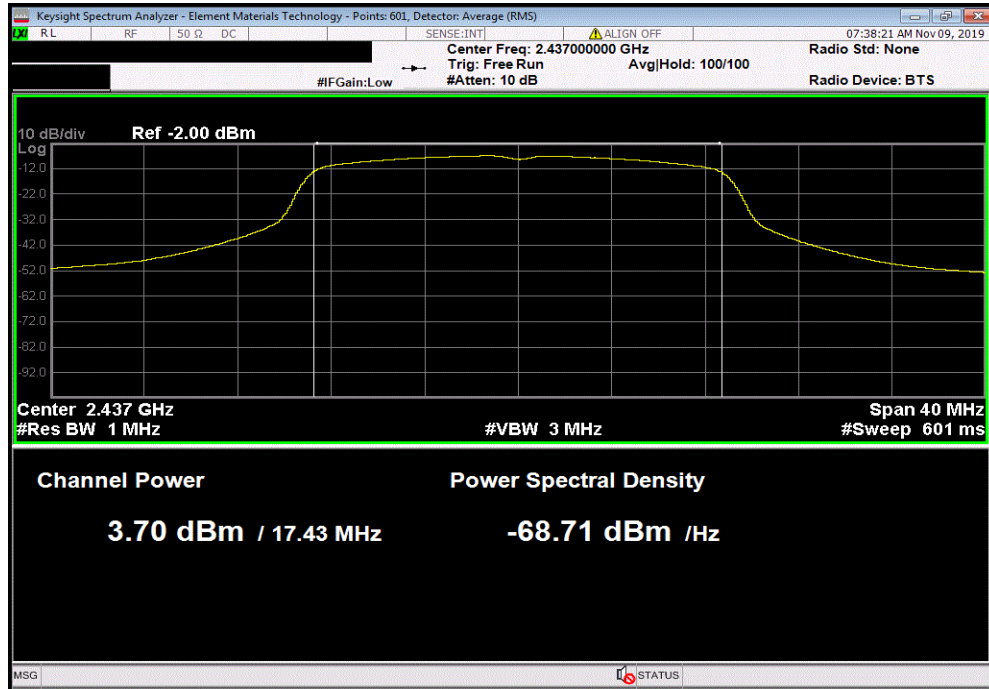


OUTPUT POWER

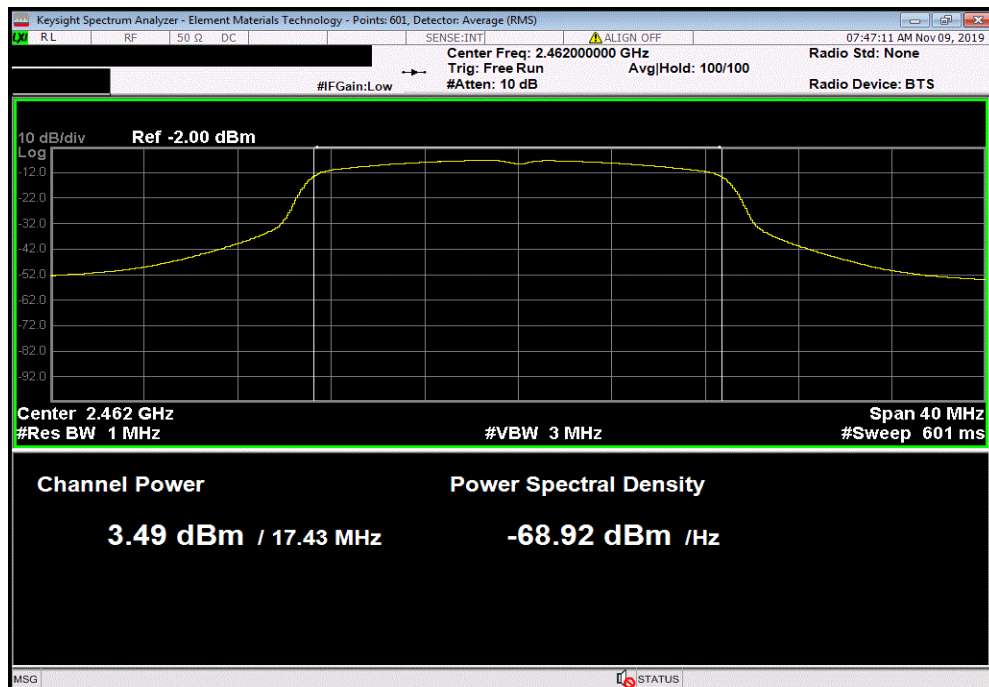


TbTx 2019.08.30.0 XMt 2019.09.05

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Mid Channel 6, 2437 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result	
	3.701	0	3.7	30	Pass	



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result	
	3.494	0	3.5	30	Pass	

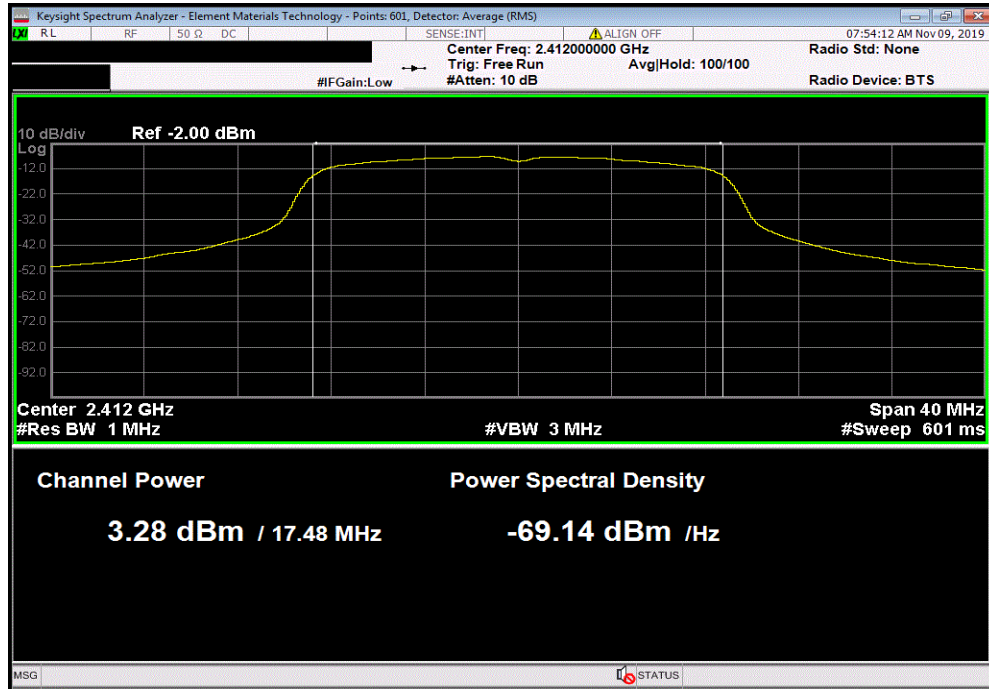


OUTPUT POWER

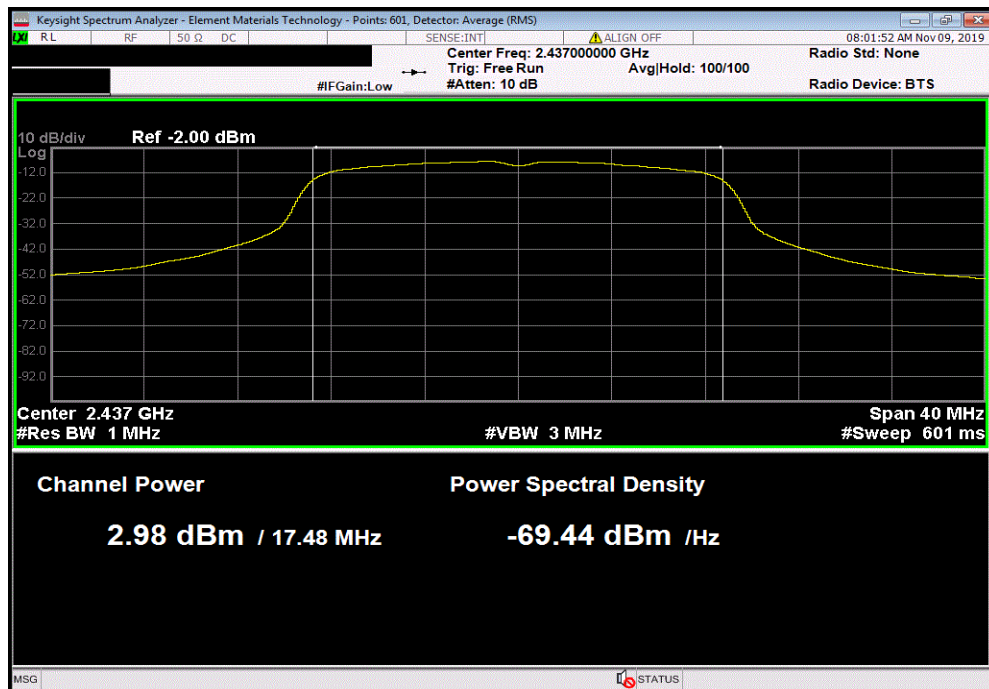


TbTx 2019.08.30.0 XMI 2019.09.05

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1, 2412 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result	
	3.284	1	4.3	30	Pass	



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Mid Channel 6, 2437 MHz						
	Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result	
	2.982	1	4	30	Pass	

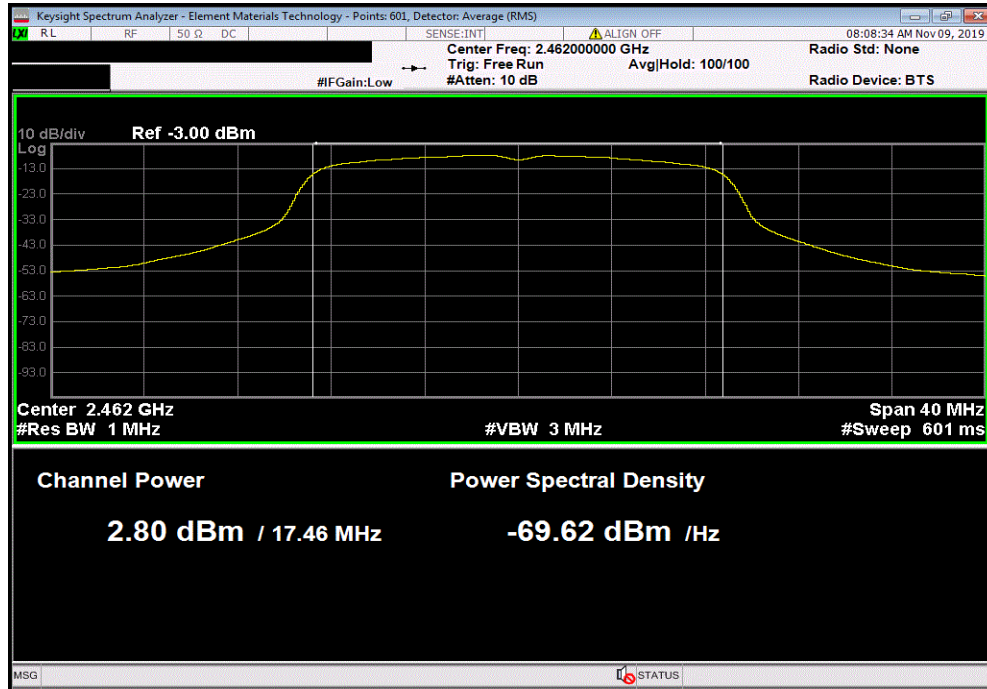


OUTPUT POWER



TbTx 2019.08.30.0 XMI 2019.09.05

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, High Channel 11, 2462 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result		
2.804	1	3.8	30	Pass		



EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)



XMit 2019.09.05

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	18-Sep-19	18-Sep-20
Block - DC	Fairview Microwave	SD3379	AMT	18-Sep-19	18-Sep-20
Cable	Micro-Coax	UFD150A-1-0720-200200	TXG	18-Sep-19	18-Sep-20
Generator - Signal	Keysight	N5171B-506	TEW	2-May-18	2-May-21
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFO	5-May-19	5-May-20

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.

The antenna gain was added to the average conducted power to calculate the EIRP. This value is compared to the EIRP limit of 36 dBm (4Watts).

EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)



TWTx 2019.08.30.0 XMt 2019.09.05

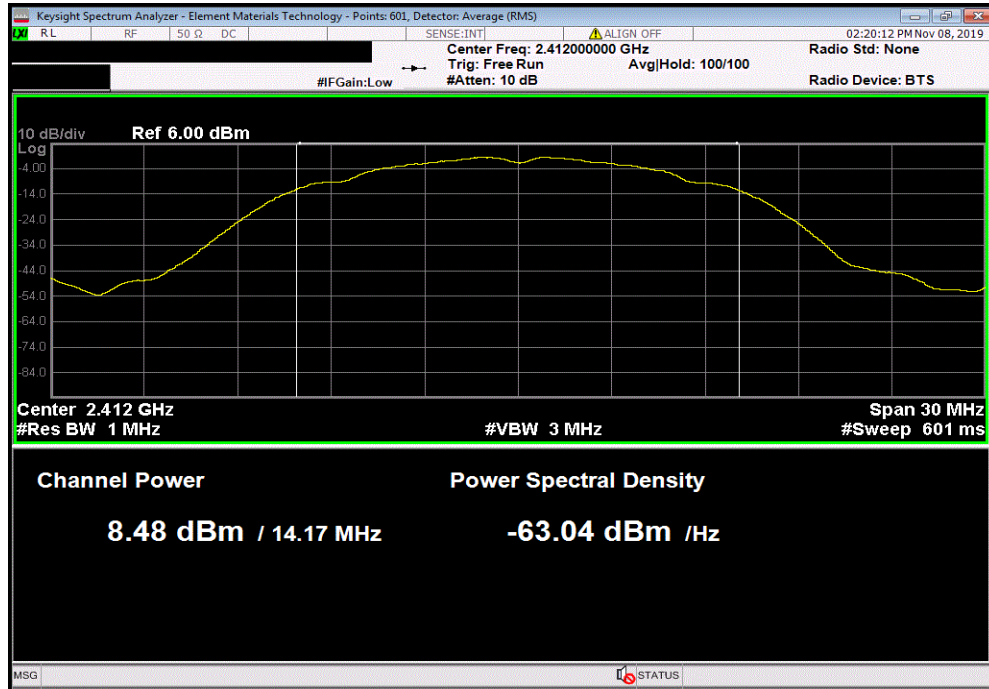
EUT: V300		Work Order: WTV0027	
Serial Number: 63		Date: 8-Nov-19	
Customer: WatchGuard Video		Temperature: 23.2 °C	
Attendees: Navaid Karimi		Humidity: 26.2% RH	
Project: None		Barometric Pres.: 1035 mbar	
Tested by: Jonathan Kiefer		Power: Battery	
Job Site: TX09			
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2019		ANSI C63.10:2013	
COMMENTS			
Reference Offset 21.22 dB (20dB attenuator+dc block+cable).			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	3	Signature <i>Jonathan Kiefer</i>	
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)
		Out Pwr (dBm)	Antenna Gain (dBi)
		EIRP (dBm)	EIRP Limit (dBm)
			Result
2400 MHz - 2483.5 MHz Band			
802.11(b) 1 Mbps			
	Low Channel 1, 2412 MHz	8.476	4
	Mid Channel 6, 2437 MHz	7.975	4
	High Channel 11, 2462 MHz	7.163	4
802.11(b) 11 Mbps			
	Low Channel 1, 2412 MHz	8.471	4
	Mid Channel 6, 2437 MHz	7.776	4
	High Channel 11, 2462 MHz	7.281	4.1
802.11(g) 6 Mbps			
	Low Channel 1, 2412 MHz	5.345	0.1
	Mid Channel 6, 2437 MHz	5.107	0.1
	High Channel 11, 2462 MHz	4.805	0.1
802.11(g) 36 Mbps			
	Low Channel 1, 2412 MHz	4.845	0.7
	Mid Channel 6, 2437 MHz	4.521	0.7
	High Channel 11, 2462 MHz	4.302	0.7
802.11(g) 54 Mbps			
	Low Channel 1, 2412 MHz	4.585	0.9
	Mid Channel 6, 2437 MHz	4.277	0.9
	High Channel 11, 2462 MHz	4.044	0.9
802.11(n) MCS0			
	Low Channel 1, 2412 MHz	4.097	0.1
	Mid Channel 6, 2437 MHz	3.701	0
	High Channel 11, 2462 MHz	3.494	0
802.11(n) MCS7			
	Low Channel 1, 2412 MHz	3.284	1
	Mid Channel 6, 2437 MHz	2.982	1
	High Channel 11, 2462 MHz	2.804	1

EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)

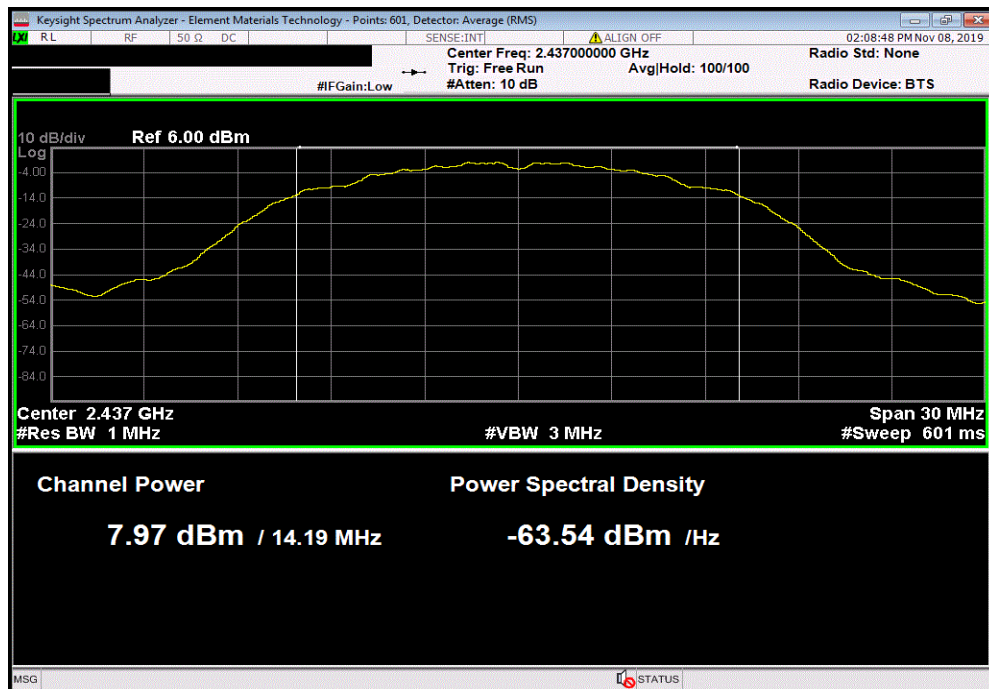


TbTx 2019.08.30.0 XMI 2019.09.05

2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
8.476	4	12.5	1.4	13.9	36	Pass



2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
7.975	4	12	1.4	13.4	36	Pass

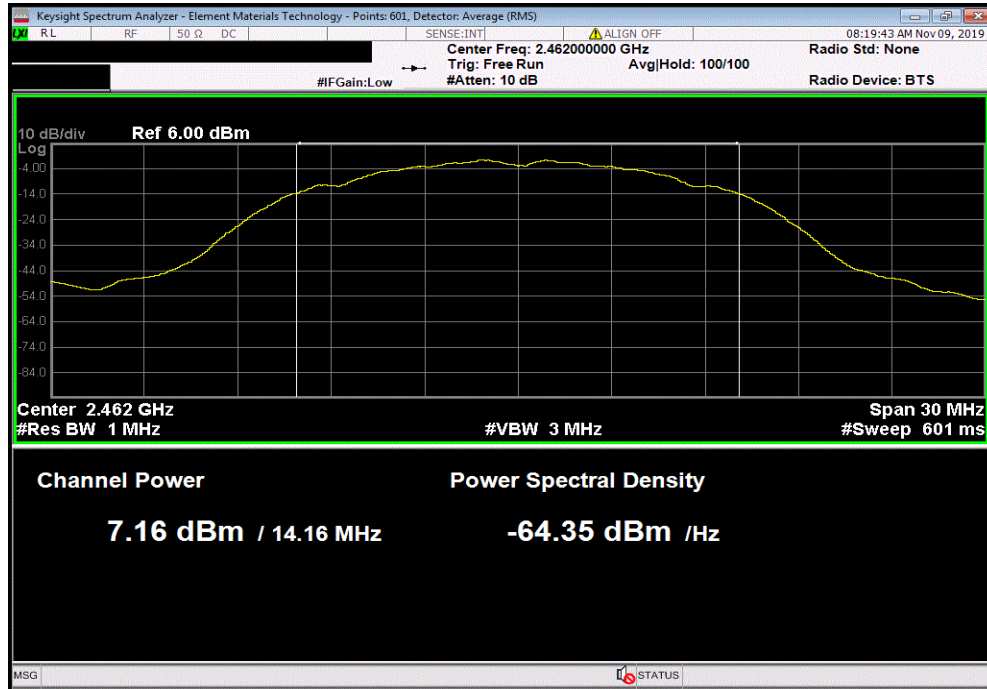


EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)

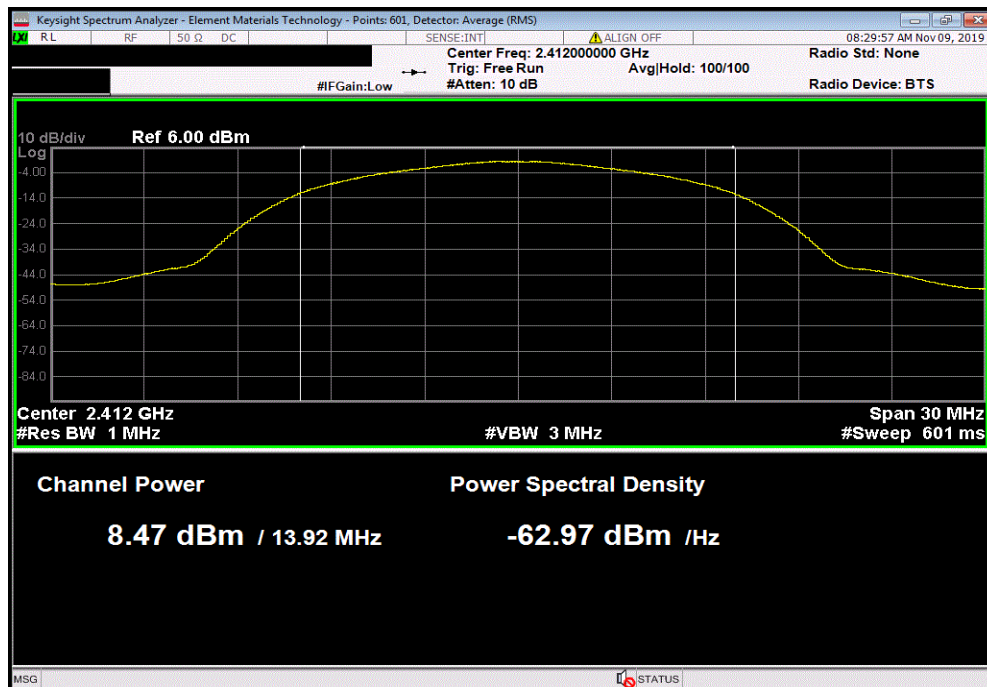


TbTx 2019.08.30.0 XMI 2019.09.05

2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
7.163	4	11.2	1.4	12.6	36	Pass



2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
8.471	4	12.5	1.4	13.9	36	Pass

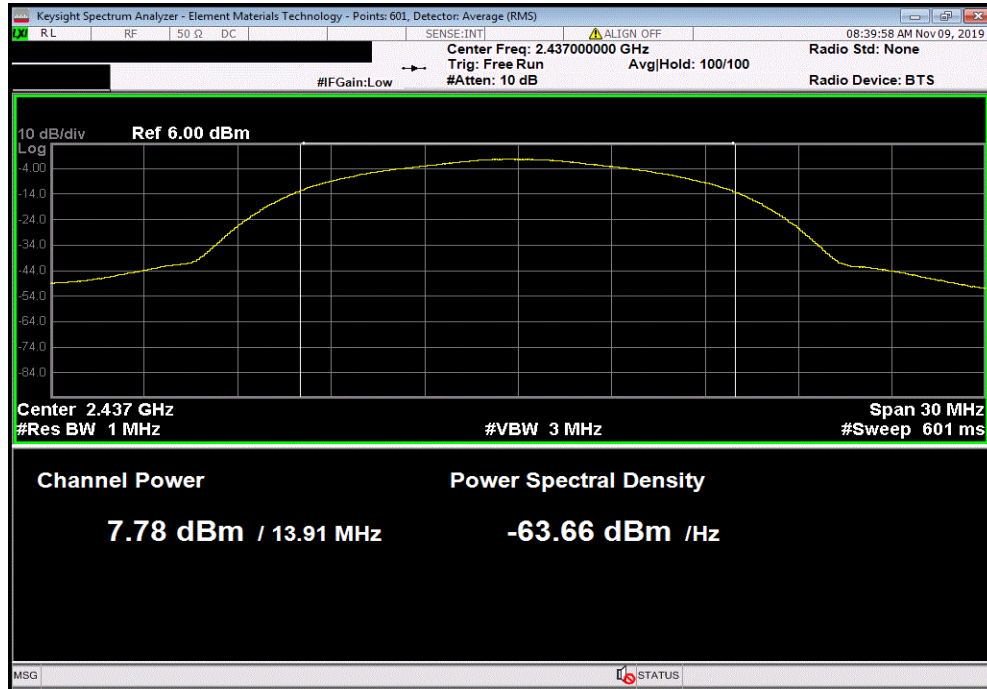


EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)

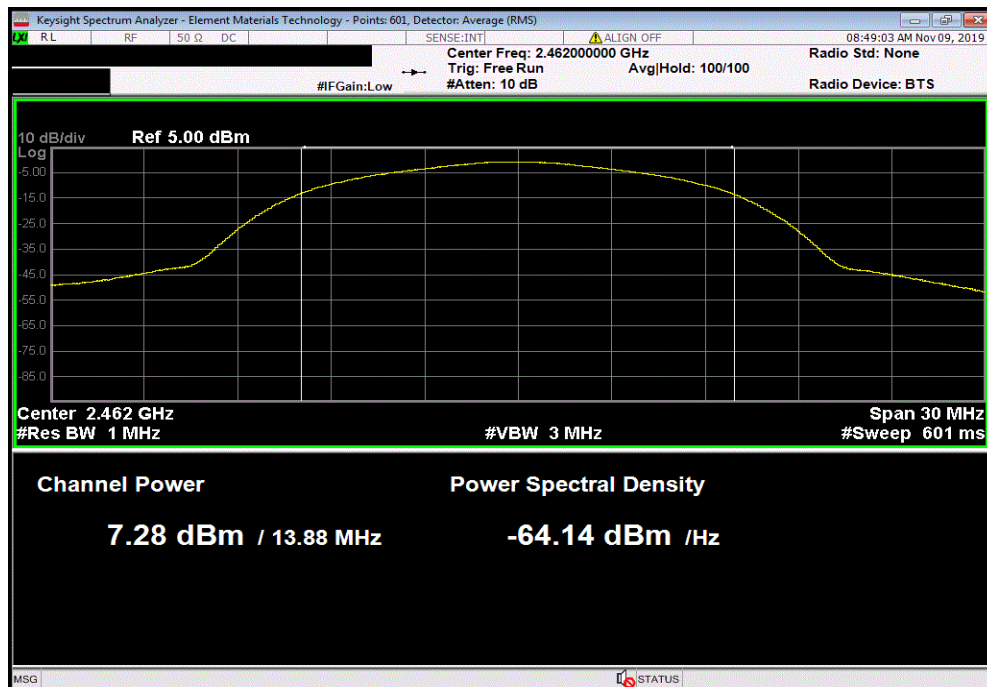


TbTx 2019.08.30.0 XMt 2019.09.05

2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
7.776	4	11.8	1.4	13.2	36	Pass



2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
7.281	4.1	11.3	1.4	12.7	36	Pass

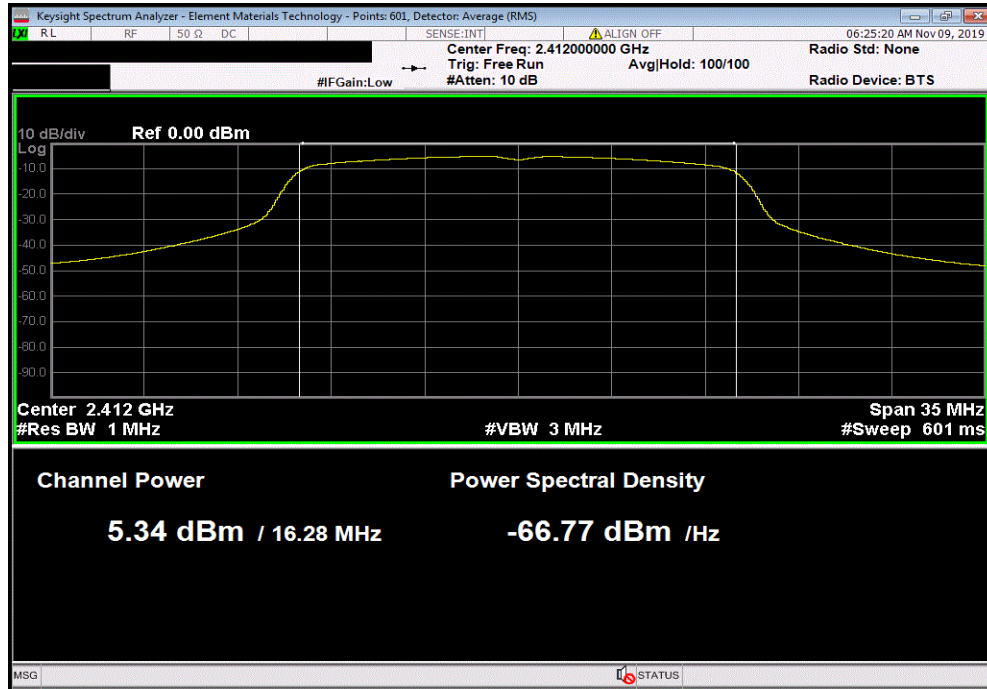


EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)

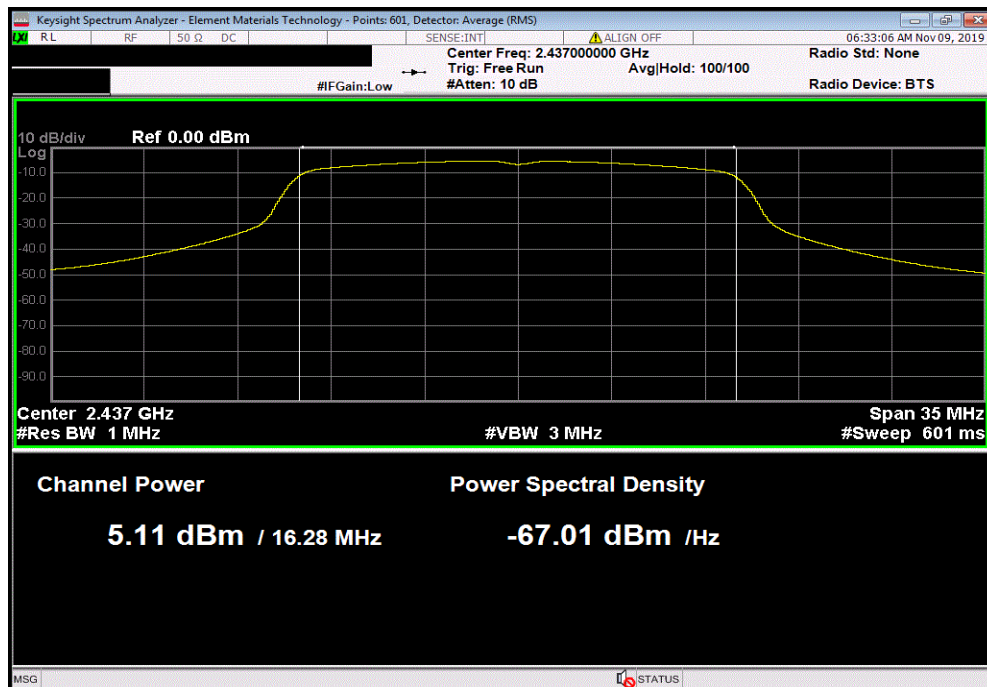


TbTx 2019.08.30.0 XMI 2019.09.05

2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
5.345	0.1	5.5	1.4	6.9	36	Pass



2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
5.107	0.1	5.2	1.4	6.6	36	Pass

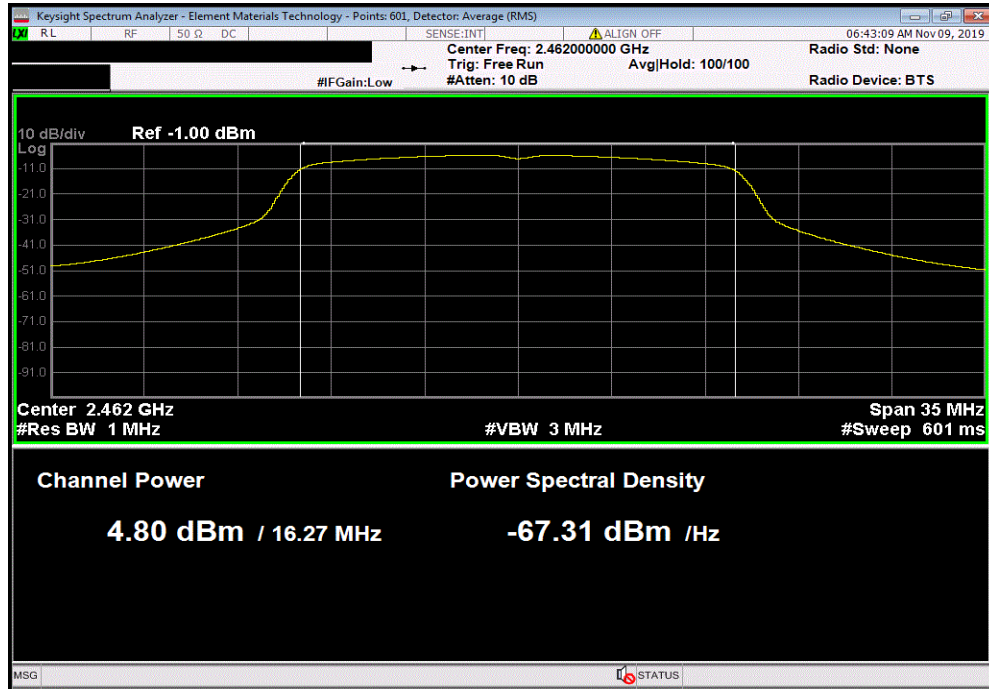


EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)

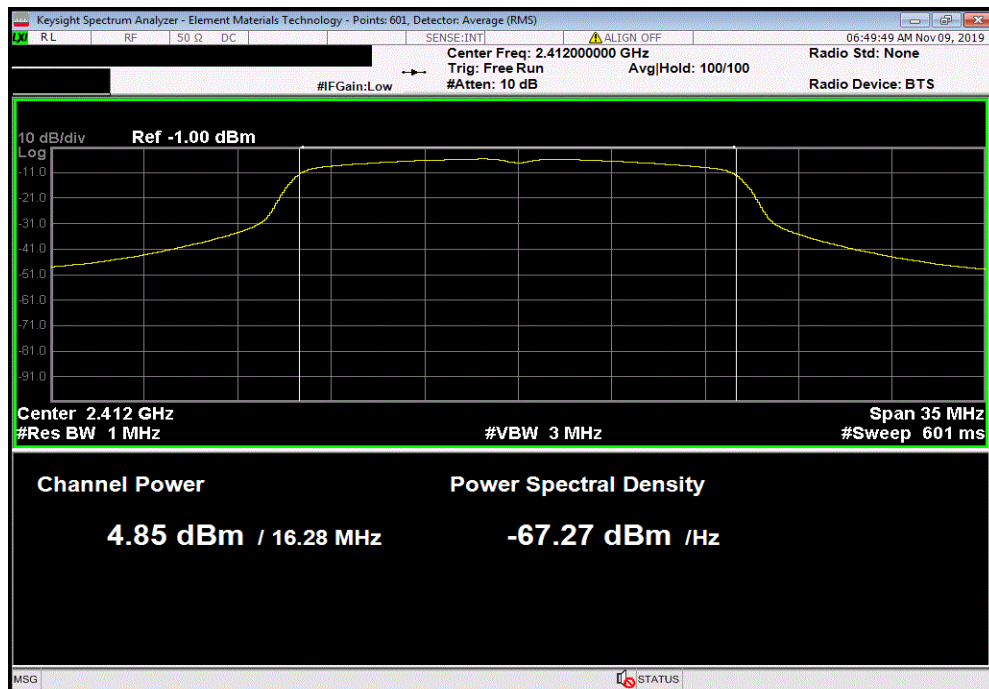


TbTx 2019.08.30.0 XMI 2019.09.05

2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
4.805	0.1	4.9	1.4	6.3	36	Pass



2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
4.845	0.7	5.5	1.4	6.9	36	Pass

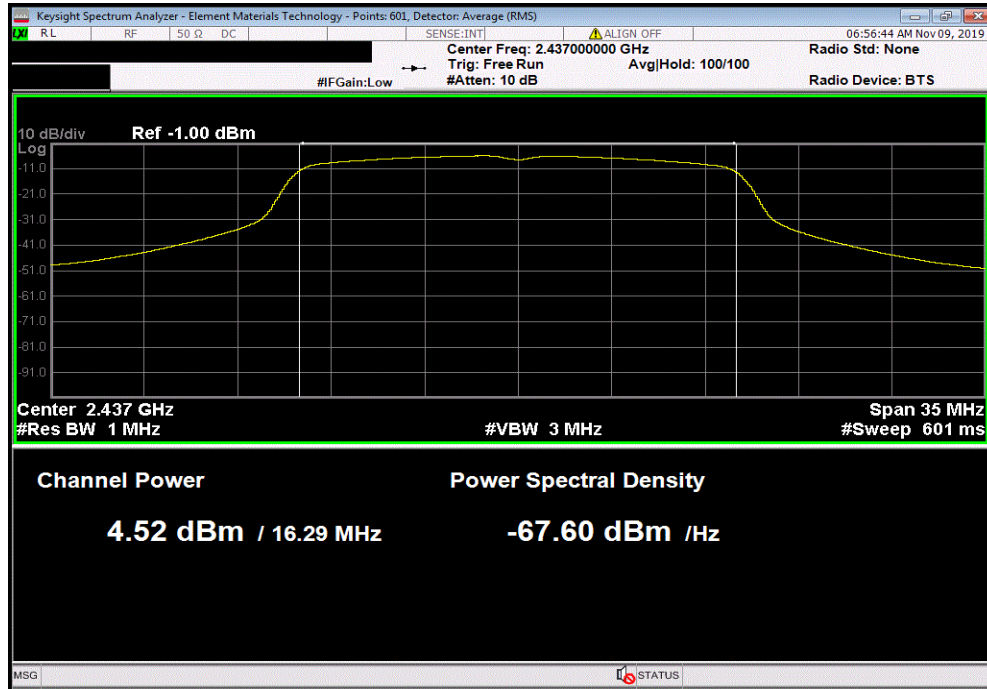


EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)

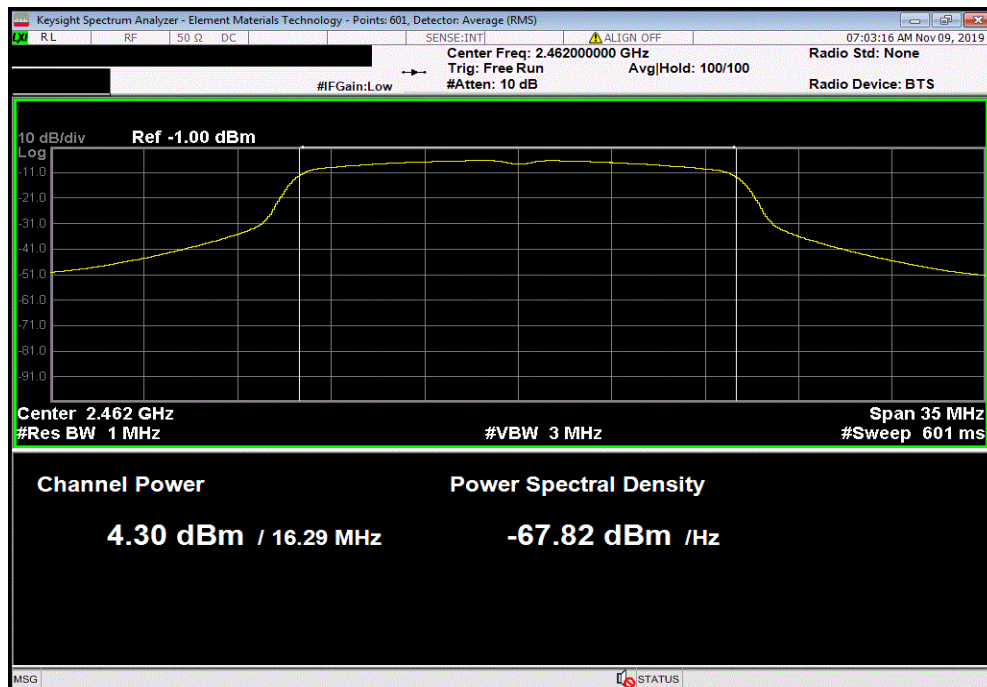


TbTx 2019.08.30.0 XMI 2019.09.05

2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
4.521	0.7	5.2	1.4	6.6	36	Pass



2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
4.302	0.7	5	1.4	6.4	36	Pass

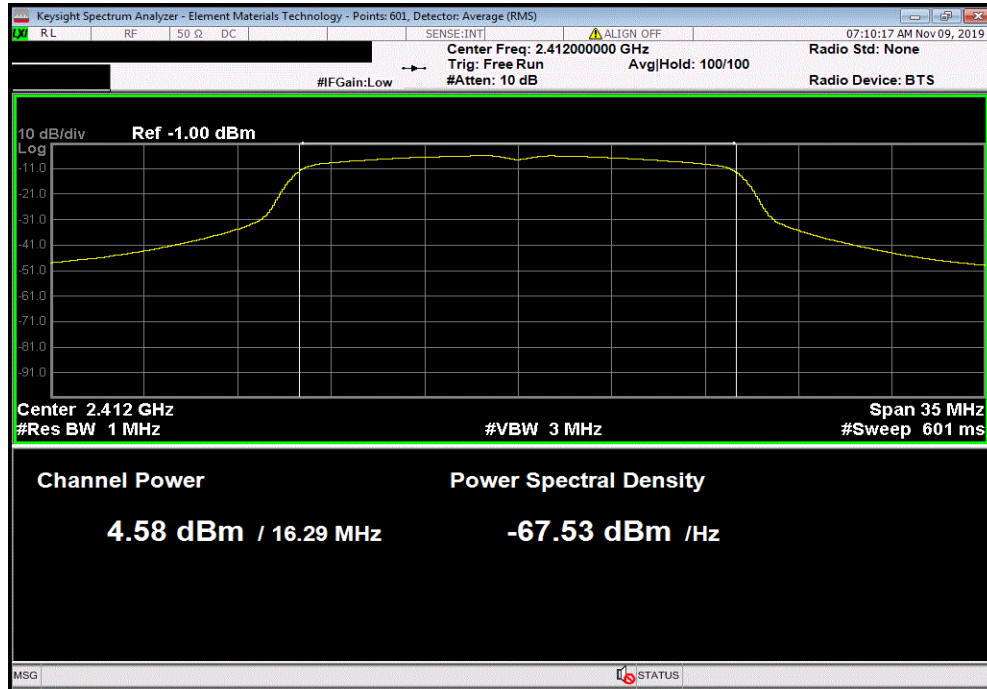


EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)

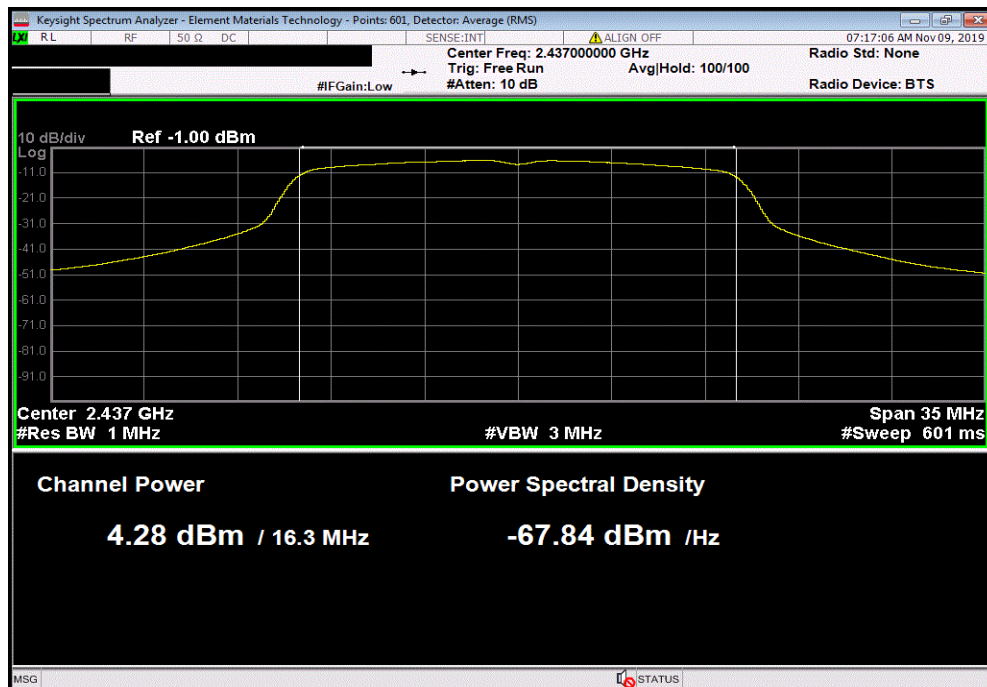


TbTx 2019.08.30.0 XMI 2019.09.05

2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
4.585	0.9	5.5	1.4	6.9	36	Pass



2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
4.277	0.9	5.2	1.4	6.6	36	Pass

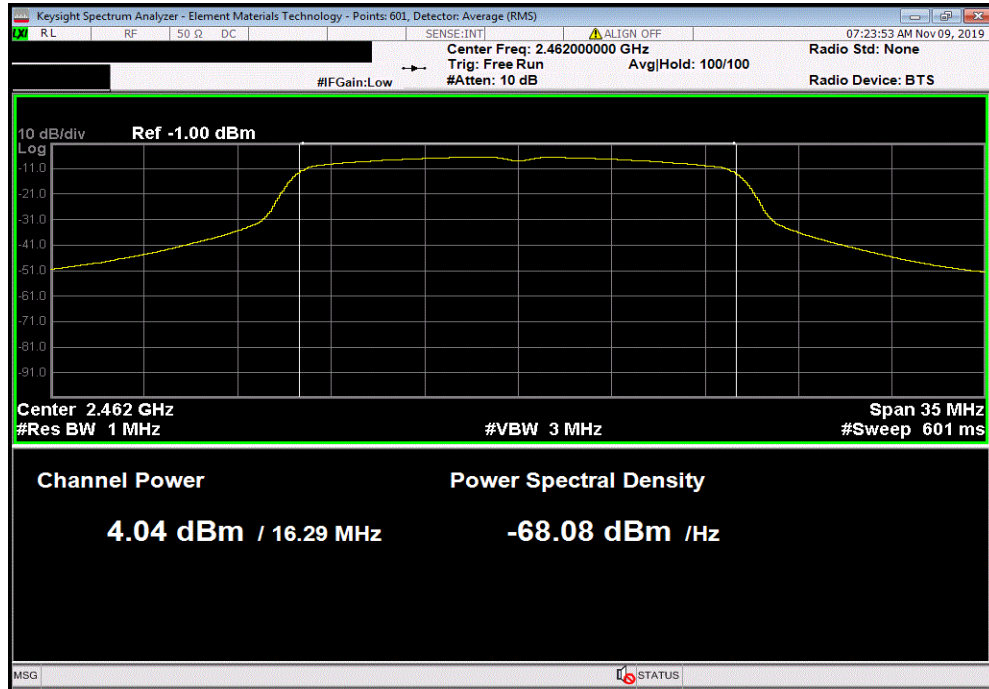


EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)

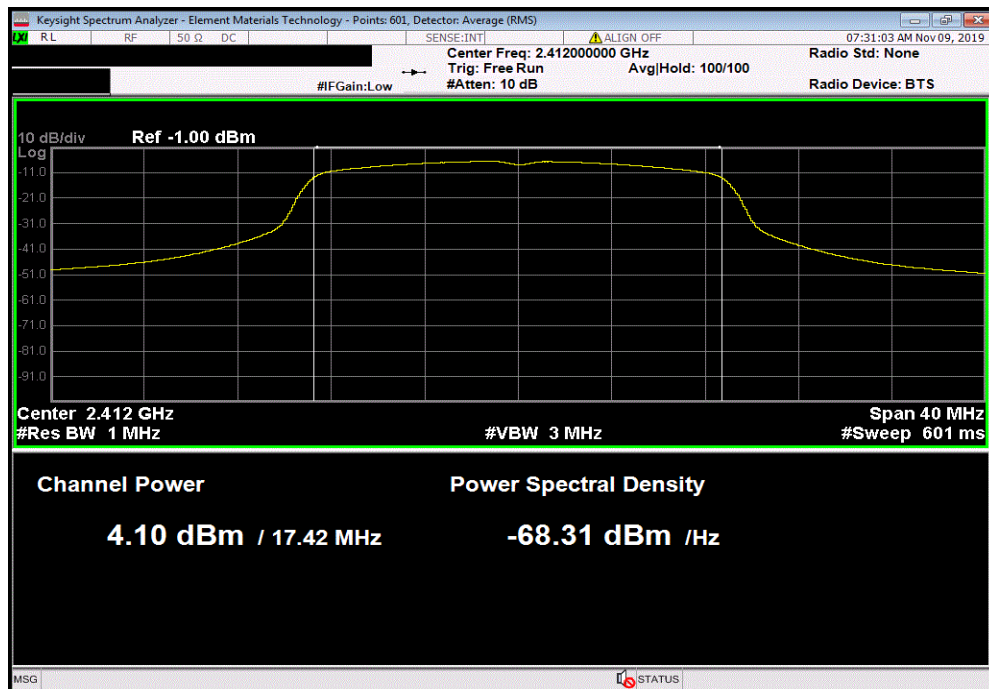


TWTx 2019.08.30.0 XMI 2019.09.05

2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
4.044	0.9	5	1.4	6.4	36	Pass



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
4.097	0.1	4.2	1.4	5.6	36	Pass

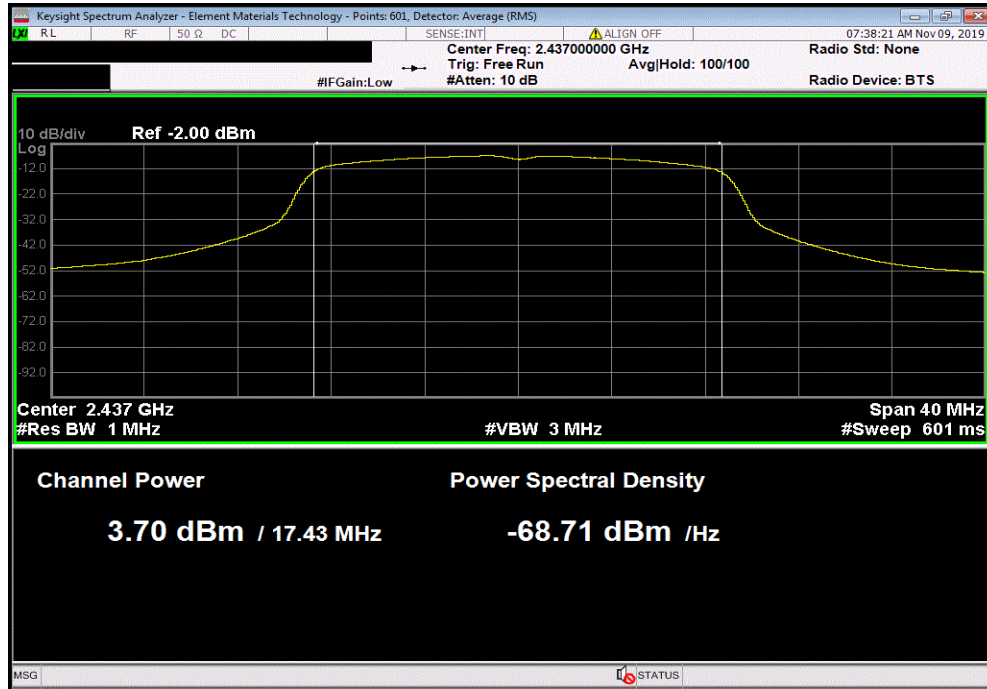


EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)

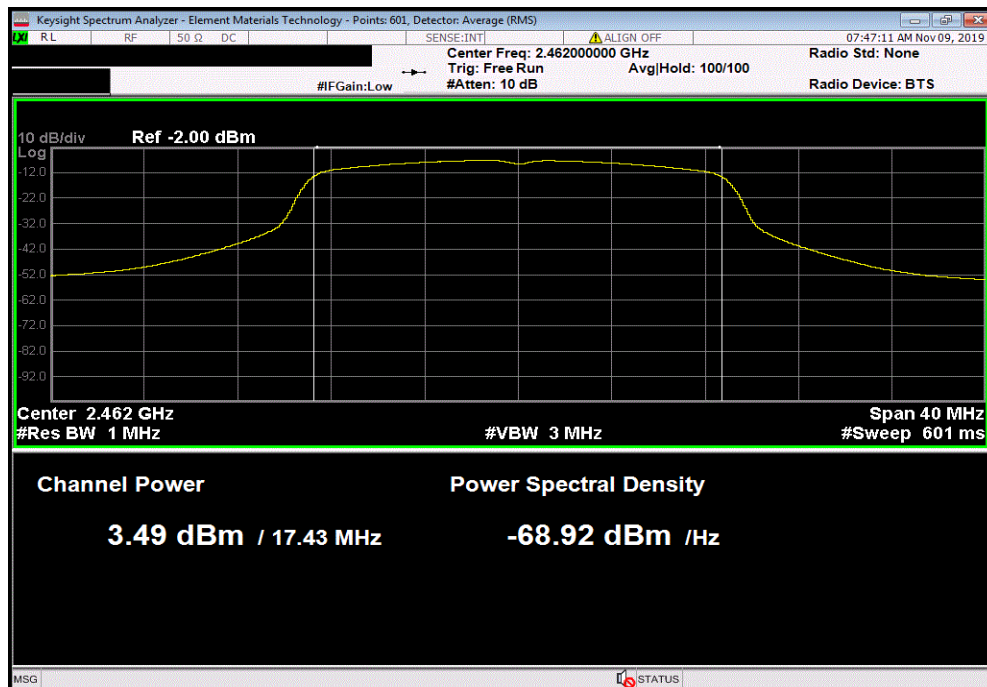


TbTx 2019.08.30.0 XMI 2019.09.05

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Mid Channel 6, 2437 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
3.701	0	3.7	1.4	5.1	36	Pass



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
3.494	0	3.5	1.4	4.9	36	Pass

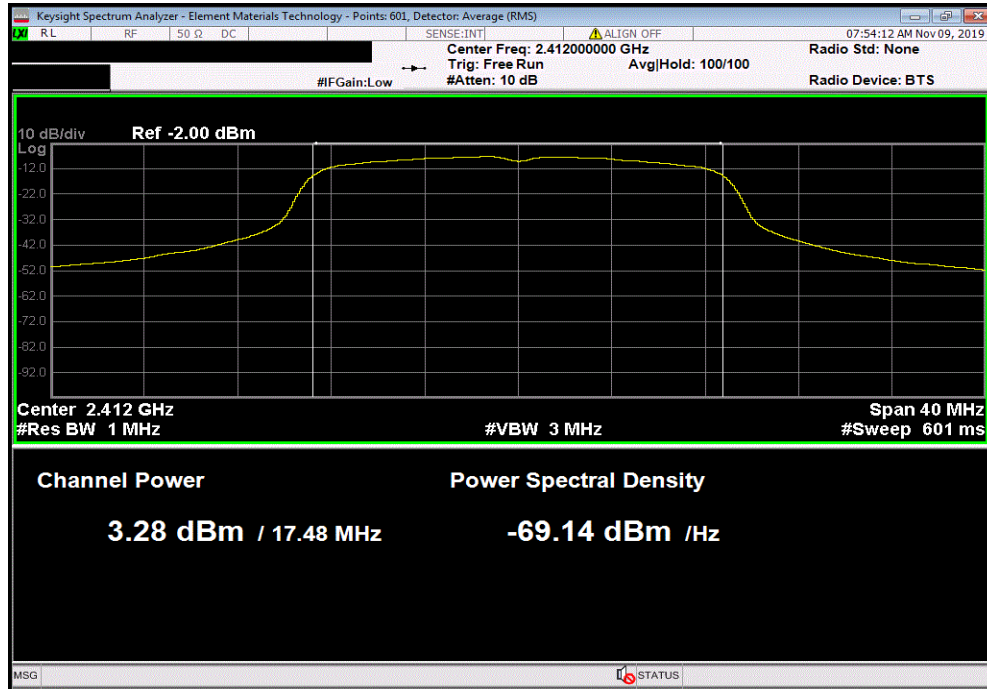


EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)

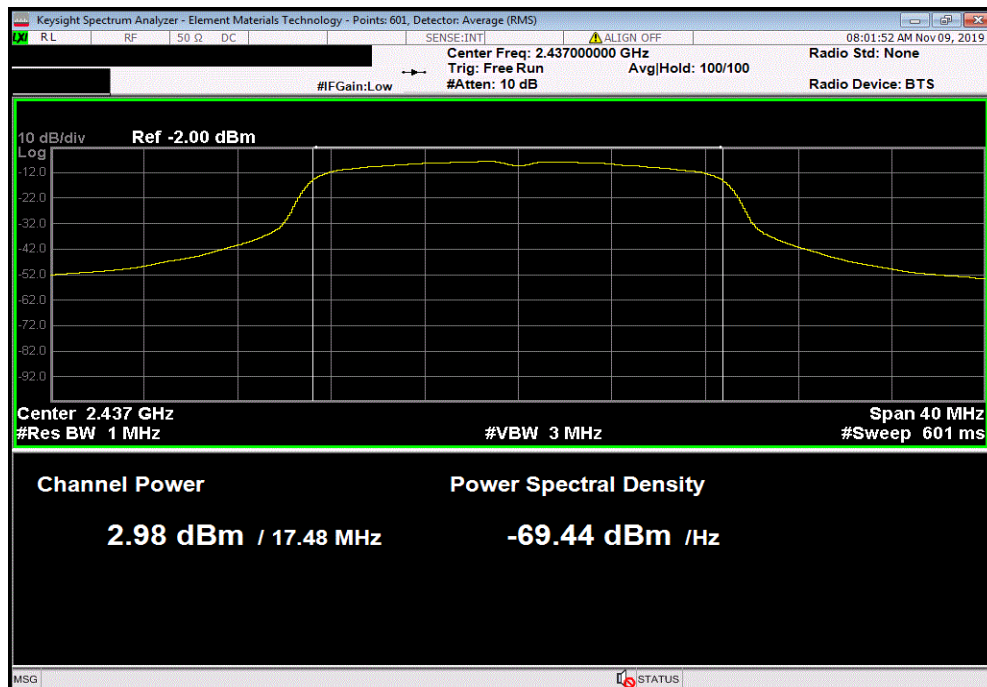


TbTx 2019.08.30.0 XMt 2019.09.05

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1, 2412 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
3.284	1	4.3	1.4	5.7	36	Pass



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Mid Channel 6, 2437 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
2.982	1	4	1.4	5.4	36	Pass



EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)



TbTx 2019.08.30.0 XMI 2019.09.05

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, High Channel 11, 2462 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
2.804	1	3.8	1.4	5.2	36	Pass

