OCCUPIED BANDWIDTH

XMit 2020.12.30.0

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
Block - DC	Fairview Microwave	SD3379	AMZ	2020-11-04	2021-11-04
Attenuator	Fairview Microwave	18B5W-26	RFY	2020-06-03	2021-06-03
Generator - Signal	Agilent	N5183A	TIK	2019-04-30	2022-04-30
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	2021-04-16	2022-04-16
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	2020-09-14	2021-09-14

TEST DESCRIPTION

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

TbtTx 2019.08.30.0 XMit 2020.12.30.0

EUT:	Zoll R-Series Data Comm II C2PC			**Work Order:**	LGPD0258
Serial Number:	LB211400035			**Date:**	24-May-21
Customer:	Logic PD, Inc.			**Temperature:**	22 °C
Attendees:	Eric Fritz			**Humidity:**	57.1% RH
Project:	None			**Barometric Pres.:**	1014 mbar
Tested by:	Dan Haas	**Power:**	3.7VDC	**Job Site:**	MN08

TEST SPECIFICATIONS	Test Method
FCC 15.247:2021	ANSI C63.10:2013

COMMENTS

Reference level offest includes measurement cable, attenuator, and DC block.

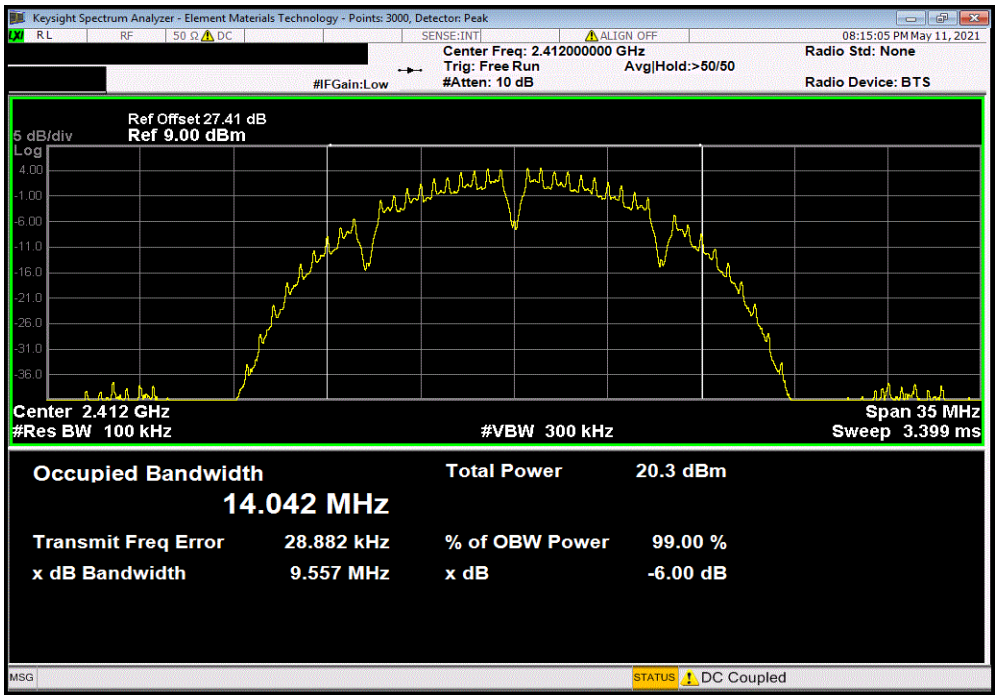
DEVIATIONS FROM TEST STANDARD

None

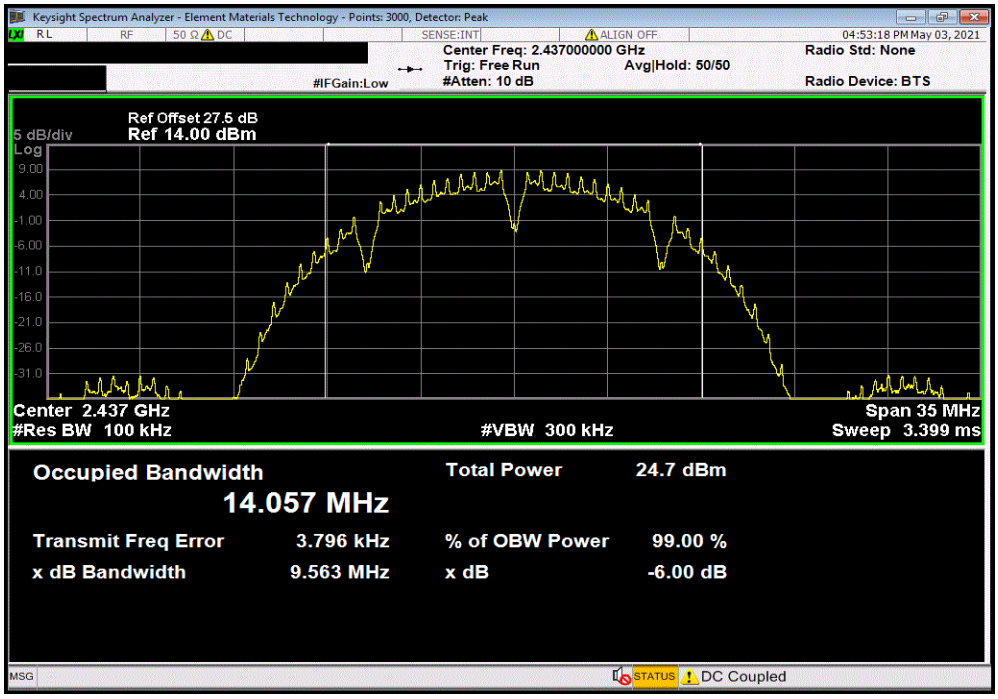
Configuration #	2	Signature

	Value	Limit (>)	Result
2400 MHz - 2483.5 MHz Band			
802.11(b) 1 Mbps			
Low Channel 1, 2412 MHz	9.557 MHz	500 kHz	Pass
Mid Channel 6, 2437 MHz	9.563 MHz	500 kHz	Pass
High Channel 11, 2462 MHz	9.557 MHz	500 kHz	Pass
802.11(b) 11 Mbps			
Low Channel 1, 2412 MHz	11.056 MHz	500 kHz	Pass
Mid Channel 6, 2437 MHz	11.066 MHz	500 kHz	Pass
High Channel 11, 2462 MHz	11.065 MHz	500 kHz	Pass
802.11(g) 6 Mbps			
Low Channel 1, 2412 MHz	15.128 MHz	500 kHz	Pass
Mid Channel 6, 2437 MHz	15.125 MHz	500 kHz	Pass
High Channel 11, 2462 MHz	15.124 MHz	500 kHz	Pass
802.11(g) 36 Mbps			
Low Channel 1, 2412 MHz	16.511 MHz	500 kHz	Pass
Mid Channel 6, 2437 MHz	16.495 MHz	500 kHz	Pass
High Channel 11, 2462 MHz	16.51 MHz	500 kHz	Pass
802.11(g) 54 Mbps			
Low Channel 1, 2412 MHz	16.498 MHz	500 kHz	Pass
Mid Channel 6, 2437 MHz	16.513 MHz	500 kHz	Pass
High Channel 11, 2462 MHz	16.516 MHz	500 kHz	Pass
802.11(n) MCS0			
Low Channel 1, 2412 MHz	15.128 MHz	500 kHz	Pass
Mid Channel 6, 2437 MHz	15.105 MHz	500 kHz	Pass
High Channel 11, 2462 MHz	15.132 MHz	500 kHz	Pass
802.11(n) MCS7			
Low Channel 1, 2412 MHz	17.74 MHz	500 kHz	Pass
Mid Channel 6, 2437 MHz	17.735 MHz	500 kHz	Pass
High Channel 11, 2462 MHz	17.737 MHz	500 kHz	Pass

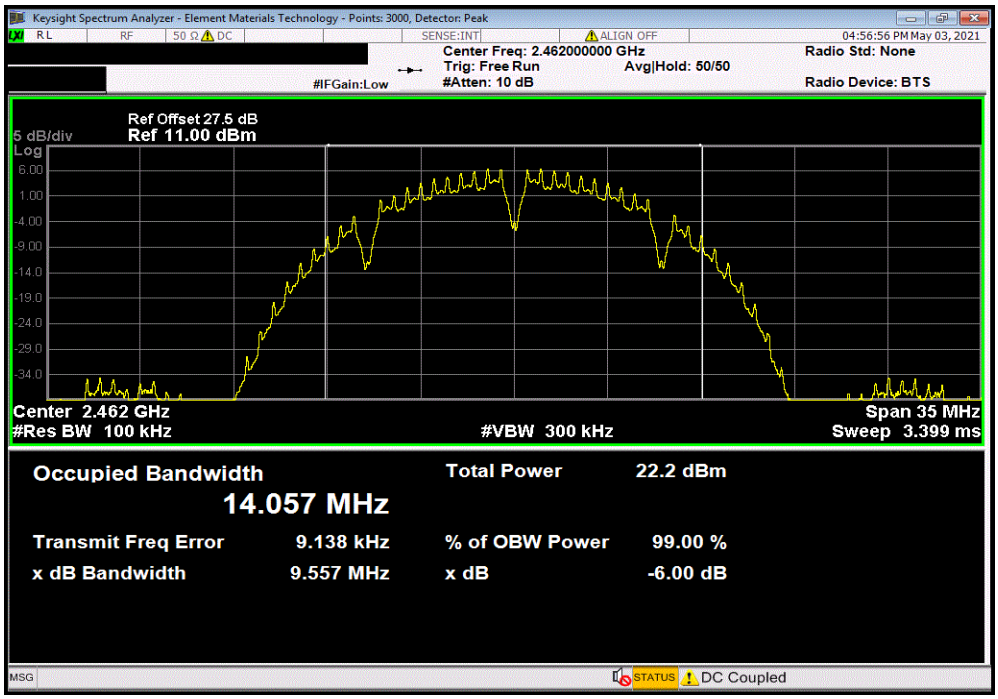
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz						
				Value	Limit (>)	Result
				9.557 MHz	500 kHz	Pass



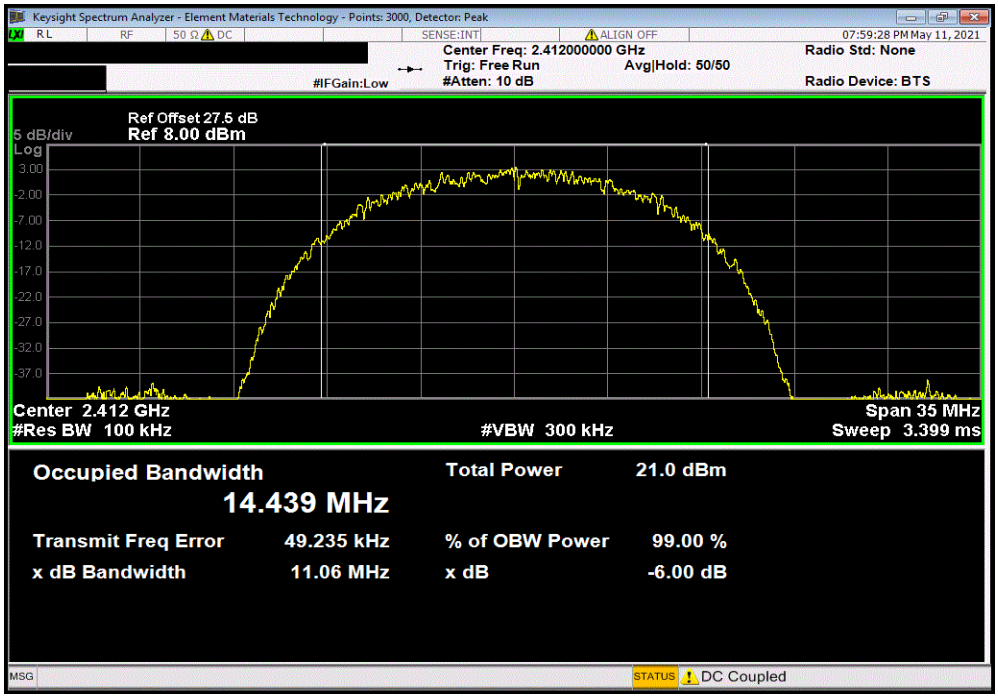
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz						
				Value	Limit (>)	Result
				9.563 MHz	500 kHz	Pass



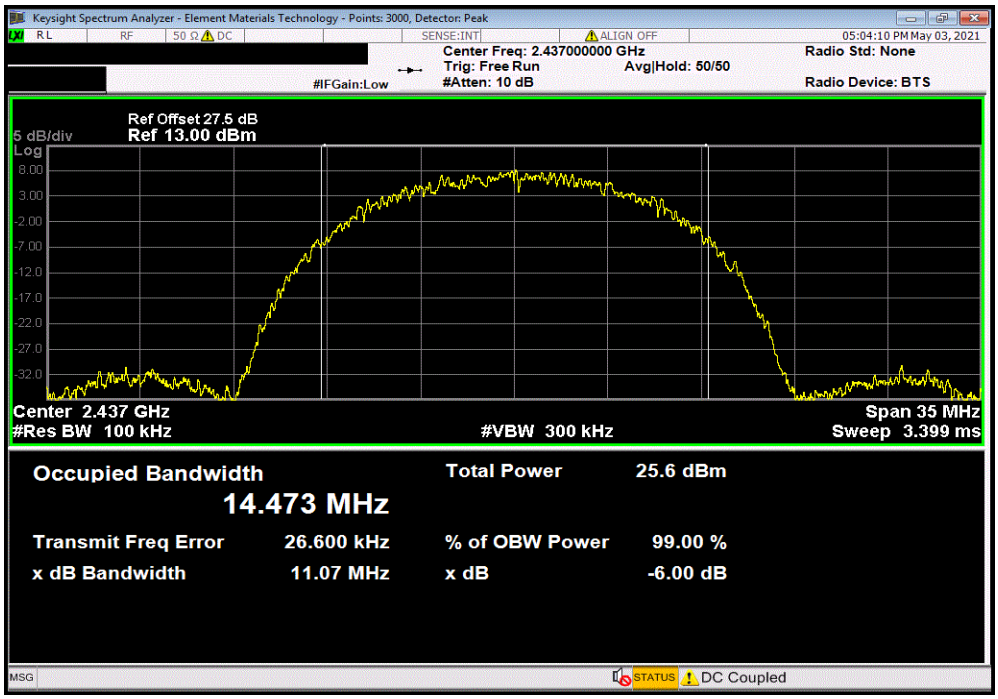
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz						
				Value	Limit (>)	Result
				9.557 MHz	500 kHz	Pass



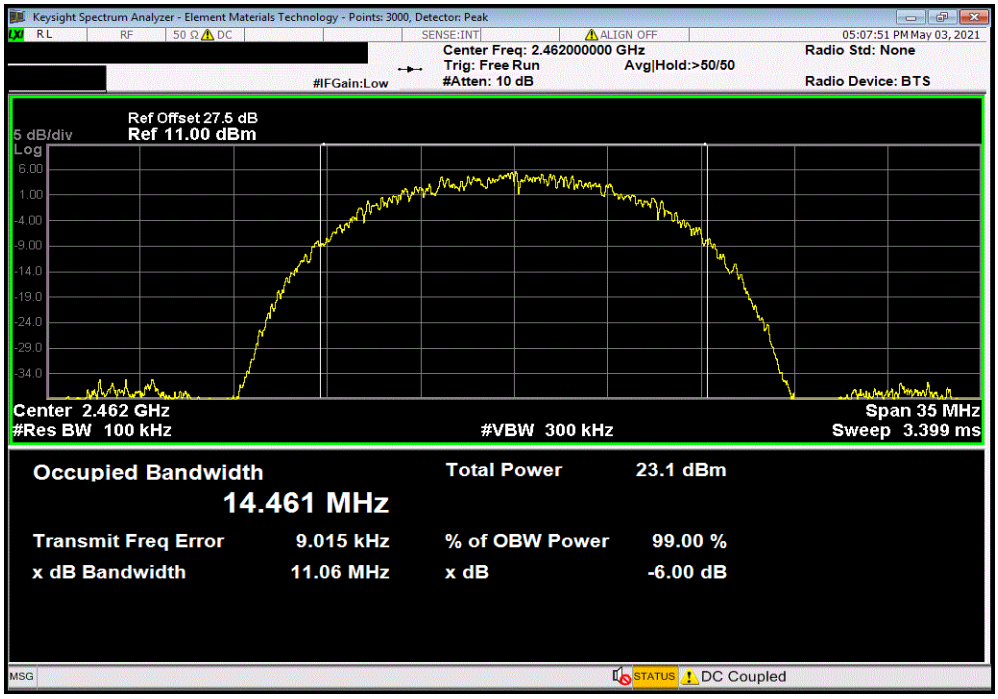
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz						
				Value	Limit (>)	Result
				11.056 MHz	500 kHz	Pass



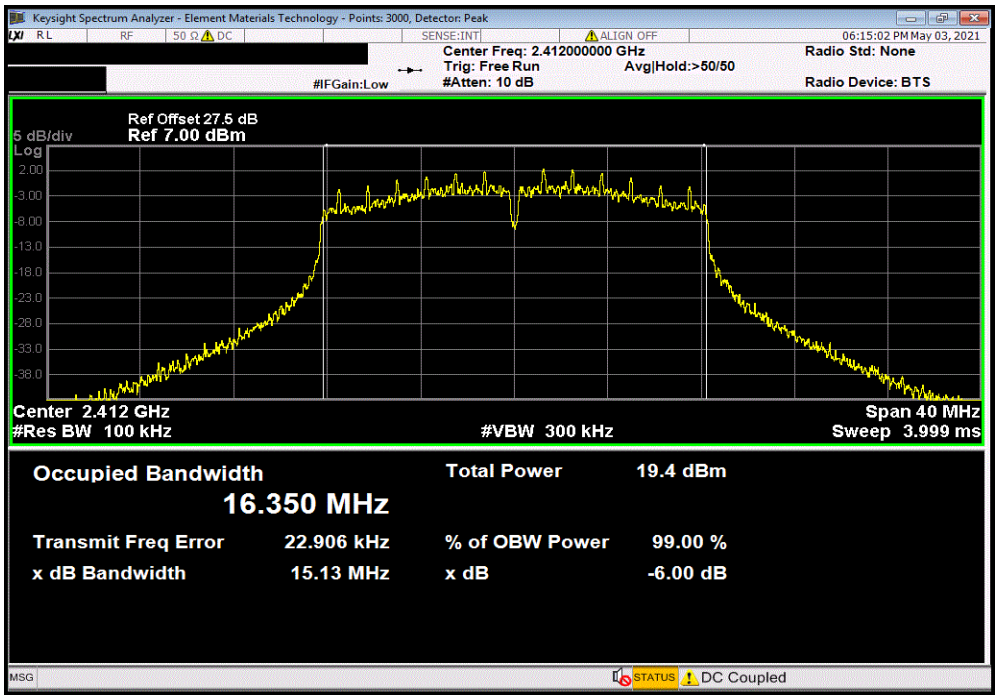
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz						
				Value	Limit (>)	Result
				11.066 MHz	500 kHz	Pass



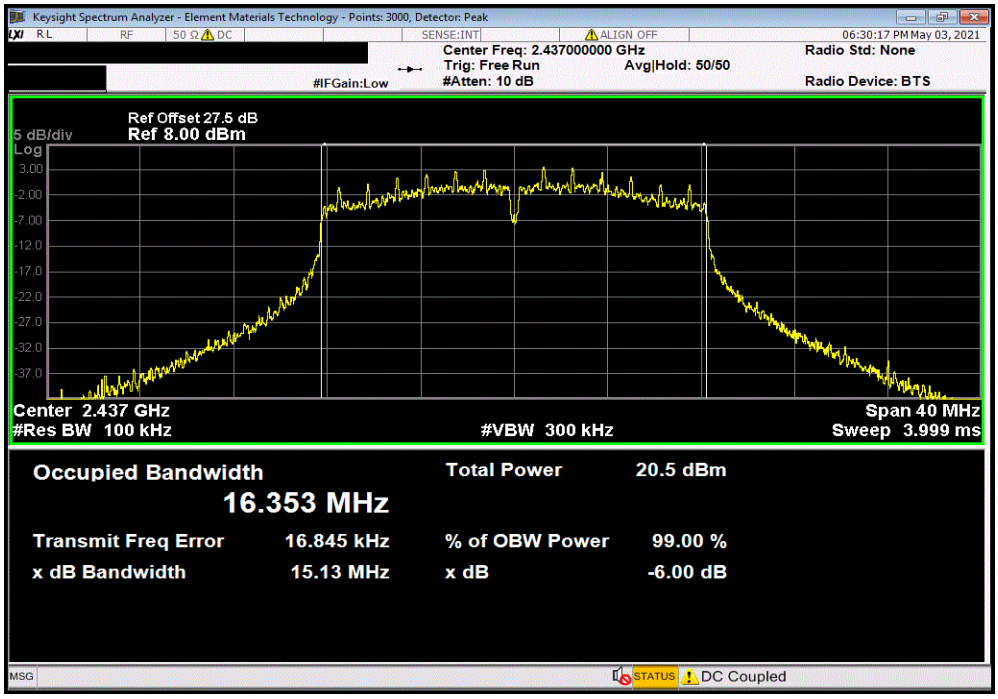
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz						
				Value	Limit (>)	Result
				11.065 MHz	500 kHz	Pass



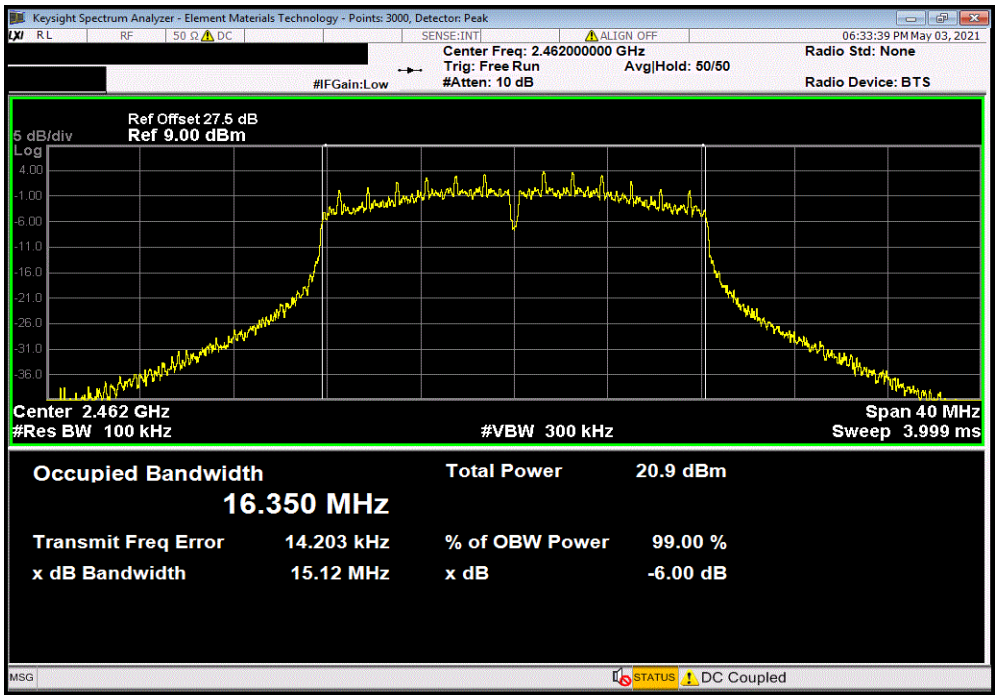
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz						
				Value	Limit (>)	Result
				15.128 MHz	500 kHz	Pass



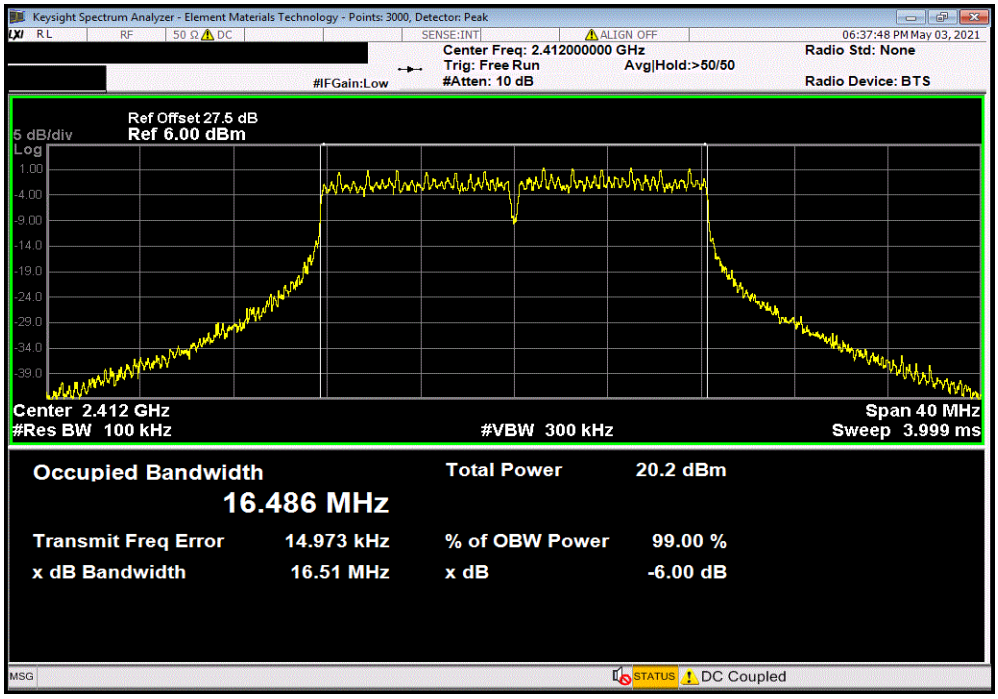
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz						
				Value	Limit (>)	Result
				15.125 MHz	500 kHz	Pass



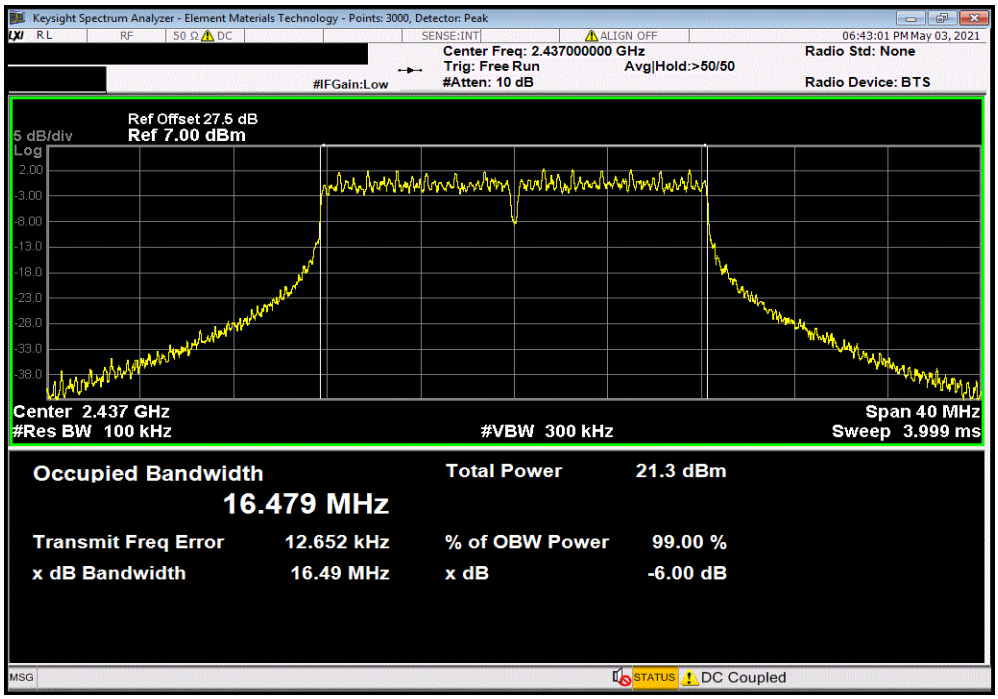
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz						
				Value	Limit (>)	Result
				15.124 MHz	500 kHz	Pass



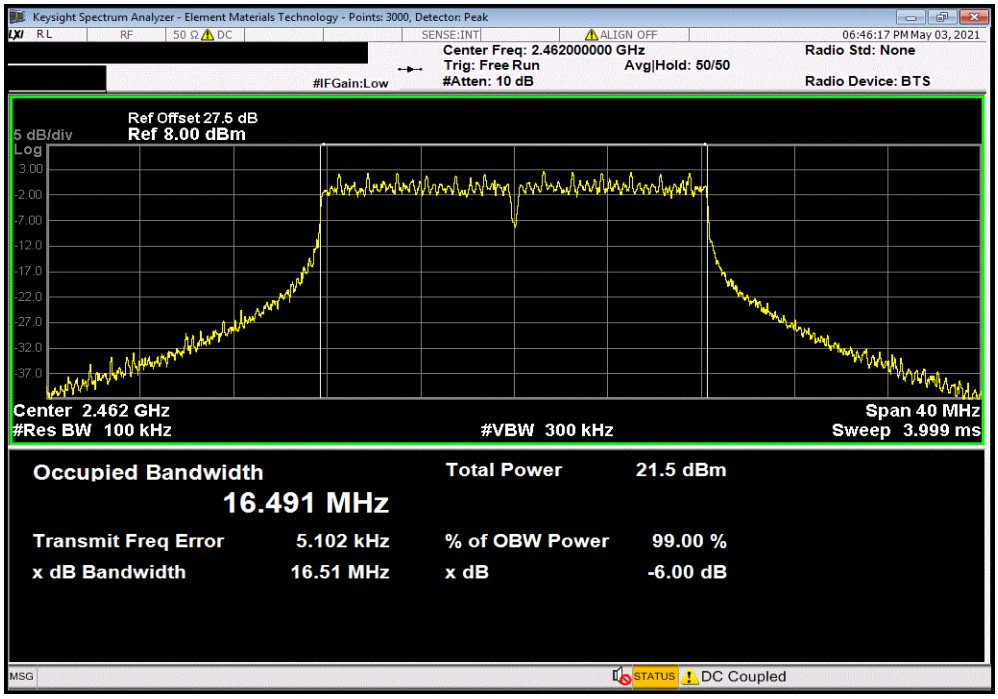
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz						
				Value	Limit (>)	Result
				16.511 MHz	500 kHz	Pass



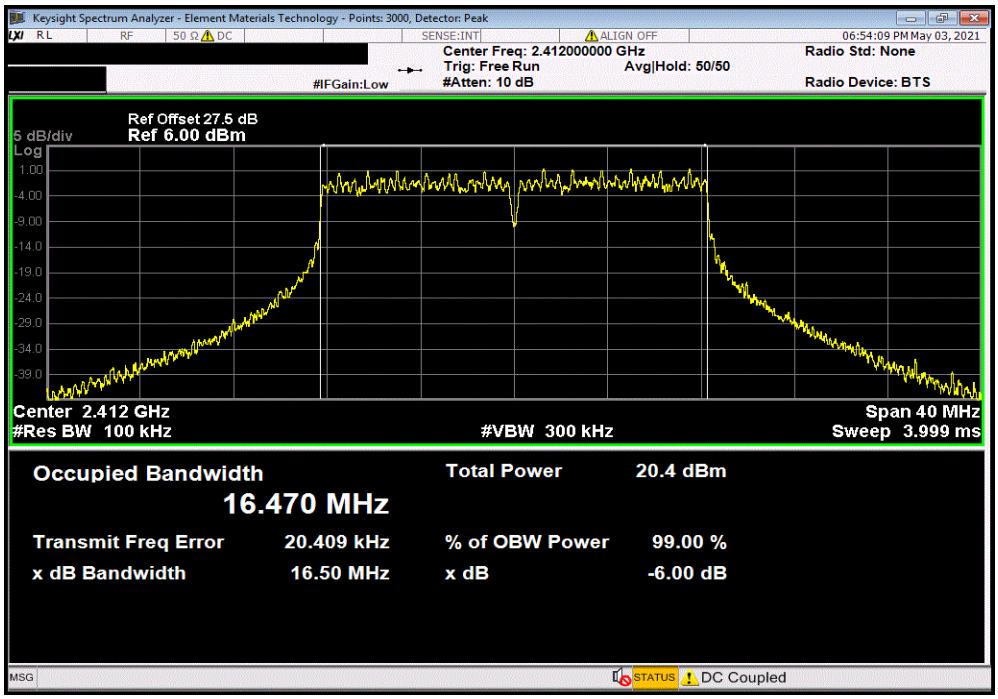
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz						
				Value	Limit (>)	Result
				16.495 MHz	500 kHz	Pass



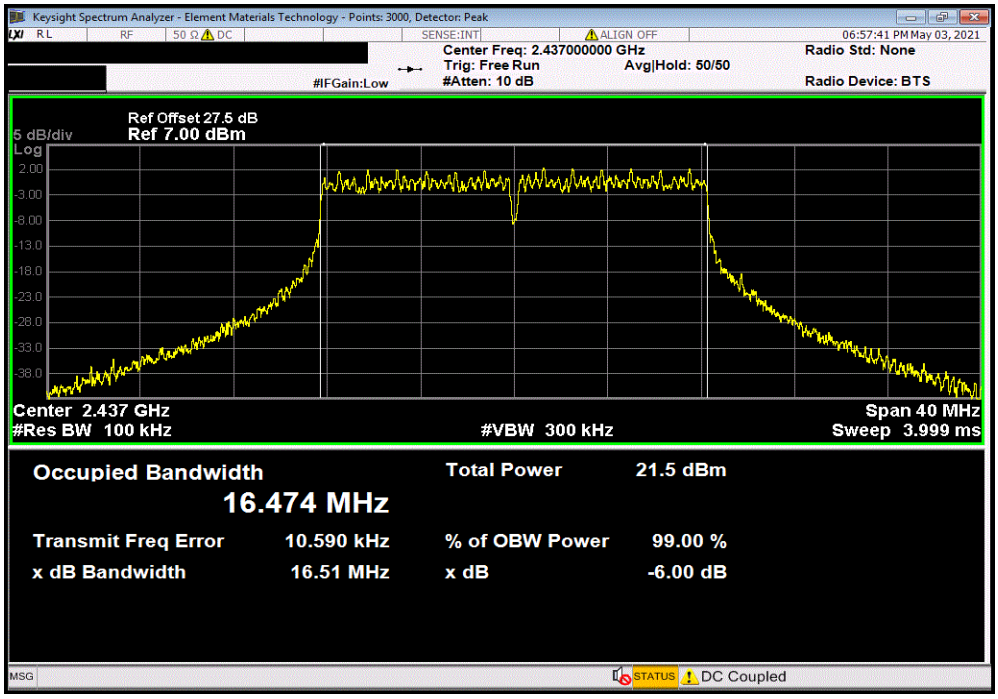
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz						
				Value	Limit (>)	Result
				16.51 MHz	500 kHz	Pass



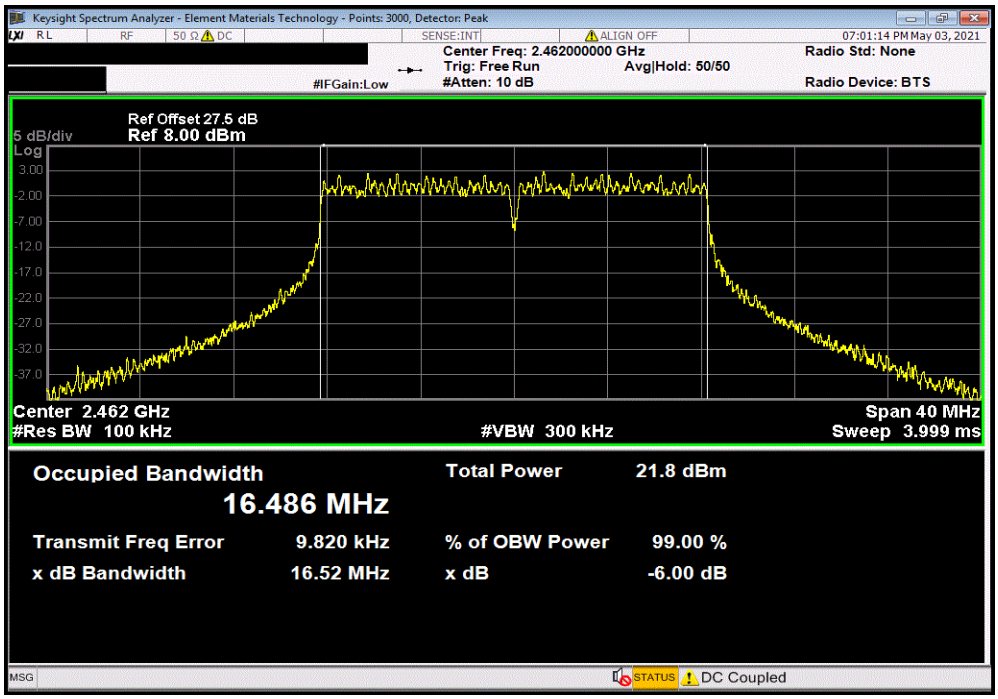
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz						
				Value	Limit (>)	Result
				16.498 MHz	500 kHz	Pass



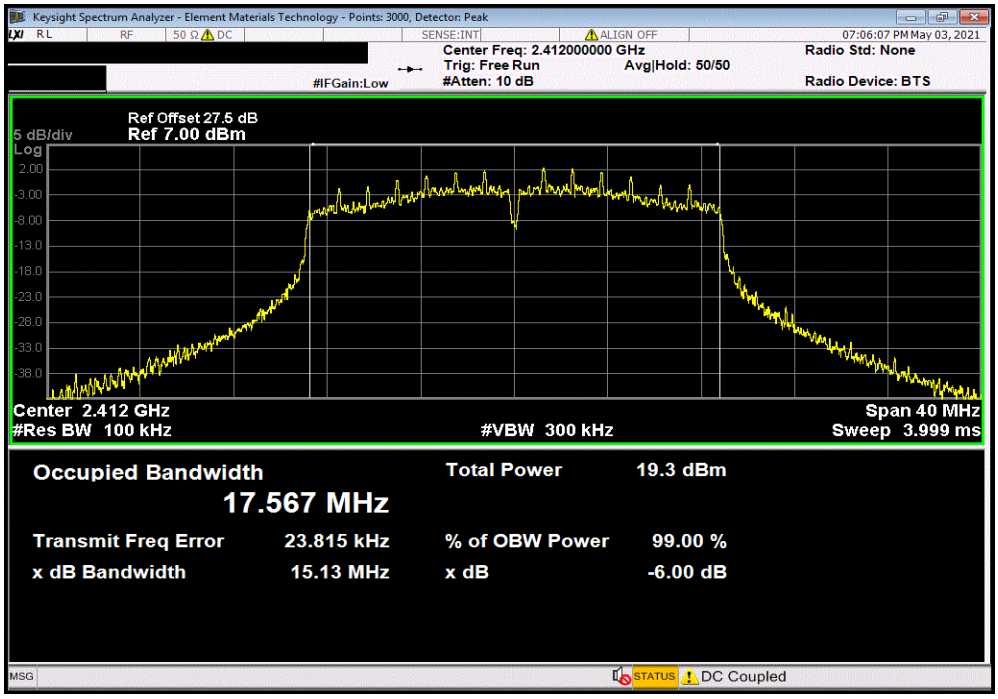
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz						
				Value	Limit (>)	Result
				16.513 MHz	500 kHz	Pass



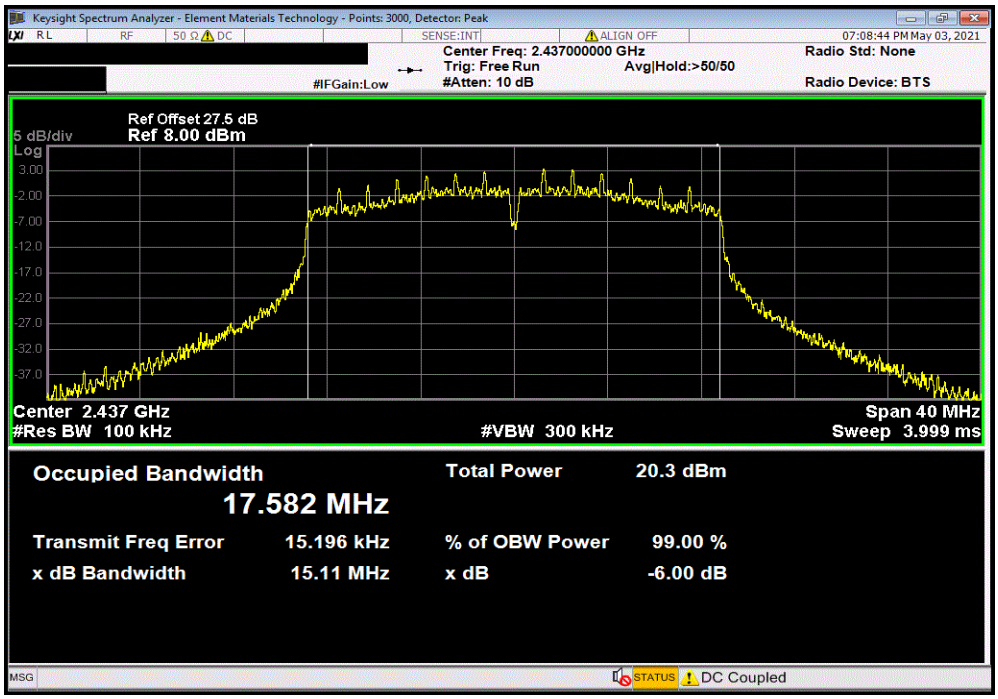
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz						
				Value	Limit (>)	Result
				16.516 MHz	500 kHz	Pass



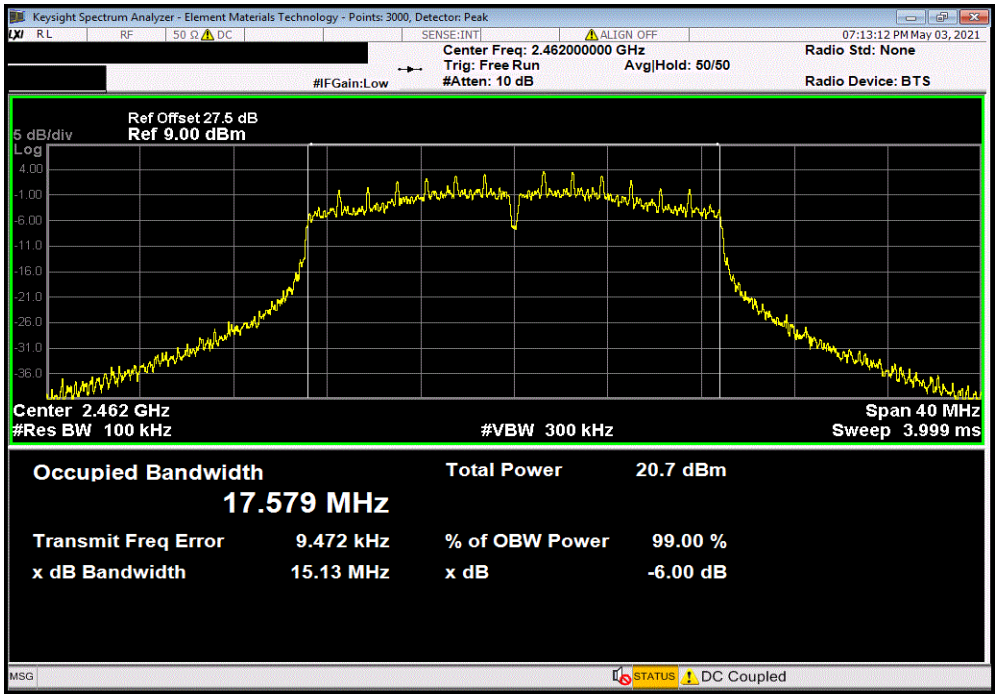
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz						
				Value	Limit (>)	Result
				15.128 MHz	500 kHz	Pass



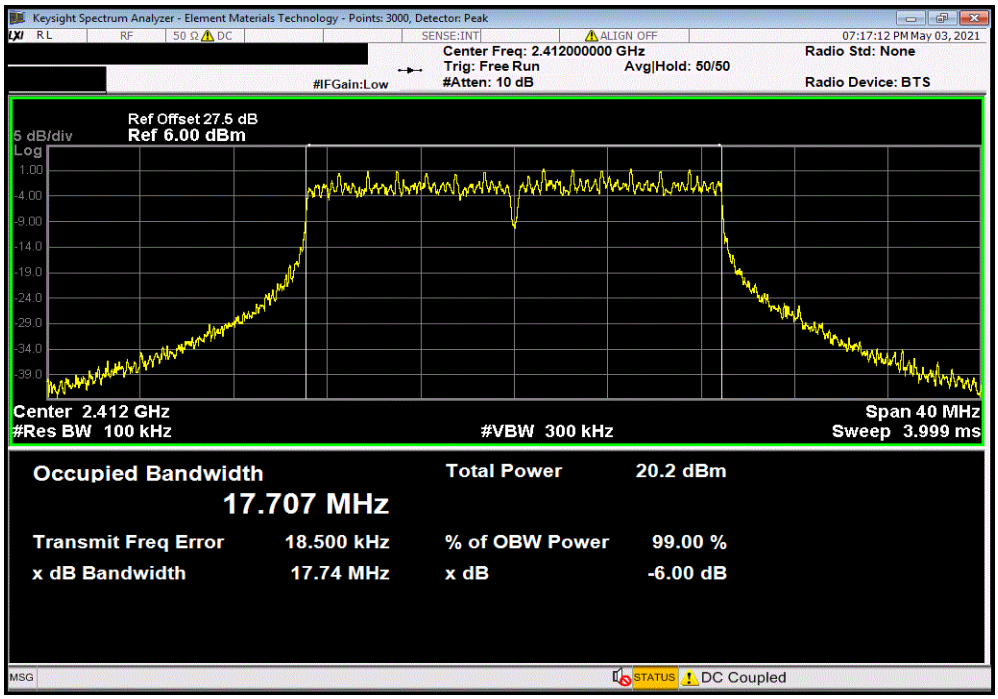
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Mid Channel 6, 2437 MHz						
				Value	Limit (>)	Result
				15.105 MHz	500 kHz	Pass



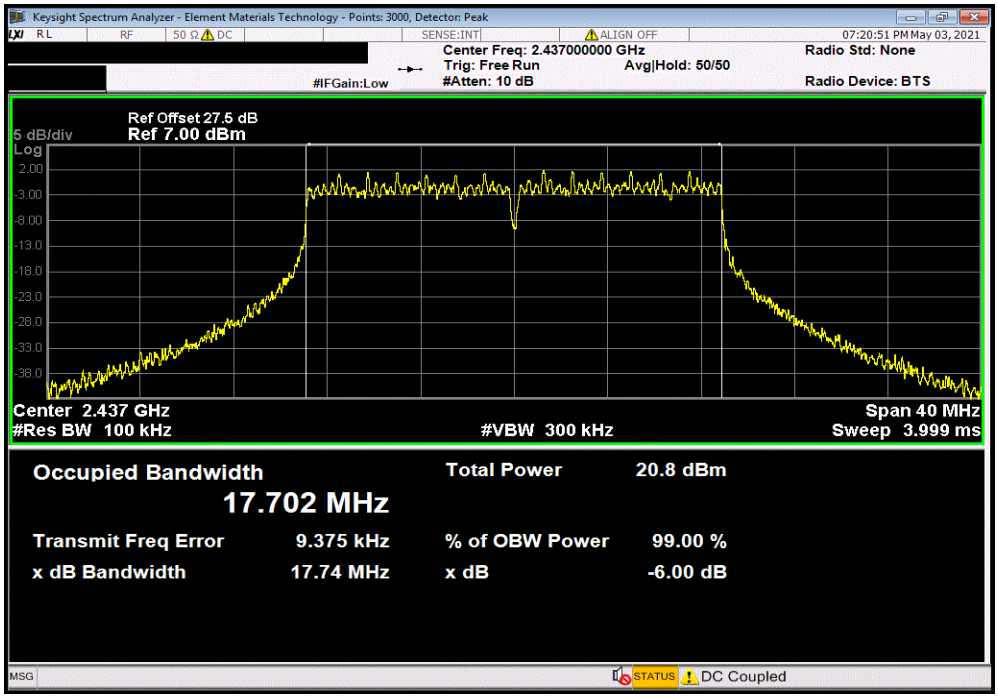
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz						
				Value	Limit (>)	Result
				15.132 MHz	500 kHz	Pass



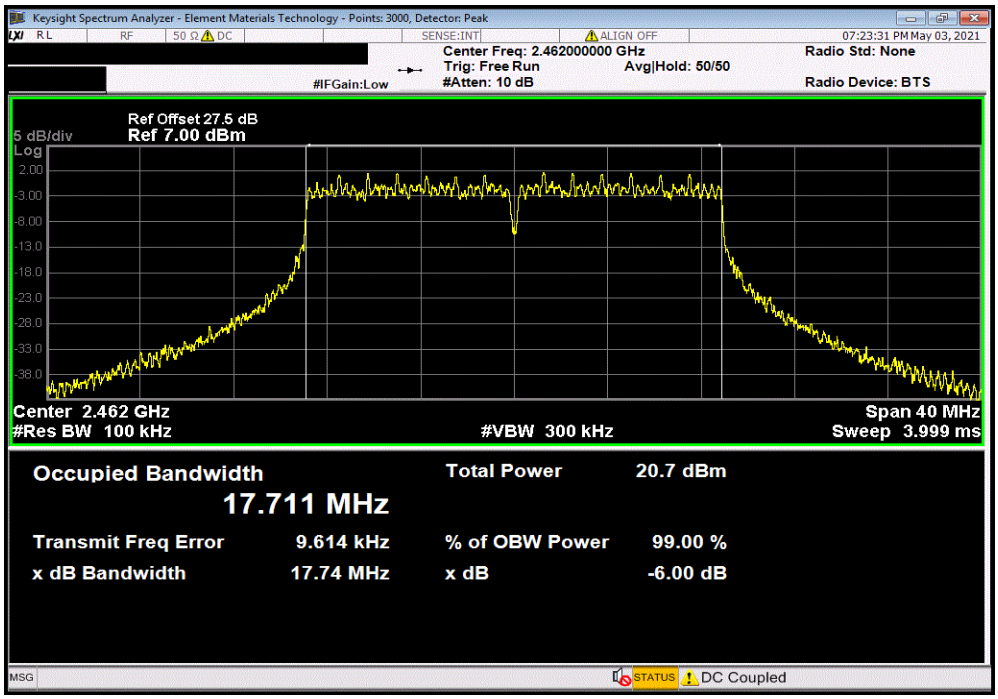
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1, 2412 MHz						
				Value	Limit (>)	Result
				17.74 MHz	500 kHz	Pass



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



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



OUTPUT POWER

XMit 2020.12.30.0

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
Block - DC	Fairview Microwave	SD3379	AMZ	2020-11-04	2021-11-04
Attenuator	Fairview Microwave	18B5W-26	RFY	2020-06-03	2021-06-03
Generator - Signal	Agilent	N5183A	TIK	2019-04-30	2022-04-30
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	2021-04-16	2022-04-16
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	2020-09-14	2021-09-14

TEST DESCRIPTION

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

element

TbtTx 2019.08.30.0 XMit 2020.12.30.0

EUT:	Zoll R-Series Data Comm II C2PC			**Work Order:**	LGPD0258
Serial Number:	LB211400035			**Date:**	12-May-21
Customer:	Logic PD, Inc.			**Temperature:**	21.5 °C
Attendees:	Eric Fritz			**Humidity:**	21.4% RH
Project:	None			**Barometric Pres.:**	1029 mbar
Tested by:	Dan Haas	**Power:**	3.7VDC	**Job Site:**	MN08

TEST SPECIFICATIONS	Test Method
FCC 15.247:2021	ANSI C63.10:2013

COMMENTS

None

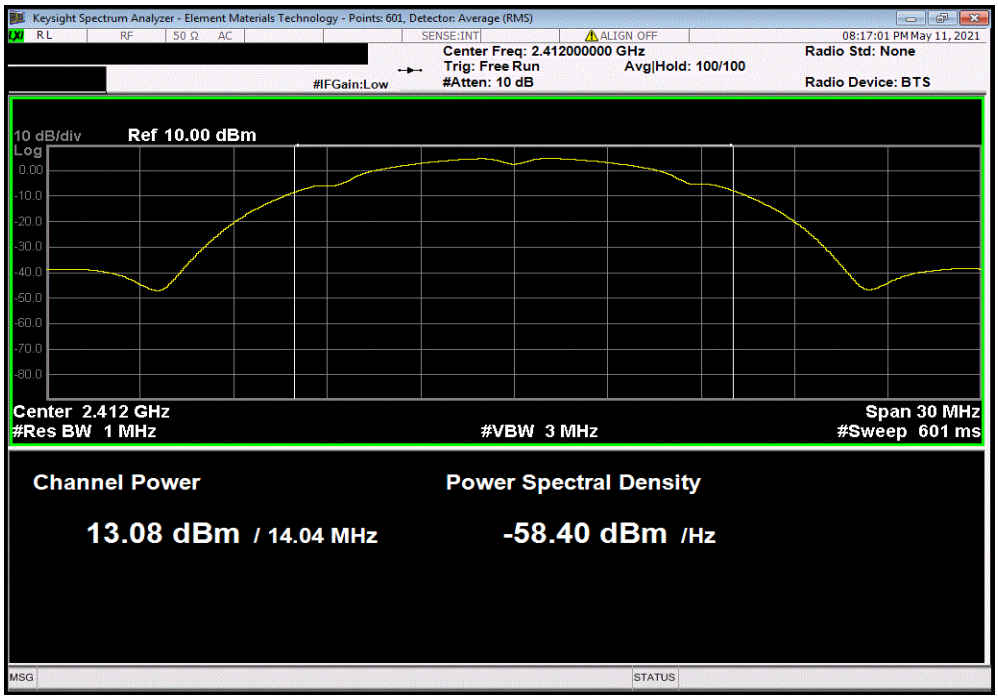
DEVIATIONS FROM TEST STANDARD

None

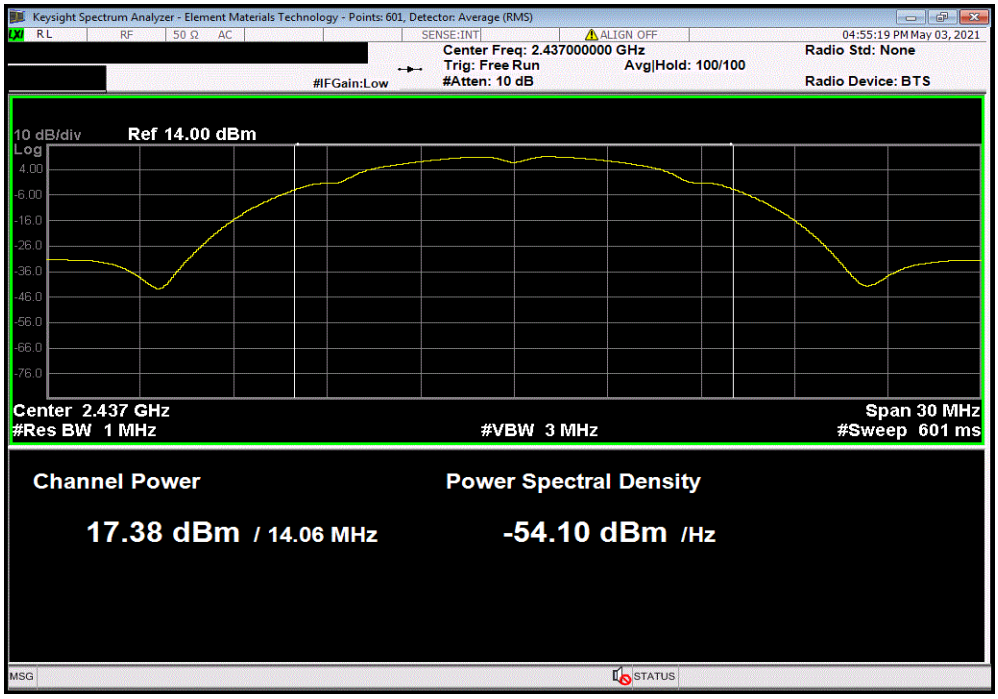
Configuration #	2	Signature

	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	13.077	0	13.1	30	Pass
Mid Channel 6, 2437 MHz	17.384	0	17.4	30	Pass
High Channel 11, 2462 MHz	14.895	0	14.9	30	Pass
802.11(b) 11 Mbps					
Low Channel 1, 2412 MHz	12.92	0.19	13.1	30	Pass
Mid Channel 6, 2437 MHz	17.398	0.2	17.6	30	Pass
High Channel 11, 2462 MHz	14.863	0.16	15.0	30	Pass
802.11(g) 6 Mbps					
Low Channel 1, 2412 MHz	12.284	0.13	12.4	30	Pass
Mid Channel 6, 2437 MHz	13.349	0.12	13.5	30	Pass
High Channel 11, 2462 MHz	13.718	0.13	13.8	30	Pass
802.11(g) 36 Mbps					
Low Channel 1, 2412 MHz	11.88	0.65	12.5	30	Pass
Mid Channel 6, 2437 MHz	12.894	0.71	13.6	30	Pass
High Channel 11, 2462 MHz	13.202	0.67	13.9	30	Pass
802.11(g) 54 Mbps					
Low Channel 1, 2412 MHz	11.734	0.99	12.7	30	Pass
Mid Channel 6, 2437 MHz	12.725	0.94	13.7	30	Pass
High Channel 11, 2462 MHz	12.987	1.01	14.0	30	Pass
802.11(n) MCS0					
Low Channel 1, 2412 MHz	12.027	0.13	12.2	30	Pass
Mid Channel 6, 2437 MHz	13.061	0.14	13.2	30	Pass
High Channel 11, 2462 MHz	13.374	0.13	13.5	30	Pass
802.11(n) MCS7					
Low Channel 1, 2412 MHz	11.589	1.02	12.6	30	Pass
Mid Channel 6, 2437 MHz	12.087	0.99	13.1	30	Pass
High Channel 11, 2462 MHz	11.97	1.05	13.0	30	Pass

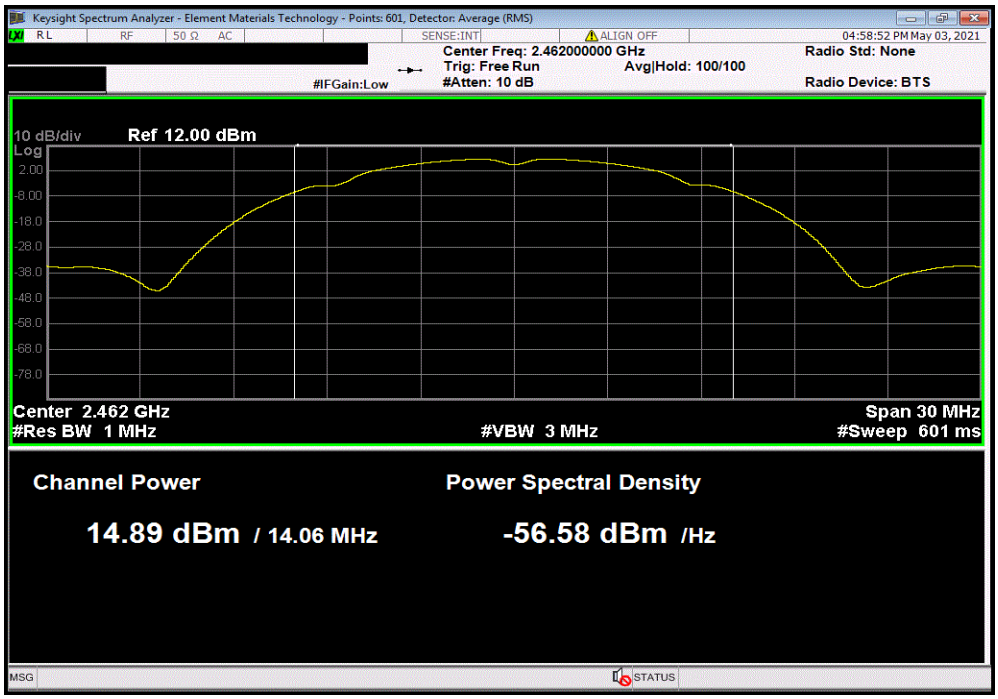
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		13.077	0	13.1	30	Pass



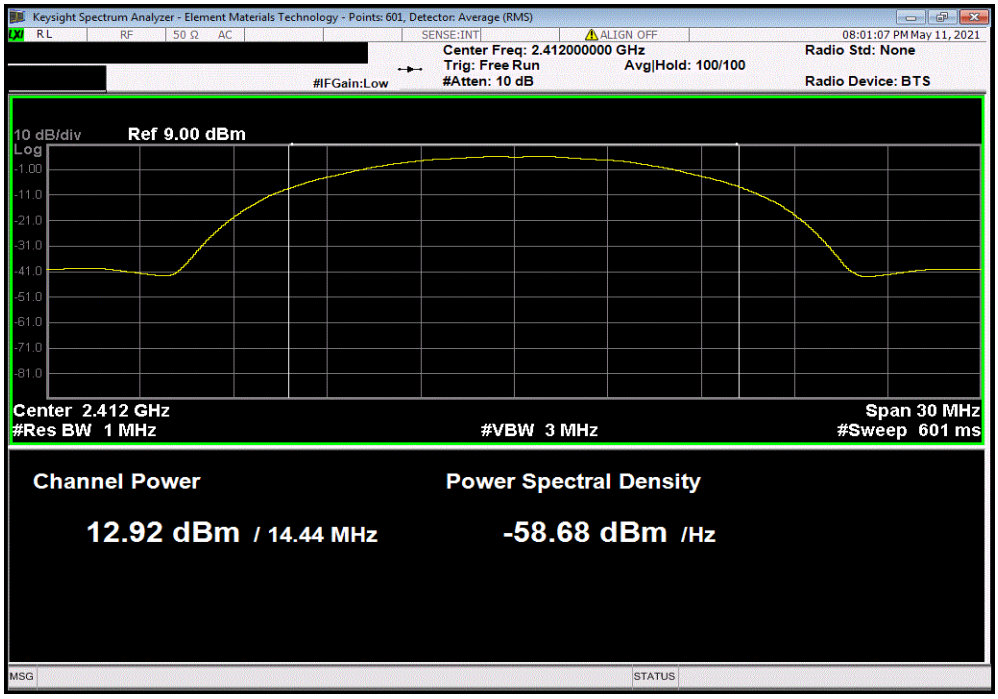
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		17.384	0	17.4	30	Pass



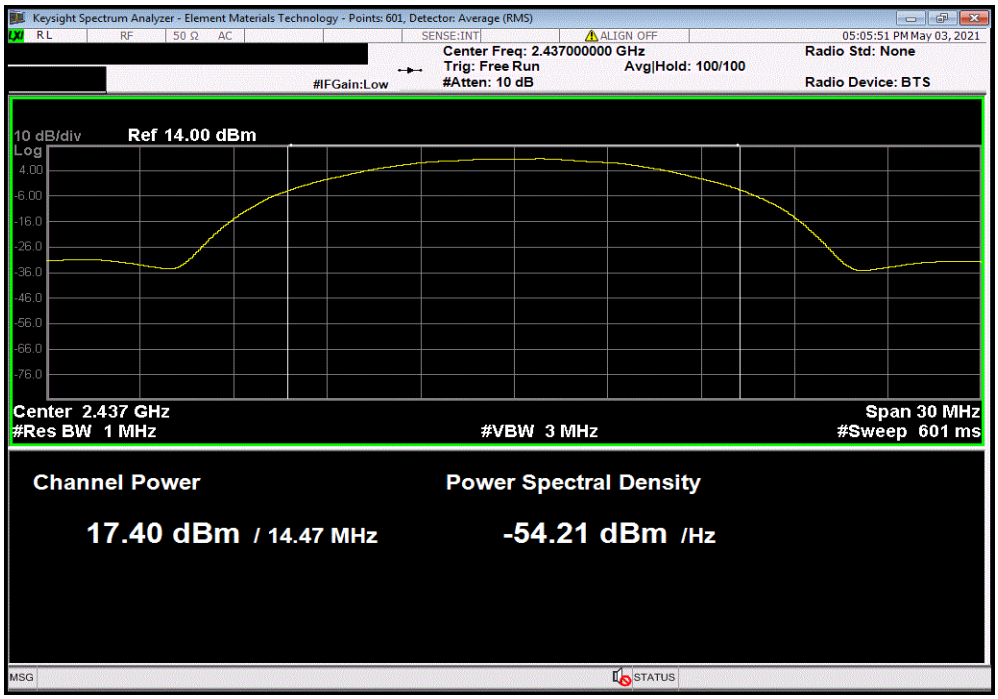
2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		14.895	0	14.9	30	Pass



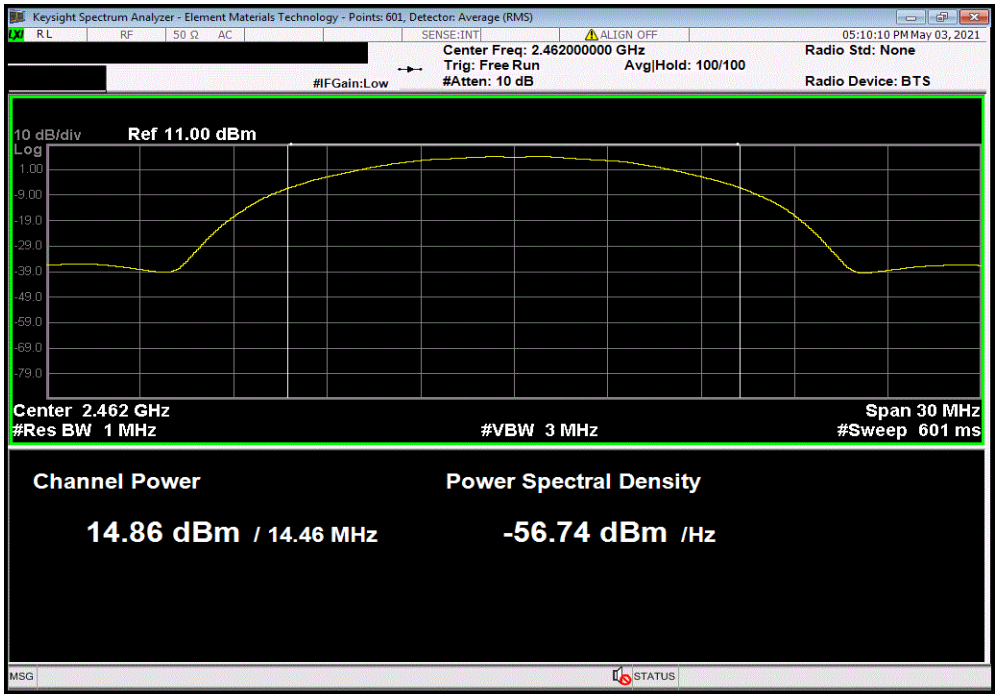
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		12.92	0.19	13.1	30	Pass



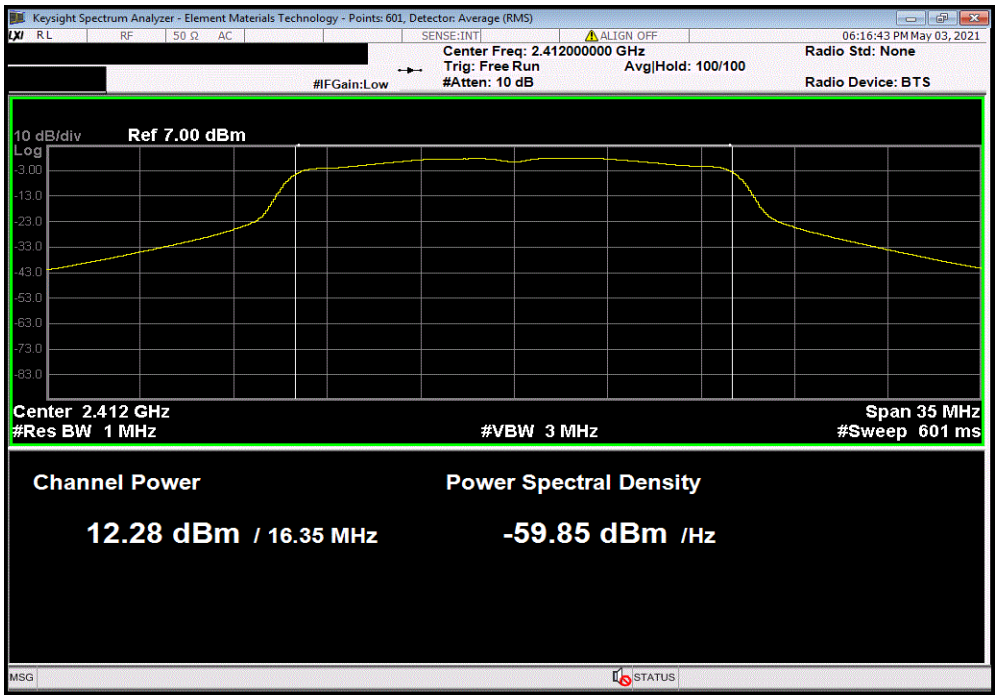
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		17.398	0.2	17.6	30	Pass



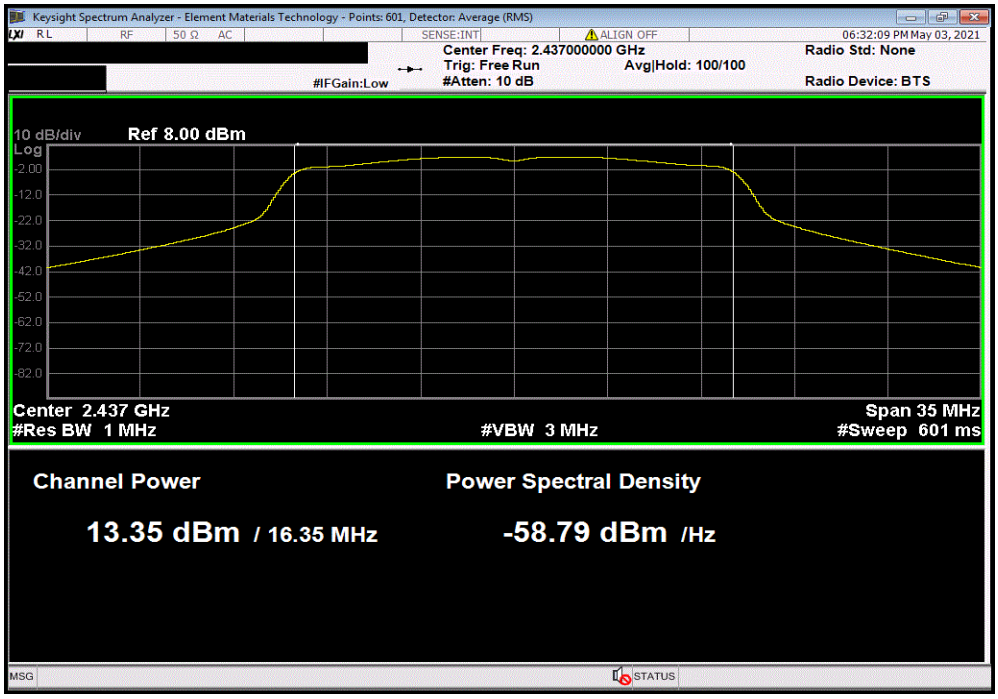
2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		14.863	0.16	15.0	30	Pass



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
		12.284	0.13	12.4	30	Pass

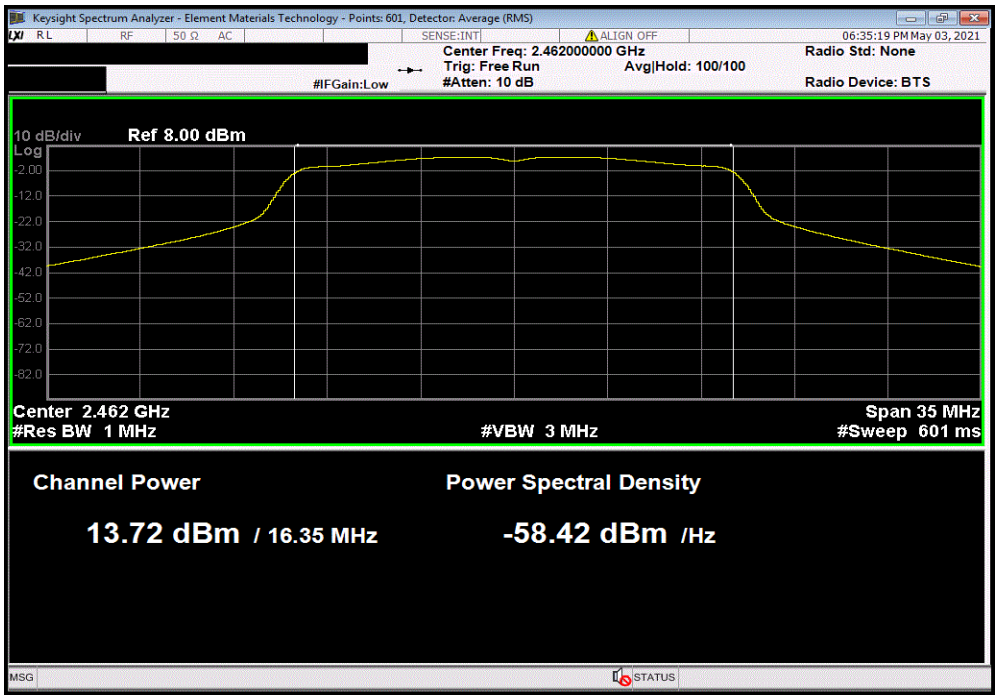


2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		13.349	0.12	13.5	30	Pass

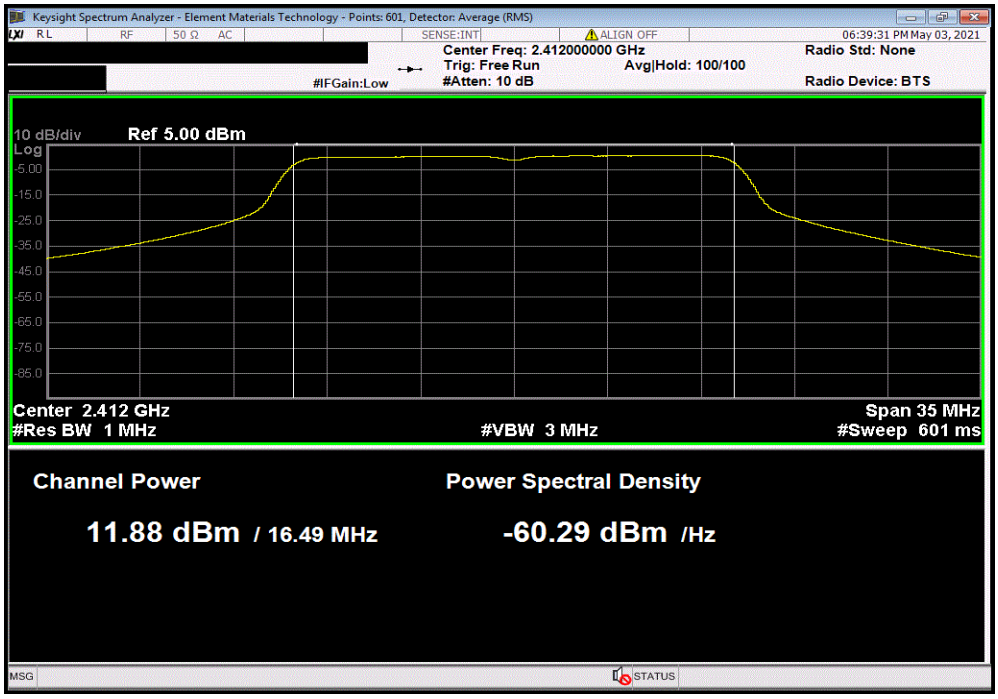


OUTPUT POWER

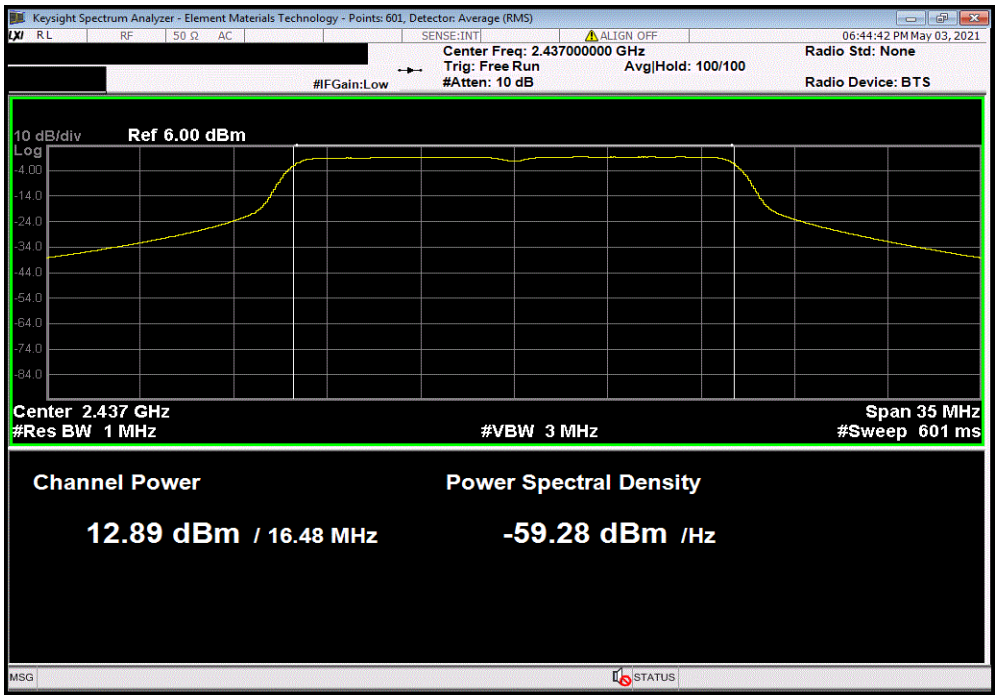
2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		13.718	0.13	13.8	30	Pass



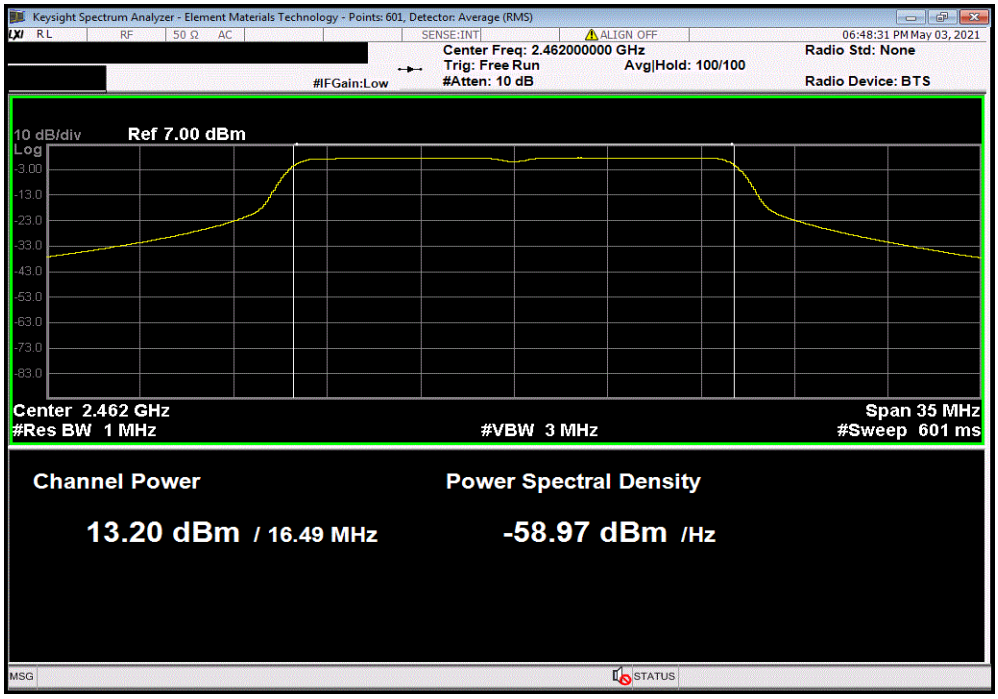
2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		11.88	0.65	12.5	30	Pass



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
		12.894	0.71	13.6	30	Pass

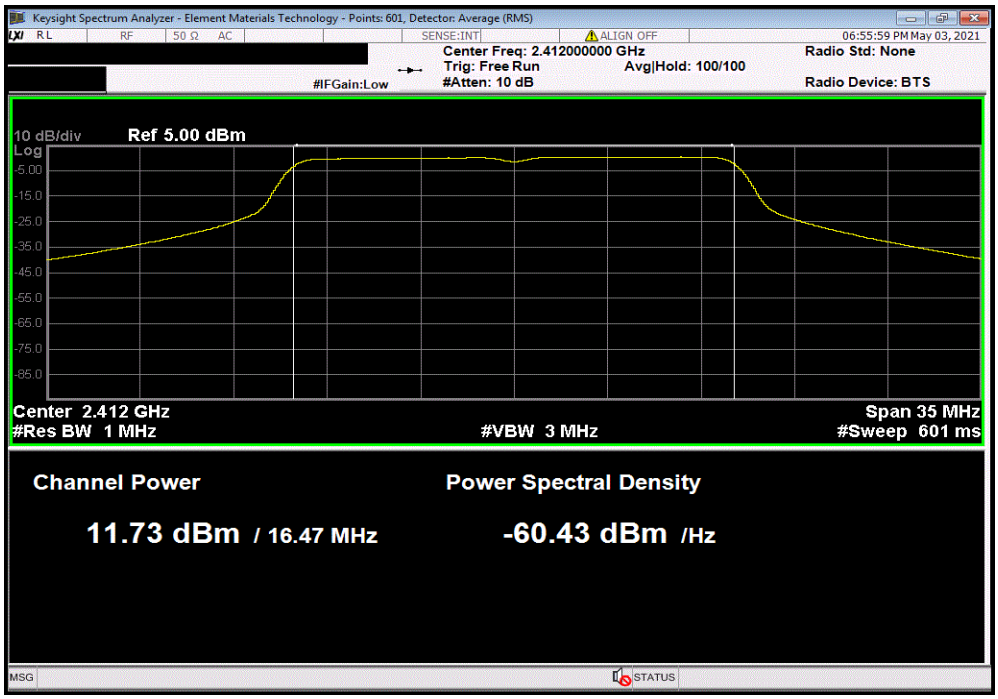


2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		13.202	0.67	13.9	30	Pass

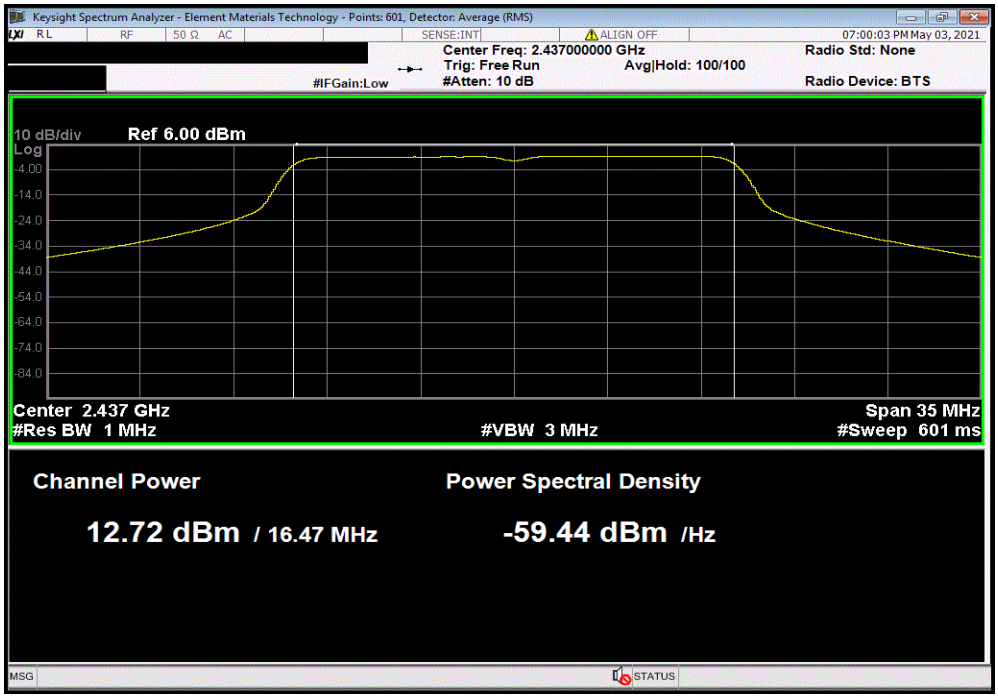


OUTPUT POWER

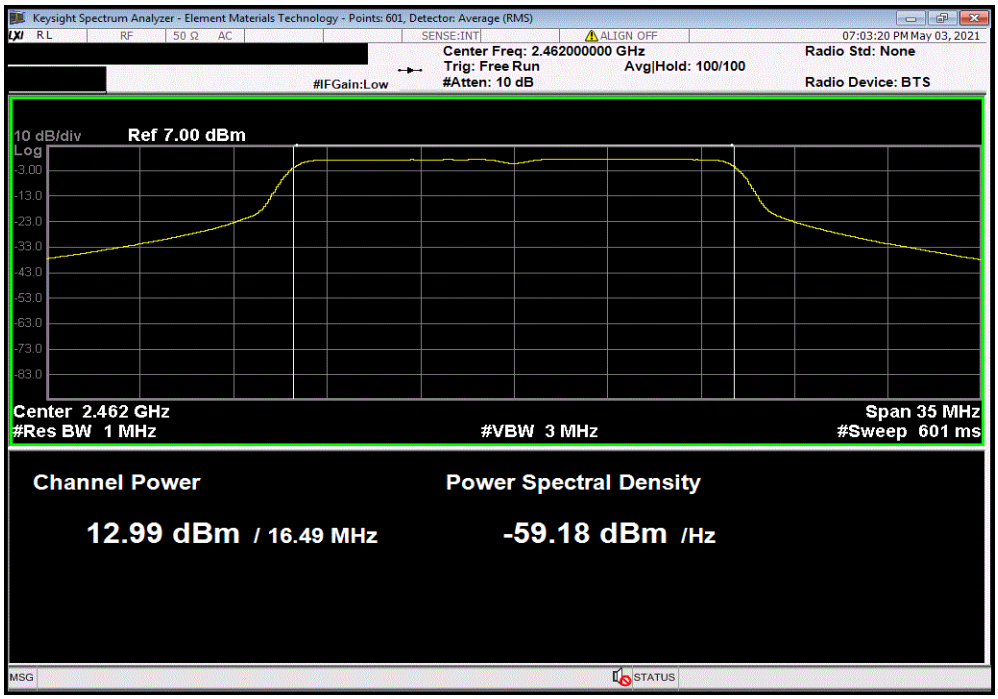
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		11.734	0.99	12.7	30	Pass



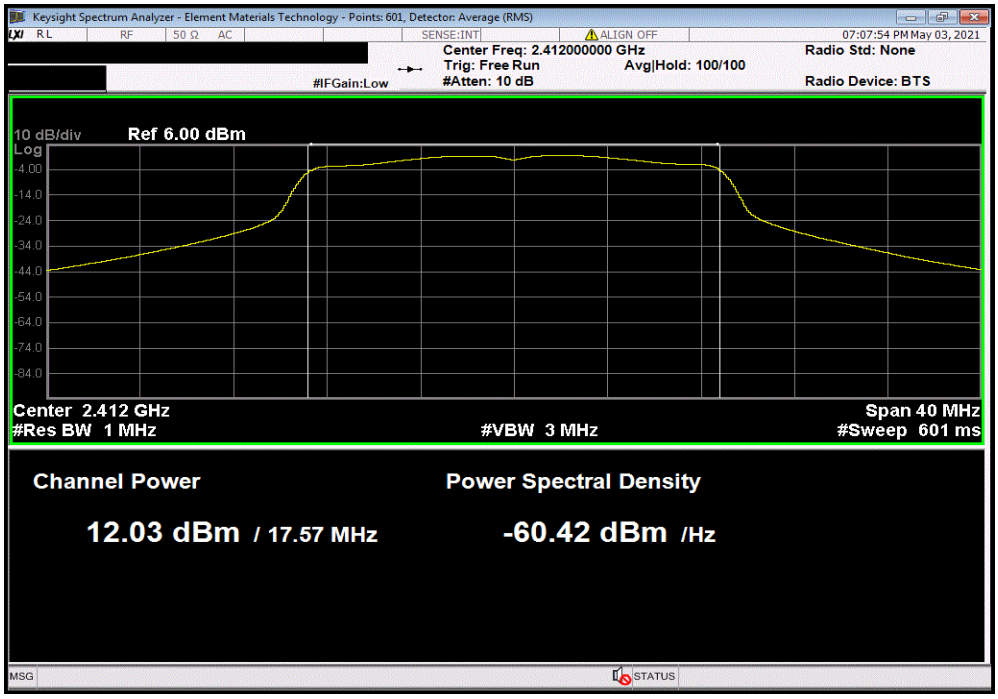
2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		12.725	0.94	13.7	30	Pass



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
		12.987	1.01	14.0	30	Pass

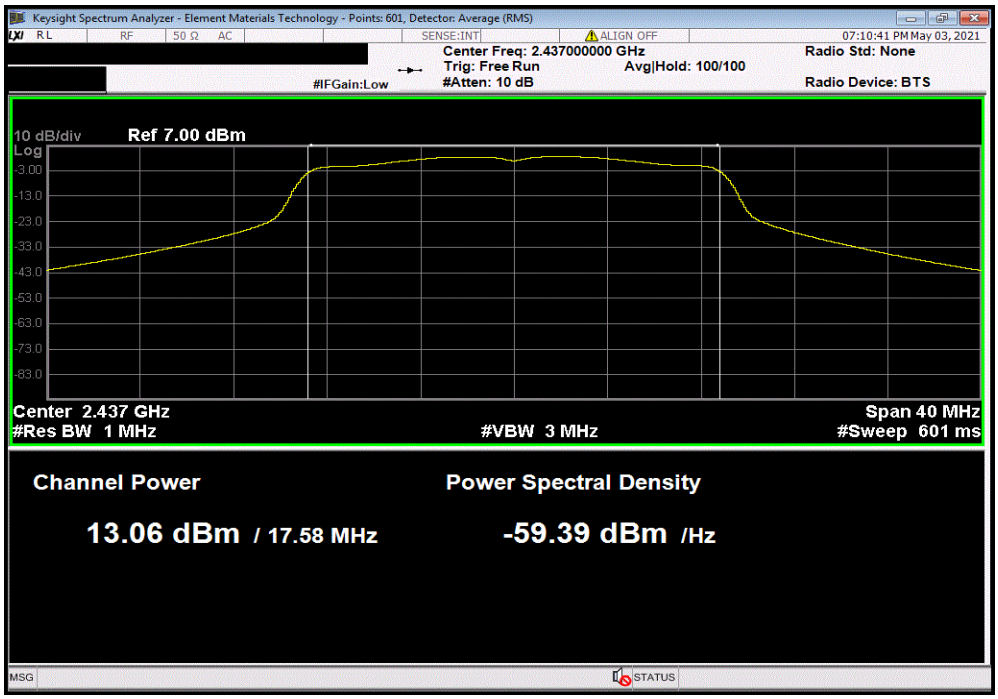


2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		12.027	0.13	12.2	30	Pass

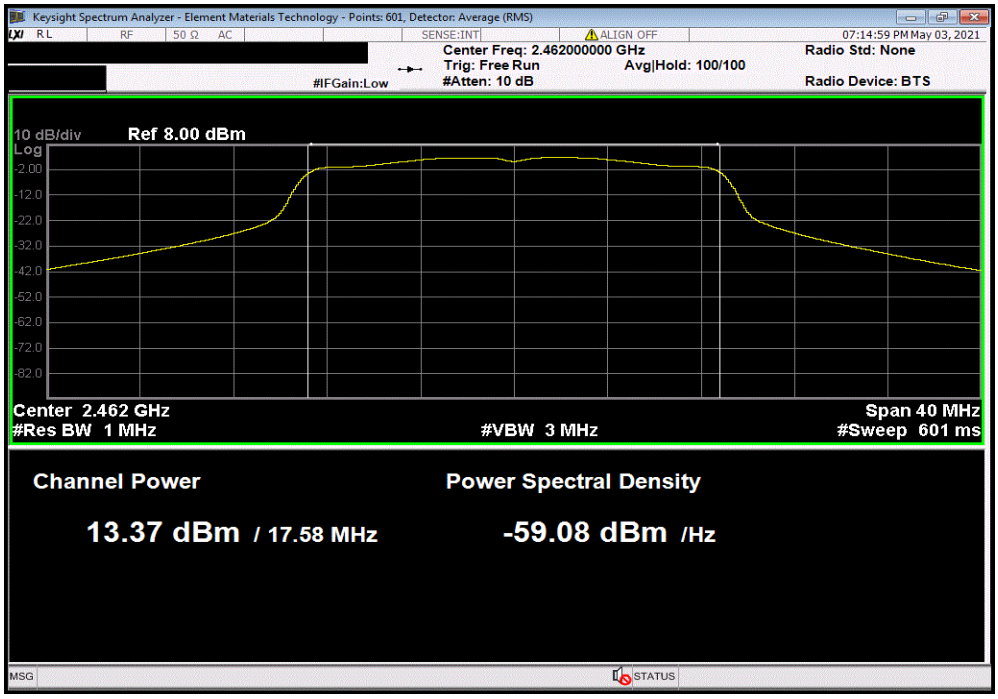


OUTPUT POWER

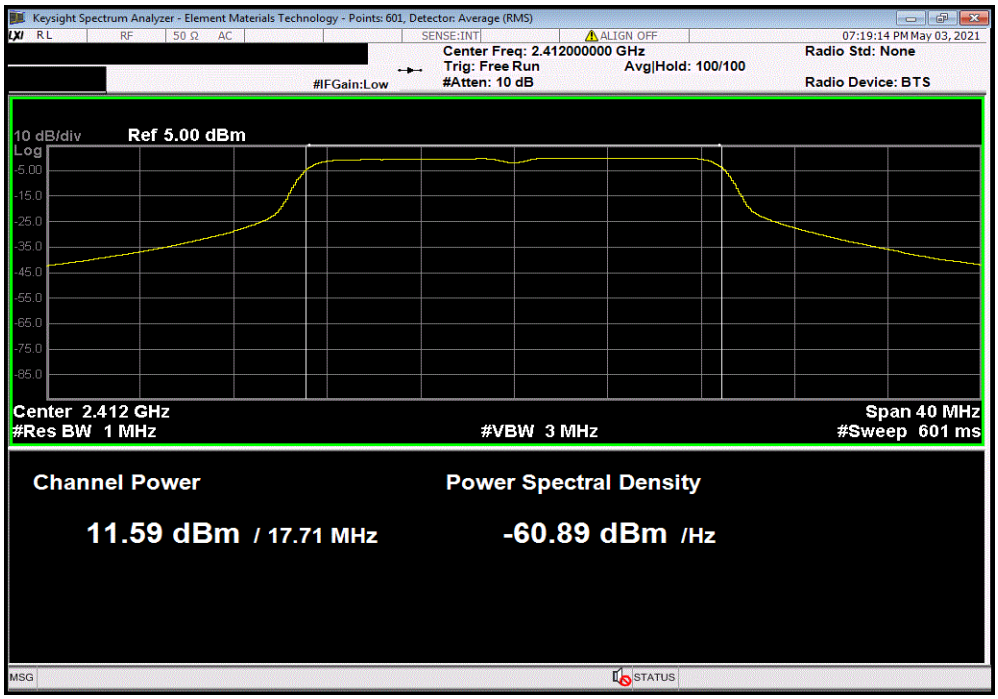
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Mid Channel 6, 2437 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		13.061	0.14	13.2	30	Pass



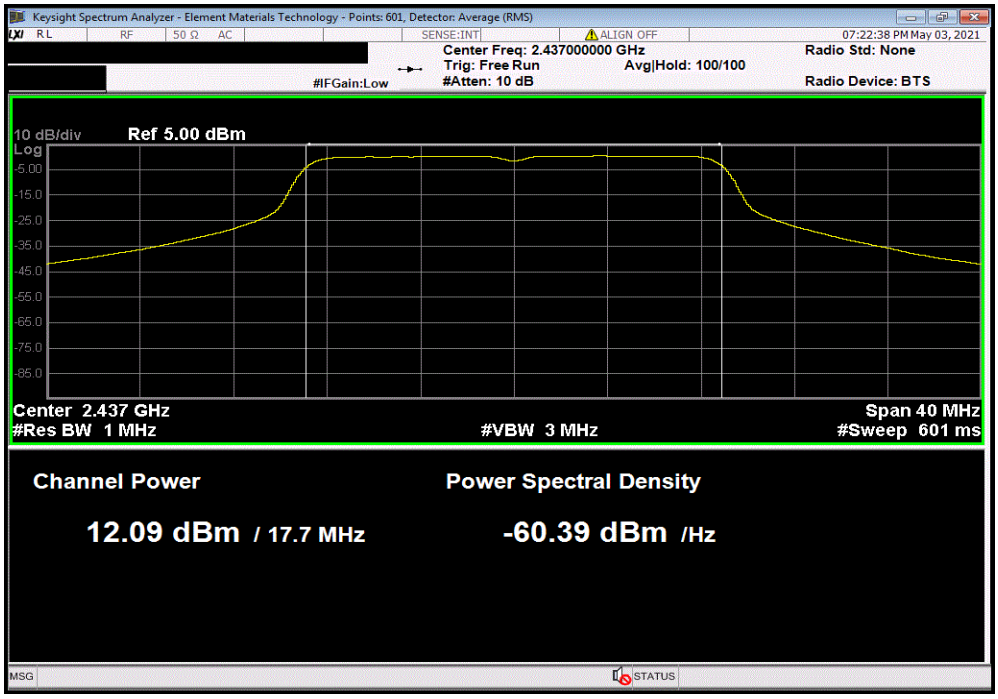
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		13.374	0.13	13.5	30	Pass



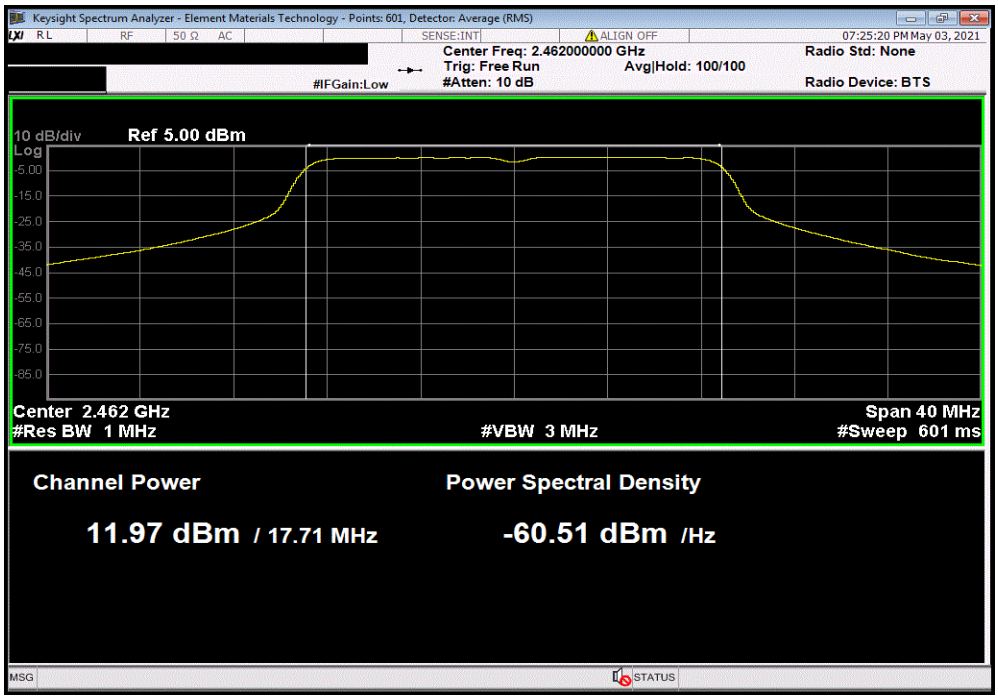
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1, 2412 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		11.589	1.02	12.6	30	Pass



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
		12.087	0.99	13.1	30	Pass



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
		11.97	1.05	13.0	30	Pass



0.0

EQUIVALENT ISOTROPIC RADIATED POWER

XMit 2020.12.30.0

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
Block - DC	Fairview Microwave	SD3379	AMZ	2020-11-04	2021-11-04
Attenuator	Fairview Microwave	18B5W-26	RFY	2020-06-03	2021-06-03
Generator - Signal	Agilent	N5183A	TIK	2019-04-30	2022-04-30
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	2021-04-16	2022-04-16
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	2020-09-14	2021-09-14

TEST DESCRIPTION

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.

EQUIVALENT ISOTROPIC RADIATED POWER

element

TbtTx 2019.08.30.0 XMit 2020.12.30.0

EUT:	Zoll R-Series Data Comm II C2PC			**Work Order:**	LGPD0258
Serial Number:	LB211400035			**Date:**	12-May-21
Customer:	Logic PD, Inc.			**Temperature:**	21.5 °C
Attendees:	Eric Fritz			**Humidity:**	21.4% RH
Project:	None			**Barometric Pres.:**	1029 mbar
Tested by:	Dan Haas	**Power:**	3.7VDC	**Job Site:**	MN08

TEST SPECIFICATIONS	Test Method
FCC 15.247:2021	ANSI C63.10:2013

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

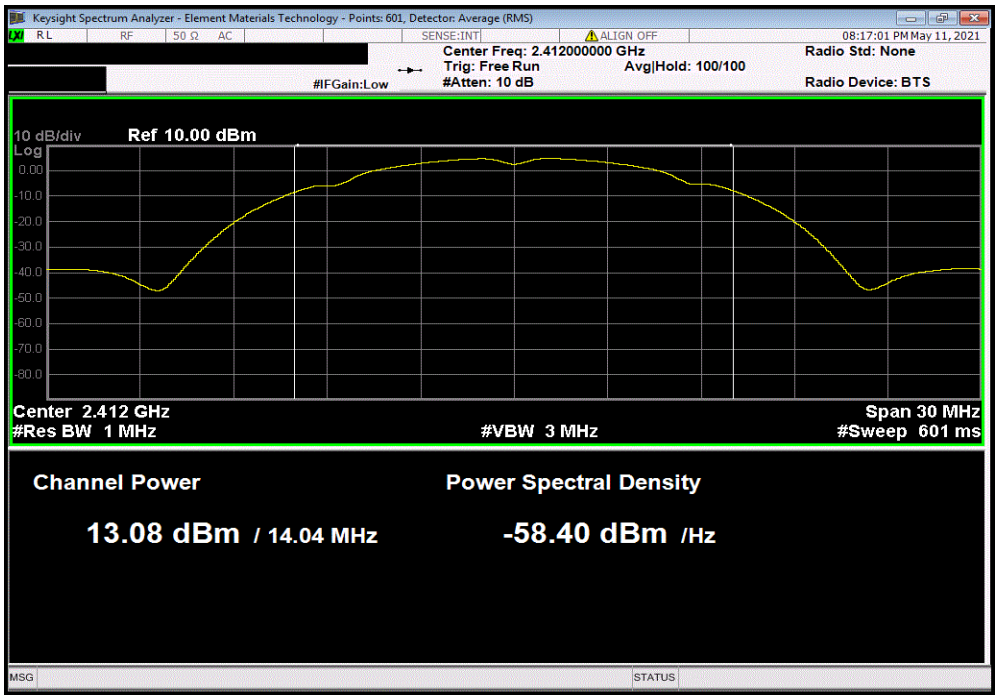
None

Configuration #	2	Signature

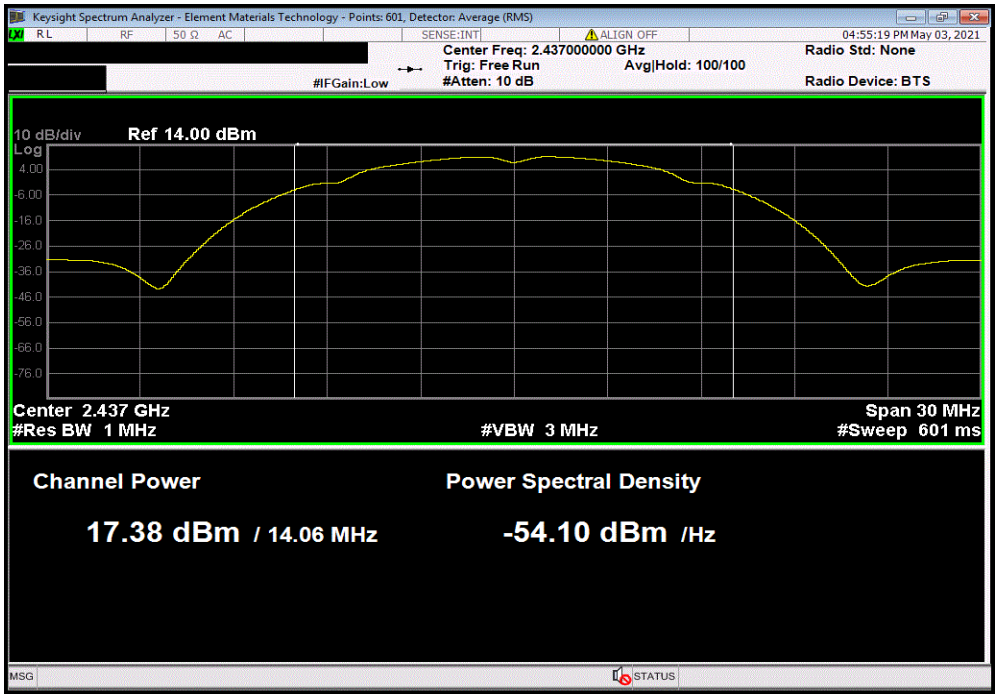
	Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Result
2400 MHz - 2483.5 MHz Band							
802.11(b) 1 Mbps							
Low Channel 1, 2412 MHz	13.077	0	13.077	1.24	14.3	30	Pass
Mid Channel 6, 2437 MHz	17.384	0	17.384	1.24	18.6	30	Pass
High Channel 11, 2462 MHz	14.895	0	14.895	1.24	16.1	30	Pass
802.11(b) 11 Mbps							
Low Channel 1, 2412 MHz	12.92	0.19	13.11	1.24	14.4	30	Pass
Mid Channel 6, 2437 MHz	17.398	0.2	17.598	1.24	18.8	30	Pass
High Channel 11, 2462 MHz	14.863	0.16	15.023	1.24	16.3	30	Pass
802.11(g) 6 Mbps							
Low Channel 1, 2412 MHz	12.284	0.13	12.414	1.24	13.7	30	Pass
Mid Channel 6, 2437 MHz	13.349	0.12	13.469	1.24	14.7	30	Pass
High Channel 11, 2462 MHz	13.718	0.13	13.848	1.24	15.1	30	Pass
802.11(g) 36 Mbps							
Low Channel 1, 2412 MHz	11.88	0.65	12.53	1.24	13.8	30	Pass
Mid Channel 6, 2437 MHz	12.894	0.71	13.604	1.24	14.8	30	Pass
High Channel 11, 2462 MHz	13.202	0.67	13.872	1.24	15.1	30	Pass
802.11(g) 54 Mbps							
Low Channel 1, 2412 MHz	11.734	0.99	12.724	1.24	14.0	30	Pass
Mid Channel 6, 2437 MHz	12.725	0.94	13.665	1.24	14.9	30	Pass
High Channel 11, 2462 MHz	12.987	1.01	13.997	1.24	15.2	30	Pass
802.11(n) MCS0							
Low Channel 1, 2412 MHz	12.027	0.13	12.157	1.24	13.4	30	Pass
Mid Channel 6, 2437 MHz	13.061	0.14	13.201	1.24	14.4	30	Pass
High Channel 11, 2462 MHz	13.374	0.13	13.504	1.24	14.7	30	Pass
802.11(n) MCS7							
Low Channel 1, 2412 MHz	11.589	1.02	12.609	1.24	13.8	30	Pass
Mid Channel 6, 2437 MHz	12.087	0.99	13.077	1.24	14.3	30	Pass
High Channel 11, 2462 MHz	11.97	1.05	13.02	1.24	14.3	30	Pass

EQUIVALENT ISOTROPIC RADIATED POWER

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)	Limit (dBm)	Result
13.077	0.0	13.1	1.2	14.3	30	Pass

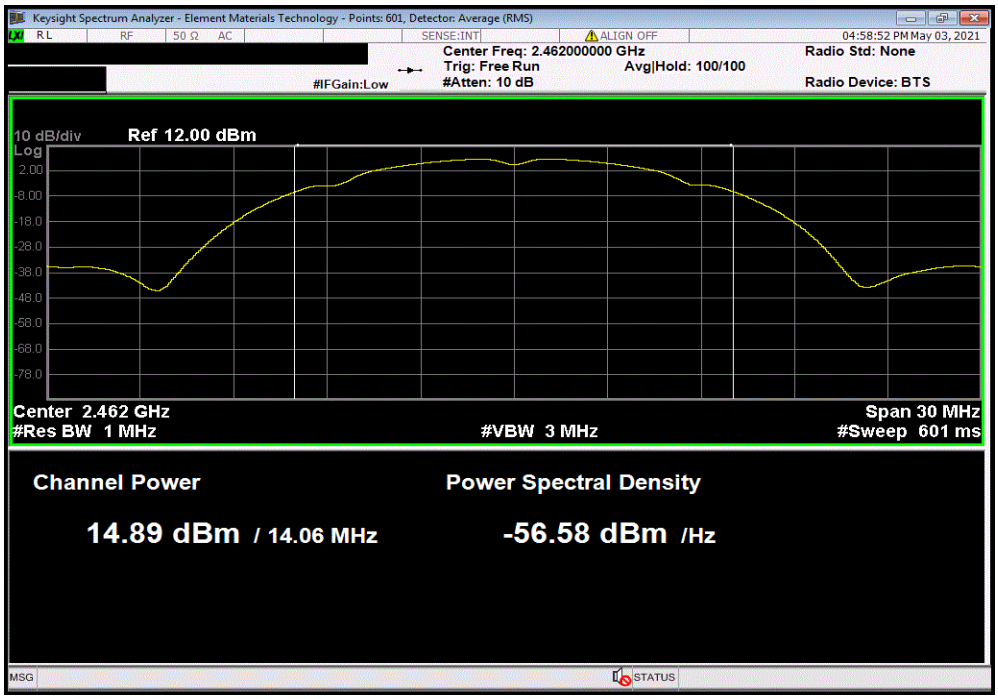


2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Result
17.384	0.0	17.4	1.2	18.6	30	Pass

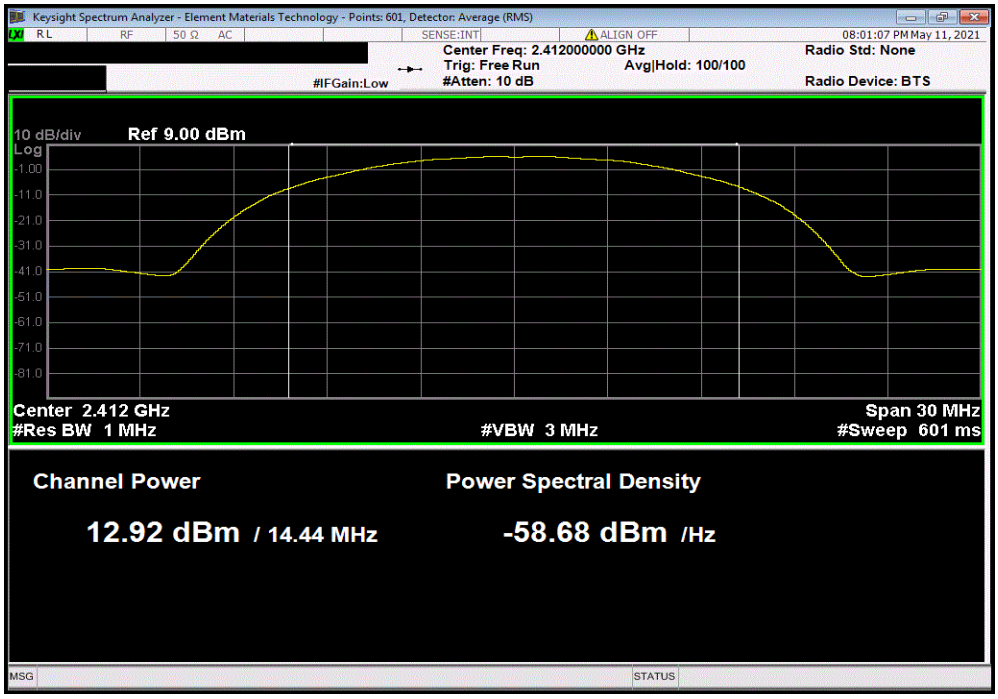


EQUIVALENT ISOTROPIC RADIATED POWER

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)	Limit (dBm)	Result
14.895	0.0	14.9	1.2	16.1	30	Pass

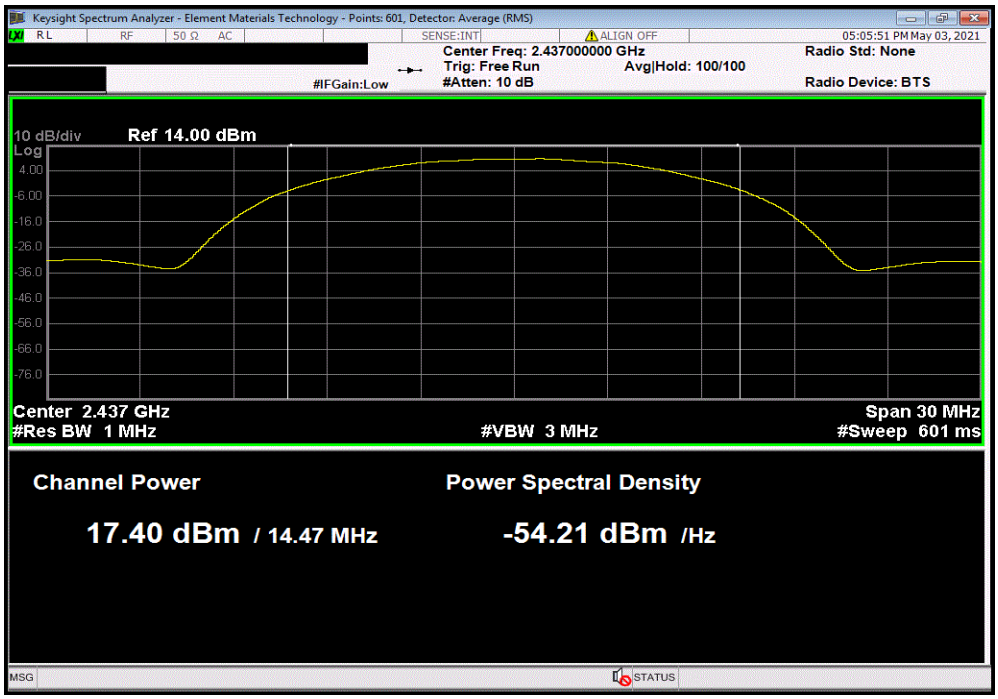


2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Result
12.92	0.2	13.1	1.2	14.4	30	Pass

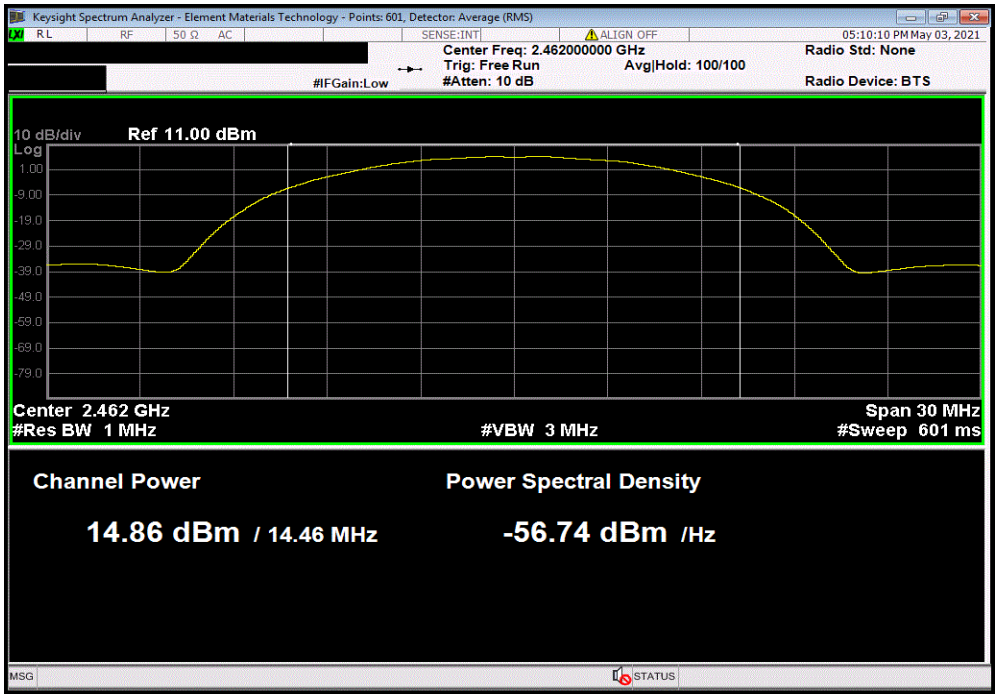


EQUIVALENT ISOTROPIC RADIATED POWER

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)	Limit (dBm)	Result
17.398	0.2	17.6	1.2	18.8	30	Pass

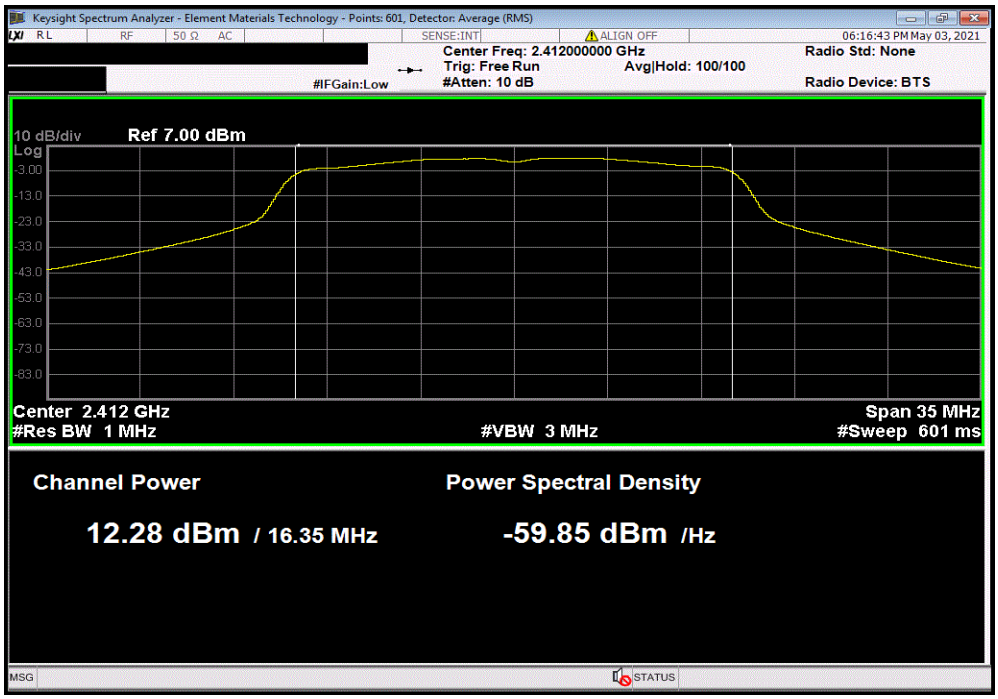


2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Result
14.863	0.2	15.0	1.2	16.3	30	Pass

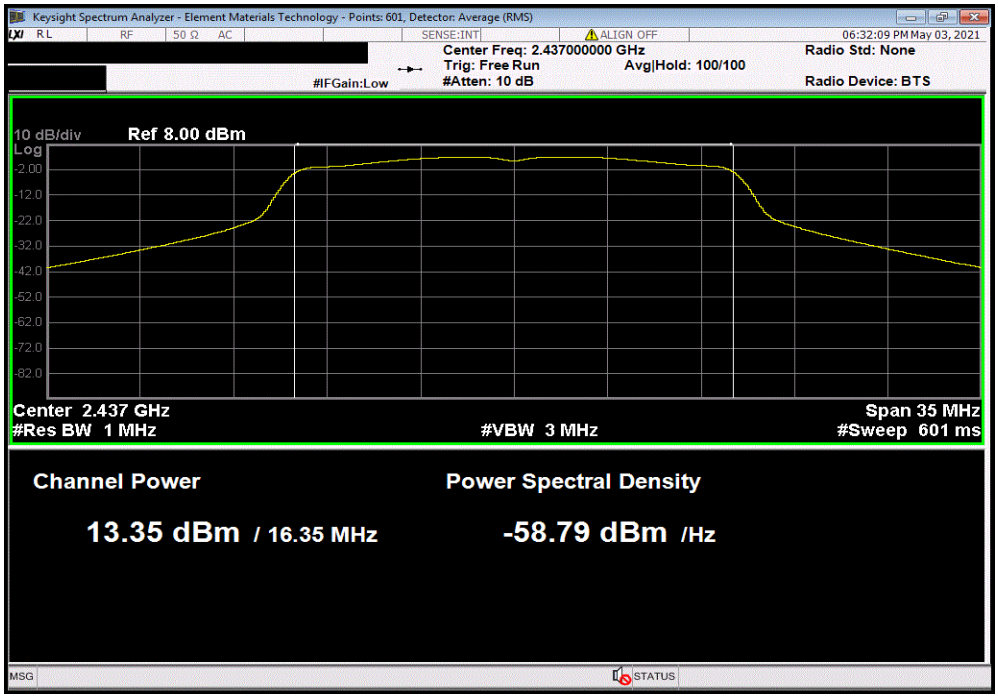


EQUIVALENT ISOTROPIC RADIATED POWER

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)	Limit (dBm)	Result
12.284	0.1	12.4	1.2	13.7	30	Pass

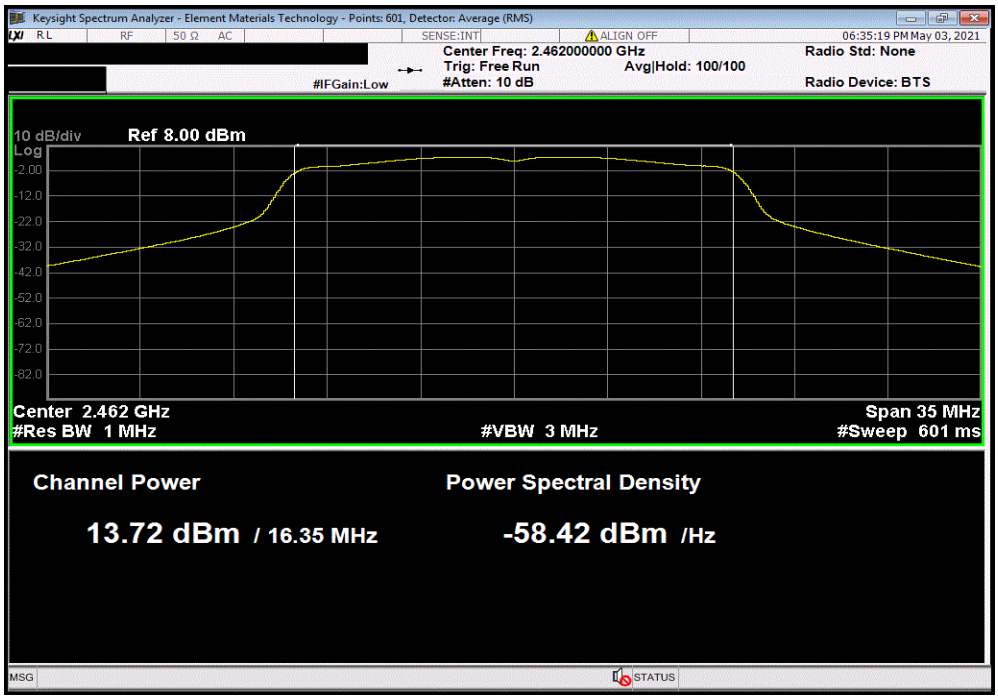


2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Result
13.349	0.1	13.5	1.2	14.7	30	Pass

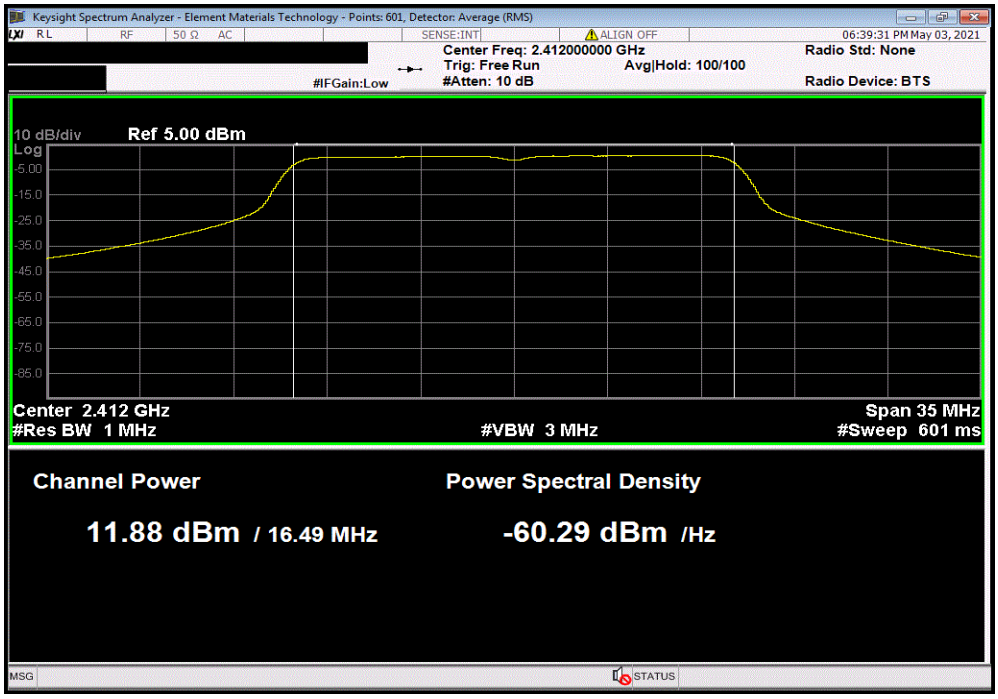


EQUIVALENT ISOTROPIC RADIATED POWER

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)	Limit (dBm)	Result
13.718	0.1	13.8	1.2	15.1	30	Pass

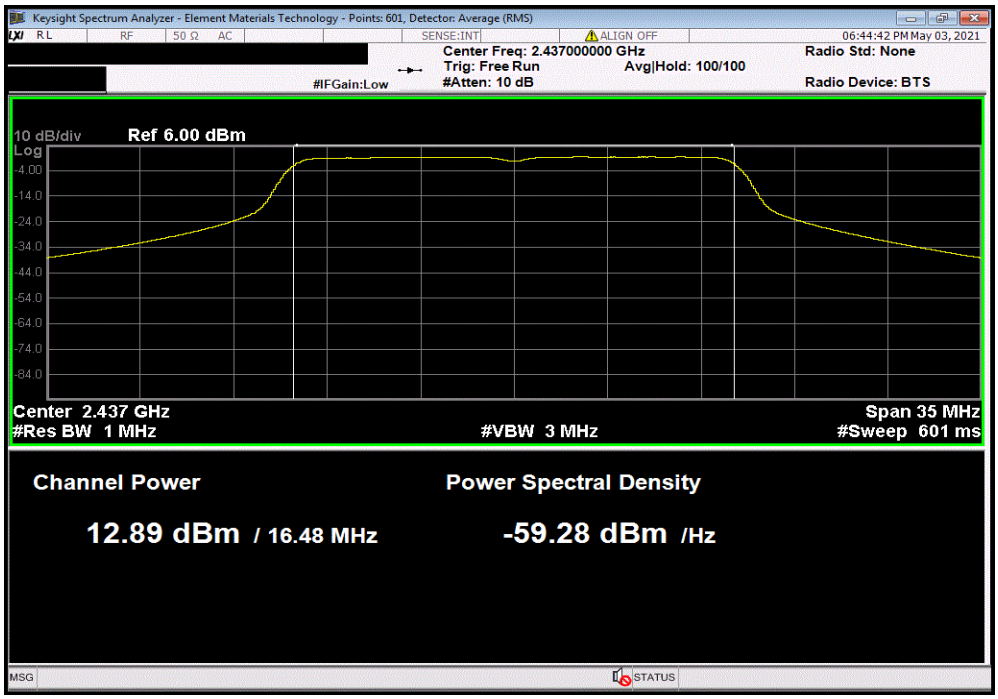


2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Result
11.88	0.7	12.5	1.2	13.8	30	Pass

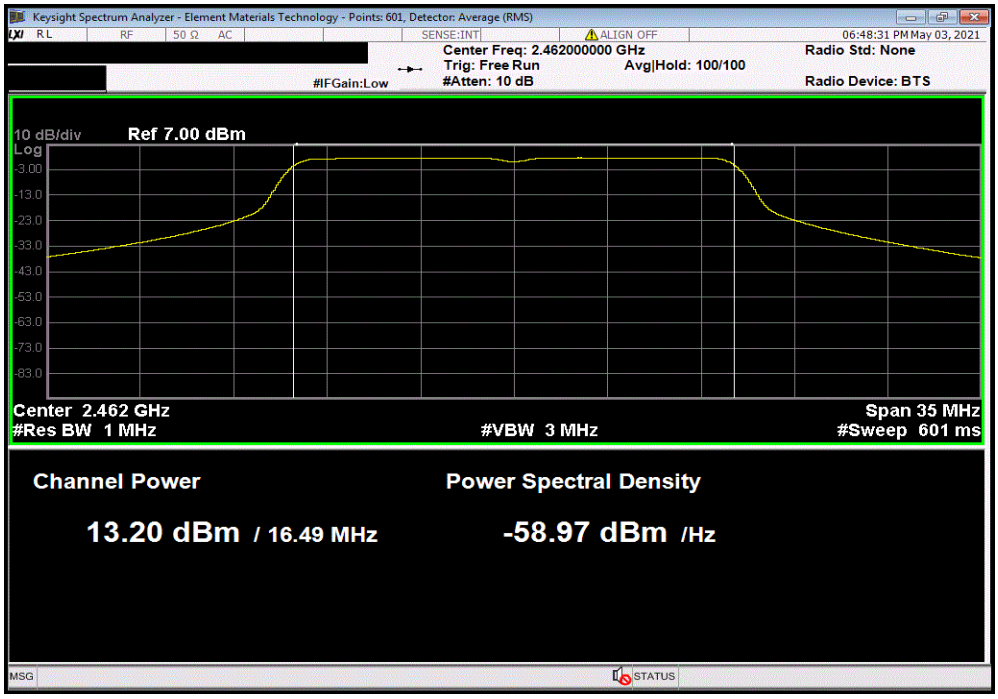


EQUIVALENT ISOTROPIC RADIATED POWER

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)	Limit (dBm)	Result
12.894	0.7	13.6	1.2	14.8	30	Pass

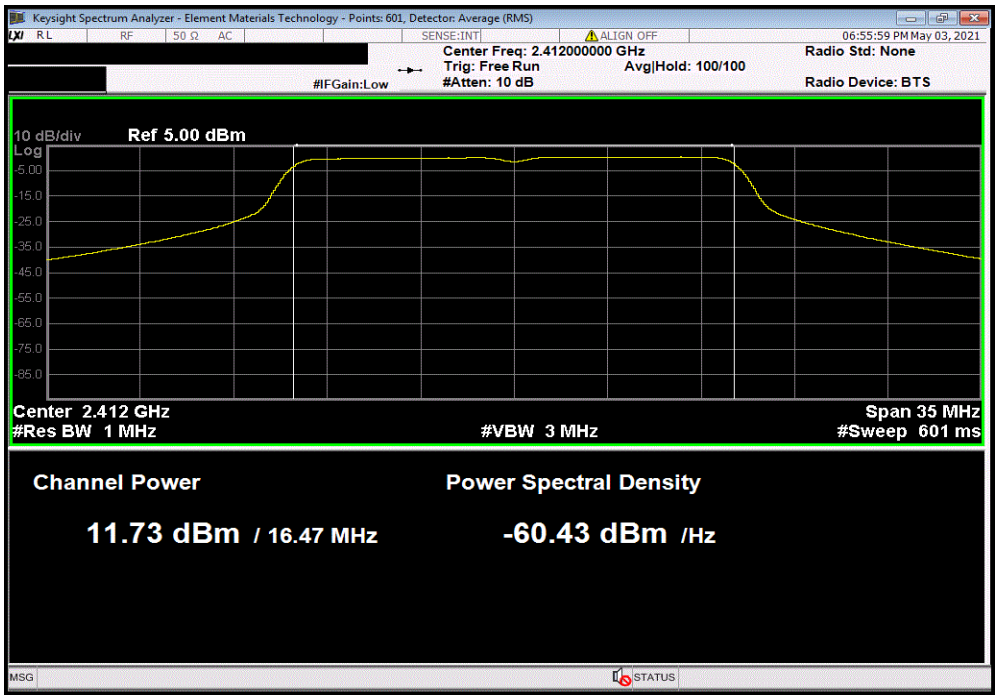


2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Result
13.202	0.7	13.9	1.2	15.1	30	Pass

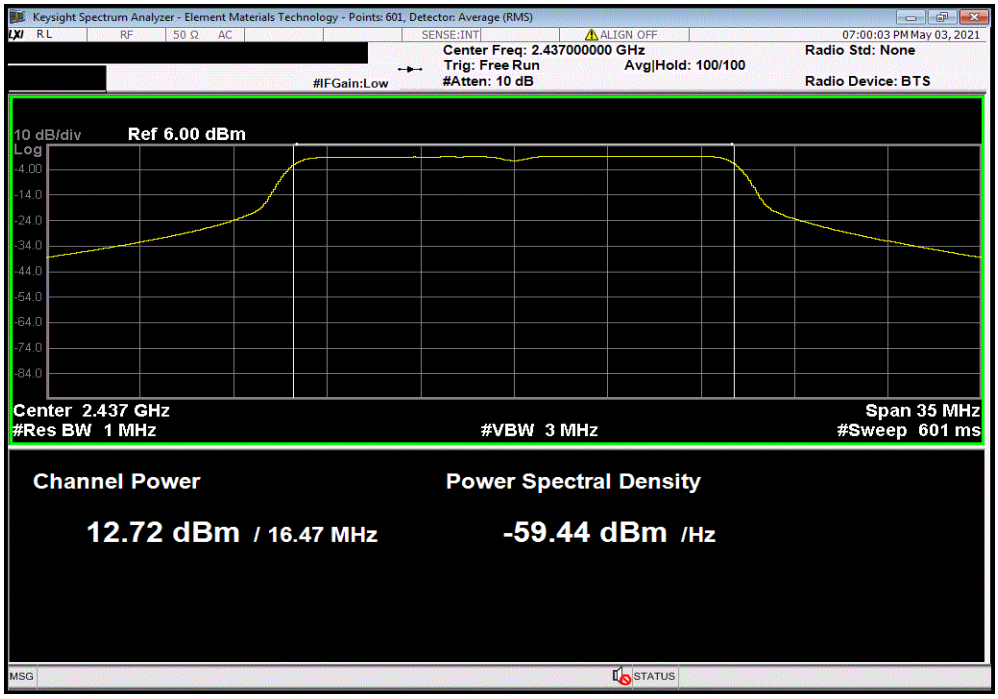


EQUIVALENT ISOTROPIC RADIATED POWER

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)	Limit (dBm)	Result
11.734	1.0	12.7	1.2	14.0	30	Pass

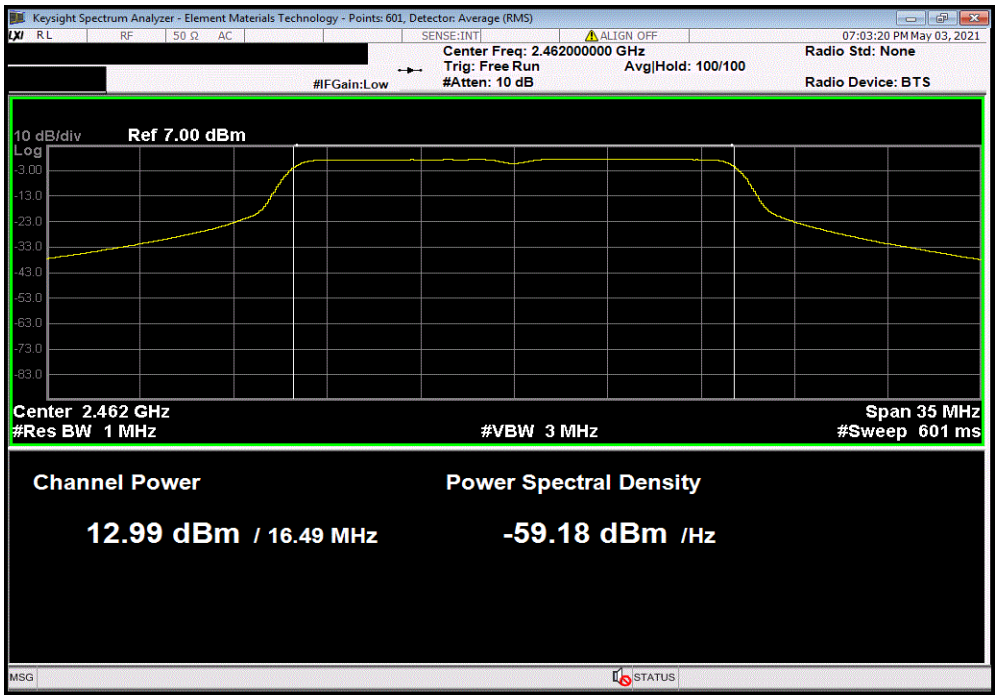


2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Result
12.725	0.9	13.7	1.2	14.9	30	Pass

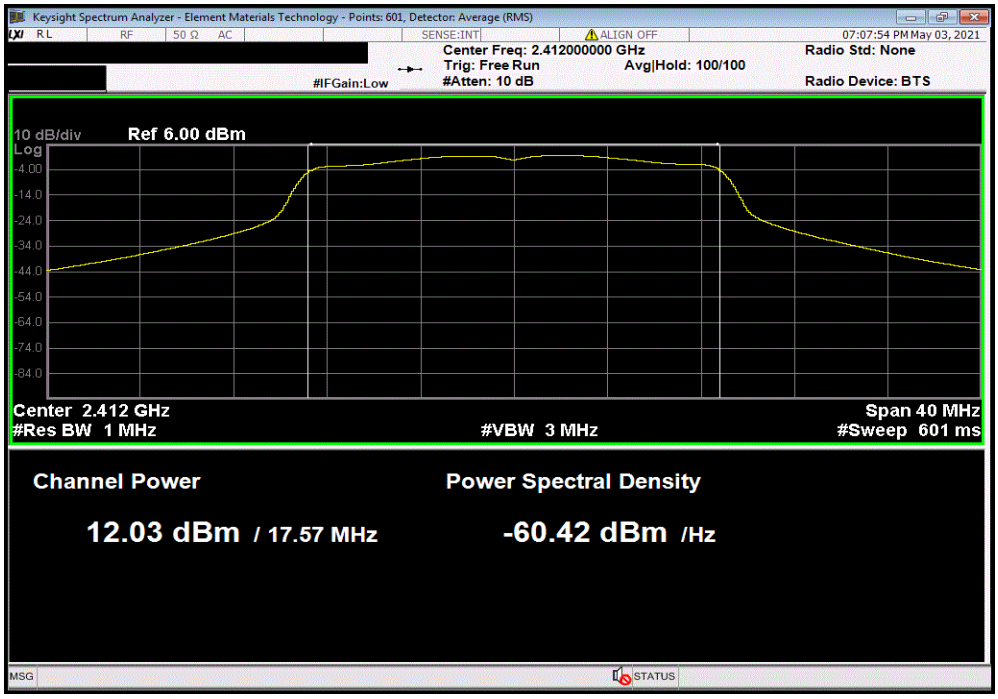


EQUIVALENT ISOTROPIC RADIATED POWER

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)	Limit (dBm)	Result
12.987	1.0	14.0	1.2	15.2	30	Pass

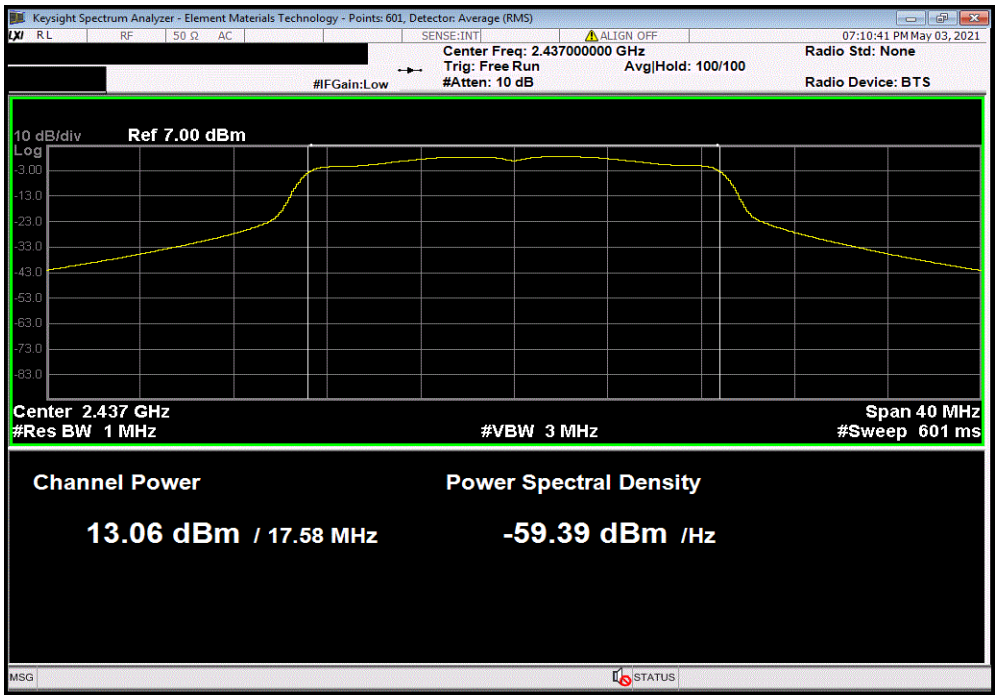


2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Result
12.027	0.1	12.2	1.2	13.4	30	Pass

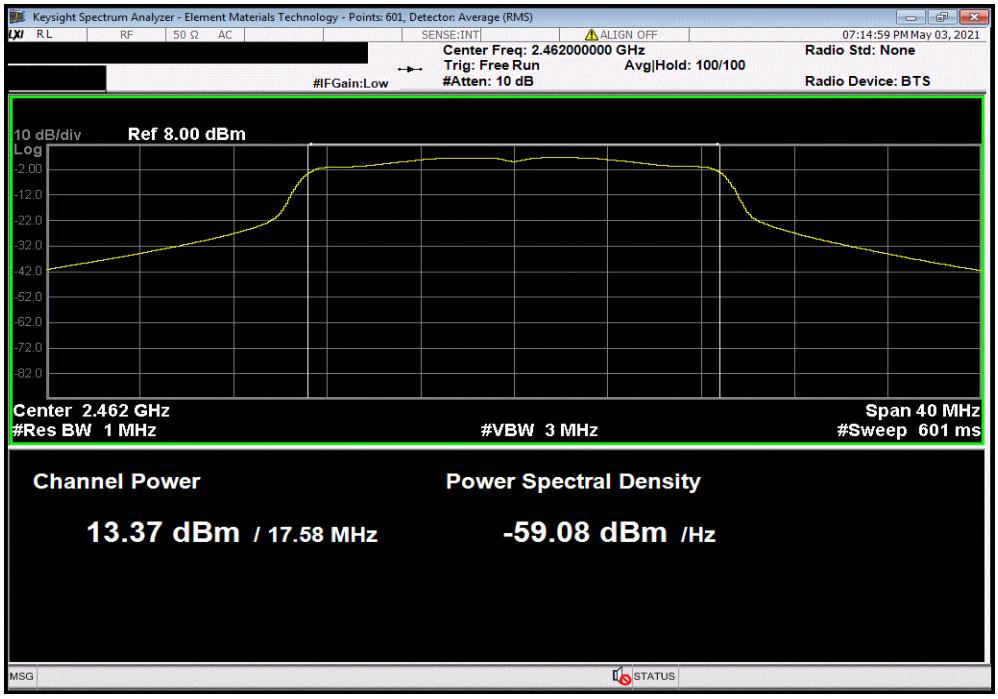


EQUIVALENT ISOTROPIC RADIATED POWER

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)	Limit (dBm)	Result
13.061	0.1	13.2	1.2	14.4	30	Pass

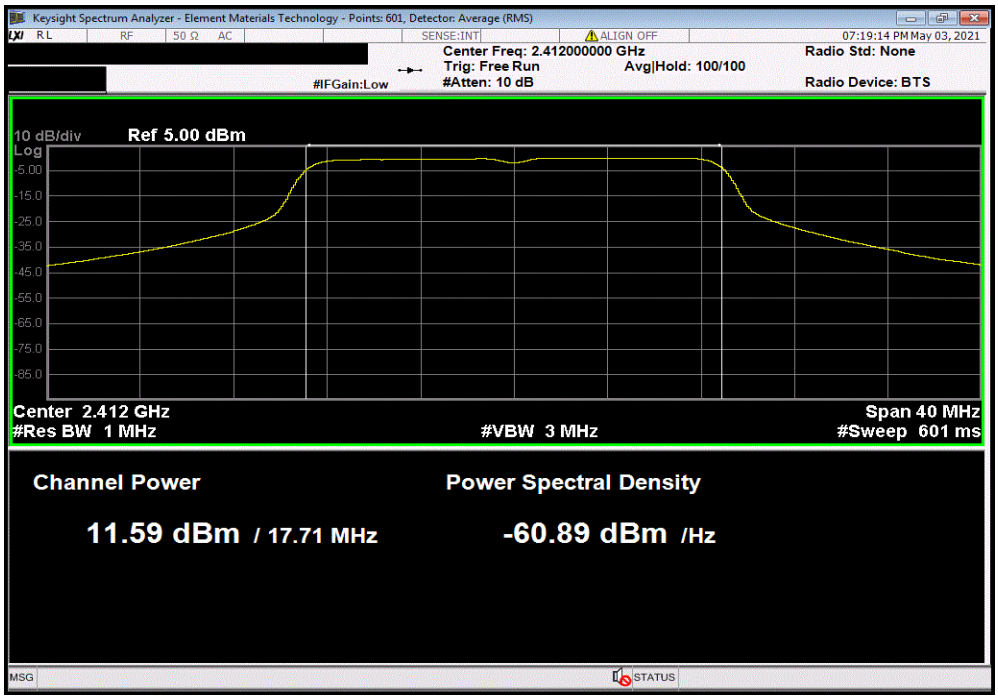


2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Result
13.374	0.1	13.5	1.2	14.7	30	Pass

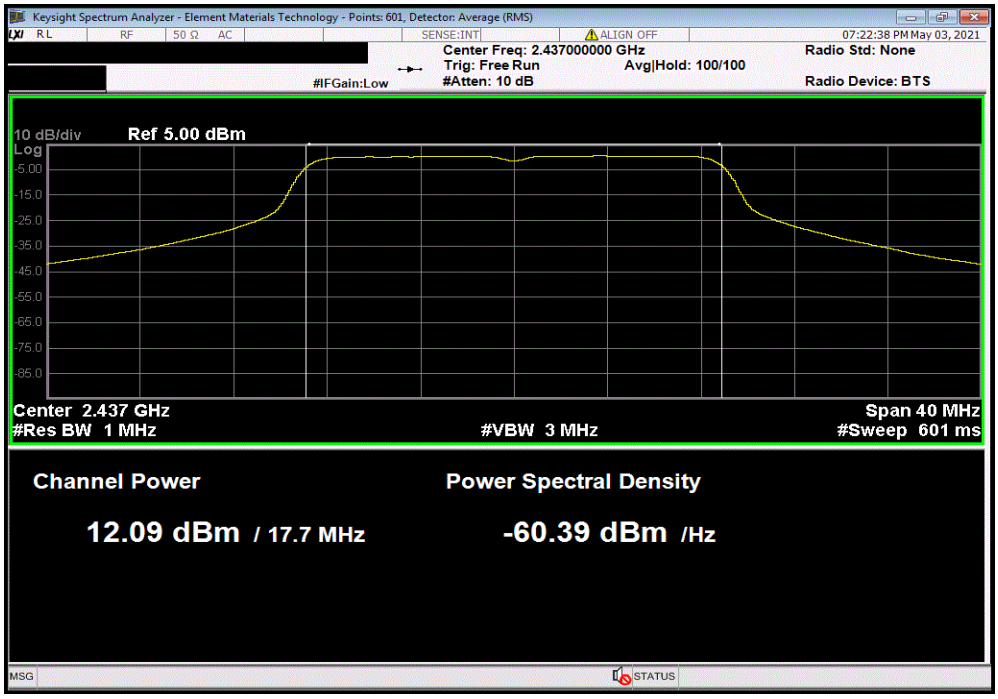


EQUIVALENT ISOTROPIC RADIATED POWER

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)	Limit (dBm)	Result
11.589	1.0	12.6	1.2	13.8	30	Pass



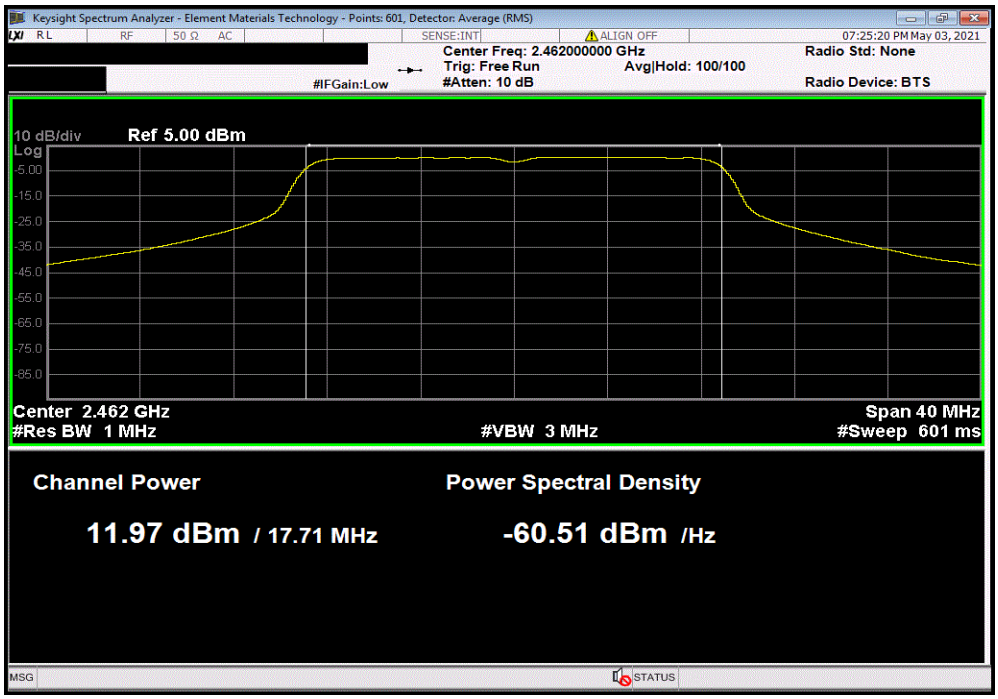
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Mid Channel 6, 2437 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Limit (dBm)	Result
12.087	1.0	13.1	1.2	14.3	30	Pass



EQUIVALENT ISOTROPIC RADIATED POWER

TbtTx 2019.08.30.0 XMit 2020.12.30.0

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)	Limit (dBm)	Result
11.97	1.1	13.0	1.2	14.3	30	Pass



0.0	1.2	1.2

SPURIOUS RADIATED EMISSIONS

element
WTD.2021.04.01.1
EmiR5 2021.01.08.0
PSA-ESCI 2021.03.17.0

TEST DESCRIPTION

The highest gain antenna of each type to be used with the EUT was tested. The EUT was configured for the required transmit frequencies and the modes as showed in the data sheets.

For each configuration, the spectrum was scanned throughout the specified range as part of the exploratory investigation of the emissions. These “pre-scans” are not included in the report. Final measurements on individual emissions were then made and included in this test report.

The individual emissions from the EUT were maximized by rotating the EUT on a turntable, adjusting the position of the EUT and EUT antenna in three orthogonal axis if required, and adjusting the measurement antenna height and polarization (per ANSI C63.10). A preamp and high pass filter (and notch filter) were used for this test in order to provide sufficient measurement sensitivity.

Measurements were made with the required detectors and annotated on the data for each individual point using the following annotation:

QP = Quasi-Peak Detector
PK = Peak Detector
AV = RMS Detector

Measurements were made to satisfy the specific requirements of the test specification for out of band emissions as well as the restricted band requirements.

If there are no detectable emissions above the noise floor, the data included may show noise floor measurements for reference only.

Measurements within 2 MHz of the allowable band may have been taken using the integration method from ANSI C63.10 clause 11.13.3. This procedure uses the channel power feature of the spectrum analyzer to integrate the power of the emission within a 1 MHz bandwidth.

Where the radio test software does not provide for a duty cycle at continuous transmit conditions (> 98%) and the RMS (power average) measurements were made across the on and off times of the EUT transmissions, a duty cycle correction is added to the measurements using the formula of 10*log(1/dc).

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Agilent	E4446A	AAQ	2020-05-07	2021-05-07
Antenna - Standard Gain	ETS Lindgren	3160-09	AHG	NCR	NCR
Amplifier - Pre-Amplifier	Miteq	JSD4-18002600-26-8P	APU	2020-09-11	2021-09-11
Cable	ESM Cable Corp.	TTBJ141 KMKM-72	MNP	2020-09-11	2021-09-11
Antenna - Double Ridge	ETS Lindgren	3115	AIB	2020-09-03	2022-09-03
Antenna - Standard Gain	ETS-Lindgren	3160-07	AJJ	NCR	NCR
Antenna - Standard Gain	ETS-Lindgren	3160-08	AJP	NCR	NCR
Amplifier - Pre-Amplifier	Miteq	AM-1064-9079 and SA18E-10	AOO	2021-02-01	2022-02-01
Amplifier - Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVC	2021-02-01	2022-02-01
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVX	2021-02-01	2022-02-01
Attenuator	Coaxicom	3910-20	AXY	2020-09-14	2021-09-14
Antenna - Biconilog	Teseq	CBL 6141B	AYD	2020-02-05	2022-02-05
Filter - Low Pass	Micro-Tronics	LPM50004	HGG	2020-09-14	2021-09-14
Cable	Element	Double Ridge Guide Horn Cables	MNV	2021-02-01	2022-02-01
Cable	Element	Standard Gain Cable	MNW	2021-02-01	2022-02-01
Cable	Element	Biconilog Cable	MNX	2021-02-01	2022-02-01
Amplifier - Pre-Amplifier	L-3 Narda-MITEQ	AMF-6F-12001800-30-10P	PAP	2021-02-01	2022-02-01
Filter - High Pass	Micro-Tronics	HPM50111	HFM	2020-09-14	2021-09-14

SPURIOUS RADIATED EMISSIONS

element
WTD.2021.04.01.1
EmiR5 2021.01.08.0
PSA-ESCI 2021.03.17.0

MEASUREMENT UNCERTAINTY

Description		
Expanded k=2	5.2 dB	-5.2 dB

FREQUENCY RANGE INVESTIGATED

30 MHz TO 26500 MHz

POWER INVESTIGATED

3.7VDC

CONFIGURATIONS INVESTIGATED

LGPD0258-3

MODES INVESTIGATED

Transmitting WiFi channels 1, 6, and 11 (2412, 2437, and 2462 MHz) at 1, 6, 11, 36, 54 Mbps, MCS0, and MCS7.

SPURIOUS RADIATED EMISSIONS

element
WTD.2021.04.01.1
EmiR5 2021.01.08.0
PSA-ESCI 2021.03.17.0

EUT:	Zoll R-Series Data Comm II C2PC	Work Order:	LGPD0258
Serial Number:	LB211400035	Date:	2021-05-04
Customer:	Logic PD, Inc.	Temperature:	22.4°C
Attendees:	Eric Fritz	Relative Humidity:	34.5%
Customer Project:	None	Bar. Pressure:	1018 mb
Tested By:	Christopher Heintzelman	Job Site:	MN09
Power:	3.7VDC	Configuration:	LGPD0258-3

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2021	ANSI C63.10:2013

TEST PARAMETERS

Run #:	13	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)

COMMENTS

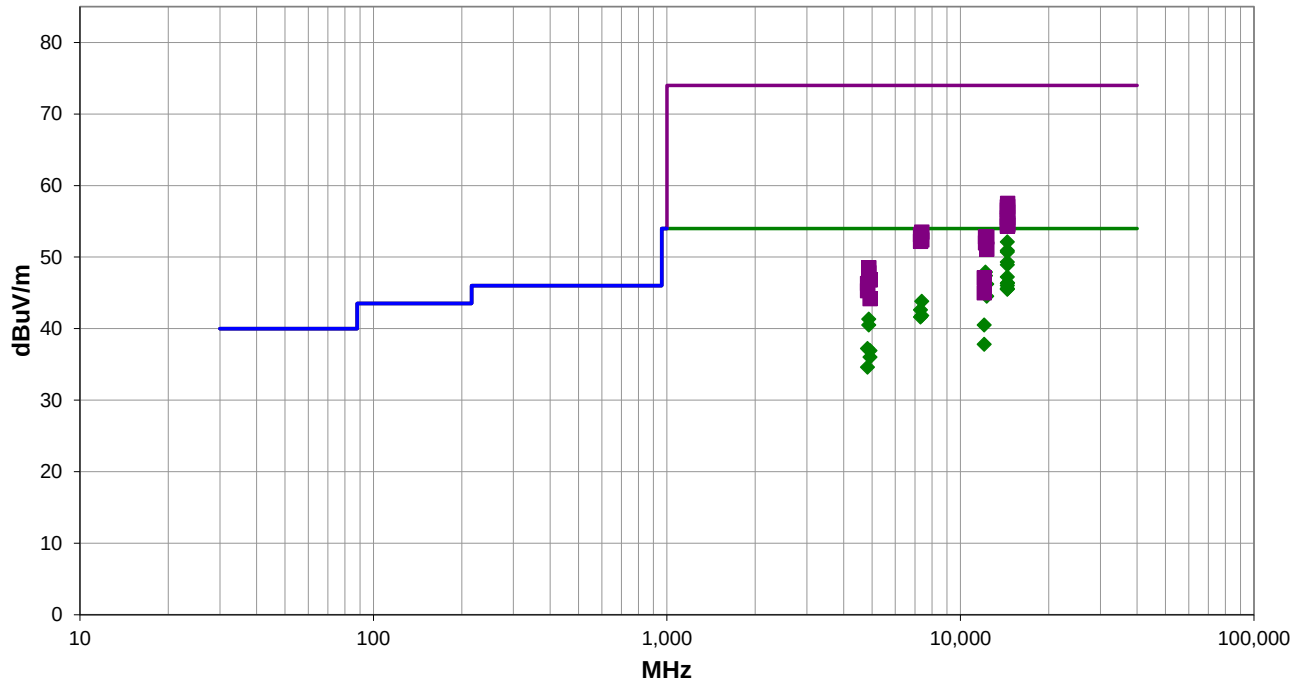
Channel 1 power reduced to level 1A. See comments for EUT orientation and data rate. Duty cycle correction factor applied from 10*log(1/duty cycle) with 1 Mbps at 100%, 6 Mbps at 96.5% (0.2dB), 11 Mbps at 95.8% (0.2dB), 36 Mbps at 84.6% (0.7dB), 54 Mbps at 79.3% (1.0dB), MCS0 at 95.9% (0.2dB), and MCS7 at 75.8% (1.2dB). The cardboard fixture was compared to Styrofoam and the results were determined to be equivalent.

EUT OPERATING MODES

Transmitting WiFi channels 1, 6, and 11 (2412, 2437, and 2462 MHz) at 1, 6, 11, 36, 54 Mbps, MCS0, and MCS7.

DEVIATIONS FROM TEST STANDARD

None



Run #: 13 ■ PK ◆ AV ● QP

SPURIOUS RADIATED EMISSIONS

element
WTD.2021.04.01.1
EmiR5 2021.01.08.0
PSA-ESCI 2021.03.17.0

RESULTS - Run #13

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Duty Cycle Correction Factor (dB)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
14471.890	35.1	17.0	2.7	107.0	0.0	0.0	Vert	AV	0.0	52.1	54.0	-1.9	EUT Vert, Low Ch, 1 Mbps
14472.030	33.9	17.0	1.5	110.0	0.0	0.0	Horz	AV	0.0	50.9	54.0	-3.1	EUT On Side, Low Ch, 1 Mbps
14471.930	33.7	17.0	1.5	131.0	0.0	0.0	Horz	AV	0.0	50.7	54.0	-3.3	EUT Vert, Low Ch, 1 Mbps
14471.960	32.3	17.0	2.5	29.0	0.0	0.0	Vert	AV	0.0	49.3	54.0	-4.7	EUT Horz, Low Ch, 1 Mbps
14472.000	31.9	17.0	1.2	119.0	0.0	0.0	Vert	AV	0.0	48.9	54.0	-5.1	EUT On Side, Low Ch, 1 Mbps
12186.060	48.5	-0.6	1.7	99.0	0.0	0.0	Vert	AV	0.0	47.9	54.0	-6.1	EUT Vert, Mid Ch, 1 Mbps
12186.060	48.0	-0.6	1.1	110.0	0.0	0.0	Horz	AV	0.0	47.4	54.0	-6.6	EUT On Side, Mid Ch, 1 Mbps
14471.980	30.0	17.0	3.0	110.0	0.2	0.0	Vert	AV	0.0	47.2	54.0	-6.8	EUT Vert, Low Ch, 11 Mbps
14472.070	28.2	17.0	3.0	110.0	1.2	0.0	Vert	AV	0.0	46.4	54.0	-7.6	EUT Vert, Low Ch, MCS7
14472.000	28.3	17.0	3.0	110.0	1.0	0.0	Vert	AV	0.0	46.3	54.0	-7.7	EUT Vert, Low Ch, 54 Mbps
12310.580	46.8	-0.6	1.6	103.0	0.0	0.0	Vert	AV	0.0	46.2	54.0	-7.8	EUT Vert, High Ch, 1 Mbps
14471.990	28.3	17.0	3.0	110.0	0.7	0.0	Vert	AV	0.0	46.0	54.0	-8.0	EUT Vert, Low Ch, 36 Mbps
14471.920	28.4	17.0	3.0	110.0	0.2	0.0	Vert	AV	0.0	45.6	54.0	-8.4	EUT Vert, Low Ch, 6 Mbps
14471.960	28.5	17.0	1.5	57.0	0.0	0.0	Horz	AV	0.0	45.5	54.0	-8.5	EUT Horz, Low Ch, 1 Mbps
14472.020	28.3	17.0	3.0	110.0	0.2	0.0	Vert	AV	0.0	45.5	54.0	-8.5	EUT Vert, Low Ch, MCS0
12310.780	45.1	-0.6	1.5	107.0	0.0	0.0	Horz	AV	0.0	44.5	54.0	-9.5	EUT on Side, High Ch, 1 Mbps
7385.975	30.4	13.4	1.5	123.0	0.0	0.0	Horz	AV	0.0	43.8	54.0	-10.2	EUT On Side, High Ch, 1 Mbps
7310.992	29.6	13.0	1.5	81.0	0.0	0.0	Horz	AV	0.0	42.6	54.0	-11.4	EUT On Side, Mid Ch, 1 Mbps
7385.825	28.4	13.4	1.5	208.0	0.0	0.0	Vert	AV	0.0	41.8	54.0	-12.2	EUT Vert, High Ch, 1 Mbps
7311.033	28.6	13.0	1.5	197.0	0.0	0.0	Vert	AV	0.0	41.6	54.0	-12.4	EUT Vert, Mid Ch, 1 Mbps
4873.950	36.5	4.8	3.9	109.0	0.0	0.0	Vert	AV	0.0	41.3	54.0	-12.7	EUT Vert, Mid Ch, 1 Mbps
4873.933	35.7	4.8	1.5	127.0	0.0	0.0	Horz	AV	0.0	40.5	54.0	-13.5	EUT On Side, Mid Ch, 1 Mbps
12059.930	41.8	-1.3	1.7	106.0	0.0	0.0	Vert	AV	0.0	40.5	54.0	-13.5	EUT Vert, Low Ch, 1 Mbps
12060.040	39.1	-1.3	1.5	87.0	0.0	0.0	Horz	AV	0.0	37.8	54.0	-16.2	EUT On Side, Low Ch, 1 Mbps
14472.090	40.5	17.0	2.7	107.0	0.0	0.0	Vert	PK	0.0	57.5	74.0	-16.5	EUT Vert, Low Ch, 1 Mbps
4823.975	32.4	4.8	1.5	132.0	0.0	0.0	Horz	AV	0.0	37.2	54.0	-16.8	EUT On Side, Low Ch, 1 Mbps
14472.080	40.1	17.0	1.5	131.0	0.0	0.0	Horz	PK	0.0	57.1	74.0	-16.9	EUT Vert, Low Ch, 1 Mbps
14471.790	40.0	17.0	1.5	110.0	0.0	0.0	Horz	PK	0.0	57.0	74.0	-17.0	EUT On Side, Low Ch, 1 Mbps
4924.050	32.3	4.6	1.5	153.0	0.0	0.0	Horz	AV	0.0	36.9	54.0	-17.1	EUT On Side, High Ch, 1 Mbps
14471.760	39.6	17.0	3.0	110.0	0.0	0.0	Vert	PK	0.0	56.6	74.0	-17.4	EUT Vert, Low Ch, 11 Mbps
14472.110	39.3	17.0	2.5	29.0	0.0	0.0	Vert	PK	0.0	56.3	74.0	-17.7	EUT Horz, Low Ch, 1 Mbps
4924.058	31.4	4.6	1.5	306.0	0.0	0.0	Vert	AV	0.0	36.0	54.0	-18.0	EUT Vert, High Ch, 1 Mbps
14472.340	38.5	17.0	1.2	119.0	0.0	0.0	Vert	PK	0.0	55.5	74.0	-18.5	EUT On Side, Low Ch, 1 Mbps
14471.860	38.5	17.0	3.0	110.0	0.0	0.0	Vert	PK	0.0	55.5	74.0	-18.5	EUT Vert, Low Ch, MCS7
14472.050	38.1	17.0	3.0	110.0	0.0	0.0	Vert	PK	0.0	55.1	74.0	-18.9	EUT Vert, Low Ch, 54 Mbps
14472.130	37.7	17.0	3.0	110.0	0.0	0.0	Vert	PK	0.0	54.7	74.0	-19.3	EUT Vert, Low Ch, MCS0
4824.075	29.8	4.8	1.5	298.0	0.0	0.0	Vert	AV	0.0	34.6	54.0	-19.4	EUT Vert, Low Ch, 1 Mbps
14472.480	37.5	17.0	1.5	57.0	0.0	0.0	Horz	PK	0.0	54.5	74.0	-19.5	EUT Horz, Low Ch, 1 Mbps
14472.180	37.5	17.0	3.0	110.0	0.0	0.0	Vert	PK	0.0	54.5	74.0	-19.5	EUT Vert, Low Ch, 6 Mbps
14471.850	37.3	17.0	3.0	110.0	0.0	0.0	Vert	PK	0.0	54.3	74.0	-19.7	EUT Vert, Low Ch, 36 Mbps

SPURIOUS RADIATED EMISSIONS

element
WTD.2021.04.01.1
EmiR5 2021.01.08.0
PSA-ESCI 2021.03.17.0

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Duty Cycle Correction Factor (dB)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
7385.658	40.1	13.4	1.5	123.0	0.0	0.0	Horz	PK	0.0	53.5	74.0	-20.5	EUT On Side, High Ch, 1 Mbps
7310.642	40.1	13.0	1.5	81.0	0.0	0.0	Horz	PK	0.0	53.1	74.0	-20.9	EUT On Side, Mid Ch, 1 Mbps
12185.020	53.5	-0.7	1.7	99.0	0.0	0.0	Vert	PK	0.0	52.8	74.0	-21.2	EUT Vert, Mid Ch, 1 Mbps
12310.120	53.4	-0.6	1.6	103.0	0.0	0.0	Vert	PK	0.0	52.8	74.0	-21.2	EUT Vert, High Ch, 1 Mbps
7387.350	39.0	13.4	1.5	208.0	0.0	0.0	Vert	PK	0.0	52.4	74.0	-21.6	EUT Vert, High Ch, 1 Mbps
7312.183	39.2	13.0	1.5	197.0	0.0	0.0	Vert	PK	0.0	52.2	74.0	-21.8	EUT Vert, Mid Ch, 1 Mbps
12185.130	52.7	-0.7	1.1	110.0	0.0	0.0	Horz	PK	0.0	52.0	74.0	-22.0	EUT On Side, Mid Ch, 1 Mbps
12309.790	51.7	-0.6	1.5	107.0	0.0	0.0	Horz	PK	0.0	51.1	74.0	-22.9	EUT on Side, High Ch, 1 Mbps
4874.117	43.7	4.8	1.5	127.0	0.0	0.0	Horz	PK	0.0	48.5	74.0	-25.5	EUT On Side, Mid Ch, 1 Mbps
4873.575	43.0	4.8	3.9	109.0	0.0	0.0	Vert	PK	0.0	47.8	74.0	-26.2	EUT Vert, Mid Ch, 1 Mbps
12060.110	48.4	-1.3	1.7	106.0	0.0	0.0	Vert	PK	0.0	47.1	74.0	-26.9	EUT Vert, Low Ch, 1 Mbps
4924.417	42.2	4.6	1.5	153.0	0.0	0.0	Horz	PK	0.0	46.8	74.0	-27.2	EUT On Side, High Ch, 1 Mbps
4823.608	41.5	4.8	1.5	132.0	0.0	0.0	Horz	PK	0.0	46.3	74.0	-27.7	EUT On Side, Low Ch, 1 Mbps
4825.875	40.5	4.8	1.5	298.0	0.0	0.0	Vert	PK	0.0	45.3	74.0	-28.7	EUT Vert, Low Ch, 1 Mbps
12059.960	46.3	-1.3	1.5	87.0	0.0	0.0	Horz	PK	0.0	45.0	74.0	-29.0	EUT On Side, Low Ch, 1 Mbps
4924.108	39.6	4.6	1.5	306.0	0.0	0.0	Vert	PK	0.0	44.2	74.0	-29.8	EUT Vert, High Ch, 1 Mbps

CONCLUSION
Pass

Tested By

SPURIOUS RADIATED EMISSIONS

element
WTD.2021.04.01.1
EmiR5 2021.01.08.0
PSA-ESCI 2021.03.17.0

EUT:	Zoll R-Series Data Comm II C2PC	Work Order:	LGPD0258
Serial Number:	LB211400035	Date:	2021-05-04
Customer:	Logic PD, Inc.	Temperature:	22.4°C
Attendees:	Eric Fritz	Relative Humidity:	34.5%
Customer Project:	None	Bar. Pressure:	1018 mb
Tested By:	Christopher Heintzelman	Job Site:	MN09
Power:	3.7VDC	Configuration:	LGPD0258-3

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2021	ANSI C63.10:2013

TEST PARAMETERS

Run #:	19	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)

COMMENTS

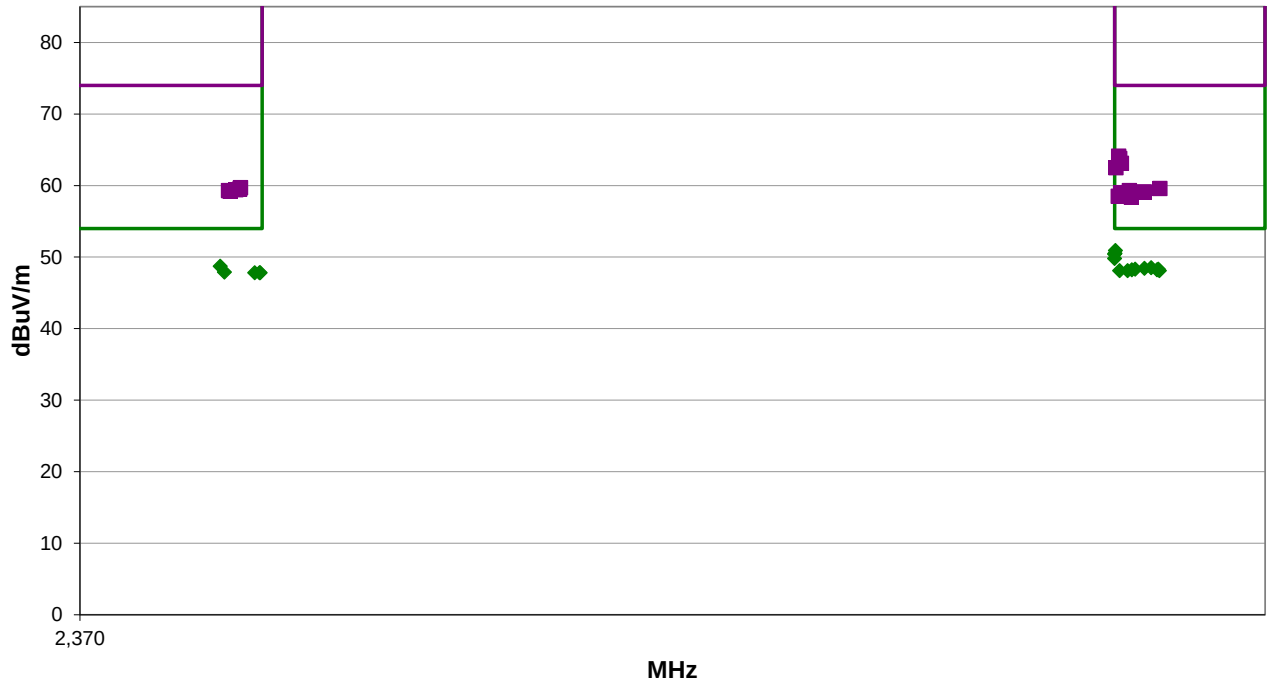
Channel 1 power reduced to level 1A. See comments for EUT orientation and data rate. Duty cycle correction factor applied from 10*log(1/duty cycle) with 1 Mbps at 100%, 6 Mbps at 96.5% (0.2dB), 11 Mbps at 95.8% (0.2dB), 36 Mbps at 84.6% (0.7dB), 54 Mbps at 79.3% (1.0dB), MCS0 at 95.9% (0.2dB), and MCS7 at 75.8% (1.2dB). The cardboard fixture was compared to Styrofoam and the results were determined to be equivalent.

EUT OPERATING MODES

Transmitting WiFi channels 1, 6, and 11 (2412, 2437, and 2462 MHz) at 1, 6, 11, 36, 54 Mbps, MCS0, and MCS7.

DEVIATIONS FROM TEST STANDARD

None



Run #: 19 ■ PK ◆ AV ● QP

SPURIOUS RADIATED EMISSIONS

element
WTD.2021.04.01.1
EmiR5 2021.01.08.0
PSA-ESCI 2021.03.17.0

RESULTS - Run #19

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Duty Cycle Correction Factor (dB)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
2483.600	32.9	-3.2	1.9	302.0	1.2	20.0	Horz	AV	0.0	50.9	54.0	-3.1	EUT Vert, High Ch, MCS7
2483.542	32.7	-3.2	1.9	302.0	1.0	20.0	Horz	AV	0.0	50.5	54.0	-3.5	EUT Vert, High Ch, 54 Mbps
2483.500	32.9	-3.2	1.9	302.0	0.7	20.0	Horz	AV	0.0	50.4	54.0	-3.6	EUT Vert, High Ch, 36 Mbps
2483.500	32.8	-3.2	1.9	302.0	0.2	20.0	Horz	AV	0.0	49.8	54.0	-4.2	EUT Vert, High Ch, MCS0
2385.400	31.2	-3.5	1.5	6.0	1.0	20.0	Horz	AV	0.0	48.7	54.0	-5.3	EUT Vert, Low Ch, 54 Mbps
2487.517	31.5	-3.2	1.9	302.0	0.2	20.0	Horz	AV	0.0	48.5	54.0	-5.5	EUT Vert, High Ch, 11 Mbps
2486.775	31.6	-3.2	1.9	302.0	0.0	20.0	Horz	AV	0.0	48.4	54.0	-5.6	EUT Vert, High Ch, 1 Mbps
2488.292	31.4	-3.1	2.2	188.0	0.0	20.0	Vert	AV	0.0	48.3	54.0	-5.7	EUT Vert, High Ch, 1 Mbps
2485.750	31.3	-3.2	1.5	48.0	0.2	20.0	Horz	AV	0.0	48.3	54.0	-5.7	EUT Vert, High Ch, 6 Mbps
2488.150	31.1	-3.1	1.5	100.0	0.2	20.0	Horz	AV	0.0	48.2	54.0	-5.8	EUT On Side, High Ch, 6 Mbps
2485.383	31.2	-3.2	1.5	150.0	0.2	20.0	Vert	AV	0.0	48.2	54.0	-5.8	EUT Vert, High Ch, 6 Mbps
2488.417	31.0	-3.1	1.5	270.0	0.2	20.0	Vert	AV	0.0	48.1	54.0	-5.9	EUT Horz, High Ch, 6 Mbps
2484.050	31.1	-3.2	1.5	20.0	0.2	20.0	Vert	AV	0.0	48.1	54.0	-5.9	EUT On Side, High Ch, 6 Mbps
2484.917	31.1	-3.2	1.5	75.0	0.2	20.0	Horz	AV	0.0	48.1	54.0	-5.9	EUT Horz, High Ch, 6 Mbps
2385.858	31.4	-3.5	1.5	6.0	0.0	20.0	Horz	AV	0.0	47.9	54.0	-6.1	EUT Vert, Low Ch, 1 Mbps
2389.792	31.1	-3.5	1.5	254.0	0.2	20.0	Vert	AV	0.0	47.8	54.0	-6.2	EUT Vert, Low Ch, 6 Mbps
2389.717	31.1	-3.5	1.5	6.0	0.2	20.0	Horz	AV	0.0	47.8	54.0	-6.2	EUT Vert, Low Ch, 6 Mbps
2389.192	31.1	-3.5	1.5	6.0	0.2	20.0	Horz	AV	0.0	47.8	54.0	-6.2	EUT Vert, Low Ch, 11 Mbps
2483.933	47.3	-3.2	1.9	302.0	0.0	20.0	Horz	PK	0.0	64.1	74.0	-9.9	EUT Vert, High Ch, 36 Mbps
2484.058	47.0	-3.2	1.9	302.0	0.0	20.0	Horz	PK	0.0	63.8	74.0	-10.2	EUT Vert, High Ch, MCS0
2484.225	46.3	-3.2	1.9	302.0	0.0	20.0	Horz	PK	0.0	63.1	74.0	-10.9	EUT Vert, High Ch, MCS7
2483.633	45.7	-3.2	1.9	302.0	0.0	20.0	Horz	PK	0.0	62.5	74.0	-11.5	EUT Vert, High Ch, 54 Mbps
2387.608	43.2	-3.5	1.5	6.0	0.0	20.0	Horz	PK	0.0	59.7	74.0	-14.3	EUT Vert, Low Ch, 1 Mbps
2488.458	42.7	-3.1	1.9	302.0	0.0	20.0	Horz	PK	0.0	59.6	74.0	-14.4	EUT Vert, High Ch, 11 Mbps
2387.517	43.0	-3.5	1.5	6.0	0.0	20.0	Horz	PK	0.0	59.5	74.0	-14.5	EUT Vert, Low Ch, 54 Mbps
2387.108	42.9	-3.5	1.5	6.0	0.0	20.0	Horz	PK	0.0	59.4	74.0	-14.6	EUT Vert, Low Ch, 11 Mbps
2485.117	42.5	-3.2	1.5	20.0	0.0	20.0	Vert	PK	0.0	59.3	74.0	-14.7	EUT On Side, High Ch, 6 Mbps
2386.300	42.8	-3.5	1.5	6.0	0.0	20.0	Horz	PK	0.0	59.3	74.0	-14.7	EUT Vert, Low Ch, 6 Mbps
2386.483	42.7	-3.5	1.5	254.0	0.0	20.0	Vert	PK	0.0	59.2	74.0	-14.8	EUT Vert, Low Ch, 6 Mbps
2486.742	42.3	-3.2	1.5	100.0	0.0	20.0	Horz	PK	0.0	59.1	74.0	-14.9	EUT On Side, High Ch, 6 Mbps
2486.733	42.3	-3.2	1.5	75.0	0.0	20.0	Horz	PK	0.0	59.1	74.0	-14.9	EUT Horz, High Ch, 6 Mbps
2484.167	42.2	-3.2	1.5	48.0	0.0	20.0	Horz	PK	0.0	59.0	74.0	-15.0	EUT Vert, High Ch, 6 Mbps
2484.308	42.2	-3.2	2.2	188.0	0.0	20.0	Vert	PK	0.0	59.0	74.0	-15.0	EUT Vert, High Ch, 1 Mbps
2485.000	42.0	-3.2	1.9	302.0	0.0	20.0	Horz	PK	0.0	58.8	74.0	-15.2	EUT Vert, High Ch, 1 Mbps
2483.883	41.7	-3.2	1.5	150.0	0.0	20.0	Vert	PK	0.0	58.5	74.0	-15.5	EUT Vert, High Ch, 6 Mbps
2485.317	41.6	-3.2	1.5	270.0	0.0	20.0	Vert	PK	0.0	58.4	74.0	-15.6	EUT Horz, High Ch, 6 Mbps

SPURIOUS RADIATED EMISSIONS

element
WTD.2021.04.01.1
EmiR5 2021.01.08.0
PSA-ESCI 2021.03.17.0

CONCLUSION
Pass

Tested By

End of Test Report