OCCUPIED BANDWIDTH

XMit 2022.02.07.0

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
Generator - Signal	Keysight	N5182B	TFU	2020-11-20	2022-11-20
Cable	Micro-Coax	UFD150A-1-0720-200200	EVK	2022-03-14	2023-03-14
Attenuator	S.M. Electronics	SA26B-20	AUY	2022-03-15	2023-03-15
Block - DC	Fairview Microwave	SD3379	AMW	2022-03-14	2023-03-14
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFO	2021-07-06	2022-07-06

TEST DESCRIPTION

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

The 99% occupied bandwidth was measured with the EUT configured for continuous modulated operation.

Per ANSI C63.10:2013, 6.9.3, the spectrum analyzer was configured as follows:

The span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts.

The resolution bandwidth (RBW) of the spectrum analyzer was set to the range of 1% to 5% of the occupied bandwidth (OBW) and video bandwidth (VBW) bandwidth was set to at least 3 times the resolution bandwidth. The analyzer sweep time was set to auto to prevent video filtering or averaging. A sample detector was used unless the device was not able to be operated in a continuous transmit mode, in which case a peak detector was used.

The spectrum analyzer occupied bandwidth measurement function was used to sum the power of the transmission in linear terms to obtain the 99% bandwidth.

OCCUPIED BANDWIDTH

TbtTx 2021.03.19.1 XMit 2022.02.07.0

EUT:	SHOUT sp Handheld Iridium Smartphone	Work Order:	PCTE0003
Serial Number:	FCC3	Date:	18-May-22
Customer:	NAL Research Corporation	Temperature:	22.6 °C
Attendees:	None	Humidity:	43.2% RH
Project:	None	Barometric Pres.:	1025 mbar
Tested by:	Jeff Alcoke	Power: 5.0 VDC via USB	Job Site: EV06

TEST SPECIFICATIONS	Test Method
FCC 15.247:2022	ANSI C63.10:2013

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

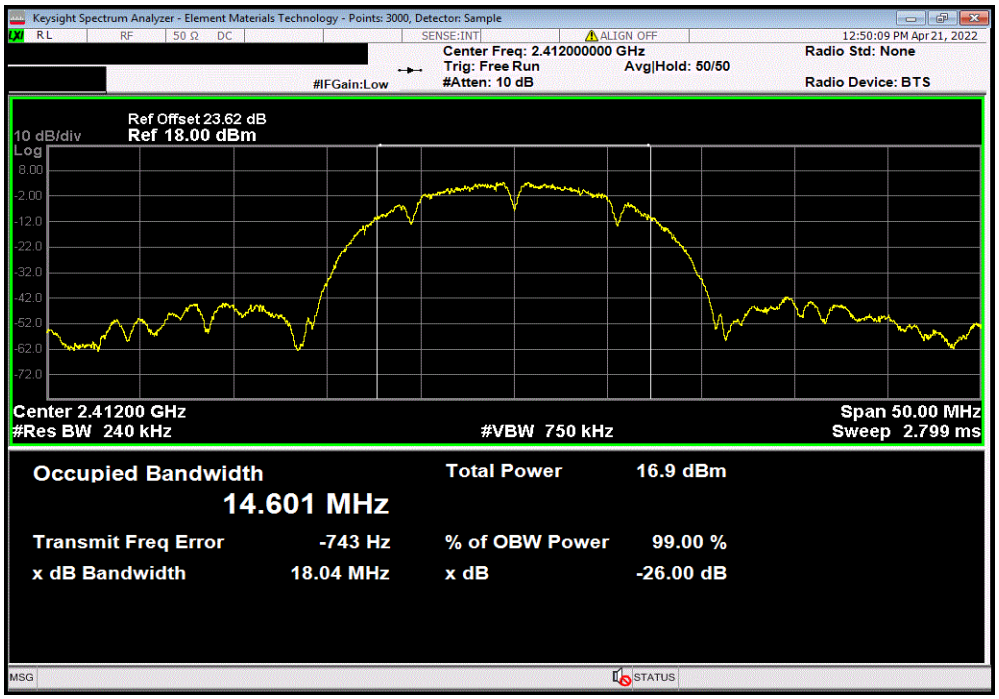
None

Configuration #	12	Signature

	Value	Limit	Result
2400 MHz - 2483.5 MHz Band			
20 MHz			
802.11(b) 1 Mbps			
Low Channel 1, 2412 MHz	14.601 MHz	N/A	N/A
Mid Channel 6, 2437 MHz	14.571 MHz	N/A	N/A
High Channel 11, 2462 MHz	14.545 MHz	N/A	N/A
802.11(b) 11 Mbps			
Low Channel 1, 2412 MHz	14.597 MHz	N/A	N/A
Mid Channel 6, 2437 MHz	14.547 MHz	N/A	N/A
High Channel 11, 2462 MHz	14.486 MHz	N/A	N/A
802.11(g) 6 Mbps			
Low Channel 1, 2412 MHz	16.259 MHz	N/A	N/A
Mid Channel 6, 2437 MHz	16.578 MHz	N/A	N/A
High Channel 11, 2462 MHz	16.284 MHz	N/A	N/A
802.11(g) 36 Mbps			
Low Channel 1, 2412 MHz	16.342 MHz	N/A	N/A
Mid Channel 6, 2437 MHz	16.389 MHz	N/A	N/A
High Channel 11, 2462 MHz	16.3 MHz	N/A	N/A
802.11(g) 54 Mbps			
Low Channel 1, 2412 MHz	16.274 MHz	N/A	N/A
Mid Channel 6, 2437 MHz	16.376 MHz	N/A	N/A
High Channel 11, 2462 MHz	16.234 MHz	N/A	N/A
802.11(n) MCS0			
Low Channel 1, 2412 MHz	17.446 MHz	N/A	N/A
Mid Channel 6, 2437 MHz	17.675 MHz	N/A	N/A
High Channel 11, 2462 MHz	17.46 MHz	N/A	N/A
802.11(n) MCS7			
Low Channel 1, 2412 MHz	17.492 MHz	N/A	N/A
Mid Channel 6, 2437 MHz	17.476 MHz	N/A	N/A
High Channel 11, 2462 MHz	17.449 MHz	N/A	N/A
40 MHz			
802.11(n) MCS0			
Low Channel 1/5, 2422 MHz	35.78 MHz	N/A	N/A
Mid Channel 4/8, 2437 MHz	36.015 MHz	N/A	N/A
High Channel 7/11, 2452 MHz	35.806 MHz	N/A	N/A
802.11(n) MCS7			
Low Channel 1/5, 2422 MHz	36.042 MHz	N/A	N/A
Mid Channel 4/8, 2437 MHz	35.758 MHz	N/A	N/A
High Channel 7/11, 2452 MHz	36.041 MHz	N/A	N/A

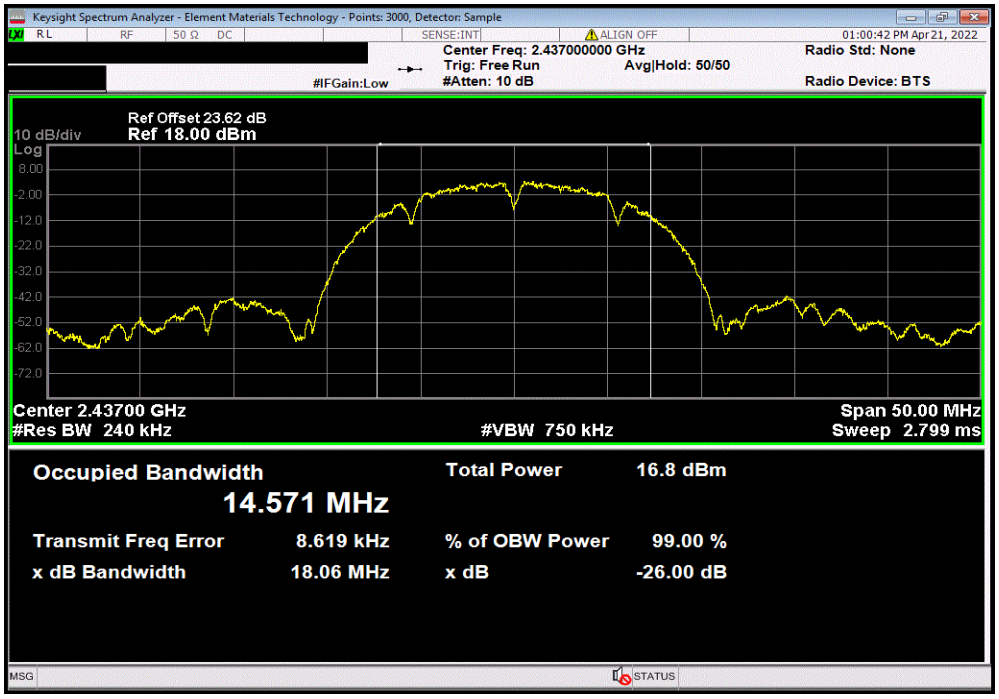
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz

				Value	Limit	Result
				14.601 MHz	N/A	N/A

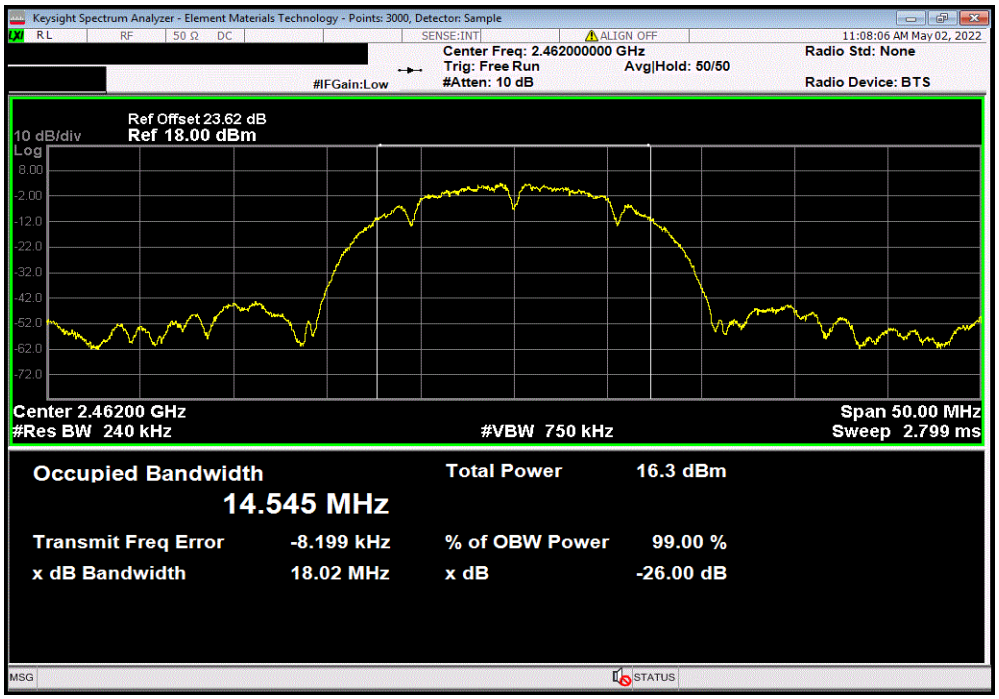


2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz

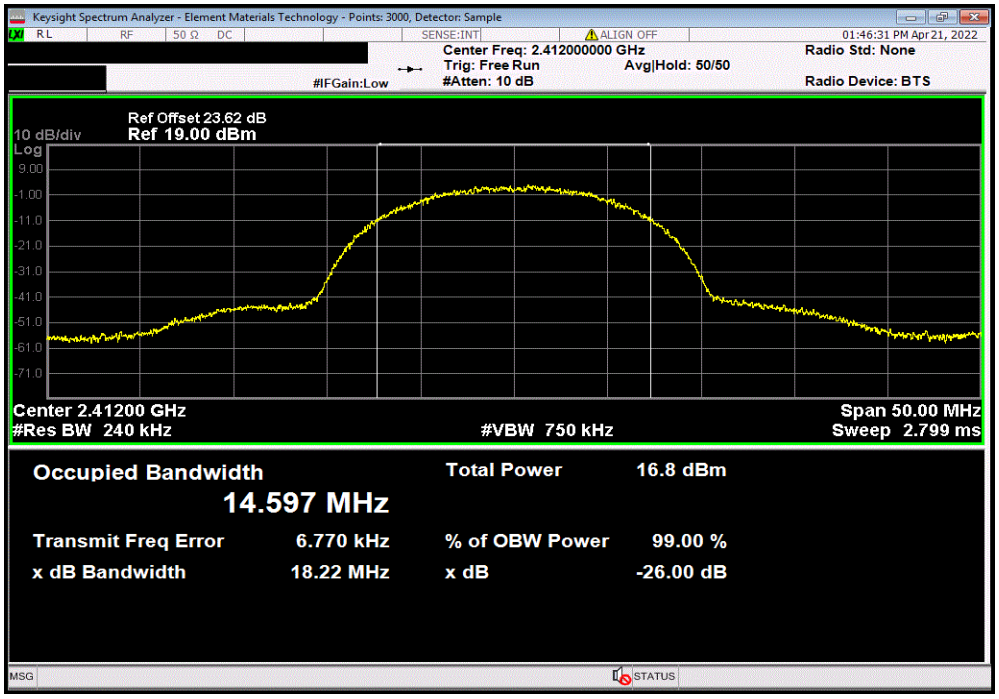
				Value	Limit	Result
				14.571 MHz	N/A	N/A



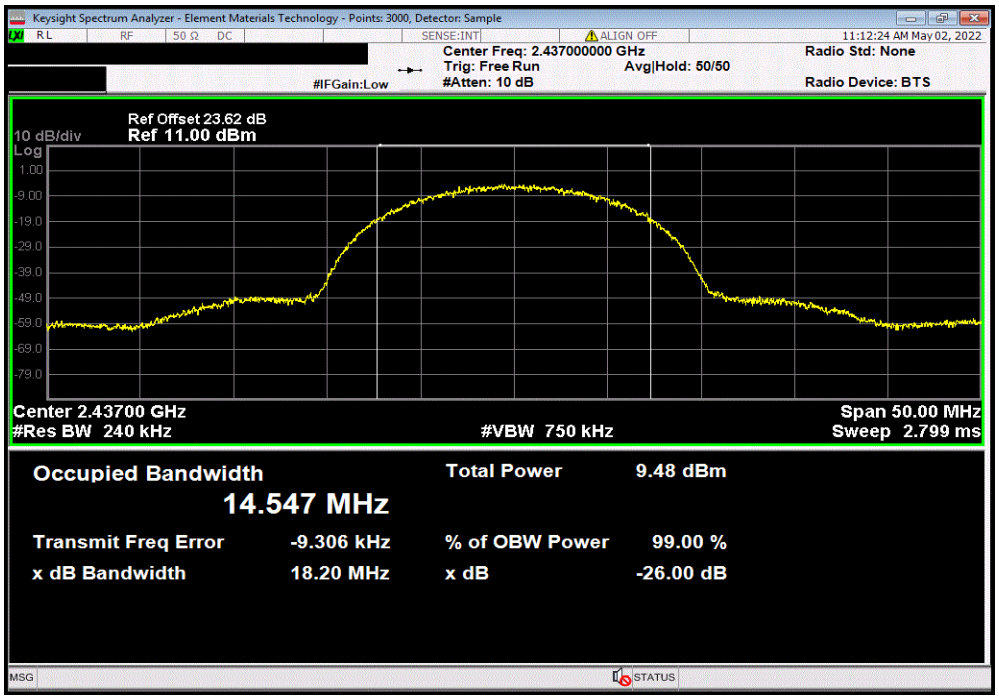
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz						
				Value	Limit	Result
				14.545 MHz	N/A	N/A



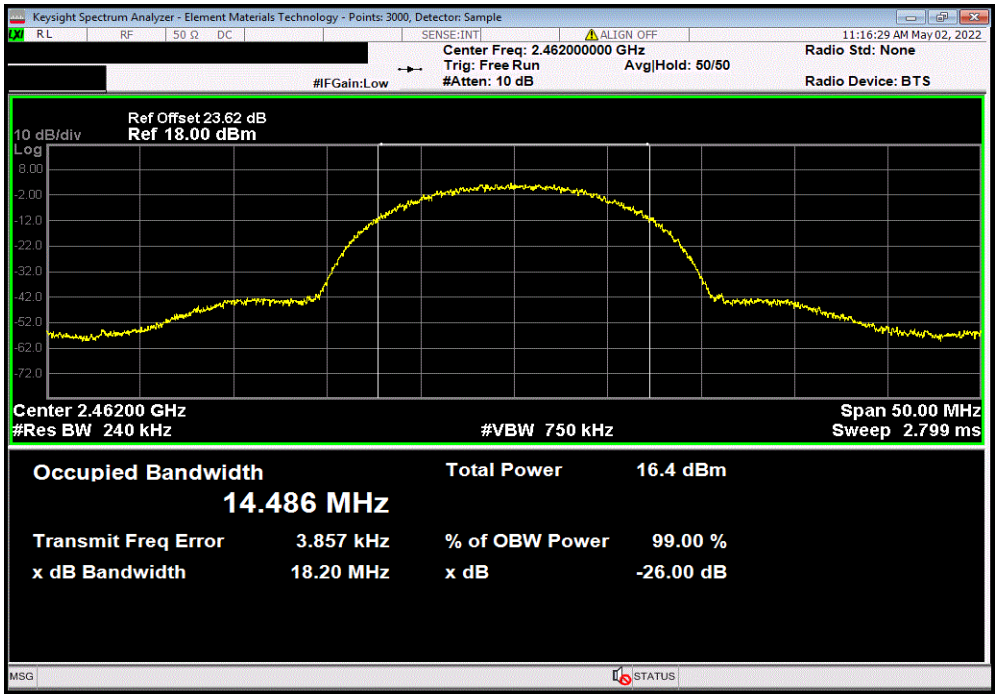
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz						
				Value	Limit	Result
				14.597 MHz	N/A	N/A



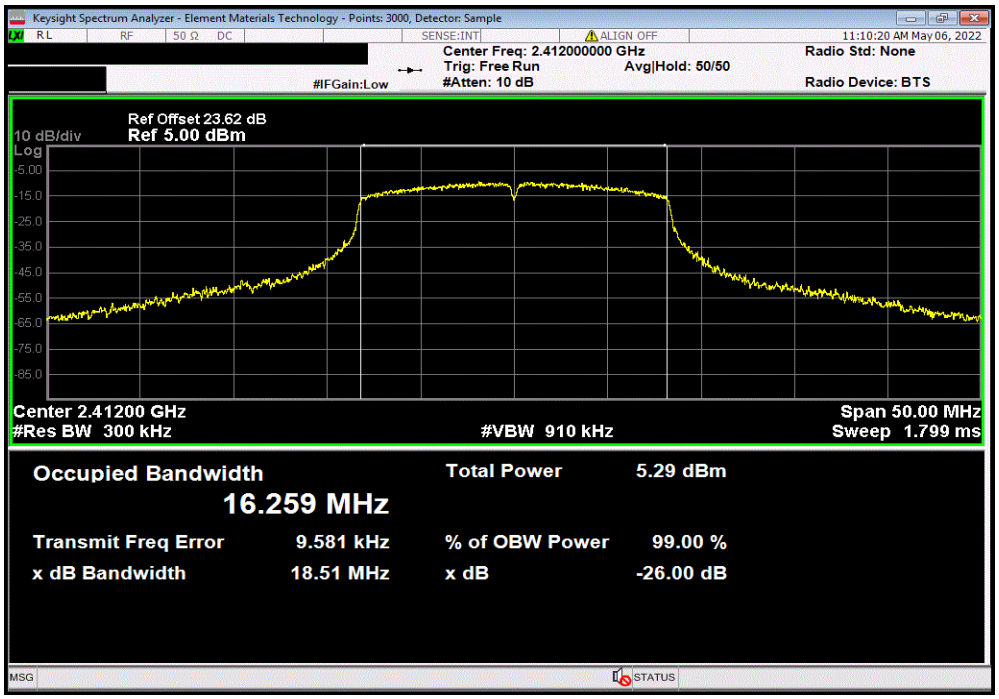
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz						
				Value	Limit	Result
				14.547 MHz	N/A	N/A



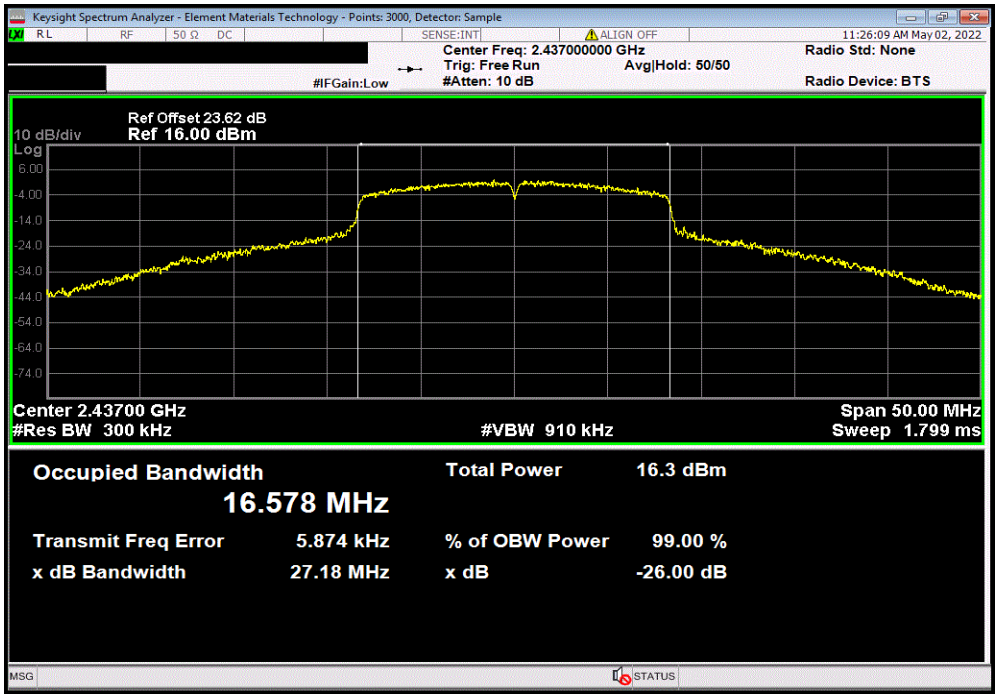
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz						
				Value	Limit	Result
				14.486 MHz	N/A	N/A



2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz						
				Value	Limit	Result
				16.259 MHz	N/A	N/A

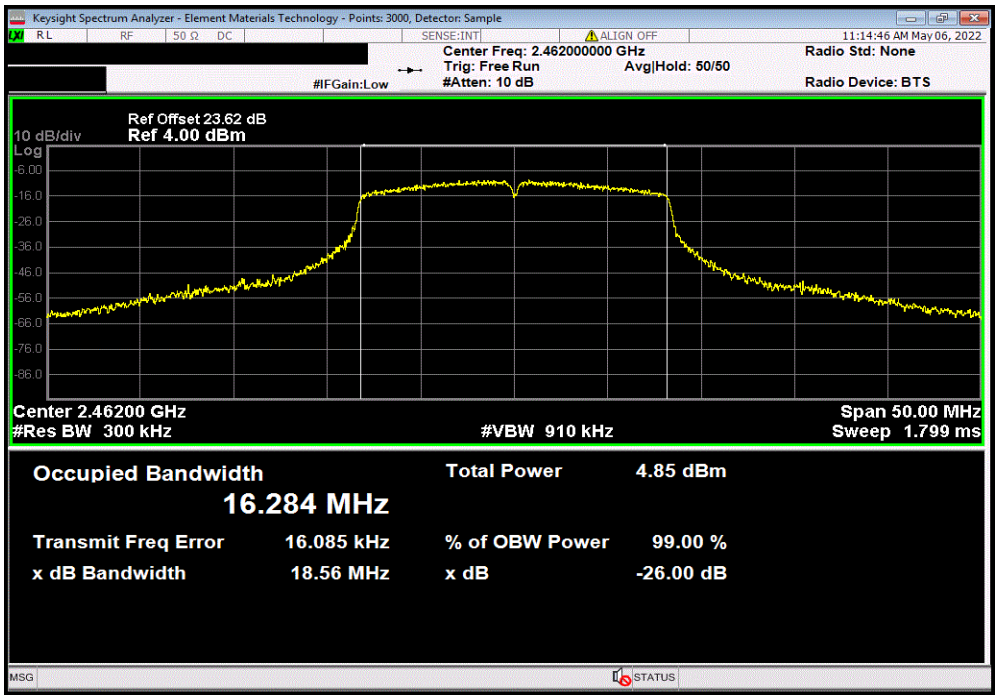


2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz						
				Value	Limit	Result
				16.578 MHz	N/A	N/A



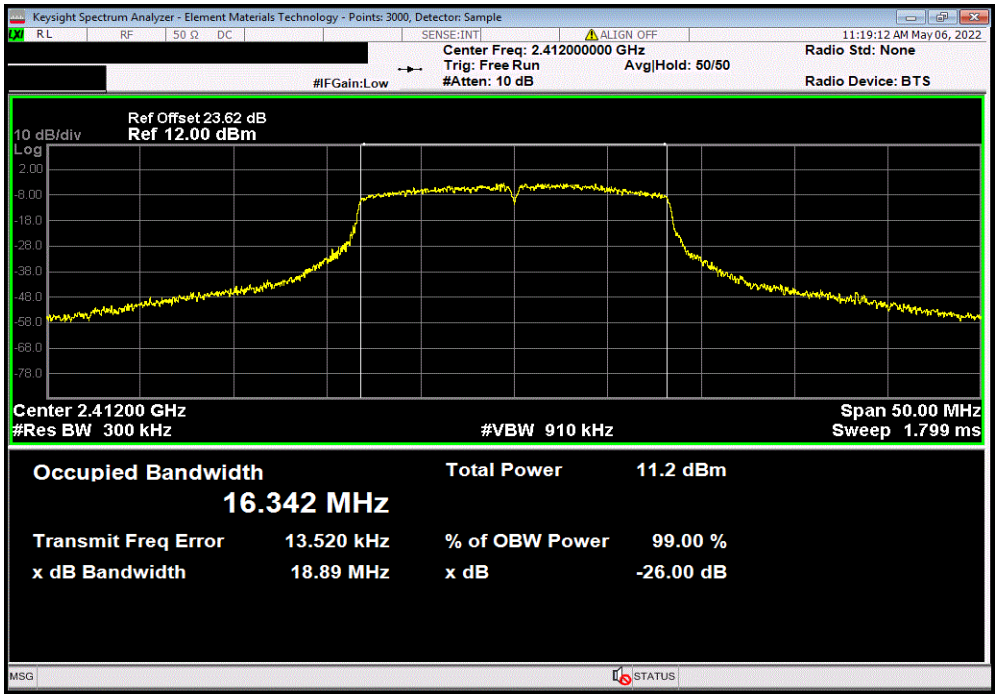
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz

				Value	Limit	Result
				16.284 MHz	N/A	N/A

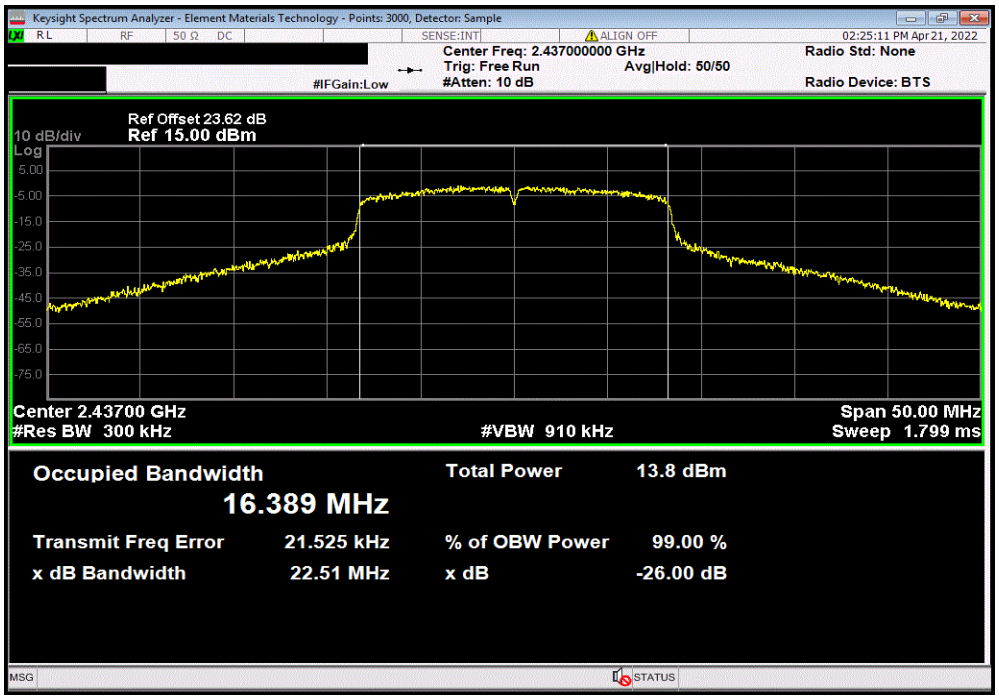


2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz

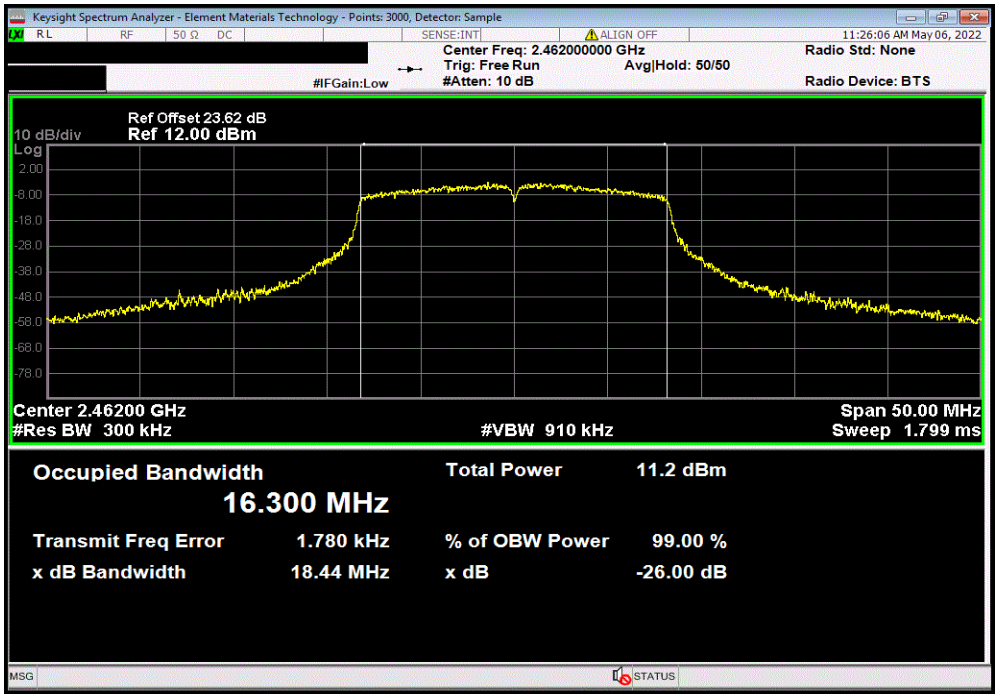
				Value	Limit	Result
				16.342 MHz	N/A	N/A



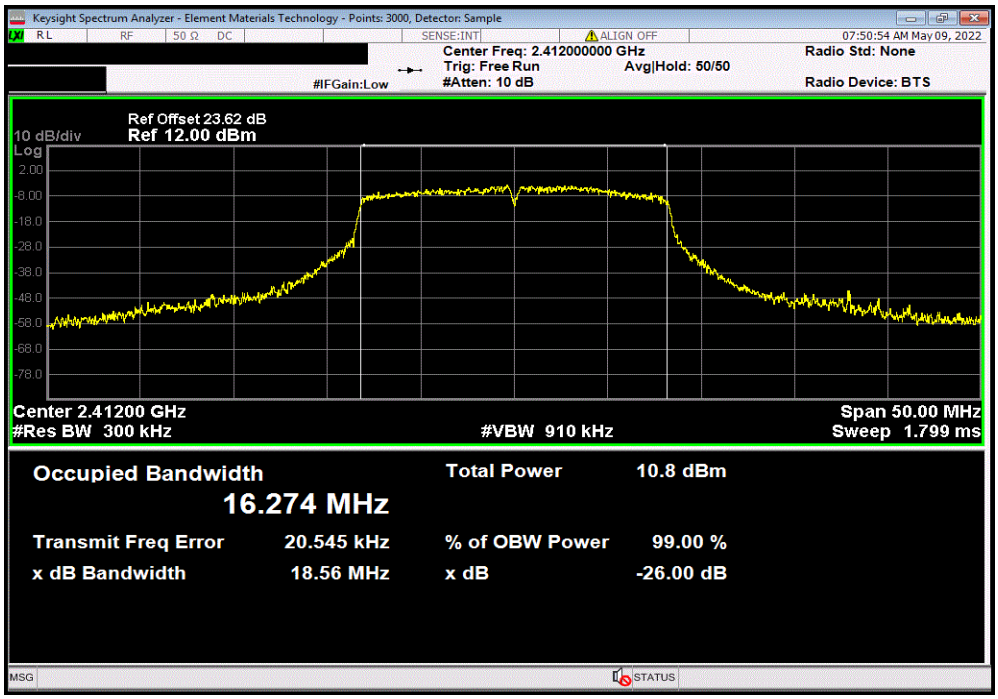
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz						
				Value	Limit	Result
				16.389 MHz	N/A	N/A



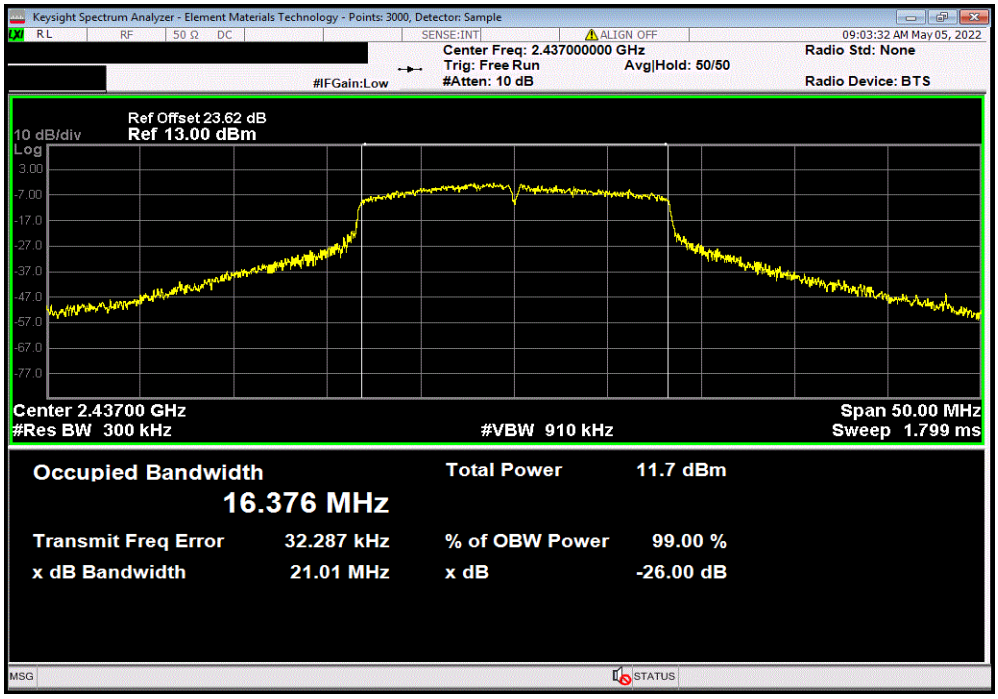
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz						
				Value	Limit	Result
				16.3 MHz	N/A	N/A



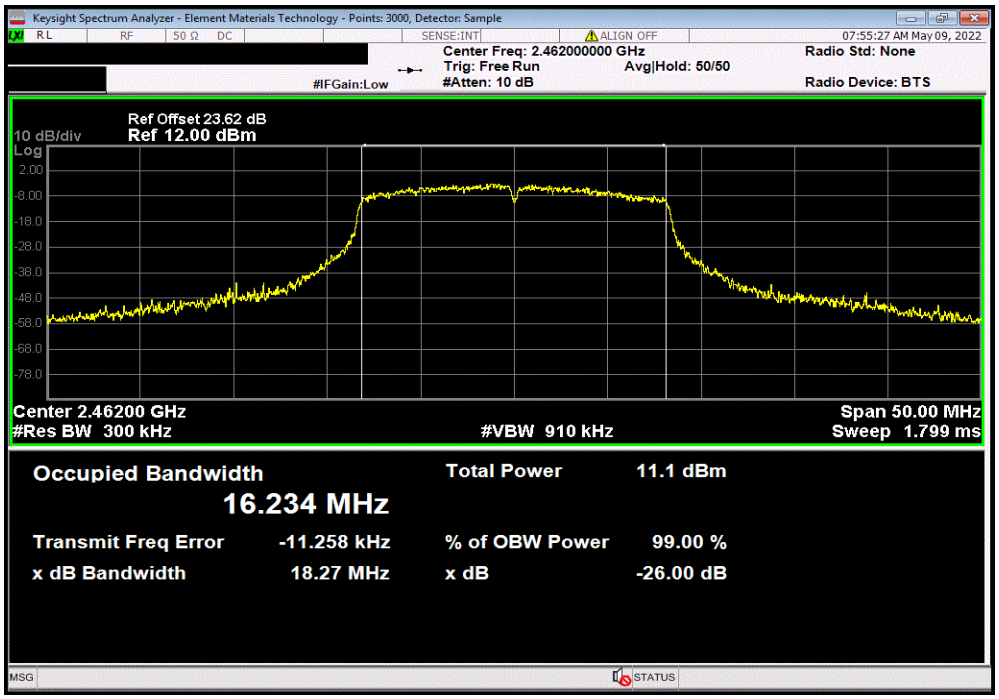
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz						
				Value	Limit	Result
				16.274 MHz	N/A	N/A



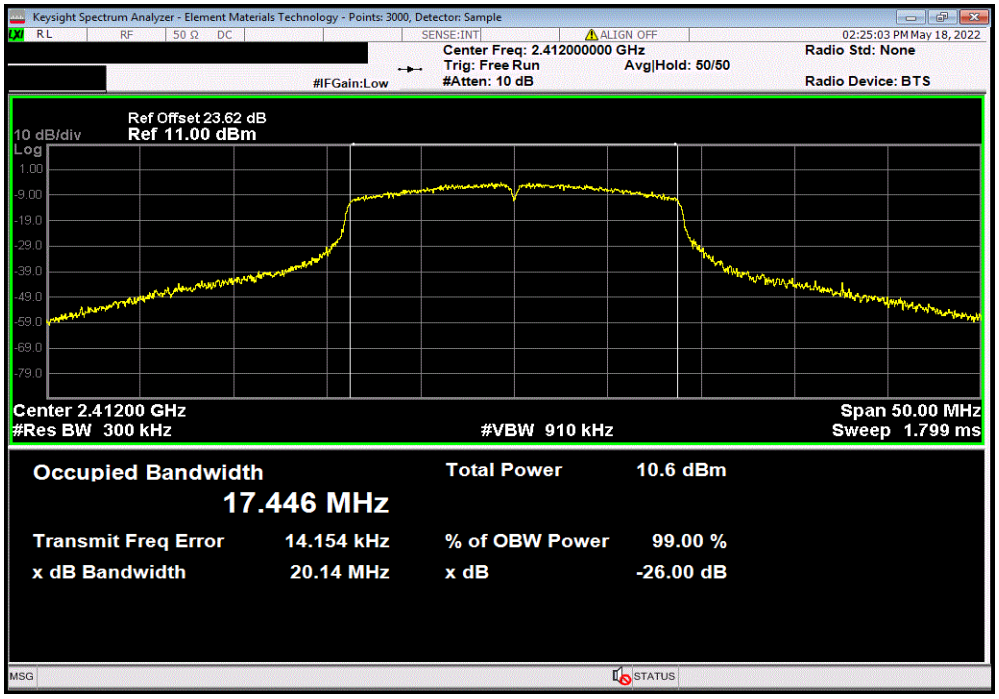
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz						
				Value	Limit	Result
				16.376 MHz	N/A	N/A



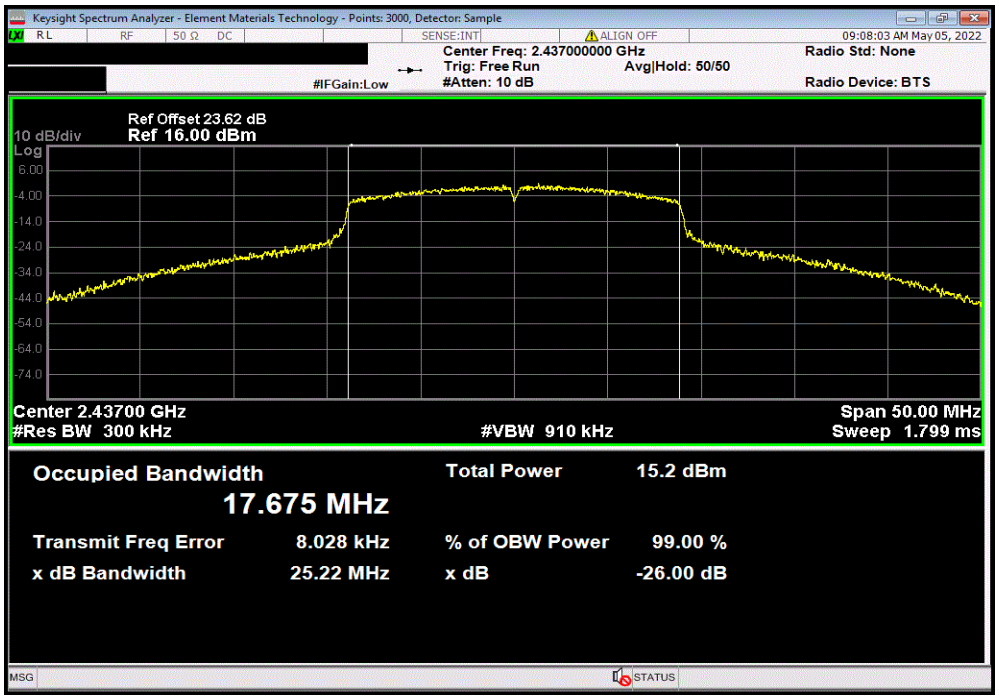
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz						
				Value	Limit	Result
				16.234 MHz	N/A	N/A



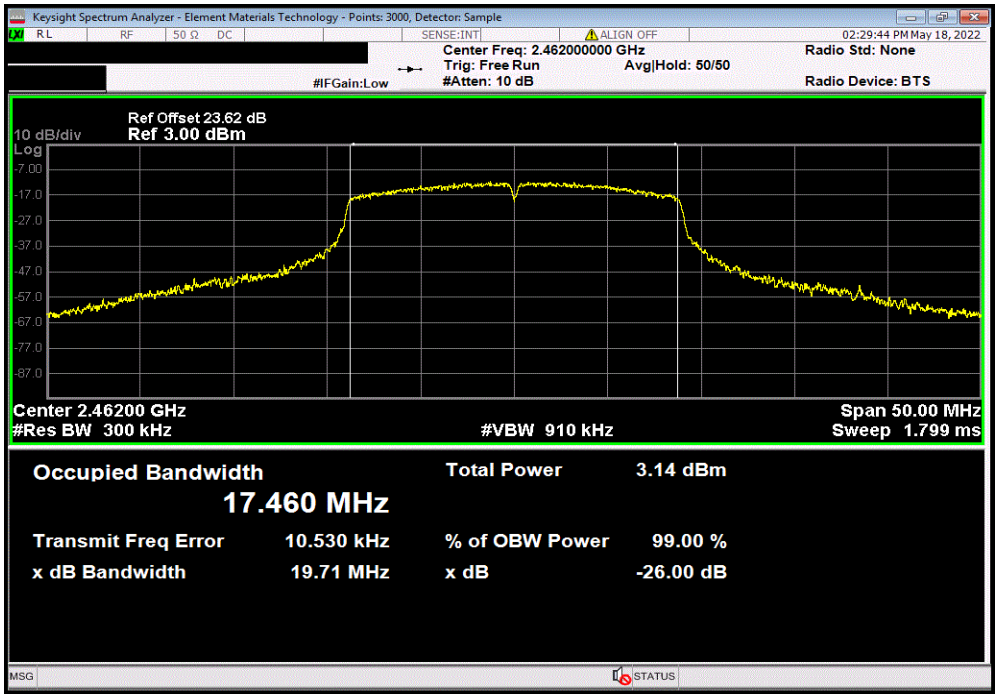
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS0, Low Channel 1, 2412 MHz						
				Value	Limit	Result
				17.446 MHz	N/A	N/A



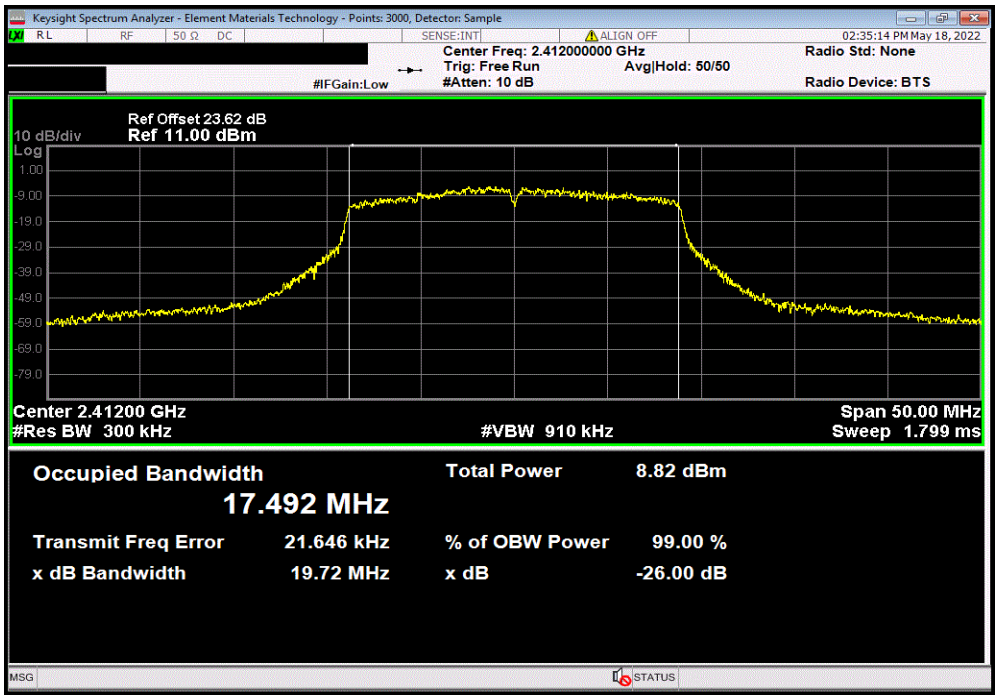
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS0, Mid Channel 6, 2437 MHz						
				Value	Limit	Result
				17.675 MHz	N/A	N/A



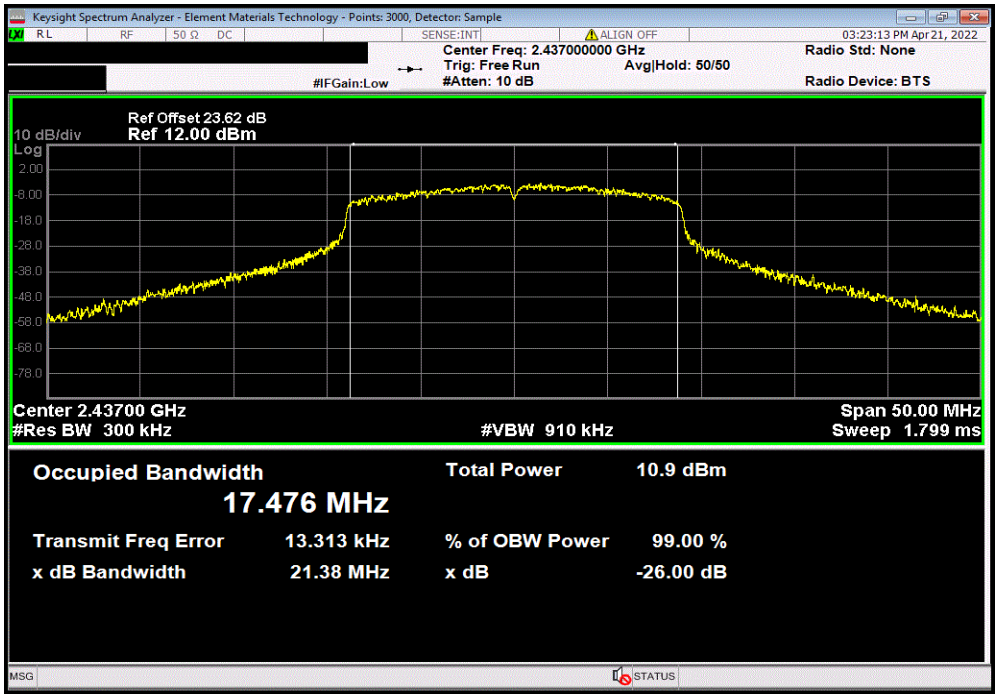
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS0, High Channel 11, 2462 MHz						
				Value	Limit	Result
				17.46 MHz	N/A	N/A



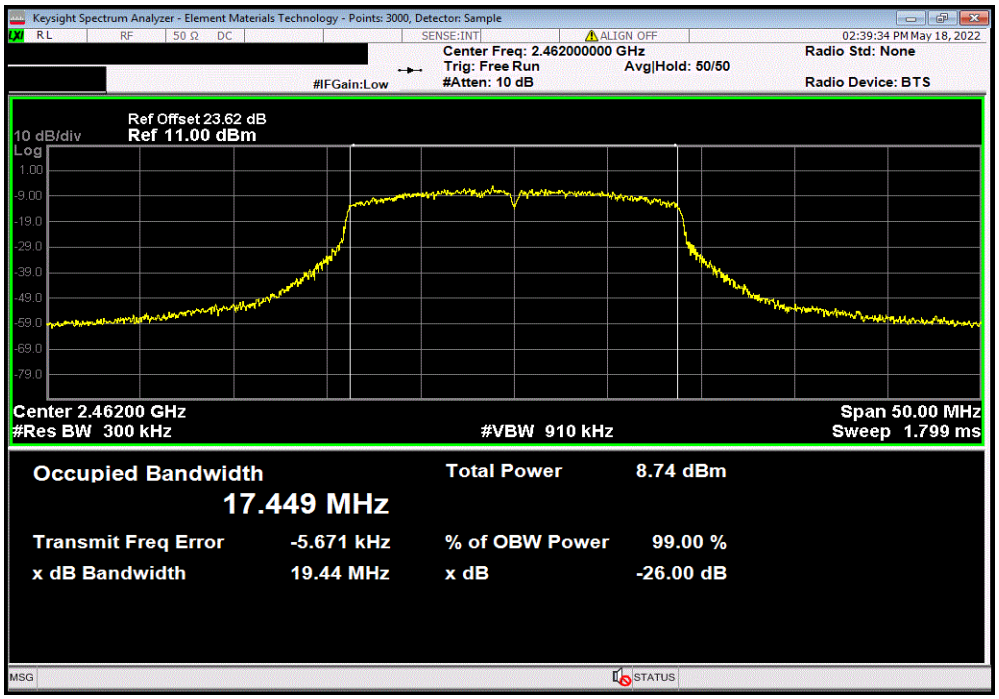
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS7, Low Channel 1, 2412 MHz						
				Value	Limit	Result
				17.492 MHz	N/A	N/A



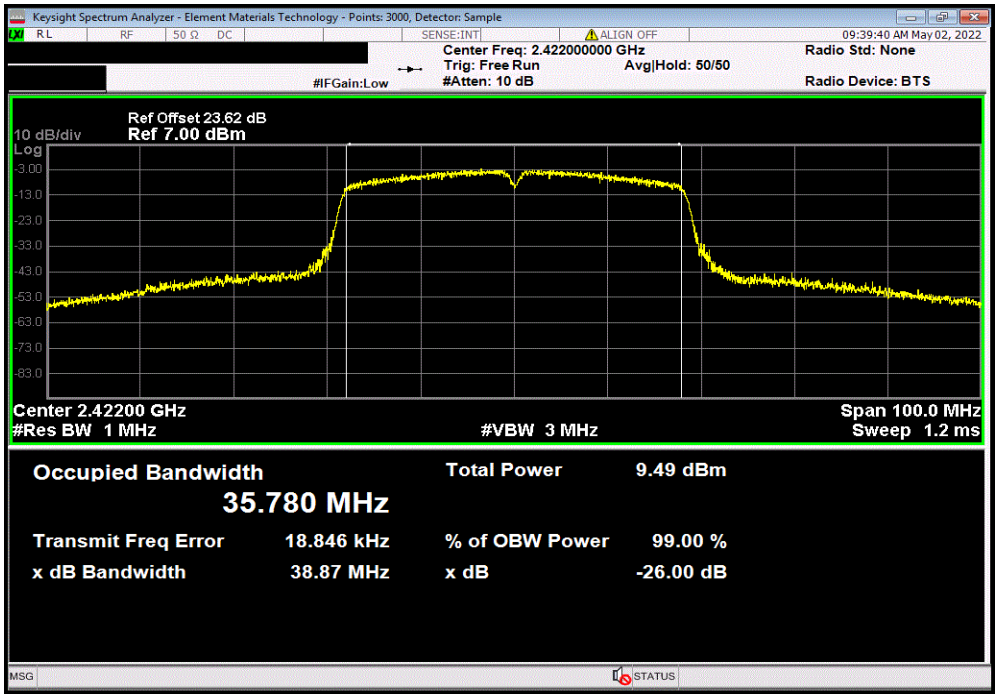
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS7, Mid Channel 6, 2437 MHz						
				Value	Limit	Result
				17.476 MHz	N/A	N/A



2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS7, High Channel 11, 2462 MHz						
				Value	Limit	Result
				17.449 MHz	N/A	N/A

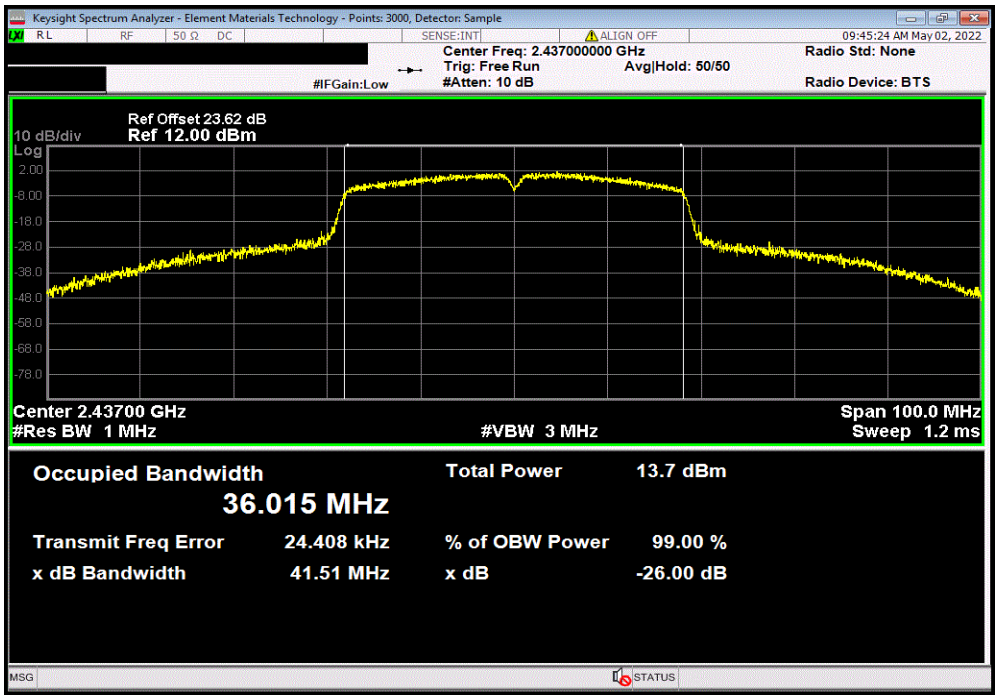


2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS0 , Low Channel 1/5, 2422 MHz						
				Value	Limit	Result
				35.78 MHz	N/A	N/A

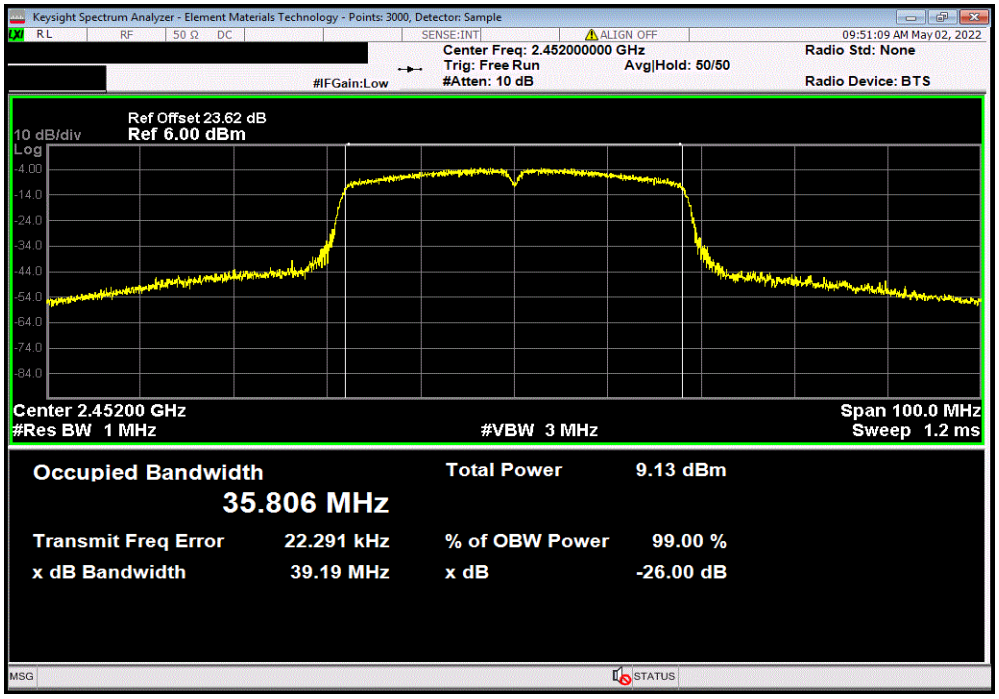


OCCUPIED BANDWIDTH

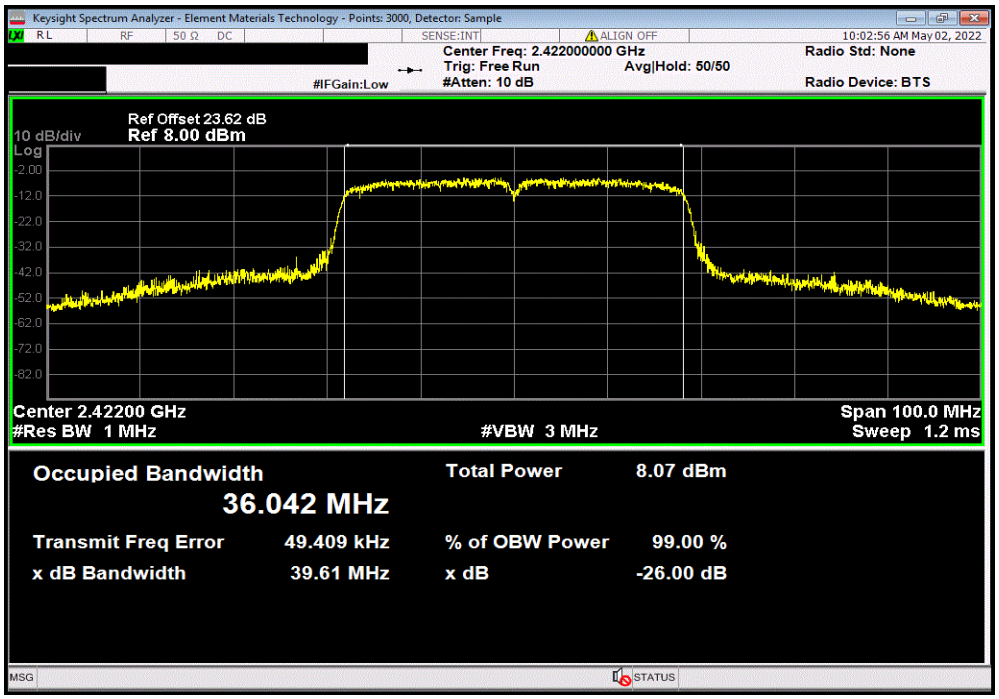
2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS0 , Mid Channel 4/8, 2437 MHz						
				Value	Limit	Result
				36.015 MHz	N/A	N/A



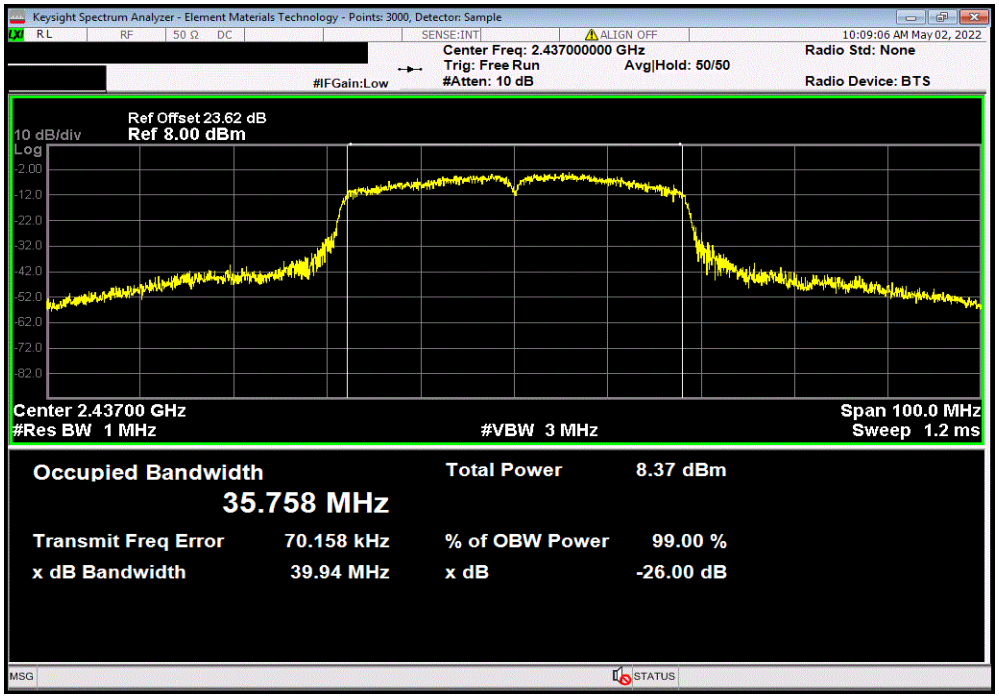
2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS0 , High Channel 7/11, 2452 MHz						
				Value	Limit	Result
				35.806 MHz	N/A	N/A



2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS7 , Low Channel 1/5, 2422 MHz						
				Value	Limit	Result
				36.042 MHz	N/A	N/A



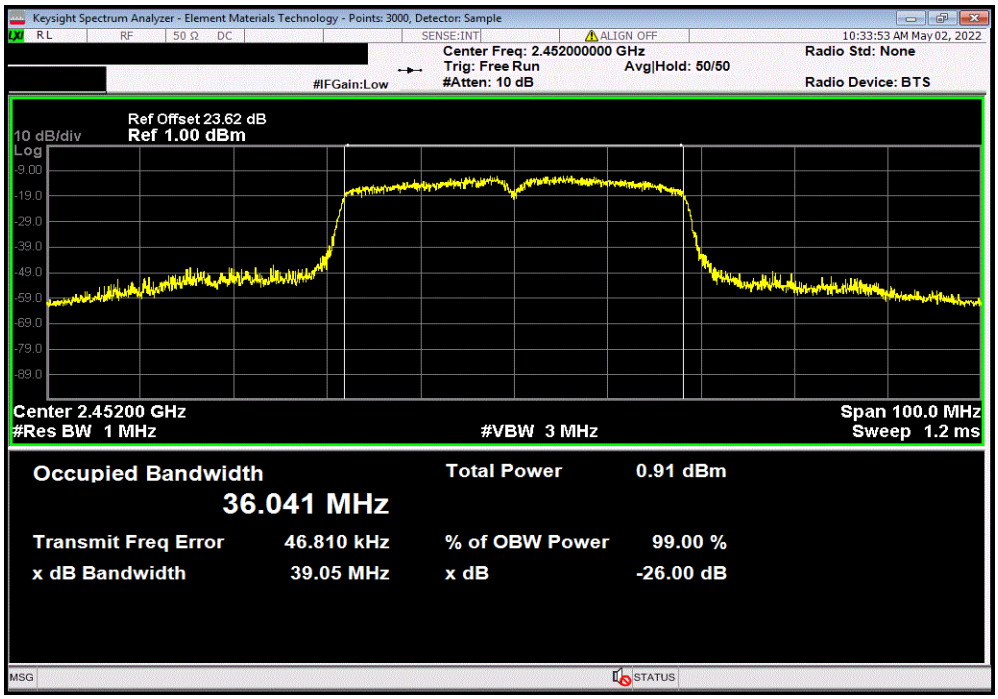
2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS7 , Mid Channel 4/8, 2437 MHz						
				Value	Limit	Result
				35.758 MHz	N/A	N/A



OCCUPIED BANDWIDTH

TbtTx 2021.03.19.1 XMit 2022.02.07.0

2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS7 , High Channel 7/11, 2452 MHz						
				Value	Limit	Result
				36.041 MHz	N/A	N/A



OUTPUT POWER

XMit 2022.02.07.0

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
Generator - Signal	Keysight	N5182B	TFU	2020-11-20	2022-11-20
Cable	Micro-Coax	UFD150A-1-0720-200200	EVK	2022-03-14	2023-03-14
Attenuator	S.M. Electronics	SA26B-20	AUY	2022-03-15	2023-03-15
Block - DC	Fairview Microwave	SD3379	AMW	2022-03-14	2023-03-14
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFO	2021-07-06	2022-07-06

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

element

TbtTx 2021.03.19.1 XMit 2022.02.07.0

EUT:	SHOUT sp Handheld Iridium Smartphone	Work Order:	PCTE0003
Serial Number:	FCC3	Date:	18-May-22
Customer:	NAL Research Corporation	Temperature:	22.6 °C
Attendees:	None	Humidity:	43.2% RH
Project:	None	Barometric Pres.:	1025 mbar
Tested by:	Jeff Alcoke	Power: 5.0 VDC via USB	Job Site: EV06

TEST SPECIFICATIONS	Test Method
FCC 15.247:2022	ANSI C63.10:2013

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

None

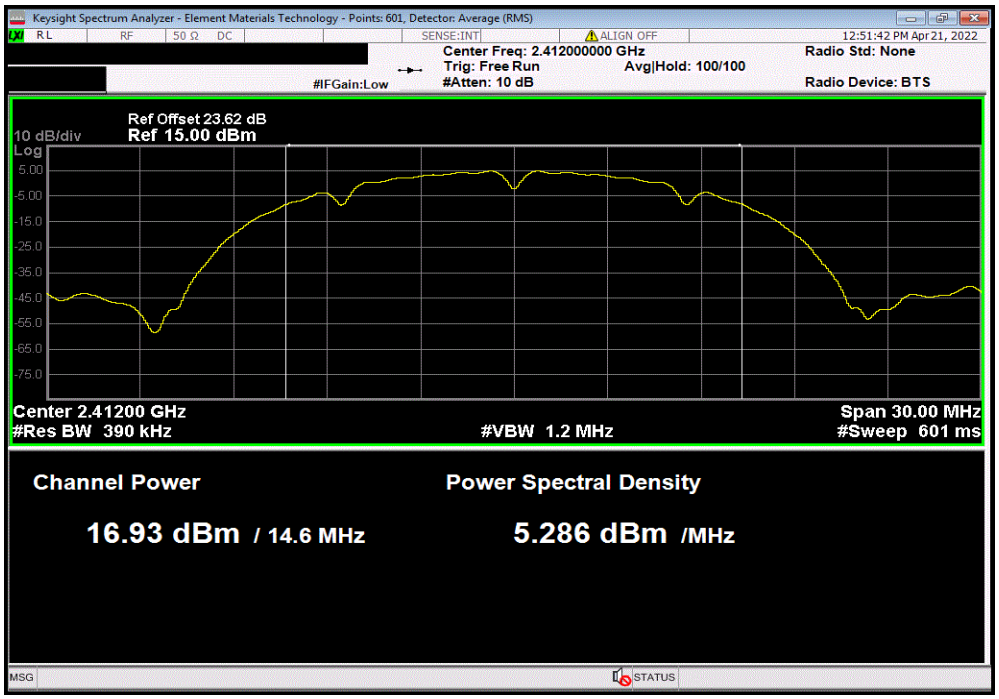
Configuration #	12	Signature

	Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
2400 MHz - 2483.5 MHz Band					
20 MHz					
802.11(b) 1 Mbps					
Low Channel 1, 2412 MHz	16.93	0	16.9	30	Pass
Mid Channel 6, 2437 MHz	16.752	0	16.8	30	Pass
High Channel 11, 2462 MHz	16.447	0	16.4	30	Pass
802.11(b) 11 Mbps					
Low Channel 1, 2412 MHz	16.755	0.3	17.1	30	Pass
Mid Channel 6, 2437 MHz	16.424	0.3	16.7	30	Pass
High Channel 11, 2462 MHz	16.335	0.3	16.6	30	Pass
802.11(g) 6 Mbps					
Low Channel 1, 2412 MHz	12.151	0.2	12.4	30	Pass
Mid Channel 6, 2437 MHz	16.279	0.2	16.5	30	Pass
High Channel 11, 2462 MHz	12.03	0.2	12.2	30	Pass
802.11(g) 36 Mbps					
Low Channel 1, 2412 MHz	11.41	0.9	12.3	30	Pass
Mid Channel 6, 2437 MHz	13.92	0.9	14.8	30	Pass
High Channel 11, 2462 MHz	11.216	0.9	12.1	30	Pass
802.11(g) 54 Mbps					
Low Channel 1, 2412 MHz	10.776	1.3	12.1	30	Pass
Mid Channel 6, 2437 MHz	11.902	1.3	13.2	30	Pass
High Channel 11, 2462 MHz	10.938	1.3	12.2	30	Pass
802.11(n) MCS0					
Low Channel 1, 2412 MHz	10.471	0.2	10.7	30	Pass
Mid Channel 6, 2437 MHz	15.341	0.2	15.5	30	Pass
High Channel 11, 2462 MHz	10.303	0.2	10.5	30	Pass
802.11(n) MCS7					
Low Channel 1, 2412 MHz	8.9	1.6	10.5	30	Pass
Mid Channel 6, 2437 MHz	10.841	1.6	12.4	30	Pass
High Channel 11, 2462 MHz	8.759	1.6	10.4	30	Pass
40 MHz					
802.11(n) MCS0					
Low Channel 1/5, 2422 MHz	9.444	0.4	9.8	30	Pass
Mid Channel 4/8, 2437 MHz	13.764	0.4	14.2	30	Pass
High Channel 7/11, 2452 MHz	9.24	0.4	9.6	30	Pass
802.11(n) MCS7					
Low Channel 1/5, 2422 MHz	8.389	2.7	11.1	30	Pass
Mid Channel 4/8, 2437 MHz	8.223	2.7	10.9	30	Pass
High Channel 7/11, 2452 MHz	8.215	2.7	10.9	30	Pass

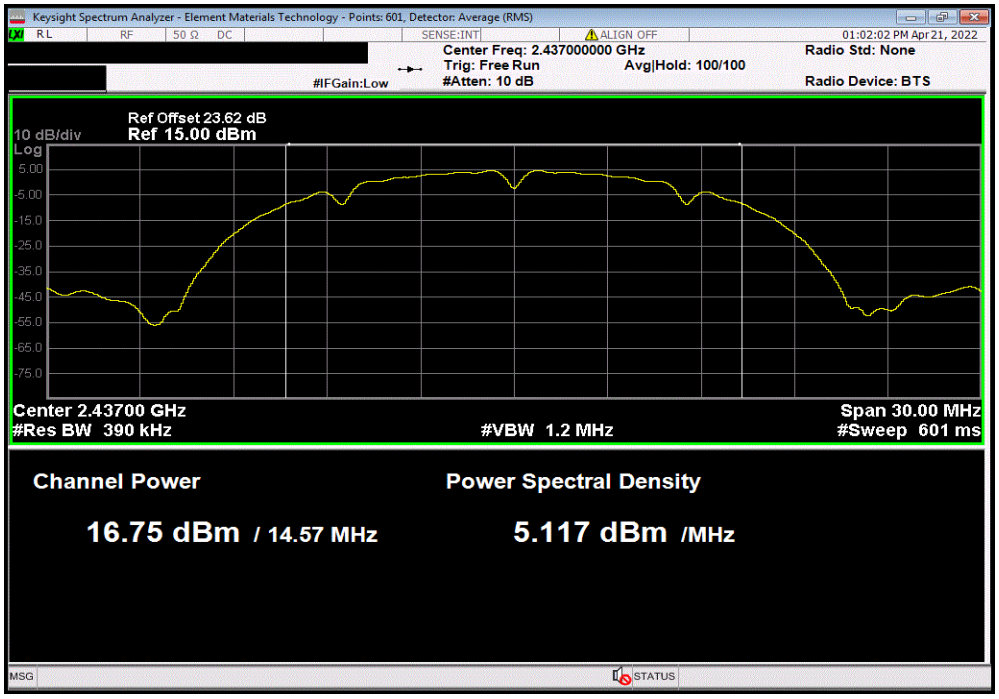
OUTPUT POWER

TbtTx 2021.03.19.1 XMit 2022.02.07.0

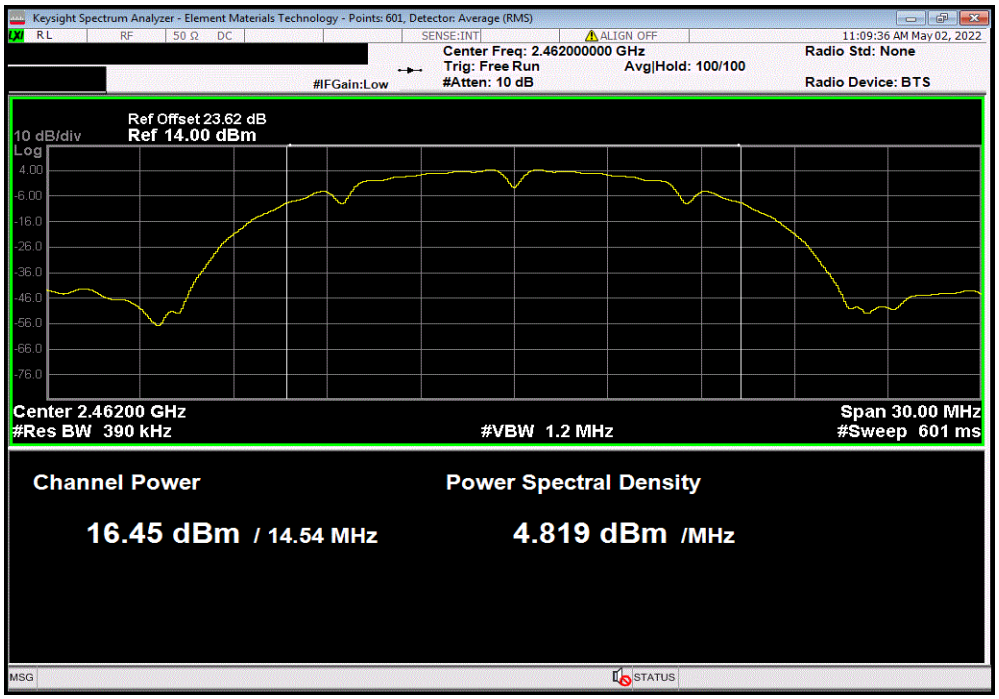
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		16.93	0	16.9	30	Pass



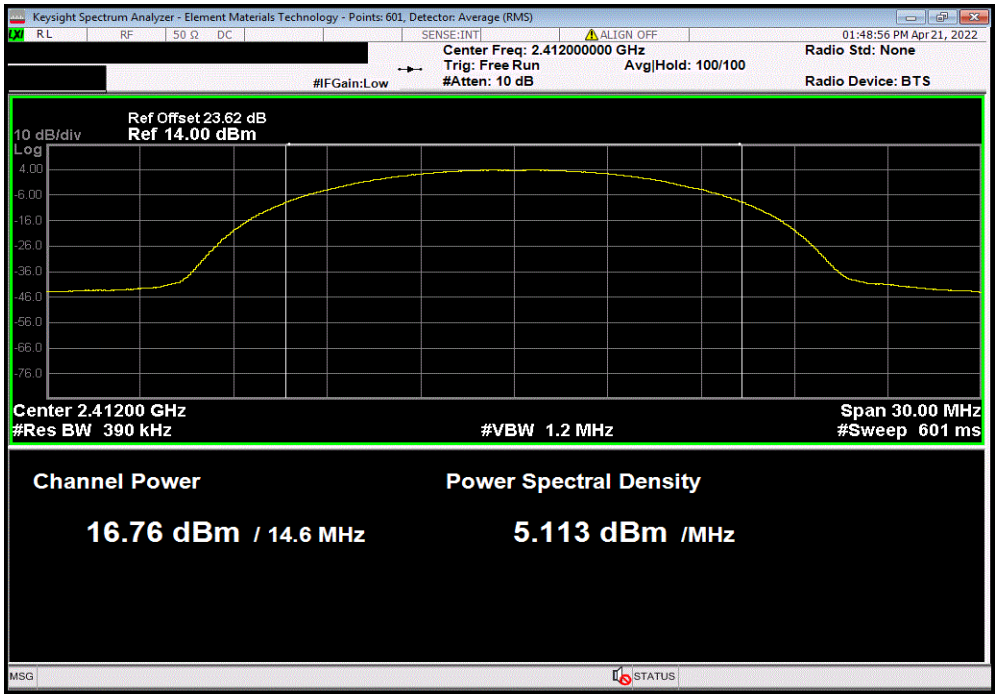
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		16.752	0	16.8	30	Pass



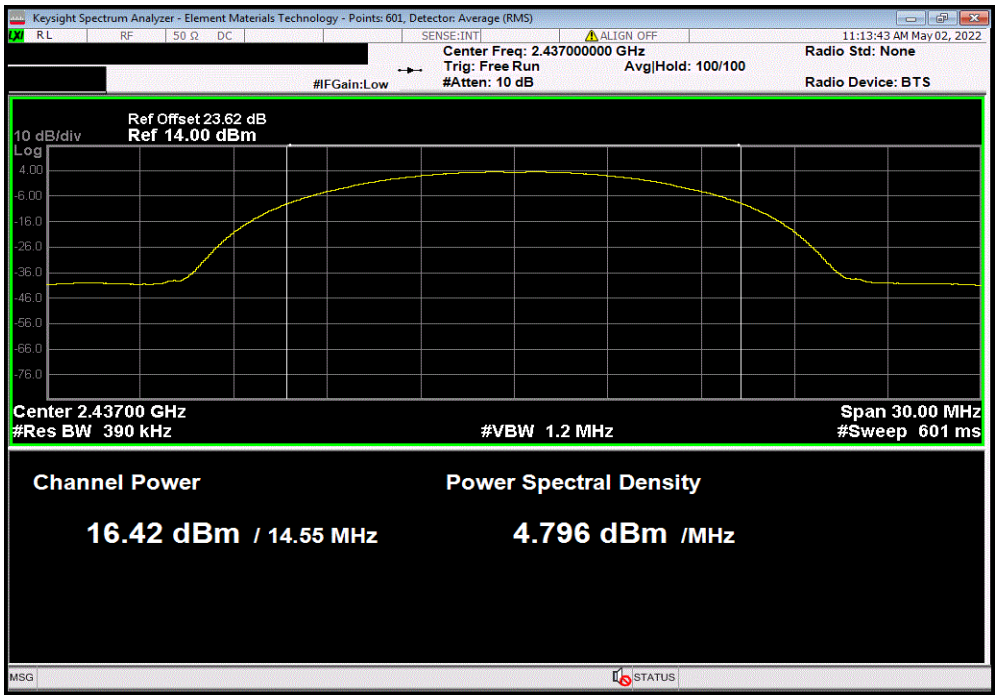
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		16.447	0	16.4	30	Pass



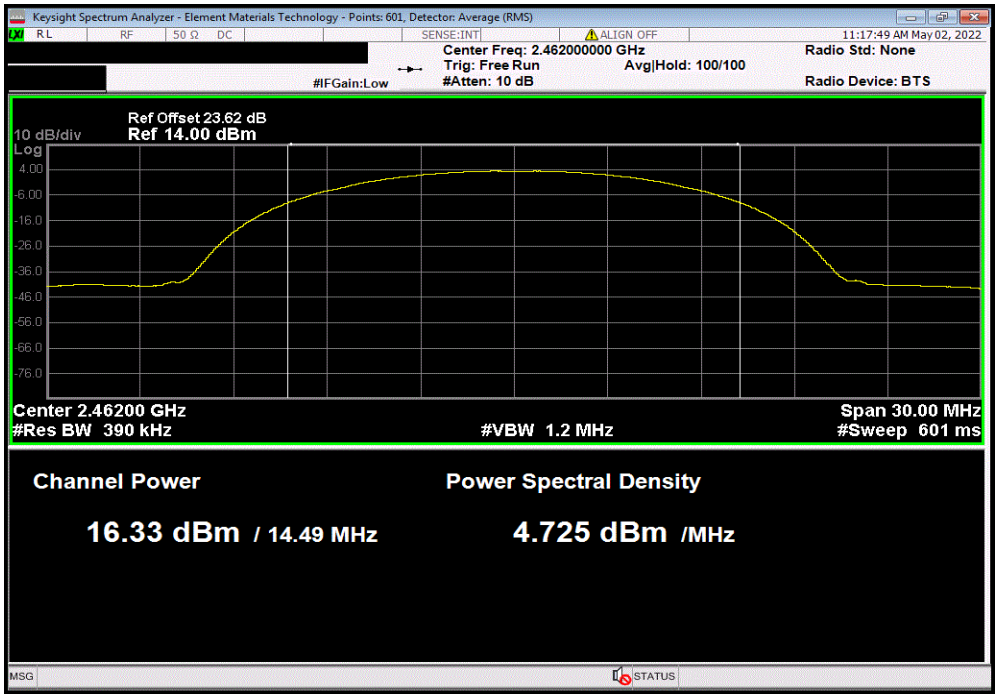
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		16.755	0.3	17.1	30	Pass



2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		16.424	0.3	16.7	30	Pass



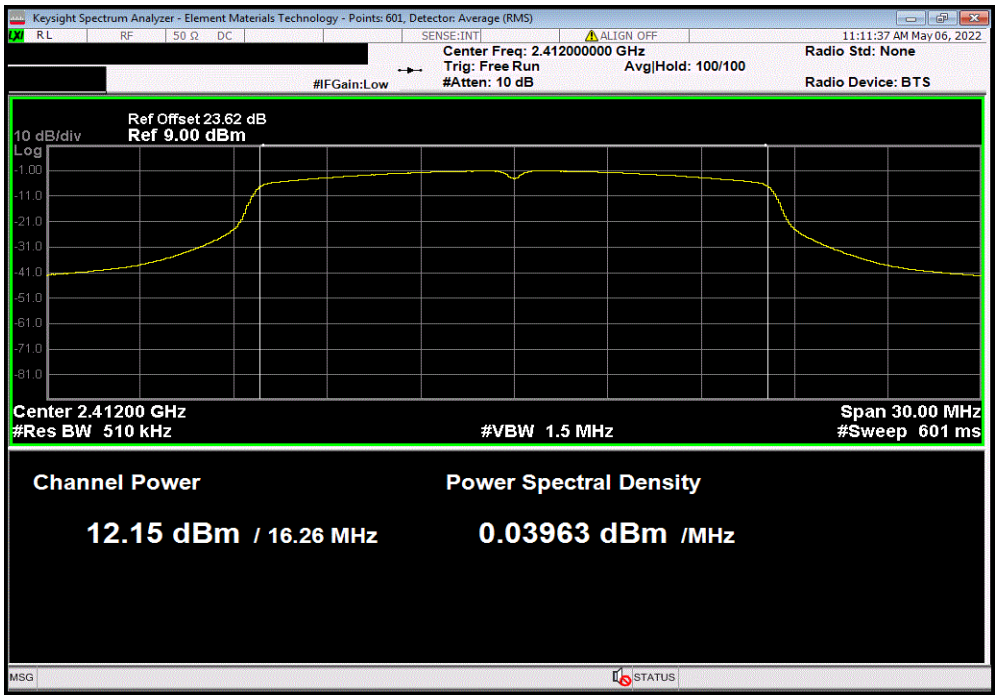
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		16.335	0.3	16.6	30	Pass



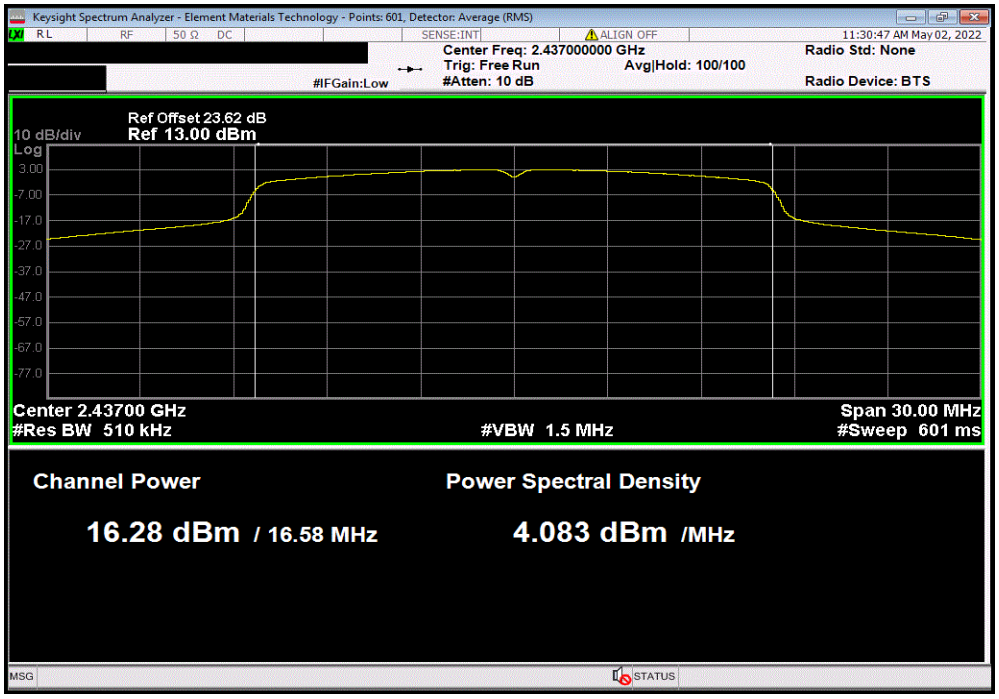
OUTPUT POWER

TbtTx 2021.03.19.1 XMit 2022.02.07.0

2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		12.151	0.2	12.4	30	Pass



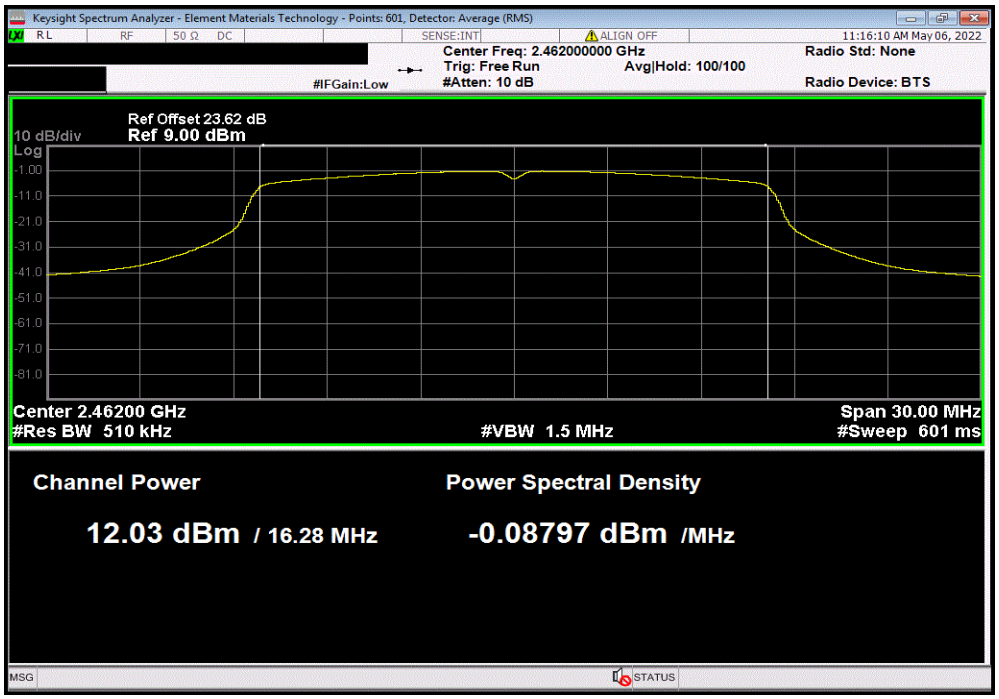
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		16.279	0.2	16.5	30	Pass



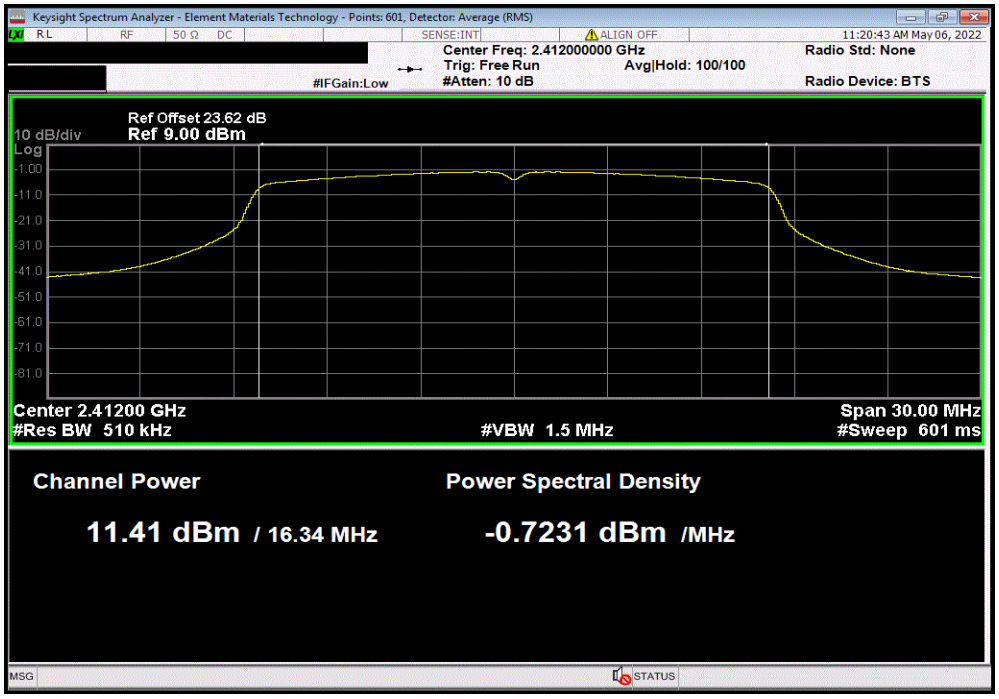
OUTPUT POWER

TbtTx 2021.03.19.1 XMit 2022.02.07.0

2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		12.03	0.2	12.2	30	Pass



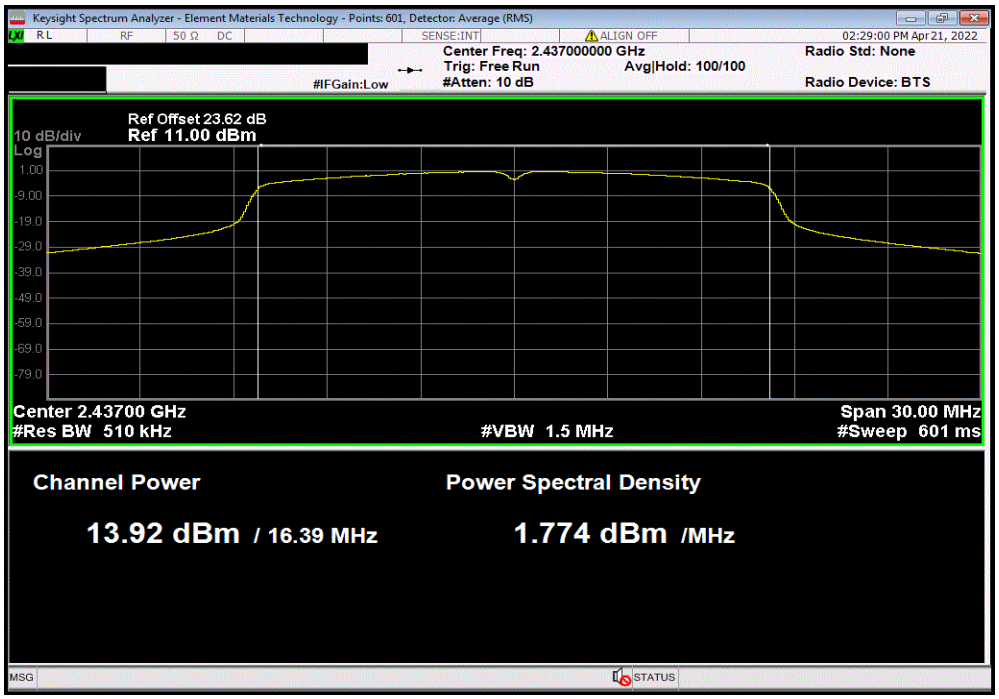
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		11.41	0.9	12.3	30	Pass



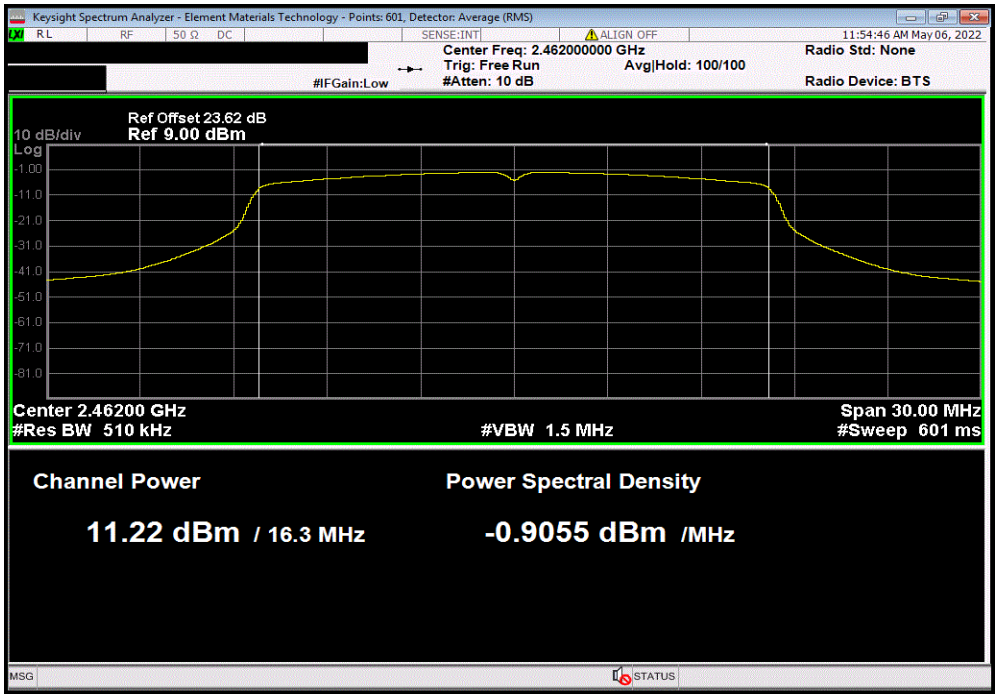
OUTPUT POWER

TbtTx 2021.03.19.1 XMit 2022.02.07.0

2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		13.92	0.9	14.8	30	Pass



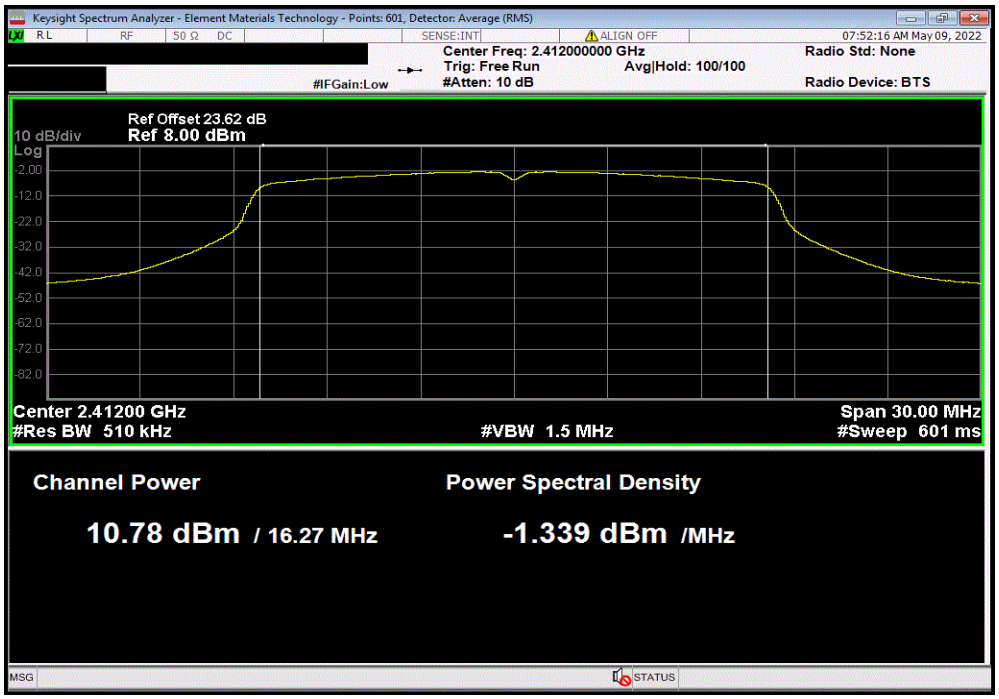
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		11.216	0.9	12.1	30	Pass



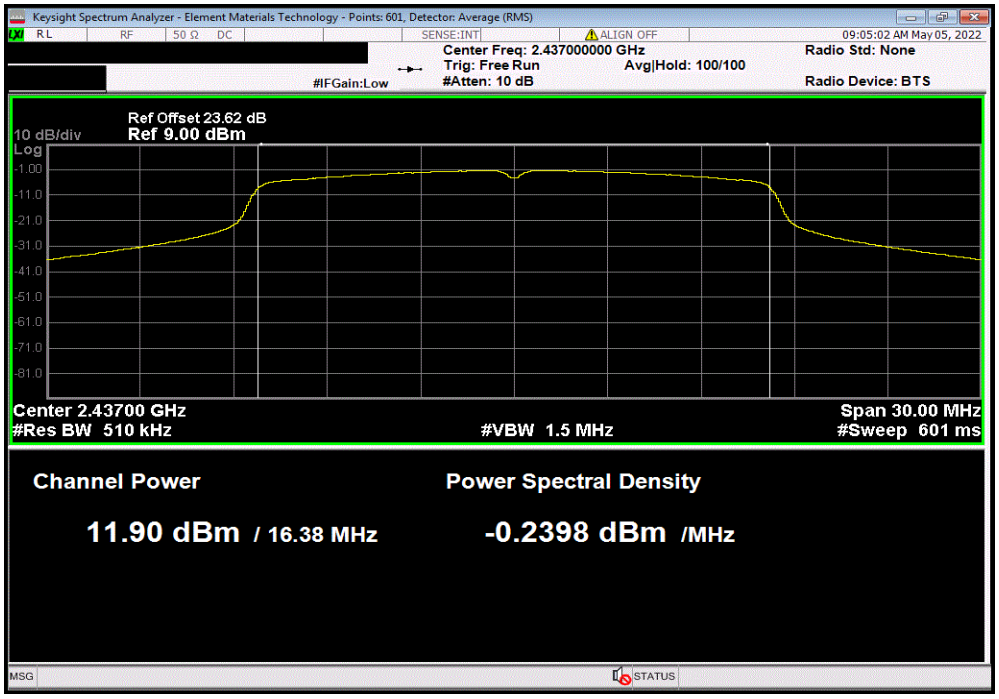
OUTPUT POWER

TbtTx 2021.03.19.1 XMit 2022.02.07.0

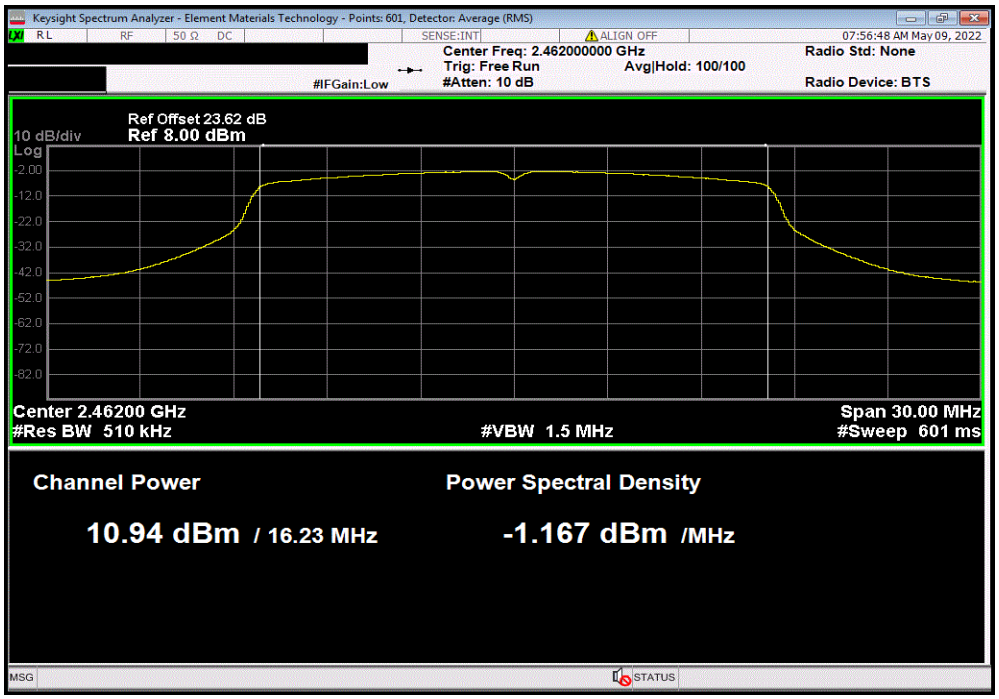
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		10.776	1.3	12.1	30	Pass



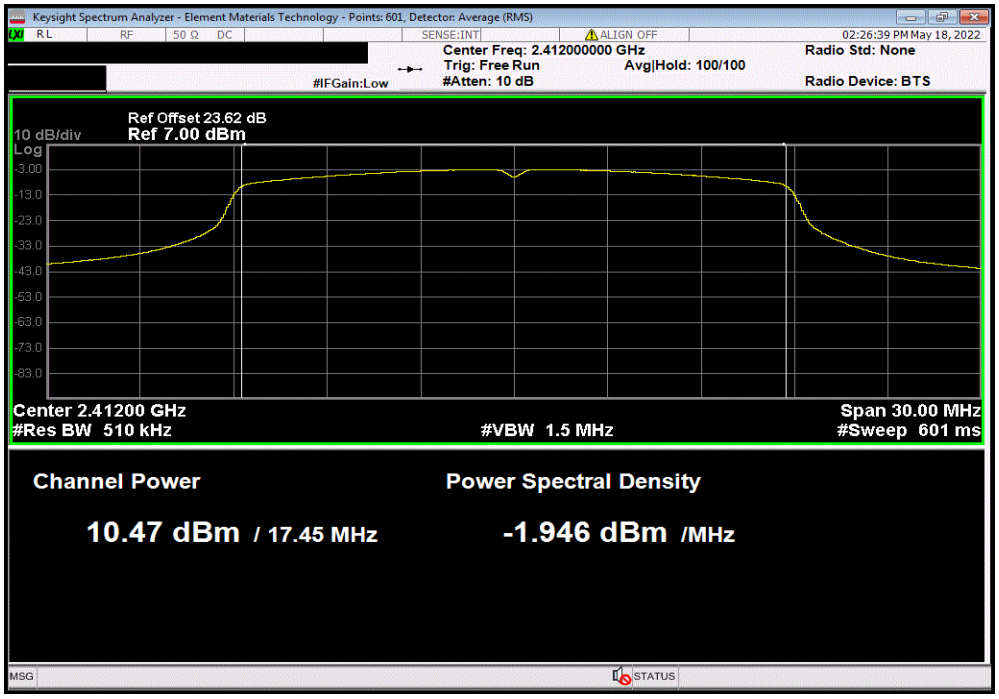
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		11.902	1.3	13.2	30	Pass



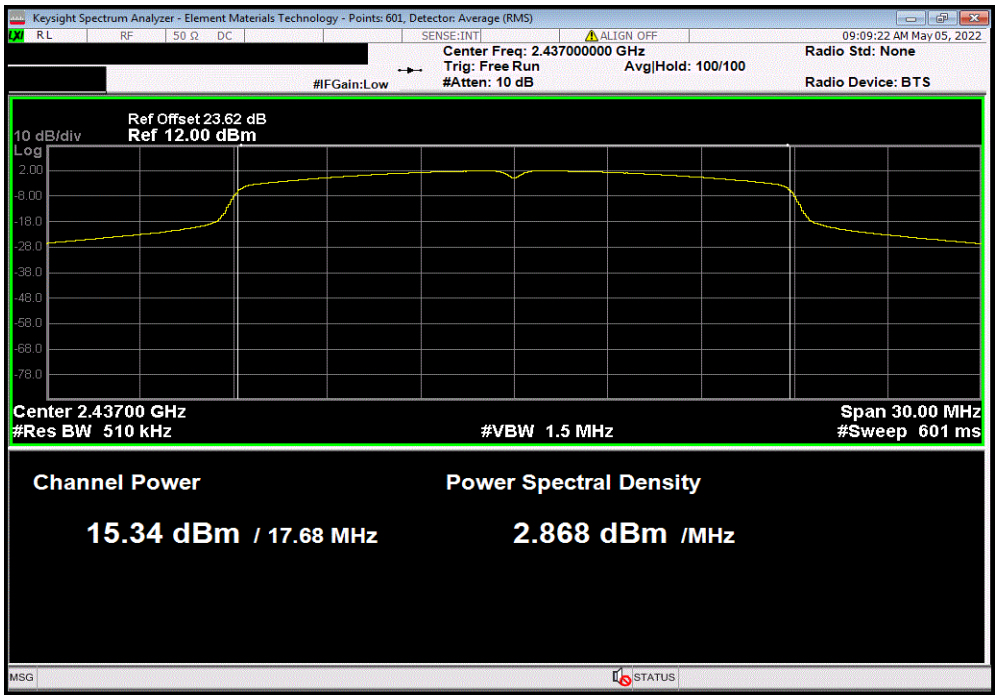
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		10.938	1.3	12.2	30	Pass



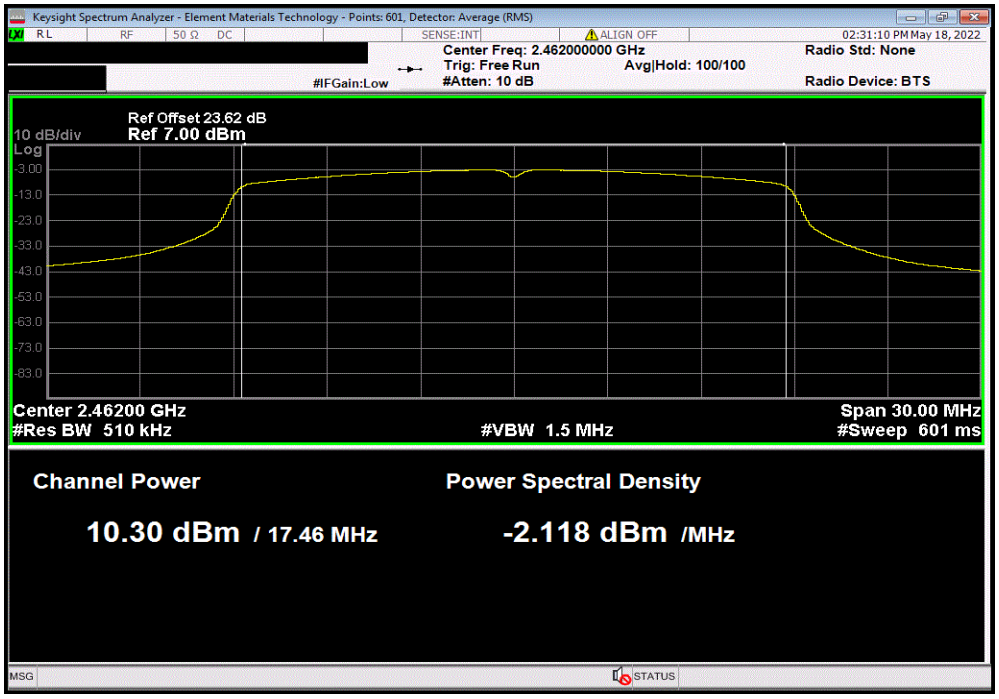
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS0, Low Channel 1, 2412 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		10.471	0.2	10.7	30	Pass



2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS0, Mid Channel 6, 2437 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		15.341	0.2	15.5	30	Pass



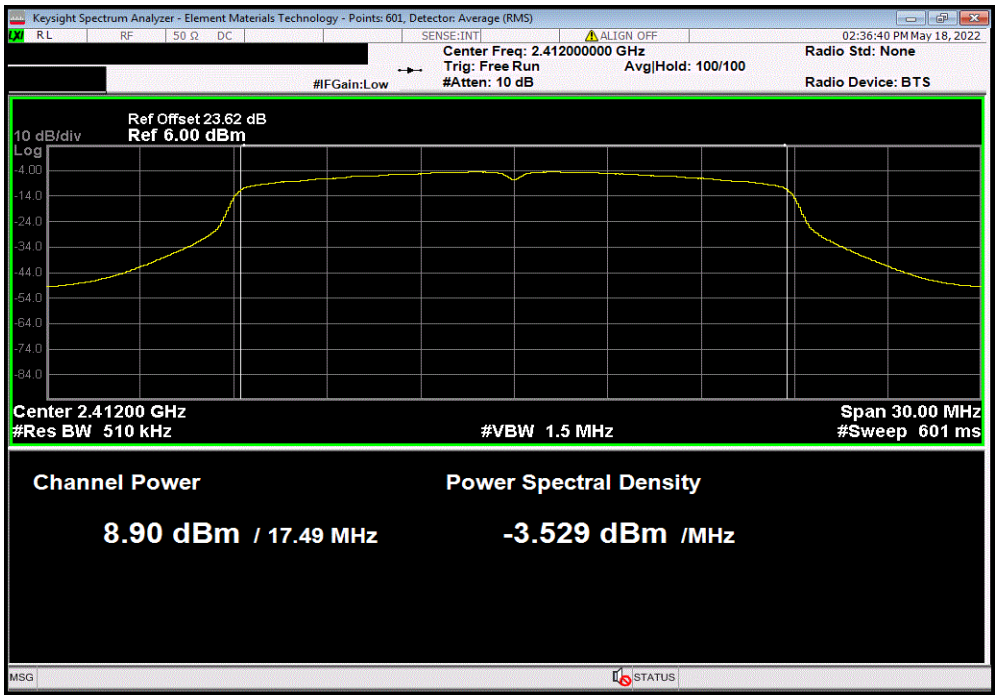
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS0, High Channel 11, 2462 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		10.303	0.2	10.5	30	Pass



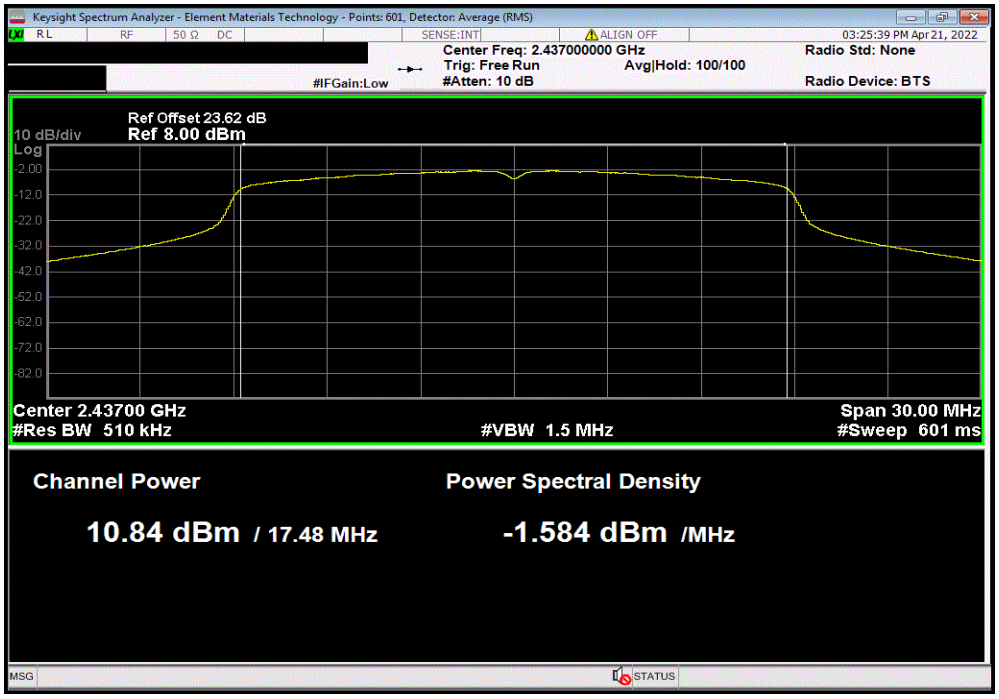
OUTPUT POWER

TbtTx 2021.03.19.1 XMit 2022.02.07.0

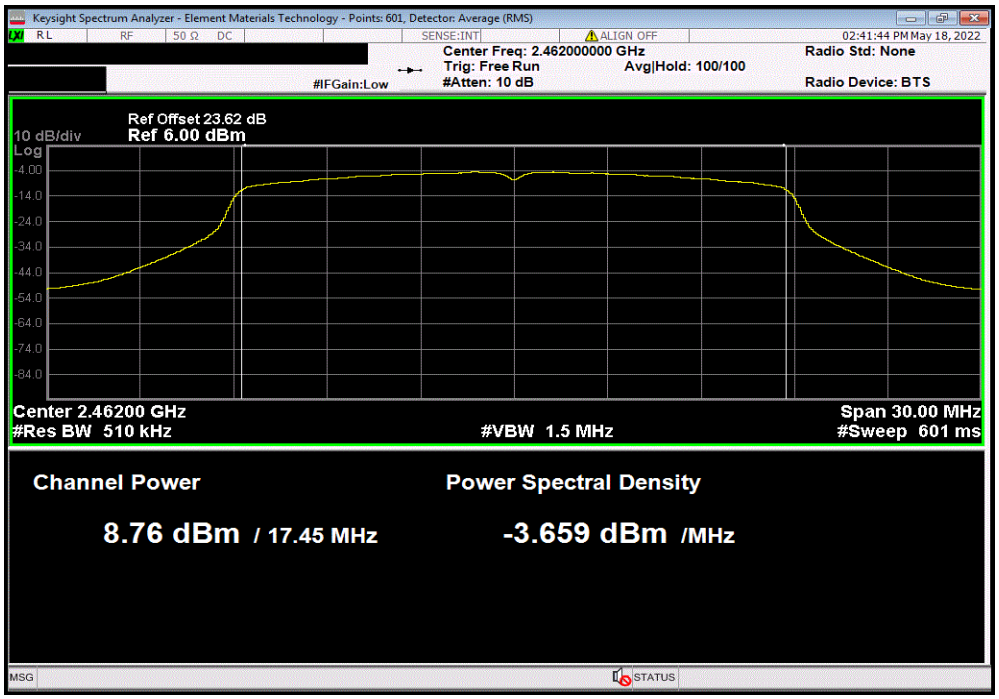
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS7, Low Channel 1, 2412 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		8.9	1.6	10.5	30	Pass



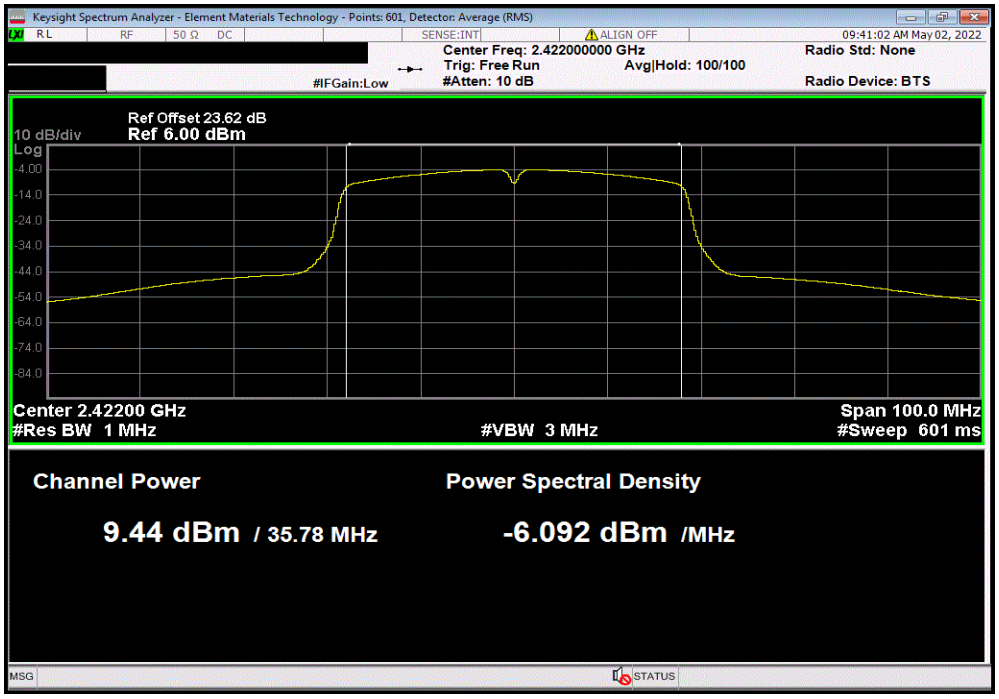
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS7, Mid Channel 6, 2437 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		10.841	1.6	12.4	30	Pass



2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS7, High Channel 11, 2462 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		8.759	1.6	10.4	30	Pass



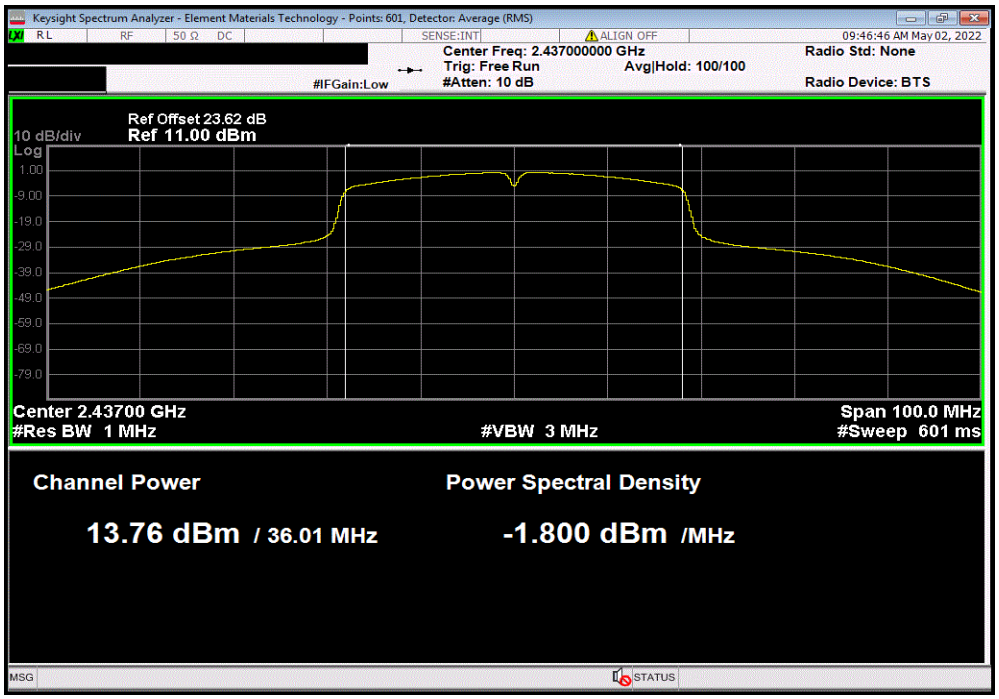
2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS0 , Low Channel 1/5, 2422 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		9.444	0.4	9.8	30	Pass



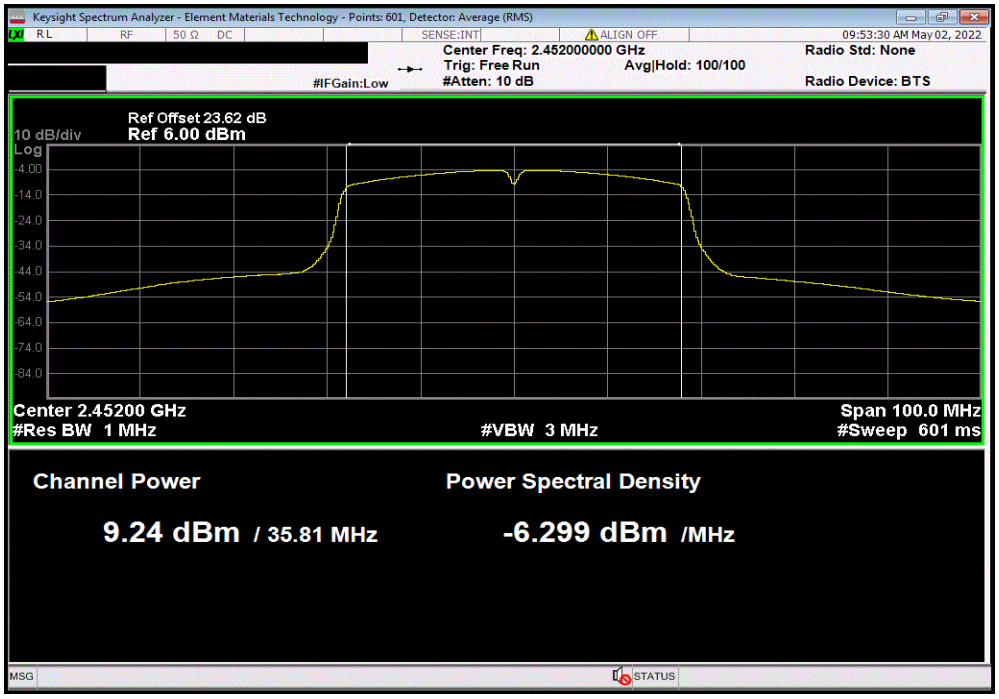
OUTPUT POWER

TbtTx 2021.03.19.1 XMit 2022.02.07.0

2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS0 , Mid Channel 4/8, 2437 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		13.764	0.4	14.2	30	Pass



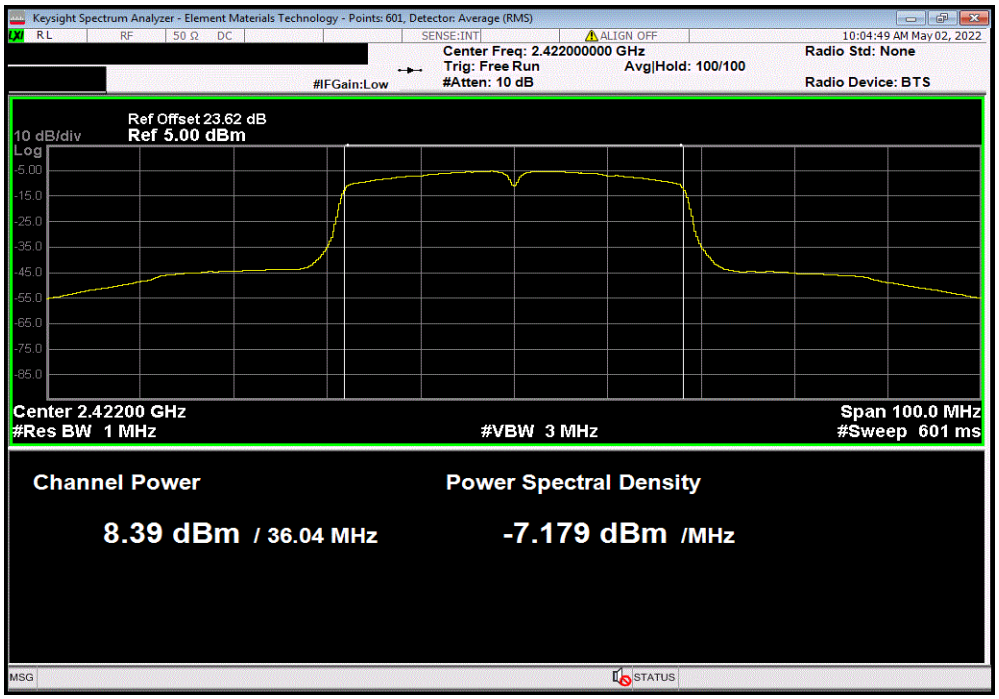
2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS0 , High Channel 7/11, 2452 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		9.24	0.4	9.6	30	Pass



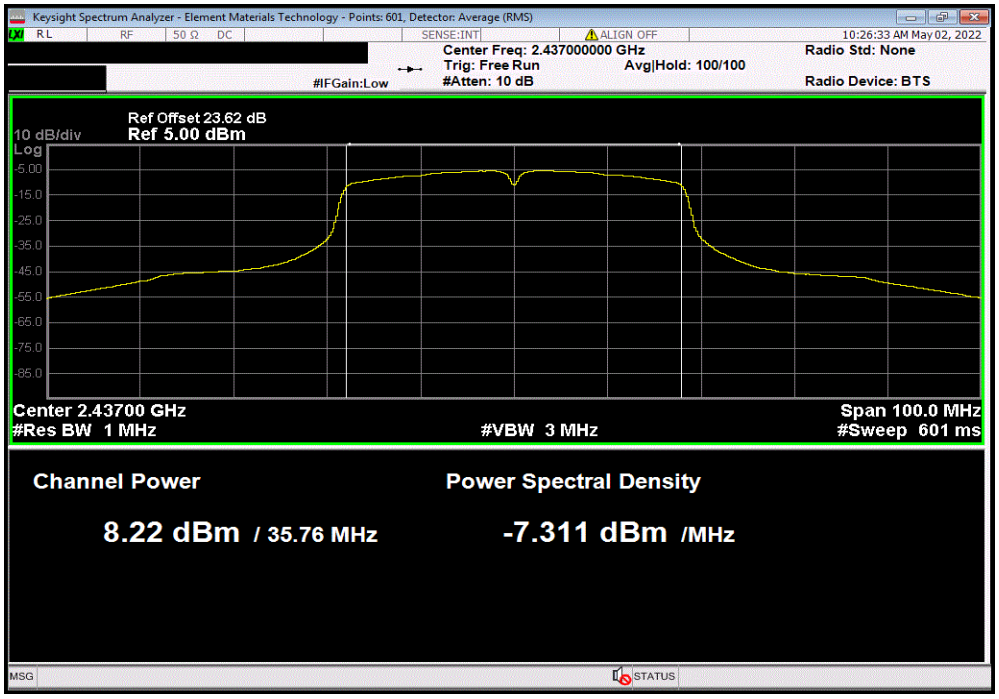
OUTPUT POWER

TbtTx 2021.03.19.1 XMit 2022.02.07.0

2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS7 , Low Channel 1/5, 2422 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		8.389	2.7	11.1	30	Pass



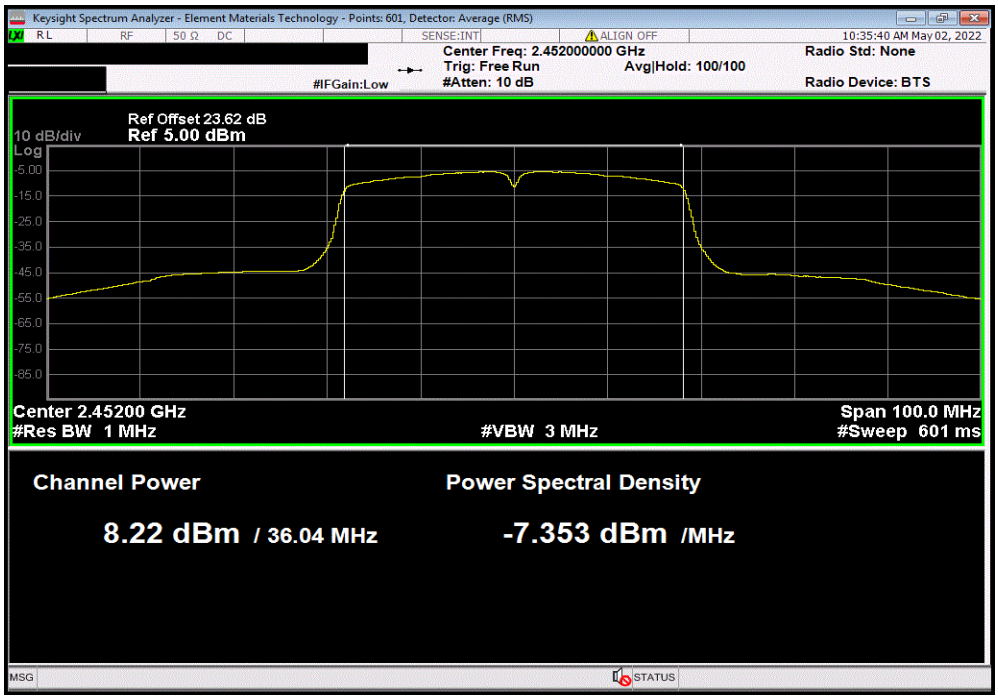
2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS7 , Mid Channel 4/8, 2437 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		8.223	2.7	10.9	30	Pass



OUTPUT POWER

TbtTx 2021.03.19.1 XMit 2022.02.07.0

2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS7 , High Channel 7/11, 2452 MHz						
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
		8.215	2.7	10.9	30	Pass



EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)

XMit 2022.02.07.0

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
Generator - Signal	Keysight	N5182B	TFU	2020-11-20	2022-11-20
Cable	Micro-Coax	UFD150A-1-0720-200200	EVK	2022-03-14	2023-03-14
Attenuator	S.M. Electronics	SA26B-20	AUY	2022-03-15	2023-03-15
Block - DC	Fairview Microwave	SD3379	AMW	2022-03-14	2023-03-14
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFO	2021-07-06	2022-07-06

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.

Equivalent Isotropic Radiated Power (EIRP) = Max Measured Power + Antenna gain (dBi)

EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)

TbtTx 2021.03.19.1 XMit 2022.02.07.0

EUT:	**SHOUT sp Handheld Iridium Smartphone**	**Work Order:**	**PCTE0003**
Serial Number:	**FCC3**	**Date:**	**18-May-22**
Customer:	**NAL Research Corporation**	**Temperature:**	**22.6 °C**
Attendees:	**None**	**Humidity:**	**43.4% RH**
Project:	**None**	**Barometric Pres.:**	**1025 mbar**
Tested by:	**Jeff Alcoke**	**Power:** **5.0 VDC via USB**	**Job Site:** **EV06**

TEST SPECIFICATIONS	**Test Method**
FCC 15.247:2022	ANSI C63.10:2013

COMMENTS

None

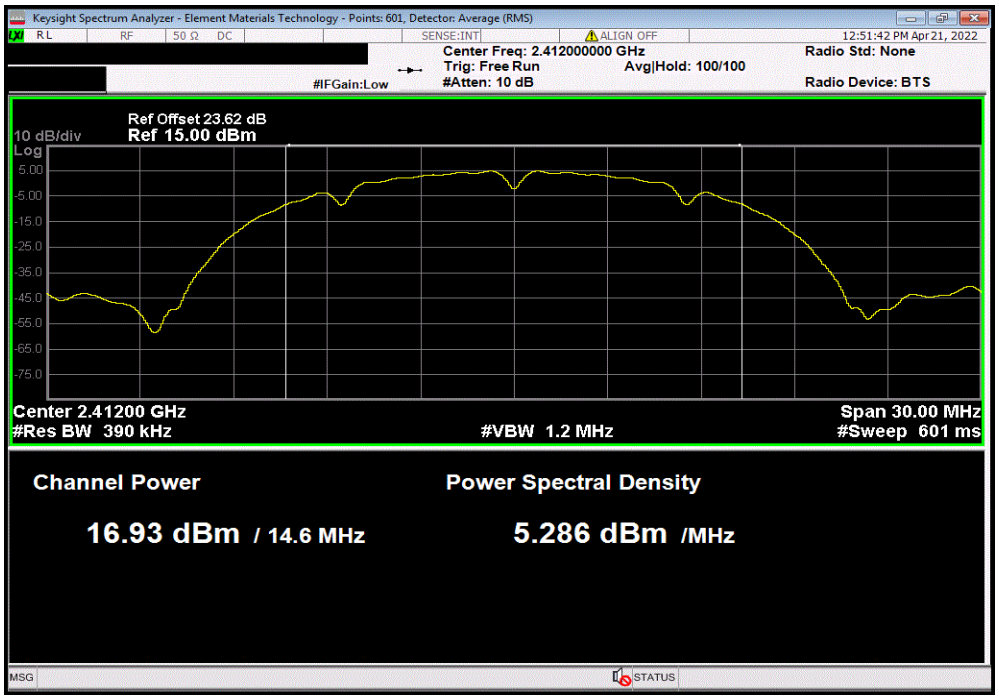
DEVIATIONS FROM TEST STANDARD

None

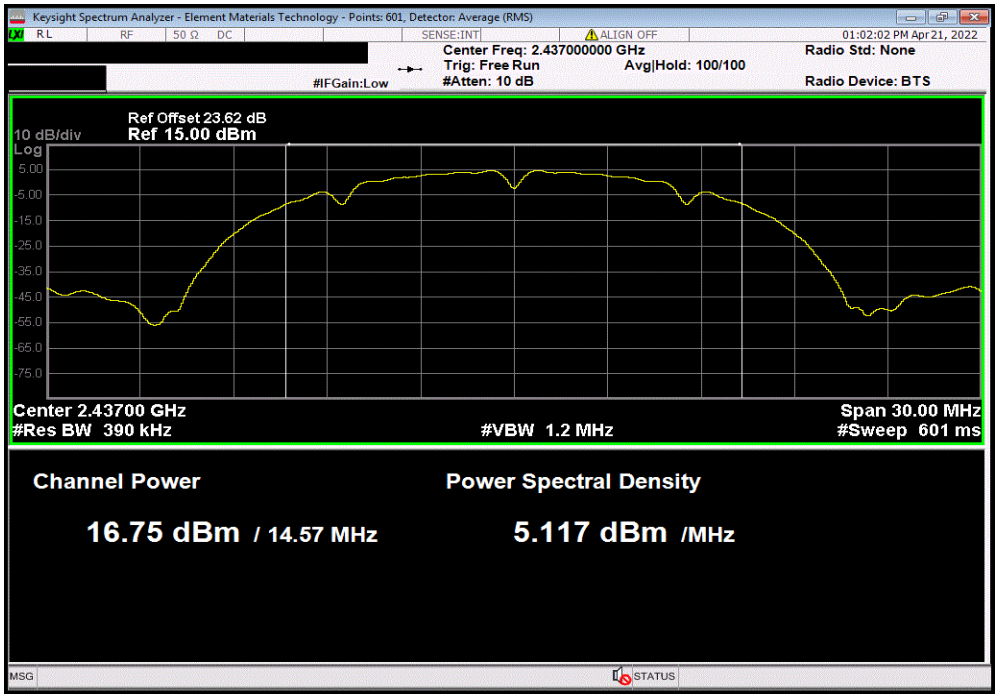
Configuration #	**12**	*Signature*

	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							
20 MHz							
802.11(b) 1 Mbps							
Low Channel 1, 2412 MHz	16.93	0	16.9	3	19.9	36	Pass
Mid Channel 6, 2437 MHz	16.752	0	16.8	3	19.8	36	Pass
High Channel 11, 2462 MHz	16.447	0	16.4	3	19.4	36	Pass
802.11(b) 11 Mbps							
Low Channel 1, 2412 MHz	16.755	0.3	17.1	3	20.1	36	Pass
Mid Channel 6, 2437 MHz	16.424	0.3	16.7	3	19.7	36	Pass
High Channel 11, 2462 MHz	16.335	0.3	16.6	3	19.6	36	Pass
802.11(g) 6 Mbps							
Low Channel 1, 2412 MHz	12.151	0.2	12.4	3	15.4	36	Pass
Mid Channel 6, 2437 MHz	16.279	0.2	16.5	3	19.5	36	Pass
High Channel 11, 2462 MHz	12.03	0.2	12.2	3	15.2	36	Pass
802.11(g) 36 Mbps							
Low Channel 1, 2412 MHz	11.41	0.9	12.3	3	15.3	36	Pass
Mid Channel 6, 2437 MHz	13.92	0.9	14.8	3	17.8	36	Pass
High Channel 11, 2462 MHz	11.216	0.9	12.1	3	15.1	36	Pass
802.11(g) 54 Mbps							
Low Channel 1, 2412 MHz	10.776	1.3	12.1	3	15.1	36	Pass
Mid Channel 6, 2437 MHz	11.902	1.3	13.2	3	16.2	36	Pass
High Channel 11, 2462 MHz	10.938	1.3	12.2	3	15.2	36	Pass
802.11(n) MCS0							
Low Channel 1, 2412 MHz	10.471	0.2	10.7	3	13.7	36	Pass
Mid Channel 6, 2437 MHz	15.341	0.2	15.5	3	18.5	36	Pass
High Channel 11, 2462 MHz	10.303	0.2	10.5	3	13.5	36	Pass
802.11(n) MCS7							
Low Channel 1, 2412 MHz	8.9	1.6	10.5	3	13.5	36	Pass
Mid Channel 6, 2437 MHz	10.841	1.6	12.4	3	15.4	36	Pass
High Channel 11, 2462 MHz	8.759	1.6	10.4	3	13.4	36	Pass
40 MHz							
802.11(n) MCS0							
Low Channel 1/5, 2422 MHz	9.444	0.4	9.8	3	12.8	36	Pass
Mid Channel 4/8, 2437 MHz	13.764	0.4	14.2	3	17.2	36	Pass
High Channel 7/11, 2452 MHz	9.24	0.4	9.6	3	12.6	36	Pass
802.11(n) MCS7							
Low Channel 1/5, 2422 MHz	8.389	2.7	11.1	3	14.1	36	Pass
Mid Channel 4/8, 2437 MHz	8.223	2.7	10.9	3	13.9	36	Pass
High Channel 7/11, 2452 MHz	8.215	2.7	10.9	3	13.9	36	Pass

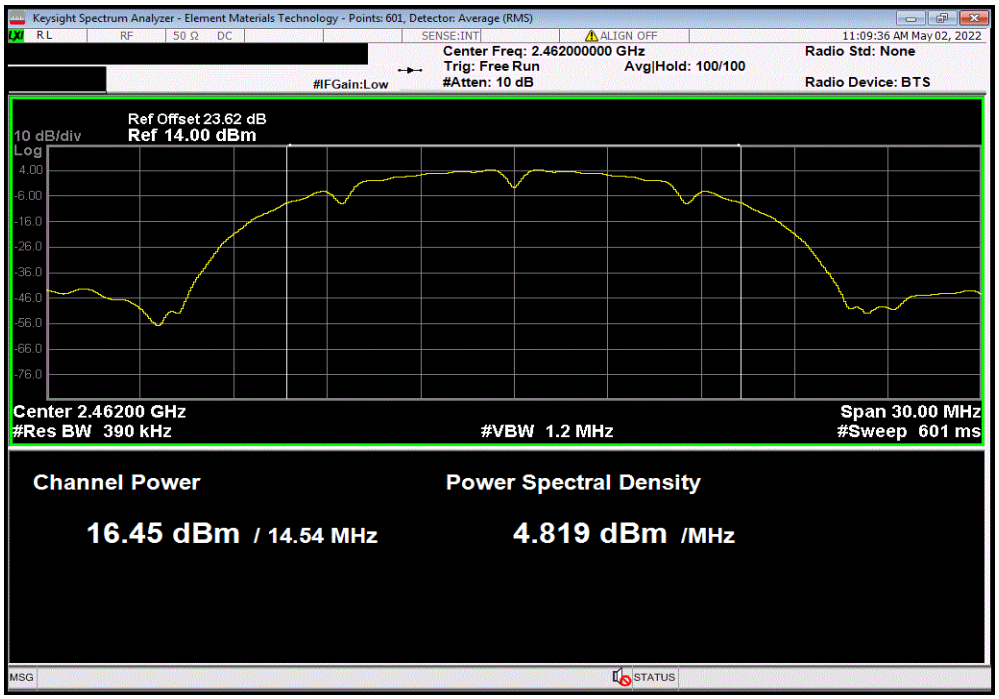
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
16.93	0	16.9	3	19.9	36	Pass



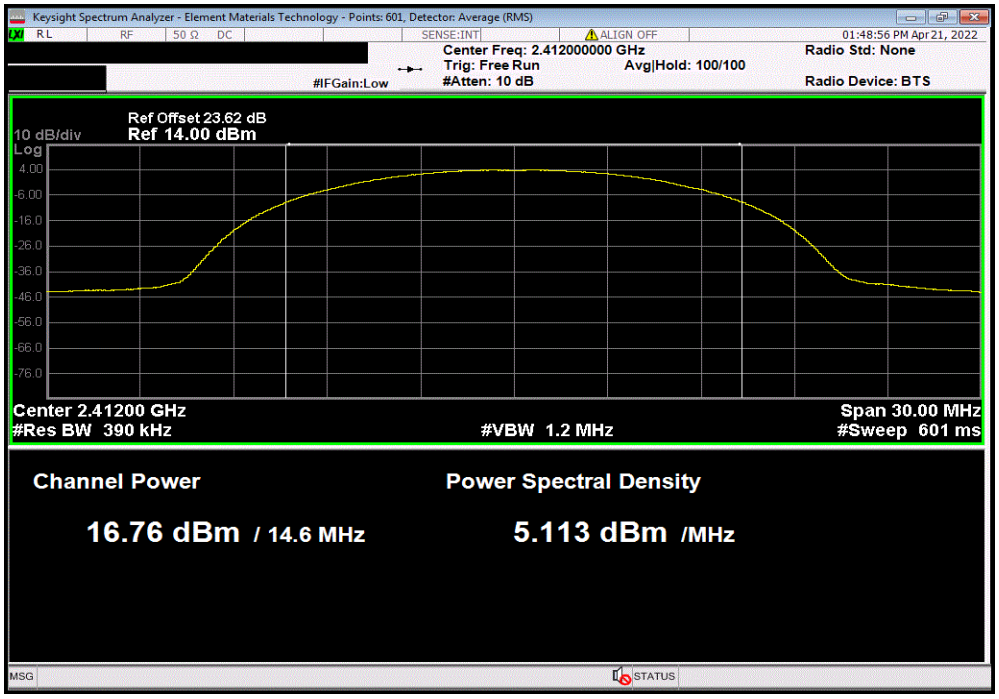
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
16.752	0	16.8	3	19.8	36	Pass



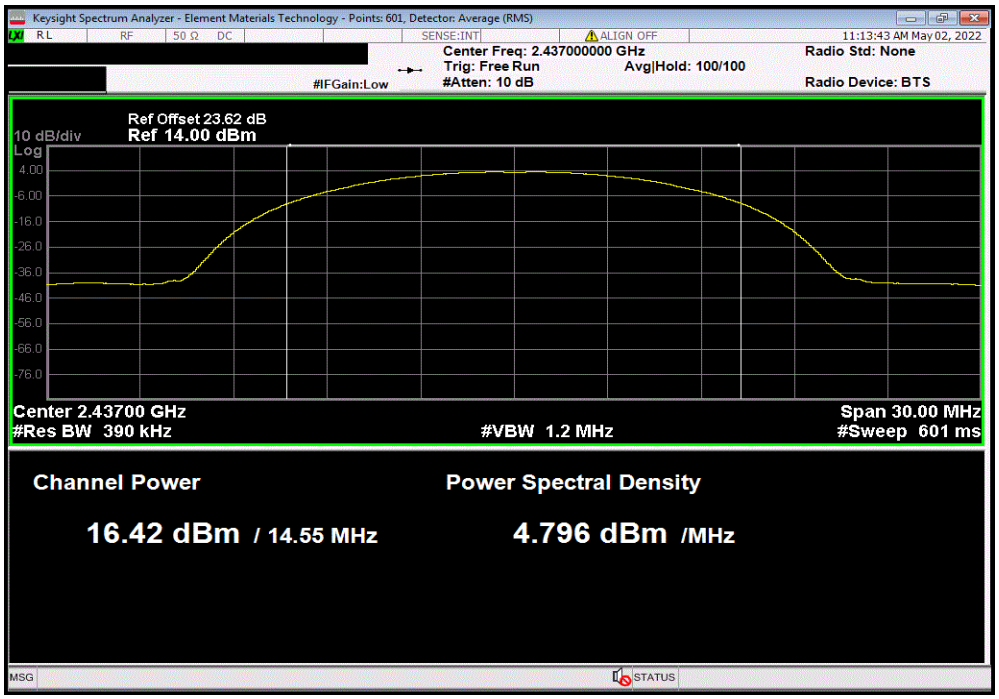
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
16.447	0	16.4	3	19.4	36	Pass



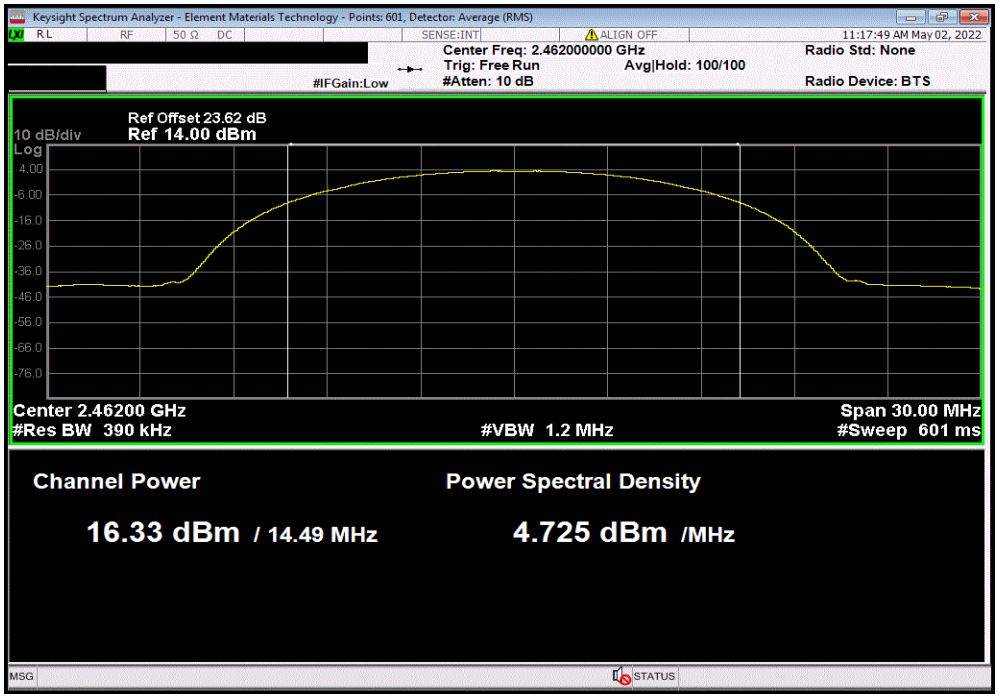
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
16.755	0.3	17.1	3	20.1	36	Pass



2400 MHz - 2483.5 MHz Band, 20 MHz, 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
16.424	0.3	16.7	3	19.7	36	Pass



2400 MHz - 2483.5 MHz Band, 20 MHz, 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
16.335	0.3	16.6	3	19.6	36	Pass

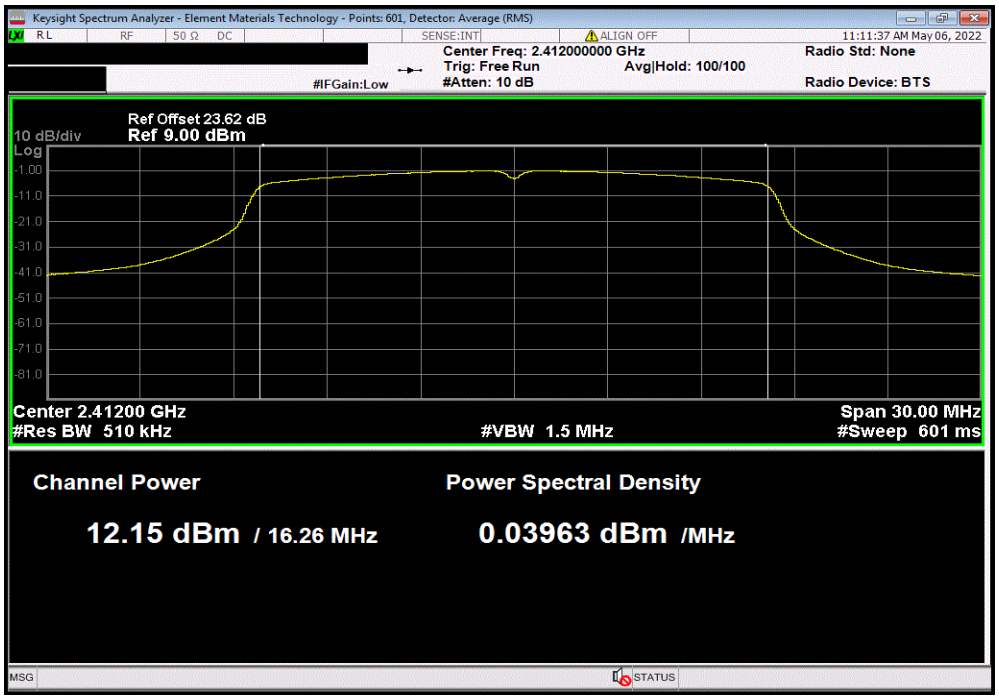


EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)

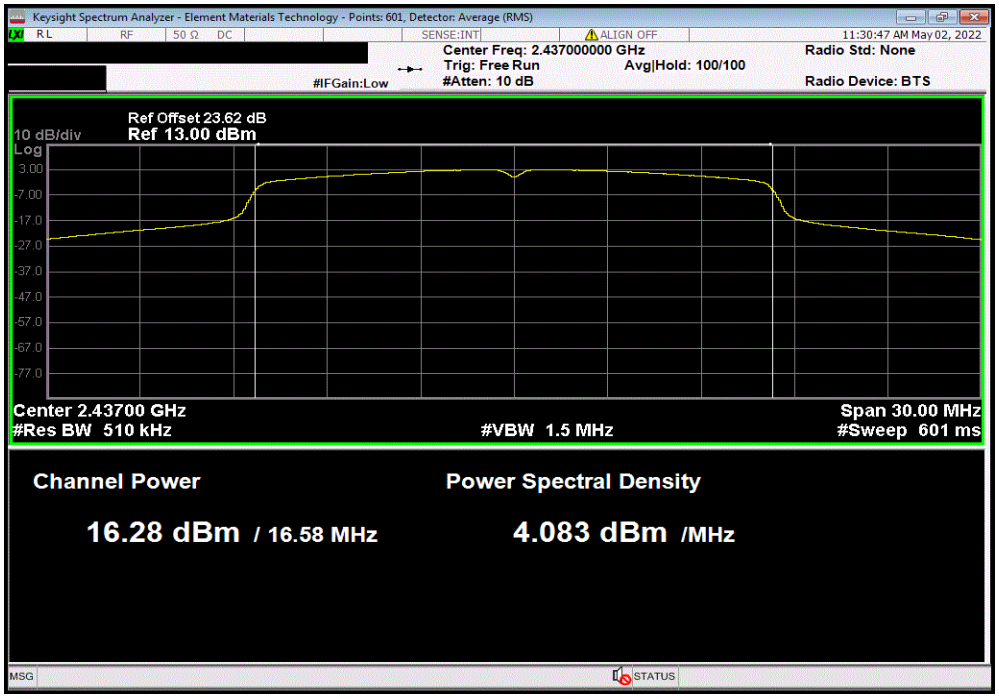
element

TbtTx 2021.03.19.1 XMit 2022.02.07.0

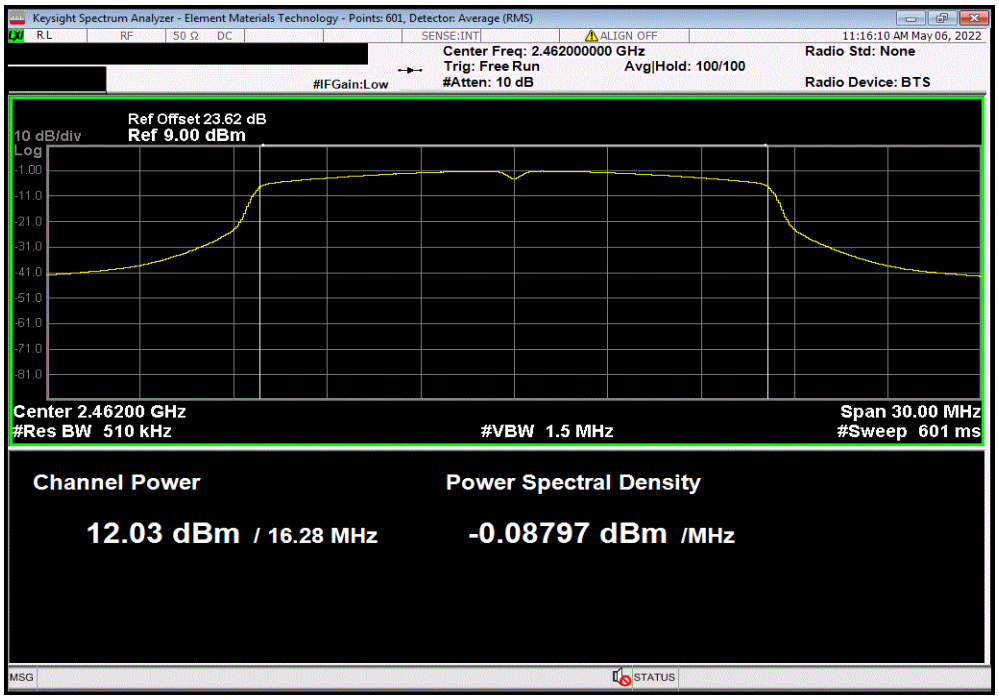
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
12.151	0.2	12.4	3	15.4	36	Pass



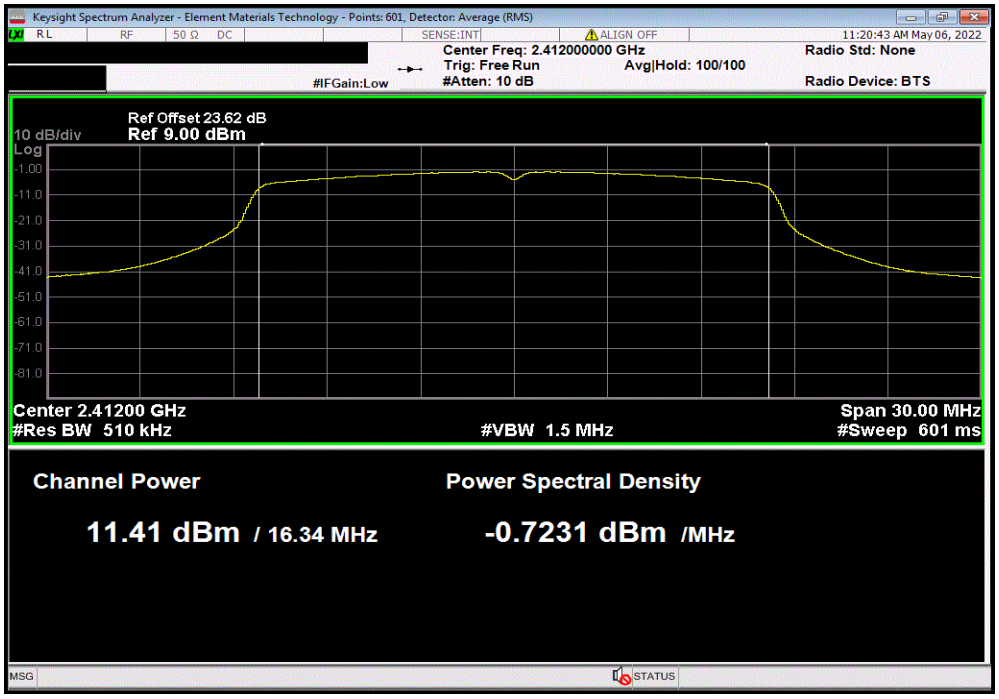
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
16.279	0.2	16.5	3	19.5	36	Pass



2400 MHz - 2483.5 MHz Band, 20 MHz, 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
12.03	0.2	12.2	3	15.2	36	Pass



2400 MHz - 2483.5 MHz Band, 20 MHz, 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
11.41	0.9	12.3	3	15.3	36	Pass

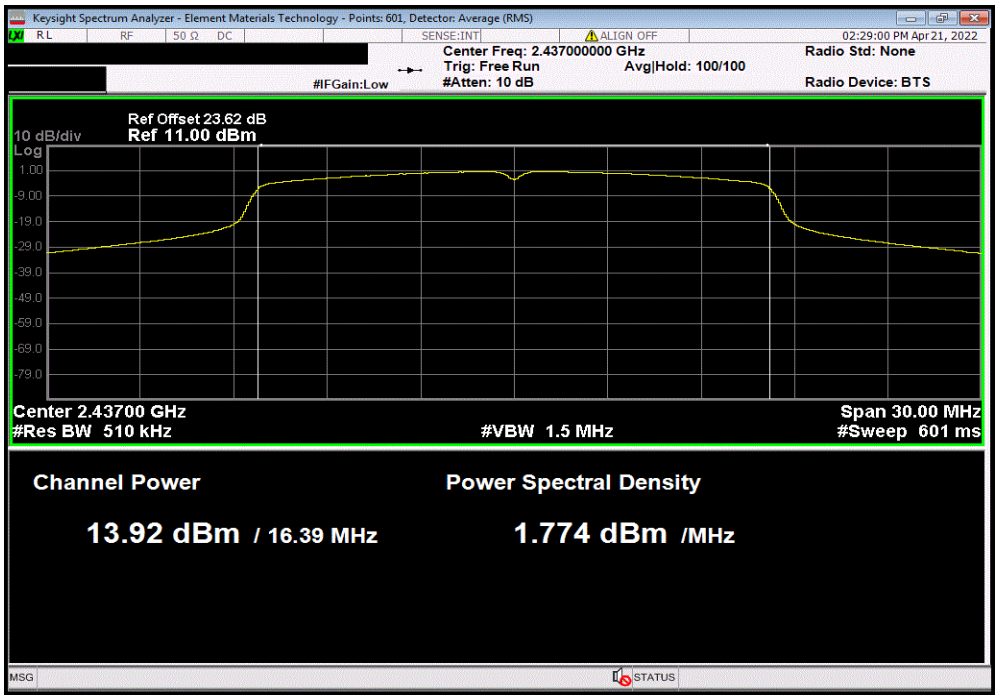


EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)

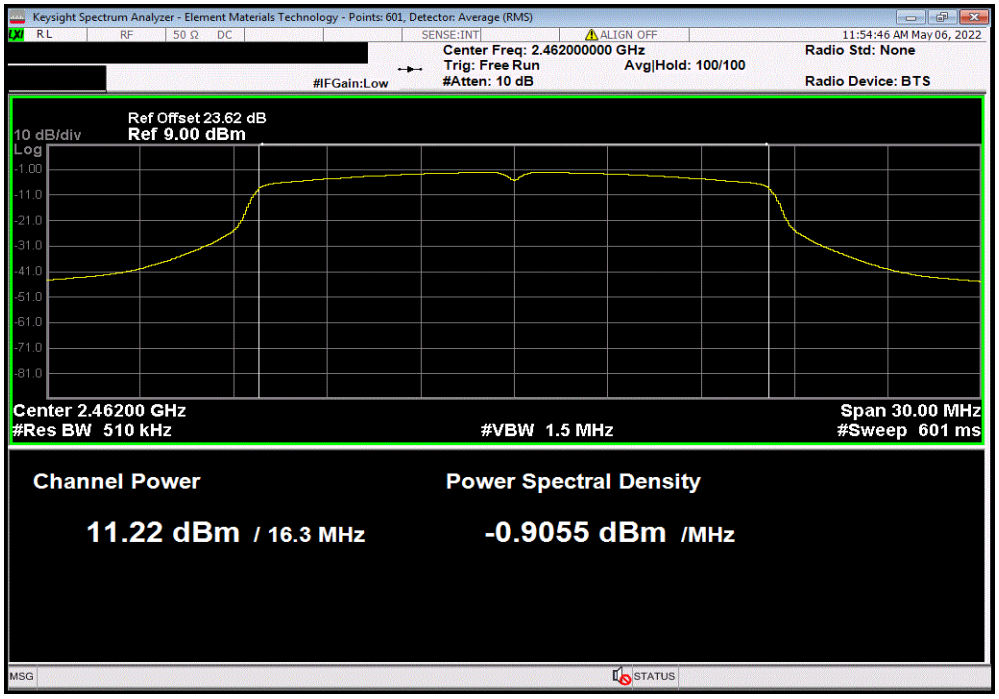
element

TbtTx 2021.03.19.1 XMit 2022.02.07.0

2400 MHz - 2483.5 MHz Band, 20 MHz, 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
13.92	0.9	14.8	3	17.8	36	Pass



2400 MHz - 2483.5 MHz Band, 20 MHz, 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
11.216	0.9	12.1	3	15.1	36	Pass

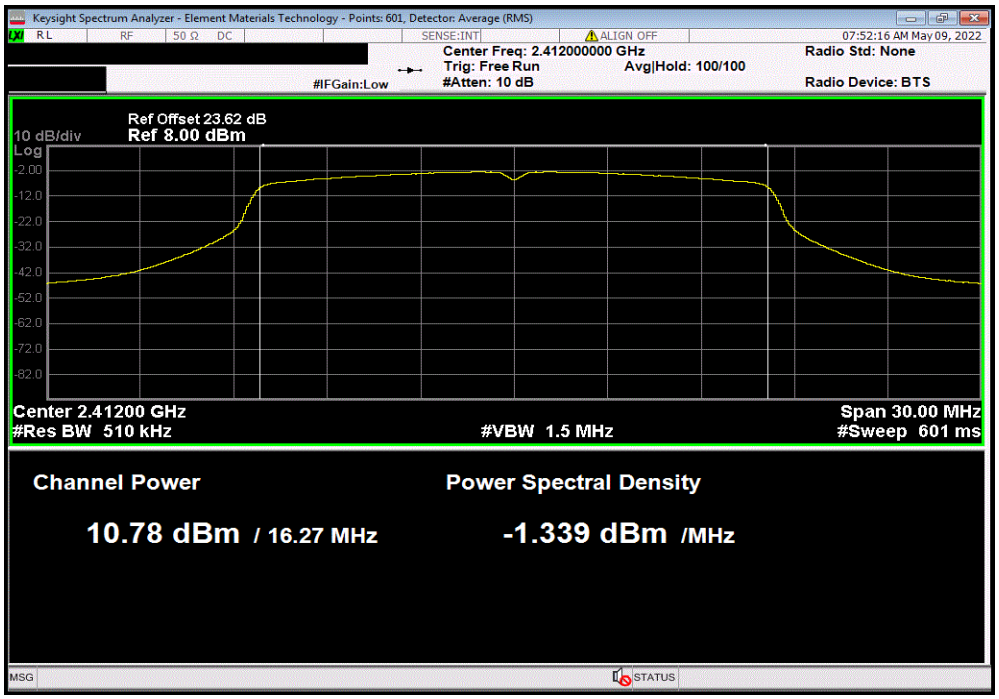


EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)

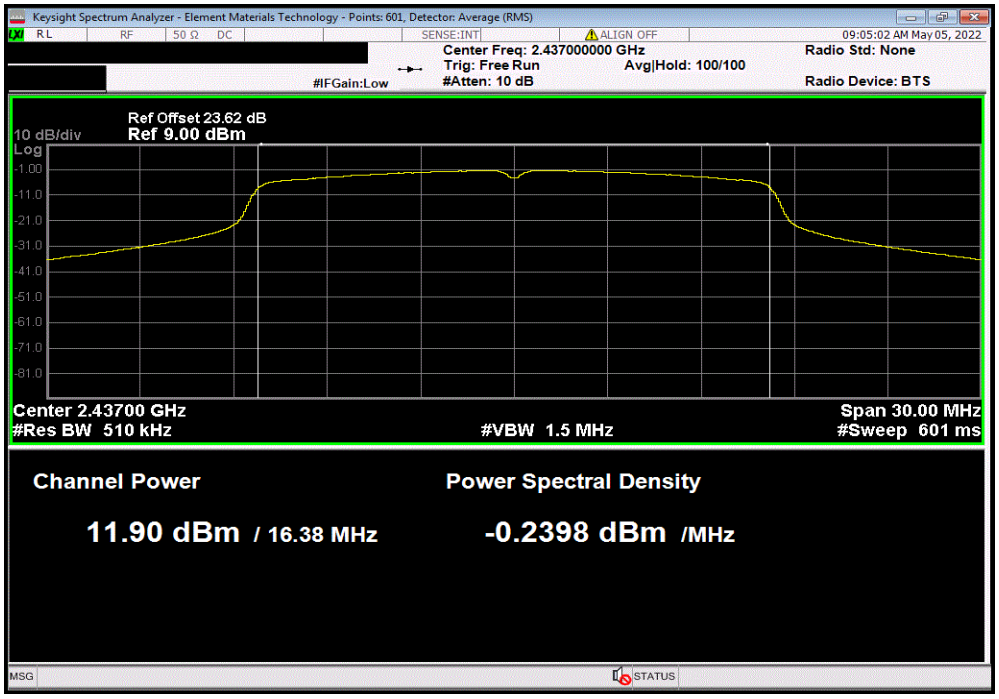
element

TbtTx 2021.03.19.1 XMit 2022.02.07.0

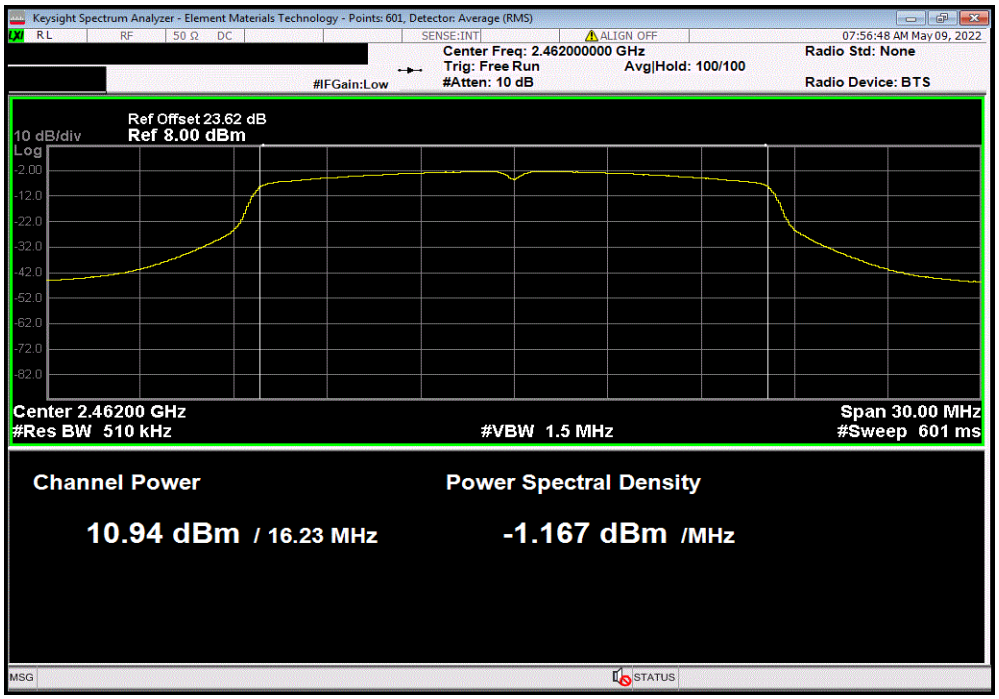
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
10.776	1.3	12.1	3	15.1	36	Pass



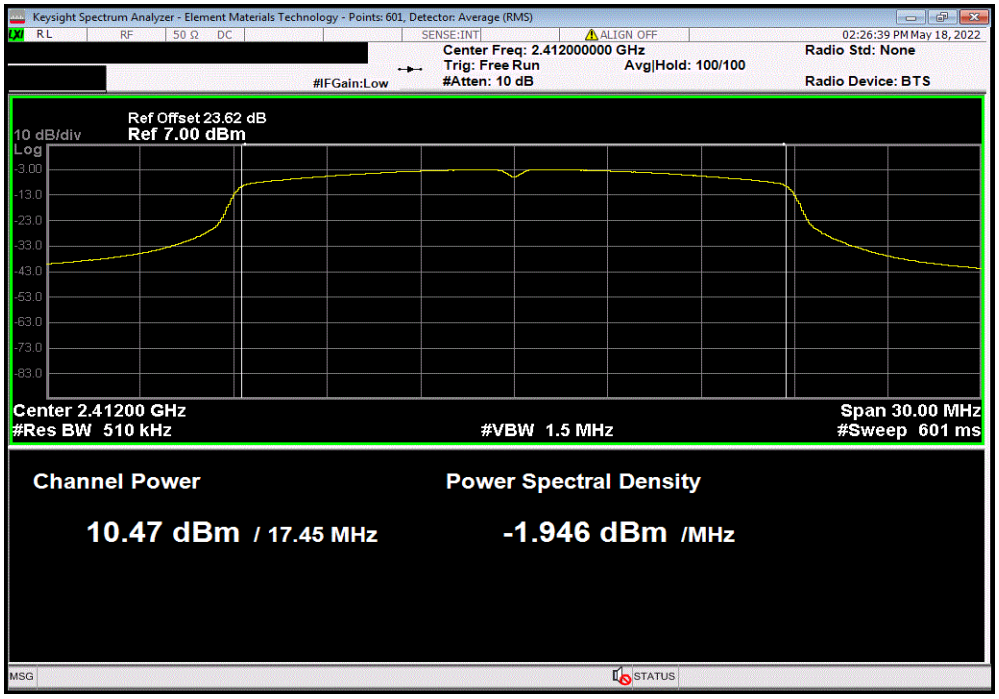
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
11.902	1.3	13.2	3	16.2	36	Pass



2400 MHz - 2483.5 MHz Band, 20 MHz, 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
10.938	1.3	12.2	3	15.2	36	Pass



2400 MHz - 2483.5 MHz Band, 20 MHz, 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
10.471	0.2	10.7	3	13.7	36	Pass

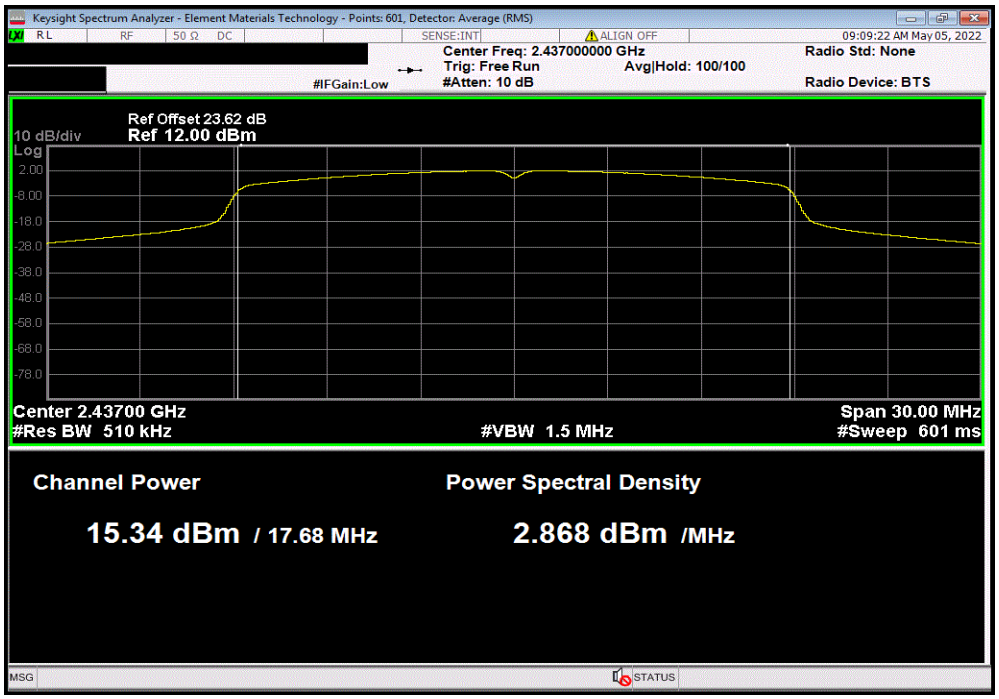


EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)

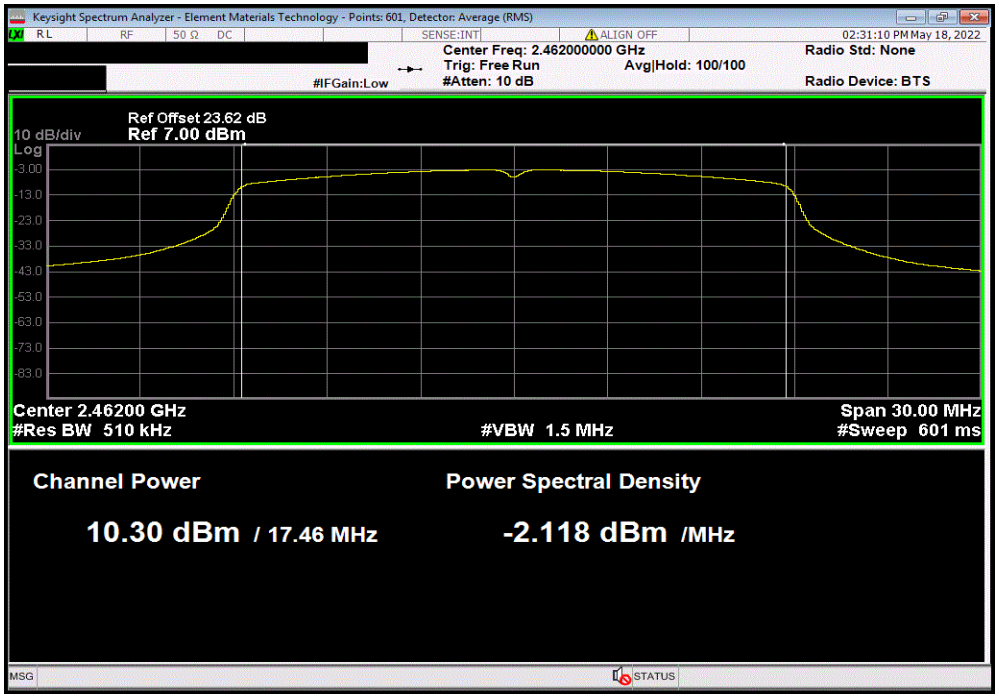
element

TbtTx 2021.03.19.1 XMit 2022.02.07.0

2400 MHz - 2483.5 MHz Band, 20 MHz, 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
15.341	0.2	15.5	3	18.5	36	Pass



2400 MHz - 2483.5 MHz Band, 20 MHz, 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
10.303	0.2	10.5	3	13.5	36	Pass

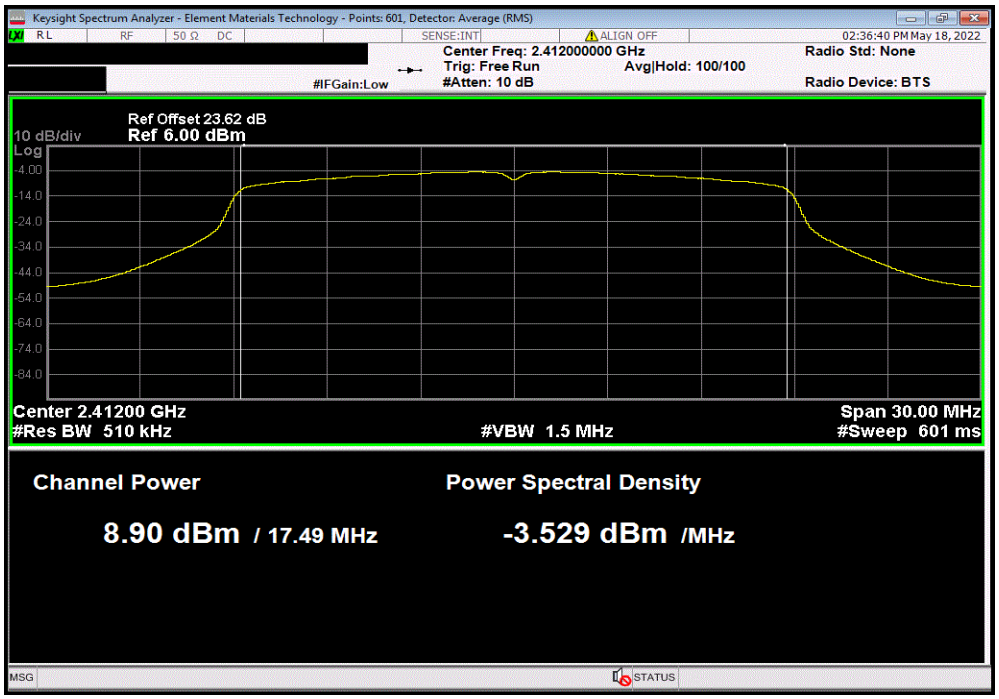


EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)

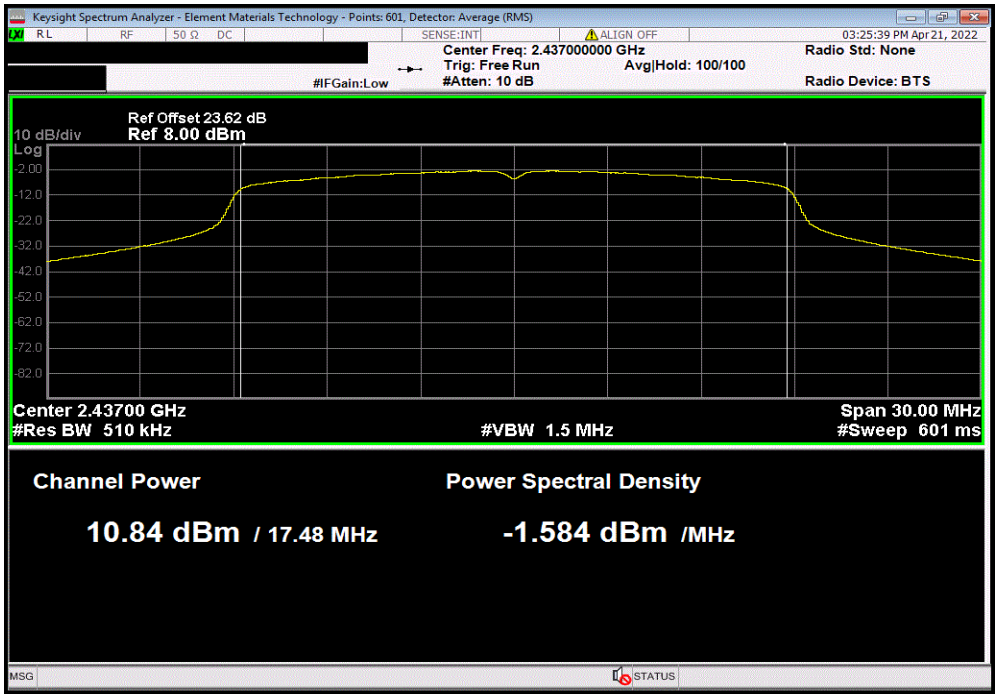
element

TbtTx 2021.03.19.1 XMit 2022.02.07.0

2400 MHz - 2483.5 MHz Band, 20 MHz, 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
8.9	1.6	10.5	3	13.5	36	Pass



2400 MHz - 2483.5 MHz Band, 20 MHz, 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
10.841	1.6	12.4	3	15.4	36	Pass

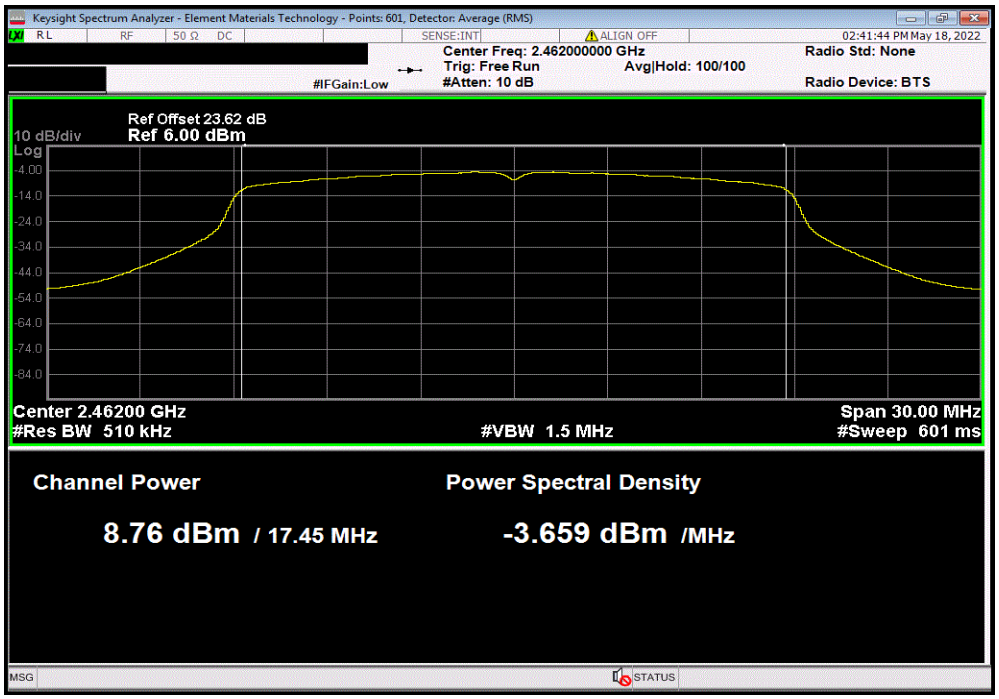


EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)

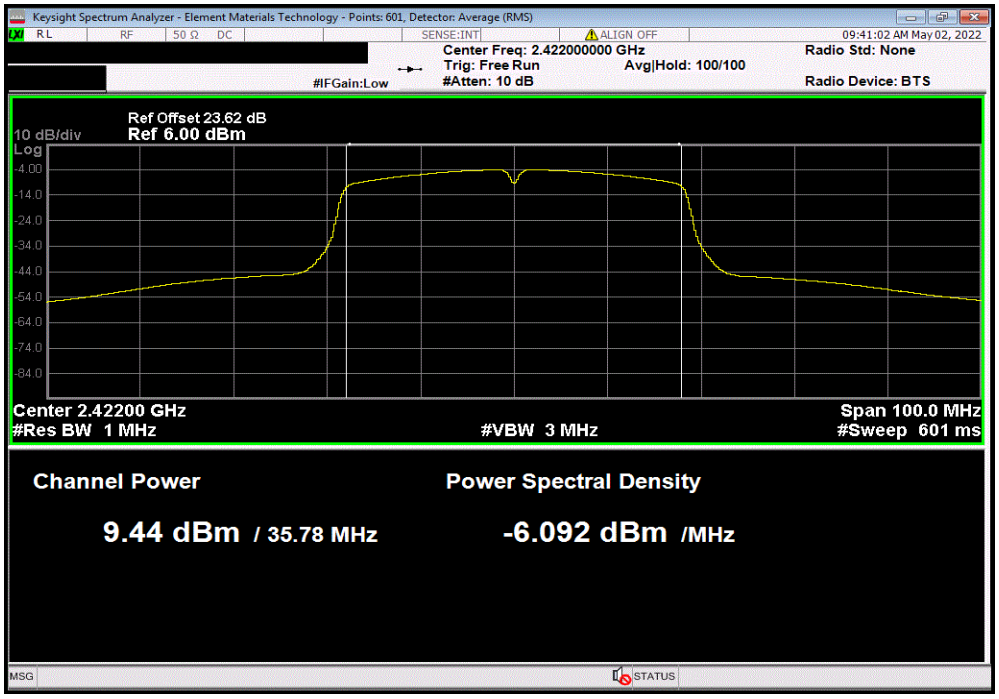
element

TbtTx 2021.03.19.1 XMit 2022.02.07.0

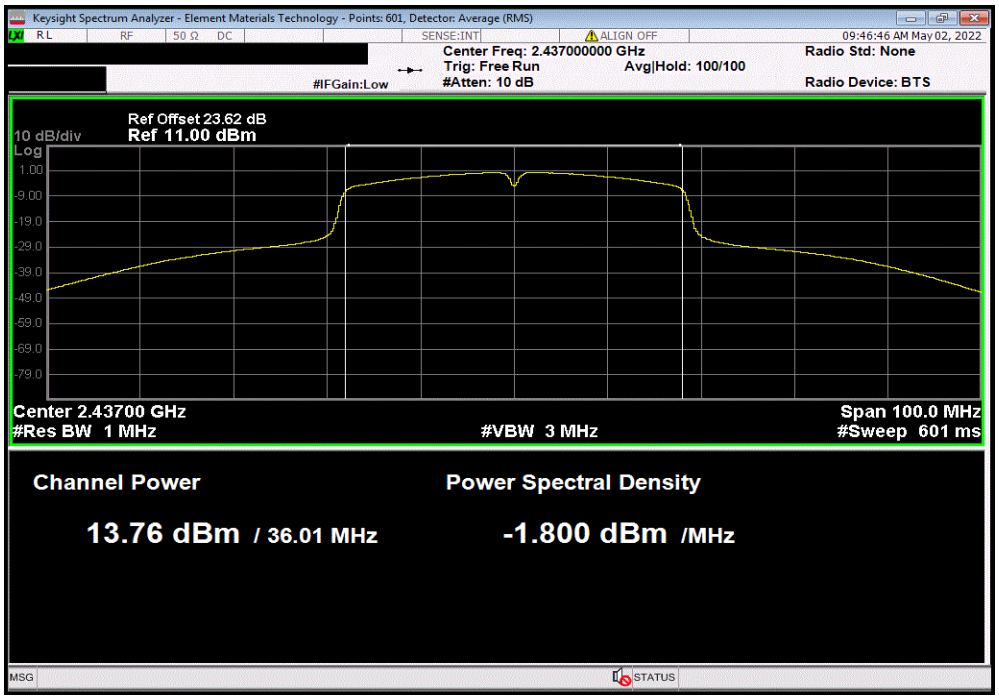
2400 MHz - 2483.5 MHz Band, 20 MHz, 802.11(n) MCS7, High Channel 11, 2462 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
8.759	1.6	10.4	3	13.4	36	Pass



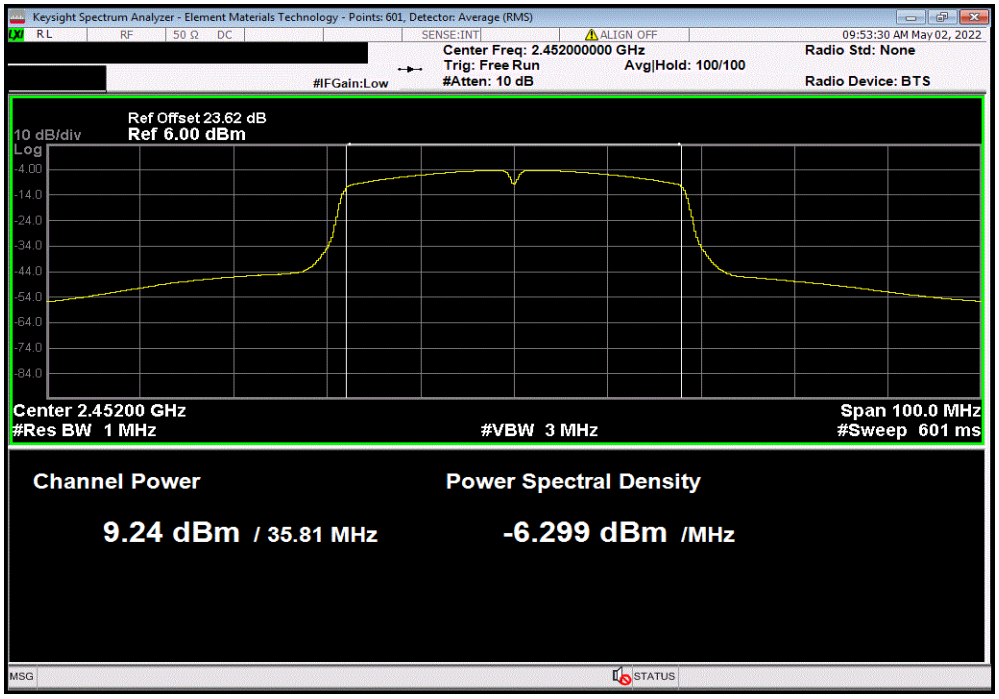
2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS0 , Low Channel 1/5, 2422 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
9.444	0.4	9.8	3	12.8	36	Pass



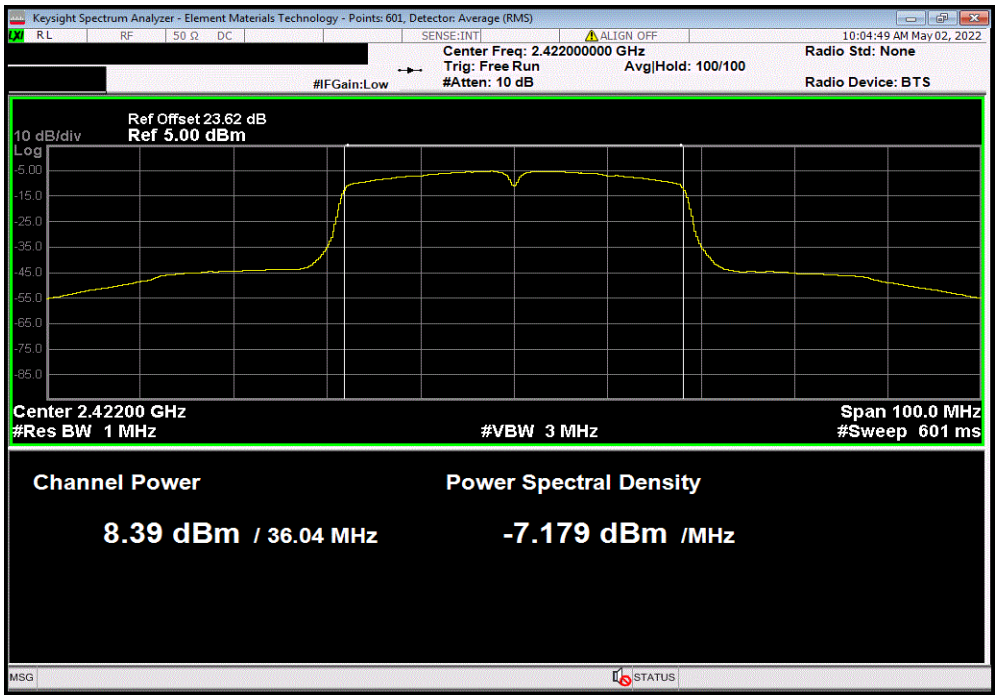
2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS0 , Mid Channel 4/8, 2437 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
13.764	0.4	14.2	3	17.2	36	Pass



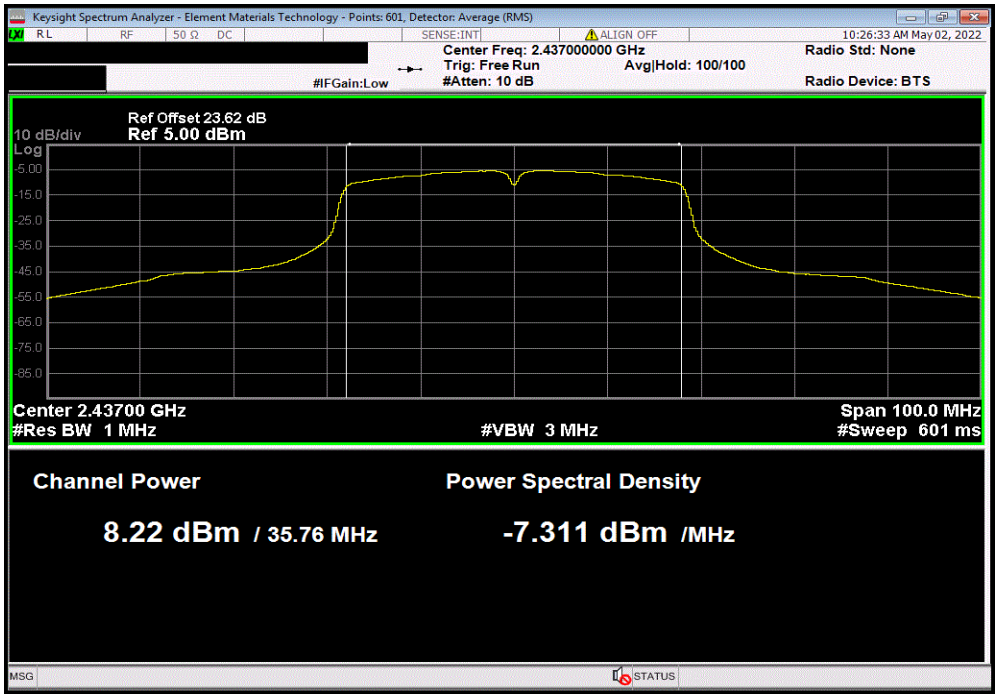
2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS0 , High Channel 7/11, 2452 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
9.24	0.4	9.6	3	12.6	36	Pass



2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS7 , Low Channel 1/5, 2422 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
8.389	2.7	11.1	3	14.1	36	Pass

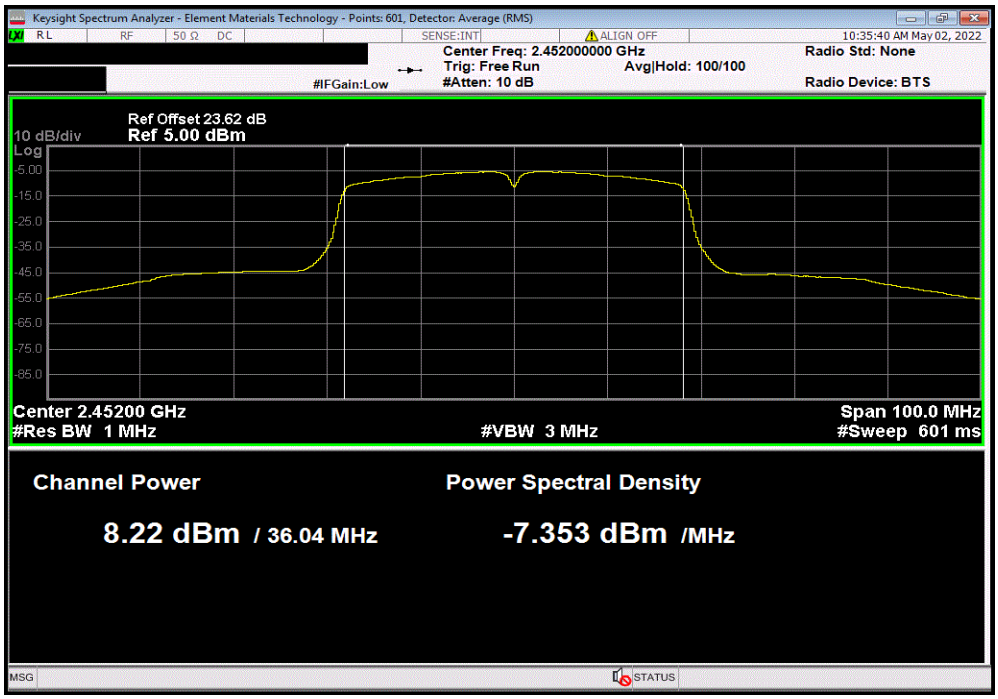


2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS7 , Mid Channel 4/8, 2437 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
8.223	2.7	10.9	3	13.9	36	Pass



EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)

element

TbtTx 2021.03.19.1 XMit 2022.02.07.0

2400 MHz - 2483.5 MHz Band, 40 MHz, 802.11(n) MCS7 , High Channel 7/11, 2452 MHz						
Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Antenna Gain (dBi)	EIRP (dBm)	EIRP Limit (dBm)	Result
8.215	2.7	10.9	3	13.9	36	Pass