



King

Falcon

FCC 15.247:2018

802.11bgn SISO (DTS) Radio

Report # KING0032



NVLAP LAB CODE: 200676-0



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CERTIFICATE OF TEST



Last Date of Test: August 17, 2018

King

Model: Falcon

Radio Equipment Testing

Standards

Specification	Method
FCC 15.247:2018	ANSI C63.10:2013, KDB 558074

Results

Method Clause	Test Description	Applied	Results	Comments
6.2	Powerline Conducted Emissions	No	N/A	Not required. Covered by previous testing under the original system level certification. FCC ID: V7TAC6-V2
11.12.1, 11.13.2, 6.5, 6.6	Spurious Radiated Emissions	Yes	Pass	
11.6	Duty Cycle	Yes	Pass	
11.8.2	Occupied Bandwidth	Yes	Pass	
11.9.2.2.4	Output Power	Yes	Pass	
11.10.2	Power Spectral Density	No	N/A	Not required. Covered by previous testing under the original system level certification. FCC ID: V7TAC6-V2
11.11	Band Edge Compliance	No	N/A	Not required. Covered by previous testing under the original system level certification. FCC ID: V7TAC6-V2
11.11	Spurious Conducted Emissions	No	N/A	Not required. Covered by previous testing under the original system level certification. FCC ID: V7TAC6-V2

Deviations From Test Standards

None

Approved By:

Victor Ratinoff, Operations Manager

Product compliance is the responsibility of the client; therefore, the tests and equipment modes of operation represented in this report were agreed upon by the client, prior to testing. The results of this test pertain only to the sample(s) tested. The specific description is noted in each of the individual sections of the test report supporting this certificate of test. This report reflects only those tests from the referenced standards shown in the certificate of test. It does not include inspection or verification of labels, identification, marking or user information.

REVISION HISTORY



Revision Number	Description	Date (yyyy-mm-dd)	Page Number
00	None		

ACCREDITATIONS AND AUTHORIZATIONS



United States

FCC - Designated by the FCC as a Telecommunications Certification Body (TCB). Certification chambers, Open Area Test Sites, and conducted measurement facilities are listed with the FCC.

A2LA - Accredited by A2LA to ISO / IEC 17065 as a product certifier. This allows Element to certify transmitters to FCC and IC specifications.

NVLAP - Each laboratory is accredited by NVLAP to ISO 17025

Canada

ISED - Recognized by Innovation, Science and Economic Development Canada as a Certification Body (CB). Certification chambers and Open Area Test Sites are filed with ISED.

European Union

European Commission – Within Element, we have a EU Notified Body validated for the EMCD and RED Directives.

Australia/New Zealand

ACMA - Recognized by ACMA as a CAB for the acceptance of test data.

Korea

MSIT / RRA - Recognized by KCC's RRA as a CAB for the acceptance of test data.

Japan

VCCI - Associate Member of the VCCI. Conducted and radiated measurement facilities are registered.

Taiwan

BSMI – Recognized by BSMI as a CAB for the acceptance of test data.

NCC - Recognized by NCC as a CAB for the acceptance of test data.

Singapore

IDA – Recognized by IDA as a CAB for the acceptance of test data.

Israel

MOC – Recognized by MOC as a CAB for the acceptance of test data.

Hong Kong

OFCA – Recognized by OFCA as a CAB for the acceptance of test data.

Vietnam

MIC – Recognized by MIC as a CAB for the acceptance of test data.

SCOPE

For details on the Scopes of our Accreditations, please visit:

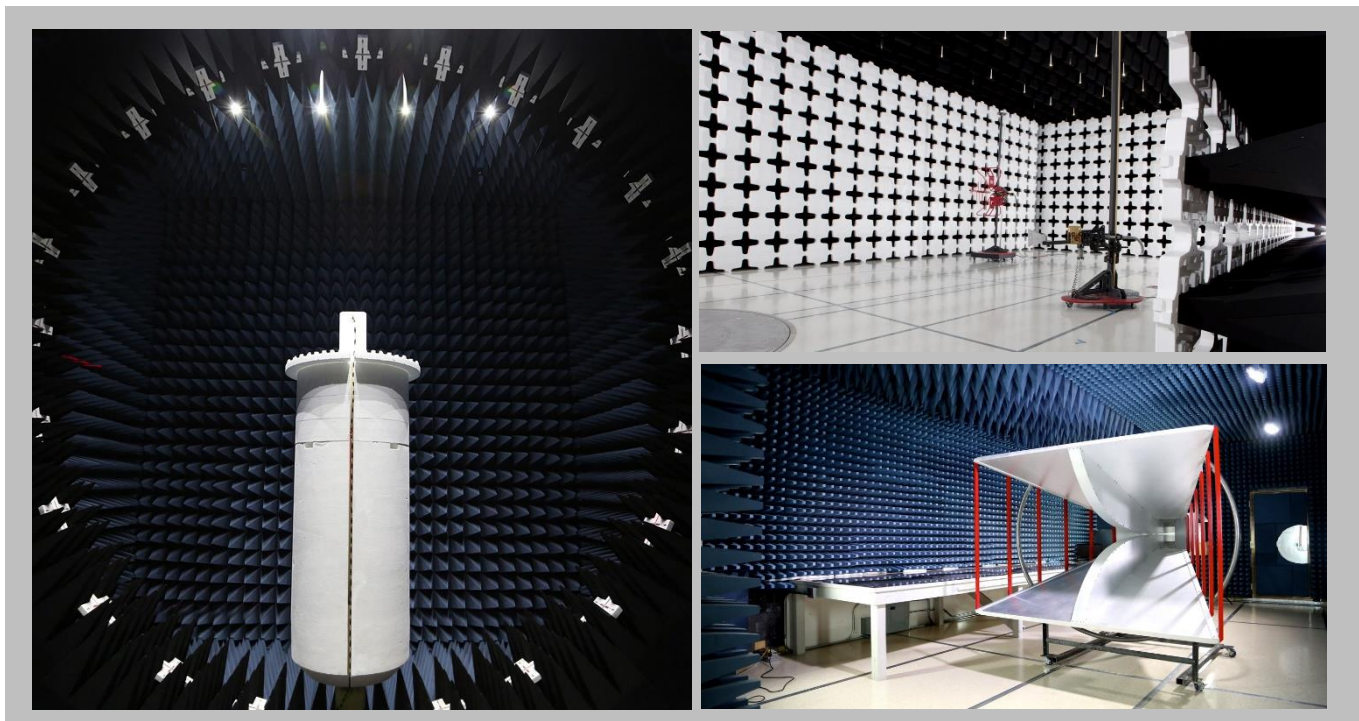
<http://portlandcustomer.element.com/ts/scope/scope.htm>

<http://gsi.nist.gov/global/docs/cabs/designations.html>

FACILITIES



California Labs OC01-17 41 Tesla Irvine, CA 92618 (949) 861-8918	Minnesota Labs MN01-10 9349 W Broadway Ave. Brooklyn Park, MN 55445 (612)-638-5136	New York Labs NY01-04 4939 Jordan Rd. Elbridge, NY 13060 (315) 554-8214	Oregon Labs EV01-12 6775 NE Evergreen Pkwy #400 Hillsboro, OR 97124 (503) 844-4066	Texas Labs TX01-09 3801 E Plano Pkwy Plano, TX 75074 (469) 304-5255	Washington Labs NC01-05 19201 120 th Ave NE Bothell, WA 98011 (425)984-6600
NVLAP					
NVLAP Lab Code: 200676-0	NVLAP Lab Code: 200881-0	NVLAP Lab Code: 200761-0	NVLAP Lab Code: 200630-0	NVLAP Lab Code:201049-0	NVLAP Lab Code: 200629-0
Innovation, Science and Economic Development Canada					
2834B-1, 2834B-3	2834E-1, 2834E-3	N/A	2834D-1, 2834D-2	2834G-1	2834F-1
BSMI					
SL2-IN-E-1154R	SL2-IN-E-1152R	N/A	SL2-IN-E-1017	SL2-IN-E-1158R	SL2-IN-E-1153R
VCCI					
A-0029	A-0109	N/A	A-0108	A-0201	A-0110
Recognized Phase I CAB for ACMA, BSMI, IDA, KCC/RRR, MIC, MOC, NCC, OFCA					
US0158	US0175	N/A	US0017	US0191	US0157



MEASUREMENT UNCERTAINTY

Measurement Uncertainty

When a measurement is made, the result will be different from the true or theoretically correct value. The difference is the result of tolerances in the measurement system that cannot be completely eliminated. To the extent that technology allows us, it has been our aim to minimize this error. Measurement uncertainty is a statistical expression of measurement error qualified by a probability distribution.

A measurement uncertainty estimation has been performed for each test per our internal quality document QM205.4.6. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty (K=2) can be found included as part of the applicable test description page. Our measurement data meets or exceeds the measurement uncertainty requirements of the applicable specification; therefore, the test data can be compared directly to the specification limit to determine compliance. The calculations for estimating measurement uncertainty are based upon ETSI TR 100 028 (or CISPR 16-4-2 as applicable), and are available upon request.

The following table represents the Measurement Uncertainty (MU) budgets for each of the tests that may be contained in this report.

Test	+ MU	- MU
Frequency Accuracy (Hz)	0.0007%	-0.0007%
Amplitude Accuracy (dB)	1.2 dB	-1.2 dB
Conducted Power (dB)	0.3 dB	-0.3 dB
Radiated Power via Substitution (dB)	0.7 dB	-0.7 dB
Temperature (degrees C)	0.7°C	-0.7°C
Humidity (% RH)	2.5% RH	-2.5% RH
Voltage (AC)	1.0%	-1.0%
Voltage (DC)	0.7%	-0.7%
Field Strength (dB)	5.1 dB	-5.1 dB
AC Powerline Conducted Emissions (dB)	2.4 dB	-2.4 dB

Test Setup Block Diagrams

Antenna Port Conducted Measurements



Near Field Test Fixture Measurements



Spurious Radiated Emissions



PRODUCT DESCRIPTION

Client and Equipment Under Test (EUT) Information

Company Name:	King
Address:	11200 Hampshire Ave S
City, State, Zip:	Bloomington, MN 55438
Test Requested By:	Michael Bendzick
Model:	Falcon (KF1000 / KF1001)
First Date of Test:	August 1, 2018
Last Date of Test:	August 17, 2018
Receipt Date of Samples:	July 26, 2018
Equipment Design Stage:	Production
Equipment Condition:	No Damage
Purchase Authorization:	Verified

Information Provided by the Party Requesting the Test

Functional Description of the EUT:

Wi-Fi extenders to the Recreational (RV) market so that users can extend campground or retail store Wi-Fi to a variety of devices in their vehicle.

Model Equivalency Statement:

Additional Falcon antenna model comes in black and has a different model number, KF1001, and can be used with the KWM1000 WiFi Extender.

Testing Objective:

To demonstrate compliance of the 802.11 radio with the Yagi and antenna connector change under FCC 15.247 for operation in the 2.4 GHz band.

CONFIGURATIONS



Configuration KING0032- 1

Software/Firmware Running during test	
Description	Version
RTL819x	3.4

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Router	KING	KWM1000	None
Router Power Supply	Generic	BN049-A05009U	None
Antenna Assembly	KING	KF1000	122GE-02090
Power Inserter	KING	23239R2	D0718S00015
Power Inserter Power Supply	GlobTek, Inc.	GT-46180-1812	None

Peripherals in test setup boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Laptop	Lenovo	E530	MP-11AN9-12-07
Laptop Power Supply	Lenovo	45N0197	11S45N0197Z1ZK1E23F0MH

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
DC Cable (wall wart)	No	1.8m	No	Router	AC Mains
Ethernet Cable	No	3.0m	No	Router	Laptop
RG316 Cable	Yes	0.33m	No	Router	Power Inserter
Antenna Assembly Cable	No	3.3m	Yes	Power Inserter	Antenna Assembly
DC Cable (wall wart)	No	1.0m	Yes	Power Inserter	AC Mains
AC Cable	No	1.0m	No	Laptop Power Supply	AC Mains
DC Cable	No	2.0m	Yes	Laptop Power Supply	Laptop
Ethernet Cable (3)	No	1.0m	No	Router	Unterminated

CONFIGURATIONS

Configuration KING0032- 2

Software/Firmware Running during test	
Description	Version
RTL819x	3.4

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Router	KING	KWM1000	None
Router Power Supply	Generic	BN049-A05009U	None

Peripherals in test setup boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Laptop	Lenovo	E530	MP-11AN9-12-07
Laptop Power Supply	Lenovo	45N0197	11S45N0197Z1ZK1E23F0MH

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
DC Cable (wall wart)	No	1.8m	No	Router	AC Mains
Ethernet Cable	No	3.0m	No	Router	Laptop
DC Cable (wall wart)	No	1.0m	Yes	Power Inserter	AC Mains
AC Cable	No	1.0m	No	Laptop Power Supply	AC Mains

CONFIGURATIONS



Configuration KING0038- 1

Software/Firmware Running during test	
Description	Version
RTL819x	3.4

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Router	KING	KWM1000	None
Router Power Supply	Generic	BN049-A05009U	None
Antenna Assembly	KING	KF1000	122GE-02090
Power Inserter	KING	23239R2	D0718S00015
Power Inserter Power Supply	GlobTek, Inc.	GT-46180-1812	None

Peripherals in test setup boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Laptop	Lenovo	E530	MP-11AN9-12-07
Laptop Power Supply	Lenovo	45N0197	11S45N0197Z1ZK1E23F0MH

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
DC Cable (wall wart)	No	1.8m	No	Router	AC Mains
Ethernet Cable	No	3.0m	No	Router	Laptop
RG316 Cable	Yes	0.33m	No	Router	Power Inserter
Antenna Assembly Cable	No	3.3m	Yes	Power Inserter	Antenna Assembly
DC Cable (wall wart)	No	1.0m	Yes	Power Inserter	AC Mains
AC Cable	No	1.0m	No	Laptop Power Supply	AC Mains
DC Cable	No	2.0m	Yes	Laptop Power Supply	Laptop
Ethernet Cable (3)	No	1.0m	No	Router	Unterminated

MODIFICATIONS

Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	2018-08-01	Duty Cycle	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
2	2018-08-01	Occupied Bandwidth	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
3	2018-08-01	Output Power	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
4	2018-08-17	Spurious Radiated Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

POWER SETTINGS



The EUT was tested using the power settings provided by the manufacturer:

SETTINGS FOR ALL TESTS IN THIS REPORT

Modulation Types	Channel Bandwidths	Channel	Position	Frequency (MHz)	Default Power Setting	Final Power Setting
1 Mbps	20	1	Low Channel	2412	36	29
		6	Mid Channel	2437	38	31
		11	High Channel	2462	40	36
11 Mbps	20	1	Low Channel	2412	36	36
		6	Mid Channel	2437	38	38
		11	High Channel	2462	40	40
6 Mbps	20	1	Low Channel	2412	23	23
		6	Mid Channel	2437	25	25
		11	High Channel	2462	27	27
36 Mbps	20	1	Low Channel	2412	23	23
		6	Mid Channel	2437	25	25
		11	High Channel	2462	27	27
54 Mbps	20	1	Low Channel	2412	23	23
		6	Mid Channel	2437	25	25
		11	High Channel	2462	27	27
MCS0	20	1	Low Channel	2412	20	20
		6	Mid Channel	2437	23	23
		11	High Channel	2462	25	25
MCS7	20	1	Low Channel	2412	20	20
		6	Mid Channel	2437	23	23
		11	High Channel	2462	25	25
MCS0	40	1/5	Low Channel	2422	21	21
		4/8	Mid Channel	2437	23	23
		7/11	High Channel	2452	23	23
MCS7	40	1/5	Low Channel	2422	21	21
		4/8	Mid Channel	2437	23	23
		7/11	High Channel	2452	23	23

SPURIOUS RADIATED EMISSIONS



PSA-ESCI 2018.05.04

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. The test data represents the configuration / operating mode/ model that produced the highest emission levels as compared to the specification limit.

MODES OF OPERATION

Transmitting at 802.11 b/g/n: Low Ch 1 (2412 MHz), High Ch 11 (2462 MHz) and Low Ch 3 (2422 MHz), High Ch 9 (2452 MHz)

POWER SETTINGS INVESTIGATED

110VAC/60Hz

CONFIGURATIONS INVESTIGATED

KING0032 - 1

FREQUENCY RANGE INVESTIGATED

Start Frequency | 30 MHz | Stop Frequency | 8200 MHz

SAMPLE CALCULATIONS

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Attenuator	Fairview Microwave	SA18H-20	TKQ	NCR	0 mo
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVJ	10-Jul-2018	12 mo
Cable	ESM Cable Corp.	1-8GHz cables	OCX	14-May-2018	12 mo
Antenna - Double Ridge	ETS Lindgren	3115	AIR	28-Jun-2018	24 mo
Filter - Low Pass	Micro-Tronics	LPM50004	HGK	25-Jan-2018	12 mo
Amplifier - Pre-Amplifier	Miteq	AM-1551	AOX	1-Aug-2018	12 mo
Cable	ESM Cable Corp.	30-1GHz cables	OCW	10-May-2018	12 mo
Antenna - Biconilog	EMCO	3142	AXB	5-Apr-2018	24 mo
Analyzer - Spectrum Analyzer	Agilent	N9010A	AFJ	8-Dec-2017	12 mo

MEASUREMENT BANDWIDTHS

Frequency Range (MHz)	Peak Data (kHz)	Quasi-Peak Data (kHz)	Average Data (kHz)
0.01 - 0.15	1.0	0.2	0.2
0.15 - 30.0	10.0	9.0	9.0
30.0 - 1000	100.0	120.0	120.0
Above 1000	1000.0	N/A	1000.0

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.

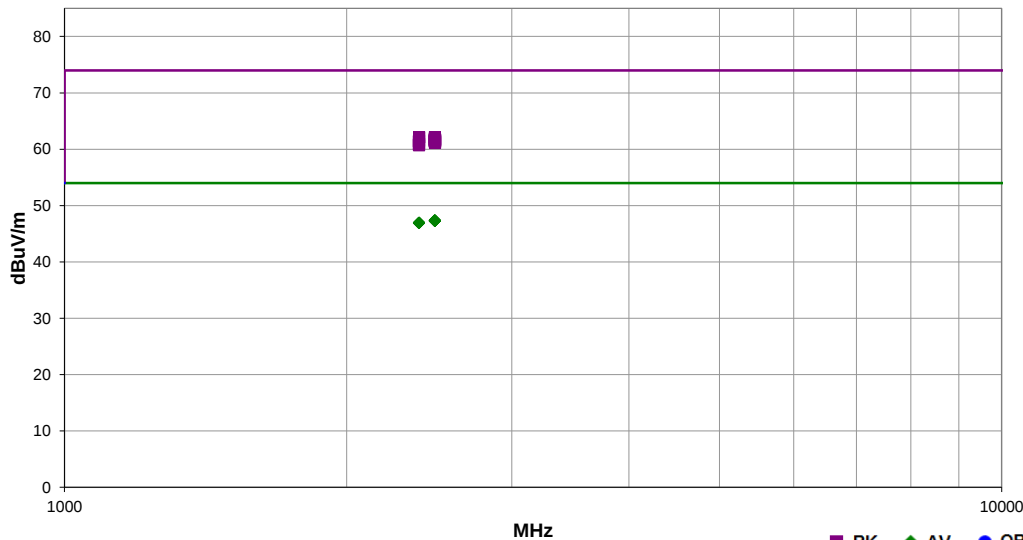
SPURIOUS RADIATED EMISSIONS



Work Order:	KING0032	Date:	29-Aug-2018	
Project:	None	Temperature:	25.4 °C	
Job Site:	OC10	Humidity:	43.9% RH	
Serial Number:	See Configurations	Barometric Pres.:	1015 mbar	
EUT:	Falcon	Tested by:	Mark Baytan	
Configuration:	1			
Customer:	King			
Attendees:	None			
EUT Power:	110VAC/60Hz			
Operating Mode:	Transmitting at 802.11 b/g/n: Low Ch 1 (2412 MHz), High Ch 11 (2462 MHz) and Low Ch 3 (2422 MHz), High Ch 9 (2452 MHz)			
Deviations:	None			
Comments:	See comments for data rates.			

Test Specifications	Test Method
FCC 15.247:2018	ANSI C63.10:2013

Run #	0	Test Distance (m)	3	Antenna Height(s)	1 to 4(m)	Results	Pass
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Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
2484.037	24.5	2.9	1.0	17.0	3.0	20.0	Horz	AV	0.0	47.4	54.0	-6.6	EUT Horz, High Ch 9, MCS0, 40MHz, TX Pwr=23
2483.690	24.4	2.9	1.3	167.0	3.0	20.0	Vert	AV	0.0	47.3	54.0	-6.7	EUT Horz, High Ch 9, MCS0, 40MHz, TX Pwr=23
2483.720	24.4	2.9	1.0	208.0	3.0	20.0	Horz	AV	0.0	47.3	54.0	-6.7	EUT Vert, High Ch 9, MCS0, 40MHz, TX Pwr=23
2484.477	24.4	2.9	1.0	170.0	3.0	20.0	Vert	AV	0.0	47.3	54.0	-6.7	EUT Vert, High Ch 9, MCS0, 40MHz, TX Pwr=23
2484.773	24.4	2.9	1.0	95.0	3.0	20.0	Horz	AV	0.0	47.3	54.0	-6.7	EUT on Side, High Ch 9, MCS0, 40MHz, TX Pwr=23
2484.577	24.4	2.9	1.0	334.0	3.0	20.0	Vert	AV	0.0	47.3	54.0	-6.7	EUT on Side, High Ch 9, MCS0, 40MHz, TX Pwr=23
2483.583	24.4	2.9	1.0	17.0	3.0	20.0	Horz	AV	0.0	47.3	54.0	-6.7	EUT Horz, High Ch 9, MCS7, 40MHz, TX Pwr=23
2483.553	24.4	2.9	1.0	17.0	3.0	20.0	Horz	AV	0.0	47.3	54.0	-6.7	EUT Horz, High Ch 11, 1Mbps, 20MHz, TX Pwr=36
2483.500	24.4	2.9	1.0	17.0	3.0	20.0	Horz	AV	0.0	47.3	54.0	-6.7	EUT Horz, High Ch 11, 1Mbps, 20MHz, TX Pwr=40
2484.500	24.4	2.9	1.0	17.0	3.0	20.0	Horz	AV	0.0	47.3	54.0	-6.7	EUT Horz, High Ch 11, 36Mbps, 20MHz, TX Pwr=27
2483.787	24.4	2.9	1.0	17.0	3.0	20.0	Horz	AV	0.0	47.3	54.0	-6.7	EUT Horz, High Ch 11, 54Mbps, 20MHz, TX Pwr=27
2484.360	24.4	2.9	1.3	167.0	3.0	20.0	Vert	AV	0.0	47.3	54.0	-6.7	EUT Horz, High Ch 9, MCS7, 40MHz, TX Pwr=23
2484.037	24.4	2.9	1.3	167.0	3.0	20.0	Vert	AV	0.0	47.3	54.0	-6.7	EUT Horz, High Ch 11, 1Mbps, 20MHz, TX Pwr=36
2485.010	24.4	2.9	1.3	167.0	3.0	20.0	Vert	AV	0.0	47.3	54.0	-6.7	EUT Horz, High Ch 11, 1Mbps, 20MHz, TX Pwr=40
2483.737	24.4	2.9	1.3	167.0	3.0	20.0	Vert	AV	0.0	47.3	54.0	-6.7	EUT Horz, High Ch 11, 6Mbps, 20MHz, TX Pwr=27
2485.337	24.4	2.9	1.3	167.0	3.0	20.0	Vert	AV	0.0	47.3	54.0	-6.7	EUT Horz, High Ch 11, 36Mbps, 20MHz, TX Pwr=27
2483.693	24.4	2.9	1.3	167.0	3.0	20.0	Vert	AV	0.0	47.3	54.0	-6.7	EUT Horz, High Ch 11, 54Mbps, 20MHz, TX Pwr=27
2389.800	24.5	2.5	1.0	113.0	3.0	20.0	Horz	AV	0.0	47.0	54.0	-7.0	EUT Horz, Low Ch 1, 6Mbps, 20MHz, TX Pwr=23
2388.507	24.4	2.5	1.0	113.0	3.0	20.0	Horz	AV	0.0	46.9	54.0	-7.1	EUT Horz, Low Ch 1, 1Mbps, 20MHz, TX Pwr=29

SPURIOUS RADIATED EMISSIONS - HARMONICS



PSA-ESCI 2018.05.04

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. The test data represents the configuration / operating mode/ model that produced the highest emission levels as compared to the specification limit.

MODES OF OPERATION

Transmitting at 802.11 b/g/n: Low Ch 1 (2412 MHz), Mid Ch 6 (2437 MHz), High Ch 11 (2462 MHz)

Transmitting at 802.11 n: Low Ch 3 (2422MHz), Mid Ch 6 (2437 MHz), High Ch 9 (2452 MHz)

POWER SETTINGS INVESTIGATED

110VAC/60Hz

CONFIGURATIONS INVESTIGATED

KING0038 - 1

FREQUENCY RANGE INVESTIGATED

Start Frequency	1000 MHz	Stop Frequency	26000 MHz
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SAMPLE CALCULATIONS

Radiated Emissions: Field Strength = Measured Level + Antenna Factor + Cable Factor - Amplifier Gain + Distance Adjustment Factor + External Attenuation

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Interval
Amplifier - Pre-Amplifier	Miteq	AMF-6F-18002650-25-10P	AOI	27-Dec-2017	12 mo
Cable	Northwest EMC	18-26GHz RE Cables	OCK	27-Dec-2017	12 mo
Antenna - Standard Gain	ETS Lindgren	3160-09	AHN	NCR	0 mo
Amplifier - Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AOF	24-May-2018	12 mo
Amplifier - Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AOE	16-Jul-2018	12 mo
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVJ	10-Jul-2018	12 mo
Filter - High Pass	Micro-Tronics	HPM50111	HHX	16-Jul-2018	12 mo
Cable	Northwest EMC	8-18GHz RE Cables	OCO	16-Jul-2018	12 mo
Cable	Northwest EMC	1-8GHz RE Cables	OCJ	2-Jul-2018	12 mo
Antenna - Standard Gain	ETS Lindgren	3160-08	AHT	NCR	0 mo
Antenna - Standard Gain	ETS Lindgren	3160-07	AHR	NCR	0 mo
Antenna - Double Ridge	EMCO	3115	AHB	28-Mar-2018	24 mo
Analyzer - Spectrum Analyzer	Agilent	E4446A	AAY	21-Nov-2017	12 mo

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 at the edges of the allowable band may be presented in an alternative method as provided for in the ANSI C63.10 Marker-Delta method. This method involves performing an in-band fundamental measurement followed by a screen capture of the fundamental and out-of-band emission using reduced measurement instrumentation bandwidths. The amplitude delta measured on this screen capture is applied to the fundamental emission value to show the out-of-band emission level as applied to the limit.

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 $10 \cdot \text{LOG}(\text{dc})$.

SPURIOUS RADIATED EMISSIONS - HARMONICS

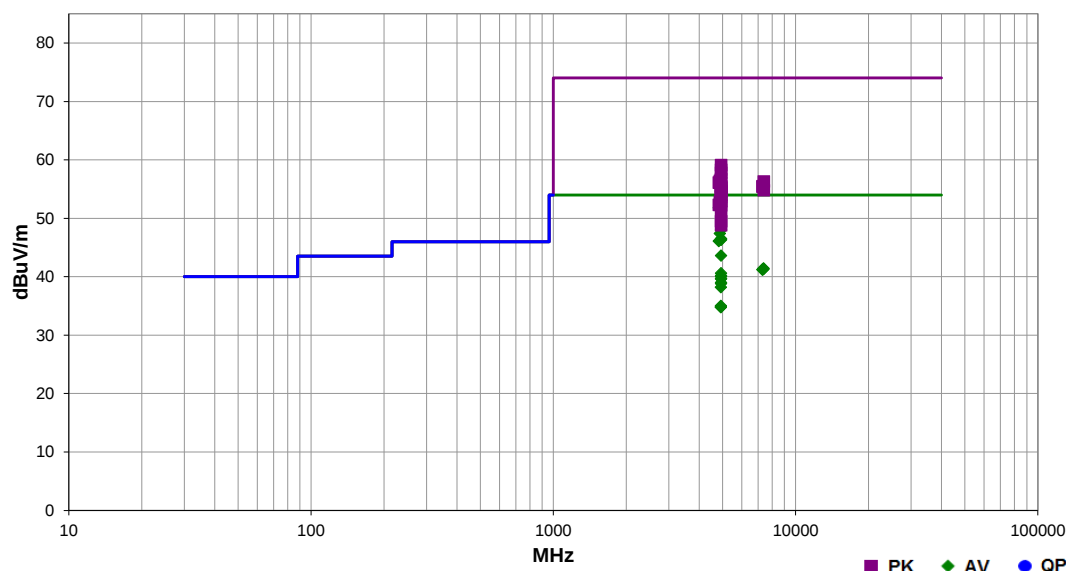


EmiRS 2018.05.07 PSA-ESCI 2018.05.04

Work Order:	KING0038	Date:	16-Aug-2018	
Project:	None	Temperature:	26.8 °C	
Job Site:	OC10	Humidity:	43.6% RH	
Serial Number:	See Configurations	Barometric Pres.:	1018 mbar	
EUT:	Falcon	Tested by:	Mark Baytan	
Configuration:	1			
Customer:	King			
Attendees:	None			
EUT Power:	110VAC/60Hz			
Operating Mode:	Transmitting at 802.11 b/g/n: Low Ch 1 (2412 MHz), Mid Ch 6 (2437 MHz), High Ch 11 (2462 MHz)			
Deviations:	None			
Comments:	None			

Test Specifications	Test Method
FCC 15.247:2018	ANSI C63.10:2013

Run #	1	Test Distance (m)	3	Antenna Height(s)	1 to 4(m)	Results	Pass
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Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
4924.000	40.4	11.9	1.6	97.0	3.0	0.0	Horz	AV	0.0	52.3	54.0	-1.7	EUT Vert, High Ch 11, 1Mbps, TX Pwr=36
4874.017	40.9	11.4	1.1	100.0	3.0	0.0	Horz	AV	0.0	52.3	54.0	-1.7	EUT Vert, Mid Ch 6, 1Mbps, TX Pwr=31
4823.992	40.9	10.9	1.2	97.0	3.0	0.0	Horz	AV	0.0	51.8	54.0	-2.2	EUT Vert, Low Ch 1, 1Mbps, TX Pwr=29
4923.555	37.9	11.9	1.2	85.0	3.0	0.0	Vert	AV	0.0	49.8	54.0	-4.2	EUT Horz, High Ch 11, 1Mbps, TX Pwr=36
4924.010	36.1	11.9	1.6	97.0	3.0	0.0	Horz	AV	0.0	48.0	54.0	-6.0	EUT Vert, High Ch 11, 11Mbps, TX Pwr=40
4874.025	36.0	11.4	1.0	230.0	3.0	0.0	Vert	AV	0.0	47.4	54.0	-6.6	EUT Horz, Mid Ch 6, 1Mbps, TX Pwr=31
4924.008	34.6	11.9	1.2	113.0	3.0	0.0	Vert	AV	0.0	46.5	54.0	-7.5	EUT on Side, High Ch 11, 1Mbps, TX Pwr=36
4924.020	34.5	11.9	1.2	45.0	3.0	0.0	Vert	AV	0.0	46.4	54.0	-7.6	EUT Vert, High Ch 11, 1Mbps, TX Pwr=36
4924.010	34.4	11.9	1.2	85.0	3.0	0.0	Vert	AV	0.0	46.3	54.0	-7.7	EUT Horz, High Ch 11, 11Mbps, TX Pwr=40
4824.008	35.2	10.9	1.2	229.0	3.0	0.0	Vert	AV	0.0	46.1	54.0	-7.9	EUT Horz, Low Ch 1, 1Mbps, TX Pwr=29
4924.000	31.7	11.9	4.0	177.0	3.0	0.0	Horz	AV	0.0	43.6	54.0	-10.4	EUT on Side, High Ch 11, 1Mbps, TX Pwr=36
7385.125	24.8	16.6	1.0	12.0	3.0	0.0	Vert	AV	0.0	41.4	54.0	-12.6	EUT Horz, High Ch 11, 1Mbps, TX Pwr=36
7383.817	24.7	16.6	1.0	78.0	3.0	0.0	Horz	AV	0.0	41.3	54.0	-12.7	EUT Vert, High Ch 11, 1Mbps, TX Pwr=36
7309.400	24.9	16.3	1.0	249.0	3.0	0.0	Horz	AV	0.0	41.2	54.0	-12.8	EUT Vert, Mid Ch 6, 1Mbps, TX Pwr=31
7312.758	24.9	16.3	3.0	130.0	3.0	0.0	Vert	AV	0.0	41.2	54.0	-12.8	EUT Horz, Mid Ch 6, 1Mbps, TX Pwr=31
4923.045	28.7	11.9	1.6	97.0	3.0	0.0	Horz	AV	0.0	40.6	54.0	-13.4	EUT Vert, High Ch 11, 6Mbps, TX Pwr=27
4924.475	28.2	11.9	1.6	97.0	3.0	0.0	Horz	AV	0.0	40.1	54.0	-13.9	EUT Vert, High Ch 11, 36Mbps, TX Pwr=27
4923.033	28.2	11.9	1.6	97.0	3.0	0.0	Horz	AV	0.0	40.1	54.0	-13.9	EUT Vert, High Ch 11, 54Mbps, TX Pwr=27
4924.425	27.8	11.9	1.2	85.0	3.0	0.0	Vert	AV	0.0	39.7	54.0	-14.3	EUT Horz, High Ch 11, 6Mbps, TX Pwr=27
4923.015	27.7	11.9	1.2	85.0	3.0	0.0	Vert	AV	0.0	39.6	54.0	-14.4	EUT Horz, High Ch 11, 54Mbps, TX Pwr=27
4924.055	47.2	11.9	1.6	97.0	3.0	0.0	Horz	PK	0.0	59.1	74.0	-14.9	EUT Vert, High Ch 11, 11Mbps, TX Pwr=40
4923.542	27.1	11.9	1.6	97.0	3.0	0.0	Horz	AV	0.0	39.0	54.0	-15.0	EUT Vert, High Ch 11, MCS0, TX Pwr=25
4923.055	26.9	11.9	1.2	85.0	3.0	0.0	Vert	AV	0.0	38.8	54.0	-15.2	EUT Horz, High Ch 11, MCS0, TX Pwr=25
4924.125	46.4	11.9	1.2	85.0	3.0	0.0	Vert	PK	0.0	58.3	74.0	-15.7	EUT Horz, High Ch 11, 11Mbps, TX Pwr=40
4922.670	26.3	11.9	1.2	85.0	3.0	0.0	Vert	AV	0.0	38.2	54.0	-15.8	EUT Horz, High Ch 11, MCS7, TX Pwr=23
4923.980	45.9	11.9	1.0	73.0	3.0	0.0	Vert	PK	0.0	57.8	74.0	-16.2	EUT Horz, High Ch 11, 1Mbps, TX Pwr=36
4924.140	44.8	11.9	1.6	97.0	3.0	0.0	Horz	PK	0.0	56.7	74.0	-17.3	EUT Vert, High Ch 11, 1Mbps, TX Pwr=36
4874.125	45.0	11.4	1.1	100.0	3.0	0.0	Horz	PK	0.0	56.4	74.0	-17.6	EUT Vert, Mid Ch 6, 1Mbps, TX Pwr=31
7386.400	39.7	16.6	1.0	78.0	3.0	0.0	Horz	PK	0.0	56.3	74.0	-17.7	EUT Vert, High Ch 11, 1Mbps, TX Pwr=36

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
4925.410	44.2	11.9	1.6	97.0	3.0	0.0	Horz	PK	0.0	56.1	74.0	-17.9	EUT Vert, High Ch 11, 6Mbps, TX Pwr=27
4823.983	45.2	10.9	1.2	97.0	3.0	0.0	Horz	PK	0.0	56.1	74.0	-17.9	EUT Vert, Low Ch 1, 1Mbps, TX Pwr=29
4922.955	43.6	11.9	1.2	85.0	3.0	0.0	Vert	PK	0.0	55.5	74.0	-18.5	EUT Horz, High Ch 11, 54Mbps, TX Pwr=27
7312.592	39.2	16.3	3.0	130.0	3.0	0.0	Vert	PK	0.0	55.5	74.0	-18.5	EUT Horz, Mid Ch 6, 1Mbps, TX Pwr=31
7313.150	39.1	16.3	1.0	249.0	3.0	0.0	Horz	PK	0.0	55.4	74.0	-18.6	EUT Vert, Mid Ch 6, 1Mbps, TX Pwr=31
4924.217	43.4	11.9	1.6	97.0	3.0	0.0	Horz	PK	0.0	55.3	74.0	-18.7	EUT Vert, High Ch 11, 36Mbps, TX Pwr=27
4924.230	43.3	11.9	1.2	194.0	3.0	0.0	Horz	PK	0.0	55.2	74.0	-18.8	EUT Horz, High Ch 11, 1Mbps, TX Pwr=36
4922.520	23.1	11.9	1.2	85.0	3.0	0.0	Vert	AV	0.0	35.0	54.0	-19.0	EUT Horz, High Ch 11, 36Mbps, TX Pwr=27
4921.533	23.0	11.8	1.2	85.0	3.0	0.0	Vert	AV	0.0	34.8	54.0	-19.2	EUT Horz, High Ch 9, MCS7, TX Pwr=23
4922.100	23.0	11.8	1.6	97.0	3.0	0.0	Horz	AV	0.0	34.8	54.0	-19.2	EUT Vert, High Ch 11, MCS7, TX Pwr=25
7386.275	38.2	16.6	1.0	12.0	3.0	0.0	Vert	PK	0.0	54.8	74.0	-19.2	EUT Horz, High Ch 11, 1Mbps, TX Pwr=36
4923.825	42.8	11.9	1.2	85.0	3.0	0.0	Vert	PK	0.0	54.7	74.0	-19.3	EUT Horz, High Ch 11, 1Mbps, TX Pwr=36
4924.015	42.7	11.9	1.2	85.0	3.0	0.0	Vert	PK	0.0	54.6	74.0	-19.4	EUT Horz, High Ch 11, 6Mbps, TX Pwr=27
4923.508	42.7	11.9	1.6	97.0	3.0	0.0	Horz	PK	0.0	54.6	74.0	-19.4	EUT Vert, High Ch 11, 54Mbps, TX Pwr=27
4923.660	42.1	11.9	1.2	85.0	3.0	0.0	Vert	PK	0.0	54.0	74.0	-20.0	EUT Horz, High Ch 11, MCS0, TX Pwr=25
4923.508	41.7	11.9	1.6	97.0	3.0	0.0	Horz	PK	0.0	53.6	74.0	-20.4	EUT Vert, High Ch 11, MCS0, TX Pwr=25
4923.825	41.1	11.9	1.2	113.0	3.0	0.0	Vert	PK	0.0	53.0	74.0	-21.0	EUT on Side, High Ch 11, 1Mbps, TX Pwr=36
4924.095	41.0	11.9	1.2	45.0	3.0	0.0	Vert	PK	0.0	52.9	74.0	-21.1	EUT Vert, High Ch 11, 1Mbps, TX Pwr=36
4874.125	41.4	11.4	1.0	230.0	3.0	0.0	Vert	PK	0.0	52.8	74.0	-21.2	EUT Horz, Mid Ch 6, 1Mbps, TX Pwr=31
4823.658	41.4	10.9	1.2	229.0	3.0	0.0	Vert	PK	0.0	52.3	74.0	-21.7	EUT Horz, Low Ch 1, 1Mbps, TX Pwr=29
4923.885	40.3	11.9	1.2	85.0	3.0	0.0	Vert	PK	0.0	52.2	74.0	-21.8	EUT Horz, High Ch 11, MCS7, TX Pwr=25
4924.117	39.2	11.9	4.0	177.0	3.0	0.0	Horz	PK	0.0	51.1	74.0	-22.9	EUT on Side, High Ch 11, 1Mbps, TX Pwr=36
4924.170	37.6	11.9	1.2	85.0	3.0	0.0	Vert	PK	0.0	49.5	74.0	-24.5	EUT Horz, High Ch 11, 36Mbps, TX Pwr=27
4926.342	36.9	11.9	1.6	97.0	3.0	0.0	Horz	PK	0.0	48.8	74.0	-25.2	EUT Vert, High Ch 11, MCS7, TX Pwr=25

SPURIOUS RADIATED EMISSIONS - HARMONICS



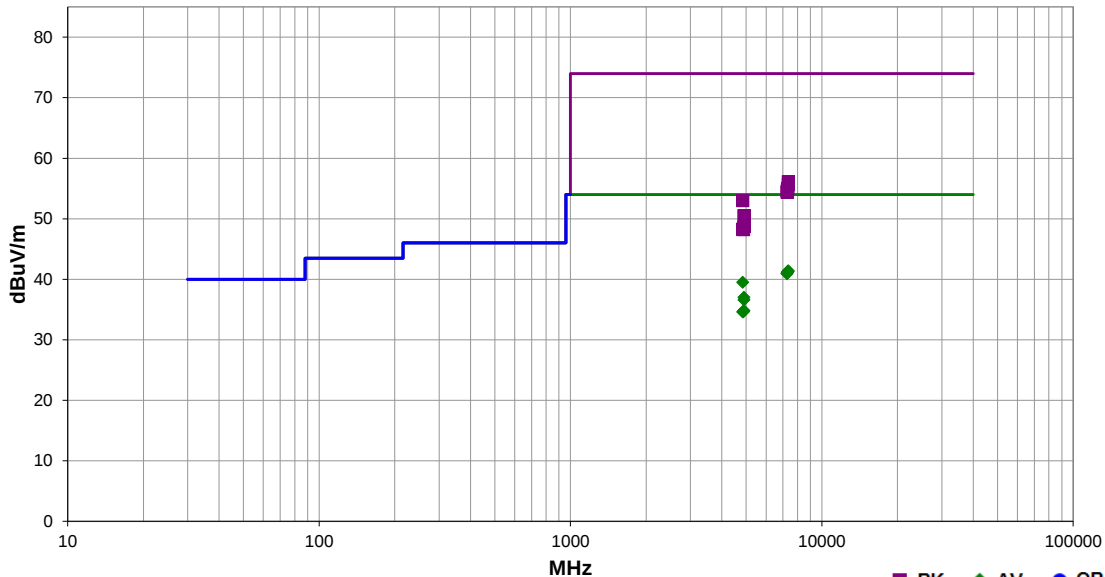
EmiRS 2018.05.07

PSA-ESCI 2018.05.04

Work Order:	KING0038	Date:	17-Aug-2018	
Project:	None	Temperature:	24.2 °C	
Job Site:	OC10	Humidity:	50.9% RH	
Serial Number:	See Configurations	Barometric Pres.:	1020 mbar	
EUT:	Falcon	Tested by:	Mark Baytan	
Configuration:	1			
Customer:	King			
Attendees:	None			
EUT Power:	110VAC/60Hz			
Operating Mode:	Transmitting at 802.11 n: Low Ch 3 (2422MHz), Mid Ch 6 (2437 MHz), High Ch 9 (2452 MHz)			
Deviations:	None			
Comments:	None			

Test Specifications	Test Method
FCC 15.247:2018	ANSI C63.10:2013

Run #	2	Test Distance (m)	3	Antenna Height(s)	1 to 4(m)	Results	Pass
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Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
7353.850	24.9	16.5	1.0	223.0	3.0	0.0	Vert	AV	0.0	41.4	54.0	-12.6	EUT Horz, High Ch 9, MCS0, 40MHz, T
7355.533	24.9	16.4	1.0	42.0	3.0	0.0	Horz	AV	0.0	41.3	54.0	-12.7	EUT Vert, High Ch 9, MCS7, 40MHz, T
7310.642	24.9	16.3	1.0	249.0	3.0	0.0	Horz	AV	0.0	41.2	54.0	-12.8	EUT Vert, Mid Ch 6, MCS7, 40MHz
7311.517	24.9	16.3	3.0	130.0	3.0	0.0	Vert	AV	0.0	41.2	54.0	-12.8	EUT Horz, Mid Ch 6, MCS7, 40MHz
7268.233	25.0	16.0	1.0	327.0	3.0	0.0	Vert	AV	0.0	41.0	54.0	-13.0	EUT Horz, Low Ch 3, MCS7, 40MHz, TX
7265.225	25.0	15.9	1.8	110.0	3.0	0.0	Horz	AV	0.0	40.9	54.0	-13.1	EUT Horz, Low Ch 3, MCS7, 40MHz, TX
4842.683	28.4	11.1	1.0	104.0	3.0	0.0	Horz	AV	0.0	39.5	54.0	-14.5	EUT Vert, Low Ch 3, MCS7, 40MHz, TX
4902.658	25.3	11.7	1.0	52.0	3.0	0.0	Vert	AV	0.0	37.0	54.0	-17.0	EUT Horz, High Ch 9, MCS7, 40MHz, T
4903.458	24.9	11.7	1.0	52.0	3.0	0.0	Vert	AV	0.0	36.6	54.0	-17.4	EUT Horz, High Ch 9, MCS0, 40MHz, T
7354.975	39.7	16.4	1.0	223.0	3.0	0.0	Vert	PK	0.0	56.1	74.0	-17.9	EUT Horz, High Ch 9, MCS0, 40MHz, T
7354.233	39.1	16.5	1.0	42.0	3.0	0.0	Horz	PK	0.0	55.6	74.0	-18.4	EUT Vert, High Ch 9, MCS7, 40MHz, TX
7311.283	38.7	16.3	3.0	130.0	3.0	0.0	Vert	PK	0.0	55.0	74.0	-19.0	EUT Horz, Mid Ch 6, MCS7, 40MHz, TX
7310.567	38.5	16.3	1.0	249.0	3.0	0.0	Horz	PK	0.0	54.8	74.0	-19.2	EUT Vert, Mid Ch 6, MCS7, 40MHz, TX
4901.600	23.1	11.7	1.0	116.0	3.0	0.0	Horz	AV	0.0	34.8	54.0	-19.2	EUT Vert, High Ch 9, MCS7, 40MHz, TX
4874.075	23.3	11.4	1.0	66.0	3.0	0.0	Vert	AV	0.0	34.7	54.0	-19.3	EUT Vert, Mid Ch 6, MCS0, 40MHz, TX I
4871.683	23.2	11.4	1.1	100.0	3.0	0.0	Horz	AV	0.0	34.6	54.0	-19.4	EUT Vert, Mid Ch 6, MCS7, 40MHz, TX I
7267.892	38.6	16.0	1.0	327.0	3.0	0.0	Vert	PK	0.0	54.6	74.0	-19.4	EUT Horz, Low Ch 3, MCS7, 40MHz, TX
4844.017	23.5	11.1	1.0	39.0	3.0	0.0	Vert	AV	0.0	34.6	54.0	-19.4	EUT Horz, Low Ch 3, MCS7, 40MHz, T
7267.092	38.5	15.9	1.8	110.0	3.0	0.0	Horz	PK	0.0	54.4	74.0	-19.6	EUT Vert, Low Ch 3, MCS7, 40MHz, TX
4846.325	41.9	11.1	1.0	104.0	3.0	0.0	Horz	PK	0.0	53.0	74.0	-21.0	EUT Vert, Low Ch 3, MCS7, 40MHz, TX
4903.675	38.8	11.7	1.0	52.0	3.0	0.0	Vert	PK	0.0	50.5	74.0	-23.5	EUT Horz, High Ch 9, MCS0, 40MHz, T
4906.125	38.8	11.7	1.0	52.0	3.0	0.0	Vert	PK	0.0	50.5	74.0	-23.5	EUT Horz, High Ch 9, MCS7, 40MHz, T
4902.217	37.0	11.7	1.0	116.0	3.0	0.0	Horz	PK	0.0	48.7	74.0	-25.3	EUT Vert, High Ch 9, MCS7, 40MHz, TX
4875.875	36.9	11.5	1.0	66.0	3.0	0.0	Vert	PK	0.0	48.4	74.0	-25.6	EUT Vert, Mid Ch 6, MCS7, 40MHz, TX I
4845.675	37.2	11.1	1.0	39.0	3.0	0.0	Vert	PK	0.0	48.3	74.0	-25.7	EUT Horz, Low Ch 3, MCS7, 40MHz, TX

Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
4874.633	36.7	11.5	1.1	100.0	3.0	0.0	Horz	PK	0.0	48.2	74.0	-25.8	EUT Vert, Mid Ch 6, MCS7, 40MHz, TX I

SPURIOUS RADIATED EMISSIONS - HARMONICS

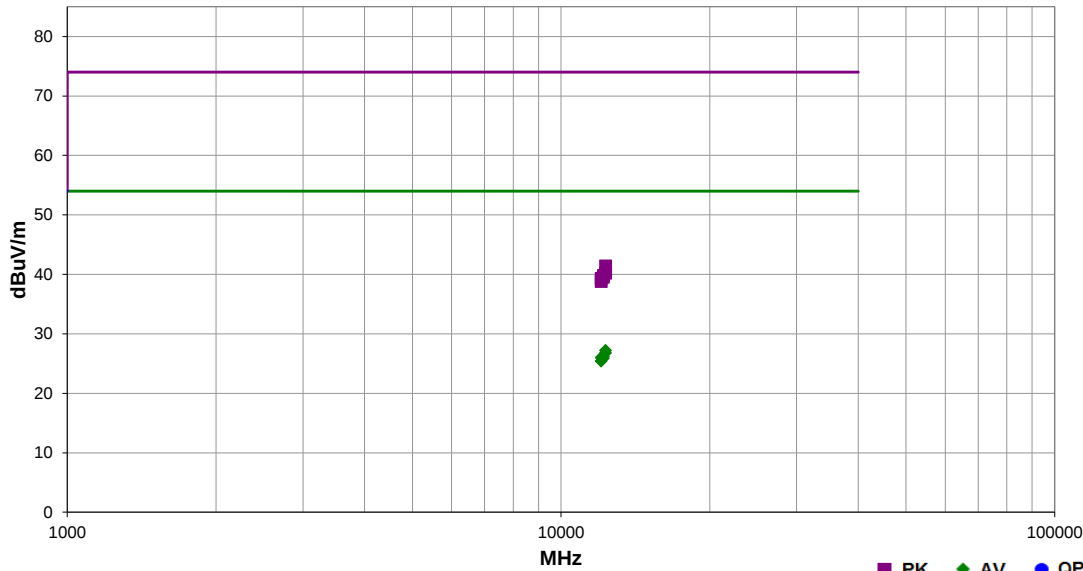


EmiR5 2018.05.07 PSA-ESCI 2018.05.04

Work Order:	KING0038	Date:	17-Aug-2018		
Project:	None	Temperature:	24.2 °C		
Job Site:	OC10	Humidity:	50.9% RH		
Serial Number:	See Configurations	Barometric Pres.:	1020 mbar	Tested by:	Mark Baytan
EUT:	Falcon				
Configuration:	1				
Customer:	King				
Attendees:	None				
EUT Power:	110VAC/60Hz				
Operating Mode:	Transmitting at 802.11 b/g/n: Low Ch 1 (2412 MHz), Mid Ch 6 (2437 MHz), High Ch 11 (2462 MHz)				
Deviations:	None				
Comments:	None				

Test Specifications	Test Method
FCC 15.247:2018	ANSI C63.10:2013

Run #	3	Test Distance (m)	3	Antenna Height(s)	1 to 4(m)	Results	Pass
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Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
12310.950	29.8	-2.6	1.0	158.0	3.0	0.0	Vert	AV	0.0	27.2	54.0	-26.8	EUT Horz, High Ch 11, 1Mbps, TX Pwr=36
12312.460	29.4	-2.6	1.0	15.0	3.0	0.0	Horz	AV	0.0	26.8	54.0	-27.2	EUT Vert, High Ch 11, 1Mbps, TX Pwr=36
12185.890	30.0	-3.8	1.0	291.0	3.0	0.0	Horz	AV	0.0	26.2	54.0	-27.8	EUT Vert, Mid Ch 6, 1Mbps, TX Pwr=31
12061.060	31.8	-5.8	3.9	209.0	3.0	0.0	Horz	AV	0.0	26.0	54.0	-28.0	EUT Vert, Low Ch 1, 1Mbps, TX Pwr=29
12185.150	29.7	-3.8	1.7	19.0	3.0	0.0	Vert	AV	0.0	25.9	54.0	-28.1	EUT Horz, Mid Ch 6, 1Mbps, TX Pwr=31
12061.100	31.2	-5.8	1.0	149.0	3.0	0.0	Vert	AV	0.0	25.4	54.0	-28.6	EUT Horz, Low Ch 1, 1Mbps, TX Pwr=29
12311.880	44.0	-2.6	1.0	158.0	3.0	0.0	Vert	PK	0.0	41.4	74.0	-32.6	EUT Horz, High Ch 11, 1Mbps, TX Pwr=36
12310.440	42.8	-2.6	1.0	15.0	3.0	0.0	Horz	PK	0.0	40.2	74.0	-33.8	EUT Vert, High Ch 11, 1Mbps, TX Pwr=36
12186.330	43.6	-3.8	1.7	19.0	3.0	0.0	Vert	PK	0.0	39.8	74.0	-34.2	EUT Horz, Mid Ch 6, 1Mbps, TX Pwr=31
12183.980	43.3	-3.8	1.0	291.0	3.0	0.0	Horz	PK	0.0	39.5	74.0	-34.5	EUT Vert, Mid Ch 6, 1Mbps, TX Pwr=31
12061.280	45.1	-5.8	3.9	209.0	3.0	0.0	Horz	PK	0.0	39.3	74.0	-34.7	EUT Vert, Low Ch 1, 1Mbps, TX Pwr=29
12060.290	44.6	-5.8	1.0	149.0	3.0	0.0	Vert	PK	0.0	38.8	74.0	-35.2	EUT Horz, Low Ch 1, 1Mbps, TX Pwr=29

SPURIOUS RADIATED EMISSIONS - HARMONICS

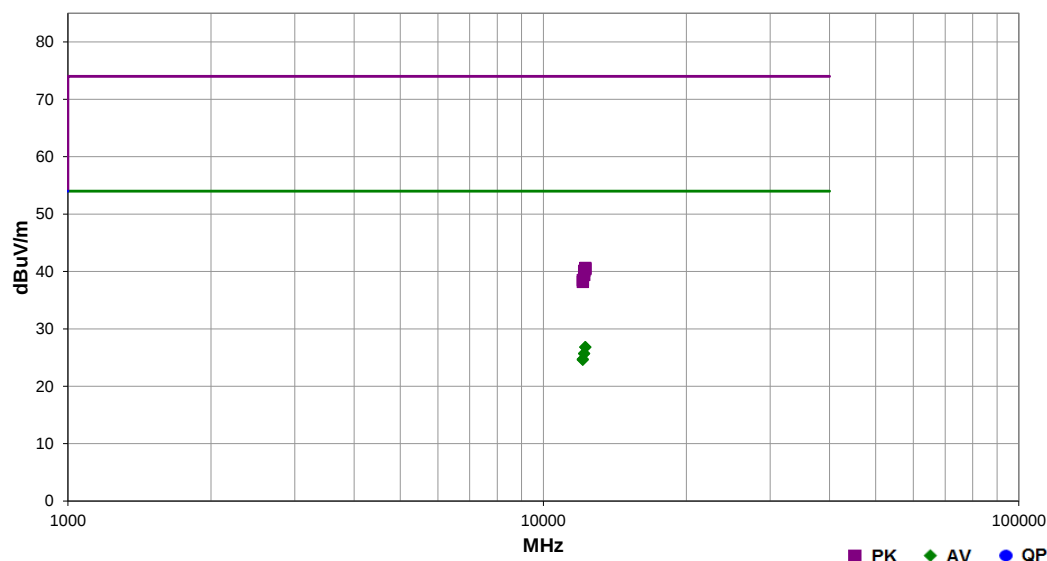


EmRS 2018.05.07 PSA-ESCI 2018.05.04

Work Order:	KING0038	Date:	17-Aug-2018	
Project:	None	Temperature:	24.2 °C	
Job Site:	OC10	Humidity:	50.9% RH	
Serial Number:	See Configurations	Barometric Pres.:	1020 mbar	
EUT:	Falcon	Tested by:	Mark Baytan	
Configuration:	1			
Customer:	King			
Attendees:	None			
EUT Power:	110VAC/60Hz			
Operating Mode:	Transmitting at 802.11 n: Low Ch 3 (2422MHz), Mid Ch 6 (2437 MHz), High Ch 9 (2452 MHz)			
Deviations:	None			
Comments:	None			

Test Specifications		Test Method	
FCC 15.247:2018		ANSI C63.10:2013	

Run #	4	Test Distance (m)	3	Antenna Height(s)	1 to 4(m)	Results	Pass
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Freq (MHz)	Amplitude (dBuV)	Factor (dB)	Antenna Height (meters)	Azimuth (degrees)	Test Distance (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
12258.380	29.7	-2.9	2.9	50.0	3.0	0.0	Horz	AV	0.0	26.8	54.0	-27.2	EUT Vert, High Ch 9, MCS7, 40MHz, TX Pwr=23
12257.710	29.7	-2.9	1.0	320.0	3.0	0.0	Vert	AV	0.0	26.8	54.0	-27.2	EUT Horz, High Ch 9, MCS7, 40MHz, TX Pwr=23
12185.570	29.5	-3.8	1.0	86.0	3.0	0.0	Horz	AV	0.0	25.7	54.0	-28.3	EUT Vert, Mid Ch 6, MCS7, 40MHz, TX Pwr=23
12186.100	29.5	-3.8	1.0	269.0	3.0	0.0	Vert	AV	0.0	25.7	54.0	-28.3	EUT Horz, Mid Ch 6, MCS7, 40MHz, TX Pwr=23
12109.760	29.6	-4.9	2.1	90.0	3.0	0.0	Vert	AV	0.0	24.7	54.0	-29.3	EUT Horz, Low Ch 3, MCS7, 40MHz, TX Pwr=21
12108.400	29.6	-5.0	1.7	312.0	3.0	0.0	Horz	AV	0.0	24.6	54.0	-29.4	EUT Vert, Low Ch 3, MCS7, 40MHz, TX Pwr=21
12260.590	43.4	-2.8	1.0	320.0	3.0	0.0	Vert	PK	0.0	40.6	74.0	-33.4	EUT Horz, High Ch 9, MCS7, 40MHz, TX Pwr=23
12258.070	43.3	-2.9	2.9	50.0	3.0	0.0	Horz	PK	0.0	40.4	74.0	-33.6	EUT Vert, High Ch 9, MCS7, 40MHz, TX Pwr=23
12184.360	43.9	-3.8	1.0	269.0	3.0	0.0	Vert	PK	0.0	40.1	74.0	-33.9	EUT Horz, Mid Ch 6, MCS7, 40MHz, TX Pwr=23
12184.530	43.2	-3.8	1.0	86.0	3.0	0.0	Horz	PK	0.0	39.4	74.0	-34.6	EUT Vert, Mid Ch 6, MCS7, 40MHz, TX Pwr=23
12109.130	43.4	-4.9	2.1	90.0	3.0	0.0	Vert	PK	0.0	38.5	74.0	-35.5	EUT Horz, Low Ch 3, MCS7, 40MHz, TX Pwr=21
12109.830	43.1	-4.9	1.7	312.0	3.0	0.0	Horz	PK	0.0	38.2	74.0	-35.8	EUT Vert, Low Ch 3, MCS7, 40MHz, TX Pwr=21

DUTY CYCLE



XMIT 2017.12.13

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Agilent	E8257D	TGU	15-Feb-18	15-Feb-21
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Attenuator	Fairview Microwave	SA18H-20	TKR	28-Dec-17	28-Dec-18
Block - DC	Fairview Microwave	SD3379	AMV	28-Dec-17	28-Dec-18
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	9-Nov-17	9-Nov-18

TEST DESCRIPTION

The measurement was made using a direct connection between the RF output of the EUT and a spectrum analyzer. The Duty Cycle (x) of the single channel operation of the radio as controlled by the provided test software was measured for each of the EUT operating modes.

There is no compliance requirement to be met by this test, so therefore no Pass / Fail criteria.

The measurements were made using a zero span on the spectrum analyzer to see the pulses in the time domain. The transmit power was set to its default maximum.

The duty cycle was calculated by dividing the transmission pulse duration (T) by the total period of a single on and total off time.

If the transmit duty cycle < 98 percent, burst gating may have been used during some of the other tests in this report to only take the measurement during the burst duration.

DUTY CYCLE



TMTx 2017.12.14 XMM 2017.12.13

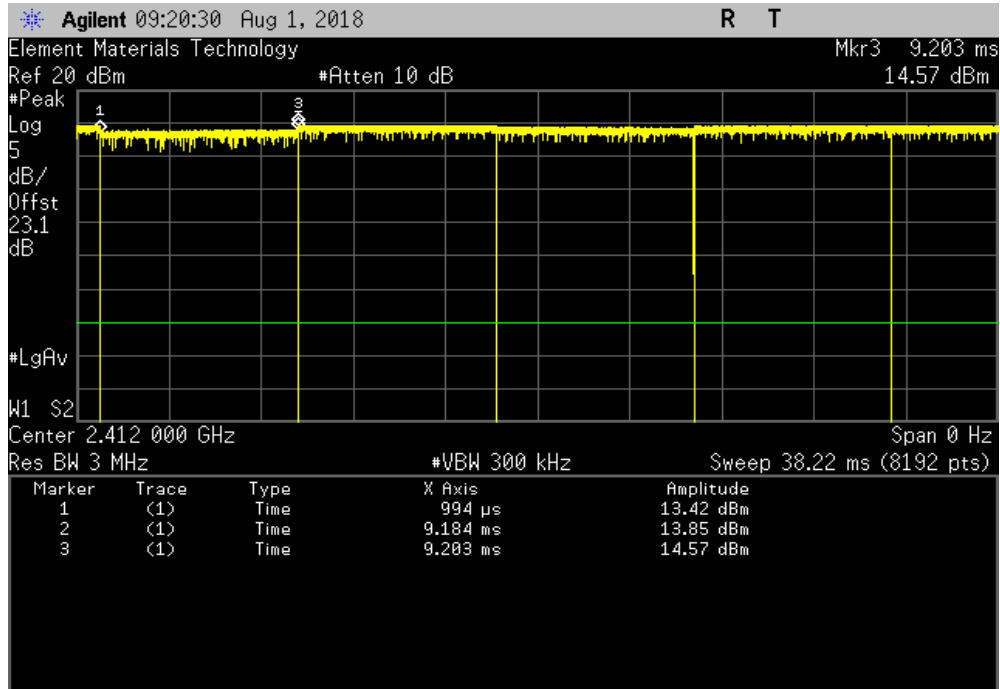
EUT: Falcon			Work Order: KING0032				
Serial Number: See Configurations			Date: 1-Aug-18				
Customer: King			Temperature: 26.3 °C				
Attendees: None			Humidity: 44.5% RH				
Project: None			Barometric Pres.: 1015 mbar				
Tested by: Johnny Candelas		Power: 110VAC/60Hz	Job Site: OC13				
TEST SPECIFICATIONS		Test Method					
FCC 15.247:2018		ANSI C63.10:2013					
COMMENTS							
Directly connected to the antenna port of the King Router (MN: KWM1000)							
DEVIATIONS FROM TEST STANDARD							
None							
Configuration #	2						
		Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
2400 MHz - 2483.5 MHz Band							
802.11(b) 1 Mbps							
	Low Channel 1, 2412 MHz, TX Pwr=36	8.19 ms	8.209 ms	1	99.8	N/A	N/A
	Low Channel 1, 2412 MHz, TX Pwr=36	N/A	N/A	5	N/A	N/A	N/A
	Mid Channel 6, 2437 MHz, TX Pwr=38	8.19 ms	8.209 ms	1	99.8	N/A	N/A
	Mid Channel 6, 2437 MHz, TX Pwr=38	N/A	N/A	5	N/A	N/A	N/A
	High Channel 11, 2462 MHz, TX Pwr=40	8.19 ms	8.209 ms	1	99.8	N/A	N/A
	High Channel 11, 2462 MHz, TX Pwr=40	N/A	N/A	5	N/A	N/A	N/A
802.11(b) 11 Mbps							
	Low Channel 1, 2412 MHz, TX Pwr=36	916.9 us	934.3 us	1	98.1	N/A	N/A
	Low Channel 1, 2412 MHz, TX Pwr=36	N/A	N/A	5	N/A	N/A	N/A
	Mid Channel 6, 2437 MHz, TX Pwr=38	917.8 us	934.2 us	1	98.2	N/A	N/A
	Mid Channel 6, 2437 MHz, TX Pwr=38	N/A	N/A	5	N/A	N/A	N/A
	High Channel 11, 2462 MHz, TX Pwr=40	917.8 us	934.2 us	1	98.2	N/A	N/A
	High Channel 11, 2462 MHz, TX Pwr=40	N/A	N/A	5	N/A	N/A	N/A
802.11(g) 6 Mbps							
	Low Channel 1, 2412 MHz, TX Pwr=23	1.352 ms	1.373 ms	1	98.5	N/A	N/A
	Low Channel 1, 2412 MHz, TX Pwr=23	N/A	N/A	5	N/A	N/A	N/A
	Mid Channel 6, 2437 MHz, TX Pwr=25	1.351 ms	1.373 ms	1	98.4	N/A	N/A
	Mid Channel 6, 2437 MHz, TX Pwr=25	N/A	N/A	5	N/A	N/A	N/A
	High Channel 11, 2462 MHz, TX Pwr=27	1.351 ms	1.373 ms	1	98.4	N/A	N/A
	High Channel 11, 2462 MHz, TX Pwr=27	N/A	N/A	5	N/A	N/A	N/A
802.11(g) 36 Mbps							
	Low Channel 1, 2412 MHz, TX Pwr=23	242.113 us	256.678 us	1	94.3	N/A	N/A
	Low Channel 1, 2412 MHz, TX Pwr=23	N/A	N/A	5	N/A	N/A	N/A
	Mid Channel 6, 2437 MHz, TX Pwr=25	242.035 us	256.556 us	1	94.3	N/A	N/A
	Mid Channel 6, 2437 MHz, TX Pwr=25	N/A	N/A	5	N/A	N/A	N/A
	High Channel 11, 2462 MHz, TX Pwr=27	242.279 us	256.822 us	1	94.3	N/A	N/A
	High Channel 11, 2462 MHz, TX Pwr=27	N/A	N/A	5	N/A	N/A	N/A
802.11(g) 54 Mbps							
	Low Channel 1, 2412 MHz, TX Pwr=23	170.213 us	184.578 us	1	92.2	N/A	N/A
	Low Channel 1, 2412 MHz, TX Pwr=23	N/A	N/A	5	N/A	N/A	N/A
	Mid Channel 6, 2437 MHz, TX Pwr=25	170.135 us	184.944 us	1	92	N/A	N/A
	Mid Channel 6, 2437 MHz, TX Pwr=25	N/A	N/A	5	N/A	N/A	N/A
	High Channel 11, 2462 MHz, TX Pwr=27	170.257 us	184.700 us	1	92.2	N/A	N/A
	High Channel 11, 2462 MHz, TX Pwr=27	N/A	N/A	5	N/A	N/A	N/A
802.11(n) MCS0							
	Low Channel 1, 2412 MHz, TX Pwr=20	1.263 ms	1.284 ms	1	98.3	N/A	N/A
	Low Channel 1, 2412 MHz, TX Pwr=20	N/A	N/A	5	N/A	N/A	N/A
	Mid Channel 6, 2437 MHz, TX Pwr=23	1.264 ms	1.286 ms	1	98.3	N/A	N/A
	Mid Channel 6, 2437 MHz, TX Pwr=23	N/A	N/A	5	N/A	N/A	N/A
	High Channel 11, 2462 MHz, TX Pwr=25	1.260 ms	1.286 ms	1	98	N/A	N/A
	High Channel 11, 2462 MHz, TX Pwr=25	N/A	N/A	5	N/A	N/A	N/A
	Low Channel 1/5, 2422 MHz, 40 MHz, TX Pwr=21	620.858 us	644.6 us	1	96.3	N/A	N/A
	Low Channel 1/5, 2422 MHz, 40 MHz, TX Pwr=21	N/A	N/A	5	N/A	N/A	N/A
	Mid Channel 4/8, 2437 MHz, 40 MHz, TX Pwr=23	621.458 us	645.2 us	1	96.3	N/A	N/A
	Mid Channel 4/8, 2437 MHz, 40 MHz, TX Pwr=23	N/A	N/A	5	N/A	N/A	N/A
	High Channel 7/11, 2452 MHz, 40 MHz, TX Pwr=23	621.437 us	645.2 us	1	96.3	N/A	N/A
	High Channel 7/11, 2452 MHz, 40 MHz, TX Pwr=23	N/A	N/A	5	N/A	N/A	N/A
802.11(n) MCS7							
	Low Channel 1, 2412 MHz, TX Pwr=20	158.257 us	172.922 us	1	91.5	N/A	N/A
	Low Channel 1, 2412 MHz, TX Pwr=20	N/A	N/A	5	N/A	N/A	N/A
	Mid Channel 6, 2437 MHz, TX Pwr=23	158.623 us	173.044 us	1	91.7	N/A	N/A
	Mid Channel 6, 2437 MHz, TX Pwr=23	N/A	N/A	5	N/A	N/A	N/A
	High Channel 11, 2462 MHz, TX Pwr=25	158.257 us	172.944 us	1	91.5	N/A	N/A
	High Channel 11, 2462 MHz, TX Pwr=25	N/A	N/A	5	N/A	N/A	N/A
	Low Channel 1/5, 2422 MHz, 40 MHz, TX Pwr=21	86.445 us	108.822 us	1	79.4	N/A	N/A
	Low Channel 1/5, 2422 MHz, 40 MHz, TX Pwr=21	N/A	N/A	5	N/A	N/A	N/A
	Mid Channel 4/8, 2437 MHz, 40 MHz, TX Pwr=23	86.445 us	108.700 us	1	79.5	N/A	N/A
	Mid Channel 4/8, 2437 MHz, 40 MHz, TX Pwr=23	N/A	N/A	5	N/A	N/A	N/A
	High Channel 7/11, 2452 MHz, 40 MHz, TX Pwr=23	86.445 us	108.678 us	1	79.5	N/A	N/A
	High Channel 7/11, 2452 MHz, 40 MHz, TX Pwr=23	N/A	N/A	5	N/A	N/A	N/A

DUTY CYCLE

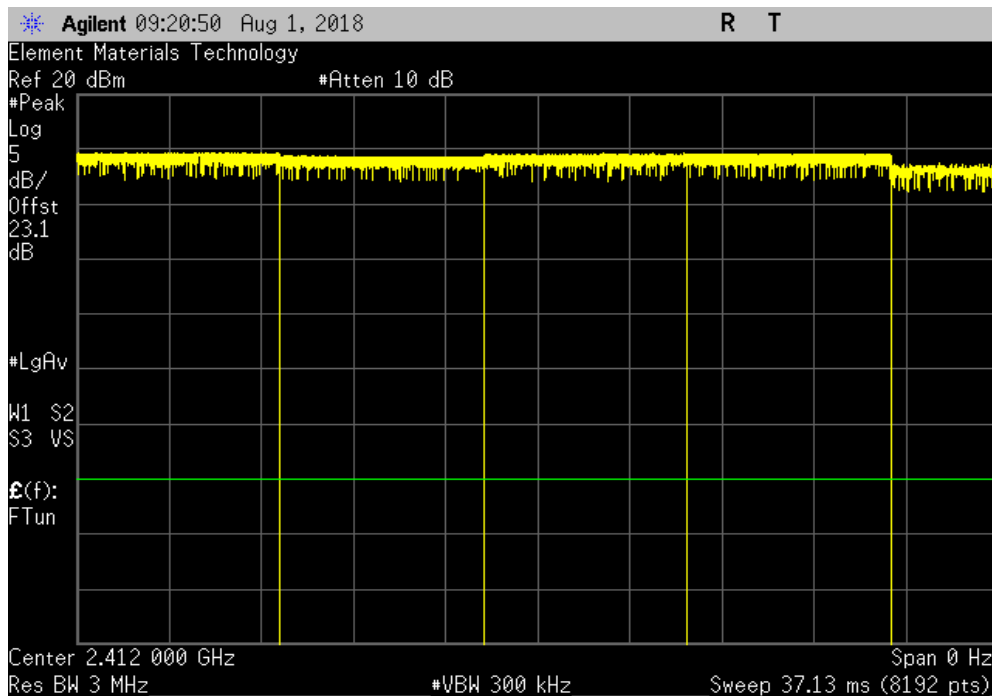


TMTx 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	8.19 ms	8.209 ms	1	99.8	N/A	N/A



2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

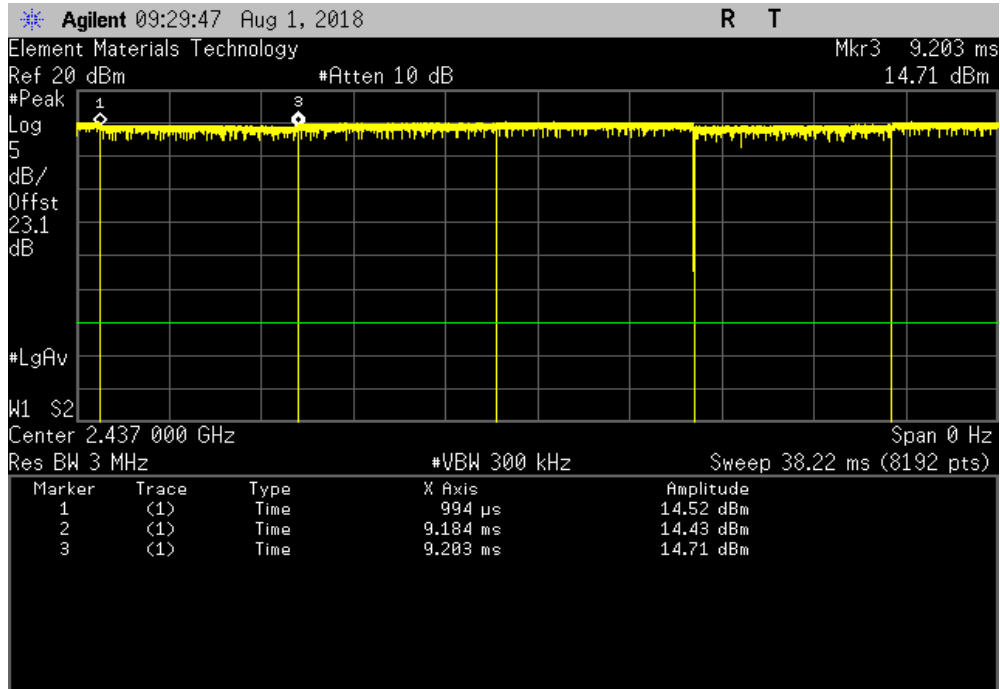


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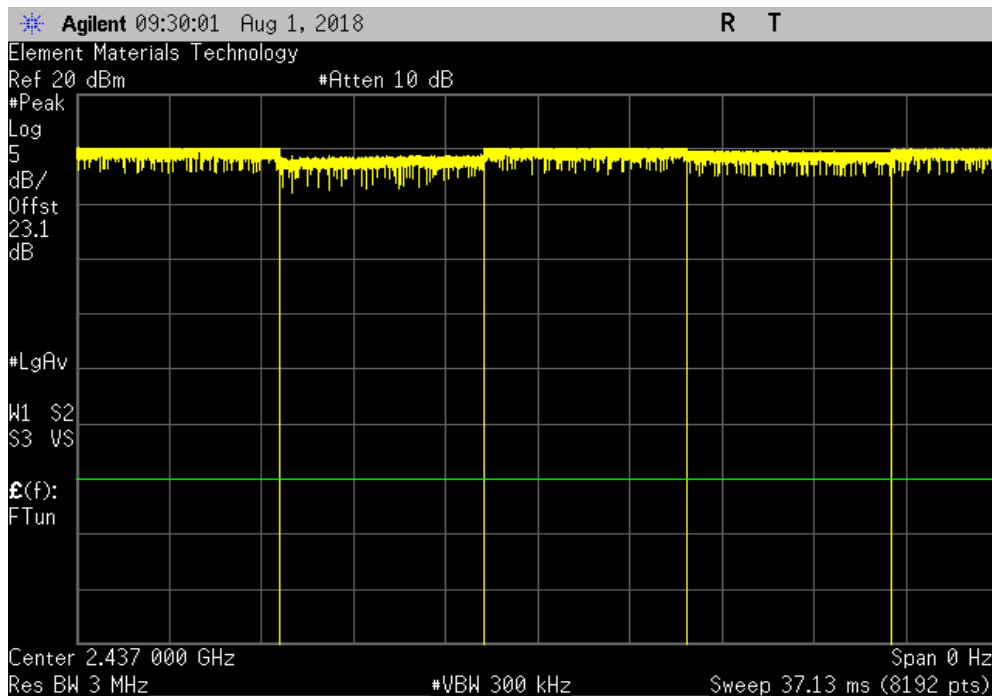


TMTx 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	8.19 ms	8.209 ms	1	99.8	N/A	N/A



2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

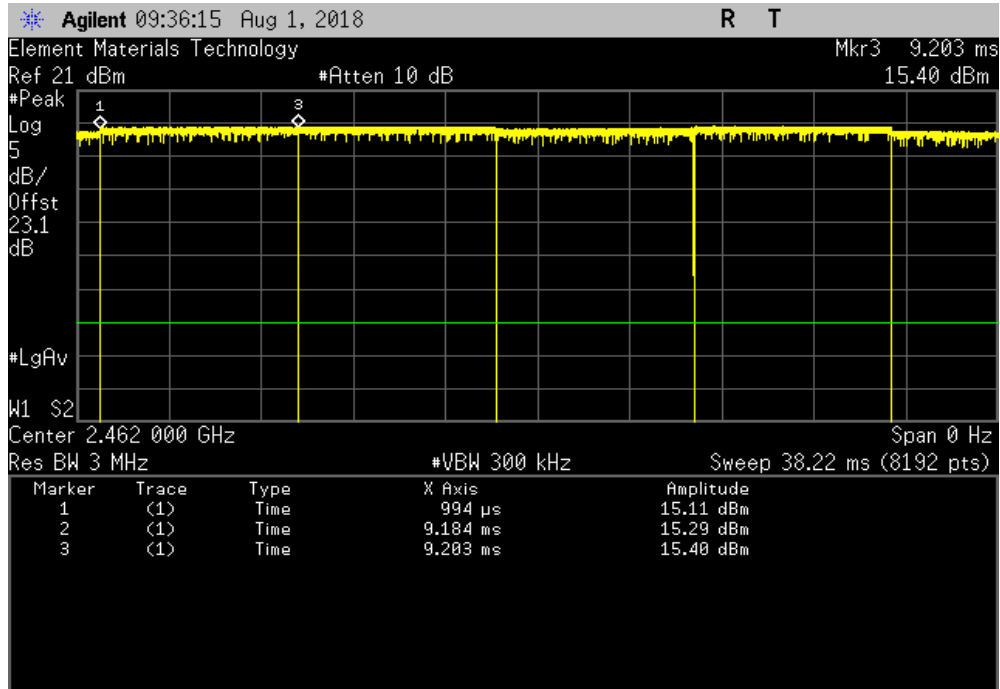


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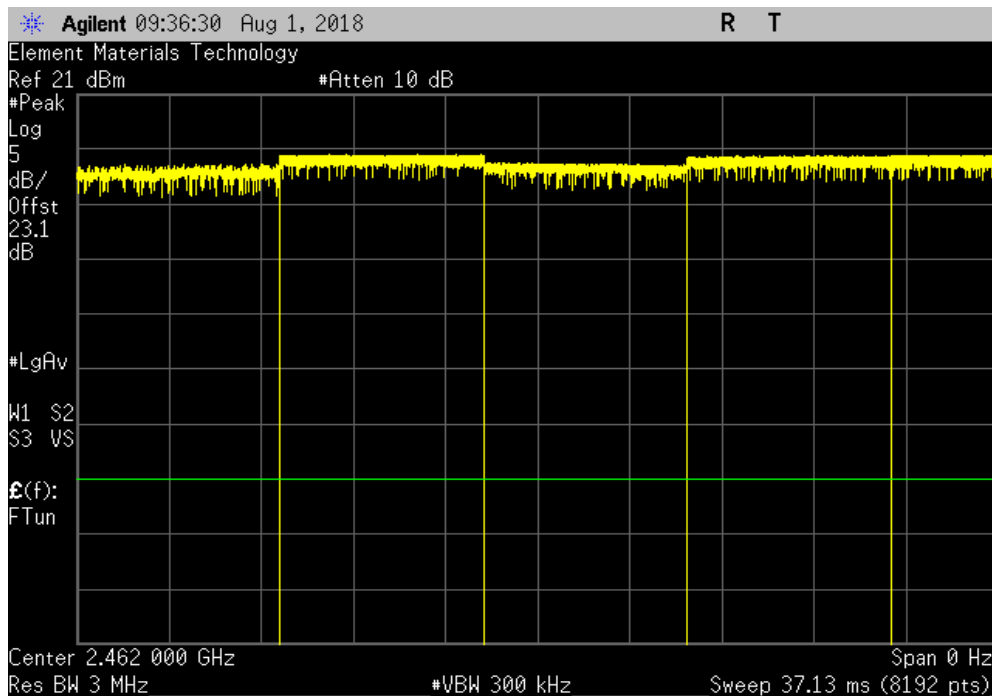


TMTx 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	8.19 ms	8.209 ms	1	99.8	N/A	N/A



2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

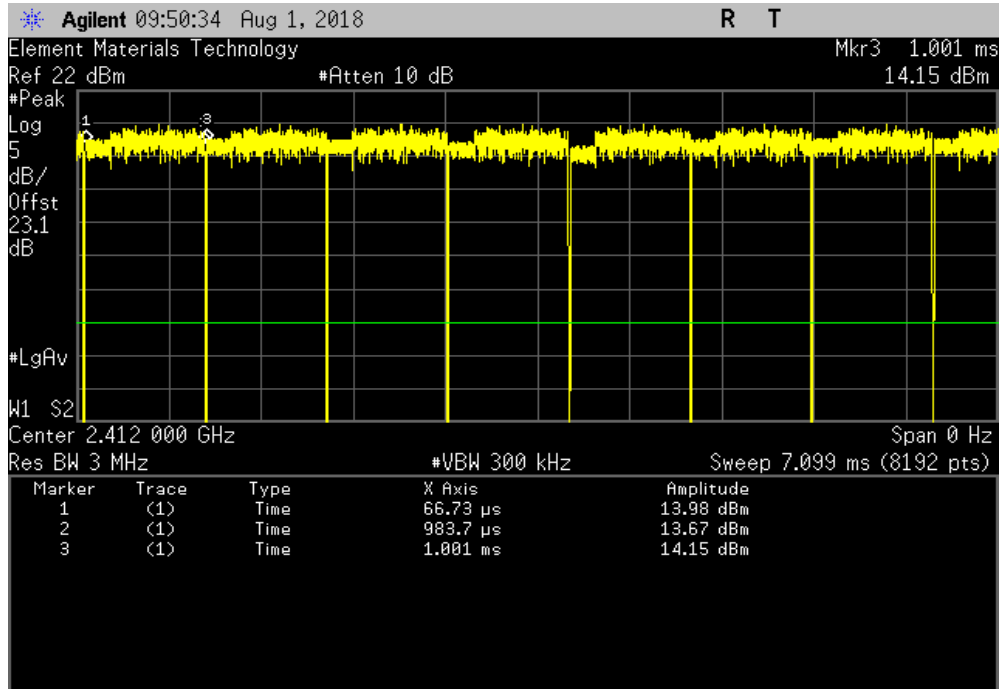


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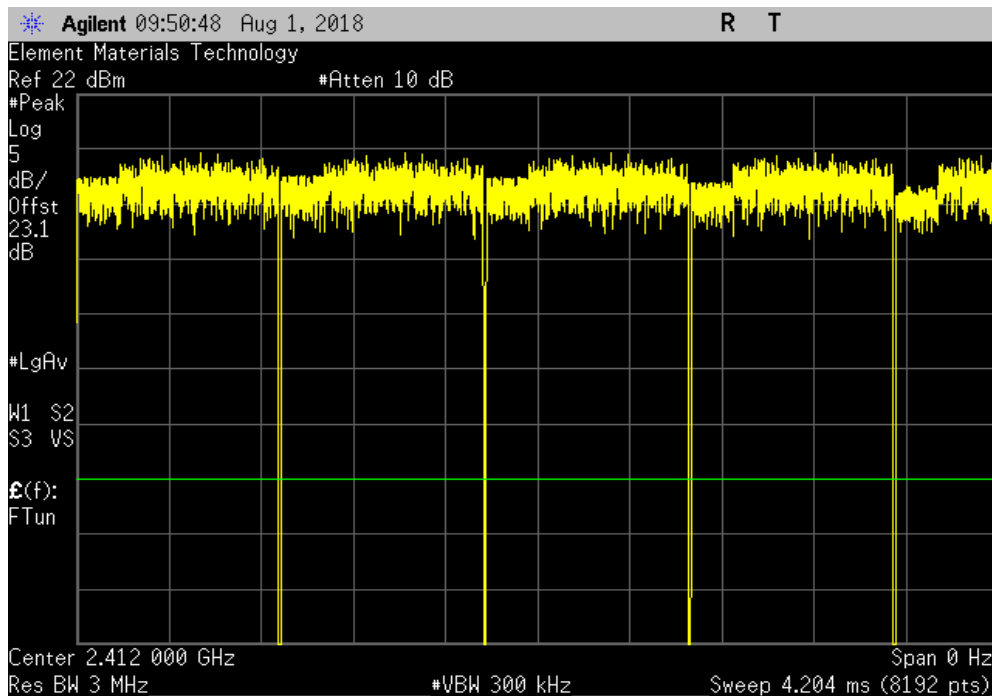


TMTX 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
916.9 us	934.3 us	1	98.1	N/A	N/A	



2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

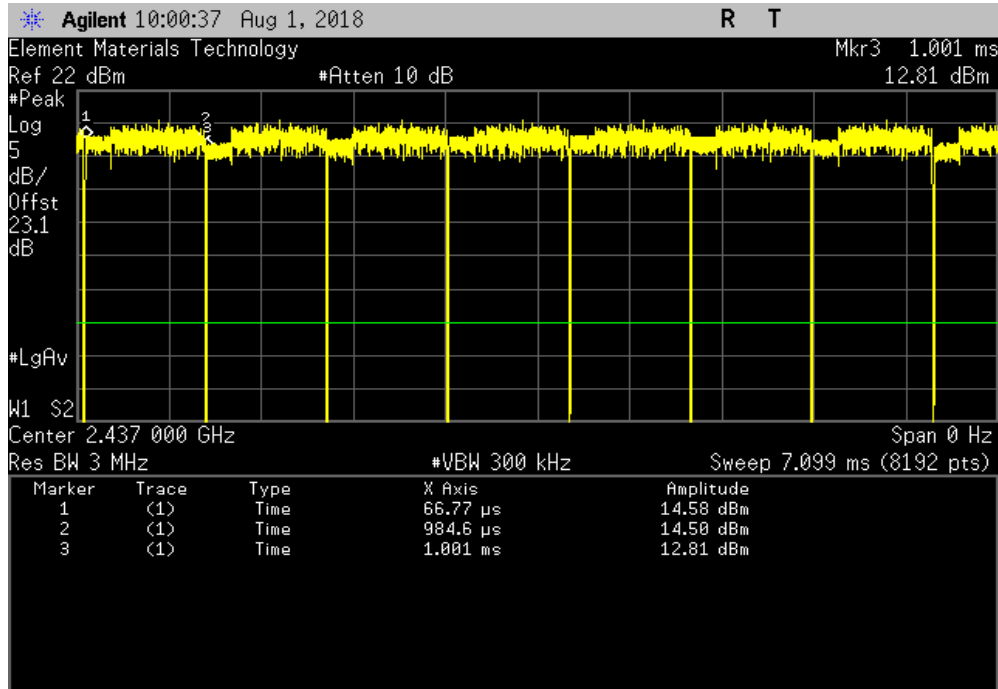


DUTY CYCLE

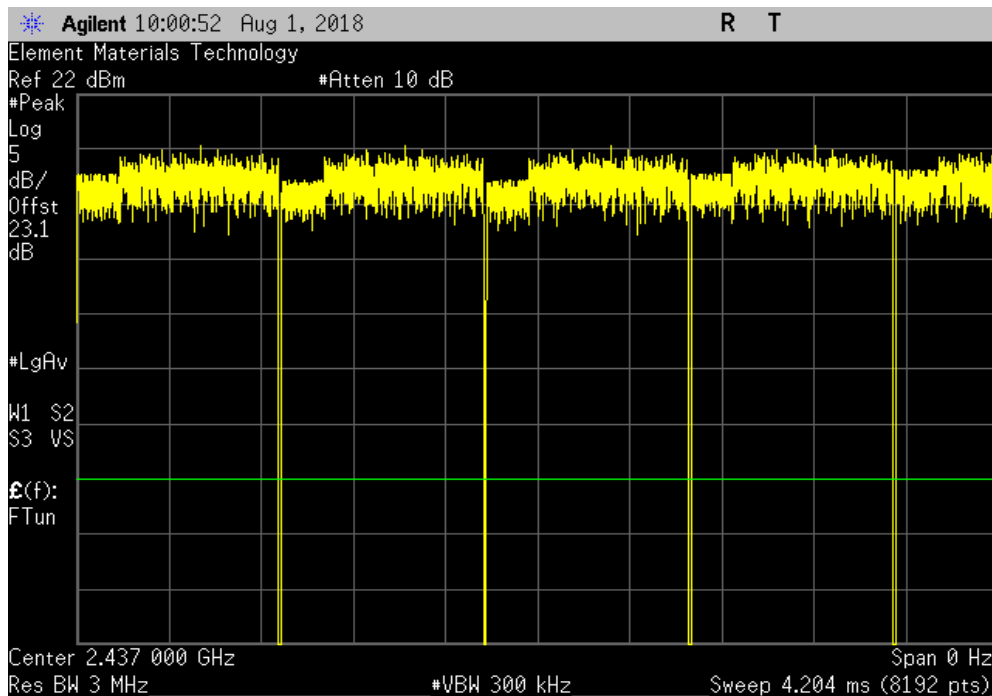


TMTx 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
917.8 us	934.2 us	1	98.2	N/A	N/A	



2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

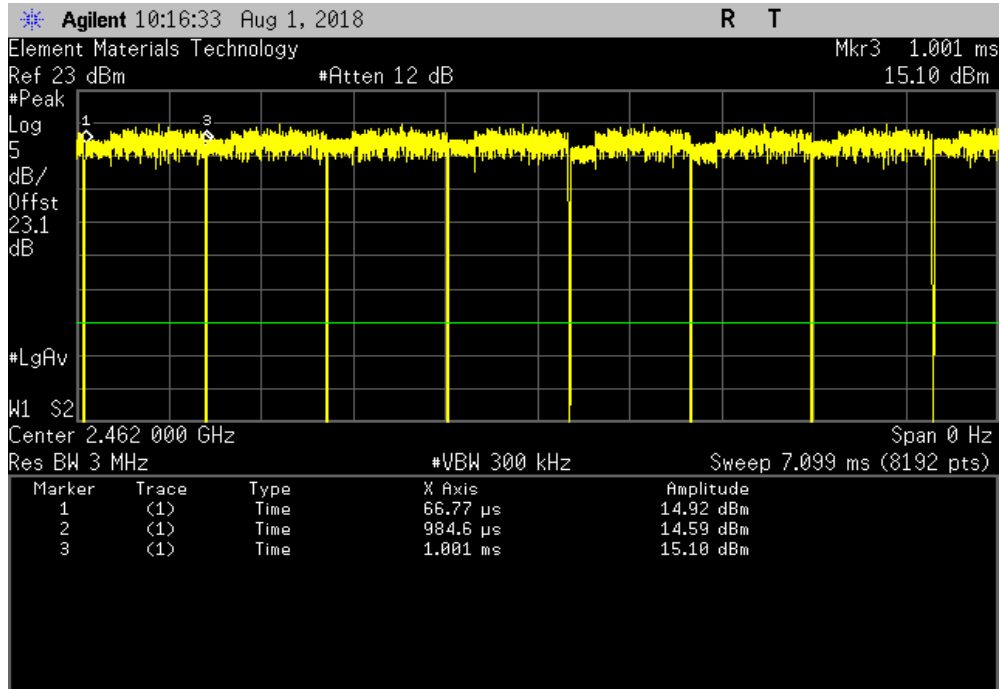


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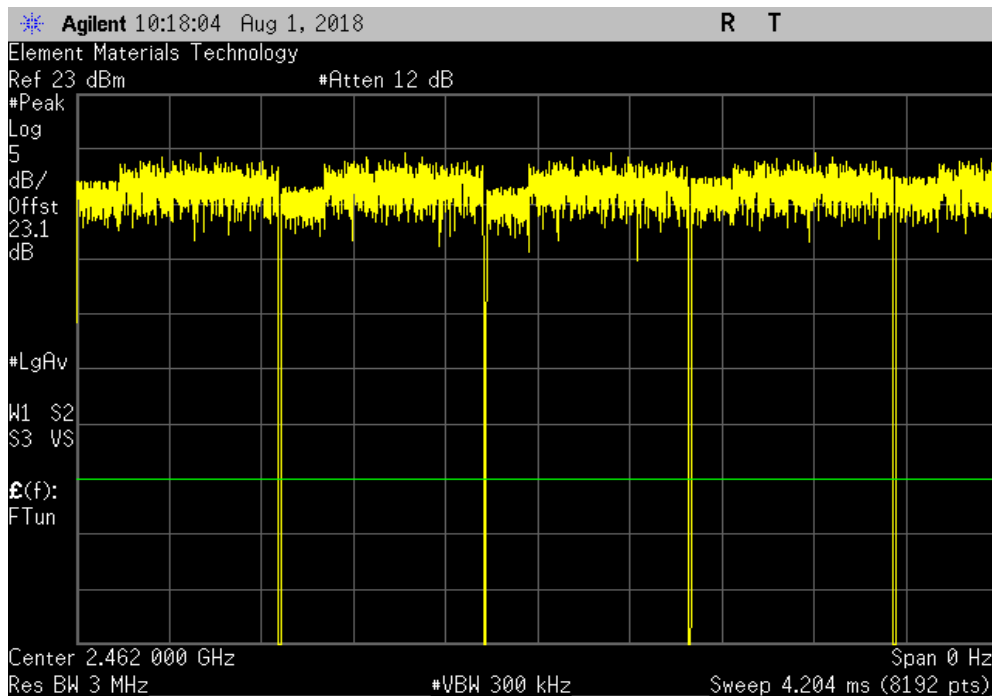


TMTx 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
917.8 us	934.2 us	1	98.2	N/A	N/A	



2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

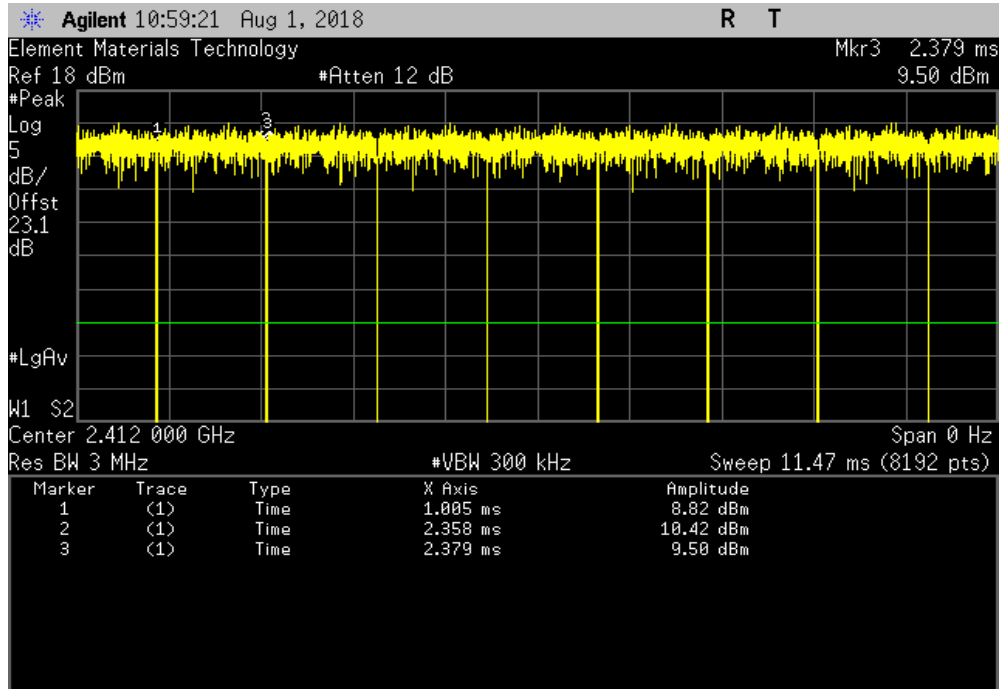


DUTY CYCLE

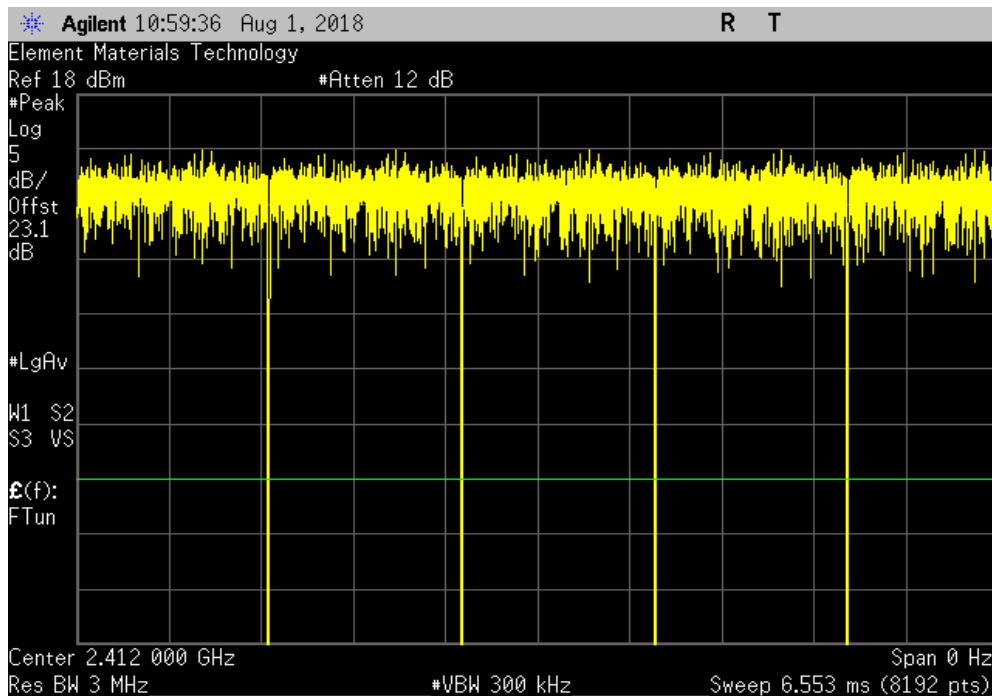


TMTx 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
1.352 ms	1.373 ms	1	98.5	N/A	N/A	



2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

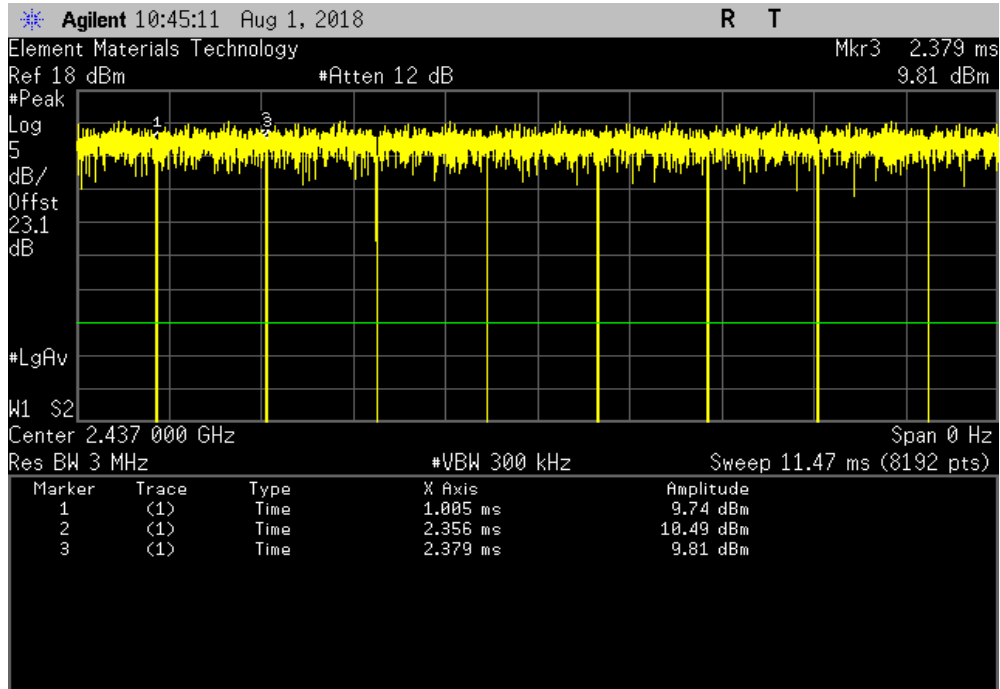


DUTY CYCLE

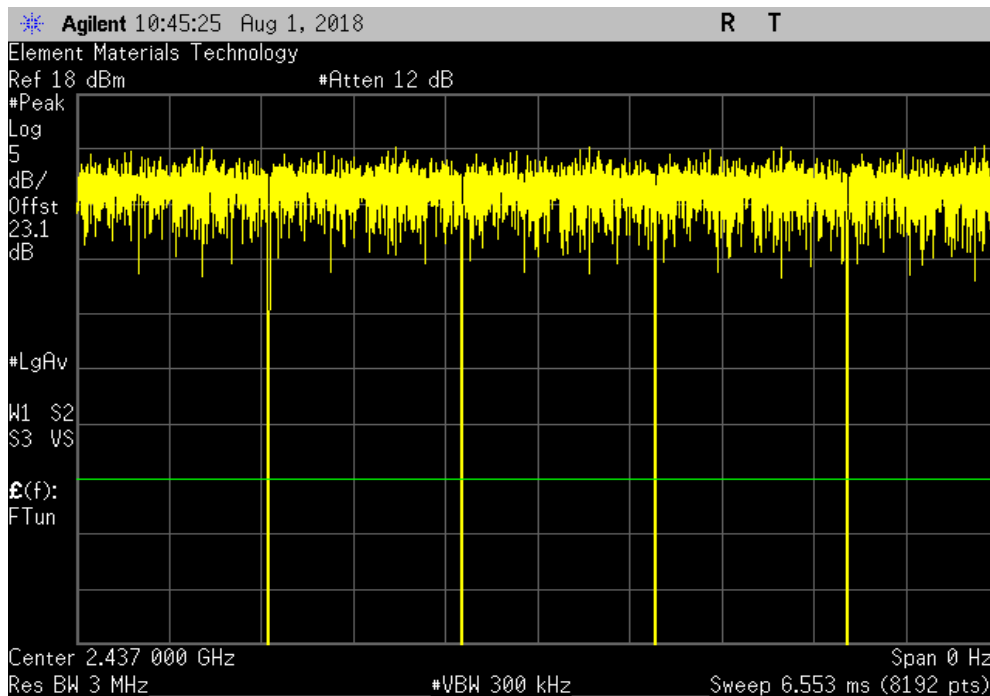


TMTx 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	1.351 ms	1.373 ms	1	98.4	N/A	N/A



2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

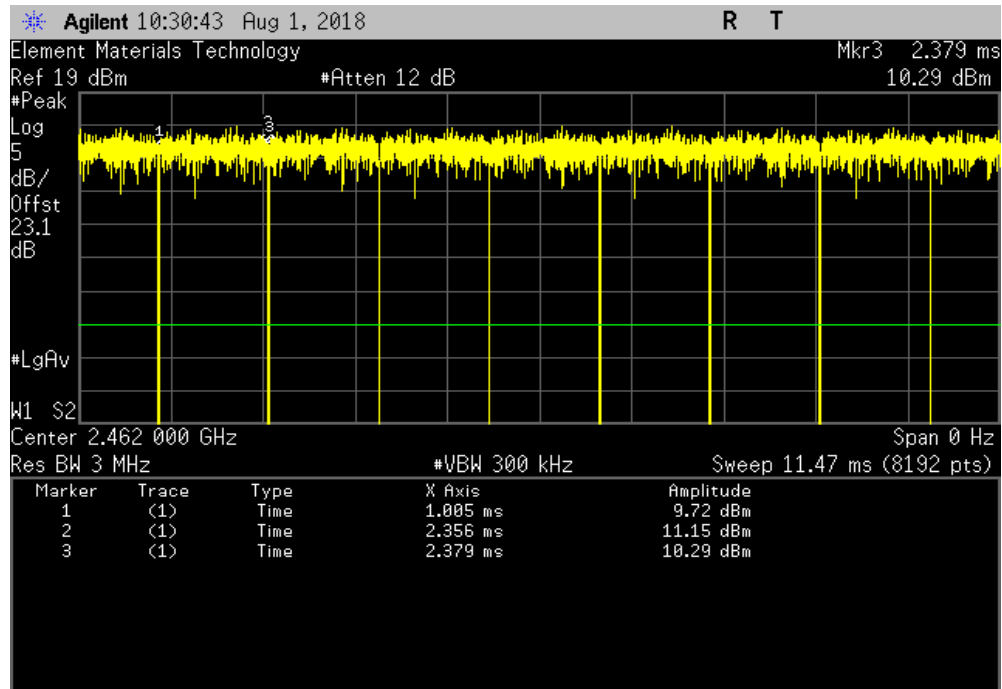


DUTY CYCLE

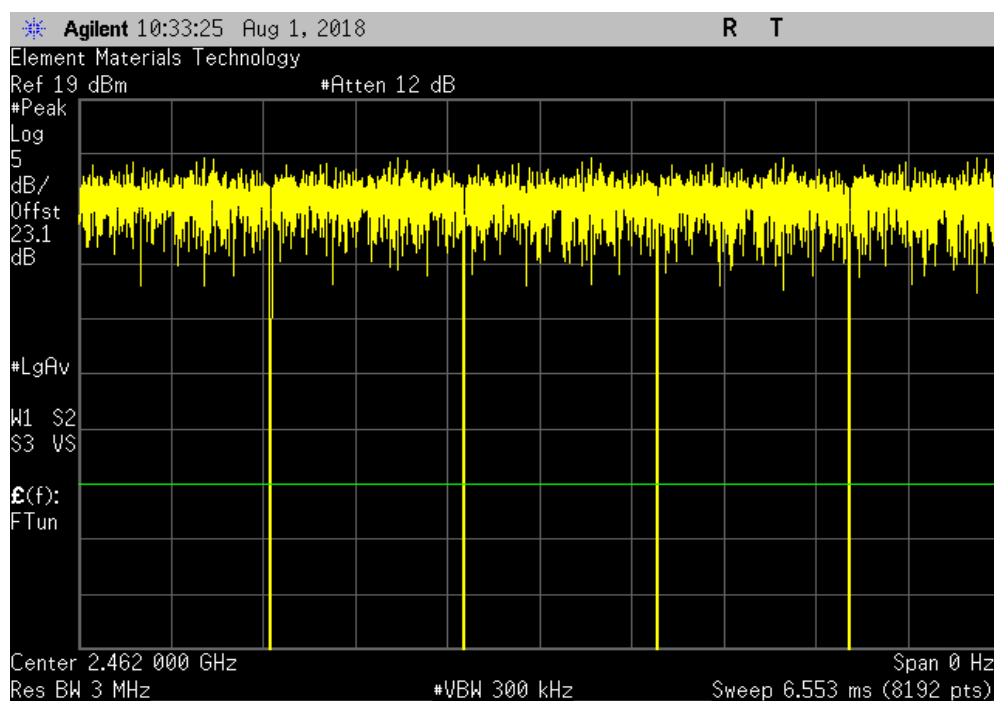


TMTx 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
1.351 ms	1.373 ms	1	98.4	N/A	N/A	



2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

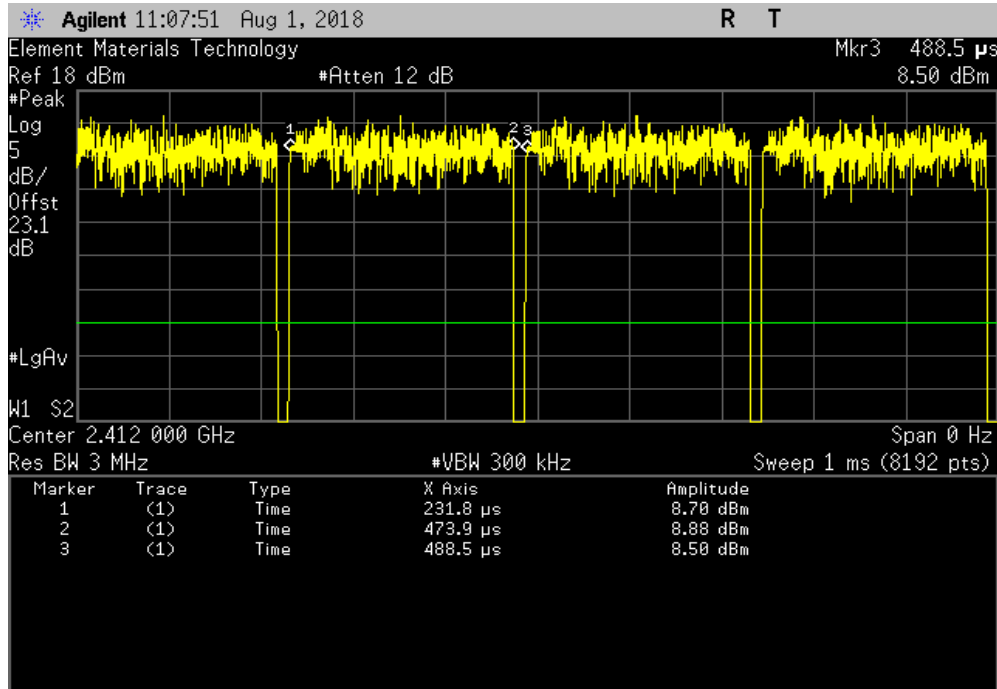


DUTY CYCLE

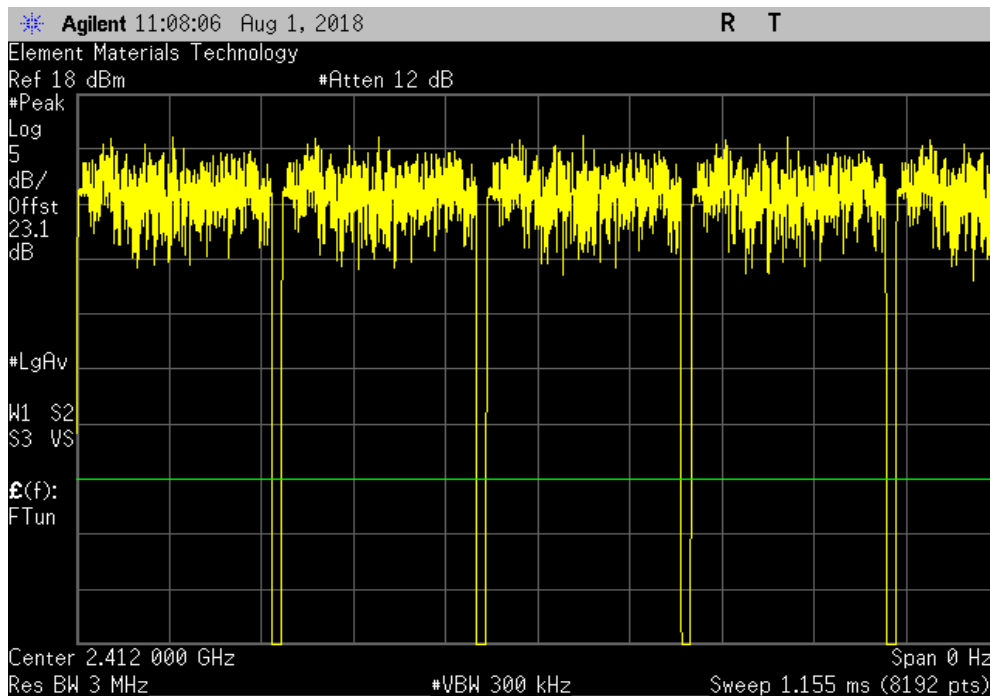


TMTx 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
242.113 us	256.678 us	1	94.3	N/A	N/A	



2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

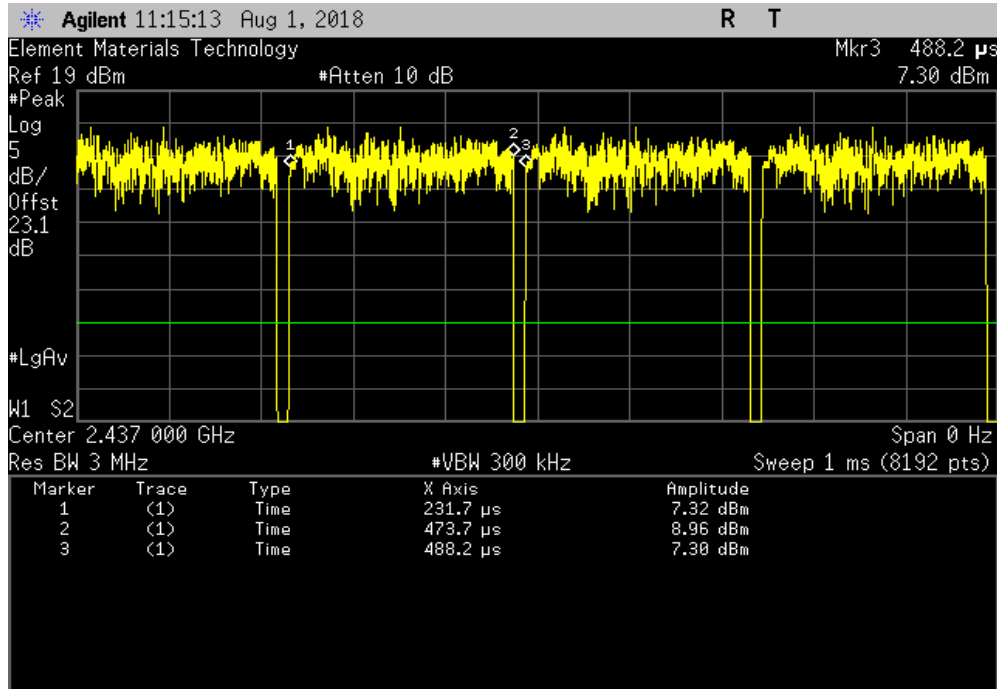


DUTY CYCLE

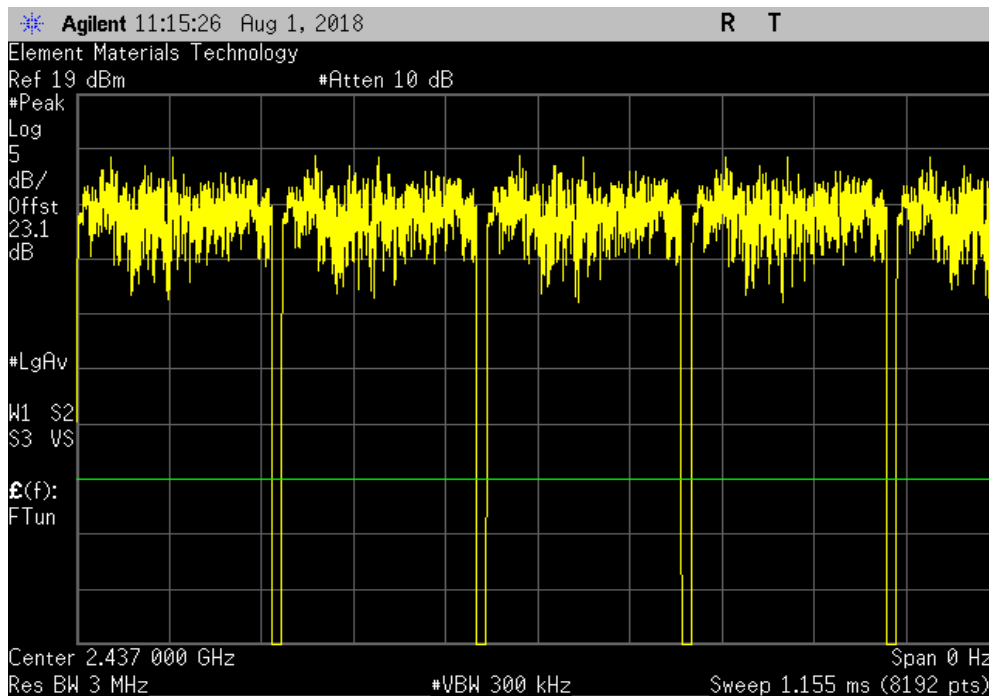


TMTx 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
242.035 us	256.556 us	1	94.3	N/A	N/A	



2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

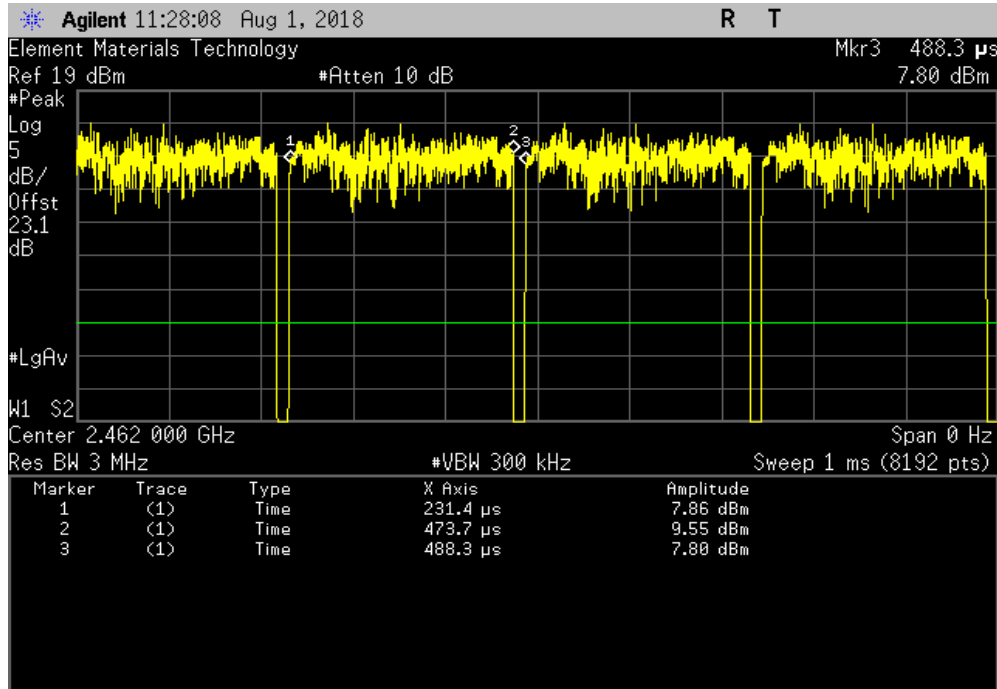


DUTY CYCLE

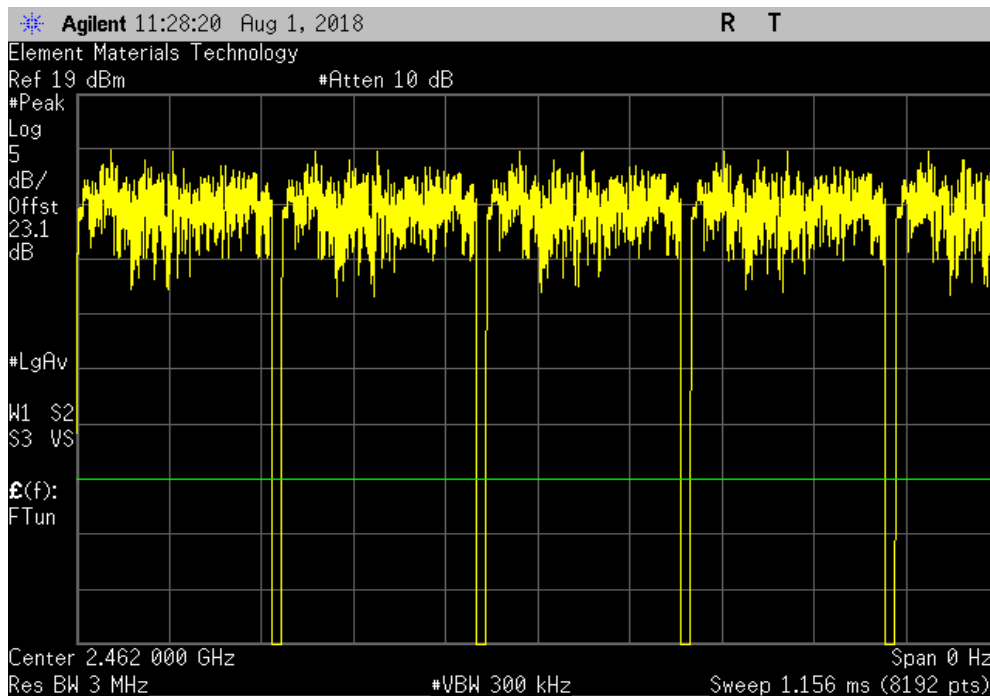


TMTX 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
242.279 us	256.822 us	1	94.3	N/A	N/A	



2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

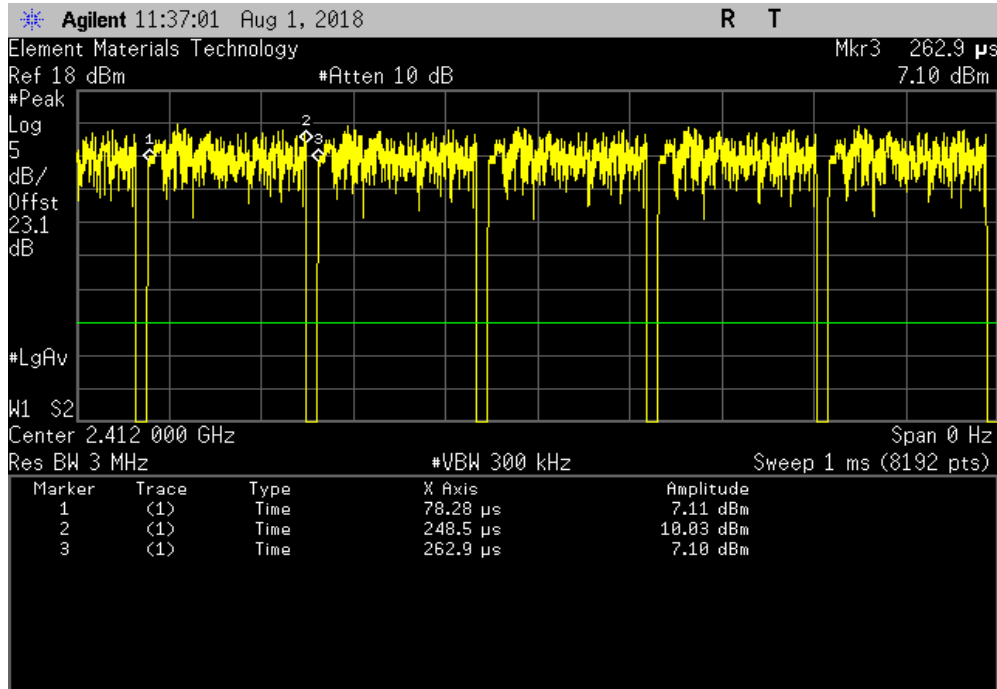


DUTY CYCLE

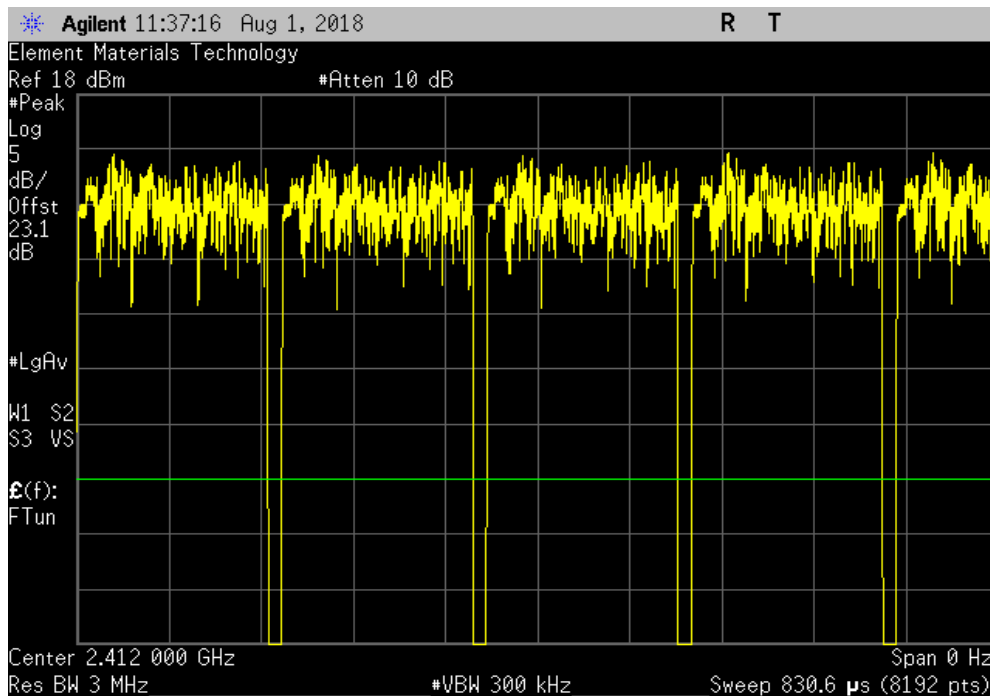


TMTX 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
170.213 us	184.578 us	1	92.2	N/A	N/A	



2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

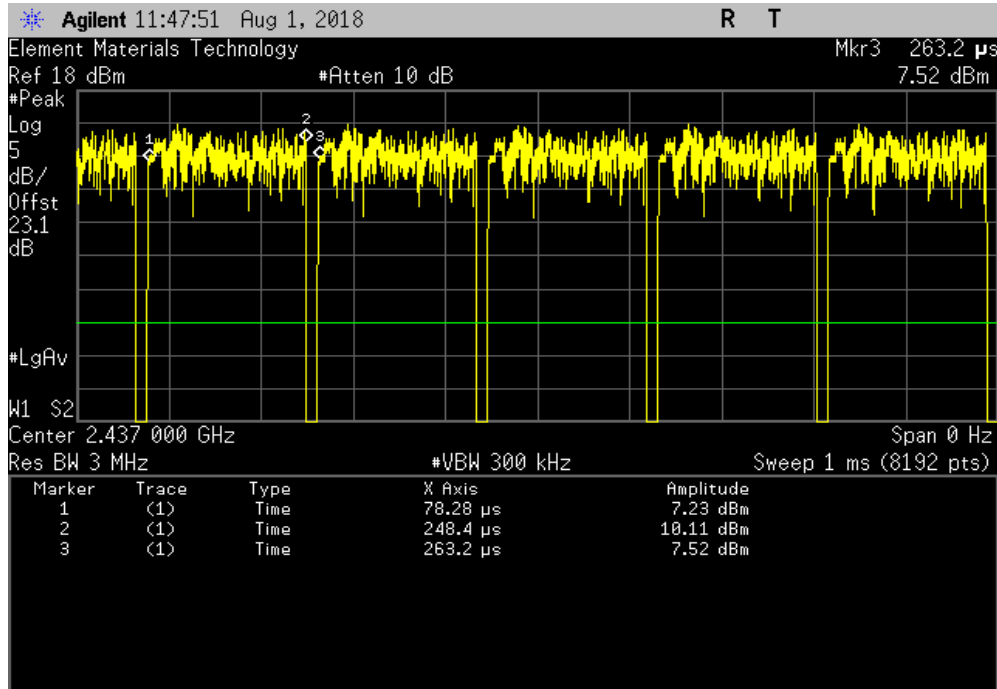


DUTY CYCLE

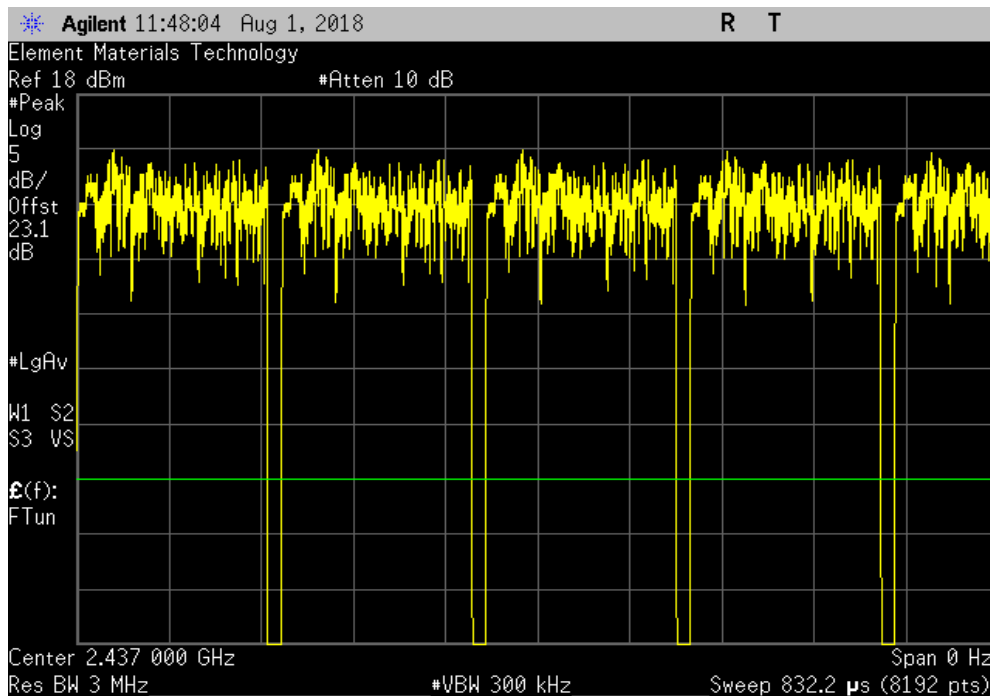


TMTX 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
170.135 us	184.944 us	1	92	N/A	N/A	



2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

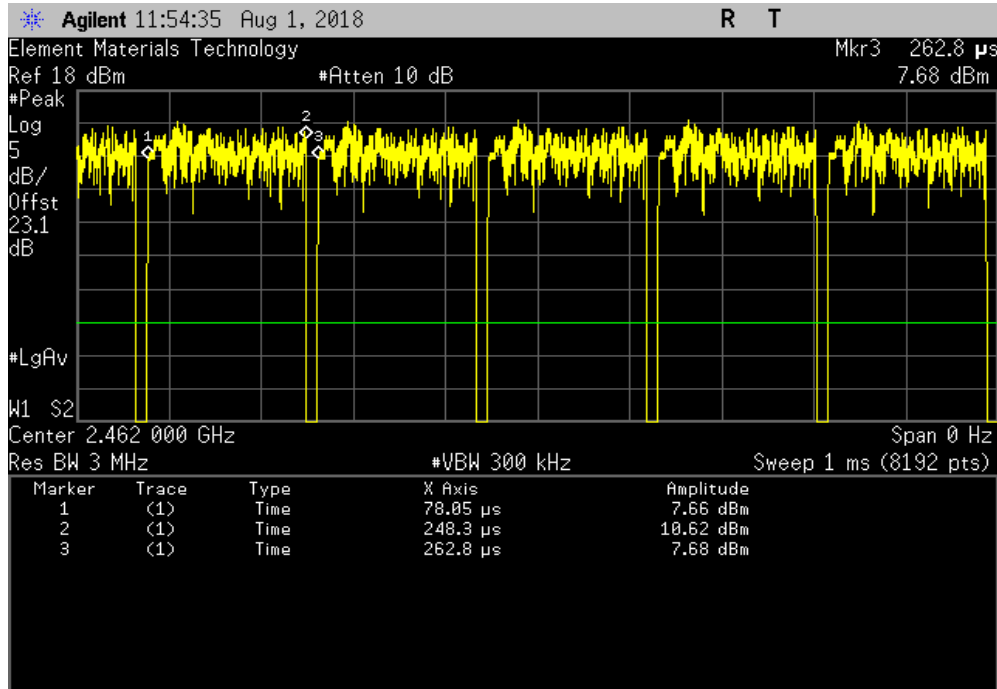


DUTY CYCLE

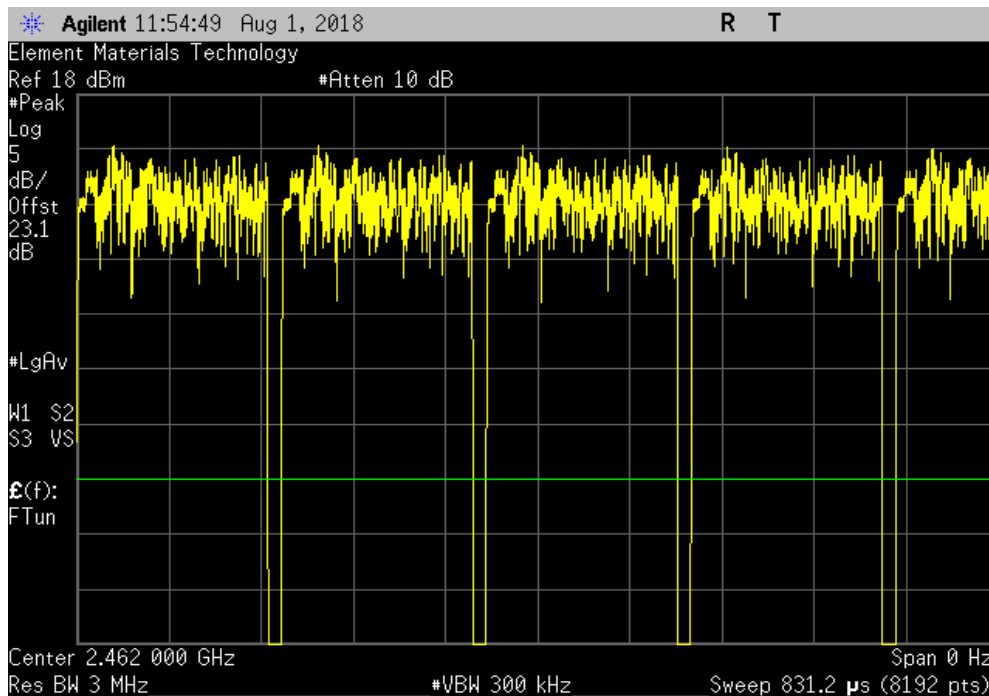


TMTx 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
170.257 us	184.700 us	1	92.2	N/A	N/A	



2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

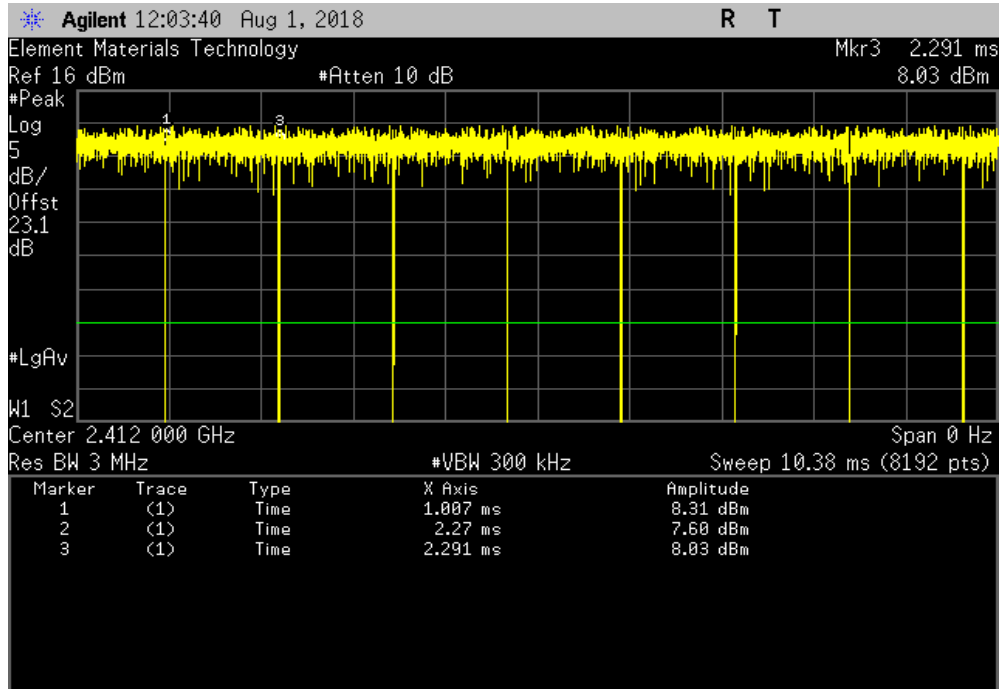


DUTY CYCLE

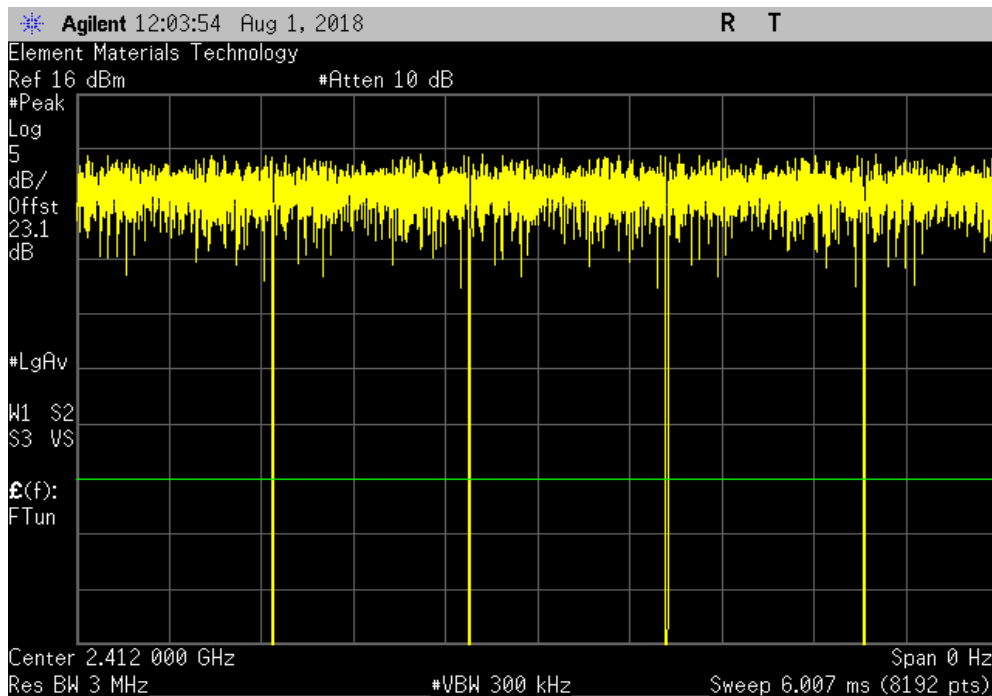


TMTx 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
1.263 ms	1.284 ms	1	98.3	N/A	N/A	



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

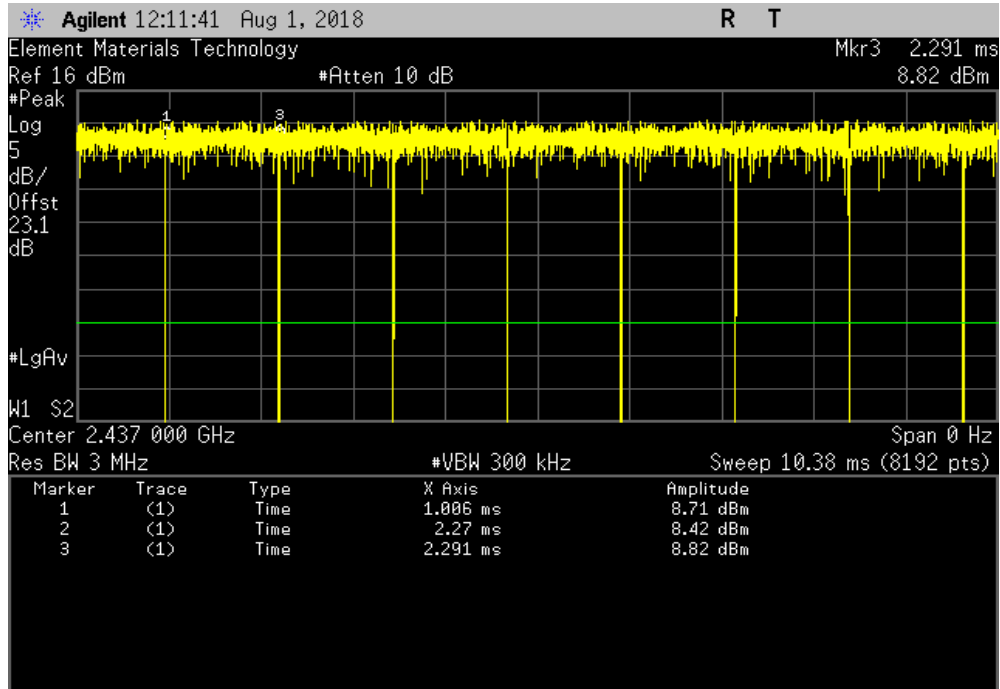


DUTY CYCLE

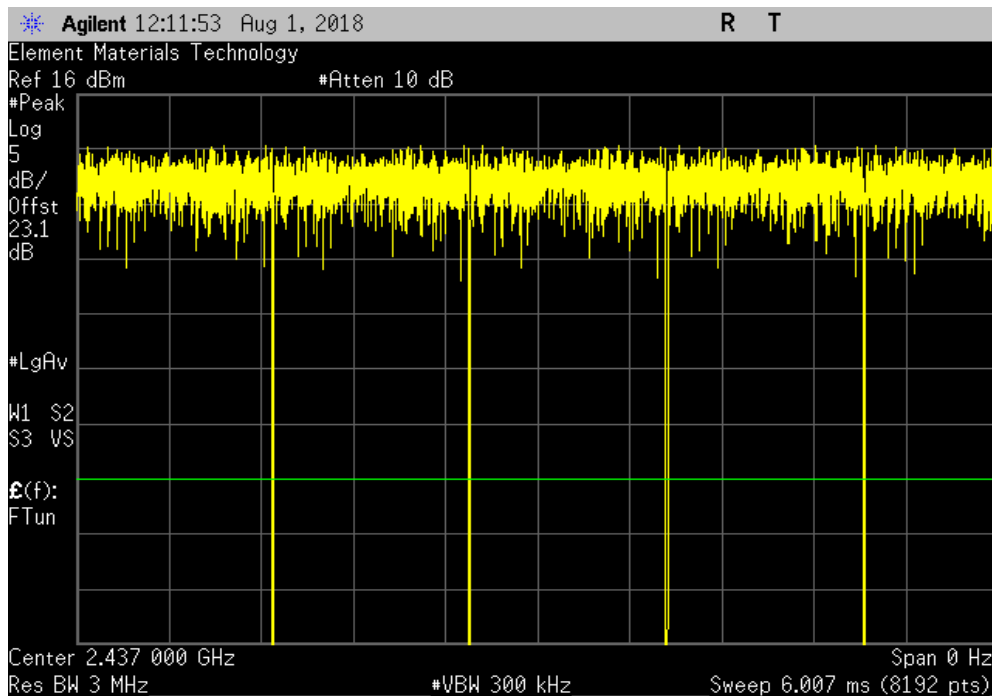


TMTx 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Mid Channel 6, 2437 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
1.264 ms	1.286 ms	1	98.3	N/A	N/A	



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Mid Channel 6, 2437 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

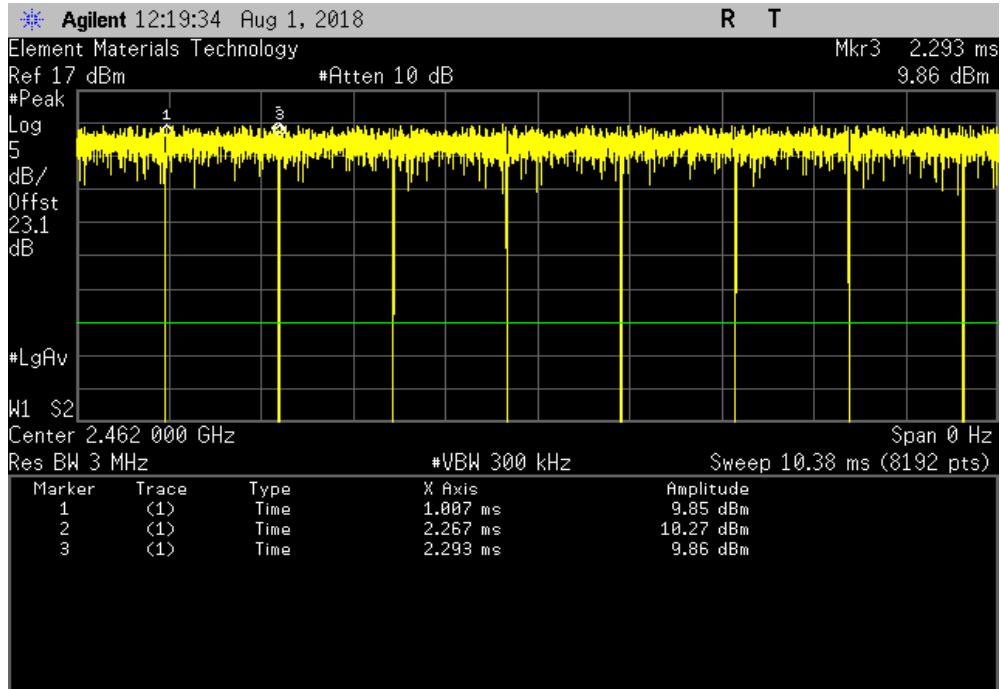


DUTY CYCLE

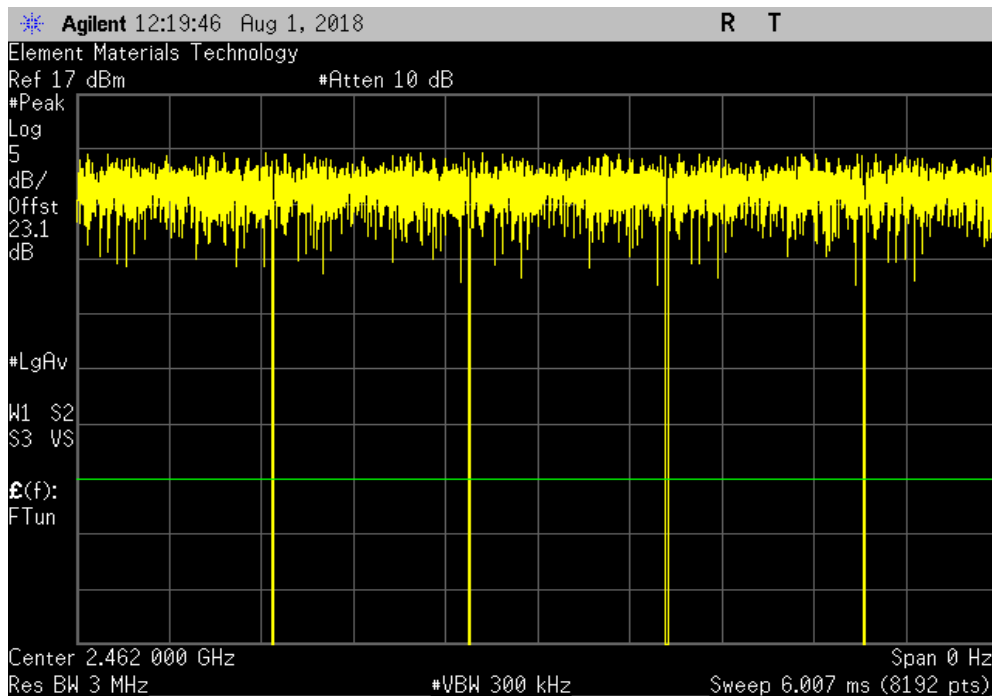


TMTx 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	1.260 ms	1.286 ms	1	98	N/A	N/A



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

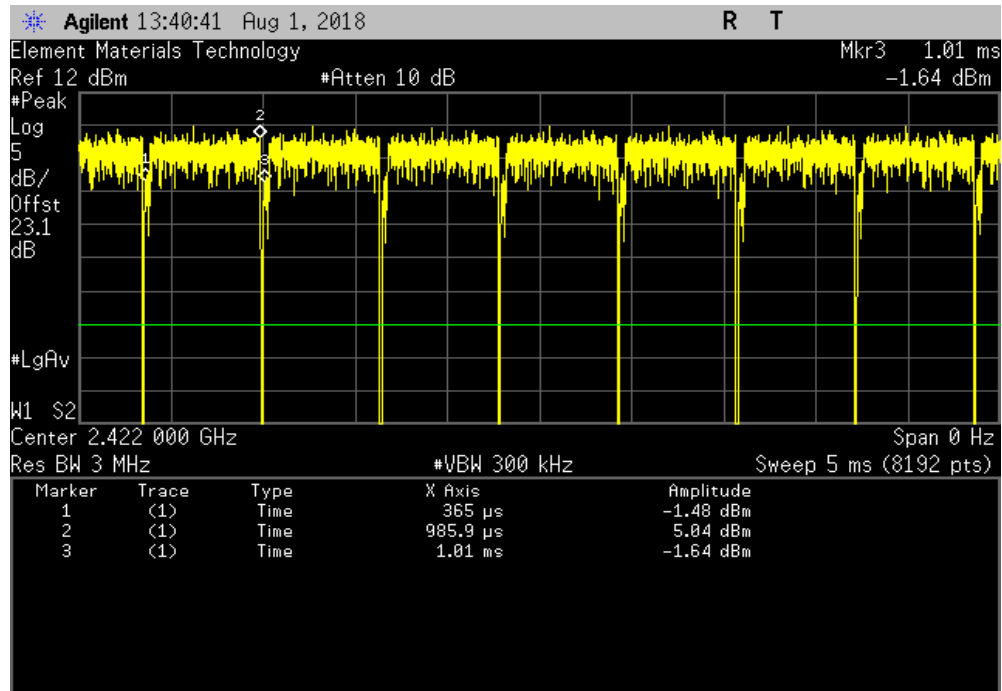


DUTY CYCLE

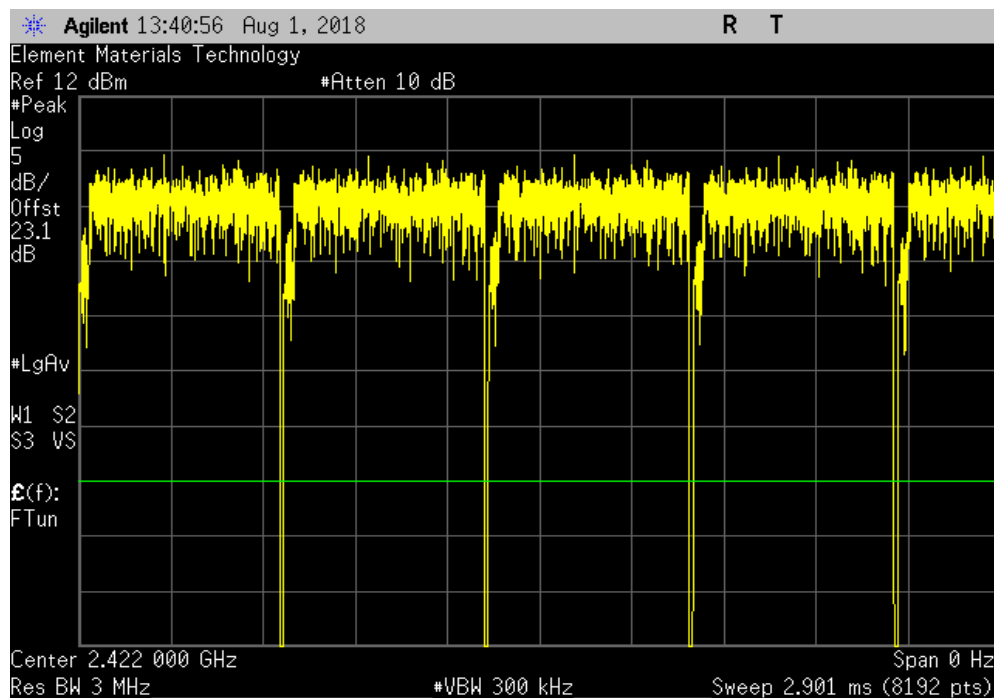


TMTX 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1/5, 2422 MHz, 40 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
620.858 us	644.6 us	1	96.3	N/A	N/A	



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1/5, 2422 MHz, 40 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

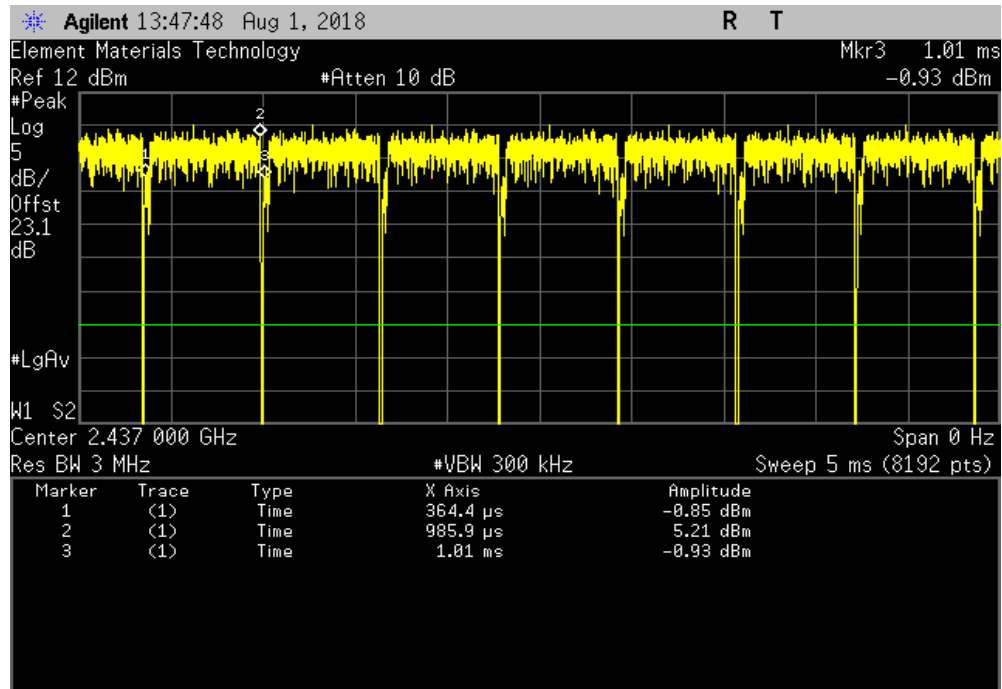


DUTY CYCLE

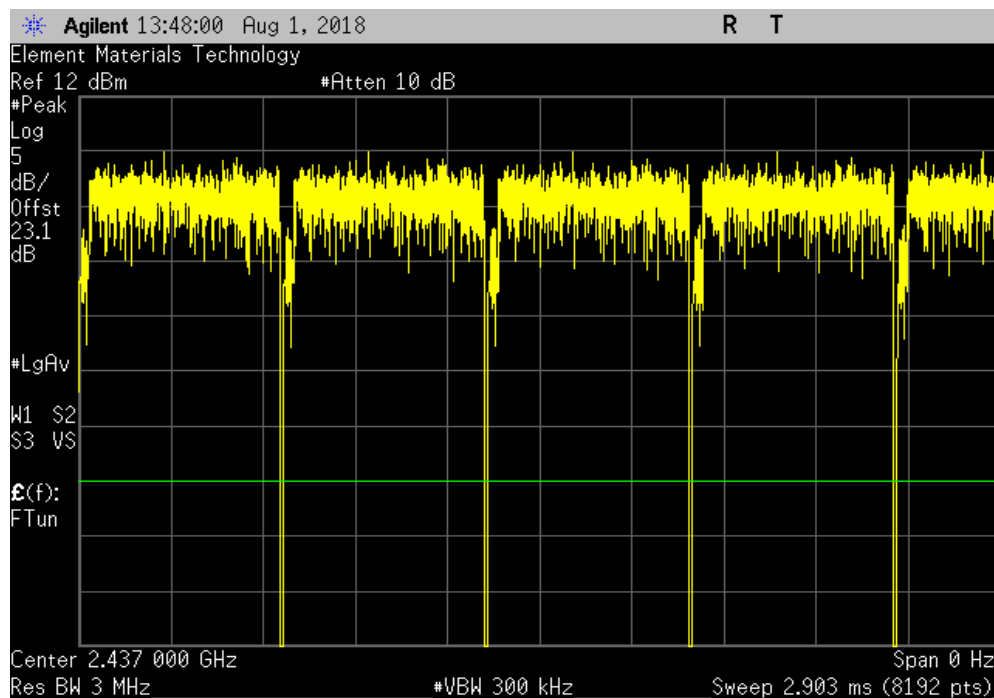


TMTx 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Mid Channel 4/8, 2437 MHz, 40 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
621.458 us	645.2 us	1	96.3	N/A	N/A	



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Mid Channel 4/8, 2437 MHz, 40 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

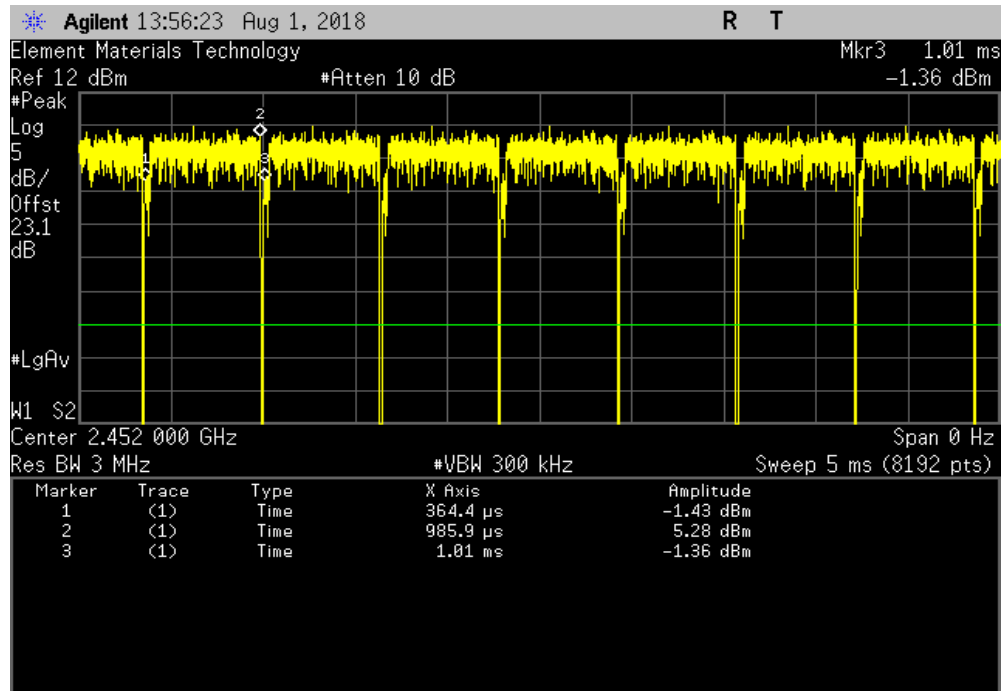


DUTY CYCLE

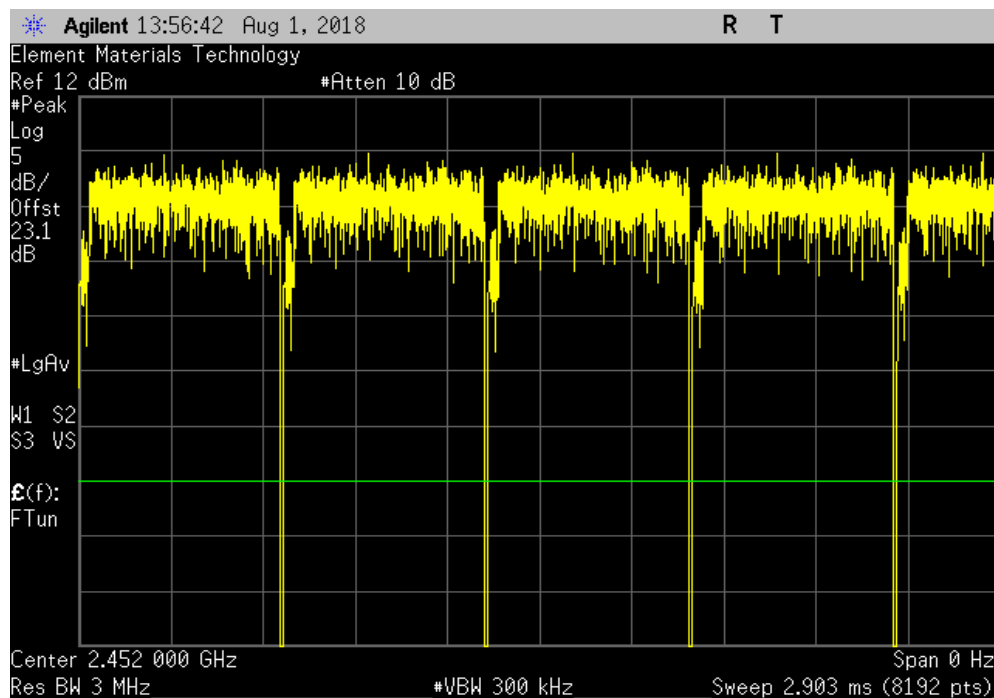


TMTX 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 7/11, 2452 MHz, 40 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
621.437 us	645.2 us	1	96.3	N/A	N/A	



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 7/11, 2452 MHz, 40 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

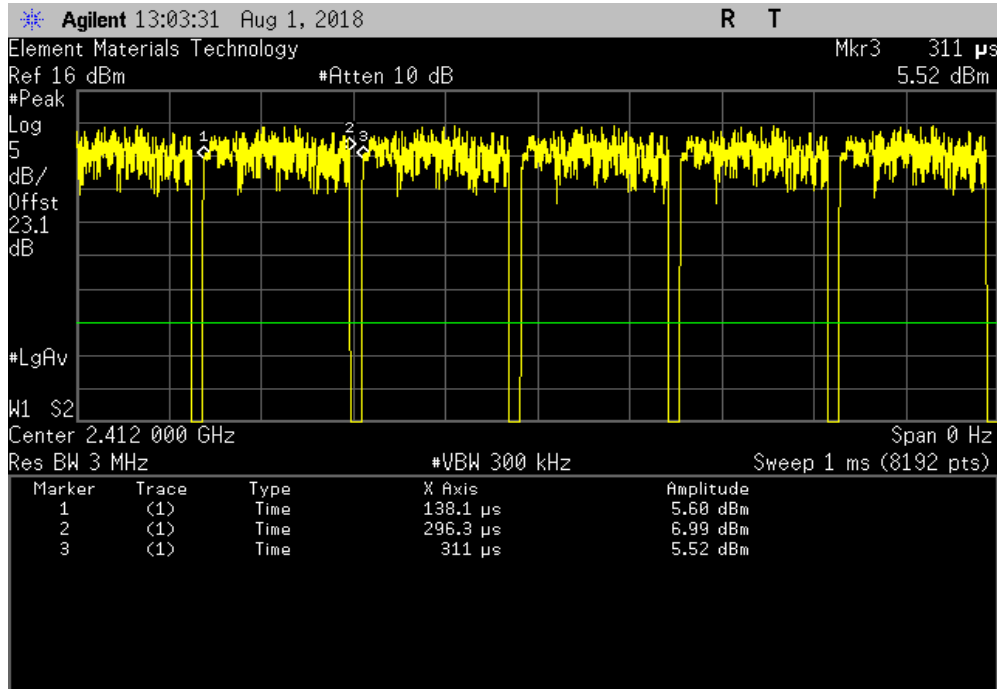


DUTY CYCLE

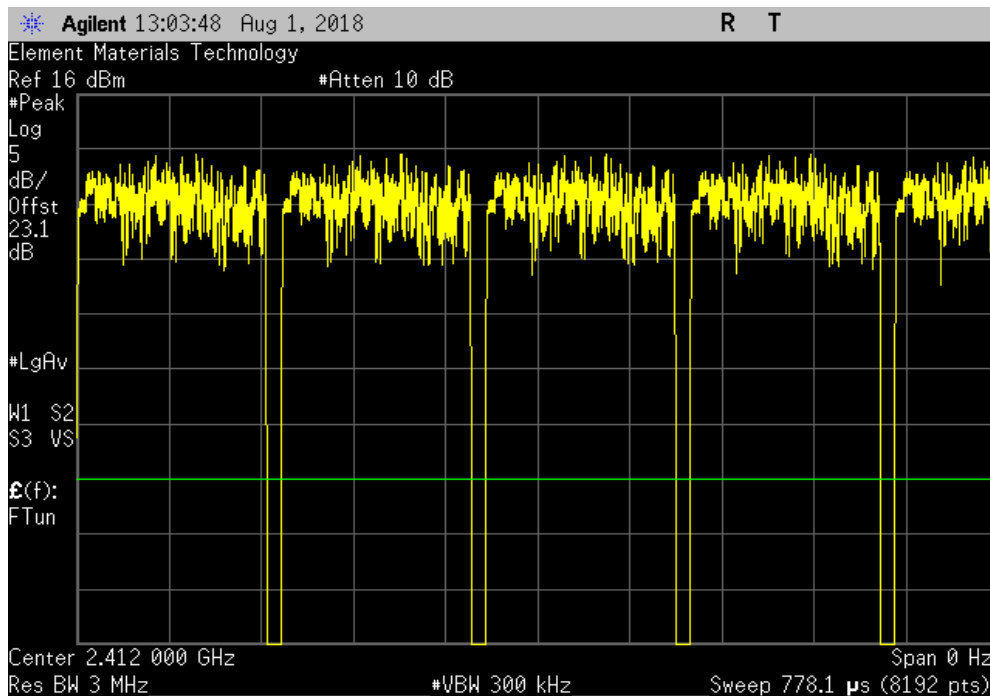


TMTx 2017.12.14 XMt 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1, 2412 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
158.257 us	172.922 us	1	91.5	N/A	N/A	



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1, 2412 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

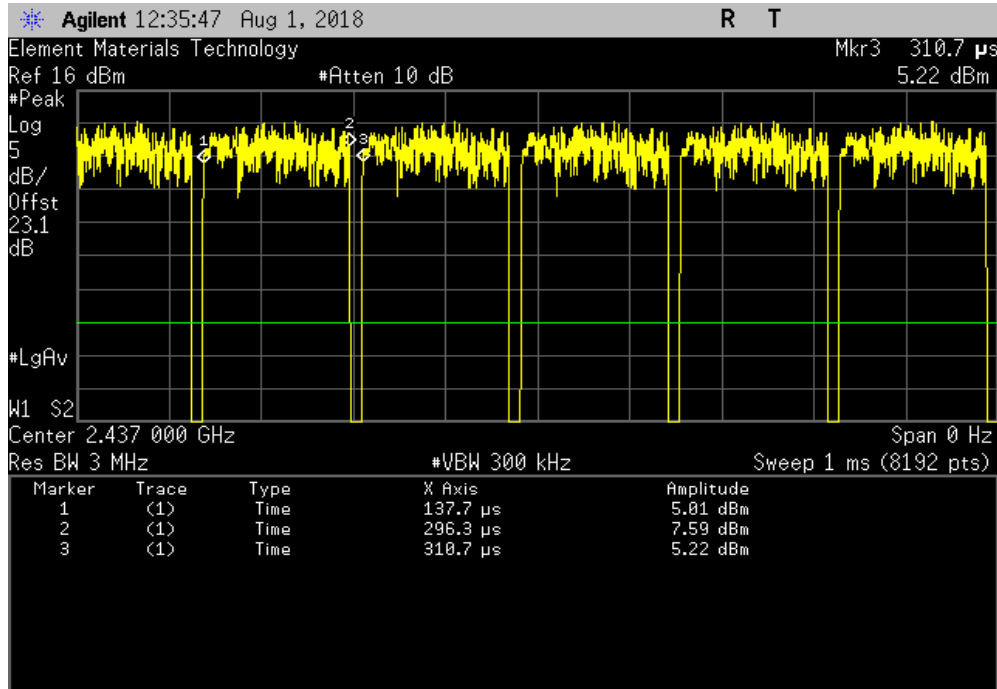


DUTY CYCLE

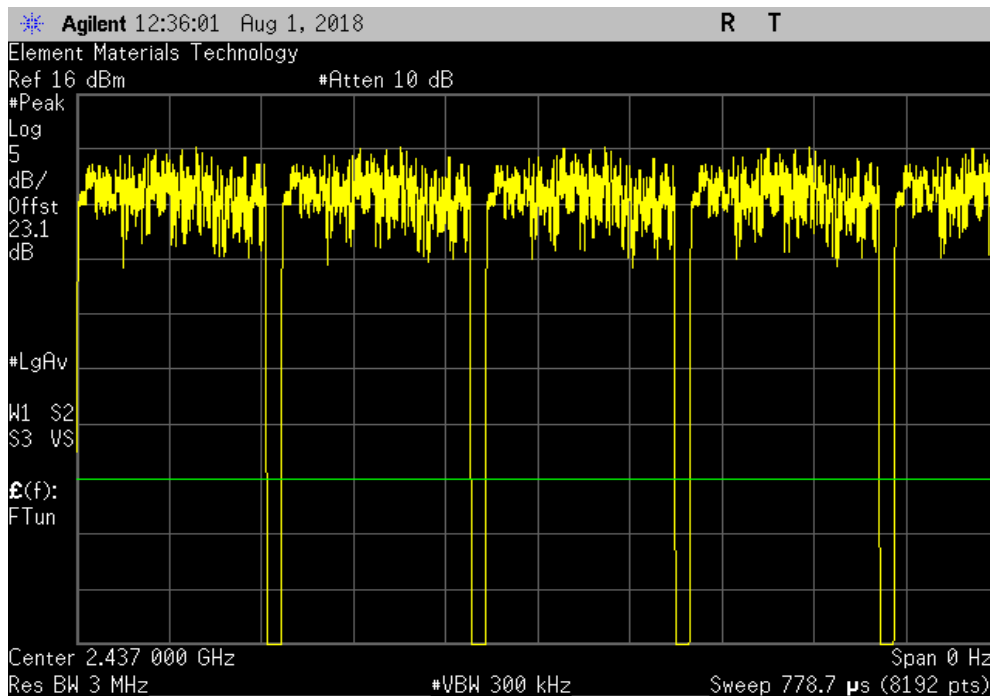


TMTx 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Mid Channel 6, 2437 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
158.623 us	173.044 us	1	91.7	N/A	N/A	



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Mid Channel 6, 2437 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

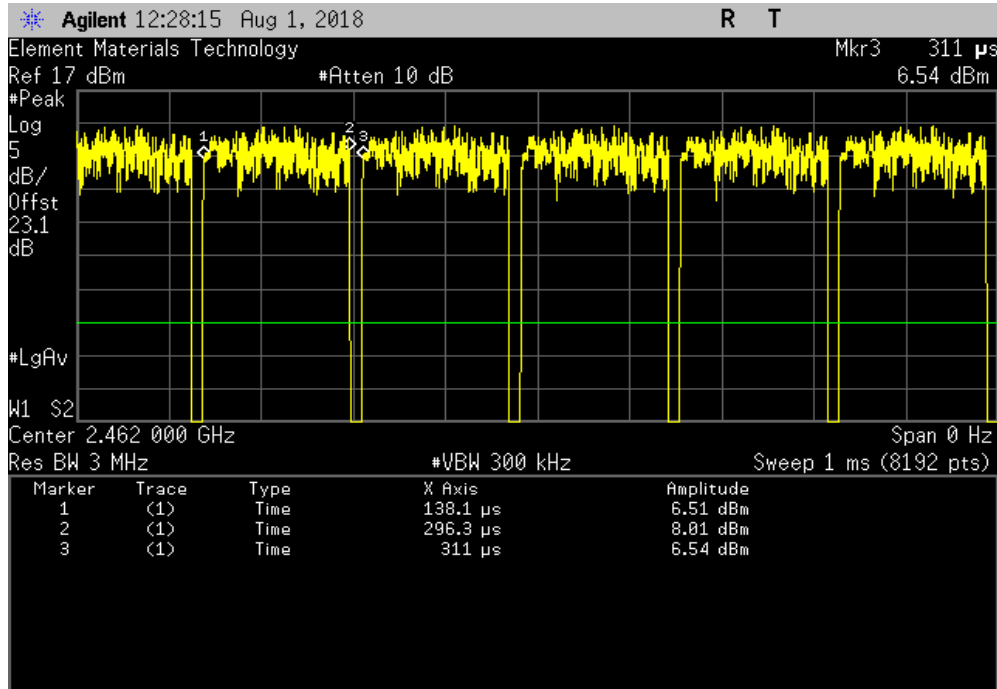


DUTY CYCLE

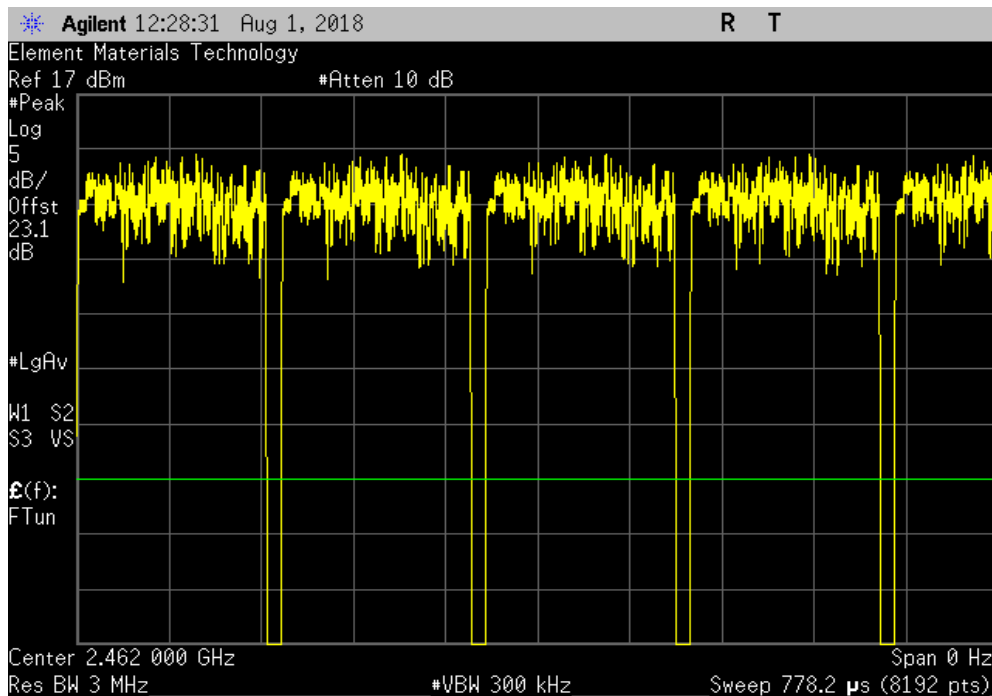


TMTX 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, High Channel 11, 2462 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
158.257 us	172.944 us	1	91.5	N/A	N/A	



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, High Channel 11, 2462 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

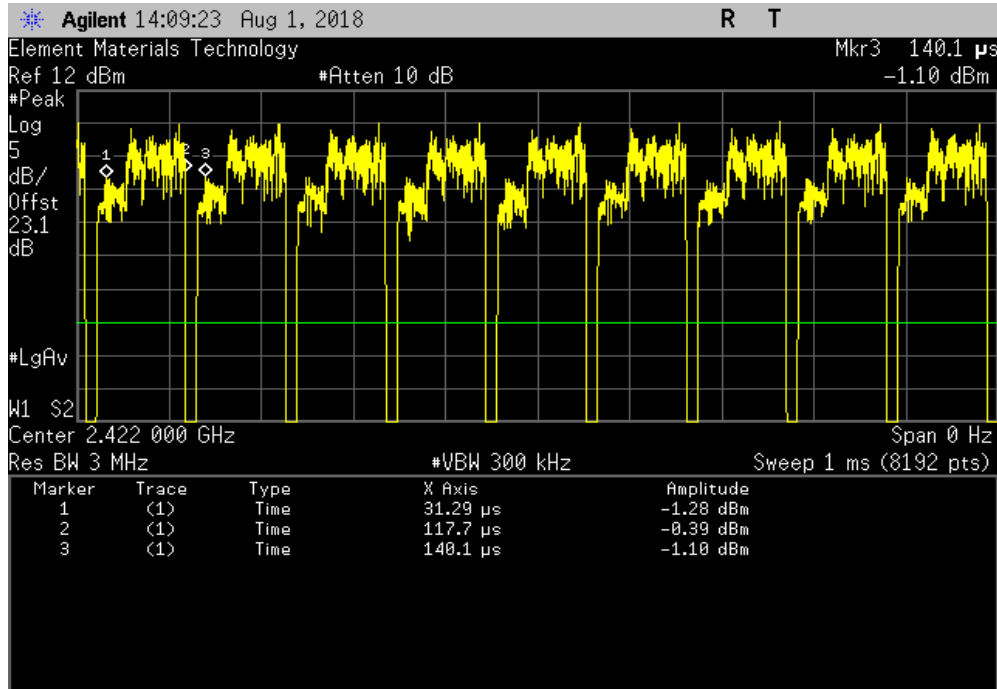


DUTY CYCLE

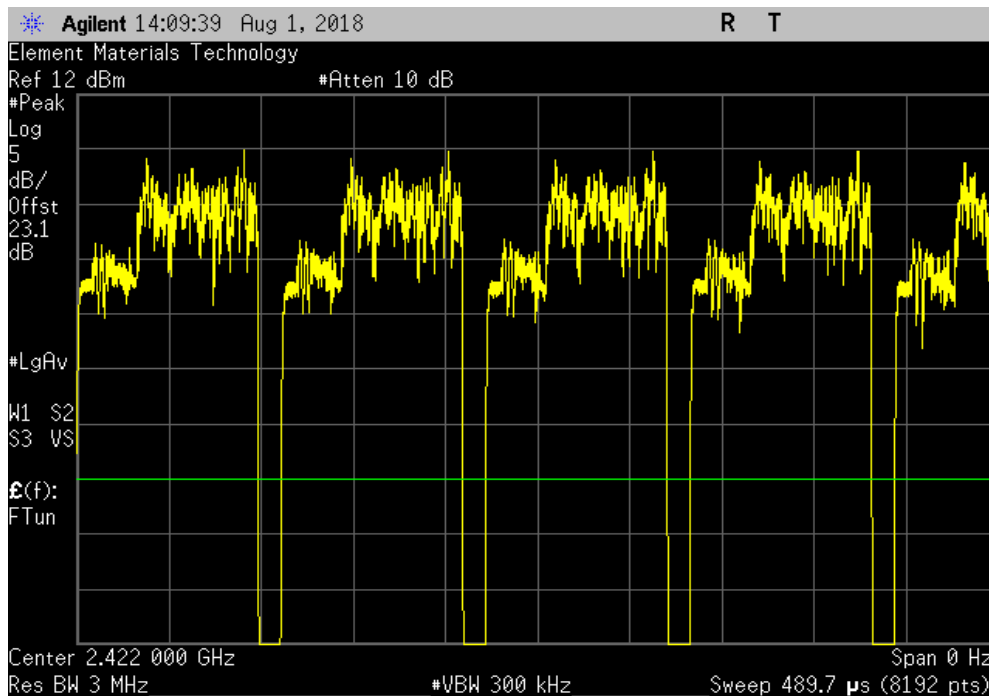


TMTx 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1/5, 2422 MHz, 40 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
86.445 us	108.822 us	1	79.4	N/A	N/A	



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1/5, 2422 MHz, 40 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

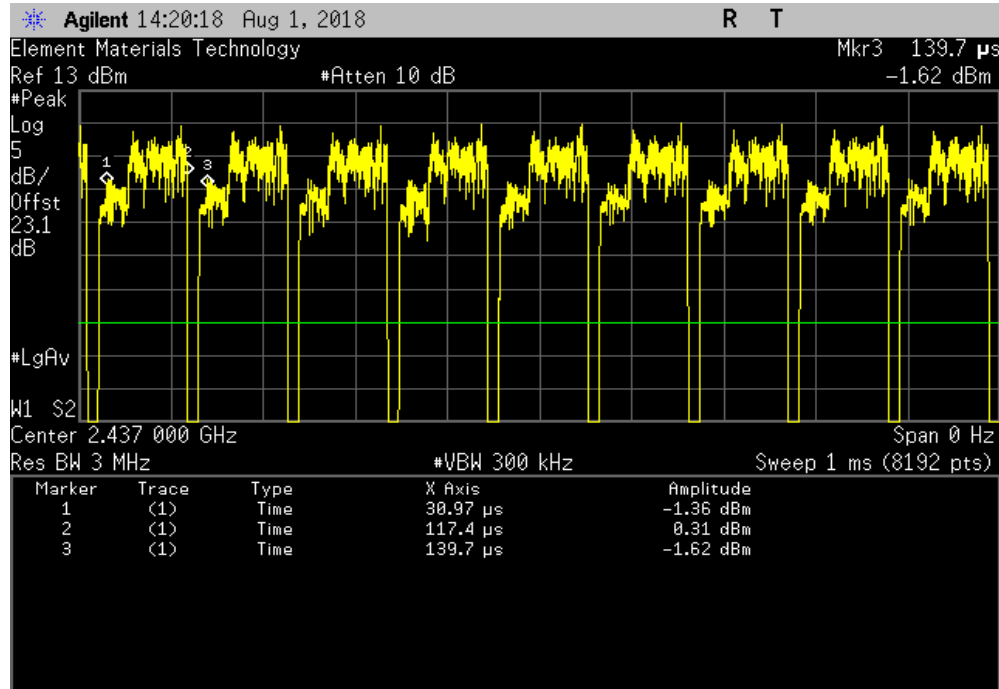


DUTY CYCLE

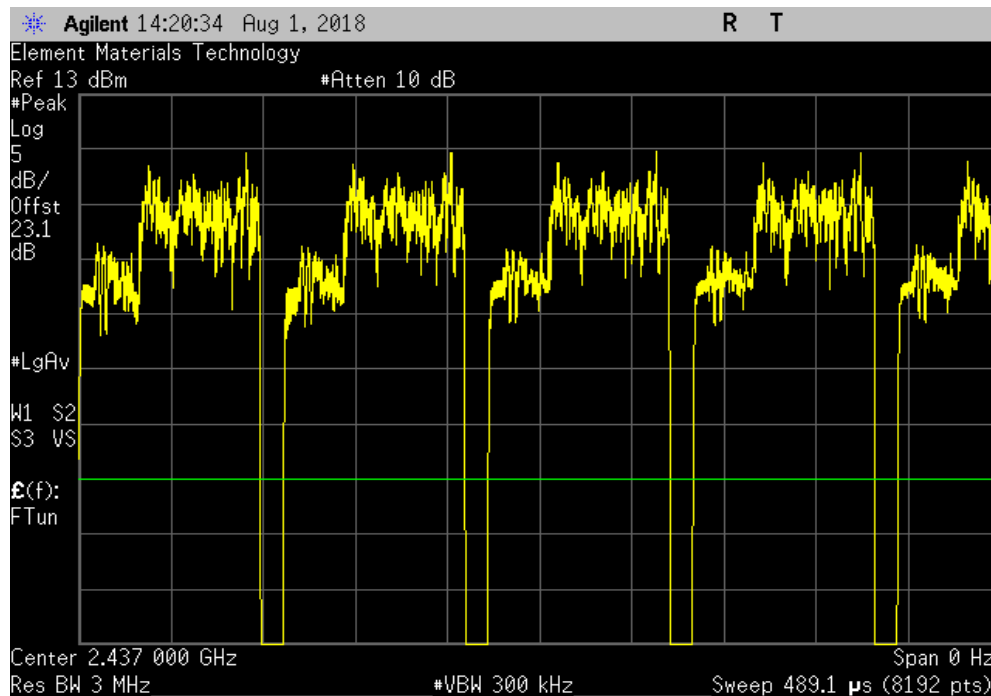


TMTx 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Mid Channel 4/8, 2437 MHz, 40 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
86.445 us	108.700 us	1	79.5	N/A	N/A	



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Mid Channel 4/8, 2437 MHz, 40 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	

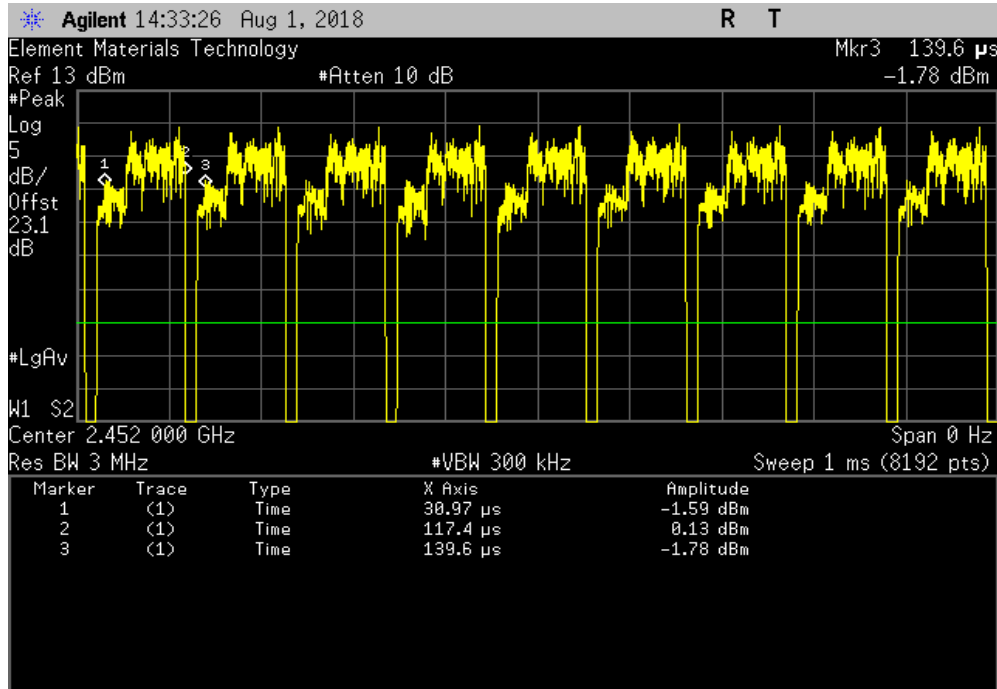


DUTY CYCLE

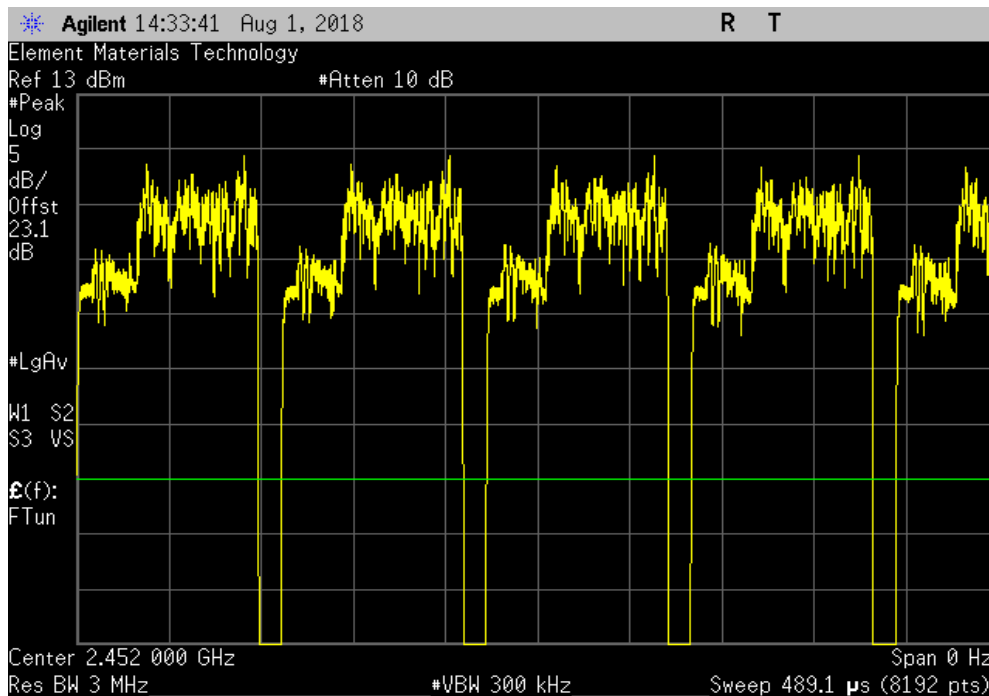


TMTx 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, High Channel 7/11, 2452 MHz, 40 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
86.445 us	108.678 us	1	79.5	N/A	N/A	



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, High Channel 7/11, 2452 MHz, 40 MHz						
Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results	
N/A	N/A	5	N/A	N/A	N/A	



OCCUPIED BANDWIDTH



XMR 2017.12.13

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Agilent	E8257D	TGU	15-Feb-18	15-Feb-21
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Attenuator	Fairview Microwave	SA18H-20	TKR	28-Dec-17	28-Dec-18
Block - DC	Fairview Microwave	SD3379	AMV	28-Dec-17	28-Dec-18
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	9-Nov-17	9-Nov-18

TEST DESCRIPTION

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

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

OCCUPIED BANDWIDTH



THxTx 2017.12.14 XMxM 2017.12.13

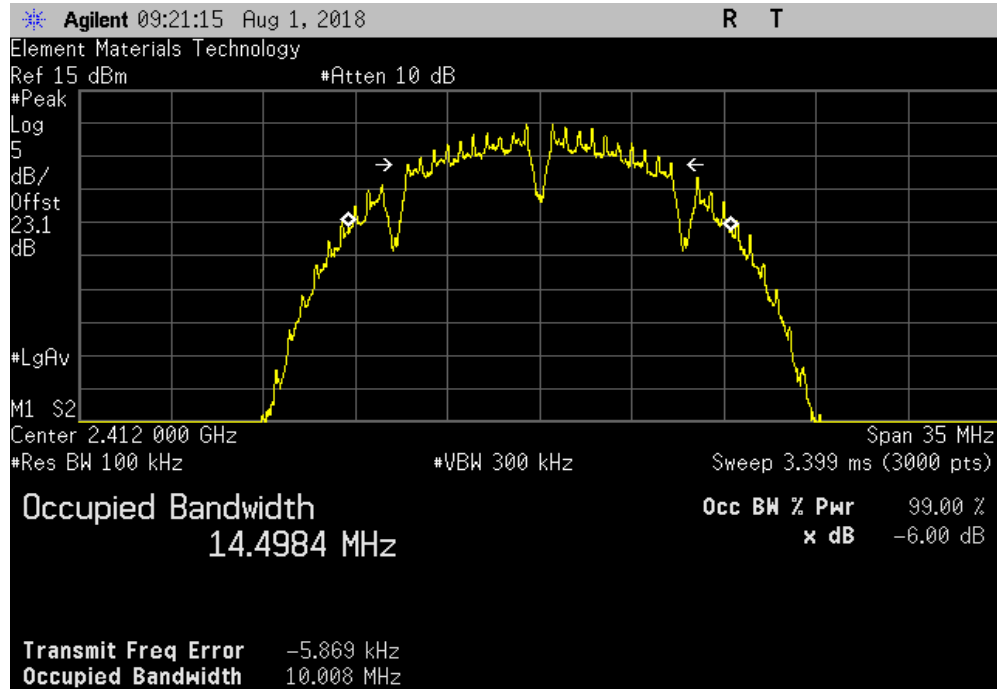
EUT: Falcon		Work Order: KING0032	
Serial Number: See Configurations		Date: 1-Aug-18	
Customer: King		Temperature: 26.3 °C	
Attendees: None		Humidity: 44.5% RH	
Project: None		Barometric Pres.: 1015 mbar	
Tested by: Johnny Candelas		Power: 110VAC/60Hz	
		Job Site: OC13	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2018		ANSI C63.10:2013	
COMMENTS			
Directly connected to the antenna port of the King Router (MN: KWM1000)			
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, TX Pwr=36	10.008 MHz	500 kHz Pass
	Mid Channel 6, 2437 MHz, TX Pwr=38	9.277 MHz	500 kHz Pass
	High Channel 11, 2462 MHz, TX Pwr=40	9.778 MHz	500 kHz Pass
802.11(b) 11 Mbps			
	Low Channel 1, 2412 MHz, TX Pwr=36	9.912 MHz	500 kHz Pass
	Mid Channel 6, 2437 MHz, TX Pwr=38	9.570 MHz	500 kHz Pass
	High Channel 11, 2462 MHz, TX Pwr=40	9.177 MHz	500 kHz Pass
802.11(g) 6 Mbps			
	Low Channel 1, 2412 MHz, TX Pwr=23	15.899 MHz	500 kHz Pass
	Mid Channel 6, 2437 MHz, TX Pwr=25	16.112 MHz	500 kHz Pass
	High Channel 11, 2462 MHz, TX Pwr=27	16.293 MHz	500 kHz Pass
802.11(g) 36 Mbps			
	Low Channel 1, 2412 MHz, TX Pwr=23	16.337 MHz	500 kHz Pass
	Mid Channel 6, 2437 MHz, TX Pwr=25	16.325 MHz	500 kHz Pass
	High Channel 11, 2462 MHz, TX Pwr=27	16.302 MHz	500 kHz Pass
802.11(g) 54 Mbps			
	Low Channel 1, 2412 MHz, TX Pwr=23	16.376 MHz	500 kHz Pass
	Mid Channel 6, 2437 MHz, TX Pwr=25	16.375 MHz	500 kHz Pass
	High Channel 11, 2462 MHz, TX Pwr=27	16.365 MHz	500 kHz Pass
802.11(n) MCS0			
	Low Channel 1, 2412 MHz, TX Pwr=20	16.164 MHz	500 kHz Pass
	Mid Channel 6, 2437 MHz, TX Pwr=23	16.278 MHz	500 kHz Pass
	High Channel 11, 2462 MHz, TX Pwr=25	15.995 MHz	500 kHz Pass
	Low Channel 1/5, 2422 MHz, 40 MHz, TX Pwr=21	34.871 MHz	500 kHz Pass
	Mid Channel 4/8, 2437 MHz, 40 MHz, TX Pwr=23	34.977 MHz	500 kHz Pass
	High Channel 7/11, 2452 MHz, 40 MHz, TX Pwr=23	35.049 MHz	500 kHz Pass
802.11(n) MCS7			
	Low Channel 1, 2412 MHz, TX Pwr=20	16.635 MHz	500 kHz Pass
	Mid Channel 6, 2437 MHz, TX Pwr=23	16.650 MHz	500 kHz Pass
	High Channel 11, 2462 MHz, TX Pwr=25	16.636 MHz	500 kHz Pass
	Low Channel 1/5, 2422 MHz, 40 MHz, TX Pwr=21	35.132 MHz	500 kHz Pass
	Mid Channel 4/8, 2437 MHz, 40 MHz, TX Pwr=23	35.120 MHz	500 kHz Pass
	High Channel 7/11, 2452 MHz, 40 MHz, TX Pwr=23	35.121 MHz	500 kHz Pass

OCCUPIED BANDWIDTH

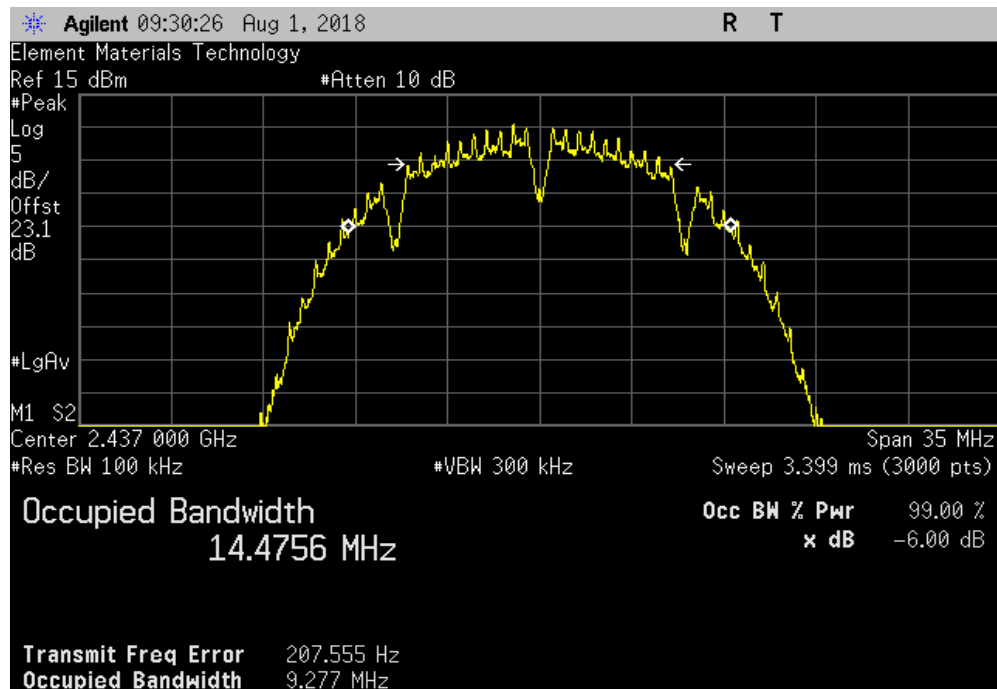


TMTx 2017.12.14 XMM 2017.12.13

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



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

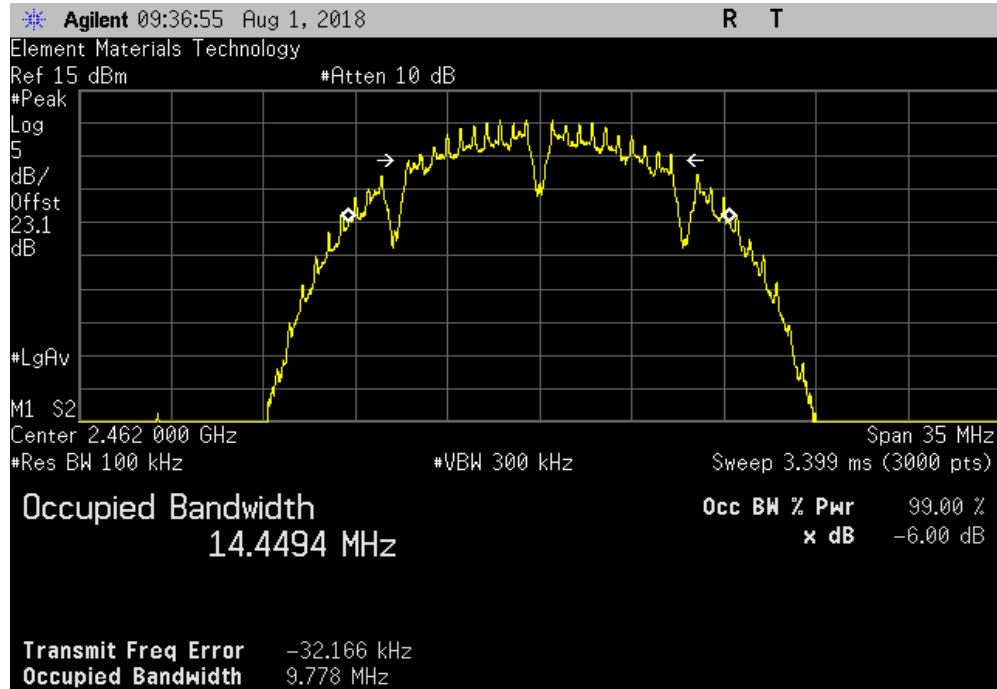


OCCUPIED BANDWIDTH

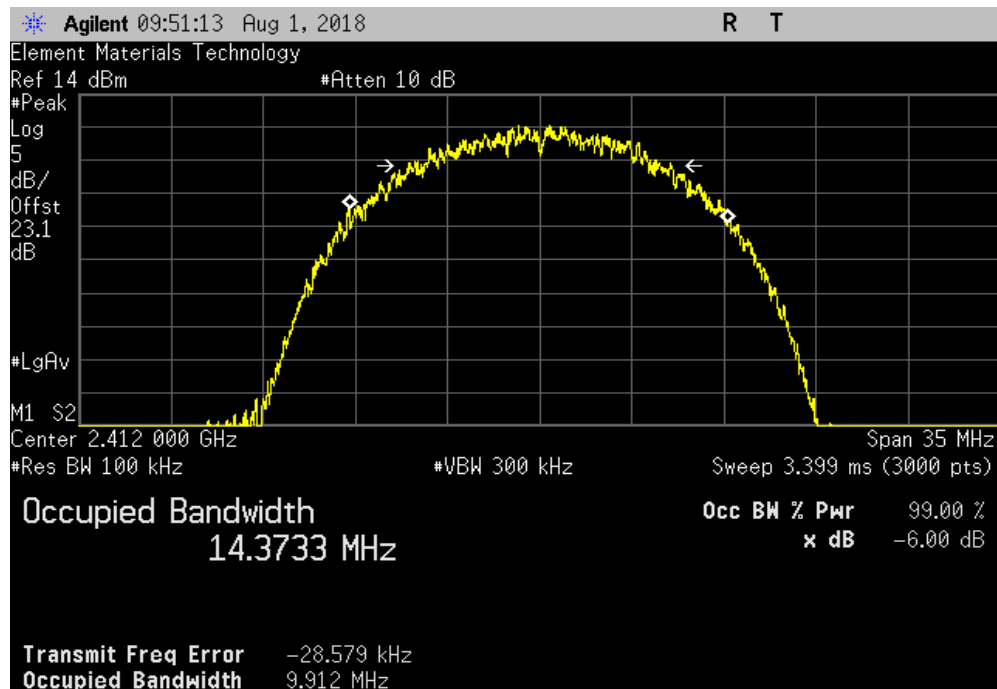


TMTx 2017.12.14 XMM 2017.12.13

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



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

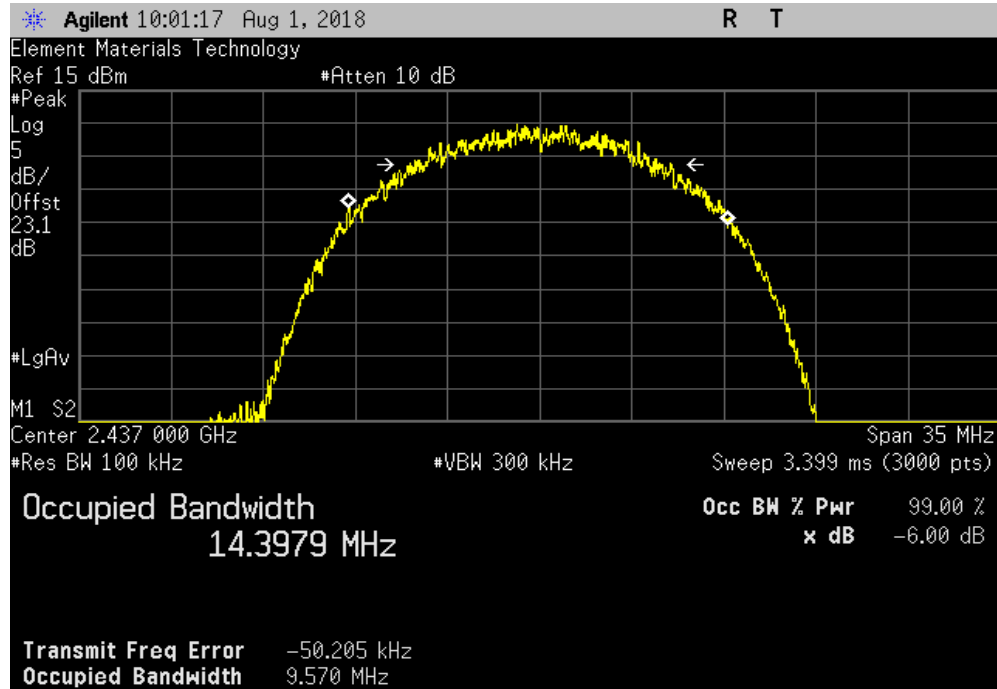


OCCUPIED BANDWIDTH

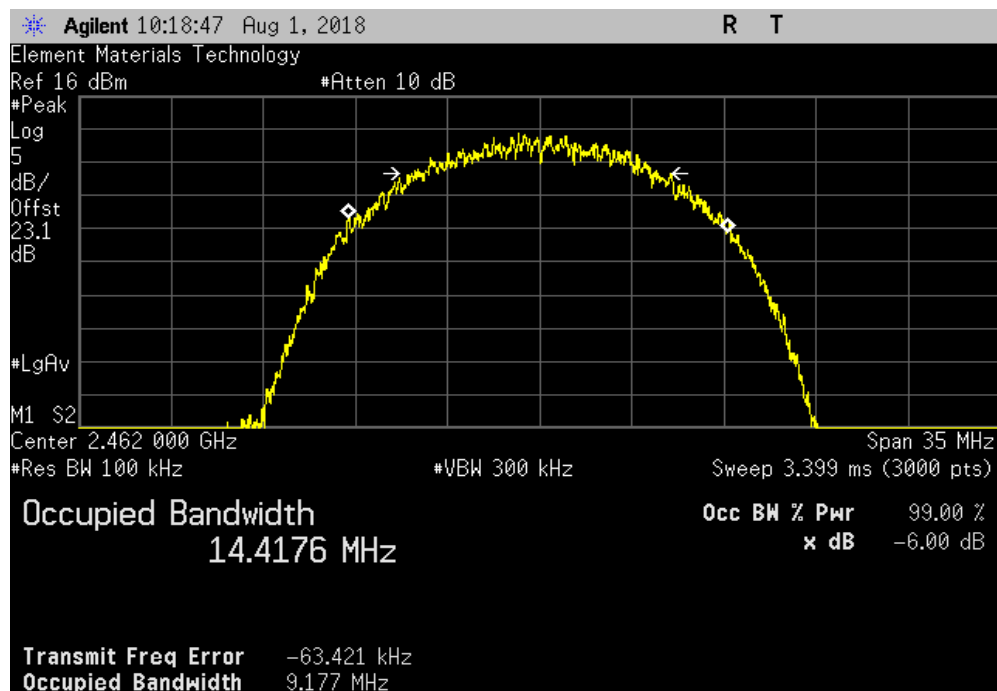


TMTx 2017.12.14 XMM 2017.12.13

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



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

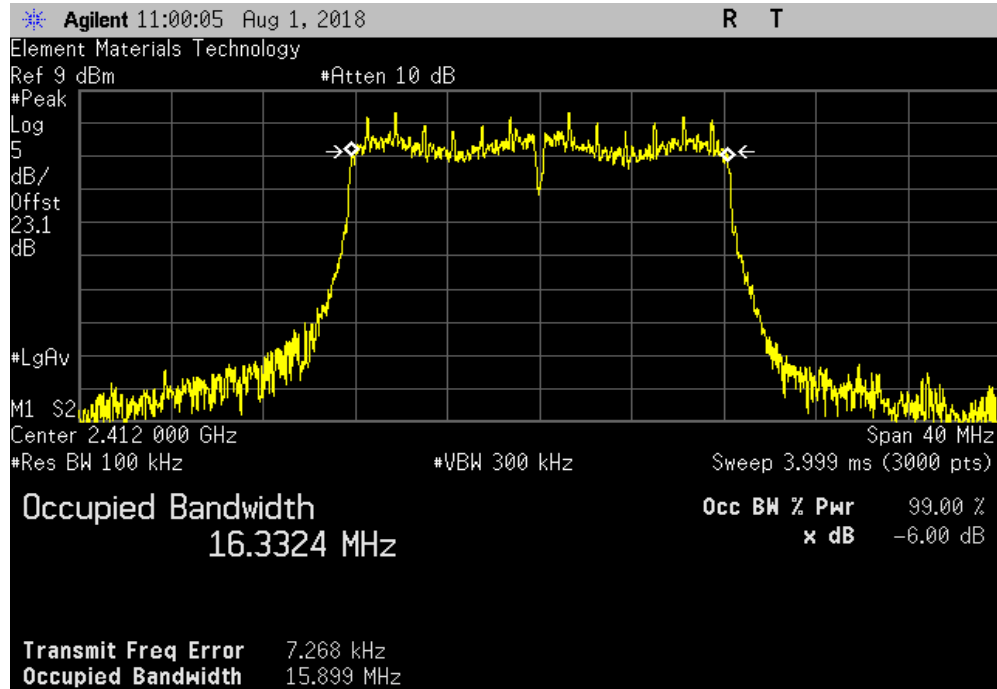


OCCUPIED BANDWIDTH

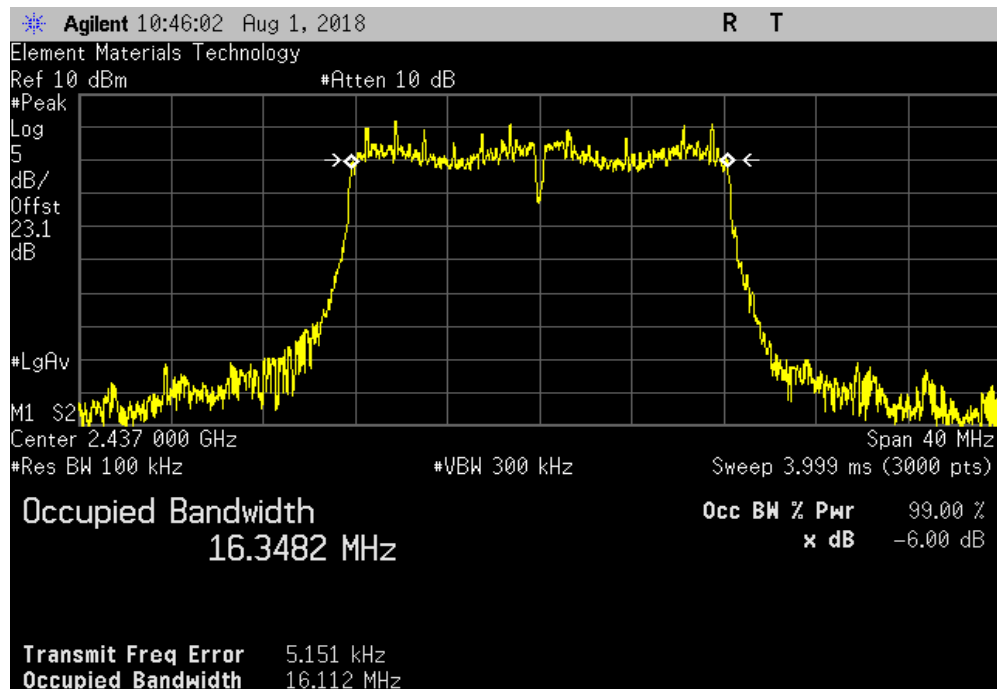


TMTx 2017.12.14 XMM 2017.12.13

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



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

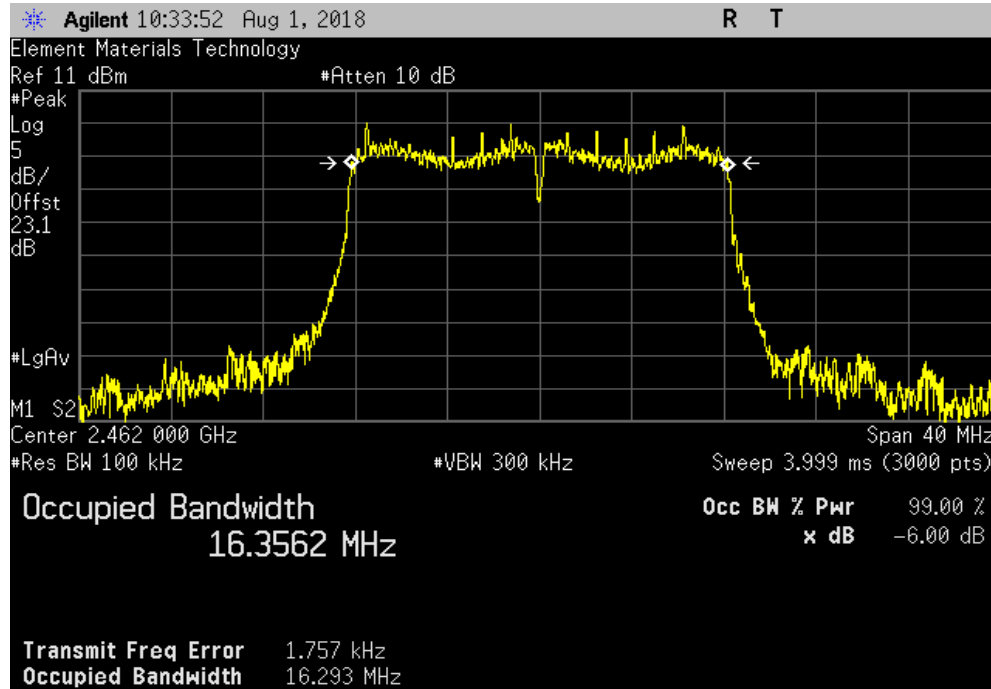


OCCUPIED BANDWIDTH

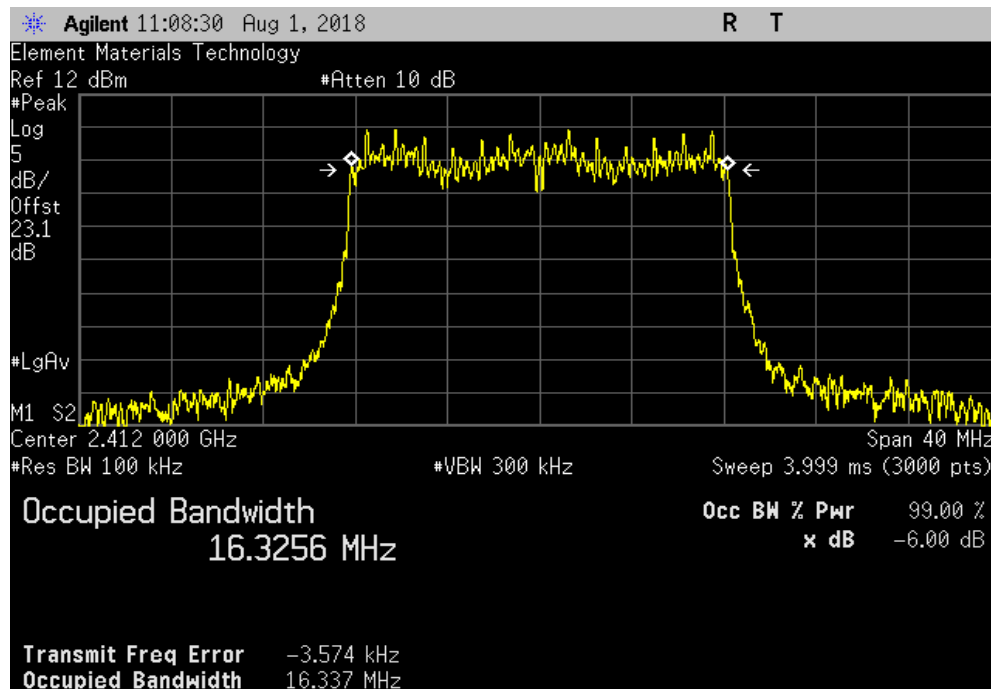


TMTx 2017.12.14 XMM 2017.12.13

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



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

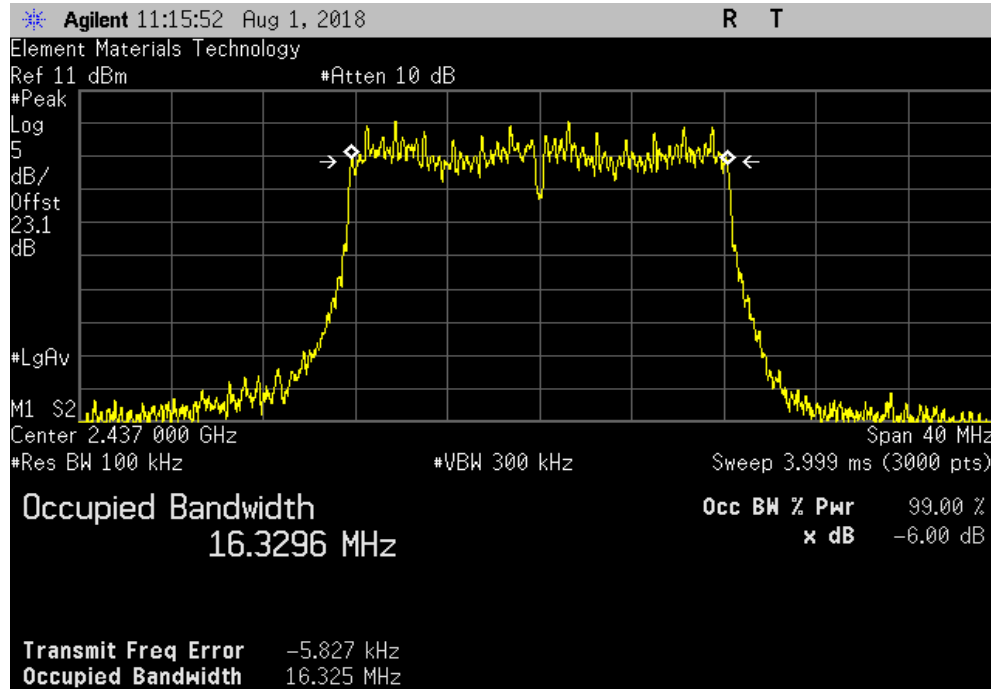


OCCUPIED BANDWIDTH

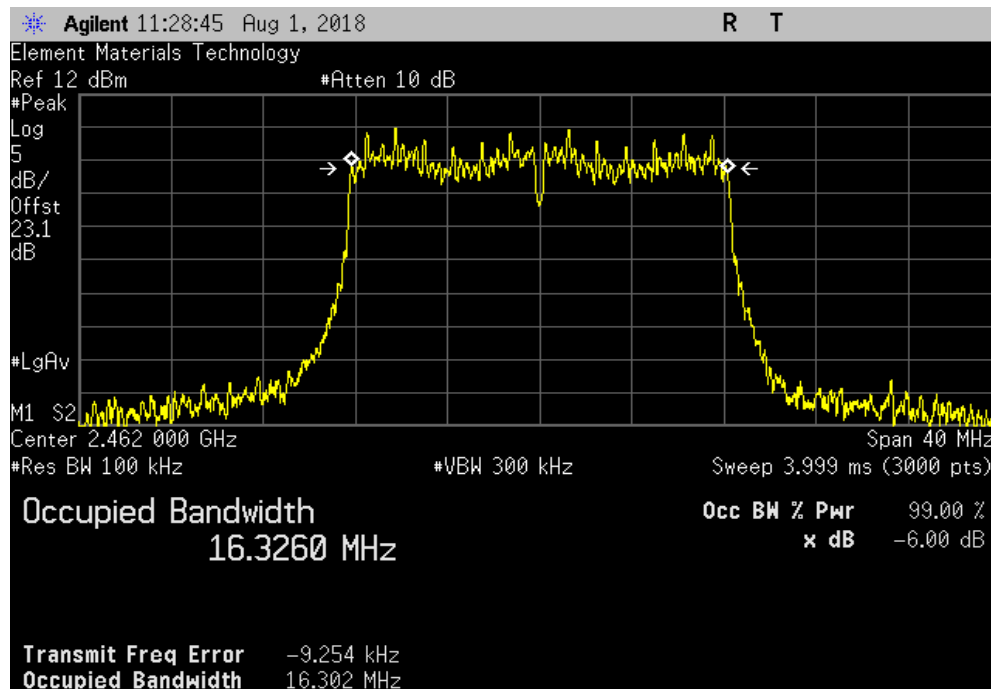


TMTx 2017.12.14 XMM 2017.12.13

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



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

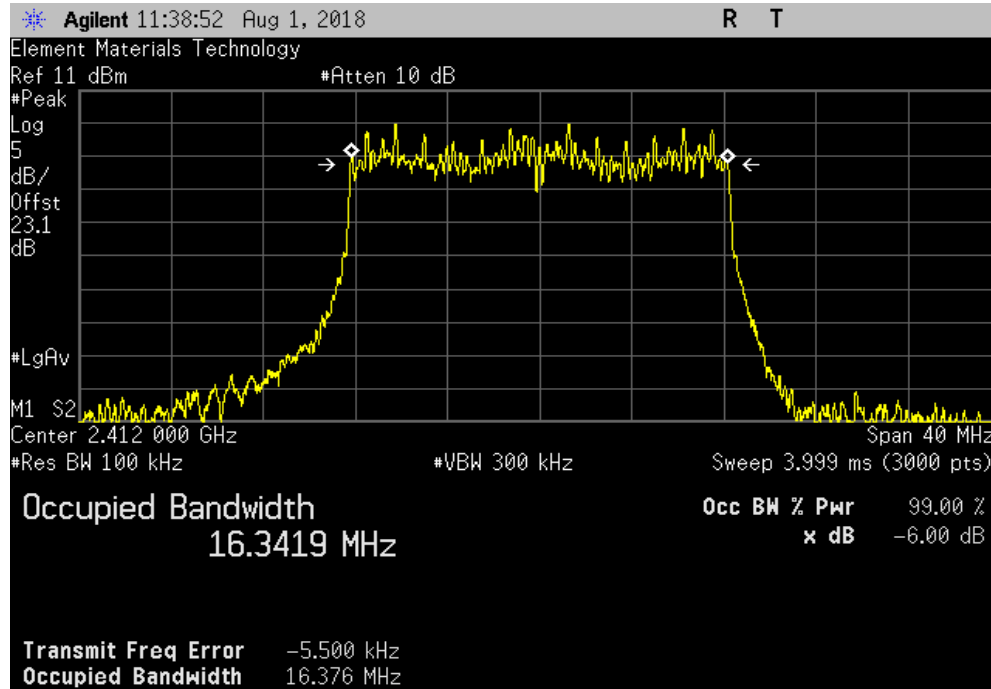


OCCUPIED BANDWIDTH

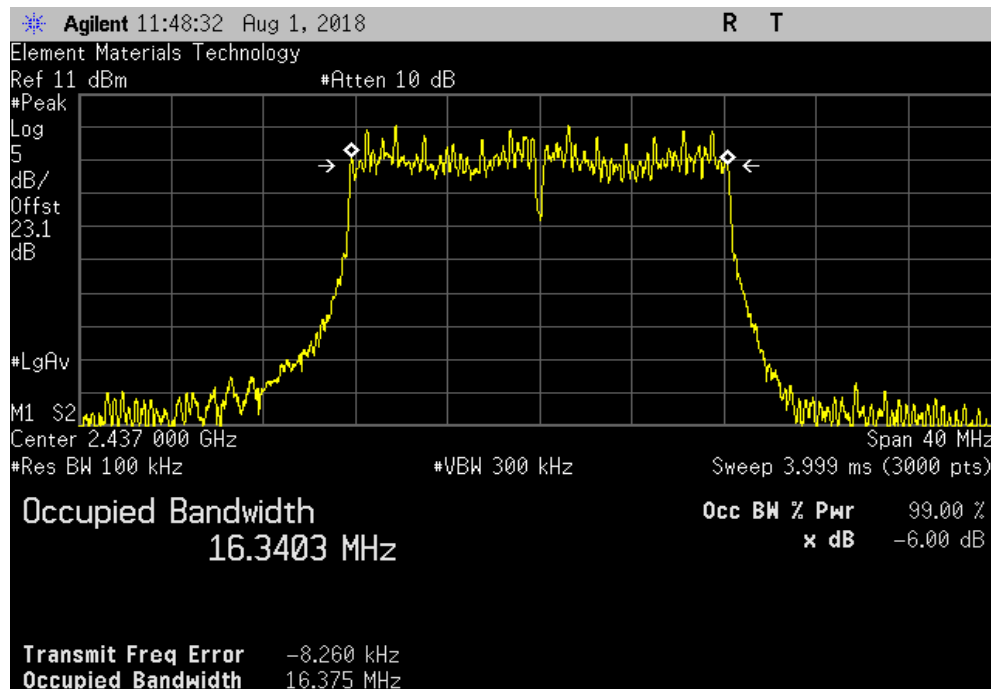


TMTx 2017.12.14 XMM 2017.12.13

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



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

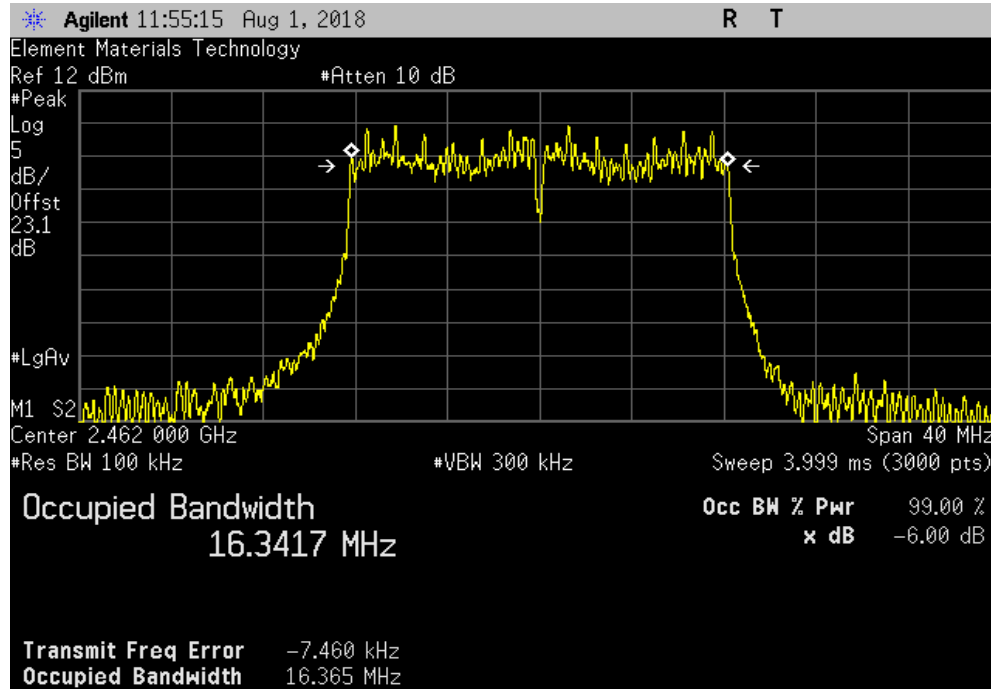


OCCUPIED BANDWIDTH

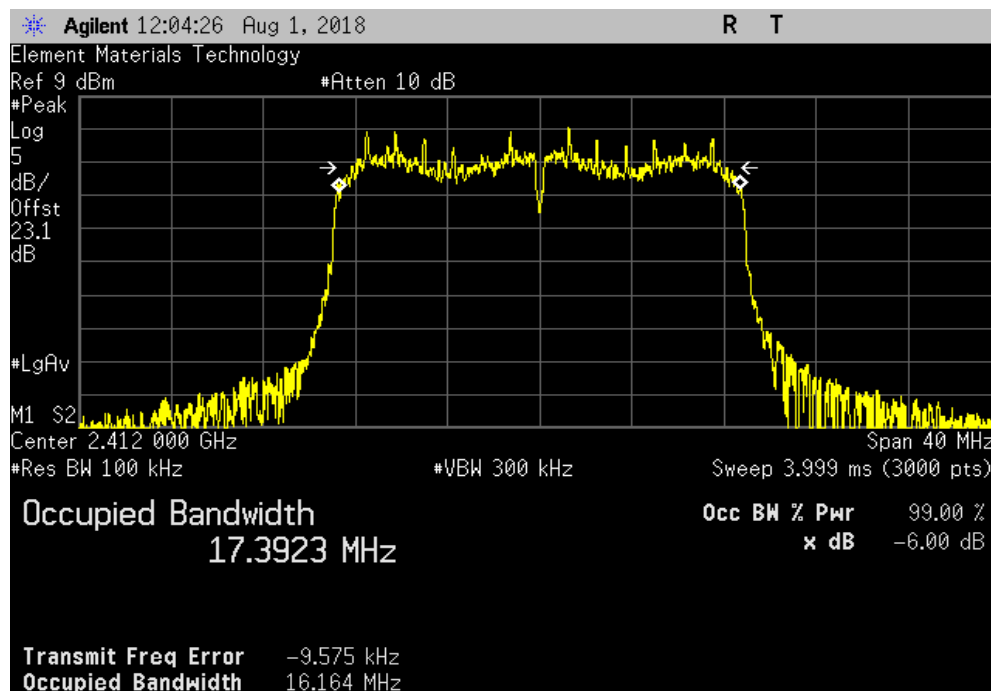


TMTx 2017.12.14 XMM 2017.12.13

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



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

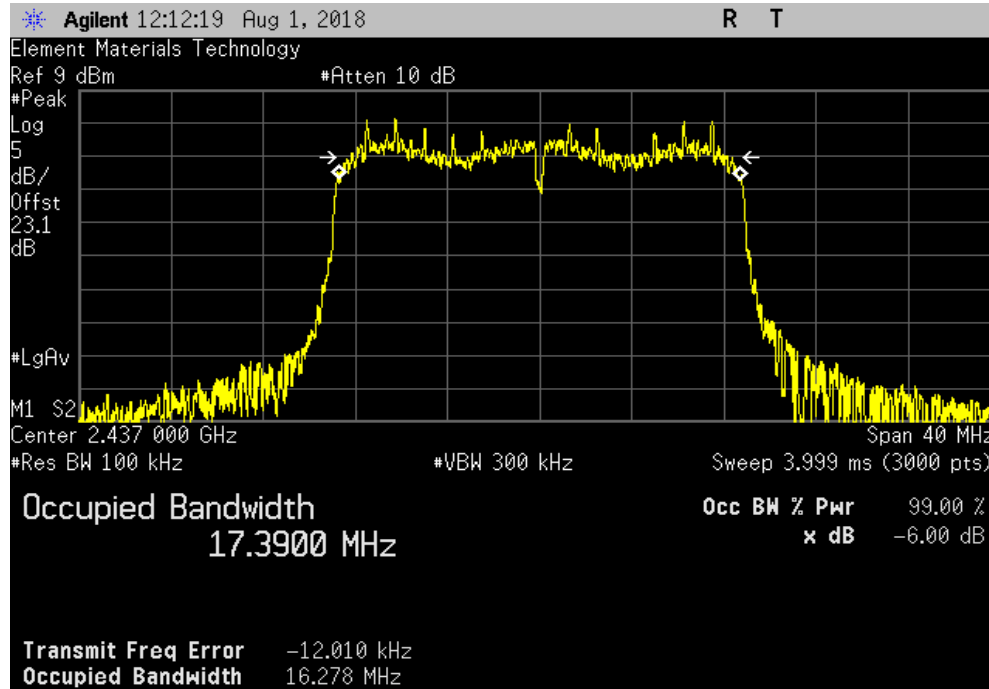


OCCUPIED BANDWIDTH

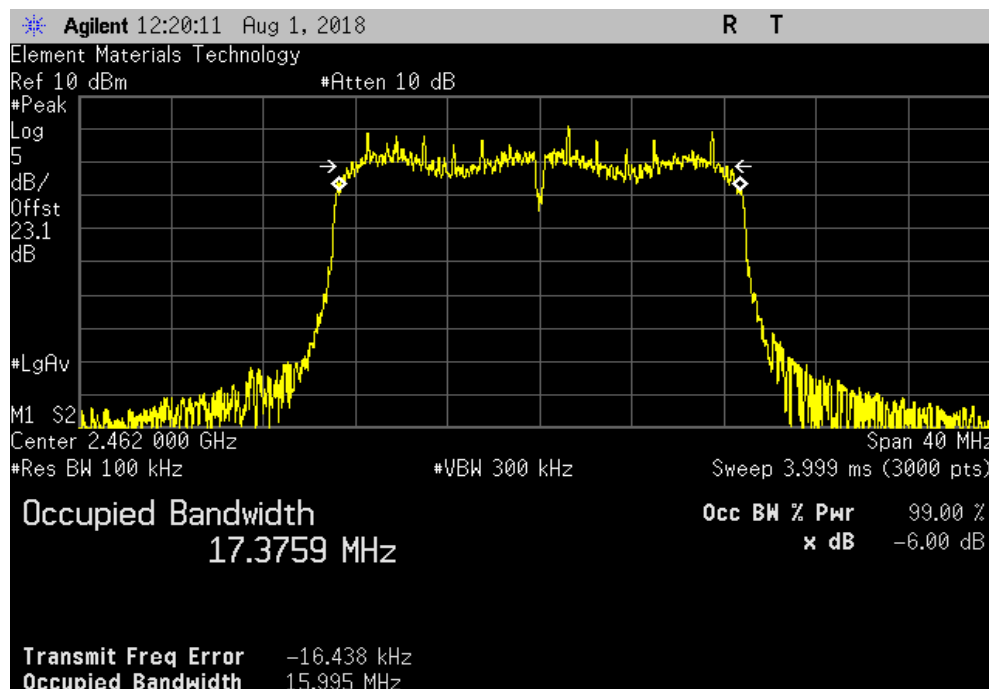


TMTx 2017.12.14 XMM 2017.12.13

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



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

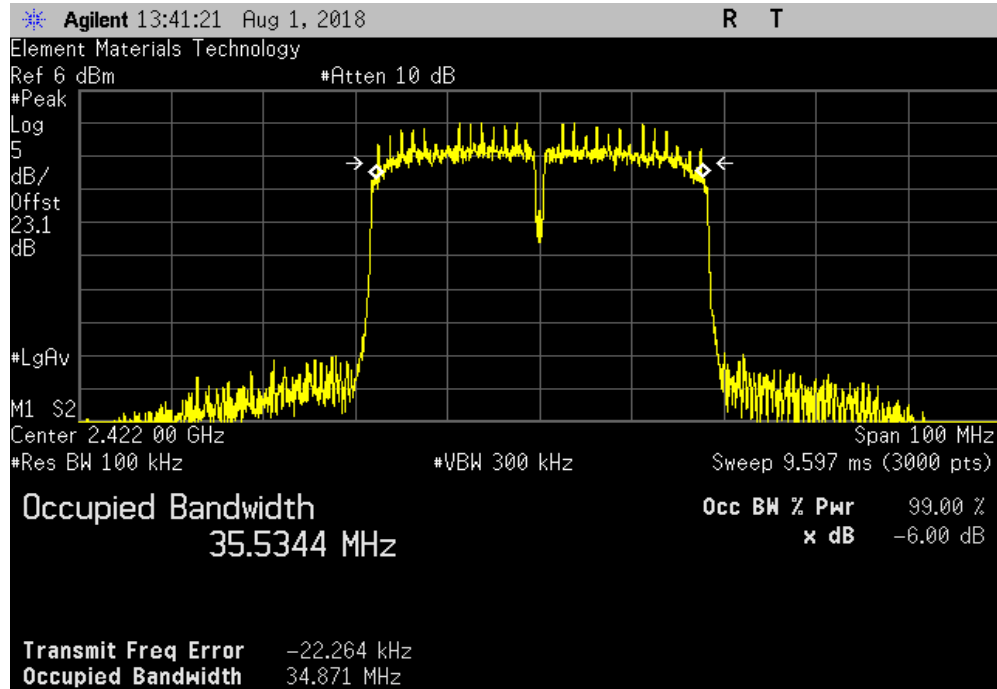


OCCUPIED BANDWIDTH

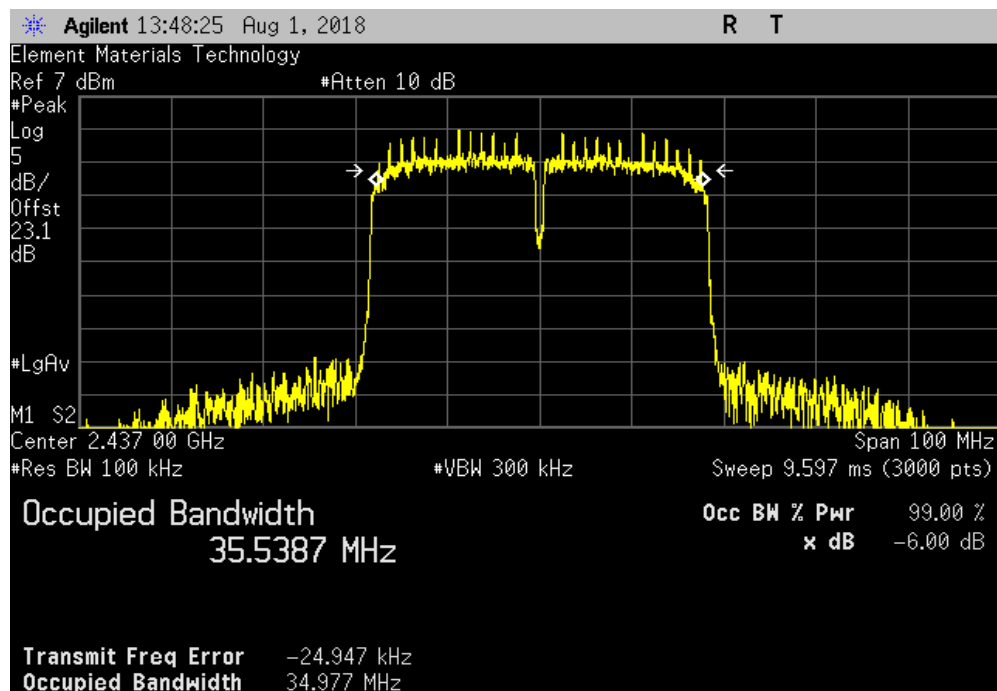


TMTx 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1/5, 2422 MHz, 40 MHz						
				Value	Limit (>)	Result
				34.871 MHz	500 kHz	Pass



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Mid Channel 4/8, 2437 MHz, 40 MHz						
				Value	Limit (>)	Result
				34.977 MHz	500 kHz	Pass

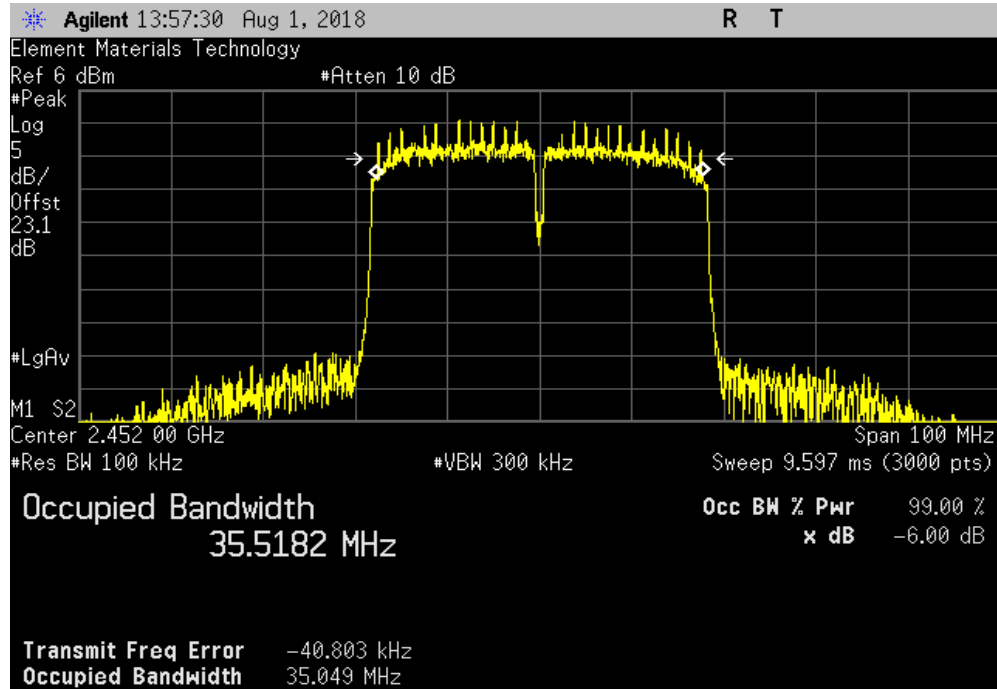


OCCUPIED BANDWIDTH

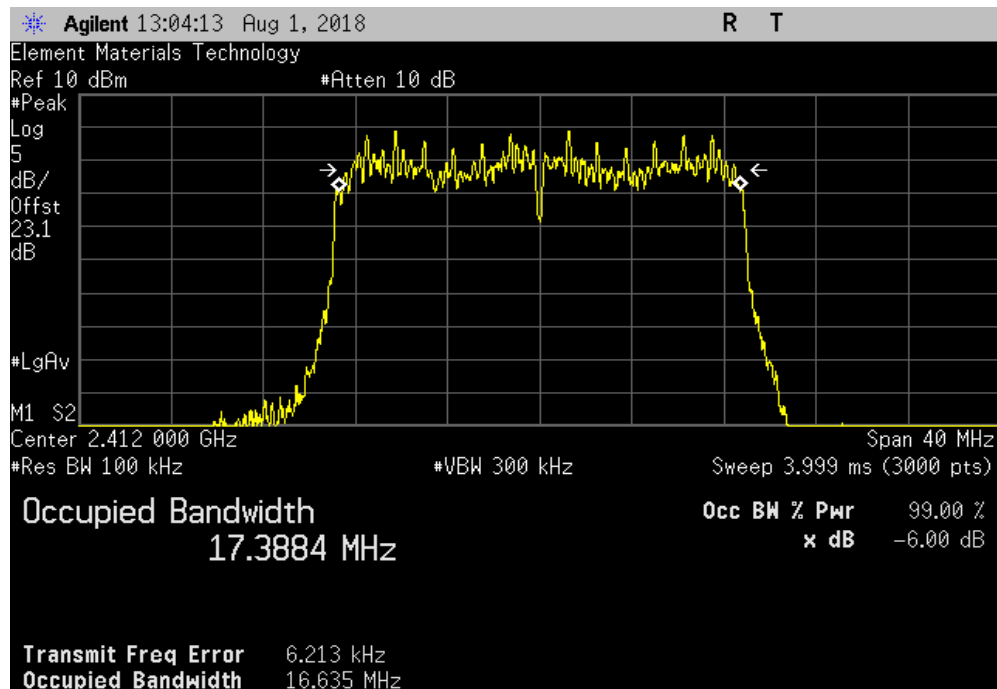


TMTx 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 7/11, 2452 MHz, 40 MHz						
				Value	Limit (>)	Result
				35.049 MHz	500 kHz	Pass



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

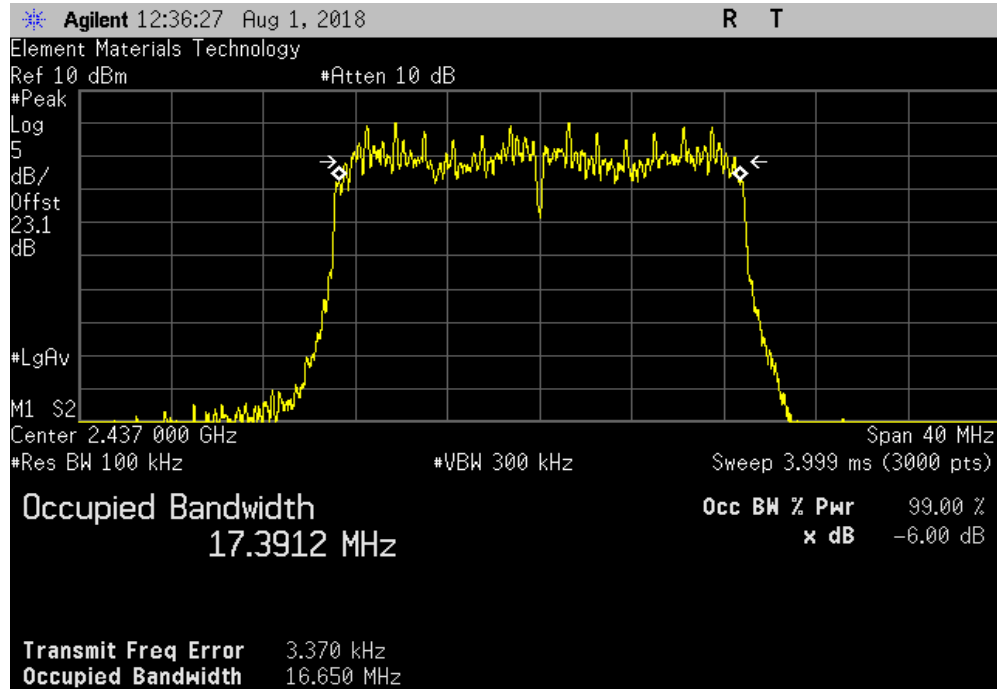


OCCUPIED BANDWIDTH

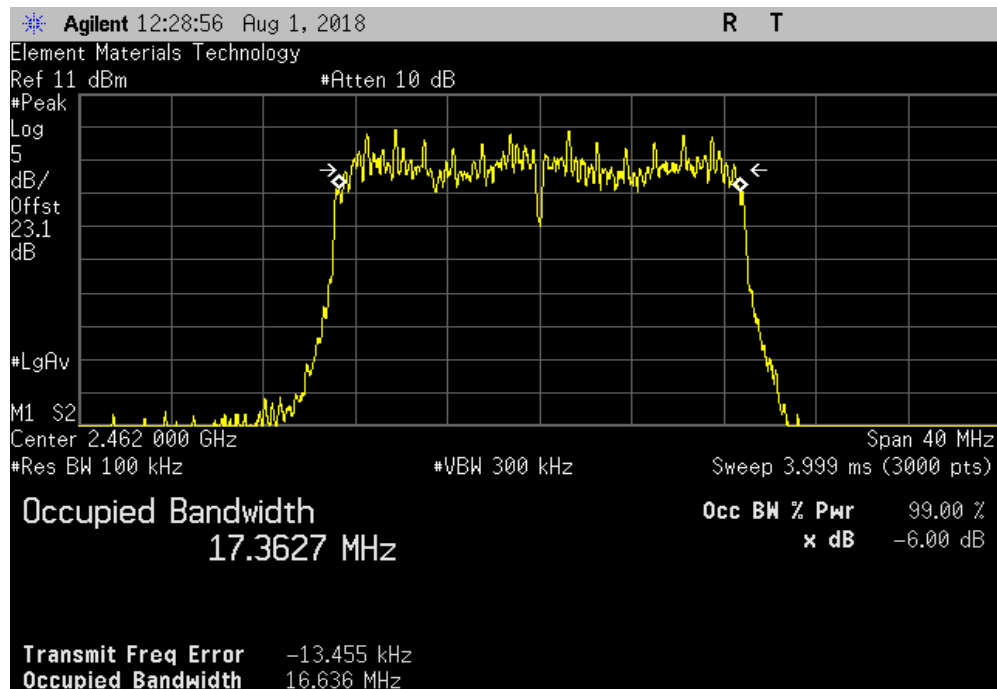


TMTx 2017.12.14 XMM 2017.12.13

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



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

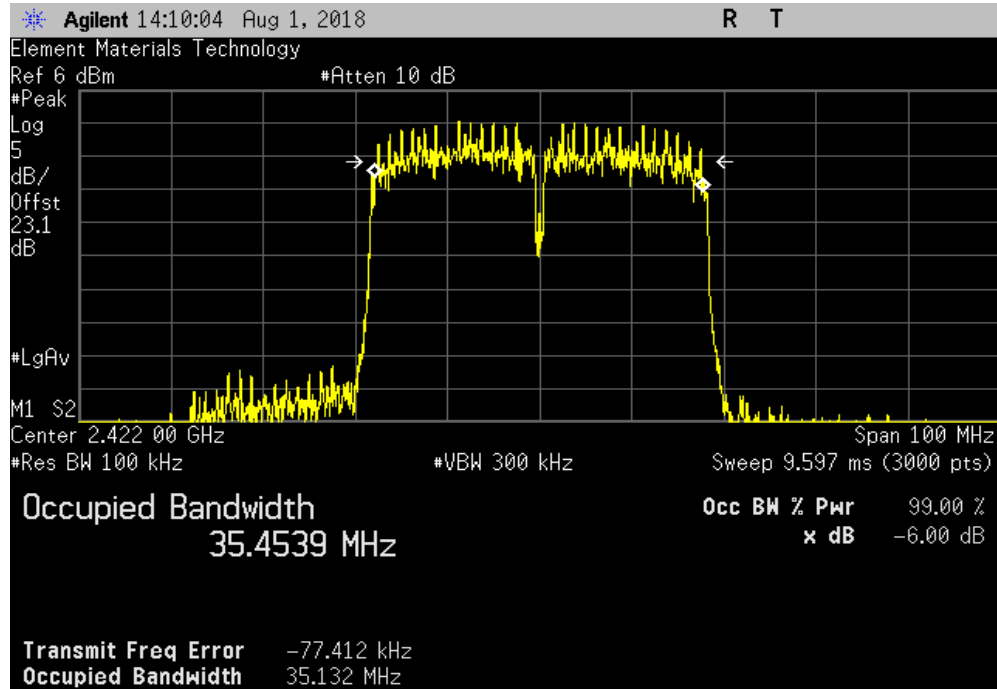


OCCUPIED BANDWIDTH

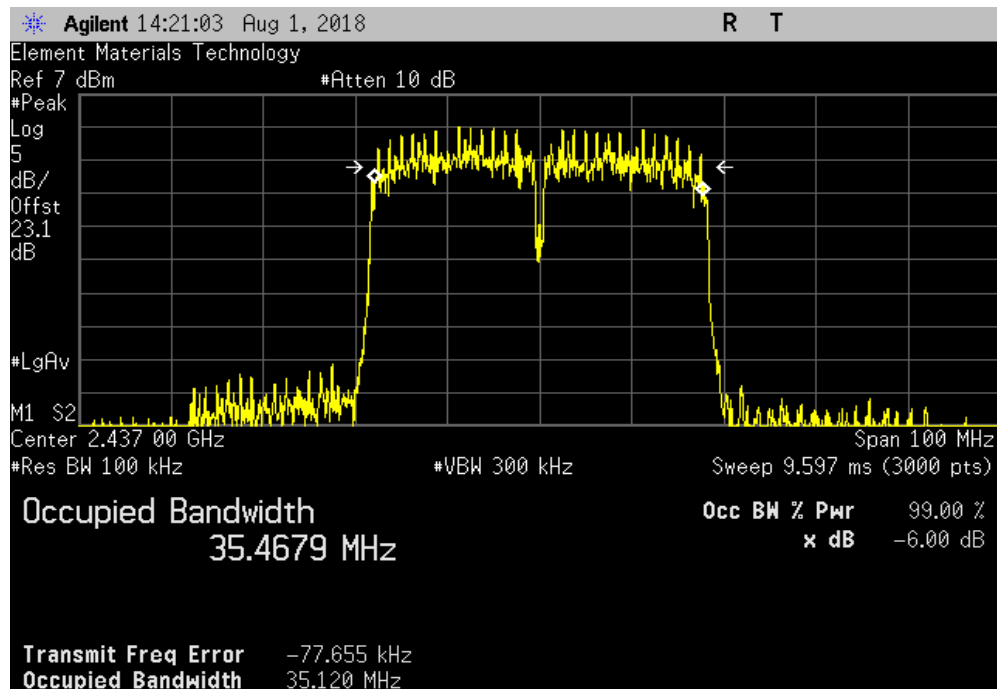


TMTx 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1/5, 2422 MHz, 40 MHz						
				Value	Limit (>)	Result
				35.132 MHz	500 kHz	Pass



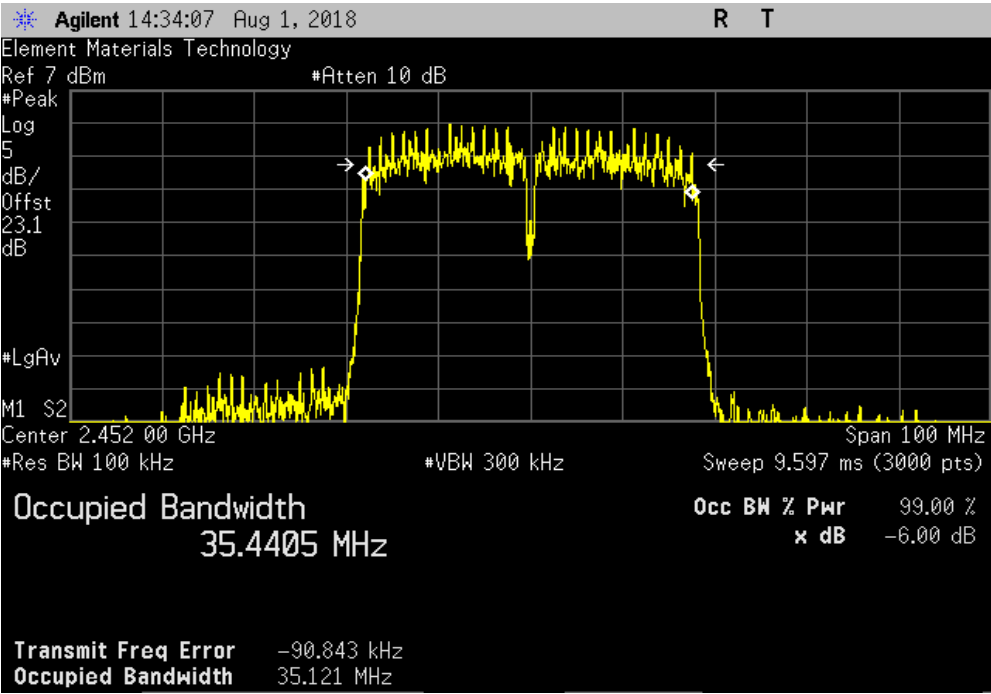
2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Mid Channel 4/8, 2437 MHz, 40 MHz						
				Value	Limit (>)	Result
				35.120 MHz	500 kHz	Pass



OCCUPIED BANDWIDTH



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, High Channel 7/11, 2452 MHz, 40 MHz						
				Value	Limit	Result
				35.121 MHz	(>) 500 kHz	Pass



OUTPUT POWER



XMIT 2017.12.13

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Agilent	E8257D	TGU	15-Feb-18	15-Feb-21
Cable	Fairview Microwave	SCA1814-0101-120	OCZ	NCR	NCR
Attenuator	Fairview Microwave	SA18H-20	TKR	28-Dec-17	28-Dec-18
Block - DC	Fairview Microwave	SD3379	AMV	28-Dec-17	28-Dec-18
Analyzer - Spectrum Analyzer	Agilent	E4440A	AFA	9-Nov-17	9-Nov-18

TEST DESCRIPTION

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

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

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

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

Limit of +28 dBm is being applied since the EUT uses an Antenna with 8 dBi gain.

OUTPUT POWER



TIMTx 2017.12.14 XMM 2017.12.13

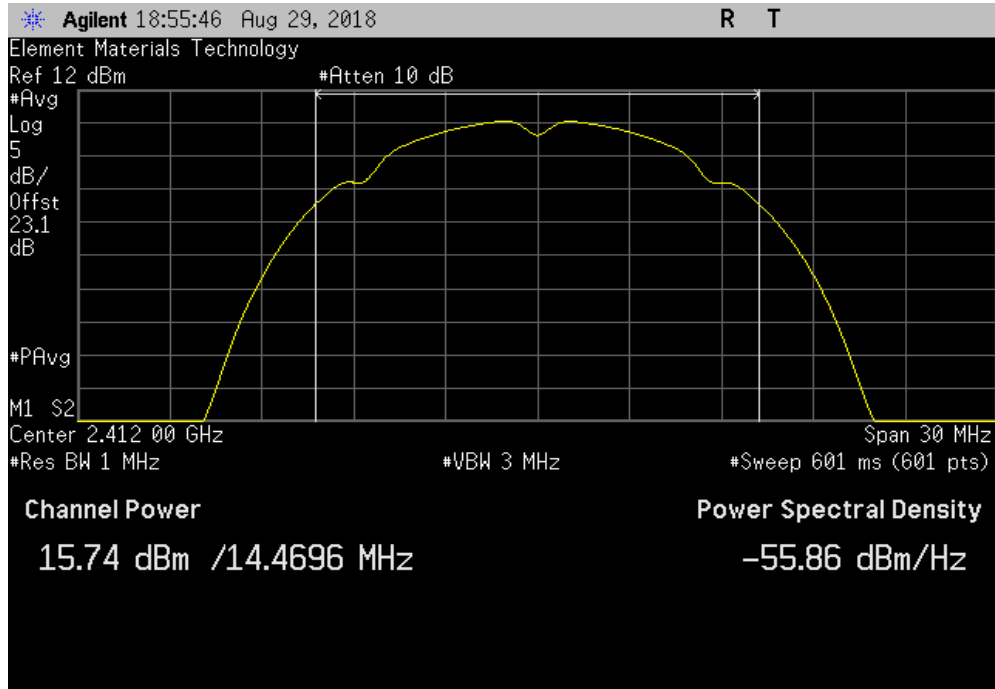
EUT: Falcon		Work Order: KING0032	
Serial Number: See Configurations		Date: 1-Aug-18	
Customer: King		Temperature: 26.3 °C	
Attendees: None		Humidity: 44.5% RH	
Project: None		Barometric Pres.: 1015 mbar	
Tested by: Johnny Candelas		Power: 110VAC/60Hz	
		Job Site: OC13	
TEST SPECIFICATIONS		Test Method	
FCC 15.247:2018		ANSI C63.10:2013	
COMMENTS			
Directly connected to the antenna port of the King Router (MN: KWM1000)			
DEVIATIONS FROM TEST STANDARD			
None			
Configuration #	2	Signature	
		Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)
		Value (dBm)	Limit (dBm)
			Results
2400 MHz - 2483.5 MHz Band			
802.11(b) 1 Mbps			
	Low Channel 1, 2412 MHz, TX Pwr=29	15.741	0
	Mid Channel 6, 2437 MHz, TX Pwr=31	16.044	0
	High Channel 11, 2462 MHz, TX Pwr=36	17.229	0
802.11(b) 11 Mbps			
	Low Channel 1, 2412 MHz, TX Pwr=36	18.526	0.1
	Mid Channel 6, 2437 MHz, TX Pwr=38	19.045	0.1
	High Channel 11, 2462 MHz, TX Pwr=40	19.420	0.1
802.11(g) 6 Mbps			
	Low Channel 1, 2412 MHz, TX Pwr=23	16.133	0.1
	Mid Channel 6, 2437 MHz, TX Pwr=25	16.589	0.1
	High Channel 11, 2462 MHz, TX Pwr=27	16.999	0.1
802.11(g) 36 Mbps			
	Low Channel 1, 2412 MHz, TX Pwr=23	17.234	0.3
	Mid Channel 6, 2437 MHz, TX Pwr=25	16.500	0.3
	High Channel 11, 2462 MHz, TX Pwr=27	16.967	0.3
802.11(g) 54 Mbps			
	Low Channel 1, 2412 MHz, TX Pwr=23	16.099	0.4
	Mid Channel 6, 2437 MHz, TX Pwr=25	16.390	0.4
	High Channel 11, 2462 MHz, TX Pwr=27	16.766	0.4
802.11(n) MCS0			
	Low Channel 1, 2412 MHz, TX Pwr=20	14.565	0.1
	Mid Channel 6, 2437 MHz, TX Pwr=23	15.441	0.1
	High Channel 11, 2462 MHz, TX Pwr=25	15.789	0.1
	Low Channel 1/5, 2422 MHz, 40 MHz, TX Pwr=21	14.916	0.2
	Mid Channel 4/8, 2437 MHz, 40 MHz, TX Pwr=23	15.452	0.2
	High Channel 7/11, 2452 MHz, 40 MHz, TX Pwr=23	15.109	0.2
802.11(n) MCS7			
	Low Channel 1, 2412 MHz, TX Pwr=20	14.561	0.4
	Mid Channel 6, 2437 MHz, TX Pwr=23	15.716	0.4
	High Channel 11, 2462 MHz, TX Pwr=25	15.643	0.4
	Low Channel 1/5, 2422 MHz, 40 MHz, TX Pwr=21	14.550	1
	Mid Channel 4/8, 2437 MHz, 40 MHz, TX Pwr=23	15.222	1
	High Channel 7/11, 2452 MHz, 40 MHz, TX Pwr=23	14.939	1

OUTPUT POWER

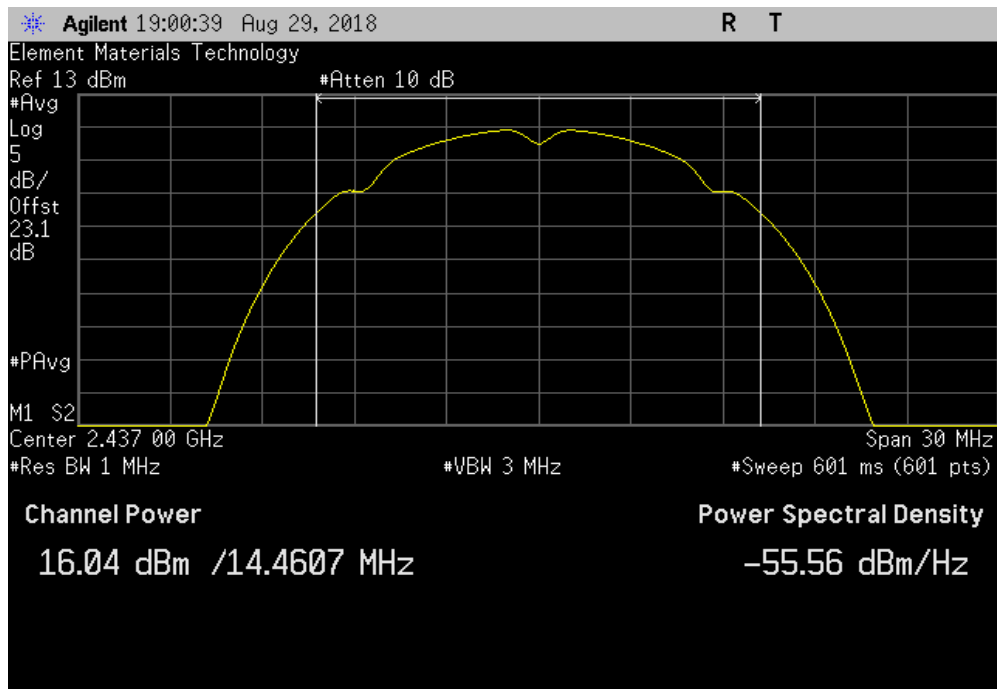


TMTx 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Low Channel 1, 2412 MHz						
Avg Cond	Duty Cycle	Value	Limit	Results		
Pwr (dBm)	Factor (dB)	(dBm)	(dBm)			
15.741	0	15.7	28	Pass		



2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, Mid Channel 6, 2437 MHz						
Avg Cond	Duty Cycle	Value	Limit	Results		
Pwr (dBm)	Factor (dB)	(dBm)	(dBm)			
16.044	0	16.0	28	Pass		

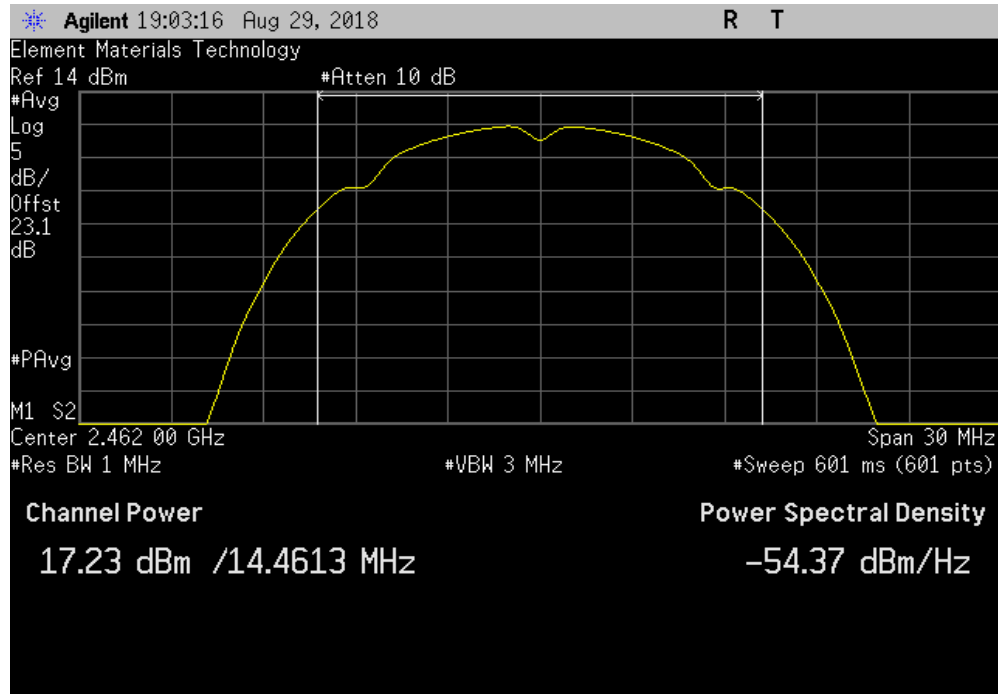


OUTPUT POWER

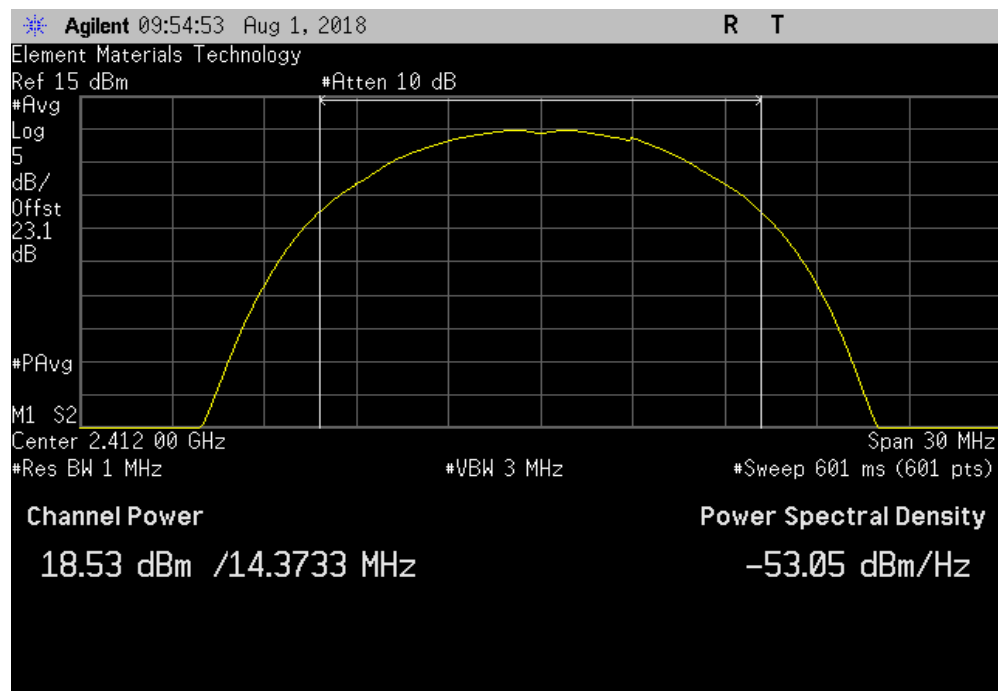


TMTx 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(b) 1 Mbps, High Channel 11, 2462 MHz						
Avg Cond	Duty Cycle		Value	Limit	Results	
Pwr (dBm)	Factor (dB)		(dBm)	(dBm)		
17.229	0		17.2	28	Pass	



2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Low Channel 1, 2412 MHz						
Avg Cond	Duty Cycle		Value	Limit	Results	
Pwr (dBm)	Factor (dB)		(dBm)	(dBm)		
18.526	0.1		18.6	28	Pass	

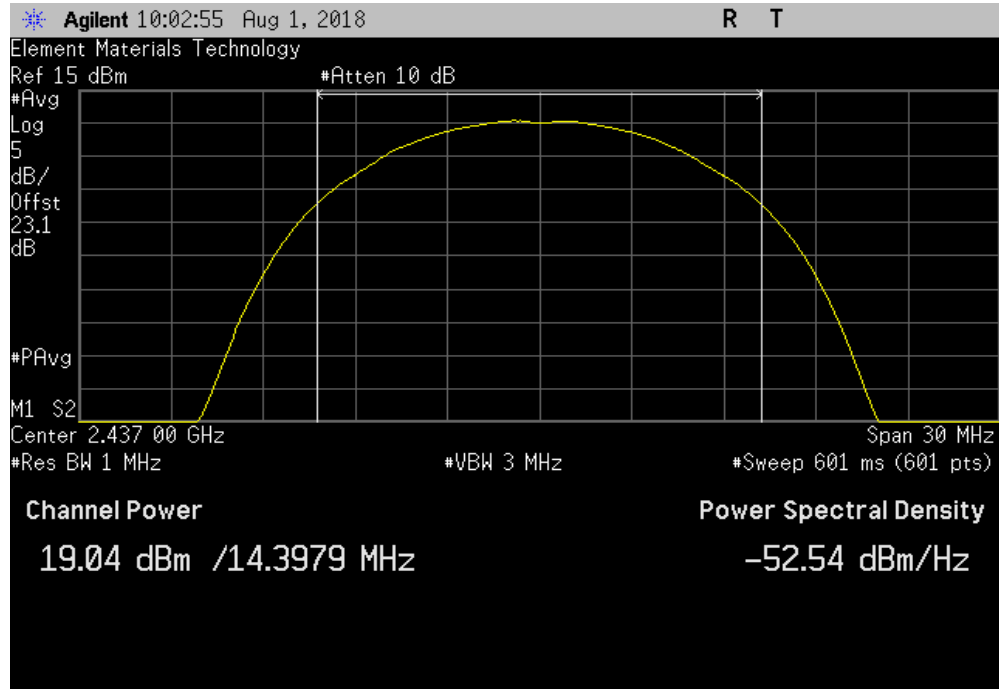


OUTPUT POWER

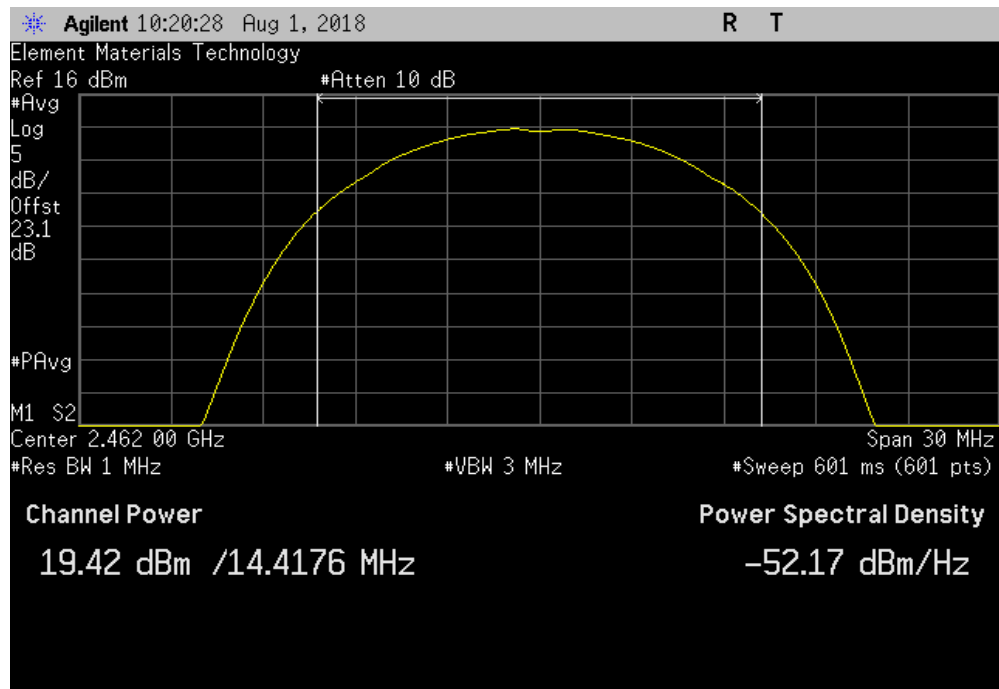


TMTx 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, Mid Channel 6, 2437 MHz						
Avg Cond	Duty Cycle		Value	Limit	Results	
Pwr (dBm)	Factor (dB)		(dBm)	(dBm)		
19.045	0.1		19.1	28	Pass	



2400 MHz - 2483.5 MHz Band, 802.11(b) 11 Mbps, High Channel 11, 2462 MHz						
Avg Cond	Duty Cycle		Value	Limit	Results	
Pwr (dBm)	Factor (dB)		(dBm)	(dBm)		
19.420	0.1		19.5	28	Pass	

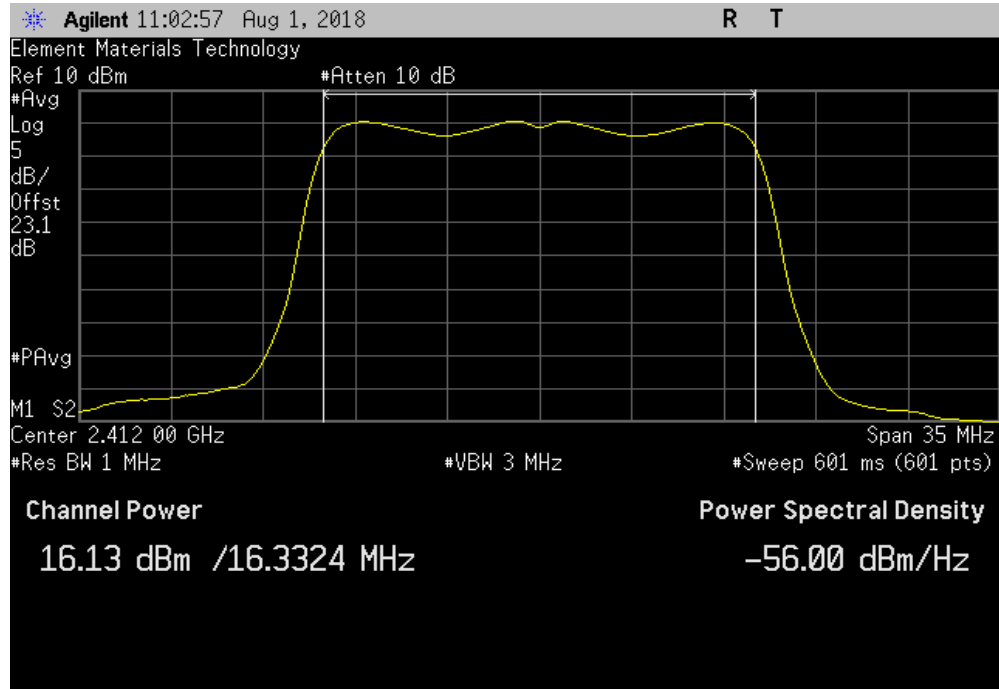


OUTPUT POWER

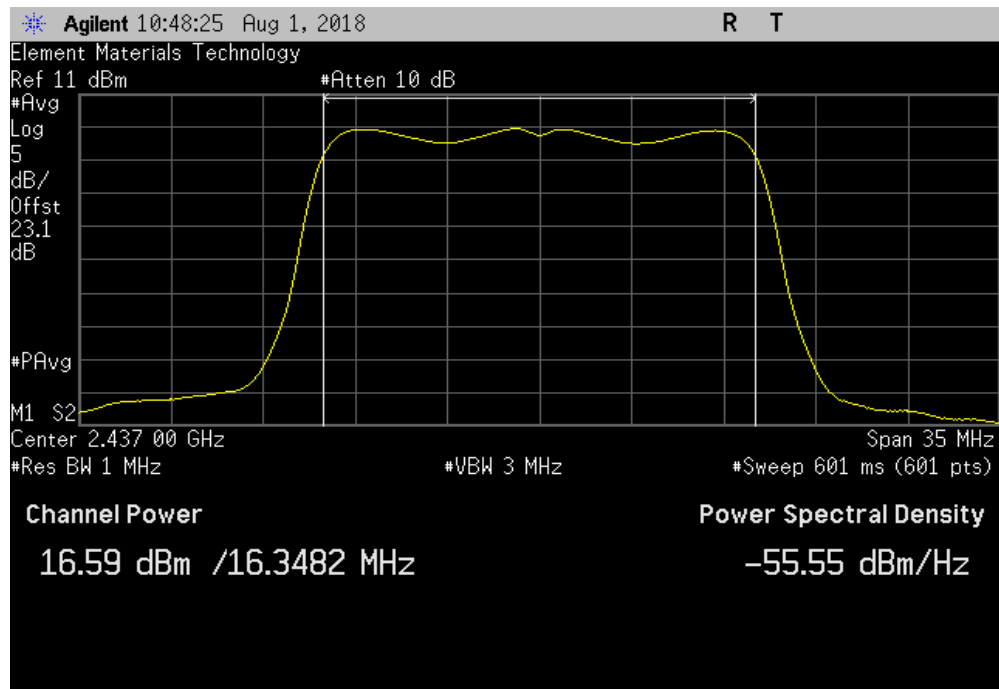


TMTx 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Low Channel 1, 2412 MHz						
Avg Cond	Duty Cycle	Value	Limit	Results		
Pwr (dBm)	Factor (dB)	(dBm)	(dBm)			
16.133	0.1	16.2	28	Pass		



2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, Mid Channel 6, 2437 MHz						
Avg Cond	Duty Cycle	Value	Limit	Results		
Pwr (dBm)	Factor (dB)	(dBm)	(dBm)			
16.589	0.1	16.7	28	Pass		

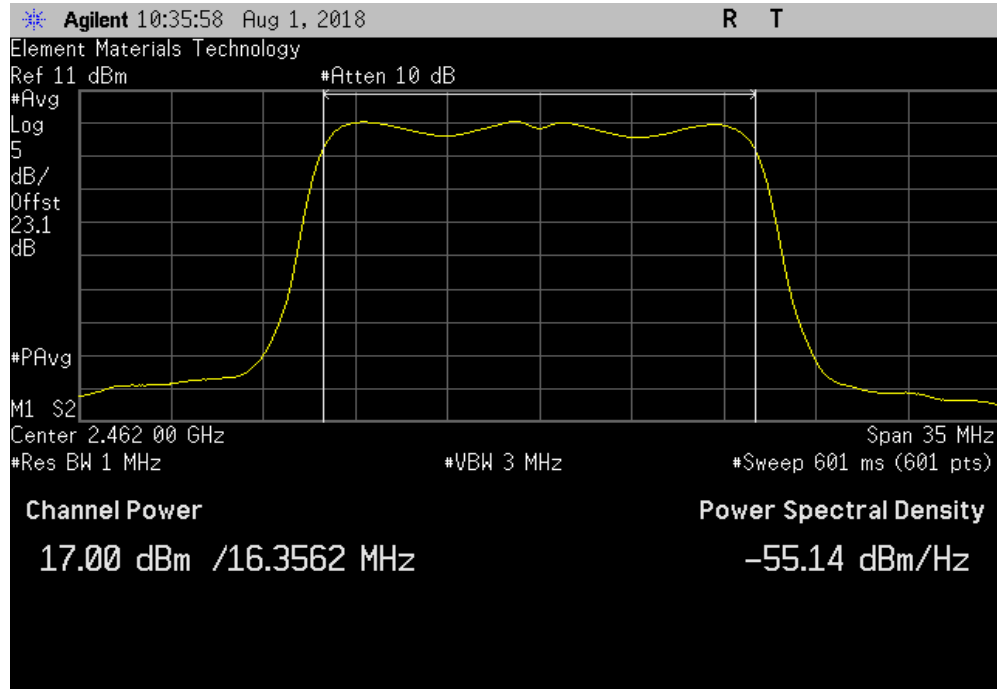


OUTPUT POWER

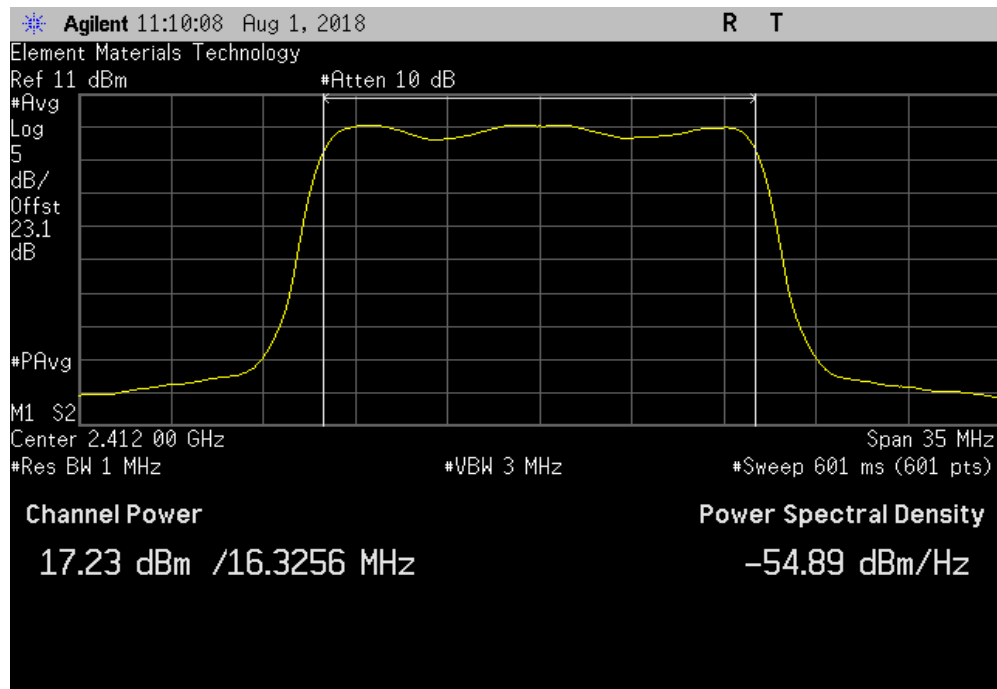


TMTx 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(g) 6 Mbps, High Channel 11, 2462 MHz						
Avg Cond	Duty Cycle	Value	Limit	Results		
Pwr (dBm)	Factor (dB)	(dBm)	(dBm)			
16.999	0.1	17.1	28	Pass		



2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Low Channel 1, 2412 MHz						
Avg Cond	Duty Cycle	Value	Limit	Results		
Pwr (dBm)	Factor (dB)	(dBm)	(dBm)			
17.234	0.3	17.5	28	Pass		

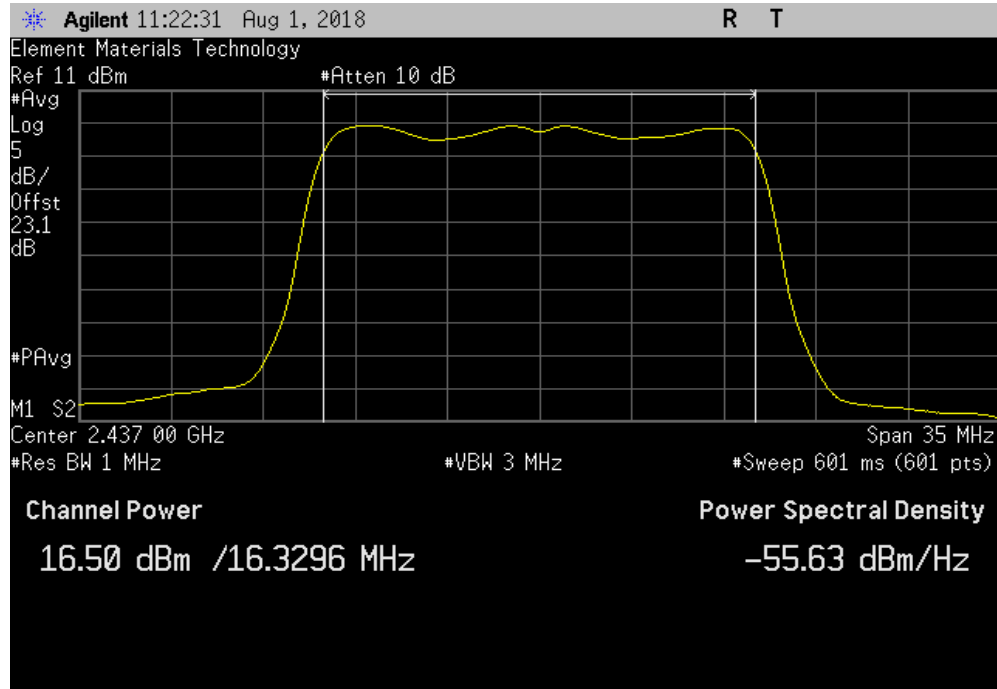


OUTPUT POWER

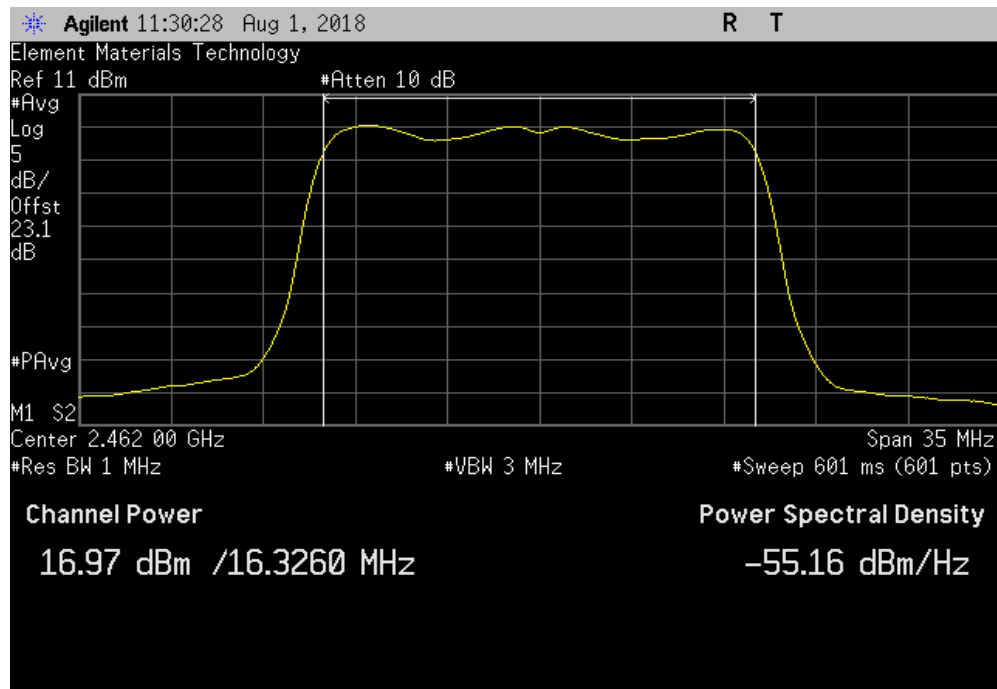


TMTx 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, Mid Channel 6, 2437 MHz						
Avg Cond	Duty Cycle		Value	Limit	Results	
Pwr (dBm)	Factor (dB)		(dBm)	(dBm)		
16.500	0.3		16.8	28	Pass	



2400 MHz - 2483.5 MHz Band, 802.11(g) 36 Mbps, High Channel 11, 2462 MHz						
Avg Cond	Duty Cycle		Value	Limit	Results	
Pwr (dBm)	Factor (dB)		(dBm)	(dBm)		
16.967	0.3		17.2	28	Pass	

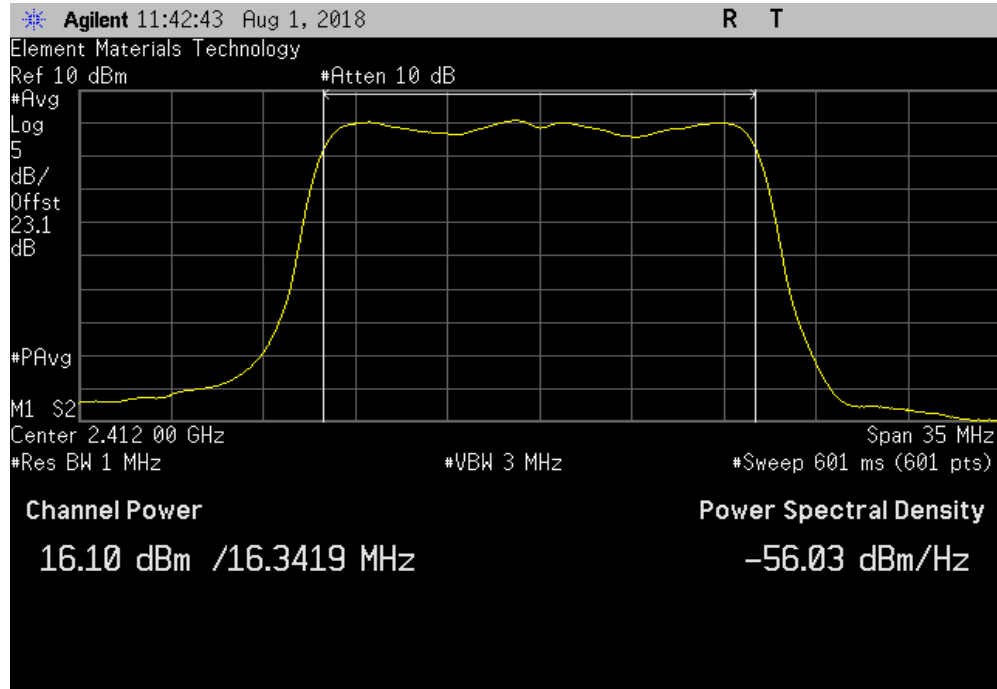


OUTPUT POWER

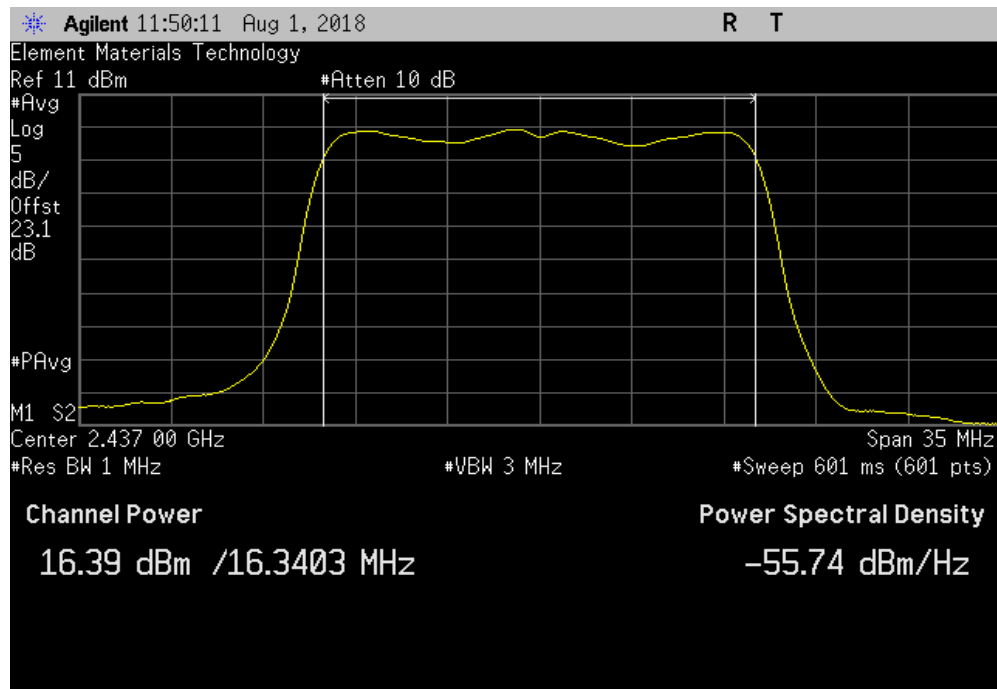


TMTx 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Low Channel 1, 2412 MHz						
Avg Cond	Duty Cycle		Value	Limit	Results	
Pwr (dBm)	Factor (dB)		(dBm)	(dBm)		
16.099	0.4		16.5	28	Pass	



2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, Mid Channel 6, 2437 MHz						
Avg Cond	Duty Cycle		Value	Limit	Results	
Pwr (dBm)	Factor (dB)		(dBm)	(dBm)		
16.390	0.4		16.8	28	Pass	

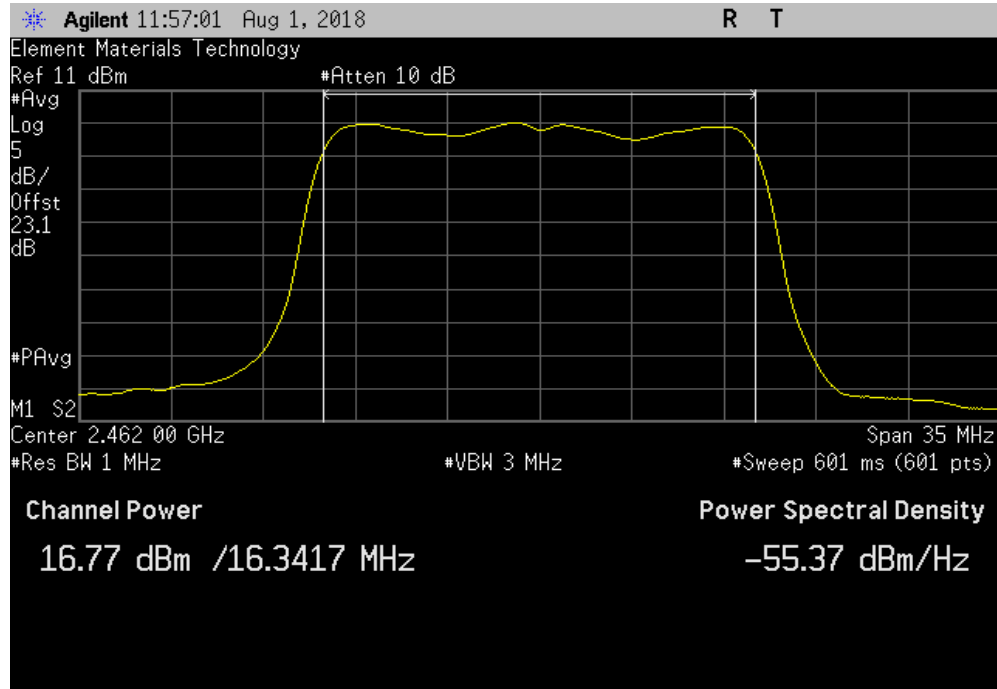


OUTPUT POWER

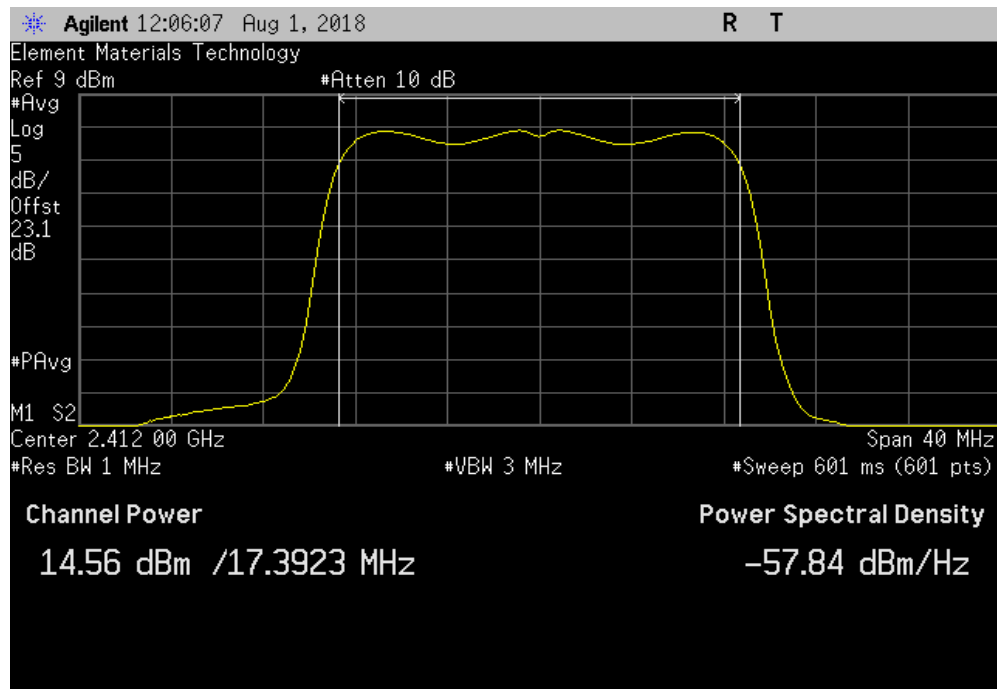


TMTx 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(g) 54 Mbps, High Channel 11, 2462 MHz						
Avg Cond	Duty Cycle		Value	Limit	Results	
Pwr (dBm)	Factor (dB)		(dBm)	(dBm)		
16.766	0.4		17.1	28	Pass	



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1, 2412 MHz						
Avg Cond	Duty Cycle		Value	Limit	Results	
Pwr (dBm)	Factor (dB)		(dBm)	(dBm)		
14.565	0.1		14.6	28	Pass	

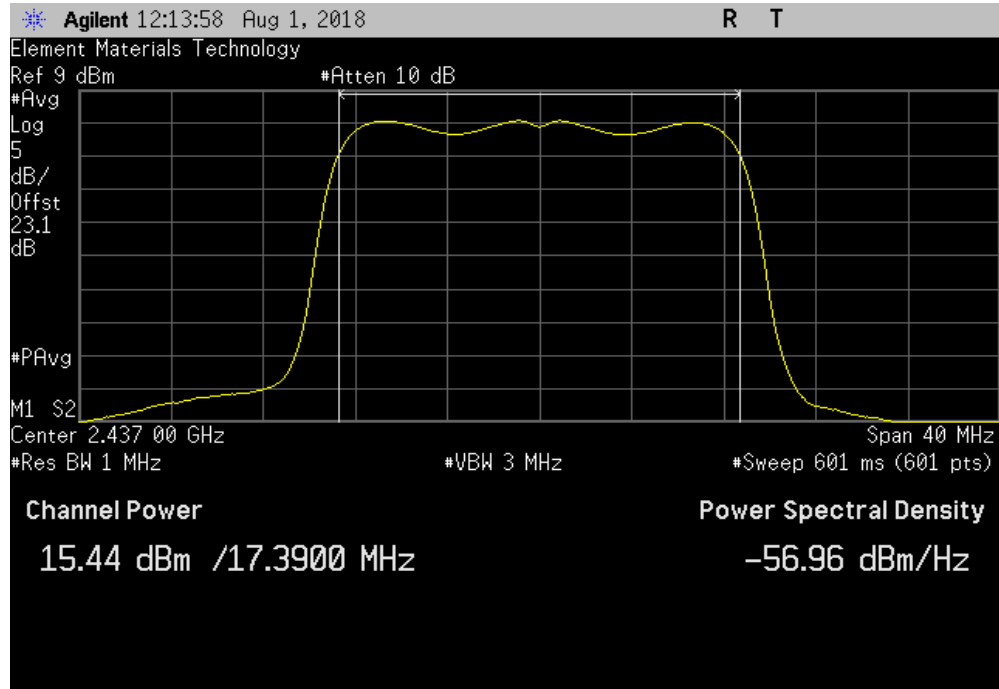


OUTPUT POWER

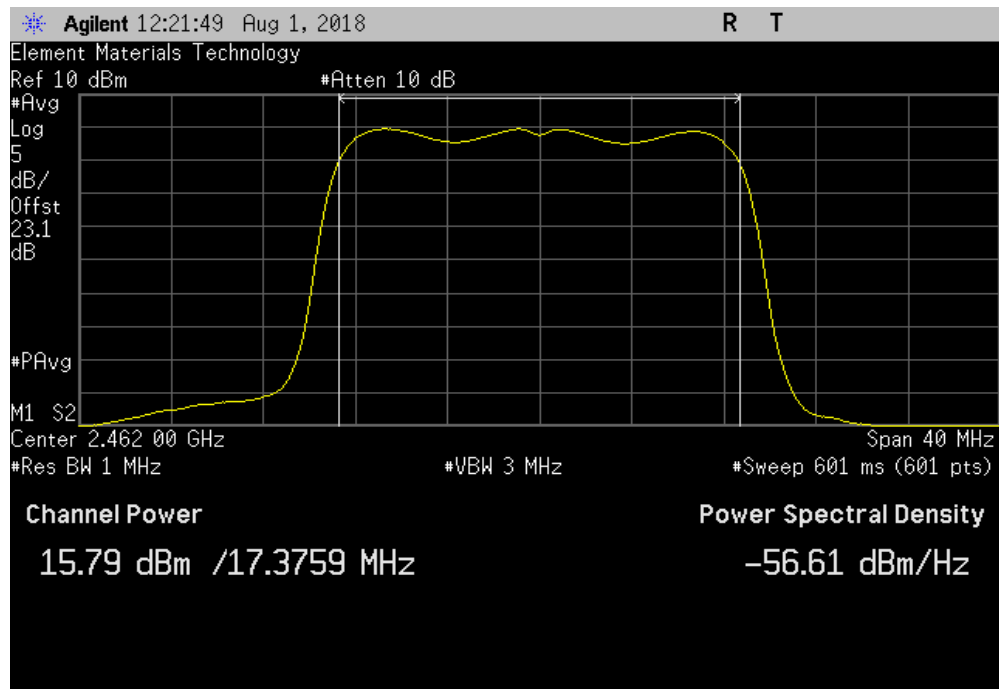


TMTx 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Mid Channel 6, 2437 MHz						
Avg Cond	Duty Cycle		Value	Limit	Results	
Pwr (dBm)	Factor (dB)		(dBm)	(dBm)		
15.441	0.1		15.5	28	Pass	



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 11, 2462 MHz						
Avg Cond	Duty Cycle		Value	Limit	Results	
Pwr (dBm)	Factor (dB)		(dBm)	(dBm)		
15.789	0.1		15.9	28	Pass	

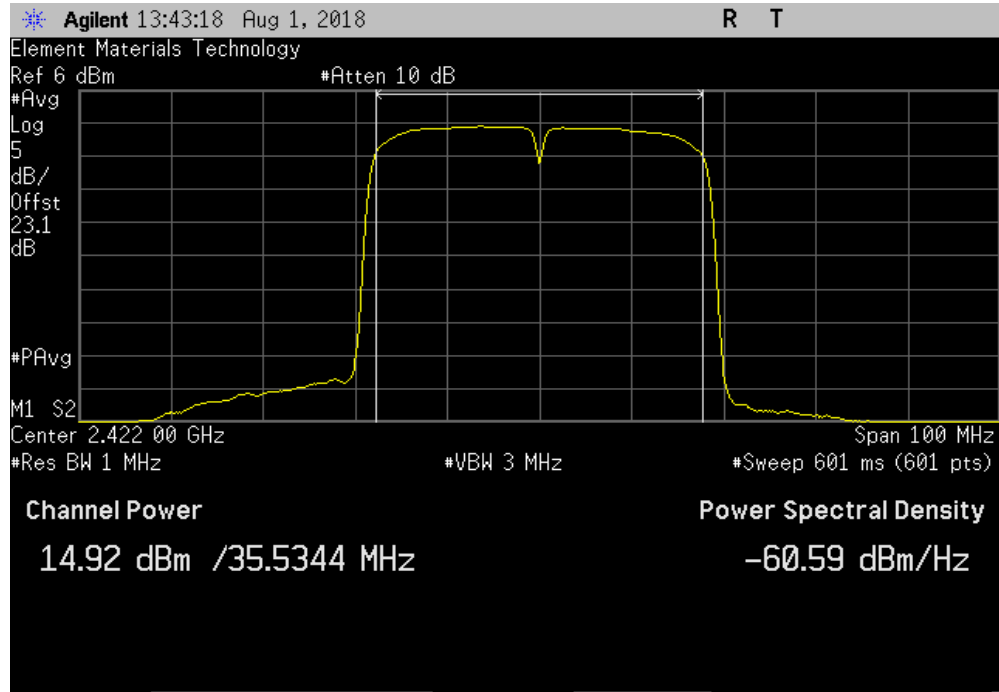


OUTPUT POWER

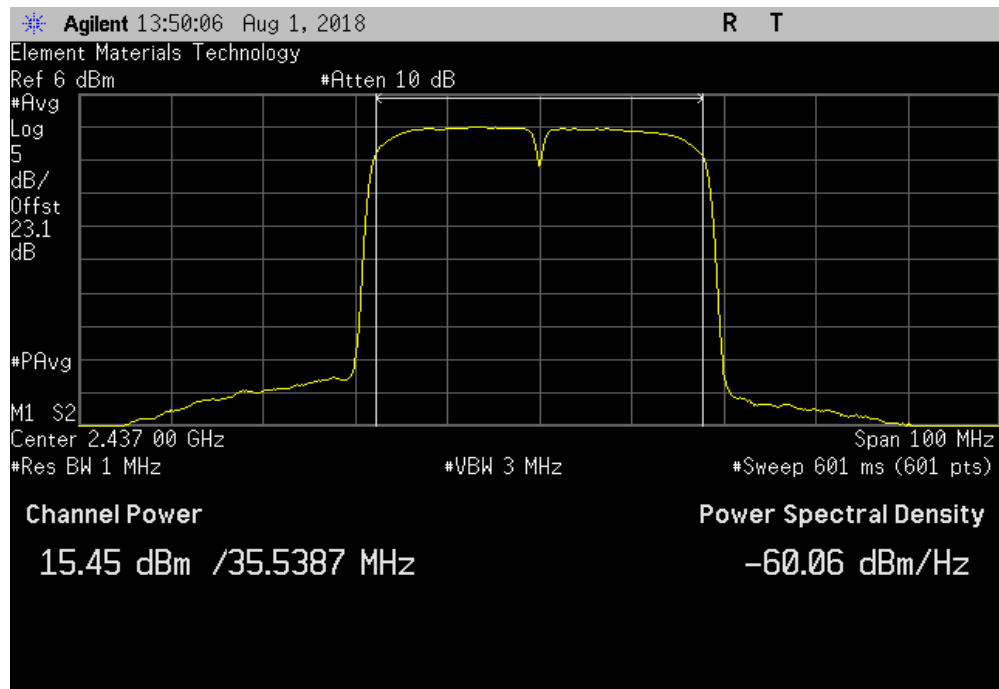


TMTx 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Low Channel 1/5, 2422 MHz, 40 MHz						
Avg Cond	Duty Cycle	Value	Limit	Results		
Pwr (dBm)	Factor (dB)	(dBm)	(dBm)			
14.916	0.2	15.1	28	Pass		



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, Mid Channel 4/8, 2437 MHz, 40 MHz						
Avg Cond	Duty Cycle	Value	Limit	Results		
Pwr (dBm)	Factor (dB)	(dBm)	(dBm)			
15.452	0.2	15.6	28	Pass		

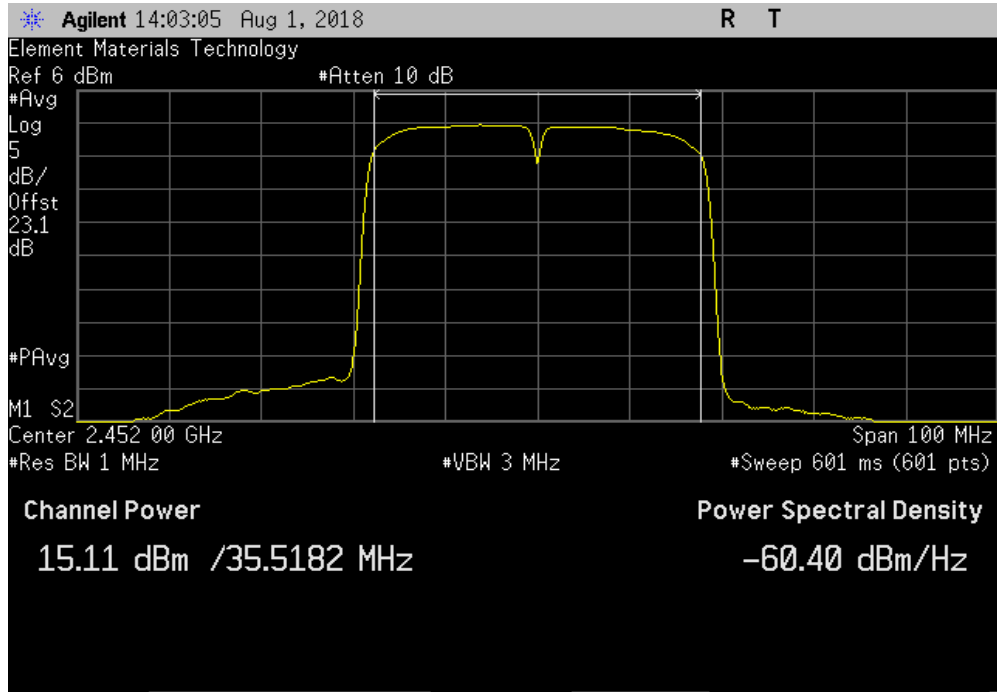


OUTPUT POWER

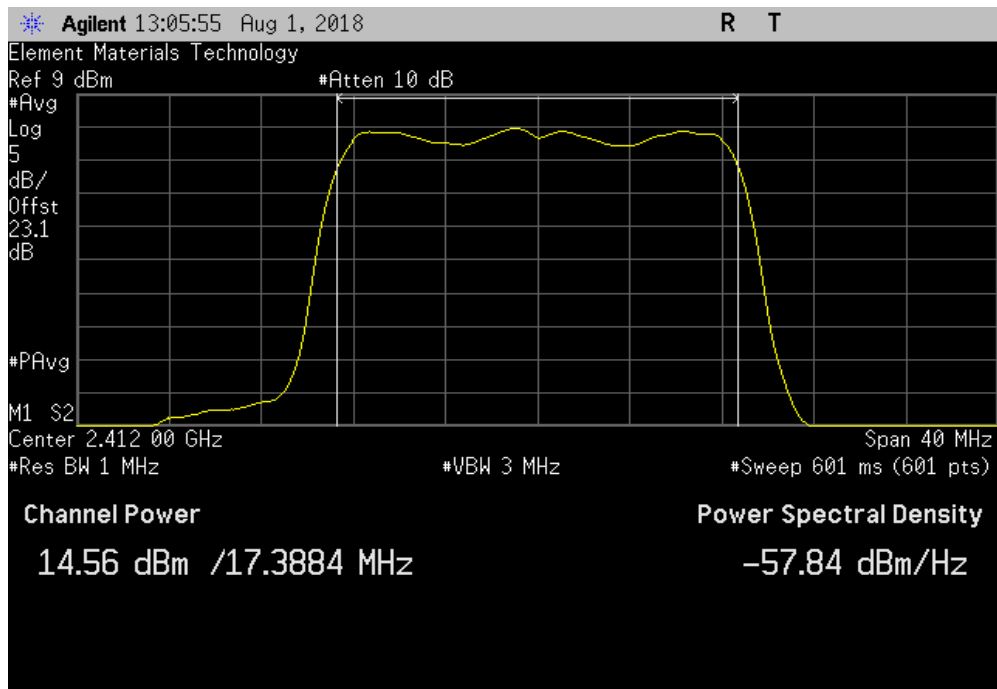


TMTx 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS0, High Channel 7/11, 2452 MHz, 40 MHz						
Avg Cond	Duty Cycle		Value	Limit	Results	
Pwr (dBm)	Factor (dB)		(dBm)	(dBm)		
15.109	0.2		15.3	28	Pass	



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1, 2412 MHz						
Avg Cond	Duty Cycle		Value	Limit	Results	
Pwr (dBm)	Factor (dB)		(dBm)	(dBm)		
14.561	0.4		14.9	28	Pass	

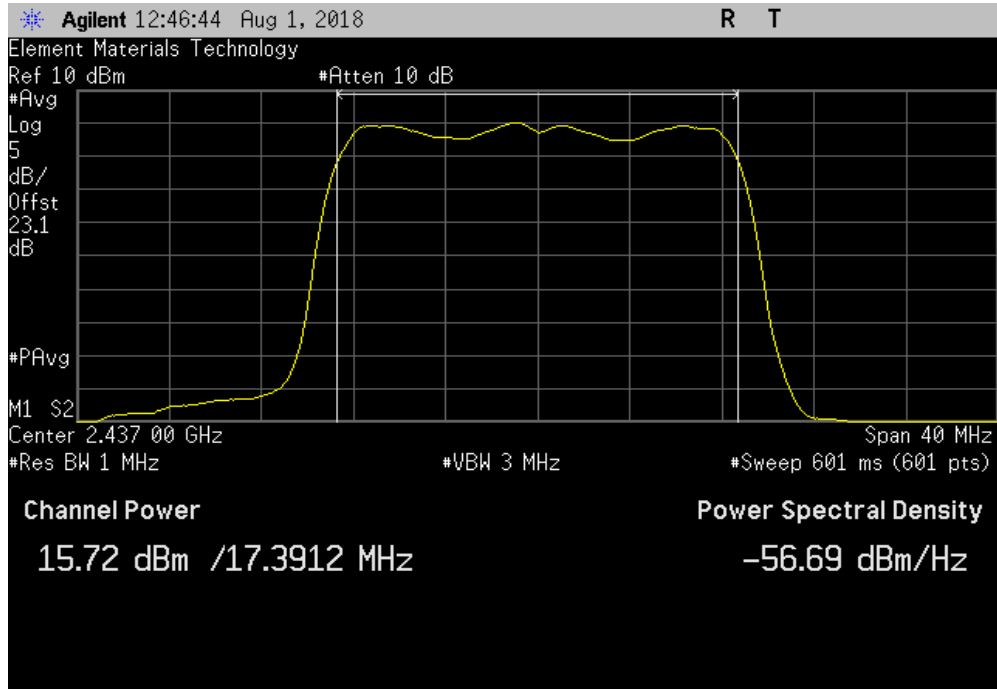


OUTPUT POWER

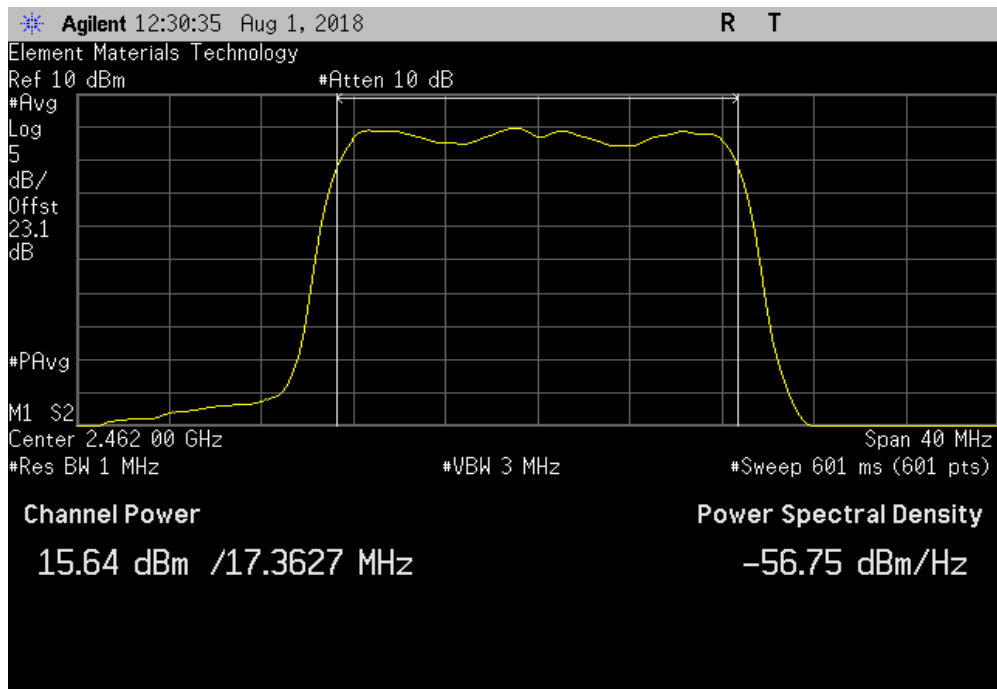


TMTx 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Mid Channel 6, 2437 MHz						
Avg Cond	Duty Cycle	Value	Limit	Results		
Pwr (dBm)	Factor (dB)	(dBm)	(dBm)			
15.716	0.4	16.1	28	Pass		



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, High Channel 11, 2462 MHz						
Avg Cond	Duty Cycle	Value	Limit	Results		
Pwr (dBm)	Factor (dB)	(dBm)	(dBm)			
15.643	0.4	16.0	28	Pass		

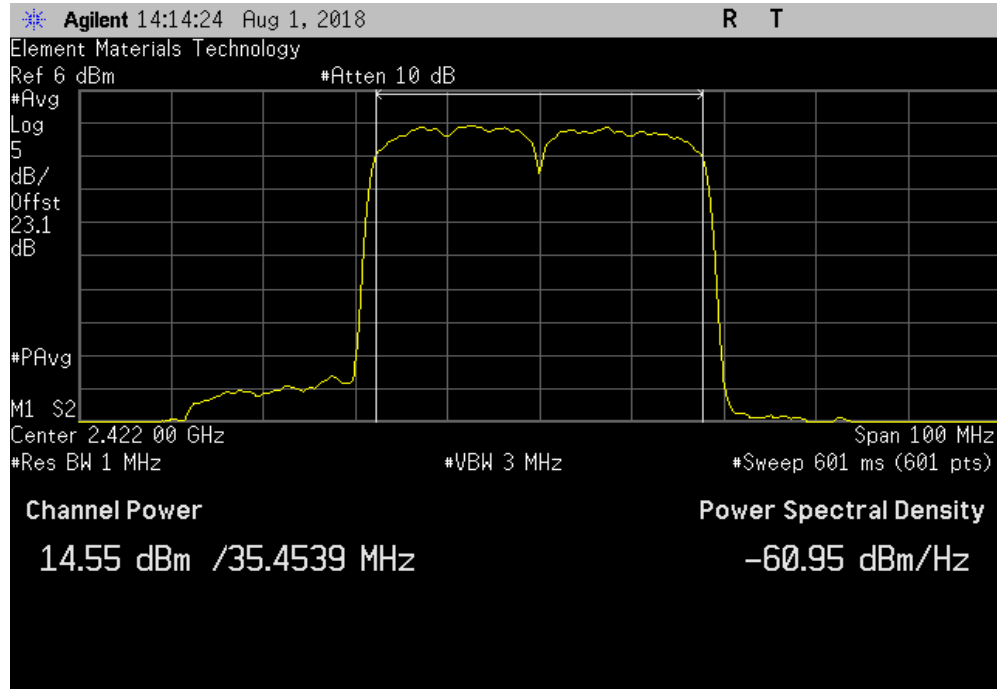


OUTPUT POWER

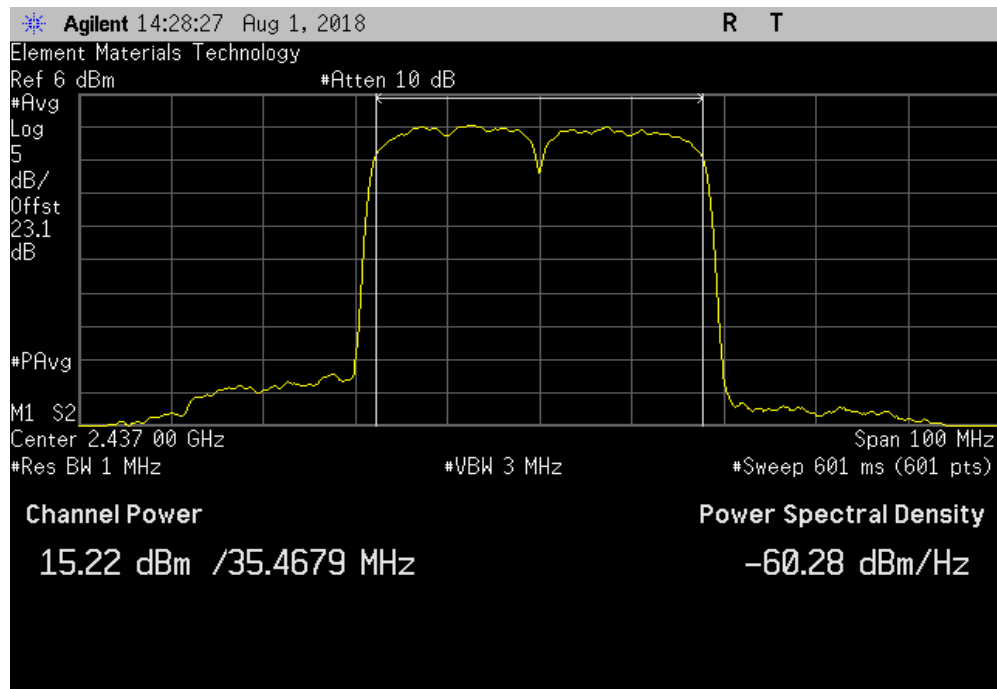


TMTX 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Low Channel 1/5, 2422 MHz, 40 MHz						
Avg Cond	Duty Cycle		Value	Limit	Results	
Pwr (dBm)	Factor (dB)		(dBm)	(dBm)		
14.550	1		15.6	28	Pass	



2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, Mid Channel 4/8, 2437 MHz, 40 MHz						
Avg Cond	Duty Cycle		Value	Limit	Results	
Pwr (dBm)	Factor (dB)		(dBm)	(dBm)		
15.222	1		16.2	28	Pass	



OUTPUT POWER



TMTx 2017.12.14 XMM 2017.12.13

2400 MHz - 2483.5 MHz Band, 802.11(n) MCS7, High Channel 7/11, 2452 MHz, 40 MHz						
Avg Cond	Duty Cycle	Value	Limit	Results		
Pwr (dBm)	Factor (dB)	(dBm)	(dBm)			
14.939	1	15.9	28	Pass		

