Kymeta Corp.

U8 Hawk

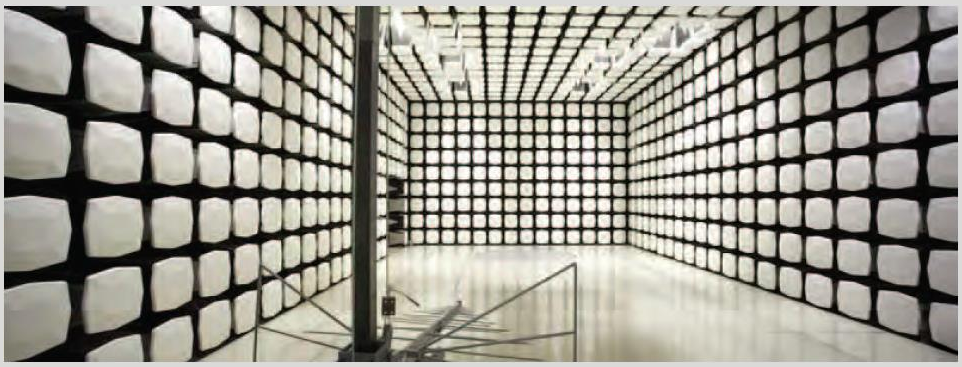
FCC 15.247:2023

RSS-247 Issue 2:2017

RSS-Gen Issue 5:2018+A1:2019+A2:2021

Wi-Fi 802.11 b/g/n/AX 2x2 MIMO radio

Report: KYME0082.0 Rev. 2, Issue Date: August 31, 2023



ACCREDITED
CERT #3310.02

CERTIFICATE OF TEST

Last Date of Test: June 16, 2023
Kymeta Corp.
EUT: U8 Hawk

Radio Equipment Testing

Standards

Specification	Method
FCC 15.247:2023	ANSI C63.10:2013, FCC KDB 558074 v05r02:2019
RSS-247 Issue 2:2017	ANSI C63.10:2013
RSS-Gen Issue 5:2018+A1:2019+A2:2021	ANSI C63.10:2013

Results

Test Description	Result	FCC Section(s)	RSS Section(s)	ANSI C63.10 Section(s)	Comments
Powerline Conducted Emissions	Pass	15.207	RSS-Gen 8.8	6.2	
Duty Cycle	N/A	KDB 558074 -6.0	RSS-Gen 3.2	11.6	Characterization of radio operation
DTS Bandwidth	Pass	15.247(a)(2), KDB 558074 -8.2	RSS-247 5.2(a)	11.8.2	
Occupied Bandwidth	Pass	KDB 558074 -2.1	RSS-Gen 6.7	6.9.3	
Output Power	Pass	15.247(b)(3), KDB 558074 -8.3.2	RSS-247 5.4(d, f), RSS-Gen 6.12	11.9.2.2.4	
Equivalent Isotropic Radiated Power (EIRP)	Pass	15.247(b)(3), KDB 558074 -8.3.2	RSS-247 5.4(d, f), RSS-Gen 6.12	11.9.2.2.4	
Power Spectral Density	Pass	15.247(e), KDB 558074 -8.4	RSS-247 5.2(b)	11.10.2	
Band Edge Compliance	Pass	15.247(d), KDB 558074 -8.5	RSS-247 5.5	11.11	
Spurious Conducted Emissions	Pass	15.247(d), KDB 558074 -8.5	RSS-247 5.5	11.11	
Spurious Radiated Emissions	Pass	15.247(d), KDB 558074 - 8.6, 8.7	RSS-247 5.5, RSS-Gen 6.13, 8.10	11.12.1, 11.13.2, 6.5, 6.6	

Deviations From Test Standards

None

Approved By:

Cole Ghizzone, Department 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. As indicated in the Statement of Work sent with the quotation, Element's standard process is to always use the latest published version of the test methods even when earlier versions are cited in the test specification. Issuance of a purchase order was de facto acceptance of this approach. Otherwise, the client would have advised Element in writing of the specific version of the test methods they wanted applied to the subject testing.

REVISION HISTORY

Revision Number	Description	Date (yyyy-mm-dd)	Page Number
01	Updated test dates.	2023-06-30	2, 10, 16, 23, 59, 95, 115, 134, 153, 173, 192, 211, 231, 250, 269, 290, 292, 294, 297, 316, 335, 355, 368, 382, 395, 448, 501
	Changed test specification to FCC 15.247:2023 on COT.	2023-06-30	2
	Added RSS to the certificate of test and reordered the tests.	2023-06-30	2
	Corrected antenna gain to 2.4 dBi. Updated EIRP siso chain 0 and the MIMO data modules.	2023-06-30	289-295
	Updated test equipment list in Duty Cycle.	2023-06-30	94
	Adjusted print area and updated antenna gains in SISO chain 0 and MIMO to account for change from 2.9 to 2.4 dBi in EIRP.	2023-06-30	289-295
	Corrected DCCF in Power Spectral Density	2023-06-30	296-353
	Additional data that was added to the SRE.	2023-06-30	557-572
	Updated radio in testing objective.	2023-06-30	10
	Added MIMO capabilities to the antenna and power settings page.	2023-06-30	11-12
	Added test description to Duty Cycle, MIMO.	2023-06-30	94
	Updated the formula in the data to properly calculate EIRP.	2023-06-30	305-323
02	Added AX to the cover	2023-08-31	1
	Added info that EUT does not support OFDMA Removed incorrect data rate from the HE20 portion of the power settings table.	2023-08-31	11
	Updated calculations for EIRP.	2023-08-31	All

ACCREDITATIONS AND AUTHORIZATIONS

element
2021.09.01

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 - Each laboratory is accredited by A2LA to ISO / IEC 17025, and as a product certifier to ISO / IEC 17065 which allows Element to certify transmitters to FCC and IC specifications.

Canada

ISED - Recognized by Innovation, Science and Economic Development Canada as a Certification Body (CB) and as a CAB for the acceptance of test data.

European Union

European Commission – Recognized as an EU Notified Body validated for the EMCD and RED Directives.

United Kingdom

BEIS – Recognized by the UK as an Approved Body under the UK Radio Equipment and UK EMC Regulations.

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

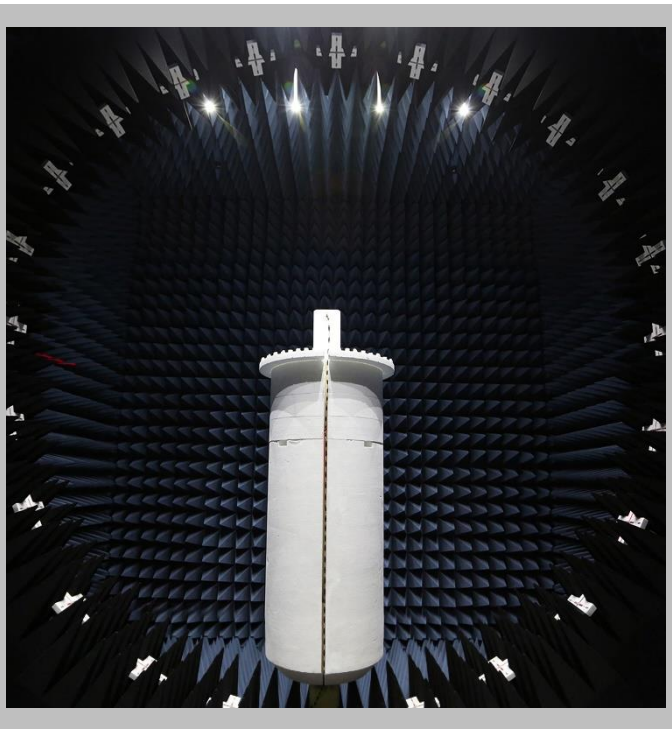
For details on the Scopes of our Accreditations, please visit:

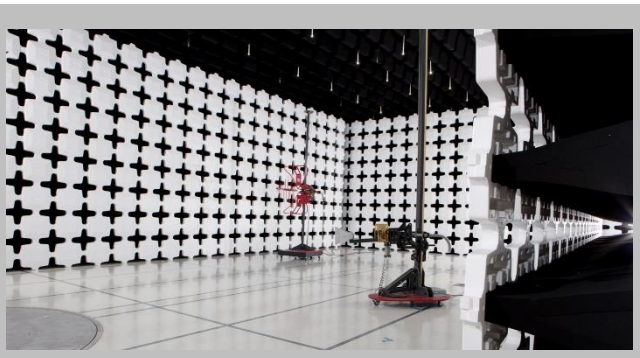
California Minnesota Oregon Texas Washington

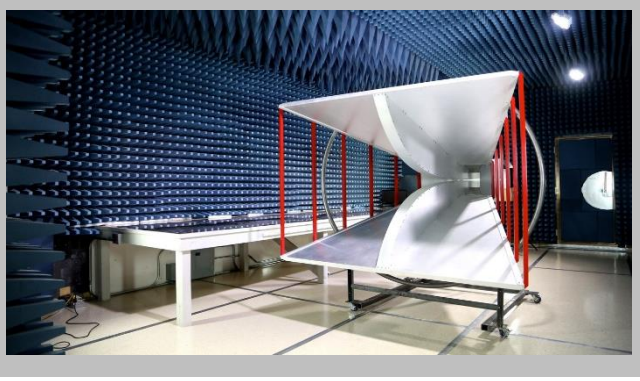
FACILITIES

element
2020.12.15

California	Minnesota	Oregon	Texas	Washington
Labs OC01-17 41 Tesla Irvine, CA 92618 (949) 861-8918	Labs MN01-11 9349 W Broadway Ave. Brooklyn Park, MN 55445 (612)-638-5136	Labs EV01-12 6775 NE Evergreen Pkwy #400 Hillsboro, OR 97124 (503) 844-4066	Labs TX01-09 3801 E Plano Pkwy Plano, TX 75074 (469) 304-5255	Labs NC01-05 19201 120th Ave NE Bothell, WA 98011 (425)984-6600
A2LA				
Lab Code: 3310.04	Lab Code: 3310.05	Lab Code: 3310.02	Lab Code: 3310.03	Lab Code: 3310.06
Innovation, Science and Economic Development Canada				
2834B-1, 2834B-3	2834E-1, 2834E-3	2834D-1	2834G-1	2834F-1
BSMI				
SL2-IN-E-1154R	SL2-IN-E-1152R	SL2-IN-E-1017	SL2-IN-E-1158R	SL2-IN-E-1153R
VCCI				
A-0029	A-0109	A-0108	A-0201	A-0110
Recognized Phase I CAB for ISED, ACMA, BSMI, IDA, KCC/RRA, MIC, MOC, NCC, OFCA				
US0158	US0175	US0017	US0191	US0157







MEASUREMENT UNCERTAINTY

element
TMU.2015.07.10

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 in the table below. A lab specific value may also be found in the applicable test description section. 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	0.0007%	-0.0007%
Amplitude Accuracy (dB)	1.2 dB	-1.2 dB
Conducted Power (dB)	1.2 dB	-1.2 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)	5.2 dB	-5.2 dB
AC Powerline Conducted Emissions (dB)	3.2 dB	-3.2 dB

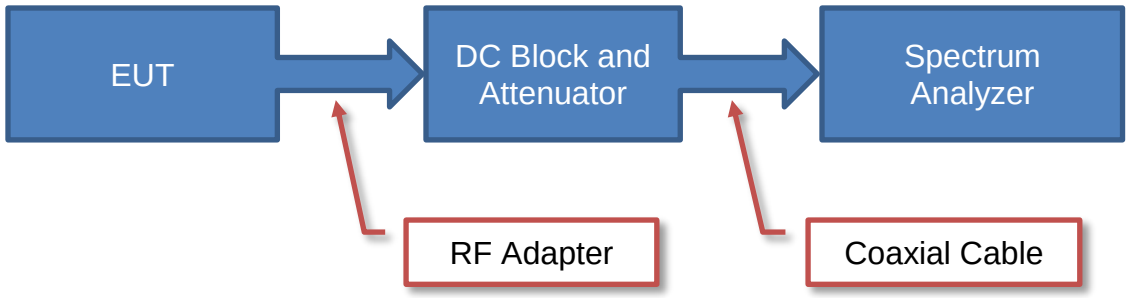
TEST SETUP BLOCK DIAGRAMS

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

Unless otherwise stated, measurements were made using the bandwidths and detectors specified. No video filter was used.

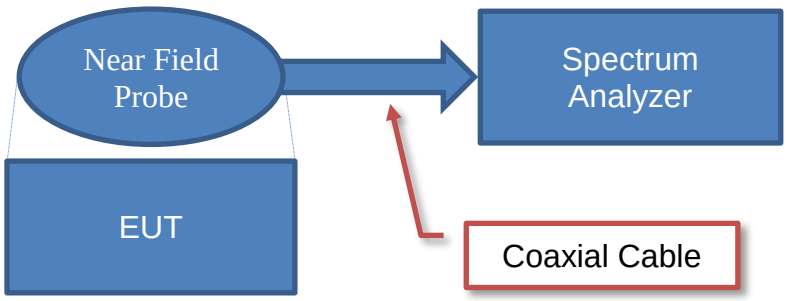
Antenna Port Conducted Measurements



Sample Calculation (logarithmic units)

Measured Value		Measured Level		Reference Level Offset
71.2	=	42.6	+	28.6

Near Field Test Fixture Measurements

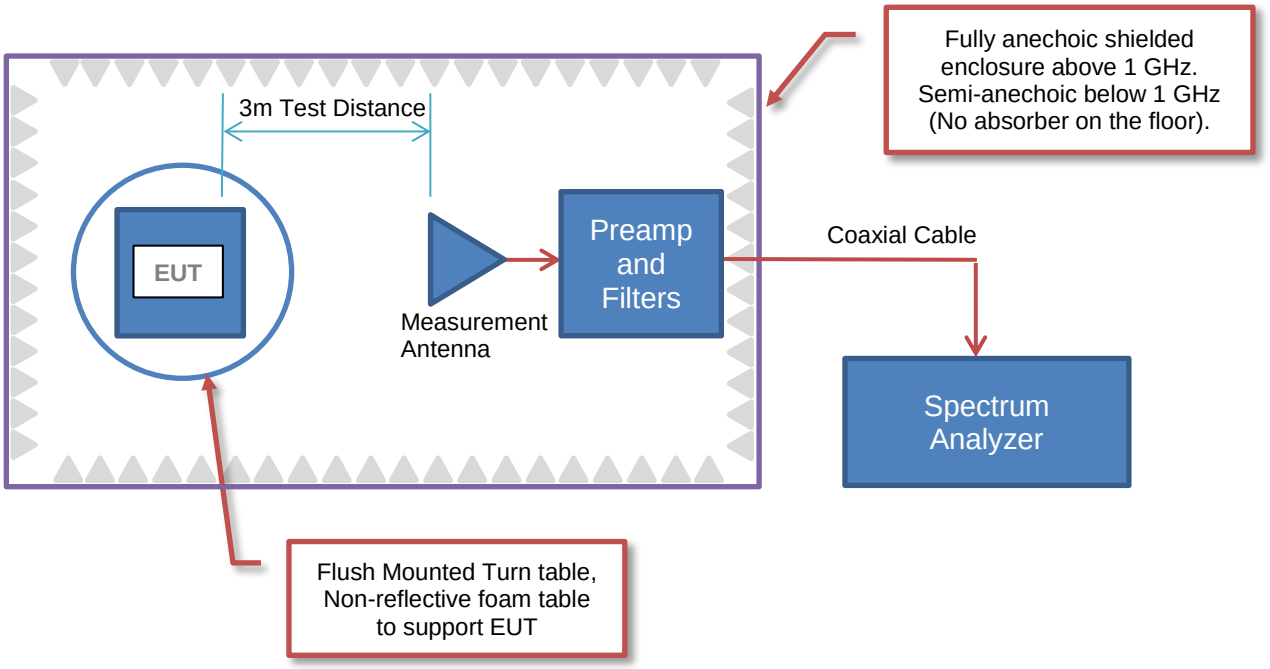


Sample Calculation (logarithmic units)

Measured Value		Measured Level		Reference Level Offset
71.2	=	42.6	+	28.6

TEST SETUP BLOCK DIAGRAMS

Emissions Measurements



Sample Calculation (logarithmic units)

Radiated Emissions:

Measured Level (Amplitude)		Factor: Antenna Factor		Factor: Cable Factor		Factor: Amplifier Gain		Distance Adjustment Factor		External Attenuation		Field Strength
42.6	+	28.6	+	3.1	-	40.8	+	0.0	+	0.0	=	**33.5**

Conducted Emissions:

Measured Level (Amplitude)		Factor: Transducer Factor		Factor: Cable Factor		External Attenuation		Adjusted Level
26.7	+	0.3	+	0.1	+	20.0	=	**47.1**

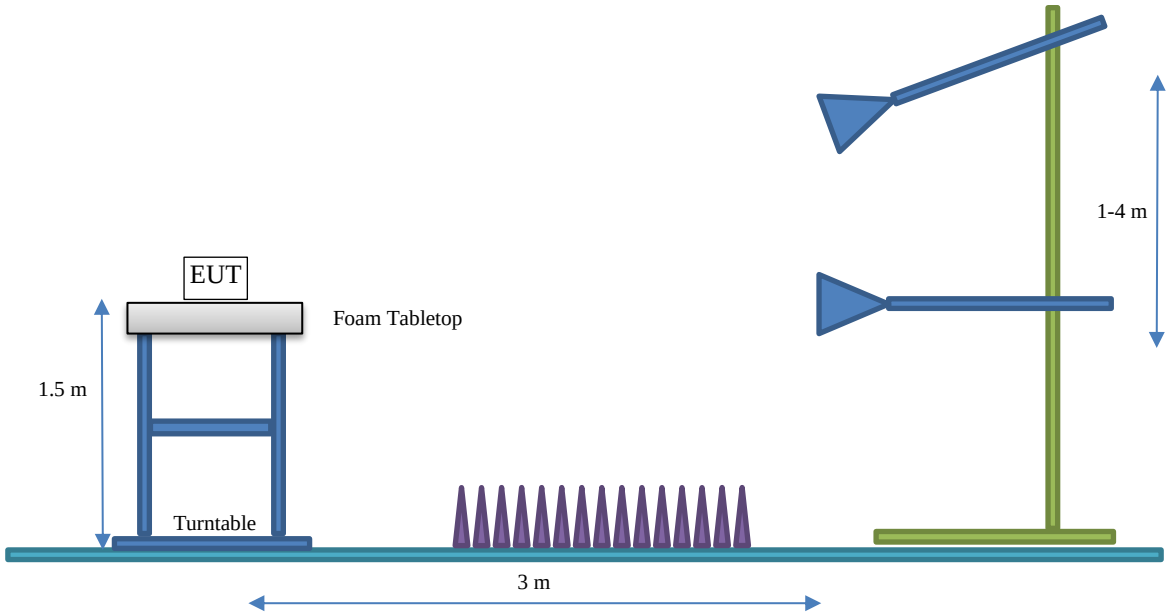
Radiated Power (ERP/EIRP) – Substitution Method:

Measured Level into Substitution Antenna (Amplitude dBm)		Substitution Antenna Factor (dBi)		EIRP to ERP (if applicable)		Measured power (dBm ERP/EIRP)
10.0	+	6.0	-	2.15	=	**13.9/16.0**

TEST SETUP BLOCK DIAGRAMS

Bore Sighting (>1GHz)

The diameter of the illumination area is the dimension of the line tangent to the EUT formed by 3 dB beamwidth of the measurement antenna at the measurement distance. At a 3 meter test distance, the diameter of the illumination area was 3.8 meters at 1 GHz and greater than 2.1 meters up to 6 GHz. Above 1 GHz, when required by the measurement standard, the antenna is pointed for both azimuth and elevation to maintain the receive antenna within the cone of radiation from the EUT. The specified measurement detectors were used for comparison of the emissions to the peak and average specification limits.



PRODUCT DESCRIPTION

Client and Equipment under Test (EUT) Information

Company Name:	Kymeta Corp.
Address:	12034 134th Court NE, Ste. 102
City, State, Zip:	Redmond, WA 98052
Test Requested By:	Michael Olsen
EUT:	U8 Hawk
First Date of Test:	October 6, 2022
Last Date of Test:	June 16, 2023
Receipt Date of Samples:	October 6, 2022
Equipment Design Stage:	Production
Equipment Condition:	No Damage
Purchase Authorization:	Verified

Information Provided by the Party Requesting the Test

Functional Description of the EUT:
The Kymeta U8 Hawk is a flat panel electronically beam steered Satellite Earth Station which has been integrated with Cellular and Wi-Fi modem capabilities into a complete turnkey terminal.

Testing Objective:
To demonstrate compliance of the Wi-Fi 802.11 b/g/n/ax 2x2 MIMO radio under FCC 15.247/RSS-247 for operation in the 2.4 GHz band.

POWER SETTINGS AND ANTENNAS

The power settings, antenna gain value(s) and cable loss (if applicable) used for the testing contained in this report were provided by the customer and will affect the validity of the results. Element assumes no responsibility for the accuracy of this information. The power settings below reflect the maximum power that the EUT is allowed to transmit at during normal operation.

ANTENNA GAIN (dBi)

Antenna Position	Type	Provided by:	Frequency Range (MHz)	PK Gain (dBi)
Chain 0	Ceramic Chip	Kymeta Corp.	2400 – 2500	2.4
Chain 1	Ceramic Chip	Kymeta Corp.	2400 – 2500	3.2

The EUT was tested using the power settings provided by the manufacturer which were based upon:

☒ Test software settings Test software/firmware installed on EUT: **8.2.1S105 Build 5080**
☐ Rated power settings

Select which applies	Transmitter configuration
Support	Single transmitter with multiple outputs
Support	Multiple transmitters operating simultaneously
No	OFDMA Capability
Select which applies	**Antenna configuration**
Support	SISO – Chain 0
Support	SISO – Chain 1
Support	Spatial diversity multiplexing: Chains 0 + 1
Support	Cyclic Delay Diversity: Chains 0 + 1
Support	Space-Time Block Coding: Chains 0 + 1
No	Beam-forming

SETTINGS FOR ALL TESTS IN THIS REPORT

Chain	Modulation Mode	Modulation Types	Channel Bandwidths (MHz)	20 MHz Channels	Channel Position	Frequency Range (MHz)	Power Setting (dBm)
0, 1	CCK	1 Mbps	20	1, 6, 11	L / M / H	2400-2483.5	20
0, 1		11 Mbps	20	1, 6, 11	L / M / H	2400-2483.5	20
0, 1	Legacy OFDM	6 Mbps	20	1, 6, 11	L / M / H	2400-2483.5	20
0, 1		36 Mbps	20	1, 6, 11	L / M / H	2400-2483.5	20**
0, 1		54 Mbps	20	1, 6, 11	L / M / H	2400-2483.5	20**
0, 1	HT20	MCS0	20	1, 6, 11	L / M / H	2400-2483.5	18
0, 1		MCS7	20	1, 6, 11	L / M / H	2400-2483.5	18
*01		MCS8	20	1, 6, 11	L / M / H	2400-2483.5	18
*01		MCS15	20	1, 6, 11	L / M / H	2400-2483.5	18
0, 1	VHT20	MCS0	20	1, 6, 11	L / M / H	2400-2483.5	18
0, 1		MCS8	20	1, 6, 11	L / M / H	2400-2483.5	18
*01		MCS0	20	1, 6, 11	L / M / H	2400-2483.5	18
*01		MCS8	20	1, 6, 11	L / M / H	2400-2483.5	18
0, 1	HE20	MCS0	20	1, 6, 11	L / M / H	2400-2483.5	18
0, 1		MCS11	20	1, 6, 11	L / M / H	2400-2483.5	18
*01		MCS0	20	1, 6, 11	L / M / H	2400-2483.5	18
*01		MCS11	20	1, 6, 11	L / M / H	2400-2483.5	18

*Indicates MIMO mode of operation
**Power setting for Chain 1, Legacy OFDM, Channel 11 = 18 dBm

CONFIGURATIONS

Configuration KYME0068-1

Software/Firmware Running During Test	
Description	**Version**
Wifi Firmware	8.2.1S105 Build 5080

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
802.11ax Wifi	Peplink	Peplink MAX HD1	192F-85E2-1761

Peripherals in Test Setup Boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Switching Adapter	DEE VAN ENTERPRISES CO., LTD.	DAS-26PFN-12FUS	None

Remote Equipment Outside of Test Setup Boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Laptop	Dell	Latitude 7480	5550067478

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
LMR240	Yes	0.9	No	802.11ax Wifi	Unterminated
DC Power	No	1.5	No	802.11ax Wifi	Switching Adapter
Cat5	No	1.0	No	802.11ax Wifi	Laptop

Configuration KYME0068-2

Software/Firmware Running During Test	
Description	**Version**
Wifi Firmware	8.2.1S105 Build 5080

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Satellite Earth Station	Kymeta Corp.	U8 Hawk	ACK207K220907009

Peripherals in Test Setup Boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
AC/DC Adapter	Mean Well	HLG-600H-24	TC13090268

Remote Equipment Outside of Test Setup Boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Laptop	Dell	Latitude 7480	5550067478

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
AC Power	No	1.8	Yes	AC Power	AC/DC Adapter
DC Power	No	3.2	No	AC/DC Adapter	Satellite Earth Station
Cat5	Yes	7	No	Satellite Earth Station	Laptop

CONFIGURATIONS

Configuration KYME0068-5

Software/Firmware Running During Test	
Description	**Version**
Wifi Firmware	8.2.1S105 Build 5080

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
802.11ax Wifi	Peplink	Peplink MAX HD1	192F-85E1-1752

Peripherals in Test Setup Boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Switching Adapter	DEE VAN ENTERPRISES CO., LTD.	DAS-26PFN-12FUS	None
Laptop	Dell	Latitude 7430	Asset Tag: 11217

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
LMR240	Yes	0.9	No	802.11ax Wifi	Unterminated
DC Power	No	1.5	No	802.11ax Wifi	Switching Adapter
Cat5	No	1.0	No	802.11ax Wifi	Laptop

Configuration KYME0071- 6

Software/Firmware Running During Test	
Description	**Version**
Wifi Firmware	8.2.1S105 Build 5080

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Satellite Earth Station	Kymeta Corp.	U8 Hawk	ACN214K220915001

Peripherals in Test Setup Boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
AC/DC Adapter	Mean Well	HLG-600H-24	TC13090268

Remote Equipment Outside of Test Setup Boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Laptop	Dell	Latitude 7480	5550067478

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
AC Power	No	1.8	Yes	AC Power	AC/DC Adapter
DC Power	No	3.2	No	AC/DC Adapter	Satellite Earth Station
Cat5	Yes	7	No	Satellite Earth Station	Laptop

CONFIGURATIONS

Configuration KYME0082- 9

Software/Firmware Running During Test	
Description	**Version**
Wifi Firmware	8.2.1S105 Build 5080

EUT			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Satellite Earth Station	Kymeta Corp.	U8 Hawk	ACN214K220915001

Peripherals in Test Setup Boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
AC/DC Adapter	Mean Well	HLG-600H-24	TC13090266

Remote Equipment Outside of Test Setup Boundary			
Description	**Manufacturer**	**Model/Part Number**	**Serial Number**
Laptop	Dell	Latitude 7480	5550067478

Cables					
Cable Type	**Shield**	**Length (m)**	**Ferrite**	**Connection 1**	**Connection 2**
AC Power	No	1.8	Yes	AC Power	AC/DC Adapter
DC Power	No	3.2	No	AC/DC Adapter	Satellite Earth Station
Cat5	Yes	7	No	Satellite Earth Station	Laptop

MODIFICATIONS

Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	2022-10-06	DTS 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.
2	2022-10-17	Powerline Conducted Emissions	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	2023-03-15	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.
4	2023-03-15	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.
5	2023-03-15	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.
6	2023-03-15	Equivalent Isotropic Radiated Power (EIRP)	Tested as delivered to test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
7	2023-03-15	Power Spectral Density	Tested as delivered to test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
8	2023-03-15	Band Edge Compliance	Tested as delivered to test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
9	2023-03-15	Spurious Conducted Emissions	Tested as delivered to test Station.	No EMI suppression devices were added or modified during this test.	EUT remained at Element following the test.
10	2023-06-16	Spurious Radiated Emissions	Tested as delivered to test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.

POWERLINE CONDUCTED EMISSIONS

element
WTD.2022.07.28.0
EmiR5 2022.07.06.0
PSA-ESCI 2022.08.23.0

TEST DESCRIPTION

Using the mode of operation and configuration noted within this report, conducted emissions tests were performed. The frequency range investigated (scanned), is also noted in this report. Conducted power line measurements are made, unless otherwise specified, over the frequency range from 150 kHz to 30 MHz to determine the line-to-ground radio-noise voltage that is conducted from the EUT power-input terminals that are directly (or indirectly via separate transformer or power supplies) connected to a public power network. Per the standard, an insulating material was also added to ground plane between the EUT's power and remote I/O cables. Equipment is tested with power cords that are normally used or that have electrical or shielding characteristics that are the same as those cords normally used. Typically those measurements are made using a LISN (Line Impedance Stabilization Network), the 50ohm measuring port is terminated by a 50ohm EMI meter or a 50ohm resistive load. All 50ohm measuring ports of the LISN are terminated by 50ohm. The test data represents the configuration / operating mode/ model that produced the highest emission levels as compared to the specification limit.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Receiver	Gauss Instruments	TDEMI 30M	ARN	2022-04-20	2023-04-20
Cable - Conducted Cable Assembly	Northwest EMC	EVG, HHD, RKT	EVGA	2022-01-04	2023-01-04
LISN	Solar Electronics	9252-50-R-24-BNC	LIP	2022-09-08	2023-09-08

MEASUREMENT UNCERTAINTY

Description		
Expanded k=2	3.2 dB	-3.2 dB

CONFIGURATIONS INVESTIGATED

KYME0068-2

MODES INVESTIGATED

On - WiFi: Tx - Chain 0, Ch. 6, 1 Mbps

POWERLINE CONDUCTED EMISSIONS

element
WTD.2022.07.28.0
EmiR5 2022.07.06.0
PSA-ESCI 2022.08.23.0

EUT:	U8 Hawk	Work Order:	KYME0068
Serial Number:	ACK207K220907009	Date:	2022-10-17
Customer:	Kymeta Corp.	Temperature:	22.3°C
Attendees:	Dean Busch	Relative Humidity:	44.9%
Customer Project:	None	Bar. Pressure (PMSL):	1023 mb
Tested By:	Jeff Alcoke	Job Site:	EV07
Power:	12 VDC via 110VAC/60Hz	Configuration:	KYME0068-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2022	ANSI C63.10:2013
RSS-Gen Issue 5:2018+A1:2019+A2:2021	ANSI C63.10:2013

TEST PARAMETERS

Run #:	2	Line:	Neutral	Add. Ext. Attenuation (dB):	0

COMMENTS

None

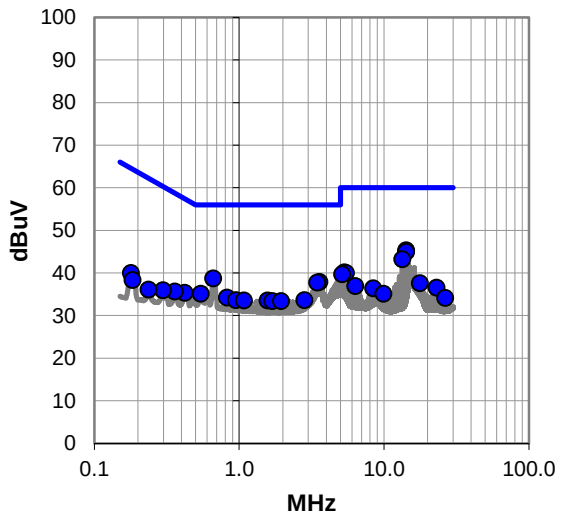
EUT OPERATING MODES

On - WiFi: Tx - Chain 0, Ch. 6, 1 Mbps

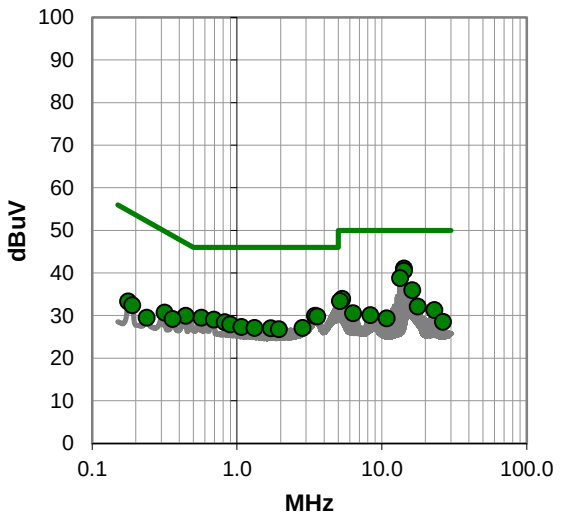
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



POWERLINE CONDUCTED EMISSIONS

element
WTD.2022.07.28.0
EmiR5 2022.07.06.0
PSA-ESCI 2022.08.23.0

RESULTS - Run #2

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
14.213	25.0	20.3	45.3	60.0	-14.7
14.273	24.6	20.3	44.9	60.0	-15.1
13.418	22.9	20.3	43.2	60.0	-16.8
0.661	19.0	19.7	38.7	56.0	-17.3
3.585	17.9	20.0	37.9	56.0	-18.1
3.461	17.7	20.0	37.7	56.0	-18.3
5.339	20.0	20.1	40.1	60.0	-19.9
5.461	19.9	20.1	40.0	60.0	-20.0
5.159	19.6	20.1	39.7	60.0	-20.3
0.542	15.4	19.7	35.1	56.0	-20.9
0.824	14.4	19.8	34.2	56.0	-21.8
0.420	15.5	19.8	35.3	57.4	-22.1
0.953	13.8	19.8	33.6	56.0	-22.4
2.829	13.6	20.0	33.6	56.0	-22.4
17.692	17.1	20.5	37.6	60.0	-22.4
1.078	13.7	19.8	33.5	56.0	-22.5
1.572	13.7	19.8	33.5	56.0	-22.5
1.699	13.5	19.9	33.4	56.0	-22.6
1.949	13.4	20.0	33.4	56.0	-22.6
6.336	16.8	20.1	36.9	60.0	-23.1
0.359	15.8	19.8	35.6	58.8	-23.2
23.127	15.8	20.7	36.5	60.0	-23.5
8.446	16.3	20.1	36.4	60.0	-23.6
0.298	16.0	19.9	35.9	60.3	-24.4
0.179	20.1	19.9	40.0	64.5	-24.5

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
14.213	20.7	20.3	41.0	50.0	-9.0
14.274	20.2	20.3	40.5	50.0	-9.5
13.418	18.5	20.3	38.8	50.0	-11.2
16.227	15.4	20.5	35.9	50.0	-14.1
5.338	13.8	20.1	33.9	50.0	-16.1
3.456	9.9	20.0	29.9	46.0	-16.1
3.585	9.8	20.0	29.8	46.0	-16.2
0.568	9.8	19.7	29.5	46.0	-16.5
5.155	13.3	20.1	33.4	50.0	-16.6
0.693	9.3	19.7	29.0	46.0	-17.0
0.443	10.2	19.7	29.9	47.0	-17.1
0.823	8.6	19.8	28.4	46.0	-17.6
17.694	11.6	20.5	32.1	50.0	-17.9
0.901	8.1	19.8	27.9	46.0	-18.1
23.129	10.6	20.7	31.3	50.0	-18.7
1.076	7.5	19.8	27.3	46.0	-18.7
1.322	7.3	19.8	27.1	46.0	-18.9
2.834	7.1	20.0	27.1	46.0	-18.9
1.712	7.1	19.9	27.0	46.0	-19.0
0.316	10.9	19.8	30.7	49.8	-19.1
1.950	6.8	20.0	26.8	46.0	-19.2
6.336	10.4	20.1	30.5	50.0	-19.5
0.359	9.4	19.8	29.2	48.8	-19.6
8.345	10.0	20.1	30.1	50.0	-19.9
10.794	9.0	20.3	29.3	50.0	-20.7

CONCLUSION

Pass

Tested By

POWERLINE CONDUCTED EMISSIONS

element
WTD.2022.07.28.0
EmiR5 2022.07.06.0
PSA-ESCI 2022.08.23.0

EUT:	U8 Hawk	Work Order:	KYME0068
Serial Number:	ACK207K220907009	Date:	2022-10-17
Customer:	Kymeta Corp.	Temperature:	22.3°C
Attendees:	Dean Busch	Relative Humidity:	44.9%
Customer Project:	None	Bar. Pressure (PMSL):	1023 mb
Tested By:	Jeff Alcoke	Job Site:	EV07
Power:	12 VDC via 110VAC/60Hz	Configuration:	KYME0068-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2022	ANSI C63.10:2013
RSS-Gen Issue 5:2018+A1:2019+A2:2021	ANSI C63.10:2013

TEST PARAMETERS

Run #:	3	Line:	High Line	Add. Ext. Attenuation (dB):	0

COMMENTS

None

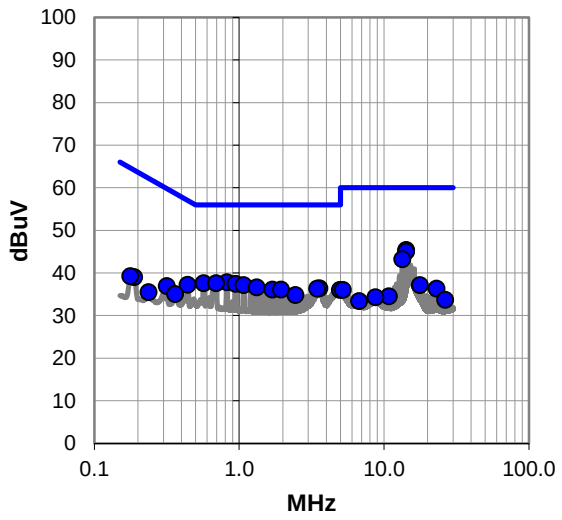
EUT OPERATING MODES

On - WiFi: Tx - Chain 0, Ch. 6, 1 Mbps

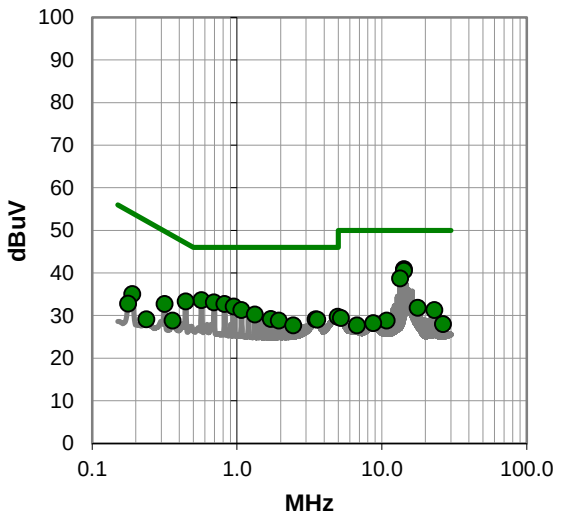
DEVIATIONS FROM TEST STANDARD

None

Quasi Peak Data - vs - Quasi Peak Limit



Average Data - vs - Average Limit



POWERLINE CONDUCTED EMISSIONS

element
WTD.2022.07.28.0
EmiR5 2022.07.06.0
PSA-ESCI 2022.08.23.0

RESULTS - Run #3

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
14.213	25.1	20.3	45.4	60.0	-14.6
14.273	24.7	20.3	45.0	60.0	-15.0
13.418	22.9	20.3	43.2	60.0	-16.8
0.824	18.0	19.8	37.8	56.0	-18.2
0.570	17.9	19.7	37.6	56.0	-18.4
0.693	17.9	19.7	37.6	56.0	-18.4
0.943	17.6	19.8	37.4	56.0	-18.6
1.076	17.3	19.8	37.1	56.0	-18.9
1.320	16.8	19.8	36.6	56.0	-19.4
3.582	16.4	20.0	36.4	56.0	-19.6
3.463	16.3	20.0	36.3	56.0	-19.7
0.440	17.4	19.8	37.2	57.1	-19.9
1.697	16.2	19.9	36.1	56.0	-19.9
1.950	16.1	20.0	36.1	56.0	-19.9
4.972	15.9	20.1	36.0	56.0	-20.0
2.454	14.8	20.0	34.8	56.0	-21.2
0.316	17.1	19.8	36.9	59.8	-22.9
17.694	16.6	20.5	37.1	60.0	-22.9
0.361	15.2	19.8	35.0	58.7	-23.7
23.129	15.6	20.7	36.3	60.0	-23.7
5.210	15.9	20.1	36.0	60.0	-24.0
0.188	19.1	19.9	39.0	64.1	-25.1
0.177	19.3	19.9	39.2	64.6	-25.4
10.792	14.2	20.3	34.5	60.0	-25.5
8.716	14.2	20.1	34.3	60.0	-25.7

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
14.212	20.6	20.3	40.9	50.0	-9.1
14.274	20.2	20.3	40.5	50.0	-9.5
13.418	18.4	20.3	38.7	50.0	-11.3
0.568	13.9	19.7	33.6	46.0	-12.4
0.695	13.4	19.7	33.1	46.0	-12.9
0.821	12.9	19.8	32.7	46.0	-13.3
0.443	13.6	19.7	33.3	47.0	-13.7
0.948	12.3	19.8	32.1	46.0	-13.9
1.076	11.5	19.8	31.3	46.0	-14.7
1.331	10.4	19.8	30.2	46.0	-15.8
4.962	9.6	20.1	29.7	46.0	-16.3
1.711	9.3	19.9	29.2	46.0	-16.8
3.488	9.1	20.0	29.1	46.0	-16.9
3.582	9.0	20.0	29.0	46.0	-17.0
0.316	12.9	19.8	32.7	49.8	-17.1
1.952	8.8	20.0	28.8	46.0	-17.2
17.694	11.3	20.5	31.8	50.0	-18.2
2.452	7.7	20.0	27.7	46.0	-18.3
23.129	10.6	20.7	31.3	50.0	-18.7
0.190	15.1	19.9	35.0	54.1	-19.1
0.359	9.0	19.8	28.8	48.8	-20.0
5.214	9.3	20.1	29.4	50.0	-20.6
10.792	8.5	20.3	28.8	50.0	-21.2
8.716	8.1	20.1	28.2	50.0	-21.8
0.177	12.9	19.9	32.8	54.6	-21.8

CONCLUSION

Pass

Tested By

DUTY CYCLE - CHAIN 0

XMit 2022.02.07.0

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Keysight	N5182B	TFU	2020-11-20	2022-11-20
Cable	Micro-Coax	UFD150A-1-0720-200200	EVI	2021-12-05	2022-12-05
Attenuator	S.M. Electronics	SA26B-10	AWR	2022-07-05	2023-07-05
Attenuator	S.M. Electronics	SA26B-20	AUY	2022-03-15	2023-03-15
Block - DC	Fairview Microwave	SD3379	AMW	2022-03-14	2023-03-14
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAW	2022-01-26	2023-01-26

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 - CHAIN 0

element

TbtTx 2022.06.03.0 XMit 2022.02.07.0

EUT:	**U8 Hawk**	**Work Order:**	**KYME0068**
Serial Number:	**192F-85E2-1761**	**Date:**	**10-Oct-22**
Customer:	**Kymeta Corp.**	**Temperature:**	**22 °C**
Attendees:	**Dean Busch**	**Humidity:**	**44.1% RH**
Project:	**None**	**Barometric Pres.:**	**1025 mbar**
Tested by:	**Jeff Alcoke**	**Power:**	**12 VDC**
Job Site:	**EV06**		

TEST SPECIFICATIONS	**Test Method**
FCC 15.247:2022	ANSI C63.10:2013
RSS-247 Issue 2:2017	ANSI C63.10:2013

COMMENTS

Reference level offset includes: DC Block, 30 dB attenuation, and measurement cable.
Only reporting duty cycle for Chain 0 as this is also representitive of Chain 1.

DEVIATIONS FROM TEST STANDARD

None

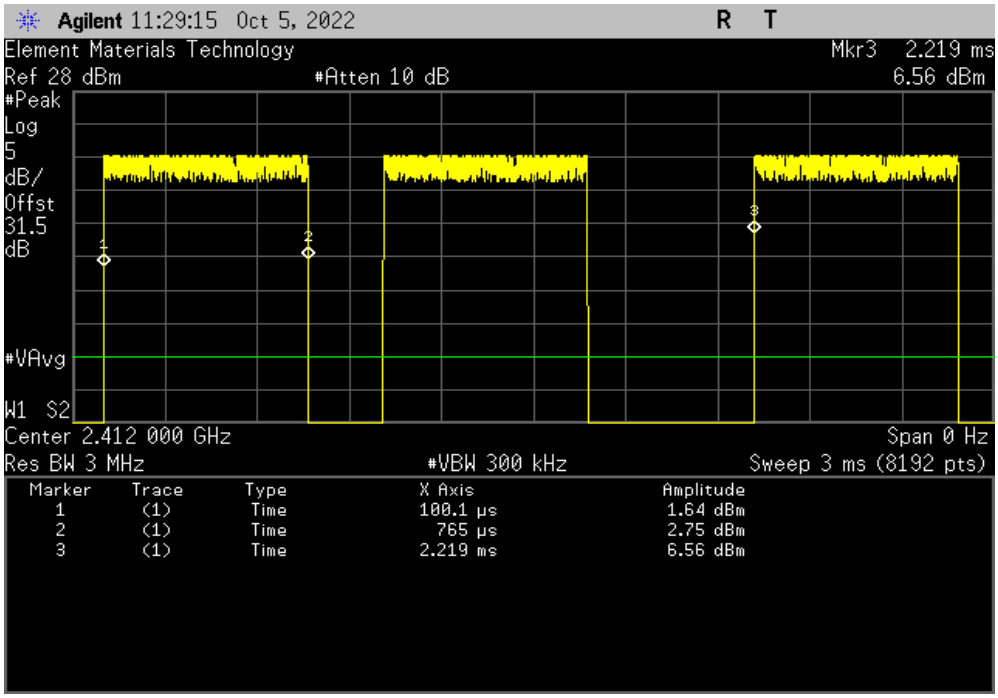
Configuration #	**1**	*Signature*

		Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
Chain 0							
	CCK, 1 Mbps						
	Low Channel 1, 2412 MHz	664.97 us	2.119 ms	2	62.8	N/A	N/A
	Low Channel 1, 2412 MHz	N/A	N/A	10	N/A	N/A	N/A
	Mid Channel 6, 2437 MHz	665.006 us	2.128 ms	2	62.5	N/A	N/A
	Mid Channel 6, 2437 MHz	N/A	N/A	10	N/A	N/A	N/A
	High Channel 11, 2462 MHz	665.002 us	2.119 ms	2	62.8	N/A	N/A
	High Channel 11, 2462 MHz	N/A	N/A	10	N/A	N/A	N/A
	CCK, 11 Mbps						
	Low Channel 1, 2412 MHz	235.832 us	2.121 ms	3	33.4	N/A	N/A
	Low Channel 1, 2412 MHz	N/A	N/A	15	N/A	N/A	N/A
	Mid Channel 6, 2437 MHz	235.626 us	2.121 ms	3	33.4	N/A	N/A
	Mid Channel 6, 2437 MHz	N/A	N/A	14	N/A	N/A	N/A
	High Channel 11, 2462 MHz	235.832 us	2.121 ms	3	33.4	N/A	N/A
	High Channel 11, 2462 MHz	N/A	N/A	15	N/A	N/A	N/A
	Legacy OFDM, 6 Mbps						
	Low Channel 1, 2412 MHz	1.977 ms	2.146 ms	1	92.1	N/A	N/A
	Low Channel 1, 2412 MHz	N/A	N/A	5	N/A	N/A	N/A
	Mid Channel 6, 2437 MHz	1.977 ms	2.146 ms	1	92.1	N/A	N/A
	Mid Channel 6, 2437 MHz	N/A	N/A	5	N/A	N/A	N/A
	High Channel 11, 2462 MHz	1.977 ms	2.146 ms	1	92.1	N/A	N/A
	High Channel 11, 2462 MHz	N/A	N/A	5	N/A	N/A	N/A
	Legacy OFDM, 36 Mbps						
	Low Channel 1, 2412 MHz	348.922 us	598.004 us	1	58.3	N/A	N/A
	Low Channel 1, 2412 MHz	N/A	N/A	5	N/A	N/A	N/A
	Mid Channel 6, 2437 MHz	349.044 us	607.088 us	1	57.5	N/A	N/A
	Mid Channel 6, 2437 MHz	N/A	N/A	6	N/A	N/A	N/A
	High Channel 11, 2462 MHz	348.8 us	562.1 us	1	62.1	N/A	N/A
	High Channel 11, 2462 MHz	N/A	N/A	5	N/A	N/A	N/A
	Legacy OFDM, 54 Mbps						
	Low Channel 1, 2412 MHz	240.678 us	499.1 us	1	48.2	N/A	N/A
	Low Channel 1, 2412 MHz	N/A	N/A	6	N/A	N/A	N/A
	Mid Channel 6, 2437 MHz	240.6 us	499.1 us	1	48.2	N/A	N/A
	Mid Channel 6, 2437 MHz	N/A	N/A	6	N/A	N/A	N/A
	High Channel 11, 2462 MHz	240.922 us	499.134 us	1	48.3	N/A	N/A
	High Channel 11, 2462 MHz	N/A	N/A	6	N/A	N/A	N/A

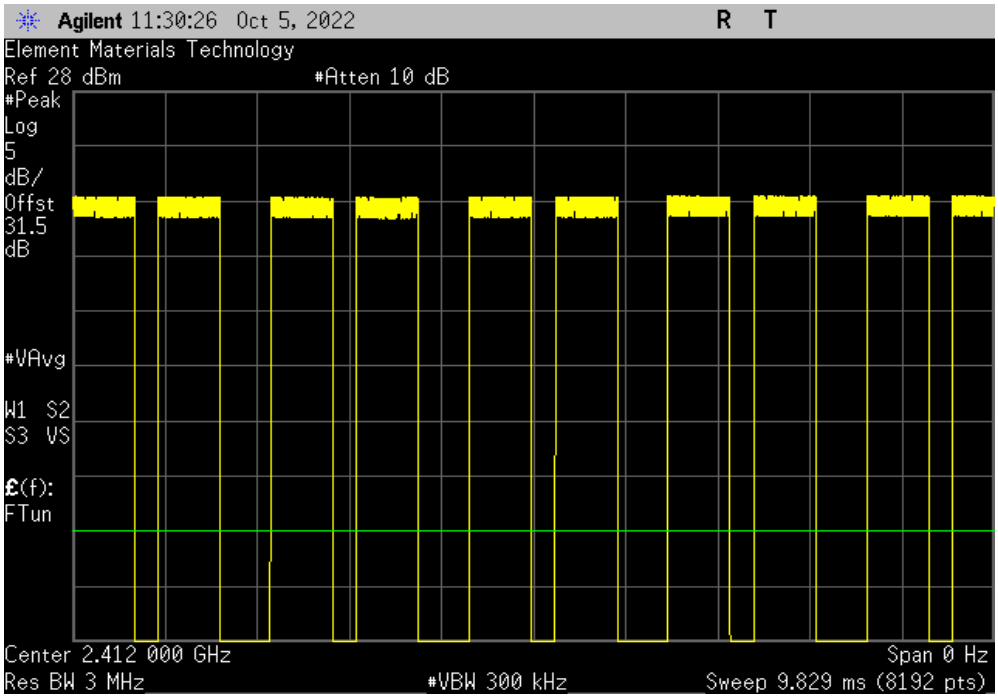
HT20, MCS0						
Low Channel 1, 2412 MHz	5.429 ms	6.255 ms	1	86.8	N/A	N/A
Low Channel 1, 2412 MHz	N/A	N/A	5	N/A	N/A	N/A
Mid Channel 6, 2437 MHz	5.429 ms	6.255 ms	1	86.8	N/A	N/A
Mid Channel 6, 2437 MHz	N/A	N/A	5	N/A	N/A	N/A
High Channel 11, 2462 MHz	5.429 ms	6.255 ms	1	86.8	N/A	N/A
High Channel 11, 2462 MHz	N/A	N/A	5	N/A	N/A	N/A
HT20, MCS7						
Low Channel 1, 2412 MHz	5.429 ms	6.254 ms	1	86.8	N/A	N/A
Low Channel 1, 2412 MHz	N/A	N/A	5	N/A	N/A	N/A
Mid Channel 6, 2437 MHz	5.429 ms	6.254 ms	1	86.8	N/A	N/A
Mid Channel 6, 2437 MHz	N/A	N/A	5	N/A	N/A	N/A
High Channel 11, 2462 MHz	5.429 ms	6.245 ms	1	86.9	N/A	N/A
High Channel 11, 2462 MHz	N/A	N/A	5	N/A	N/A	N/A
VHT20, MCS0						
Low Channel 1, 2412 MHz	5.429 ms	6.246 ms	1	86.9	N/A	N/A
Low Channel 1, 2412 MHz	N/A	N/A	5	N/A	N/A	N/A
Mid Channel 6, 2437 MHz	5.429 ms	6.246 ms	1	86.9	N/A	N/A
Mid Channel 6, 2437 MHz	N/A	N/A	5	N/A	N/A	N/A
High Channel 11, 2462 MHz	5.429 ms	6.246 ms	1	86.9	N/A	N/A
High Channel 11, 2462 MHz	N/A	N/A	5	N/A	N/A	N/A
VHT20, MCS8						
Low Channel 1, 2412 MHz	5.43 ms	6.254 ms	1	86.8	N/A	N/A
Low Channel 1, 2412 MHz	N/A	N/A	5	N/A	N/A	N/A
Mid Channel 6, 2437 MHz	5.429 ms	6.253 ms	1	86.8	N/A	N/A
Mid Channel 6, 2437 MHz	N/A	N/A	5	N/A	N/A	N/A
High Channel 11, 2462 MHz	5.429 ms	6.253 ms	1	86.8	N/A	N/A
High Channel 11, 2462 MHz	N/A	N/A	5	N/A	N/A	N/A
HE20, MCS0						
Low Channel 1, 2412 MHz	5.446 ms	6.244 ms	1	87.2	N/A	N/A
Low Channel 1, 2412 MHz	N/A	N/A	5	N/A	N/A	N/A
Mid Channel 6, 2437 MHz	5.446 ms	6.244 ms	1	87.2	N/A	N/A
Mid Channel 6, 2437 MHz	N/A	N/A	5	N/A	N/A	N/A
High Channel 11, 2462 MHz	5.446 ms	6.244 ms	1	87.2	N/A	N/A
High Channel 11, 2462 MHz	N/A	N/A	5	N/A	N/A	N/A
HE20, MCS11						
Low Channel 1, 2412 MHz	5.446 ms	6.252 ms	1	87.1	N/A	N/A
Low Channel 1, 2412 MHz	N/A	N/A	5	N/A	N/A	N/A
Mid Channel 6, 2437 MHz	5.446 ms	6.252 ms	1	87.1	N/A	N/A
Mid Channel 6, 2437 MHz	N/A	N/A	5	N/A	N/A	N/A
High Channel 11, 2462 MHz	5.446 ms	6.252 ms	1	87.1	N/A	N/A
High Channel 11, 2462 MHz	N/A	N/A	5	N/A	N/A	N/A

DUTY CYCLE - CHAIN 0

Chain 0, CCK, 1 Mbps, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	664.97 us	2.119 ms	2	62.8	N/A	N/A

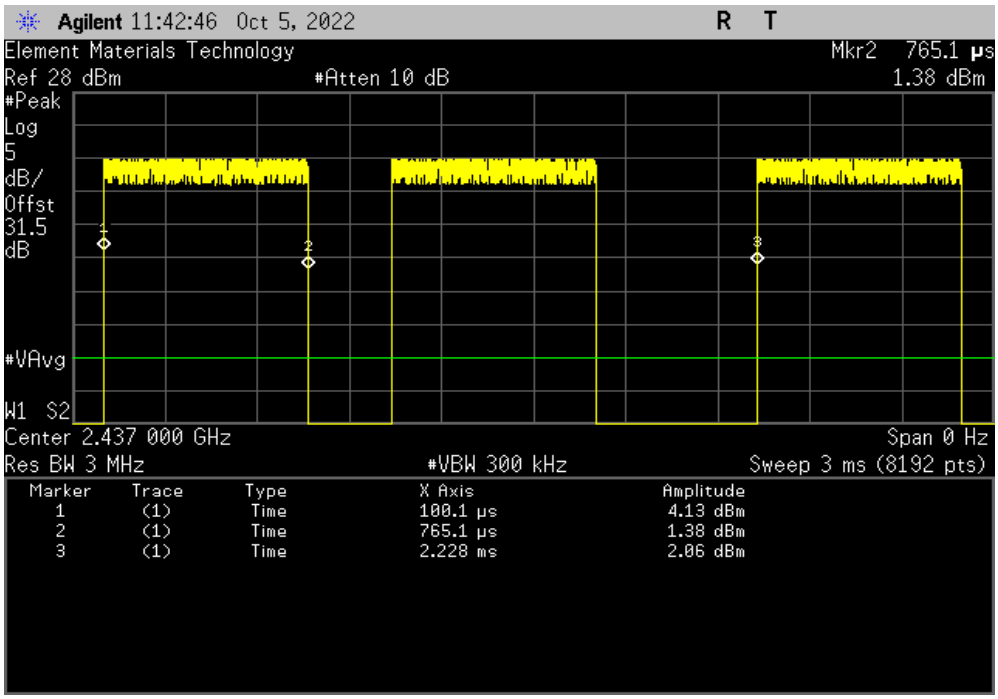


Chain 0, CCK, 1 Mbps, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	10	N/A	N/A	N/A

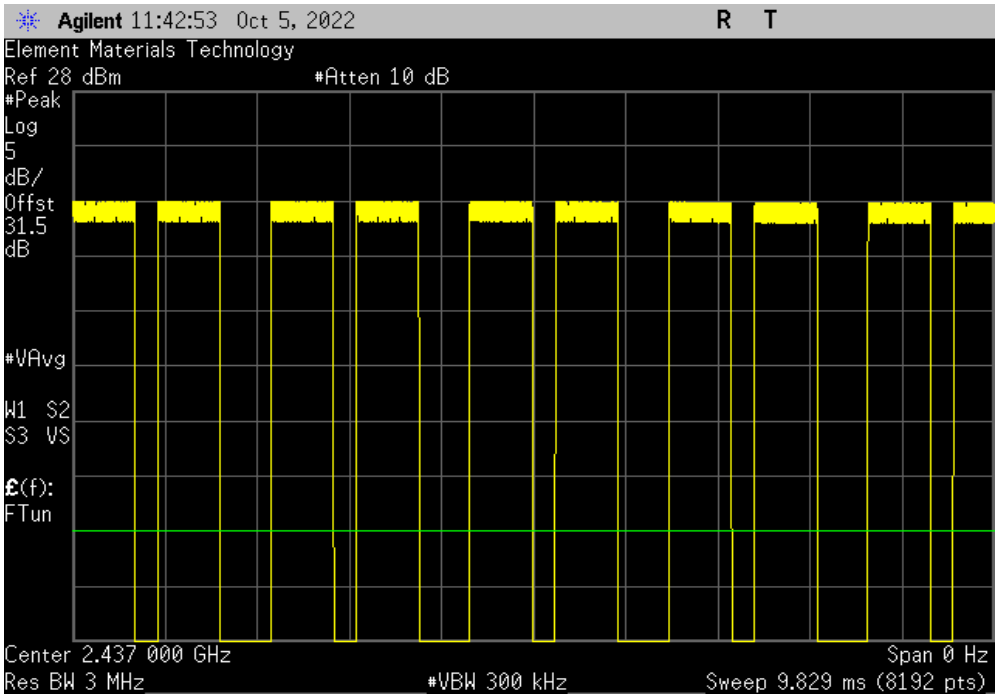


DUTY CYCLE - CHAIN 0

Chain 0, CCK, 1 Mbps, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	665.006 us	2.128 ms	2	62.5	N/A	N/A

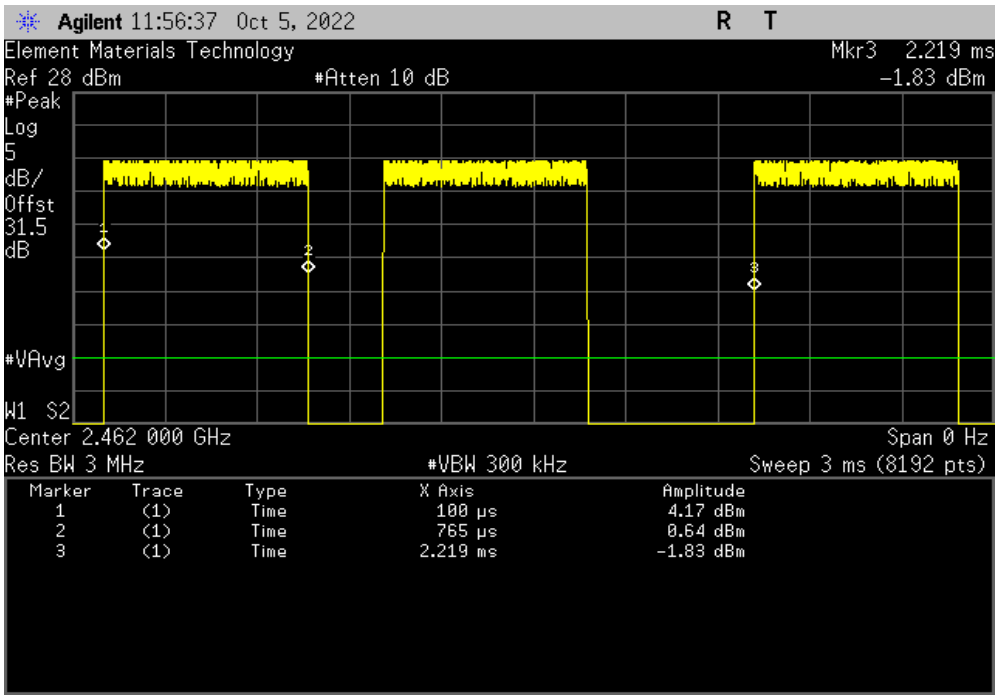


Chain 0, CCK, 1 Mbps, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	10	N/A	N/A	N/A

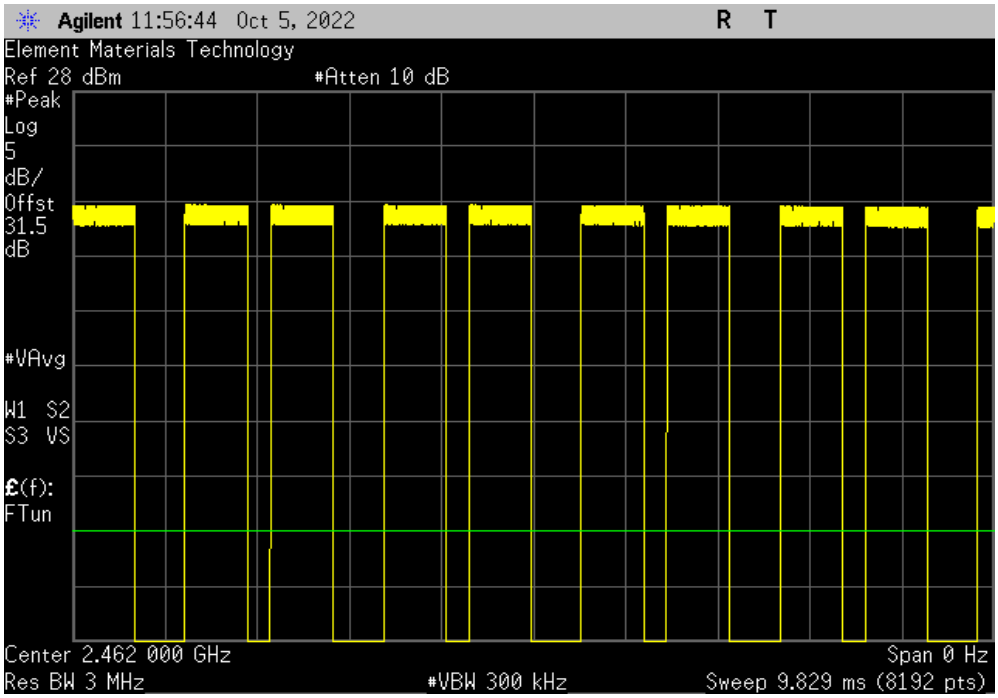


DUTY CYCLE - CHAIN 0

Chain 0, CCK, 1 Mbps, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	665.002 us	2.119 ms	2	62.8	N/A	N/A

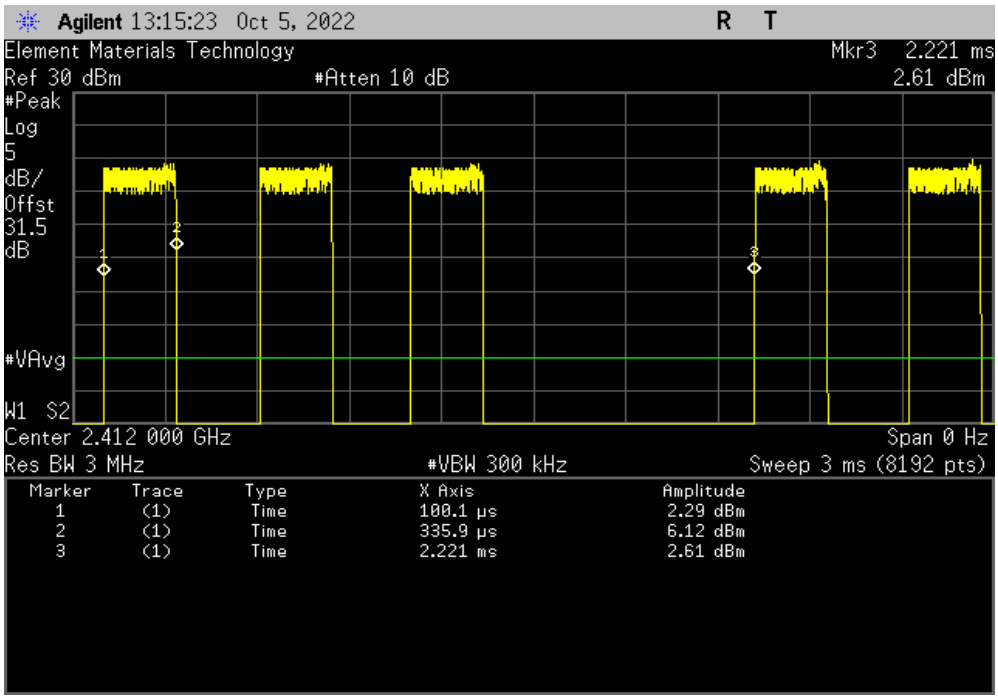


Chain 0, CCK, 1 Mbps, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	10	N/A	N/A	N/A

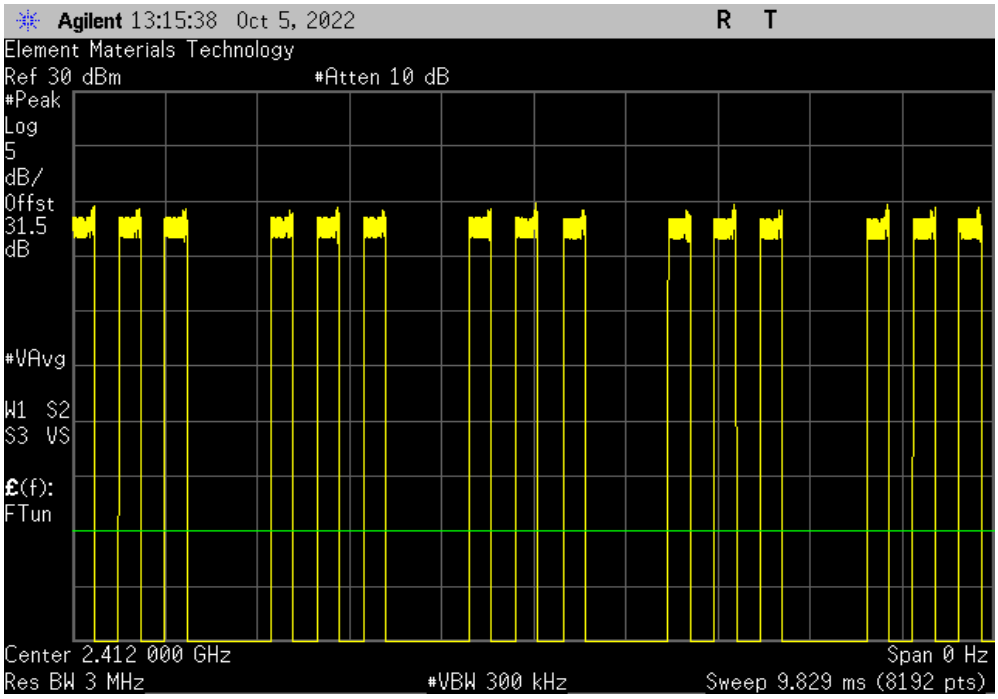


DUTY CYCLE - CHAIN 0

Chain 0, CCK, 11 Mbps, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	235.832 us	2.121 ms	3	33.4	N/A	N/A

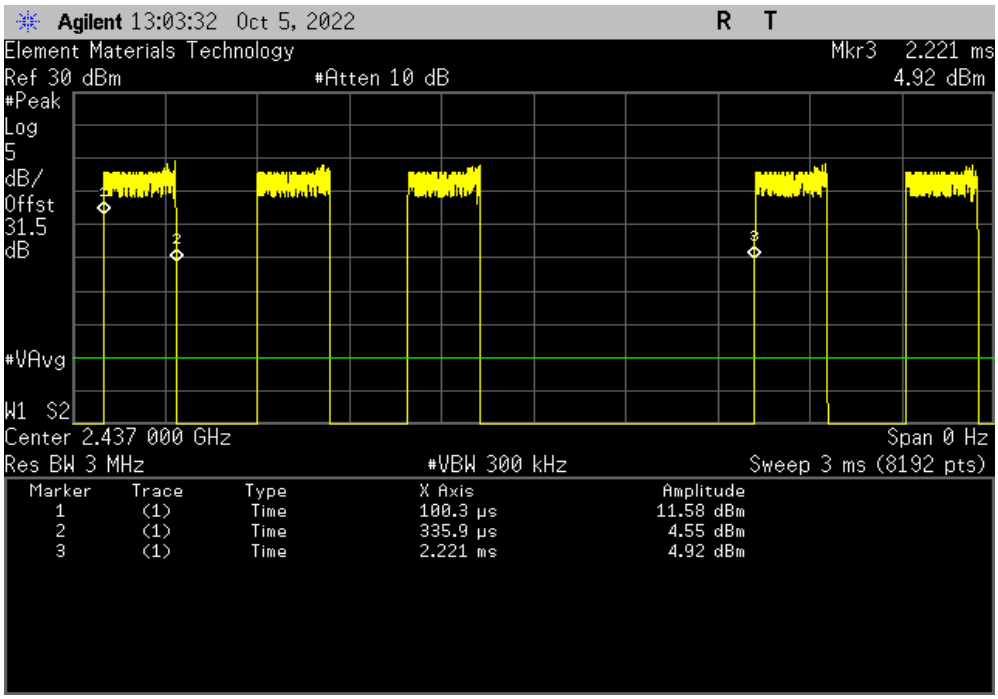


Chain 0, CCK, 11 Mbps, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	15	N/A	N/A	N/A

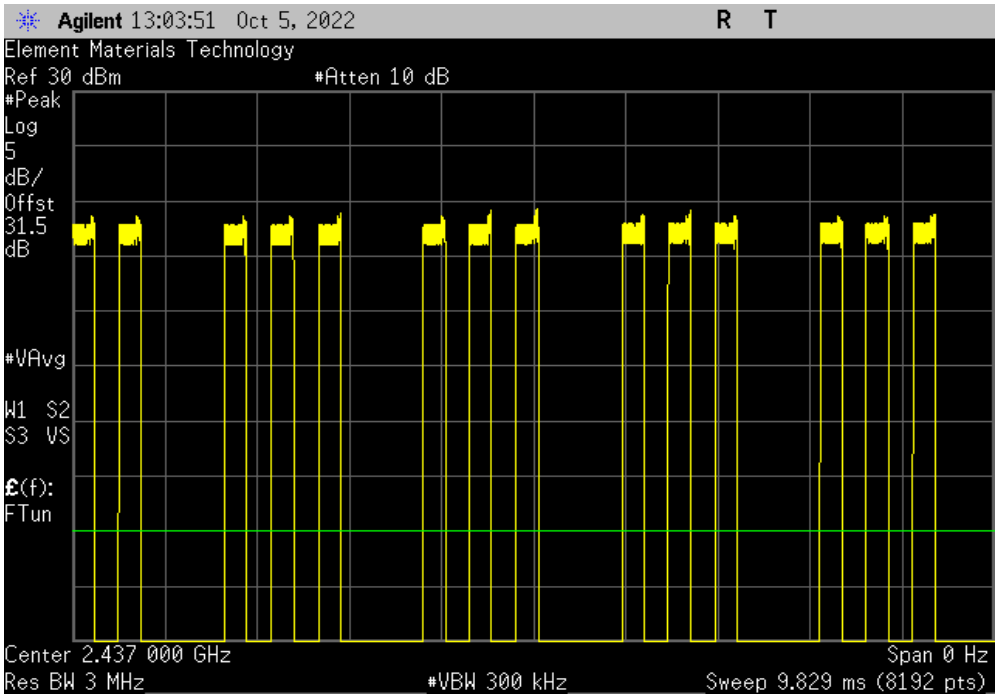


DUTY CYCLE - CHAIN 0

Chain 0, CCK, 11 Mbps, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	235.626 us	2.121 ms	3	33.4	N/A	N/A

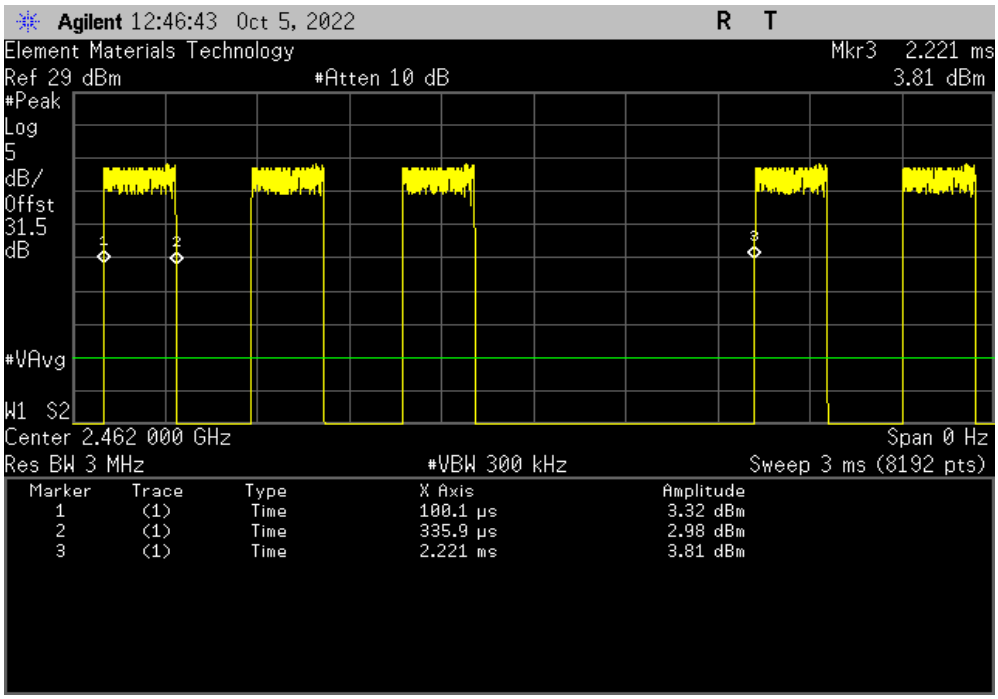


Chain 0, CCK, 11 Mbps, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	14	N/A	N/A	N/A

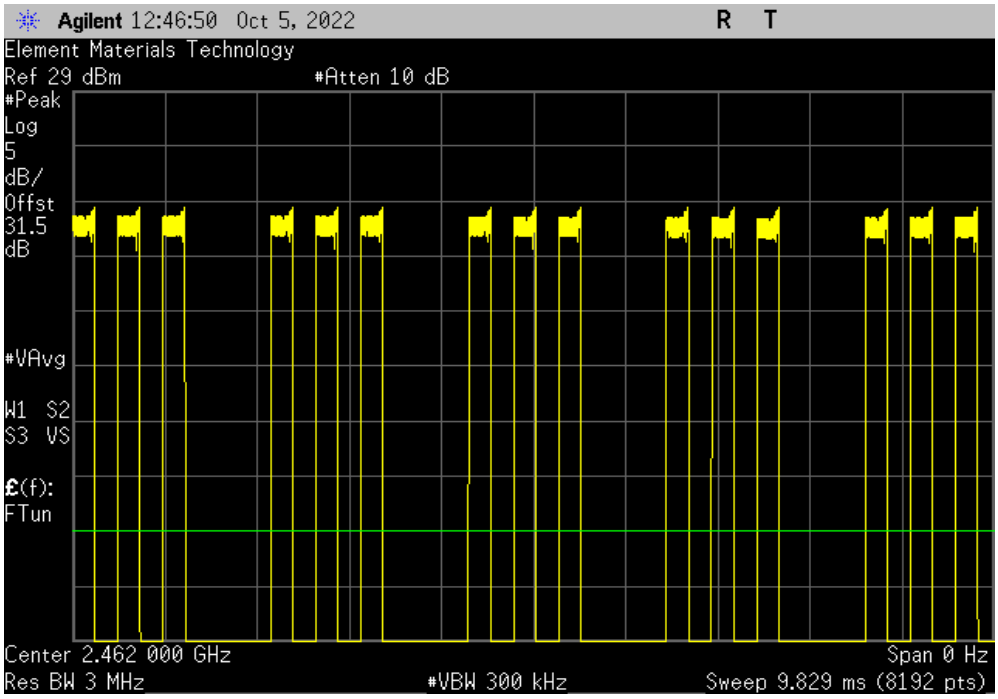


DUTY CYCLE - CHAIN 0

Chain 0, CCK, 11 Mbps, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	235.832 us	2.121 ms	3	33.4	N/A	N/A

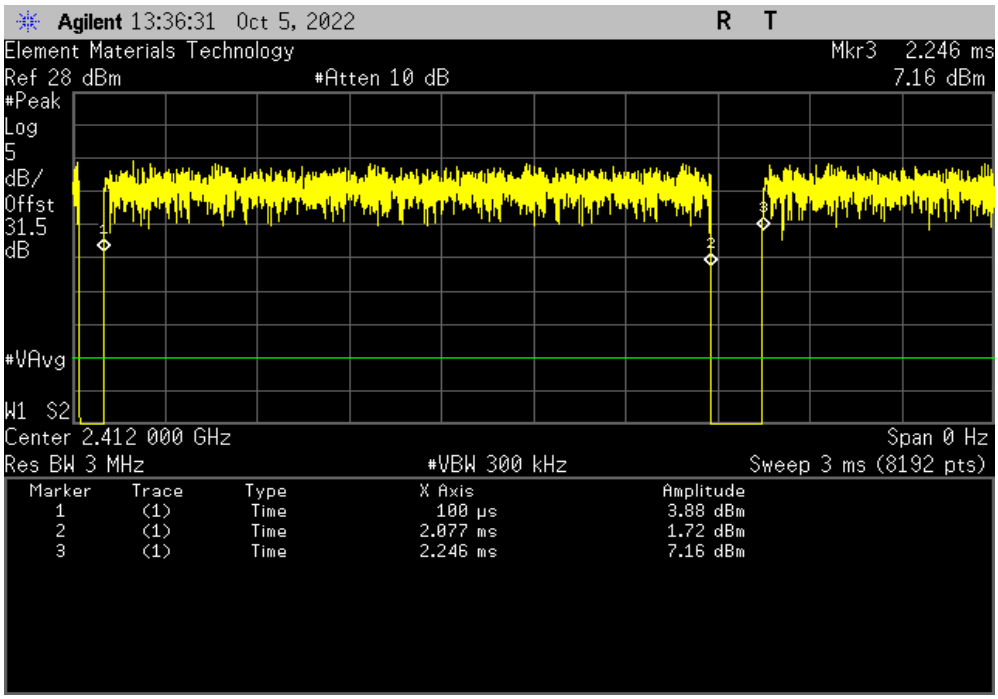


Chain 0, CCK, 11 Mbps, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	15	N/A	N/A	N/A

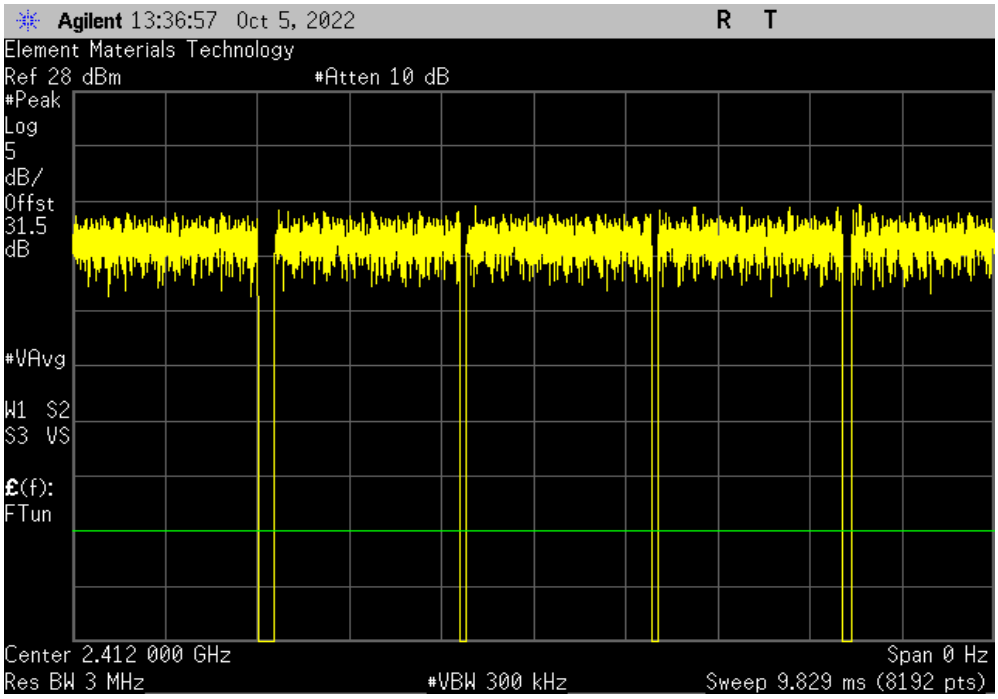


DUTY CYCLE - CHAIN 0

Chain 0, Legacy OFDM, 6 Mbps, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	1.977 ms	2.146 ms	1	92.1	N/A	N/A

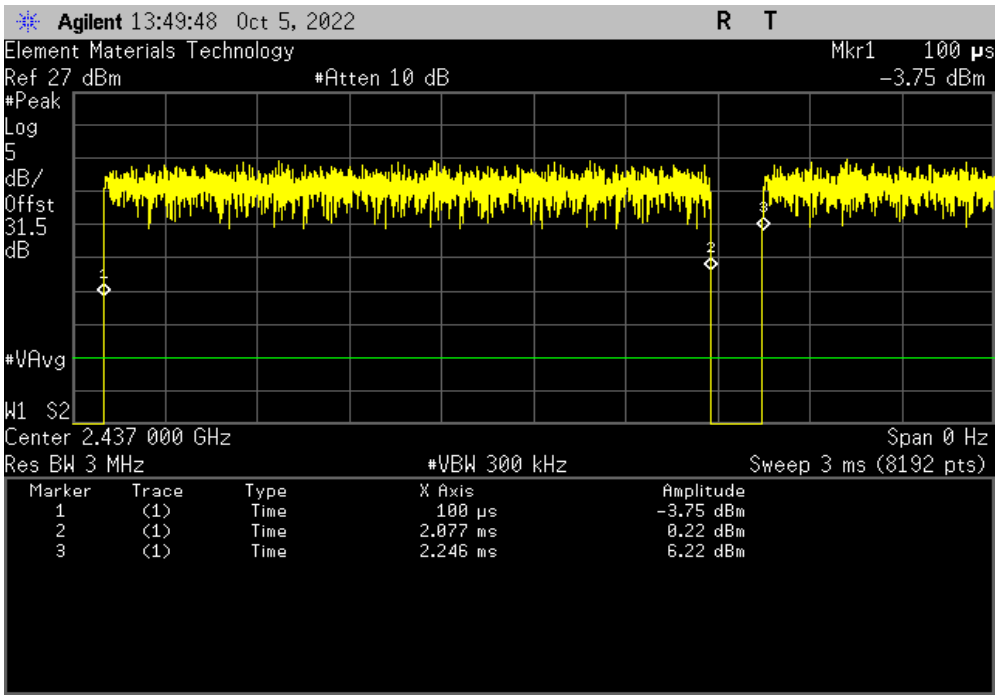


Chain 0, Legacy OFDM, 6 Mbps, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

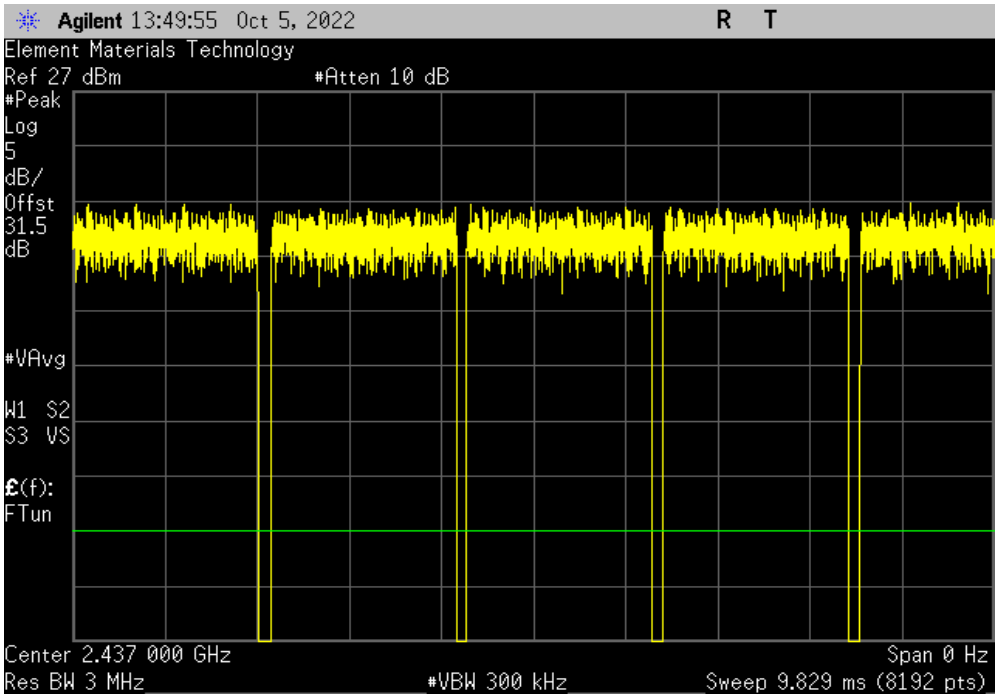


DUTY CYCLE - CHAIN 0

Chain 0, Legacy OFDM, 6 Mbps, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	1.977 ms	2.146 ms	1	92.1	N/A	N/A

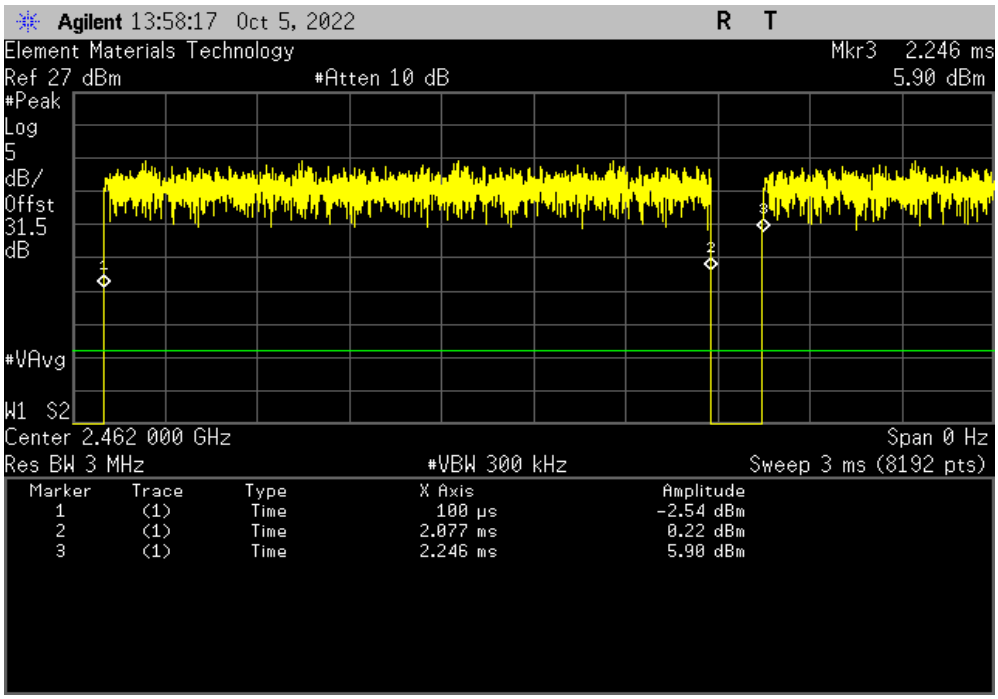


Chain 0, Legacy OFDM, 6 Mbps, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

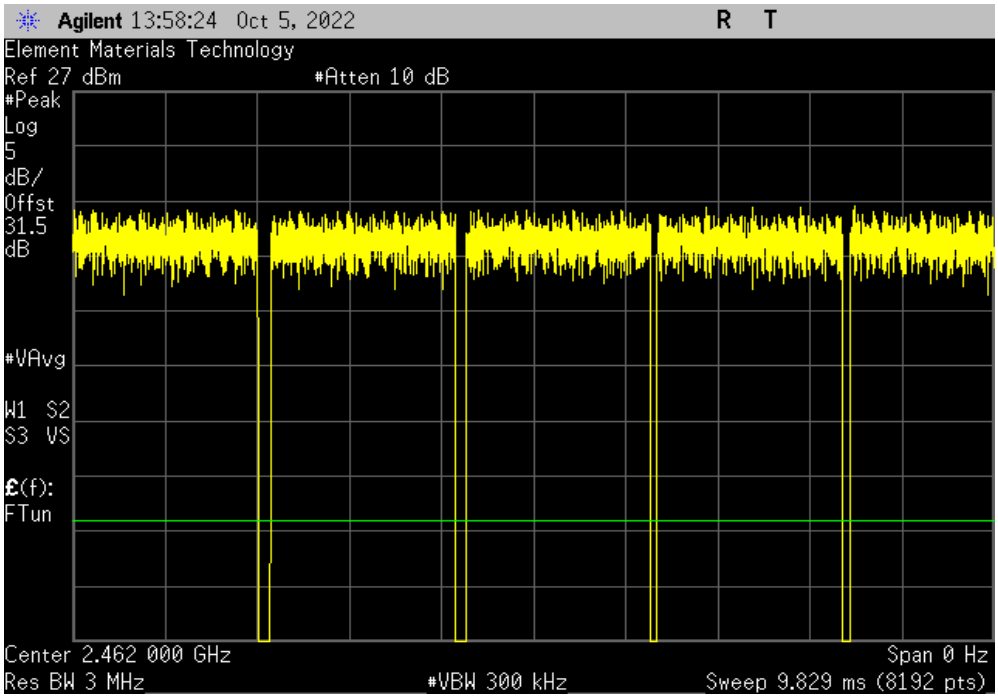


DUTY CYCLE - CHAIN 0

Chain 0, Legacy OFDM, 6 Mbps, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	1.977 ms	2.146 ms	1	92.1	N/A	N/A

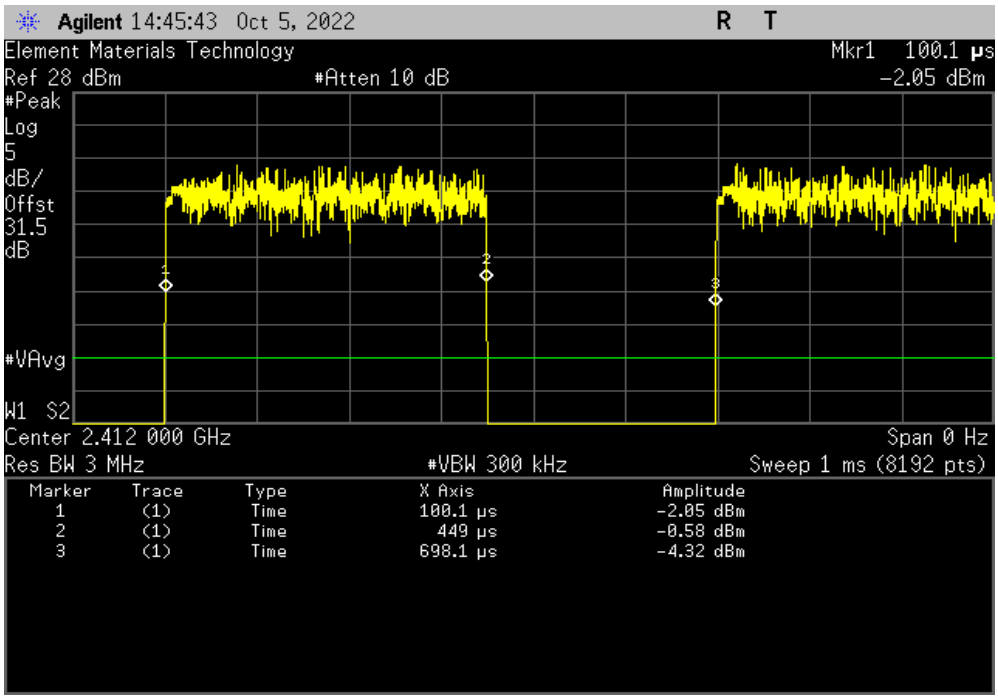


Chain 0, Legacy OFDM, 6 Mbps, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

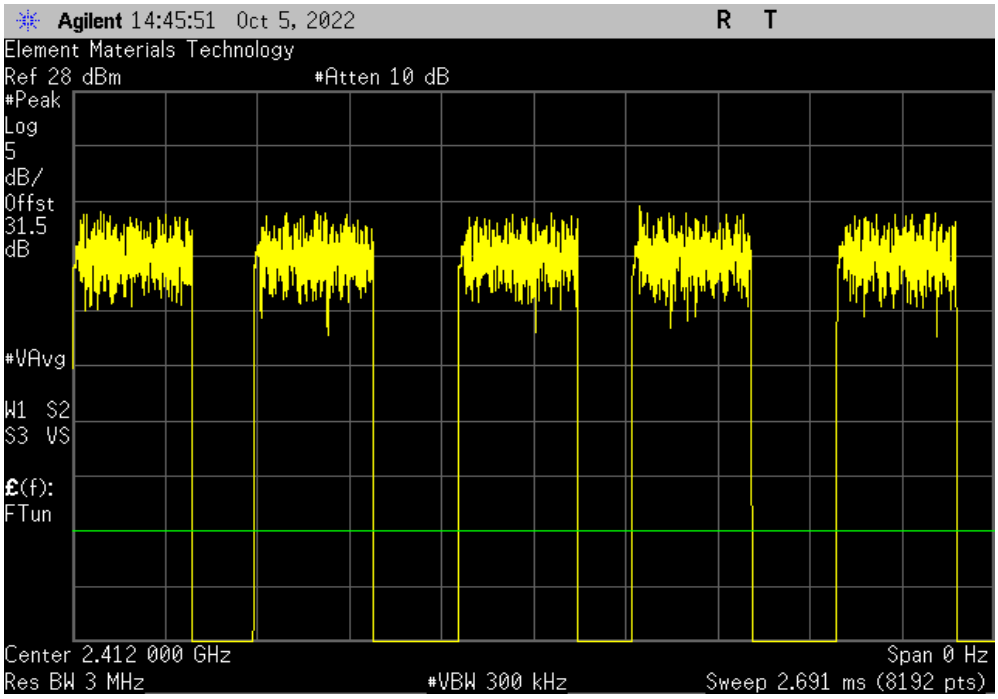


DUTY CYCLE - CHAIN 0

Chain 0, Legacy OFDM, 36 Mbps, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	348.922 us	598.004 us	1	58.3	N/A	N/A

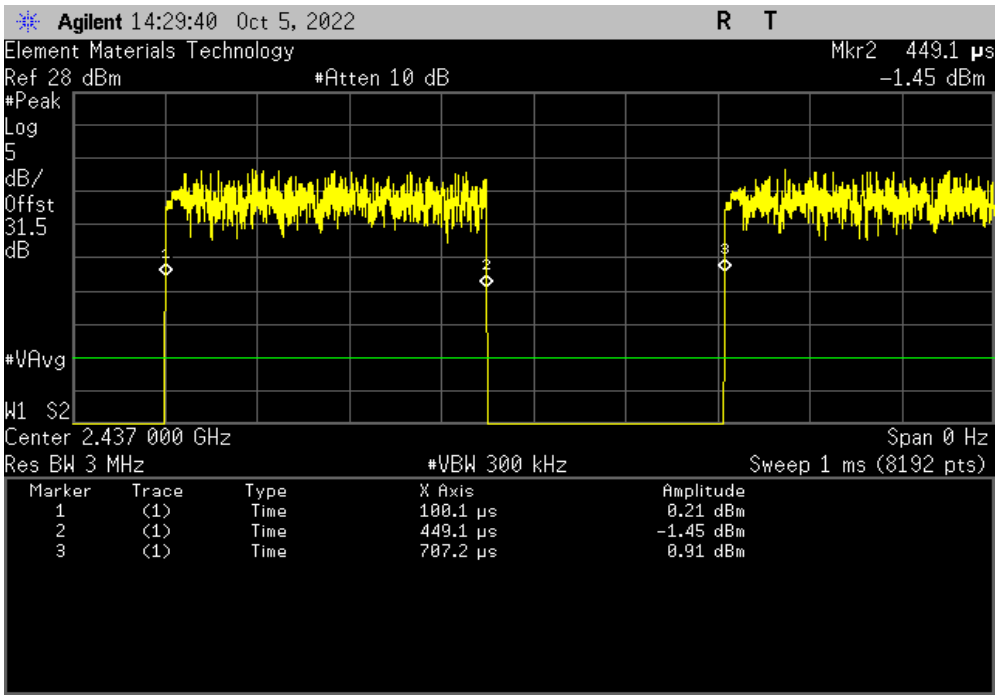


Chain 0, Legacy OFDM, 36 Mbps, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

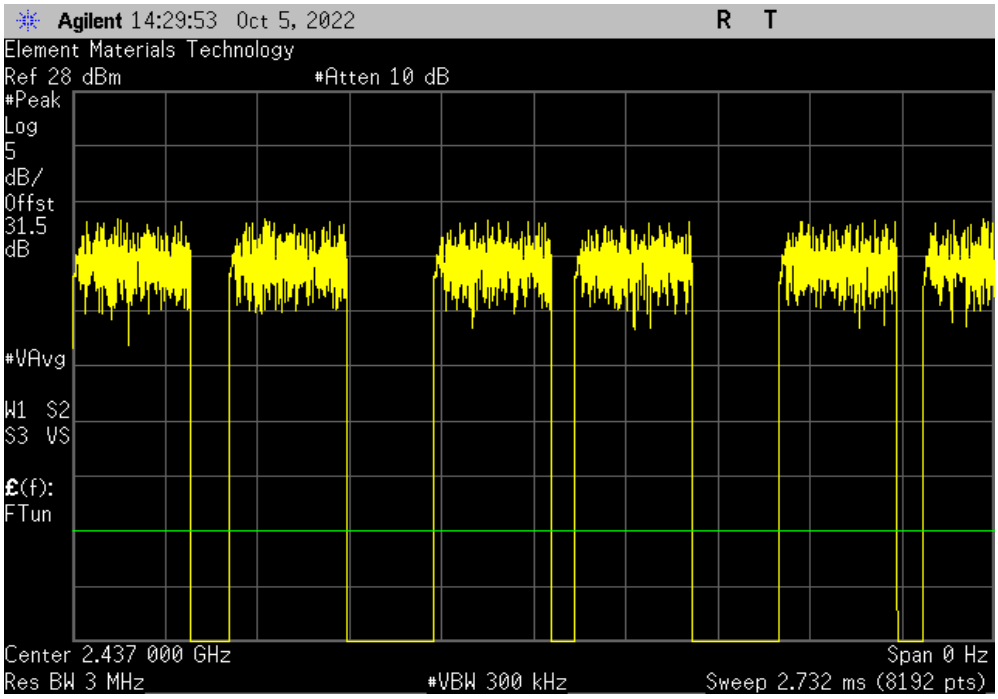


DUTY CYCLE - CHAIN 0

Chain 0, Legacy OFDM, 36 Mbps, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	349.044 us	607.088 us	1	57.5	N/A	N/A

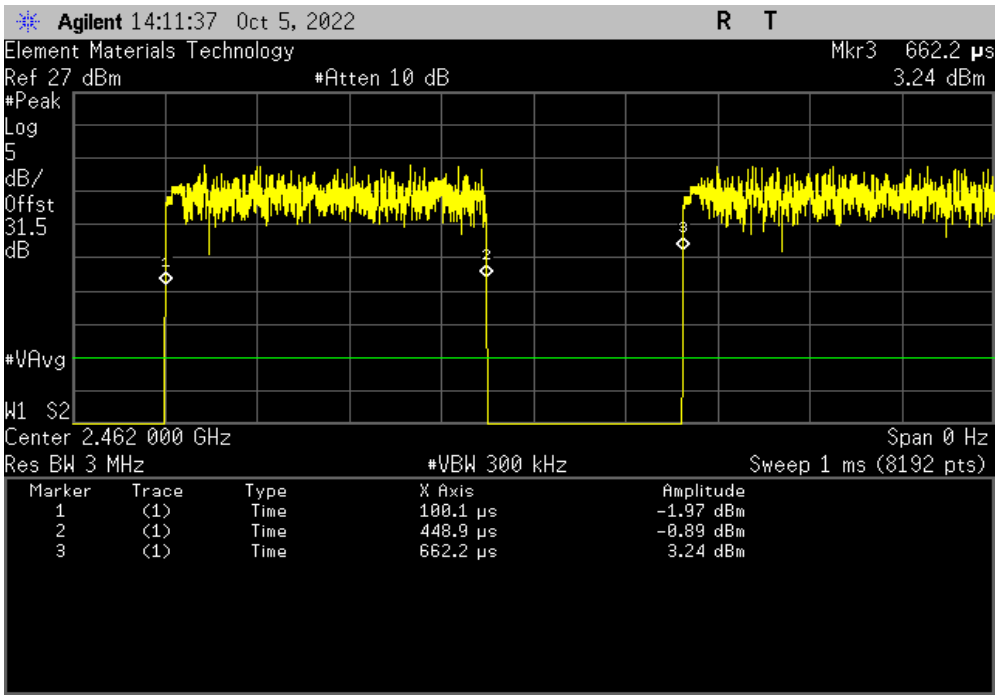


Chain 0, Legacy OFDM, 36 Mbps, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	6	N/A	N/A	N/A

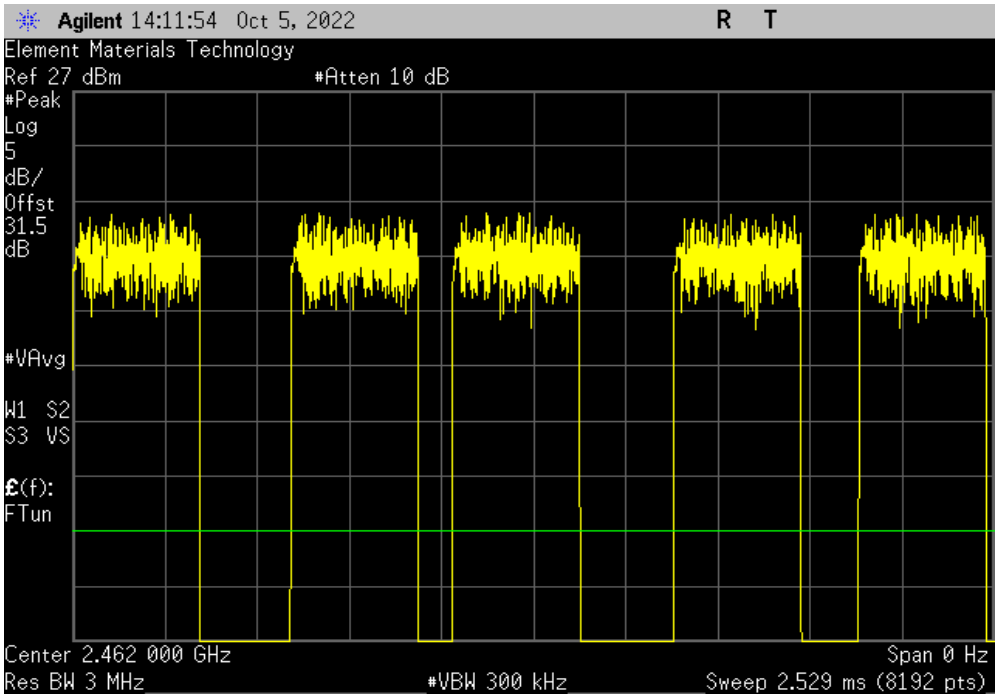


DUTY CYCLE - CHAIN 0

Chain 0, Legacy OFDM, 36 Mbps, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	348.8 us	562.1 us	1	62.1	N/A	N/A

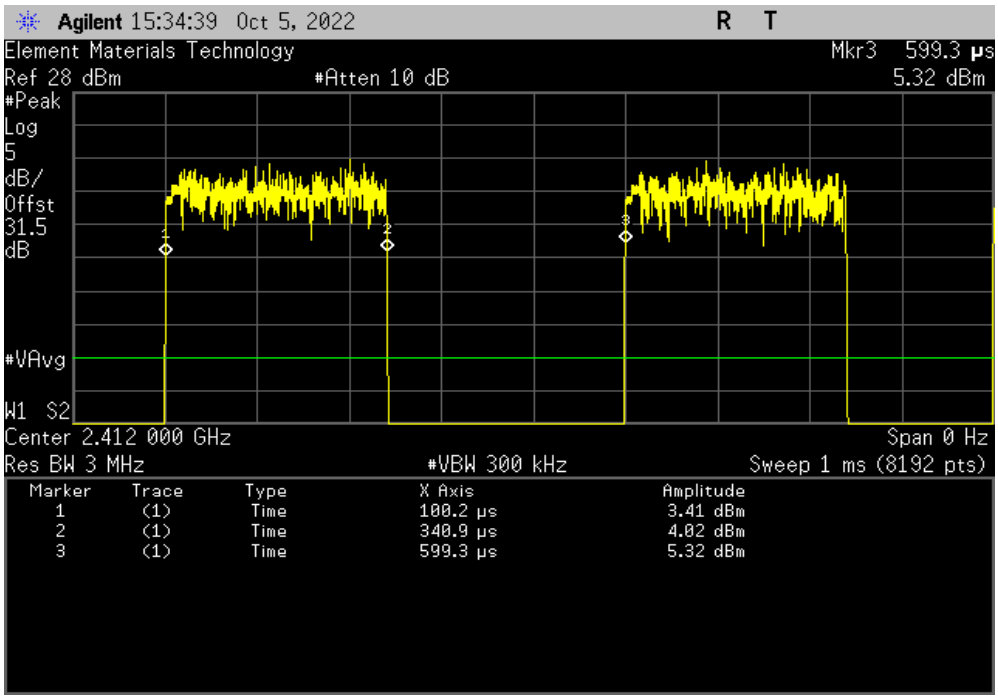


Chain 0, Legacy OFDM, 36 Mbps, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

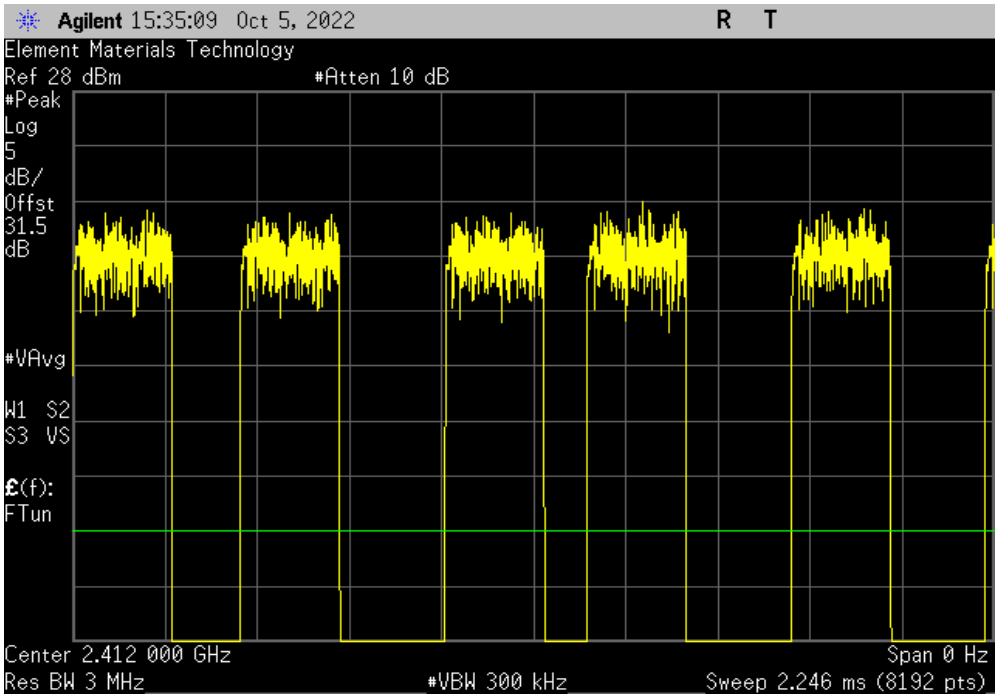


DUTY CYCLE - CHAIN 0

Chain 0, Legacy OFDM, 54 Mbps, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	240.678 us	499.1 us	1	48.2	N/A	N/A

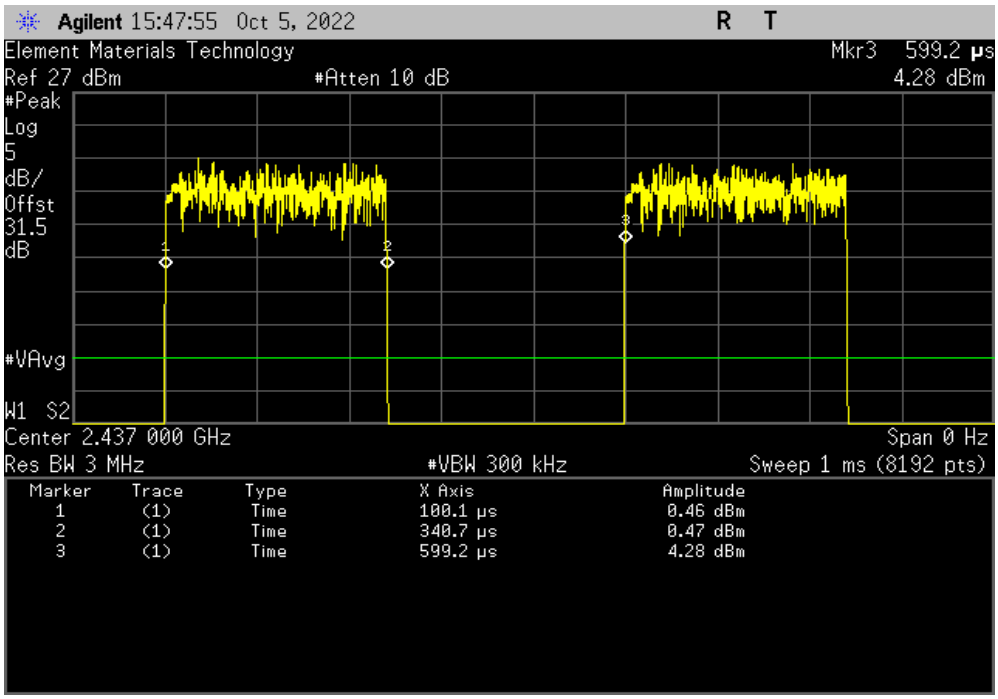


Chain 0, Legacy OFDM, 54 Mbps, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	6	N/A	N/A	N/A

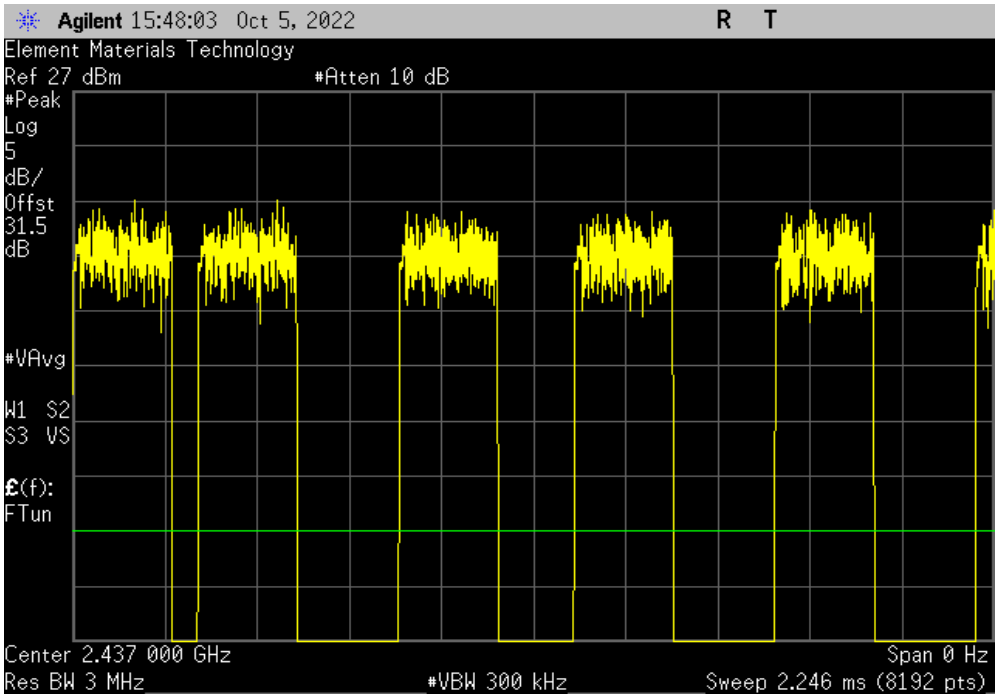


DUTY CYCLE - CHAIN 0

Chain 0, Legacy OFDM, 54 Mbps, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	240.6 us	499.1 us	1	48.2	N/A	N/A

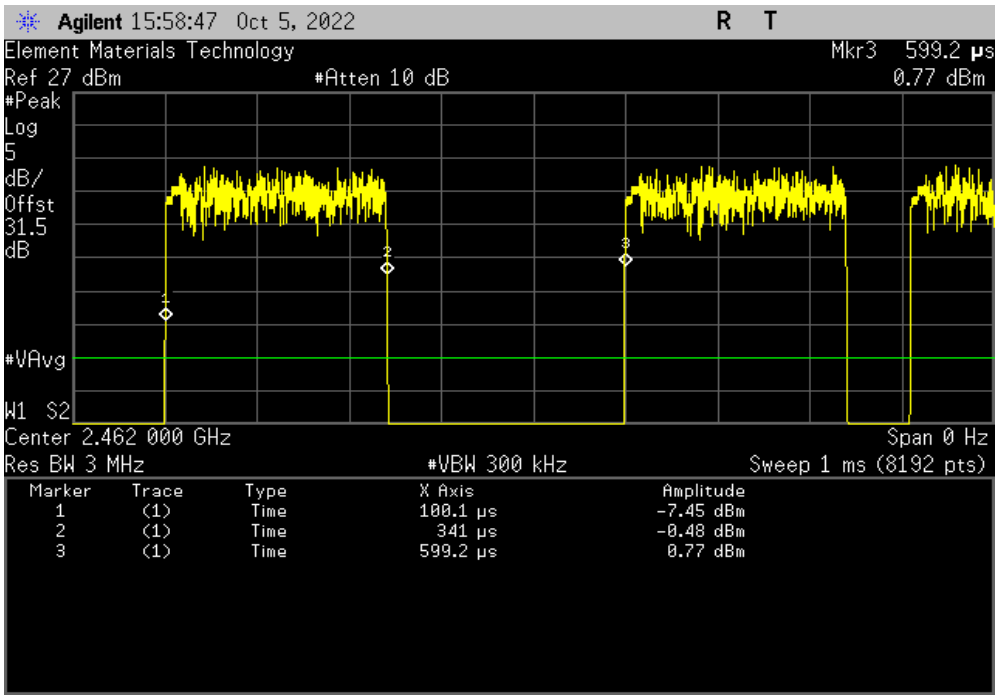


Chain 0, Legacy OFDM, 54 Mbps, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	6	N/A	N/A	N/A

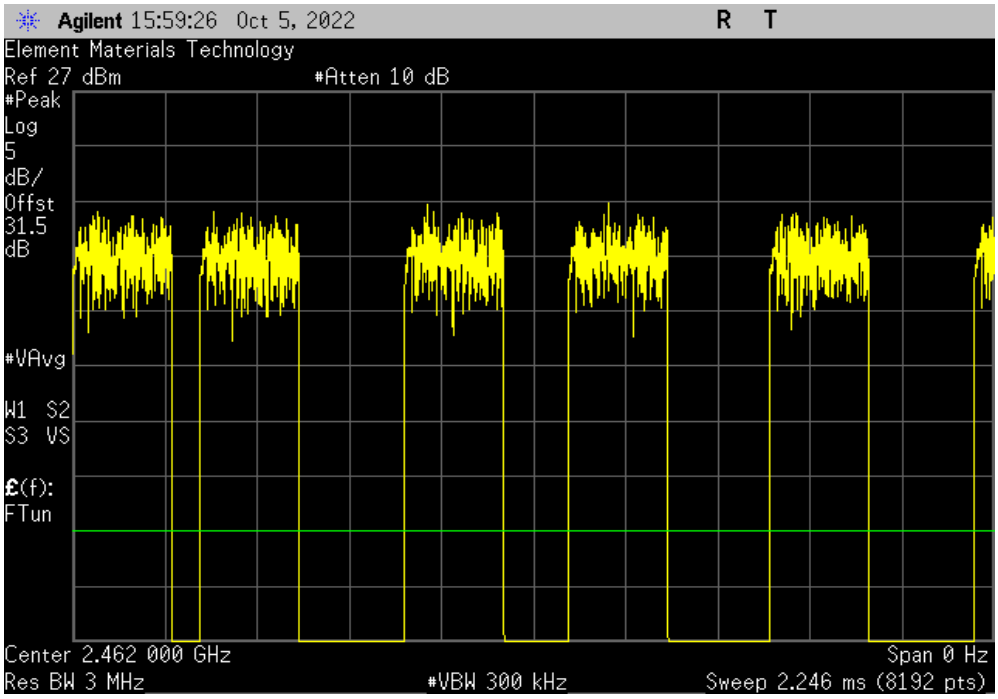


DUTY CYCLE - CHAIN 0

Chain 0, Legacy OFDM, 54 Mbps, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	240.922 us	499.134 us	1	48.3	N/A	N/A

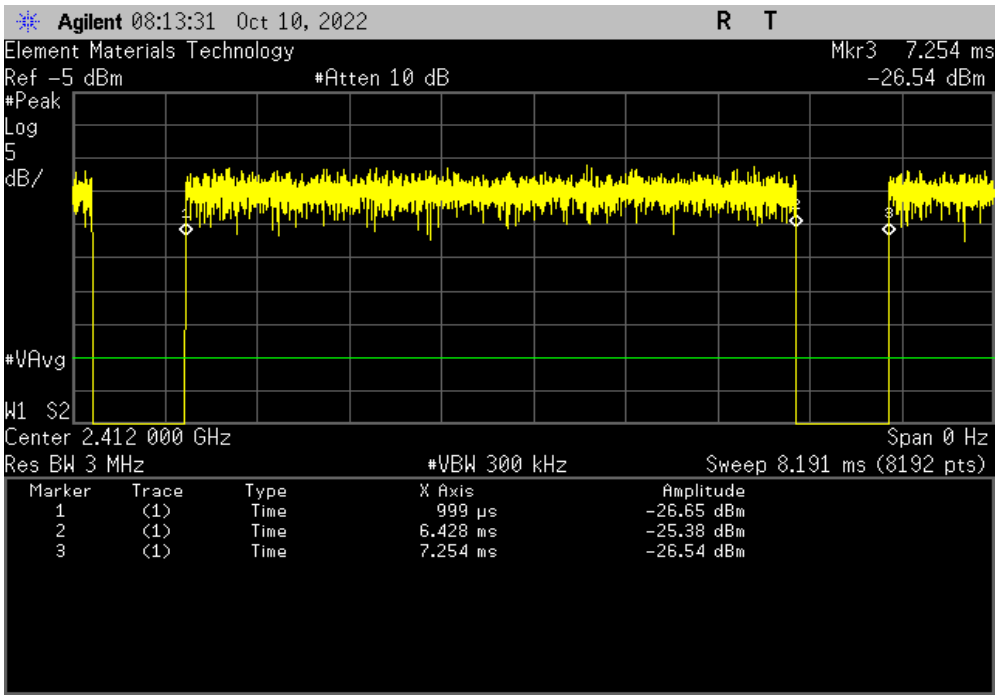


Chain 0, Legacy OFDM, 54 Mbps, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	6	N/A	N/A	N/A

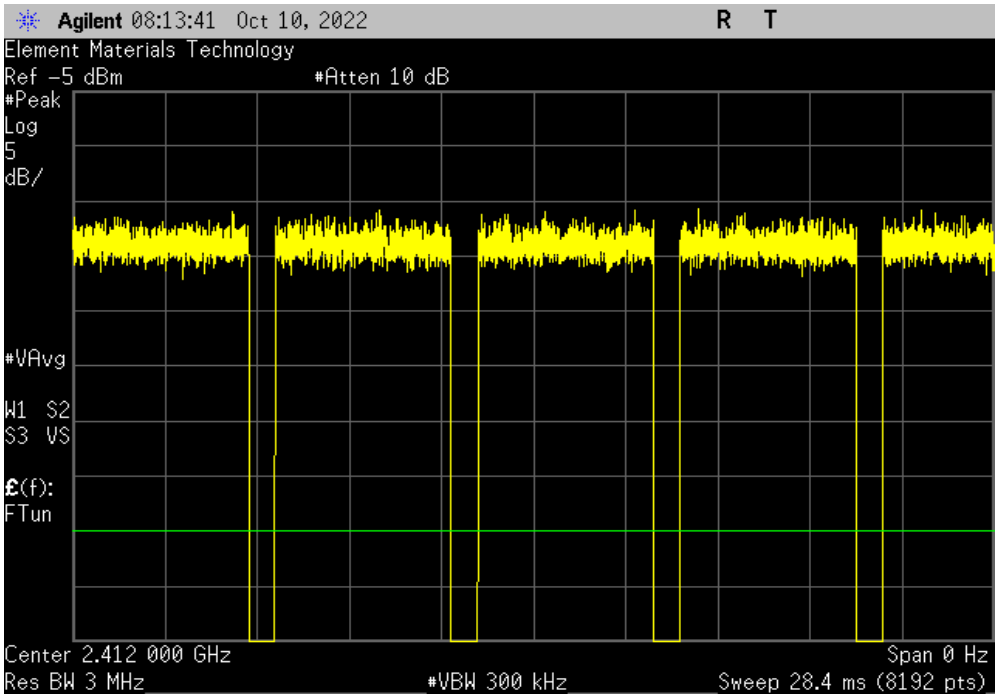


DUTY CYCLE - CHAIN 0

Chain 0, HT20, MCS0, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.429 ms	6.255 ms	1	86.8	N/A	N/A

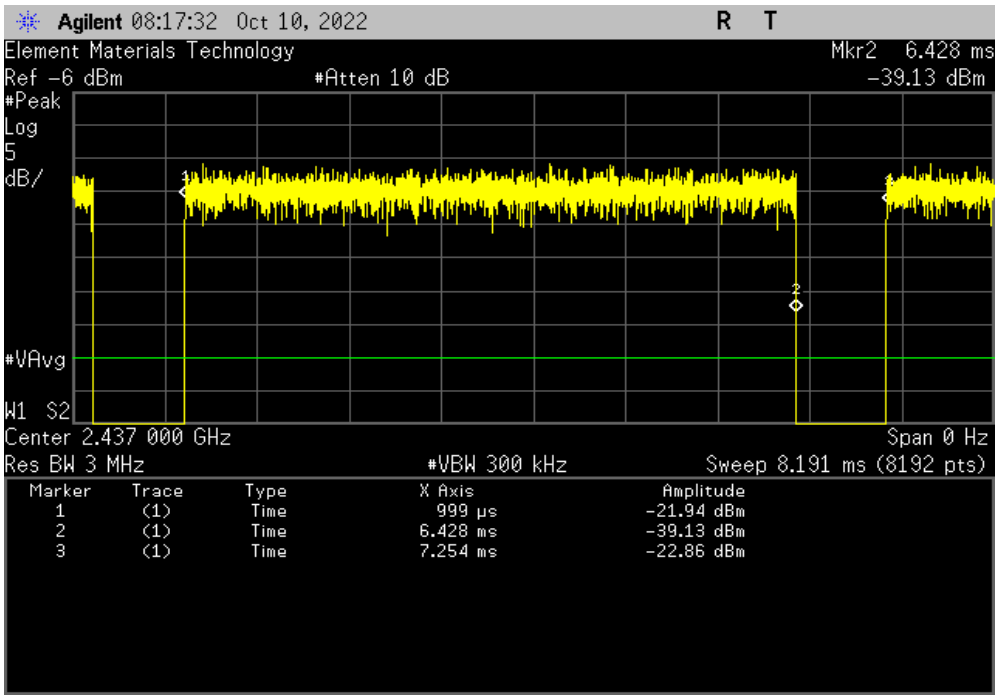


Chain 0, HT20, MCS0, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

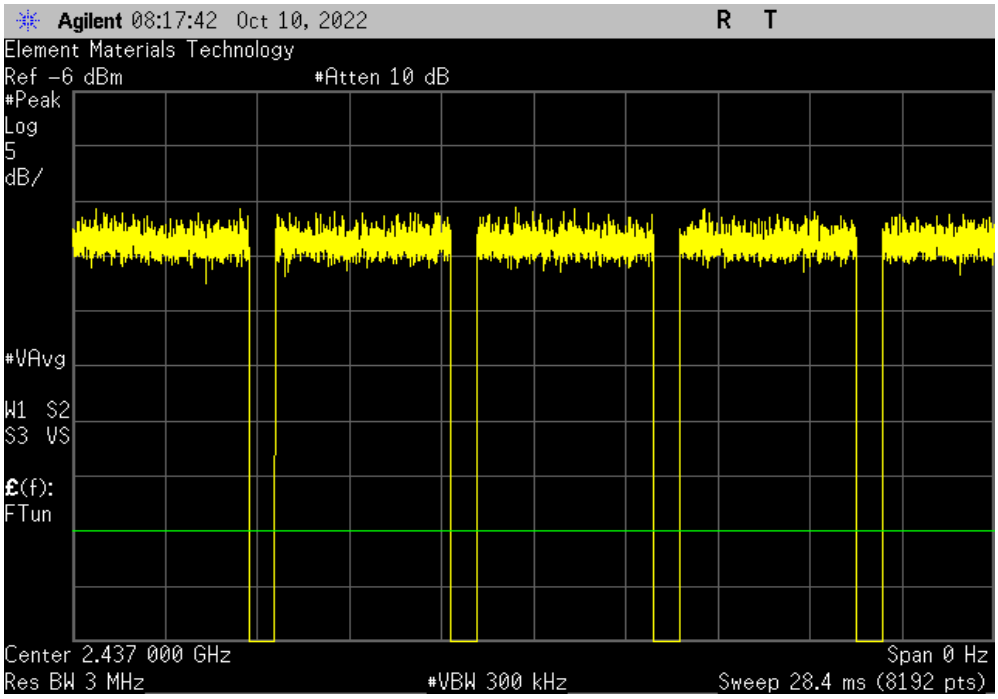


DUTY CYCLE - CHAIN 0

Chain 0, HT20, MCS0, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.429 ms	6.255 ms	1	86.8	N/A	N/A

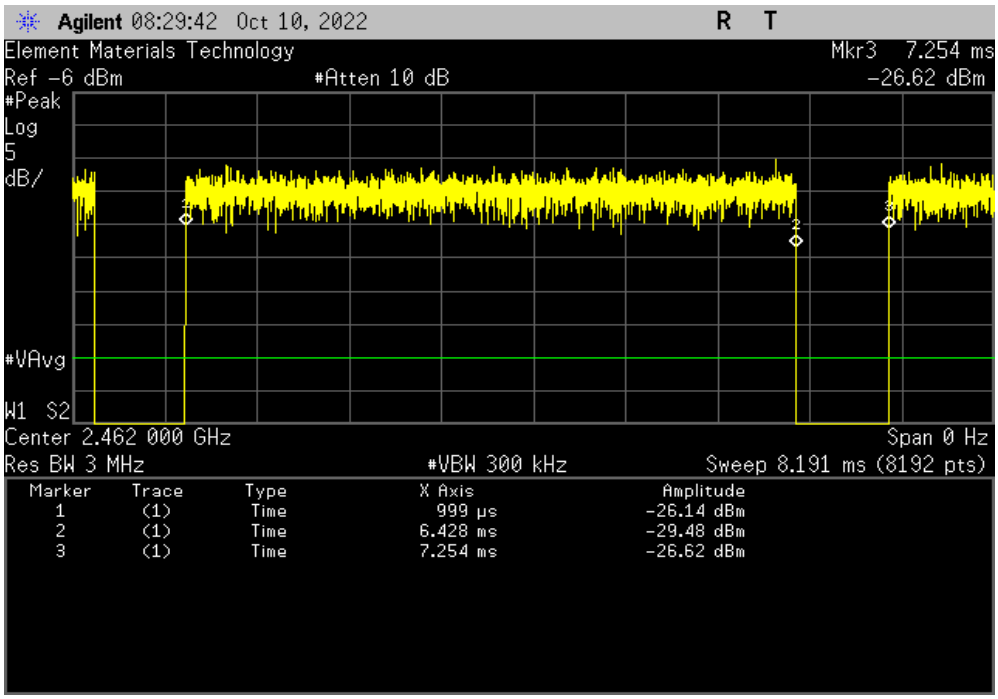


Chain 0, HT20, MCS0, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

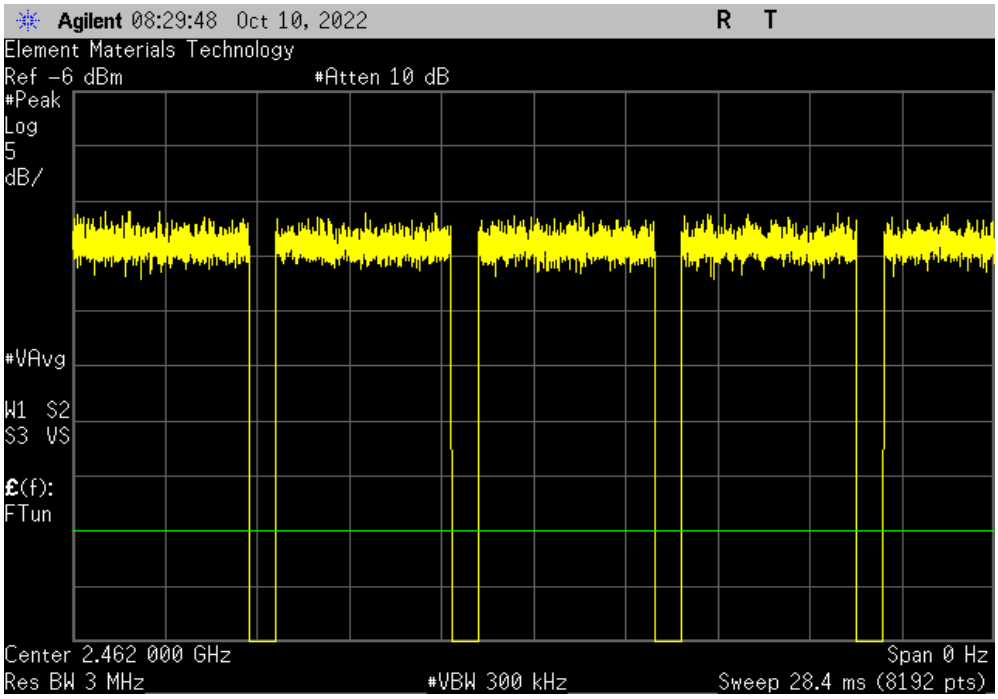


DUTY CYCLE - CHAIN 0

Chain 0, HT20, MCS0, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.429 ms	6.255 ms	1	86.8	N/A	N/A

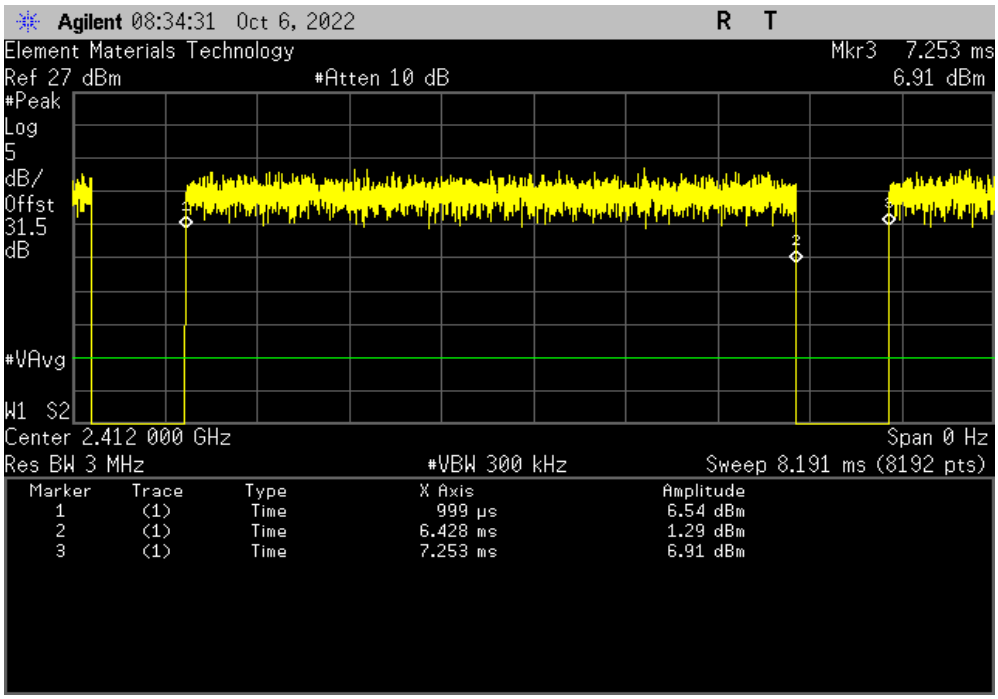


Chain 0, HT20, MCS0, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

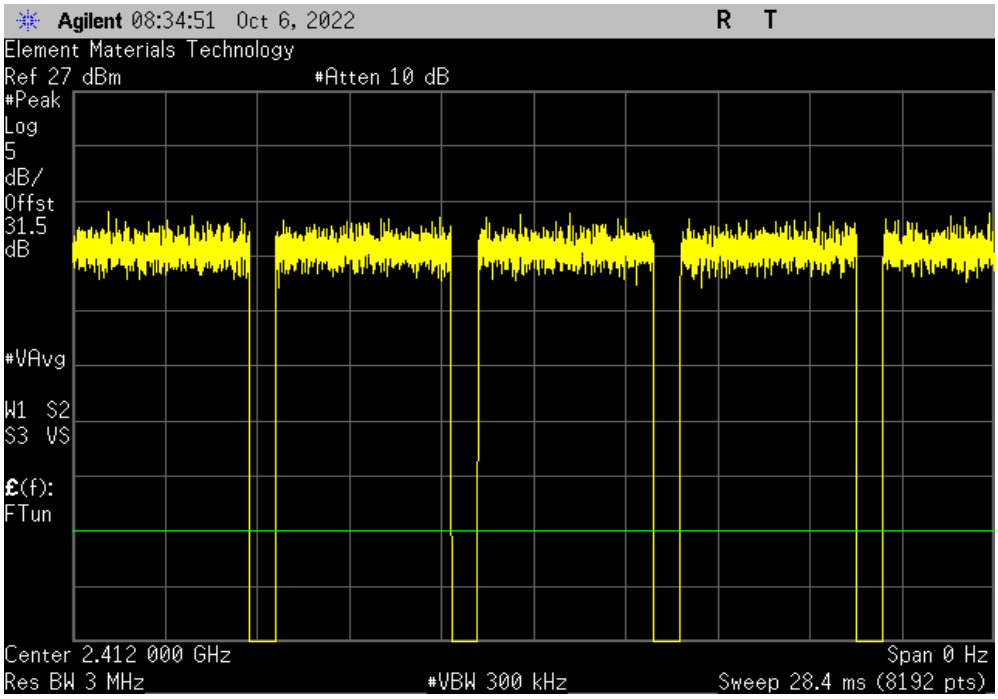


DUTY CYCLE - CHAIN 0

Chain 0, HT20, MCS7, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.429 ms	6.254 ms	1	86.8	N/A	N/A

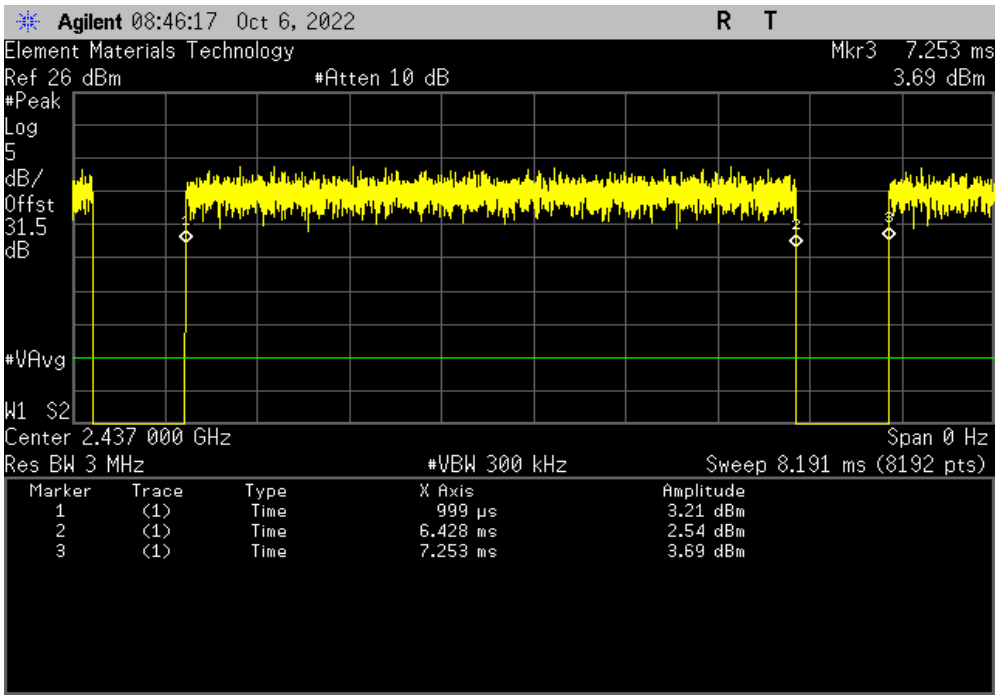


Chain 0, HT20, MCS7, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

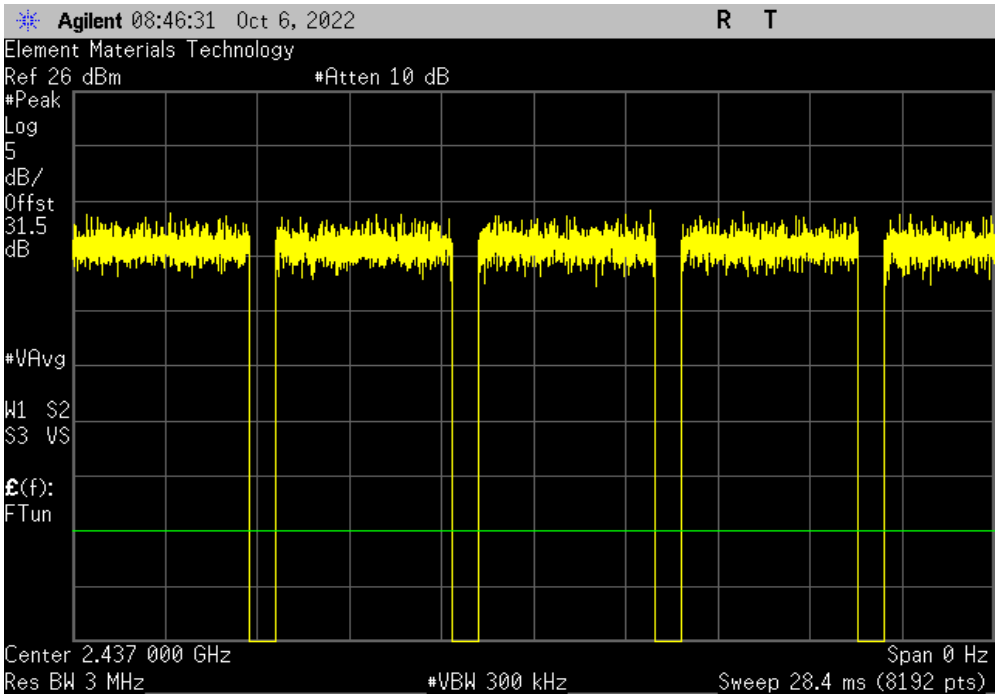


DUTY CYCLE - CHAIN 0

Chain 0, HT20, MCS7, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.429 ms	6.254 ms	1	86.8	N/A	N/A

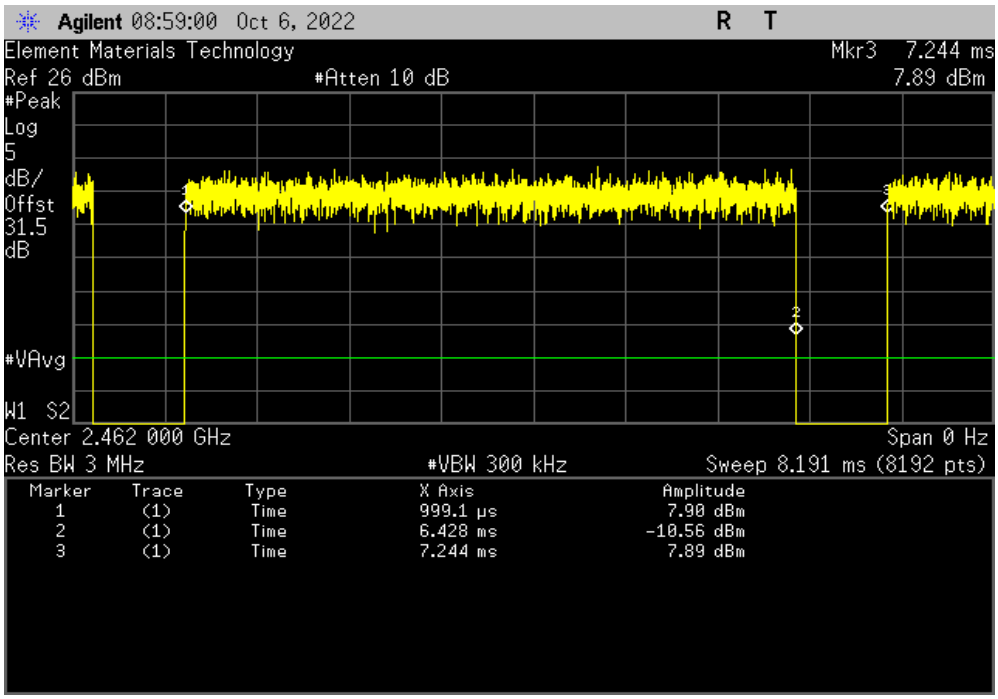


Chain 0, HT20, MCS7, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

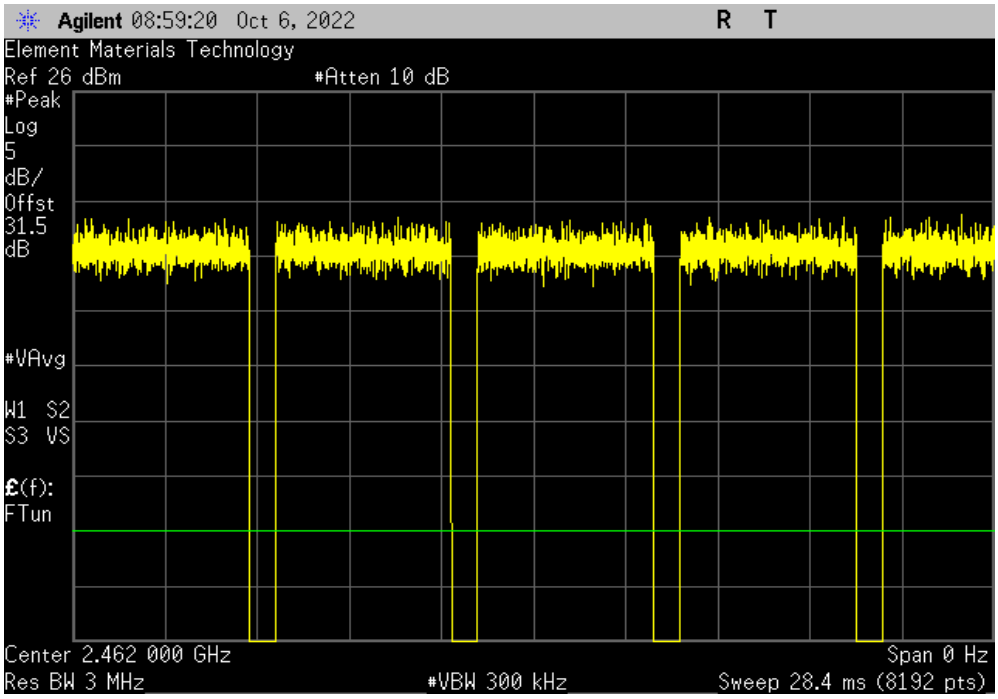


DUTY CYCLE - CHAIN 0

Chain 0, HT20, MCS7, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.429 ms	6.245 ms	1	86.9	N/A	N/A

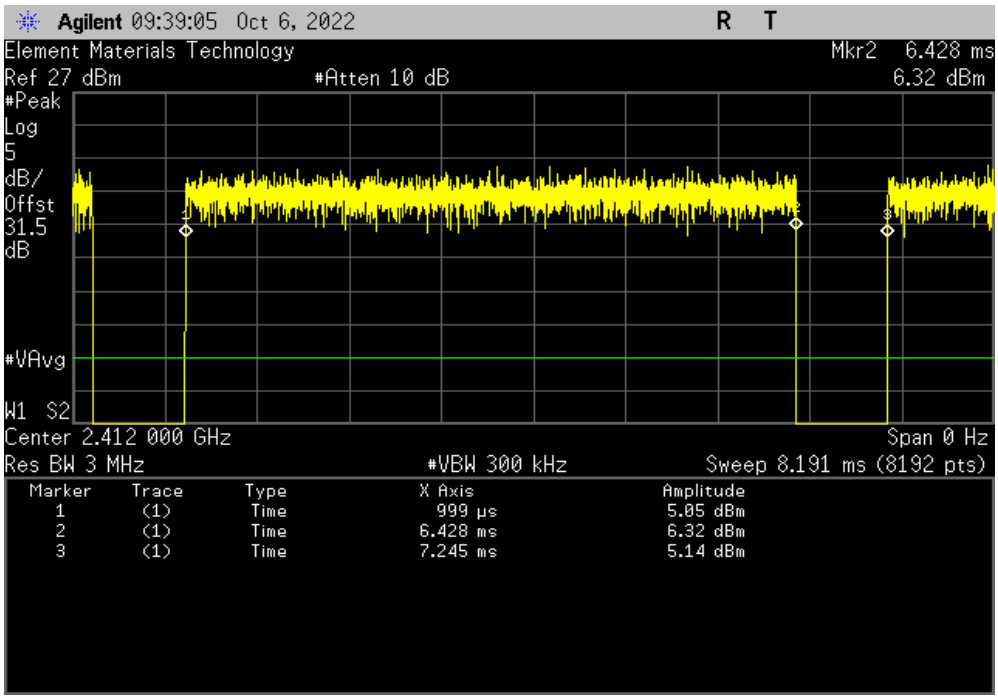


Chain 0, HT20, MCS7, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

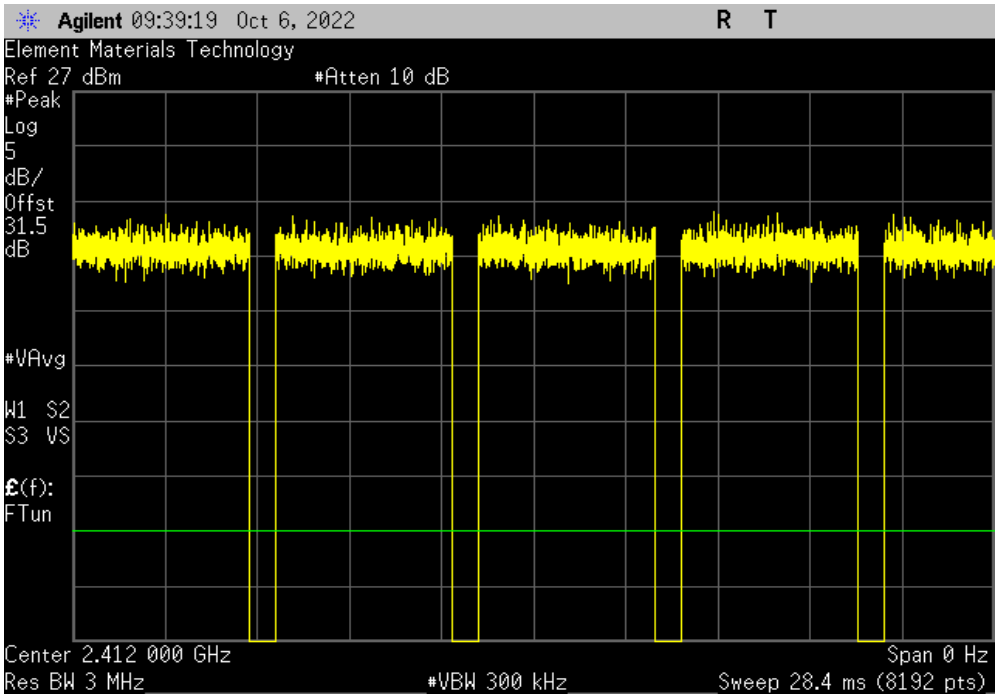


DUTY CYCLE - CHAIN 0

Chain 0, VHT20, MCS0, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.429 ms	6.246 ms	1	86.9	N/A	N/A

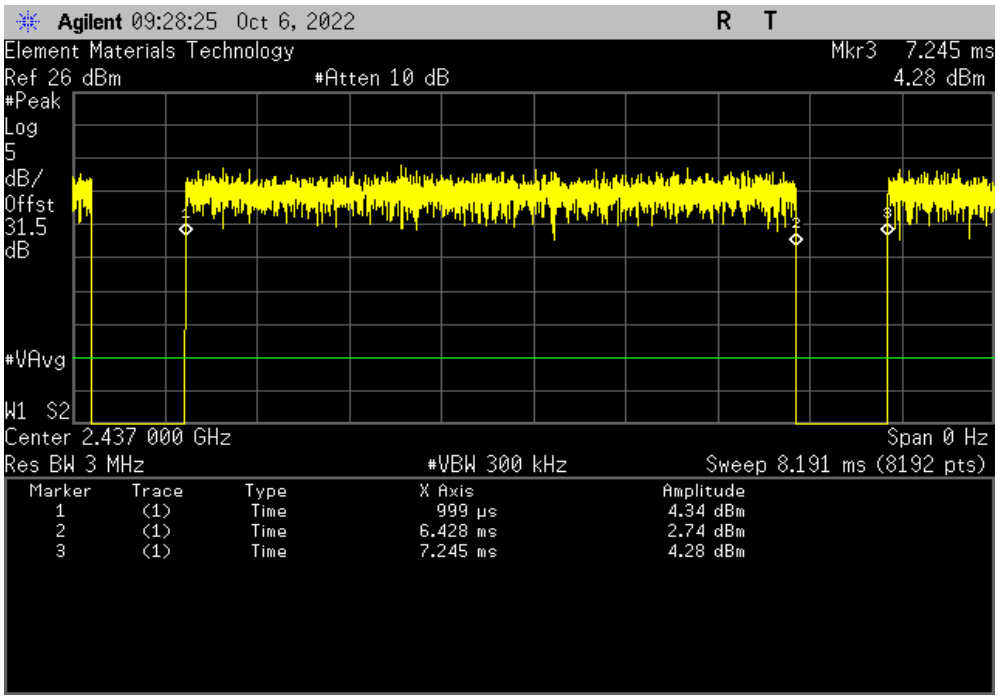


Chain 0, VHT20, MCS0, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

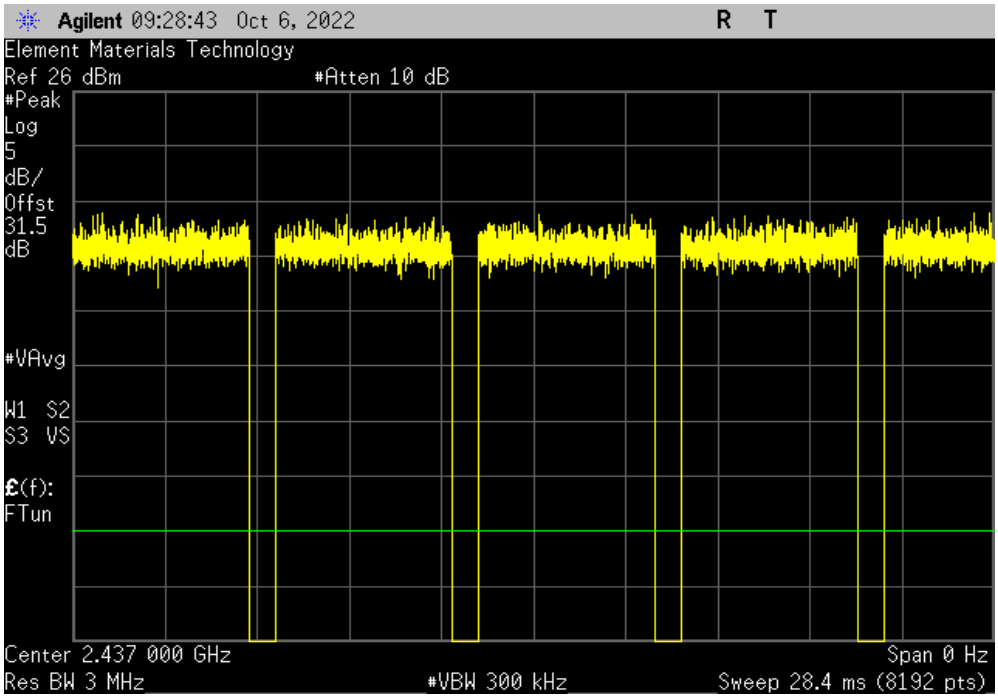


DUTY CYCLE - CHAIN 0

Chain 0, VHT20, MCS0, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.429 ms	6.246 ms	1	86.9	N/A	N/A

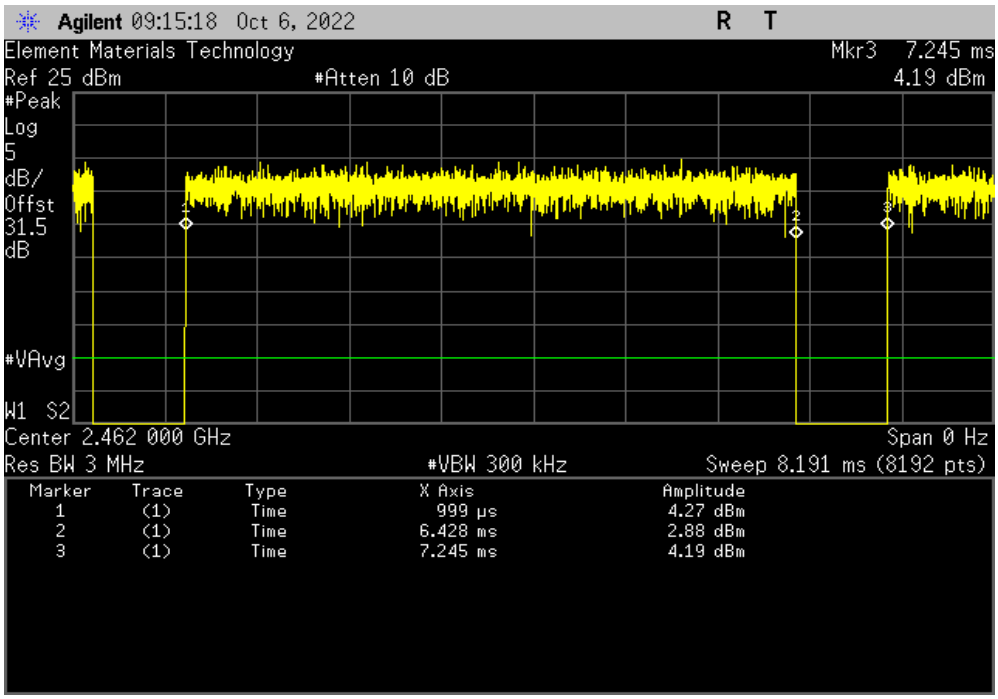


Chain 0, VHT20, MCS0, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

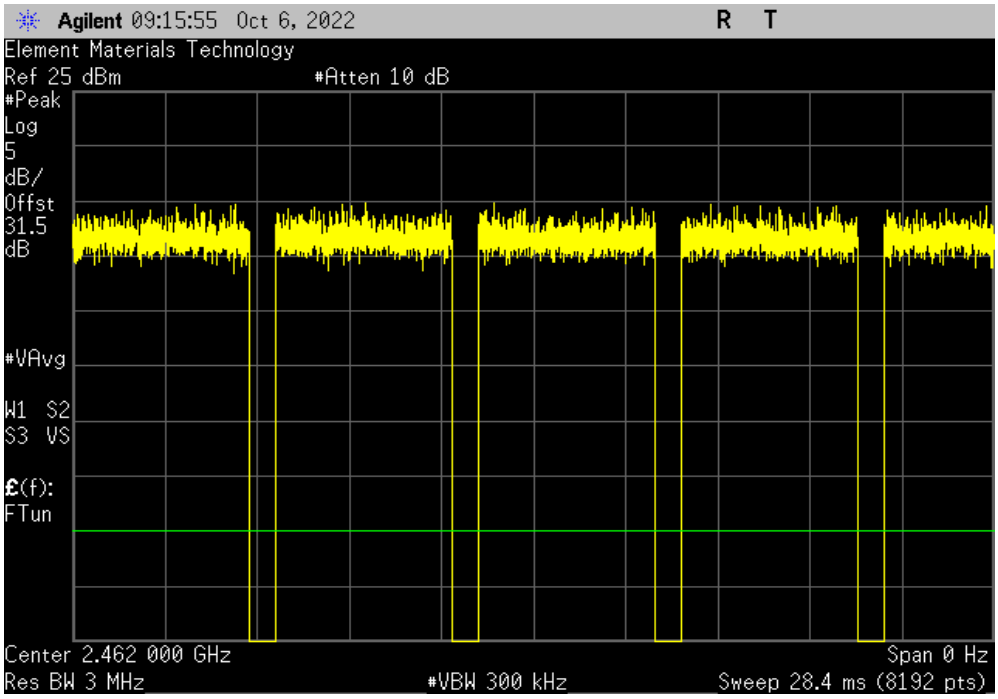


DUTY CYCLE - CHAIN 0

Chain 0, VHT20, MCS0, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.429 ms	6.246 ms	1	86.9	N/A	N/A

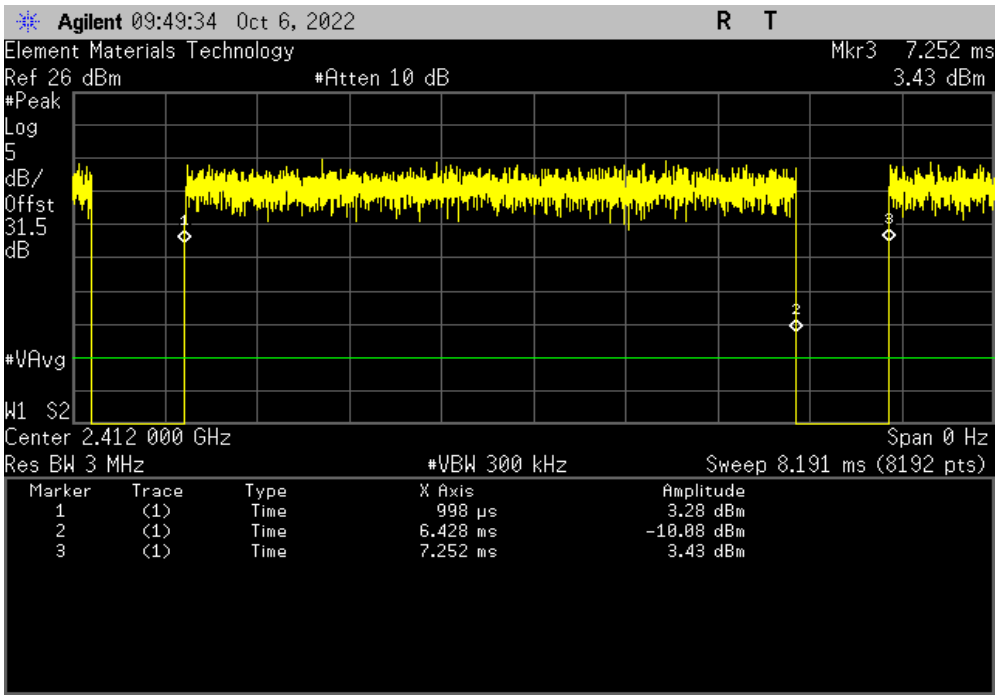


Chain 0, VHT20, MCS0, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

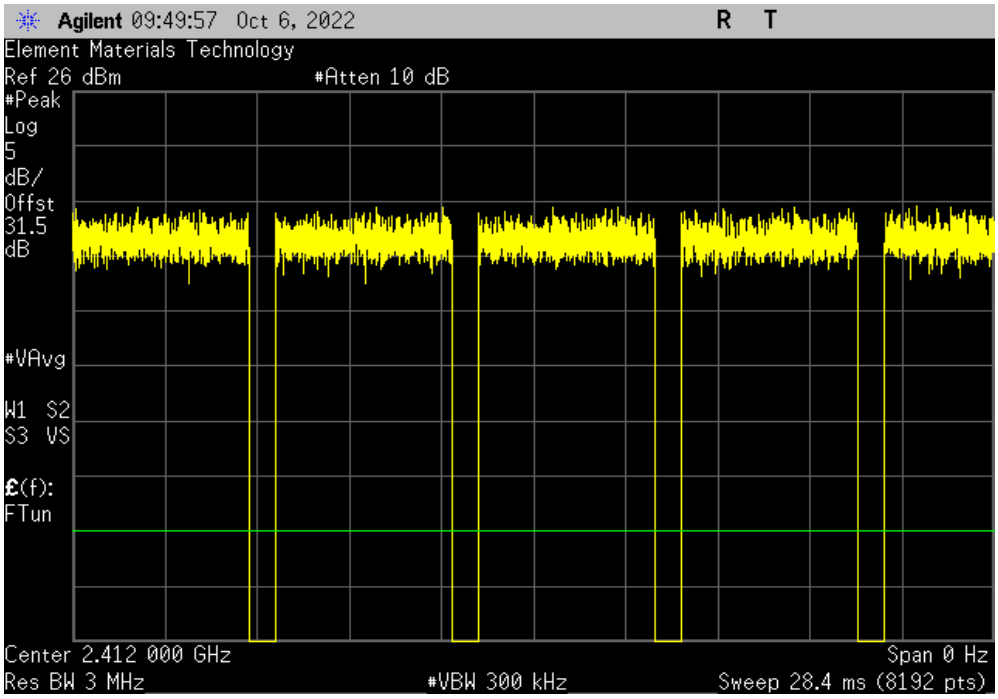


DUTY CYCLE - CHAIN 0

Chain 0, VHT20, MCS8, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.43 ms	6.254 ms	1	86.8	N/A	N/A

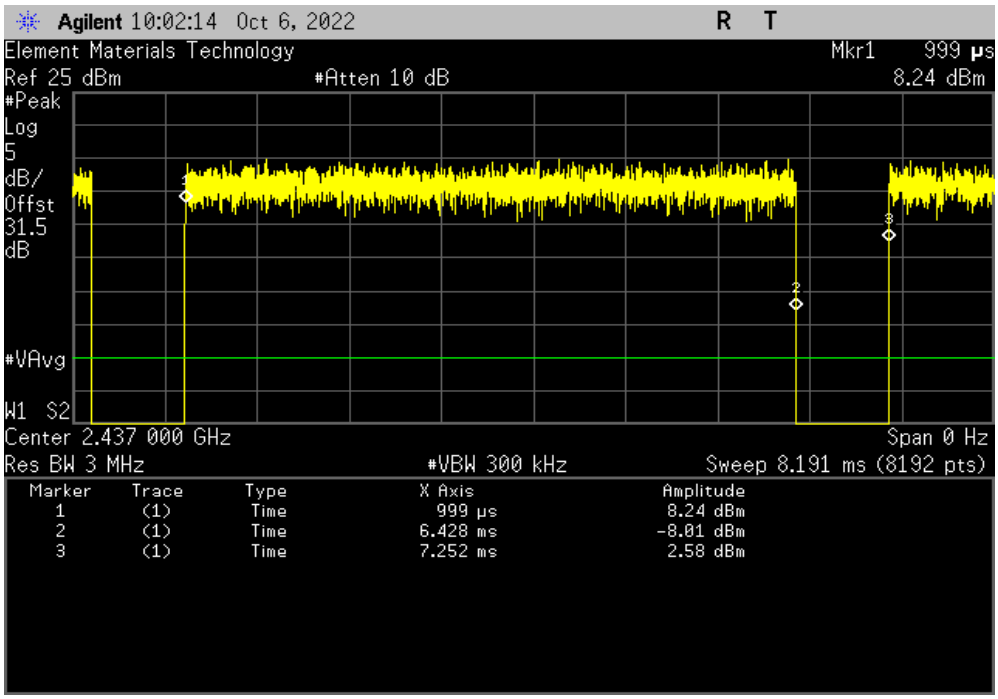


Chain 0, VHT20, MCS8, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

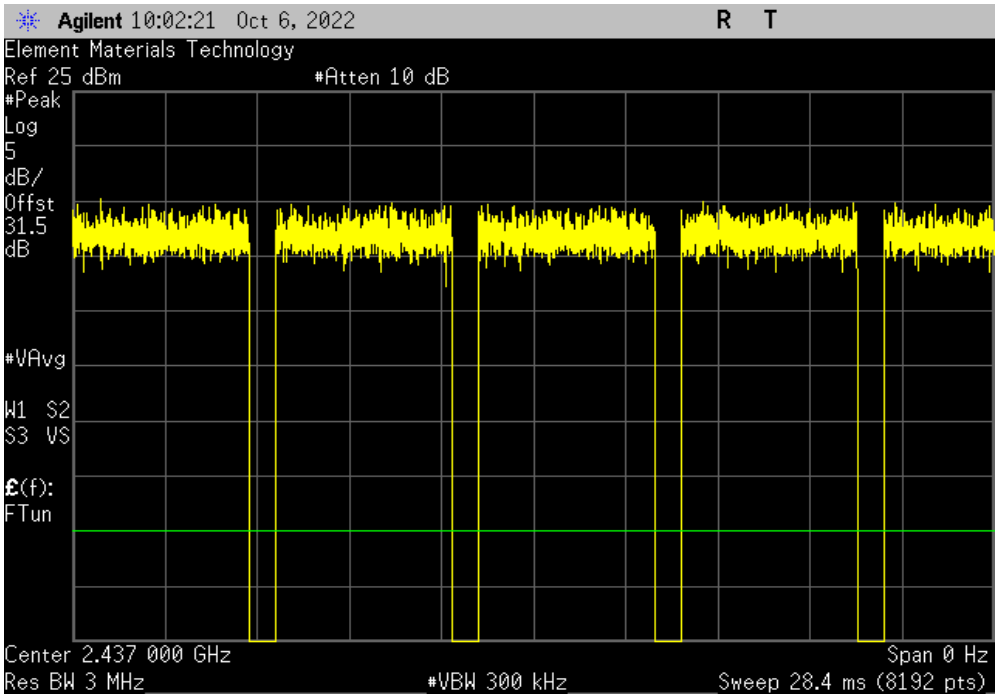


DUTY CYCLE - CHAIN 0

Chain 0, VHT20, MCS8, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.429 ms	6.253 ms	1	86.8	N/A	N/A

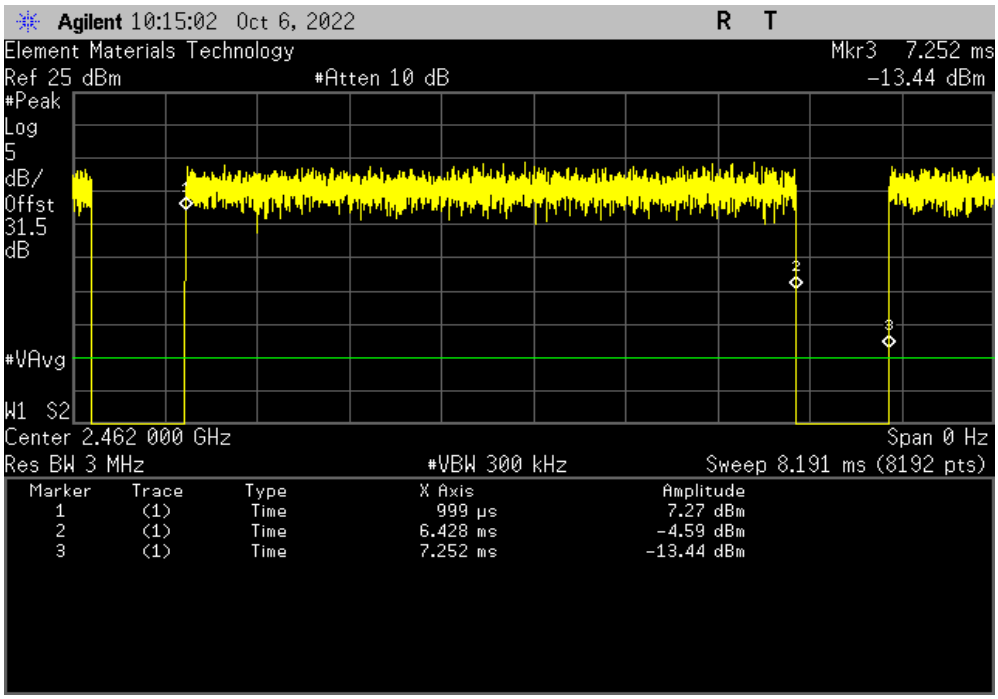


Chain 0, VHT20, MCS8, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

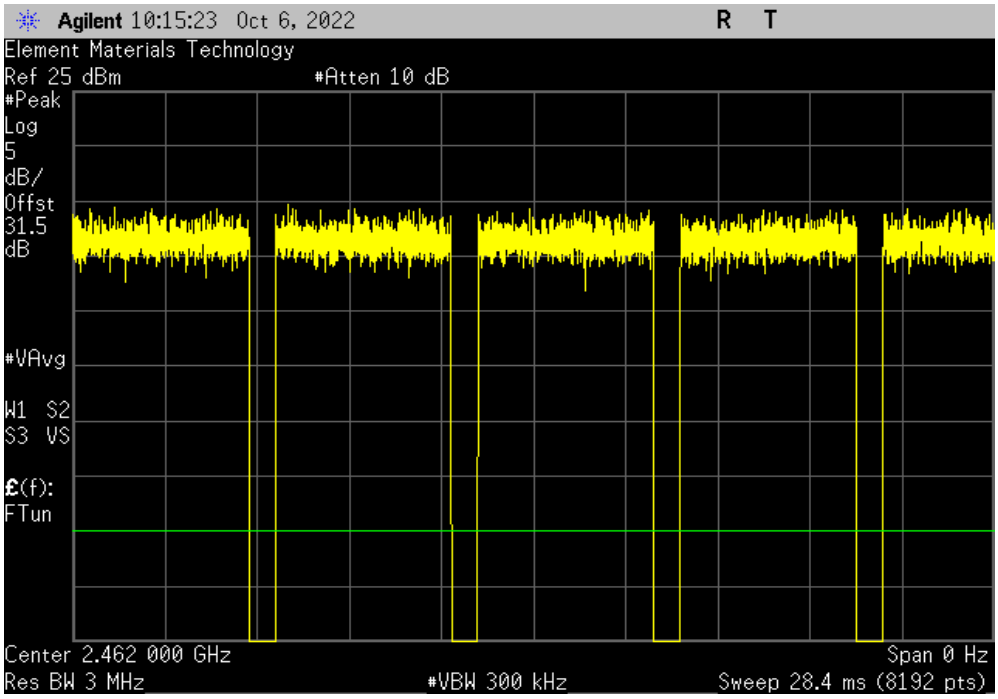


DUTY CYCLE - CHAIN 0

Chain 0, VHT20, MCS8, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.429 ms	6.253 ms	1	86.8	N/A	N/A

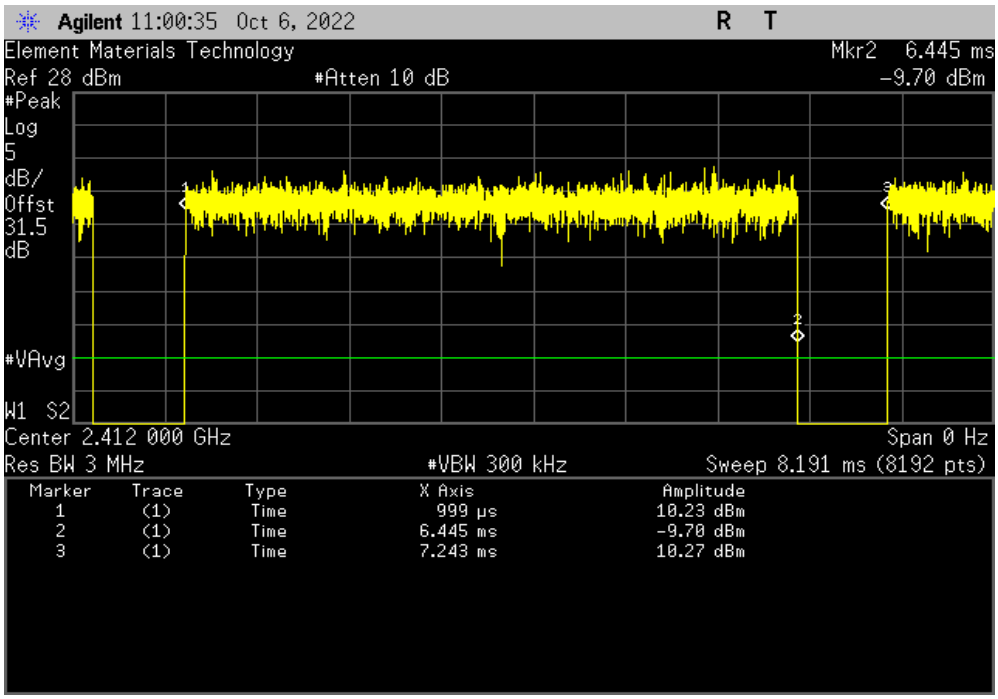


Chain 0, VHT20, MCS8, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

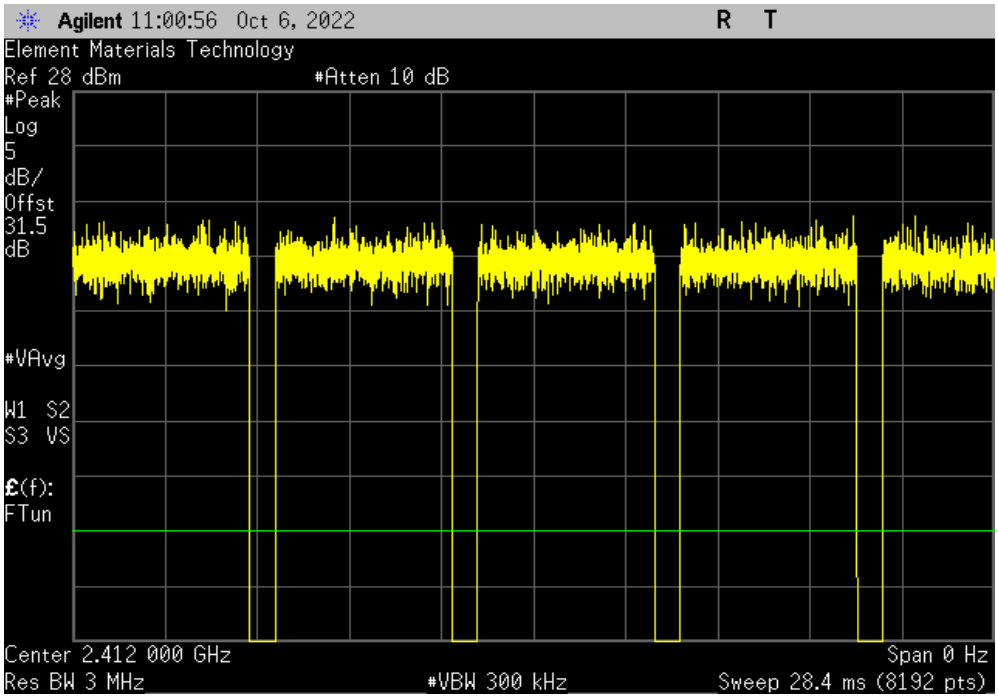


DUTY CYCLE - CHAIN 0

Chain 0, HE20, MCS0, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.446 ms	6.244 ms	1	87.2	N/A	N/A

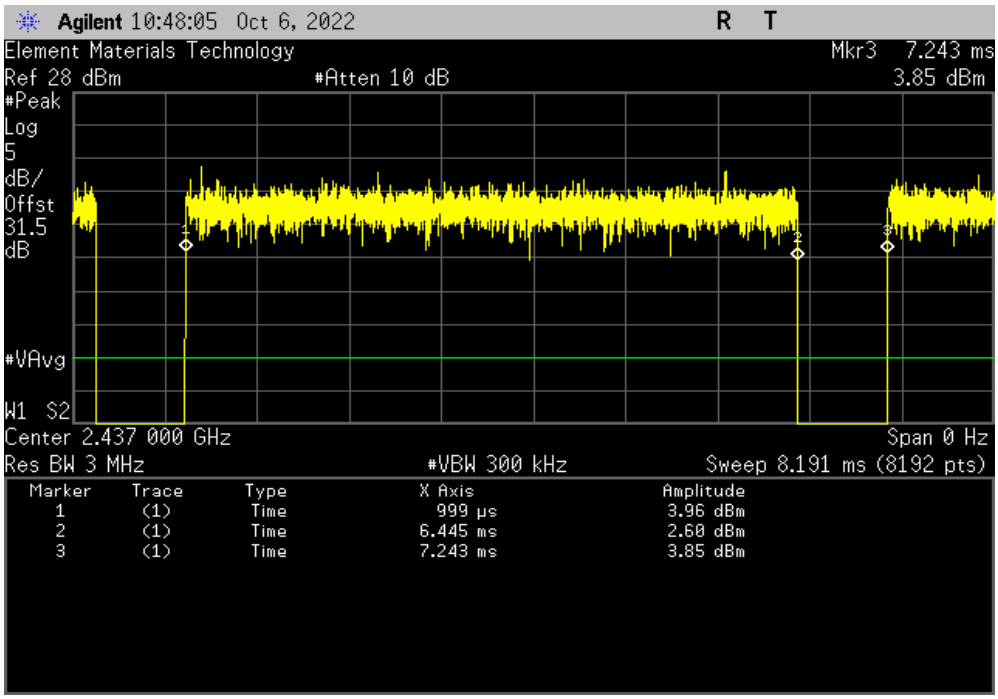


Chain 0, HE20, MCS0, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

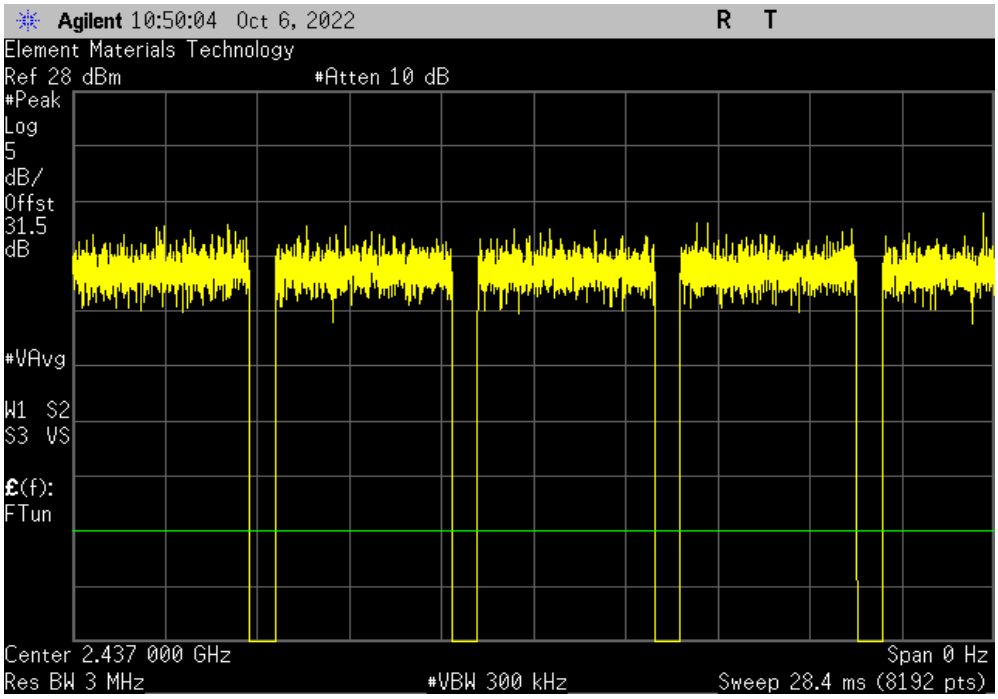


DUTY CYCLE - CHAIN 0

Chain 0, HE20, MCS0, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.446 ms	6.244 ms	1	87.2	N/A	N/A

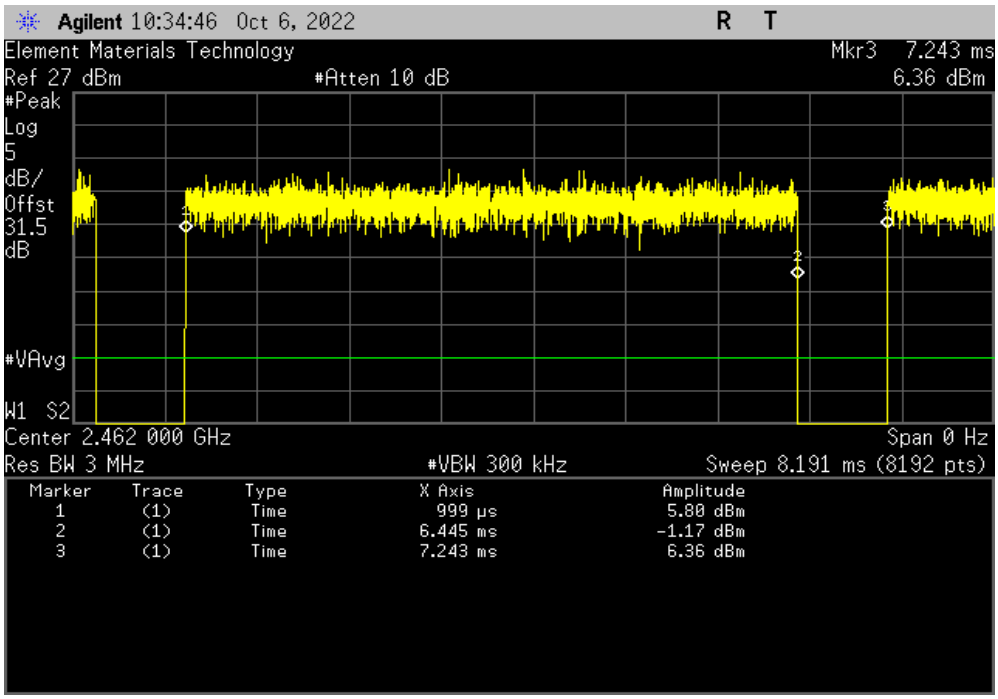


Chain 0, HE20, MCS0, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

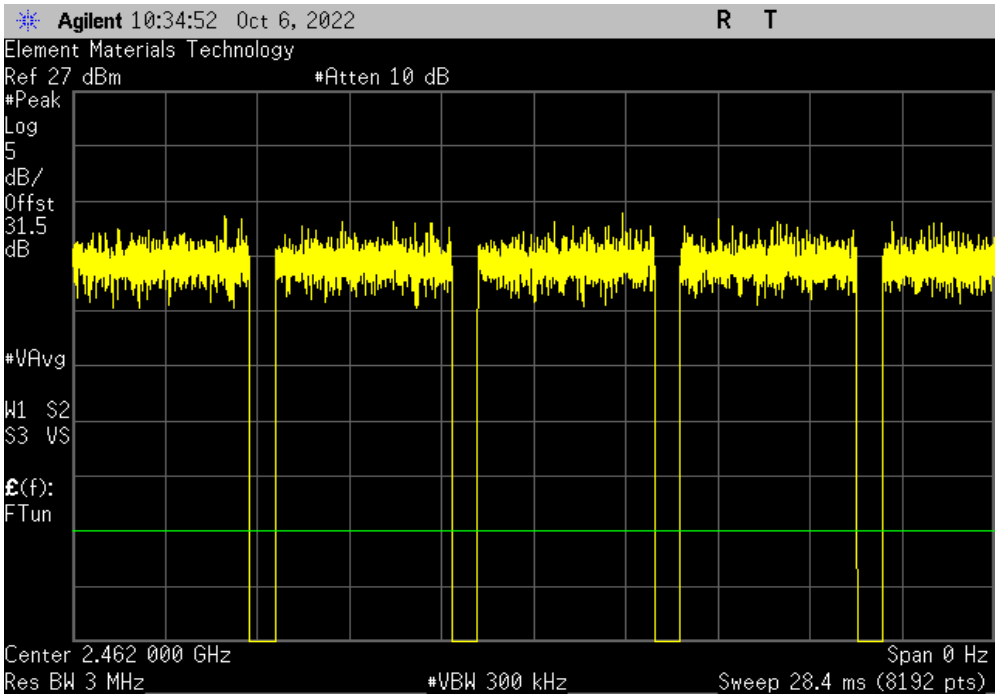


DUTY CYCLE - CHAIN 0

Chain 0, HE20, MCS0, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.446 ms	6.244 ms	1	87.2	N/A	N/A

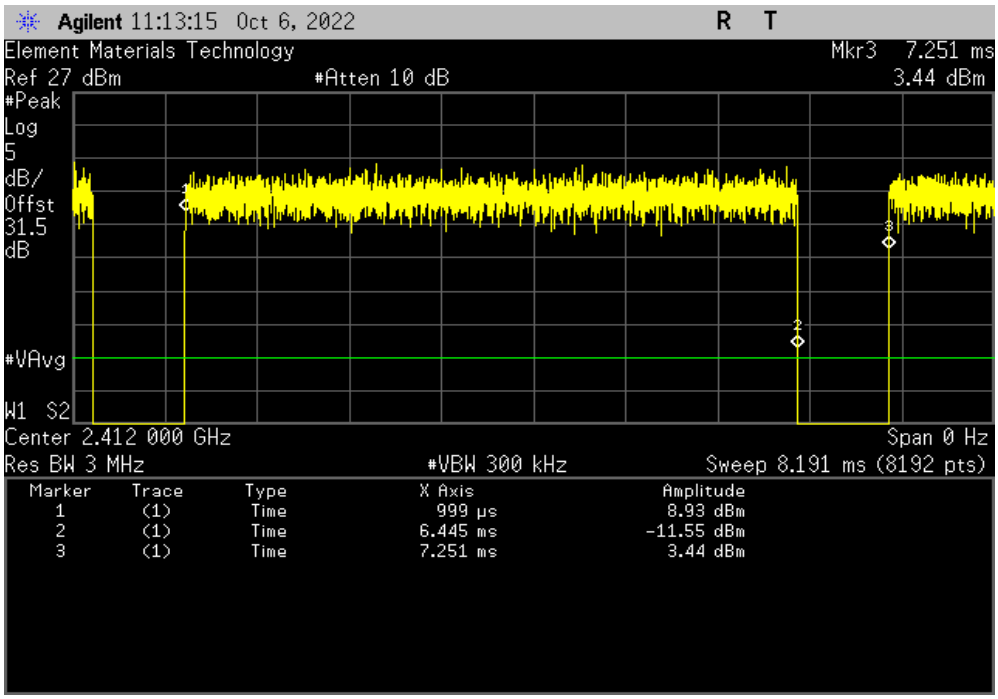


Chain 0, HE20, MCS0, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

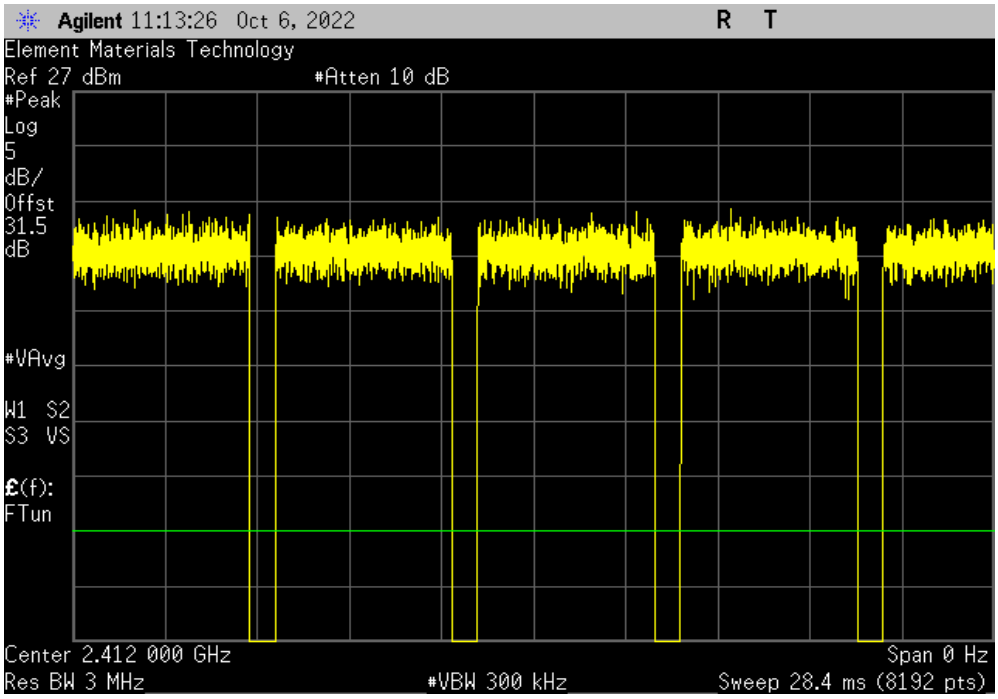


DUTY CYCLE - CHAIN 0

Chain 0, HE20, MCS11, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.446 ms	6.252 ms	1	87.1	N/A	N/A

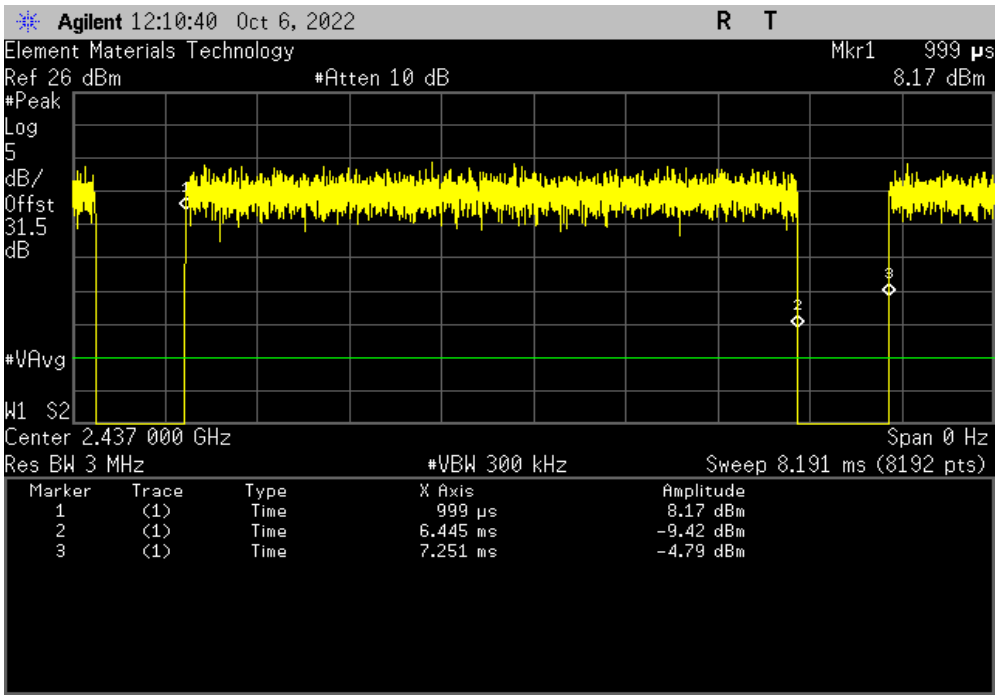


Chain 0, HE20, MCS11, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

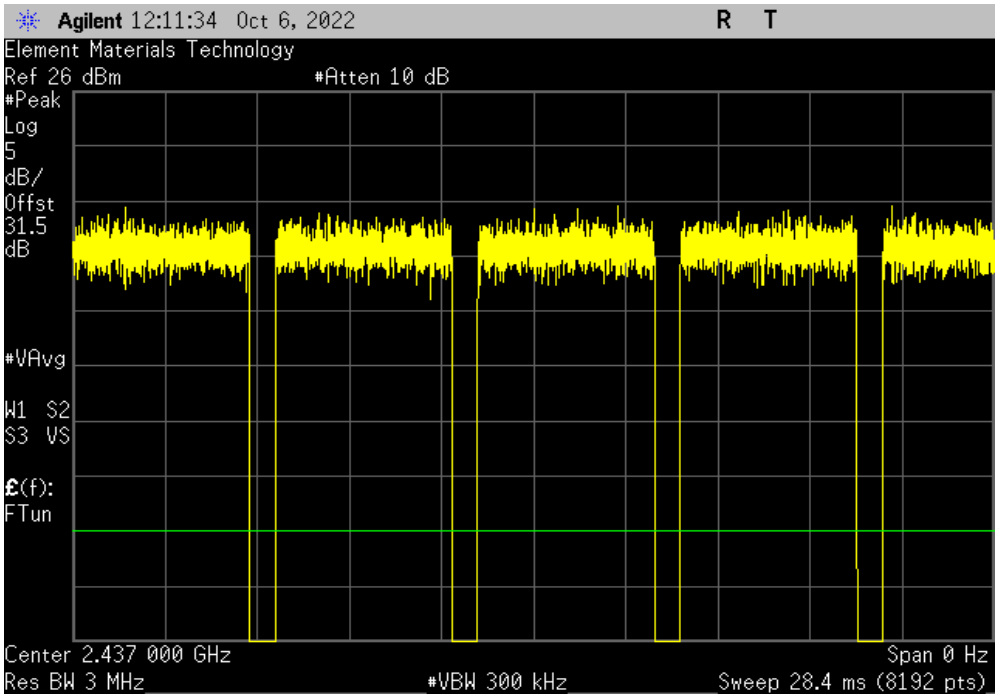


DUTY CYCLE - CHAIN 0

Chain 0, HE20, MCS11, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.446 ms	6.252 ms	1	87.1	N/A	N/A

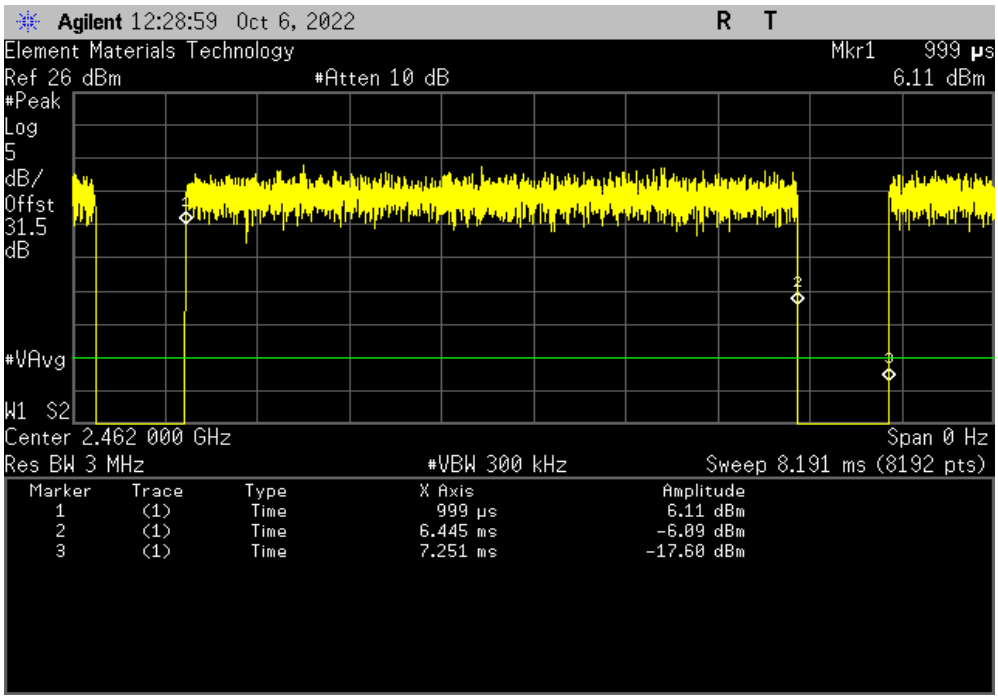


Chain 0, HE20, MCS11, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

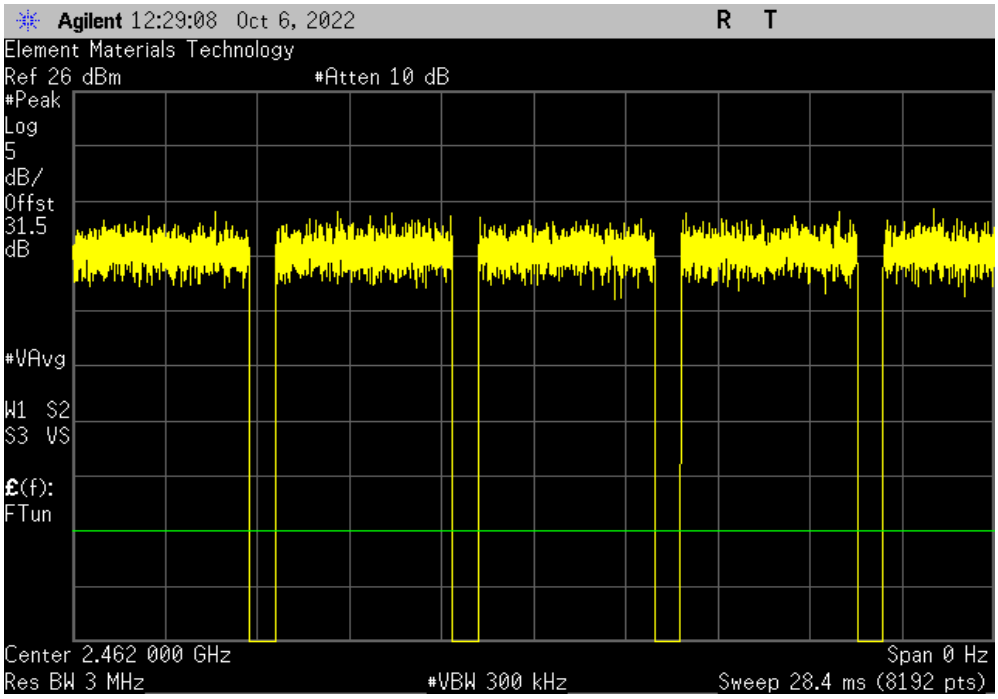


DUTY CYCLE - CHAIN 0

Chain 0, HE20, MCS11, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.446 ms	6.252 ms	1	87.1	N/A	N/A



Chain 0, HE20, MCS11, 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 - CHAIN 1

XMit 2022.02.07.0

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Keysight	N5182B	TFU	2020-11-20	2022-11-20
Cable	Micro-Coax	UFD150A-1-0720-200200	EVI	2021-12-05	2022-12-05
Attenuator	S.M. Electronics	SA26B-10	AWR	2022-07-05	2023-07-05
Attenuator	S.M. Electronics	SA26B-20	AUY	2022-03-15	2023-03-15
Block - DC	Fairview Microwave	SD3379	AMW	2022-03-14	2023-03-14
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAW	2022-01-26	2023-01-26

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 - CHAIN 1

element

TbtTx 2022.06.03.0 XMit 2022.02.07.0

EUT:	**U8 Hawk**			**Work Order:**	**KYME0068**
Serial Number:	**192F-85E2-1761**			**Date:**	**7-Oct-22**
Customer:	**Kymeta Corp.**			**Temperature:**	**22.5 °C**
Attendees:	**Dean Busch**			**Humidity:**	**43.7% RH**
Project:	**None**			**Barometric Pres.:**	**1025 mbar**
Tested by:	**Jeff Alcoke**	**Power:**	**12 VDC**	**Job Site:**	**EV06**

TEST SPECIFICATIONS	**Test Method**
FCC 15.247:2022	ANSI C63.10:2013
RSS-247 Issue 2:2017	ANSI C63.10:2013

COMMENTS

Reference level offset includes: DC Block, 30 dB attenuation, and measurement cable.

DEVIATIONS FROM TEST STANDARD

None

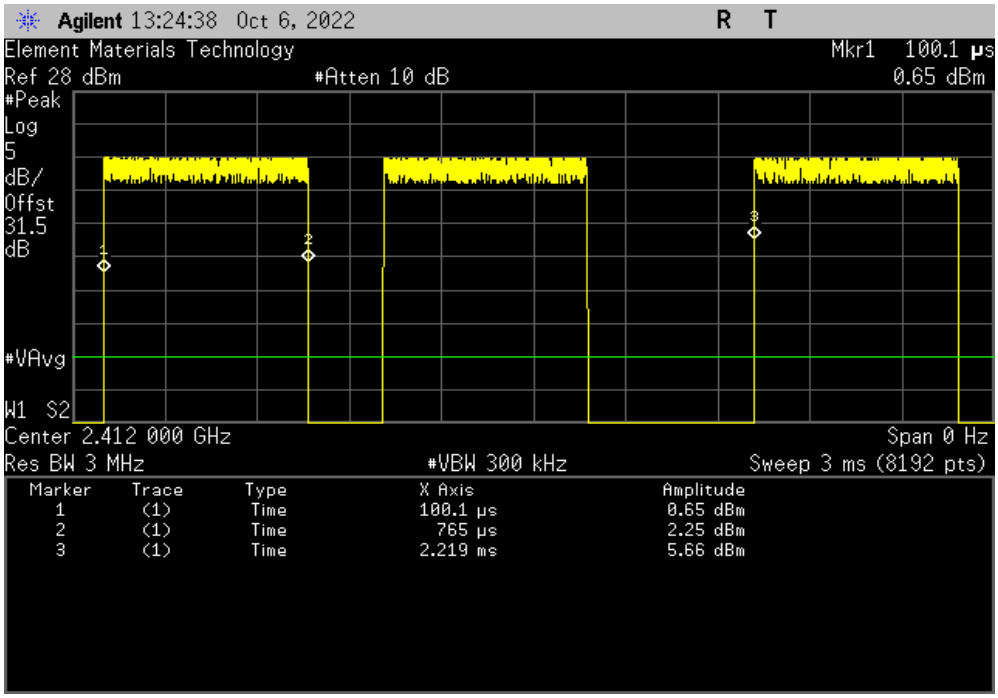
Configuration #	**1**	*Signature*

	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
Chain 1						
CCK, 1 Mbps						
Low Channel 1, 2412 MHz	664.97 us	2.119 ms	2	62.8	N/A	N/A
Low Channel 1, 2412 MHz	N/A	N/A	10	N/A	N/A	N/A
Mid Channel 6, 2437 MHz	664.97 us	2.119 ms	2	62.8	N/A	N/A
Mid Channel 6, 2437 MHz	N/A	N/A	10	N/A	N/A	N/A
High Channel 11, 2462 MHz	664.97 us	2.119 ms	2	62.8	N/A	N/A
High Channel 11, 2462 MHz	N/A	N/A	10	N/A	N/A	N/A
CCK, 11 Mbps						
Low Channel 1, 2412 MHz	235.832 us	2.121 ms	3	33.4	N/A	N/A
Low Channel 1, 2412 MHz	N/A	N/A	15	N/A	N/A	N/A
Mid Channel 6, 2437 MHz	236.011 us	2.121 ms	3	33.4	N/A	N/A
Mid Channel 6, 2437 MHz	N/A	N/A	14	N/A	N/A	N/A
High Channel 11, 2462 MHz	235.795 us	2.121 ms	3	33.4	N/A	N/A
High Channel 11, 2462 MHz	N/A	N/A	14	N/A	N/A	N/A
Legacy OFDM, 6 Mbps						
Low Channel 1, 2412 MHz	1.977 ms	2.146 ms	1	92.1	N/A	N/A
Low Channel 1, 2412 MHz	N/A	N/A	5	N/A	N/A	N/A
Mid Channel 6, 2437 MHz	1.977 ms	2.146 ms	1	92.1	N/A	N/A
Mid Channel 6, 2437 MHz	N/A	N/A	5	N/A	N/A	N/A
High Channel 11, 2462 MHz	1.977 ms	2.146 ms	1	92.1	N/A	N/A
High Channel 11, 2462 MHz	N/A	N/A	5	N/A	N/A	N/A
Legacy OFDM, 36 Mbps						
Low Channel 1, 2412 MHz	348.8 us	598.019 us	1	58.3	N/A	N/A
Low Channel 1, 2412 MHz	N/A	N/A	5	N/A	N/A	N/A
Mid Channel 6, 2437 MHz	348.944 us	597.958 us	1	58.4	N/A	N/A
Mid Channel 6, 2437 MHz	N/A	N/A	5	N/A	N/A	N/A
High Channel 11, 2462 MHz	349 us	597.797 us	1	58.4	N/A	N/A
High Channel 11, 2462 MHz	N/A	N/A	5	N/A	N/A	N/A
Legacy OFDM, 54 Mbps						
Low Channel 1, 2412 MHz	240.966 us	498.89 us	1	48.3	N/A	N/A
Low Channel 1, 2412 MHz	N/A	N/A	5	N/A	N/A	N/A
Mid Channel 6, 2437 MHz	240.7 us	498.794 us	1	48.3	N/A	N/A
Mid Channel 6, 2437 MHz	N/A	N/A	5	N/A	N/A	N/A
High Channel 11, 2462 MHz	240.8 us	498.912 us	1	48.3	N/A	N/A
High Channel 11, 2462 MHz	N/A	N/A	5	N/A	N/A	N/A
HT20, MCS0						
Low Channel 1, 2412 MHz	5.429 ms	6.255 ms	1	86.8	N/A	N/A
Low Channel 1, 2412 MHz	N/A	N/A	5	N/A	N/A	N/A
Mid Channel 6, 2437 MHz	5.429 ms	6.255 ms	1	86.8	N/A	N/A
Mid Channel 6, 2437 MHz	N/A	N/A	5	N/A	N/A	N/A
High Channel 11, 2462 MHz	5.429 ms	6.255 ms	1	86.8	N/A	N/A
High Channel 11, 2462 MHz	N/A	N/A	5	N/A	N/A	N/A

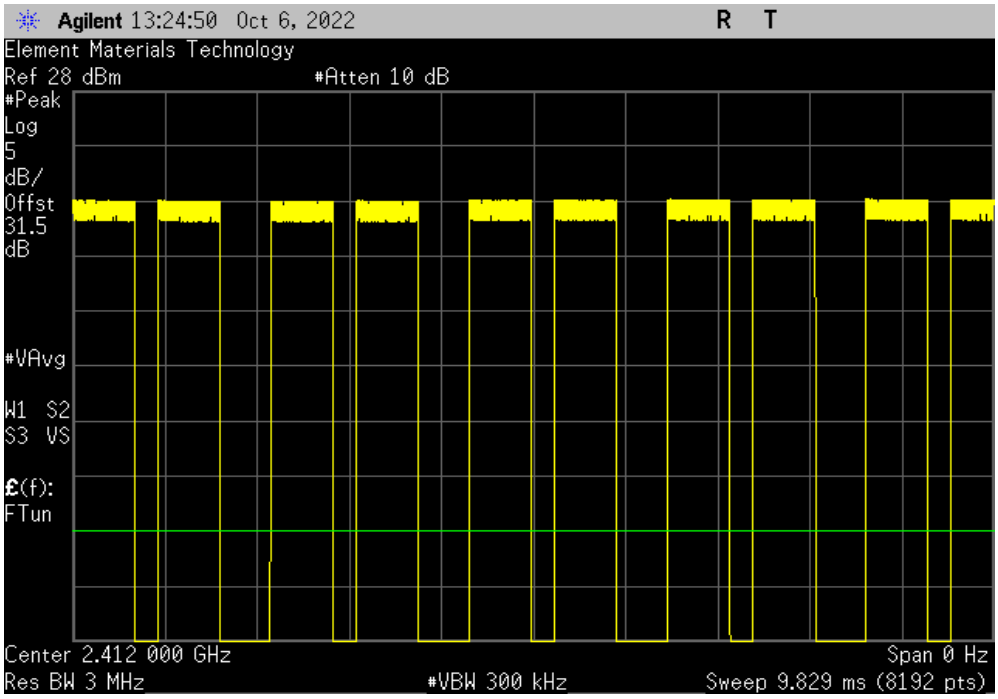
HT20, MCS7						
Low Channel 1, 2412 MHz	5.429 ms	6.254 ms	1	86.8	N/A	N/A
Low Channel 1, 2412 MHz	N/A	N/A	5	N/A	N/A	N/A
Mid Channel 6, 2437 MHz	5.429 ms	6.255 ms	1	86.8	N/A	N/A
Mid Channel 6, 2437 MHz	N/A	N/A	5	N/A	N/A	N/A
High Channel 11, 2462 MHz	5.429 ms	6.254 ms	1	86.8	N/A	N/A
High Channel 11, 2462 MHz	N/A	N/A	5	N/A	N/A	N/A
VHT20, MCS0						
Low Channel 1, 2412 MHz	5.429 ms	6.246 ms	1	86.9	N/A	N/A
Low Channel 1, 2412 MHz	N/A	N/A	5	N/A	N/A	N/A
Mid Channel 6, 2437 MHz	5.429 ms	6.246 ms	1	86.9	N/A	N/A
Mid Channel 6, 2437 MHz	N/A	N/A	5	N/A	N/A	N/A
High Channel 11, 2462 MHz	5.429 ms	6.246 ms	1	86.9	N/A	N/A
High Channel 11, 2462 MHz	N/A	N/A	5	N/A	N/A	N/A
VHT20, MCS8						
Low Channel 1, 2412 MHz	5.429 ms	6.253 ms	1	86.8	N/A	N/A
Low Channel 1, 2412 MHz	N/A	N/A	5	N/A	N/A	N/A
Mid Channel 6, 2437 MHz	5.429 ms	6.259 ms	1	86.7	N/A	N/A
Mid Channel 6, 2437 MHz	N/A	N/A	5	N/A	N/A	N/A
High Channel 11, 2462 MHz	5.429 ms	6.253 ms	1	86.8	N/A	N/A
High Channel 11, 2462 MHz	N/A	N/A	5	N/A	N/A	N/A
HE20, MCS0						
Low Channel 1, 2412 MHz	5.446 ms	6.244 ms	1	87.2	N/A	N/A
Low Channel 1, 2412 MHz	N/A	N/A	5	N/A	N/A	N/A
Mid Channel 6, 2437 MHz	5.446 ms	6.244 ms	1	87.2	N/A	N/A
Mid Channel 6, 2437 MHz	N/A	N/A	5	N/A	N/A	N/A
High Channel 11, 2462 MHz	5.446 ms	6.244 ms	1	87.2	N/A	N/A
High Channel 11, 2462 MHz	N/A	N/A	5	N/A	N/A	N/A
HE20, MCS11						
Low Channel 1, 2412 MHz	5.446 ms	6.252 ms	1	87.1	N/A	N/A
Low Channel 1, 2412 MHz	N/A	N/A	5	N/A	N/A	N/A
Mid Channel 6, 2437 MHz	5.446 ms	6.252 ms	1	87.1	N/A	N/A
Mid Channel 6, 2437 MHz	N/A	N/A	5	N/A	N/A	N/A
High Channel 11, 2462 MHz	5.446 ms	6.252 ms	1	87.1	N/A	N/A
High Channel 11, 2462 MHz	N/A	N/A	5	N/A	N/A	N/A

DUTY CYCLE - CHAIN 1

Chain 1, CCK, 1 Mbps, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	664.97 us	2.119 ms	2	62.8	N/A	N/A

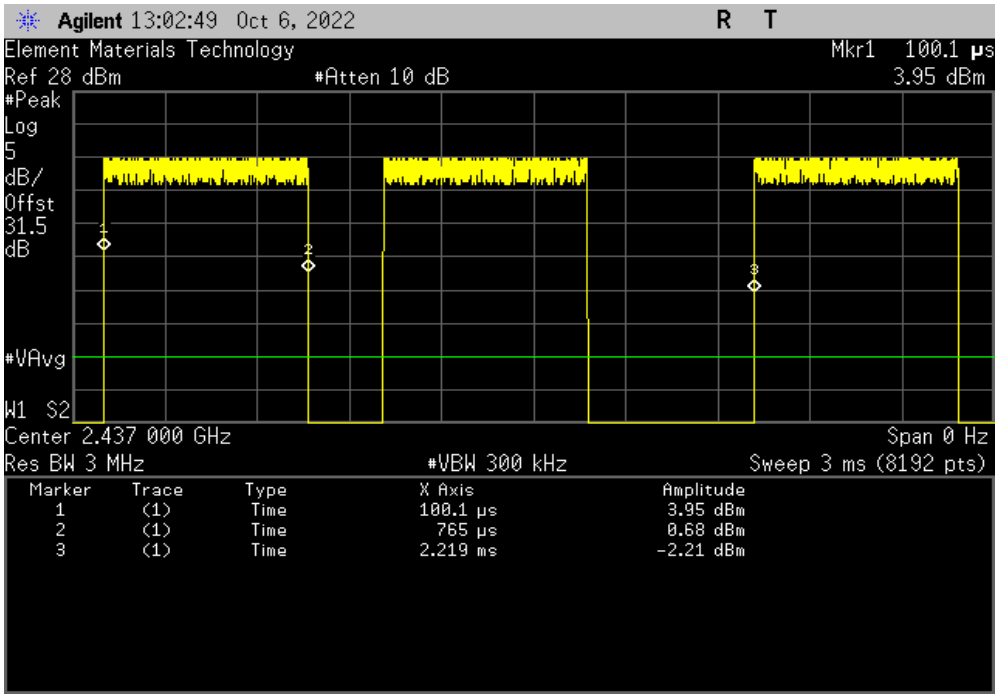


Chain 1, CCK, 1 Mbps, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	10	N/A	N/A	N/A

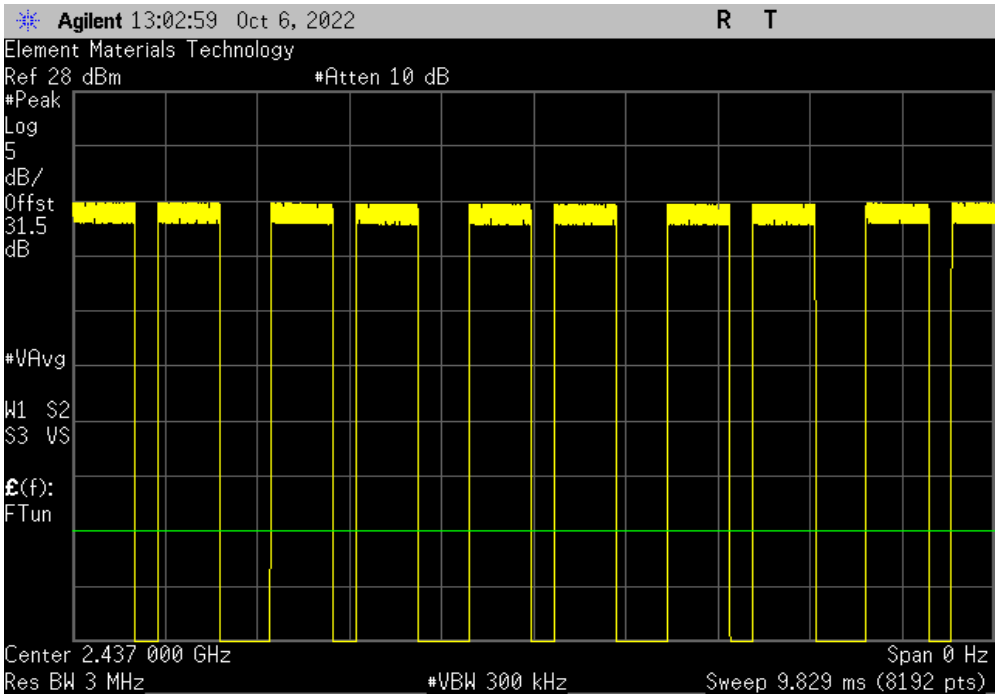


DUTY CYCLE - CHAIN 1

Chain 1, CCK, 1 Mbps, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	664.97 us	2.119 ms	2	62.8	N/A	N/A

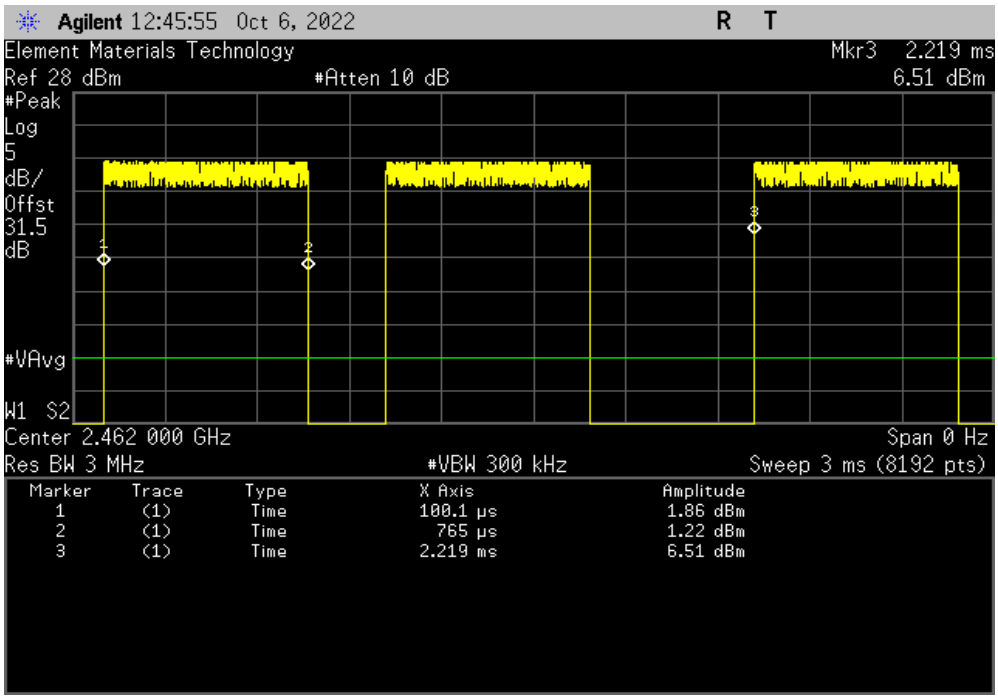


Chain 1, CCK, 1 Mbps, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	10	N/A	N/A	N/A

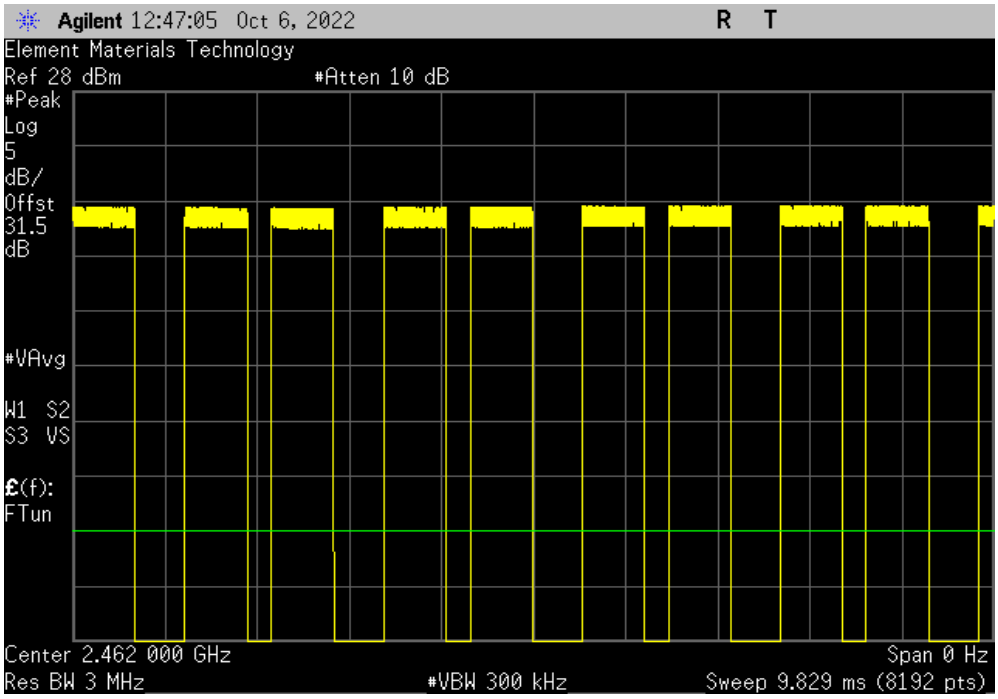


DUTY CYCLE - CHAIN 1

Chain 1, CCK, 1 Mbps, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	664.97 us	2.119 ms	2	62.8	N/A	N/A

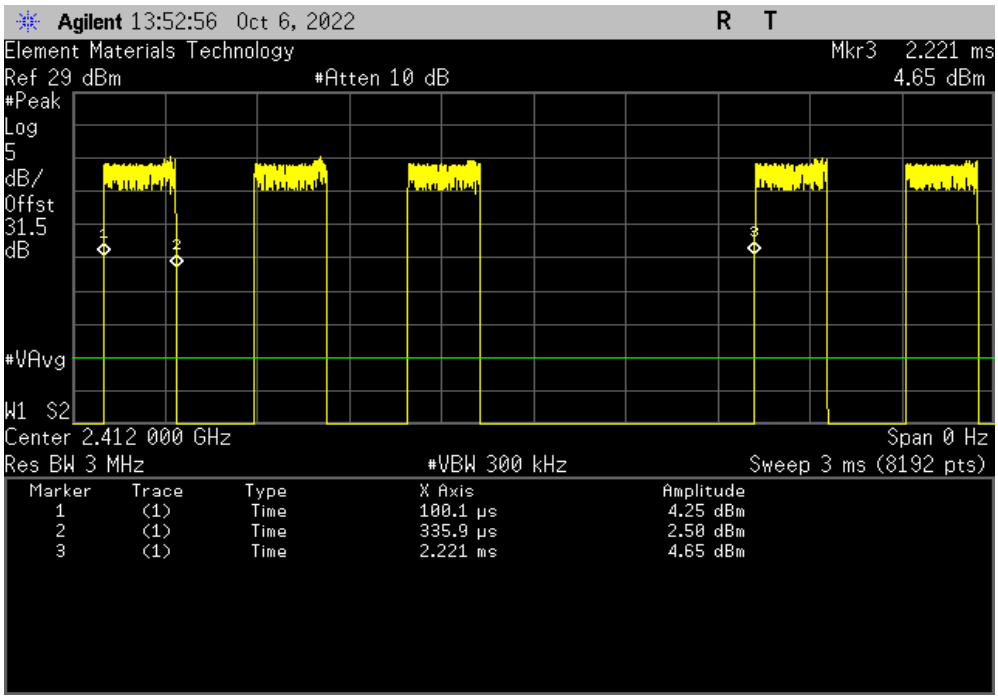


Chain 1, CCK, 1 Mbps, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	10	N/A	N/A	N/A

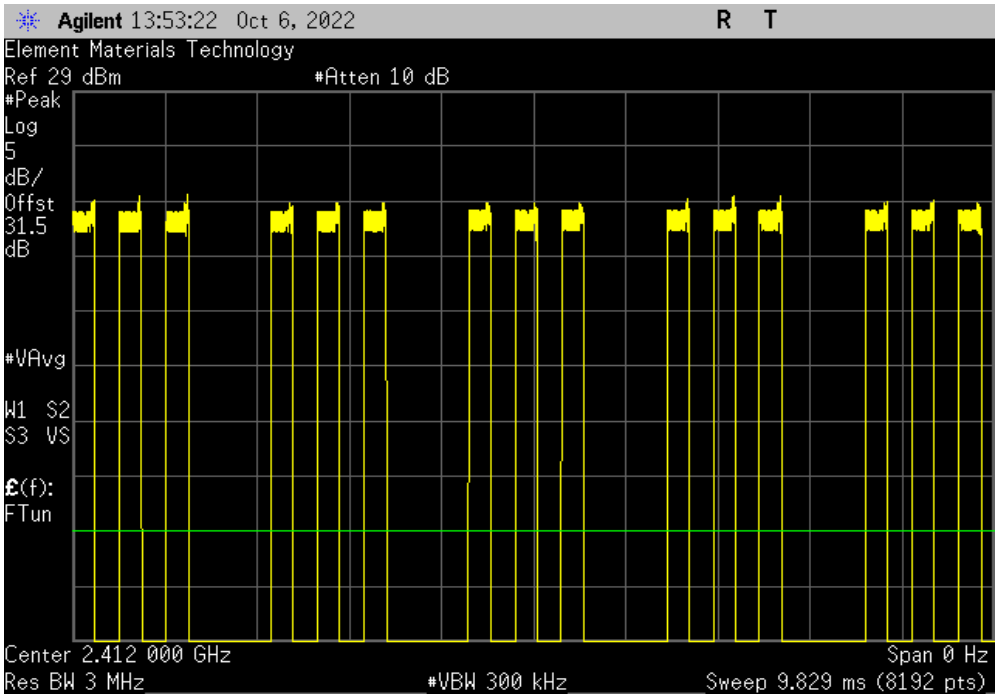


DUTY CYCLE - CHAIN 1

Chain 1, CCK, 11 Mbps, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	235.832 us	2.121 ms	3	33.4	N/A	N/A

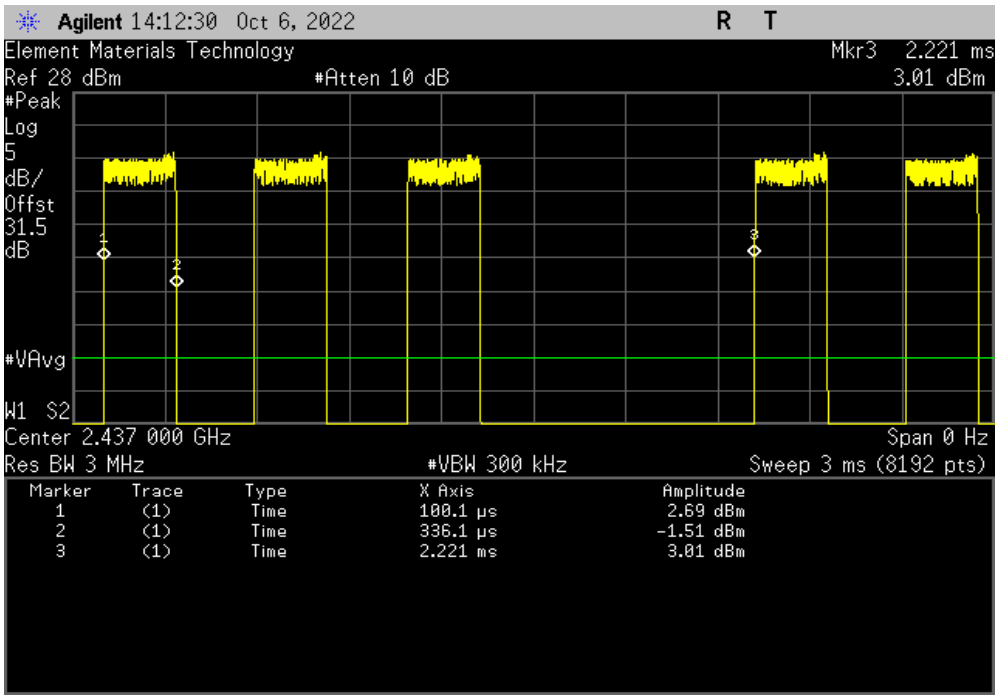


Chain 1, CCK, 11 Mbps, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	15	N/A	N/A	N/A

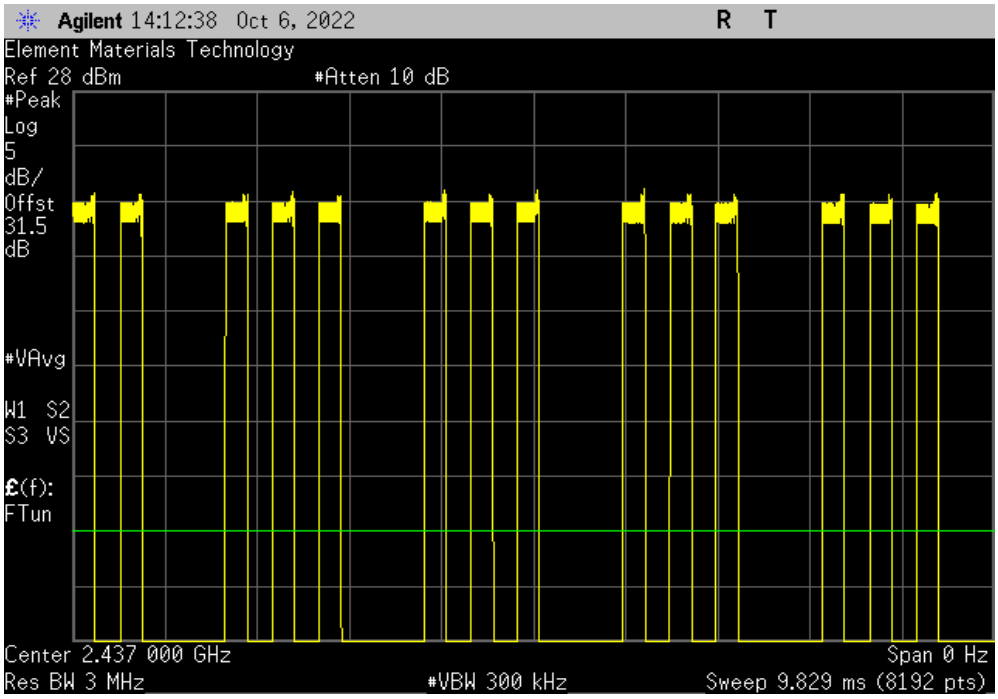


DUTY CYCLE - CHAIN 1

Chain 1, CCK, 11 Mbps, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	236.011 us	2.121 ms	3	33.4	N/A	N/A

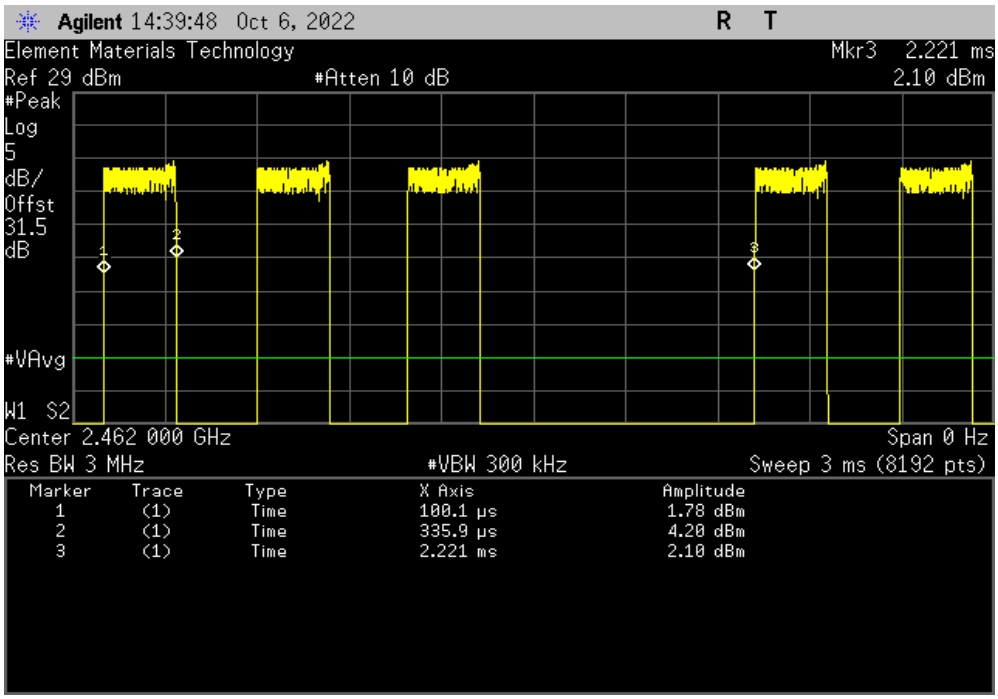


Chain 1, CCK, 11 Mbps, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	14	N/A	N/A	N/A

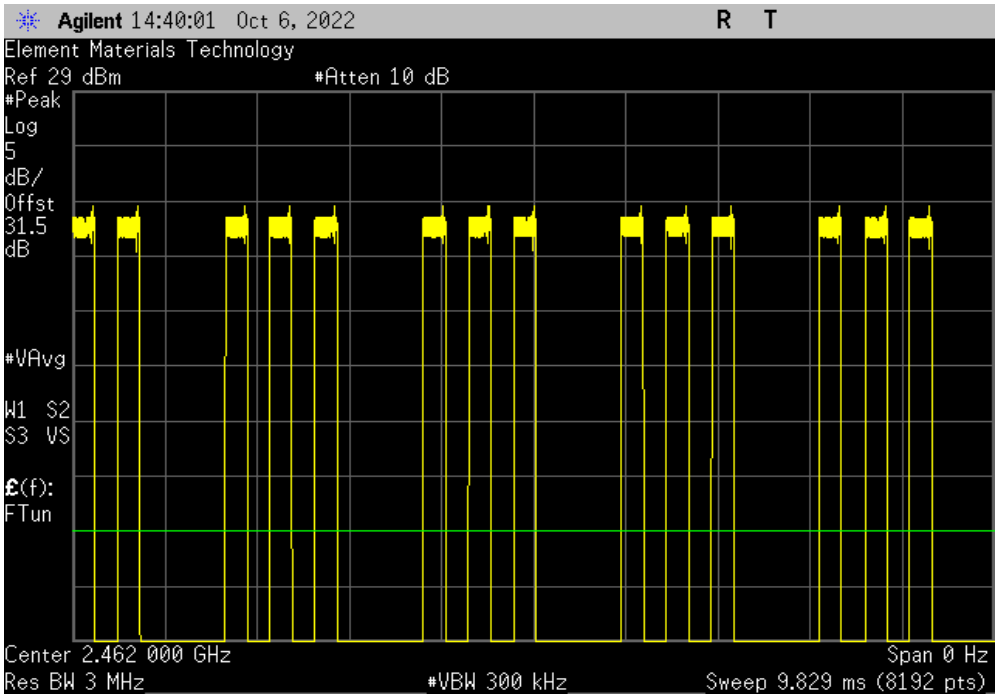


DUTY CYCLE - CHAIN 1

Chain 1, CCK, 11 Mbps, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	235.795 us	2.121 ms	3	33.4	N/A	N/A

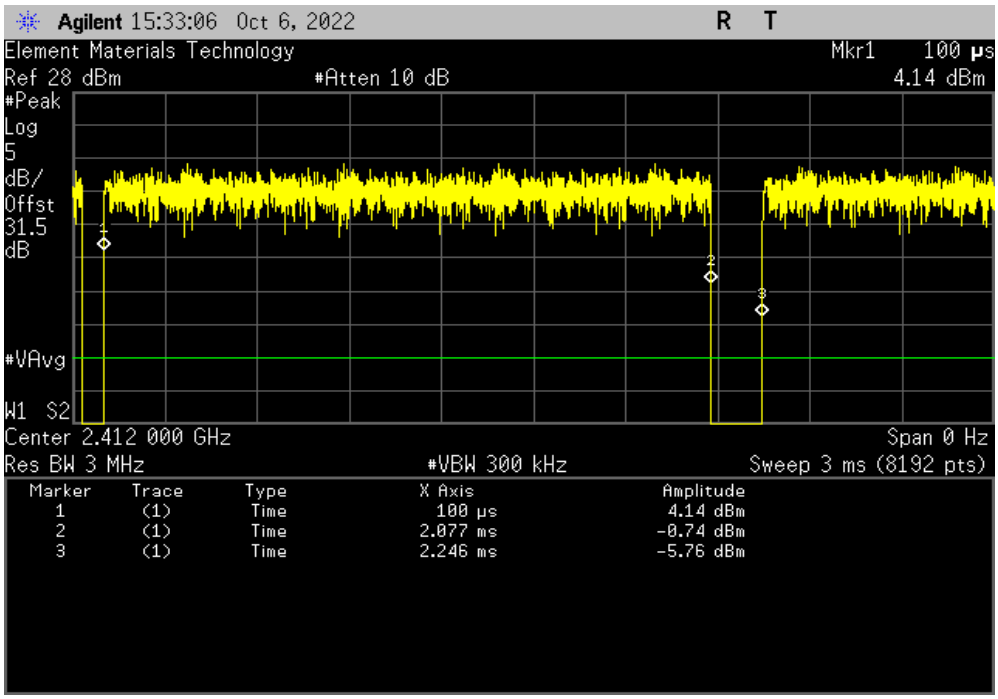


Chain 1, CCK, 11 Mbps, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	14	N/A	N/A	N/A

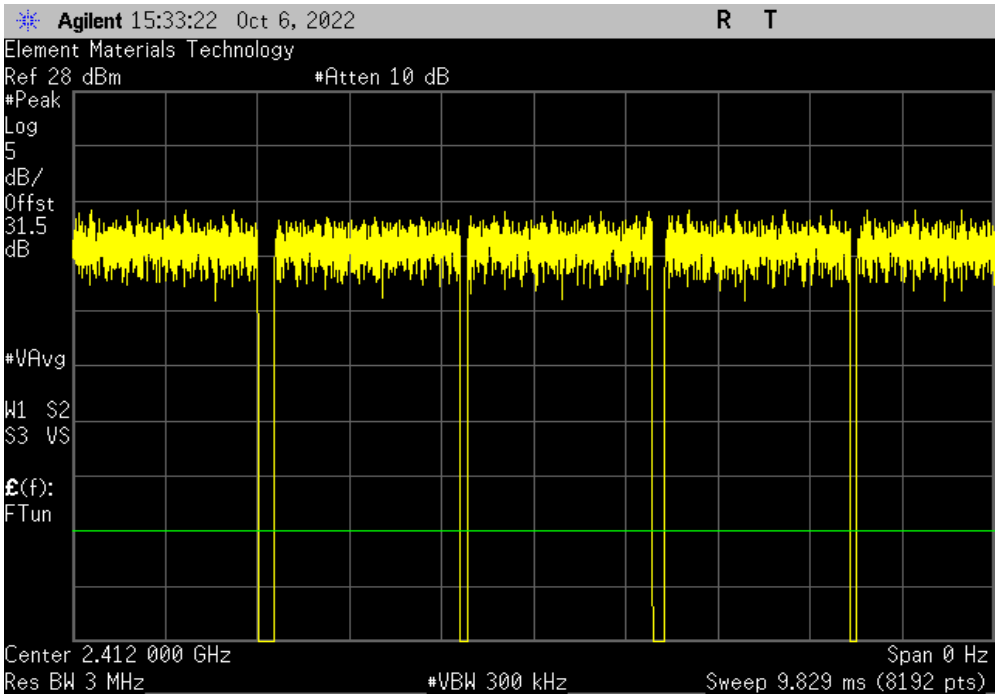


DUTY CYCLE - CHAIN 1

Chain 1, Legacy OFDM, 6 Mbps, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	1.977 ms	2.146 ms	1	92.1	N/A	N/A

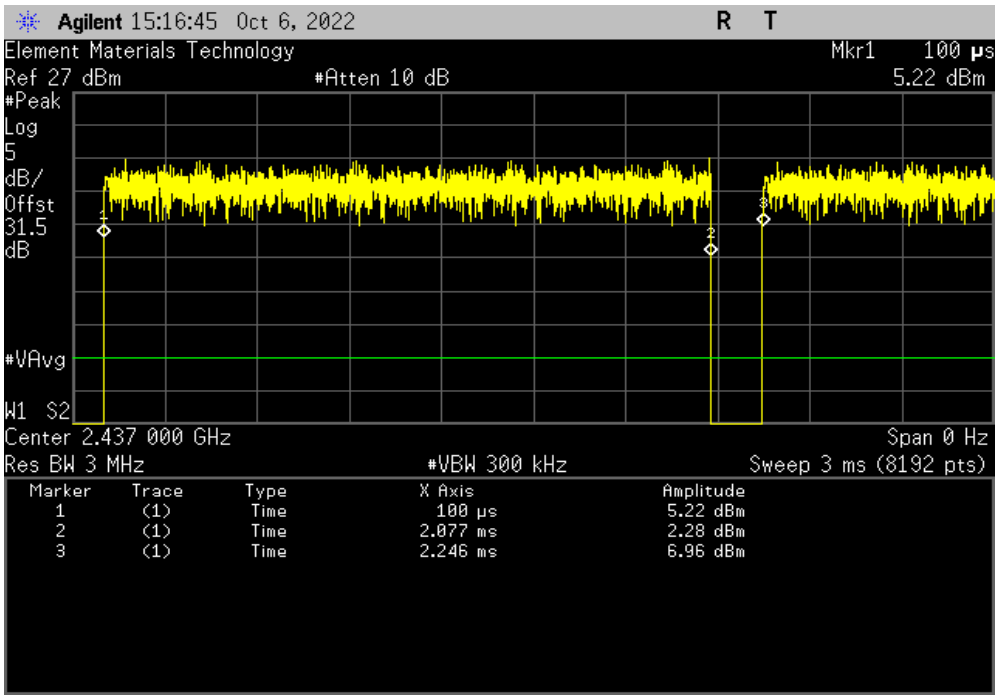


Chain 1, Legacy OFDM, 6 Mbps, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

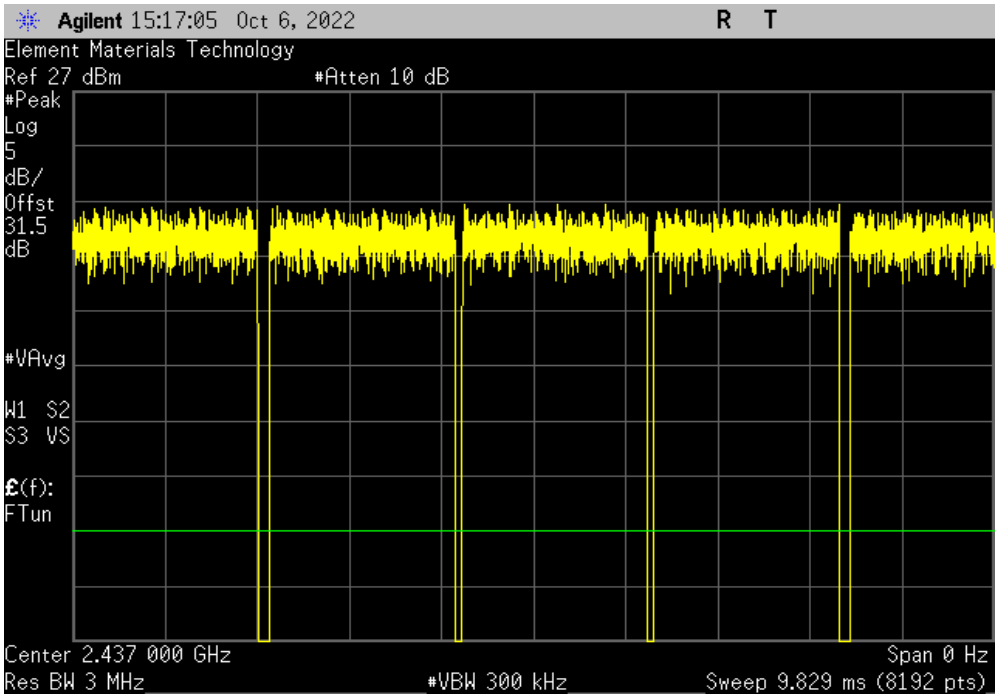


DUTY CYCLE - CHAIN 1

Chain 1, Legacy OFDM, 6 Mbps, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	1.977 ms	2.146 ms	1	92.1	N/A	N/A

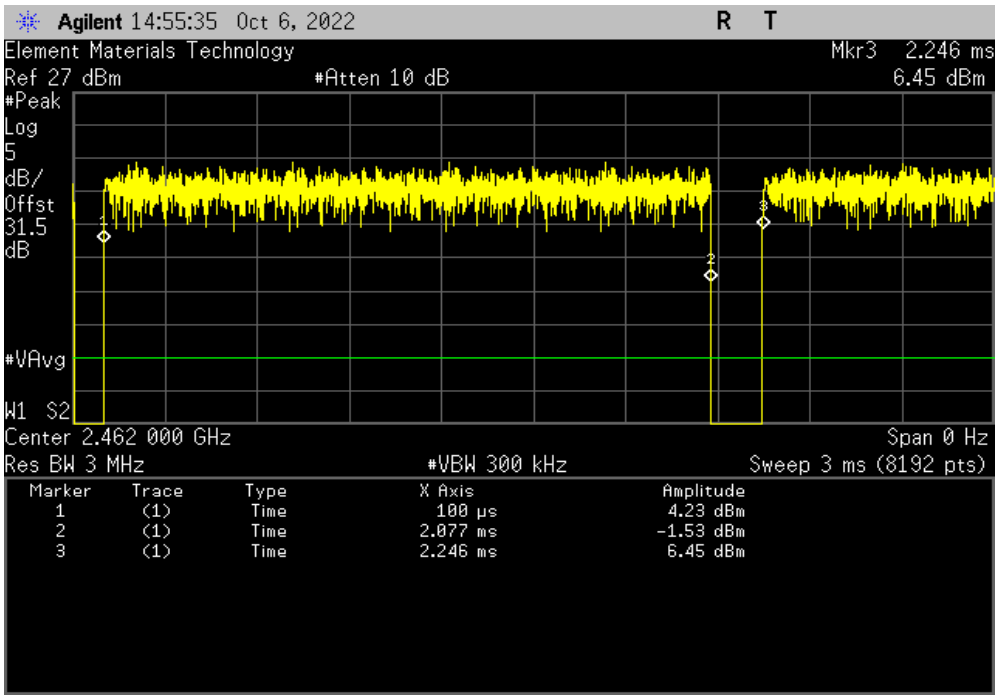


Chain 1, Legacy OFDM, 6 Mbps, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

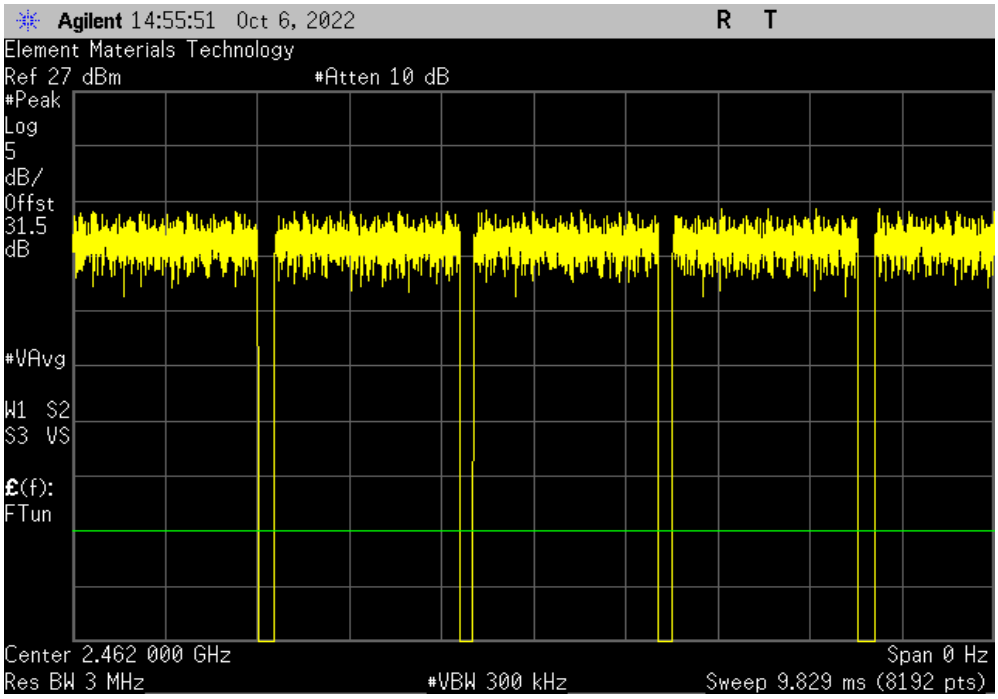


DUTY CYCLE - CHAIN 1

Chain 1, Legacy OFDM, 6 Mbps, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	1.977 ms	2.146 ms	1	92.1	N/A	N/A

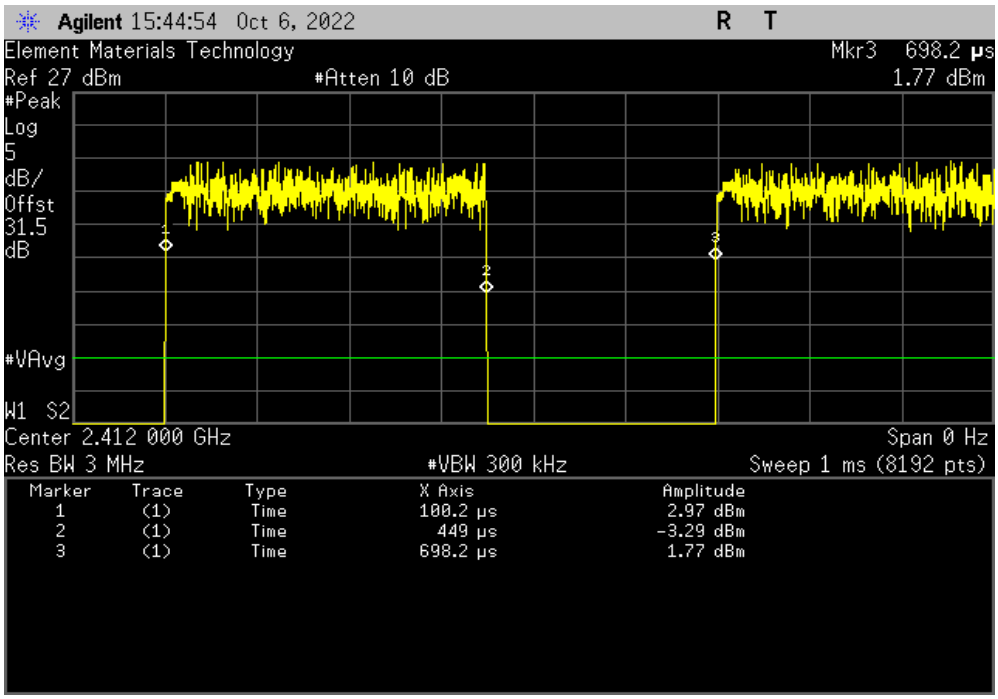


Chain 1, Legacy OFDM, 6 Mbps, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

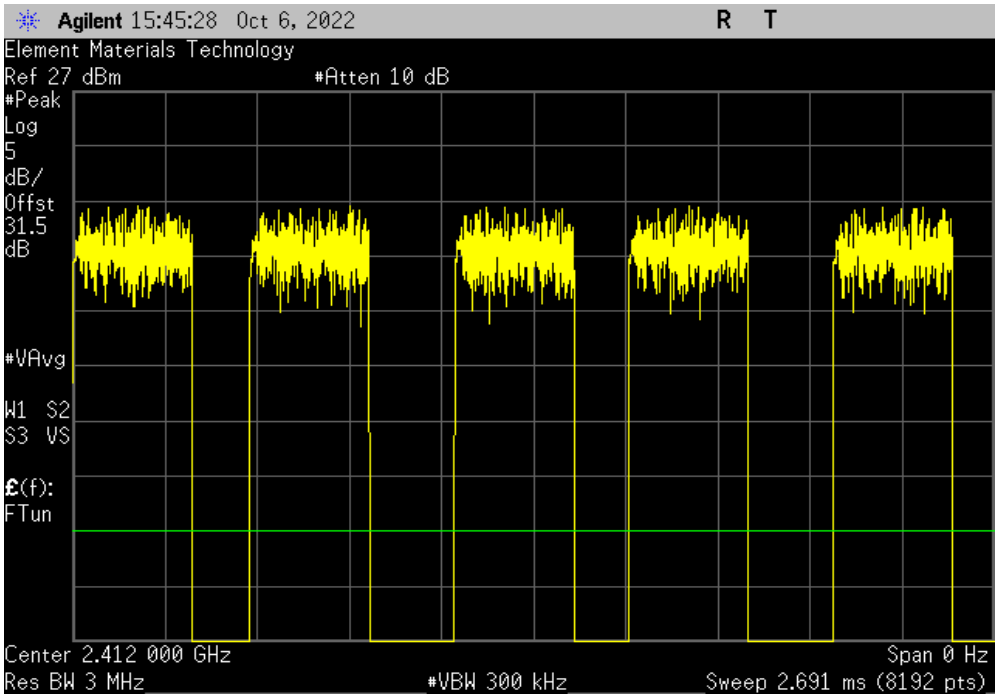


DUTY CYCLE - CHAIN 1

Chain 1, Legacy OFDM, 36 Mbps, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	348.8 us	598.019 us	1	58.3	N/A	N/A

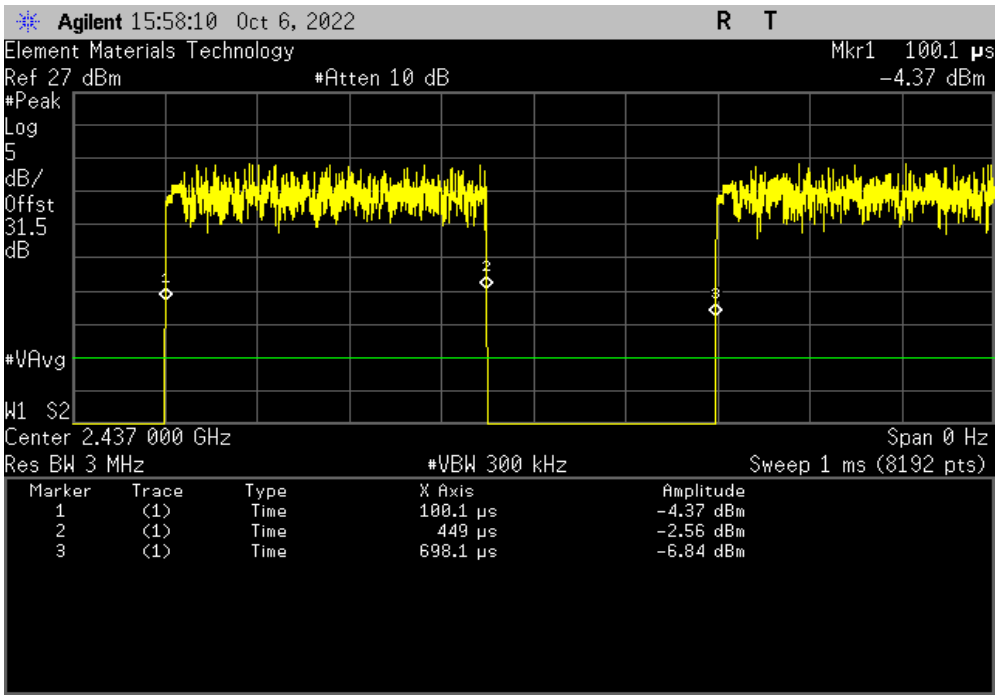


Chain 1, Legacy OFDM, 36 Mbps, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

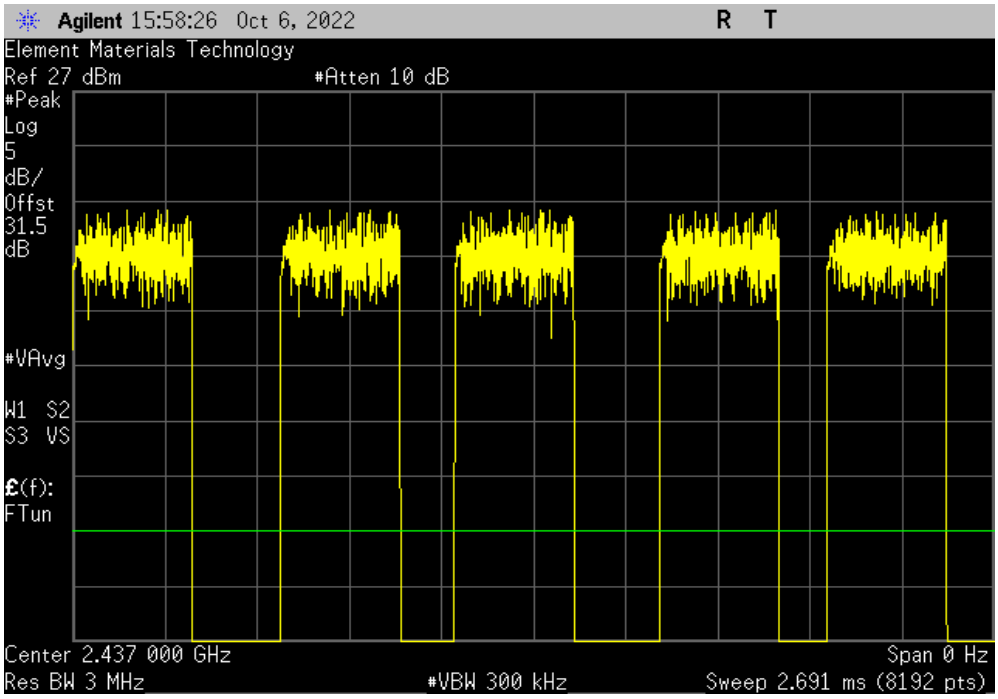


DUTY CYCLE - CHAIN 1

Chain 1, Legacy OFDM, 36 Mbps, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	348.944 us	597.958 us	1	58.4	N/A	N/A

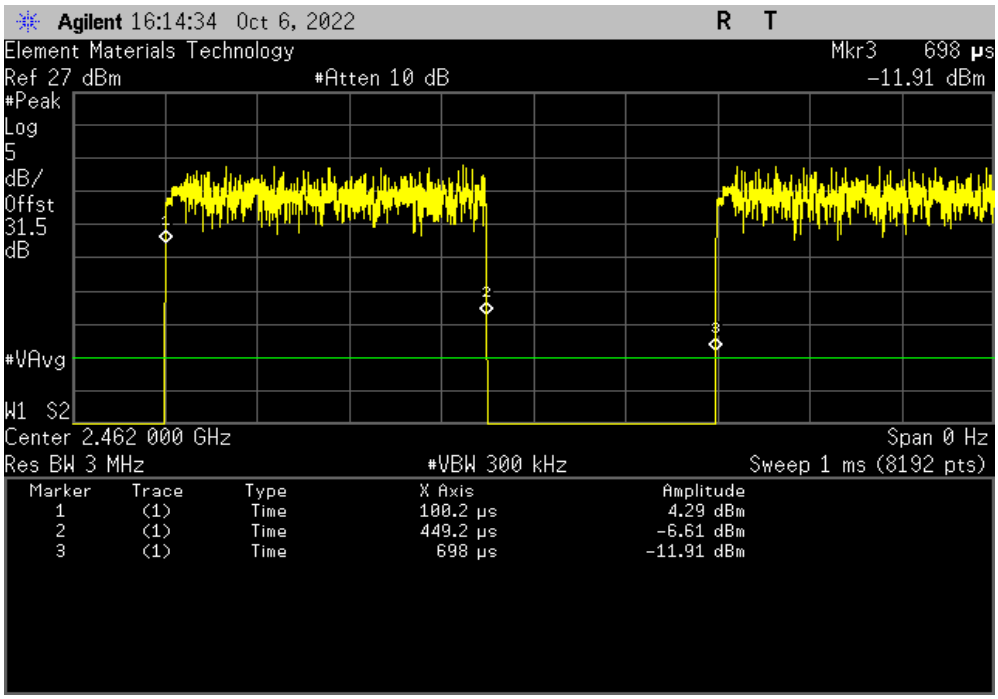


Chain 1, Legacy OFDM, 36 Mbps, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

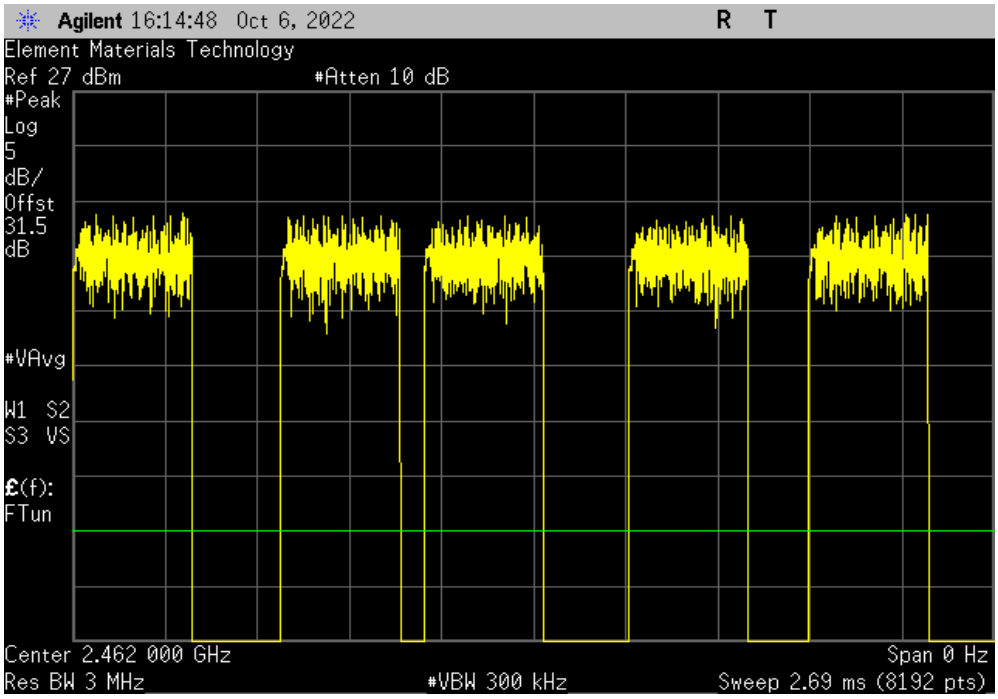


DUTY CYCLE - CHAIN 1

Chain 1, Legacy OFDM, 36 Mbps, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	349 us	597.797 us	1	58.4	N/A	N/A

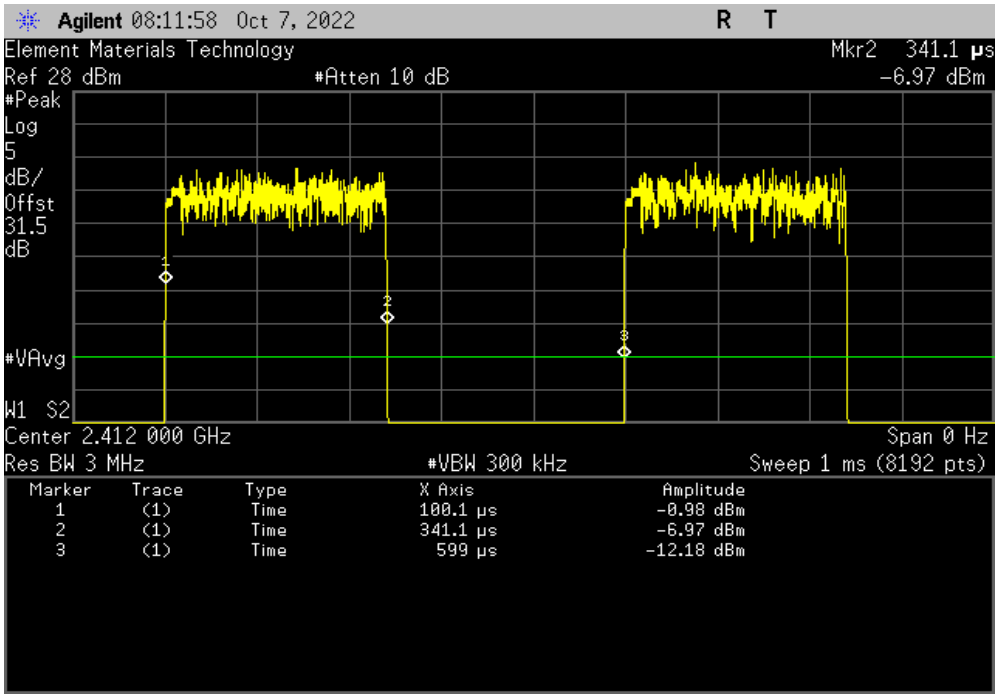


Chain 1, Legacy OFDM, 36 Mbps, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

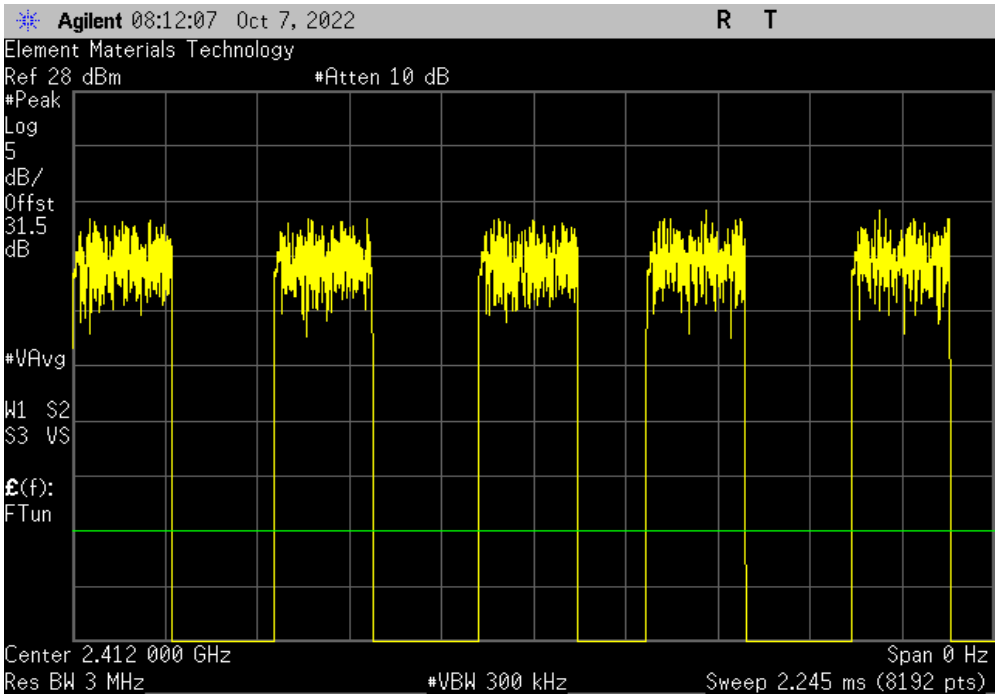


DUTY CYCLE - CHAIN 1

Chain 1, Legacy OFDM, 54 Mbps, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	240.966 us	498.89 us	1	48.3	N/A	N/A

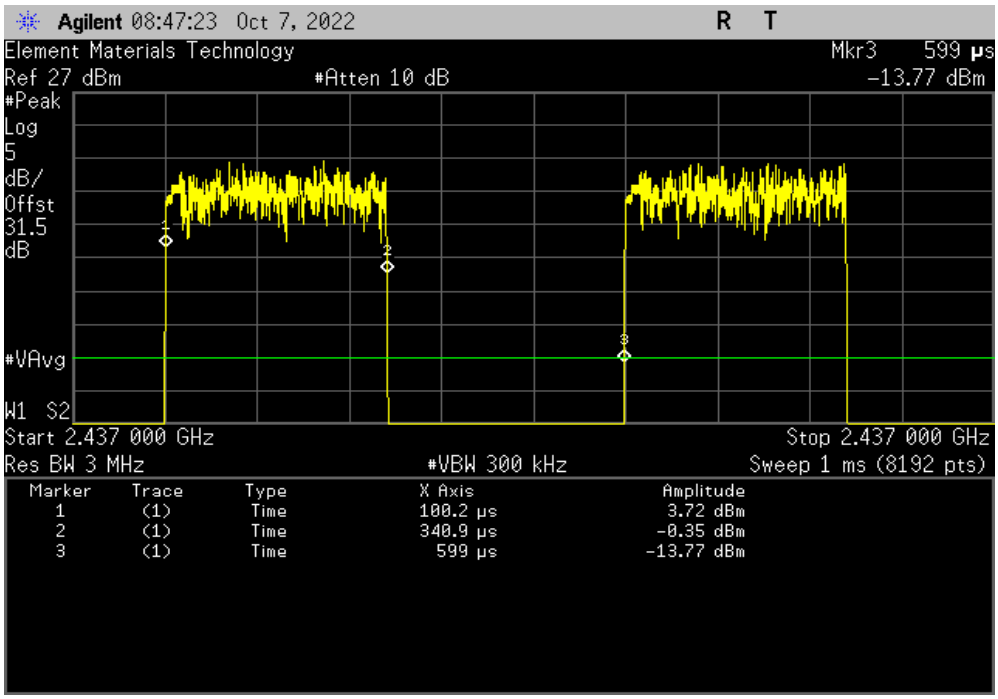


Chain 1, Legacy OFDM, 54 Mbps, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

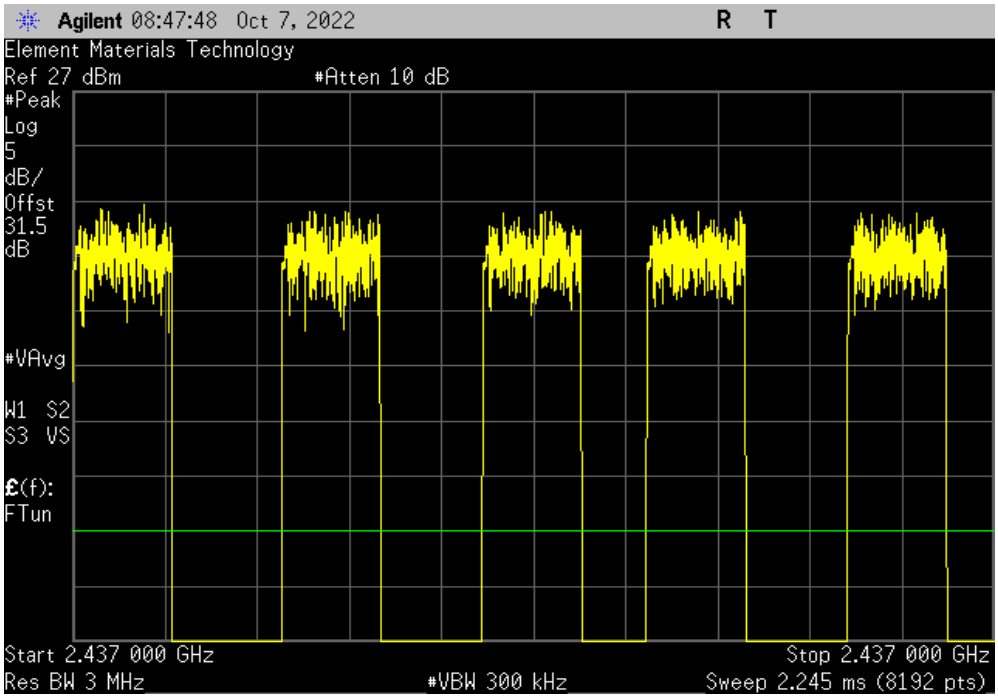


DUTY CYCLE - CHAIN 1

Chain 1, Legacy OFDM, 54 Mbps, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	240.7 us	498.794 us	1	48.3	N/A	N/A

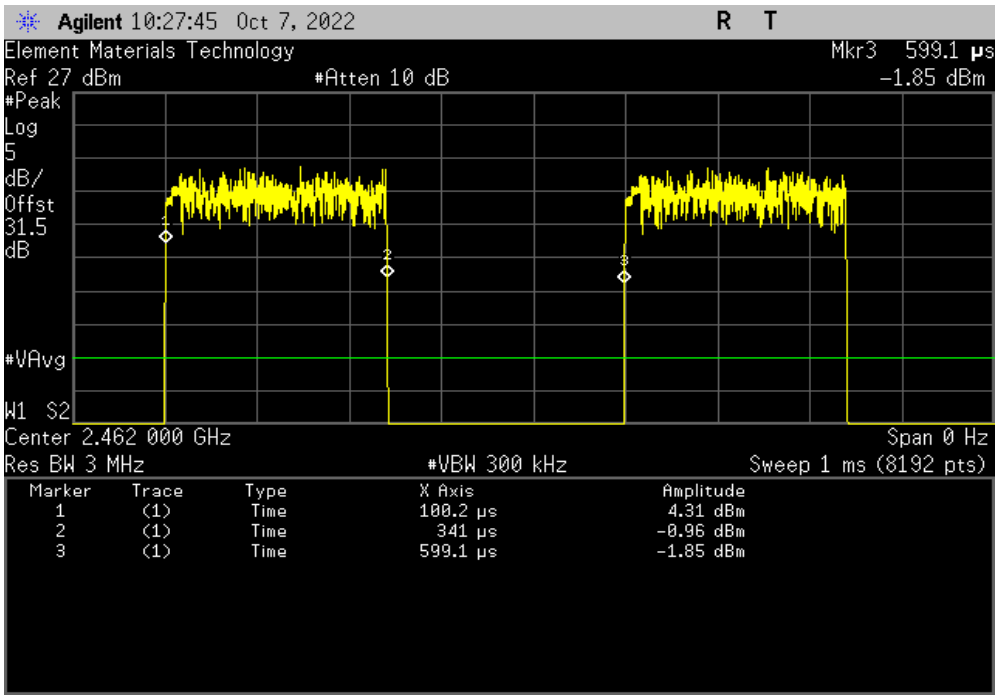


Chain 1, Legacy OFDM, 54 Mbps, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

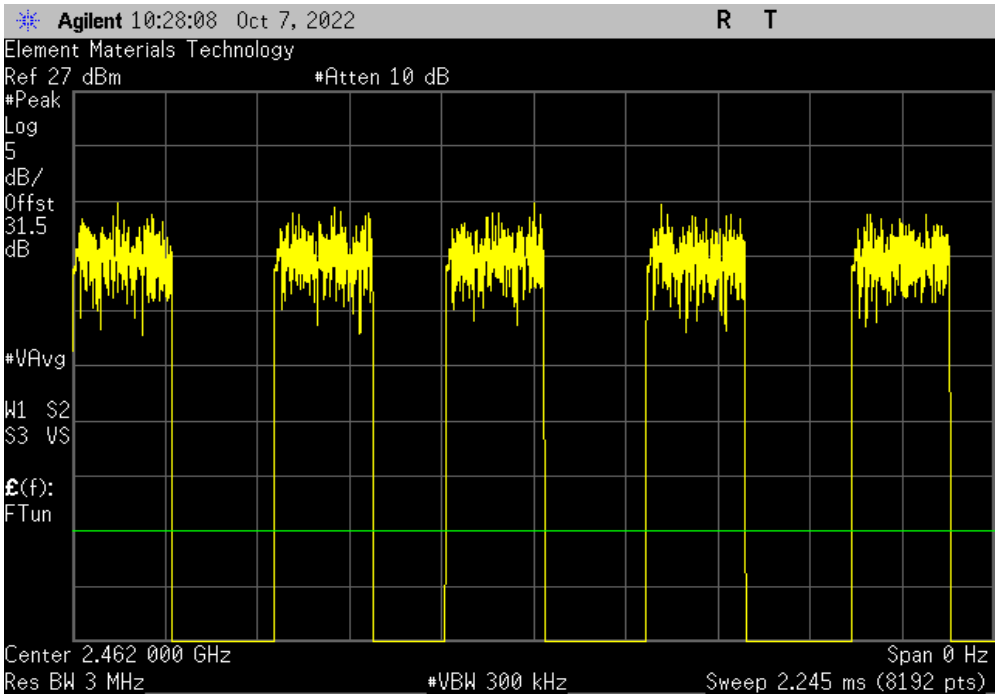


DUTY CYCLE - CHAIN 1

Chain 1, Legacy OFDM, 54 Mbps, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	240.8 us	498.912 us	1	48.3	N/A	N/A

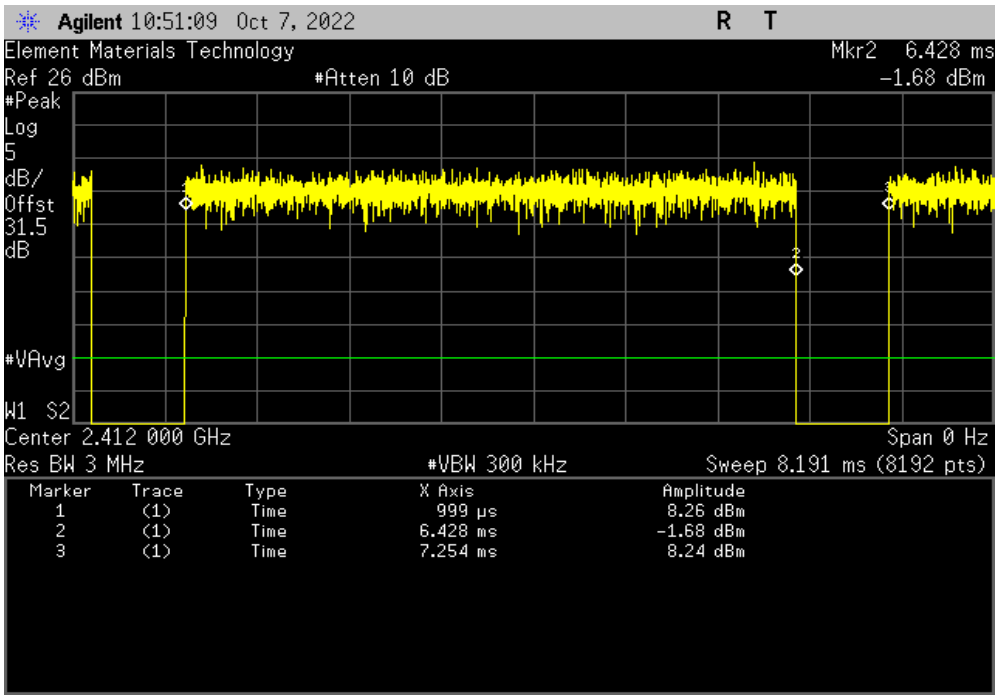


Chain 1, Legacy OFDM, 54 Mbps, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

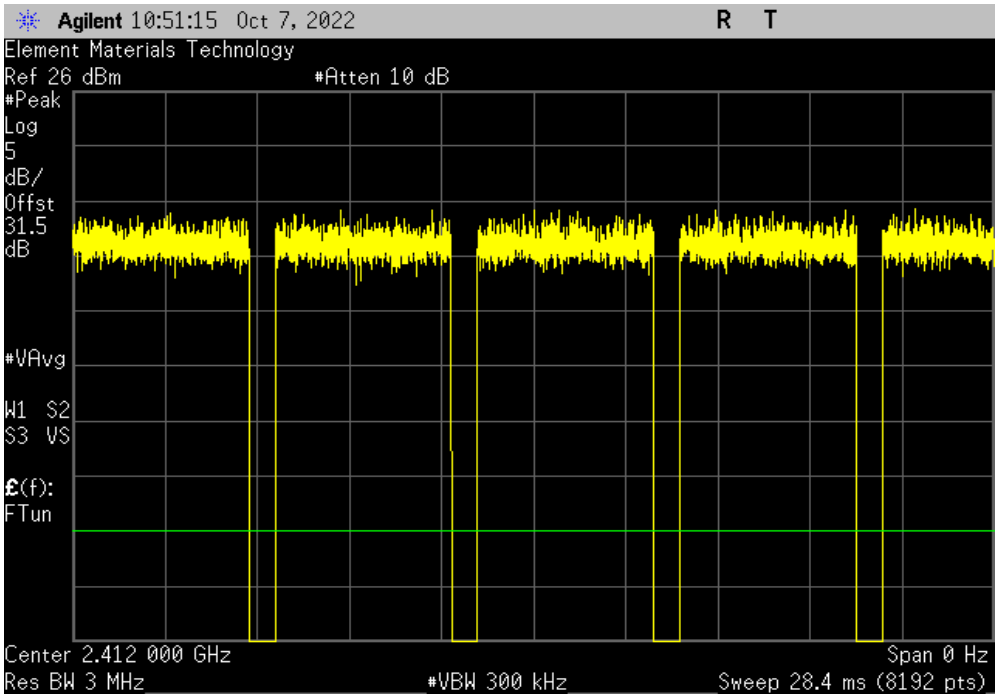


DUTY CYCLE - CHAIN 1

Chain 1, HT20, MCS0, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.429 ms	6.255 ms	1	86.8	N/A	N/A

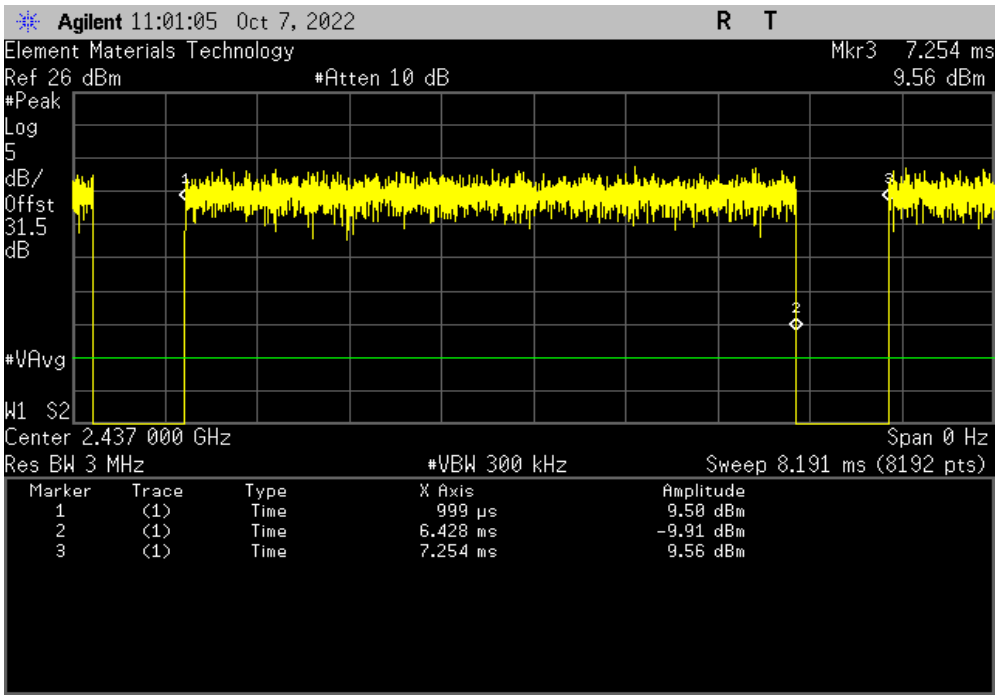


Chain 1, HT20, MCS0, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

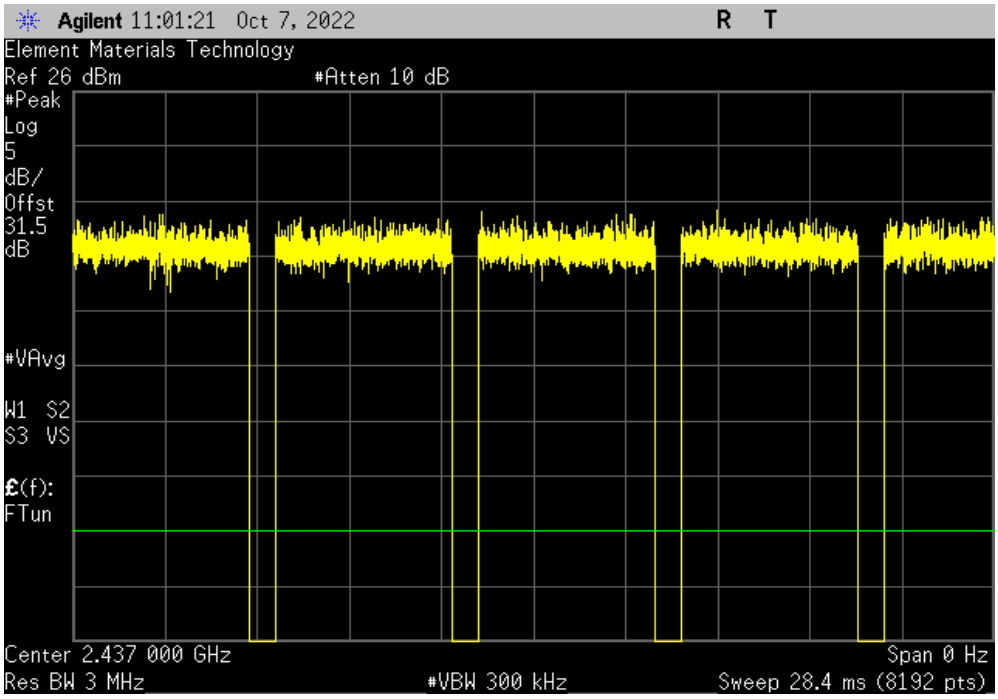


DUTY CYCLE - CHAIN 1

Chain 1, HT20, MCS0, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.429 ms	6.255 ms	1	86.8	N/A	N/A

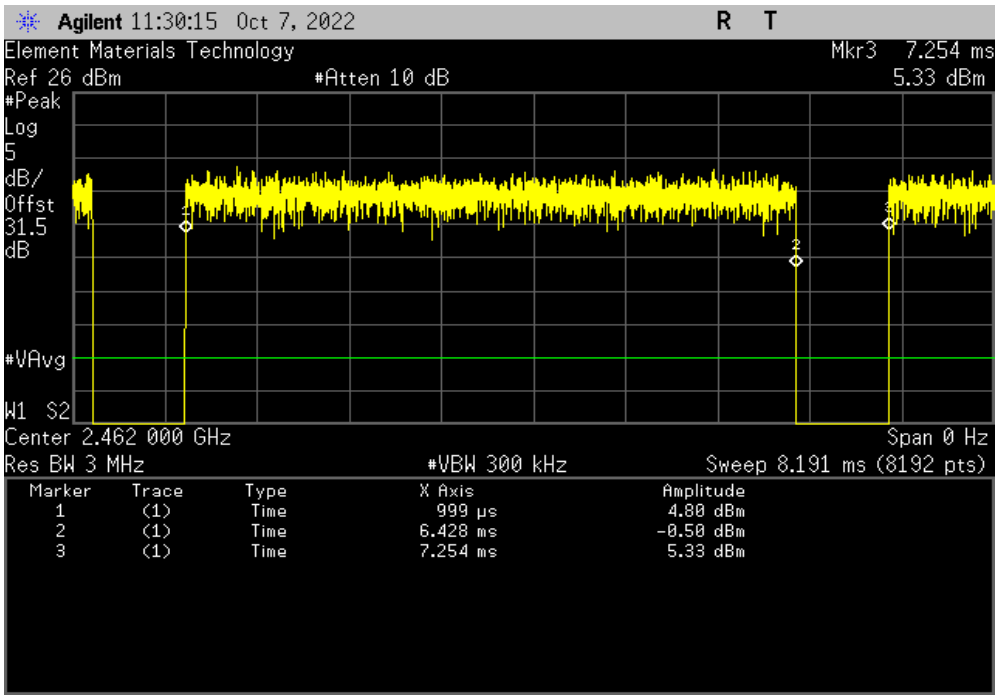


Chain 1, HT20, MCS0, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

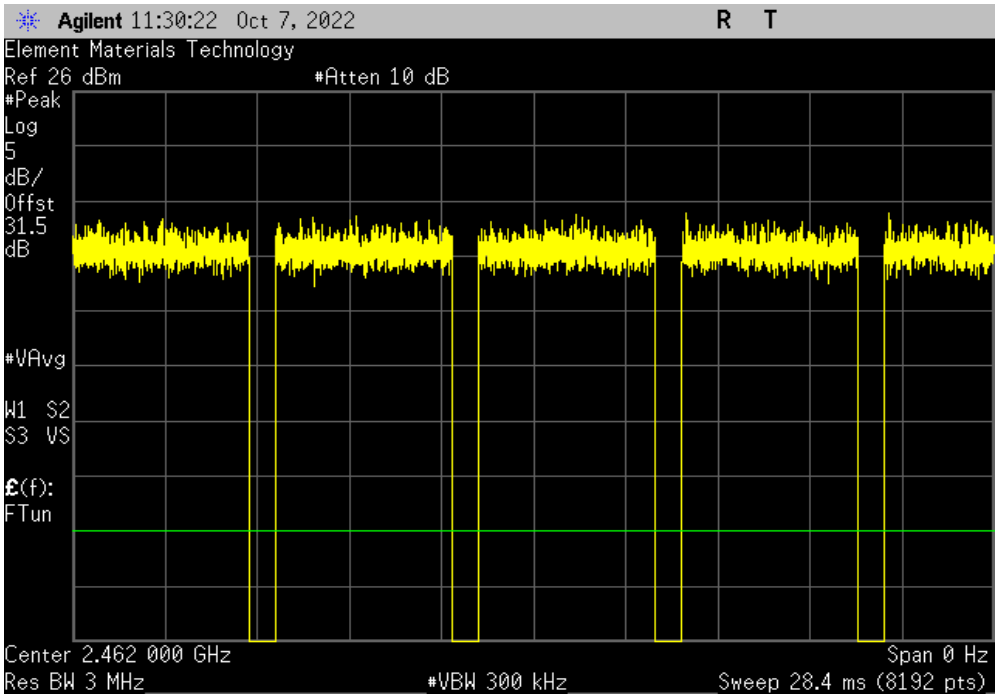


DUTY CYCLE - CHAIN 1

Chain 1, HT20, MCS0, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.429 ms	6.255 ms	1	86.8	N/A	N/A

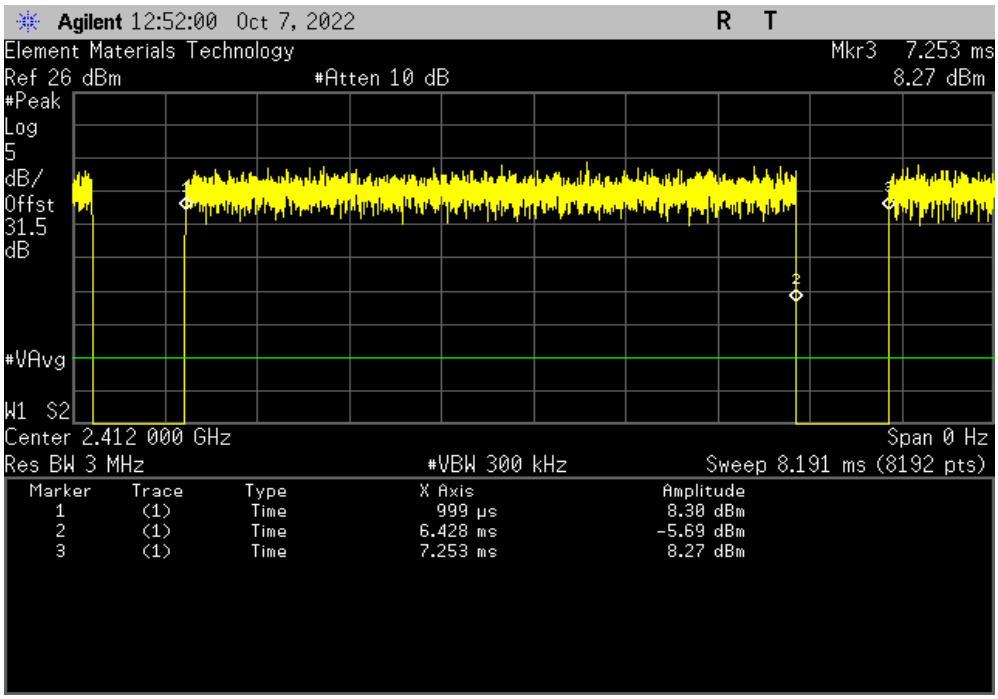


Chain 1, HT20, MCS0, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

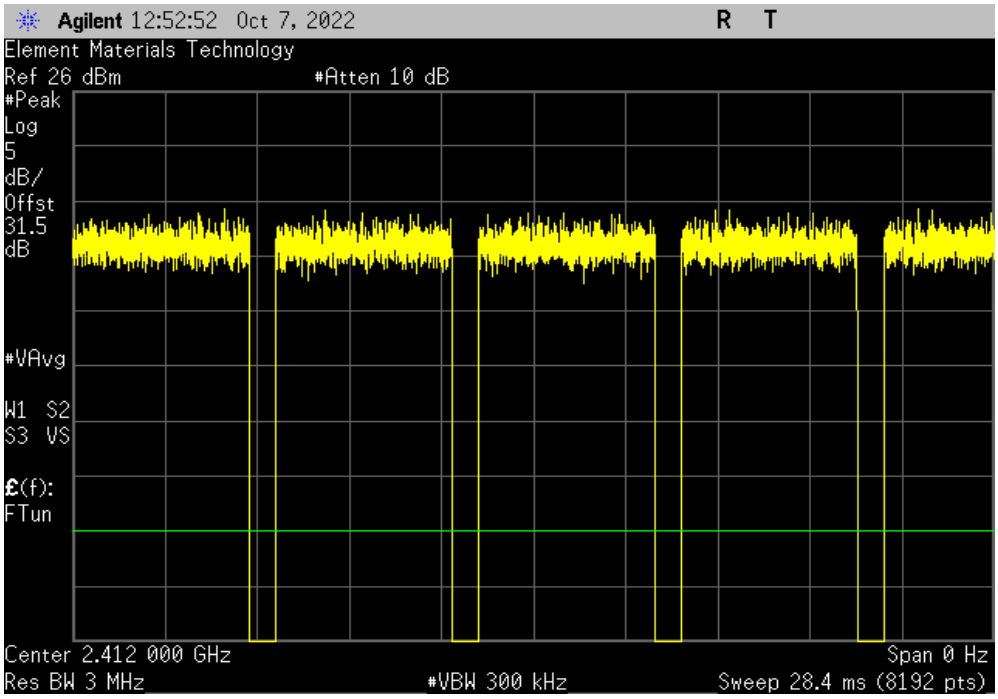


DUTY CYCLE - CHAIN 1

Chain 1, HT20, MCS7, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.429 ms	6.254 ms	1	86.8	N/A	N/A

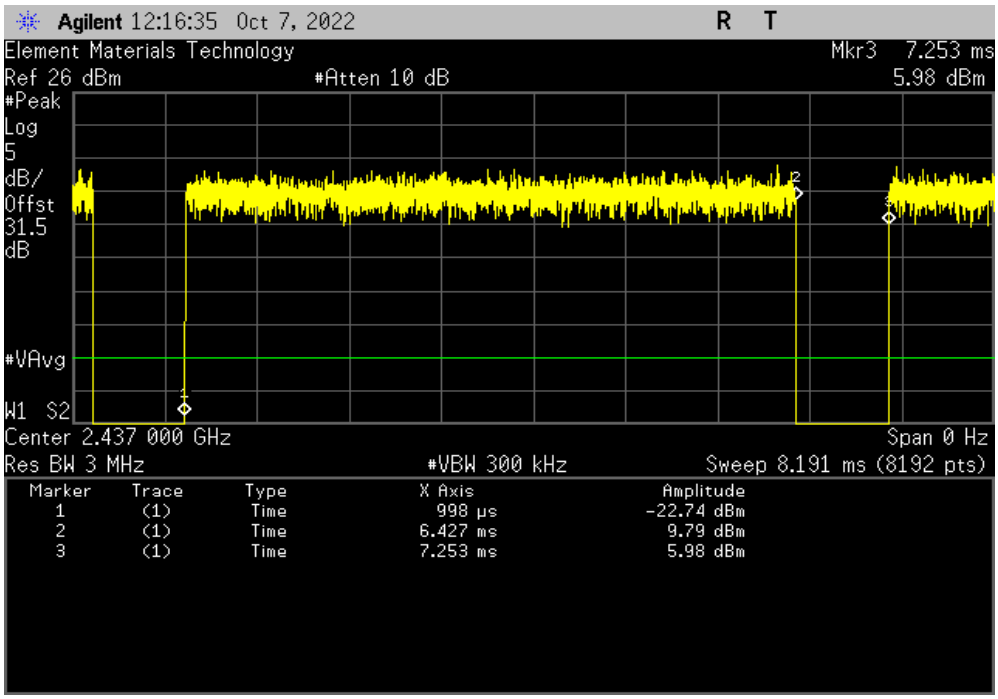


Chain 1, HT20, MCS7, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

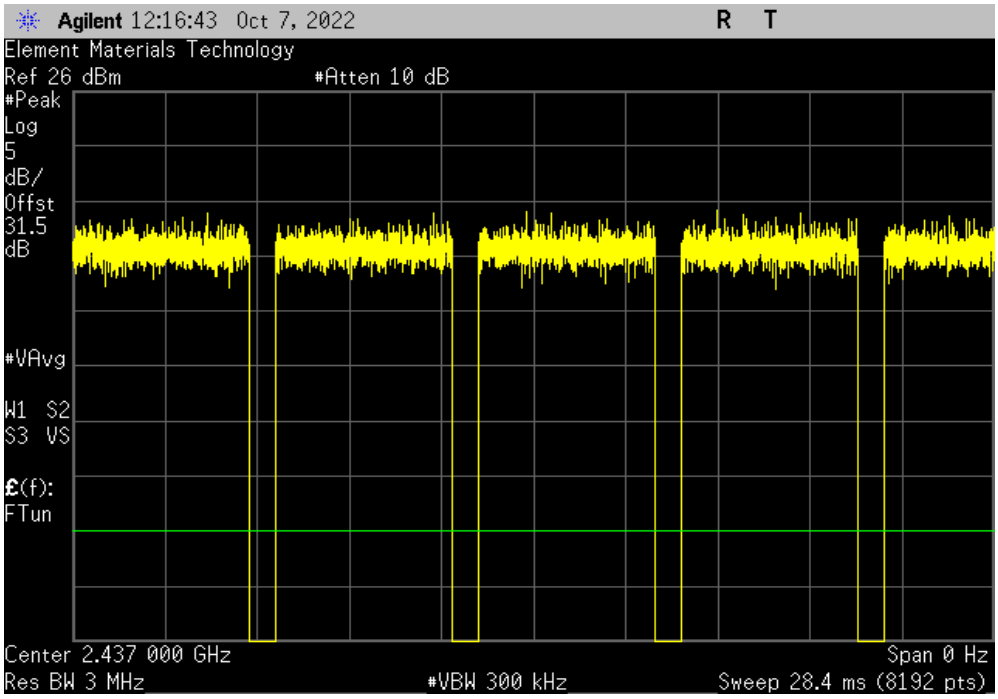


DUTY CYCLE - CHAIN 1

Chain 1, HT20, MCS7, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.429 ms	6.255 ms	1	86.8	N/A	N/A

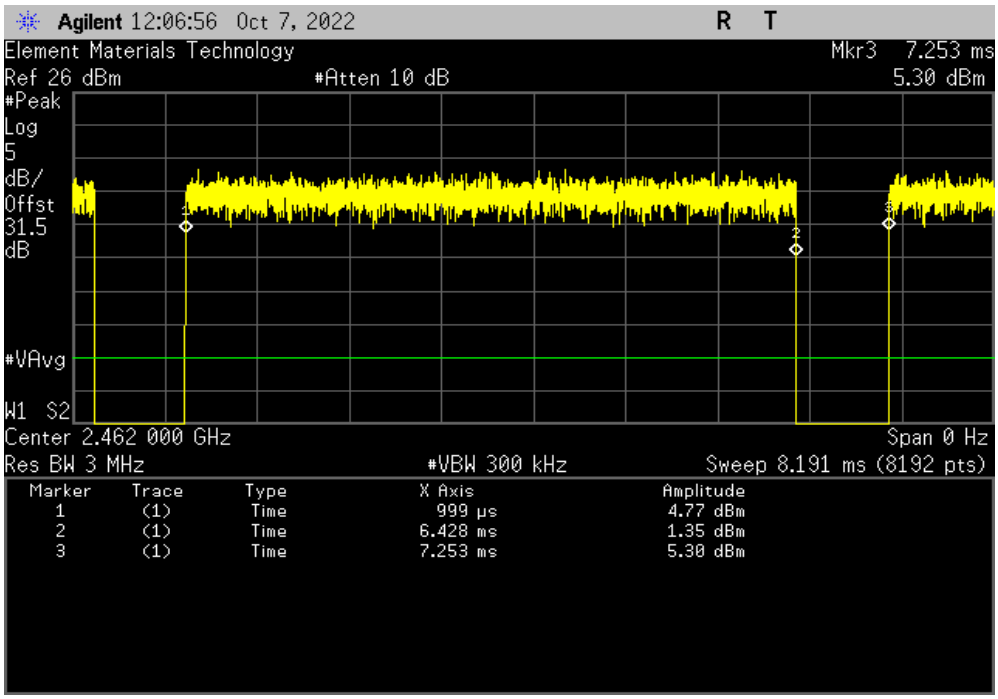


Chain 1, HT20, MCS7, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

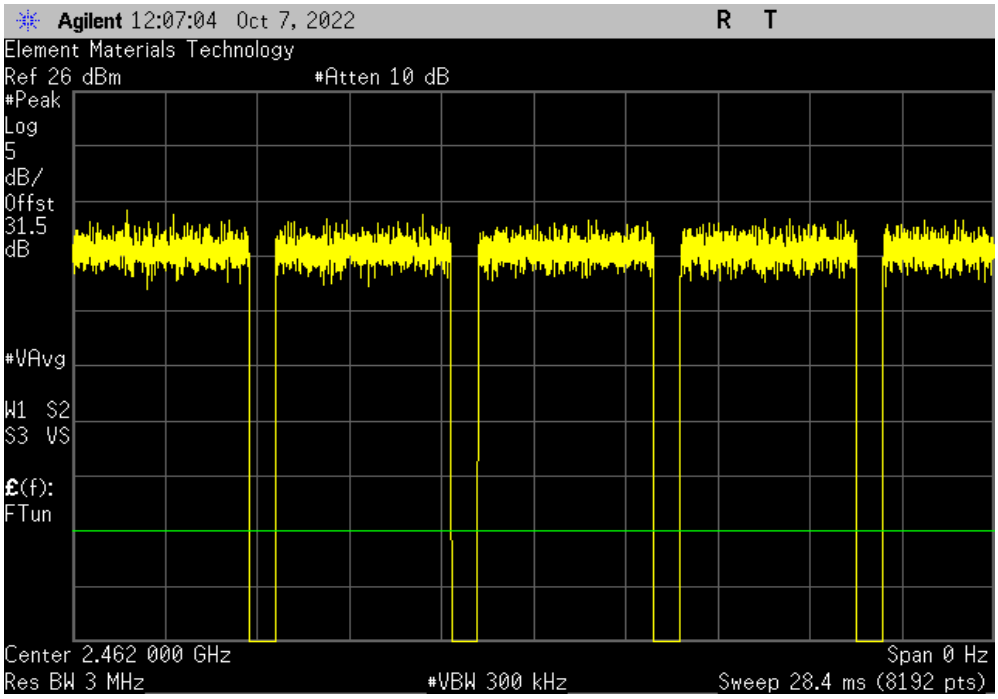


DUTY CYCLE - CHAIN 1

Chain 1, HT20, MCS7, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.429 ms	6.254 ms	1	86.8	N/A	N/A

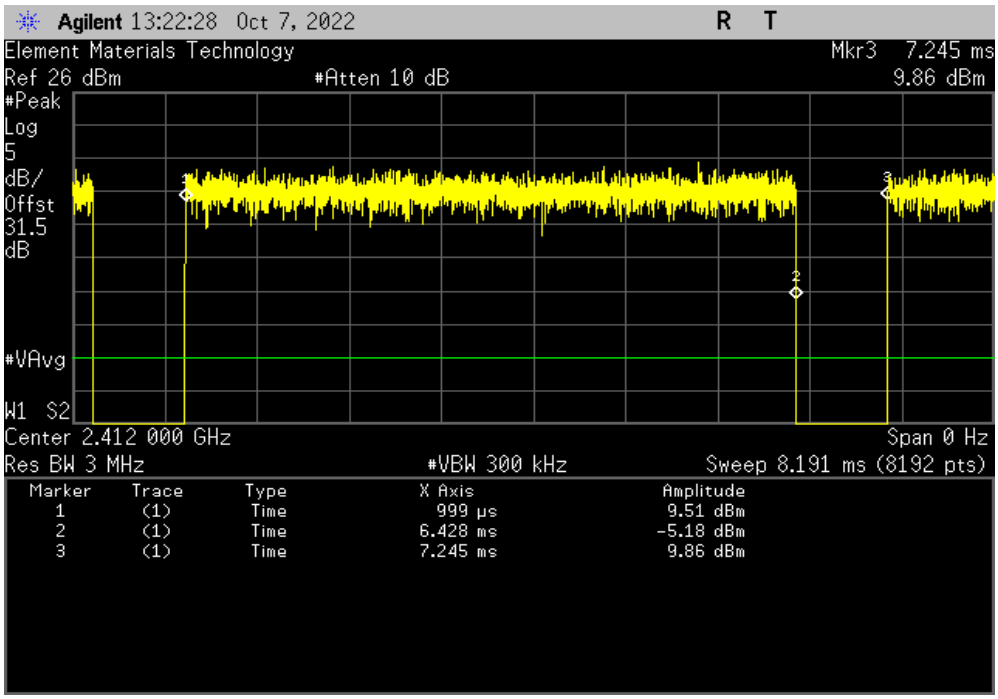


Chain 1, HT20, MCS7, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

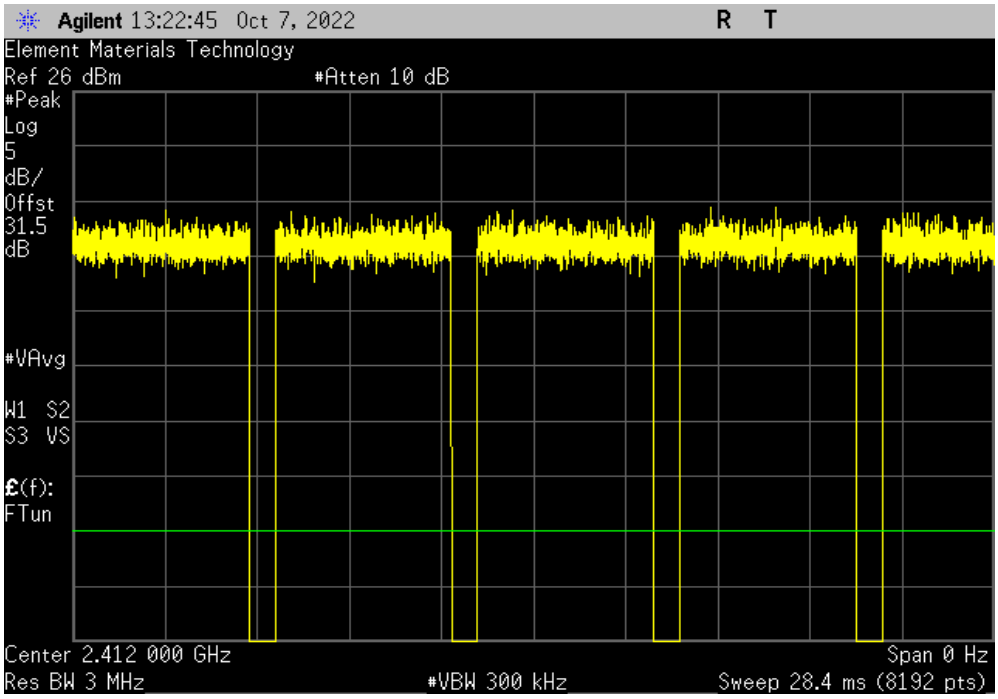


DUTY CYCLE - CHAIN 1

Chain 1, VHT20, MCS0, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.429 ms	6.246 ms	1	86.9	N/A	N/A

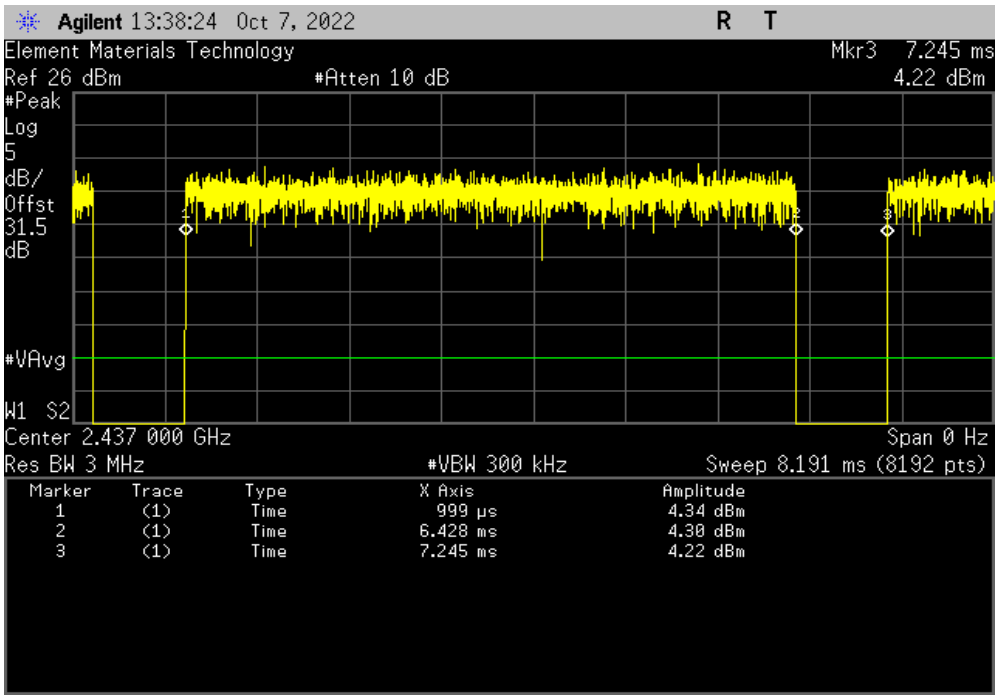


Chain 1, VHT20, MCS0, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

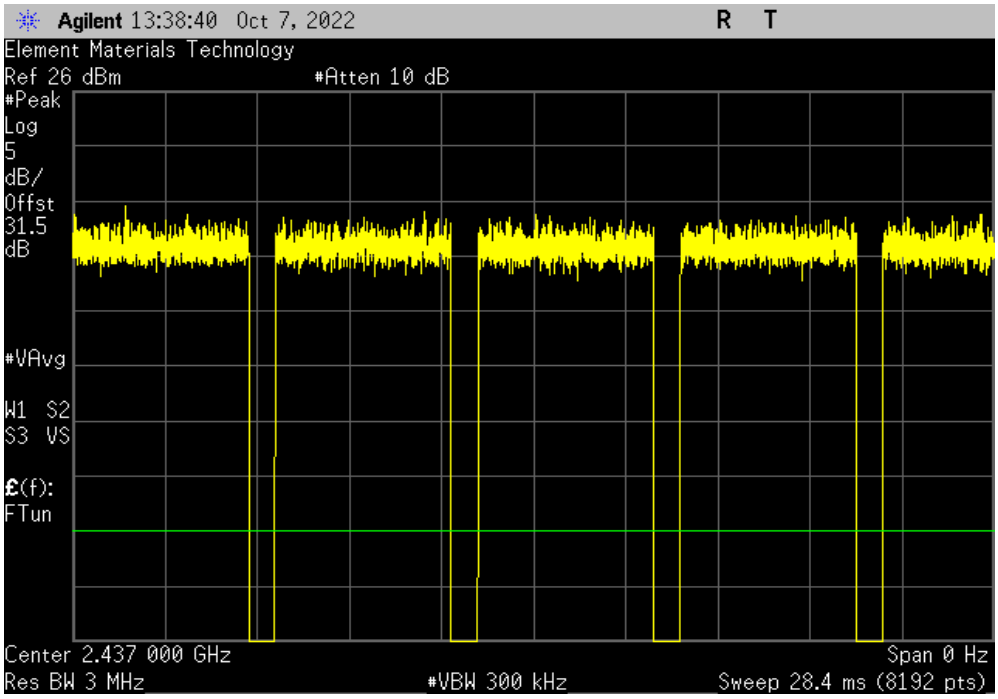


DUTY CYCLE - CHAIN 1

Chain 1, VHT20, MCS0, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.429 ms	6.246 ms	1	86.9	N/A	N/A

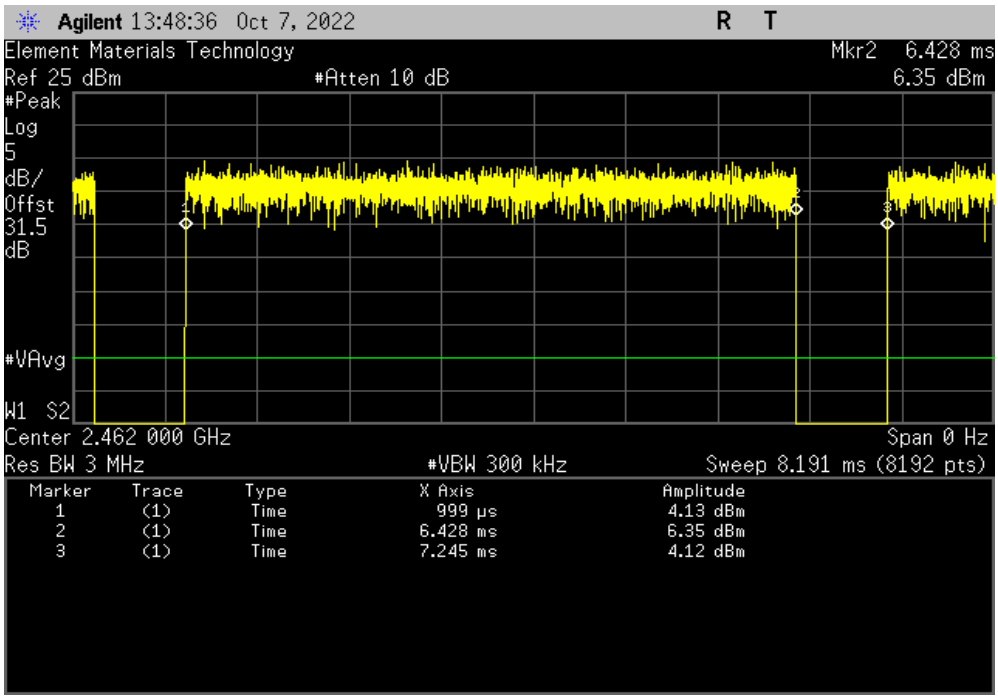


Chain 1, VHT20, MCS0, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

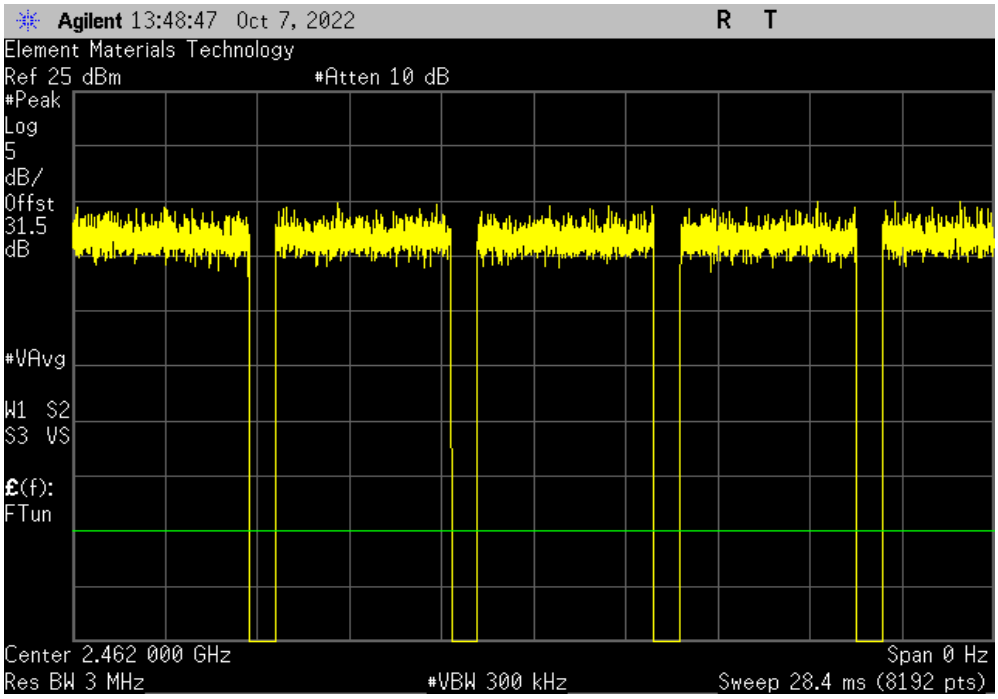


DUTY CYCLE - CHAIN 1

Chain 1, VHT20, MCS0, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.429 ms	6.246 ms	1	86.9	N/A	N/A

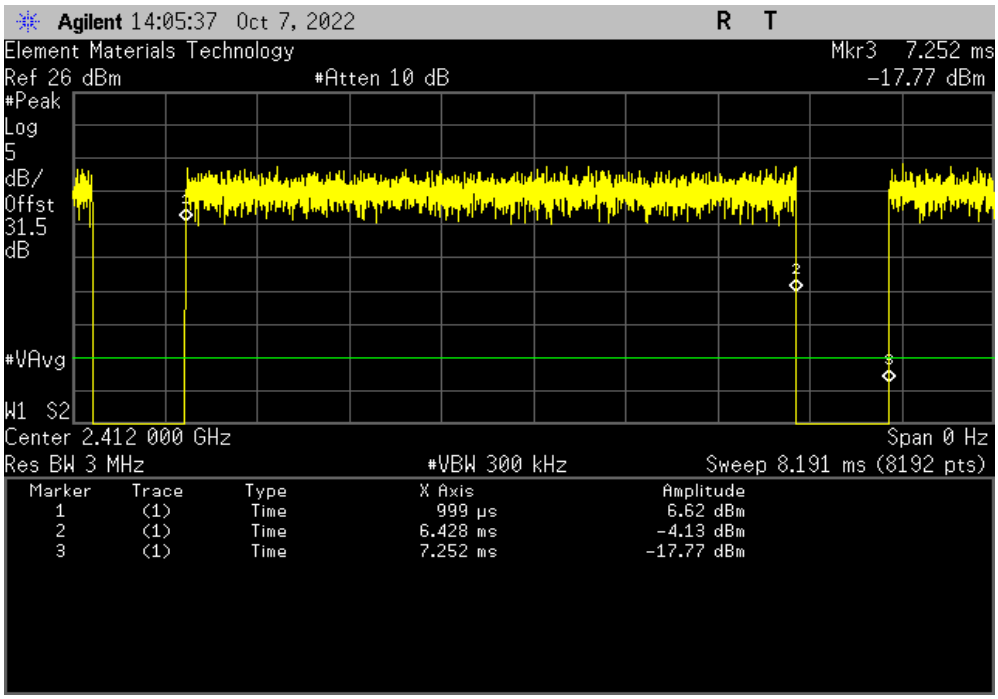


Chain 1, VHT20, MCS0, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

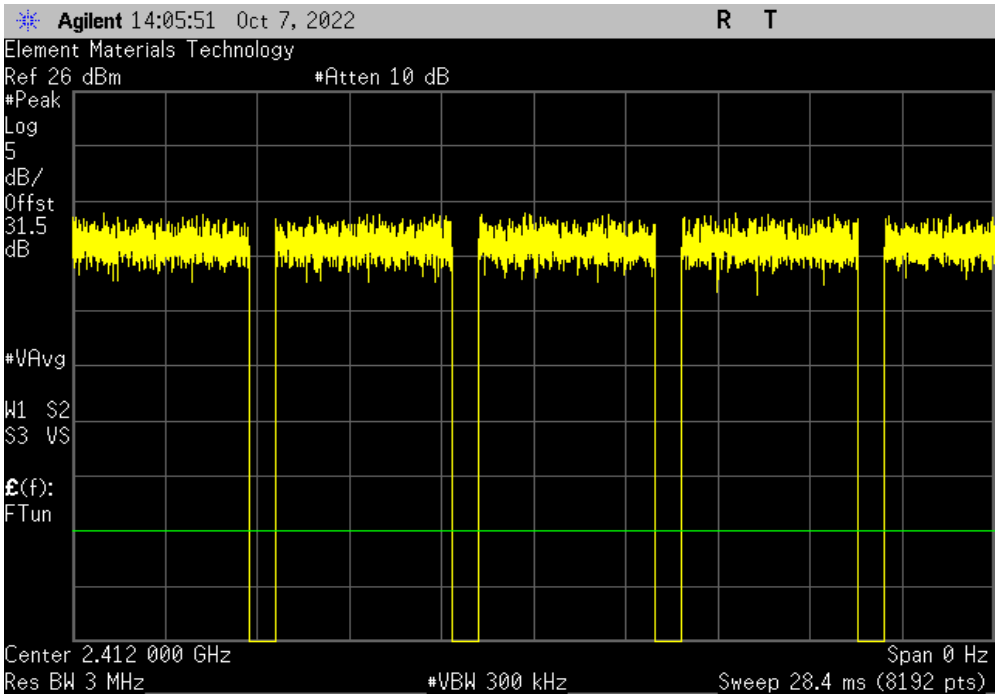


DUTY CYCLE - CHAIN 1

Chain 1, VHT20, MCS8, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.429 ms	6.253 ms	1	86.8	N/A	N/A

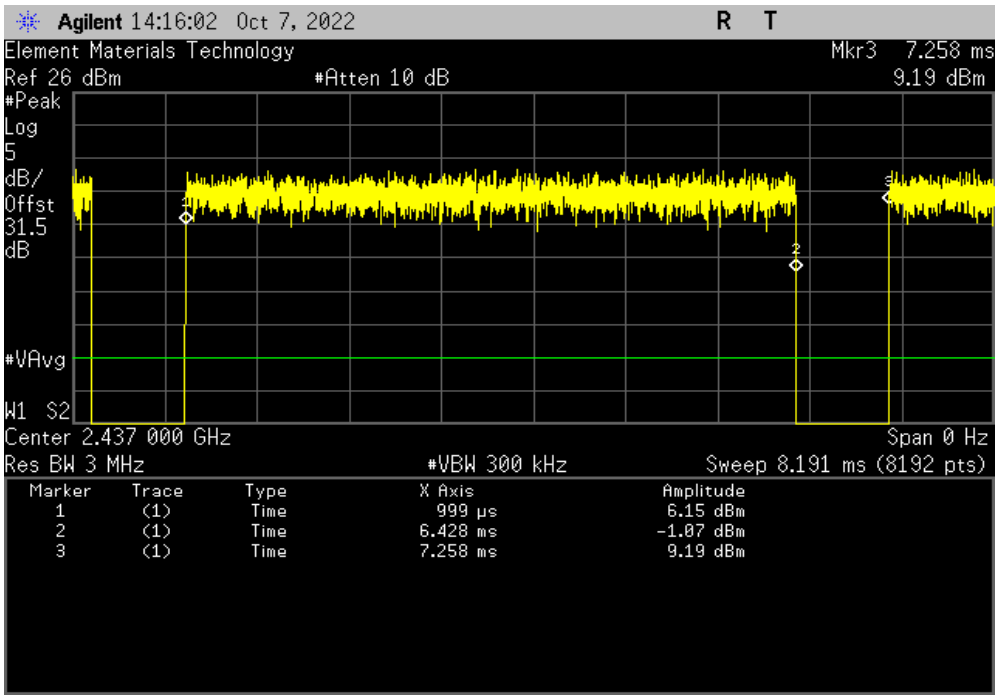


Chain 1, VHT20, MCS8, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

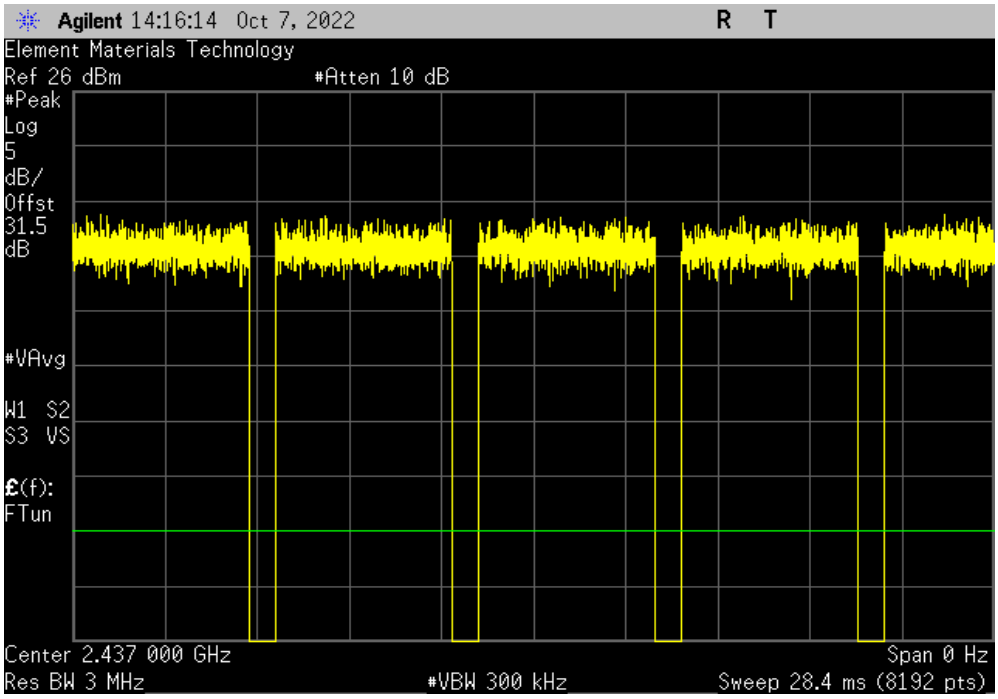


DUTY CYCLE - CHAIN 1

Chain 1, VHT20, MCS8, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.429 ms	6.259 ms	1	86.7	N/A	N/A

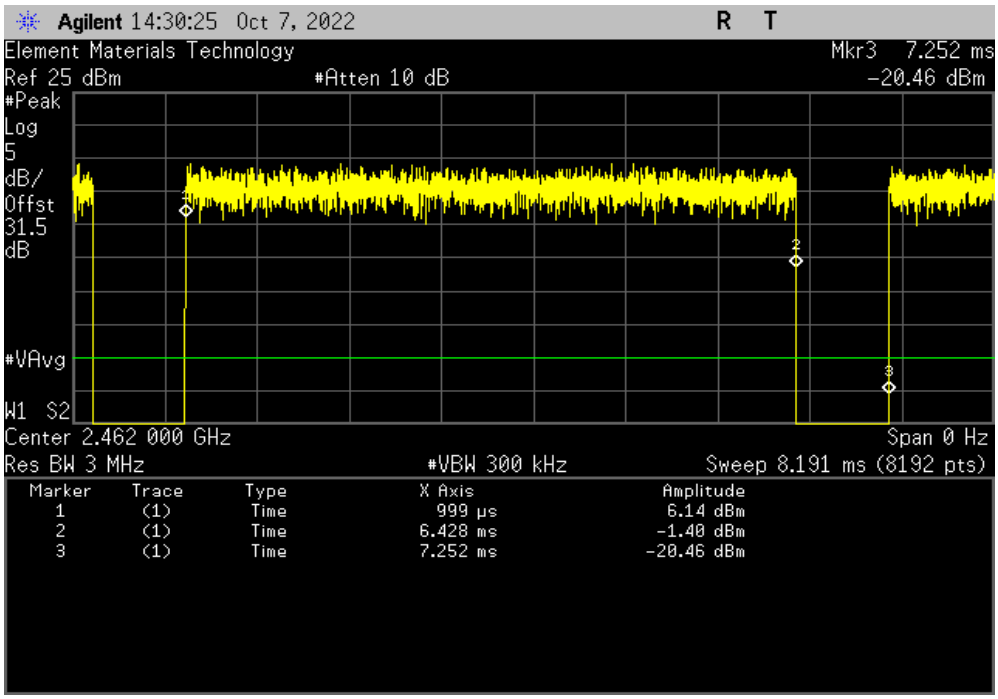


Chain 1, VHT20, MCS8, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

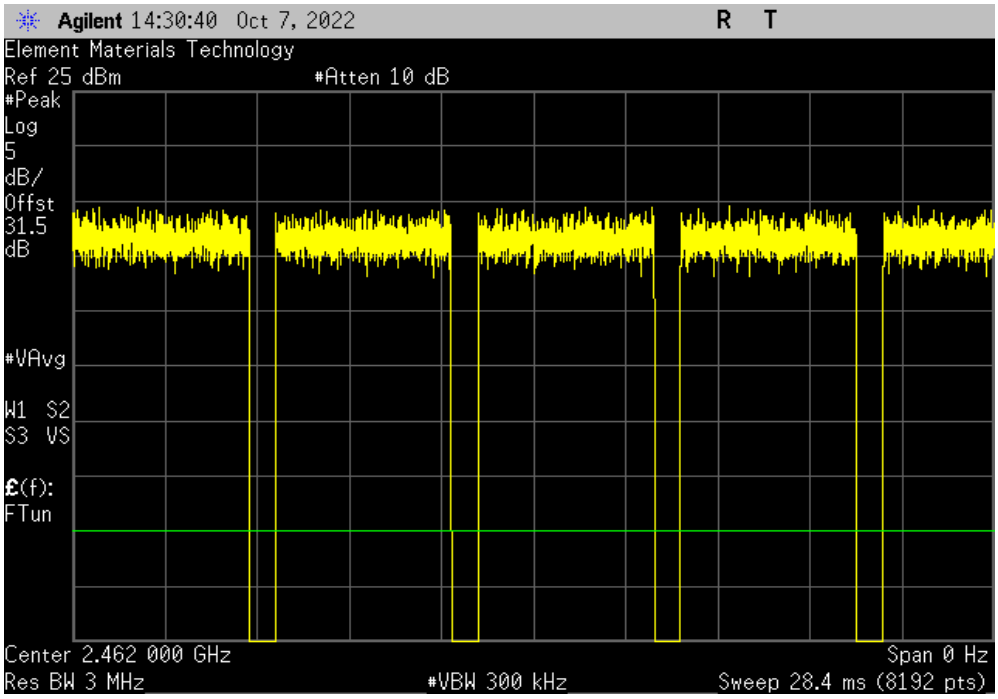


DUTY CYCLE - CHAIN 1

Chain 1, VHT20, MCS8, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.429 ms	6.253 ms	1	86.8	N/A	N/A

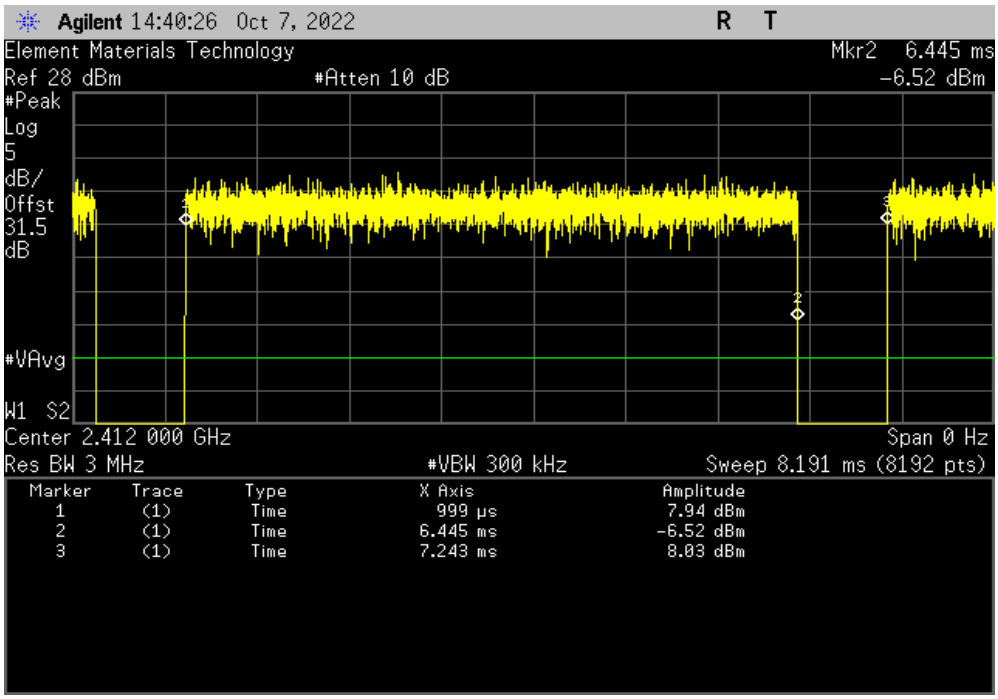


Chain 1, VHT20, MCS8, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

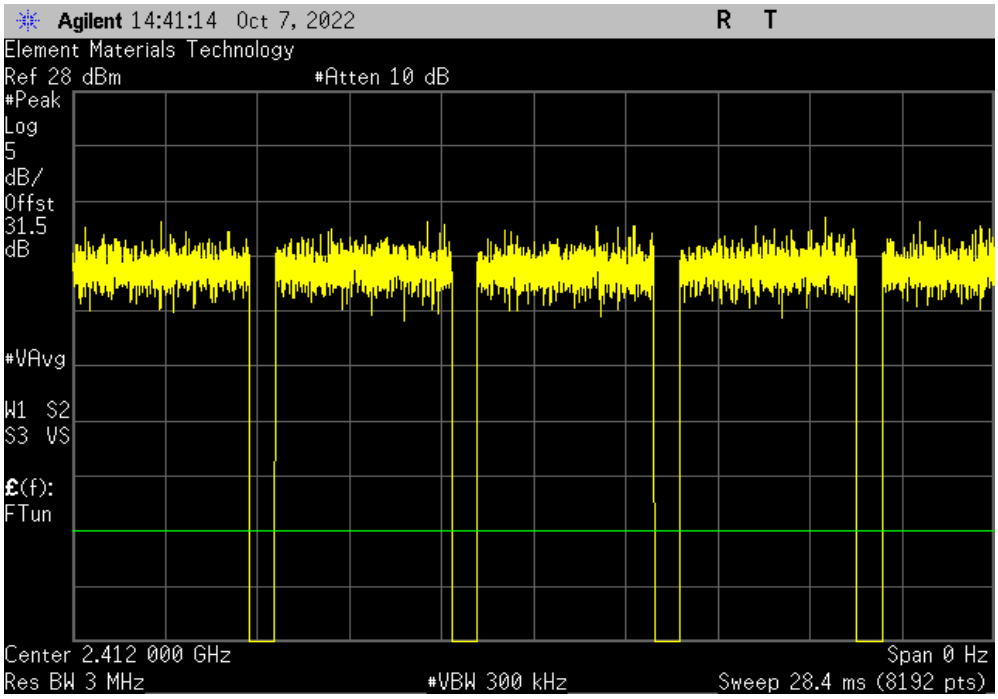


DUTY CYCLE - CHAIN 1

Chain 1, HE20, MCS0, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.446 ms	6.244 ms	1	87.2	N/A	N/A

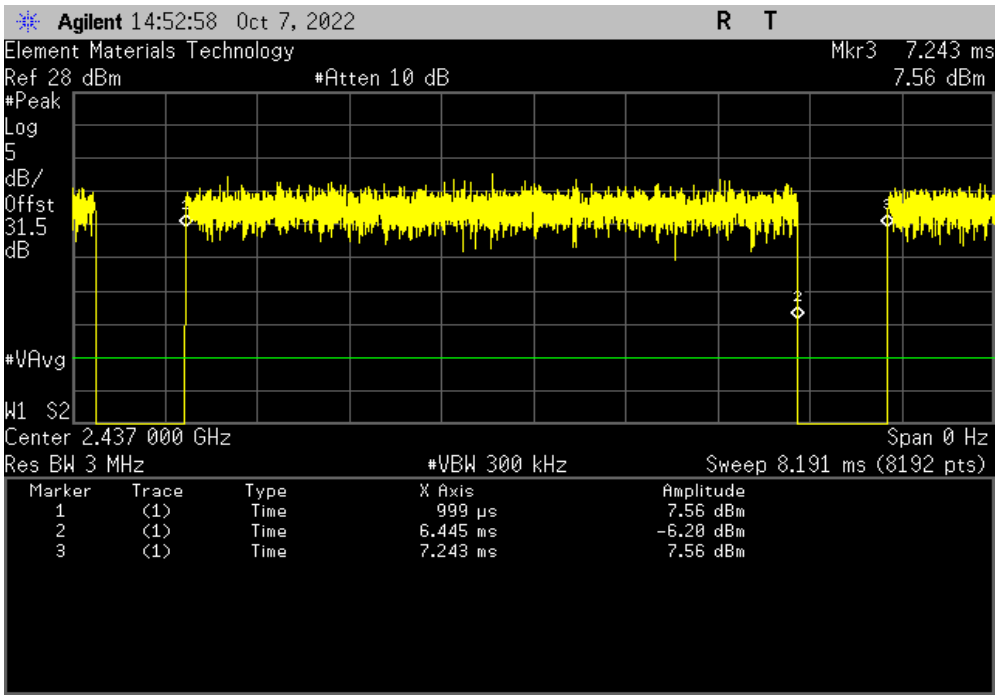


Chain 1, HE20, MCS0, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

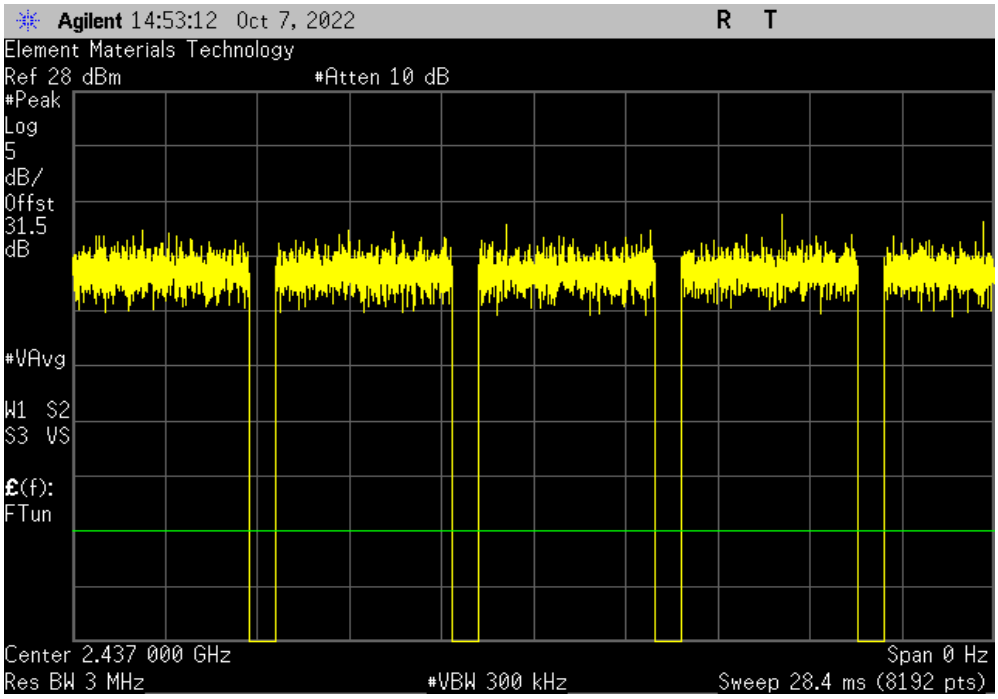


DUTY CYCLE - CHAIN 1

Chain 1, HE20, MCS0, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.446 ms	6.244 ms	1	87.2	N/A	N/A

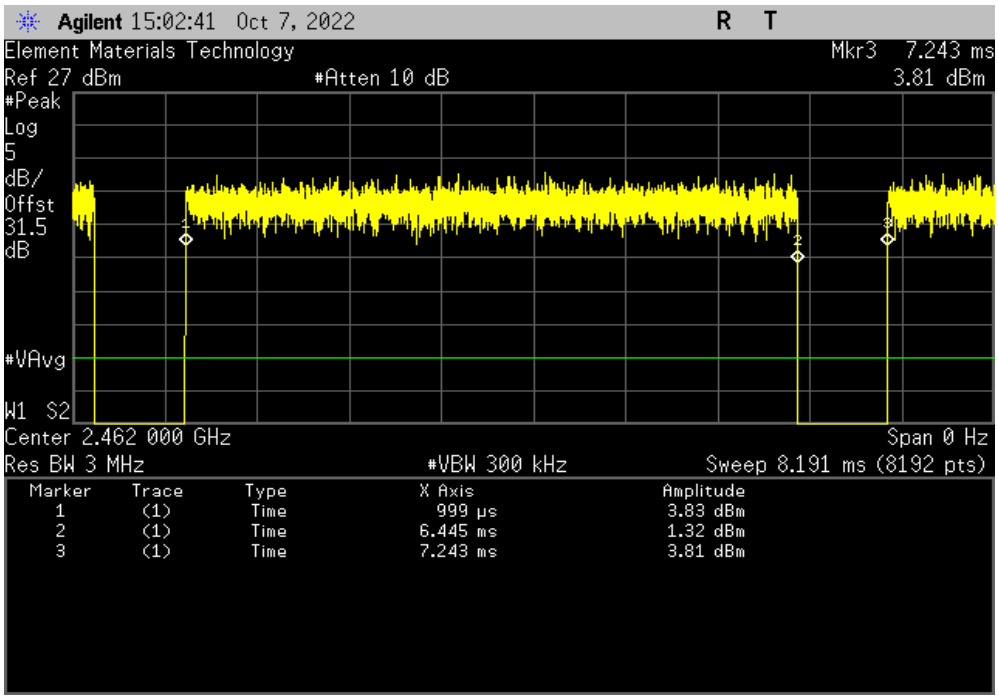


Chain 1, HE20, MCS0, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

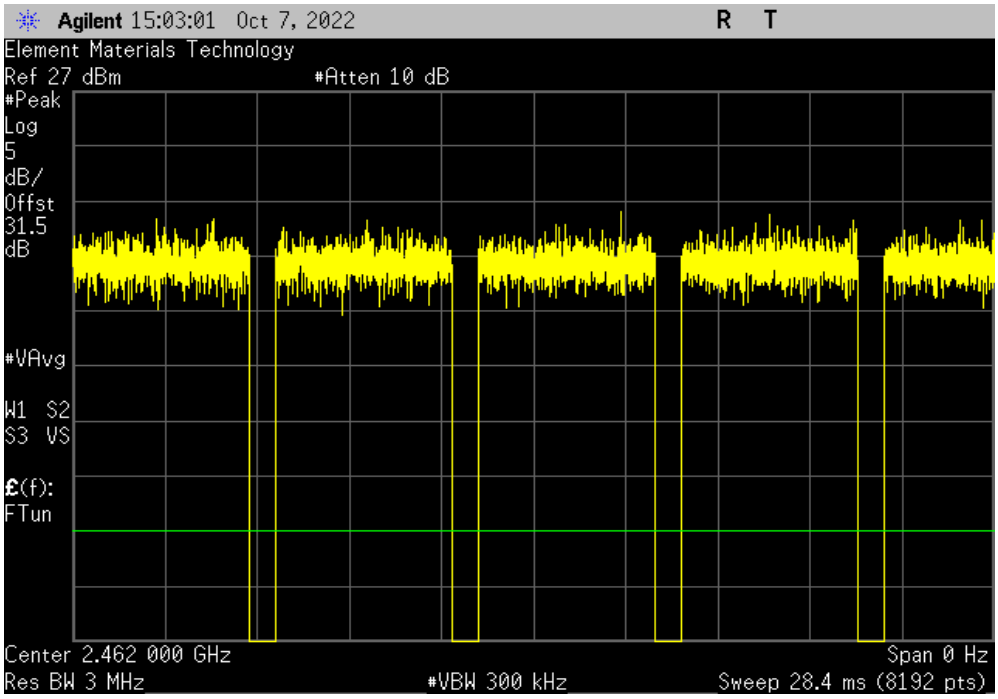


DUTY CYCLE - CHAIN 1

Chain 1, HE20, MCS0, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.446 ms	6.244 ms	1	87.2	N/A	N/A

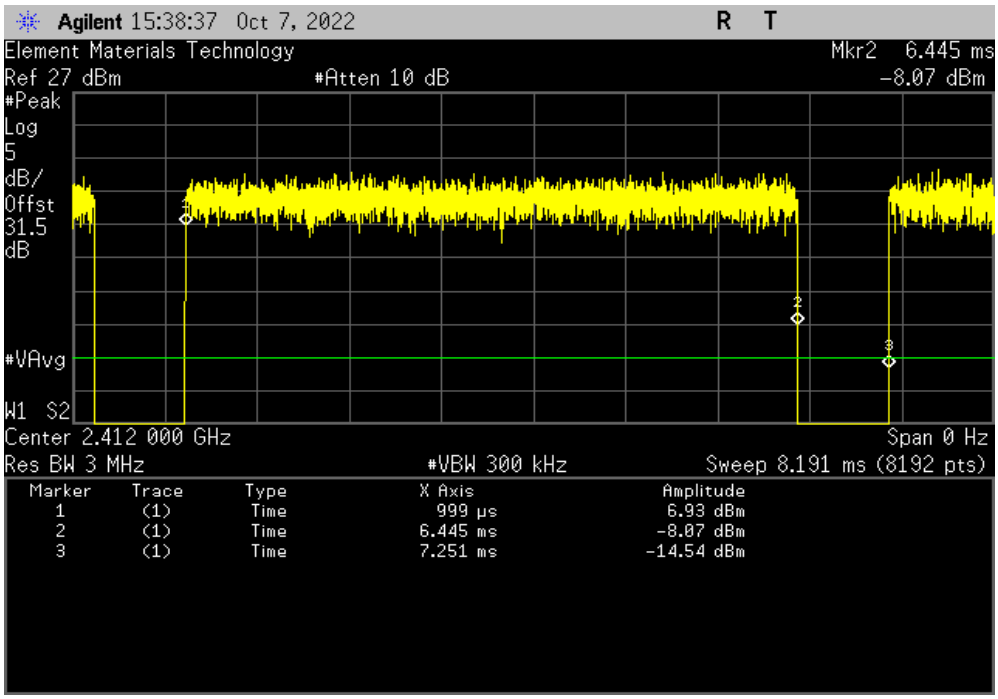


Chain 1, HE20, MCS0, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

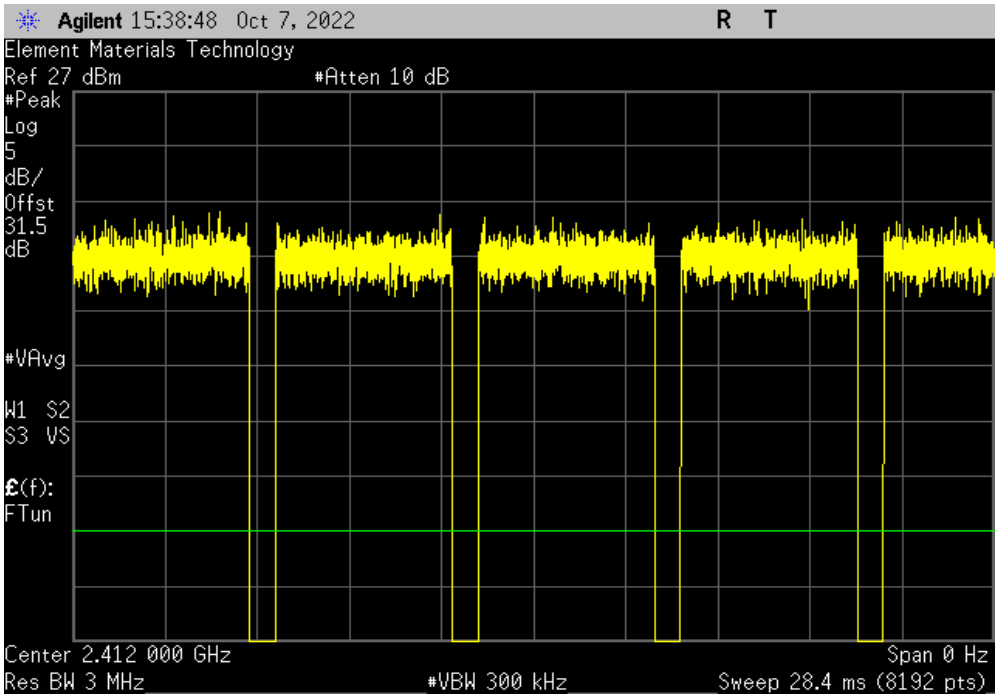


DUTY CYCLE - CHAIN 1

Chain 1, HE20, MCS11, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.446 ms	6.252 ms	1	87.1	N/A	N/A

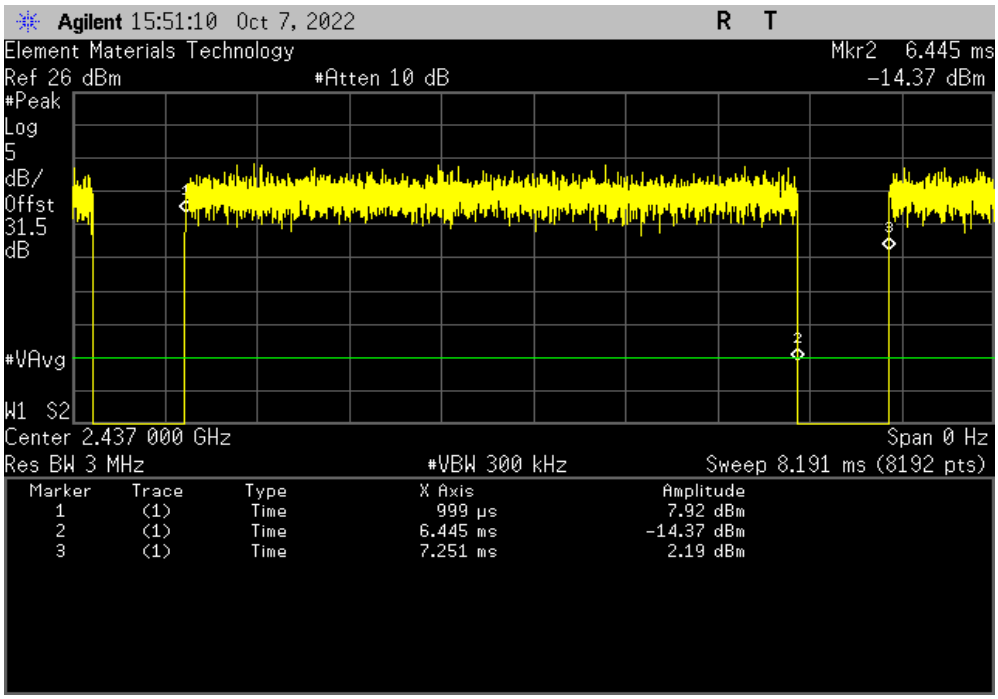


Chain 1, HE20, MCS11, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

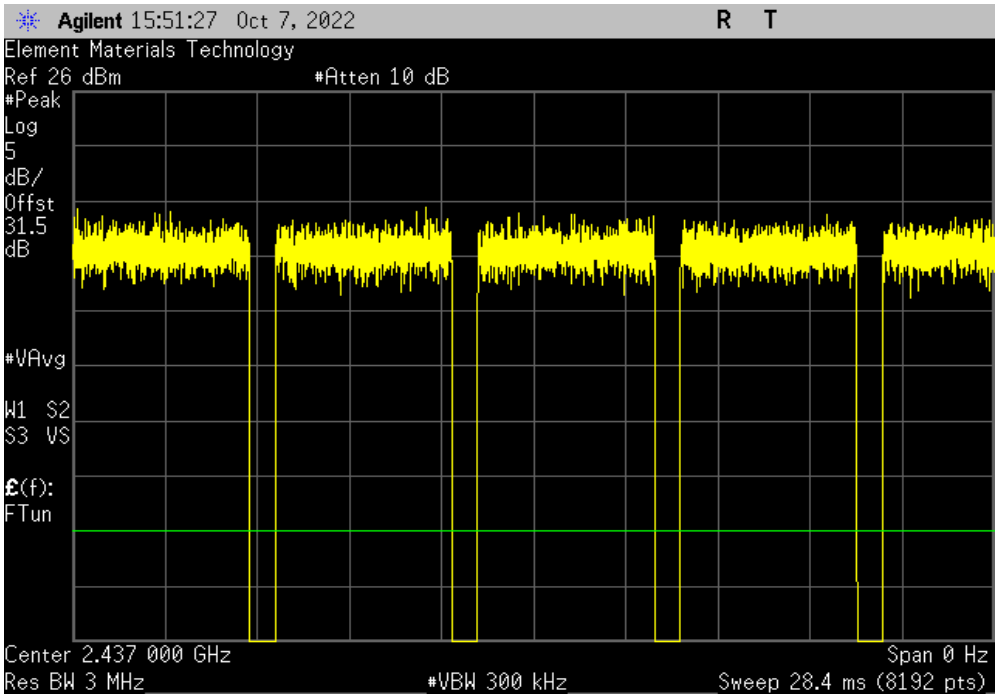


DUTY CYCLE - CHAIN 1

Chain 1, HE20, MCS11, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.446 ms	6.252 ms	1	87.1	N/A	N/A

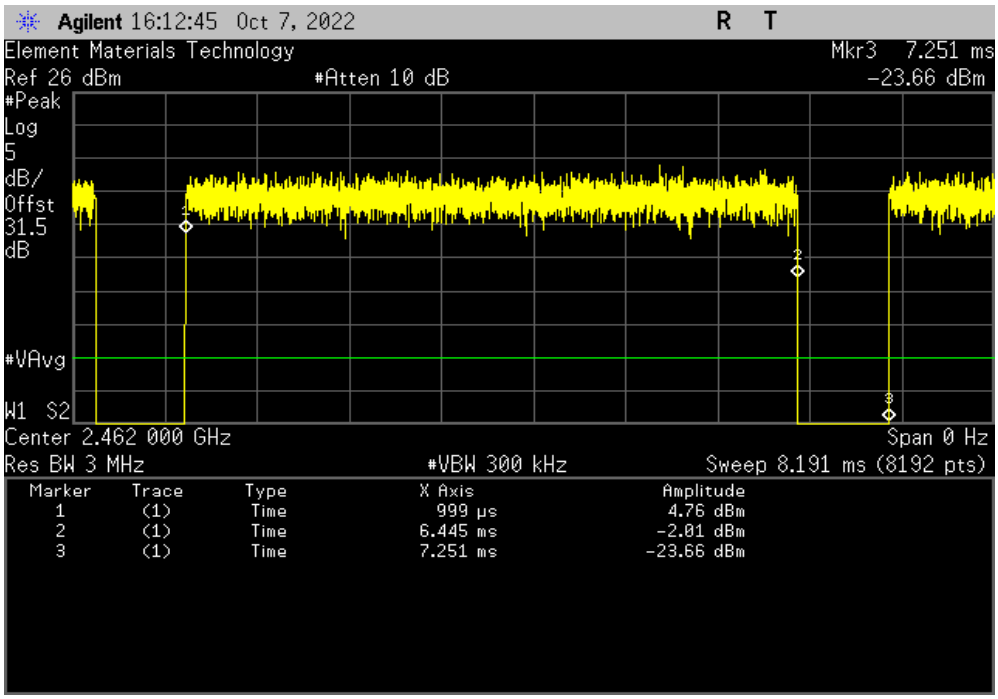


Chain 1, HE20, MCS11, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

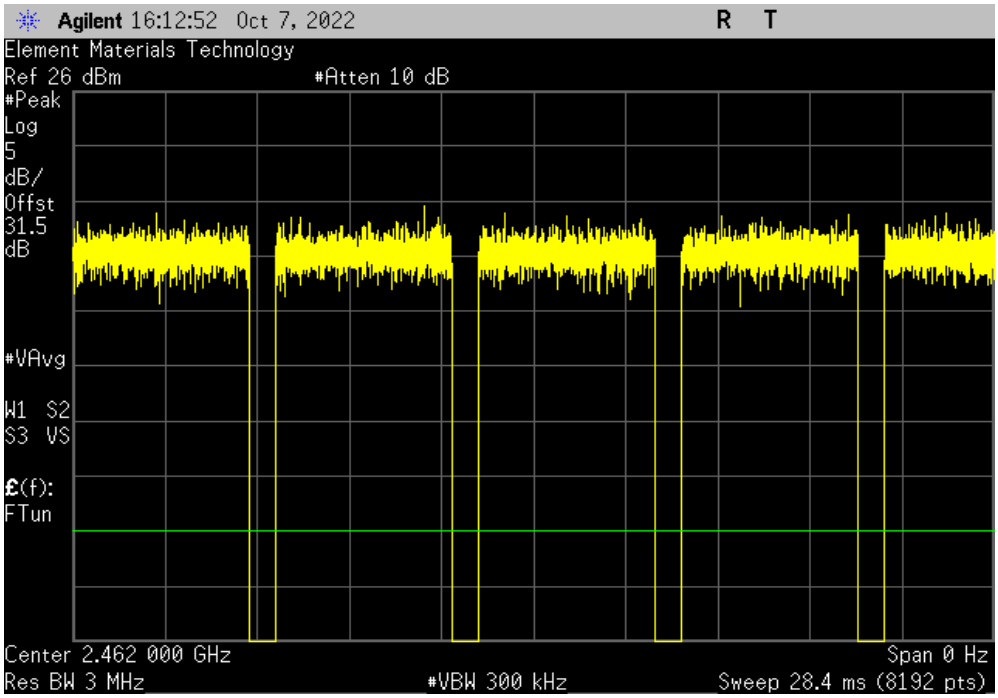


DUTY CYCLE - CHAIN 1

Chain 1, HE20, MCS11, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.446 ms	6.252 ms	1	87.1	N/A	N/A



Chain 1, HE20, MCS11, 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 - MIMO

XMit 2023.02.14.0

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

TEST EQUIPMENT - 2023

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Attenuator	S.M. Electronics	SA26B-10	AWR	2022-07-05	2023-07-05
Generator - Signal	Keysight	N5182B	TFU	2022-12-02	2024-12-02
Cable	Micro-Coax	D150A-1-0720-200	EVI	2022-12-02	2023-12-02
Attenuator	S.M. Electronics	SA26B-20	AUY	2023-03-13	2024-03-13
Block - DC	Fairview Microwave	SD3379	AMW	2023-03-13	2024-03-13
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAW	2023-02-06	2024-02-06

TEST EQUIPMENT - 2022

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Keysight	N5182B	TFU	2020-11-20	2022-11-20
Cable	Micro-Coax	D150A-1-0720-200	EVI	2021-12-05	2022-12-05
Attenuator	S.M. Electronics	SA26B-10	AWR	2022-07-05	2023-07-05
Attenuator	S.M. Electronics	SA26B-20	AUY	2022-03-15	2023-03-15
Block - DC	Fairview Microwave	SD3379	AMW	2022-03-14	2023-03-14
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAW	2022-01-26	2023-01-26

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 - MIMO

element

TbtTx 2022.06.03.0 XMit 2023.02.14.0

EUT:	**U8 Hawk**			**Work Order:**	**KYME0068**
Serial Number:	**See configuration**			**Date:**	**03/15/23**
Customer:	**Kymeta Corp.**			**Temperature:**	**19.7°C**
Attendees:	**Dean Busch and Mike Olsen**			**Humidity:**	**40.5%**
Project:	**None**			**Barometric Pres.:**	**1008 mbar**
Tested by:	**Jeff Alcoke**	**Power:**	**12VDC**	**Job Site:**	**EV06**

TEST SPECIFICATIONS	**Test Method**
FCC 15.247:2023	ANSI C63.10:2013
RSS-247 Issue 2:2017	ANSI C63.10:2013

COMMENTS

All measurments collected before 2023, were performed on configuration KYME0068-1. Reporting measurements from Chain 0 only. Chain 1 has the same duty cycle. Reference level offset includes: DC block, 30 dB attenuation, and measurement cable.

DEVIATIONS FROM TEST STANDARD

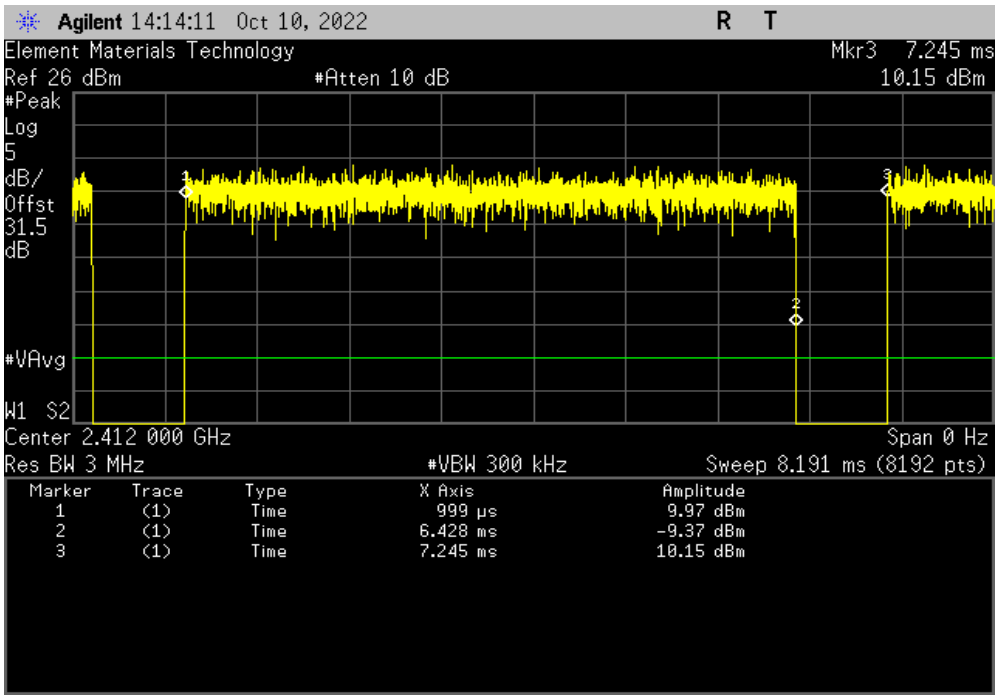
None

Configuration #	**KYME0068-1** **KYME0068-5**	*Signature*

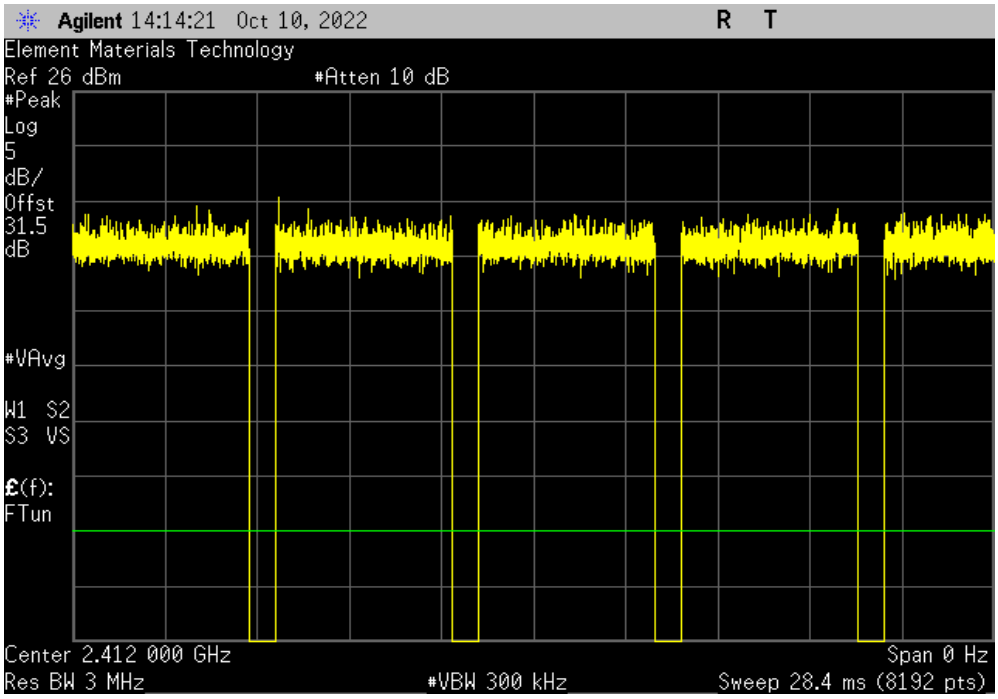
		Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
MIMO - Chain 0							
	HT20, MCS8						
	Low Channel 1, 2412 MHz	5.429 ms	6.246 ms	1	86.9	N/A	N/A
	Low Channel 1, 2412 MHz	N/A	N/A	5	N/A	N/A	N/A
	Mid Channel 6, 2437 MHz	5.429 ms	6.246 ms	1	86.9	N/A	N/A
	Mid Channel 6, 2437 MHz	N/A	N/A	5	N/A	N/A	N/A
	High Channel 11, 2462 MHz	5.429 ms	6.246 ms	1	86.9	N/A	N/A
	High Channel 11, 2462 MHz	N/A	N/A	5	N/A	N/A	N/A
	HT20, MCS15						
	Low Channel 1, 2412 MHz	5.429 ms	6.241 ms	1	87	N/A	N/A
	Low Channel 1, 2412 MHz	N/A	N/A	5	N/A	N/A	N/A
	Mid Channel 6, 2437 MHz	5.429 ms	6.241 ms	1	87	N/A	N/A
	Mid Channel 6, 2437 MHz	N/A	N/A	5	N/A	N/A	N/A
	High Channel 11, 2462 MHz	5.429 ms	6.241 ms	1	87	N/A	N/A
	High Channel 11, 2462 MHz	N/A	N/A	5	N/A	N/A	N/A
	VHT20, MCS0						
	Low Channel 1, 2412 MHz	5.429 ms	6.253 ms	1	86.8	N/A	N/A
	Low Channel 1, 2412 MHz	N/A	N/A	5	N/A	N/A	N/A
	Mid Channel 6, 2437 MHz	5.429 ms	6.253 ms	1	86.8	N/A	N/A
	Mid Channel 6, 2437 MHz	N/A	N/A	5	N/A	N/A	N/A
	High Channel 11, 2462 MHz	5.429 ms	6.253 ms	1	86.8	N/A	N/A
	High Channel 11, 2462 MHz	N/A	N/A	5	N/A	N/A	N/A
	VHT20, MCS8						
	Low Channel 1, 2412 MHz	5.43 ms	6.264 ms	1	86.7	N/A	N/A
	Low Channel 1, 2412 MHz	N/A	N/A	5	N/A	N/A	N/A
	Mid Channel 6, 2437 MHz	5.429 ms	6.263 ms	1	86.7	N/A	N/A
	Mid Channel 6, 2437 MHz	N/A	N/A	5	N/A	N/A	N/A
	High Channel 11, 2462 MHz	5.43 ms	6.264 ms	1	86.7	N/A	N/A
	High Channel 11, 2462 MHz	N/A	N/A	5	N/A	N/A	N/A
	HE20, MCS0						
	Low Channel 1, 2412 MHz	5.453 ms	6.261 ms	1	87.1	N/A	N/A
	Low Channel 1, 2412 MHz	N/A	N/A	5	N/A	N/A	N/A
	Mid Channel 6, 2437 MHz	5.453 ms	6.261 ms	1	87.1	N/A	N/A
	Mid Channel 6, 2437 MHz	N/A	N/A	5	N/A	N/A	N/A
	High Channel 11, 2462 MHz	5.453 ms	6.261 ms	1	87.1	N/A	N/A
	High Channel 11, 2462 MHz	N/A	N/A	5	N/A	N/A	N/A
	HE20, MCS11						
	Low Channel 1, 2412 MHz	5.453 ms	6.251 ms	1	87.2	N/A	N/A
	Low Channel 1, 2412 MHz	N/A	N/A	5	N/A	N/A	N/A
	Mid Channel 6, 2437 MHz	5.453 ms	6.251 ms	1	87.2	N/A	N/A
	Mid Channel 6, 2437 MHz	N/A	N/A	5	N/A	N/A	N/A
	High Channel 11, 2462 MHz	5.453 ms	6.251 ms	1	87.2	N/A	N/A
	High Channel 11, 2462 MHz	N/A	N/A	5	N/A	N/A	N/A

DUTY CYCLE - MIMO

MIMO - Chain 0, HT20, MCS8, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.429 ms	6.246 ms	1	86.9	N/A	N/A

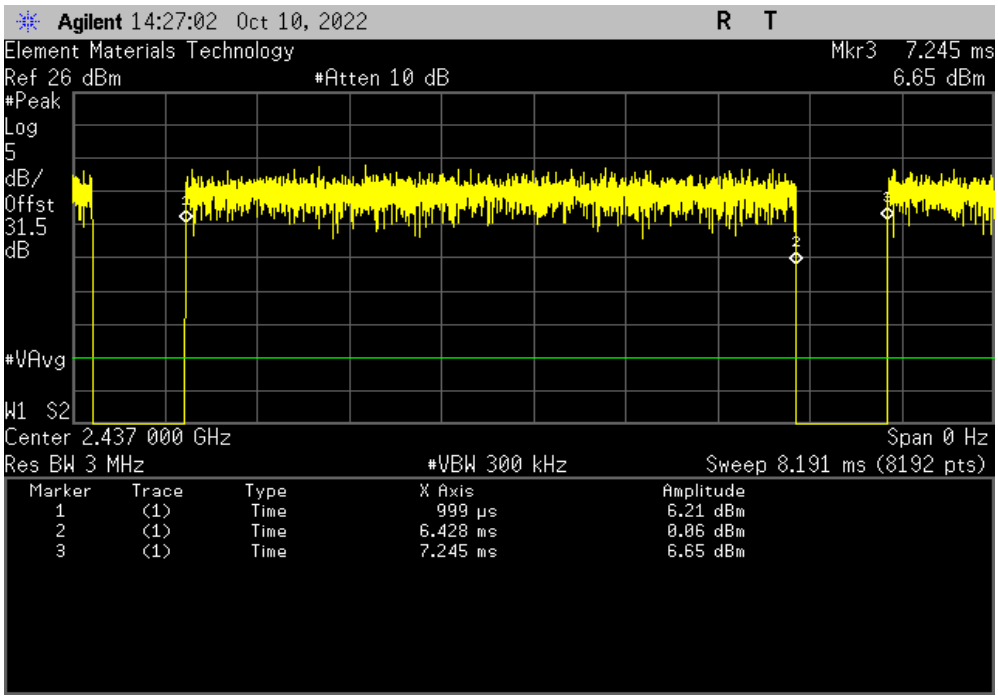


MIMO - Chain 0, HT20, MCS8, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

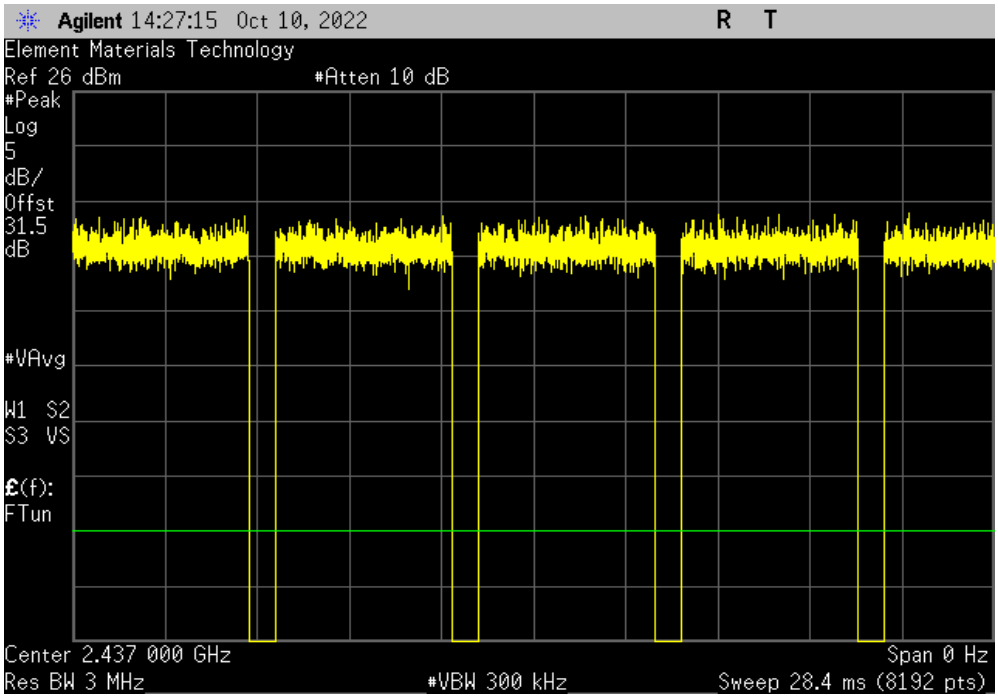


DUTY CYCLE - MIMO

MIMO - Chain 0, HT20, MCS8, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.429 ms	6.246 ms	1	86.9	N/A	N/A

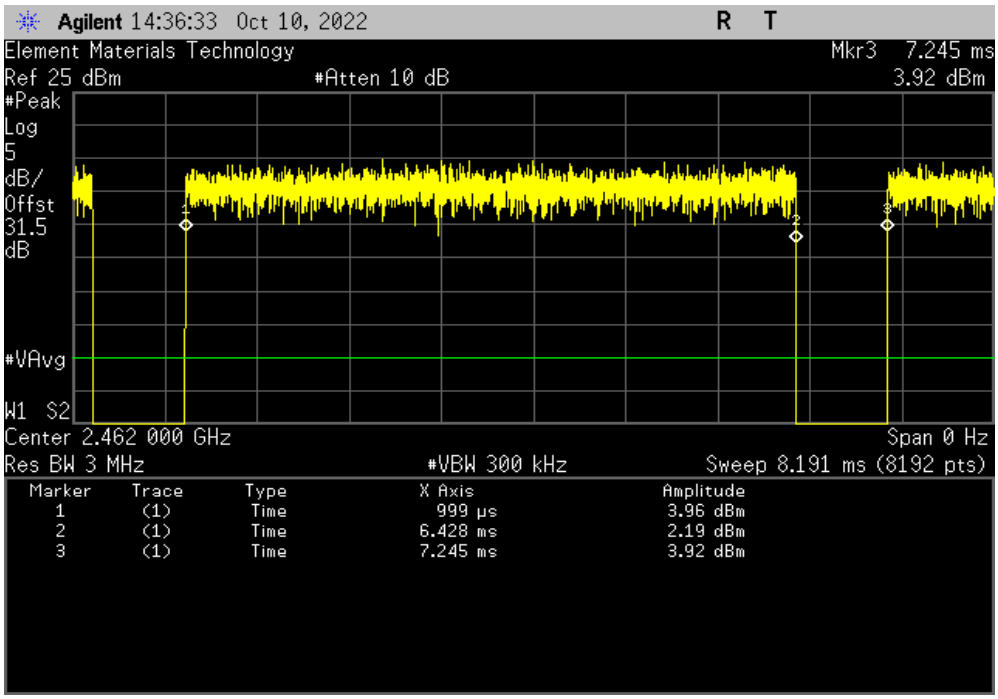


MIMO - Chain 0, HT20, MCS8, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

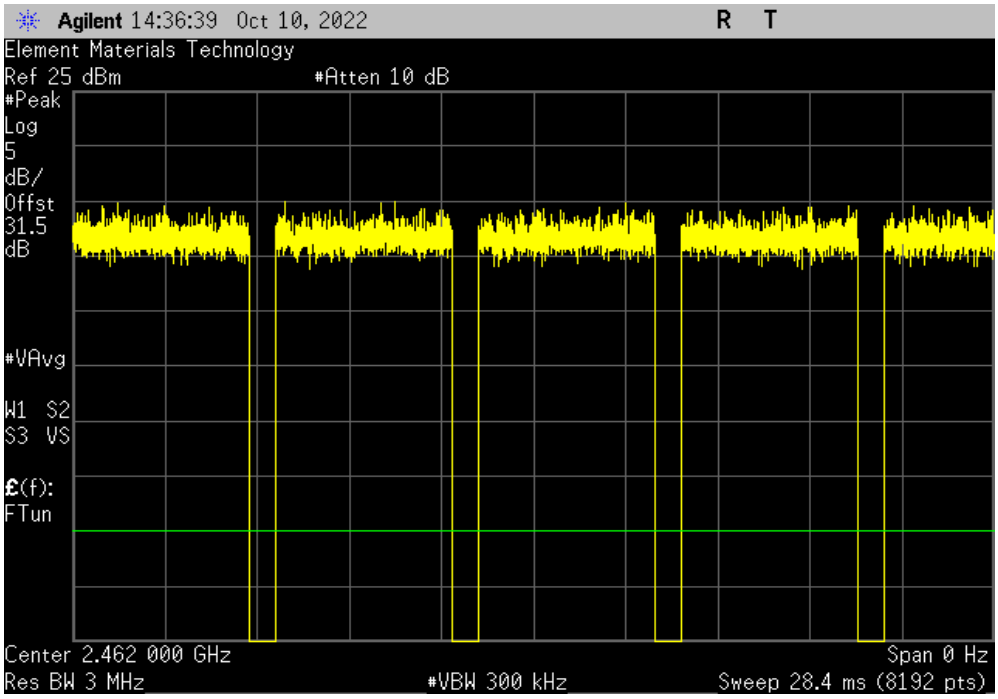


DUTY CYCLE - MIMO

MIMO - Chain 0, HT20, MCS8, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.429 ms	6.246 ms	1	86.9	N/A	N/A

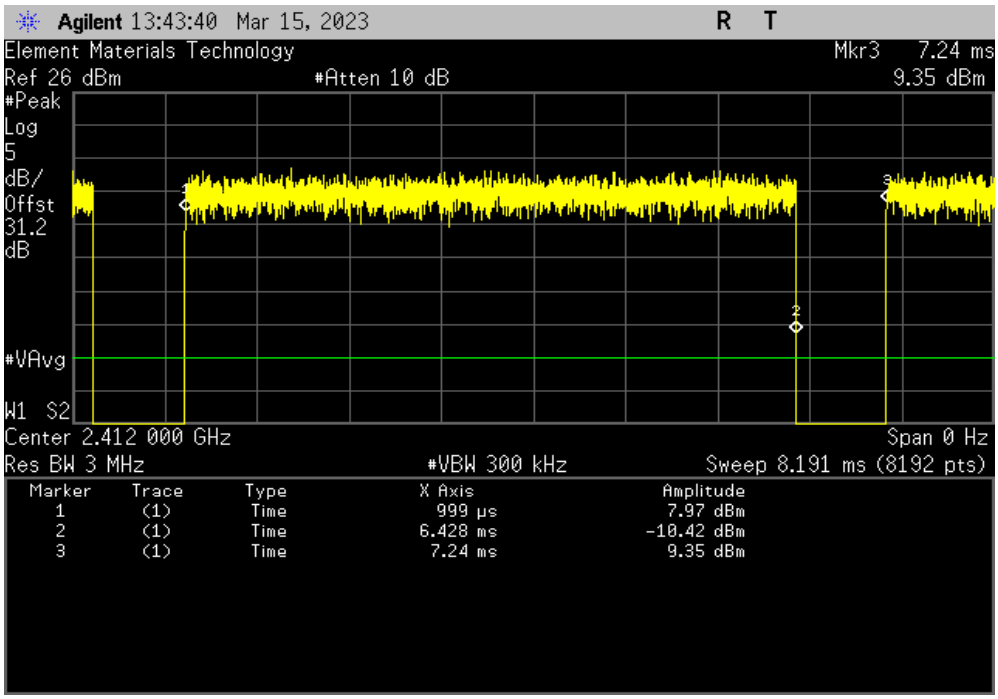


MIMO - Chain 0, HT20, MCS8, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

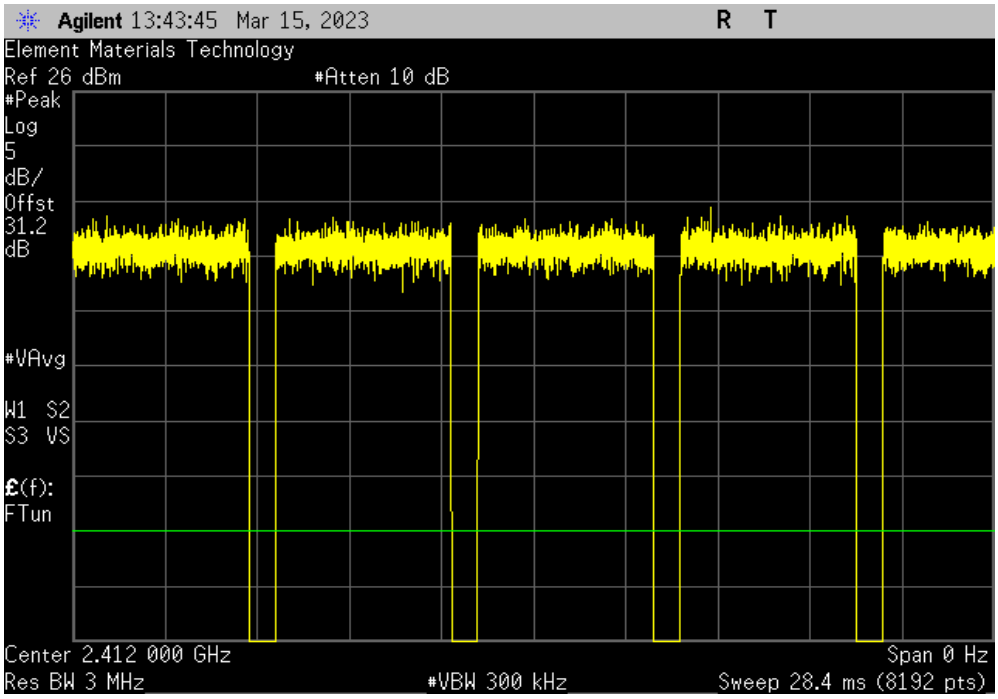


DUTY CYCLE - MIMO

MIMO - Chain 0, HT20, MCS15, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.429 ms	6.241 ms	1	87	N/A	N/A

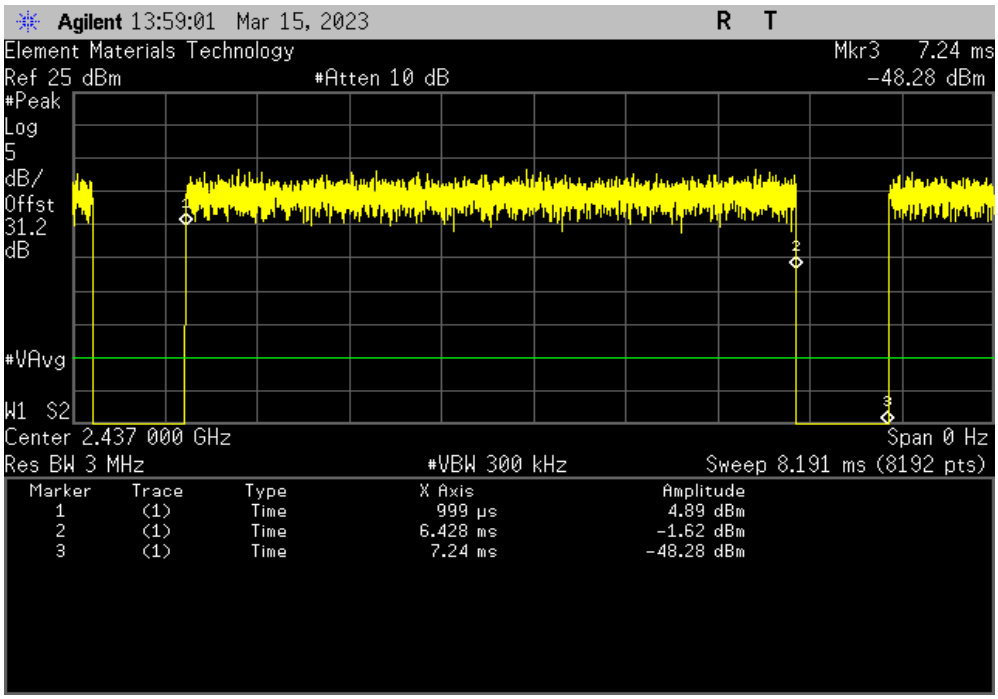


MIMO - Chain 0, HT20, MCS15, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

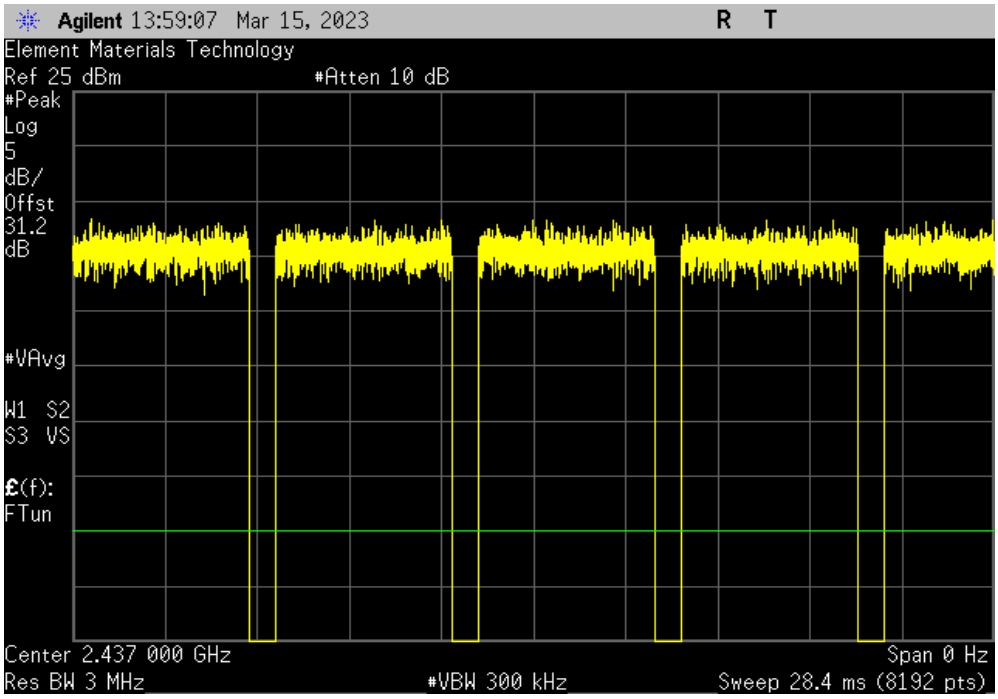


DUTY CYCLE - MIMO

MIMO - Chain 0, HT20, MCS15, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.429 ms	6.241 ms	1	87	N/A	N/A

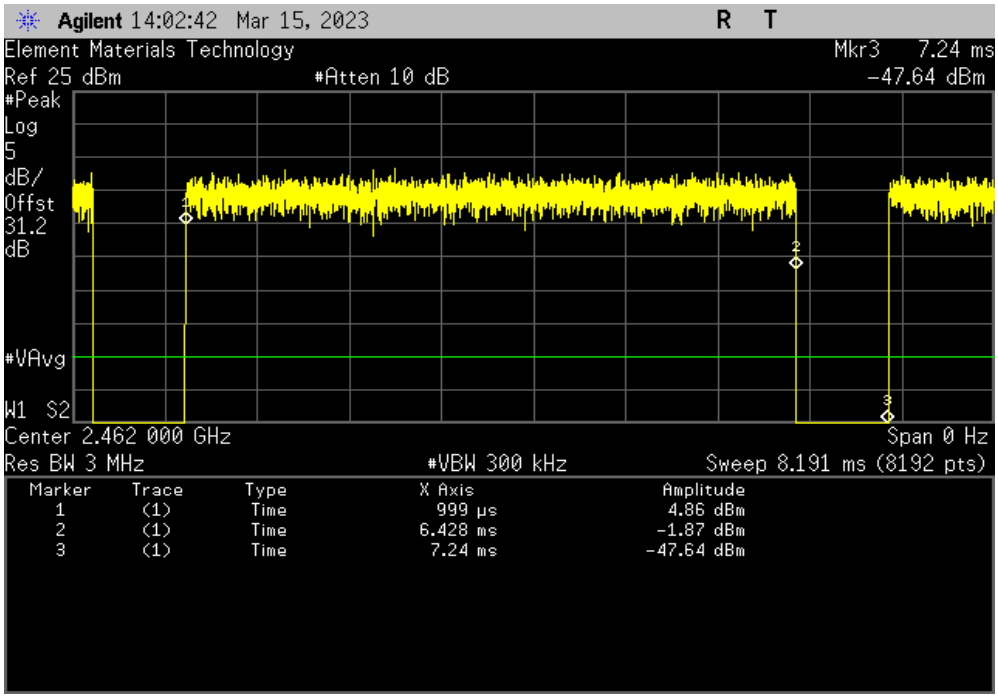


MIMO - Chain 0, HT20, MCS15, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

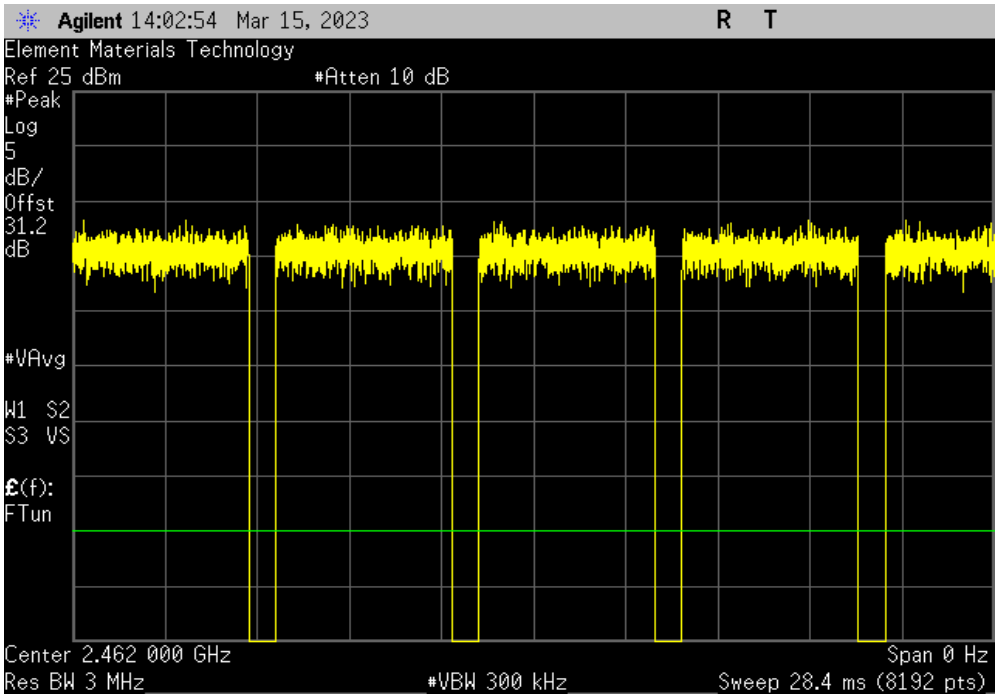


DUTY CYCLE - MIMO

MIMO - Chain 0, HT20, MCS15, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.429 ms	6.241 ms	1	87	N/A	N/A

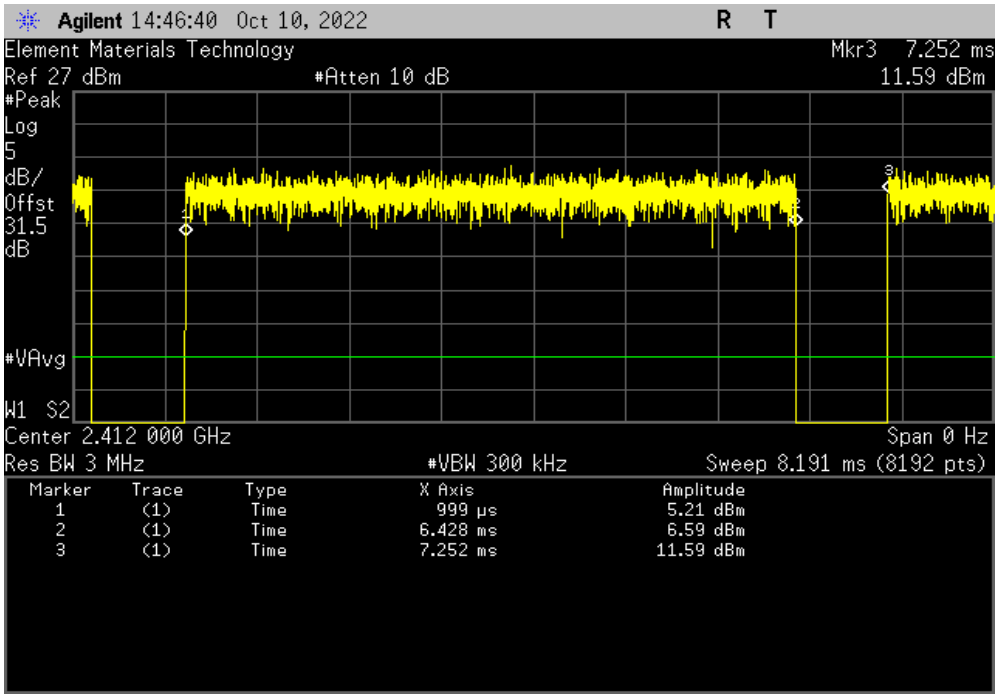


MIMO - Chain 0, HT20, MCS15, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

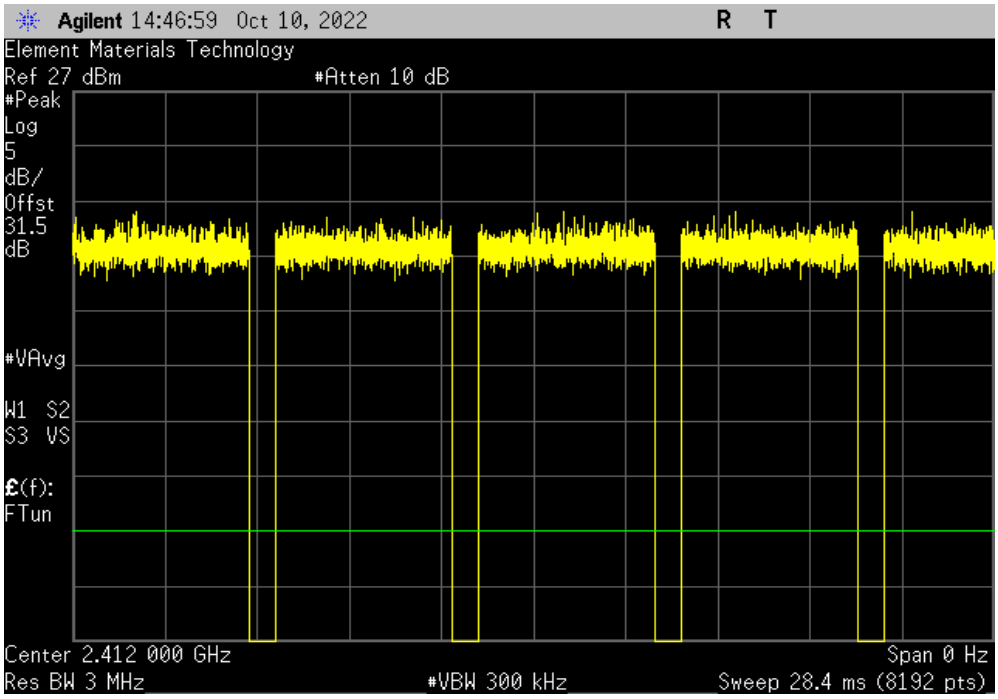


DUTY CYCLE - MIMO

MIMO - Chain 0, VHT20, MCS0, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.429 ms	6.253 ms	1	86.8	N/A	N/A

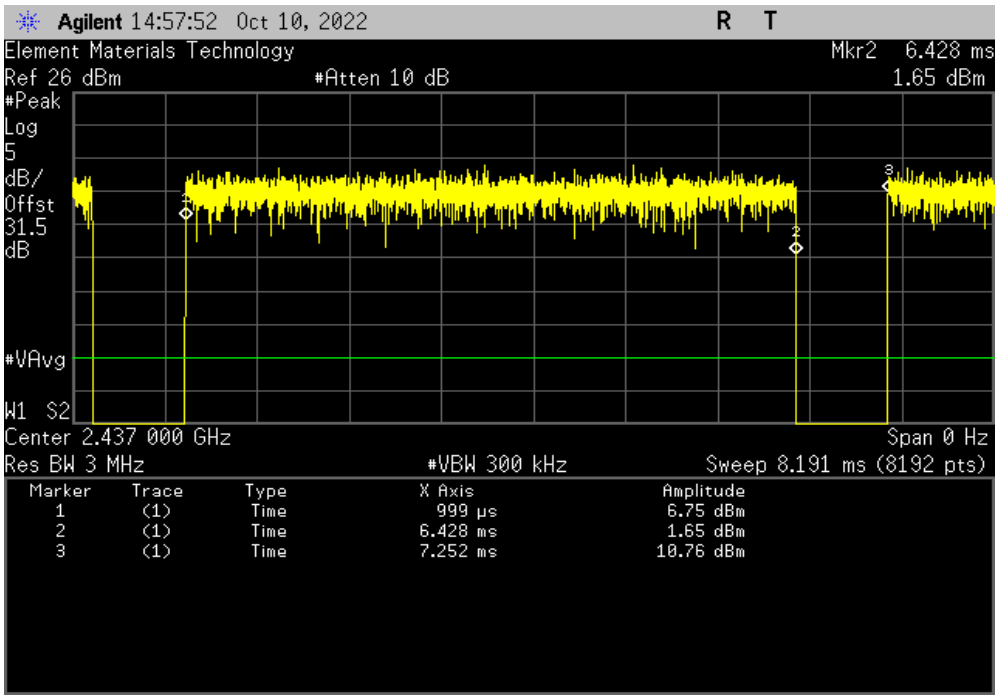


MIMO - Chain 0, VHT20, MCS0, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

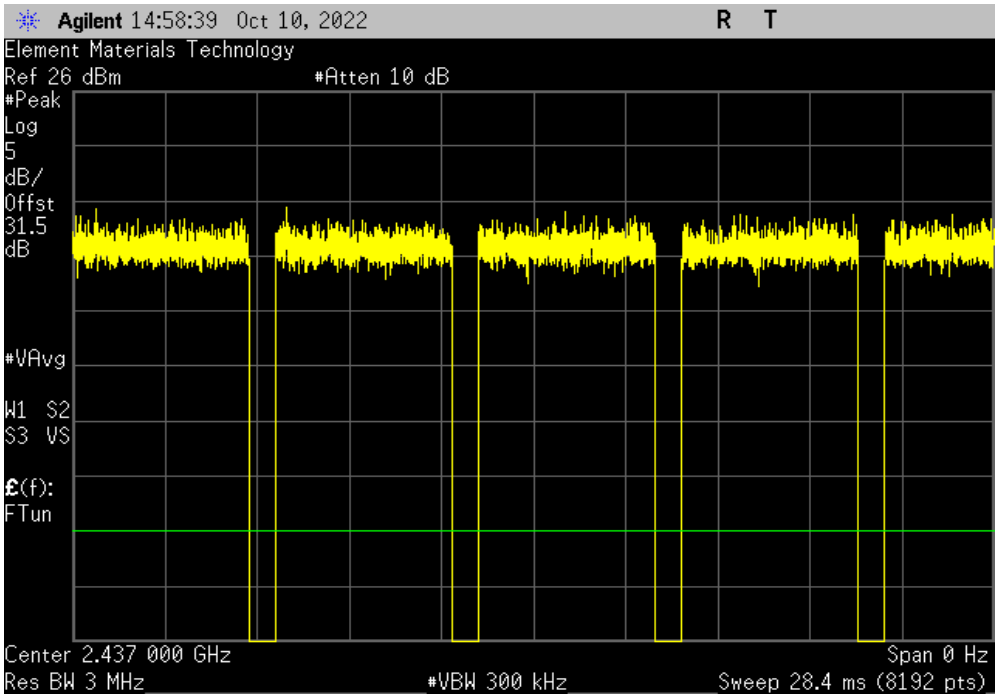


DUTY CYCLE - MIMO

MIMO - Chain 0, VHT20, MCS0, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.429 ms	6.253 ms	1	86.8	N/A	N/A

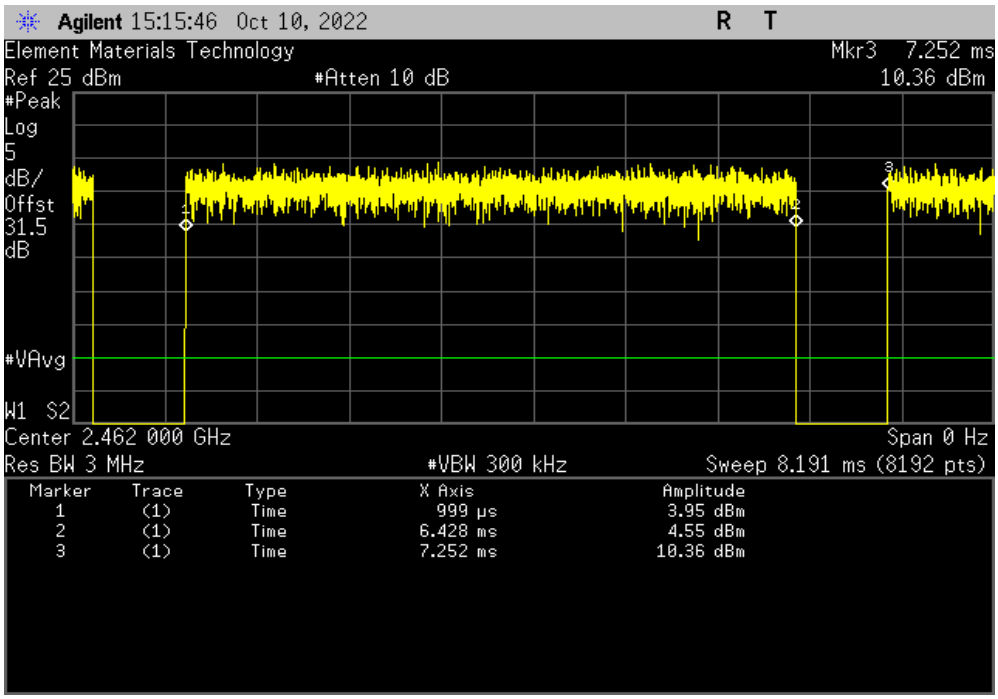


MIMO - Chain 0, VHT20, MCS0, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

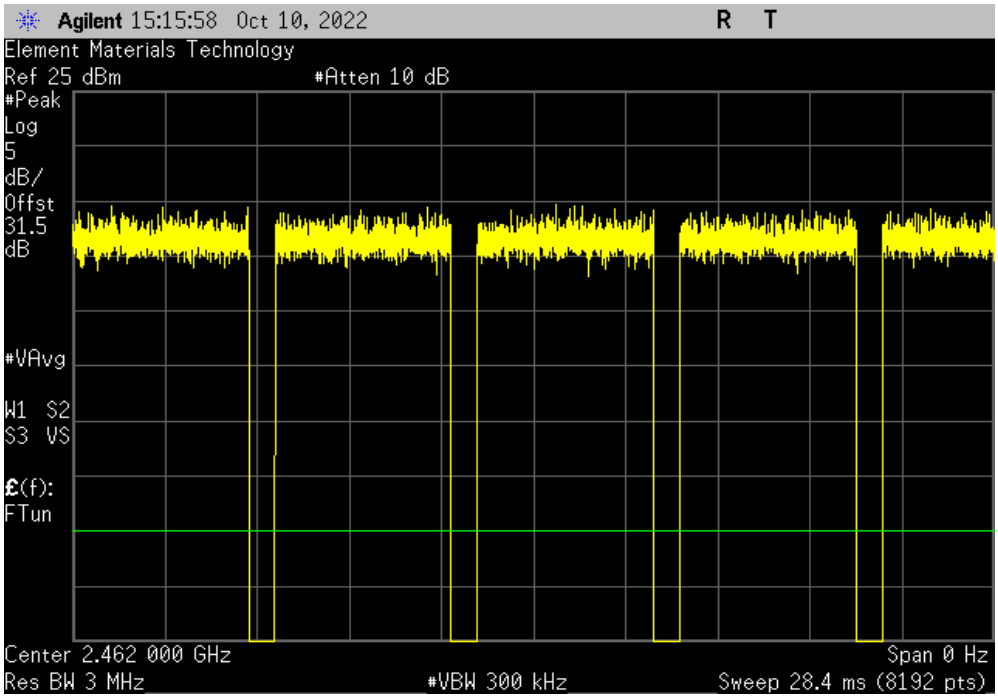


DUTY CYCLE - MIMO

MIMO - Chain 0, VHT20, MCS0, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.429 ms	6.253 ms	1	86.8	N/A	N/A

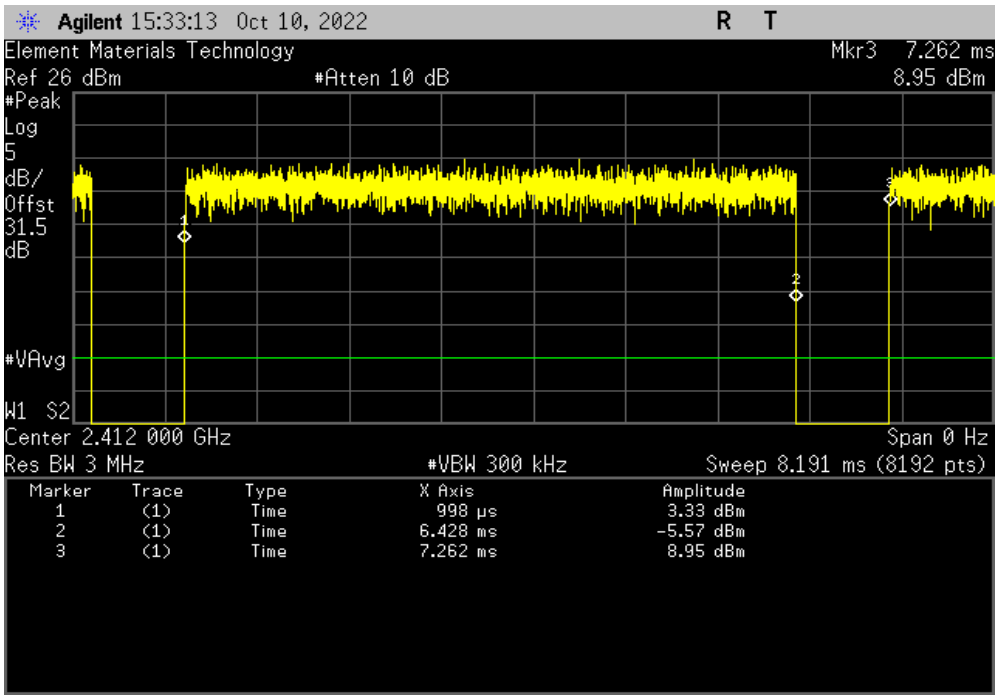


MIMO - Chain 0, VHT20, MCS0, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

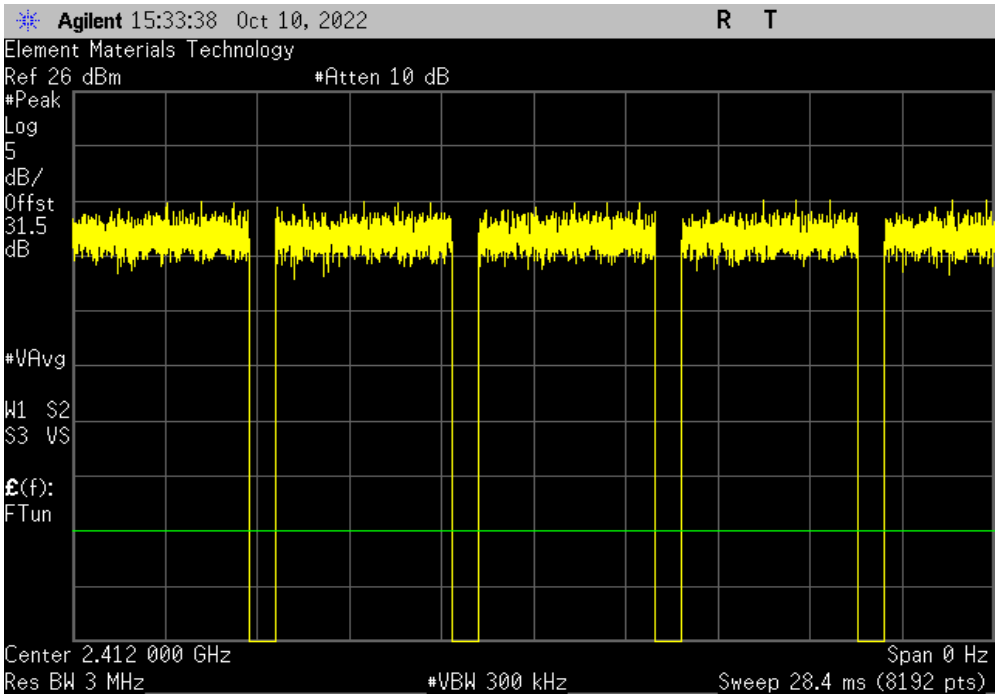


DUTY CYCLE - MIMO

MIMO - Chain 0, VHT20, MCS8, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.43 ms	6.264 ms	1	86.7	N/A	N/A

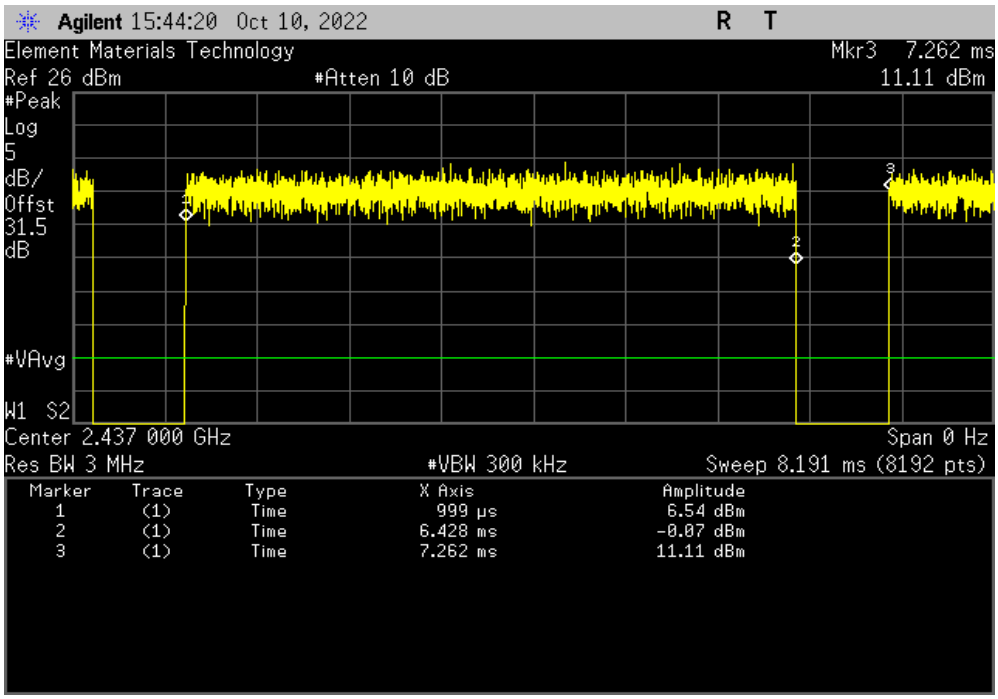


MIMO - Chain 0, VHT20, MCS8, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

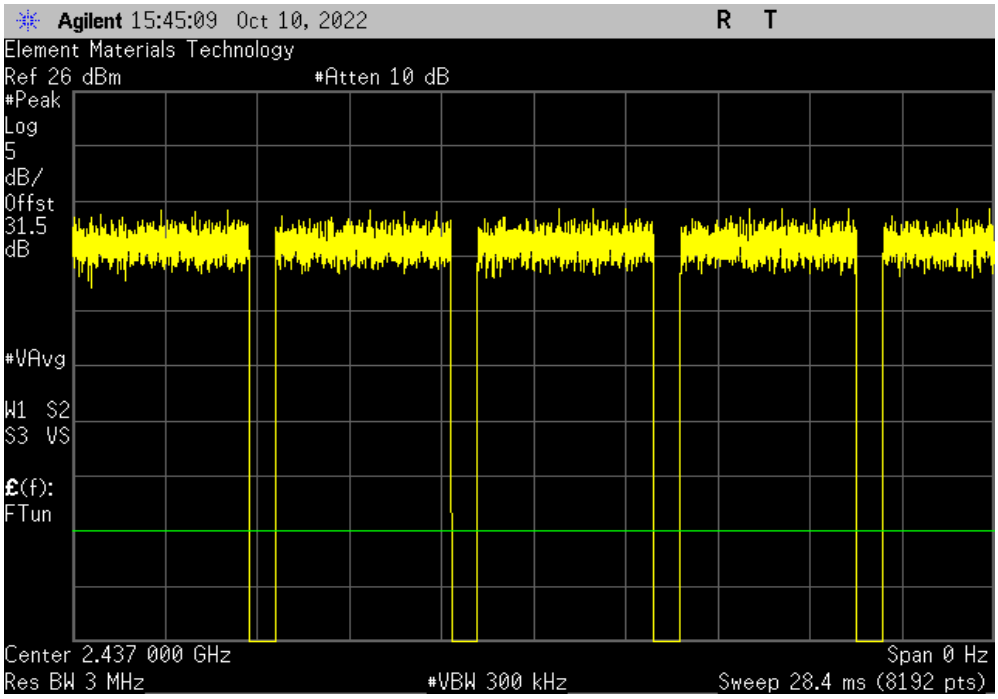


DUTY CYCLE - MIMO

MIMO - Chain 0, VHT20, MCS8, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.429 ms	6.263 ms	1	86.7	N/A	N/A

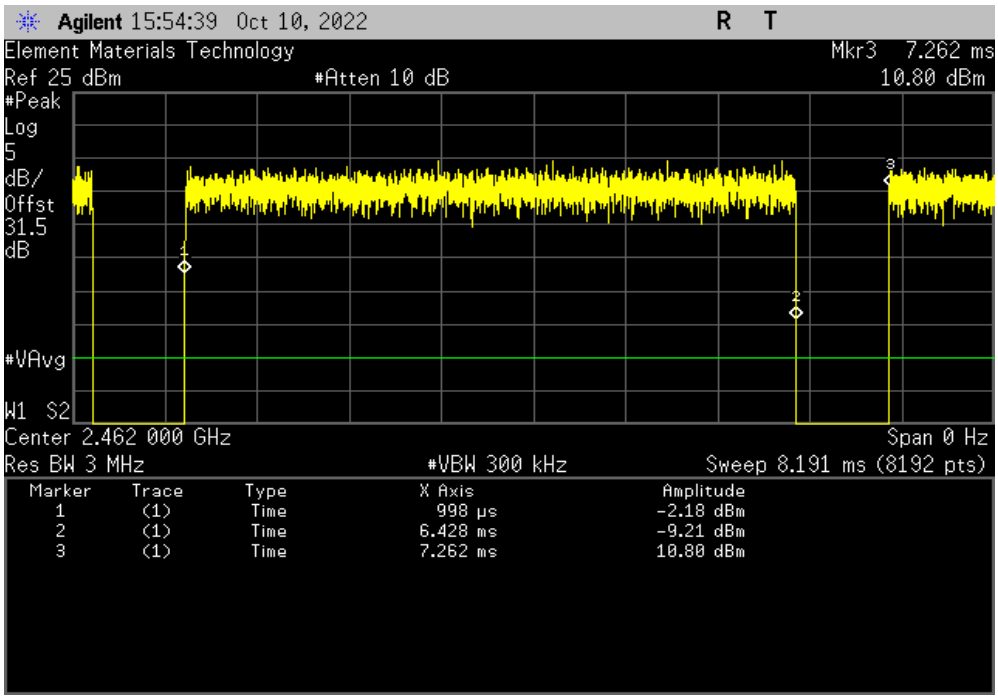


MIMO - Chain 0, VHT20, MCS8, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

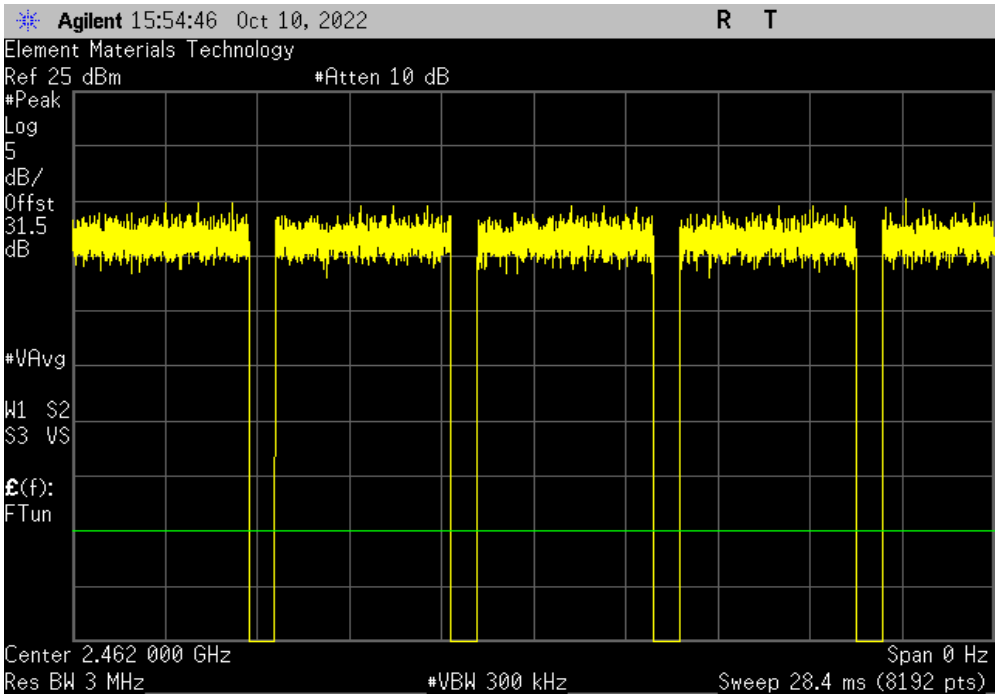


DUTY CYCLE - MIMO

MIMO - Chain 0, VHT20, MCS8, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.43 ms	6.264 ms	1	86.7	N/A	N/A

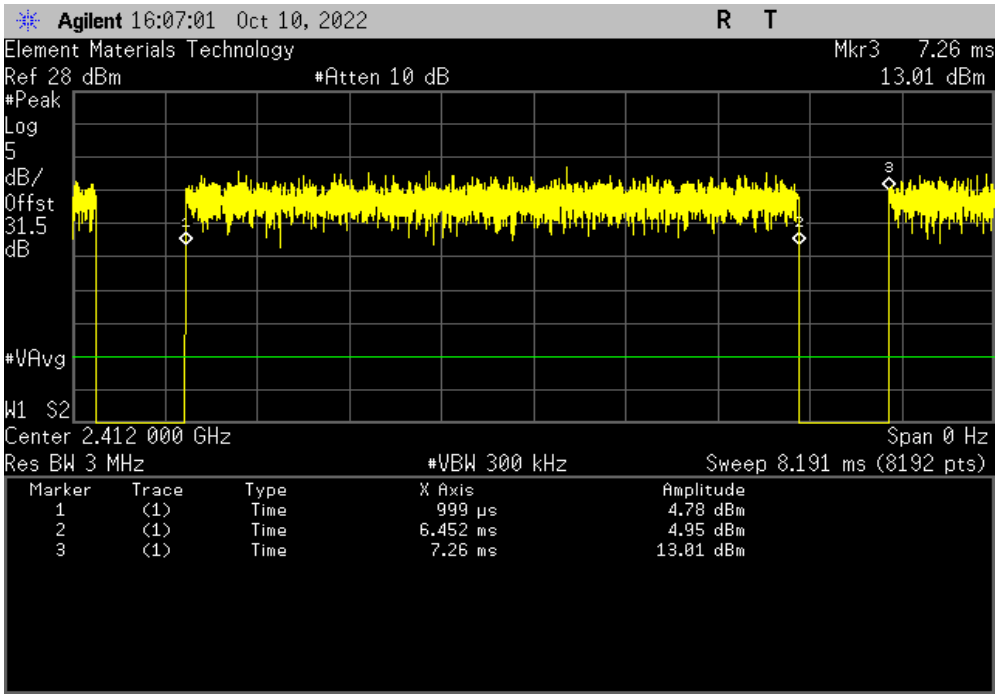


MIMO - Chain 0, VHT20, MCS8, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

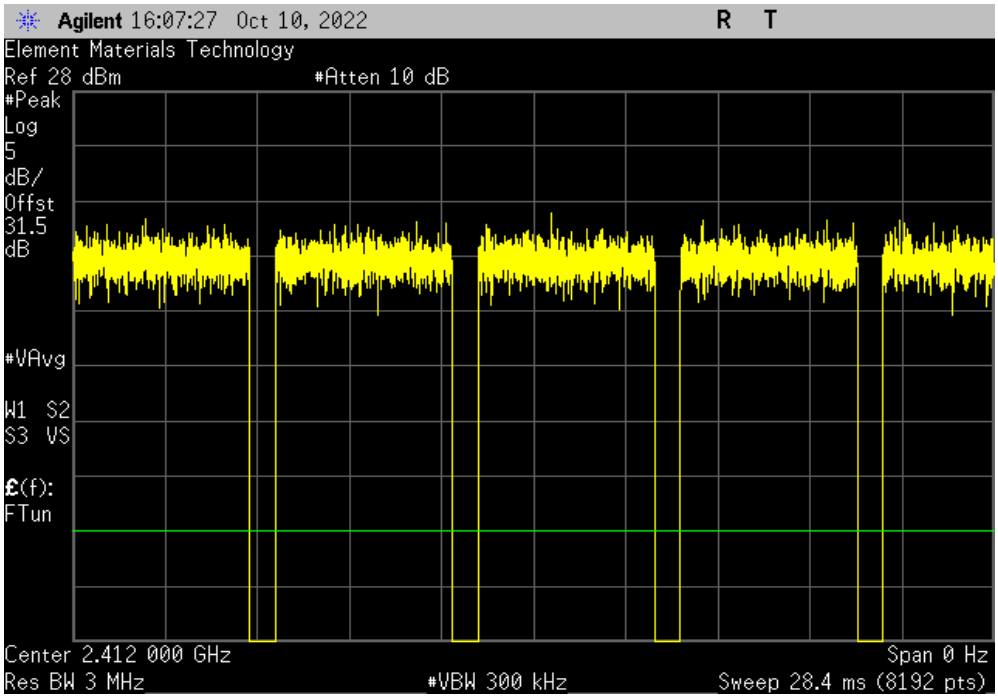


DUTY CYCLE - MIMO

MIMO - Chain 0, HE20, MCS0, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.453 ms	6.261 ms	1	87.1	N/A	N/A

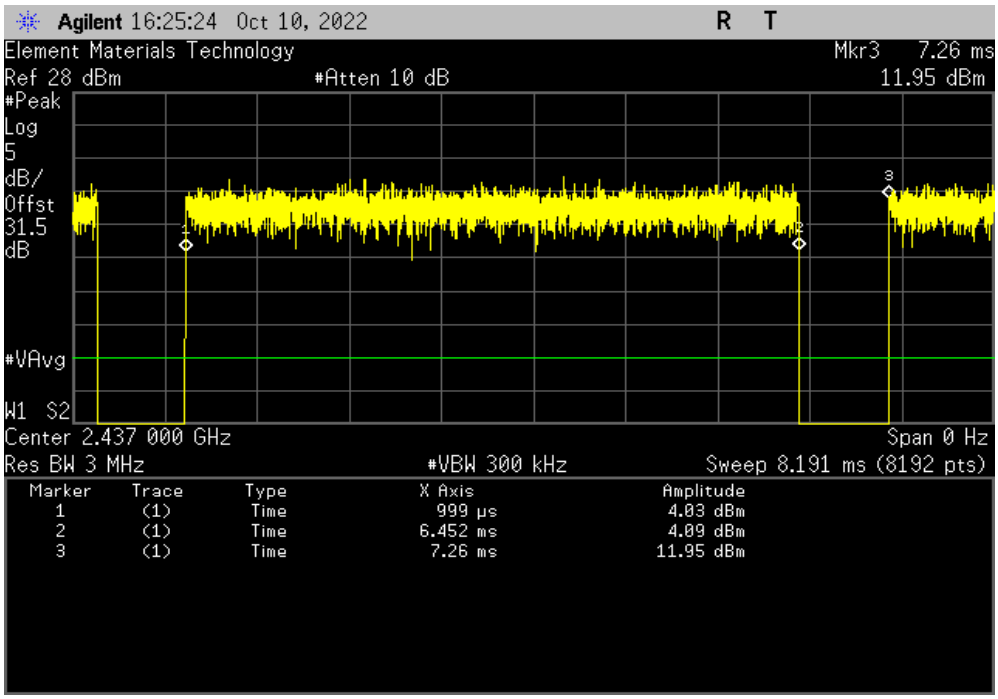


MIMO - Chain 0, HE20, MCS0, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

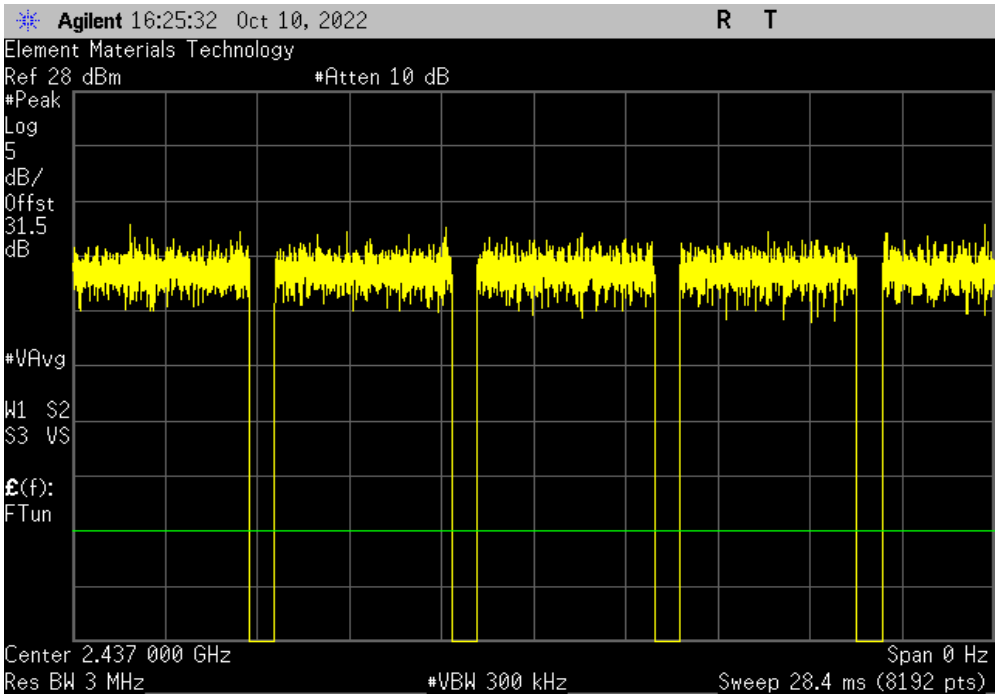


DUTY CYCLE - MIMO

MIMO - Chain 0, HE20, MCS0, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.453 ms	6.261 ms	1	87.1	N/A	N/A

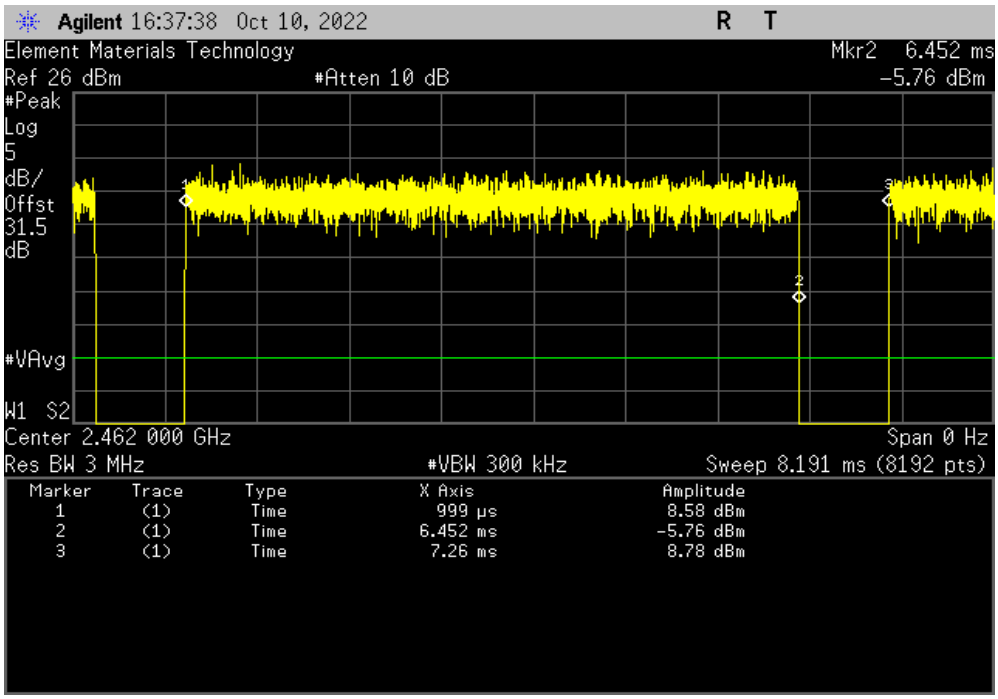


MIMO - Chain 0, HE20, MCS0, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

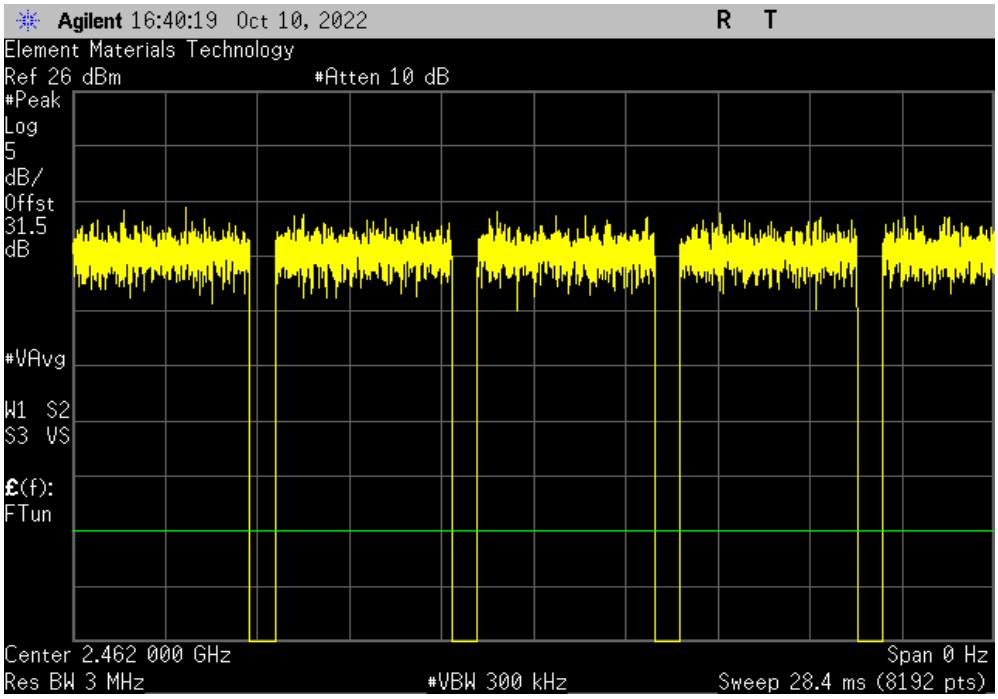


DUTY CYCLE - MIMO

MIMO - Chain 0, HE20, MCS0, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.453 ms	6.261 ms	1	87.1	N/A	N/A

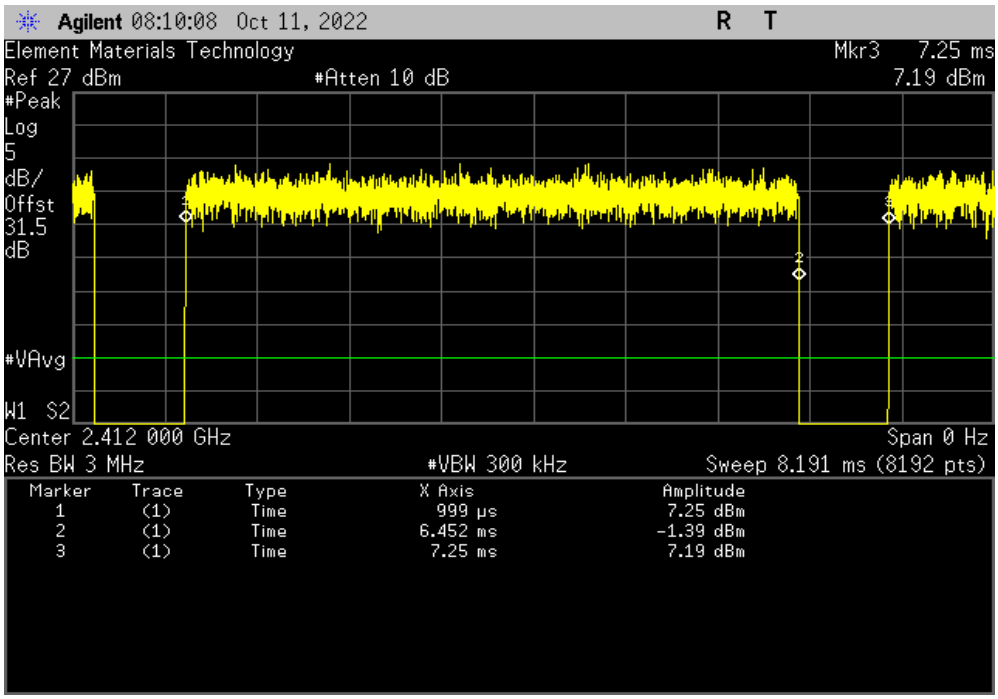


MIMO - Chain 0, HE20, MCS0, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

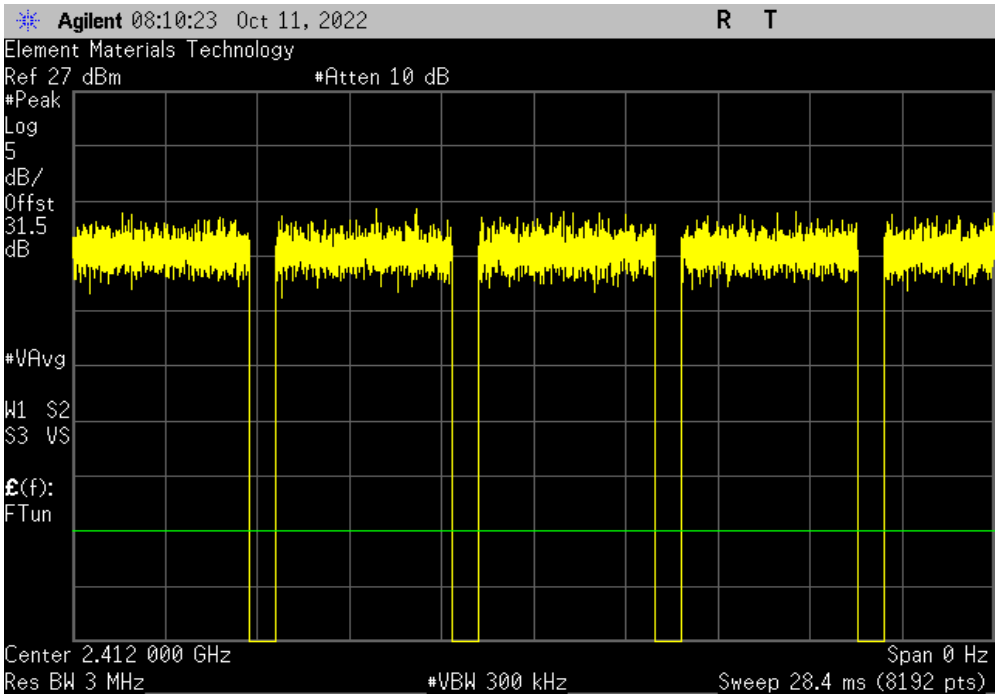


DUTY CYCLE - MIMO

MIMO - Chain 0, HE20, MCS11, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.453 ms	6.251 ms	1	87.2	N/A	N/A

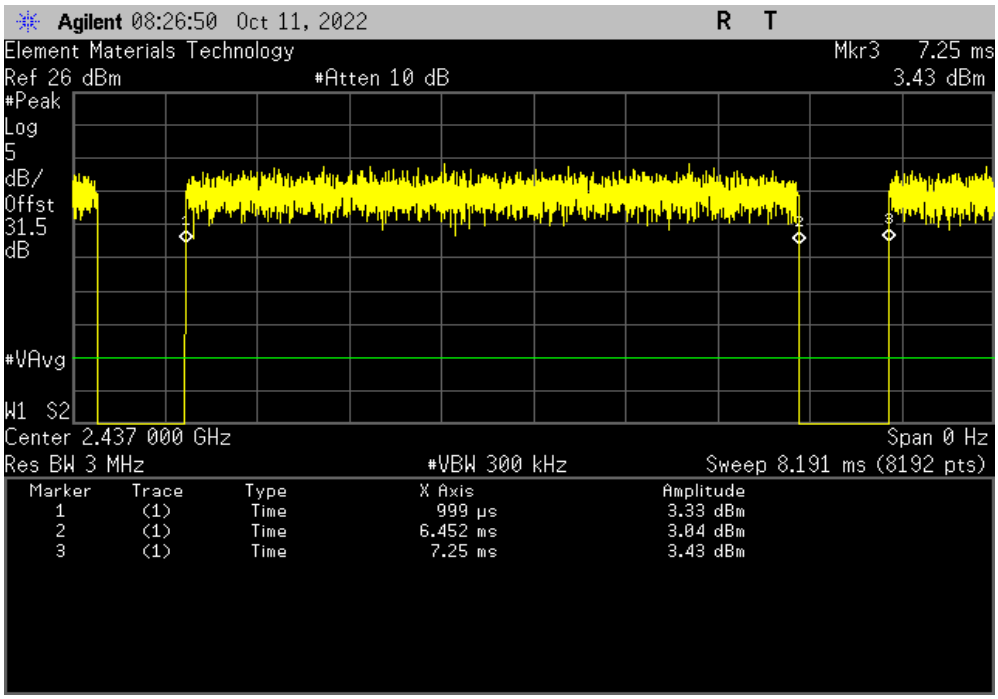


MIMO - Chain 0, HE20, MCS11, Low Channel 1, 2412 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

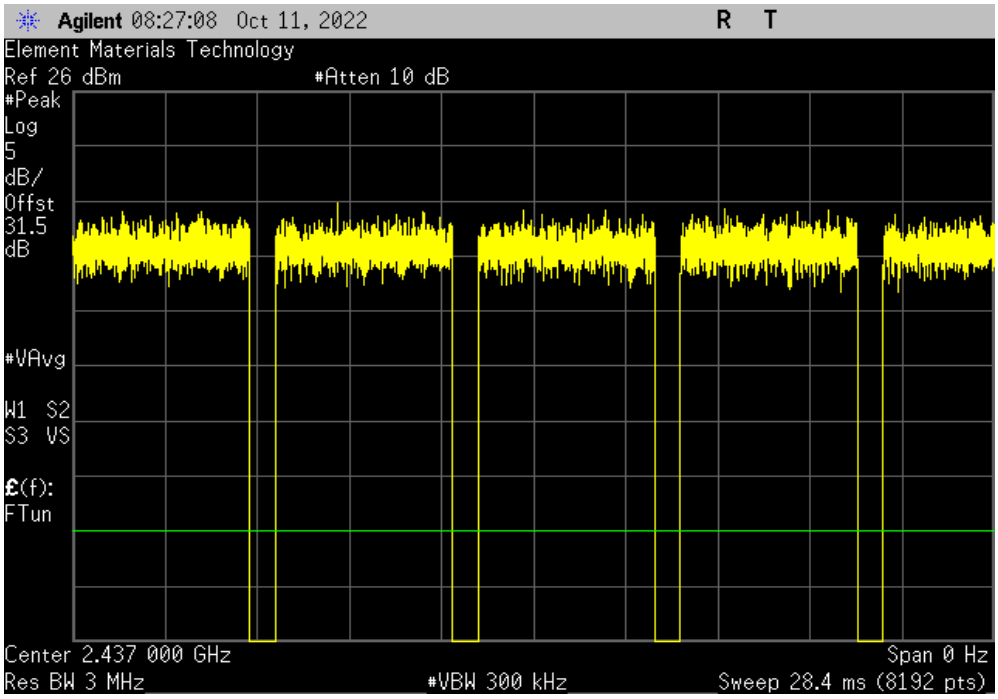


DUTY CYCLE - MIMO

MIMO - Chain 0, HE20, MCS11, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.453 ms	6.251 ms	1	87.2	N/A	N/A

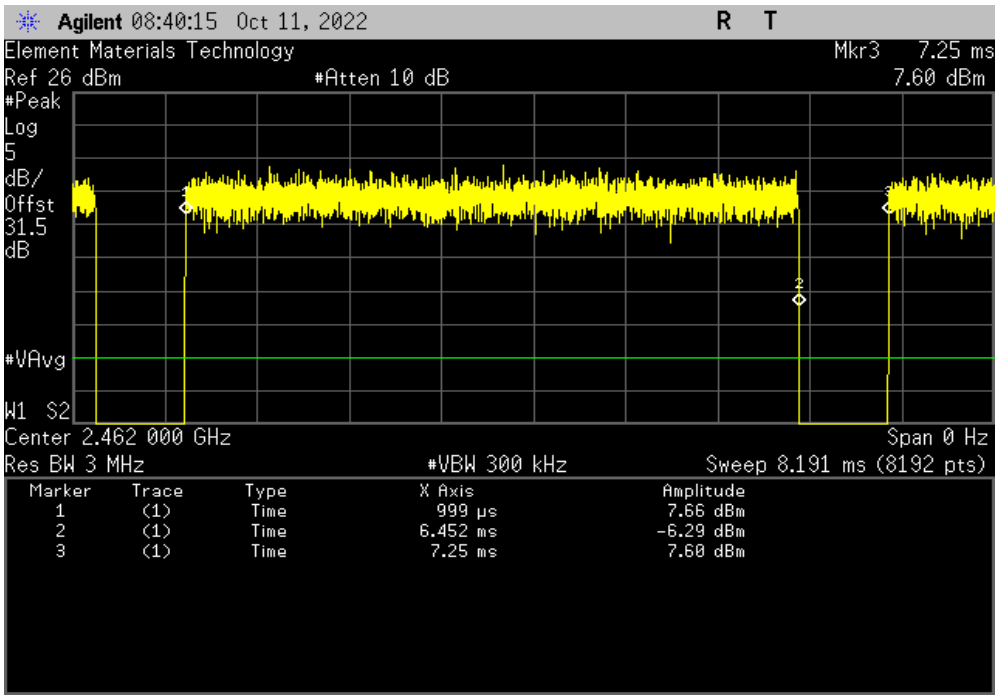


MIMO - Chain 0, HE20, MCS11, Mid Channel 6, 2437 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	N/A	N/A	5	N/A	N/A	N/A

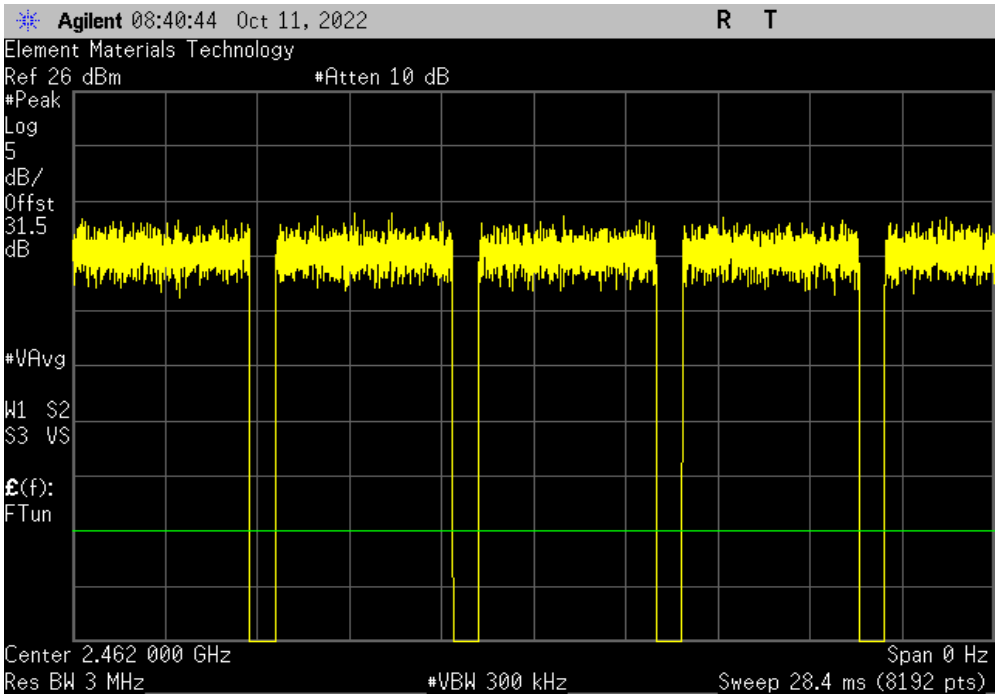


DUTY CYCLE - MIMO

MIMO - Chain 0, HE20, MCS11, High Channel 11, 2462 MHz						
	Pulse Width	Period	Number of Pulses	Value (%)	Limit (%)	Results
	5.453 ms	6.251 ms	1	87.2	N/A	N/A



MIMO - Chain 0, HE20, MCS11, 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



DTS BANDWIDTH - CHAIN 0

XMit 2022.02.07.0

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Generator - Signal	Keysight	N5182B	TFU	2020-11-20	2022-11-20
Cable	Micro-Coax	UFD150A-1-0720-200200	EVI	2021-12-05	2022-12-05
Attenuator	S.M. Electronics	SA26B-10	AWR	2022-07-05	2023-07-05
Attenuator	S.M. Electronics	SA26B-20	AUY	2022-03-15	2023-03-15
Block - DC	Fairview Microwave	SD3379	AMW	2022-03-14	2023-03-14
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAW	2022-01-26	2023-01-26

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 DTS bandwidth was measured using 100 kHz resolution bandwidth and 300 kHz video bandwidth. The span of the analyzer shall be set to capture all products of the modulation process, including the emission skirts.

DTS BANDWIDTH - CHAIN 0

TbtTx 2022.06.03.0 XMit 2022.02.07.0

EUT:	**U8 Hawk**			**Work Order:**	**KYME0068**
Serial Number:	**192F-85E2-1761**			**Date:**	**6-Oct-22**
Customer:	**Kymeta Corp.**			**Temperature:**	**21.8 °C**
Attendees:	**Dean Busch**			**Humidity:**	**44.2% RH**
Project:	**None**			**Barometric Pres.:**	**1025 mbar**
Tested by:	**Jeff Alcoke**	**Power:**	**12 VDC**	**Job Site:**	**EV06**

TEST SPECIFICATIONS	**Test Method**
FCC 15.247:2022	ANSI C63.10:2013
RSS-247 Issue 2:2017	ANSI C63.10:2013

COMMENTS

Reference level offset includes: DC Block, 30 dB attenuation, and measurement cable.

DEVIATIONS FROM TEST STANDARD

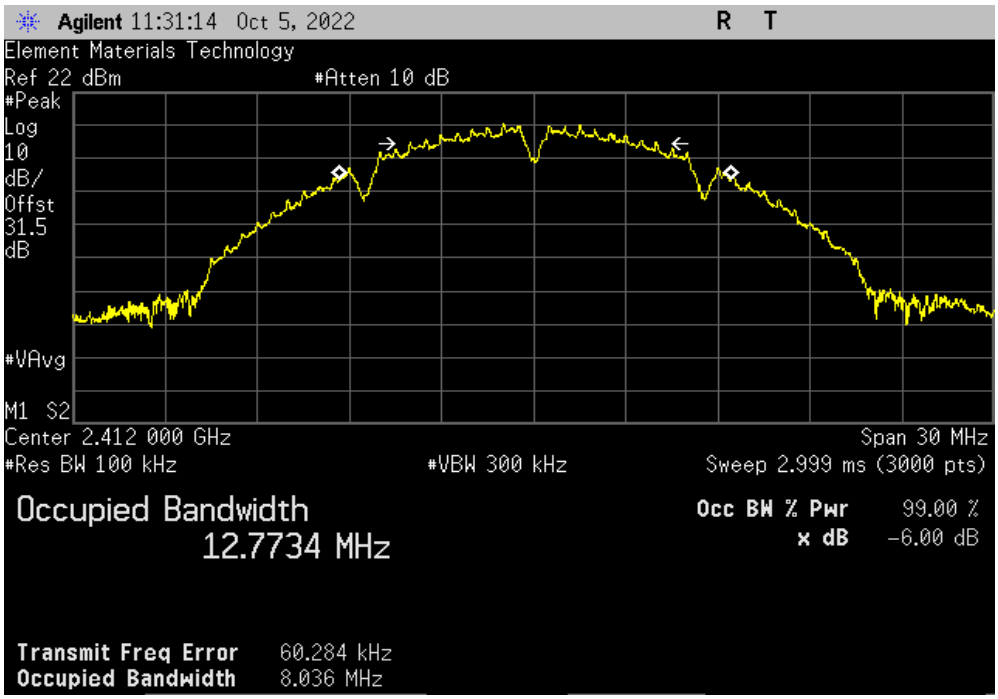
None

Configuration #	**1**	*Signature*

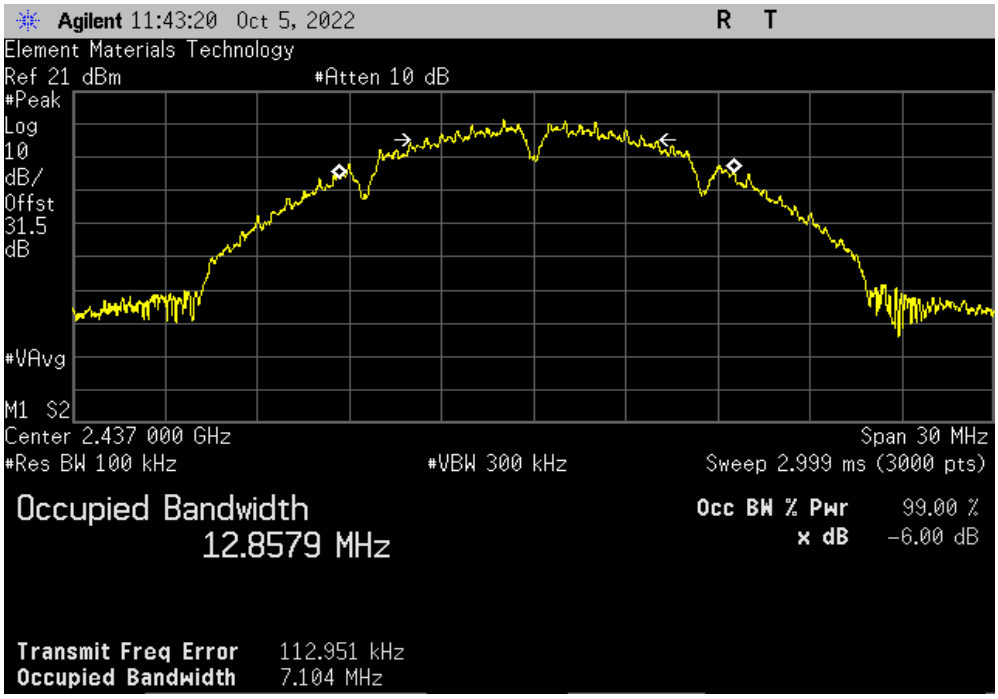
		Value	**Limit (>)**	**Result**
Chain 0				
	CCK, 1 Mbps			
	Low Channel 1, 2412 MHz	8.036 MHz	500 kHz	Pass
	Mid Channel 6, 2437 MHz	7.104 MHz	500 kHz	Pass
	High Channel 11, 2462 MHz	8.529 MHz	500 kHz	Pass
	CCK, 11 Mbps			
	Low Channel 1, 2412 MHz	7.557 MHz	500 kHz	Pass
	Mid Channel 6, 2437 MHz	7.573 MHz	500 kHz	Pass
	High Channel 11, 2462 MHz	8.136 MHz	500 kHz	Pass
	Legacy OFDM, 6 Mbps			
	Low Channel 1, 2412 MHz	15.748 MHz	500 kHz	Pass
	Mid Channel 6, 2437 MHz	15.464 MHz	500 kHz	Pass
	High Channel 11, 2462 MHz	15.938 MHz	500 kHz	Pass
	Legacy OFDM, 36 Mbps			
	Low Channel 1, 2412 MHz	16.427 MHz	500 kHz	Pass
	Mid Channel 6, 2437 MHz	16.451 MHz	500 kHz	Pass
	High Channel 11, 2462 MHz	16.438 MHz	500 kHz	Pass
	Legacy OFDM, 54 Mbps			
	Low Channel 1, 2412 MHz	16.462 MHz	500 kHz	Pass
	Mid Channel 6, 2437 MHz	16.463 MHz	500 kHz	Pass
	High Channel 11, 2462 MHz	16.5 MHz	500 kHz	Pass
	HT20, MCS0			
	Low Channel 1, 2412 MHz	16.984 MHz	500 kHz	Pass
	Mid Channel 6, 2437 MHz	16.17 MHz	500 kHz	Pass
	High Channel 11, 2462 MHz	16.281 MHz	500 kHz	Pass
	HT20, MCS7			
	Low Channel 1, 2412 MHz	17.715 MHz	500 kHz	Pass
	Mid Channel 6, 2437 MHz	17.702 MHz	500 kHz	Pass
	High Channel 11, 2462 MHz	17.755 MHz	500 kHz	Pass
	VHT20, MCS0			
	Low Channel 1, 2412 MHz	16.67 MHz	500 kHz	Pass
	Mid Channel 6, 2437 MHz	16.348 MHz	500 kHz	Pass
	High Channel 11, 2462 MHz	16.857 MHz	500 kHz	Pass
	VHT20, MCS8			
	Low Channel 1, 2412 MHz	17.742 MHz	500 kHz	Pass
	Mid Channel 6, 2437 MHz	17.736 MHz	500 kHz	Pass
	High Channel 11, 2462 MHz	17.791 MHz	500 kHz	Pass
	HE20, MCS0			
	Low Channel 1, 2412 MHz	17.74 MHz	500 kHz	Pass
	Mid Channel 6, 2437 MHz	15.849 MHz	500 kHz	Pass
	High Channel 11, 2462 MHz	17.167 MHz	500 kHz	Pass
	HE20, MCS11			
	Low Channel 1, 2412 MHz	19.065 MHz	500 kHz	Pass
	Mid Channel 6, 2437 MHz	19.023 MHz	500 kHz	Pass
	High Channel 11, 2462 MHz	19.101 MHz	500 kHz	Pass

DTS BANDWIDTH - CHAIN 0

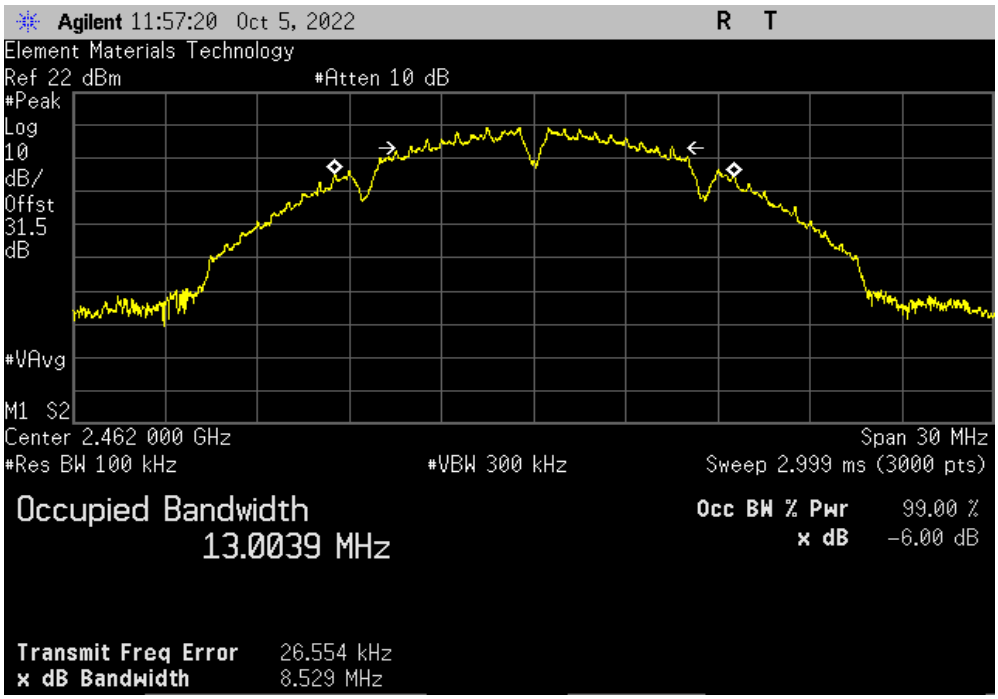
Chain 0, CCK, 1 Mbps, Low Channel 1, 2412 MHz						
				Value	Limit (>)	Result
				8.036 MHz	500 kHz	Pass



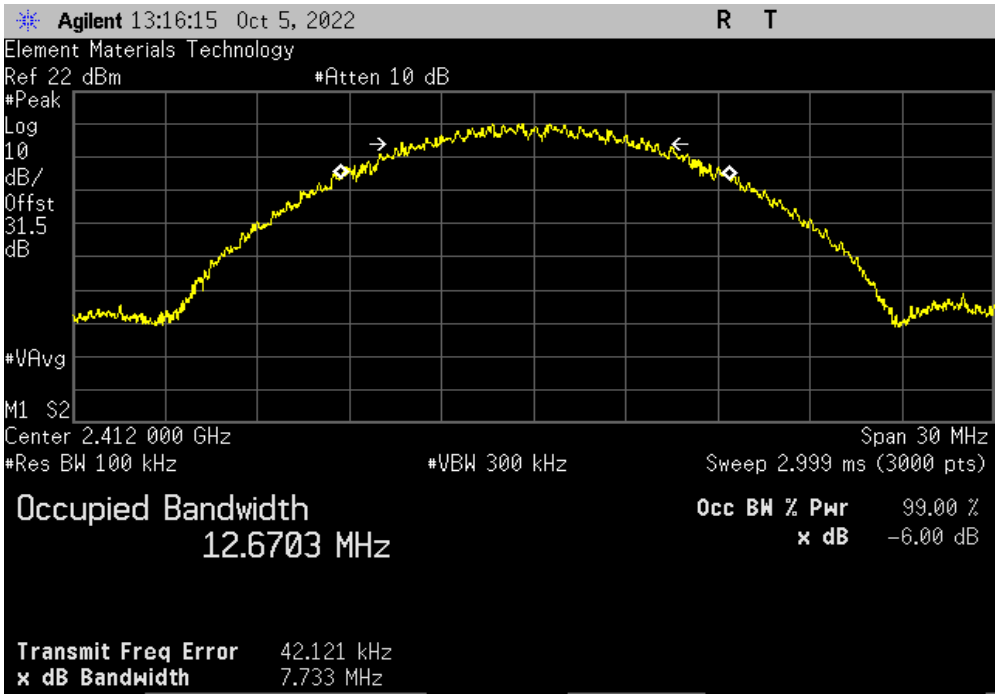
Chain 0, CCK, 1 Mbps, Mid Channel 6, 2437 MHz						
				Value	Limit (>)	Result
				7.104 MHz	500 kHz	Pass



Chain 0, CCK, 1 Mbps, High Channel 11, 2462 MHz						
				Value	Limit (>)	Result
				8.529 MHz	500 kHz	Pass

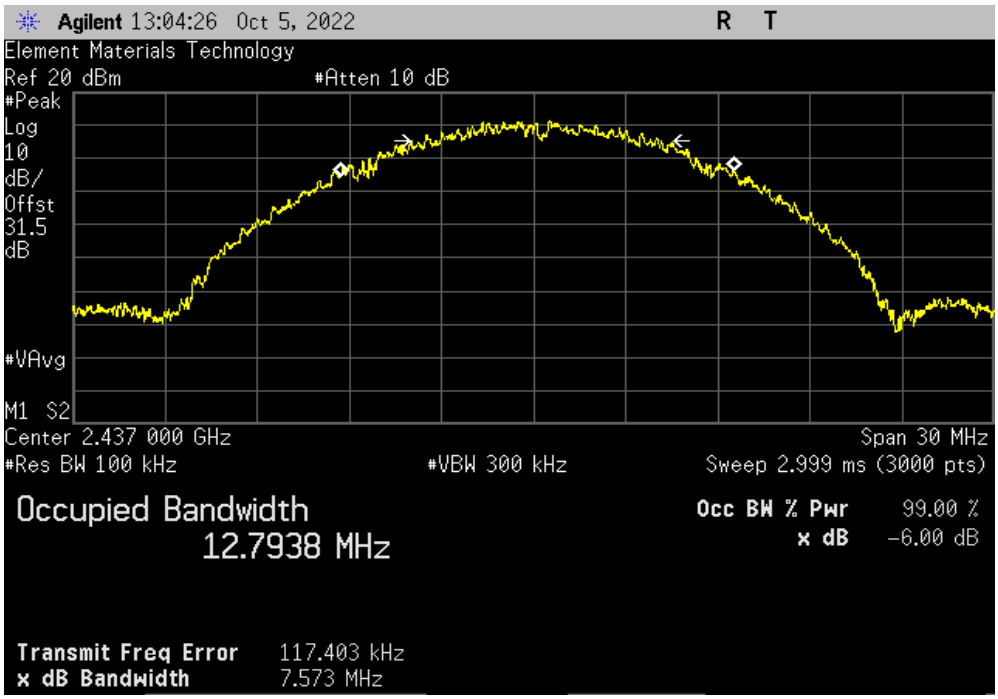


Chain 0, CCK, 11 Mbps, Low Channel 1, 2412 MHz						
				Value	Limit (>)	Result
				7.557 MHz	500 kHz	Pass

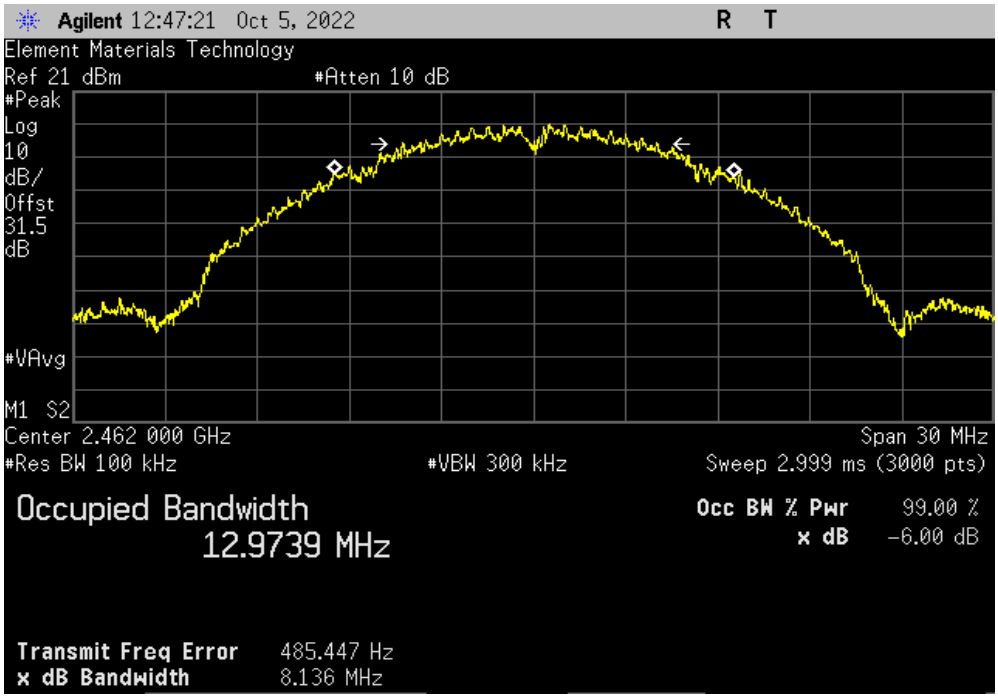


DTS BANDWIDTH - CHAIN 0

Chain 0, CCK, 11 Mbps, Mid Channel 6, 2437 MHz						
				Value	Limit (>)	Result
				7.573 MHz	500 kHz	Pass

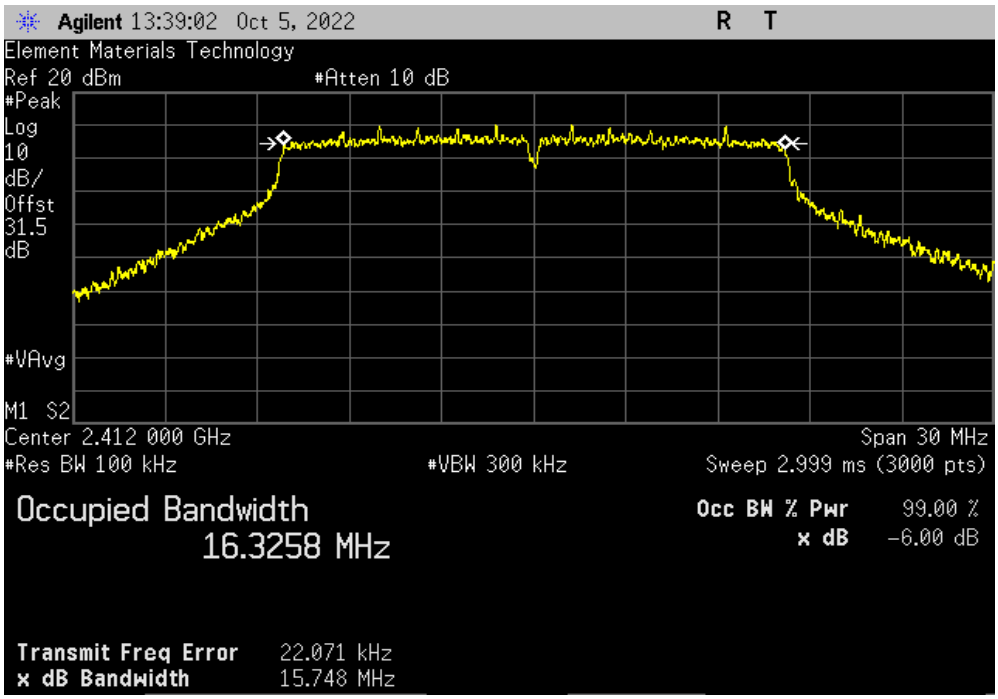


Chain 0, CCK, 11 Mbps, High Channel 11, 2462 MHz						
				Value	Limit (>)	Result
				8.136 MHz	500 kHz	Pass

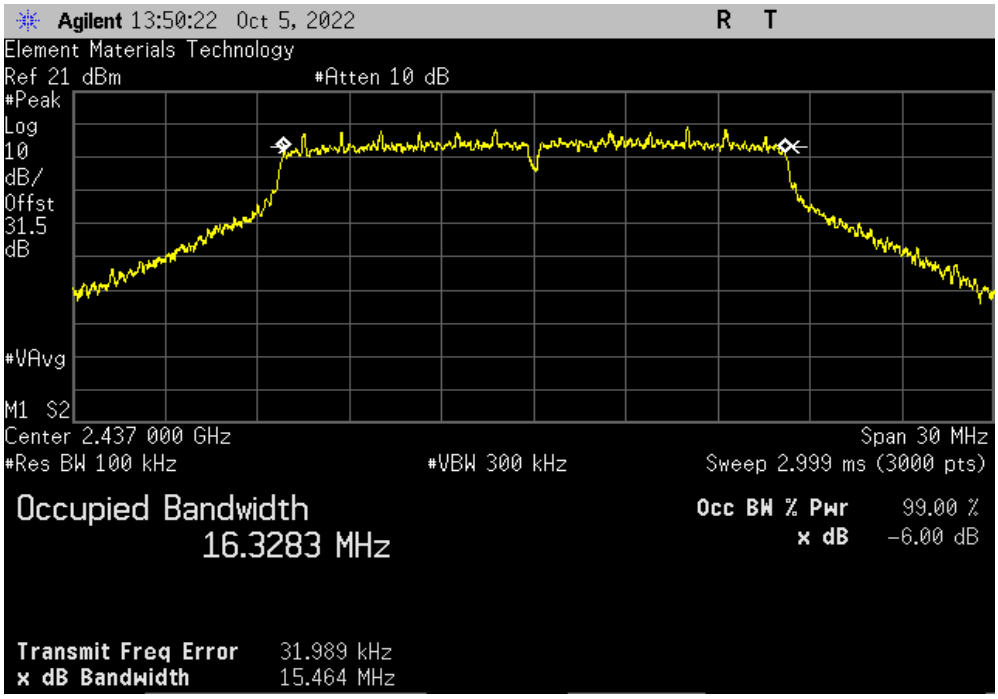


DTS BANDWIDTH - CHAIN 0

Chain 0, Legacy OFDM, 6 Mbps, Low Channel 1, 2412 MHz						
				Value	Limit (>)	Result
				15.748 MHz	500 kHz	Pass

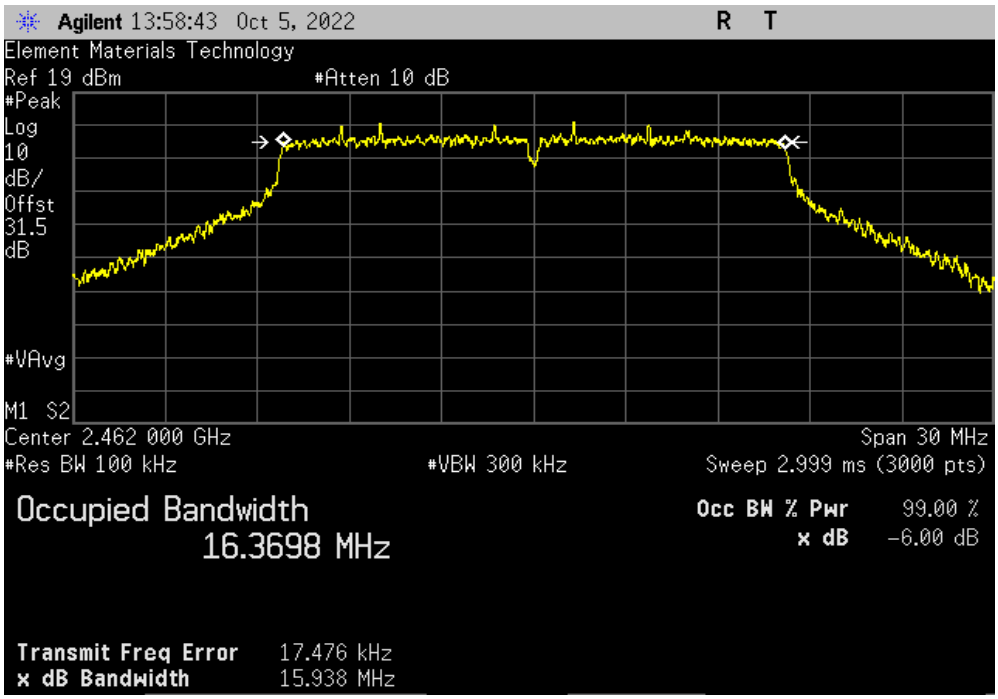


Chain 0, Legacy OFDM, 6 Mbps, Mid Channel 6, 2437 MHz						
				Value	Limit (>)	Result
				15.464 MHz	500 kHz	Pass

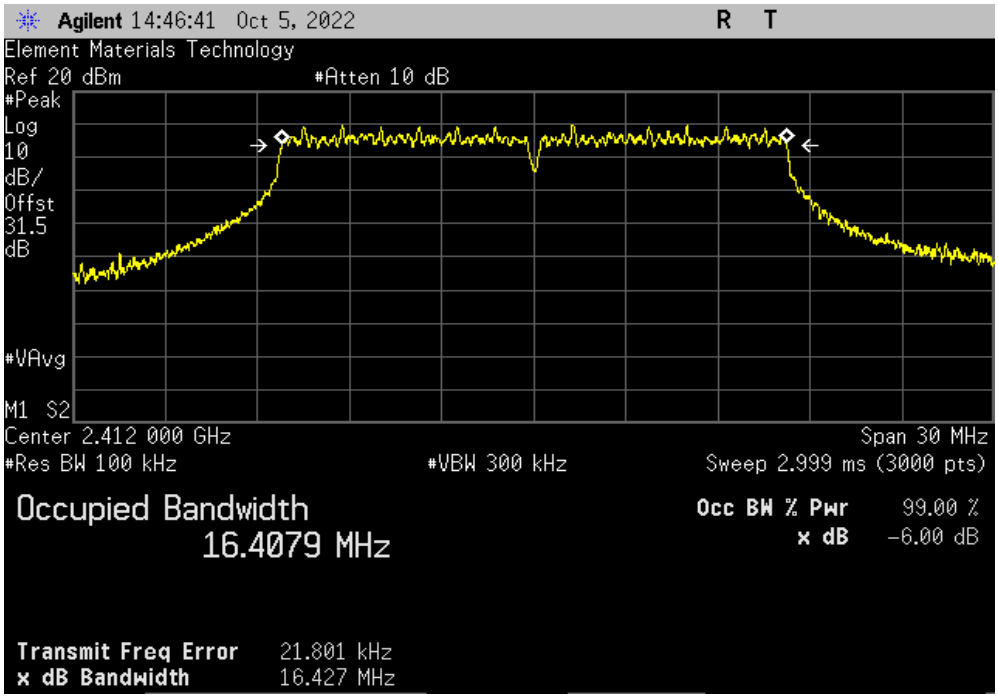


DTS BANDWIDTH - CHAIN 0

Chain 0, Legacy OFDM, 6 Mbps, High Channel 11, 2462 MHz						
				Value	Limit (>)	Result
				15.938 MHz	500 kHz	Pass

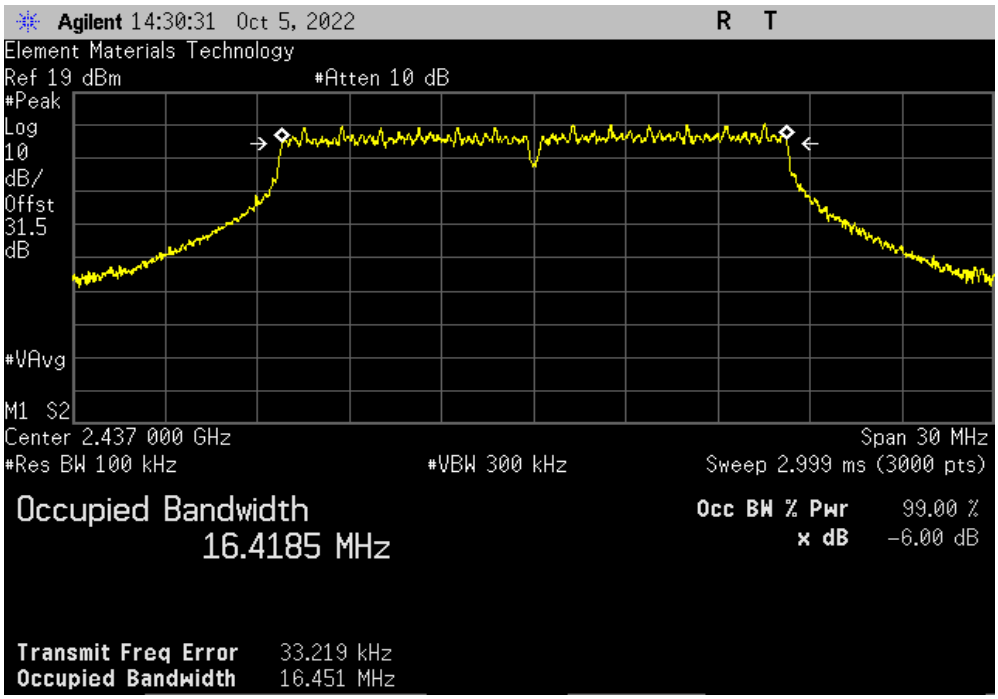


Chain 0, Legacy OFDM, 36 Mbps, Low Channel 1, 2412 MHz						
				Value	Limit (>)	Result
				16.427 MHz	500 kHz	Pass

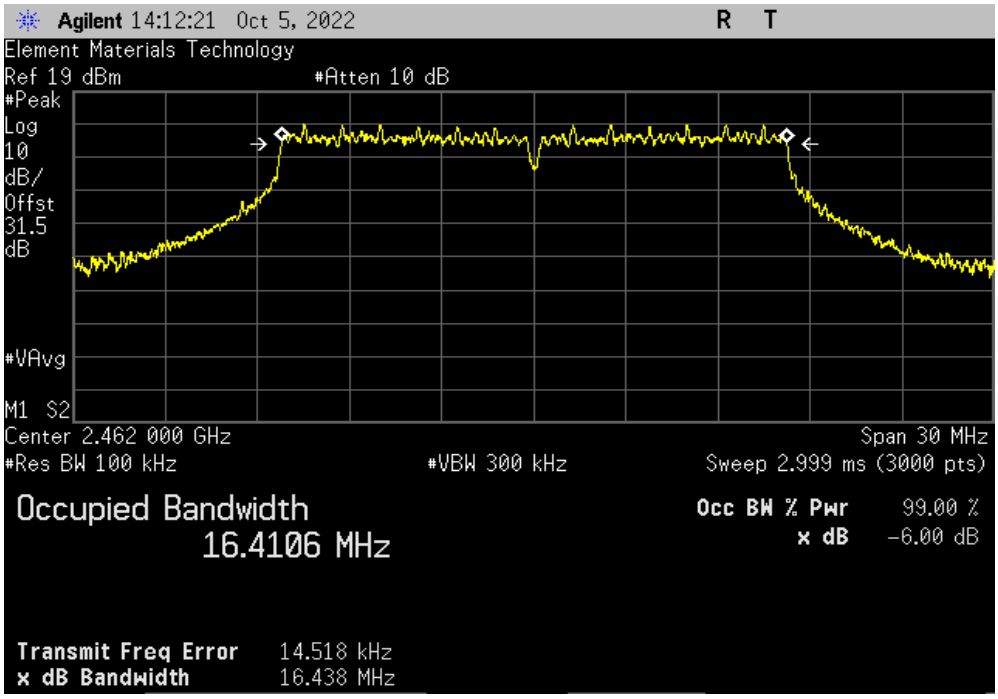


DTS BANDWIDTH - CHAIN 0

Chain 0, Legacy OFDM, 36 Mbps, Mid Channel 6, 2437 MHz						
				Value	Limit (>)	Result
				16.451 MHz	500 kHz	Pass

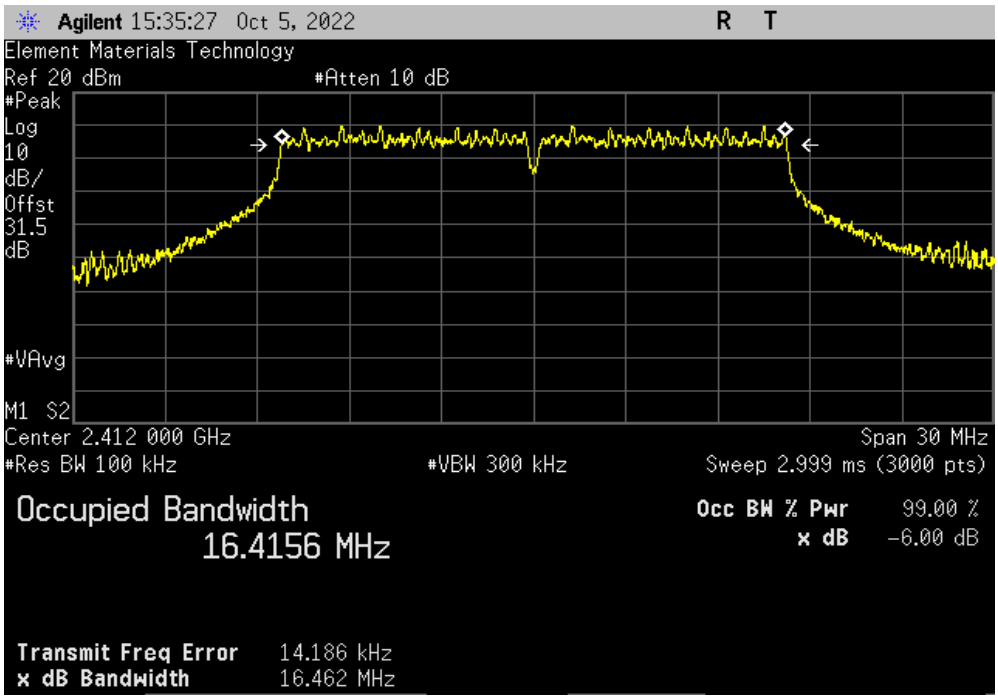


Chain 0, Legacy OFDM, 36 Mbps, High Channel 11, 2462 MHz						
				Value	Limit (>)	Result
				16.438 MHz	500 kHz	Pass

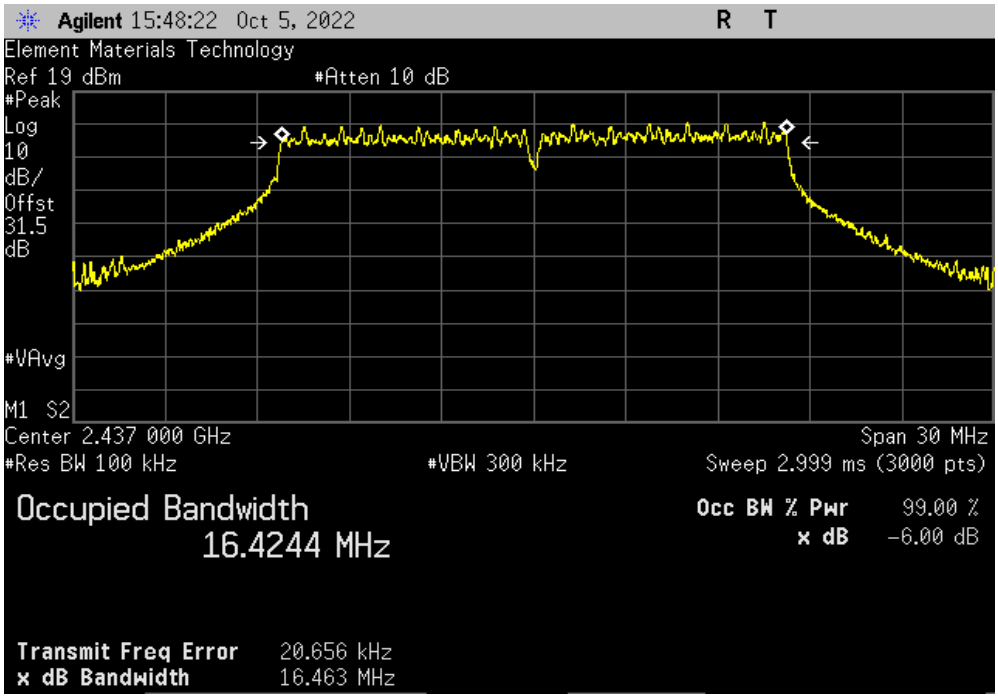


DTS BANDWIDTH - CHAIN 0

Chain 0, Legacy OFDM, 54 Mbps, Low Channel 1, 2412 MHz						
				Value	Limit (>)	Result
				16.462 MHz	500 kHz	Pass

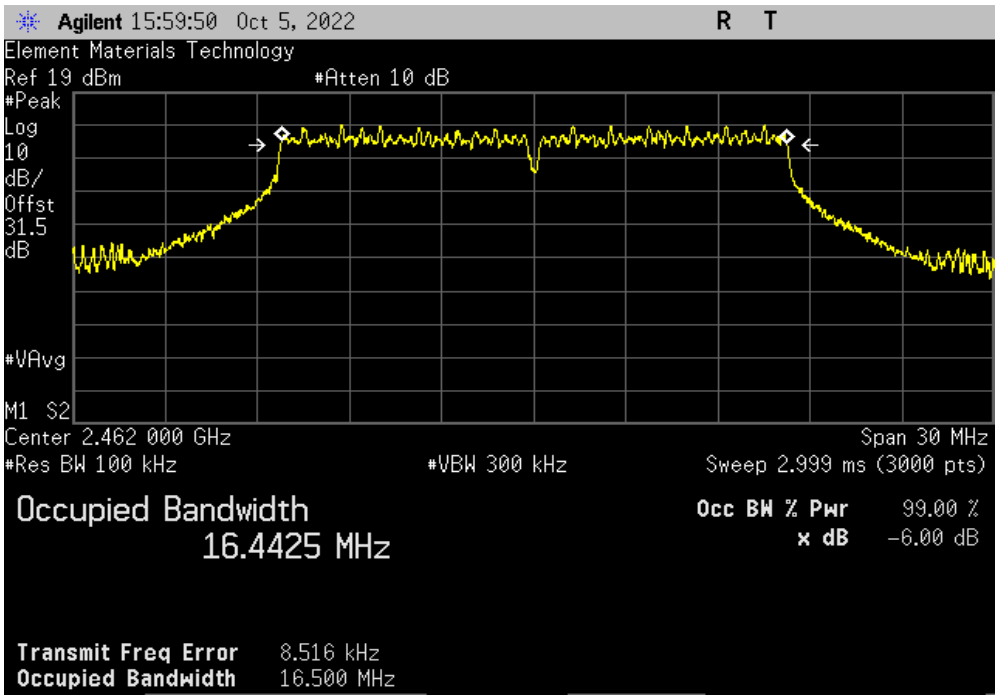


Chain 0, Legacy OFDM, 54 Mbps, Mid Channel 6, 2437 MHz						
				Value	Limit (>)	Result
				16.463 MHz	500 kHz	Pass

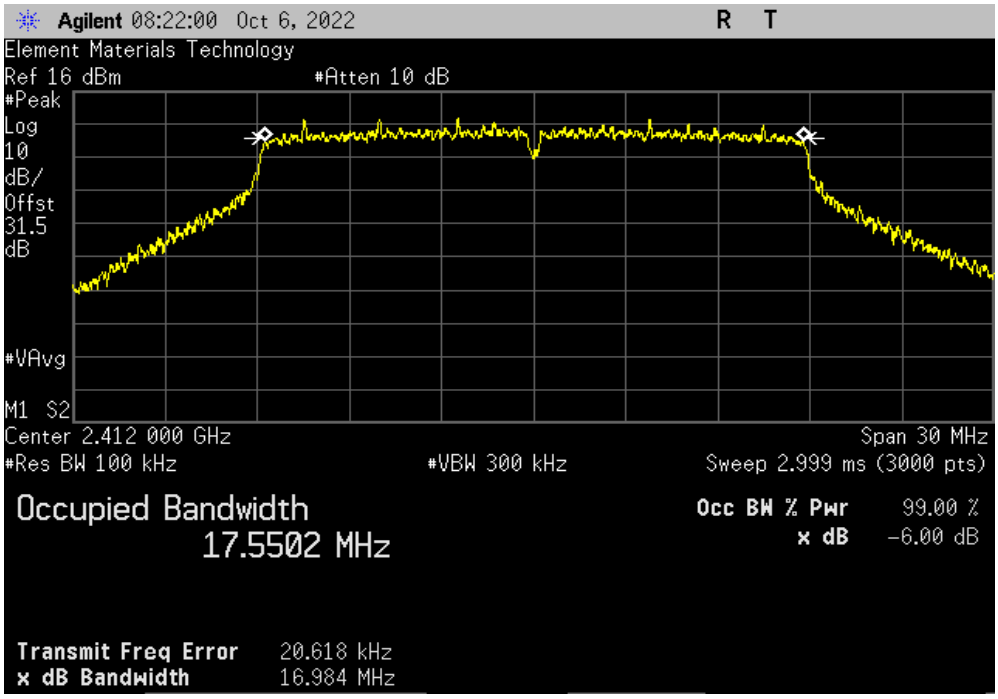


DTS BANDWIDTH - CHAIN 0

Chain 0, Legacy OFDM, 54 Mbps, High Channel 11, 2462 MHz						
				Value	Limit (>)	Result
				16.5 MHz	500 kHz	Pass

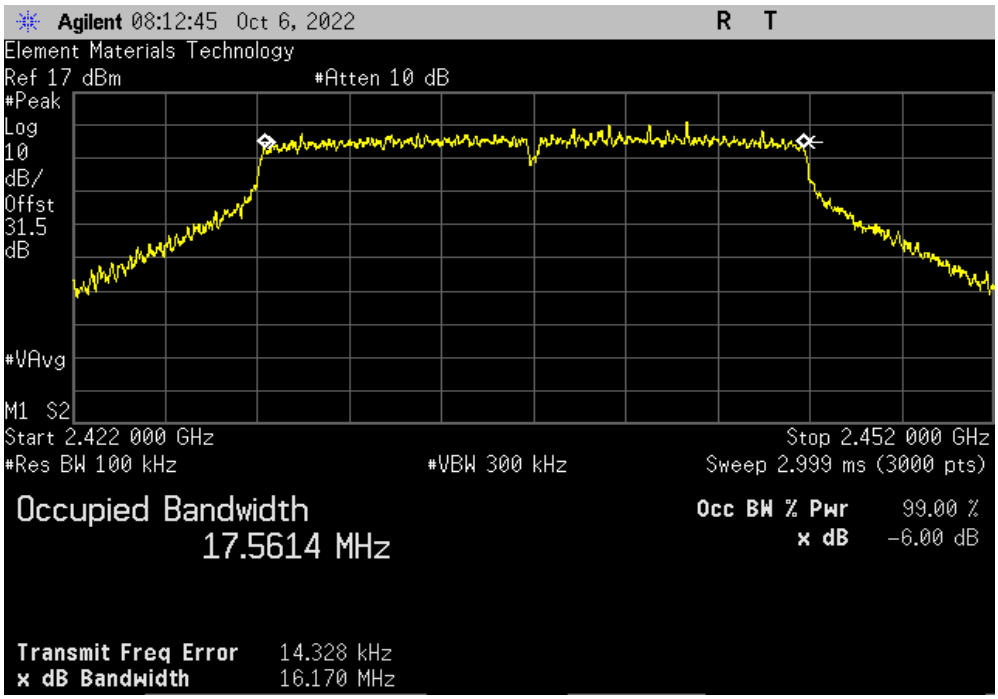


Chain 0, HT20, MCS0, Low Channel 1, 2412 MHz						
				Value	Limit (>)	Result
				16.984 MHz	500 kHz	Pass

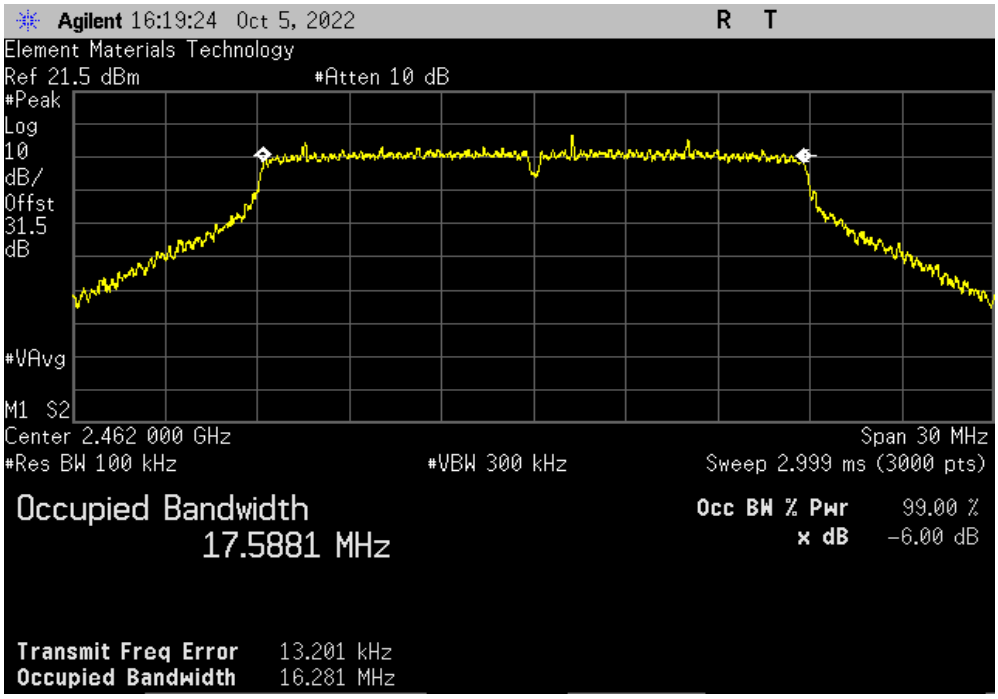


DTS BANDWIDTH - CHAIN 0

Chain 0, HT20, MCS0, Mid Channel 6, 2437 MHz						
				Value	Limit (>)	Result
				16.17 MHz	500 kHz	Pass

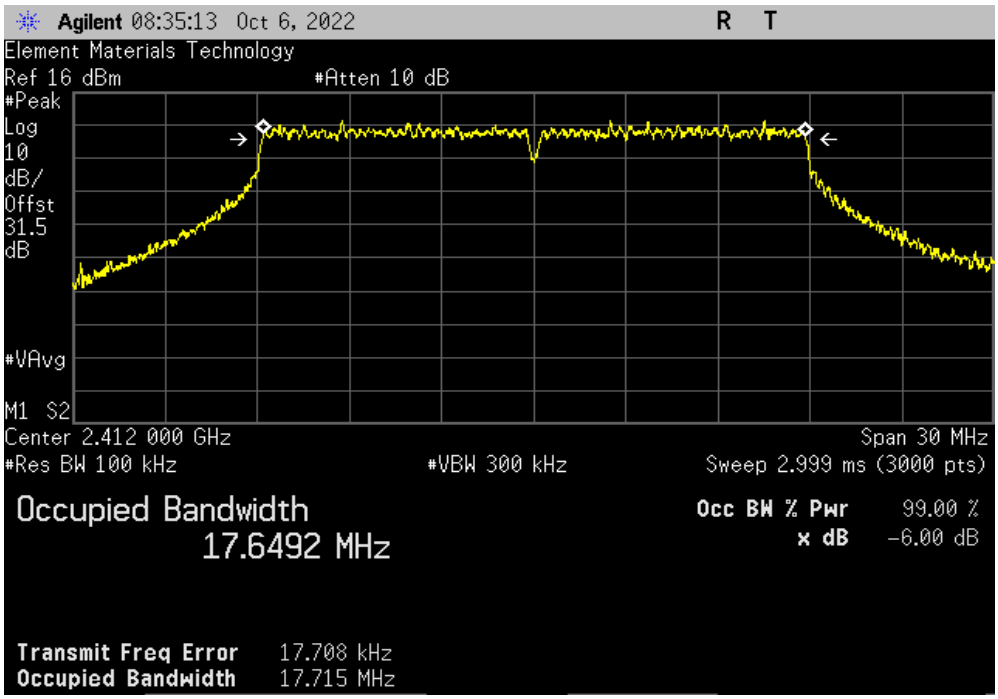


Chain 0, HT20, MCS0, High Channel 11, 2462 MHz						
				Value	Limit (>)	Result
				16.281 MHz	500 kHz	Pass

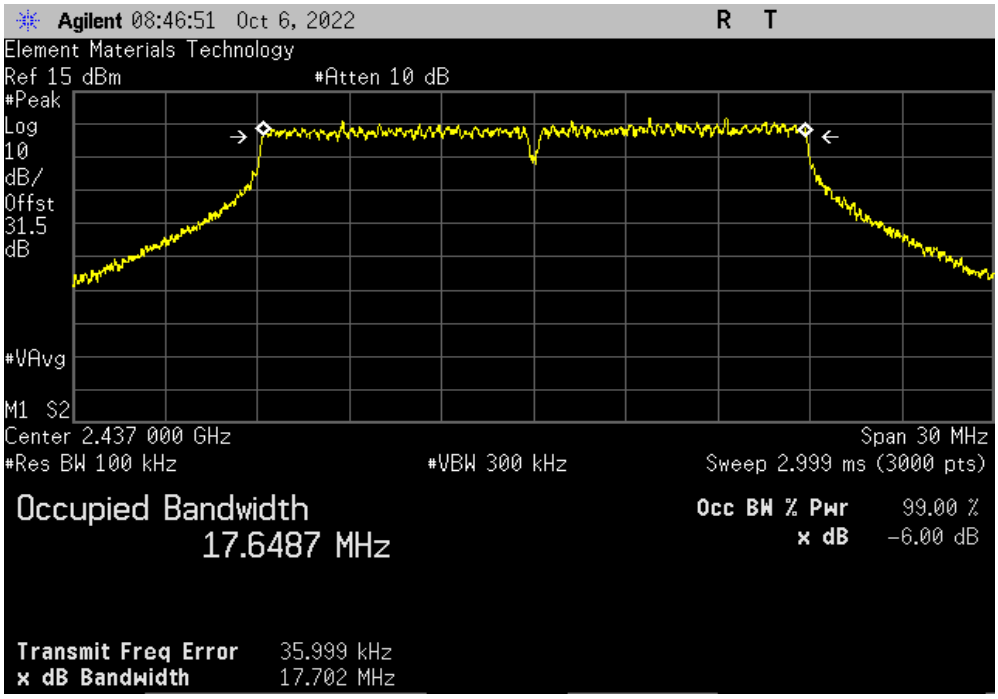


DTS BANDWIDTH - CHAIN 0

Chain 0, HT20, MCS7, Low Channel 1, 2412 MHz						
				Value	Limit (>)	Result
				17.715 MHz	500 kHz	Pass

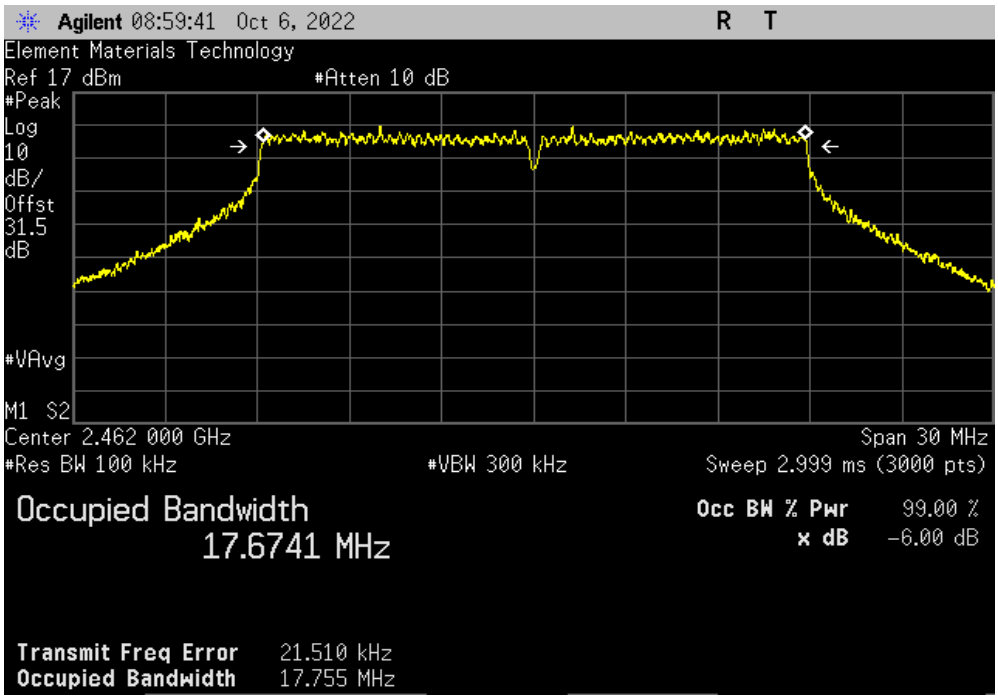


Chain 0, HT20, MCS7, Mid Channel 6, 2437 MHz						
				Value	Limit (>)	Result
				17.702 MHz	500 kHz	Pass

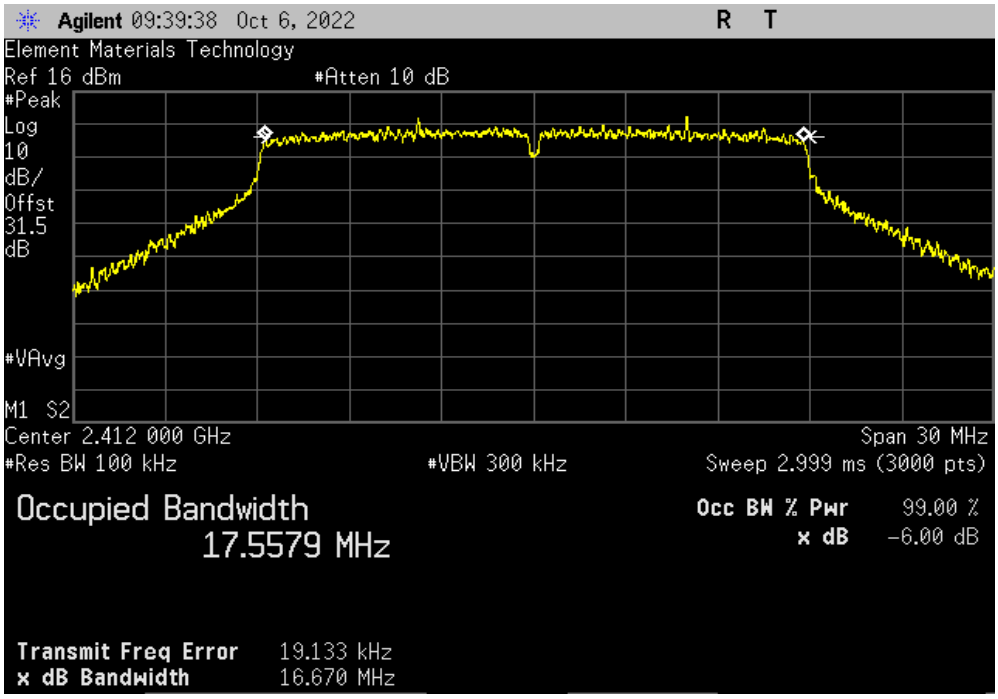


DTS BANDWIDTH - CHAIN 0

Chain 0, HT20, MCS7, High Channel 11, 2462 MHz						
				Value	Limit (>)	Result
				17.755 MHz	500 kHz	Pass

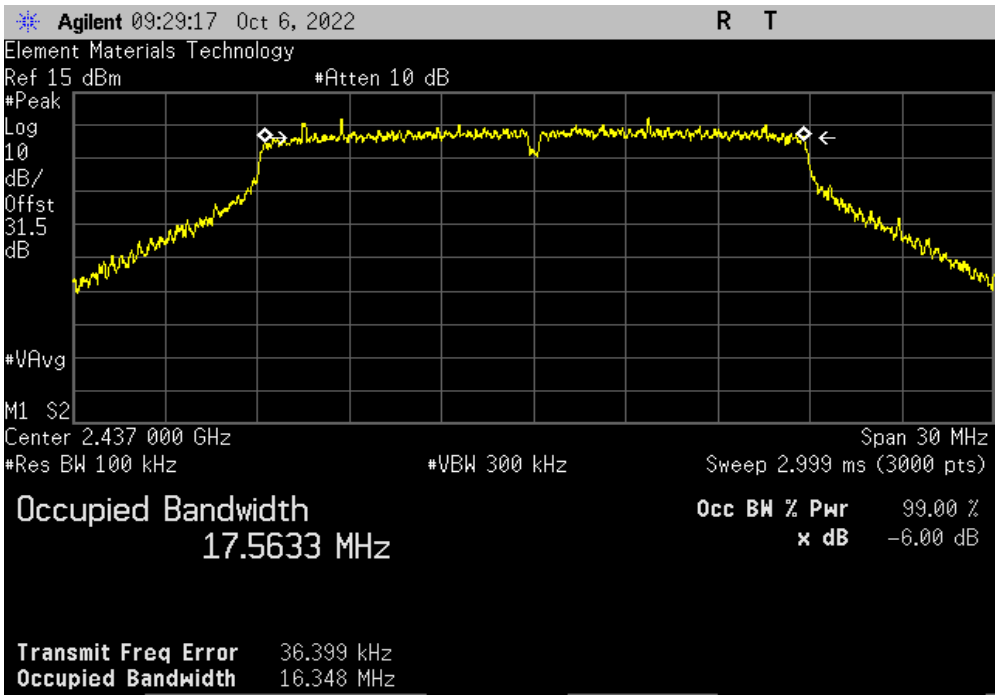


Chain 0, VHT20, MCS0, Low Channel 1, 2412 MHz						
				Value	Limit (>)	Result
				16.67 MHz	500 kHz	Pass

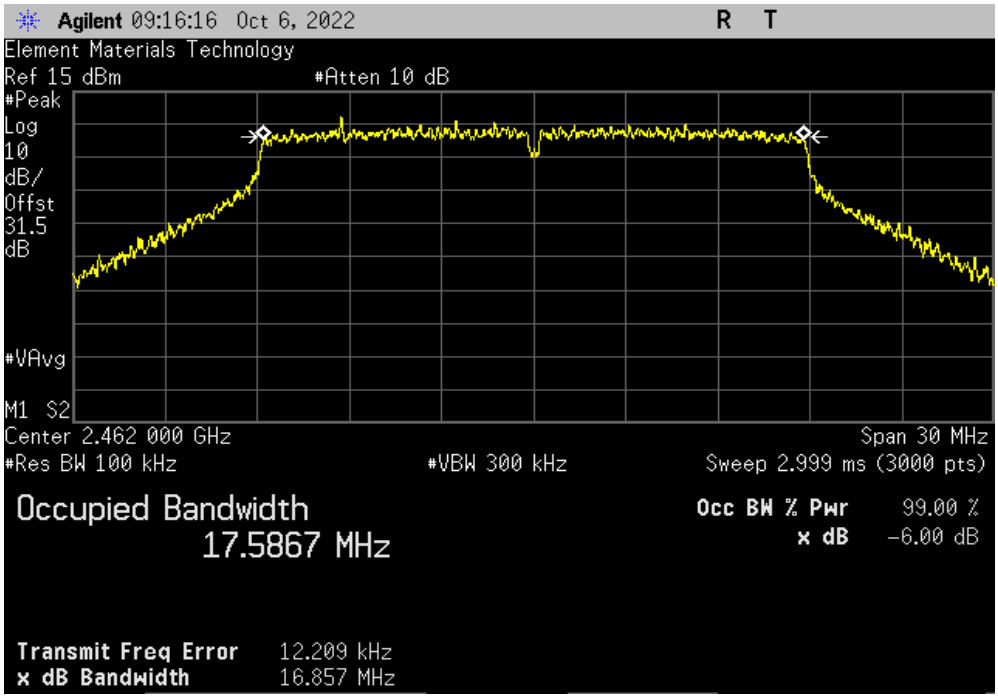


DTS BANDWIDTH - CHAIN 0

Chain 0, VHT20, MCS0, Mid Channel 6, 2437 MHz						
				Value	Limit (>)	Result
				16.348 MHz	500 kHz	Pass

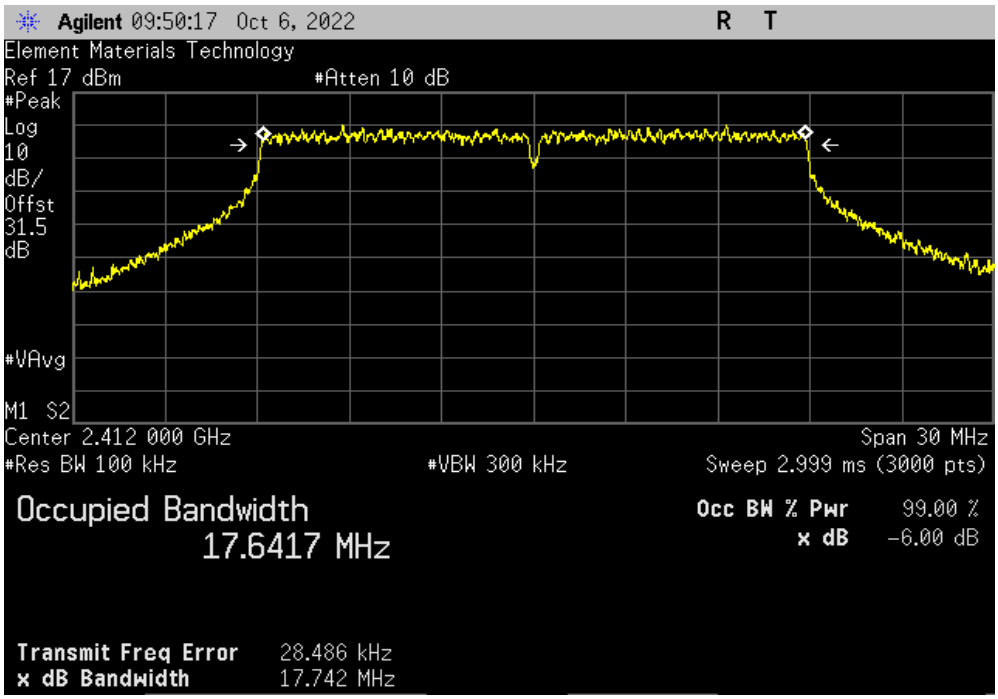


Chain 0, VHT20, MCS0, High Channel 11, 2462 MHz						
				Value	Limit (>)	Result
				16.857 MHz	500 kHz	Pass

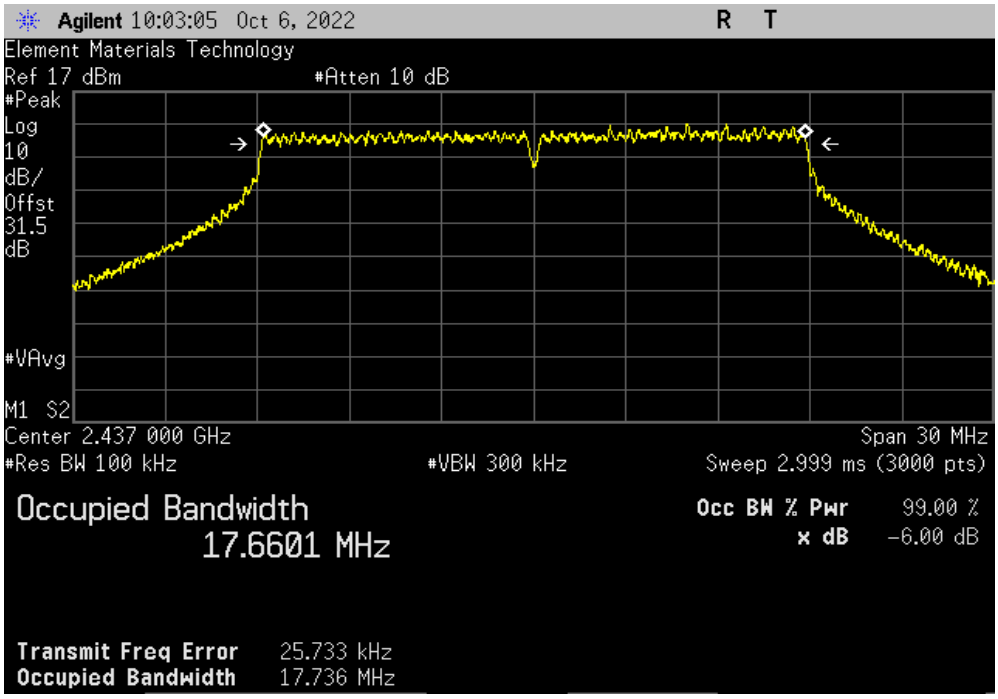


DTS BANDWIDTH - CHAIN 0

Chain 0, VHT20, MCS8, Low Channel 1, 2412 MHz						
				Value	Limit (>)	Result
				17.742 MHz	500 kHz	Pass

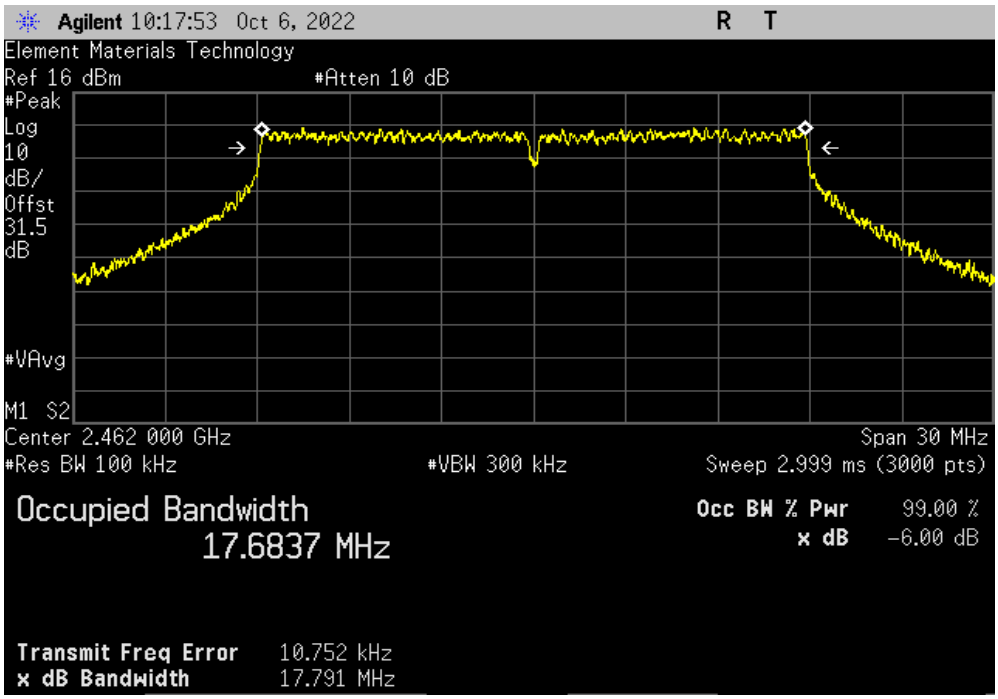


Chain 0, VHT20, MCS8, Mid Channel 6, 2437 MHz						
				Value	Limit (>)	Result
				17.736 MHz	500 kHz	Pass

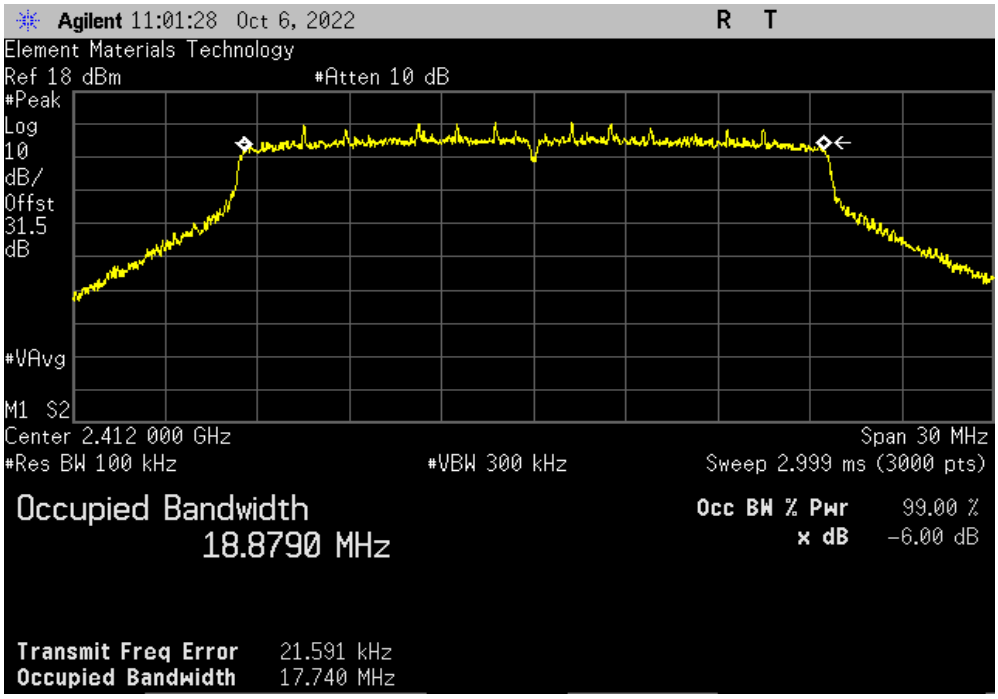


DTS BANDWIDTH - CHAIN 0

Chain 0, VHT20, MCS8, High Channel 11, 2462 MHz						
				Value	Limit (>)	Result
				17.791 MHz	500 kHz	Pass

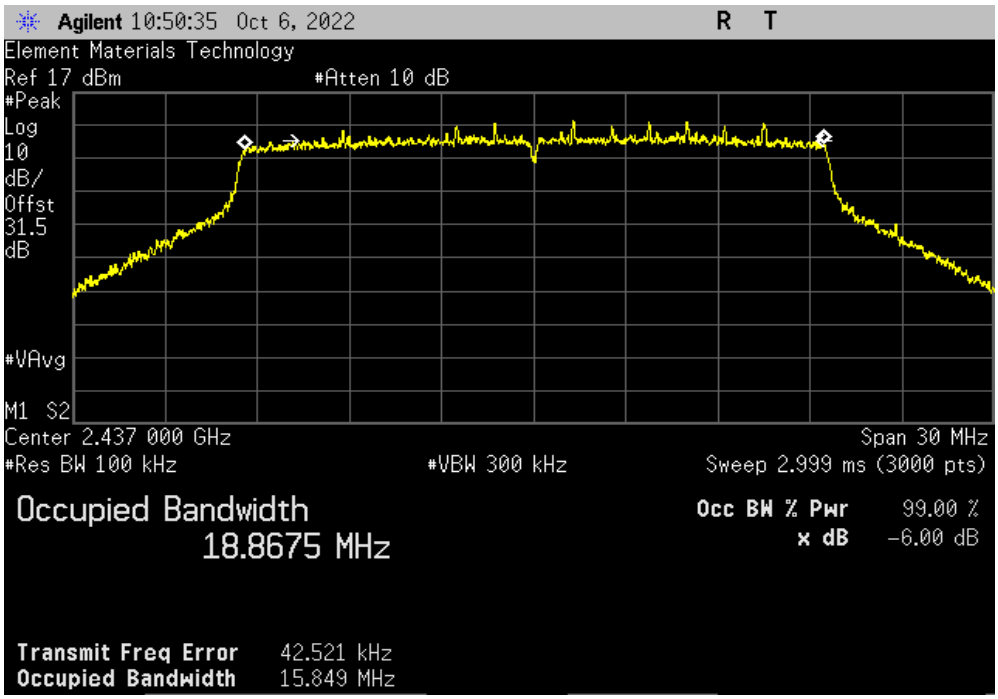


Chain 0, HE20, MCS0, Low Channel 1, 2412 MHz						
				Value	Limit (>)	Result
				17.74 MHz	500 kHz	Pass

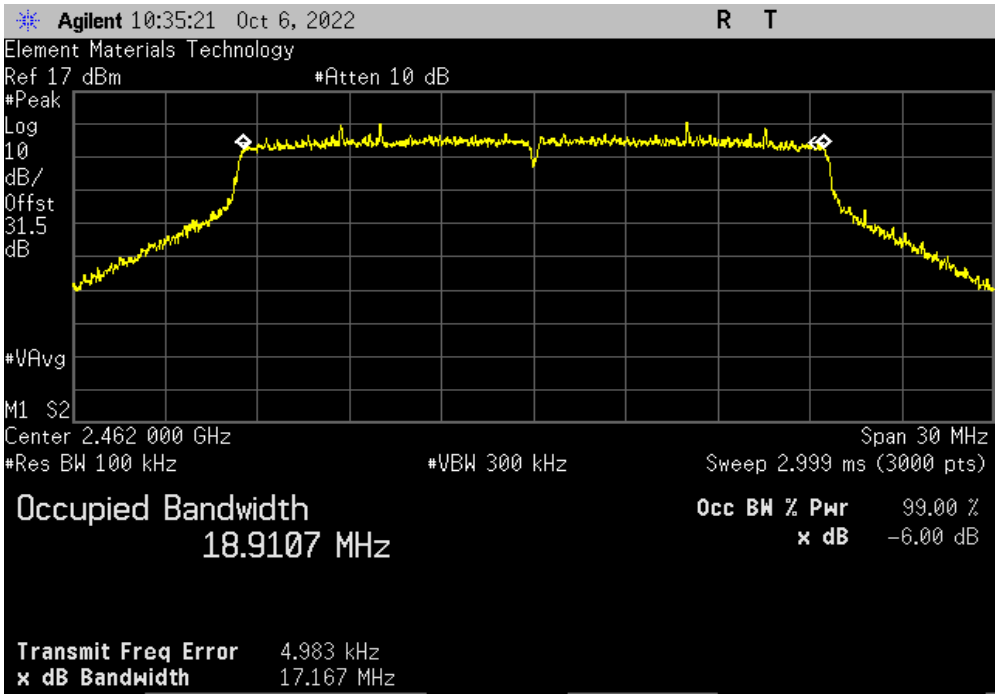


DTS BANDWIDTH - CHAIN 0

Chain 0, HE20, MCS0, Mid Channel 6, 2437 MHz						
				Value	Limit (>)	Result
				15.849 MHz	500 kHz	Pass

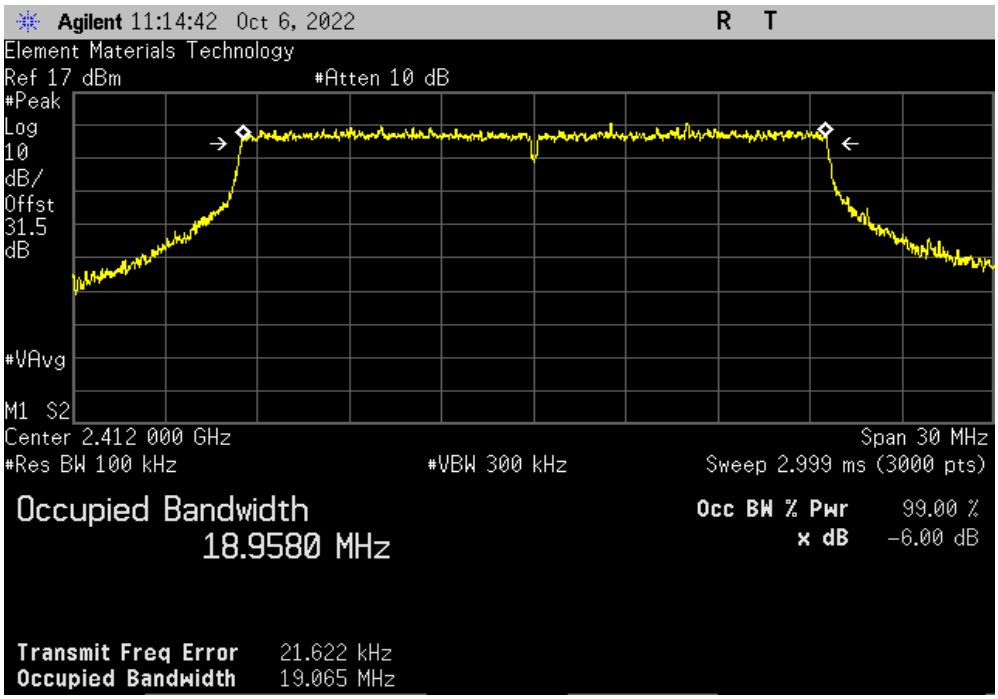


Chain 0, HE20, MCS0, High Channel 11, 2462 MHz						
				Value	Limit (>)	Result
				17.167 MHz	500 kHz	Pass

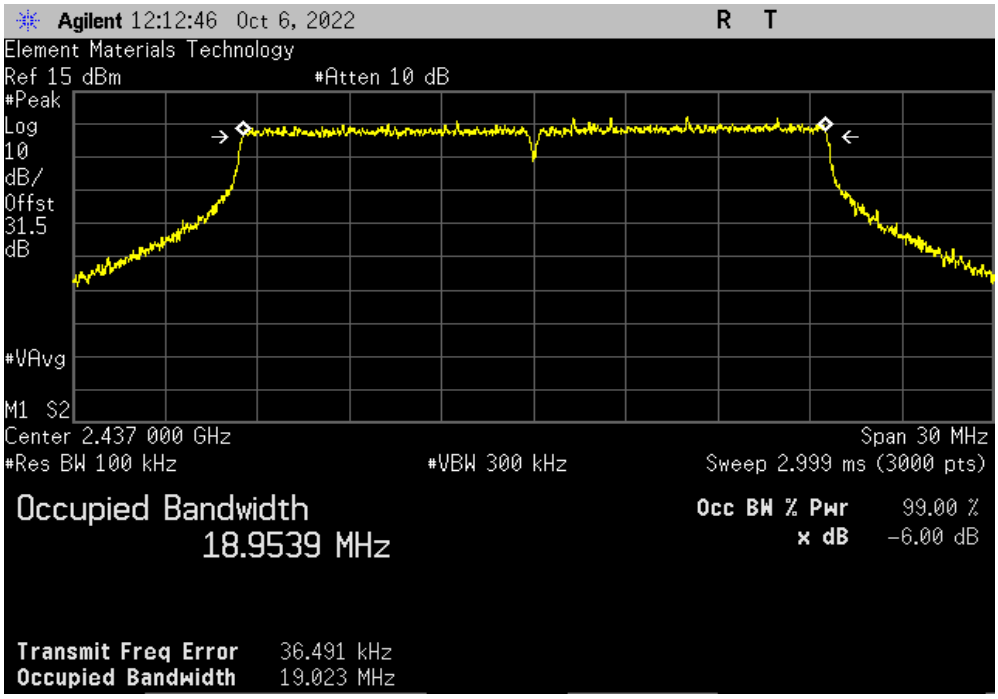


DTS BANDWIDTH - CHAIN 0

Chain 0, HE20, MCS11, Low Channel 1, 2412 MHz						
				Value	Limit (>)	Result
				19.065 MHz	500 kHz	Pass



Chain 0, HE20, MCS11, Mid Channel 6, 2437 MHz						
				Value	Limit (>)	Result
				19.023 MHz	500 kHz	Pass



DTS BANDWIDTH - CHAIN 0

Chain 0, HE20, MCS11, High Channel 11, 2462 MHz						
				Value	Limit (>)	Result
				19.101 MHz	500 kHz	Pass