



element

IrriGreen, Inc.

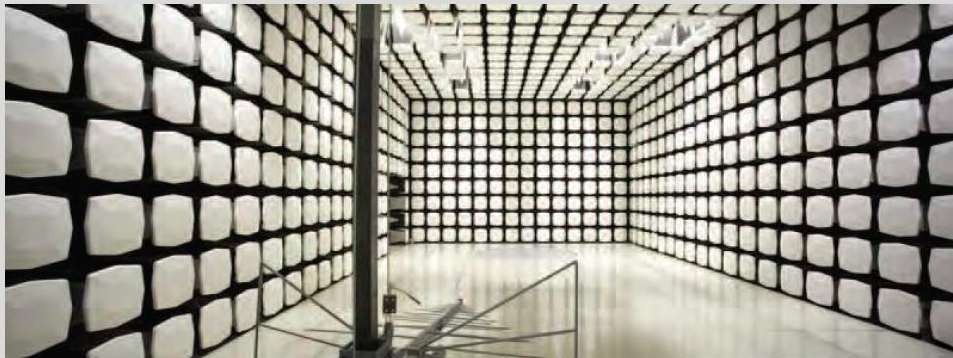
Controller 3, Model 705101

FCC 15.207:2024

FCC 15.247:2024

Wi-Fi 802.11 a/b/g/n SISO radio

Report: IRR10024.4 Rev. 1, Issue Date: September 19, 2024



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CERTIFICATE OF TEST

Last Date of Test: September 13, 2024

IrriGreen, Inc.

EUT: Sprinkler with Controller, Controller 3, Model 705101

Radio Equipment Testing

Standards

Specification	Method
FCC 15.207:2024	ANSI C63.10:2013
FCC 15.247:2024	

Guidance

FCC KDB 558074 v05r02:2019

Results

Test Description	Result	Specification Section(s)	Method Section(s)	Comments
Powerline Conducted Emissions	Pass	15.207	6.2	
Duty Cycle	Evaluated	KDB 558074 -6.0	11.6	
DTS Bandwidth	Pass	15.247(a)(2), KDB 558074 -8.2	11.8.2	
Occupied Bandwidth	Evaluated	KDB 558074 -2.1	6.9.3	
Output Power	Pass	15.247(b)(3), KDB 558074 -8.3.2	11.9.2.2.4	
Equivalent Isotropic Radiated Power (EIRP)	Pass	15.247(b)(3), KDB 558074 -8.3.2	11.9.2.2.4	
Power Spectral Density	Pass	15.247(e), KDB 558074 -8.4	11.10.5	
Band Edge Compliance	Pass	15.247(d), KDB 558074 -8.5	11.11	
Spurious Conducted Emissions	Pass	15.247(d), KDB 558074 -8.5	11.11	
Spurious Radiated Emissions	Pass	15.247(d), KDB 558074 -8.6, 8.7	11.12.1, 11.13.2, 6.5, 6.6	

Deviations From Test Standards

None

Approved By:



Cole Ghizzone, Operations Manager
Signed for and on behalf of Element

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
00	None		
01	Updated test lab accreditation number	2024-09-19	1
	Changed test lab from MN to EV		6
	Updated antenna gain and power settings table		12
	Updated EIRP values		61 – 62
	Updated test description and tabular data		63 - 65

ACCREDITATIONS AND AUTHORIZATIONS



United States

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

A2LA - 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](#)

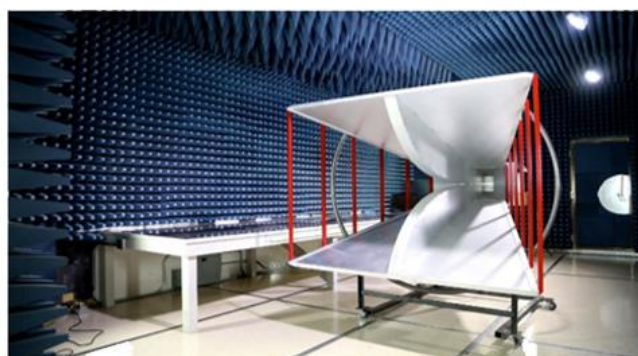
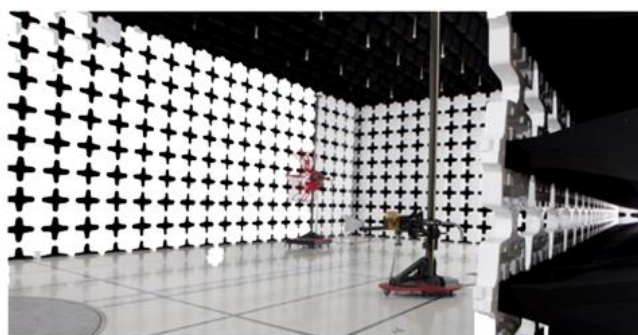
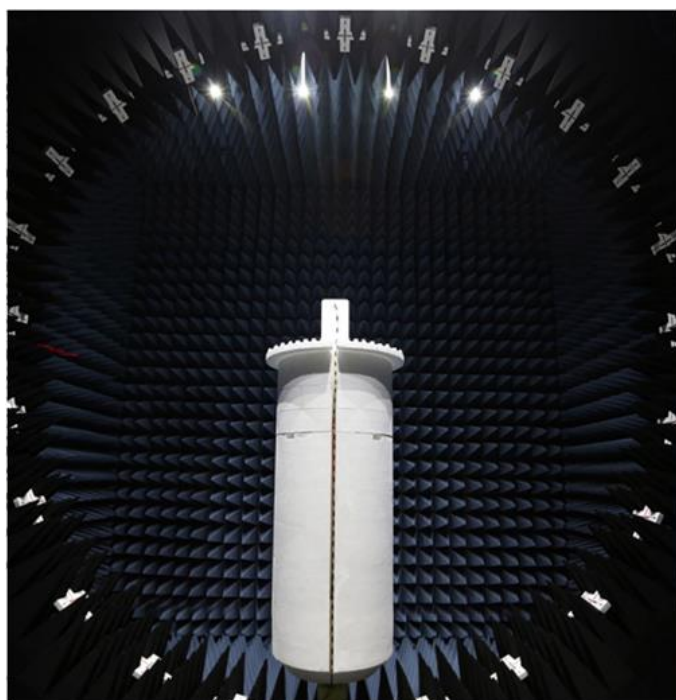
FACILITIES

Testing was performed at the following location(s)

	Location	Labs ⁽¹⁾	Address	A2LA ⁽²⁾	ISED ⁽³⁾	BSMI ⁽⁴⁾	VCCI ⁽⁵⁾	CAB ⁽⁶⁾	FDA ⁽⁷⁾
☐	California	OC01-17	41 Tesla Irvine, CA 92618 (949) 861-8918	3310.04	2834B	SL2-IN-E-1154R	A-0029	US0158	TL-55
☐	Minnesota	MN01-11	9349 W Broadway Ave. Brooklyn Park, MN 55445 (612) 638-5136	3310.05	2834E	SL2-IN-E-1152R	A-0109	US0175	TL-57
☒	Oregon	EV01-12	6775 NE Evergreen Pkwy #400 Hillsboro, OR 97124 (503) 844-4066	3310.02	2834D	SL2-IN-E-1017	A-0108	US0017	TL-56
☐	Plano Texas	PT01-15	1701 E Plano Pkwy, Ste 150 Plano, TX 75074 (972) 509-2566	214.19	32637	SL2-IN-E-057R	A-0426	US0054	N/A
☐	Texas	TX01-09	3801 E Plano Pkwy Plano, TX 75074 (469) 304-5255	3310.03	2834G	SL2-IN-E-1158R	N/A	US0191	TL-54
☐	Washington	NC01-05	19201 120th Ave NE Bothell, WA 98011 (425) 984-6600	3310.06	2834F	SL2-IN-E-1153R	A-0110	US0157	TL-67
☐	Offsite	N/A	See Product Description	N/A	N/A	N/A	N/A	N/A	N/A

See data sheets for specific labs

- (1) The lab designations denote individual rooms within each location. (OC01, OC02, OC03, etc.)
- (2) A2LA Certificate No.
- (3) ISED Company No.
- (4) BSMI No.
- (5) VCCI Site Filing No.
- (6) CAB Identifier. Recognized Phase I CAB for ISED, ACMA, BSMI, IDA, KCC/RRA, MIC, MOC, NCC, OFCA
- (7) FDA ASCA No.



MEASUREMENT UNCERTAINTY

Measurement Uncertainty

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

A measurement uncertainty estimation has been performed for each test per our internal quality document QM205.4.6. The estimation is used to compare the measured result with its "true" or theoretically correct value. The expanded measurement uncertainty ($k=2$) can be found 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.

Various Measurements

Test	All Labs (+/-)
Frequency Accuracy (%)	0.0007
Amplitude Accuracy (dB)	1.2
Conducted Power (dB)	1.2
Radiated Power via Substitution (dB)	0.7
Temperature (degrees C)	0.7
Humidity (% RH)	2.5
Voltage (AC) (%)	1
Voltage (DC) (%)	0.7

Field Strength Measurements (dB)

Range	EV01 (+/-)	EV06 (+/-)
10kHz-30MHz	1.8	N/A
30MHz-1GHz 3m	4.6	N/A
1GHz-6GHz	5.1	N/A
6GHz-40GHz	5.2	N/A

AC Powerline Conducted Emissions Measurements (dB)

Range	EV07 (+/-)	EV06 (+/-)
9kHz-150kHz LISN	3.6	N/A
150kHz-30MHz LISN	3.2	N/A
150kHz-30MHz CVP	3.2	N/A
150kHz-30MHz Telecom-ISN	4.4	N/A

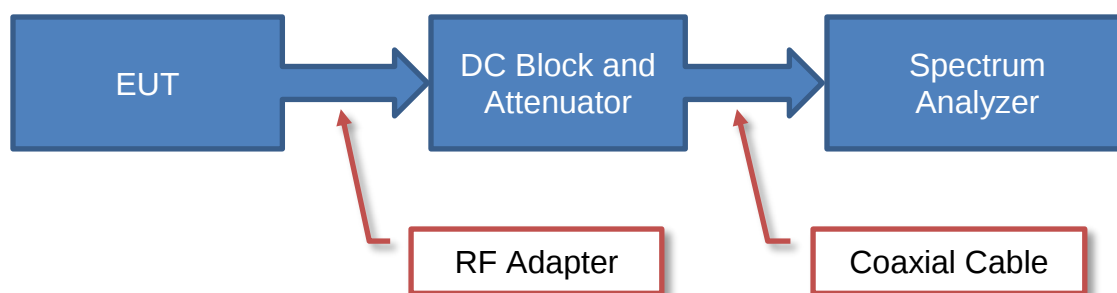
TEST SETUP BLOCK DIAGRAMS

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.

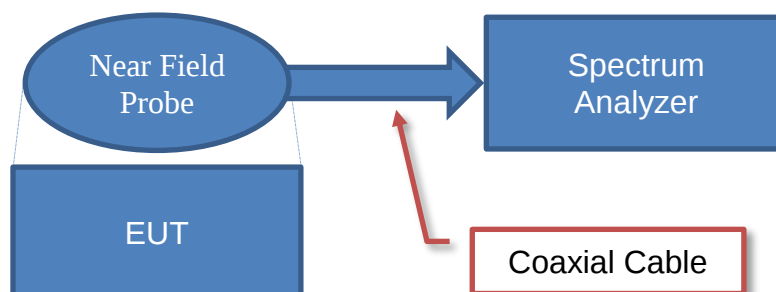
Antenna Port Conducted Measurements



Sample Calculation (logarithmic units)

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

Near Field Test Fixture Measurements

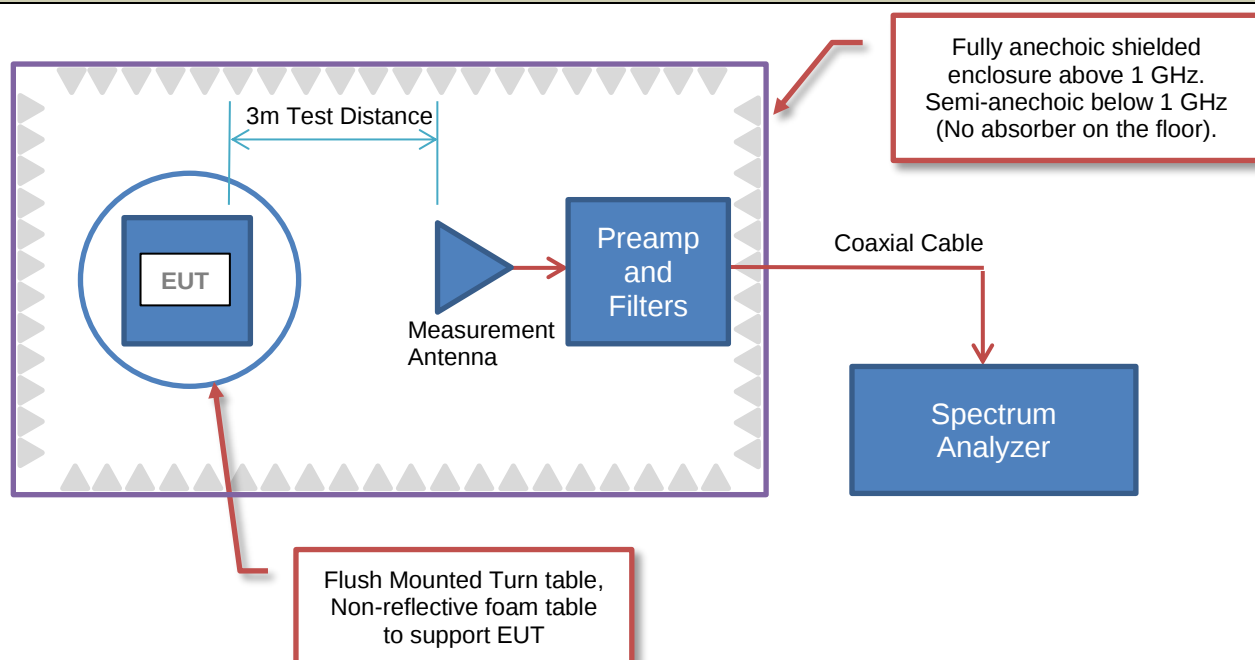


Sample Calculation (logarithmic units)

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			Distance Adjustment Factor	External Attenuation	Field Strength
	Antenna Factor	Cable Factor	Amplifier Gain			
42.6	28.6	3.1	40.8	0.0	0.0	33.5

Conducted Emissions:

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

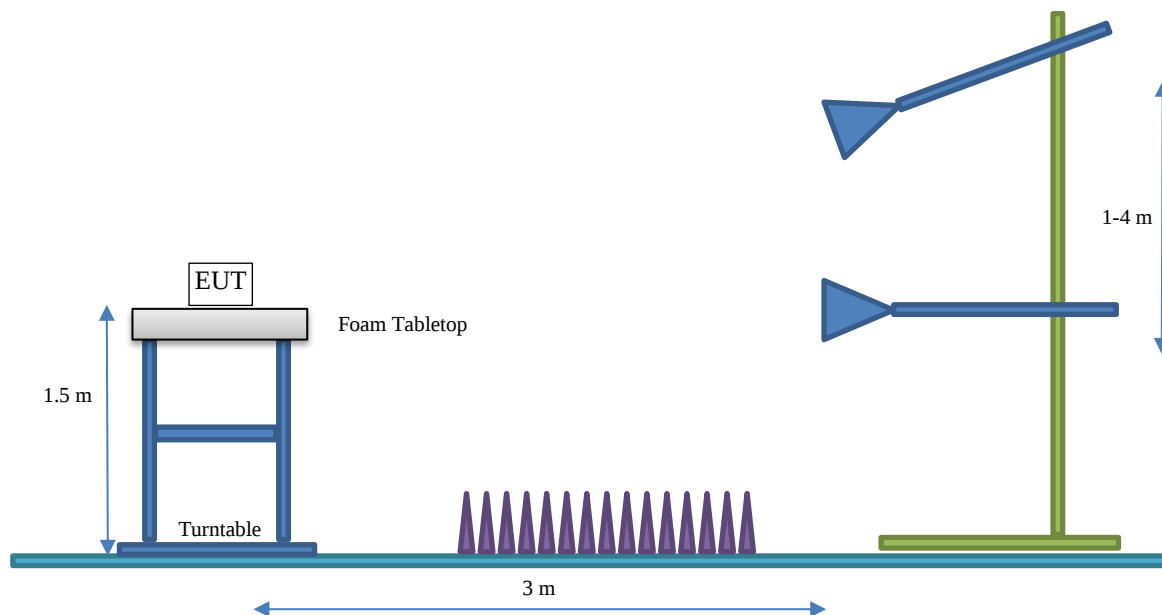
Radiated Power (ERP/EIRP) – Substitution Method:

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:	IrriGreen, Inc.
Address:	5250 West 73rd Street
City, State, Zip:	Edina, MN 55439
Test Requested By:	Gary Klinefelter
EUT:	Controller 3, Model 705101
First Date of Test:	July 22, 2024
Last Date of Test:	September 13, 2024
Receipt Date of Samples:	July 22, 2024
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 controller is labeled as a "Controller 3" with an IrriGreen sprinkler model 705101.

The controller contains three radio types:

- BLE
- 2.4 GHz Wi-Fi
- 5 GHz Wi-Fi. The 5 GHz Wi-Fi supports UNII-1 and UNII-3 bands.

The BLE radio uses a PCB Trace antenna.

Wi-Fi has a software-controlled diversity switch that changes the path to two identical antennas placed in two different orientations. The antennas are Shenzhen Keesun Technology Co. Ltd., EM60 PCB antennas. Only one antenna can actively transmit at a time.

This report is specific to the 2.4 GHz Wi-Fi radio.

Testing Objective:

To demonstrate compliance of the Wi-Fi 802.11 a/b/g/n SISO radio under FCC 15.247 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	Type	Provided by:	Part Number	Frequency Range (MHz)	Gain (dBi)
Ant. 1	PCB	Shenzhen Keesun Technology Co. Ltd.	EM60	2400-2480	3.48
Ant. 2	PCB	Shenzhen Keesun Technology Co. Ltd.	EM60	2400-2480	3.48

The EUT is a SISO radio which contains an RF switch connecting Ant. 1 and Ant. 2 to the RF path. This switch is for diversity purposes only and does not allow for simultaneous transmissions.

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: CC31XX/CC32XX Radio Tool V1.0.3.19
☐ Rated power settings

SETTINGS FOR ALL TESTS IN THIS REPORT

Modulation Types	Data Rates	Channel Bandwidths (MHz)	Channel Position (20 MHz Ch.)	Frequency Range (MHz)	Power Setting*
DSSS	1 Mbps	20	Low (1) Mid (6) High (11)	2412 2437 2462	0
CCK	11 Mbps	20	Low (1) Mid (6) High (11)	2412 2437 2462	0
OFDM	6 Mbps, 36 Mbps, 54 Mbps	20	Low (1) Mid (6) High (11)	2412 2437 2462	0
BPSK	MCS0	20	Low (1) Mid (6) High (11)	2412 2437 2462	0
64-QAM	MCS7	20	Low (1) Mid (6) High (11)	2412 2437 2462	0

*The power setting indicates the amount of attenuation the radio control software adds to the RF path. A value of 0 indicates that no additional attenuation was added. The radio firmware installed on the EUT sets the RF power level (dBm) for channel 1 to a value that is 6 dB lower than the other channels.

CONFIGURATIONS



Configuration IRR0024-1

Software/Firmware Running During Test	
Description	Version
CC31XX/CC32XX Radio Tool	1.0.3.19

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Sprinkler Controller	Irrigreen Inc	Controller 3, Model 705101	1C:63:49:9D:4E:DC

Remote Equipment Outside of Test Setup Boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Laptop	Dell	Vostro 15 3530	7PC3424
AC Adapter	Dell	LA65NS2-01	None
Developer Kit	Ti	LP-EDS110ET	None

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
AC Power	No	4.5	No	Sprinkler Controller	AC mains
USB C	Yes	0.5	No	Developer Kit	USB Extension
USB Extension	Yes	2.9	No	USB C	Laptop
AC Power	No	0.9	No	AC Mains	AC Adapter
Flex cable	No	0.2	No	Sprinkler Controller	Developer Kit
DC Power	No	1.8	Yes	AC Adapter	Laptop

CONFIGURATIONS



Configuration IRR0024-8

Software/Firmware Running During Test	
Description	Version
CC31XX/CC32XX Radio Tool	1.0.3.19

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Sprinkler Controller	Irrigreen Inc	Controller 3, Model 705101	1C:63:49:9D:33:FF

Peripherals in Test Setup Boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Laptop	Dell	Vostro 15 3530	7PC3424
AC Adapter	Dell	LA65NS2-01	None
Developer Kit	Ti	CC-2652-R7	None

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
AC Power	No	4.5	No	Sprinkler Controller	AC mains
AC Power	No	0.9	No	AC Mains	AC Adapter
Ribbon Cable	No	0.1	No	Sprinkler Controller	Developer Kit
Micro USB	Yes	0.9	No	Developer Kit	Laptop
DC Power	No	1.8	Yes	AC Adapter	Laptop

CONFIGURATIONS



Configuration IRR0024-9

Software/Firmware Running During Test	
Description	Version
CC31XX/CC32XX Radio Tool	1.0.3.19

EUT			
Description	Manufacturer	Model/Part Number	Serial Number
Sprinkler Controller	Irrigreen Inc	Controller 3, Model 705101	1C:63:49:9D:4E:DC

Remote Equipment Outside of Test Setup Boundary			
Description	Manufacturer	Model/Part Number	Serial Number
Laptop	Dell	Vostro 15 3530	7PC3424
Developer Kit	Ti	LP-EDS110ET	None
Sprinkler Head	Irrigreen Inc	400104	None

Cables					
Cable Type	Shield	Length (m)	Ferrite	Connection 1	Connection 2
AC Power	No	4.5	No	Sprinkler Controller	AC mains
Flex cable	No	0.2	No	Sprinkler Controller	Developer Kit
USB C	Yes	0.5	No	Developer Kit	Laptop
I/O Cable	No	15.2	No	Sprinkler Controller	Sprinkler

MODIFICATIONS

Equipment Modifications

Item	Date	Test	Modification	Note	Disposition of EUT
1	2024-07-26	DTS Bandwidth (6 dB)	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	2024-07-26	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.
3	2024-07-26	Occupied Bandwidth (99%)	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	2024-08-21	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.
5	2024-08-21	Spurious Conducted Emissions	Tested as delivered to Test Station.	No EMI suppression devices were added or modified during this test.	Scheduled testing was completed.
6	2024-09-10	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.
7	2024-09-10	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.
8	2024-09-10	Equivalent Isotropic Radiated 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.
9	2024-09-11	Spurious Radiated 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	2024-07-24	Powerline Conducted 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

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	2024-05-22	2025-05-22
Cable - Conducted Cable Assembly	Northwest EMC	EVG, HHD, RKT, VAB	EVGA	2024-04-19	2025-04-19
LISN	Solar Electronics	9252-50-R-24-BNC	LIR	2024-09-13	2025-09-13

CONFIGURATIONS INVESTIGATED

IRRI0024-3

MODES INVESTIGATED

Transmitting 802.11b, 1 Mbps, Ch. 6 = 2437 MHz, Ant. 1

POWERLINE CONDUCTED EMISSIONS



EUT:	Controller 3, Model 705101	Work Order:	IRRI0024
Serial Number:	1C:63:49:9D:4E:DC	Date:	2024-09-13
Customer:	IrriGreen, Inc.	Temperature:	21.9°C
Attendees:	None	Relative Humidity:	48%
Customer Project:	None	Bar. Pressure (PMSL):	1015 mb
Tested By:	Jeff Alcock	Job Site:	EV01
Power:	110VAC/60Hz	Configuration:	IRRI0024-9

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2024	ANSI C63.10:2013

TEST PARAMETERS

Run #:	20	Line:	Neutral	Add. Ext. Attenuation (dB):	0
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COMMENTS

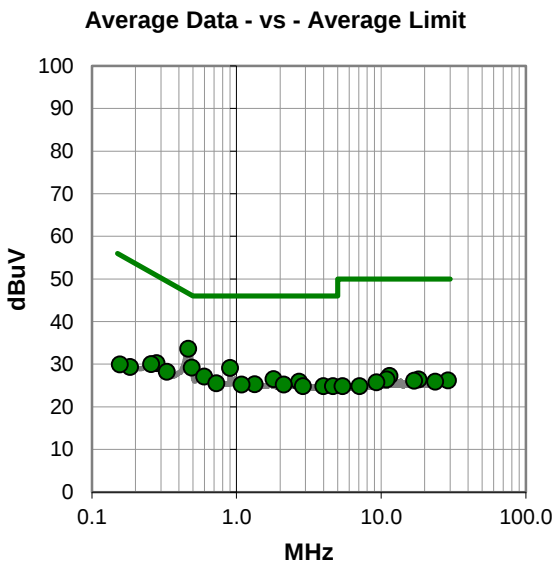
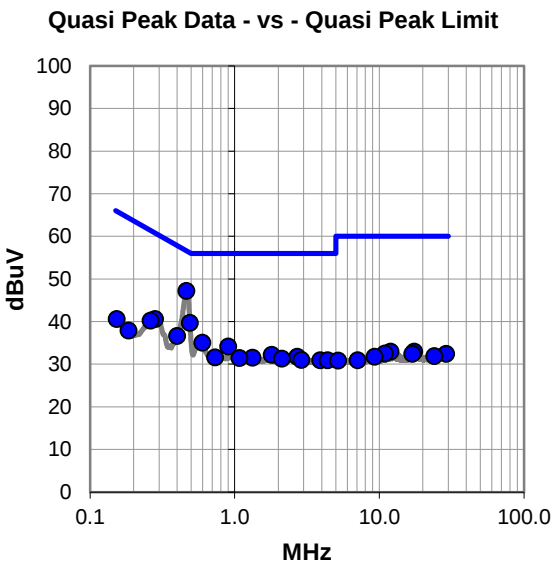
Unable to bundle I/O cable due to excessive length.

EUT OPERATING MODES

Transmitting 802.11b, 1 Mbps, Ch. 6 = 2437 MHz, Ant. 1
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DEVIATIONS FROM TEST STANDARD

None



POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #20

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.464	27.3	19.9	47.2	56.6	-9.4
0.490	19.8	19.9	39.7	56.2	-16.5
0.281	20.7	19.9	40.6	60.8	-20.2
0.597	15.1	19.9	35.0	56.0	-21.0
0.263	20.3	19.9	40.2	61.3	-21.1
0.400	16.7	19.9	36.6	57.8	-21.2
0.902	14.1	20.0	34.1	56.0	-21.9
1.804	12.2	20.0	32.2	56.0	-23.8
2.706	11.6	20.1	31.7	56.0	-24.3
0.733	11.7	19.9	31.6	56.0	-24.4
1.331	11.5	20.0	31.5	56.0	-24.5
1.078	11.4	20.0	31.4	56.0	-24.6
2.126	11.2	20.1	31.3	56.0	-24.7
2.895	10.9	20.1	31.0	56.0	-25.0
3.910	10.6	20.3	30.9	56.0	-25.1
4.396	10.6	20.3	30.9	56.0	-25.1
0.153	20.5	20.1	40.6	65.8	-25.2
0.185	17.9	20.0	37.9	64.3	-26.4
12.002	12.2	20.7	32.9	60.0	-27.1
17.482	11.7	21.2	32.9	60.0	-27.1
10.913	11.8	20.7	32.5	60.0	-27.5
16.909	11.2	21.2	32.4	60.0	-27.6
29.014	10.1	22.3	32.4	60.0	-27.6
24.003	10.2	21.7	31.9	60.0	-28.1
9.277	11.2	20.5	31.7	60.0	-28.3

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.463	13.7	19.9	33.6	46.6	-13.0
0.902	9.1	20.0	29.1	46.0	-16.9
0.490	9.3	19.9	29.2	46.2	-17.0
0.597	7.2	19.9	27.1	46.0	-18.9
1.804	6.5	20.0	26.5	46.0	-19.5
2.704	5.8	20.1	25.9	46.0	-20.1
0.727	5.6	19.9	25.5	46.0	-20.5
0.280	10.3	19.9	30.2	50.8	-20.6
1.339	5.3	20.0	25.3	46.0	-20.7
1.082	5.2	20.0	25.2	46.0	-20.8
2.123	5.1	20.1	25.2	46.0	-20.8
2.881	4.7	20.1	24.8	46.0	-21.2
4.000	4.5	20.3	24.8	46.0	-21.2
4.654	4.5	20.3	24.8	46.0	-21.2
0.330	8.3	19.9	28.2	49.5	-21.3
0.257	10.1	19.9	30.0	51.5	-21.5
11.458	6.5	20.7	27.2	50.0	-22.8
10.913	5.7	20.7	26.4	50.0	-23.6
18.182	5.2	21.2	26.4	50.0	-23.6
28.959	3.9	22.3	26.2	50.0	-23.8
16.911	4.9	21.2	26.1	50.0	-23.9
23.637	4.3	21.6	25.9	50.0	-24.1
9.274	5.2	20.5	25.7	50.0	-24.3
0.184	9.3	20.0	29.3	54.3	-25.0
5.409	4.5	20.3	24.8	50.0	-25.2

CONCLUSION

Pass



Tested By

POWERLINE CONDUCTED EMISSIONS

EUT:	Controller 3, Model 705101	Work Order:	IRRI0024
Serial Number:	1C:63:49:9D:4E:DC	Date:	2024-09-13
Customer:	IrriGreen, Inc.	Temperature:	21.9°C
Attendees:	None	Relative Humidity:	48%
Customer Project:	None	Bar. Pressure (PMSL):	1015 mb
Tested By:	Jeff Alcock	Job Site:	EV01
Power:	110VAC/60Hz	Configuration:	IRRI0024-9

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.207:2024	ANSI C63.10:2013

TEST PARAMETERS

Run #:	21	Line:	High Line	Add. Ext. Attenuation (dB):	0
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COMMENTS

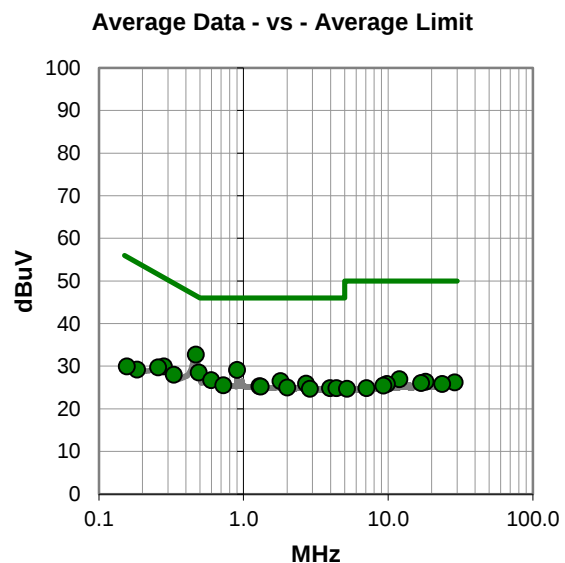
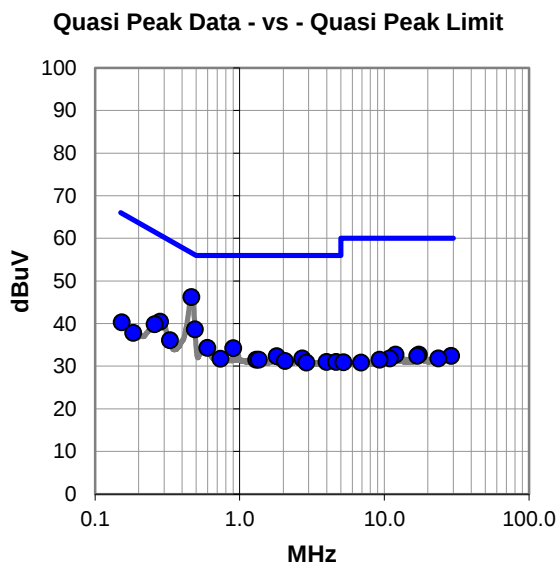
Unable to bundle I/O cable due to excessive length.

EUT OPERATING MODES

Transmitting 802.11b, 1 Mbps, Ch. 6 = 2437 MHz, Ant. 1

DEVIATIONS FROM TEST STANDARD

None



POWERLINE CONDUCTED EMISSIONS

RESULTS - Run #21

Quasi Peak Data - vs - Quasi Peak Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.464	26.3	19.9	46.2	56.6	-10.4
0.490	18.7	19.9	38.6	56.2	-17.6
0.281	20.5	19.9	40.4	60.8	-20.4
0.258	19.9	19.9	39.8	61.5	-21.7
0.597	14.4	19.9	34.3	56.0	-21.7
0.902	14.2	20.0	34.2	56.0	-21.8
0.330	16.2	19.9	36.1	59.5	-23.4
1.804	12.3	20.0	32.3	56.0	-23.7
2.706	11.7	20.1	31.8	56.0	-24.2
0.737	11.8	19.9	31.7	56.0	-24.3
1.302	11.5	20.0	31.5	56.0	-24.5
1.354	11.5	20.0	31.5	56.0	-24.5
2.059	11.2	20.0	31.2	56.0	-24.8
3.989	10.7	20.3	31.0	56.0	-25.0
4.656	10.7	20.3	31.0	56.0	-25.0
2.896	10.7	20.1	30.8	56.0	-25.2
0.153	20.2	20.1	40.3	65.8	-25.5
0.184	17.8	20.0	37.8	64.3	-26.5
12.002	12.0	20.7	32.7	60.0	-27.3
17.384	11.5	21.2	32.7	60.0	-27.3
16.914	11.2	21.2	32.4	60.0	-27.6
29.041	10.1	22.3	32.4	60.0	-27.6
10.913	11.1	20.7	31.8	60.0	-28.2
23.637	10.2	21.6	31.8	60.0	-28.2
9.277	11.0	20.5	31.5	60.0	-28.5

Average Data - vs - Average Limit

Freq (MHz)	Amp. (dBuV)	Factor (dB)	Adjusted (dBuV)	Spec. Limit (dBuV)	Margin (dB)
0.467	12.8	19.9	32.7	46.6	-13.9
0.902	9.1	20.0	29.1	46.0	-16.9
0.490	8.6	19.9	28.5	46.2	-17.7
0.597	6.8	19.9	26.7	46.0	-19.3
1.804	6.5	20.0	26.5	46.0	-19.5
2.706	5.8	20.1	25.9	46.0	-20.1
0.727	5.6	19.9	25.5	46.0	-20.5
1.288	5.3	20.0	25.3	46.0	-20.7
1.314	5.2	20.0	25.2	46.0	-20.8
0.281	10.0	19.9	29.9	50.8	-20.9
2.005	5.0	20.0	25.0	46.0	-21.0
3.972	4.5	20.3	24.8	46.0	-21.2
4.396	4.5	20.3	24.8	46.0	-21.2
2.881	4.6	20.1	24.7	46.0	-21.3
0.330	8.1	19.9	28.0	49.5	-21.5
0.257	9.8	19.9	29.7	51.5	-21.8
12.002	6.2	20.7	26.9	50.0	-23.1
18.182	5.1	21.2	26.3	50.0	-23.7
28.957	3.9	22.3	26.2	50.0	-23.8
16.913	4.8	21.2	26.0	50.0	-24.0
9.821	5.3	20.5	25.8	50.0	-24.2
23.637	4.2	21.6	25.8	50.0	-24.2
9.274	4.9	20.5	25.4	50.0	-24.6
0.184	9.2	20.0	29.2	54.3	-25.1
7.092	4.4	20.4	24.8	50.0	-25.2

CONCLUSION

Pass


Tested By

DUTY CYCLE

TEST DESCRIPTION

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

The 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.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAW	2024-02-14	2025-02-14
Block - DC	Fairview Microwave	SD3379	AMX	2024-03-16	2025-03-16
Attenuator	Fairview Microwave	SA26B-20	TWJ	2024-03-14	2025-03-14
Cable	Micro-Coax	UFD150A-1-0720-200200	EVK	2024-03-13	2025-03-13
Generator - Signal	Keysight	N5182B	TEU	2024-04-18	2027-04-18

DUTY CYCLE

EUT:	Controller 3, Model 705101	Work Order:	IRRI0024
Serial Number:	1C:63:49:9D:33:FF	Date:	2024-09-10
Customer:	IrriGreen, Inc.	Temperature:	22°C
Attendees:	None	Relative Humidity:	47.4%
Customer Project:	None	Bar. Pressure (PMSL):	1013 mbar
Tested By:	Jeff Alcock	Job Site:	EV06
Power:	110VAC/60Hz	Configuration:	IRRI0024-8

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2024	ANSI C63.10:2013

COMMENTS

Reference level offset includes: DC Block, 20 dB attenuator and measurement cable

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

N/A

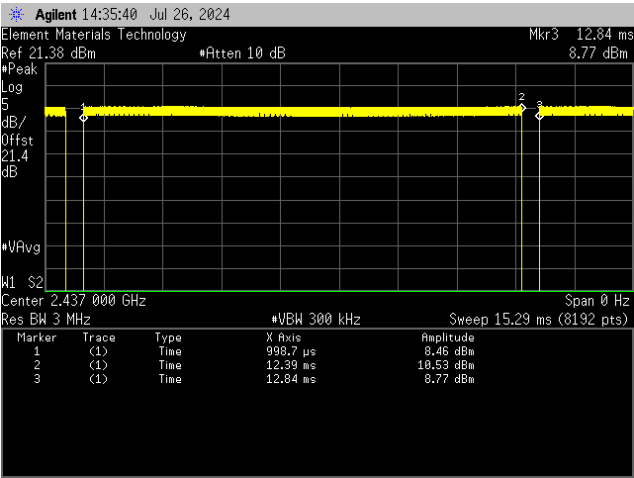


Tested By

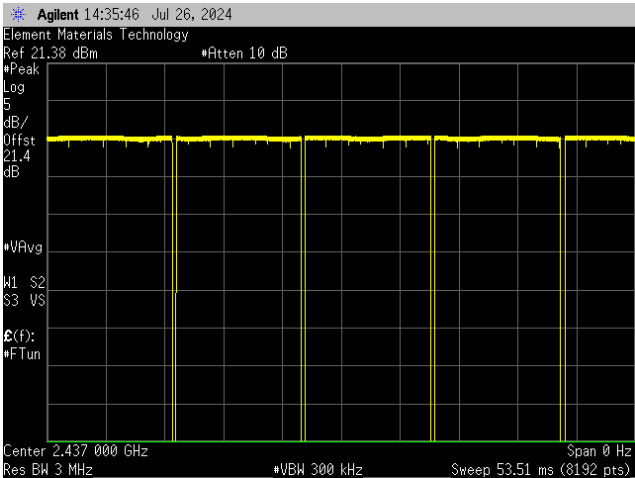
TEST RESULTS

	Pulse Width	Period	Number of Pulses	Value (%)	Limit N/A	Results
Antenna 2						
802.11(b), 20 MHz, 1 Mbps						
Mid Channel 6, 2437 MHz	11.392 ms	11.844 ms	1	96.2	N/A	N/A
	N/A	N/A	5	N/A	N/A	N/A
802.11(b), 20 MHz, 11 Mbps						
Mid Channel 6, 2437 MHz	1.211 ms	1.472 ms	1	82.2	N/A	N/A
	N/A	N/A	5	N/A	N/A	N/A
802.11(g), 20 MHz, 6 Mbps						
Mid Channel 6, 2437 MHz	1.892 ms	2.07 ms	1	91.4	N/A	N/A
	N/A	N/A	5	N/A	N/A	N/A
802.11(g), 20 MHz, 36 Mbps						
Mid Channel 6, 2437 MHz	332.5 us	780.3 us	1	42.6	N/A	N/A
	N/A	N/A	5	N/A	N/A	N/A
802.11(g), 20 MHz, 54 Mbps						
Mid Channel 6, 2437 MHz	228.744 us	1.633 ms	2	28.0	N/A	N/A
	N/A	N/A	10	N/A	N/A	N/A
802.11(n), 20 MHz, MCS0						
Mid Channel 6, 2437 MHz	1.764 ms	1.951 ms	1	90.4	N/A	N/A
	N/A	N/A	5	N/A	N/A	N/A
802.11(n), 20 MHz, MCS7						
Mid Channel 6, 2437 MHz	195.1 us	1.584 ms	2	24.5	N/A	N/A
	N/A	N/A	10	N/A	N/A	N/A

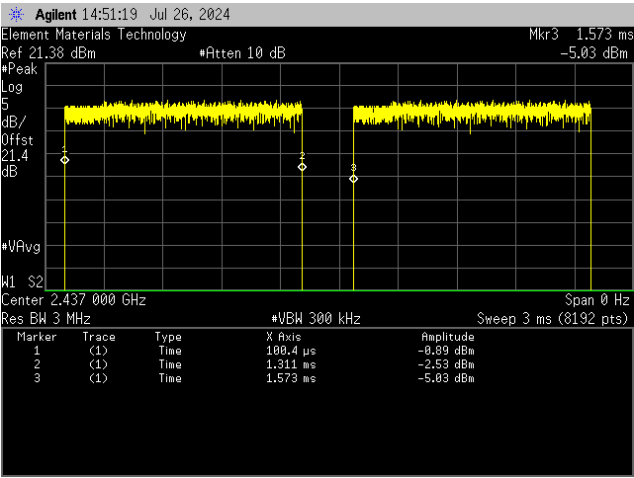
DUTY CYCLE



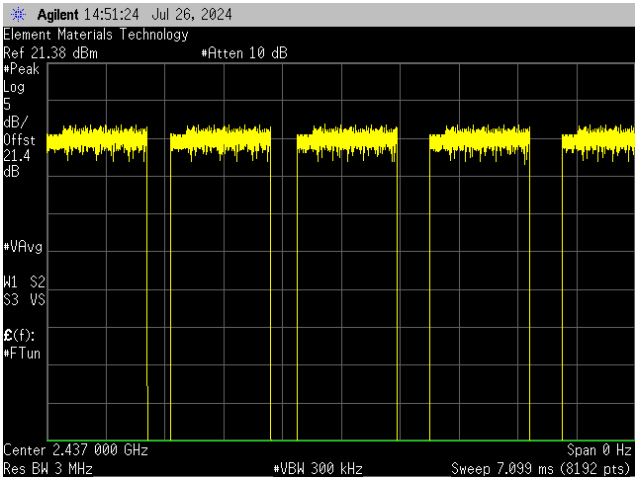
Antenna 2
802.11(b), 20 MHz, 1 Mbps
Mid Channel 6, 2437 MHz



Antenna 2
802.11(b), 20 MHz, 1 Mbps
Mid Channel 6, 2437 MHz

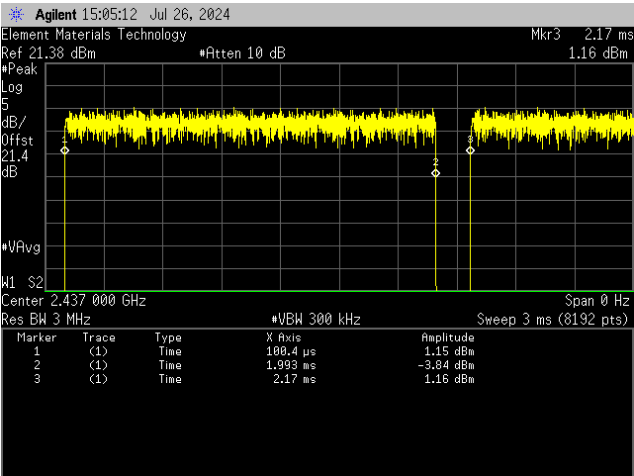


Antenna 2
802.11(b), 20 MHz, 11 Mbps
Mid Channel 6, 2437 MHz

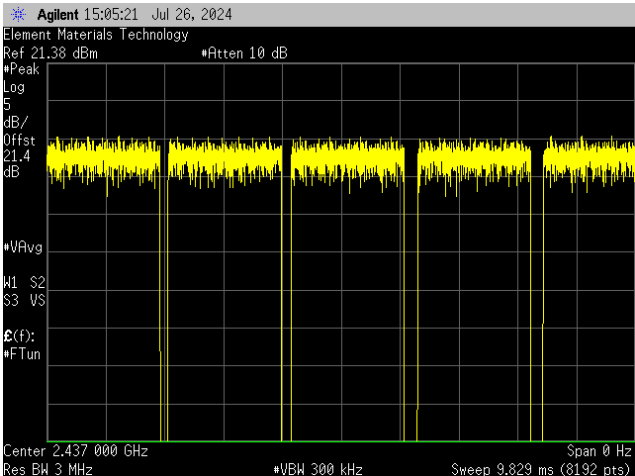


Antenna 2
802.11(b), 20 MHz, 11 Mbps
Mid Channel 6, 2437 MHz

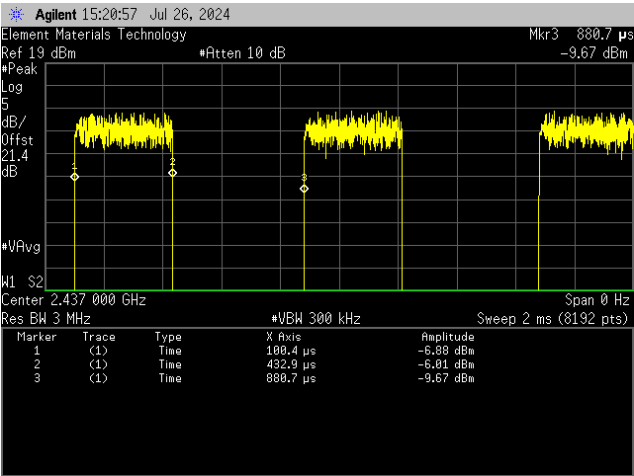
DUTY CYCLE



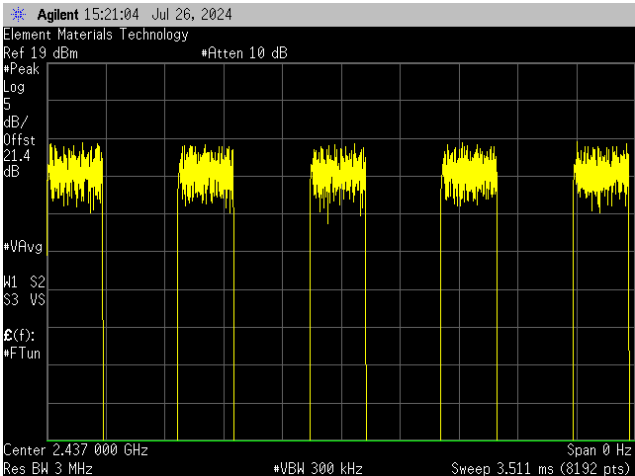
Antenna 2
802.11(g), 20 MHz, 6 Mbps
Mid Channel 6, 2437 MHz



Antenna 2
802.11(g), 20 MHz, 6 Mbps
Mid Channel 6, 2437 MHz

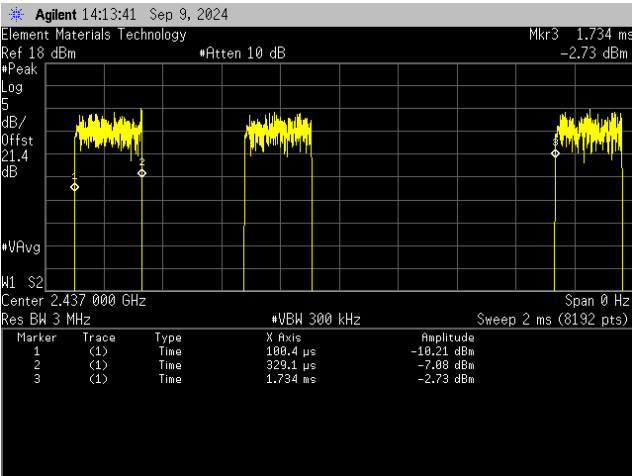


Antenna 2
802.11(g), 20 MHz, 36 Mbps
Mid Channel 6, 2437 MHz

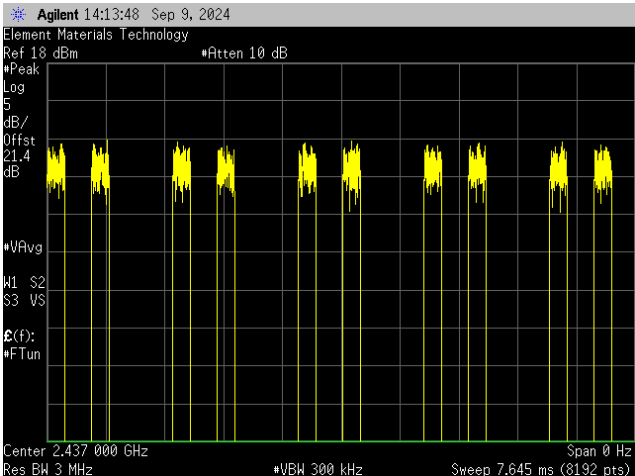


Antenna 2
802.11(g), 20 MHz, 36 Mbps
Mid Channel 6, 2437 MHz

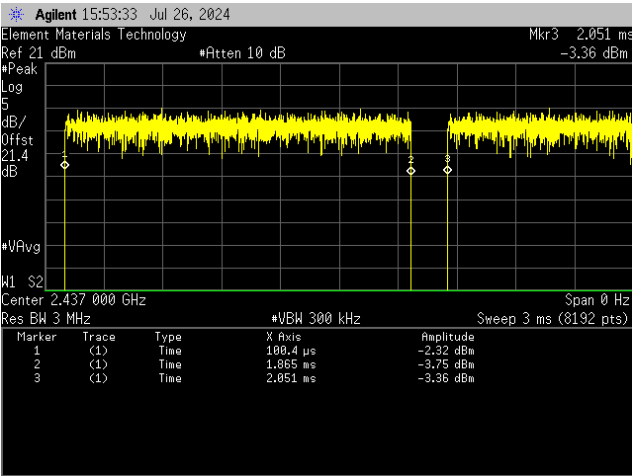
DUTY CYCLE



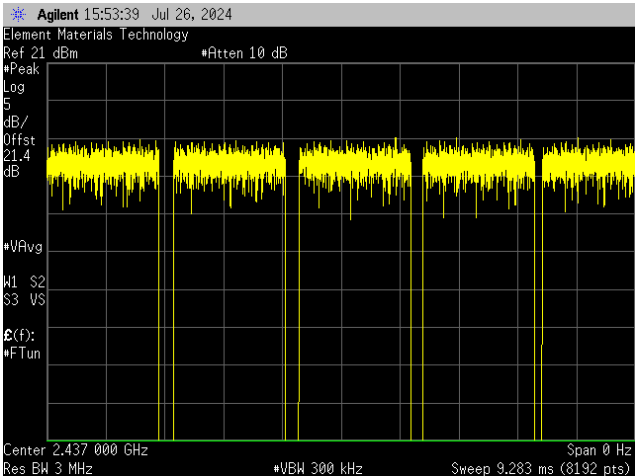
Antenna 2
802.11(g), 20 MHz, 54 Mbps
Mid Channel 6, 2437 MHz



Antenna 2
802.11(g), 20 MHz, 54 Mbps
Mid Channel 6, 2437 MHz

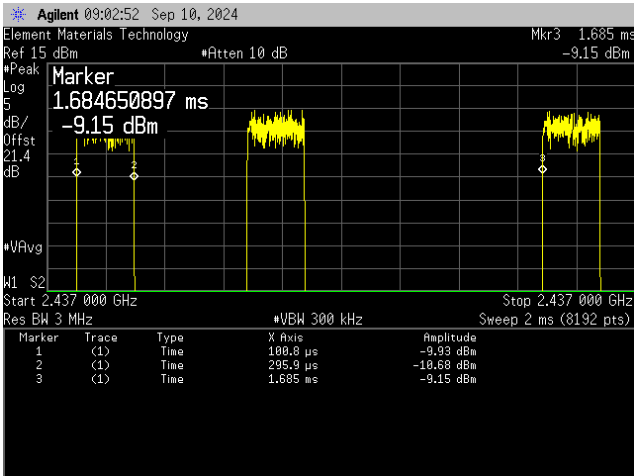


Antenna 2
802.11(n), 20 MHz, MCS0
Mid Channel 6, 2437 MHz

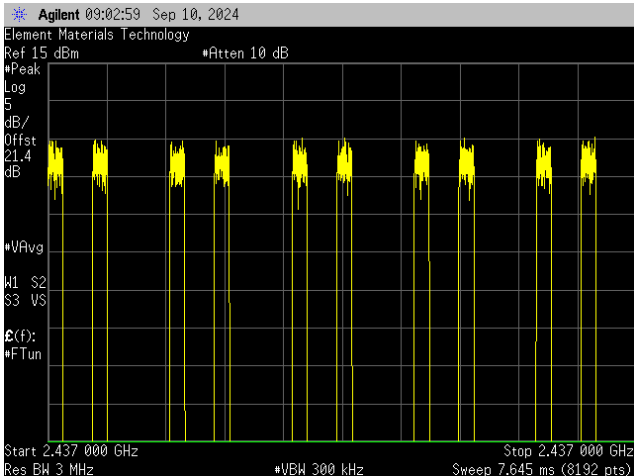


Antenna 2
802.11(n), 20 MHz, MCS0
Mid Channel 6, 2437 MHz

DUTY CYCLE



Antenna 2
802.11(n), 20 MHz, MCS7
Mid Channel 6, 2437 MHz



Antenna 2
802.11(n), 20 MHz, MCS7
Mid Channel 6, 2437 MHz

DTS BANDWIDTH (6dB)

TEST DESCRIPTION

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

The 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.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAW	2024-02-14	2025-02-14
Cable	Micro-Coax	UFD150A-1-0720-200200	EVI	2023-11-22	2024-11-22
Attenuator	S.M. Electronics	SA26B-20	AUY	2024-03-13	2025-03-13
Block - DC	Fairview Microwave	SD3379	AMW	2024-03-13	2025-03-13
Generator - Signal	Keysight	N5182B	TEU	2024-04-18	2027-04-18

DTS BANDWIDTH (6dB)



EUT:	Controller 3, Model 705101	Work Order:	IRRI0024
Serial Number:	1C:63:49:9D:4E:DC	Date:	2024-07-26
Customer:	IrriGreen, Inc.	Temperature:	22.3°C
Attendees:	None	Relative Humidity:	51.3%
Customer Project:	None	Bar. Pressure (PMSL):	1016 mbar
Tested By:	Christopher Ladwig	Job Site:	EV06
Power:	110VAC/60Hz	Configuration:	IRRI0024-3

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2024	ANSI C63.10:2013

COMMENTS

Reference level offset includes: DC block, 20 dB attenuator and measurement cable.
Measurements performed on the antenna port that has the highest conducted output power.

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

Pass

Tested By

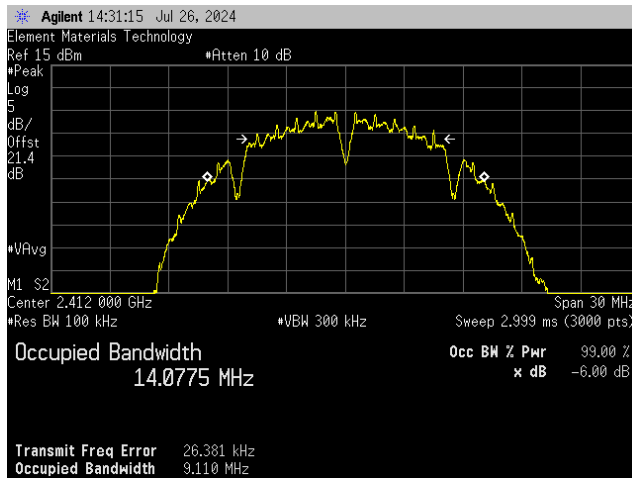
TEST RESULTS

Limit			
Antenna 2			
802.11(b), 20 MHz, 1 Mbps			
Low Channel 1, 2412 MHz	9.11 MHz	500 kHz	Pass
Mid Channel 6, 2437 MHz	9.101 MHz	500 kHz	Pass
High Channel 11, 2462 MHz	9.102 MHz	500 kHz	Pass
802.11(b), 20 MHz, 11 Mbps			
Low Channel 1, 2412 MHz	9.5 MHz	500 kHz	Pass
Mid Channel 6, 2437 MHz	9.473 MHz	500 kHz	Pass
High Channel 11, 2462 MHz	9.624 MHz	500 kHz	Pass
802.11(g), 20 MHz, 6 Mbps			
Low Channel 1, 2412 MHz	13.791 MHz	500 kHz	Pass
Mid Channel 6, 2437 MHz	14.464 MHz	500 kHz	Pass
High Channel 11, 2462 MHz	14.884 MHz	500 kHz	Pass
802.11(g), 20 MHz, 36 Mbps			
Low Channel 1, 2412 MHz	16.468 MHz	500 kHz	Pass
Mid Channel 6, 2437 MHz	16.429 MHz	500 kHz	Pass
High Channel 11, 2462 MHz	16.442 MHz	500 kHz	Pass
802.11(g), 20 MHz, 54 Mbps			
Low Channel 1, 2412 MHz	16.445 MHz	500 kHz	Pass
Mid Channel 6, 2437 MHz	16.49 MHz	500 kHz	Pass
High Channel 11, 2462 MHz	16.392 MHz	500 kHz	Pass
802.11(n), 20 MHz, MCS0			

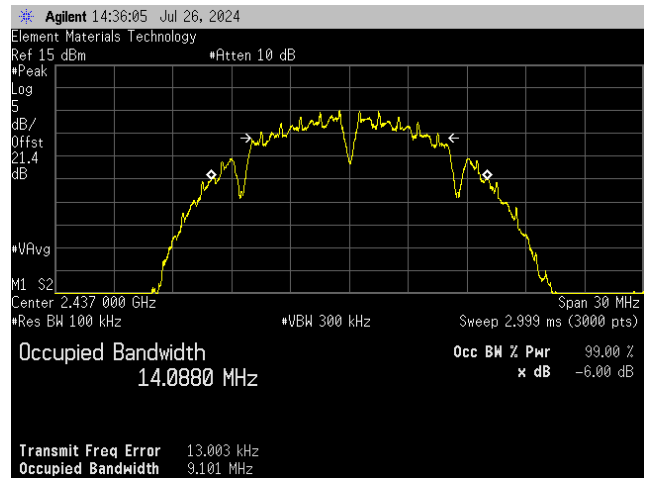
DTS BANDWIDTH (6dB)

Limit			
Low Channel 1, 2412 MHz	15.065 MHz	500 kHz	Pass
Mid Channel 6, 2437 MHz	13.599 MHz	500 kHz	Pass
High Channel 11, 2462 MHz	15.099 MHz	500 kHz	Pass
802.11(n), 20 MHz, MCS7			
Low Channel 1, 2412 MHz	17.586 MHz	500 kHz	Pass
Mid Channel 6, 2437 MHz	17.601 MHz	500 kHz	Pass
High Channel 11, 2462 MHz	17.652 MHz	500 kHz	Pass

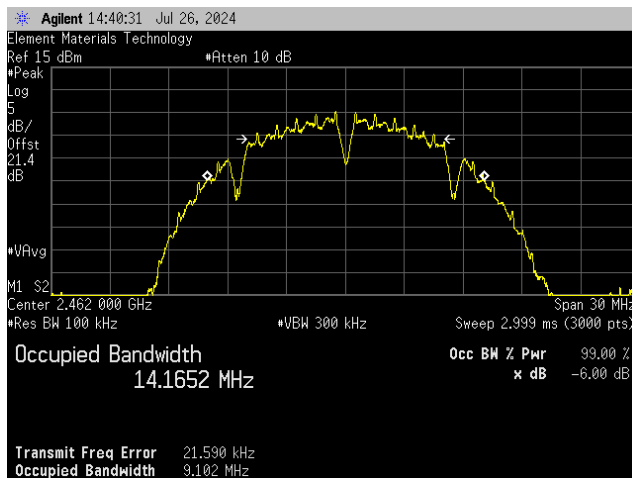
DTS BANDWIDTH (6dB)



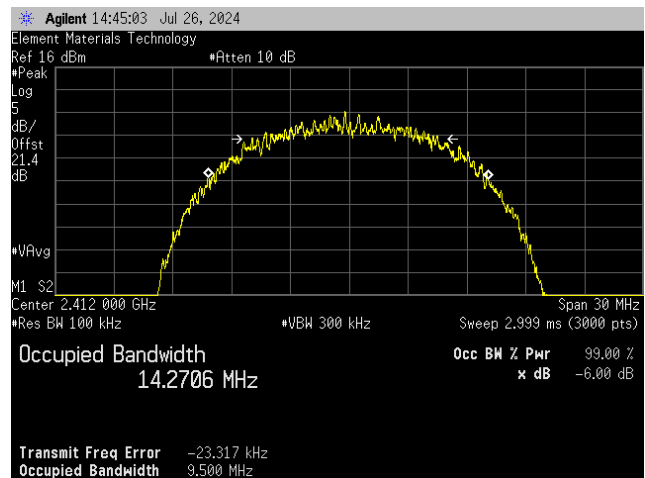
Antenna 2
802.11(b), 20 MHz, 1 Mbps
Low Channel 1, 2412 MHz



Antenna 2
802.11(b), 20 MHz, 1 Mbps
Mid Channel 6, 2437 MHz

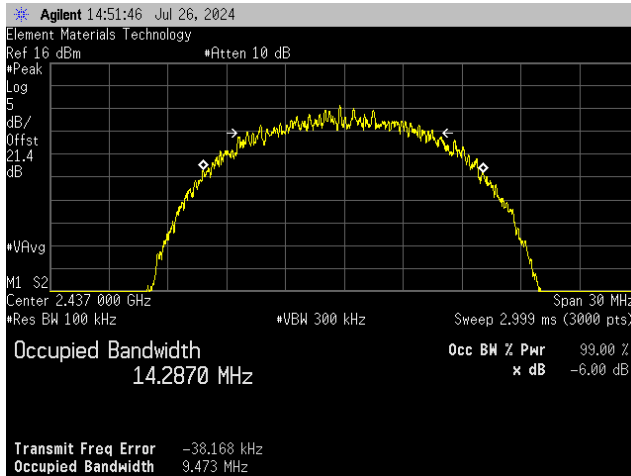


Antenna 2
802.11(b), 20 MHz, 1 Mbps
High Channel 11, 2462 MHz

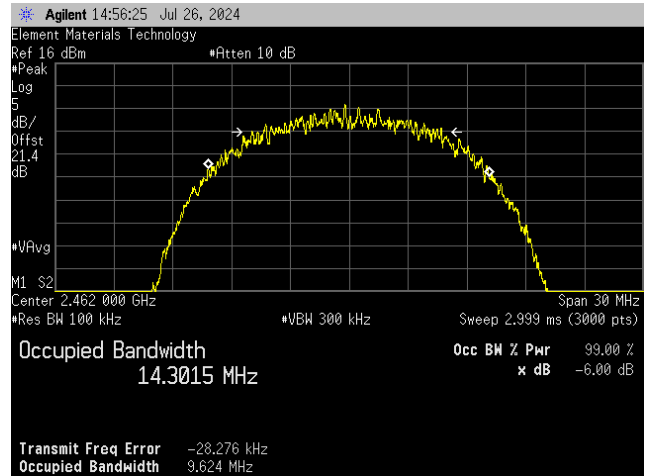


Antenna 2
802.11(b), 20 MHz, 11 Mbps
Low Channel 1, 2412 MHz

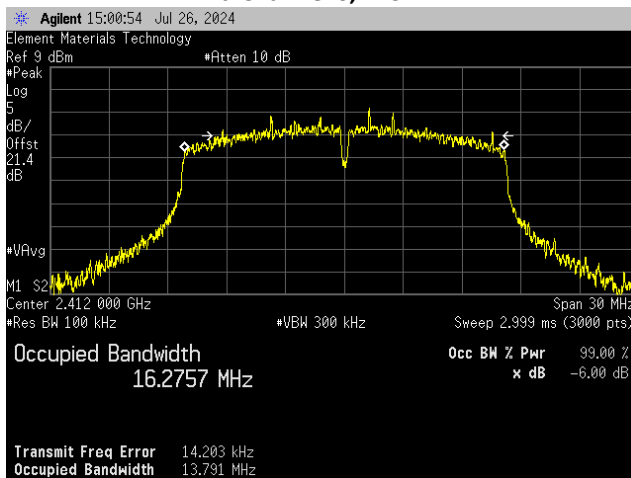
DTS BANDWIDTH (6dB)



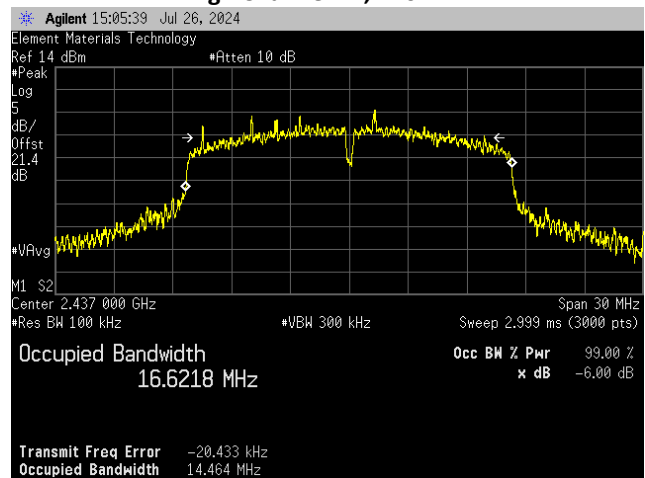
Antenna 2
802.11(b), 20 MHz, 11 Mbps
Mid Channel 6, 2437 MHz



Antenna 2
802.11(b), 20 MHz, 11 Mbps
High Channel 11, 2462 MHz

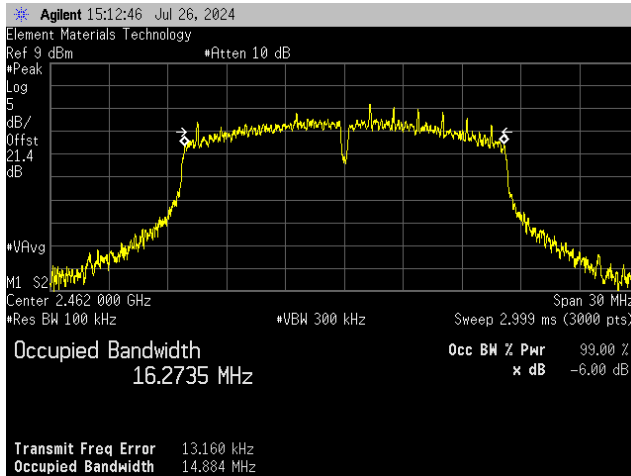


Antenna 2
802.11(g), 20 MHz, 6 Mbps
Low Channel 1, 2412 MHz

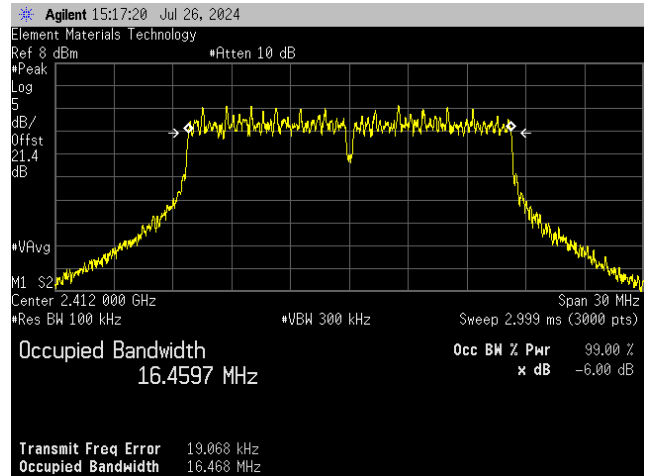


Antenna 2
802.11(g), 20 MHz, 6 Mbps
Mid Channel 6, 2437 MHz

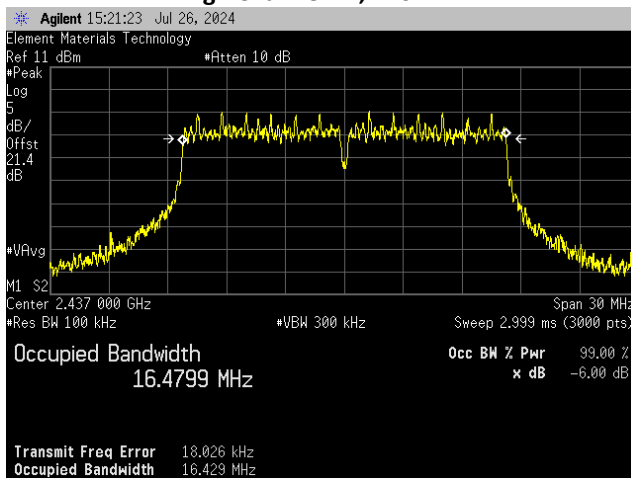
DTS BANDWIDTH (6dB)



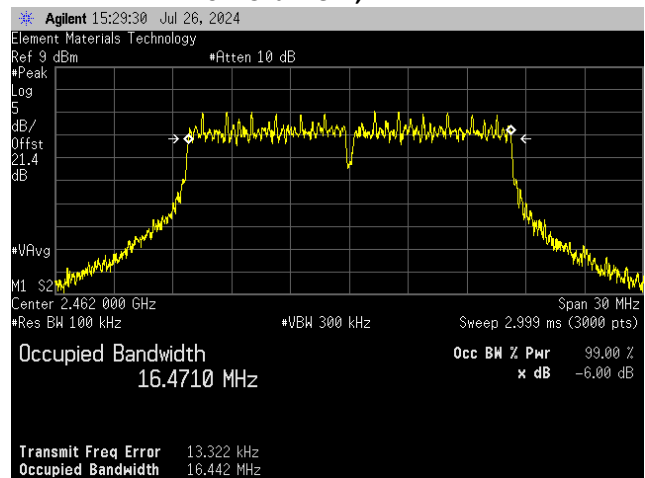
Antenna 2
802.11(g), 20 MHz, 6 Mbps
High Channel 11, 2462 MHz



Antenna 2
802.11(g), 20 MHz, 36 Mbps
Low Channel 1, 2412 MHz

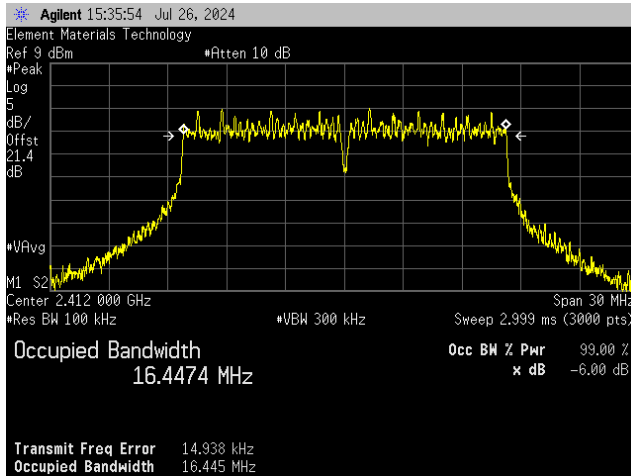


Antenna 2
802.11(g), 20 MHz, 36 Mbps
Mid Channel 6, 2437 MHz

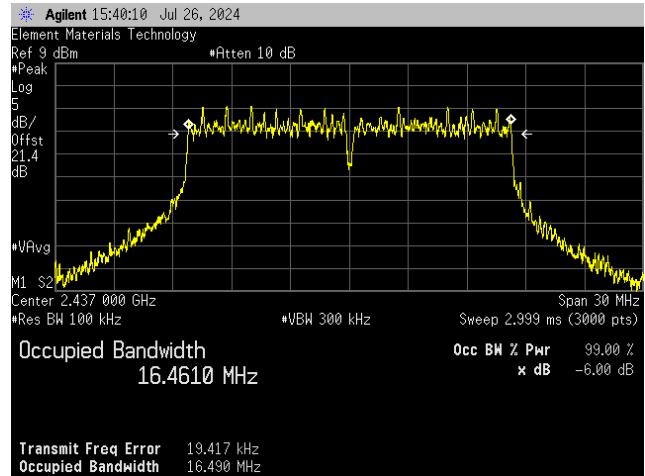


Antenna 2
802.11(g), 20 MHz, 36 Mbps
High Channel 11, 2462 MHz

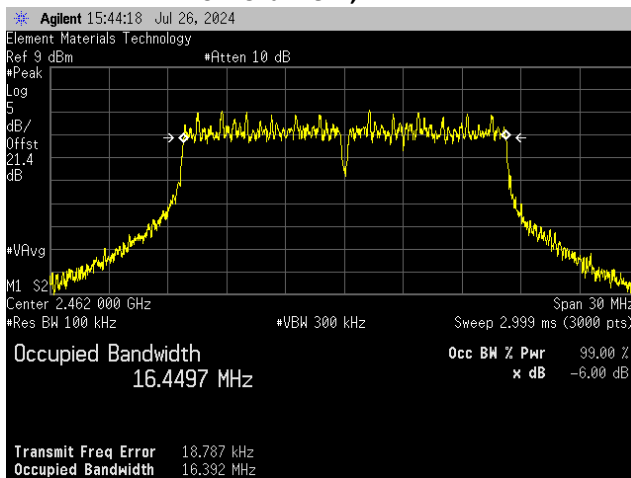
DTS BANDWIDTH (6dB)



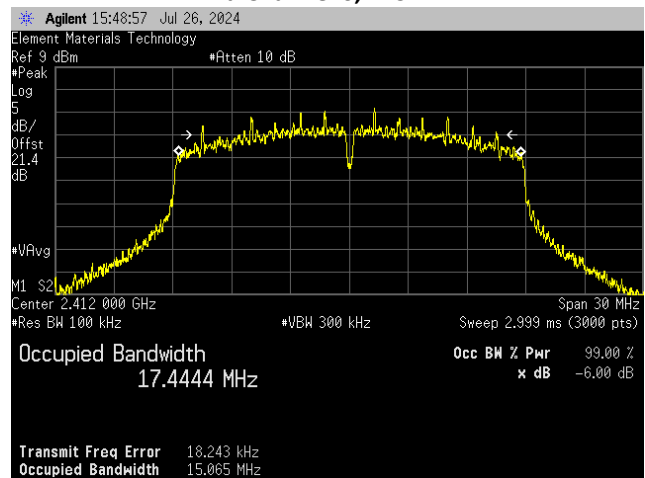
Antenna 2
802.11(g), 20 MHz, 54 Mbps
Low Channel 1, 2412 MHz



Antenna 2
802.11(g), 20 MHz, 54 Mbps
Mid Channel 6, 2437 MHz

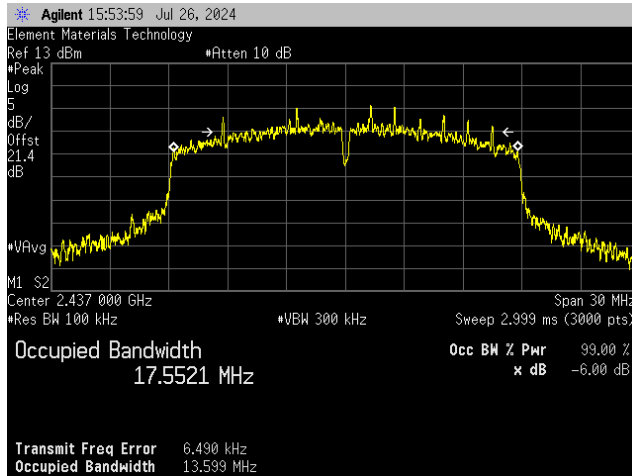


Antenna 2
802.11(g), 20 MHz, 54 Mbps
High Channel 11, 2462 MHz

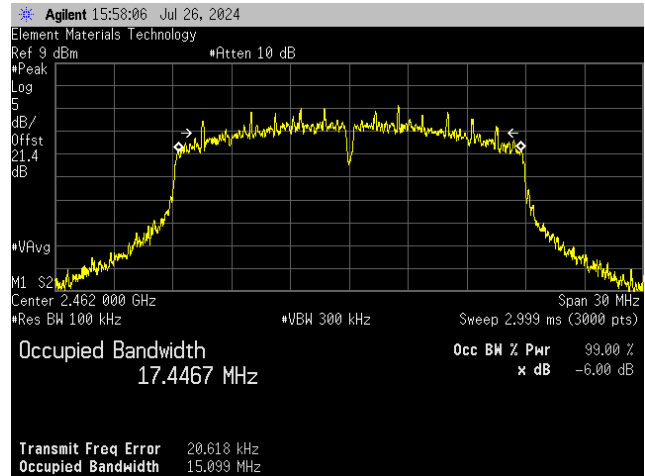


Antenna 2
802.11(n), 20 MHz, MCS0
Low Channel 1, 2412 MHz

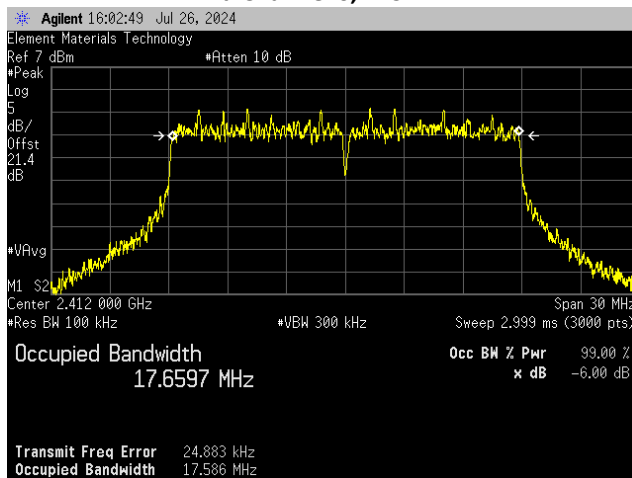
DTS BANDWIDTH (6dB)



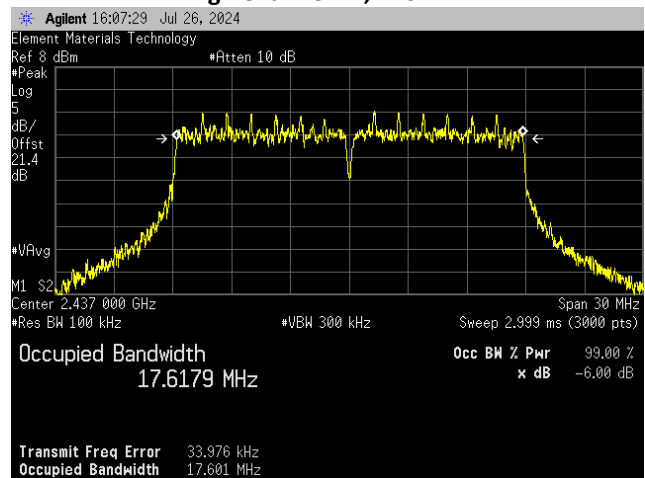
Antenna 2
802.11(n), 20 MHz, MCS0
Mid Channel 6, 2437 MHz



Antenna 2
802.11(n), 20 MHz, MCS0
High Channel 11, 2462 MHz

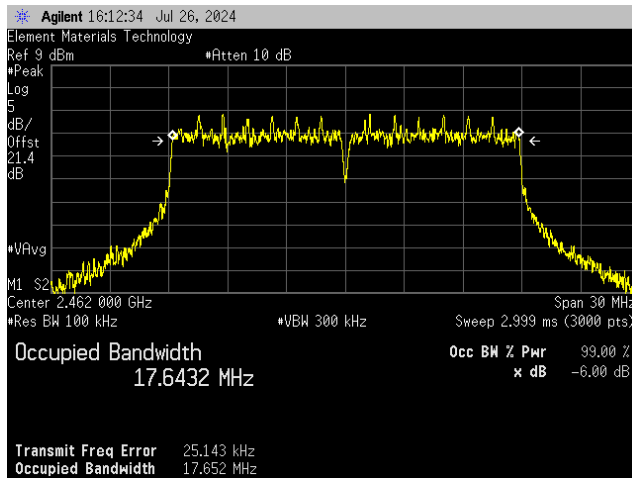


Antenna 2
802.11(n), 20 MHz, MCS7
Low Channel 1, 2412 MHz



Antenna 2
802.11(n), 20 MHz, MCS7
Mid Channel 6, 2437 MHz

DTS BANDWIDTH (6dB)



Antenna 2
802.11(n), 20 MHz, MCS7
High Channel 11, 2462 MHz

OCCUPIED BANDWIDTH (99%)

TEST DESCRIPTION

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

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

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

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

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

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

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAW	2024-02-14	2025-02-14
Cable	Micro-Coax	UFD150A-1-0720-200200	EVI	2023-11-22	2024-11-22
Attenuator	S.M. Electronics	SA26B-20	AUY	2024-03-13	2025-03-13
Block - DC	Fairview Microwave	SD3379	AMW	2024-03-13	2025-03-13
Generator - Signal	Keysight	N5182B	TEU	2024-04-18	2027-04-18

OCCUPIED BANDWIDTH (99%)

EUT:	Controller 3, Model 705101	Work Order:	IRRI0024
Serial Number:	1C:63:49:9D:4E:DC	Date:	2024-07-26
Customer:	Irrigreen, Inc.	Temperature:	22.2°C
Attendees:	None	Relative Humidity:	50.9%
Customer Project:	None	Bar. Pressure (PMSL):	1016 mbar
Tested By:	Christopher Ladwig	Job Site:	EV06
Power:	110VAC/60Hz	Configuration:	IRRI0024-3

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2024	ANSI C63.10:2013

COMMENTS

Reference level offset includes: DC block, 20 dB attenuator and measurement cable.
Measurements performed on the antenna port that has the highest conducted output power.

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

N/A



Tested By

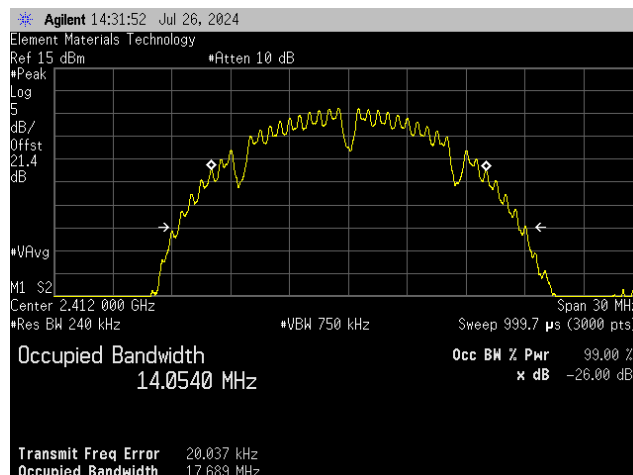
TEST RESULTS

	Value	Limit	Result
Antenna 2			
802.11(b), 20 MHz, 1 Mbps			
Low Channel 1, 2412 MHz	14.054 MHz	N/A	N/A
Mid Channel 6, 2437 MHz	14.074 MHz	N/A	N/A
High Channel 11, 2462 MHz	14.136 MHz	N/A	N/A
802.11(b), 20 MHz, 11 Mbps			
Low Channel 1, 2412 MHz	14.264 MHz	N/A	N/A
Mid Channel 6, 2437 MHz	14.296 MHz	N/A	N/A
High Channel 11, 2462 MHz	14.303 MHz	N/A	N/A
802.11(g), 20 MHz, 6 Mbps			
Low Channel 1, 2412 MHz	16.484 MHz	N/A	N/A
Mid Channel 6, 2437 MHz	16.961 MHz	N/A	N/A
High Channel 11, 2462 MHz	16.429 MHz	N/A	N/A
802.11(g), 20 MHz, 36 Mbps			
Low Channel 1, 2412 MHz	16.709 MHz	N/A	N/A
Mid Channel 6, 2437 MHz	16.906 MHz	N/A	N/A
High Channel 11, 2462 MHz	16.89 MHz	N/A	N/A
802.11(g), 20 MHz, 54 Mbps			
Low Channel 1, 2412 MHz	16.784 MHz	N/A	N/A
Mid Channel 6, 2437 MHz	16.749 MHz	N/A	N/A
High Channel 11, 2462 MHz	16.8 MHz	N/A	N/A
802.11(n), 20 MHz, MCS0			

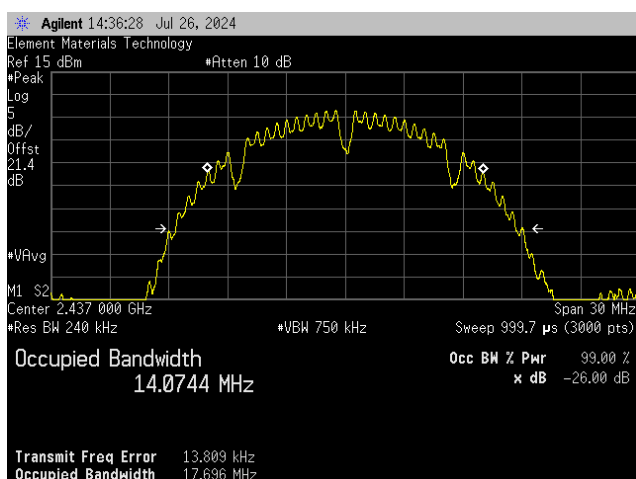
OCCUPIED BANDWIDTH (99%)

	Value	Limit	Result
Low Channel 1, 2412 MHz	17.535 MHz	N/A	N/A
Mid Channel 6, 2437 MHz	17.74 MHz	N/A	N/A
High Channel 11, 2462 MHz	17.546 MHz	N/A	N/A
802.11(n), 20 MHz, MCS7			
Low Channel 1, 2412 MHz	17.839 MHz	N/A	N/A
Mid Channel 6, 2437 MHz	17.897 MHz	N/A	N/A
High Channel 11, 2462 MHz	17.87 MHz	N/A	N/A

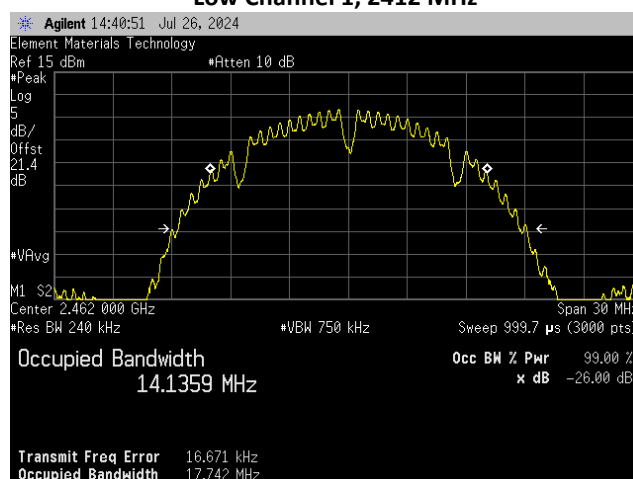
OCCUPIED BANDWIDTH (99%)



Antenna 2
802.11(b), 20 MHz, 1 Mbps
Low Channel 1, 2412 MHz

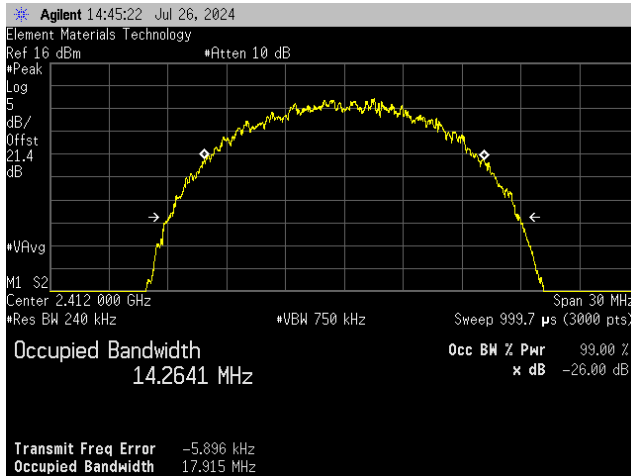


Antenna 2
802.11(b), 20 MHz, 1 Mbps
Mid Channel 6, 2437 MHz

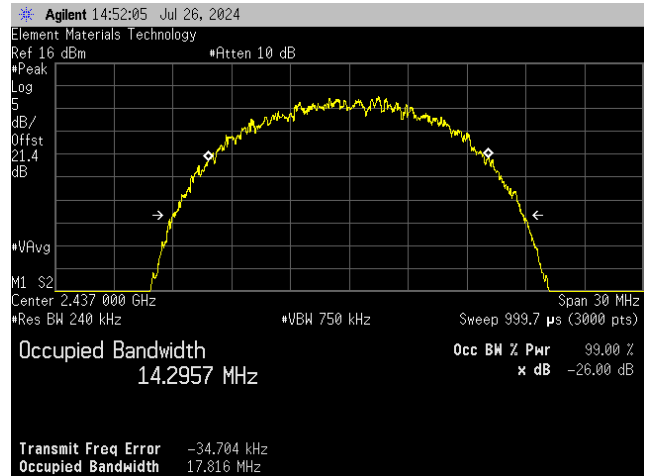


Antenna 2
802.11(b), 20 MHz, 1 Mbps
High Channel 11, 2462 MHz

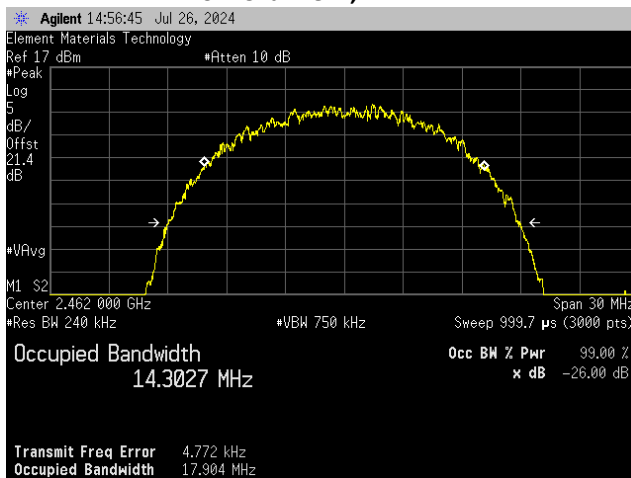
OCCUPIED BANDWIDTH (99%)



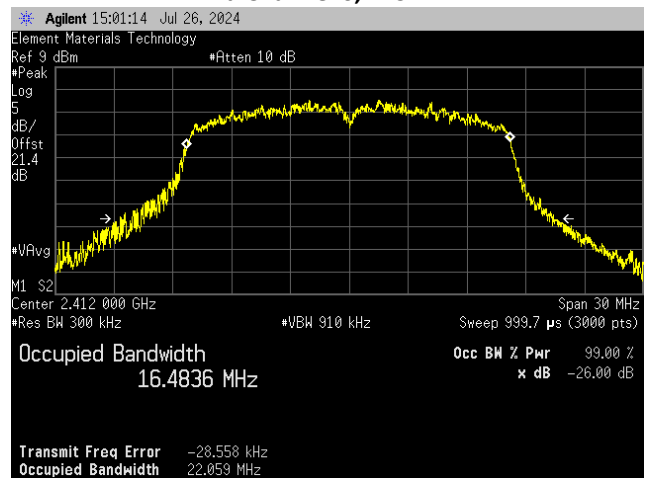
Antenna 2
802.11(b), 20 MHz, 11 Mbps
Low Channel 1, 2412 MHz



Antenna 2
802.11(b), 20 MHz, 11 Mbps
Mid Channel 6, 2437 MHz

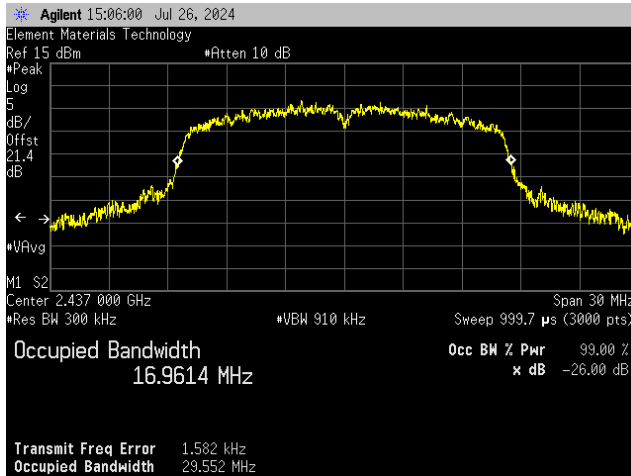


Antenna 2
802.11(b), 20 MHz, 11 Mbps
High Channel 11, 2462 MHz

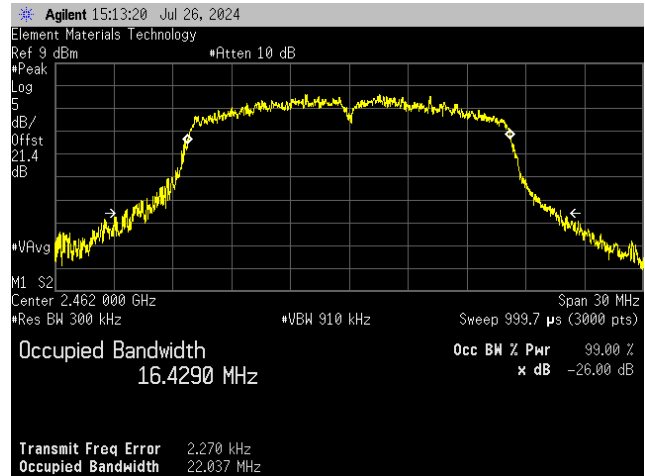


Antenna 2
802.11(g), 20 MHz, 6 Mbps
Low Channel 1, 2412 MHz

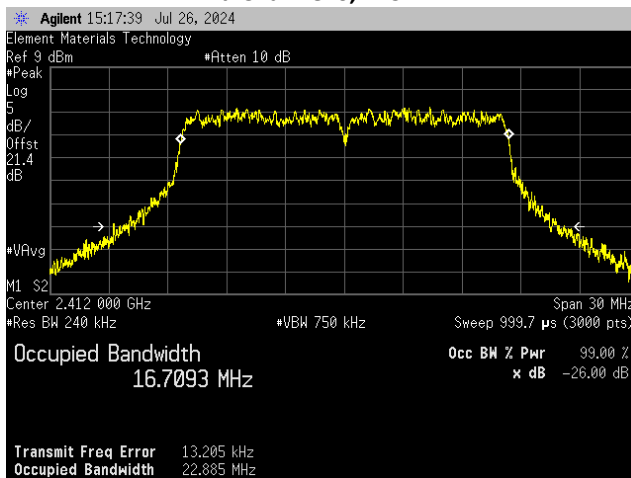
OCCUPIED BANDWIDTH (99%)



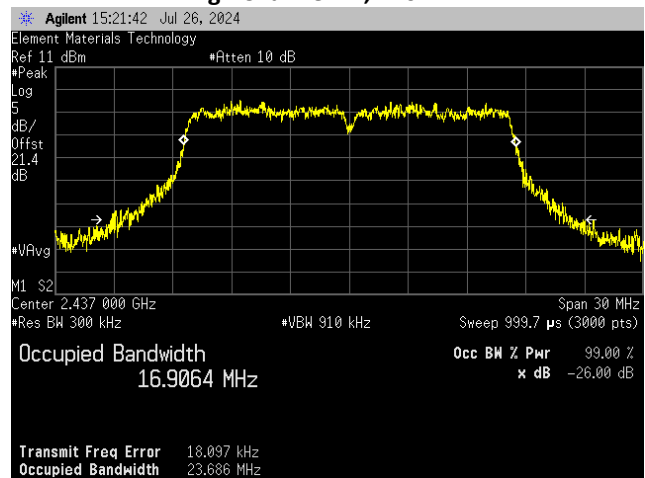
Antenna 2
802.11(g), 20 MHz, 6 Mbps
Mid Channel 6, 2437 MHz



Antenna 2
802.11(g), 20 MHz, 6 Mbps
High Channel 11, 2462 MHz

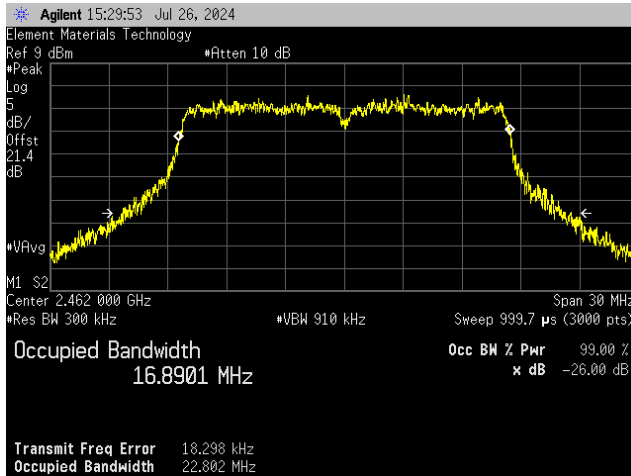


Antenna 2
802.11(g), 20 MHz, 36 Mbps
Low Channel 1, 2412 MHz

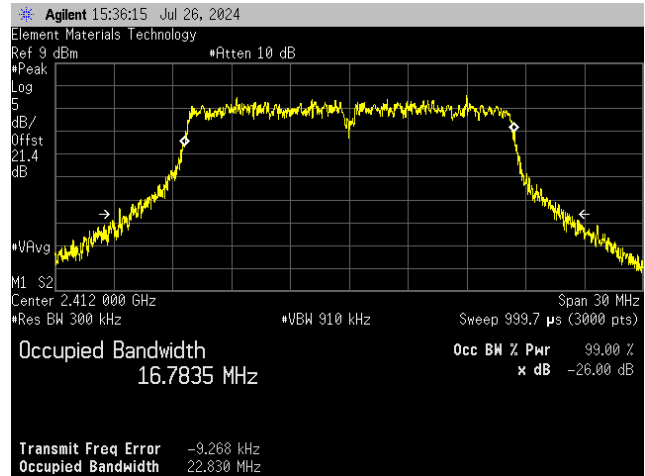


Antenna 2
802.11(g), 20 MHz, 36 Mbps
Mid Channel 6, 2437 MHz

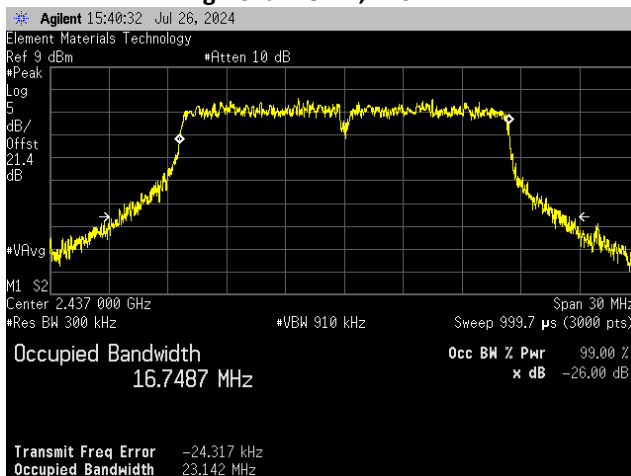
OCCUPIED BANDWIDTH (99%)



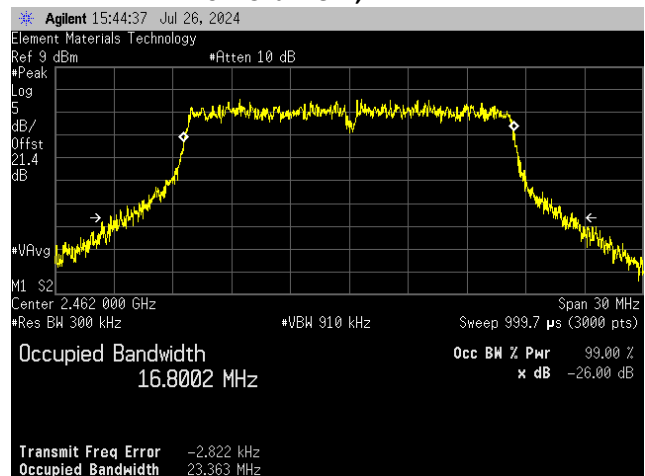
Antenna 2
802.11(g), 20 MHz, 36 Mbps
High Channel 11, 2462 MHz



Antenna 2
802.11(g), 20 MHz, 54 Mbps
Low Channel 1, 2412 MHz

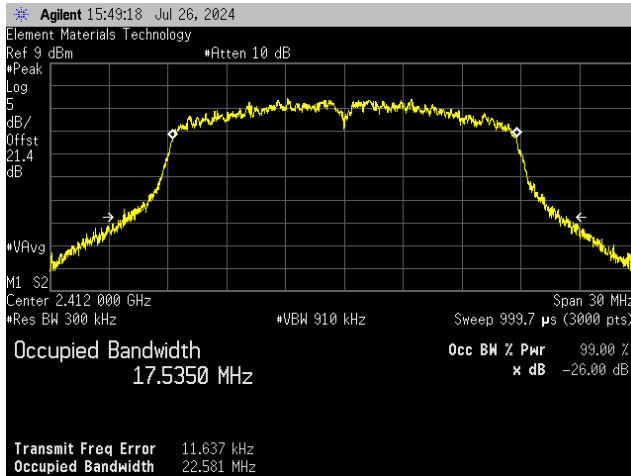


Antenna 2
802.11(g), 20 MHz, 54 Mbps
Mid Channel 6, 2437 MHz

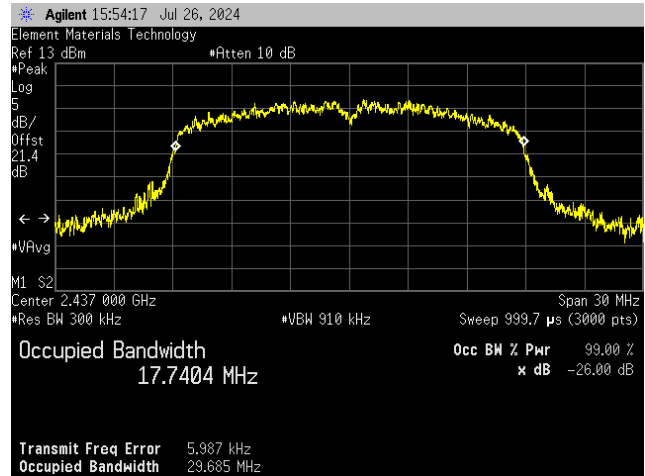


Antenna 2
802.11(g), 20 MHz, 54 Mbps
High Channel 11, 2462 MHz

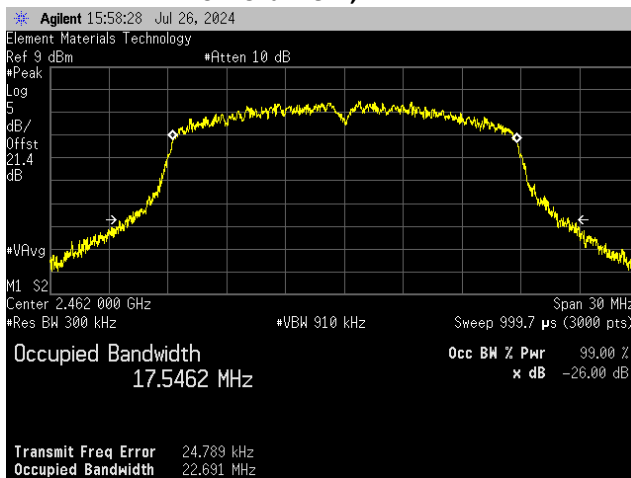
OCCUPIED BANDWIDTH (99%)



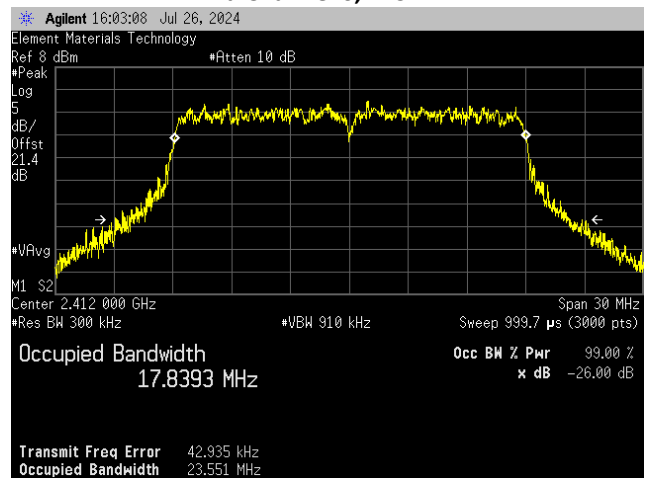
Antenna 2
802.11(n), 20 MHz, MCS0
Low Channel 1, 2412 MHz



Antenna 2
802.11(n), 20 MHz, MCS0
Mid Channel 6, 2437 MHz

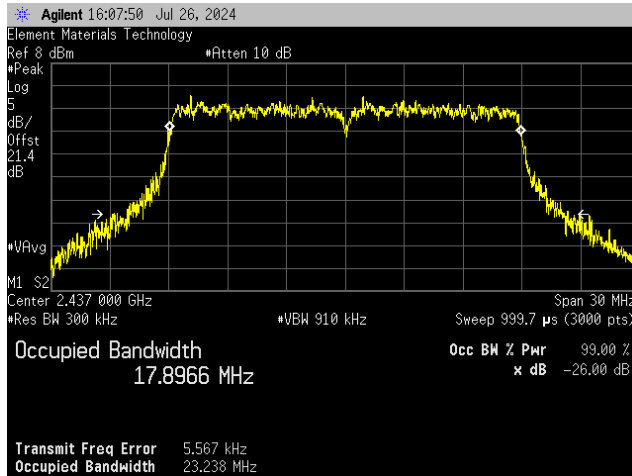


Antenna 2
802.11(n), 20 MHz, MCS0
High Channel 11, 2462 MHz

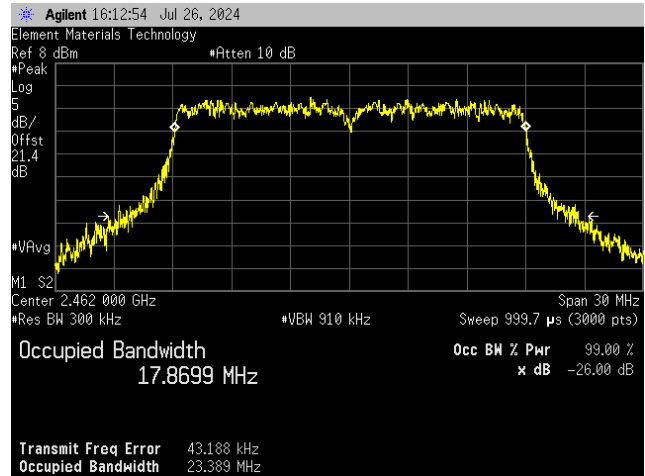


Antenna 2
802.11(n), 20 MHz, MCS7
Low Channel 1, 2412 MHz

OCCUPIED BANDWIDTH (99%)



Antenna 2
802.11(n), 20 MHz, MCS7
Mid Channel 6, 2437 MHz



Antenna 2
802.11(n), 20 MHz, MCS7
High Channel 11, 2462 MHz

OUTPUT POWER

TEST DESCRIPTION

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

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

The fundamental emission output power (maximum average conducted output power) was measured using the channels and modes as called out on the following data sheets. The transmit power was set to its default maximum.

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

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAW	2024-02-14	2025-02-14
Block - DC	Fairview Microwave	SD3379	AMX	2024-03-16	2025-03-16
Attenuator	Fairview Microwave	SA26B-20	TWJ	2024-03-14	2025-03-14
Cable	Micro-Coax	UFD150A-1-0720-200200	EVK	2024-03-13	2025-03-13
Generator - Signal	Keysight	N5182B	TEU	2024-04-18	2027-04-18

OUTPUT POWER

EUT:	Controller 3, Model 705101	Work Order:	IRRI0024
Serial Number:	1C:63:49:9D:33:FF	Date:	2024-09-10
Customer:	IrriGreen, Inc.	Temperature:	22°C
Attendees:	None	Relative Humidity:	47.6%
Customer Project:	None	Bar. Pressure (PMSL):	1013 mbar
Tested By:	Jeff Alcock	Job Site:	EV06
Power:	110VAC/60Hz	Configuration:	IRRI0024-8

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2024	ANSI C63.10:2013

COMMENTS

Reference level offset includes: DC Block, 20 dB attenuator and measurement cable

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

Pass



Tested By

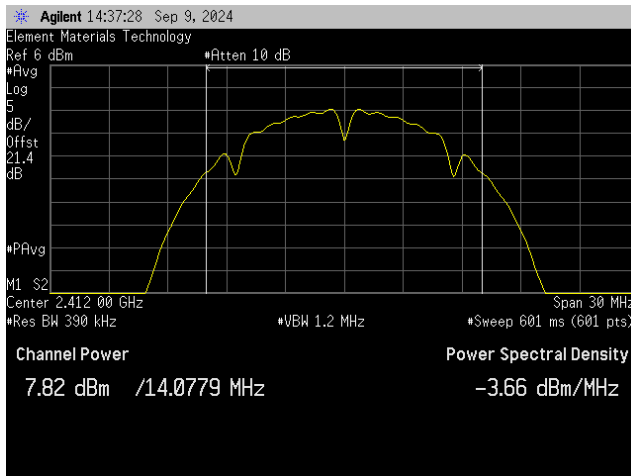
TEST RESULTS

	Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
Antenna 1					
802.11(b), 20 MHz, 1 Mbps					
Low Channel 1, 2412 MHz	7.825	0.2	8.0	30	Pass
Mid Channel 6, 2437 MHz	14.104	0.2	14.3	30	Pass
High Channel 11, 2462 MHz	14.158	0.2	14.4	30	Pass
802.11(b), 20 MHz, 11 Mbps					
Low Channel 1, 2412 MHz	7.576	0.9	8.5	30	Pass
Mid Channel 6, 2437 MHz	13.961	0.9	14.9	30	Pass
High Channel 11, 2462 MHz	14.052	0.9	15.0	30	Pass
802.11(g), 20 MHz, 6 Mbps					
Low Channel 1, 2412 MHz	3.286	0.4	3.7	30	Pass
Mid Channel 6, 2437 MHz	13.715	0.4	14.1	30	Pass
High Channel 11, 2462 MHz	9.313	0.4	9.7	30	Pass
802.11(g), 20 MHz, 36 Mbps					
Low Channel 1, 2412 MHz	0.023	3.7	3.7	30	Pass
Mid Channel 6, 2437 MHz	8.111	3.7	11.8	30	Pass
High Channel 11, 2462 MHz	6.051	3.7	9.8	30	Pass
802.11(g), 20 MHz, 54 Mbps					
Low Channel 1, 2412 MHz	-1.575	5.5	3.9	30	Pass
Mid Channel 6, 2437 MHz	4.862	5.5	10.4	30	Pass
High Channel 11, 2462 MHz	4.462	5.5	10.0	30	Pass
802.11(n), 20 MHz, MCS0					

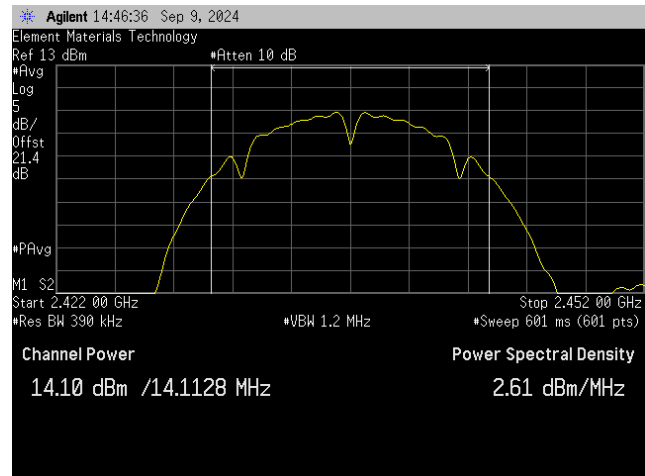
OUTPUT POWER

	Avg Cond Pwr (dBm)	Duty Cycle Factor (dB)	Out Pwr (dBm)	Limit (dBm)	Result
Low Channel 1, 2412 MHz	3.245	0.4	3.6	30	Pass
Mid Channel 6, 2437 MHz	12.608	0.4	13.0	30	Pass
High Channel 11, 2462 MHz	9.118	0.4	9.5	30	Pass
802.11(n), 20 MHz, MCS7					
Low Channel 1, 2412 MHz	-3.072	6.1	3.0	30	Pass
Mid Channel 6, 2437 MHz	2.847	6.1	8.9	30	Pass
High Channel 11, 2462 MHz	2.976	6.1	9.1	30	Pass
Antenna 2					
802.11(b), 20 MHz, 1 Mbps					
Low Channel 1, 2412 MHz	6.598	0.2	6.8	30	Pass
Mid Channel 6, 2437 MHz	14.586	0.2	14.8	30	Pass
High Channel 11, 2462 MHz	14.781	0.2	15.0	30	Pass
802.11(b), 20 MHz, 11 Mbps					
Low Channel 1, 2412 MHz	6.448	0.9	7.3	30	Pass
Mid Channel 6, 2437 MHz	14.245	0.9	15.1	30	Pass
High Channel 11, 2462 MHz	14.456	0.9	15.4	30	Pass
802.11(g), 20 MHz, 6 Mbps					
Low Channel 1, 2412 MHz	2.423	0.4	2.8	30	Pass
Mid Channel 6, 2437 MHz	14.075	0.4	14.5	30	Pass
High Channel 11, 2462 MHz	9.78	0.4	10.2	30	Pass
802.11(g), 20 MHz, 36 Mbps					
Low Channel 1, 2412 MHz	-0.91	3.7	2.8	30	Pass
Mid Channel 6, 2437 MHz	8.47	3.7	12.2	30	Pass
High Channel 11, 2462 MHz	6.568	3.7	10.3	30	Pass
802.11(g), 20 MHz, 54 Mbps					
Low Channel 1, 2412 MHz	-2.532	5.5	3.0	30	Pass
Mid Channel 6, 2437 MHz	5.227	5.5	10.7	30	Pass
High Channel 11, 2462 MHz	4.989	5.5	10.5	30	Pass
802.11(n), 20 MHz, MCS0					
Low Channel 1, 2412 MHz	2.218	0.4	2.6	30	Pass
Mid Channel 6, 2437 MHz	12.982	0.4	13.4	30	Pass
High Channel 11, 2462 MHz	9.589	0.4	10.0	30	Pass
802.11(n), 20 MHz, MCS7					
Low Channel 1, 2412 MHz	-4.994	6.1	1.1	30	Pass
Mid Channel 6, 2437 MHz	3.168	6.1	9.3	30	Pass
High Channel 11, 2462 MHz	3.457	6.1	9.6	30	Pass

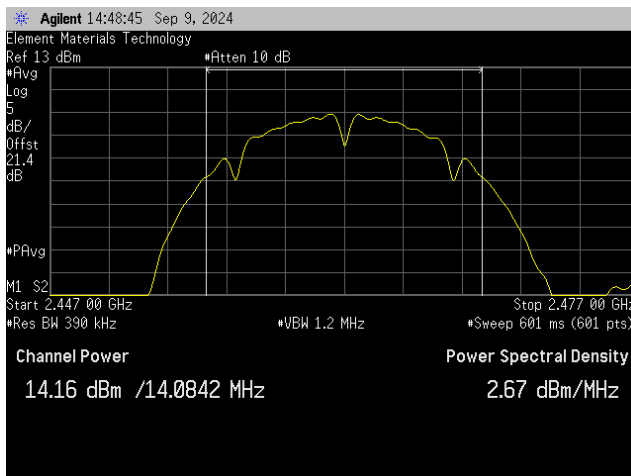
OUTPUT POWER



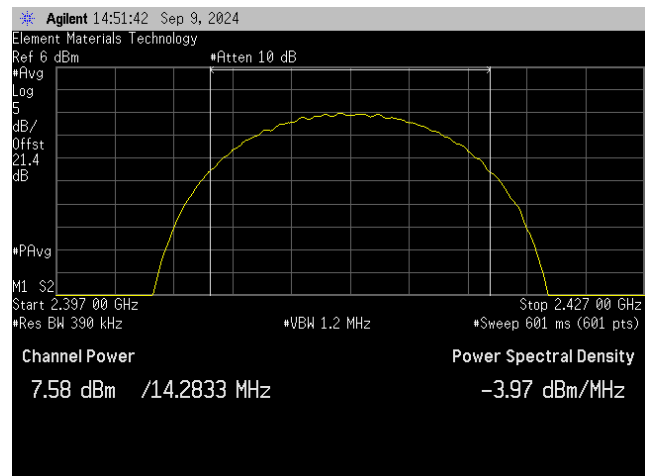
Antenna 1
802.11(b), 20 MHz, 1 Mbps
Low Channel 1, 2412 MHz



Antenna 1
802.11(b), 20 MHz, 1 Mbps
Mid Channel 6, 2437 MHz

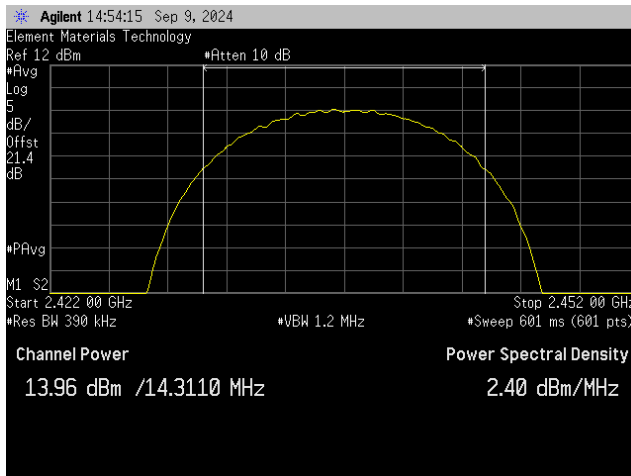


Antenna 1
802.11(b), 20 MHz, 1 Mbps
High Channel 11, 2462 MHz

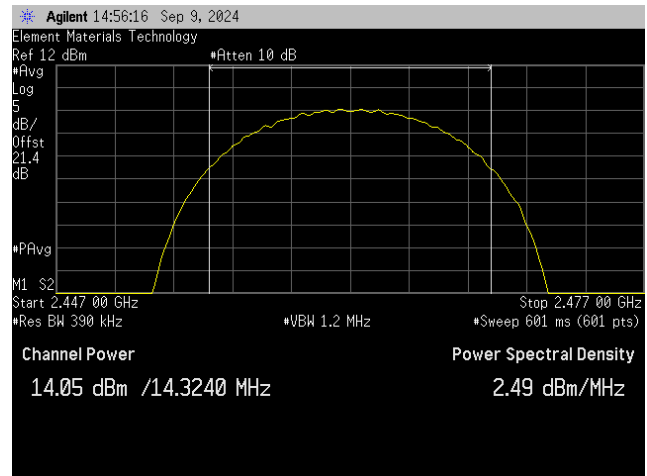


Antenna 1
802.11(b), 20 MHz, 11 Mbps
Low Channel 1, 2412 MHz

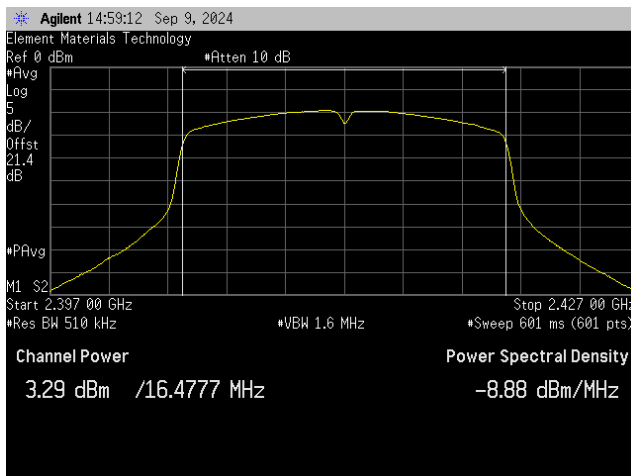
OUTPUT POWER



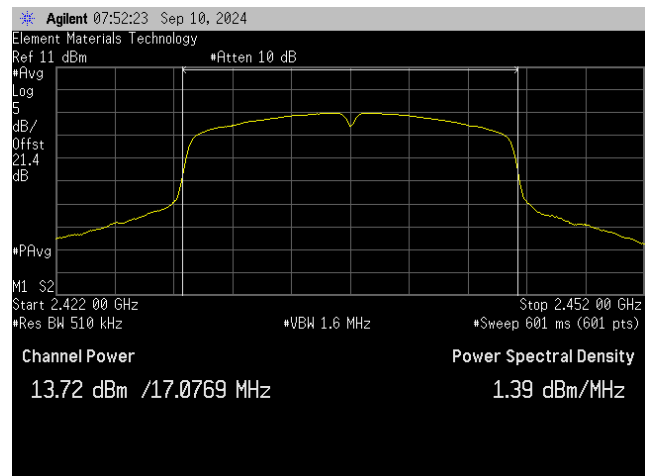
Antenna 1
802.11(b), 20 MHz, 11 Mbps
Mid Channel 6, 2437 MHz



Antenna 1
802.11(b), 20 MHz, 11 Mbps
High Channel 11, 2462 MHz

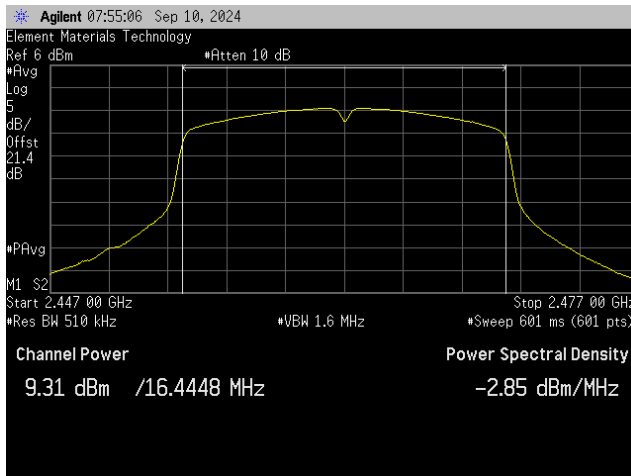


Antenna 1
802.11(g), 20 MHz, 6 Mbps
Low Channel 1, 2412 MHz

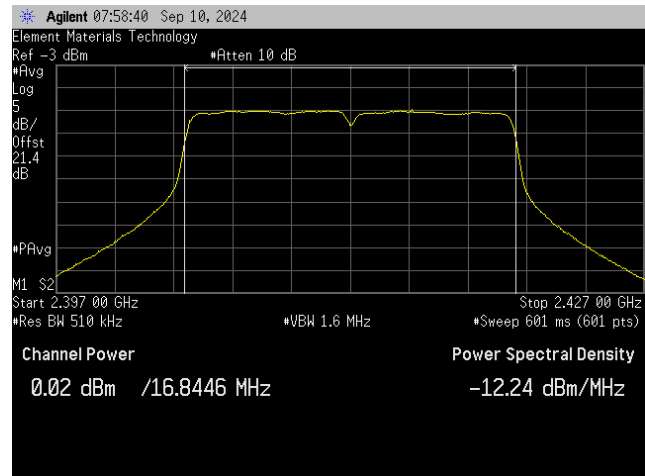


Antenna 1
802.11(g), 20 MHz, 6 Mbps
Mid Channel 6, 2437 MHz

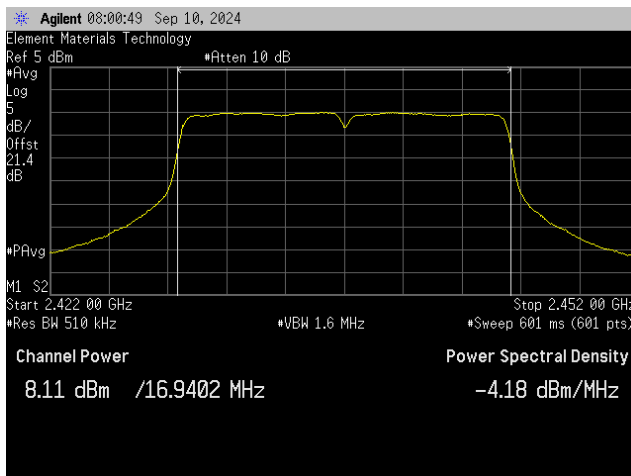
OUTPUT POWER



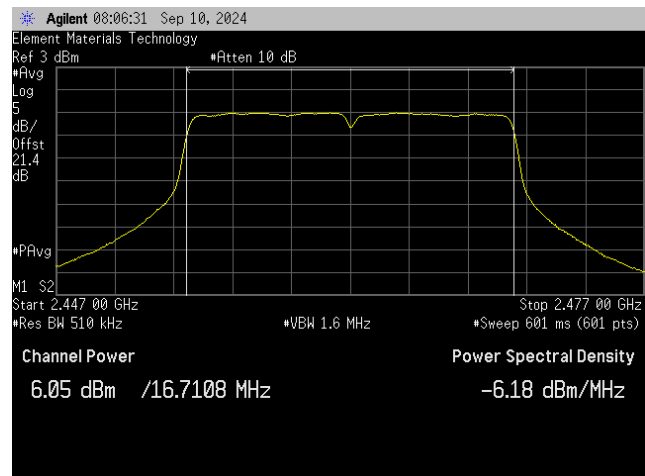
Antenna 1
802.11(g), 20 MHz, 6 Mbps
High Channel 11, 2462 MHz



Antenna 1
802.11(g), 20 MHz, 36 Mbps
Low Channel 1, 2412 MHz

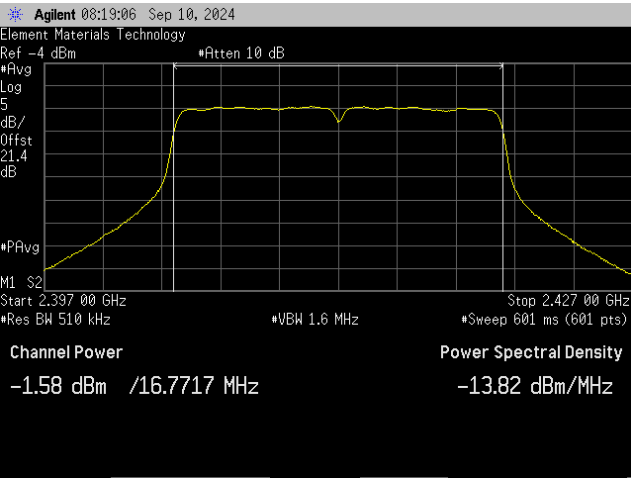


Antenna 1
802.11(g), 20 MHz, 36 Mbps
Mid Channel 6, 2437 MHz

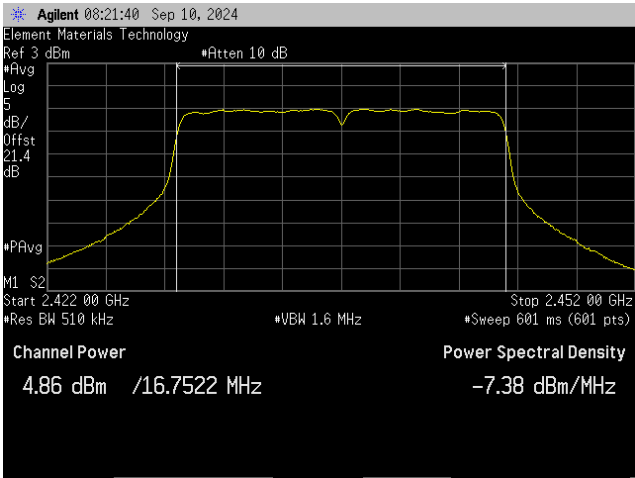


Antenna 1
802.11(g), 20 MHz, 36 Mbps
High Channel 11, 2462 MHz

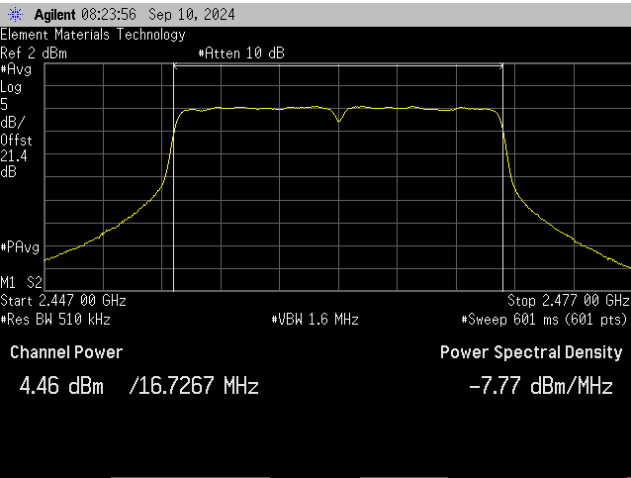
OUTPUT POWER



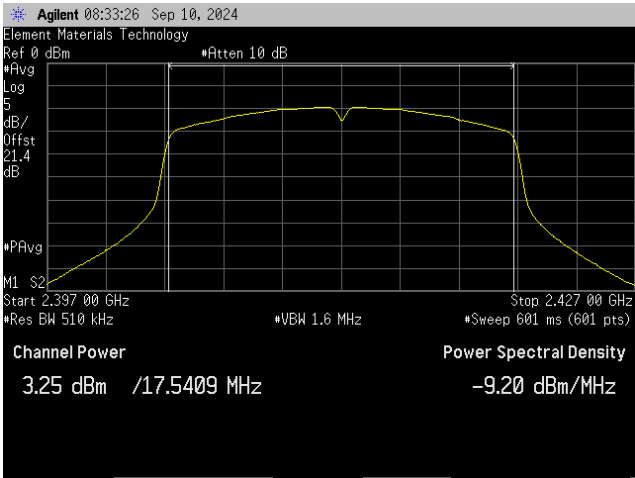
Antenna 1
802.11(g), 20 MHz, 54 Mbps
Low Channel 1, 2412 MHz



Antenna 1
802.11(g), 20 MHz, 54 Mbps
Mid Channel 6, 2437 MHz

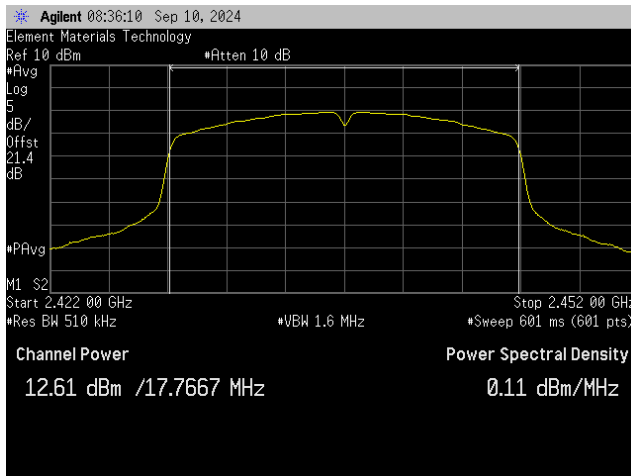


Antenna 1
802.11(g), 20 MHz, 54 Mbps
High Channel 11, 2462 MHz

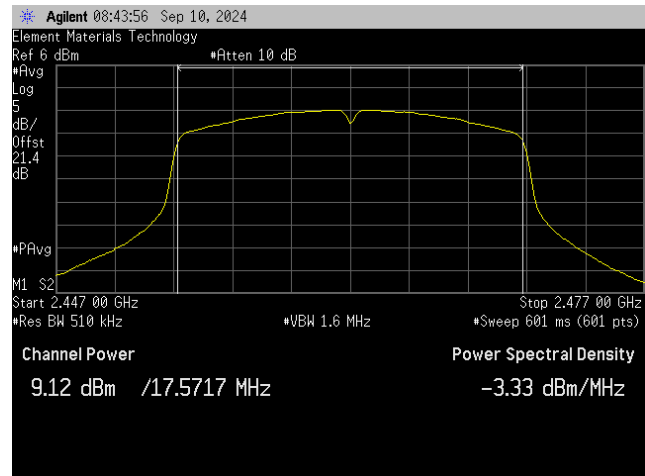


Antenna 1
802.11(n), 20 MHz, MCS0
Low Channel 1, 2412 MHz

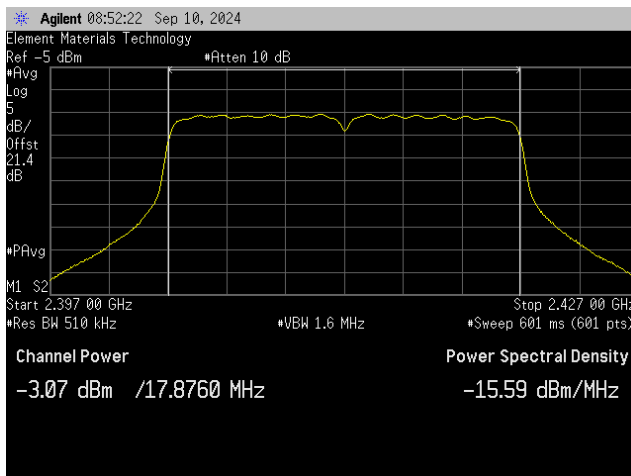
OUTPUT POWER



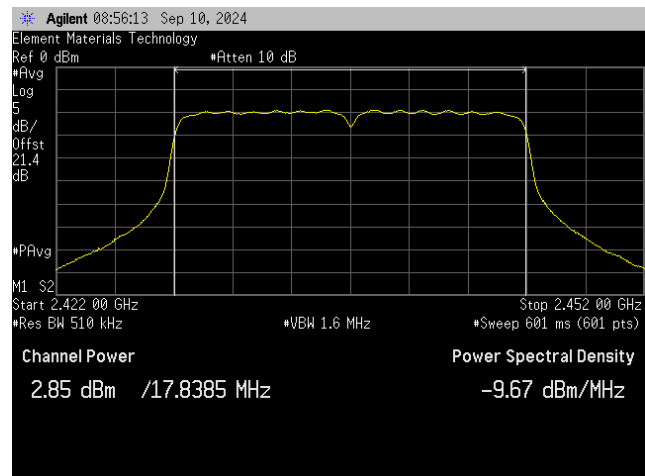
Antenna 1
802.11(n), 20 MHz, MCS0
Mid Channel 6, 2437 MHz



Antenna 1
802.11(n), 20 MHz, MCS0
High Channel 11, 2462 MHz

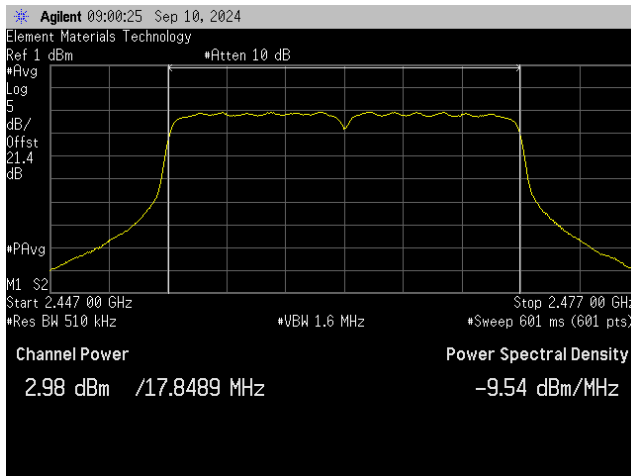


Antenna 1
802.11(n), 20 MHz, MCS7
Low Channel 1, 2412 MHz

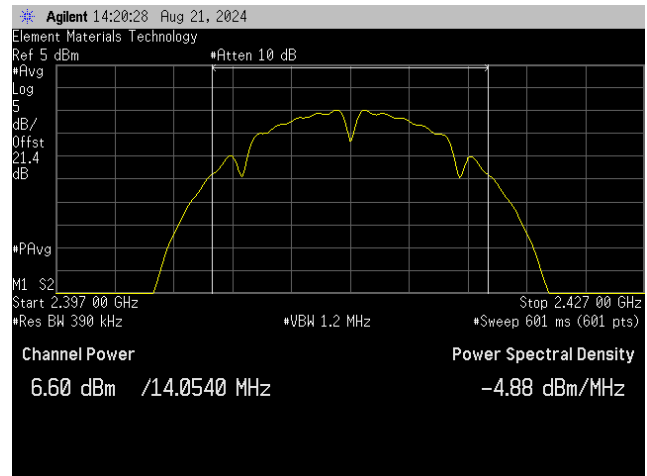


Antenna 1
802.11(n), 20 MHz, MCS7
Mid Channel 6, 2437 MHz

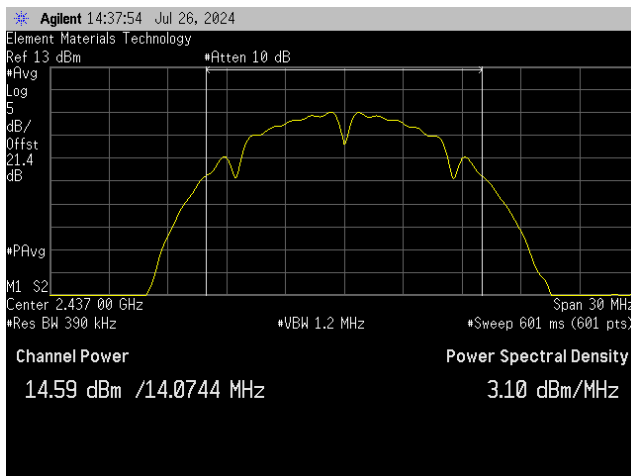
OUTPUT POWER



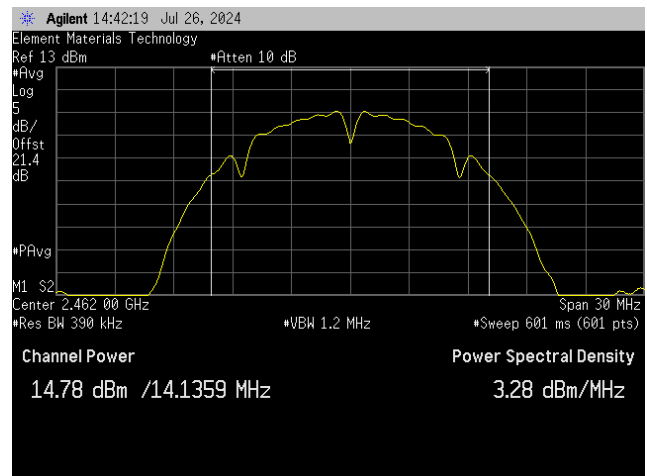
Antenna 1
802.11(n), 20 MHz, MCS7
High Channel 11, 2462 MHz



Antenna 2
802.11(b), 20 MHz, 1 Mbps
Low Channel 1, 2412 MHz

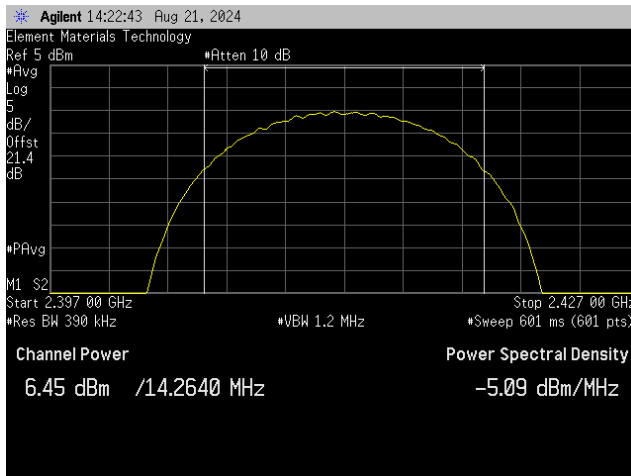


Antenna 2
802.11(b), 20 MHz, 1 Mbps
Mid Channel 6, 2437 MHz

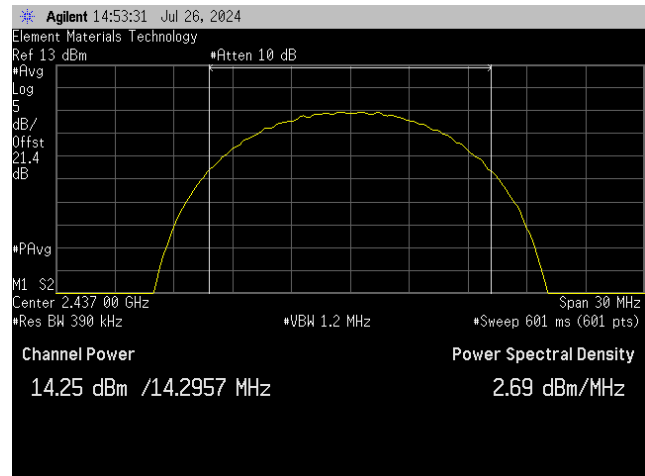


Antenna 2
802.11(b), 20 MHz, 1 Mbps
High Channel 11, 2462 MHz

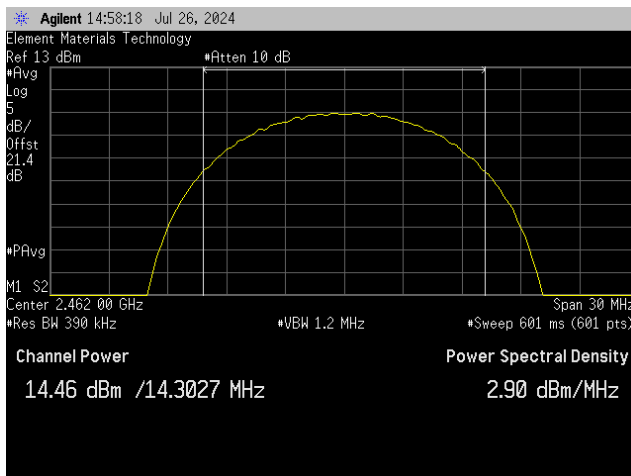
OUTPUT POWER



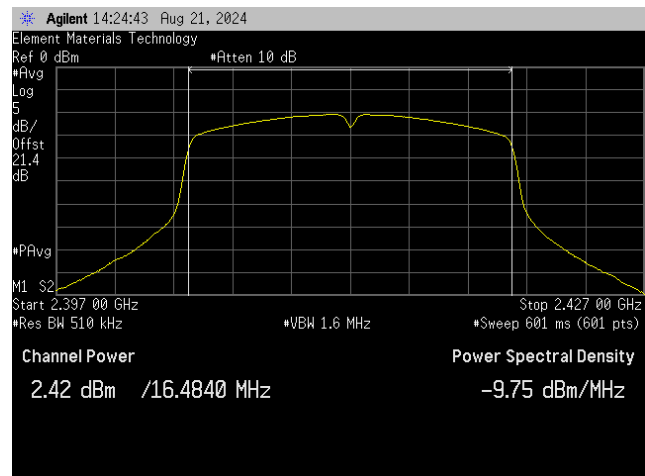
Antenna 2
802.11(b), 20 MHz, 11 Mbps
Low Channel 1, 2412 MHz



Antenna 2
802.11(b), 20 MHz, 11 Mbps
Mid Channel 6, 2437 MHz

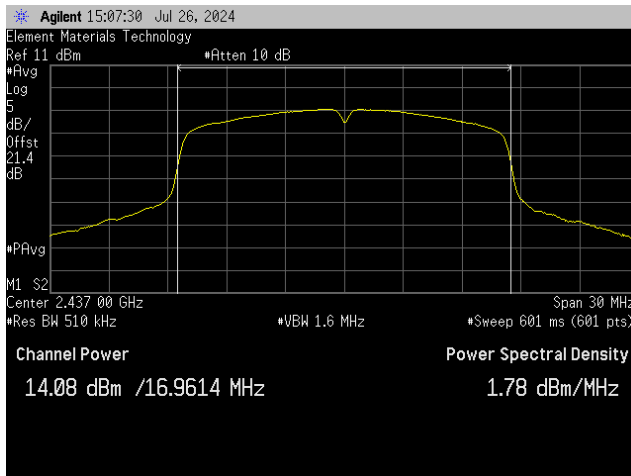


Antenna 2
802.11(b), 20 MHz, 11 Mbps
High Channel 11, 2462 MHz

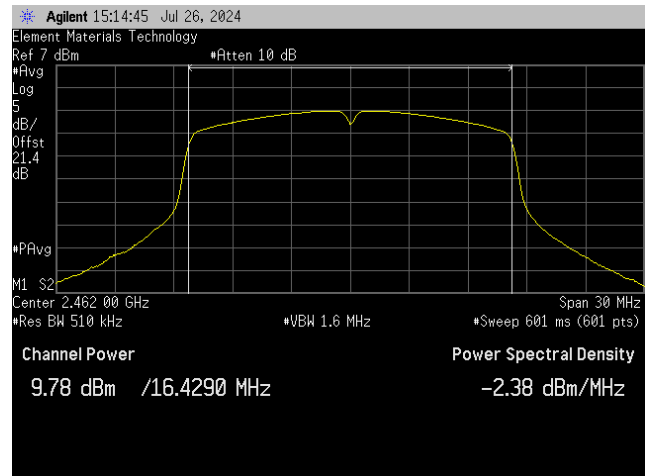


Antenna 2
802.11(g), 20 MHz, 6 Mbps
Low Channel 1, 2412 MHz

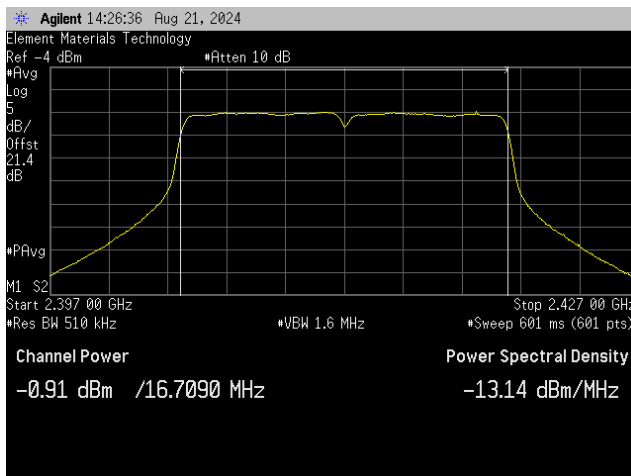
OUTPUT POWER



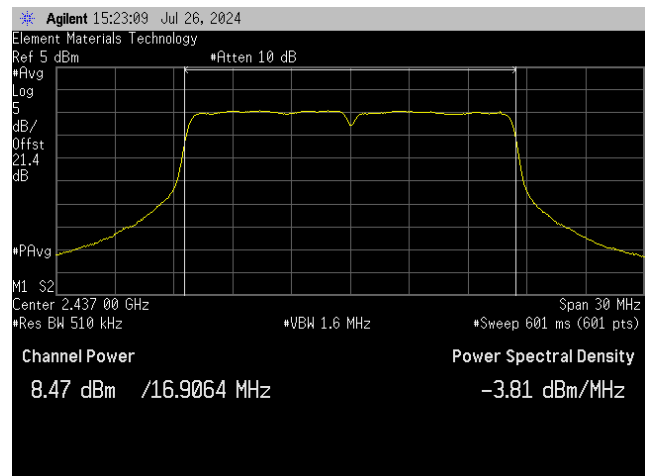
Antenna 2
802.11(g), 20 MHz, 6 Mbps
Mid Channel 6, 2437 MHz



Antenna 2
802.11(g), 20 MHz, 6 Mbps
High Channel 11, 2462 MHz

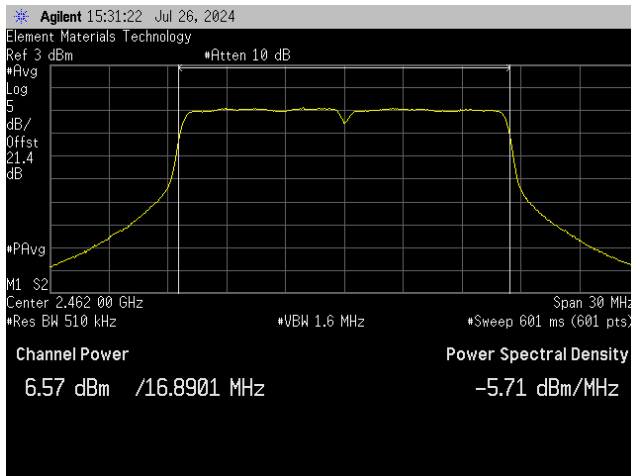


Antenna 2
802.11(g), 20 MHz, 36 Mbps
Low Channel 1, 2412 MHz

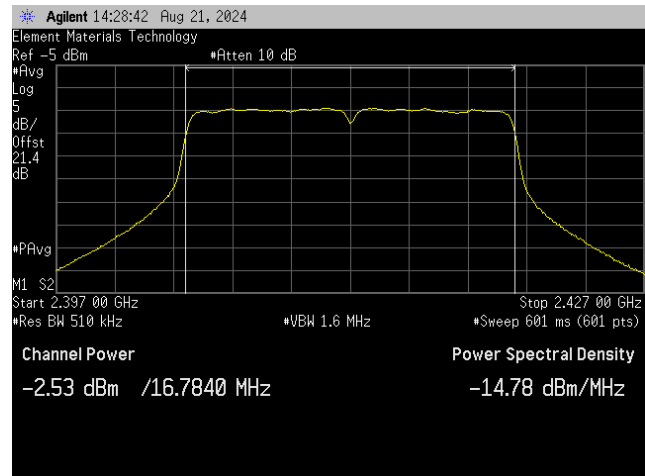


Antenna 2
802.11(g), 20 MHz, 36 Mbps
Mid Channel 6, 2437 MHz

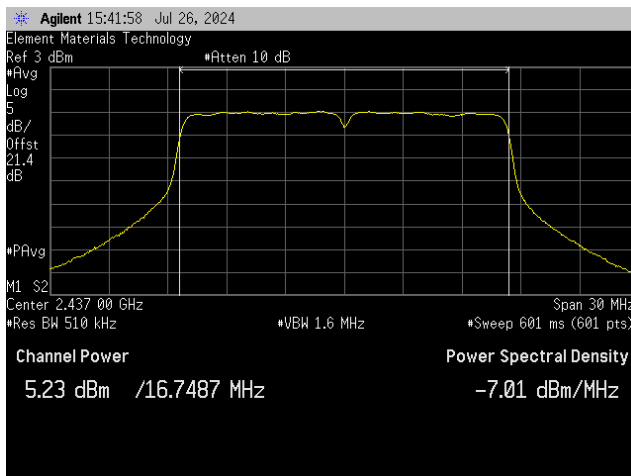
OUTPUT POWER



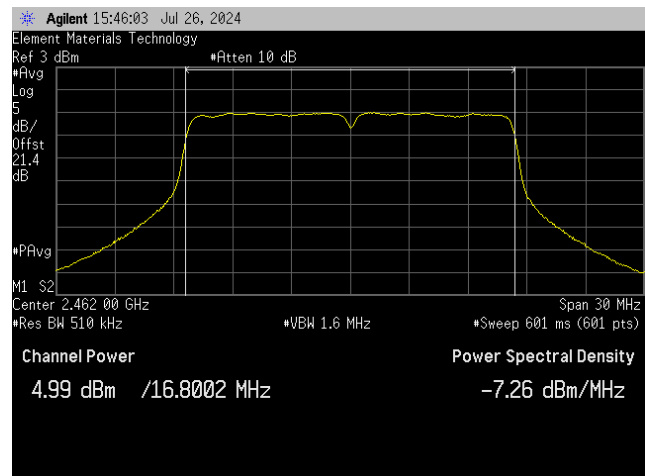
Antenna 2
802.11(g), 20 MHz, 36 Mbps
High Channel 11, 2462 MHz



Antenna 2
802.11(g), 20 MHz, 54 Mbps
Low Channel 1, 2412 MHz

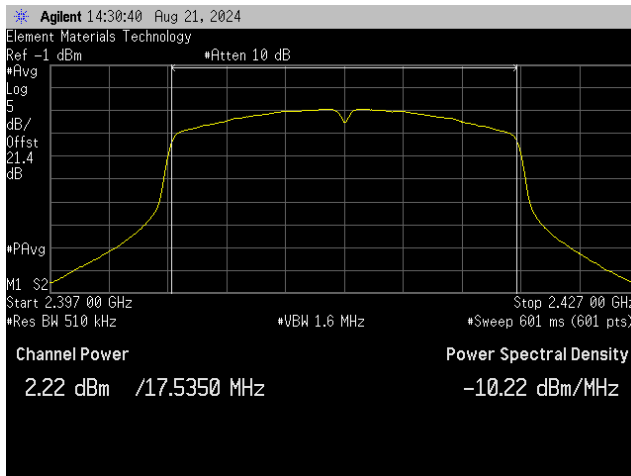


Antenna 2
802.11(g), 20 MHz, 54 Mbps
Mid Channel 6, 2437 MHz

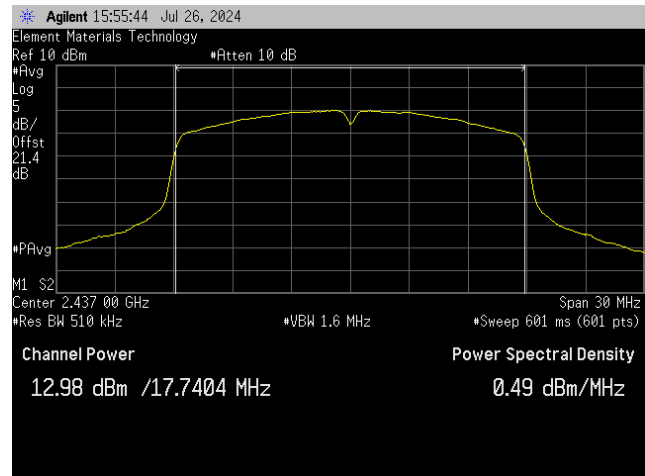


Antenna 2
802.11(g), 20 MHz, 54 Mbps
High Channel 11, 2462 MHz

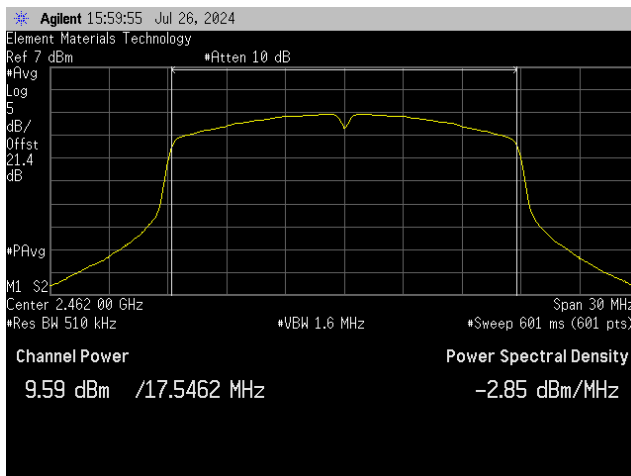
OUTPUT POWER



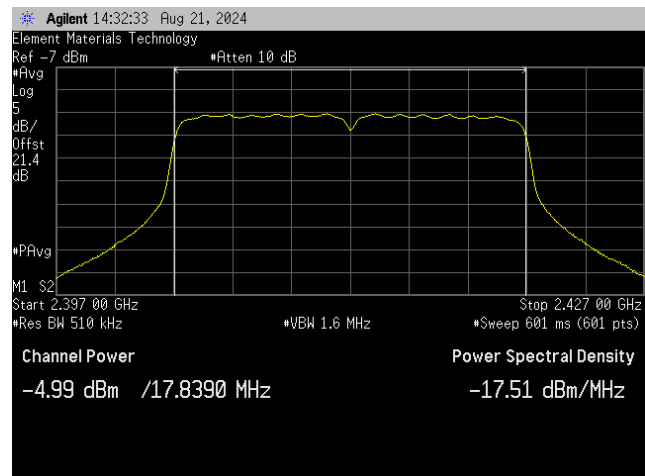
Antenna 2
802.11(n), 20 MHz, MCS0
Low Channel 1, 2412 MHz



Antenna 2
802.11(n), 20 MHz, MCS0
Mid Channel 6, 2437 MHz

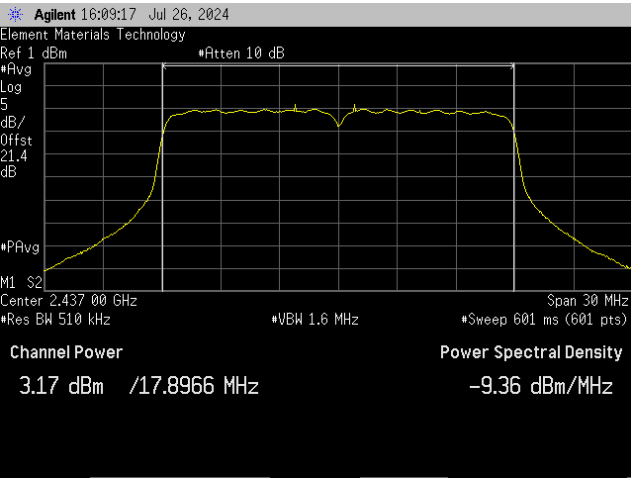


Antenna 2
802.11(n), 20 MHz, MCS0
High Channel 11, 2462 MHz

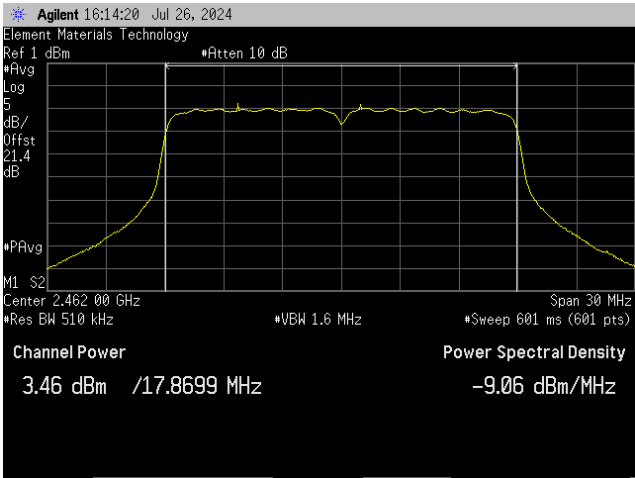


Antenna 2
802.11(n), 20 MHz, MCS7
Low Channel 1, 2412 MHz

OUTPUT POWER



Antenna 2
802.11(n), 20 MHz, MCS7
Mid Channel 6, 2437 MHz



Antenna 2
802.11(n), 20 MHz, MCS7
High Channel 11, 2462 MHz

EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)



TEST DESCRIPTION

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

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

The fundamental emission output power (maximum average conducted output power) was measured using the channels and modes as called out on the following data sheets. The transmit power was set to its default maximum.

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

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

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAW	2024-02-14	2025-02-14
Block - DC	Fairview Microwave	SD3379	AMX	2024-03-16	2025-03-16
Attenuator	Fairview Microwave	SA26B-20	TWJ	2024-03-14	2025-03-14
Cable	Micro-Coax	UFD150A-1-0720-200200	EVK	2024-03-13	2025-03-13
Generator - Signal	Keysight	N5182B	TEU	2024-04-18	2027-04-18

EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)



EUT:	Controller 3, Model 705101	Work Order:	IRRI0024
Serial Number:	1C:63:49:9D:33:FF	Date:	2024-09-10
Customer:	IrriGreen, Inc.	Temperature:	22°C
Attendees:	None	Relative Humidity:	47.3%
Customer Project:	None	Bar. Pressure (PMSL):	1013 mbar
Tested By:	Jeff Alcock	Job Site:	EV06
Power:	110VAC/60Hz	Configuration:	IRRI0024-8

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2024	ANSI C63.10:2013

COMMENTS

Reference level offset includes: DC Block, 20 dB attenuator and measurement cable

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

Pass


Tested By

TEST RESULTS

		Avg Cond Pwr	Duty Cycle	Out Pwr	Antenna	EIRP	EIRP Limit	
		(dBm)	Factor (dB)	(dBm)	Gain (dBi)	(dBm)	(dBm)	Result
Antenna 1								
802.11(b), 20 MHz, 1 Mbps								
Low Channel 1, 2412 MHz		7.825	0.2	8	3.48	11.5	36	Pass
Mid Channel 6, 2437 MHz		14.104	0.2	14.3	3.48	17.8	36	Pass
High Channel 11, 2462 MHz		14.158	0.2	14.4	3.48	17.9	36	Pass
802.11(b), 20 MHz, 11 Mbps								
Low Channel 1, 2412 MHz		7.576	0.9	8.5	3.48	12.0	36	Pass
Mid Channel 6, 2437 MHz		13.961	0.9	14.9	3.48	18.4	36	Pass
High Channel 11, 2462 MHz		14.052	0.9	15	3.48	18.5	36	Pass
802.11(g), 20 MHz, 6 Mbps								
Low Channel 1, 2412 MHz		3.286	0.4	3.7	3.48	7.2	36	Pass
Mid Channel 6, 2437 MHz		13.715	0.4	14.1	3.48	17.6	36	Pass
High Channel 11, 2462 MHz		9.313	0.4	9.7	3.48	13.2	36	Pass
802.11(g), 20 MHz, 36 Mbps								
Low Channel 1, 2412 MHz		0.023	3.7	3.7	3.48	7.2	36	Pass
Mid Channel 6, 2437 MHz		8.111	3.7	11.8	3.48	15.3	36	Pass
High Channel 11, 2462 MHz		6.051	3.7	9.8	3.48	13.3	36	Pass
802.11(g), 20 MHz, 54 Mbps								
Low Channel 1, 2412 MHz		-1.575	5.5	3.9	3.48	7.4	36	Pass
Mid Channel 6, 2437 MHz		4.862	5.5	10.4	3.48	13.9	36	Pass

EQUIVALENT ISOTROPIC RADIATED POWER (EIRP)

High Channel 11, 2462 MHz	4.462	5.5	10	3.48	13.5	36	Pass
802.11(n), 20 MHz, MCS0							
Low Channel 1, 2412 MHz	3.245	0.4	3.6	3.48	7.1	36	Pass
Mid Channel 6, 2437 MHz	12.608	0.4	13	3.48	16.5	36	Pass
High Channel 11, 2462 MHz	9.118	0.4	9.5	3.48	13.0	36	Pass
802.11(n), 20 MHz, MCS7							
Low Channel 1, 2412 MHz	-3.072	6.1	3	3.48	6.5	36	Pass
Mid Channel 6, 2437 MHz	2.847	6.1	8.9	3.48	12.4	36	Pass
High Channel 11, 2462 MHz	2.976	6.1	9.1	3.48	12.6	36	Pass
Antenna 2							
802.11(b), 20 MHz, 1 Mbps							
Low Channel 1, 2412 MHz	6.598	0.2	6.8	3.48	10.3	36	Pass
Mid Channel 6, 2437 MHz	14.586	0.2	14.8	3.48	18.3	36	Pass
High Channel 11, 2462 MHz	14.781	0.2	15	3.48	18.5	36	Pass
802.11(b), 20 MHz, 11 Mbps							
Low Channel 1, 2412 MHz	6.448	0.9	7.3	3.48	10.8	36	Pass
Mid Channel 6, 2437 MHz	14.245	0.9	15.1	3.48	18.6	36	Pass
High Channel 11, 2462 MHz	14.456	0.9	15.4	3.48	18.9	36	Pass
802.11(g), 20 MHz, 6 Mbps							
Low Channel 1, 2412 MHz	2.423	0.4	2.8	3.48	6.3	36	Pass
Mid Channel 6, 2437 MHz	14.075	0.4	14.5	3.48	18.0	36	Pass
High Channel 11, 2462 MHz	9.78	0.4	10.2	3.48	13.7	36	Pass
802.11(g), 20 MHz, 36 Mbps							
Low Channel 1, 2412 MHz	-0.91	3.7	2.8	3.48	6.3	36	Pass
Mid Channel 6, 2437 MHz	8.47	3.7	12.2	3.48	15.7	36	Pass
High Channel 11, 2462 MHz	6.568	3.7	10.3	3.48	13.8	36	Pass
802.11(g), 20 MHz, 54 Mbps							
Low Channel 1, 2412 MHz	-2.532	5.5	3	3.48	6.5	36	Pass
Mid Channel 6, 2437 MHz	5.227	5.5	10.7	3.48	14.2	36	Pass
High Channel 11, 2462 MHz	4.989	5.5	10.5	3.48	14.0	36	Pass
802.11(n), 20 MHz, MCS0							
Low Channel 1, 2412 MHz	2.218	0.4	2.6	3.48	6.1	36	Pass
Mid Channel 6, 2437 MHz	12.982	0.4	13.48	3.48	17.0	36	Pass
High Channel 11, 2462 MHz	9.589	0.4	10	3.48	13.5	36	Pass
802.11(n), 20 MHz, MCS7							
Low Channel 1, 2412 MHz	-4.994	6.1	1.1	3.48	4.6	36	Pass
Mid Channel 6, 2437 MHz	3.168	6.1	9.3	3.48	12.8	36	Pass
High Channel 11, 2462 MHz	3.4857	6.1	9.6	3.48	13.1	36	Pass

POWER SPECTRAL DENSITY

TEST DESCRIPTION

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

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

The power spectral density was measured using the channels and modes as called out in the following data sheets.

The method AVGPSD-2 in clause 11.10.5 of ANSI C63.10:2013 was used to make the measurement. This method uses trace averaging and RMS detection across the ON and OFF times of the transmission. The analyzer was configured to the following settings:

Span = at least 1.5 * OBW
RBW = 100 kHz
VBW = 300 kHz
Detector = RMS
Sweep = 601 mS
Points = 601

The peak marker function was used to determine the maximum amplitude level.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAW	2024-02-14	2025-02-14
Block - DC	Fairview Microwave	SD3379	AMX	2024-03-16	2025-03-16
Attenuator	Fairview Microwave	SA26B-20	TWJ	2024-03-14	2025-03-14
Cable	Micro-Coax	UFD150A-1-0720-200200	EVK	2024-03-13	2025-03-13
Generator - Signal	Keysight	N5182B	TEU	2024-04-18	2027-04-18

POWER SPECTRAL DENSITY

EUT:	Controller 3, Model 705101	Work Order:	IRRI0024
Serial Number:	1C:63:49:9D:33:FF	Date:	2024-07-26
Customer:	Irrigreen, Inc.	Temperature:	22.3°C
Attendees:	None	Relative Humidity:	47.9%
Customer Project:	None	Bar. Pressure (PMSL):	1015 mbar
Tested By:	Christopher Ladwig	Job Site:	EV06
Power:	110VAC/60Hz	Configuration:	IRRI0024-8

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2024	ANSI C63.10:2013

COMMENTS

Reference level offset includes: DC block, 20 dB attenuator and measurement cable.
Measurements performed on the antenna port that has the highest conducted output power.

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

Pass



Tested By

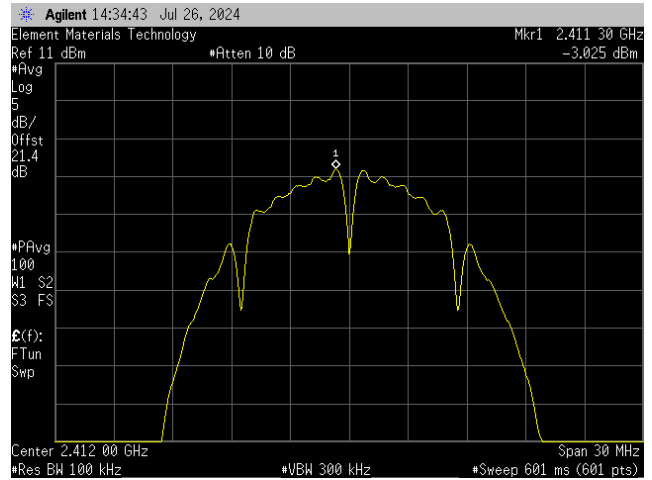
TEST RESULTS

		Measured	Duty Cycle	Final	Limit	Results
		Value (dBm)	Factor (dB)	Value (dBm)	≤ (dBm/3kHz)	
Antenna 2						
802.11(b), 20 MHz, 1 Mbps						
	Low Channel 1, 2412 MHz	-3.025	0.1	-2.9	8	Pass
	Mid Channel 6, 2437 MHz	-2.726	0.2	-2.5	8	Pass
	High Channel 11, 2462 MHz	-2.519	0.2	-2.3	8	Pass
802.11(b), 20 MHz, 11 Mbps						
	Low Channel 1, 2412 MHz	-3.694	0.9	-2.8	8	Pass
	Mid Channel 6, 2437 MHz	-3.337	0.9	-2.4	8	Pass
	High Channel 11, 2462 MHz	-3.169	0.9	-2.3	8	Pass
802.11(g), 20 MHz, 6 Mbps						
	Low Channel 1, 2412 MHz	-9.952	0.5	-9.5	8	Pass
	Mid Channel 6, 2437 MHz	-5.265	0.4	-4.9	8	Pass
	High Channel 11, 2462 MHz	-9.591	0.5	-9.1	8	Pass
802.11(g), 20 MHz, 36 Mbps						
	Low Channel 1, 2412 MHz	-13.88	3.7	-10.2	8	Pass
	Mid Channel 6, 2437 MHz	-11.584	3.7	-7.9	8	Pass
	High Channel 11, 2462 MHz	-13.464	3.7	-9.8	8	Pass
802.11(g), 20 MHz, 54 Mbps						
	Low Channel 1, 2412 MHz	-15.075	4	-11.1	8	Pass

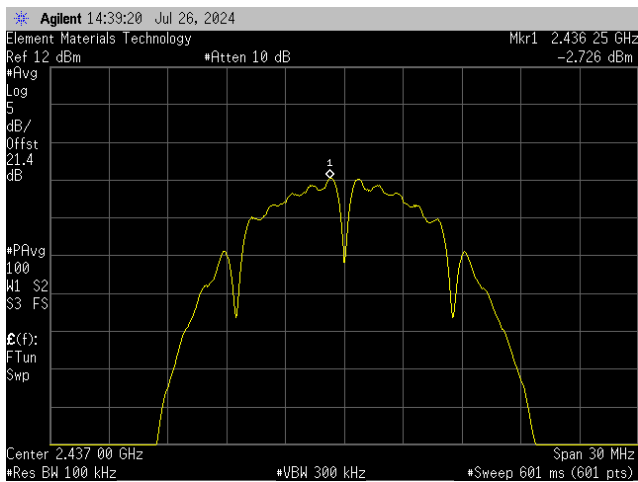
POWER SPECTRAL DENSITY

Mid Channel 6, 2437 MHz	-14.41	4	-10.4	8	Pass
High Channel 11, 2462 MHz	-14.817	4	-10.8	8	Pass
802.11(n), 20 MHz, MCS0					
Low Channel 1, 2412 MHz	-10.248	0.4	-9.8	8	Pass
Mid Channel 6, 2437 MHz	-6.608	0.4	-6.2	8	Pass
High Channel 11, 2462 MHz	-9.942	0.5	-9.4	8	Pass
802.11(n), 20 MHz, MCS7					
Low Channel 1, 2412 MHz	-16.258	7.2	-9.1	8	Pass
Mid Channel 6, 2437 MHz	-16.359	4.7	-11.7	8	Pass
High Channel 11, 2462 MHz	-15.979	7.1	-8.9	8	Pass

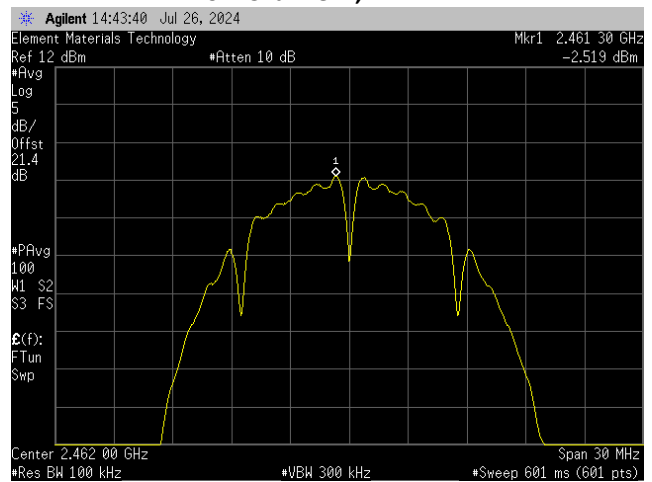
POWER SPECTRAL DENSITY



Antenna 2
802.11(b), 20 MHz, 1 Mbps
Low Channel 1, 2412 MHz

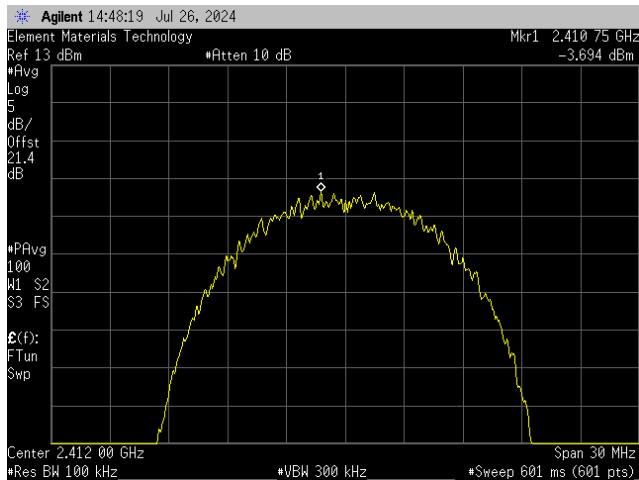


Antenna 2
802.11(b), 20 MHz, 1 Mbps
Mid Channel 6, 2437 MHz

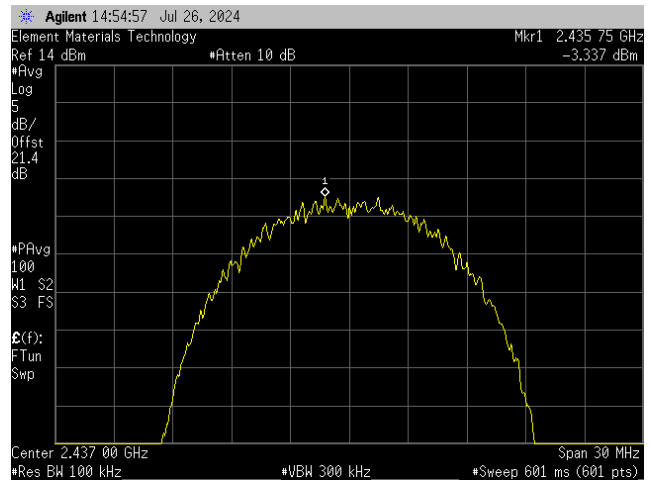


Antenna 2
802.11(b), 20 MHz, 1 Mbps
High Channel 11, 2462 MHz

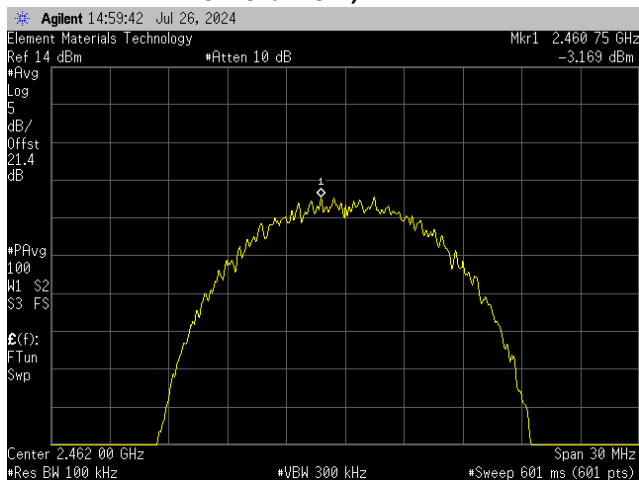
POWER SPECTRAL DENSITY



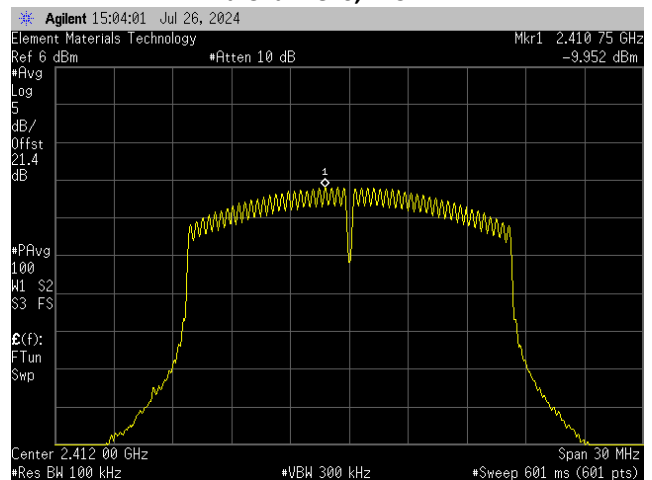
Antenna 2
802.11(b), 20 MHz, 11 Mbps
Low Channel 1, 2412 MHz



Antenna 2
802.11(b), 20 MHz, 11 Mbps
Mid Channel 6, 2437 MHz

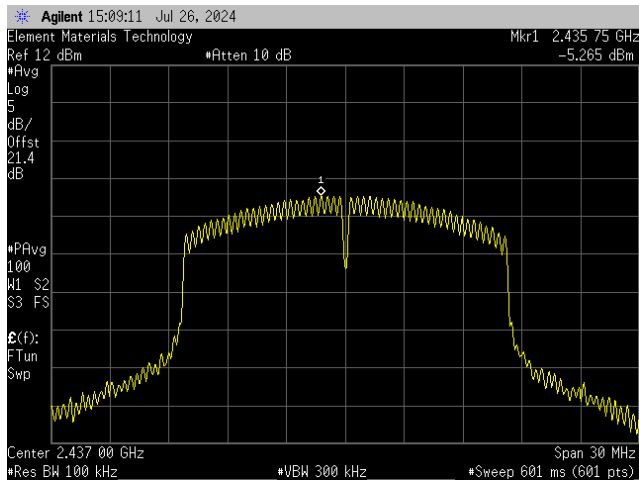


Antenna 2
802.11(b), 20 MHz, 11 Mbps
High Channel 11, 2462 MHz

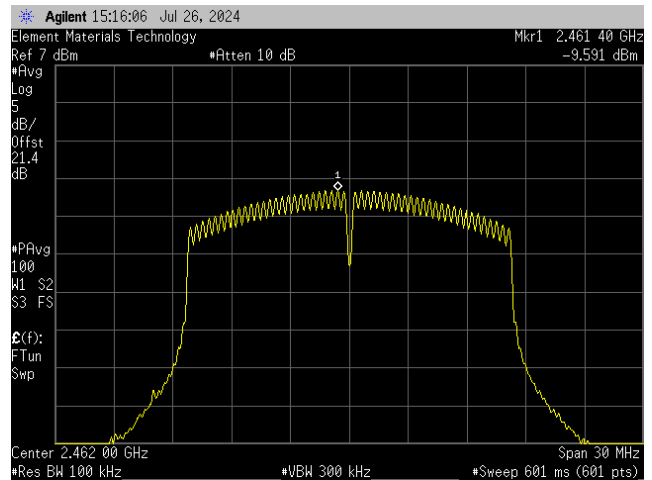


Antenna 2
802.11(g), 20 MHz, 6 Mbps
Low Channel 1, 2412 MHz

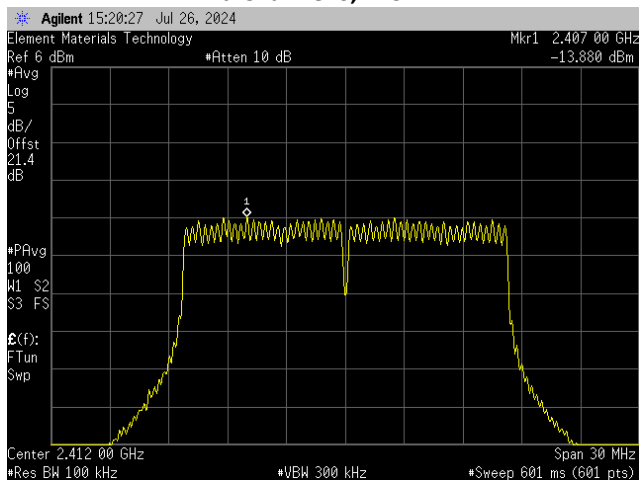
POWER SPECTRAL DENSITY



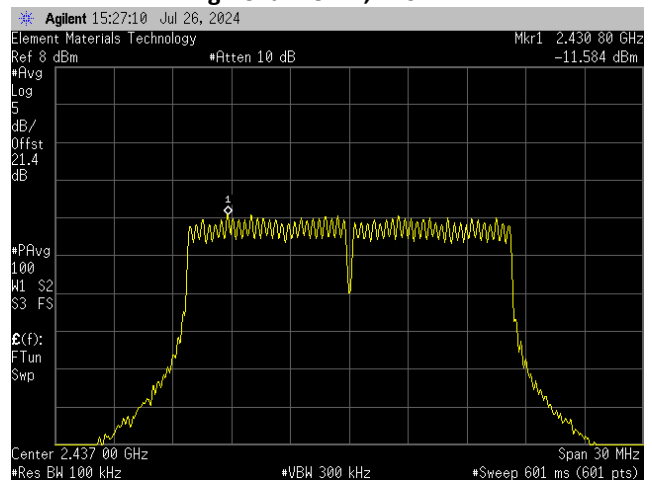
Antenna 2
802.11(g), 20 MHz, 6 Mbps
Mid Channel 6, 2437 MHz



Antenna 2
802.11(g), 20 MHz, 6 Mbps
High Channel 11, 2462 MHz

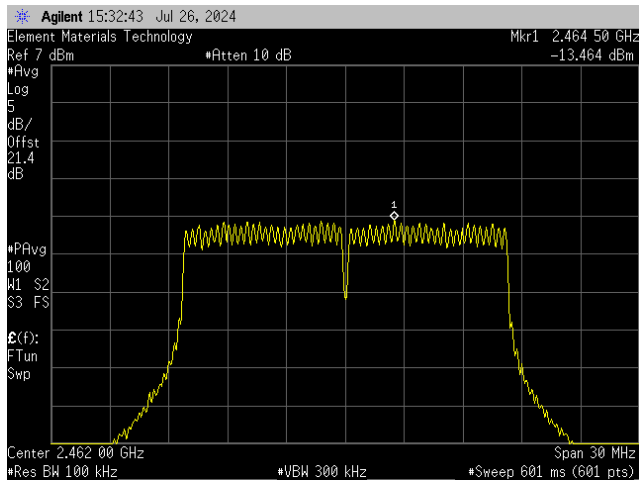


Antenna 2
802.11(g), 20 MHz, 36 Mbps
Low Channel 1, 2412 MHz

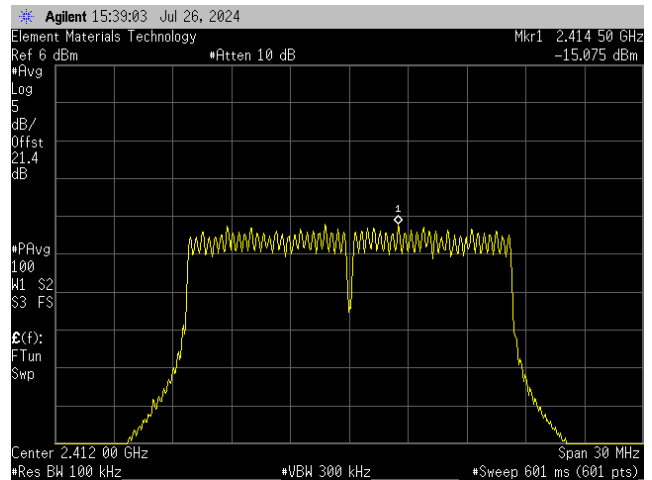


Antenna 2
802.11(g), 20 MHz, 36 Mbps
Mid Channel 6, 2437 MHz

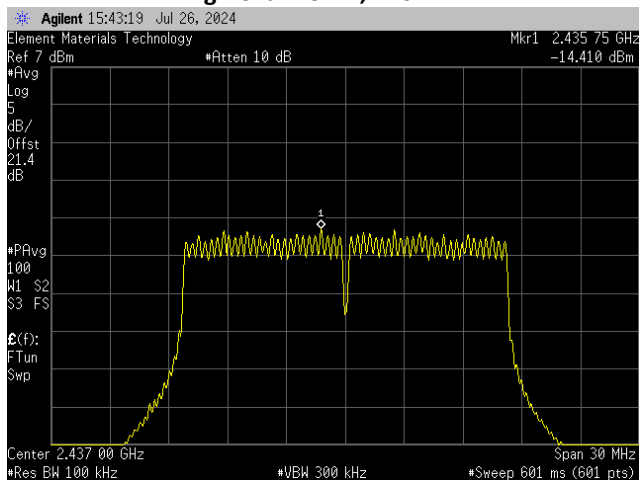
POWER SPECTRAL DENSITY



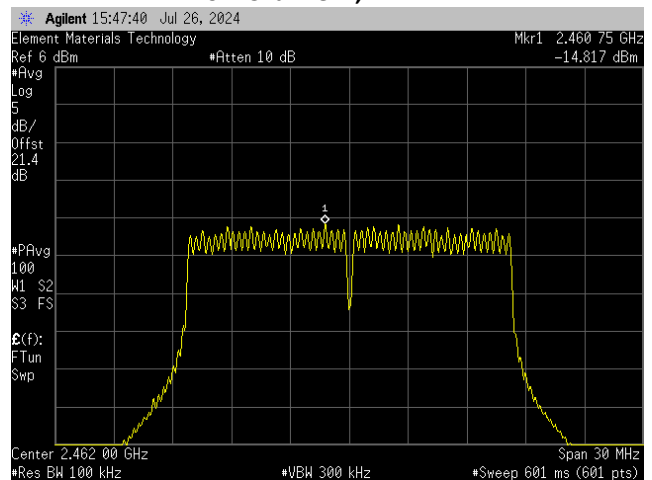
Antenna 2
802.11(g), 20 MHz, 36 Mbps
High Channel 11, 2462 MHz



Antenna 2
802.11(g), 20 MHz, 54 Mbps
Low Channel 1, 2412 MHz

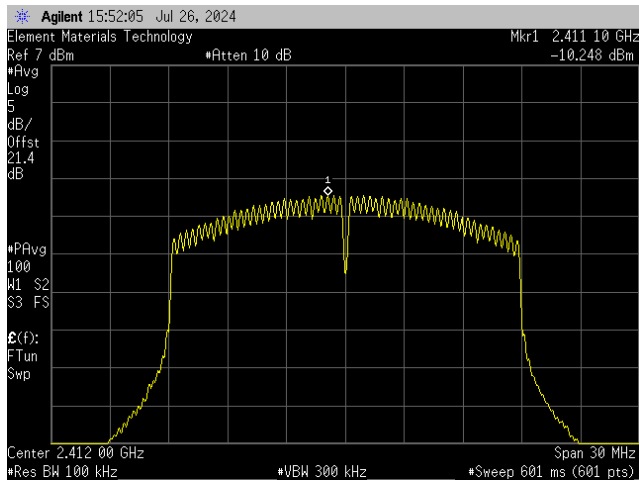


Antenna 2
802.11(g), 20 MHz, 54 Mbps
Mid Channel 6, 2437 MHz

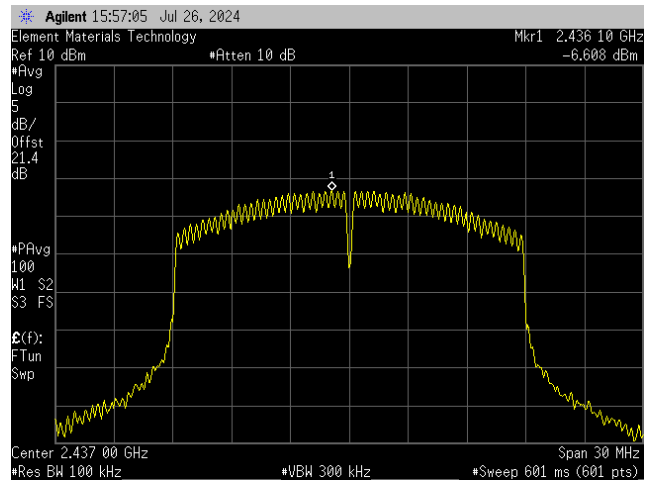


Antenna 2
802.11(g), 20 MHz, 54 Mbps
High Channel 11, 2462 MHz

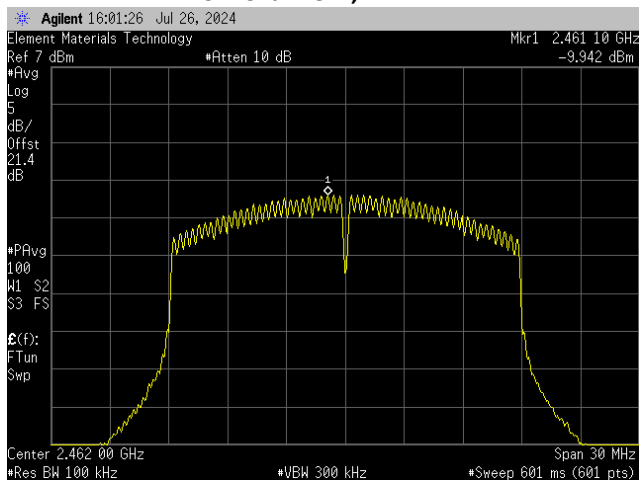
POWER SPECTRAL DENSITY



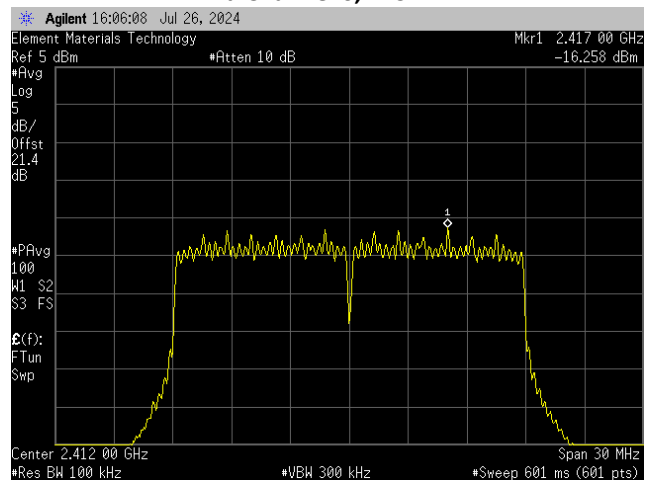
Antenna 2
802.11(n), 20 MHz, MCS0
Low Channel 1, 2412 MHz



Antenna 2
802.11(n), 20 MHz, MCS0
Mid Channel 6, 2437 MHz

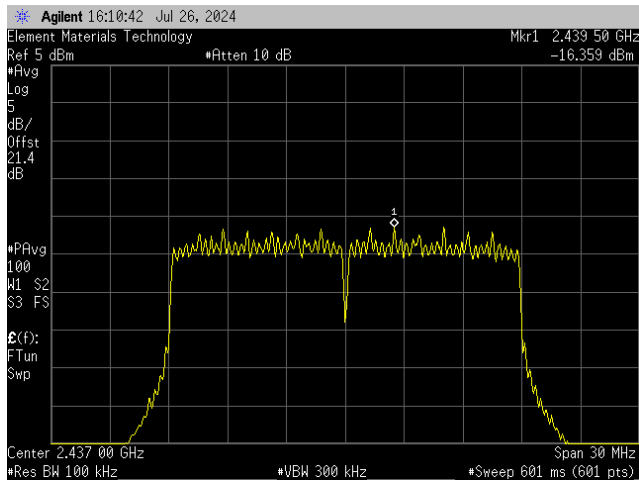


Antenna 2
802.11(n), 20 MHz, MCS0
High Channel 11, 2462 MHz

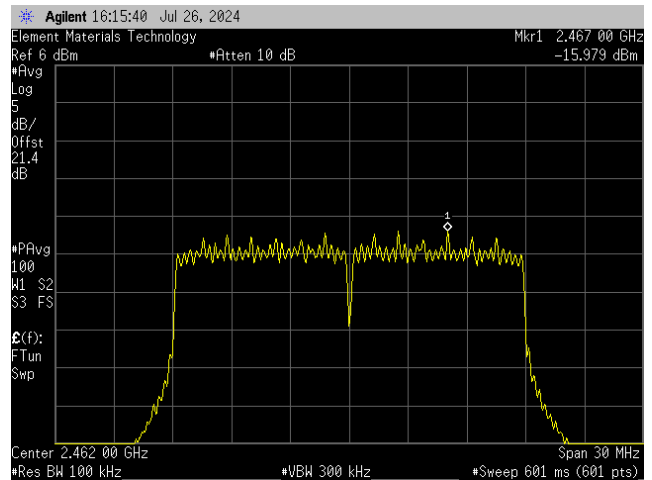


Antenna 2
802.11(n), 20 MHz, MCS7
Low Channel 1, 2412 MHz

POWER SPECTRAL DENSITY



Antenna 2
802.11(n), 20 MHz, MCS7
Mid Channel 6, 2437 MHz



Antenna 2
802.11(n), 20 MHz, MCS7
High Channel 11, 2462 MHz

BAND EDGE COMPLIANCE

TEST DESCRIPTION

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

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

The spurious RF conducted emissions at the edges of the authorized bands were measured with the EUT set to low and high transmit frequencies in each available band. The channels closest to the band edges were selected. The EUT was transmitting at the data rate(s) listed in the datasheet.

The spectrum was scanned below the lower band edge and above the higher band edge. The analyzer screen captures for this test show an example of the emission mask for the test mode also used during the radiated spurious emissions at the restricted band edges test.

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAW	2024-02-14	2025-02-14
Block - DC	Fairview Microwave	SD3379	AMX	2024-03-16	2025-03-16
Attenuator	Fairview Microwave	SA26B-20	TWJ	2024-03-14	2025-03-14
Cable	Micro-Coax	UFD150A-1-0720-200200	EVK	2024-03-13	2025-03-13
Generator - Signal	Keysight	N5182B	TEU	2024-04-18	2027-04-18

BAND EDGE COMPLIANCE

EUT:	Controller 3, Model 705101	Work Order:	IRRI0024
Serial Number:	1C:63:49:9D:33:FF	Date:	2024-08-21
Customer:	IrriGreen, Inc.	Temperature:	22.3°C
Attendees:	None	Relative Humidity:	48.3%
Customer Project:	None	Bar. Pressure (PMSL):	1015 mbar
Tested By:	Christopher Ladwig	Job Site:	EV06
Power:	110VAC/60Hz	Configuration:	IRRI0024-8

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2024	ANSI C63.10:2013

COMMENTS

Reference level offset includes: DC block, 20 dB attenuator and measurement cable.
Measurements performed on the antenna port that has the highest conducted output power.

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

Pass

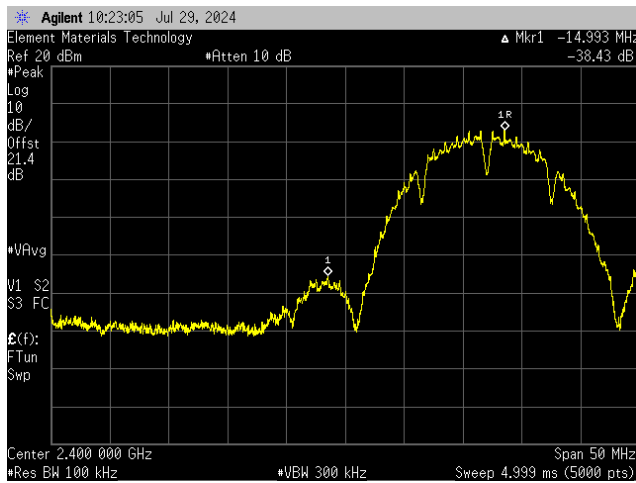


Tested By

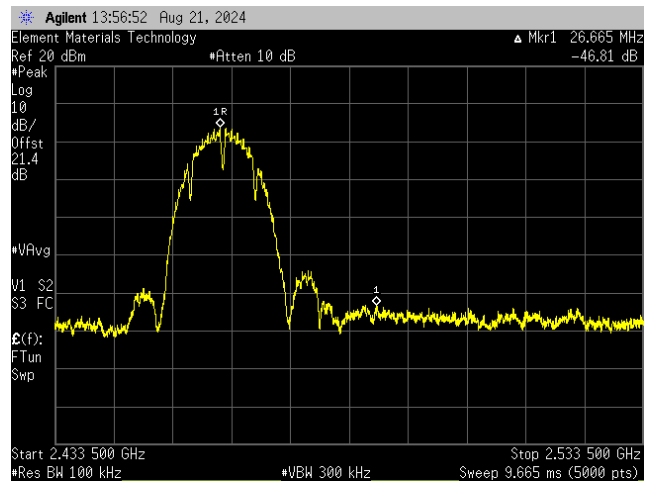
TEST RESULTS

	Value (dBc)	Limit ≤ (dBc)	Result
Antenna 2			
802.11(b), 20 MHz, 1 Mbps			
Low Channel 1, 2412 MHz	-38.43	-30	Pass
High Channel 11, 2462 MHz	-46.81	-30	Pass
802.11(b), 20 MHz, 11 Mbps			
Low Channel 1, 2412 MHz	-32.4	-30	Pass
High Channel 11, 2462 MHz	-46.59	-30	Pass
802.11(g), 20 MHz, 6 Mbps			
Low Channel 1, 2412 MHz	-31.25	-30	Pass
High Channel 11, 2462 MHz	-43.43	-30	Pass
802.11(g), 20 MHz, 36 Mbps			
Low Channel 1, 2412 MHz	-30.98	-30	Pass
High Channel 11, 2462 MHz	-43.7	-30	Pass
802.11(g), 20 MHz, 54 Mbps			
Low Channel 1, 2412 MHz	-31.31	-30	Pass
High Channel 11, 2462 MHz	-43.43	-30	Pass
802.11(n), 20 MHz, MCS0			
Low Channel 1, 2412 MHz	-32.55	-30	Pass
High Channel 11, 2462 MHz	-44.5	-30	Pass
802.11(n), 20 MHz, MCS7			
Low Channel 1, 2412 MHz	-31.89	-30	Pass
High Channel 11, 2462 MHz	-43.68	-30	Pass

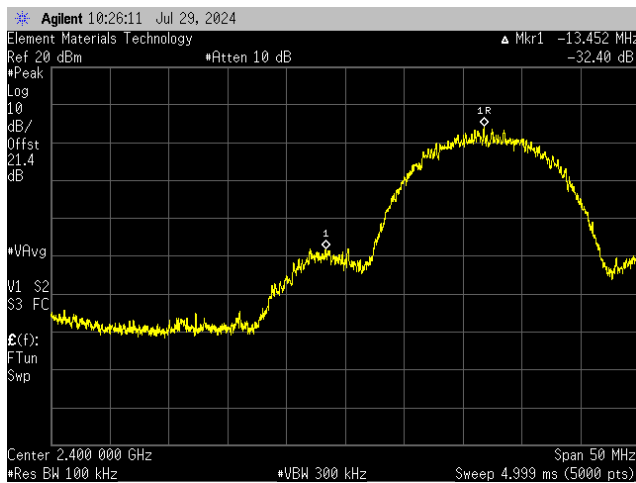
BAND EDGE COMPLIANCE



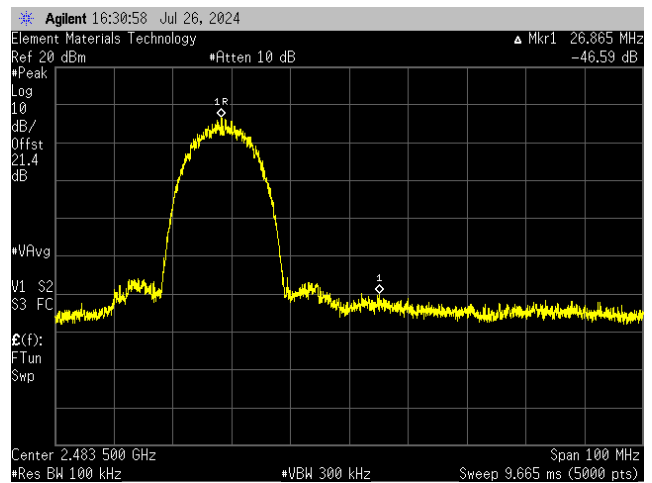
Antenna 2
802.11(b), 20 MHz, 1 Mbps
Low Channel 1, 2412 MHz



Antenna 2
802.11(b), 20 MHz, 1 Mbps
High Channel 11, 2462 MHz

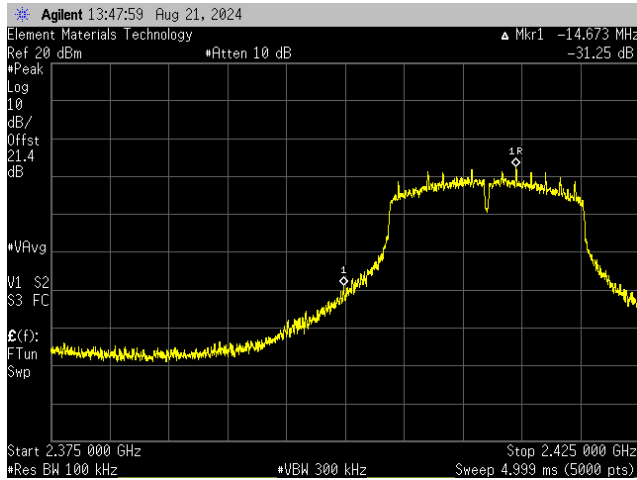


Antenna 2
802.11(b), 20 MHz, 11 Mbps
Low Channel 1, 2412 MHz

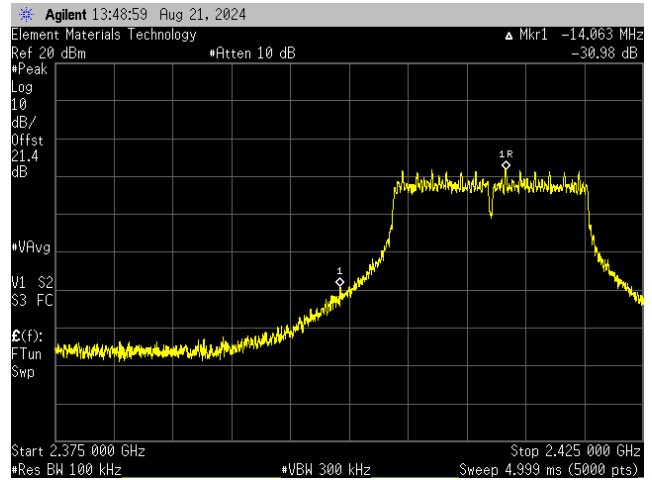


Antenna 2
802.11(b), 20 MHz, 11 Mbps
High Channel 11, 2462 MHz

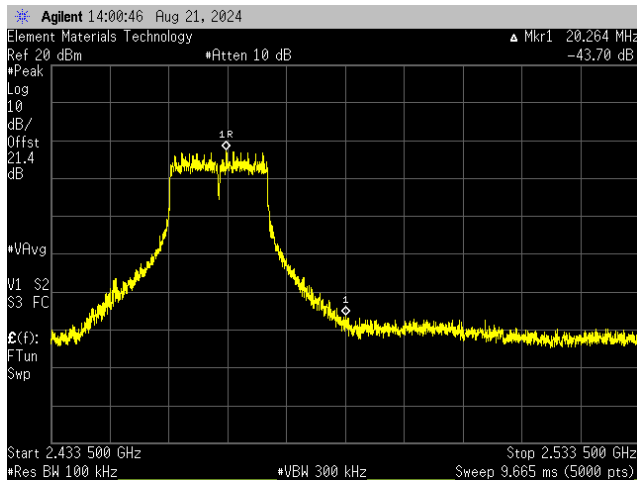
BAND EDGE COMPLIANCE



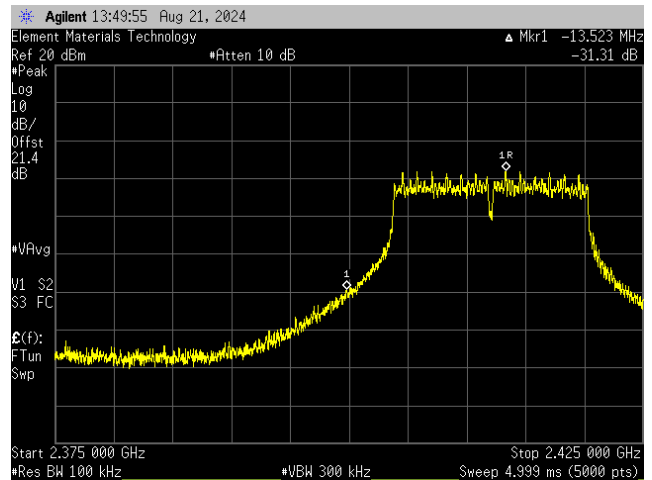
Antenna 2
802.11(g), 20 MHz, 6 Mbps
Low Channel 1, 2412 MHz



Antenna 2
802.11(g), 20 MHz, 36 Mbps
Low Channel 1, 2412 MHz

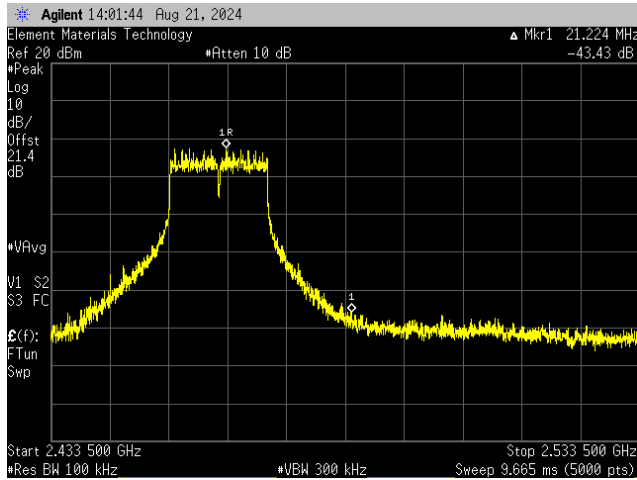


Antenna 2
802.11(g), 20 MHz, 36 Mbps
High Channel 11, 2462 MHz

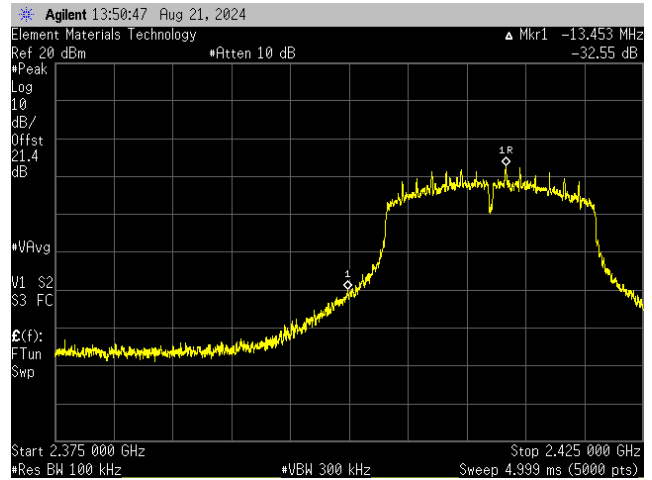


Antenna 2
802.11(g), 20 MHz, 54 Mbps
Low Channel 1, 2412 MHz

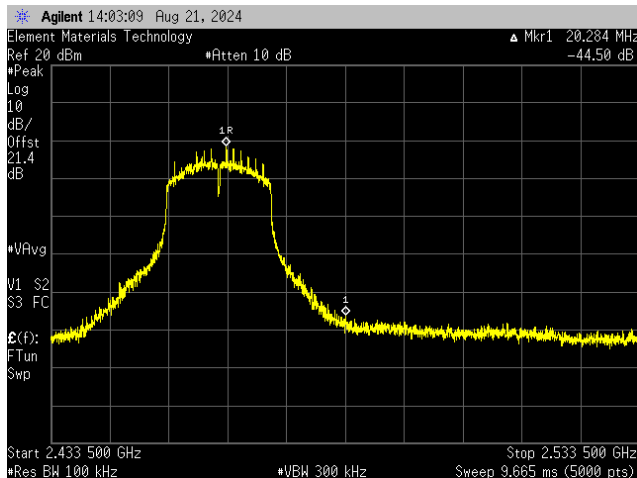
BAND EDGE COMPLIANCE



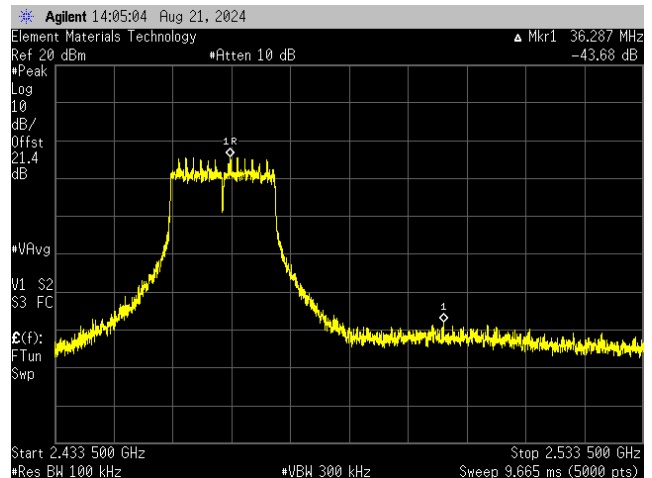
Antenna 2
802.11(g), 20 MHz, 54 Mbps
High Channel 11, 2462 MHz



Antenna 2
802.11(n), 20 MHz, MCS0
Low Channel 1, 2412 MHz



Antenna 2
802.11(n), 20 MHz, MCS0
High Channel 11, 2462 MHz



Antenna 2
802.11(n), 20 MHz, MCS7
High Channel 11, 2462 MHz

SPURIOUS CONDUCTED EMISSIONS

TEST DESCRIPTION

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

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

The spurious RF conducted emissions were measured with the EUT set to low, medium and high transmit frequencies. The EUT was transmitting at the data rate(s) listed in the datasheet. For each transmit frequency, the fundamental was measured with a 100 kHz resolution bandwidth and the highest value was recorded. The rest of the spectrum was then measured with a 100 kHz resolution bandwidth and the highest value was found. The difference between the value found on the fundamental and the rest of the spectrum was compared against the limit to determine compliance.

The reference level offset for the fundamental screen capture was based on a measured value of the loss between the spectrum analyzer and the EUT which was verified at the time of test. The remaining screen capture(s) use an internal transducer factor on the analyzer to correct the displayed trace based on the cable loss over frequency. The reference level offset for the additional screen capture(s) is then based on the expected attenuator value and any other losses.

Fundamental Offset = Ref Lvl Offset showing measured composite factor of all losses

Remaining Screen capture(s) Offset = "Internal" cable loss factor not shown on screen capture + Ref Lvl Offset showing expected attenuator value and any other losses

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Analyzer - Spectrum Analyzer	Agilent	E4440A	AAW	2024-02-14	2025-02-14
Block - DC	Fairview Microwave	SD3379	AMX	2024-03-16	2025-03-16
Attenuator	Fairview Microwave	SA26B-20	TWJ	2024-03-14	2025-03-14
Cable	Micro-Coax	UFD150A-1-0720-200200	EVK	2024-03-13	2025-03-13
Generator - Signal	Keysight	N5182B	TEU	2024-04-18	2027-04-18

SPURIOUS CONDUCTED EMISSIONS

EUT:	Controller 3, Model 705101	Work Order:	IRRI0024
Serial Number:	1C:63:49:9D:33:FF	Date:	2024-08-21
Customer:	Irrigreen, Inc.	Temperature:	22.4°C
Attendees:	None	Relative Humidity:	48.3%
Customer Project:	None	Bar. Pressure (PMSL):	1015 mbar
Tested By:	Christopher Ladwig	Job Site:	EV06
Power:	110VAC/60Hz	Configuration:	IRRI0024-8

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2024	ANSI C63.10:2013

COMMENTS

Reference level offset includes: DC block, 20 dB attenuator and measurement cable.
Measurements performed on the antenna port that has the highest conducted output power.

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

Pass



Tested By

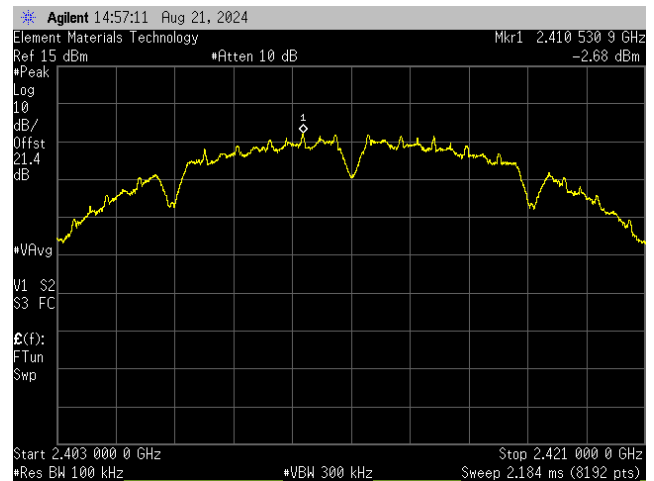
TEST RESULTS

	Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
Antenna 2					
802.11(b), 20 MHz, 1 Mbps					
Low Channel 1, 2412 MHz	Fundamental	2410.53	N/A	N/A	N/A
	30 MHz - 12.5 GHz	2334.9	-46.84	-30	Pass
	12.5 GHz - 25 GHz	24871.8	-45.07	-30	Pass
Mid Channel 6, 2437 MHz	Fundamental	2436.49	N/A	N/A	N/A
	30 MHz - 12.5 GHz	2354.7	-48.1	-30	Pass
	12.5 GHz - 25 GHz	24729.9	-50.76	-30	Pass
High Channel 11, 2462 MHz	Fundamental	2461.52	N/A	N/A	N/A
	30 MHz - 12.5 GHz	2513	-49.52	-30	Pass
	12.5 GHz - 25 GHz	24270.5	-51.89	-30	Pass
802.11(g), 20 MHz, 6 Mbps					
Low Channel 1, 2412 MHz	Fundamental	2413.31	N/A	N/A	N/A
	30 MHz - 12.5 GHz	2386.7	-45.4	-30	Pass
	12.5 GHz - 25 GHz	24388	-45.58	-30	Pass
Mid Channel 6, 2437 MHz	Fundamental	2435.77	N/A	N/A	N/A
	30 MHz - 12.5 GHz	2353.2	-48.98	-30	Pass
	12.5 GHz - 25 GHz	24955.7	-49.89	-30	Pass
High Channel 11, 2462 MHz	Fundamental	2463.29	N/A	N/A	N/A
	30 MHz - 12.5 GHz	2505.4	-47.45	-30	Pass
	12.5 GHz - 25 GHz	24504	-45.85	-30	Pass
802.11(n), 20 MHz, MCS0					
Low Channel 1, 2412 MHz	Fundamental	2413.3	N/A	N/A	N/A
	30 MHz - 12.5 GHz	7891.7	-46.19	-30	Pass
	12.5 GHz - 25 GHz	24333.1	-39.73	-30	Pass
Mid Channel 6, 2437 MHz	Fundamental	2438.28	N/A	N/A	N/A

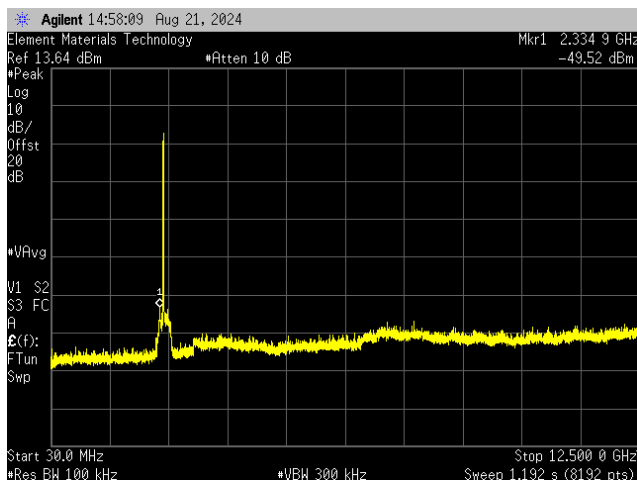
SPURIOUS CONDUCTED EMISSIONS

	Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
High Channel 11, 2462 MHz	30 MHz - 12.5 GHz	2360.8	-48.05	-30	Pass
	12.5 GHz - 25 GHz	24870.3	-50.01	-30	Pass
	Fundamental	2463.3	N/A	N/A	N/A
	30 MHz - 12.5 GHz	2538.9	-47.23	-30	Pass
	12.5 GHz - 25 GHz	24438.4	-45.71	-30	Pass

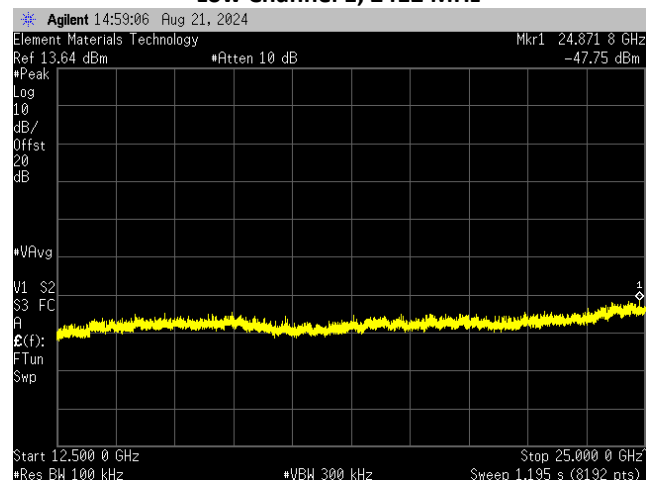
SPURIOUS CONDUCTED EMISSIONS



Antenna 2
802.11(b), 20 MHz, 1 Mbps
Low Channel 1, 2412 MHz

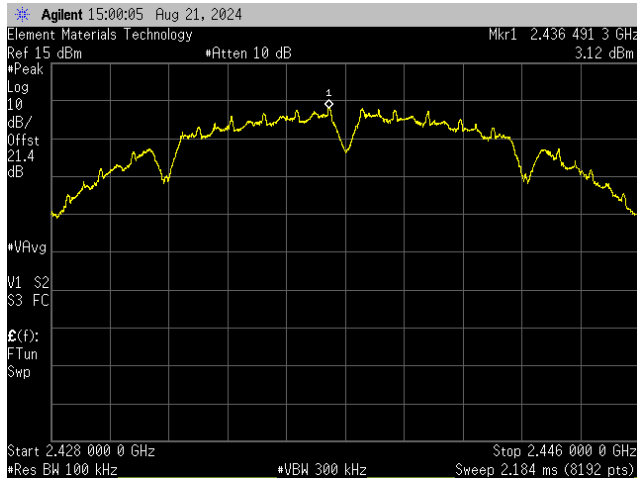


Antenna 2
802.11(b), 20 MHz, 1 Mbps
Low Channel 1, 2412 MHz

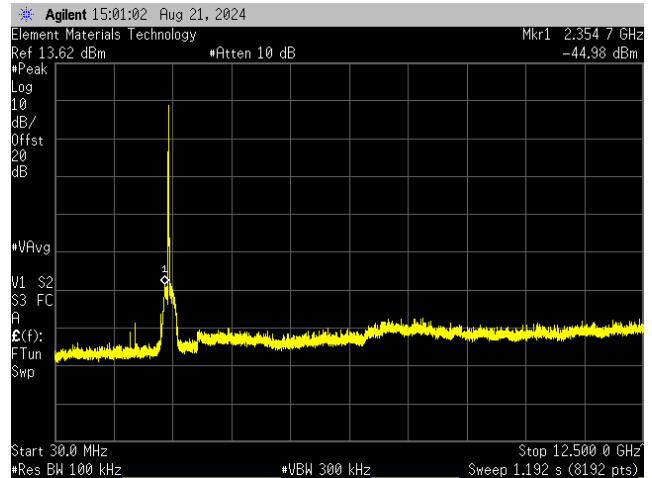


Antenna 2
802.11(b), 20 MHz, 1 Mbps
Low Channel 1, 2412 MHz

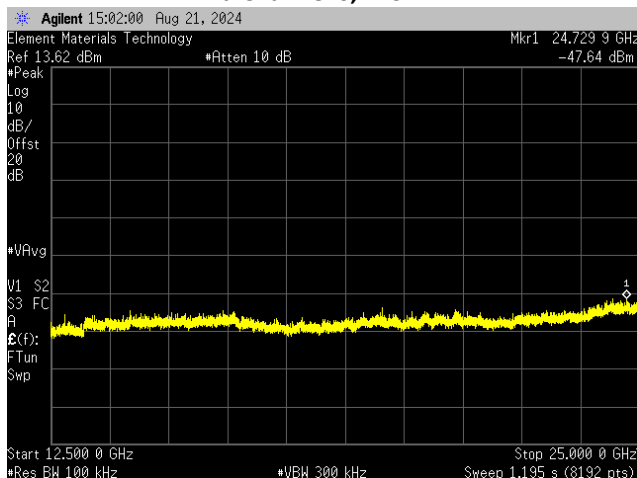
SPURIOUS CONDUCTED EMISSIONS



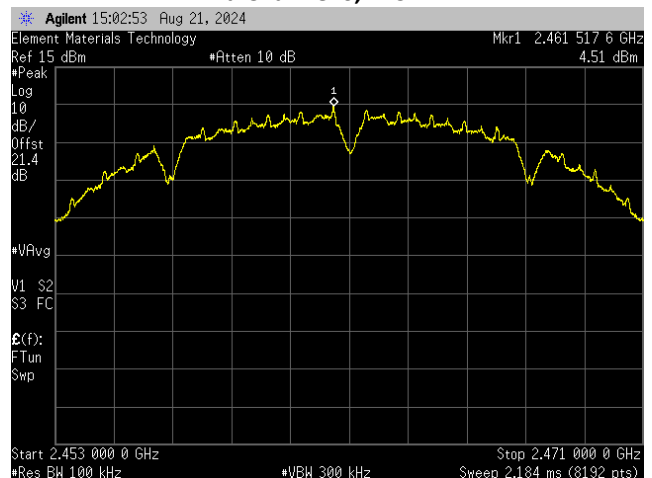
Antenna 2
802.11(b), 20 MHz, 1 Mbps
Mid Channel 6, 2437 MHz



Antenna 2
802.11(b), 20 MHz, 1 Mbps
Mid Channel 6, 2437 MHz

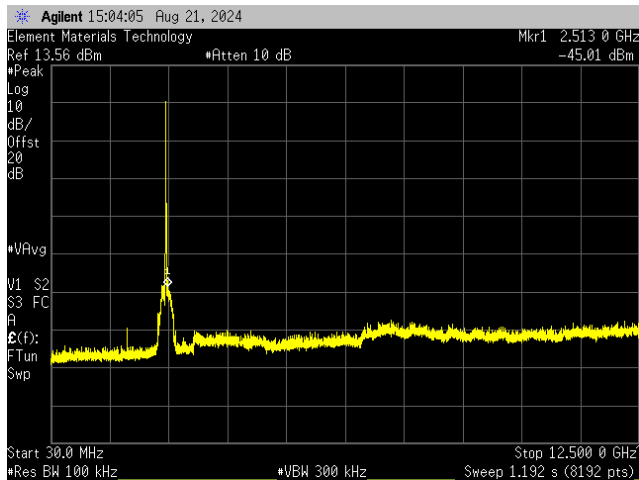


Antenna 2
802.11(b), 20 MHz, 1 Mbps
Mid Channel 6, 2437 MHz

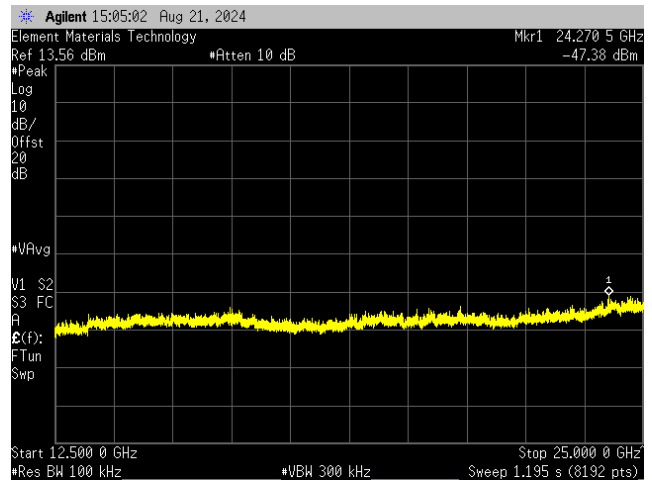


Antenna 2
802.11(b), 20 MHz, 1 Mbps
High Channel 11, 2462 MHz

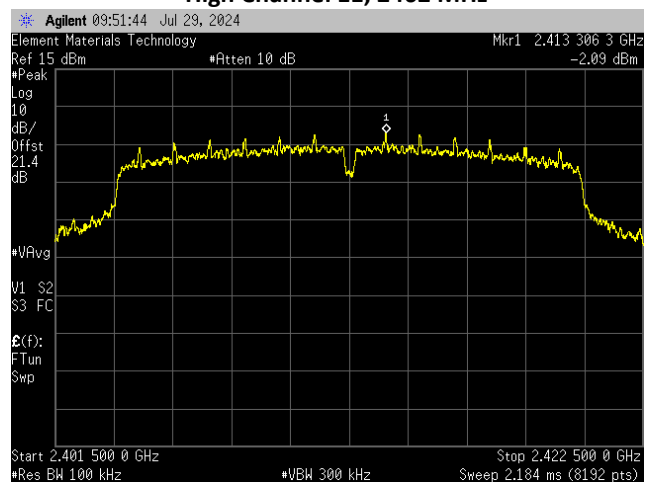
SPURIOUS CONDUCTED EMISSIONS



Antenna 2
802.11(b), 20 MHz, 1 Mbps
High Channel 11, 2462 MHz

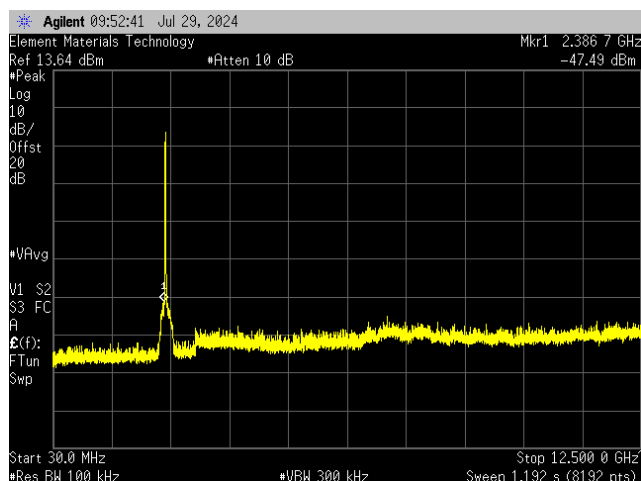


Antenna 2
802.11(b), 20 MHz, 1 Mbps
High Channel 11, 2462 MHz

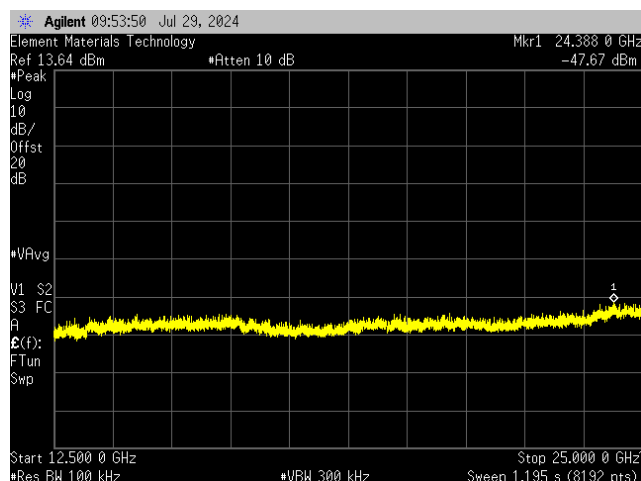


Antenna 2
802.11(g), 20 MHz, 6 Mbps
Low Channel 1, 2412 MHz

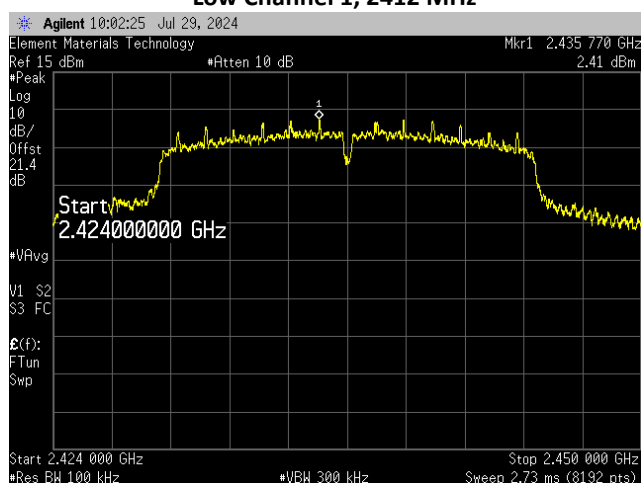
SPURIOUS CONDUCTED EMISSIONS



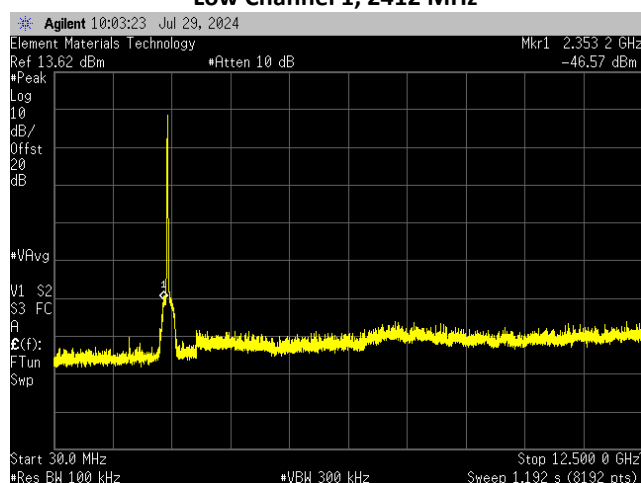
Antenna 2
802.11(g), 20 MHz, 6 Mbps
Low Channel 1, 2412 MHz



Antenna 2
802.11(g), 20 MHz, 6 Mbps
Low Channel 1, 2412 MHz

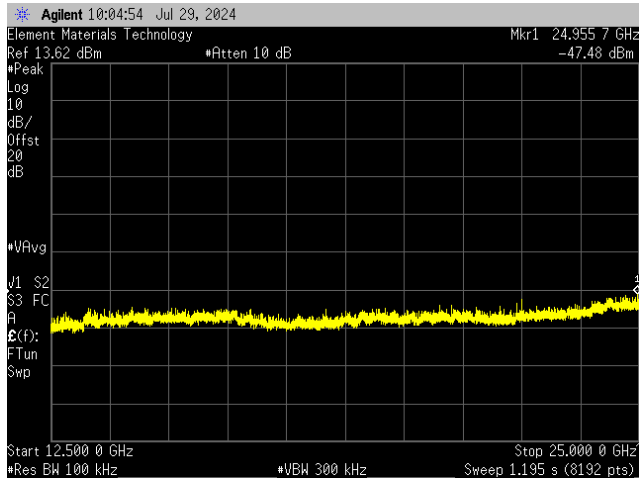


Antenna 2
802.11(g), 20 MHz, 6 Mbps
Mid Channel 6, 2437 MHz

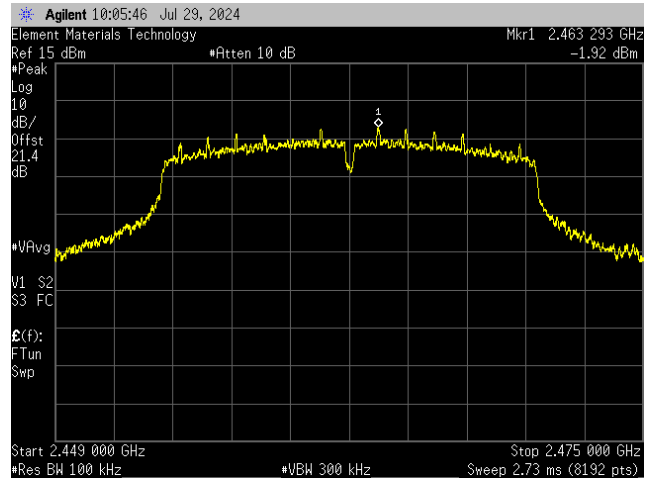


Antenna 2
802.11(g), 20 MHz, 6 Mbps
Mid Channel 6, 2437 MHz

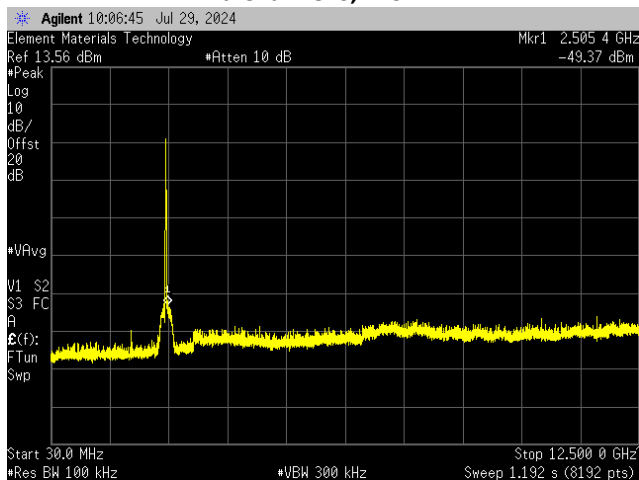
SPURIOUS CONDUCTED EMISSIONS



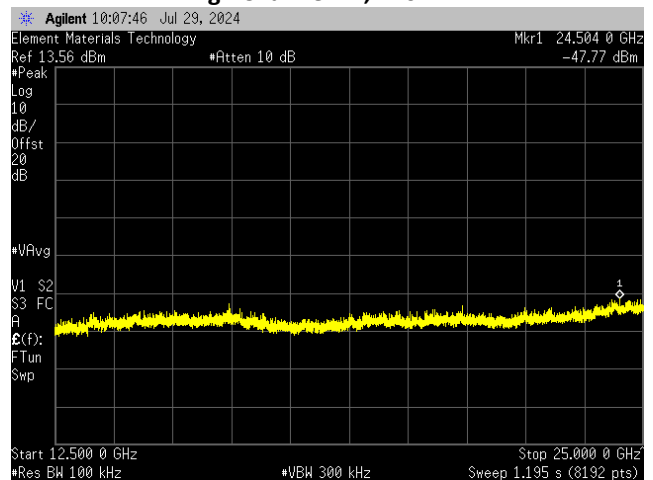
Antenna 2
802.11(g), 20 MHz, 6 Mbps
Mid Channel 6, 2437 MHz



Antenna 2
802.11(g), 20 MHz, 6 Mbps
High Channel 11, 2462 MHz

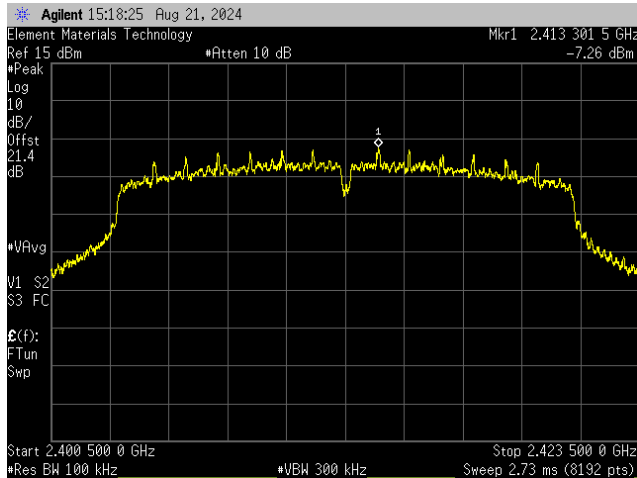


Antenna 2
802.11(g), 20 MHz, 6 Mbps
High Channel 11, 2462 MHz

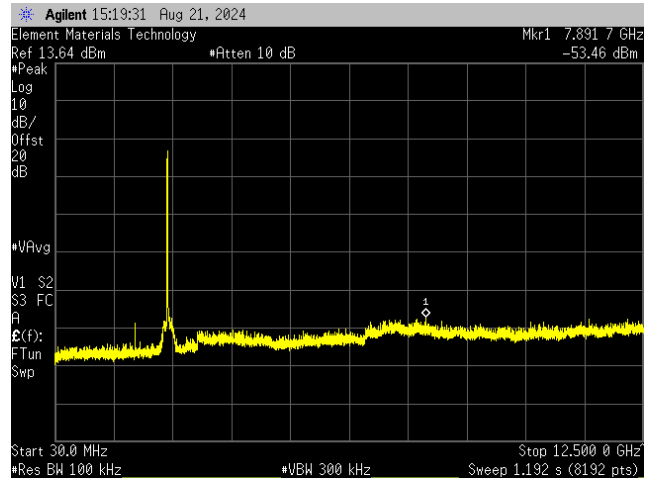


Antenna 2
802.11(g), 20 MHz, 6 Mbps
High Channel 11, 2462 MHz

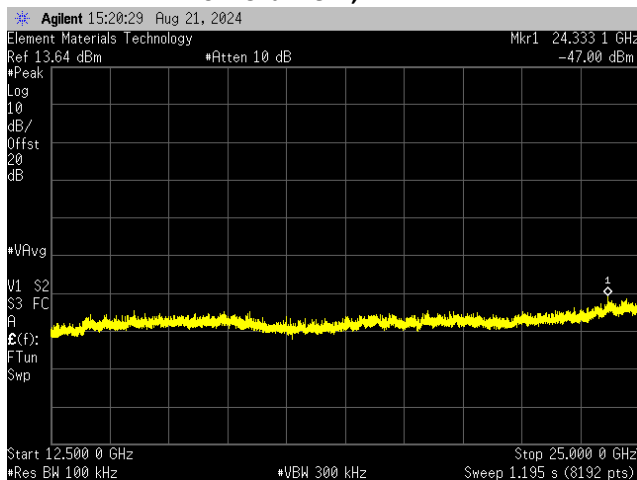
SPURIOUS CONDUCTED EMISSIONS



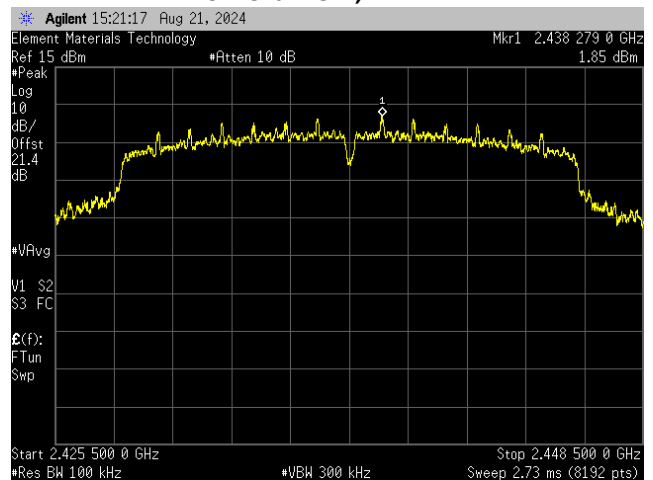
Antenna 2
802.11(n), 20 MHz, MCS0
Low Channel 1, 2412 MHz



Antenna 2
802.11(n), 20 MHz, MCS0
Low Channel 1, 2412 MHz

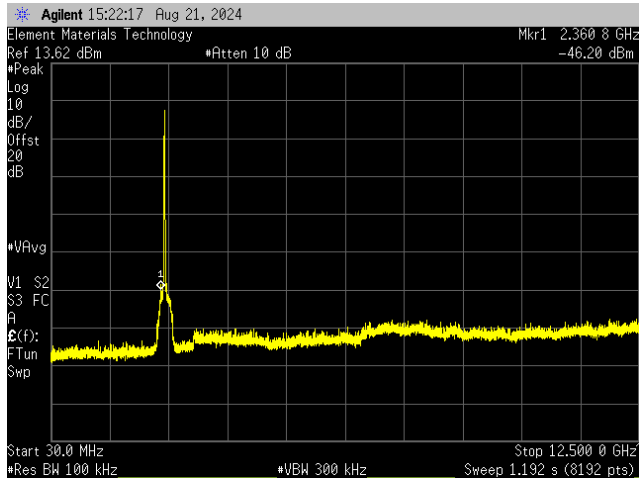


Antenna 2
802.11(n), 20 MHz, MCS0
Low Channel 1, 2412 MHz

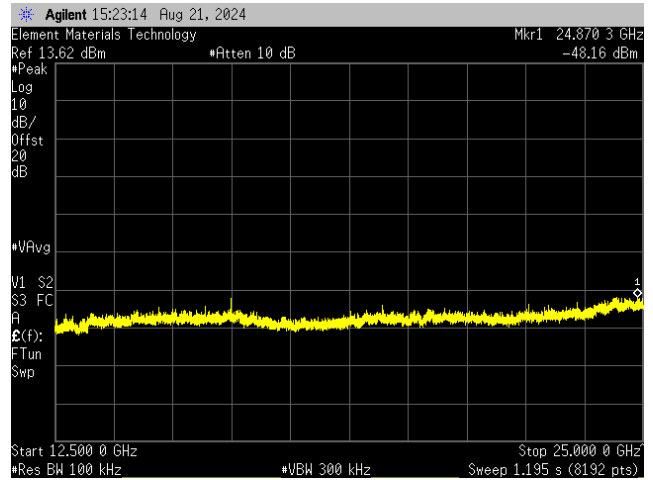


Antenna 2
802.11(n), 20 MHz, MCS0
Mid Channel 6, 2437 MHz

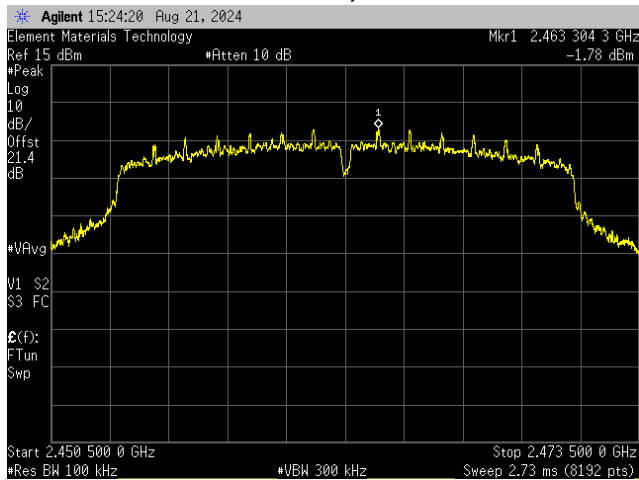
SPURIOUS CONDUCTED EMISSIONS



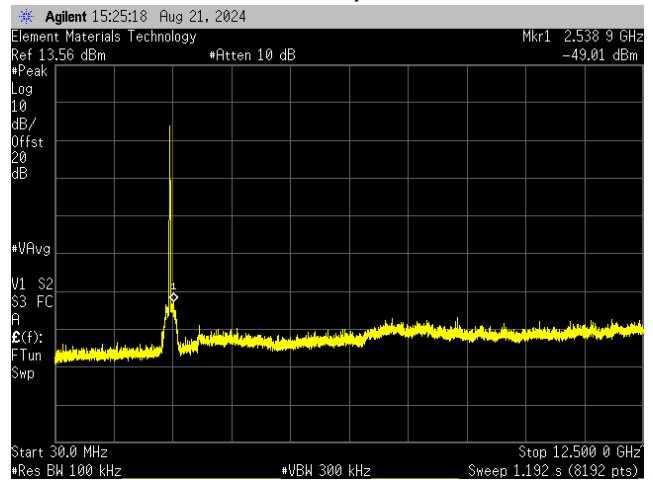
Antenna 2
802.11(n), 20 MHz, MCS0
Mid Channel 6, 2437 MHz



Antenna 2
802.11(n), 20 MHz, MCS0
Mid Channel 6, 2437 MHz

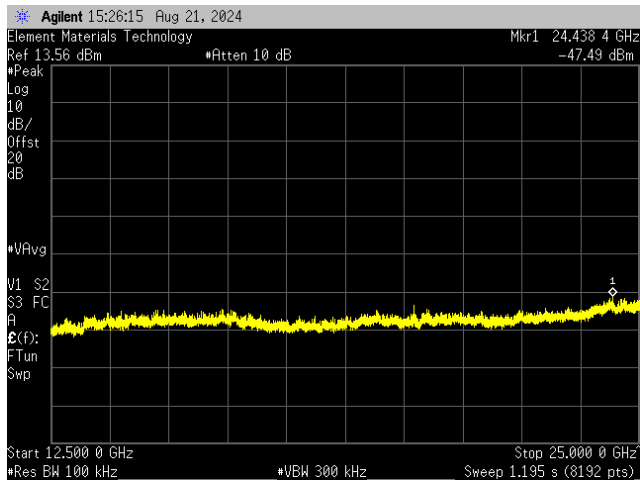


Antenna 2
802.11(n), 20 MHz, MCS0
High Channel 11, 2462 MHz



Antenna 2
802.11(n), 20 MHz, MCS0
High Channel 11, 2462 MHz

SPURIOUS CONDUCTED EMISSIONS



Antenna 2
802.11(n), 20 MHz, MCS0
High Channel 11, 2462 MHz

SPURIOUS RADIATED EMISSIONS

TEST DESCRIPTION

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

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

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

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

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

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

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

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Antenna - Loop	A.H. Systems, Inc.	SAS-563B	TNI	2022-06-07	2025-06-07
Antenna - Biconilog	EMCO	3142B	AXJ	2023-04-17	2025-04-17
Antenna - Double Ridge	ETS Lindgren	3115	AIZ	2024-03-08	2026-03-08
Antenna - Standard Gain	ETS Lindgren	3160-07	AHU	NCR	NCR
Antenna - Standard Gain	ETS Lindgren	3160-08	AHV	NCR	NCR
Antenna - Standard Gain	ETS Lindgren	3160-09	AIV	NCR	NCR
Amplifier - Pre-Amplifier	Miteq	AM-1616-1000	AOL	2023-11-05	2024-11-05
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	PAG	2024-03-14	2025-03-14
Amplifier - Pre-Amplifier	L-3 Narda-MITEQ	AMF-6F-08001200-30-10P	PAO	2023-10-31	2024-10-31
Amplifier - Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AVD	2023-10-31	2024-10-31
Amplifier - Pre-Amplifier	Miteq	AMF-6F-18002650-25-10P	AVU	2024-07-09	2025-07-09
Cable	N/A	Bilog Cables	EVA	2023-11-05	2024-11-05
Cable	N/A	Double Ridge Horn Cables	EVB	2024-03-14	2025-03-14
Cable	None	Standard Gain Horn Cables	EVF	2023-10-31	2024-10-31
Cable	ESM Cable Corp.	TTBJ141-KMKM-72	EVY	2024-07-09	2025-07-09
Attenuator	Coaxicom	3910-20	AXZ	2024-02-12	2025-02-12
Attenuator	Coaxicom	3910-10	AWX	2024-02-12	2025-02-12
Filter - Low Pass	Micro-Tronics	LPM50004	LFD	2024-02-12	2025-02-12
Filter - High Pass	Micro-Tronics	HPM50111	HFO	2023-11-06	2024-11-06
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFO	2023-10-04	2024-10-04

FREQUENCY RANGE INVESTIGATED

9 kHz TO 26.4 GHz

POWER INVESTIGATED

110VAC/60Hz

SPURIOUS RADIATED EMISSIONS

CONFIGURATIONS INVESTIGATED

IRRI0024-1
IRRI0024-9

MODES INVESTIGATED

Tx 802.11bgn, Ch. 1 = 2412 MHz, Ch. 6 = 2437 MHz, Ch. 11 = 2462 MHz, 1 Mbps, Ant 1
Tx 802.11bgn, Ch. 1 = 2412 MHz, Ch. 6 = 2437 MHz, Ch. 11 = 2462 MHz, 1 Mbps, Ant 2

SPURIOUS RADIATED EMISSIONS

EUT:	Controller 3, Model 705101	Work Order:	IRRI0024
Serial Number:	1C:63:49:9D:4E:DC	Date:	2024-07-22
Customer:	IrriGreen, Inc.	Temperature:	22.1°C
Attendees:	Seth Hammond	Relative Humidity:	46.3%
Customer Project:	None	Bar. Pressure (PMSL):	1020 mb
Tested By:	Jeff Alcock	Job Site:	EV01
Power:	110VAC/60Hz	Configuration:	IRRI0024-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2024	ANSI C63.10:2013

TEST PARAMETERS

Run #:	22	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

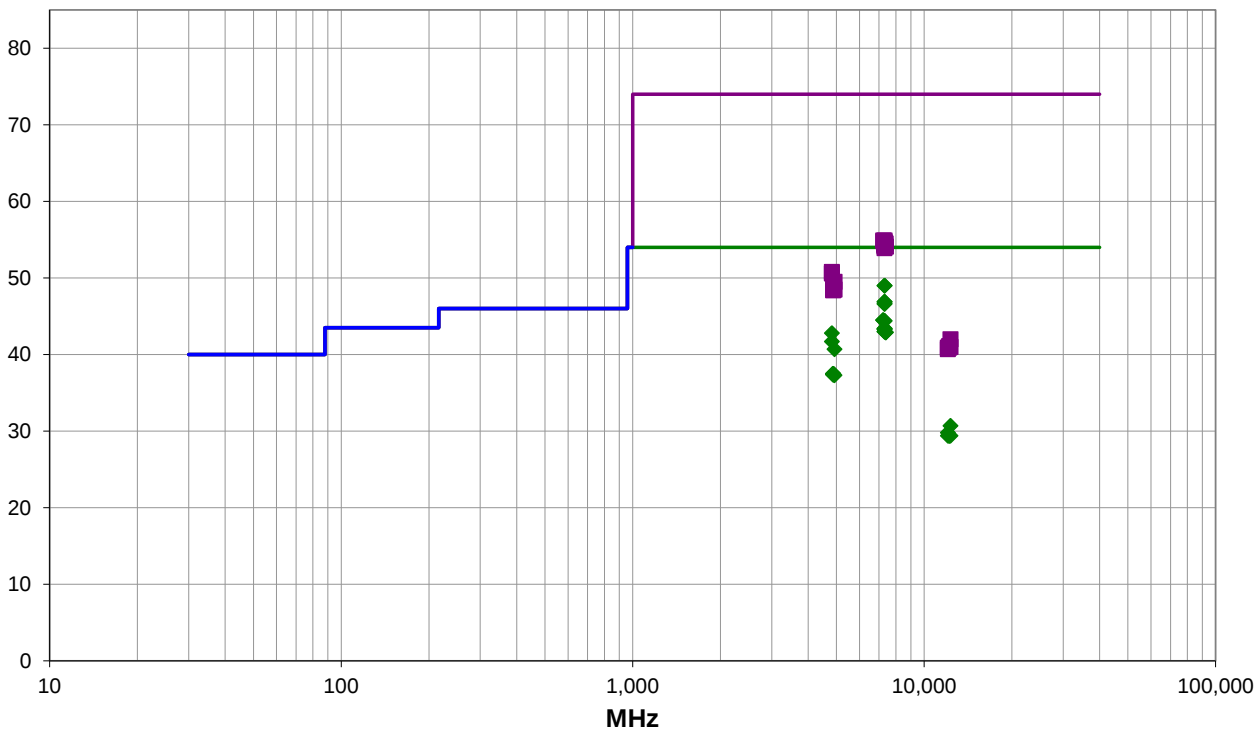
Please reference comments below for channel, data rate, and EUT orientation.
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EUT OPERATING MODES

Tx 802.11bgn, Ch. 1 = 2412 MHz, Ch. 6 = 2437 MHz, Ch. 11 = 2462 MHz, 1 Mbps, Ant 1
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DEVIATIONS FROM TEST STANDARD

None



Run #: 22

■ PK ◆ AV ● QP

SPURIOUS RADIATED EMISSIONS

RESULTS - Run #22

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Duty Cycle Correction Factor (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
7313.425	27.3	15.6	1.5	108.0	6.1	0.0	Horz	AV	0.0	49.0	54.0	-5.0	Ch. 6, MCS7, EUT Vert
7311.325	27.3	15.6	1.5	145.0	6.1	0.0	Vert	AV	0.0	49.0	54.0	-5.0	Ch. 6, MCS7, EUT Vert
7313.267	27.3	15.6	1.5	69.0	4.0	0.0	Horz	AV	0.0	46.9	54.0	-7.1	Ch. 6, 54 Mbps, EUT Vert
7312.600	27.3	15.6	1.5	312.0	4.0	0.0	Vert	AV	0.0	46.9	54.0	-7.1	Ch. 6, 54 Mbps, EUT Vert
7312.658	27.4	15.6	3.2	107.0	3.7	0.0	Horz	AV	0.0	46.7	54.0	-7.3	Ch. 6, 36 Mbps, EUT Vert
7312.725	27.3	15.6	1.5	306.0	3.7	0.0	Vert	AV	0.0	46.6	54.0	-7.4	Ch. 6, 36 Mbps, EUT Vert
7234.158	27.4	15.5	1.5	172.0	1.6	0.0	Horz	AV	0.0	44.5	54.0	-9.5	Ch. 1, 1 Mbps, EUT Vert
7233.708	27.4	15.5	1.5	266.0	1.6	0.0	Vert	AV	0.0	44.5	54.0	-9.5	Ch. 1, 1 Mbps, EUT Vert
7313.075	27.6	15.6	1.5	148.0	1.2	0.0	Horz	AV	0.0	44.4	54.0	-9.6	Ch. 6, 11 Mbps, EUT Vert
7309.758	27.6	15.6	1.5	0.0	1.2	0.0	Vert	AV	0.0	44.4	54.0	-9.6	Ch. 6, 11 Mbps, EUT Vert
7311.708	27.3	15.6	1.5	119.0	0.5	0.0	Horz	AV	0.0	43.4	54.0	-10.6	Ch. 6, 6 Mbps, EUT Vert
7313.317	27.3	15.6	1.5	10.0	0.5	0.0	Vert	AV	0.0	43.4	54.0	-10.6	Ch. 6, 6 Mbps, EUT Vert
7312.600	27.3	15.6	1.5	214.0	0.4	0.0	Horz	AV	0.0	43.3	54.0	-10.7	Ch. 6, MCS0, EUT Vert
7312.750	27.3	15.6	1.5	27.0	0.4	0.0	Vert	AV	0.0	43.3	54.0	-10.7	Ch. 6, MCS0, EUT Vert
7311.833	27.3	15.6	1.5	213.0	0.1	0.0	Horz	AV	0.0	43.0	54.0	-11.0	Ch. 6, 1 Mbps, EUT Vert
7312.200	27.3	15.6	1.5	145.0	0.1	0.0	Vert	AV	0.0	43.0	54.0	-11.0	Ch. 6, 1 Mbps, EUT Vert
7383.725	27.1	15.7	1.5	65.0	0.1	0.0	Horz	AV	0.0	42.9	54.0	-11.1	Ch. 11, 1 Mbps, EUT Vert
7384.758	27.1	15.7	1.5	245.0	0.1	0.0	Vert	AV	0.0	42.9	54.0	-11.1	Ch. 11, 1 Mbps, EUT Vert
4824.000	33.2	9.5	1.5	43.0	0.1	0.0	Horz	AV	0.0	42.8	54.0	-11.2	Ch. 1, 1 Mbps, EUT Vert
4824.033	32.1	9.5	2.1	25.0	0.1	0.0	Vert	AV	0.0	41.7	54.0	-12.3	Ch. 1, 1 Mbps, EUT Vert
4924.000	31.1	9.5	1.5	360.0	0.1	0.0	Horz	AV	0.0	40.7	54.0	-13.3	Ch. 11, 1 Mbps, EUT Vert
4871.542	27.9	9.5	1.5	236.0	0.1	0.0	Vert	AV	0.0	37.5	54.0	-16.5	Ch. 6, 1 Mbps, EUT Horz
4871.892	27.9	9.5	1.5	246.0	0.1	0.0	Horz	AV	0.0	37.5	54.0	-16.5	Ch. 6, 1 Mbps, EUT Vert
4871.542	27.9	9.5	1.5	11.0	0.1	0.0	Vert	AV	0.0	37.5	54.0	-16.5	Ch. 6, 1 Mbps, EUT Vert
4871.658	27.8	9.5	1.5	341.0	0.1	0.0	Horz	AV	0.0	37.4	54.0	-16.6	Ch. 6, 1 Mbps, EUT Horz
4871.500	27.8	9.5	1.5	98.0	0.1	0.0	Horz	AV	0.0	37.4	54.0	-16.6	Ch. 6, 1 Mbps, EUT On Side
4873.442	27.8	9.5	1.5	114.0	0.1	0.0	Vert	AV	0.0	37.4	54.0	-16.6	Ch. 6, 1 Mbps, EUT On Side
4923.867	27.7	9.5	1.5	150.0	0.1	0.0	Vert	AV	0.0	37.3	54.0	-16.7	Ch. 11, 1 Mbps, EUT Vert
7311.883	39.3	15.6	1.5	306.0	0.0	0.0	Vert	PK	0.0	54.9	74.0	-19.1	Ch. 6, 36 Mbps, EUT Vert
7234.700	39.4	15.5	1.5	266.0	0.0	0.0	Vert	PK	0.0	54.9	74.0	-19.1	Ch. 1, 1 Mbps, EUT Vert
7235.592	39.3	15.5	1.5	172.0	0.0	0.0	Horz	PK	0.0	54.8	74.0	-19.2	Ch. 1, 1 Mbps, EUT Vert
7310.208	39.1	15.6	1.5	0.0	0.0	0.0	Vert	PK	0.0	54.7	74.0	-19.3	Ch. 6, 11 Mbps, EUT Vert
7313.167	39.0	15.6	1.5	312.0	0.0	0.0	Vert	PK	0.0	54.6	74.0	-19.4	Ch. 6, 54 Mbps, EUT Vert
7312.075	39.0	15.6	1.5	108.0	0.0	0.0	Horz	PK	0.0	54.6	74.0	-19.4	Ch. 6, MCS7, EUT Vert
7309.083	39.0	15.6	1.5	145.0	0.0	0.0	Vert	PK	0.0	54.6	74.0	-19.4	Ch. 6, MCS7, EUT Vert
7384.675	38.8	15.7	1.5	65.0	0.0	0.0	Horz	PK	0.0	54.5	74.0	-19.5	Ch. 11, 1 Mbps, EUT Vert
7310.667	38.9	15.6	1.5	148.0	0.0	0.0	Horz	PK	0.0	54.5	74.0	-19.5	Ch. 6, 11 Mbps, EUT Vert
7311.925	38.8	15.6	1.5	119.0	0.0	0.0	Horz	PK	0.0	54.4	74.0	-19.6	Ch. 6, 6 Mbps, EUT Vert
7312.925	38.8	15.6	1.5	69.0	0.0	0.0	Horz	PK	0.0	54.4	74.0	-19.6	Ch. 6, 54 Mbps, EUT Vert
7308.750	38.8	15.6	1.5	214.0	0.0	0.0	Horz	PK	0.0	54.4	74.0	-19.6	Ch. 6, MCS0, EUT Vert
7313.342	38.7	15.6	1.5	213.0	0.0	0.0	Horz	PK	0.0	54.3	74.0	-19.7	Ch. 6, 1 Mbps, EUT Vert
7313.092	38.7	15.6	1.5	27.0	0.0	0.0	Vert	PK	0.0	54.3	74.0	-19.7	Ch. 6, MCS0, EUT Vert

SPURIOUS RADIATED EMISSIONS

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Duty Cycle Correction Factor (meters)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
7312.775	38.6	15.6	1.5	145.0	0.0	0.0	Vert	PK	0.0	54.2	74.0	-19.8	Ch. 6, 1 Mbps, EUT Vert
7386.375	38.4	15.7	1.5	245.0	0.0	0.0	Vert	PK	0.0	54.1	74.0	-19.9	Ch. 11, 1 Mbps, EUT Vert
7310.975	38.5	15.6	3.2	107.0	0.0	0.0	Horz	PK	0.0	54.1	74.0	-19.9	Ch. 6, 36 Mbps, EUT Vert
7309.275	38.3	15.6	1.5	10.0	0.0	0.0	Vert	PK	0.0	53.9	74.0	-20.1	Ch. 6, 6 Mbps, EUT Vert
4824.250	41.3	9.5	2.1	25.0	0.0	0.0	Vert	PK	0.0	50.8	74.0	-23.2	Ch. 1, 1 Mbps, EUT Vert
12310.720	29.9	0.7	1.7	57.0	0.1	0.0	Vert	AV	0.0	30.7	54.0	-23.3	Ch. 11, 1 Mbps, EUT Vert
4824.092	41.1	9.5	1.5	43.0	0.0	0.0	Horz	PK	0.0	50.6	74.0	-23.4	Ch. 1, 1 Mbps, EUT Vert
12057.730	29.0	0.7	1.5	47.0	0.1	0.0	Vert	AV	0.0	29.8	54.0	-24.2	Ch. 1, 1 Mbps, EUT Vert
4923.533	40.0	9.5	1.5	360.0	0.0	0.0	Horz	PK	0.0	49.5	74.0	-24.5	Ch. 11, 1 Mbps, EUT Vert
12308.270	28.6	0.7	1.5	336.0	0.1	0.0	Horz	AV	0.0	29.4	54.0	-24.6	Ch. 11, 1 Mbps, EUT Vert
12185.770	28.5	0.8	1.5	15.0	0.1	0.0	Horz	AV	0.0	29.4	54.0	-24.6	Ch. 6, 1 Mbps, EUT Vert
12185.780	28.5	0.8	1.6	284.0	0.1	0.0	Vert	AV	0.0	29.4	54.0	-24.6	Ch. 6, 1 Mbps, EUT Vert
12058.350	28.6	0.7	1.5	338.0	0.1	0.0	Horz	AV	0.0	29.4	54.0	-24.6	Ch. 1, 1 Mbps, EUT Vert
4874.025	39.6	9.5	1.5	246.0	0.0	0.0	Horz	PK	0.0	49.1	74.0	-24.9	Ch. 6, 1 Mbps, EUT Vert
4872.033	39.4	9.5	1.5	11.0	0.0	0.0	Vert	PK	0.0	48.9	74.0	-25.1	Ch. 6, 1 Mbps, EUT Vert
4874.458	39.3	9.5	1.5	236.0	0.0	0.0	Vert	PK	0.0	48.8	74.0	-25.2	Ch. 6, 1 Mbps, EUT Horz
4872.808	39.1	9.5	1.5	114.0	0.0	0.0	Vert	PK	0.0	48.6	74.0	-25.4	Ch. 6, 1 Mbps, EUT On Side
4924.033	39.0	9.5	1.5	150.0	0.0	0.0	Vert	PK	0.0	48.5	74.0	-25.5	Ch. 11, 1 Mbps, EUT Vert
4874.592	38.9	9.5	1.5	341.0	0.0	0.0	Horz	PK	0.0	48.4	74.0	-25.6	Ch. 6, 1 Mbps, EUT Horz
4874.358	38.9	9.5	1.5	98.0	0.0	0.0	Horz	PK	0.0	48.4	74.0	-25.6	Ch. 6, 1 Mbps, EUT On Side
12309.730	41.3	0.7	1.7	57.0	0.0	0.0	Vert	PK	0.0	42.0	74.0	-32.0	Ch. 11, 1 Mbps, EUT Vert
12183.850	40.3	0.8	1.6	284.0	0.0	0.0	Vert	PK	0.0	41.1	74.0	-32.9	Ch. 6, 1 Mbps, EUT Vert
12311.350	40.3	0.7	1.5	336.0	0.0	0.0	Horz	PK	0.0	41.0	74.0	-33.0	Ch. 11, 1 Mbps, EUT Vert
12186.680	40.1	0.8	1.5	15.0	0.0	0.0	Horz	PK	0.0	40.9	74.0	-33.1	Ch. 6, 1 Mbps, EUT Vert
12058.040	40.2	0.7	1.5	338.0	0.0	0.0	Horz	PK	0.0	40.9	74.0	-33.1	Ch. 1, 1 Mbps, EUT Vert
12059.380	40.0	0.7	1.5	47.0	0.0	0.0	Vert	PK	0.0	40.7	74.0	-33.3	Ch. 1, 1 Mbps, EUT Vert

CONCLUSION

Pass



Tested By

SPURIOUS RADIATED EMISSIONS



EUT:	Controller 3, Model 705101	Work Order:	IRRI0024
Serial Number:	1C:63:49:9D:4E:DC	Date:	2024-09-10
Customer:	IrriGreen, Inc.	Temperature:	21.8°C
Attendees:	None	Relative Humidity:	46.2%
Customer Project:	None	Bar. Pressure (PMSL):	1013 mb
Tested By:	Jeff Alcock	Job Site:	EV01
Power:	110VAC/60Hz	Configuration:	IRRI0024-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2024	ANSI C63.10:2013

TEST PARAMETERS

Run #:	180	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

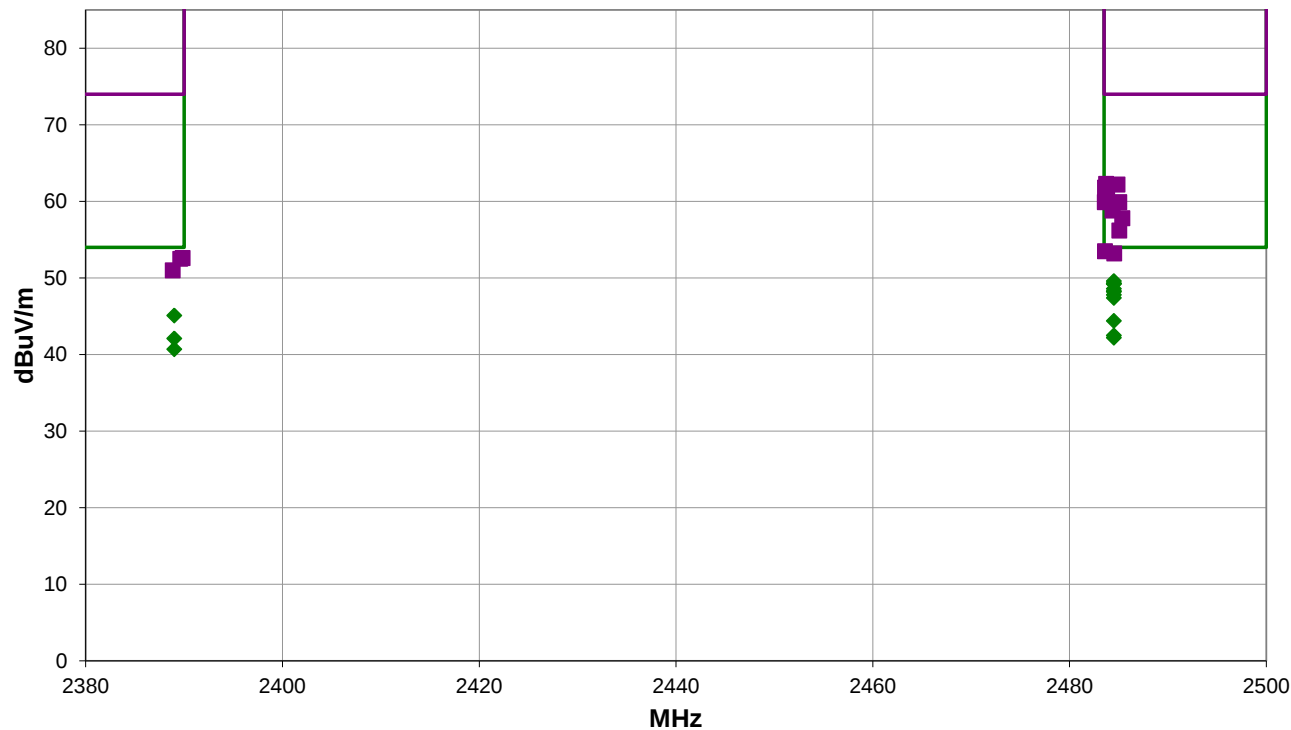
Please reference data comments below for channel, data rate, and EUT orientation.

EUT OPERATING MODES

Transmitting 802.11bgn, Ch. 1 = 2412 MHz, Ch. 6 = 2437 MHz, Ch. 11 = 2468 MHz, Ant 1.

DEVIATIONS FROM TEST STANDARD

None



Run #: 180

■ PK ◆ AV ● QP

SPURIOUS RADIATED EMISSIONS

RESULTS - Run #180

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Duty Cycle Correction Factor (dB)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
2484.500	41.2	-2.0	1.0	179.0	0.4	10.0	Horz	AV	0.0	49.6	54.0	-4.4	Ch. 11, 6 Mbps, EUT Vert
2484.500	35.2	-2.0	1.5	178.0	6.1	10.0	Horz	AV	0.0	49.3	54.0	-4.7	Ch. 11, MCS7, EUT Vert
2484.500	35.8	-2.0	1.5	178.0	5.5	10.0	Horz	AV	0.0	49.3	54.0	-4.7	Ch. 11, 54 Mbps, EUT Vert
2484.500	40.3	-2.0	1.5	178.0	0.9	10.0	Horz	AV	0.0	49.2	54.0	-4.8	Ch. 11, 11 Mbps, EUT Vert
2484.500	36.9	-2.0	1.5	178.0	3.7	10.0	Horz	AV	0.0	48.6	54.0	-5.4	Ch. 11, 36 Mbps, EUT Vert
2484.500	40.1	-2.0	1.5	178.0	0.2	10.0	Horz	AV	0.0	48.3	54.0	-5.7	Ch. 11, 1 Mbps, EUT Vert
2484.500	39.8	-2.0	1.0	183.0	0.4	10.0	Vert	AV	0.0	48.2	54.0	-5.8	Ch. 11, 6 Mbps, EUT on Side
2484.500	39.4	-2.0	1.5	178.0	0.4	10.0	Horz	AV	0.0	47.8	54.0	-6.2	Ch. 11, MCS0, EUT Vert
2484.500	39.0	-2.0	2.02	343.0	0.4	10.0	Horz	AV	0.0	47.4	54.0	-6.6	Ch. 11, 6 Mbps, EUT Horz
2389.000	31.4	-2.4	1.5	168.0	6.1	10.0	Horz	AV	0.0	45.1	54.0	-8.9	Ch. 1, MCS7, EUT Vert
2484.500	36.0	-2.0	1.5	75.0	0.4	10.0	Vert	AV	0.0	44.4	54.0	-9.6	Ch. 11, 6 Mbps, EUT Vert
2484.500	34.1	-2.0	1.5	351.0	0.4	10.0	Horz	AV	0.0	42.5	54.0	-11.5	Ch. 11, 6 Mbps, EUT on Side
2483.710	54.3	-2.0	1.5	178.0	0.0	10.0	Horz	PK	0.0	62.3	74.0	-11.7	Ch. 11, 36 Mbps, EUT Vert
2484.870	54.2	-2.0	1.0	179.0	0.0	10.0	Horz	PK	0.0	62.2	74.0	-11.8	Ch. 11, 6 Mbps, EUT Vert
2484.500	33.8	-2.0	1.5	39.0	0.4	10.0	Vert	AV	0.0	42.2	54.0	-11.8	Ch. 11, 6 Mbps, EUT Horz
2389.000	34.3	-2.4	1.5	168.0	0.2	10.0	Horz	AV	0.0	42.1	54.0	-11.9	Ch. 1, 1 Mbps, EUT Vert
2483.607	53.8	-2.0	1.5	178.0	0.0	10.0	Horz	PK	0.0	61.8	74.0	-12.2	Ch. 11, 54 Mbps, EUT Vert
2483.807	53.0	-2.0	1.5	178.0	0.0	10.0	Horz	PK	0.0	61.0	74.0	-13.0	Ch. 11, MCS0, EUT Vert
2389.000	32.7	-2.4	1.5	168.0	0.4	10.0	Horz	AV	0.0	40.7	54.0	-13.3	Ch. 1, 6 Mbps, EUT Vert
2483.713	52.1	-2.0	1.5	178.0	0.0	10.0	Horz	PK	0.0	60.1	74.0	-13.9	Ch. 11, MCS7, EUT Vert
2485.047	51.9	-2.0	1.0	183.0	0.0	10.0	Vert	PK	0.0	59.9	74.0	-14.1	Ch. 11, 6 Mbps, EUT on Side
2483.580	51.9	-2.0	2.02	343.0	0.0	10.0	Horz	PK	0.0	59.9	74.0	-14.1	Ch. 11, 6 Mbps, EUT Horz
2484.377	50.8	-2.0	1.5	178.0	0.0	10.0	Horz	PK	0.0	58.8	74.0	-15.2	Ch. 11, 11 Mbps, EUT Vert
2485.357	49.8	-2.0	1.5	178.0	0.0	10.0	Horz	PK	0.0	57.8	74.0	-16.2	Ch. 11, 1 Mbps, EUT Vert
2485.057	48.2	-2.0	1.5	75.0	0.0	10.0	Vert	PK	0.0	56.2	74.0	-17.8	Ch. 11, 6 Mbps, EUT Vert
2483.600	45.5	-2.0	1.5	39.0	0.0	10.0	Vert	PK	0.0	53.5	74.0	-20.5	Ch. 11, 6 Mbps, EUT Horz
2484.537	45.2	-2.0	1.5	351.0	0.0	10.0	Horz	PK	0.0	53.2	74.0	-20.8	Ch. 11, 6 Mbps, EUT on Side
2389.853	45.0	-2.4	1.5	168.0	0.0	10.0	Horz	PK	0.0	52.6	74.0	-21.4	Ch. 1, 6 Mbps, EUT Vert
2389.607	44.9	-2.4	1.5	168.0	0.0	10.0	Horz	PK	0.0	52.5	74.0	-21.5	Ch. 1, 1 Mbps, EUT Vert
2388.843	43.4	-2.4	1.5	168.0	0.0	10.0	Horz	PK	0.0	51.0	74.0	-23.0	Ch. 1, MCS7, EUT Vert

CONCLUSION

Pass



Tested By

SPURIOUS RADIATED EMISSIONS

EUT:	Controller 3, Model 705101	Work Order:	IRRI0024
Serial Number:	1C:63:49:9D:4E:DC	Date:	2024-07-23
Customer:	IrriGreen, Inc.	Temperature:	22.1°C
Attendees:	Seth Hammond	Relative Humidity:	46.7%
Customer Project:	None	Bar. Pressure (PMSL):	1021 mb
Tested By:	Christopher Ladwig	Job Site:	EV01
Power:	110VAC/60Hz	Configuration:	IRRI0024-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2024	ANSI C63.10:2013

TEST PARAMETERS

Run #:	38	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

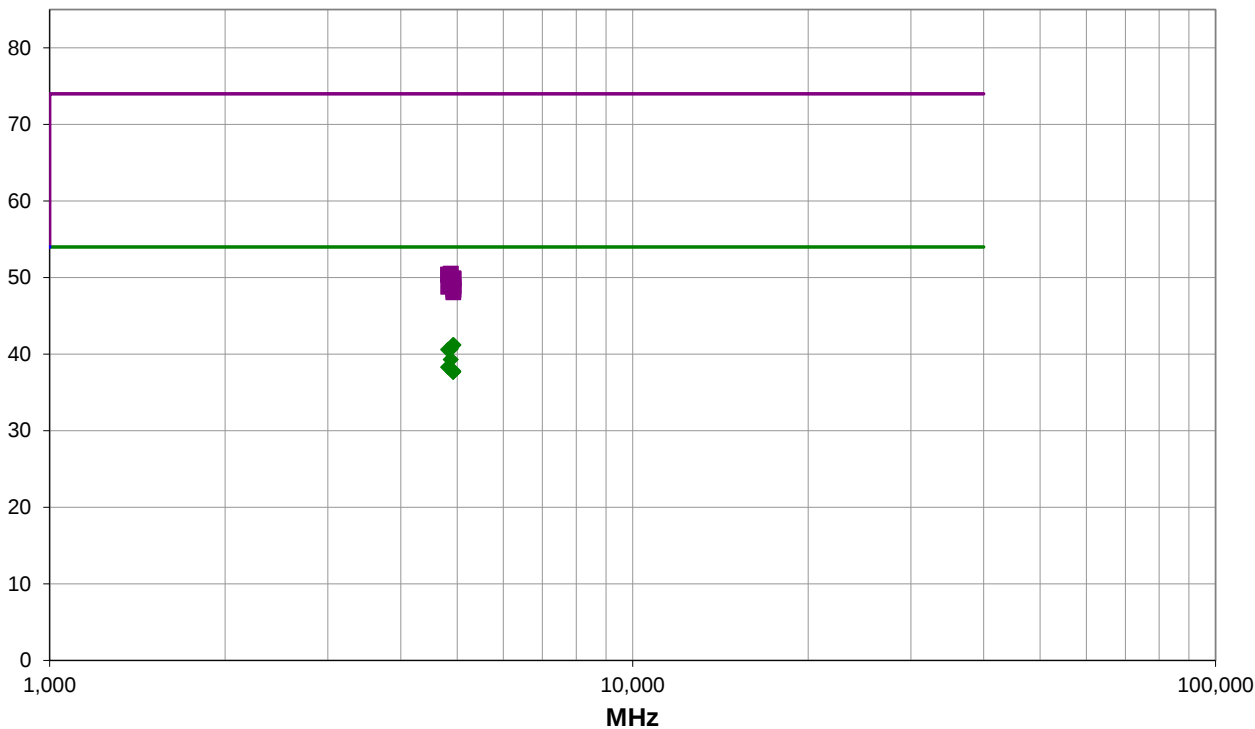
Please reference comments below for channel, data rate, and EUT orientation. Measurement performed on worst case non-noise floor harmonic.

EUT OPERATING MODES

Tx 802.11bgn, Ch. 1 = 2412 MHz, Ch. 6 = 2437 MHz, Ch. 11 = 2462 MHz, 1 Mbps, Ant 2
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DEVIATIONS FROM TEST STANDARD

None



Run #: 38

■ PK ◆ AV ● QP

SPURIOUS RADIATED EMISSIONS

RESULTS - Run #38

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Duty Cycle Correction Factor (dB)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
4924.017	31.5	9.5	1.5	352.0	0.2	0.0	Horz	AV	0.0	41.2	54.0	-12.8	Ch. 11, 1Mbps, EUT Vert
4924.033	31.5	9.5	1.0	54.0	0.2	0.0	Vert	AV	0.0	41.2	54.0	-12.8	Ch. 11, 1Mbps, EUT Vert
4873.983	31.0	9.5	1.5	352.0	0.2	0.0	Horz	AV	0.0	40.7	54.0	-13.3	Ch. 6, 1Mbps, EUT Vert
4823.975	30.9	9.5	1.5	352.0	0.2	0.0	Horz	AV	0.0	40.6	54.0	-13.4	Ch. 1, 1Mbps, EUT Vert
4874.050	29.6	9.5	1.5	66.0	0.2	0.0	Vert	AV	0.0	39.3	54.0	-14.7	Ch. 6, 1Mbps, EUT Vert
4823.933	28.6	9.5	1.5	37.0	0.2	0.0	Vert	AV	0.0	38.3	54.0	-15.7	Ch. 1, 1Mbps, EUT Vert
4921.750	27.9	9.5	1.5	45.0	0.4	0.0	Vert	AV	0.0	37.8	54.0	-16.2	Ch. 11, MCS0, EUT Vert
4921.508	27.8	9.5	1.5	321.0	0.4	0.0	Horz	AV	0.0	37.7	54.0	-16.3	Ch. 11, 6Mbps, EUT Vert
4921.833	27.8	9.5	3.0	248.0	0.4	0.0	Vert	AV	0.0	37.7	54.0	-16.3	Ch. 11, 6Mbps, EUT Vert
4921.708	27.8	9.5	3.1	299.0	0.4	0.0	Horz	AV	0.0	37.7	54.0	-16.3	Ch. 11, MCS0, EUT Vert
4874.075	41.0	9.5	1.5	352.0	0.0	0.0	Horz	PK	0.0	50.5	74.0	-23.5	Ch. 6, 1Mbps, EUT Vert
4824.258	40.9	9.5	1.5	352.0	0.0	0.0	Horz	PK	0.0	50.4	74.0	-23.6	Ch. 1, 1Mbps, EUT Vert
4923.858	40.4	9.5	1.5	352.0	0.0	0.0	Horz	PK	0.0	49.9	74.0	-24.1	Ch. 11, 1Mbps, EUT Vert
4923.958	40.3	9.5	1.0	54.0	0.0	0.0	Vert	PK	0.0	49.8	74.0	-24.2	Ch. 11, 1Mbps, EUT Vert
4874.108	39.7	9.5	1.5	66.0	0.0	0.0	Vert	PK	0.0	49.2	74.0	-24.8	Ch. 6, 1Mbps, EUT Vert
4922.008	39.4	9.5	1.5	321.0	0.0	0.0	Horz	PK	0.0	48.9	74.0	-25.1	Ch. 11, 6Mbps, EUT Vert
4825.883	39.3	9.5	1.5	37.0	0.0	0.0	Vert	PK	0.0	48.8	74.0	-25.2	Ch. 1, 1Mbps, EUT Vert
4924.967	39.3	9.5	3.0	248.0	0.0	0.0	Vert	PK	0.0	48.8	74.0	-25.2	Ch. 11, 6Mbps, EUT Vert
4925.183	38.9	9.5	3.1	299.0	0.0	0.0	Horz	PK	0.0	48.4	74.0	-25.6	Ch. 11, MCS0, EUT Vert
4923.258	38.6	9.5	1.5	45.0	0.0	0.0	Vert	PK	0.0	48.1	74.0	-25.9	Ch. 11, MCS0, EUT Vert

CONCLUSION

Pass



Tested By

SPURIOUS RADIATED EMISSIONS



EUT:	Sprinkler with Controller Model 705101	Work Order:	IRRI0024
Serial Number:	900636 RevA1 Unit A	Date:	2024-07-23
Customer:	IrriGreen, Inc.	Temperature:	22.1°C
Attendees:	Seth Hammond	Relative Humidity:	46.7%
Customer Project:	None	Bar. Pressure (PMSL):	1021 mb
Tested By:	Christopher Ladwig	Job Site:	EV01
Power:	110VAC/60Hz	Configuration:	IRRI0024-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2024	ANSI C63.10:2013

TEST PARAMETERS

Run #:	39	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

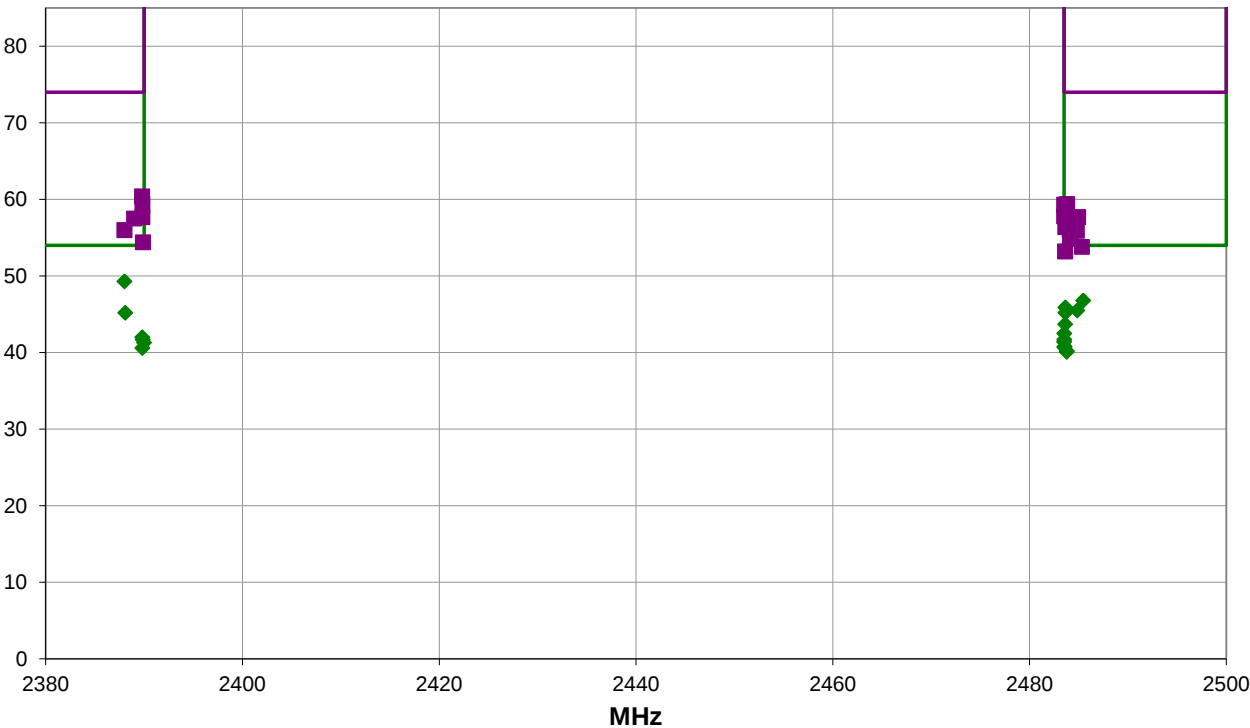
Please reference comments below for channel, data rate, and EUT orientation.
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EUT OPERATING MODES

Tx 802.11bgn, Ch. 1 = 2412 MHz, Ch. 6 = 2437 MHz, Ch. 11 = 2462 MHz, 1 Mbps, Ant 2
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DEVIATIONS FROM TEST STANDARD

None



Run #: 39

■ PK ◆ AV ● QP

SPURIOUS RADIATED EMISSIONS

RESULTS - Run #39

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Duty Cycle Correction Factor (dB)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
2388.003	41.5	-2.4	1.0	62.0	0.2	10.0	Horz	AV	0.0	49.3	54.0	-4.7	Ch. 1, 1Mbps, EUT Horz
2485.450	38.6	-2.0	1.0	235.0	0.2	10.0	Vert	AV	0.0	46.8	54.0	-7.2	Ch. 11, 1Mbps, EUT On Side
2483.637	31.8	-2.0	1.0	235.0	6.1	10.0	Vert	AV	0.0	45.9	54.0	-8.1	Ch. 11, MCS7, EUT On Side
2484.850	36.6	-2.0	1.0	235.0	0.9	10.0	Vert	AV	0.0	45.5	54.0	-8.5	Ch. 11, 11Mbps, EUT On Side
2388.083	37.4	-2.4	1.0	51.0	0.2	10.0	Vert	AV	0.0	45.2	54.0	-8.8	Ch. 1, 1Mbps, EUT On Side
2483.640	31.7	-2.0	1.0	235.0	5.5	10.0	Vert	AV	0.0	45.2	54.0	-8.8	Ch. 11, 54Mbps, EUT On Side
2483.617	32.0	-2.0	1.0	235.0	3.7	10.0	Vert	AV	0.0	43.7	54.0	-10.3	Ch. 11, 36Mbps, EUT On Side
2483.523	34.1	-2.0	1.0	302.0	0.4	10.0	Vert	AV	0.0	42.5	54.0	-11.5	Ch. 11, MCS0, EUT On Side
2389.817	34.0	-2.4	1.0	62.0	0.4	10.0	Horz	AV	0.0	42.0	54.0	-12.0	Ch. 1, MCS0, EUT Horz
2389.860	33.7	-2.4	1.0	62.0	0.4	10.0	Horz	AV	0.0	41.7	54.0	-12.3	Ch. 1, 6Mbps, EUT Horz
2483.530	33.3	-2.0	1.0	235.0	0.4	10.0	Vert	AV	0.0	41.7	54.0	-12.3	Ch. 11, 6Mbps, EUT On Side
2483.507	33.0	-2.0	1.0	0.0	0.4	10.0	Horz	AV	0.0	41.4	54.0	-12.6	Ch. 11, MCS0, EUT Horz
2389.990	33.3	-2.4	1.0	51.0	0.4	10.0	Vert	AV	0.0	41.3	54.0	-12.7	Ch. 1, MCS0, EUT On Side
2483.563	32.4	-2.0	2.0	239.0	0.4	10.0	Vert	AV	0.0	40.8	54.0	-13.2	Ch. 11, MCS0, EUT Horz
2483.527	32.3	-2.0	1.1	207.0	0.4	10.0	Horz	AV	0.0	40.7	54.0	-13.3	Ch. 11, MCS0, EUT On Side
2389.823	32.6	-2.4	1.0	51.0	0.4	10.0	Vert	AV	0.0	40.6	54.0	-13.4	Ch. 1, 6Mbps, EUT On Side
2389.797	52.8	-2.4	1.0	62.0	0.0	10.0	Horz	PK	0.0	60.4	74.0	-13.6	Ch. 1, MCS0, EUT Horz
2483.783	31.8	-2.0	1.5	105.0	0.4	10.0	Vert	AV	0.0	40.2	54.0	-13.8	Ch. 11, MCS0, EUT Vert
2483.773	31.7	-2.0	1.5	231.0	0.4	10.0	Horz	AV	0.0	40.1	54.0	-13.9	Ch. 11, MCS0, EUT Vert
2483.813	51.4	-2.0	1.0	235.0	0.0	10.0	Vert	PK	0.0	59.4	74.0	-14.6	Ch. 11, 36Mbps, EUT On Side
2389.827	51.7	-2.4	1.0	51.0	0.0	10.0	Vert	PK	0.0	59.3	74.0	-14.7	Ch. 1, MCS0, EUT On Side
2483.713	51.3	-2.0	1.0	235.0	0.0	10.0	Vert	PK	0.0	59.3	74.0	-14.7	Ch. 11, 54Mbps, EUT On Side
2483.517	51.3	-2.0	1.0	302.0	0.0	10.0	Vert	PK	0.0	59.3	74.0	-14.7	Ch. 11, MCS0, EUT On Side
2483.623	50.8	-2.0	1.0	235.0	0.0	10.0	Vert	PK	0.0	58.8	74.0	-15.2	Ch. 11, 6Mbps, EUT On Side
2483.510	49.8	-2.0	1.0	235.0	0.0	10.0	Vert	PK	0.0	57.8	74.0	-16.2	Ch. 11, MCS7, EUT On Side
2389.830	50.1	-2.4	1.0	62.0	0.0	10.0	Horz	PK	0.0	57.7	74.0	-16.3	Ch. 1, 6Mbps, EUT Horz
2484.933	49.7	-2.0	1.0	235.0	0.0	10.0	Vert	PK	0.0	57.7	74.0	-16.3	Ch. 11, 11Mbps, EUT On Side
2388.977	49.9	-2.4	1.0	62.0	0.0	10.0	Horz	PK	0.0	57.5	74.0	-16.5	Ch. 1, 1Mbps, EUT Horz
2483.627	48.4	-2.0	1.0	0.0	0.0	10.0	Horz	PK	0.0	56.4	74.0	-17.6	Ch. 11, MCS0, EUT Horz
2388.003	48.4	-2.4	1.0	51.0	0.0	10.0	Vert	PK	0.0	56.0	74.0	-18.0	Ch. 1, 6Mbps, EUT On Side
2484.070	48.0	-2.0	2.0	239.0	0.0	10.0	Vert	PK	0.0	56.0	74.0	-18.0	Ch. 11, MCS0, EUT Horz
2484.790	47.9	-2.0	1.0	235.0	0.0	10.0	Vert	PK	0.0	55.9	74.0	-18.1	Ch. 11, 1Mbps, EUT On Side
2484.120	47.0	-2.0	1.1	207.0	0.0	10.0	Horz	PK	0.0	55.0	74.0	-19.0	Ch. 11, MCS0, EUT On Side
2389.887	46.8	-2.4	1.0	51.0	0.0	10.0	Vert	PK	0.0	54.4	74.0	-19.6	Ch. 1, 1Mbps, EUT On Side
2485.323	45.8	-2.0	1.5	105.0	0.0	10.0	Vert	PK	0.0	53.8	74.0	-20.2	Ch. 11, MCS0, EUT Vert
2483.617	45.2	-2.0	1.5	231.0	0.0	10.0	Horz	PK	0.0	53.2	74.0	-20.8	Ch. 11, MCS0, EUT Vert

CONCLUSION

Pass



Tested By

SPURIOUS RADIATED EMISSIONS



EUT:	Controller 3, Model 705101	Work Order:	IRRI0024
Serial Number:	1C:63:49:9D:4E:DC	Date:	2024-09-11
Customer:	IrriGreen, Inc.	Temperature:	21.8°C
Attendees:	None	Relative Humidity:	47.9%
Customer Project:	None	Bar. Pressure (PMSL):	1008 mb
Tested By:	Jeff Alcock	Job Site:	EV01
Power:	110VAC/60Hz	Configuration:	IRRI0024-9

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2024	ANSI C63.10:2013

TEST PARAMETERS

Run #:	183	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

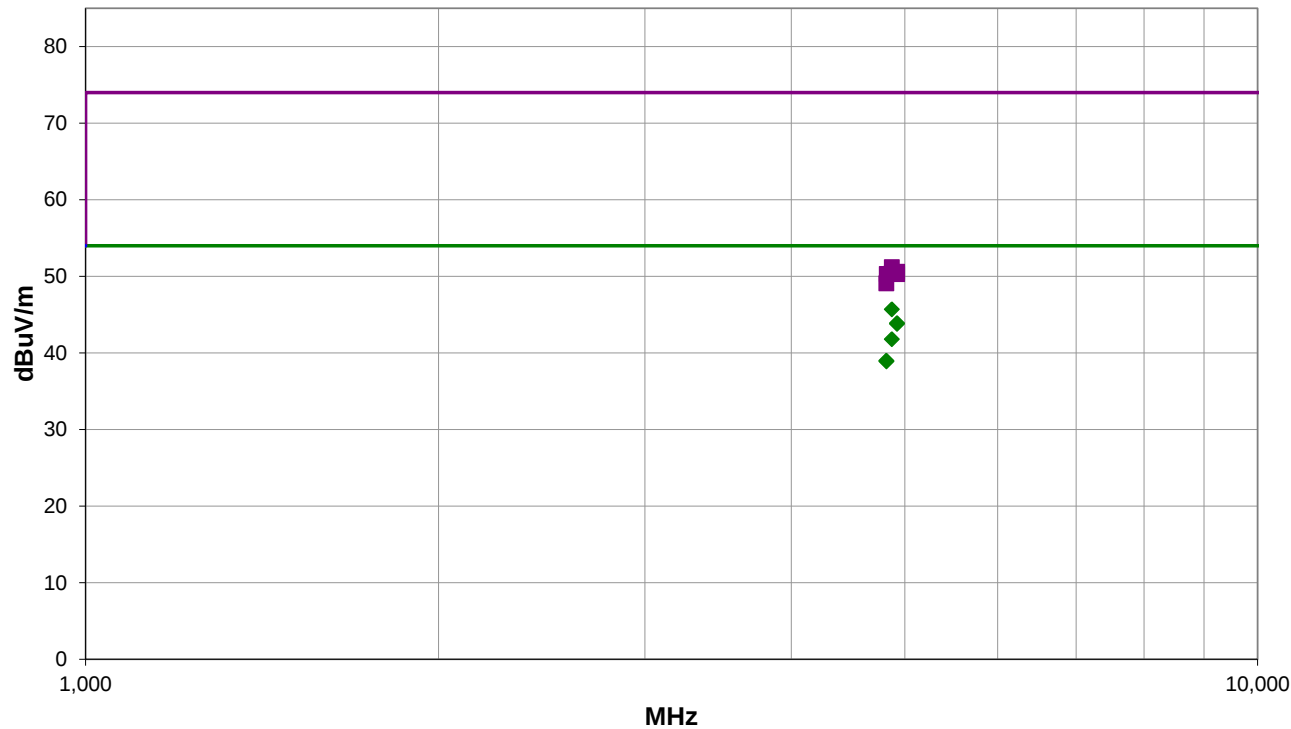
Please reference data comments below for channel, data rate, and EUT orientation. Spot-checking worst case non-noise floor emission.

EUT OPERATING MODES

Transmitting 802.11bgn, Ch. 1 = 2412 MHz, Ch. 6 = 2437 MHz, Ch. 11 = 2462 MHz, Antenna 1

DEVIATIONS FROM TEST STANDARD

None



Run #: 183

PK AV QP

SPURIOUS RADIATED EMISSIONS

RESULTS - Run #183

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Duty Cycle Correction Factor (dB)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
4873.975	36.0	9.5	3.5	332.0	0.2	0.0	Horz	AV	0.0	45.7	54.0	-8.3	Ch. 6, 1 Mbps, EUT Vert
4923.975	34.2	9.5	1.6	345.0	0.2	0.0	Vert	AV	0.0	43.9	54.0	-10.1	Ch. 11, 1 Mbps, EUT Vert
4924.075	34.1	9.5	1.4	14.0	0.2	0.0	Horz	AV	0.0	43.8	54.0	-10.2	Ch. 11, 1 Mbps, EUT Vert
4874.000	32.1	9.5	1.5	335.0	0.2	0.0	Vert	AV	0.0	41.8	54.0	-12.2	Ch. 6, 1 Mbps, EUT Vert
4821.742	29.3	9.5	1.5	151.0	0.2	0.0	Horz	AV	0.0	39.0	54.0	-15.0	Ch 1, 1 Mbps, EUT Vert
4822.817	29.2	9.5	2.8	146.0	0.2	0.0	Vert	AV	0.0	38.9	54.0	-15.1	Ch. 1, 1 Mbps, EUT Vert
4874.008	41.7	9.5	3.5	332.0	0.0	0.0	Horz	PK	0.0	51.2	74.0	-22.8	Ch. 6, 1 Mbps, EUT Vert
4924.075	41.1	9.5	1.4	14.0	0.0	0.0	Horz	PK	0.0	50.6	74.0	-23.4	Ch. 11, 1 Mbps, EUT Vert
4874.050	41.0	9.5	1.5	335.0	0.0	0.0	Vert	PK	0.0	50.5	74.0	-23.5	Ch. 6, 1 Mbps, EUT Vert
4924.192	40.8	9.5	1.6	345.0	0.0	0.0	Vert	PK	0.0	50.3	74.0	-23.7	Ch. 11, 1 Mbps, EUT Vert
4826.150	40.8	9.5	2.8	146.0	0.0	0.0	Vert	PK	0.0	50.3	74.0	-23.7	Ch. 1, 1 Mbps, EUT Vert
4821.625	39.6	9.5	1.5	151.0	0.0	0.0	Horz	PK	0.0	49.1	74.0	-24.9	Ch 1, 1 Mbps, EUT Vert

CONCLUSION

Pass



Tested By

SPURIOUS RADIATED EMISSIONS



EUT:	Controller 3, Model 705101	Work Order:	IRRI0024
Serial Number:	1C:63:49:9D:4E:DC	Date:	2024-09-11
Customer:	IrriGreen, Inc.	Temperature:	21.7°C
Attendees:	None	Relative Humidity:	47.7%
Customer Project:	None	Bar. Pressure (PMSL):	1008 mb
Tested By:	Jeff Alcock	Job Site:	EV01
Power:	110VAC/60Hz	Configuration:	IRRI0024-9

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2024	ANSI C63.10:2013

TEST PARAMETERS

Run #:	184	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

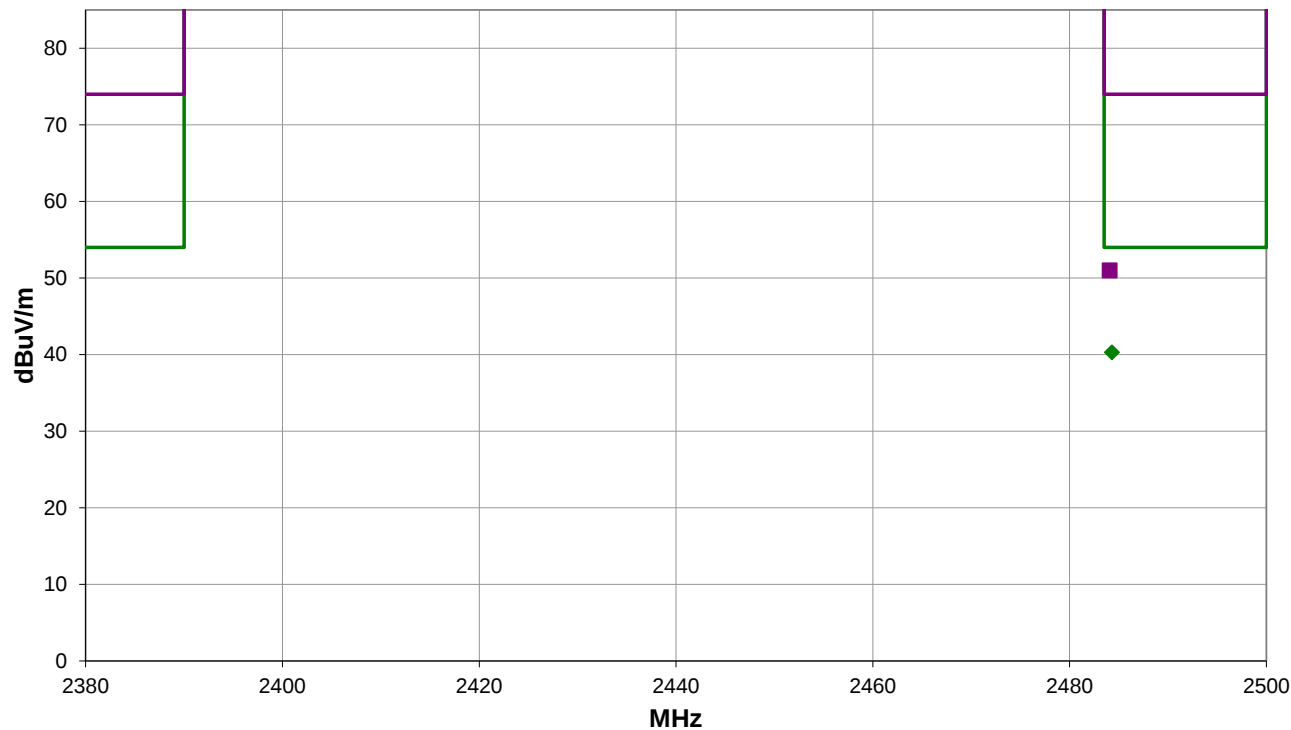
Please reference data comments below for channel, data rate, and EUT orientation. Spot-checking worst case emission.

EUT OPERATING MODES

Transmitting 802.11bgn, Ch. 1 = 2412 MHz, Ch. 6 = 2437 MHz, Ch. 11 = 2462 MHz, Antenna 1

DEVIATIONS FROM TEST STANDARD

None



Run #: 184

■ PK ◆ AV ● QP

SPURIOUS RADIATED EMISSIONS

RESULTS - Run #184

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Duty Cycle Correction Factor (dB)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
2484.300	31.9	-2.0	1.5	183.0	0.4	10.0	Horz	AV	0.0	40.3	54.0	-13.7	Ch. 11, 6 Mbps, EUT Vert
2484.070	43.0	-2.0	1.5	183.0	0.0	10.0	Horz	PK	0.0	51.0	74.0	-23.0	Ch. 11, 6 Mbps, EUT Vert

CONCLUSION
Pass


Tested By

SPURIOUS RADIATED EMISSIONS



EUT:	Controller 3, Model 705101	Work Order:	IRRI0024
Serial Number:	1C:63:49:9D:4E:DC	Date:	2024-09-11
Customer:	IrriGreen, Inc.	Temperature:	21.7°C
Attendees:	None	Relative Humidity:	47.7%
Customer Project:	None	Bar. Pressure (PMSL):	1008 mb
Tested By:	Jeff Alcock	Job Site:	EV01
Power:	110VAC/60Hz	Configuration:	IRRI0024-9

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2024	ANSI C63.10:2013

TEST PARAMETERS

Run #:	185	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

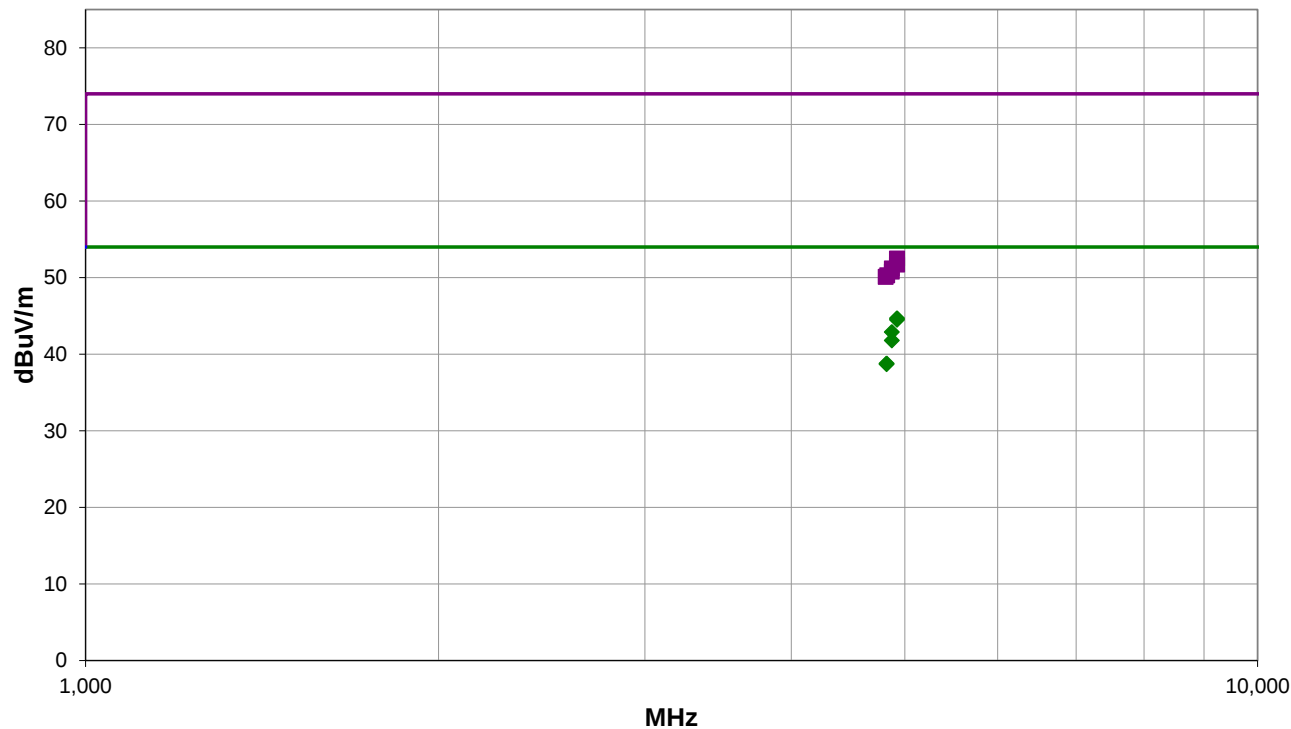
Please reference data comments below for channel, data rate, and EUT orientation. Spot checking worst case non-noise floor harmonic.

EUT OPERATING MODES

Transmitting 802.11bgn, Ch. 1 = 2412 MHz, Ch. 6 = 2437 MHz, Ch. 11 = 2462 MHz, Antenna 2

DEVIATIONS FROM TEST STANDARD

None



Run #: 185

■ PK ◆ AV ● QP

SPURIOUS RADIATED EMISSIONS

RESULTS - Run #185

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Duty Cycle Correction Factor (dB)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
4924.000	35.0	9.5	1.7	340.0	0.2	0.0	Vert	AV	0.0	44.7	54.0	-9.3	Ch. 11, 1 Mbps, EUT Vert
4924.000	34.8	9.5	1.43	353.0	0.2	0.0	Horz	AV	0.0	44.5	54.0	-9.5	Ch. 11, 1 Mbps, EUT Vert
4874.000	33.2	9.5	1.58	338.0	0.2	0.0	Horz	AV	0.0	42.9	54.0	-11.1	Ch. 6, 1 Mbps, EUT Vert
4874.000	32.1	9.5	1.5	349.0	0.2	0.0	Vert	AV	0.0	41.8	54.0	-12.2	Ch. 6, 1 Mbps, EUT Vert
4824.000	29.1	9.5	1.5	173.0	0.2	0.0	Horz	AV	0.0	38.8	54.0	-15.2	Ch. 1, 1 Mbps, EUT Vert
4824.000	29.0	9.5	1.5	13.0	0.2	0.0	Vert	AV	0.0	38.7	54.0	-15.3	Ch. 1, 1 Mbps, EUT Vert
4923.960	43.0	9.5	1.7	340.0	0.0	0.0	Vert	PK	0.0	52.5	74.0	-21.5	Ch. 11, 1 Mbps, EUT Vert
4923.923	42.2	9.5	1.43	353.0	0.0	0.0	Horz	PK	0.0	51.7	74.0	-22.3	Ch. 11, 1 Mbps, EUT Vert
4873.793	41.7	9.5	1.5	349.0	0.0	0.0	Vert	PK	0.0	51.2	74.0	-22.8	Ch. 6, 1 Mbps, EUT Vert
4874.020	41.3	9.5	1.58	338.0	0.0	0.0	Horz	PK	0.0	50.8	74.0	-23.2	Ch. 6, 1 Mbps, EUT Vert
4830.080	40.8	9.5	1.5	173.0	0.0	0.0	Horz	PK	0.0	50.3	74.0	-23.7	Ch. 1, 1 Mbps, EUT Vert
4815.580	40.6	9.5	1.5	13.0	0.0	0.0	Vert	PK	0.0	50.1	74.0	-23.9	Ch. 1, 1 Mbps, EUT Vert

CONCLUSION

Pass



Tested By

SPURIOUS RADIATED EMISSIONS

EUT:	Controller 3, Model 705101	Work Order:	IRRI0024
Serial Number:	1C:63:49:9D:4E:DC	Date:	2024-09-11
Customer:	IrriGreen, Inc.	Temperature:	21.7°C
Attendees:	None	Relative Humidity:	47.7%
Customer Project:	None	Bar. Pressure (PMSL):	1008 mb
Tested By:	Jeff Alcock	Job Site:	EV01
Power:	110VAC/60Hz	Configuration:	IRRI0024-9

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2024	ANSI C63.10:2013

TEST PARAMETERS

Run #:	186	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)
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COMMENTS

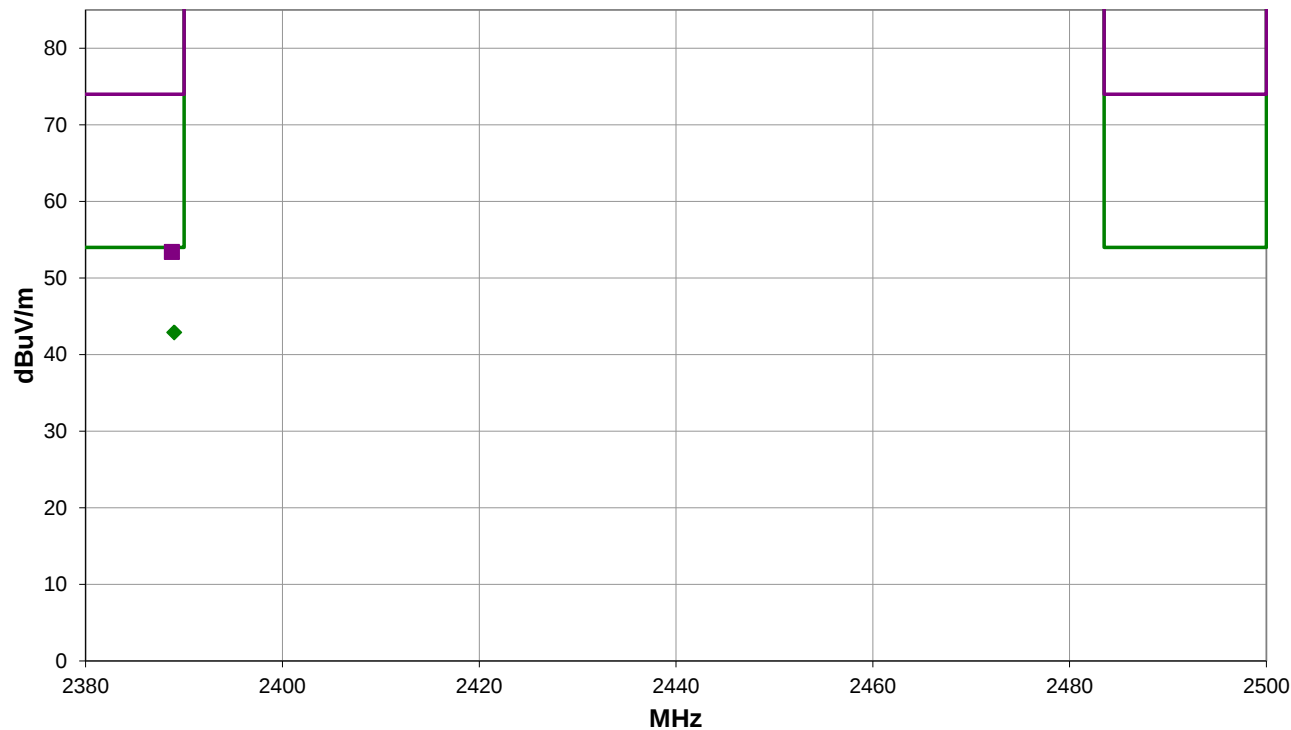
Please reference data comments below for channel, data rate, and EUT orientation. Spot checking worst case emission.
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EUT OPERATING MODES

Transmitting 802.11bgn, Ch. 1 = 2412 MHz, Ch. 6 = 2437 MHz, Ch. 11 = 2462 MHz, Antenna 2
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DEVIATIONS FROM TEST STANDARD

None



Run #: 186

■ PK ◆ AV ● QP

SPURIOUS RADIATED EMISSIONS

RESULTS - Run #186

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Duty Cycle Correction Factor (dB)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
2389.000	35.1	-2.4	1.0	213.0	0.2	10.0	Horz	AV	0.0	42.9	54.0	-11.1	Ch. 1, 1 Mbps, EUT Horz
2388.760	45.8	-2.4	1.0	213.0		10.0	Horz	PK	0.0	53.4	74.0	-20.6	Ch. 1, 1 Mbps, EUT Horz

CONCLUSION
Pass

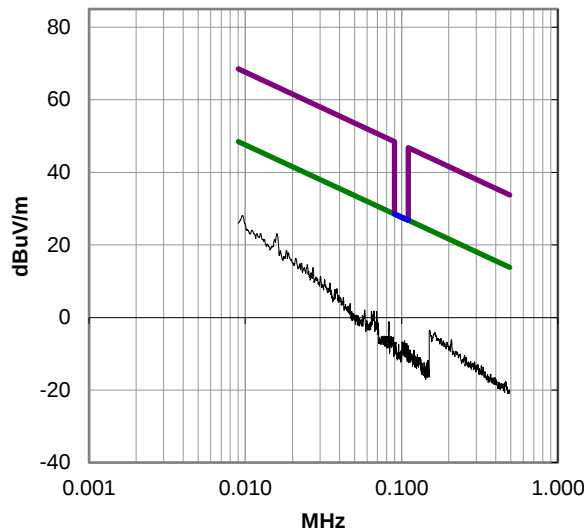

Tested By

SPURIOUS RADIATED EMISSIONS

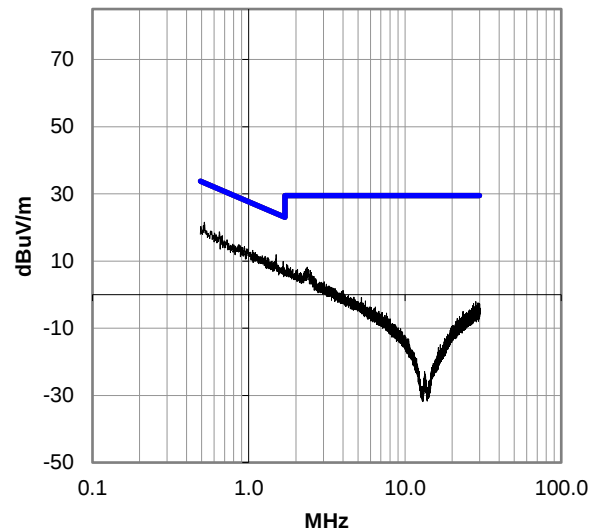
PRESCAN DATA

Radiated spurious emissions from the EUT are initially reviewed with Pre-scans (Preview scans). Pre-scans are performed, with the EUT transmitting on the lowest applicable data rate, for both vertical and horizontal polarizations. The Pre-scan plots below are shown with a peak detector and RBW for the following frequency ranges: 9 kHz RBW (< 30 MHz); 120 kHz RBW (30 - 1000 MHz); 1 MHz RBW (> 1 GHz). In the case where unintentional emissions are observed, an ambient or idle pre-scan with the radio off, will be shown for comparison.

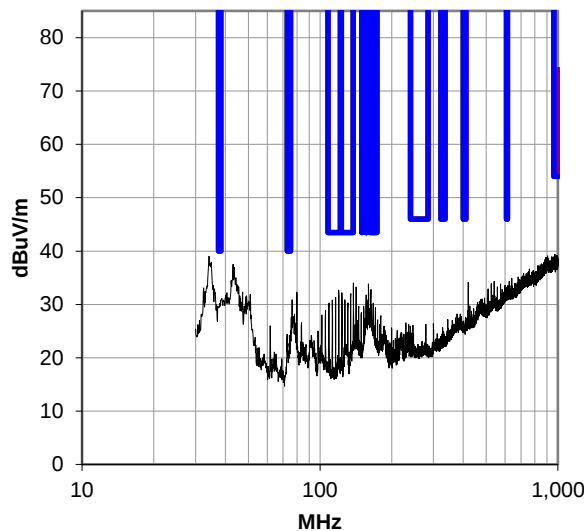
0.009-0.49 MHz, Run 48



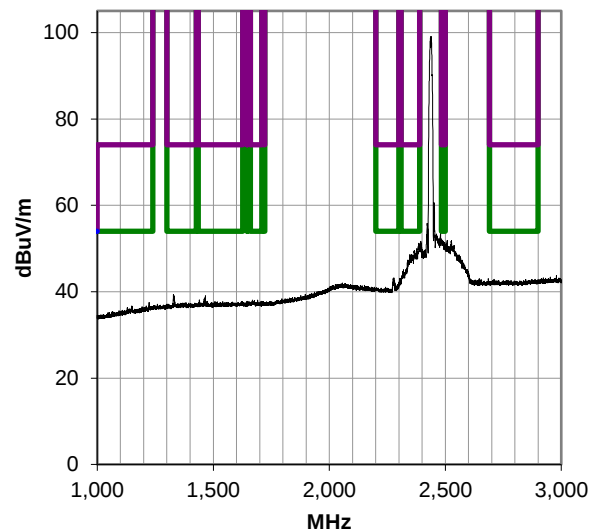
0.49-30 MHz, Run 47



30-1000 MHz, Run 42

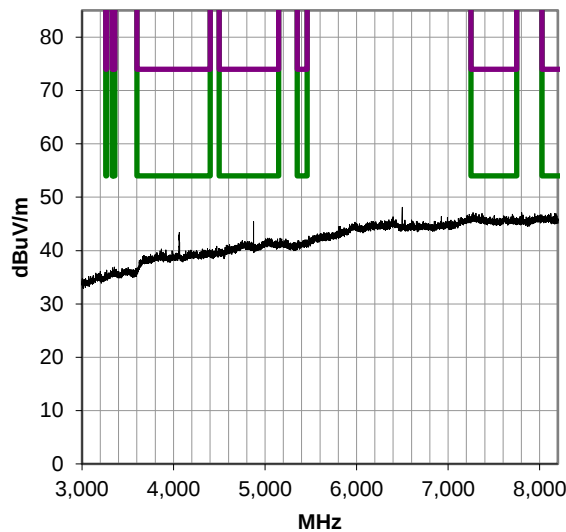


1000-3000 MHz, Run 13

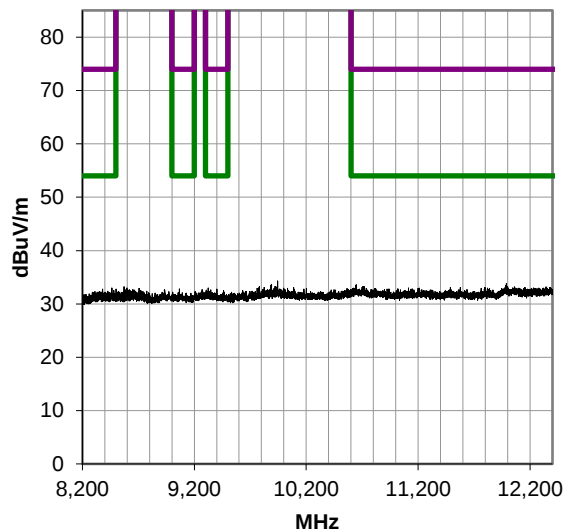


SPURIOUS RADIATED EMISSIONS

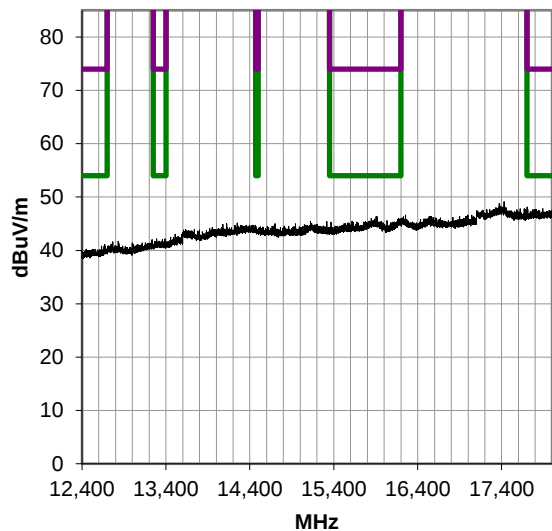
3000-8200 MHz, Run 14



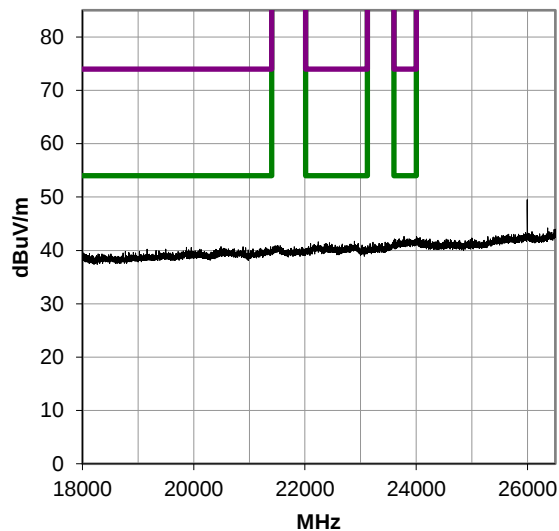
8200-12400 MHz, Run 15



12400-18000 MHz, Run 16



18000-26500 MHz, Run 27



End of Test Report