SPURIOUS CONDUCTED EMISSIONS

element
TbtTx 2024.05.24.1
WTD.2024.01.16.0

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
Cable	Micro-Coax	UFD150A-1-0720-200200	MNL	2023-09-05	2024-09-05
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFM	2024-05-22	2025-05-22
Generator - Signal	Agilent	N5183A	TIK	2022-01-24	2025-01-24
Attenuator	Fairview Microwave	SA4014-20	AQI	2023-09-05	2024-09-05
Block - DC	Fairview Microwave	SD3379	ANH	2023-09-05	2024-09-05

SPURIOUS CONDUCTED EMISSIONS

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TbtTx 2024.05.24.1
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EUT:	Fuji Thermostat	Work Order:	ADEM0044
Serial Number:	52202030005204	Date:	2024-07-22
Customer:	Ademco, Inc.	Temperature:	21.8°C
Attendees:	None	Relative Humidity:	62.5%
Customer Project:	None	Bar. Pressure (PMSL):	1016 mbar
Tested By:	Christopher Heintzelman, Arnauld Dedry	Job Site:	MN11
Power:	110VAC/60Hz	Configuration:	ADEM0044-1

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2024	ANSI C63.10:2013
RSS-247 Issue 3:2023	ANSI C63.10:2013

COMMENTS

None

DEVIATIONS FROM TEST STANDARD

None

CONCLUSION

Pass

Tested By

TEST RESULTS

	Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
20 MHz BW					
802.11(b) 1 Mbps					
Low Channel 1, 2412 MHz	Fundamental	2412.48	N/A	N/A	N/A
	30 MHz - 12.5 GHz	4824.05	-57.19	-30	Pass
	12.5 GHz - 25 GHz	24993.9	-47.41	-30	Pass
Mid Channel 6, 2437 MHz	Fundamental	2437.48	N/A	N/A	N/A
	30 MHz - 12.5 GHz	4874.29	-60.28	-30	Pass
	12.5 GHz - 25 GHz	24975.58	-49.83	-30	Pass
High Channel 11, 2462 MHz	Fundamental	2462.49	N/A	N/A	N/A
	30 MHz - 12.5 GHz	4924.52	-59.25	-30	Pass
	12.5 GHz - 25 GHz	24986.27	-48.03	-30	Pass
802.11(b) 11 Mbps					
Low Channel 1, 2412 MHz	Fundamental	2412.37	N/A	N/A	N/A
	30 MHz - 12.5 GHz	2383.63	-57.17	-30	Pass
	12.5 GHz - 25 GHz	24864.18	-47.4	-30	Pass
Mid Channel 6, 2437 MHz	Fundamental	2436.75	N/A	N/A	N/A
	30 MHz - 12.5 GHz	12116.35	-59.44	-30	Pass
	12.5 GHz - 25 GHz	24861.13	-48.12	-30	Pass
High Channel 11, 2462 MHz	Fundamental	2462.42	N/A	N/A	N/A
	30 MHz - 12.5 GHz	5769.46	-59.97	-30	Pass
	12.5 GHz - 25 GHz	24819.92	-46.46	-30	Pass
802.11(g) 6 Mbps					
Low Channel 1, 2412 MHz	Fundamental	2413.24	N/A	N/A	N/A
	30 MHz - 12.5 GHz	2386.68	-50.78	-30	Pass

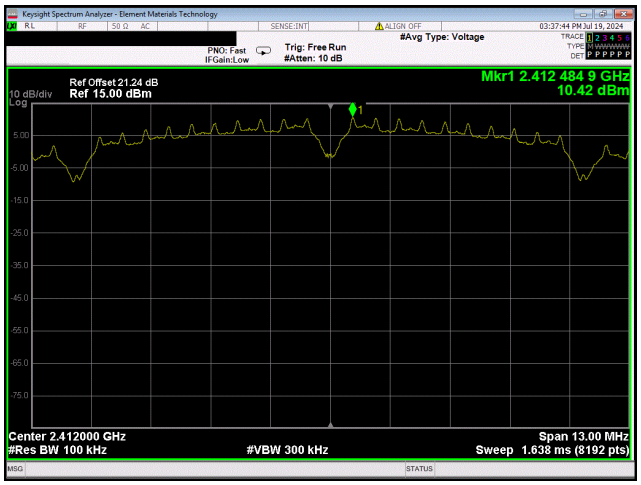
SPURIOUS CONDUCTED EMISSIONS

element
TbtTx 2024.05.24.1
WTD.2024.01.16.0

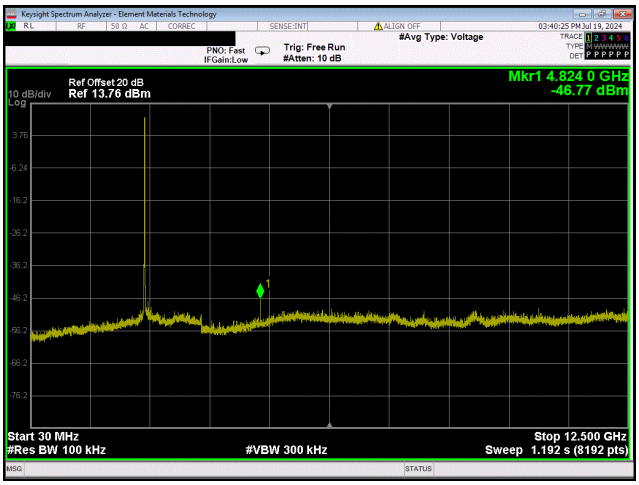
	Frequency Range	Measured Freq (MHz)	Max Value (dBc)	Limit ≤ (dBc)	Result
	12.5 GHz - 25 GHz	23959.22	-42.86	-30	Pass
Mid Channel 6, 2437 MHz	Fundamental	2438.25	N/A	N/A	N/A
	30 MHz - 12.5 GHz	5461.93	-57.37	-30	Pass
	12.5 GHz - 25 GHz	24853.5	-45.58	-30	Pass
High Channel 11, 2462 MHz	Fundamental	2463.24	N/A	N/A	N/A
	30 MHz - 12.5 GHz	12055.46	-54.23	-30	Pass
	12.5 GHz - 25 GHz	24853.5	-42.86	-30	Pass
802.11(g) 36 Mbps					
Low Channel 1, 2412 MHz	Fundamental	2413.24	N/A	N/A	N/A
	30 MHz - 12.5 GHz	2386.68	-52.38	-30	Pass
	12.5 GHz - 25 GHz	24896.23	-42.92	-30	Pass
Mid Channel 6, 2437 MHz	Fundamental	2438.24	N/A	N/A	N/A
	30 MHz - 12.5 GHz	2523.7	-56.84	-30	Pass
	12.5 GHz - 25 GHz	24822.98	-44.69	-30	Pass
High Channel 11, 2462 MHz	Fundamental	2463.25	N/A	N/A	N/A
	30 MHz - 12.5 GHz	5618.74	-55.09	-30	Pass
	12.5 GHz - 25 GHz	24954.22	-42.11	-30	Pass
802.11(g) 54 Mbps					
Low Channel 1, 2412 MHz	Fundamental	2413.24	N/A	N/A	N/A
	30 MHz - 12.5 GHz	2386.68	-49.61	-30	Pass
	12.5 GHz - 25 GHz	24873.34	-43.93	-30	Pass
Mid Channel 6, 2437 MHz	Fundamental	2438.25	N/A	N/A	N/A
	30 MHz - 12.5 GHz	11801.22	-55.88	-30	Pass
	12.5 GHz - 25 GHz	24603.22	-43.94	-30	Pass
High Channel 11, 2462 MHz	Fundamental	2463.25	N/A	N/A	N/A
	30 MHz - 12.5 GHz	9261.85	-54.68	-30	Pass
	12.5 GHz - 25 GHz	24986.27	-42.97	-30	Pass
802.11(n) MCS0					
Low Channel 1, 2412 MHz	Fundamental	2413.25	N/A	N/A	N/A
	30 MHz - 12.5 GHz	12107.22	-52.86	-30	Pass
	12.5 GHz - 25 GHz	24845.87	-41.05	-30	Pass
Mid Channel 6, 2437 MHz	Fundamental	2438.24	N/A	N/A	N/A
	30 MHz - 12.5 GHz	12292.95	-55.88	-30	Pass
	12.5 GHz - 25 GHz	24966.43	-44.3	-30	Pass
High Channel 11, 2462 MHz	Fundamental	2463.25	N/A	N/A	N/A
	30 MHz - 12.5 GHz	5512.17	-52.84	-30	Pass
	12.5 GHz - 25 GHz	24841.29	-40.84	-30	Pass
802.11(n) MCS7					
Low Channel 1, 2412 MHz	Fundamental	2413.25	N/A	N/A	N/A
	30 MHz - 12.5 GHz	2386.68	-51.39	-30	Pass
	12.5 GHz - 25 GHz	24783.3	-40.24	-30	Pass
Mid Channel 6, 2437 MHz	Fundamental	2438.25	N/A	N/A	N/A
	30 MHz - 12.5 GHz	5617.22	-54.5	-30	Pass
	12.5 GHz - 25 GHz	24938.96	-42.96	-30	Pass
High Channel 11, 2462 MHz	Fundamental	2463.25	N/A	N/A	N/A
	30 MHz - 12.5 GHz	2541.96	-53.02	-30	Pass
	12.5 GHz - 25 GHz	24932.85	-40.49	-30	Pass

SPURIOUS CONDUCTED EMISSIONS

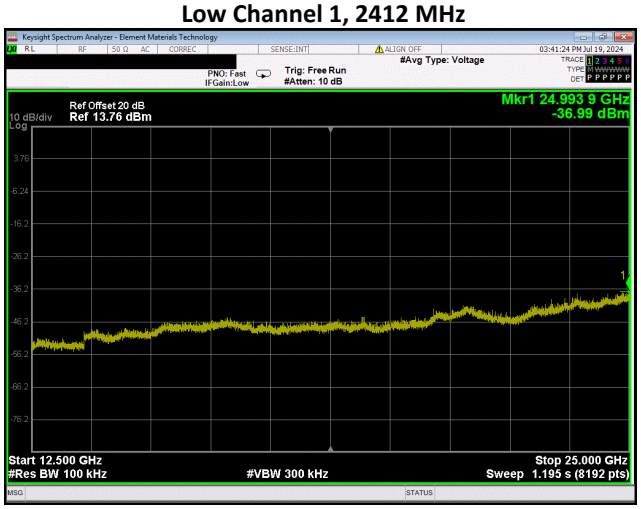
element
TbtTx 2024.05.24.1
WTD.2024.01.16.0



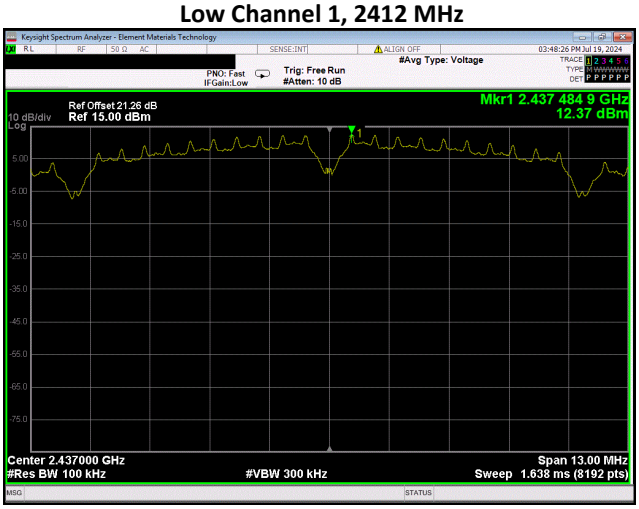
20 MHz BW
802.11(b) 1 Mbps
Low Channel 1, 2412 MHz



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



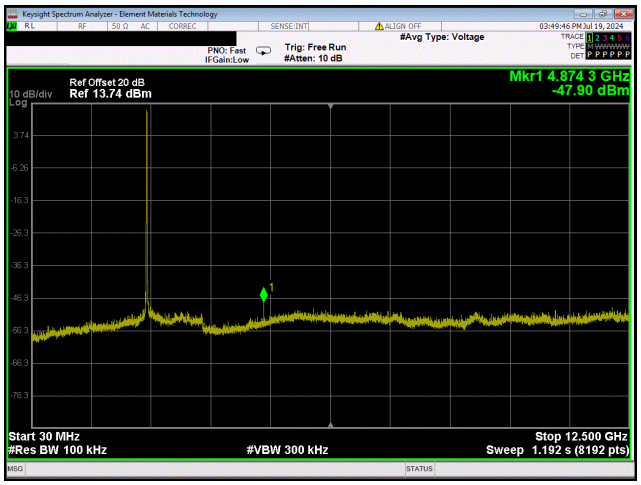
20 MHz BW
802.11(b) 1 Mbps
Low Channel 1, 2412 MHz



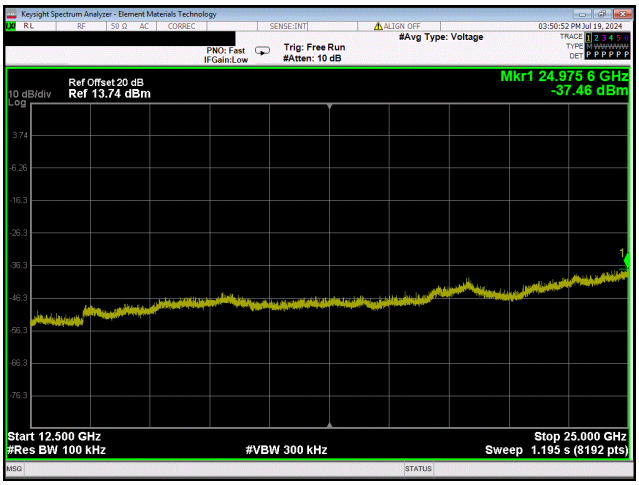
20 MHz BW
802.11(b) 1 Mbps
Mid Channel 6, 2437 MHz

SPURIOUS CONDUCTED EMISSIONS

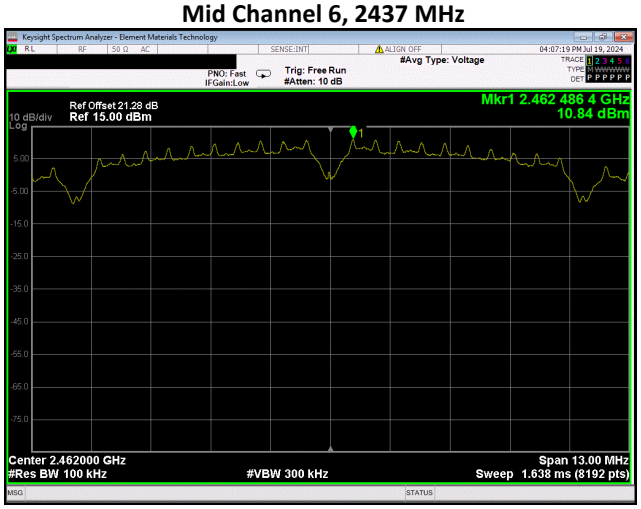
element
TbtTx 2024.05.24.1
WTD.2024.01.16.0



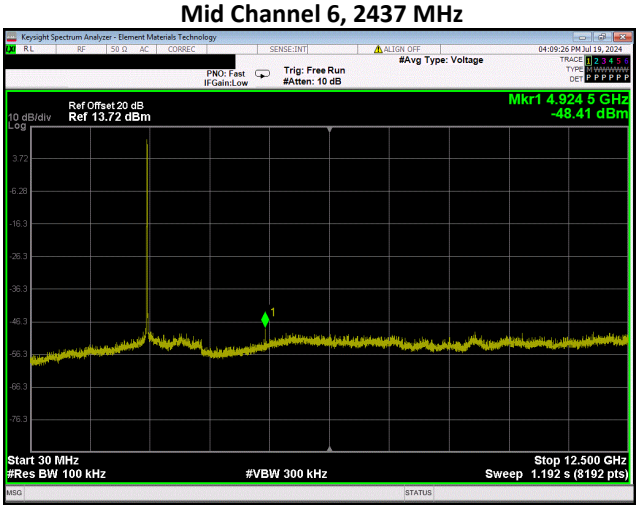
20 MHz BW
802.11(b) 1 Mbps
Mid Channel 6, 2437 MHz



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



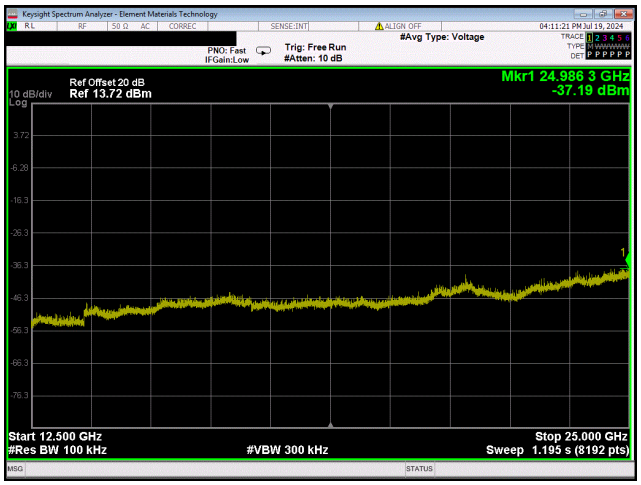
20 MHz BW
802.11(b) 1 Mbps
High Channel 11, 2462 MHz



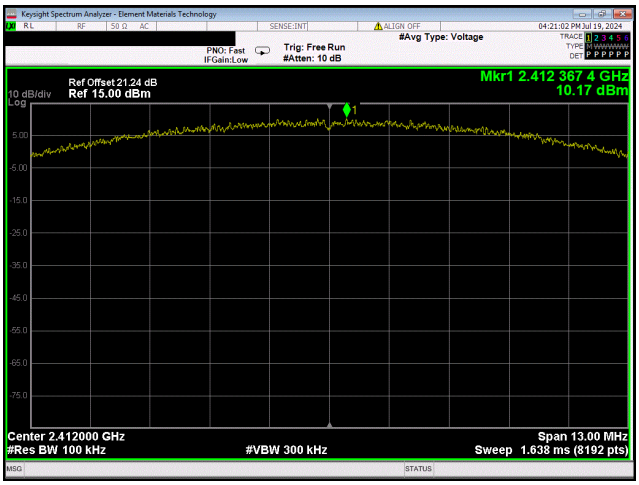
20 MHz BW
802.11(b) 1 Mbps
High Channel 11, 2462 MHz

SPURIOUS CONDUCTED EMISSIONS

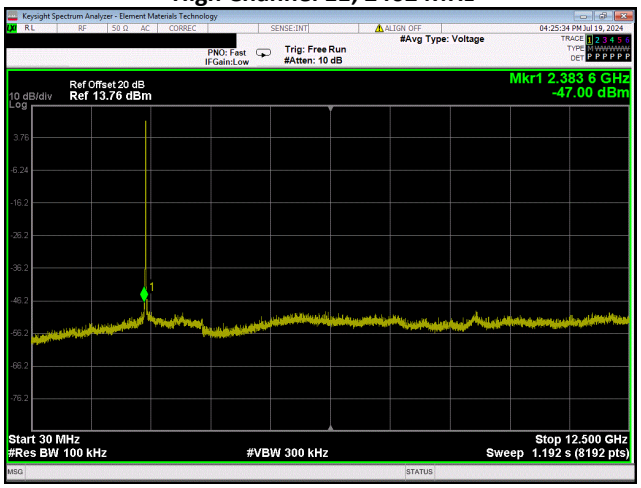
element
TbtTx 2024.05.24.1
WTD.2024.01.16.0



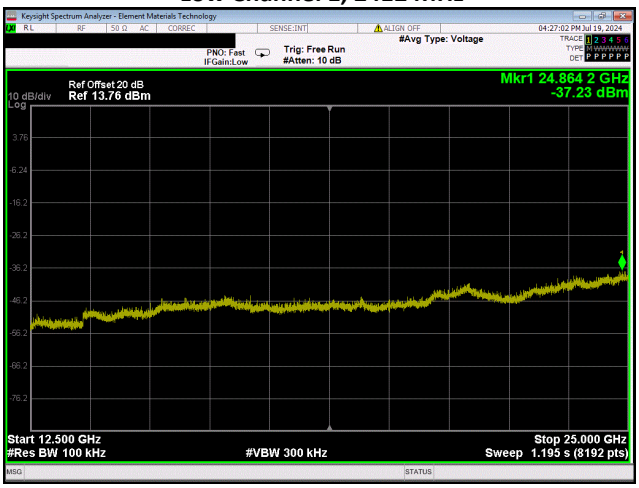
20 MHz BW
802.11(b) 1 Mbps
High Channel 11, 2462 MHz



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



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



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

SPURIOUS CONDUCTED EMISSIONS

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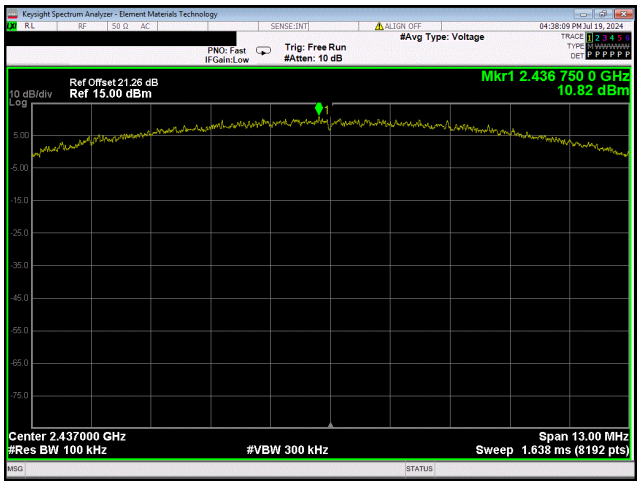
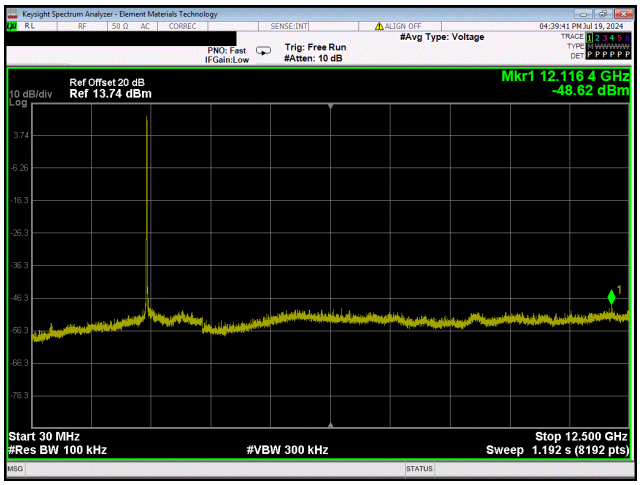
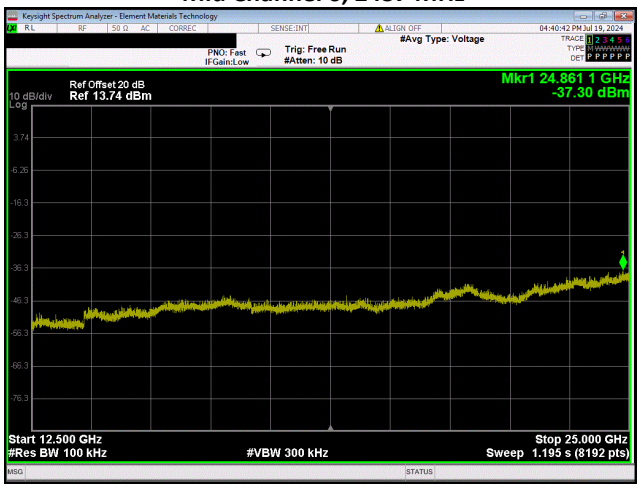


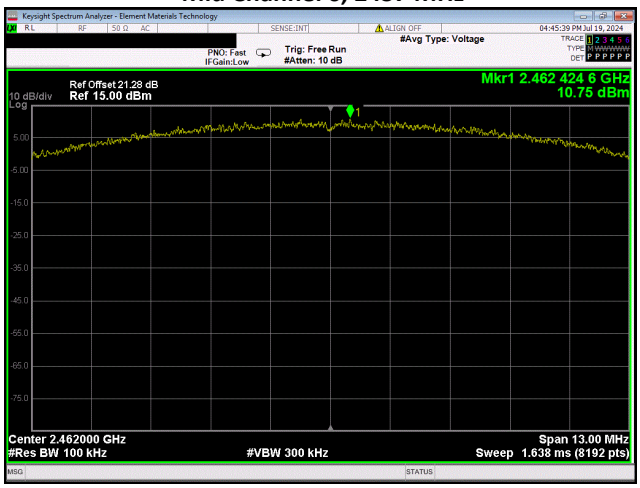
20 MHz BW
802.11(b) 11 Mbps
Mid Channel 6, 2437 MHz



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



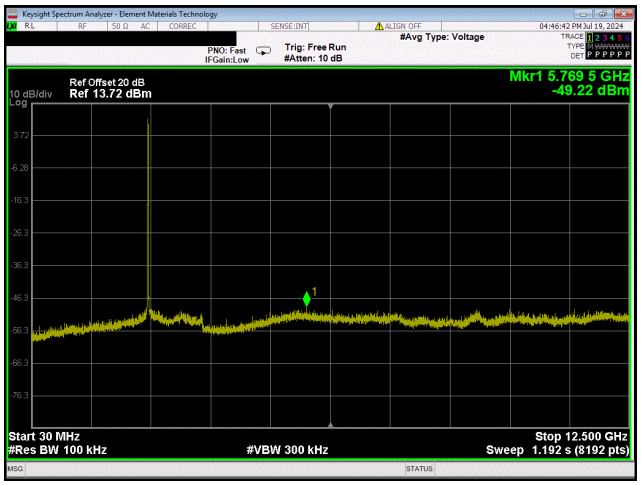
20 MHz BW
802.11(b) 11 Mbps
Mid Channel 6, 2437 MHz



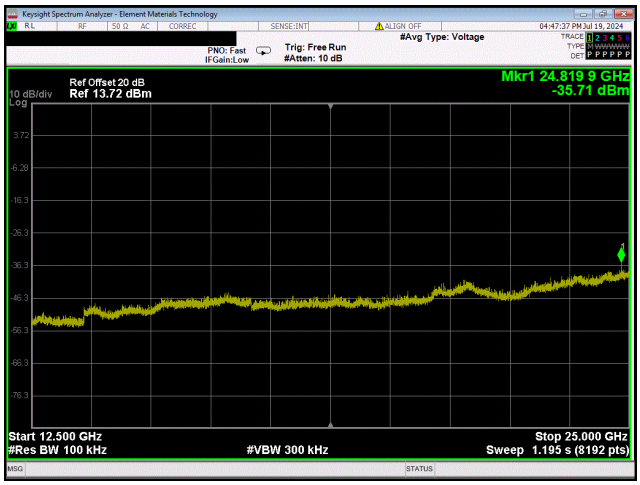
20 MHz BW
802.11(b) 11 Mbps
High Channel 11, 2462 MHz

SPURIOUS CONDUCTED EMISSIONS

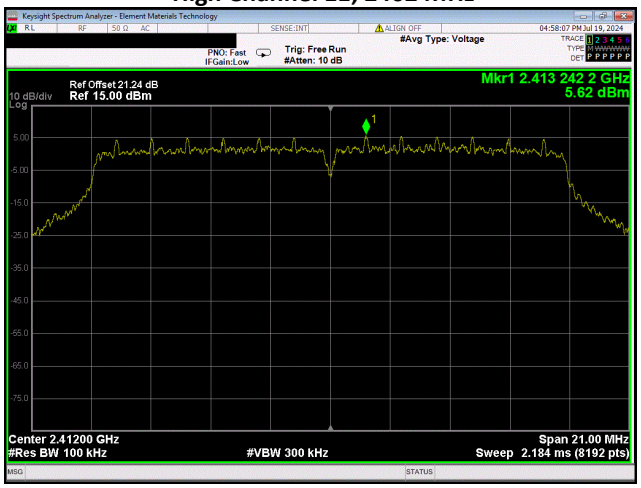
element
TbtTx 2024.05.24.1
WTD.2024.01.16.0



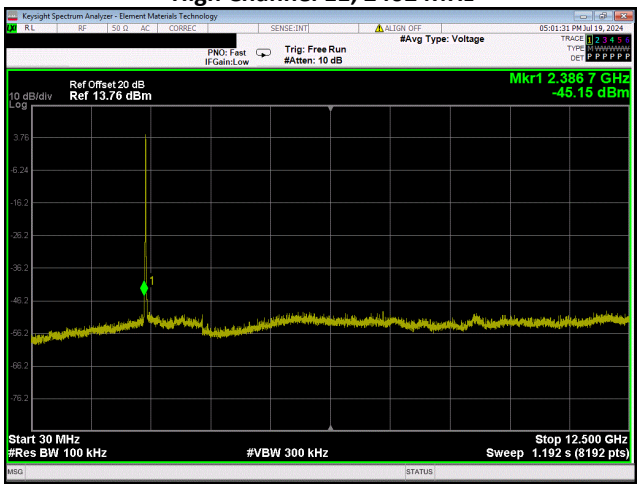
20 MHz BW
802.11(b) 11 Mbps
High Channel 11, 2462 MHz



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



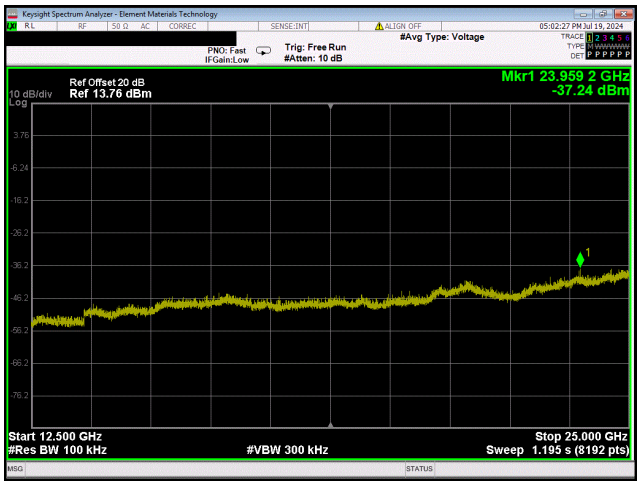
20 MHz BW
802.11(g) 6 Mbps
Low Channel 1, 2412 MHz



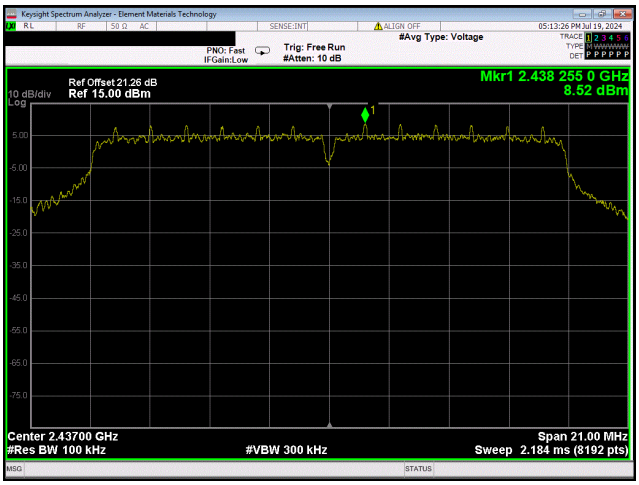
20 MHz BW
802.11(g) 6 Mbps
Low Channel 1, 2412 MHz

SPURIOUS CONDUCTED EMISSIONS

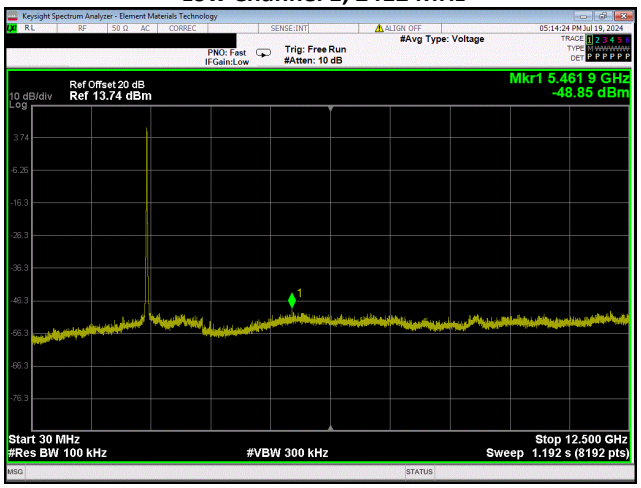
element
TbtTx 2024.05.24.1
WTD.2024.01.16.0



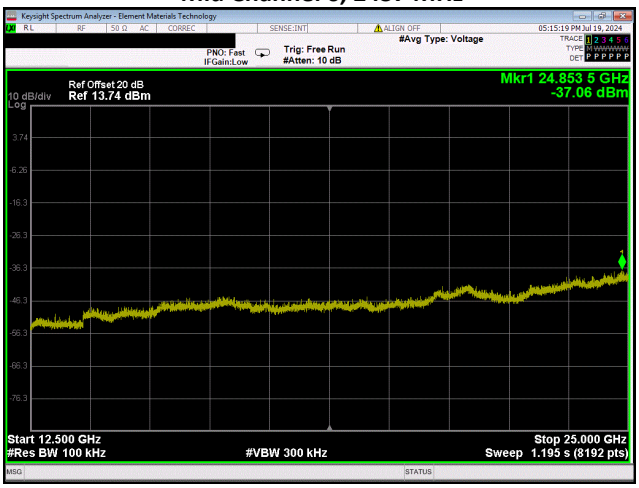
20 MHz BW
802.11(g) 6 Mbps
Low Channel 1, 2412 MHz



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



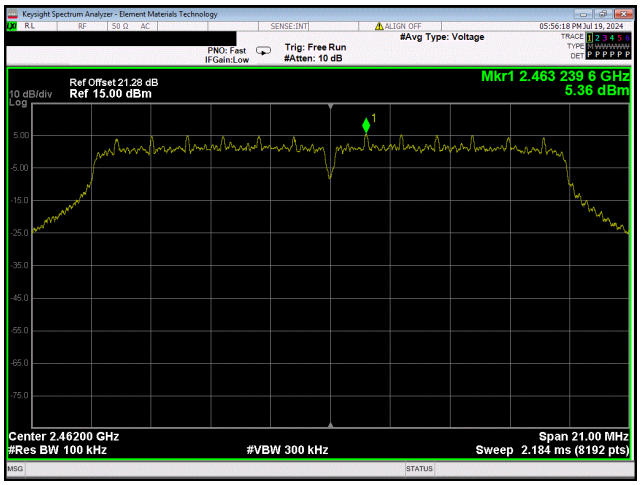
20 MHz BW
802.11(g) 6 Mbps
Mid Channel 6, 2437 MHz



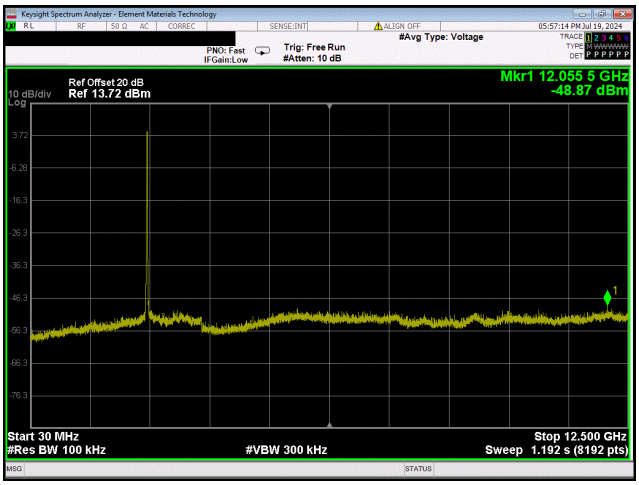
20 MHz BW
802.11(g) 6 Mbps
Mid Channel 6, 2437 MHz

SPURIOUS CONDUCTED EMISSIONS

element
TbtTx 2024.05.24.1
WTD.2024.01.16.0

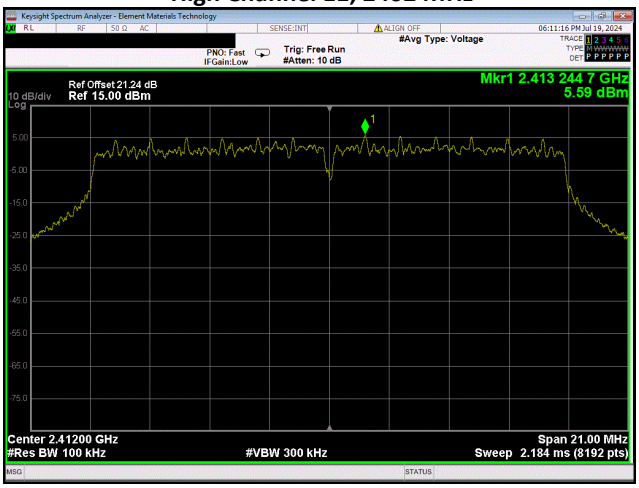


20 MHz BW
802.11(g) 6 Mbps
High Channel 11, 2462 MHz



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

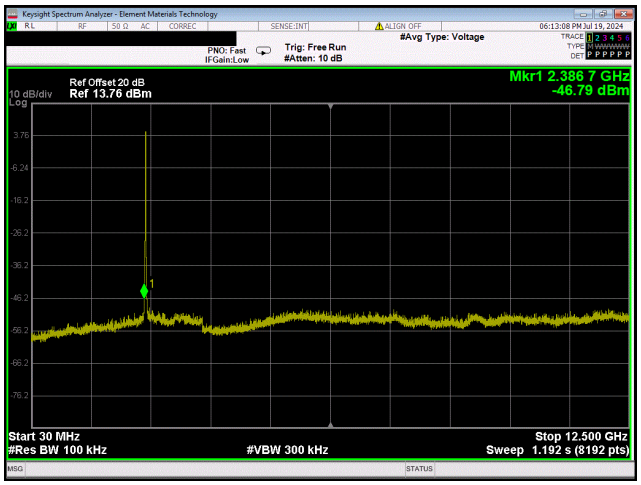
20 MHz BW
802.11(g) 6 Mbps
High Channel 11, 2462 MHz



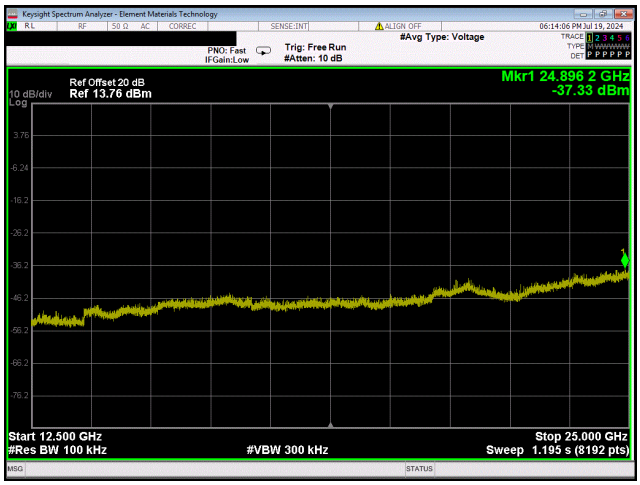
20 MHz BW
802.11(g) 36 Mbps
Low Channel 1, 2412 MHz

SPURIOUS CONDUCTED EMISSIONS

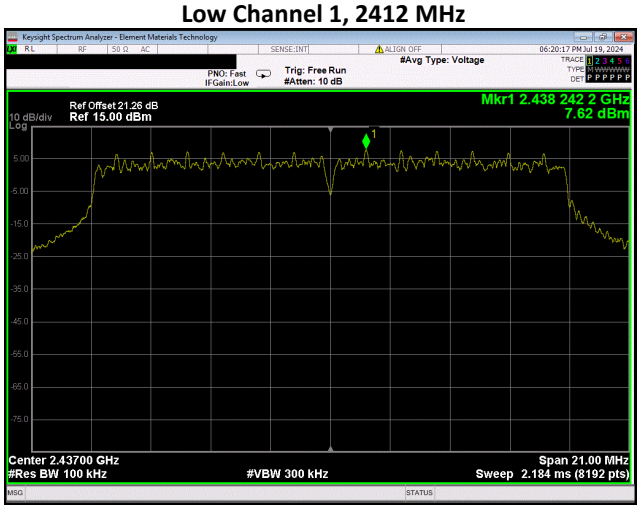
element
TbtTx 2024.05.24.1
WTD.2024.01.16.0



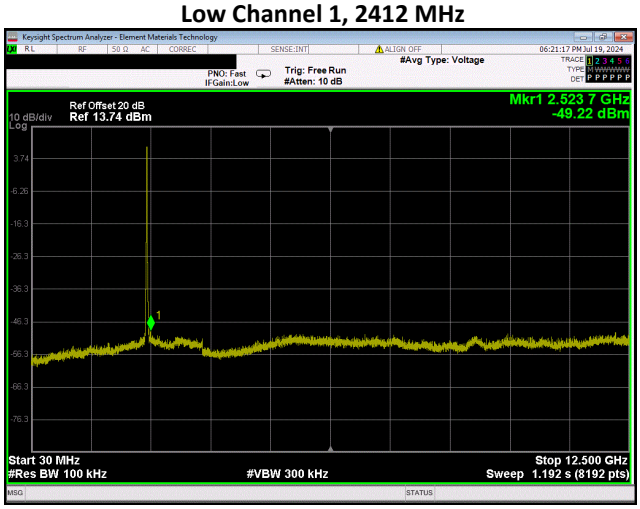
20 MHz BW
802.11(g) 36 Mbps
Low Channel 1, 2412 MHz



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



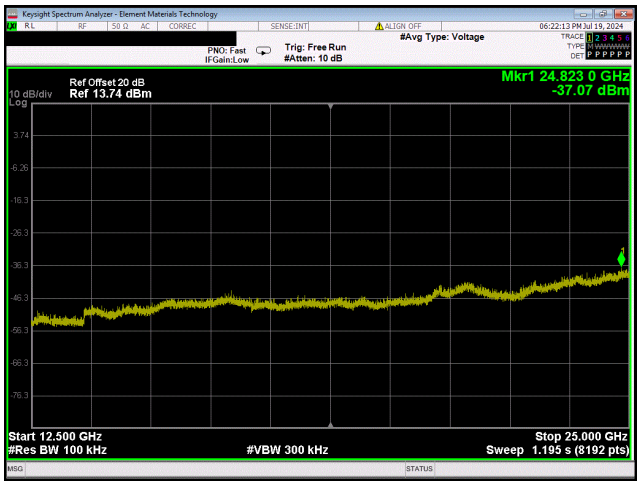
20 MHz BW
802.11(g) 36 Mbps
Mid Channel 6, 2437 MHz



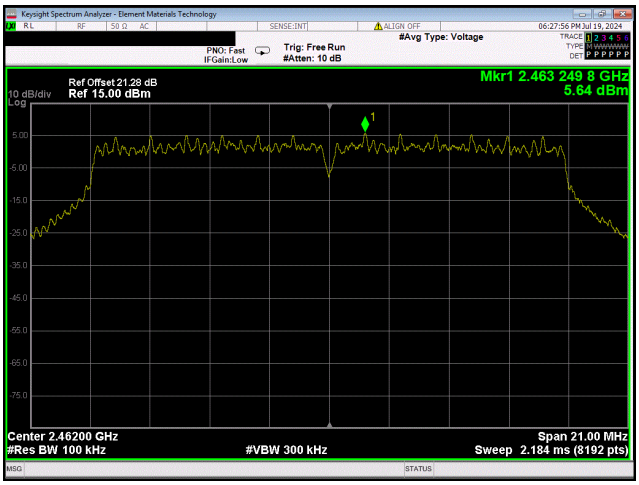
20 MHz BW
802.11(g) 36 Mbps
Mid Channel 6, 2437 MHz

SPURIOUS CONDUCTED EMISSIONS

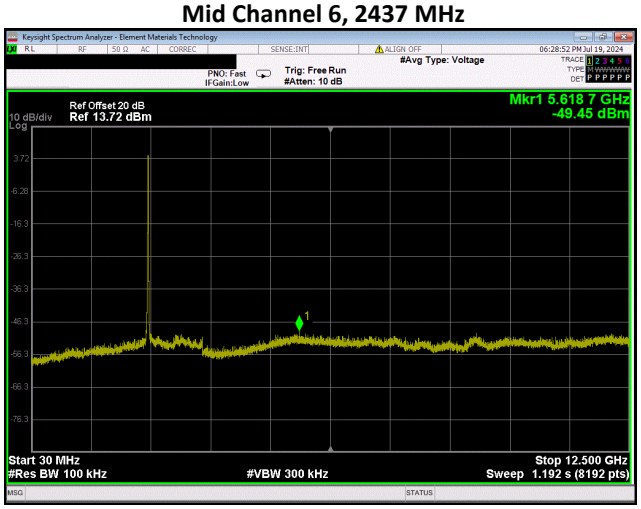
element
TbtTx 2024.05.24.1
WTD.2024.01.16.0



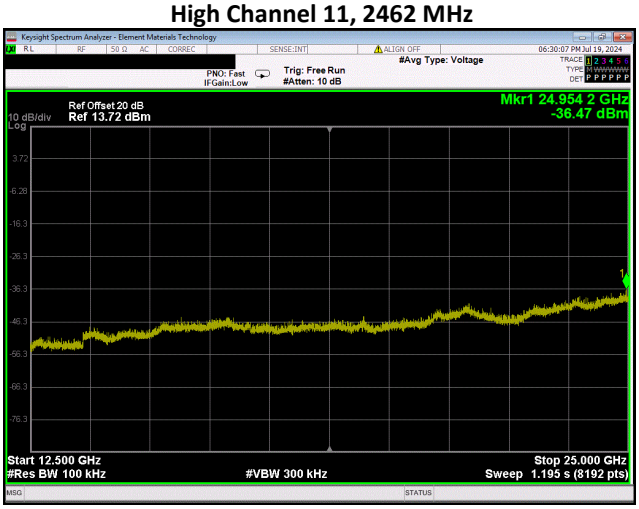
20 MHz BW
802.11(g) 36 Mbps
Mid Channel 6, 2437 MHz



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



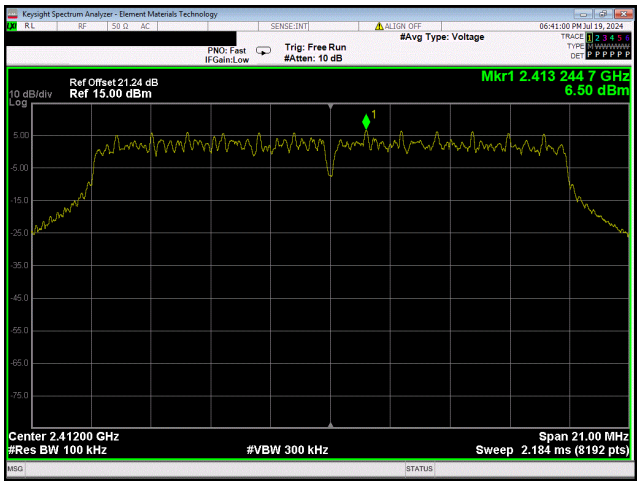
20 MHz BW
802.11(g) 36 Mbps
High Channel 11, 2462 MHz



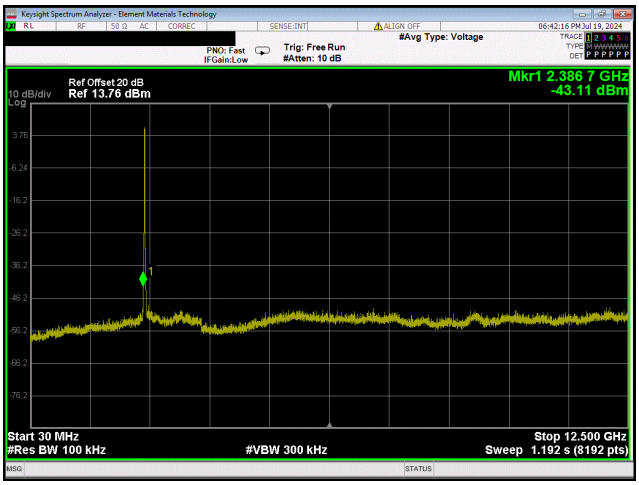
20 MHz BW
802.11(g) 36 Mbps
High Channel 11, 2462 MHz

SPURIOUS CONDUCTED EMISSIONS

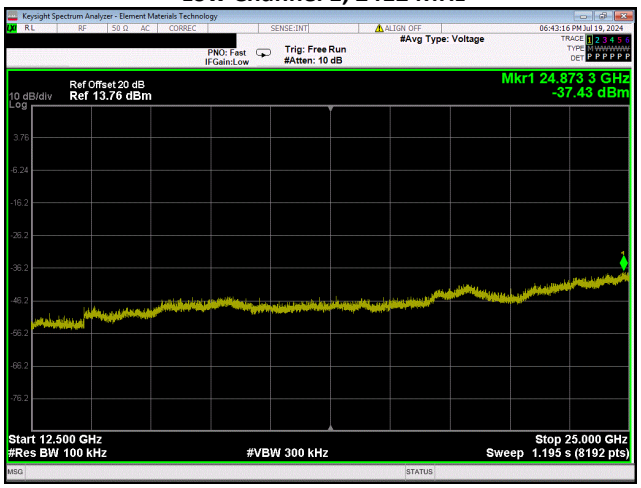
element
TbtTx 2024.05.24.1
WTD.2024.01.16.0



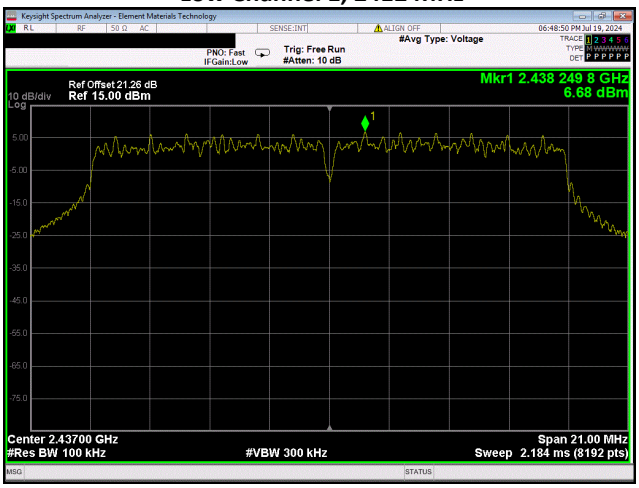
20 MHz BW
802.11(g) 54 Mbps
Low Channel 1, 2412 MHz



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



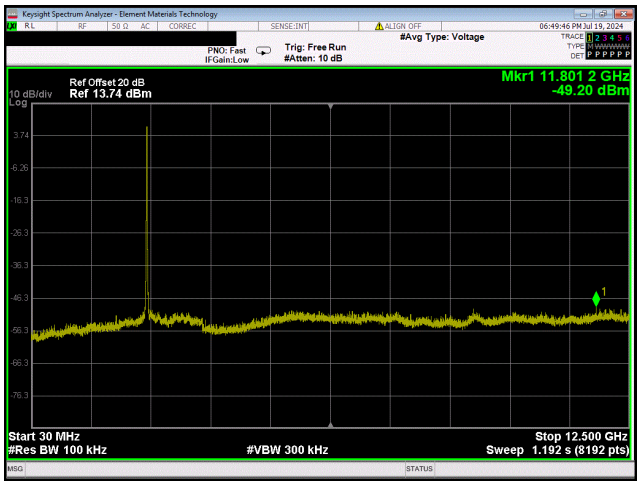
20 MHz BW
802.11(g) 54 Mbps
Low Channel 1, 2412 MHz



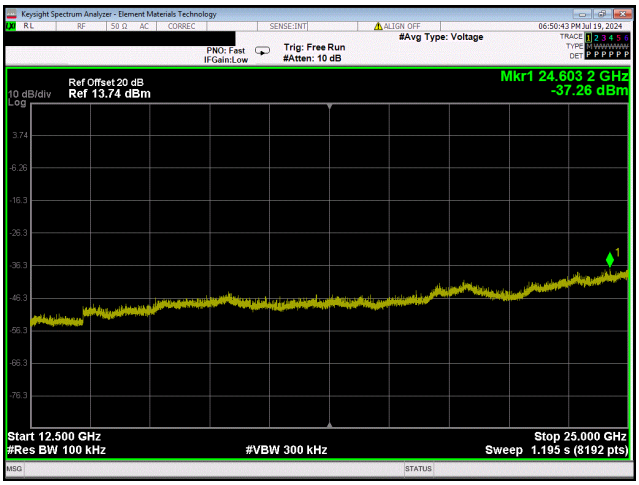
20 MHz BW
802.11(g) 54 Mbps
Mid Channel 6, 2437 MHz

SPURIOUS CONDUCTED EMISSIONS

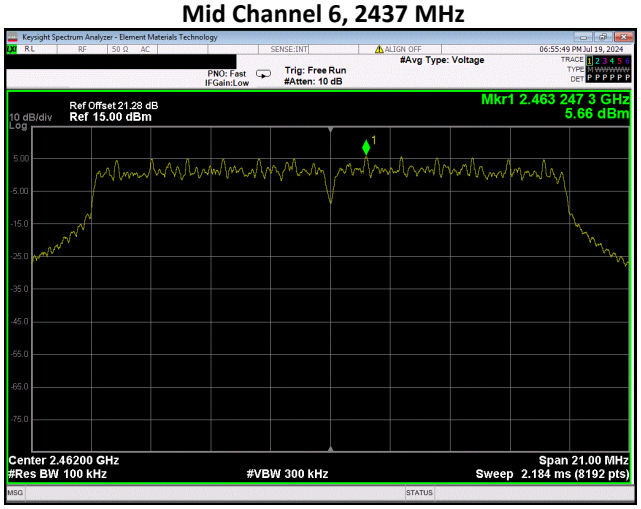
element
TbtTx 2024.05.24.1
WTD.2024.01.16.0



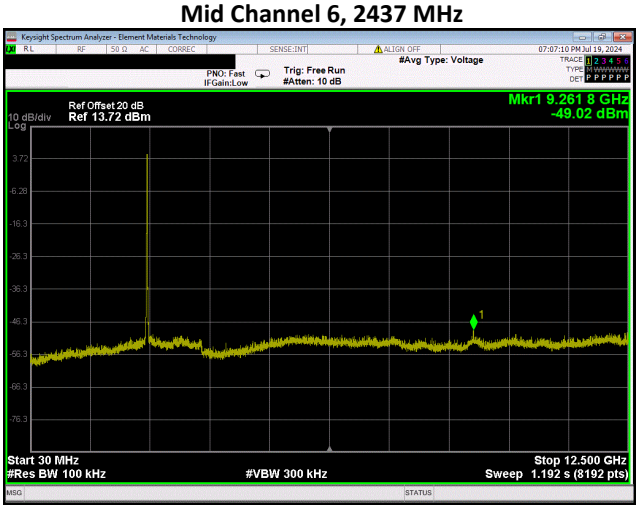
20 MHz BW
802.11(g) 54 Mbps
Mid Channel 6, 2437 MHz



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



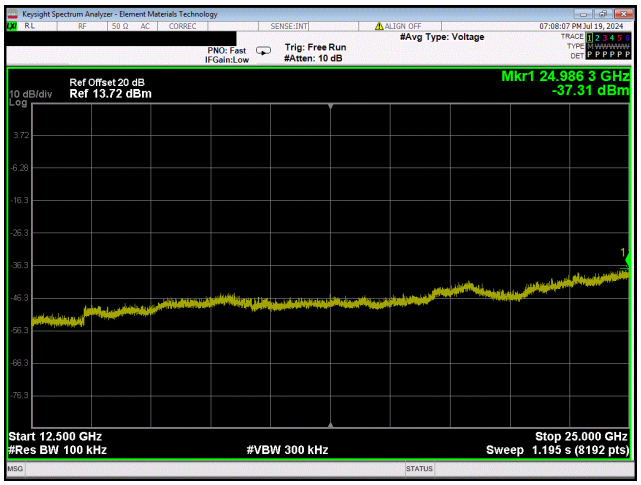
20 MHz BW
802.11(g) 54 Mbps
High Channel 11, 2462 MHz



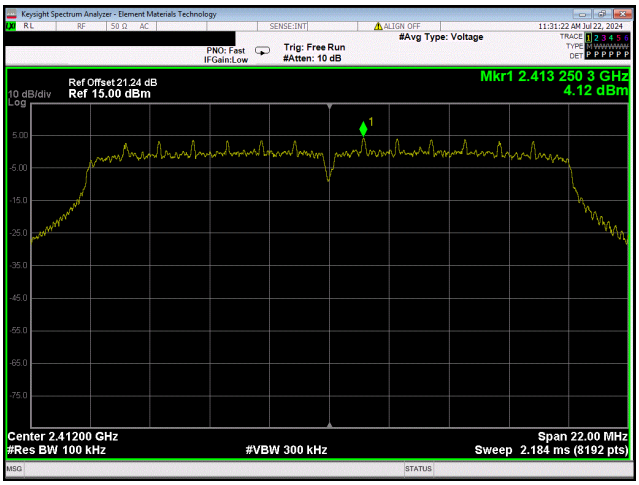
20 MHz BW
802.11(g) 54 Mbps
High Channel 11, 2462 MHz

SPURIOUS CONDUCTED EMISSIONS

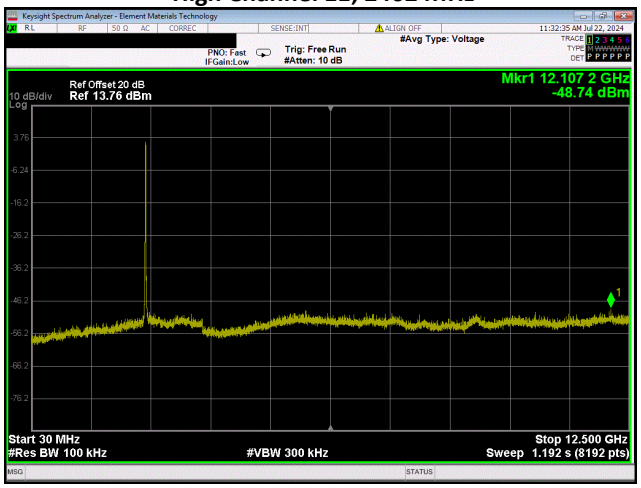
element
TbtTx 2024.05.24.1
WTD.2024.01.16.0



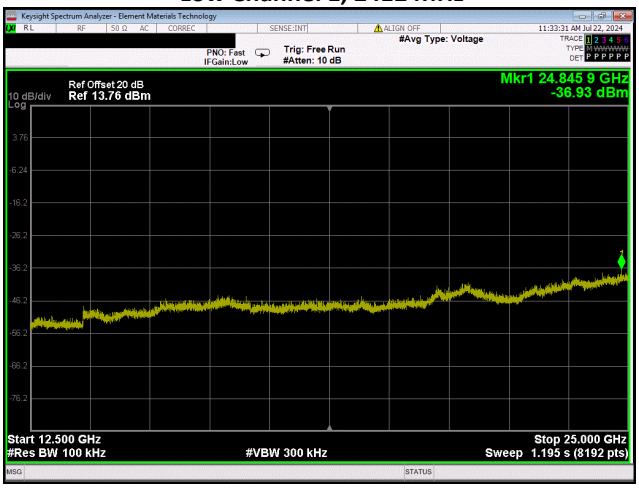
20 MHz BW
802.11(g) 54 Mbps
High Channel 11, 2462 MHz



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



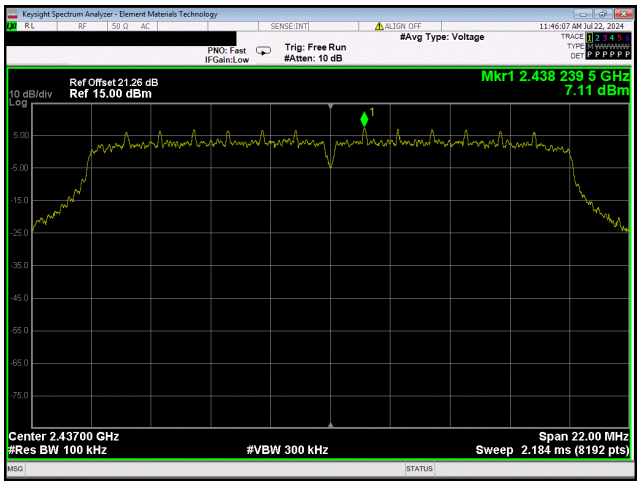
20 MHz BW
802.11(n) MCS0
Low Channel 1, 2412 MHz



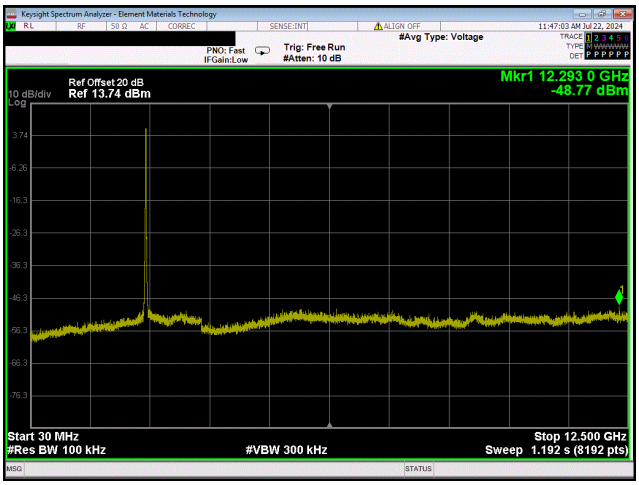
20 MHz BW
802.11(n) MCS0
Low Channel 1, 2412 MHz

SPURIOUS CONDUCTED EMISSIONS

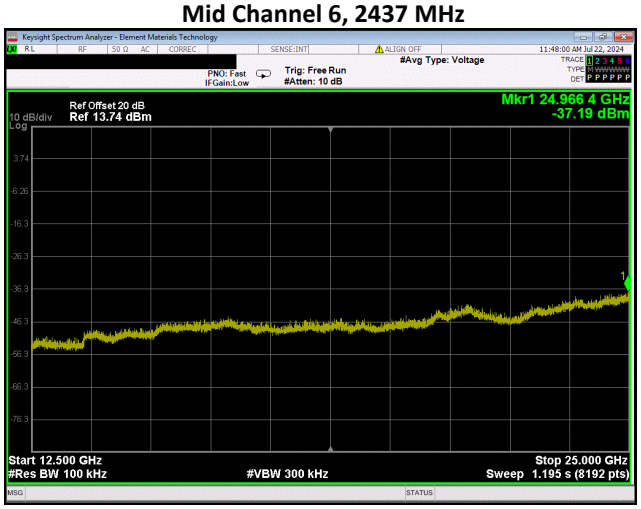
element
TbtTx 2024.05.24.1
WTD.2024.01.16.0



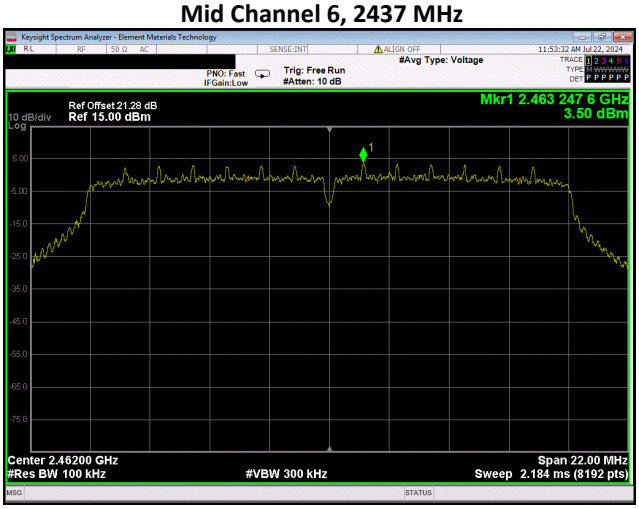
20 MHz BW
802.11(n) MCS0
Mid Channel 6, 2437 MHz



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



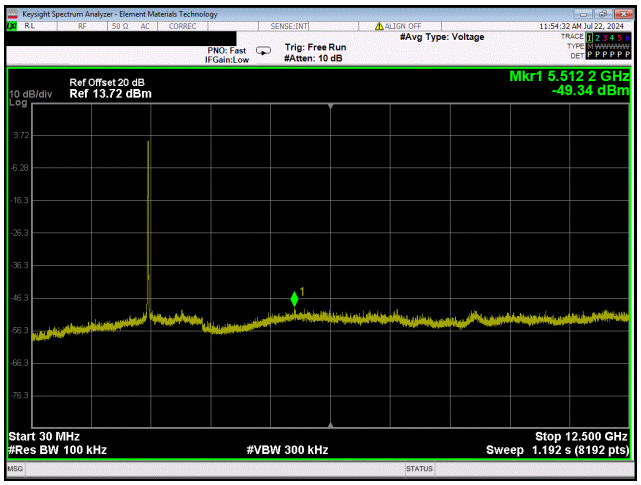
20 MHz BW
802.11(n) MCS0
Mid Channel 6, 2437 MHz



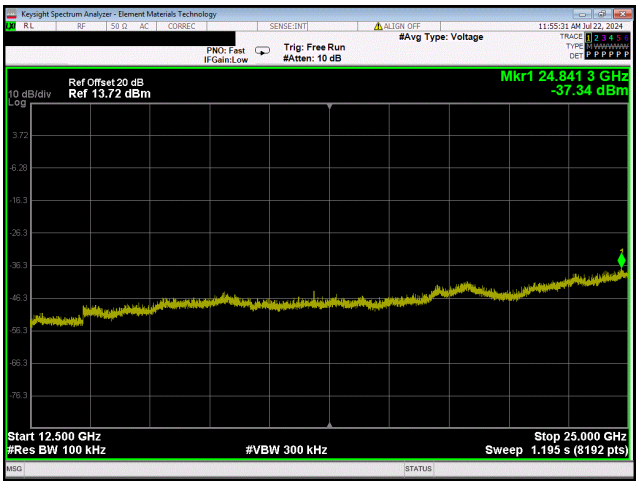
20 MHz BW
802.11(n) MCS0
High Channel 11, 2462 MHz

SPURIOUS CONDUCTED EMISSIONS

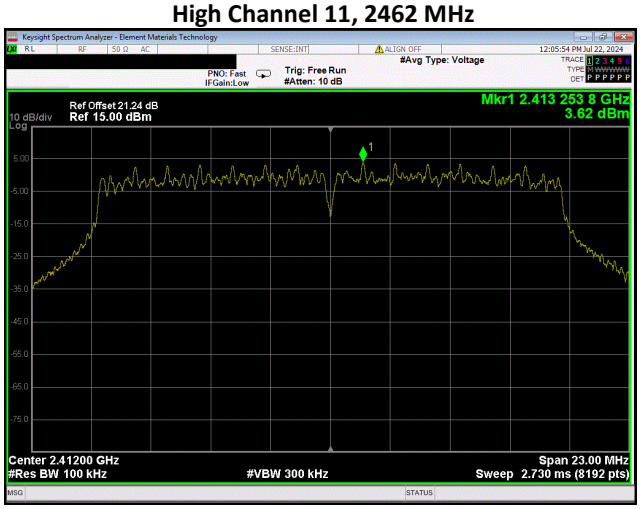
element
TbtTx 2024.05.24.1
WTD.2024.01.16.0



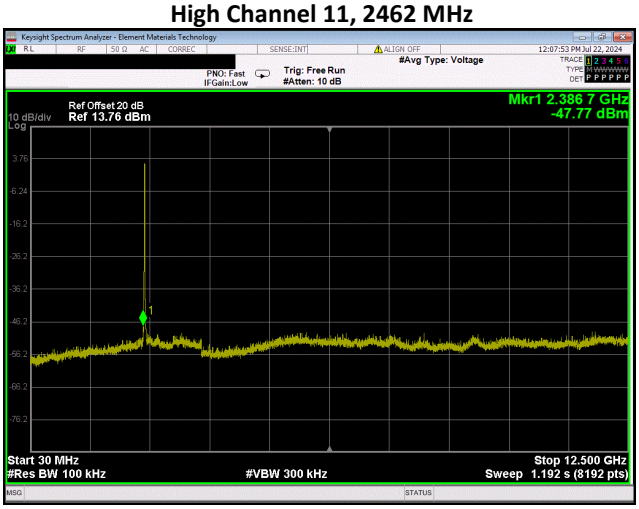
20 MHz BW
802.11(n) MCS0
High Channel 11, 2462 MHz



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



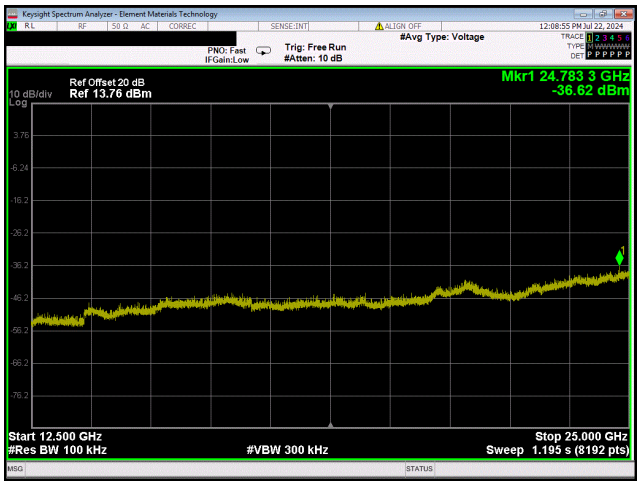
20 MHz BW
802.11(n) MCS7
Low Channel 1, 2412 MHz



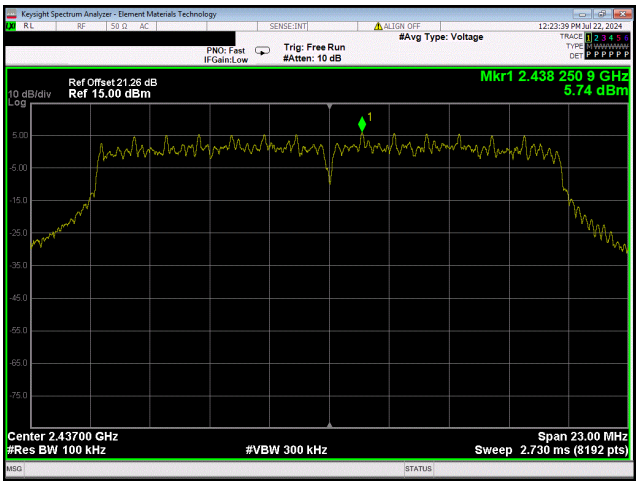
20 MHz BW
802.11(n) MCS7
Low Channel 1, 2412 MHz

SPURIOUS CONDUCTED EMISSIONS

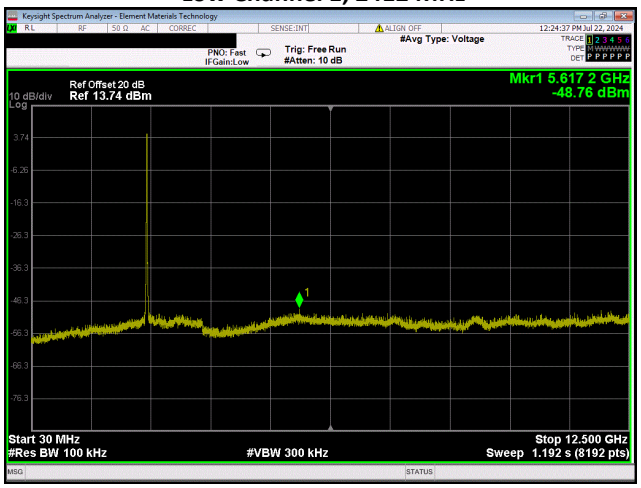
element
TbtTx 2024.05.24.1
WTD.2024.01.16.0



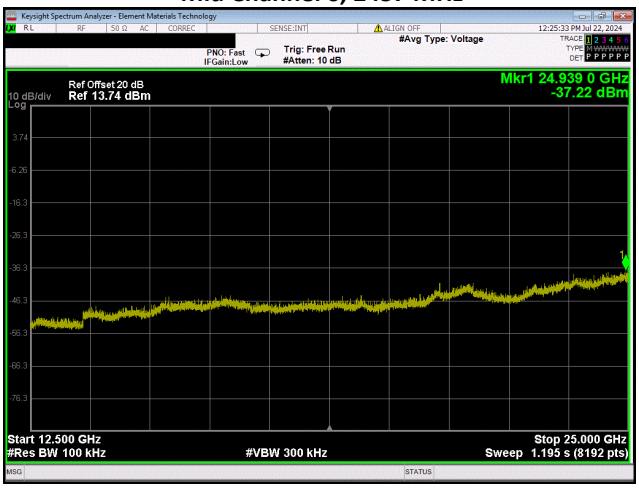
20 MHz BW
802.11(n) MCS7
Low Channel 1, 2412 MHz



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



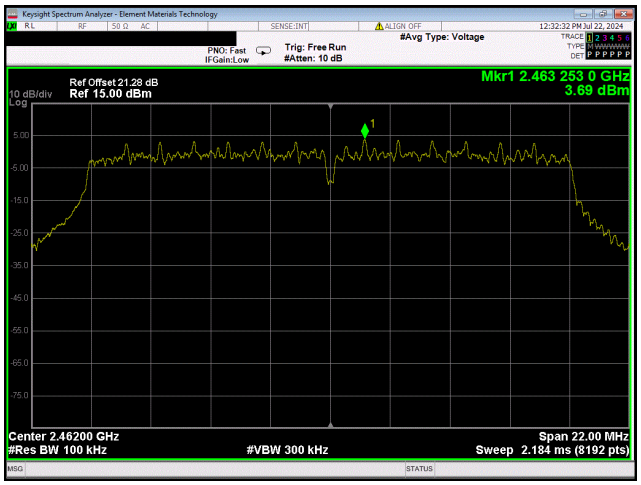
20 MHz BW
802.11(n) MCS7
Mid Channel 6, 2437 MHz



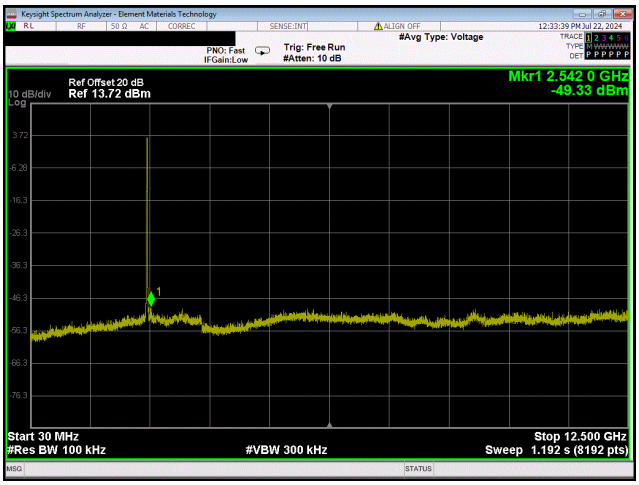
20 MHz BW
802.11(n) MCS7
Mid Channel 6, 2437 MHz

SPURIOUS CONDUCTED EMISSIONS

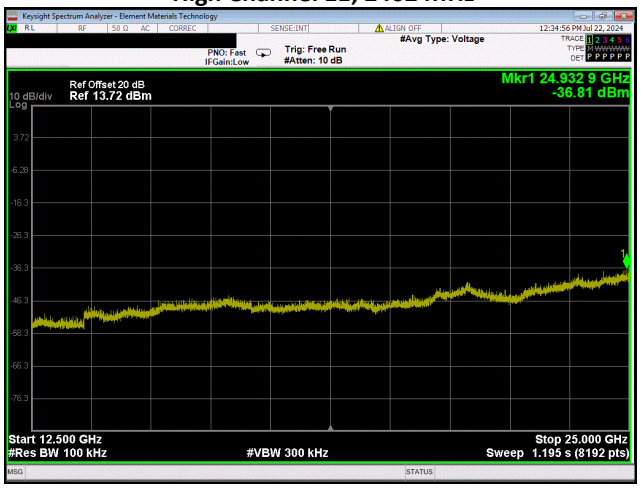
element
TbtTx 2024.05.24.1
WTD.2024.01.16.0



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



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



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

SPURIOUS RADIATED EMISSIONS

element
WTD.2024.01.16.0
EmiR5 2023.08.29.0
PSA-ESCI 2023.12.23.0

TEST DESCRIPTION

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

For each configuration, the spectrum was scanned throughout the specified range as part of the exploratory investigation of the emissions. These “pre-scans” are included in the report. Final measurements on individual emissions were then made and included in this test report.

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

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

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

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

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

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

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

TEST EQUIPMENT

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Antenna - Double Ridge	ETS Lindgren	3115	AIB	2022-09-01	2024-09-01
Cable	Element	Double Ridge Guide Horn Cables	MNV	2024-01-30	2025-01-30
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVX	2024-01-30	2025-01-30
Attenuator	Coaxicom	3910-20	AXY	2023-09-10	2024-09-10
Analyzer - Spectrum Analyzer	Keysight	N9010A	AFN	2024-02-29	2025-02-28
Filter - High Pass	Micro-Tronics	HPM50111	HFM	2023-09-10	2024-09-10
Antenna - Standard Gain	ETS-Lindgren	3160-07	AJJ	NCR	NCR
Cable	Element	Standard Gain Cable	MNW	2024-01-30	2025-01-30
Amplifier - Pre-Amplifier	Miteq	AMF-6F-08001200-30-10P	AVC	2024-01-30	2025-01-30
Antenna - Standard Gain	ETS-Lindgren	3160-08	AJP	NCR	NCR
Amplifier - Pre-Amplifier	L-3 Narda-Miteq	AMF-6F-12001800-30-10P	PAP	2024-08-21	2025-08-21
Antenna - Biconilog	ETS Lindgren	3142D	AXN	2023-08-16	2025-08-16
Cable	ESM Cable Corp.	MN04 Bilog Cables	MND	2024-01-28	2025-01-28
Amplifier - Pre-Amplifier	Miteq	AM-1551	PAC	2024-06-08	2025-06-08
Receiver	Rohde & Schwarz	ESR26	ARP	2024-05-23	2025-05-23
Antenna - Standard Gain	ETS Lindgren	3160-09	AHG	NCR	NCR
Cable	ESM Cable Corp.	TTBJ141 KMKM-72	MNP	2023-09-05	2024-09-05
Amplifier - Pre-Amplifier	Miteq	JSD4-18002600-26-8P	APU	2023-09-05	2024-09-05

SPURIOUS RADIATED EMISSIONS

element
WTD.2024.01.16.0
EmiR5 2023.08.29.0
PSA-ESCI 2023.12.23.0

Description	Manufacturer	Model	ID	Last Cal.	Cal. Due
Antenna - Biconilog	Ametek	CBL 6141B	AYS	2023-03-28	2025-03-28
Cable	Element	Biconilog Cable	MNX	2024-01-30	2025-01-30
Amplifier - Pre-Amplifier	Miteq	AM-1064-9079 and SA18E-10	AOO	2024-01-30	2025-01-30
Filter - Low Pass	Micro-Tronics	LPM50004	HGG	2023-09-10	2024-09-10
Antenna - Loop	ETS Lindgren	6502	AOB	2023-06-12	2025-06-12
Cable	ESM Cable Corp.	Bilog Cables	MNH	2023-10-08	2024-10-08
Analyzer - Spectrum Analyzer	Agilent	E4446A	AAQ	2024-03-13	2025-03-13
Antenna - Double Ridge	ETS Lindgren	3115	AIP	2024-08-02	2026-08-02
Cable	ESM Cable Corp.	Double Ridge Guide Horn Cables	MNI	2024-01-08	2025-01-08
Amplifier - Pre-Amplifier	Miteq	AMF-3D-00100800-32-13P	AVT	2024-01-08	2025-01-08
Attenuator	Fairview Microwave	SA18H-20	VAF	2024-08-25	2025-08-25
Antenna - Standard Gain	ETS Lindgren	3160-08	AIQ	NCR	NCR
Cable	ESM Cable Corp.	Standard Gain Horn Cables	MNJ	2024-01-28	2025-01-28
Amplifier - Pre-Amplifier	Miteq	AMF-6F-12001800-30-10P	AVW	2024-01-08	2025-01-08

FREQUENCY RANGE INVESTIGATED

9 kHz TO 26 GHz

POWER INVESTIGATED

110VAC/60Hz

CONFIGURATIONS INVESTIGATED

ADEM0044-1
ADEM0044-2
ADEM0044-3

MODES INVESTIGATED

Transmitting 802.11 WiFi 2.4GHz, Low, Mid, and High Chs (2412, 2437, and 2462 MHz), 20 MHz Channel BW. See comments below for data rate and EUT orientation.

SPURIOUS RADIATED EMISSIONS

element
WTD.2024.01.16.0
EmiR5 2023.08.29.0
PSA-ESCI 2023.12.23.0

EUT:	Fuji Thermostat	Work Order:	ADEM0044
Serial Number:	52202030005049	Date:	2024-09-18
Customer:	Ademco, Inc.	Temperature:	22.1°C
Attendees:	None	Relative Humidity:	53.5%
Customer Project:	None	Bar. Pressure (PMSL):	1011 mb
Tested By:	Christopher Heintzelman	Job Site:	MN05
Power:	110VAC/60Hz	Configuration:	ADEM0044-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2024	ANSI C63.10:2013
RSS-247 Issue 3:2023	ANSI C63.10:2013
RSS-Gen Issue 5:2018+A1:2019+A2:2021	ANSI C63.10:2013

TEST PARAMETERS

Run #:	71	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)

COMMENTS

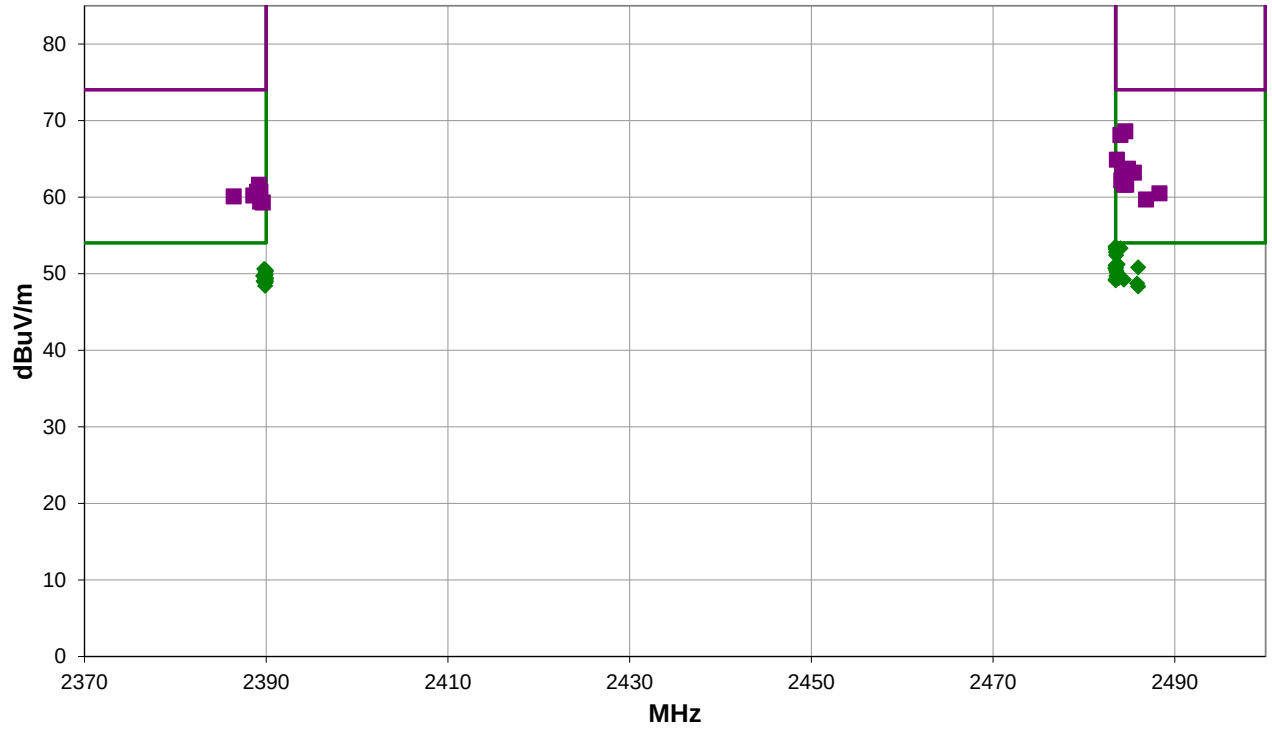
The 1 Mbps test mode was >98% duty cycle, but other modes were <98%. A duty cycle correction factor was applied using the formula 10*log(1/duty cycle). 6 Mbps: 94.1%, 0.3dB. 11 Mbps: 91%, 0.4dB. 36 Mbps: 73.8%, 1.3dB. 54 Mbps: 65.7%, 1.8dB. MCS0: 93.7%, 0.3dB. MCS7: 63.8%, 2.0dB.

EUT OPERATING MODES

Transmitting Wifi Low and High Chs (2412 and 2462 MHz), 20 MHz BW. See comments below for EUT orientation and data rate.

DEVIATIONS FROM TEST STANDARD

None



Run #: 85 PK AV QP

SPURIOUS RADIATED EMISSIONS

element
WTD.2024.01.16.0
EmiR5 2023.08.29.0
PSA-ESCI 2023.12.23.0

RESULTS - Run #85

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Duty Cycle Correction Factor (dB)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
2483.500	35.5	-3.3	1.0	253.9	1.3	20.0	Horz	AV	0.0	53.5	54.0	-0.5	High Ch, EUT Horz, 36 Mbps
2484.042	34.8	-3.3	1.0	253.9	1.8	20.0	Horz	AV	0.0	53.3	54.0	-0.7	High Ch, EUT Horz, 54 Mbps
2483.517	35.2	-3.3	1.0	253.9	1.3	20.0	Horz	AV	0.0	53.2	54.0	-0.8	High Ch, EUT Horz, 36 Mbps
2483.533	34.3	-3.3	1.0	253.9	1.8	20.0	Horz	AV	0.0	52.8	54.0	-1.2	High Ch, EUT Horz, 54 Mbps
2483.575	33.7	-3.3	1.0	253.9	2.0	20.0	Horz	AV	0.0	52.4	54.0	-1.6	High Ch, EUT Horz, MCS7
2483.658	34.2	-3.3	1.5	81.9	0.3	20.0	Horz	AV	0.0	51.2	54.0	-2.8	High Ch, EUT Horz, 6 Mbps
2483.733	34.1	-3.3	1.0	253.9	0.4	20.0	Horz	AV	0.0	51.2	54.0	-2.8	High Ch, EUT Horz, 11 Mbps
2483.525	34.1	-3.3	1.0	253.9	0.3	20.0	Horz	AV	0.0	51.1	54.0	-2.9	High Ch, EUT Horz, MCS0
2483.533	33.7	-3.3	1.0	253.9	0.4	20.0	Horz	AV	0.0	50.8	54.0	-3.2	High Ch, EUT Horz, 11 Mbps
2486.000	33.8	-3.3	1.5	81.9	0.3	20.0	Horz	AV	0.0	50.8	54.0	-3.2	High Ch, EUT Horz, 6 Mbps
2483.500	33.7	-3.3	1.5	196.0	0.3	20.0	Vert	AV	0.0	50.7	54.0	-3.3	High Ch, EUT Vert, 6 Mbps
2483.500	34.0	-3.3	1.0	253.9	0.0	20.0	Horz	AV	0.0	50.7	54.0	-3.3	High Ch, EUT Horz, 1 Mbps
2483.517	33.7	-3.3	1.0	253.9	0.3	20.0	Horz	AV	0.0	50.7	54.0	-3.3	High Ch, EUT Horz, MCS0
2389.792	33.4	-4.1	1.5	192.9	1.3	20.0	Horz	AV	0.0	50.6	54.0	-3.4	Low Ch, EUT Horz, 36 Mbps
2483.558	33.7	-3.3	1.0	253.9	0.0	20.0	Horz	AV	0.0	50.4	54.0	-3.6	High Ch, EUT Horz, 1 Mbps
2389.992	32.5	-4.1	1.5	192.9	2.0	20.0	Horz	AV	0.0	50.4	54.0	-3.6	Low Ch, EUT Horz, MCS7
2389.958	33.1	-4.1	1.5	192.9	1.3	20.0	Horz	AV	0.0	50.3	54.0	-3.7	Low Ch, EUT Horz, 36 Mbps
2483.617	33.2	-3.3	1.0	253.9	0.3	20.0	Horz	AV	0.0	50.2	54.0	-3.8	High Ch, EUT Horz, MCS7
2389.942	34.0	-4.1	1.01	322.9	0.3	20.0	Vert	AV	0.0	50.2	54.0	-3.8	Low Ch, EUT Vert, 6 Mbps
2389.950	33.7	-4.1	1.01	322.9	0.3	20.0	Vert	AV	0.0	49.9	54.0	-4.1	Low Ch, EUT Vert, 6 Mbps
2389.942	33.6	-4.1	1.5	192.9	0.3	20.0	Horz	AV	0.0	49.8	54.0	-4.2	Low Ch, EUT Horz, 6 Mbps
2483.592	32.7	-3.3	1.5	83.0	0.3	20.0	Horz	AV	0.0	49.7	54.0	-4.3	High Ch, EUT On Side, 6 Mbps
2389.683	32.0	-4.1	1.5	192.9	1.8	20.0	Horz	AV	0.0	49.7	54.0	-4.3	Low Ch, EUT Horz, 54 Mbps
2389.983	33.2	-4.1	1.5	192.9	0.3	20.0	Horz	AV	0.0	49.4	54.0	-4.6	Low Ch, EUT Horz, 6 Mbps
2483.858	32.4	-3.3	3.86	355.9	0.3	20.0	Vert	AV	0.0	49.4	54.0	-4.6	High Ch, EUT On Side, 6 Mbps
2389.900	33.2	-4.1	1.5	192.9	0.3	20.0	Horz	AV	0.0	49.4	54.0	-4.6	Low Ch, EUT Horz, MCS0
2389.992	31.6	-4.1	1.5	192.9	1.8	20.0	Horz	AV	0.0	49.3	54.0	-4.7	Low Ch, EUT Horz, 54 Mbps
2483.500	32.2	-3.3	1.5	83.0	0.3	20.0	Horz	AV	0.0	49.2	54.0	-4.8	High Ch, EUT On Side, 6 Mbps
2484.408	32.2	-3.3	3.88	271.0	0.3	20.0	Horz	AV	0.0	49.2	54.0	-4.8	High Ch, EUT Vert, 6 Mbps
2483.517	32.1	-3.3	3.86	355.9	0.3	20.0	Vert	AV	0.0	49.1	54.0	-4.9	High Ch, EUT On Side, 6 Mbps
2389.867	32.8	-4.1	1.5	192.9	0.4	20.0	Horz	AV	0.0	49.1	54.0	-4.9	Low Ch, EUT Horz, 11 Mbps
2389.983	32.8	-4.1	1.5	192.9	0.3	20.0	Horz	AV	0.0	49.0	54.0	-5.0	Low Ch, EUT Horz, MCS0
2389.733	32.8	-4.1	1.5	192.9	0.3	20.0	Horz	AV	0.0	49.0	54.0	-5.0	Low Ch, EUT Horz, MCS7
2389.900	32.9	-4.1	1.5	192.9	0.0	20.0	Horz	AV	0.0	48.8	54.0	-5.2	Low Ch, EUT Horz, 1 Mbps
2389.933	32.5	-4.1	1.5	192.9	0.4	20.0	Horz	AV	0.0	48.8	54.0	-5.2	Low Ch, EUT Horz, 11 Mbps
2485.875	31.7	-3.3	1.5	37.0	0.3	20.0	Vert	AV	0.0	48.7	54.0	-5.3	High Ch, EUT Horz, 6 Mbps
2484.567	51.9	-3.3	1.0	253.9		20.0	Horz	PK	0.0	68.6	74.0	-5.4	High Ch, EUT Horz, 54 Mbps
2389.892	32.5	-4.1	1.5	192.9	0.0	20.0	Horz	AV	0.0	48.4	54.0	-5.6	Low Ch, EUT Horz, 1 Mbps
2486.000	31.3	-3.3	1.5	37.0	0.3	20.0	Vert	AV	0.0	48.3	54.0	-5.7	High Ch, EUT Horz, 6 Mbps

SPURIOUS RADIATED EMISSIONS

element
WTD.2024.01.16.0
EmiR5 2023.08.29.0
PSA-ESCI 2023.12.23.0

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Duty Cycle Correction Factor (dB)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
2484.033	51.4	-3.3	1.0	253.9		20.0	Horz	PK	0.0	68.1	74.0	-5.9	High Ch, EUT Horz, 36 Mbps
2483.650	48.2	-3.3	1.5	81.9		20.0	Horz	PK	0.0	64.9	74.0	-9.1	High Ch, EUT Horz, 6 Mbps
2484.850	47.0	-3.3	1.5	196.0		20.0	Vert	PK	0.0	63.7	74.0	-10.3	High Ch, EUT Vert, 6 Mbps
2485.517	46.5	-3.3	1.0	253.9		20.0	Horz	PK	0.0	63.2	74.0	-10.8	High Ch, EUT Horz, 11 Mbps
2484.242	46.4	-3.3	1.0	253.9		20.0	Horz	PK	0.0	63.1	74.0	-10.9	High Ch, EUT Horz, MCS7
2484.525	45.6	-3.3	1.0	253.9		20.0	Horz	PK	0.0	62.3	74.0	-11.7	High Ch, EUT Horz, MCS0
2484.125	45.5	-3.3	1.5	83.0		20.0	Horz	PK	0.0	62.2	74.0	-11.8	High Ch, EUT On Side, 6 Mbps
2484.658	44.9	-3.3	3.86	355.9		20.0	Vert	PK	0.0	61.6	74.0	-12.4	High Ch, EUT On Side, 6 Mbps
2484.425	44.9	-3.3	1.0	253.9		20.0	Horz	PK	0.0	61.6	74.0	-12.4	High Ch, EUT Horz, 1 Mbps
2389.217	45.7	-4.1	1.01	322.9		20.0	Vert	PK	0.0	61.6	74.0	-12.4	Low Ch, EUT Vert, 6 Mbps
2389.192	44.9	-4.1	1.5	192.9		20.0	Horz	PK	0.0	60.8	74.0	-13.2	Low Ch, EUT Horz, 6 Mbps
2389.358	44.8	-4.1	1.5	192.9		20.0	Horz	PK	0.0	60.7	74.0	-13.3	Low Ch, EUT Horz, 36 Mbps
2389.008	44.8	-4.1	1.5	192.9		20.0	Horz	PK	0.0	60.7	74.0	-13.3	Low Ch, EUT Horz, MCS7
2488.317	43.8	-3.3	3.88	271.0		20.0	Horz	PK	0.0	60.5	74.0	-13.5	High Ch, EUT Vert, 6 Mbps
2388.583	44.3	-4.1	1.5	192.9		20.0	Horz	PK	0.0	60.2	74.0	-13.8	Low Ch, EUT Horz, 11 Mbps
2386.425	44.2	-4.1	1.5	192.9		20.0	Horz	PK	0.0	60.1	74.0	-13.9	Low Ch, EUT Horz, 1 Mbps
2486.833	43.0	-3.3	1.5	37.0		20.0	Vert	PK	0.0	59.7	74.0	-14.3	High Ch, EUT Horz, 6 Mbps
2389.333	43.5	-4.1	1.5	192.9		20.0	Horz	PK	0.0	59.4	74.0	-14.6	Low Ch, EUT Horz, MCS0
2389.617	43.4	-4.1	1.5	192.9		20.0	Horz	PK	0.0	59.3	74.0	-14.7	Low Ch, EUT Horz, 54 Mbps

CONCLUSION

Pass

Tested By

SPURIOUS RADIATED EMISSIONS

element
WTD.2024.01.16.0
EmiR5 2023.08.29.0
PSA-ESCI 2023.12.23.0

EUT:	Fuji Thermostat	Work Order:	ADEM0044
Serial Number:	52202030005049	Date:	2024-07-29
Customer:	Ademco, Inc.	Temperature:	22°C
Attendees:	None	Relative Humidity:	61.6%
Customer Project:	None	Bar. Pressure (PMSL):	1009 mb
Tested By:	Arnauld Dedry	Job Site:	MN09
Power:	110VAC/60Hz	Configuration:	ADEM0044-2

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2024	ANSI C63.10:2013
RSS-247 Issue 3:2023	ANSI C63.10:2013
RSS-Gen Issue 5:2018+A1:2019+A2:2021	ANSI C63.10:2013

TEST PARAMETERS

Run #:	41	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)

COMMENTS

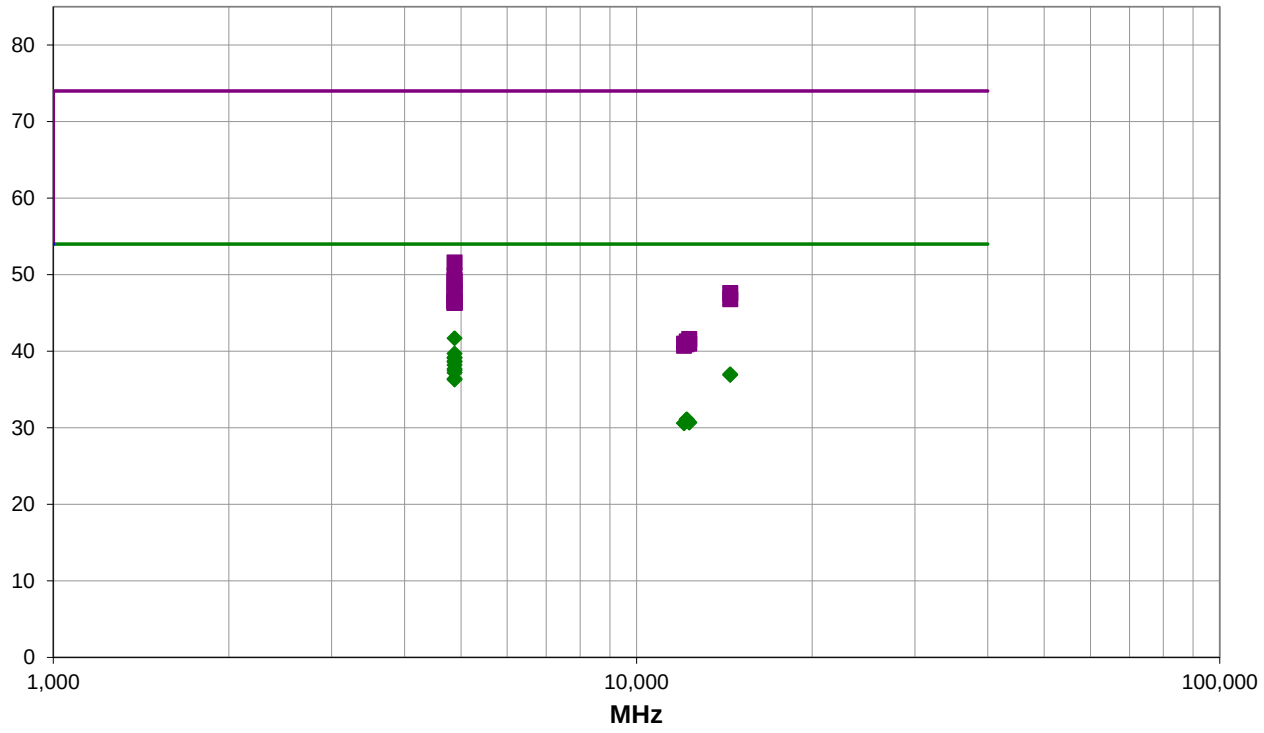
The 1 Mbps test mode was >98% duty cycle, but other modes were <98%. A duty cycle correction factor was applied using the formula 10*log(1/duty cycle). 6 Mbps: 94.1%, 0.3dB. 11 Mbps: 91%, 0.4dB. 36 Mbps: 73.8%, 1.3dB. 54 Mbps: 65.7%, 1.8dB. MCS0: 93.7%, 0.3dB. MCS7: 63.8%, 2.0dB.

EUT OPERATING MODES

Transmitting 802.11 WiFi 2.4GHz, Low, Mid, and High Chs (2412, 2437, and 2462 MHz), 20 MHz Channel BW. See comments below for data rate and EUT orientation.

DEVIATIONS FROM TEST STANDARD

None



Run #: 41

PK AV QP

SPURIOUS RADIATED EMISSIONS

element
WTD.2024.01.16.0
EmiR5 2023.08.29.0
PSA-ESCI 2023.12.23.0

RESULTS - Run #41

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
4874.042	36.1	5.2	3.9	221.9	0.4	0.0	Horz	AV	0.0	41.7	54.0	-12.3	EUT Horz, Mid Ch, 11 Mbps
4873.983	34.1	5.2	1.5	344.8	0.4	0.0	Vert	AV	0.0	39.7	54.0	-14.3	EUT Vert, Mid Ch, 11 Mbps
4873.883	33.8	5.2	3.8	230.0	0.3	0.0	Horz	AV	0.0	39.3	54.0	-14.7	EUT Horz, Mid Ch, MCS0
4873.542	33.6	5.2	3.9	221.9	0.3	0.0	Horz	AV	0.0	39.1	54.0	-14.9	EUT Horz, Mid Ch, 6 Mbps
4874.025	31.5	5.2	3.8	230.1	2.0	0.0	Horz	AV	0.0	38.7	54.0	-15.3	EUT Horz, Mid Ch, MCS7
4874.042	31.6	5.2	3.9	221.9	1.8	0.0	Horz	AV	0.0	38.6	54.0	-15.4	EUT Horz, Mid Ch, 54 Mbps
4874.133	31.7	5.2	3.9	221.9	1.3	0.0	Horz	AV	0.0	38.2	54.0	-15.8	EUT Horz, Mid Ch, 36 Mbps
4874.183	30.5	5.2	1.5	344.9	2.0	0.0	Vert	AV	0.0	37.7	54.0	-16.3	EUT Vert, Mid Ch, MCS7
4874.008	30.5	5.2	1.5	344.8	1.8	0.0	Vert	AV	0.0	37.5	54.0	-16.5	EUT Vert, Mid Ch, 54 Mbps
4874.017	30.7	5.2	1.5	344.8	1.3	0.0	Vert	AV	0.0	37.2	54.0	-16.8	EUT Vert, Mid Ch, 36 Mbps
14469.900	29.9	6.9	1.5	132.9	0.2	0.0	Vert	AV	0.0	37.0	54.0	-17.0	EUT Vert, Mid Ch, 1 Mbps
14471.310	29.9	6.9	1.5	55.0	0.0	0.0	Horz	AV	0.0	36.8	54.0	-17.2	EUT Horz, Mid Ch, 1 Mbps
4874.017	30.9	5.2	1.5	344.8	0.3	0.0	Vert	AV	0.0	36.4	54.0	-17.6	EUT Vert, Mid Ch, 6 Mbps
4874.575	30.9	5.2	1.5	344.8	0.3	0.0	Vert	AV	0.0	36.4	54.0	-17.6	EUT Vert, Mid Ch, MCS0
4874.008	46.0	5.2	3.9	221.9		0.4	Horz	PK	0.0	51.6	74.0	-22.4	EUT Horz, Mid Ch, 11 Mbps
12187.180	32.0	-1.0	1.5	353.0	0.0	0.0	Horz	AV	0.0	31.0	54.0	-23.0	EUT Horz, Mid Ch, 1 Mbps
12186.450	32.0	-1.0	1.5	42.9	0.0	0.0	Vert	AV	0.0	31.0	54.0	-23.0	EUT Vert, Mid Ch, 1 Mbps
12311.150	31.2	-0.6	1.5	55.0	0.0	0.0	Vert	AV	0.0	30.6	54.0	-23.4	EUT Vert, High Ch, 1 Mbps
12311.480	31.2	-0.6	1.5	192.9	0.0	0.0	Horz	AV	0.0	30.6	54.0	-23.4	EUT Horz, High Ch, 1 Mbps
12061.280	32.3	-1.8	1.5	340.9	0.0	0.0	Vert	AV	0.0	30.5	54.0	-23.5	EUT Vert, Low Ch, 1 Mbps
12061.890	32.3	-1.8	1.5	66.9	0.0	0.0	Horz	AV	0.0	30.5	54.0	-23.5	EUT Horz, Low Ch, 1 Mbps
4872.233	44.7	5.2	3.9	221.9		0.0	Horz	PK	0.0	49.9	74.0	-24.1	EUT Horz, Mid Ch, 6 Mbps
4873.783	44.1	5.2	1.5	344.8		0.0	Vert	PK	0.0	49.3	74.0	-24.7	EUT Vert, Mid Ch, 11 Mbps
4874.567	43.9	5.2	3.8	230.0		0.0	Horz	PK	0.0	49.1	74.0	-24.9	EUT Horz, Mid Ch, MCS0
4874.358	42.7	5.2	3.9	221.9		0.0	Horz	PK	0.0	47.9	74.0	-26.1	EUT Horz, Mid Ch, 36 Mbps
4874.625	42.5	5.2	3.8	230.1		0.0	Horz	PK	0.0	47.7	74.0	-26.3	EUT Horz, Mid Ch, MCS7
14470.630	40.7	6.9	1.5	132.9		0.0	Vert	PK	0.0	47.6	74.0	-26.4	EUT Vert, Mid Ch, 1 Mbps
4872.650	42.0	5.2	3.9	221.9		0.0	Horz	PK	0.0	47.2	74.0	-26.8	EUT Horz, Mid Ch, 54 Mbps
14473.430	39.9	6.9	1.5	55.0		0.0	Horz	PK	0.0	46.8	74.0	-27.2	EUT Horz, Mid Ch, 1 Mbps
4875.733	41.2	5.3	1.5	344.9		0.0	Vert	PK	0.0	46.5	74.0	-27.5	EUT Vert, Mid Ch, MCS7
4874.458	41.3	5.2	1.5	344.8		0.0	Vert	PK	0.0	46.5	74.0	-27.5	EUT Vert, Mid Ch, MCS0
4873.408	41.3	5.2	1.5	344.8		0.0	Vert	PK	0.0	46.5	74.0	-27.5	EUT Vert, Mid Ch, 36 Mbps
4872.808	41.1	5.2	1.5	344.8		0.0	Vert	PK	0.0	46.3	74.0	-27.7	EUT Vert, Mid Ch, 54 Mbps
4872.875	41.1	5.2	1.5	344.8		0.0	Vert	PK	0.0	46.3	74.0	-27.7	EUT Vert, Mid Ch, 6 Mbps
12311.860	42.2	-0.6	1.5	192.9		0.0	Horz	PK	0.0	41.6	74.0	-32.4	EUT Horz, High Ch, 1 Mbps
12186.840	42.3	-1.0	1.5	42.9		0.0	Vert	PK	0.0	41.3	74.0	-32.7	EUT Vert, Mid Ch, 1 Mbps
12060.760	42.8	-1.8	1.5	340.9		0.0	Vert	PK	0.0	41.0	74.0	-33.0	EUT Vert, Low Ch, 1 Mbps
12312.420	41.6	-0.6	1.5	55.0		0.0	Vert	PK	0.0	41.0	74.0	-33.0	EUT Vert, High Ch, 1 Mbps
12187.430	41.9	-1.0	1.5	353.0		0.0	Horz	PK	0.0	40.9	74.0	-33.1	EUT Horz, Mid Ch, 1 Mbps

SPURIOUS RADIATED EMISSIONS

element
WTD.2024.01.16.0
EmiR5 2023.08.29.0
PSA-ESCI 2023.12.23.0

Freq (MHz)	Amplitude (dBuV)	Factor (dB/m)	Antenna Height (meters)	Azimuth (degrees)	Duty Cycle Correction Factor (dB)	External Attenuation (dB)	Polarity/ Transducer Type	Detector	Distance Adjustment (dB)	Adjusted (dBuV/m)	Spec. Limit (dBuV/m)	Compared to Spec. (dB)	Comments
12059.560	42.5	-1.8	1.5	66.9		0.0	Horz	PK	0.0	40.7	74.0	-33.3	EUT Horz, Low Ch, 1 Mbps

CONCLUSION
Pass

Tested By

SPURIOUS RADIATED EMISSIONS

element
WTD.2024.01.16.0
EmiR5 2023.08.29.0
PSA-ESCI 2023.12.23.0

EUT:	Fuji Thermostat	Work Order:	ADEM0044
Serial Number:	52202030005293	Date:	2024-08-22
Customer:	Ademco, Inc.	Temperature:	22.2°C
Attendees:	None	Relative Humidity:	51.5%
Customer Project:	None	Bar. Pressure (PMSL):	1022 mb
Tested By:	Arnauld Dedry	Job Site:	MN05
Power:	110VAC/60Hz	Configuration:	ADEM0044-3

TEST SPECIFICATIONS

Specification:	Method:
FCC 15.247:2024	ANSI C63.10:2013
RSS-247 Issue 3:2023	ANSI C63.10:2013
RSS-Gen Issue 5:2018+A1:2019+A2:2021	ANSI C63.10:2013

TEST PARAMETERS

Run #:	34	Test Distance (m):	3	Ant. Height(s) (m):	1 to 4(m)

COMMENTS

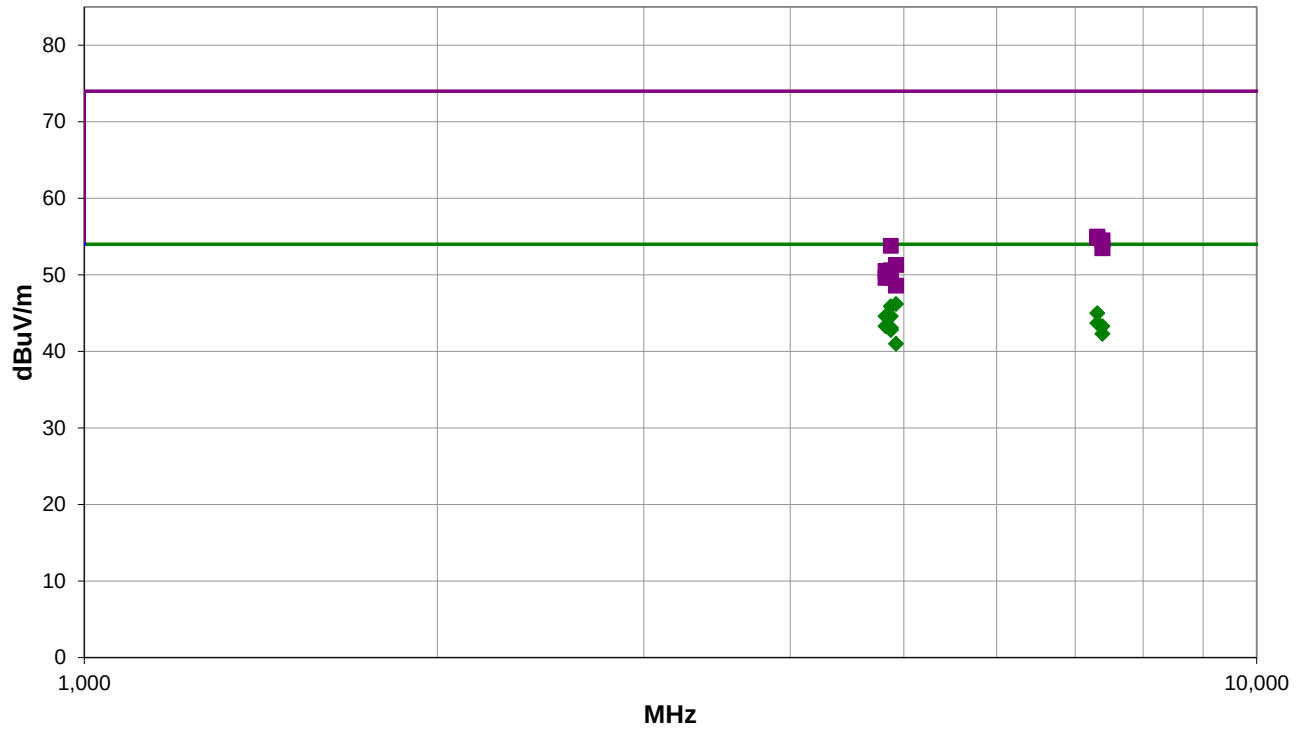
The 1 Mbps test mode was >98% duty cycle, but other modes were <98%. A duty cycle correction factor was applied using the formula 10*log(1/duty cycle). 6 Mbps: 94.1%, 0.3dB. 11 Mbps: 91%, 0.4dB. 36 Mbps: 73.8%, 1.3dB. 54 Mbps: 65.7%, 1.8dB. MCS0: 93.7%, 0.3dB. MCS7: 63.8%, 2.0dB.

EUT OPERATING MODES

Transmitting 802.11 WiFi 2.4GHz, Low, Mid, and High Chs (2412, 2437, and 2462 MHz), 20 MHz Channel BW. See comments below for data rate and EUT orientation.

DEVIATIONS FROM TEST STANDARD

None



Run #: 34 ■ PK ◆ AV ● QP

SPURIOUS RADIATED EMISSIONS

element
WTD.2024.01.16.0
EmiR5 2023.08.29.0
PSA-ESCI 2023.12.23.0

RESULTS - Run #34

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
4873.970	43.5	5.7	1.7	54.0	0.0	0.0	Horz	AV	0.0	49.2	54.0	-4.8	EUT Horz, Mid Ch, 1 Mbps
4923.953	40.7	5.4	2.8	53.0	0.0	0.0	Horz	AV	0.0	46.1	54.0	-7.9	EUT Horz, High Ch, 1 Mbps
4873.967	40.1	5.7	1.5	339.0	0.0	0.0	Horz	AV	0.0	45.8	54.0	-8.2	EUT On Side, Mid Ch, 1 Mbps
7311.933	31.6	13.3	2.7	213.0	0.0	0.0	Vert	AV	0.0	44.9	54.0	-9.1	EUT Vert, Mid Ch, 1 Mbps
4823.933	38.5	6.0	1.5	354.0	0.0	0.0	Horz	AV	0.0	44.5	54.0	-9.5	EUT Horz, Low Ch, 1 Mbps
4873.950	38.8	5.7	1.0	174.0	0.0	0.0	Vert	AV	0.0	44.5	54.0	-9.5	EUT Vert, Mid Ch, 1 Mbps
7311.983	30.3	13.3	1.5	344.0	0.0	0.0	Horz	AV	0.0	43.6	54.0	-10.4	EUT Horz, Mid Ch, 1 Mbps
4823.942	37.2	6.0	4.0	195.0	0.0	0.0	Vert	AV	0.0	43.2	54.0	-10.8	EUT Vert, Low Ch, 1 Mbps
7385.070	29.4	13.8	2.5	143.0	0.0	0.0	Vert	AV	0.0	43.2	54.0	-10.8	EUT Vert, high Ch, 1 Mbps
4873.997	37.3	5.7	2.7	117.0	0.0	0.0	Vert	AV	0.0	43.0	54.0	-11.0	EUT On Side, Mid Ch, 1 Mbps
4873.963	37.1	5.7	4.0	219.0	0.0	0.0	Vert	AV	0.0	42.8	54.0	-11.2	EUT Horz, Mid Ch, 1 Mbps
4874.013	37.0	5.7	3.7	195.0	0.0	0.0	Horz	AV	0.0	42.7	54.0	-11.3	EUT Vert, Mid Ch, 1 Mbps
7385.217	28.4	13.8	1.5	94.0	0.0	0.0	Horz	AV	0.0	42.2	54.0	-11.8	EUT Horz, High Ch, 1 Mbps
4923.980	35.5	5.4	1.2	173.0	0.0	0.0	Vert	AV	0.0	40.9	54.0	-13.1	EUT Vert, high Ch, 1 Mbps
7310.833	41.7	13.3	1.7	183.0	0.0	0.0	Horz	PK	0.0	55.0	74.0	-19.0	EUT On Side, Mid Ch, 1 Mbps
7310.923	41.6	13.3	2.7	213.0	0.0	0.0	Vert	PK	0.0	54.9	74.0	-19.1	EUT Vert, Mid Ch, 1 Mbps
7310.053	41.6	13.3	1.5	344.0	0.0	0.0	Horz	PK	0.0	54.9	74.0	-19.1	EUT Horz, Mid Ch, 1 Mbps
7386.887	40.7	13.8	2.5	143.0	0.0	0.0	Vert	PK	0.0	54.5	74.0	-19.5	EUT Vert, high Ch, 1 Mbps
4873.950	48.1	5.7	1.7	54.0	0.0	0.0	Horz	PK	0.0	53.8	74.0	-20.2	EUT Horz, Mid Ch, 1 Mbps
7386.520	39.7	13.8	1.5	94.0	0.0	0.0	Horz	PK	0.0	53.5	74.0	-20.5	EUT Horz, High Ch, 1 Mbps
4924.083	45.9	5.4	2.8	53.0	0.0	0.0	Horz	PK	0.0	51.3	74.0	-22.7	EUT Horz, High Ch, 1 Mbps
4873.853	44.9	5.7	3.7	195.0	0.0	0.0	Horz	PK	0.0	50.6	74.0	-23.4	EUT Vert, Mid Ch, 1 Mbps
4823.742	44.5	6.0	1.5	354.0	0.0	0.0	Horz	PK	0.0	50.5	74.0	-23.5	EUT Horz, Low Ch, 1 Mbps
4874.140	44.8	5.7	1.0	174.0	0.0	0.0	Vert	PK	0.0	50.5	74.0	-23.5	EUT Vert, Mid Ch, 1 Mbps
4873.980	44.5	5.7	2.7	117.0	0.0	0.0	Vert	PK	0.0	50.2	74.0	-23.8	EUT On Side, Mid Ch, 1 Mbps
4824.083	43.6	6.0	4.0	195.0	0.0	0.0	Vert	PK	0.0	49.6	74.0	-24.4	EUT Vert, Low Ch, 1 Mbps
4873.997	43.9	5.7	4.0	219.0	0.0	0.0	Vert	PK	0.0	49.6	74.0	-24.4	EUT Horz, Mid Ch, 1 Mbps
4923.823	43.2	5.4	1.2	173.0	0.0	0.0	Vert	PK	0.0	48.6	74.0	-25.4	EUT Vert, high Ch, 1 Mbps

CONCLUSION

Pass

Arnaud Fee

Tested By

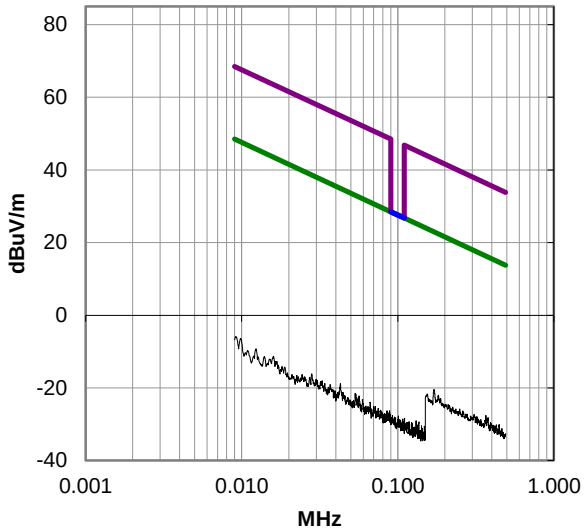
SPURIOUS RADIATED EMISSIONS

element
WTD.2024.01.16.0
EmiR5 2023.08.29.0
PSA-ESCI 2023.12.23.0

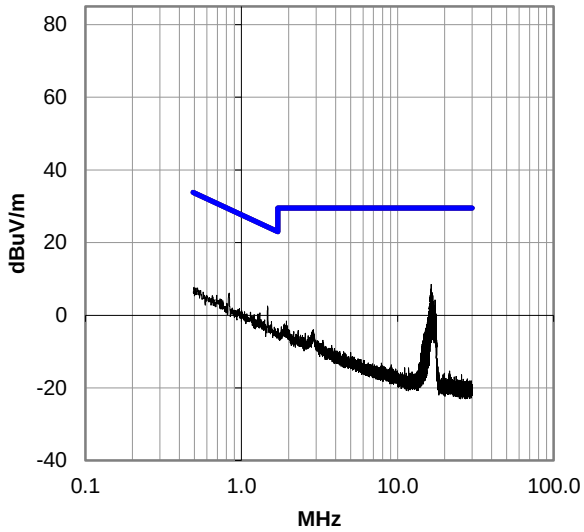
PRESCAN DATA

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.

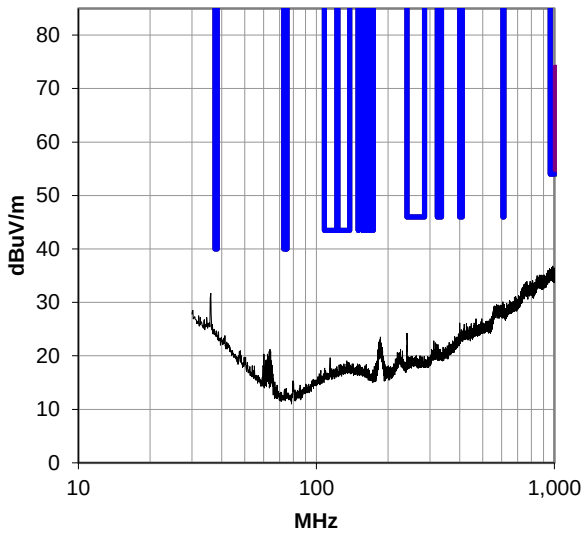
0.009-0.49 MHz, Run 38



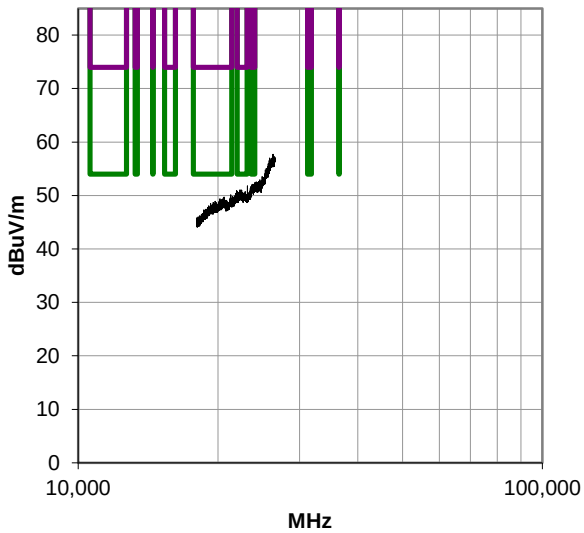
0.49-30 MHz, Run 39



30-1000 MHz, Run 241



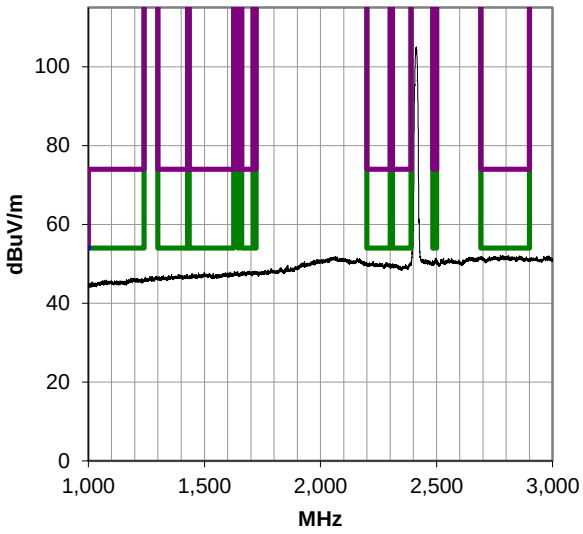
18000-26500 MHz, Run 207



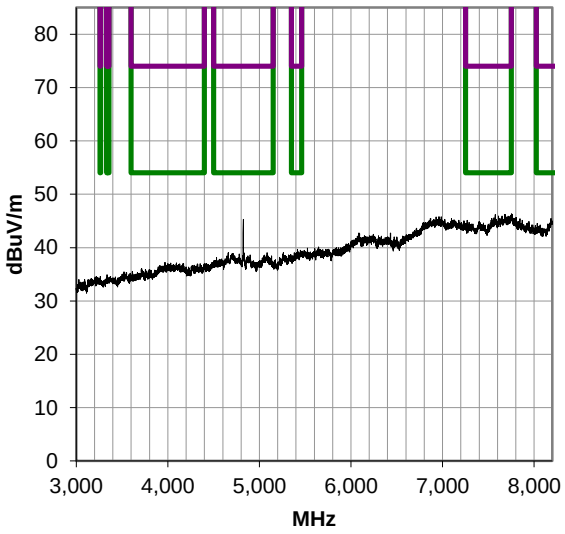
SPURIOUS RADIATED EMISSIONS

element
WTD.2024.01.16.0
EmiR5 2023.08.29.0
PSA-ESCI 2023.12.23.0

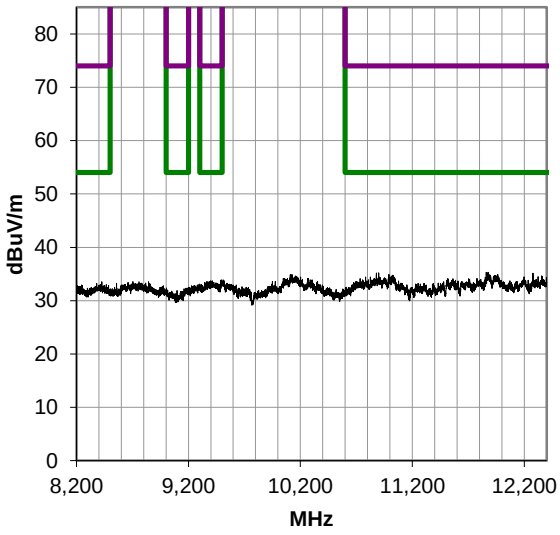
1000-3000 MHz, Run 73



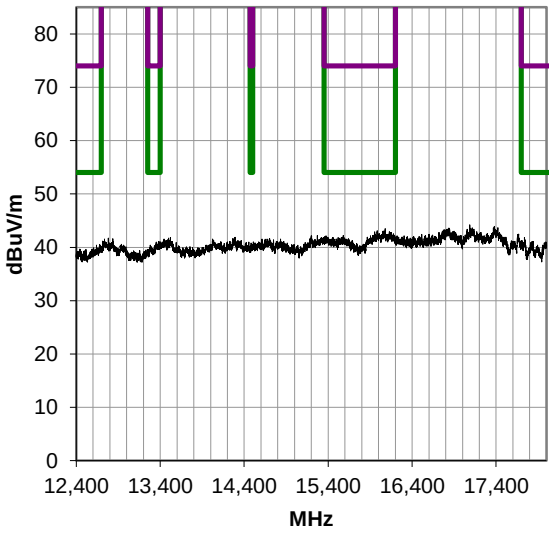
3000-8200 MHz, Run 74



8200-12400 MHz, Run 75



12400-18000 MHz, Run 76



End of Test Report