RADIO TEST REPORT

Product	:	Essential 2 Camera Family
Model Name	:	VMC3052
Series Model	:	VMC2052, VMC3050, VMC2050
FCC ID	:	2APLE18300425
Test Regulation	:	FCC 47 CFR Part 15 Subpart C (Section 15.247)
Received Date	:	2023/3/16
Test Date	:	2023/4/7 ~ 2023/4/20
Issued Date	:	2023/6/26
Applicant	:	Arlo Technologies Inc 2200 Faraday Avenue, Suite 150, Carlsbad, CA 92008, USA
Issued By	:	Underwriters Laboratories Taiwan Co., Ltd. Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan

Testing Laboratory
3398

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REVISION HISTORY

Original Test Report No.: 4790738132-US-R0-V0

Revision	Test report No.	Date	Page revised	Contents
Original	4790738132-US-R0-V0	2023/6/26	-	Initial issue

Table of Contents

1. Attestation of Test Results

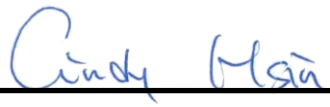
APPLICANT:	Arlo Technologies Inc 2200 Faraday Avenue, Suite 150, Carlsbad, CA 92008, USA
MANUFACTURER:	Fuyu Precision Component Company Limited Lot M1 and Lot F, Quang Chau Industrial Park, Van Trung Commune, Viet Yen District, Bac Giang Province,Viet Nam
EUT DESCRIPTION:	Essential 2 Camera Family
BRAND:	Arlo
MODEL:	VMC3052
SERIES MODEL:	VMC2052, VMC3050, VMC2050
SAMPLE STAGE:	Engineering Verification Test sample
DATE of TESTED:	2023/4/7 ~ 2023/4/20

APPLICABLE STANDARDS	
STANDARD	**Test Results**
FCC 47 CFR PART 15 Subpart C (Section 15.247)	PASS

Underwriters Laboratories Taiwan Co., Ltd. tested the above equipment in accordance with the requirements set forth in the above standards. All indications of Pass/Fail in this report are opinions expressed by Underwriters Laboratories Taiwan Co., Ltd. based on interpretations and/or observations of test results. The test results show that the equipment tested is capable of demonstrating compliance with the requirements as documented in this report.

Note: The results documented in this report apply only to the tested sample, under the conditions and modes of operation as described herein. This document may not be altered or revised in any way unless done so by Underwriters Laboratories Taiwan Co., Ltd. and all revisions are duly noted in the revisions section. Any alteration of this document not carried out by Underwriters Laboratories Taiwan Co., Ltd. will constitute fraud and shall nullify the document. This report must not be used by the client to claim product certification, approval, or endorsement by NVLAP, NIST, any agency of the Federal Government, or any agency of any government.

Prepared By:



Cindy Hsin Date : 2023/6/26
Project Handler

Approved and Authorized By:

Eric Lee Date : 2023/6/26
Senior Laboratory Engineer

2. Summary of Test Results

Summary of Test Results		
FCC Clause	**Test Items**	**Result**
15.247(a)(2)	6dB Bandwidth	PASS
15.247(b)	Conducted Output Power	PASS
15.247(e)	Power Spectral Density	PASS
15.247(d)	Antenna Port Emission	PASS
15.205 / 15.209 / 15.247(d)	Radiated Emissions and Band Edge Measurement	PASS
15.207	AC Power Conducted Emission	PASS
15.203	Antenna Requirement	PASS

3. Test Methodology and Reference Procedures

The tests documented in this report were performed in accordance with 47 CFR FCC Part 2, KDB558074 D01 Meas Guidance v05r02, KDB414788 D01 Radiated Test Site v01r01, ANSI C63.10-2013.

4. Facilities and Accreditation

Test Location	Underwriters Laboratories Taiwan Co., Ltd.
Address	Building B and Building E, No. 372-7, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County, Taiwan
Accreditation Certificate	Underwriters Laboratories Taiwan Co., Ltd. is accredited by TAF, Laboratory Code 3398.

5. Measurement Uncertainty

For statement of conformity, accuracy method (Section 4.3.4 of ISO Guide 115) was applied as decision rule for measurement in this test report.

The following uncertainties have been calculated to provide a confidence level of 95 % using a coverage factor k=2.

Determining compliance based on the results of the compliance measurement, not considering measurement instrumentation uncertainty.

Measurement	Frequency	Uncertainty
Conducted disturbance at mains terminals ports	150kHz ~ 30MHz	±2.9 dB
RF Conducted	9 kHz - 40GHz	±2.4 dB
Radiated disturbance below 30MHz	9 kHz - 30 MHz	±1.9 dB
Radiated disturbance below 1 GHz	30MHz ~ 1GHz	±5.8 dB
Radiated disturbance above 1 GHz	1GHz ~ 40GHz	±4.8 dB

6. Equipment under Test

6.1. Description of EUT

Product	Essential 2 Camera Family
Brand Name	Arlo
Model Name	VMC3052
Series Model	VMC2052, VMC3050, VMC2050
Operating Frequency	2412MHz ~ 2462MHz
Modulation	CCK, DQPSK, DBPSK for DSSS 64QAM, 16QAM, QPSK, BPSK for OFDM
Transfer Rate	802.11b: up to 11 Mbps 802.11g: up to 54 Mbps 802.11n: up to MCS7
Number of Channel	11 for 802.11b, 802.11g, 802.11n (HT20)
Maximum Output Power	802.11b: 26.04 dBm 802.11g: 28.71 dBm 802.11n (HT20): 28.57 dBm
Normal Voltage	5Vdc from host 3.69Vdc from battery
Sample ID	5971598

Note:

1. The models difference table as below:

Model	Main Board (PCBA Board)	LED Board (PCBA board)	Image Sensor (2K/FHD)	LED (IR)	Lens (2K/FHD)	MECH (Enclosure)	Battery Type
VMC3052	PCB layout and circuit is the same except for image sensor	PCB layout and circuit is the same except for IR LED quantity	2K 2560 x 1440 Image Sensor : GC4023	IR LED *2	2K lens	Large housing	4 cell battery (A-18)
VMC3050						Regular housing	1 cell battery (A-19)
VMC2052			FHD 1920 x 1080 Image Sensor : SC2333	IR LED *1	FHD Lens	Large housing	4 cell battery (A-18)
VMC2050						Regular housing	1 cell battery (A-19)

2. The EUT incorporates a SISO function. Physically, the EUT provides one completed transmitters and one receivers.

Modulation Mode	Tx,Rx Function
802.11b	1TX,1RX
802.11g	1TX,1RX
802.11n (HT20)	1TX,1RX

3. The EUT contains following accessory devices:

Product	Brand	Model	Description
USB Cable	Nienyi	310-50024-01	Length: 0.9 m

4. The EUT could be supplied with rechargeable battery as the following table:

Brand Name	Model	Description
Arlo	A-19	4650mAh,3.69V, 17.1585Wh For VMC3050 & VMC2050
Arlo	A-18	18.6Ah,3.69V, 68.63Wh For VMC3052 & VMC2052

5. The above EUT information is declared by manufacturer and for more detailed features description, please refer the manufacturer's or user's manual, the laboratory shall not be held responsible.

6.2. Channel List

11 channels are provided for 802.11b, 802.11g and 802.11n (HT20):

Channel	Frequency (MHz)	Channel	Frequency (MHz)
1	2412	7	2442
2	2417	8	2447
3	2422	9	2452
4	2427	10	2457
5	2432	11	2462
6	2437	-	-

6.3. Test Condition

Test Item	Test Site No.	Environmental Condition	Input Power	Test Date	Tested by
Antenna Port Conducted Measurement	SR4	22~26℃/ 56~61%RH	5Vdc from host	2023/04/07~ 2023/04/20	WaterNil Guan
Radiated Spurious Emission	966-2	22~26℃/ 56~61%RH	5Vdc from host	2023/04/07~ 2023/04/20	WaterNil Guan
AC power Line Conducted Emission	SR1	23~25℃/ 56~59%RH	5Vdc from host	2023/04/07~ 2023/04/08	WaterNil Guan

FCC Test Firm Registration Number: 498077

Sample Calculation:

Antenna Port Conducted Measurement:

- Where relevant, the follow sample calculation is provided:
  Result Value (dBm) = Reading Value (dBm) +Attenuator Factor (dB) + Cable Loss (dB).
  Example: Result Value (10dBm) = Reading Value (-2dBm) +Attenuator Factor (10dB) + Cable Loss(2dB).
  *Test plot only shown the “Result Value”.

Radiated Spurious Emission:

- Where relevant, the follow sample calculation is provided:
  Result Value (dBuV/m) = Reading Value (dBuV) + Correction Factor (dB/m).
  Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) - Preamp Factor (dB).
  Example: Result Value (34.5dBuV/m) = Reading Value (40.1dBuV) + Antenna Factor (18.7dB/m) + Cable Loss (4.2dB) - Preamp Factor (28.5dB).

AC power Line Conducted Emission:

- Where relevant, the follow sample calculation is provided:
  Result Value (dBuV) = Reading Value (dBuV) + Correction Factor (dB).
  Correction Factor (dB) = Insertion loss(dB) + Cable loss(dB).
  Example: Result Value (53.7dBuV) = Reading Value (35.1dBuV) + Insertion loss(18.1dB) + Cable loss(0.5dB).

6.4. Description of Available Antennas

Ant. No.	Transmitter Circuit	Brand Name	Model Name	Ant. Type	Maximum Gain (dBi)
1	Chain (0)	N/A	N/A	PIFA	2.8

Note: The above antenna information was provided from customer and for more detailed features description, please refer the manufacturer's specification or user's manual, the laboratory shall not be held responsible.

6.5. Test Mode Applicability and Tested Channel Detail

- The fundamental of the EUT was investigated in three orthogonal axes X-Y/Y-Z/X-Z, it was determined that Y-Z plane was worst-case. Therefore, all final radiated testing was performed with the EUT in Y-Z plane.
- The EUT has two types for battery: A-19 and A-18. The worst case was A-18 by pretest. Therefore, the test data of the A-18 was recorded in this report only.
- The EUT has four types for model: VMC3050, VMC3052, VMC2050, and VMC2052. The worst case was VMC3052 by pretest. Therefore the test data of the VMC3052 was recorded in this report only.
- The EUT has two types for power source: 5V from adapter (2AEA010BA3B) and 3.69Vdc from battery and 5Vdc from host, the worst case was 5Vdc from host by pretested. the worst case was found in the 5Vdc. Therefore the test data of the 5Vdc from host was recorded in this report only.
- For Antenna Port Conducted Measurement, this item includes all test value of each mode, but only includes spectrum plot of worst value of each mode.
- For below 30MHz testing, investigation was done on three antenna orientations (parallel, perpendicular, and ground-parallel), parallel and perpendicular are the worst orientations, therefore testing was performed on these two orientations only.
- For below 1 GHz radiated emission and AC power line conducted emission have performed all modes of operation were investigated and the worst-case emissions are reported.
- Pre-Scan has been conducted to determine the worst-case mode from all possible combinations between available modulations, data rates and antenna ports (if EUT with antenna diversity architecture).

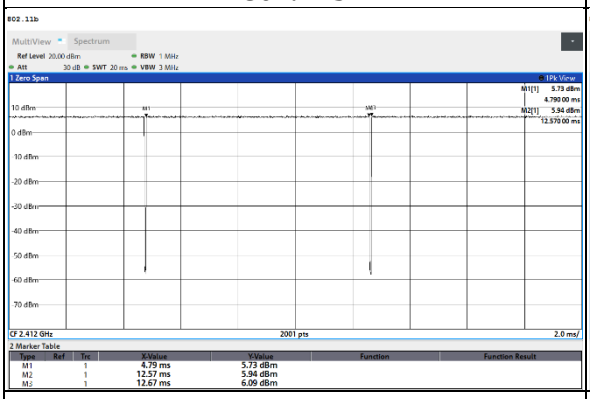
Test Item	Mode	Modulation Technology	Modulation Type	Available Channel	Test Channel	Data Rate
Radiated Emissions (Above 1GHz)	802.11b	DSSS	DBPSK	1 to 11	1,6,11	1 Mbps
	802.11g	OFDM	BPSK	1 to 11	1,6,11	6 Mbps
	802.11n20	OFDM	BPSK	1 to 11	1,6,11	MCS0
Radiated Emissions (Below 1GHz)	802.11g	OFDM	BPSK	1 to 11	6	6 Mbps
AC Power Line Conducted Emission	802.11g	OFDM	BPSK	1 to 11	6	6 Mbps
*Antenna Port Conducted Measurement	802.11b	DSSS	DBPSK	1 to 11	1,6,11	1 Mbps
	802.11g	OFDM	BPSK	1 to 11	1,6,11	6 Mbps
	802.11n20	OFDM	BPSK	1 to 11	1,6,11	MCS0

*Note: For Antenna Port Conducted Measurement item, Inner channels only test Power and Conducted Out of Band Emission.

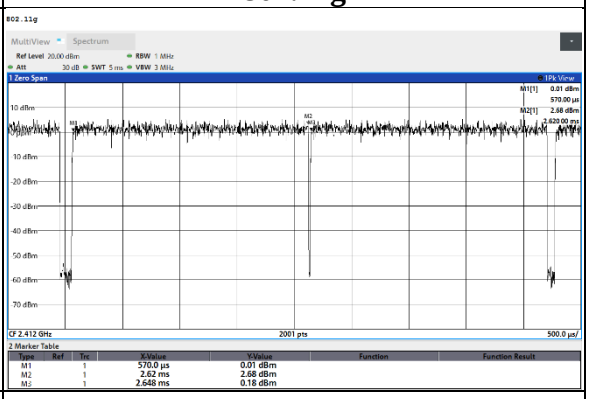
6.6. Duty cycle

Mode	On Time (ms)	On+Off Time (ms)	Duty Cycle	Duty Factor (dB)	VBW Set (above 1GHz)
802.11b	7.780	7.880	0.9873	N/A	10Hz
802.11g	2.050	2.078	0.9865	N/A	10Hz
802.11n(HT20)	1.913	1.940	0.9861	N/A	10Hz

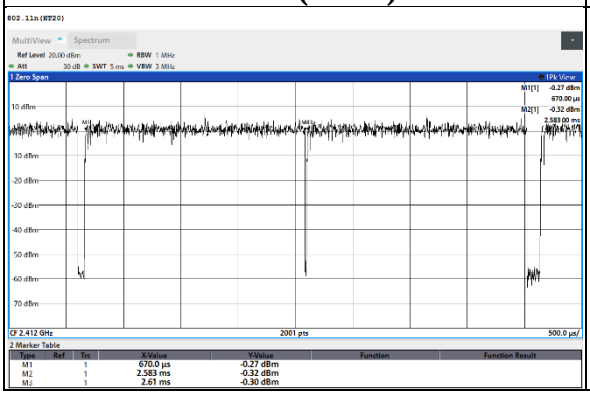
802.11b



802.11g



802.11n(HT20)



7. Test Equipment

Test Equipment List					
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal. Date**	**Expired date**
Radiated Spurious Emission					
Spectrum Analyzer	Keysight	N9010A	MY56070827	2023/4/7	2024/4/6
EMI Test Receiver	Rohde & Schwarz	ESR7	101754	2022/12/13	2023/12/12
Loop Antenna	ETS lindgren	6502	00213440	2023/1/4	2024/1/3
Trilog-Broadband Antenna with 5dB Attenuator	Schwarzbeck & EMCI	VULB 9168 & N-6-05	774 & AT-N0538	2023/2/13	2024/2/12
Horn Antenna (1-18 GHz)	Schwarzbeck	BBHA 9120 D	01690	2022/12/21	2023/12/20
Horn Antenna (18-40 GHz)	Schwarzbeck	BBHA 9170	781	2022/12/30	2023/12/29
Preamplifier (30-1000 MHz)	EMCI	EMC330E	980405	2022/6/7	2023/6/6
Preamplifier (1-18 GHz)	EMCI	EMC051835BE	980406	2023/2/17	2024/2/16
Preamplifier (18-40GHz)	EMCI	EMC184040SEE	980426	2022/5/17	2023/5/16
Cables	Hanyitek	K1K50-UP0264-K1K50-2500	170214-4 & 170425-2	2022/12/1	2023/11/30
Cables	Hanyitek	K1K50-UP0264-K1K50-2500	170214-1 & 170214-2	2022/12/1	2023/11/30

Test Equipment List					
Equipment	**Manufacturer**	**Model No.**	**Serial No.**	**Cal. Date**	**Expired date**
Antenna Port Conducted Measurement					
Spectrum Analyzer	Keysight	N9010A	MY56070834	2022/9/12	2023/9/11
Attenuator	EMCI	EMC-40ATK2W10	17002	2022/12/9	2023/12/8
Pulse Power Sensor	Anritsu	MA2411B	1531202	2023/1/4	2024/1/3
Power Meter	Anritsu	ML2495A	1645002	2023/1/4	2024/1/3
AC power Line Conducted Emission					
EMI Test Receiver	Rohde & Schwarz	ESR7	101753	2022/11/10	2023/11/9
Two-Line V-Network	Rohde & Schwarz	ENV216	102136	2022/8/29	2023/8/28
Impuls-Begrenzer Pulse Limiter	Rohde & Schwarz	ESH3-Z2	102219-Qt	2022/8/30	2023/8/29
Cables	TITAN	CFD200	T0732ACFD200 20A300-2	2022/4/9	2023/4/8

UL Software		
Description	**Name**	**Version**
Radiated measurement	e3	6.191211 (V6)
Conducted measurement	RF-Conducted-FCC 15247	ver 1.0
AC power Line Conducted Emission	EZ_EMC	UL-3A1.2

8. Description of Test Setup

Support Equipment

ID	Equipment	Brand Name	Model Name	S/N	Remark
A	Laptop	DELL	Latitude E5470	3JFKWF2	Provided by Lab

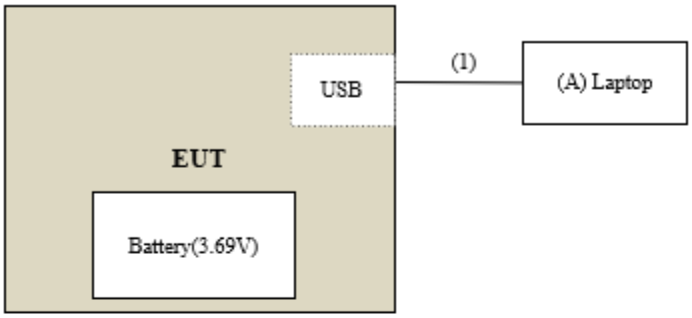
I/O Cables

ID	Equipment	Brand Name	Model Name	Length (m)	Remark
1	USB Cable	Nienyi	310-50024-01	0.9	Provided by Client

Test Setup

Controlled using a bespoke application (Typing RF command by terminal tool(Putty version 0.62)) on a test Notebook. The application was used to enable a continuous transmission mode and to select the test channels, data rates, modulation schemes and power setting as required.

Setup Diagram for Test



Under Table

Remote Site

9. Test Results

9.1. 6dB Bandwidth

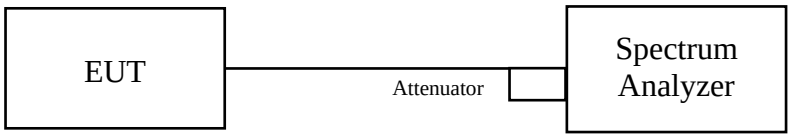
Requirements

The minimum 6 dB bandwidth shall be at least 500 kHz.

Test procedure

a. Set resolution bandwidth (RBW) = 100kHz.
b. Set the video bandwidth (VBW) ≥ 3 x RBW, Detector = Peak.
c. Trace mode = max hold.
d. Sweep = auto couple.
e. Measure the maximum width of the emission that is constrained by the frequencies associated with the two amplitude points (upper and lower) that are attenuated by 6 dB relative to the maximum level measured in the fundamental emission.

Test Setup

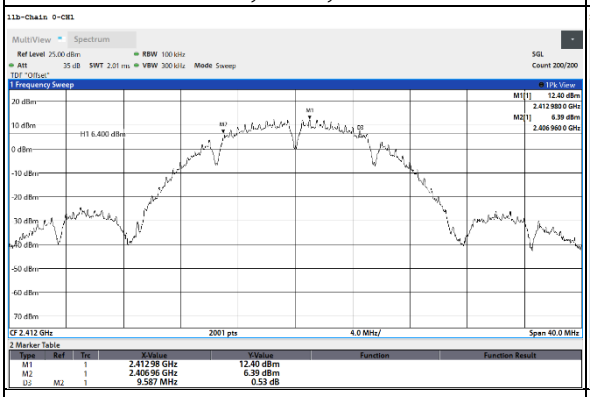


The loss between RF output port of the EUT and the input port of the Spectrum Analyzer has been taken into consideration.

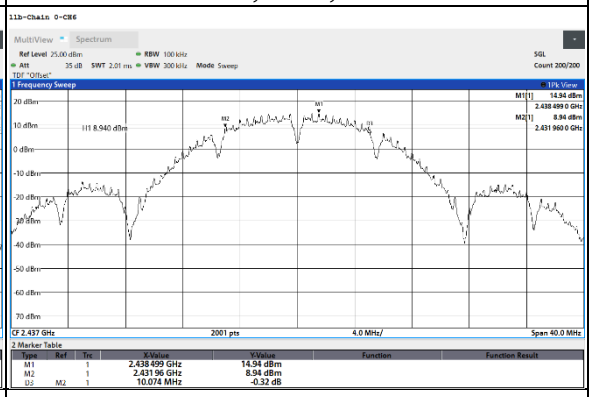
Test Data

Mode	CH	Freq (MHz)	6dB BW (MHz)	Limit (MHz)	Result
			Chain 0		
802.11b	1	2412	9.587	0.5	PASS
	6	2437	10.074	0.5	PASS
	11	2462	10.043	0.5	PASS

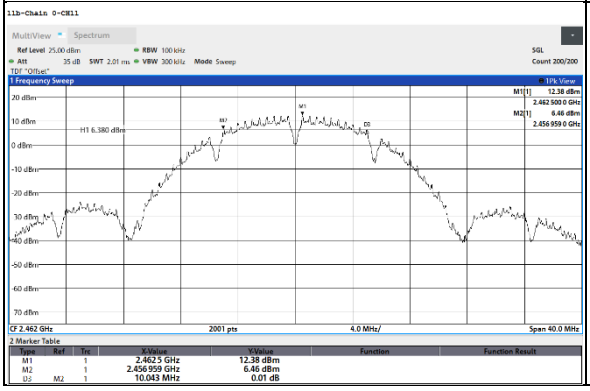
802.11b, CH1, Chain 0



802.11b, CH6, Chain 0

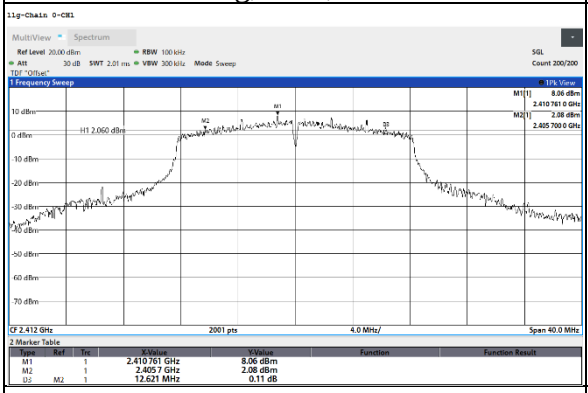


802.11b, CH11, Chain 0



Mode	CH	Freq (MHz)	6dB BW (MHz) Chain 0	Limit (MHz)	Result
802.11g	1	2412	12.621	0.5	PASS
	6	2437	13.185	0.5	PASS
	11	2462	15.052	0.5	PASS

802.11g, CH1, Chain 0



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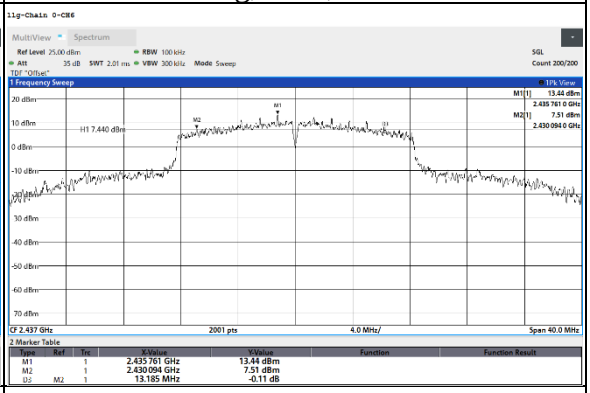
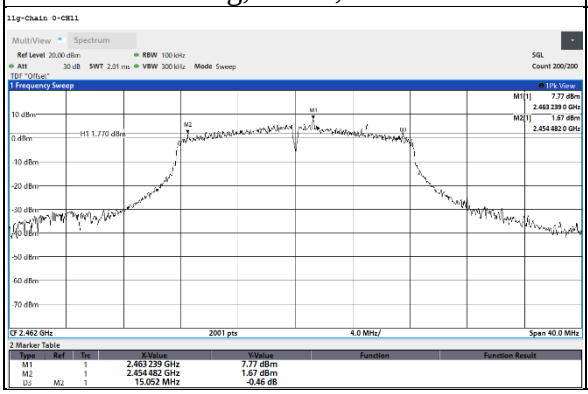
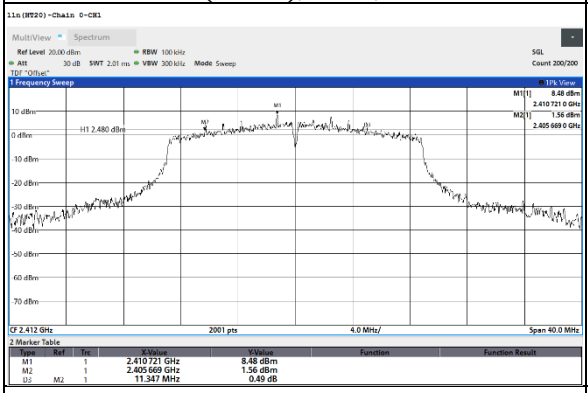


802.11g, CH11, Chain 0



Mode	CH	Freq (MHz)	6dB BW (MHz) Chain 0	Limit (MHz)	Result
802.11n(HT20)	1	2412	11.347	0.5	PASS
	6	2437	14.387	0.5	PASS
	11	2462	14.999	0.5	PASS

802.11n(HT20), CH1, Chain 0



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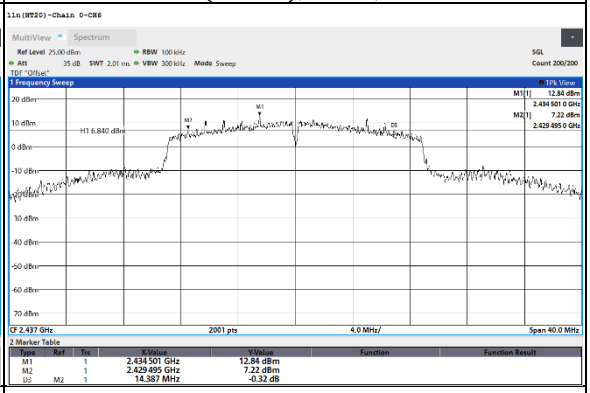

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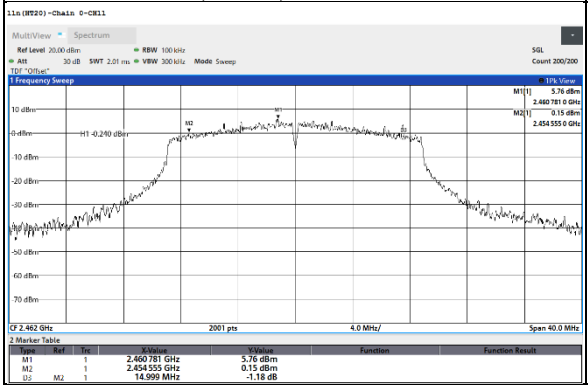


9.2. Conducted Output Power

Requirements

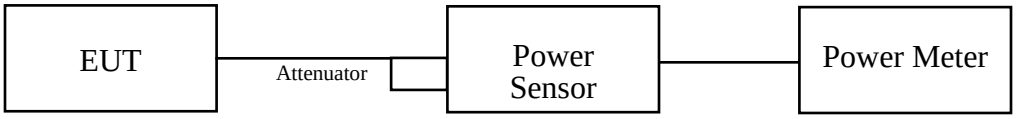
For systems using digital modulation in the 2400-2483.5 MHz bands: 1 Watt.

Note:
1. P_{Out} = maximum conducted output power in dBm, G_{TX} = the maximum transmitting antenna directional gain in dBi, B is the 26 dB emission bandwidth in megahertz

Test Procedure

A peak power sensor was used on the output port of the EUT. A power meter was used to read the response of the peak power sensor. Record the power level.

Test Setup



The loss between RF output port of the EUT and the input port of the Power Meter has been taken into consideration.

Test Data

Peak Power

802.11b

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	339.625	25.31	30	PASS
6	2437	401.791	26.04	30	PASS
11	2462	272.898	24.36	30	PASS

802.11g

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	656.145	28.17	30	PASS
6	2437	743.019	28.71	30	PASS
11	2462	616.595	27.90	30	PASS

802.11n (HT20)

Channel	Frequency (MHz)	Peak Power (mW)	Peak Power (dBm)	Limit (dBm)	Pass / Fail
1	2412	595.662	27.75	30	PASS
6	2437	719.449	28.57	30	PASS
11	2462	514.044	27.11	30	PASS

Average Power (Reference Only)

802.11b

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
1	2412	213.304	23.29
6	2437	261.216	24.17
11	2462	167.494	22.24

802.11g

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
1	2412	79.25	18.99
6	2437	257.632	24.11
11	2462	70.469	18.48

802.11n (HT20)

Channel	Frequency (MHz)	Average Power (mW)	Average Power (dBm)
1	2412	69.984	18.45
6	2437	255.27	24.07
11	2462	60.117	17.79

9.3. Power Spectral Density

Requirements

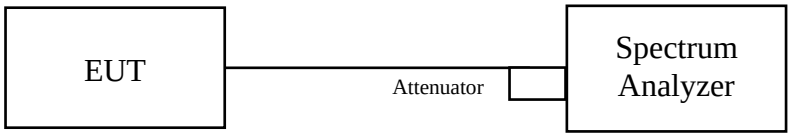
The Maximum of Power Spectral Density Measurement is 8dBm in any 3 kHz (If G_{TX} > 6 dBi, then PSD = 8 – (G_{TX} – 6)).

Note:
1. PSD = power spectral density that he same method as used to determine the conducted output power shall be used to determine the power spectral density. And power spectral density in dBm/MHz.
2. G_{TX} = the maximum transmitting antenna directional gain in dBi.

Test procedure

a. Set analyzer center frequency to DTS channel center frequency.
b. Set the span to 1.5 times the DTS bandwidth.
c. Set the RBW to: 3 kHz ≤ RBW ≤ 100 kHz.
d. Set the VBW ≥ 3 × RBW.
e. Detector = peak.
f. Sweep time = auto couple.
g. Trace mode = max hold.
h. Allow trace to fully stabilize.
i. Use the peak marker function to determine the maximum amplitude level within the RBW.

Test Setup



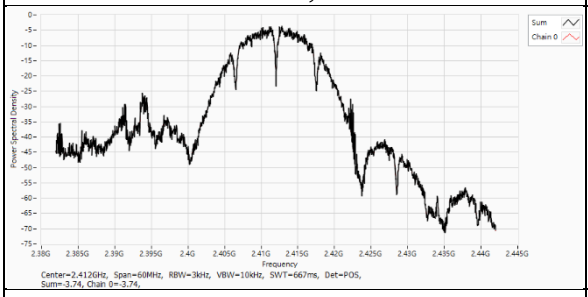
The loss between RF output port of the EUT and the input port of the Spectrum Analyzer has been taken into consideration.

Test Data

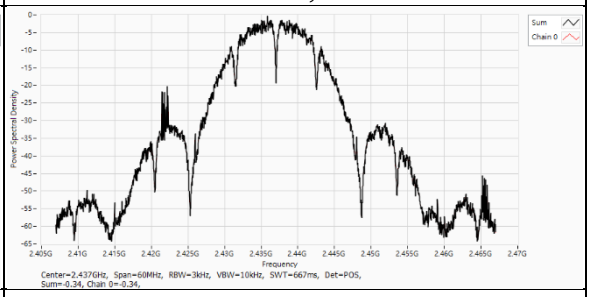
Mode	CH	Freq (MHz)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Directional Gain (dBi)	Result
802.11b	1	2412	-3.74	8	2.8	PASS
	6	2437	-0.34	8	2.8	PASS
	11	2462	-4.36	8	2.8	PASS

Mode	CH	Freq (MHz)	PSD per Chain (dBm/3kHz)
			Chain 0
802.11b	1	2412	-3.739
	6	2437	-0.342
	11	2462	-4.36

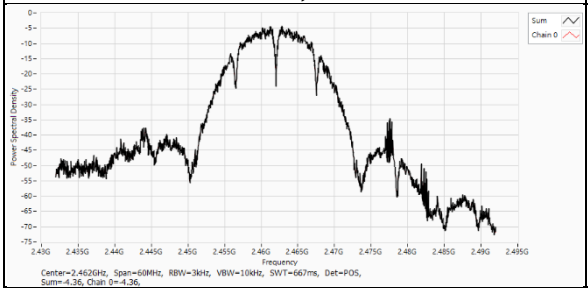
802.11b, CH1



802.11b, CH6



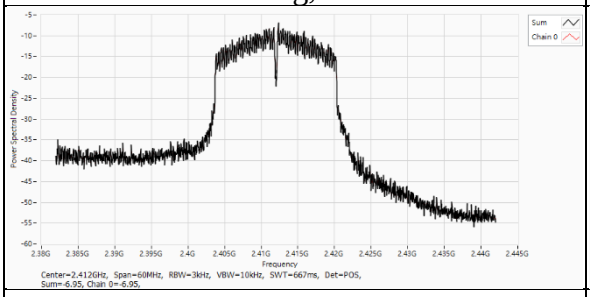
802.11b, CH11



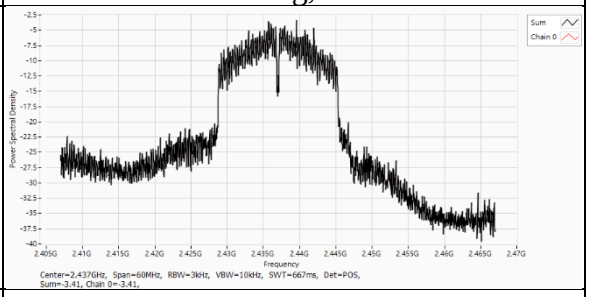
Mode	CH	Freq (MHz)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Directional Gain (dBi)	Result
802.11g	1	2412	-6.95	8	2.8	PASS
	6	2437	-3.41	8	2.8	PASS
	11	2462	-7.38	8	2.8	PASS

Mode	CH	Freq (MHz)	PSD per Chain (dBm/3kHz) Chain 0
802.11g	1	2412	-6.945
	6	2437	-3.411
	11	2462	-7.378

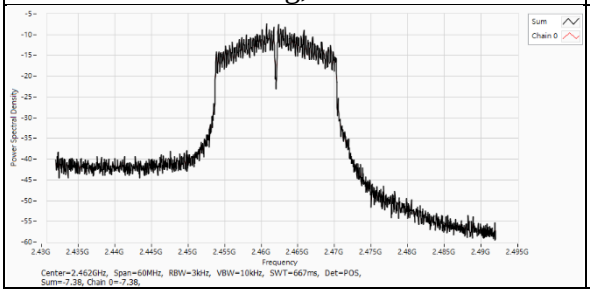
802.11g, CH1



802.11g, CH6



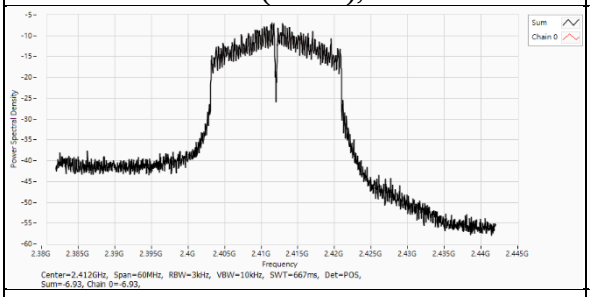
802.11g, CH11



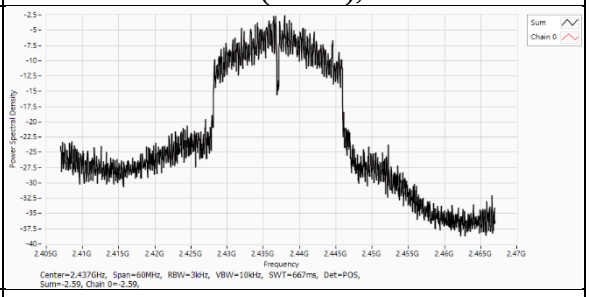
Mode	CH	Freq (MHz)	Total PSD (dBm/3kHz)	Limit (dBm/3kHz)	Directional Gain (dBi)	Result
802.11n(HT20)	1	2412	-6.93	8	2.8	PASS
	6	2437	-2.59	8	2.8	PASS
	11	2462	-7.54	8	2.8	PASS

Mode	CH	Freq (MHz)	PSD per Chain (dBm/3kHz) Chain 0
802.11n(HT20)	1	2412	-6.929
	6	2437	-2.592
	11	2462	-7.539

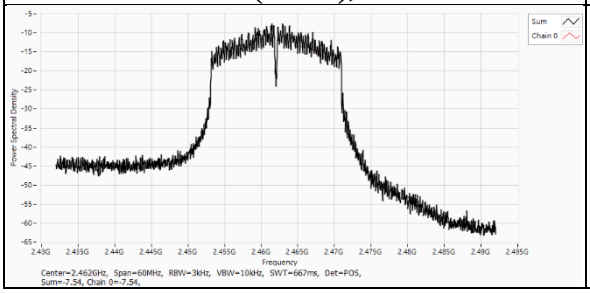
802.11n(HT20), CH1



802.11n(HT20), CH6



802.11n(HT20), CH11



9.4. Conducted Out of Band Emission

Requirements

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated intentional radiator is operating, the radio frequency power that is produced by the intentional radiator shall be at least 20 dB below that in the 100 kHz bandwidth within the band that contains the highest level of the desired power, based on either an RF conducted or a radiated measurement, provided the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of RMS averaging over a time interval, as permitted under paragraph (b) (3) of this section, the attenuation required under this paragraph shall be 30 dB instead of 20 dB. Attenuation below the general limits specified in §15.209 (a) is not required.

Test procedure

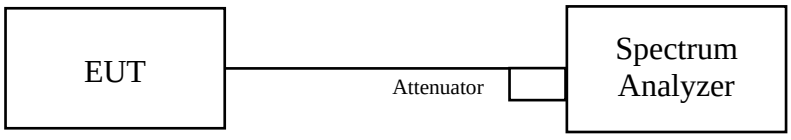
Measurement Procedure REF

1. Set the RBW = 100 kHz.
2. Set the VBW ≥ 300 kHz.
3. Set the span to 1.5 times the DTS bandwidth.
4. Detector = peak.
5. Sweep time = auto couple.
6. Trace mode = max hold.
7. Allow trace to fully stabilize.
8. Use the peak marker function to determine the maximum power level in any 100 kHz band segment within the fundamental EBW.

Measurement Procedure OOBE

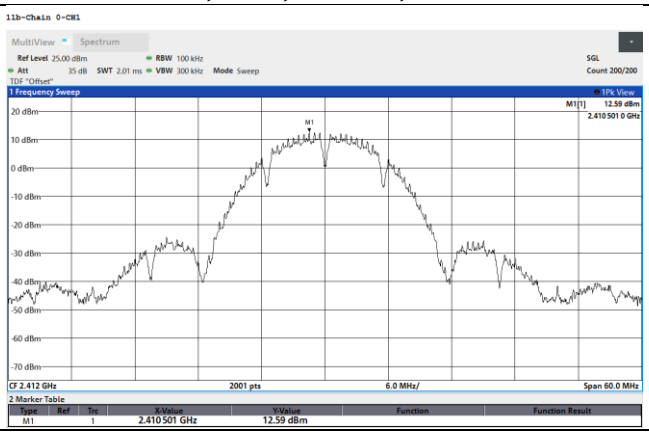
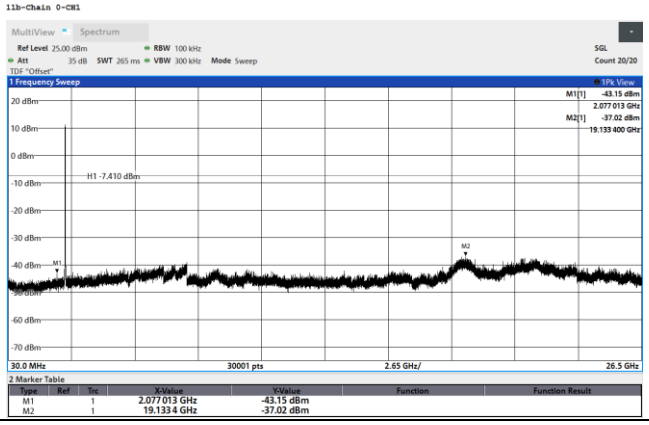
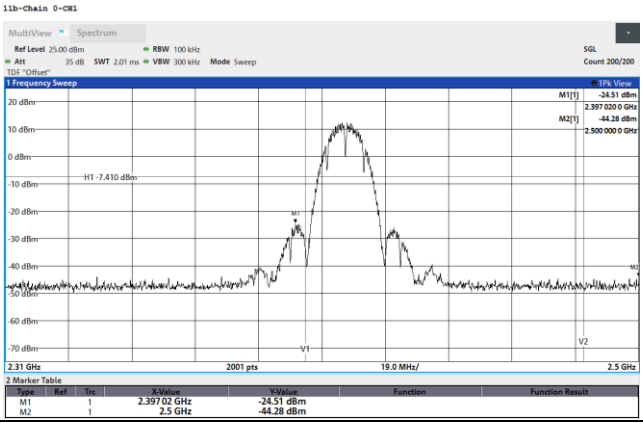
1. Set RBW = 100 kHz.
2. Set VBW ≥ 300 kHz.
3. Detector = peak.
4. Sweep = auto couple.
5. Trace Mode = max hold.
6. Allow trace to fully stabilize.
7. Use the peak marker function to determine the maximum amplitude level.

Test Setup

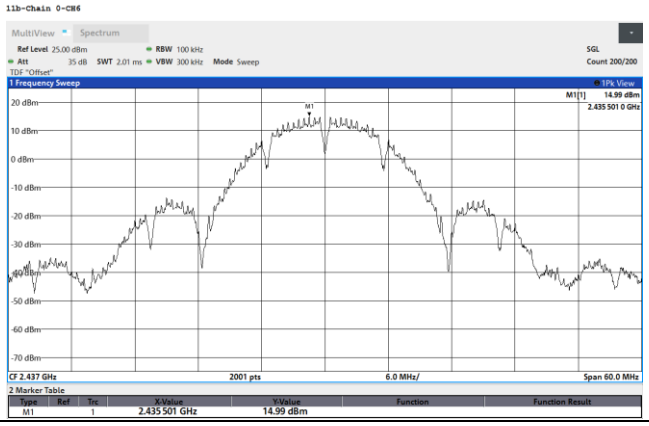


The loss between RF output port of the EUT and the input port of the Spectrum Analyzer has been taken into consideration.

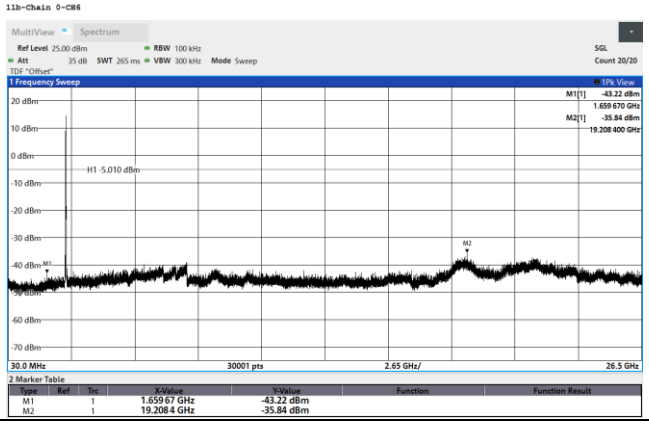
Test Data

802.11b, CH1, Chain 0, Reference

802.11b, CH1, Chain 0, Conducted Emission

802.11b, CH1, Chain 0, Band edge


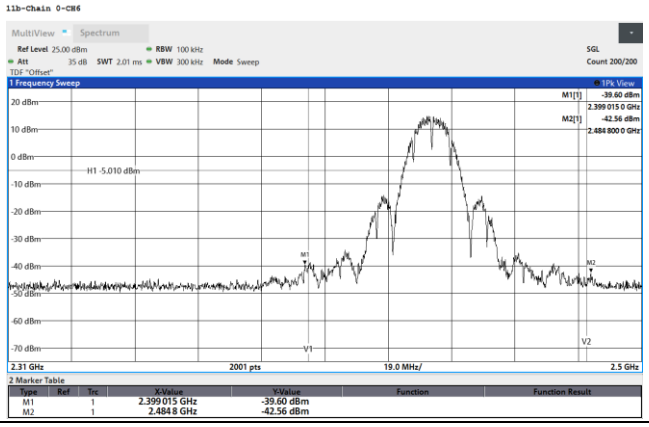
802.11b, CH6, Chain 0, Reference



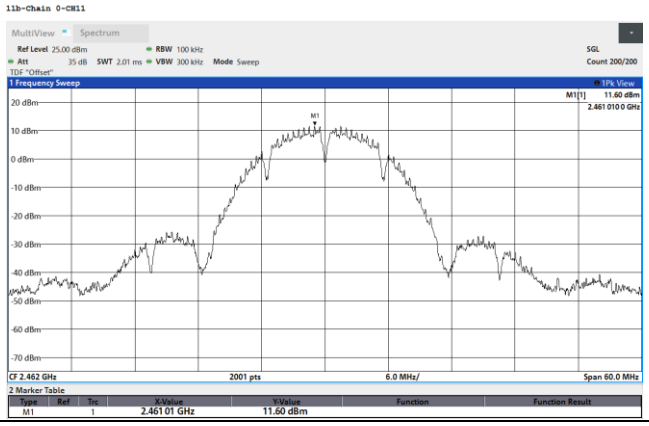
802.11b, CH6, Chain 0, Conducted Emission



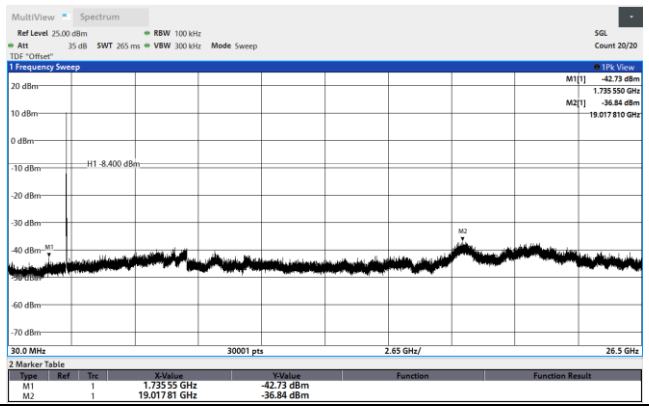
802.11b, CH6, Chain 0, Band edge



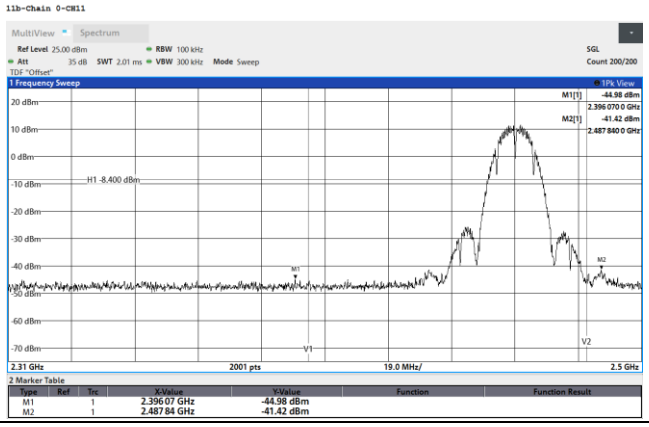
802.11b, CH11, Chain 0, Reference



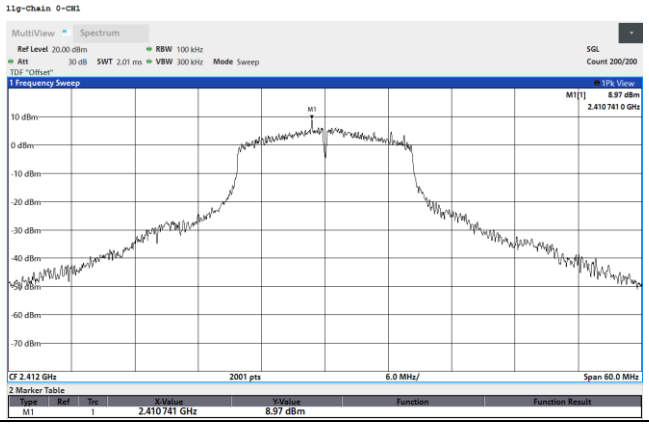
802.11b, CH11, Chain 0, Conducted Emission



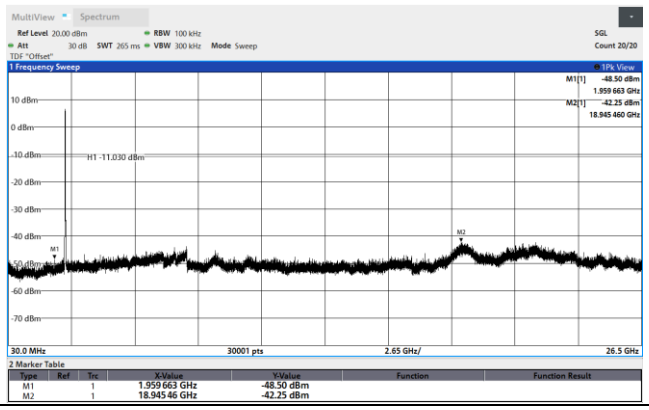
802.11b, CH11, Chain 0, Band edge



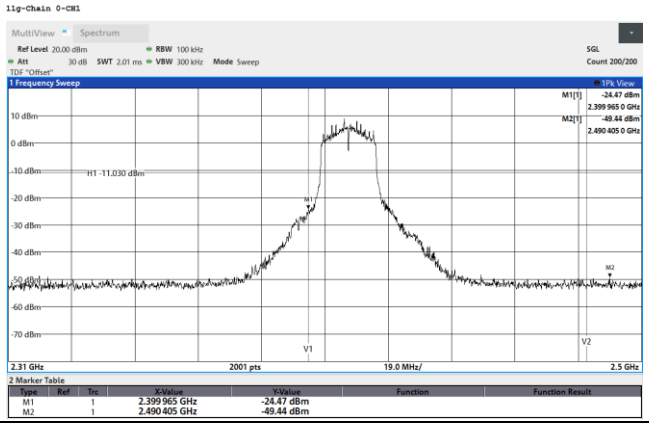
802.11g, CH1, Chain 0, Reference



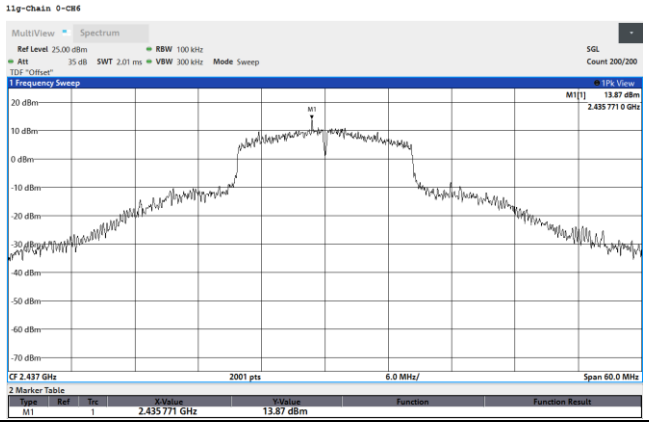
802.11g, CH1, Chain 0, Conducted Emission



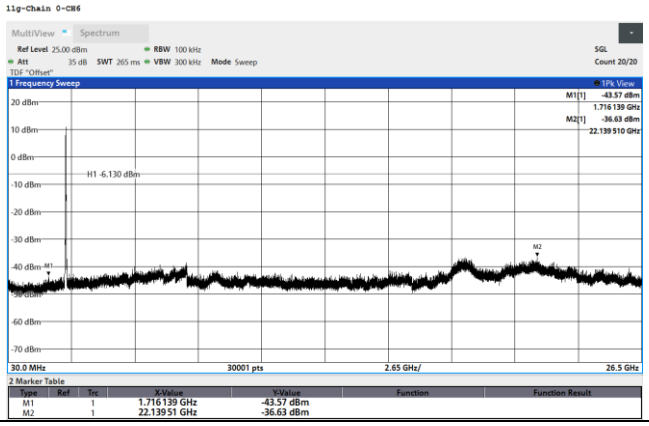
802.11g, CH1, Chain 0, Band edge



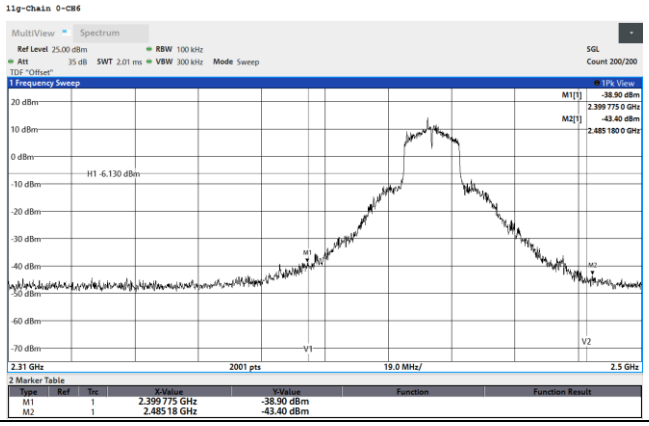
802.11g, CH6, Chain 0, Reference



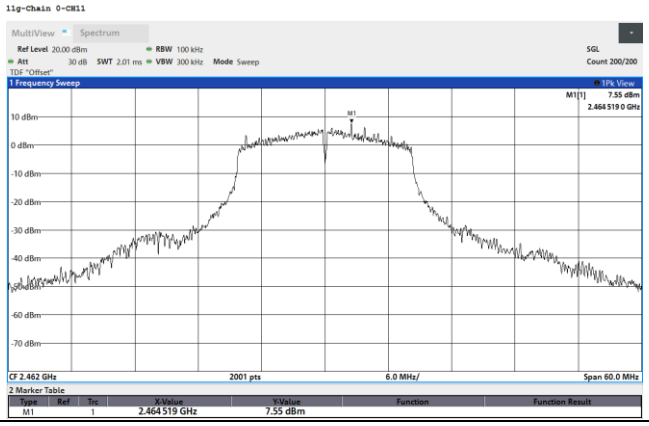
802.11g, CH6, Chain 0, Conducted Emission



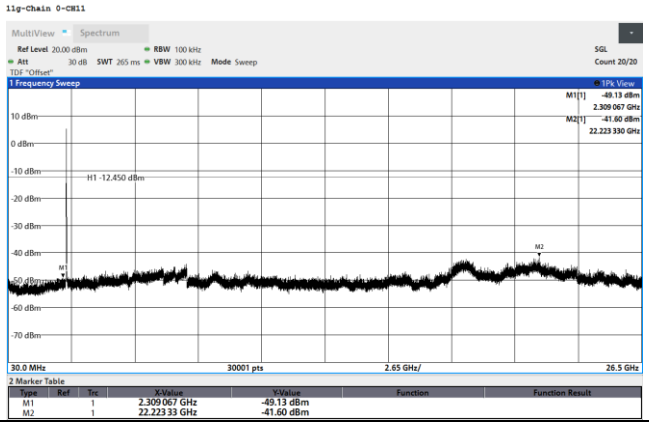
802.11g, CH6, Chain 0, Band edge



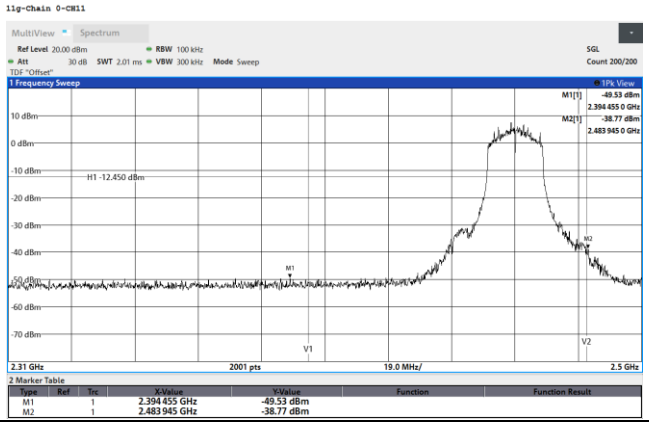
802.11g, CH11, Chain 0, Reference



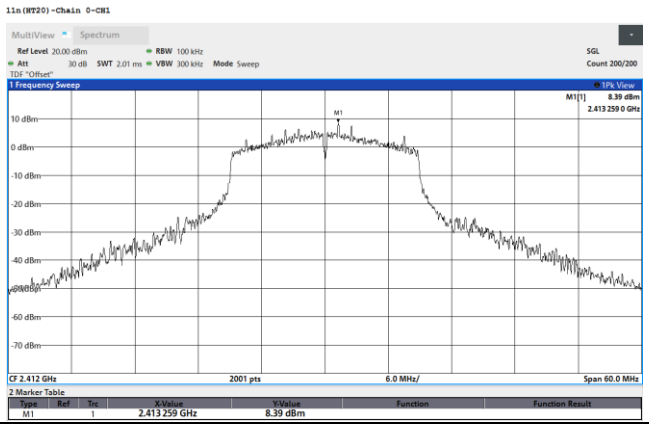
802.11g, CH11, Chain 0, Conducted Emission



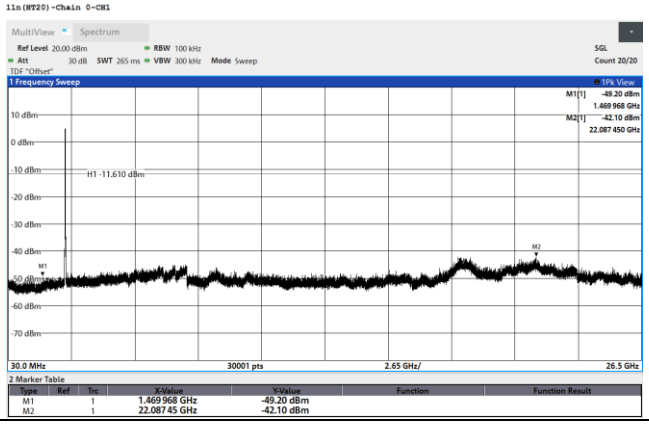
802.11g, CH11, Chain 0, Band edge



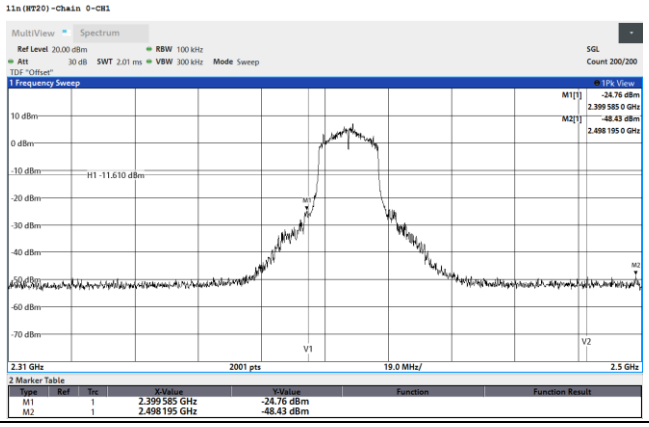
802.11n(HT20), CH1, Chain 0, Reference



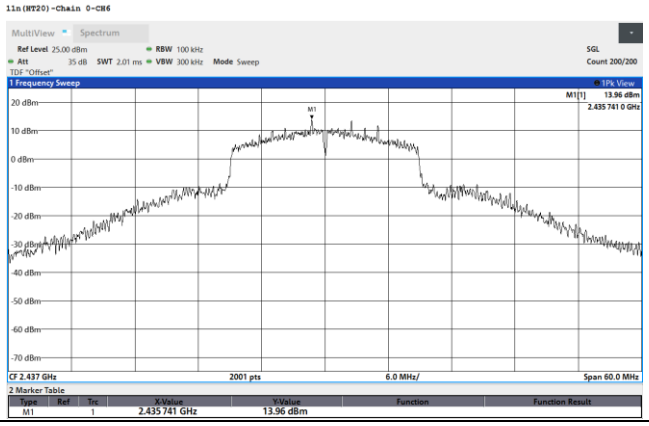
802.11n(HT20), CH1, Chain 0, Conducted Emission



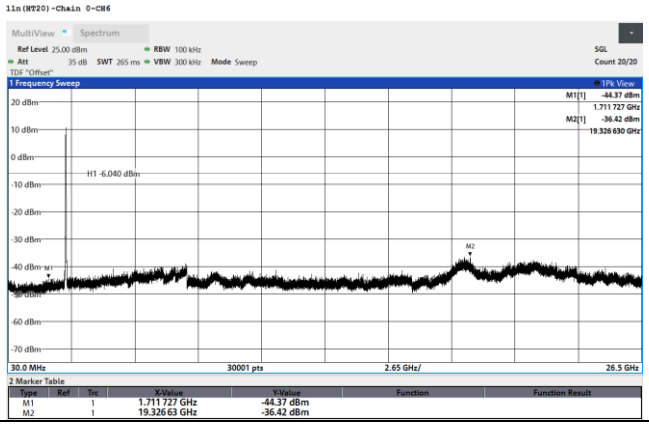
802.11n(HT20), CH1, Chain 0, Band edge



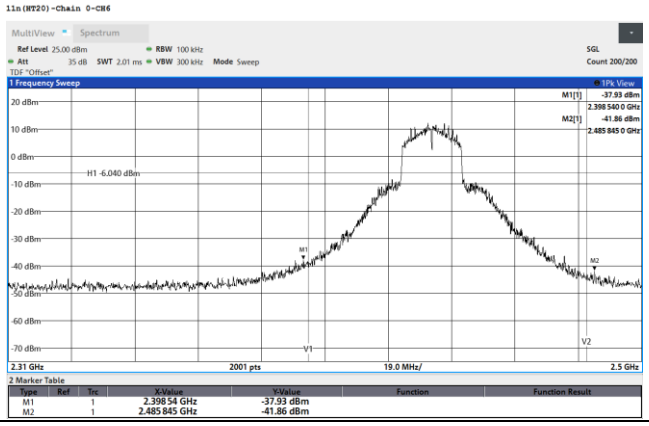
802.11n(HT20), CH6, Chain 0, Reference



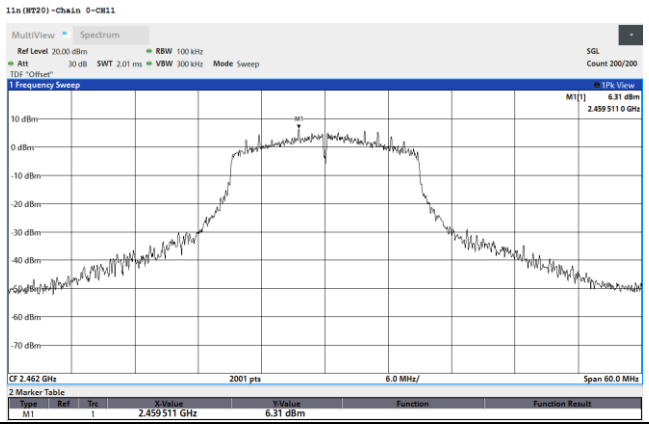
802.11n(HT20), CH6, Chain 0, Conducted Emission



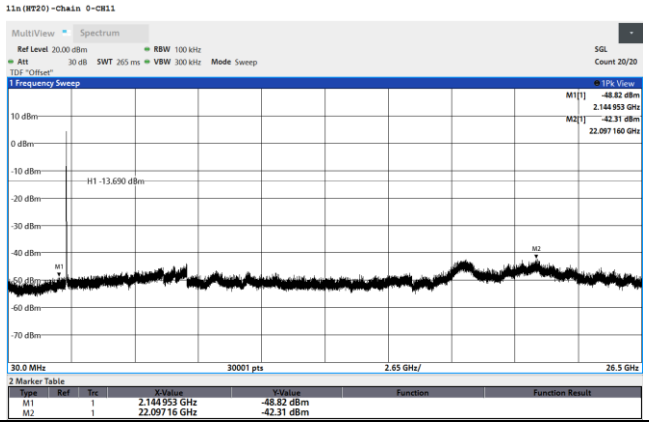
802.11n(HT20), CH6, Chain 0, Band edge



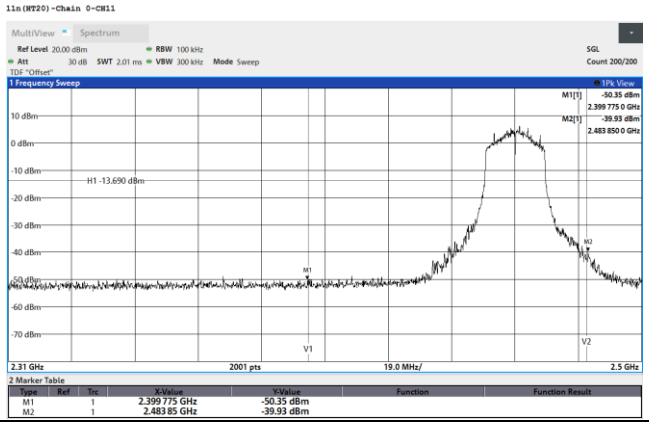
802.11n(HT20), CH11, Chain 0, Reference



802.11n(HT20), CH11, Chain 0, Conducted Emission



802.11n(HT20), CH11, Chain 0, Band edge



9.5. Radiated Spurious Emission

Requirements

Radiated emissions which fall in the restricted bands must comply with the radiated emission limits specified as below table. Other emissions shall be at least 20dB below the highest level of the desired power:

Frequency(MHz)	Field strength (microvolts/meter)	Measurement distance (meters)
0.009-0.490	2400/F(kHz)	300
0.490-1.705	24000/F(kHz)	30
1.705-30.0	30	30
30-88	100	3
88-216	150	3
216-960	200	3
Above 960	500	3

NOTE:
1. The lower limit shall apply at the transition frequencies.
2. Emission level (dBuV/m) = 20 log Emission level (uV/m).
3. For frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.

Test Procedures

[For 9 kHz ~ 30 MHz]

a. The EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter chamber room. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. Parallel, perpendicular, and ground-parallel orientations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. For measurement below 30MHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.

NOTE:
1. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 9kHz at frequency below 30MHz.

[For above 30 MHz]

a. The EUT was placed on the top of a rotating table 0.8 meters (for 30MHz ~ 1GHz) / 1.5 meters (for above 1GHz) above the ground at 3 meter chamber room for test. The table was rotated 360 degrees to determine the position of the highest radiation.
b. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
c. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
d. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading.
e. For measurement below 1GHz, the initial step in collecting conducted emission data is a spectrum analyzer peak detector mode pre-scanning the measurement frequency range. Significant peaks are then marked and then Quasi Peak detector mode re-measured. If the emission level of the EUT measured by the peak detector is lower than the applicable limit, the peak emission level will be reported. Otherwise, the emission measurement will be repeated using the quasi-peak detector and reported.
f. The test-receiver system was set to peak and average detects function and specified bandwidth with maximum hold mode when the test frequency is above 1 GHz. If the peak reading value also meets average limit, measurement with the average detector is unnecessary.

Note:

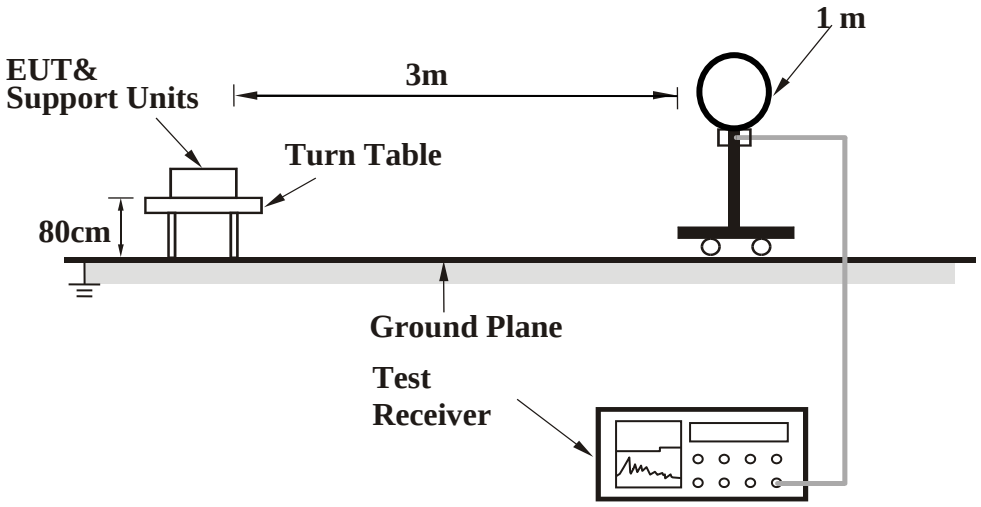
a. The resolution bandwidth and video bandwidth of test receiver/spectrum analyzer is 120kHz for Quasi-peak detection (QP) at frequency below 1GHz.
b. The resolution bandwidth of test receiver/spectrum analyzer is 1 MHz and the video bandwidth is 3 MHz for Peak detection (PK) at frequency above 1GHz.
c. The resolution bandwidth of test receiver/spectrum analyzer is 1MHz and the video bandwidth is ≥ 1/T (Duty cycle < 98%) or 10Hz (Duty cycle ≥ 98%) for Average detection (AV) at frequency above 1GHz.

Configuration	Average	
	RBW	VBW
802.11b	1MHz	Refer to section 6.6 for duty cycle.
802.11g		
802.11n (HT20)		

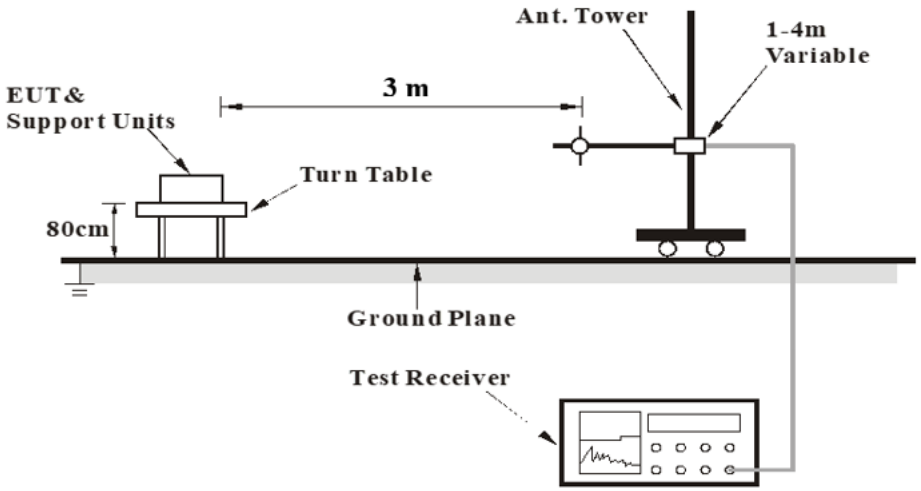
d. All modes of operation were investigated (includes all external accessories) and the worst-case emissions are reported, the other emission levels were low against the limit.
e. Test data of Result value (dBuV/m) = Reading value (dBuV/m) + Correction Factor (dB/m).
f. Test data of Margin(dB) = Result value (dBuV/m) - Limit value (dBuV/m).
g. Test data of Correction Factor (dB/m) = Antenna Factor (dB/m) + Cable Loss (dB) - Preamp Factor (dB).
h. Test data of Notation "@" = Fundamental Frequency
i. Test data of Notation " * " = The peak result under 20 dB above and complies with AVG limit, AVG result is deemed to comply with AVG limit.

Test Setup

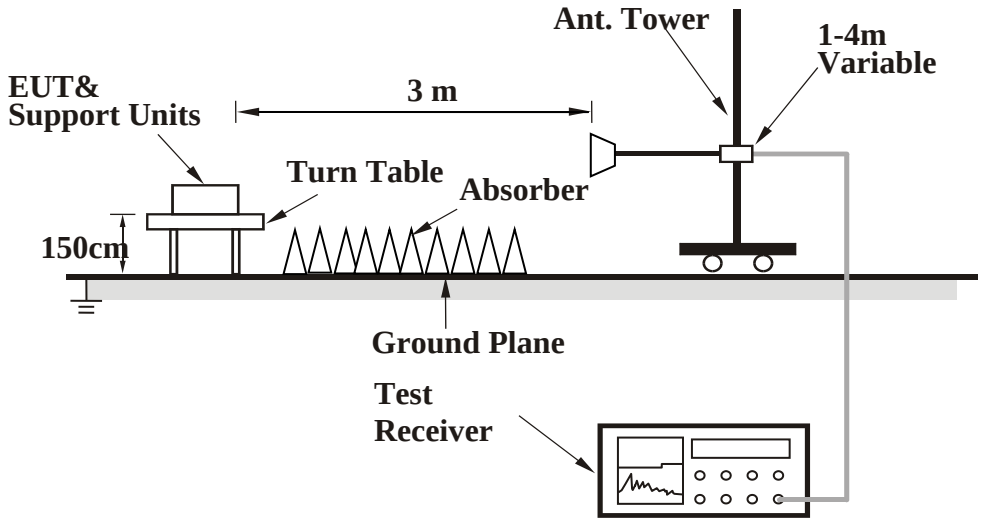
<Frequency Range 9 kHz ~ 30 MHz>



<Frequency Range 30 MHz ~ 1 GHz >



<Frequency Range above 1 GHz>



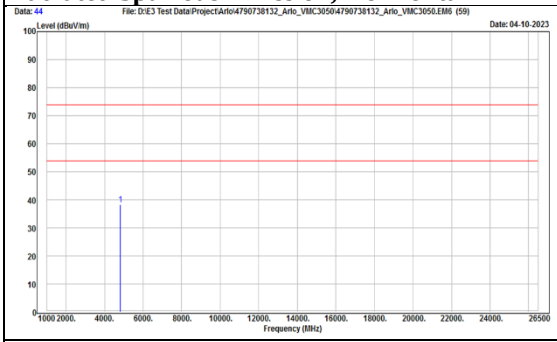
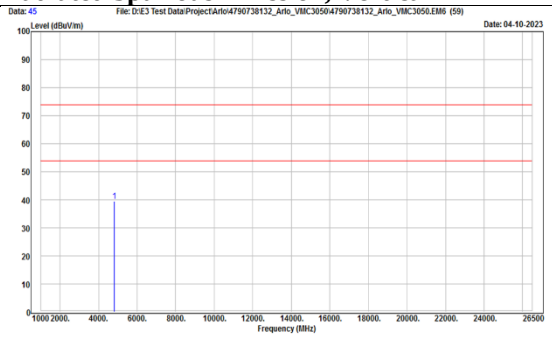
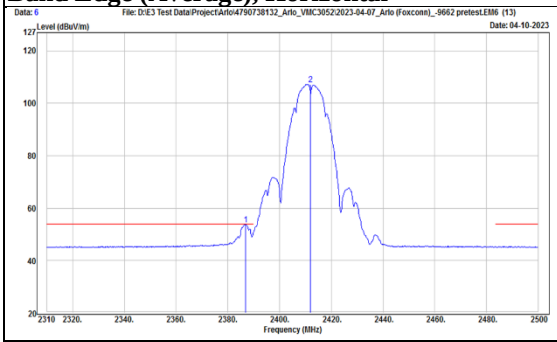
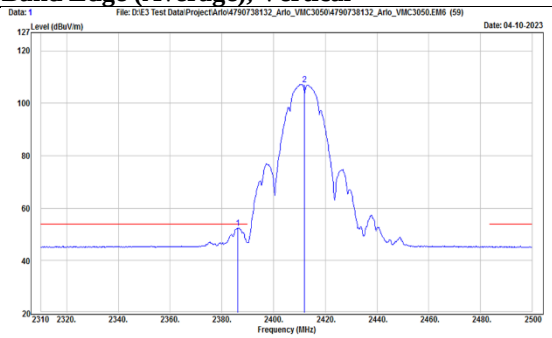
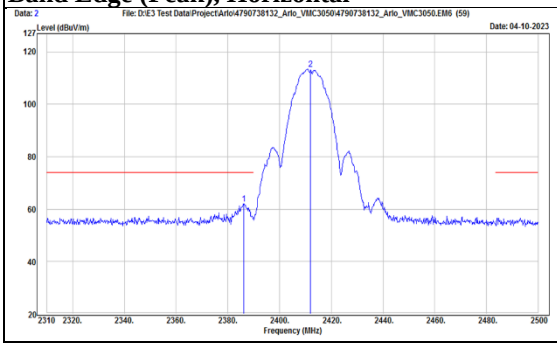
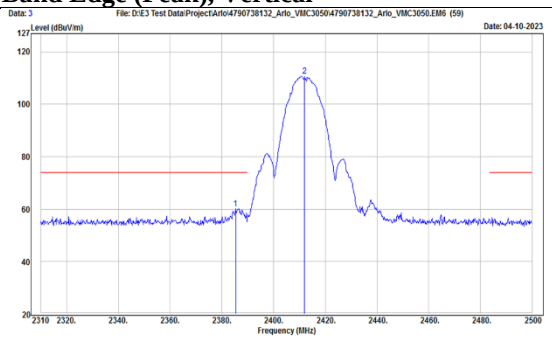
For the actual test configuration, please refer to the Setup Configurations.

Test Data

Above 1 GHz

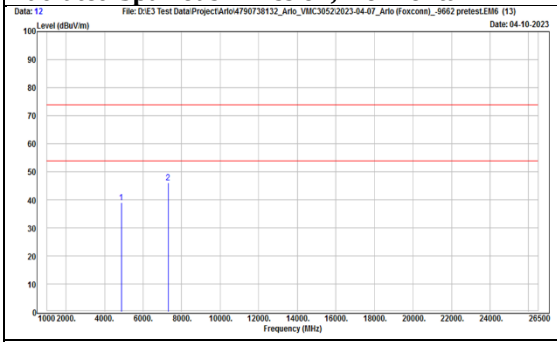
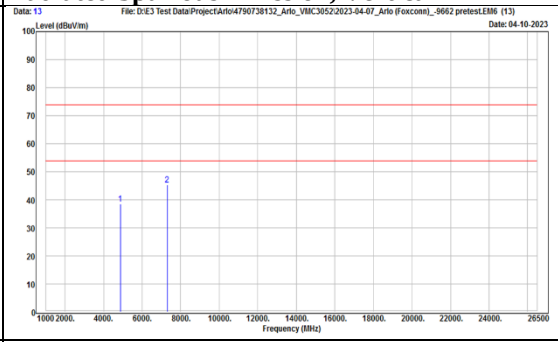
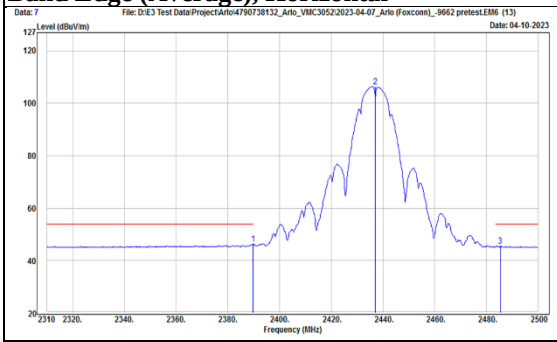
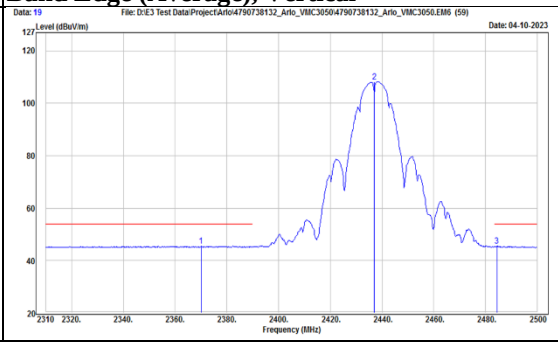
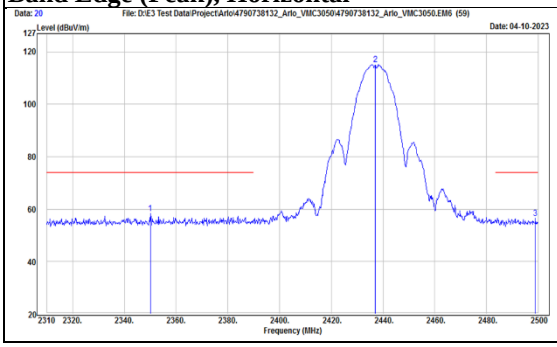
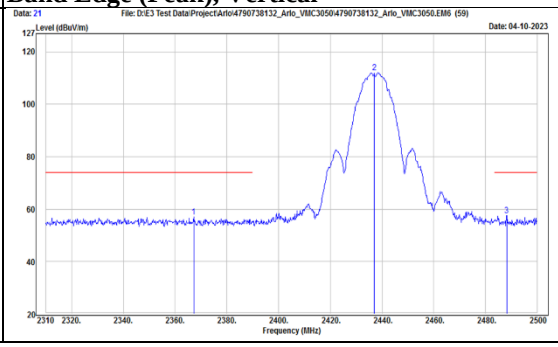
Mode	802.11b	Channel	1

Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		2386.19	46.24	15.87	62.11	74	-11.89	PK
		2386.95	37.92	15.87	53.79	54	-0.21	AVG
	@	2412	97.49	15.88	113.37	N/A	N/A	PK
	@	2412	91.35	15.88	107.23	N/A	N/A	AVG
	*	4824	36.15	2.16	38.31	74	-35.69	PK
Vertical		2385.43	44.23	15.87	60.1	74	-13.9	PK
		2386.19	36.61	15.87	52.48	54	-1.52	AVG
	@	2412	94.89	15.88	110.77	N/A	N/A	PK
	@	2412	91.37	15.88	107.25	N/A	N/A	AVG
	*	4824	37.39	2.16	39.55	74	-34.45	PK

TX, 802.11b (Ch 1) **Radiated Spurious Emission, Horizontal**	**TX, 802.11b (Ch 1)** **Radiated Spurious Emission, Vertical**
	
TX, 802.11b (Ch 1) **Band Edge (Average), Horizontal**	**TX, 802.11b (Ch 1)** **Band Edge (Average), Vertical**
	
TX, 802.11b (Ch 1) **Band Edge (Peak), Horizontal**	**TX, 802.11b (Ch 1)** **Band Edge (Peak), Vertical**
	

Mode	802.11b	Channel	6

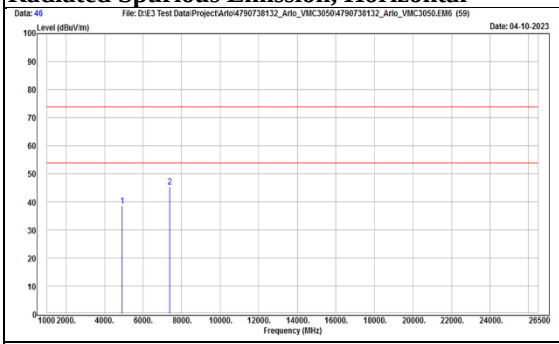
Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		2350.09	42.48	15.95	58.43	74	-15.57	PK
		2389.8	30.43	15.86	46.29	54	-7.71	AVG
	@	2437	99.19	15.97	115.16	N/A	N/A	PK
	@	2437	90.37	15.97	106.34	N/A	N/A	AVG
		2485.37	29.88	15.8	45.68	54	-8.32	AVG
		2498.86	40.81	15.72	56.53	74	-17.47	PK
	*	4874	36.88	2.2	39.08	74	-34.92	PK
	*	7311	35.79	10.2	45.99	74	-28.01	PK
Vertical		2367.19	41.11	15.91	57.02	74	-16.98	PK
		2370.04	29.76	15.9	45.66	54	-8.34	AVG
	@	2437	96.12	15.97	112.09	N/A	N/A	PK
	@	2437	92.31	15.97	108.28	N/A	N/A	AVG
		2484.42	29.65	15.8	45.45	54	-8.55	AVG
		2488.22	41.85	15.78	57.63	74	-16.37	PK
	*	4874	36.24	2.2	38.44	74	-35.56	PK
	*	7311	35.28	10.2	45.48	74	-28.52	PK

TX, 802.11b (Ch 6) **Radiated Spurious Emission, Horizontal**	**TX, 802.11b (Ch 6)** **Radiated Spurious Emission, Vertical**
	
TX, 802.11b (Ch 6) **Band Edge (Average), Horizontal**	**TX, 802.11b (Ch 6)** **Band Edge (Average), Vertical**
	
TX, 802.11b (Ch 6) **Band Edge (Peak), Horizontal**	**TX, 802.11b (Ch 6)** **Band Edge (Peak), Vertical**
	

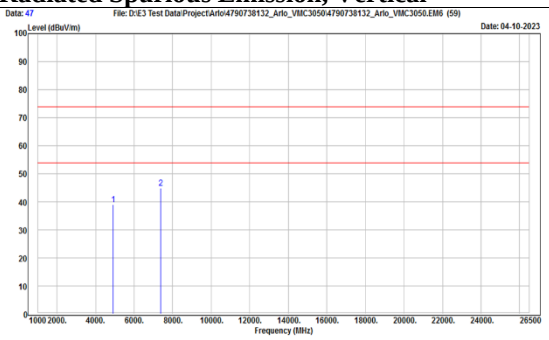
Mode	802.11b	Channel	11

Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal	@	2462	96.3	15.95	112.25	N/A	N/A	PK
	@	2462	91.91	15.95	107.86	N/A	N/A	AVG
		2486.89	37.87	15.79	53.66	54	-0.34	AVG
		2487.46	45.7	15.79	61.49	74	-12.51	PK
	*	4924	36.17	2.25	38.42	74	-35.58	PK
	*	7386	34.73	10.52	45.25	74	-28.75	PK
Vertical	@	2462	95.11	15.95	111.06	N/A	N/A	PK
	@	2462	91.48	15.95	107.43	N/A	N/A	AVG
		2486.32	44.54	15.79	60.33	74	-13.67	PK
		2487.46	37.48	15.79	53.27	54	-0.73	AVG
	*	4924	36.89	2.25	39.14	74	-34.86	PK
	*	7386	34.4	10.52	44.92	74	-29.08	PK

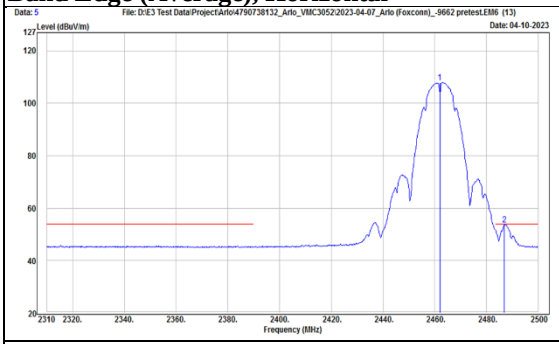
TX, 802.11b (Ch 11)
Radiated Spurious Emission, Horizontal



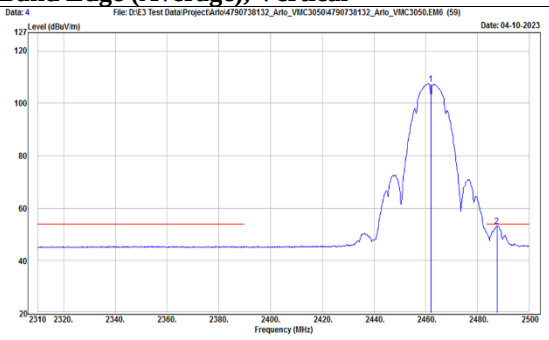
TX, 802.11b (Ch 11)
Radiated Spurious Emission, Vertical



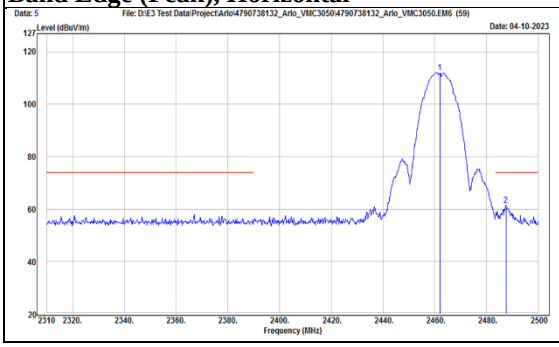
TX, 802.11b (Ch 11)
Band Edge (Average), Horizontal



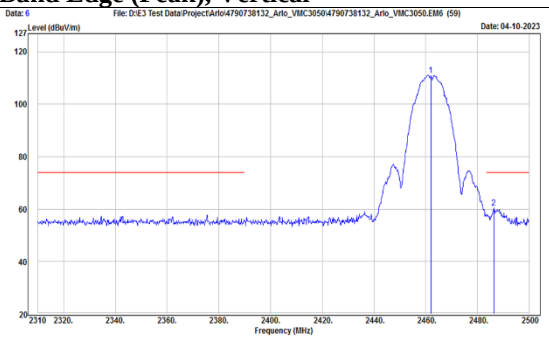
TX, 802.11b (Ch 11)
Band Edge (Average), Vertical



TX, 802.11b (Ch 11)
Band Edge (Peak), Horizontal

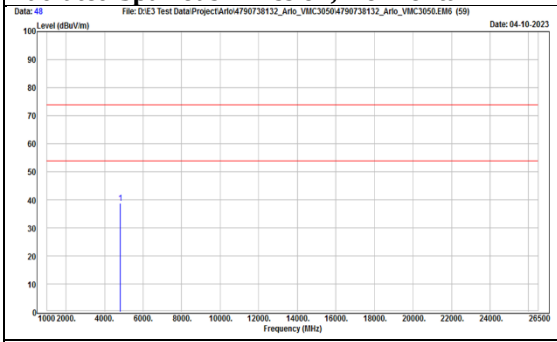
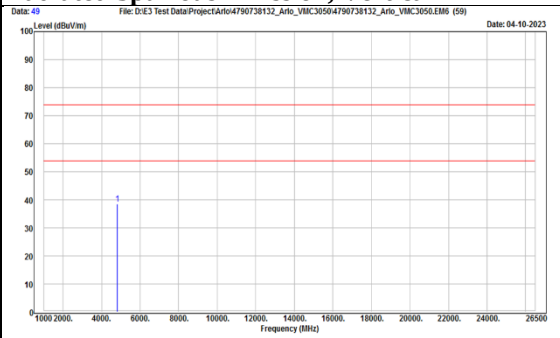
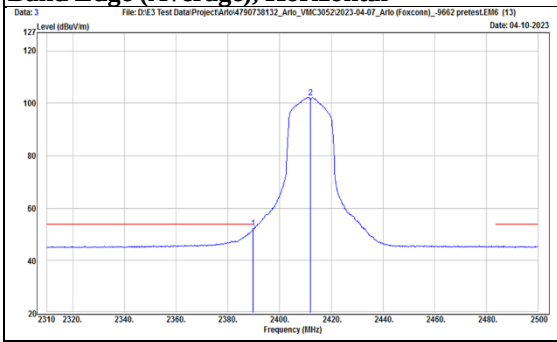
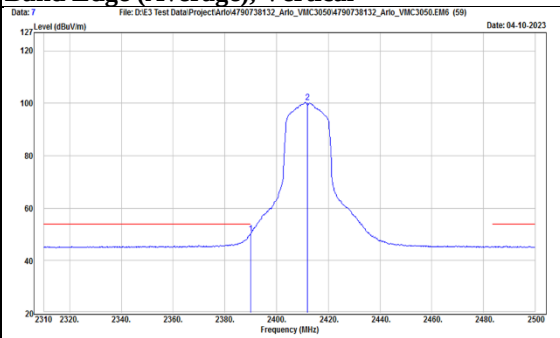
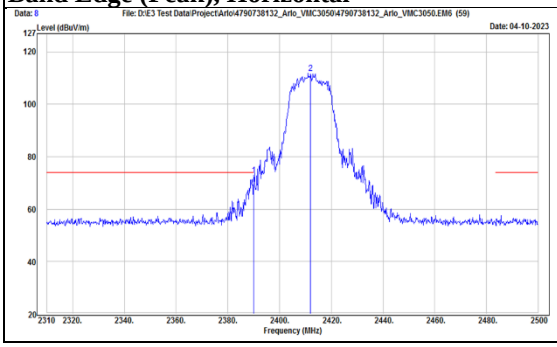
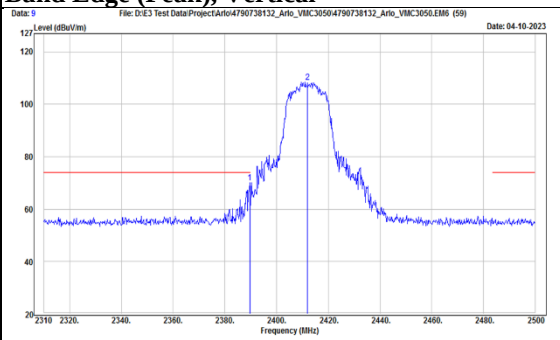


TX, 802.11b (Ch 11)
Band Edge (Peak), Vertical



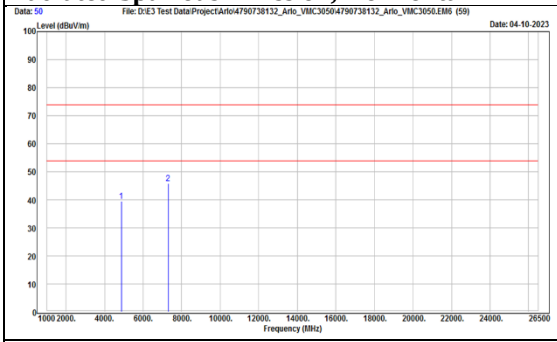
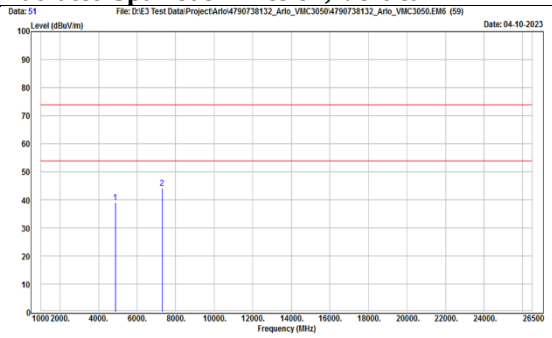
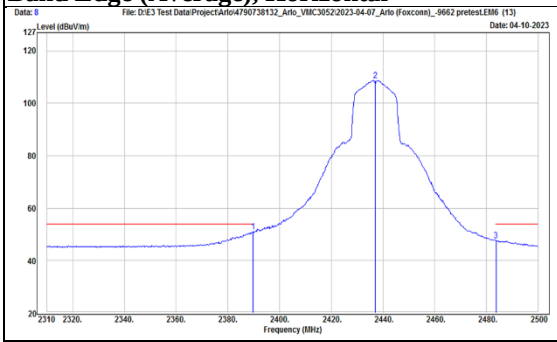
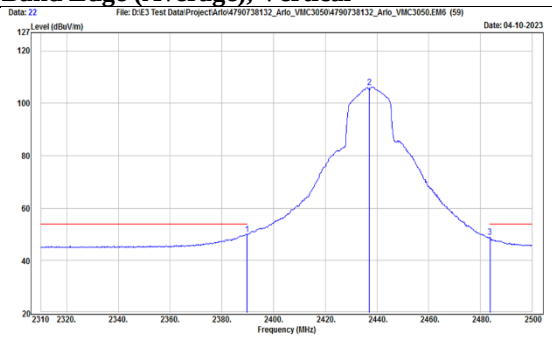
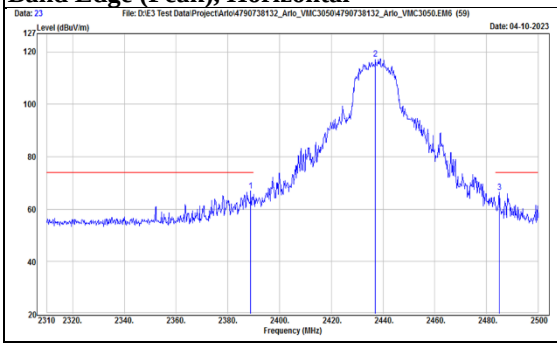
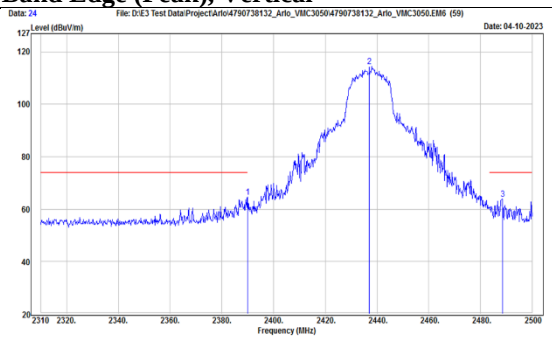
Mode	802.11g	Channel	1

Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		2389.8	36.4	15.86	52.26	54	-1.74	AVG
		2389.99	57.1	15.86	72.96	74	-1.04	PK
	@	2412	96.07	15.88	111.95	N/A	N/A	PK
	@	2412	86.41	15.88	102.29	N/A	N/A	AVG
	*	4824	36.6	2.16	38.76	74	-35.24	PK
Vertical		2389.61	54.28	15.86	70.14	74	-3.86	PK
		2389.99	34.3	15.86	50.16	54	-3.84	AVG
	@	2412	92.6	15.88	108.48	N/A	N/A	PK
	@	2412	84.44	15.88	100.32	N/A	N/A	AVG
	*	4824	36.28	2.16	38.44	74	-35.56	PK

TX, 802.11g (Ch 1) **Radiated Spurious Emission, Horizontal**	**TX, 802.11g (Ch 1)** **Radiated Spurious Emission, Vertical**
	
TX, 802.11g (Ch 1) **Band Edge (Average), Horizontal**	**TX, 802.11g (Ch 1)** **Band Edge (Average), Vertical**
	
TX, 802.11g (Ch 1) **Band Edge (Peak), Horizontal**	**TX, 802.11g (Ch 1)** **Band Edge (Peak), Vertical**
	

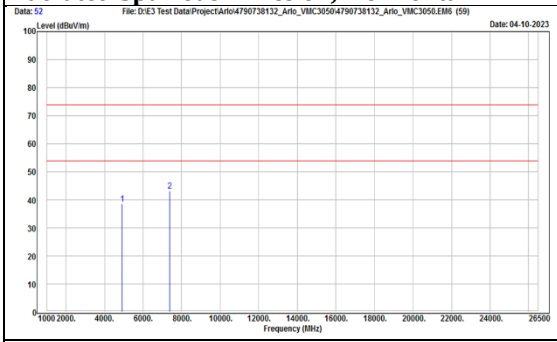
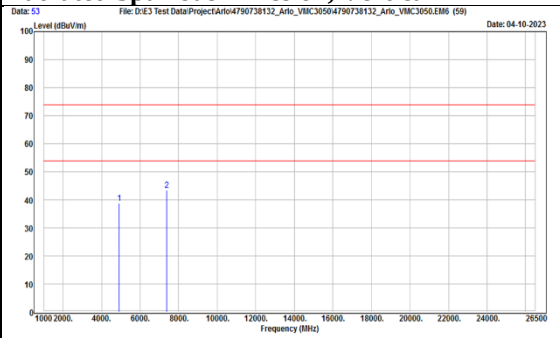
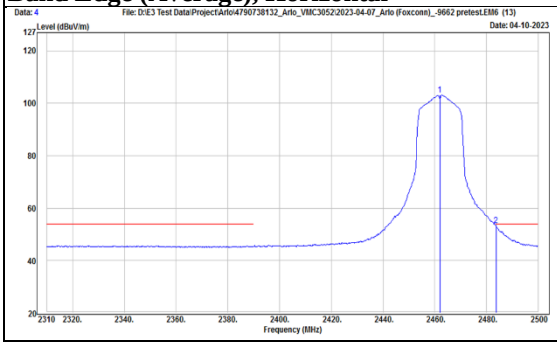
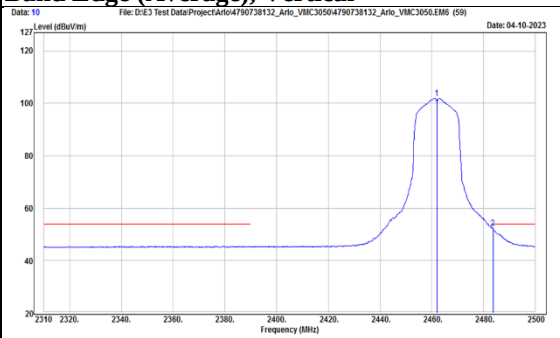
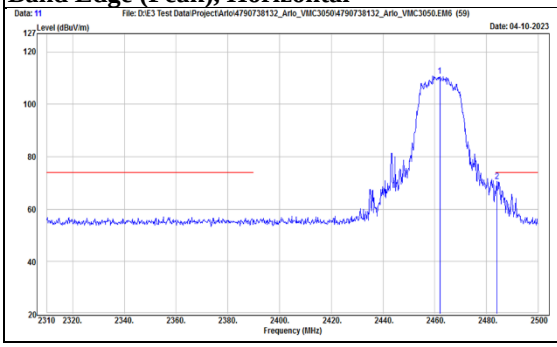
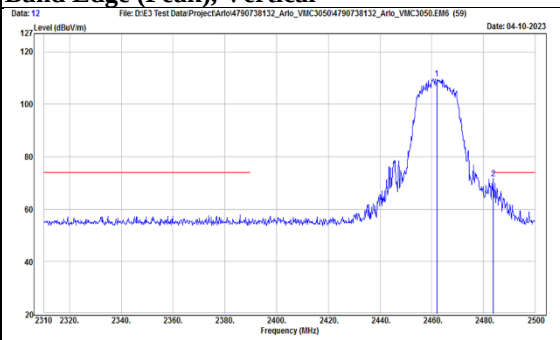
Mode	802.11g	Channel	6

Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		2388.85	51.13	15.86	66.99	74	-7.01	PK
		2389.8	35.13	15.86	50.99	54	-3.01	AVG
	@	2437	101.31	15.97	117.28	N/A	N/A	PK
	@	2437	92.85	15.97	108.82	N/A	N/A	AVG
		2483.66	31.83	15.81	47.64	54	-6.36	AVG
		2484.99	50.63	15.8	66.43	74	-7.57	PK
	*	4874	37.35	2.2	39.55	74	-34.45	PK
	*	7311	35.71	10.2	45.91	74	-28.09	PK
Vertical		2389.8	34.22	15.86	50.08	54	-3.92	AVG
		2389.99	48.66	15.86	64.52	74	-9.48	PK
	@	2437	98.38	15.97	114.35	N/A	N/A	PK
	@	2437	90.26	15.97	106.23	N/A	N/A	AVG
		2483.66	33.08	15.81	48.89	54	-5.11	AVG
		2488.6	48.05	15.78	63.83	74	-10.17	PK
	*	4874	36.75	2.2	38.95	74	-35.05	PK
	*	7311	33.92	10.2	44.12	74	-29.88	PK

TX, 802.11g (Ch 6) **Radiated Spurious Emission, Horizontal**	**TX, 802.11g (Ch 6)** **Radiated Spurious Emission, Vertical**
	
TX, 802.11g (Ch 6) **Band Edge (Average), Horizontal**	**TX, 802.11g (Ch 6)** **Band Edge (Average), Vertical**
	
TX, 802.11g (Ch 6) **Band Edge (Peak), Horizontal**	**TX, 802.11g (Ch 6)** **Band Edge (Peak), Vertical**
	

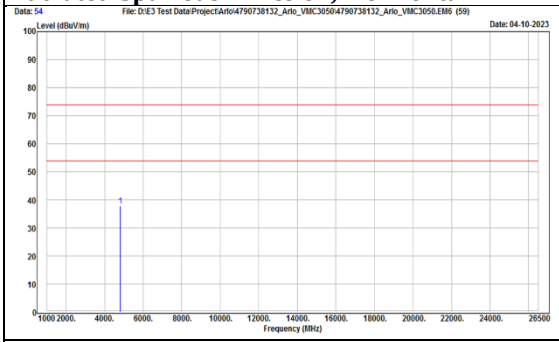
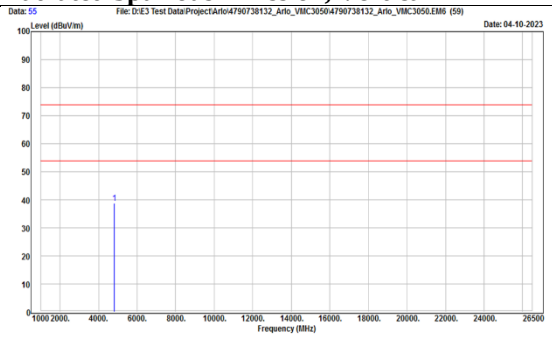
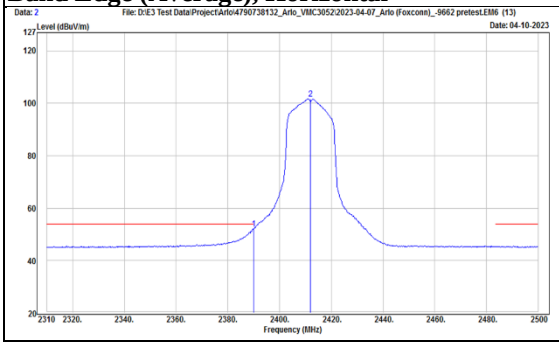
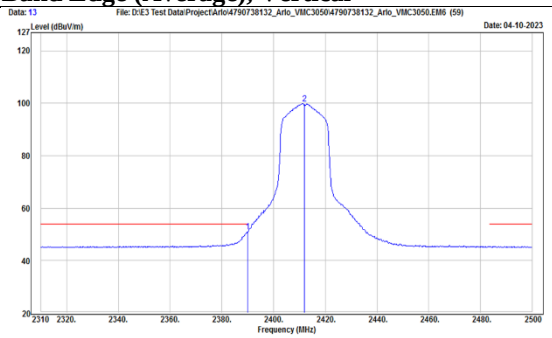
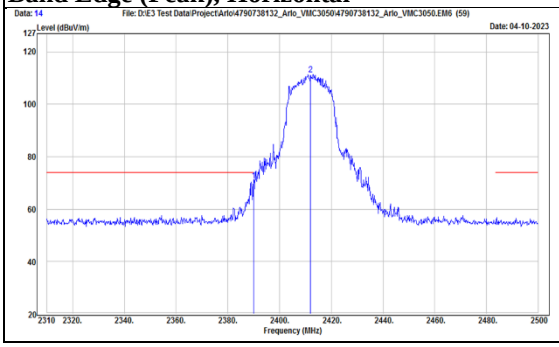
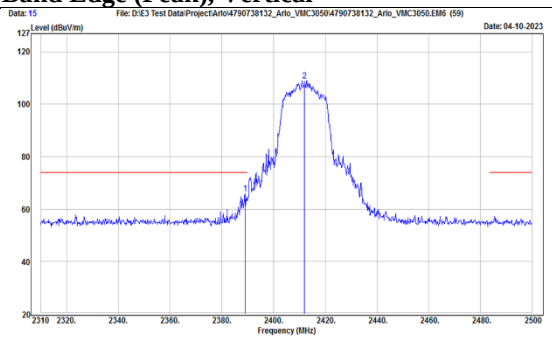
Mode	802.11g	Channel	11

Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal	@	2462	94.88	15.95	110.83	N/A	N/A	PK
	@	2462	87.23	15.95	103.18	N/A	N/A	AVG
		2483.66	37.54	15.81	53.35	54	-0.65	AVG
		2484.04	54.78	15.81	70.59	74	-3.41	PK
	*	4924	36.19	2.25	38.44	74	-35.56	PK
	*	7386	32.7	10.52	43.22	74	-30.78	PK
Vertical	@	2462	93.84	15.95	109.79	N/A	N/A	PK
	@	2462	86.02	15.95	101.97	N/A	N/A	AVG
		2483.66	36.56	15.81	52.37	54	-1.63	AVG
		2483.85	55.83	15.81	71.64	74	-2.36	PK
	*	4924	36.51	2.25	38.76	74	-35.24	PK
	*	7386	32.8	10.52	43.32	74	-30.68	PK

TX, 802.11g (Ch 11) **Radiated Spurious Emission, Horizontal**	**TX, 802.11g (Ch 11)** **Radiated Spurious Emission, Vertical**
	
TX, 802.11g (Ch 11) **Band Edge (Average), Horizontal**	**TX, 802.11g (Ch 11)** **Band Edge (Average), Vertical**
	
TX, 802.11g (Ch 11) **Band Edge (Peak), Horizontal**	**TX, 802.11g (Ch 11)** **Band Edge (Peak), Vertical**
	

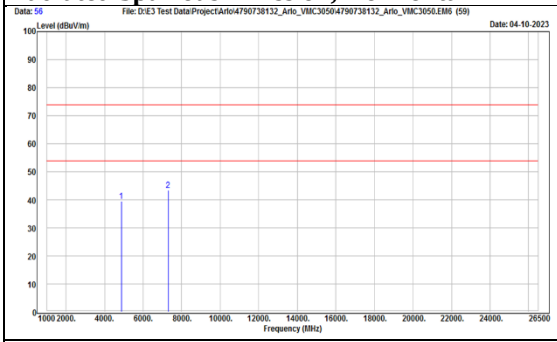
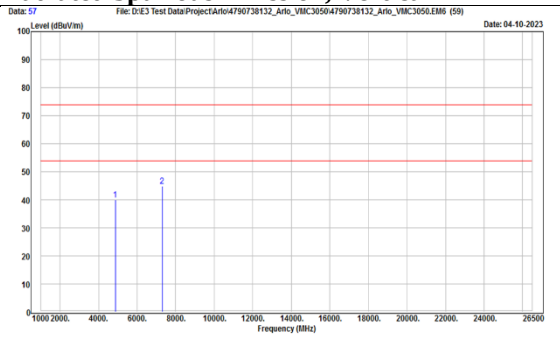
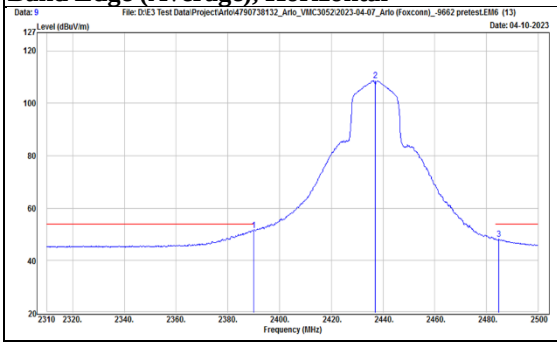
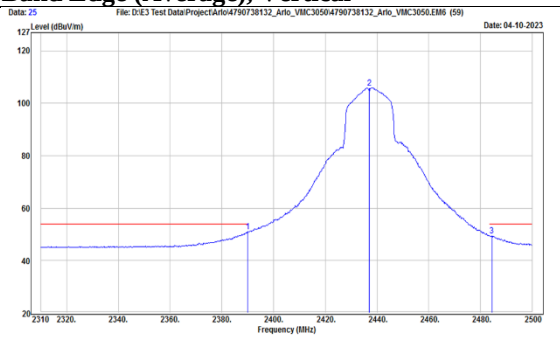
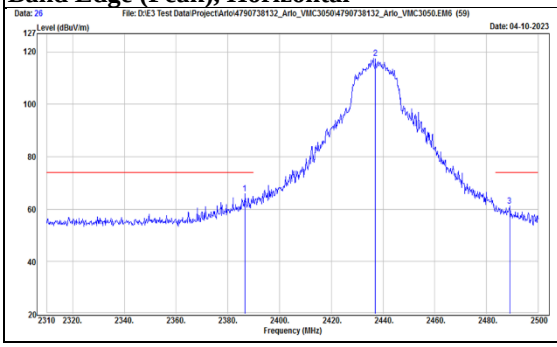
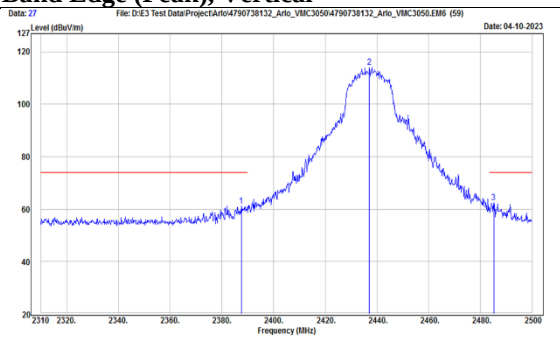
Mode	802.11n(HT20)	Channel	1

Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		2389.99	55.04	15.86	70.9	74	-3.1	PK
		2389.99	36.34	15.86	52.2	54	-1.8	AVG
	@	2412	95.47	15.88	111.35	N/A	N/A	PK
	@	2412	85.82	15.88	101.7	N/A	N/A	AVG
	*	4824	35.72	2.16	37.88	74	-36.12	PK
Vertical		2389.04	50	15.86	65.86	74	-8.14	PK
		2389.99	35.17	15.86	51.03	54	-2.97	AVG
	@	2412	93.1	15.88	108.98	N/A	N/A	PK
	@	2412	84.07	15.88	99.95	N/A	N/A	AVG
	*	4824	36.67	2.16	38.83	74	-35.17	PK

TX, 802.11n(HT20) (Ch 1) **Radiated Spurious Emission, Horizontal**	**TX, 802.11n(HT20) (Ch 1)** **Radiated Spurious Emission, Vertical**
	
TX, 802.11n(HT20) (Ch 1) **Band Edge (Average), Horizontal**	**TX, 802.11n(HT20) (Ch 1)** **Band Edge (Average), Vertical**
	
TX, 802.11n(HT20) (Ch 1) **Band Edge (Peak), Horizontal**	**TX, 802.11n(HT20) (Ch 1)** **Band Edge (Peak), Vertical**
	

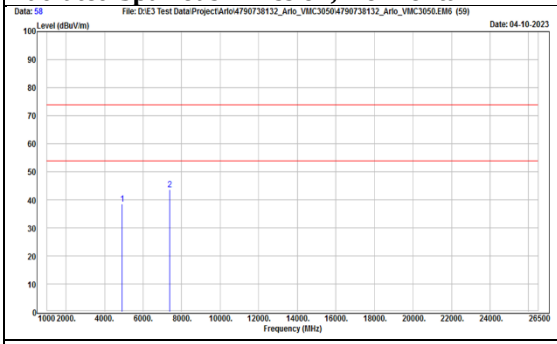
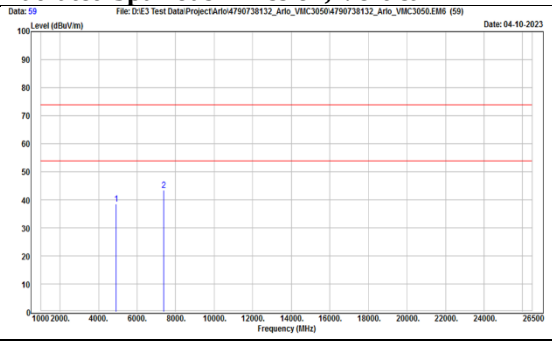
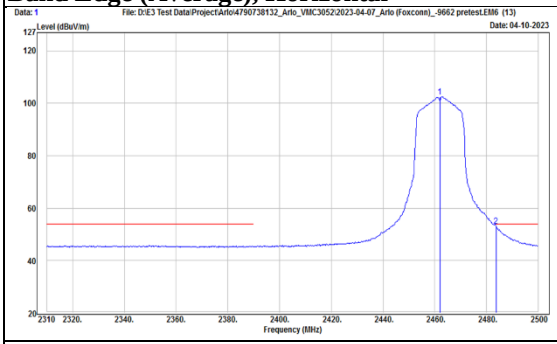
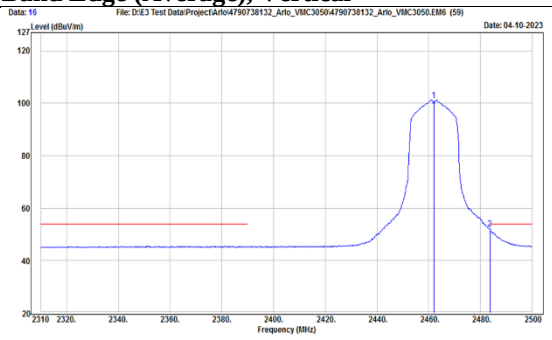
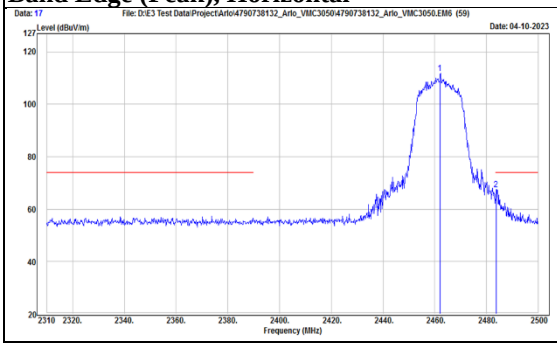
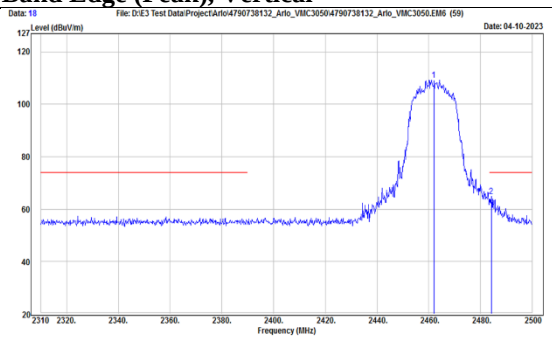
Mode	802.11n(HT20)	Channel	6

Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		2386.57	49.99	15.87	65.86	74	-8.14	PK
		2389.99	35.65	15.86	51.51	54	-2.49	AVG
	@	2437	101.56	15.97	117.53	N/A	N/A	PK
	@	2437	92.79	15.97	108.76	N/A	N/A	AVG
		2484.8	32.26	15.8	48.06	54	-5.94	AVG
		2488.98	45.55	15.78	61.33	74	-12.67	PK
	*	4874	37.26	2.2	39.46	74	-34.54	PK
	*	7311	33.32	10.2	43.52	74	-30.48	PK
Vertical		2387.52	45.28	15.87	61.15	74	-12.85	PK
		2389.99	35.08	15.86	50.94	54	-3.06	AVG
	@	2437	98.33	15.97	114.3	N/A	N/A	PK
	@	2437	90	15.97	105.97	N/A	N/A	AVG
		2484.42	33.57	15.8	49.37	54	-4.63	AVG
		2485.18	46.82	15.8	62.62	74	-11.38	PK
	*	4874	37.88	2.2	40.08	74	-33.92	PK
	*	7311	34.58	10.2	44.78	74	-29.22	PK

TX, 802.11n(HT20) (Ch 6) **Radiated Spurious Emission, Horizontal**	**TX, 802.11n(HT20) (Ch 6)** **Radiated Spurious Emission, Vertical**
	
TX, 802.11n(HT20) (Ch 6) **Band Edge (Average), Horizontal**	**TX, 802.11n(HT20) (Ch 6)** **Band Edge (Average), Vertical**
	
TX, 802.11n(HT20) (Ch 6) **Band Edge (Peak), Horizontal**	**TX, 802.11n(HT20) (Ch 6)** **Band Edge (Peak), Vertical**
	

Mode	802.11n(HT20)	Channel	11

Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal	@	2462	95.88	15.95	111.83	N/A	N/A	PK
	@	2462	86.5	15.95	102.45	N/A	N/A	AVG
		2483.66	51.77	15.81	67.58	74	-6.42	PK
		2483.66	37.31	15.81	53.12	54	-0.88	AVG
	*	4924	36.32	2.25	38.57	74	-35.43	PK
	*	7386	33.13	10.52	43.65	74	-30.35	PK
Vertical	@	2462	93.41	15.95	109.36	N/A	N/A	PK
	@	2462	85.31	15.95	101.26	N/A	N/A	AVG
		2483.66	36.17	15.81	51.98	54	-2.02	AVG
		2484.23	49.04	15.81	64.85	74	-9.15	PK
	*	4924	36.32	2.25	38.57	74	-35.43	PK
	*	7386	32.86	10.52	43.38	74	-30.62	PK

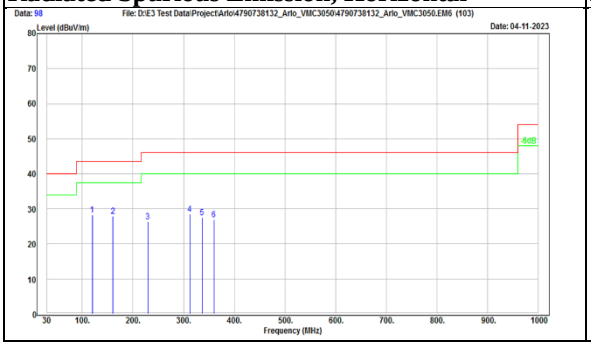
TX, 802.11n(HT20) (Ch 11) **Radiated Spurious Emission, Horizontal**	**TX, 802.11n(HT20) (Ch 11)** **Radiated Spurious Emission, Vertical**
	
TX, 802.11n(HT20) (Ch 11) **Band Edge (Average), Horizontal**	**TX, 802.11n(HT20) (Ch 11)** **Band Edge (Average), Vertical**
	
TX, 802.11n(HT20) (Ch 11) **Band Edge (Peak), Horizontal**	**TX, 802.11n(HT20) (Ch 11)** **Band Edge (Peak), Vertical**
	

Below 1 GHz

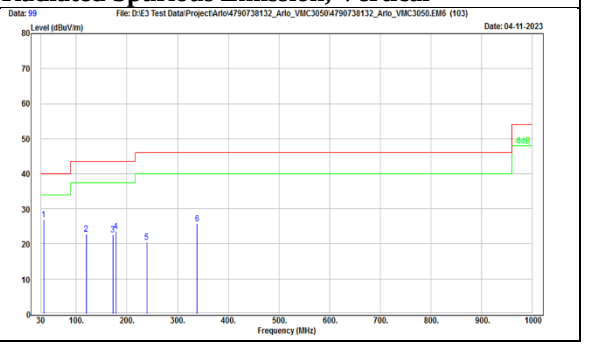
Mode	802.11g	Channel	6

Polarization	Notation	Frequency (MHz)	Reading (dBuV)	Correct (dB/m)	Result (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Remark
Horizontal		120.21	42.37	-14.02	28.35	43.5	-15.15	PK
		160.95	39.37	-11.49	27.88	43.5	-15.62	PK
		229.82	40.22	-13.79	26.43	46	-19.57	PK
		312.27	38.74	-10.32	28.42	46	-17.58	PK
		336.52	37.04	-9.57	27.47	46	-18.53	PK
		359.8	36.3	-9.33	26.97	46	-19.03	PK
Vertical		35.82	40.07	-13.06	27.01	40	-12.99	PK
		120.21	36.89	-14.02	22.87	43.5	-20.63	PK
		172.59	34.52	-11.91	22.61	43.5	-20.89	PK
		178.41	36.3	-12.66	23.64	43.5	-19.86	PK
		239.52	33.06	-12.63	20.43	46	-25.57	PK
		338.46	35.36	-9.55	25.81	46	-20.19	PK

TX, 802.11g (Ch 6)
Radiated Spurious Emission, Horizontal



TX, 802.11g (Ch 6)
Radiated Spurious Emission, Vertical



9 kHz ~ 30 MHz Data:

For 9 kHz to 30 MHz radiated emission have performed all modes of operation were investigated. The amplitude of spurious emissions attenuated more than 20 dB below the permissible value is not required to be report.

No non-compliance noted:

KDB 414788 D01 OATS and Chamber Correlation Justification

- Base on FCC 15.31 (f) (2): measurements may be performed at a distance closer than that specified in the regulations; however, an attempt should be made to avoid making measurements in the near field.

- OATs and chamber correlation testing had been performed and chamber measured test results is the worst case test result.

Although these tests were performed other than open area test site, adequate comparison measurements were confirmed against 30m open area test site. Therefore sufficient tests were made to demonstrate that the alternative site produces results that correlate with the ones of tests made in an open field based on KDB 414788.

9.6. AC Power Line Conducted Emission

Requirements

Frequency (MHz)	Conducted limit (dBµV)	
	Quasi-peak	Average
0.15 - 0.5	66 - 56	56 - 46
0.50 - 5.0	56	46
5.0 - 30	60	50

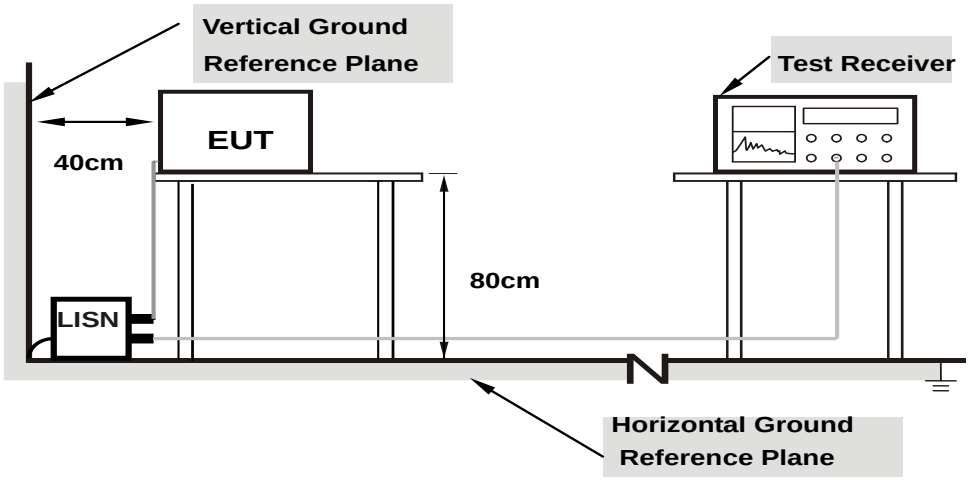
Note:
1. The lower limit shall apply at the transition frequencies.
2. The limit decreases in line with the logarithm of the frequency in the range of 0.15 to 0.50MHz.

Test Procedures

a. The EUT was placed 0.4 meters from the conducting wall of the shielded room with EUT being connected to the power mains through a line impedance stabilization network (LISN). Other support units were connected to the power mains through another LISN. The two LISNs provide 50 ohm/ 50uH of coupling impedance for the measuring instrument.
b. Both lines of the power mains connected to the EUT were checked for maximum conducted interference.
c. The frequency range from 150kHz to 30MHz was searched. Emission levels under (Limit - 20dB) was not recorded.

NOTE:
1. The resolution bandwidth and video bandwidth of test receiver is 9kHz for quasi-peak detection (QP) and average detection (AV) at frequency 0.15MHz-30MHz.
2. All modes of operation were investigated (includes all external accessories) and the worst-case emissions are reported, the other emission levels were low against the limit.
3. Test data of Result value (dBuV) = Reading value (dBuV) + Correction Factor (dB).
4. Test data of Margin(dB) = Result value (dBuV) - Limit value (dBuV).
5. Test data of Correction Factor (dB) = Insertion loss(dB) + Cable loss(dB).

Test Setup



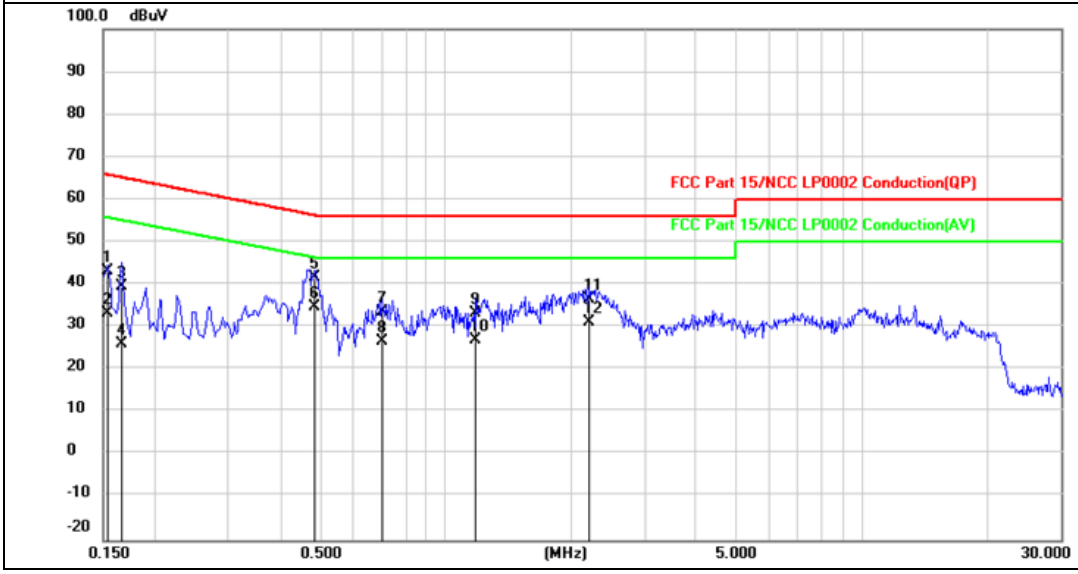
Note: 1.Support units were connected to second LISN.

For the actual test configuration, please refer to the Setup Configurations.

Test Data

Mode	11g_TX2437	Channel	6

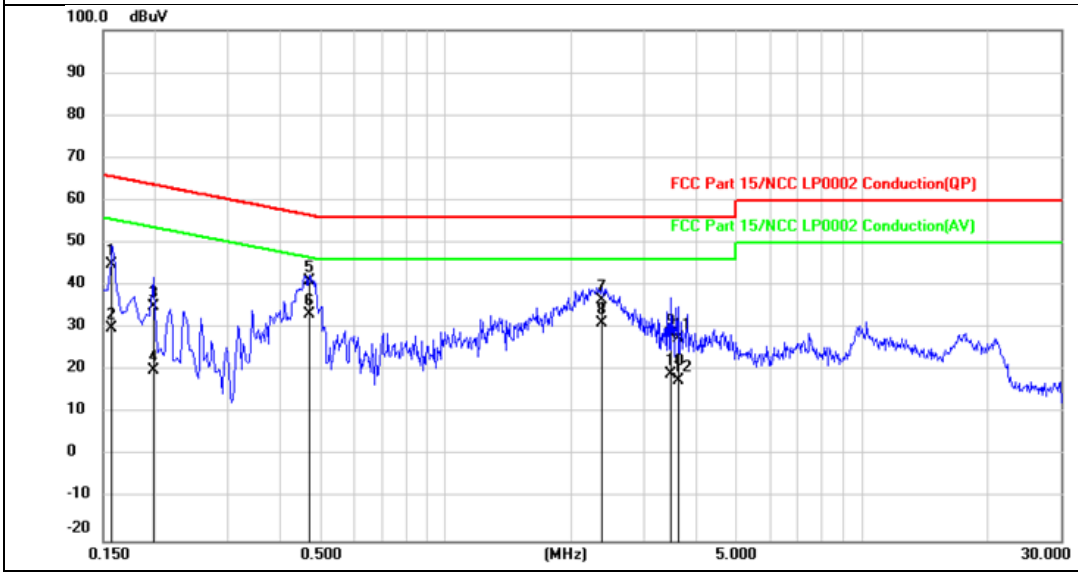
Phase: Line



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1539	33.03	10.01	43.04	65.79	-22.75	QP
2	0.1539	23.15	10.01	33.16	55.79	-22.63	AVG
3	0.1660	29.49	10.01	39.50	65.16	-25.66	QP
4	0.1660	16.12	10.01	26.13	55.16	-29.03	AVG
5	0.4860	31.54	10.01	41.55	56.24	-14.69	QP
6	0.4860	24.80	10.01	34.81	46.24	-11.43	AVG
7	0.7019	23.50	10.02	33.52	56.00	-22.48	QP
8	0.7019	16.65	10.02	26.67	46.00	-19.33	AVG
9	1.1820	23.29	10.03	33.32	56.00	-22.68	QP
10	1.1820	16.95	10.03	26.98	46.00	-19.02	AVG
11	2.2100	26.50	10.07	36.57	56.00	-19.43	QP
12	2.2100	21.10	10.07	31.17	46.00	-14.83	AVG

Mode	11g_TX2437	Channel	6

Phase: Neutral



No.	Frequency (MHz)	Reading (dBuV)	Correct (dB)	Result (dBuV)	Limit (dBuV)	Margin (dB)	Remark
1	0.1580	34.97	10.00	44.97	65.57	-20.60	QP
2	0.1580	19.97	10.00	29.97	55.57	-25.60	AVG
3	0.1980	25.06	9.99	35.05	63.69	-28.64	QP
4	0.1980	10.21	9.99	20.20	53.69	-33.49	AVG
5	0.4700	30.95	10.00	40.95	56.51	-15.56	QP
6	0.4700	23.28	10.00	33.28	46.51	-13.23	AVG
7	2.3660	26.43	10.07	36.50	56.00	-19.50	QP
8	2.3660	21.14	10.07	31.21	46.00	-14.79	AVG
9	3.4660	18.27	10.09	28.36	56.00	-27.64	QP
10	3.4660	9.05	10.09	19.14	46.00	-26.86	AVG
11	3.6220	17.57	10.10	27.67	56.00	-28.33	QP
12	3.6220	7.68	10.10	17.78	46.00	-28.22	AVG

END OF REPORT