



## Test report RSS 247

*IC RSS-247  
TEST REPORT**For the*

Product name:Driveri

Model: D-210  
Derivative Models: D-210A, D211

Prepared for:Netradyne Inc.

Prepared by:

  
(AnshulTyagi)

Approved by:

  
(Steven Wu)

Reviewed by:

  
(Dr R Lenin Raja)

(Authorized Representative)(/ lenin83/)

AA Electro Magnetic Test Laboratory Private Limited.  
Plot 174, UdyogVihar, Phase4, Sector-18, Gurgaon, Haryana, India.  
Contact:0124-4235350,4145343;  
e-mail:info@aaemtlabs.com;Website:www.aaemtlabs.com

Date: 14/07/2020

	REPORT BODY	APPENDICES				TOTAL
		A	B	C	D	
PAGES	36	58	3	1	6	106

This report shall not be reproduced except in full, without the written approval of AAEMT

AA Electro Magnetic Test Laboratory Private Limited is accredited by, Lab Code to perform the tests listed in this report, except where noted otherwise. This report and the information contained herein represent the test results related only to the sample tested. This report should not be relied upon as an endorsement or certification by AAEMTfor the sample tested, nor does it represent any statement whatsoever as to its marketing status or fitness of the equipment for a particular purpose.

1 | P a g e

Plot 174, Udyog Vihar Phase 4, Sector -18, Gurgoan, Haryana, India.

Contact:0124-4235350,4145343;e-mail:info@aaemtlabs.com;Website: www.aaemtlabs.com

An ISO 17025: 2017, Accredited Laboratory ,VCCI (support member – #4053),ISED#: 26046, FCC #0029402088 CE #800058\_00





AA Electro Magnetic Test Laboratory Private Limited

Report No:AAEMT/EMC/200623-02-04



Certificate#5593.01

### REVISION HISTORY

REVISION	DATE	COMMENTS	MODIFIED BY





## TABLE OF CONTENTS

SECTION	TITLE	PAGE
REVISION HISTORY .....		.2
GENERAL REPORT SUMMARY .....		.6
SUMMARY OF TEST RESULTS.....		.7
TECHNICAL DESCRIPTION OF THE EUT .....		.9
1. PURPOSE.....		11
2. ADMINISTRATIVE DATA .....		12
2.1 Location of Testing .....		12
2.2 Traceability Statement .....		12
2.3 Cognizant Personnel .....		12
2.4 Date Test Sample was Received .....		12
2.5 Disposition of the Test Sample .....		12
2.6 Abbreviations and Acronyms.....		12
3. APPLICABLE DOCUMENTS .....		13
4. DESCRIPTION OF TEST CONFIGURATION .....		14
4.1 Description of Test conditions .....		14
5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT .....		15
5.1 EUT and Accessory List .....		15
5.2 Test Equipment .....		16
6. TEST SITE DESCRIPTION .....		18
6.1 Test Facility Description .....		18
6.2 EUT Mounting, Bonding and Grounding .....		18
6.3 Facility Environmental Characteristics .....		18
7. TEST PROCEDURES.....		19
7.1 Emissions in Restricted and Non-Restricted Bands .....		19
7.1.3 Test Procedure (Radiated).....		21
7.1.4 Test Procedure (Conducted) .....		22
7.2 Conducted Emissions Test – Mains Ports.....		23
7.2.1 Limit (FCC PART 15 Section 15.207(a), IC RSS-GEN Issue 4 [8.8]) .....		23
7.2.2 Test Procedure .....		23
7.3 Occupied Bandwidth .....		24
7.3.1 Limit (FCC PART 15 Section 15.247(a)(2), IC-RSS 247 Issue 1, [5.2.1]) .....		24
7.3.2 Test Procedure .....		24
7.3.3 Test Result .....		25
7.4 Maximum Peak Output Power.....		32
7.4.1 Limit (FCC PART 15 Section 15.247(b)(3), IC-RSS 247 Issue 1, [5.4.4]) .....		32
7.4.2 Test Procedure .....		32
7.4.3 Test Result .....		33
7.5 Maximum Peak Power Spectral Density .....		34
7.5.1 Limit (FCC PART 15 Section 15.247(e), IC-RSS 247 Issue 1, [5.2.2]) .....		34
7.5.2 Test Procedure .....		34
7.5.3 Test Result .....		35
7.6 Antenna Requirement .....		36
7.6.1 Requirement (FCC PART 15 SECTION 15.203,15.247(b)(4)) .....		36
7.6.2 Test Result .....		36
8. CONCLUSIONS / COMPLIANCE STATEMENT .....		37
APPENDIX A .....		38



APPENDIX B .....	97
APPENDIX C .....	100
APPENDIX D .....	101





## LIST OF APPENDICES

APPENDIX	TITLE
A	Radiated and Conducted Data Sheets <ul style="list-style-type: none"> <li>• Radiated Emissions Test Data (General Requirements, and Restricted Bands)</li> <li>• Emissions in Non-Restricted Frequency Bands Test Data</li> <li>• Occupied Bandwidth Test Data</li> <li>• MaximumPeak Output Power Test Data</li> <li>• Maximum Peak Power Spectral Density Test Data</li> </ul>
B	Test Setup Diagrams
C	Modifications To The EUT
D	Additional Models Covered Under This Report

## LIST OF FIGURES

FIGURE	TITLE
1	Conducted Emissions Test Setup
2	Plot Map And Layout of Test Site
3	Layout of 5 Meter Semi-Anechoic Chamber





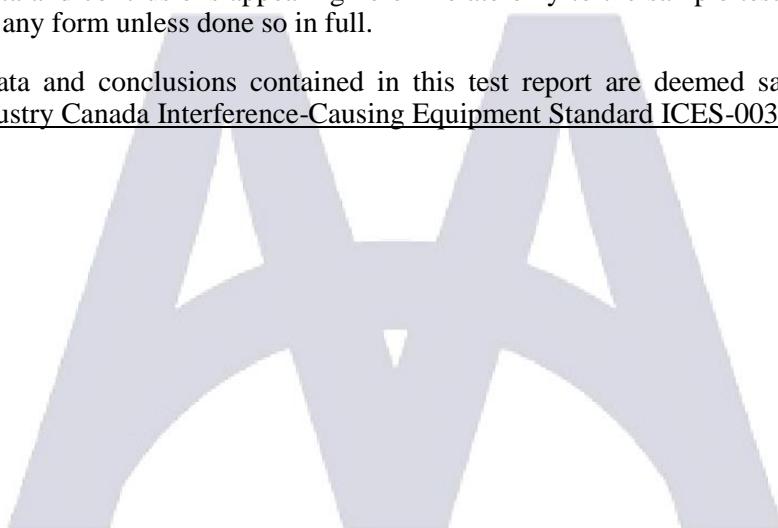
## GENERAL REPORT SUMMARY

This electromagnetic emission test report is generated by AAEMT, which is an independent testing and consulting firm. The test report is based on testing performed AAEMT personnel according to the measurement procedure described in the test specification given below and in the "Test Procedures" section of this report.

The measurement data and conclusions appearing herein relate only to the sample tested and this report may not be reproduced in any form unless done so in full.

The measurement data and conclusions contained in this test report are deemed satisfactory evidence of compliance with Industry Canada Interference-Causing Equipment Standard ICES-003, Issue 6, January 2016.

:





## GENERAL REPORT SUMMARY (CONTINUED)

Device Tested:

Driveri

Product Description:

Driveri is an AI powered vision based IoT system, sold as an aftermarket product to fleets. The device is installed in trucks/cars behind the rear-view mirror, and the power is supplied from the car battery through a custom power cable. When the vehicle is being driven, the road facing camera is enabled by default, records and generates real time safety alerts to assist the driver. The camera facing the driver / passenger's optional due to privacy requirements and enabled at customers' request. The recorded videos are processed (using our patented machine learning algorithms) on the device together with the other sensor data and can detect any events related to driving behavior and driver behavior. The device has 2 buttons on the bottom side of the device, when pressed creates alerts which are user generated. 2 LEDs on driver facing side indicate the current operational state of device & also indicate privacy setting (driver facing camera recording status).

Modifications:

N/A

Manufacturer:

Netradyne Inc.

Test Date(s):

Jun. 23~ Jun. 25, 2020

Test Specifications:

EMI requirements

Limits: FCC Title 47, Part 15 Subpart B, Class B

Test Procedure: ANSI C63.4: 2014

Test Deviations:

The test procedure was not deviated from during the testing.

## SUMMARY OF TEST RESULTS

7 | Page

Plot 174, Udyog Vihar Phase 4, Sector -18, Gurgoan, Haryana, India.

Contact:0124-4235350,4145343;e-mail:[info@aaemtlabs.com](mailto:info@aaemtlabs.com);Website: [www.aaemtlabs.com](http://www.aaemtlabs.com)

An ISO 17025: 2017, Accredited Laboratory ,VCCI (support member – #4053),ISED#: 26046, FCC #0029402088 CE #800058\_00





TEST	TEST REQUIREMENT	TEST METHOD	RESULT
Antenna Requirement	FCC PART 15 C section 15.247 (c) and Section 15.203	FCC PART 15 C section 15.247 (c) and Section 15.203 RSS-Gen	PASS
Conducted Emissions at Mains Terminals	FCC PART 15 C section 15.207	ANSI C63.10:Clause6.2 RSS-Gen 8.8	PASS
Radiated Spurious Emission 30 MHz to 25 GHz)	FCC PART 15 C section 15.209 &15.247(d)	ANSI C63.10: Clause 6.4, 6.5 and 6.6 RSS-Gen 8.9	PASS
6 dB Bandwidth	FCC PART 15 C section 15.247 (a)(2)	ANSI C63.10: Clause 6.9.1 RSS-Gen	PASS
MaximumPeak Output Power	FCC PART 15 C section 15.247(b)(3)	FCC/KDB-558074 D01 v03r01 Clause 9.1.2 RSS 247 5.4(d)	PASS
Peak Power Spectral Density	FCC PART 15 C section 15.247(e)	ANSI C63.10: Clause 6.11.2.3 RSS 247 5.2(b)	PASS
Conducted Spurious Emission (30MHz to 25GHz)	FCC PART 15 C section 15.209 &15.247(d)	ANSI C63.10: Clause 6.7 RSS-Gen 8.9	PASS

N/A is an abbreviation for Not Applicable.

**Model description:** D-210 : Intelligent Driver Monitoring System Smart Dash-cam

D-210A : Intelligent Driver Monitoring System Smart Dash-cam Series 1

D-211 : Intelligent Driver Monitoring System Smart Dash-cam WA

Driveri is an AI powered vision based IoT system, sold as an aftermarket product to fleets. The device is installed in trucks/cars behind the rear-view mirror, and the power is supplied from the car battery through a custom power cable.

When the vehicle is being driven, the road facing camera is enabled by default, records and generates real time safety alerts to assist the driver. The camera facing the driver / passenger's optional due to privacy requirements and enabled at customers' request. The recorded videos are processed (using our patented machine learning algorithms) on the device together with the other sensor data and can detect any events related to driving behavior and driver behavior. The device has 2 buttons on the bottom side of the device, when pressed creates alerts which are user generated. 2 LEDs on driver facing side indicate the current operational state of device & also indicate privacy setting (driver facing camera recording status).

**Remark:**

ANSI C63.10: the detail version is ANSI C63.10:2009 in the whole report.





## TECHNICAL DESCRIPTION OF THE EUT

Manufacturer:	Netradyne Inc.
Manufacturer Address:	9191 Towne Centre Drive, Suite 200, San Diego, CA 92122
EUT Name:	Driveri
Model No:	D-210
Brand Name:	Netradyne
Derivative model No.:	D-210A, D-211
Operation frequency:	2412 MHz to 2462 MHz for 802.11b/g/n(HT20) 2422 MHz to 2452 MHz for 802.11n(HT40)
Number of Channels:	11 Channels for 802.11b/g/n(HT20) 7 Channels for 802.11n(HT40)
Modulation Technology:	802.11b: CCK/QPSK/BPSK 802.11g/n:BPSK/QPSK/16QAM/64QAM
Transmit Data Rate:	802.11b :1/2/5.5/11 Mbps 802.11g :6/9/12/18/24/36/48/54 Mbps 802.11n(HT20): 7.2/14.4/21.7/28.9/43.3/57.8/65/72.2 Mbps 802.11n(HT40): 15/30/45/60/90/120/135/150 Mbps
Channel Separation:	5 MHz
Antenna Gain(dBi):	3dBi
H/W No.:	501-1-01283_A1, 501-1-01301_A1, 501-1-00908_B1, 501-1-01243_A1
S/W No.:	2.4.9.rc.2
Power Supply Range:	Input : 12VDC, 3A
Note:	
1.	For a more detailed features description, please refer to the manufacturer's specifications or the User's Manual.



**EUT channels and frequencies list:**

- Test frequencies are lowest channel: 2412 MHz, middle channel: 2437 MHz and highest channel: 2462 MHz for 802.11b/g/n(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		

- Test frequencies are lowest channel: 2422 MHz, middle channel: 2437 MHz and highest channel: 2452 MHz for 802.11n(HT40)

Channel	Frequency (MHz)	Channel	Frequency (MHz)
3	2422	7	2442
4	2427	8	2447
5	2432	9	2452
6	2437		





## 1.

### PURPOSE

This document is a qualification test report based on the Electromagnetic Interference (EMI) tests performed on the . The EMI measurements were performed according to the measurement procedure described in ANSI C63.4: 2014. The tests were performed in order to determine whether the electromagnetic emissions from the equipment under test, referred to as EUT hereafter, are within the specification limits defined in FCC Title 47, Part 15, Subpart C.





## 2. ADMINISTRATIVE DATA

### 2.1 Location of Testing

The EMI tests described herein were performed at the test facility of AAEMT, Plot 174, UdyogViharPhase4, Sector-18, Gurgaon, Haryana, India.

### 2.2 Traceability Statement

The calibration certificates of all test equipment used during the test are on file at the location of the test.

### 2.3 Cognizant Personnel

### 2.4 Date Test Sample was Received

### 2.5 Disposition of the Test Sample

### 2.6 Abbreviations and Acronyms

The following abbreviations and acronyms may be used in this document.

RF	Radio Frequency
EMI	Electromagnetic Interference
EUT	Equipment Under Test
P/N	Part Number
S/N	Serial Number
HP	Hewlett Packard
ITE	Information Technology Equipment
CML	Corrected Meter Limit
LISN	Line Impedance Stabilization Network
CISPR	International Special Committee On Radio Interference
FCC	Federal Communications Commission



**3.****APPLICABLE DOCUMENTS**

The following documents are referenced or used in the preparation of this EMI Test Report.

SPEC	TITLE
RSS-Gen Issue 5, April 2018	General Requirements for Compliance of Radio Apparatus
RSS 247, Issue 2, February 2017	Digital Transmission Systems (DTSS), Frequency Hopping Systems (FHSs) and Licence-Exempt Local Area Network (LE-LAN) Devices
FCC Title 47, Part 15, Subpart C	FCC Rules - Radio frequency devices (including digital devices).
FCC Publication KDB558074	Guidance for compliance measurements on digital transmission system, frequency hopping spread spectrum system, and hybrid system devices operating under section 15.247 of the fcc rules, August 24, 2018
ANSI C63.10-2013	American National Standard of Procedures for Compliance Testing of Unlicensed Wireless Devices.



## 4. DESCRIPTION OF TEST CONFIGURATION

### 4.1 Description of Test conditions

- (1) EUT was tested in normal configuration (Please See following Block diagram)

1. Block diagram of EUT configuration(TX Mode)



Note: 1.The EUT wa

transmit duty cycle is not less than 90%.

2. Using the software (MP Tool) to control the fixed transmitting power index (0-63): 32, frequency, date rate and other test mode.

transmitting mode and the

- (2) E.U.T. test conditions:

15.31(e):For intentional radiators, measurements of the variation ofthe input power or the radiated signal level of the fundamentalfrequency component of the emission, as appropriate, shall beperformed with the supply voltage varied between 85% and 115% ofthe nominal rated supply voltage. For battery operated equipment, theequipment tests shall be performed using a new battery.

15.32: Power supplies and CPU boards used with personal computers and for which separate authorizations are required to be obtained shall be tested as follows: Testing shall be in accordance with the procedures specified in Section 15.31 of this part.

- (3) Test frequencies:

According to the 15.31(m) Measurements on intentional radiators orreceivers, other than TV broadcast receivers, shall be performed and. If requiredreported for each band in which the device can beoperated with the device operating at the number of frequencies ineach band specified in the following table:

Frequency range over which device operates	Number of frequencies	Location in the range of operation
1 MHz or less	1	Middle
1 to 10 MHz	2	1 near top and 1 near bottom
More than 10 MHz	3	1 near top, 1 near middle and 1 near bottom

- (4) Frequency range of radiated measurements:

According to the 15.33, the test range will be up to the tenth harmonic of the highest fundamental frequency.

- (5) Pre-test the EUT in all transmitting mode at the lowest, middle and highest channel with different data rate and conducted to determine the worst-case mode, only the worst-case results are recorded in this report.





## 5. LISTS OF EUT, ACCESSORIES AND TEST EQUIPMENT

### 5.1 EUT and Accessory List

No .	Equipment	Manufacturer	FCC ID	Model No.	Power cord	signal cable
1	DriverI/DCM LTE Module	Netradyne Inc.	2AM8R- DCM-NA1- 100	DriverI/DCM	N/A	N/A
2	CAN Adaptor Board	Netradyne Inc.	N/A	A1 version : D-210-AD1 A2 version : D-210-AD2 A3 Version : D-210-AD3	N/A	N/A





## 5.2 Test Equipment

No	Test Equipment	Manufacturer	Model No	Serial No	Cal. Date	Cal. Due Date
1	EMI TEST Receiver	Rohde and Schwarz	ESIB26	838786/010	2020/01/28	2021/01/27
2	Loop antenna	DAZE Beijing	ZN30900C	18052	2020/01/29	2021/01/28
3	Hi power horn antenna	DAZE Beijing	ZN30700	18012	2020/01/30	2021/01/29
4	Horn antenna	DAZE Beijing	ZN30702	18006	2020/01/30	2021/01/29
5	Horn antenna	DAZE Beijing	ZN30703	18005	2020/01/30	2021/01/29
6	Preamplifier	KELIANDA	LNA-0009295	-	2020/01/28	2021/01/29
7	Preamplifier	KELIANDA	CF-00218	-	2020/01/28	2021/01/27
8	Bi conical Antenna	DAZE Beijing	ZN30505C	17038	2020/01/28	2021/01/29
9	EMI-RECEIVER	Schwarzbeck	FCKL	1528194	2020/01/28	2021/01/27
10	Spectrum Analyzer	ADVANTEST	R3361	-	2019/05/15	2021/05/14
11	LISN	Kyoritsu	KNW-407	8-1789-5	2020/01/28	2021/01/27
12	Network-LISN	Schwarzbeck	NNBM8125	81251314	2020/01/28	2021/01/27
13	Network-LISN	Schwarzbeck	NNBM8125	81251315	2020/01/28	2021/01/27
14	PULSELIMITER	Rohde and Schwarz	ESH3-Z2	100681	2019/05/13	2021/05/12
15	50ΩCoaxialSwitch	DAIWA	1565157	-	2019/05/13	2021/05/12





16	50ΩCoaxialSwitch	-	-	-	2019/05/13	2021/05/12
17	Wireless signal power meter	DARE!!	RPR3006W	RFSW190220	2020/01/29	2021/01/28
18	Signal Generator	KEYSIGHT	N5181A	512071	2020/01/29	2021/01/28
19	RF Vector Signal Generator	Keysight	N5182B	512094	2020/01/29	2021/01/28
20	Spectrum analyzer	R&S	FSV-40N	101385	2020/01/29	2021/01/28
21	Radio Communication Tester	R&S	CMW 500	124589	2019/5/15	2021/5/14
22	Signal Generator	R&S	SMP02	837017/004 836593/005	2019/5/15	2021/5/14
23	DC Power Supply	Guanker	JK15040K	TNC/ET/C/0 01/15	2020/2/2	2021/2/1
24	Pro. Temp & Humi. chamber	MENTEK	MHP-150-1C	MAA081125 01	2020/2/2	2021/2/1
25	Attenuators	AGILENT	8494B	-	-	-
26	Attenuators	AGILENT	8495B	-	-	-



## 6. TEST SITE DESCRIPTION

### 6.1 Test Facility Description

Please refer to the table below and section 7.1 of this report for the details of which sites were used for testing. All sites are located at Plot 174, UdyogViharPhase4, Sector-18, Gurgaon, Haryana, India.

Site Used For Test	Site Description

### 6.2 EUT Mounting, Bonding and Grounding

N/A

### 6.3 Facility Environmental Characteristics





## 7. TEST PROCEDURES

The following sections describe the test methods and the specifications for the tests.

### 7.1

#### Emissions in Restricted and Non-Restricted Bands

##### 7.1.1

##### General Requirements Limit (FCC PART 15 Section 15.209(a)(1), IC-RSS-GEN Issue 4, [8.9])

Frequency of Emission (MHz)	Field Strength		Measurement Distance (Meters)
	$\mu\text{V}/\text{m}$	$\text{dB}\mu\text{V}/\text{m}$	
0.009-0.49	2400/F(kHz)		300
0.49-1.705	24000/F(kHz)		30
1.705-30	30		30
30-88	100	40	3
88-216	150	43.5	3
216-960	200	46	3
Above 960	500	54	3

##### 7.1.2

##### Emissions in Restricted and Non-Restricted Bands Limit (FCC PART 15 Section 15.247(d), IC RSS-GEN Issue 4, [8.10], IC-RSS 247 Issue 1, [5.5] )

##### Emissions in Restricted and Non-Restricted Bands FCC PART 15 Section 15.247(d):

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 Section 15.209(a) is not required. In addition, radiated emissions which fall in the restricted bands, as defined in Section 15.205(a), must also comply with the radiated emission limits specified in Section 15.209(a) (see Section 15.205(c)).





## 7.1.2

**Emissions in Restricted and Non-Restricted Bands Limit (FCC PART 15 Section 15.247(d), IC-RSS-GEN Issue 4, [8.10], IC-RSS 247 Issue 1, [5.5] ) (Continued)****Emissions in Restricted Bands IC-RSS-GEN Issue 4, [8.10]:**

Restricted bands, identified in Table 6, are designated primarily for safety-of-life services (distress calling and certain aeronautical bands), certain satellite downlinks, radio astronomy and some government uses. Except where otherwise indicated, the following restrictions apply:

- (a) Fundamental components of modulation of license-exempt radio apparatus shall not fall within the restricted bands of Table 6 except for apparatus complying under RSS-287
- (b) Unwanted emissions that fall into restricted bands of Table 6 shall comply with the limits specified in RSS-Gen; and
- (c) Unwanted emissions that do not fall within the restricted frequency bands of Table 6 shall comply either with the limits specified in the applicable RSS or with those specified in this RSS-Gen.

Limit (For Restricted Bands)
See General Limits Requirement In Above Chart (Section 7.1.1)

**Emissions in Non-Restricted Bands IC-RSS 247 Issue 1, [5.5]:**

In any 100 kHz bandwidth outside the frequency band in which the spread spectrum or digitally modulated device is operating, the RF power that is produced 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 that the transmitter demonstrates compliance with the peak conducted power limits. If the transmitter complies with the conducted power limits based on the use of root-mean-square averaging over a time interval, as permitted under Section 5.4(4), the attenuation required shall be 30 dB instead of 20 dB. Attenuation below the general field strength limits specified in RSS-Gen is not required.

Limit (For Non Restricted Bands)
20db Below Peak Power Spectral Density
30db Below Average Power Spectral Density





### 7.1.3

#### Test Procedure (Radiated)

The Rohde & Schwarz ESI EMI receiver was used as a measuring meter while under software control by the Rohde & Schwarz EZ-EMC software. To increase the sensitivity of the instrument, the built in preamplifier was used from 9 KHz to 1 GHz and an external preamplifier was used from 1 GHz to 26.5 GHz. The EMI receiver was used in the peak detect mode with the "Max Hold" feature activated. In this mode, the EMI receiver records the highest measured reading over all the sweeps. The built in quasi-peak or average detector was used only for those readings which are marked accordingly on the data sheets. The effective measurement bandwidth used for the radiated emissions test was 100 kHz from 9 kHz to 26.5 GHz.

The Loop Antenna, Broadband BiLog and horn antennas were used as transducers during the measurement. The Loop antenna was used from 9 KHz to 30 MHz, the BiConiLog antenna was used from 30 MHz to 1000 MHz and horn antennas were used from 1GHz – 26.5 GHz. The frequency spans were wide (9 kHz to 150 kHz, 150 kHz to 30 MHz, 30 MHz to 88 MHz, 88 MHz to 216 MHz, 216 to 300 MHz, 300 MHz to 1 GHz, 1 GHz to 18 GHz and 18 GHz to 26.5 GHz) during preliminary investigations. The final data was taken with a frequency span of 1 MHz. Furthermore, the frequency span was reduced during the preliminary investigations as deemed necessary.

The 5 meter semi-anechoic chamber of AAEMT was used for radiated emission testing. This test site is set up according to ANSI C63.4: 2014. Please see section 6.2 of this report for mounting, bonding and grounding of the EUT. The turntable supporting the EUT is remote controlled using a motor. The turntable permits EUT rotation of 360 degrees in order to maximize emissions. Also, the antenna mast allows height variation of the antenna from 1 meter to 4 meters. Data was collected in the worst case (highest emission) configuration of the EUT. The EUT was rotated 360 degrees and the antenna height was varied from 1 to 4 meters (for E field radiated field strength).

The presence of non EUT signals was verified by turning the EUT off. In case a non EUT signal was detected, the measurement bandwidth was reduced temporarily and verification was made that an additional adjacent peak did not exist. This ensures that the other signal does not hide any emissions from the EUT. The EUT was tested at a 3 meter test distance from 9 kHz to 26.5 GHz. to obtain final test data.

Calculation Of Radiated Emission Test Data:

Amplitude - Gain + Antenna Factor + Cable Loss = Corrected Amplitude

Corrected Amplitude - Limit = Margin

Associated with the radiated emission test data in this report is a  $\pm 5.1\text{dB}$  measurement uncertainty.





#### 7.1.4 Test Procedure (Conducted)

1. The mains terminal disturbance voltage test was conducted in a shielded room.
2. The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a  $50\Omega/50\mu\text{H} + 5\Omega$  linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.
3. The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane, but separated from metallic contact with the ground reference plane by 0.1m of insulation.
4. The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0,4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0,8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0,8m from LISN 2.





## 7.2 Conducted Emissions Test – Mains Ports

### 7.2.1

### Limit (FCC PART 15 Section 15.207(a), IC RSS-GEN Issue 4 [8.8])

Frequency of Emission (MHz)	Conducted Limit (dB $\mu$ V)	
	Quasi-peak	Average
0.15-0.5	66 to 56 *	56 to 46 *
0.5-5	56	46
5-30	60	50

\*Note: Decreases with the logarithm of the frequency

### 7.2.2

### Test Procedure

1. The mains terminal disturbance voltage test was conducted in a shielded room.
2. The EUT was connected to AC power source through a LISN 1 (Line Impedance Stabilization Network) which provides a  $50\Omega/50\mu\text{H} + 5\Omega$  linear impedance. The power cables of all other units of the EUT were connected to a second LISN 2, which was bonded to the ground reference plane in the same way as the LISN 1 for the unit being measured. A multiple socket outlet strip was used to connect multiple power cables to a single LISN provided the rating of the LISN was not exceeded.
3. The tabletop EUT was placed upon a non-metallic table 0.8m above the ground reference plane. And for floor-standing arrangement, the EUT was placed on the horizontal ground reference plane, but separated from metallic contact with the ground reference plane by 0.1m of insulation.
4. The test was performed with a vertical ground reference plane. The rear of the EUT shall be 0,4 m from the vertical ground reference plane. The vertical ground reference plane was bonded to the horizontal ground reference plane. The LISN 1 was placed 0,8 m from the boundary of the unit under test and bonded to a ground reference plane for LISNs mounted on top of the ground reference plane. This distance was between the closest points of the LISN 1 and the EUT. All other units of the EUT and associated equipment was at least 0,8m from LISN 2.



**7.3****Occupied Bandwidth****7.3.1****Limit (FCC PART 15 Section 15.247(a)(2), IC-RSS 247 Issue 1, [5.2.1])****FCC PART 15 Section 15.247(a)(2)**

Systems using digital modulation techniques may operate in the 2400 - 2483.5 MHz band. The minimum 6 dB bandwidth shall be at least 500 kHz

**IC-RSS 247 Issue 1 [5.2.1]**

DTSs include systems that employ digital modulation techniques resulting in spectral characteristics similar to direct sequence systems. The following applies to the bands 902-928 MHz and 2400-2483.5 MHz

<b>Limit</b>
6 dB Bandwidth $\geq$ 500 kHz

**7.3.2****Test Procedure**

Follow the radiated test procedure but set the Spectrum Analyzer as below:

RBW: 100 kHz

VBW:  $\geq$  3 X RBW

Detector: Peak

Trace Mode: Max Hold

- (1) Set analyzer center frequency to center of signal
- (2) Turn on occupied bandwidth measurement mode
- (3) Set measurement to 6db bandwidth

Associated with the Occupied Bandwidth test data in this report is a  $\pm 2.5\%$  measurement uncertainty.





### 7.3.3 Test Result

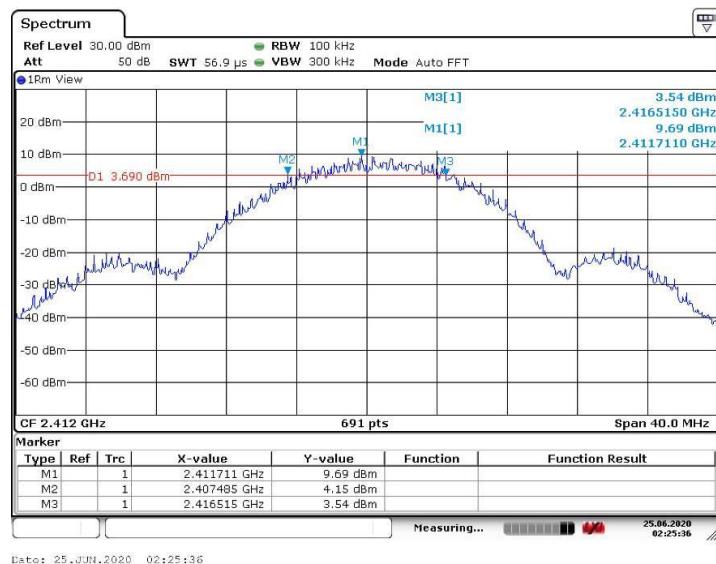
Channel No.	Frequency (MHz)	Mode	Data Rate	Measured 6dB bandwidth (MHz)	Limit	Result
1	2412	802.11b	11 Mbps	9.030	≥500KHz	Pass
6	2437		11 Mbps	8.336		Pass
11	2462		11 Mbps	8.336		Pass
1	2412	802.11g	54 Mbps	16.440	≥500KHz	Pass
6	2437		54 Mbps	15.803		Pass
11	2462		54 Mbps	15.220		Pass
1	2412	802.11n (HT20)	72.2 Mbps	17.308	≥500KHz	Pass
6	2437		72.2 Mbps	16.440		Pass
11	2462		72.2 Mbps	15.977		Pass
3	2422	802.11n (HT40)	150 Mbps	31.260	≥500KHz	Pass
6	2437		150 Mbps	35.660		Pass
9	2452		150 Mbps	35.080		Pass

**Test result:** The unit does meet the RSS requirements.

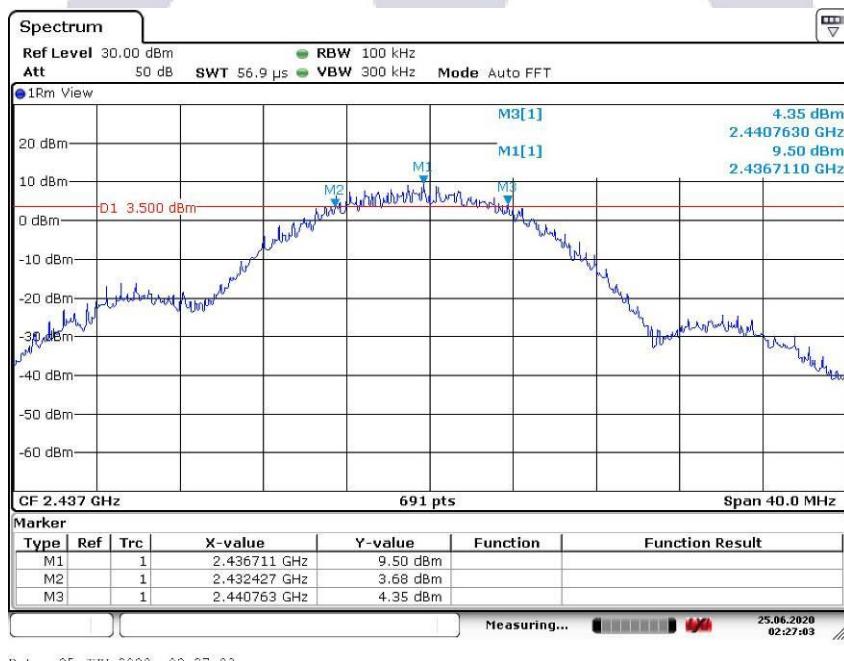


**Result plot as follows:**
**802.11b mode with 11Mbps data rate (Worst case)**

Channel 1: 2.412GHz:



Channel 6: 2.437GHz:

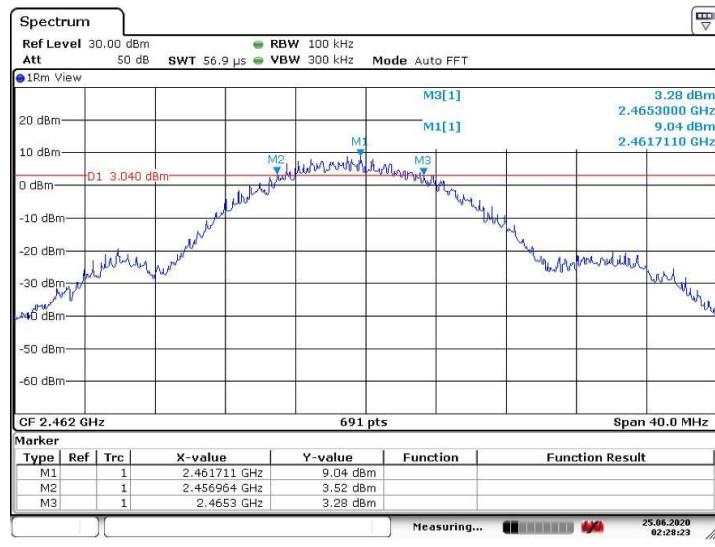




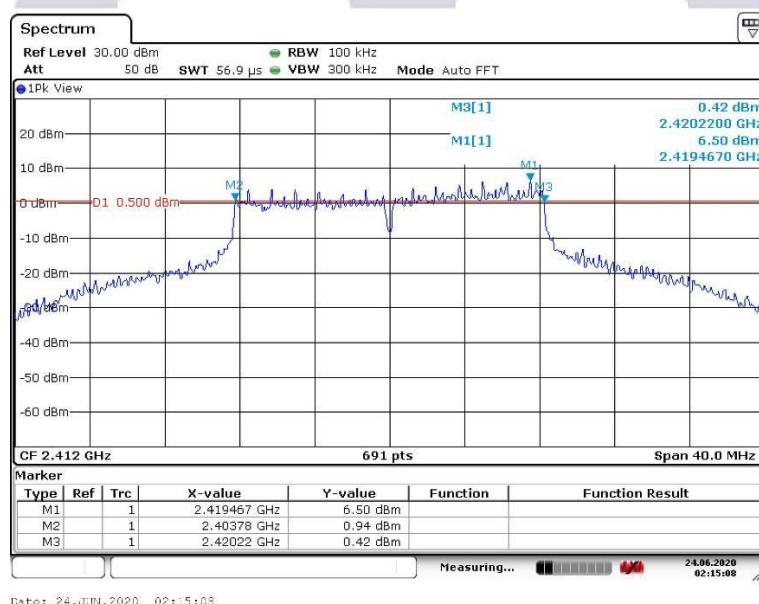
Report No:AAEMT/EMC/200623-02-04

Certificate#5593.01

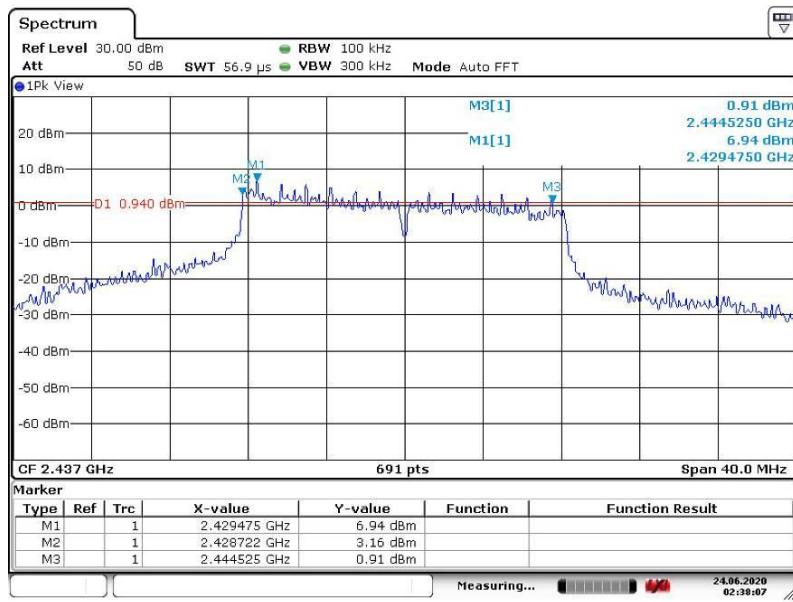
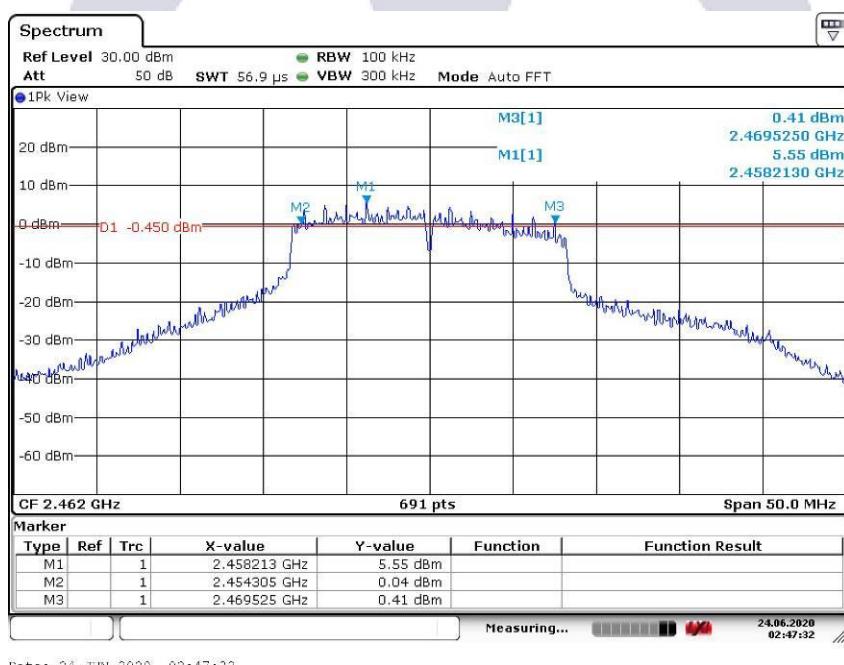
Channel 11: 2.462GHz:

**802.11g mode with 54Mbps data rate (Worst case)**

Channel 1: 2.412GHz:

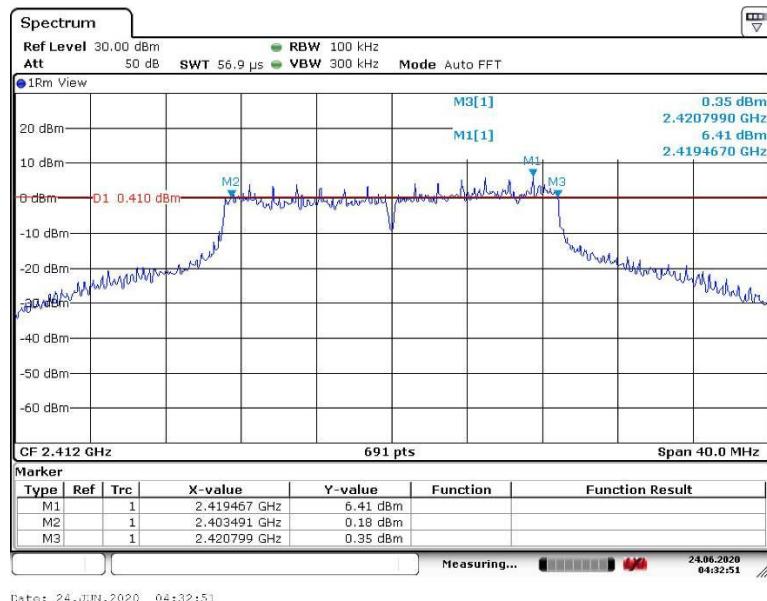


Report No:**AAEMT/EMC/200623-02-04**

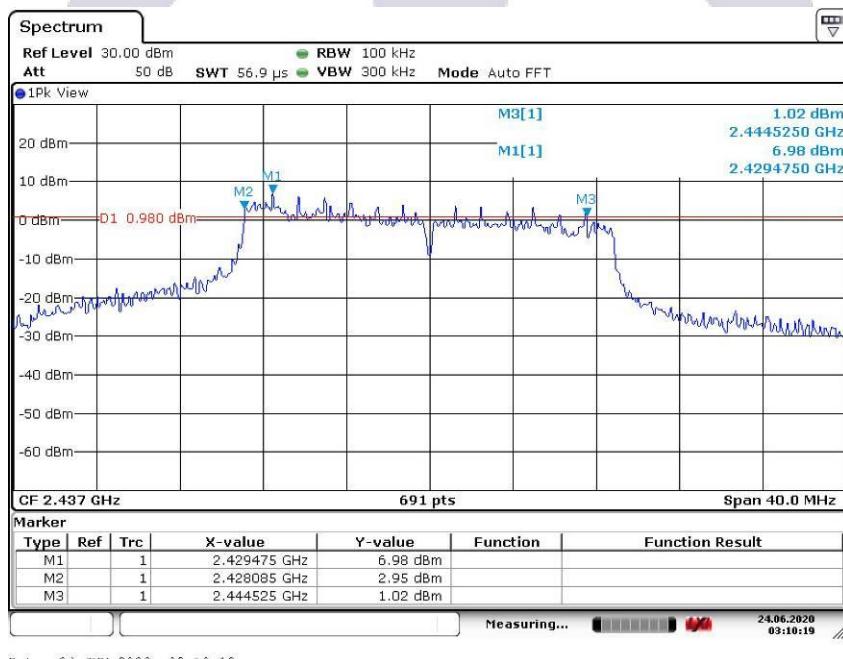
Certificate#**5593.01**
**Channel 6: 2.437GHz:**

**Channel 11: 2.462GHz:**


**802.11n(HT20) mode with 72.2Mbps data rate (Worst case)**

Channel 1: 2.412GHz:

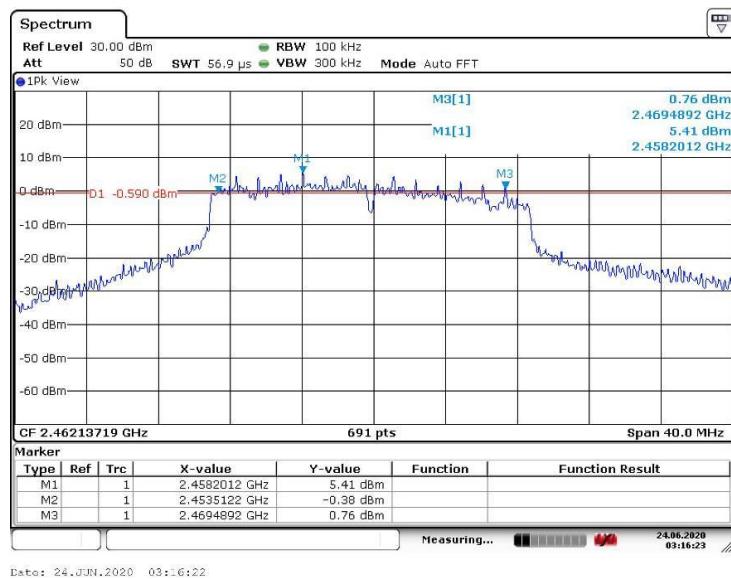


Channel 6: 2.437GHz:



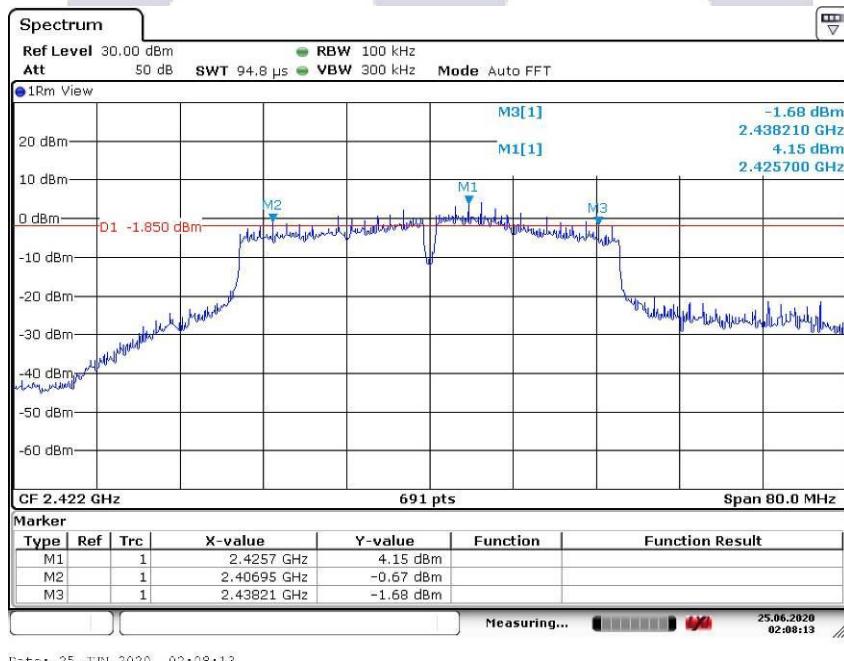


Channel 11: 2.462GHz:

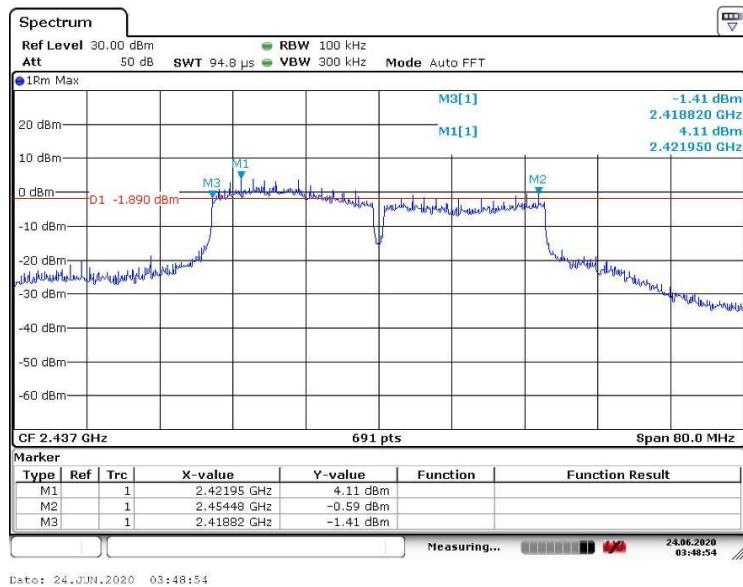


802.11n(HT40) mode with 150Mbps data rate (Worst case)

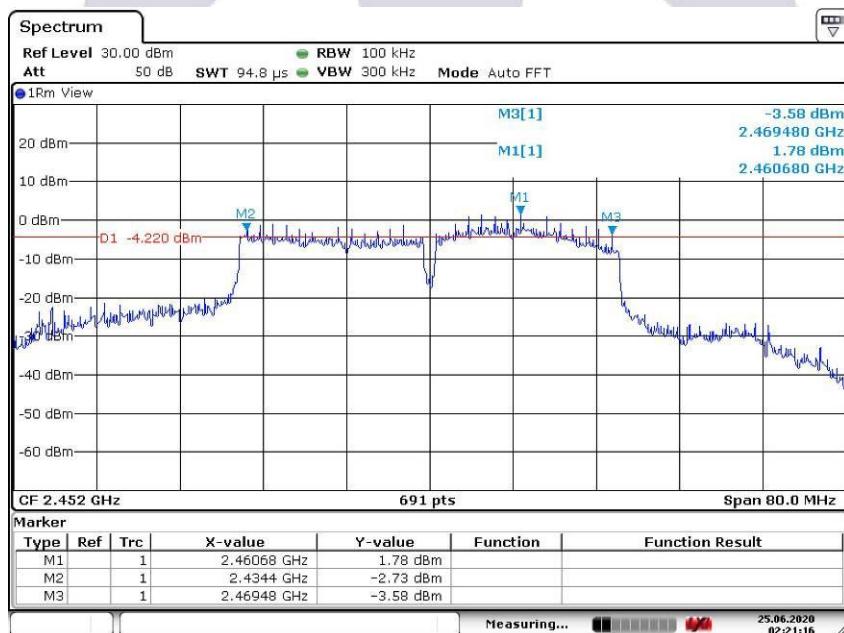
Channel 3: 2.422GHz:



Channel 6: 2.437GHz:



Channel 9: 2.452GHz:





## 7.4 Maximum Peak Output Power

### 7.4.1 Limit (FCC PART 15 Section 15.247(b)(3), IC-RSS 247 Issue 1, [5.4.4])

#### FCC PART 15 Section 15.247(b)(3)

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

#### IC-RSS 247 Issue 1, [5.4.4]

For DTSs employing digital modulation techniques operating in the bands 2400-2483.5 MHz, the maximum peak conducted output power shall not exceed 1W. Except provided in Section 5.4(5), the e.i.r.p. shall not exceed 4 W.

Limit
Maximum Peak Output Power (Digital Modulation) $\leq$ 1Watt or 30 dBm

### 7.4.2 Test Procedure

Follow the radiated test procedure but set the Spectrum Analyzer as below:

RBW > DTS Bandwidth  
VBW  $\geq$  3 x RBW  
Span  $\geq$  3 \* RBW  
Detector: Peak  
Trace Mode: Max Hold

- (1) When the trace is completed, mark the peak value

Associated with the Maximum Peak Output Power test data in this report is a  $\pm 5.1$ dB measurement uncertainty.





### 7.4.3 Test Result

Channel No.	Frequency (MHz)	Mode	Data Rate	Measured Channel Power (dBm)	Limit	Result
1	2412	802.11b	11 Mbps	25.75	1W(30dBm)	Pass
6	2437		11 Mbps	25.58		Pass
11	2462		11 Mbps	25.02		Pass
1	2412	802.11g	54 Mbps	23.15	1W(30dBm)	Pass
6	2437		54 Mbps	23.20		Pass
11	2462		54 Mbps	22.50		Pass
1	2412	802.11n (HT20)	72.2 Mbps	23.12	1W(30dBm)	Pass
6	2437		72.2 Mbps	23.18		Pass
11	2462		72.2 Mbps	22.77		Pass
3	2422	802.11n (HT40)	150 Mbps	23.24	1W(30dBm)	Pass
6	2437		150 Mbps	23.06		Pass
9	2452		150 Mbps	21.75		Pass



## 7.5 MaximumPeak Power Spectral Density

### 7.5.1 Limit (FCC PART 15 Section 15.247(e), IC-RSS 247 Issue 1, [5.2.2])

#### FCC PART 15 Section 15.247(e)

For digitally modulated systems, the power spectral density conducted from the intentional radiator to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of paragraph (b) of this section. The same method of determining the conducted output power shall be used to determine the power spectral density

#### IC-RSS 247 Issue 1, [5.2.2]

The transmitter power spectral density conducted from the transmitter to the antenna shall not be greater than 8 dBm in any 3 kHz band during any time interval of continuous transmission. This power spectral density shall be determined in accordance with the provisions of Section 5.4(4), (i.e. the power spectral density shall be determined using the same method as is used to determine the conducted output power)

Limit
8 dBm/3 KHz

### 7.5.2 Test Procedure

Follow the radiated test procedure but set the Spectrum Analyzer as below:

3 kHz  $\leq$  RBW  $\leq$  100 kHz  
VBW  $\geq$  3 x RBW  
Span  $\geq$  1.5 \* DTS Bandwidth  
Detector: Peak  
Sweep Time auto

(1) Use Peak Marker Function

(2) If value Exceeds limit, reduce RBW (no less than 3 kHz)

Associated with the Maximum Peak Output Power test data in this report is a  $\pm 5.1$ dB measurement uncertainty.





### 7.5.3 Test Result

Channel No.	Frequency (MHz)	Mode	Data Rate	Measured Peak Power Spectral Density (dBm/3KHz)	Limit	Result
1	2412	802.11b	11 Mbps	-4.69	8dBm/3KHz	Pass
6	2437		11 Mbps	-5.16		Pass
11	2462		11 Mbps	-5.88		Pass
1	2412	802.11g	54 Mbps	-18.33	8dBm/3KHz	Pass
6	2437		54 Mbps	-18.33		Pass
11	2462		54 Mbps	-17.01		Pass
1	2412	802.11n (HT20)	72.2 Mbps	-17.49		Pass
6	2437		72.2 Mbps	-17.83		Pass
11	2462		72.2 Mbps	-16.08		Pass
3	2422	802.11n (HT40)	150 Mbps	-24.52	8dBm/3KHz	Pass
6	2437		150 Mbps	-28.58		Pass
9	2452		150 Mbps	-29.94		Pass



## 7.6 Antenna Requirement

### 7.6.1 Requirement (FCC PART 15 SECTION 15.203,15.247(b)(4))

An intentional radiator shall be designed to ensure that no antenna other than that furnished by the responsible party shall be used with the device. The use of a permanently attached antenna or of an antenna that uses a unique coupling to the intentional radiator shall be considered sufficient to comply with the provisions of this Section.

(4) The conducted output power limit specified in paragraph (b) of this section is based on the use of antennas with directional gains that do not exceed 6 dBi. Except as shown in paragraph (c) of this section, if transmitting antennas of directional gain greater than 6 dBi are used, the conducted output power from the intentional radiator shall be reduced below the stated values in paragraphs (b)(1), (b)(2), and (b)(3) of this section, as appropriate, by the amount in dB that the directional gain of the antenna exceeds 6 dBi.

### 7.6.2 Test Result

The antenna is internal antenna (Using pogo pin connector to touch the metal area of antenna) and no consideration of replacement. Antenna gain is maximum 3 dBi from 2.4GHz to 2.5GHz.





## **8. CONCLUSIONS / COMPLIANCE STATEMENT**

Based upon the results contained in this report, AAEMT has determined that the Product, Model: , meets all of the specification limits defined in FCC Title 47, Part 15, Subpart C.





# APPENDIX A

## *DATA SHEETS & Setup Photographs*



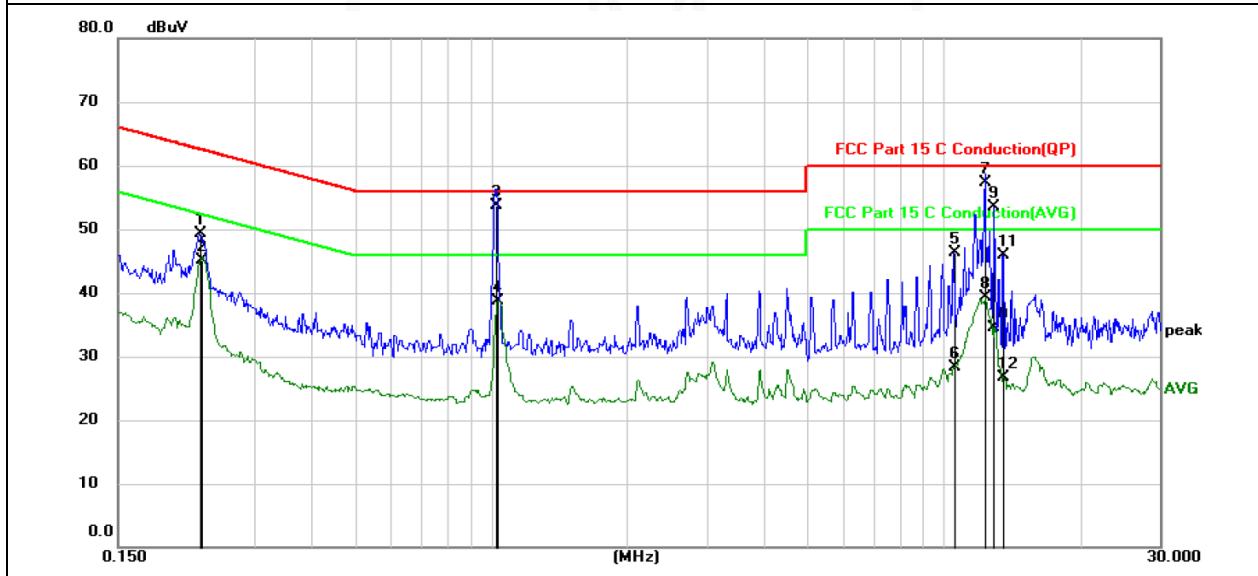


## Conduction Emissions Measurement

EUT :	Driveri	Model Name. :	D-210
Temperature :	26°C	Relative Humidity :	54%
Pressure :	1010hPa	Test Date :	2020-06-23
Test Mode :	TX (11Mbps) CH1 (worst case)	Phase :	Line
<b>Test Voltage :</b>	DC 12V		

No.	Mk.	Freq. MHz	Reading Level	Correct Factor	Measure- ment	Limit	Over
			dBuV	dB	dBuV	dB	Detector
1		0.2270	33.81	15.46	49.27	62.56	-13.29 QP
2		0.2280	29.72	15.46	45.18	52.52	-7.34 AVG
3 *		1.0258	38.35	15.40	53.75	56.00	-2.25 QP
4		1.0354	23.37	15.40	38.77	46.00	-7.23 AVG
5		10.5250	30.99	15.35	46.34	60.00	-13.66 QP
6		10.5250	13.04	15.35	28.39	50.00	-21.61 AVG
7		12.2987	41.86	15.35	57.21	60.00	-2.79 QP
8		12.3000	23.89	15.35	39.24	50.00	-10.76 AVG
9		12.9000	38.11	15.35	53.46	60.00	-6.54 QP
10		12.9000	19.18	15.35	34.53	50.00	-15.47 AVG
11		13.5000	30.54	15.34	45.88	60.00	-14.12 QP
12		13.5000	11.44	15.34	26.78	50.00	-23.22 AVG

Remark: Factor = LISN factor + Cable Loss + Pulse limiter factor.

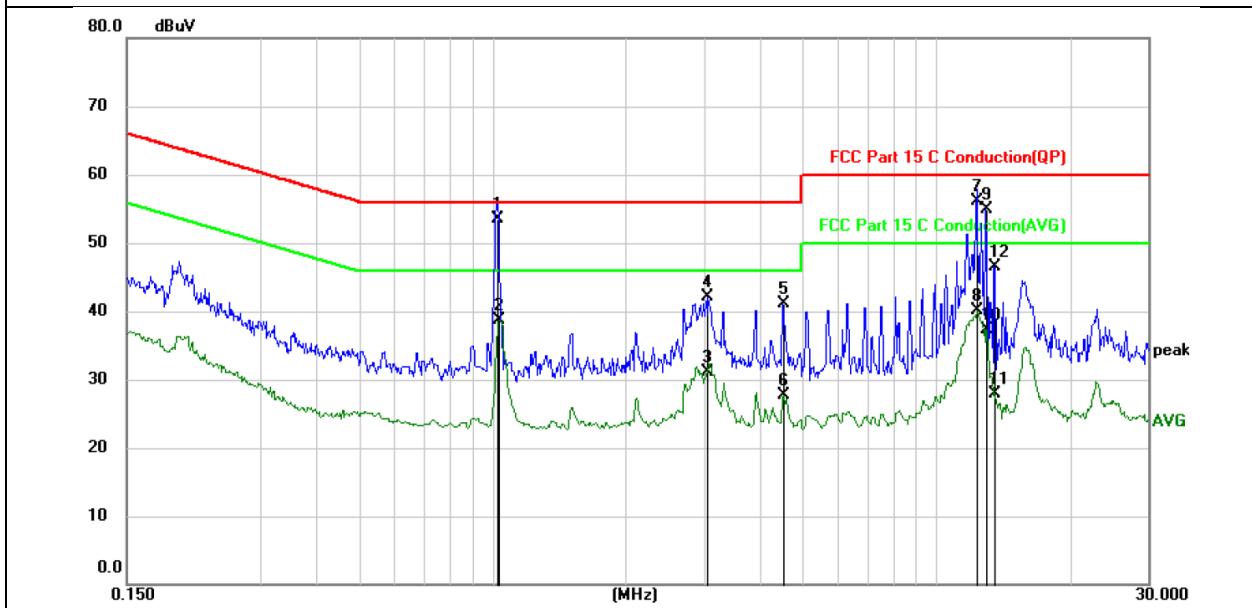




EUT :	Driveri	Model Name. :	D-210
Temperature :	26°C	Relative Humidity :	54%
Pressure :	1010hPa	Test Date :	2020-06-23
Test Mode :	TX (11Mbps) CH1 (worst case)	Phase :	Neutral
<b>Test Voltage :</b>	DC 12V		

No.	Mk.	Freq. MHz	Reading Level	Correct Factor	Measure- ment	Limit	Over dB	Over Detector
			dBuV					
1	*	1.0234	38.17	15.40	53.57	56.00	-2.43	QP
2		1.0354	23.38	15.40	38.78	46.00	-7.22	AVG
3		3.0424	15.72	15.41	31.13	46.00	-14.87	AVG
4		3.0425	26.63	15.41	42.04	56.00	-13.96	QP
5		4.5050	25.66	15.41	41.07	56.00	-14.93	QP
6		4.5095	12.29	15.41	27.70	46.00	-18.30	AVG
7		12.2990	40.79	15.35	56.14	60.00	-3.86	QP
8		12.3249	24.78	15.35	40.13	50.00	-9.87	AVG
9		12.9250	39.50	15.35	54.85	60.00	-5.15	QP
10		12.9250	21.88	15.35	37.23	50.00	-12.77	AVG
11		13.5000	12.49	15.34	27.83	50.00	-22.17	AVG
12		13.5250	31.20	15.35	46.55	60.00	-13.45	QP

Remark: Factor = LISN factor + Cable Loss + Pulse limiter factor.



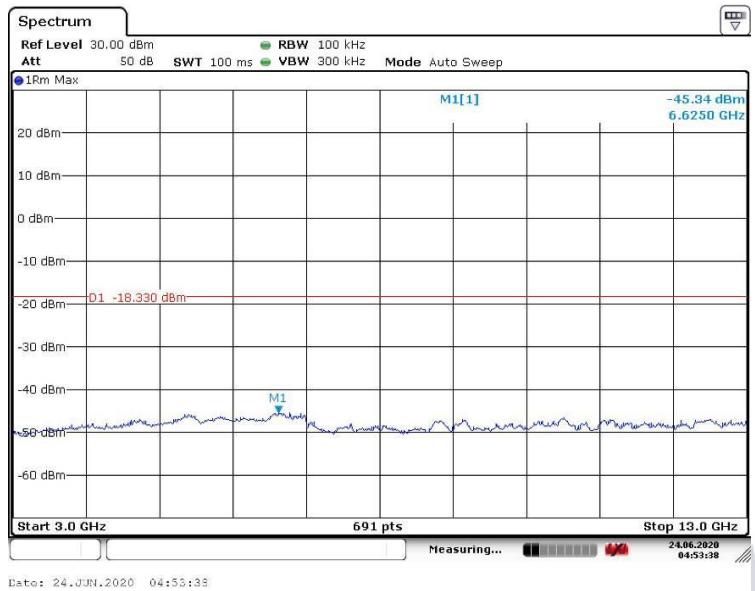


## Conducted Spurious Emissions

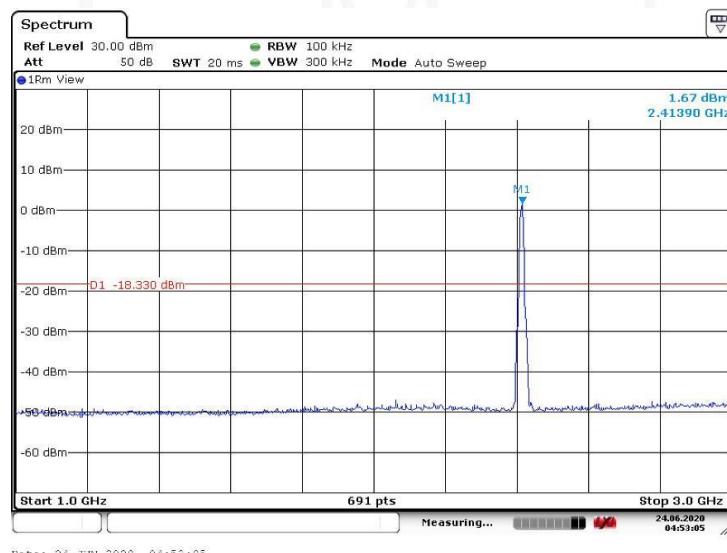
**802.11b mode with 11Mbps data rate (Worst case)**

Channel 1: 2.412GHz:

30 MHz to 1 GHz

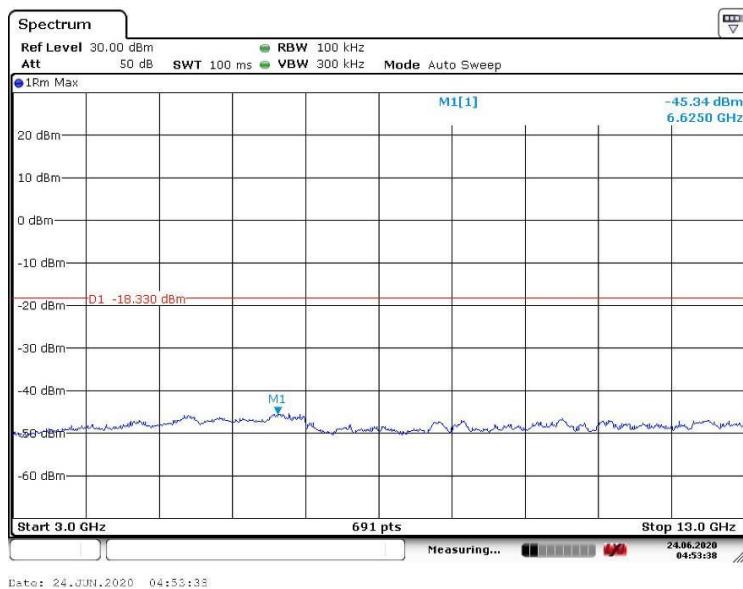


1 G to 3 GHz

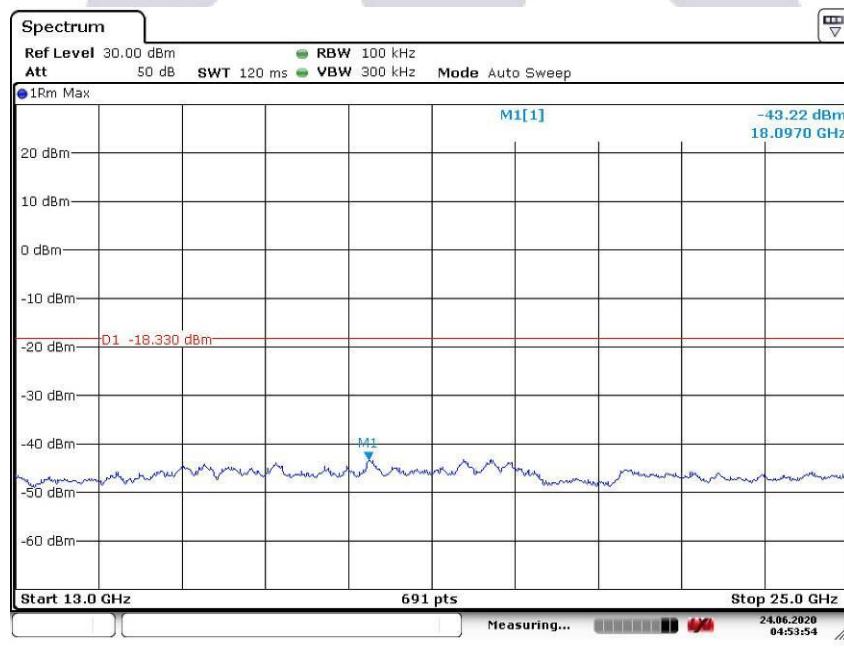




3 G to 13 GHz



13 G to 25 GHz



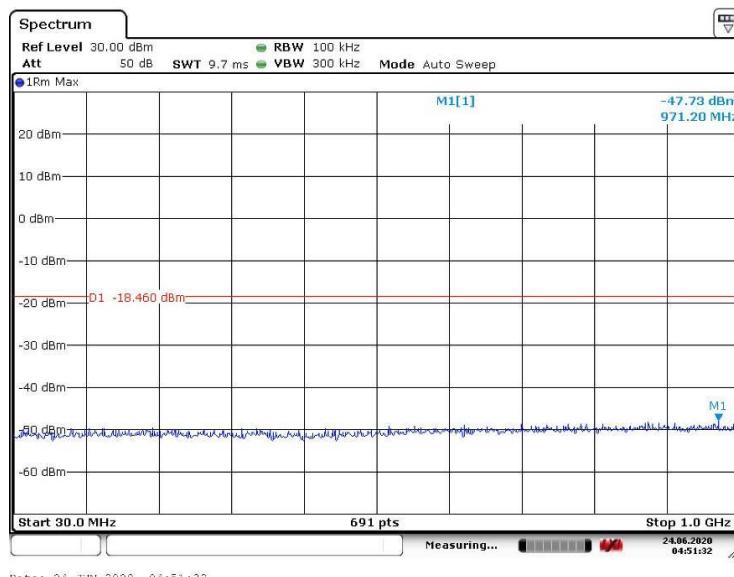


Report No:AAEMT/EMC/200623-02-04

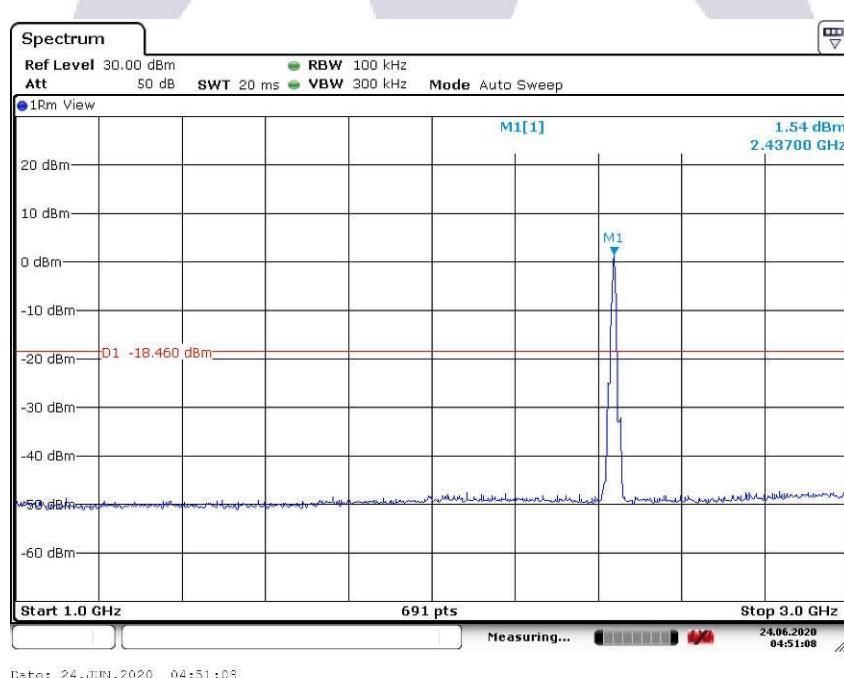
Certificate#5593.01

Channel 6: 2.437GHz:

30 MHz to 1 GHz

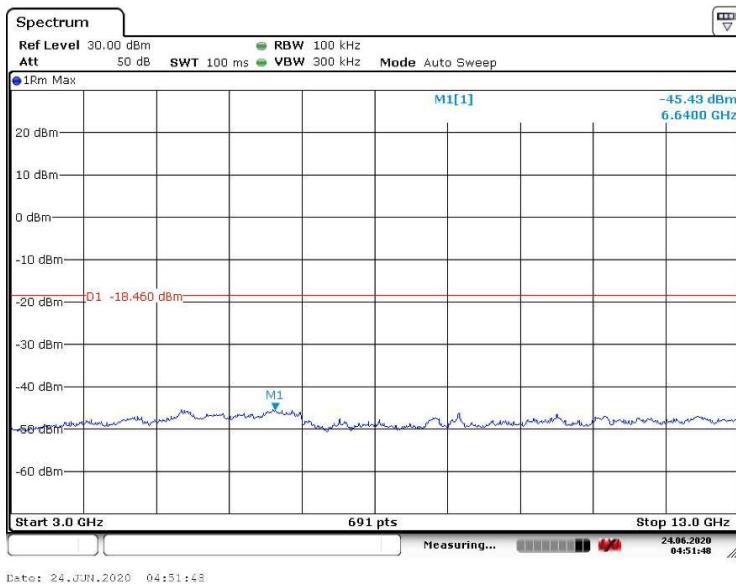


1 G to 3 GHz

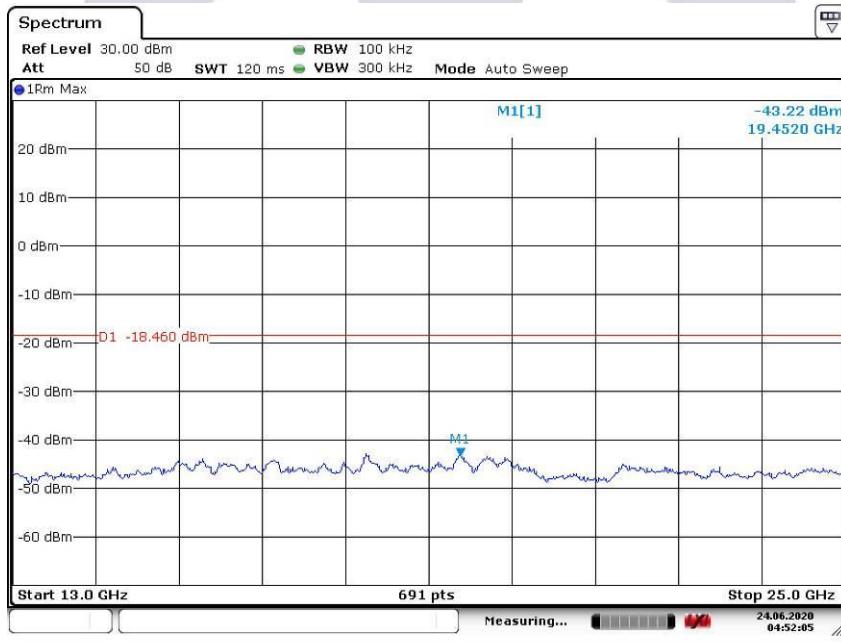




3 G to 13 GHz



13 G to 25 GHz



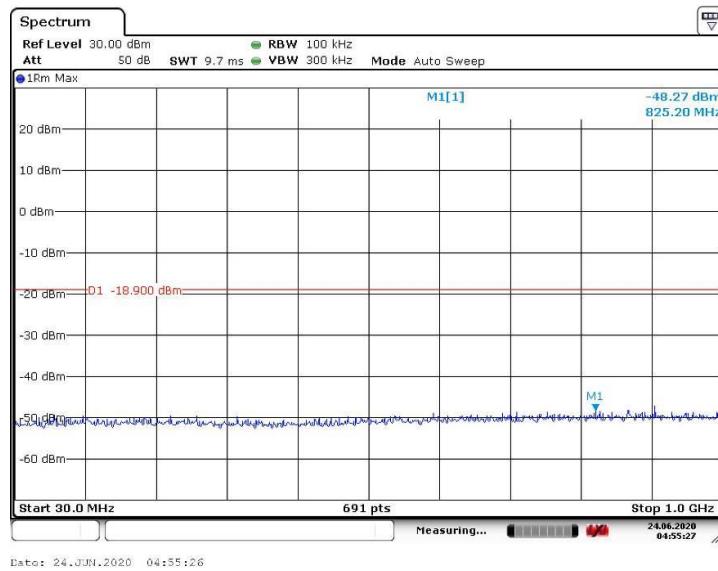


Report No:AAEMT/EMC/200623-02-04

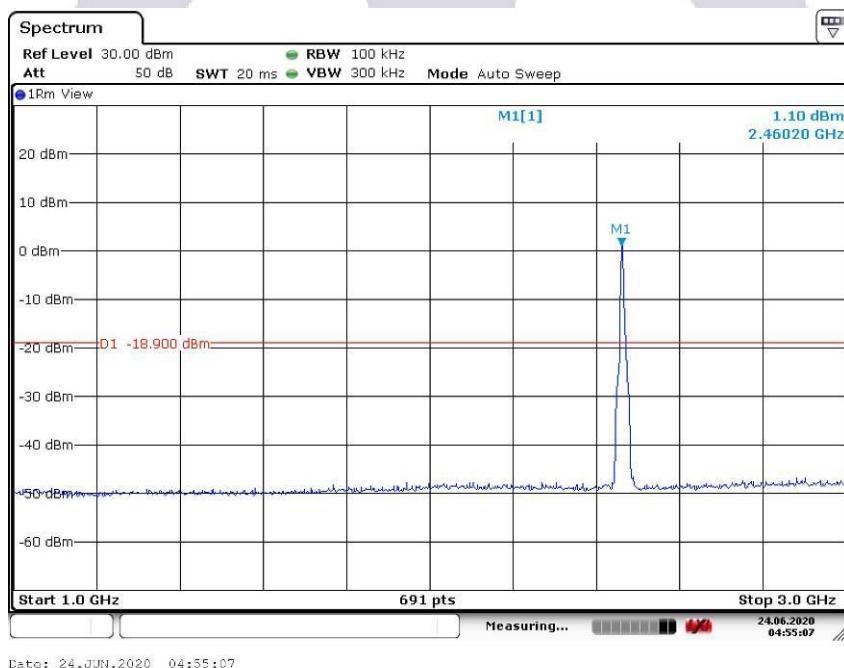
Certificate#5593.01

Channel 11:2.462 GHz

30 MHz to 1 GHz



1 G to 3 GHz

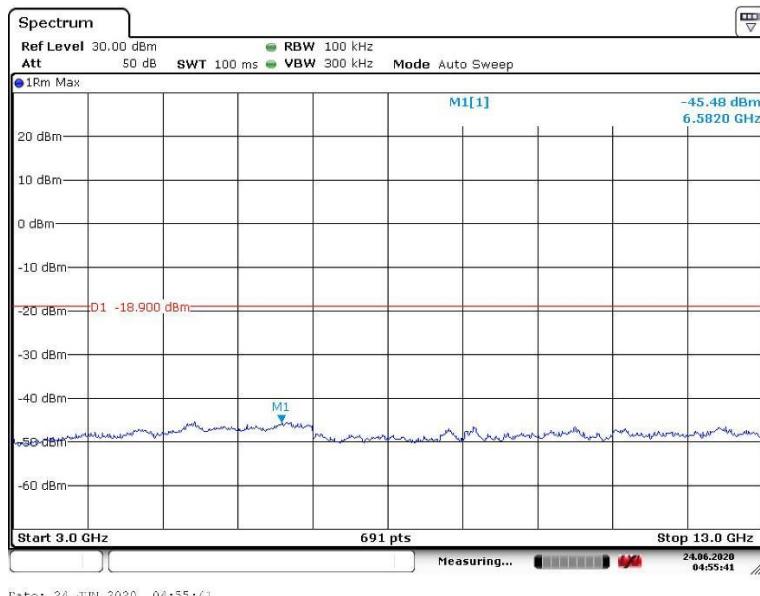




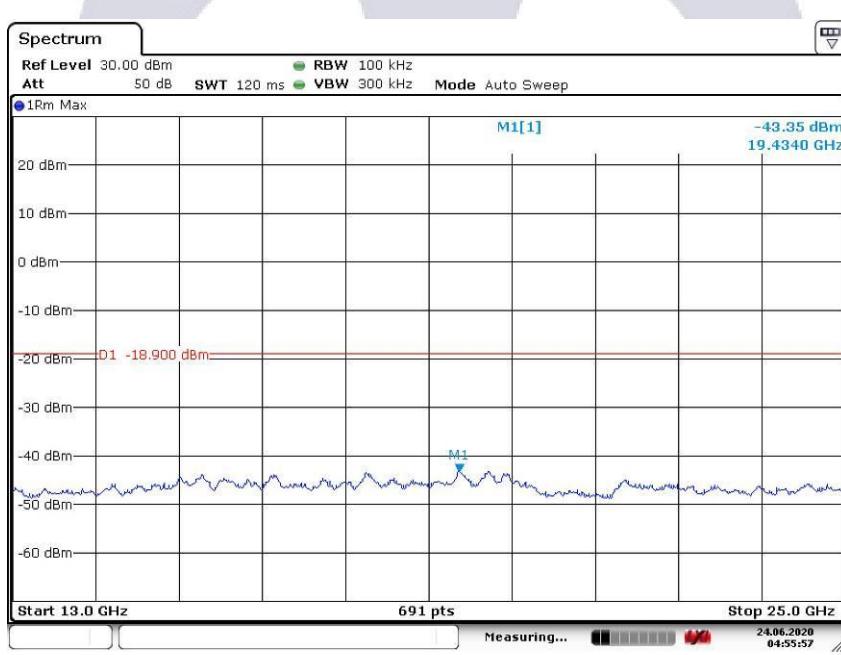
Report No:AAEMT/EMC/200623-02-04

Certificate#5593.01

3 G to 13 GHz



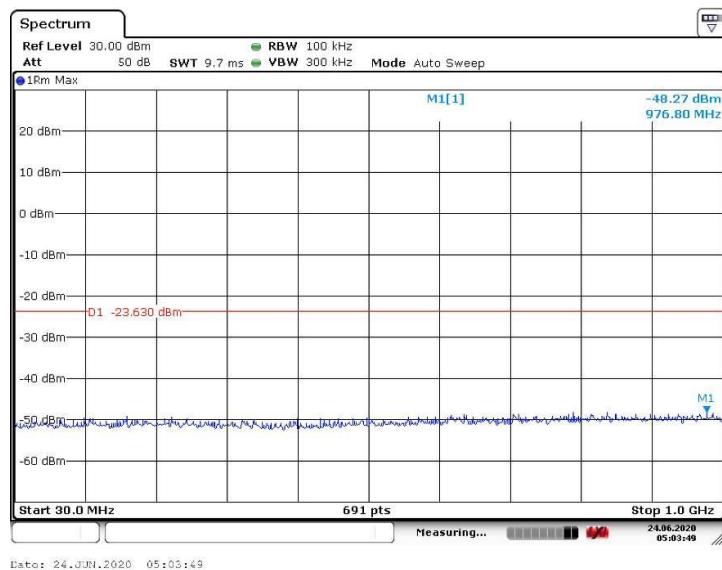
13 G to 25 GHz



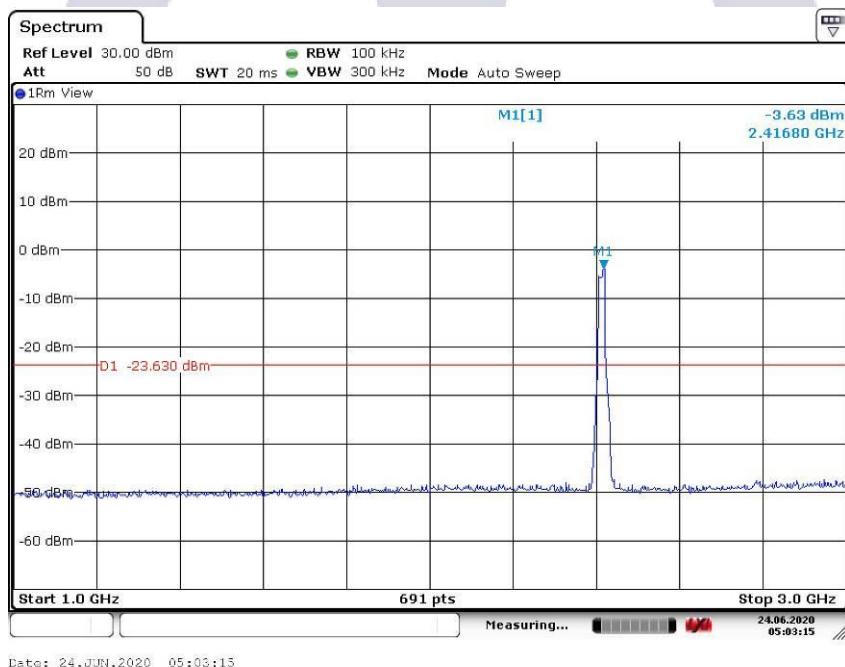
**802.11g mode with 54Mbps data rate (Worst case)**

Channel 1: 2.412GHz:

30 MHz to 1 GHz

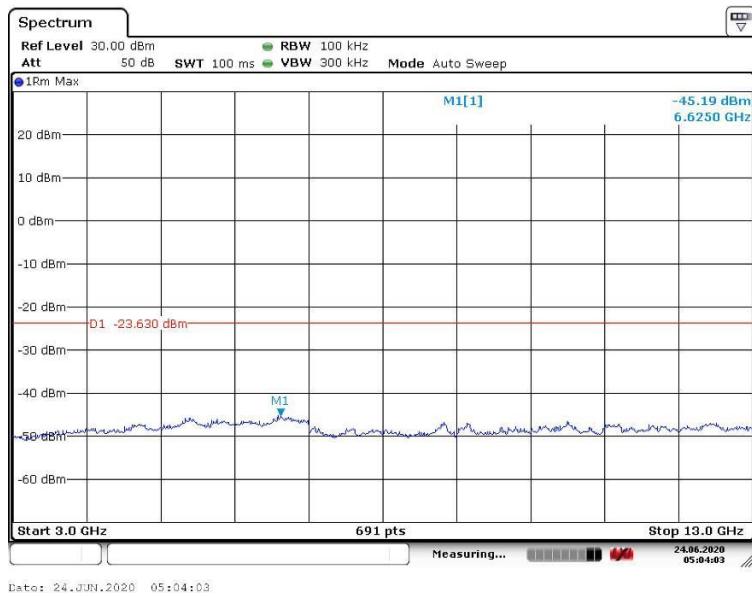


1 G to 3 GHz

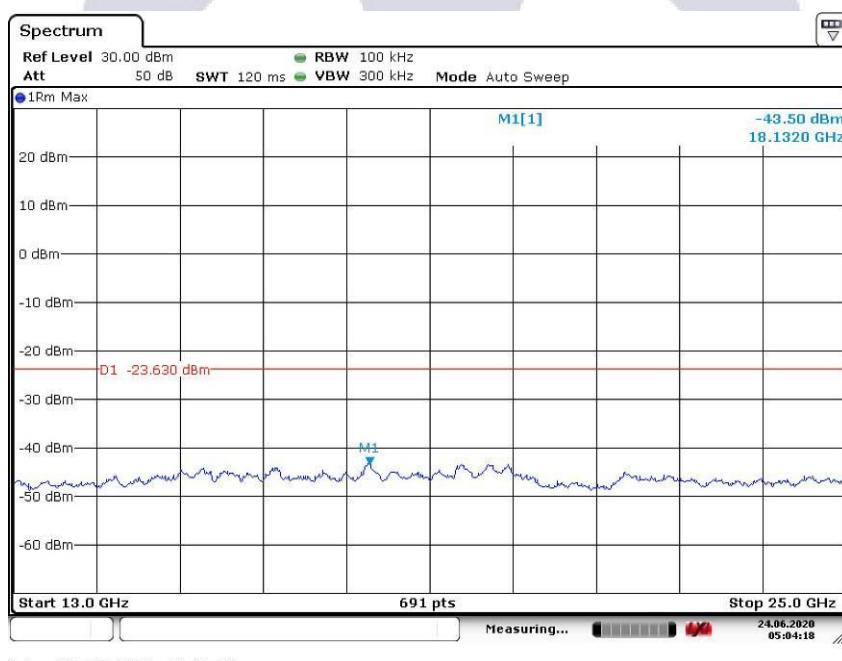




3 G to 13 GHz



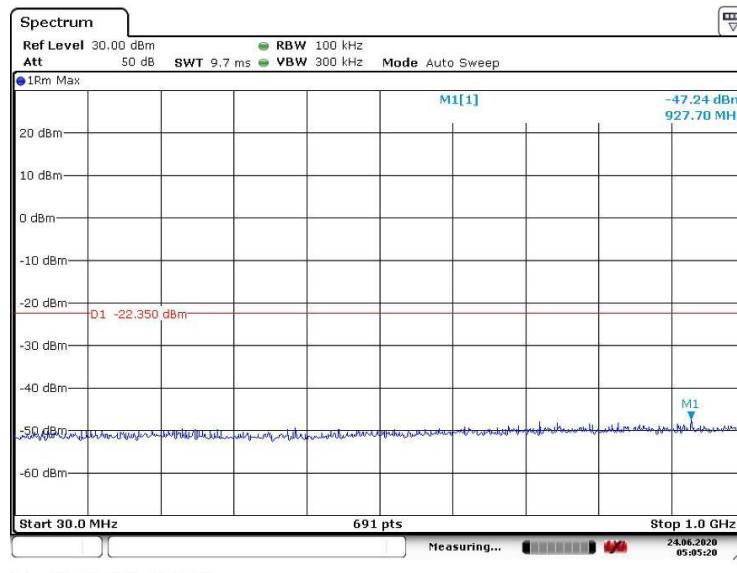
13 G to 25 GHz



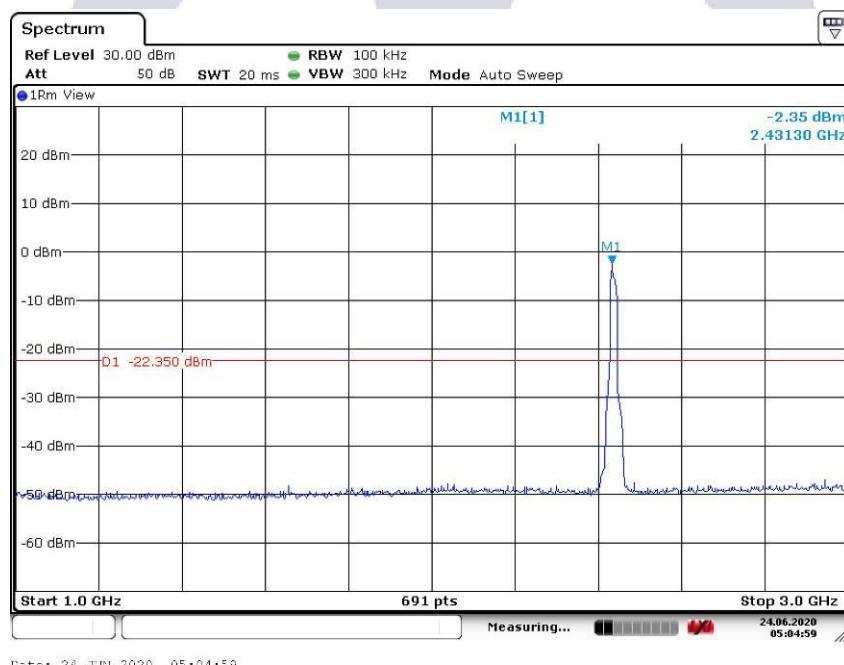


Channel 6: 2.437GHz:

30 MHz to 1 GHz



1 G to 3 GHz

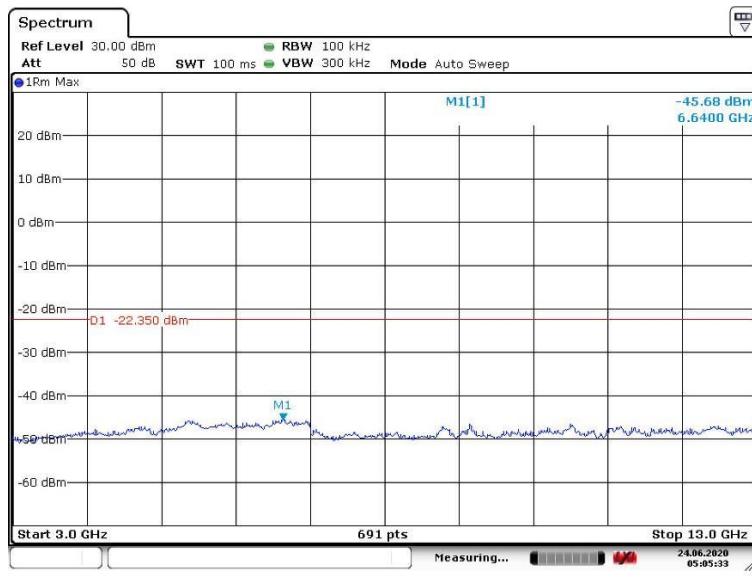




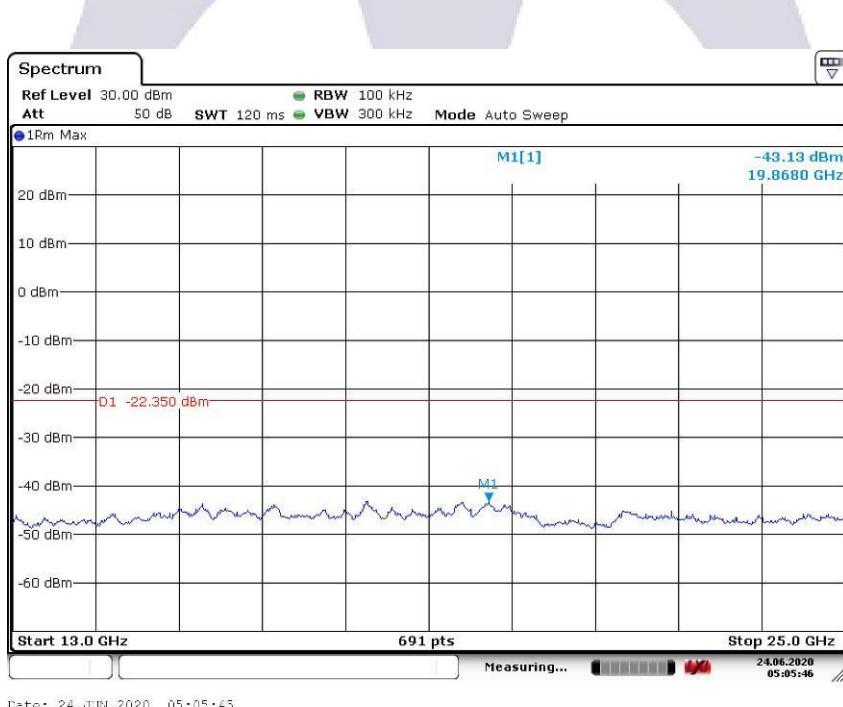
Report No:AAEMT/EMC/200623-02-04

Certificate#5593.01

3 G to 13 GHz



13 G to 25 GHz



50 | Page

Plot 174, Udyog Vihar Phase 4, Sector -18, Gurgoan, Haryana, India.

Contact:0124-4235350,4145343;e-mail:[info@aaemtlabs.com](mailto:info@aaemtlabs.com);Website: [www.aaemtlabs.com](http://www.aaemtlabs.com)

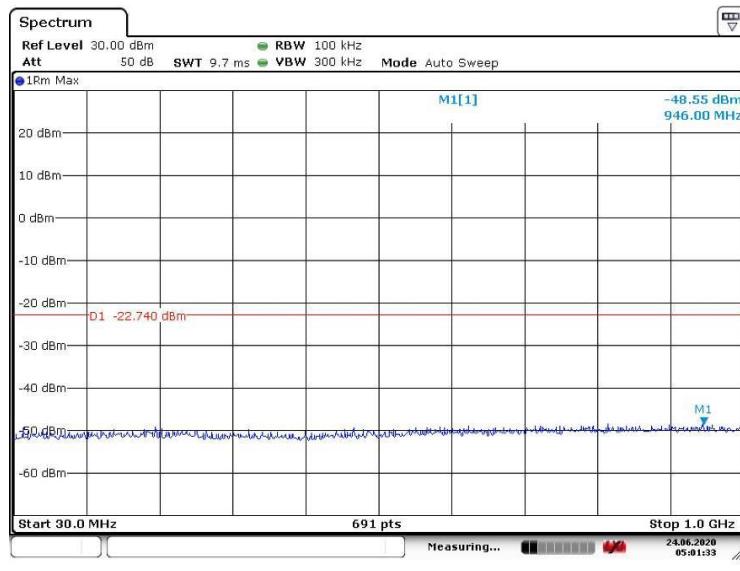
An ISO 17025: 2017, Accredited Laboratory ,VCCI (support member – #4053),ISED#: 26046, FCC #0029402088 CE #800058\_00



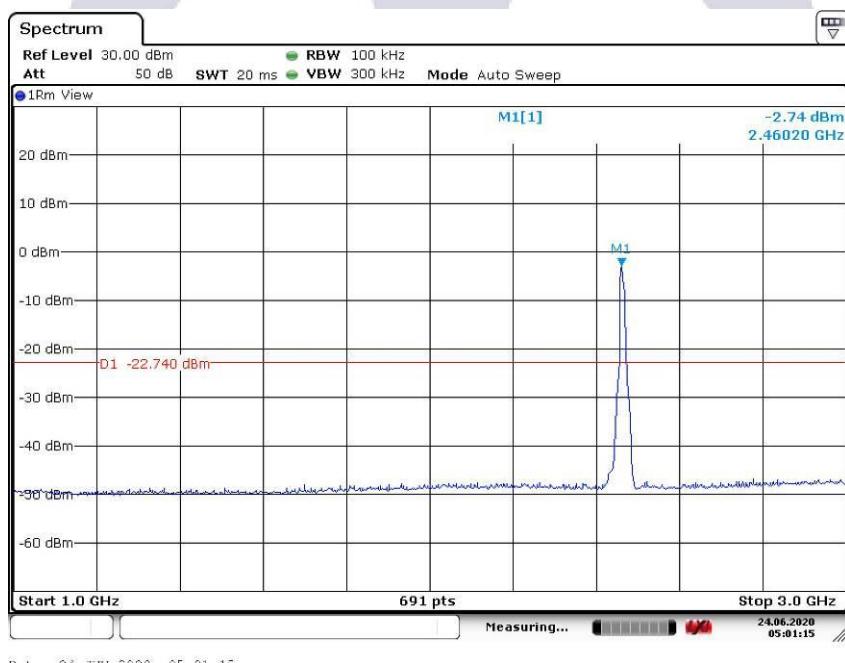


Channel 11:2.462 GHz

30 MHz to 1 GHz



1 G to 3 GHz

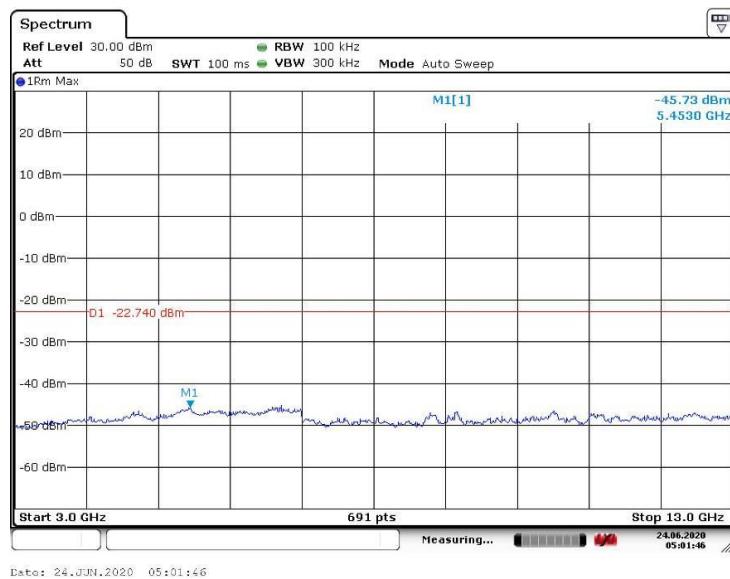




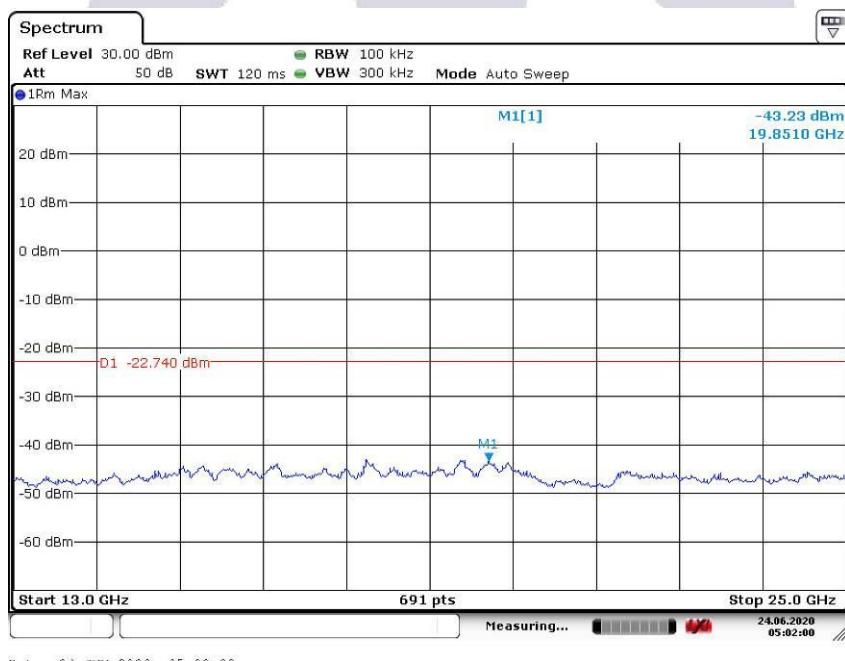
Report No:AAEMT/EMC/200623-02-04

Certificate#5593.01

3 G to 13 GHz



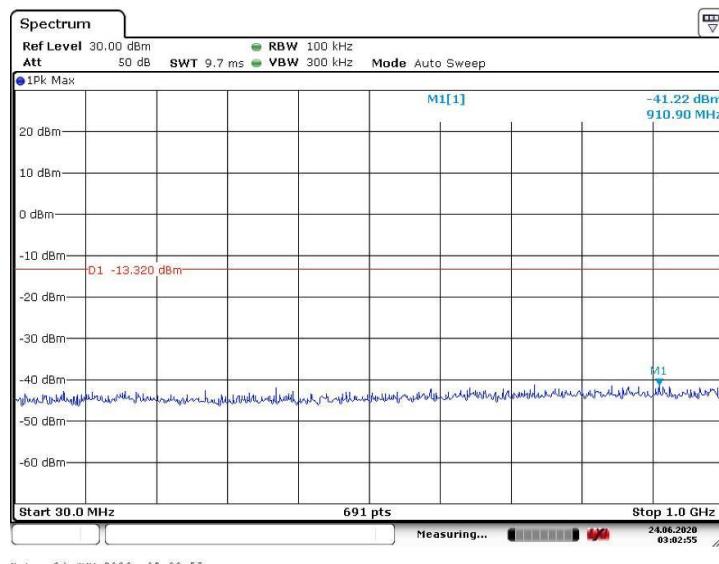
13 G to 25 GHz



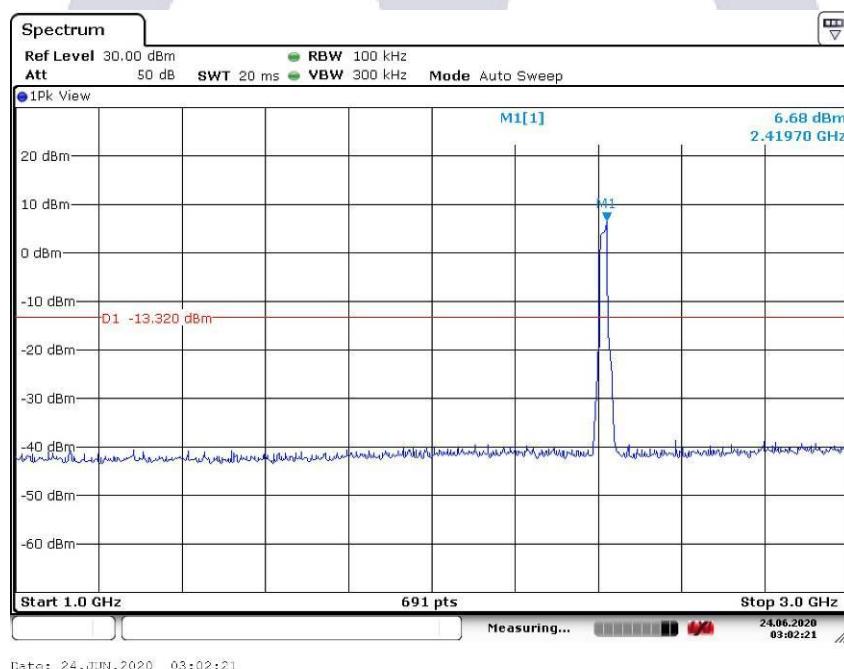
**802.11n(HT20) mode with 72.2Mbps data rate (Worst case)**

Channel 1: 2.412GHz:

30 MHz to 1 GHz



1 G to 3 GHz

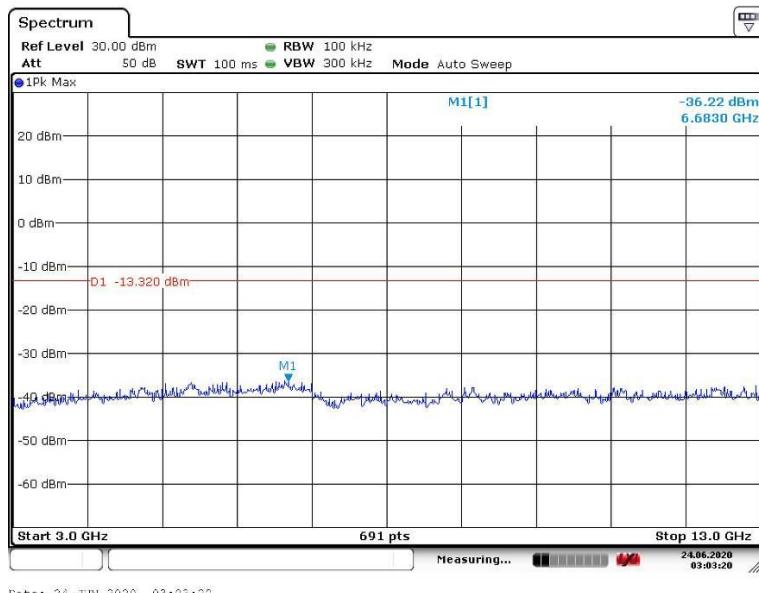




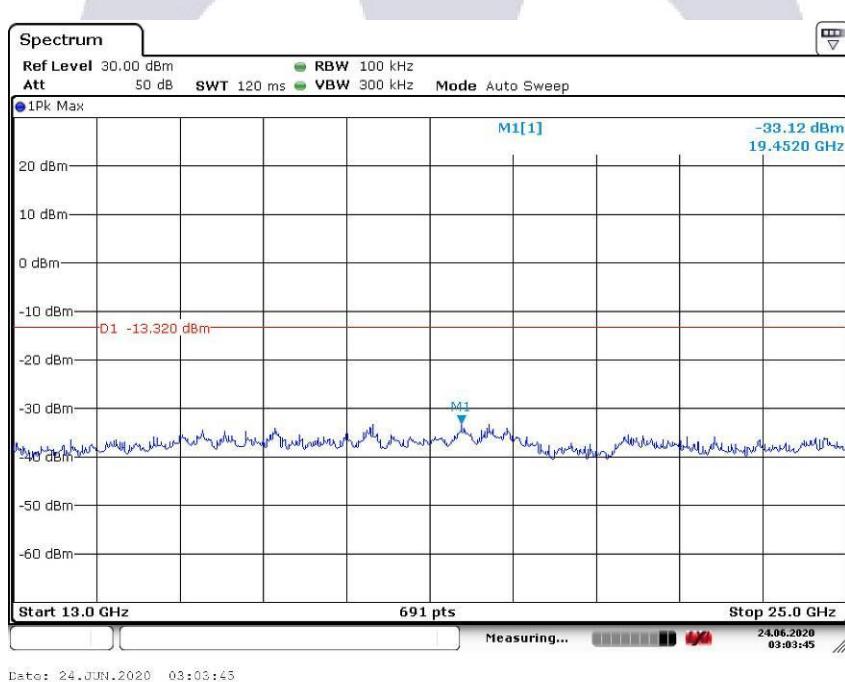
Report No:AAEMT/EMC/200623-02-04

Certificate#5593.01

3 G to 13 GHz



13 G to 25 GHz



54 | P a g e

Plot 174, Udyog Vihar Phase 4, Sector -18, Gurgoan, Haryana, India.

Contact:0124-4235350,4145343;e-mail:[info@aaemtlabs.com](mailto:info@aaemtlabs.com);Website: [www.aaemtlabs.com](http://www.aaemtlabs.com)

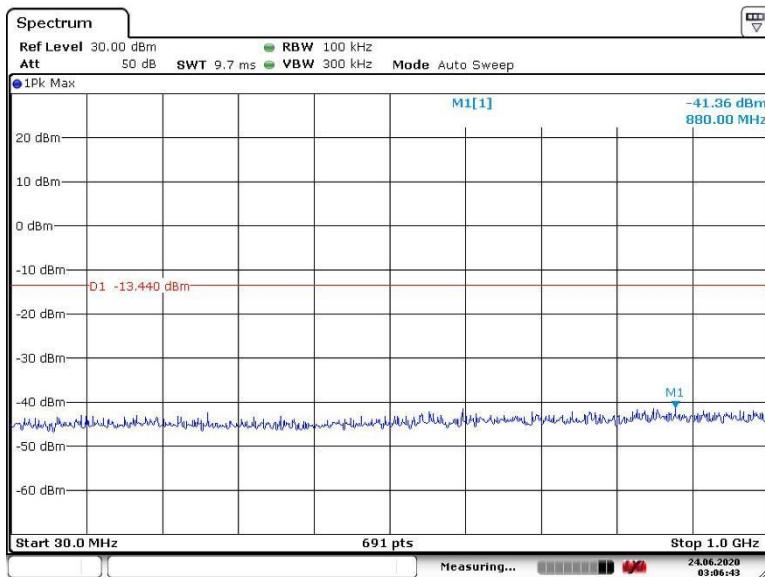
An ISO 17025: 2017, Accredited Laboratory ,VCCI (support member – #4053),ISED#: 26046, FCC #0029402088 CE #800058\_00





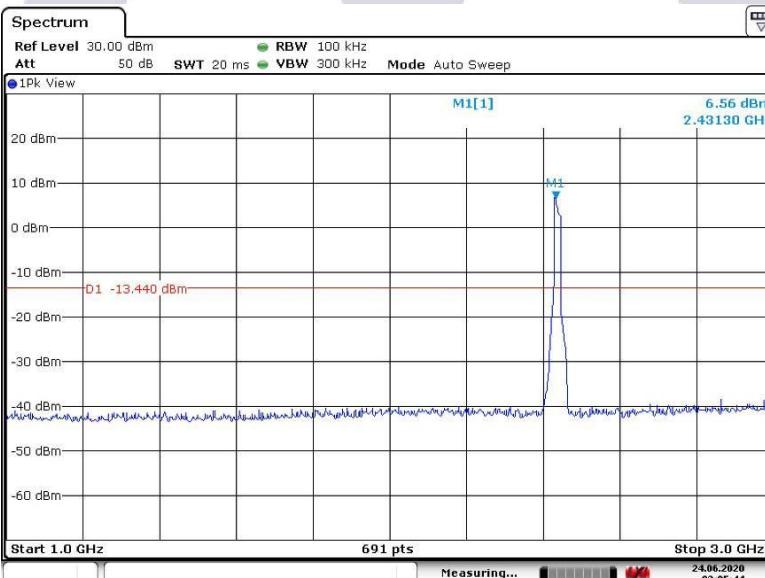
Channel 6: 2.437GHz:

30 MHz to 1 GHz



Date: 24.JUN.2020 03:06:43

1 G to 3 GHz

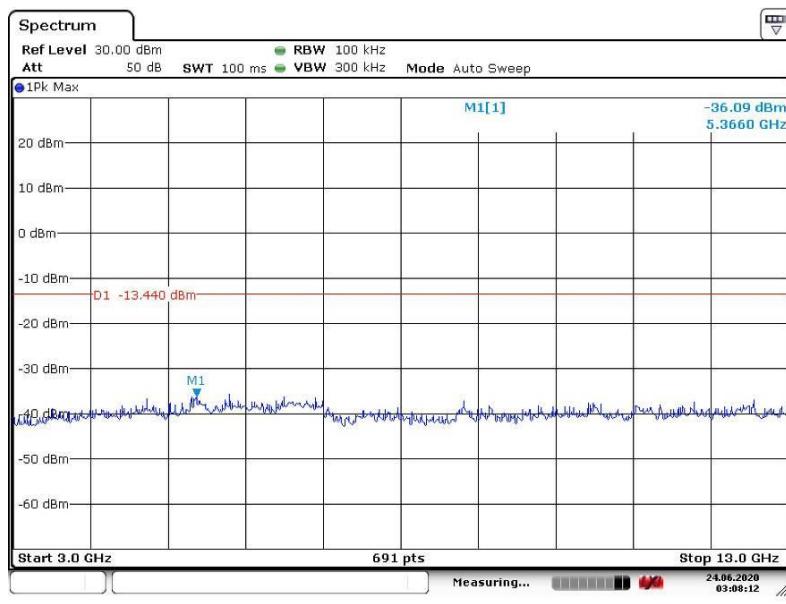


Date: 24.JUN.2020 03:05:44

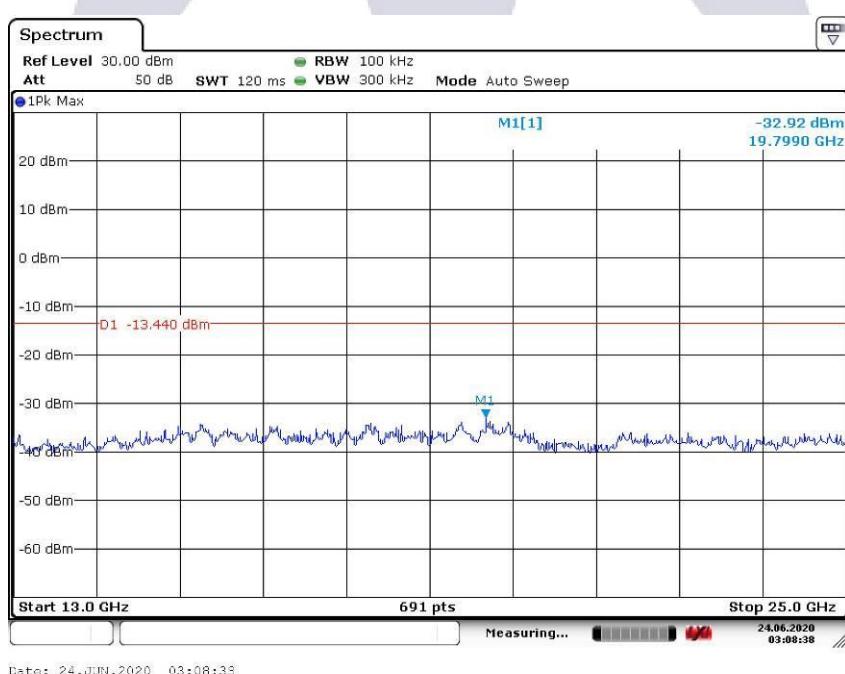




3 G to 13 GHz



13 G to 25 GHz



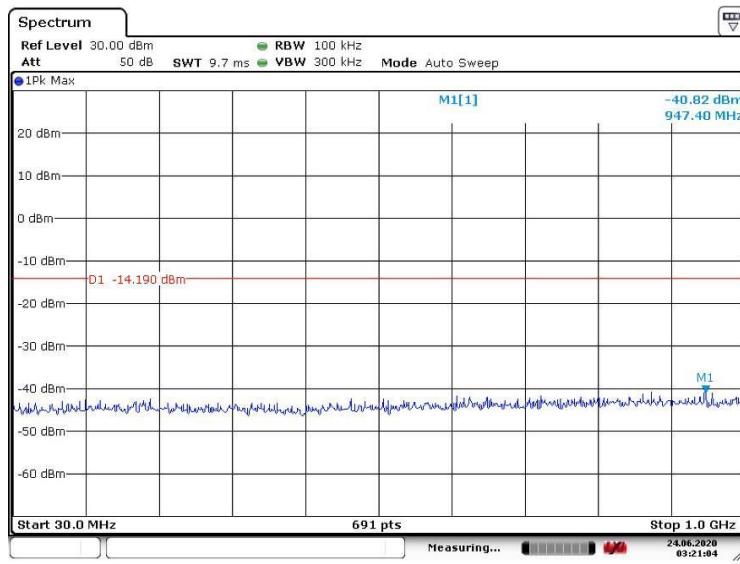


Report No:AAEMT/EMC/200623-02-04

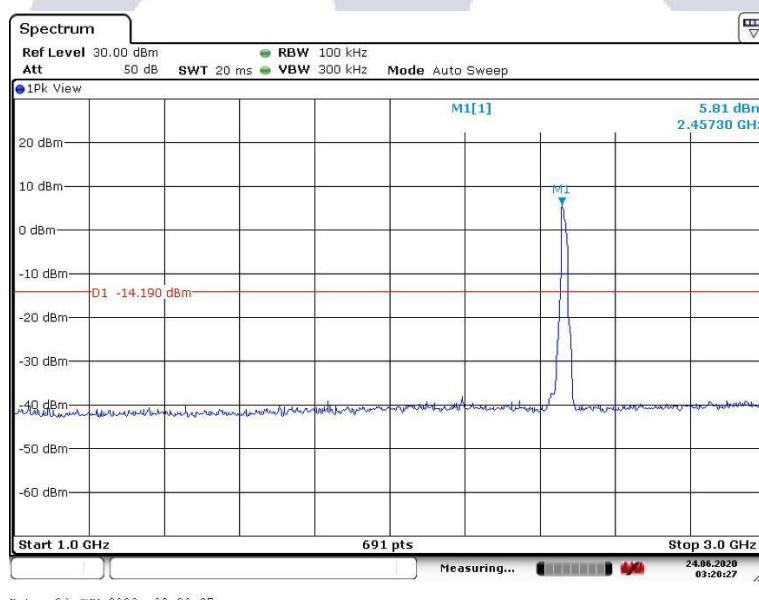
Certificate#5593.01

Channel 11:2.462 GHz

30 MHz to 1 GHz



1 G to 3 GHz



3 G to 13 GHz

57 | P a g e

Plot 174, Udyog Vihar Phase 4, Sector -18, Gurgoan, Haryana, India.

Contact: 0124-4235350, 4145343; e-mail: [info@aaemtlabs.com](mailto:info@aaemtlabs.com); Website: [www.aaemtlabs.com](http://www.aaemtlabs.com)

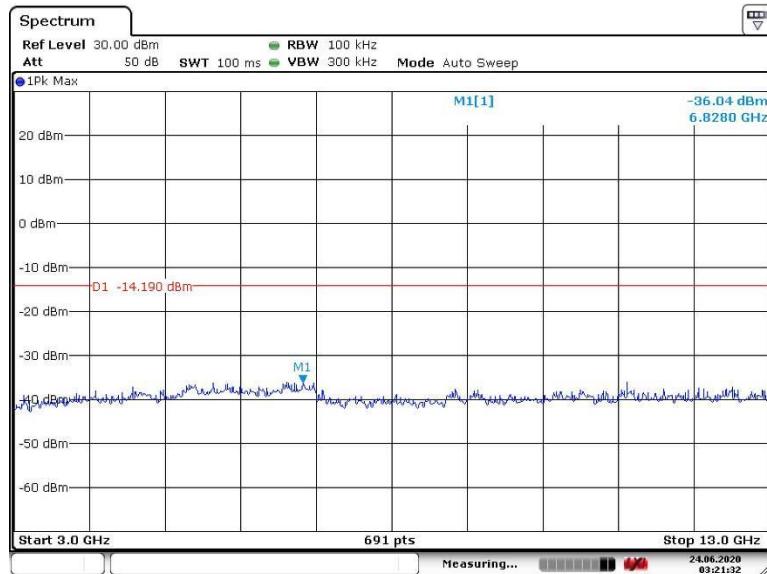
An ISO 17025: 2017, Accredited Laboratory ,VCCI (support member – #4053), ISED#: 26046, FCC #0029402088 CE #800058\_00





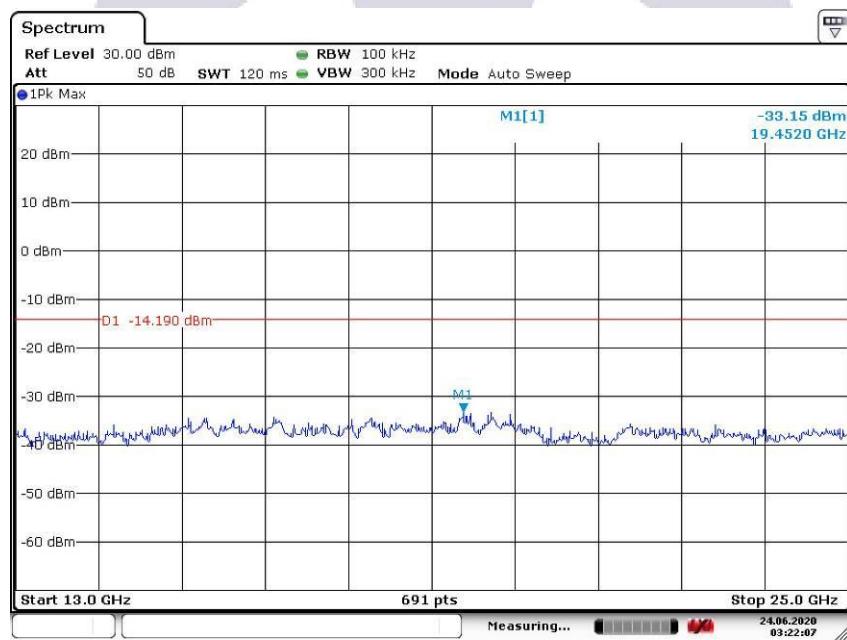
Report No:AAEMT/EMC/200623-02-04

Certificate#5593.01



Date: 24.JUN.2020 03:21:32

13 G to 25 GHz



Date: 24.JUN.2020 03:22:07

### 802.11n(HT40) mode with 150Mbps data rate (Worst case)

58 | P a g e

Plot 174, Udyog Vihar Phase 4, Sector -18, Gurgoan, Haryana, India.

Contact:0124-4235350,4145343;e-mail:[info@aaemtlabs.com](mailto:info@aaemtlabs.com);Website: [www.aaemtlabs.com](http://www.aaemtlabs.com)

An ISO 17025: 2017, Accredited Laboratory ,VCCI (support member – #4053),ISED#: 26046, FCC #0029402088 CE #800058\_00



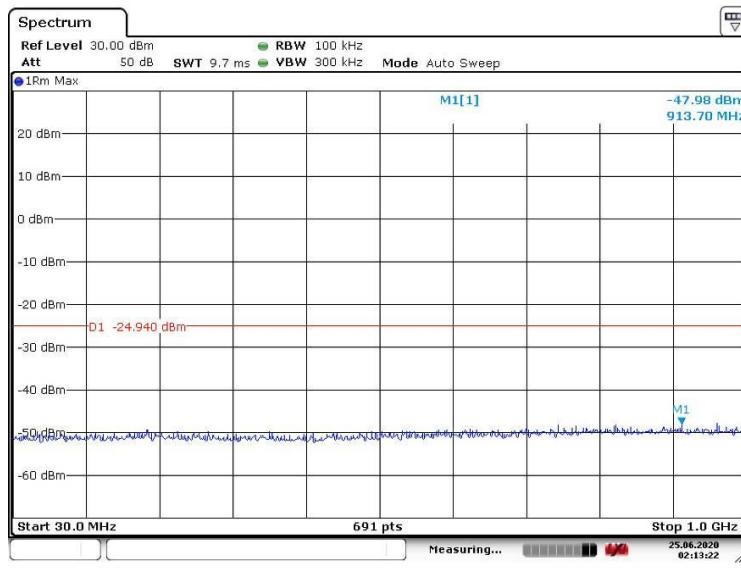


Report No:AAEMT/EMC/200623-02-04

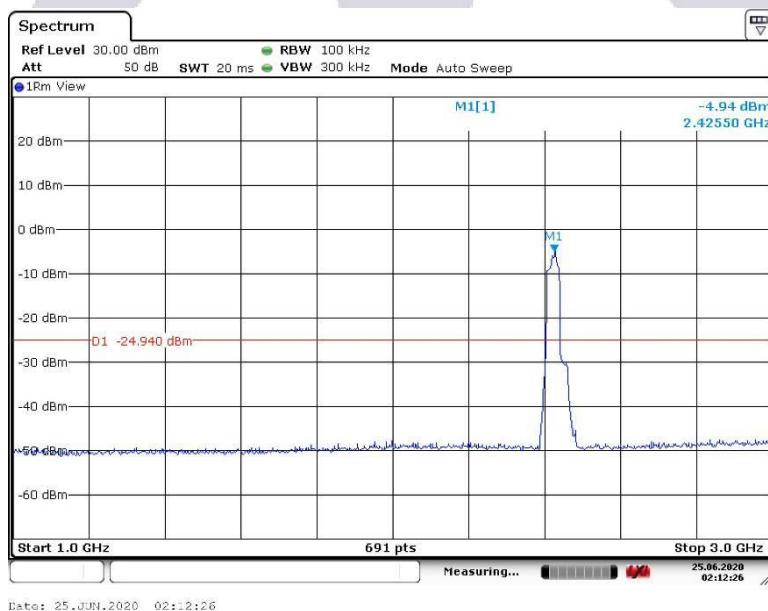
Certificate#5593.01

Channel 3: 2.422GHz:

30 MHz to 1 GHz



1 G to 3 GHz

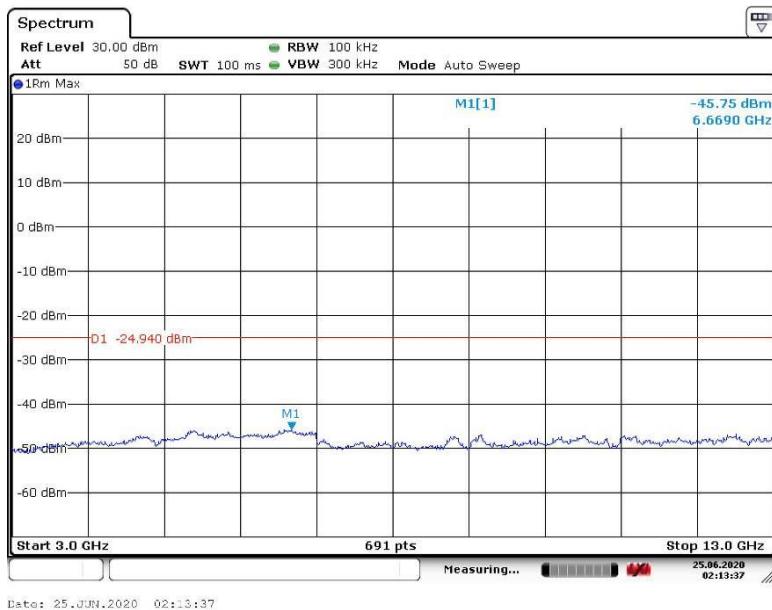




Report No:AAEMT/EMC/200623-02-04

Certificate#5593.01

3 G to 13 GHz



13 G to 25 GHz



60 | Page

Plot 174, Udyog Vihar Phase 4, Sector -18, Gurgoan, Haryana, India.

Contact:0124-4235350,4145343;e-mail:[info@aaemtlabs.com](mailto:info@aaemtlabs.com);Website: [www.aaemtlabs.com](http://www.aaemtlabs.com)

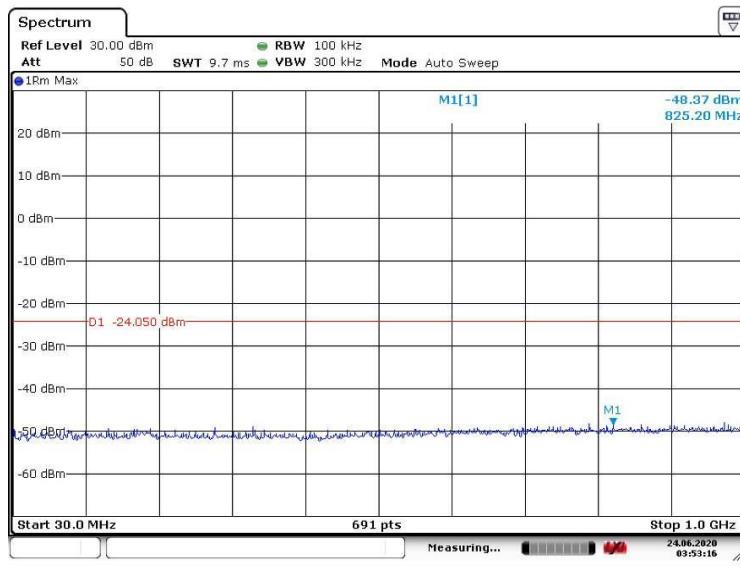
An ISO 17025: 2017, Accredited Laboratory ,VCCI (support member – #4053),ISED#: 26046, FCC #0029402088 CE #800058\_00



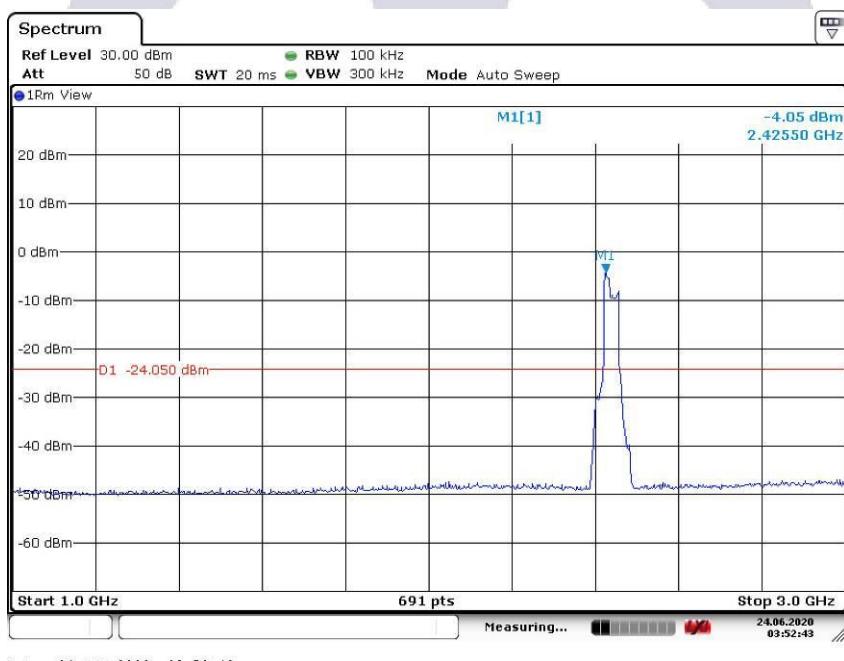


Channel 6: 2.437GHz:

30 MHz to 1 GHz

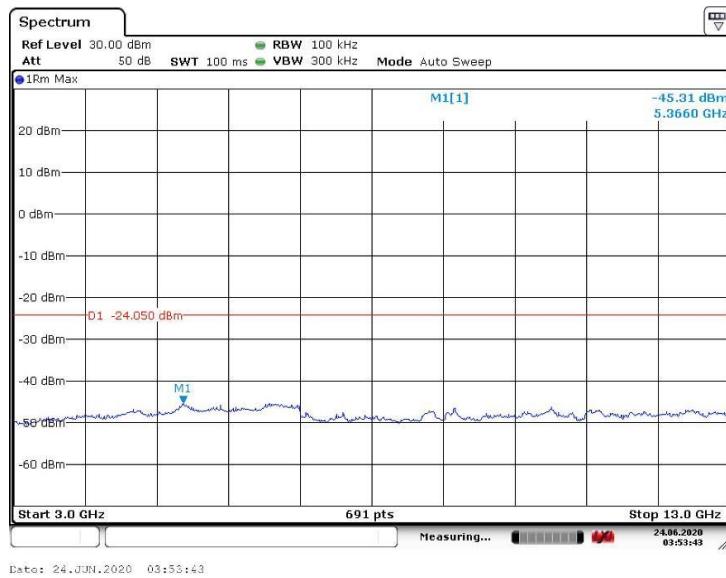


1 G to 3 GHz

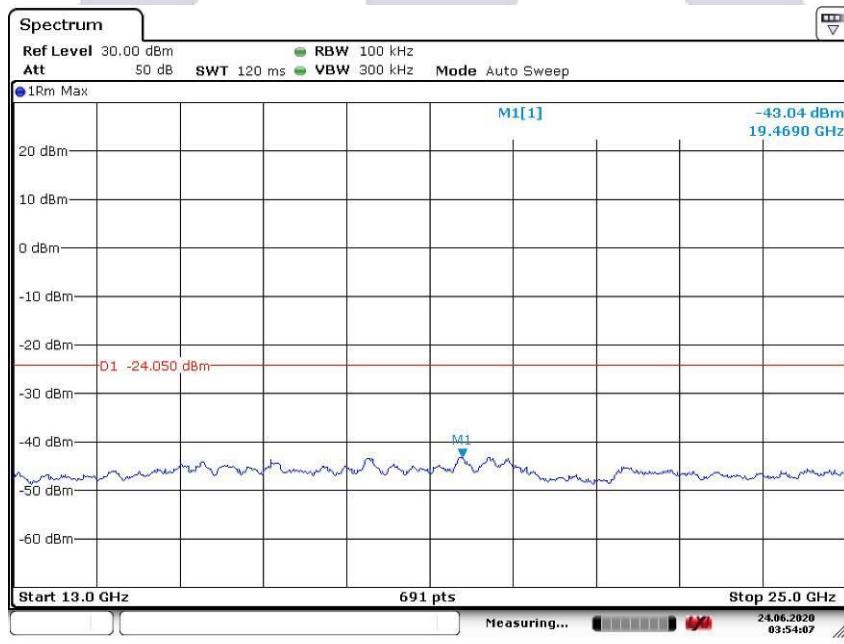




3 G to 13 GHz



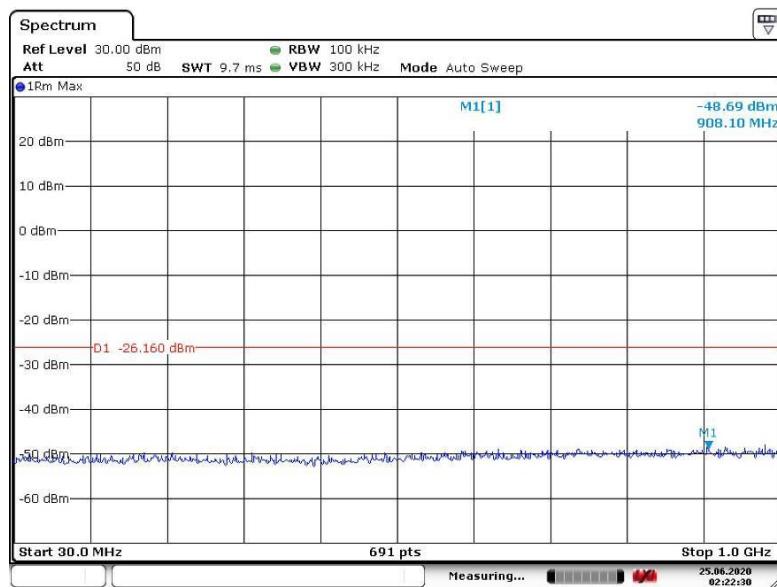
13 G to 25 GHz





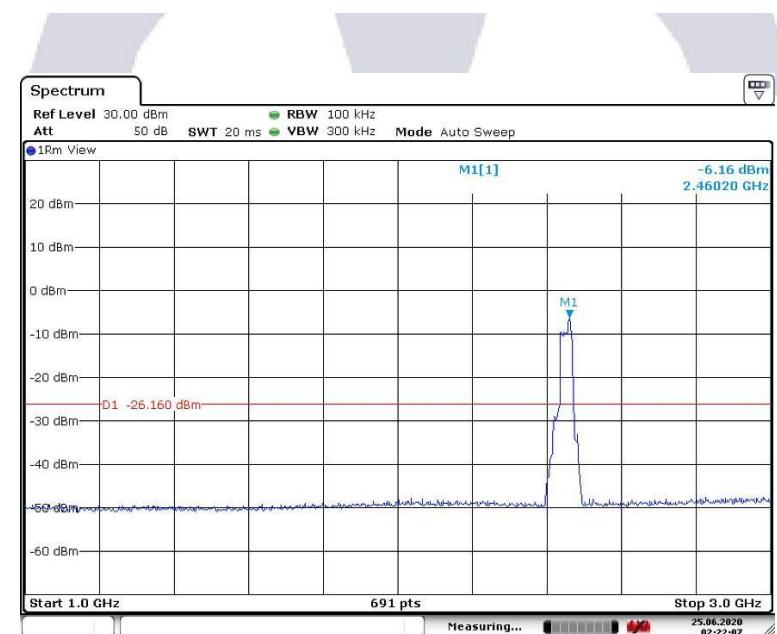
Channel 9:2.452 GHz

30 MHz to 1 GHz



Date: 25.JUN.2020 02:22:30

1 G to 3 GHz



Date: 25.JUN.2020 02:22:05

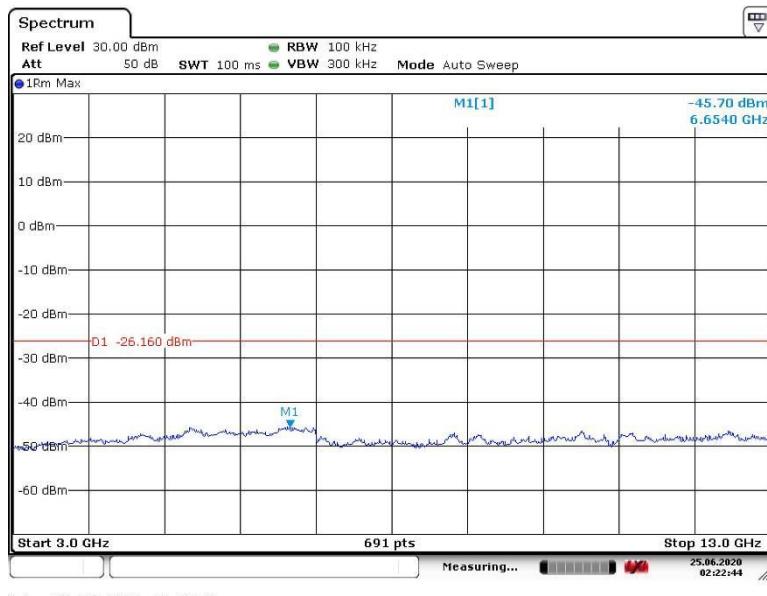




Report No:AAEMT/EMC/200623-02-04

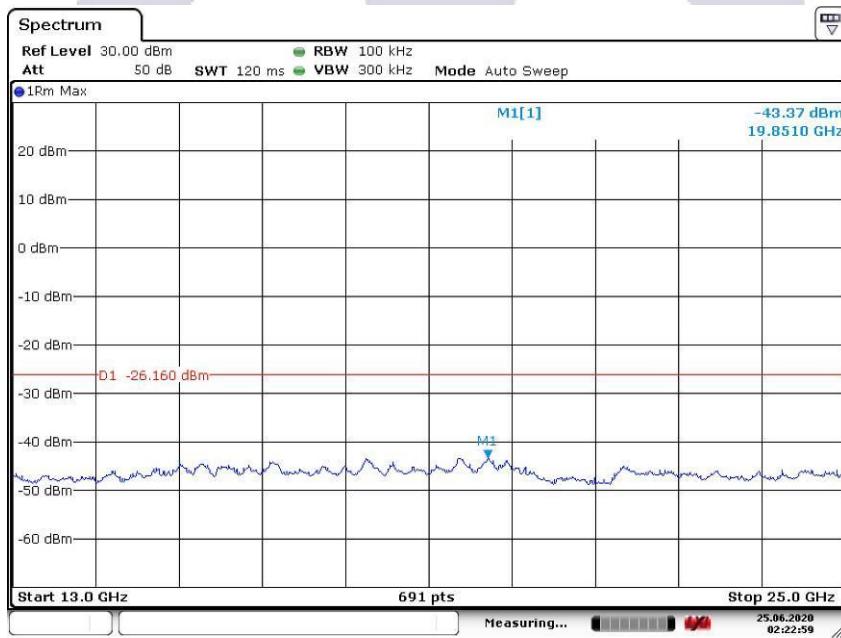
Certificate#5593.01

3 G to 13 GHz



Date: 25.JUN.2020 02:22:45

13 G to 25 GHz



Date: 25.JUN.2020 02:23:00

64 | P a g e

Plot 174, Udyog Vihar Phase 4, Sector -18, Gurgoan, Haryana, India.

Contact:0124-4235350,4145343;e-mail:[info@aaemtlabs.com](mailto:info@aaemtlabs.com);Website: [www.aaemtlabs.com](http://www.aaemtlabs.com)

An ISO 17025: 2017, Accredited Laboratory ,VCCI (support member – #4053),ISED#: 26046, FCC #0029402088 CE #800058\_00



**Radiated Emissions Measurement (for non-restricted bands)**

EUT :	Driveri	Model Name :	D-210
Temperature :	25 °C	Test Data	2020-06-23
Pressure :	1005 hPa	Relative Humidity :	60%
Test Mode :	TX	Test Voltage :	DC 12V
Measurement Distance	3 m	Frequency Range	9KHz to 30MHz
RBW/VBW	9KHz~150KHz/RB 200Hz for QP, 150KHz~30MHz/RB 9KHz for QP		

No emission found between lowest internal used/generated frequencies to 30MHz.





## Radiated Emissions Test Data 30MHz-1000MHz

EUT :	Driveri	Model Name :	D-210
Temperature :	25 °C	Test Data	2020-06-23
Pressure :	1005 hPa	Relative Humidity :	60%
Test Mode :	TX:802.11b 2.412 GHz 11Mbps(worst-case)	Test Voltage :	DC 12V
Measurement Distance	3 m	Frequency Range	30MHz to 1GHz
RBW/VBW	9KHz~150KHz/RB 200Hz for QP, 150KHz~30MHz/RB 9KHz for QP		

Test at Channel 1 (2.412 GHz) in transmitting status

## 30 MHz~1 GHz Spurious Emissions .Quasi-Peak Measurement

## Vertical:

Peak scan  
Level (dB $\mu$ V/m)

## Quasi-peak measurement

No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over
			Level	Factor	ment		
		MHz	dB $\mu$ V	dB	dB $\mu$ V/m	dB/m	dB
1		30.0000	57.07	-28.29	28.78	40.00	-11.22 peak
2	*	37.7756	64.88	-31.64	33.24	40.00	-6.76 peak
3		82.4850	62.28	-29.63	32.65	40.00	-7.35 peak
4		115.5311	60.23	-24.50	35.73	43.50	-7.77 peak
5		142.7455	55.95	-22.65	33.30	43.50	-10.20 peak
6		902.8056	41.29	-5.29	36.00	46.00	-10.00 peak



**Horizontal:**

Peak scan

Level (dB $\mu$ V/m)Quasi-peak measurement

No.	Mk.	Freq. MHz	Reading Level dB $\mu$ V	Correct Factor dB	Measure- ment dB $\mu$ V/m	Limit dB/m	Over dB	Over Detector
1		35.8316	62.25	-30.79	31.46	40.00	-8.54	peak
2		84.4289	63.00	-29.19	33.81	40.00	-6.19	peak
3	!	101.9238	65.44	-25.68	39.76	43.50	-3.74	peak
4	*	115.5311	64.92	-24.50	40.42	43.50	-3.08	peak
5		133.0261	60.27	-23.25	37.02	43.50	-6.48	peak
6		144.6894	58.26	-22.51	35.75	43.50	-7.75	peak

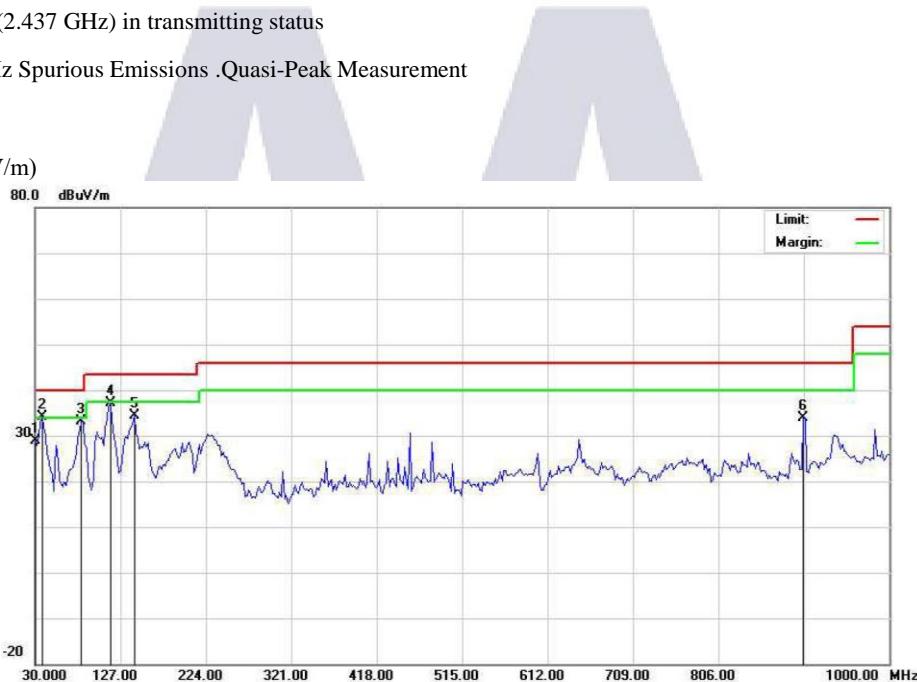




EUT :	Driveri	Model Name :	D-210
Temperature :	25 °C	Test Data	2020-06-23
Pressure :	1010 hPa	Relative Humidity :	60%
Test Mode :	TX:802.11b 2.437 GHz 11Mbps(worst-case)	Test Voltage :	DC 12V
Measurement Distance	3 m	Frequency Range	30MHz to 1GHz
RBW/VBW	100KHz / 300KHz for spectrum, RBW=120KHz for receiver.		

Test at Channel 6 (2.437 GHz) in transmitting status

30 MHz~1 GHz Spurious Emissions .Quasi-Peak Measurement

**Vertical:**Peak scan  
Level (dB $\mu$ V/m)**Quasi-peak measurement**

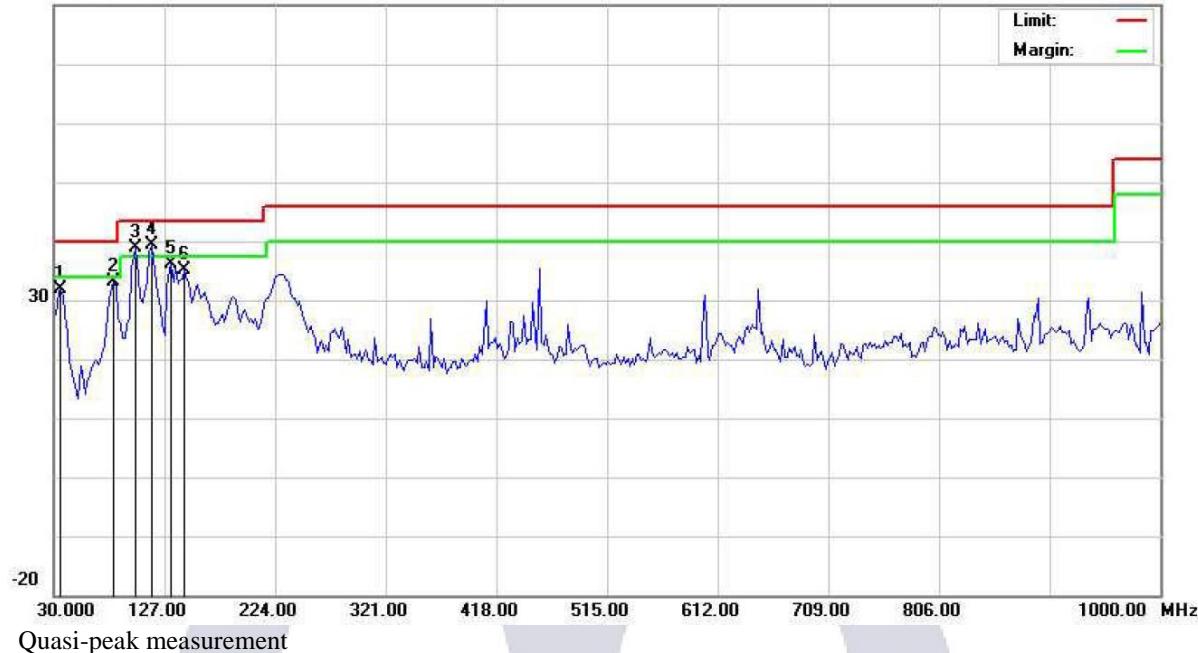
No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over
			Level	Factor	ment		
		MHz	dB $\mu$ V	dB	dB $\mu$ V/m	dB/m	dB
1		30.0000	57.07	-28.29	28.78	40.00	-11.22
2	*	37.7754	65.88	-31.64	34.24	40.00	-5.76
3		82.4848	62.78	-29.63	33.15	40.00	-6.85
4		115.5310	61.73	-24.50	37.23	43.50	-6.27
5		142.7452	56.95	-22.65	34.30	43.50	-9.20
6		902.8056	39.29	-5.29	34.00	46.00	-12.00



**Horizontal:**

Peak scan  
Level (dB $\mu$ V/m)

80.0 dB $\mu$ V/m



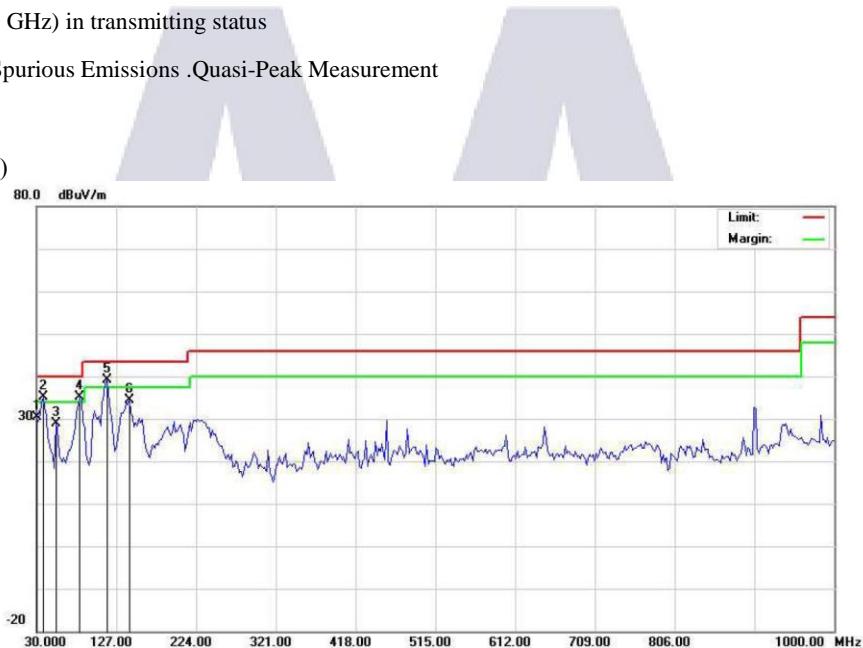
No.	Mk.	Freq. MHz	Reading Level dB $\mu$ V	Correct Factor dB	Measure- ment dB $\mu$ V/m	Limit dB/m	Over dB	Detector
1		35.8316	62.75	-30.79	31.96	40.00	-8.04	peak
2		82.4848	62.73	-29.63	33.10	40.00	-6.90	peak
3	!	101.9235	64.44	-25.68	38.76	43.50	-4.74	peak
4	*	115.5310	63.92	-24.50	39.42	43.50	-4.08	peak
5		133.0260	59.27	-23.25	36.02	43.50	-7.48	peak
6		144.6893	57.76	-22.51	35.25	43.50	-8.25	peak



EUT :	Driveri	Model Name :	D-210
Temperature :	25 °C	Test Data	2020-06-23
Pressure :	1010 hPa	Relative Humidity :	60%
Test Mode :	TX:802.11b 2.462 GHz 11Mbps(worst-case)	Test Voltage :	DC 12V
Measurement Distance	3 m	Frequency Range	30MHz to 1GHz
RBW/VBW	100KHz / 300KHz for spectrum, RBW=120KHz for receiver.		

Test at Channel 11 (2.462 GHz) in transmitting status

30 MHz~1 GHz Spurious Emissions .Quasi-Peak Measurement

**Vertical:**Peak scan  
Level (dB $\mu$ V/m)Quasi-peak measurement

No.	Mk.	Freq. MHz	Reading Level dB $\mu$ V	Correct Factor dB	Measure- ment dB $\mu$ V/m	Limit dB/m	Over dB	Detector
1	30.0000	58.57	-28.29	30.28	40.00	-9.72	peak	
2 !	37.7754	66.88	-31.64	35.24	40.00	-4.76	peak	
3	53.3265	62.55	-33.73	28.82	40.00	-11.18	peak	
4 !	82.4848	64.78	-29.63	35.15	40.00	-4.85	peak	
5 *	115.5310	63.73	-24.50	39.23	43.50	-4.27	peak	
6	142.7452	56.95	-22.65	34.30	43.50	-9.20	peak	



**Horizontal:**

Peak scan  
Level (dB $\mu$ V/m)

80.0 dB $\mu$ V/m


No.	Mk.	Freq.	Reading	Correct	Measure-	Limit	Over	
			Level	Factor	ment			
		MHz	dB $\mu$ V	dB	dB $\mu$ V/m	dB/m	dB	Detector
1	!	35.8316	67.25	-30.79	36.46	40.00	-3.54	peak
2	!	82.4848	67.23	-29.63	37.60	40.00	-2.40	peak
3	!	101.9235	66.94	-25.68	41.26	43.50	-2.24	peak
4	*	115.5310	66.42	-24.50	41.92	43.50	-1.58	peak
5		136.9138	59.74	-23.02	36.72	43.50	-6.78	peak
6		455.7114	47.56	-10.72	36.84	46.00	-9.16	peak



## Radiated Emissions Test Data above 1GHz

## 802.11b mode with 11Mbps data rate (Worst case)

EUT :	Driveri	Model Name :	D-210
Temperature :	25 °C	Test Data	2020-06-23
Pressure :	1010 hPa	Relative Humidity :	60%
Test Mode :	TX:802.11b 2.412 GHz	Test Voltage :	DC 12V
Measurement Distance	3 m	Frequency Range	1GHz to 25GHz
RBW/VBW	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average. non-restricted band: 100KHz/300KHz for Peak.		

1~25 GHz Harmonics &amp; Spurious Emissions. Peak &amp; Average Measurement

(a) Antenna polarization: Horizontal

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
4824.000	55.13	5.08	60.28	74.00	46.49	PEAK
4824.000	44.39	5.08	49.32	54.00	44.79	AVERAGE
7236.000	48.61	7.16	55.64	74.00	37.41	PEAK
7236.000	37.96	7.16	45.28	54.00	36.40	AVERAGE

(b) Antenna polarization: Vertical

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
4824.000	55.08	5.08	60.17	74.00	46.33	PEAK
4824.000	43.84	5.08	48.71	54.00	43.63	AVERAGE
7236.000	47.54	7.16	55.13	74.00	35.83	PEAK
7236.000	38.39	7.16	45.34	54.00	36.89	AVERAGE





EUT :	Driveri	Model Name :	D-210
Temperature :	25 °C	Test Data	2020-06-23
Pressure :	1010 hPa	Relative Humidity :	60%
Test Mode :	TX:802.11b 2.437 GHz	Test Voltage :	DC 12V
Measurement Distance	3 m	Frequency Range	1GHz to 25GHz
RBW/VBW	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average. non-restricted band: 100KHz/300KHz for Peak.		

## 1~25 GHz Harmonics &amp; Spurious Emissions. Peak &amp; Average Measurement

(a) Antenna polarization: Horizontal

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
4874.000	54.97	5.13	60.11	74.00	46.21	PEAK
4874.000	44.17	5.13	49.42	54.00	44.72	AVERAGE
7311.000	48.46	7.49	55.89	74.00	37.84	PEAK
7311.000	38.20	7.49	45.81	54.00	37.50	AVERAGE

(b) Antenna polarization: Vertical

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
4874.000	54.47	5.13	59.72	74.00	45.32	PEAK
4874.000	43.27	5.13	48.81	54.00	43.21	AVERAGE
7311.000	47.91	7.49	55.07	74.00	36.47	PEAK
7311.000	37.74	7.49	45.42	54.00	36.65	AVERAGE





EUT :	Driveri	Model Name :	D-210
Temperature :	25 °C	Test Data	2020-06-23
Pressure :	1010 hPa	Relative Humidity :	60%
Test Mode :	TX:802.11b 2.462 GHz	Test Voltage :	DC 12V
Measurement Distance	3 m	Frequency Range	1GHz to 25GHz
RBW/VBW	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average. non-restricted band: 100KHz/300KHz for Peak.		

## 1~25 GHz Harmonics &amp; Spurious Emissions. Peak &amp; Average Measurement

(a) Antenna polarization: Horizontal

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
4924.000	54.89	5.18	60.04	74.00	46.11	PEAK
4924.000	43.47	5.18	49.05	54.00	43.70	AVERAGE
7386.000	48.17	7.82	55.78	74.00	37.77	PEAK
7386.000	38.23	7.82	45.57	54.00	37.62	AVERAGE

(b) Antenna polarization: Vertical

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
4924.000	55.44	5.18	60.60	74.00	47.22	PEAK
4924.000	43.90	5.18	49.44	54.00	44.52	AVERAGE
7386.000	48.34	7.82	55.89	74.00	38.05	PEAK
7386.000	38.09	7.82	45.91	54.00	37.82	AVERAGE

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level = Receiver Reading + Antenna Factor + Cable Loss - Preamplifier Factor.

As shown in Section, for frequencies above 1000 MHz. the above field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

No any other emissions level which are attenuated less than 20dB below the limit.According to 15.31(o), The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part.Hence there no other emissions have been reported.





802.11g mode with 54Mbps data rate(Worst case)

EUT :	Driveri	Model Name :	D-210
Temperature :	25 °C	Test Data	2020-06-23
Pressure :	1010 hPa	Relative Humidity :	60%
Test Mode :	TX:802.11g2.412 GHz	Test Voltage :	DC 12V
Measurement Distance	3 m	Frequency Range	1GHz to 25GHz
RBW/VBW	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average. non-restricted band: 100KHz/300KHz for Peak.		

1~25 GHz Harmonics &amp; Spurious Emissions. Peak &amp; Average Measurement

## (a) Antenna polarization: Horizontal

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
4824.000	54.61	5.08	60.19	74.00	45.88	PEAK
4824.000	43.99	5.08	48.93	54.00	44.00	AVERAGE
7236.000	48.13	7.16	54.95	74.00	36.24	PEAK
7236.000	38.04	7.16	44.79	54.00	35.99	AVERAGE

## (b) Antenna polarization: Vertical

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
4824.000	54.98	5.08	60.23	74.00	46.29	PEAK
4824.000	44.37	5.08	48.97	54.00	44.42	AVERAGE
7236.000	48.33	7.16	55.29	74.00	36.78	PEAK
7236.000	37.52	7.16	45.13	54.00	35.81	AVERAGE





EUT :	Driveri	Model Name :	D-210
Temperature :	25 °C	Test Data	2020-06-23
Pressure :	1010 hPa	Relative Humidity :	60%
Test Mode :	TX:802.11g2.437 GHz	Test Voltage :	DC 12V
Measurement Distance	3 m	Frequency Range	1GHz to 25GHz
RBW/VBW	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average. non-restricted band: 100KHz/300KHz for Peak.		

## 1~25 GHz Harmonics &amp; Spurious Emissions. Peak &amp; Average Measurement

(a) Antenna polarization: Horizontal

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
4874.000	55.79	5.13	60.44	74.00	47.36	PEAK
4874.000	44.00	5.13	49.22	54.00	44.35	AVERAGE
7311.000	48.31	7.49	55.92	74.00	37.72	PEAK
7311.000	38.51	7.49	45.88	54.00	37.88	AVERAGE

(b) Antenna polarization: Vertical

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
4874.000	55.33	5.13	60.00	74.00	46.46	PEAK
4874.000	44.71	5.13	49.53	54.00	45.37	AVERAGE
7311.000	48.14	7.49	55.83	74.00	37.46	PEAK
7311.000	37.83	7.49	45.54	54.00	36.86	AVERAGE





EUT :	Driveri	Model Name :	D-210
Temperature :	25 °C	Test Data	2020-06-23
Pressure :	1010 hPa	Relative Humidity :	60%
Test Mode :	TX:802.11g2.462 GHz	Test Voltage :	DC 12V
Measurement Distance	3 m	Frequency Range	1GHz to 25GHz
RBW/VBW	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average. non-restricted band: 100KHz/300KHz for Peak.		

## 1~25 GHz Harmonics &amp; Spurious Emissions. Peak &amp; Average Measurement

(a) Antenna polarization: Horizontal

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
4924.000	55.02	5.18	59.93	74.00	46.13	PEAK
4924.000	43.71	5.18	49.11	54.00	44.00	AVERAGE
7386.000	48.08	7.82	55.41	74.00	37.31	PEAK
7386.000	38.41	7.82	45.80	54.00	38.03	AVERAGE

(b) Antenna polarization: Vertical

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
4924.000	55.60	5.18	60.67	74.00	47.45	PEAK
4924.000	44.35	5.18	49.55	54.00	45.08	AVERAGE
7386.000	47.72	7.82	55.67	74.00	37.21	PEAK
7386.000	38.05	7.82	46.31	54.00	38.18	AVERAGE

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level = Receiver Reading + Antenna Factor + Cable Factor - Preamplifier Factor.

No any other emissions level which are attenuated less than 20dB below the limit.

According to 15.31(o), The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part.

Hence there no other emissions have been reported.





## 802.11n(HT20) mode with 72.2Mbps data rate(Worst case)

EUT :	Driveri	Model Name :	D-210
Temperature :	25 °C	Test Data	2020-06-23
Pressure :	1010 hPa	Relative Humidity :	60%
Test Mode :	TX:802.11n(HT20) 2.412 GHz	Test Voltage :	DC 12V
Measurement Distance	3 m	Frequency Range	1GHz to 25GHz
RBW/VBW	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average. non-restricted band: 100KHz/300KHz for Peak.		

1~25 GHz Harmonics &amp; Spurious Emissions. Peak &amp; Average Measurement

(a) Antenna polarization: Horizontal

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
4824.000	54.53	5.08	59.59	74.00	45.20	PEAK
4824.000	44.03	5.08	48.68	54.00	43.79	AVERAGE
7236.000	48.09	7.16	55.43	74.00	36.68	PEAK
7236.000	37.80	7.16	44.71	54.00	35.67	AVERAGE

(b) Antenna polarization: Vertical

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
4824.000	54.86	5.08	59.81	74.00	45.75	PEAK
4824.000	43.29	5.08	48.83	54.00	43.20	AVERAGE
7236.000	47.24	7.16	54.89	74.00	35.29	PEAK
7236.000	37.54	7.16	44.78	54.00	35.48	AVERAGE





EUT :	Driveri	Model Name :	D-210
Temperature :	25 °C	Test Data	2020-06-23
Pressure :	1010 hPa	Relative Humidity :	60%
Test Mode :	TX:802.11n(HT20) 2.437 GHz	Test Voltage :	DC 12V
Measurement Distance	3 m	Frequency Range	1GHz to 25GHz
RBW/VBW	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average. non-restricted band: 100KHz/300KHz for Peak.		

## 1~25 GHz Harmonics &amp; Spurious Emissions. Peak &amp; Average Measurement

## (a) Antenna polarization: Horizontal

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
4874.000	54.74	5.13	59.71	74.00	45.58	PEAK
4874.000	44.03	5.13	48.99	54.00	44.15	AVERAGE
7311.000	48.22	7.49	55.24	74.00	36.95	PEAK
7311.000	38.42	7.49	45.73	54.00	37.64	AVERAGE

## (b) Antenna polarization: Vertical

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
4874.000	54.81	5.13	59.88	74.00	45.82	PEAK
4874.000	43.89	5.13	49.26	54.00	44.28	AVERAGE
7311.000	47.98	7.49	55.85	74.00	37.32	PEAK
7311.000	37.47	7.49	45.22	54.00	36.18	AVERAGE





EUT :	Driveri	Model Name :	D-210
Temperature :	25 °C	Test Data	2020-06-23
Pressure :	1010 hPa	Relative Humidity :	60%
Test Mode :	TX:802.11n(HT20) 2.437 GHz	Test Voltage :	DC 12V
Measurement Distance	3 m	Frequency Range	1GHz to 25GHz
RBW/VBW	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average. non-restricted band: 100KHz/300KHz for Peak.		

## 1~25 GHz Harmonics &amp; Spurious Emissions. Peak &amp; Average Measurement

(a) Antenna polarization: Horizontal

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
4924.000	55.14	5.18	60.17	74.00	46.49	PEAK
4924.000	43.05	5.18	48.68	54.00	42.91	AVERAGE
7386.000	48.03	7.82	55.56	74.00	37.41	PEAK
7386.000	38.60	7.82	45.96	54.00	38.38	AVERAGE

(b) Antenna polarization: Vertical

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
4924.000	54.44	5.18	59.93	74.00	45.55	PEAK
4924.000	43.56	5.18	48.98	54.00	43.72	AVERAGE
7386.000	48.73	7.82	56.27	74.00	38.82	PEAK
7386.000	38.40	7.82	45.97	54.00	38.19	AVERAGE

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level = Receiver Reading + Antenna Factor + Cable Loss - Preamplifier Factor.

As shown in Section, for frequencies above 1000 MHz. the above field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

No any other emissions level which are attenuated less than 20dB below the limit. According to 15.31(o), The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part. Hence there no other emissions have been reported.





802.11n(HT40) mode with 150Mbps data rate(Worst case)

EUT :	Driveri	Model Name :	D-210
Temperature :	25 °C	Test Data	2020-06-23
Pressure :	1010 hPa	Relative Humidity :	60%
Test Mode :	TX:802.11n(HT40) 2.422 GHz	Test Voltage :	DC 12V
Measurement Distance	3 m	Frequency Range	1GHz to 25GHz
RBW/VBW	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average. non-restricted band: 100KHz/300KHz for Peak.		

1~25 GHz Harmonics &amp; Spurious Emissions. Peak &amp; Average Measurement

(a) Antenna polarization: Horizontal

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
4844.000	52.00	5.11	56.67	74.00	39.78	PEAK
4844.000	37.98	5.11	43.23	54.00	32.32	AVERAGE
7266.000	41.93	7.29	48.95	74.00	24.17	PEAK
7266.000	32.01	7.29	39.61	54.00	24.91	AVERAGE

(b) Antenna polarization: Vertical

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
4844.000	51.78	5.11	56.82	74.00	39.71	PEAK
4844.000	37.51	5.11	42.93	54.00	31.55	AVERAGE
7266.000	41.69	7.29	49.08	74.00	24.06	PEAK
7266.000	32.60	7.29	39.75	54.00	25.64	AVERAGE





EUT :	Driveri	Model Name :	D-210
Temperature :	25 °C	Test Data	2020-06-23
Pressure :	1010 hPa	Relative Humidity :	60%
Test Mode :	TX:802.11n(HT40) 2.437 GHz	Test Voltage :	DC 12V
Measurement Distance	3 m	Frequency Range	1GHz to 25GHz
RBW/VBW	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average. non-restricted band: 100KHz/300KHz for Peak.		

## 1~25 GHz Harmonics &amp; Spurious Emissions. Peak &amp; Average Measurement

(a) Antenna polarization: Horizontal

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
4874.000	52.12	5.13	57.32	74.00	40.57	PEAK
4874.000	38.03	5.13	42.79	54.00	31.95	AVERAGE
7311.000	42.34	7.49	49.80	74.00	25.63	PEAK
7311.000	32.21	7.49	39.80	54.00	25.50	AVERAGE

(b) Antenna polarization: Vertical

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
4874.000	51.95	5.13	57.34	74.00	40.42	PEAK
4874.000	37.58	5.13	43.02	54.00	31.73	AVERAGE
7311.000	41.20	7.49	49.12	74.00	23.81	PEAK
7311.000	31.79	7.49	39.64	54.00	24.92	AVERAGE





EUT :	Driveri	Model Name :	D-210
Temperature :	25 °C	Test Data	2020-06-23
Pressure :	1010 hPa	Relative Humidity :	60%
Test Mode :	TX:802.11n(HT40) 2.452 GHz	Test Voltage :	DC 12V
Measurement Distance	3 m	Frequency Range	1GHz to 25GHz
RBW/VBW	Spurious emission: 1MHz/3MHz for Peak, 1MHz/10Hz for Average. non-restricted band: 100KHz/300KHz for Peak.		

## 1~25 GHz Harmonics &amp; Spurious Emissions. Peak &amp; Average Measurement

## (a) Antenna polarization: Horizontal

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
4904.000	52.43	5.16	57.54	74.00	41.13	PEAK
4904.000	37.48	5.16	42.98	54.00	31.62	AVERAGE
7356.000	41.50	7.69	49.37	74.00	24.56	PEAK
7356.000	32.10	7.69	40.10	54.00	25.89	AVERAGE

## (b) Antenna polarization: Vertical

Frequency (MHz)	Reading Level (dBuV)	Correct Factor (dB)	Measure Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector Type
4904.000	51.89	5.16	57.23	74.00	40.28	PEAK
4904.000	38.56	5.16	43.65	54.00	33.37	AVERAGE
7356.000	42.32	7.69	50.09	74.00	26.10	PEAK
7356.000	31.56	7.69	39.61	54.00	24.86	AVERAGE

The field strength is calculated by adding the Antenna Factor. Cable Factor & Preamplifier. The basic equation with a sample calculation is as follows:

Final Test Level = Receiver Reading + Antenna Factor + Cable Loss - Preamplifier Factor.

As shown in Section, for frequencies above 1000 MHz. the above field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.

No any other emissions level which are attenuated less than 20dB below the limit.

According to 15.31(o), The amplitude of spurious emissions from intentional radiators and emissions from unintentional radiators which are attenuated more than 20 dB below the permissible value need not be reported unless specifically required elsewhere in this Part.Hence there no other emissions have been reported.

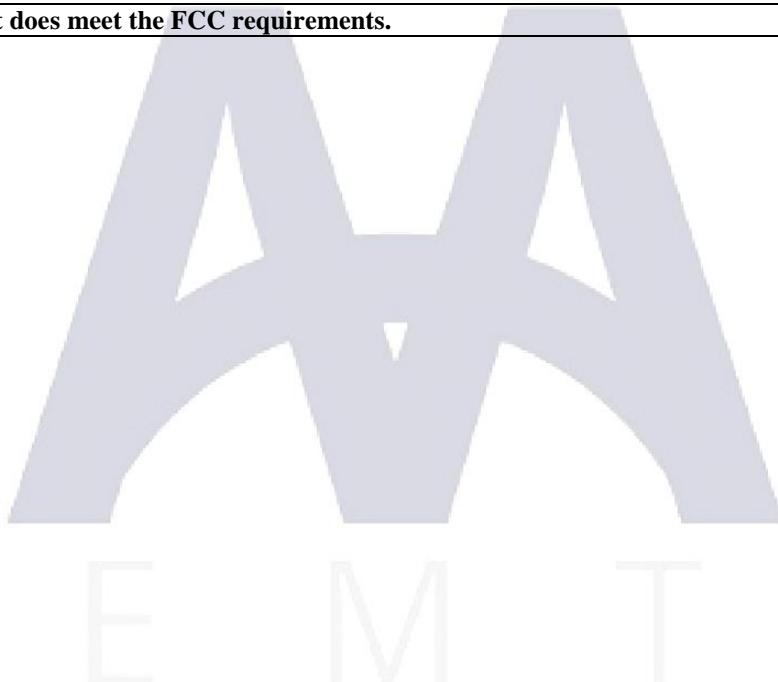




## Remark:

- 1) For this intentional radiator operates below 25 GHz. The spectrum shall be investigated to the tenth harmonics of the highest fundamental frequency. And above the third harmonic of this intentional radiator, the disturbance is very low. So the test result only displays to 3<sup>rd</sup> harmonic.
- 2). As shown in Section, for frequencies above 1000 MHz. the above field strength limits are based on average limits. However, the peak field strength of any emission shall not exceed the maximum permitted average limits specified above by more than 20 dB under any condition of modulation.
- 3). The test only perform the EUT in transmitting status since the test frequencies were over 1GHz only required transmitting status.

**Test result: The unit does meet the FCC requirements.**





### Radiated Emissions which fall in the restricted bands

802.11b mode with 11Mbps data rate(Worst case)

Test at Channel 1 (2.412 GHz) in transmitting status

#### Peak Measurement:

Frequency (MHz)	Reading Level (dB $\mu$ V)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Antenna polarization
2310.000	55.08	27.93	4.74	35.09	52.66	74.00	Vertical
2390.000	53.75	27.63	4.96	35.05	51.29	74.00	V
2483.500	53.69	27.55	4.90	34.99	51.15	74.00	V
2500.000	54.69	27.55	5.00	34.98	52.26	74.00	V
2310.000	53.71	27.93	4.74	35.09	51.29	74.00	Horizontal
2390.000	53.40	27.63	4.96	35.05	50.94	74.00	H
2483.500	54.25	27.55	4.90	34.99	51.71	74.00	H
2500.000	54.33	27.55	5.00	34.98	51.90	74.00	H

#### Average Measurement:

Frequency (MHz)	Reading Level (dB $\mu$ V)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Antenna polarization
2310.000	42.17	27.93	4.74	35.09	39.75	54.00	Vertical
2390.000	42.71	27.63	4.96	35.05	40.25	54.00	V
2483.500	44.23	27.55	4.90	34.99	41.69	54.00	V
2500.000	43.63	27.55	5.00	34.98	41.20	54.00	V
2310.000	43.41	27.93	4.74	35.09	40.99	54.00	Horizontal
2390.000	43.69	27.63	4.96	35.05	41.23	54.00	H
2483.500	42.34	27.55	4.90	34.99	39.80	54.00	H
2500.000	44.22	27.55	5.00	34.98	41.79	54.00	H





Test at Channel 6 (2.437 GHz) in transmitting status

**Peak Measurement:**

Frequency (MHz)	Reading Level (dB $\mu$ V)	Antenna actors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Antenna polarization
2310.000	55.82	27.93	4.74	35.09	53.40	74.00	Vertical
2390.000	54.43	27.63	4.96	35.05	51.97	74.00	V
2483.500	54.59	27.55	4.90	34.99	52.05	74.00	V
2500.000	54.24	27.55	5.00	34.98	51.81	74.00	V
2310.000	55.25	27.93	4.74	35.09	52.83	74.00	Horizontal
2390.000	53.77	27.63	4.96	35.05	51.31	74.00	H
2483.500	54.40	27.55	4.90	34.99	51.86	74.00	H
2500.000	53.93	27.55	5.00	34.98	51.50	74.00	H

**Average Measurement:**

Frequency (MHz)	Reading Level (dB $\mu$ V)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Antenna polarization
2310.000	42.99	27.93	4.74	35.09	40.57	54.00	Vertical
2390.000	43.90	27.63	4.96	35.05	41.44	54.00	V
2483.500	43.83	27.55	4.90	34.99	41.29	54.00	V
2500.000	42.49	27.55	5.00	34.98	40.06	54.00	V
2310.000	44.59	27.93	4.74	35.09	42.17	54.00	Horizontal
2390.000	43.48	27.63	4.96	35.05	41.02	54.00	H
2483.500	43.50	27.55	4.90	34.99	40.96	54.00	H
2500.000	42.50	27.55	5.00	34.98	40.07	54.00	H





Test at Channel 11 (2.462 GHz) in transmitting status

**Peak Measurement:**

Frequency (MHz)	Reading Level (dB $\mu$ V)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Antenna polarization
2310.000	54.48	27.93	4.74	35.09	52.06	74.00	Vertical
2390.000	53.59	27.63	4.96	35.05	51.13	74.00	V
2483.500	54.60	27.55	4.90	34.99	52.06	74.00	V
2500.000	53.28	27.55	5.00	34.98	50.85	74.00	V
2310.000	55.00	27.93	4.74	35.09	52.58	74.00	Horizontal
2390.000	54.22	27.63	4.96	35.05	51.76	74.00	H
2483.500	54.05	27.55	4.90	34.99	51.51	74.00	H
2500.000	55.71	27.55	5.00	34.98	53.28	74.00	H

**Average Measurement:**

Frequency (MHz)	Reading Level (dB $\mu$ V)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Antenna polarization
2310.000	43.99	27.93	4.74	35.09	41.57	54.00	Vertical
2390.000	42.94	27.63	4.96	35.05	40.48	54.00	V
2483.500	43.90	27.55	4.90	34.99	41.36	54.00	V
2500.000	44.45	27.55	5.00	34.98	42.02	54.00	V
2310.000	43.91	27.93	4.74	35.09	41.49	54.00	Horizontal
2390.000	43.88	27.63	4.96	35.05	41.42	54.00	H
2483.500	43.89	27.55	4.90	34.99	41.35	54.00	H
2500.000	43.37	27.55	5.00	34.98	40.94	54.00	H





802.11g mode with 54Mbps data rate(Worst case)

Test at Channel 1 (2.412 GHz) in transmitting status

**Peak Measurement:**

Frequency (MHz)	Reading Level (dB $\mu$ V)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Antenna polarization
2310.000	55.17	27.93	4.74	35.09	52.75	74.00	Vertical
2390.000	53.64	27.63	4.96	35.05	51.18	74.00	V
2483.500	54.20	27.55	4.90	34.99	51.66	74.00	V
2500.000	54.44	27.55	5.00	34.98	52.01	74.00	V
2310.000	55.31	27.93	4.74	35.09	52.89	74.00	Horizontal
2390.000	54.40	27.63	4.96	35.05	51.94	74.00	H
2483.500	54.86	27.55	4.90	34.99	52.32	74.00	H
2500.000	55.18	27.55	5.00	34.98	52.75	74.00	H

**Average Measurement:**

Frequency (MHz)	Reading Level (dB $\mu$ V)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Antenna polarization
2310.000	44.60	27.93	4.74	35.09	42.18	54.00	Vertical
2390.000	43.67	27.63	4.96	35.05	41.21	54.00	V
2483.500	43.45	27.55	4.90	34.99	40.91	54.00	V
2500.000	44.64	27.55	5.00	34.98	42.21	54.00	V
2310.000	43.54	27.93	4.74	35.09	41.12	54.00	Horizontal
2390.000	43.64	27.63	4.96	35.05	41.18	54.00	H
2483.500	42.32	27.55	4.90	34.99	39.78	54.00	H
2500.000	42.62	27.55	5.00	34.98	40.19	54.00	H





Test at Channel 6 (2.437 GHz) in transmitting status

**Peak Measurement:**

Frequency (MHz)	Reading Level (dB $\mu$ V)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Antenna polarization
2310.000	54.15	27.93	4.74	35.09	51.73	74.00	Vertical
2390.000	54.32	27.63	4.96	35.05	51.86	74.00	V
2483.500	54.50	27.55	4.90	34.99	51.96	74.00	V
2500.000	55.57	27.55	5.00	34.98	53.14	74.00	V
2310.000	54.48	27.93	4.74	35.09	52.06	74.00	Horizontal
2390.000	54.42	27.63	4.96	35.05	51.96	74.00	H
2483.500	54.57	27.55	4.90	34.99	52.03	74.00	H
2500.000	55.28	27.55	5.00	34.98	52.85	74.00	H

**Average Measurement:**

Frequency (MHz)	Reading Level (dB $\mu$ V)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Antenna polarization
2310.000	43.94	27.93	4.74	35.09	41.52	54.00	Vertical
2390.000	42.80	27.63	4.96	35.05	40.34	54.00	V
2483.500	43.71	27.55	4.90	34.99	41.17	54.00	V
2500.000	43.08	27.55	5.00	34.98	40.65	54.00	V
2310.000	42.68	27.93	4.74	35.09	40.26	54.00	Horizontal
2390.000	43.19	27.63	4.96	35.05	40.73	54.00	H
2483.500	44.29	27.55	4.90	34.99	41.75	54.00	H
2500.000	42.40	27.55	5.00	34.98	39.97	54.00	H





Test at Channel 11 (2.462 GHz) in transmitting status

**Peak Measurement:**

Frequency (MHz)	Reading Level (dB $\mu$ V)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Antenna polarization
2310.000	53.96	27.93	4.74	35.09	51.54	74.00	Vertical
2390.000	54.32	27.63	4.96	35.05	51.86	74.00	V
2483.500	55.91	27.55	4.90	34.99	53.37	74.00	V
2500.000	54.47	27.55	5.00	34.98	52.04	74.00	V
2310.000	53.74	27.93	4.74	35.09	51.32	74.00	Horizontal
2390.000	54.79	27.63	4.96	35.05	52.33	74.00	H
2483.500	53.98	27.55	4.90	34.99	51.44	74.00	H
2500.000	54.45	27.55	5.00	34.98	52.02	74.00	H

**Average Measurement:**

Frequency (MHz)	Reading Level (dB $\mu$ V)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Antenna polarization
2310.000	43.41	27.93	4.74	35.09	40.99	54.00	Vertical
2390.000	42.51	27.63	4.96	35.05	40.05	54.00	V
2483.500	44.84	27.55	4.90	34.99	42.30	54.00	V
2500.000	43.59	27.55	5.00	34.98	41.16	54.00	V
2310.000	43.36	27.93	4.74	35.09	40.94	54.00	Horizontal
2390.000	43.92	27.63	4.96	35.05	41.46	54.00	H
2483.500	43.21	27.55	4.90	34.99	40.67	54.00	H
2500.000	43.36	27.55	5.00	34.98	40.93	54.00	H





802.11n(HT20) mode with 72.2Mbps data rate(Worst case)

Test at Channel 1 (2.412 GHz) in transmitting status

**Peak Measurement:**

Frequency (MHz)	Reading Level (dB $\mu$ V)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Antenna polarization
2310.000	54.80	27.93	4.74	35.09	52.38	74.00	Vertical
2390.000	55.45	27.63	4.96	35.05	52.99	74.00	V
2483.500	53.80	27.55	4.90	34.99	51.26	74.00	V
2500.000	55.15	27.55	5.00	34.98	52.72	74.00	V
2310.000	54.33	27.93	4.74	35.09	51.91	74.00	Horizontal
2390.000	55.13	27.63	4.96	35.05	52.67	74.00	H
2483.500	54.13	27.55	4.90	34.99	51.59	74.00	H
2500.000	55.48	27.55	5.00	34.98	53.05	74.00	H

**Average Measurement:**

Frequency (MHz)	Reading Level (dB $\mu$ V)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Antenna polarization
2310.000	42.88	27.93	4.74	35.09	40.46	54.00	Vertical
2390.000	43.25	27.63	4.96	35.05	40.79	54.00	V
2483.500	42.50	27.55	4.90	34.99	39.96	54.00	V
2500.000	42.64	27.55	5.00	34.98	40.21	54.00	V
2310.000	44.29	27.93	4.74	35.09	41.87	54.00	Horizontal
2390.000	42.36	27.63	4.96	35.05	39.90	54.00	H
2483.500	42.69	27.55	4.90	34.99	40.15	54.00	H
2500.000	43.57	27.55	5.00	34.98	41.14	54.00	H





Test at Channel 6 (2.437 GHz) in transmitting status

**Peak Measurement:**

Frequency (MHz)	Reading Level (dB $\mu$ V)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Antenna polarization
2310.000	54.94	27.93	4.74	35.09	52.52	74.00	Vertical
2390.000	53.61	27.63	4.96	35.05	51.15	74.00	V
2483.500	55.10	27.55	4.90	34.99	52.56	74.00	V
2500.000	54.90	27.55	5.00	34.98	52.47	74.00	V
2310.000	55.00	27.93	4.74	35.09	52.58	74.00	Horizontal
2390.000	54.35	27.63	4.96	35.05	51.89	74.00	H
2483.500	54.81	27.55	4.90	34.99	52.27	74.00	H
2500.000	54.47	27.55	5.00	34.98	52.04	74.00	H

**Average Measurement:**

Frequency (MHz)	Reading Level (dB $\mu$ V)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Antenna polarization
2310.000	44.32	27.93	4.74	35.09	41.90	54.00	Vertical
2390.000	42.65	27.63	4.96	35.05	40.19	54.00	V
2483.500	43.37	27.55	4.90	34.99	40.83	54.00	V
2500.000	43.30	27.55	5.00	34.98	40.87	54.00	V
2310.000	43.18	27.93	4.74	35.09	40.76	54.00	Horizontal
2390.000	42.41	27.63	4.96	35.05	39.95	54.00	H
2483.500	42.73	27.55	4.90	34.99	40.19	54.00	H
2500.000	44.71	27.55	5.00	34.98	42.28	54.00	H





Test at Channel 11 (2.462 GHz) in transmitting status

**Peak Measurement:**

Frequency (MHz)	Reading Level (dB $\mu$ V)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Antenna polarization
2310.000	55.41	27.93	4.74	35.09	52.99	74.00	Vertical
2390.000	55.25	27.63	4.96	35.05	52.79	74.00	V
2483.500	54.08	27.55	4.90	34.99	51.54	74.00	V
2500.000	54.48	27.55	5.00	34.98	52.05	74.00	V
2310.000	54.20	27.93	4.74	35.09	51.78	74.00	Horizontal
2390.000	53.02	27.63	4.96	35.05	50.56	74.00	H
2483.500	53.95	27.55	4.90	34.99	51.41	74.00	H
2500.000	55.42	27.55	5.00	34.98	52.99	74.00	H

**Average Measurement:**

Frequency (MHz)	Reading Level (dB $\mu$ V)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Antenna polarization
2310.000	42.80	27.93	4.74	35.09	40.38	54.00	Vertical
2390.000	44.34	27.63	4.96	35.05	41.88	54.00	V
2483.500	43.84	27.55	4.90	34.99	41.30	54.00	V
2500.000	43.02	27.55	5.00	34.98	40.59	54.00	V
2310.000	42.25	27.93	4.74	35.09	39.83	54.00	Horizontal
2390.000	43.50	27.63	4.96	35.05	41.04	54.00	H
2483.500	44.46	27.55	4.90	34.99	41.92	54.00	H
2500.000	43.91	27.55	5.00	34.98	41.48	54.00	H





802.11n(HT40) mode with 150Mbps data rate(Worst case)

Test at Channel 3 (2.422 GHz) in transmitting status

**Peak Measurement:**

Frequency (MHz)	Reading Level (dB $\mu$ V)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Antenna polarization
2310.000	54.50	27.93	4.74	35.09	52.08	74.00	Vertical
2390.000	53.33	27.63	4.96	35.05	50.87	74.00	V
2483.500	54.52	27.55	4.90	34.99	51.98	74.00	V
2500.000	54.01	27.55	5.00	34.98	51.58	74.00	V
2310.000	54.19	27.93	4.74	35.09	51.77	74.00	Horizontal
2390.000	55.07	27.63	4.96	35.05	52.61	74.00	H
2483.500	54.85	27.55	4.90	34.99	52.31	74.00	H
2500.000	54.41	27.55	5.00	34.98	51.98	74.00	H

**Average Measurement:**

Frequency (MHz)	Reading Level (dB $\mu$ V)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Antenna polarization
2310.000	42.10	27.93	4.74	35.09	39.68	54.00	Vertical
2390.000	42.61	27.63	4.96	35.05	40.15	54.00	V
2483.500	43.17	27.55	4.90	34.99	40.63	54.00	V
2500.000	44.00	27.55	5.00	34.98	41.57	54.00	V
2310.000	43.23	27.93	4.74	35.09	40.81	54.00	Horizontal
2390.000	42.62	27.63	4.96	35.05	40.16	54.00	H
2483.500	43.04	27.55	4.90	34.99	40.50	54.00	H
2500.000	43.43	27.55	5.00	34.98	41.00	54.00	H





Test at Channel 6 (2.437 GHz) in transmitting status

**Peak Measurement:**

Frequency (MHz)	Reading Level (dB $\mu$ V)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Antenna polarization
2310.000	53.97	27.93	4.74	35.09	51.55	74.00	Vertical
2390.000	54.65	27.63	4.96	35.05	52.19	74.00	V
2483.500	54.26	27.55	4.90	34.99	51.72	74.00	V
2500.000	54.07	27.55	5.00	34.98	51.64	74.00	V
2310.000	55.25	27.93	4.74	35.09	52.83	74.00	Horizontal
2390.000	54.67	27.63	4.96	35.05	52.21	74.00	H
2483.500	54.14	27.55	4.90	34.99	51.60	74.00	H
2500.000	54.87	27.55	5.00	34.98	52.44	74.00	H

**Average Measurement:**

Frequency (MHz)	Reading Level (dB $\mu$ V)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Antenna polarization
2310.000	44.28	27.93	4.74	35.09	41.86	54.00	Vertical
2390.000	42.97	27.63	4.96	35.05	40.51	54.00	V
2483.500	42.70	27.55	4.90	34.99	40.16	54.00	V
2500.000	43.39	27.55	5.00	34.98	40.96	54.00	V
2310.000	43.73	27.93	4.74	35.09	41.31	54.00	Horizontal
2390.000	43.31	27.63	4.96	35.05	40.85	54.00	H
2483.500	44.26	27.55	4.90	34.99	41.72	54.00	H
2500.000	42.30	27.55	5.00	34.98	39.87	54.00	H





Test at Channel 9 (2.452 GHz) in transmitting status

**Peak Measurement:**

Frequency (MHz)	Reading Level (dB $\mu$ V)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Antenna polarization
2310.000	54.52	27.93	4.74	35.09	52.10	74.00	Vertical
2390.000	55.03	27.63	4.96	35.05	52.57	74.00	V
2483.500	53.46	27.55	4.90	34.99	50.92	74.00	V
2500.000	53.86	27.55	5.00	34.98	51.43	74.00	V
2310.000	53.84	27.93	4.74	35.09	51.42	74.00	Horizontal
2390.000	54.37	27.63	4.96	35.05	51.91	74.00	H
2483.500	53.45	27.55	4.90	34.99	50.91	74.00	H
2500.000	55.64	27.55	5.00	34.98	53.21	74.00	H

**Average Measurement:**

Frequency (MHz)	Reading Level (dB $\mu$ V)	Antenna factors (dB/m)	Cable loss (dB)	Preamp factor (dB)	Emission Level (dB $\mu$ V/m)	Limit (dB $\mu$ V/m)	Antenna polarization
2310.000	43.09	27.93	4.74	35.09	40.67	54.00	Vertical
2390.000	44.16	27.63	4.96	35.05	41.70	54.00	V
2483.500	44.17	27.55	4.90	34.99	41.63	54.00	V
2500.000	42.87	27.55	5.00	34.98	40.44	54.00	V
2310.000	44.05	27.93	4.74	35.09	41.63	54.00	Horizontal
2390.000	43.34	27.63	4.96	35.05	40.88	54.00	H
2483.500	43.14	27.55	4.90	34.99	40.60	54.00	H
2500.000	43.51	27.55	5.00	34.98	41.08	54.00	H





AA Electro Magnetic Test Laboratory Private Limited

Report No:AAEMT/EMC/200623-02-04



Certificate#5593.01

## APPENDIX B

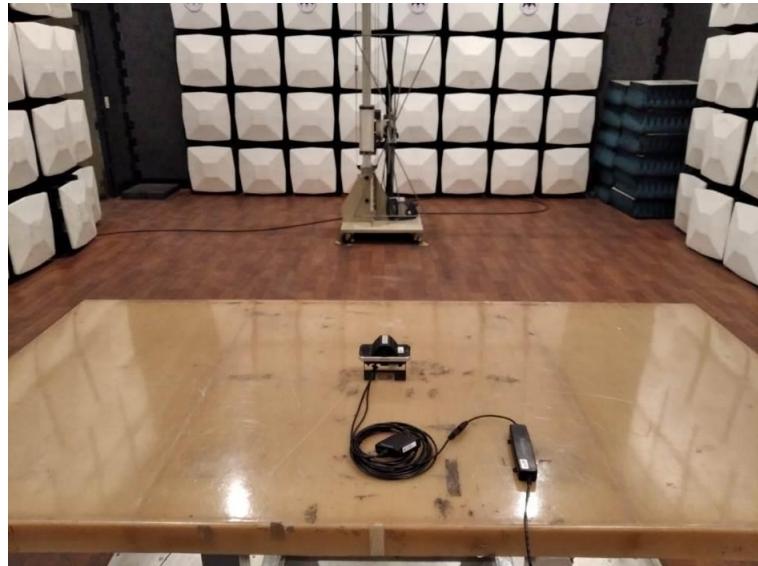
### *TEST SETUP DIAGRAMS*





## Radiated Emission Test Setup

Below 1GHz:

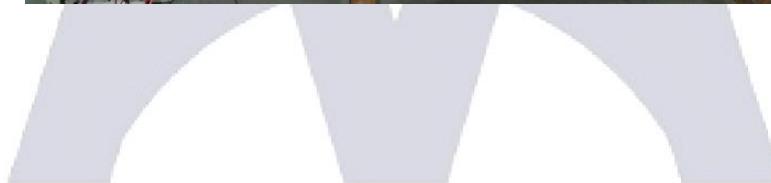


Above 1GHz:





### Conducted Emission Test Setup





# APPENDIX C

## *MODIFICATIONS TO THE EUT*



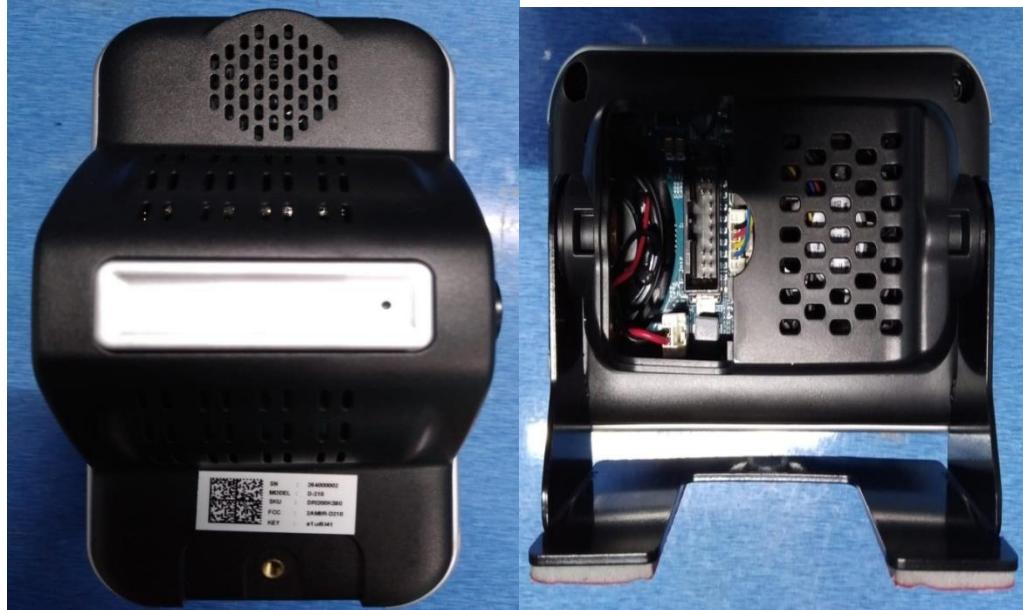
## APPENDIX D

### ***ADDITIONAL MODELS COVERED UNDER THIS REPORT AND ACCESSORIES***

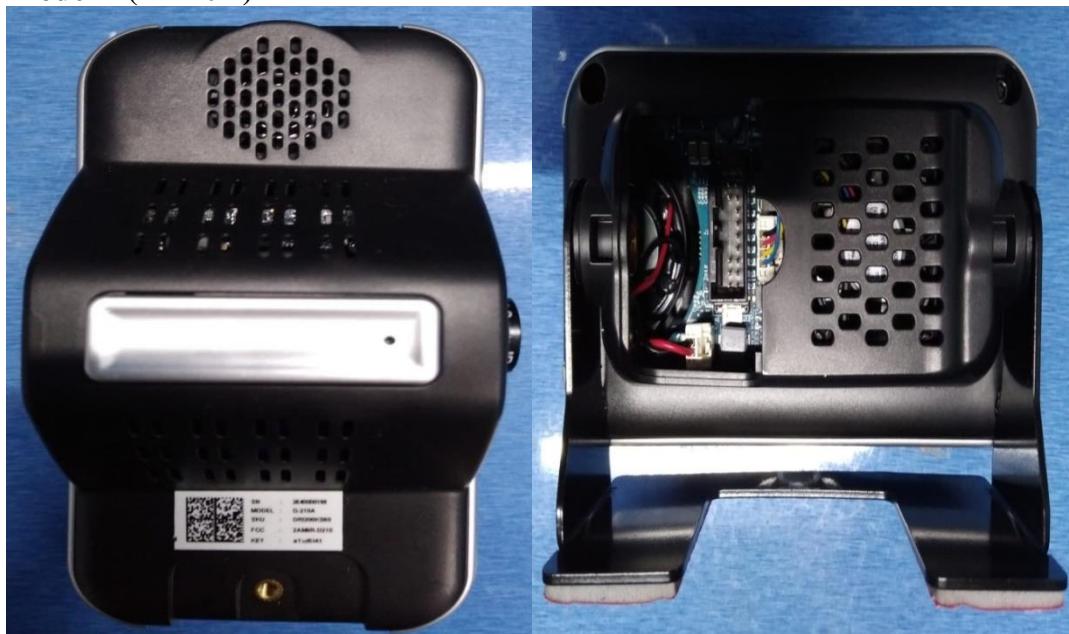


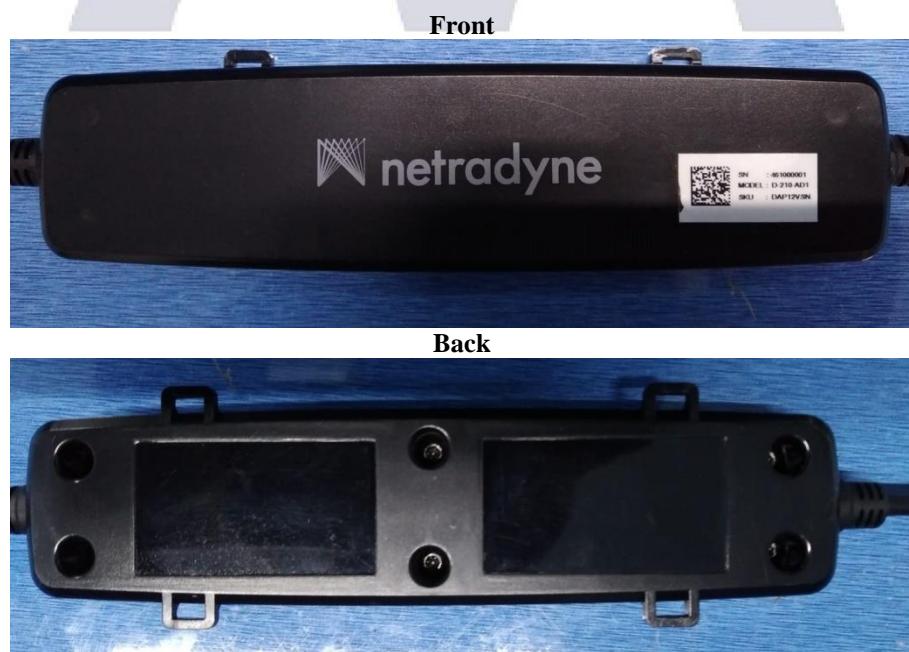
### EUT Photographs

#### Main Model (D-210)



#### Serial Model 1 (D-210A)



**Serial Model 2 (D-211)****Accessories Photographs****CAN Adapter AD01**



### CAN Adapter AD02

Front



Back



### CAN Adapter AD03

Front



Back





### LTE Module

Front



LTE Module





**\*\*End of Report\*\***

This page is intentionally left blank  
and marks the last page of this report

