Report No.: NTC1706421FV00

FCC ID: PRDRX0I



# RADIO TEST REPORT

The device described below is tested by Dongguan Nore Testing Center Co., Ltd. to determine the maximum emission levels emanating from the device, the severe levels which the device can endure and E.U.T.'s performance criterion. The test results, data evaluation, test procedures, and equipment of configurations shown in this report were made in accordance with the procedures in ANSI C63.10(2013).

Applicant

: Acrox Technologies Co., Ltd.

Address

: 4F., No.89, Minshan St., Neihu Dist., Taipei City 114, Taiwan

Manufacturer/Factory

: Acrox Technologies Co., Ltd.

Address

: Hsinmin Industrial, Changan Town, Dongguan City, Guangdong, China

E.U.T.

: 2.4G Dongle

**Brand Name** 

: Acrox, onn

Model No.

: MQL

FCC ID

: PRDRX0I

Measurement Standard : FCC PART 15.249: 2016

Date of Receiver

: November 07, 2017

Date of Test

: November 07, 2017 to November 08, 2017

Date of Report

: November 09, 2017

This Test Report is Issued Under the Authority of:

Prepared by

Rose Hu / Engineer

Appro

Iori Fan / Authorized Signatory

This test report is for the customer shown above and their specific product only. This report applies to above tested sample only and shall not be reproduced in part without written approval of Dongquan Nore Testing Center Co., Ltd.

Dongguan Nore Testing Center Co., Ltd. Report No.: NTC1706421FV00 FCC ID: PRDRX0I



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# **Revision History of This Test Report**

Report Number	Description	Issued Date
NTC1706421FV00	Initial Issue	2017-11-09

Report No.: NTC1706421FV00

FCC ID: PRDRX0I



#### 1. GENERAL INFORMATION

## 1.1 Product Description for Equipment under Test

Model Name : MQL

Model Difference

Description

: None

Power Supply : DC 5V

Test Voltage : AC 120V 60Hz PC Input

**Technical Specification:** 

2.4G Function:

Frequency Range : 2404-2478MHz

Modulation Type : GFSK

Number of Channel : 20

Antenna Type : PCB

Antenna Gain : -0.5 dBi (Declaration by manufacturer)

Hardware version : V1.0

Software version : V1.0

FCC ID: PRDRX0I



#### **Channel List:**

Channel	1	2	3	4	5
Frequency(MHz)	2404	2414	2478	2408	2454
Channel	6	7	8	9	10
Frequency(MHz)	2406	2456	2410	2405	2474
Channel	11	12	13	14	15
Frequency(MHz)	2425	2450	2470	2458	2477
Channel	16	17	18	19	20
Frequency(MHz)	2452	2460	2435	2466	2441

Note: The Lowest, middle, and the Highest frequency of channel were selected to perform the test. The frequency selected see below:

The Lowest frequency: 2404MHz The middle frequency: 2441MHz The Highest frequency: 2478MHz

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#### 1.2 Related Submittal(s) / Grant (s)

This submittal(s) (test report) is intended for FCC ID: PRDRX0I filing to comply with Section 15.249 of the FCC Part 15 (2016), Subpart C Rule.

#### 1.3 Test Methodology

Both AC mains line-conducted and radiated emission measurements were performed according to the procedures in ANSI C63.10 (2013). Radiated emission measurement was performed in semi-anechoic chamber and conducted emission measurement was performed in shield room. For radiated emission measurement, preliminary scans were performed in the semi-anechoic chamber only to determine the worst case modes. All radiated tests were performed at an antenna to EUT distance of 3 meters.

#### 1.4 Equipment Modifications

Not available for this EUT intended for grant.

#### 1.5 Support Device

Notebook PC : Manufacturer: Lenovo

Model: TP00067A P/N: SL10G10768

S/N: PF-0DS3YC 15/12

CE, FCC: DOC

Adapter : Manufacturer: Lenovo

Model: ADLX65NLC3A

I/P: AC 100-240V 50-60Hz, 1.8A

O/P: DC 20V 3.25A

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#### 1.6 Test Facility and Location

Listed by CNAS, August 14, 2015
The certificate is valid until August 13, 2018
The Laboratory has been assessed and proved to be in compliance with CNAS/CL01
The Certificate Registration Number is L5795.

Listed by FCC, July 03, 2014
The Certificate Registration Number is 665078.
Listed by Industry Canada, June 18, 2014
The Certificate Registration Number is 46405-9743.

Listed by FCC A2LA, November 01, 2017 The Certificate Number is 4429.01.

Dongguan NTC Co., Ltd. (Full Name: Dongguan Nore Testing Center Co., Ltd.)

Building D, Gaosheng Science and Technology Park, Hongtu Road, Nancheng District, Dongguan City, Guangdong, China (Full Name: Building D, Gaosheng Science & Technology Park, Zhouxi Longxi Road, Nancheng District, Dongguan, Guangdong, China. Dongguan Nore Testing Center Co., Ltd. Report No.: NTC1706421FV00 FCC ID: PRDRX0I



## 1.7 Summary of Test Results

FCC Rules	Description Of Test	Uncertainty	Result
§15.207(a)	AC Power Conducted Emission	±1.06dB	Compliant
§15.249(a)/ 15.209	Radiated Emissions	±3.70dB	Compliant
§15.249(d)/ 15.205	Band Edge	±1.70dB	Compliant
§15.215(c)	20dB Bandwidth	±1.42 x10 <sup>-4</sup> %	Compliant
§15.203	Antenna Requirement	±0.60dB	Compliant

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## 2. System Test Configuration

## 2.1 EUT Configuration

The EUT configuration for testing is installed on RF field strength measurement to meet the Commissions requirement and operating in a manner which intends to maximize its emission characteristics in a continuous normal application.

#### 2.2 Special Accessories

Not available for this EUT intended for grant.

#### 2.3 Description of test modes

The EUT has been tested under operating condition. The Lowest, middle and highest frequencies were chosen for testing.

#### 2.4 EUT Exercise

The EUT was operated in the engineering mode to fix the Tx frequency that was for the purpose of the measurements.

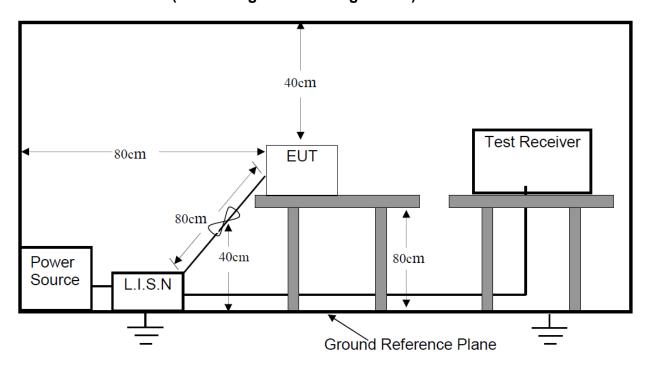
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#### 3. Conducted Emissions Test

## 3.1 Test SET-UP (Block Diagram of Configuration)



#### 3.2 Test Condition

Test Requirement: FCC Part 15.207

Frequency Range: 150KHz ~ 30MHz

**Detector: RBW 9KHz, VBW 30KHz** 

**Operation Mode: TX** 

#### 3.3 Measurement Results

Please refer to following the test plots of the worst case: middle channel.

FCC ID: PRDRX0I

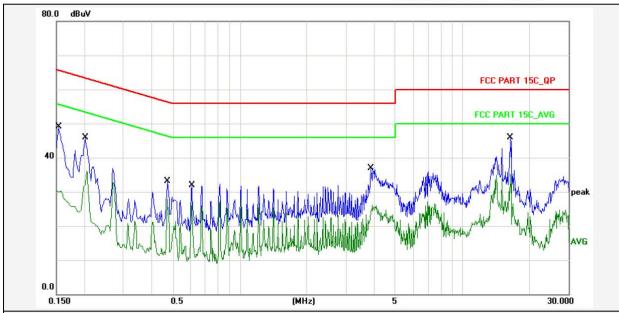


Site: Conduction

Dongguan NTC Co., Ltd. Tel: +86-769-22022444 Fax: +86-769-22022799

Nore Testing Center Web: Http://www.ntc-c.com

Test Time: 2017-11-08 16:32:40



Report No.: MQL

Test Standard: FCC PART 15C\_QP

Test item: **Conducted Emission** 

Applicant: ACROX Temp.( )/Hum.(%): 26(C) / 52 % Product: 2.4GHz Dongle AC 120V/60Hz Power Rating:

Model No.: MQL Test Engineer: Lay

Test Mode: Remark:

No.	Frequency (MHz)	Factor (dBuV)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1539	10.80	36.40	47.20	65.78	-18.58	QP	Р	
2	0.1539	10.80	17.40	28.20	55.78	-27.58	AVG	Р	
3	0.2020	10.80	33.10	43.90	63.52	-19.62	QP	Р	
4	0.2020	10.80	23.30	34.10	53.52	-19.42	AVG	Р	
5	0.4740	10.80	20.30	31.10	56.44	-25.34	QP	Р	
6	0.4740	10.80	15.20	26.00	46.44	-20.44	AVG	Р	
7	0.6099	10.80	19.10	29.90	56.00	-26.10	QP	Р	
8	0.6099	10.80	14.20	25.00	46.00	-21.00	AVG	Ъ	
9	3.8940	10.80	24.10	34.90	56.00	-21.10	QP	J	
10	3.8940	10.80	13.20	24.00	46.00	-22.00	AVG	Р	
11	16.4057	10.80	33.20	44.00	60.00	-16.00	QP	Р	
12	16.4057	10.80	22.30	33.10	50.00	-16.90	AVG	Р	

FCC ID: PRDRX0I

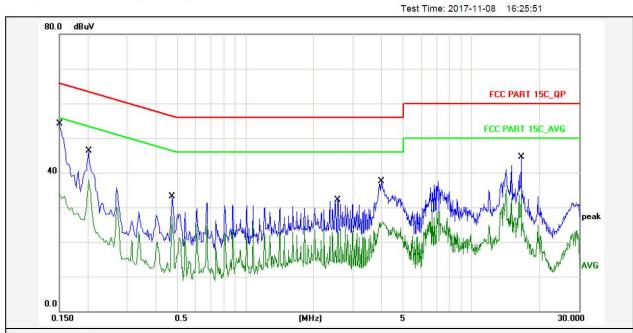


Site: Conduction



Dongguan NTC Co., Ltd. Tel: +86-769-22022444 Fax: +86-769-22022799

None Testing Center Web: Http://www.ntc-c.com



Report No.: MQL

Test Standard: FCC PART 15C\_QP

Test item: **Conducted Emission** 

Applicant: ACROX Temp.( )/Hum.(%): 26(C) / 52 % Product: 2.4GHz Dongle Power Rating: AC 120V/60Hz

Phase:

Model No.: MQL Test Engineer: Lay

Test Mode: Remark:

No.	Frequency (MHz)	Factor (dBuV)	Reading (dBuV)	Level (dBuV)	Limit (dBuV)	Margin (dB)	Detector	P/F	Remark
1	0.1500	10.80	41.30	52.10	65.99	-13.89	QP	Р	
2	0.1500	10.80	21.10	31.90	55.99	-24.09	AVG	Р	
3	0.2020	10.80	33.40	44.20	63.52	-19.32	QP	Р	
4	0.2020	10.80	25.20	36.00	53.52	-17.52	AVG	Р	
5	0.4740	10.80	20.30	31.10	56.44	-25.34	QP	Р	
6	0.4740	10.80	14.50	25.30	46.44	-21.14	AVG	Р	
7	2.5660	10.80	19.20	30.00	56.00	-26.00	QP	Р	
8	2.5660	10.80	10.90	21.70	46.00	-24.30	AVG	Р	
9	3.9940	10.80	24.70	35.50	56.00	-20.50	QP	Ը	
10	3.9940	10.80	13.20	24.00	46.00	-22.00	AVG	Р	
11	16.5819	10.80	31.80	42.60	60.00	-17.40	QP	Р	
12	16.5819	10.80	21.80	32.60	50.00	-17.40	AVG	Р	

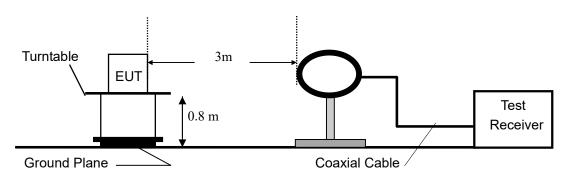
FCC ID: PRDRX0I

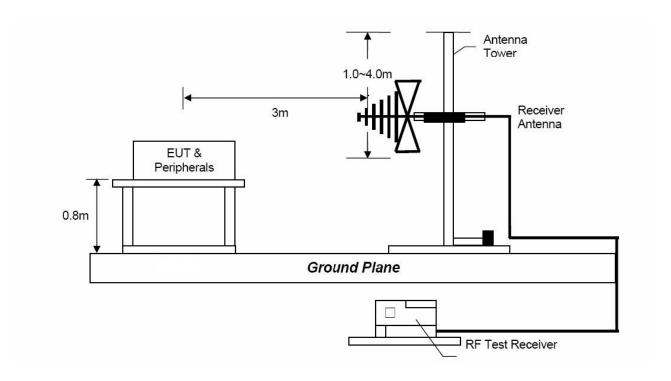


## 4. Radiated Emission Test

## **4.1 Test SET-UP (Block Diagram of Configuration)**

## 4.1.1 Radiated Emission Test Set-Up, Frequency Below 30MHz



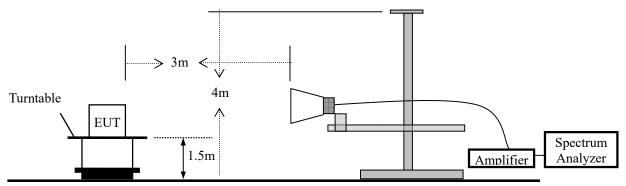


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#### 4.1.2 Radiated Emission Test Set-Up, Frequency above 1GHz



#### **4.2 Measurement Procedure**

- a. Blow 1GHz, the EUT was placed on the top of a rotating table 0.8 meters above the ground at a 3 meter semi- anechoic chamber room.
- b. For the radiated emission test above 1GHz:
  - The EUT was placed on the top of a rotating table 1.5 meters above the ground at a 3 meter full anechoic chamber room. The table was rotated 360 degrees to determine the position of the highest radiation. Place the measurement antenna away from each area of the EUT determined to be a source of emissions at the specified measurement distance, while keeping the measurement antenna aimed at the source of emissions at each frequency of significant emissions, with polarization oriented for maximum response. The measurement antenna may have to be higher or lower than the EUT, depending on the radiation pattern of the emission and staying aimed at the emission source for receiving the maximum signal. The final measurement antenna elevation shall be that which maximizes the emissions. The measurement antenna elevation for maximum emissions shall be restricted to a range of heights of from 1 m to 4 m above the ground or reference ground plane.
- c. The EUT was set 3 meters away from the interference-receiving antenna, which was mounted on the top of a variable-height antenna tower.
- d. The height of antenna is varied from one meter to four meters above the ground to determine the maximum value of the field strength. Both horizontal and vertical polarizations of the antenna are set to make the measurement.
- e. For each suspected emission, the EUT was arranged to its worst case and then the antenna was tuned to heights from 1 meter to 4 meters and the rotatable table was turned from 0 degrees to 360 degrees to find the maximum reading. The test-receiver system was set to peak detect function and specified bandwidth with maximum hold mode.
- f. A Quasi-peak measurement was then made for that frequency point for below 1GHz test. PK and AV for above 1GHz emission test.

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During the radiated emission test, the spectrum analyzer was set with the following configurations:

Frequency Band (MHz)	Level	Resolution Bandwidth	Video Bandwidth		
30 to 1000	QP	120 kHz	300 kHz		
Above 1000	Peak	1 MHz	3 MHz		
Above 1000	Average	1 MHz	10 Hz		

#### 4.3 Limit

Frequency range	Distance Meters	Field Strengths Limit (15.209)					
MHz		μV	/m				
0.009 ~ 0.490	300	2400/F	(kHz)				
0.490 ~ 1.705	30	24000/	F(kHz)				
1.705 ~ 30	30	30	)				
30 ~ 88	3	10	0				
88 ~ 216	3	15	0				
216 ~ 960	3	20	0				
Above 960	3	50	0				
Frequency range	Distance Meters	Field Strengths	Limit (15.249)				
MHz		mV/m	μV/m				
		(Field strength of	(Field strength of				
		fundamental)	Harmonics)				
902 ~ 928	3	50	500				
2400 ~ 2483.5	3	50	500				
5725 ~ 5875	3	50	500				
24000 ~ 2425000	3	250	2500				

Remark : (1) Emission level (dB) $\mu$ V = 20 log Emission level  $\mu$ V/m

- (2) The smaller limit shall apply at the cross point between two frequency bands.
- (3) As shown in 15.35(b), for frequencies above 1000MHz, the field strength limits are based on average detector, however, the peak field strength of any emission shall not exceed the maximum permitted average limits, specified above by more than 20dB under any condition of modulation.
- (4) The frequency range scanned is from the lowest radio frequency signal generated in the device which is greater than 9 kHz to the tenth harmonic of the highest fundamental frequency or 40 GHz, whichever is lower.

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#### **4.4 Measurement Results**

Please refer to following the test plots of the worst case: middle channel.

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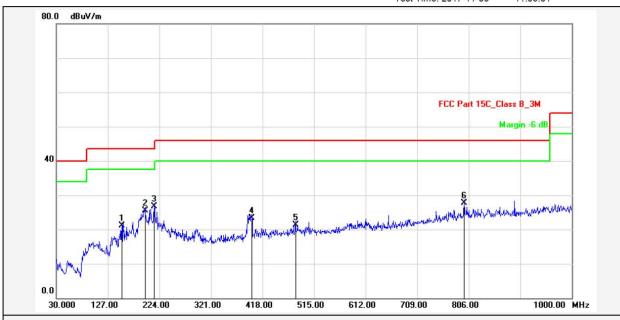
FCC ID: PRDRX0I



Site: Radiation



Test Time: 2017-11-08 11:05:01



Report No.:

Test Standard: FCC Part 15C\_Class B\_3M

Test item: **Radiation Emission** 

Applicant: ACROX Product: 2.4GHz Dongle

Model No.: MQL

Test Mode:

Remark:

hyghele	desappement	And produce the source of the	and water and the same
00	709.00	806.00	1000.00 MHz
	Test Distan	ce: 3m	
	Ant. Polariz	ation: Hor	rizontal
	Temp.(C)/H	um.(%):	24(C) / 47 %
	Dawer Batis	ng: AC 120\	V/60Hz
	Fower Ratii	.g	

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	153.1900	-15.40	36.50	21.10	43.50	-22.40	QP			Р	
2	196.8400	-13.41	39.01	25.60	43.50	-17.90	QP			Р	
3	214.3000	-13.13	39.93	26.80	43.50	-16.70	QP			Р	
4	397.6300	-9.13	32.43	23.30	46.00	-22.70	QP			Р	
5	480.0800	-7.21	28.61	21.40	46.00	-24.60	QP			Р	
6	797.2700	-1.99	29.69	27.70	46.00	-18.30	QP			Р	

Note: Below 30MHz, the emissions are lower than 20dB below the allowable limit.

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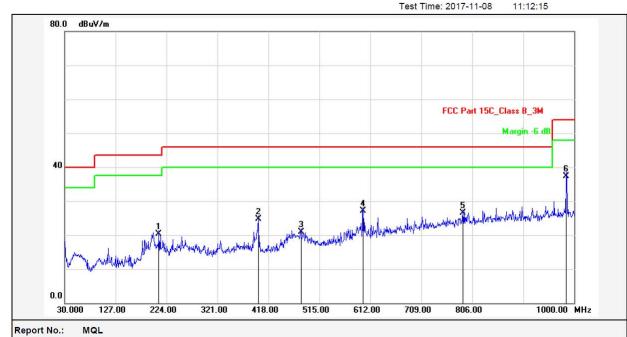




# Dongguan NTC Co., Ltd. Tel:+86-769-22022444 Fax:+86-769-22022799

Nore Testing Center Web: <u>Http://www.ntc-c.com</u>

Site: Radiation



FCC Part 15C\_Class B\_3M Test Standard:

Test item: **Radiation Emission** 

ACROX Applicant: Product: 2.4GHz Dongle

Model No.: MQL

Test Mode:

Remark:

No.	Frequency (MHz)	Factor (dB/m)	Reading (dBuV)	Level (dBuV/m)	Limit (dBuV/m)	Margin (dB)	Detector	Height (cm)	Azimuth (deg.)	P/F	Remark
1	209.4500	-16.26	36.56	20.30	43.50	-23.20	QP			Р	
2	398.6000	-11.12	35.82	24.70	46.00	-21.30	QP			Р	
3	480.0800	-9.21	30.21	21.00	46.00	-25.00	QP			Р	
4	598.4200	-7.03	34.23	27.20	46.00	-18.80	QP			Р	
5	788.5400	-2.09	28.69	26.60	46.00	-19.40	QP			Р	
6	985.4500	-0.27	37.67	37.40	54.00	-16.60	QP			Р	

Test Distance:

Power Rating:

Test Engineer:

Ant. Polarization:

Temp.(C)/Hum.(%):

3m

Vertical

AC 120V/60Hz

Ivan

24(C) / 47 %

Note: Below 30MHz, the emissions are lower than 20dB below the allowable limit.

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Frequency Range: Test Date: November 08, 2017 1-25GHz

Test Result: **PASS** Temperature: **21** ℃ Measured Distance: 3m Humidity: 55 %

Test By: Sance

Freq.	Ant.Pol.	Rea Level(	ding	Factor	Emissio (dBı		Limit (dBu\			rgin B)
(MHz)	(H/V)	PK	AV	(dB/m)	PK	AV	PK	AV	PK	AV
				ration M	ode: TX N			, , ,		7.0
2404	V	74.33	72.12	0.14	74.47	72.26	114.00	94.00	-39.53	-21.74
4808	V	47.06	36.32	6.33	53.39	42.65	74.00	54.00	-20.61	-11.35
7212	V	46.57	30.85	10.44	57.01	41.29	74.00	54.00	-16.99	-12.71
2404	Н	73.12	68.36	0.14	73.26	68.50	114.00	94.00	-40.74	-25.50
4808	Н	53.30	42.01	6.33	59.63	48.34	74.00	54.00	-14.37	-5.66
7212	Н	46.23	31.20	10.44	56.67	41.64	74.00	54.00	-17.33	-12.36
			Ope	ration M	ode: TX I	Mode (M	id)			
2441	V	75.31	71.76	0.24	75.55	72.00	114.00	94.00	-38.45	-22.00
4882	V	53.14	35.87	6.60	59.74	42.47	74.00	54.00	-14.26	-11.53
7323	V	46.06	31.49	10.55	56.61	42.04	74.00	54.00	-17.39	-11.96
2441	Н	72.11	68.32	0.24	72.35	68.56	114.00	94.00	-41.65	-25.44
4882	Н	53.61	42.37	6.60	60.21	48.97	74.00	54.00	-13.79	-5.03
7323	Н	46.69	31.66	10.55	57.24	42.21	74.00	54.00	-16.76	-11.79
	1	1			ode: TX N			1	1	
2478	V	67.31	64.86	0.34	67.65	65.20	114.00	94.00	-46.35	-28.80
4956	V	51.98	39.81	6.88	58.86	46.69	74.00	54.00	-15.14	-7.31
7434	V	46.58	31.68	10.59	57.17	42.27	74.00	54.00	-16.83	-11.73
2478	Н	66.33	62.01	0.34	66.67	62.35	114.00	94.00	-47.33	-31.65
4956	Н	52.40	42.49	6.88	59.28	49.37	74.00	54.00	-14.72	-4.63
7434	Н	46.19	31.00	10.59	56.78	41.59	74.00	54.00	-17.22	-12.41

Note:

- (1) All Readings are Peak Value and AV.
- (2) Emission Level= Reading Level + Factor
- (3) Factor= Antenna Gain + Cable Loss Amplifier Gain
- (4) Data of measurement within this frequency range shown " --- " in the table above means the reading of emissions are attenuated more than 10dB below the permissible limits.
  - (5) Measurement uncertainty: ±3.7dB.
  - (6) Horn antenna used for the emission over 1000MHz.

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#### 5. 20dB Bandwidth

#### **5.1 Measurement Procedure**

The 20dB bandwidth of the emission was contained within the frequency band designated which the EUT operated. The effects, if any, from frequency sweeping, frequency hopping, other modulation techniques and frequency stability over excepted variations in temperature and supply voltage were considered, FCC Rule 15.215(c):

The antenna port of the EUT was connected to the input of a spectrum analyzer. Analyzer RBW was chosen so that the display was a result of the hopping channel modulation. For each RF output channel investigated, the spectrum analyzer center frequency was set to the channel carrier. Use the spectrum 20dB down delta function to measure the bandwidth.

#### **5.2 Test SET-UP (Block Diagram of Configuration)**

FIIT	Spectrum Analyzer
	Opectium Analyzei

#### 5.3 Measurement Results

Refer to attached data chart.

RBW: 100KHz VBW: 300KHz Spectrum Detector: PK Temperature : 22  $^{\circ}$ C Test By: Sance Humidity : 54  $^{\circ}$ 

Test Result: PASS Test Date: November 08, 2017

Channel frequency (MHz)	20dB Down BW(kHz)			
2404	2154			
2441	2139			
2478	2154			

FCC ID: PRDRX0I



#### **Lowest Channel**



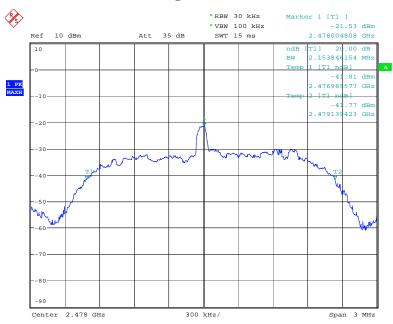
#### **Middle Channel**



FCC ID: PRDRX0I



## **Highest Channel**



Report No.: NTC1706421FV00

FCC ID: PRDRX0I



## 6. Band Edge

#### **6.1 Measurement Procedure**

Same as Radiated Emission Test.

#### 6.2 Limit

Emissions radiated outside of the specified frequency bands, except for harmonics, shall be attenuated by at least 50 dB below the level of the fundamental or to the general radiated emission limits in §15.209, whichever is the lesser attenuation.

#### 6.3 Measurement Results

Operation Mode: TX Mode Test Date: November 08, 2017

Temperature : 21  $^{\circ}$ C Humidity : 55  $^{\circ}$ C Test Result: PASS Test By: Sance

Measured Distance: 3m

Freq. (MHz)	Ant.Pol. (H/V)	Reading Level(dBuV)		Factor (dB/m)	Emission Level (dBuV)		Limit 3m (dBuV/m)		Margin (dB)	
		PK	AV	(ub/III)	PK	AV	PK	AV	PK	AV
2390.000	Н	48.74	32.35	0.13	48.87	32.48	74.00	54.00	-25.13	-21.52
2390.000	V	47.71	33.14	0.13	47.84	33.27	74.00	54.00	-26.16	-20.73
2483.500	Н	46.02	30.91	0.34	46.36	31.25	74.00	54.00	-27.64	-22.75
2483.500	V	45.76	30.98	0.34	46.10	31.32	74.00	54.00	-27.90	-22.68

Note: (1) Emission Level= Reading Level + Factor

(2) Factor= Antenna Gain + Cable Loss – Amplifier Gain

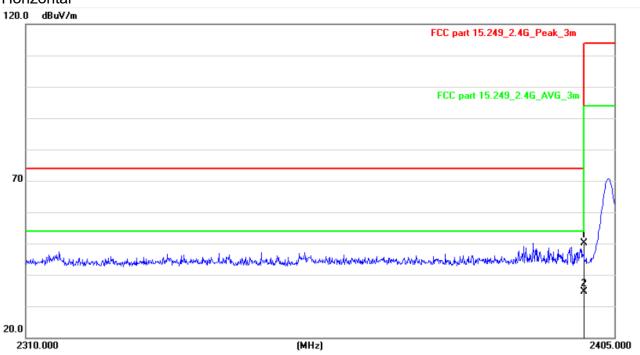
(3) Horn antenna used for the emission over 1000MHz.

FCC ID: PRDRX0I

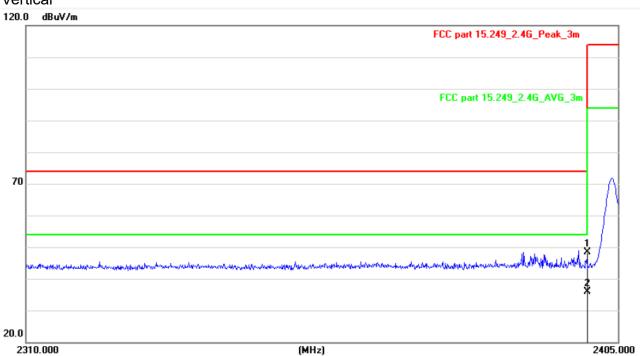


#### Low channel

Horizontal





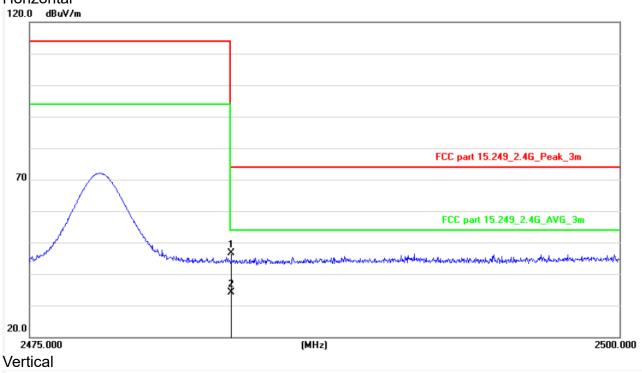


FCC ID: PRDRX0I

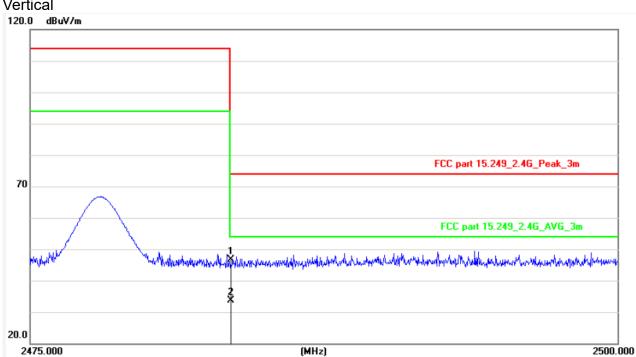


## High channel









Report No.: NTC1706421FV00

FCC ID: PRDRX0I



## 7. Antenna requirement

#### 7.1 Measurement Procedure

According to of FCC part 15C section 15.203:

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, the manufacturer may design the unit so that a broken antenna can be replaced by the user, but the use of a standard antenna jack or electrical connector is prohibited.

Systems operating in the 2400-2483.5MHz band that are used exclusively for fixed, point-to-point operations may employ transmitting antennas with directional gain greater than 6dBi provided the maximum peak output power of the intentional radiator is reduced by 1dB for every 3dB that the directional gain of the antenna exceeds 6dBi.

#### 7.2 Measurement Results

The antenna is PCB antenna and no consideration of replacement, and the best case gain of the antenna is -0.5dBi. So, the antenna is consider meet the requirement.

FCC ID: PRDRX0I



## 8. Test Equipment List

Description	Manufacturer	Model Number	Serial Number	Characteristics	Calibration Date	Calibration Due Date	
Test Receiver	Rohde & Schwarz	ESCI7	100837	9KHz~7GHz	Mar. 14, 2017	Mar. 13, 2018	
Antenna	Schwarzbeck	VULB9162	9162-010	30MHz~7GHz	Mar. 15, 2017	Mar. 14, 2018	
Cable	Huber+Suhner	CBL2-NN-1M	22390001	9KHz~7GHz	Mar. 14, 2017	Mar. 13, 2018	
Cable	Huber+Suhner	CIL02	N/A	9KHz~7GHz	Mar. 14, 2017	Mar. 13, 2018	
RF Cable	Huber+Suhner	SF-104	MY16559/4	9KHz~25GHz	Apr. 25, 2017	Apr. 25, 2018	
Power Amplifier	HP	HP 8447D	1145A00203	100KHz~1.3GHz	Mar. 14, 2017	Mar. 13, 2018	
Horn Antenna	Schwarzbeck	BBHA9170	9170-242	15GHz~40GHz	Mar. 14, 2017	Mar. 13, 2018	
Horn Antenna	Com-Power	AH-118	071078	1GHz~18GHz	Mar. 15, 2017	Mar. 14, 2018	
RF Cable	Huber+Suhner	SF-104	N/A	9KHz~40GHz	Apr. 25, 2017	Apr. 24, 2018	
Loop antenna	Daze	ZA30900A	0708	9KHz~30MHz	Apr. 25, 2017	Apr. 24, 2018	
Spectrum Analyzer	Rohde & Schwarz	FSU26	200409/026	20Hz~26.5GHz	Apr. 25, 2017	Apr. 24, 2018	
Spectrum Analyzer	Rohde & Schwarz	FSV40	101003	10Hz~40GHz	April. 06, 2017	April. 05, 2018	
Pre-Amplifier	EMCI	EMC 184045	980102	18GHz~40GHz	Nov. 03, 2017	Nov. 02, 2018	
Pre-Amplifier	Agilent	8449B	3008A02964	1GHz~26.5GHz	Apr. 25, 2017	Apr. 24, 2018	
L.I.S.N.	Rohde & Schwarz	ENV 216	101317	9KHz~30MHz	Mar. 14, 2017	Mar. 13, 2018	
Temporary antenna connector	TESCOM	SS402	N/A	9KHz-25GHz	N/A	N/A	

Note: The temporary antenna connector is soldered on the PCB board in order to perform conducted tests and this temporary antenna connector is listed in the equipment list.