

EN 62311:2008  
ASSESSMENT REPORT

For

**Tomorrow systems s.r.o**

Karlstejska 323,Orech

**Tested Model: 524WiFi 900VX**  
**Series Model: 524WiFi 600VX,524WiFi 900VX-MX,**  
**524WiFi 600VX-MX,WDS-WLE600VX-7A,WDS-WLE900VX-7A**

<b>Report Type:</b> Amended Report	<b>Product Type:</b> Dual Band 11AC wireless Module
<b>Report Number:</b>	RKSA210121001-01D
<b>Report Date:</b>	2021-01-27
	Oscar Ye
<b>Reviewed By:</b>	EMC Manager
<b>Prepared By:</b>	Bay Area Compliance Laboratories Corp. (Kunshan) No.248 Chenghu Road, Kunshan, Jiangsu province, China Tel: +86-0512-86175000 Fax: +86-0512-88934268 <a href="http://www.baclcorp.com.cn">www.baclcorp.com.cn</a>

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**DOCUMENT REVISION HISTORY**

Revision Number	Report Number	Description of Revision	Date of Issue
1	RKSA191022001-01D	Original Report	2019-11-30
2	RKSA210121001-01D	Amended Report	2021-01-27

**Note:**

This is an amended report application based on RKSA191022001-01D, the details as below:

1. Change the manufacturer from “Wallys Communications (SuZhou) Co.,LTD” to “Tomorrow systems s.r.o”.
2. Change the address from “Room 2723,Le Jia building,Jia Rui Xiang No.8, Suzhou Industrial Park, Suzhou, P.R Suzhou, 215000 China” to “Karlstejska 323,Orech”.
3. Change the tested model from “DR900VX” to “524WiFi 900VX”.
4. Change the series model from “DR900VX-4.9,DR600VX,DR600VX-4.9,DR900VX-MX,DR600VX-MX” to “524WiFi 600VX,524WiFi 900VX-MX,524WiFi 600VX-MX,WDS-WLE600VX-7A,WDS-WLE900VX-7A”.
5. Update the Product Similarity Declaration Letter.

The above changes will affect nothing, all test data and photos were referred to the original report RKSA191022001-01D that issued on 2019-11-30 by BACL (Kunshan).

**GENERAL INFORMATION****Product Description for Equipment under Test (EUT)**

Applicant	Tomorrow systems s.r.o
Tested Model	524WiFi 900VX
Series Model	524WiFi 600VX,524WiFi 900VX-MX,524WiFi 600VX-MX, WDS-WLE600VX-7A,WDS-WLE900VX-7A
Model Difference	See Product Similarity Declaration Letter
Product Type	Dual Band 11AC wireless Module
Power Supply	DC 3.3V
RF Function	2.4G Wi-Fi, 5G Wi-Fi, DFS
Operating Band/Frequency	2.4G Wi-Fi: 2412-2472 MHz 5G Wi-Fi Band1: 5150-5250MHz,5G Wi-Fi Band2: 5250-5350MHz 5G Wi-Fi Band3: 5470-5725MHz
Channel Number	2.4G Wi-Fi: 13; 5G Wi-Fi B1:7, B2:7, B3:18
Channel Separation	2.4G Wi-Fi: 5MHz; 5G Wi-Fi B1,B2,B3:10MHz
Antenna Type	Omni antenna
Antenna Gain	2.0dBi

*\*All measurement and test data in this report was gathered from production sample serial number: 20191022001.  
(Assigned by the BACL. The EUT supplied by the applicant was received on 2019-10-22)*

## Declarations

1: BACL is not responsible for the authenticity of any test data provided by the applicant. Data included from the applicant that may affect test results are marked with an asterisk '\*'. Customer model name, addresses, names, trademarks etc. are not considered data.

2: Unless otherwise stated the results shown in this test report refer only to the sample(s) tested.

3: Otherwise required by the applicant or Product Regulations, Decision Rule in this report did not consider the uncertainty.

4: The extended uncertainty given in this report is obtained by combining the standard uncertainty times the coverage factor K with the 95% confidence interval.

5: This report cannot be reproduced except in full, without prior written approval of the Company.

6: This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.

## PRODUCT SIMILARITY DECLARATION LETTER

Tomorrow systems s.r.o  
Add: Karlstejska 323,Orech  
Tel: +420775262900  
Fax: +420608262004  
Mail: info@524wifi.com  
Date: 2021-1-21

### DECLARATION OF SIMILARITY

Dear Sir or Madam:

We, Tomorrow systems s.r.o , hereby declare that product: Dual Band 11AC wireless Module, as following models: 524WiFi 900VX ,524WiFi 600VX,524WiFi 900VX-MX ,524WiFi 600VX-MX ,WDS-WLE600VX-7A,WDS-WLE900VX-7A. And only 524WiFi 900VX was tested by BACL with the same electromagnetic emissions and electromagnetic compatibility characteristics.

The detail differences description as below:

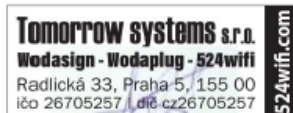
All the products are the different model name, with the same appearance, structure, power and size, and schematic and PCB design.

Please contact me if there is need for any additional clarification or information.

Best Regards,

Signature:

Contact Person: Karel Horky  
Title: CEO, founder



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**BELOW IS THE ORIGINAL REPORT**

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EN 62311:2008  
ASSESSMENT REPORT

For

**Wallys Communications (SuZhou) Co.,LTD**

Room 2723,Le Jia building,Jia Rui Xiang No.8, Suzhou Industrial Park, Suzhou, P.R Suzhou,  
215000 China

**Tested Model: DR900VX**  
**Series Model: DR900VX-4.9,DR600VX,DR600VX-4.9,DR900VX-MX,DR600VX-MX**

<b>Report Type:</b> Original Report	<b>Product Type:</b> Dual Band 11AC wireless Module
<b>Test Engineer:</b>	Carry Cai
<b>Report Number:</b>	RKSA191022001-01D
<b>Report Date:</b>	2019-11-30
<b>Reviewed By:</b>	Oscar Ye
<b>Prepared By:</b>	EMC Manager
Bay Area Compliance Laboratories Corp. (Kunshan) No.248 Chenghu Road, Kunshan, Jiangsu province, China Tel: +86-0512-86175000 Fax: +86-0512-88934268 <a href="http://www.baclcorp.com.cn">www.baclcorp.com.cn</a>	

**Note:** This test report is prepared for the customer shown above and for the equipment described herein. It may not be duplicated or used in part without prior written consent from Bay Area Compliance Laboratories Corp. This report is valid only with a valid digital signature. The digital signature may be available only under the Adobe software above version 7.0.



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## GENERAL INFORMATION

### Product Description for Equipment under Test (EUT)

Applicant	Wallys Communications (SuZhou) Co.,LTD
Tested Model	DR900VX
Series Model	DR900VX-4.9,DR600VX,DR600VX-4.9,DR900VX-MX,DR600VX-MX
Model Difference	Model names
Product Type	Dual Band 11AC wireless Module
Power Supply	DC 3.3V
RF Function	2.4G Wi-Fi, 5G Wi-Fi, DFS
Operating Band/Frequency	2.4G Wi-Fi: 2412-2472 MHz 5G Wi-Fi Band1: 5150-5250MHz,5G Wi-Fi Band2: 5250-5350MHz 5G Wi-Fi Band3: 5470-5725MHz
Channel Number	2.4G Wi-Fi: 13; 5G Wi-Fi B1:7, B2:7, B3:18
Channel Separation	2.4G Wi-Fi: 5MHz; 5G Wi-Fi B1,B2,B3:10MHz
Antenna Type	Omni antenna
Antenna Gain	2.0dBi

*\*All measurement and test data in this report was gathered from production sample serial number: 20191022001. (Assigned by the BACL. The EUT supplied by the applicant was received on 2019-10-22.)*

### Objective

This report is prepared on behalf of *Wallys Communications (SuZhou) Co.,LTD.* in accordance with EN 62311:2008, Generic standard to demonstrate the compliance of electronic and electrical apparatus with the basic restrictions related to human exposure to electromagnetic fields (0 Hz–300 GHz) is to demonstrate the compliance of apparatus with the basic restrictions or reference levels on exposure of the general public related to electric, magnetic, electromagnetic fields as well as induced and contact current.

The objective is to determine the compliance of EUT with EN 62311:2008.

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

No related submittal(s).

### Test Methodology

All measurements contained in this report were conducted with EN 62311:2008.

### Test Facility

The test site used by Bay Area Compliance Laboratories Corp. (Kunshan) to collect test data is located on the No.248 Chenghu Road,Kunshan,Jiangsu province,China.

Bay Area Compliance Laboratories Corp. (Kunshan) Lab is accredited to ISO/IEC 17025 by A2LA (Lab code: 4323.01) and the FCC designation No. CN1185 under the FCC KDB 974614 D01 and CAB identifier CN0004 under the ISED requirement. The facility also complies with the radiated and AC line conducted test site criteria set forth in ANSI C63.4-2014.

FINAL

## Technical Requirements Specification in EN 62311

### General Description of Applied Standards

EN 62311 Generic standard to demonstrate the compliance of electronic and electrical apparatus with the basic restrictions related to human exposure to electromagnetic fields (0 Hz–300 GHz) is to demonstrate the compliance of apparatus with the basic restrictions or reference levels on exposure of the general public related to electric, magnetic, electromagnetic fields as well as induced and contact current.

### RF Exposure Evaluation

#### Limit:

According to EN 62311, the criteria listed in the below table shall be used to evaluate the environmental impact of human exposure to radio-frequency (RF) radiation as specified table 2 of Council Recommendation 1999/519/EC.

Reference levels for electric, magnetic and electromagnetic fields  
(0 Hz to 300 GHz, unperturbed rms values)

Frequency range	E-field strength (V/m)	H-field strength (A/m)	B-field (μT)	Equivalent plane wave power density $S_{eq}$ (W/m <sup>2</sup> )
0-1 Hz	—	$3,2 \times 10^4$	$4 \times 10^4$	—
1-8 Hz	10 000	$3,2 \times 10^4/f^2$	$4 \times 10^4/f^2$	—
8-25 Hz	10 000	$4\,000/f$	$5\,000/f$	—
0,025-0,8 kHz	$250/f$	$4/f$	$5/f$	—
0,8-3 kHz	$250/f$	5	6,25	—
3-150 kHz	87	5	6,25	—
0,15-1 MHz	87	$0,73/f$	$0,92/f$	—
1-10 MHz	$87/f^{1/2}$	$0,73/f$	$0,92/f$	—
10-400 MHz	28	$0,073$	$0,092$	2
400-2 000 MHz	$1,375\,f^{1/2}$	$0,0037\,f^{1/2}$	$0,0046\,f^{1/2}$	$f/200$
2-300 GHz	61	0,16	0,20	10

#### Notes:

1.  $f$  as indicated in the frequency range column.

**Test method**

The antenna of the product, under normal use condition is at least 20cm away from the body of the user. Warning statement of the user for keeping 20cm separation distance and the prohibition of operating to a person has been printed on the user manual. So, this product under normal use is located on electromagnetic far field between the human body.

**Far Field Calculation Formula**

$$E = \frac{\sqrt{30PG(\theta, \phi)}}{r}$$

$G$  = antenna gain relative to an isotropic antenna  
 $\theta, \phi$  = elevation and azimuth angles to point of investigation  
 $r$  = distance from observation point to the antenna

**Test Data****Environmental Conditions**

<b>Temperature:</b>	22.3~25.0 °C
<b>Relative Humidity:</b>	48~50%
<b>ATM Pressure:</b>	101.1~101.3kPa

The testing was performed by Carry Cai from 2019-10-28 to 2019-11-18.

For 2.4G Wi-Fi:

Frequency Range (GHz)	Tune-up EIRP (dBm)	Tune-up EIRP (mW)	E-Field Strength (V/m)	E-Field Limit (V/m)	Result
2412-2472	20.00	100	8.66	61	Pass

**Note:** Antenna Gain (numeric): 2dBi (2.33) for 2.4G Wi-Fi

For 5G Wi-Fi:

Frequency Range (GHz)	Tune-up EIRP (dBm)	Tune-up EIRP (mW)	E-Field Strength (V/m)	E-Field Limit (V/m)	Result
5150-5250	18.50	70.79	7.29	61	Pass
5250-5350	18.00	63.10	6.88	61	Pass
5470-5725	19.00	79.43	7.72	61	Pass

**Note:** Antenna Gain (numeric): 2dBi (2.87) for 5G Wi-Fi.

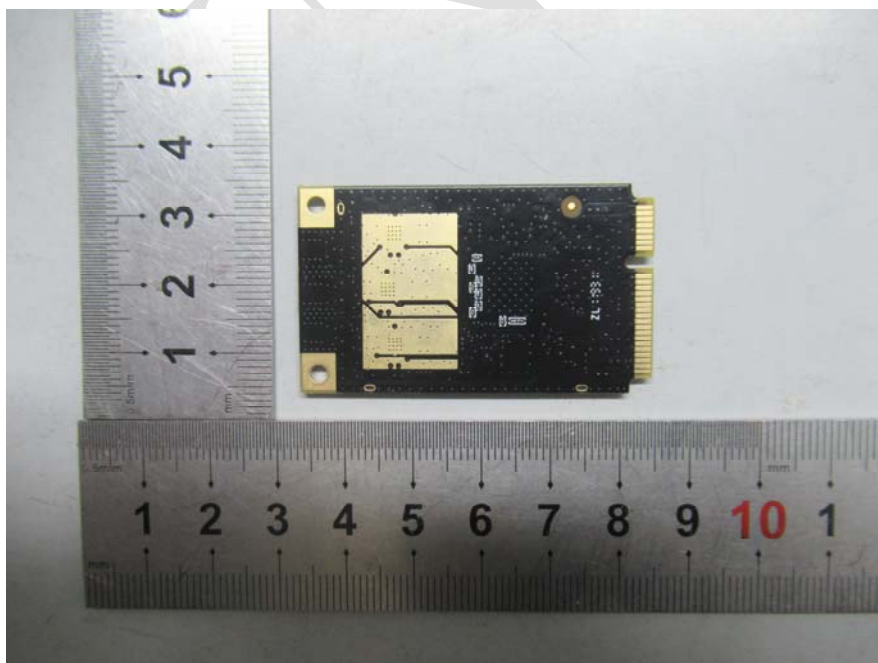
**The distance from observation point to the antenna is 20cm.**

## EXHIBIT A - EUT PHOTOGRAPHS

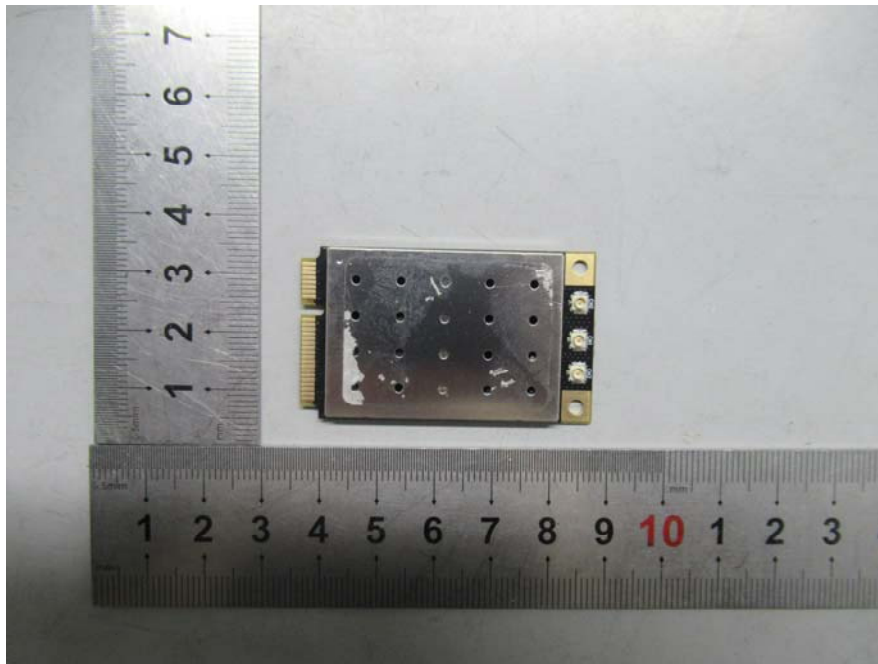
EUT – Top View



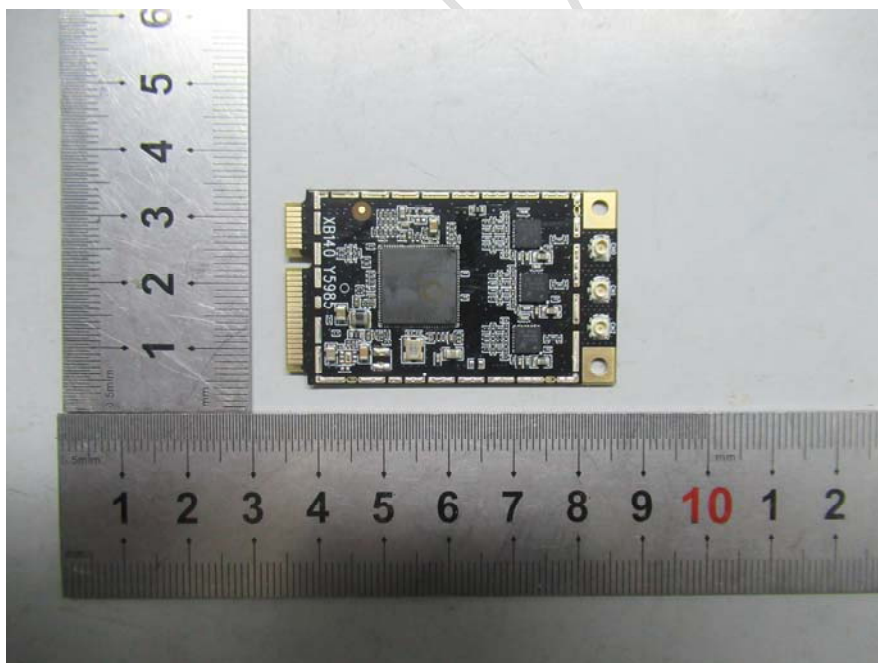
EUT – Bottom View



**EUT – PCB Top View**



**EUT – PCB Top Shielding off View**

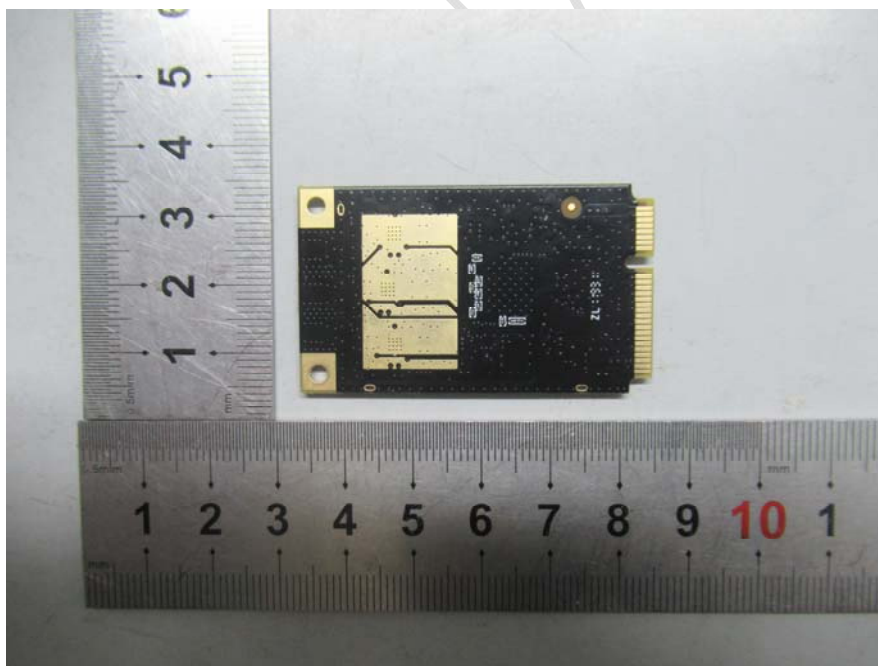




**EUT – PCB Top Chip View**

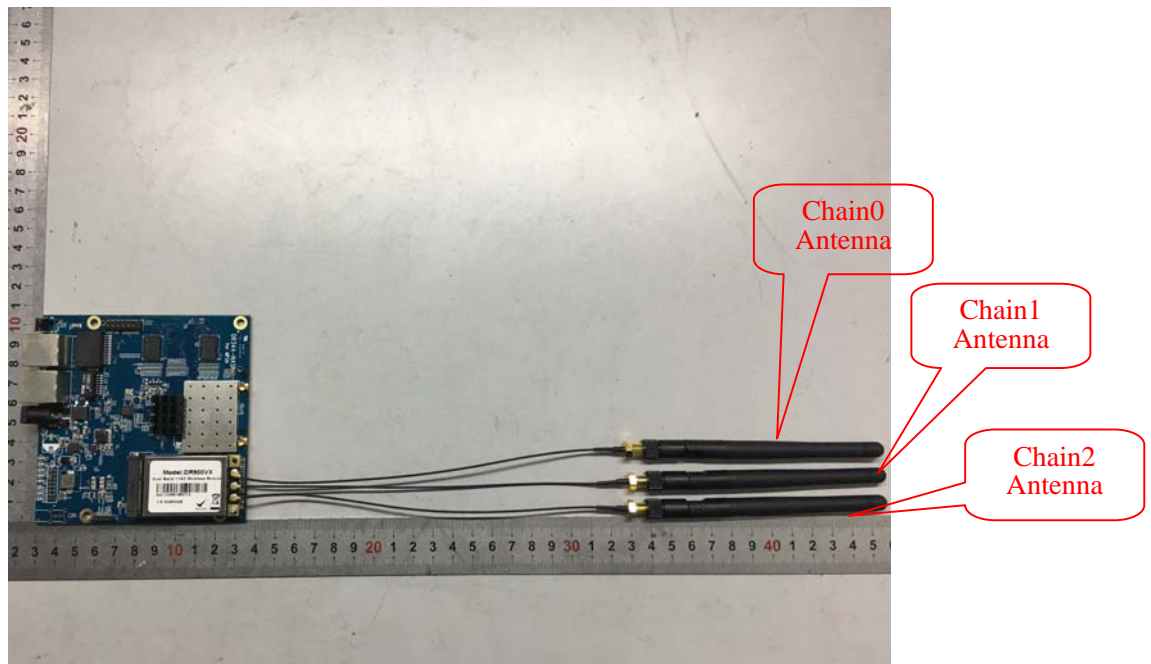


**EUT – PCB Bottom View**

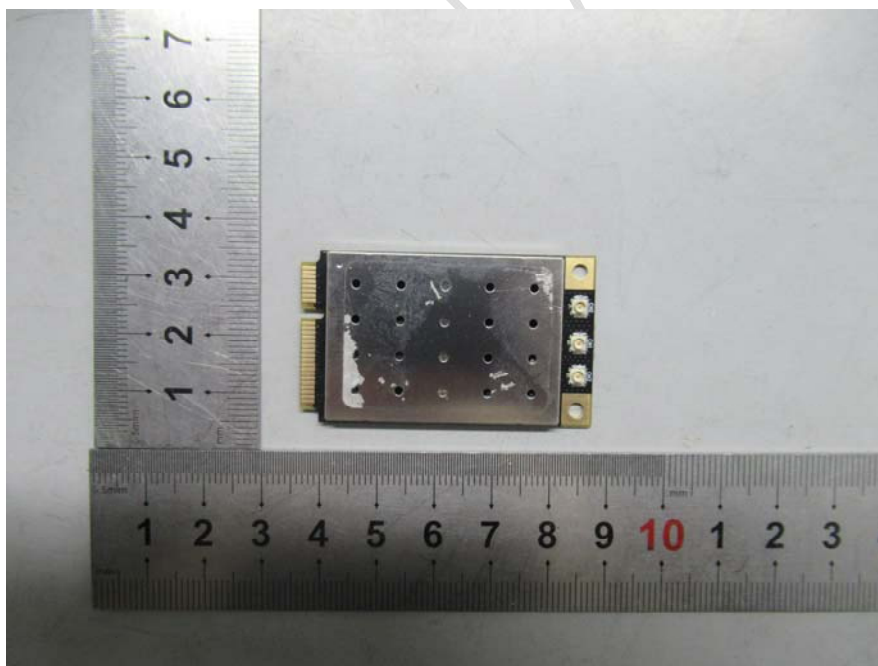




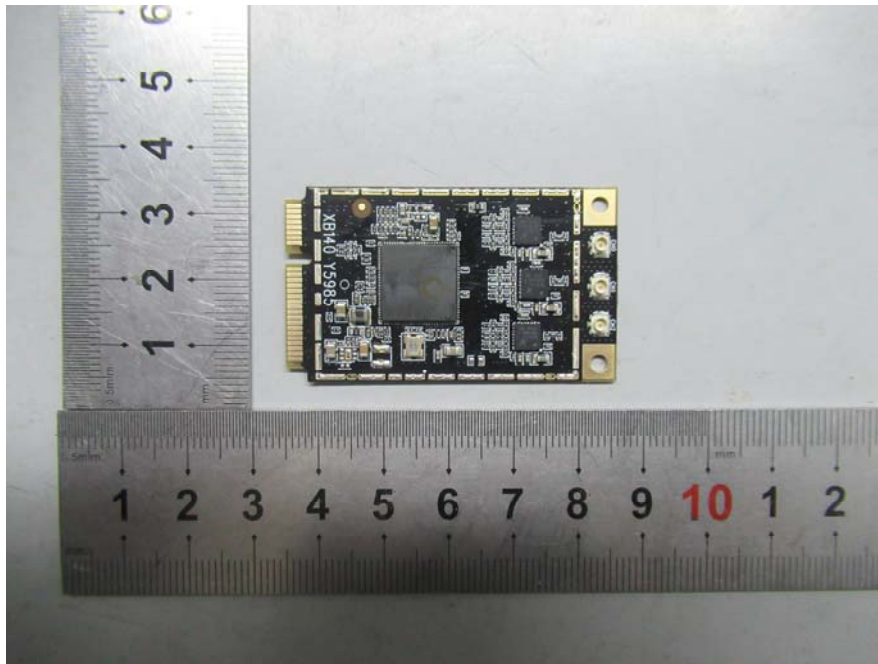
### EUT with Base plate View



### EUT – PCB Top View



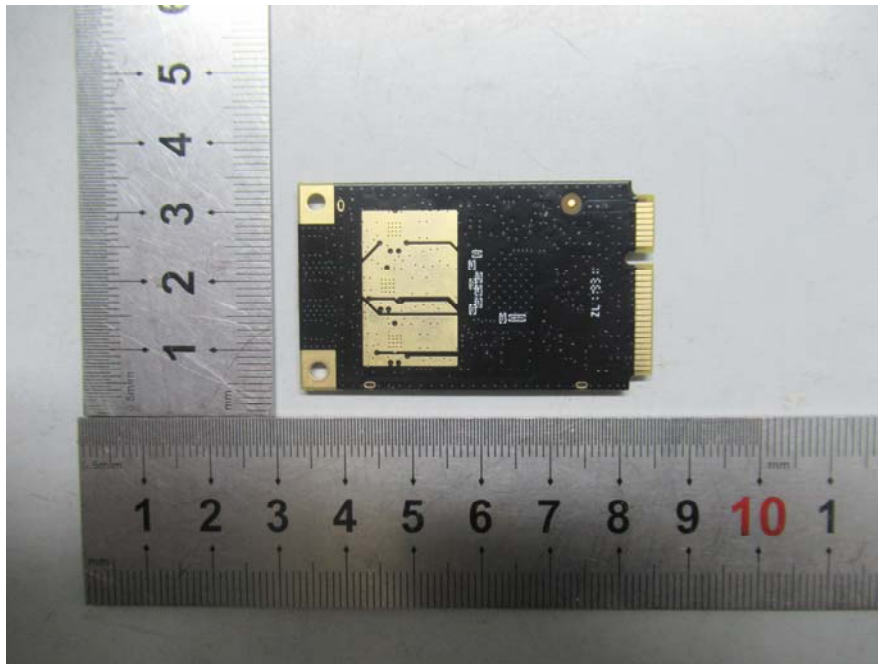
**EUT – PCB Top Shielding off View**



**EUT – PCB Top Chip View**



**EUT – PCB Bottom View**



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## PRODUCT SIMILARITY DECLARATION LETTER

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Wallys Communications (SuZhou) Co.,LTD

Add: Room 2723,Le Jia building,Jia Rui Xiang No.8, Suzhou Industrial Park, Suzhou,  
P.R. Suzhou, 215000 China

Tel: 18913094531

Fax: 0512-62815802

Mail: richard\_zhu@wallystech.com

Date: 2019-10-20

### DECLARATION OF SIMILARITY

Dear Sir or Madam:

We, Wallys Communications (SuZhou) Co.,LTD, hereby declare that product:

Dual Band 11AC wireless Module , as following models: DR900VX, DR900VX-4.9,  
DR600VX,DR600VX-4.9,DR900VX-MX,DR600VX-MX.And only DR900VX  
was tested by BACL with the same electromagnetic emissions and  
electromagnetic compatibility characteristics.

The detail differences description as below:

All the products are the different model name, with the same appearance, structure,  
power and size, and schematic and PCB design.

Please contact me if there is need for any additional clarification or information.

Best Regards,

Signature:



Contact Person: Richard

Title: Engineer

\*\*\*\*\* END OF REPORT \*\*\*\*\*