



SAR EXPOSURE

REPORT

FOR

Product Name: WIFI Module

Model :MWR188FT-U

Trade Name : Taiwan Anjietw

Issued to

**Taiwan Anjie Electronics Co.,Ltd
1F,No.236,Sec.3,Huanbei Rd.,Jubei City, Hsinchu County,30265,
Taiwan**

Issued by

**Global Certification Corp.
No.146, Sec. 2, Xiangzhang Rd., Xizhi Dist.,New Taipei City 221,
Taiwan (R.O.C.)**

*Note: This test refers exclusively to the test presented test model and sample. This report shall not be reproduced except in full, without the written approval of Global Certification Corporation. This document may be altered or revised by Global Certification Corporation. Personnel only, and shall be noted in the revision section of the document.
The decision rule is according to the standard test method and request, that measurement result doesn't consider uncertainty.*



Revision History

Revision	No.	Report Number	Issue Date	Description	Author/ Revised by
1.	051301	FR0-051301	Jun.01,2020	Original Report	Eason



TABLE OF CONTENTS	3
1. GENERAL INFORMATION	4
1.1 DESCRIPTION OF THE TESTED SAMPLES	5
2. GENERAL SAR TEST REDUCTION AND EXCLUSION GUIDANCE	6
3. SAR TEST EXCLUSION THRESHOLDS	7



1. GENERAL INFORMATION

Applicant : Taiwan Anjie Electronics Co.,Ltd
Address : 1F,No.236,Sec.3,Huanbei Rd.,Jubei City, Hsinchu County,30265,Taiwan
Manufacturer : Taiwan Anjie Electronics Co.,Ltd
Address : 1F,No.236,Sec.3,Huanbei Rd.,Jubei City, Hsinchu County,30265,Taiwan
EUT : WIFI Module
Model No. : MWR188FT-U
Trade Name : Taiwan Anjietw
Model Differences : --

Is here with confirmed to comply with the requirements set out in the FCC Rules and Regulations Part 15 Subpart C and the measurement procedures were according to ANSI C63.4-2014. The said equipment in the configuration described in this report shows the maximum emission levels emanating from equipment are within the compliance requirements.

Test Standard :

KDB 447498 D01

Tested By:

Approved by:

Jun.01,2020
Date

Kai Yeh
Kai Yeh, Engineer

Jun.01,2020
Date

Eason Hsu
Eason Hsu, Section Chief



1.1 DESCRIPTION OF THE TESTED SAMPLES

EUT Name : WIFI Module
Model : MWR188FT-U
Power From ☒Support Unit PC
Power Rating : +3.3Vdc ($\pm 0.3V$)
FCC ID : 2AP85-MWR188FTU
Basic Spec : 802.11b / 802.11g / 802.11n HT20 / 802.11n HT40
Operate Frequency : 2412 MHz ~ 2462 MHz
RF Output Power : 802.11b : 9.28 dBm / 0.00847227 W (Peak)
802.11g : 7.88 dBm / 0.00613762 W (Peak)
802.11n HT20 : 6.26 dBm / 0.00422669 W (Peak)
802.11n HT40 : 0.99 dBm / 0.00125603 W (Peak)
Number of Channels : 11
Step of Channel : ☐N/A ☒ 5 MHz
Modulation Type : CCK + OFDM
Antenna Quantity : 1 Tx/Rx
Antenna Type : FPCB Antenna
Antenna Gain : 2.85 dBi
EUT Received Date : May.14,2020
EUT Test Completed Date : May.29,2020
EUT Channel List :

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



2. GENERAL SAR TEST REDUCTION AND EXCLUSION GUIDANCE

2.1 The 1-g and 10-g SAR test exclusion thresholds for 100 MHz to 6 GHz at test separation distances ≤ 50 mm are determined by:

$[(\text{max. power of channel, including tune-up tolerance, mW})/(\text{min. test separation distance, mm})] \cdot$

- $[\sqrt{f(\text{GHz})}] \leq 3.0$ for 1-g SAR and ≤ 7.5 for 10-g extremity SAR,²¹ where $f(\text{GHz})$ is the RF channel transmit frequency in GHz
- Power and distance are rounded to the nearest mW and mm before calculation²²
- The result is rounded to one decimal place for comparison

The test exclusions are applicable only when the minimum test separation distance is ≤ 50 mm and for transmission frequencies between 100 MHz and 6 GHz. When the minimum test separation distance is < 5 mm, a distance of 5 mm is applied to determine SAR test exclusion.

2.2 At 100 MHz to 6 GHz and for test separation distances > 50 mm, the SAR test exclusion threshold is determined according to the following

- $[\text{Threshold at 50 mm in step 1}) + (\text{test separation distance} - 50 \text{ mm}) \cdot (f(\text{MHz})/150)] \text{ mW}$, at 100 MHz to 1500 MHz
- $[\text{Threshold at 50 mm in step 1}) + (\text{test separation distance} - 50 \text{ mm}) \cdot 10] \text{ mW}$ at > 1500 MHz and ≤ 6 GHz

2.3 At frequencies below 100 MHz, the following may be considered for SAR test exclusion

- The threshold at the corresponding test separation distance at 100 MHz in step 2) is multiplied by $[1 + \log(100/f(\text{MHz}))]$ for test separation distances > 50 mm and < 200 mm
- The threshold determined by the equation in a) for 50 mm and 100 MHz is multiplied by $\frac{1}{2}$ for test separation distances ≤ 50 mm
- SAR measurement procedures are not established below 100 MHz. When SAR test exclusion cannot be applied, a KDB inquiry is required to determine SAR evaluation requirements for any test results to be acceptable.

**3. SAR TEST EXCLUSION THRESHOLDS**

The min. test separation distance is 5 mm.

Test Mode	Frequency (MHz)	P (mW)	d (mm)	SAR (mW / cm ²)	Exclusion Limit (mW / cm ²)
Tx Mode 11b	2412	6.56145266	5.00	2.038067893	3.00
	2437	8.31763771	5.00	2.596915152	3.00
	2462	8.47227414	5.00	2.658728677	3.00
Test Mode	Frequency (MHz)	P (mW)	d (mm)	SAR (mW / cm ²)	Exclusion Limit (mW / cm ²)
Tx Mode 11g	2412	5.15228645	5.00	1.600363536	3.00
	2437	6.12350392	5.00	1.911867366	3.00
	2462	6.13762005	5.00	1.926078662	3.00
Test Mode	Frequency (MHz)	P (mW)	d (mm)	SAR (mW / cm ²)	Exclusion Limit (mW / cm ²)
Tx Mode 11n HT20	2412	3.13328572	5.00	0.973237081	3.00
	2437	4.13999675	5.00	1.292580977	3.00
	2462	4.22668614	5.00	1.326398494	3.00
Test Mode	Frequency (MHz)	P (mW)	d (mm)	SAR (mW / cm ²)	Exclusion Limit (mW / cm ²)
Tx Mode 11n HT40	2422	1.19398810	5.00	0.371635391	3.00
	2437	1.25602996	5.00	0.392155003	3.00
	2452	1.21059813	5.00	0.379131814	3.00

$[(\text{max. power of channel, including tune-up tolerance, } P \text{ (mW)}) / (\text{min. test separation distance, } 5\text{mm})] [\text{sqrt}(f(\text{GHz}))] = \text{SAR (mW / cm}^2) < 3.0 \text{ for 1-g SAR}$

END