

RF EXPOSURE REPORT



Applicant: Qualcomm Technologies, Inc.
5775 Morehouse Drive, San Diego, CA 92121-1714, United States

Manufacturer: Qualcomm Technologies, Inc.
5775 Morehouse Drive, San Diego, CA 92121-1714, United States

Product Name: Miro-Power Wi-Fi LGA Module for IoT applications

Brand Name: Qualcomm

Model No.: QCC730M-0X

FCC ID J9C-QCC730M0X

Date of EUT Received: Jan. 09, 2025

Issue Date: May 14, 2025

Approved By

John Yeh

We hereby certify that:

The above equipment was evaluated by SGS Taiwan Ltd. The evaluation in this report is in compliance with FCC Rule Part §2.1091, KDB 447498 D01 v06.

The results of this report relate only to the sample identified in this report.

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t (886-2) 2299-3279

f (886-2) 2298-0488

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Revision History

Report Number	Revision	Description	Issue Date	Revised By	Remark
TESA2501000049ES	00	Original	May 14, 2025	Kimmy Chiou	

Note:

- 1、The remark "*" indicates modification of the report upon requests from certification body.
- 2、Variant information of HW SKU is provided by the applicant, test results of this report are applicable to the sample EUT(s) received.
And are assessed as electrically identical in RF characteristics, therefore, no further assessment required for the variant(s).

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1 DESCRIPTION OF EQUIPMENT UNDER TEST (EUT)

1.1 Product Description

Product Name:	Miuro-Power Wi-Fi LGA Module for IoT applications
Brand Name:	Qualcomm
Model No.:	QCC730M-0X
HW SKU:	QCC730M-0XB/QCC730M-0XU

1.2 HW SKU Difference Table

HW SKU	Antenna Type	ANT
QCC730M-0XB	1 type: PCB	L3=0.3nH, C40=0R, L4=0.2pF, L6=0R, L7=NC
QCC730M-0XU	3 types: PIFA, Monopole, Dipole	No antenna matching

1.3 Evaluation site

Laboratory	Site Address		FCC Designation number	ISED Company Number	CAB Identifier
SGS Taiwan Ltd. Central RF Lab. (TAF code 3702)	<input type="checkbox"/>	No. 134, Wu Kung Road, New Taipei Industrial Park, Wuku District, New Taipei City, 24803, Taiwan.	TW0027	4620A	TW3702
	<input checked="" type="checkbox"/>	No. 2, Keji 1st Rd., Guishan Township, Taoyuan County, 333 Taiwan.	TW0028	4620E	
	<input type="checkbox"/>	1F, No. 8, Alley 15, Lane 120, Sec. 1, Nei Hu Road, Nei Hu District, Taipei City, 222 Taiwan.	TW0029	23862	

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1.4 Antenna Information:

Antenna Type	Supplier	Antenna Part No.	Freq. (MHz)	Peak Antenna Gain (dBi)
PIFA	INPAQ	RFPCA303510EMMB101	2.4GHz	3.33
Dipole	INPAQ	RFPCA331010EMMB101		3.11
Monopole	INPAQ	RFPCA501010EMMB101	2.4GHz	3.27
PCB	INPAQ	RFIQM0730010XB001		2.07

Antenna Type	Supplier	Antenna Part No.	Note
PIFA	INPAQ	RFPCA303510EMMB101	Ant 1
Dipole	INPAQ	RFPCA331010EMMB101	Ant 2
Monopole	INPAQ	RFPCA501010EMMB101	Ant 3
PCB	INPAQ	RFIQM0730010XB001	Ant 4

Operating Frequency (MHz)	Ant 1 Peak Gain (dBi)	Ant 2 Peak Gain (dBi)	Ant 3 Peak Gain (dBi)	Ant 4 Peak Gain (dBi)
5150.0 ~ 5250.0	2.27	2.97	3.00	0.63
5250.0 ~ 5350.0	2.56	3.09	2.87	1.04
5470.0 ~ 5725.0	3.43	3.37	3.29	2.70
5725.0 ~ 5850.0	3.19	3.28	3.18	3.13

Note: Antenna information is provided by the applicant.

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1.5 Rated Power

Mode	Freq. Range (MHz)	Channels	Max Output Power (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Worst Case
WLAN 2.4GHz	2412-2462	11	22	3.33	25.33	V

Mode	Freq. Range (MHz)	Max. Output Power Include Tolerance (dBm)	Antenna Gain (dBi)	EIRP (dBm)	Worst Case
WLAN 5GHz	5150~5250	20.50	3.00	23.50	
	5250~5350	20.50	3.09	23.59	
	5470~5725	20.50	3.43	23.93	V
	5725~5850	20.50	3.28	23.78	

Note: PG information is provided by the applicant.

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2 MAXIMUM PERMISSIBLE EXPOSURE (MPE)

2.1 FCC Standard Applicable

According to §1.1307(b)(1), systems operating under the provisions of this section shall be operated in a manner that ensure that the public is not exposed to radio frequency energy level in excess of the Commission's guideline.

This is a Mobile device, the MPE is required.

According to §1.1310 and §2.1091 RF exposure is calculated.

Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Averaging Time (minute)
Limits for General Population/Uncontrolled Exposure				
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f ²)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100000	/	/	1.0	30

f = frequency in MHz

* = Plane-wave equipment power density

Prediction of MPE limit at a given distance

$$S = PG / 4\pi R^2$$

Where: S = Power density

P = Power input to antenna

G = Power gain of the antenna in the direction of interest relative to an isotropic radiator

R = Distance to the center of radiation of the antenna

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2.2 Power Density Calculation (Worst Case)

FCC Standalone MPE

Operation Mode	Evaluation Frequency (MHz)	Operation Distance (cm)	Max. Output Power Include Tolerance (dBm)	Antenna Gain (dBi)	Max. EIRP (mW)	Power Density (PD) (mW/cm ²)	Limit (mW/cm ²)	Pass / Fail	Power Density / Limit
WLAN 2.4G	2442.00	20	22	3.33	341.19	0.068	1.000	Pass	0.068
WLAN 5G	5180.00	20	20.5	3.43	247.17	0.049	1.000	Pass	0.049

Conclusion: The maximum power density is below MPE thresholds, therefore the device is compliant FCC RF exposure requirement.

~ End of Report ~

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