

RF Exposure Evaluation Declaration

Product Name : Sub6 5G module

Brand Name : WNC

Model No. : IMQC

FCC ID : NKRIMQC

Applicant : Wistron NeWeb Corporation

Address : 20 Park Avenue II, Hsinchu Science Park, Hsinchu 308,
Taiwan

Date of Receipt : Oct. 07, 2021

Issued Date : Mar. 23, 2022

Report No. : 21A0144R-RFUSMPEV02-A

Report Version : V1.0



The test results relate only to the samples tested.

The test results shown in the test report are traceable to the national/international standard through the calibration of the equipment and evaluated measurement uncertainty herein.

This report must not be used to claim product endorsement by TAF or any agency of the government.

Measurement uncertainties evaluated for each testing system and associated connections are given here to provide the system information for reference. Compliance determinations do not take into account measurement uncertainties for each testing system, but are based on the results of the compliance measurement.

The test report shall not be reproduced except in full without the written approval of DEKRA Testing and Certification Co., Ltd.

Test Result for Inspection



Product Name : Sub6 5G module
Applicant : Wistron NeWeb Corporation
Address : 20 Park Avenue II, Hsinchu Science Park, Hsinchu 308,
Taiwan
Manufacturer : Wistron NeWeb Corporation
Address : 20 Park Avenue II, Hsinchu Science Park, Hsinchu 308,
Taiwan
Brand Name : WNC
Model No. : IMQC
FCC ID : NKRIMQC
EUT Voltage : DC 3.3 ~ 4.3V
Testing Voltage : DC 3.8V
Applicable Standard : FCC 47 CFR Part 2.1091 Radiofrequency radiation exposure
evaluation: mobile devices.
Test Lab : Hsin Chu Laboratory
Address : No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu
County 310, Taiwan, R.O.C.
TEL: +886-3-582-8001 / FAX: +886-3-582-8958
Test Result : Complied

Documented By : *Amelia Wu*

(Amelia Wu / Project Specialist)

Approved By : *Louis Hsu*

(Louis Hsu / Deputy Manager)

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and Certification Co., Ltd.

Revision History

Version	Description	Issued Date
V1.0	Initial issue of report	Mar. 23, 2022

1. General Information

1.1. EUT General Information

RF General Information				
Evaluation Mode	Band	Frequency Range		Modulation Type
		Uplink (MHz)	Downlink (MHz)	
WWAN	LTE Band 2	1850~1910	1930~1990	QPSK / 16QAM / 64QAM / 256QAM
	LTE Band 5	824~849	869~894	
	LTE Band 12	699~716	729~746	
	LTE Band 14	788~798	758~768	
	LTE Band 29	N/A	717~728	
	LTE Band 30	2305~2315	2350~2360	
	LTE Band 66	1710~1780	2110~2200	
	5G NR n2	1850~1910	1930~1990	pi/2 BPSK / QPSK / 16QAM / 64QAM / 256QAM
	5G NR n5	824~849	869~894	
	5G NR n12	699~716	729~746	
	5G NR n30	2305~2315	2350~2360	
	5G NR n66	1710~1780	2110~2200	
	5G NR n77	3300~4200	3300~4200	

Note: The above EUT information is declared by the manufacturer.

1.2. Test Facility

Laboratory Information

USA : **FCC Registration Number: TW3024**
Canada : **CAB identifier : TW3024**

The address and introduction of DEKRA Testing and Certification Co., Ltd. laboratories can be founded in our Web site: <http://www.dekra.com.tw>

If you have any comments, please don't hesitate to contact us. Our test sites as below:

Test Laboratory	DEKRA Testing and Certification Co., Ltd.
Address	<ol style="list-style-type: none"> No.372-2, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan, R.O.C. No.372, Sec. 4, Zhongxing Rd., Zhudong Township, Hsinchu County 31061, Taiwan, R.O.C.
Phone number	<ol style="list-style-type: none"> +886-3-582-8001 +886-3-582-8001
Fax number	<ol style="list-style-type: none"> +886-3-582-8958 +886-3-582-8958
E mail address	info.tw@dekra.com
Website	http://www.dekra.com.tw
<p>Note: Test site number for address 1 includes SR2-H. Test site number for address 2 includes CB2-H, CB3-H, CB4-H, SR10-H and SR12-H.</p>	

2. RF Exposure Evaluation

2.1. Test Limit

(A) Test Limit for Occupational / Controlled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
0.3-3.0	614	1.63	*(100)	<6
3.0-30	1842/f	4.89/f	*(900/f ²)	<6
30-300	61.4	0.163	1.0	<6
300-1500	-	-	f/300	<6
1500-100,000	-	-	5	<6

(B) Test Limit for General Population / Uncontrolled Exposure

Frequency Range (MHz)	Electric Field Strength (E) (V/m)	Magnetic Field Strength (H) (A/m)	Power Density (S) (mW/ cm ²)	Averaging Time E ² , H ² or S (minutes)
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
1500-100,000	-	-	1.0	<30

Note: f = frequency in MHz; *Plane-wave equivalent power density

Power Density (S) is calculated by the following formula:

$$S=(P*G)/4\pi R^2$$

where:

S = power density (in appropriate units, e.g. mW/ cm²)

P = power input to the antenna (in appropriate units, e.g., mW)

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

π = 3.1416

R = distance to the center of radiation of the antenna (appropriate units, e.g., cm)

2.2. Test Result of RF Exposure Evaluation

Exposure Environment: General Population / Uncontrolled Exposure

Evaluation Mode	Maximum Tune-up Conducted Output Power (dBm)	Actual Antenna Gain (dBi)	Max Antenna Gain to meet all limit (dBi)	E.I.R.P			Power Density	
				Result		Limit	Result	Limit
				(dBm)	(mW)	(dBm)	(mW/cm ²)	(mW/cm ²)
LTE Band 2	25.70	3.87	7.30	33.00	1995.262	33.00	0.397	1.000
LTE Band 5	25.70	4.41	8.70	34.40	2754.229	40.60	0.548	0.549
LTE Band 12	25.70	3.10	7.90	33.60	2290.868	36.92	0.456	0.466
LTE Band 14	25.70	3.10	8.50	34.20	2630.268	36.92	0.523	0.525
LTE Band 30	23.50	0.50	0.50	24.00	251.189	24.00	0.050	1.000
LTE Band 66	25.70	3.91	4.30	30.00	1000.000	30.00	0.199	1.000
LTE CA Band 5B	25.70	4.41	8.70	34.40	2754.229	40.60	0.548	0.549
5G NR n2	25.70	3.87	7.30	33.00	1995.262	33.00	0.397	1.000
5G NR n5	25.70	4.41	8.70	34.40	2754.229	40.60	0.548	0.549
5G NR n12	25.70	3.10	7.90	33.60	2290.868	36.92	0.456	0.466
5G NR n30	23.50	0.50	0.50	24.00	251.189	24.00	0.050	1.000
5G NR n66	25.70	3.91	4.30	30.00	1000.000	30.00	0.199	1.000
5G NR n77	26.50	3.50	3.50	30.00	1000.000	30.00	0.199	1.000

Distance (cm): 20 for Maximum Permissible Exposure.

Note:

1. The above EUT information is declared by the manufacturer.
2. The results are evaluated using the maximum power.