

RF Exposure Report

Report No.: SABHQN-WTW-P20120273

FCC ID: MCLT77W968

Test Model: T77W968

Received Date: Mar. 21, 2018

Test Date: Apr. 01 to 26, 2018

Issued Date: Apr. 08, 2021

Applicant: HON HAI PRECISION IND. CO., LTD.

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R.O.C.

Issued By: Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch
Hsin Chu Laboratory

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Test Location: E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300,
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**FCC Registration /
Designation Number:** 723255 / TW2022



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Release Control Record

Issue No.	Description	Date Issued
SABHQN-WTW-P20120273	Original release.	Apr. 08, 2021

1 Certificate of Conformity

Product: LTE M.2 Module

Brand: FOXCONN

Test Model: T77W968

Sample Status: ENGINEERING SAMPLE

Applicant: HON HAI PRECISION IND. CO., LTD.

Test Date: Apr. 01 to 26, 2018

Standards: FCC Part 2 (Section 2.1091)
IEEE C95.3 -2002

References Test Guidance: KDB 447498 D01 General RF Exposure Guidance v06

The above equipment has been tested by **Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch**, and found compliance with the requirement of the above standards. The test record, data evaluation & Equipment Under Test (EUT) configurations represented herein are true and accurate accounts of the measurements of the sample's EMC characteristics under the conditions specified in this report.

Prepared by :  , **Date:** Apr. 08, 2021
Claire Kuan / Specialist

Approved by :  , **Date:** Apr. 08, 2021
Clark Lin / Technical Manager

2 RF Exposure

2.1 Limits for Maximum Permissible Exposure (MPE)

Frequency Range (MHz)	Electric Field Strength (V/m)	Magnetic Field Strength (A/m)	Power Density (mW/cm ²)	Average Time (minutes)
Limits For General Population / Uncontrolled Exposure				
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

F = Frequency in MHz

2.2 MPE Calculation Formula

$$P_d = (P_{out} * G) / (4 * \pi * r^2)$$

where

P_d = power density in mW/cm²

P_{out} = output power to antenna in mW

G = gain of antenna in linear scale

π = 3.1416

R = distance between observation point and center of the radiator in cm

2.3 Classification

The antenna of this product, under normal use condition, is at least 20cm away from the body of the user.
So, this device is classified as **Mobile Device**.

2.4 Antenna Gain

Antenna No.	Antenna Net Gain(dBi)	Frequency range (MHz)	Antenna Type	Connector Type	Cable Length
1	Please refer to below table	699~803	PIFA	i-pex(MHF)	100mm
2	Please refer to below table	791~960 1447.9~1606	PIFA	i-pex(MHF)	100mm
3	Please refer to below table	1710~2170 2500~2690	PIFA	i-pex(MHF)	100mm
4	Please refer to below table	5110~5925 (for LAA RX)	PIFA	i-pex(MHF)	100mm
5	Please refer to below table	2305~2315	Dipole	i-pex(MHF)	80mm
6	Please refer to below table	3500~3700	PCB	i-pex(MHF)	100mm

Antenna gain list			
Antenna No.	Band	Freq. Range (MHz)	Gain (dBi)
3	WCDMA II (B2)	1850~1910	4.92
3	WCDMA IV (B4)	1710~1755	5.99
2	WCDMA V (B5)	824~849	2.68
3	LTE Band (2)	1850~1910	4.92
3	LTE Band (4)	1710~1755	5.99
2	LTE Band (5)	824~849	2.68
3	LTE Band (7)	2500~2570	5.2
1	LTE Band (12)	698~716	4.17
1	LTE Band (13)	777~787	3.05
1	LTE Band (14)	788~798	2.87
1	LTE Band (17)	704~716	4.17
3	LTE Band (25)	1850~1915	4.92
2	LTE Band (26)	814~849	2.92
5	LTE Band (30)	2305~2315	3.02
3	LTE Band (38)	2570~2620	4.82
3	LTE Band (41)	2496~2690	5.38
6	LTE Band (42)	3550~3700	0.92
6	LTE Band (48)	3550~3700	0.92
3	LTE Band (66)	1710~1780	5.99

Note: The above Antenna information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications, the laboratory shall not be held responsible.

2.5 Calculation Result

All test data (Except LTE B42 & LTE B48) was copied from the original test report (Report No.: SA180321E03)

Operation Mode	Evaluation Frequency (MHz)	Max. Conducted Power		Antenna Gain (dBi)	Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
		(mW)	(dBm)				
WCDMA B2	1852.4	281.838	24.50	4.92	20	0.17407	1
WCDMA B4	1712.4	281.838	24.50	5.99	20	0.22270	1
WCDMA B5	826.4	281.838	24.50	2.68	20	0.10393	0.55093
LTE B2	1850.7	281.838	24.50	4.92	20	0.17407	1
LTE B4	1710.7	281.838	24.50	5.99	20	0.22270	1
LTE B5	824.7	281.838	24.50	2.68	20	0.10393	0.5498
LTE B7	2502.5	281.838	24.50	5.20	20	0.18566	1
LTE B12	699.7	281.838	24.50	4.17	20	0.14646	0.46647
LTE B13	779.5	281.838	24.50	3.05	20	0.11317	0.51967
LTE B14	790.5	281.838	24.50	2.87	20	0.10857	0.527
LTE B17	706.5	281.838	24.50	4.17	20	0.14646	0.471
LTE B25	1850.7	281.838	24.50	4.92	20	0.17407	1
LTE B26	814.7	281.838	24.50	2.92	20	0.10983	0.54313
LTE B26	824.7	281.838	24.50	2.92	20	0.10983	0.5498
LTE B41	2498.5	281.838	24.50	5.38	20	0.19352	1
LTE B42	3560	159.22	22.02	0.92	20	0.03915	1
LTE B48	3557.5	160.32	22.05	0.92	20	0.03942	1
LTE B66	1710.7	281.838	24.50	5.99	20	0.22270	1
LTE B38	2572.5	281.838	24.50	4.82	20	0.17011	1
LTE B5 (5M+10M)	836.8+844	224.388	23.51	2.68	20	0.08274	0.5498
LTE B7 (15M+20M)	2535+2552.1	219.28	23.41	5.20	20	0.14445	1
LTE B38 (15M+15M)	2577.5+2592.5	206.063	23.14	4.82	20	0.12437	1
LTE B41 (10M+5M)	2593+2600.2	215.278	23.33	5.38	20	0.14782	1
LTE B42C (20M+20M)	3560+3579.8	149.97	21.76	0.92	20	0.03688	1

Note:

1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.
2. Limit of Power Density = F/1500 (For frequency below 1500MHz)
3. This power include tune-up tolerance range that specified in T77W968 Tune Up power table.

Operation Mode	Evaluation Frequency (MHz)	Max. EIPR Power		Distance (cm)	Power Density (mW/cm ²)	Limit (mW/cm ²)
		(mW)	(dBm)			
LTE B30	2310	250	23.98	20	0.04974	1

Note: This power include tune-up tolerance range that specified in T77W968 Tune Up power table.

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