RF Exposure Report

Report No.:	SABEOO-WTW-P20090660
FCC ID:	MAD-G08RRH-46-06B
Test Model:	G08RRH-46-06B
Received Date:	Sep. 28, 2020
Test Date:	Oct. 31, 2020
Issued Date:	Dec. 28, 2020
Applicant:	Microelectronics Technology Inc.
Address:	No. 1, Innovation Road II, Hsinchu Science Park, Hsinchu 300, Taiwan, R.O.C.
Issued By:	Bureau Veritas Consumer Products Services (H.K.) Ltd., Taoyuan Branch Hsin Chu Laboratory
Lab Address:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan
Test Location:	E-2, No.1, Li Hsin 1st Road, Hsinchu Science Park, Hsinchu City 300, Taiwan

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Release Control Record

Issue No.	Description	Date Issued
SABEOO-WTW-P20090660	Original release.	Dec. 28, 2020

1   Certificate of Conformity

Product:	LionHead 2x40W n5 RRH
Brand:	MTI
Test Model:	G08RRH-46-06B
Sample Status:	ENGINEERING SAMPLE
Applicant:	Microelectronics Technology Inc.
Test Date:	Oct. 31, 2020
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:** _____ Dec. 28, 2020 _____
Claire Kuan / Specialist

Approved by : _____ , **Date:** _____ Dec. 28, 2020 _____
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/cm2)	Average Time (minutes)
(A)Limits For Occupational / Control Exposures				
300-1500	…	…	F/300	6
1500-100,000	…	…	5	6
(B)Limits For General Population / Uncontrolled Exposure				
300-1500	…	…	F/1500	30
1500-100,000	…	…	1.0	30

F = Frequency in MHz

2.2   MPE Calculation Formula

$$Pd = (Pout*G) / (4*pi*r^2)$$

where

Pd = power density in mW/cm^2

Pout = output power to antenna in mW/MHz

G = gain of antenna in linear scale

Pi = 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 400cm away from the body of the user. So, this device is classified as fixed station and installations by professional service personnel device.

3   Antenna Gain

The antennas provided to the EUT, please refer to the following table:

Antenna Gain (dBi)	Frequency range(MHz)	Antenna Type	Connector Type
18	806-894	Sector	2×4.3-10 Female

Notes Based on the manufacturer's statement :
The antenna is a polarization Sector antenna, +/- 45 degree means two port have 90 degree difference

Note:

1. The above EUT information is declared by manufacturer and for more detailed features description, please refer to the manufacturer's specifications or user's manual.

2. Based on the maximum RF power (conducted & EIRP) listed in this report, considerations pertaining to the maximum allowed EIRP (conducted power level), signal type and antenna gain should be considered for each installation.

4   Calculation Result

The LTE Band 5 data was copied from the original test report (Report No.: SA200417E02)

For LTE Band 5

Frequency Band (MHz)	Conducted Average Power - Per Chain (dBm/MHz)		Max Conducted Average Power - Total (dBm/MHz)	Antenna Gain (dBi)	Max EIRP Power (dBm/MHz)	Max EIRP Power (mW/MHz)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
	CHAIN 0	CHAIN 1							
871.5~891.5	39.13	39.11	42.13	18	60.13	1030386.12	400	0.51251	0.581

EIRP Power = Conducted Power+ Antenna gain

For 5G NR n5

Frequency Band (MHz)	Conducted Average Power - Per Chain (dBm/MHz)		Max Conducted Average Power - Total (dBm/MHz)	Antenna Gain (dBi)	Max EIRP Power (dBm/MHz)	Max EIRP Power (mW/MHz)	Distance (cm)	Power Density (mW/cm^2)	Limit (mW/cm^2)
	Chain 0	Chain 1							
871.5~891.5	39.10	38.92	42.02	18	60.02	1004615.79	400	0.49980	0.581

EIRP Power = Conducted Power+ Antenna gain

Note:
1. Determining compliance based on the results of the compliance measurement, not taking into account measurement instrumentation uncertainty.

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