MPE REPORT

FCC ID:2AWHZ-N240600

Date of issue: July 02, 2020

Report number:	MTi20050902-3E3
Sample description:	Lithium-ion Batteries
Model(s):	N240600, N240130
Applicant:	GUANGDONG ICE CO., LTD
Address:	XIANGSHIROAD LIAOBU DONGGUANG
Date of test:	May 19, 2020 to July 02, 2020

Shenzhen Microtest Co., Ltd.

http://www.mtitest.com

Tel:(86-755)88850135 Fax: (86-755) 88850136 Web: http://www.mtitest.com E-mail: mti@51mti.com
Address: No.102A & 302A, East Block, Hengfang Industrial Park, Xingye Road, Xixiang, Bao'an District, Shenzhen, Guangdong, China

TEST RESULT CERTIFICATION	
Applicant's name:	GUANGDONG ICE CO., LTD
Address:	XIANGSHIROAD LIAOBU DONGGUANG
Manufacture's name:	GUANGDONG ICE CO., LTD
Address:	XIANGSHIROAD LIAOBU DONGGUANG
Product name:	Lithium-ion Batteries
Trademark:	I-synergy
Model and/or type reference:	N240600, N240130
Serial model:	CM2-1102120
RF exposure procedures:	KDB 447498 D01 v06

This device described above has been tested by Shenzhen Microtest Co., Ltd and the test results show that the equipment under test (EUT) is in compliance with the FCC requirements. And it is applicable only to the tested sample identified in the report.

Tested by:

Demi Mu July 02, 2020

Reviewed by:

Leo Su July 02, 2020

Approved by:

Tom Xue July 02, 2020

RF EXPOSURE EVALUATION

According to FCC 1.1310: The criteria listed in the following table shall be used to evaluate the environment impact of human exposure to radio frequency (RF) Radiation as specified in §1.1307(b)

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 (minutes)
(A) Limits for Occupational/Controlled Exposure				
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
300-1,500			f/300	6
1,500-100,000			5	6
(B) 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
300-1,500			f/1500	30
1,500-100,000			1.0	30

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

MPE Calculation Method

Friis transmission formula: $Pd= (Pout*G)\ (4*pi*R^2)$

Where

Pd= Power density in mW/cm2

Pout=output power to antenna in mW

G= Numeric gain of the antenna relative to isotropic antenna

Pi=3.1415926

R= distance between observation point and center of the radiator in cm (20cm)

Pd the limit of MPE, 1mW/cm2. If we know the maximum gain of the antenna and total power input to the antenna, through the calculation, we will know the distance where the MPE limit is reached.

Measurement Result

R=20cm

2.4GWiFi

Channel Freq. (MHz)	modulation	conducted power (dBm)	Tune-up power (dBm)	Max tune-up power (dBm)	Max tune-up power (mW)	Antenna Gain Numeric	Evaluation result at 20cm Power density(mW/cm2)	Power density Limits (mW/cm2)
		Ant A	Ant A	Ant A	Ant A	Ant A	Ant A	
2412	802.11b	11.02	12±1	13	19.95	1.58	0.00627	1
2437		12.5	12±1	13	19.95	1.58	0.00627	1
2462		12.61	12±1	13	19.95	1.58	0.00627	1
2412	802.11g	8.75	8±1	9	7.94	1.58	0.00250	1
2437		8.81	8±1	9	7.94	1.58	0.00250	1
2462		8.88	8±1	9	7.94	1.58	0.00250	1
2412	802.11n H20	8.77	9±1	10	10	1.58	0.00314	1
2437		8.97	9±1	10	10	1.58	0.00314	1
2462		9.62	9±1	10	10	1.58	0.00314	1

GPRS850:

Channel	conducted power (dBm)	Tune-up power (dBm)	Max tune-up power (dBm)	Max tune-up power (mW)	Antenna Gain (dBi)	Antenna Gain Numeric	Evaluation result (mW/cm2)	Power density Limits (mW/cm2)
128	32.31	32±1	33	1995.262	2	1.58	0.62717	1
190	32.40	32±1	33	1995.262	2	1.58	0.62717	1
251	32.46	32±1	33	1995.262	2	1.58	0.62717	1

EGPRS850:

Channel	conducted power (dBm)	Tune-up power (dBm)	Max tune-up power (dBm)	Max tune-up power (mW)	Antenna Gain (dBi)	Antenna Gain Numeric	Evaluation result (mW/cm2)	Power density Limits (mW/cm2)
128	26.72	26±1	27	501.187	2	1.58	0.15754	1
190	26.94	26±1	27	501.187	2	1.58	0.15754	1
251	26.95	26±1	27	501.187	2	1.58	0.15754	1

GPRS1900:

Channel	conducted power	Tune-up power (dBm)	Max		Antenna		Evaluation result	Power density Limits
	(dBm)		tune-up power		Gain		(mW/cm2)	(mW/cm2)
			(dBm)	(mW)	(dBi)	Numeric		
512	29.87	29±1	30	1000.00	2	1.58	0.31433	1
661	29.98	29±1	30	1000.00	2	1.58	0.31433	1
810	29.75	29±1	30	1000.00	2	1.58	0.31433	1

EGPRS1900:

Channel	conducted power	Tune-up power (dBm)	Max		Antenna		Evaluation result	Power density Limits
	(dBm)		tune-up power		Gain		(mW/cm2)	(mW/cm2)
			(dBm)	(mW)	(dBi)	Numeric		
512	27.09	28±1	29	794.328	2	1.58	0.24968	1
661	27.41	28±1	29	794.328	2	1.58	0.24968	1
810	27.17	28±1	29	794.328	2	1.58	0.24968	1

WCDMA BAND II:

Channel	conducted power	Tune-up power (dBm)	Max		Antenna		Evaluation result	Power density Limits
	(dBm)		tune-up power		Gain		(mW/cm2)	(mW/cm2)
			(dBm)	(mW)	(dBi)	Numeric		
9262	23.16	23±1	24	251.189	2	1.58	0.07896	1
9400	22.93	23±1	24	251.189	2	1.58	0.07896	1
9538	22.49	23±1	24	251.189	2	1.58	0.07896	1

WCDMA BAND V:

Channel	conducted power	Tune-up power (dBm)	Max		Antenna		Evaluation result	Power density Limits
	(dBm)		tune-up power		Gain		(mW/cm2)	(mW/cm2)
			(dBm)	(mW)	(dBi)	Numeric		
4132	23.65	23±1	24	251.189	2	1.58	0.07896	0.55
4182	23.48	23±1	24	251.189	2	1.58	0.07896	0.56
4233	23.49	23±1	24	251.189	2	1.58	0.07896	0.56

Simultaneous transmit:

2.4GWiFi+ GPRS850 =0.00314+0.62717=0.63031 mW/cm2

2.4GWiFi + EGPRS850 =0.00314+0.15754=0.16068 mW/cm2

2.4GWiFi + GPRS1900 =0.00314+0.31433=0.31747 mW/cm2

2.4GWiFi + EGPRS1900 =0.00314+0.24968=0.25282 mW/cm2

2.4GWiFi + WCDMA BAND II =0.00314+0.07896=0.0821 mW/cm2

2.4GWiFi + (WCDMA BAND V/ Power density Limits) =0.00314+(0.07896/0.55)= 0.00314+0.14356=0.146704 mW/cm2

Conclusion:

For the max result: 0.63031≤ 1.0 for 1g SAR, No SAR is required.

----END OF REPORT----