Sichuan Injet New Energy Co., Ltd.

MPE ASSESSMENT REPORT

Report Type:
IC MPE assessment report

Model:
iM3C-19K2A, iM3C-15K6A,
iM3C-11K5A, iM3C-09K6A

REPORT NUMBER:
2309A1183SHA-004

ISSUE DATE:
November 1, 2023

DOCUMENT CONTROL NUMBER:
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Intertek Testing Services Shanghai
Building No.86, 1198 Qinzhou Road (North)
Caohejing Development Zone
Shanghai 200233, China

Telephone: 86 21 6127 8200
www.intertek.com

Total Quality. Assured.

TEST REPORT

Report no.: 2309A1183SHA-004

4Applicant:	Sichuan Injet New Energy Co., Ltd. The Northeast Corner of Minshan Road and Tumenjiang Road, Economic and Technological Development Zone, Deyang, Sichuan, China
Manufacturer:	Sichuan Injet New Energy Co., Ltd. The Northeast Corner of Minshan Road and Tumenjiang Road, Economic and Technological Development Zone, Deyang, Sichuan, China
Factory:	Sichuan Injet New Energy Co., Ltd. The Northeast Corner of Minshan Road and Tumenjiang Road, Economic and Technological Development Zone, Deyang, Sichuan, China
IC:	31210-IM3C2309

SUMMARY:

The equipment complies with the requirements according to the following standard(s) or Specification:
RSS-102: Issue 5 (March 2015)

PREPARED BY:	**REVIEWED BY:**
Project Engineer Sky Yang	Reviewer Eric Li

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Revision History

Report No.	Version	Description	Issued Date
2309A1183SHA-004	Rev. 01	Initial issue of report	November 1, 2023

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1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Product name:	AC EV Charger
Type/Model:	iM3C-19K2A, iM3C-15K6A, iM3C-11K5A, iM3C-09K6A
Description of EUT:	The EUT is an electric vehicle DC charger. It contains a certified WIFI module and LTE module. The LTE module IC is 10224A-2019EC25AFX, the WIFI module IC is 21098-ESPC3WROOM. All models are electric identical except the rated power.
Rating:	iM3C-19K2A: 240VAC, 60Hz, 80A Max iM3C-15K6A: 240VAC, 60Hz, 65A Max iM3C-11K5A: 240VAC, 60Hz, 48A Max iM3C-09K6A: 240VAC, 60Hz, 40A Max
EUT type:	☒ Table top ☐ Floor standing
Software Version:	-
Hardware Version:	-
Sample received date:	September 11, 2023
Date of test:	September 12, 2023 ~ September 27, 2023

1.2 Technical Specification

Frequency Range:	13.56 MHz ~ 13.56 MHz
Modulation:	ASK
Antenna gain:	PCB antenna

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1.3 Description of Test Facility

Name:	Intertek Testing Services Shanghai
Address:	Building 86, No. 1198 Qinzhou Road(North), Shanghai 200233, P.R. China
Telephone:	86 21 61278200
Telefax:	86 21 54262353

The test facility is recognized, certified, or accredited by these organizations:	CNAS Accreditation Lab Registration No. CNAS L0139
	FCC Accredited Lab Designation Number: CN0175
	IC Registration Lab CAB identifier.: CN0014
	VCCI Registration Lab Member No.: 3598 (Registration No.: R-14243, G-10845, C-14723, T-12252)
	A2LA Accreditation Lab Certificate Number: 3309.02

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2 MPE Assessment

Test result: Pass

2.1 MPE Test Exclusion Limit

Section 2.5.2: Exemption from Routine Evaluation Limits – RF Exposure Evaluation

According RSS-102 Table 1(RF Field Strength Limits for Devices Used by the General Public)

Frequency (MHz)	Exemption Limits (mW)				
	At separation distance of ≤5 mm	At separation distance of 10 mm	At separation distance of 15 mm	At separation distance of 20 mm	At separation distance of 25 mm
≤300	71 mW	101 mW	132 mW	162 mW	193 mW
450	52 mW	70 mW	88 mW	106 mW	123 mW
835	17 mW	30 mW	42 mW	55 mW	67 mW
1900	7 mW	10 mW	18 mW	34 mW	60 mW
2450	4 mW	7 mW	15 mW	30 mW	52 mW
3500	2 mW	6 mW	16 mW	32 mW	55 mW
5800	1 mW	6 mW	15 mW	27 mW	41 mW

RF exposure evaluation is required if the separation distance between the user and the device's radiating element is >20 cm, except when the device operates as follows:

Frequency (MHz)	EIRP (W)
< 20	≤ 1
≥ 20 and < 48	$\leq 22.48/f^{0.5}$
≥ 48 and < 300	≤ 0.6
≥ 300 and < 6000	$\leq 1.31 \times 10^{-2} f^{0.6834}$
≥ 6000	≤ 5

Calculated limit according to above table:

Band (MHz)	EIRP (W)
315	≤ 0.668
433.92	≤ 0.831
2400 - 2483.5	≤ 2.675
5150 - 5250	≤ 4.507
5250 - 5350	≤ 4.567
5470-5600 & 5650-5725	≤ 4.697
5725 -5850	≤ 4.845
GSM850	≤ 1.288
GSM1900	≤ 2.239
WCDMA Band II	≤ 2.239
WCDMA Band IV	≤ 2.122
WCDMA Band V	≤ 1.288
LTE Band 2	≤ 2.239
LTE Band 4	≤ 2.122

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LTE Band 5	≤ 1.288
LTE Band 7	≤ 2.751
LTE Band 12	≤ 1.151
LTE Band 13	≤ 1.238
LTE Band 25	≤ 2.239
LTE Band 26(814-824)	≤ 1.278
LTE Band 26(824-849)	≤ 1.288
LTE Band 38	≤ 2.803
LTE Band 41	≤ 2.748

2.2 Assessment Results

The fundamental emission is measured as:

☐Radiated Method:

Maximum EIRP

Device	Field Strength (dBuV/m)	EIRP (mW)
Remote transmitter		

☒Conducted Method:

The Power Data please refer to the RF Test Report 2309A1183SHA-002

13.56MHz: 60.6dBuV/m@3m, @20cm=@3m+40log(3/0.2)=107.64dBuV/m

Maximum EIRP

For 13.56MHz: 107.64dBuV/m=0.000077W< 1W.

The power for WIFI module refers to certificate of IC: 21098-ESPC3WROOM

The power for LTE module refers to report of IC: 10224A-2019EC25AFX

Maximum EIRP:

Device	Conducted Power (dBm)	Gain of Antenna (dBi)	EIRP (dBm)	EIRP (W)
Bluetooth LE	8.52	3.26	11.78	0.0151
WIFI 2.4G	17.56	3.26	20.82	0.121
WCDMA Band II	25	4	29	0.794
WCDMA Band IV	25	4	29	0.794
WCDMA Band V	25	4	29	0.794
LTE Band 2	25	4	29	0.794
LTE Band 4	25	4	29	0.794
LTE Band 5	25	4	29	0.794
LTE Band 12	25	4	29	0.794
LTE Band 13	25	4	29	0.794
LTE Band 14	25	4	29	0.794
LTE Band 66	25	4	29	0.794
LTE Band 71	25	4	29	0.794

RFID, WIFI and LTE can transmit simultaneously, so the maximum rate of MPE is,

0.000077/1+0.121/2.675+0.794/1.151=0.735<=1.0.

Therefore, the MPE requirement is deemed to be satisfied without test.

********** END **********