Sichuan Injet New Energy Co., Ltd.

MPE ASSESSMENT REPORT

Report Type:
FCCC MPE assessment report

Model:
iNSCDA240K1, iNSCDA180K1,
iNSCDA150K1, iNSCDA120K1

REPORT NUMBER:
2309A1178SHA-003

ISSUE DATE:
October 23, 2023

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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.: 2309A1178SHA-003

Applicant:	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
FCC ID:	2AZGWIHUB-2309

SUMMARY:

The equipment complies with the requirements according to the following standard(s) or Specification:
KDB447498 D01 General RF Exposure Guidance v06 FCC Part2.1091, FCC Part2.1093 FCC Part1.1307(b)

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

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Revision History

Report No.	Version	Description	Issued Date
2309A1178SHA-003	Rev. 01	Initial issue of report	October 23, 2023

TEST REPORT

1 GENERAL INFORMATION

1.1 Description of Equipment Under Test (EUT)

Product name:	DC Fast Charging Station
Type/Model:	iNSCDA240K1, iNSCDA180K1, iNSCDA150K1, iNSCDA120K1
Description of EUT:	The EUT is an electric vehicle DC charger. It contains a certified LTE module, the LTE module FCC ID is XMR201909EC25AFX, the LTE module IC is 10224A-2019EC25AFX. All models are electric identical except the rated power. We test iNSCDA240K1 as representative and list the result in this report.
Rating:	iNSCDA240K1: Input: 480VAC, 50/60Hz, 304A Max Output: 150-1000VDC, 250A Max, 240kW Max iNSCDA180K1: Input: 480VAC, 50/60Hz, 228A Max Output: 150-1000VDC, 250A Max, 180kW Max iNSCDA150K1: Input: 480VAC, 50/60Hz, 190A Max Output: 150-1000VDC, 250A Max, 150kW Max iNSCDA120K1: Input: 480VAC, 50/60Hz, 152A Max Output: 150-1000VDC, 250A Max, 120kW Max
EUT type:	☐ Table top ☒ Floor standing
Software Version:	-
Hardware Version:	-
Sample received date:	August 8, 2023
Date of test:	August 10, 2023 ~ August 22, 2023

1.2 Technical Specification

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

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 Assessment Limit

Mobile device exposure for standalone operations:

According to§1.1310, the limit for general population/uncontrolled exposures

Frequency range (MHz)	Electric field strength (V/m)	Magnetic field strength (A/m)	Power density (mW/cm^2)	Averaging time (minutes)
0.3-1.34	614	1.63	*(100)	30
1.34-30	824/f	2.19/f	*(180/f2)	30
30-300	27.5	0.073	0.2	30
300-1500	/	/	f/1500	30
1500-100,000	/	/	1.0	30

Note: Limit for 13.56MHz is 60.77 V/m

Mobile device exposure for simultaneous transmission operations: **the sum of the MPE ratios for all simultaneously transmitting antennas incorporated in a host device is ≤ 1.0**

2.2 Assessment Results

Power density (S) is calculated according to the formula:
$S = P / (4\pi R^2)$
Where S = power density in mW/cm^2
P = Radiated transmit power in mW
R = distance (cm)

As we can see from the test report 2309A1178SHA-002:
59.6dBuV/m@3m, @20cm=@3m+40log(3/0.2)=106.64dBuV/m=0.215V/m<60.77.

The power for LTE module refers to certificate of FCC ID: XMR201909EC25AFX

The calculations in the table below use the highest gain of antenna for client EUT. These calculations represent worst case in terms of the exposure levels.

Frequency Range	EIRP		Antenna Gain	R	S	Limits
(MHz)	(dBm)	(mW)	(dBi)	(cm)	(mW/cm2)	(mW/cm2)
WCDMA Band II	29	794.33	4	20	0.158	1
WCDMA Band IV	29	794.33	4	20	0.158	1
WCDMA Band V	29	794.33	4	20	0.158	0.55
LTE Band 2	29	794.33	4	20	0.158	1
LTE Band 4	29	794.33	4	20	0.158	1
LTE Band 5	29	794.33	4	20	0.158	0.55
LTE Band 12	29	794.33	4	20	0.158	0.47
LTE Band 13	29	794.33	4	20	0.158	0.52
LTE Band 14	29	794.33	4	20	0.158	0.53
LTE Band66	29	794.33	4	20	0.158	1
LTE Band 71	29	794.33	4	20	0.158	0.45

Note: 1 mW/cm2 from 1.310 Table 1.

RFID and LTE can transmit simultaneously, so the maximum rate of MPE is,
0.215/60.77+0.158/0.45=0.355 <1.0.

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Appendix I

Definition below must be outlined in the User Manual:

To satisfy FCC RF exposure requirements, a separation distance of 20 cm or more should be maintained between the antenna of this device and persons during device operation.
To ensure compliance, operations at closer than this distance is not recommended.

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