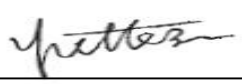
Shenzhen Most Technology Service Co., Ltd.
East A, 1 floor of New Aolin Factory buiding, Langshan Erlu, North District,
Hi-tech Industry Park, Nanshan,Shenzhen,Guangdong,China

RF Exposure Evaluation Report

Report Reference No..... :	**MTEB24080002-H**	
FCC ID..... :	**2A6G9-ACEVC48DG**	
Compiled by (position+printed name+signature).. :	File administrators Alisa Luo	
Supervised by (position+printed name+signature).. :	Test Engineer Sunny Deng	
Approved by (position+printed name+signature).. :	Manager Yvette Zhou	
Date of issue..... :	**Aug. 01,2024**	
Representative Laboratory Name. :	**Shenzhen Most Technology Service Co., Ltd.**	
Address..... :	No.5, 2nd Langshan Road, North District, Hi-tech Industrial Park, Nanshan, Shenzhen, Guangdong, China.	
Applicant's name..... :	**powerflex systems inc**	
Address..... :	392 1st street los altos, CA 94022 United States	
Test specification/ Standard.....**:**	**47 CFR Part 1.1307;47 CFR Part 1.1310** **KDB447498D01 General RF Exposure Guidance v06**	
TRF Originator..... :	Shenzhen Most Technology Service Co., Ltd.	

Test item description.....:	Electric Vehicle AC Charger
Trade Mark..... :	Powerflex System Inc
Model/Type reference..... :	PF-96D-LTE
Listed Models ..... :	N/A
Modulation Type..... :	ASK
Operation Frequency..... :	13.56MHz
Hardware Version.....	V1.0
Software Version.....	V00.01.01
Rating..... :	AC 240V/60Hz
Result..... :	**PASS**

T E S T R E P O R T

Equipment under Test	:	Electric Vehicle AC Charger
Model /Type	:	PF-96D-LTE
Listed Models		N/A
Remark		N/A
Applicant	:	**powerflex systems inc**
Address	:	392 1st street los altos, CA 94022 United States
Manufacturer	:	**Xiamen Joint Tech. Co., Ltd**
Address	:	Building #1,No.268 HouXiang Rd,Xinyang,Industrial Park,Haicang District,XIAMEN,Fujian,China.

Test Result:	**PASS**

The test report merely corresponds to the test sample.
It is not permitted to copy extracts of these test result without the written permission of the test laboratory.

1. Revision History

Revision	Issue Date	Revisions	Revised By
00	2024.08.01	Initial Issue	Alisa Luo

2. SAR Evaluation

2.1 RF Exposure Compliance Requirement

2.1.1 Standard Requirement

According to KDB447498D01 General RF Exposure Guidance v06
4.3.1. Standalone SAR test exclusion considerations
Unless specifically required by the published RF exposure KDB procedures, standalone 1-g head or body and 10-g extremity SAR evaluation for general population exposure conditions, by measurement or numerical simulation, is not required when the corresponding SAR Exclusion Threshold condition, listed below, is satisfied.

2.1.2 Limits

According to FCC Part1.1310: 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 part1.1307(b)

TABLE 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)	Averaging time (minutes)
(A) Limits for Occupational/Controlled Exposures				
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
300–1500	.....	.....	f/300	6
1500–100,000	.....	.....	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
300–1500	.....	.....	f/1500	30
1500–100,000	.....	.....	1.0	30

F= Frequency in MHz
Friis Formula
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 = gain of antenna in linear scale
Pi = 3.1416

R = distance between observation point and center of the radiator in cm
Pd id the limit of MPE, 1 mW/cm2 . If we know the maximum gain of the antenna and the total power input to the antenna, through the calculation, we will know the distance r where the MPE limit is reached.

2.1.3 EUT RF Exposure

For 13.56MHz wireless:
Field strength=79.0dBuV/m
EIRP =79.0dBuV/m-95.2+6= -10.2dBm

Channel	EIRP	Tune up tolerance (dBm)	Maximum tune-up Power (dBm)	Maximum tune-up Power (MW)	Power Density at R = 20 cm (mW/cm2)	Limit	Result
13.56 MHz	-10.2dBm	±1	-9.2	0.12	0.00002	0.9789	Pass

Note: 1) Refer to report MTEB24080002-R for EUT test Max Conducted average Output Power value.
Note: 2) Pd = (EIRP)/(4* Pi * R^2)=(0.12)/(4*3.1416*20^2)=0.00002

Contains FCCID: XMR202203FC80A

5.3 RF Exposure Evaluation Result

Evolution mode	Maximum Conducted power (dBm)	Antenna Gain (typical) (dBi):	Total Power (mw)	Distance (cm)	Power Density (mW/cm²)	Limit of Power Density (mW/cm²)	Power Density / Limit	Verdict
Bluetooth	8.00	1.00	7.943	20	1.00	0.002	0.002	Pass
2.4G WIFI	19.00	1.00	100.000	20	1.00	0.020	0.020	Pass
5.2G WIFI	16.00	1.00	50.119	20	1.00	0.010	0.010	Pass
5.3G WIFI	16.00	1.00	50.119	20	1.00	0.010	0.010	Pass
5.6G WIFI	16.00	1.00	50.119	20	1.00	0.010	0.010	Pass
5.8G WIFI	16.00	1.00	50.119	20	1.00	0.010	0.010	Pass

5.4 Collocated Power Density Calculation

Evolution mode	Frequency(MHz)	Power Density/Limit	Σ(Power Density / Limit) of Bluetooth + 2.4G WIFI + 5G WIFI	Verdict
Bluetooth	2400 MHz ~ 2483.5 MHz	0.002	0.032	Pass
2.4G WIFI	2400 MHz ~ 2483.5 MHz	0.020		
5.8G WIFI	5725 MHz ~ 5850 MHz	0.010		

Note:

1. Σ(Power Density / Limit): This is a summation of [(power density for each transmitter/ antenna included in the simultaneous transmission)/ (corresponding MPE limit)], for WLAN + Bluetooth.
2. The worst-case situation is 0.032, which is less than "1". This confirmed that the device comply with FCC 1.1310 MPE limit.
3. The DUT work frequency range used is 2400 MHz ~ 2483.5 MHz and 5725 MHz ~ 5850 MHz the result close to the limit by the above formula, so we select worst case power to calculate the exclusion power threshold.
4. More power list please refer to RF test report.

Simultaneous TX（NFC+2.4G+BT+5G）

Mode	Power Density(mW/m²)		Conclusion
	Reaults	Limit	
Simultaneous TX	0.0322	1.0	PASS

$$\sum_{i=1}^{a}\frac{P_i}{P_{\text{th},i}}+\sum_{j=1}^{b}\frac{ERP_j}{ERP_{\text{th},j}}+\sum_{k=1}^{c}\frac{Evaluated_k}{Exposure\ Limit_k}\le 1$$

Reaults（NFC+2.4G+BT+5G）=0.0005568/3+0.002/1+0.020/1+0.010/1=0.0322

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Band	Maximum Conducted Output Power (dBm)	MAX. antenna gain (dBi)	PG		Test Result (mW/cm^2)	Limit Value (mW/cm^2)	Conclusion
			(dBm)	(mW)			
WCDMA II	25.00	8.000	33.000	1995.262	0.397	1.000	Pass
WCDMA IV	25.00	5.000	30.000	1000.000	0.199	1.000	Pass
WCDMA V	25.00	9.416	34.416	2764.394	0.550	0.550	Pass
LTE Band 2	25.00	8.000	33.000	1995.262	0.397	1.000	Pass
LTE Band 4	25.00	5.000	30.000	1000.000	0.199	1.000	Pass
LTE Band 5	25.00	9.416	34.416	2764.394	0.550	0.550	Pass
LTE Band 12	25.00	8.734	33.734	2362.653	0.470	0.470	Pass
LTE Band 13	25.00	9.173	34.173	2613.966	0.520	0.520	Pass
LTE Band 14	25.00	9.255	34.255	2663.790	0.530	0.530	Pass
LTE Band 66	25.00	5.000	30.000	1000.000	0.199	1.000	Pass
LTE Band 71	25.00	8.545	33.545	2262.039	0.450	0.450	Pass
Note: **R** = 20cm ∏= 3.1416							

IMPORTANT NOTE: To comply with theFCC RF exposure compliance requirements, the antenna(s) used for this transmitter must be installed to provide a separation distance of at least 20 cm from all persons and must not be co-located or operating in conjunction with any other antenna or transmitter. No change to the antenna or the device is permitted. Any change to the antenna or the device could result in the device exceeding the RF exposure requirements and void user's authority to operate the device.

.....THE END OF REPORT.....