

Situation of WPT standards in China

2018.9

Content

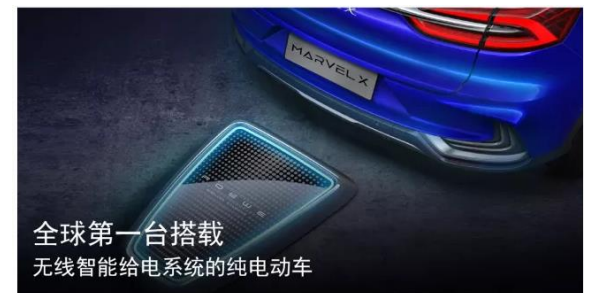
Situation of EV WPT industry

Situation of EV WPT situation

Suggestion for EVS-GTR

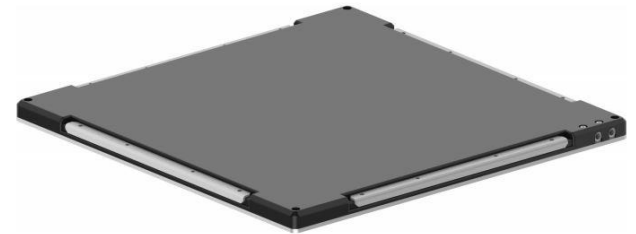
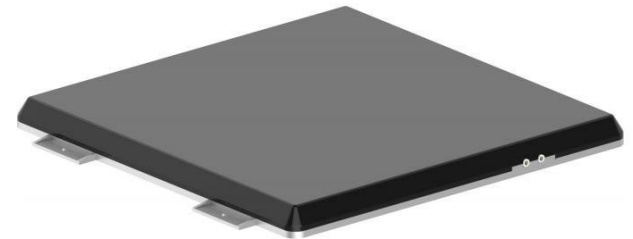
Vehicle manufacture

OEM	Model	Remark
北汽 BAIC	EV 150、EV 160	adapted, in vehicle production
江淮 JAC	iEV 7	adapted
上汽 SAIC	MARVAL X	SAIC's Roewe MARVAL X is the world's first pure electric vehicle equipped with WPT system
吉利 Geely		adapted, in vehicle production
一汽 FAW		adapted
长安 ChangAn	逸动EV EADO EV	adapted
东风 DongFeng		adapted
广汽 GAC		adapted
比亚迪 BYD	宋 Song	adapted



Suppliers

Supplier	Parameters	Application	Business Model
中兴 ZTEV	3.7kW、7.7kW、 30kW、60kW	EV-passenger car Bus	Tier one Supplier
万安 VIE	3.7kW、7.7kW	EV-passenger car	Evatran' s Joint Venture Tier one Supplier
中惠创智 Zone Charge	7.7kW、22kW	EV-passenger car	Tier one Supplier
中海阳 Rays Power	7.7kW、30kW	EV-passenger car Bus	
华为 Huawei	pre- development	EV-passenger car	
比亚迪 BYD	pre- development	EV-passenger car	
特来电 TELD	pre- development	EV-passenger car	
新页 New Yea	pre- development	EV-passenger car	



Explanation for 11kw product

MF-WPT1	MF-WPT2	MF-WPT3	MF-WPT4	MF-WPT5	MF-WPT6	
$P \leq 3.7kW$	$3.7kW < P \leq 7.7kW$	$7.7kW < P \leq 11kW$	$11kW < P \leq 22kW$	$22kW < P \leq 33kW$	$33kW < P \leq 66kW$	$> 66kW$

11kw is very important in standard of SAE J2954 and IEC 61980, however it's not capable in China. Because the supplying device's capacity in China under the single phase mode is 7kw, whose voltage and current is 220V and 32A.

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Situation of WPT standard in China

Four national standards have been voted by TC114

- 《Electric vehicle wireless power transfer system—General requirements》
- 《Special requirements of electric vehicle(EV) wireless charging system》
- 《The exposure limits and measurement method of electromagnetic radiation during wireless charging for electric vehicle》
- 《Communication protocols between electric vehicle on-board charger and wireless charging equipment》

Five national standards are under the drafting

- 《Electromagnetic compatibility requirements and test methods for electric vehicle wireless power transfer systems》
- 《Electric Vehicle Wireless Power Transfer Specific Requirements for Commercial Vehicle》
- 《Interoperability of electric vehicle(EV) wireless charging system for vehicle side 》
- 《Interoperability of electric vehicle(EV) wireless charging system for ground side 》
- 《Technical Requirements of Stereo Garage Wireless Power Supply System》

we are considering establishing the series standards for easy reading and understanding

GB/T XXXX Electric vehicle wireless power transfer system ,which includes eight parts:

- Part 1: General requirements ;
- Part 2: Communication protocols between electric vehicle on-board charger and wireless charging equipment ;
- Part 3: specific requirements;
- Part 4: The exposure limits and measurement method of electromagnetic radiation ;
- Part 5: Electromagnetic compatibility requirements and test methods ;
- Part 6: interoperability requirement for vehicle side;
- Part 7: interoperability requirement for ground side ;
- Part 8: Specific Requirements for Commercial Vehicle .

Note: the standard of Technical Requirements of Stereo Garage Wireless Power Supply System is belong to the requirement of suppling device.

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Conclusions

- The industry of EV WPT industry is not mature enough for regulation
- There are lots of technical routes right now. So ISO, IEC and SAE are continually adjusting the standards.
- The inductive charging test is more complicated than conductive charging, which need lots of standards to deal with.
- Taking into consideration of all above situations ,we suggest exclude the content related to WPT in EVS-GTR.



Thanks