

## **HANGZHOU EV-TECH OBC(ON Board Charger) EQUIPPED GREAT WALL ORA-R1 EV CIRCUIT ANALYSIS REPORT**



ORA-R1 of Great Wall Motor  
Company Limited  
Source from Great Wall website



OBC unit

### **Vehicle overview**

This OBC is produced by Chinese maker HANGZHOU EV-TECH for Great Wall Motor leader model ORA-R1 EV. Batteries reported to be 33 kWh are mounted under the floor. FF (Front Engine • Front Drive) system by maximum output of 35kW (about 48PS) motor is adopted.

### **OBC unit features**

Input voltage: 90-264VAC / Output voltage: 200-420VDC Current: 12A 3.3kW

DC input voltage: 200-420VDC / DC output voltage:  $14 \pm 0.1V$

OBC has a three-layer housing,

The upper layer mainly consists of a junction box board (hereinafter, JB board) and a power relay. The middle layer is equipped with a charger + DCDC circuit mainly composed of a control board and a main board. A cooling channel is provided in the lower layer (bottom side of the housing).

OBC system consists of PFC, LLC, and 14V DCDC converter

### **Report content**

96 pages report the PCB outline, layout of each layer, function block diagram, detailed circuit diagram and parts list.

Cross reference viewer is also provided.

**Circuit analysis report: \$25,000**

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