

Model of high voltage inverter





Overview

What is a battery inverter model?

The model under test consists of a Battery inverter connected to the Grid (represented by a Three-phase voltage source component and a RL section) with a passive load (represented by RL components). This application note compares performance between the switching (Figure 1) and average (Figure 2) models of the Battery inverter component.

What is a switching inverter model?

In the Switching Inverter model, the switching components are used to create an output voltage, and so the measured output voltage has a switching waveform (Figure 6, green). In the average model, the measured output voltage has a continuous waveform generated from ideal voltage sources, shown in (Figure 6, red).

Who develops high voltage inverter systems for electric vehicles?

The vehicle manufactures and automotive tier 1 suppliers develop inverter systems for electric vehicles. Discussions were held with their design and research teams during direct meetings to understand future developments. Through these discussions, along with our own research, there are some clear high voltage inverter trends in the EV market. 3.

What is the main circuit of an inverter?

The main circuit of an inverter includes an inverter DC power supply, IGBT bridge inverter, protection circuits, high frequency high voltage transformers, and high frequency high voltage silicon stack (Rectifier).



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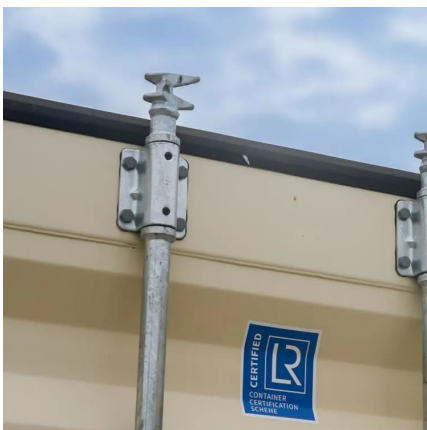
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