

# **Inverter maximum driving power**





## Overview

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How much inverter power can a car battery support?

There is a theoretical limit to the amount of inverter power that can be supported by an automotive battery. Theoretically, the maximum supported inverter power can be calculated by multiplying the battery capacity (Ah) by the battery voltage (V) multiplied by the discharge multiplier (C-rate).

How do I determine the maximum inverter power a car battery can support?

To determine the maximum inverter power that your vehicle's battery can support, you need to know the battery's rated voltage (12V for most automotive batteries) and the number of ampere-hours (Ah).

How traction inverters affect EV driving range?

The efficiency and performance of traction inverters directly impact an EV's driving range on a single charge. Therefore, to build the next generation of these systems, the industry has widely adopted silicon carbide (SiC) field-effect transistors (FETs) to enable higher reliability, efficiency and power density.

Can a high power inverter be used on a car battery?

When using a high power inverter, it may be necessary to consider a battery with additional deep cycles to ensure that the car battery is not damaged by continuous discharge. For standard automotive batteries, it is recommended that inverter power not exceed 600 watts for safety and battery life.



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