Obc and energy storage inverter

Why do OBCs need more power?

With battery capacity increasing,the OBCs need to be designed for even higher power. With the increasing power capacity of the OBC,specifications such as power density and efficiency are even more important,due to limited space and cooling capacity in the car.

Why do inverter power stages need bidirectional power transfer?

Another requirement that is becoming more prevalent for inverter power stages is the need for bidirectional power transfer. This is important in storage ready inverters where there can be a need for the power from the grid to be stored in local power storage like a battery.

What is a reference design for ANPC inverter power stage?

This reference design provides a design template for implementing a three-level, three-phase, gallium nitride (GaN) based ANPC inverter power stage. The use of fast switching power devices makes it possible to switch at a higher frequency of 100 kHz, reducing the size of magnetics for the filter and increasing the power density of the power stage.

Can GaN devices be used in solar inverters?

This design also demonstrates the use GaN devices in solar inverterswhich was not possible with other topologies due to their limitation of voltage withstand capability. Additional power density is also being enabled by moving to higher switching speeds in power converters.

How many ISRS are in the OBC project?

The OBC project consists of three ISRs(ISR1,ISR2,and ISR3) running on 2 cores,the C28x core and the CLA core. Using an ePWM for the ISR1 trigger,an eCAP for ISR2's trigger,and ADC for ISR3's trigger allows the ISR priority to be controlled entirely by hardware. Table 5-4 shows how each ISR is partitioned and its tasks. Table 5-4.

Is it safe to use a board with overvoltage & overcurrent?

The board operates at voltages and currents that may cause shock,fire,or injury if not properly handled. Use the equipment with necessary caution and appropriate safeguards to avoid injury or damage to property. For safety,use of isolated equipment with overvoltage and overcurrent is highly recommended.

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