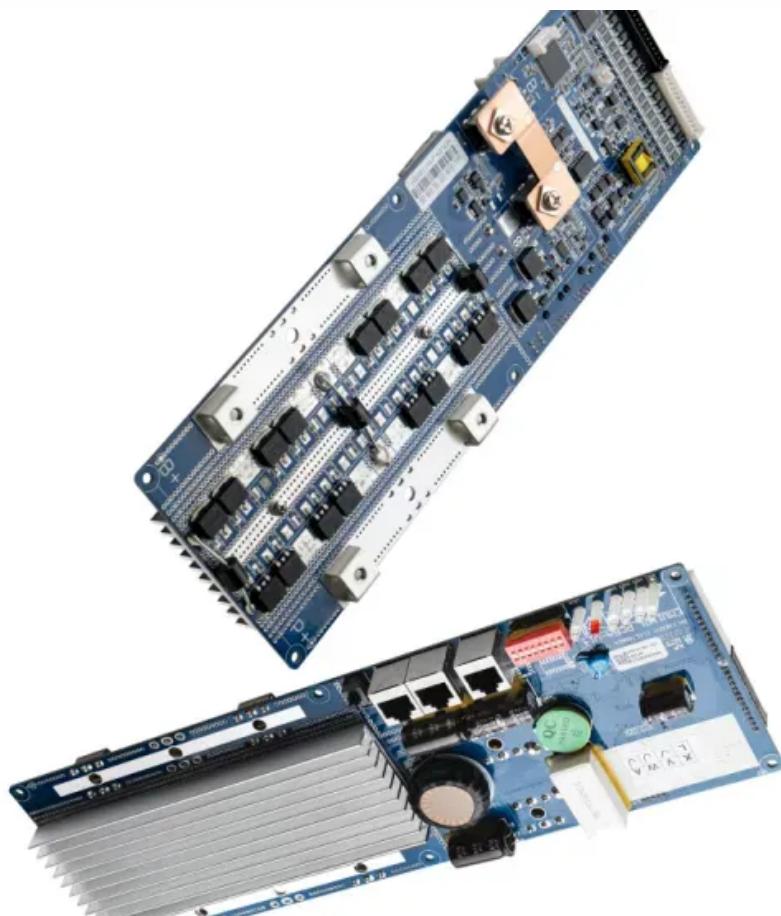




SolarInvert Energy Solutions

**High frequency inverter
produces 1200v**



Overview

What is a high frequency inverter?

In many applications, it is important for an inverter to be lightweight and of a relatively small size. This can be achieved by using a High-Frequency Inverter that involves an isolated DC-DC stage (Voltage Fed Push-Pull/Full Bridge) and the DC-AC section, which provides the AC output.

What is a GPI 1200V power device?

The successful design enables GPI to apply GaN to a class of high voltage and high power systems requiring 1200V power device ratings. Such applications include solar inverter, UPS, three phase PFC, EV fast charger, motor drive and welding. Effort is underway to efficiently package the new 1200V device for convenient use in power switching systems.

Which power supply topologies are suitable for a high frequency inverter?

The power supply topologies suitable for the High-Frequency Inverter includes push-pull, half-bridge and the full-bridge converter as the core operation occurs in both the quadrants, thereby, increasing the power handling capability to twice of that of the converters operating in single quadrant (forward and flyback converter).

What is a bridge type inverter?

The simplest form of an inverter is the bridge-type, where a power bridge is controlled according to the sinusoidal pulse-width modulation (SPWM) principle and the resulting SPWM wave is filtered to produce the alternating output voltage. In many applications, it is important for an inverter to be lightweight and of a relatively small size.

How does a transformerless inverter work?

Transformerless Inverter Technology The existing DC voltage is converted to a square 50 Hz AC voltage via a full bridge (S1, S4), then smoothed to a

sinusoidal 50 Hz AC voltage via the chokes (L1+L2) and fed into the public grid. Additional safety measures (residual current circuit breaker) required.

Does an improved inverter output filter configuration reduce dv/dt at motor terminals?

D. A. Rendusara and B. N. Enjeti, "An improved inverter output filter configuration reduces common and differential modes DV/DT at the motor terminals in PWM drive systems," IEEE Trans. Power Electron., vol. 13, no. 6, pp. 1135-1143, Nov. 1998.

High frequency inverter produces 1200v



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A connection to the neutral point ...

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2MW / 5MWh
Customizable

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SemiQ 1200V SiC Full-Bridge Modules Simplify Development

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