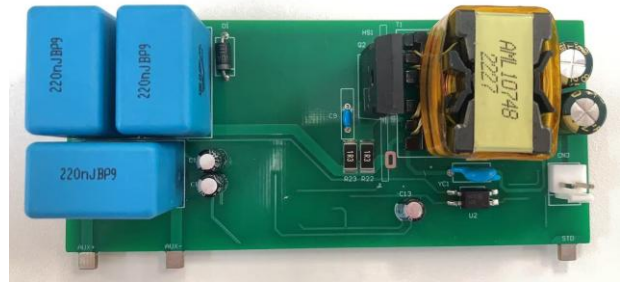


1kV Input Auxiliary Power Converter

Description

This reference design is a 50W DC-DC converter which is used for auxiliary power of PV system. It was using typical flyback topology together with synchronous rectification control to achieve simple, isolated, high performance, low cost and reliable design.

In order to work under high BUS voltage and high switching frequency. This design has used Silicon Carbide (SiC) MOSFET. Resulting less power loss, high efficiency and reduction of size and weight.



Advantages

- High voltage operation
- Ease of use
- High performance
- Low cost
- Full isolated

Features

- Input voltage: 900-1000Vdc
- Output: 12Vdc 4AMax.
- Output Power: 50W Max.

Core Chip

- PWM controller: **onsemi** UC2844BD1R2G
- SiC MOSFET: **onsemi** NTHL1000N170M1
- SR controller: **onsemi** NCP4306DADZZ
- Output power MOSFET: **onsemi** FDMS86101DC
- Voltage Reference: **onsemi** NCP431BCSNT1G
- Optocoupler: **onsemi** FOD817A

Applications

- Auxiliary power of large power system
- DC-DC converter

Block Diagram

