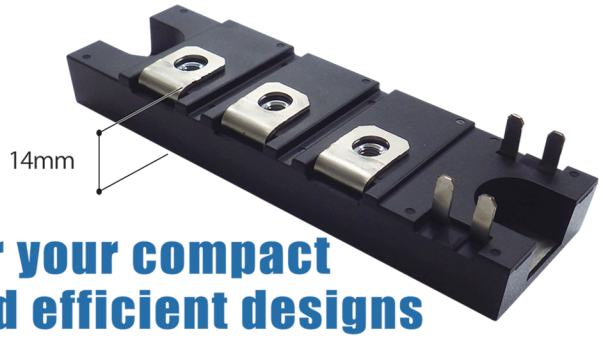
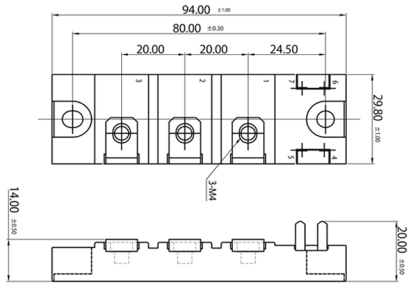
SanRex LEADING THE NEW POWER ELECTRONICS ▸▸

Preliminary

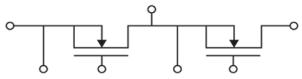
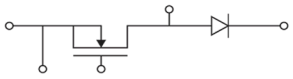
Techno Block Series ※1

SiC MOSFET & Schottky Barrier Diodes Modules





For your compact and efficient designs

Diagram	MOSFET + MOSFET	MOSFET + SBD	SBD + SBD
Connection			
Application	Inverter DC/DC Converter	PFC Boost Converter	Output Rectification

Advantages

- Low loss at even high temperature
- High Vgs(th) to reduce malfunctions
- Tj=150℃
- Panasonic DioMOS (MOFET w/o internal diode) for compact and higher power: Reduced volume to 1/3 ※2
- New durable package design with Top and Bottom Die Soldering and Transfer Mold technologies

Key Specifications

● SiC MOSFET

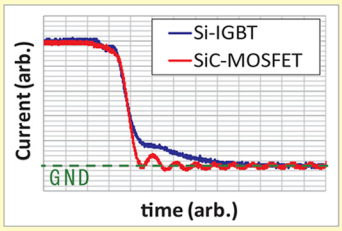
I_D	V_{DSS}	V_{GS} (th)	R_{DS}(on) V_{GS}=20V	V_{SD} V_{GS}=-5V
100A	1200V	4.5V	9mΩ	2.7V
150A	1200V	4.5V	6mΩ	2.7V

● SiC SBD

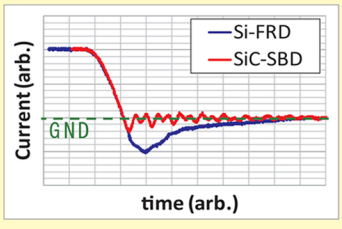
I_F	V_{RRM}	V_F
100A	1200V	1.65V
150A	1200V	1.65V

High Speed/Low Loss

SW-OFF Current Waveforms (Tj=25℃)



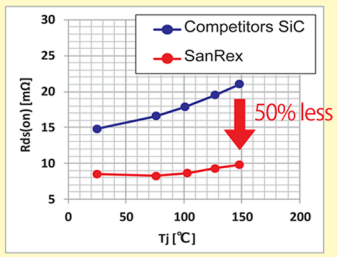
Recovery Current Waveforms (Tj=25℃)



Low Loss at high temp

Low ON Resistance [Rds(on)]

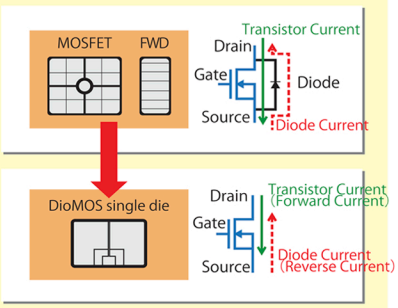
SiC-MOSFET
Rds(on) vs Tj (100A device)



Rds(on): 50% less at (Tj=25℃~150℃)

DioMOS = MOSFET with internal FWD

FWD = Flywheel Diode



No external flywheel diode required

※1："Techno Block" Series is SanRex's original high heat dissipation semiconductors by the transfermold process.

※2： Diode-integrated MOSFET
DioMOS is a original SiC device structure developed by Panasonic.