1200V/180A Full SiC Power Module with Integrated SiC Trench MOSFET

BSM180D12P3C007

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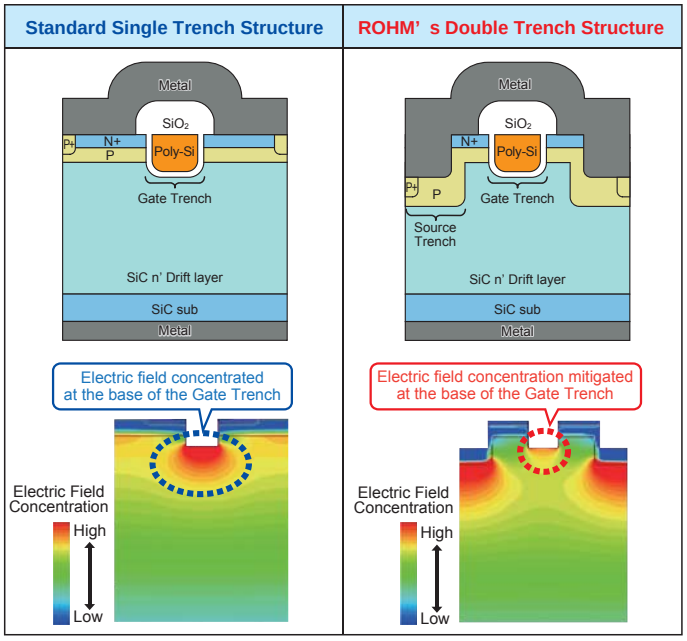
New full SiC power module with built-in SiC trench MOSFET reduces ON resistance and improves switching performance

Product Outline

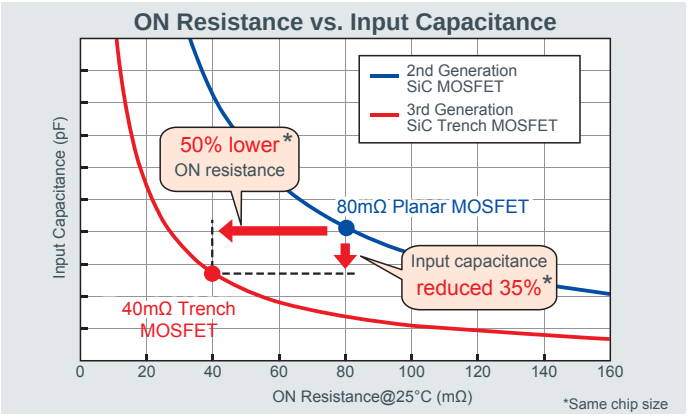
SiC devices are attracting attention due to their superior performance and characteristics compared with silicon as a semiconductor material.

ROHM's new SiC MOSFET, which utilizes a trench structure that reduces ON resistance by 50% and input capacitance by 35% compared with existing planar-type SiC MOSFETs, has been adopted in ROHM's 1200V/180A full SiC power module.

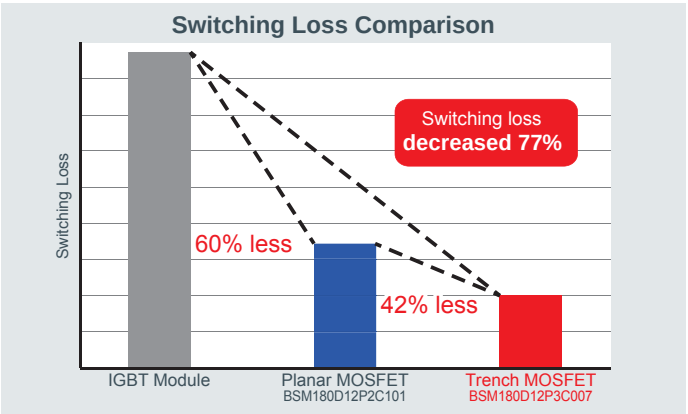
Proprietary double trench structure provides long-term reliability



ON resistance reduced by 50%



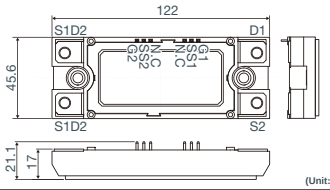
Dramatically lower switching loss



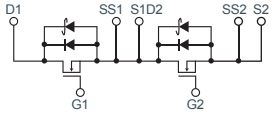
Specifications

Part No.	Absolute Max. Ratings (Ta=25°C)						RDS(ON) Typ. (mΩ)
	VDSS (V)	VGS (V)	ID (A) [Tc=60°C]	Tj (°C)	Tstg (°C)	Visol (V) [AC 1min]	
BSM180D12P3C007	1200	-4 to +22	180	-40 to +175	-40 to +125	2500	10

Package (C Type)



Internal Circuit



Expanded discrete trench MOSFET lineup

The lineup is being expanded to include 3 part numbers for each rated voltage: 650V and 1200V, in rated currents of 95A (1200V) and 118A (650V).

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