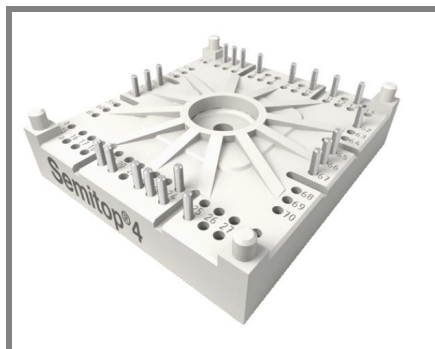




SEMITOP® 4

IGBT Module

SK200GD066T

Target Data

Features

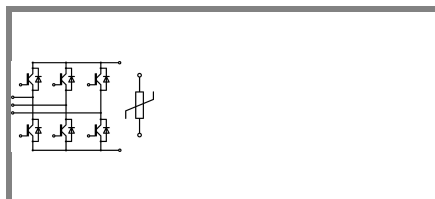
- One screw mounting module
- Fully compatible with SEMITOP®1,2,3
- Improved thermal performances by aluminium oxide substrate
- Trench IGBT technology
- CAL technology FWD
- Integrated NTC temperature sensor

Typical Applications

- Inverter up to 42 kVA
- Typ. motor power 18,5 kW

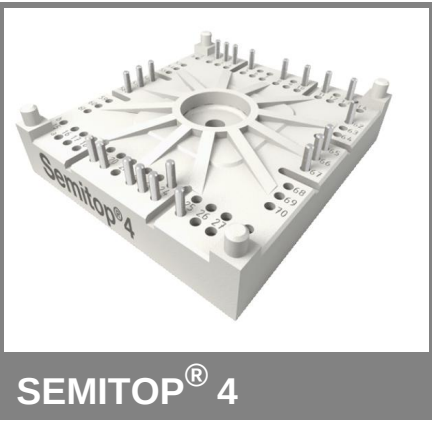
Absolute Maximum Ratings				$T_s = 25\text{ °C}$, unless otherwise specified	
Symbol	Conditions			Values	Units
IGBT					
V_{CES}	$T_j = 25\text{ °C}$			600	V
I_C	$T_j = 175\text{ °C}$	$T_s = 25\text{ °C}$		174	A
		$T_s = 70\text{ °C}$		131	A
I_{CRM}	$I_{CRM} = 2 \times I_{Cnom}$			400	A
V_{GES}				± 20	V
t_{psc}	$V_{CC} = 360\text{ V}$; $V_{GE} \leq 20\text{ V}$; $T_j = 125\text{ °C}$ $V_{CES} < 600\text{ V}$			6	μs
Inverse Diode					
I_F	$T_j = 175\text{ °C}$	$T_s = 25\text{ °C}$		99	A
		$T_s = 70\text{ °C}$		79	A
I_{FRM}	$I_{FRM} = 2 \times I_{Fnom}$			120	A
Module					
$I_{t(RMS)}$					A
T_{vj}				-40 ... +150	$^{\circ}\text{C}$
T_{stg}				-40 ... +125	$^{\circ}\text{C}$
V_{isol}	AC, 1 min.			2500	V

Characteristics			T _s = 25 °C, unless otherwise specified			
Symbol	Conditions		min.	typ.	max.	Units
IGBT						
V _{GE(th)}	V _{GE} = V _{CE} , I _C = 3,2 mA		5	5,8	6,5	V
I _{CES}	V _{GE} = 0 V, V _{CE} = V _{CES} T _j = 25 °C T _j = 125 °C					mA mA
I _{GES}	V _{CE} = 0 V, V _{GE} = 20 V T _j = 25 °C T _j = 125 °C		1200			nA nA
V _{CE0}	T _j = 25 °C T _j = 150 °C		0,6 0,7		1 0,8	V V
r _{CE}	V _{GE} = 15 V T _j = 25°C T _j = 150°C		2,75 4,25		4 5,5	mΩ mΩ
V _{CE(sat)}	I _{Cnom} = 200 A, V _{GE} = 15 V T _j = 25°C _{chiplev.} T _j = 150°C _{chiplev.}		1,45 1,7		1,9 2,15	V V
C _{ies} C _{oes} C _{res}	V _{CE} = 25, V _{GE} = 0 V f = 1 MHz		12,2 0,76 0,36		nF nF nF	
t _{d(on)} t _r E _{on}	R _{Gon} = 22 Ω di/dt = 2575 A/μs	V _{CC} = 300V I _{Cnom} = 200A	134 125 17,6		ns ns mJ	
t _{d(off)} t _f E _{off}	R _{Goff} = 22 Ω di/dt = 2575 A/μs	T _j = 125 °C V _{GE} = -7/+15 V	1131 86 11,8		ns ns mJ	
R _{th(j-s)}	per IGBT		0,45		K/W	



GD-T

SK200GD066T



IGBT Module

SK200GD066T

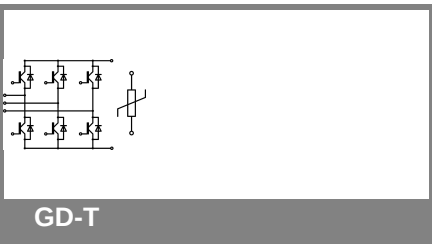
Target Data

Features

- One screw mounting module
- Fully compatible with SEMITOP®1,2,3
- Improved thermal performances by aluminium oxide substrate
- Trench IGBT technology
- CAL technology FWD
- Integrated NTC temperature sensor

Typical Applications

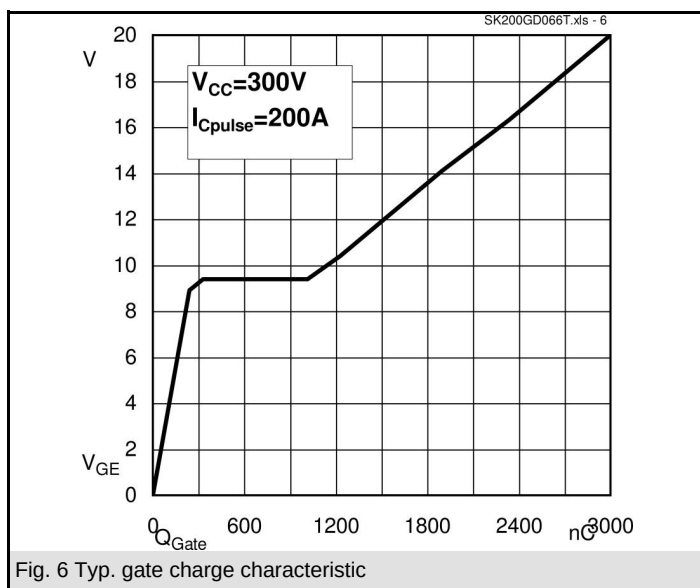
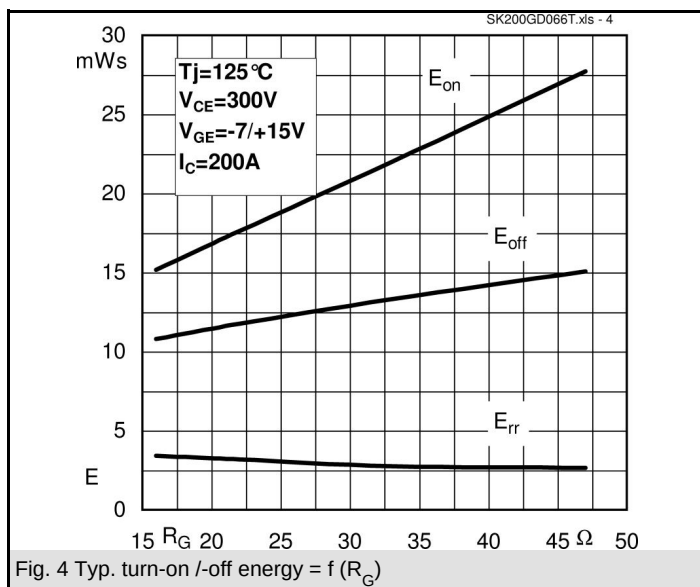
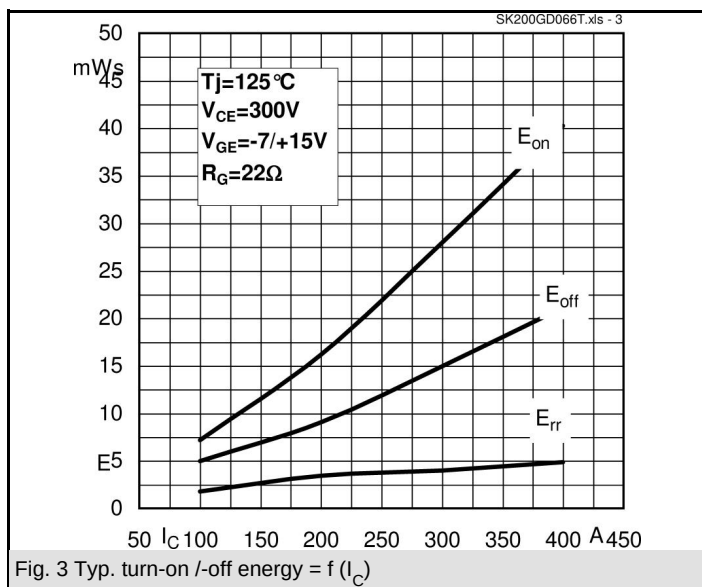
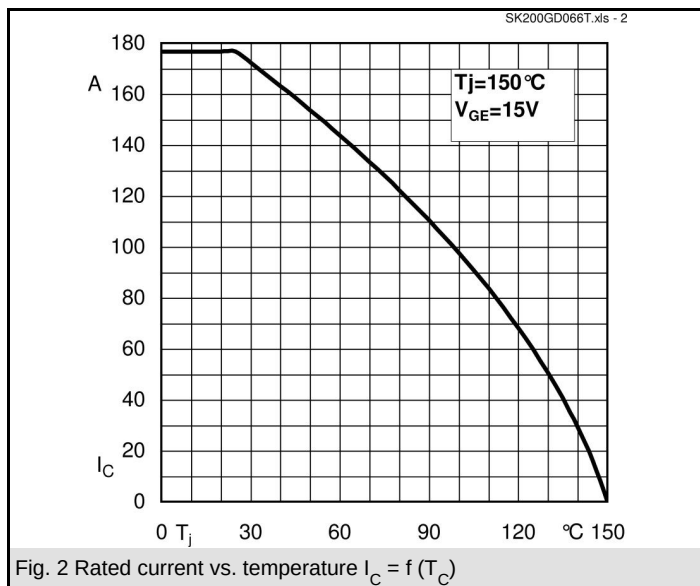
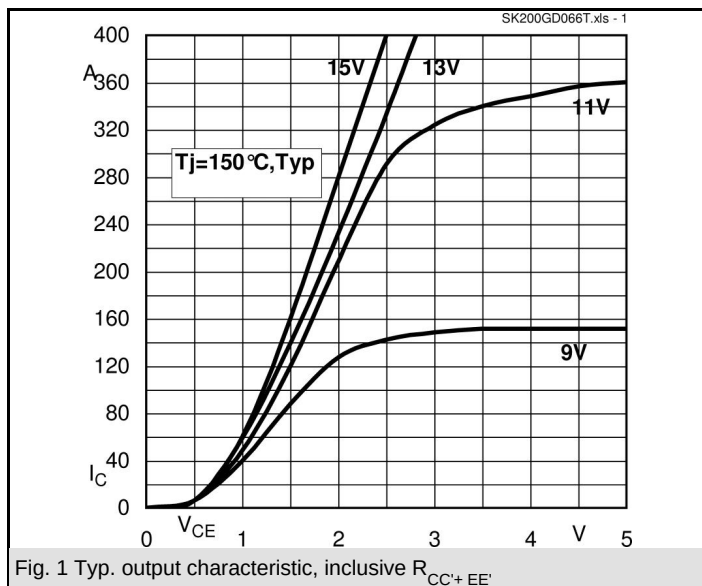
- Inverter up to 42 kVA
- Typ. motor power 18,5 kW

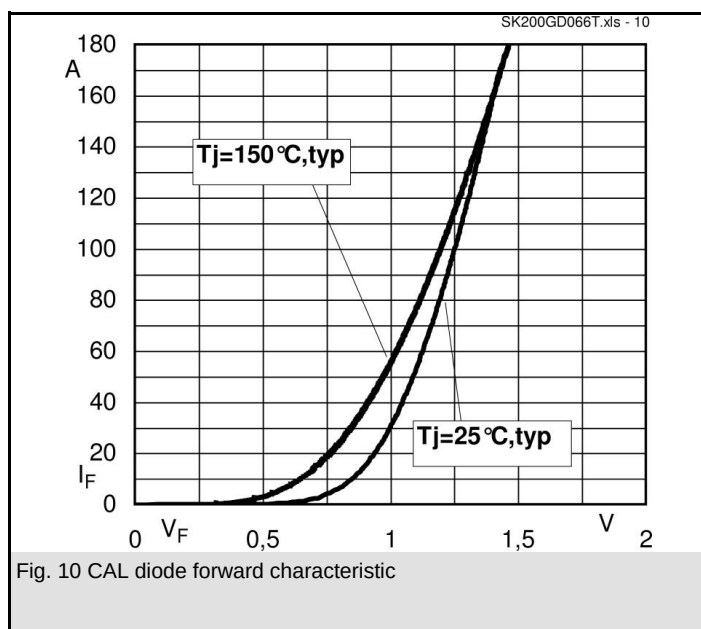
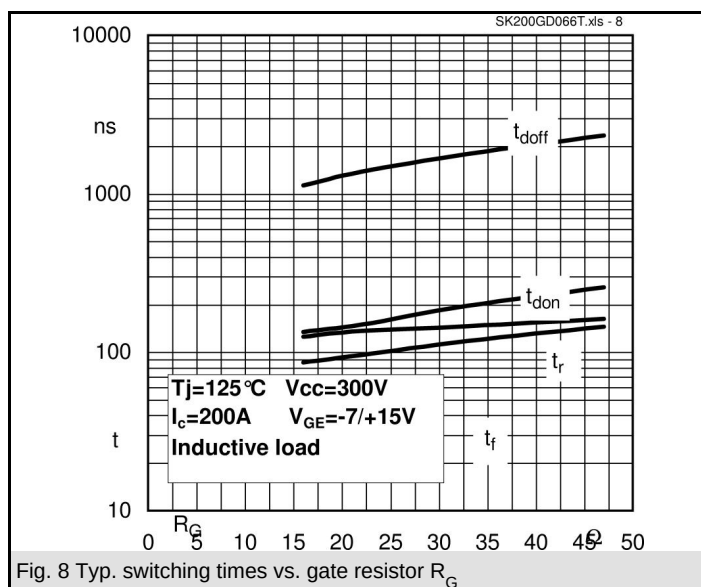
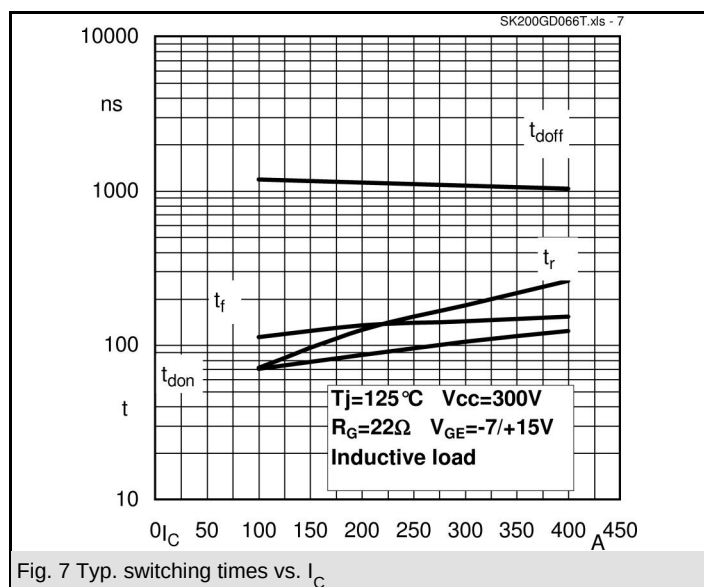


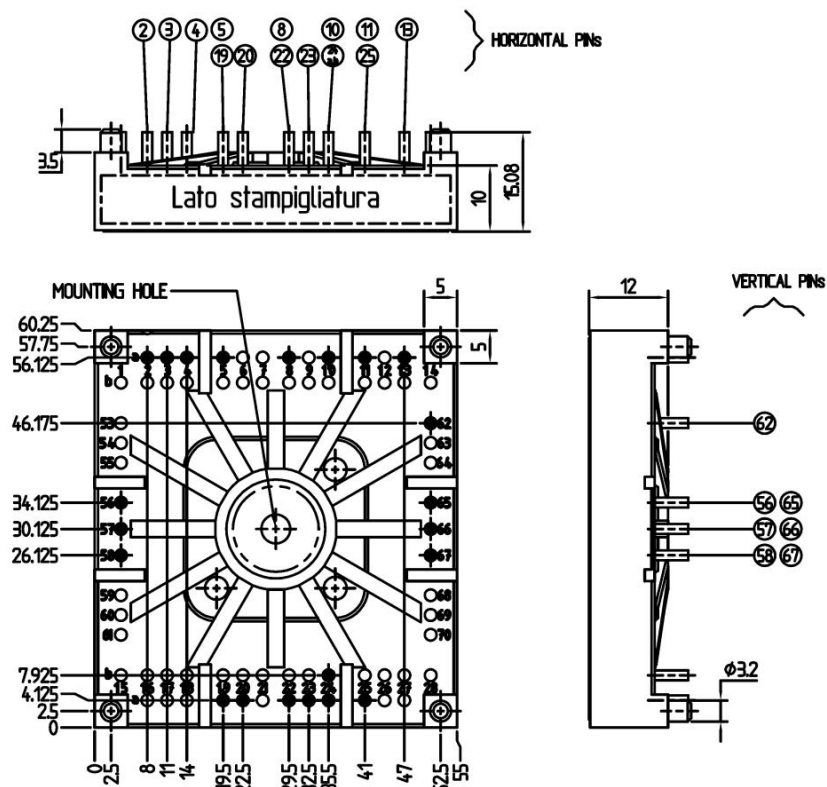
Characteristics						
Symbol	Conditions		min.	typ.	max.	Units
Inverse Diode						
V _F = V _{EC}	I _{Fnom} = 200 A; V _{GE} = 0 V	T _j = 25 °C _{chiplev.}		1,48		V
		T _j = 150 °C _{chiplev.}		1,5		V
V _{F0}		T _j = 25 °C		0,95		V
		T _j = 150 °C		0,85		V
r _F		T _j = 25 °C		3		mΩ
		T _j = 150 °C		3,5		mΩ
I _{RRM}	I _{Fnom} = 200 A di/dt = 2575 A/μs V _{CC} = 300V	T _j = 125 °C		80		A
Q _{rr}				20		μC
E _{rr}				3,2		mJ
R _{th(j-s)D}	per diode			0,8		K/W
M _s	to heat sink			3,5		Nm
w				60		g
Temperature sensor						
R ₁₀₀	T _s =100°C (R ₂₅ =5kΩ)			493±5%		Ω

This is an electrostatic discharge sensitive device (ESDS), international standard IEC 60747-1, Chapter IX.

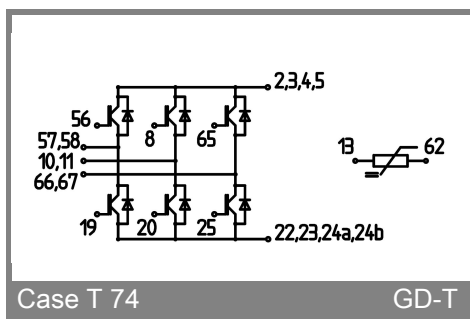
This technical information specifies semiconductor devices but promises no characteristics. No warranty or guarantee expressed or implied is made regarding delivery, performance or suitability.







Case T74 (Suggested hole diameter for the solder pins in the circuit board: 2mm. Suggested hole diameter for the mounting pins in the circuit board: 3,6mm)



Case T 74

GD-T