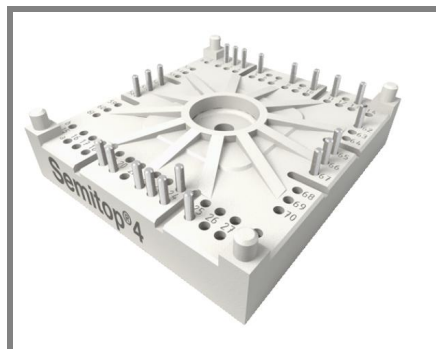


SK100GD126T



SEMITOP® 4

IGBT Module

SK100GD126T

Target Data

Features

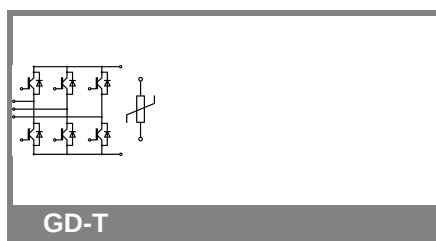
- One screw mounting module
- Fully compatible with SEMITOP®1,2,3
- Improved thermal performances by aluminium oxide substrate
- Trench IGBT technology
- CAL technology FWD
- Integrated NTC temperature sensor

Typical Applications

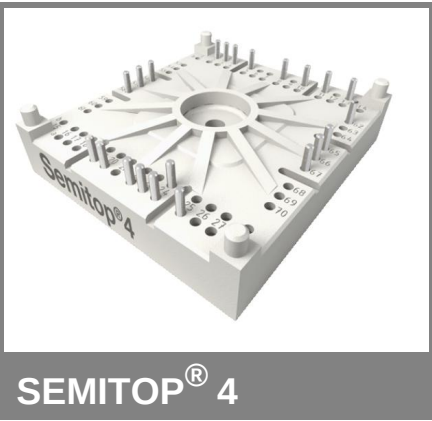
- Inverter up to 50 kVA
- Typ. motor power 22 kW

Absolute Maximum Ratings				$T_s = 25\text{ °C}$, unless otherwise specified	
Symbol	Conditions			Values	Units
IGBT					
V_{CES}	$T_j = 25\text{ °C}$			1200	V
I_C	$T_j = 150\text{ °C}$	$T_s = 25\text{ °C}$		114	A
		$T_s = 70\text{ °C}$		86	A
I_{CRM}	$I_{CRM} = 2 \times I_{Cnom}$			200	A
V_{GES}				± 20	V
t_{psc}	$V_{CC} = 600\text{ V}$; $V_{GE} \leq 20\text{ V}$; $T_j = 125\text{ °C}$ $V_{CES} < 1200\text{ V}$			10	μs
Inverse Diode					
I_F	$T_j = 150\text{ °C}$	$T_s = 25\text{ °C}$		118	A
		$T_s = 70\text{ °C}$		88	A
I_{FRM}	$I_{FRM} = 2 \times I_{Fnom}$			200	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 = 4 mA		5	5,8	6,5	V	
I _{CES}	V _{GE} = 0 V, V _{CE} = V _{CES}	T _j = 25 °C				mA	
		T _j = 125 °C				mA	
I _{GES}	V _{CE} = 0 V, V _{GE} = 20 V	T _j = 25 °C				nA	
		T _j = 125 °C				nA	
V _{CE0}		T _j = 25 °C				V	
		T _j = 125 °C				V	
r _{CE}	V _{GE} = 15 V	T _j = 25°C				mΩ	
		T _j = 125°C				mΩ	
V _{CE(sat)}	I _{Cnom} = 100 A, V _{GE} = 15 V	T _j = 25°C _{chiplev.}				V	
		T _j = 125°C _{chiplev.}				V	
C _{ies}	V _{CE} = 25, V _{GE} = 0 V	f = 1 MHz				nF	
C _{oes}						nF	
C _{res}						nF	
t _{d(on)}	R _{Gon} = 4 Ω di/dt = 2250 A/μs	V _{CC} = 600V I _{Cnom} = 100A T _j = 125 °C V _{GE} = -7/+15 V				ns	
t _r						ns	
E _{on}						mJ	
t _{d(off)}	R _{Goff} = 4 Ω di/dt = 2250 A/μs						ns
t _f							ns
E _{off}							mJ
R _{th(j-s)}	per IGBT					K/W	



SK100GD126T



IGBT Module

SK100GD126T

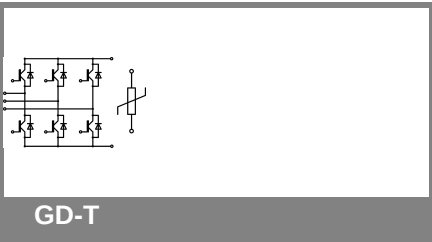
Target Data

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

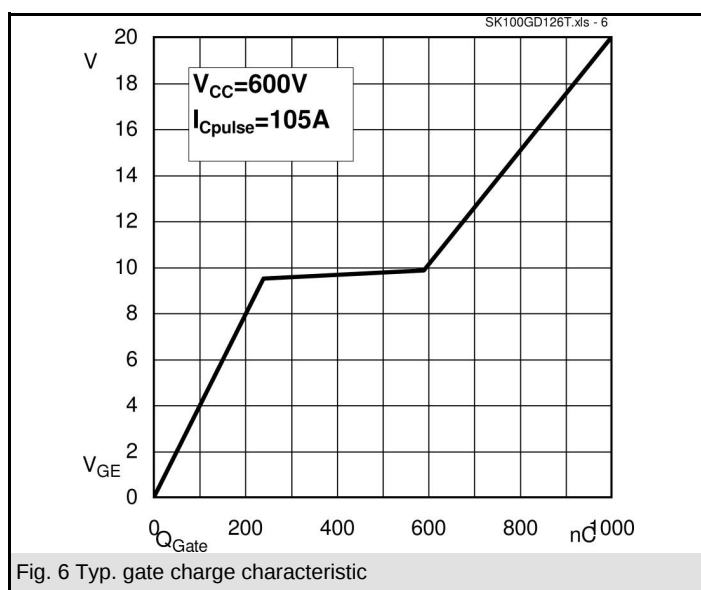
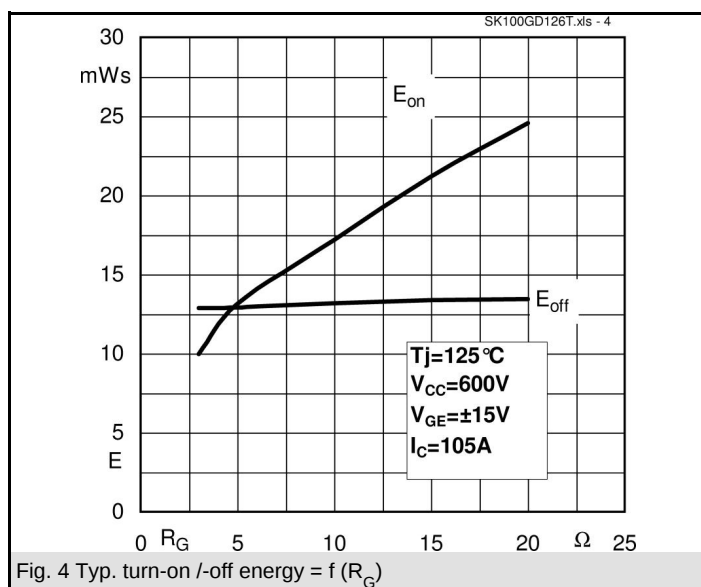
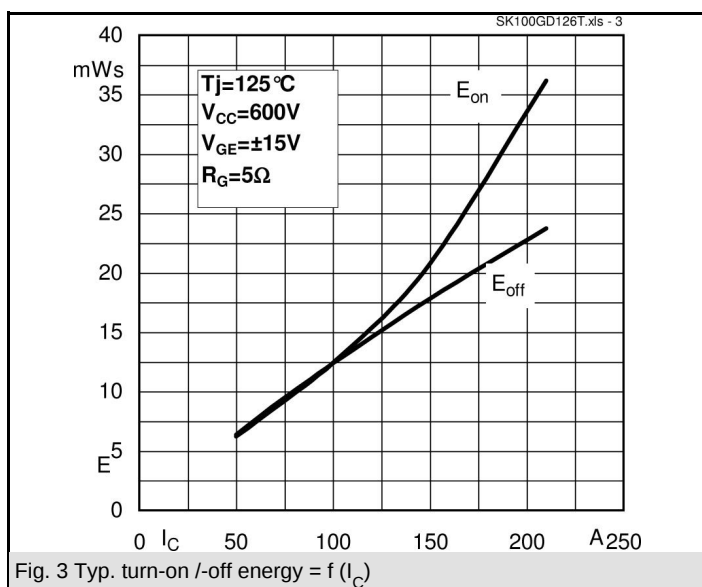
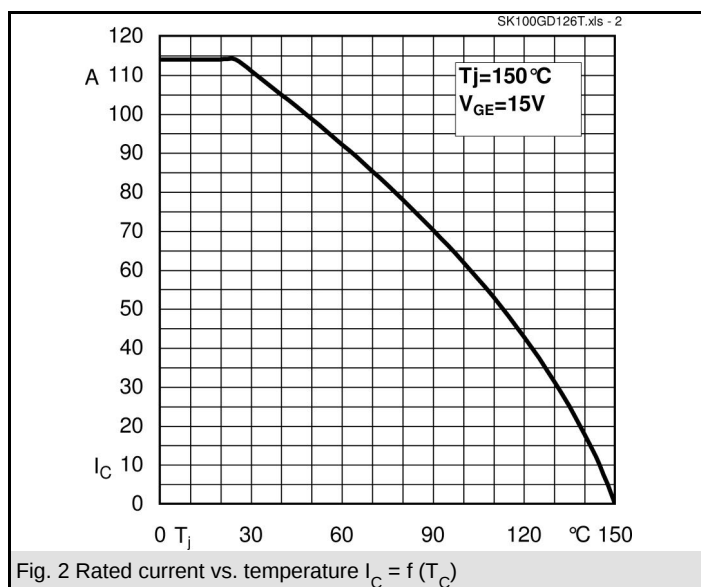
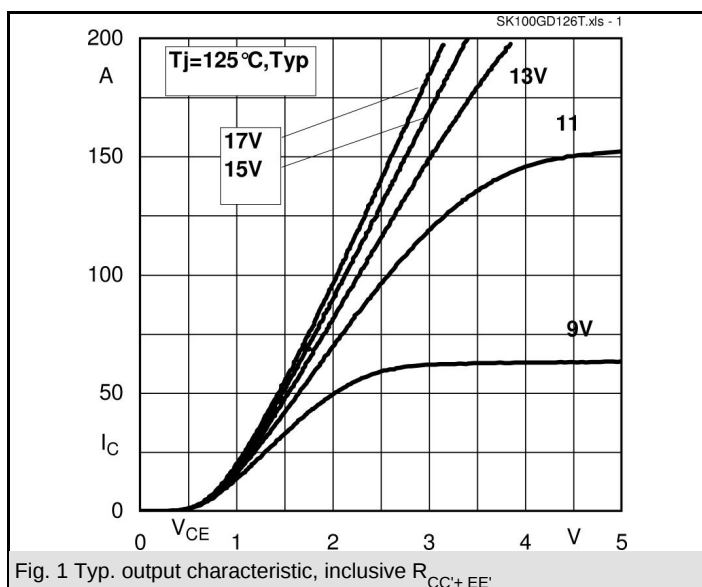
- Inverter up to 50 kVA
- Typ. motor power 22 kW

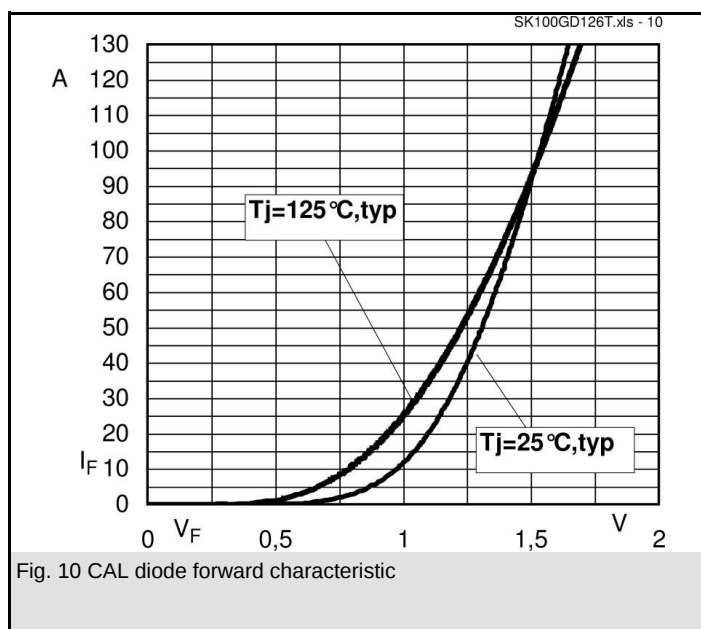
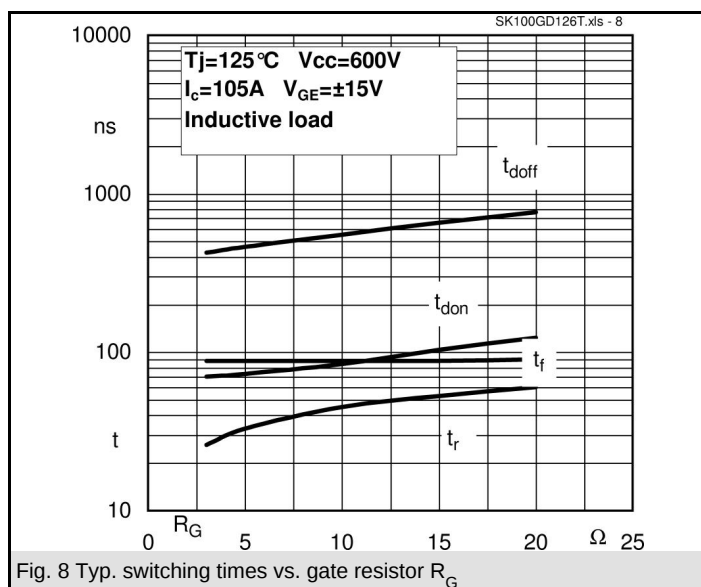
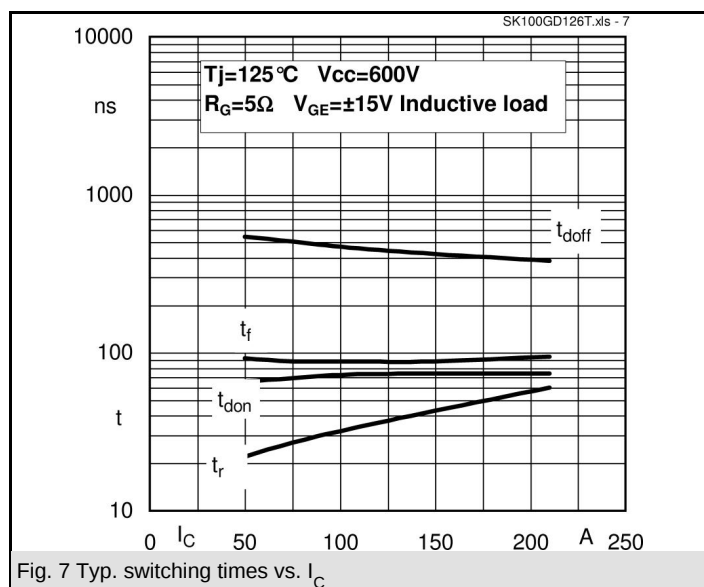


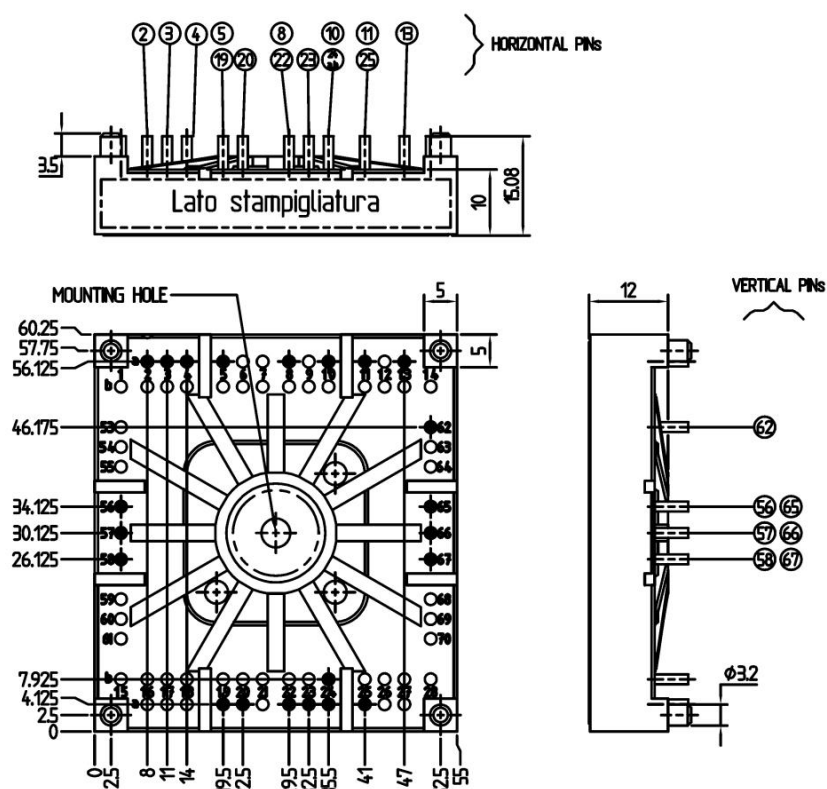
Characteristics						
Symbol	Conditions		min.	typ.	max.	Units
Inverse Diode						
V _F = V _{EC}	I _{Fnom} = 100 A; V _{GE} = 0 V	T _j = 25 °C _{chiplev.}		1		V
		T _j = 125 °C _{chiplev.}		1,5		V
V _{F0}		T _j = 25 °C		1,18		V
		T _j = 125 °C		1		V
r _F		T _j = 25 °C		3,2		mΩ
		T _j = 125 °C		5		mΩ
I _{RRM}	I _{Fnom} = 100 A di/dt = 2250 A/μs V _{CC} = 600V	T _j = 125 °C		100		A
Q _{rr}				20		μC
E _{rr}				7,3		mJ
R _{th(j-s)D}	per diode			0,55		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.

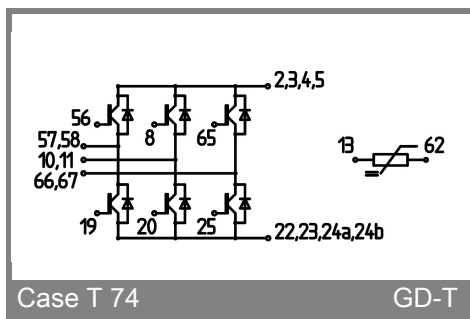
This technical information specifies semiconductor devices but promises no characteristics. No warranty or guarantee expressed or implied is made regarding delivery, performance or suitability.







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