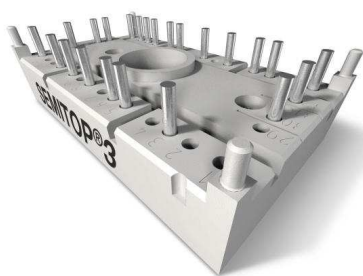


SK35GD12T4ET



SEMITOP® 3

IGBT Module

SK35GD12T4ET

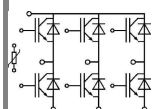
Features

- One screw mounting module
- Trench4 IGBT technology
- CAL4 technology FWD
- Integrated NTC temperature sensor

Typical Applications*

Remarks

- $V_{CE,sat}$, V_F = chip level value

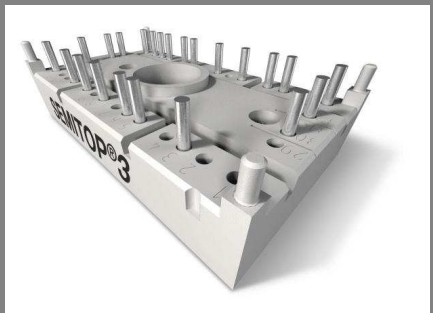


GD-ET

Absolute Maximum Ratings		T _s = 25 °C, unless otherwise specified		
Symbol	Conditions		Values	Units
IGBT				
V _{CES}	T _j = 25 °C		1200	V
I _C	T _j = 175 °C	T _s = 25 °C	44	A
		T _s = 70 °C	35	A
I _{CRM}	I _{CRM} = 3 x I _{Cnom}		105	A
V _{GES}			± 20	V
t _{psc}	V _{CC} = 800 V; V _{GE} ≤ 15 V; T _j = 150 °C V _{CES} < 1200 V		10	µs
Inverse Diode				
I _F	T _j = 175 °C	T _s = 25 °C	40	A
		T _s = 70 °C	31	A
I _{FRM}	I _{FRM} = 3 x I _{Fnom}		105	A
I _{FSM}	t _p = 10 ms; half sine wave T _j = 150 °C		225	A
Module				
I _{t(RMS)}				A
T _{vj}			-40 ... +175	°C
T _{stg}			-40 ... +125	°C
V _{isol}	AC, 1 min.		2500	V

Characteristics		$T_s = 25\text{ °C}$, unless otherwise specified			
Symbol	Conditions	min.	typ.	max.	Units
IGBT					
$V_{GE(th)}$	$V_{GE} = V_{CE}$, $I_C = 1,2\text{ mA}$	5	5,8	6,5	V
I_{CES}	$V_{GE} = 0\text{ V}$, $V_{CE} = V_{CES}$			1,0	mA
					mA
I_{GES}	$V_{CE} = 0\text{ V}$, $V_{GE} = 20\text{ V}$			120	nA
					nA
V_{CE0}				1,1	V
					1,2
r_{CE}	$V_{GE} = 15\text{ V}$			21,4	$\text{m}\Omega$
					35,7
$V_{CE(sat)}$	$I_{Cnom} = 35\text{ A}$, $V_{GE} = 15\text{ V}$			1,85	V
					2,05
C_{ies}	$V_{CE} = 25$, $V_{GE} = 0\text{ V}$			1,95	nF
					0,155
C_{oes}				0,115	nF
					0,115
Q_G	$V_{GE} = -7\text{ V} \dots +15\text{ V}$		190		nC
$t_{d(on)}$	$R_{Gon} = 22\text{ }\Omega$		28		ns
					25
t_r			3,27		mJ
					303
$t_{d(off)}$	$R_{Goff} = 22\text{ }\Omega$		70		ns
					3,3
t_f	$di/dt = 2900\text{ A}/\mu s$				mJ
					3,3
$R_{th(j-s)}$	per IGBT		1,21		K/W

SK35GD12T4ET



SEMITOP® 3

IGBT Module

SK35GD12T4ET

Features

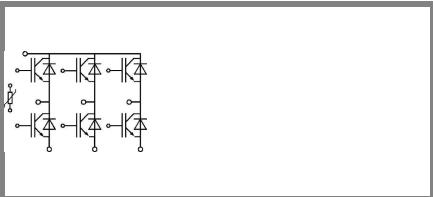
- One screw mounting module
- Trench4 IGBT technology
- CAL4 technology FWD
- Integrated NTC temperature sensor

Typical Applications*

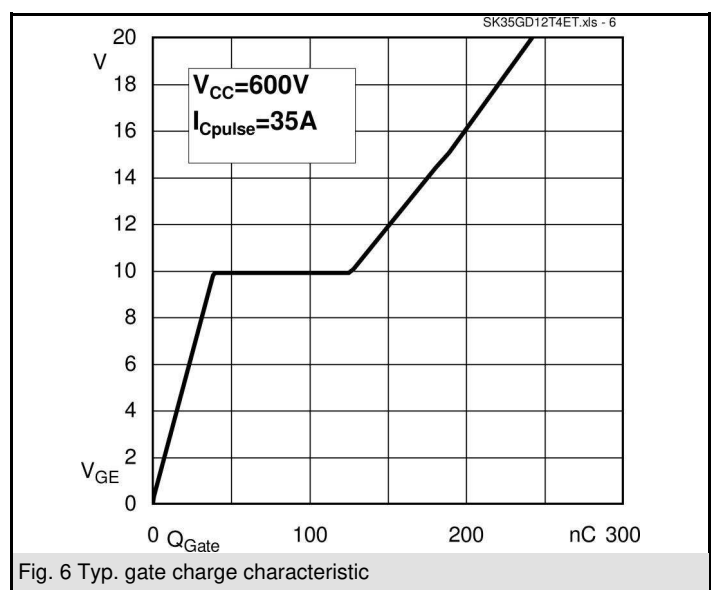
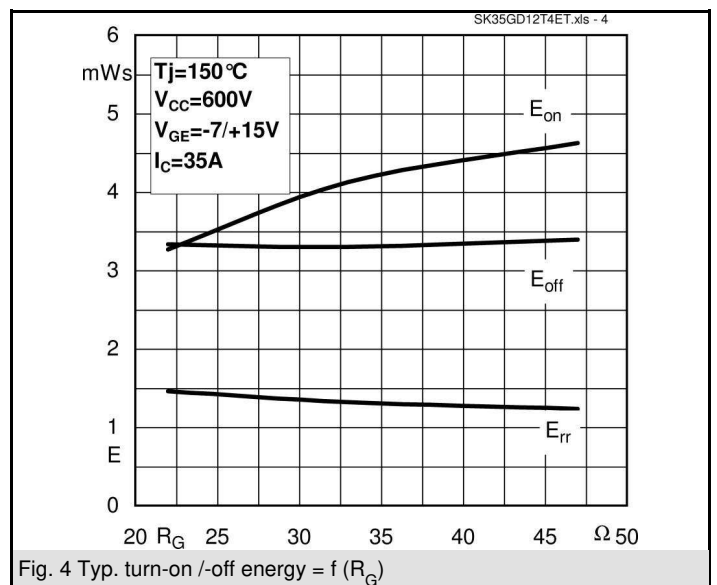
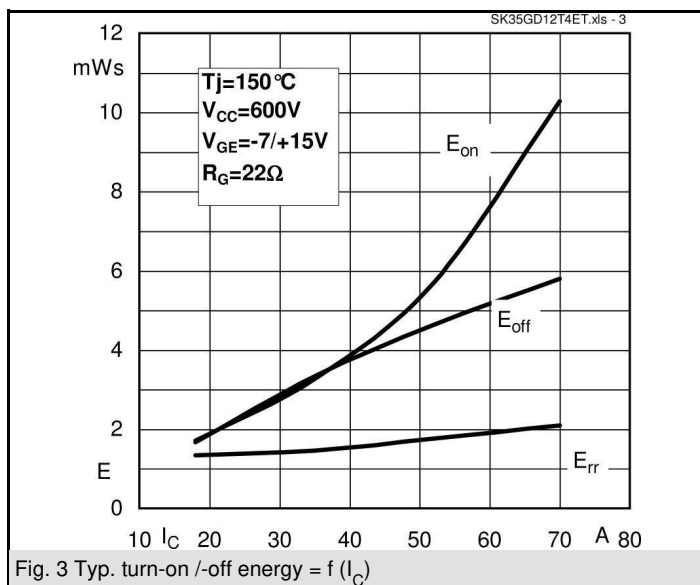
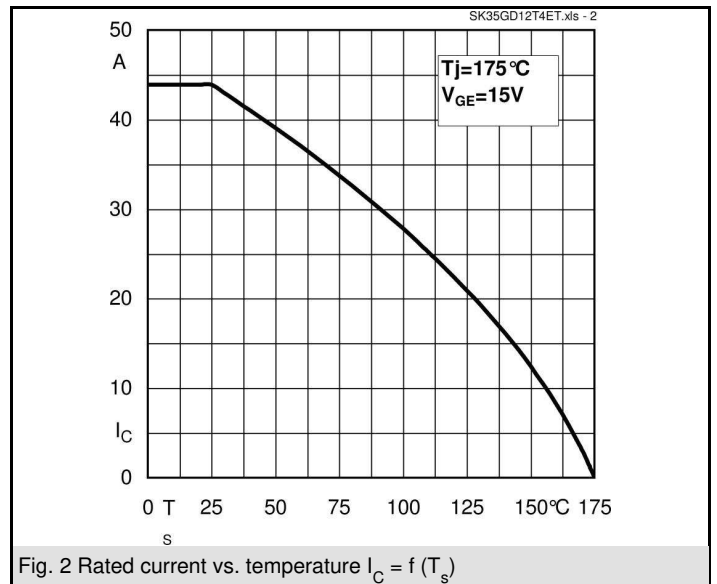
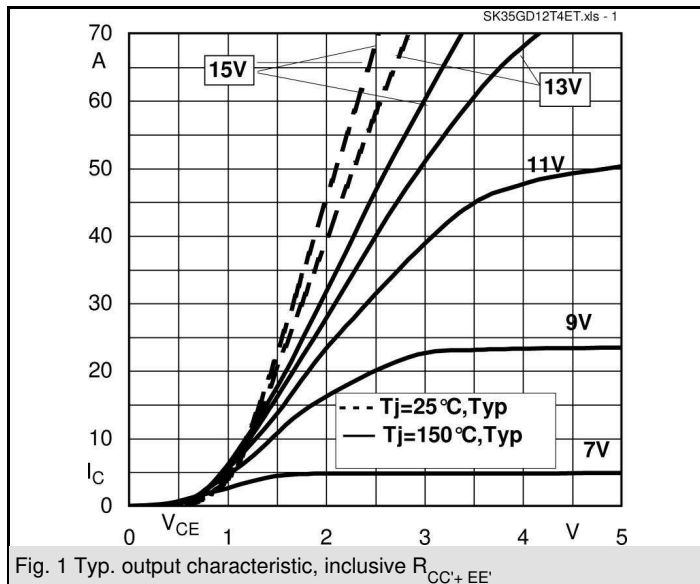
Remarks

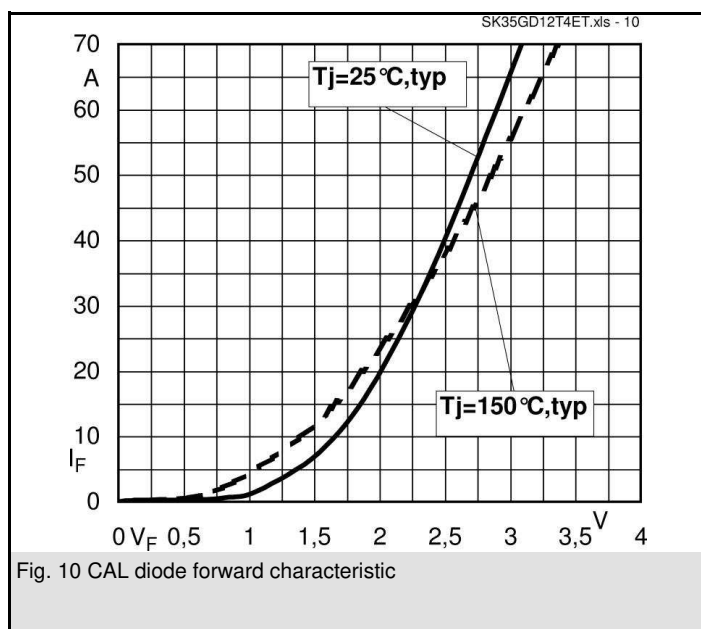
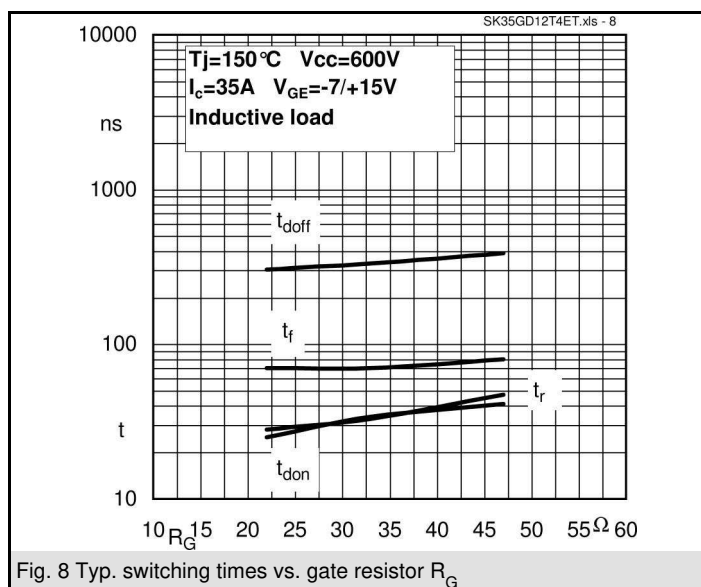
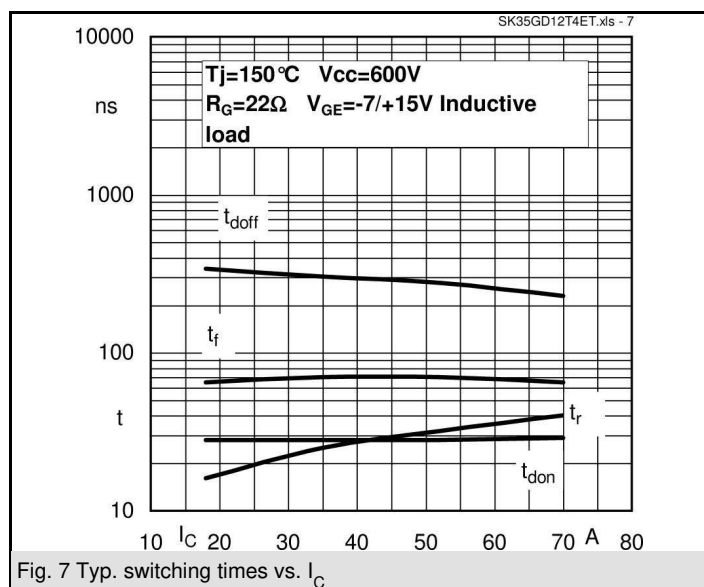
- $V_{CE,sat}$, V_F = chip level value

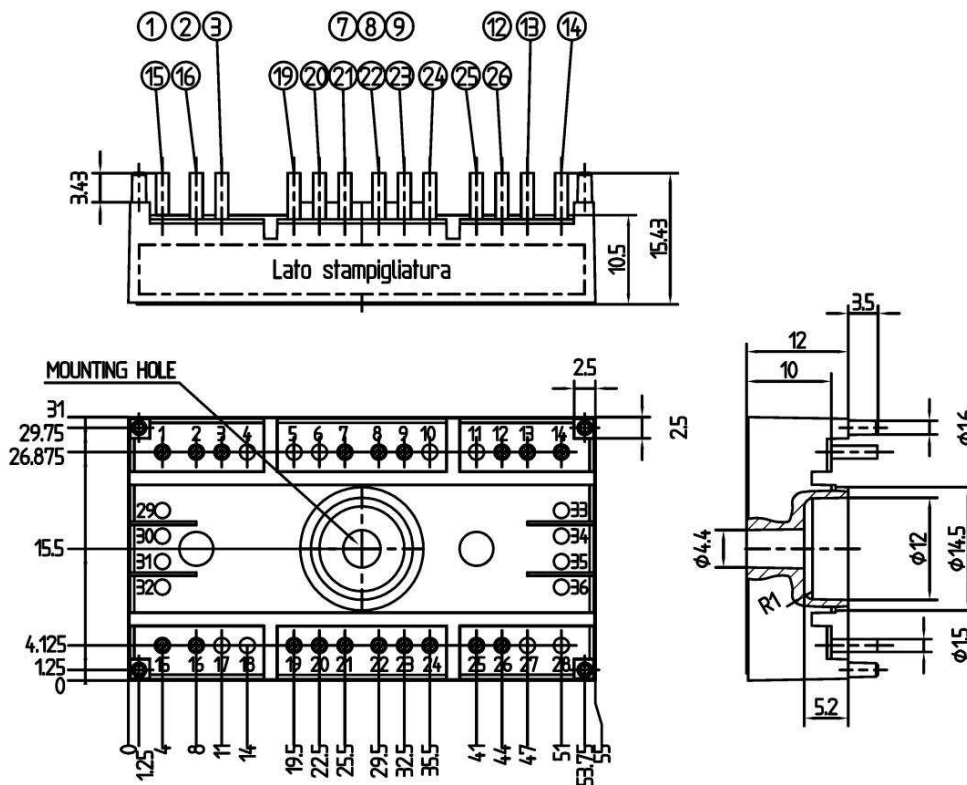
Characteristics						
Symbol	Conditions		min.	typ.	max.	Units
Inverse Diode						
V _F = V _{EC}	I _{Fnom} = 35 A; V _{GE} = 0 V	T _j = 25 °C _{chipleve.}		2,3	2,62	V
		T _j = 150 °C _{chipleve.}		2,29	2,62	V
V _{F0}		T _j = 25 °C		1,3	1,5	V
		T _j = 150 °C		0,9	1,1	V
r _F		T _j = 25 °C		27	32	mΩ
		T _j = 150 °C		39,7	43,4	mΩ
I _{RRM}	I _F = 35 A	T _j = 150 °C		30		A
Q _{rr}	di/dt = 2900 A/μs			2		μC
E _{rr}	V _{CC} = 600V			1,46		mJ
R _{th(j-s)D}	per diode			1,55		K/W
M _s	to heat sink		2,25		2,5	Nm
w				30		g
Temperature sensor						
R ₁₀₀	T _s =100°C (R ₂₅ =5kΩ)			493±5%		Ω



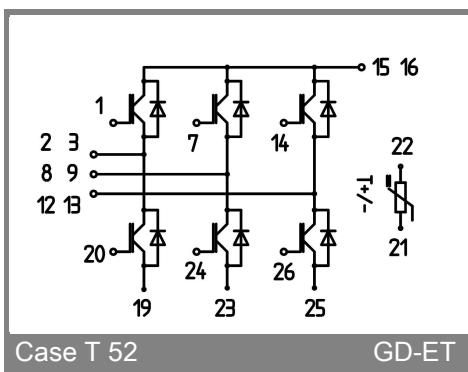
GD-ET







Case T52 (Suggested hole diameter for solder pins and plastic mounting pins: 2mm)



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

*IMPORTANT INFORMATION AND WARNINGS

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