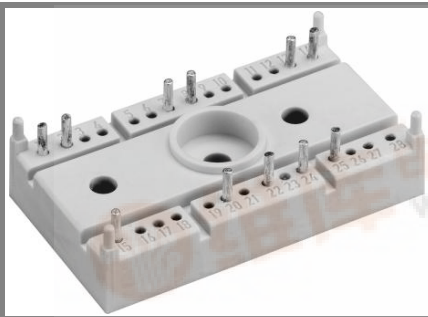


SK 30 GARL 067 E



SEMITOP® 3

IGBT Module

SK 30 GARL 067 E

Target Data

Features

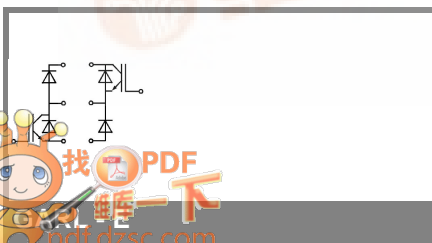
- Compact design
- One screw mounting
- Heat transfer and isolation through direct copper bonded aluminium oxide ceramic (DCB)
- Hyperfast NPT IGBT
- N-channel homogeneous silicon structure (NPT-Non punch-through IGBT)
- Positive Vcesat temperature coefficient (Easy paralleling)
- Low tail current with low temperature dependence
- Low threshold voltage

Typical Applications

- Switching (not for linear use)
- High Frequencies Applications
- Welding Generator
- Switched mode power supplies
- UPS

Absolute Maximum Ratings		T _s = 25 °C, unless otherwise specified		
Symbol	Conditions	Values		Units
IGBT				
V _{CES}		600		V
V _{GES}		± 20		V
I _C	T _s = 25 (80) °C;	45 (30)		A
I _{CM}	t _p < 1 ms; T _s = 25 (80) °C;	90 (60)		A
T _j		- 40 ... + 150		°C
Freewheeling Diode				
I _F	T _s = 25 (80) °C;	45 (30)		A
I _{FM} = - I _{CM}	t _p < 1 ms; T _s = 25 (80) °C;	90 (60)		A
T _j		- 40 ... + 150		°C
T _{stg}		- 40 ... + 125		°C
T _{sol}	Terminals, 10 s	260		°C
V _{isol}	AC 50 Hz, r.m.s. 1 min. / 1 s	2500 / 3000		V

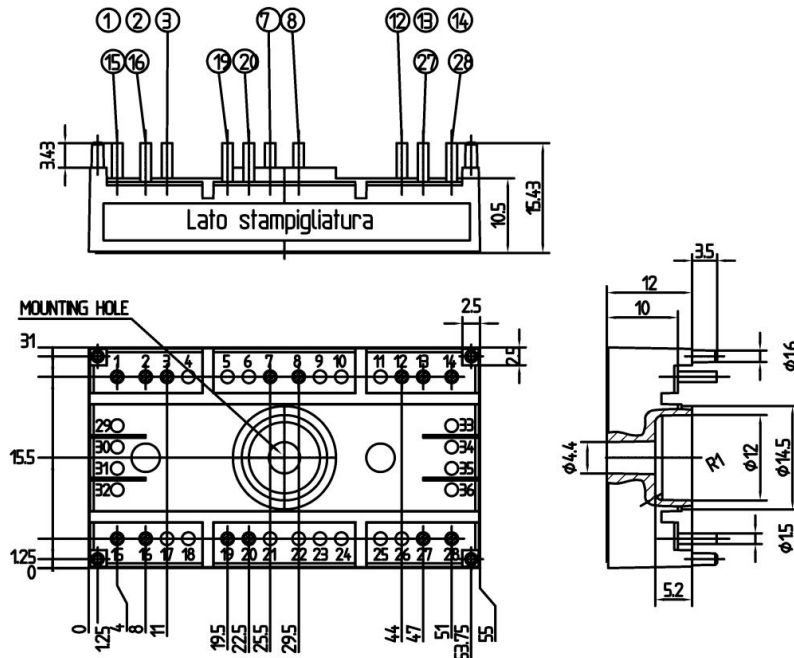
Characteristics		T _s = 25 °C, unless otherwise specified			
Symbol	Conditions	min.	typ.	max.	Units
IGBT					
V _{CE(sat)}	I _C = 60 A, T _j = 25 (125) °C		2,8 (3,5)		V
V _{GE(th)}	V _{CE} = V _{GE} ; I _C = 0,0014 A	3	4	5	V
C _{ies}	V _{CE} = 25 V; V _{GE} = 0 V; 1 MHz		3		nF
R _{th(j-s)}	per IGBT per module			0,85	K/W K/W
under following conditions:					
t _{d(on)}	V _{CC} = 400 V, V _{GE} = ± 15 V		32		ns
t _r	I _C = 60 A, T _j = 125 °C		20		ns
t _{d(off)}	R _{Gon} = R _{Goff} = 11 Ω		340		ns
t _f			30		ns
E _{on} + E _{off}	Inductive load		3,4		mJ
Freewheeling Diode					
V _F = V _{EC}	I _F = 60 A; T _j = 25 (150) °C		(1,25)	2	V
V _(TO)	T _j = (150) °C		(1)		V
r _T	T _j = (150) °C		(9)		mΩ
R _{th(j-s)}				1,6	K/W
under following conditions:					
I _{RRM}	I _F = 30 A; V _R = 400 V		18		A
Q _{rr}	di _F /dt = -100 A/μs		1,5		μC
E _{off}	V _{GE} = 0 V; T _j = 125 °C				mJ
Mechanical data					
M1	mounting torque	2,3		2,5	Nm
w			30		g
Case	SEMITOP® 3		T 69		



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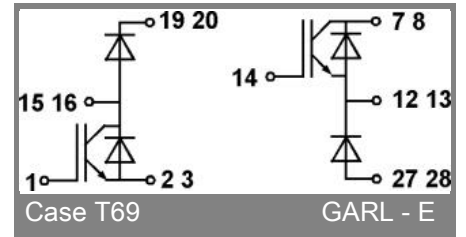
UL Recognized
File no. E 63 532

Dimensions in mm



SUGGESTED HOLEDIAMETER FOR THE SOLDER PINS AND THE MOUNTING PINS IN THE PCB: 2 mm

Suggsted hole diameter for the solder pins and the mounting pins in the PCB: 2mm



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.