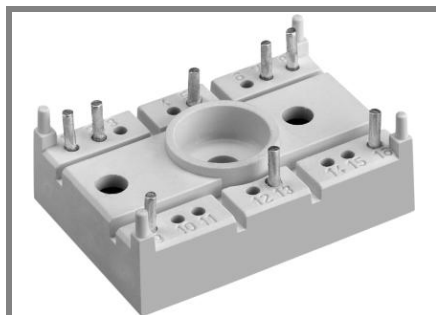




SEMITOP® 2

IGBT Module

SK 30 GB 067

SK 30 GAR 067

SK 30 GAL 067

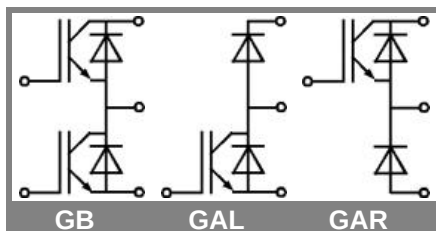
Target Data

Features

- Compact design
- One screw mounting
- Heat transfer and isolation through direct copper bonded aluminium oxide ceramic (DCB)
- Hyper fast 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

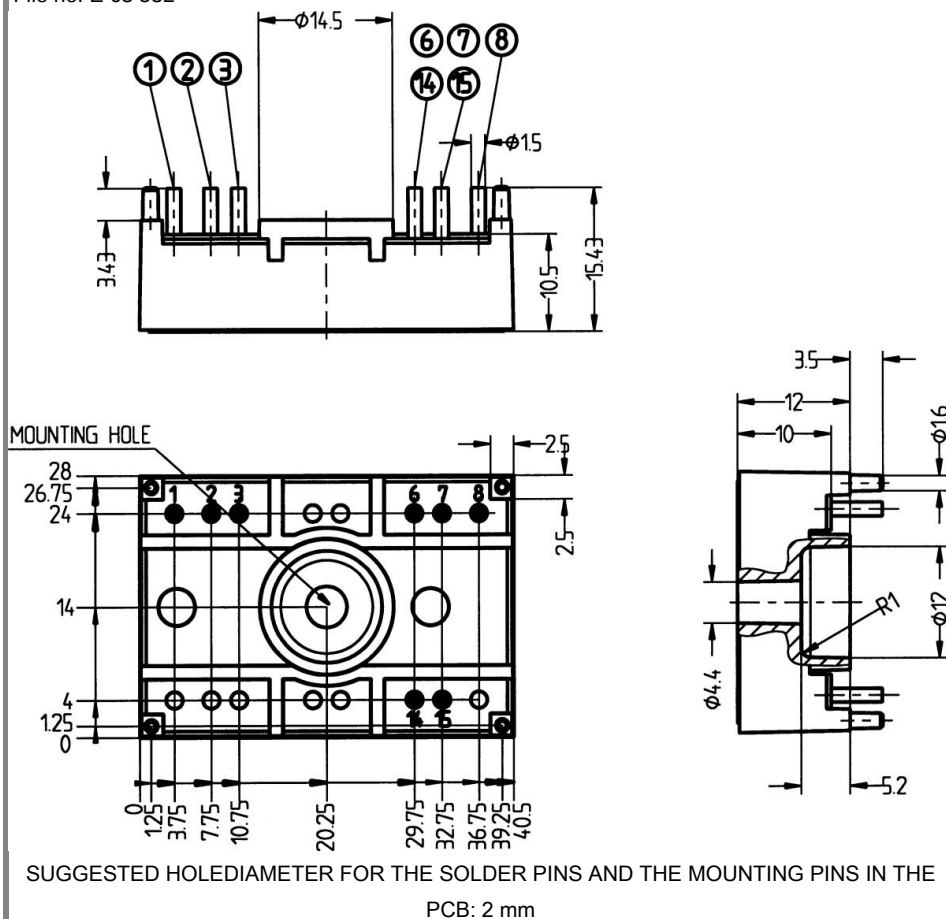


Absolute Maximum Ratings		$T_s = 25^\circ\text{C}$, unless otherwise specified	
Symbol	Conditions	Values	Units
IGBT			
V_{CES}		600	V
V_{GES}		± 20	V
I_C	$T_s = 25 (80)^\circ\text{C}$;	45 (30)	A
I_{CM}	$t_p < 1 \text{ ms}$; $T_s = 25 (80)^\circ\text{C}$;	90 (60)	A
T_j		- 40 ... + 150	$^\circ\text{C}$
Inverse/Freewheeling Diode			
I_F	$T_s = 25 (80)^\circ\text{C}$;	45 (30)	A
$I_{FM} = -I_{CM}$	$t_p < 1 \text{ ms}$; $T_s = 25 (80)^\circ\text{C}$;	90 (60)	A
T_j		- 40 ... + 150	$^\circ\text{C}$
T_{stg}		- 40 ... + 125	$^\circ\text{C}$
T_{sol}	Terminals, 10 s	260	$^\circ\text{C}$
V_{isol}	AC 50 Hz, r.m.s. 1 min. / 1 s	2500 / 3000	V

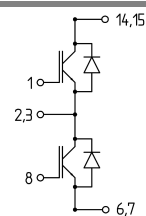
Characteristics		$T_s = 25^\circ\text{C}$, unless otherwise specified			
Symbol	Conditions	min.	typ.	max.	Units
IGBT					
$V_{CE(sat)}$	$I_C = 60 \text{ A}$, $T_j = 25 (125)^\circ\text{C}$		2,8 (3,5)		V
$V_{GE(th)}$	$V_{CE} = V_{GE}$; $I_C = 0,0014 \text{ A}$	3	4	5	V
C_{res}	$V_{CE} = 25 \text{ V}$; $V_{GE} = 0 \text{ V}$; 1 MHz		3		nF
$R_{th(j-s)}$	per IGBT			0,85	K/W
	per module				K/W
$t_{d(on)}$	under following conditions: $V_{CC} = 400 \text{ V}$, $V_{GE} = \pm 15 \text{ V}$		32		ns
t_r	$I_C = 60 \text{ A}$, $T_j = 125^\circ\text{C}$		20		ns
$t_{d(off)}$	$R_{Gon} = R_{Goff} = 11 \Omega$		340		ns
t_f			30		ns
$E_{on} + E_{off}$	Inductive load		3,4		mJ
Inverse/Freewheeling Diode					
$V_F = V_{EC}$	$I_F = 60 \text{ A}$; $T_j = 25 (150)^\circ\text{C}$		(1,25)	2	V
$V_{(TO)}$	$T_j = (150)^\circ\text{C}$		(1)		V
r_T	$T_j = (150)^\circ\text{C}$		(9)		m Ω
$R_{th(j-s)}$				1,6	K/W
I_{RRM}	under following conditions: $I_F = 30 \text{ A}$; $V_R = 400 \text{ V}$		18		A
Q_{rr}	$di_F/dt = -100 \text{ A}/\mu\text{s}$		1,5		μC
E_{off}	$V_{GE} = 0 \text{ V}$; $T_j = 125^\circ\text{C}$				mJ
Mechanical data					
M1	mounting torque			2	Nm
w			19		g
Case	SEMITOP® 2		T 32		

UL Recognized
File no. E 63 532

Dimensions in mm

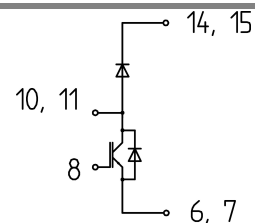


Suggsted hole diameter for the solder pins and the mounting pins in the PCB:
2mm

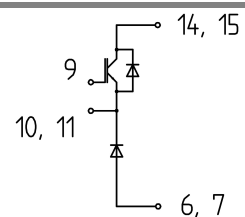


Case T32

GB



GAL



GAR

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.