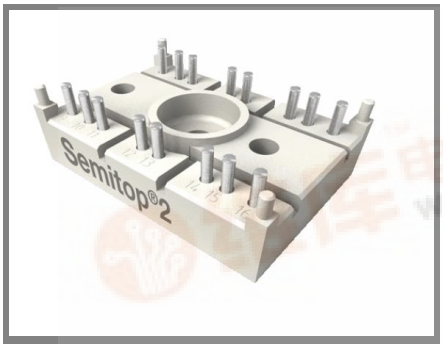
SK30GB067



SEMITOP® 2

IGBT Module

SK30GB067
SK30GAL067
SK30GAR067

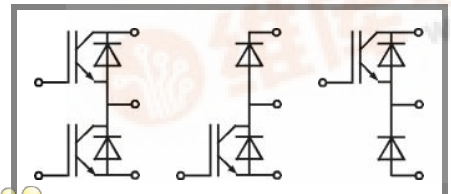
Target Data

Features

- Compact design
- One screw mounting
- Heat transfer and isolation through direct copper bonded aluminium oxide ceramic (DCB)
- Hyperfast NPT technology IGBT
- N-channel homogeneous silicon structure (NPT Non-Punch-Through IGBT)
- Positive $V_{ce,sat}$ temperature coefficient (Easy paralleling)
- Low tail current with low temperature dependence
- Low treshold voltage

Typical Applications

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



GB GAL GAR

Absolute Maximum Ratings T_s = 25 °C, unless otherwise specified

Symbol	Conditions		Values	Units
IGBT				
V_{CES}	T_j = 25 °C		600	V
I_C	T_j = 125 °C	T_s = 25 °C	45	A
		T_s = 80 °C	30	A
I_{CRM}	I_{CRM}= 2 x I_{Cnom}		120	A
V_{GES}			± 20	V
t_{psc}	V_{CC} = 300 V; $V_{GE} \leq$ 20 V; V_{CES} < 600 V	T_j = 125 °C	10	µs
Inverse Diode				
I_F	T_j = 150 °C	T_s = 25 °C	45	A
		T_s = 80 °C	30	A
I_{FRM}	I_{FRM}= 2 x I_{Fnom}			A
I_{FSM}	t_p = 10 ms; sinusoidal	T_j = °C	180	A
Module				
$I_{t(RMS)}$				A
T_{vj}			-40 ... +150	°C
T_{stg}			-40 ... +125	°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 = 0,6 mA		3	4	5	V
I_{CES}	V_{GE} = 0 V, V_{CE} = V_{CES}	T_j = 25 °C			0,004	mA
I_{GES}	V_{CE} = 0 V, V_{GE} = 20 V	T_j = 25 °C			240	nA
V_{CE0}		T_j = 150 °C			2	V
r_{CE}	V_{GE} = 15 V	T_j = 150°C		30		mΩ
$V_{CE(sat)}$	I_{Cnom} = 60 A, V_{GE} = 15 V	T_j = 25°C$_{chiplev.}$		2,8	3,15	V
		T_j = 125°C$_{chiplev.}$		3,5	4	V
C_{ies}	V_{CE} = 25, V_{GE} = 0 V	f = 1 MHz		3		nF
C_{oes}				0,3		nF
C_{res}				0,18		nF
$t_{d(on)}$	R_{Gon} = 11 Ω	V_{CC} = 400V		32		ns
t_r		I_{Cnom}= 60A		20		ns
E_{on}		T_j = 125 °C		1,8		mJ
$t_{d(off)}$	R_{Goff} = 11 Ω	V_{GE}=±15V		340		ns
t_f				30		ns
E_{off}				1,4		mJ
$R_{th(j-s)}$	per IGBT				0,85	K/W

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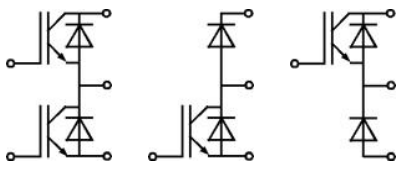


GB GAL GAR

Characteristics

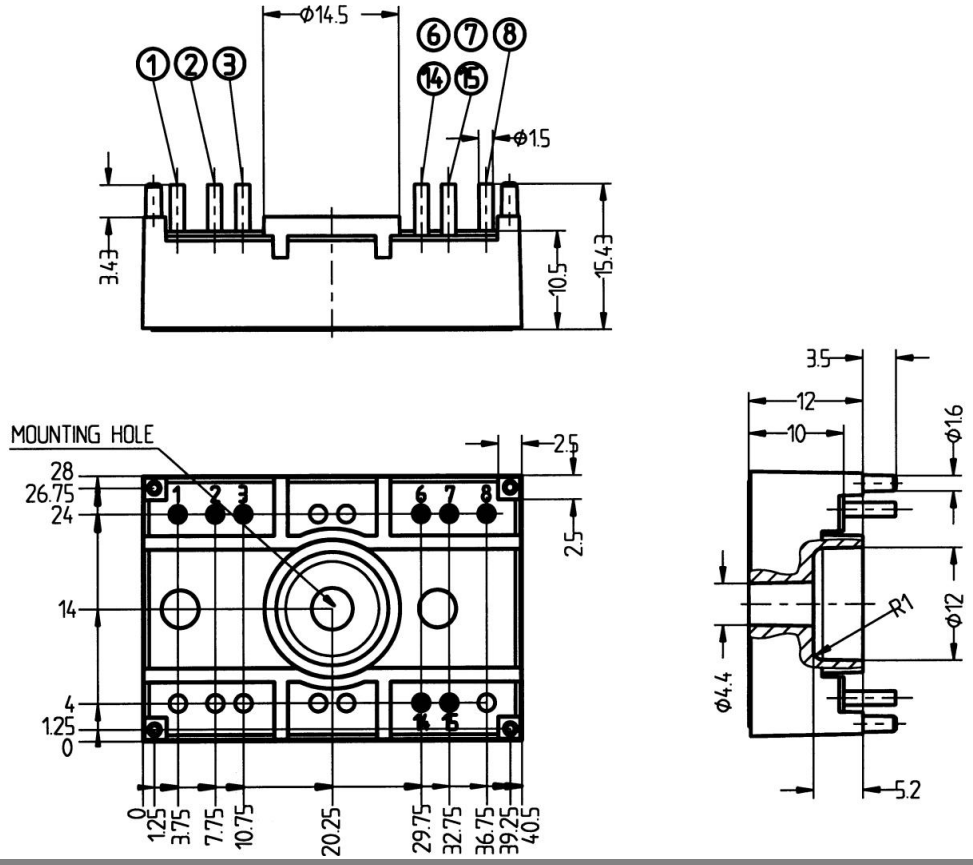
Symbol	Conditions		min.	typ.	max.	Units
Inverse Diode						
$V_F = V_{EC}$	I_{Fnom} = 60 A; V_{GE} = 0 V	T_j = 25 °C$_{chiplev.}$			2	V
		T_j = 150 °C$_{chiplev.}$		1,25		V
V_{F0}		T_j = 25 °C				V
		T_j = 150 °C		1		V
r_F		T_j = 25 °C				mΩ
		T_j = 150 °C		9		mΩ
I_{RRM}	I_{Fnom} = 30 A	T_j = 125 °C		18		A
Q_{rr}	di/dt = -100 A/µs			1,5		µC
E_{rr}	V_{CC}= 400V					mJ
$R_{th(j-s)D}$	per diode				1,6	K/W
M_s	to heat sink				2	Nm
w				19		g

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

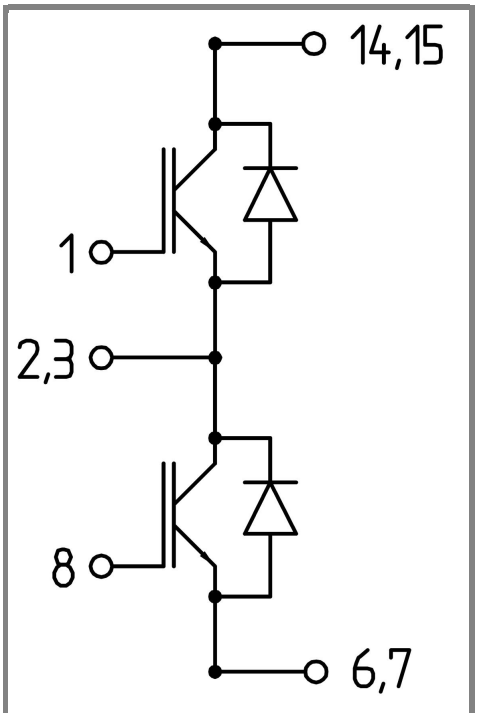
This technical information specifies semiconductor devices but promises no characteristics. No warranty or guarantee expressed or implied is made regarding delivery, performance or suitability.

SK30GB067

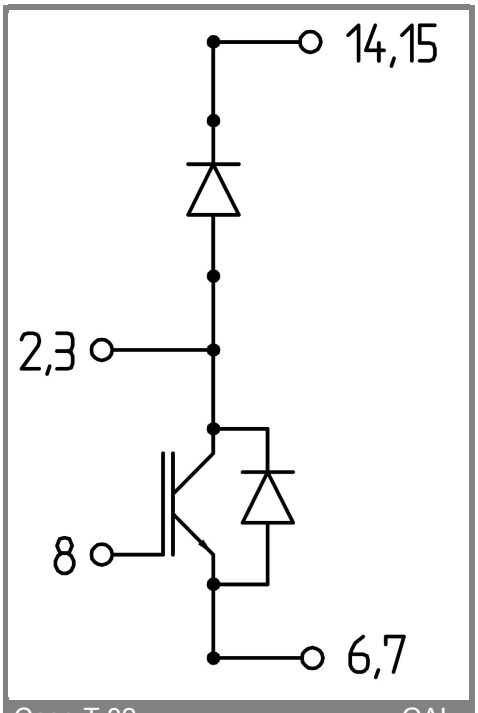
UL recognized file no. E 63 532



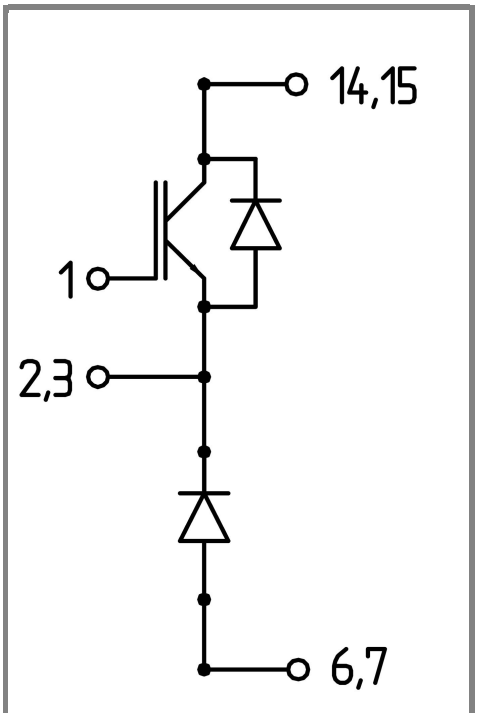
Case T32 (Suggested hole diameter, in the PCB, for solder pins and plastic mounting pins: 2mm)



Case T 32 GB



Case T 32 GAL



Case T 32 GAR