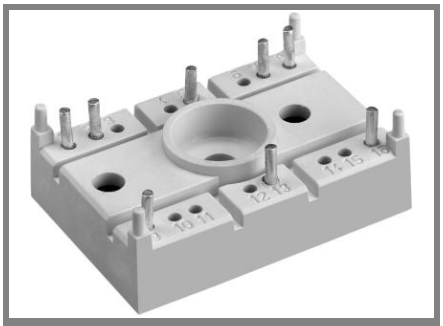
SK 20 GD 063



SEMITOP® 2

IGBT Module

SK 20 GD 063

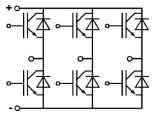
Target Data

Features

- Compact design
- One screw mounting
- Heat transfer and isolation through direct copper bonded aluminium oxide ceramic (DCB)
- N channel, homogeneous Silicon structure (NPT-Non punchtrough IGBT)
- High short circuit capability
- Low tail current with low temperature dependence

Typical Applications

- Switching (not for linear use)
- Inverter
- Switched mode power supplies
- UPS



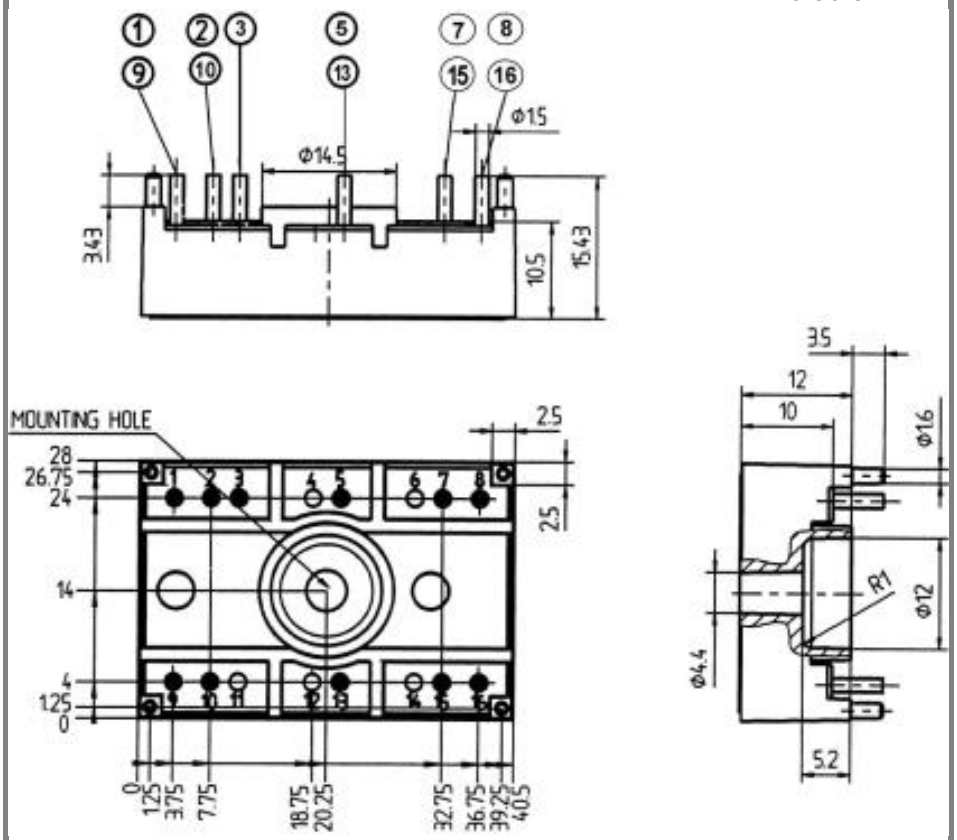
GD

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;	24 (17)	A
I_{CM}	t_p < 1 ms; T_s = 25 (80) °C;	48 (34)	A
T_j		- 40 ... + 150	°C
Inverse / Freewheeling CAL diode			
I_F	T_s = 25 (80) °C;	22 (15)	A
I_{FM} = - I_{CM}	t_p < 1 ms; T_s = 25 (80) °C;	44 (30)	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 = 20 A, T_j = 25 (125) °C		2,1 (2,2)		V
$V_{GE(th)}$	V_{CE} = V_{GE}; I_C = 0,0005 A	4,5	5,5	6,5	V
C_{ies}	V_{CE} = 25 V; V_{GE} = 0 V; 1 MHz		1,1		nF
$R_{th(j-s)}$	per IGBT			1,7	K/W
	per module				K/W
	under following conditions:				
$t_{d(on)}$	V_{CC} = 300 V , V_{GE} = ± 15 V		35		ns
t_r	I_C = 15 A, T_j = 125 °C		50		ns
$t_{d(off)}$	R_{Gon} = R_{Goff} = 68 Ω		250		ns
t_f			20		ns
E_{on} + E_{off}	Inductive load		1,11		mJ
Inverse / Freewheeling CAL diode					
V_F = V_{EC}	I_F = 10 A; T_j = 25 (125) °C		1,45 (1,4)	1,7 (1,7)	V
$V_{(TO)}$	T_j = (125) °C		(0,85)	(0,9)	V
r_T	T_j = (125) °C		(55)	(80)	mΩ
$R_{th(j-s)}$				2,3	K/W
	under following conditions:				
I_{RRM}	I_F = 10 A; V_R = -300 V		6,5		A
Q_{rr}	dI_F/dt = -200 A/µs		1		µC
E_{off}	V_{GE} = 0 V; T_j = 125 °C		0,1		mJ
Mechanical data					
M1	mounting torque			2	Nm
w			21		g
Case	SEMITOP® 2		T 47		

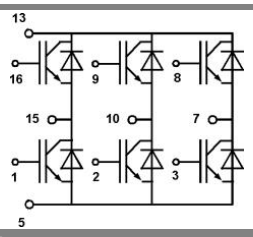
SK 20 GD 063

Dimensions in mm



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

Case T47



Case T 47 GD

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.

