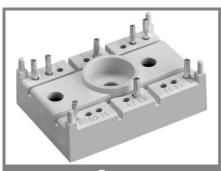
SK 15 GD 126



SEMITOP® 2

IGBT Module

SK 15 GD 126

Preliminary Data

Features

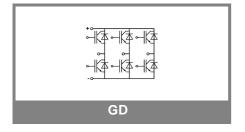
- Fast Trench IGBTs
- Soft freewheeling diodes in CAL High Density technology
- · Compact design
- · One screw mounting
- Heat transfer and isolation through direct copper bonded aluminium oxide ceramic (DCB)

Typical Applications

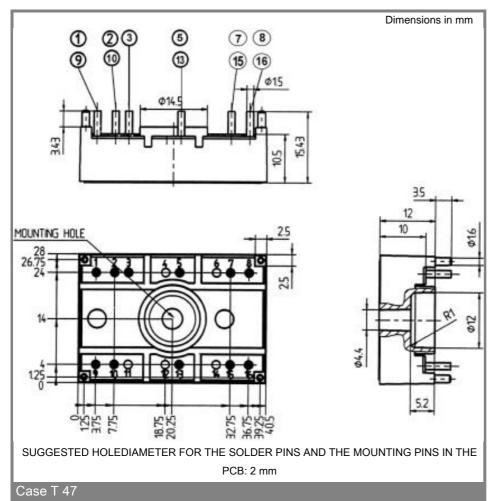
- Switching (not for linear use)
- Inverter
- Switched mode power supplies
- UPS

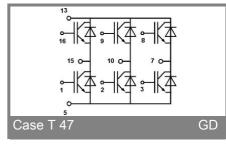
Absolute	Maximum Ratings	T_s = 25 °C, unless otherwise	T _s = 25 °C, unless otherwise specified				
Symbol	Conditions	Values	Units				
IGBT							
V_{CES}		1200	V				
V_{GES}		± 20	V				
I _C	$T_s = 25 (80) ^{\circ}C;$	22 (15)	Α				
I _{CM}	$t_p < 1 \text{ ms}; T_s = 25 (80) ^{\circ}\text{C};$	44 (30)	Α				
T _j		- 40 + 150	°C				
Inverse/Freewheeling CAL diode							
I _F	$T_s = 25 (80) ^{\circ}C;$	25 (17)	Α				
$I_{FM} = -I_{CM}$	$t_p < 1 \text{ ms; } T_s = 25 (80) \text{ °C;}$	50 (34)	Α				
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				

Characte	ristics	T _s = 25 °C, unless otherwise specified						
		min.			Units			
-	Conditions	1111111.	typ.	max.	Ullits			
IGBT		•						
$V_{CE(sat)}$	I _C = 15 A, T _j = 25 (125) °C		1,7 (2)	2,1	V			
V _{GE(th)}	$V_{CE} = V_{GE}$; $I_{C} = 0,0006 A$	5	5,8	6,5	V			
C _{ies}	$V_{CE} = 25 \text{ V}; V_{GE} = 0 \text{ V}; 1 \text{ MHz}$		1,2		nF			
$R_{th(j-s)}$	per IGBT			1,6	K/W			
	per module				K/W			
	under following conditions:							
t _{d(on)}	$V_{CC} = 600 \text{ V}$, $V_{GE} = \pm 15 \text{ V}$		35		ns			
t _r `´	I _C = 15 A, T _i = 125 °C		20		ns			
t _{d(off)}	$R_{Gon} = R_{Goff} = 50 \Omega$		403		ns			
t _f			192		ns			
E _{on} + E _{off}	Inductive load		3,56		mJ			
Inverse/Freewheeling CAL diode								
$V_F = V_{EC}$	I _F = 11 A; T _i = 25 (125) °C		1,6 (1,6)	1,8 (1,8)	V			
V _(TO)	$T_{i} = (125) ^{\circ}C$		1 (0,8)	1,1	V			
r _T	T _j = (125) °C		40 (53)	47	$m\Omega$			
$R_{th(j-s)}$				2,1	K/W			
	under following conditions:							
I _{RRM}	I _F = 15 A; V _R = 600 V		21		Α			
Q_{rr}	$dI_F/dt = 570 A/\mu s$		3,5		μC			
E _{off}	V _{GE} = 0 V; T _j = 125 °C		1,4		mJ			
Mechanical data								
M1	mounting torque			2	Nm			
w			21		g			
Case	SEMITOP® 2		T 47					



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

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