

SEMITOP® 2

Bridge Rectifier

SK 55 B 06 F

Preliminary Data

Features

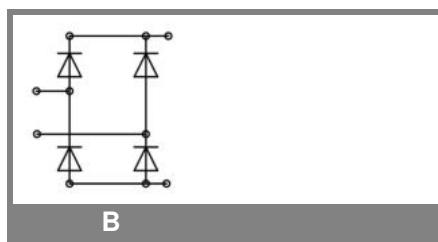
- Compact design
- One screw mounting
- Heat transfer and insulation through direct copper bonded aluminium oxide ceramic (DCB)
- Fast and soft recovery CAL (Controlled Axial Lifetime) diode
- UL recognized, file no. E 63 532

Typical Applications*

- General power switching applications
- UPS
- SMPS

V_{RSM} V	V_{RRM}, V_{DRM} V	$I_D = 54$ A (full conduction) ($T_s = 80$ °C) SK 55 B 06 F
	600	

Symbol	Conditions	Values	Units
I_D	$T_s = 80$ °C	54	A
I_{RRM}	$T_{vj} = 125$ °C (See Fig. 6)	30	A
Q_{rr}	$T_{vj} = 25$ (125) °C (See Fig. 6)	typ. 1 (3)	µC
I_R	$T_{vj} = 25$ (125) °C; $V_R = V_{RRM}$	0,1 (4)	mA
I_{FSM}	$T_{vj} = 150$ °C; 10 ms	440	A
	$T_{vj} =$ °C; ms		A
i^2t	$T_{vj} = 150$ °C; 10 ms	970	A²s
	$T_{vj} =$ °C; ms		A²s
V_F	$T_{vj} = 25$ °C; $I_F = 50$ A	max. 1,7	V
$V_{(TO)}$	$T_{vj} = 125$ °C	max. 0,9	V
r_T	$T_{vj} = 125$ °C	max. 16	mΩ
I_{RD}	$T_{vj} =$ °C; $V_{DD} = V_{DRM}$; $V_{RD} = V_{RRM}$		mA
$R_{th(j-s)}$	per diode per module	1,2 0,3	K/W K/W
T_{solder}	terminals, 10s	260	°C
T_{vj}		-40...+150	°C
T_{stg}		-40...+125	°C
V_{isol}	a. c. 50 Hz; r.m.s.; 1 s / 1 min.	3000 (2500)	V
M_s	mounting torque to heatsink	2	Nm
M_t		19	g
m	approx. weight		
Case	SEMITOP® 2	T 6	



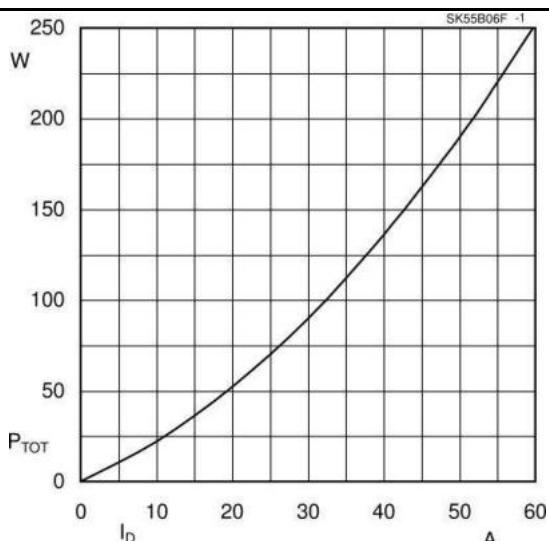


Fig. 1 Power dissipation vs. Output current

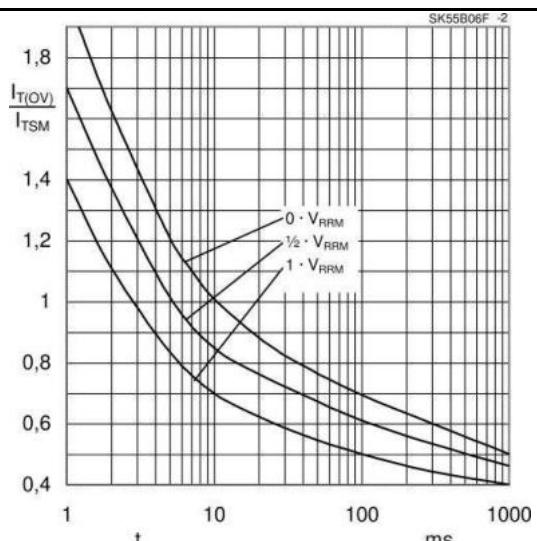


Fig. 2 Surge overload current vs. time

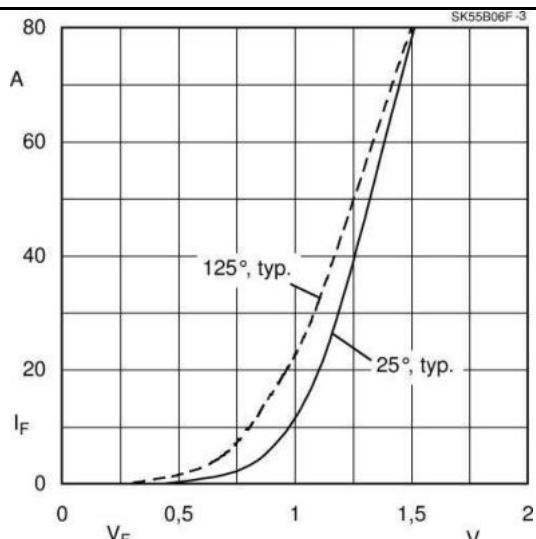


Fig. 3 Forward characteristics of single diode

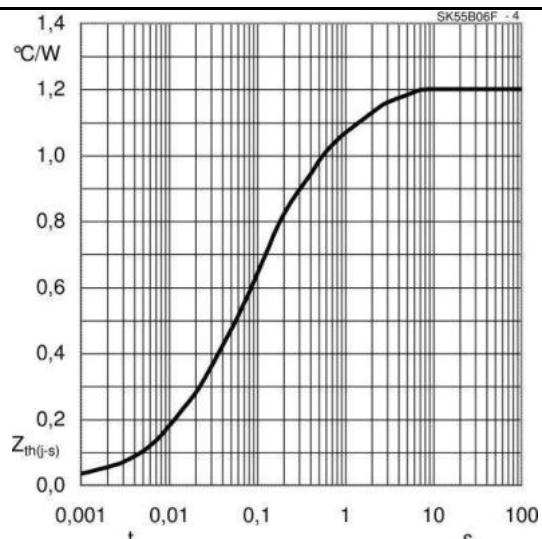


Fig. 4 Thermal transient impedance vs. time

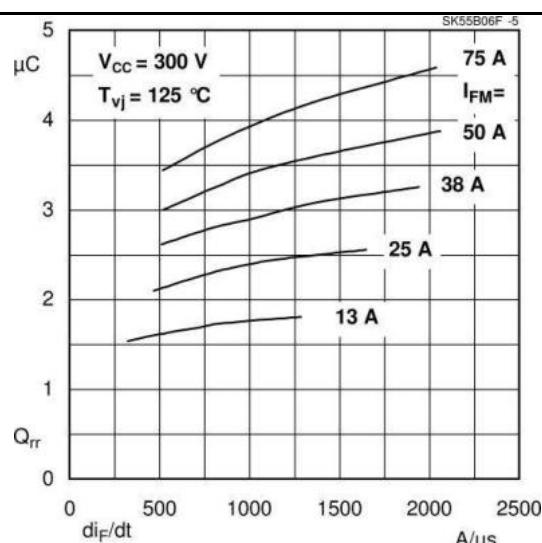


Fig. 5 Typ. reverse recovery charge $Q_{rr} = f(dI_F/dt)$

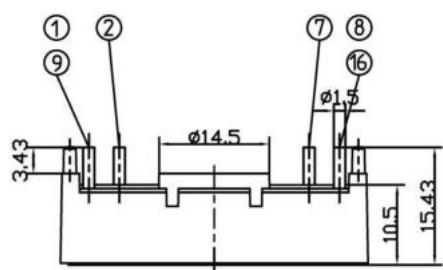
Measurement conditions for switching parameters:

$I_F = 50A$

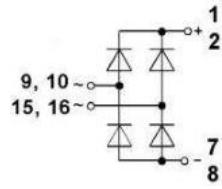
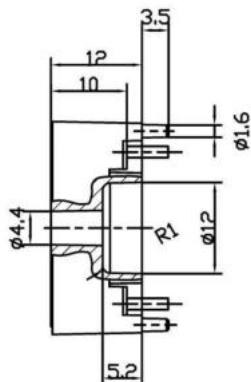
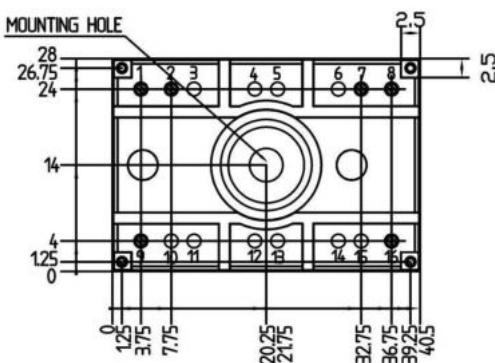
$V_R = 300V$

$-di/dt = 500A/\mu s$

Fig. 6



Dimensions in mm



Case T6

B

Case T6 (Suggested hole diameter, in the PCB, for solder pins and plastic mounting pins = 2mm)

* The specifications of our components may not be considered as an assurance of component characteristics. Components have to be tested for the respective application. Adjustments may be necessary. The use of SEMIKRON products in life support appliances and systems is subject to prior specification and written approval by SEMIKRON. We therefore strongly recommend prior consultation of our personal.