

# SK 80 D 12 F

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SEMITOP® 3

## Bridge Rectifier

### SK 80 D 12 F

Preliminary Data

### Features

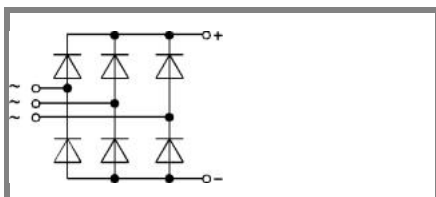
- Compact design
- One screw mounting
- Heat transfer and insulation through direct copper bonded aluminium oxide ceramic (DCB)
- Fast and soft recovery CAL (Controlled Axial Lifetime) diode
- UL recognized, file no. E 63 532

### Typical Applications

- General power switching applications
- UPS
- SMPS

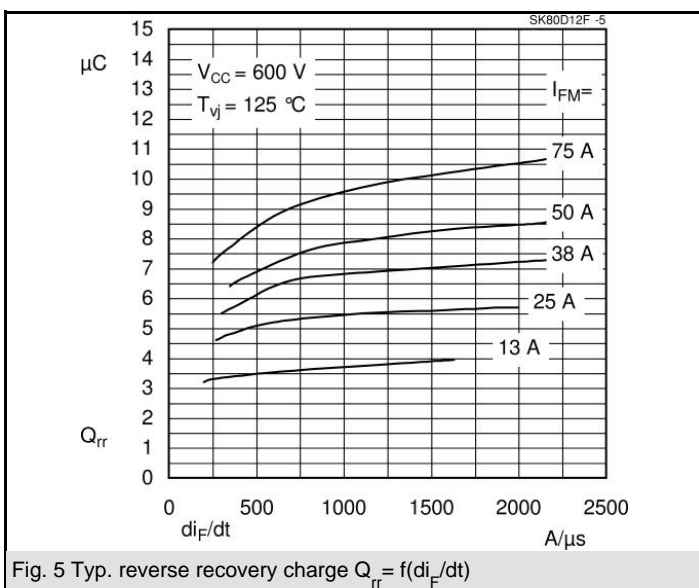
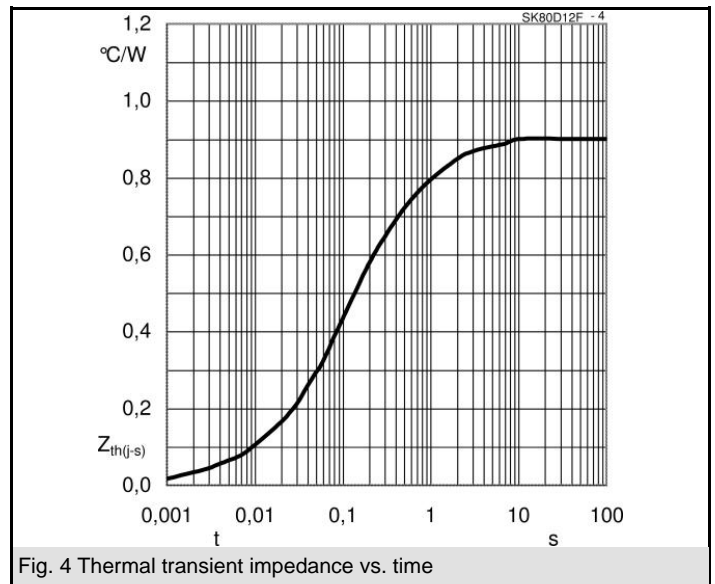
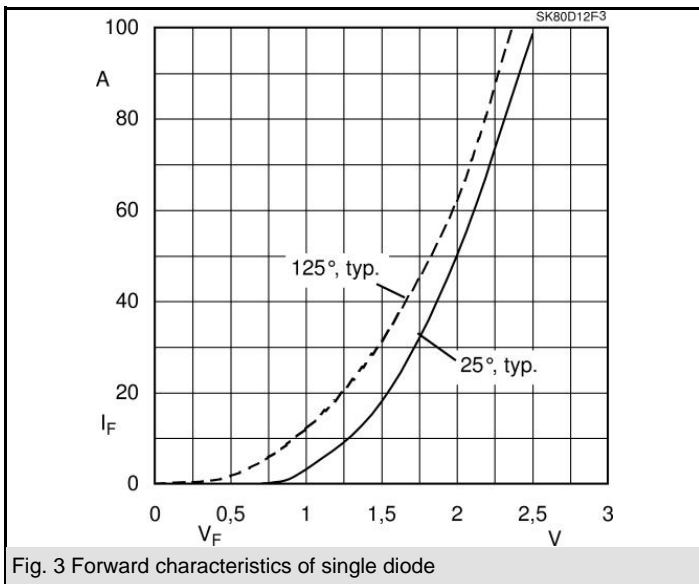
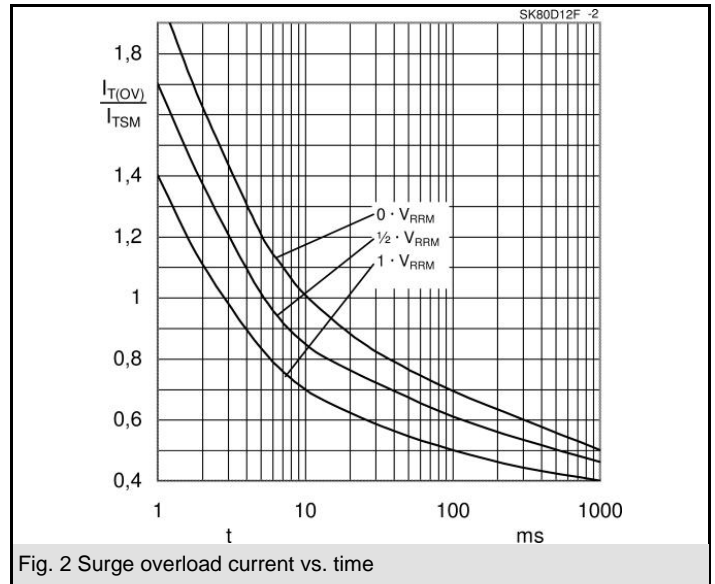
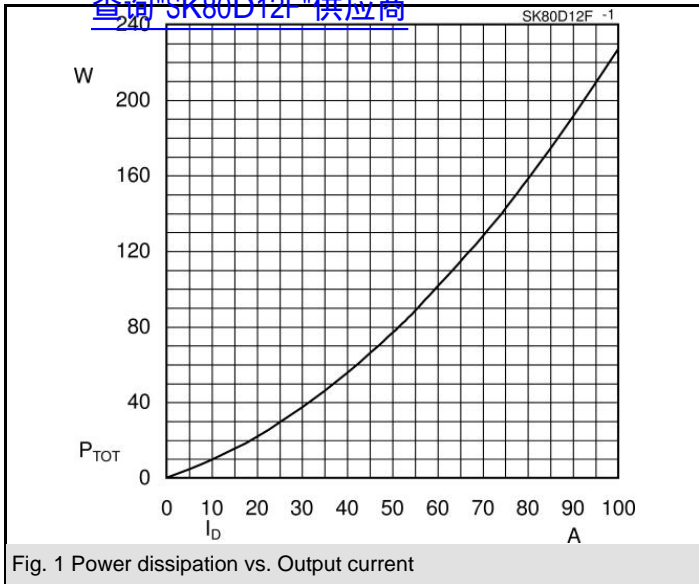
$V_{RSM}$ V	$V_{RRM}, V_{DRM}$ V	$I_D = 80$ A (full conduction) ( $T_s = 80$ °C)
	1200	SK 80 D 12 F

Symbol	Conditions	Values	Units
$I_D$	$T_s = 80$ °C	80	A
$I_{RRM}$	$T_{vj} = 125$ °C (See Fig. 6)	typ. 40	A
$Q_{rr}$	$T_{vj} = 25$ (125) °C (See Fig. 6)	typ. 1,5 (2,7)	μC
$I_R$	$T_{vj} = 25$ (150) °C; $V_R = V_{RRM}$	0,2 (4)	mA
$I_{FSM}$	$T_{vj} = 150$ °C; 10 ms	550	A
$i^2t$	$T_{vj} =$ °C; ms	1500	A <sup>2</sup> s
	$T_{vj} = 150$ °C; 10 ms		A <sup>2</sup> s
	$T_{vj} =$ °C; ms		A <sup>2</sup> s
$V_F$	$T_{vj} = 25$ °C; $I_F = 75$ A	max. 2,5	V
$V_{(TO)}$	$T_{vj} = 125$ °C	max. 1,2	V
$r_T$	$T_{vj} = 125$ °C	max. 22	mΩ
$I_{RD}$	$T_{vj} =$ °C; $V_{DD} = V_{DRM}$ ; $V_{RD} = V_{RRM}$		mA mA
$R_{th(j-s)}$	per diode per module	0,9 0,15	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	2,5	Nm
$M_t$			
m	approx. weight	30	g
Case	SEMITOP® 3	T 25	



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**Measurement conditions for switching parameters:**

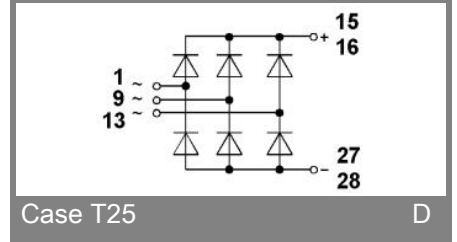
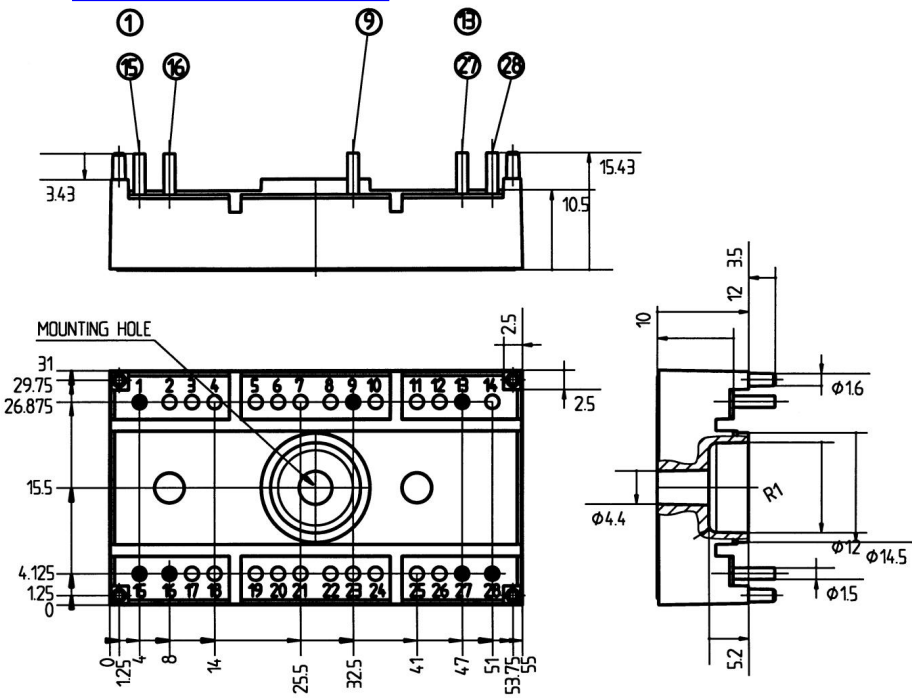
**$I_F = 50A$**   
 **$V_R = 600V$**   
 **$-di/dt = 800A/\mu s$**

Fig. 6

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Dimensions in mm



Case T25 (Suggested hole diameter, in the PCB, for solder pins and plastic mounting pins = 2mm)

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