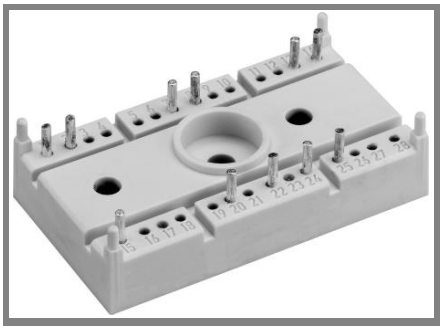
SK 80 D 12 F



SEMITOP® 3

Bridge Rectifier

SK 80 D 12 F

Preliminary Data

Features

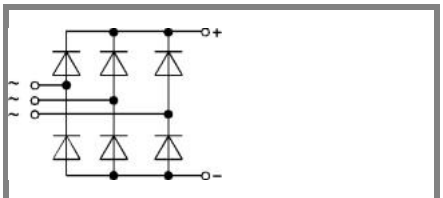
- Compact design
- One screw mounting
- Heat transfer and insulation through direct copper bonded aluminium oxide ceramic (DCB
- Fast and soft recovery CAL (Controlled Axial Lifetime) diode
- UL recognized, file no. E 63 532

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
	T_{vj} = °C; ms		A
i²t	T_{vj} = 150 °C; 10 ms	1500	A²s
	T_{vj} = °C; ms		A²s
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	0,9	K/W
	per module	0,15	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	



D

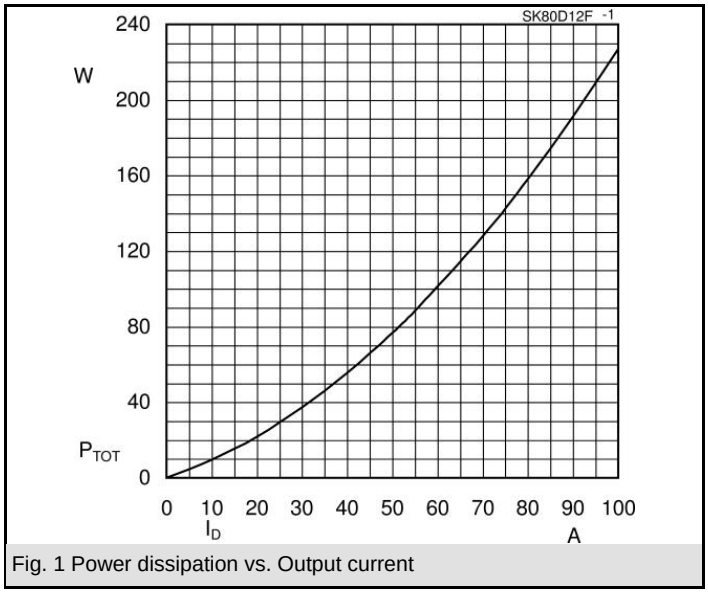


Fig. 1 Power dissipation vs. Output current

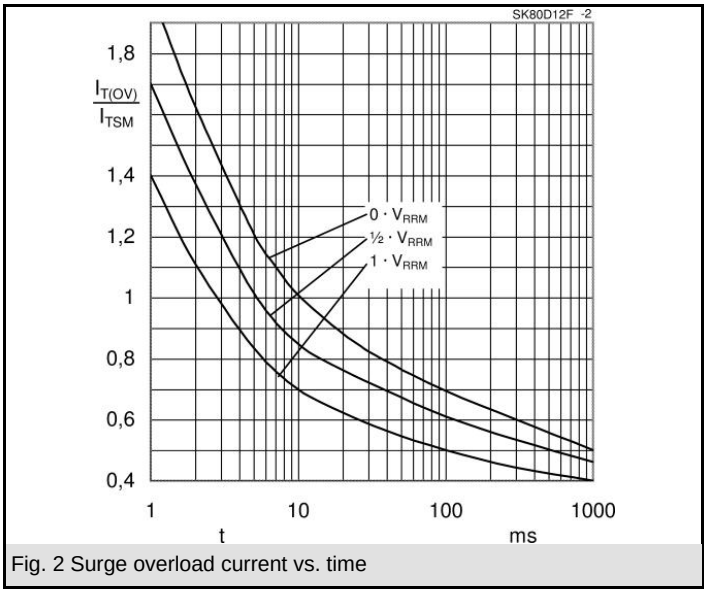


Fig. 2 Surge overload current vs. time

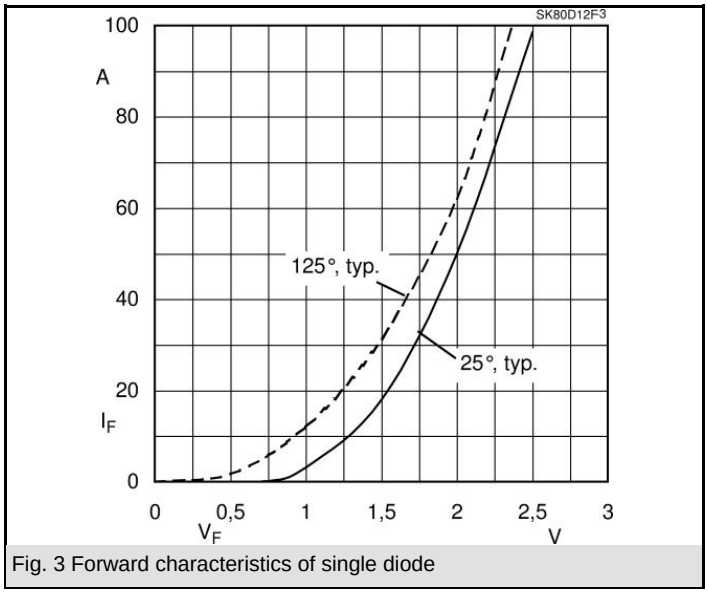


Fig. 3 Forward characteristics of single diode

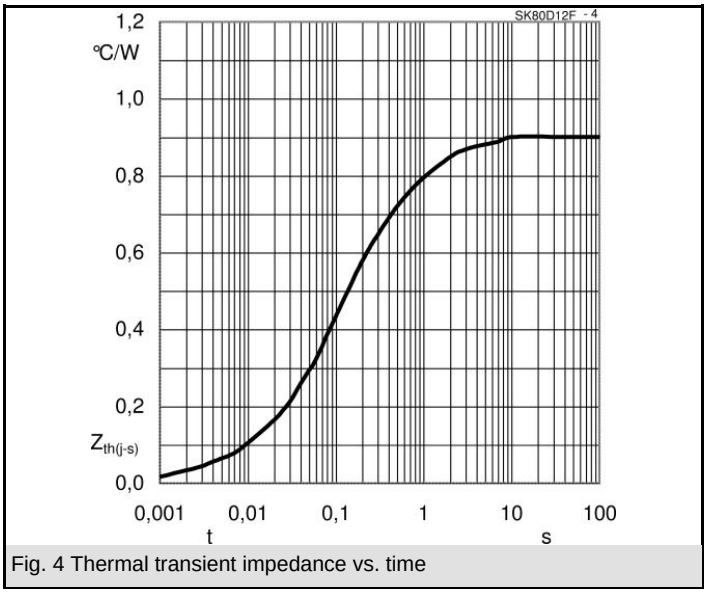


Fig. 4 Thermal transient impedance vs. time

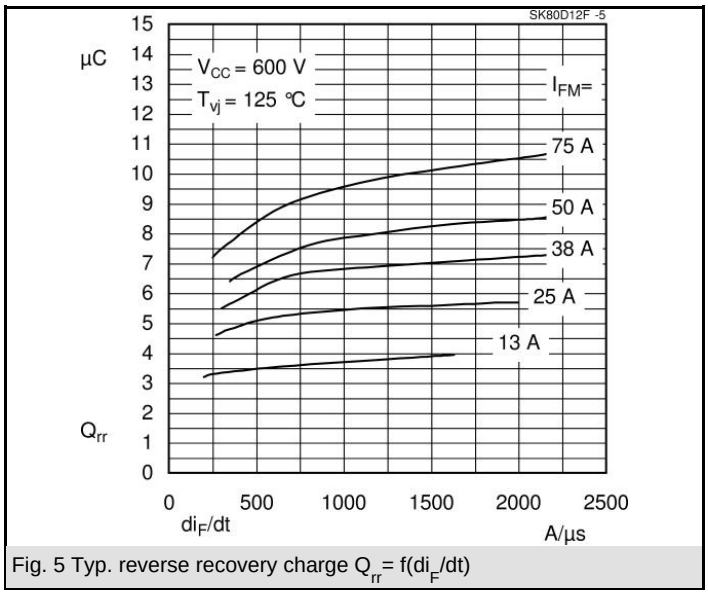


Fig. 5 Typ. reverse recovery charge $Q_{rr} = f(di_F/dt)$

Measurement conditions for switching parameters:

I_F= 50A
V_R= 600V
-di/dt = 800A/µs

Fig. 6

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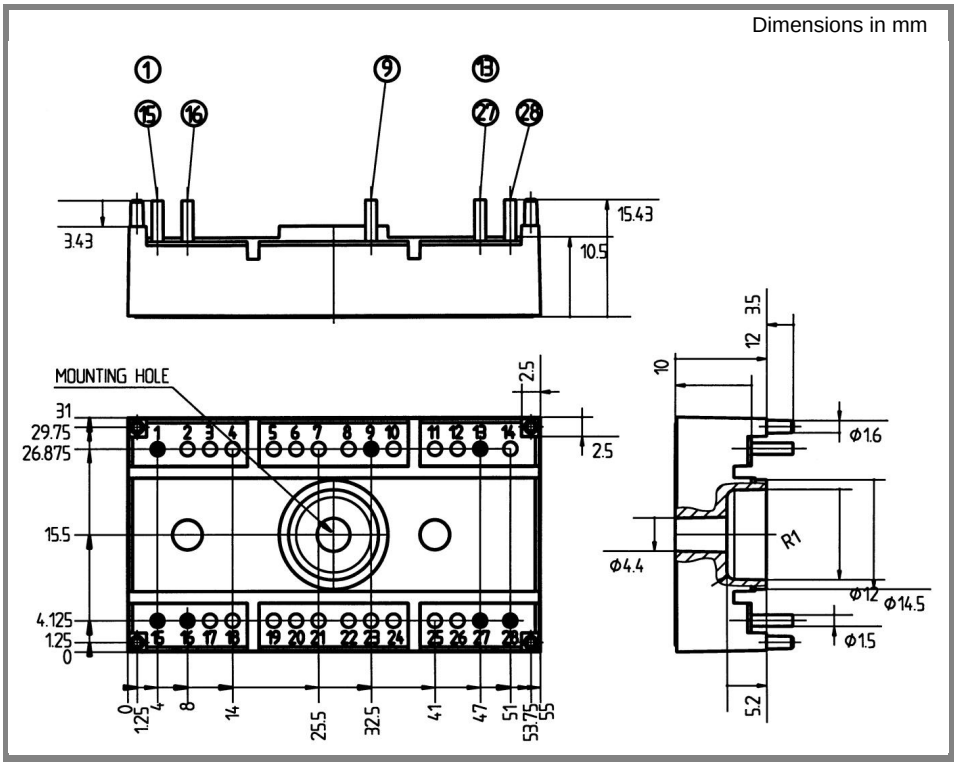
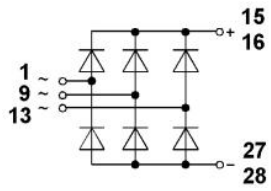
Dimensions in mm



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



Case T25 D

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