

SK 80 D 12 F



SEMITOP® 3

Bridge Rectifier

SK 80 D 12 F

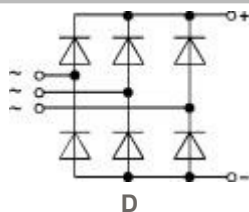
Preliminary Data

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	$I_D = 80 \text{ A (full condu)}$ ($T_s = 80 \text{ °C}$)
	1200	SK 80 D 12 F
Symbol	Conditions	
I_D	$T_s = 80 \text{ °C}$	
I_{RRM}	$T_{vj} = 125 \text{ °C (See Fig. 6)}$	
Q_{rr}	$T_{vj} = 25 (125) \text{ °C (See Fig. 6)}$	
I_R	$T_{vj} = 25 (150) \text{ °C}; V_R = V_{RRM}$	
I_{FSM}	$T_{vj} = 150 \text{ °C}; 10 \text{ ms}$	
i^2t	$T_{vj} = \text{°C}; \text{ms}$	
V_F	$T_{vj} = 25 \text{ °C}; I_F = 75 \text{ A}$	
$V_{(TO)}$	$T_{vj} = 125 \text{ °C}$	
r_T	$T_{vj} = 125 \text{ °C}$	
I_{RD}	$T_{vj} = \text{°C}; V_{DD} = V_{DRM}; V_{RD} = V_{RRM}$	
$R_{th(j-s)}$	per diode	
T_{solder}	per module	
T_{vj}	terminals, 10s	
T_{stg}		
V_{isol}	a. c. 50 Hz; r.m.s.; 1 s / 1 min.	
M_s	mounting torque to heatsink	
M_t		
m	approx. weight	
Case	SEMITOP® 3	

Diagrams

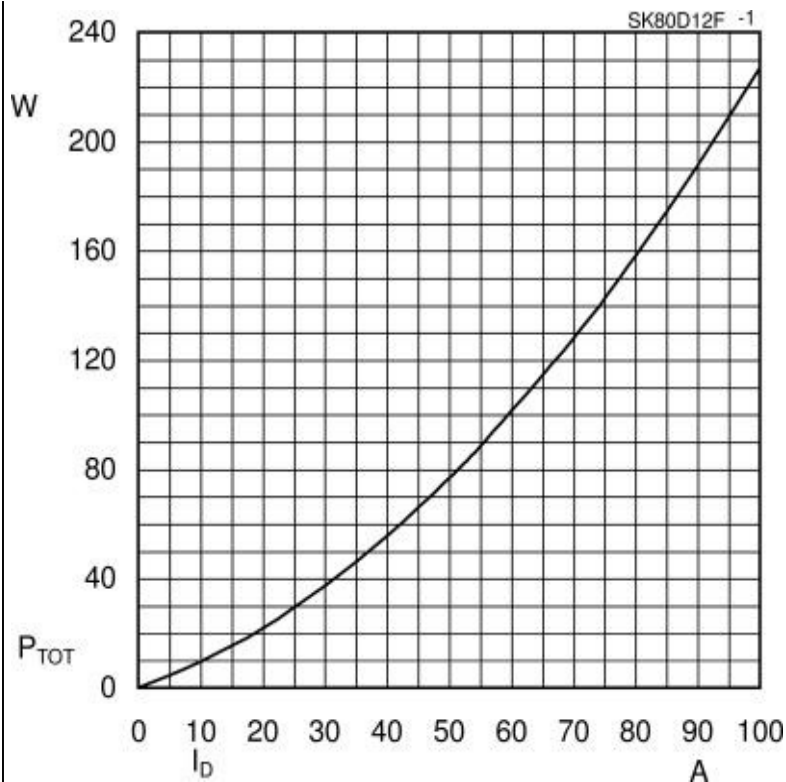


Fig. 1 Power dissipation vs. Output current

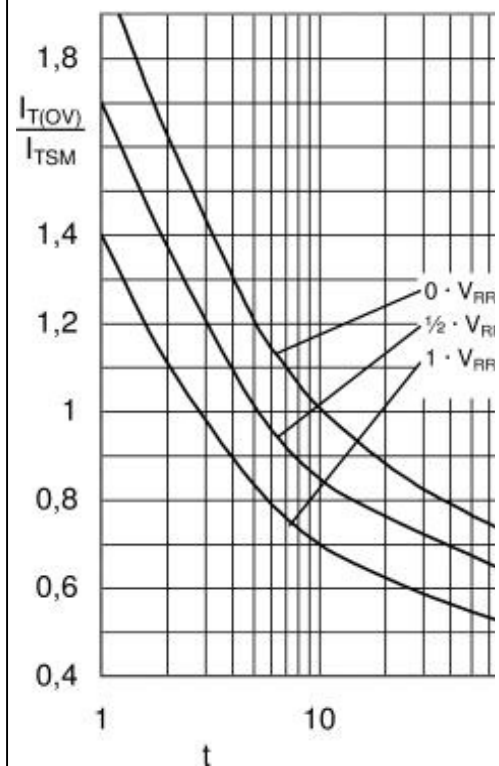


Fig. 2 Surge overload current vs. time

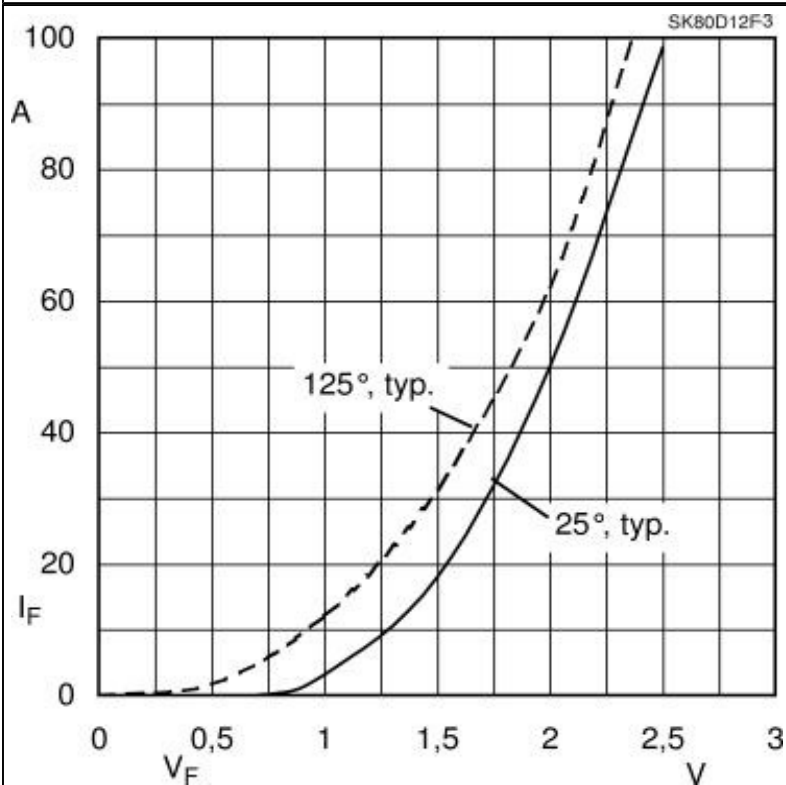


Fig. 3 Forward characteristics of single diode

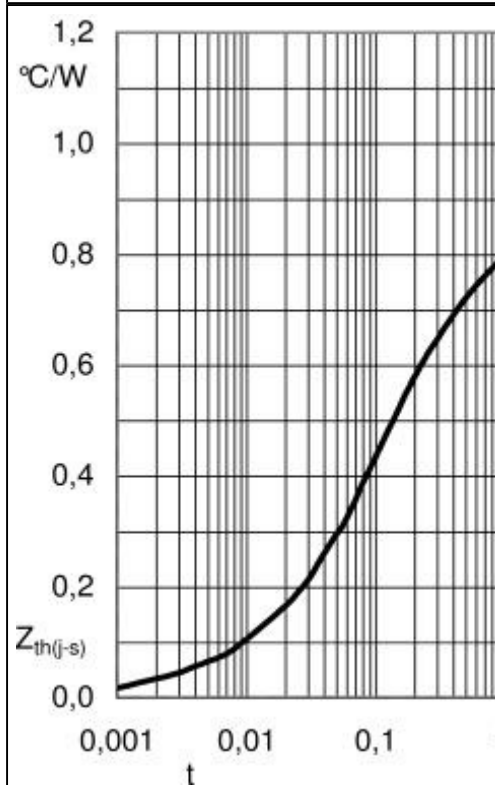


Fig. 4 Thermal transient impedance vs. time

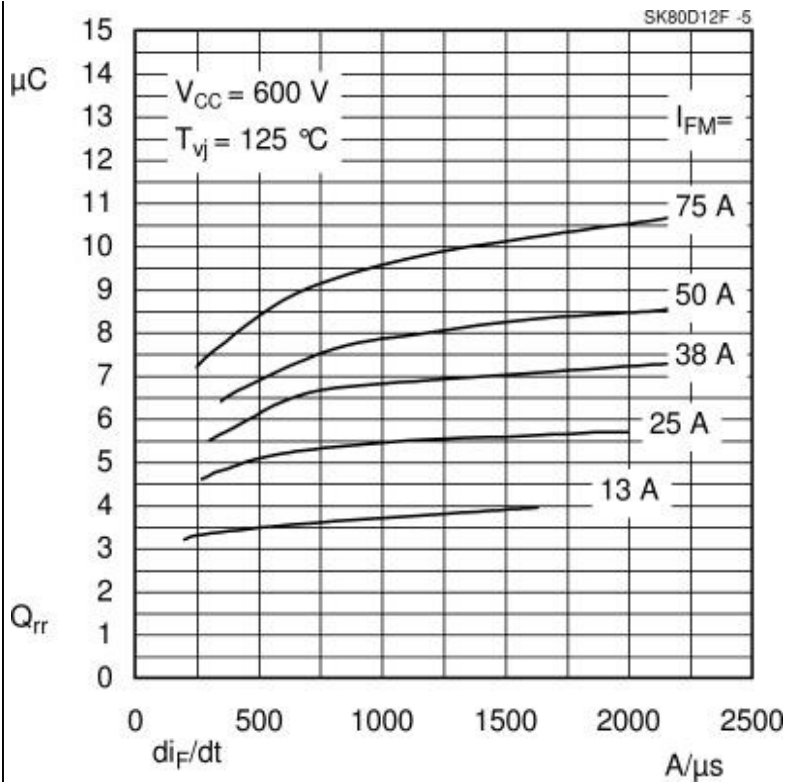


Fig. 5 Typ. reverse recovery charge $Q_{rr} = f(di_F/dt)$

Measurement conditions for sw

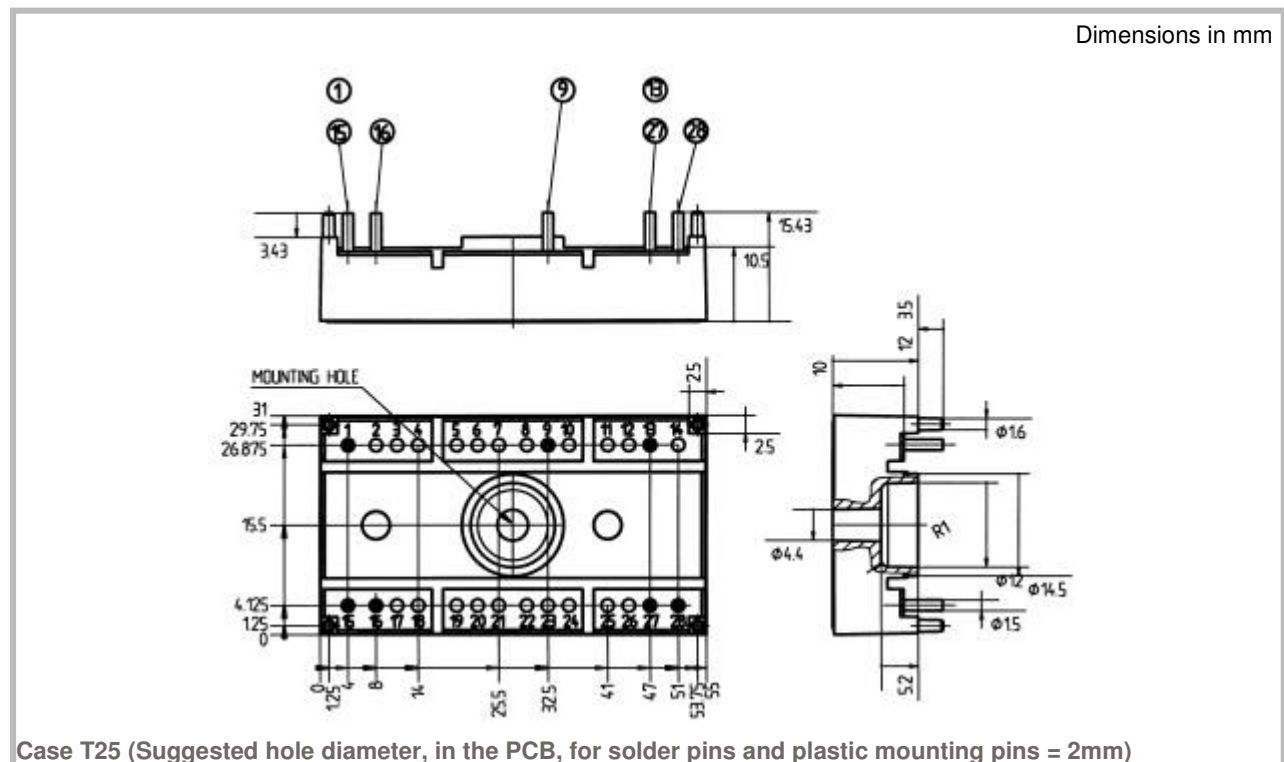
$I_F = 50 \text{ A}$

$V_R = 600 \text{ V}$

$-di/dt = 800 \text{ A}/\mu\text{s}$

Fig. 6

Cases / Circuits



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