

SKD 35



Square bridge

Power Bridge Rectifiers

SKD 35

Features

- Square plastic case with isolated metal base plate and fast-on connectors
- Blocking voltage up to 1600 V
- High surge currents
- Notch moulded in casing for easy polarity identification
- Easy chassis mounting

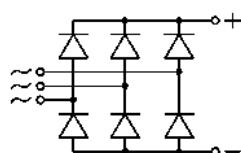
Typical Applications

- Three phase rectifier for power supplies
- Input rectifiers for variable frequency drives
- Rectifier for DC motor field supplies
- Battery charger rectifiers
- Recommended snubber network: $RC: 50 \Omega, 0.1 \mu F (P_R = 1 W)$
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- 1) Freely suspended or mounted on an insulator
- 2) Mounted on a painted metal sheet of min. $250 \times 250 \times 1 \text{ mm}$
- 3) Recommended

V_{RSM}, V_{RRM} V	V_{RMS} ³⁾ V	$I_D = 36 \text{ A } (T_c = 70 \text{ }^\circ\text{C})$ Types	
400	125	SKD 35/04	
800	250	SKD 35/08	
1000	310	SKD 35/10	
1200	400	SKD 35/12	
1400	440	SKD 35/14	
1600	500	SKD 35/16	

Symbol	Condition	Values	Units
I_D	$T_a = 45 \text{ }^\circ\text{C}, P1/120 \text{ natural cooling}$	28	A
	$T_a = 45 \text{ }^\circ\text{C}, \text{chassis}^2)$	14,5	A
	$T_c = 35 \text{ }^\circ\text{C}, P1/120 \text{ forced cooling}$	36	A
	$T_c = 45 \text{ }^\circ\text{C}, P1/120 \text{ natural cooling}$	28	A
	$T_a = 45 \text{ }^\circ\text{C}, \text{chassis}^2)$	14,5	A
I_{DCL}	$T_{vj} = 25 \text{ }^\circ\text{C} ; 10 \text{ ms}$	370	A
	$T_{vj} = 150 \text{ }^\circ\text{C} ; 10 \text{ ms}$	320	A
	$T_{vj} = 25 \text{ }^\circ\text{C} ; 8,3 \dots 10 \text{ ms}$	680	A^2s
	$T_{vj} = 150 \text{ }^\circ\text{C} ; 8,3 \dots 10 \text{ ms}$	500	A^2s
I_{FSM}	$T_{vj} = 25 \text{ }^\circ\text{C} ; 10 \text{ ms}$	370	A
	$T_{vj} = 150 \text{ }^\circ\text{C} ; 10 \text{ ms}$	320	A
	$T_{vj} = 25 \text{ }^\circ\text{C} ; 8,3 \dots 10 \text{ ms}$	680	A^2s
	$T_{vj} = 150 \text{ }^\circ\text{C} ; 8,3 \dots 10 \text{ ms}$	500	A^2s
V_F	$T_{vj} = 25 \text{ }^\circ\text{C}, I_F = 150 \text{ A}$	max. 1,90	V
	$T_{vj} = 150 \text{ }^\circ\text{C}$	0,85	V
	$T_{vj} = 150 \text{ }^\circ\text{C}$	7	$\text{m}\Omega$
	I_{RD}	300	μA
	I_{RD}	5	mA
t_{rr}	$T_{vj} = 25 \text{ }^\circ\text{C}$	Typ. 10	μs
		2000	Hz
f_G	$T_{vj} = 25 \text{ }^\circ\text{C}$		
$R_{th(j-a)}$	isolated ¹⁾	14	K/W
	chassis ²⁾	3,8	K/W
$R_{th(j-c)}$	total	1,0	K/W
	total	0,15	K/W
T_{vj}		-40 ... +150	$^\circ\text{C}$
		-55 ... +150	$^\circ\text{C}$
T_{stg}			
V_{isol}	a. c. 50 ... 60 Hz; r.m.s.; 1 s / 1 min.	3000 / 2500	V~
	to heatsink	2 \pm 15 %	Nm
	SI units	18 \pm 15 %	Lb. in.
M_s	US units	23	g
	approx.		
M			
Case		G 11b	



SKD

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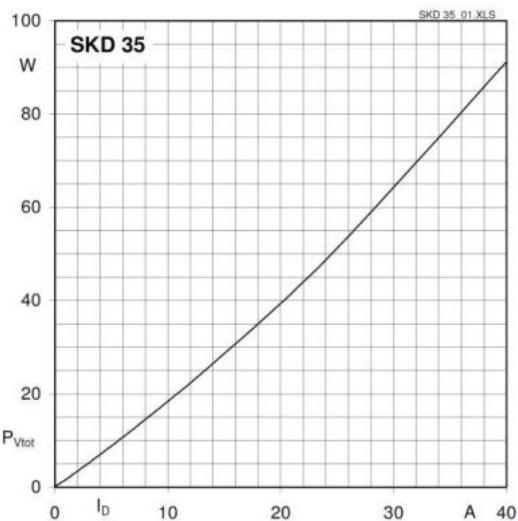


Fig. 01 Power dissipation vs. output current

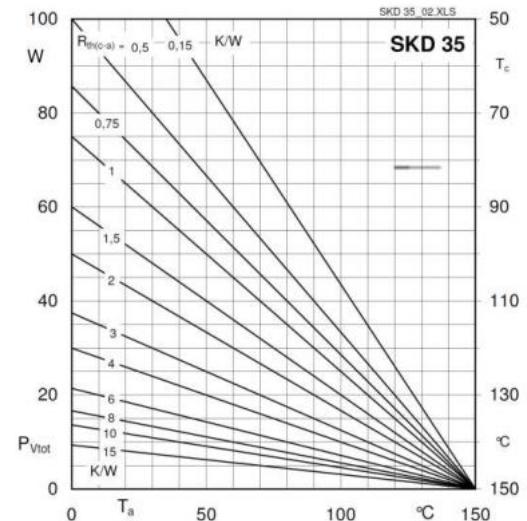


Fig. 02 Power dissipation vs. case temperature

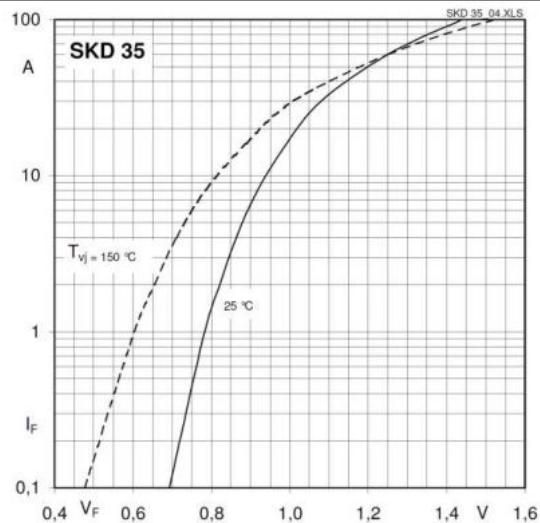


Fig. 04 Forward characteristics of a diode arm (typical)

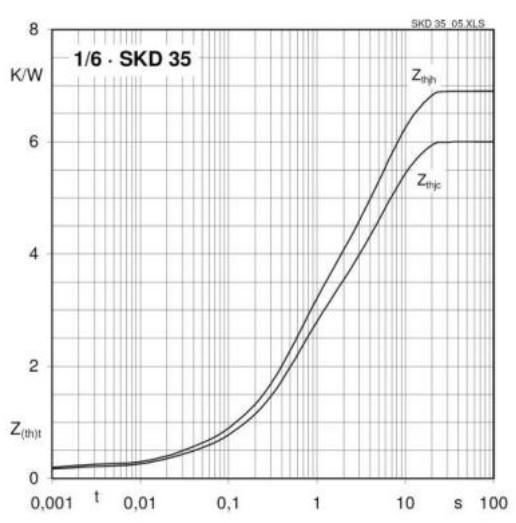
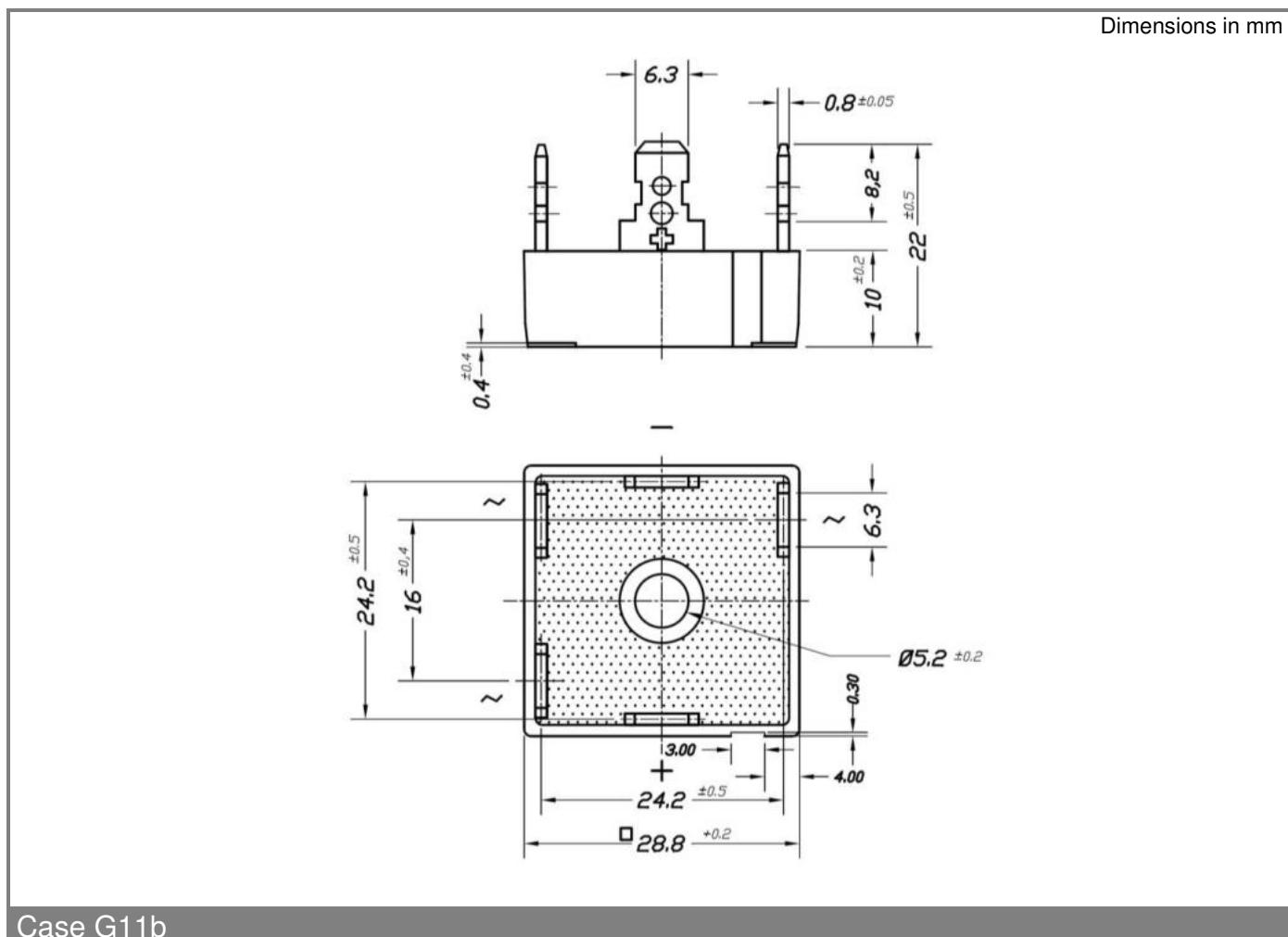


Fig. 05 Transient thermal impedance vs. time



Case G11b

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