



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 current
- Easy chassis mounting

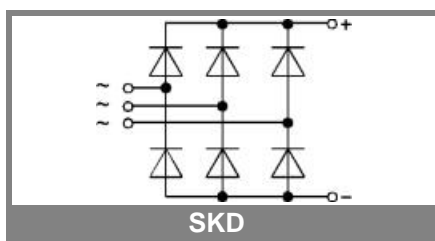
Typical Applications

- 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 Ω, 0.1 μF ($P_R = 1 \text{ W}$)

- 1) Freely suspended or mounted on an insulator
- 2) Mounted on a painted metal sheet of min. 250 x 250 x 1 mm
- 3) Recommended V_{VRMS} values
($V_{VRMS \text{ max}} = V_{RRM} / 1,42$)

V_{RSM}, V_{RRM} V	V_{VRMS} V	$I_D = 36 \text{ A } (T_c = 70 \text{ °C})$ Types	C_{max} μF	R_{min} Ω
200	60	SKD 35/02		0,15
400	125	SKD 35/04		0,3
800	250	SKD 35/08		0,7
1200	400	SKD 35/12		1
1600	500	SKD 35/16		1,5

Symbol	Conditions	Values	Units
I_D	$T_a = 45 \text{ °C}, P1/120$ natural cooling	28	A
	$T_a = 45 \text{ °C},$ chassis ²⁾	14,5	A
I_{DCL}	$T_a = 35 \text{ °C}, P1/120$ forced cooling	36	A
	$T_a = 45 \text{ °C}, P1/120$ natural cooling	28	A
	$T_a = 45 \text{ °C},$ chassis ²⁾	14,5	A
I_{FSM}	$T_{vj} = 25 \text{ °C}, 10 \text{ ms}$	370	A
	$T_{vj} = 150 \text{ °C}, 10 \text{ ms}$	320	A
i^2t	$T_{vj} = 25 \text{ °C}, 8,3 \dots 10 \text{ ms}$	680	A ² s
	$T_{vj} = 150 \text{ °C}, 8,3 \dots 10 \text{ ms}$	500	A ² s
V_F	$T_{vj} = 25 \text{ °C}, I_F = 150 \text{ A}$	max. 1,9	V
$V_{(TO)}$	$T_{vj} = 150 \text{ °C}$	max. 0,85	V
r_T	$T_{vj} = 150 \text{ °C}$	max. 7	mΩ
I_{RD}	$T_{vj} = 25 \text{ °C}, V_{RD} = V_{RRM}$	300	μA
	$T_{vj} = \text{ °C}, V_{RD} = V_{RRM} \geq V$		μA
I_{RD}	$T_{vj} = 150 \text{ °C}, V_{RD} = V_{RRM}$	5	mA
	$T_{vj} = \text{ °C}, V_{RD} = V_{RRM} \geq V$		mA
t_{tr}	$T_{vj} = 25 \text{ °C}$	10	μs
f_G		2000	Hz
$R_{th(j-a)}$	isolated ¹⁾	14	K/W
	chassis ²⁾	3,8	K/W
	total	1,0	K/W
	$R_{th(j-c)}$ total	0,15	K/W
	$R_{th(c-s)}$ total		
T_{vj}		- 40 ... + 150	°C
T_{stg}		- 55 ... + 150	°C
V_{isol}	a. c. 50 ... 60 Hz; r.m.s.; 1 s / 1 min.	3000 / 2500	V~
M_s	to heatsink	$2 \pm 15 \%$	Nm
M_t			Nm
a			m/s ²
w		23	g
F_u			A
Case		G 11b	



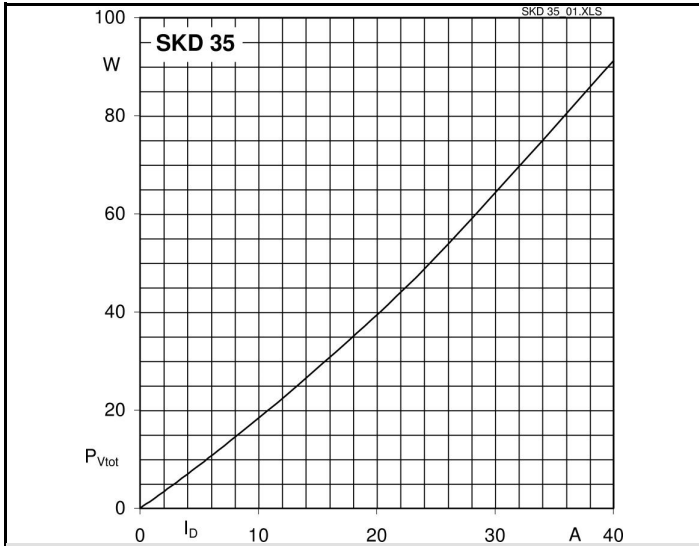


Fig. 3L Power dissipation vs. output current

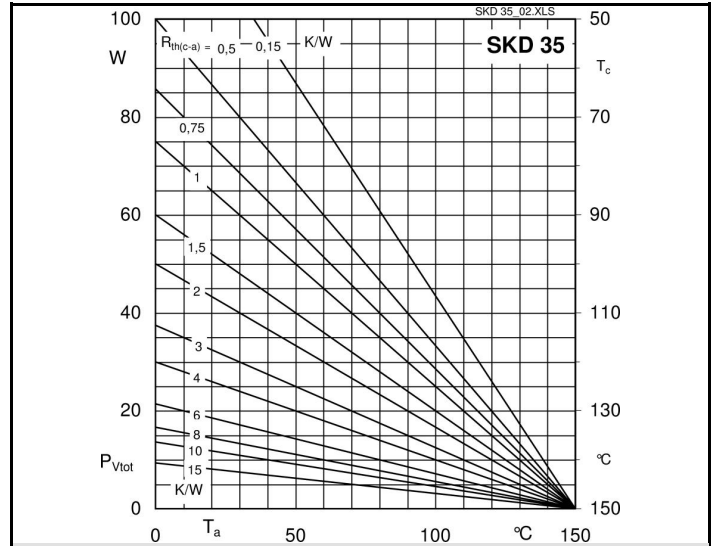


Fig. 3R Power dissipation vs. case temperature

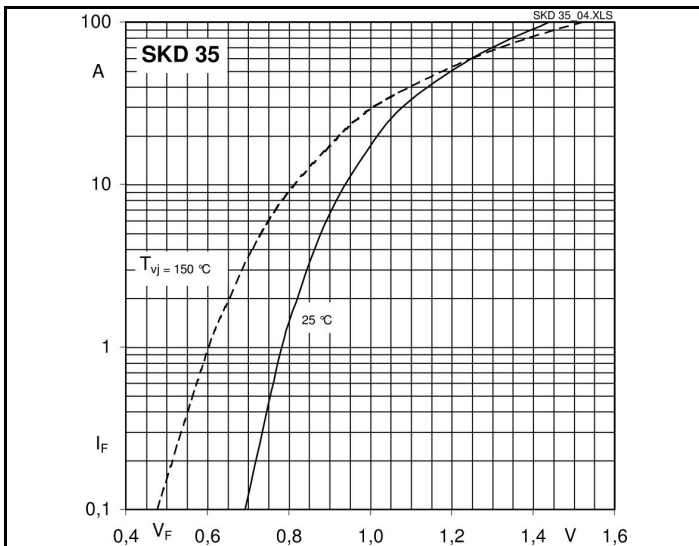


Fig. 9 Forward characteristics of a diode arm (typical)

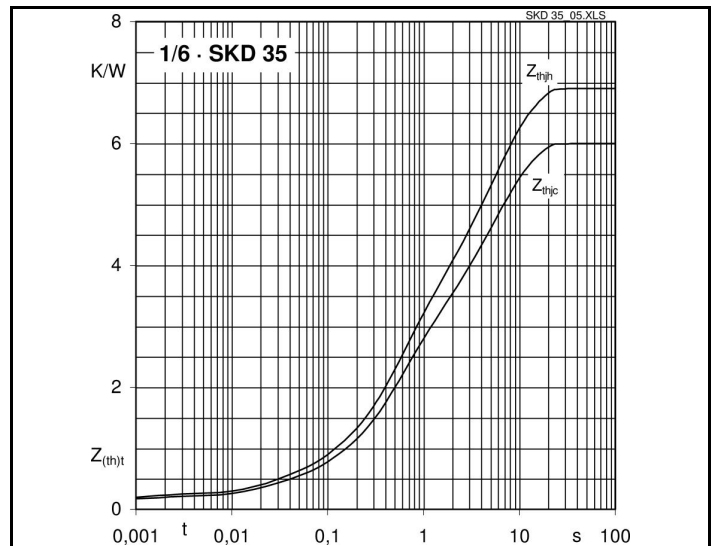
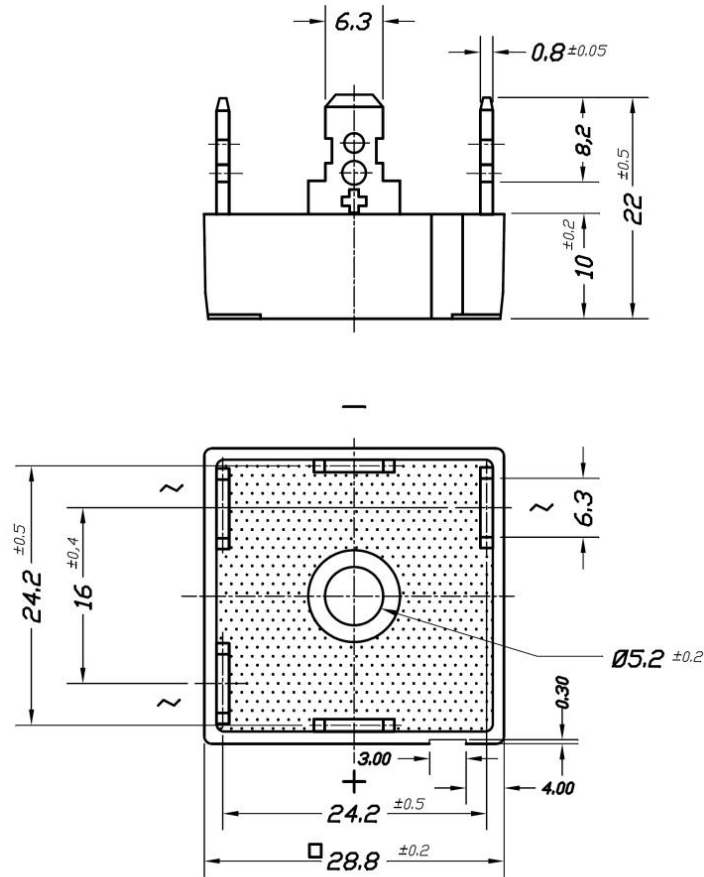


Fig. 12 Transient thermal impedance vs. time



Case G 11b

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