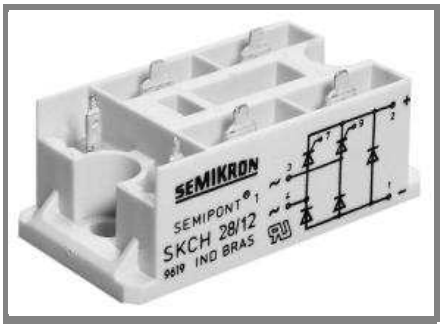
SKCH 28



SEMIPONT® 1

Controllable Bridge Rectifiers

SKCH 28

Features

- Sturdy isolated metal baseplate
- Fast-on terminals with solder tips
- Suitable for wave soldering
- High surge current rating
- UL recognized, file no. E 63 532

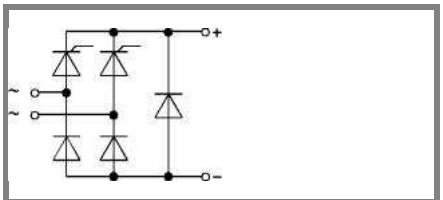
Typical Applications*

- Controllable single phase rectifier
- DC power supplies
- DC motor controllers
- DC motor field controllers

1) Painted metal shield of minimum 250 x 250 x 1 mm: $R_{th(c-a)}$ = 1,85 K/W
2) Freely suspended or mounted on insulator

V_{RSM} V	V_{RRM}, V_{DRM} V	I_D = 28 A (full conduction) (T_c = 89 °C)
400	400	SKCH 28/04
600	600	SKCH 28/06
800	800	SKCH 28/08
1200	1200	SKCH 28/12
1400	1400	SKCH 28/14
1600	1600	SKCH 28/16

Symbol	Conditions	Values	Units
I_D	T_c = 85 °C	30	A
	T_a= 45 °C; chassis 1)	13	A
	T_a= 45 °C; P5A/100	15	A
	T_a= 45 °C; P13A/125	16	A
	T_a= 45 °C; P1A/120	23	A
I_{TSM}, I_{FSM}	T_{vj} = 25 °C; 10 ms	320	A
	T_{vj} = 125 °C; 10 ms	280	A
i^2t	T_{vj} = 25 °C; 8,3 ... 10 ms	510	A^2s
	T_{vj} = 125 °C; 8,3 ... 10 ms	390	A^2s
V_T	T_{vj} = 25 °C; I_T=75 A	max. 2,25	V
$V_{T(TO)}$	T_{vj} = 125 °C;	max. 1	V
r_T	T_{vj} = 125 °C	max. 16	mΩ
I_{DD}; I_{RD}	T_{vj} = 125 °C; V_{DD} = V_{DRM}; V_{RD} = V_{RRM}	max. 8	mA
t_{gd}	T_{vj} = 25 °C; I_G = 1 A; di_G/dt = 1 A/µs	1	µs
t_{gr}	V_D = 0,67 · V_{DRM}	1	µs
$(dv/dt)_{cr}$	T_{vj} = 125 °C	max. 500	V/µs
$(di/dt)_{cr}$	T_{vj} = 125 °C; f = 50 Hz	max. 50	A/µs
t_q	T_{vj} = 125 °C; typ.	80	µs
I_H	T_{vj} = 25 °C; typ. / max.	50 / 150	mA
I_L	T_{vj} = 25 °C; R_G = 33 Ω	100 / 300	mA
V_{GT}	T_{vj} = 25 °C; d.c.	min. 2	V
I_{GT}	T_{vj} = 25 °C; d.c.	min. 100	mA
V_{GD}	T_{vj} = 125 °C; d.c.	max. 0,25	V
I_{GD}	T_{vj} = 125 °C; d.c.	max. 3	mA
$R_{th(j-c)}$	per thyristor / diode	1,8	K/W
	total	0,45	K/W
$R_{th(c-s)}$	total	0,1	K/W
$R_{th(j-a)}$	total 2)	15	K/W
T_{vj}		- 40 ... + 125	°C
T_{stg}		- 40 ... + 125	°C
V_{isol}	a. c. 50 Hz; r.m.s.; 1 s / 1 min.	3600 (3000)	V
M_s	case to heatsink	2	Nm
M_t		n.a.	Nm
m		66	g
Case	SKCH	G 25	



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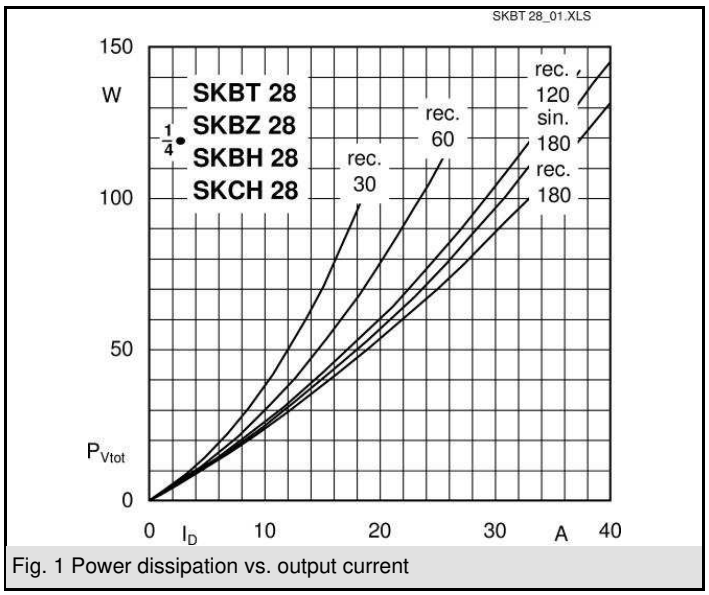


Fig. 1 Power dissipation vs. output current

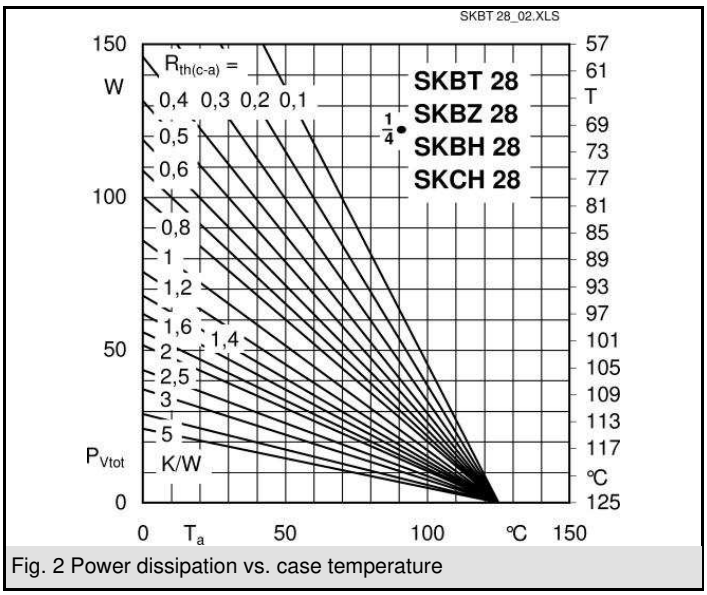


Fig. 2 Power dissipation vs. case temperature

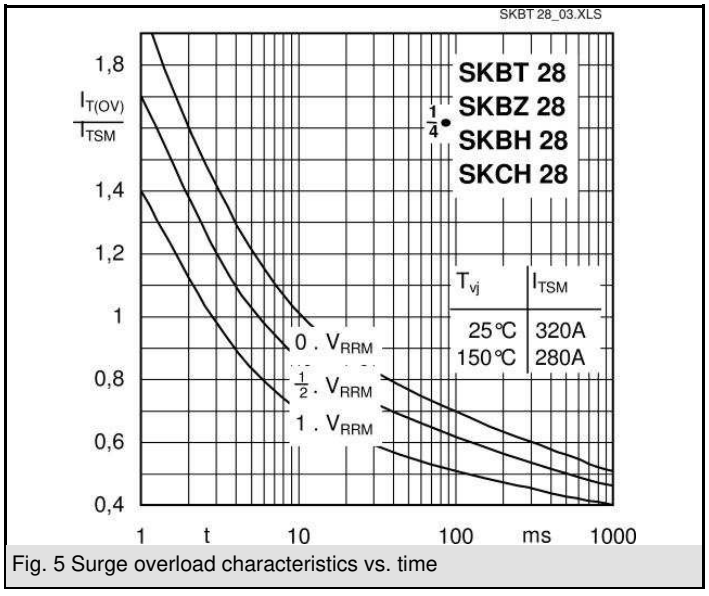


Fig. 5 Surge overload characteristics vs. time

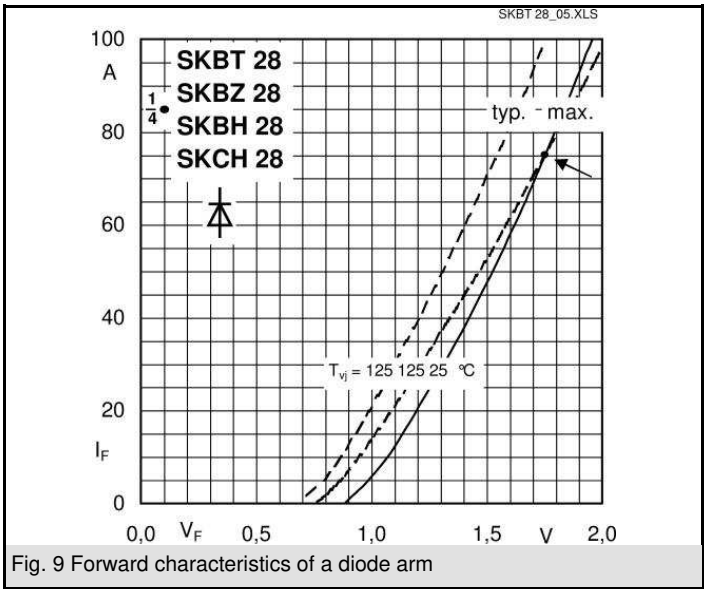


Fig. 9 Forward characteristics of a diode arm

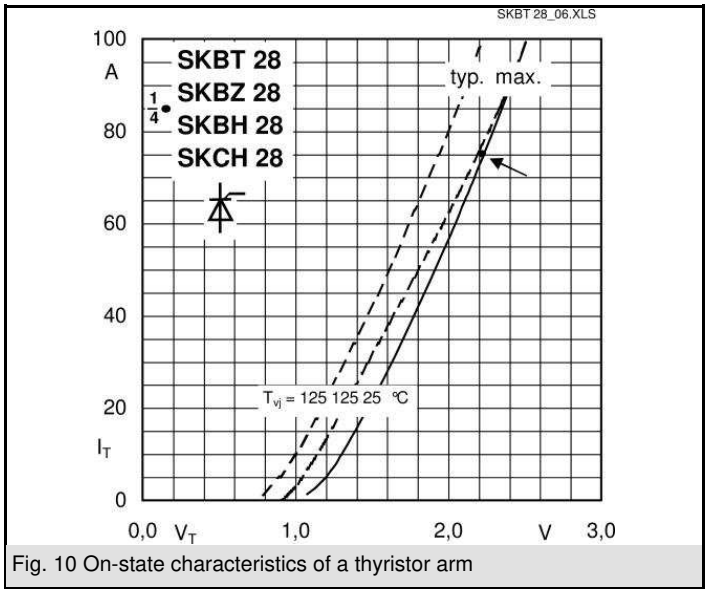


Fig. 10 On-state characteristics of a thyristor arm

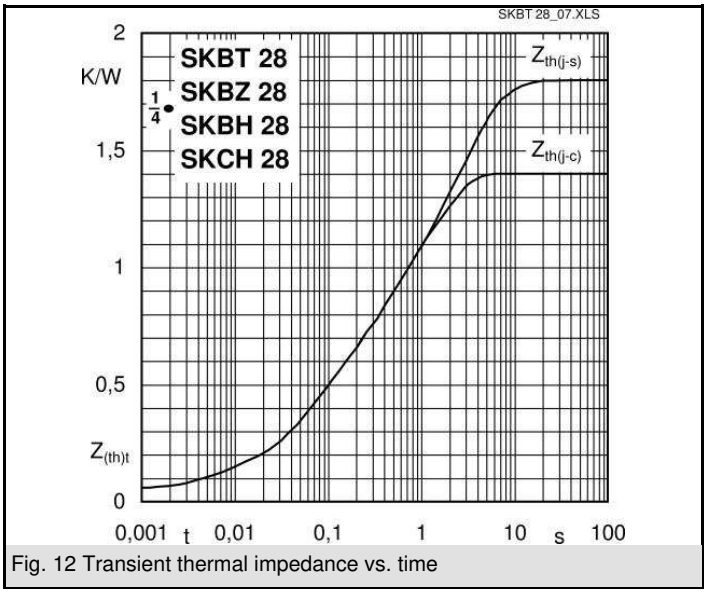


Fig. 12 Transient thermal impedance vs. time

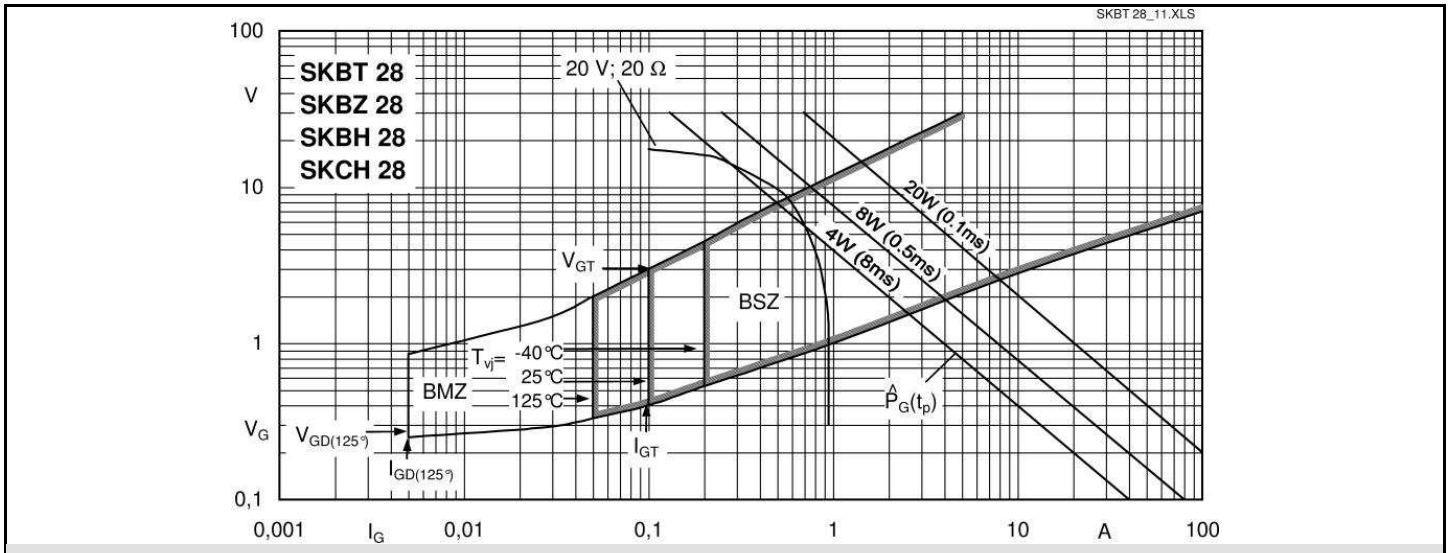
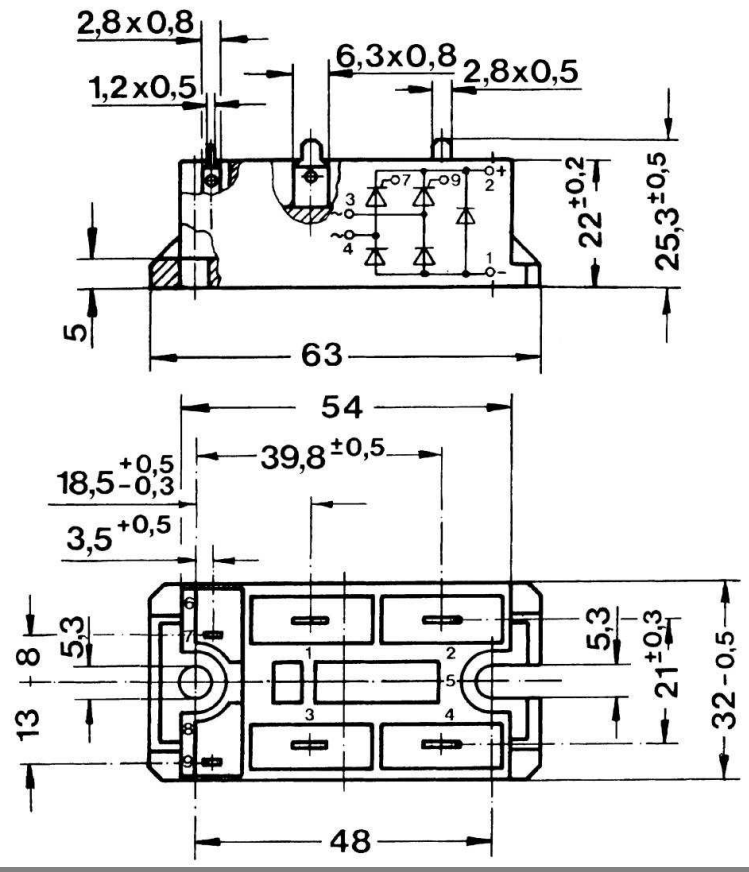


Fig. 11 Gate characteristics of a thyristor device

Dimensions in mm



Case G 25

This is an electrostatic discharge sensitive device (ESDS) due to international standard IEC 61340.

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