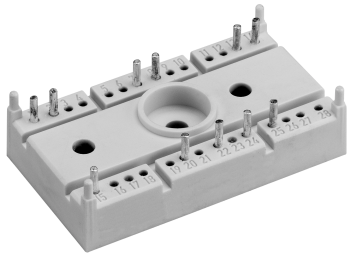
V_{RSM} V	V_{RRM} V_{DRM} V	I_{RMS} (maximum values for continuous operation) (T_h = 80 °C) 42 A	68 A
900	800	**SK 40 DT 08**	**SK 70 DT 08**
1300	1200	**SK 40 DT 12**	**SK 70 DT 12**
1700	1600	**SK 40 DT 16**	**SK 70 DT 16**

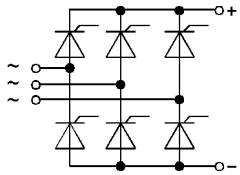
Symbol	Conditions	SK 40 DT	SK 70 DT	Units
I_D	T_h = 80 °C; ind. load	42	68	A
I_{TSM}	T_{vj} = 25 °C; 10 ms	320	450	A
	T_{vj} = 125 °C; 10 ms	280	380	A
i^2t	T_{vj} = 25 °C; 8,3...10 ms	510	1 000	A^2s
	T_{vj} = 125 °C; 8,3...10 ms	390	720	A^2s
$(dv/dt)_{cr}$	T_{vj} = 125 °C	500	1 000	V/µs
$(di/dt)_{cr}$	T_{vj} = 125 °C; f = 50...60 Hz	100	50	A/µs
t_q	T_{vj} = 125 °C	80	80	µs
I_H	T_{vj} = 25 °C; typ. / max	80 / 150	80 / 150	mA
I_L	T_{vj} = 25 °C; R_G = 33 Ω; typ. / max.	150 / 300	150 / 300	mA
V_T	T_{vj} = 25 °C; I_T = 75 A	2,45	1,9	V
$V_{T(TO)}$	T_{vj} = 125 °C	1,10	1	V
r_T	T_{vj} = 125 °C	20	10	mΩ
I_{DD}; I_{RD}	T_{vj} = 125 °C; V_{DD} = V_{DRM}; V_{RD} = V_{RRM}	max. 8	max. 10	mA
V_{GT}	T_{vj} = 25 °C; dc	2	2	V
I_{GT}	T_{vj} = 25 °C; dc	100	100	mA
V_{GD}	T_{vj} = 125 °C; dc	0,25	0,25	V
I_{GD}	T_{vj} = 125 °C; dc	3	3	mA
R_{thjh} [1]	per thyristor	1,7	1,2	K/W
T_{vjmax}		– 40 ... + 125		°C
T_{stg}		– 40 ... + 125		°C
T_{solder}	terminals, 10 s	260		°C
V_{isol}	a.c. 50 Hz; r.m.s. 1 s/1 min	3000 / 2500		V~
M_1	mounting torque	2,5		Nm
w		30		g
Case		T 15		

SEMITOP® 3

Controllable Bridge Rectifiers

SK 40 DT
SK 70 DT





DT

Features

- Compact design
- One screw mounting
- Heat transfer and isolation through direct copper bonded aluminium oxide ceramic (DCB)
- Glass passivated thyristor chips
- Up to 1600 V reverse voltage
- high surge currents
- UL recognized, file no. E 63 532

- Typical Applications
- Reversing DC motors
- Controlled field rectifier for DC drives
- Controlled battery charger rectifiers

[1] Thermal resistance junction to heatsink

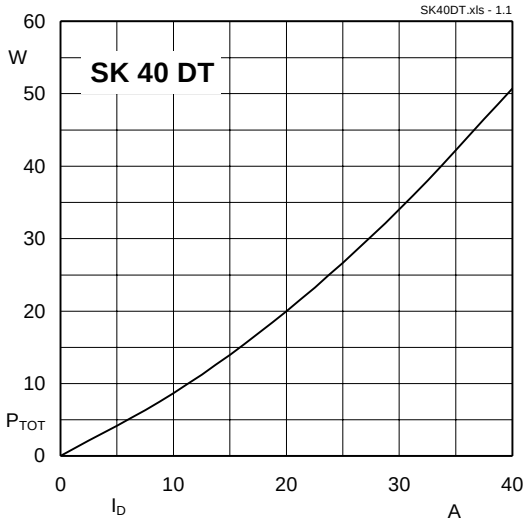


Fig. 1 Power dissipation vs. output current

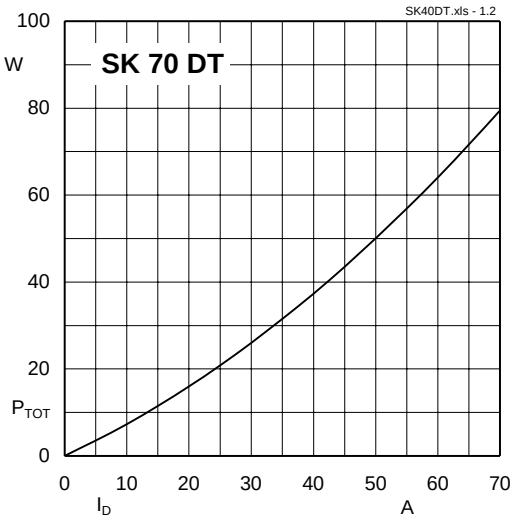


Fig. 1 Power dissipation vs. output current

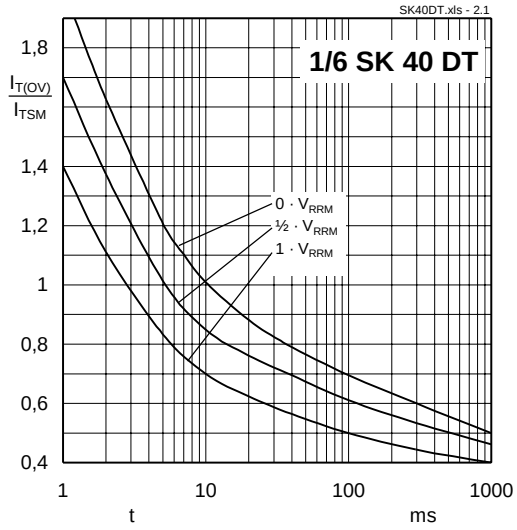


Fig. 2 Surge overload current vs. time

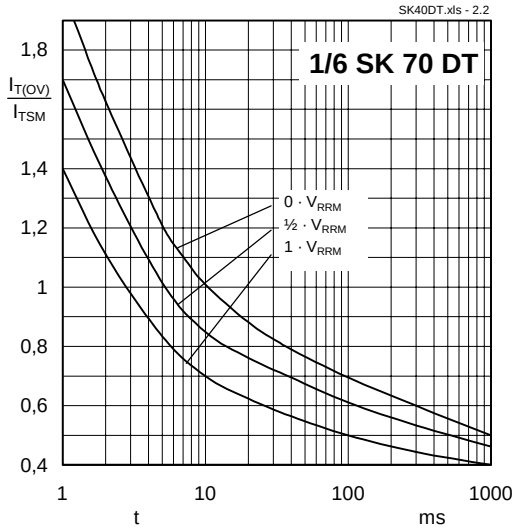


Fig. 2 Surge overload current vs. time

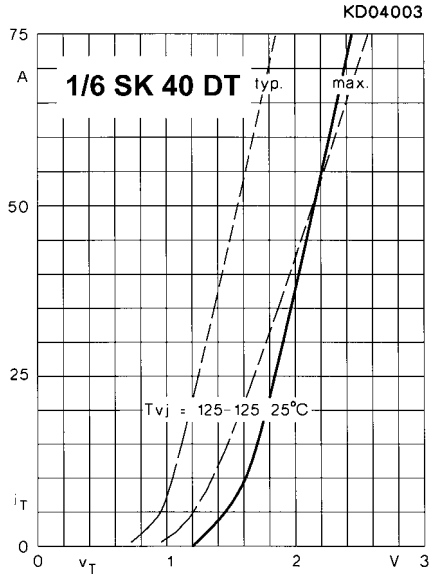


Fig. 3 Forward characteristic of single thyristor

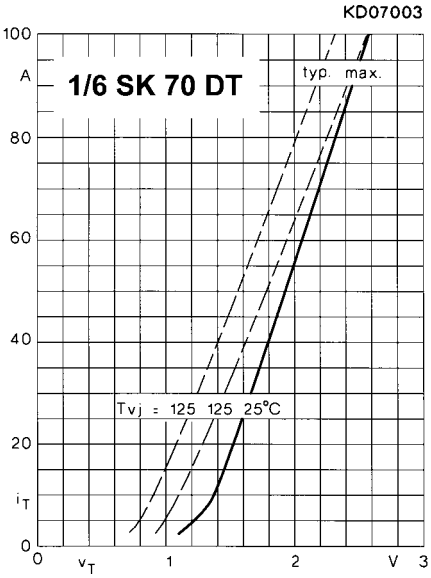


Fig. 3 Forward characteristic of single thyristor

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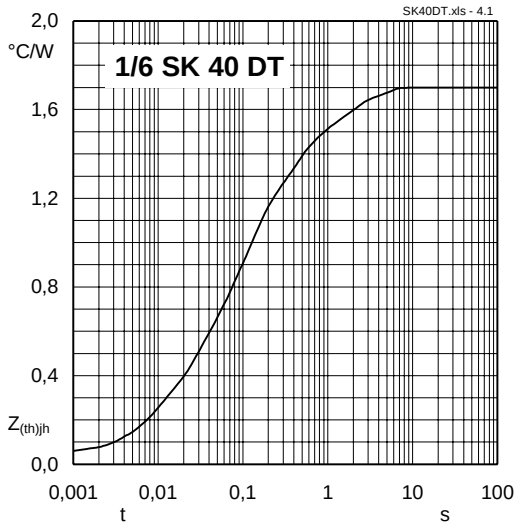

Fig. 4 Thermal transient impedance vs. time

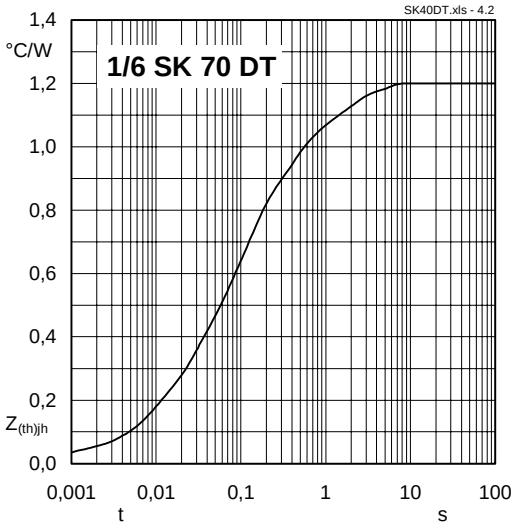

Fig. 4 Thermal transient impedance vs. time

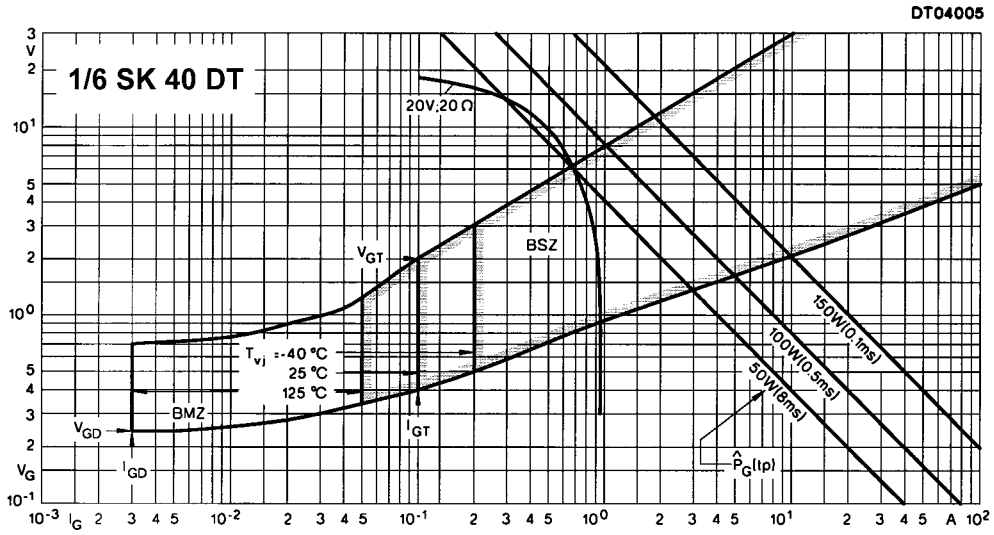

Fig. 5 Gate trigger characteristics of a single thyristor

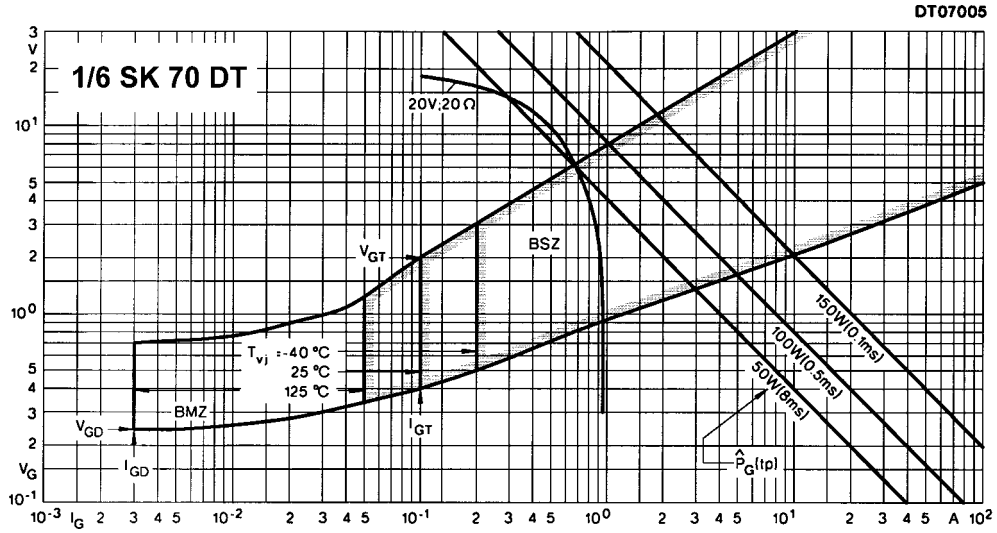

Fig. 5 Gate trigger characteristics of a single thyristor

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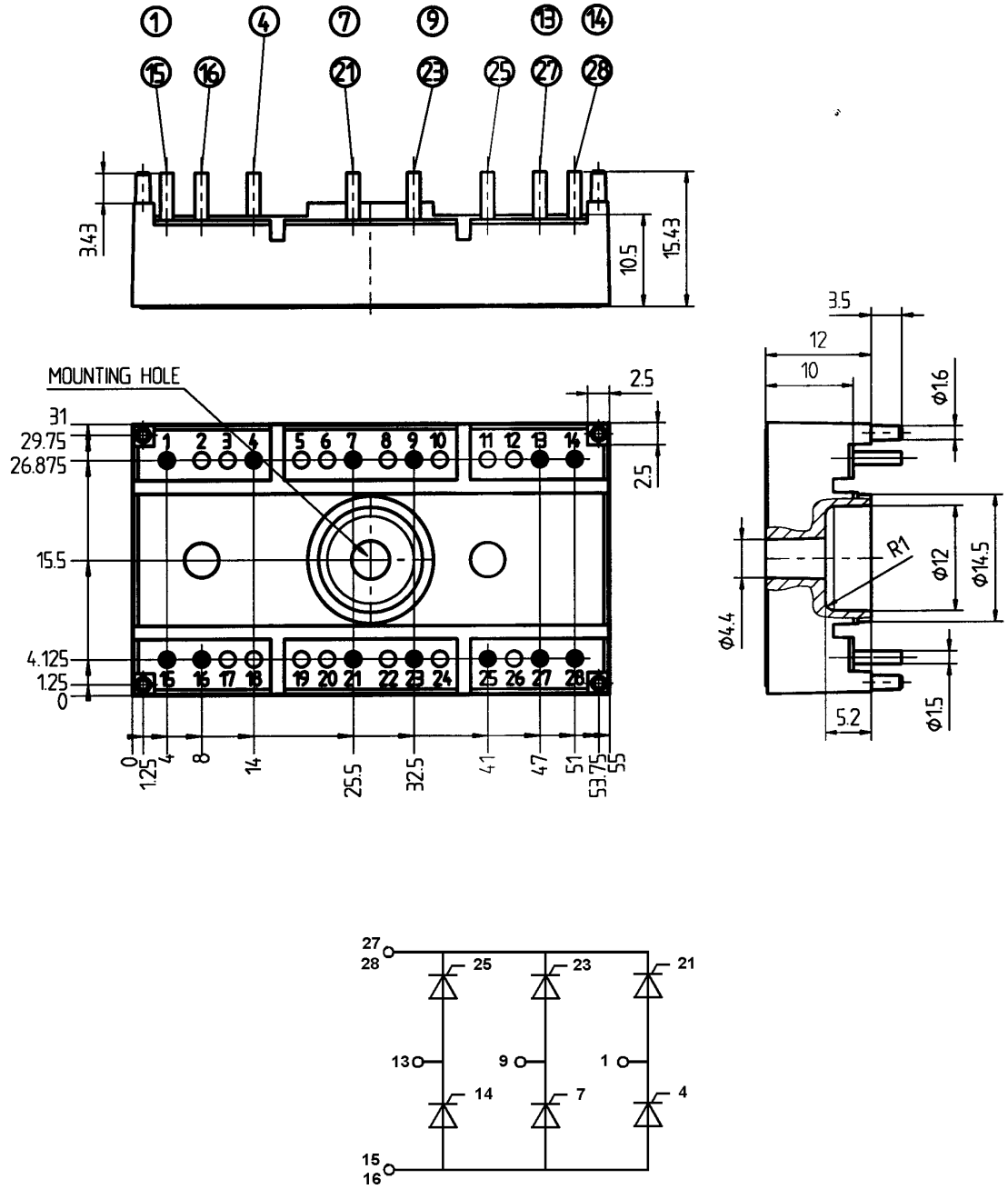
Case T 15



Dimensions in mm

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