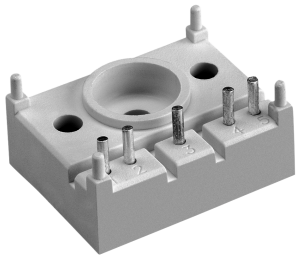
V_{RSM} V	V_{RRM} V_{DRM} V	I_{RMS} (maximum values for continuous operation) (T_h = 85 °C) 29 A
900	800	**SK 25 KQ 08**
1300	1200	**SK 25 KQ 12**
1700	1600	**SK 25 KQ 16**

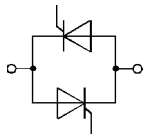
Symbol	Conditions	Values	Units
I_{RMS}	W1C; sin 180°; T_h = 100 °C	20	A
	T_h = 85 °C	29	A
I_{TSM}	T_{vj} = 25 °C; 10 ms	320	A
	T_{vj} = 125 °C; 10 ms	280	A
i^2t	T_{vj} = 25 °C; 8,3...10 ms	510	A^2s
	T_{vj} = 125 °C; 8,3...10 ms	390	A^2s
t_{gd}	T_{vj} = 25 °C; I_G = 1 A; di_G/dt = 1 A/µs	1	µs
t_{gr}	V_D = 0,67 V_{DRM}	1	µs
$(dv/dt)_{cr}$	T_{vj} = 125 °C	500	V/µs
$(di/dt)_{cr}$	T_{vj} = 125 °C; f = 50...60 Hz	100	A/µs
t_q	T_{vj} = 125 °C; typ.	80	µs
I_H	T_{vj} = 25 °C; typ. / max	80 / 150	mA
I_L	T_{vj} = 25 °C; R_G = 33 Ω; typ. / max.	150 / 300	mA
V_T	T_{vj} = 25 °C; I_T = 75 A; max.	2,45	V
$V_{T(TO)}$	T_{vj} = 125 °C	1,10	V
r_T	T_{vj} = 125 °C	20	mΩ
I_{DD}; I_{RD}	T_{vj} = 125 °C; V_{DD} = V_{DRM}, V_{RD} = V_{RRM}	max. 8	mA
V_{GT}	T_{vj} = 25 °C; dc	2	V
I_{GT}	T_{vj} = 25 °C; dc	100	mA
V_{GD}	T_{vj} = 125 °C; dc	0,25	V
I_{GD}	T_{vj} = 125 °C; dc	3	mA
R_{thjh} [1)]	cont. per thyristor / per W1C	1,7 / 0,85	K/W
	sin 180° per thyristor / per W1C	1,78 / 0,89	K/W
T_{vj}	thyristor	– 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	1,5	Nm
w		13	g
Case		T 1	

SEMITOP® 1

Antiparallel Thyristor Module

SK 25 KQ





KQ

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

- Soft starters
- Light control
- Temperature control

[1)] Thermal resistance junction to heatsink

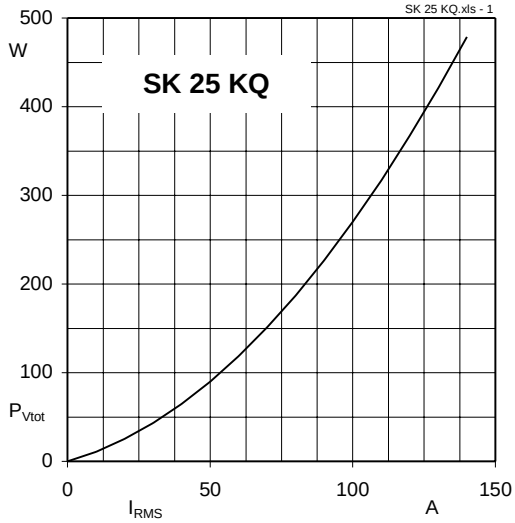


Fig. 1 Power dissipation per module vs. rms current

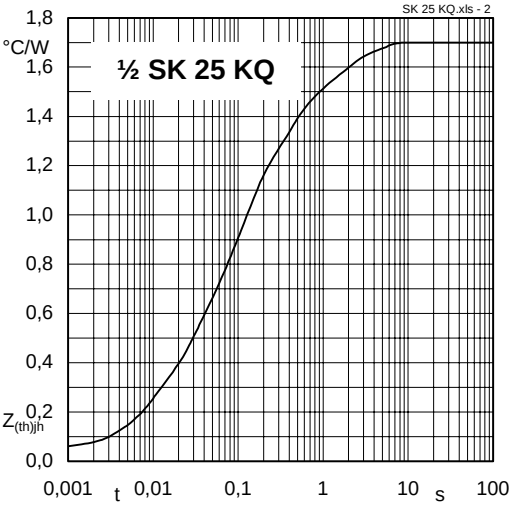


Fig. 2 Transient thermal impedance vs. time

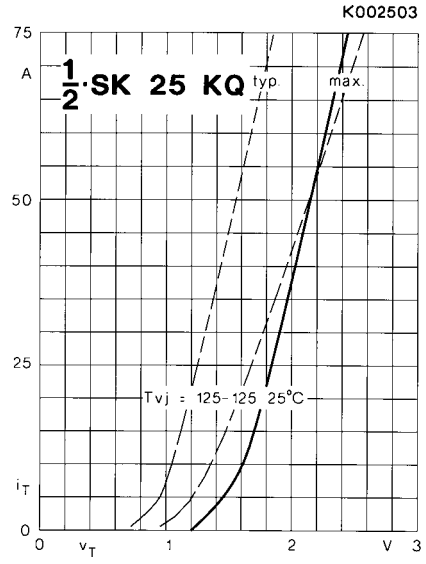


Fig. 3 On-state characteristics

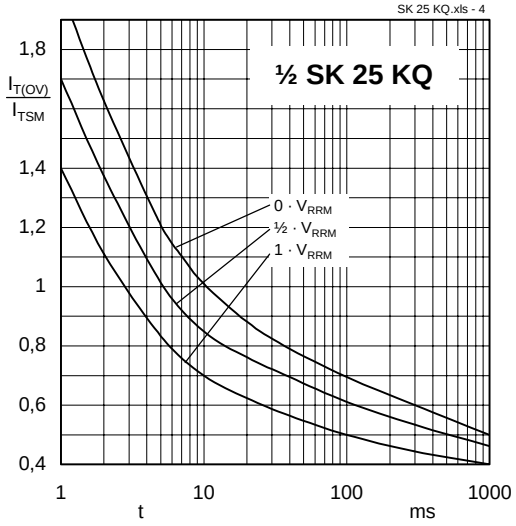


Fig. 4 Surge overload current vs. time

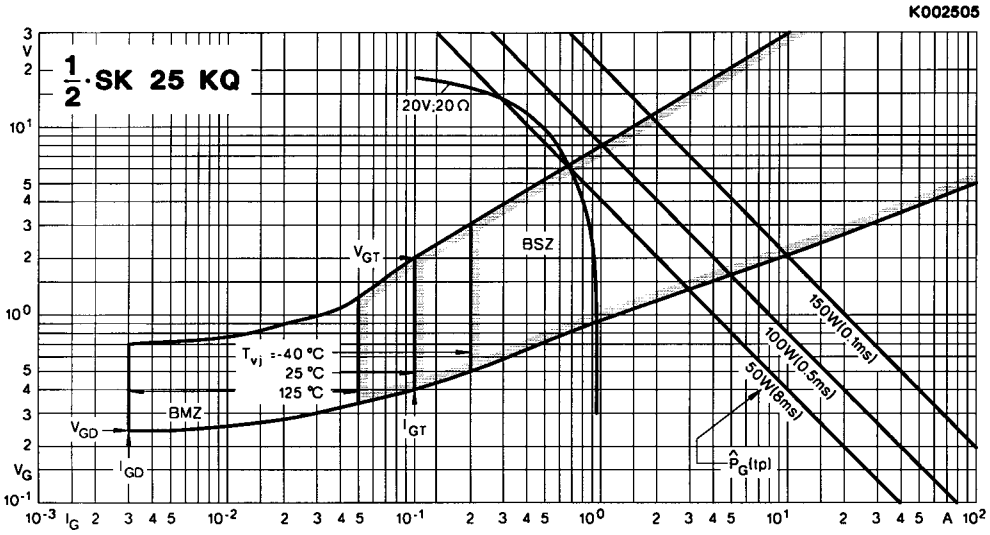
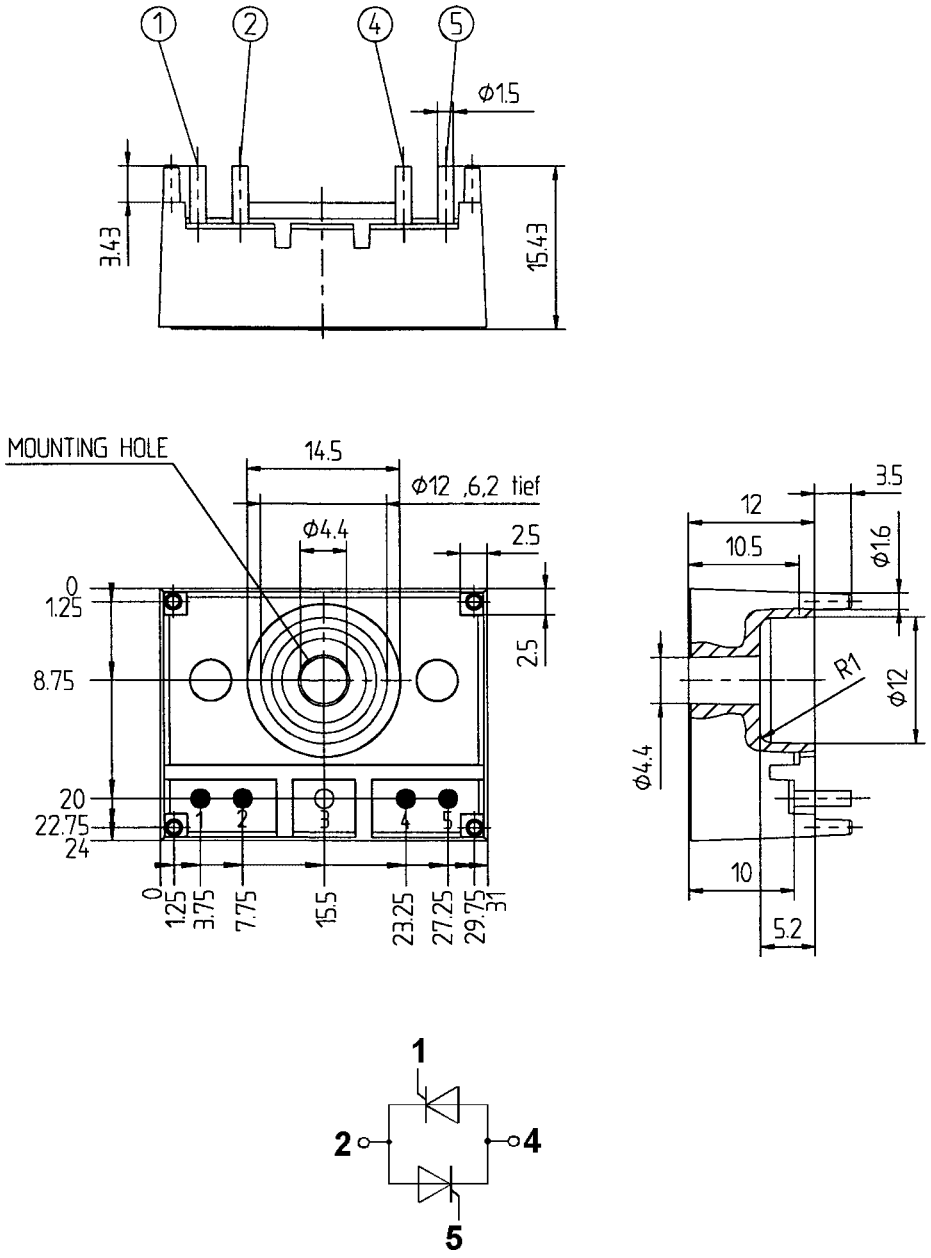


Fig. 5 Gate trigger characteristics

SEMITOP® 1
SK 25 KQ

Case T 1



Dimensions in mm

