

V_{RSM}	V_{RRM} V_{DRM}	I_{RMS} (maximum values for continuous operation) ($T_h = 85\text{ °C}$)	
		46 A	71 A
900	800	SK 45 KQ 08	SK 70 KQ 08
1300	1200	SK 45 KQ 12	SK 70 KQ 12
1700	1600	SK 45 KQ 16	SK 70 KQ 16

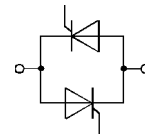
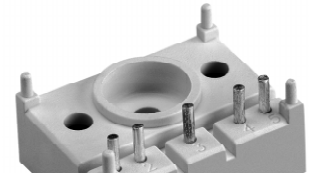
SEMITOP® 1

Antiparallel Thyristor Module

for a.c. controllers

SK 45 KQ SK 70 KQ

Preliminary Data



KQ

Symbol	Conditions	SK 45 KQ	SK 70 KQ	Units
I_{RMS}	W1C; sin 180°; $T_h = 100\text{ °C}$ $T_h = 85\text{ °C}$	32	50	A
		46	71	A
I_{TSM}	$T_{vj} = 25\text{ °C}$; 10 ms $T_{vj} = 125\text{ °C}$; 10 ms	450	1 000	A
		380	900	A
i^2t	$T_{vj} = 25\text{ °C}$; 8,3...10 ms $T_{vj} = 125\text{ °C}$; 8,3...10 ms	1 000	5 000	A ² s
		720	4 000	A ² s
t_{gd} t_{gr}	$T_{vj} = 25\text{ °C}$; $I_G = 1\text{ A}$; $di_G/dt = 1\text{ A}/\mu\text{s}$ $V_D = 0,67 V_{DRM}$	1		μs
		2		μs
$(dv/dt)_{cr}$ $(di/dt)_{cr}$	$T_{vj} = 125\text{ °C}$ $T_{vj} = 125\text{ °C}$; $f = 50...60\text{ Hz}$	1 000	1 000	V/ μs
		50	50	A/ μs
t_q	$T_{vj} = 125\text{ °C}$; typ.	80	80	μs
I_H	$T_{vj} = 25\text{ °C}$; typ. / max	80 / 150	100 / 200	mA
I_L	$T_{vj} = 25\text{ °C}$; $R_G = 33\ \Omega$; typ. / max.	150 / 300	200 / 400	mA
V_T	$T_{vj} = 25\text{ °C}$; ($I_T = \dots$); max.	1,9	1,8	V
		(75)	(120)	A
$V_{T(TO)}$	$T_{vj} = 125\text{ °C}$	1	1	V
r_T I_{DD} ; I_{RD}	$T_{vj} = 125\text{ °C}$ $T_{vj} = 25\text{ °C}$ } $V_{DD} = V_{DRM}$ $T_{vj} = 125\text{ °C}$ } $V_{RD} = V_{RRM}$	10	6	m Ω
		0,5	0,5	mA
		10	15	mA
V_{GT}	$T_{vj} = 25\text{ °C}$; dc	2	2	V
I_{GT}	$T_{vj} = 25\text{ °C}$; dc	100	100	mA
V_{GD}	$T_{vj} = 125\text{ °C}$; dc	0,25	0,25	V
I_{GD}	$T_{vj} = 125\text{ °C}$; dc	3	5	mA
R_{thjh}	sin 180° per thyristor per W1C	1,2	0,8	K/W
		0,6	0,4	K/W
T_{vj}		- 40 ... + 125		°C
T_{stg}		- 40 ... + 125		°C
T_{solder}	terminals, 10 s	260		°C
V_{isol} M_1	a.c. 50 Hz; r.m.s. 1 s/1 min case to heatsink	3000 / 2500		V~
			1,5	Nm lb.in. g
w			13	
Case			T 1	

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

Typical Applications

- Soft starters
- Light control (studios, theaters)
- Temperature control

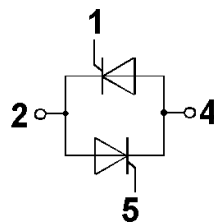
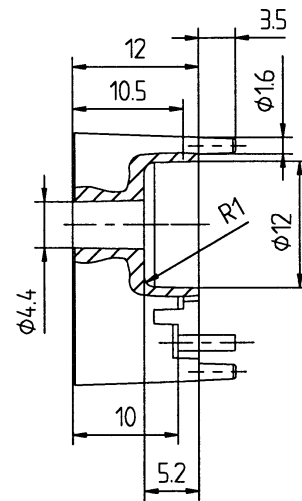
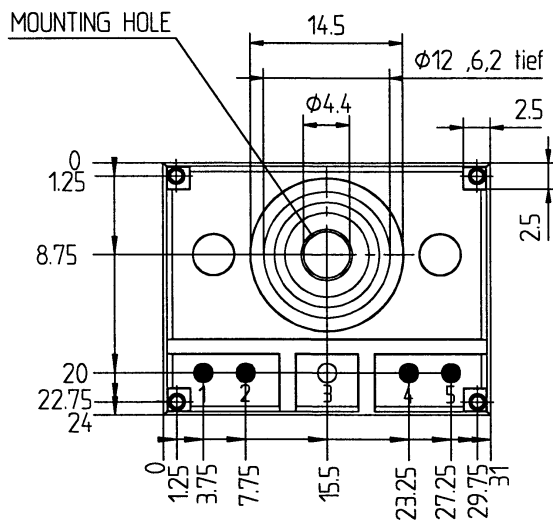
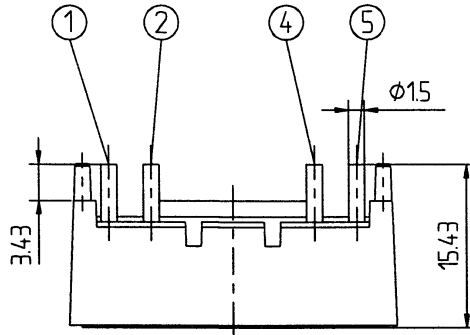
SK 45 KQ, SK 70 KQ

SEMITOP® 1

SK 45 KQ

SK 70 KQ

Case T 1



Dimensions in mm