

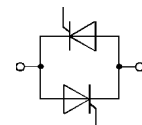
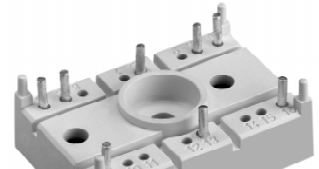
V_{RSM}	V_{RRM} V_{DRM}	I_{RMS} (maximum values for continuous operation) ($T_h = 85\text{ °C}$)	
V	V	105 A	138 A
900	800	SK 100 KQ 08	SK 120 KQ 08
1300	1200	SK 100 KQ 12	SK 120 KQ 12
1700	1600	SK 100 KQ 16	SK 120 KQ 16

SEMITOP® 2

Antiparallel Thyristor Module
for a.c. controllers

SK 100 KQ SK 120 KQ

Preliminary Data



KQ

Symbol	Conditions	SK 100 KQ	SK 120 KQ	Units	
I_{RMS}	W1C; sin 180°; $T_h = 100\text{ °C}$ $T_h = 85\text{ °C}$	74	97	A	
		105	138	A	
I_{TSM}	$T_{vj} = 25\text{ °C}$; 10 ms	1 500	2 000	A	
	$T_{vj} = 125\text{ °C}$; 10 ms	1 350	1 800	A	
	i^2t	$T_{vj} = 25\text{ °C}$; 8,3...10 ms	11 250	20 000	A ² s
		$T_{vj} = 125\text{ °C}$; 8,3...10 ms	9 100	16 200	A ² s
t_{gd}	$T_{vj} = 25\text{ °C}$; $I_G = 1\text{ A}$; $di_G/dt = 1\text{ A}/\mu\text{s}$	1		μs	
t_{gr}	$V_D = 0,67 V_{DRM}$	2		μs	
$(dv/dt)_{cr}$	$T_{vj} = 125\text{ °C}$	1 000		V/ μs	
$(di/dt)_{cr}$	$T_{vj} = 125\text{ °C}$; $f = 50\text{...}60\text{ Hz}$	50		A/ μs	
t_q	$T_{vj} = 125\text{ °C}$; typ.	80		μs	
I_H	$T_{vj} = 25\text{ °C}$; typ. / max	100 / 200		mA	
I_L	$T_{vj} = 25\text{ °C}$; $R_G = 33\ \Omega$; typ. / max.	200 / 500		mA	
V_T	$T_{vj} = 25\text{ °C}$; ($I_T = \dots$); max.	1,8	1,85	V	
		(200)	(300)	A	
$V_{T(TO)}$	$T_{vj} = 125\text{ °C}$	0,9	0,9	V	
r_T	$T_{vj} = 125\text{ °C}$	4,5	3,5	m Ω	
I_{DD} ; I_{RD}	$T_{vj} = 25\text{ °C}$ } $V_{DD} = V_{DRM}$ $T_{vj} = 125\text{ °C}$ } $V_{RD} = V_{RRM}$	1	1	mA	
		20	20	mA	
V_{GT}	$T_{vj} = 25\text{ °C}$; dc	2		V	
I_{GT}	$T_{vj} = 25\text{ °C}$; dc	100		mA	
V_{GD}	$T_{vj} = 125\text{ °C}$; dc	0,25		V	
I_{GD}	$T_{vj} = 125\text{ °C}$; dc	5		mA	
R_{thjh}	sin 180° per thyristor per W1C	0,6	0,45	K/W	
		0,3	0,225	K/W	
T_{vj}		- 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	case to heatsink	SI units		Nm	
		US units		lb.in.	
w		19		g	
Case		T 2			

Features

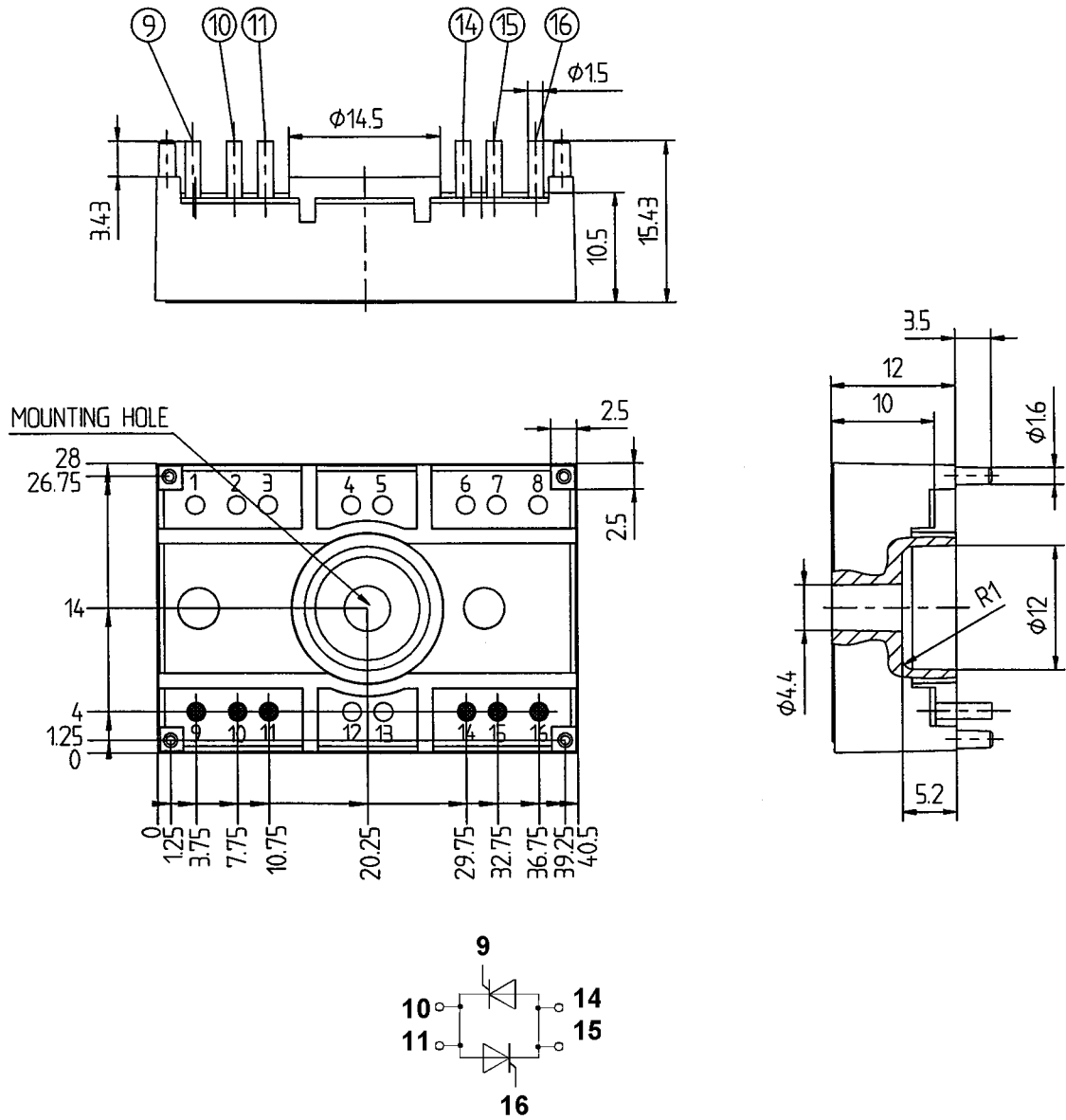
- Compact design
- One screw mounting
- Heat transfer and isolation through direct copper bonded aluminium oxide ceramic (DCB)
- Glass passivated thyristor chips
- Up to 1600 V reverse voltage

Typical Applications

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

SEMITOP® 2
SK 100 KQ
SK 120 KQ

Case T 2



Dimensions in mm