

SEMiSTART

Antiparallel thyristors for softstart

SKKQ 1500

Features

- Compact design
- Thyristor with amplifying gate
- Pressure contact technology

Typical Applications*

- Soft Starters

Remarks

- Please note: This module has no soft mold protection around the chip. It is therefore susceptible to environmental influences (dust, humidity, etc.). The humidity test according to IEC60068-2-67 is not passed by this product.
- Recommendation: The devices should be installed in control cabinets of IP54 degree of protection.

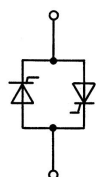
1) T_{vjmax} up to 150°C is allowable for overload conditions, max. time period for the overload condition is 20s.

Absolute Maximum Ratings

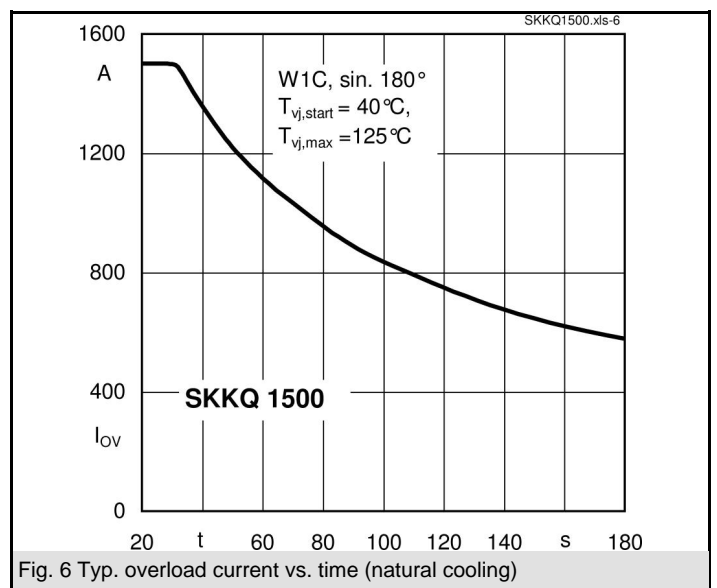
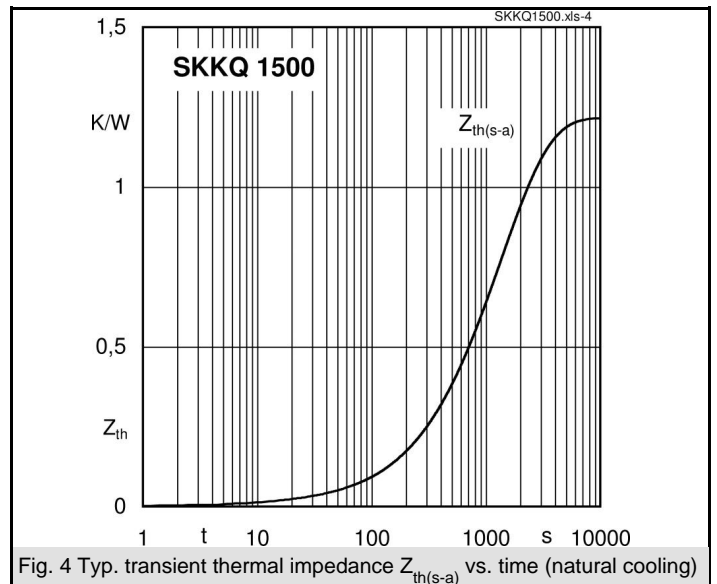
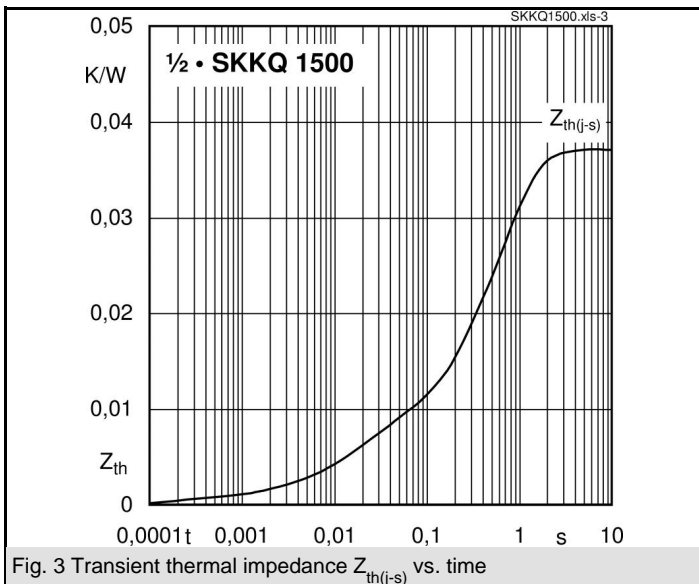
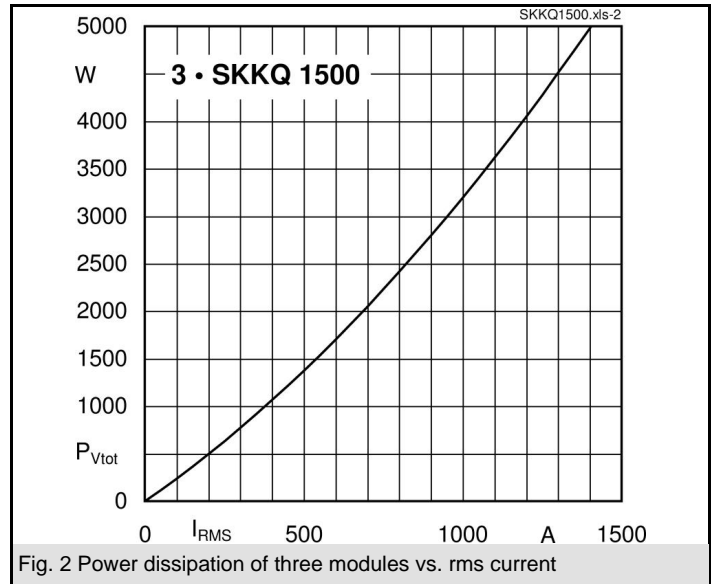
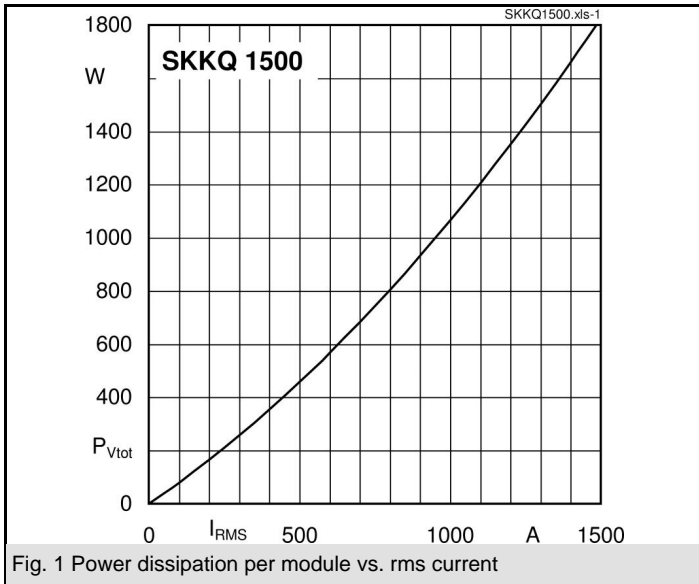
Symbol	Conditions	Values	Units
$I_{overload}$	W1C; sin. 180°; 20 sec.; $T_{vjmax.} = 150\text{ °C}$; $T_{vjstart} = 40\text{ °C}$	1500	A
I_{TSM}	$T_{vj} = 25\text{ °C}$; 10 ms	17000	A
	$T_{vj} = 125\text{ °C}$; 10 ms	15000	A
I^2t	$T_{vj} = 25\text{ °C}$; 8,3 ... 10 ms	1445000	A ² s
	$T_{vj} = 125\text{ °C}$; 8,3 ... 10 ms	1125000	A ² s
SKKQ 1500/14			
V_{RSM}		1500	V
$V_{RRM}; V_{DRM}$		1400	V
SKKQ 1500/18			
V_{RSM}		1900	V
$V_{RRM}; V_{DRM}$		1800	V
T_{vj}		-40 ... +125 ¹⁾	°C
T_{stg}		-40 ... +125	°C

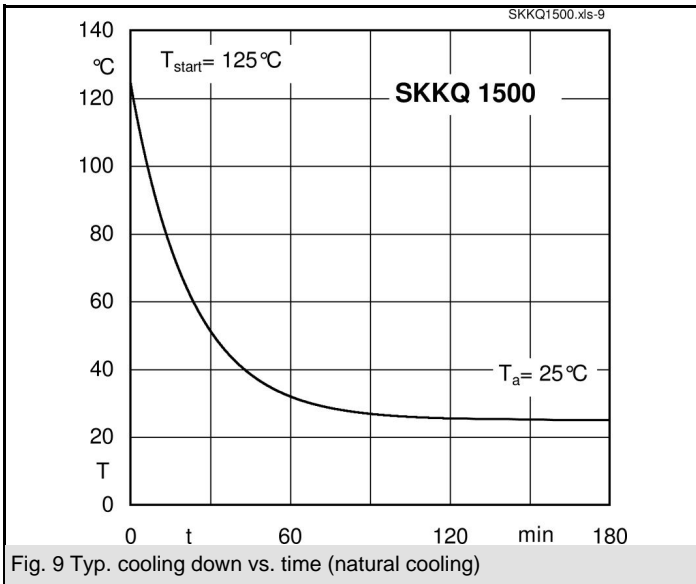
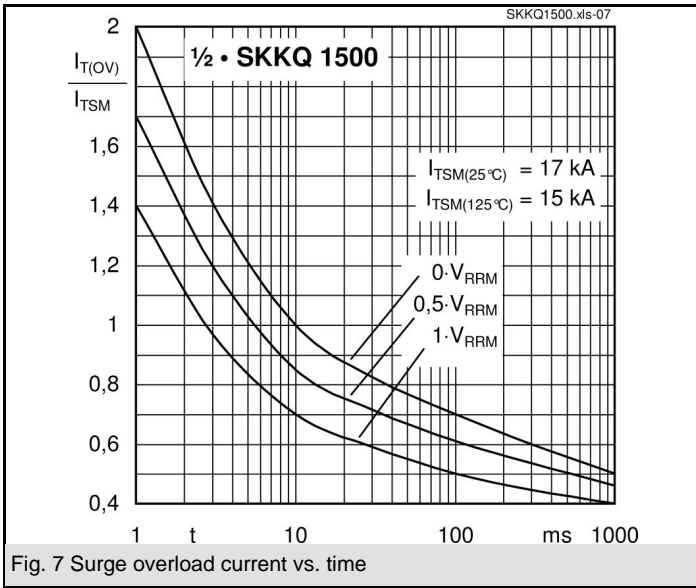
Characteristics

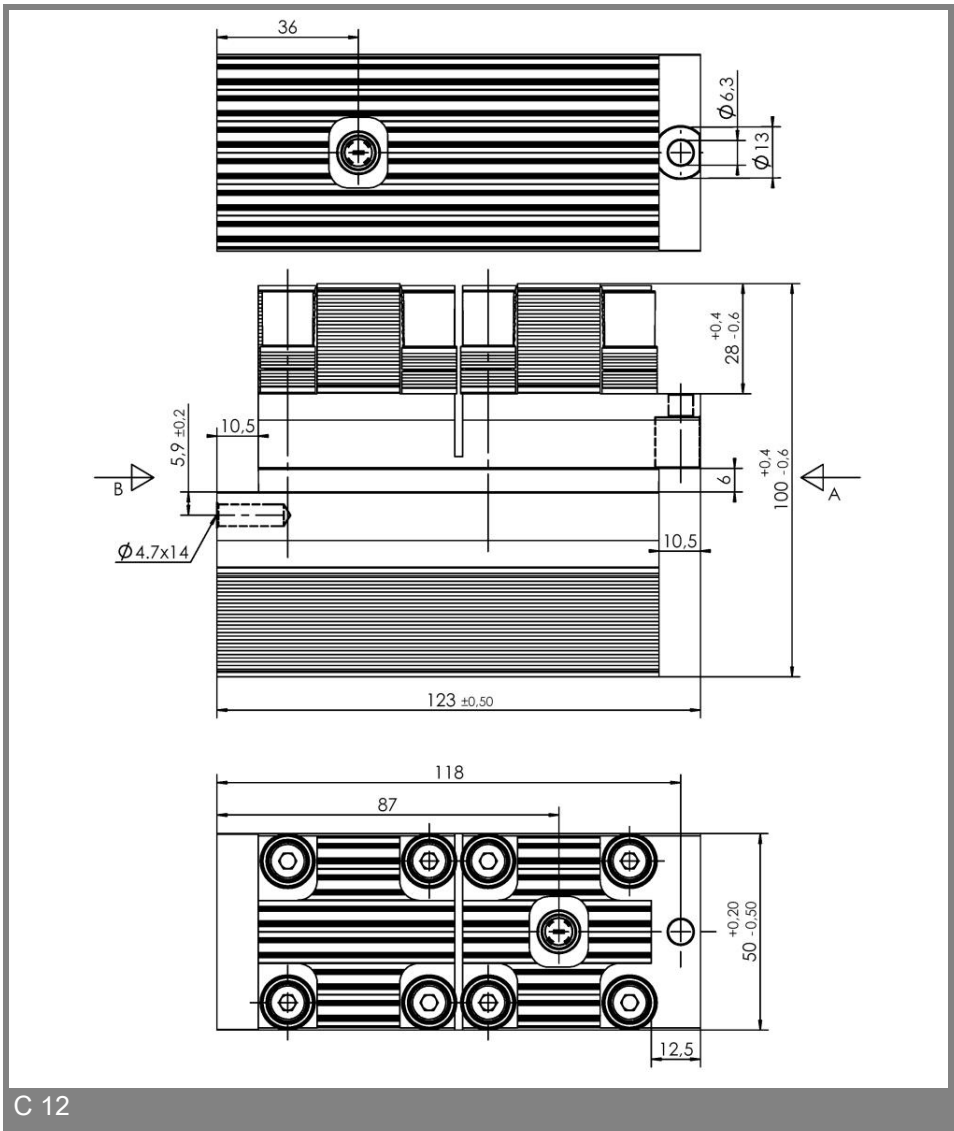
Symbol	Conditions	min.	typ.	max.	Units
V_T	$T_{vj} = 25\text{ °C}$; $I_T = 1700\text{ A}$			1,5	V
$V_{T(TO)}$	$T_{vj} = 125\text{ °C}$			0,85	V
r_T	$T_{vj} = 125\text{ °C}$			0,3	mΩ
$I_{DD}; I_{RD}$	$T_{vj} = 125\text{ °C}$; $V_{RD} = V_{RRM}$; per module			190	mA
t_{gd}	$T_{vj} = 25\text{ °C}$; $I_G = 1\text{ A}$; $di_G/dt = 1\text{ A}/\mu\text{s}$		1		μs
t_{gr}	$V_D = 0,67 * V_{DRM}$		2		μs
$(dv/dt)_{cr}$	$T_{vj} = 125\text{ °C}$		1000		V/μs
$(di/dt)_{cr}$	$T_{vj} = 125\text{ °C}$; $f = 50 \dots 60\text{ Hz}$		200		A/μs
t_q	$T_{vj} = 125\text{ °C}$		200		μs
I_H	$T_{vj} = 25\text{ °C}$		150	500	mA
I_L	$T_{vj} = 25\text{ °C}$; $R_G = 33\text{ Ω}$		300	2000	mA
V_{GT}	$T_{vj} = 25\text{ °C}$; d.c.	3			V
I_{GT}	$T_{vj} = 25\text{ °C}$; d.c.	200			mA
V_{GD}	$T_{vj} = 125\text{ °C}$; d.c.			0,25	V
I_{GD}	$T_{vj} = 125\text{ °C}$; d.c.			10	mA
$R_{th(j-s)}$	cont.; per thyristor			0,037	K/W
M_t			5 ± 15%		Nm
m	approx.		1200		g
Case			C 12		



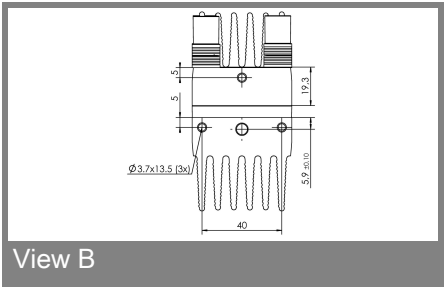
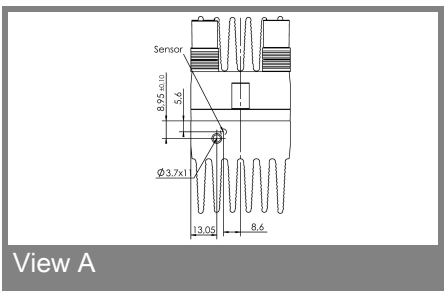
W1C







C 12



* The specifications of our components may not be considered as an assurance of component characteristics. Components have to be tested for the respective application. Adjustments may be necessary. The use of SEMIKRON products in life support appliances and systems is subject to prior specification and written approval by SEMIKRON. We therefore strongly recommend prior consultation of our personal.