

## SEMiSTART

### Antiparallel thyristors for softstart

#### SKKQ 1200

#### 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.

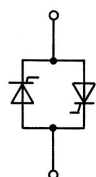
1)  $T_{vjmax}$  up to 150°C is allowable for overload conditions, max. time period for the overload condition is 20s.

#### Absolute Maximum Ratings

Symbol	Conditions	Values	Units
$I_{overload}$	W1C; sin. 180°; 20 sec.; $T_{vjmax} = 150\text{ °C}$ ; $T_{vjstart} = 40\text{ °C}$	1225	A
$I_{TSM}$	$T_{vj} = 25\text{ °C}$ ; 10 ms	9500	A
	$T_{vj} = 125\text{ °C}$ ; 10 ms	8000	A
$I^2t$	$T_{vj} = 25\text{ °C}$ ; 8,3 ... 10 ms	451000	A <sup>2</sup> s
	$T_{vj} = 125\text{ °C}$ ; 8,3 ... 10 ms	320000	A <sup>2</sup> s
SKKQ 1200/14			
$V_{RSM}$		1500	V
$V_{RRM}, V_{DRM}$		1400	V
SKKQ 1200/18			
$V_{RSM}$		1900	V
$V_{RRM}, V_{DRM}$		1800	V
$T_{vj}$		-40 ... +125 <sup>1)</sup>	°C
$T_{stg}$		-40 ... +125	°C

#### Characteristics

Symbol	Conditions	min.	typ.	max.	Units
$V_T$	$T_{vj} = 25\text{ °C}$ ; $I_T = 1500\text{ A}$			1,65	V
$V_{T(TO)}$	$T_{vj} = 125\text{ °C}$			0,9	V
$r_T$	$T_{vj} = 125\text{ °C}$			0,5	mΩ
$I_{DD}, I_{RD}$	$T_{vj} = 125\text{ °C}$ ; $V_{RD} = V_{RRM}$ ; per module			120	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
$t_q$	$T_{vj} = 125\text{ °C}$		150		μs
$I_H$	$T_{vj} = 25\text{ °C}$		150	500	mA
$I_L$	$T_{vj} = 25\text{ °C}$ ; $R_G = 33\ \Omega$		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			0,066	K/W
$M_t$			5 ± 15%		Nm
m	approx.		1200		g
Case			C 12		



W1C

