## **SKT 1000**



### **Capsule Thyristor**

### Line Thyristor

#### **SKT 1000**

#### **Features**

- Hermetic metal case with ceramic insulator
- Capsule package for double sided cooling
- · International standard case
- Off-state and reverse voltages up to 2800 V
- · Amplifying gate

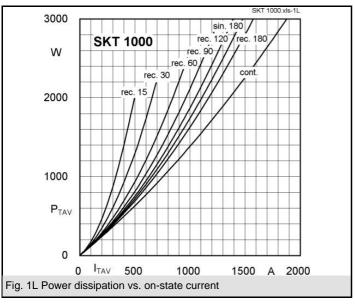
#### **Typical Applications\***

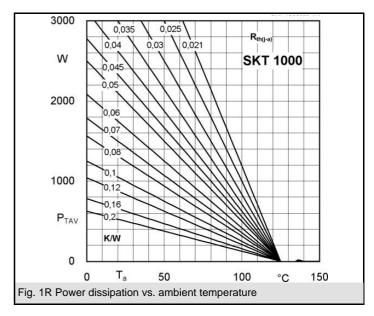
- DC motor control (e. g. for machine tools)
- Controlled rectifiers
  (e. g. for battery charging)
- AC controllers
  Ac for temperate
  - (e. g. for temperature control)
- Recommended snubber network e. g. for  $V_{VRMS} \le 400 \text{ V}$ : R = 33  $\Omega/32$  W, C = 1  $\mu\text{F}$

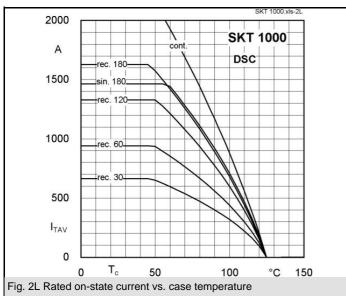
$V_{RSM}$	V <sub>RRM</sub> , V <sub>DRM</sub>	I <sub>TRMS</sub> = 2300 A (maximum value for continuous operation)		
V	V	I <sub>TAV</sub> = 1000 A (sin. 180; DSC; T <sub>c</sub> = 85 °C)		
1300	1200	SKT 1000/12E		
1700	1600	SKT 1000/16E		
2300	2200	SKT 1000/22EL2		
2700	2600	SKT 1000/26EL2		
2900	2800	SKT 1000/28EL2		

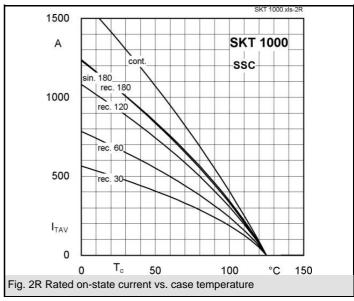
Symbol	Conditions	Values	Units
I <sub>TAV</sub>	sin. 180; T <sub>c</sub> = 100 (85) °C;	710 (1000 )	Α
I <sub>D</sub>	2 x P8/180; T <sub>a</sub> = 45 °C; B2 / B6	360 / 500	Α
	2 x P8/180F; T <sub>a</sub> = 35 °C; B2 / B6	1250 /1750	Α
I <sub>RMS</sub>	2 x P8/180; T <sub>a</sub> = 45 °C; W1C	400	Α
I <sub>TSM</sub>	T <sub>vj</sub> = 25 °C; 10 ms	19000	Α
	$T_{vj} = 125 ^{\circ}\text{C}; 10 \text{ms}$	16500	Α
i²t	T <sub>vj</sub> = 25 °C; 8,3 10 ms	1800000	A²s
	$T_{vj}$ = 125 °C; 8,3 10 ms	1360000	A²s
$V_T$	T <sub>vi</sub> = 25 °C; I <sub>T</sub> = 3600 A	max. 2	V
$V_{T(TO)}$	T <sub>vj</sub> = 125 °C	max. 1,14	V
r <sub>T</sub>	T <sub>vj</sub> = 125 °C	max. 0,243	mΩ
I <sub>DD</sub> ; I <sub>RD</sub>	$T_{vj} = 125 \text{ °C}; V_{RD} = V_{RRM}; V_{DD} = V_{DRM}$	max. 160	mA
t <sub>gd</sub>	$T_{vj} = 25 ^{\circ}\text{C}; I_{G} = 1 \text{A}; di_{G}/dt = 1 \text{A/}\mu\text{s}$	1	μs
t <sub>gr</sub>	$V_{D} = 0.67 * V_{DRM}$	2	μs
(di/dt) <sub>cr</sub>	T <sub>vi</sub> = 125 °C	max. 125	A/µs
(dv/dt) <sub>cr</sub>	T <sub>vi</sub> = 125 °C	max. 1000	V/µs
t <sub>q</sub>	$T_{vj} = 125 ^{\circ}\text{C}$	100 250	μs
I <sub>H</sub>	$T_{vj} = 25 ^{\circ}\text{C}$ ; typ. / max.	250 / 500	mA
IL	$T_{vj}$ = 25 °C; $R_G$ = 33 $\Omega$ ; typ. / max.	500 / 2000	mA
V <sub>GT</sub>	$T_{vj} = 25 ^{\circ}\text{C}; \text{d.c.}$	min. 3	V
I <sub>GT</sub>	$T_{vj} = 25 ^{\circ}\text{C}; \text{d.c.}$	min. 250	mA
$V_{GD}$	$T_{vj} = 125 ^{\circ}\text{C}; \text{d.c.}$	max. 0,25	V
$I_{GD}$	$T_{vj}$ = 125 °C; d.c.	max. 10	mA
R <sub>th(j-c)</sub>	cont.; DSC	0,021	K/W
R <sub>th(j-c)</sub>	sin. 180; DSC / SSC	0,0225 / 0,054	K/W
R <sub>th(j-c)</sub>	rec. 120; DSC / SSC	0,027 / 0,06	K/W
R <sub>th(c-s)</sub>	DSC / SSC	0,005 / 0,01	K/W
$T_{vj}$		- 40 <b>+</b> 125	°C
$T_{stg}$		- 40 <b>+</b> 130	°C
V <sub>isol</sub>		-	V~
F	mounting force	22 25	kN
а			m/s²
m	approx.	480	g
Case		B 14	

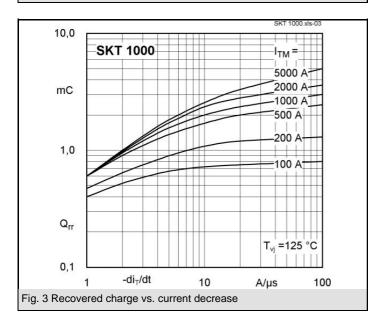


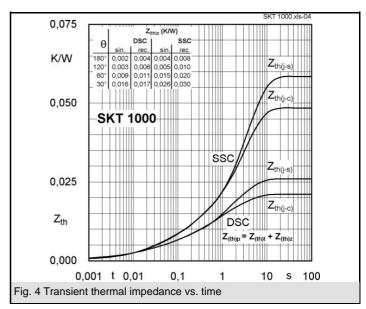




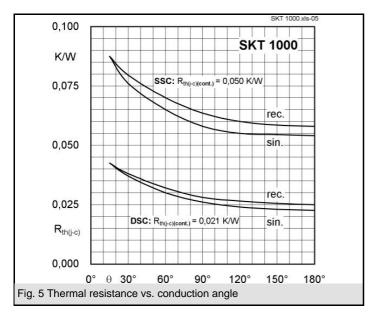


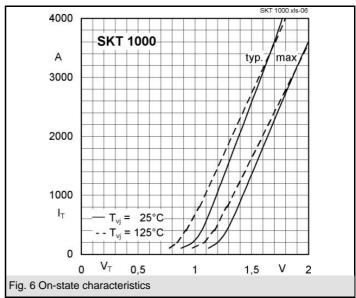


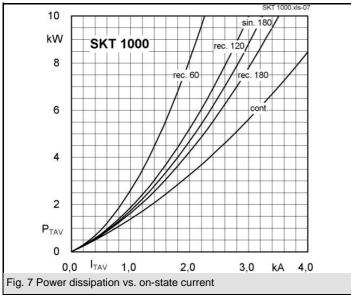


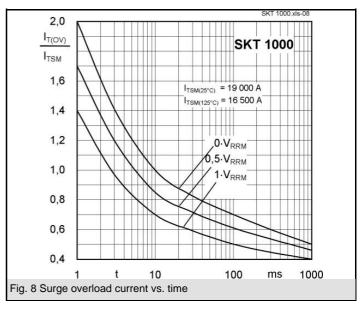


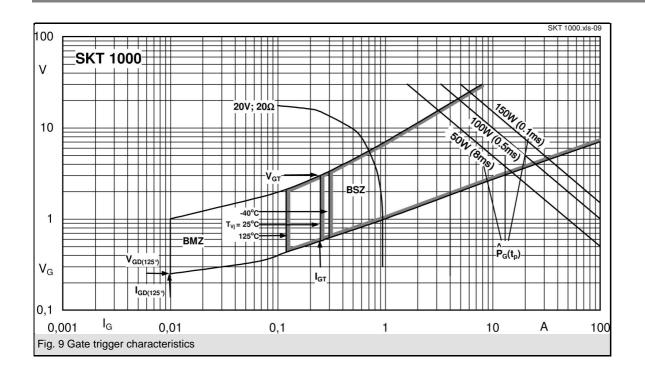
# **SKT 1000**

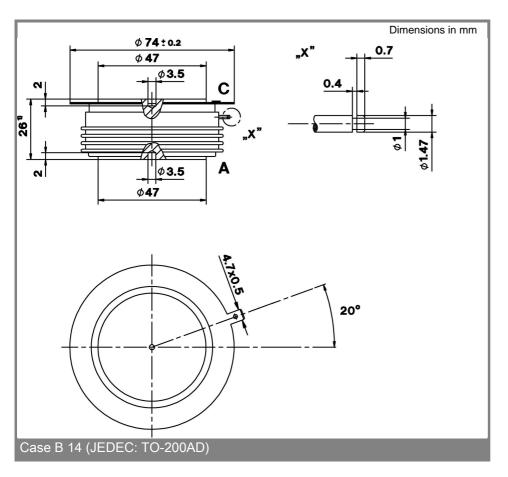


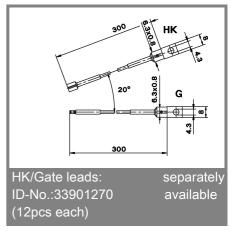












<sup>\*</sup> The specifications of our components may not be considered as an assurance of component characteristics. Components have to be tested for the respective application. Adjustments may be necessary. The use of SEMIKRON products in life support appliances and systems is subject to prior specification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