



Capsule Thyristor

Line Thyristor

SKT 1000

Features

- Hermetic metal case with ceramic insulator
- Capsule package for double sided cooling
- International standard cas
- Amplifying gate

Typical Applications*

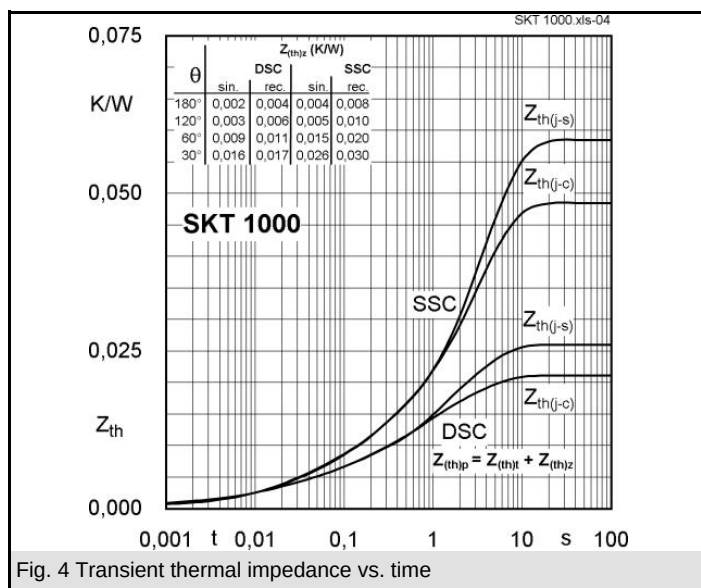
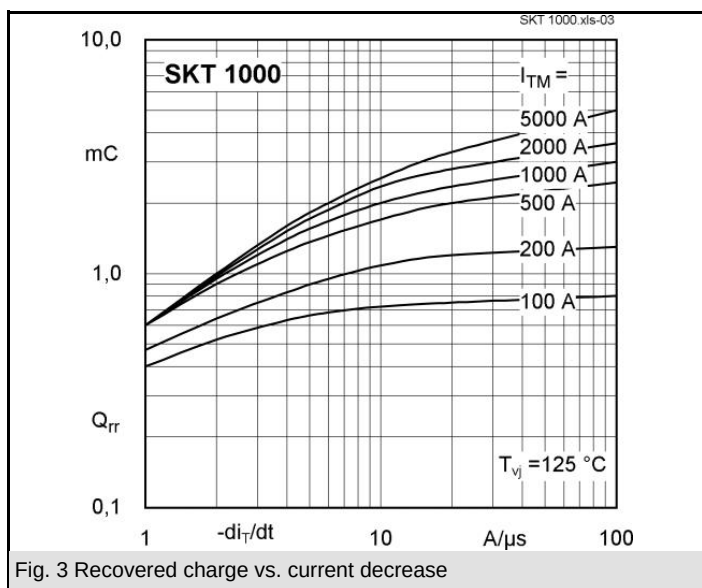
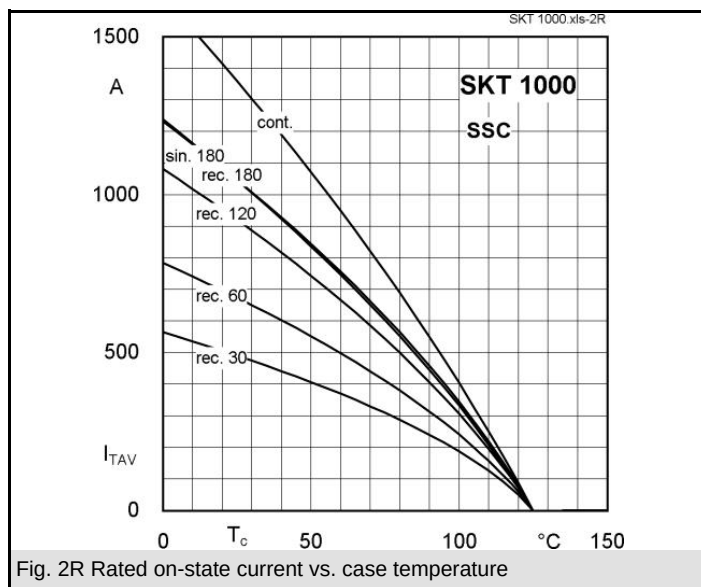
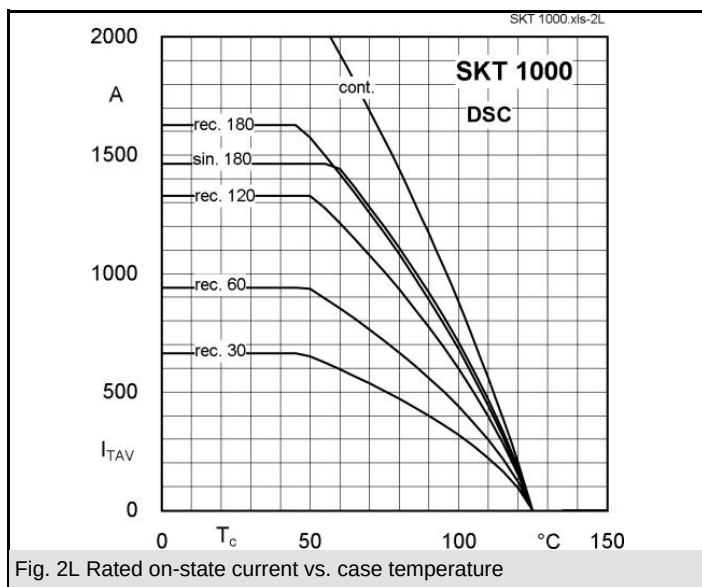
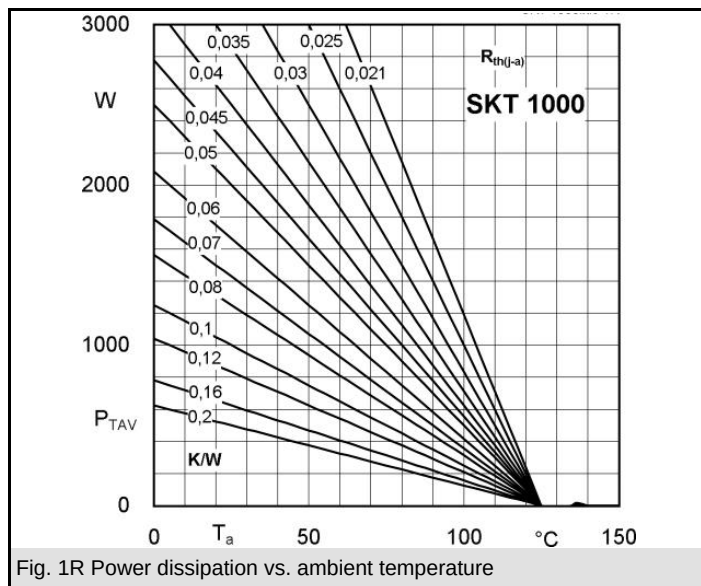
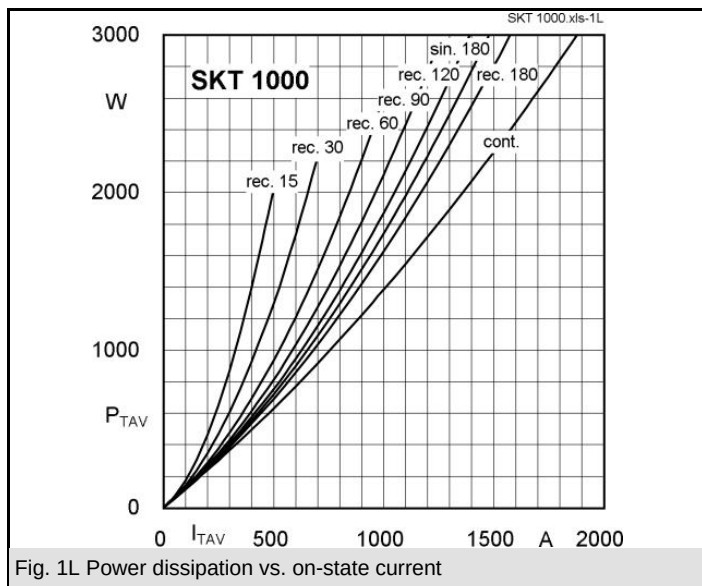
- DC motor control
(e. g. for machine tools)
- Controlled rectifiers
(e. g. for battery charging)
- AC controllers
(e. g. for temperature control)
- Recommended snubber network
e. g. for $V_{VRMS} \leq 400$ V:
 $R = 33 \Omega / 32$ W, $C = 1 \mu F$

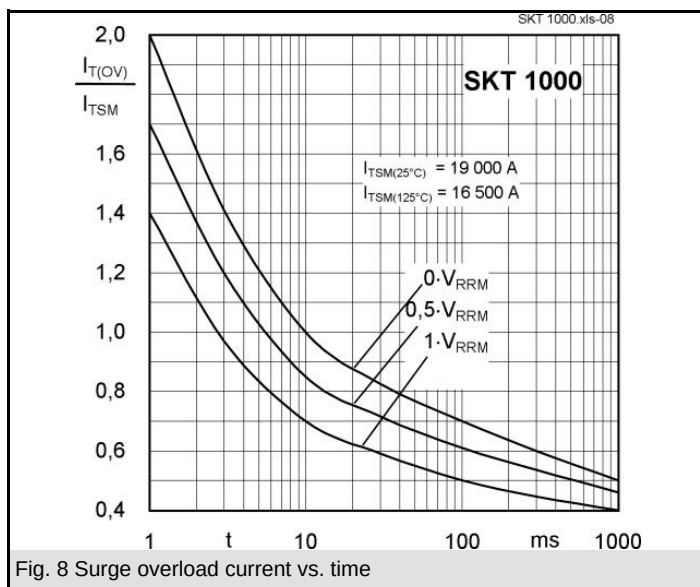
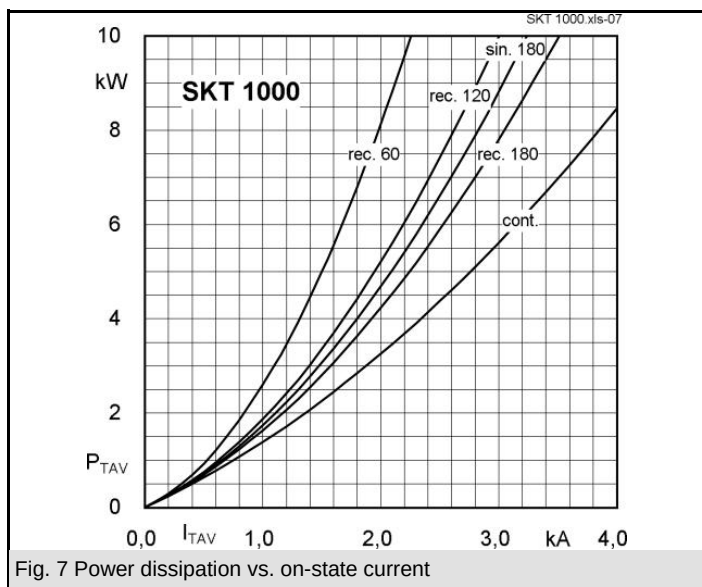
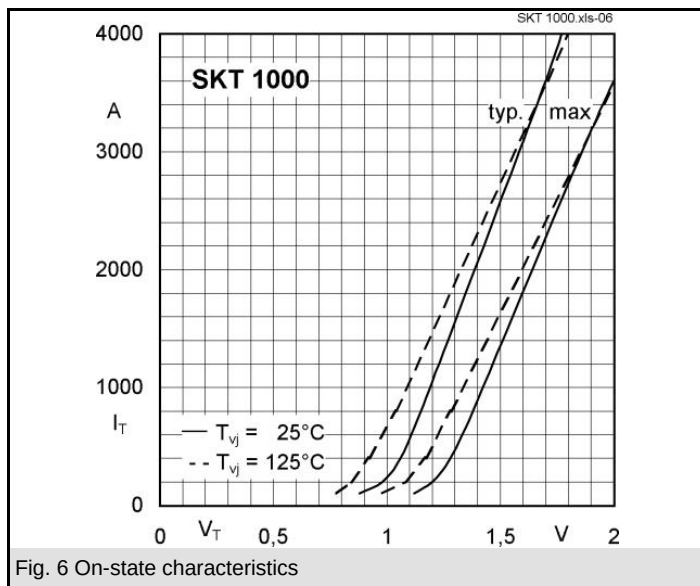
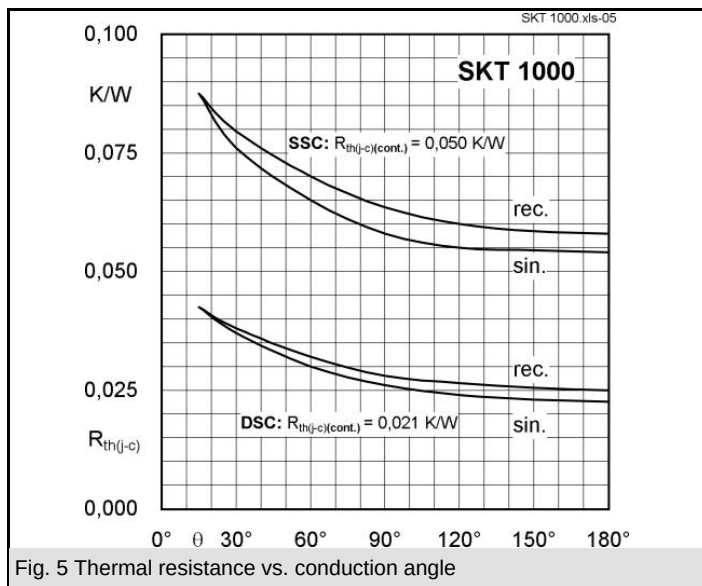
V_{RSM} V	V_{RRM}, V_{DRM} V	$I_{TRMS} = 2300$ A (maximum value for continuous operation) $I_{TAV} = 1000$ A (sin. 180; DSC; $T_c = 85$ °C)		
1300 1700	1200 1600	SKT 1000/12E SKT 1000/16E		

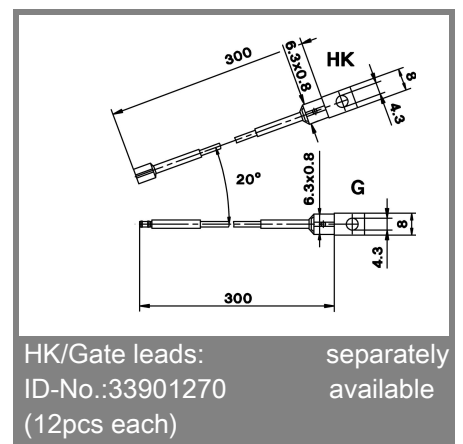
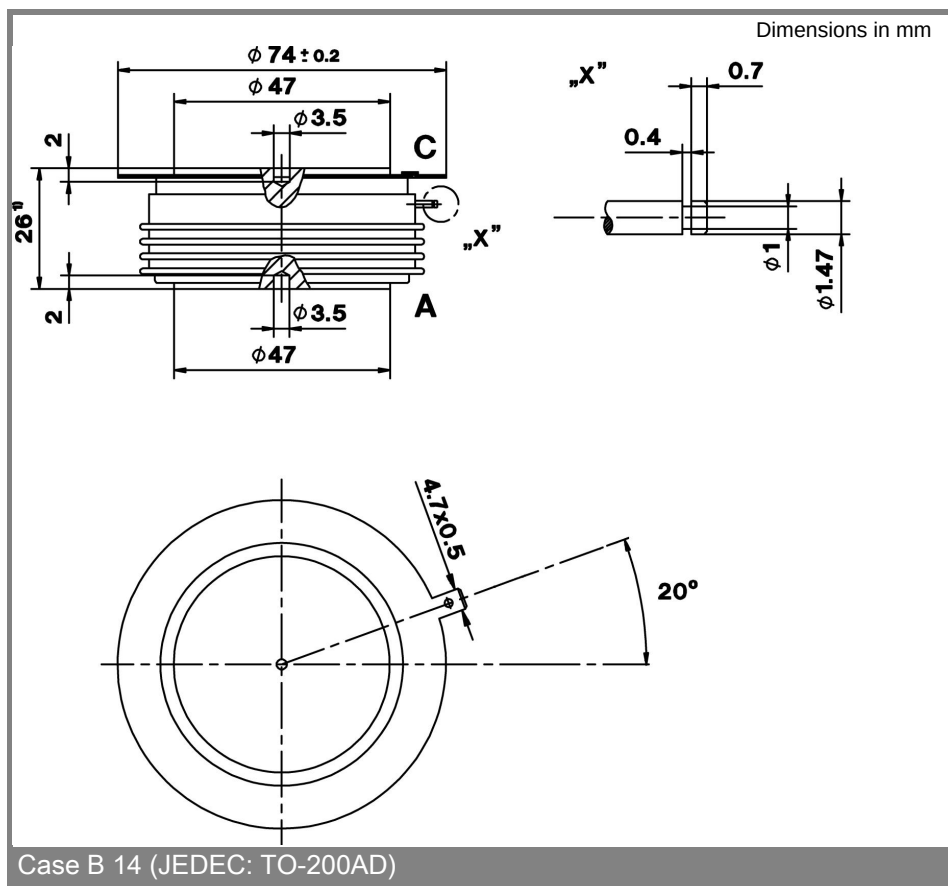
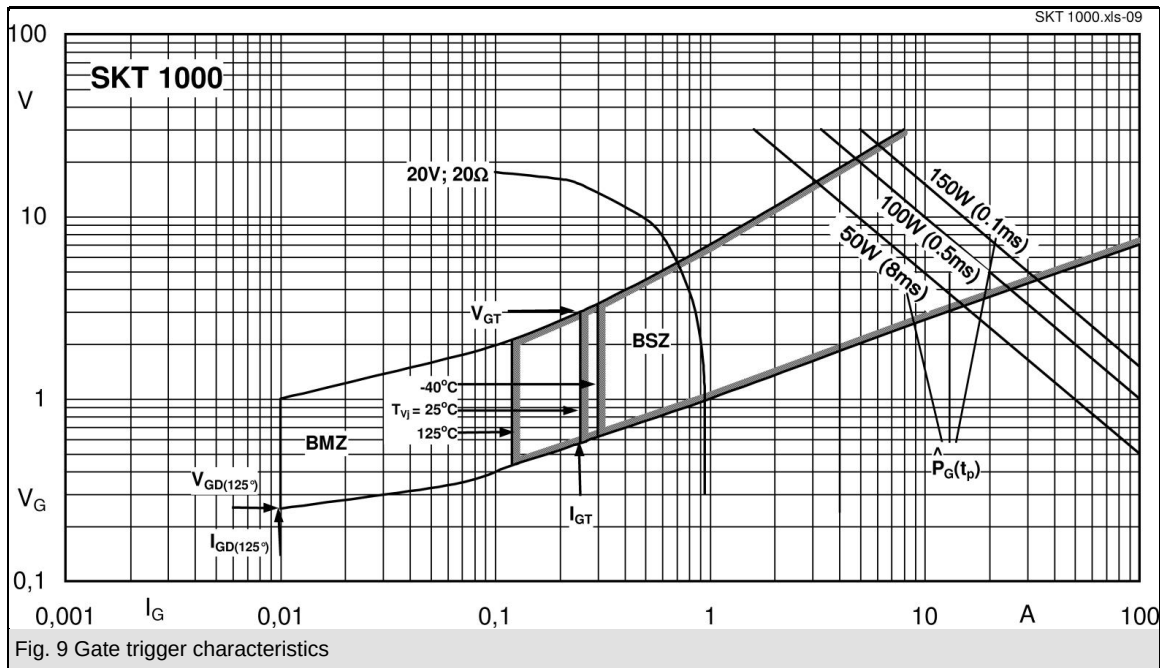
Symbol	Conditions	Values	Units
I_{TAV}	sin. 180; $T_c = 100$ (85) °C;	710 (1000)	A
I_D	2 x P8/180; $T_a = 45$ °C; B2 / B6	360 / 500	A
	2 x P8/180F; $T_a = 35$ °C; B2 / B6	1250 / 1750	A
I_{RMS}	2 x P8/180; $T_a = 45$ °C; W1C	400	A
I_{TSM}	$T_{vj} = 25$ °C; 10 ms	19000	A
	$T_{vj} = 125$ °C; 10 ms	16500	A
i^2t	$T_{vj} = 25$ °C; 8,3 ... 10 ms	1800000	A²s
	$T_{vj} = 125$ °C; 8,3 ... 10 ms	1360000	A²s
V_T	$T_{vj} = 25$ °C; $I_T = 3600$ A	max. 2	V
$V_{T(TO)}$	$T_{vj} = 125$ °C	max. 1,14	V
r_T	$T_{vj} = 125$ °C	max. 0,243	mΩ
I_{DD}, I_{RD}	$T_{vj} = 125$ °C; $V_{RD} = V_{RRM}, V_{DD} = V_{DRM}$	max. 160	mA
t_{gd}	$T_{vj} = 25$ °C; $I_G = 1$ A; $di_G/dt = 1$ A/μs	1	μs
t_{gr}	$V_D = 0,67 * V_{DRM}$	2	μs
$(di/dt)_{cr}$	$T_{vj} = 125$ °C	max. 125	A/μs
$(dv/dt)_{cr}$	$T_{vj} = 125$ °C	max. 1000	V/μs
t_q	$T_{vj} = 125$ °C	100 ... 250	μs
I_H	$T_{vj} = 25$ °C; typ. / max.	250 / 500	mA
I_L	$T_{vj} = 25$ °C; $R_G = 33 \Omega$; typ. / max.	500 / 2000	mA
V_{GT}	$T_{vj} = 25$ °C; d.c.	min. 3	V
I_{GT}	$T_{vj} = 25$ °C; d.c.	min. 250	mA
V_{GD}	$T_{vj} = 125$ °C; d.c.	max. 0,25	V
I_{GD}	$T_{vj} = 125$ °C; d.c.	max. 10	mA
$R_{th(j-c)}$	cont.; DSC	0,021	K/W
$R_{th(j-c)}$	sin. 180; DSC / SSC	0,0225 / 0,054	K/W
$R_{th(j-c)}$	rec. 120; DSC / SSC	0,027 / 0,06	K/W
$R_{th(c-s)}$	DSC / SSC	0,005 / 0,01	K/W
T_{vj}		- 40 ... + 125	°C
T_{stg}		- 40 ... + 130	°C
V_{isol}		-	V~
F	mounting force	22 ... 25	kN
a			m/s²
m	approx.	480	g
Case		B 14	



SKT







* 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 staff.