



Capsule Thyristor

Line Thyristor

SKT 1800

Features

- Hermetic metal case with ceramic insulator
- Capsule package for double sided cooling
- Shallow design with single sided cooling
- Off-state and reverse voltages up to 1600 V
- Amplifying gate

Typical Applications*

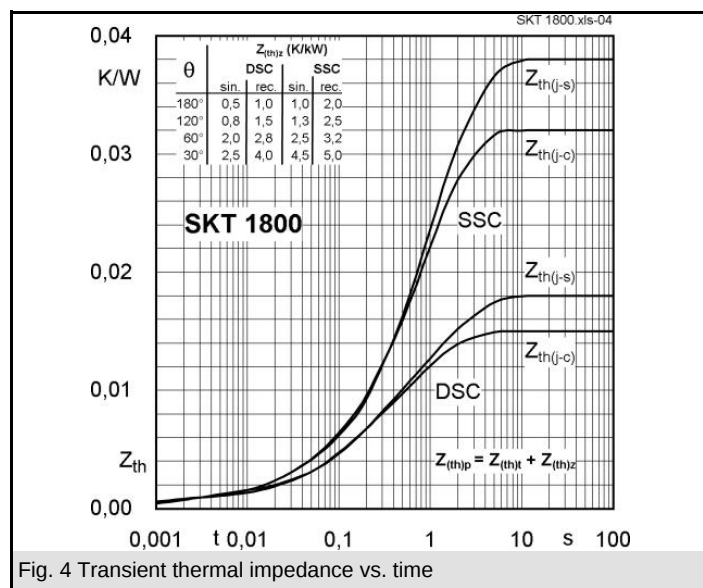
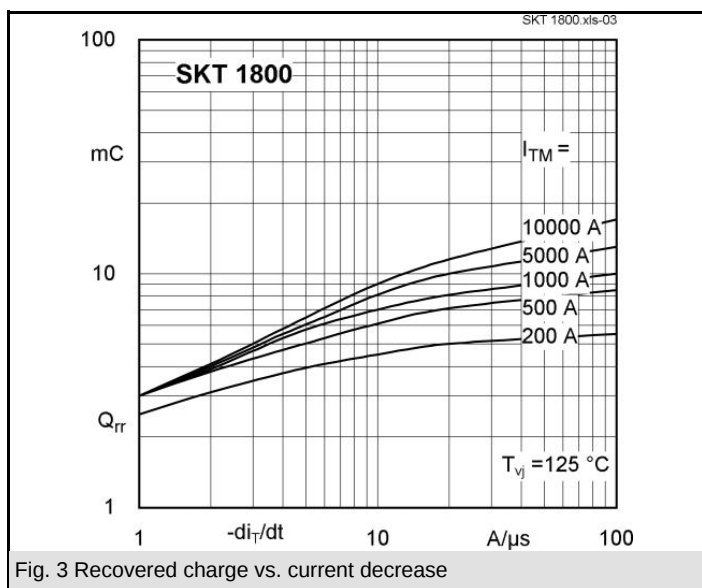
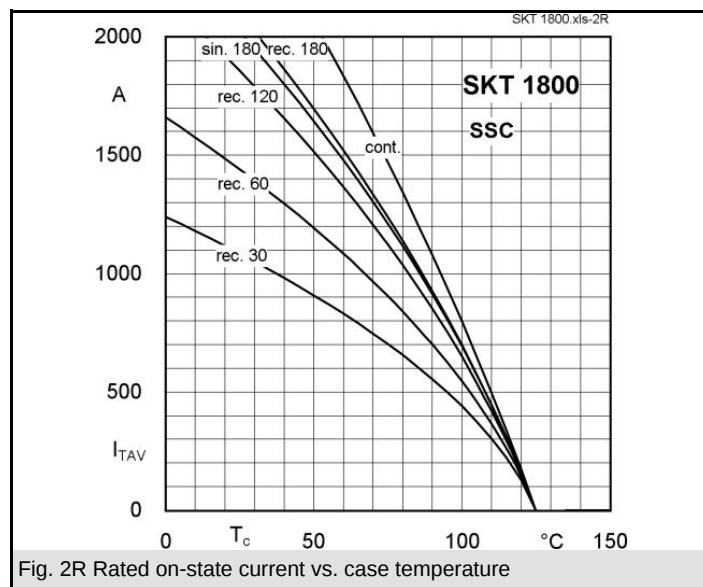
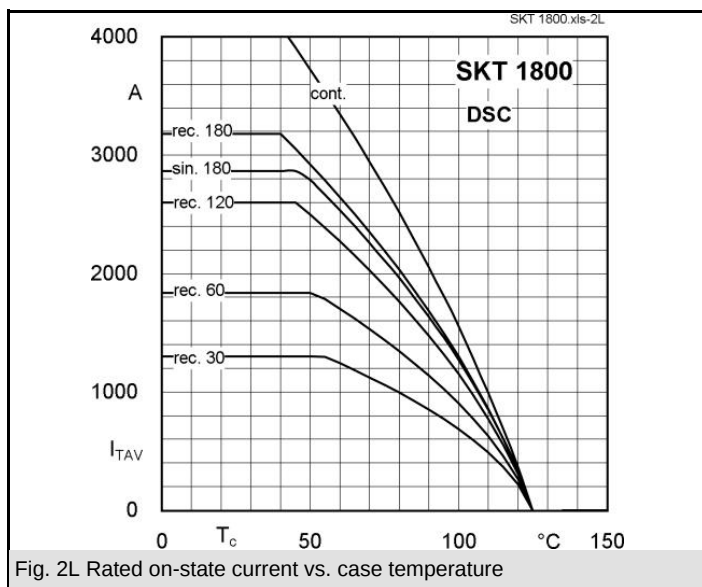
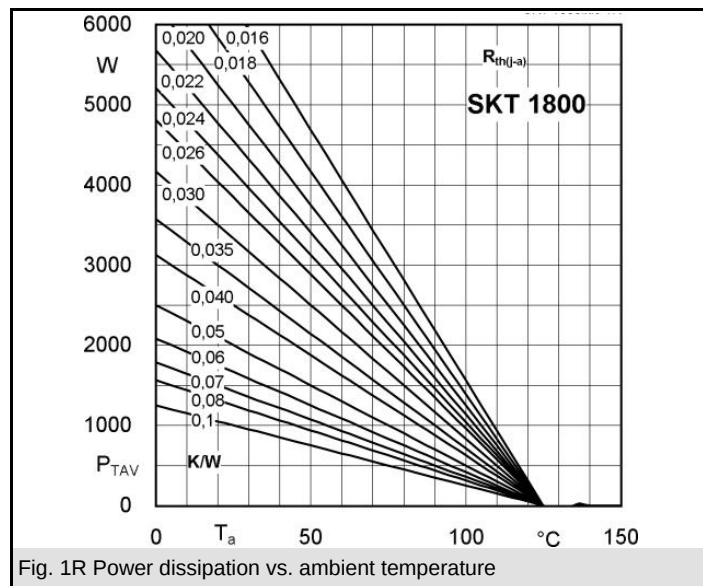
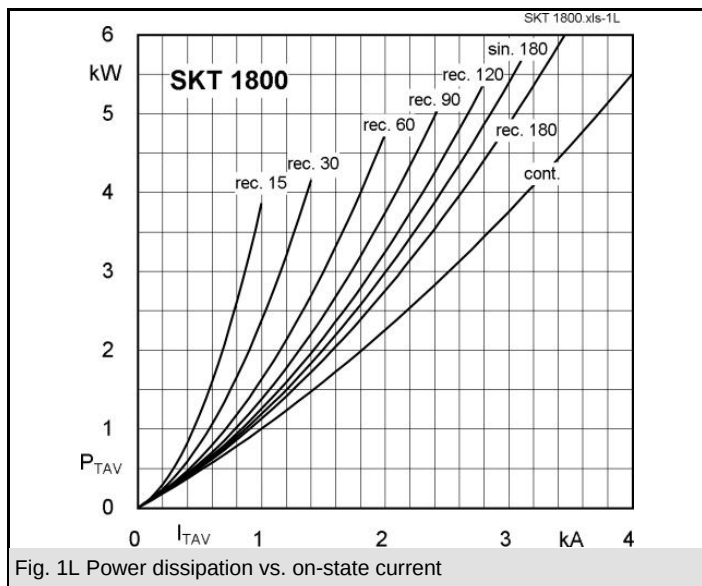
- DC motor control (e. g. for machine tools)
- Controlled rectifiers (e. g. for battery charging)
- AC controllers (e. g. for temperature control)
- Soft starters for AC motors
- Recommended snubber network
e. g. for $V_{VRMS} \leq 400$ V:
 $R = 33 \Omega / 32$ W, $C = 1 \mu F$

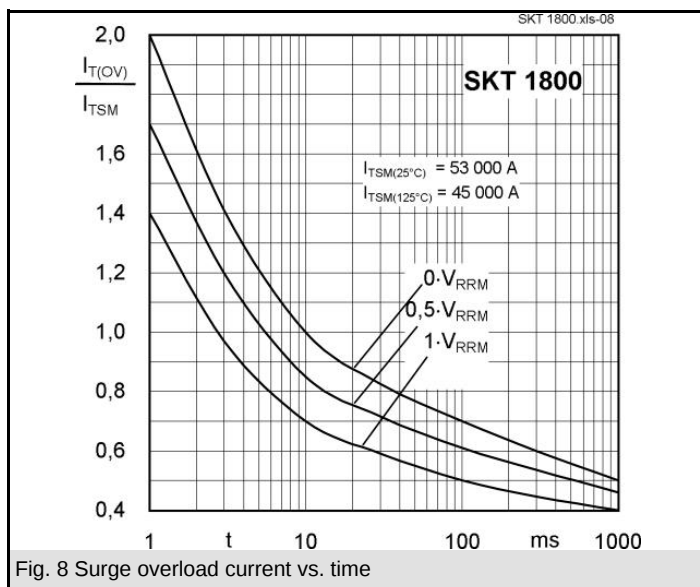
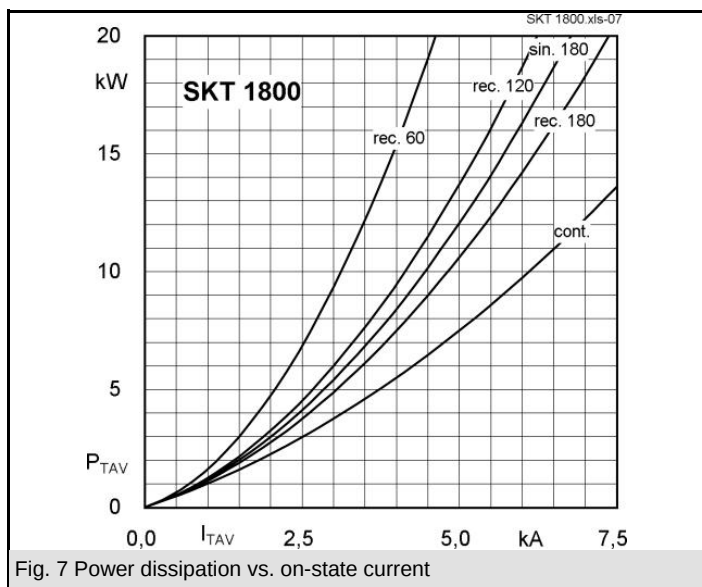
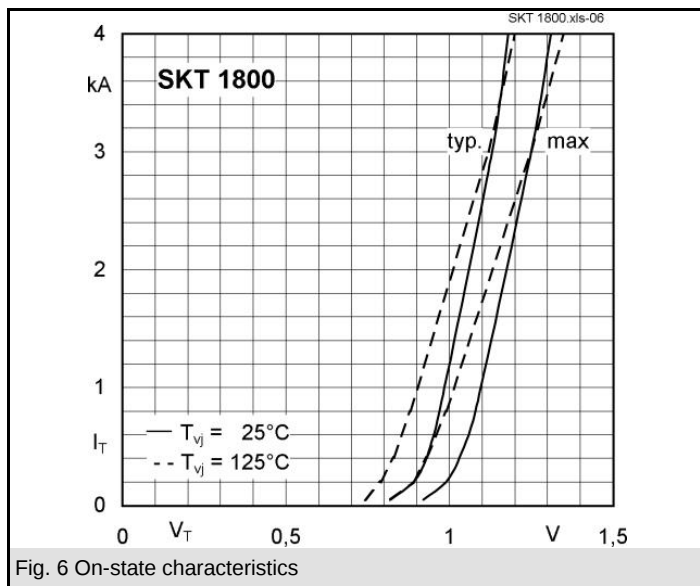
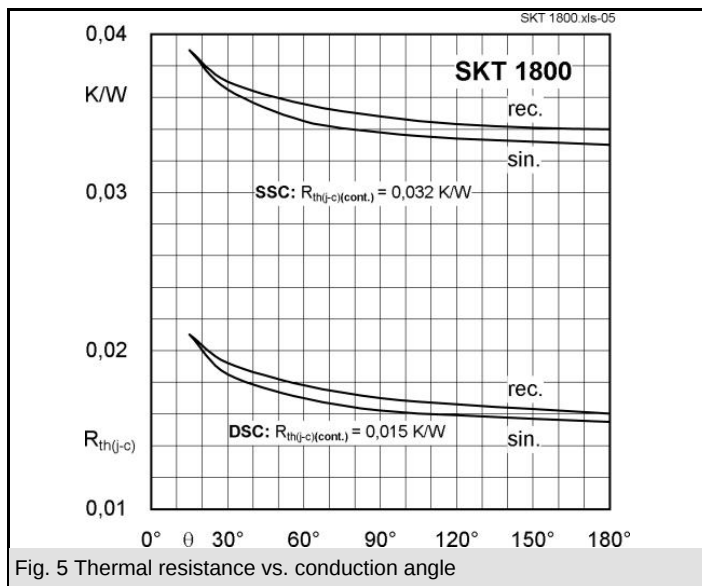
V_{RSM} V	V_{RRM}, V_{DRM} V	$I_{TRMS} = 4500$ A (maximum value for continuous operation) $I_{TAV} = 1800$ A (sin. 180; DSC; $T_c = 85$ °C)		
1300	1200	SKT 1800/12E		
1500	1400	SKT 1800/14E		
1700	1600	SKT 1800/16E		

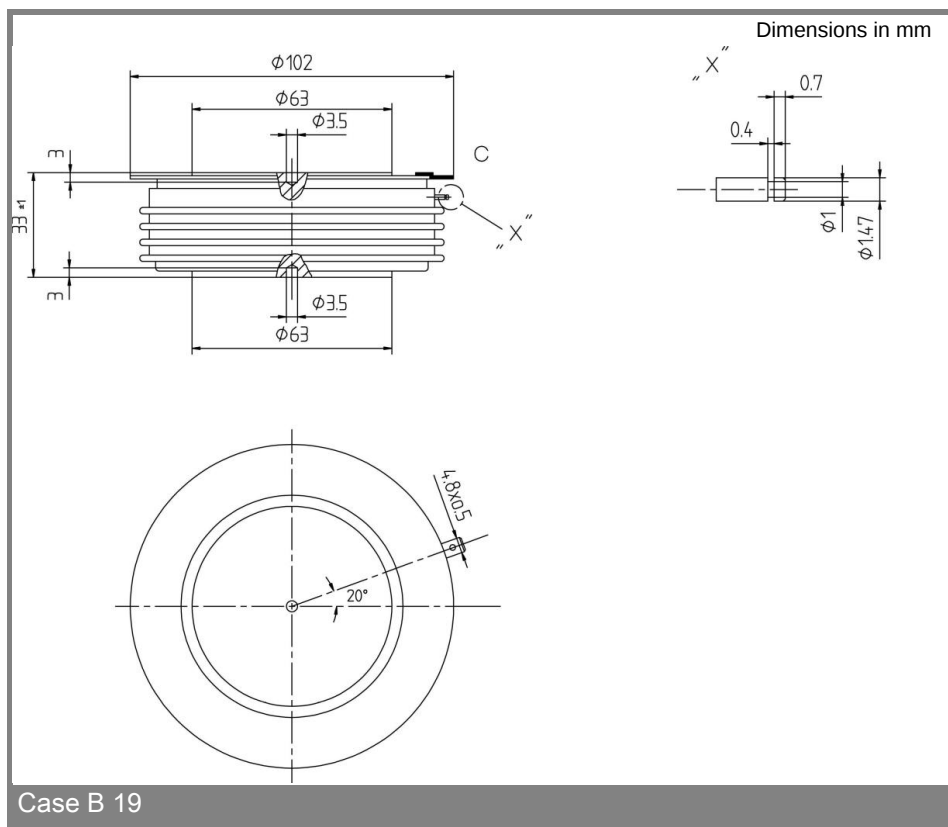
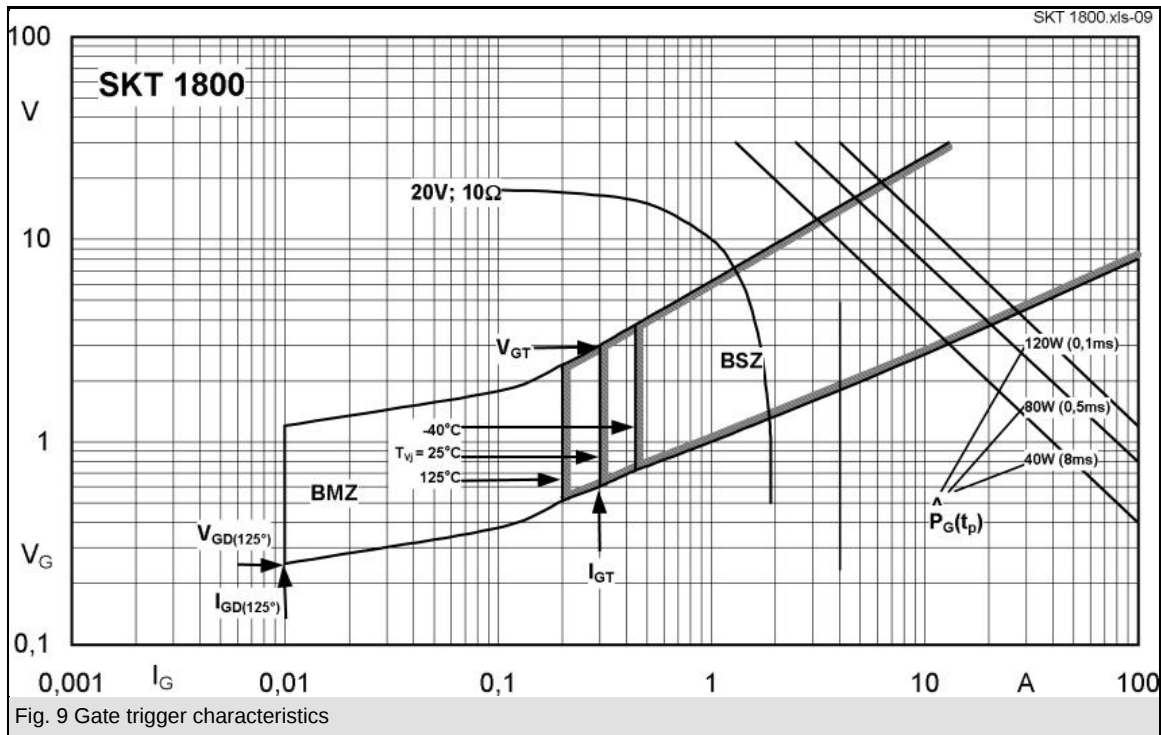
Symbol	Conditions	Values	Units
I_{TAV}	sin. 180; $T_c = 100$ (85) °C;	2500 (1270)	A
I_D	2 x N4/250; $T_a = 45$ °C; B2 / B6	2500 / 3600	A
	2 x N4/400; $T_a = 45$ °C; B2 / B6	2800 / 4000	A
I_{RMS}	2 x N4/250; $T_a = 45$ °C; W1C	2800	A
I_{TSM}	$T_{vj} = 25$ °C; 10 ms	53000	A
	$T_{vj} = 125$ °C; 10 ms	45000	A
i^2t	$T_{vj} = 25$ °C; 8,3 ... 10 ms	14000000	A ² s
	$T_{vj} = 125$ °C; 8,3 ... 10 ms	10000000	A ² s
V_T	$T_{vj} = 25$ °C; $I_T = 3000$ A	max. 1,25	V
$V_{T(TO)}$	$T_{vj} = 125$ °C	max. 0,88	V
r_T	$T_{vj} = 125$ °C	max. 0,124	mΩ
I_{DD}, I_{RD}	$T_{vj} = 125$ °C; $V_{RD} = V_{RRM}$; $V_{DD} = V_{DRM}$	max. 100	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. 150	A/μs
$(dv/dt)_{cr}$	$T_{vj} = 125$ °C	max. 1000	V/μs
t_q	$T_{vj} = 125$ °C	200 ... 300	μs
I_H	$T_{vj} = 25$ °C; typ. / max.	500 / 1000	mA
I_L	$T_{vj} = 25$ °C; typ. / max.	2000 / 5000	mA
V_{GT}	$T_{vj} = 25$ °C; d.c.	min. 3	V
I_{GT}	$T_{vj} = 25$ °C; d.c.	min. 300	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	0,015	K/W
$R_{th(j-c)}$	sin. 180; DSC / SSC	0,0155 / 0,033	K/W
$R_{th(j-c)}$	rec. 120; DSC / SSC	0,0165 / 0,0345	K/W
$R_{th(c-s)}$	DSC / SSC	0,003 / 0,006	K/W
T_{vj}		- 40 ... + 125	°C
T_{stg}		- 40 ... + 130	°C
V_{isol}		-	V~
F_a	mounting force	27 ... 34	kN
m	approx.	1000	m/s ²
Case		B 19	g



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.