

# SKT 600



## Capsule Thyristor

## Line Thyristor

### SKT 600

#### Features

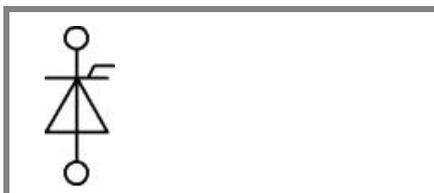
- Hermetic metal case with ceramic insulator
- Capsule package for double sided cooling
- Shallow design with single sided cooling
- International standard case
- Off-state and reverse voltages up to 1800 V
- Amplifying gate

#### Typical Applications\*

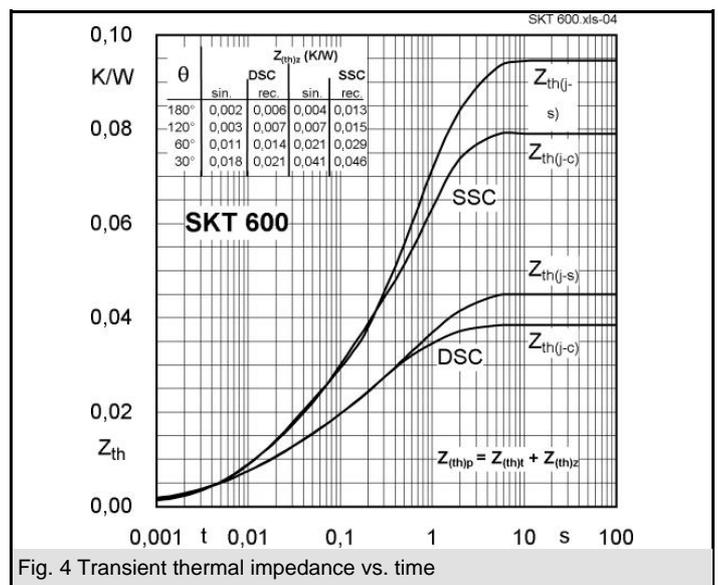
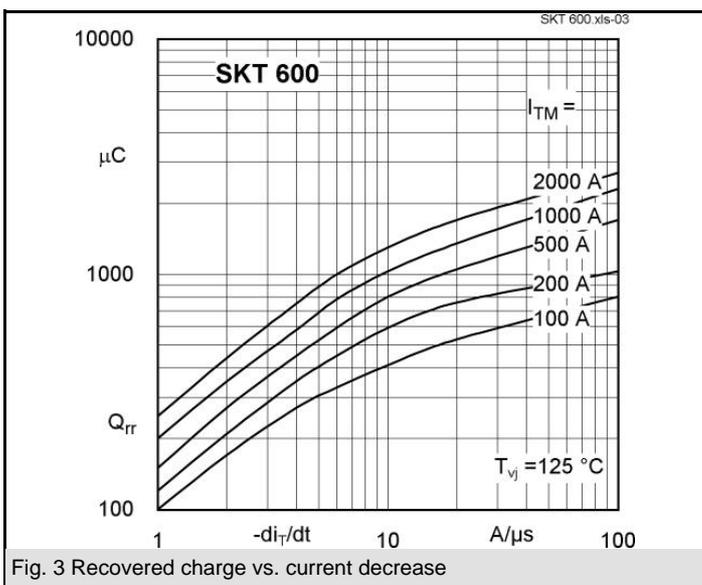
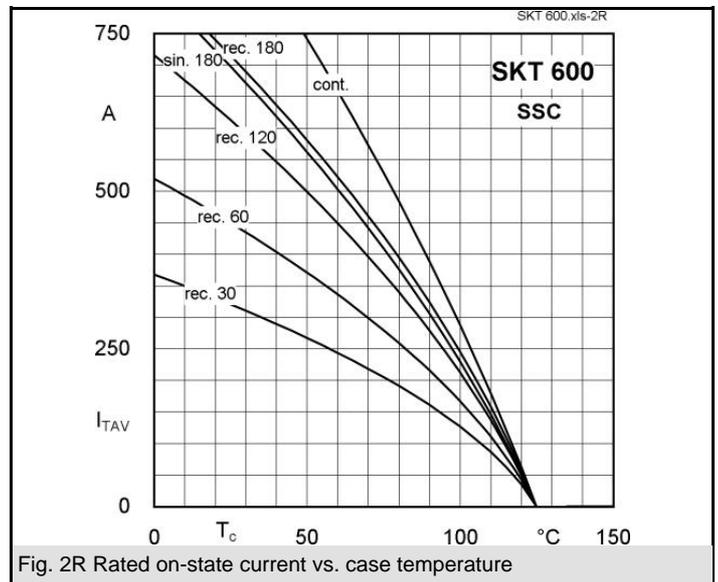
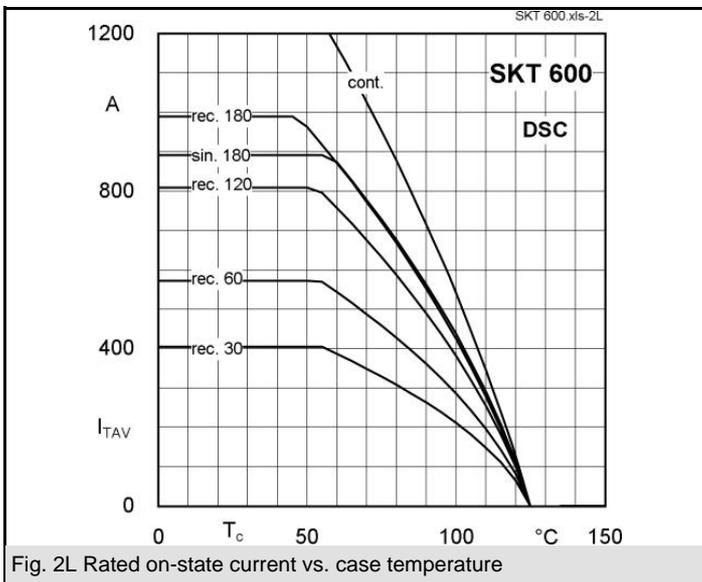
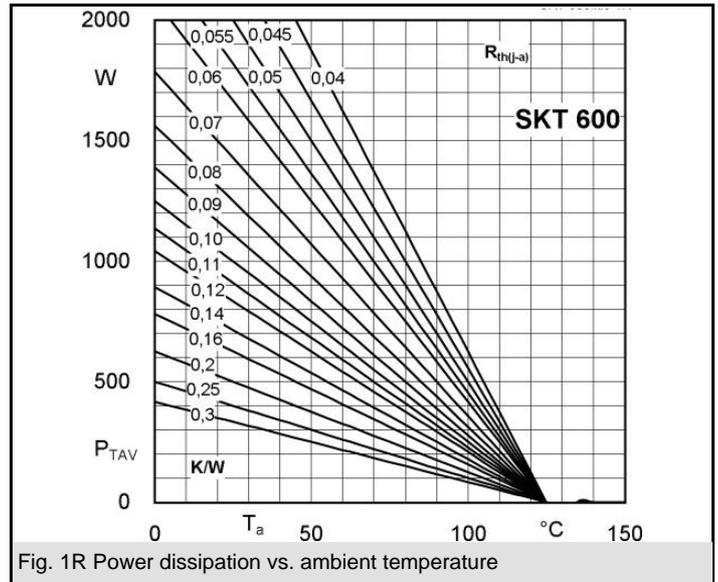
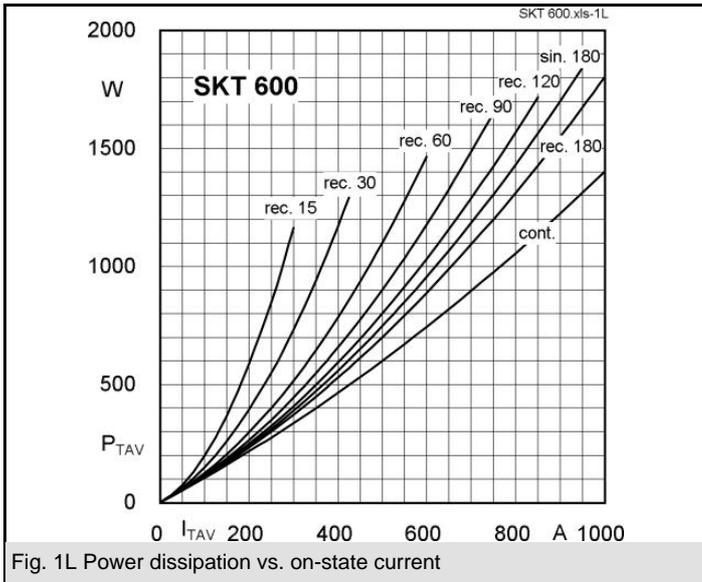
- DC motor control (e. g. for machine tools)
- Controlled rectifiers (e. g. for battery charging)
- AC controllers (e. g. for temperature control)
- Recommended snubber network e. g. for  $V_{VRMS} \leq 400$  V:  $R = 33 \Omega / 32$  W,  $C = 1 \mu F$

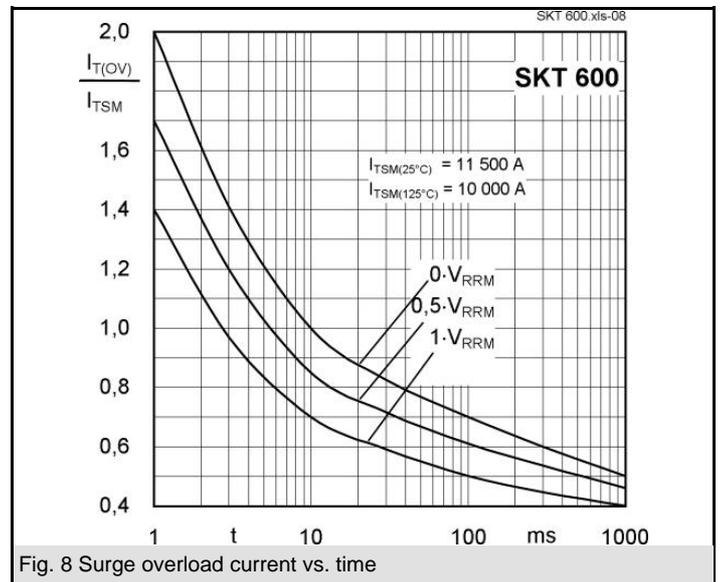
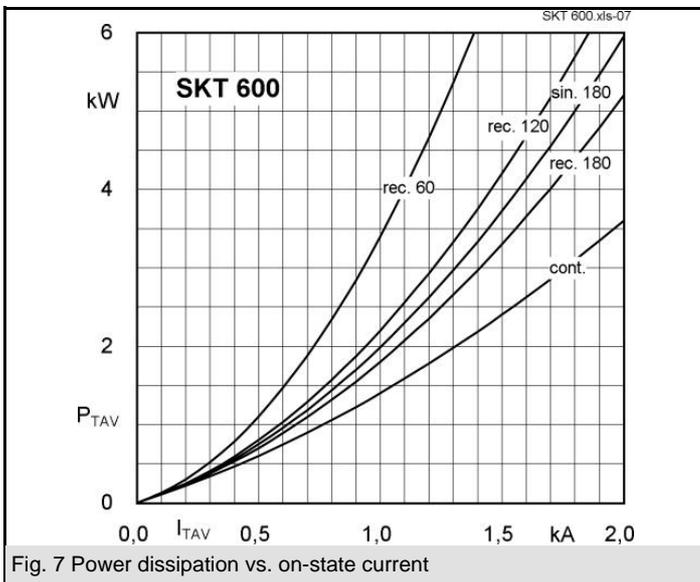
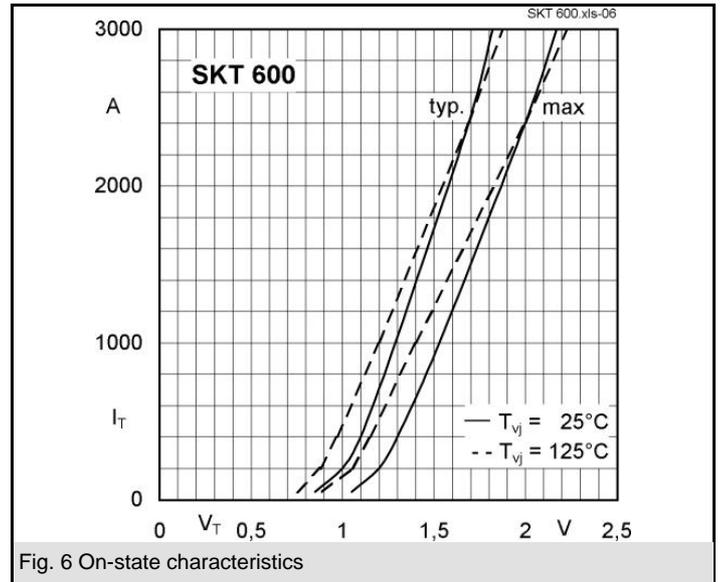
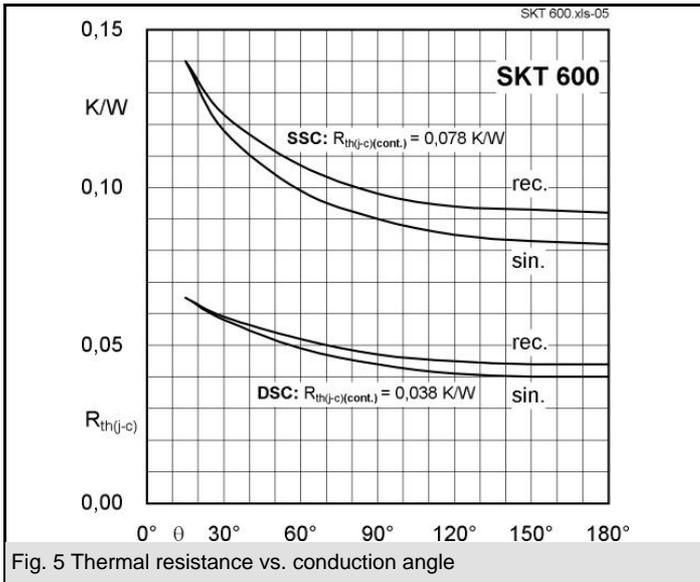
$V_{RSM}$ V	$V_{RRM}, V_{DRM}$ V	$I_{TRMS} = 1400$ A (maximum value for continuous operation) $I_{TAV} = 600$ A (sin. 180; DSC; $T_c = 86$ °C)	
900	800	SKT 600/08D	
1300	1200	SKT 600/12E	
1500	1400	SKT 600/14E	
1700	1600	SKT 600/16E	
1900	1800	SKT 600/18E	

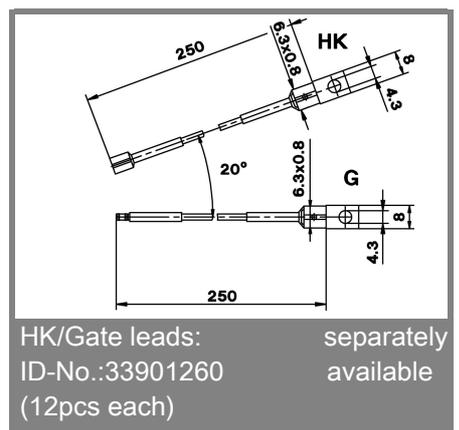
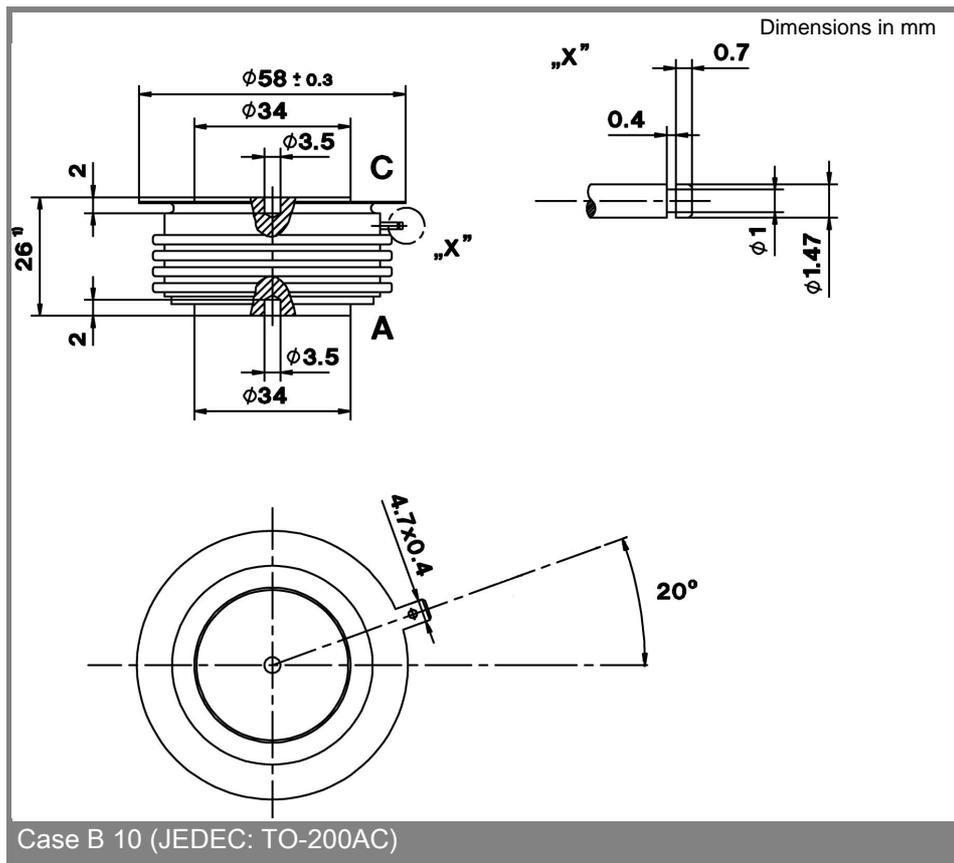
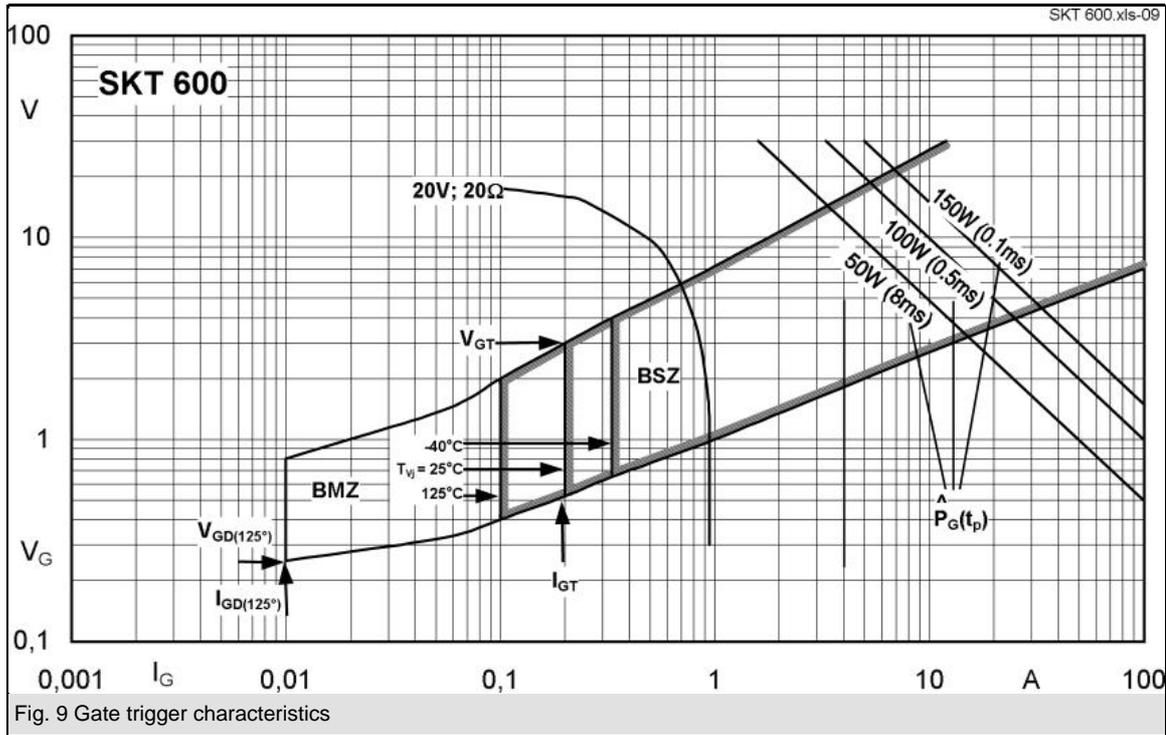
Symbol	Conditions	Values	Units
$I_{TAV}$	sin. 180; $T_c = 100$ (85) °C;	437 (620)	A
$I_D$	2 x P8/180; $T_a = 45$ °C; B2 / B6 2 x P8/180 F; $T_a = 35$ °C; B2 / B6	400 / 560 1060 / 1500	A A
$I_{RMS}$	2 x P8/180; $T_a = 45$ °C; W1C	440	A
$I_{TSM}$	$T_{vj} = 25$ °C; 10 ms $T_{vj} = 125$ °C; 10 ms	11500 10000	A A
$i^2t$	$T_{vj} = 25$ °C; 8,3 ... 10 ms $T_{vj} = 125$ °C; 8,3 ... 10 ms	660000 500000	A <sup>2</sup> s A <sup>2</sup> s
$V_T$	$T_{vj} = 25$ °C; $I_T = 2400$ A	max. 2	V
$V_{T(TO)}$	$T_{vj} = 125$ °C	max. 1	V
$r_T$	$T_{vj} = 125$ °C	max. 0,4	mΩ
$I_{DD}, I_{RD}$	$T_{vj} = 125$ °C; $V_{RD} = V_{RRM}; V_{DD} = V_{DRM}$	max. 90	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; SKT ...D / SKT ...E	max. 500 / 1000	V/μs
$t_q$	$T_{vj} = 125$ °C,	100 ... 200	μs
$I_H$	$T_{vj} = 25$ °C; typ. / max.	150 / 500	mA
$I_L$	$T_{vj} = 25$ °C; 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. 200	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	0,038	K/W
$R_{th(j-c)}$	sin. 180; DSC / SSC	0,04 / 0,082	K/W
$R_{th(j-c)}$	rec. 120; DSC / SSC	0,045 / 0,093	K/W
$R_{th(c-s)}$	DSC / SSC	0,007 / 0,014	K/W
$T_{vj}$		- 40 ... + 125	°C
$T_{stg}$		- 40 ... + 130	°C
$V_{isol}$		-	V~
F	mounting force	10 ... 13	kN
a			m/s <sup>2</sup>
m	approx.	240	g
Case		B 10	



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 personal.