



## Capsule Thyristors

## Thyristors

### SKT 553

### Features

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

### Typical Applications\*

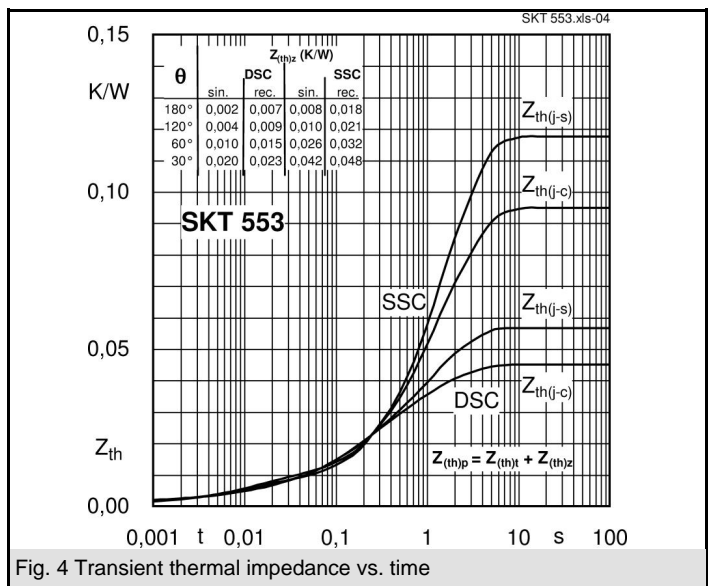
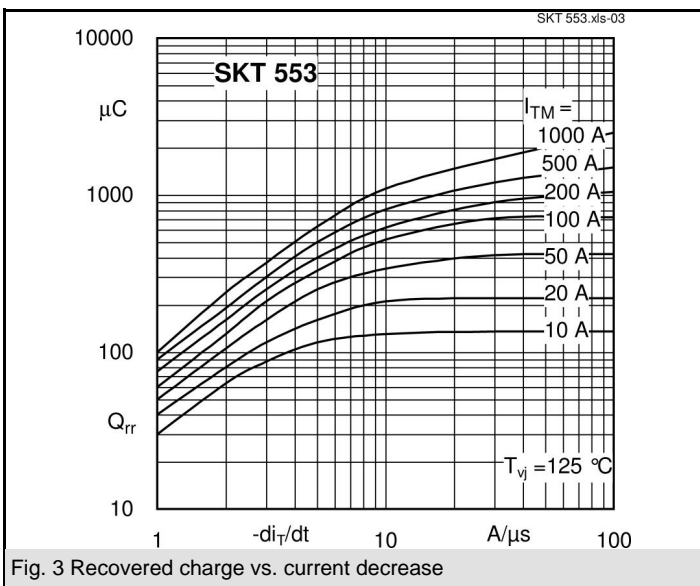
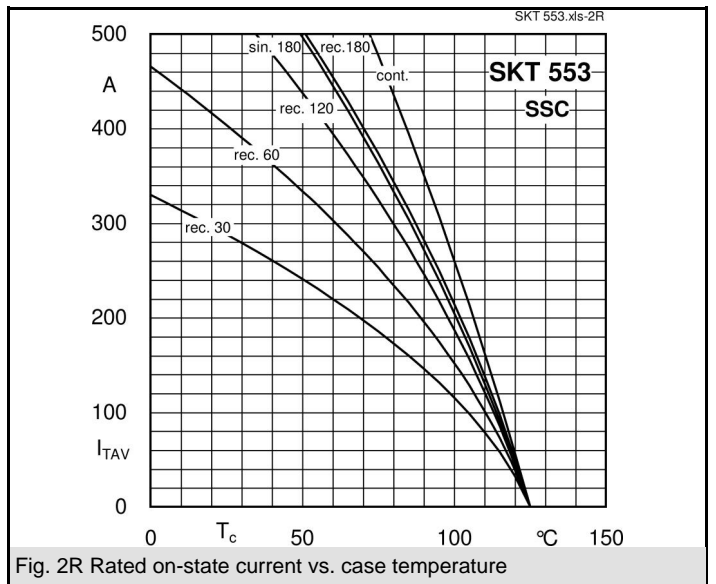
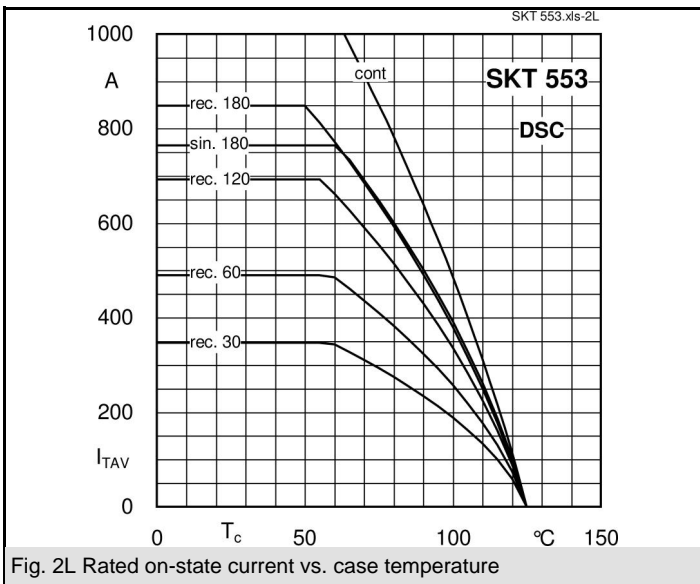
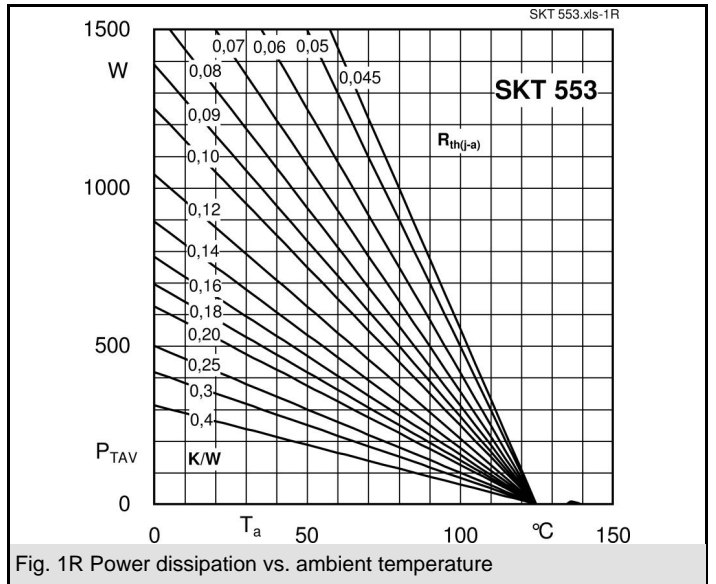
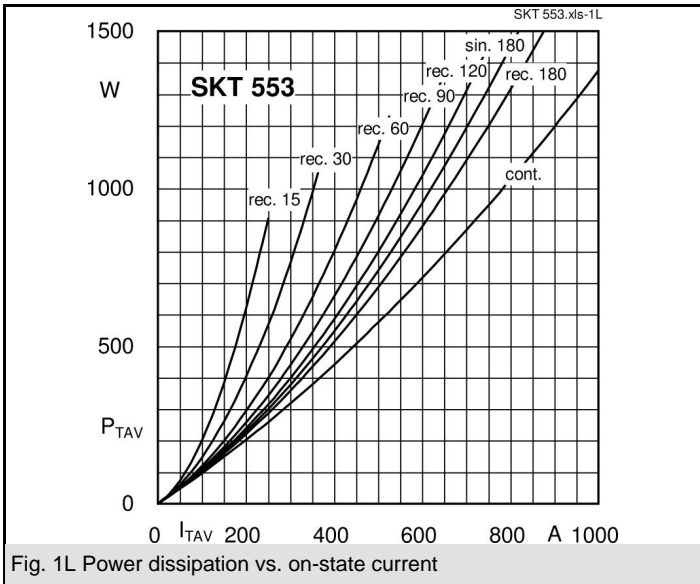
- DC motor control (e. g. for machine tools)
- Controlled rectifiers (e. g. for battery charging)
- AC controllers (e. g. for temperature control)
- Soft Starters for AC motors

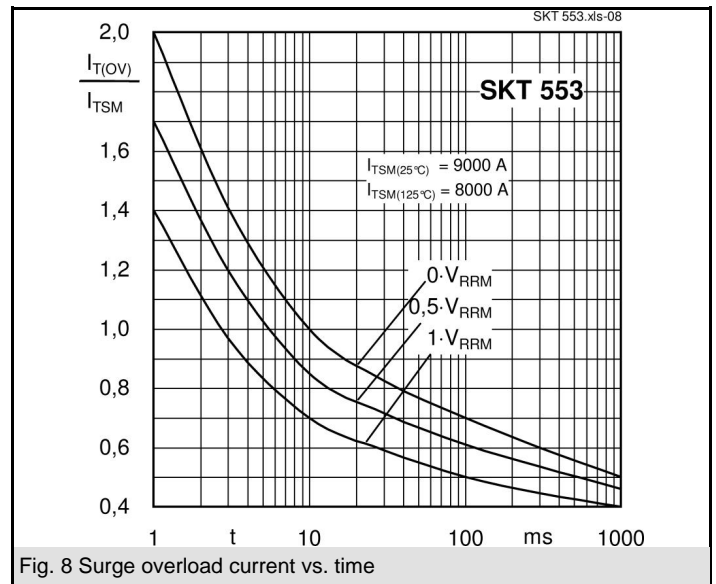
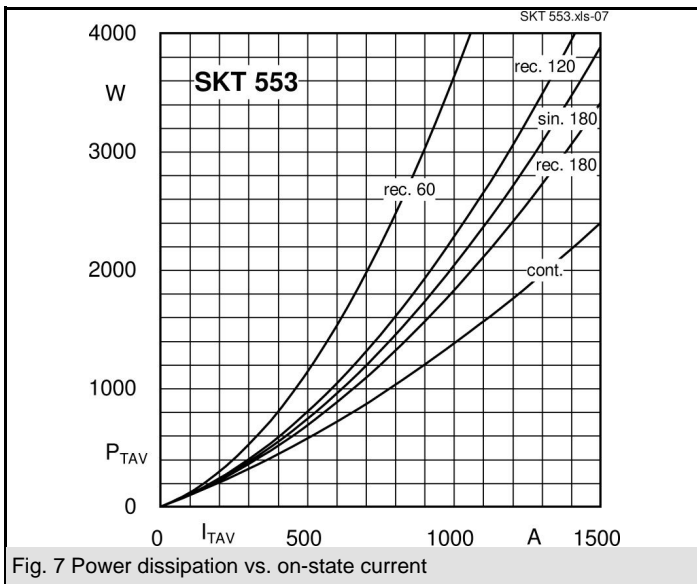
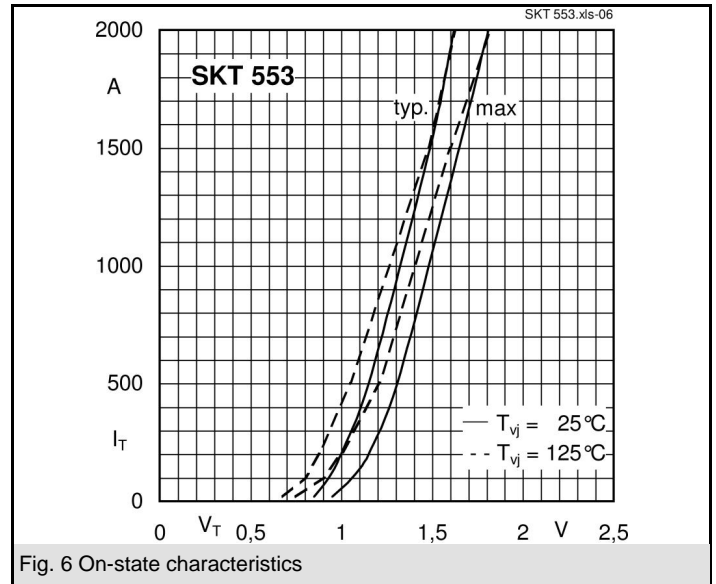
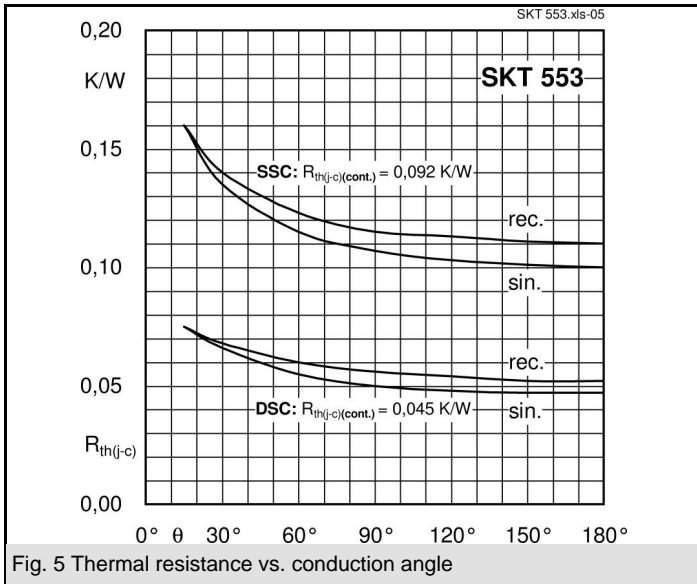
$V_{RSM}$ V	$V_{RRM}, V_{DRM}$ V	$I_{TRMS} = 1200$ A (maximum value for continuous operation) $I_{TAV} = 550$ A (sin. 180; DSC; $T_c = 85$ °C)	
500	400	SKT 553/04E	
900	800	SKT 553/08E	
1300	1200	SKT 553/12E	
1500	1400	SKT 553/14E	
1700	1600	SKT 553/16E	
1900	1800	SKT 553/18E	

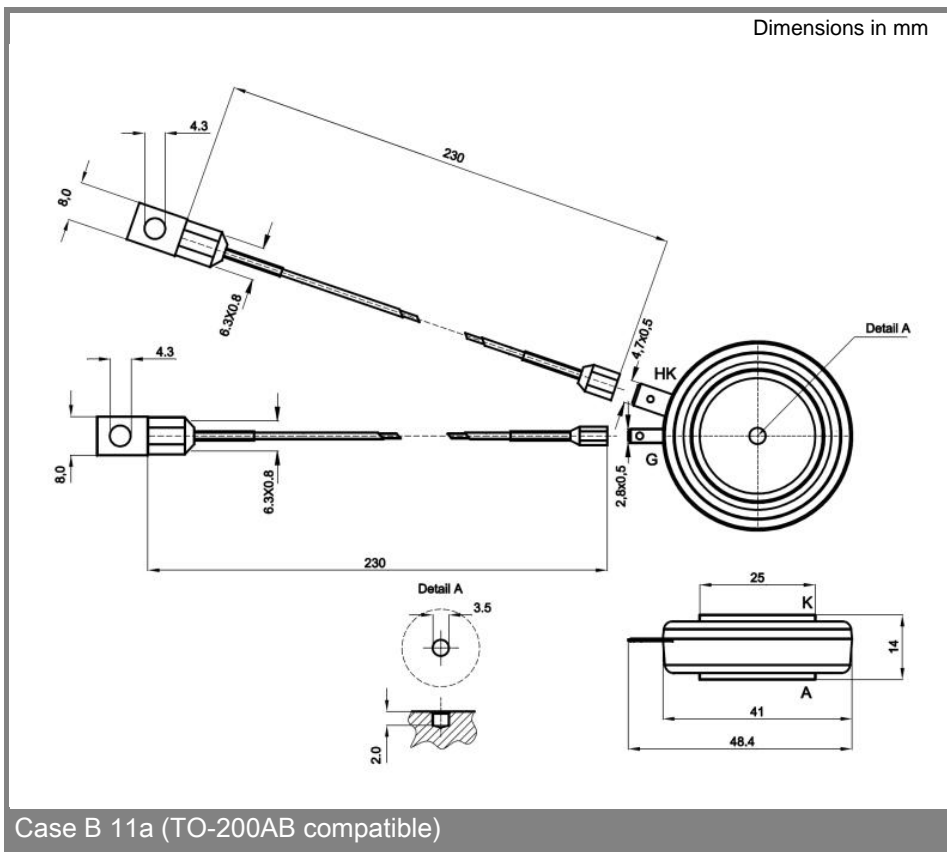
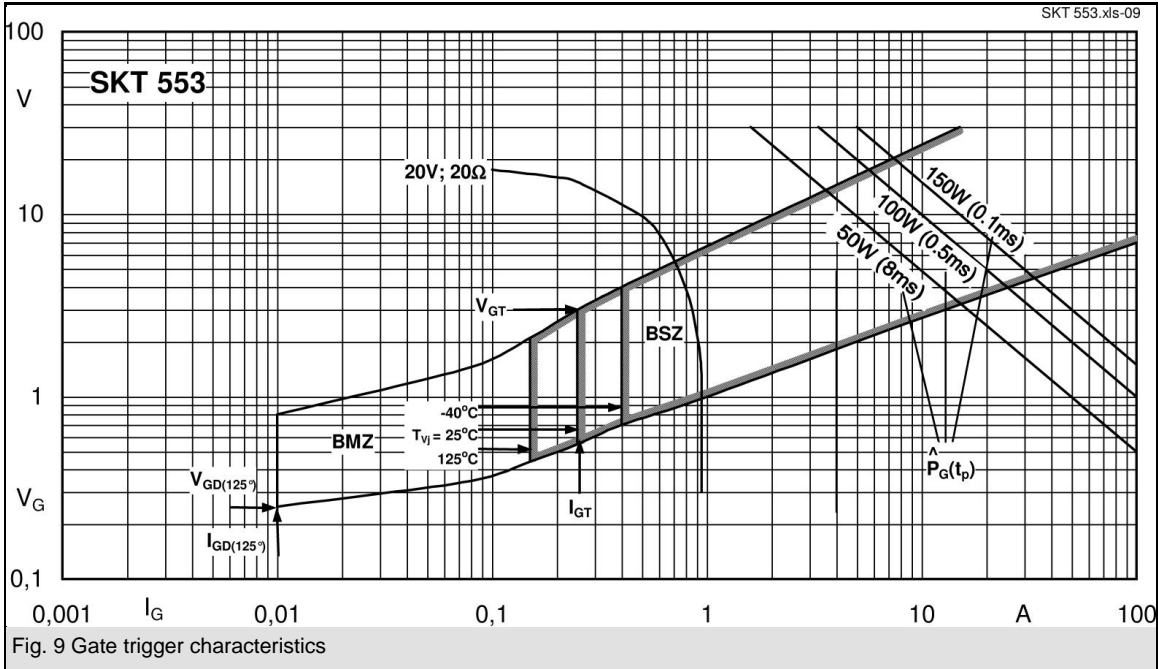
Symbol	Conditions	Values	Units
$I_{TAV}$	sin. 180; $T_c = 100$ (85) °C;	391 (550)	A
$I_D$	2 x P8/180; $T_a = 45$ °C; B2 / B6	390 / 560	A
	2 x P8/180 F; $T_a = 35$ °C; B2 / B6	980 / 1340	A
$I_{RMS}$	2 x P8/180; $T_a = 45$ °C; W1C	430	A
$I_{TSM}$	$T_{vj} = 25$ °C; 10 ms	9000	A
	$T_{vj} = 125$ °C; 10 ms	8000	A
$i^2t$	$T_{vj} = 25$ °C; 8,3 ... 10 ms	405000	A <sup>2</sup> s
	$T_{vj} = 125$ °C; 8,3 ... 10 ms	320000	A <sup>2</sup> s
$V_T$	$T_{vj} = 25$ °C; $I_T = 1500$ A	max. 1,65	V
$V_{T(TO)}$	$T_{vj} = 125$ °C	max. 0,925	V
$r_T$	$T_{vj} = 125$ °C	max. 0,45	mΩ
$I_{DD}, I_{RD}$	$T_{vj} = 125$ °C; $V_{RD} = V_{RRM}; V_{DD} = V_{DRM}$	max. 50	mA
$t_{gd}$	$T_{vj} = 25$ °C; $I_G = 1$ A; $di_G/dt = 1$ A/μs	1	μs
$t_{gr}$	$V_D = 0,67 * V_{DRM}$	1	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,	50 ... 150	μs
$I_H$	$T_{vj} = 25$ °C; typ. / max.	150 / 500	mA
$I_L$	$T_{vj} = 25$ °C; $R_G = 33$ Ω; 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	0,045	K/W
	sin. 180; DSC / SSC	0,047 / 0,1	K/W
	rec. 120; DSC / SSC	0,054 / 0,113	K/W
$R_{th(c-s)}$	DSC / SSC	0,012 / 0,024	K/W
$T_{vj}$		- 40 ... + 125	°C
$T_{stg}$		- 40 ... + 130	°C
$V_{isol}$		-	V~
F	mounting force	5,2 ... 8	kN
a			m/s <sup>2</sup>
m	approx.	85	g
Case		B 11a	



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.