

Thyristors

T-25-20

SKT 520

V_{RSM}	V_{RRM} V_{DRM}	$\left(\frac{dv}{dt}\right)_{cr}$	I_{TRMS} (maximum values for continuous operation)	
				1400 A
V	V	V/ μ s	I_{TAV} (sin. 180; $T_{case} = 55^\circ\text{C}$; DSC)	
			780 A	
1900	1800	1000	SKT 520/18 E	
2100	2000	1000	SKT 520/20 E	
2300	2200	1000	SKT 520/22 E	
2500	2400	1000	SKT 520/24 E	
2900	2800	1000	SKT 520/28 E	



Symbol	Conditions	SKT 520
I_{TAV}	sin. 180; $T_{case} = 85^\circ\text{C}$; DSC	520 A
I_{TSM}	$T_{vj} = 25^\circ\text{C}$ $T_{vj} = 125^\circ\text{C}$	9000 A 8000 A
i^2t	$T_{vj} = 25^\circ\text{C}$ $T_{vj} = 125^\circ\text{C}$	405 000 A ² s 320 000 A ² s
t_{gd} t_{gr} $(di/dt)_{cr}$	$T_{vj} = 25^\circ\text{C}$; $I_G = 1\text{ A}$; $di_G/dt = 1\text{ A}/\mu\text{s}$ $V_D = 0,67 \cdot V_{DRM}$ $f = 50 \dots 60\text{ Hz}$	typ. 1 μs typ. 2 μs 125 A/ μs
I_H	$T_{vj} = 25^\circ\text{C}$; typ./max.	150 mA/500 mA
I_L	$T_{vj} = 25^\circ\text{C}$; typ./max.	500 mA/2 A
t_q	$T_{vj} = 125^\circ\text{C}$; typ.	100 ... 200 μs
V_T	$T_{vj} = 25^\circ\text{C}$; $I_T = 1500\text{ A}$; max.	2,0 V
$V_{T(TO)}$	$T_{vj} = 125^\circ\text{C}$	1,2 V
r_T	$T_{vj} = 125^\circ\text{C}$	0,55 m Ω
I_{DD}, I_{RD}	$T_{vj} = 125^\circ\text{C}$; $V_{DD} = V_{DRM}$; $V_{RD} = V_{RRM}$	120 mA
V_{GT}	$T_{vj} = 25^\circ\text{C}$	3 V
I_{GT}	$T_{vj} = 25^\circ\text{C}$	200 mA
V_{GD}	$T_{vj} = 125^\circ\text{C}$	0,25 V
I_{GD}	$T_{vj} = 125^\circ\text{C}$	10 mA
R_{thjc}	cont. DSC sin. 180; DSC/SSC rec. 120; DSC/SSC	0,038 $^\circ\text{C}/\text{W}$ 0,040/0,082 $^\circ\text{C}/\text{W}$ 0,045/0,093 $^\circ\text{C}/\text{W}$
R_{thch}	DSC/SSC	0,007/0,014 $^\circ\text{C}/\text{W}$
T_{vj}		-40 ... +125 $^\circ\text{C}$
T_{stg}		-40 ... +130 $^\circ\text{C}$
F	SI units	10 ... 13 kN
w	US units	2200 ... 2850 lbs.
		240 g
Case		B 10

Features

- Hermetic metal cases with ceramic insulators
- Capsule packages for double sided cooling
- Shallow design with single sided cooling
- International standard cases
- Off-state and reverse voltages up to 2800 V

Typical Applications

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

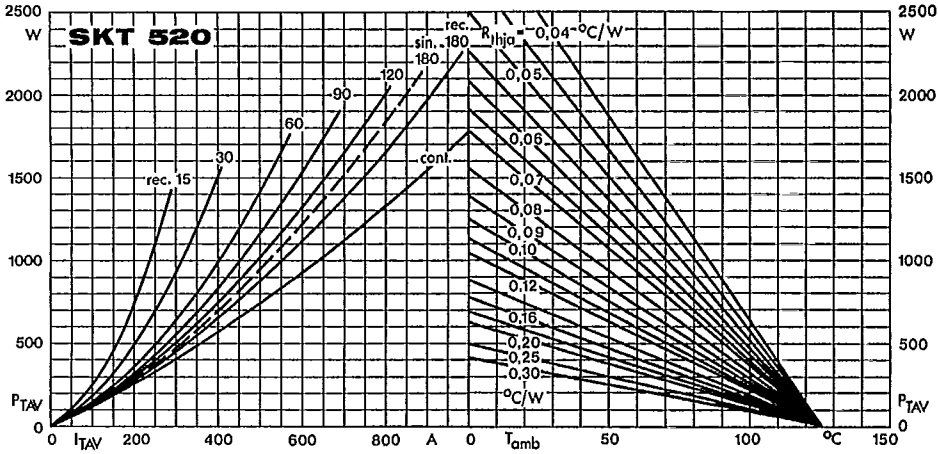


Fig. 1 Power dissipation vs. on-state current and ambient temperature

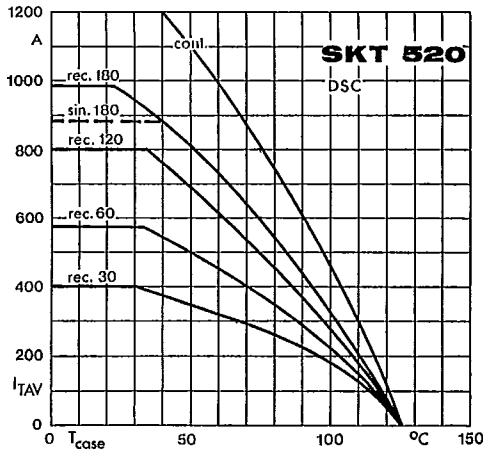


Fig. 2 a Rated on-state current vs. case temperature

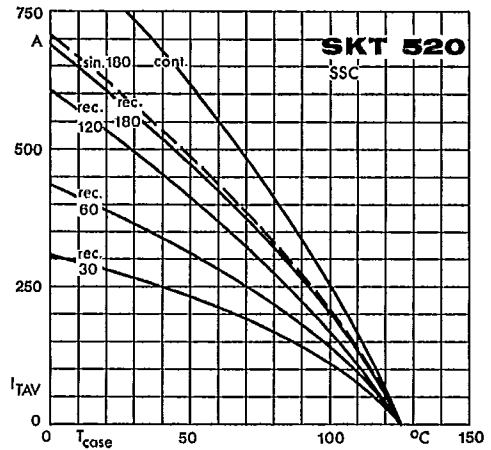


Fig. 2 b Rated on-state current vs. case temperature

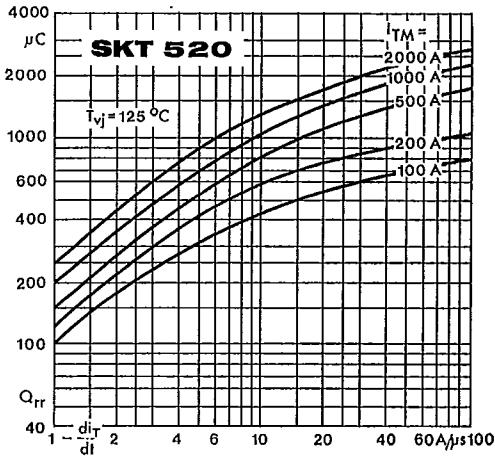


Fig. 3 Recovered charge vs. current decrease

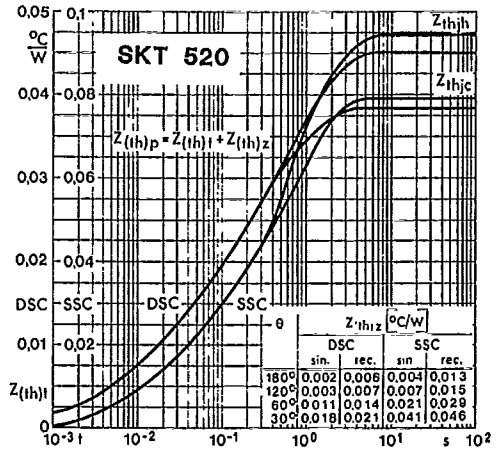


Fig. 4 Transient thermal impedance vs. time

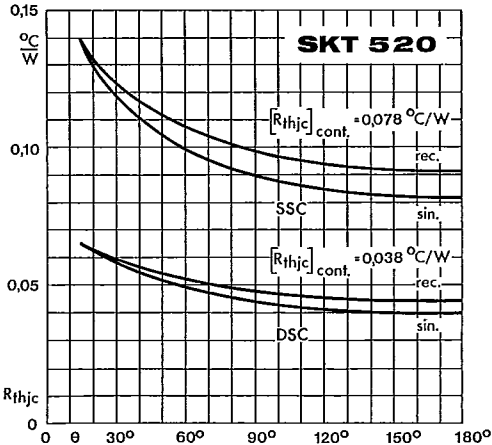


Fig. 5 Thermal resistance vs. conduction angle

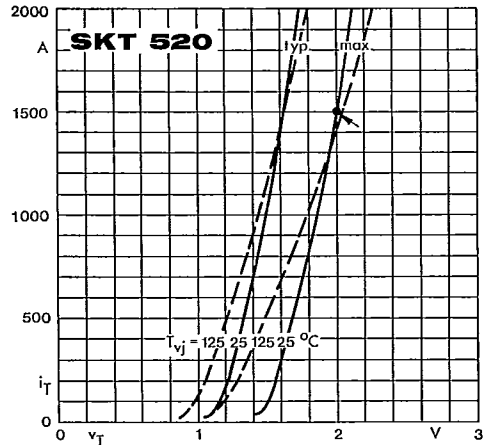


Fig. 6 On-state characteristics

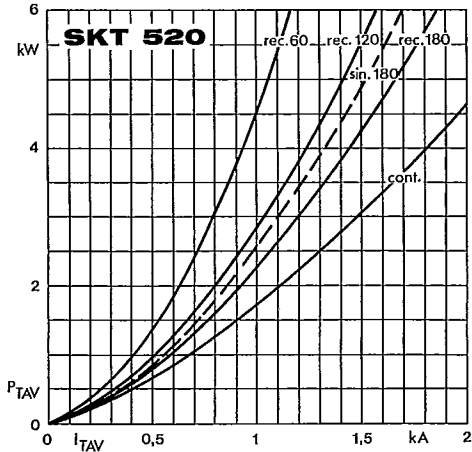


Fig. 7 Power dissipation vs. on-state current

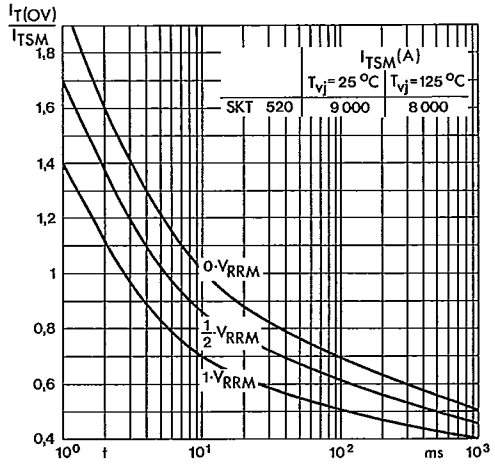


Fig. 8 Surge overload current vs. time

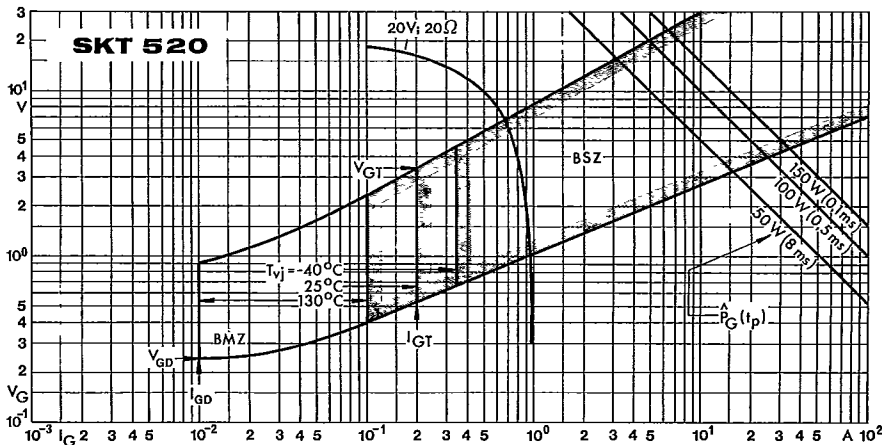
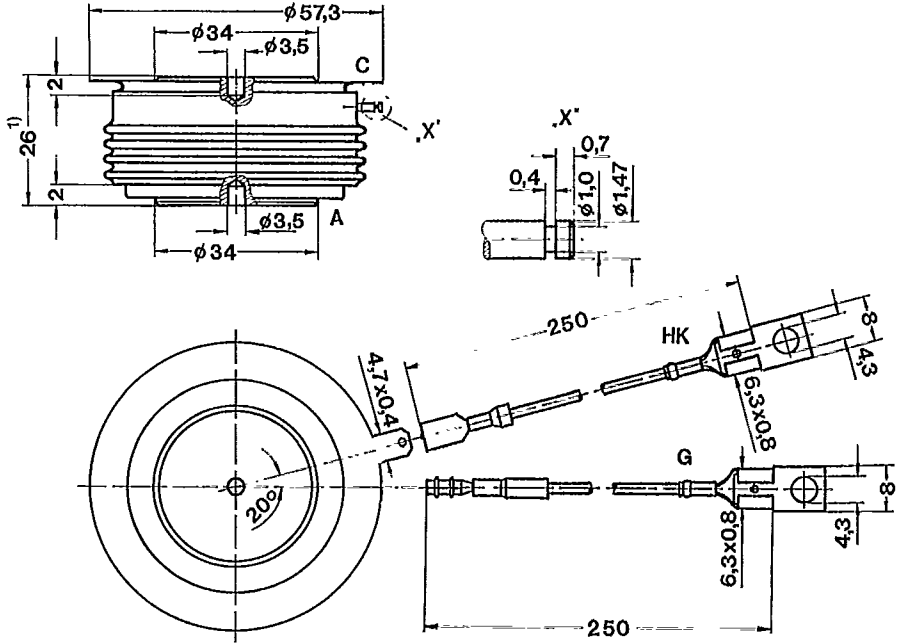


Fig. 9 Gate trigger characteristics

SKT 520
SKT 600
SKT 760

Case B 10

DIN 41814: 153 C 4
JEDEC: TO-200 AB



1) SKT 520/24 E } 27 mm
SKT 520/28 E }

- C: Cathode terminal
- A: Anode terminal
- G: Gate terminal (yellow sleeve)
- HK: Auxillary cathode terminal (red sleeve)

Dimensions in mm