

Thyristors

SKT 600
SKT 760



V _{RSM}	V _{RRM} V _{DRM}	$\left(\frac{dv}{dt}\right)_{cr}$	I _{TRMS} (maximum values for continuous operation)	
			1400 A	1600 A
V	V	V/μs	I _{TAV} (sin. 180; T _{case} = ...; DSC)	
			890 A (57 °C)	1020 A (56 °C)
500	400	500	SKT 600/04 D	SKT 760/04 D
900	800	500	SKT 600/08 D	SKT 760/08 D
1300	1200	500	SKT 600/12 D	SKT 760/12 D
		1000	SKT 600/12 E	SKT 760/12 E
1500	1400	1000	SKT 600/14 E	SKT 760/14 E
1700	1600	1000	SKT 600/16 E	SKT 760/16 E
1900	1800	1000	SKT 600/18 E	SKT 760/18 E

Symbol	Conditions	SKT 600	SKT 760
I _{TAV}	sin. 180; (T _{case} = ...); DSC	600 A (85 °C)	760 A (80 °C)
I _{TSM}	T _{vj} = 25 °C: 10 ms T _{vj} = 125 °C: 10 ms	11 500 A 10 000 A	15 000 A 13 000 A
i ² t	T _{vj} = 25 °C: 8,3 ... 10 ms T _{vj} = 125 °C: 8,3 ... 10 ms	660 kA ² s 500 kA ² s	1125 kA ² s 845 kA ² s
t _{gd}	T _{vj} = 25 °C; I _G = 1 A; di _G /dt = 1 A/μs	typ. 1 μs	
t _{gr}	V _D = 0,67 · V _{DRM}	typ. 2 μs	
(di/dt) _{cr}	f = 50 ... 60 Hz	125 A/μs	
I _H	T _{vj} = 25 °C; typ./max.	150 mA/500 mA	
I _L	T _{vj} = 25 °C; typ./max.	500 mA/2 A	
t _q	T _{vj} = 125 °C; typ.	100 ... 200 μs	
V _T	T _{vj} = 25 °C; I _T = 2400 A; max.	2,0 V	1,65 V
V _{T(TO)}	T _{vj} = 125 °C	1,0 V	0,92 V
r _T	T _{vj} = 125 °C	0,4 mΩ	0,3 mΩ
I _{DD} , I _{RD}	T _{vj} = 125 °C; V _{DD} = V _{DRM} ; V _{RD} = V _{RRM}	80 mA	80 mA
V _{GT}	T _{vj} = 25 °C	3 V	
I _{GT}	T _{vj} = 25 °C	200 mA	
V _{GD}	T _{vj} = 125 °C	0,25 V	
I _{GD}	T _{vj} = 125 °C	10 mA	
R _{thjc}	cont. DSC sin. 180; DSC/SSC rec. 120; DSC/SSC	0,038 °C/W 0,040/0,082 °C/W 0,045/0,093 °C/W	
R _{thch}	DSC/SSC	0,007/0,014 °C/W	
T _{vj}		- 40 ... +125 °C	
T _{stg}		- 40 ... +130 °C	
F	SI units	10 ... 13 kN	
w	US units	2200 ... 2850 lbs.	
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 1800 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)

8136671 0006016 TT1

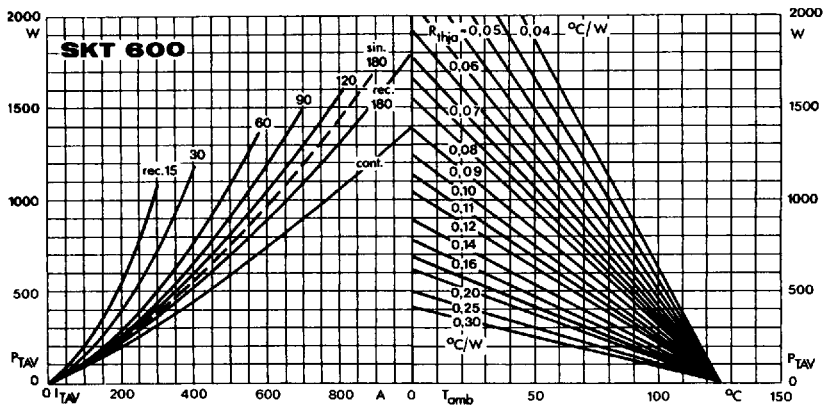


Fig. 1 a Power dissipation vs. on-state current and ambient temperature

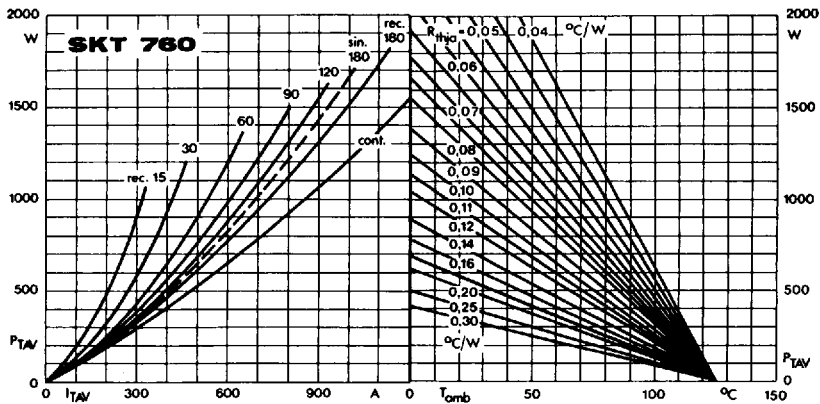


Fig. 1 b Power dissipation vs. on-state current and ambient temperature

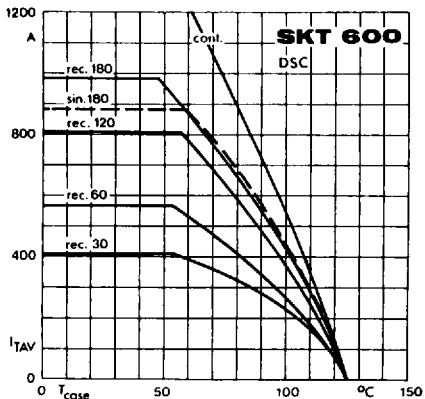


Fig. 2 a Rated on-state current vs. case temperature

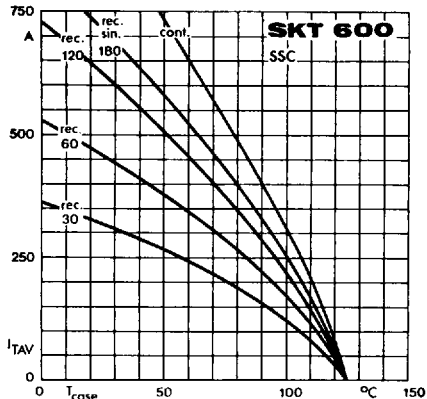


Fig. 2 b Rated on-state current vs. case temperature

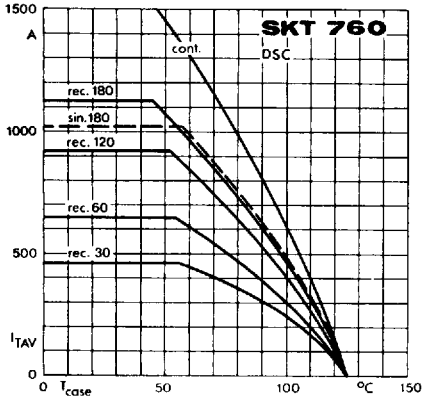


Fig. 2 c Rated on-state current vs. case temperature

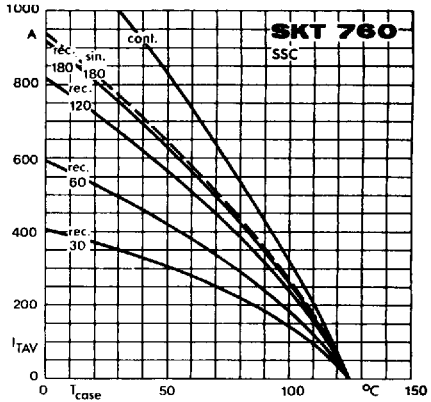


Fig. 2 d Rated on-state current vs. case temperature

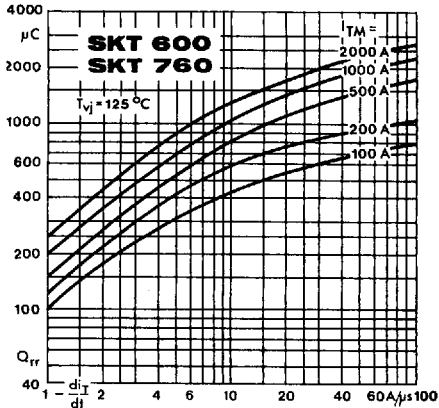


Fig. 3 Recovered charge vs. current decrease

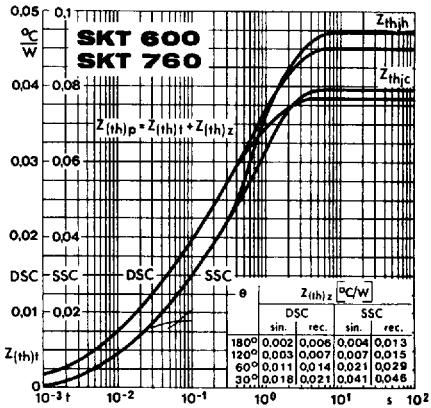


Fig. 4 Transient thermal impedance vs. time

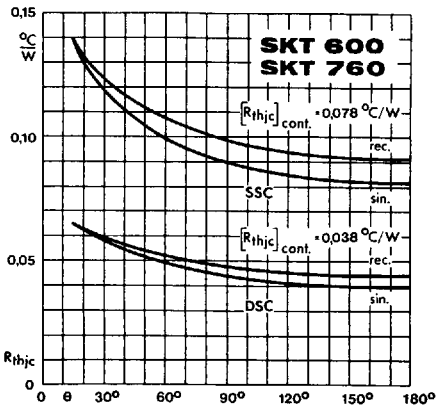


Fig. 5 Thermal resistance vs. conduction angle

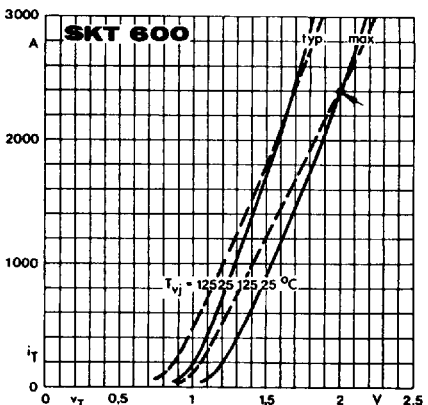


Fig. 6 a On-state characteristics

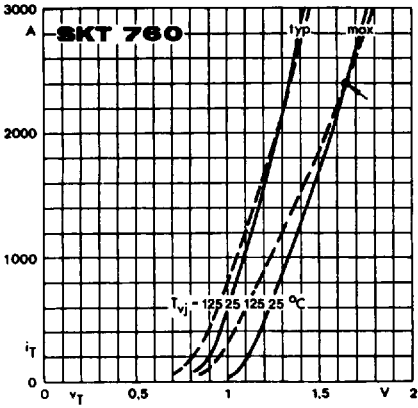


Fig. 6 b On-state characteristics

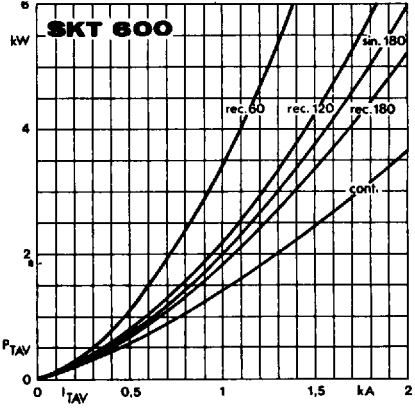


Fig. 7 a Power dissipation vs. on-state current

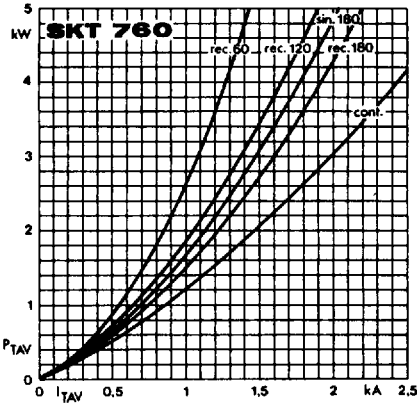


Fig. 7 b Power dissipation vs. on-state current

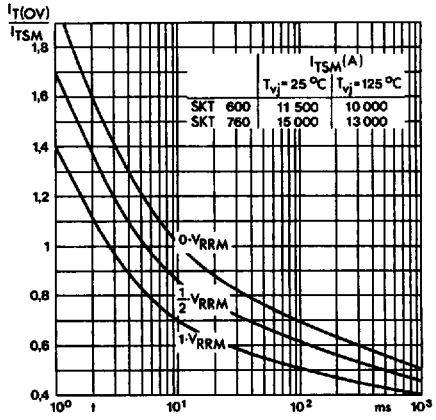


Fig. 8 Surge overload current vs. time

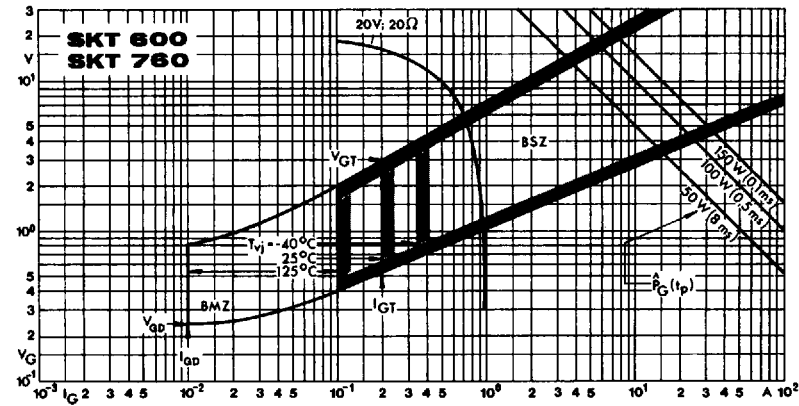


Fig. 9 Gate trigger characteristics