SKT 55

Stud Thyristor

Line Thyristor

SKT 55

V_{RSM} V	V_{RRM}, V_{DRM} V	I_{TRMS} = 110 A (maximum value for continuous operation) I_{TAV} = 55 A (sin. 180; T_c = 92 °C)		
500	400	SKT 55/04D		
700	600	SKT 55/06D		
900	800	SKT 55/08D		
1300	1200	SKT 55/12E		
1500	1400	SKT 55/14E		
1700	1600	SKT 55/16E		
1900	1800	SKT 55/18E		

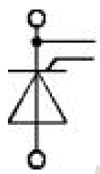
Symbol	Conditions	Values	Units
I_{TAV}	sin. 180; T_c = 100 (85) °C	47 (63)	A
I_D	K3; T_a = 45 °C; B2 / B6	42 / 60	A
	K1,1; T_a = 45 °C; B2 / B6	76 /110	A
I_{RMS}	K3; T_a = 45 °C; W1C	46	A
I_{TSM}	T_{vj} = 25 °C; 10 ms	1300	A
	T_{vj} = 130 °C; 10 ms	1100	A
i²t	T_{vj} = 25 °C; 8,35 ... 10 ms	8500	A²s
	T_{vj} = 130 °C; 8,35 ... 10 ms	6000	A²s
V_T	T_{vj} = 25 °C; I_T = 200 A	max. 1,8	V
$V_{T(TO)}$	T_{vj} = 130 °C	0,9	V
r_T	T_{vj} = 130 °C	4	mΩ
I_{DD}; I_{RD}	T_{vj} = 130 °C; V_{RD} = V_{RRM}; V_{DD} = V_{DRM}	max. 25	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} = 130 °C	max. 50	A/µs
$(dv/dt)_{cr}$	T_{vj} = 130 °C ; SKT ...D / SKT ...E	max. 500 / 1000	V/µs
t_q	T_{vj} = 130 °C	100	µs
I_H	T_{vj} = 25 °C; typ. / max.	150 / 250	mA
I_L	T_{vj} = 25 °C ; typ. / max.	300 / 600	mA
V_{GT}	T_{vj} = 25 °C; d.c.	min. 3	V
I_{GT}	T_{vj} = 25 °C; d.c.	min. 150	mA
V_{GD}	T_{vj} = 130 °C; d.c.	max. 0,25	V
I_{GD}	T_{vj} = 130 °C; d.c.	max. 10	mA
$R_{th(j-c)}$	cont.	0,4	K/W
$R_{th(j-c)}$	sin. 180	0,47	K/W
$R_{th(j-c)}$	rec. 120	0,53	K/W
$R_{th(c-s)}$		0,08	K/W
T_{vj}		- 40 ... + 130	°C
T_{stg}		- 55 ... + 150	°C
V_{isol}		-	V~
M_s	to heatsink	10	Nm
a		5 * 9,81	m/s²
m	approx.	65	g
Case		B 5	

Features

- Hermetic metal case with glass insulator
- Threaded stud ISO M12
- International standard case

Typical Applications

- DC motor control (e. g. for machines 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 = 47 Ω/10 W, C = 0,22 µF



SKT

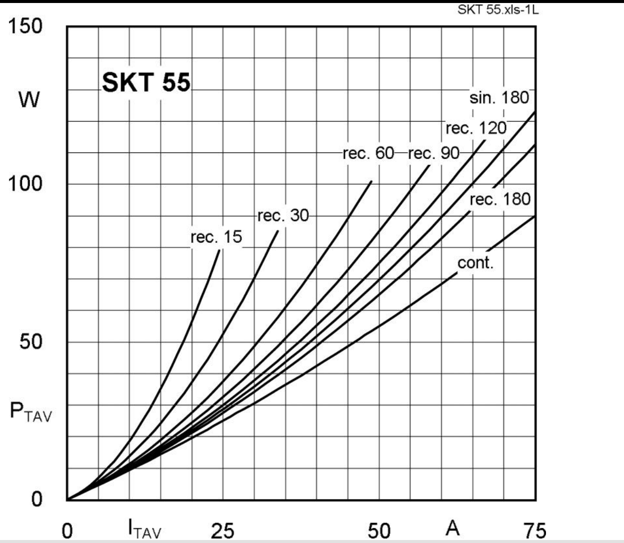


Fig. 1L Power dissipation vs. on-state current

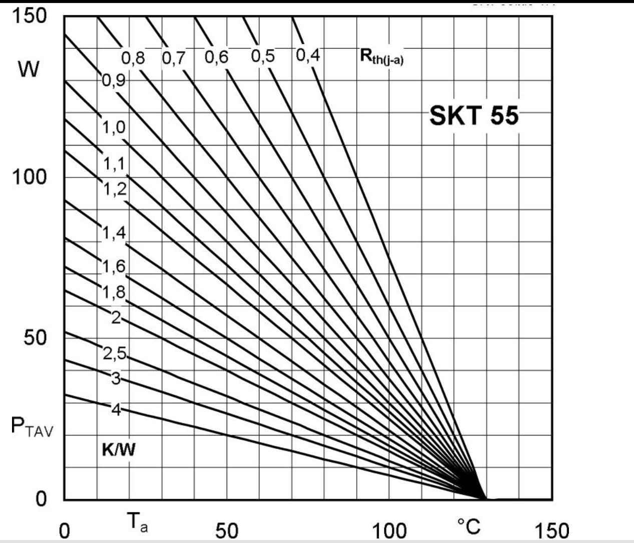


Fig. 1R Power dissipation vs. ambient temperature

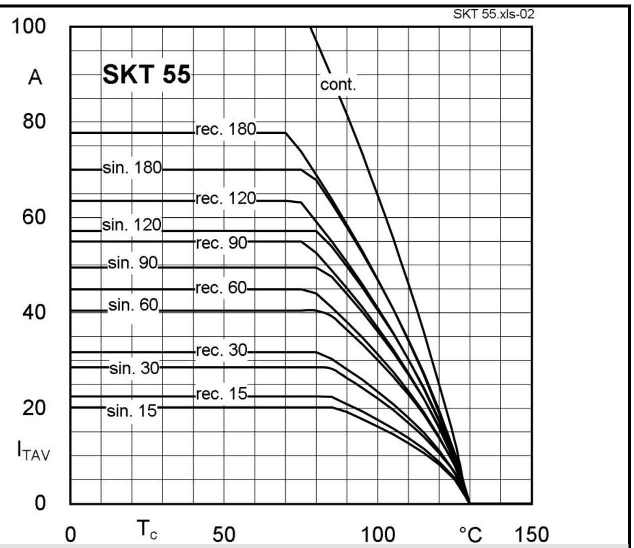


Fig. 2 Rated on-state current vs. case temperature

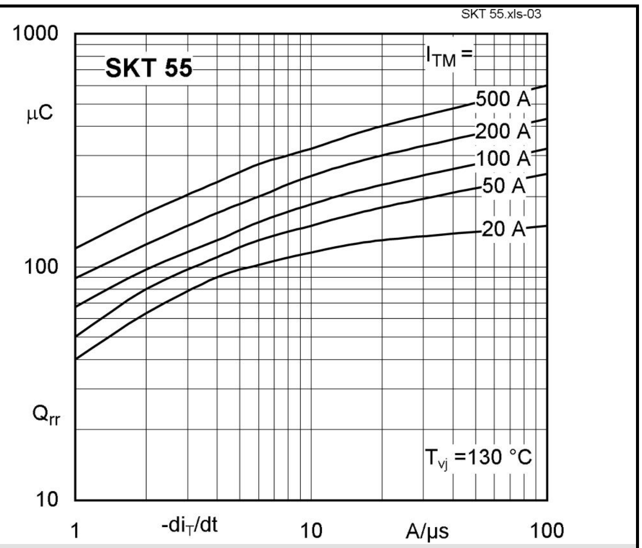


Fig. 3 Recovered charge vs. current decrease

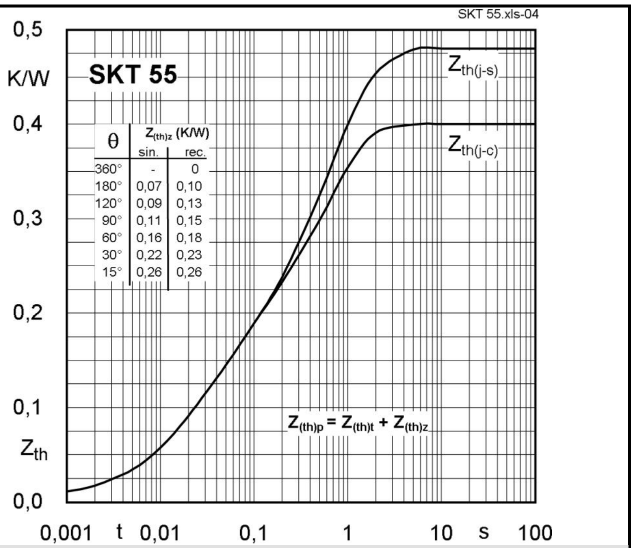


Fig. 4 Transient thermal impedance vs. time

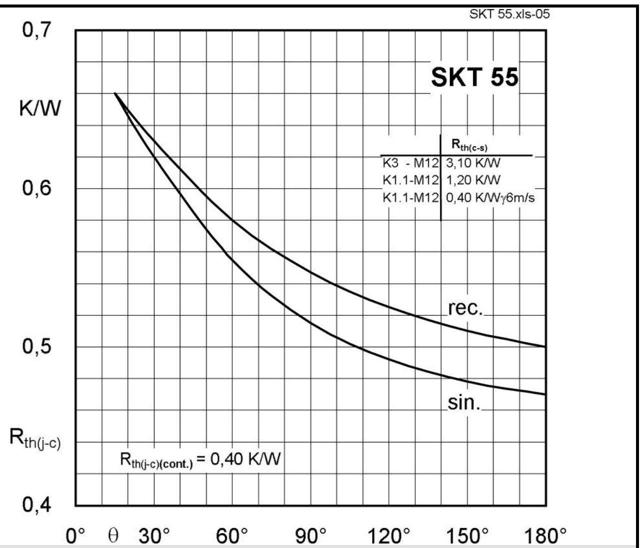


Fig. 5 Thermal resistance vs. conduction angle

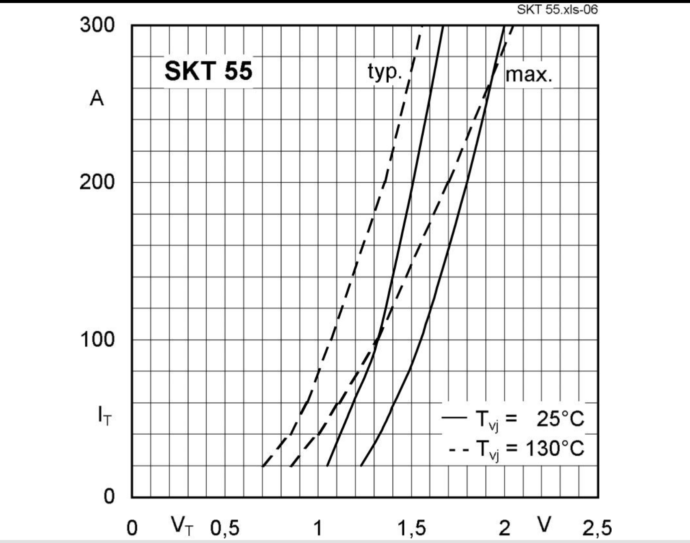


Fig. 6 On-state characteristics

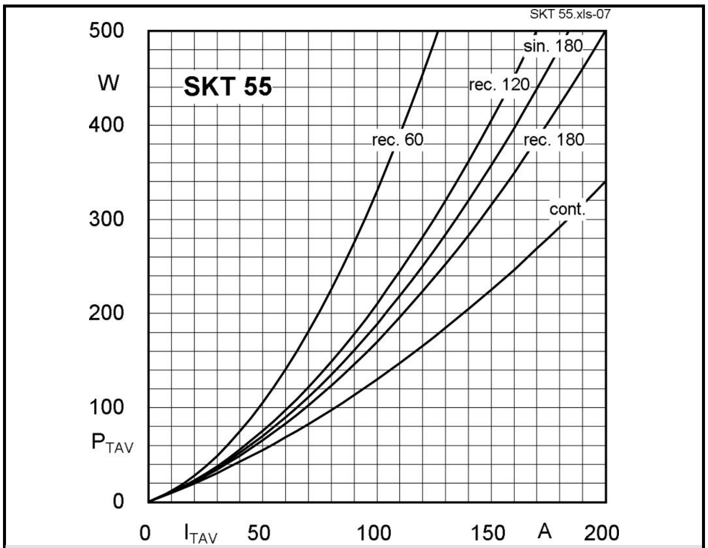


Fig. 7 Power dissipation vs. on-state current

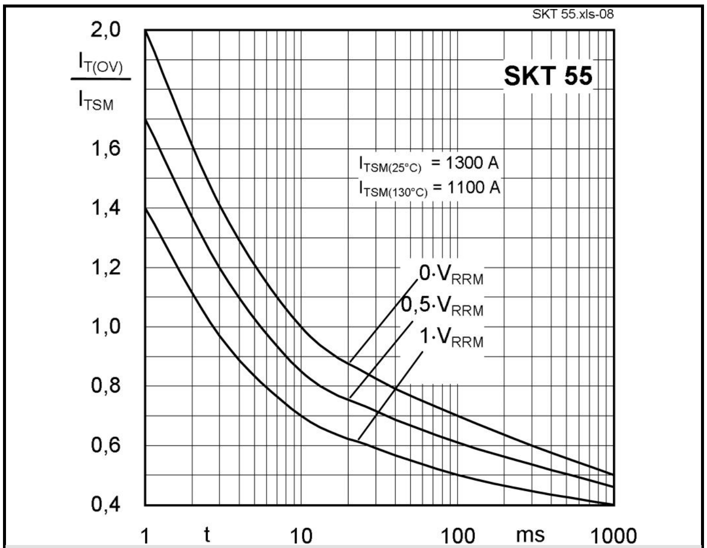


Fig. 8 Surge overload curent vs. time

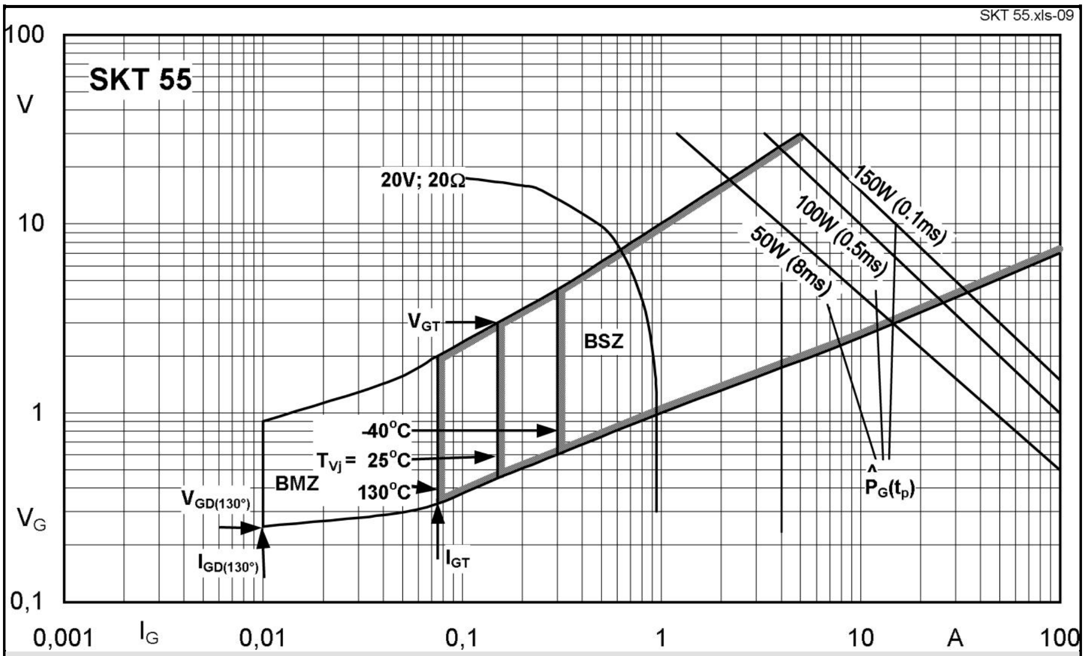
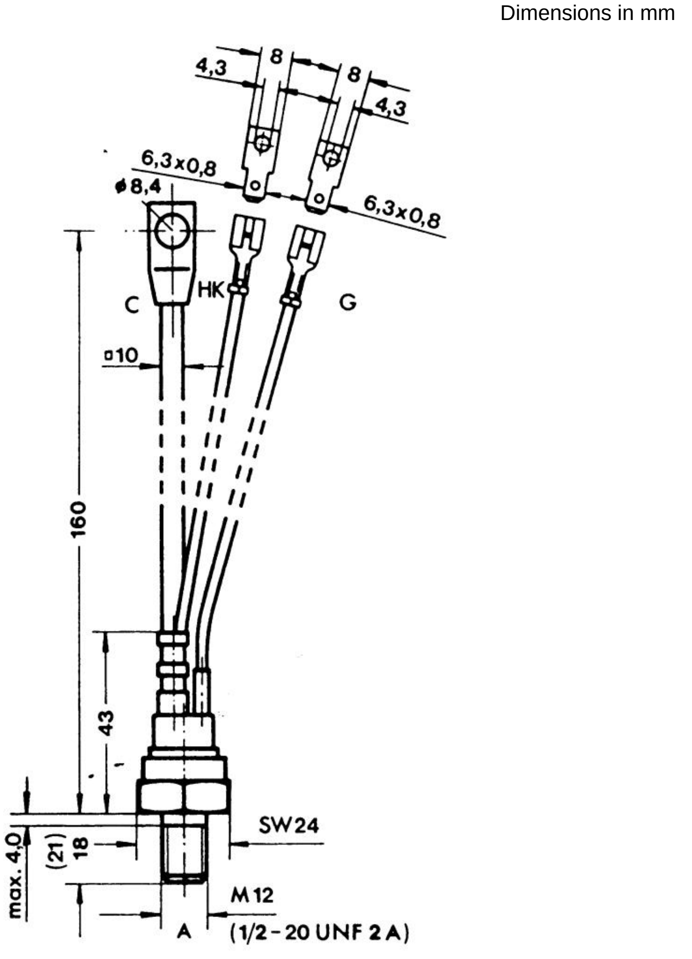


Fig. 9 Gate trigger characteristics



Case B 5 (IEC 60191-2: A12MA, A12U; JEDEC: TO209 (TO94))

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