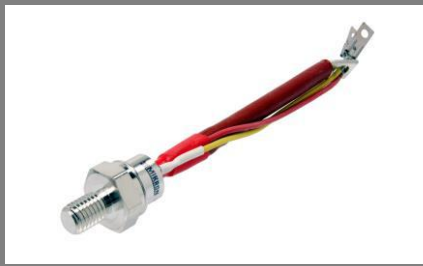


SKT 100



Stud Thyristor

V_{RSM} V	V_{RRM}, V_{DRM} V	$I_{TRMS} = 175$ A (maximum value for continuous operation) $I_{TAV} = 100$ A (sin. 180; $T_c = 85$ °C)
500	400	SKT 100/04 D
900	800	SKT 100/08 D
1300	1200	SKT 100/12 E
1500	1400	SKT 100/14 E
1700	1600	SKT 100/16 E
1900	1800	SKT 100/18 E

Line Thyristor

SKT 100

Features

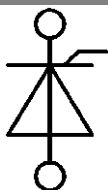
- Hermetic metal case with glass insulator
- Threaded stud ISO M12 x 1,75 or ½" - 20 UNF 2A
- Interchangeable with international standard case

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 $V_{RMS} \leq 400$ V:
 $R = 47 \Omega / 10$ W, $C = 0,22 \mu F$

1) Mounting with grease-like thermal compound or joint contact compound
 2) M12 x 1,75 is standard, "UNF" should be added in description for ½" - 20 2A thread.
 e.g.: SKT 100/08 D UNF

Symbol	Condition	Values	Units
I_{TAV}	sin. 180; $T_c = 100$ (85) °C	74 (100)	A
I_D	2 x P1/120; $T_a = 50$ °C; B2/B6 2 x P1/120F; $T_a = 40$ °C; B2/B6	125 / 176 182 / 250	A A
I_{RMS}	2 x P1/120; $T_a = 45$ °C; W1C	146	A
I_{TSM}	$T_{vj} = 25$ °C ; 10 ms $T_{vj} = 130$ °C ; 10 ms	2000 1750	A A
i^2t	$T_{vj} = 25$ °C ; 8,3...10 ms $T_{vj} = 130$ °C ; 8,3...10 ms	20000 15300	A ² s A ² s
V_T	$T_{vj} = 25$ °C, $I_T = 300$ A	max. 1,75	V
$V_{T(TO)}$	$T_{vj} = 130$ °C	max. 1	V
r_T	$T_{vj} = 130$ °C	max. 2,4	mΩ
$I_{DD}; I_{RD}$	$T_{vj} = 130$ °C; $V_{RD} = V_{RRM}; V_{DD} = V_{DRM}$	max. 30	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; D (E)	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.	0,25	K/W
$R_{th(j-c)}$	sin. 180	0,28	K/W
$R_{th(j-c)}$	rec. 120	0,31	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	M12 or ½" - 20 UNF M12 or ½" - 20 UNF (lubricated) ¹⁾	10 7,5	Nm Nm
a		5 * 9,81	m/s ²
m	approx.	100	g
Case		B5	



SKT

SKT 100

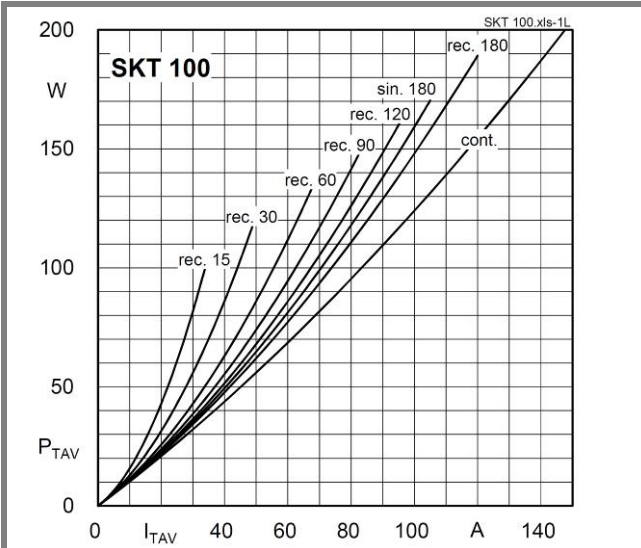


Fig. 1L Power dissipation vs. on-state current

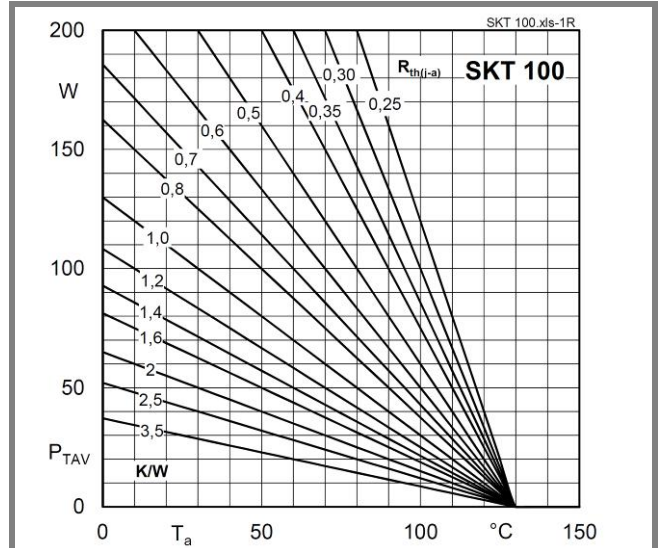


Fig. 1R Power dissipation vs. ambient temperature

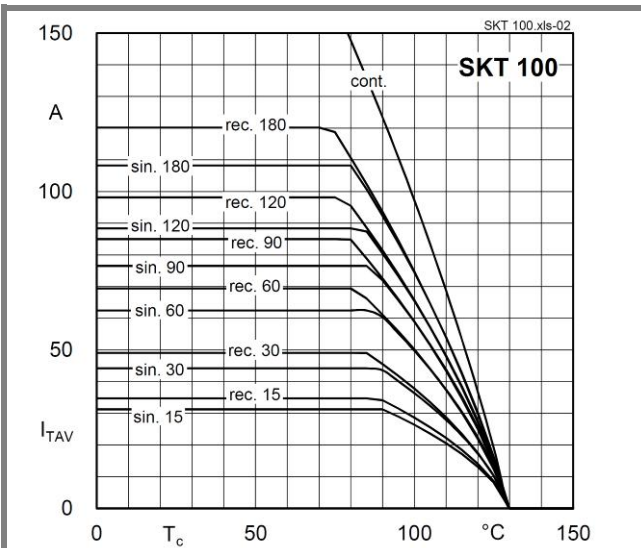


Fig. 2 Rated on-state current vs. case temperature

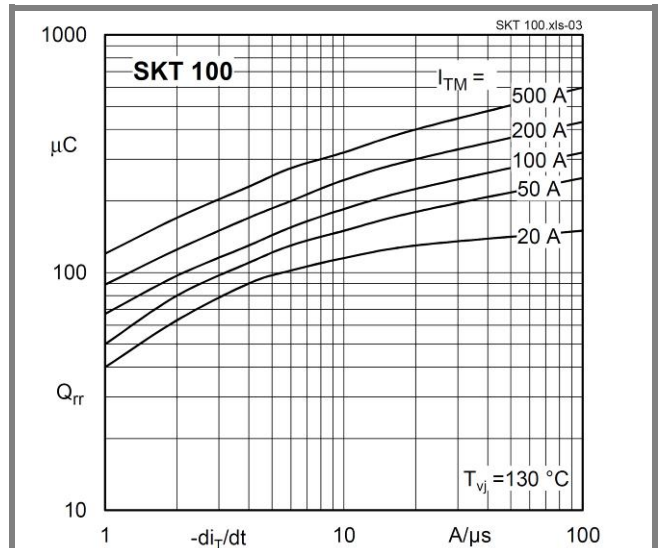


Fig. 3 Recovered charge vs. current decrease

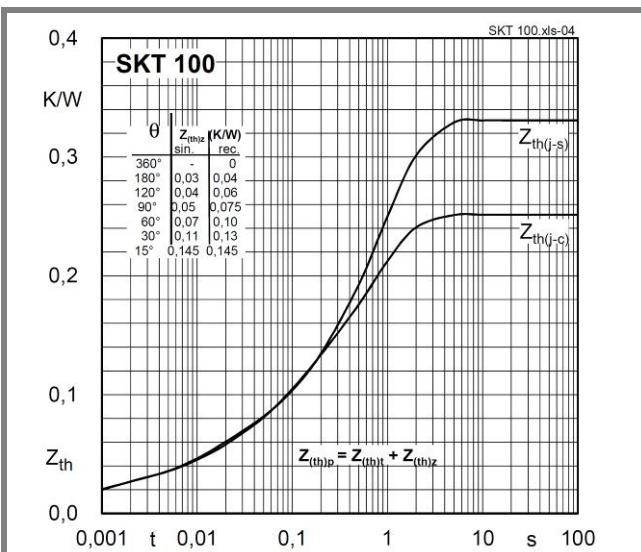


Fig. 4 Transient thermal impedance vs. time

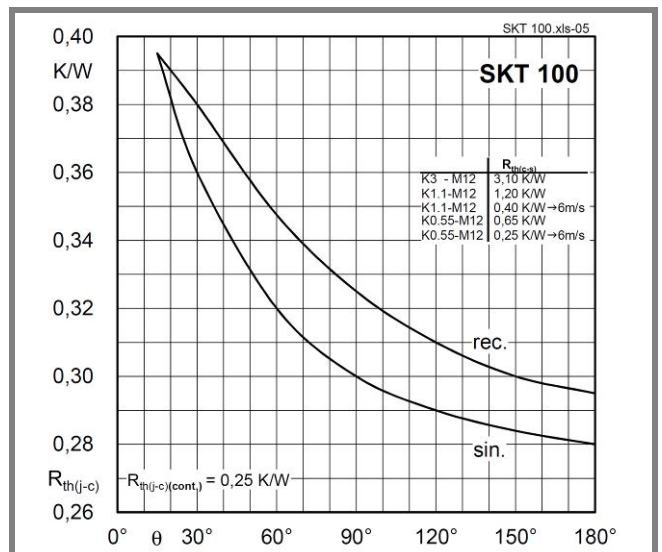


Fig. 5 Thermal resistance vs. conduction angle

SKT 100

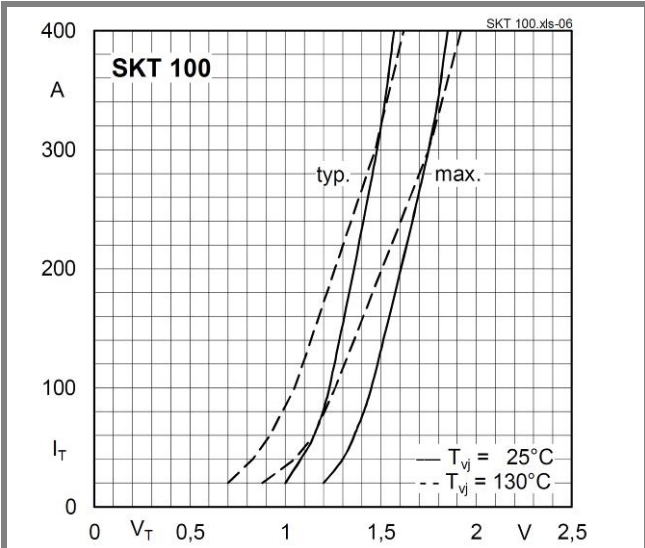


Fig. 6 On-state characteristics

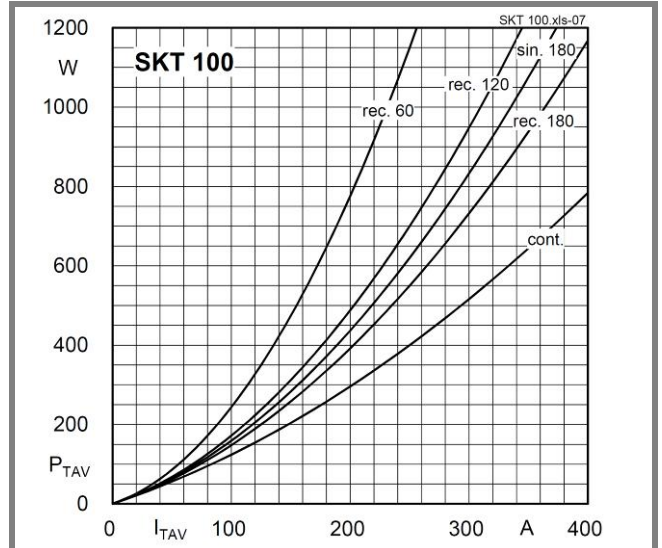


Fig. 7 Power dissipation vs. on-state current

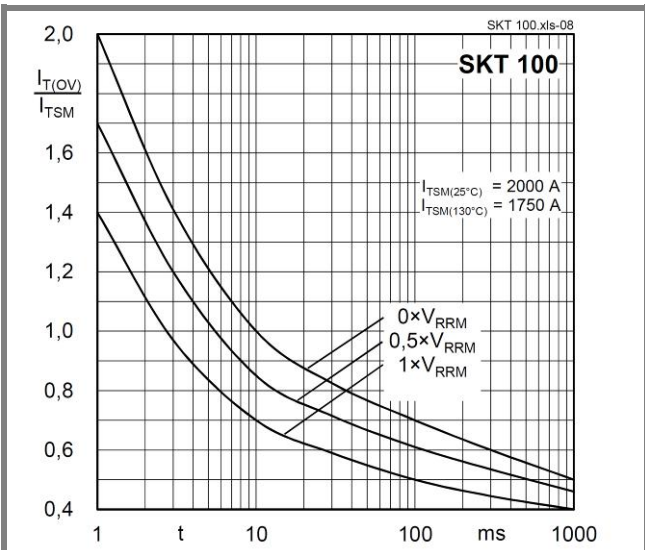


Fig. 8 Surge overload current vs. time

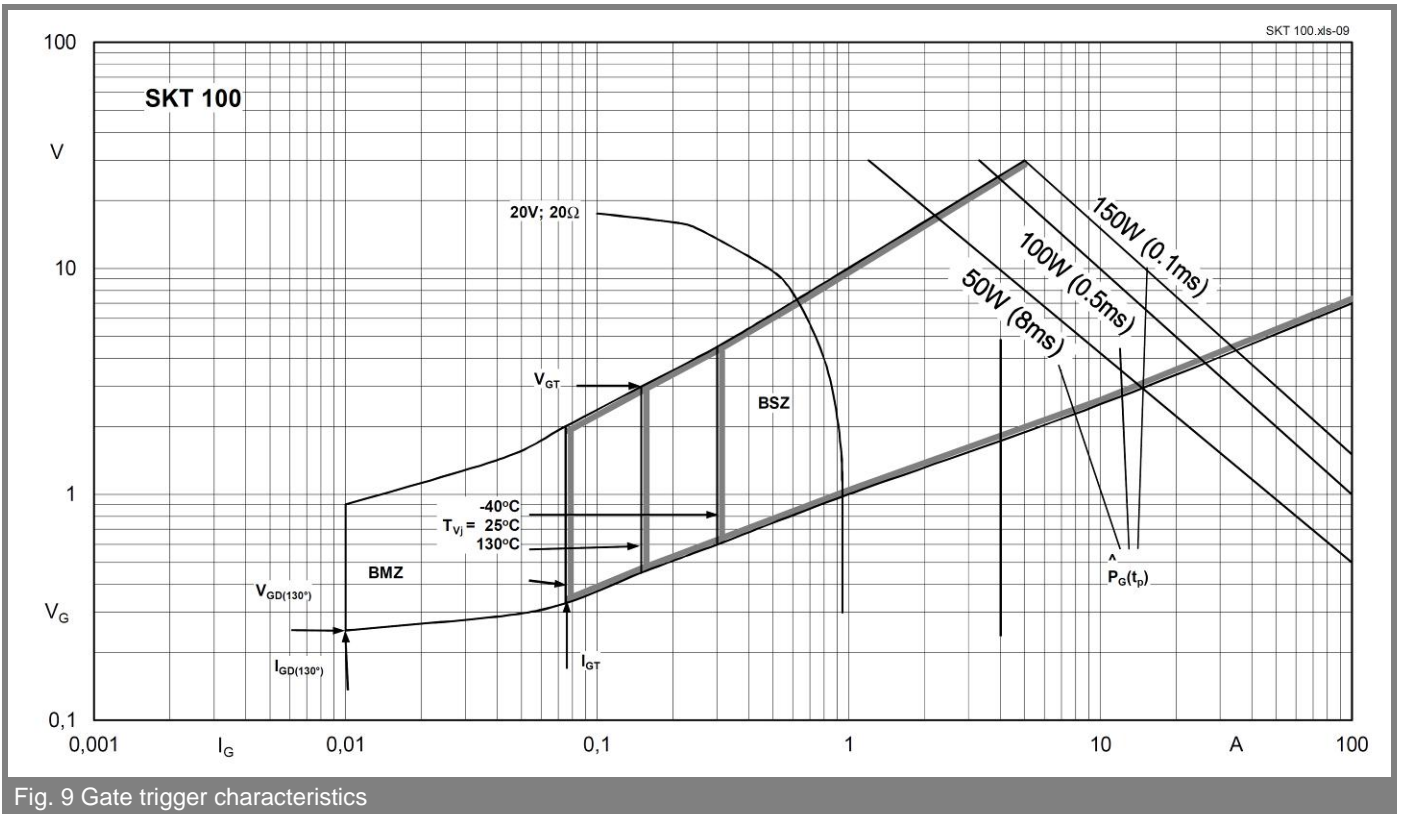
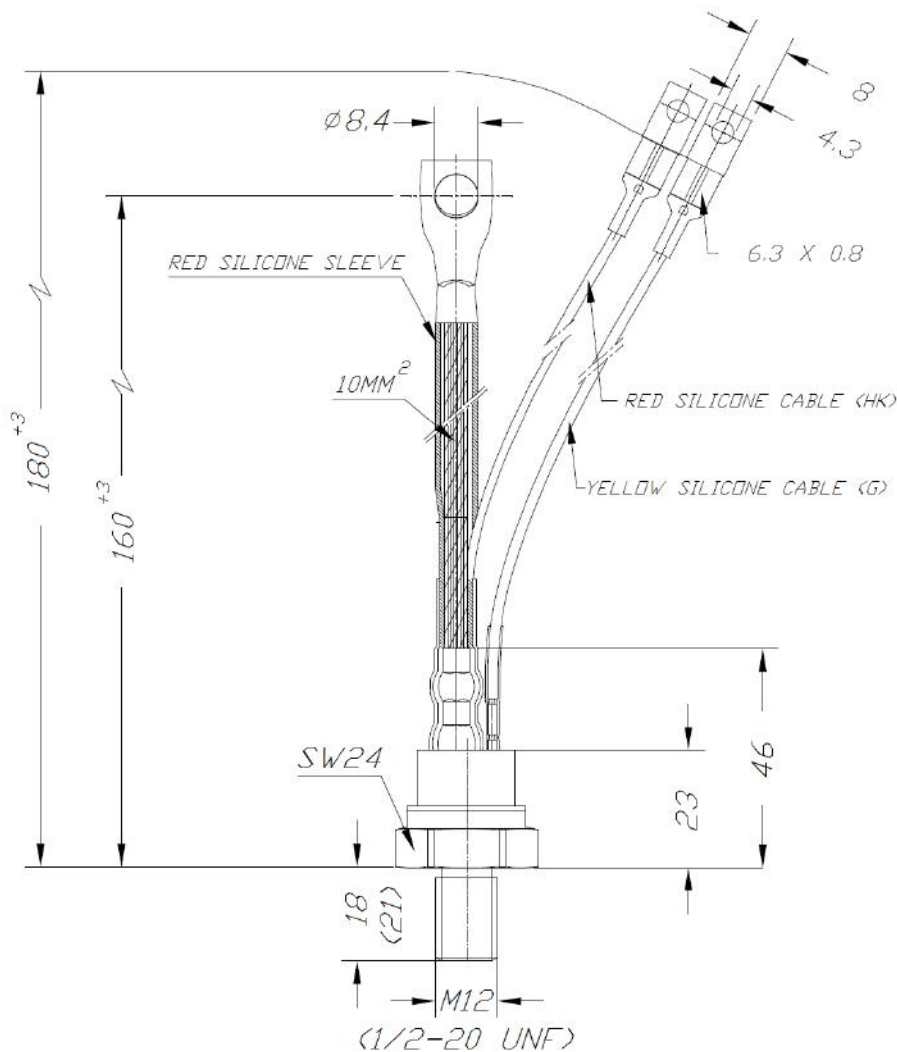


Fig. 9 Gate trigger characteristics



Case B5 (IEC 60191-2: A12MA, A12U; JEDEC: TO-209 (TO94))

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