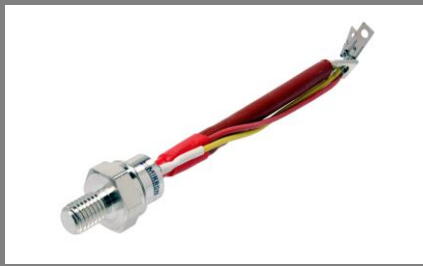


# SKT 100



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

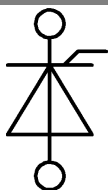
- Hermetic metal case with glass insulator
- Threaded stud ISO M12 x 1,75 or ½" - 20 UNF 2A
- Interchangeable with international standard case

#### 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 <sup>2</sup> s A <sup>2</sup> 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) <sup>1)</sup>	10 7,5	Nm Nm
$a$		5 * 9,81	m/s <sup>2</sup>
$m$	approx.	100	g
Case		B5	



SKT

# SKT 100

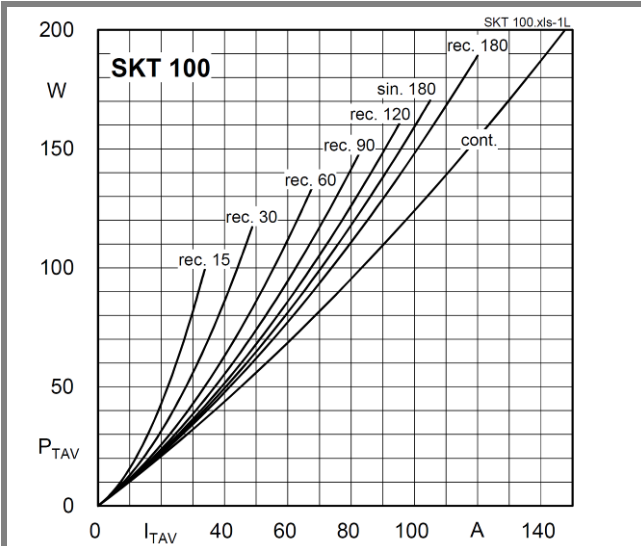


Fig. 1L Power dissipation vs. on-state current

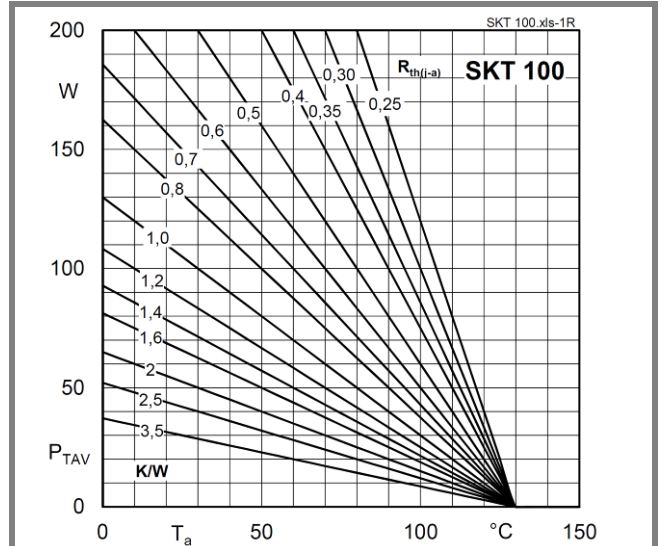


Fig. 1R Power dissipation vs. ambient temperature

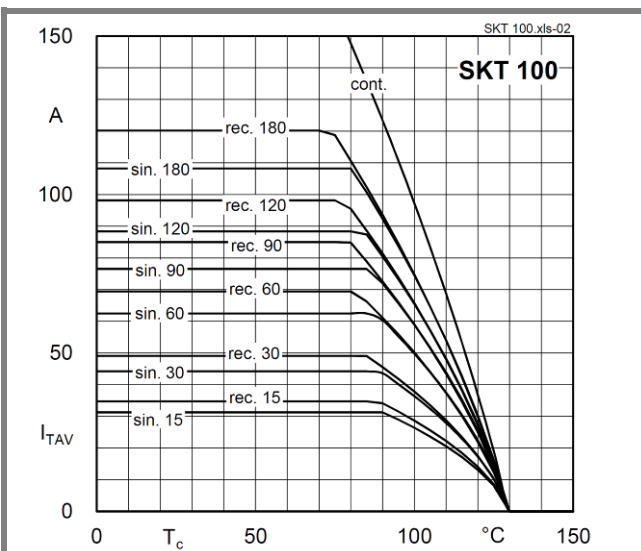


Fig. 2 Rated on-state current vs. case temperature

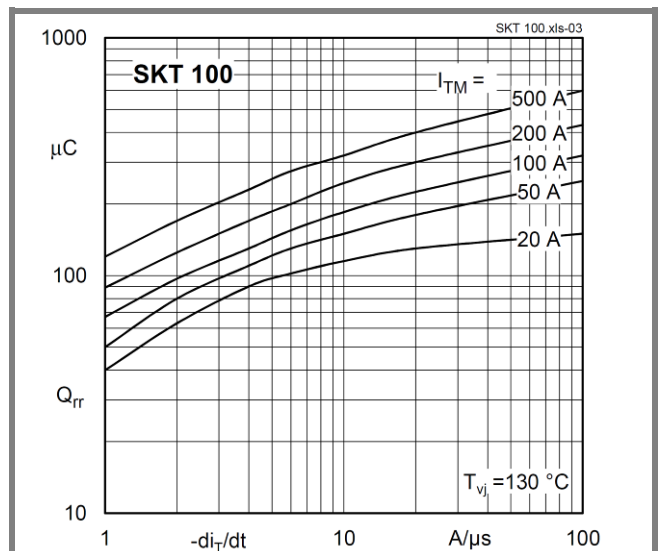


Fig. 3 Recovered charge vs. current decrease

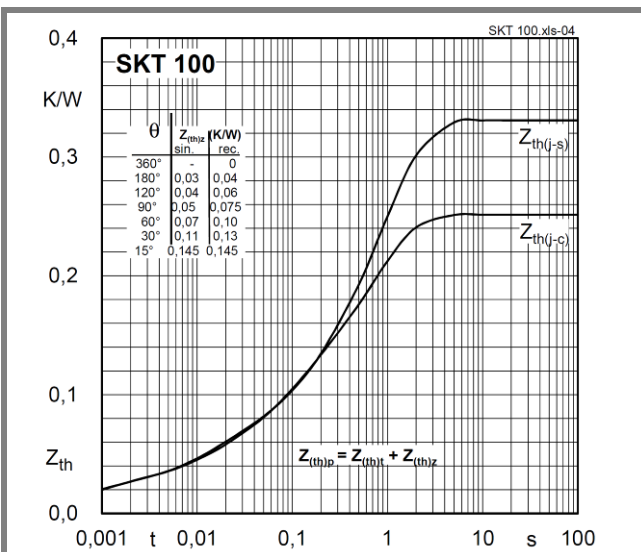


Fig. 4 Transient thermal impedance vs. time

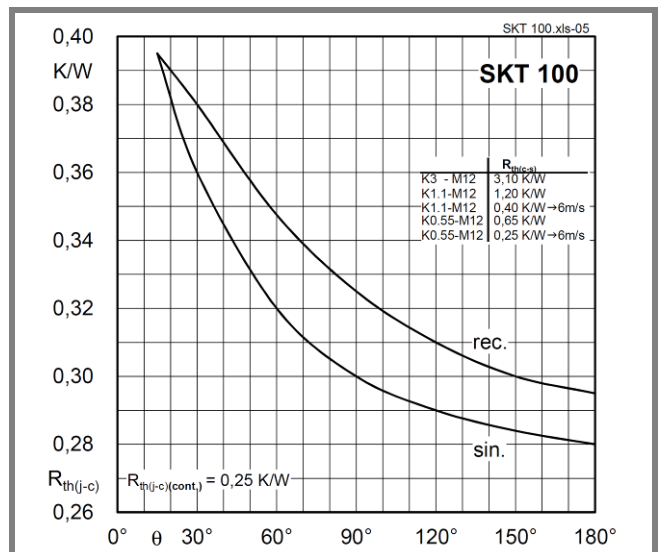


Fig. 5 Thermal resistance vs. conduction angle

# SKT 100

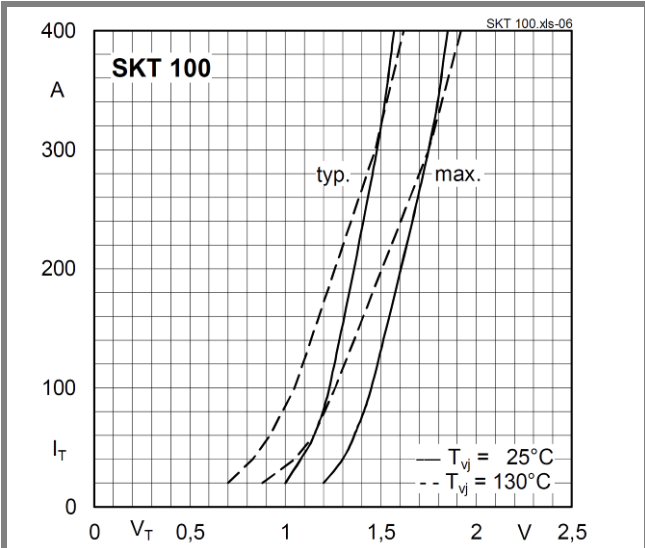


Fig. 6 On-state characteristics

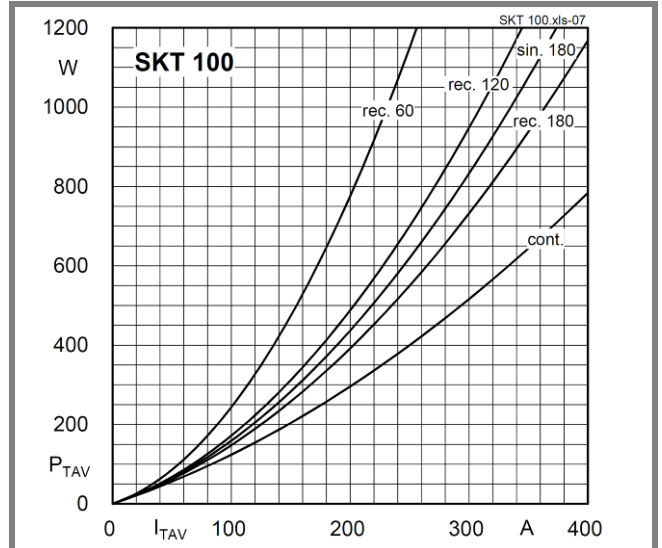


Fig. 7 Power dissipation vs. on-state current

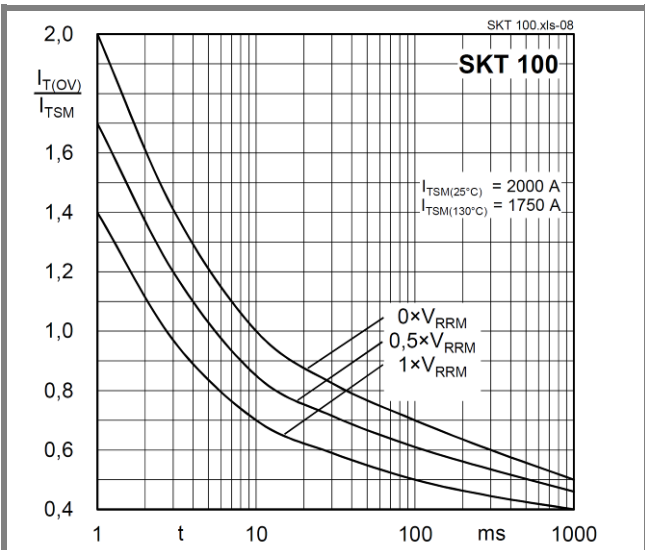


Fig. 8 Surge overload current vs. time

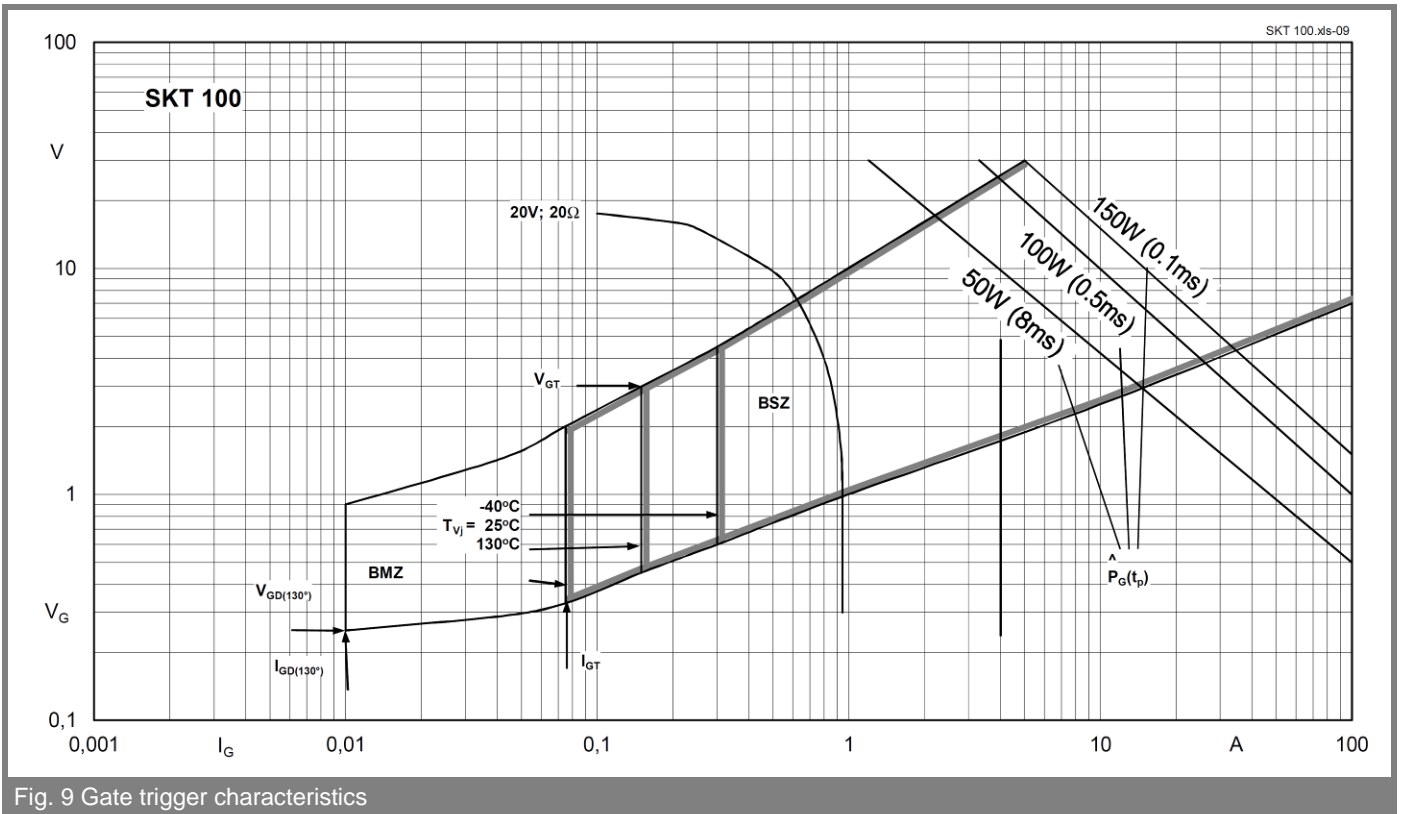
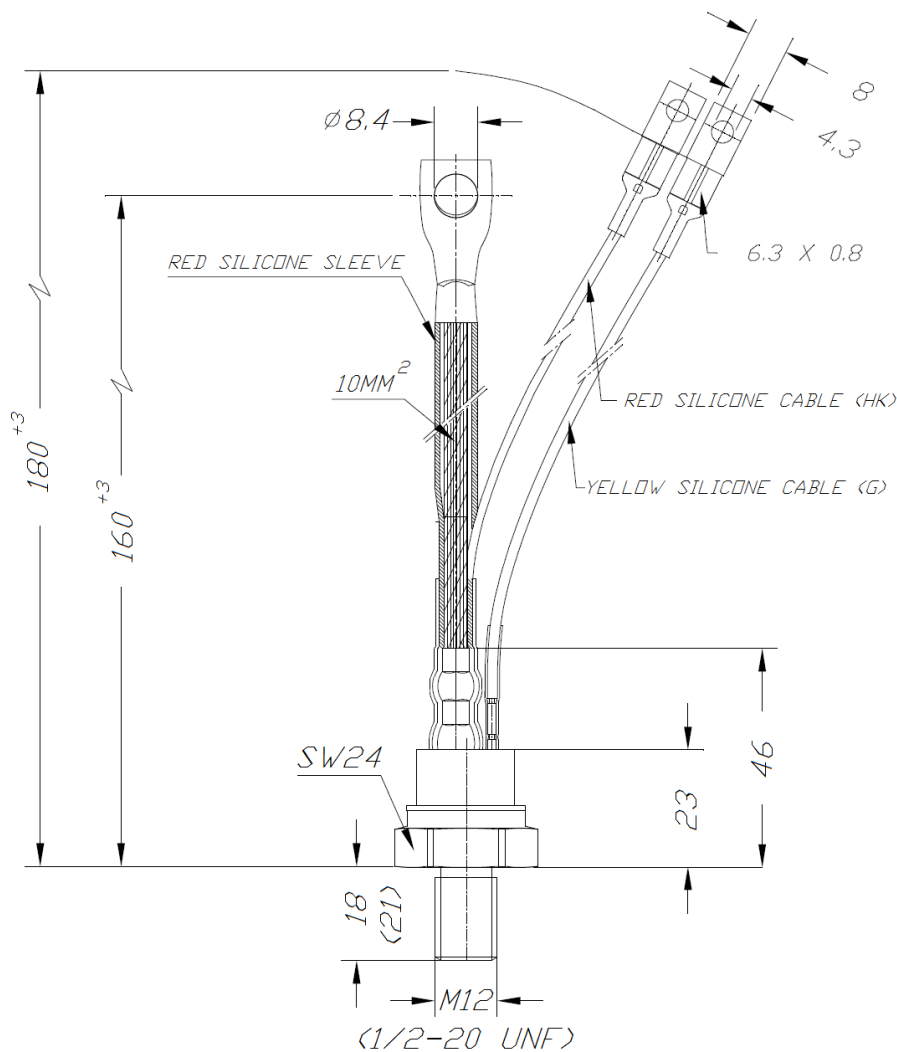


Fig. 9 Gate trigger characteristics



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

**\*IMPORTANT INFORMATION AND WARNINGS**

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