SK 100 TAA

SEMITOP®2

Two separated thyristors

SK 100 TAA

Target Data

Features

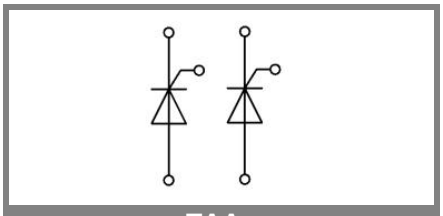
- Compact design
- One screw mounting
- Heat transfer and isolation through direct copper bonded aluminium oxide ceramic (DBC)
- Glass passivated thyristor chips
- Up to 1600 reverse voltage
- High surge currents

Typical Applications

- Brake chopper
- Soft starters

V_{RSM} V	V_{RRM}, V_{DRM} V	I_T= 100 A (T_s = 80 °C)
900	800	SK 100 TAA 08
1300	1200	SK 100 TAA 12
1700	1600	SK 100 TAA 16

Characteristics		Ts = 25°C unless otherwise specified	
Symbol	**Conditions**	**Values**	**Units**
I_T	Ts = 100°C	65	A
I_T	Ts = 80°C	100	A
			A
I_{TSM}/I_{FSM}	T_{vj} = 25 (125) °C; 10 ms	2000 (1800)	A
I^2t	T_{vj} = 25 (125) °C; half sine wave, 10 ms	20000 (16200)	A^2s
T_{stg}		-40 ... + 125	°C
T_{solder}	terminals, 10 s	260	°C
Thyristor			
$(dv/dt)_{cr}$	T_{vj} = 125 °C	1000	V/µs
$(di/dt)_{cr}$	T_{vj} = 125 °C; f = 50 ... 60 Hz	50	A/µs
t_q	T_{vj} = 125 °C; typ.	80	µs
I_H	T_{vj} = 25 °C; typ. / max.	100 / 200	mA
I_L	T_{vj} = 25 °C; R_G = 33 Ω ; typ. / max.	200 / 500	mA
V_T	T_{vj} = 25 °C; (I_T = 300 A); max.	1,85	V
$V_{T(TO)}$	T_{vj} = 125 °C	max. 0,9	V
r_T	T_{vj} = 125 °C	max. 3,5	mΩ
I_{DD}; I_{RD}	T_{vj} = 125 °C; V_{DD} = V_{DRM}; V_{RD} = V_{RRM}	max. 20	mA
$R_{th(j-s)}$	cont. per thyristor	0,45	K/W
T_{vj}		-40 ... +125	°C
V_{GT}	T_{vj} = 25 °C; d.c.	2	V
I_{GT}	T_{vj} = 25 °C; d.c.	100	mA
V_{GD}	T_{vj} = 125 °C; d.c.	0,25	V
I_{GD}	T_{vj} = 125 °C; d.c.	5	mA
Diode			
V_F	T_{vj} = °C; (I_F = A); max.		V
$V_{(TO)}$	T_{vj} = °C		V
r_T	T_{vj} = °C		mΩ
I_{RD}	T_{vj} = °C; V_{RD} = V_{RRM}		mA
$R_{th(j-s)}$			K/W
T_{vj}			°C
Mechanical data			
V_{isol}	AC 50Hz, r.m.s. 1min (1sec)	2500 (3000)	V
M_1	mounting torque	2	Nm
w		19	g
Case	SEMITOP®2	T 81	



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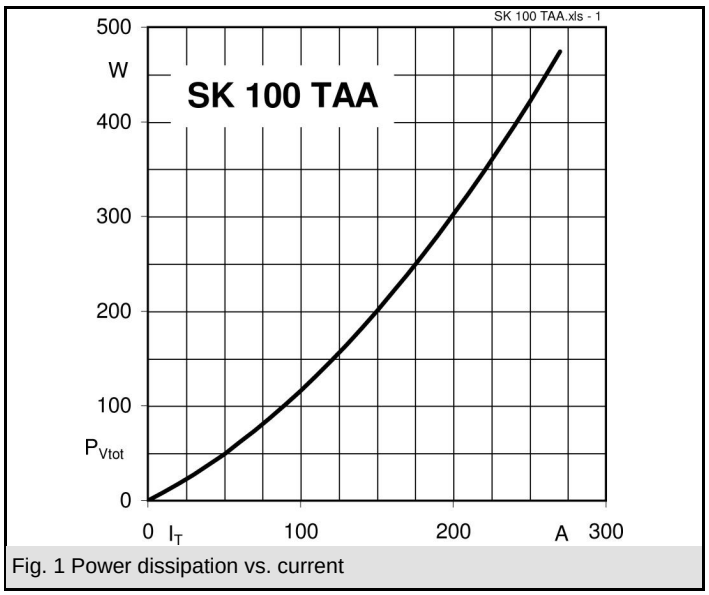


Fig. 1 Power dissipation vs. current

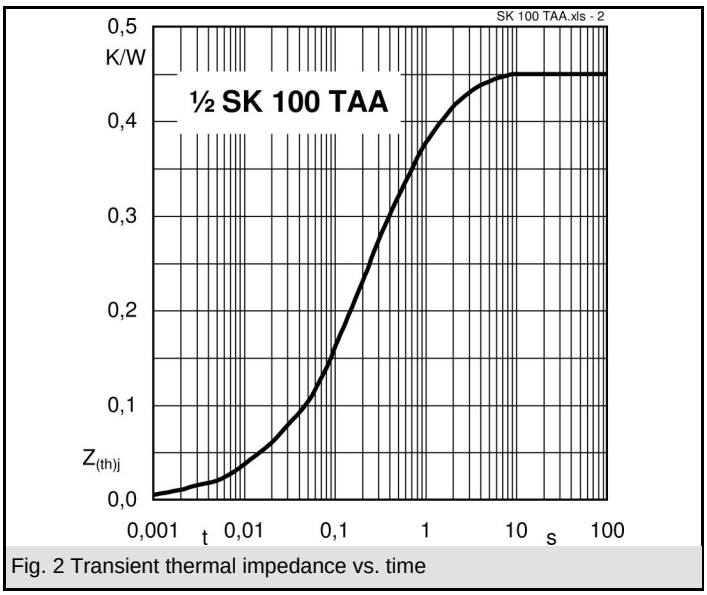


Fig. 2 Transient thermal impedance vs. time

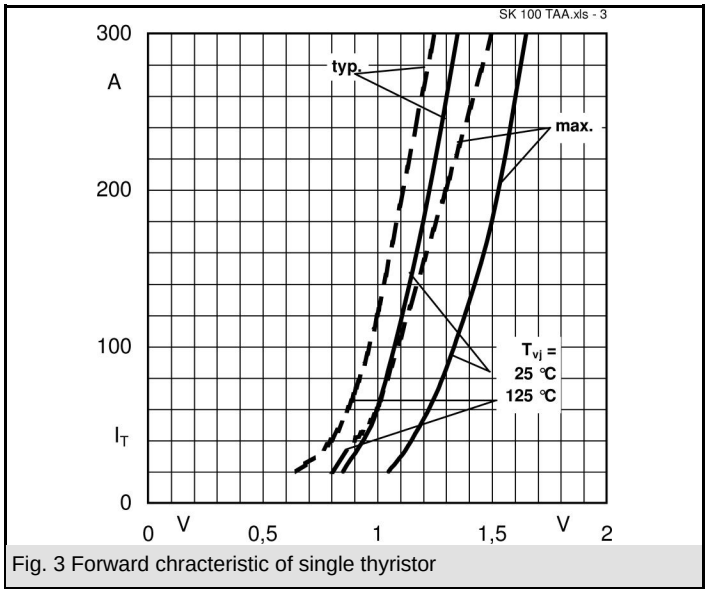


Fig. 3 Forward chracteristic of single thyristor

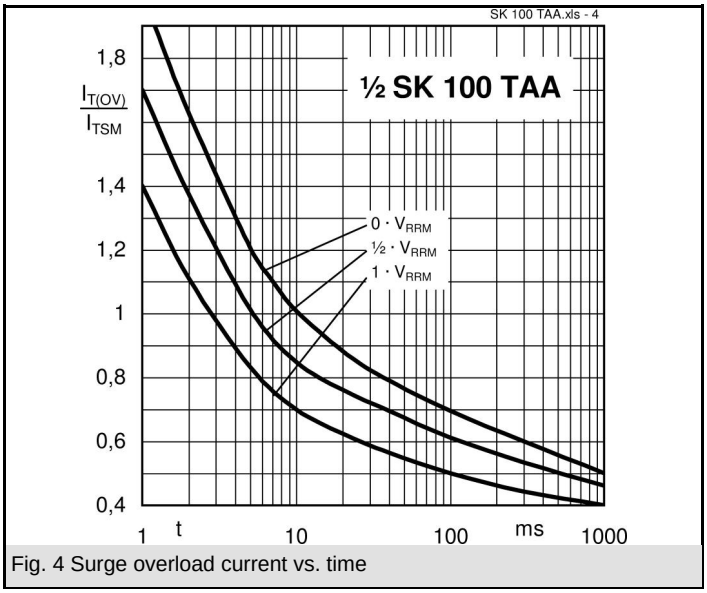


Fig. 4 Surge overload current vs. time

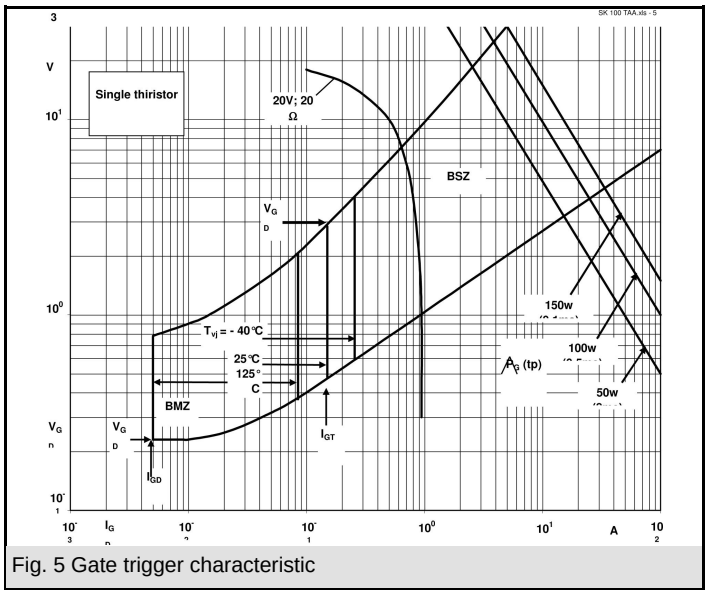
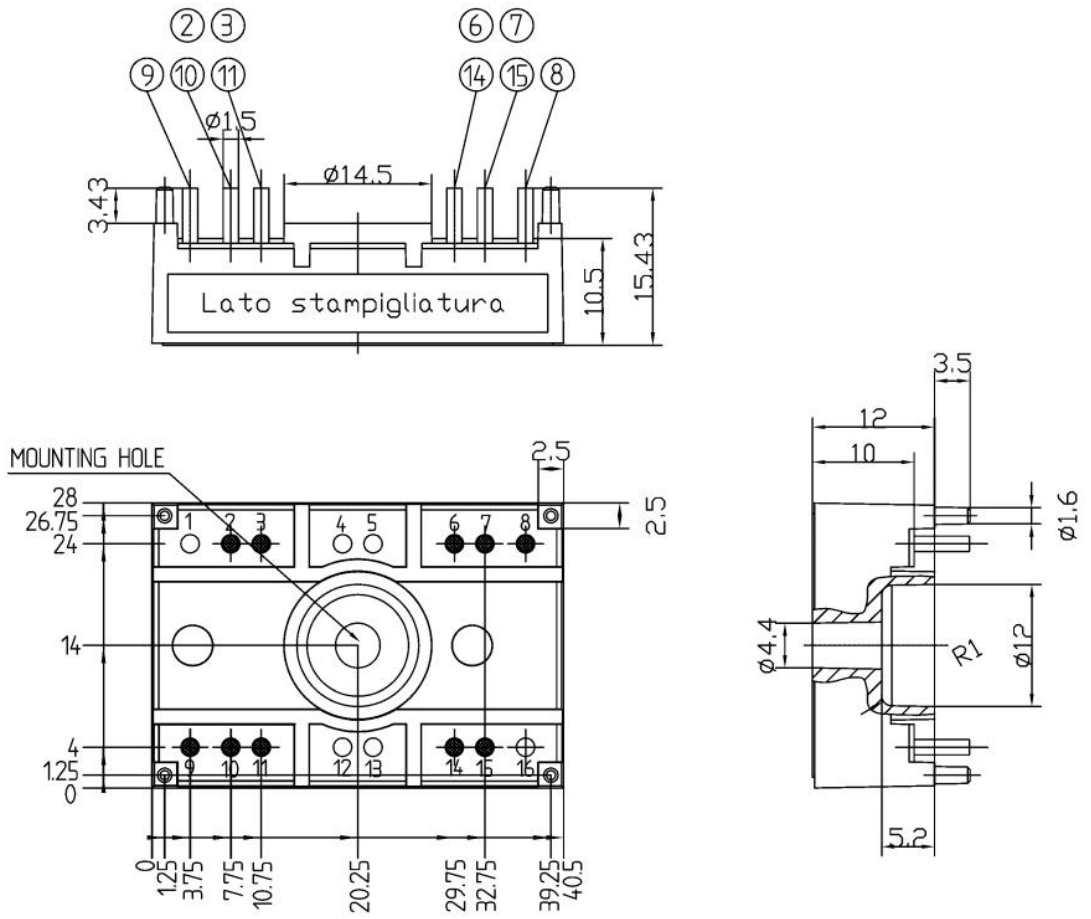


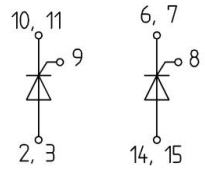
Fig. 5 Gate trigger characteristic

Dimensions in mm



SUGGESTED HOLEDIAMETER FOR THE SOLDER PINS AND THE MOUNTING PINS IN THE PCB: 2 mm

Case T 81 (Suggested hole diameter, in the PCB, for solder pins and plastic mounting pins: 2mm)



TAA

This is an electrostatic discharge sensitive device (ESDS), international standard IEC 60747-1, Chapter IX.

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