SK100TAA16p

SEMITOP® 2 Press-Fit

Two separated thyristors

Engineering Sample

SK100TAA16p

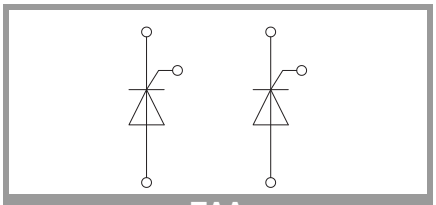
Target Data

Features

- **One screw mounting module**
- **Solder free mounting with Press-fit terminals**
- **Fully compatible with other SEMITOP® Press-Fit types**
- **Improved thermal performances by aluminum oxide substrate**
- **Glass passivated thyristor chips**
- **Up to 1600V reverse voltage**
- **UL recognized, file no. E 63 532**

Typical Applications*

- **Soft starters**
- **Brake chopper**



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Absolute Maximum Ratings			
Symbol	**Conditions**	**Values**	**Unit**
Thyristor 1			
V_{RRM}		1600	V
$I_{T(AV)}$	T_j = 130 °C, T_s = 70 °C	98	A
I_{TSM}	tp = 10 ms, sin 180°, T_j = 25 °C	2000	A
i^2t	tp = 10 ms, sin 180°, T_j = 25 °C	20000	A^2s
T_j		-40 ... 130	°C

Absolute Maximum Ratings			
Symbol	**Conditions**	**Values**	**Unit**
Module			
$I_{t(RMS)}$	$T_{terminal}$ = 100 °C, T_S = 60°C, per pin	40	A
T_{stg}		-40 ... 125	°C
V_{isol}	AC, sinusoidal, t = 1 min	2500	V

Characteristics						
Symbol	**Conditions**		**min.**	**typ.**	**max.**	**Unit**
Thyristor 1						
V_T	I_T = 150 A	T_j = 25 °C			1.26	V
	chiplevel	T_j = 130 °C		1.12	1.19	V
$V_{T(TO)}$	T_j = 130 °C			0.84	0.91	V
r_T	T_j = 130 °C			1.85	1.87	mΩ
V_{GT}	T_j = 25 °C		1.65			V
I_{GT}	T_j = 25 °C		100			mA
I_H	T_j = 25 °C				220	mA
I_L	T_j = 25 °C				550	mA
dv/dt_{cr}	T_j = 130 °C				1000	V/µs
di/dt_{cr}	T_j = 130 °C				100	A/µs
$R_{th(j-s)}$	per single thyristor			0.45		K/W

Characteristics				
Symbol	**Conditions**	**min.**	**typ.**	**max.**	**Unit**
Module					
M_s	to heatsink	1.8		2	Nm
w	weight		19		g

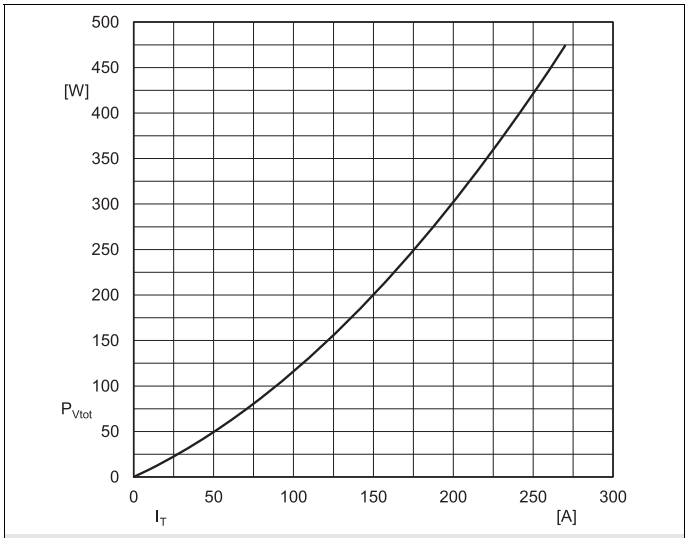


Fig. 1: Power dissipation per module vs. rms current

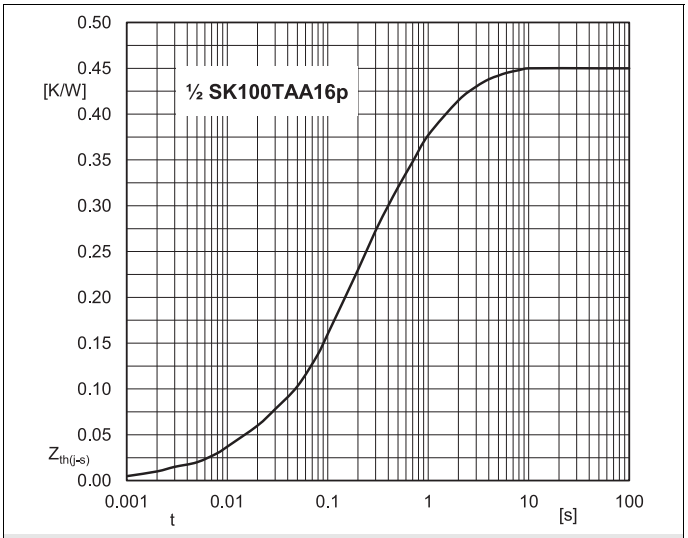


Fig. 2: Transient thermal impedance vs. time

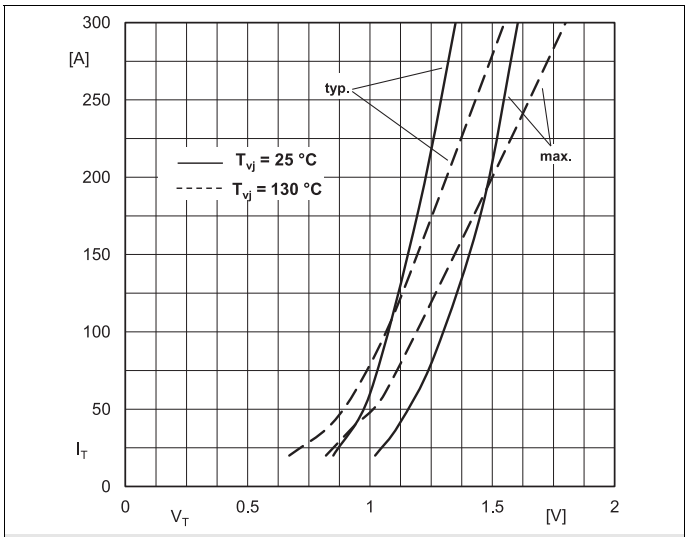


Fig. 3: Typ. forward characteristic of single thyristor

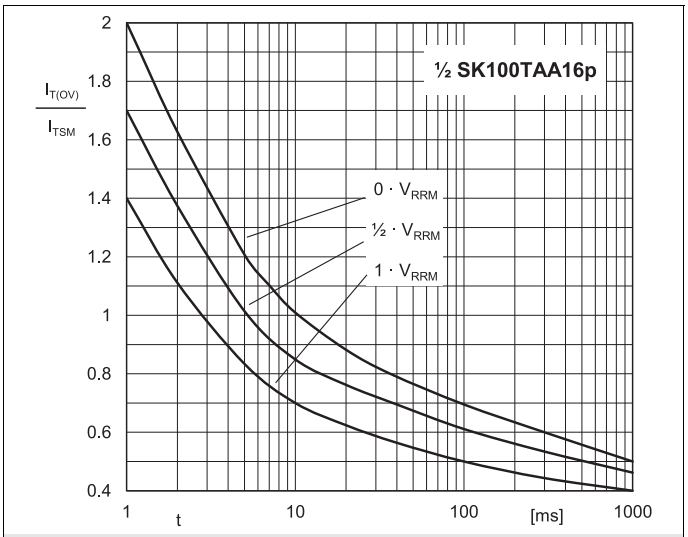
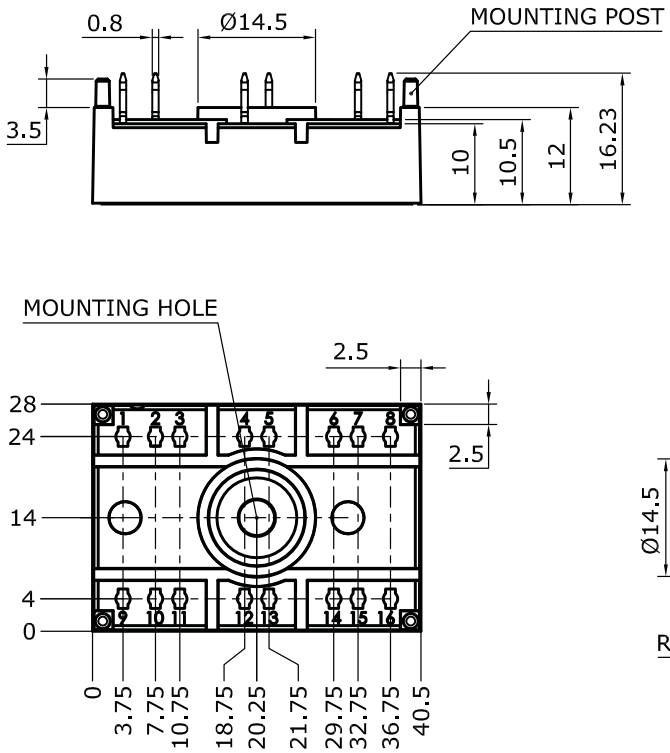


Fig. 4 : Surge overload current vs. time

Dimensions: mm
Tolerance system: ISO 2768-m



Suggested drilled hole diameter for terminal pins in the circuit board:

- minimum: 1.575 mm
- typical: 1.6 mm
- maximum: 1.625 mm

Suggested hole diameter for the mounting post in the circuit board:

- 2 mm

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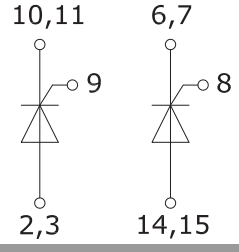

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This is an electrostatic discharge sensitive device (ESDS), international standard IEC 60747-1, chapter IX.

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