



SEMITOP®2

Thyristor and Diode
separated in the same
housing
SK 75 TAE

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 1600V reverse voltage

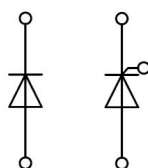
Typical Applications*

- UPS

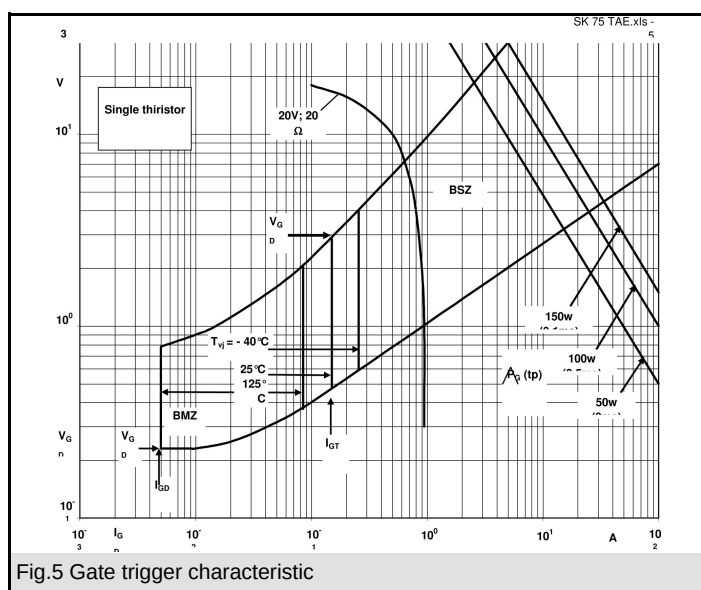
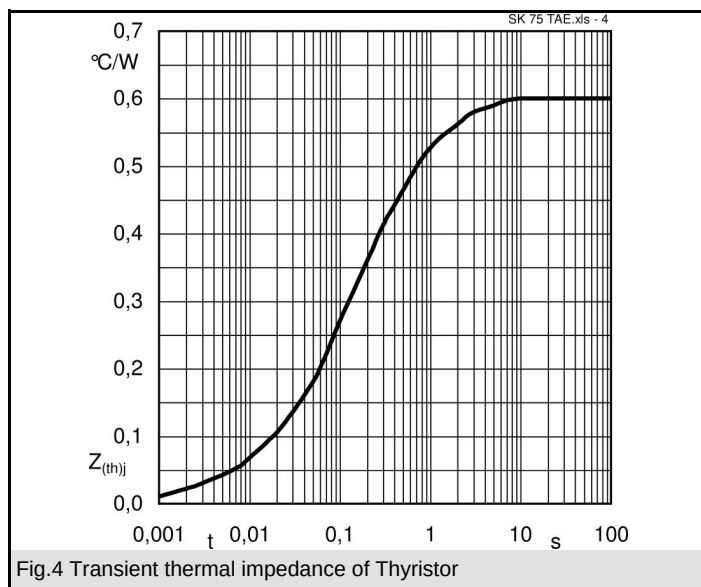
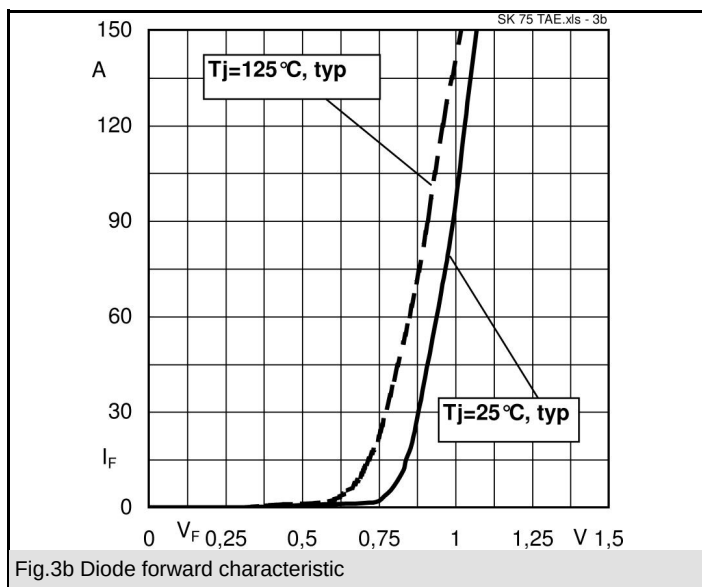
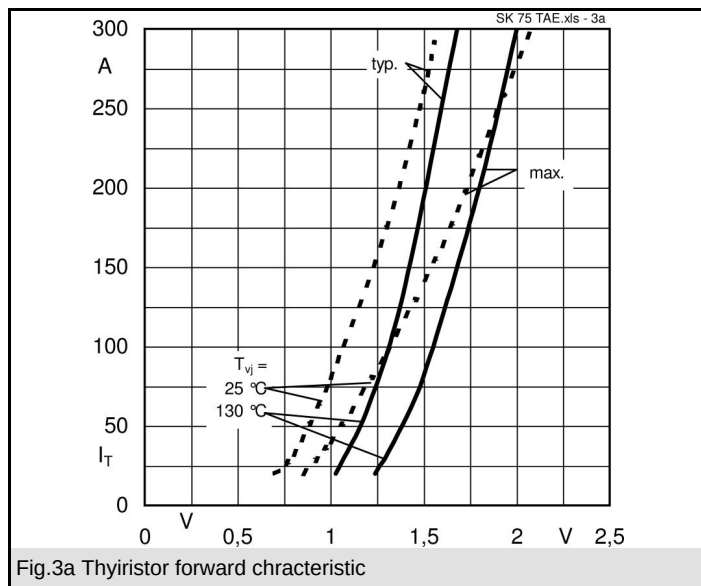
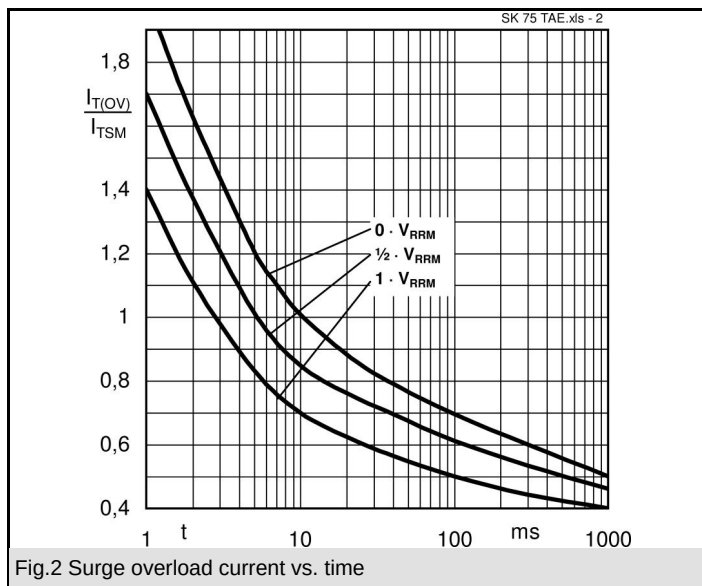
¹⁾ REMARKS: V_T , $V_{T(To)}$, V_F , V_{TO} = chip level value

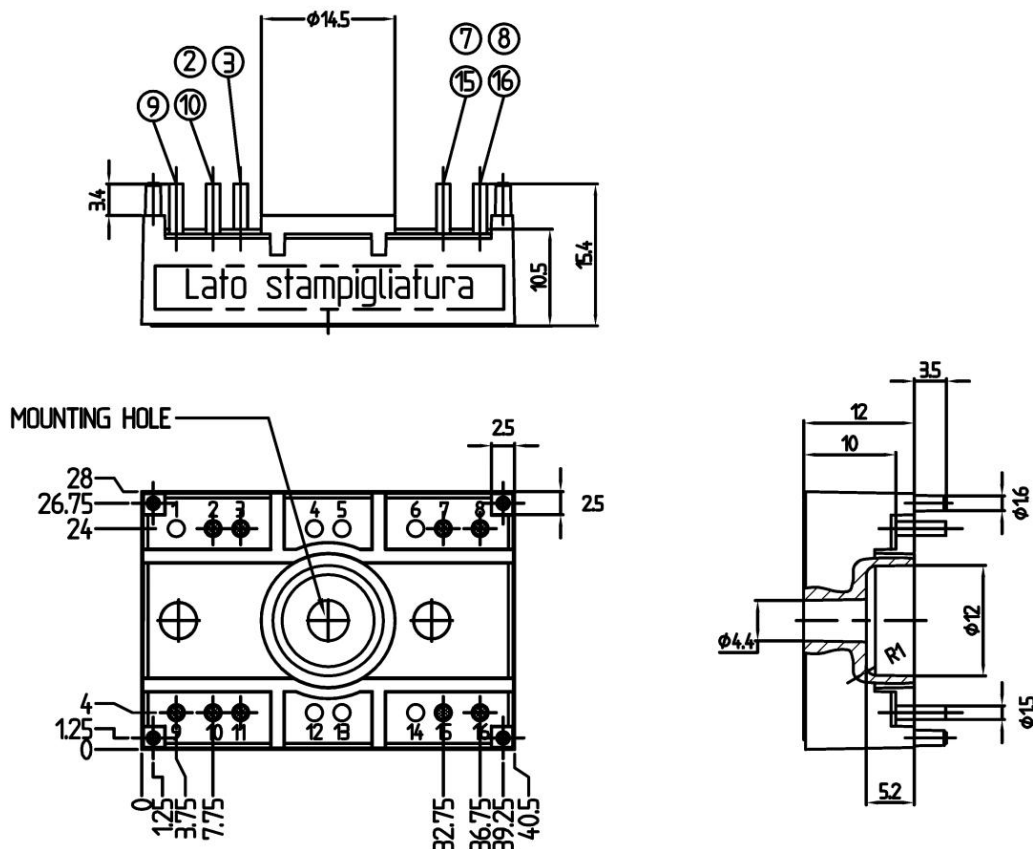
V_{RSM} V	V_{RRM} , V_{DRM} V	$I_T = 75$ A ($T_s = 80$ °C)
1300	1200	SK75TAE12

Characteristics		$T_s = 25$ °C, unless otherwise specified	
Symbol	Conditions	Values	Units
I_T	$T_s = 80$ °C	75	A
I_T	$T_s = 100$ °C	50	A
			A
I_{TSM}/I_{FSM}	$T_{vj} = 130$ °C; 10 ms	1250	A
I^2t	$T_{vj} = 130$ °C; half sine wave, 10 ms	7810	A²s
T_{stg}		-40 ... +130	°C
T_{solder}	terminals, 10 s	260	°C
Thyristor			
$(dv/dt)_{cr}$	$T_{vj} = 125$ °C	500	V/μs
$(di/dt)_{cr}$	$T_{vj} = 125$ °C; $f =$ Hz	125	A/μs
t_q	$T_{vj} = 130$ °C; typ.	150	μs
I_H	$T_{vj} = 25$ °C; typ. / max.	250 /	mA
I_L	$T_{vj} = 25$ °C; $R_G =$; typ. / max.	600 /	mA
V_T	$T_{vj} = 130$ °C; ($I_T = 110$ A); max.	1,2	V
$V_{T(To)}$	$T_{vj} = 130$ °C	max. 0,85	V
r_T	$T_{vj} = 130$ °C	max. 4,4	mΩ
I_{DD} ; I_{RD}	$T_{vj} =$ °C; $V_{DD} = V_{DRM}$; $V_{RD} = V_{RRM}$	max.	mA
$R_{th(j-s)}$	max. value	0,6	K/W
T_{vj}		-40 ... +130	°C
V_{GT}	$T_{vj} = 25$ °C; d.c.	1,98	V
I_{GT}	$T_{vj} = 25$ °C; d.c.	100	mA
V_{GD}	$T_{vj} = 130$ °C; d.c.	0,25	V
I_{GD}	$T_{vj} = 115$ °C; d.c.	6	mA
Diode			
V_F	$T_{vj} = 125$ °C; ($I_F = 100$ A); max.	1,1	V
$V_{(To)}$	$T_{vj} = 125$ °C	0,83	V
r_T	$T_{vj} = 125$ °C	1,6	mΩ
I_{RD}	$T_{vj} =$ °C; $V_{RD} = V_{RRM}$		mA
$R_{th(j-s)}$	max. value	0,62	K/W
T_{vj}		-40 ... +150	°C
Mechanical data			
V_{isol}	a.c. 50Hz; r.m.s.; 1s (1min)	2500 (3000)	V
M_1	mounting torque	2	Nm
w		19	g
Case	SEMITOP®2	T 82	



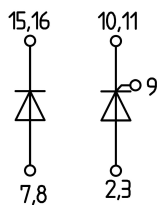
TAE





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

Case T82 (Suggested hole diameter, in the PCB, for solder pins and plastic mounting pins: 2mm)



T82

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

* The specifications of our components may not be considered as an assurance of component characteristics. Components have to be tested for the respective application. Adjustments may be necessary. The use of SEMIKRON products in life support appliances and systems is subject to prior specification and written approval by SEMIKRON. We therefore strongly recommend prior consultation of our personal.