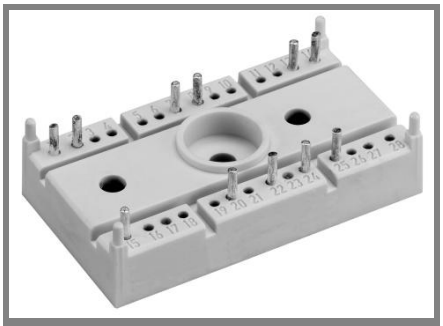
SK 45 STA



SEMITOP® 3

Six Separated Thyristors Module

SK 45 STA

Preliminary Data

Features

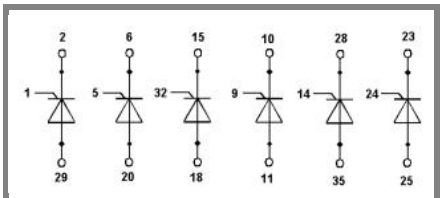
- Compact design
- One screw mounting
- Heat transfer and isolation through direct copper bonded aluminium oxide ceramic (DCB)
- Glass passivated thyristor chips
- Up to 1600 V reverse voltage

Typical Applications

- Soft starters
- Light control (studios, theatres...)
- Temperature control

V_{RSM} V	V_{RRM}, V_{DRM} V	I_{TRMS} = 41 A (T_s = 75 °C)
900	800	SK 45 STA 08
1300	1200	SK 45 STA 12
1700	1600	SK 45 STA 16

Characteristics		T_h = 25 °C, unless otherwise specified	
Symbol	**Conditions**	**Values**	**Units**
I_{rms} (W1C)	sin. 180°; T_S = 100°C	33	A
I_{rms} (W1C)	sin. 180°; T_S = 85°C	47	A
			A
I_{TSM}/I_{FSM}	T_{vj} = 25 (125) °C; 10 ms	450 (380)	A
I^2t	T_{vj} = 25 (125) °C; 8,3 ... 10 ms ms	1000 (720)	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.	80 / 150	mA
I_L	T_{vj} = 25 °C; R_G = 33 Ω; typ. / max.	150 / 300	mA
V_T	T_{vj} = 25 °C; (I_T = 75 A); max.	1,9	V
$V_{T(TO)}$	T_{vj} = 125 °C	max. 1	V
r_T	T_{vj} = 125 °C	max. 10	mΩ
I_{DD}; I_{RD}	T_{vj} = 125 °C; V_{DD} = V_{DRM}; V_{RD} = V_{RRM}	max. 10	mA
$R_{th(j-s)}$		1,2	K/W
T_{vj}		- 40 ... + 125	°C
V_{GT}	T_{vj} = 25 °C; d.c.	3	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.	3	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}	a.c. 50 Hz; r.m.s.; 1 min / 1s	2500 (3000)	V
M_1	mounting torque	2,5	Nm
w		30	g
Case	SEMITOP® 3	T56	



STA

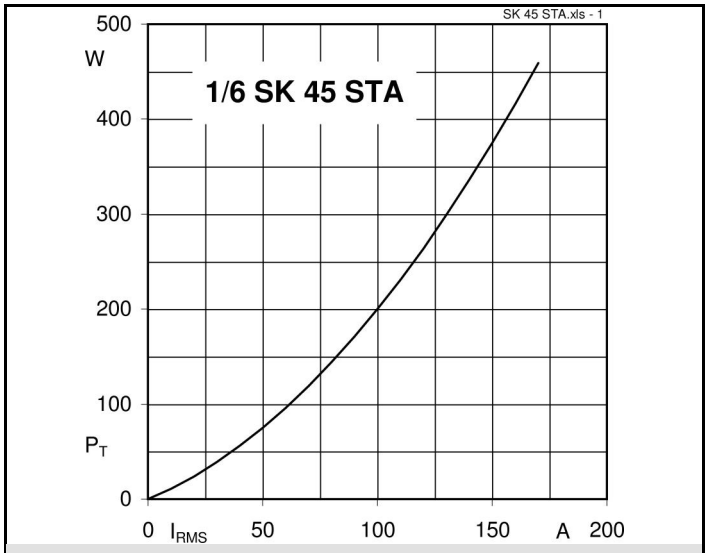


Fig. 1 Power dissipation per Thyristor vs. r.m.s. current

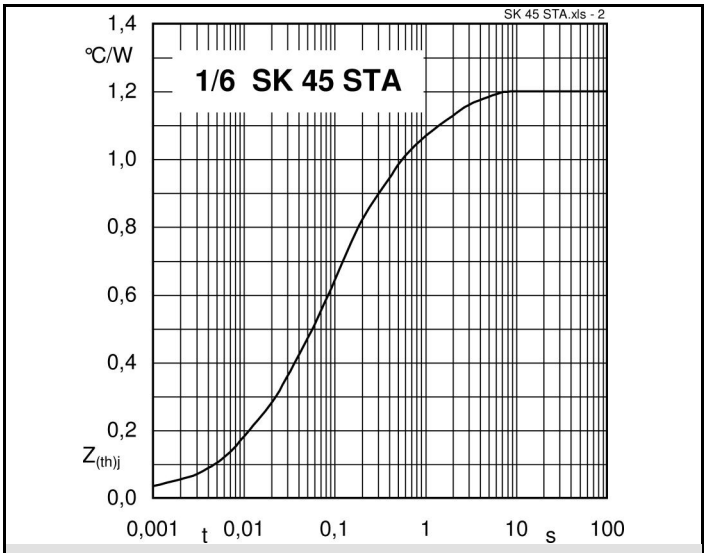


Fig. 2 Transient thermal impedance vs. time

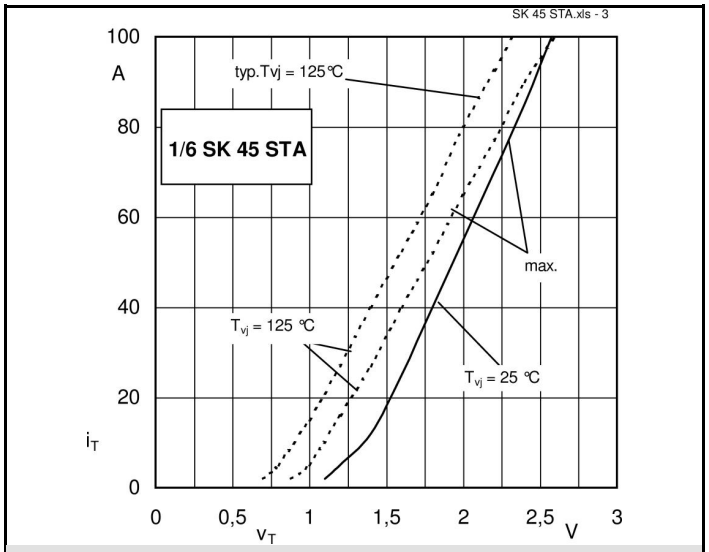


Fig. 3 On-state characteristics

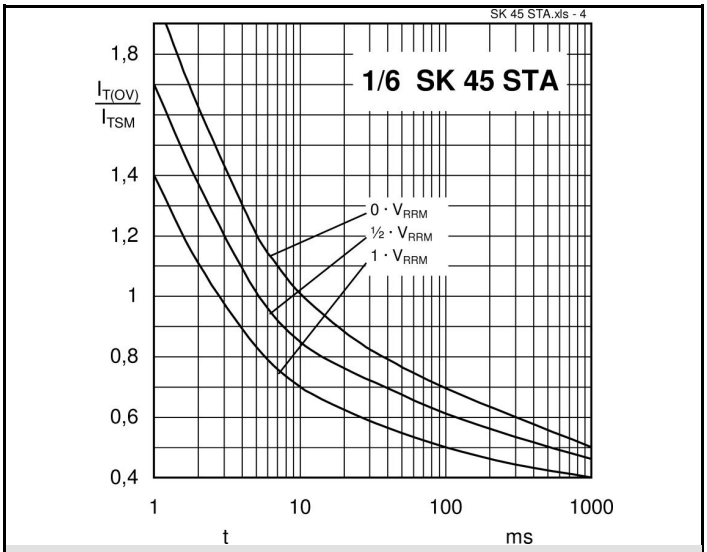


Fig. 4 Surge overload current vs. time

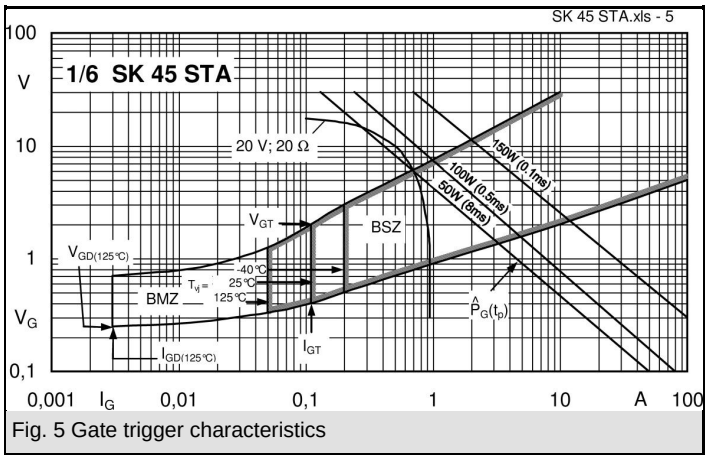
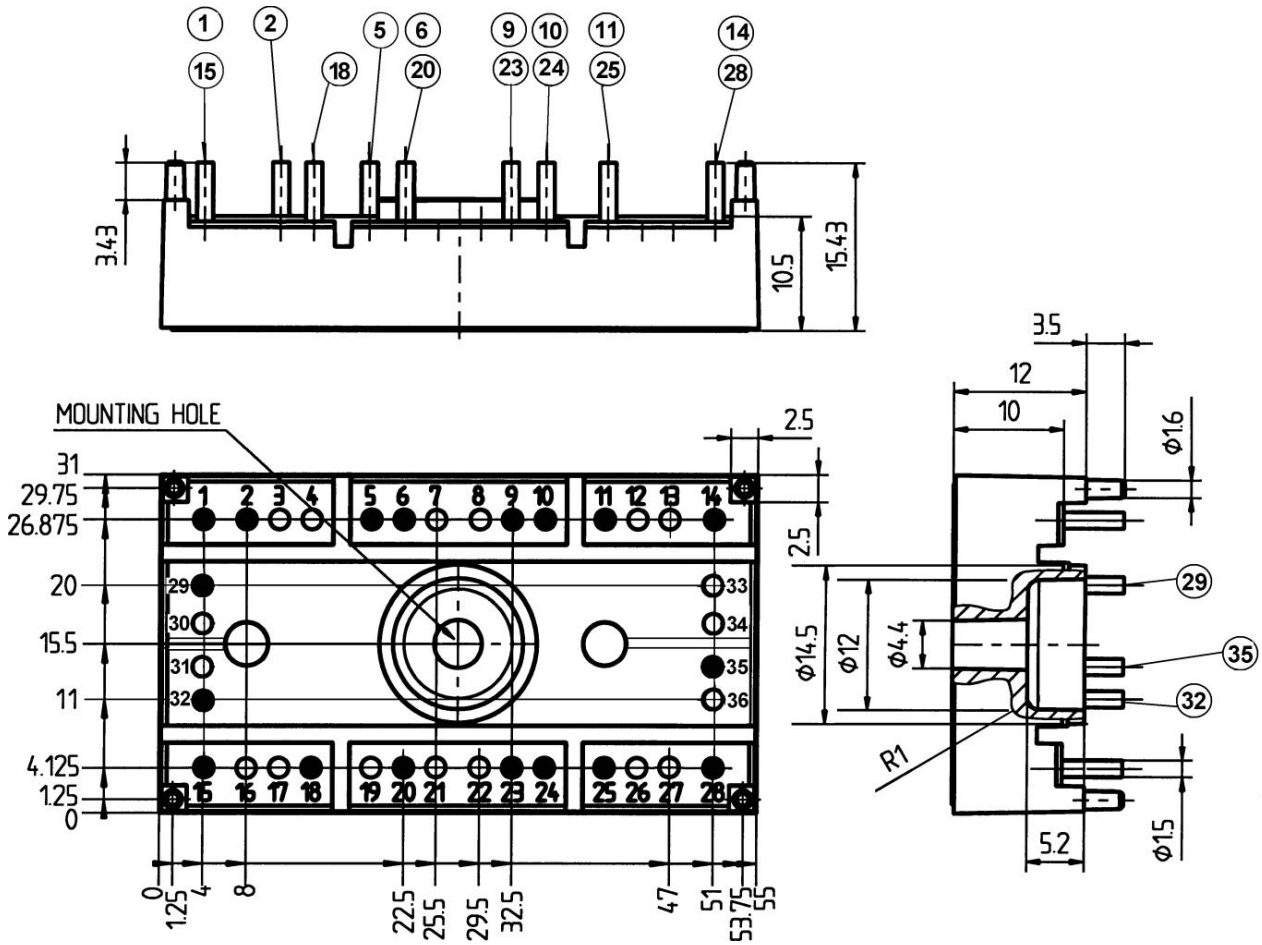


Fig. 5 Gate trigger characteristics

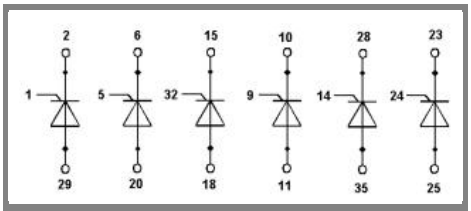
UL Recognized
File no. E 63532

Dimensions in mm



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

Case T56 (Sugested hole diameter in the PCB for solder pins and mounting pins: 2mm)



Case T56

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

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