

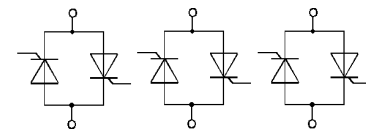
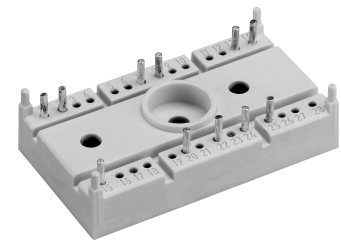
V_{RSM}	V_{RRM} V_{DRM}	I_{RMS} (maximum values for continuous operation) ($T_h = 85\text{ °C}$)	
V	V	29 A	47 A
900	800	SK 25 UT 08	SK 45 UT 08
1300	1200	SK 25 UT 12	SK 45 UT 12
1700	1600	SK 25 UT 16	SK 45 UT 16

SEMİTOP® 3

Three phase antiparallel Thyristor Module

**SK 25 UT
SK 45 UT**

Symbol	Conditions	SK 25 UT	SK 45 UT	Units
I_{RMS}	W1C; sin 180°; $T_h = 100\text{ °C}$	20	33	A
	$T_h = 85\text{ °C}$	29	47	A
I_{TSM}	$T_{vj} = 25\text{ °C}$; 10 ms	320	450	A
	$T_{vj} = 125\text{ °C}$; 10 ms	280	380	A
i^2t	$T_{vj} = 25\text{ °C}$; 8,3...10 ms	510	1 000	A ² s
	$T_{vj} = 125\text{ °C}$; 8,3...10 ms	390	720	A ² s
$(dv/dt)_{cr}$	$T_{vj} = 125\text{ °C}$	500	1 000	V/ μ s
$(di/dt)_{cr}$	$T_{vj} = 125\text{ °C}$; $f = 50\text{...}60\text{ Hz}$	100	50	A/ μ s
t_q	$T_{vj} = 125\text{ °C}$; typ.	80	80	μ s
I_H	$T_{vj} = 25\text{ °C}$; typ. / max	80 / 150	80 / 150	mA
I_L	$T_{vj} = 25\text{ °C}$; $R_G = 33\ \Omega$; typ. / max.	150 / 300	150 / 300	mA
V_T	$T_{vj} = 25\text{ °C}$; ($I_T = 75\text{ A}$); max.	2,45	1,9	V
$V_{T(TO)}$	$T_{vj} = 125\text{ °C}$	1,10	1	V
r_T	$T_{vj} = 125\text{ °C}$	20	10	m Ω
I_{DD} ; I_{RD}	$T_{vj} = 125\text{ °C}$; $V_{DD} = V_{DRM}$; $V_{RD} = V_{RRM}$	max. 8	max. 10	mA
V_{GT}	$T_{vj} = 25\text{ °C}$; dc	2	2	V
I_{GT}	$T_{vj} = 25\text{ °C}$; dc	100	100	mA
V_{GD}	$T_{vj} = 125\text{ °C}$; dc	0,25	0,25	V
I_{GD}	$T_{vj} = 125\text{ °C}$; dc	3	3	mA
$R_{thjh}^{1)}$	cont. per thyristor / per W1C	1,7 / 0,85	1,2 / 0,6	K/W
	sin 180° per thyristor / per W1C	1,78 / 0,89	1,24 / 0,62	K/W
T_{vjmax}		- 40 ... + 125		°C
T_{stg}		- 40 ... + 125		°C
T_{solder}	terminals, 10 s	260		°C
V_{isol}	a.c. 50 Hz; r.m.s. 1 s/1 min	3000 / 2500		V~
M_1	mounting torque	2,5		Nm
w		30		g
Case		T 13		



UT

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
- high surge currents
- UL recognized, file no. E 63 532

Typical Applications

- Soft starters
- Light control
- Temperature control

¹⁾ Thermal resistance junction to heatsink

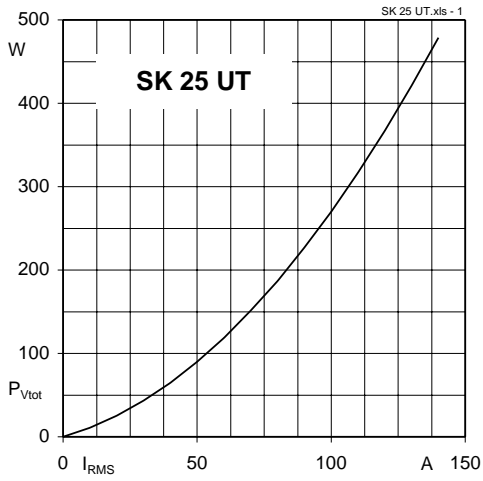


Fig. 1 Power dissipation per phase vs. rms current

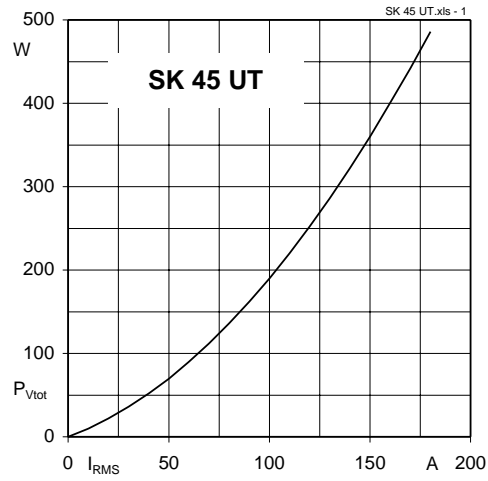


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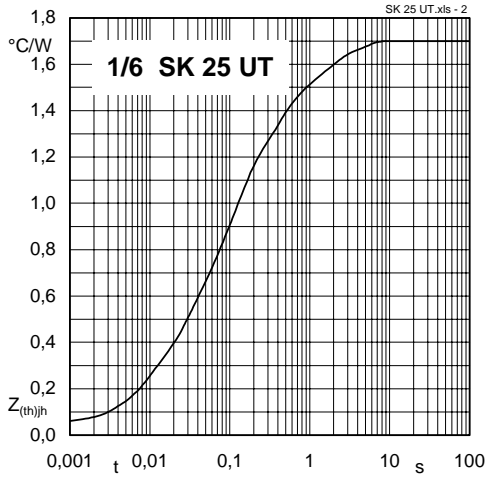


Fig. 2 Transient thermal impedance vs. time

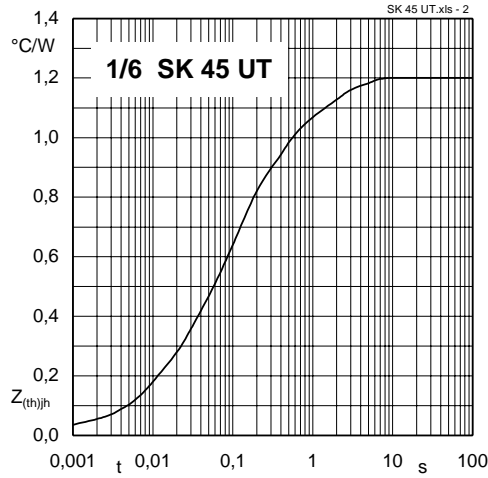


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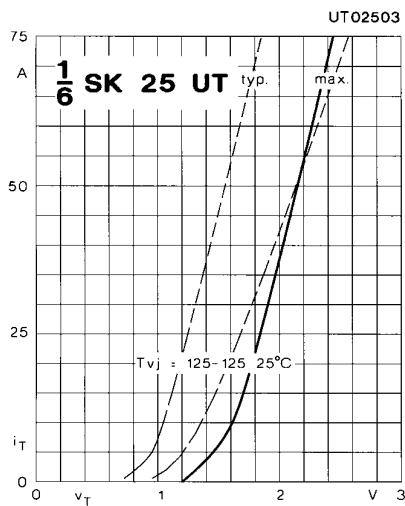


Fig. 3 On-state characteristics

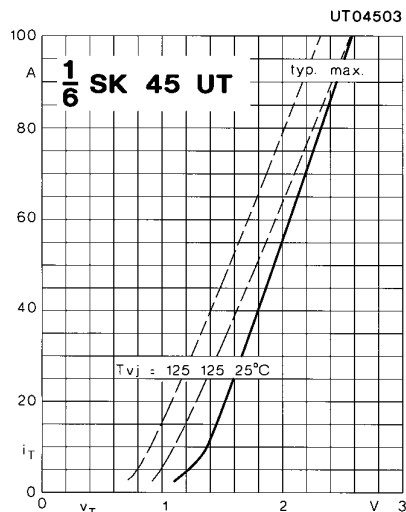


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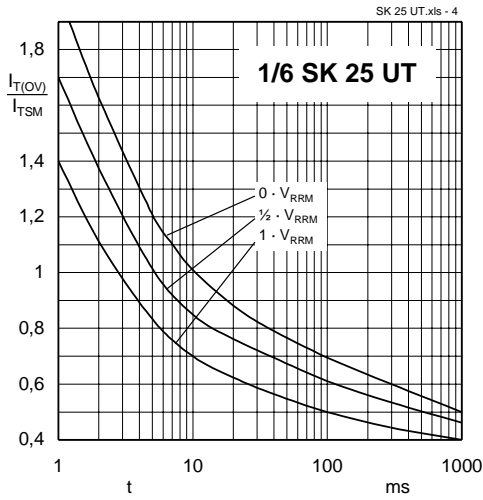


Fig. 4 Surge overload current vs. time

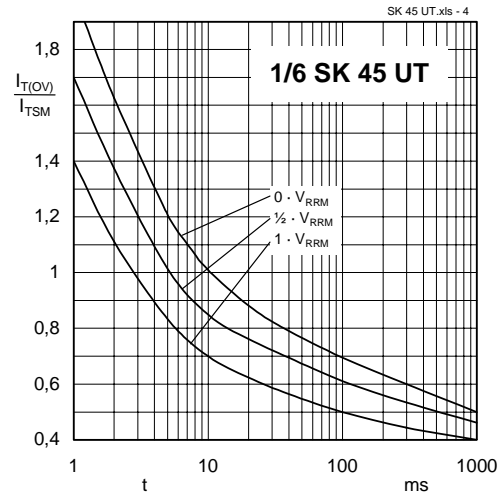


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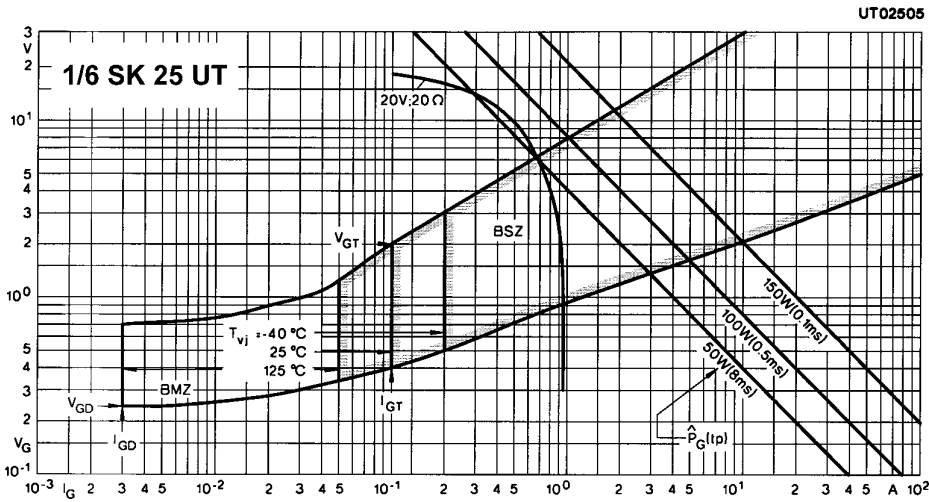


Fig. 5 Gate trigger characteristics of a single thyristor

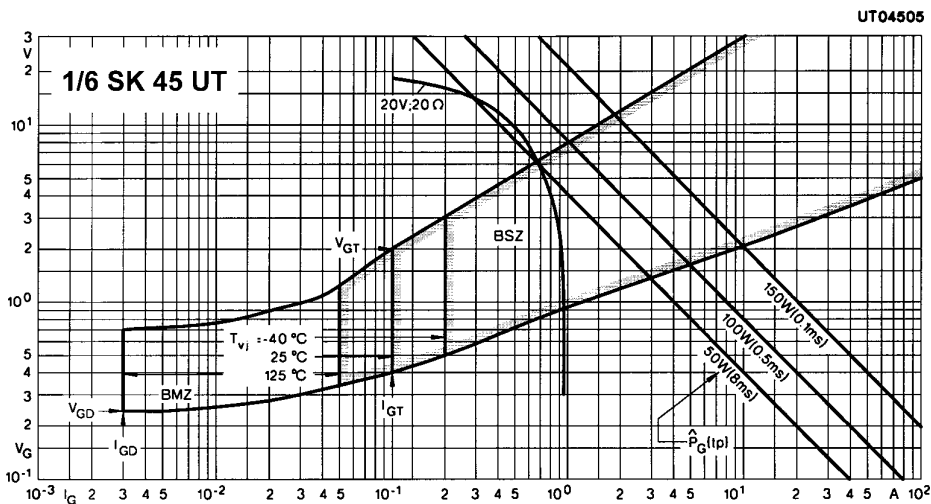
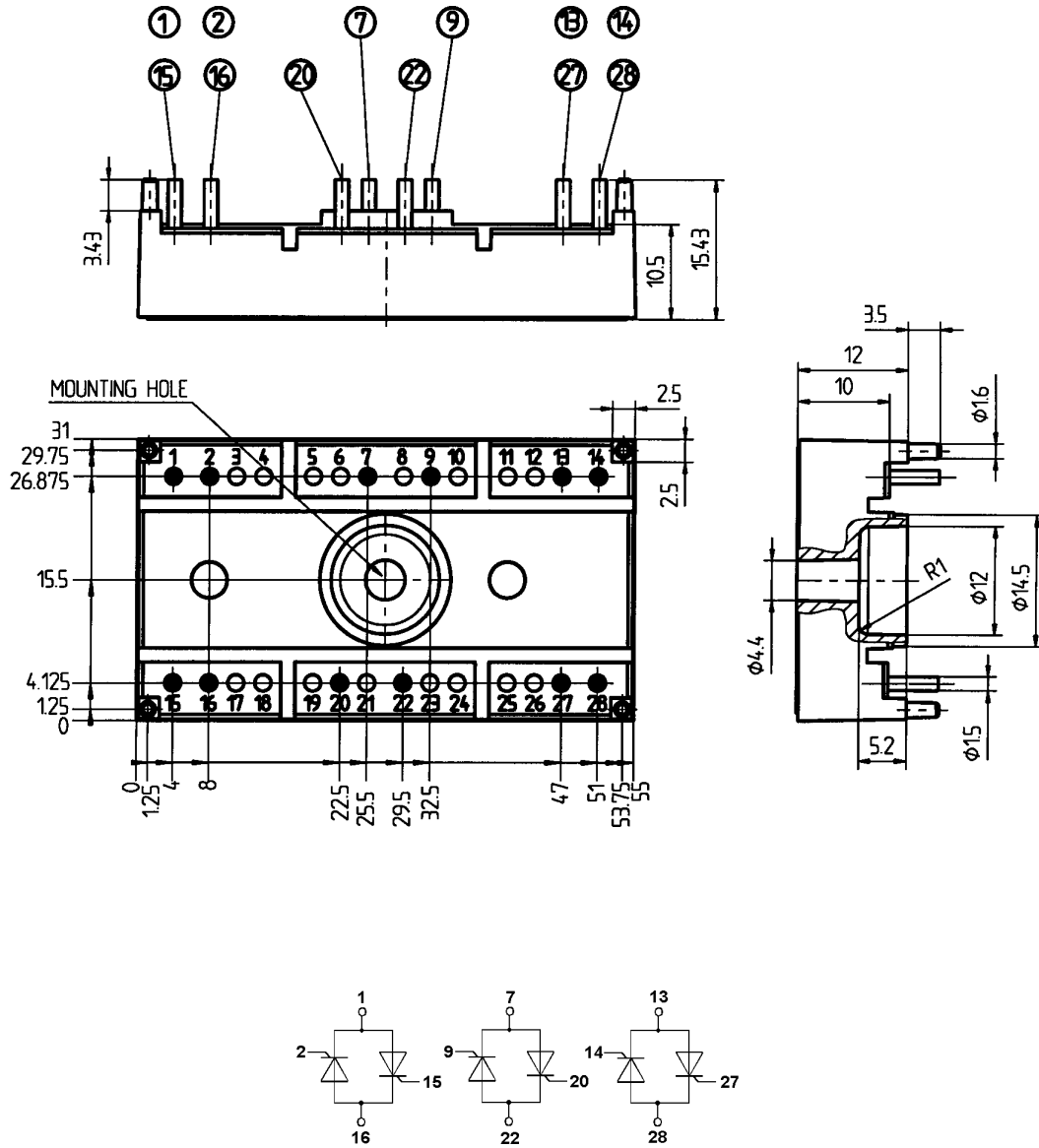


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SK 25 UT, SK 45 UT

SEMITOP® 3
 SK 25 UT
 SK 45 UT

Case T 13



Dimensions in mm

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