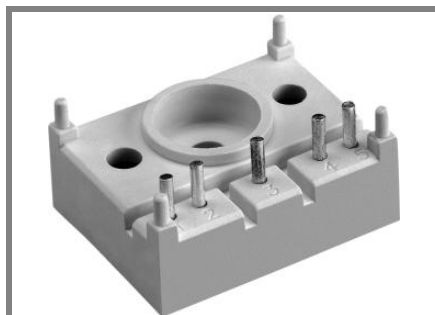




SEMITOP®1

Thyristor Module

SK 35 NT

Preliminary Data

Features

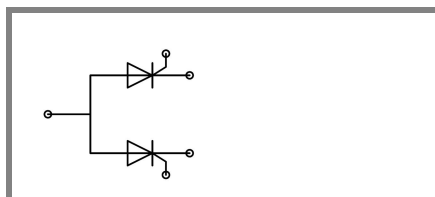
- Compact design
- One screw mounting
- Heat transfer and isolation through direct copper bonded aluminium oxide (DCB)
- Glass passivated thyristor chips
- Up to 1600V reverse voltage
- High surge currents
- UL recognized, file no. E 63 532

Typical Applications

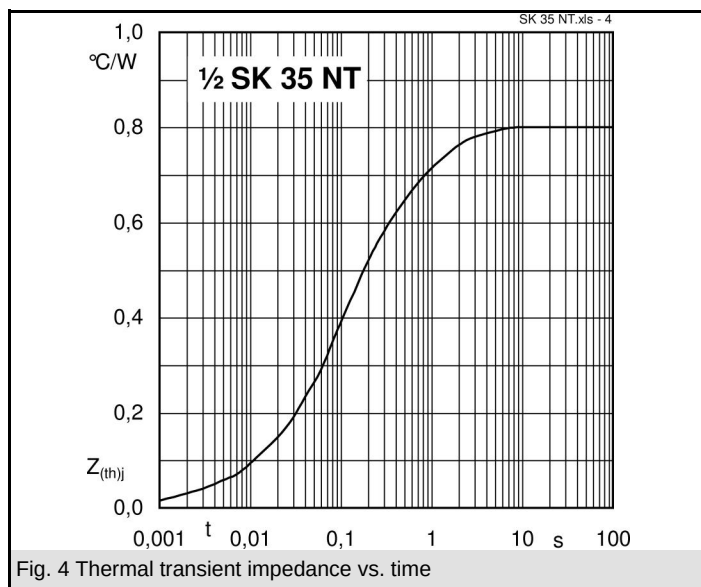
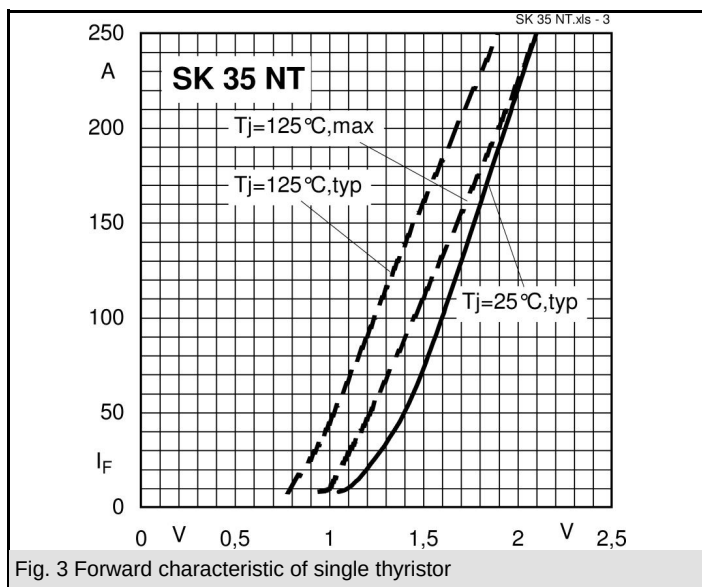
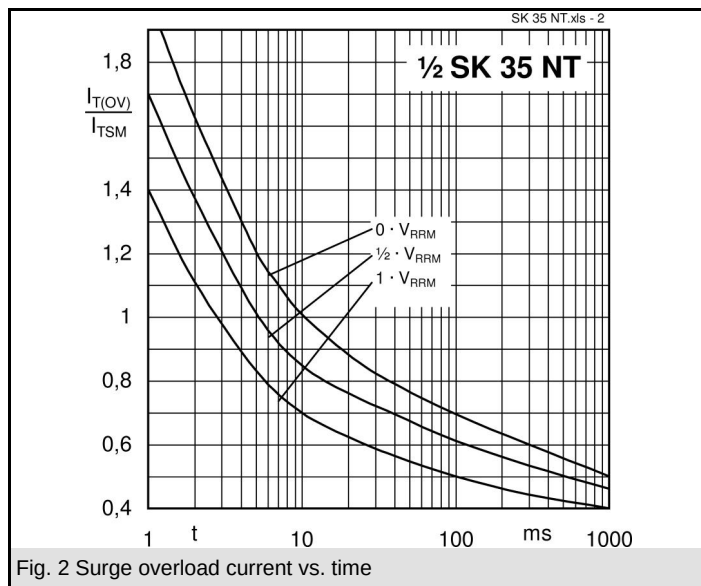
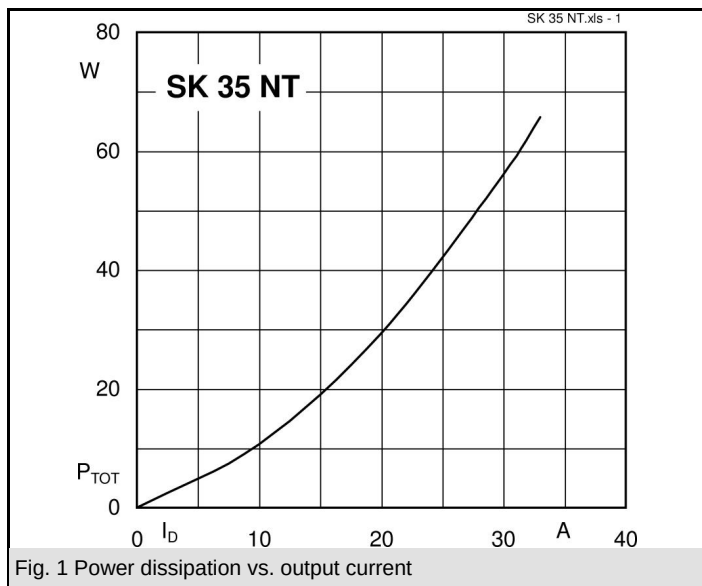
- Soft starters
- Light control (studios, theaters)
- Temperature control

V_{RSM} V	V_{RRM}, V_{DRM} V	$I_{RMS} = (T_h = 80^\circ\text{C}) \text{ A (full conduction)}$ ($T_h = 85^\circ\text{C}$)
900	800	SK 35 NT 08
1300	1200	SK 35 NT 12
1700	1600	SK 35 NT 16

Symbol	Conditions	Values	Units
I_{RMS}	; sin. 180° ; ; sin. 180° ;		A
I_{TAV}	sin. 180° ; $T_h = 100^\circ\text{C}$	23	A
I_{TAV}	sin. 180° ; $T_h = 85^\circ\text{C}$	33	A
I_{TSM}	$T_{vj} = 25^\circ\text{C}$; 10 ms $T_{vj} = 125^\circ\text{C}$; 10 ms	1000 900	A
i^2t	$T_{vj} = 25^\circ\text{C}$; 8,3 ... 10 ms $T_{vj} = 125^\circ\text{C}$; 8,3 ... 10 ms	5000 4000	A ² s A ² s
V_T	$T_{vj} = 25^\circ\text{C}$, $I_T = 120 \text{ A}$	max. 1,8	V
$V_{T(TO)}$	$T_{vj} = 125^\circ\text{C}$	max. 1	V
r_T	$T_{vj} = 125^\circ\text{C}$	max. 6	mΩ
I_{DD}, I_{RD}	$T_{vj} = 25^\circ\text{C}$, $V_{RD} = V_{RRM}$ $T_{vj} = 125^\circ\text{C}$, $V_{RD} = V_{RRM}$	max. 0,5 max. 15	mA mA
t_{gd}	$T_{vj} = 25^\circ\text{C}$, $I_G = 1 \text{ A}$; $di_G/dt = 1 \text{ A}/\mu\text{s}$	1	μs
t_{gr}	$V_D = 0,67 \cdot V_{DRM}$	2	μs
$(dv/dt)_{cr}$	$T_{vj} = 125^\circ\text{C}$	1000	V/μs
$(di/dt)_{cr}$	$T_{vj} = 125^\circ\text{C}$; $f = 50 \dots 60 \text{ Hz}$	50	A/μs
t_q	$T_{vj} = 125^\circ\text{C}$; typ.	80	μs
I_H	$T_{vj} = 25^\circ\text{C}$; typ. / max.	100 / 200	mA
I_L	$T_{vj} = 25^\circ\text{C}$; $R_G = 33 \Omega$; typ. / max.	200 / 400	mA
V_{GT}	$T_{vj} = 25^\circ\text{C}$; d.c.	min. 2	V
I_{GT}	$T_{vj} = 25^\circ\text{C}$; d.c.	min. 100	mA
V_{GD}	$T_{vj} = 125^\circ\text{C}$; d.c.	max. 0,25	V
I_{GD}	$T_{vj} = 125^\circ\text{C}$; d.c.	max. 5	mA
$R_{th(j-h)}$	cont. per thyristor cont. per module	0,8 0,4	K/W K/W
$R_{th(j-h)}$	sin 180° , per thyristor sin 180° per module	0,84 0,42	K/W K/W
T_{vj}		-40 ... +125	°C
T_{stg}		-40 ... +125	°C
T_{solder}	terminals, 10s	260	°C
V_{isol}	a. c. 50 Hz; r.m.s.; 1 s / 1 min.	3000 / 2500	V~
M_s			Nm
M_t	mounting torque	1,5	Nm
a			m/s ²
m		13	g
Case	SEMITOP®1	T9	



NT



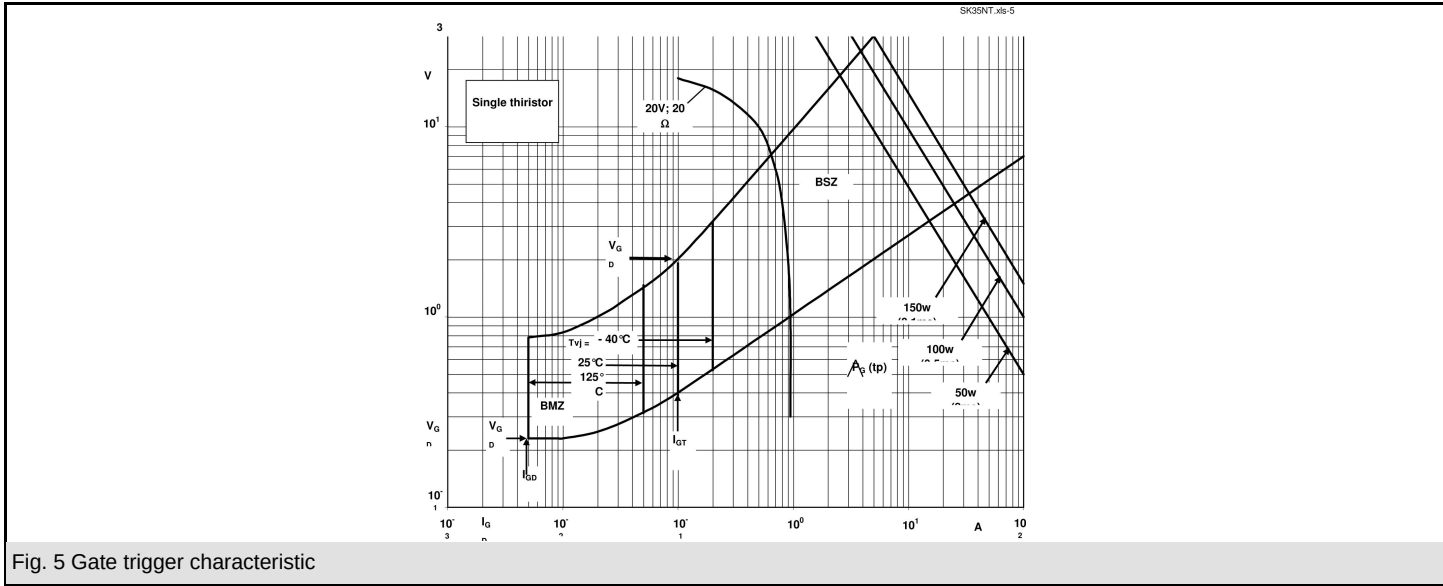
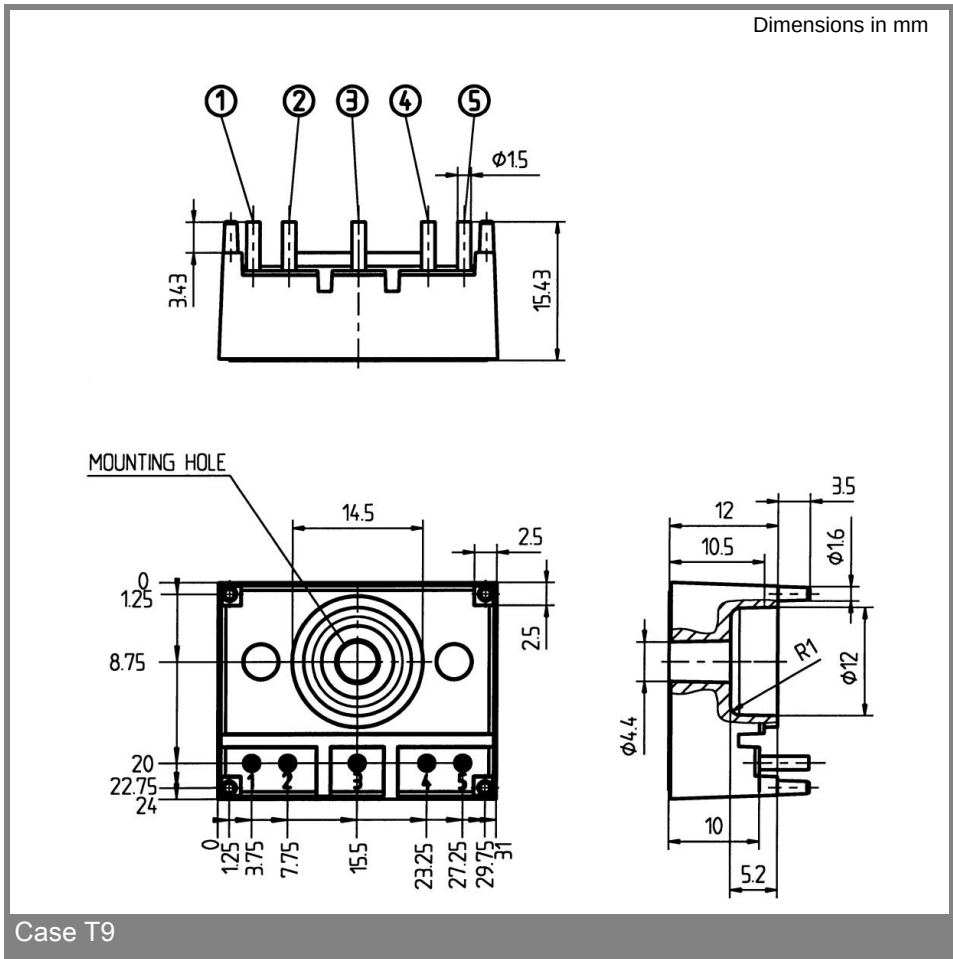
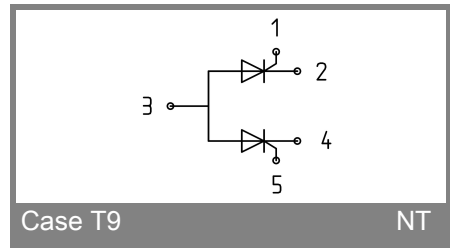


Fig. 5 Gate trigger characteristic



Case T9



Case T9	NT
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