



SEMIPONT™ 5

Three phase antiparallel Thyristor Module

SKUT 85

Preliminary Data

Features

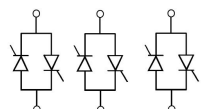
- Compact design
- Two screws mounting
- Heat transfer and isolation through direct copper board (Low R_{th})
- Low resistance in Steady-State and high reliability
- High surge currents
- Glass passivated thyristors chips
- Up to 1600V reverse voltage
- UL recognized, file no. E 63 532

Typical Applications

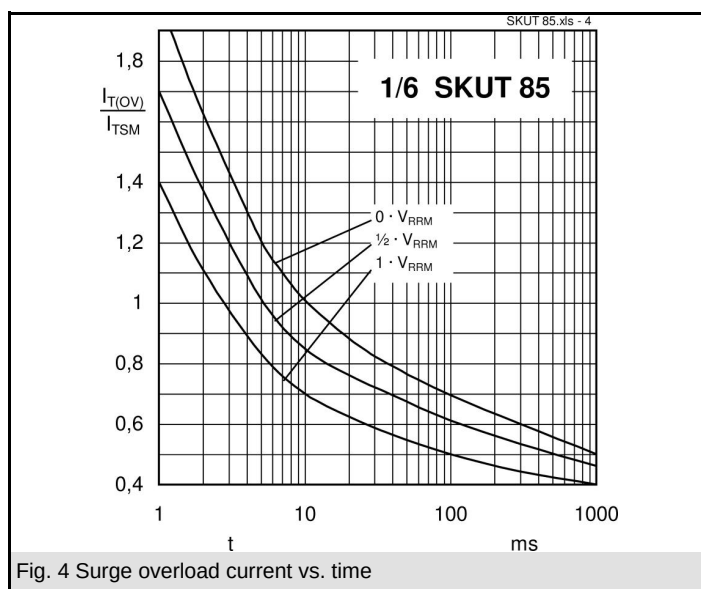
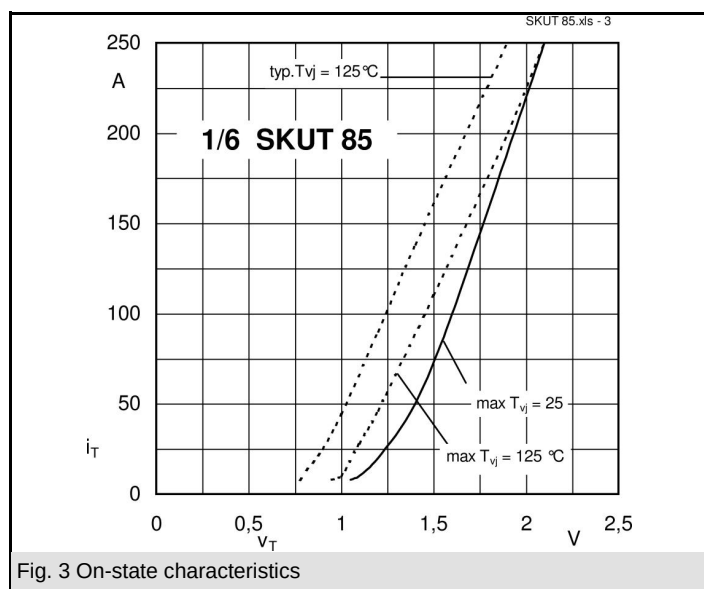
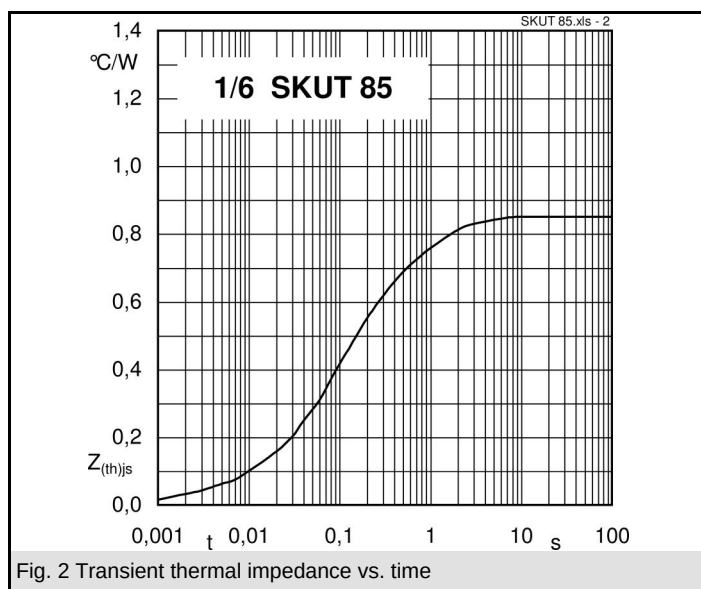
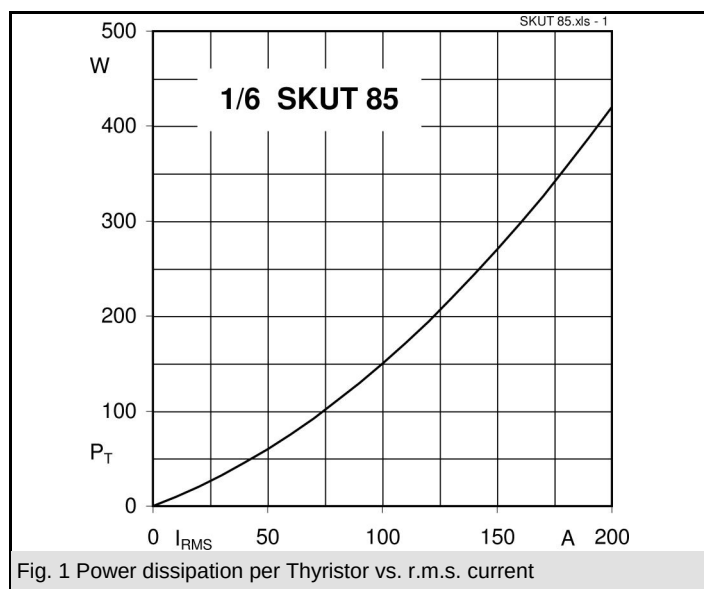
- Soft starter
- Light control (e.g. studios, theaters)
- Temperature control (e.g. oven, chemical processes)

V_{RSM} V	V_{RRM}, V_{DRM} V	$I_{RMS} = 85 \text{ A (full conduction)}$ ($T_s = 85^\circ \text{C}$)
1300	1200	SKUT 85/12
1700	1600	SKUT 85/16

Symbol	Conditions	Values	Units
I_{RMS}	W3C ; sin. 180° ; $T_s = 85^\circ \text{C}$; sin. 180° ;	85	A A
I_{TSM}	$T_{vj} = 25^\circ \text{C}$; 10 ms $T_{vj} = 125^\circ \text{C}$; 10 ms	1050	A A
i^2t	$T_{vj} = 25^\circ \text{C}$; 10 ms $T_{vj} = 125^\circ \text{C}$; 8,3...10 ms	5500	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. 1,1	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. 1 max. 20	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
$(dv/dt)_{cr}$	$T_{vj} = 125^\circ \text{C}$	500	V/μs
$(di/dt)_{cr}$	$T_{vj} = 125^\circ \text{C}$; $f = 50...60 \text{ Hz}$	50	A/μs
t_q	$T_{vj} = 125^\circ \text{C}$; typ.	150	μs
I_H	$T_{vj} = 25^\circ \text{C}$; typ. / max.	200	mA
I_L	$T_{vj} = 25^\circ \text{C}$; $R_G = 33 \Omega$; typ. / max.	400	mA
V_{GT}	$T_{vj} = 25^\circ \text{C}$; d.c.	min. 3	V
I_{GT}	$T_{vj} = 25^\circ \text{C}$; d.c.	min. 150	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
$R_{th(j-s)}$	sin 180°C per Thyristor	0,85	K/W K/W
T_{vj}		-40...+125	°C
T_{stg}		-40...+125	°C
T_{sold}	Terminals, 10s max	260	°C
V_{isol}	a. c. 50 Hz; r.m.s.; 1 s / 1 min.	3600 / 3000	V~
M_s	Mounting torque to Heatsink, SI units	2,5	Nm
M_t			Nm
a			m/s ²
m		75	g
Case	SEMIPONT 5	G62	



W3C



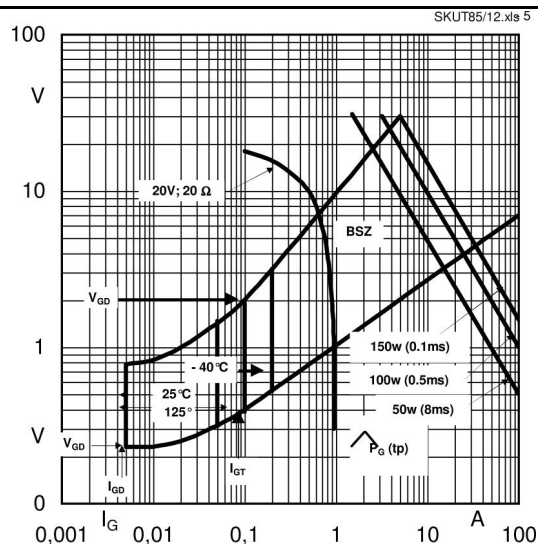
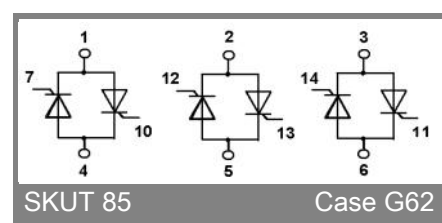
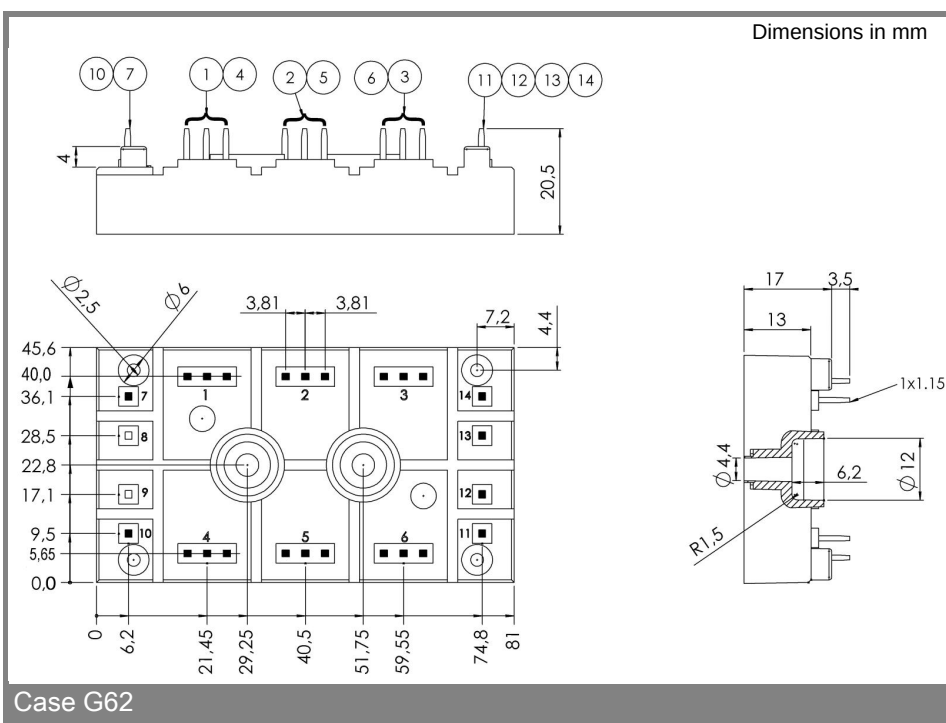


Fig. 5 Gate trigger characteristics



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