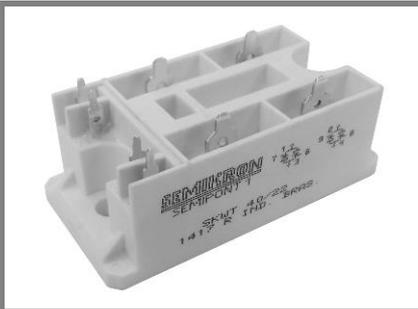


SKWT 40



SEMIPONT® 1

Antiparallel thyristor module

SKWT 40

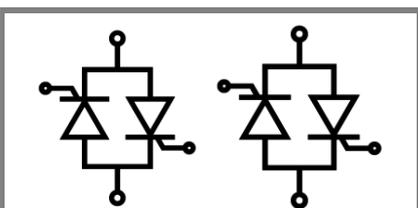
Features

- Compact design with isolated metal baseplate
- Easy chassis mounting
- Fast-on terminals with solder tips
- Suitable for wave soldering
- High surge current rating
- Blocking voltage of 2200 V
- UL recognized plastic material

Typical Applications*

- Static switches
- Soft starters
- Temperature control

- 1) Freely suspended or mounted on insulator
- 2) Painted metal sheet of minimum. 250 x 250 x 1 mm: $R_{th(c-a)} = 1,85 \text{ K/W}$



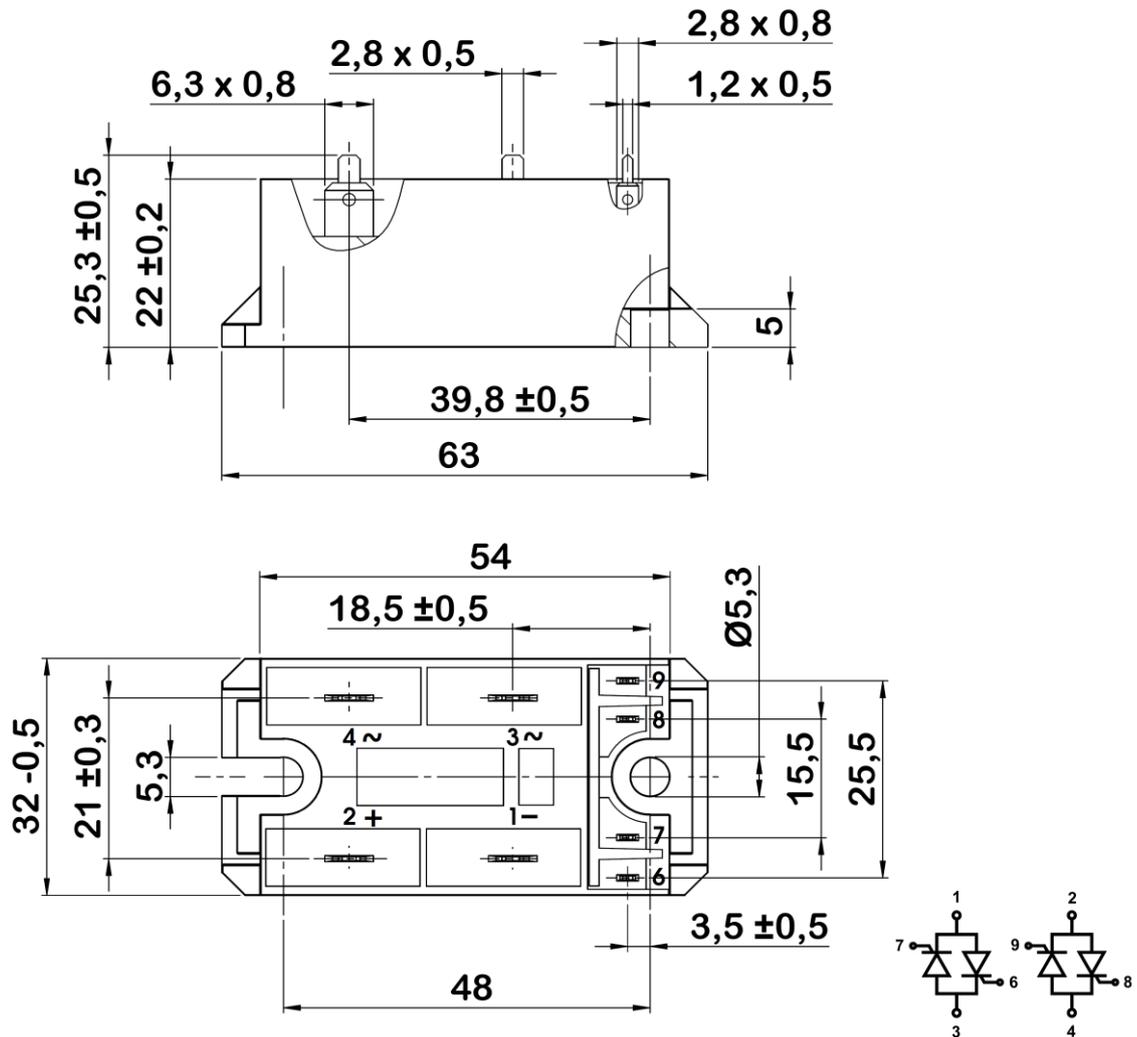
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V_{RSM} V	V_{RRM}, V_{DRM} V	$I_{RMS} = 40 \text{ A (sin. } 180^\circ)$ ($T_c = 91^\circ \text{C}$)
900	800	SKWT 40/08
1300	1200	SKWT 40/12
1700	1600	SKWT 40/16
2300	2200	SKWT 40/22

Absolute Maximum Ratings				
Symbol	Conditions		Values	Units
Chip				
I_{RMS}	W1C; sin. 180°	$T_c = 90^\circ \text{C}$	41	A
		$T_c = 100^\circ \text{C}$	31	A
I_{TSM}	8,3 ... 10ms	$T_j = 25^\circ \text{C}$	700	A
		$T_j = 125^\circ \text{C}$	580	A
i^2t	8,3 ... 10ms	$T_j = 25^\circ \text{C}$	2500	A ² s
		$T_j = 125^\circ \text{C}$	1700	A ² s
$(di/dt)_{cr}$	$T_{vj} = 125^\circ \text{C}; f = 50 \dots 60 \text{Hz}$		100	A/ μs
$(dv/dt)_{cr}$	$T_{vj} = 125^\circ \text{C}$		1000	V/ μs
T_j			-40 ... 125	°C
Module				
T_{stg}			-55 ... 125	°C
V_{isol}	a.c.; 60 Hz; r.m.s	1 min	3000	V
		1 s	2500	V

Characteristics					
Symbol	Conditions	min.	typ.	max.	Units
Chip					
V_T	$T_{vj} = 25^\circ \text{C}; I_T = 120 \text{A (chip level)}$			1,95	V
$V_{T(TO)}$	$T_{vj} = 125^\circ \text{C (chip level)}$			0,9	V
r_T	$T_{vj} = 125^\circ \text{C (chip level)}$			6	m Ω
$I_{DD}; I_{RD}$	$T_{vj} = 25 \dots 125^\circ \text{C}, V_{RD} = V_{RRM}$	0,3		10	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}	$V_D = 0,67 \times V_{DRM}$			2	μs
t_q	$T_{vj} = 125^\circ \text{C}$		80		μs
I_H	$T_{vj} = 125^\circ \text{C}$		150	250	mA
I_L	$T_{vj} = 125^\circ \text{C}; RG = 33 \Omega$		300	600	mA
V_{GT}	$T_{vj} = 25^\circ \text{C}; \text{d.c.}$	3			V
I_{GT}	$T_{vj} = 25^\circ \text{C}; \text{d.c.}$	150			mA
V_{GD}	$T_{vj} = 125^\circ \text{C}; \text{d.c.}$			0,25	V
I_{GD}	$T_{vj} = 125^\circ \text{C}; \text{d.c.}$			6	mA
$R_{th(f-a)}$	Isolated ¹⁾			2,3	K/W
$R_{th(f-c)}$	per thyristor			1,6	K/W
$R_{th(f-c)}$	Total			0,4	K/W
Module					
$R_{th(c-s)}$	Total			0,1	K/W
M_S	to heatsink M4	1,8	2	2,2	Nm
M_T	to terminal M5	2,7	3	3,3	Nm
w			75		g
Case	SEMIPONT 1 – G28				

Dimensions in millimeters



Case G28

*IMPORTANT INFORMATION AND WARNINGS

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