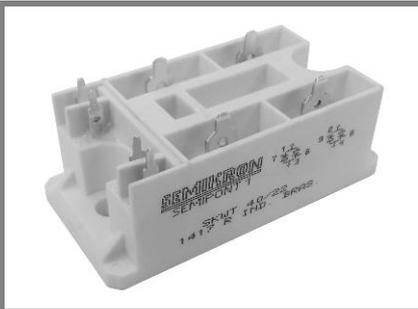


SKWT 40



SEMIPONT® 1

Antiparallel thyristor module

SKWT 40

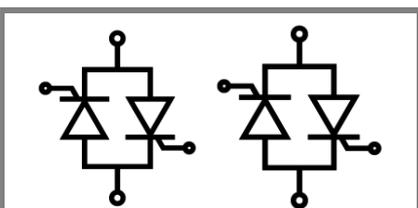
Features

- 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: $R_{th(c-a)} = 1,85 \text{ K/W}$



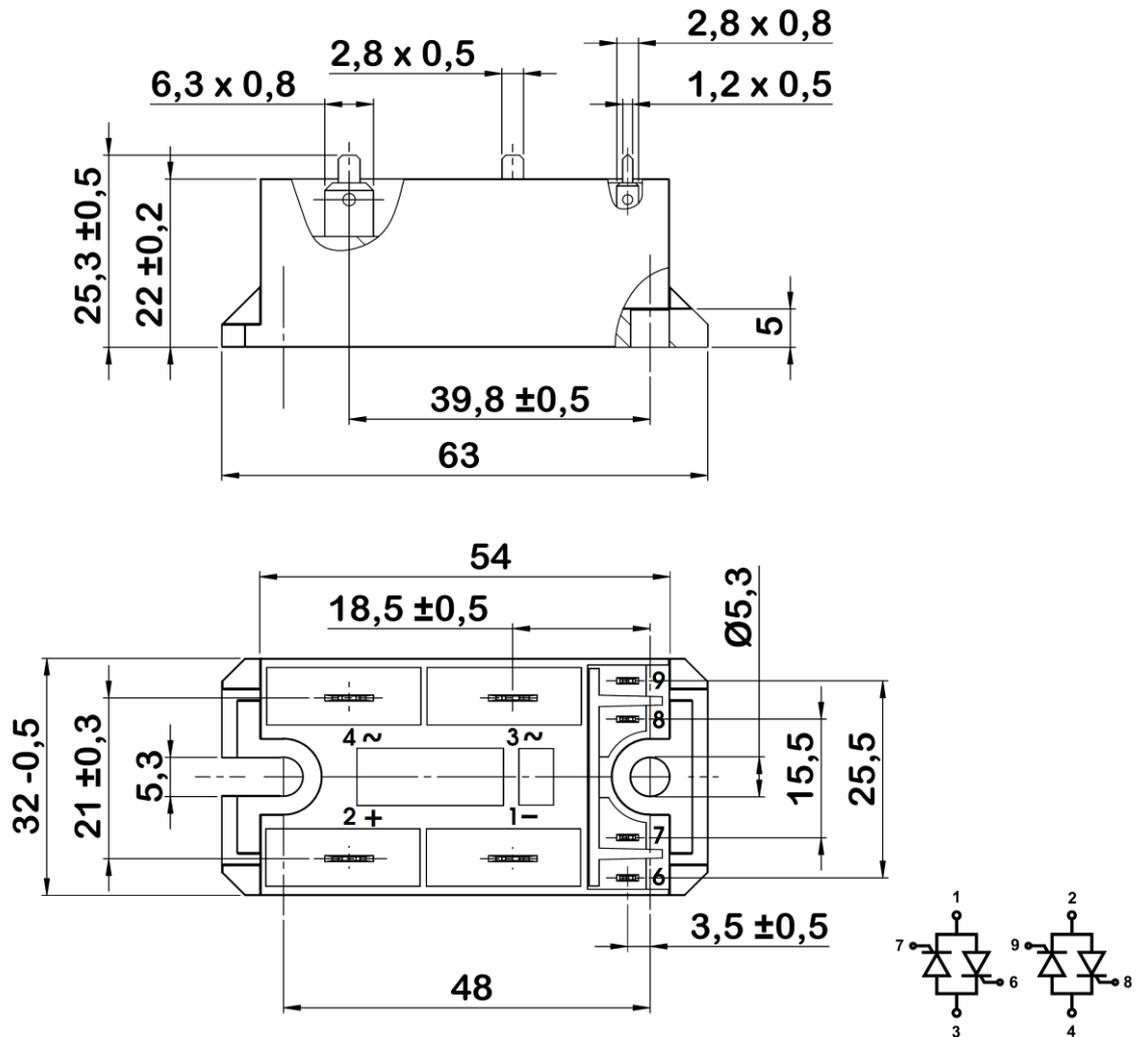
SKWT

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
$(di/dt)_{cr}$	$T_{vj} = 125^\circ \text{C}; f = 50...60\text{Hz}$		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
$I_{DD}; I_{RD}$	$T_{vj} = 25...125^\circ \text{C}, V_{RD} = V_{RRM}$	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
$R_{th(j-a)}$	Isolated ¹⁾			2,3	K/W
$R_{th(j-c)}$	per thyristor			1,6	K/W
$R_{th(j-c)}$	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

The specifications of SEMIKRON products may not be considered as guarantee or assurance of product characteristics ("Beschaffenheitsgarantie"). The specifications of SEMIKRON products describe only the usual characteristics of products to be expected in typical applications, which may still vary depending on the specific application. Therefore, products must be tested for the respective application in advance. Application adjustments may be necessary. The user of SEMIKRON products is responsible for the safety of their applications embedding SEMIKRON products and must take adequate safety measures to prevent the applications from causing a physical injury, fire or other problem if any of SEMIKRON products become faulty. The user is responsible to make sure that the application design is compliant with all applicable laws, regulations, norms and standards. Except as otherwise explicitly approved by SEMIKRON in a written document signed by authorized representatives of SEMIKRON, SEMIKRON products may not be used in any applications where a failure of the product or any consequences of the use thereof can reasonably be expected to result in personal injury. No representation or warranty is given and no liability is assumed with respect to the accuracy, completeness and/or use of any information herein, including without limitation, warranties of non-infringement of intellectual property rights of any third party. SEMIKRON does not assume any liability arising out of the applications or use of any product; neither does it convey any license under its patent rights, copyrights, trade secrets or other intellectual property rights, nor the rights of others. SEMIKRON makes no representation or warranty of non-infringement or alleged noninfringement of intellectual property rights of any third party which may arise from applications. Due to technical requirements our products may contain dangerous substances. For information on the types in question please contact the nearest SEMIKRON sales office. This document supersedes and replaces all information previously supplied and may be superseded by updates. SEMIKRON reserves the right to make changes.