

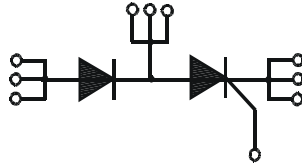
### Thyristor Modules Thyristor/Diode Modules

### PSKH 96

$I_{TRMS}$  = 2x180 A  
 $I_{TAVM}$  = 2x105 A  
 $V_{RRM}$  = 600-1800V

Preliminary Data Sheet

$V_{RSM}$ $V_{DSM}$ (V)	$V_{RRM}$ $V_{DRM}$ (V)	Type
700	600	PSKH 96/06
900	800	PSKH 96/08
1300	1200	PSKH 96/12
1500	1400	PSKH 96/14
1700	1600	PSKH 96/16
1900	1800	PSKH 96/18



Symbol	Test Conditions	Maximum Ratings
$I_{TRMS}$		180 A
$I_{TAVM}$	$T_C = 85\text{ °C}$ , 180° sine	105 A
$I_{TSM}$	$T_{VJ} = 45\text{ °C}$ $t = 10\text{ ms}$ (50 Hz), sine	2250 A
	$V_R = 0$ $t = 8.3\text{ ms}$ (60 Hz), sine	2400 A
	$T_{VJ} = 125\text{ °C}$ $t = 10\text{ ms}$ (50 Hz), sine	2000 A
	$V_R = 0$ $t = 8.3\text{ ms}$ (60 Hz), sine	2150 A
$\int i^2 dt$	$T_{VJ} = 45\text{ °C}$ $t = 10\text{ ms}$ (50 Hz), sine	25300 A <sup>2</sup> s
	$V_R = 0$ $t = 8.3\text{ ms}$ (60 Hz), sine	23900 A <sup>2</sup> s
	$T_{VJ} = 125\text{ °C}$ $t = 10\text{ ms}$ (50 Hz), sine	20000 A <sup>2</sup> s
	$V_R = 0$ $t = 8.3\text{ ms}$ (60 Hz), sine	19100 A <sup>2</sup> s
$(di/dt)_{cr}$	$T_{VJ} = 125\text{ °C}$ repetitive, $I_T = 250\text{ A}$ $f=50\text{ Hz}$ , $t_p=200\mu\text{s}$	150 A/ $\mu\text{s}$
	$V_D=2/3V_{DRM}$ $I_G=0.45\text{ A}$ non repetitive, $I_T = I_{TAVM}$ $di_G/dt=0.45\text{ A}/\mu\text{s}$	500 A/ $\mu\text{s}$
$(dv/dt)_{cr}$	$T_{VJ} = 125\text{ °C}$ $V_D=2/3V_{DRM}$ $R_{GK} = \infty$ , method 1 (linear voltage rise)	1000 V/ $\mu\text{s}$
$P_{GM}$	$T_{VJ} = 125\text{ °C}$ $t_p=30\mu\text{s}$	$\leq 10$ W
	$I_T=I_{TAVM}$ $t_p=300\mu\text{s}$	$\leq 5$ W
$P_{GAVM}$		0.5 W
$V_{RGM}$		10 V
$T_{VJ}$		-40... + 125 °C
$T_{VJM}$		125 °C
$T_{stg}$		-40... + 125 °C
$V_{ISOL}$	50/60 Hz, RMS $t = 1\text{ min}$	3000 V~
	$I_{ISOL} \leq 1\text{ mA}$ $t = 1\text{ s}$	3600 V~
$M_d$	Mounting torque (M4)	1.5 - 2.0 Nm
		14 - 18 lb.in.
<b>Weight</b>	typ.	24 g

#### Features

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- Isolation voltage 3600 V~
- Planar glass passivated chips
- Low forward voltage drop
- Leads suitable for PC board soldering
- UL registered, E 148688

#### Applications

- DC motor control
- Light and temperature control
- Softstart AC motor controller
- Solid state switches

#### Advantages

- Easy to mount with two screws
- Space and weight savings
- Improved temperature and power cycling capability
- High power density
- Small and light weight

Data according to IEC 60747 refer to a single thyristor unless otherwise stated

Symbol	Test Conditions	Characteristic Value
$I_{D,R}$	$T_{VJ} = 125^{\circ}\text{C}$ , $V_R = V_{RRM}$ , $V_D = V_{DRM}$	$\leq 5$ mA
$V_T$	$I_T = 150$ A, $T_{VJ} = 25^{\circ}\text{C}$	$\leq 1.2$ V
$V_{TO}$	For power-loss calculations only	0.8 V
$r_T$		2.4 m $\Omega$
$V_{GT}$	$V_D = 6$ V, $T_{VJ} = 25^{\circ}\text{C}$	$\leq 1.5$ V
	$T_{VJ} = -40^{\circ}\text{C}$	$\leq 1.6$ V
$I_{GT}$	$V_D = 6$ V, $T_{VJ} = 25^{\circ}\text{C}$	$\leq 150$ mA
	$T_{VJ} = -40^{\circ}\text{C}$	$\leq 200$ mA
$V_{GD}$	$T_{VJ} = 125^{\circ}\text{C}$ , $V_D = 2/3 V_{DRM}$	$\leq 0.2$ V
$I_{GD}$	$T_{VJ} = 125^{\circ}\text{C}$ , $V_D = 2/3 V_{DRM}$	$\leq 10$ mA
$I_L$	$T_{VJ} = 25^{\circ}\text{C}$ , $t_p = 10\mu\text{s}$	$\leq 450$ mA
	$I_G = 0.45$ A, $di_G/dt = 0.45$ A/ $\mu\text{s}$	
$I_H$	$T_{VJ} = 25^{\circ}\text{C}$ , $V_D = 6$ V, $R_{GK} = \infty$	$\leq 200$ mA
$t_{gd}$	$T_{VJ} = 25^{\circ}\text{C}$ , $V_D = 1/2 V_{DRM}$	$\leq 2$ $\mu\text{s}$
	$I_G = 0.45$ A, $di_G/dt = 0.45$ A/ $\mu\text{s}$	
$R_{thJC}$	per thyristor; DC	0.26 K/W
	per module	0.13 K/W
$R_{thJK}$	per thyristor; sine 180° el	0.46 K/W
	per module	0.23 K/W
$d_s$	Creeping distance on surface	11.2 mm
$d_A$	Creeping distance in air	5.0 mm
$a$	Max. allowable acceleration	50 m/s <sup>2</sup>

### Package style and outline

Dimensions in mm (1mm = 0.0394")

