

## Thyristor Modules

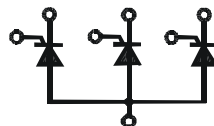
**PSVT 90**  
**PSXT 90**

$I_{TRMS}$   
 $V_{RRM}$

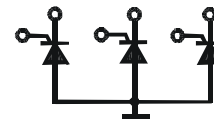
**= 165 A**  
**= 800 - 1600 V**

### Preliminary Data Sheet

$V_{RSM}$ $V_{DSM}$	$V_{RRM}$ $V_{DRM}$	Type	Type
900	800	PSVT 90/08	PSXT 90/08
1300	1200	PSVT 90/12	PSXT 90/12
1500	1400	PSVT 90/14	PSXT 90/14
1700	1600	PSVT 90/16	PSXT 90/16



PSVT



Base

PSXT



Characteristic picture

Symbol	Test Conditions	Maximum Ratings	
$I_{TRMS}$		165 A	
$I_{TAVM}$	$T_C = 83^\circ\text{C}$ 180° sine,	75 A	
$I_{TAVM}$	$T_C = 85^\circ\text{C}$ 180° sine,	70 A	
$I_{TSM}$	$T_{VJ} = 45^\circ\text{C}$ $V_R = 0$ t = 10 ms (50Hz), sine	1200 A	
	t = 8.3 ms (60Hz), sine	1300 A	
	$T_{VJ} = T_{VJM}$ $V_R = 0$ t = 10 ms (50Hz), sine	1050 A	
	t = 8.3 ms (60Hz), sine	1150 A	
$\int i^2 dt$	$T_{VJ} = 45^\circ\text{C}$ $V_R = 0$ t = 10 ms (50Hz), sine	7200 A <sup>2</sup> s	
	t = 8.3 ms (60Hz), sine	7010 A <sup>2</sup> s	
	$T_{VJ} = T_{VJM}$ $V_R = 0$ t = 10 ms (50Hz), sine	5500 A <sup>2</sup> s	
	t = 8.3 ms (60Hz), sine	5480 A <sup>2</sup> s	
$(di/dt)_{cr}$	$T_{VJ} = T_{VJM}$ f = 50Hz, $t_p = 200\mu\text{s}$ $V_D = 2/3 V_{DRM}$	repetitive, $I_T = 150\text{ A}$ 150 A/ $\mu\text{s}$	
	$I_G = 0.45\text{ A}$ $di_G/dt = 0.45\text{ A}/\mu\text{s}$	non repetitive; $I_T = I_{TAVM}$ 500 A/ $\mu\text{s}$	
	$(dv/dt)_{cr}$	$T_{VJ} = T_{VJM}$ ; $V_{DR} = 2/3 V_{DRM}$ $R_{GK} = \infty$ ; method 1 (linear voltage rise)	1000 V/ $\mu\text{s}$
	$P_{GM}$	$T_{VJ} = T_{VJM}$ $I_T = I_{TAVM}$ $t_p = 30\mu\text{s}$ $t_p = 300\mu\text{s}$	10 W 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 $I_{ISOL} \leq 1\text{ mA}$	t = 1 min t = 1 s	2500 V~ 3000 V~
	$M_d$	Mounting torque (M6) Terminal connection torque (M6)	5 Nm 5 Nm
Weight	typ.		270 g

### Features

- Package with screw terminals
- Isolation voltage 3000V~
- Planar glasspassivated chips
- UL registered, E 148688

### Applications

- Heat and temperature control for industrial furnaces and chemical processes
- Lighting control
- Motor control
- Power converter

### Advantages

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

