

## Technical Data

# PST ZP242

## RECTIFIER DIODE

### Features

- Blocking Capability up to 2200 V
- High Surge Rating
- Rugged Ceramic Hermetic Package

### ELECTRICAL CHARACTERISTICS AND RATINGS

#### Blocking

Parameter	Symbol	Min	Max	Typ	Unit	Conditions
Repetitive peak reverse voltage	$V_{RRM}$		2200		V	$T_j = -40\text{ }^{\circ}\text{C}$ to $175\text{ }^{\circ}\text{C}$
Non repetitive peak reverse voltage	$V_{RSM}$		2300		V	$T_j = -40\text{ }^{\circ}\text{C}$ to $175\text{ }^{\circ}\text{C}$
Repetitive peak reverse current	$I_{RRM}$		50		mA	$T_j = T_{jmax}$ , $V = V_{RRM}$

#### Conducting

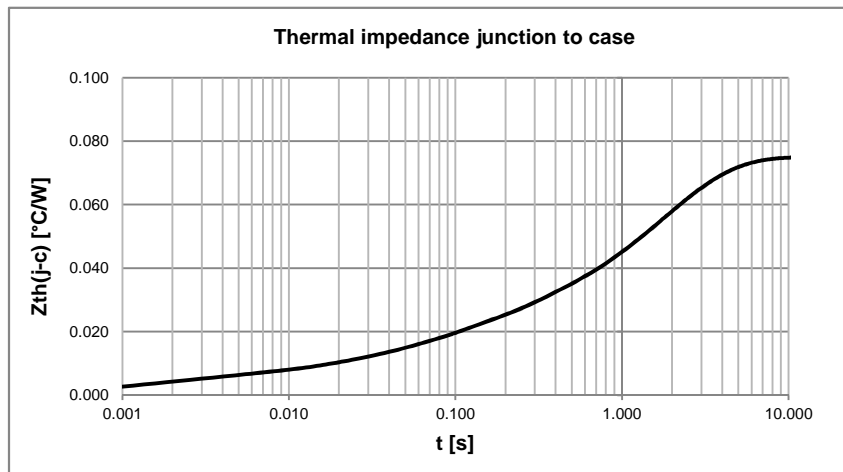
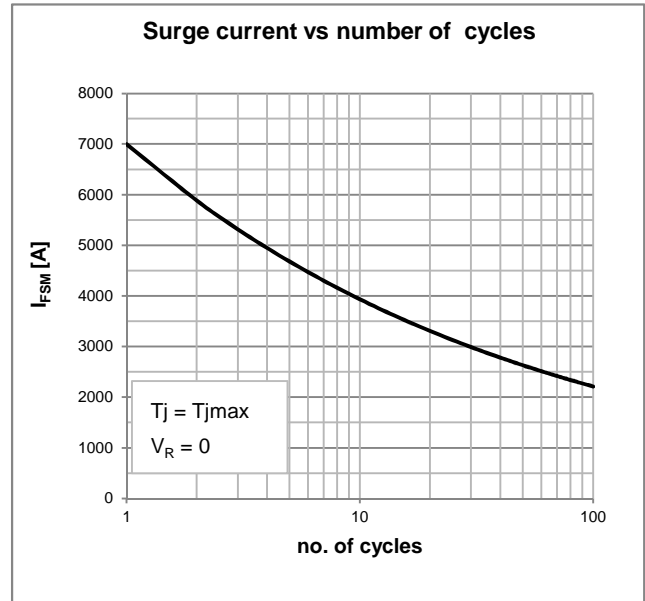
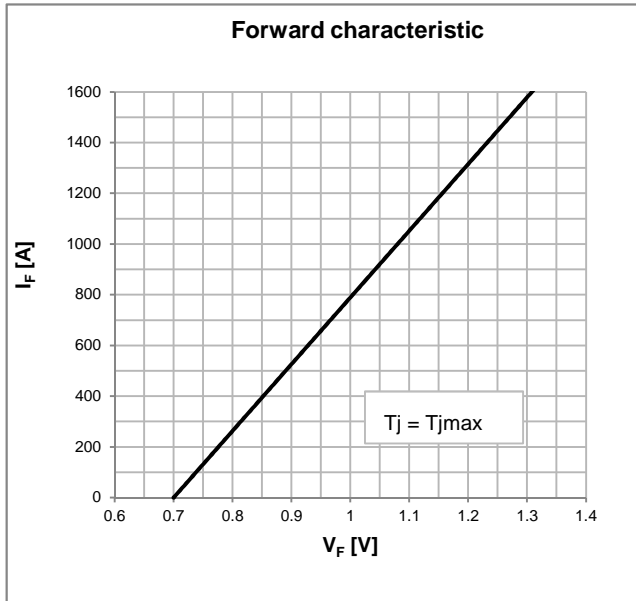
Parameter	Symbol	Min	Max	Typ	Unit	Conditions
Average value of forward current	$I_{F(AV)}$		810		A	50 Hz sinewave, $180^{\circ}$ conduction, $T_c = 85\text{ }^{\circ}\text{C}$
RMS value of forward current	$I_{F(RMS)}$		1272		A	50 Hz sinewave, $180^{\circ}$ conduction, $T_c = 85\text{ }^{\circ}\text{C}$
Peak one cycle surge (non repetitive) current	$I_{FSM}$		7		kA	50 Hz sinewave, $180^{\circ}$ conduction, $T_j = T_{jmax}$ , $V_R = 0$
I square t	$I^2 t$		245		$\text{kA}^2\text{s}$	$T_j = T_{jmax}$
Peak forward voltage	$V_{FM}$		1.16		V	Forward current 1200 A, $T_j = T_{jmax}$
Threshold voltage	$V_{F(TO)}$		0.7		V	$T_j = T_{jmax}$
Forward slope resistance	$r_F$		0.38		$\text{m}\Omega$	$T_j = T_{jmax}$

#### Thermal and mechanical characteristics and ratings

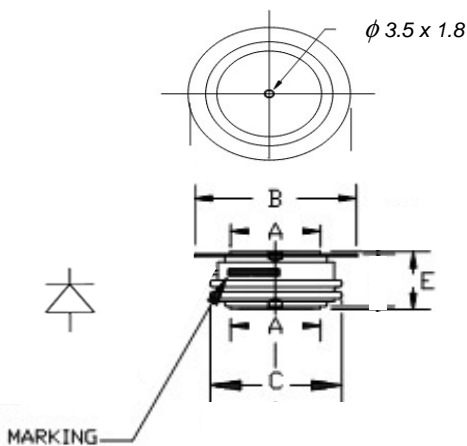
Parameter	Symbol	Min	Max	Typ	Unit	Conditions
Operating temperature	$T_j$	-40	175		$^{\circ}\text{C}$	
Storage temperature	$T_{stg}$	-40	175		$^{\circ}\text{C}$	
Thermal resistance junction to case	$R_{th(j-c)}$		0.075		$^{\circ}\text{C}/\text{W}$	Double side cooled, $180^{\circ}$ SIN
Thermal resistance case to sink	$R_{th(c-s)}$		0.020		$^{\circ}\text{C}/\text{W}$	Mounting surfaces smooth, flat and greased
Mounting force	$F$	4.5	5		kN	
Weight	$W$			55	g	

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## OUTLINE AND DIMENSIONS



	A	B	C	E
mm	19	42	37	14 ± 0.5

- All the characteristics given in this data sheet are guaranteed only with uniform clamping force, cleaned and lubricated heatsink surfaces with flatness < 0.03 mm and roughness < 2 $\mu$ m