

## PST ZP3001LT

### RECTIFIER DIODE

#### Features

- Blocking Capability up to 1000 V
- High Surge Rating
- Rugged Ceramic Hermetic Package

#### ELECTRICAL CHARACTERISTICS AND RATINGS

#### Blocking

Parameter	Symbol	Min	Max	Typ	Unit	Conditions
Repetitive peak reverse voltage	$V_{RRM}$		1000		V	$T_j = -40\text{ °C to }190\text{ °C}$
Non repetitive peak reverse voltage	$V_{RSM}$		1100		V	$T_j = -40\text{ °C to }190\text{ °C}$
Repetitive peak reverse current	$I_{RRM}$		75		mA	$T_j = T_{jmax}$ , $V = V_{RRM}$

#### Conducting

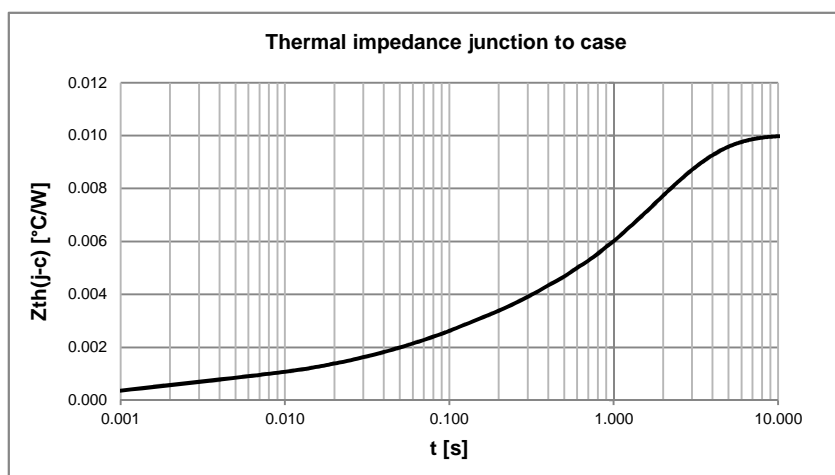
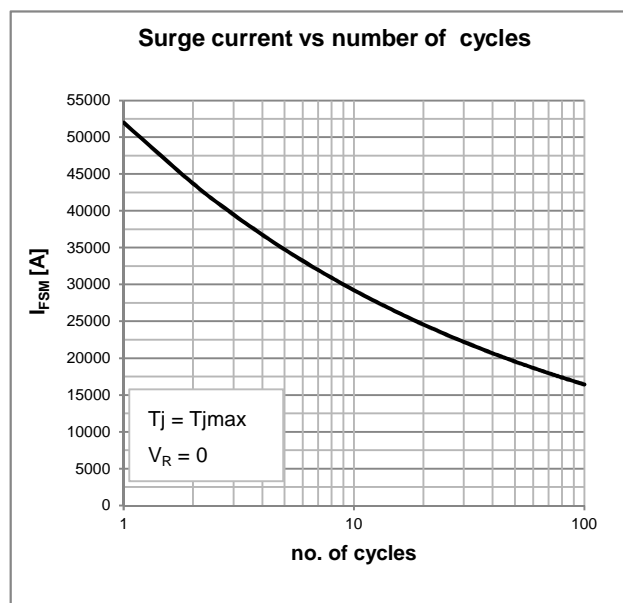
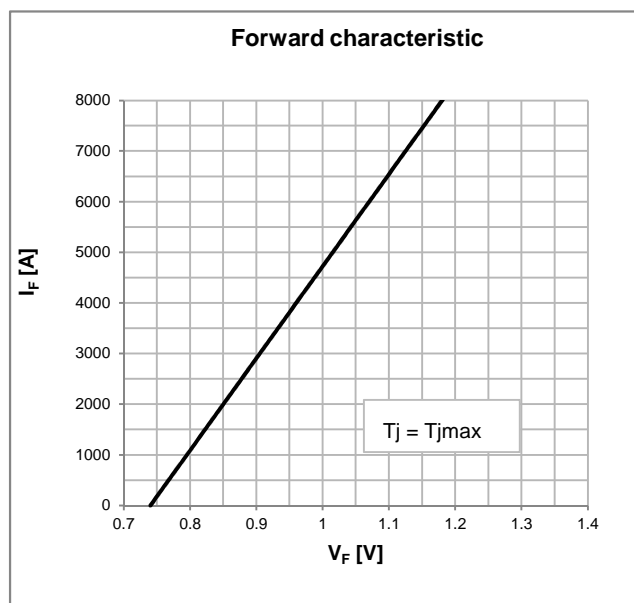
Parameter	Symbol	Min	Max	Typ	Unit	Conditions
Average value of forward current	$I_{F(AV)}$		6480		A	50 Hz sinewave, 180° conduction, $T_c = 85\text{ °C}$
RMS value of forward current	$I_{F(RMS)}$		7750		A	50 Hz sinewave, 180° conduction, $T_c = 85\text{ °C}$
Peak one cycle surge (non repetitive) current	$I_{FSM}$		52		kA	50 Hz sinewave, 180° conduction, $T_j = T_{jmax}$ , $V_R = 0$
I square t	$I^2 t$		13520		$kA^2s$	$T_j = T_{jmax}$
Peak forward voltage	$V_{FM}$		1.02		V	Forward current 5000 A, $T_j = T_{jmax}$
Threshold voltage	$V_{F(TO)}$		0.74		V	$T_j = T_{jmax}$
Forward slope resistance	$r_F$		0.055		mΩ	$T_j = T_{jmax}$

#### Thermal and mechanical characteristics and ratings

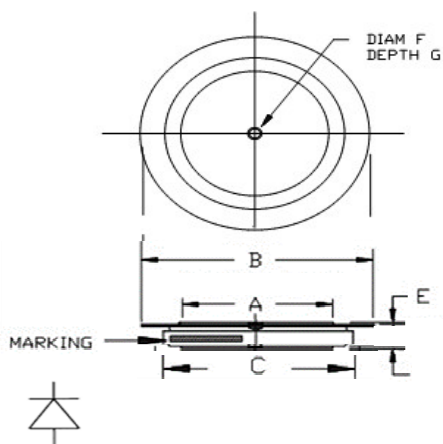
Parameter	Symbol	Min	Max	Typ	Unit	Conditions
Operating temperature	$T_j$	-40	190		°C	
Storage temperature	$T_{stg}$	-40	190		°C	
Thermal resistance junction to case	$R_{th(j-c)}$		0.010		°C/W	Double side cooled, 180° SIN
Thermal resistance case to sink	$R_{th(c-s)}$		0.005		°C/W	Mounting surfaces smooth, flat and greased
Mounting force	<b>F</b>	22	25		kN	
Weight	<b>W</b>			200	g	

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## OUTLINE AND DIMENSIONS



	A	B	C	E
mm	48	76	70	8 ± 1

- 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