



## PST ZK912

### FAST RECOVERY DIODE

#### Features

- Blocking Capability up to 2700 V
- Soft Reverse Recovery
- Rugged Ceramic Hermetic Package

#### ELECTRICAL CHARACTERISTICS AND RATINGS

##### Blocking

Parameter	Symbol	Min	Max	Typ	Unit	Conditions
Repetitive peak reverse voltage	$V_{RRM}$		2700		V	$T_j = -40^\circ C$ to $150^\circ C$
Non repetitive peak reverse voltage	$V_{RSM}$		2800		V	$T_j = -40^\circ C$ to $150^\circ C$
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	$I_{F(AV)}$		680		A	50 Hz sinewave, $180^\circ$ conduction, $T_c = 85^\circ C$
RMS value of forward current	$I_{F(RMS)}$		1068		A	50 Hz sinewave, $180^\circ$ conduction, $T_c = 85^\circ C$
Peak one cycle surge (non repetitive) current	$I_{FSM}$		6.5		kA	50 Hz sinewave, $180^\circ$ conduction, $T_j = T_{jmax}$ , $V_R = 0$
$I^2t$	$I^2t$		211		kA <sup>2</sup> s	$T_j = T_{jmax}$
Peak forward voltage	$V_{FM}$		1.94		V	Forward current 1200 A, $T_j = T_{jmax}$
Threshold voltage	$V_{F(TO)}$		1.10		V	$T_j = T_{jmax}$
Forward slope resistance	$r_F$		0.70		mΩ	$T_j = T_{jmax}$

##### Thermal and mechanical characteristics and ratings

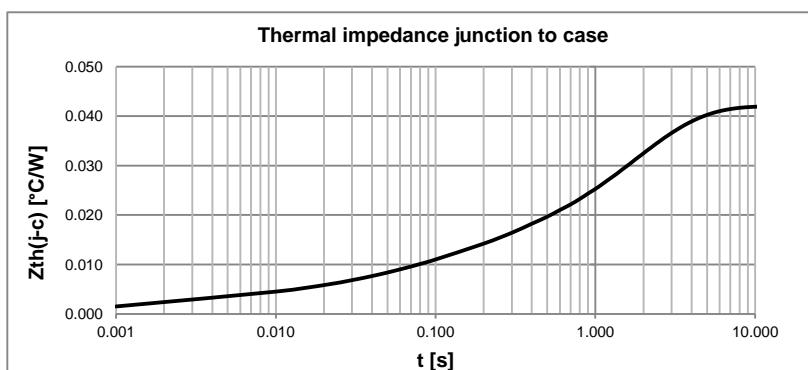
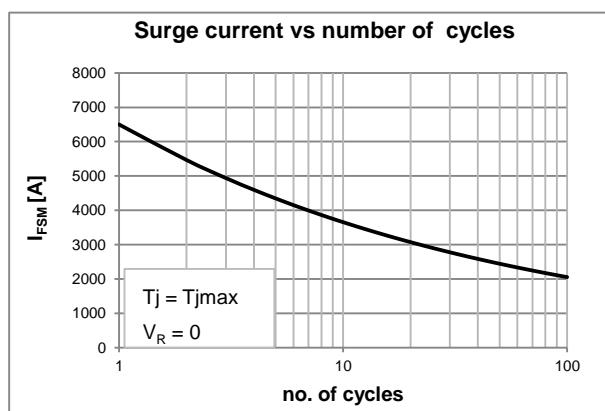
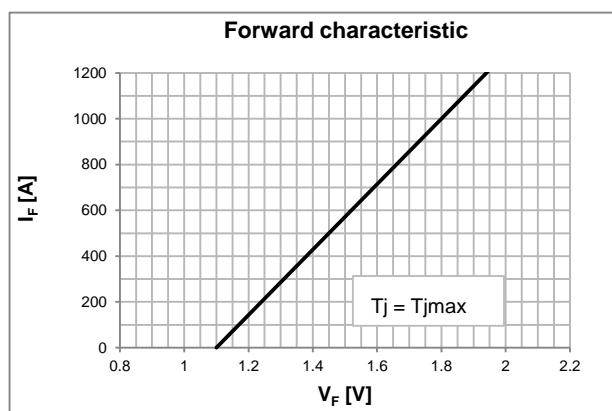
Parameter	Symbol	Min	Max	Typ	Unit	Conditions
Operating temperature	$T_j$	-40	150		°C	
Storage temperature	$T_{stg}$	-40	150		°C	
Thermal resistance junction to case	$R_{th(j-c)}$		0.042		°C/W	Double side cooled, $180^\circ$ SIN
Thermal resistance case to sink	$R_{th(c-s)}$		0.010		°C/W	Mounting surfaces smooth, flat and greased
Mounting force	$F$	8.5	9.5		kN	
Weight	$W$			280	g	

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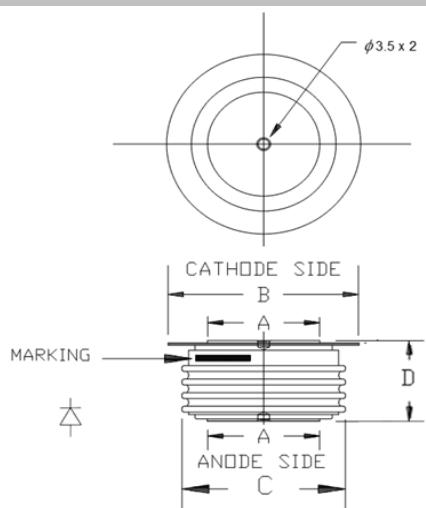
## FAST RECOVERY DIODE

### Switching

Parameter	Symbol	Min	Max	Typ	Unit	Conditions
Reverse recovery current	$I_{rr}$		140		A	$I_F = 350 \text{ A}$
Reverse recovery charge	$Q_{rr}$		260		$\mu\text{C}$	$dI_F / dt = 80 \text{ A}/\mu\text{s}$
Reverse recovery time	$t_{rr}$		4.0		$\mu\text{s}$	$V_R = 100 \text{ V}$
Softness	$s$	0.4				$T_j = T_{jmax}$



### OUTLINE AND DIMENSIONS



	A	B	C	D
mm	34	56 - 64	55	$26 \pm 1$

- 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 < 2µm