



# PST ZK2012

## FAST RECOVERY DIODE

### Features

- Blocking Capability up to 2600 V
- Soft Reverse Recovery
- Rugged Ceramic Hermetic Package

### ELECTRICAL CHARACTERISTICS AND RATINGS

#### Blocking

Parameter	Symbol	Min	Max	Typ	Unit	Conditions
Repetitive peak reverse voltage	$V_{RRM}$		2600		V	$T_j = -40\text{ °C to }150\text{ °C}$
Non repetitive peak reverse voltage	$V_{RSM}$		2700		V	$T_j = -40\text{ °C to }150\text{ °C}$
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	$I_{F(AV)}$		1415		A	50 Hz sinewave, 180° conduction, $T_c = 85\text{ °C}$
RMS value of forward current	$I_{F(RMS)}$		2220		A	50 Hz sinewave, 180° conduction, $T_c = 85\text{ °C}$
Peak one cycle surge (non repetitive) current	$I_{FSM}$		16		kA	50 Hz sinewave, 180° conduction, $T_j = T_{jmax}, V_R = 0$
I square t	$I^2 t$		1280		$kA^2s$	$T_j = T_{jmax}$
Peak forward voltage	$V_{FM}$		1.8		V	Forward current 2000 A, $T_j = T_{jmax}$
Threshold voltage	$V_{F(TO)}$		1.10		V	$T_j = T_{jmax}$
Forward slope resistance	$r_F$		0.345		$m\Omega$	$T_j = T_{jmax}$

#### Thermal and mechanical characteristics and ratings

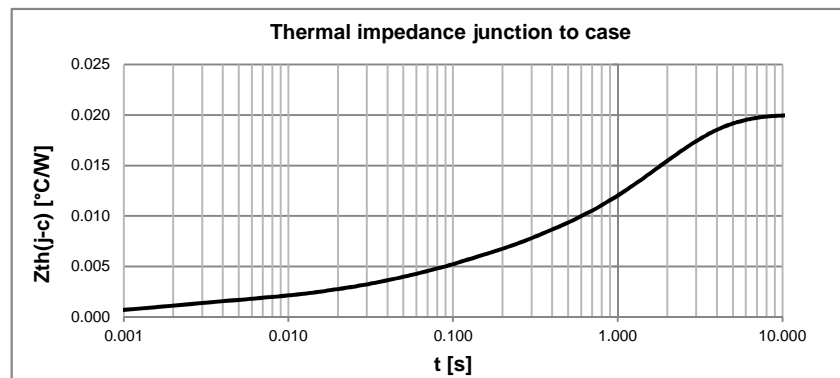
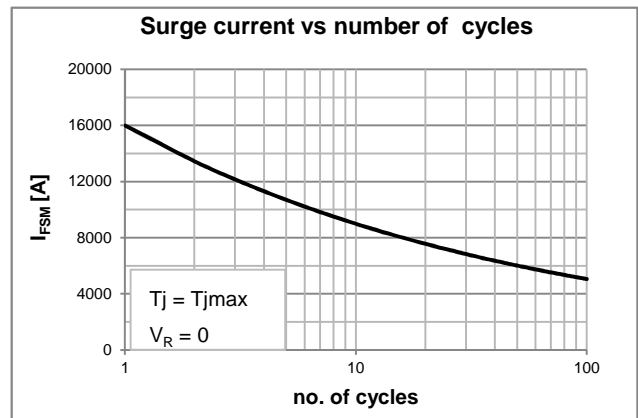
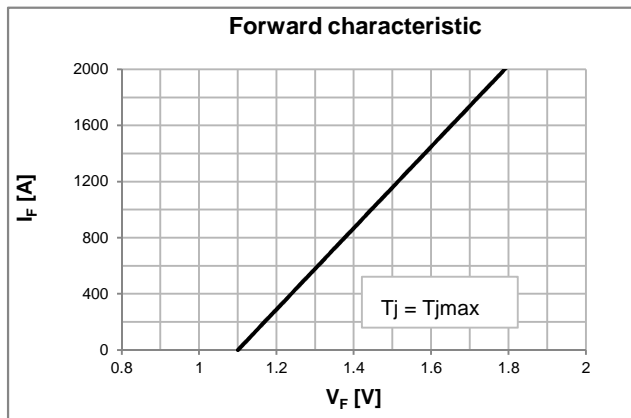
Parameter	Symbol	Min	Max	Typ	Unit	Conditions
Operating temperature	$T_j$	-40	150		°C	
Storage temperature	$T_{stg}$	-40	150		°C	
Thermal resistance junction to case	$R_{th(j-c)}$		0.020		°C/W	Double side cooled, 180° SIN
Thermal resistance case to sink	$R_{th(c-s)}$		0.006		°C/W	Mounting surfaces smooth, flat and greased
Mounting force	$F$	18	20		kN	
Weight	$W$			500	g	

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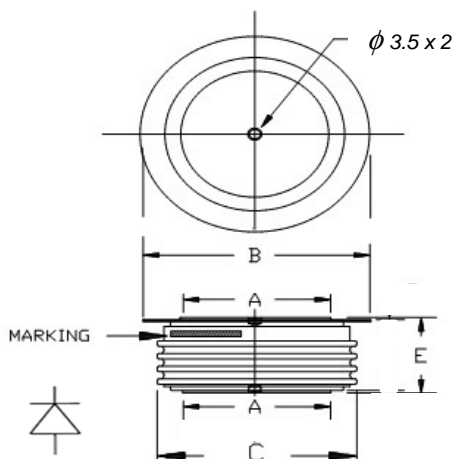
## FAST RECOVERY DIODE

### Switching

Parameter	Symbol	Min	Max	Typ	Unit	Conditions
Reverse recovery current	$I_{rr}$		345		A	$I_F = 1000$ A
Reverse recovery charge	$Q_{rr}$		800		$\mu\text{C}$	$di_F / dt = 100$ A/ $\mu\text{s}$
Reverse recovery time	$t_{rr}$		4.6		$\mu\text{s}$	$V_R = 100$ V
Softness	$s$	0.4				$T_j = T_{jmax}$



### OUTLINE AND DIMENSIONS



	A	B	C	E
mm	47	75	66	$26 \pm 0.5$

- 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  $\mu\text{m}$