YZPST®

Yangzhou Positioning Tech. Co., Ltd

Technical Data

PST ZP1104

RECTIFIER DIODE

Features

- Blocking Capability up to 2900 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}		2900		V	Tj = -40 °C to 175 °C
Non repetitive peak reverse voltage	V_{RSM}		3000		V	Tj = -40 °C to 175 °C
Repetitive peak reverse current	I_{RRM}		50		mA	Tj = Tjmax , V = V_{RRM}

Conducting
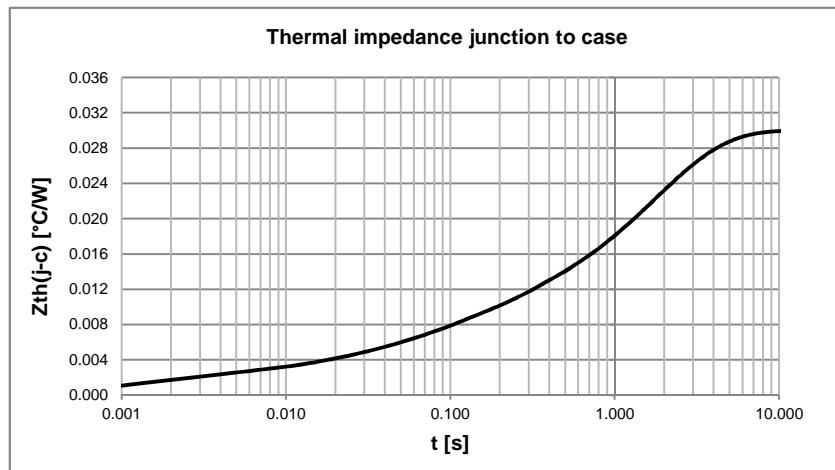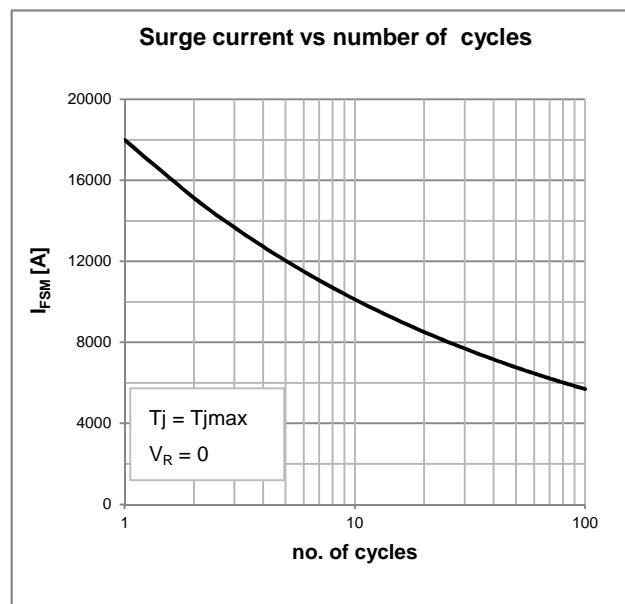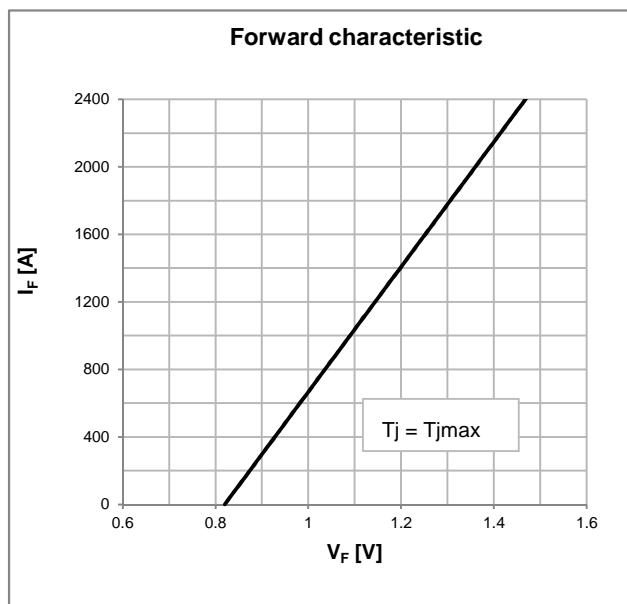
Parameter	Symbol	Min	Max	Typ	Unit	Conditions
Average value of forward current	$I_{F(AV)}$		1600		A	50 Hz sinewave,180° conduction, Tc = 85 °C
RMS value of forward current	$I_{F(RMS)}$		2512		A	50 Hz sinewave,180° conduction, Tc = 85 °C
Peak one cycle surge (non repetitive) current	I_{FSM}		18		kA	50 Hz sinewave,180° conduction, Tj = Tjmax, V_R = 0
I square t	$I^2 t$		1620		kA^2s	Tj = Tjmax
Peak forward voltage	V_{FM}		1.30		V	Forward current 2000 A, Tj = Tjmax
Threshold voltage	$V_{F(TO)}$		0.82		V	Tj = Tjmax
Forward slope resistance	r_F		0.27		mΩ	Tj = Tjmax

Thermal and mechanical characteristics and ratings
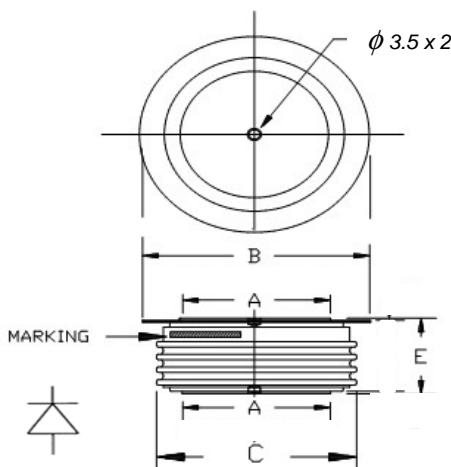
Parameter	Symbol	Min	Max	Typ	Unit	Conditions
Operating temperature	T_j	-40	175		°C	
Storage temperature	T_{stg}	-40	175		°C	
Thermal resistance junction to case	$R_{th(j-c)}$		0.030		°C/W	Double side cooled, 180° SIN
Thermal resistance case to sink	$R_{th(c-s)}$		0.007		°C/W	Mounting surfaces smooth, flat and greased
Mounting force	F	11.5	13.5		kN	
Weight	W			275	g	

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Forward characteristic

I_F [A] vs V_F [V]

Tj = Tjmax

Surge current vs number of cycles

I_{FSM} [A] vs no. of cycles

Tj = Tjmax
$V_R = 0$

Thermal impedance junction to case

Zth(j-c) [°C/W] vs t [s]

OUTLINE AND DIMENSIONS

ϕ 3.5 x 2

MARKING

mm	A	B	C	E
	34	64	55	26 ± 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 < 2μm