



Technical Data

PST ZP2000-20

RECTIFIER DIODE

Features

- Blocking Capability up to 2000 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}		2000		V	$T_j = -40\text{ }^{\circ}\text{C}$ to $190\text{ }^{\circ}\text{C}$
Non repetitive peak reverse voltage	V_{RSM}		2100		V	$T_j = -40\text{ }^{\circ}\text{C}$ to $190\text{ }^{\circ}\text{C}$
Repetitive peak reverse current	I_{RRM}		75		mA	$T_j = T_{jmax}$, $V = V_{RRM}$

Conducting

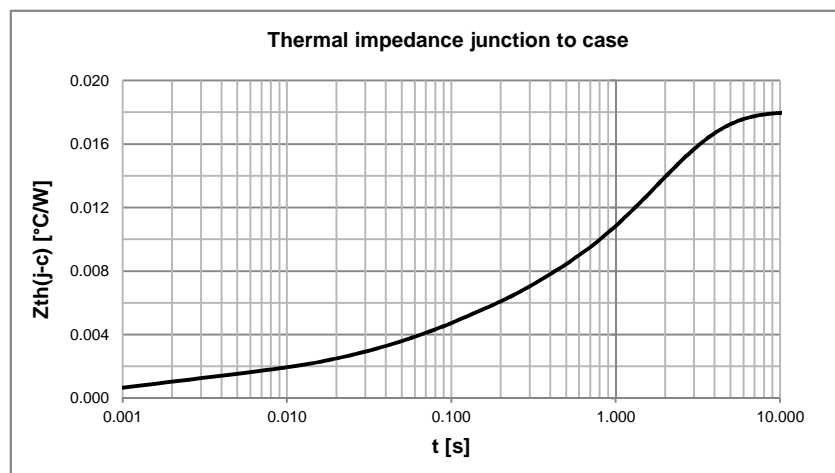
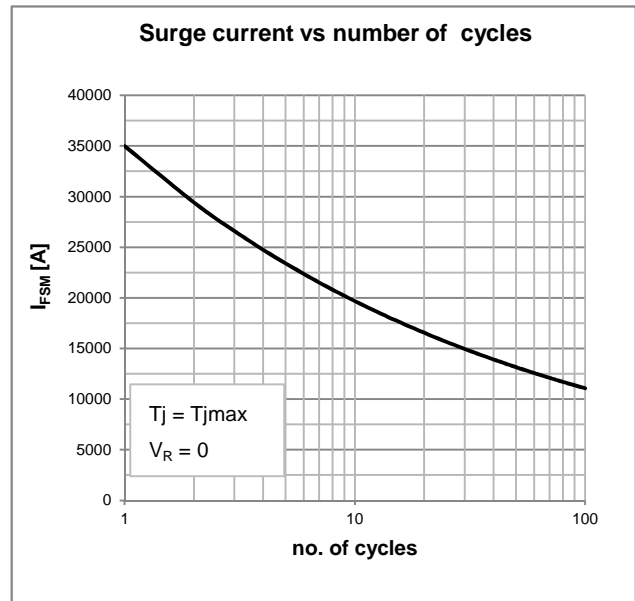
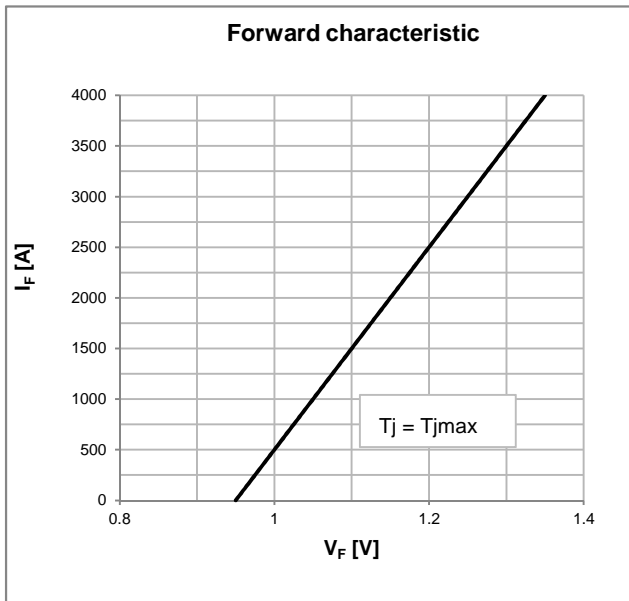
Parameter	Symbol	Min	Max	Typ	Unit	Conditions
Average value of forward current	$I_{F(AV)}$		2000		A	50 Hz sine wave, 180° conduction, $T_c = 140\text{ }^{\circ}\text{C}$
RMS value of forward current	$I_{F(RMS)}$		3140		A	50 Hz sine wave, 180° conduction, $T_c = 140\text{ }^{\circ}\text{C}$
Surge non repetitive current	I_{FSM}		40		kA	50 Hz (10 ms) sine wave Half cycle, $T_j = 25\text{ }^{\circ}\text{C}$
Surge non repetitive current	I_{FSM}		35		kA	50 Hz (10 ms) sine wave Half cycle
I square t	$I^2 t$		6125		kA^2s	$V_R = 0$ $T_j = T_{jmax}$
Surge non repetitive current	I_{FSM}		20		kA	50 Hz (100 ms) sine wave Half cycle, $T_j = T_{jmax}$
Peak forward voltage	V_{FM}		1.58		V	Forward current 6300 A, $T_j = T_{jmax}$
Threshold voltage	$V_{F(TO)}$		0.95		V	$T_j = T_{jmax}$
Forward slope resistance	r_F		0.100		m Ω	$T_j = T_{jmax}$

Thermal and mechanical characteristics and ratings

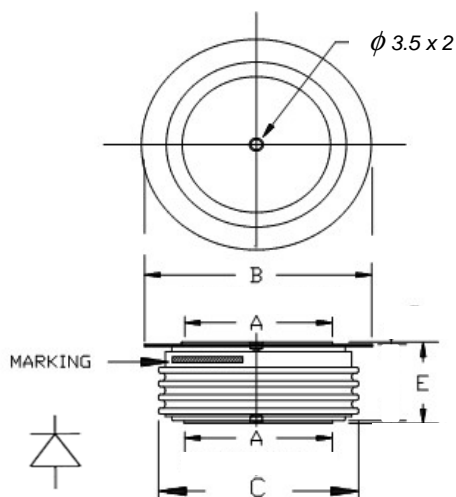
Parameter	Symbol	Min	Max	Typ	Unit	Conditions
Operating temperature	T_j	-40	190		$^{\circ}\text{C}$	
Storage temperature	T_{stg}	-40	190		$^{\circ}\text{C}$	
Thermal resistance junction to case	$R_{th(j-c)}$		0.018		$^{\circ}\text{C/W}$	Double side cooled, 180° SIN
Thermal resistance case to sink	$R_{th(c-s)}$		0.004		$^{\circ}\text{C/W}$	Mounting surfaces smooth, flat and greased
Mounting force	F	23	28		kN	
Weight	W			520	g	

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OUTLINE AND DIMENSIONS



	A	B	C	E
mm	47	74	66	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 < 2 μ m