

PST ZP302

RECTIFIER DIODE

Features

- Blocking Capability up to 800 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} | | 800 | | V | $T_j = -40\text{ }^{\circ}\text{C}$ to $190\text{ }^{\circ}\text{C}$ |
| Non repetitive peak reverse voltage | V_{RSM} | | 900 | | V | $T_j = -40\text{ }^{\circ}\text{C}$ to $190\text{ }^{\circ}\text{C}$ |
| Repetitive peak reverse current | I_{RRM} | | 50 | | mA | $T_j = T_{jmax}$, $V = V_{RRM}$ |

Conducting

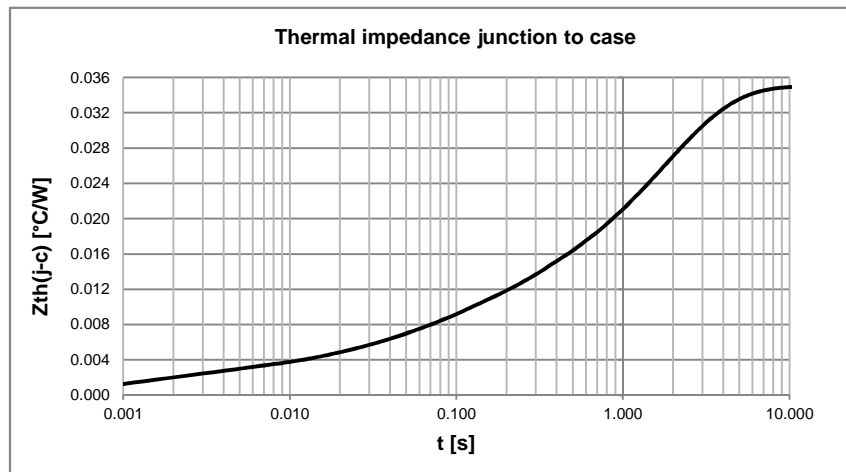
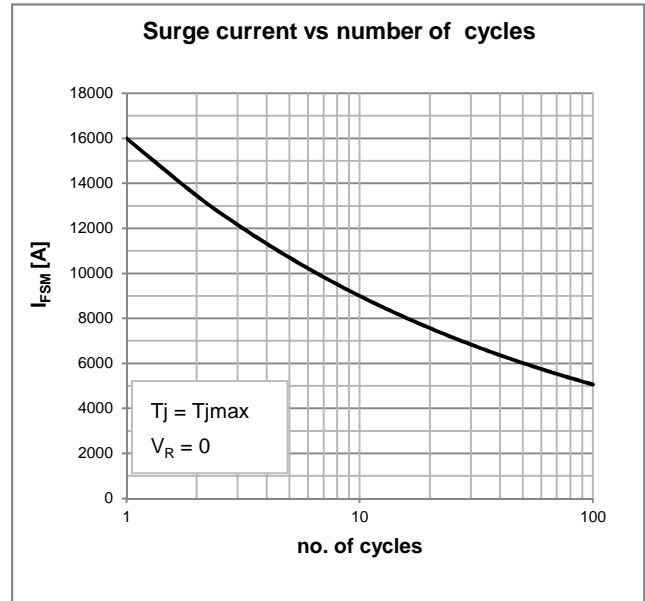
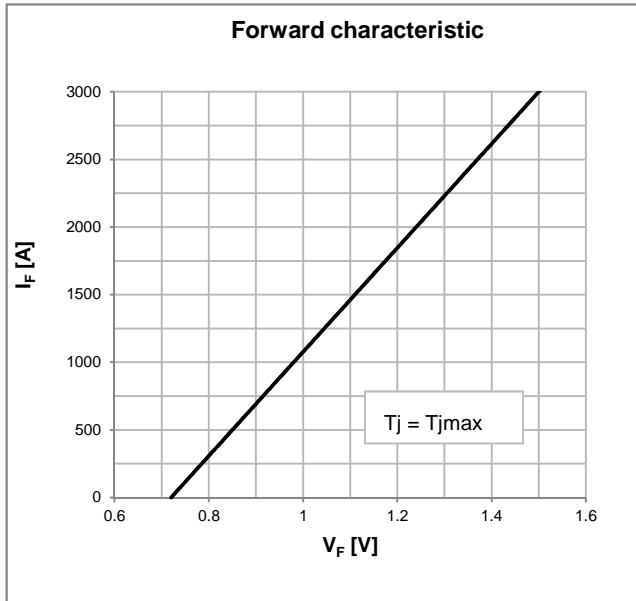
| Parameter | Symbol | Min | Max | Typ | Unit | Conditions |
|---|--------------|-----|------|-----|-----------------------|--|
| Average value of forward current | $I_{F(AV)}$ | | 1680 | | A | 50 Hz sinewave, 180° conduction, $T_c = 85\text{ }^{\circ}\text{C}$ |
| RMS value of forward current | $I_{F(RMS)}$ | | 2638 | | A | 50 Hz sinewave, 180° conduction, $T_c = 85\text{ }^{\circ}\text{C}$ |
| 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} | | 1.50 | | V | Forward current 3000 A, $T_j = T_{jmax}$ |
| Threshold voltage | $V_{F(TO)}$ | | 0.72 | | V | $T_j = T_{jmax}$ |
| Forward slope resistance | r_F | | 0.26 | | $\text{m}\Omega$ | $T_j = T_{jmax}$ |

Thermal and mechanical characteristics and ratings

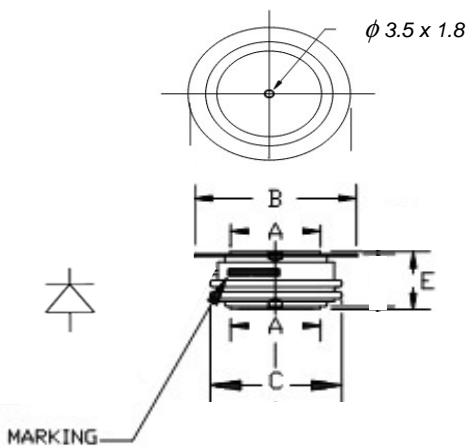
| Parameter | Symbol | Min | Max | Typ | Unit | Conditions |
|-------------------------------------|---------------|-----|-------|-----|-----------------------------|--|
| Operating temperature | T_j | -40 | 190 | | $^{\circ}\text{C}$ | |
| Storage temperature | T_{stg} | -40 | 190 | | $^{\circ}\text{C}$ | |
| Thermal resistance junction to case | $R_{th(j-c)}$ | | 0.035 | | $^{\circ}\text{C}/\text{W}$ | Double side cooled, 180° SIN |
| Thermal resistance case to sink | $R_{th(c-s)}$ | | 0.015 | | $^{\circ}\text{C}/\text{W}$ | Mounting surfaces smooth, flat and greased |
| Mounting force | F | 8 | 10 | | kN | |
| Weight | W | | | 85 | g | |

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OUTLINE AND DIMENSIONS



| | A | B | C | E |
|----|----|----|----|----------|
| mm | 25 | 42 | 40 | 14 ± 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