

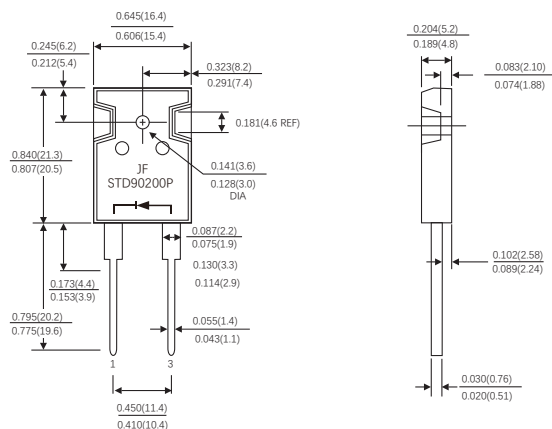
FEATURES

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Glass passivated Chip
- Low VF, Low power loss
- Flexible solution for reliable AC power rectification
- High surge capability
- High temperature soldering guaranteed: 260°C/10s at terminals
- Component in accordance to RoHS 2015/863/EU



MECHANICAL DATA

- Case: TO-247AC molded plastic body
- Terminals: Lead solderable per MIL-STD-750,method 2026
- Polarity: As marked.
- Mounting Position: Any



Pin1 Pin3
CASE

TYPICAL APPLICATIONS

- Input Rectification
- Bypass Diode
- Polarity Reverse Protection
- EV / HEV Battery Chargers

Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

(Ratings at 25°C ambient temperature unless otherwise specified)

| Parameters | | Symbols | Value | | | | Units |
|--|-----------------------|------------------|-------------|------|------|------|-------|
| Maximum repetitive peak reverse voltage | | V_{RRM} | 2000 | | | | V |
| Maximum RMS voltage | | V_{RMS} | 1414 | | | | V |
| Maximum DC blocking voltage | | V_{DC} | 2000 | | | | V |
| Maximum average forward rectified current(D=0.5 Rectangular wave) | | $I_{F(AV)}$ | 90.0 | | | | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load, (JEDEC method) | | I_{FSM} | 1000 | | | | A |
| Forward voltage at 90A (Note 1) | | V_F | TYP. | 1.05 | MAX. | 1.25 | V |
| Maximum instantaneous reverse current at rated DC blocking voltage(Note 1) | T _J =25°C | IR | TYP. | - | MAX. | 5 | uA |
| | T _J =125°C | | TYP. | - | MAX. | 250 | uA |
| Typical thermal resistance (Note 2) | | R _{ΘJC} | 0.30 | | | | °C/W |
| Operating junction temperature range | | T _J | - 55 to+150 | | | | °C |
| Storage temperature range | | T _{STG} | - 55 to+150 | | | | °C |

Notes: 1.Pulse test: 300 us pulse width,1% duty cycle
2.Thermal resistance from junction to case

RATINGS AND CHARACTERISTICS OF STD90200P

FIG.1-FORWARD CURRENT DERATING CURVE

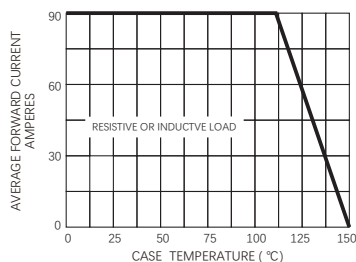


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT(Per diode)

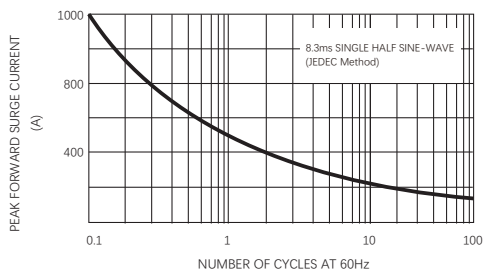


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

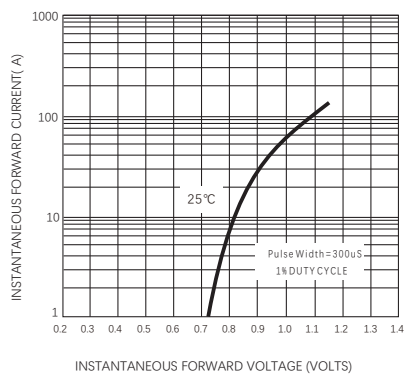
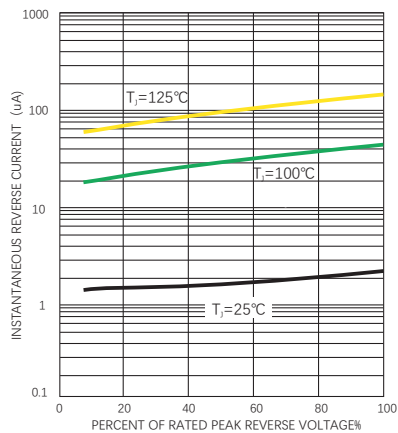


FIG.4-TYPICAL REVERSE CHARACTERISTICS



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