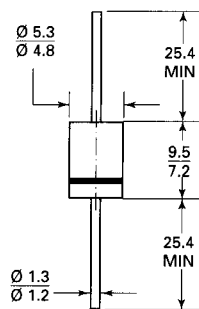


BY396...BY399 FAST SILICON RECTIFIERS

FEATURES

- * Low forward voltage
- * High current capability
- * Low leakage current
- * High surge capability
- * Low cost



VOLTAGE RANGE

100 to 800 Volts

CURRENT

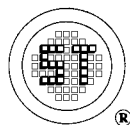
3.0 Amperes

Dimensions in mm

Absolute Maximum Ratings ($T_a = 25^\circ\text{C}$)

| | Symbol | Value | Unit |
|--|---------------------------|-----------------|------------------|
| Repetitive Peak Reverse Voltage | BY396 V_{RRM} | 100 | V |
| | BY397 V_{RRM} | 200 | V |
| | BY398 V_{RRM} | 400 | V |
| | BY399 V_{RRM} | 800 | V |
| Surge Forward Current, Half Cycle 50Hz, starting from $T_j = 25^\circ\text{C}$ | I_{FSM} | 100 | A |
| Average Forward Current at $T_{amb} = 50^\circ\text{C}$ | I_{FAV} | 3 ¹⁾ | A |
| Junction Temperature | T_j | 175 | $^\circ\text{C}$ |
| Ambient Operating Temperature Range | T_{amb} | -40 to + 175 | $^\circ\text{C}$ |
| Storage Temperature Range | T_s | -40 to + 175 | $^\circ\text{C}$ |

¹⁾ Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case.



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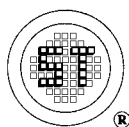
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FAST SILICON RECTIFIERS

Characteristics at $T_j = 25^\circ\text{C}$

| | Symbol | Min. | Typ. | Max. | Unit |
|--|-----------|------|------|------------------|---------------|
| Forward Voltage at $I_F = 3\text{ A}$ | V_F | - | - | 1.3 | V |
| Leakage Current at V_{RRM} | I_R | - | - | 10 | μA |
| Forward Recovery Time at $I_F = 100\text{ mA}$ | t_{fr} | - | - | 1.0 | μs |
| Reverse Recovery Time from $I_F = 10\text{ mA}$ through $I_R = 10\text{ mA}$ to $I_R = 1\text{ mA}$ | t_{fr} | - | - | 0.5 | μs |
| Thermal Resistance Junction to Ambient Air | R_{thA} | - | - | 30 ¹⁾ | K/W |

¹⁾ Valid provided that leads are kept at ambient temperature at a distance of 8 mm from case.



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