

ER100S THRU ER106S

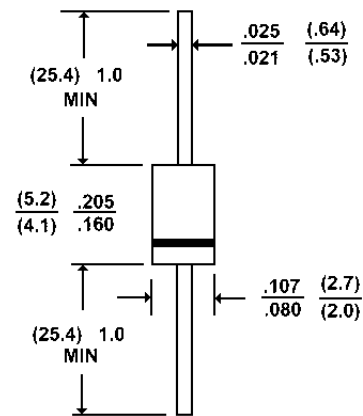
SUPERFAST RECOVERY RECTIFIERS

VOLTAGE - 50 to 600 Volts CURRENT - 1.0 Ampere

FEATURES

- Superfast recovery times-epitaxial construction
- Low forward voltage, high current capability
- Exceeds environmental standards of MIL-S-19500/228
- Hermetically sealed
- Low leakage
- High surge capability
- Plastic package has Underwriters Laboratories Flammability Classification 94V-O utilizing Flame Retardant Epoxy Molding Compound

A-405



Dimensions in inches and (millimeters)

MECHANICAL DATA

Case: Molded plastic, A-405

Terminals: Axial leads, solderable to per MIL-STD-202, Method 208

Polarity: Color Band denotes cathode end

Mounting Position: Any

Weight: 0.008 ounce, 0.22 gram

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 °C ambient temperature unless otherwise specified.

Resistive or inductive load, 60Hz.

| | ER100S | ER101S | ER101AS | ER102S | ER103S | ER104S | ER106S | UNITS |
|---|-------------|--------|---------|--------|--------|--------|--------|-------|
| Maximum Recurrent Peak Reverse Voltage | 50 | 100 | 150 | 200 | 300 | 400 | 600 | V |
| Maximum RMS Voltage | 35 | 70 | 105 | 140 | 210 | 320 | 420 | V |
| Maximum DC Blocking Voltage | 50 | 100 | 150 | 200 | 300 | 400 | 600 | V |
| Maximum Average Forward Current .375"(9.5mm) lead lengths at T _A =55 °C | 1.0 | | | | | | | A |
| Peak Forward Surge Current, I _{FM} (surge): 8.3ms single half sine-wave superimposed on rated load(JEDEC method) | 30.0 | | | | | | | A |
| Maximum Forward Voltage at 1.0A DC | .95 | | 1.25 | | 1.7 | | | V |
| Maximum DC Reverse Current at Rated DC Blocking Voltage | 5.0 | | | | | | | µg A |
| Maximum DC Reverse Current at Rated DC Blocking Voltage T _A =125 °C | 150 | | | | | | | µg A |
| Maximum Reverse Recovery Time(Note 1) | 35.0 | | | | | | | ns |
| Typical Junction capacitance (Note 1) | 17 | | | | | | | pF |
| Typical Junction Resistance(Note 2) R _{θJKJA} | 50 | | | | | | | °C/W |
| Operating and Storage Temperature Range T _J | -55 to +150 | | | | | | | °C |

NOTES:

1. Reverse Recovery Test Conditions: I_F=.5A, I_R=1A, I_{rr}=.25A
2. Measured at 1 MHz and applied reverse voltage of 4.0 VDC
3. Thermal resistance from junction to ambient and from junction to lead length 0.375"(9.5mm) P.C.B. mounted

RATING AND CHARACTERISTIC CURVES

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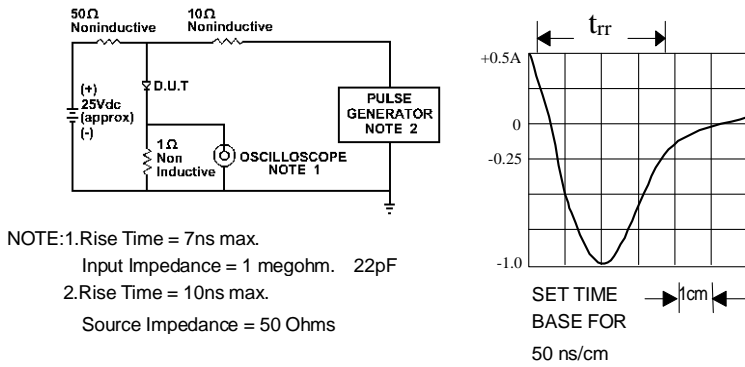


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

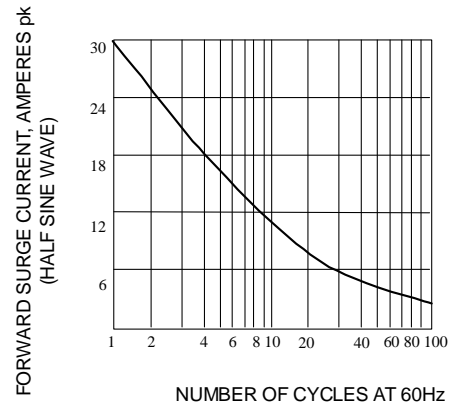


Fig. 2-MAXIMUM NON-REPEITIVE SURGE CURRENT

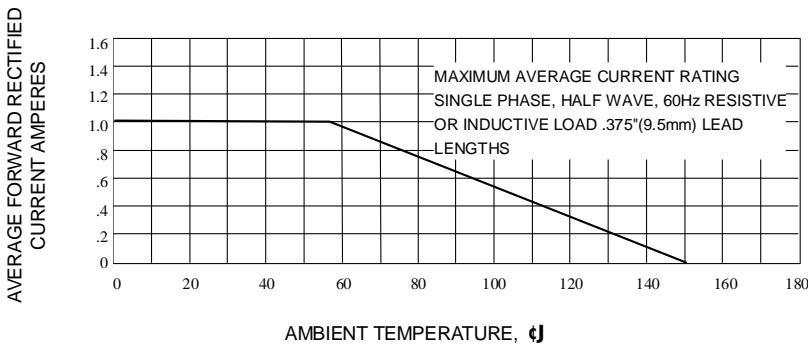


Fig. 3-MAXIMUM AVERAGE FORWARD CURRENT RATING

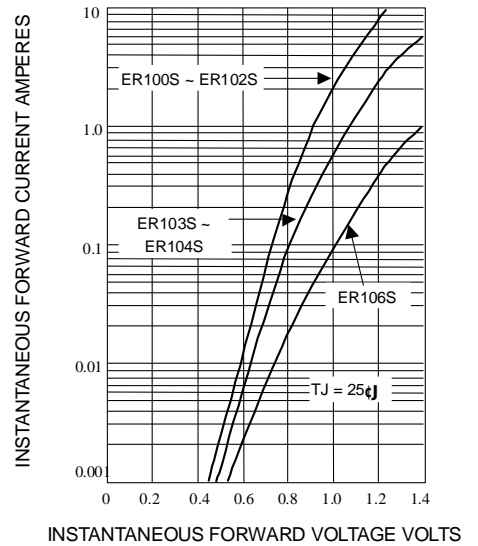


Fig. 4-FORWARD CURRENT DERATING CURVE

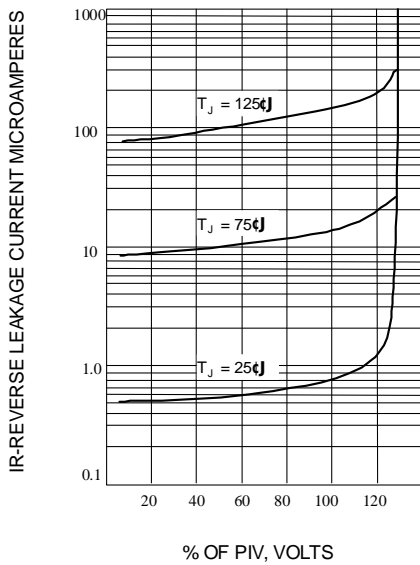


Fig. 5-TYPICAL REVERSE CHARACTERISTICS

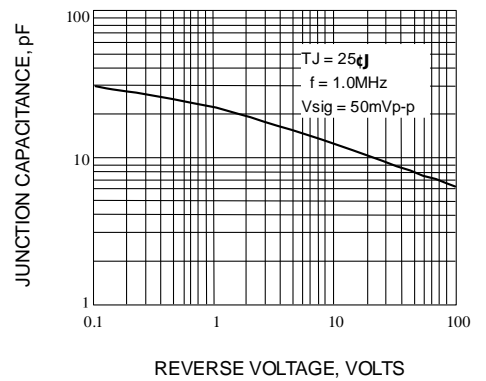


Fig. 6-TYPICAL JUNCTION CAPACITANCE