



Micro Commercial Components  
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# ER300 THRU ER306

## 3 Amp Super Fast Recovery Rectifier 50 to 600 Volts

### Features

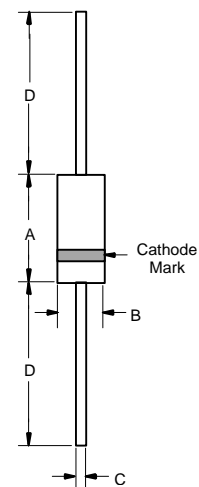
- Superfast recovery times-epitaxial construction
- Low forward voltage, high current capability
- Hermetically sealed
- Low leakage , High surge capability

### Maximum Ratings

- Operating Junction Temperature: -55°C to +150°C
- Storage Temperature: -55°C to +150°C
- Typical Thermal Resistance 20°C/W Junction to ambient

| MCC Catalog Number | Device Marking | Maximum Recurrent Peak Reverse Voltage | Maximum RMS Voltage | Maximum DC Blocking Voltage |
|--------------------|----------------|--|---------------------|-----------------------------|
| ER300              | ER300          | 50V                                    | 35V                 | 50V                         |
| ER301              | ER301          | 100V                                   | 70V                 | 100V                        |
| ER301A             | ER301A         | 150V                                   | 105V                | 150V                        |
| ER302              | ER302          | 200V                                   | 140V                | 200V                        |
| ER303              | ER303          | 300V                                   | 210V                | 300V                        |
| ER304              | ER304          | 400V                                   | 280V                | 400V                        |
| ER306              | ER306          | 600V                                   | 420V                | 600V                        |

### DO-201AD



### Electrical Characteristics @ 25°C Unless Otherwise Specified

|  |             |                          |   |
|--|-------------|--------------------------|---|
| Average Forward Current  | $I_{F(AV)}$ | 3 A                      | $T_A = 55^\circ\text{C}$                              |
| Peak Forward Surge Current   | $I_{FSM}$   | 125A                     | 8.3ms, half sine                                      |
| Maximum Instantaneous Forward Voltage<br>ER300-302<br>ER303-304<br>ER306 | $V_F$       | 0.95V<br>1.25V<br>1.70V  | $I_{FM} = 3.0A;$<br>$T_A = 25^\circ\text{C}$          |
| Maximum DC Reverse Current At Rated DC Blocking Voltage                  | $I_R$       | 5 $\mu$ A<br>300 $\mu$ A | $T_A = 25^\circ\text{C}$<br>$T_A = 125^\circ\text{C}$ |
| Maximum Reverse Recovery Time  | $T_{rr}$    | 35ns                     | $I_F=0.5A, I_R=1.0A,$<br>$I_{rr}=0.25A$               |
| Typical Junction Capacitance   | $C_J$       | 35pF                     | Measured at<br>1.0MHZ, $V_R=4.0V$                     |

| DIM | DIMENSIONS |      |       |      | NOTE |
|-----|------------|------|-------|------|------|
|     | INCHES     |      | MM    |      |      |
|     | MIN        | MAX  | MIN   | MAX  |      |
| A   | ---        | .370 | ---   | 9.50 |      |
| B   | ---        | .250 | ---   | 6.40 |      |
| C   | .048       | .052 | 1.20  | 1.30 |      |
| D   | 1.000      | ---  | 25.40 | ---  |      |

\*Pulse Test: Pulse Width 300 $\mu$ sec, Duty Cycle 2%

# ER300 thru ER306

## RATING AND CHARACTERISTIC CURVES

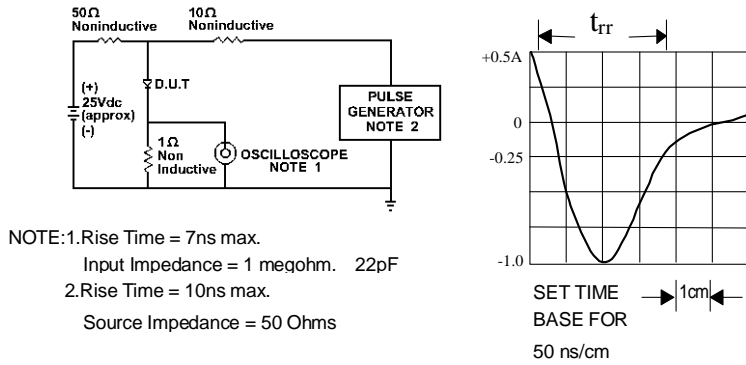


Fig. 1-REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

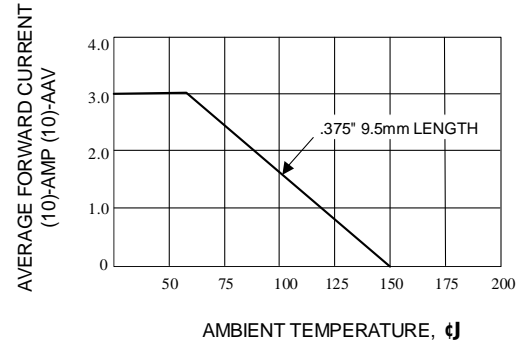


Fig. 2-MAXIMUM AVERAGE FORWARD CURRENT RATING

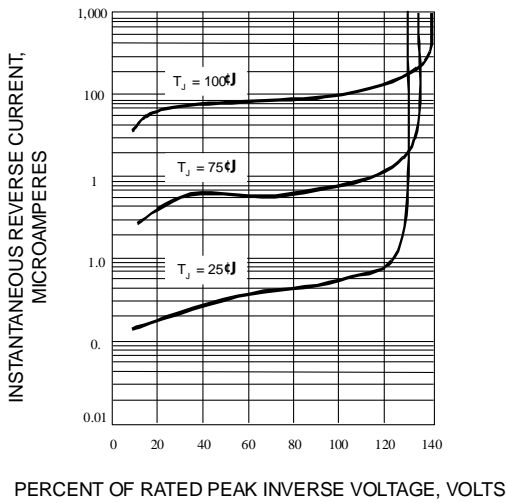


Fig. 3-TYPICAL REVERSE CHARACTERISTICS

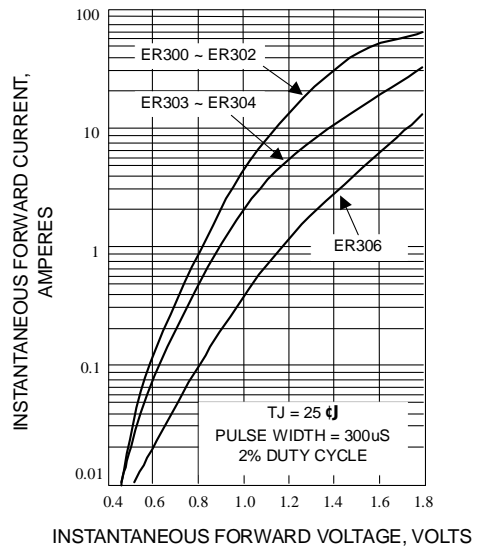


Fig. 4-FORWARD CURRENT DERATING CURVE

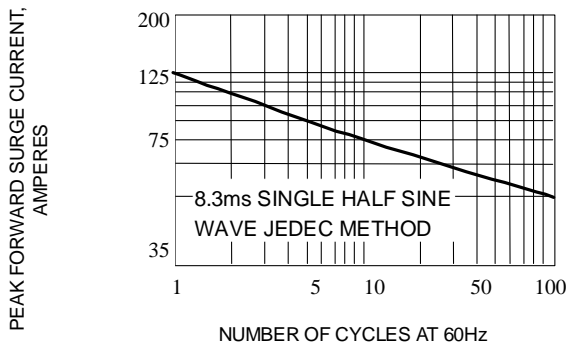


Fig. 5-MAXIMUM NON-REPETITIVE SURGE CURRENT

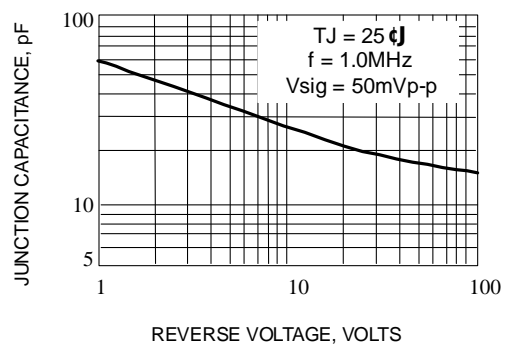


Fig. 6-TYPICAL JUNCTION CAPACITANCE