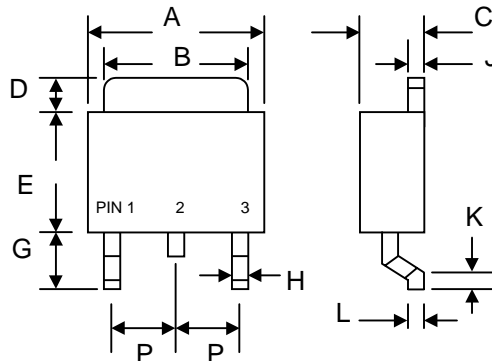


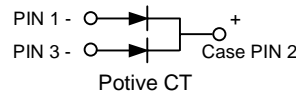
### Features

- Glass Passivated Die Construction
- Ideally Suited for Automatic Assembly
- Low Profile Package
- High Surge Current Capability
- Low Power Loss, High Efficiency
- Super-Fast Recovery Time
- Plastic Case Material has UL Flammability Classification Rating 94V-O



### Mechanical Data

- Case: Molded Plastic
- Terminals: Plated Leads Solderable per MIL-STD-750, Method 2026
- Polarity: Cathode Band
- Weight: 0.4 grams (approx.)
- Mounting Position: Any
- Marking: Type Number
- Standard Packaging: 16mm Tape (EIA-481)



| D PAK/TO-252AA       |              |      |
|----------------------|--------------|------|
| Dim                  | Min          | Max  |
| A                    | 6.4          | 6.8  |
| B                    | 5.0          | 5.4  |
| C                    | 2.35         | 2.75 |
| D                    | —            | 1.60 |
| E                    | 5.3          | 5.7  |
| G                    | 2.3          | 2.7  |
| H                    | 0.4          | 0.8  |
| J                    | 0.4          | 0.6  |
| K                    | 0.3          | 0.7  |
| L                    | 0.50 Typical |      |
| P                    | —            | 2.3  |
| All Dimensions in mm |              |      |

### Maximum Ratings and Electrical Characteristics @T<sub>A</sub>=25°C unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%.

| Characteristic  | Symbol                            | ED1002CS    | ED1003CS | ED1004CS | ED1006CS | Unit |
|---|-----------------------------------|-------------|----------|----------|----------|------|
| Peak Repetitive Reverse Voltage   | V <sub>RRM</sub>                  |             |          |          |          | V    |
| Working Peak Reverse Voltage  | V <sub>RWM</sub>                  | 200         | 300      | 400      | 600      |      |
| DC Blocking Voltage   | V <sub>R</sub>                    |             |          |          |          |      |
| RMS Reverse Voltage   | V <sub>R(RMS)</sub>               | 140         | 210      | 280      | 420      | V    |
| Average Rectified Output Current @T <sub>L</sub> = 100°C  | I <sub>O</sub>                    | 10          |          |          |          | A    |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | I <sub>FSM</sub>                  | 100         |          |          |          | A    |
| Forward Voltage (Note 1) @I <sub>F</sub> = 10A  | V <sub>FM</sub>                   | 0.95        | 1.3      | 1.7      |          | V    |
| Peak Reverse Current @T <sub>A</sub> = 25°C At Rated DC Blocking Voltage @T <sub>A</sub> = 100°C                | I <sub>RM</sub>                   |             | 5.0      | 300      |          | μA   |
| Typical Thermal Resistance Junction to Ambient  | R <sub>θJA</sub>                  | 43          |          |          |          | K/W  |
| Reverse Recovery Time (Note 2)  | t <sub>rr</sub>                   | 35          | 50       |          |          | nS   |
| Operating and Storage Temperature Range   | T <sub>J</sub> , T <sub>STG</sub> | -50 to +150 |          |          |          | °C   |

Note: 1. Mounted on P.C. Board with 14mm<sup>2</sup> (0.13mm thick) copper pad.  
 2. Measured with I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>tr</sub> = 0.25A.

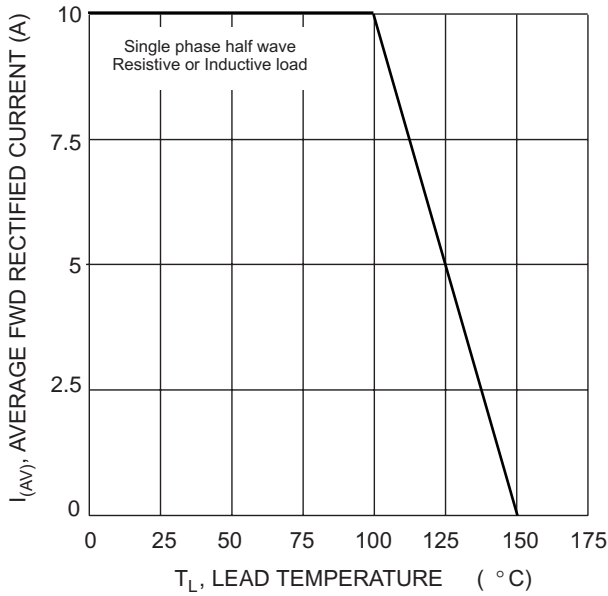


Fig. 1 Forward Current Derating Curve

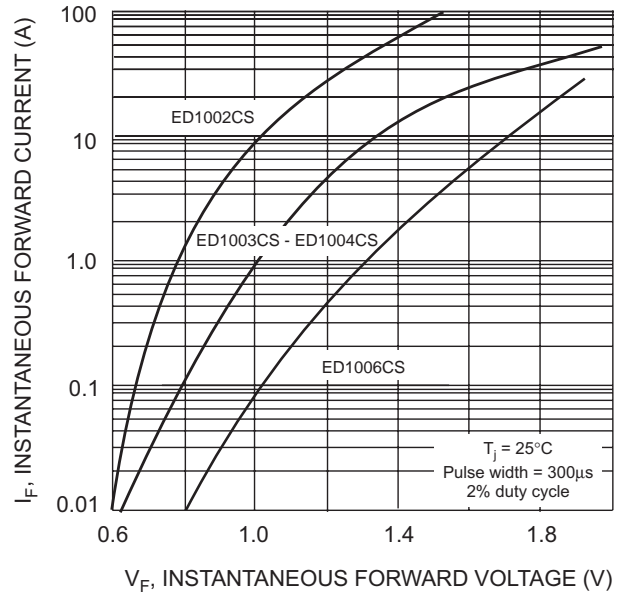


Fig. 2 Typical Forward Characteristics

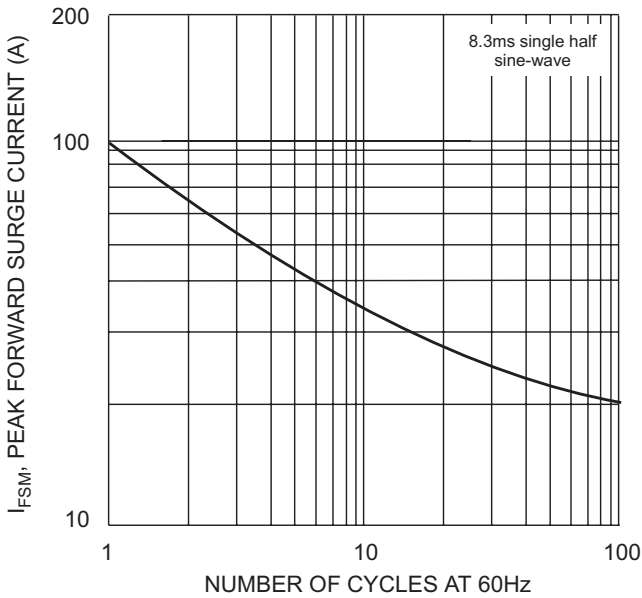


Fig. 3 Peak Forward Surge Current

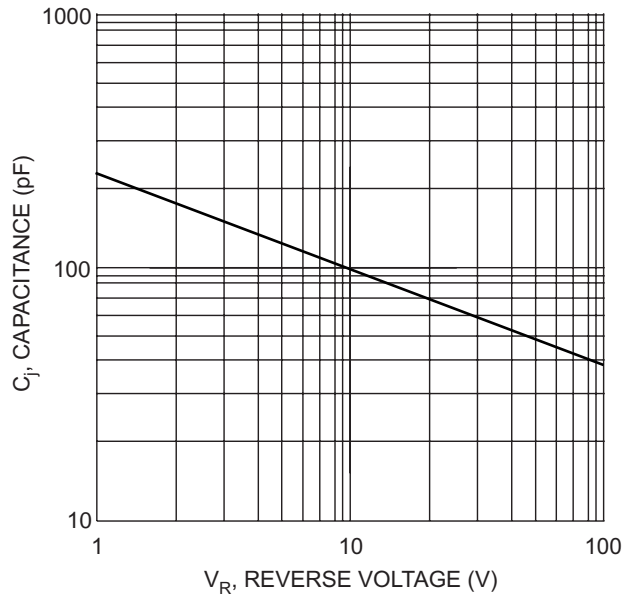
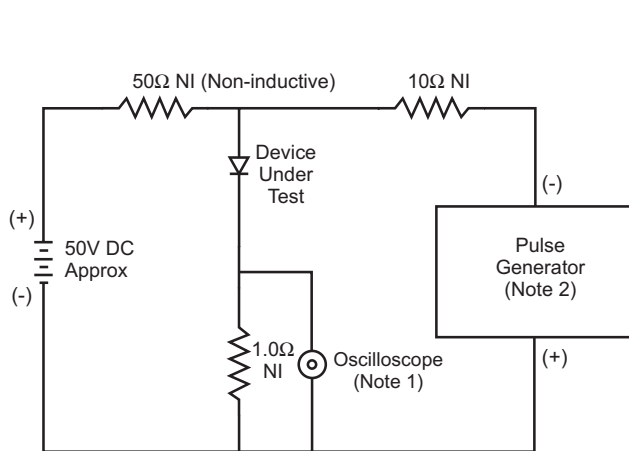


Fig. 4 Typical Junction Capacitance



- Notes:
1. Rise Time = 7.0ns max. Input Impedance = 1.0MΩ, 22pF.
  2. Rise Time = 10ns max. Input Impedance = 50Ω.

Set time base for 5/10ns/cm

Fig. 5 Reverse Recovery Time Characteristic and Test Circuit

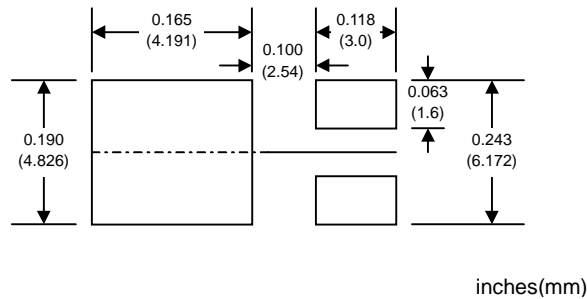
## ORDERING INFORMATION

| Product No.♦ | Package Type | Shipping Quantity |
|--------------|--------------|-------------------|
| ED1002CS-T3  | DPAK         | 2500/Tape & Reel  |
| ED1003CS-T3  | DPAK         | 2500/Tape & Reel  |
| ED1004CS-T3  | DPAK         | 2500/Tape & Reel  |
| ED1006CS-T3  | DPAK         | 2500/Tape & Reel  |

♦T3 suffix refers to a 13" reel.

Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.

## RECOMMENDED FOOTPRINT



inches(mm)

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