

ED502S Thru ED506S

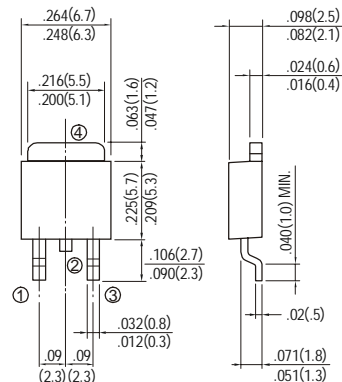
DPAK SURFACE MOUNT SUPER FAST RECOVERY RECTIFIER

VOLTAGE - 200 to 600 Volts CURRENT - 5.0 Amperes

FEATURES

- For surface mounted applications
- Low profile package
- Built-in strain relief
- Easy pick and place
- Superfast recovery times for high efficiency
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Glass passivated junction
- High temperature soldering:
260°C / 10 seconds at terminals

DPAK / TO-252



MECHANICAL DATA

Case: D PAK/TO-252 molded plastic

Terminals: Solder plated, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode

Standard packaging: 16mm tape (EIA-481)

Weight: 0.015 ounce, 0.4 gram.

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Resistive or inductive load.

| | SYMBOLS | ED502S | ED503S | ED504S | ED506S | UNITS |
|--|------------------------------------|-------------|-----------|-----------|-----------|-----------------------------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 200 | 300 | 400 | 600 | Volts |
| Maximum RMS Voltage | V_{RMS} | 140 | 210 | 280 | 420 | Volts |
| Maximum DC Blocking Voltage | V_{DC} | 200 | 300 | 400 | 600 | Volts |
| Maximum Average Forward Rectified Current at $T_C=75^\circ\text{C}$ | $I_{(AV)}$ | 5.0 | 5.0 | 5.0 | 5.0 | Amps |
| Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load(JEDEC method) | I_{FSM} | 75 | 75 | 75 | 75 | Amps |
| Maximum Instantaneous Forward Voltage at 5.0A (Note 1) | V_F | 0.95 | 1.25 | 1.25 | 1.70 | Volts |
| Maximum DC Reverse Current (Note 1) $T_A=25^\circ\text{C}$ at Rated DC Blocking Voltage $T_A=100^\circ\text{C}$ | I_R | 5.0 50 | 5.0 50 | 5.0 50 | 5.0 50 | μA |
| Maximum Thermal Resistance (Note 2) | $R_{\theta JC}$ $R_{\theta JA}$ | 7 80 | 7 80 | 7 80 | 7 80 | $^\circ\text{C} / \text{W}$ |
| Maximum Reverse Recovery | T_{RR} | 35 | 35 | 35 | 35 | ns |
| Storage Temperature Range | T_{STG} | -55 to +150 | | | | $^\circ\text{C}$ |

NOTES:

1. Pulse Test with $PW=300\mu\text{sec}$, 2% Duty Cycle.
2. Mounted on P.C. Board with 14mm^2 (.013mm thick) copper pad areas.

RATING AND CHARACTERISTIC CURVES

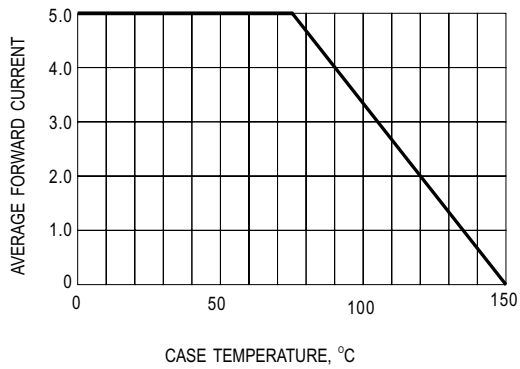


Fig.1- FORWARD CURRENT DERATING CURVE

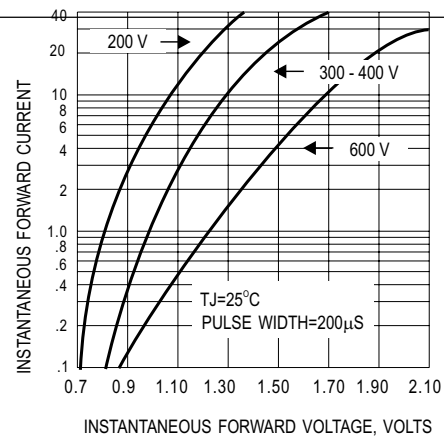


Fig.2- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

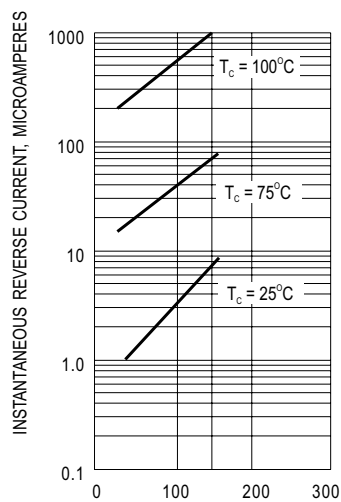


Fig.3- TYPICAL REVERSE CHARACTERISTIC

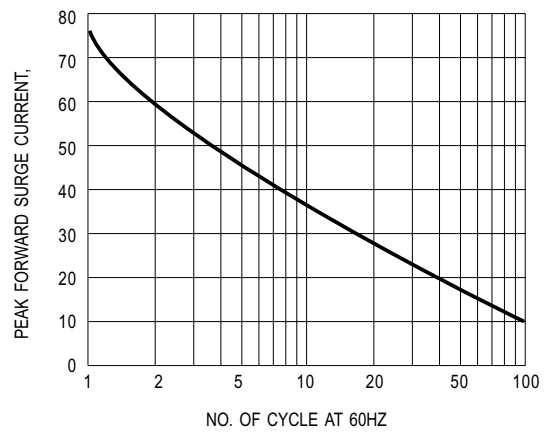


Fig.4- MAXIMUM NON-REPETITIVE SURGE CURRENT

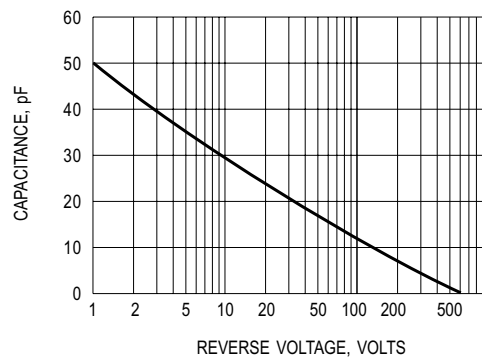


Fig.5- TYPICAL JUNCTION CAPACITANCE