



DATA SHEET

ED502S~ED506S

SUPERFAST RECOVERY RECTIFIERS

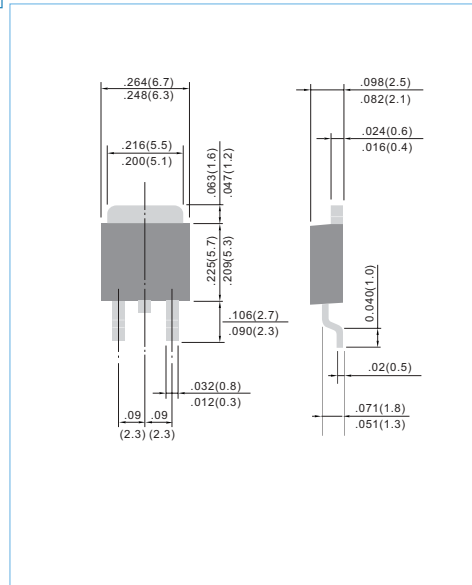
VOLTAGE 200 to 600 Volts **CURRENT** 6.0 Amperes

TO-252 / DPAK

Unit : inch (mm)

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.
- Pb free product are available : 99% Sn above can meet Rohs environment substance directive request



MECHANICAL DATA

Case: Molded plastic, TO-252

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

Polarity: As marking

Weight: 0.015 ounces, 0.4grams.

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified. Resistive or inductive load. 60Hz.

| PARAMETER | SYMBOL | ED502S | ED503S | ED504S | ED506S | UNITS |
|---|-----------------|---------------|--------|--------|--------|----------------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 200 | 300 | 400 | 600 | V |
| Maximum RMS Voltage | V_{RMS} | 140 | 210 | 280 | 420 | V |
| Maximum DC Blocking Voltage | V_{DC} | 200 | 300 | 400 | 600 | V |
| Maximum Average Forward Current .375" (9.5mm) lead length at $T_c = 75^\circ C$ | I_{AV} | 5.0 | | | | A |
| Peak Forward Surge Current :8.3ms single half sine-wave superimposed on rated load(JEDEC method) | I_{FSM} | 75 | | | | A |
| Maximum Forward Voltage at 3.0A (Note 1) | V_F | 0.95 | 1.25 | 1.7 | | V |
| Maximum DC Reverse Current at $T_A = 25^\circ C$ at Rated DC Blocking Voltage $T_A = 100^\circ C$ | I_R | 5.0 | | | | μA |
| | | 50 | | | | |
| Maximum Reverse Recovery Time (Note 2) | T_{rr} | 35 | | | | nS |
| Maximum thermal Resistance (Note 3) | $R_{\theta JC}$ | 9.0 | | | | $^\circ C / W$ |
| Operating Junction and Storage Temperature Range | T_J, T_{STG} | - 50 to + 150 | | | | $^\circ C$ |

NOTES:

1. Pulse Test with PW=300 usec, 2% Duty Cycle.
2. Reverse Recovery Tset Conditions: $I_F=0.5A, I_R=1.0A, I_{rr}=0.25A$
3. Mounted on P.C. Board with 14mm² (.013mm thick) copper pad areas.



RATING AND CHARACTERISTIC CURVES

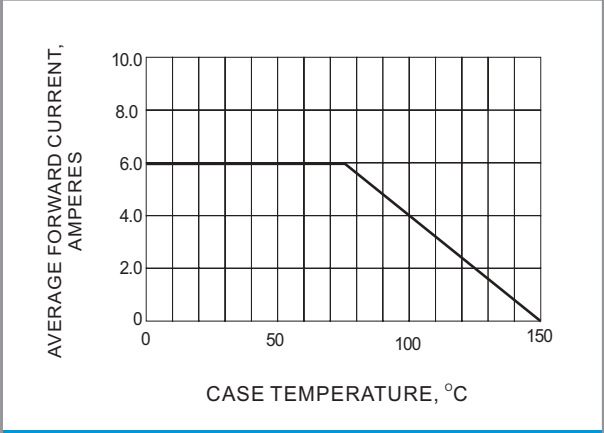


Fig.1- FORWARD CURRENT DERATING CURVE

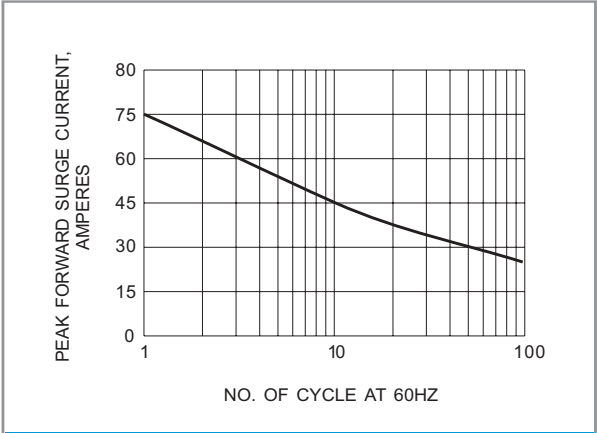


Fig.2- MAXIMUM NON-REPETITIVE SURGE CURRENT

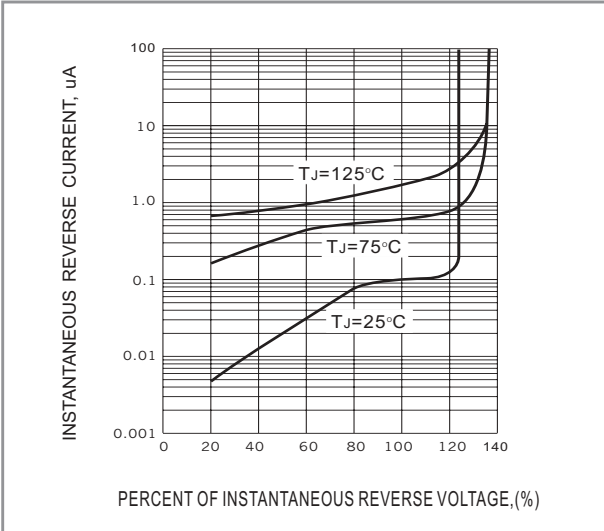


Fig.3- TYPICAL REVERSE CHARACTERISTICS

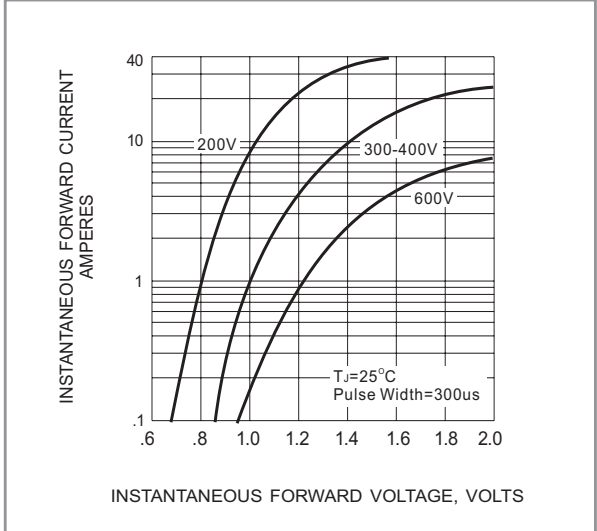


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS