

# DATA SHEET

## ED502S~ED506S

### SUPERFAST RECOVERY RECTIFIERS

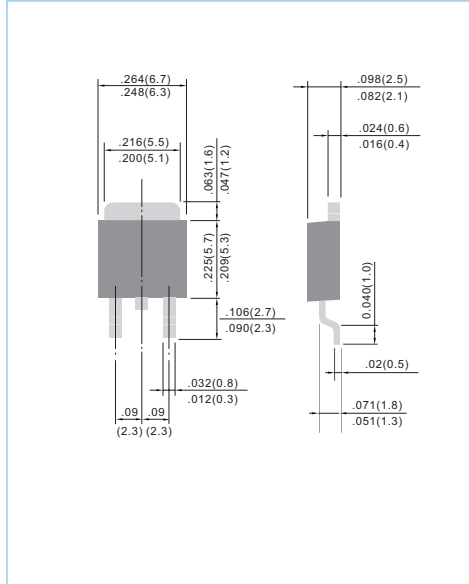
**VOLTAGE** 200 to 600 Volts **CURRENT** 6.0 Amperes

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 $T_c = 75^\circ\text{C}$	$I_{AV}$	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 $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage $T_A = 100^\circ\text{C}$	$I_R$	5.0 50				$\mu\text{A}$
Maximum Reverse Recovery Time (Note 2 )	$T_{rr}$	35				nS
Maximum thermal Resistance (Note 3 )	$R_{\theta JC}$	9.0				$^\circ\text{C} / \text{W}$
Operating Junction and Storage Temperature Range	$T_J, T_{STG}$	- 50 to + 150				$^\circ\text{C}$

#### NOTES:

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

## RATING AND CHARACTERISTIC CURVES

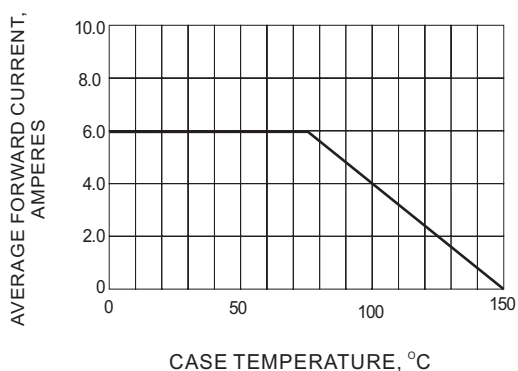


Fig.1- FORWARD CURRENT DERATING CURVE

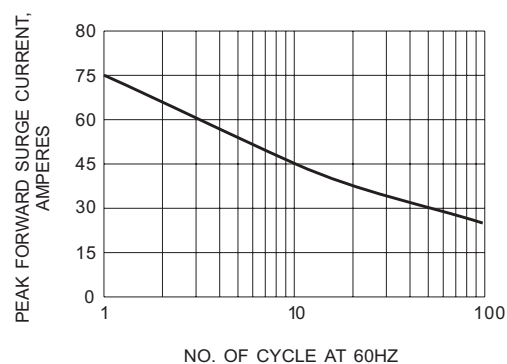


Fig.2- MAXIMUM NON - REPETITIVE SURGE CURRENT

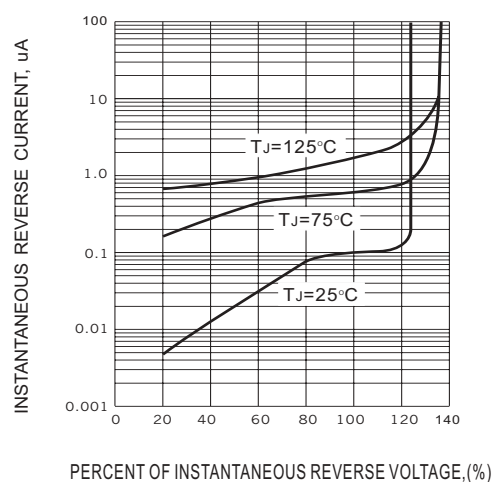


Fig.3- TYPICAL REVERSE CHARACTERISTICS

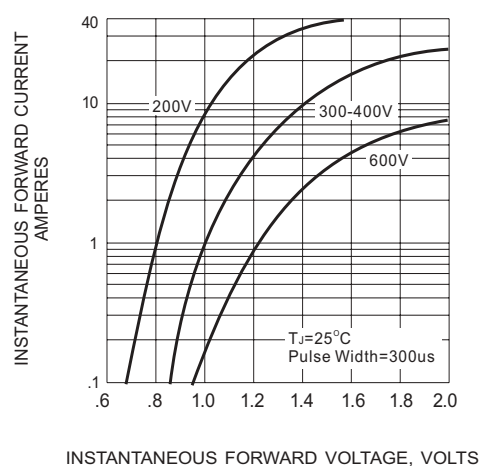


Fig.4- TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS