

# ER500G~ER506G

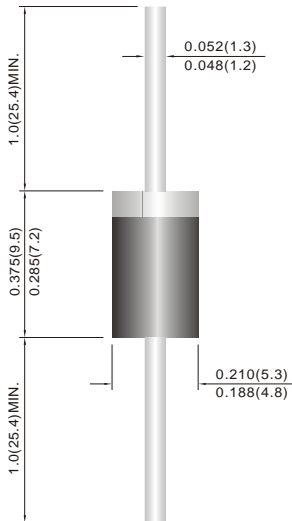
## GLASS SUPERFAST RECOVERY RECTIFIERS

**VOLTAGE** 50 to 600 Volts    **CURRENT** 5.0 Amperes



DO-201AD

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.
- Lead free in comply with EU RoHS 2002/95/EC directives

### MECHANICAL DATA

- Case: Molded plastic, DO-201AD
- Terminals: Axial leads, solderable to MIL-STD-750, Method 2026
- Polarity: Color Band denotes cathode end
- Mounting Position: Any

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

PARAMETER	SYMBOL	ER500G	ER501G	ER501AG	ER502G	ER503G	ER504G	ER506G	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	150	200	300	400	600	V
Maximum RMS Voltage	$V_{RMS}$	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	$V_{DC}$	50	100	150	200	300	400	600	V
Maximum Average Forward Current .375" (9.5mm) lead length at $T_A=55^\circ C$	$I_{F(AV)}$	5.0							A
Peak Forward Surge Current : 8.3ms single half sine-wave superimposed on rated load(JEDEC method)	$I_{FSM}$	130							A
Maximum Forward Voltage at 5.0A	$V_F$	0.95			1.25		1.70	V	
Maximum DC Reverse Current $T_J=25^\circ C$ at Rated DC Blocking Voltage $T_J=100^\circ C$	$I_R$	5.0			300				$\mu A$
Maximum Reverse Recovery Time(Note 1)	$t_{rr}$				35				ns
Typical Junction capacitance (Note 2)	$C_J$				65				pF
Typical Junction Resistance(Note 3)	$R_{\theta JA}$				20				$^\circ C / W$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150							$^\circ C$

NOTES:1. Reverse Recovery Test Conditions:  $I_F=5A, I_R=1A, I_{rr}=25A$

2. Measured at 1 MHz and applied reverse voltage of 4.0 VDC

3. Thermal resistance from junction to ambient and from junction to lead length 0.375"(9.5mm) P.C.B. mounted

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## RATING AND CHARACTERISTIC CURVES

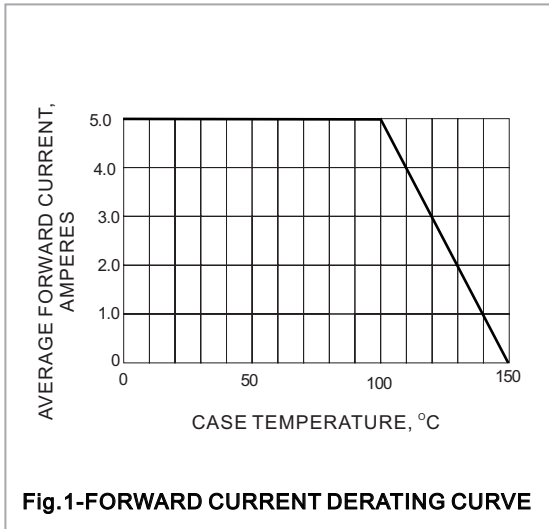


Fig.1-FORWARD CURRENT DERATING CURVE

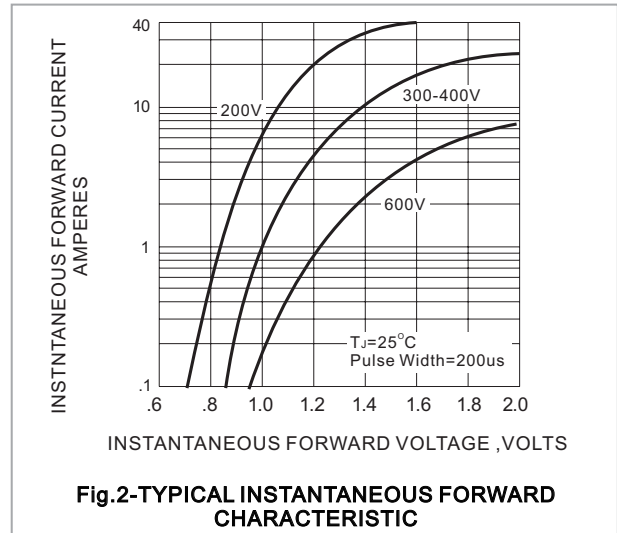


Fig.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTIC

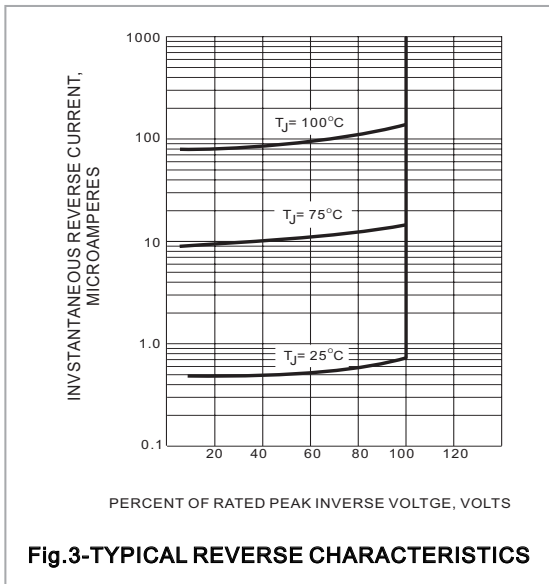


Fig.3-TYPICAL REVERSE CHARACTERISTICS

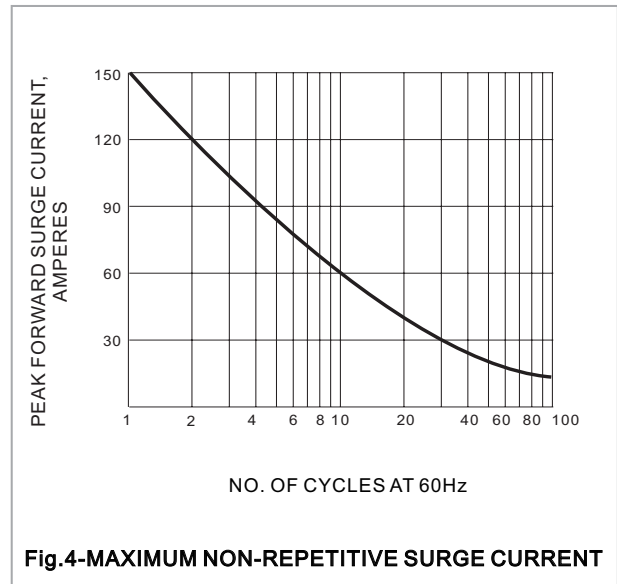


Fig.4-MAXIMUM NON-REPETITIVE SURGE CURRENT

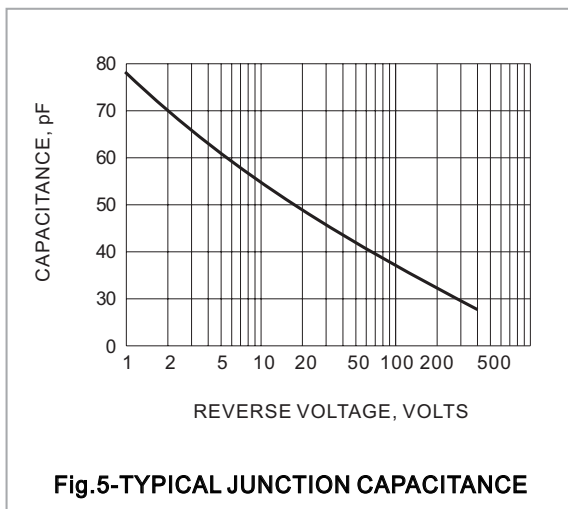


Fig.5-TYPICAL JUNCTION CAPACITANCE