

## BY296 ~ BY299

### SOFT RECOVERY, FAST SWITCHING PLASTIC RECTIFIER

**VOLTAGE** 50 to 1000 Volts **CURRENT** 2.0 Amperes

#### FEATURES

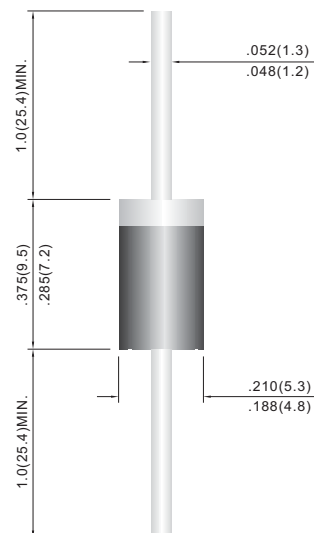
- High current capability.
- Plastic package has Underwriters Laboratory Flammability Classification 94V-O
- Void-free molded plastic package
- Exceeds environmental standards of MIL-S-19500/228
- Fast switching for high efficiency.
- In compliance with EU RoHS 2002/95/EC directives

#### 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
- Weight: 0.0395 ounce, 1.122 gram

#### DO-201AD

Unit: inch(mm)



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

| PARAMETER                                                                                        | SYMBOL          | BY296       | BY297 | BY298 | BY299 | UNITS           |
|--------------------------------------------------------------------------------------------------|-----------------|-------------|-------|-------|-------|-----------------|
| Maximum Recurrent Peak Reverse Voltage                                                           | $V_{RRM}$       | 100         | 200   | 400   | 800   | V               |
| Maximum RMS Voltage                                                                              | $V_{RMS}$       | 70          | 140   | 280   | 560   | V               |
| Maximum DC Blocking Voltage                                                                      | $V_{DC}$        | 100         | 200   | 400   | 800   | V               |
| Maximum Average Forward Current .375"(9.5mm) lead length at $T_A=50^{\circ}C$                    | $I_{F(AV)}$     | 2.0         |       |       |       | A               |
| Peak Forward Surge Current : 10ms single half sine-wave superimposed on rated load(JEDEC method) | $I_{FSM}$       | 70          |       |       |       | A               |
| Maximum Repetitive Peak Forward Surge (Note 1)                                                   | $I_{FRM}$       | 10          |       |       |       | A               |
| Maximum Forward Voltage at 2.0A                                                                  | $V_F$           | 1.3         |       |       |       | V               |
| Maximum DC Reverse Current at $T_J=25^{\circ}C$<br>Rated DC Blocking Voltage $T_J=100^{\circ}C$  | $I_R$           | 10<br>500   |       |       |       | $\mu A$         |
| Maximum Reverse Recovery Time (Note 2)                                                           | $t_{rr}$        | 150         |       |       |       | ns              |
| Typical Junction capacitance (Note 3)                                                            | $C_J$           | 60          |       |       |       | pF              |
| Typical Thermal Resistance(Note 4)                                                               | $R_{\theta JA}$ | 22          |       |       |       | $^{\circ}C / W$ |
| Operating Junction and Storage Temperature Range                                                 | $T_J, T_{STG}$  | -55 to +150 |       |       |       | $^{\circ}C$     |

NOTES: 1. Repetitive Peak Forward Surge Current at  $f < 15KHz$ .

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

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

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

## BY296 ~ BY299

### RATING AND CHARACTERISTIC CURVES

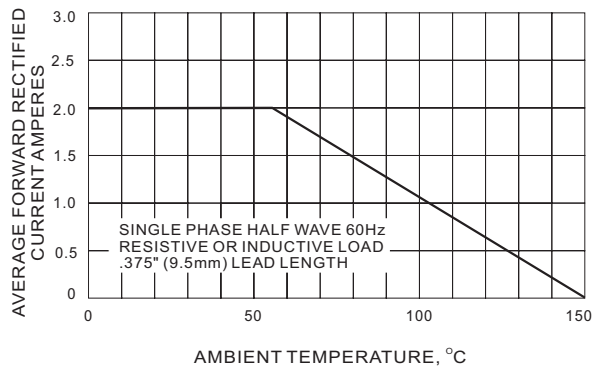


FIG.1 FORWARD CURRENT DERATING CURVE

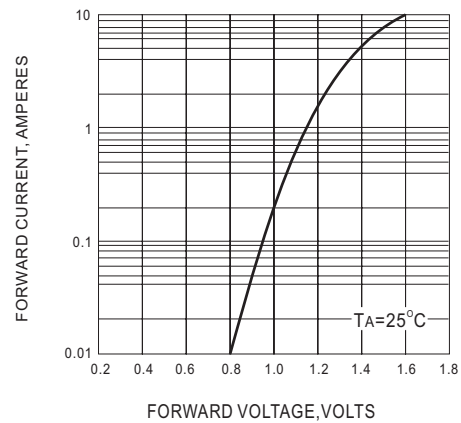


FIG.2 TYPICAL FORWARD CHARACTERISTICS

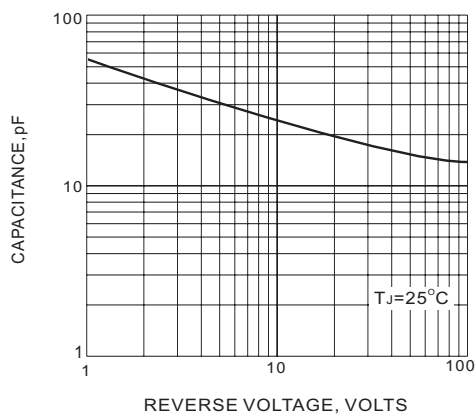


FIG.3 TYPICAL JUNCTION CAPACITANCE

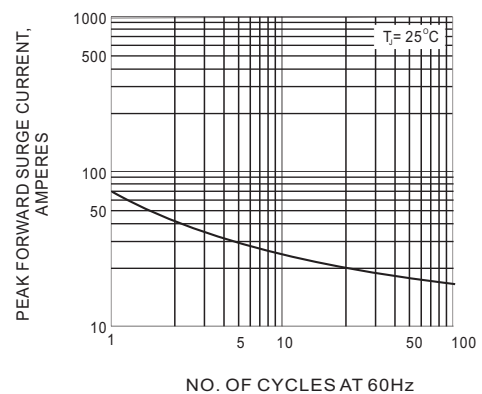


FIG.4 PEAK FORWARD SURGE CURRENT

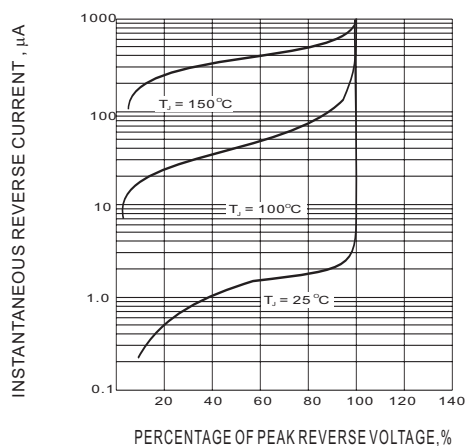


Fig.5-TYPICAL REVERSE CHARACTERISTIC