



## FAST RECOVER RECTIFIER

BY296 THRU BY299

VOLTAGE RANGE  
CURRENT

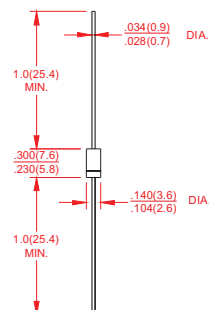
100 to 800 Volts  
2 .0Ampere

### FEATURES

- Low coat construction
- Fast switching for high efficiency.
- Low reverse leakage
- High forward surge current capability
- High temperature soldering guaranteed:  
260°C/10 secods/.375"(9.5mm)lead length at 5 lbs(2.3kg) tension

### MECHANICAL DATA

- Case: Transfer molded plastic
- Epoxy: UL94V-O rate flame retardant
- Polarity: Color band denotes cathode end
- Lead: Plated axial lead, solderable per MIL-STD-202E method 208C
- Mounting position: Any
- Weight: 0.014 ounce, 0.39 grams



DO-15

Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25°C ambient temperature unless otherwise specified
- Single Phase, half wave, 60Hz, resistive or inductive load
- For capacitive load derate current by 20%

|                                                                                                     |                        | SYMBOLS           | BY296         | BY297 | BY298 | BY299 | UNITS |
|-----------------------------------------------------------------------------------------------------|------------------------|-------------------|---------------|-------|-------|-------|-------|
| Maximum Repetitive Peak Reverse Voltage                                                             |                        | V <sub>RRM</sub>  | 100           | 200   | 400   | 800   | Volts |
| Maximum RMS Voltage                                                                                 |                        | V <sub>RMS</sub>  | 70            | 140   | 280   | 560   | Volts |
| Maximum DC Blocking Voltage                                                                         |                        | V <sub>DC</sub>   | 100           | 200   | 400   | 800   | Volts |
| Maximum Average Forward Rectified Current 0.375"(9.5mm) lead length at T <sub>A</sub> = 75°C        |                        | I <sub>(AV)</sub> | 2.0           |       |       |       | Amp   |
| Peak Forward Surge Current<br>8.3mS single half sine wave superimposed on rated load (JEDEC method) |                        | I <sub>FSM</sub>  | 70            |       |       |       | Amps  |
| Maximum Instantaneous Forward Voltage @ 2.0A                                                        |                        | V <sub>F</sub>    | 1.3           |       |       |       | Volts |
| Maximum DC Reverse Current at Rated DC Blocking Voltage                                             | T <sub>A</sub> = 25°C  | I <sub>R</sub>    | 5.0           |       |       |       | μA    |
|                                                                                                     | T <sub>A</sub> = 100°C |                   | 200           |       |       |       |       |
| Maximum Reverse Recovery Time (Note 3) T <sub>J</sub> =25°C                                         |                        | t <sub>rr</sub>   | 500           |       |       |       | ns    |
| Typical Junction Capacitance (Note 1)                                                               |                        | C <sub>J</sub>    | 25            |       |       |       | pF    |
| Typical Thermal Resistance (Note 2)                                                                 |                        | R <sub>θJA</sub>  | 40            |       |       |       | °C/W  |
| Operating Junction Temperature Range                                                                |                        | T <sub>J</sub>    | (-55 to +150) |       |       |       | °C    |
| Storage Temperature Range                                                                           |                        | T <sub>STG</sub>  | (-55 to +150) |       |       |       | °C    |

#### Notes:

- 1.Measured at 1.0MHz and Applied Reverse Voltage of 4.0Volits.
- 2 Thermal Resistance from junction to Ambient at .375"(9.5mm)lead length, P.C.board mounted.
- 3.Reverse Recovery Test Conditions: $I_F = 10\text{mA}$ ,  $I_R = 10\text{mA}$ ,  $I_{rr} = 1\text{A}$



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## RATING AND CHARACTERISTIC CURVES BY296 THRU BY299

