

# AR5000L - AR5010L

**PRV : 50 - 1000 Volts**  
**Io : 50 Amperes**

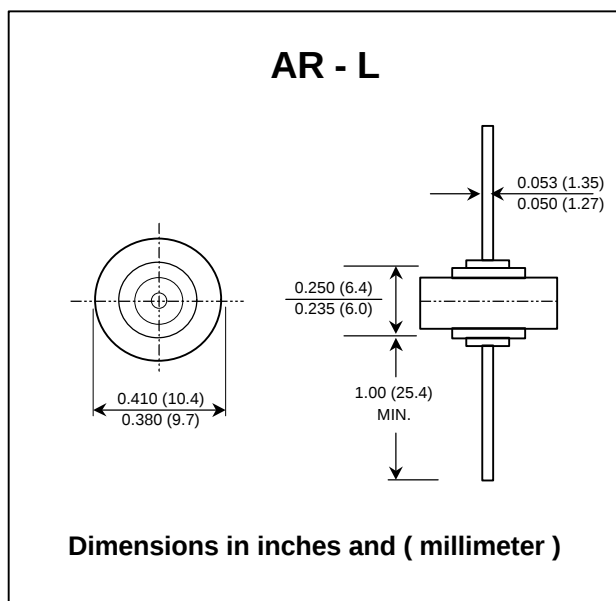
## FEATURES :

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop

## MECHANICAL DATA :

- \* Case : Molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Cathode polarity band
- \* Mounting position : Any
- \* Weight : 2.73 grams

# AUTOMOTIVE RECTIFIER DIODES



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

| RATING                                                                                              | SYMBOL          | AR<br>5000L   | AR<br>5001L | AR<br>5002L | AR<br>5004L | AR<br>5006L | AR<br>5008L | AR<br>5010L | UNIT          |
|-----------------------------------------------------------------------------------------------------|-----------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|---------------|
| Maximum Repetitive Peak Reverse Voltage                                                             | $V_{RRM}$       | 50            | 100         | 200         | 400         | 600         | 800         | 1000        | Volts         |
| Maximum RMS Voltage                                                                                 | $V_{RMS}$       | 35            | 70          | 140         | 280         | 420         | 560         | 700         | Volts         |
| Maximum DC Blocking Voltage                                                                         | $V_{DC}$        | 50            | 100         | 200         | 400         | 600         | 800         | 1000        | Volts         |
| Average Rectified Forward Current $T_c = 150^{\circ}C$                                              | $I_{F(AV)}$     | 50            |             |             |             |             |             |             | Amps.         |
| Peak Forward Surge Current Single half sine wave superimposed on rated load (JEDEC Method)          | $I_{FSM}$       | 500           |             |             |             |             |             |             | Amps.         |
| Maximum Forward Voltage at $I_F = 50$ Amps.                                                         | $V_F$           | 1.1           |             |             |             |             |             |             | Volts         |
| Maximum DC Reverse Current $T_a = 25^{\circ}C$<br>at rated DC Blocking Voltage $T_a = 100^{\circ}C$ | $I_R$           | 5.0           |             |             |             |             |             |             | $\mu A$       |
|                                                                                                     | $I_{R(H)}$      | 1.0           |             |             |             |             |             |             | mA            |
| Thermal Resistance (Note 1)                                                                         | $R_{\theta JC}$ | 0.8           |             |             |             |             |             |             | $^{\circ}C/W$ |
| Junction Temperature Range                                                                          | $T_J$           | - 65 to + 175 |             |             |             |             |             |             | $^{\circ}C$   |
| Storage Temperature Range                                                                           | $T_{STG}$       | - 65 to + 175 |             |             |             |             |             |             | $^{\circ}C$   |

**Note :** (1) Thermal resistance from junction to case. Single side cooled.

**UPDATE : APRIL 23, 1998**

## RATING AND CHARACTERISTIC CURVES ( AR5000L - AR5010L )

