

# AR5000 - AR5010

**PRV : 50 - 1000 Volts**

**I<sub>o</sub> : 50 Amperes**

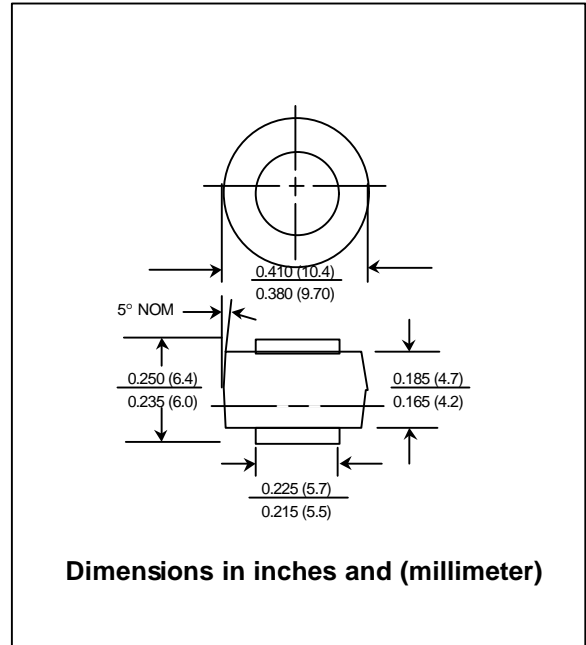
## FEATURES :

- \* 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
- \* Terminals : Terminal are readily solderable
- \* Polarity : Cathode polarity band
- \* Mounting position : Any
- \* Weight : 1.84 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 5000       | AR 5001 | AR 5002 | AR 5004 | AR 5006 | AR 5008 | AR 5010 | UNIT  |
|--|--------------------|---------------|---------|---------|---------|---------|---------|---------|-------|
| Maximum Repetitive Peak Reverse Voltage  | V <sub>RRM</sub>   | 50            | 100     | 200     | 400     | 600     | 800     | 1000    | Volts |
| Maximum RMS Voltage  | V <sub>RMS</sub>   | 35            | 70      | 140     | 280     | 420     | 560     | 700     | Volts |
| Maximum DC Blocking Voltage  | V <sub>DC</sub>    | 50            | 100     | 200     | 400     | 600     | 800     | 1000    | Volts |
| Average Rectified Forward Current T <sub>c</sub> = 150°C                                   | I <sub>F(AV)</sub> | 50            |         |         |         |         |         |         | Amps. |
| Peak Forward Surge Current Single half sine wave superimposed on rated load (JEDEC Method) | I <sub>FSM</sub>   | 500           |         |         |         |         |         |         | Amps. |
| Maximum Forward Voltage at I <sub>F</sub> = 50 Amps.                                       | V <sub>F</sub>     | 1.1           |         |         |         |         |         |         | Volts |
| Maximum DC Reverse Current Ta = 25 °C<br>at rated DC Blocking Voltage Ta = 100 °C          | I <sub>R</sub>     | 5.0           |         |         |         |         |         |         | μA    |
|  | I <sub>R(H)</sub>  | 1.0           |         |         |         |         |         |         | mA    |
| Thermal Resistance (Note 1)  | R <sub>θJC</sub>   | 0.8           |         |         |         |         |         |         | °C/W  |
| Junction Temperature Range   | T <sub>J</sub>     | - 65 to + 175 |         |         |         |         |         |         | °C    |
| Storage Temperature Range  | T <sub>STG</sub>   | - 65 to + 174 |         |         |         |         |         |         | °C    |
| Marking Code   |                    |               |         |         |         |         |         |         |       |

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

## RATING AND CHARACTERISTIC CURVES ( AR5000 - AR5010 )

