

# AR3500L - AR3512L

**PRV : 50 - 1200 Volts**

**Io : 35 Amperes**

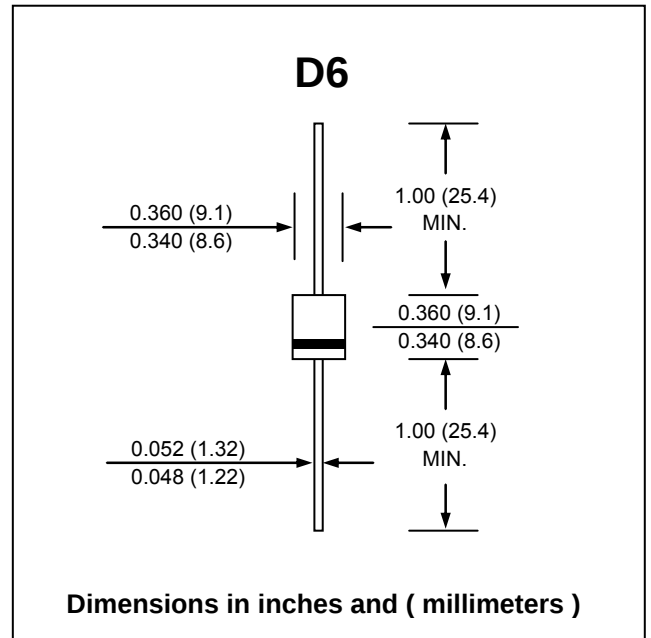
## FEATURES :

- \* High current capability
- \* High surge current capability
- \* High reliability
- \* Low reverse current
- \* Low forward voltage drop
- \* **Pb / RoHS Free**

## MECHANICAL DATA :

- \* Case : molded plastic
- \* Epoxy : UL94V-O rate flame retardant
- \* Lead : Axial lead solderable per MIL-STD-202, Method 208 guaranteed
- \* Polarity : Color band denotes cathode end
- \* Mounting position : Any
- \* Weight : 2.049 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.

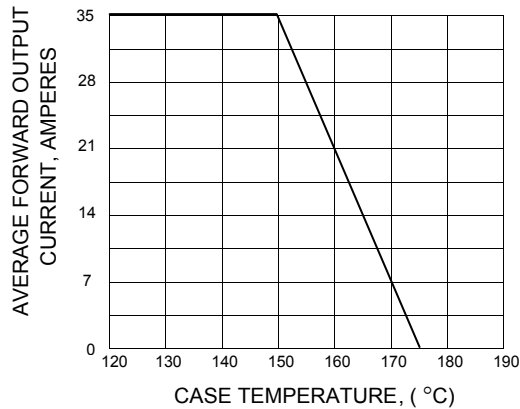
For capacitive load, derate current by 20%.

| RATING                                                                                                                            | SYMBOL          | AR<br>3500L   | AR<br>3501L | AR<br>3502L | AR<br>3504L | AR<br>3506L | AR<br>3508L | AR<br>3510L | AR<br>3512L | UNIT                 |
|-----------------------------------------------------------------------------------------------------------------------------------|-----------------|---------------|-------------|-------------|-------------|-------------|-------------|-------------|-------------|----------------------|
| Maximum Repetitive Peak Reverse Voltage                                                                                           | $V_{RRM}$       | 50            | 100         | 200         | 400         | 600         | 800         | 1000        | 1200        | V                    |
| Maximum RMS Voltage                                                                                                               | $V_{RMS}$       | 35            | 70          | 140         | 280         | 420         | 560         | 700         | 840         | V                    |
| Maximum DC Blocking Voltage                                                                                                       | $V_{DC}$        | 50            | 100         | 200         | 400         | 600         | 800         | 1000        | 1200        | V                    |
| Average Rectified Forward Current $T_c = 150\text{ }^{\circ}\text{C}$                                                             | $I_{F(AV)}$     | 35            |             |             |             |             |             |             |             | A                    |
| Peak Forward Surge Current Single half sine wave superimposed on rated load (JEDEC Method)                                        | $I_{FSM}$       | 400           |             |             |             |             |             |             |             | A                    |
| Maximum Forward Voltage at $I_F = 35\text{ Amps.}$                                                                                | $V_F$           | 1.1           |             |             |             |             |             |             |             | V                    |
| Maximum DC Reverse Current $T_a = 25\text{ }^{\circ}\text{C}$<br>at rated DC Blocking Voltage $T_a = 100\text{ }^{\circ}\text{C}$ | $I_R$           | 5.0           |             |             |             |             |             |             |             | $\mu\text{A}$        |
|                                                                                                                                   | $I_{R(H)}$      | 1.0           |             |             |             |             |             |             |             | mA                   |
| Thermal Resistance (Note 1)                                                                                                       | $R_{\theta JC}$ | 1.0           |             |             |             |             |             |             |             | $^{\circ}\text{C/W}$ |
| Junction Temperature Range                                                                                                        | $T_J$           | - 65 to + 175 |             |             |             |             |             |             |             | $^{\circ}\text{C}$   |
| Storage Temperature Range                                                                                                         | $T_{STG}$       | - 65 to + 175 |             |             |             |             |             |             |             | $^{\circ}\text{C}$   |

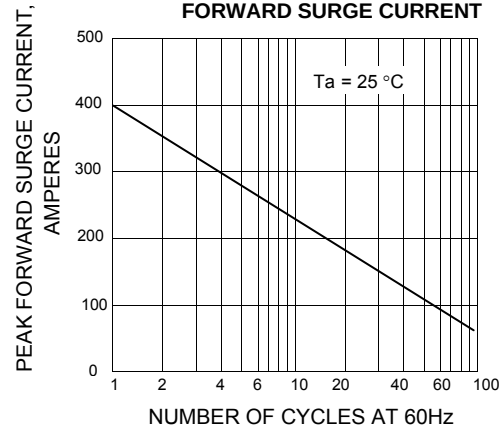
**Note :** (1) Thermal resistance from junction to case. Single side cooled.

## RATING AND CHARACTERISTIC CURVES ( AR3500L - AR3512L )

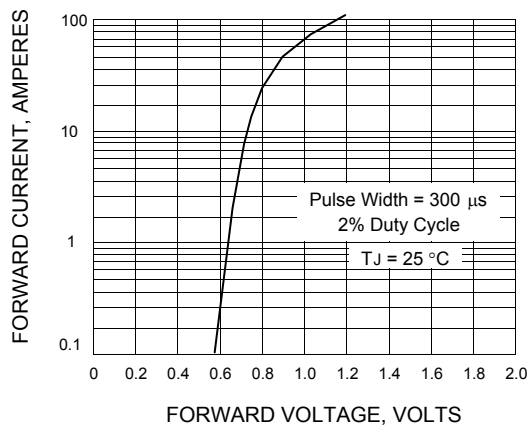
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



**FIG.2 - MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.3 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS**

