



Certificate Number: QM561



Certificate Number: 517276

# AR2500 - AR2512

## AUTOMOTIVE RECTIFIER DIODES

**PRV : 50 - 1200 Volts**

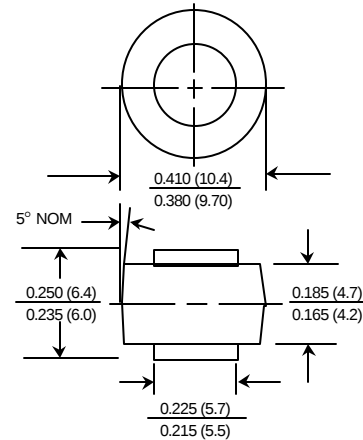
**Io : 25 Amperes**

### 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



Dimensions in inches and (millimeter)

### 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%.

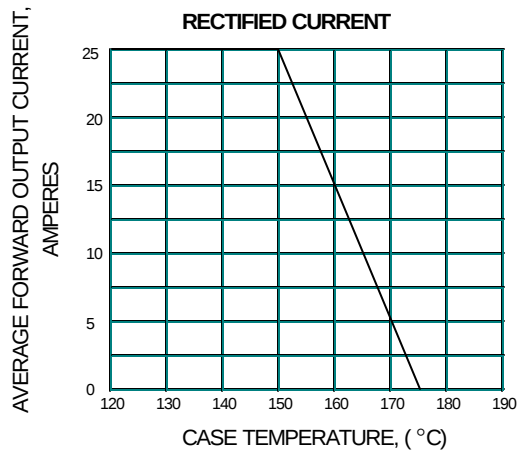
| RATING                                                                                     | SYMBOL          | AR<br>2500    | AR<br>2501 | AR<br>2502 | AR<br>2504 | AR<br>2506 | AR<br>2508 | AR<br>2510 | AR<br>2512 | UNIT               |
|--------------------------------------------------------------------------------------------|-----------------|---------------|------------|------------|------------|------------|------------|------------|------------|--------------------|
| Maximum Repetitive Peak Reverse Voltage                                                    | $V_{RRM}$       | 50            | 100        | 200        | 400        | 600        | 800        | 1000       | 1200       | Volts              |
| Maximum RMS Voltage                                                                        | $V_{RMS}$       | 35            | 70         | 140        | 280        | 420        | 560        | 700        | 840        | Volts              |
| Maximum DC Blocking Voltage                                                                | $V_{DC}$        | 50            | 100        | 200        | 400        | 600        | 800        | 1000       | 1200       | Volts              |
| Average Rectified Forward Current $T_c = 150^\circ\text{C}$                                | $I_{F(AV)}$     | 25            |            |            |            |            |            |            |            | Amps.              |
| Peak Forward Surge Current Single half sine wave superimposed on rated load (JEDEC Method) | $I_{FSM}$       | 400           |            |            |            |            |            |            |            | Amps.              |
| Maximum Forward Voltage at $I_F = 25$ Amps.                                                | $V_F$           | 1.0           |            |            |            |            |            |            |            | Volts              |
| Maximum DC Reverse Current $T_a = 25^\circ\text{C}$                                        | $I_R$           | 5.0           |            |            |            |            |            |            |            | $\mu\text{A}$      |
| at rated DC Blocking Voltage $T_a = 100^\circ\text{C}$                                     | $I_{R(H)}$      | 1.0           |            |            |            |            |            |            |            | mA                 |
| Thermal Resistance (Note 1)                                                                | $R_{\theta JC}$ | 0.8           |            |            |            |            |            |            |            | $^\circ\text{C/W}$ |
| Junction Temperature Range                                                                 | $T_J$           | - 65 to + 175 |            |            |            |            |            |            |            | $^\circ\text{C}$   |
| Storage Temperature Range                                                                  | $T_{STG}$       | - 65 to + 175 |            |            |            |            |            |            |            | $^\circ\text{C}$   |
| Marking Code                                                                               |                 |               |            |            |            |            |            |            |            |                    |

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

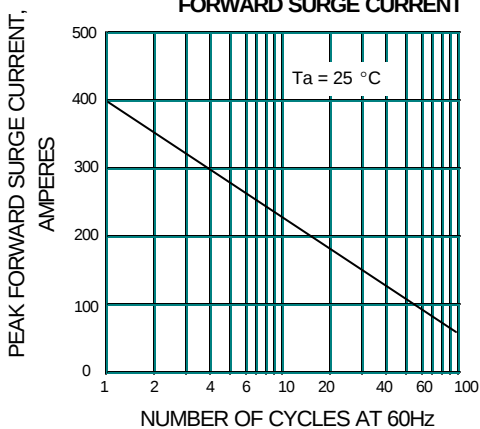
**UPDATE : OCTOBER 19, 2000**

## RATING AND CHARACTERISTIC CURVES ( AR2500 - AR2512 )

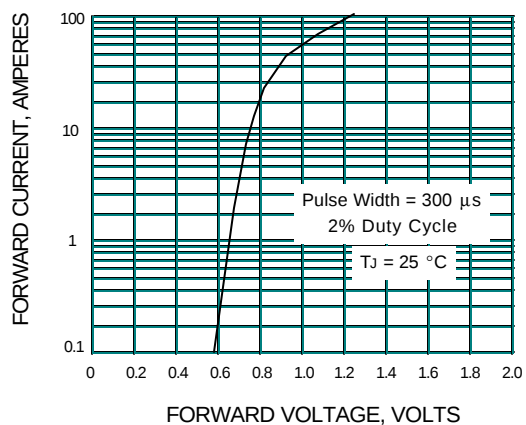
**FIG.1 - DERATING CURVE FOR OUTPUT RECTIFIED CURRENT**



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



**FIG.3 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS**

