

# ARS35 / AR35 SERIES

**35.0 AMPS. HIGH CURRENT  
PLASTIC SILICON  
RECTIFIERS**

**Voltage Range  
50 to 1000 VOLTS  
Current  
35.0 Amperes**

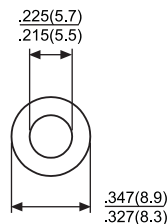
## Features

- Plastic material used carries Underwriters
- Laboratory Classification 94V-0
- Low cost construction utilizing void-free molded plastic technique
- Low cost
- Diffused junction
- Low leakage
- High surge capability
- High temperature soldering guaranteed: 250°C for 10 seconds

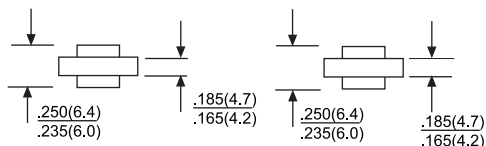
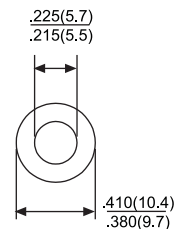
## Mechanical Data

- Cases: Molded plastic case
- Terminals: Plated terminals, solderable per MIL-STD-202, Method 208
- Polarity: Color ring denotes cathode end
- Weight: 0.07 ounce, 1.8 grams
- Mounting position: Any

## ARS



## AR



Dimensions in inches and (millimeters)

## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

| Type Number  |                                   | ARS 35005   | ARS 3501 | ARS 3502 | ARS 3504 | ARS 3506 | ARS 3508 | ARS 3510 | UNITS    |
|--|-----------------------------------|-------------|----------|----------|----------|----------|----------|----------|----------|
|  |                                   | AR35005     | AR3501   | AR3502   | AR3504   | AR3506   | AR3508   | AR3510   |          |
| Maximum Repetitive Peak Reverse Voltage  | V <sub>RRM</sub>                  | 50          | 100      | 200      | 400      | 600      | 800      | 1000     | V        |
| Maximum RMS Voltage  | V <sub>RMS</sub>                  | 35          | 70       | 140      | 280      | 420      | 560      | 700      | V        |
| Maximum DC Blocking Voltage  | V <sub>DC</sub>                   | 50          | 100      | 200      | 400      | 600      | 800      | 1000     | V        |
| Maximum Average Forward Rectified Current @ T <sub>c</sub> = 150°C   | I <sub>F(AV)</sub>                | 35          |          |          |          |          |          |          | A        |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) at T <sub>J</sub> = 150°C | I <sub>FSM</sub>                  | 500         |          |          |          |          |          |          | A        |
| Maximum Instantaneous Forward Voltage @ 35A  | V <sub>F</sub>                    | 1.0         |          |          |          |          |          |          | V        |
| Maximum DC Reverse Current @ T <sub>c</sub> = 25°C at Rated DC Blocking Voltage @ T <sub>c</sub> = 100°C                     | I <sub>R</sub>                    | 5.0<br>250  |          |          |          |          |          |          | μA<br>mA |
| Typical Reverse Recovery Time (Note 2)   | T <sub>RR</sub>                   | 3.0         |          |          |          |          |          |          | μS       |
| Typical Junction Capacitance (Note 1) T <sub>J</sub> = 25°C  | C <sub>J</sub>                    | 300         |          |          |          |          |          |          | pF       |
| Typical Thermal Resistance (Note 3)  | R <sub>θJC</sub>                  | 1.0         |          |          |          |          |          |          | °C/W     |
| Operating and Storage Temperature Range  | T <sub>J</sub> , T <sub>STG</sub> | -55 to +175 |          |          |          |          |          |          | °C       |

NOTES: 1. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.  
2. Reverse Recovery Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=1.0A, I<sub>RR</sub>=0.25A  
3. Thermal Resistance from Junction to Case, Single Side Cooled.

# RATING AND CHARACTERISTIC CURVES

## ARS35/AR35 SERIES

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

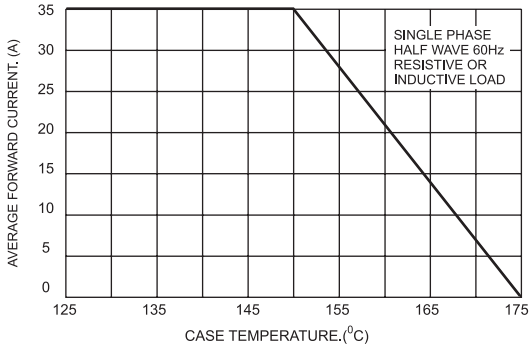


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

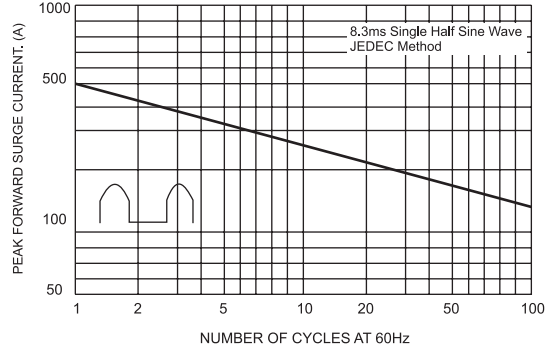


FIG.3- TYPICAL FORWARD CHARACTERISTICS

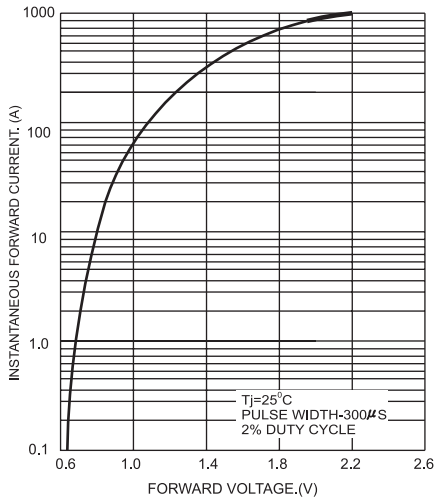


FIG.4-TYPICAL REVERSE CHARACTERISTICS

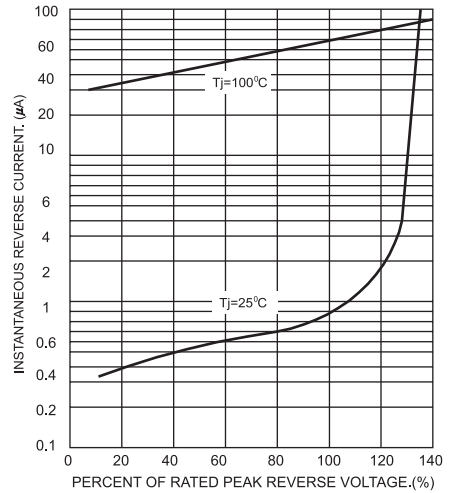


FIG.5- TYPICAL JUNCTION CAPACITANCE

