



ARS25 / AR25 SERIES

25.0 AMPS. High Current Plastic Silicon Rectifiers



Voltage Range
50 to 1000 Volts
Current
25.0 Amperes

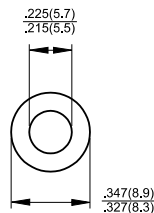
Features

- ✧ 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

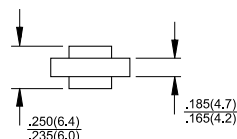
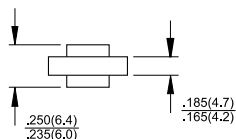
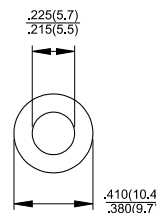
Mechanical Data

- ✧ Case: 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, 60 Hz, resistive or inductive load.

For capacitive load, derate current by 20%

| Type Number | ARS 25A | ARS 25B | ARS 25D | ARS 25G | ARS 25J | ARS 25K | ARS 25M | Units |
|--|-------------|---------|---------|---------|---------|---------|---------|-------|
| | AR25A | AR25B | AR25D | AR25G | AR25J | AR25K | AR25M | |
| Maximum Recurrent Peak Reverse Voltage | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS Voltage | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Rectified Current @T _c = 150°C | 25 | | | | | | | A |
| Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) at T _J =150°C | 400 | | | | | | | A |
| Maximum Instantaneous Forward Voltage @ 25A | 1.0 | | | | | | | V |
| Maximum DC Reverse Current @ T _c =25°C at Rated DC Blocking Voltage @ T _c =100°C | 5.0 | | | | | | | µA |
| Typical Reverse Recovery Time (Note 2) | 3.0 | | | | | | | µS |
| Typical Junction Capacitance (Note 1) T _J =25°C | 300 | | | | | | | pF |
| Typical Thermal Resistance RθJC (Note 3) | 1.0 | | | | | | | °C/W |
| Operating and Storage Temperature Range T _J , T _{STG} | -50 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_F=0.5A, I_R=1.0A, I_{RR}=0.25A

3. Thermal Resistance from Junction to Case, Single Side Cooled.

RATINGS AND CHARACTERISTIC CURVES (ARS25 THRU AR25)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

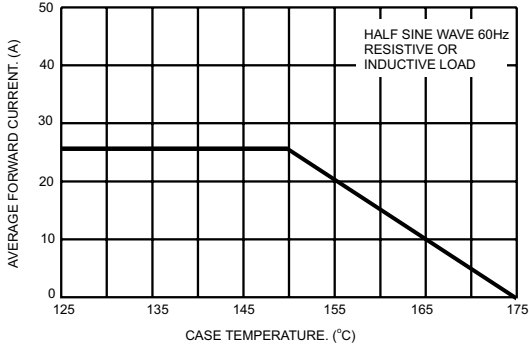


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

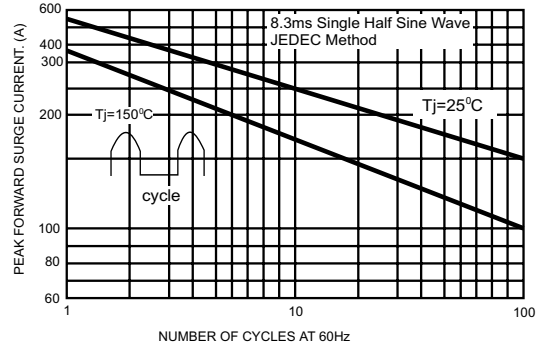


FIG.3- TYPICAL FORWARD CHARACTERISTICS

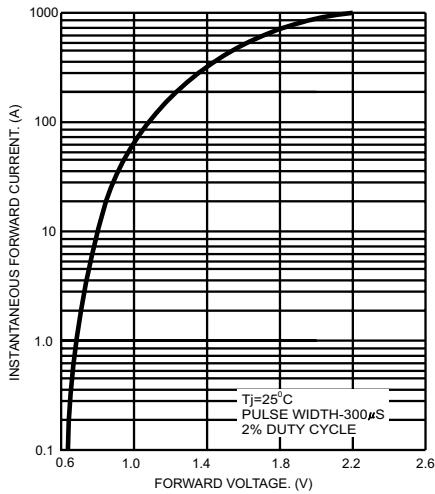


FIG.4- TYPICAL REVERSE CHARACTERISTICS

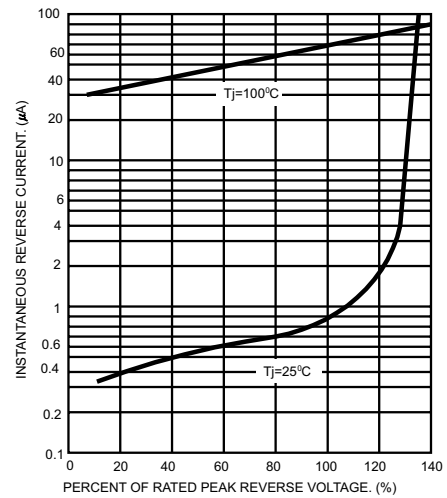


FIG.5- TYPICAL JUNCTION CAPACITANCE

