



ARS25 / AR25 SERIES

25.0 AMPS. High Current Plastic Silicon Rectifiers



Voltage Range
50 to 1000 Volts
Current
25.0 Amperes

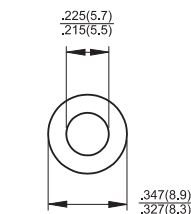
Features

- ✧ 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: 260°C for 10 seconds

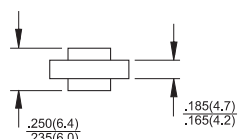
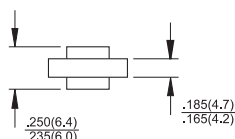
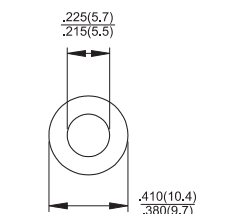
Mechanical Data

- ✧ 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	Symbol	ARS 25A	ARS 25B	ARS 25D	ARS 25G	ARS 25J	ARS 25K	ARS 25M	Units
		AR 25A	AR 25B	AR 25D	AR 25G	AR 25J	AR 25K	AR 25M	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current @ $T_c = 150^\circ\text{C}$	$I_{(AV)}$	25							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) at $T_j=150^\circ\text{C}$	I_{FSM}	400							A
Maximum Instantaneous Forward voltage @ 25A	V_F	1.0							V
Maximum DC Reverse Current @ $T_c=25^\circ\text{C}$ at Rated DC Blocking Voltage @ $T_c=100^\circ\text{C}$	I_R	5.0 250							μA μA
Typical Reverse Recovery Time (Note 2)	T_{rr}	3.0							μS
Typical Junction Capacitance (Note 1) $T_j=25^\circ\text{C}$	C_j	300							pF
Typical Thermal Resistance (Note 3)	$R_{\theta JC}$	1.0							$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	T_j, T_{STG}	-50 to +175							$^\circ\text{C}$

Notes: 1. Measured at 1 MHz and Applied Reverse Voltage of 4.0 V D.C.

2. Reverse Recovery Test Conditions: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{RR}=0.25\text{A}$

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

RATINGS AND CHARACTERISTIC CURVES (ARS25 THRU AR25)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

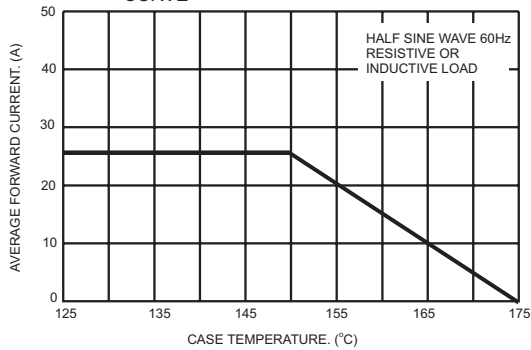


FIG.2- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

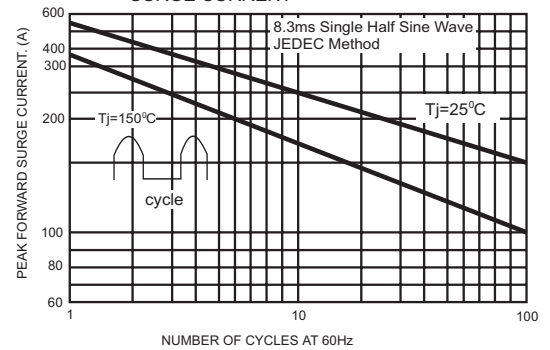


FIG.3- TYPICAL FORWARD CHARACTERISTICS

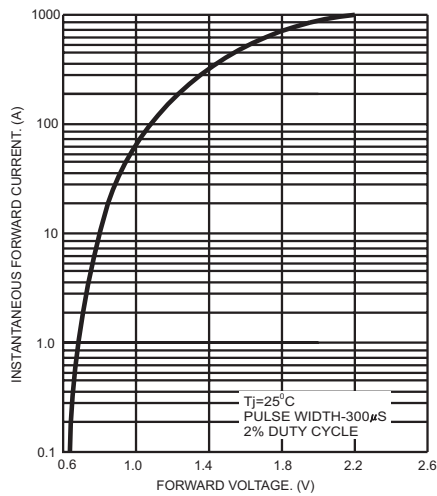


FIG.4- TYPICAL REVERSE CHARACTERISTICS

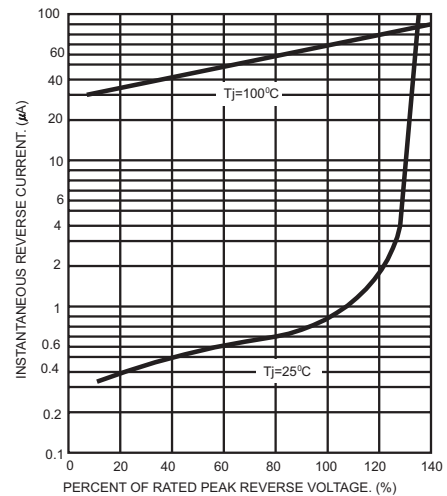


FIG.5- TYPICAL JUNCTION CAPACITANCE

