



## AR25 SERIES

### 25 AMPS. High Current Button Rectifiers

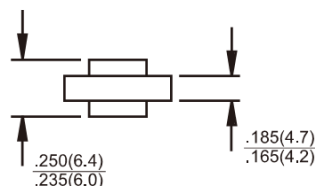
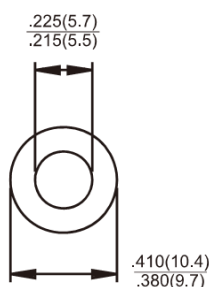
#### Features

- ✧ 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
- ✧ Green compound with suffix "G" on packing code & prefix "G" on datecode

#### Mechanical Data

- ✧ Case: Molded plastic case
- ✧ Terminals: Pure tin plated, lead free, solderable per MIL-STD-202, Method 208
- ✧ Polarity: Color ring denotes cathode
- ✧ Weight: 1.8 grams
- ✧ Mounting position: Any

#### AR



#### Dimensions in inches and (millimeters)

#### Marking Diagram



AR25X = Specific Device Code  
G = Green Compound  
Y = Year  
M = Work Month

#### 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	AR 25A	AR 25B	AR 25D	AR 25G	AR 25J	AR 25K	AR 25M	Units
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 @ $T_C=150^{\circ}C$	$I_{F(AV)}$	25							A
Peak Forward Surge Current, 8.3 ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method) at $T_J=150^{\circ}C$	$I_{FSM}$	400							A
Maximum Instantaneous Forward Voltage (Note 1) @ 25A	$V_F$	1.0							V
Maximum DC Reverse Current at @ $T_A=25^{\circ}C$ Rated DC Blocking Voltage @ $T_A=125^{\circ}C$	$I_R$	5 250							$\mu A$ $\mu A$
Typical Reverse Recovery Time (Note 2)	$T_{rr}$	3.0							$\mu S$
Typical Junction Capacitance (Note 3)	$C_j$	300							pF
Typical Thermal Resistance (Note 4)	$R_{\theta JC}$	1.0							$^{\circ}C/W$
Operating and Storage Temperature Range	$T_J, T_{STG}$	- 50 to + 175							$^{\circ}C$

Note 1: Pulse Test with PW=300 usec, 1% Duty Cycle

Note 2: Reverse Recovery Time Test Conditions:  $I_F=0.5A$ ,  $I_R=1.0A$ ,  $I_{RR}=0.25A$

Note 3: Measured at 1 MHz and Applied Reverse Voltage of 4.0V D.C.

Note 4: Thermal Resistance from Junction to Case, Single Side Cooled.

Version:C10

## RATINGS AND CHARACTERISTIC CURVES (AR25 SERIES)

FIG.1- MAXIMUM FORWARD CURRENT DERATING CURVE

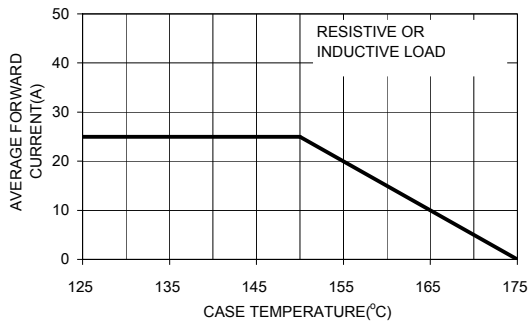


FIG. 2- TYPICAL REVERSE CHARACTERISTICS

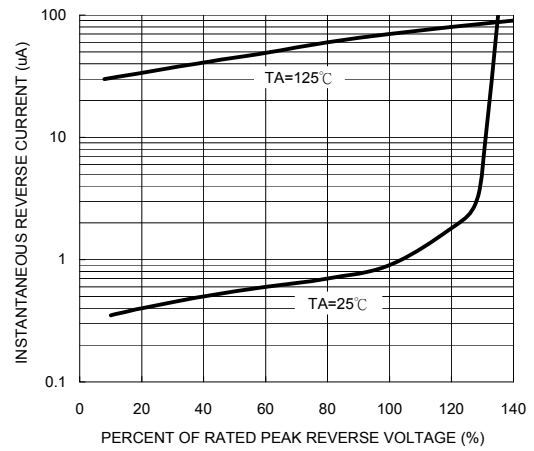


FIG. 3- MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

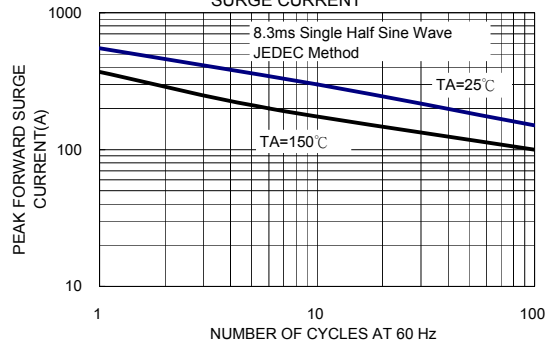


Fig. 5- TYPICAL FORWARD CHARACTERISTICS

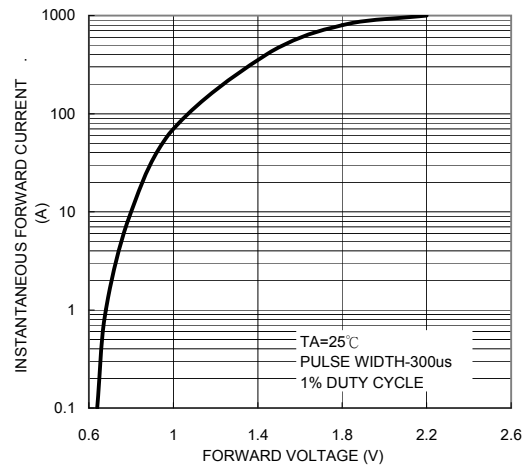


FIG. 4- TYPICAL JUNCTION CAPACITANCE

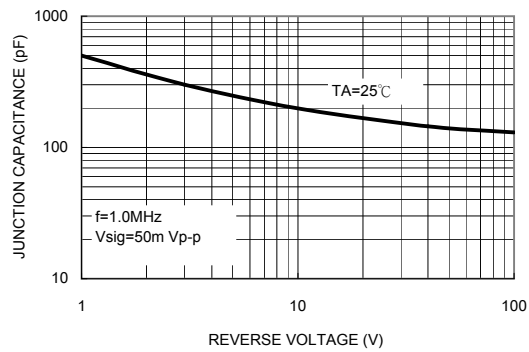


FIG.6- REVERSE RECOVERY TIME CHARACTERISTIC AND TEST CIRCUIT DIAGRAM

