

## AUTOMOTIVE RECTIFIER

**RA5005 THRU RA5010**

**VOLTAGE RANGE  
CURRENT**

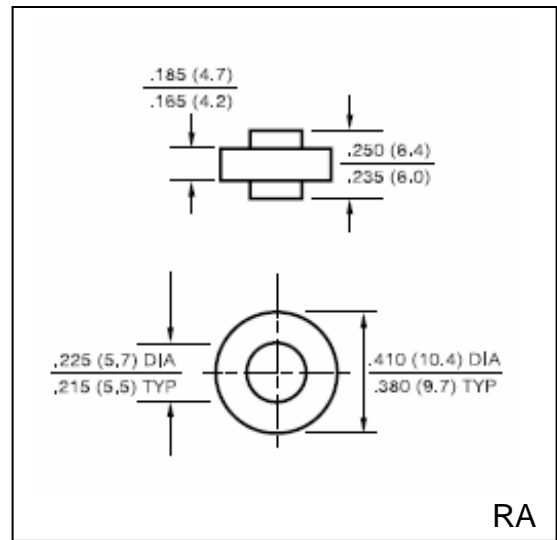
**50 to 1000 Volts  
50.0 Ampere**

### FEATURES

- Low Leakage
- Low forward voltage drop
- High current capability
- High forward surge current capacity

### MECHANICAL DATA

- Case: transfer molded plastic
- Epoxy: UL94V-0 rate flame retardant
- Lead: Plated slug, solderable per MIL-STD-202E method 208C
- Polarity: color ring denotes cathode end
- Mounting Position: any
- Weight: 0.067 ounce, 1.90 gram



### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	SYMBOLS	RA 5005	RA 501	RA 502	RA 504	RA 506	RA 508	RA 5010	UNIT
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current, At $T_C = 105^\circ\text{C}$	$I_{(AV)}$	50.0							Amps
Peak Forward Surge Current 8.3mS single half sine wave superimposed on rated load (JEDEC method)	$I_{FSM}$	600							Amps
Maximum Instantaneous Forward Voltage @ 50.0A	$V_F$	1.08							Volts
Maximum DC Reverse Current at Rated DC Blocking Voltage per element	$I_R$	$T_A = 25^\circ\text{C}$ 5.0							$\mu\text{A}$
		$T_A = 100^\circ\text{C}$ 400							
Typical Thermal Resistance	$R_{\theta JC}$	0.8							$^\circ\text{C}/\text{W}$
Operating Junction Temperature Range	$T_J$	(-65 to +175)							$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	(-65 to +175)							$^\circ\text{C}$

### Notes:

1. Proper heatsinking must be provided

## RATINGS AND CHARACTERISTIC CURVES RA5005 THRU RA5010

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

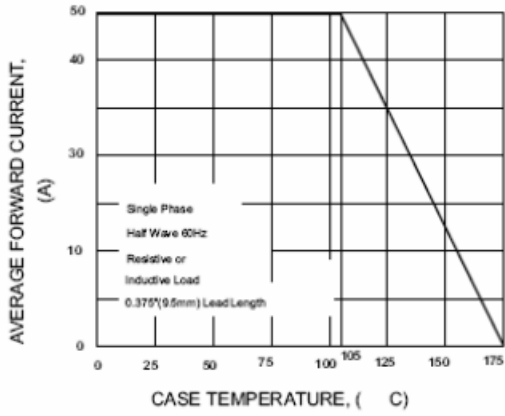


FIG.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

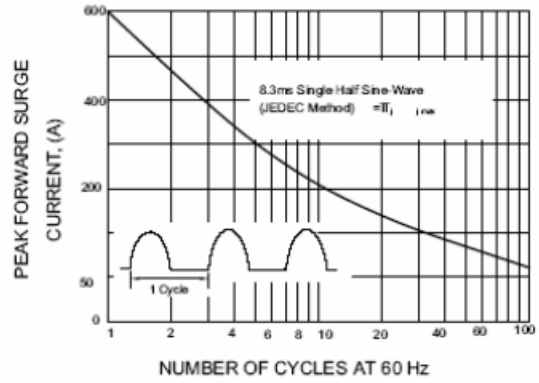


FIG.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

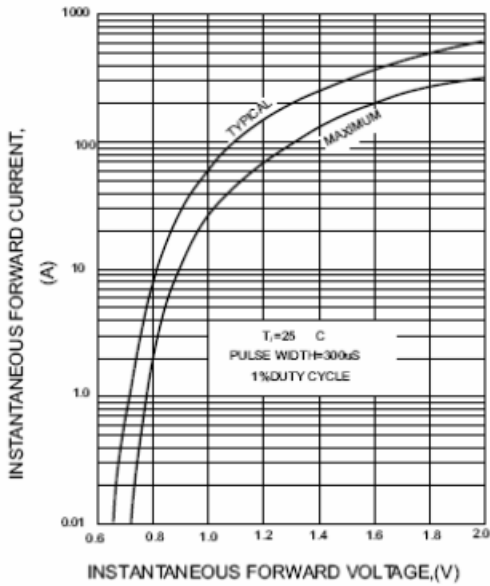


FIG.4. FORWARD POWER DISSIPATION

