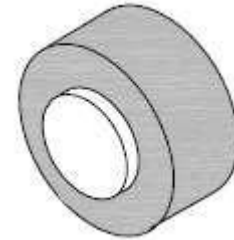


50A Automotive Rectifiers

Features

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



AR

Mechanical Data

Case:	AR, molded plastic body
Epoxy:	Plastic package has UL flammability classification 94V-0
Terminals:	Plated slug, solderable per MIL-STD-202, Method 208C
Polarity:	Color ring denotes cathode end
Weight:	0.064 ounces, 1.82 grams

Maximum Ratings and Electrical Characteristics ($T_A=25^\circ\text{C}$ unless noted otherwise)

Symbol	Description	AR501	AR502	AR503	AR504	Unit	Conditions
V_{RRM}	Maximum Repetitive Peak Reverse Voltage	100	200	300	400	V	
V_{RMS}	Maximum RMS Voltage	70	140	210	280	V	
V_{DC}	Maximum DC Blocking Voltage	100	200	300	400	V	
I_{F(AV)}	Maximum Average Forward Rectified Current	50				A	T _C =110° C
I_{FSM}	Peak Forward Surge Current	600				A	8.3ms single half sine-wave superimposed on rated load (JEDEC Method)
V_F	Forward Voltage	1.08				V	I _F =80A
I_R	Maximum DC Reverse Current at Rated DC Blocking Voltage	5.0				μA	T _A =25° C
		400					T _A =100° C

Symbol	Description	AR501	AR502	AR503	AR504	Unit	Conditions
R_{thjc}	Typical Thermal Resistance	0.8				$^{\circ}\text{C} / \text{W}$	
T_J , T_{STG}	Operating Junction and Storage Temperature Range	-65 to +175				$^{\circ}\text{C}$	

Note: (1) Enough heatsink must be considered in application.
 (2) Single phase, half wave, 60Hz, resistive or inductive load.
 (3) For capacitive load derate current by 20%.

Typical Characteristics Curves

Fig.1-Typical Forward Current Derating Curve

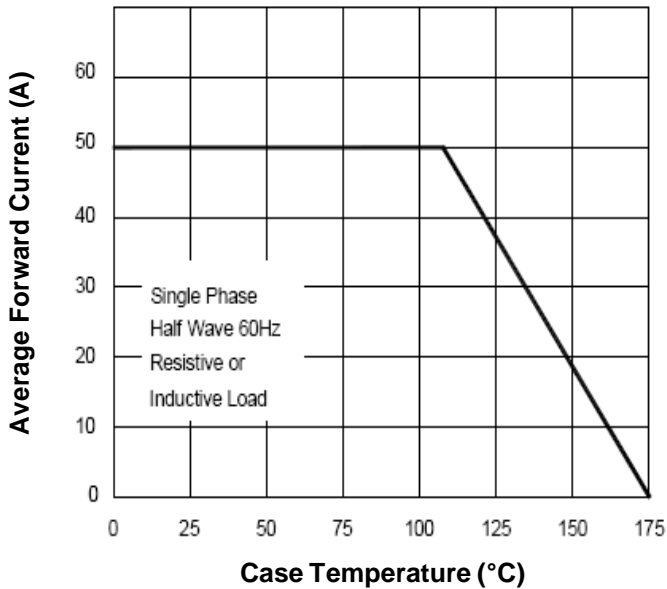


Fig.2-Max. Non-Repetitive Peak Forward Surge Current

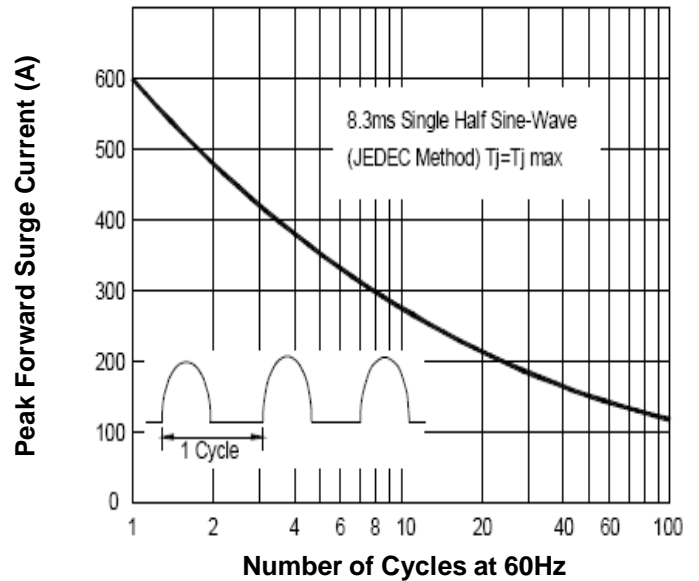


Fig.3- Typical Instantaneous Forward Characteristics

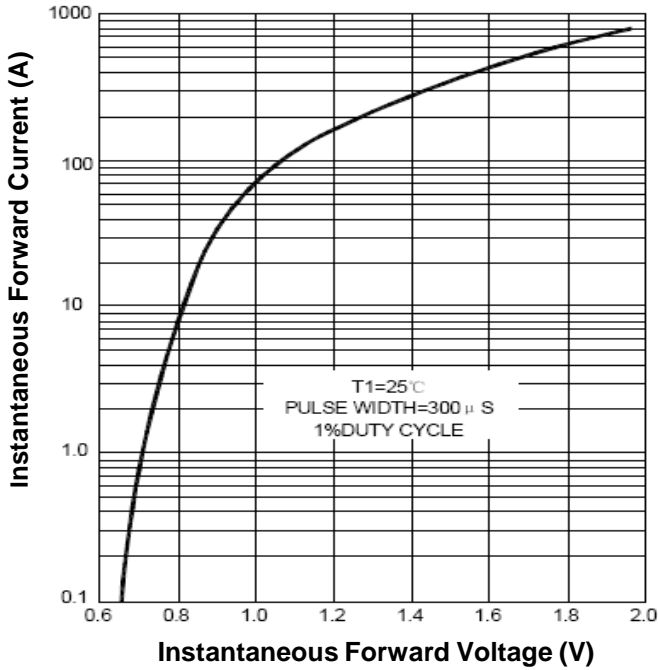
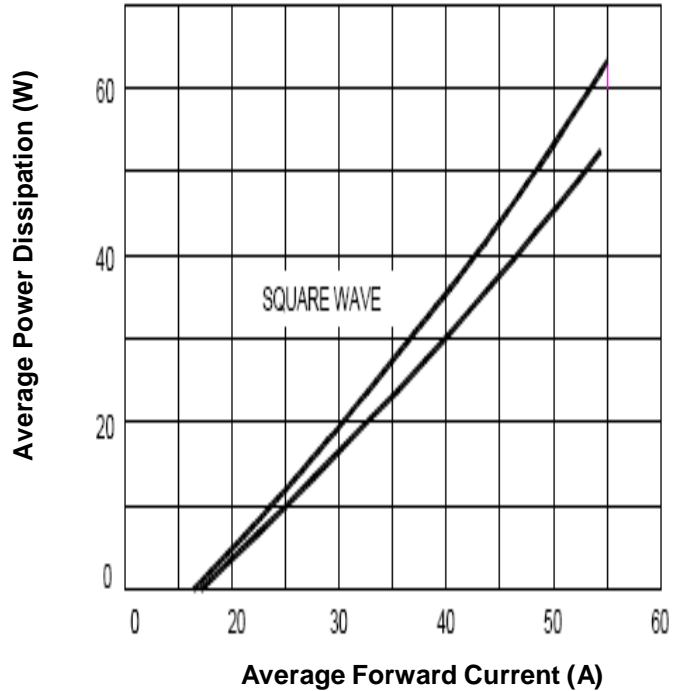
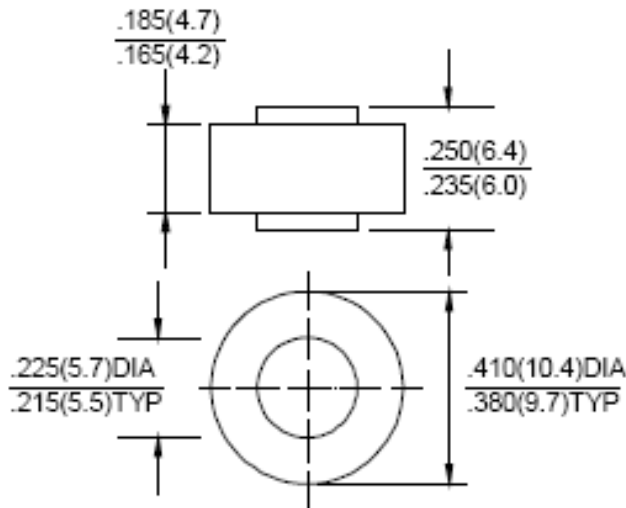


Fig.4-Forward Power Dissipation



Dimensions in inch (mm)



AR

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