AR50A THRU AR50M

High Current Automobile Rectifier

Reverse Voltage - 50 to 1000Volts

Forward Current - 50 Amperes

Features

- Better heat dissipation
- Low power loss
- High surge forward current capability
- High temperature soldering guaranteed: 265℃/10S

Mechanical Data

- Case: JEDEC AR molded plastic
- Polarity: Color band denotes cathode

Applications

- Generally applied in alternator, motorbike , automobile, etc.

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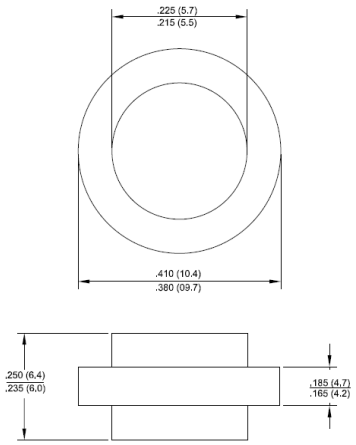

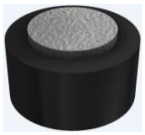

Package Outline Dimensions in Inches (Millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25℃ ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load.

For capacitive load, derate current by 20%.

Characteristics	Symbol	AR50A	AR50B	AR50D	AR50G	AR50J	AR50K	AR50M	Unit
Maximum Repetitive 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_A=55 ℃	$I_{(AV)}$	50							A
Peak Forward Surge Current, 8.3mS Single Half Sine-Wave, Superimposed on Rated Load (JEDEC Method)	I_{FSM}	600							A
I^2t Rating for Fusing (t<8.3mS)	I^2t	1494							A^2S
Maximum Instantaneous Forward Voltage at Rated Forward Current	V_F	1.1							V
Maximum DC Reverse Current at Rated @T_J=25℃ DC Bolcking Voltage @T_J=150℃	I_R	10 1000							uA
Typical Junction Capacitance (Note1)	C_J	300							pF
Typical Thermal Resistance Junction to Ambient	$R_{\theta JA}$	1.0							℃/W
Operating Junction Temperature Range	T_J	-55 to +150							℃
Storage Temperature Range	T_{STG}	-55 to +150							℃
Position of polarity ring denotes cathode, while color denotes voltage gradation.		Red	Yellow	Orange	Silver	Green	Blue	Purple	

Notes: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V DC.

2.The typical data above is for reference only

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Fig. 1 - Forward Current Derating Curve

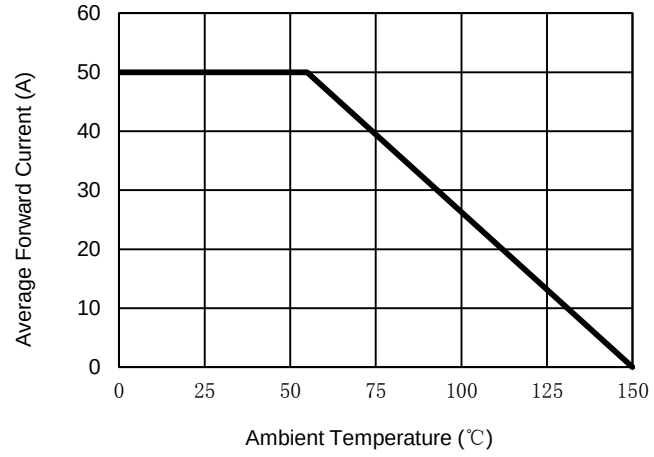


Fig. 2 - Maximum Non-Repetitive Surge Current

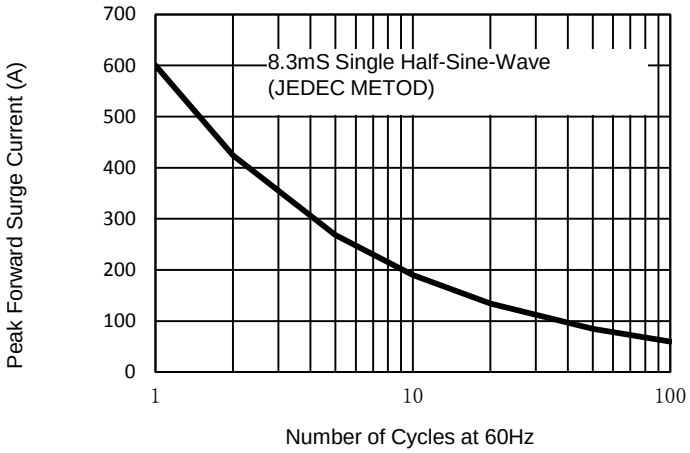


Fig. 3 - Typical Reverse Characteristics

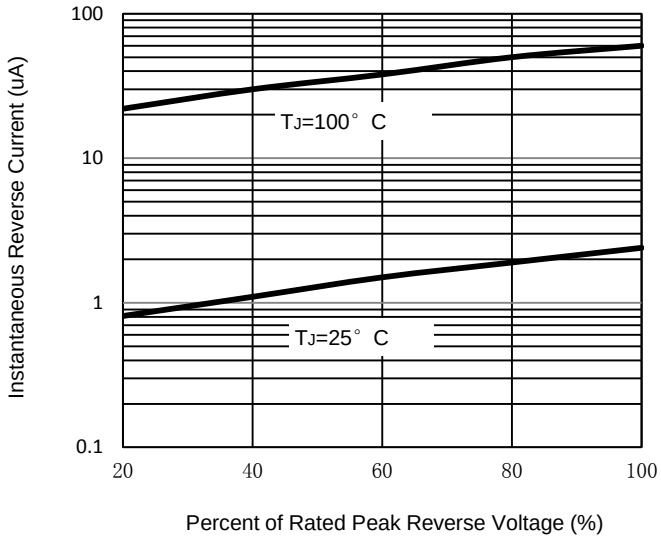


Fig. 4 - Typical Forward Characteristics

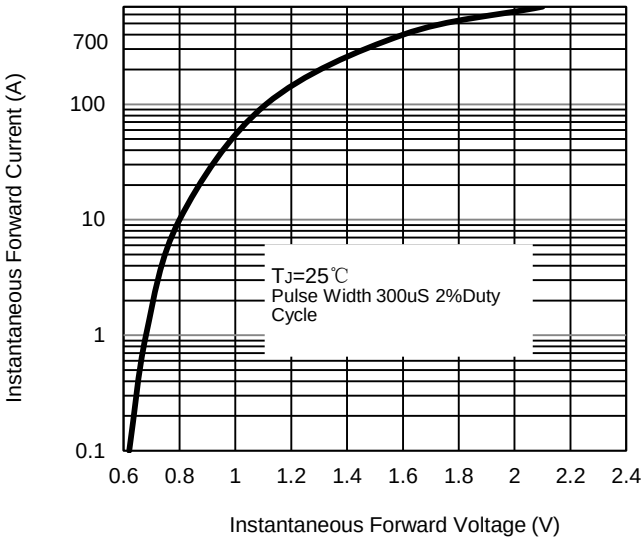
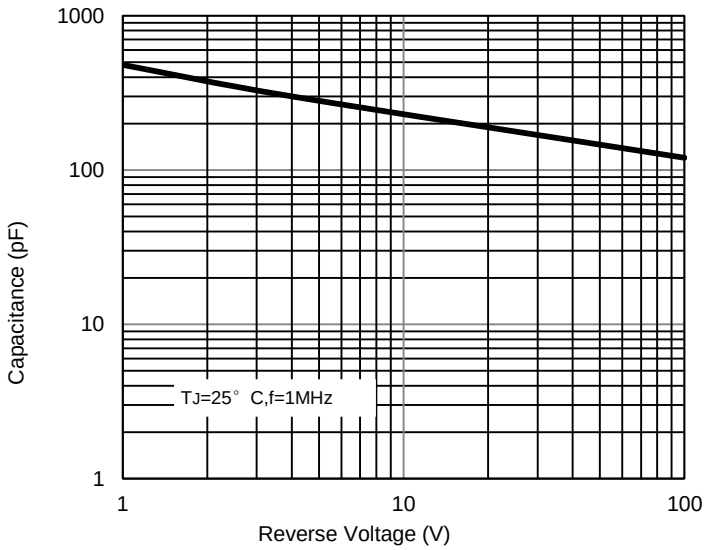


Fig. 5 - Typical Junction Capacitance



The curve above is for reference only.

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