

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 °C/10S

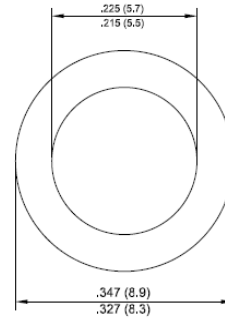
Mechanical Data

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

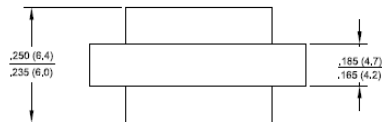
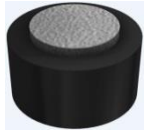
Applications

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

ARS



RoHS
COMPLIANT



Package Outline Dimensions in Inches (Millimeters)

Maximum Ratings and Electrical Characteristics

Rating at 25 °C ambient temperature unless otherwise specified.

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

For capacitive load, derate current by 20%.

Characteristics	Symbol	ARS50A	ARS50B	ARS50D	ARS50G	ARS50J	ARS50K	ARS50M	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 °C	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 ² t Rating for Fusing (t<8.3mS)	I ² t	1494							A ² S
Maximum Instantaneous Forward Voltage at Rated Forward Current	V _F	1.1							V
Maximum DC Reverse Current at Rated @T _J =25 °C	I _R	10							uA
DC Bolcking Voltage @T _J =150 °C		1000							
Typical Junction Capacitance (Note1)	C _J	300							pF
Typical Thermal Resistance Junction to Ambient	R _{θJA}	1.0							°C/W
Operating Junction Temperature Range	T _J	-55 to +150							°C
Storage Temperature Range	T _{STG}	-55 to +150							°C
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

Fig. 1 - Forward Current Derating Curve

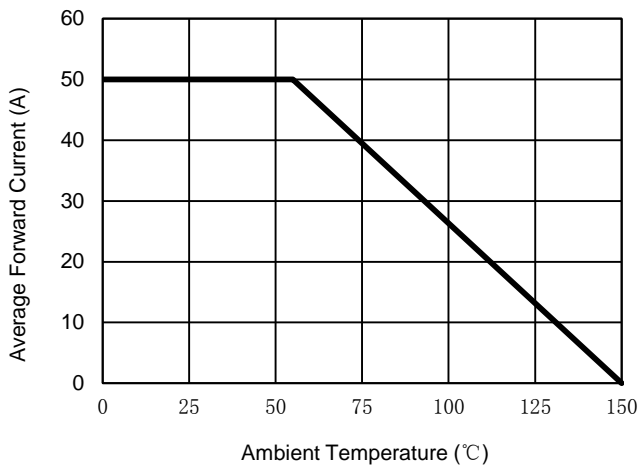


Fig. 2 - Maximum Non-Repetitive Surge Current

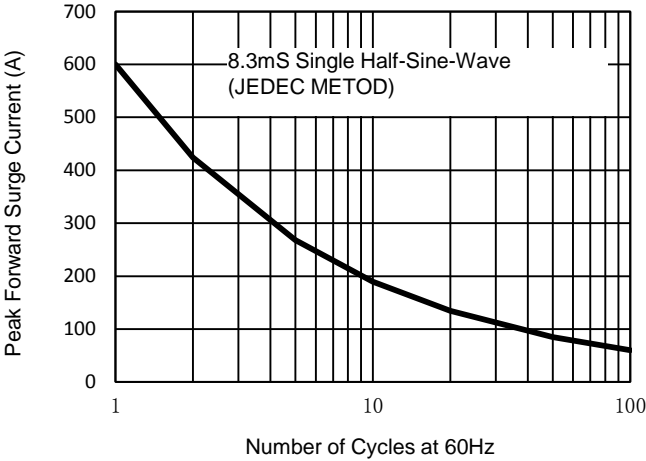


Fig. 3 - Typical Reverse Characteristics

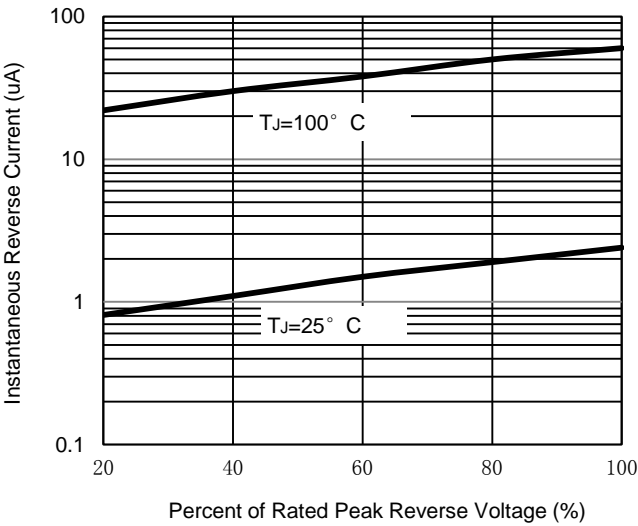


Fig. 4 - Typical Forward Characteristics

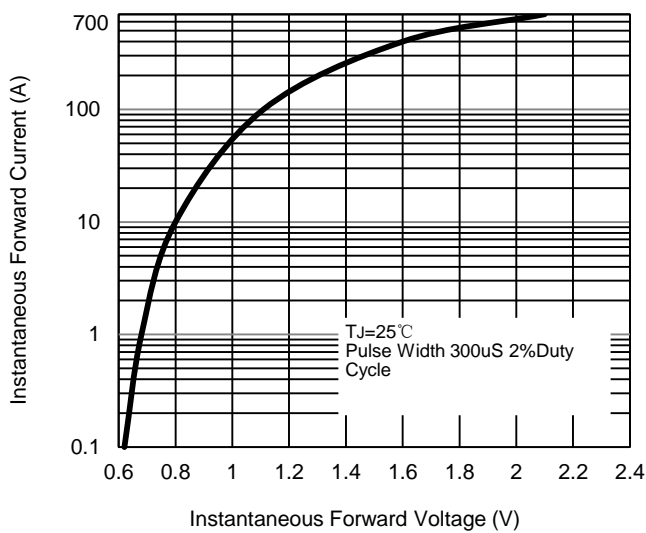
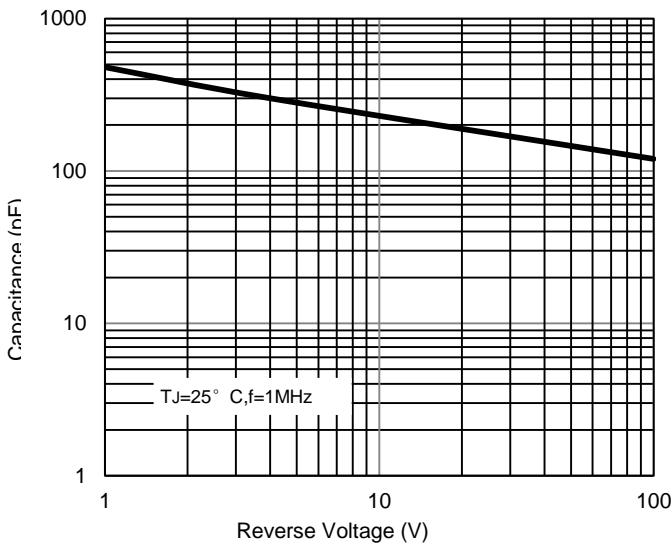


Fig. 5 - Typical Junction Capacitance



The curve above is for reference only.

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