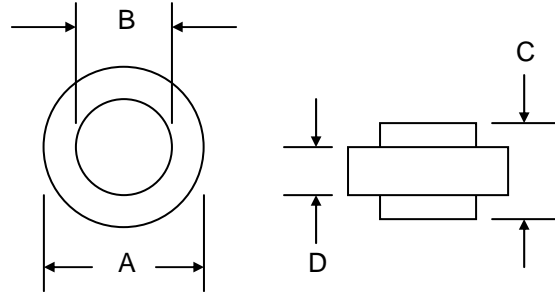


Features

- Diffused Junction
- Low Leakage
- Low Cost
- High Surge Current Capability
- Low Cost Construction Utilizing Void-Free Molded Plastic Technique



Mechanical Data

- Case: AR or ARS, Molded Plastic
- Terminals: Plated Terminals Solderable per MIL-STD-202, Method 208
- Polarity: Color Ring Denotes Cathode End
- Weight: 1.8 grams (approx.)
- Mounting Position: Any
- Marking: Type Number
- **Lead Free: For RoHS / Lead Free Version, Add "-LF" Suffix to Part Number, See Page 3**

Dim	AR		ARS	
	Min	Max	Min	Max
A	9.70	10.40	8.30	8.90
B	5.50	5.70	5.50	5.70
C	6.0	6.40	6.0	6.40
D	4.2	4.7	4.2	4.7
All Dimensions in mm				

Maximum Ratings and Electrical Characteristics @T_A=25°C unless otherwise specified

Single Phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

Characteristic	Symbol	AR/S 50A	AR/S 50B	AR/S 50D	AR/S 50G	AR/S 50J	Unit	
Peak Repetitive Reverse Voltage	V _{RRM}	50	100	200	400	600	V	
Working Peak Reverse Voltage	V _{RWM}							
DC Blocking Voltage	V _R							
RMS Reverse Voltage	V _{R(RMS)}	35	70	140	280	420	V	
Average Rectified Output Current @T _C = 150°C	I _O	50						A
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load (JEDEC Method)	I _{FSM}	500						A
Forward Voltage @I _F = 50A	V _{FM}	1.0						V
Peak Reverse Current @T _A = 25°C At Rated DC Blocking Voltage @T _A = 100°C	I _{RM}	5.0 500						μA
Reverse Recovery Time (Note 1)	t _{rr}	3.0						μS
Typical Junction Capacitance (Note 2)	C _J	400						pF
Typical Thermal Resistance (Note 3)	R _{JC}	1.0						°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-50 to +175						°C

Note: 1. Measured with I_F = 0.5A, I_R = 1.0A, I_{RR} = 0.25A
 2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.
 3. Thermal Resistance: Junction to case, single side cooled.

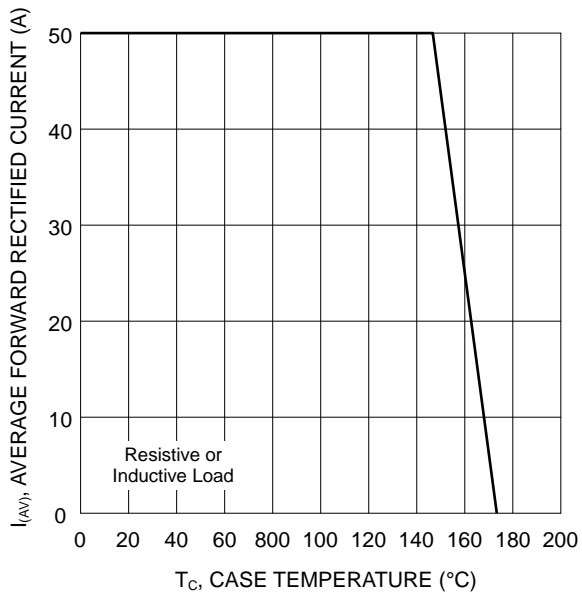


Fig. 1 Forward Current Derating Curve

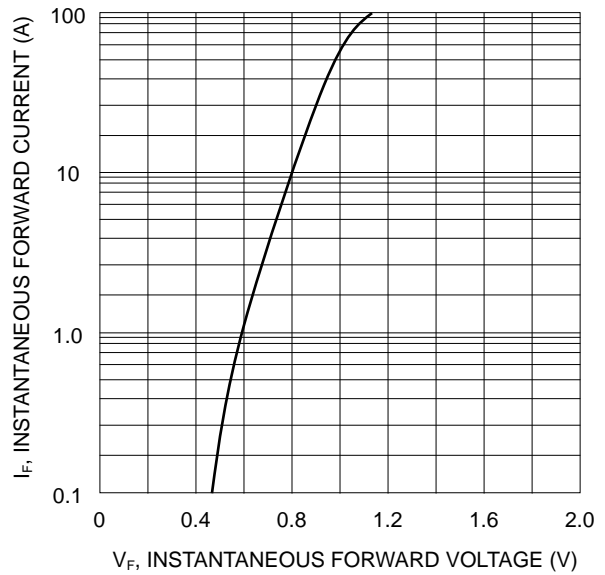


Fig. 2 Typical Forward Characteristics

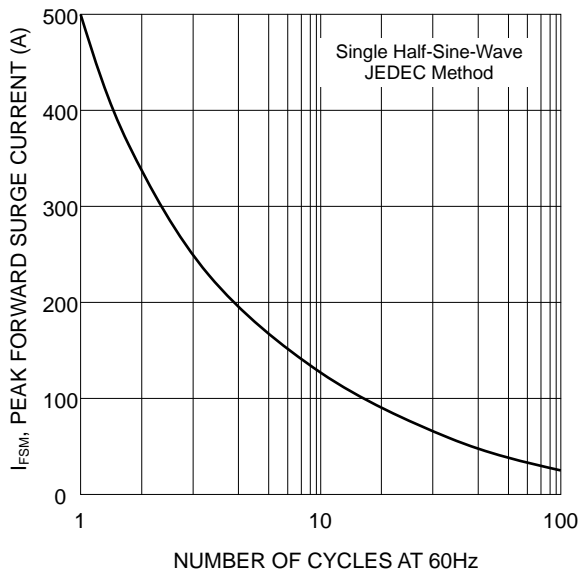


Fig. 3 Forward Surge Current Derating Curve

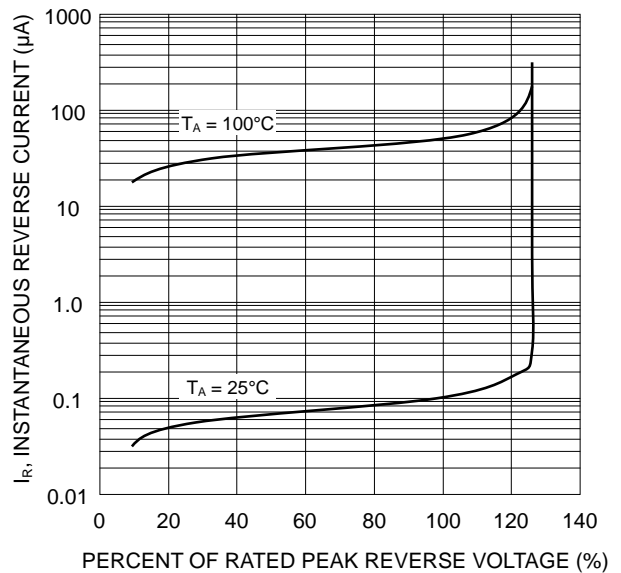



Fig. 4 Typical Reverse Characteristics

ORDERING INFORMATION

Product No.	Package Type	Shipping Quantity
AR50A	10mm Button	1000 Units/Box
ARS50A	8.6mm Button	1000 Units/Box
AR50B	10mm Button	1000 Units/Box
ARS50B	8.6mm Button	1000 Units/Box
AR50D	10mm Button	1000 Units/Box
ARS50D	8.6mm Button	1000 Units/Box
AR50G	10mm Button	1000 Units/Box
ARS50G	8.6mm Button	1000 Units/Box
AR50J	10mm Button	1000 Units/Box
ARS50J	8.6mm Button	1000 Units/Box

- Shipping quantity given is for minimum packing quantity only. For minimum order quantity, please consult the Sales Department.
- To order Lead Free version (with Lead Free finish), add "-LF" suffix to part number above. For example, AR50A-LF.

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WARNING: DO NOT USE IN LIFE SUPPORT EQUIPMENT. WTE power semiconductor products are not authorized for use as critical components in life support devices or systems without the express written approval.

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