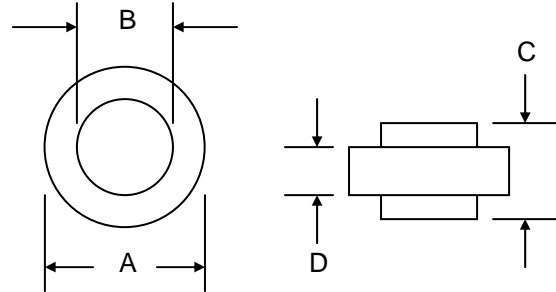


### Features

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

Note: 1. Measured with I<sub>F</sub> = 0.5A, I<sub>R</sub> = 1.0A, I<sub>RR</sub> = 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.

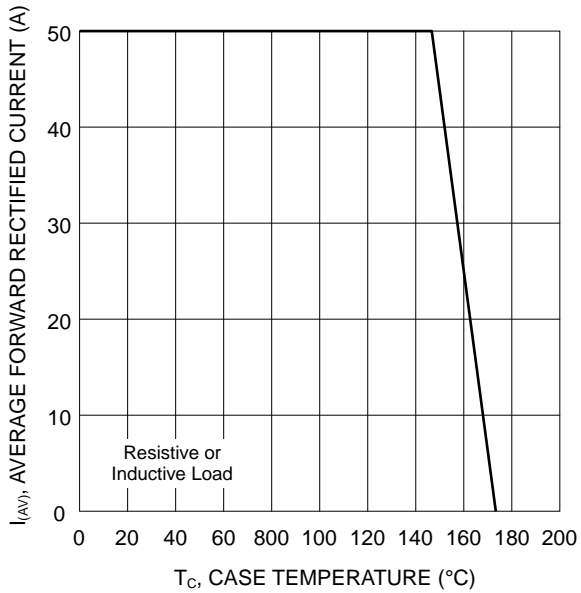


Fig. 1 Forward Current Derating Curve

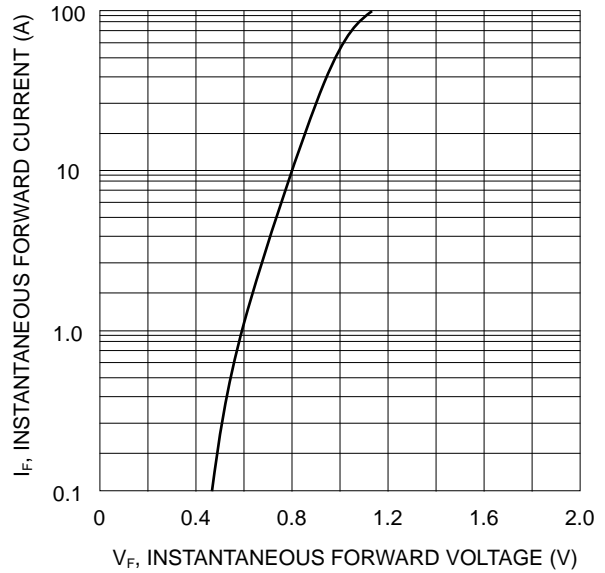


Fig. 2 Typical Forward Characteristics

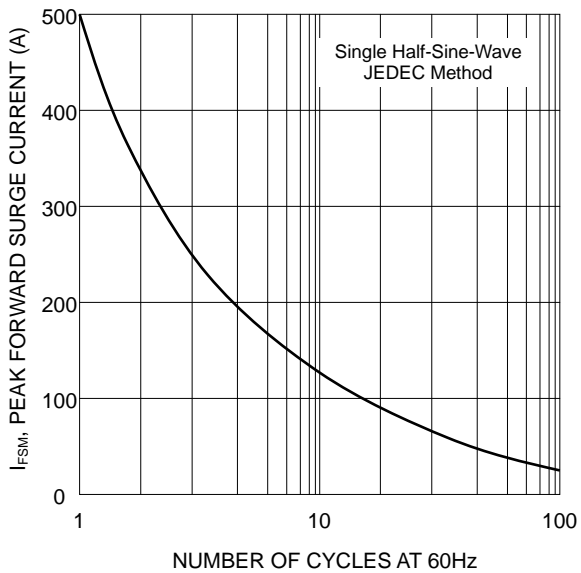


Fig. 3 Forward Surge Current Derating Curve

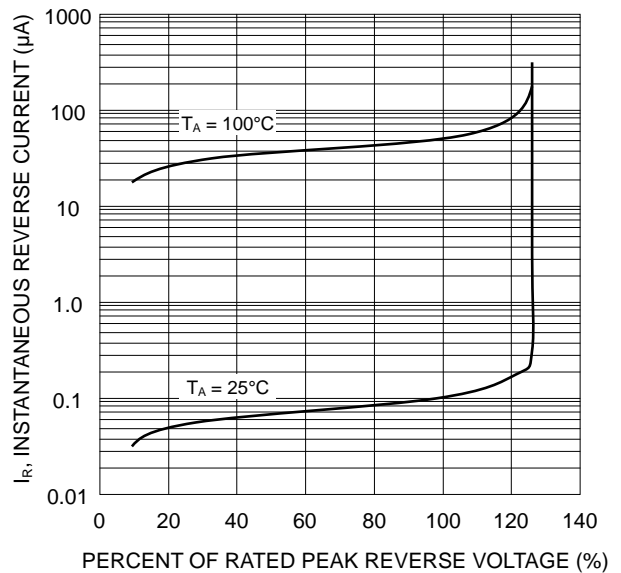



Fig. 4 Typical Reverse Characteristics

## 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

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

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