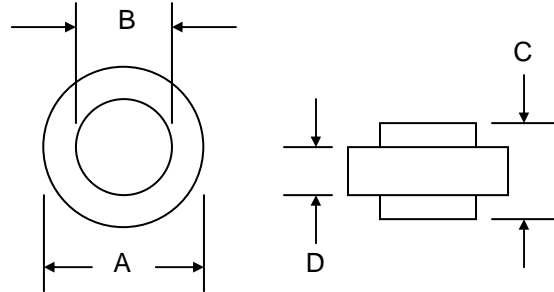


Features

- 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: Color Ring Only
- **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 Working Peak Reverse Voltage DC Blocking Voltage	V _{RRM} V _{RWM} V _R	50	100	200	400	600	V
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) at T _J = 150°C	I _{FSM}	500					A
Forward Voltage @I _F = 50A	V _{FM}	1.1					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 _{θJC}	1.0					°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-50 to +175					°C
Polarity and Voltage Denotation Color Ring		Green	Yellow	Silver	Orange	Red	

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.

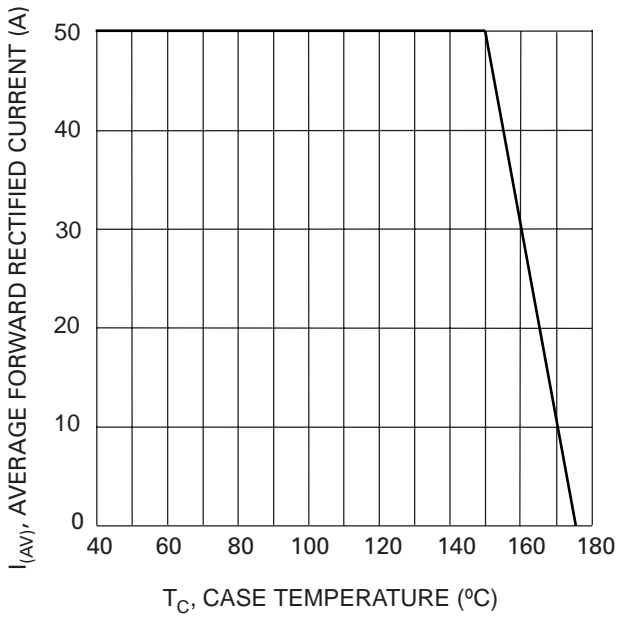


Fig. 1 Forward Current Derating Curve

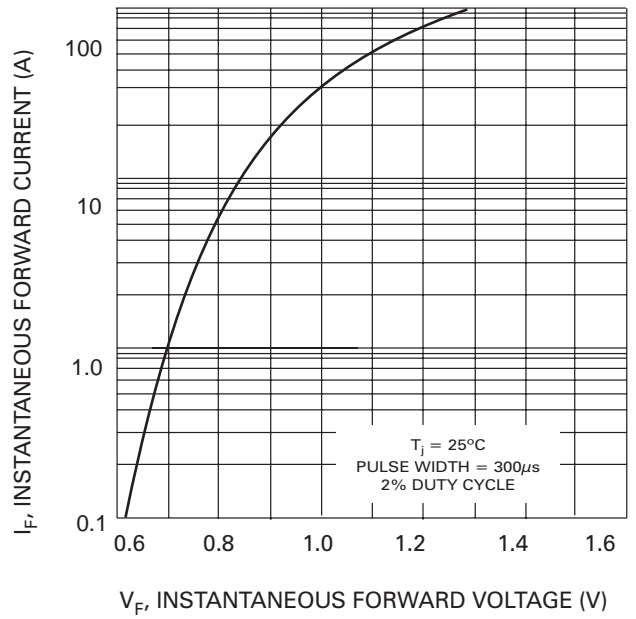


Fig. 2 Typical Forward Characteristics

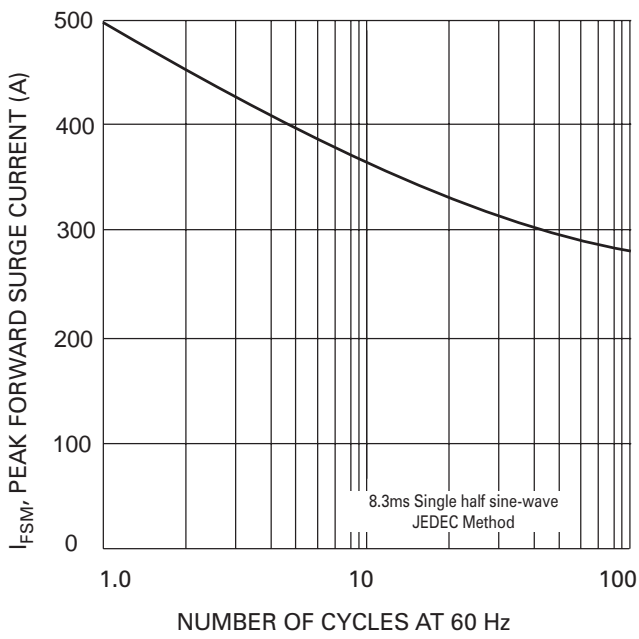


Fig. 3 Max Non-Repetitive Peak Fwd Surge Current

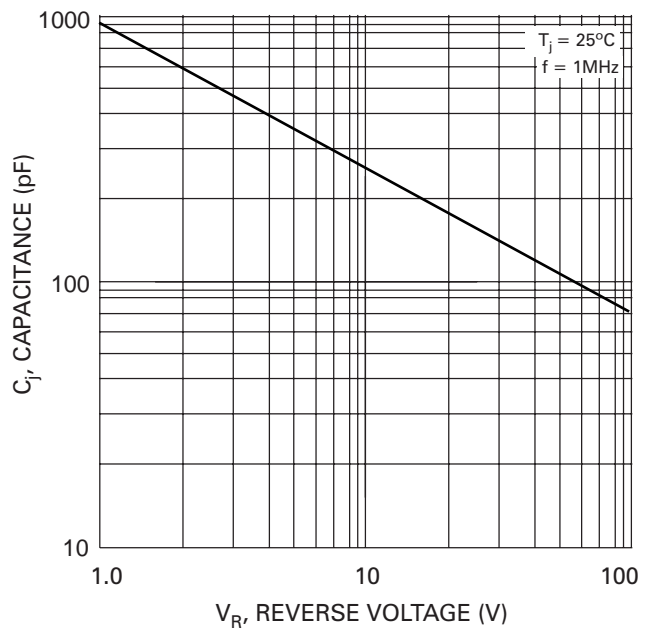


Fig. 4 Typical Junction Capacitance

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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