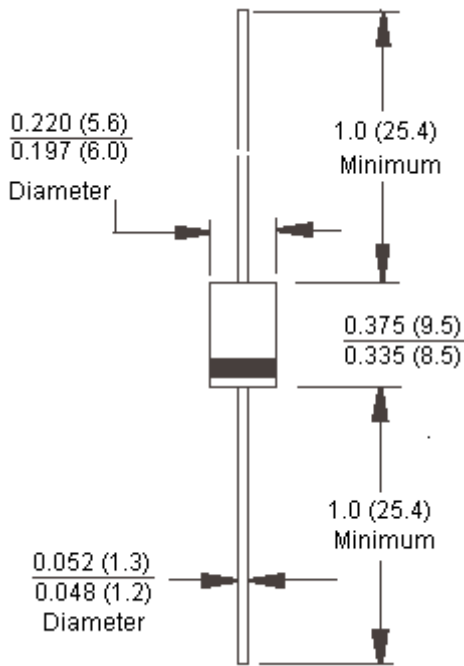




## Features:

- Low forward voltage drop.
- High current capability.
- High reliability.
- High surge current capability.

## DO-201AD



Dimensions : Inches (Millimetres)

## Mechanical Data:

Cases	: Moulded plastic.
Lead	: Axial leads, solderable per MIL-STD-202, Method 208 guaranteed.
Polarity	: Colour band denotes cathode end.
High temperature soldering guaranteed	: 260°C/10 seconds/0.375 inch, (9.5mm) lead lengths at 5lbs., (2.3kg) tension.
Weight	: 1.2 grams.

## 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%.

Type Number	Symbol	MR850	MR851	MR852	MR854	MR856	MR858	Units
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	V
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	420	560	
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	800	
Maximum Average Forward Rectified Current 0.375 inch (9.5mm) Lead Length at $T_A = 55^\circ\text{C}$	$I_{(AV)}$	3.0						A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method )	$I_{FSM}$	150						
Maximum Instantaneous Forward Voltage at 3.0A	$V_F$	1.25				1.3		V
Maximum DC Reverse Current at $T_A = 25^\circ\text{C}$ at Rated DC Blocking Voltage at $T_A = 100^\circ\text{C}$	$I_R$	10 200						$\mu\text{A}$ $\mu\text{A}$
Maximum Reverse Recovery Time (Note 1)	$T_{rr}$	100				150		nS
Typical Junction Capacitance (Note 2)	$C_j$	60						pF
Typical Thermal Resistance (Note 3)	$R_{\theta JA}$	45						$^\circ\text{C/W}$
Operating Temperature Range	$T_J$	-65 to +150						$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$							

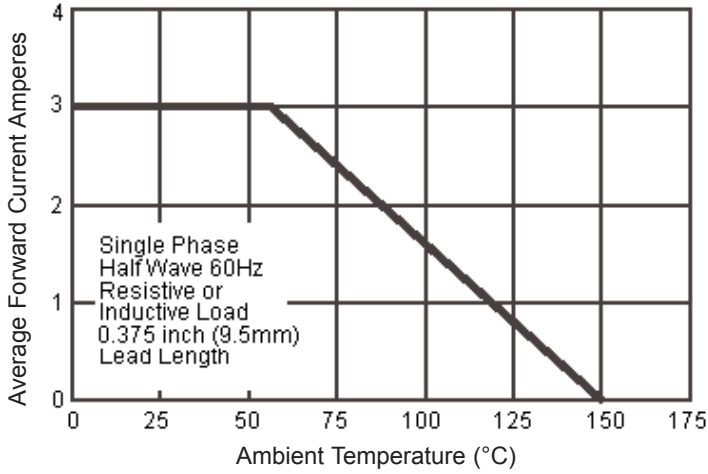
Note: 1. Reverse Recovery Test Conditions:  $I_F = 0.5\text{A}$ ,  $I_R = 1.0\text{A}$ ,  $I_{RR} = 0.25\text{A}$ .

2. Measured at 1MHz and Applied Reverse Voltage of 4.0 Volts DC.

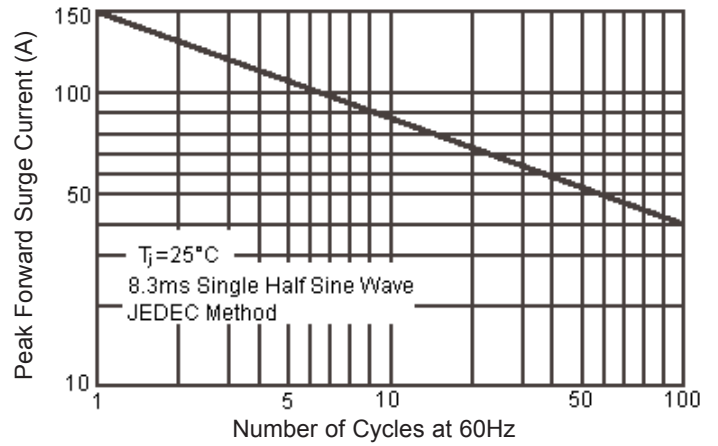
3. Mount on Cu-Pad Size 16mm x 16mm on PCB.

## Ratings and Characteristic Curves (MR850, MR851, MR852, MR854, MR856, MR858)

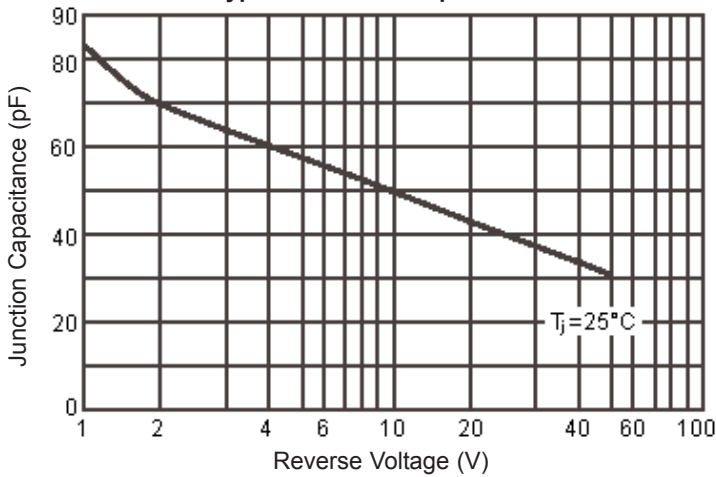
Maximum Forward Current Derating Curve



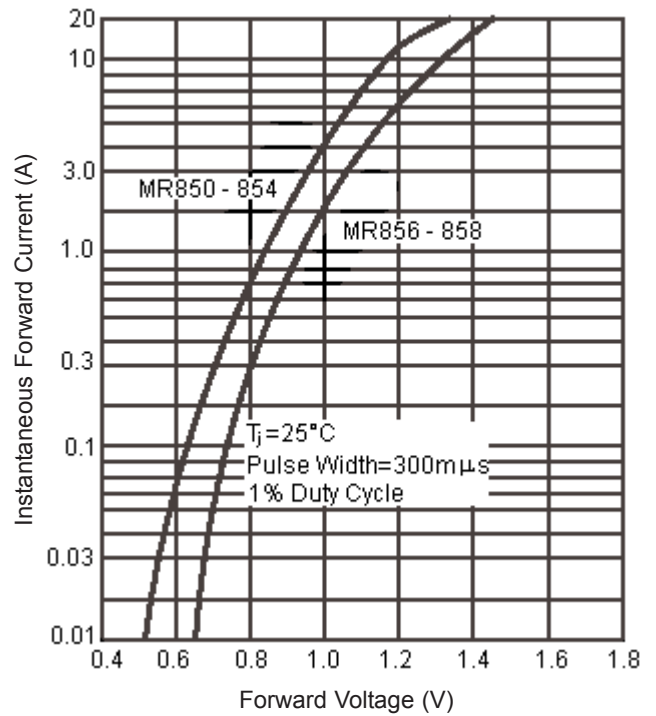
Maximum Non-Repetitive Forward Surge Current



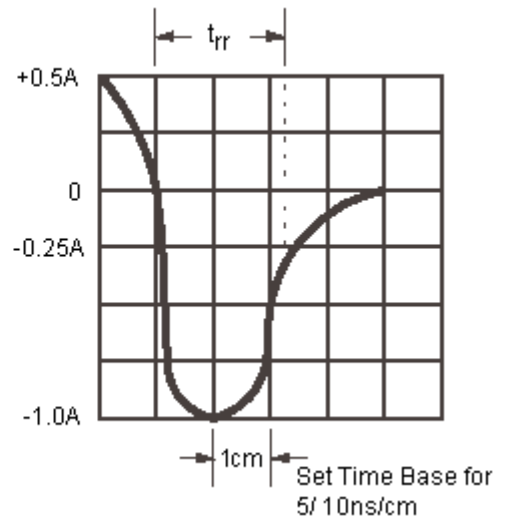
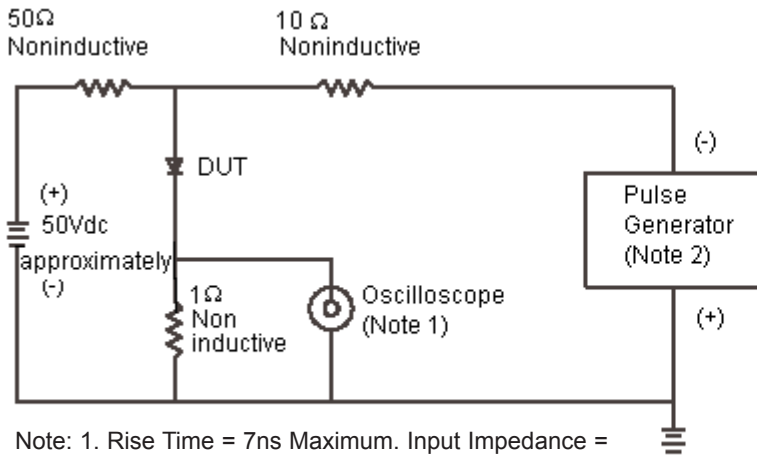
Typical Junction Capacitance



Typical Forward Characteristics



## Reverse Recovery Time Characteristic and Test Circuit Diagram



Note: 1. Rise Time = 7ns Maximum. Input Impedance = 1 Megohm 22pf  
 2. Rise Time = 10ns Maximum Source Impedance = 50 ohms

## Part Number Table

Description	Part Number
Diode, Fast, 3A, 50V	MR850
Diode, Fast, 3A, 100V	MR851
Diode, Fast, 3A, 200V	MR852
Diode, Fast, 3A, 400V	MR854
Diode, Fast, 3A, 600V	MR856
Diode, Fast, 3A, 800	MR858

## Notes:

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