

# MR850 THRU MR856



3.0 AMP FAST RECOVERY RECTIFIERS



## FEATURES

- \* Low forward voltage drop
- \* High current capability
- \* High reliability
- \* High surge current capability

## MECHANICAL DATA

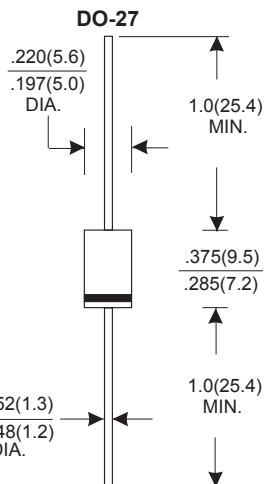
- \* Case: Molded plastic
- \* Epoxy: UL 94V-0 rate flame retardant
- \* Lead: Axial leads, solderable per MIL-STD-202, method 208 guaranteed
- \* Polarity: Color band denotes cathode end
- \* Mounting position: Any
- \* Weight: 1.10 grams

## VOLTAGE RANGE

50 to 600 Volts

## CURRENT

3.0 Amperes



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating 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  | MR850      | MR851 | MR852 | MR854 | MR856 | UNITS |
|--|------------|-------|-------|-------|-------|-------|
| Maximum Recurrent Peak Reverse Voltage   | 50         | 100   | 200   | 400   | 600   | V     |
| Maximum RMS Voltage  | 35         | 70    | 140   | 280   | 480   | V     |
| Maximum DC Blocking Voltage  | 50         | 100   | 200   | 400   | 600   | V     |
| Maximum Average Forward Rectified Current  |            |       |       |       |       | A     |
| .375"(9.5mm) Lead Length at Ta=75°C  | 3.0        |       |       |       |       | A     |
| Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | 200        |       |       |       |       | A     |
| Maximum Instantaneous Forward Voltage at 3.0A  | 1.25       |       |       |       |       | V     |
| Maximum DC Reverse Current Ta=25°C   | 5.0        |       |       |       |       | μA    |
| at Rated DC Blocking Voltage Ta=100°C  | 150        |       |       |       |       | μA    |
| Maximum Reverse Recovery Time (Note 1)   | 150        |       |       |       |       | nS    |
| Typical Junction Capacitance (Note 2)  | 60         |       |       |       |       | pF    |
| Operating and Storage Temperature Range T <sub>J</sub> , T <sub>STG</sub>                          | -65 — +150 |       |       |       |       | °C    |

### NOTES:

- Reverse Recovery Time test condition: IF=0.5A, IR=1.0A, IRR=0.25A
- Measured at 1MHz and applied reverse voltage of 4.0V D.C.

# RATING AND CHARACTERISTIC CURVES (MR850 THRU MR856)

FIG.1-TYPICAL FORWARD CHARACTERISTICS

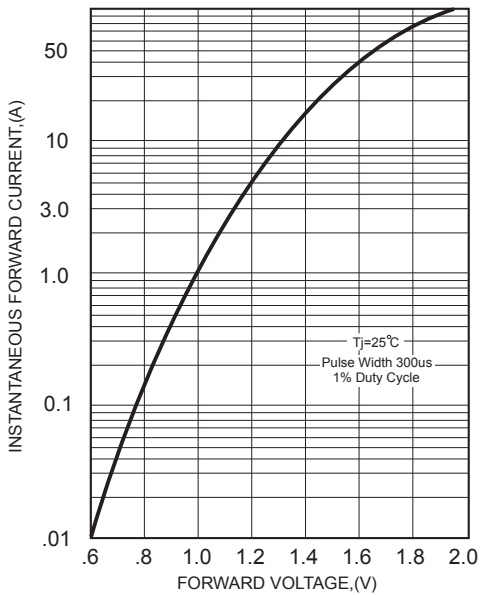


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

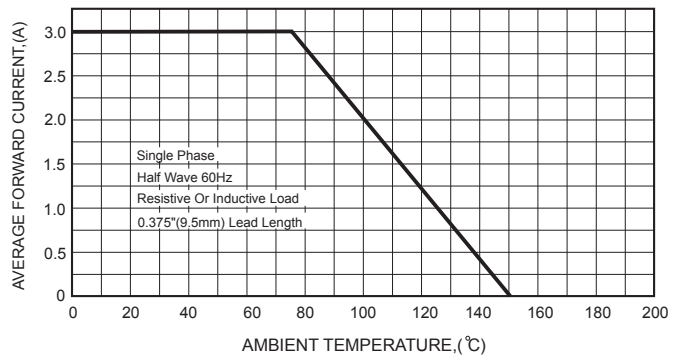
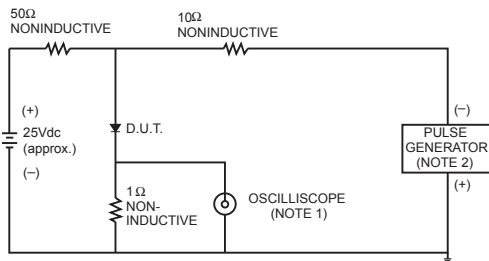


FIG.3- TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTICS



- NOTES: 1. Rise Time= 7ns max., Input Impedance= 1 megohm, 22pF.  
2. Rise Time= 10ns max., Source Impedance= 50 ohms.

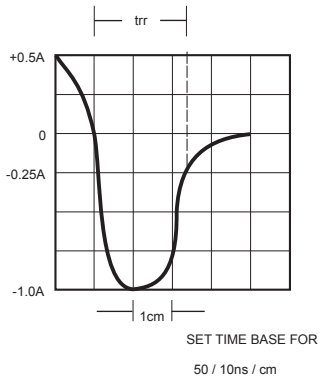


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

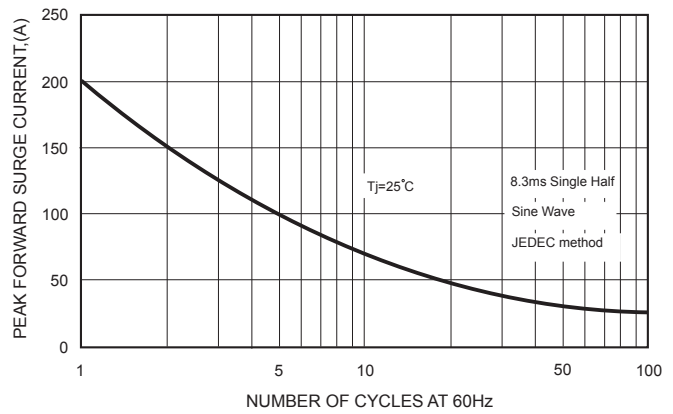


FIG.5-TYPICAL JUNCTION CAPACITANCE

