

# MR850 THRU MR856

## SOFT RECOVERY, FAST SWITCHING PLASTIC RECTIFIER VOLTAGE - 50 to 600 Volts CURRENT - 3.0 Amperes

### FEATURES

- High surge current capability
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Void-free molded plastic package
- 3.0 ampere operation at  $T_A=50\text{ }^{\circ}\text{C}$  with no thermal runaway
- Exceeds environmental standards of MIL-S-19500/228
- Fast switching for high efficiency

### MECHANICAL DATA

Case: JEDEC DO-201AD molded plastic

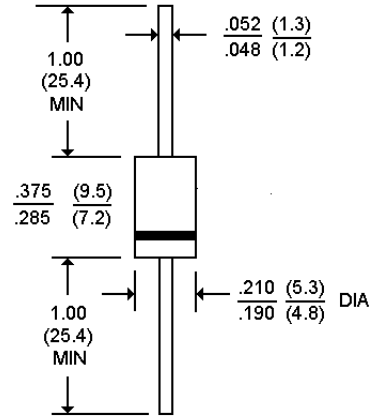
Terminals: Plated Axial leads, solderable per MIL-STD-750,  
Method 2026

Polarity: Color Band denotes end

Mounting Position: Any

Weight: 0.04 ounce, 1.1 gram

### DO-201AD



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25  $^{\circ}\text{C}$  ambient temperature unless otherwise specified.

Resistive or inductive load.

	SYMBOLS	MR850	MR851	MR852	MR854	MR856	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	Volts
Maximum RMS Voltage	$V_{RMS}$	35	70	140	280	480	Volts
Maximum DC Blocking Voltage	$V_{DC}$	50	100	200	400	600	Volts
Maximum Average Forward Rectified Current .375"(9.5mm) Lead Length at $T_A=50\text{ }^{\circ}\text{C}$	$I_{(AV)}$	3.0					Amps
Peak Forward Surge Current 10ms single half sine-wave superimposed on rated load at $T_A=25\text{ }^{\circ}\text{C}$	$I_{FSM}$	100.0					Amps
Maximum Repetitive Peak Forward Surge(Note 1)	$I_{FRM}$	10.0					Amps
Maximum Instantaneous Forward Voltage at 3.0A	$V_F$	1.25					Volts
Maximum DC Reverse Current $T_A=25\text{ }^{\circ}\text{C}$ at Rated DC Blocking Voltage $T_A=100\text{ }^{\circ}\text{C}$	$I_R$	500.0					$\mu\text{g A}$
Maximum Reverse Recovery Time(Note 3) $T_J=25\text{ }^{\circ}\text{C}$	$T_{RR}$	150					ns
Typical Junction capacitance (Note 2)	$C_J$	60					pF
Typical Thermal Resistance (Note 4)	$R_{\theta KJA}$	15.0					$^{\circ}\text{C/W}$
Operating Junction Temperature Range	$T_J$	-50 to +125					$^{\circ}\text{C}$
Storage Temperature Range	$T_{STG}$	-50 to +150					$^{\circ}\text{C}$

### NOTES:

1. Repetitive Peak Forward Surge Current at  $f < 15\text{ KHz}$
2. Measured at 1 MHz and applied reverse voltage of 4.0 Volts
3. Reverse Recovery Test Conditions:  $I_F=0.5\text{ A}$ ,  $I_R=1.0\text{ A}$ ,  $I_{rr}=0.25\text{ A}$
4. Thermal Resistance From Junction to Ambient at 0.375"(9.5mm) lead length with both leads to heat sink

# RATING AND CHARACTERISTIC CURVES

## MR850 THRU MR856

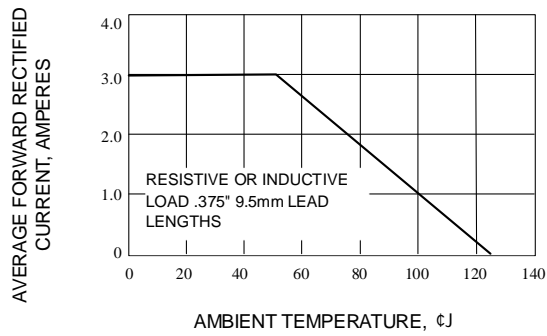


Fig. 1-FORWARD CURRENT DERATING CURVE

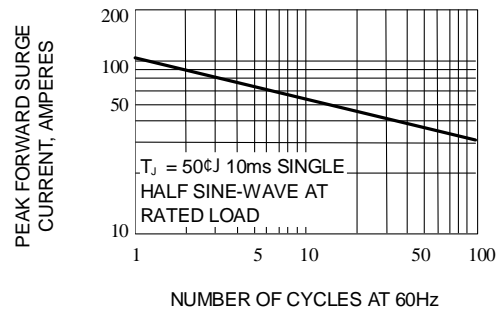


Fig. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

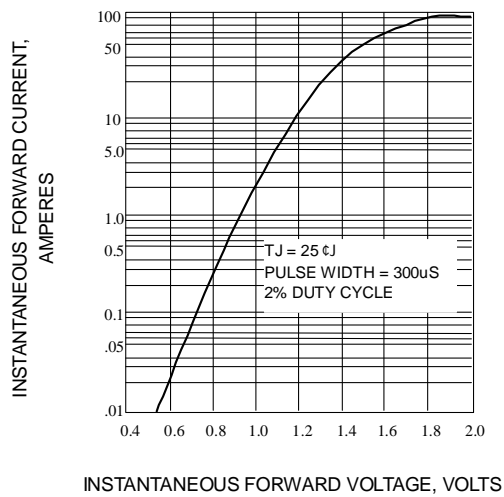


Fig. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

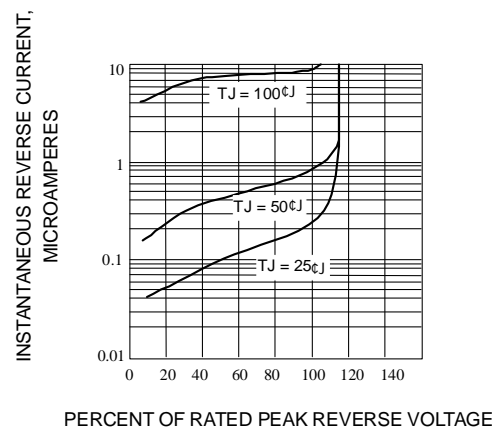


Fig. 4-TYPICAL REVERSE CHARACTERISTICS

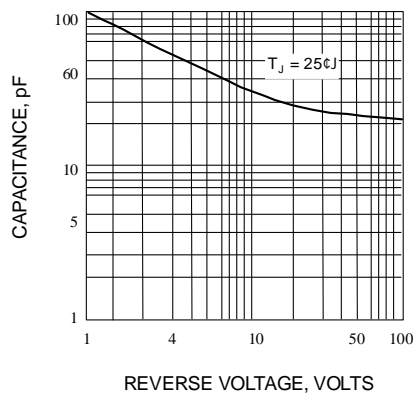


Fig. 5-TYPICAL JUNCTION CAPACITANCE