

# MR850 THRU MR856

## SOFT RECOVERU, FAST SWITCHING PLASTIC RECTIFIER

VOLTAGE - 50 to 600 Volts CURRENT - 3.0 Amperes

### DO-201AD

#### FEATURES

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

#### MECHANICAL DATA

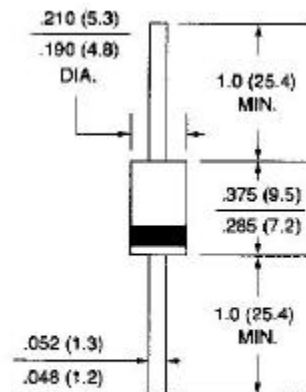
Case: JEDEC DO-201AD molded plastic

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



Dimensions in inches and (millimeters)

#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25 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 $T_A=50$	$I_{(AV)}$	3.0					Amps
Peak Forward Surge Current 10ms single half sine-wave superimposed on rated load at $T_A=25$	$I_{FSM}$	100.0					Amps
Maximum Repetitive Peak Forward Surge(Note1)	$I_{FRM}$	10.0					Amps
Maximum Instantaneous Forward Voltage at 3.0A	$V_F$	1.25					Volts
Maximum DC Reverse Current $T_A=25$ at Rated DC Blocking Voltage $T_A=100$	$I_R$	10.0 500.0					A A
Maximum Reverse Recovery Time(Note 3) $T_J=25$	$T_{RR}$	150					ns
Typical Junction capacitance (Note 2)	$C_J$	60					pF
Typical Thermal Resistance (Note 4)	R JA	15.0					/W
Operating Junction Temperature Range	$T_J$	-50 to +125					
Storage Temperature Range	$T_{STG}$	-50 to +150					

#### 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

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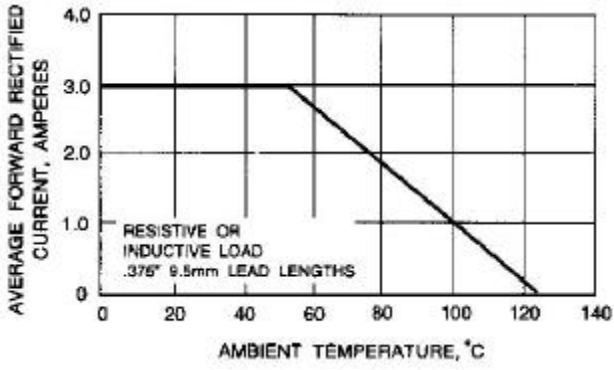


Fig. 1-FORWARD CURRENT DERATING CURVE

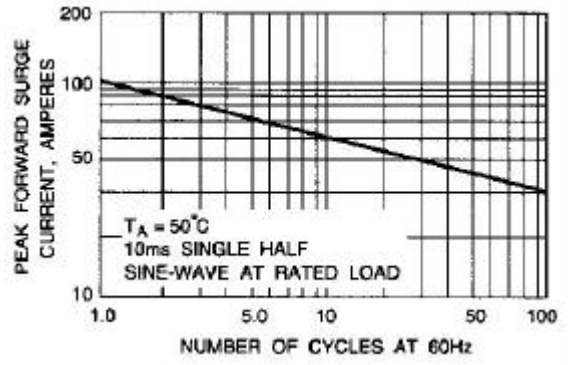


Fig. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

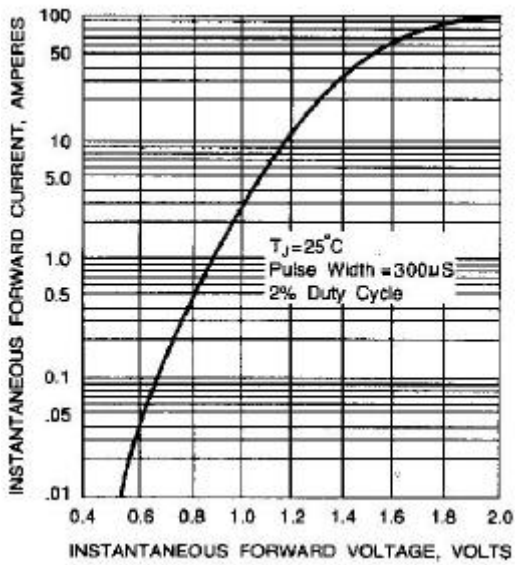


Fig. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

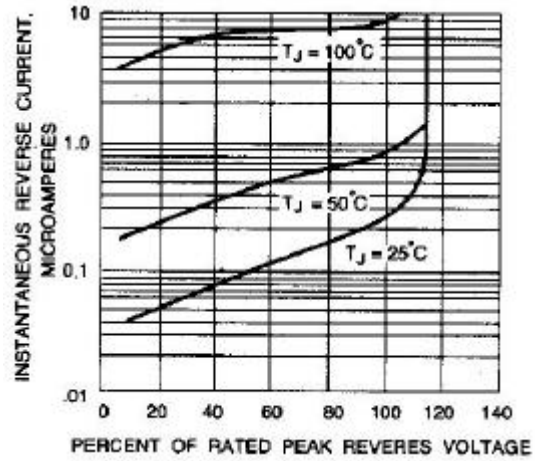


Fig. 4-TYPICAL REVERSE CHARACTERISTICS

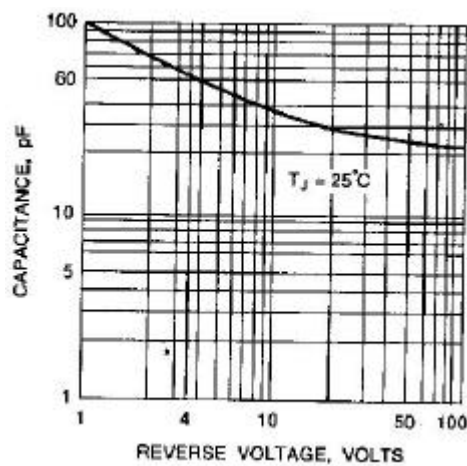


Fig. 5-TYPICAL JUNCTION CAPACITANCE