



# MR850 THRU MR858

## 3.0 AMPS. FAST RECOVERY RECTIFIERS

### FEATURES

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

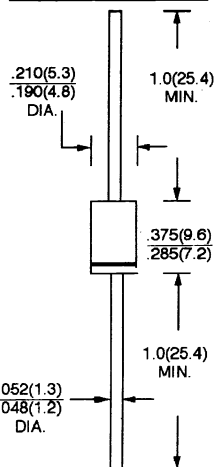
### MECHANICAL DATA

- \* 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: 1.18 grams

### VOLTAGE RANGE

50 to 800 Volts  
CURRENT  
3.0 Amperes

### DO-201AD



Dimensions in inches and (millimeters)

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Rating at 25°C ambient temperature unless otherwise specified.  
Single phase, half wave, 60 Hz, resistive or inductive load.  
For capacitive load, derate current by 20%

TYPE NUMBER	SYMBOLS	MR850	MR851	MR852	MR854	MR856	MR858	UNITS
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	V
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	V
Maximum D. C Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	V
Maximum Average Forward Rectified Current .375" (9.5mm) lead length @ T <sub>A</sub> = 55°C	I <sub>F(AV)</sub>	3.0						A
Peak Forward Surge Current, 8.3 ms single half sine-wave superimposed on rated load(JEDEC method)	I <sub>FSM</sub>	150						A
Maximum Instantaneous Forward Voltage at 3.0A	V <sub>F</sub>	1.25				1.3		V
Maximum D. C Reverse Current @ T <sub>A</sub> = 25°C at Rated D. C Blocking Voltage @ T <sub>A</sub> = 100°C	I <sub>R</sub>	10.0 200						μA μA
Maximum Reverse Recovery Time(Note 1)	T <sub>RR</sub>	100				150		nS
Typical Junction Capacitance (Note 2)	C <sub>J</sub>	80						pF
Operating Temperature Range	T <sub>J</sub>	- 65 to + 125						°C
Storage Temperature Range	T <sub>STG</sub>	- 65 to + 150						°C

NOTES: 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 1 MHz and applied reverse voltage of 4.0V D.C.

## RATINGS AND CHARACTERISTIC CURVES (MR850 THRU MR858)

FIG. 1 - FORWARD CURRENT DERATING CURVE

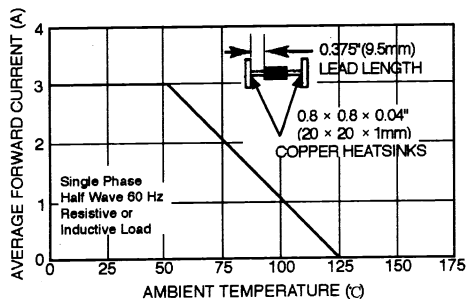


FIG. 2 - MAXIMUM NON - REPETITIVE FORWARD SURGE CURRENT

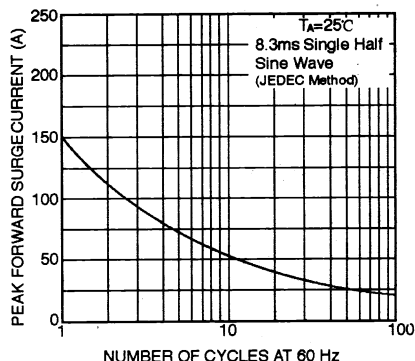


FIG. 3 - TYPICAL FORWARD CHARACTERISTICS

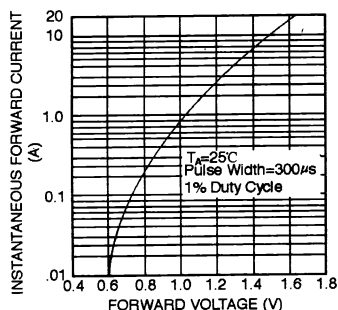


FIG. 4 - TYPICAL JUNCTION CAPACITANCE

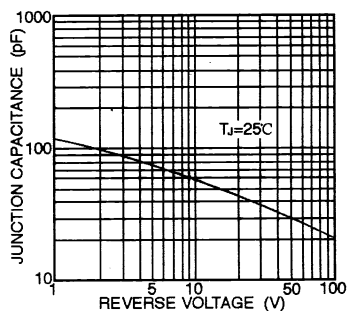


FIG. 5 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY SET TIME BASE FOR

