



## PRESS FIT AUTOMOTIVE RECTIFIER (MOTOROLA)

### PRM501 THRU PRM506

VOLTAGE RANGE 100 to 600 Volts

CURRENT 50.0 Amperes

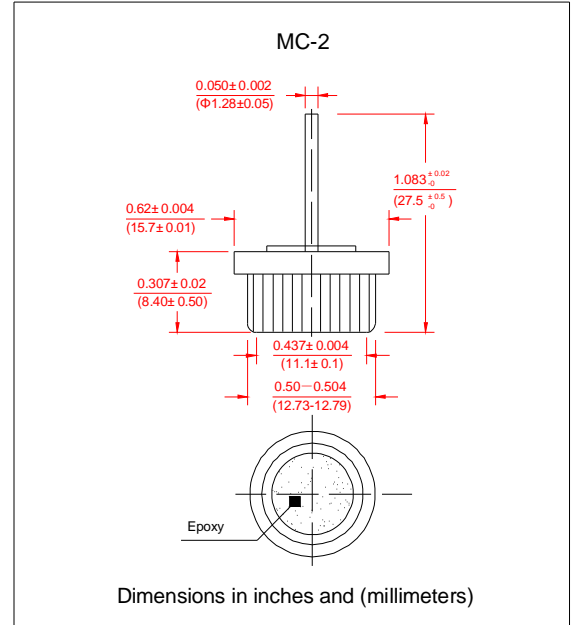
#### TECHNICAL SPECIFICATION:

#### FEATURES

- Low Leakage
- Low forward voltage drop
- High current capability
- High forward surge current capacity

#### MECHANICAL DATA

- Technology: Cell with Vacuum soldered
- Case: Copper case
- Polarity: As marked of case bottom
- Lead: Plated lead, solderable per MIL-STD-202E method 208C
- Mounting: Press Fit
- Weight: 0.30 ounces, 8.5 grams



#### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

- Ratings at 25°C ambient temperature unless otherwise specified
- Single Phase, half wave, 60HZ, resistive or inductive load
- For capacitive load derate current by 20%

	SYMBOLS	PRM501	PRM502	PRM503	PRM504	PRM506	UNIT
Maximum Repetitive Peak Reverse Voltage	$V_{RRM}$	100	200	300	400	600	Volts
Maximum RMS Voltage	$V_{RMS}$	70	140	210	280	420	Volts
Maximum DC Blocking Voltage	$V_{DC}$	100	200	300	400	600	Volts
Maximum Average Forward Rectified Current, At $T_c=105^\circ C$	$I_{(AV)}$	50					Amps
Peak Forward Surge Current 3.3mS single half sine wave superimposed on Rated load (JEDEC method)	$I_{FSM}$	600					Amps
Rating for fusing ( $t < 8.3ms$ )	$I^2t$	1494					A <sup>2</sup> S
Maximum instantaneous Forward Voltage at 100A	$V_F$	1.05					Volts
Maximum DC Reverse Current at Rated $T_A=25^\circ C$ DC Blocking Voltage $T_A=100^\circ C$	$I_R$	5.0					UA
		450					
Typical Thermal Resistance	$R_{\theta JC}$	0.8					°C/W
Operating and Storage Temperature Range	$T_J, T_{STG}$	(-65 to +175)					°C

#### Notes:

1. Enough heatsink must be considered in application.



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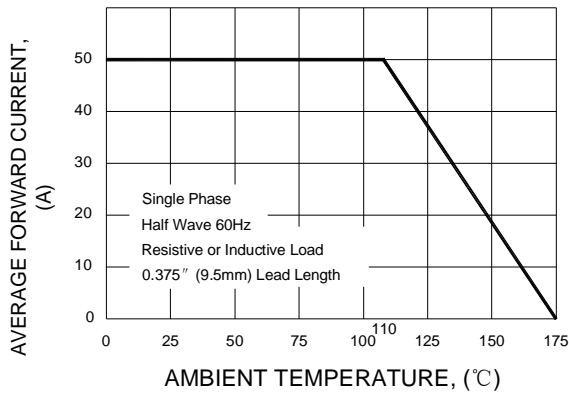
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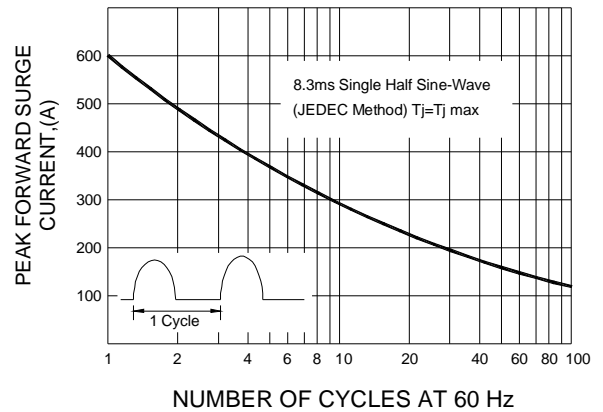
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## RATINGS AND CHARACTERISTIC CURVES PRM501 THRU PRM506

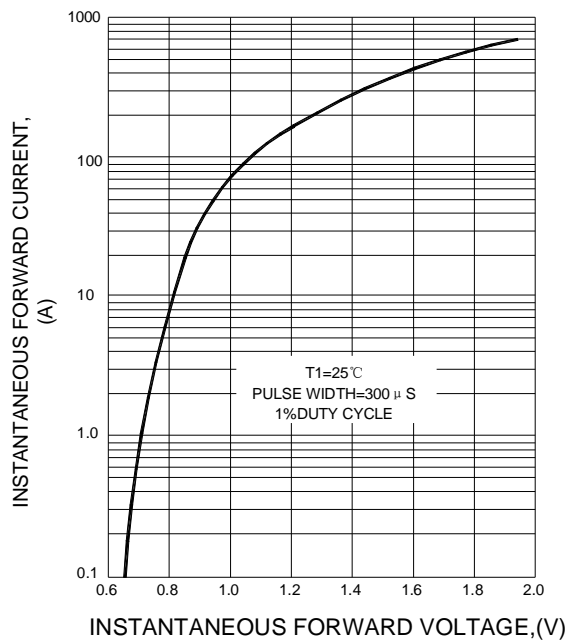
**FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE**



**FIG.2 MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT**



**FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS**



**FIG.4 FORWARD POWER DISSIPATION**

