



PRESS FIT AUTOMOTIVE RECTIFIER (MOTOROLA)

PRMG501 THRU PRMG506

VOLTAGE RANGE 100 to 600 Volts

CURRENT 50.0 Amperes

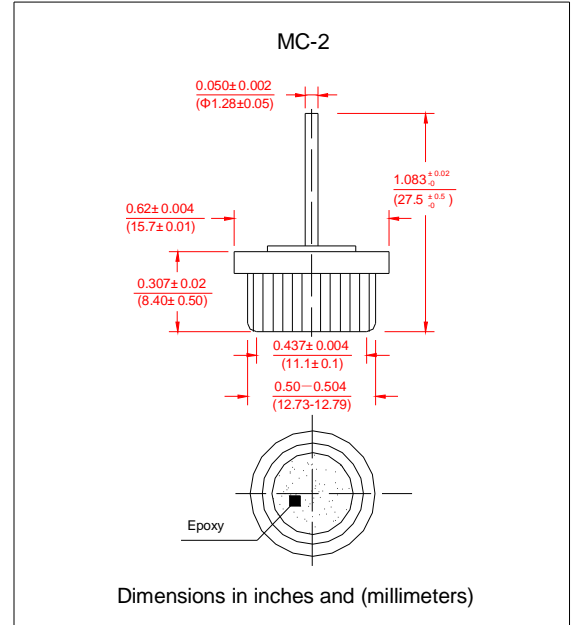
TECHNICAL SPECIFICATION:

FEATURES

- Low Leakage
- Low forward voltage drop
- High current capability
- High forward surge current capacity
- Glass passivated chip

MECHANICAL DATA

- Technology: 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^2S |
| 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 | | | | | $^\circ C/W$ |
| Operating and Storage Temperature Range | T_J, T_{STG} | (-65 to +175) | | | | | $^\circ C$ |

Notes:

1. Enough heat sink must be considered in application.



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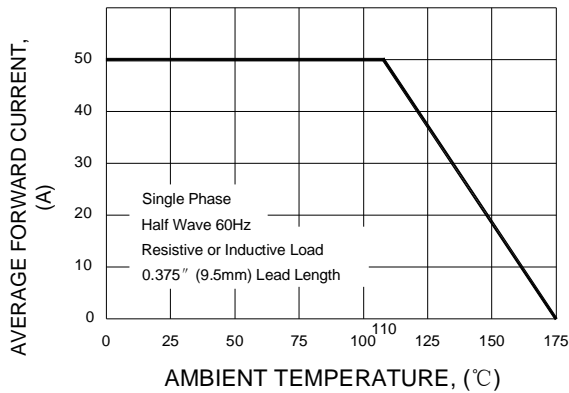
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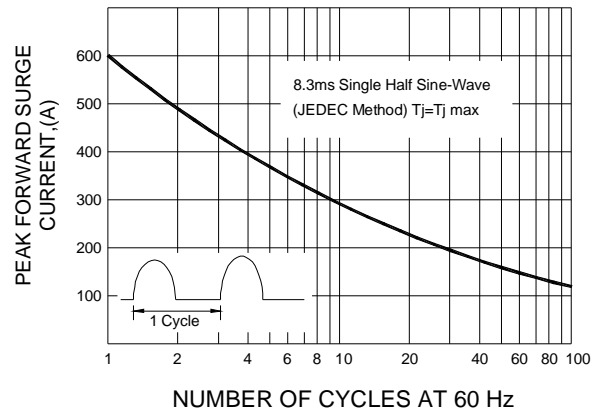
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RATINGS AND CHARACTERISTIC CURVES PRM501 THRU PRM506

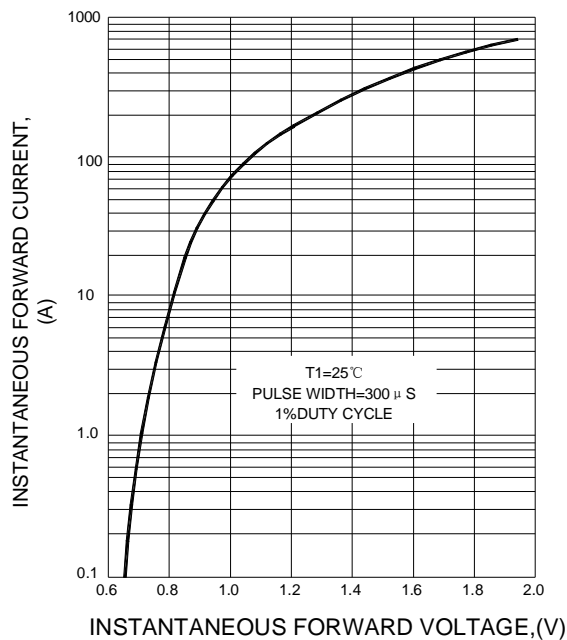
F1G.1 TYPICAL FORWARD CURRENT DERATING CURVE



F1G.2 MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



F1G.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



F1G.4 FORWARD POWER DISSIPATION

