



PRESS FIT AUTOMOTIVE RECTIFIER (BOSCH)

PRBG251 THRU PRBG256

VOLTAGE RANGE 100 to 600 Volts

CURRENT 25.0 Amperes

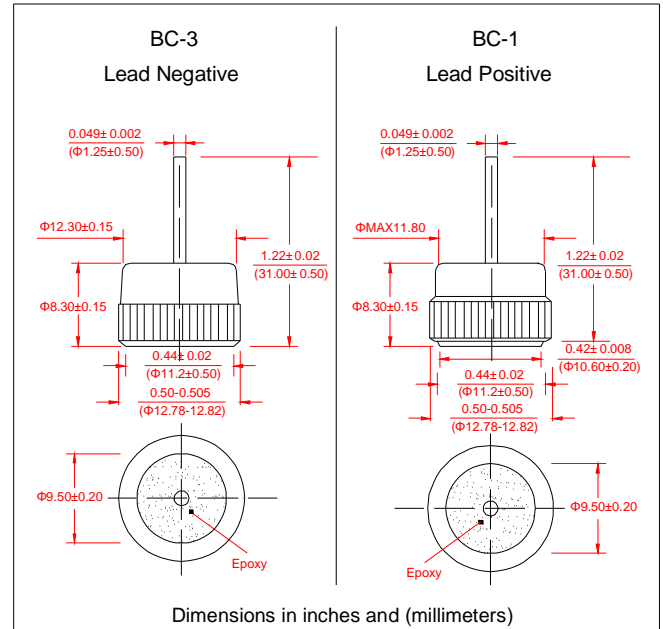
TECHNICAL SPECIFICATION:

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: 0.28 ounces, 7.86 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 | PRBG251 | PRBG252 | PRBG253 | PRBG254 | PRBG256 | 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 $T_c=105^\circ\text{C}$ | $I_{(AV)}$ | 25 | | | | | Amps |
| Peak Forward Surge Current 3.3mS single half sine wave superimposed on Rated load (JEDEC method) | I_{FSM} | 400 | | | | | Amps |
| Rating for fusing ($t < 8.3\text{ms}$) | I^2t | 664 | | | | | A^2S |
| Maximum instantaneous Forward Voltage at 100A | V_F | 1.08 | | | | | Volts |
| Maximum DC Reverse Current at Rated $T_A=25^\circ\text{C}$ DC Blocking Voltage $T_A=100^\circ\text{C}$ | I_R | 5.0 | | | | | UA |
| | | 450 | | | | | |
| Typical Thermal Resistance | $R_{\theta JC}$ | 0.8 | | | | | $^\circ\text{C}/\text{W}$ |
| Operating and Storage Temperature Range | T_J, T_{STG} | (-65 to +175) | | | | | $^\circ\text{C}$ |

Notes:

1. Enough heat sink must be considered in application.



PRESS FIT AUTOMOTIVE RECTIFIER (BOSCH)

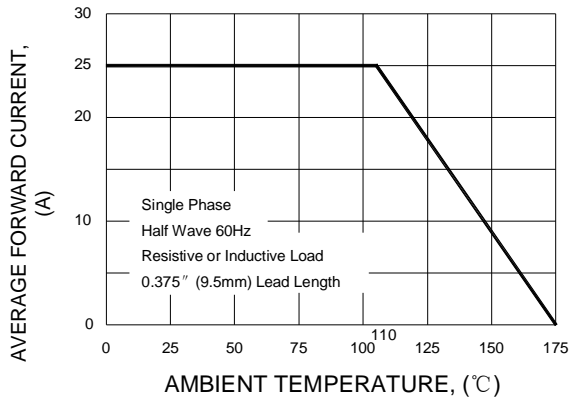
PRBG251 THRU PRBG256

VOLTAGE RANGE 100 to 600 Volts

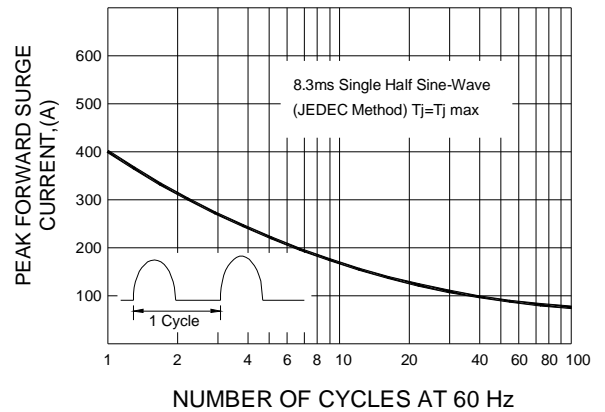
CURRENT 25.0 Amperes

RATINGS AND CHARACTERISTIC CURVES PRBG251 THRU PRBG256

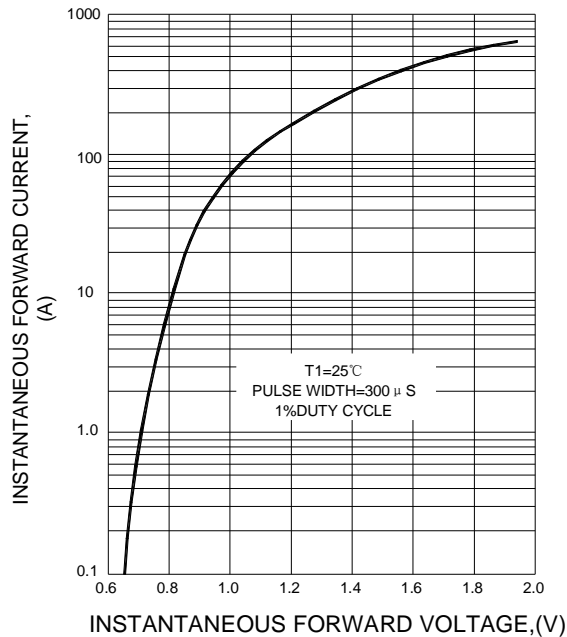
F1G.1 TYPICAL FORWARD CURRENT DERATING CURVE



F1G.2 MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



F1G.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



F1G.4 FORWARD POWER DISSIPATION

