PRESS FIT AUTOMOTIVE RECTIFIER（BOSCH）

PRB501 THRU PRB506

VOLTAGE RANGE **100 to 600 Volts**
CURRENT **50.0 Amperes**

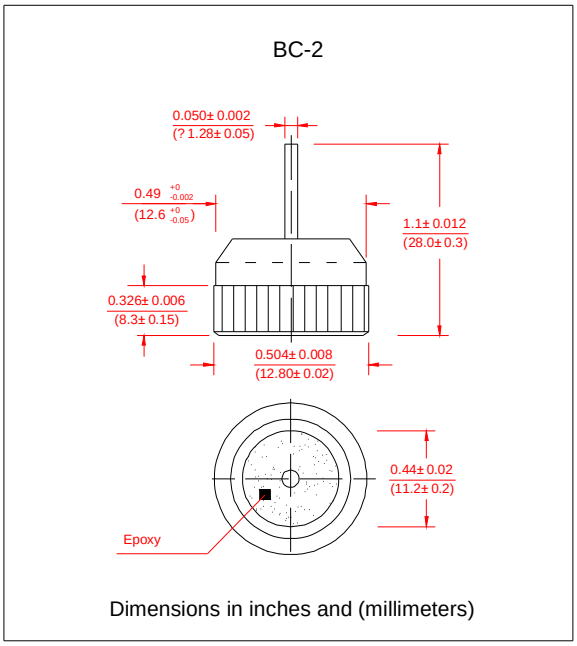
TECHNICAL SPECIFICATION:

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: 0.29 ounces, 8.09 grams



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

	SYMBOLS	PRB501	PRB502	PRB503	PRB504	PRB506	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 Tc=105℃	$I_{(AV)}$	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 TA=25℃	I_R	5.0					UA
DC Blocking Voltage TA=100℃		450					
Typical Thermal Resistance	$R_{\theta JC}$	0.8					℃/W
Operating and Storage Temperature Range	T_J,T_{STG}	(-65 to +175)					℃

Notes:

1. Enough heat sink must be considered in application.

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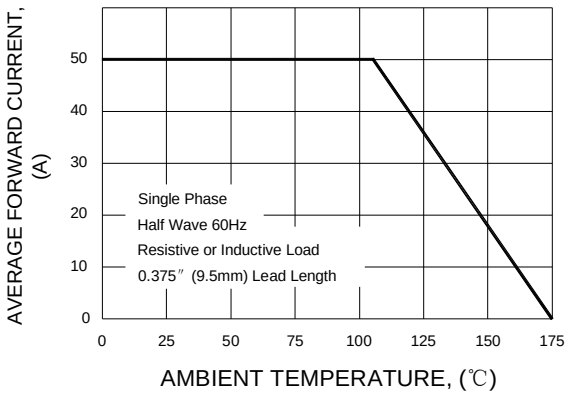
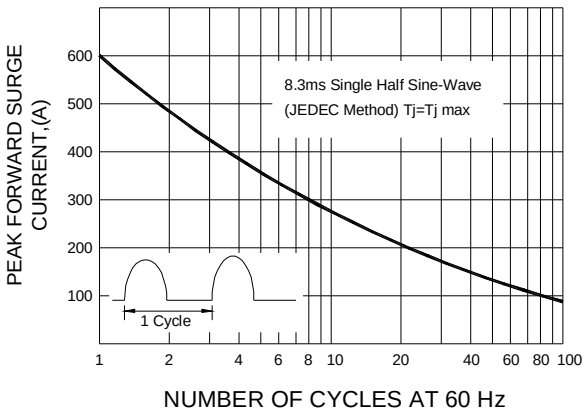
RATINGS AND CHARACTERISTIC CURVES PRB501 THRU PRB506

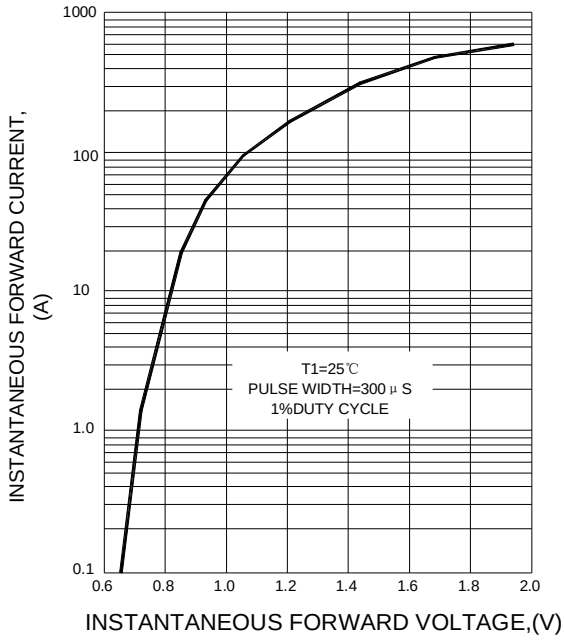
F1G.1 TYPICAL FORWARD CURRENT DERATING GURVE



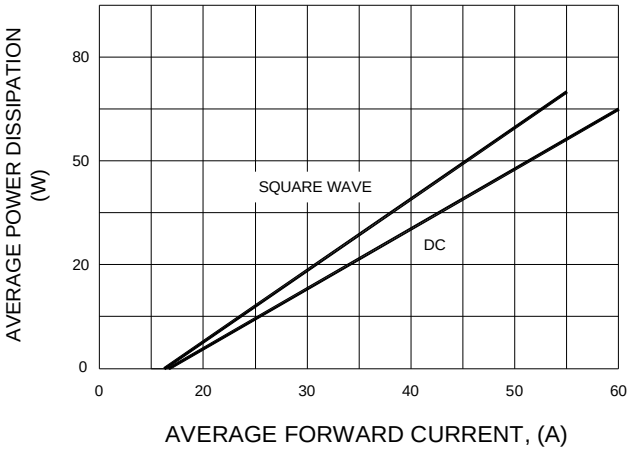
F1G.2 MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



F1G.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



F1G.4 FORWARD ROWER DISSIPATION



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