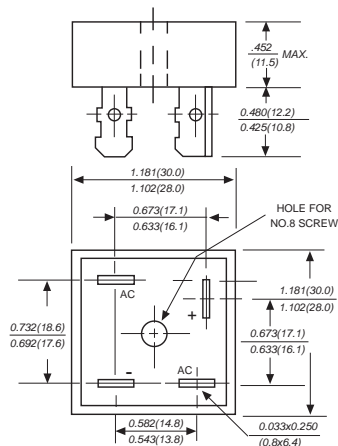


# KBPC35005 THRU KBPC3510 AND MB3505 THRU MB3510

## SILICON BRIDGE RECTIFIERS

Reverse Voltage - 50 to 1000 Volts    Forward Current - 35.0 Amperes

### MB-35



Dimensions in inches and (millimeters)

### FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ Ideal for printed circuit boards
- ◆ Low reverse leakage
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 260°C/10 seconds, at 5 lbs. (2.3kg) tension

### MECHANICAL DATA

**Case:** Metal case

**Terminals:** Plated 0.25" (6.35mm) lug.

**Polarity:** Polarity symbols marked on case

**Mounting:** Thru hole for #8 screw, 20in.-lbs. torque max.

**Weight:** 1.02 ounce, 29 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 current capacitive load current derate by 20%.

|   | SYMBOLS         | KBPC 35005<br>MB3505    | KBPC 3501<br>MB351 | KBPC 3502<br>MB352 | KBPC 3504<br>MB354 | KBPC 3506<br>MB356 | KBPC 3508<br>MB358 | KBPC 3510<br>MB3510 | UNITS                     |
|---|-----------------|-------------------------|--------------------|--------------------|--------------------|--------------------|--------------------|---------------------|---------------------------|
| Maximum repetitive peak reverse voltage   | $V_{RRM}$       | 50                      | 100                | 200                | 400                | 600                | 800                | 1000                | VOLTS                     |
| Maximum RMS voltage   | $V_{RMS}$       | 35                      | 70                 | 140                | 280                | 420                | 560                | 700                 | VOLTS                     |
| Maximum DC blocking voltage   | $V_{DC}$        | 50                      | 100                | 200                | 400                | 600                | 800                | 1000                | VOLTS                     |
| Maximum average forward output rectified current at $T_c=50^\circ\text{C}$ (Note 1,2)               | $I_{(AV)}$      | 35                      |                    |                    |                    |                    |                    |                     | Amps                      |
| Peak forward surge current<br>8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$       | 400.0                   |                    |                    |                    |                    |                    |                     | Amps                      |
| Rating for Fusing ( $t < 8.3\text{ms}$ )  | $I^2t$          | 664                     |                    |                    |                    |                    |                    |                     | $\text{A}^2\text{s}$      |
| Maximum instantaneous forward voltage drop per bridge element at 17.5A                              | $V_F$           | 1.1                     |                    |                    |                    |                    |                    |                     | Volts                     |
| Maximum DC reverse current<br>at rated DC blocking voltage  | $I_R$           | $T_A=25^\circ\text{C}$  |                    |                    |                    |                    |                    |                     | $\text{mA}$               |
|   |                 | $T_A=100^\circ\text{C}$ |                    |                    |                    |                    |                    |                     | $\text{mA}$               |
| Isolation voltage from case to leads  | $V_{ISO}$       | 2500                    |                    |                    |                    |                    |                    |                     | $V_{AC}$                  |
| Typical Thermal Resistance (Note 2)   | $R_{\theta JA}$ | 2.0                     |                    |                    |                    |                    |                    |                     | $^\circ\text{C}/\text{W}$ |
| Operating junction temperature range  | $T_J$           | -65 to +150             |                    |                    |                    |                    |                    |                     | $^\circ\text{C}$          |
| storage temperature range   | $T_{STG}$       | -65 to +150             |                    |                    |                    |                    |                    |                     | $^\circ\text{C}$          |

**NOTES:**

1. Unit mounted on 9" x 3.5" x 4.6" thick (23cm x 9cm x 11.8cm) Al. plate.

2. Bolt down on heat-sink with silicone thermal compound between bridge and mounting surface for maximum heat transfer efficiency with #8 screw.