

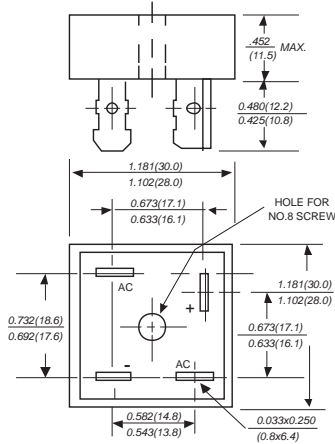


KBPC25005 THRU KBPC2510 AND MB2505 THRU MB2510

SILICON BRIDGE RECTIFIERS

Reverse Voltage - 50 to 1000 Volts Forward Current - 25.0 Amperes

MB-25



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, 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, derate by 20%.

| | SYMBOLS | KBPC 25005 MR2505 | KBPC 2501 MB251 | KBPC 2502 MB252 | KBPC 2504 MB254 | KBPC 2506 MB256 | KBPC 2508 MR258 | KBPC 2510 MB2510 | 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) | $I_{(AV)}$ | 25 | | | | | | | Amps |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 300.0 | | | | | | | Amps |
| Rating for Fusing ($t < 8.3\text{ms}$) | I^2t | 373 | | | | | | | A^2s |
| Maximum instantaneous forward voltage drop per bridge element at 12.5A | V_F | 1.1 | | | | | | | Volts |
| Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$ | I_R | 10 | | | | | | | μA |
| | | 1.0 | | | | | | | mA |
| Isolation voltage from case to leads | V_{ISO} | 2500 | | | | | | | V_{AC} |
| Typical Thermal Resistance (Note 2) | R_{qJA} | 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 5" x 6" x 4.9" thick (12.8cm x 15.2cm x 12.4cm) 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.

RATINGS AND CHARACTERISTIC CURVES KBPC25005 THRU KBPC2510 AND MB2505 THRU MB2510

