

1.0A Surface Mount Schottky Barrier Single-Phase Bridge Rectifiers-20-100V

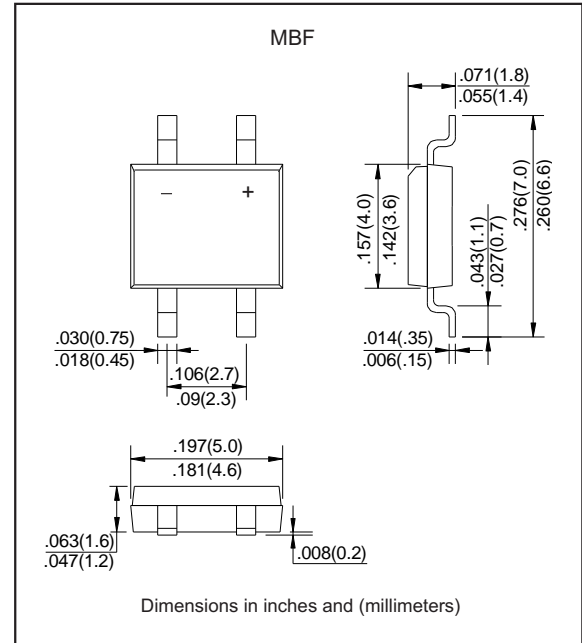
Features

- Surge overload ratings to 30 amperes peak.
- 1.0A rating in low profile surface mount mini-dip bridge save space on printed circuit board.
- Ideal for automated replacement.
- Reliable low cost construction utilizing molded plastic technology results in inexpensive product.
- Silicon eplana epitaxial chip, metal silicon junction.
- Lead-free parts meet RoHS requirements.

Mechanical data

- Epoxy:UL94-V0 rated flame retardant
- Case : Molded plastic, LBS/MBF
- Terminals : Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity : marked on body
- Mounting Position : Any
- Weight : Approximated 0.082 gram

Package outline



Maximum ratings and Electrical Characteristics (AT $T_A=25^{\circ}\text{C}$ unless otherwise noted)

| PARAMETER | CONDITIONS | Symbol | MIN. | TYP. | MAX. | UNIT |
|-----------------------------------|---|-----------------|------|------|------|----------------------|
| Average Forward rectified current | See Fig.1 | I_{AV} | | | 1.0 | A |
| Peak Forward surge current | 8.3ms single half sine-wave (JEDEC methode) | I_{FSM} | | | 30 | A |
| Reverse current | $V_R = V_{RRM} \quad T_J = 25^{\circ}\text{C}$ | I_R | | | 0.1 | mA |
| | $V_R = V_{RRM} \quad T_J = 100^{\circ}\text{C}$ | | | | 10 | |
| Thermal resistance | Junction to ambient | $R_{\theta JA}$ | | 75 | | $^{\circ}\text{C/W}$ |
| Diode junction capacitance | f=1MHz and applied 4V DC reverse voltage | C_J | | 28 | | pF |
| Storage temperature | | T_{STG} | -55 | | +150 | $^{\circ}\text{C}$ |

| SYMBOLS | V_{RRM}^{*1} (V) | V_{RMS}^{*2} (V) | V_R^{*3} (V) | V_F^{*4} (V) | Operating temperature $T_J, (^{\circ}\text{C})$ |
|---------|-----------------------|-----------------------|-------------------|-------------------|--|
| KMB12F | 20 | 14 | 20 | 0.55 | |
| KMB14F | 40 | 28 | 40 | | |
| KMB16F | 60 | 42 | 60 | 0.70 | |
| KMB18F | 80 | 56 | 80 | | |
| KMB110F | 100 | 70 | 100 | 0.85 | |

*1 Repetitive peak reverse voltage

*2 RMS voltage

*3 Continuous reverse voltage

*4 Maximum forward voltage per element at 1.0A peak

Rating and characteristic curves

FIG. 1- FORWARD CURRENT DERATING CURVE

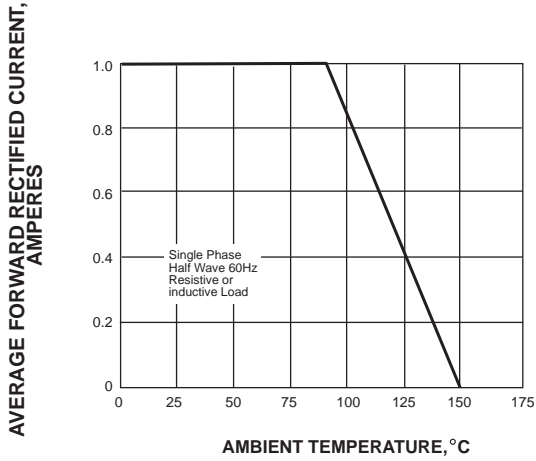


FIG. 2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

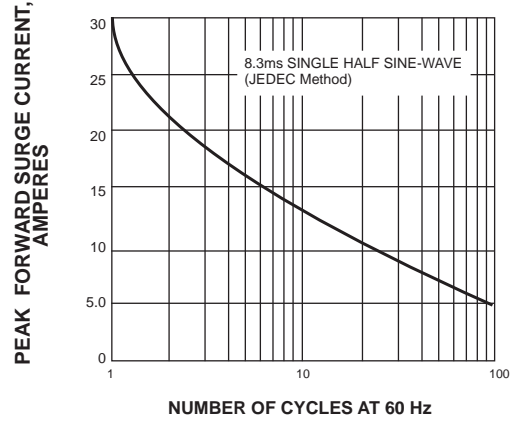


FIG. 3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

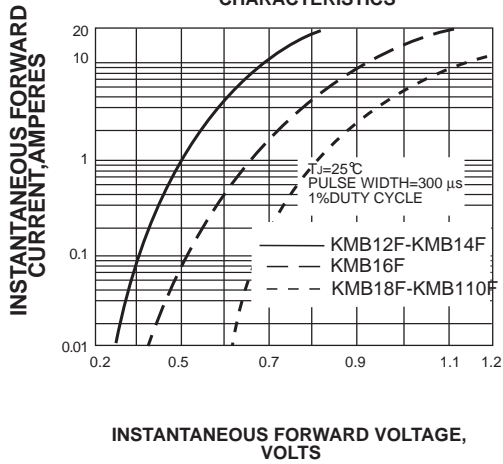


FIG. 4-TYPICAL REVERSE CHARACTERISTICS

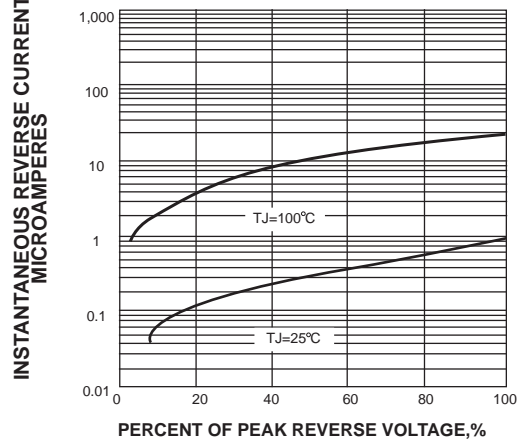
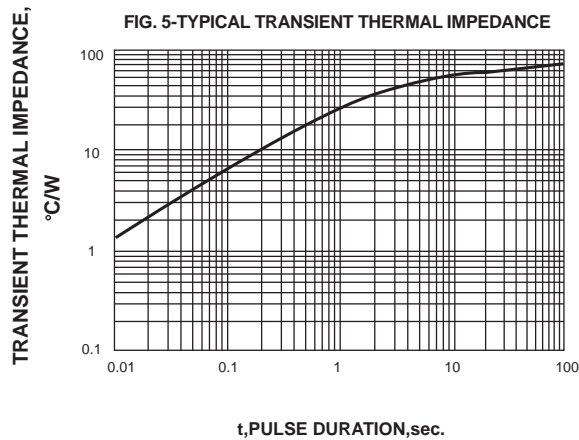
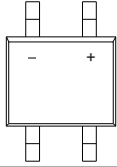
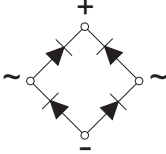


FIG. 5-TYPICAL TRANSIENT THERMAL IMPEDANCE



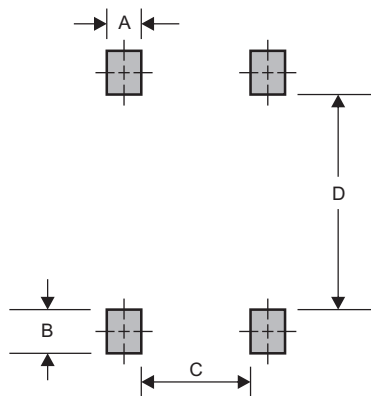
Pinning information

| Simplified outline | Symbol |
|---|---|
|  |  |

Marking

| Type number | Marking code |
|-------------|--------------|
| KMB12F | KMB12F |
| KMB14F | KMB14F |
| KMB16F | KMB16F |
| KMB18F | KMB18F |
| KMB110F | KMB110F |

Suggested solder pad layout



Dimensions in inches and (millimeters)

| PACKAGE | A | B | C | D |
|---------|--------------|--------------|--------------|--------------|
| MBF | 0.023 (0.58) | 0.030 (0.76) | 0.070 (1.78) | 0.226 (5.75) |

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