

Surface Mount Schottky Barrier Rectifier

VOLTAGE RANGE 20 to 200 Volts CURRENT 3.0 Amperes

FEATURES

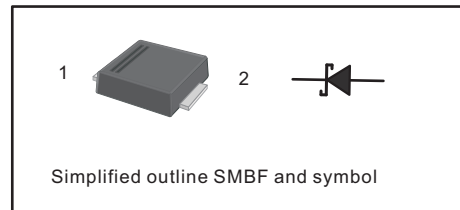
- * Metal silicon junction, majority carrier conduction
- * For surface mounted applications
- * Low power loss, high efficiency
- * High forward surge current capability
- * For use in low voltage, high frequency inverters, free wheeling, and polarity protection applications

MECHANICAL DATA

- * Case:SMBF
- * Terminals:Solderable per MIL-STD-750,Method 2026

PINNING

| PIN | DESCRIPTION |
|-----|-------------|
| 1 | Cathode |
| 2 | Anode |



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 by20%

MAXIMUM RATINGS (At TA = 25°C unless otherwise noted)

| RATINGS | SYMBOL | FM320BF | FM340BF | FM360BF | FM380BF | FM3100BF | FM3120BF | FM3150BF | FM3200BF | UNITS |
|---|------------------|--------------|---------|---------|---------|----------|----------|----------|----------|------------------|
| Maximum Recurrent Peak Reverse Voltage | VRRM | 20 | 40 | 60 | 80 | 100 | 120 | 150 | 200 | Volts |
| Maximum RMS Voltage | VRMS | 14 | 28 | 42 | 56 | 70 | 84 | 105 | 140 | Volts |
| Maximum DC Blocking Voltage | Vdc | 20 | 40 | 60 | 80 | 100 | 120 | 150 | 200 | Volts |
| Maximum Average Forward Rectified Current | IO | 3.0 | | | | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | IFSM | 80 | | | | | | | | Amps |
| Typical Current Squared Time | I ² T | 26.56 | | | | | | | | A ² S |
| Typical Thermaesistance (Note 2) | RθJL | 37 | | | | | | | | °C/W |
| | RθJA | 65 | | | | | | | | °C/W |
| Typical Junction Capacitance (Note 1) | CJ | 450 | | | | 400 | | | | pF |
| Operating and Storage Temperature Range | TJ,TSTG | -55 to + 150 | | | | | | | | °C |

ELECTRICAL CHARACTERISTICS (At TA = 25°C unless otherwise noted)

| CHARACTERISTICS | SYMBOL | FM320BF | FM340BF | FM360BF | FM380BF | FM3100BF | FM3120BF | FM3150BF | FM3200BF | UNITS |
|--|-------------|---------|---------|---------|---------|----------|----------|----------|----------|-------|
| Maximum Instantaneous Forward Voltage at 3.0A DC | VF | 0.55 | | 0.70 | | 0.85 | | 0.95 | | Volts |
| Maximum Average Reverse Current at Rated DC Blocking Voltage | @TA = 25°C | 0.5 | | | | 0.3 | | | | mAmps |
| | @TA = 100°C | 10 | | | | 5 | | | | mAmps |

NOTES : 1. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
2. Thermal resistance junction to terminal, 5X5mm² copper pads to each terminal.

RATING AND CHARACTERISTICS CURVES (FM320BF THRU FM3200BF)

Fig.1 Forward Current Derating Curve

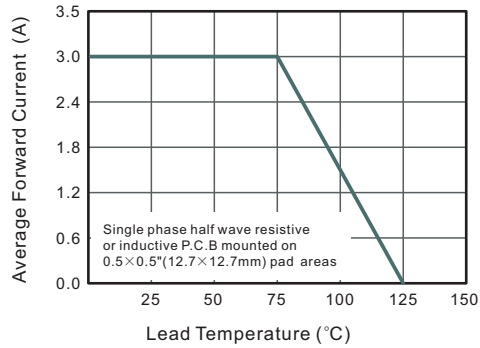


Fig.2 Typical Reverse Characteristics

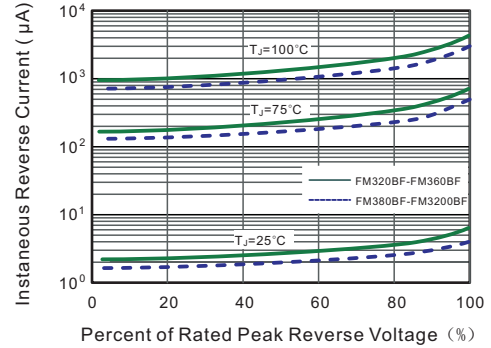


Fig.3 Typical Forward Characteristic

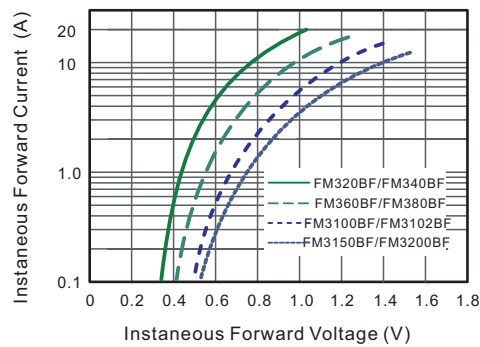


Fig.4 Typical Junction Capacitance

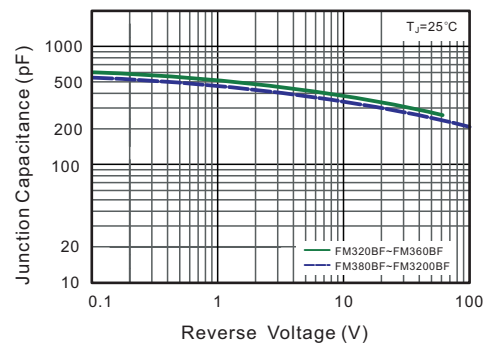


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

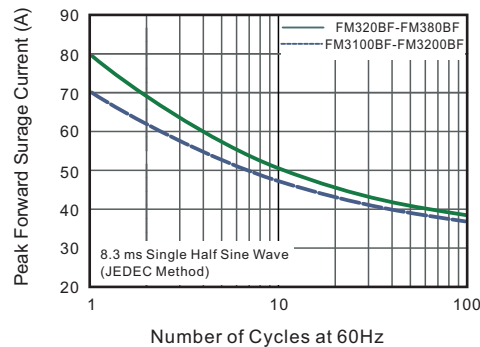
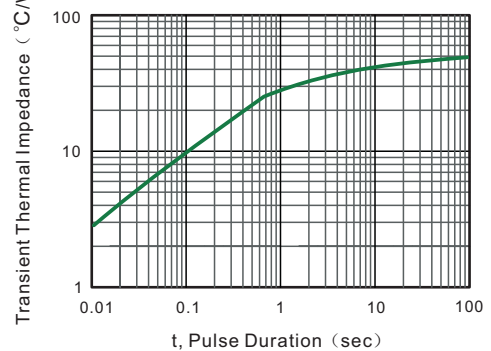
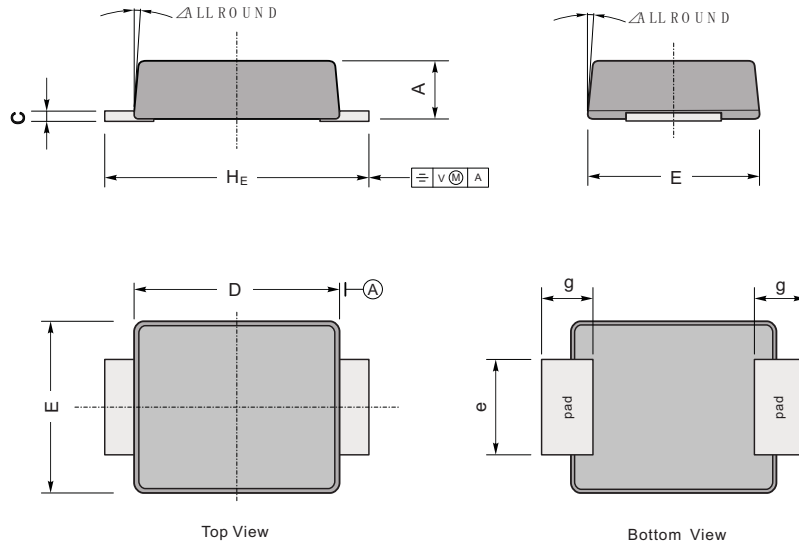


Fig.6- Typical Transient Thermal Impedance



PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

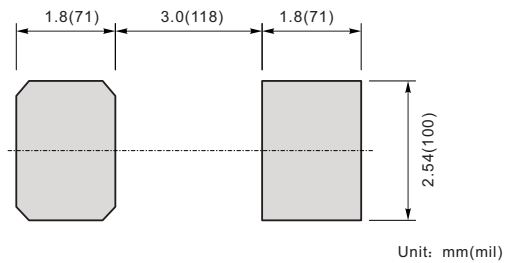


| UNIT | | A | C | D | E | H_E | e | g | \angle |
|------|-----|-----|------|-----|-----|-------|-----|-----|----------|
| mm | max | 1.3 | 0.26 | 4.4 | 3.7 | 5.5 | 2.2 | 1.0 | 9° |
| | min | 1.1 | 0.18 | 4.2 | 3.5 | 5.1 | 1.9 | | |
| mil | max | 51 | 10 | 173 | 146 | 216 | 86 | 40 | |
| | min | 43 | 7 | 165 | 138 | 200 | 75 | | |

Marking

| Type number | Marking code |
|-------------|--------------|
| FM320BF | S32B |
| FM340BF | S34B |
| FM360BF | S36B |
| FM380BF | S38B |
| FM3100BF | S310B |
| FM3120BF | S312B |
| FM3150BF | S315B |
| FM3200BF | S320B |

The recommended mounting pad size



Unit: mm(mil)

PACKAGING OF DIODE AND BRIDGE RECTIFIERS

REEL PACK

| PACKAGE | PACKING CODE | EA PER REEL | EA PER INNER BOX | COMPONENT SPACE (mm) | TAPE SPACE (mm) | REEL DIA (mm) | CARTON SIZE (mm) | EA PER CARTON | GROSS WEIGHT(Kg) |
|---------|--------------|-------------|------------------|----------------------|-----------------|---------------|------------------|---------------|------------------|
| SMBF | -T | 5000 | 10,000 | --- | --- | 330 | 350*350*230 | 50,000 | 8.20 |

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