

M1F THRU M7F

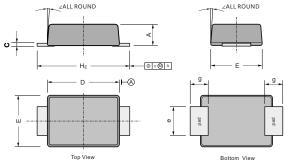
Surface Mount General Purpose Silicon Rectifiers



Reverse Voltage - 50 to 1000 V Forward Current - 1 A

SMAF





| UNIT | | Α | С | D | Е | е | g | HE | ∠ | |
|------|-----|-----|------|-----|-----|-----|-----|-----|----------|--|
| mm | max | 1.2 | 0.20 | 3.7 | 2.7 | 1.6 | 1.2 | 4.9 | | |
| | min | 0.9 | 0.12 | 3.3 | 2.4 | 1.3 | 8.0 | 4.4 | 7° | |
| mil | max | 47 | 7.9 | 146 | 106 | 63 | 47 | 193 | | |
| | min | 35 | 4.7 | 130 | 94 | 51 | 31 | 173 | | |

FEATURES

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- · Easy to pick and place
- Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

· Case: SMAF

• Terminals: Solderable per MIL-STD-750, Method 2026

• Approx. Weight: 27mg / 0.00095oz

Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

| Parameter | Symbols | M1F | M2F | мзғ | M4F | M5F | M6F | M7F | Units |
|--|--------------------|------------|-----|-----|-----|-----|-----|------|-------|
| Maximum Repetitive Peak Reverse Voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Maximum DC Blocking Voltage | V _{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| Maximum Average Forward Rectified Current at T_c = 125 °C | I _{F(AV)} | 1 | | | | | | | А |
| Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load | I _{FSM} | 30 | | | | | | | |
| Maximum Instantaneous Forward Voltage at 1 A | V _F | 1.1 | | | | | | | V |
| Maximum DC Reverse Current $T_a = 25 ^{\circ}\text{C}$ at Rated DC Blocking Voltage $T_a = 125 ^{\circ}\text{C}$ | I _R | 5 50 | | | | | | | μA |
| Typical Junction Capacitance (1) | C _j | 15 | | | | | | | pF |
| Typical Thermal Resistance (2) | $R_{\theta JA}$ | 80 | | | | | | | °C/W |
| Operating and Storage Temperature Range | T_{j},T_{stg} | -55 ~ +150 | | | | | | | °C |

⁽¹⁾ Measured at 1 MHz and applied reverse voltage of 4 V D.C

⁽ 2) P.C.B. mounted with 2.0" X 2.0" (5 X 5 cm) copper pad areas.



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Fig.1 Forward Current Derating Curve

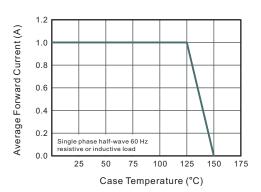


Fig.2 Typical Instaneous Reverse Characteristics

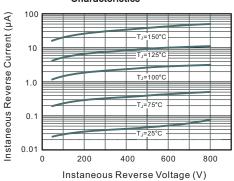


Fig.3 Typical Forward Characteristic

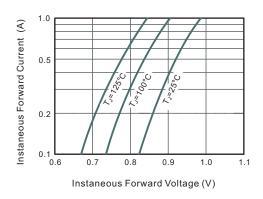


Fig.4 Typical Junction Capacitance

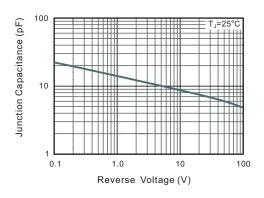
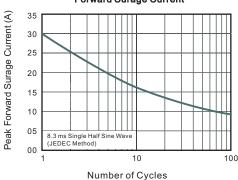
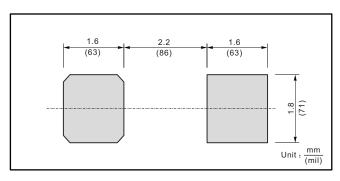


Fig.5 Maximum Non-Repetitive Peak Forward Surage Current



The recommended mounting pad size



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