

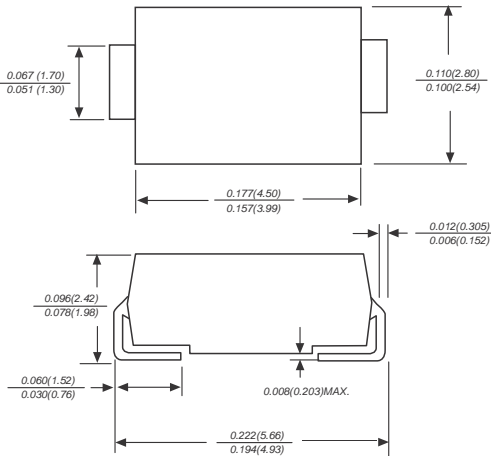


M1 THRU M7 AND S1A THRU S1M

SURFACE MOUNT GENERAL RECTIFIER

Reverse Voltage - 50 to 1000 Volts Forward Current - 1.0 Ampere

DO-214AC



Dimensions in inches and (millimeters)

FEATURES

- ◆ The plastic package carries Underwriters Laboratory Flammability Classification 94V-0
- ◆ For surface mounted applications
- ◆ Low reverse leakage
- ◆ Built-in strain relief, ideal for automated placement
- ◆ High forward surge current capability
- ◆ High temperature soldering guaranteed: 250°C/10 seconds at terminals

MECHANICAL DATA

Case: JEDEC DO-214AC molded plastic body

Terminals: Solder plated, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.002 ounce, 0.07 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 capacitive load current derate by 20%.

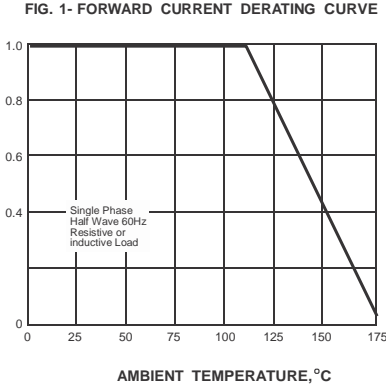
| | SYMBOLS | M1 S1A | M2 S1B | M3 S1D | M4 S1G | M5 S1J | M6 S1K | M7 S1M | UNITS |
|---|----------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|---------------|
| Maximum repetitive peak reverse voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | 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 rectified current at $T_L=110\text{ C}$ | $I_{(AV)}$ | 1.0 | | | | | | | Amp |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 30.0 | | | | | | | Amps |
| Maximum instantaneous forward voltage at 1.0A | V_F | 1.1 | | | | | | | Volts |
| Maximum DC reverse current $T_A=25\text{ C}$ at rated DC blocking voltage $T_A=100\text{ C}$ | I_R | 5.0 50.0 | | | | | | | μA |
| Typical junction capacitance (NOTE 1) | C_J | 15.0 | | | | | | | pF |
| Typical thermal resistance (NOTE 2) | R_{JA} | 75.0 | | | | | | | C/W |
| Operating junction and storage temperature range | T_J, T_{STG} | -65 to +175 | | | | | | | C |

Note: 1. Measured at 1MHz and applied reverse voltage of 4.0V D.C.

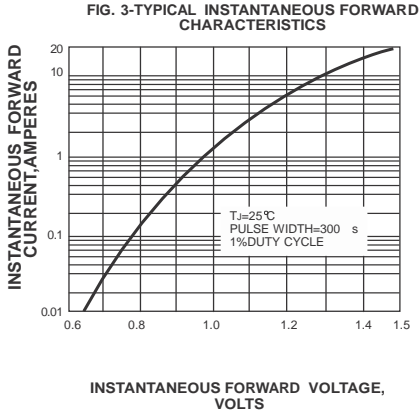
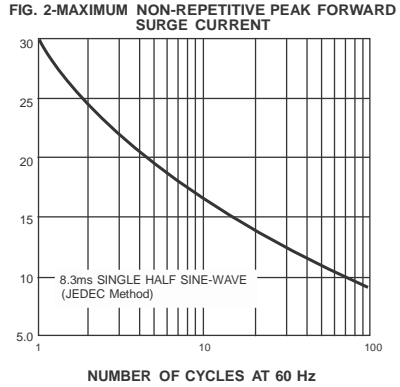
2. P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas

RATINGS AND CHARACTERISTIC CURVES M1 THRU M7 AND S1A THRU S1M

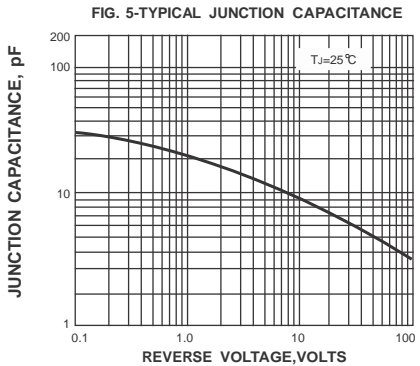
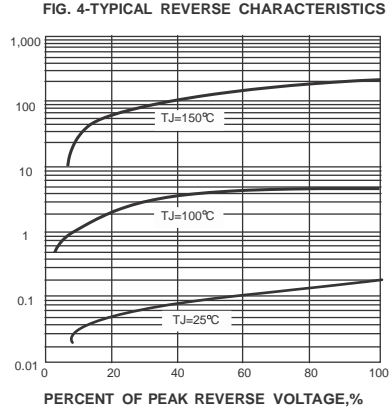
AVERAGE FORWARD RECTIFIED CURRENT,
AMPERES



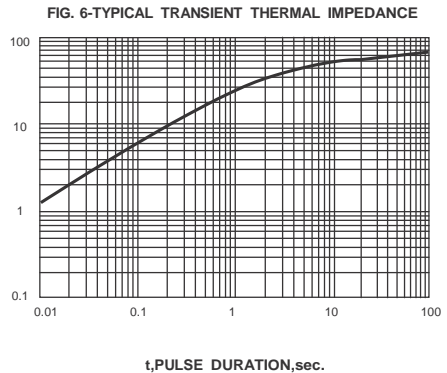
PEAK FORWARD SURGE CURRENT,
AMPERES



INSTANTANEOUS REVERSE CURRENT,
MICROAMPERES



TRANSIENT THERMAL IMPEDANCE,
°C/W



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