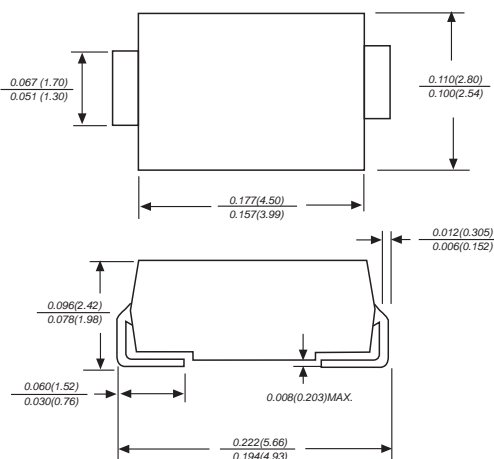


# M1 THRU M7 AND S1A THRU S1M

## 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%.

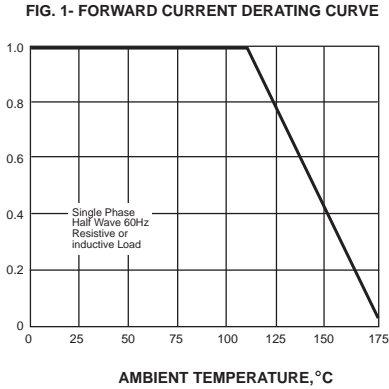
	SYMBOLS	M1 S1A	M2 S1B	M3 S1D	M4 S1G	M5 S1J	M6 S1K	M7 S1M	UNITS
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	VOLTS
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	VOLTS
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	VOLTS
Maximum average forward rectified current at $T_L=110^\circ\text{C}$	$I_{(AV)}$	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 $T_A=25^\circ\text{C}$ at rated DC blocking voltage $T_A=100^\circ\text{C}$	$I_R$	5.0 50.0							$\mu\text{A}$
Typical junction capacitance (NOTE 1)	$C_J$	15.0							pF
Typical thermal resistance (NOTE 2)	$R_{\theta JA}$	75.0							$^\circ\text{C/W}$
Operating junction and storage temperature range	$T_J, T_{STG}$	-65 to +175							$^\circ\text{C}$

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

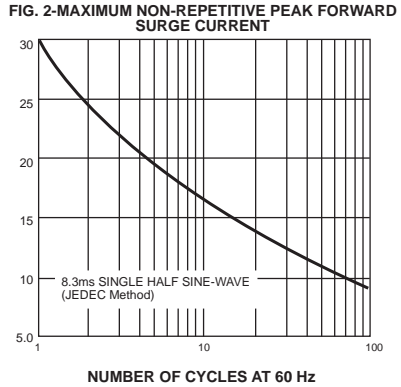
2. P.C.B. mounted with 0.2x0.2" (5.0x5.0mm) copper pad areas

# RATINGS AND CHARACTERISTIC CURVES M1 THRU M7 AND S1A THRU S1M

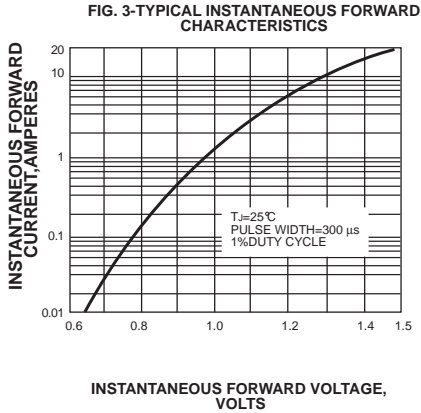
AVERAGE FORWARD RECTIFIED CURRENT,  
AMPERES



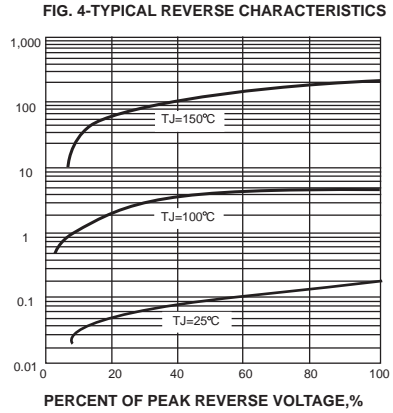
PEAK FORWARD SURGE CURRENT,  
AMPERES



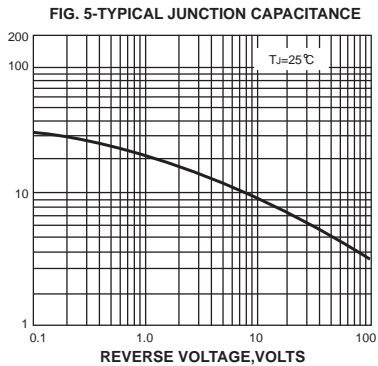
INSTANTANEOUS FORWARD CURRENT, AMPERES



INSTANTANEOUS REVERSE CURRENT, MICROAMPERES



JUNCTION CAPACITANCE, pF



TRANSIENT THERMAL IMPEDANCE, °C/W

