

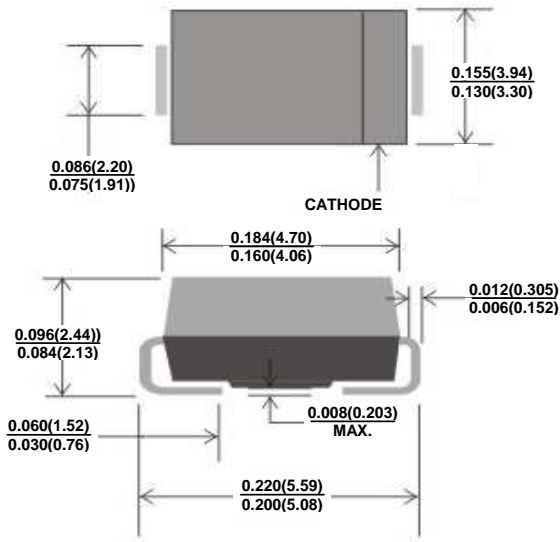


M1B THRU M7B

SURFACE MOUNT GENERAL RECTIFIERS

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

DO-214AA



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 : 260°C /10 seconds at terminals

MECHANICAL DATA

Case: JEDEC DO-214AA 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%.

PARAMETER	SYMBOLS	M1B	M2B	M3B	M4B	M5B	M6B	M7B	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
Minimum DC Breakdown Voltage	V_{DC}	50	100	200	400	600	800	1000	Volts
Average Rectified current at $T_L = 75^\circ\text{C}$	$I_{F(AV)}$	1.0							Amp
Non-repetitive Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30							Amps
Maximum Forward Voltage at $I_F = 1.0\text{A}$	V_F	1.1							Volts
Reverse Leakage Current at V_{RRM} $T_A = 25^\circ\text{C}$ $T_A = 100^\circ\text{C}$	I_R	5.0 50							μA
Typical Junction Capacitance (NOTE 1)	C_J	15							pF
Typical Thermal Resistance (NOTE 2)	$R_{\theta JA}$	75							$^\circ\text{C/W}$
Operating Junction Temperature Range	T_J	-65 to +175							$^\circ\text{C}$
Storage Temperature Range	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, PCBoard FR4.

3. $T_J = 25^\circ\text{C}$ unless otherwise specified.



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RATINGS AND CHARACTERISTIC CURVES

FIG. 1- FORWARD CURRENT DERATING CURVE

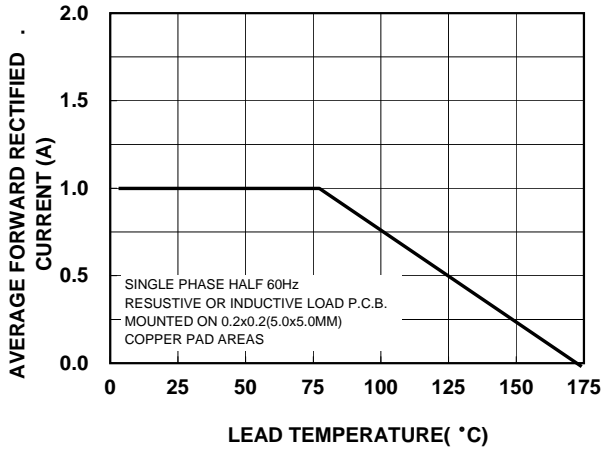


FIG. 2-TYPICAL JUNCTION RATINGS

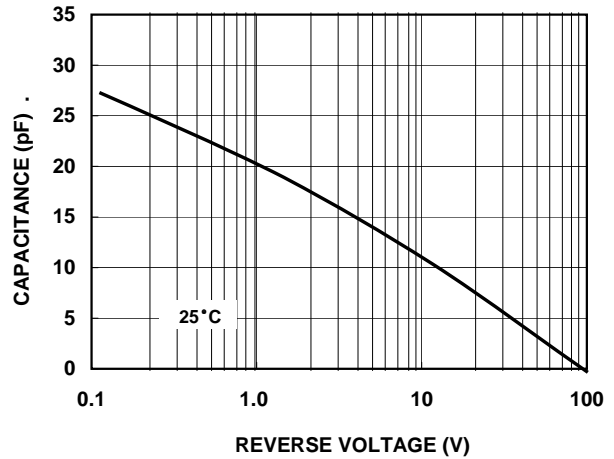


FIG. 3-TYPICAL REVERSE CHARACTERISTICS

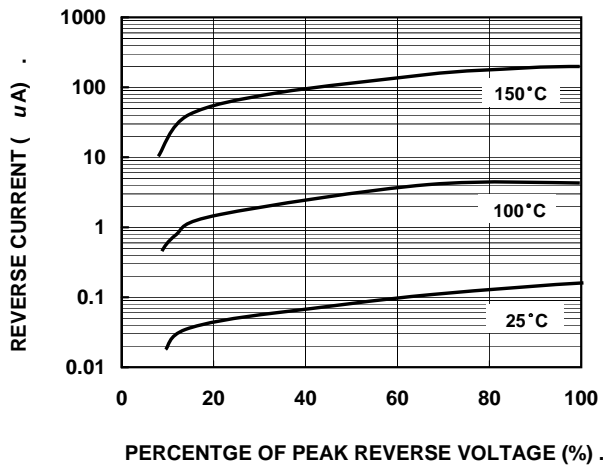


FIG. 4-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

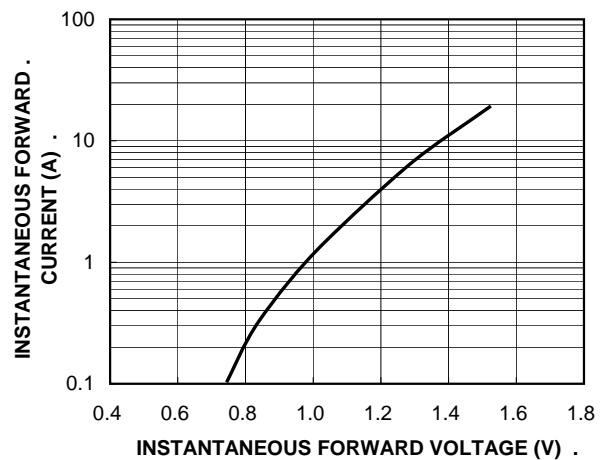


FIG.5.μ MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT

