

I. General Purpose Rectifier

1.0A Surface Mount Silicon Rectifier M1~M7

(Package: SMA (DO-214AC))

<p><u>FEATURES</u></p> <ul style="list-style-type: none"> • 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 <p><u>MECHANICAL DATA</u></p> <ul style="list-style-type: none"> • 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 : 0.083 grams 	<p>Case: SMA Dimensions in inches and (millimeters)</p>
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Ratings & 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%.

Characteristics	Symbol	M1	M2	M3	M4	M5	M6	M7	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 $T_L = 90^\circ\text{C}$	I_o	1.0							Amps
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 1.0 A	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							μA
Typical junction capacitance (Note 1)	C_j	15.0							PF
Typical thermal resistance (Note 2)	R_{th-JA}	75.0							$^\circ\text{C} / \text{W}$
Operating junction and storage temperature range	T_j, T_{stg}	-55 to + 150							$^\circ\text{C}$

Notes:

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

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

Ratings and Characteristic Curves of M1~M7

