



M1(H) THRU M7(H)

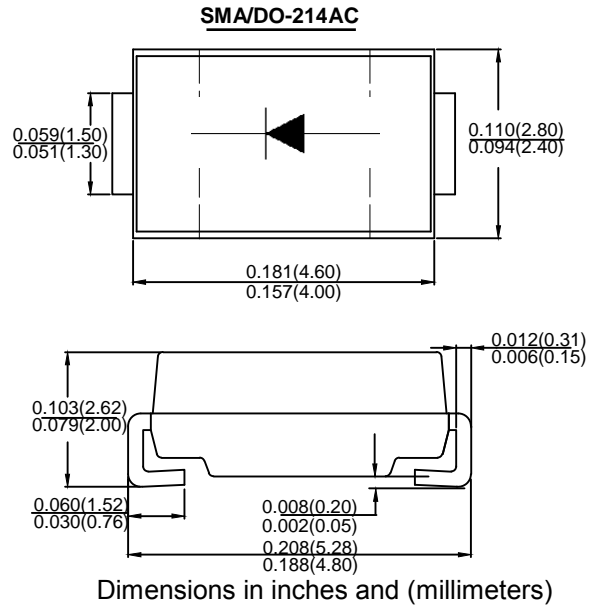
1.0AMP SURFACE MOUNT GLASS RECOVERY RECTIFIER

Features

- For surface mounted application
- Low forward voltage drop
- High current capability
- High reliability
- Classification Rating 94V-0

Mechanical Data

- Case: Molded plastic SMA
- Terminals: Plated leads solderable per MIL-STD-750, Method 2026 guaranteed
- Polarity: Color band dented cathode end
- Mounting Position: Any
- Making: Type Number



Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified
 Single phase, half wave, 60Hz, resistive or inductive load
 For capacitive load derate current by 20%

Type Number (Note 1)	SYMBOL	M1(H)	M2(H)	M3(H)	M4(H)	M5(H)	M6(H)	M7(H)	Unit
Maximum Recurrent 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
Average Rectified Output Current @ $T_L = 100^\circ\text{C}$	$I_{F(AV)}$	1.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave @ $T_j = 125^\circ\text{C}$ Superimposed On Rated Load (JEDEC Method)	I_{FSM}	30 24							A
Non-Repetitive Peak Forward Surge Current 1.0ms Single half sine-wave @ $T_j = 125^\circ\text{C}$ Superimposed On Rated Load (JEDEC Method)	I_{FSM}	60 48							A
10000 times of the wave surge current (time width 1ms, time interval 3s)	I_{FSM}	22.5							A
Rating for fusing ($t < 8.3\text{ms}$)	$I^2 t$	3.74							A^2s
Forward Voltage @ $I_F = 1.0\text{A}$	V_{FM}	1.0							V
Peak Reverse Current @ $T_A = 25^\circ\text{C}$	I_R	5.0							uA
At Rated DC Blocking Voltage @ $T_A = 125^\circ\text{C}$		50							
Typical Junction Capacitance (Note 2)	C_J	12							pF
Typical reverse recovery time (Note 3)	t_{rr}	1.5							μs
Typical Thermal Resistance (Note 4)	$R_{\theta JL}$ $R_{\theta JA}$	23 57							$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150							$^\circ\text{C}$

Note: 1. "H": Halogen Free.

2. Measured at 1.0 MHz and Applied reverse Voltage of 4.0V D.C

3. Reverse Recovery Test Conditions: $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$

4. Device mounted on FR-4 substrate, 1" * 1", 2oz, single-sided, PC boards with 0.1" * 0.15" copper pad.



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FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

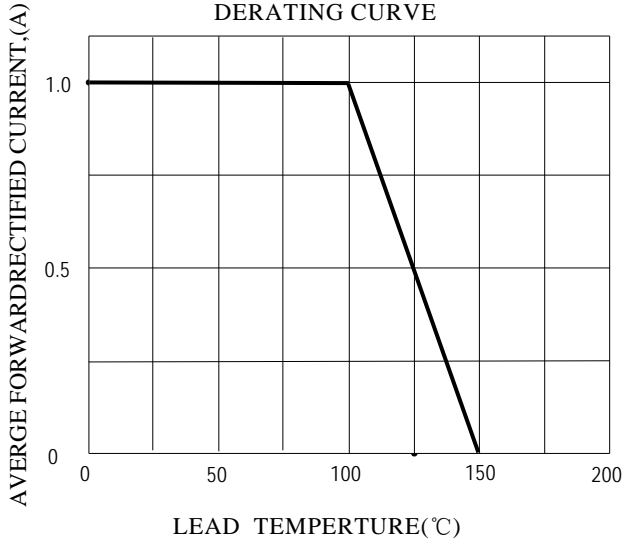


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

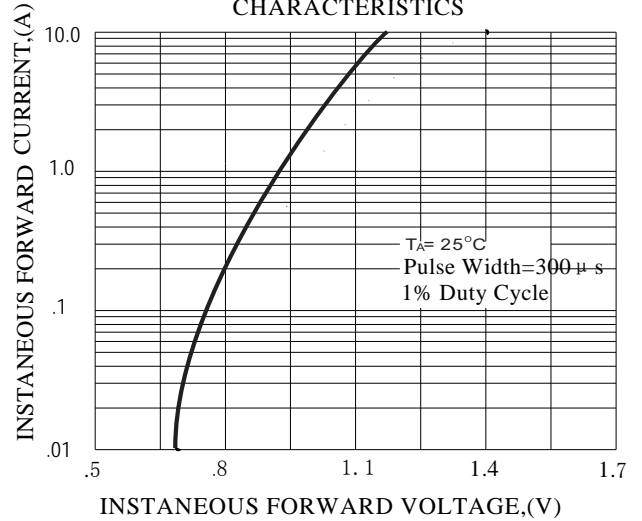


FIG.3-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

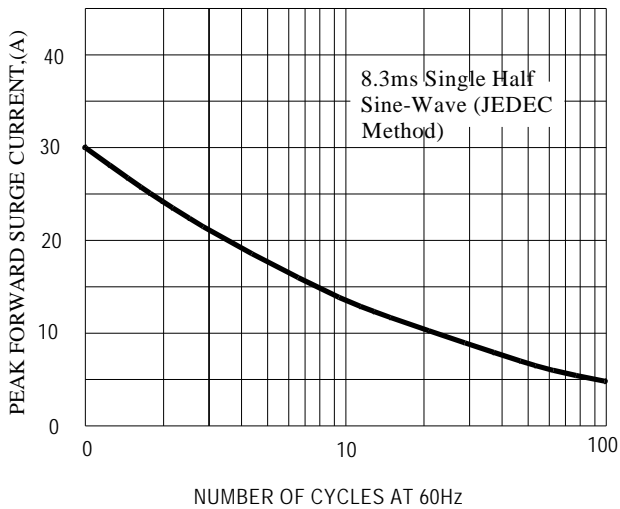


FIG.4-TYPICAL REVERSE CHARACTERISTICS

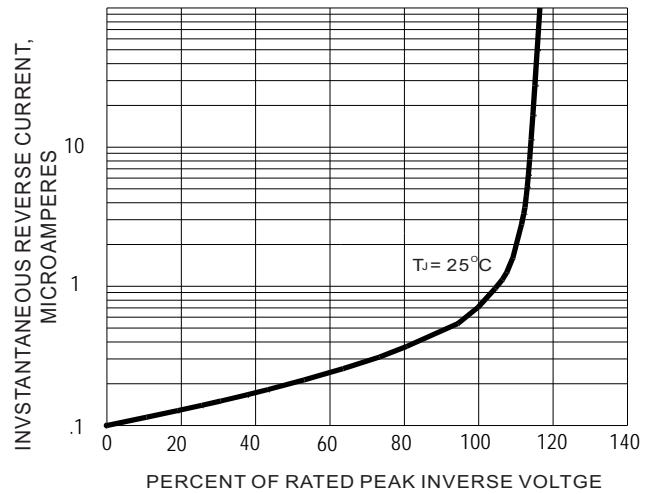
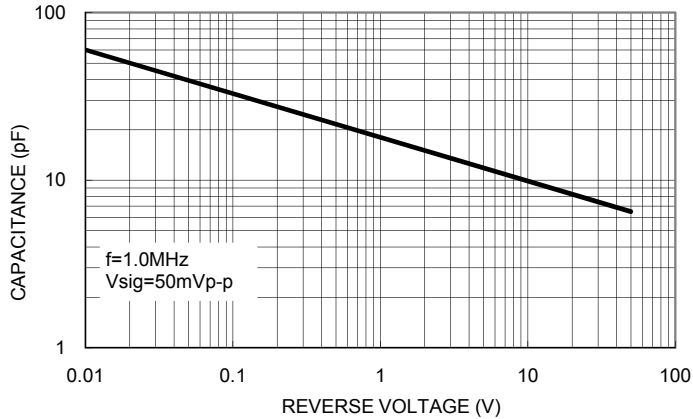
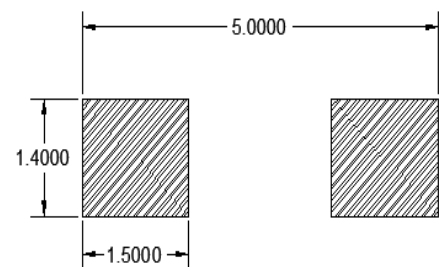


FIG. 5 TYPICAL JUNCTION CAPACITANCE



SMA PAD LAYOUT





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