

SURFACE MOUNT OPEN JUNCTION RECTIFIER

M1 THRU M7

VOLTAGE RANGE 50 to 1000 Volts

CURRENT 1.0 Ampere

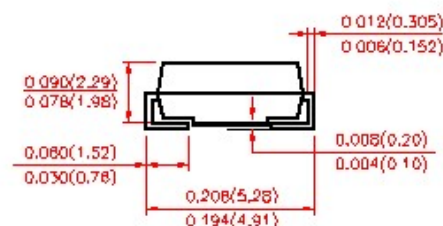
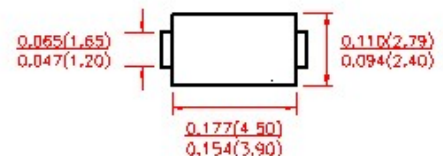
FEATURES

- For surface mounted applications
- Open junction Protection
- Low profile package
- Built-in strain relief, ideal for automated placement
- Plastic package has underwrites laboratory flammability Classification 94V-0
- High temperature soldering guaranteed:
250°C/10 second at terminals

MECHANICAL DATA

- Case: JEDED SMA (DO-214AC) molded plastic
- Terminals: Plated axial lead solderable per MIL-STD-750, method 2026
- Polarity: Color band denotes cathode end
- Mounting position: Any
- Weight: 0.002ounce, 0.064 gram

DO-214AC(SMA)



Dimensions in inches and (millimeters)

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 derate current by 20%

		SYMBOLS	M1	M2	M3	M4	M5	M6	M7	UNIT
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 (see Fig.1)		I _{F(AV)}	1.0							Amps
Peak Forward Surge Current 8.3ms single half sine wave superimposed on rated load (JEDEC method) T _L =90°C		I _{FSM}	30							Amps
Maximum Instantaneous Forward Voltage at 1.0A		V _F	1.1							Volts
Maximum DC Reverse Current at rated DC Blocking Voltage at	T _A = 25°C	I _R	5.0							μA
	T _A = 125°C		50							
Typical Junction Capacitance (NOTE 1)		R _{0JA}	50							°C/W
		R _{0JL}	90							
Typical Thermal Resistance (NOTE 2)		t _{IT}	1.8							μs
Operating and Storage Temperature Range		T _J , T _{STG}	-55 to +150							°C

Notes:

- Thermal resistance from Junction to ambient and from junction to lead mounted on 0.2×0.2" (5.0 × 5.0mm) copper pad areas.
- Reverse recovery test condition: $I_F=0.5\text{A}$, $I_R=1.0\text{A}$, $I_{rr}=0.25\text{A}$

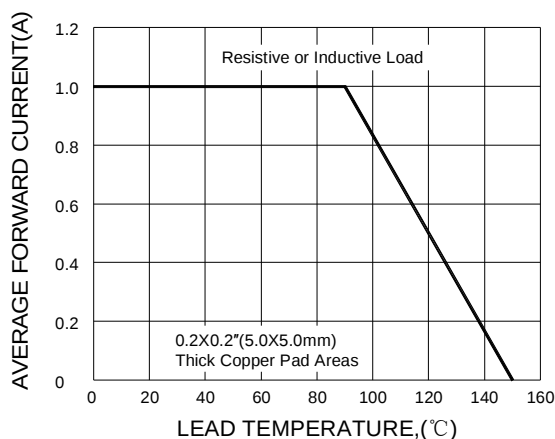
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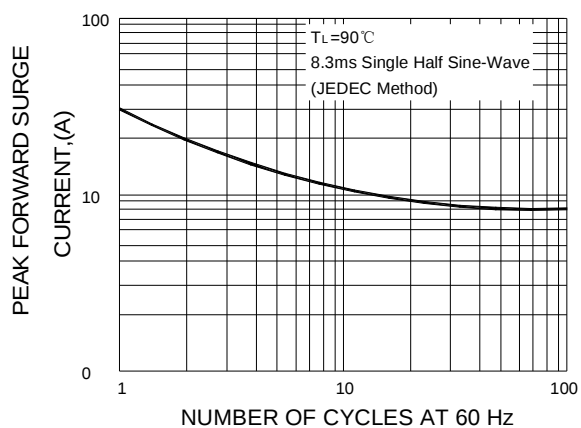
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RATINGS AND CHARACTERISTIC CURVES M1 THRU M7

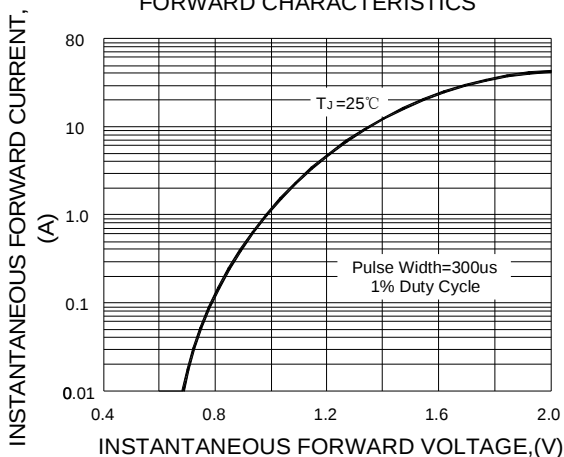
F1G.1-FORWARD CURRENT DERATING CURVE



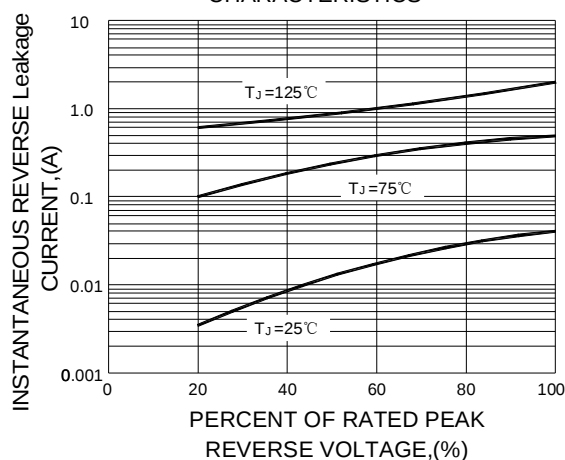
F1G.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



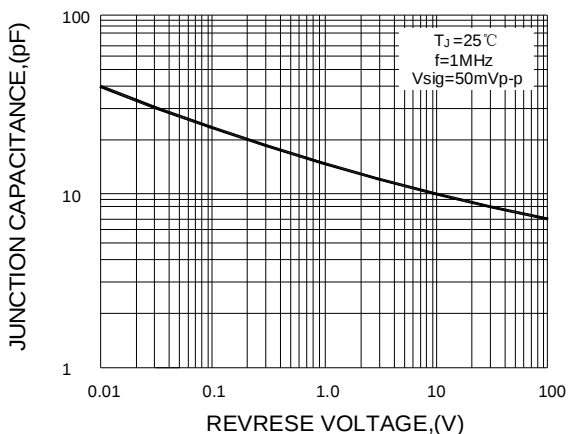
F1G.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



F1G.4-TYPICAL REVERSE CHARACTERISTICS



F1G.5-TYPICAL JUNCTION CAPACITANCE



F1G.6-TRANSIENT THERMAL IMPEDANCE

