



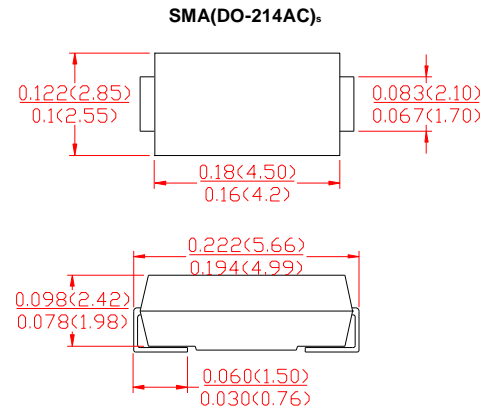
## SURFACE MOUNT RECTIFIER

**M1 - M7**

**Voltage Range - 50 to 1000 V**  
**Forward Current - 1 A**

### FEATURES

- For surface mounted applications in order to optimize board space
- 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 seconds at terminals



Dimensions in inches and (millimeters)

### MECHANICAL DATA

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

### 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	UNITS
Maximum Repetitive Peak Reverse Voltage	VRRM	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	VRMS	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	VDC	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current, at T <sub>L</sub> =110 °C	I <sub>(AV)</sub>	1							A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I <sub>FSM</sub>	25.0							Amps
Maximum Instantaneous Forward Voltage at 1.0A	V <sub>F</sub>	1.1							Volts
Maximum DC Reverse Current at rated DC blocking voltage at	T <sub>A</sub> =25 °C	1.0					5.0		μA
		50							
Maximum Reverse Recovery Time(Note2)	RRT	1.8							nS
Maximum Thermal Resistance (Note 1)	RQJA	75.0					85.0		°C/W
	RQJL	27.0					30.0		
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>stg</sub>	-55 to +150							°C

**NOTES:**

1. Thermal resistance from junction to ambient and from junction to lead mounted on 0.230.2”(5.03.0mm) copper pad areas.
2. Reverse recovery test condition, I<sub>F</sub>=0.5A I<sub>R</sub>=1.0A IRR=0.25A.



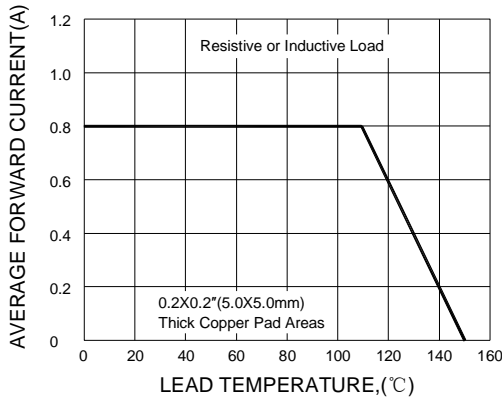
# SURFACE MOUNT RECTIFIER

M1 - M7

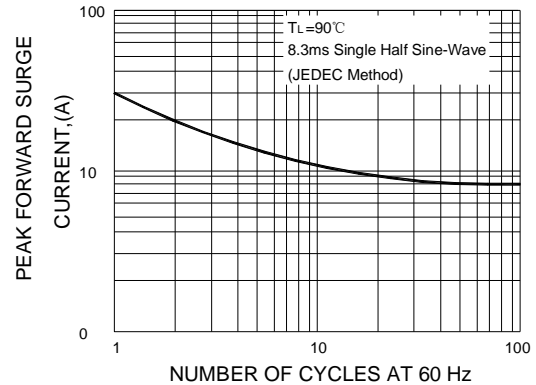
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## RATINGS AND CHARACTERISTIC CURVES M1 - M7

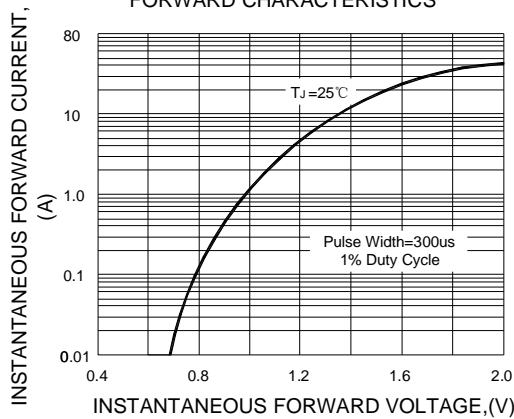
F1G.1-FORWARD CURRENT DERATING CURVE



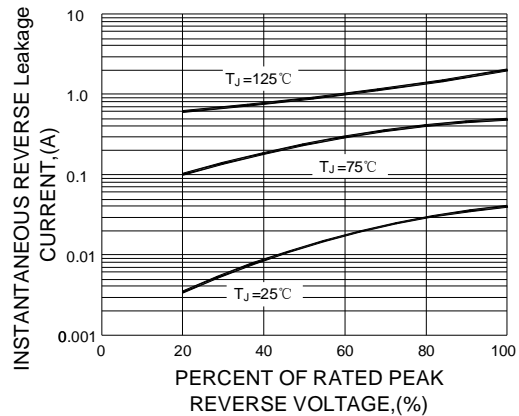
F1G.2-MAXIMUM NON-REPETITIVE PEAK FORWARD SURGE CURRENT



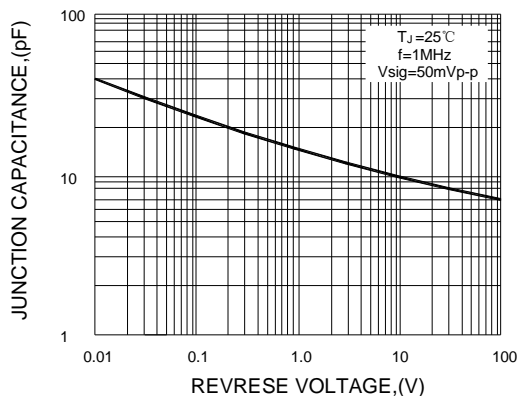
F1G.3-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS



F1G.4-TYPICAL REVERSE CHARACTERISTICS



F1G.5-TYPICAL JUNCTION CAPACITANCE



F1G.6-TRANSIENT THERMAL IMPEDANCE

