

## FM301L THRU FM307L

# SURFACE MOUNT GLASS PASSIVATED SILICON RECTIFIER VOLTAGE RANGE 50 to 1000 Volts CURRENT 3.0 Ampere

### **FEATURES**

- \* Glass passivated device
- \* Ideal for surface mounted applications
- \* Low leakage current
- \* Metallurgically bonded construction
- \* Mounting position: Any
- \* Weight: 0.24 gram

### **MECHANICAL DATA**

\* Epoxy : Device has UL flammability classification 94V-0

### MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25  $^{\circ}$ C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

# SMCL 3.125 (3.17) 0.125 (3.17) 0.115 (2.92) 0.280 (7.11) 0.280 (6.21) 0.280 (6.60) 3.200 (6.60) 3.200 (6.152) 0.008 (0.203) 0.004 (0.102) 0.008 (0.203) 0.004 (0.102) 0.008 (0.203) 0.004 (0.102) 0.008 (0.203) 0.004 (0.102) 0.008 (0.203) 0.009 (0.203)

### $\textbf{MAXIMUM RATINGS} \ (\textcircled{@} \ \mathsf{TA=25} \ ^{\circ}\mathsf{C} \ unless \ otherwise \ noted)$

RATINGS	SYMBOL	FM301L	FM302L	FM303L	FM304L	FM305L	FM306L	FM307L	UNITS
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	50	100	200	400	600	800	1000	Volts
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	Volts
Maximum Average Forward Rectified Current at Ambient Temperature	Io	3.0							Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	150							Amps
Typical Thermal Resistance (Note 1)	R <sub>θJA</sub>	47							°C/W
Typical Thermal Resistance (Note 1)	RθJL	13							°C/W
Typical Junction Capacitance (Note 2)	CJ	30							pF
Operating Temperature Range	TJ	150						°C	
Storage Temperature Range	T <sub>STG</sub>	-55 to + 150							°C

### ELECTRICAL CHARACTERISTICS(@TA=25 °C unless otherwise noted)

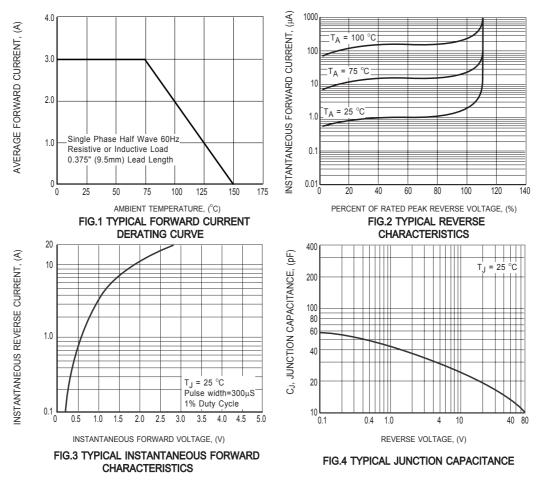
CHARACTERISTICS		SYMBOL	FM301L	FM302L	FM303L	FM304L	FM305L	FM306L	FM307L	UNITS
Maximum Instantaneous Forward Voltage at 3.0A DC		VF	1.1							Volts
Maximum Average Reverse Current	@T <sub>A</sub> = 25°C	I <sub>R</sub>				2.0				μА
at Rated DC Blocking Voltage	@T <sub>A</sub> = 100°C					125				μА

NOTES: 1. Thermal Resistance: Mounted on PCB.

- 2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.
- 3. "Fully ROHS compliant","100% Sn plating (Pb-free)".

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### RATING AND CHARACTERISTICS CURVES (FM301L THRU FM307L)



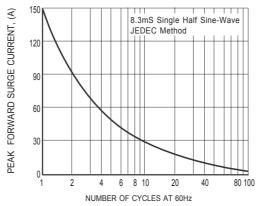
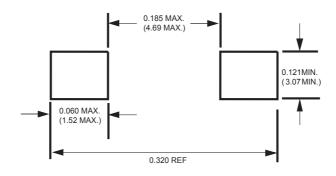


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT



# **Mounting Pad Layout**



Dimensions in inches and (millimeters)



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