

SURFACE MOUNT SILICON RECTIFIER
VOLTAGE RANGE 50 to 1000 Volts CURRENT 1.0 Ampere

FEATURES

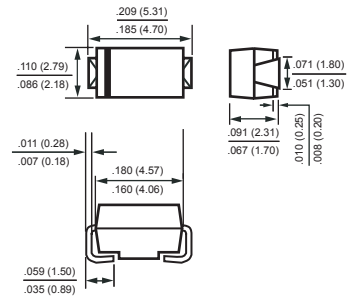
- * Ideal for surface mounted applications
- * Low leakage current
- * Metallurgically bonded construction
- * Mounting position: Any
- * Weight: 0.078 gram

MECHANICAL DATA

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



SMX



Dimensions in inches and (millimeters)

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

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

MAXIMUM RATINGS (@ TA=25 °C unless otherwise noted)

RATINGS	SYMBOL	HL101W	HL102W	HL103W	HL104W	HL105W	HL106W	HL107W	UNITS	
Maximum Recurrent 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 Lead Temperature	I_O	1.0							Amps	
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	35				30			Amps	
Typical Thermal Resistance (Note 1)	$R_{\theta JA}$	100								°C/W
Typical Thermal Resistance (Note 1)	$R_{\theta JL}$	60								°C/W
Typical Junction Capacitance (Note 2)	C_J	15								pF
Operating Temperature Range	T_J	150								°C
Storage Temperature Range	T_{STG}	-55 to + 150							°C	

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

CHARACTERISTICS	SYMBOL	HL101W	HL102W	HL103W	HL104W	HL105W	HL106W	HL107W	UNITS
Maximum Instantaneous Forward Voltage at 1.0A DC	V_F					1.05			Volts
Maximum Full Load Reverse Current, Full cycle Average at $T_A=75^{\circ}C$	I_R					30			uA
Maximum Average Reverse Current @ $T_A = 25^{\circ}C$						500			nA
at Rated DC Blocking Voltage @ $T_A = 125^{\circ}C$						100			uA

- 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)".

RATING AND CHARACTERISTICS CURVES (HL101W THRU HL107W)

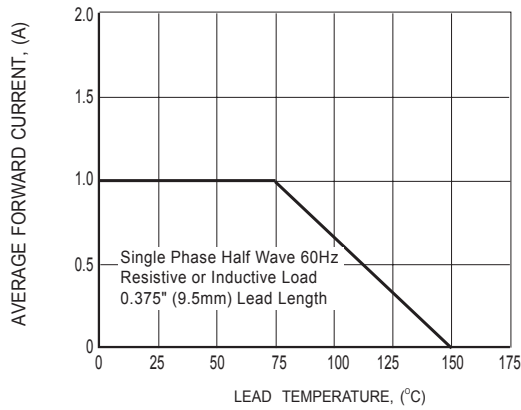


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

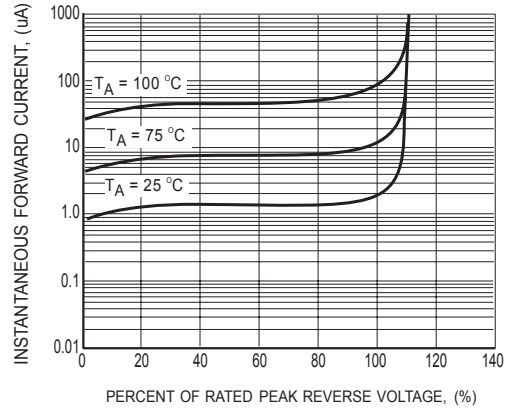


FIG.2 TYPICAL REVERSE CHARACTERISTICS

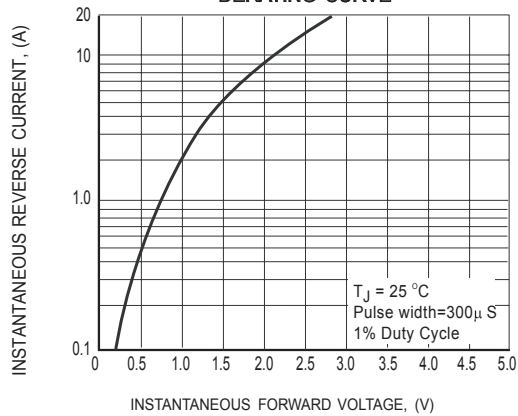


FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

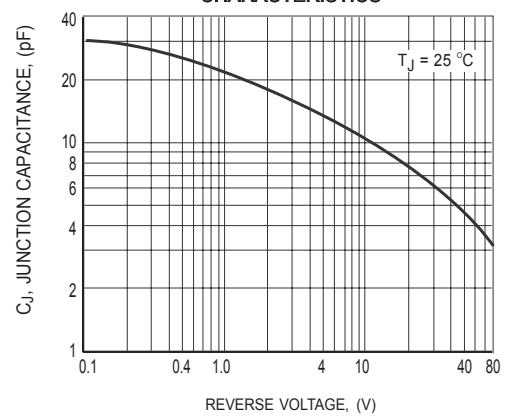


FIG.4 TYPICAL JUNCTION CAPACITANCE

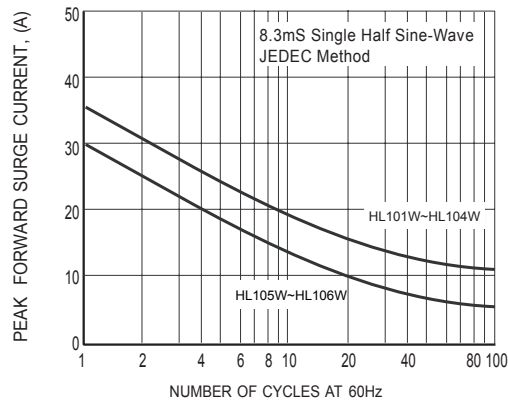
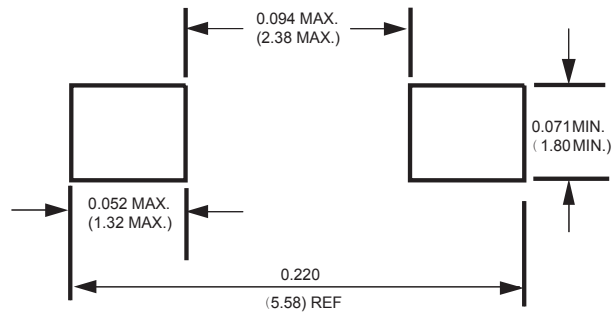


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

Mounting Pad Layout



Dimensions in inches and (millimeters)

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