

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

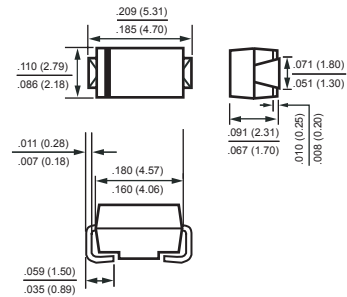
MECHANICAL DATA

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

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%.

SMX



Dimensions in inches and (millimeters)

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 _{θJA}	100							°C/W
Typical Thermal Resistance (Note 1)	R _{θJL}	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)

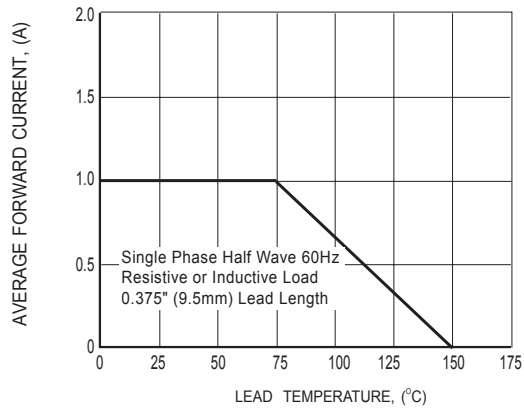


FIG.1 TYPICAL FORWARD CURRENT DERATING CURVE

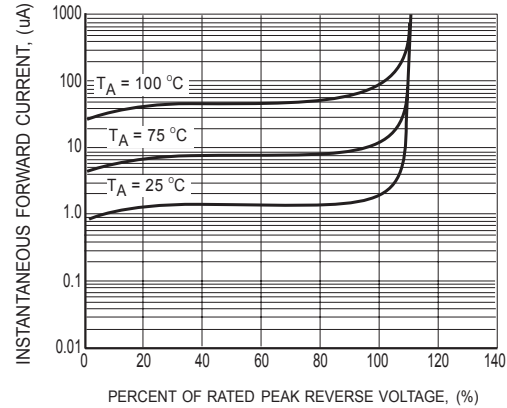


FIG.2 TYPICAL REVERSE CHARACTERISTICS

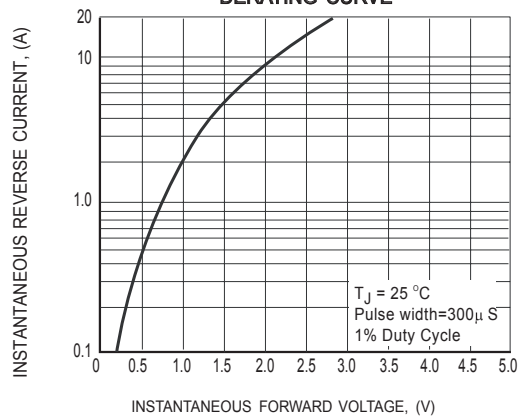


FIG.3 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

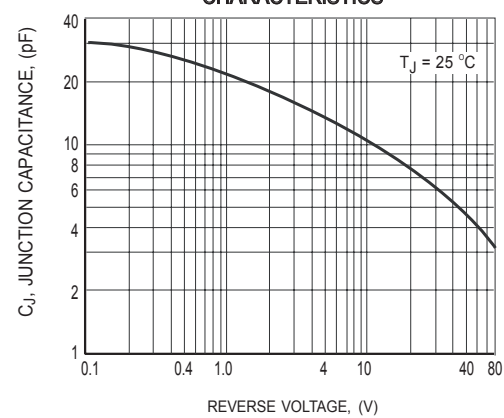


FIG.4 TYPICAL JUNCTION CAPACITANCE

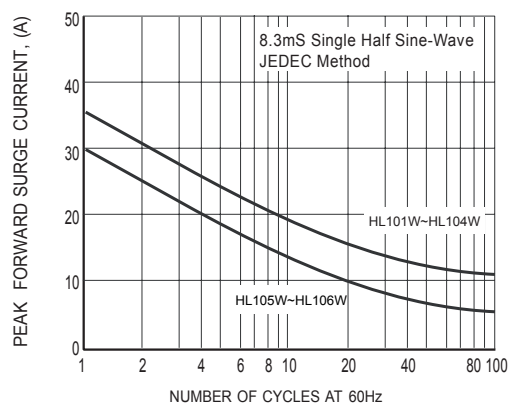
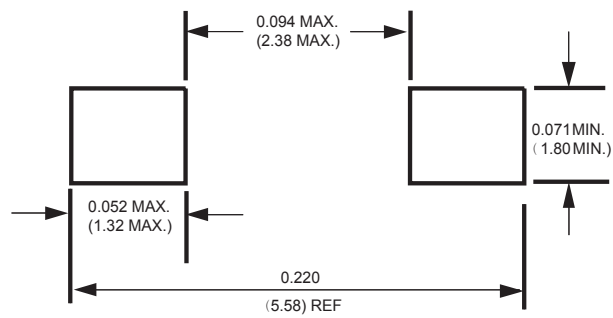


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

Mounting Pad Layout



Dimensions in inches and (millimeters)

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