

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

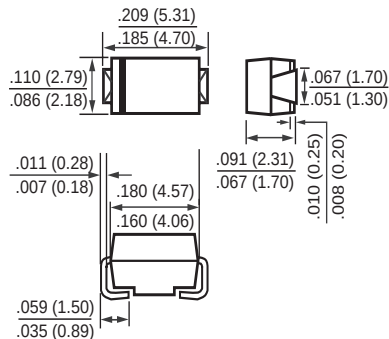
FEATURES

- * Ideal for surface mounted applications
- * Low leakage current
- * Metallurgically bonded construction
- * Mounting position: Any
- * Weight: 0.057 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 (At TA = 25°C unless otherwise noted)

RATINGS	SYMBOL	HFM101W	HFM102W	HFM103W	HFM104W	HFM105W	HFM106W	HFM107W	HFM108W	UNITS
Maximum Recurrent Peak Reverse Voltage	V _{RRM}	50	100	200	300	400	600	800	1000	Volts
Maximum RMS Volts	V _{RMS}	35	70	140	210	280	420	560	700	Volts
Maximum DC Blocking Voltage	V _{DC}	50	100	200	300	400	600	800	1000	Volts
Maximum Average Forward Current at TA = 50°C	I _O	1.0								Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I _{FSM}	30								Amps
Typical Junction Capacitance (Note 2)	C _j	15					12			pF
Operating and Storage Temperature Range	T _J , T _{STG}	-65 to + 150								°C

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

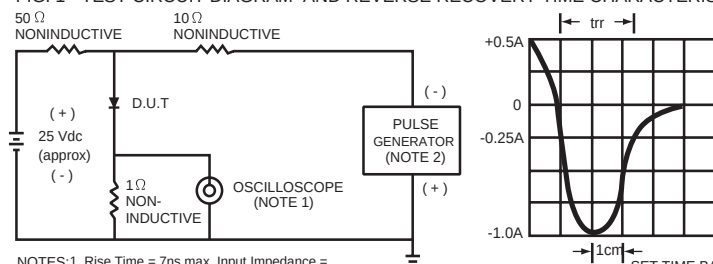
CHARACTERISTICS		SYMBOL	HFM101W	HFM102W	HFM103W	HFM104W	HFM105W	HFM106W	HFM107W	HFM108W	UNITS
Maximum Forward Voltage at 1.0A DC		V _F	1.0			1.3		1.7			Volts
Maximum Full Load Reverse Current, Full cycle Average T _A = 55°C		I _R	50								uAmps
Maximum DC Reverse Current at	@ T _A = 25°C		5.0								uAmps
Rated DC Blocking Voltage	@ T _A = 125°C		100								uAmps
Maximum Reverse Recovery Time (Note 1)		t _{rr}	50					75			nSec

NOTES : 1. Test Conditions: IF=0.5A, IR=-1.0A, IRR=-0.25A.

2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.

RATING AND CHARACTERISTIC CURVES (HFM101W THRU HFM108W)

FIG. 1 - TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC



NOTES: 1. Rise Time = 7ns max. Input Impedance = 1 megohm, 22pF.
2. Rise Time = 10ns max. Source Impedance = 50 ohms.

FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

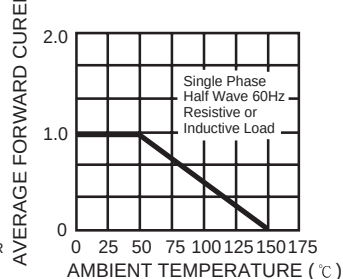


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

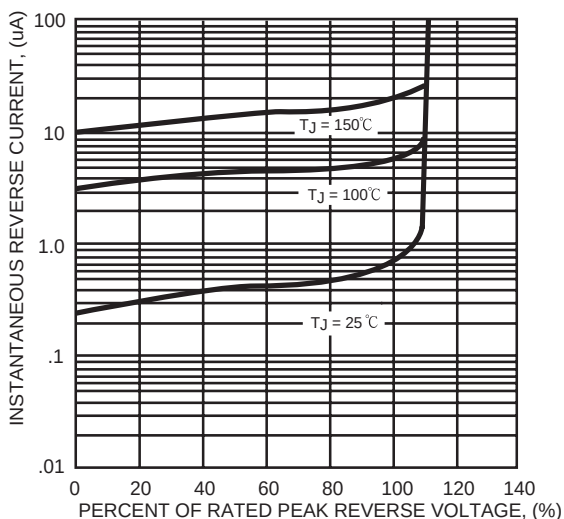


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

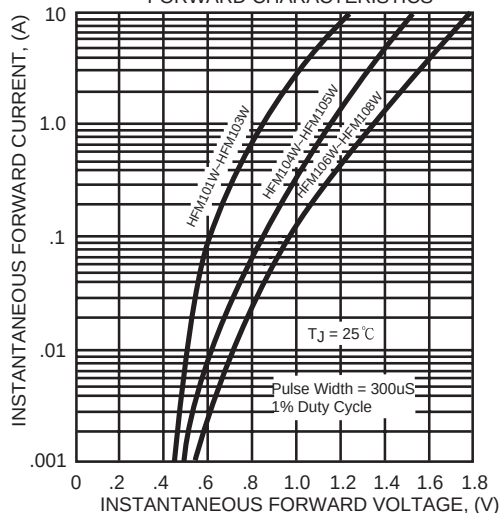


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

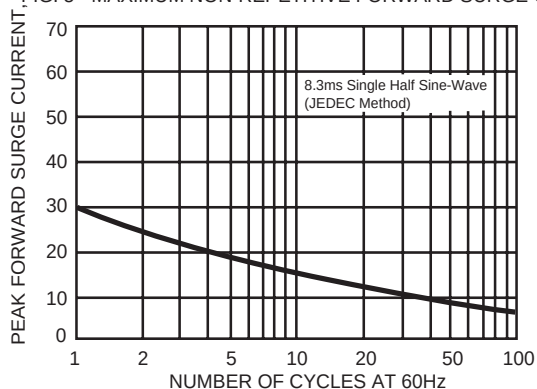
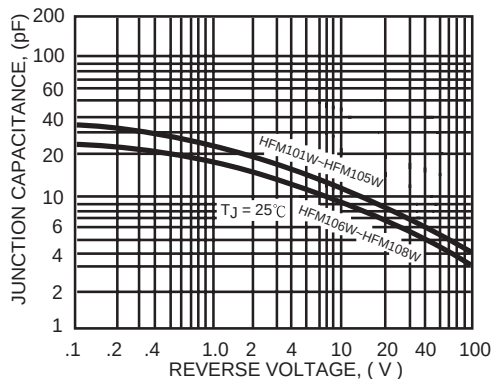
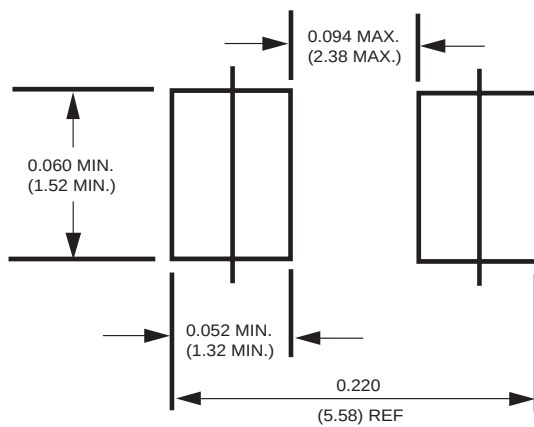


FIG. 6 - TYPICAL JUNCTION CAPACITANCE



Mounting Pad Layout



Dimensions in inches and (millimeters)