

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

**FEATURES**

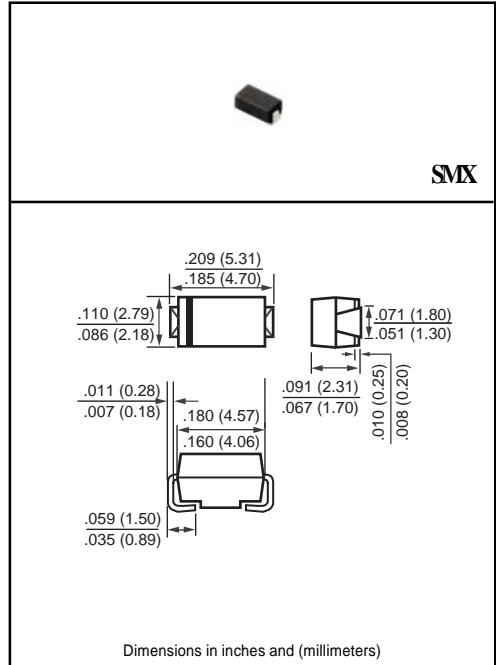
- \* Ideal for surface mounted applications
- \* Low leakage current
- \* Metallurgically bonded construction
- \* Mounting position: Any
- \* Weight: 0.057 gram

**MECHANICAL DATA**

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

**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 <sub>RRM</sub>	50	100	200	300	400	600	800	1000	Volts
Maximum RMS Volts	V <sub>RMS</sub>	35	70	140	210	280	420	560	700	Volts
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	300	400	600	800	1000	Volts
Maximum Average Forward Current at TA = 50°C	I <sub>O</sub>	1.0								Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	30								Amps
Typical Junction Capacitance (Note 2)	C <sub>J</sub>	15					12			pF
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-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 <sub>F</sub>	1.0			1.3		1.7			Volts
Maximum Full Load Reverse Current, Full cycle Average TA = 55°C	I <sub>R</sub>	50								uAmps
Maximum DC Reverse Current at @ TA = 25°C		5.0								uAmps
Rated DC Blocking Voltage @ TA = 125°C		100								uAmps
Maximum Reverse Recovery Time (Note 1)	t <sub>rr</sub>	50					75			nSec

- NOTES : 1. Test Conditions: I<sub>F</sub>=0.5A, I<sub>R</sub>=-1.0A, I<sub>RR</sub>=-0.25A.  
 2. Measured at 1 MHz and applied reverse voltage of 4.0 volts.  
 3. "Fully ROHS compliant", "100% Sn plating (Pb free)."

# RATING AND CHARACTERISTIC CURVES ( HFM101W THRU HFM108W )

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

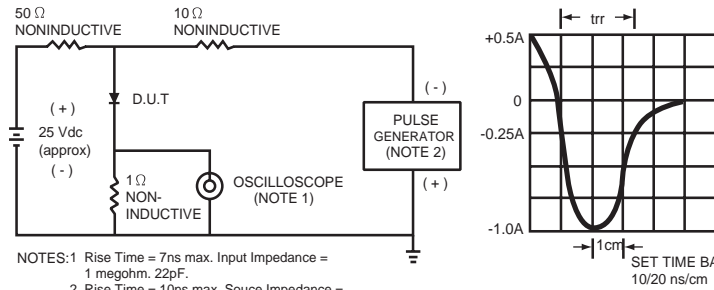


FIG. 2 - TYPICAL FORWARD CURRENT DERATING CURVE

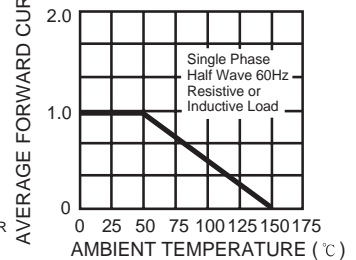


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

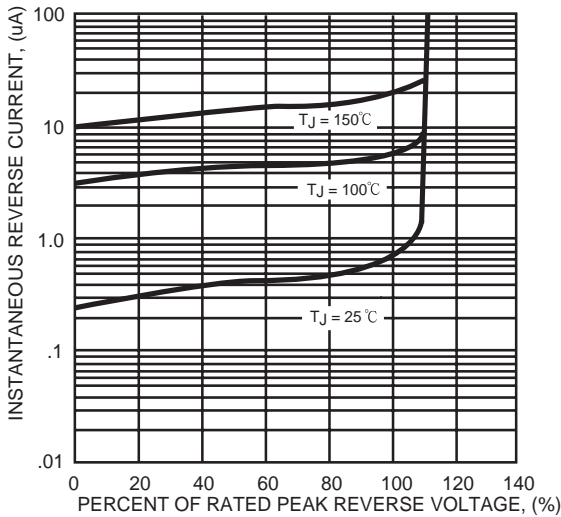


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

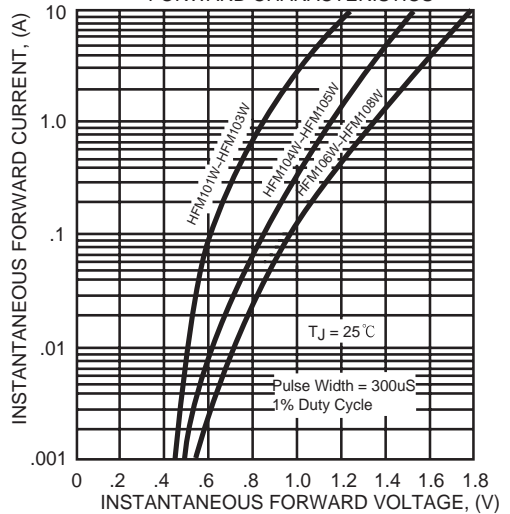


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

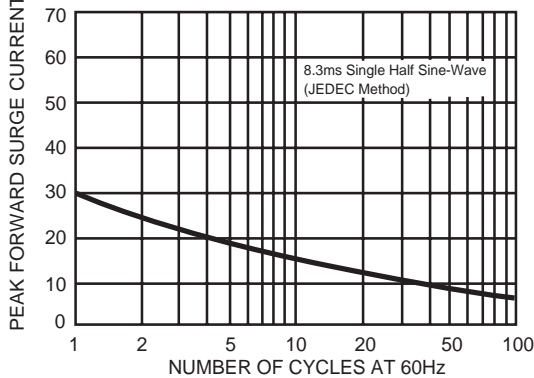
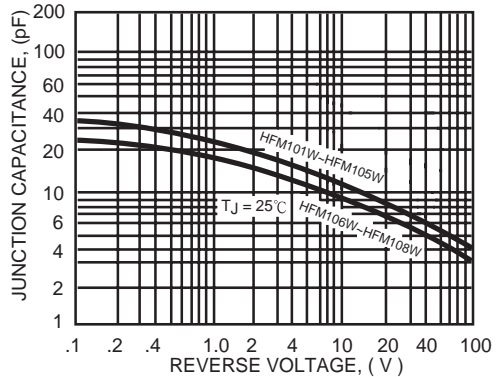
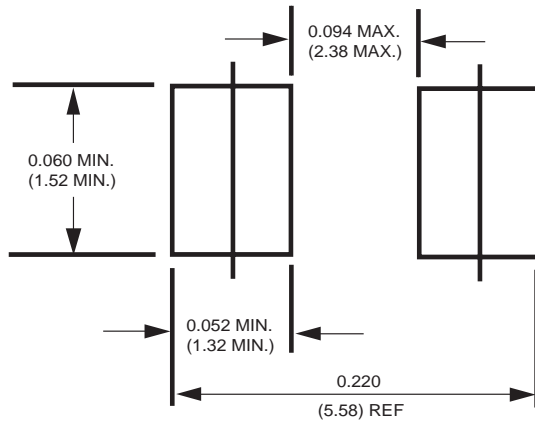


FIG. 6 - TYPICAL JUNCTION CAPACITANCE



## Mounting Pad Layout



Dimensions in inches and (millimeters)

# Mouser Electronics

Authorized Distributor

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[HFM102W-W-ES1](#)