

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

FEATURES

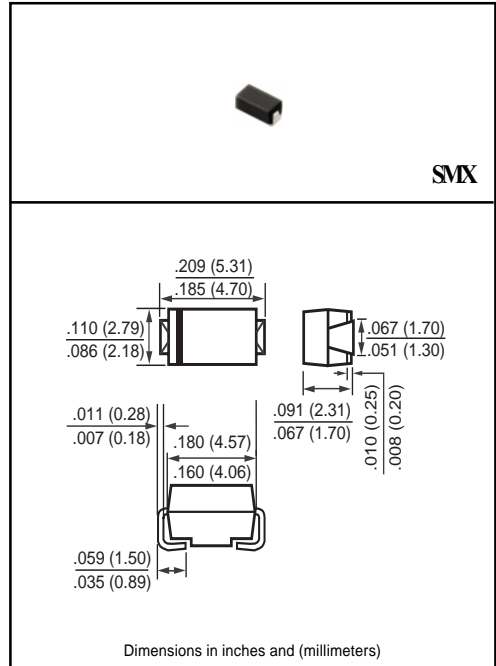
- * Ideal for surface mounted applications
- * Low leakage current
- * Metallurgically bonded construction
- * Mounting position: Any
- * Weight: 0.057 gram

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 | VRRM | 50 | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS Volts | VRMS | 35 | 70 | 140 | 210 | 280 | 420 | 560 | 700 | Volts |
| Maximum DC Blocking Voltage | Vdc | 50 | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | Volts |
| Maximum Average Forward Current at TA = 50°C | Io | 1.0 | | | | | | | | Amps |
| Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method) | IFSM | 30 | | | | | | | | Amps |
| Typical Junction Capacitance (Note 2) | Cj | 15 | | | | | 12 | | | pF |
| Operating and Storage Temperature Range | TJ, TSTG | -65 to + 150 | | | | | | | | °C |

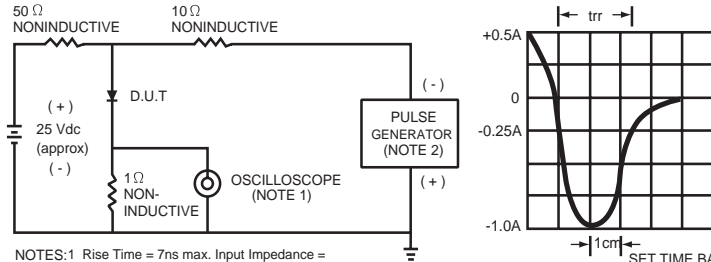
ELECTRICAL CHARACTERISTICS (At TA = 25°C unless otherwise noted)

| CHARACTERISTICS | SYMBOL | HFM101W | HFM102W | HFM103W | HFM104W | HFM105W | HFM106W | HFM107W | HFM108W | UNITS |
|---|--------|---------|---------|---------|---------|---------|---------|---------|---------|-------|
| Maximum Forward Voltage at 1.0A DC | Vf | 1.0 | | | 1.3 | | 1.7 | | | Volts |
| Maximum Full Load Reverse Current, Full cycle Average TA = 55°C | Ir | 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) | trr | 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

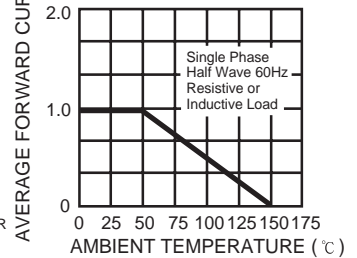


FIG. 3 - TYPICAL REVERSE CHARACTERISTICS

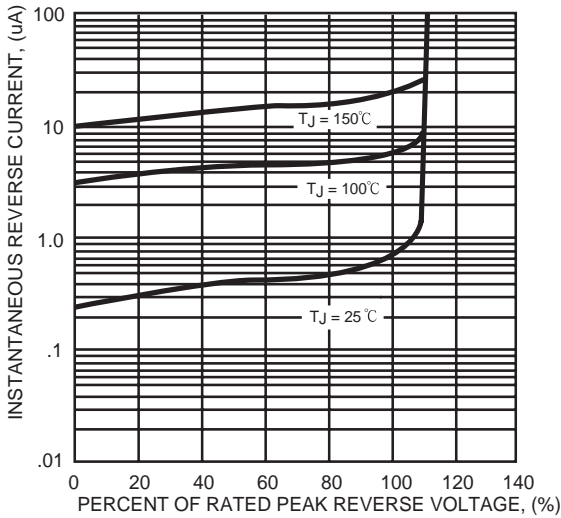


FIG. 4 - TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

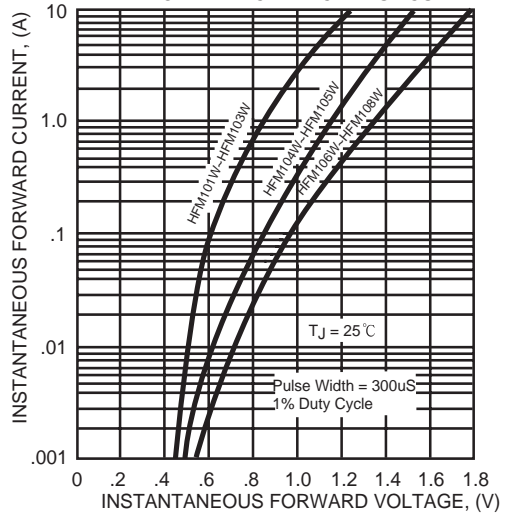


FIG. 5 - MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

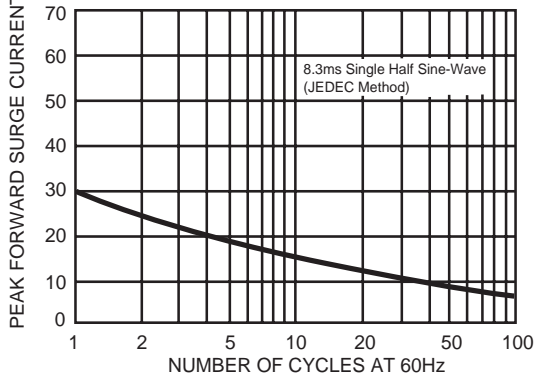
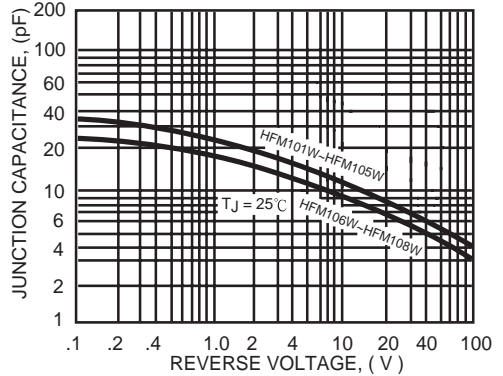
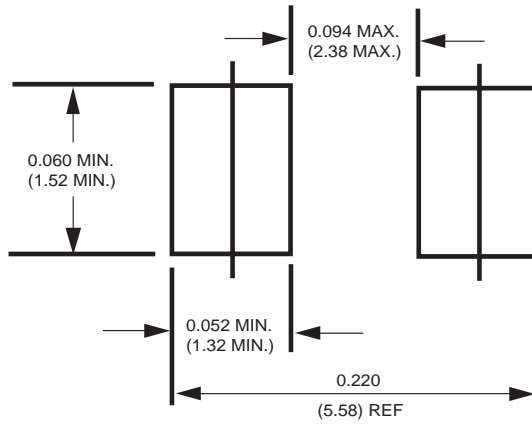


FIG. 6 - TYPICAL JUNCTION CAPACITANCE



Mounting Pad Layout



Dimensions in inches and (millimeters)