

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

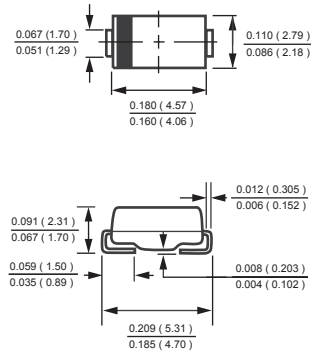
FEATURES

- * Glass passivated device
- * 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

DO-214AC



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)

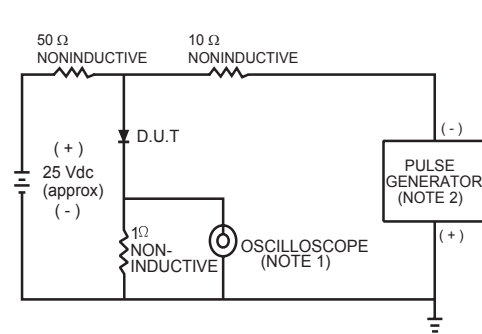
| RATINGS | SYMBOL | HFM101 | HFM102 | HFM103 | HFM104 | HFM105 | HFM106 | HFM107 | HFM108 | UNITS |
|---|-----------------|--------------|--------|--------|--------|--------|--------|--------|--------|--------------------|
| Maximum Recurrent Peak Reverse Voltage | V_{RRM} | 50 | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | Volts |
| Maximum RMS Voltage | V_{RMS} | 35 | 70 | 140 | 210 | 280 | 420 | 490 | 700 | Volts |
| Maximum DC Blocking Voltage | V_{DC} | 50 | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | Volts |
| Maximum Average Forward Rectified Current at $T_A = 50^\circ\text{C}$ | 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 Thermal Resistance (Note 1) | $R_{\theta JL}$ | 27 | | | | | | | | $^\circ\text{C/W}$ |
| Typical Thermal Resistance (Note 1) | $R_{\theta JA}$ | 75 | | | | | | | | $^\circ\text{C/W}$ |
| Typical Junction Capacitance (Note 2) | C_J | 15 | | | | 12 | | | | pF |
| Operating Temperature Range | T_J | 150 | | | | | | | | $^\circ\text{C}$ |
| Storage Temperature Range | T_{STG} | -55 to + 150 | | | | | | | | $^\circ\text{C}$ |

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

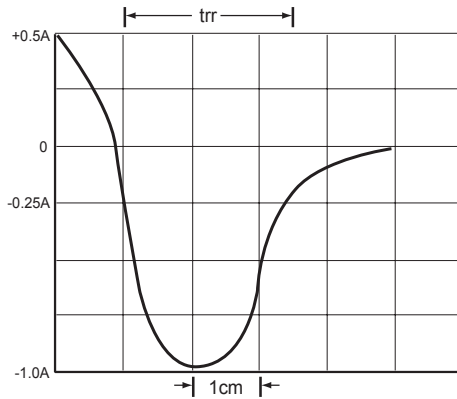
| CHARACTERISTICS | SYMBOL | HFM101 | HFM102 | HFM103 | HFM104 | HFM105 | HFM106 | HFM107 | HFM108 | UNITS | |
|--|----------|--------|--------|--------|--------|--------|--------|--------|--------|---------------|------|
| Maximum Instantaneous Forward Voltage at 1.0A DC | V_F | 1.0 | | | 1.3 | | 1.7 | | | Volts | |
| Maximum Full Load Reverse Current, Full cycle Average $T_A = 55^\circ\text{C}$ | I_R | 50 | | | | | | | | μA | |
| Maximum Average Reverse Current @ $T_A = 25^\circ\text{C}$ | | 5 | | | | | | | | μA | |
| at Rated DC Blocking Voltage @ $T_A = 125^\circ\text{C}$ | | 100 | | | | | | | | μA | |
| Maximum Reverse Recovery Time (Note 4) | t_{rr} | 50 | | | | | 75 | | | | nSec |

- 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)".
4. Test Conditions: $I_F = 0.5\text{A}$, $I_R = -1.0\text{A}$, $I_{RR} = -0.25\text{A}$.

RATING AND CHARACTERISTICS CURVES (HFM101 THRU HFM108)



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



SET TIME BASE FOR 50/100 ns/cm

FIG.1 TEST CIRCUIT DIAGRAM AND REVERSE RECOVERY TIME CHARACTERISTIC

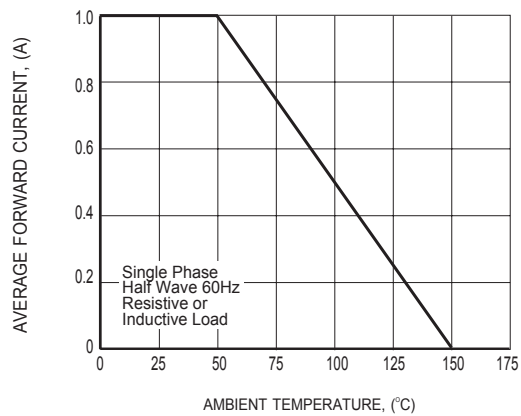


FIG.2 TYPICAL FORWARD CURRENT DERATING CURVE

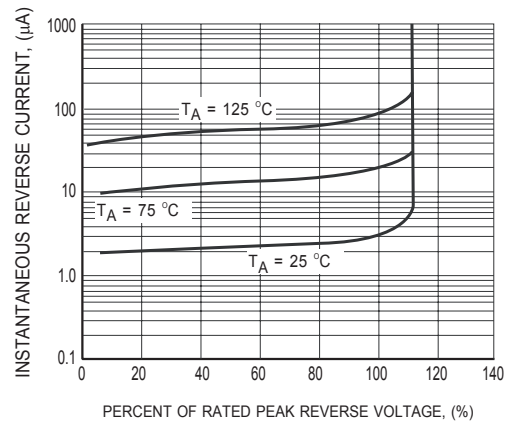


FIG.3 TYPICAL REVERSE CHARACTERISTICS

RATING AND CHARACTERISTICS CURVES (HFM101 THRU HFM108)

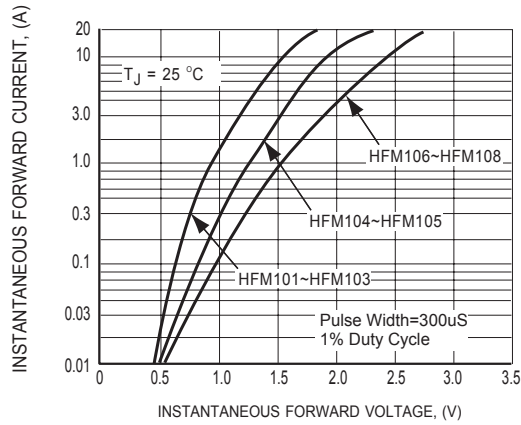


FIG.4 TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

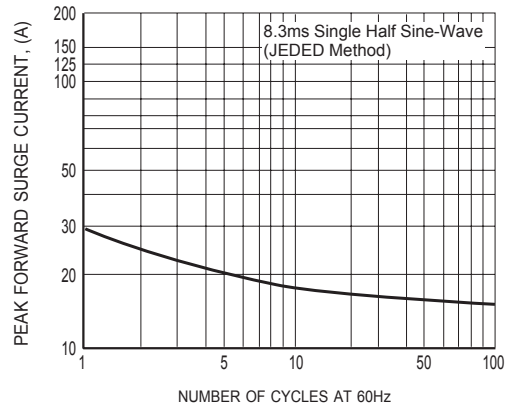


FIG.5 MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

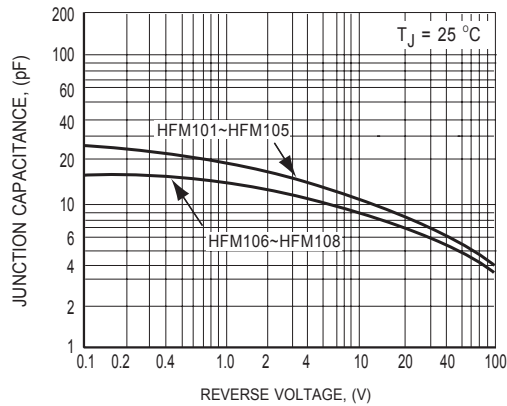
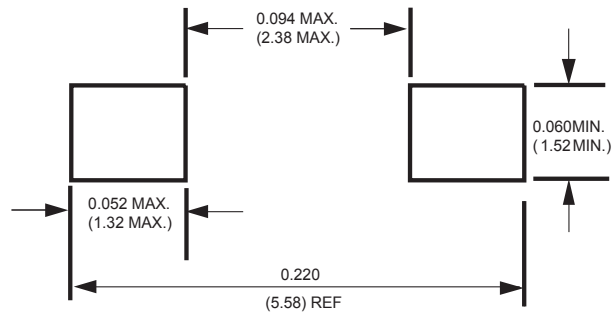


FIG.6 TYPICAL JUNCTION CAPACITANCE

Mounting Pad Layout



Dimensions in inches and (millimeters)

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- Подбор аналогов;
- Консультации по применению компонента;
- Поставка образцов и прототипов;
- Техническая поддержка проекта;
- Защита от снятия компонента с производства.



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