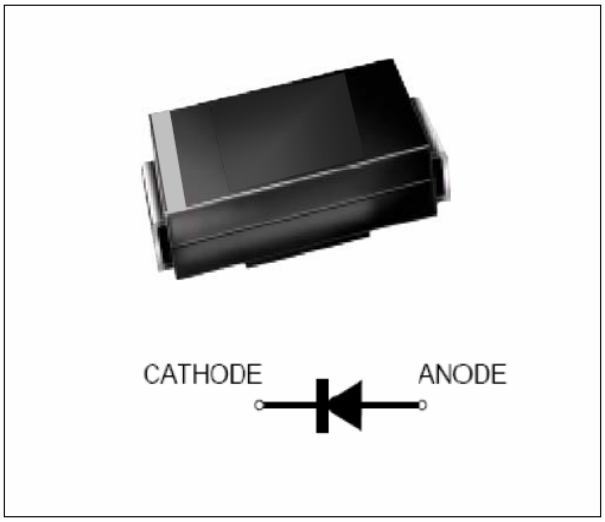
# HFM101 thru HFM108

## Surface Mount Glass Passivated High Efficiency Rectifiers

**Reverse Voltage 50 to 1000V**
**Forward Current 1.0A**




## 1.FEATURES

* Plastic package has Underwriters Laboratories Flammability Classification 94V-0
* Ideally suited for use in very high frequency switching
* power supplies, inverters and as free wheeling diodes
* Ultrafast recovery time for high efficiency
* Excellent high temperature switching
* Soft recovery characteristics
* Cavity-free glass passivated junction
* High temperature soldering guaranteed:
* 260°C/10 seconds, 0.375" (9.5mm) lead length, 5 lbs. (2.3kg) tension

## 2.Mechanical Data

**Case**: JEDEC DO-214AC, molded plastic over glass body
**Terminals**: Plated axial leads, solderable per MIL-STD-750, Method 2026
**Polarity**: Color band denotes cathode end
**Mounting Position**: Any
**Weight**: 0.002 oz., 0.061 g
**Handling precautin**:None

We declare that the material of product compliance with RoHS requirements.

## 3.Electrical Characteristic

### Maximum Ratings & Thermal Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

| Parameter Symbol | symbol | HFM 101 | HFM 102 | HFM 103 | HFM 104 | HFM 105 | HFM 106 | HFM 107 | HFM 108 | Unit |
|---|---|---|---|---|---|---|---|---|---|---|
| Maximum repetitive peak reverse voltage | $V_{RRM}$ | 50 | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | V |
| Maximum RMS voltage | $V_{RMS}$ | 35 | 70 | 140 | 210 | 280 | 420 | 560 | 700 | V |
| Maximum DC blocking voltage | $V_{DC}$ | 50 | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | V |
| Maximum average forward rectified current 0.375" (9.5mm) lead length at $T_A$ = 75°C | IF(AV) | 1.0 | | | | | | | | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | $I_{FSM}$ | 30 | | | | | | | | A |
| Maximum full load reverse current, full cycle average,0.375"(9.5mm) lead lengths at $T_A$ = 55° C | IR(AV) | 100 | | | | | | | | μA |
| Typical thermal resistance (Note 2) | RθJA | 50 | | | | | | | | °C/W |
| Operating junction and storage temperature range | TJ, TSTG | –50 to +150 | | | | | | | | °C |

### Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

| Parameter Symbol | symbol | HFM 101 | HFM 102 | HFM 103 | HFM 104 | HFM 105 | HFM 106 | HFM 107 | HFM 108 | Unit |
|---|---|---|---|---|---|---|---|---|---|---|
| Maximum instantaneous forward voltage at 1.0A | $V_F$ | 1.00 | | | 1.30 | | 1.85 | | | V |
| Maximum DC reverse current TA = 25°C<br>at rated DC blocking voltage TA = 100°C | IR | 5.0<br>100 | | | | | | | | μA |
| Typical reverse recovery time (Note 1) | trr | 50 | | | | | 75 | | | ns |
| Typical junction capacitance at 4.0V, 1MHz | CJ | 17 | | | | | | | | PF |

NOTES:
1. IF = 0.5A, IR = 1.0A, IRR = 0.25A
2. Thermal resistance from junction to ambient at 0.375” (9.5mm) lead length, P.C.B. mounted

## 4.Ratings and Characteristic Curves ( TA = 25°C unless otherwise noted )

Fig. 1 – Forward Current Derating Curve

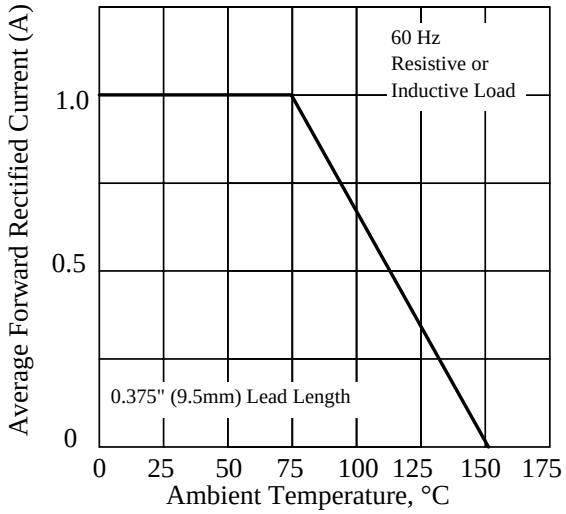



Fig. 2 – Maximum Non-repetitive Peak Forward Surge Current

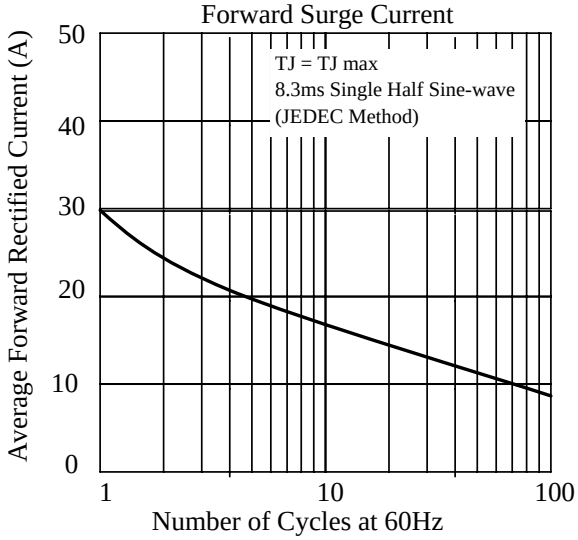



Fig 3. – Typical Instantaneous Forward Characteristics

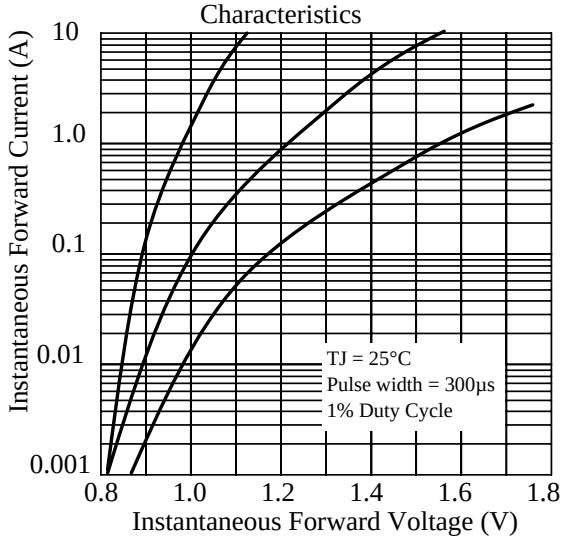



Fig 4. – Typical Reverse Characteristics

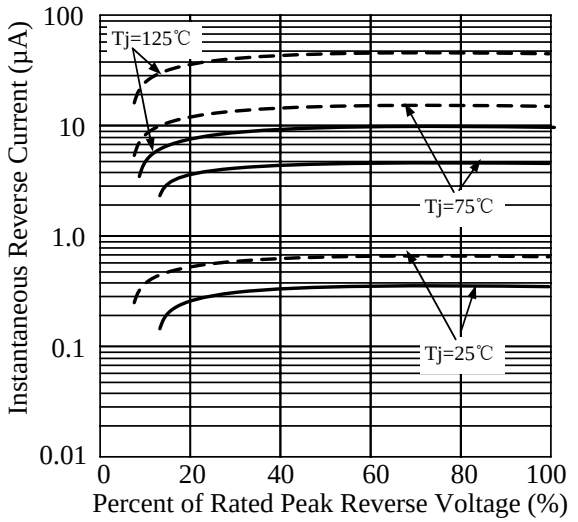



Fig 5. – typical transient thermal impedance

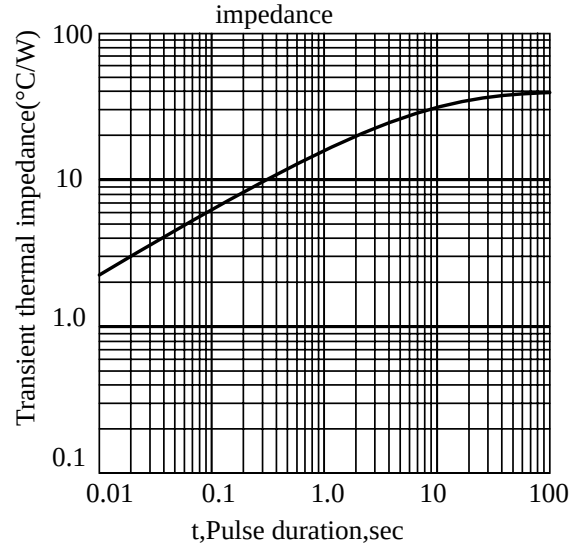
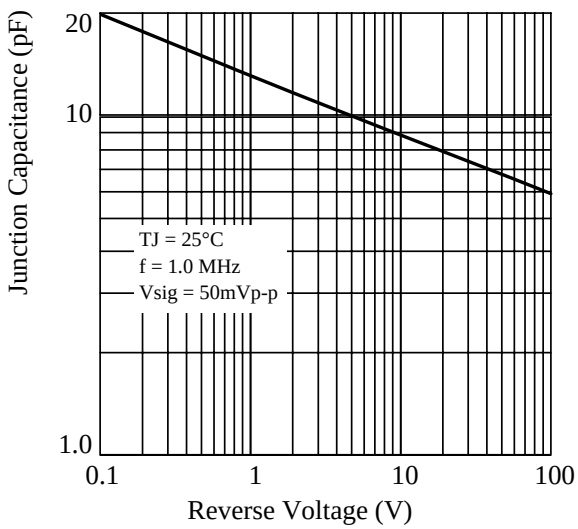
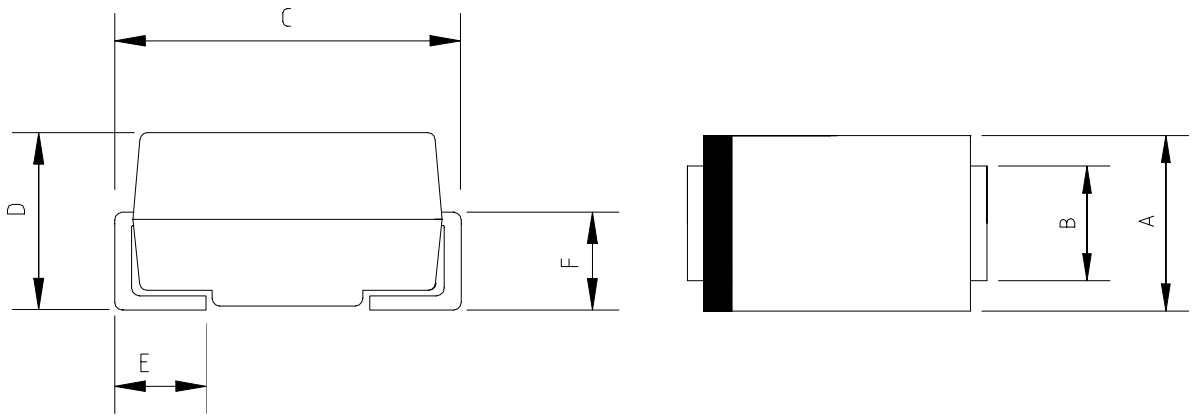



Fig 6. – Typical Junction Capacitance



## 5.Package Dimensions in inches and (millmeters)

Package outline



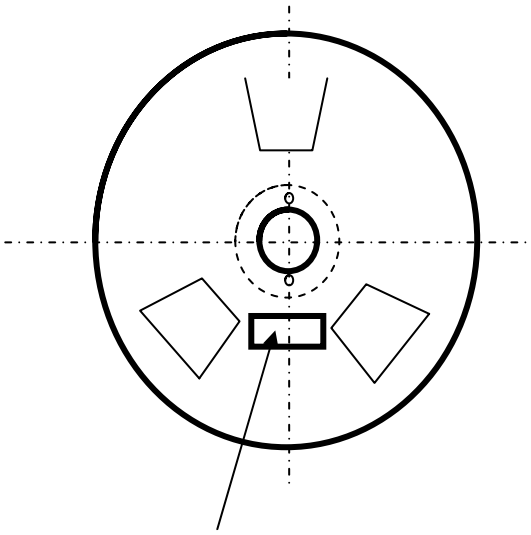

| Dimensions | | | | |
|---|---|---|---|---|
| | inches | | mm | |
| | Min. | Max. | Min. | Max. |
| A | 0.086 | 0.110 | 2.2 | 2.8 |
| B | 0.051 | 0.067 | 1.3 | 1.7 |
| C | 0.185 | 0.209 | 4.7 | 5.3 |
| D | 0.067 | 0.100 | 1.7 | 2.55 |
| E | 0.035 | 0.059 | 0.9 | 1.5 |
| F | 0.035 | 0.059 | 0.9 | 1.5 |

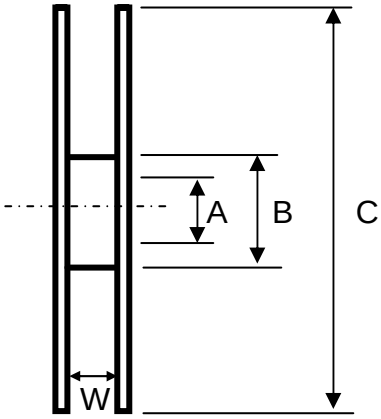
Note:
DO-214AC
molded plastic case
The marking band indicates the cathode

# SMA Packing Specification

1.卷盘规格/Reel Packing

Unit:mm

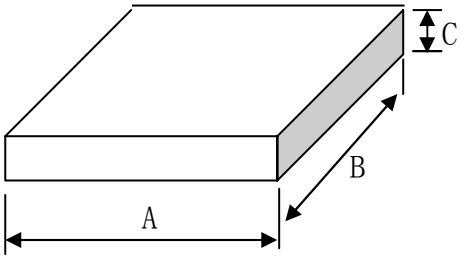



| Item | Q'ty/Taping |
|---|---|
| 7“ | 2K |
| 13“ | 5K |

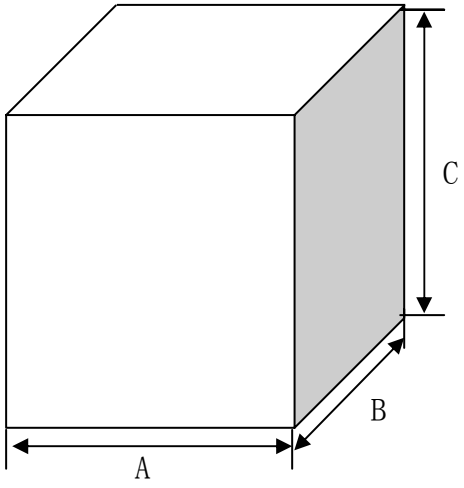
| Item | Symbol | Dimension |
|---|---|---|
| 13“ Size | A | 13.0±0.2 |
| | B | 75.0±0.5 |
| | C | 330±1.0 |
| | W | 13.2±1.0 |
| 7“ Size | A | 13.0±0.2 |
| | B | 54±0.5 |
| | C | 177±1.0 |
| | W | 13.2±1.0 |

2.内箱规格/ Inside Box Specification




| Item | Symbol | Dimension |
|---|---|---|
| Size | A | 335±2 |
| | B | 335±2 |
| | C | 40±1 |

3.外箱规格/Outer Box Specification




| Item | Symbol | Dimension |
|---|---|---|
| Size | A | 350±2 |
| | B | 350±2 |
| | C | 345±2 |