

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 precaution: None

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 $T_A = 75^\circ\text{C}$ | $I_F(AV)$ | 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 $T_A = 55^\circ\text{C}$ | $I_R(AV)$ | 100 | | | | | | | | μA |
| Typical thermal resistance (Note 2) | $R_{\theta JA}$ | 50 | | | | | | | | $^\circ\text{C/W}$ |
| Operating junction and storage temperature range | T_J, T_{STG} | -50 to +150 | | | | | | | | $^\circ\text{C}$ |

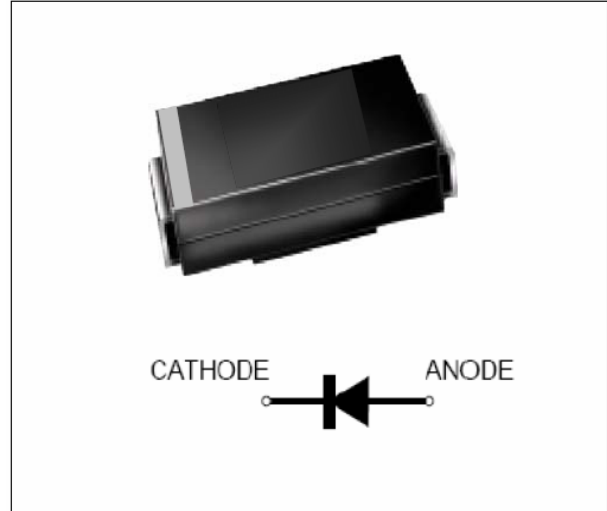
Electrical Characteristics Ratings at 25°C ambient temperature unless otherwise specified.

| 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 $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_A = 100^\circ\text{C}$ | I_R | 5.0 100 | | | | | | | | μA |
| Typical reverse recovery time (Note 1) | t_{rr} | 50 | | | | 75 | | | | ns |
| Typical junction capacitance at 4.0V, 1MHz | C_J | 17 | | | | | | | | PF |

NOTES:

1. $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $IRR = 0.25\text{A}$

2. Thermal resistance from junction to ambient at 0.375" (9.5mm) lead length, P.C.B. mounted



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

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

Fig. 1 - Forward Current Derating Curve

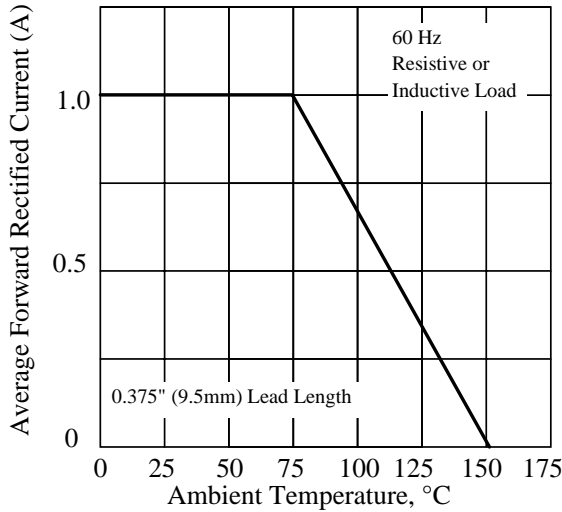


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

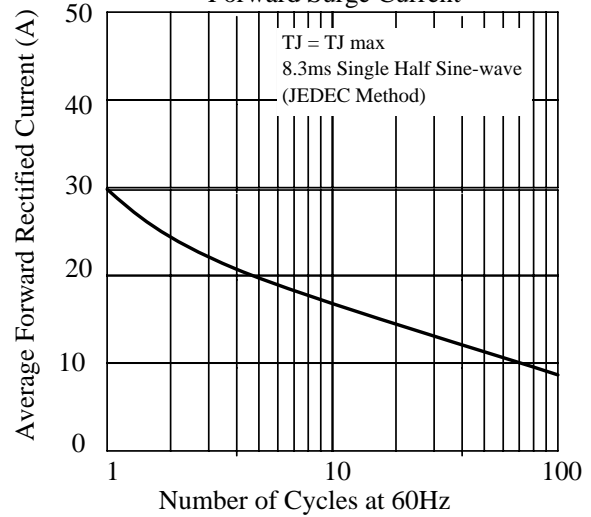


Fig 3. - Typical Instantaneous Forward Characteristics

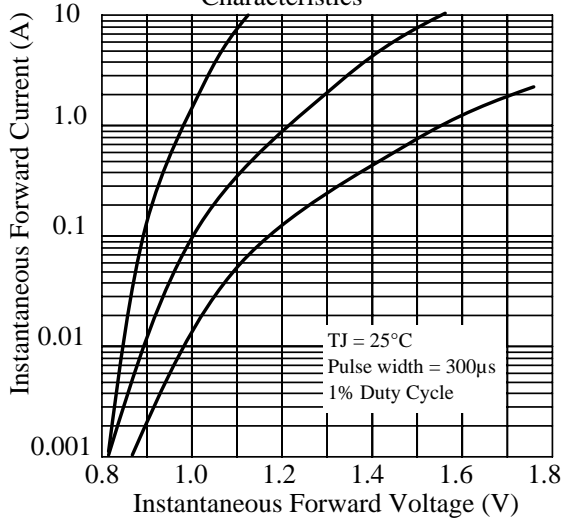


Fig 4. - Typical Reverse Characteristics

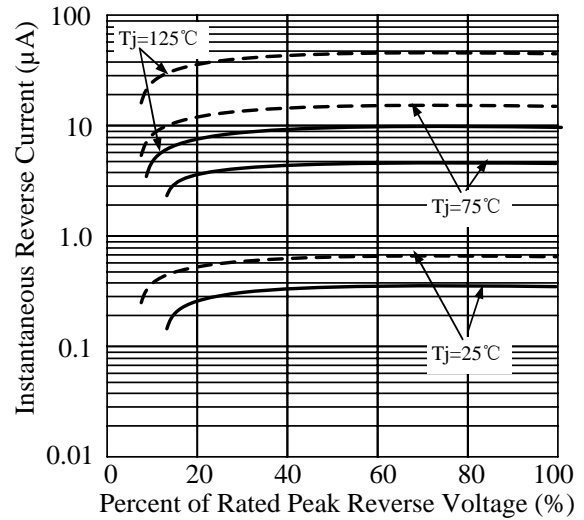


Fig 5. - typical transient thermal impedance

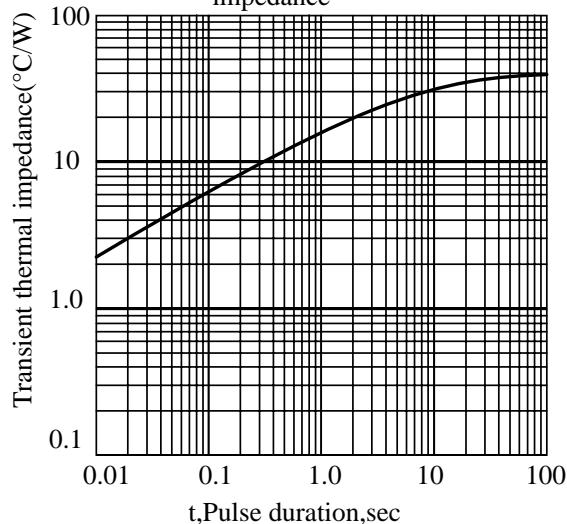
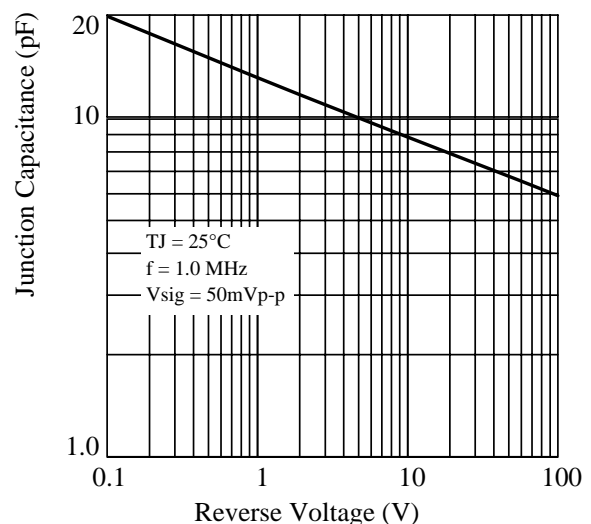
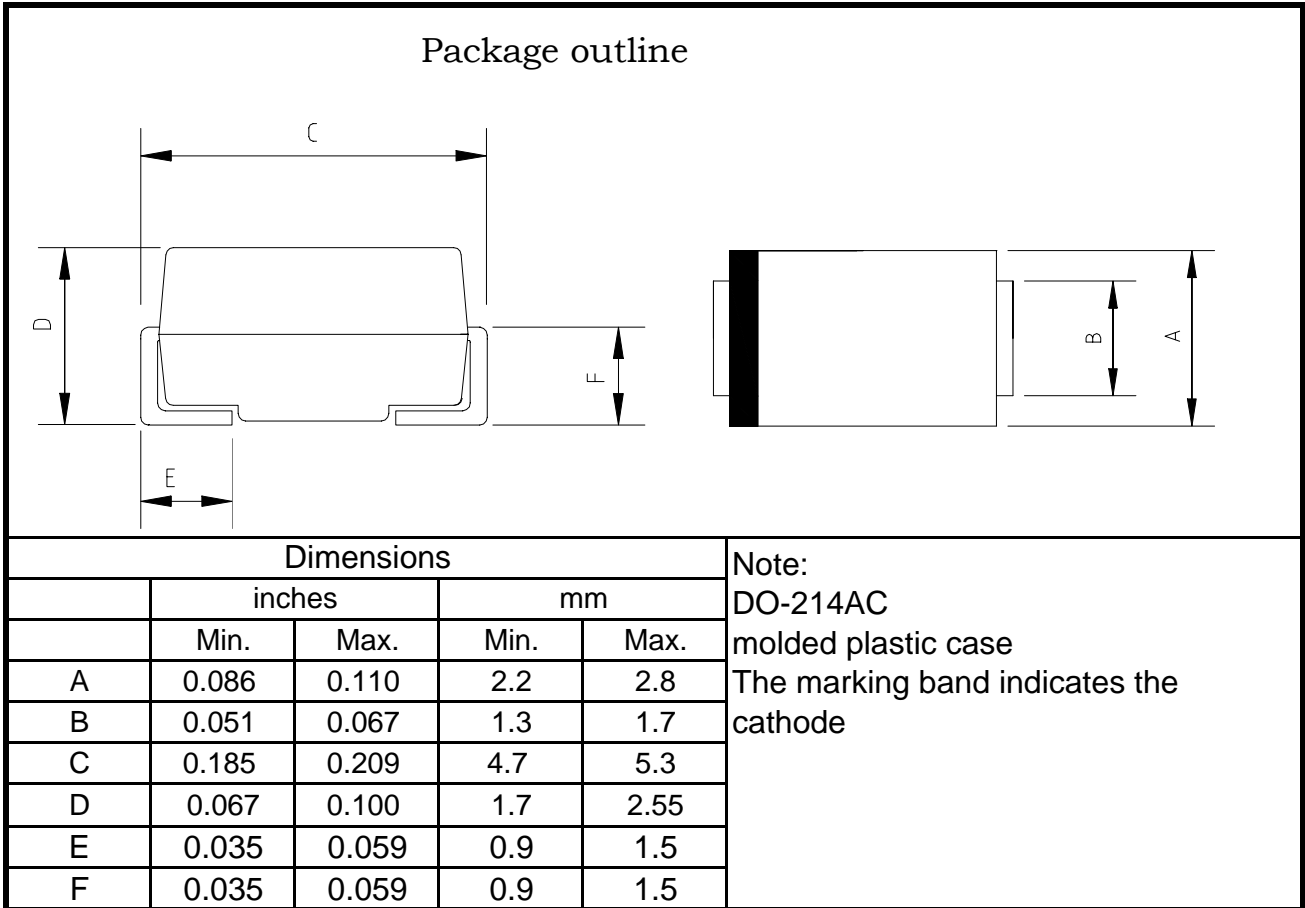


Fig 6. - Typical Junction Capacitance

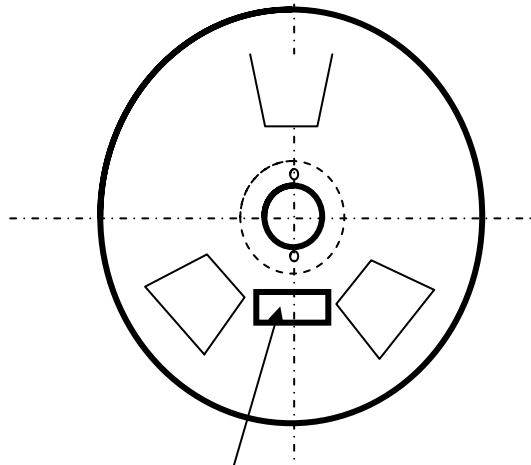


5.Package Dimensions in inches and (millimeters)



SMA Packing Specification

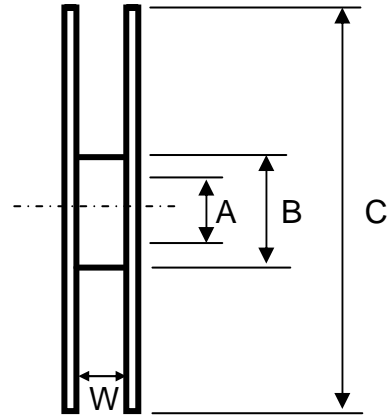
1. 卷盘规格/Reel Packing



Label stike this position

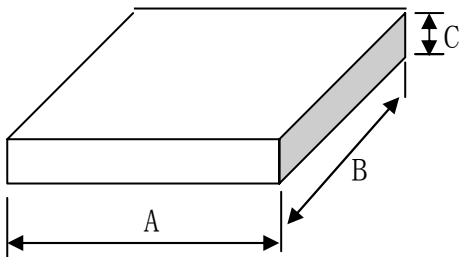
| Item | Q'ty/Taping |
|------|-------------|
| 7" | 2K |
| 13" | 5K |

Unit:mm



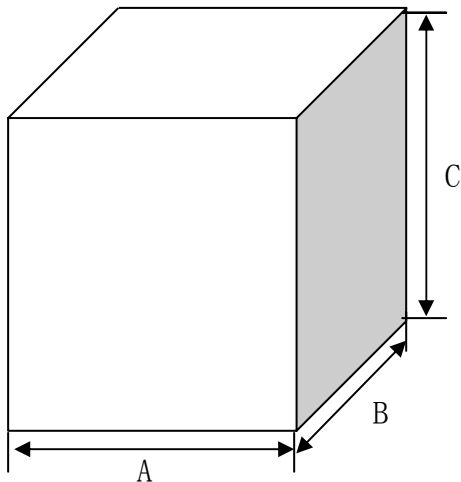
| Item | Symbol | Dimension |
|-------------|--------|-----------|
| 13" Size | A | 13.0±0.2 |
| | B | 75.0±0.5 |
| | C | 330±1.0 |
| | W | 13.2±1.0 |
| 7" Size | A | 13.0±0.2 |
| | B | 54±0.5 |
| | C | 177±1.0 |
| | W | 13.2±1.0 |

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 |