

HFMA210 thru HFMA290

Surface Mount Glass Passivated High Efficiency Rectifiers

Reverse Voltage 50 to 1200V Forward Current 2.0A

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
- * 5 lbs. (2.3kg) tension

Mechanical Data

Case: JEDEC DO-214AC, molded plastic over glass die

Terminals: Plated axial leads, solderable per MIL-STD-750, Method 2026

Polarity: Color band denotes cathode end

Mounting Position: Any

Weight: 0.0023 oz., 0.065 g

Handling precaution: None

1. Electrical Characteristic

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

| Parameter Symbol | symbol | HFMA 210 | HFMA 220 | HFMA 230 | HFMA 240 | HFMA 250 | HFMA 260 | HFMA 270 | HFMA 280 | HFMA 290 | Unit |
|--|---------------|-------------|----------|----------|----------|----------|----------|----------|----------|----------|--------------------|
| device marking code | | HF21 | HF22 | HF23 | HF24 | HF25 | HF26 | HF27 | HF28 | HF29 | |
| Maximum repetitive peak reverse voltage | V_{RRM} | 50 | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | 1200 | V |
| Maximum RMS voltage | V_{RMS} | 35 | 70 | 140 | 210 | 280 | 420 | 560 | 700 | 840 | V |
| Maximum DC blocking voltage | V_{DC} | 50 | 100 | 200 | 300 | 400 | 600 | 800 | 1000 | 1200 | V |
| Maximum average forward rectified current (See fig. 1) | IF(AV) | 2.0 | | | | | | | | | A |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 60 | | | | | | | | | A |
| Maximum full load reverse current, full cycle average, at $T_A = 55^\circ\text{C}$ | IR(AV) | 100 | | | | | | | | | μA |
| Typical thermal resistance (Note 2) | R θ JA | 150 | | | | | | | | | $^\circ\text{C/W}$ |
| Operating junction and storage temperature range | TJ, TSTG | -50 to +150 | | | | | | | | | $^\circ\text{C}$ |

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

| Parameter Symbol | symbol | HFMA 210 | HFMA 220 | HFMA 230 | HFMA 240 | HFMA 250 | HFMA 260 | HFMA 270 | HFMA 280 | HFMA 290 | Unit | |
|--|--------|----------|----------|----------|----------|----------|----------|----------|----------|----------|------|---------------|
| Maximum instantaneous forward voltage at 2.0A | V_F | 1.00 | | 1.30 | | | 1.85 | | | | V | |
| Maximum DC reverse current $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_A = 100^\circ\text{C}$ | IR | 5.0 | | | | | 50 | | | | | μA |
| Typical reverse recovery time (Note 1) | trr | 50 | | | | | 75 | | | | | ns |
| Typical junction capacitance at 4.0V, 1MHz | CJ | 17 | | | | | | | | | PF | |

NOTES:

1. $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$
2. 8.0mm² (.013mm thick) land areas



We declare that the material of product compliance with ROHS requirements

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

Fig. 1 - Forward Current Derating Curve

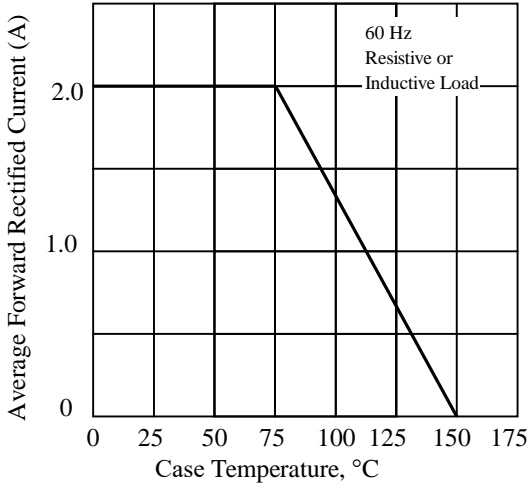


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

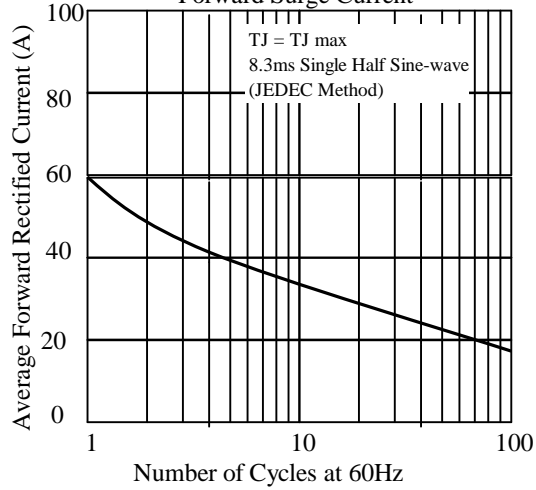


Fig 3. - Typical Instantaneous Forward Characteristics

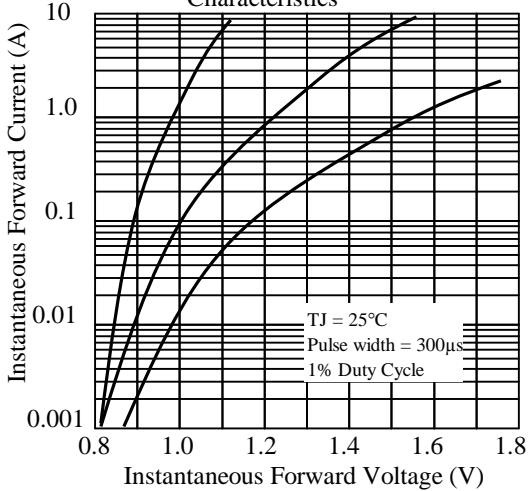


Fig 4. - Typical Reverse Characteristics

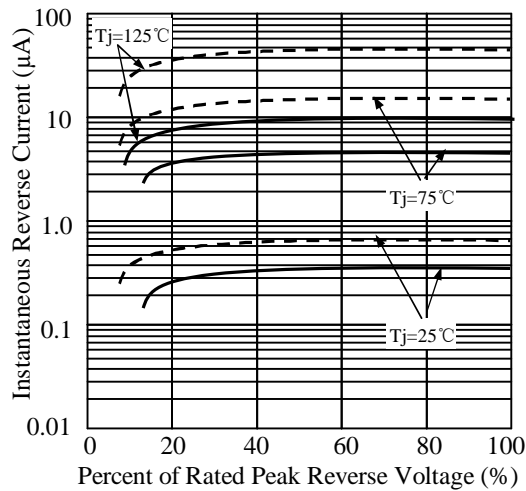


Fig 5. - typical transient thermal impedance

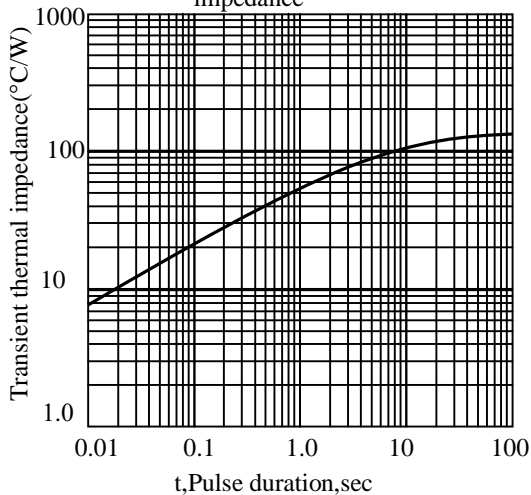
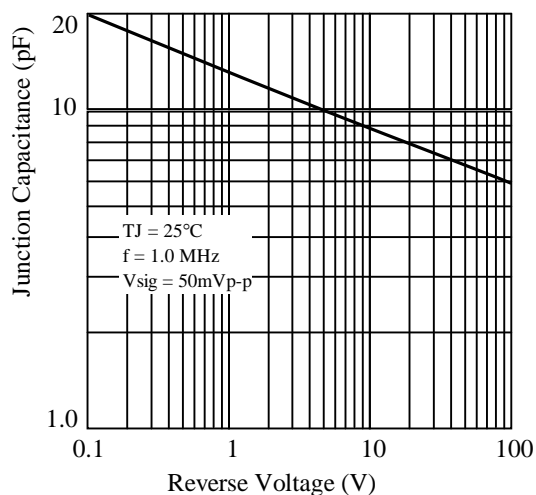
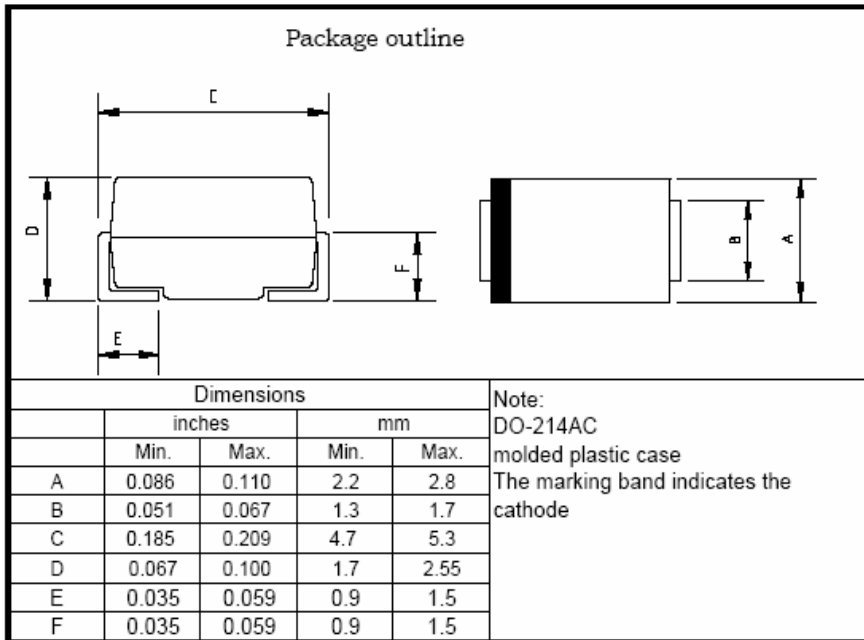


Fig 6. - Typical Junction Capacitance

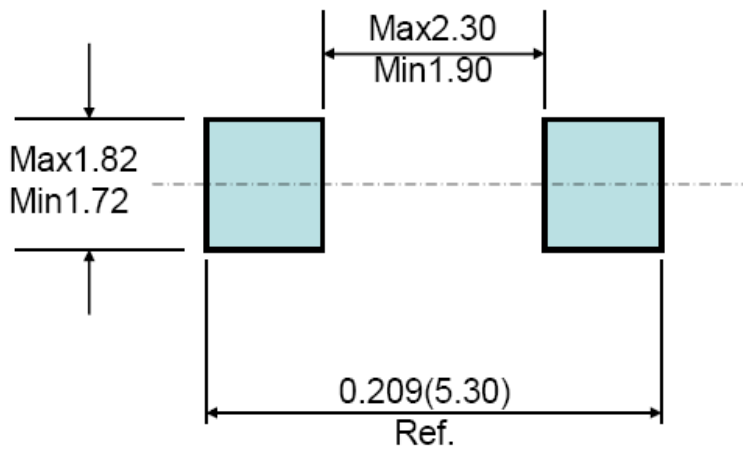


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3. dimension:



Mounting Pad Layout ---SMA



HFMA290: HF---超快二极管; M---贴片产品; A---SMA封装; 2---IF=2A; 90---VB=1200V;

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4. Update Record

| 版次 | 更新记录 | 更新作者 | 更新日期 |
|----|---|------|-----------|
| 1 | 第一版 | 周杰 | 2011-7-13 |
| 2 | 增加包装规范 | 周杰 | 2011-9-6 |
| 3 | 1.将HFMA2**更名为HFMA2**; 2.将HFMA280H更名为HFMA290; | 周杰 | 2012-8-2 |