

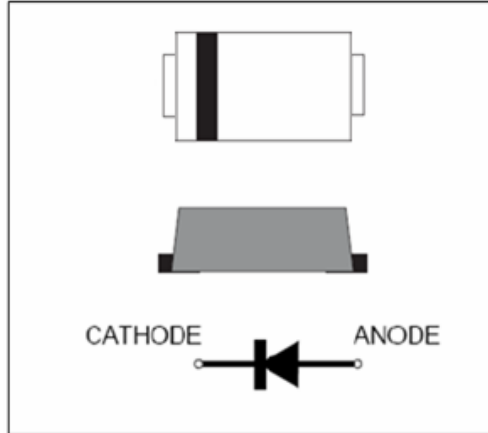
FFMAF201 thru FFMAF207T

Surface Mount Glass Passivated Junction Fast Recovery Rectifiers

Reverse Voltage 50 to 1000V Forward Current 2.0A

FEATURES

- * Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- * High temperature metallurgically bonded construction
- * Cavity-free glass passivated junction
- * Capable of meeting environmental standards of MIL-S-19500
- * Typical IR less than 1.0 μ A
- * High temperature soldering guaranteed: 260°C/10 seconds



We declare that the material of product is Halogen free (green epoxy compound)

Mechanical Data

Case: JEDEC SMA-FL, molded plastic over glass DIE

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

Polarity: Color band denotes cathode end

Mounting Position Any

Weight: 0.0327g

Handling precaution: None

Electrical Characteristic

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

| Parameter Symbol | symbol | FFMAF 201 | FFMAF 202 | FFMAF 203 | FFMAF 204 | FFMAF 205 | FFMAF 206 | FFMAF 207 | FFMAF 207P | FFMAF 207T | Unit | |
|--|------------------------------------|-------------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------------------|--------------------|
| Device marking code | | FF21 | FF22 | FF23 | FF24 | FF25 | FF26 | FF27 | FF27P | FF27T | | |
| Maximum repetitive peak reverse voltage | V_{RRM} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | 1000 | 1000 | V | |
| Maximum RMS voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | 700 | 700 | V | |
| Maximum DC blocking voltage | V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | 1000 | 1000 | V | |
| Maximum average forward rectified current lead length at $T_c = 75^\circ\text{C}$ (Note 2) | $I_{F(AV)}$ | 2.0 | | | | | | | | | A | |
| Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 60 | | | | | | | | | A | |
| Typical reverse recovery time (Note 1) | t_{rr} | 150 | | | 250 | 500 | 250 | 160 | | | ns | |
| Typical thermal resistance (Note 2) | $R_{\theta JA}$ $R_{\theta JC}$ | 150 | | | | | 25 | | | | | $^\circ\text{C/W}$ |
| Operating junction temperature range | T_J | -55 to +150 | | | | | | | | | $^\circ\text{C}$ | |
| storage temperature range | T_{STG} | -65 to +175 | | | | | | | | | $^\circ\text{C}$ | |

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

| Parameter Symbol | symbol | FFMAF 201 | FFMAF 202 | FFMAF 203 | FFMAF 204 | FFMAF 205 | FFMAF 206 | FFMAF 207 | FFMAF 207P | FFMAF 207T | Unit | |
|--|--------|-----------|-----------|-----------|-----------|-----------|-----------|-----------|------------|------------|------|---------------|
| Maximum instantaneous forward voltage at 2.0A | V_F | 1.3 | | | | | | | | | V | |
| Maximum DC reverse current $T_J = 25^\circ\text{C}$ at rated DC blocking voltage $T_J = 125^\circ\text{C}$ | I_R | 5.0 | | | | | 100 | | | | | μA |
| Typical junction capacitance at 4.0V, 1MHz (Note 2) | C_J | 15.0 | | | | | | | | | PF | |

NOTES:

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

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

Fig. 1 - Forward Current Derating Curve

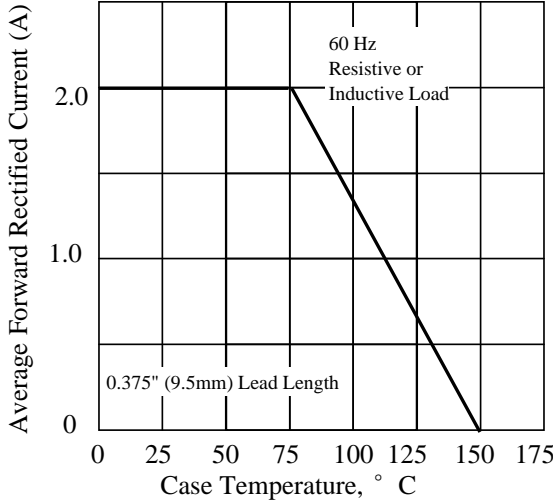


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

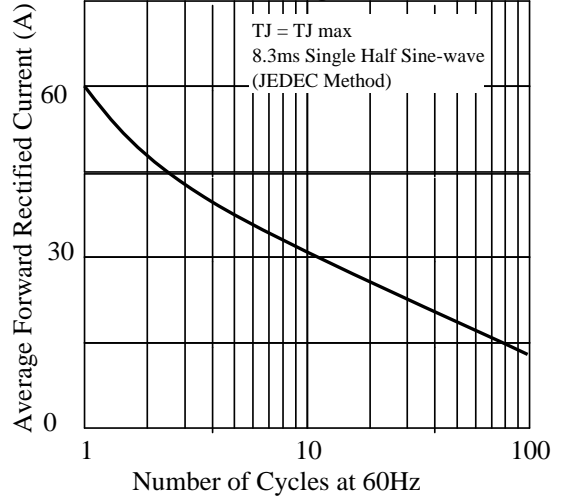


Fig 3. - Typical Instantaneous Forward Characteristics

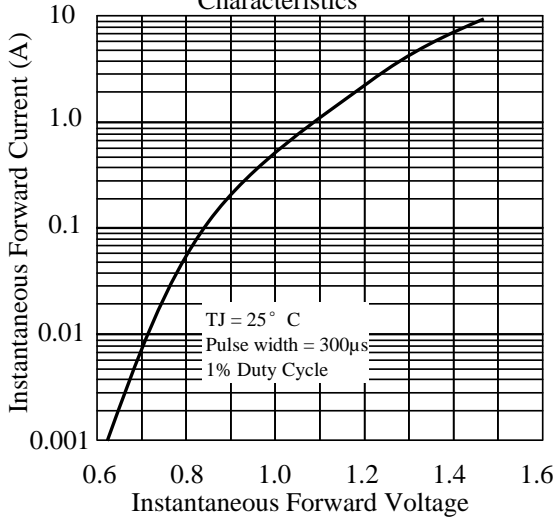


Fig 4. - Typical Reverse Characteristics

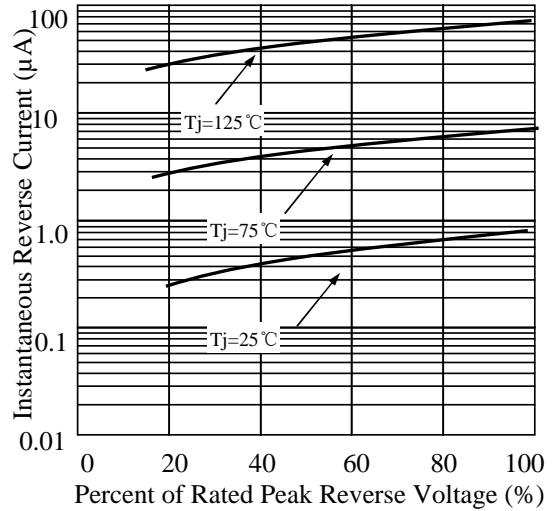


Fig 5. - typical transient thermal impedance

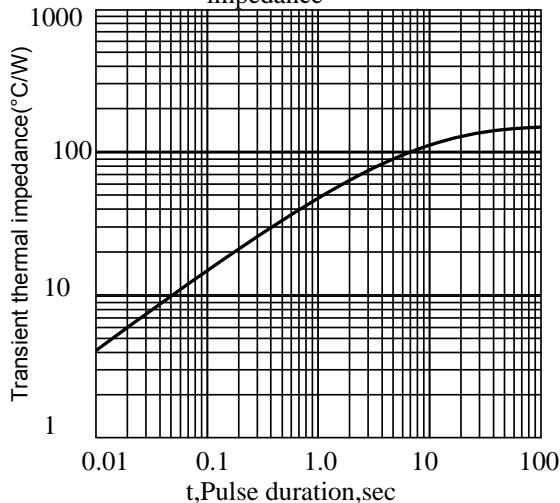
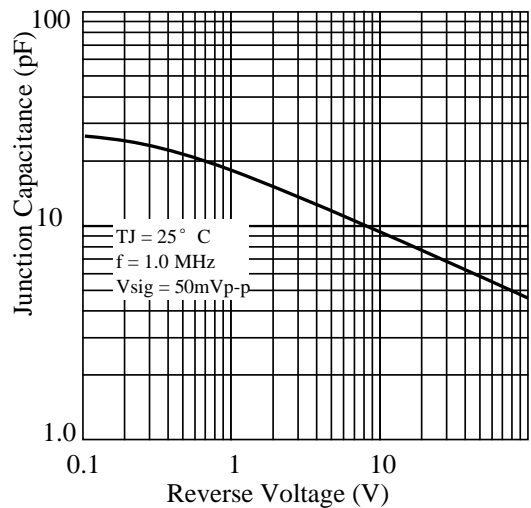


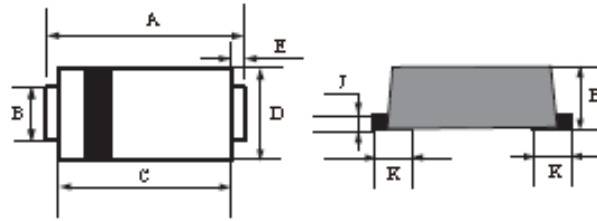
Fig 6. - Typical Junction Capacitance



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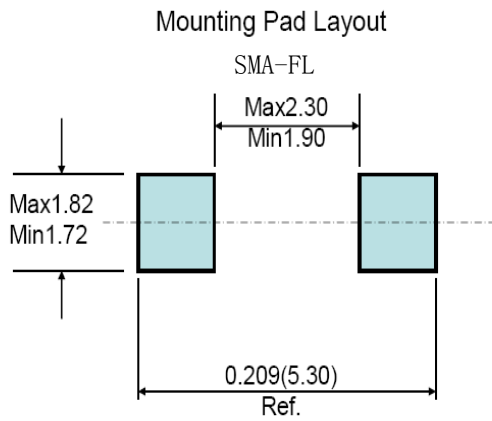
3. dimension:

SMA-FL



| DIM | MILLIMETERS | | INCHES | |
|-----|-------------|------|----------|-------|
| | MIN | MAX | MIN | MAX |
| A | 4.4 | 4.8 | 0.173 | 0.189 |
| B | 1.3 | 1.5 | 0.051 | 0.059 |
| C | 3.3 | 3.7 | 0.130 | 0.146 |
| D | 2.3 | 2.7 | 0.091 | 0.106 |
| E | 0.90Typ | | 0.035Typ | |
| H | 0.9 | 1.2 | 0.036 | 0.047 |
| J | 0.11 | 0.21 | 0.005 | 0.009 |

Suggested solder pad layout



5.1 、 SMD Packing Reel Spec & Packing Quantity

5.1.1 Reel Packing

A. Reel Spec



unit: mm

| SPEC | A | B | C | W | Quantity/Reel |
|------------------|-----------|----------|----------|----------|---------------|
| SMA-FL 7" reel | 177.0±2.0 | 54.0±0.5 | 13.0±0.5 | 13.2±0.2 | 3K |
| TO277 13" reel | 330.0±2.0 | 75.0±0.5 | 13.0±0.5 | 13.2±0.2 | 5K |
| SOD123FL 7" reel | 177.0±2.0 | 50.0±0.5 | 13.0±0.5 | 9.4±1.5 | 3K |
| SOD323HE 7" reel | 177.0±2.0 | 50.0±0.5 | 13.0±0.5 | 9.4±1.5 | 3K |
| SMB-FL 13" reel | 330.0±2.0 | 75.0±0.5 | 13.0±0.5 | 13.2±0.2 | 5K |

B. 13" reel packing box



unit: mm

| size | A | B | C |
|------|---------|---------|--------|
| | 335±5.0 | 335±2.0 | 40±1.0 |

as per above packing

| Spec | Q' ty/Box |
|-----------------|-----------|
| TO277 13" reel | 10K |
| SMB-FL 13" reel | 10K |

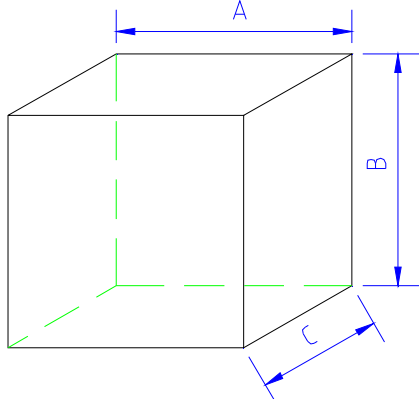
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C. 7" reel packing box



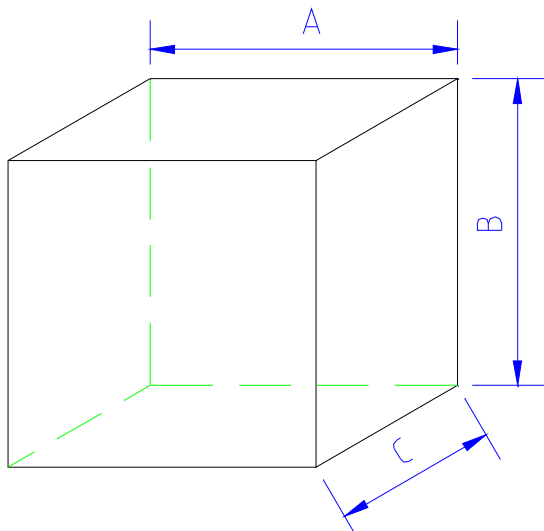
unit: mm

| | A | B | C |
|----------|---------|---------|---------|
| SMA-FL | | | |
| SOD123FL | | | |
| SOD323HE | 186±2.0 | 139±2.0 | 185±2.0 |

as per above packing

| | Q' ty/Box |
|----------|-----------|
| SMA-FL | 30K |
| SOD123FL | 30K |
| SOD323HE | 30K |

D. reel packing carton



unit: mm

| | A | B | C |
|------|---------|---------|---------|
| size | 350±2.0 | 340±2.0 | 350±2.0 |

as per above packing

| Spec | Q' ty/Carton |
|-----------------|--------------|
| TO277 13" reel | 80K |
| SMB-FL 13" reel | 80K |

unit: mm

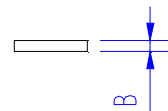
| | A | B | C |
|----------|---------|---------|---------|
| SMA-FL | | | |
| SOD123FL | | | |
| SOD323HE | 455±2.0 | 400±2.0 | 410±2.0 |

as per above packing

| Spec | Q' ty/Carton |
|-------------------|--------------|
| SMA-FL 7" reel | 360K |
| SOD123-FL 7" reel | 360K |
| SOD323HE 7" reel | 360K |

5.1.2 Tape Spec

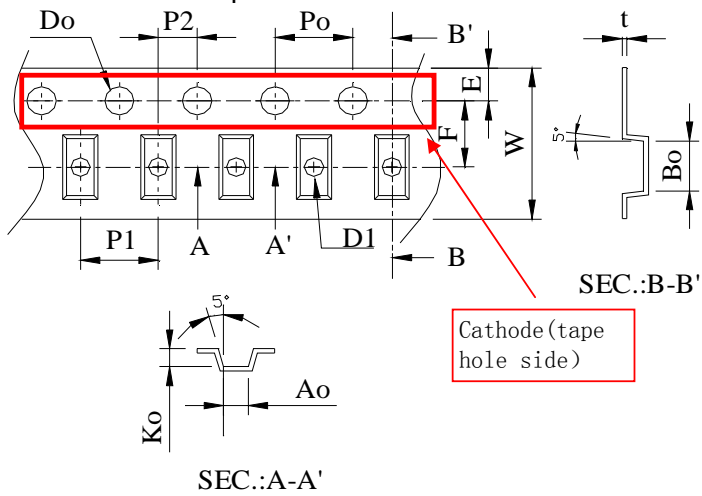
A. Cover Tape



unit: mm

| | A | B |
|----------|----------|-------------|
| SMA-FL | 9.5±0.10 | 0.062±0.007 |
| SMB-FL | | |
| TO277 | | |
| SOD123FL | 5.4±0.10 | |
| SOD323HE | | |

B. Carrier Tape



| Item | SOD323HE | SOD123FL | SMA-FL | SMB-FL | TO277 |
|------|-----------|-----------|-----------|-----------|-----------|
| W | 8±0.3 | 8±0.3 | 12±0.3 | 12±0.3 | 12±0.3 |
| P1 | 4±0.1 | 4±0.1 | 4±0.1 | 8±0.1 | 8±0.1 |
| E | 1.75±0.1 | 1.75±0.1 | 1.75±0.1 | 1.75±0.1 | 1.75±0.1 |
| F | 3.5±0.05 | 3.5±0.05 | 5.5±0.05 | 5.5±0.05 | 5.5±0.05 |
| D0 | 1.55±0.05 | 1.55±0.05 | 1.55±0.05 | 1.55±0.05 | 1.55±0.05 |
| D1 | 1.1±0.1 | 1.1±0.1 | 1.5±0.1 | 1.55±0.05 | 1.5±0.1 |
| P0 | 4±0.1 | 4±0.1 | 4±0.1 | 4±0.1 | 4±0.1 |
| P2 | 2±0.05 | 2±0.05 | 2±0.05 | 2±0.05 | 2±0.05 |
| 10P0 | 40±0.2 | 40±0.2 | 40±0.2 | 40±0.2 | 40±0.2 |
| A0 | 1.45±0.1 | 1.95±0.1 | 2.83±0.1 | 3.8±0.1 | 4.3±0.1 |
| B0 | 2.75±0.1 | 3.95±0.1 | 4.75±0.1 | 5.75±0.1 | 6.8±0.1 |
| K0 | 0.80±0.1 | 1.30±0.1 | 1.42±0.1 | 1.4±0.1 | 1.35±0.1 |
| T | 0.25±0.05 | 0.25±0.05 | 0.25±0.05 | 0.25±0.05 | 0.25±0.05 |

Title:

Power Diode SMD Package Packing Spec

DOC NO.: WI-258

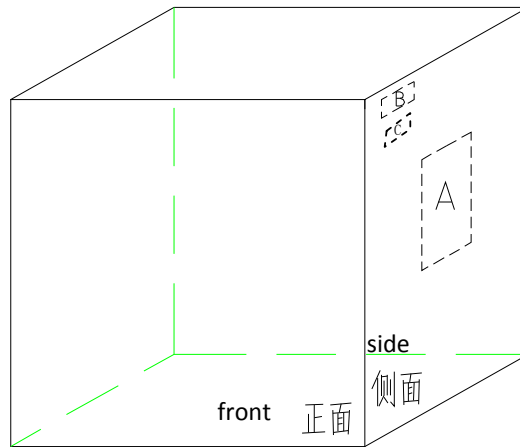
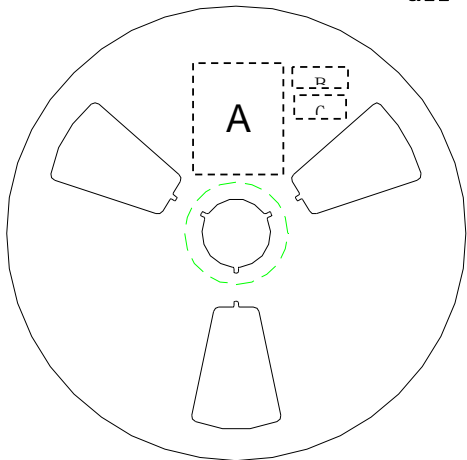
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5.2、SMD Power Diode General Packing Spec

A. 7" reel

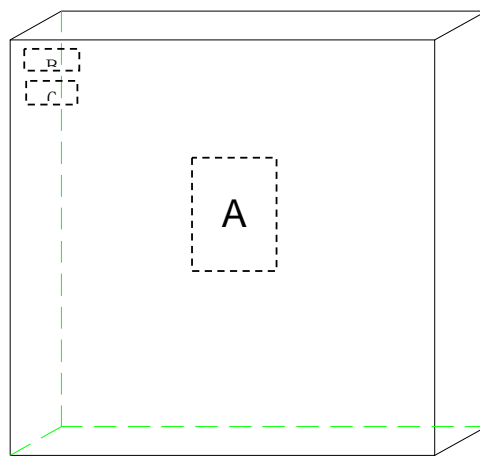
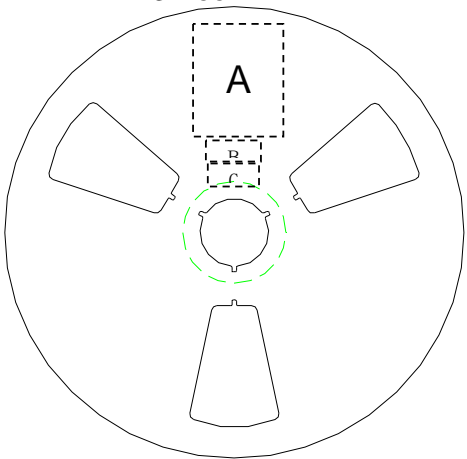
all labels will be at cathode side of reel ;



A:LRC label;

B:Environment Label C:Halide free label

B. 13" reel



A:LRC label;

B:Environment Labe C:Halide free label

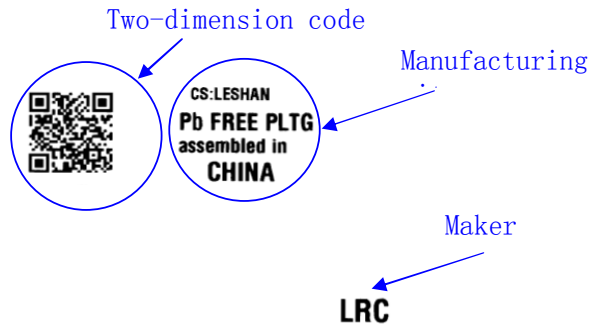
C. Tape lead: face anode side of the reel, upper side is the tape lead position. All labels are at cathode side of the reel.



| | |
|--|-------------------------------|
| 标题: Power Diode SMD Package Packing Spec | DOC NO.: WI-258 |
| | Version: 5 Modification: 0 |
| | Page: 6 |

C. Label Content :
LRC Label

P/N → (1P) LPN: **SM140A**
 Lot No. → (1T) LOT: **140106049X**
 Date code → (9D) DTE: **1403**
 Quantity → (Q) QTY: **10000**



lot: 140106049X: 140106---2014/1/6; 049----lot number:49; X: product code

Environment Label



Halide-free Label



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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 | 2014. 04. 28 |

单击下面可查看定价，库存，交付和生命周期等信息

[>>LRC\(乐山无线电\)](#)