

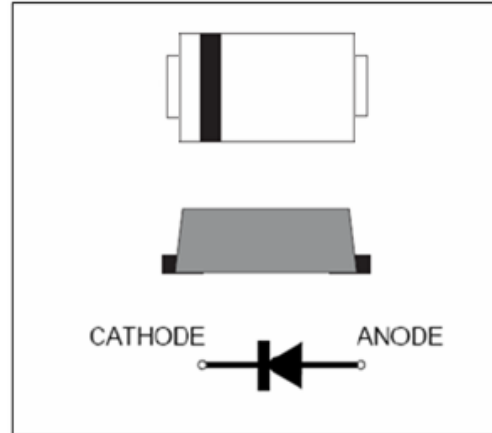
FFMAF101 thru FFMAF107T

Surface Mount Glass Passivated Junction Fast Recovery Rectifiers

Reverse Voltage 50 to 1000V Forward Current 1.0A

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 101	FFMAF 102	FFMAF 103	FFMAF 104	FFMAF 105	FFMAF 106	FFMAF 107	FFMAF 107P	FFMAF 107T	Unit
Device marking code		FF11	FF12	FF13	FF14	FF15	FF16	FF17	FF17P	FF17T	
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°C(Note 2)	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
Typical reverse recovery time (Note 1)	trr	150				250	500		250	160	ns
Typical thermal resistance (Note 2)	RθJA RθJC	150 25									°C/W
Operating junction temperature range	T _J	−55 to +150									°C
storage temperature range	T _{STG}	−65 to +175									°C

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

Parameter Symbol	symbol	FFMAF 101	FFMAF 102	FFMAF 103	FFMAF 104	FFMAF 105	FFMAF 106	FFMAF 107	FFMAF 107P	FFMAF 107T	Unit
Maximum instantaneous forward voltage at 1.0A	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. $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $IRR = 0.25\text{A}$

2. 8.0mm² (.013mm thick) land areas

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

Fig. 1 - Forward Current Derating Curve

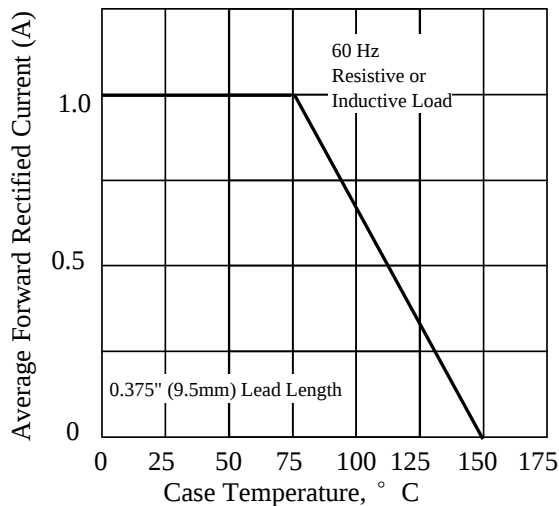


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

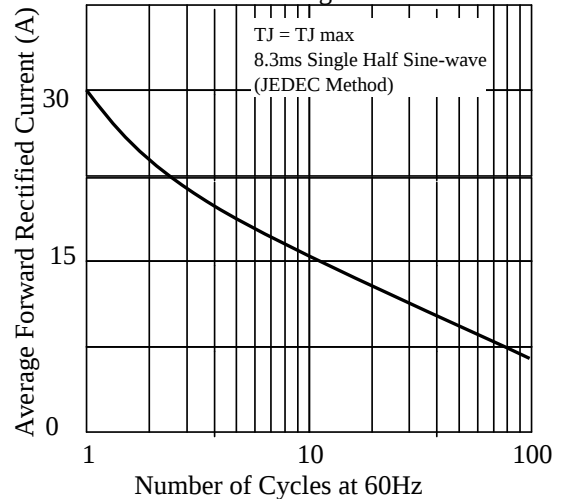


Fig 3. - Typical Instantaneous Forward Characteristics

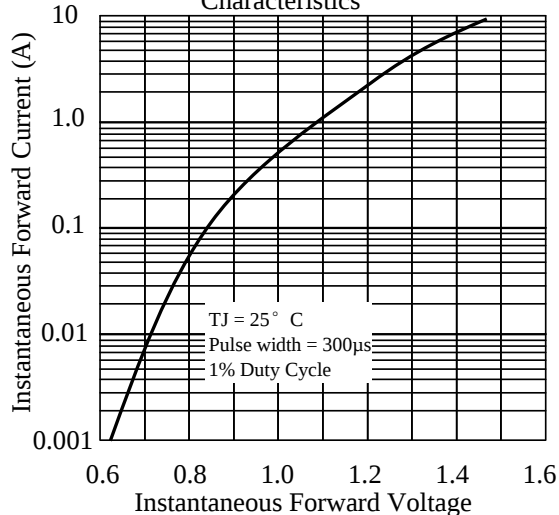


Fig 4. - Typical Reverse Characteristics

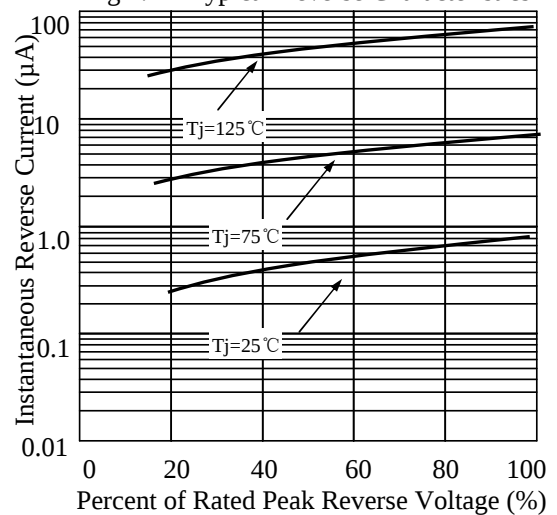


Fig 5. - typical transient thermal impedance

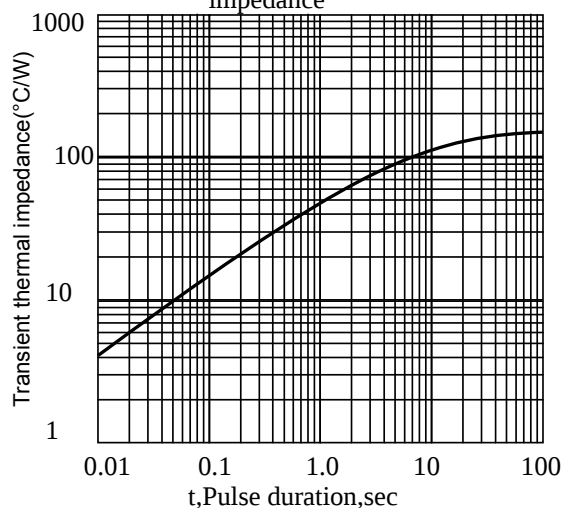
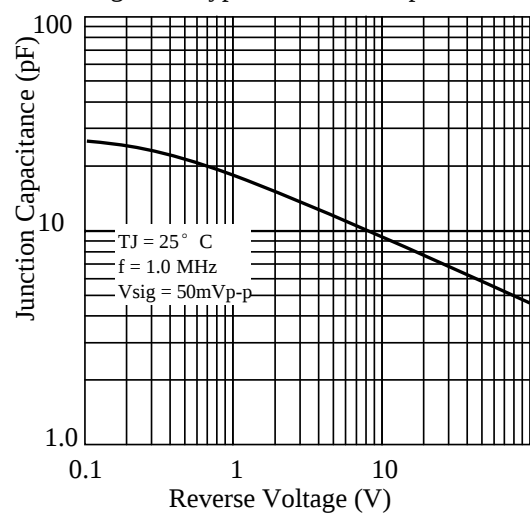


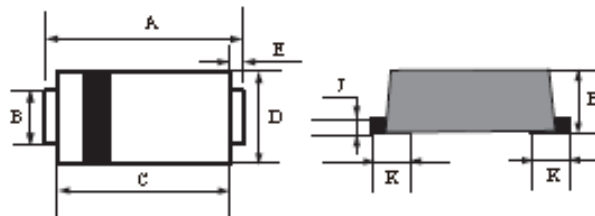
Fig 6. - Typical Junction Capacitance



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3. dimension:

SMA-FL

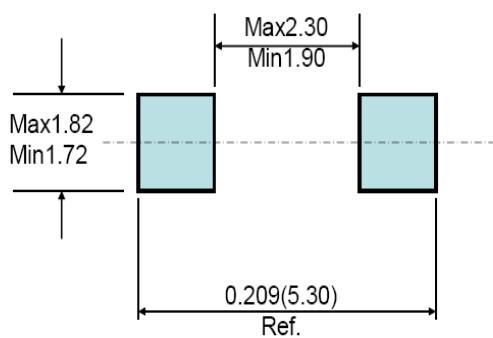


DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	4.4	4.8	0.173	0.189
B	1.3	1.5	0.051	0.059
C	3.3	3.7	0.130	0.146
D	2.3	2.7	0.091	0.106
E	0.90Typ		0.035Typ	
H	0.9	1.2	0.036	0.047
J	0.11	0.21	0.005	0.009

Suggested solder pad layout

Mounting Pad Layout

SMA-FL



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5.1 、 SMD Packing Reel Spec & Packing Quantity

5.1.1 Reel Packing
A. Reel Spec

The diagram shows a top view of a reel with three sectors and a side view. Dimensions are labeled: A is the total height, B is the height of the carrier, C is the height of the carrier body, and W is the width of the carrier.

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

The diagram shows a 3D view of a rectangular box. Dimensions are labeled: A is the height, B is the length, and C is the width.

unit: mm

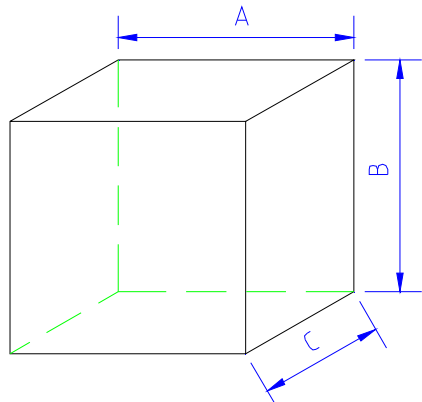
	A	B	C
size	335±5.0	335±2.0	40±1.0

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



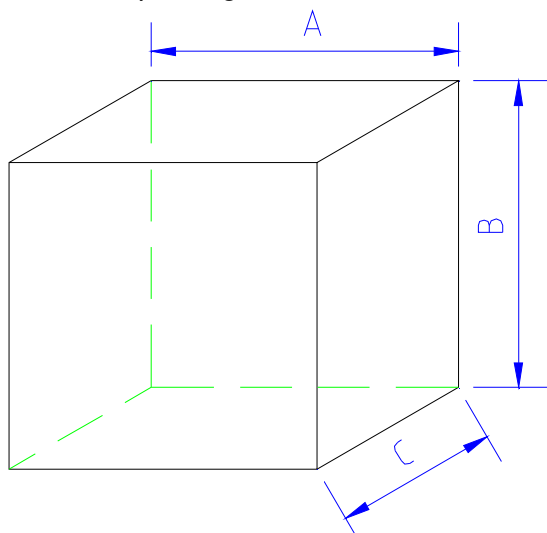
unit: mm

	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

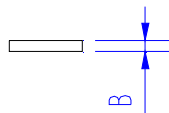
	A	B	C
SMA-FL SOD123FL SOD323HE	455±2.0	400±2.0	410±2.0

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

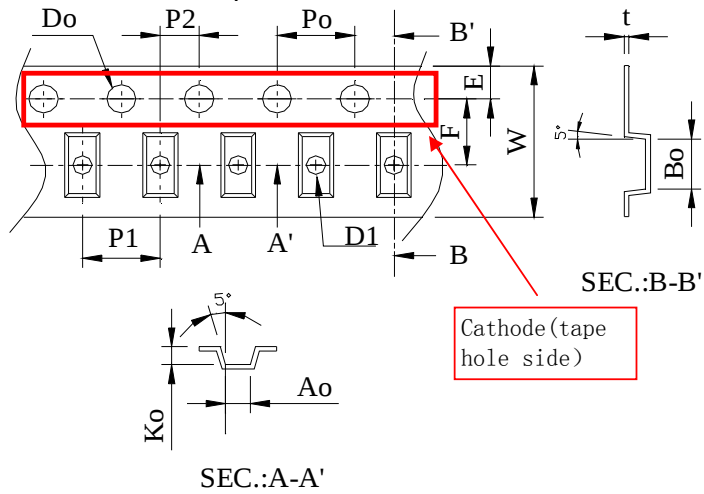


unit: mm

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

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B. Carrier Tape

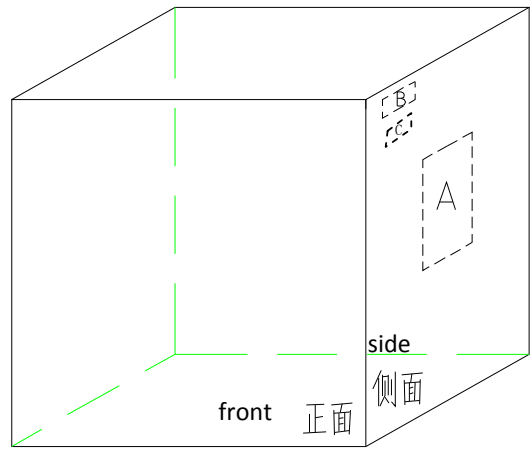
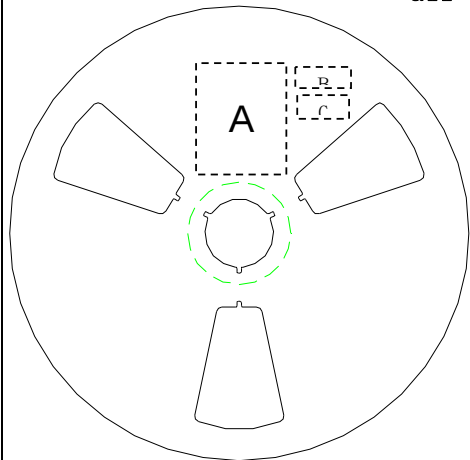


Item	SOD323HE	SOD123FL	SMA-FL	SMB-FL	TO277
W	8±0.3	8±0.3	12±0.3	12±0.3	12±0.3
P1	4±0.1	4±0.1	4±0.1	8±0.1	8±0.1
E	1.75±0.1	1.75±0.1	1.75±0.1	1.75±0.1	1.75±0.1
F	3.5±0.05	3.5±0.05	5.5±0.05	5.5±0.05	5.5±0.05
D0	1.55±0.05	1.55±0.05	1.55±0.05	1.55±0.05	1.55±0.05
D1	1.1±0.1	1.1±0.1	1.5±0.1	1.55±0.05	1.5±0.1
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

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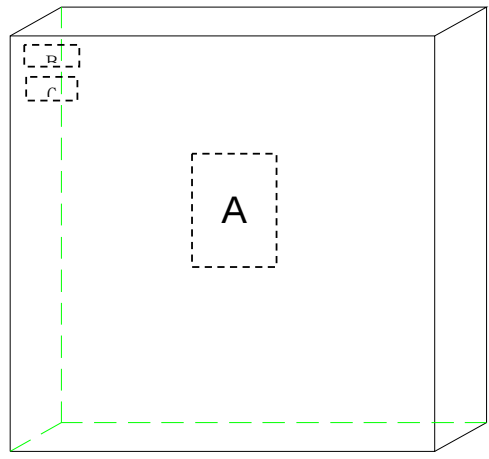
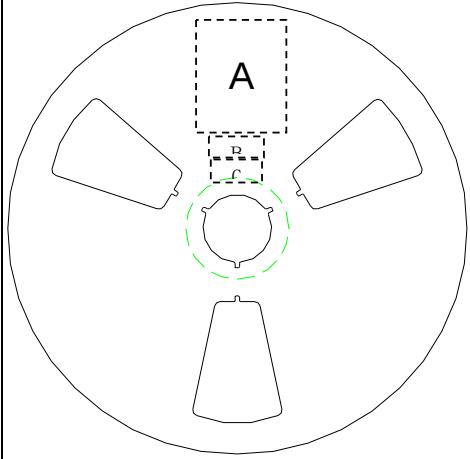
5.2、SMD Power Diode General Packing Spec

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.



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C. Label Content :
LRC Label

P/N

→

(1P) LPN: SM140A

Lot No.

→

(1T) LOT: 140106049X

Date code

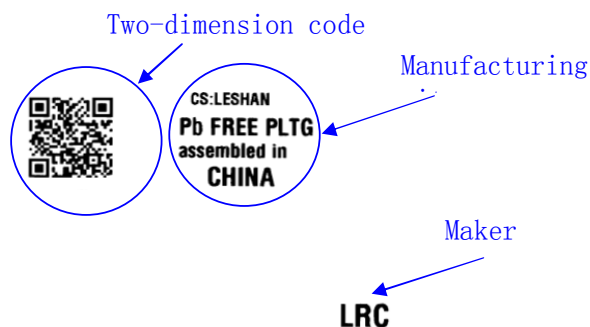
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(9D) DTE: 1403

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. 05. 26