

HFMAF101 thru HFMAF109

Surface Mount Glass Passivated High Efficiency Rectifiers

Reverse Voltage 50 to 1200V Forward Current 1.0A



Tonghua Electronics

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

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: 28mg

Handling precaution: None

1. Electrical Characteristic

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

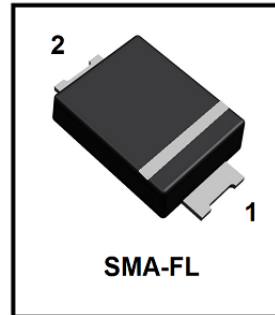
Parameter Symbol	symbol	HFMA F 101	HFMA F 102	HFMA F 103	HFMA F 104	HFMA F 105	HFMA F 106	HFMA F 107	HFMA F 108	HFMA F 109	Unit
marking		HF1	HF2	HF3	HF4	HF5	HF6	HF7	HF8	HF9	
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	300	400	600	800	1000	1200	V
Maximum RSM voltage	V_{RSM}	35	70	140	210	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 lead length at $T_c = 75^\circ\text{C}$	$I_F(AV)$	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)	$R_{\theta JA}$ $R_{\theta JL}$	150 35									$^\circ\text{C/W}$
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	HFMA F 101	HFMA F 102	HFMA F 103	HFMA F 104	HFMA F 105	HFMA F 106	HFMA F 107	HFMA F 108	HFMA F 109	Unit
Maximum instantaneous forward voltage at 1.0A	V _F	1.00			1.30		1.85				V
Maximum DC reverse current TA = 25°C at rated DC blocking voltage TJ = 100°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 is
Halogen free (green epoxy compound)

HFMAF101 thru HFMAF109

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

Fig. 1 - Forward Current Derating Curve

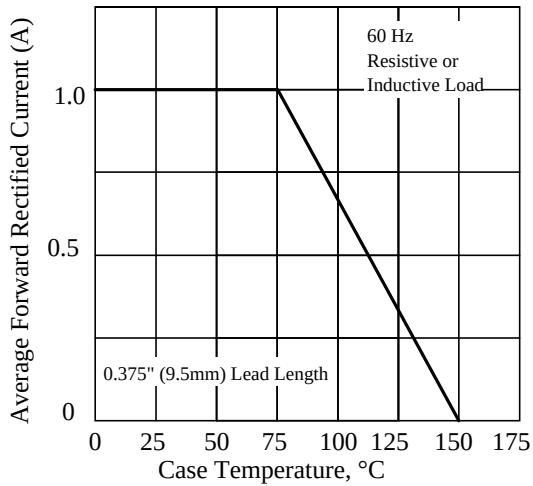


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

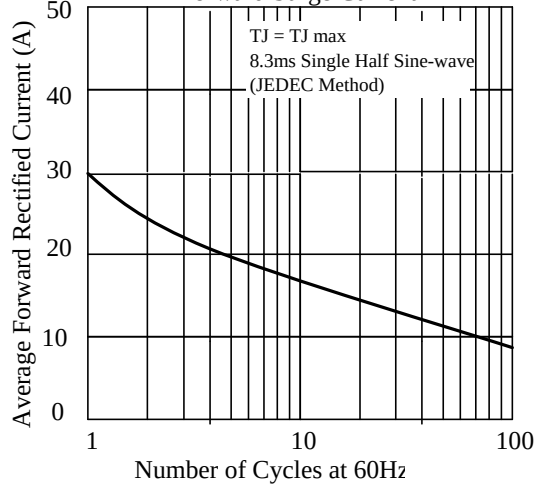


Fig 3. - Typical Instantaneous Forward Characteristics

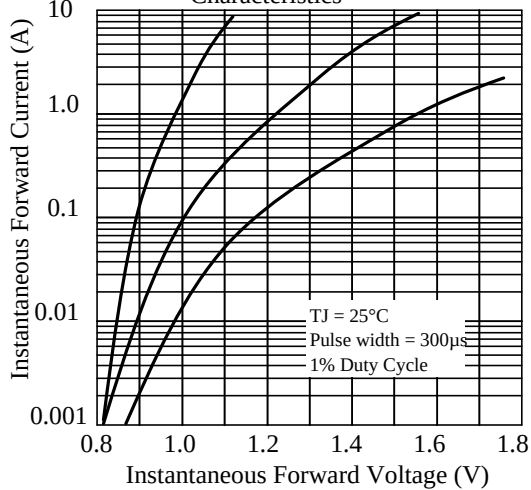


Fig 4. - Typical Reverse Characteristics

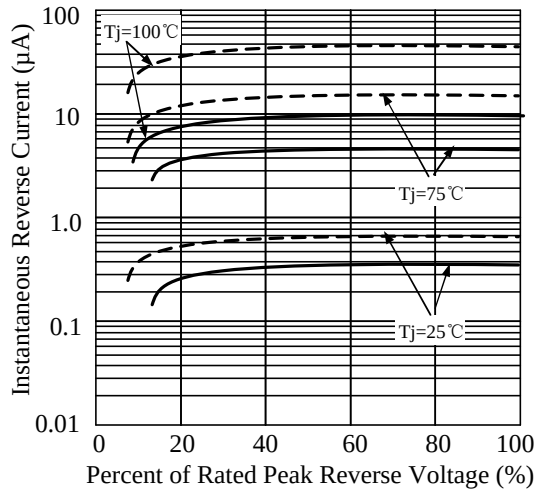


Fig 5. - typical transient thermal impedance

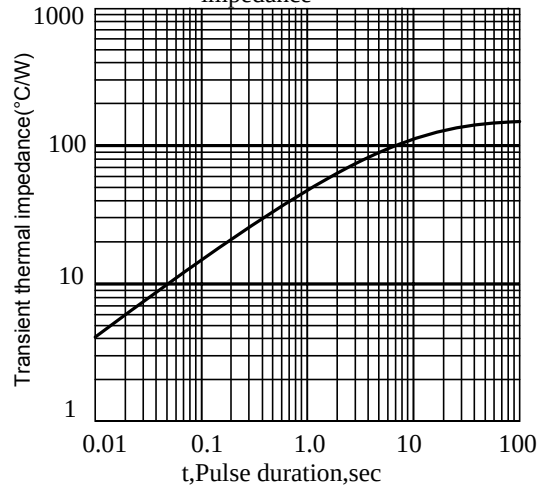
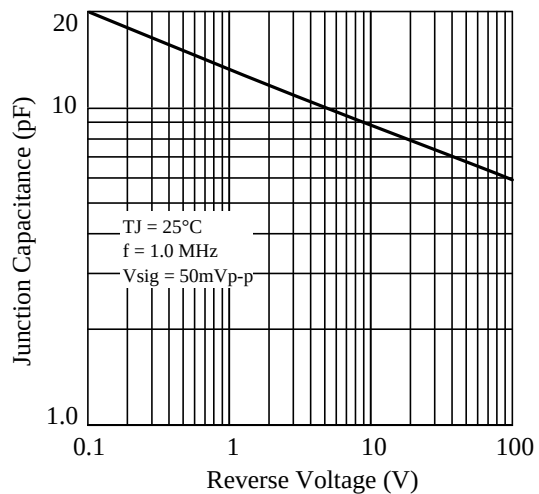
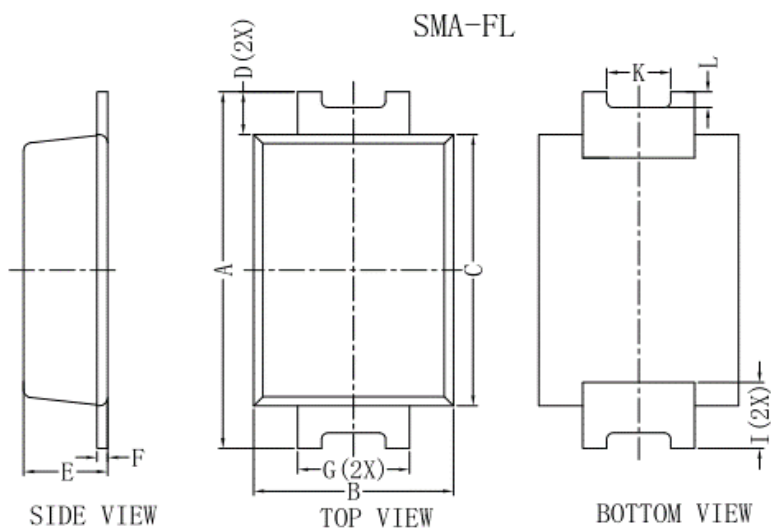


Fig 6. - Typical Junction Capacitance



3.OUTLINE AND DIMENSIONS

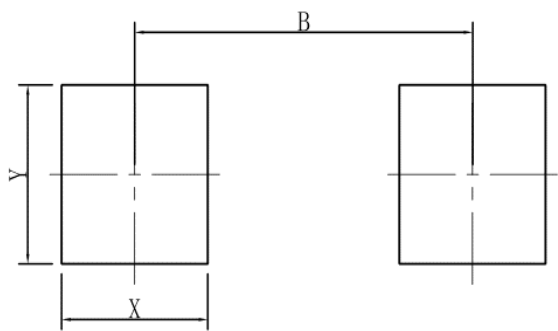


SMA-FL			
DIM	MIN	MAX	Typ.
A	4.40	4.80	4.60
B	2.30	2.70	2.60
C	3.30	3.70	3.50
D			0.55
E	0.90	1.20	1.05
F	0.11	0.21	0.17
G	1.30	1.50	1.40
I	-	-	0.90
K	-	-	0.80
L	-	-	0.20
All Dimensions in mm			

GENERAL NOTES

- 1.Top package surface finish Ra0.4±0.2um
- 2.Bottom package surface finish Ra0.7±0.2um

4.SOLDERING FOOTPRINT



SMA-FL	
DIM	(mm)
X	1.60
Y	1.80
B	3.70

Proprietary Information	Title: Power Packages Product Packing Specification 功率产品包装规范 Document Number: APS-QA-QS-009	
	Revision C	



8.1.2 Label position and QA stamp position.(Empty area) 标签张贴位置及QA印章位置。（印章盖 标签空白区）

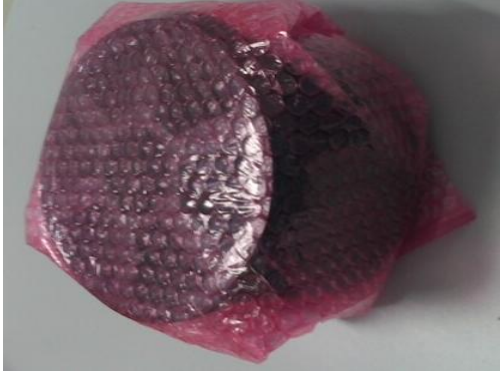


7英寸卷盘标签张贴及QA印章位置



13英寸卷盘标签张贴及QA印章位置

8.1.3 Ensure direction In the same reel. The same steel coil plate direction, With antistatic bubble to package reel. Refer to the below picture.
同一箱内的卷盘方向一致,用防静电泡沫对卷盘进行包裹。



7英寸卷盘防静电泡沫包裹



13英寸卷盘防静电泡沫包裹

Proprietary Information	Title: Power Packages Marking & Taping Specification 功率封装字模和编带规范	
	Document Number:APS-QA-QS-010	Revision C

8.2 Standard Products Taping Specification

标准产品编带规范

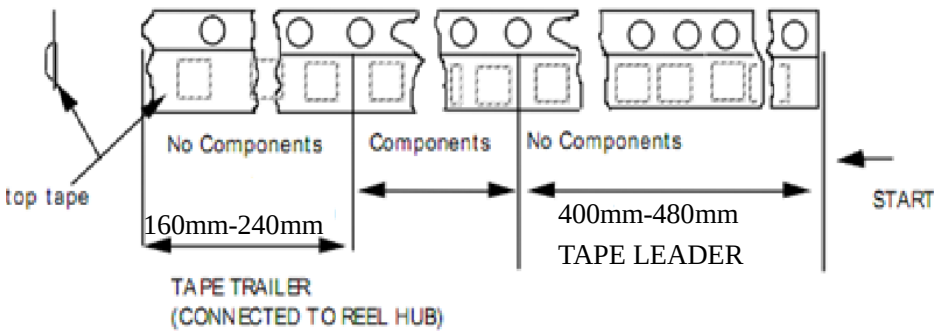
8.2.1 Tape length of no component

空带长度说明

Taping leader length 引导部分：440mm±40mm ， Tape trailer 尾部：200mm±40mmt

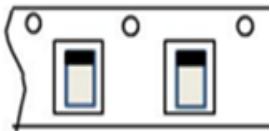
Figure 4

Tape Ends For Finished Goods Reel



8.2.2 Component packaging orientation: The cathode lead is close to the carrier tape's index hole.

产品放置方向：印阴极带引脚邻近载带索引孔



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8.2.3 Tape enwind orientation

编带缠绕方向要求

