

HFMAF101 thru HFMAF109

Surface Mount Glass Passivated High Efficiency Rectifiers
Reverse Voltage 50 to 1200V Forward Current 1.0A

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, 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

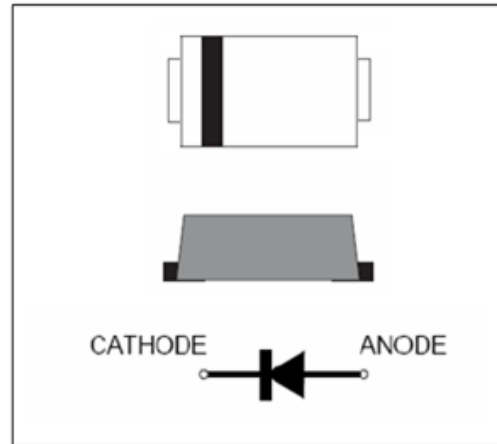
Weight: 0.0327 g

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 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 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)	$R_{\theta JA}$ $R_{\theta Jc}$	100 25									$^\circ\text{C/W}$
Operating junction and storage temperature range	T_J , T_{STG}	-50 to +150									$^\circ\text{C}$



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

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 $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_J = 100^\circ\text{C}$	I_R	5.0					50				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. $I_F = 0.5\text{A}$, $I_R = 1.0\text{A}$, $I_{RR} = 0.25\text{A}$
2. 8.0mm² (.013mm thick) land areas

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

Fig. 1 - Forward Current Derating Curve

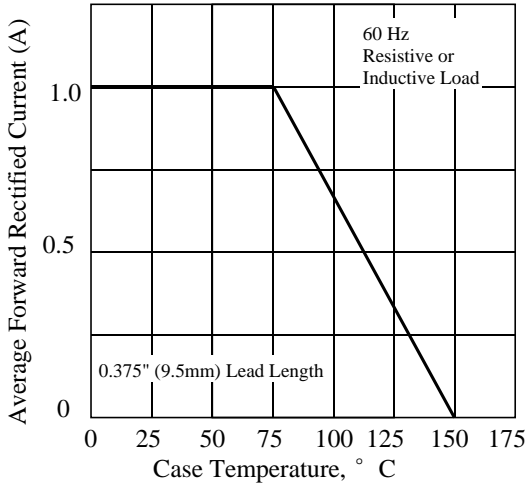


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

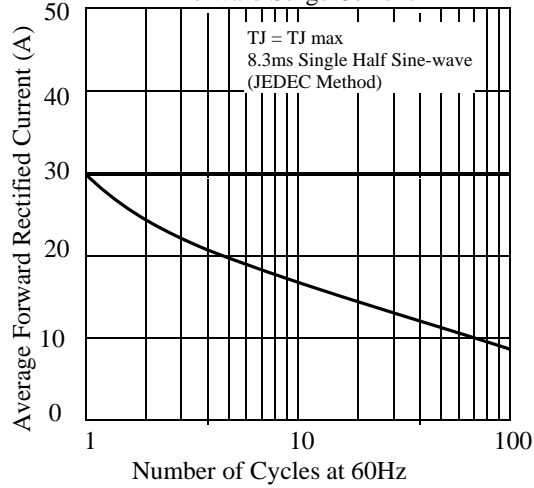


Fig 3. - Typical Instantaneous Forward Characteristics

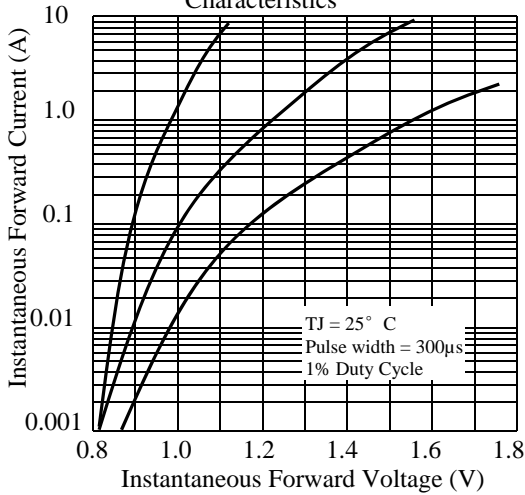


Fig 4. - Typical Reverse Characteristics

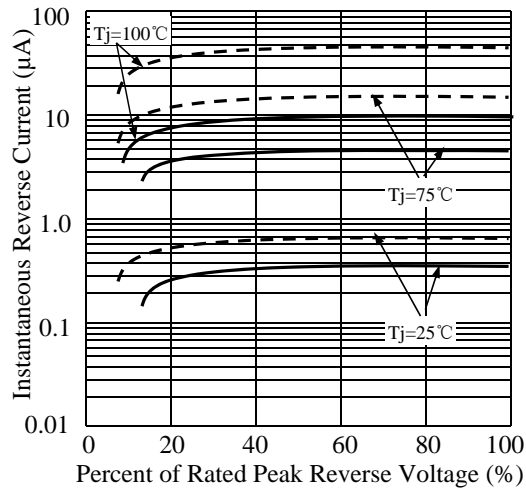


Fig 5. - typical transient thermal impedance

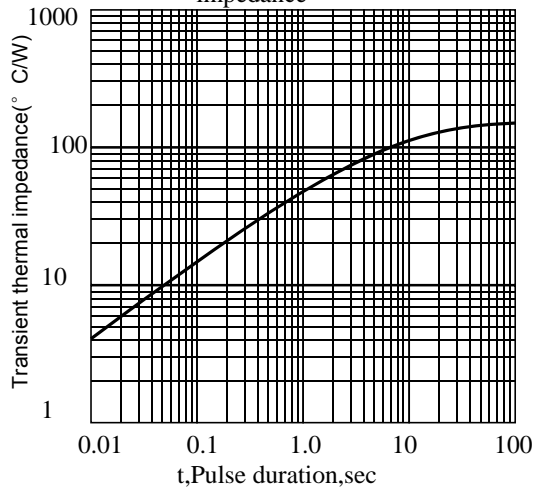
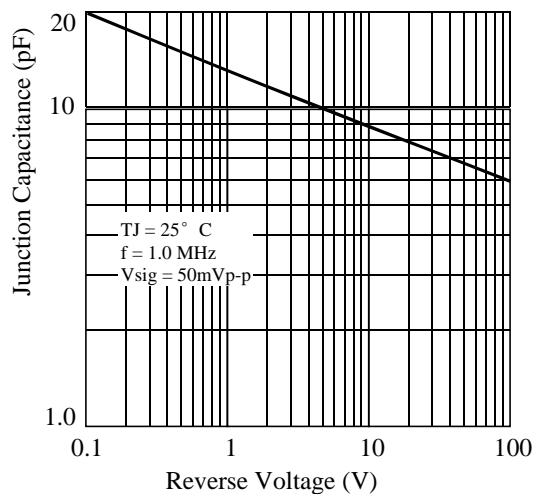


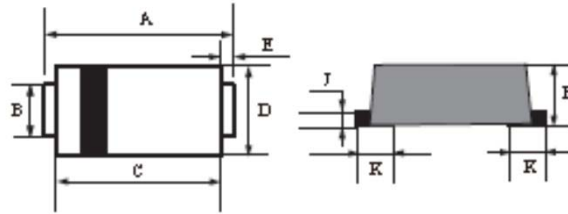
Fig 6. - Typical Junction Capacitance



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3. dimension:

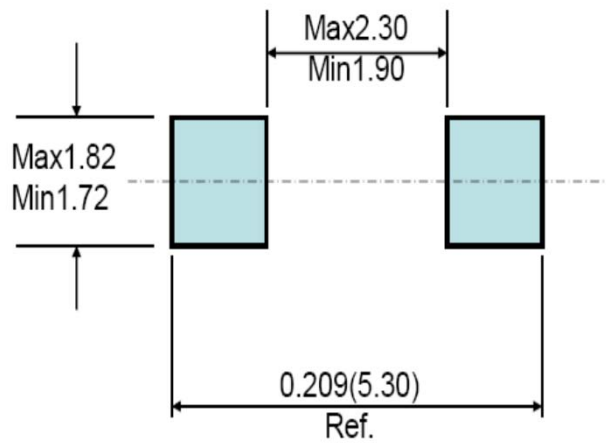
SMA-FL



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
K	0.7	1.1	0.028	0.043
E	0.45	0.65	0.018	0.026
H	0.9	1.1	0.035	0.043
J	0.11	0.21	0.004	0.008

Mounting Pad Layout

SMA-FL



HFMAF106: HF----高效快速二极管; M---SM贴片产品; AF---SMA-FL封装; 1----IF=1A; 06----VB=600V;



LRC

乐山无线电股份有限公司
Leshan Radio Company, Ltd

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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. 25