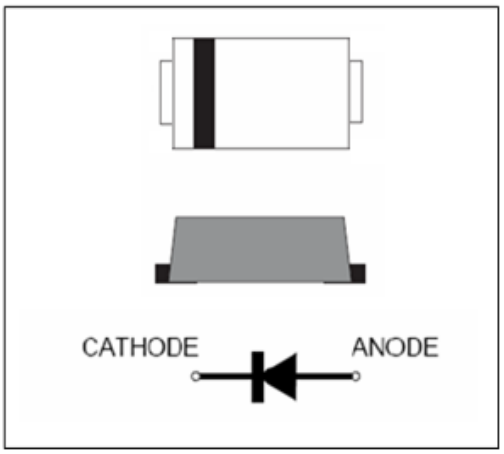
乐山无线电股份有限公司
Leshan Radio Company, Ltd

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



We declare that the material of product is Haloggen 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: 0.0327 g
Handling precautin:None

1.Electrical Characteristic

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

Parameter Symbol	symbol	HFMAF 101	HFMAF 102	HFMAF 103	HFMAF 104	HFMAF 105	HFMAF 106	HFMAF 107	HFMAF 108	HFMAF 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°C	IF(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°C	IR(AV)	100									μA
Typical thermal resistance (Note 2)	$R\theta J_A$ $R\theta J_C$	100 25									°C/W
Operating junction and storage temperature range	TJ, TSTG	–50 to +150									°C

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

Parameter Symbol	symbol	HFMAF 101	HFMAF 102	HFMAF 103	HFMAF 104	HFMAF 105	HFMAF 106	HFMAF 107	HFMAF 108	HFMAF 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. IF = 0.5A, IR = 1.0A, IRR = 0.25A
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

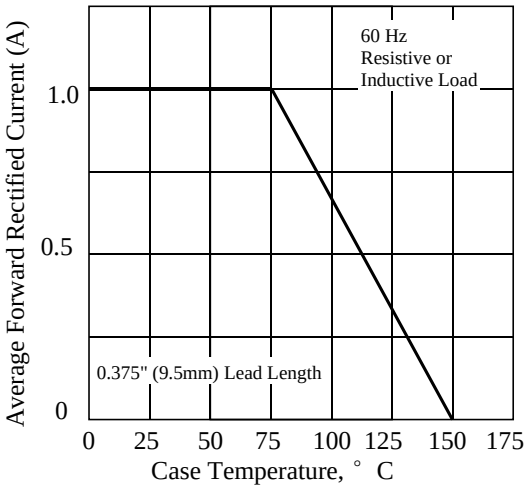


Fig. 2 – Maximum Non-repetitive Peak Forward Surge Current

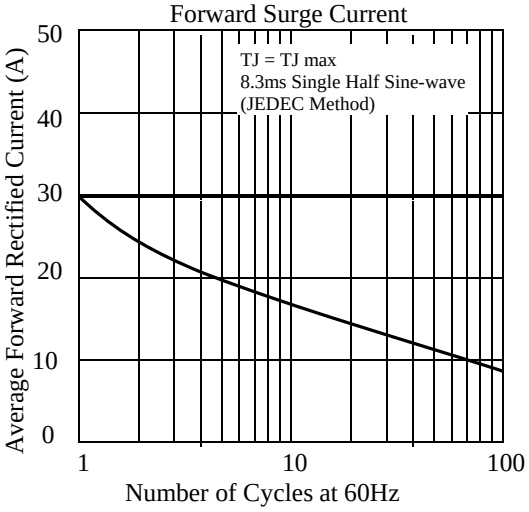


Fig 3. – Typical Instantaneous Forward Characteristics

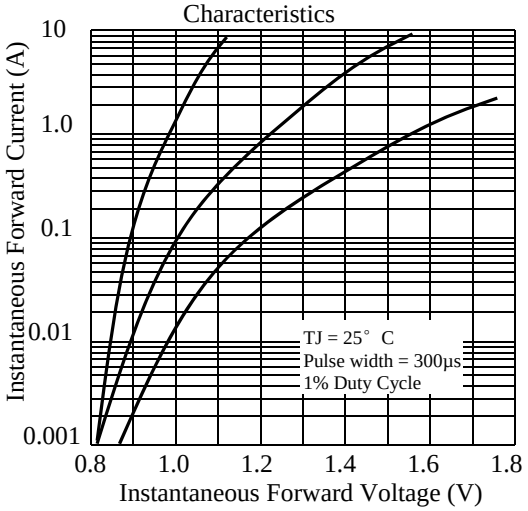


Fig 4. – Typical Reverse Characteristics

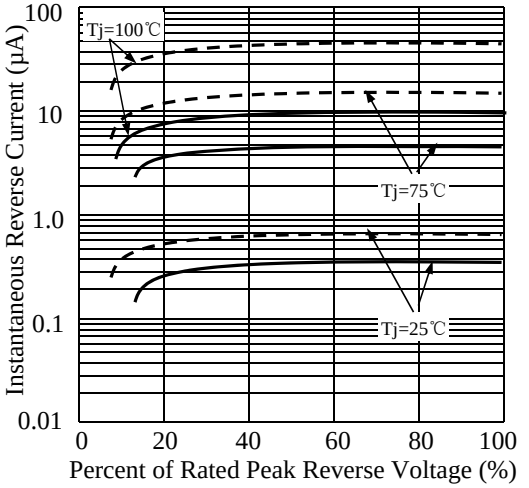


Fig 5. – typical transient thermal impedance

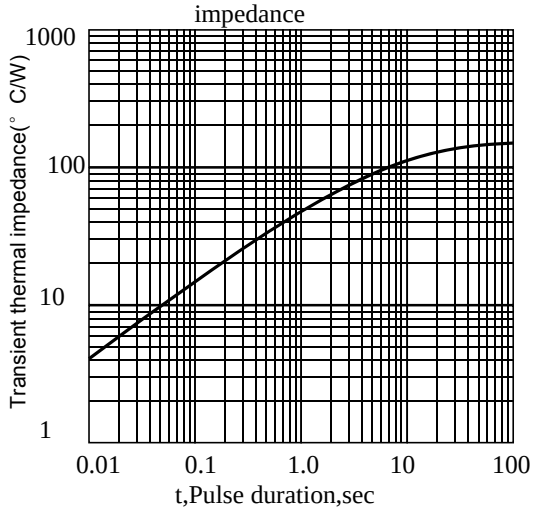
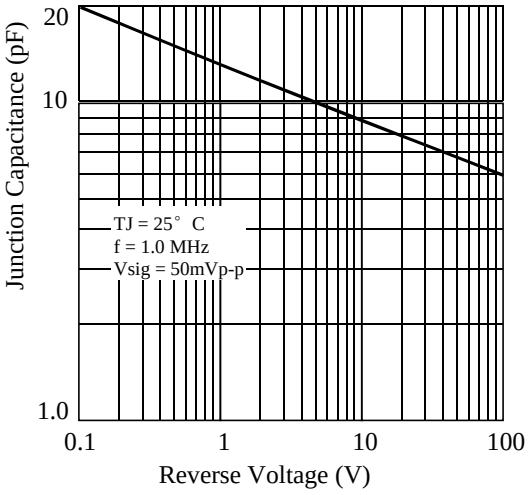


Fig 6. – Typical Junction Capacitance



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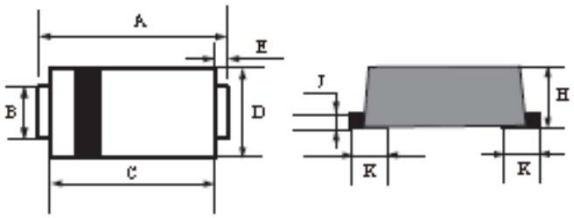
3. dimension:

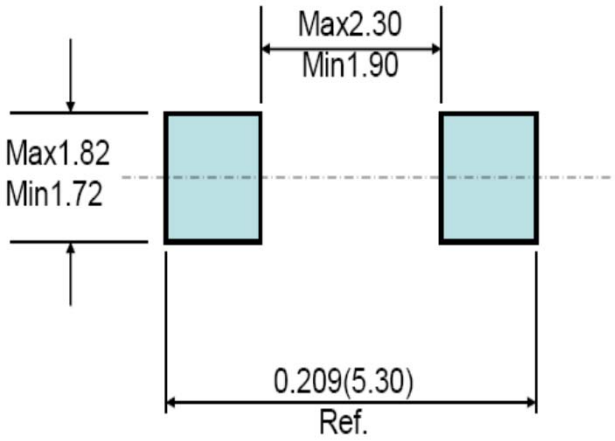
SMA-FL



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;

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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

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