

HFMBF201 thru HFMBF209

Surface Mount Glass Passivated High Efficiency Rectifiers
Reverse Voltage 50 to 1200V Forward Current 2.0A

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 SMB-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

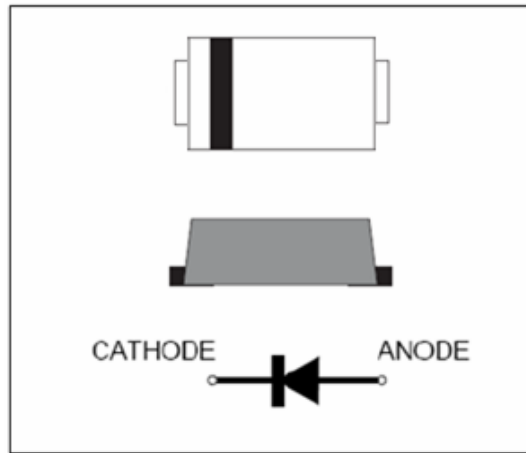
Weight: 0.066 g

Handling precaution: None

1. Electrical Characteristic

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

Parameter Symbol	symbol	HFMB F201	HFMB F202	HFMB F203	HFMB F204	HFMB F205	HFMB F206	HFMB F207	HFMB F208	HFMB F209	Unit
device marking code		HF201	HF202	HF203	HF204	HF205	HF206	HF207	HF208	HF209	
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 $T_c = 75^\circ\text{C}$	IF(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 thermal resistance (Note 1)	R θ JA R θ JC	90 9									°C/W
Operating junction and storage temperature range	T _J , T _{STG}	-50 to +150									°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	HFMB F201	HFMB F202	HFMB F203	HFMB F204	HFMB F205	HFMB F206	HFMB F207	HFMB F208	HFMB F209	Unit
Maximum instantaneous forward voltage at 2.0A	V_F	1.00			1.30		1.85				V
Maximum DC reverse current $T_A = 25^\circ\text{C}$ at rated DC blocking voltage $T_j = 100^\circ\text{C}$	IR	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

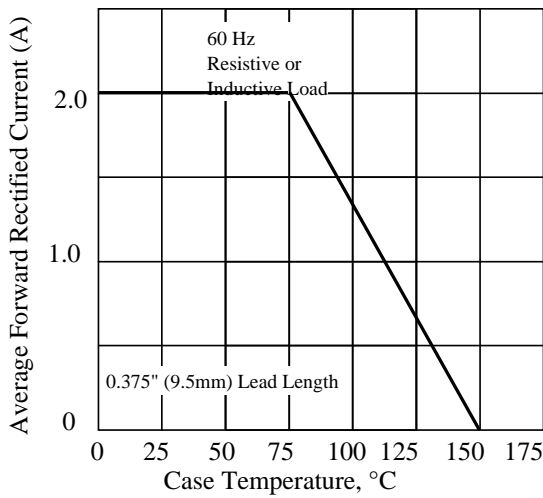


Fig. 2 - Maximum Non-repetitive Peak Forward Surge Current

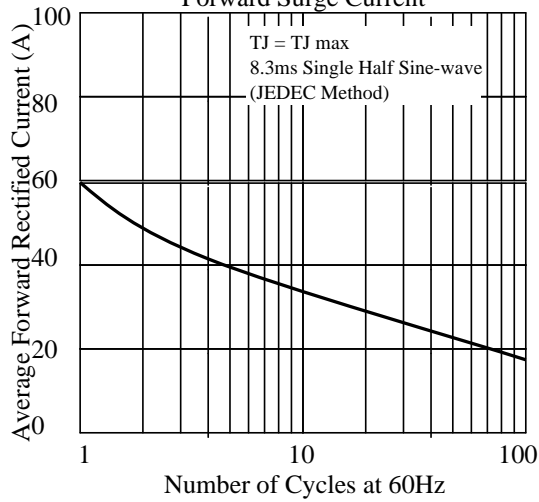


Fig 3. - Typical Instantaneous Forward Characteristics

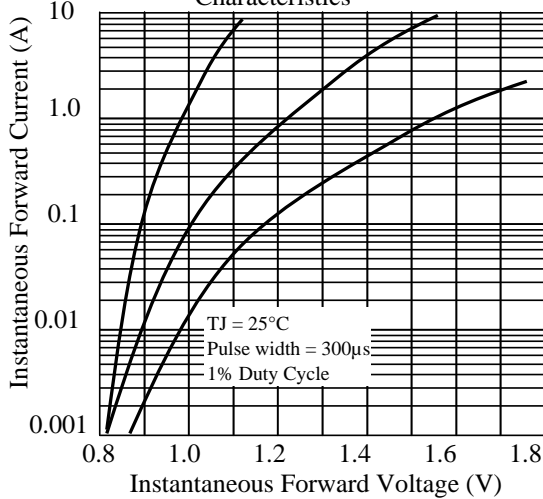


Fig 4. - Typical Reverse Characteristics

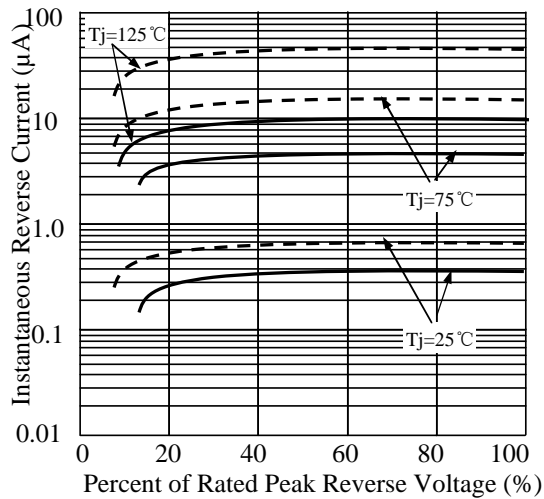


Fig 5. - typical transient thermal impedance

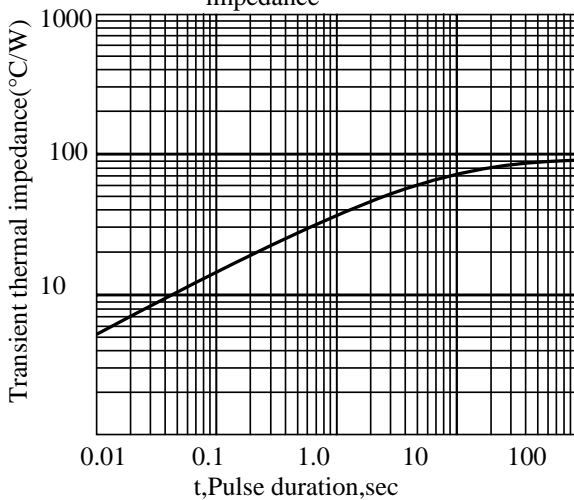
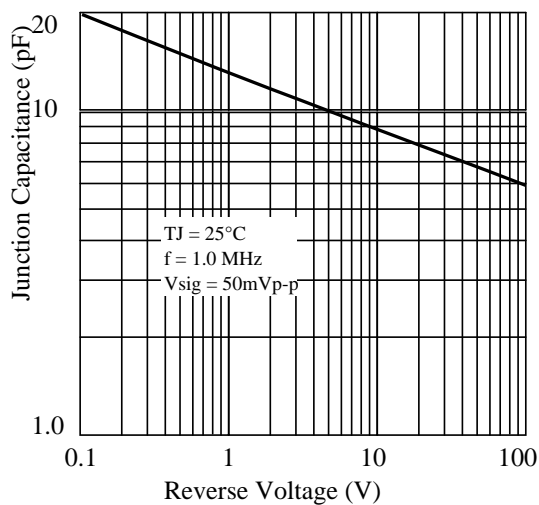


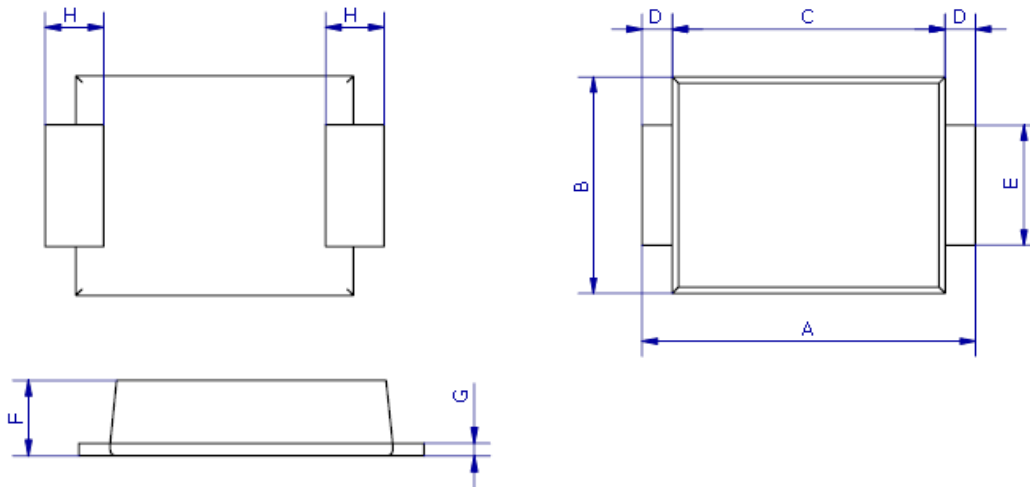
Fig 6. - Typical Junction Capacitance



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3. dimension:

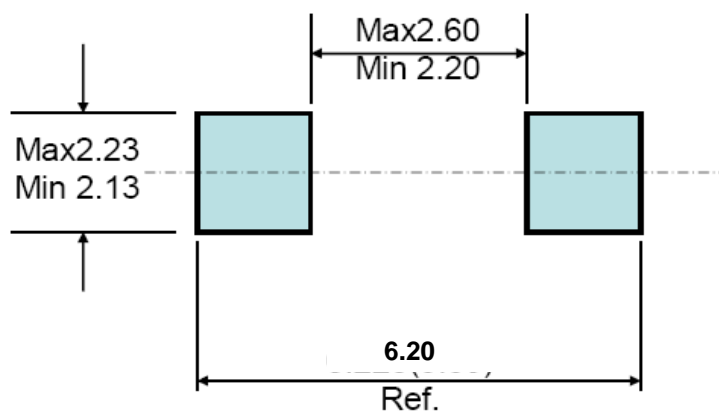
SMB-FL



DIM	MILLIMETERS		INCHES	
	MIN	MAX	MIN	MAX
A	5.3	5.7	0.209	0.224
B	3.4	3.8	0.134	0.150
C	4.3	4.7	0.169	0.185
D	0.45Typ		0.018Typ	
E	1.9	2.1	0.0748	0.08268
F	1.05	1.40	0.04134	0.05512
G	0.2	0.3	0.00591	0.00984
H	0.95Typ		0.037Typ	

Mounting Pad Layout

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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	2014.04.30