

MB24F THRU MB220F

Surface Mount Schottky Bridge Rectifier
Reverse Voltage - 40 to 200 V
Forward Current - 2 A

Features

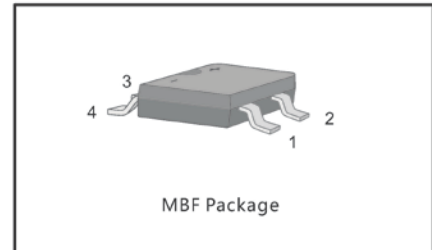
- High Surge Current Capability
- Designed for Surface Mount Application

Mechanical Data

- Case: Molded plastic, MBF
- Terminals: solderable per MIL-STD-750, Method 2026

PINNING

PIN	DESCRIPTION
1	Input Pin (~)
2	Input Pin (~)
3	Output Anode (+)
4	Output Cathode (-)



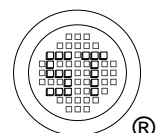
Absolute Maximum Ratings and Characteristics

Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbols	MB24F	MB245F	MB25F	MB26F	MB28F	MB210F	MB215F	MB220F	Units	
	Marking	MB24F	MB245F	MB25F	MB26F	MB28F	MB210F	MB215F	MB220F	-	
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	40	45	50	60	80	100	150	200	V	
Maximum RMS Voltage	V_{RMS}	28	32	35	42	56	70	105	140	V	
Maximum DC Blocking Voltage	V_{DC}	40	45	50	60	80	100	150	200	V	
Average Rectified Output Current	$I_{F(AV)}$	2								A	
Peak Forward Surge Current 8.3 ms Single Half-sine-wave Superimposed on Rated Load (JEDEC Method)	I_{FSM}	50								A	
I^2t Rating for Fusing ($t \leq 8.3$ ms)	I^2t	10.38								A ² S	
Maximum Forward Voltage at 2 A	V_F	0.55	0.7		0.85		0.90		V		
Maximum DC Reverse Current at $T_a = 25^\circ\text{C}$ at Rated DC Reverse Voltage at $T_a = 100^\circ\text{C}$	I_R	0.1 10				0.05 5				mA	
Typical Junction Capacitance ¹⁾	C_J	220	80								pF
Typical Thermal Resistance ²⁾	$R_{\theta JA}$	75								°C/W	
Junction Temperature	T_j	- 55 to + 150								°C	
Storage Temperature Range	T_{stg}	- 55 to + 150								°C	

¹⁾ Measured at 1 MHz and applied reverse voltage of 4 V.

²⁾ Mounted on glass epoxy PC board with 4x1.5"x1.5" (3.81x3.81 cm) copper pad.



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Electrical Characteristics Curves

Fig.1 Forward Current Derating Curve

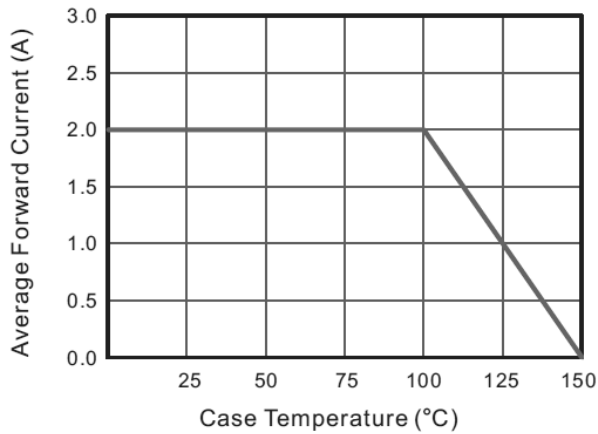


Fig.2 Typical Reverse Characteristics

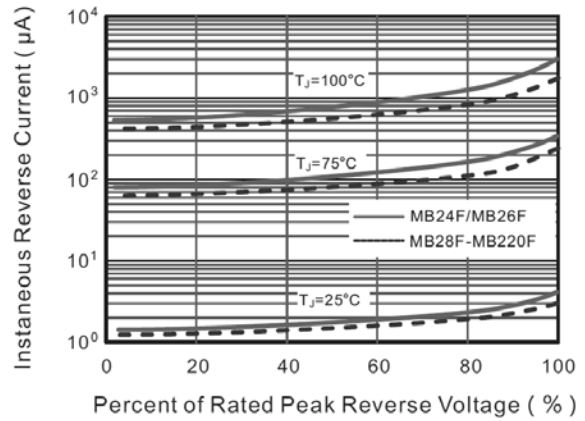


Fig.3 Typical Forward Characteristic

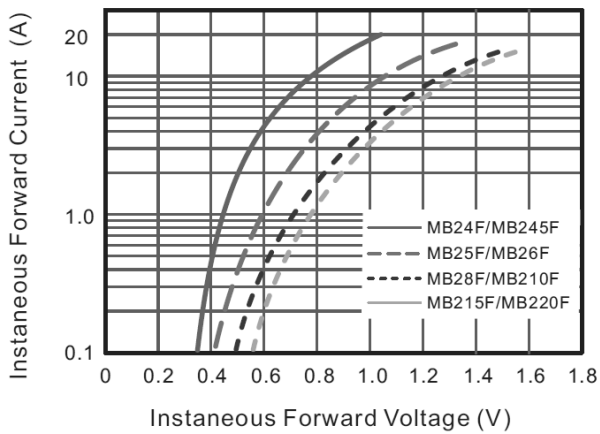


Fig.4 Typical Junction Capacitance

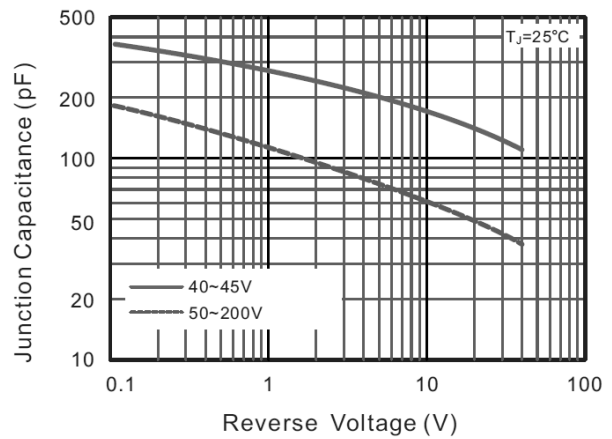


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

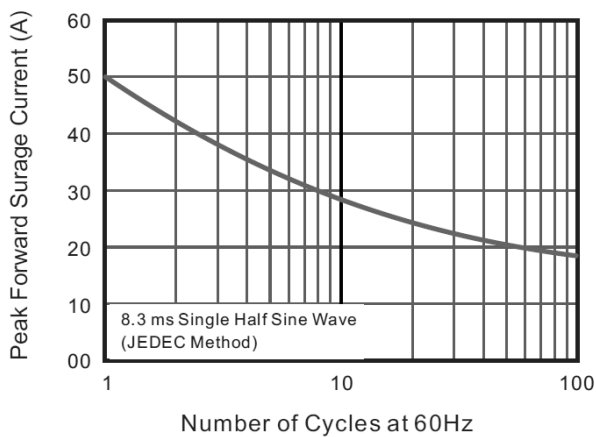
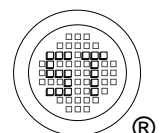
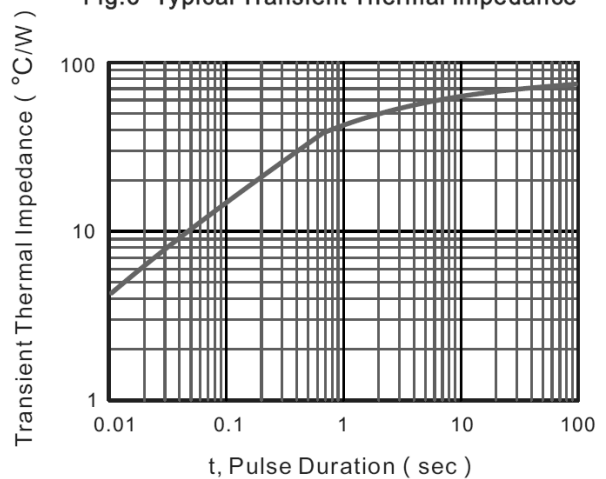


Fig.6- Typical Transient Thermal Impedance

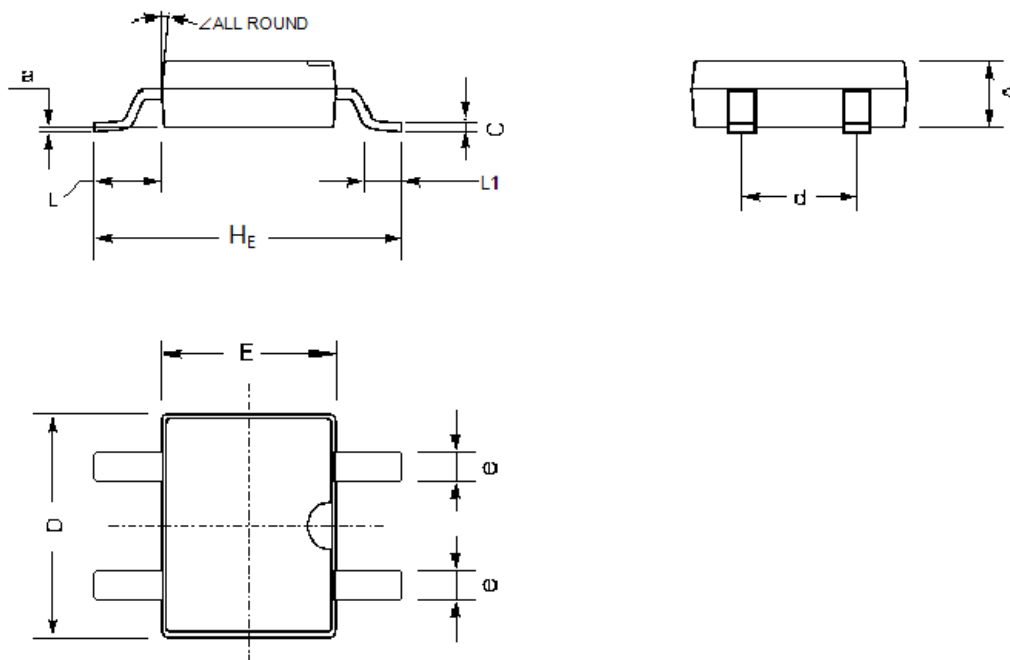


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PACKAGE OUTLINE

MBF

Plastic surface mounted package; 4 leads



UNIT	A	C	D	E	HE	d	e	L	L1	a	∠
mm	1.6	0.22	5	4.1	7	2.7	0.8	1.7	1.1	0.2	7°
	1.2	0.15	4.5	3.6	6.4	2.3	0.5	1.3	0.5	0	

Recommended Soldering Footprint

