MB14F THRU MB120F

1A SURFACE MOUNT SCHOTTKY BRIDGE

FEATURES:

Reverse Voltage - 40 to 200 V

Forward Current - 1 A

High Surge Current Capability

Designed for Surface Mount Application

MECHANICAL DATA

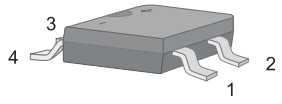
L Case: MBF

L Terminals: Solderable per MIL-STD-750, Method 2026

L Approx. Weight: 75mg 00024oz

PINNING

PIN	DESCRIPTION
1	Input PinF~I
2	Input PinF~I
3	Output AnodeF+I
4	Output CathodeF-I



MBF Package

Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Parameter	Symbols	MB14F	MB16F	MB18F	MB110F	MB115F	MB120F	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	40	60	80	100	150	200	V
Maximum RMS voltage	V_{RMS}	28	42	56	70	105	140	V
Maximum DC Blocking Voltage	V_{DC}	40	60	80	100	150	200	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	1.0						A
Peak Forward Surge Current,8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	I_{FSM}	40			30			A
Max Instantaneous Forward Voltage at 1 A	V_F	0.50	0.70		0.85	0.90		V
Maximum DC Reverse Current T_a = 25°C at Rated DC Reverse Voltage T_a =100°C	I_R	0.3 10			0.2 5	0.1 2		mA
Typical Junction Capacitance [1]	C_j	110	80					pF
Typical Thermal Resistance [2]	R_{JA}	115						°C/W
Operating Junction Temperature Range	T_j	-55 ~ +125						°C
Storage Temperature Range	T_{stg}	-55 ~ +150						°C

Note: 1. Measured at 1MHz and applied reverse voltage of 4 V D.C.

2. Mounted on glass epoxy PC board with 1.3mm² copper pad.

Fig.1 Forward Current Derating Curve

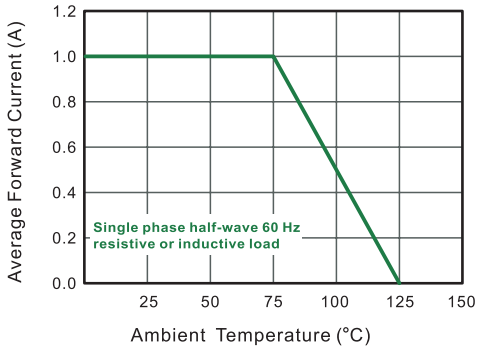


Fig.2 Typical Reverse Characteristics

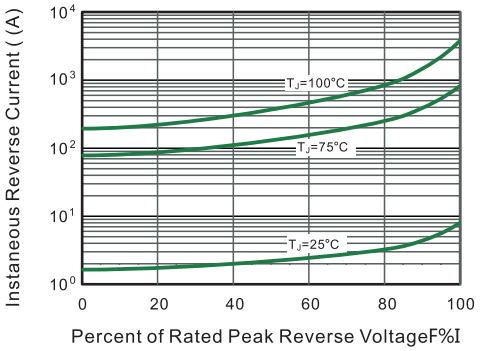
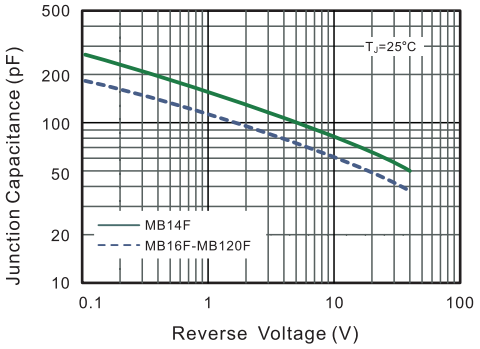


Fig.4 Typical Junction Capacitance



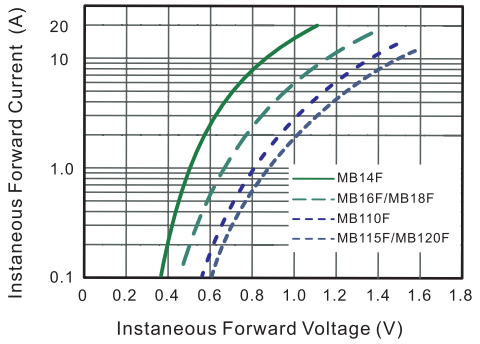


Fig.5 Maximum Non-Repetitive Peak Forward Surage Current

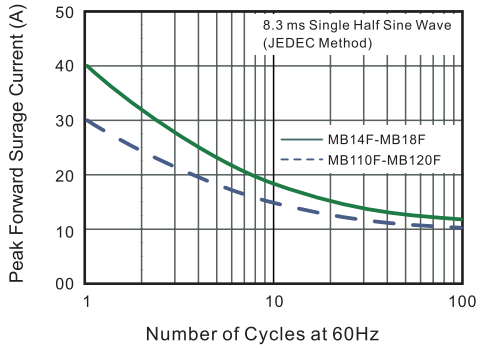
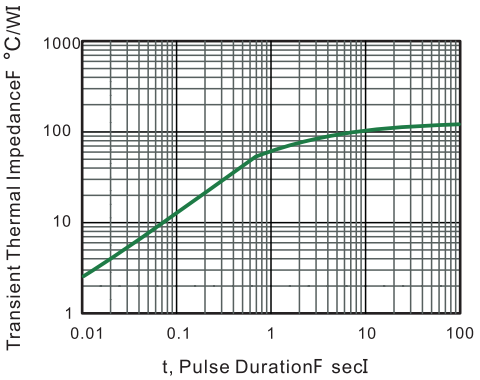
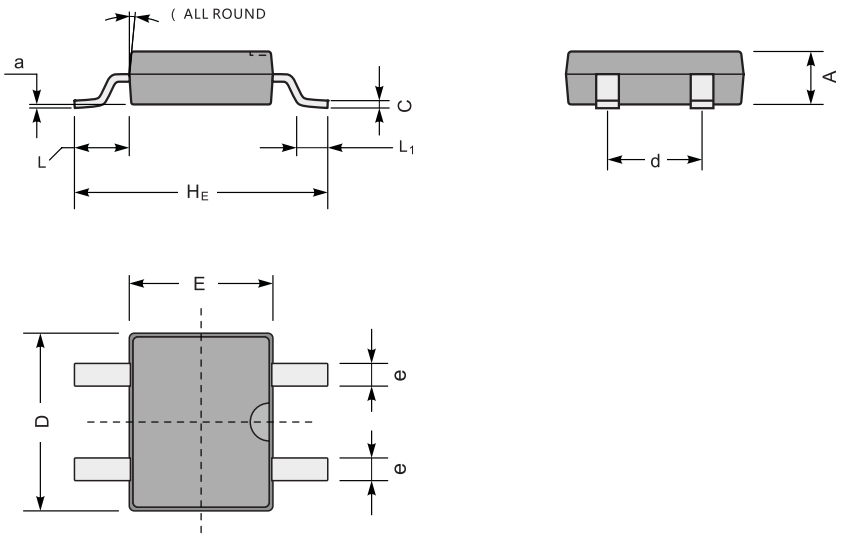


Fig.6- Typical Transient Thermal Impedance



PACKAGE OUTLINE

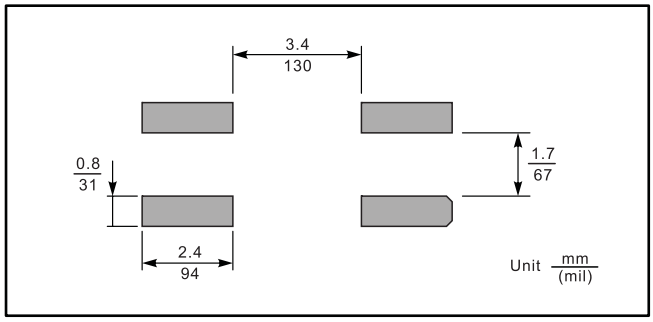
Plastic surface mounted package; 4 leads MBF



MBF mechanical data

UNIT		A	C	D	E	H_E	d	e	L	L_1	a	(
mm	max	1.6	0.22	5.0	4.1	7.0	2.7	0.7	1.7	1.1	0.2	7°
	min	1.2	0.15	4.5	3.6	6.4	2.3	0.5	1.3	0.5	—	
mil	max	63	8.7	197	161	276	106	28	67	43	8	
	min	47	5.9	177	142	252	91	20	51	20	—	

The recommended mounting pad size



Marking

Type number	Marking code
MB14F	MB14F
MB16F	MB16F
MB18F	MB18F
MB110F	MB110F
MB115F	MB115F
MB120F	MB120F