



MB14FK THRU MB120FK

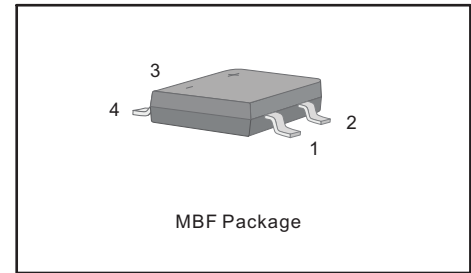
1A SURFACE MOUNT SCHOTTKY BRIDGE

FEATURES:

- Reverse Voltage - 40 to 200 V
- Forward Current - 1 A
- High Surge Current Capability
- Designed for Surface Mount Application

MECHANICAL DATA

- Case: MBF
- Terminals: Solderable per MIL-STD-750, Method 2026
- Approx. Weight: 75mg 0.0024oz



PINNING

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

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	MB14FK	MB16FK	MB18FK	MB110FK	MB115FK	MB120FK	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	0.55	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 _{θJA}	100						°C/W
Operating Junction Temperature Range	T _j	-55 ~ +150						°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 4×1.5"×1.5" (3.81×3.81 cm) copper pad.



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Fig.1 Forward Current Derating Curve

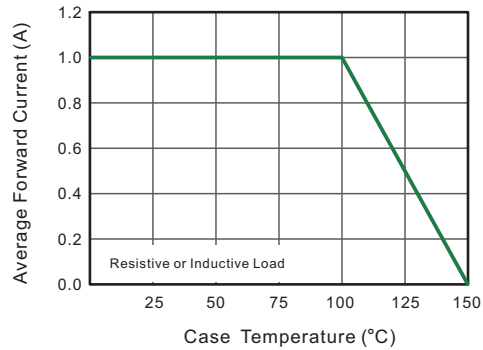


Fig.2 Typical Reverse Characteristics

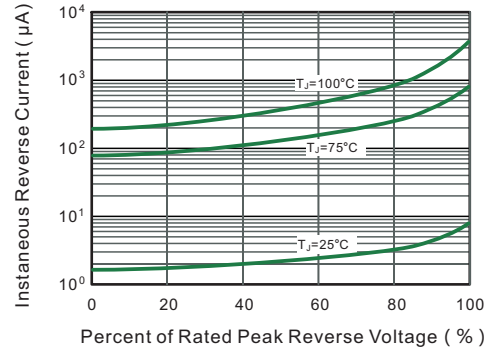


Fig.4 Typical Junction Capacitance

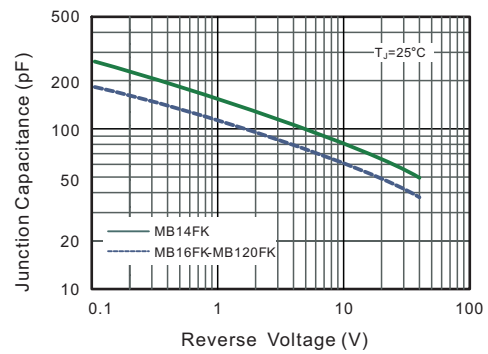


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

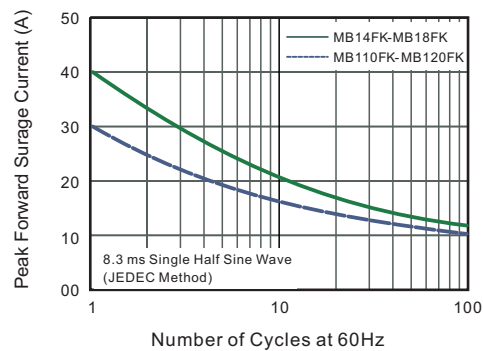
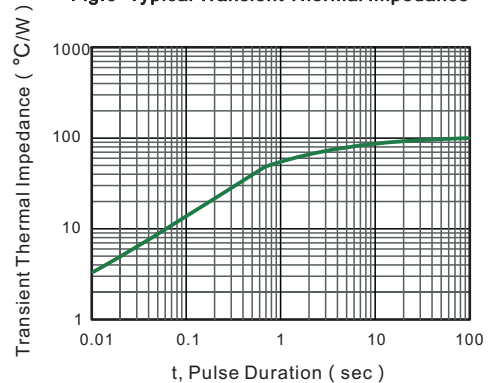
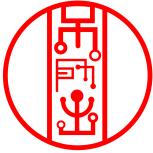


Fig.6- Typical Transient Thermal Impedance



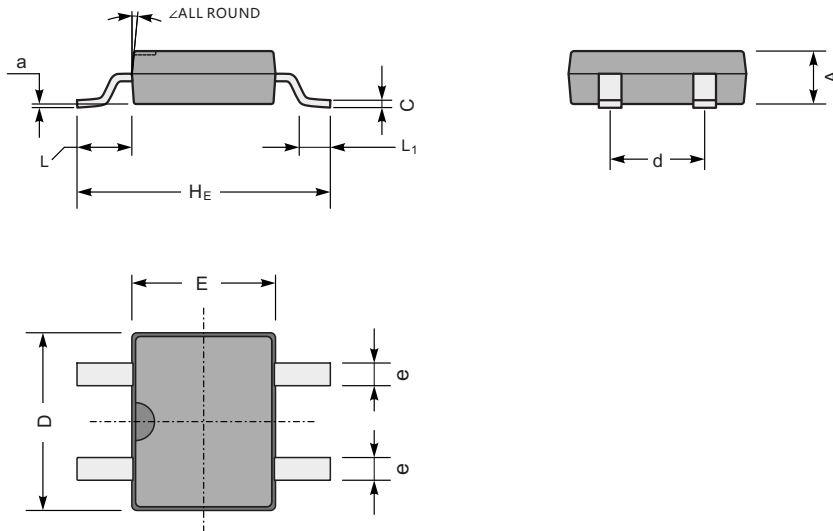


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PACKAGE OUTLINE

Plastic surface mounted package; 4 leads

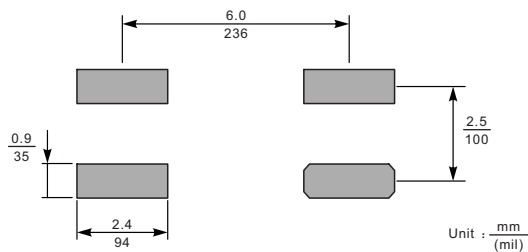
MBF



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	0.8	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	31	67	43	8	
	min	47	5.9	177	142	252	91	20	51	20	—	

The recommended mounting pad size



Marking

Type number	Marking code
MB14FK	MB14F
MB16FK	MB16F
MB18FK	MB18F
MB110FK	MB110F
MB115FK	MB115F
MB120FK	MB120F