

## Small Signal Fast Switching Bridge



MBF

### PINNING

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

### Features

- For surface mounted applications
- Glass Passivated Chip Junction
- Fast reverse recovery time
- Ideal for automated placement
- High conductance

### Mechanical Data

- Package: MBF
- Lead: lead solderable per MIL-STD-202, method 208 guaranteed
- Polarity: Color band denotes cathode end

### ■ Maximum Ratings (T<sub>a</sub>=25°C Unless otherwise specified)

Parameter	Symbols	MB4148F	Units
Non-Repetitive peak reverse voltage	V <sub>RM</sub>	100	V
Peak repetitive peak reverse voltage	V <sub>RRM</sub>	75	V
Maximum RMS voltage	V <sub>RMS</sub>	53	V
Continuous Forward Current	I <sub>FM</sub>	300	mA
Average rectified output current	I <sub>o</sub>	150	mA
Non-repetitive Peak Forward Surge Current @8.3ms	I <sub>FSM</sub>	0.15	A
Total Power Dissipation	P <sub>tot</sub>	500	mw
Operating and Storage Temperature Range	T <sub>j</sub> , T <sub>stg</sub>	-55-+150	°C

### ■ Characteristics at T<sub>a</sub>=25°C

Parameter	Symbols	MB4148F	Units
Maximum Forward Voltage at 10 mA at 150 mA	V <sub>F</sub>	1.0 1.5	V
Peak Reverse Current at V <sub>R</sub> =20V T <sub>j</sub> =25°C at V <sub>R</sub> = 75V T <sub>j</sub> =25°C	I <sub>R</sub>	0.05 5	μA
Typical Junction Capacitance f=1MHz, V <sub>R</sub> =0V	C <sub>j</sub>	4	pF

Note: 1.I<sub>F</sub>=I<sub>R</sub>=10mA, I<sub>rr</sub>=0.1X I<sub>R</sub>, R<sub>L</sub>=100Ω

## RATINGS AND CHARACTERISTICS CURVES (TA = 25 °C unless otherwise noted)

Fig.1 Power Derating Curve

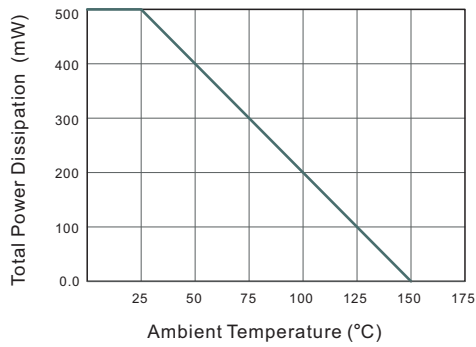


Fig.2 Typical Reverse Characteristics

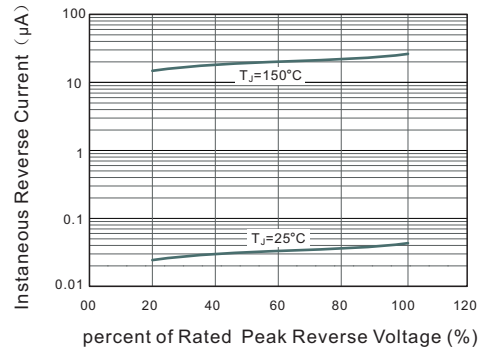


Fig.3 Typical Instaneous Forward Characteristics

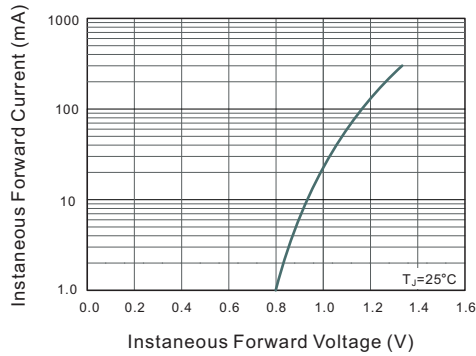
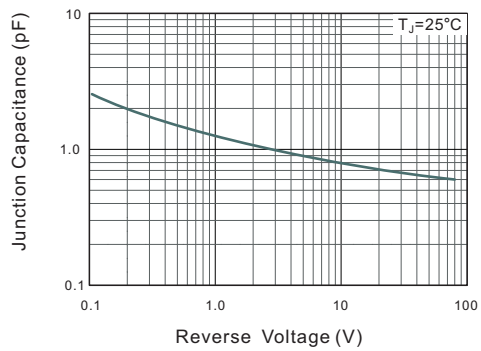
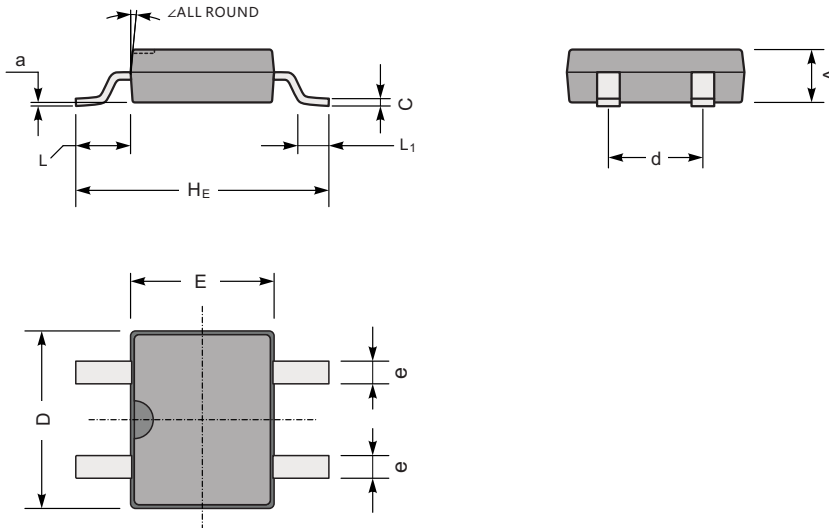


Fig.4 Typical Junction Capacitance



## PACKAGE OUTLINE DIMENSIONS

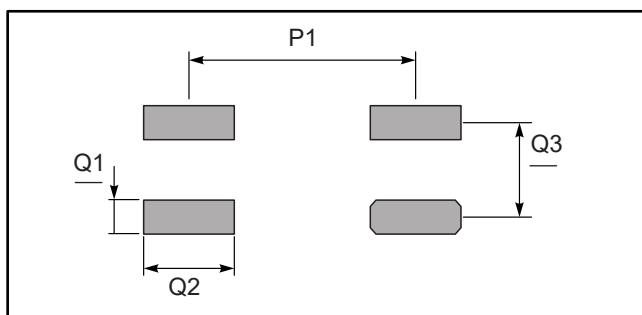
Note:unit mm(Mil)



## MBF Mechanical Data

UNIT		A	C	D	E	H <sub>E</sub>	d	e	L	L <sub>1</sub>	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	—	

## MBF Suggested Pad Layout



UNIT		P1	Q1	Q2	Q2
mm	min	6.0	0.9	2.4	2.4
mil	min	236	35	94	94