

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_A=25°C Unless otherwise specified)

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

■Characteristics at T_A=25°C

Parameter	Symbols	MB4148F	Units
Maximum Forward Voltage at 10 mA at 150 mA	V _F	1.0 1.5	V
Peak Reverse Current at V _R =20V T _j =25°C at V _R = 75V T _j =25°C	I _R	0.05 5	μA
Typical Junction Capacitance f=1MHz, V _R =0V	C _j	4	pF

Note: 1. I_F=I_R=10mA, I_{rr}=0.1X I_R, R_L=100Ω

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

Fig.1 Power Derating Curve

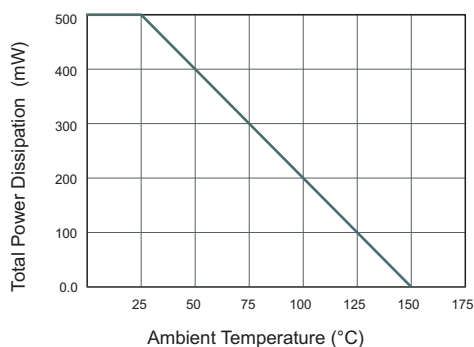


Fig.2 Typical Reverse Characteristics

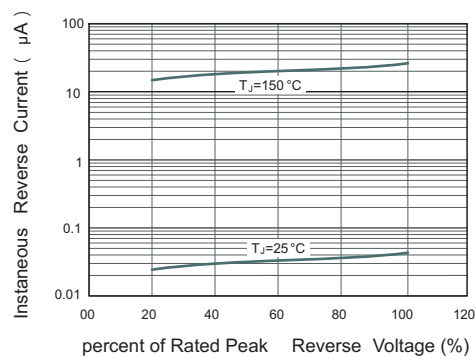


Fig.3 Typical Instantaneous Forward Characteristics

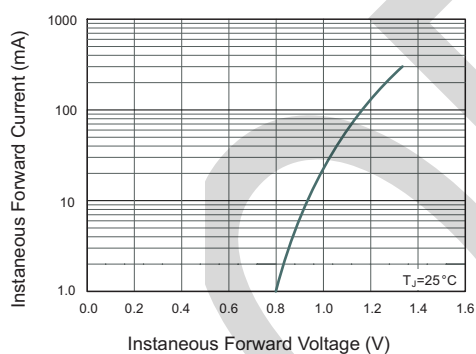
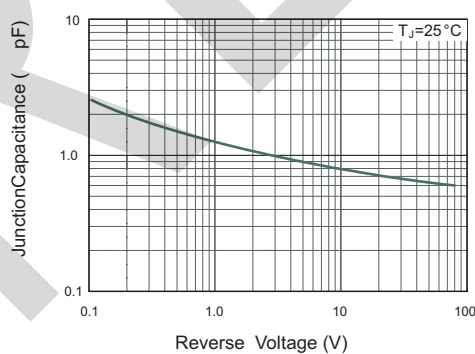
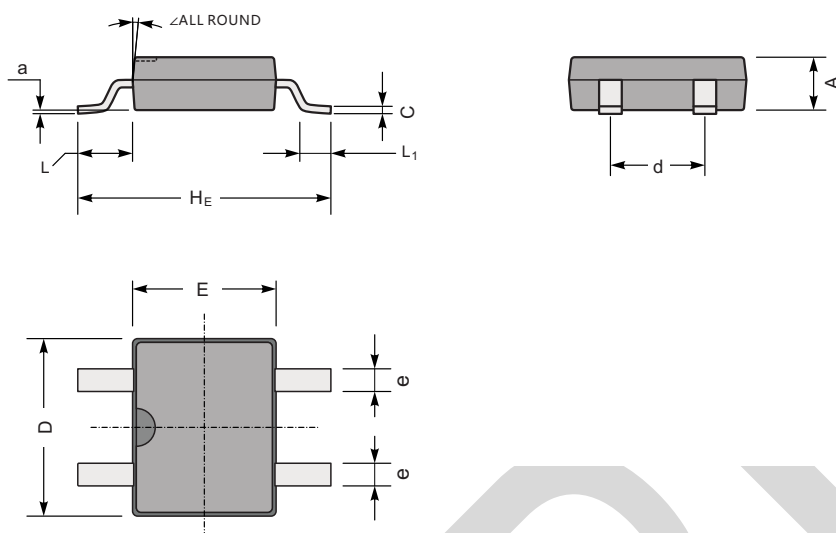


Fig.4 Typical Junction Capacitance



PACKAGE OUTLINE DIMENSIONS

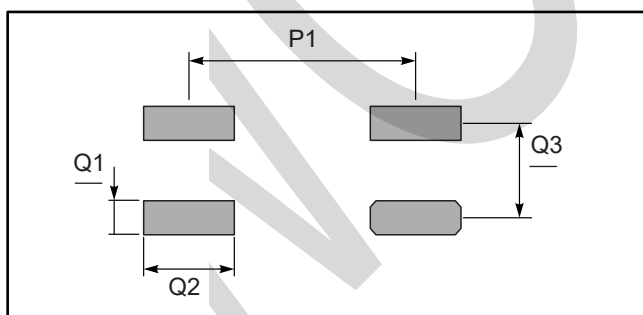
Note: unit mm(Mil)



MBF Mechanical Data

UNIT		A	C	D	E	HE	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	—	

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