

MBF Plastic-Encapsulate Bridge Rectifier

General Purpose Bridge Rectifier

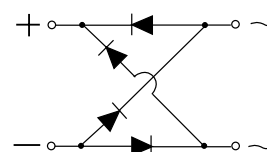
Features

- $I_{F(AV)}$ 1.0 A
- V_{RRM} 50V-1000V
- High surge current capability
- Glass passivated chip

Applications

- General purpose 1 phase Bridge rectifier applications

MBF



Limiting Values (Absolute Maximum Rating)

Item	Symbol	Unit	Conditions		MB						
					05F	1F	2F	4F	6F	8F	10F
Repetitive Peak Reverse Voltage	V _{RRM}	V			50	100	200	400	600	800	1000
Maximum RMS Voltage	V _{RMS}	V			35	70	140	280	420	560	700
Maximum DC blocking Voltage	V _{DC}	V			50	100	200	400	600	800	1000
Average Rectified Output Current	I _O	A	60Hz sine wave, R-load, Ta=25℃	On alumina substrate	1.0						
				On glass-epoxi substrate	0.5						
Surge(Non-repetitive)Forward Current	I _{FSM}	A	60Hz half sine wave, 1 cycle, T _j =25℃		30						
Current Squared Time	I ² t	A ² S	1ms≤t<8.3ms T _j =25℃, Rating of per diode		3.7						
Operation Junction and Storage Temperature Range	T _J , T _{stg}	℃			-55 ~+150						

Electrical Characteristics ($T_a=25^\circ\text{C}$ Unless otherwise specified)

Item	Symbol	Unit	Test Condition	Max
Peak Forward Voltage	V_{FM}	V	$I_{FM}=1.0\text{A}$, Pulse measurement, Rating of per diode	1.0
Peak Reverse Current	I_{RRM1}	μA	Maximum DC reverse current $T_a=25^\circ\text{C}$	5.0
	I_{RRM2}	μA	at rated DC blocking voltage $T_a=125^\circ\text{C}$	500
Thermal Resistance	$R_{\theta J-A}$	$^\circ\text{C/W}$	Between junction and ambient, On alumina substrate	75
			Between junction and ambient, On glass-epoxi substrate	134
	$R_{\theta J-L}$		Between junction and lead	20
Typical junction capacitance per diode	C_J	pF	Measured at 1.0MHz and applied reverse voltage of 4.0 volts.	13

FIG.1: FORWARD CURRENT DERATING CURVE

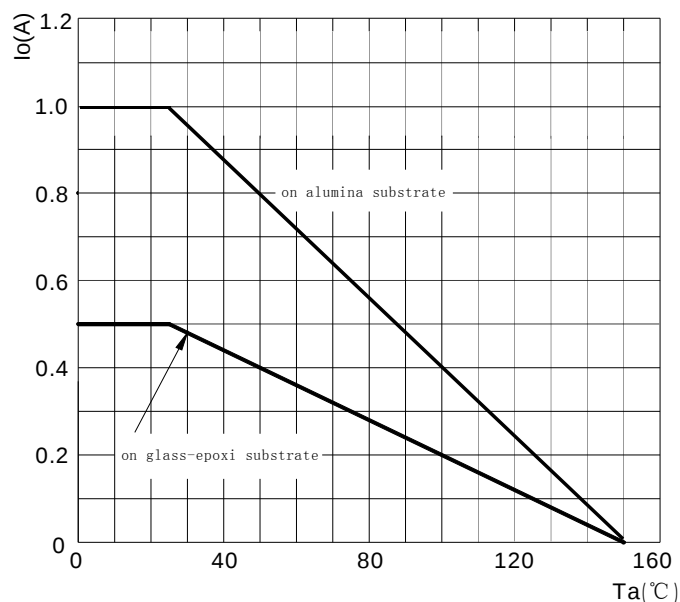


FIG.2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

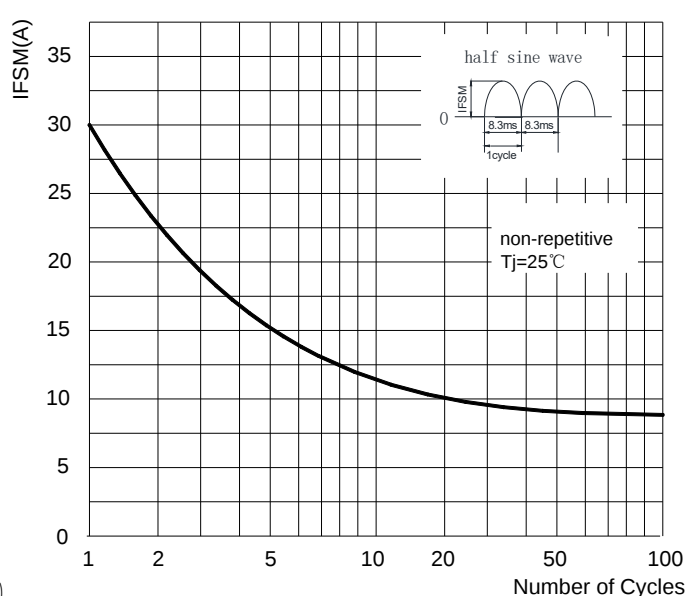


FIG.3: TYPICAL FORWARD CHARACTERISTICS

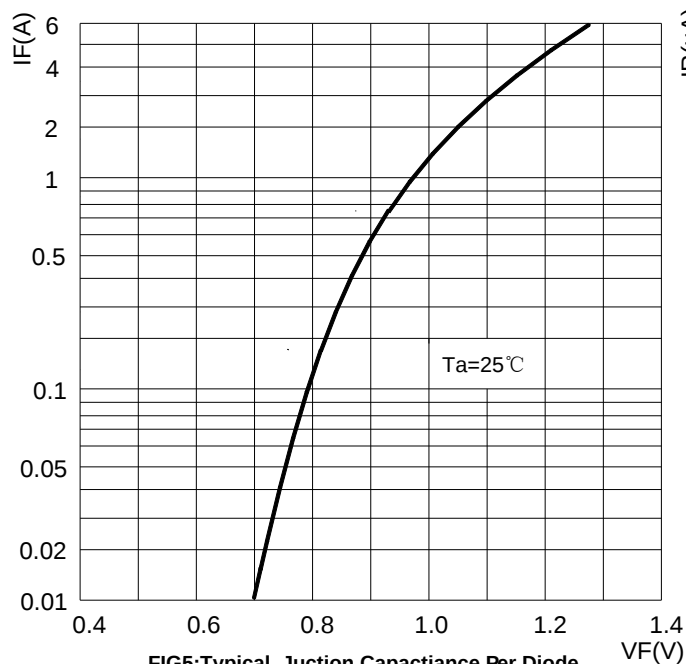


FIG.4: TYPICAL REVERSE CHARACTERISTICS

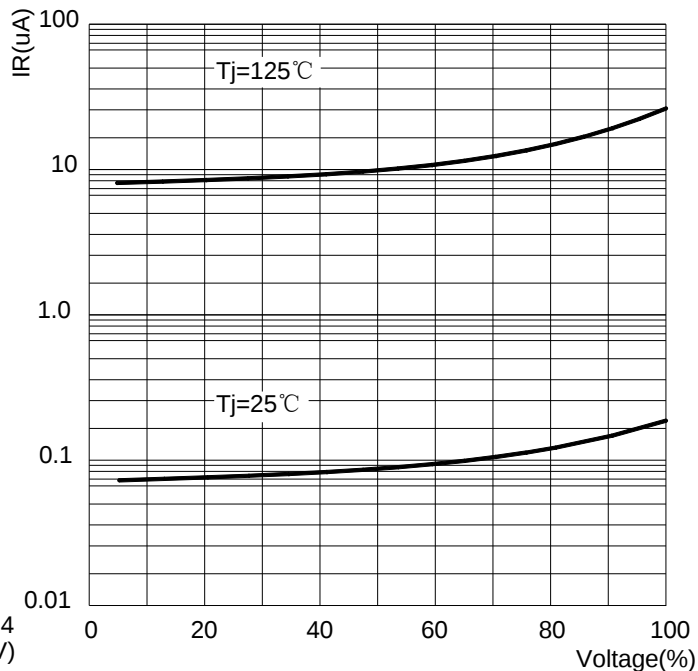
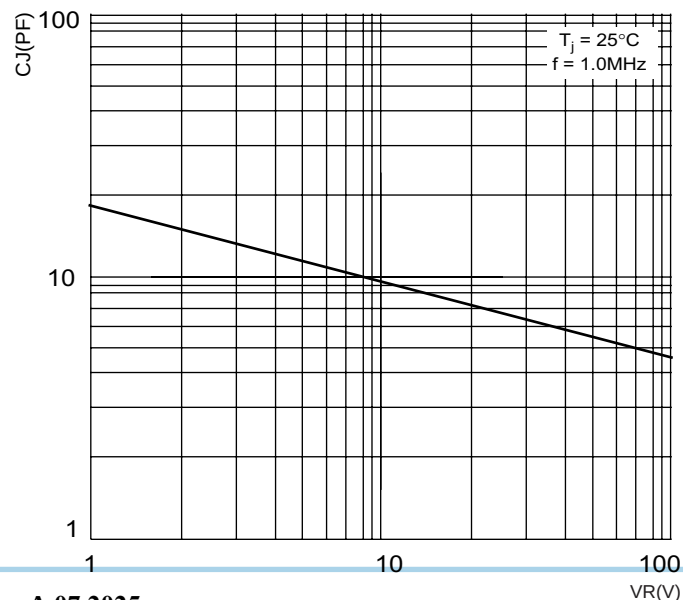
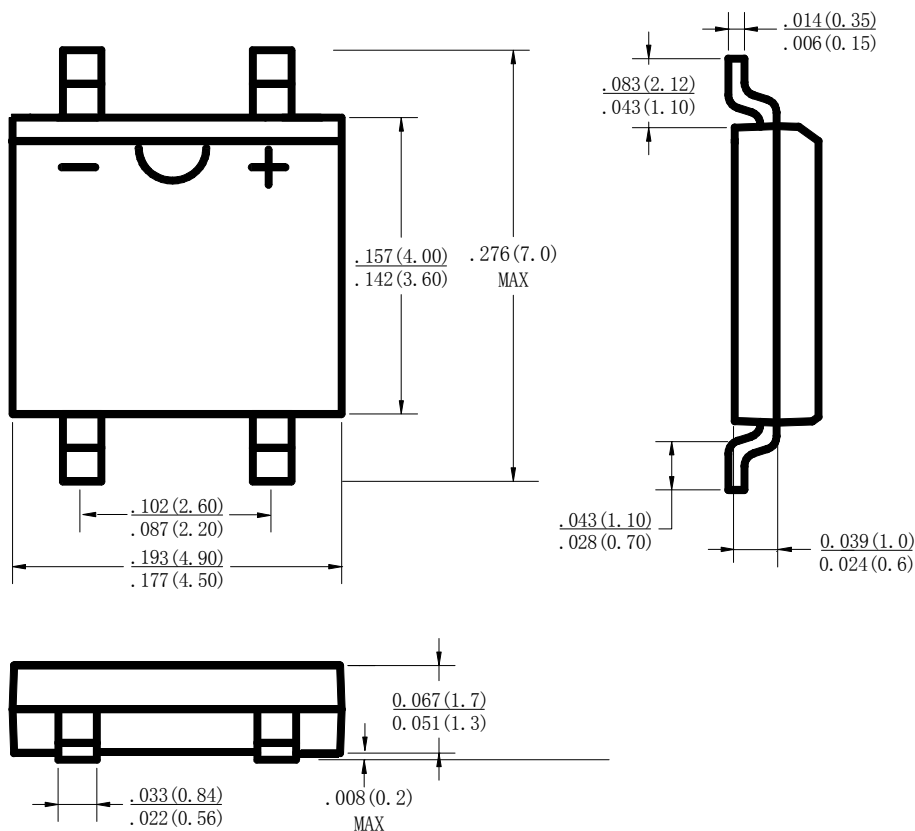


FIG5: Typical Junction Capacitance Per Diode

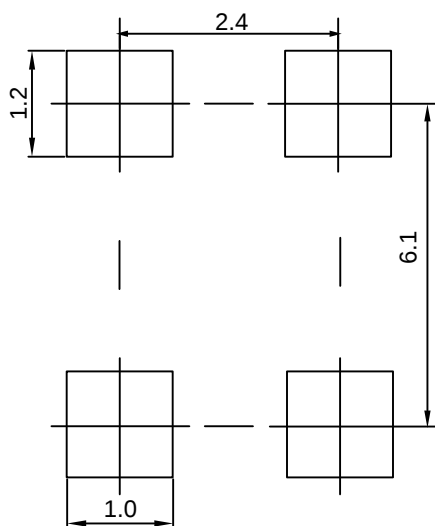


MBF Package Outline Dimensions



Dimensions in inches and (millimeters)

MBF Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

Reel Taping Specifications For Surface Mount Devices-MBF

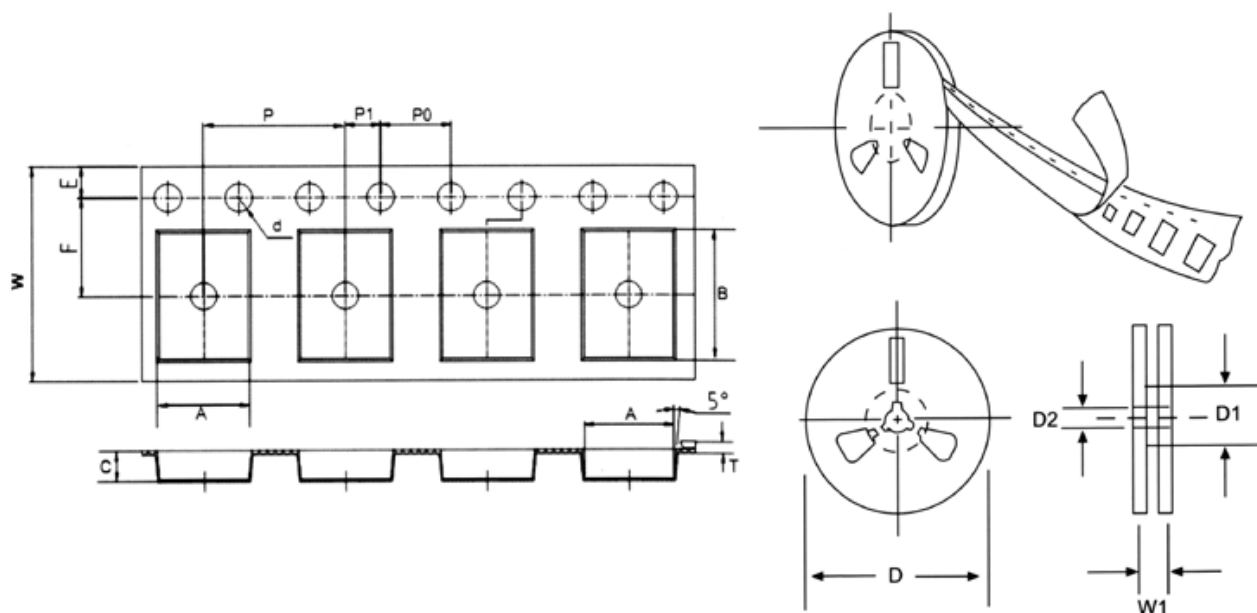


FIG: CONFIGURATION OF SURFACE MOUNTED DEVICES TAPING

ITEM	SYMBOL	MBF mm(inch)
Carrier width	A	5.02±0.1(0.198±0.004)
Carrier length	B	7.15±0.1(0.281±0.004)
Carrier depth	C	1.65±0.1(0.074±0.004)
Sprocket hole	d	1.55±0.05(0.061±0.002)
Reel outside diameter	D	279±2.0 (11± 0.079)
Reel inner diameter	D1	75±1.0 (2.95 ±0.039)
Feed hole diameter	D2	13±0.5(0.512±0.020)
Sprocket hole position	E	1.75±0.1(0.069±0.004)
Punch hole position	F	5.50±0.1(0.217±0.002)
Punch hole pitch	P	8.0±0.1(0.315±0.004)
Sprocket hole pitch	P0	4.0±0.1(0.157±0.004)
Embossment center	P1	2.0±0.1(0.079±0.004)
Total tape thickness	T	0.20-0.70(0.008-0.028)
Tape width	W	12.0±0.3/-0.1(0.472±0.004)
Reel width	W1	16.8±2.0(0.661±0.079)

NOTE: Devices are packed in accordance with EIA standard RS-481-A and specification given above.