



MBF Plastic-Encapsulate Bridge Rectifier

MB05F THRU MB10F General Purpose Bridge Rectifier

Features

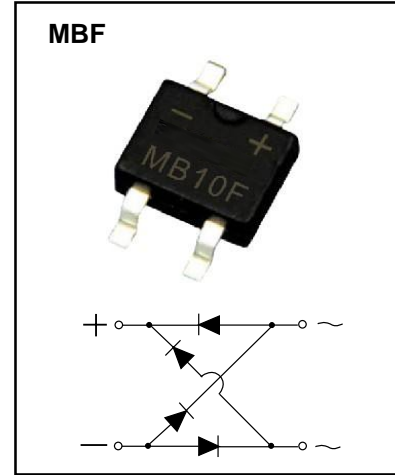
- $I_{F(AV)}$ 0.8A
- V_{RRM} 50V-1000V
- High surge current capability
- Glass passivated chip

Applications

- General purpose 1 phase Bridge rectifier applications

Marking

- MBXXF
X : From 05 To 10



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, $T_a=25^\circ C$	On alumina substrate		0.8				
				On glass-epoxi substrate		0.5				
Surge(Non-repetitive)Forward Current	I_{FSM}	A	60Hz half sine wave, 1 cycle, $T_j=25^\circ C$				30			
Current Squared Time	I^2t	A ² S	1ms ≤ t < 8.3ms $T_j=25^\circ C$, Rating of per diode				3.7			
Operation Junction and Storage Temperature Range	T_j, T_{stg}	°C								-55 ~+150

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

Item	Symbol	Unit	Test Condition	Max
Peak Forward Voltage	V_{FM}	V	$I_{FM}=0.4A$, Pulse measurement, Rating of per diode	1.0
Peak Reverse Current	I_{RRM1}	μ A	Maximum DC reverse current $T_a=25^\circ C$	5.0
	I_{RRM2}	μ A	at rated DC blocking voltage $T_a=125^\circ C$	500
Thermal Resistance	$R_{\theta J-A}$	°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

Typical Characteristics

FIG.1: FORWARD CURRENT DERATING CURVE

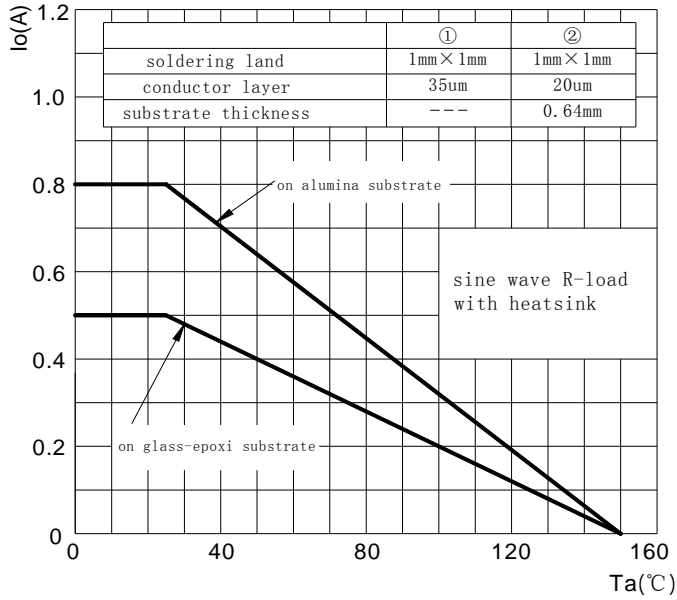


FIG.2: MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

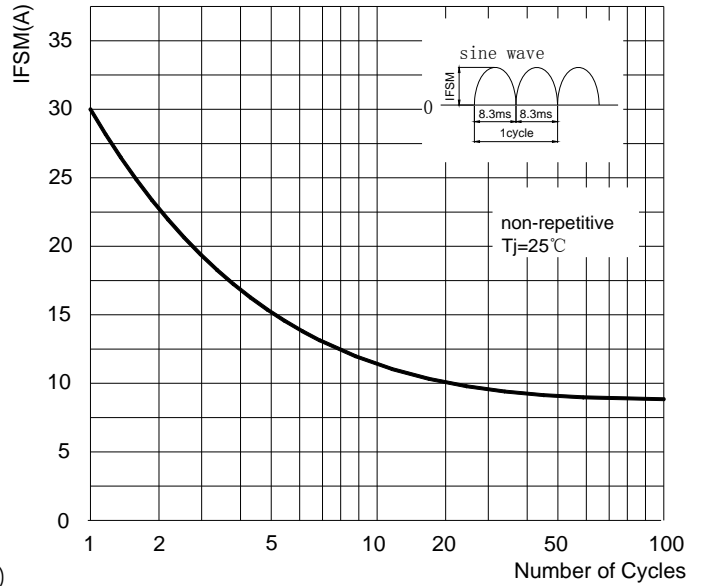


FIG.3: TYPICAL FORWARD CHARACTERISTICS

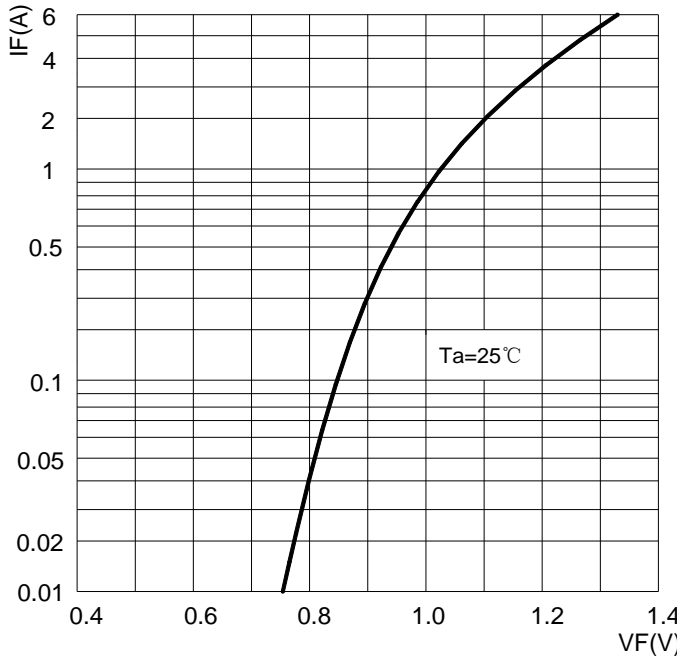


FIG.4: TYPICAL REVERSE CHARACTERISTICS

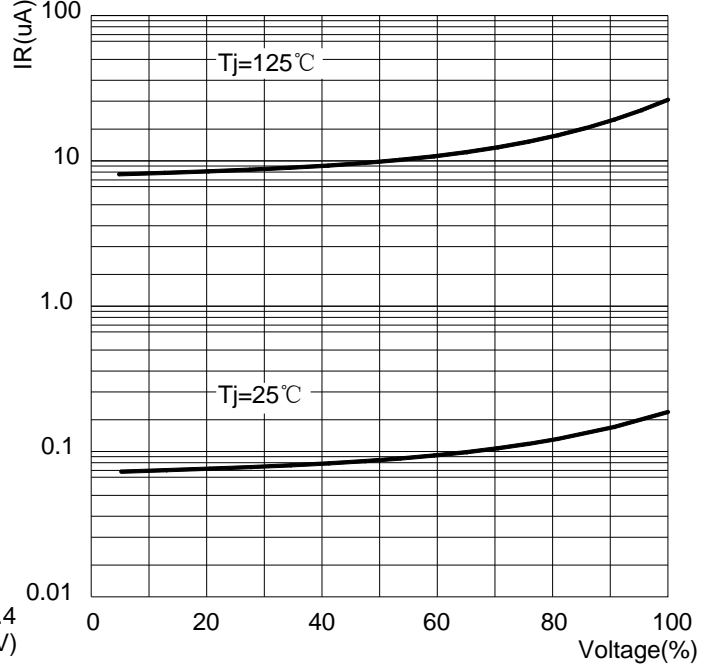
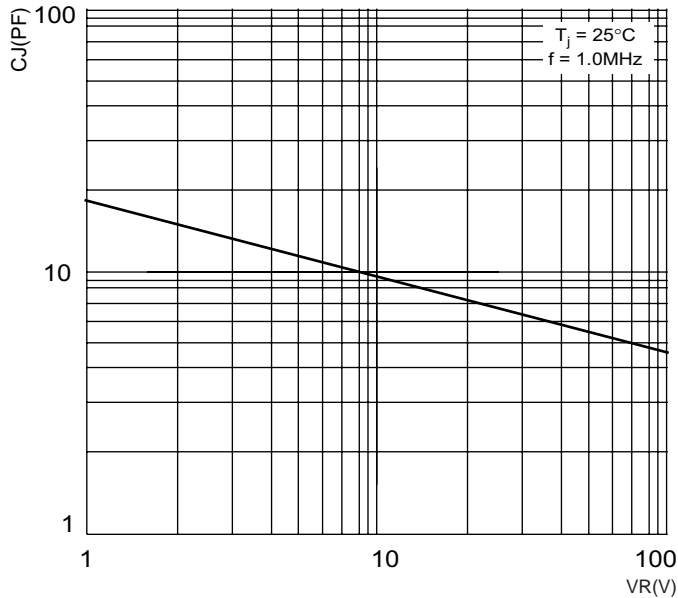
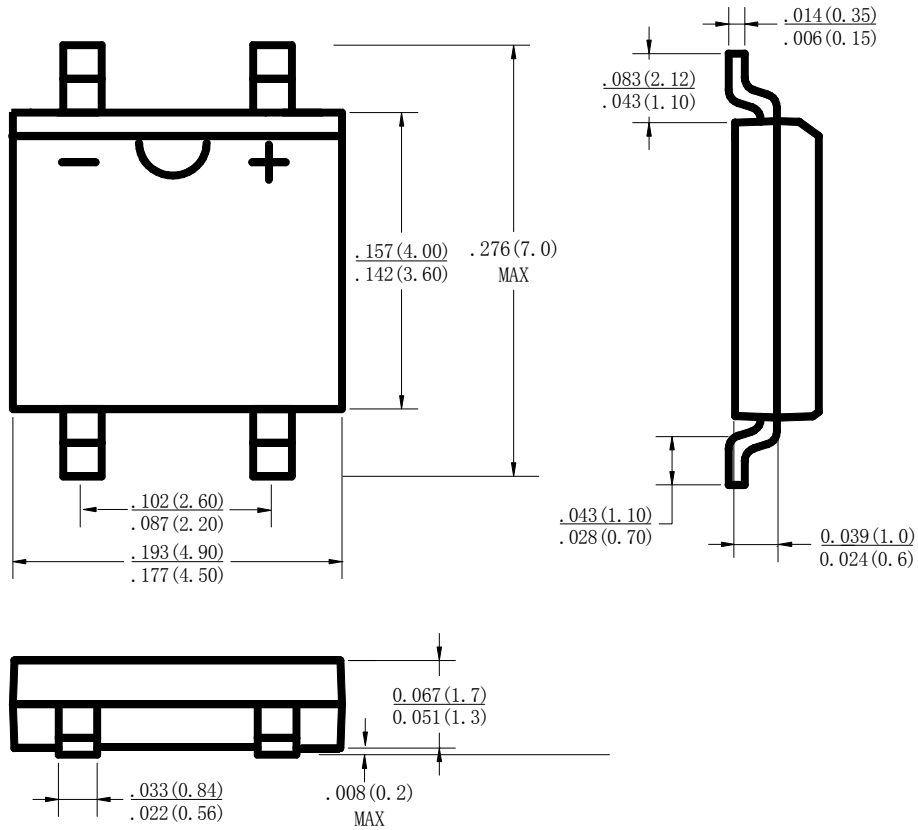


FIG5: Typical Junction Capacitance Per Diode

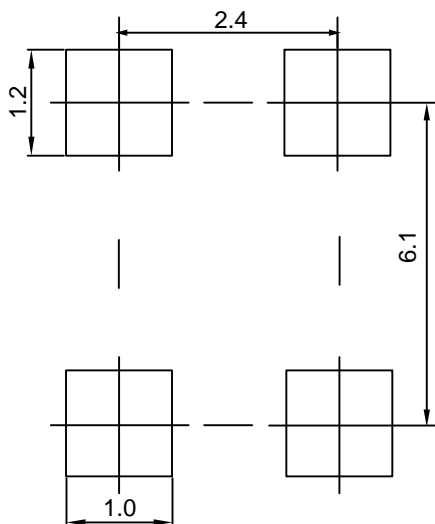


MBF Package Outline Dimensions



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.

NOTICE

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Reel Taping Specifications For Surface Mount Devices-MBF

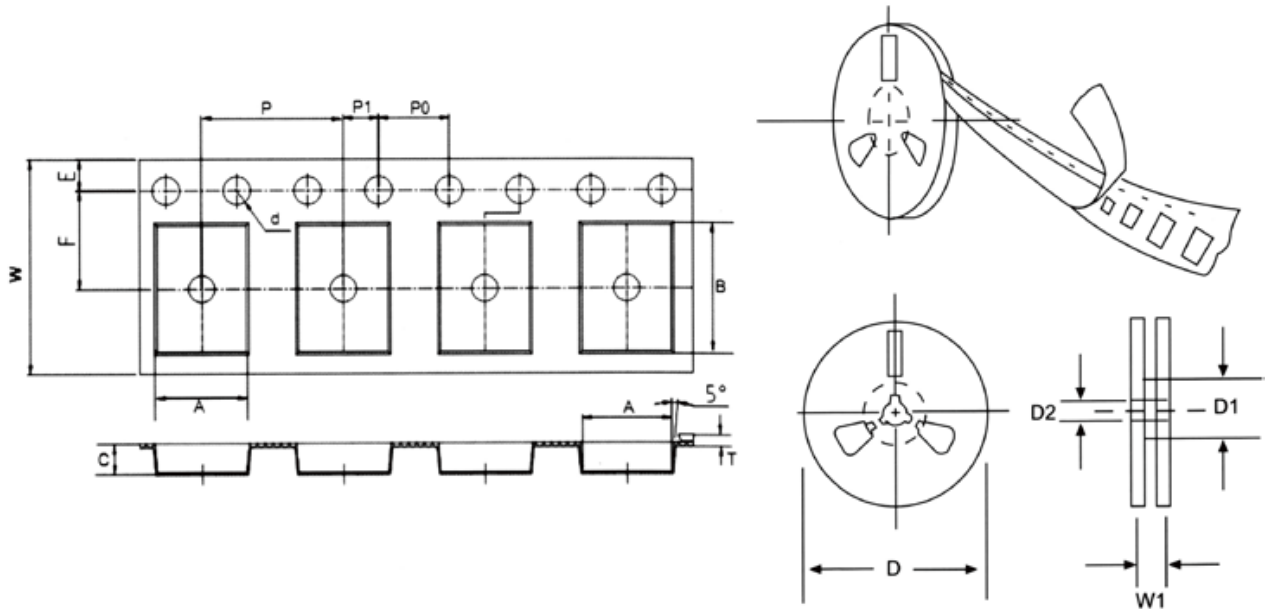


FIG: CONFIGURATION OF SURFACE MOUNTED DEVICES TAPING

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)
Strocket 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 packde in accordance with EIA standard RS-481-A and specification given above.

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