

Low Profile Surface Mount Single Phase Bridge Rectifiers

TMBFR301~TMBFR310

100 to 1000 V

3A

MSBL

Features

- u Low forward voltage drop
- u Low leakage current
- u Ideal for automated placement
- u Glass passivated standard bridge rectifiers
- u Moisture sensitivity: level 1
- u Low profile, Typical Height 1.4mm
- u High temperature soldering guaranteed: 260 °C /10 seconds
- u Weight: 0.195g
- u Halogen free

Typical Applications

For use of general purpose AC to DC bridge rectification in power supply, charger, office appliance, home appliance and telecome device.

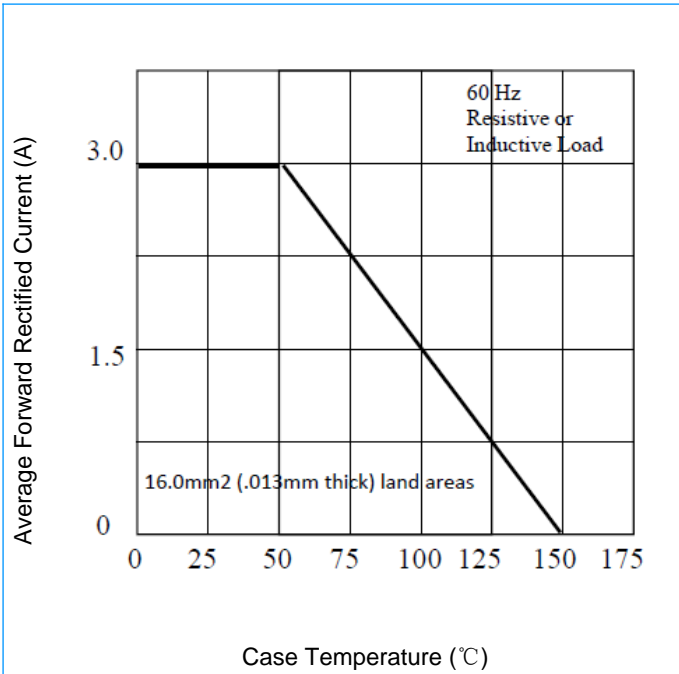
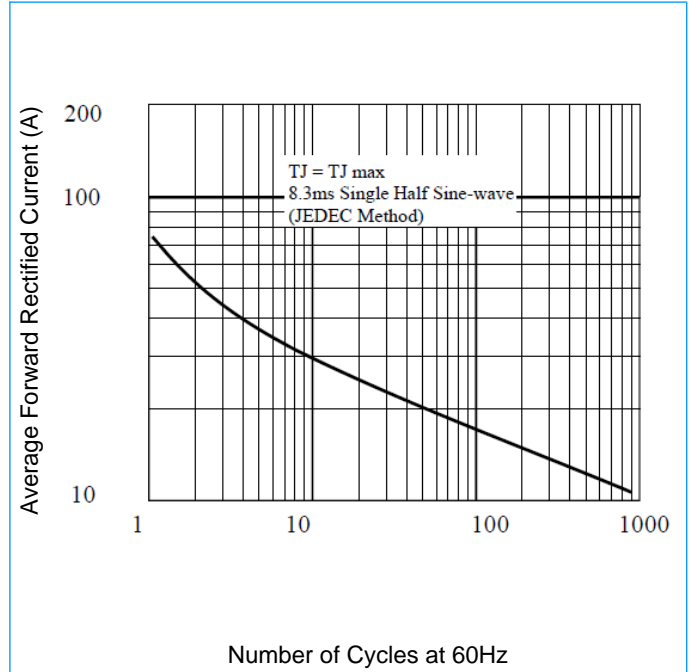
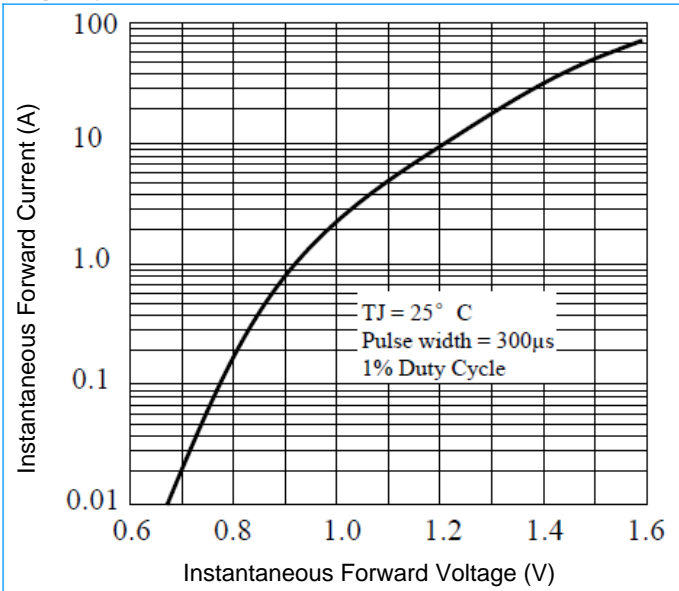
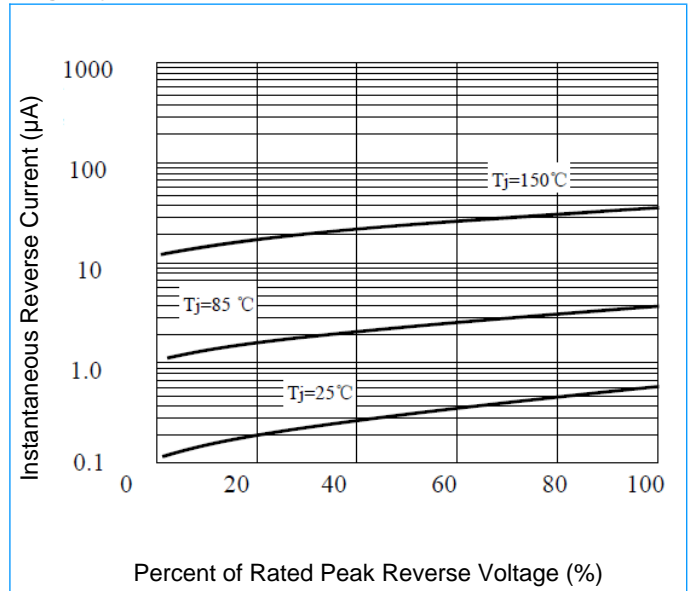


Maximum Ratings and Electrical Characteristics (@ 25°C unless otherwise noted)

Parameter	Symbol	TMBFR301	TMBFR302	TMBFR304	TMBFR306	TMBFR308	TMBFR310	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	3						A
Peak Forward Surge Current : 8.3ms Single Half Sinewave Superimposed on Rated Load	I_{FSM}	120						A
Rating for fusing (t<8.3ms)	I^2t	60						A ² sec
Typical Thermal Resistance (Note 1)	$R_{\theta JC}$ $R_{\theta JA}$	15 75						°C/W
Operating Junction and Storage Temperature Range	T_J, T_{STG}	-55 to +150						°C
Maximum Instantaneous Forward Voltage ($I_F = 3.0A, T_J = 25^\circ C$)	V_F	1.05						V
Maximum DC reverse current at rated DC blocking voltage	$T_A = 25^\circ C$	5						μA
	$T_A = 125^\circ C$	500						
Typical junction capacitance at 4.0V, 1MHz	C_J	32						pF

Note:1. Mounted on glass epoxy PC board with $4 \times (5 \times 5 \text{mm}^2)$ copper pad.

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Rating and Characteristic Curves ($T_A=25^{\circ}\text{C}$ unless otherwise noted)
Fig1. Forward Current Derating Curve

Fig2. Maximum Non-repetitive Peak Forward Surge Current

Fig3. Typical Instantaneous Forward Characteristics

Fig4. Typical Reverse Characteristics


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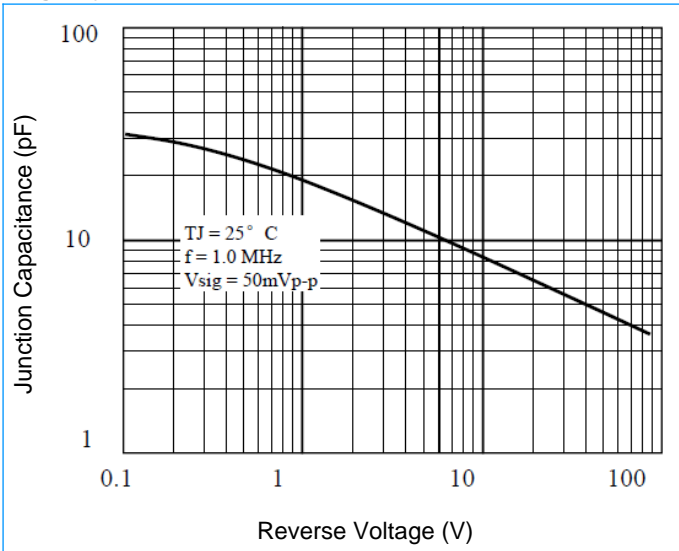
100 to 1000 V

3A

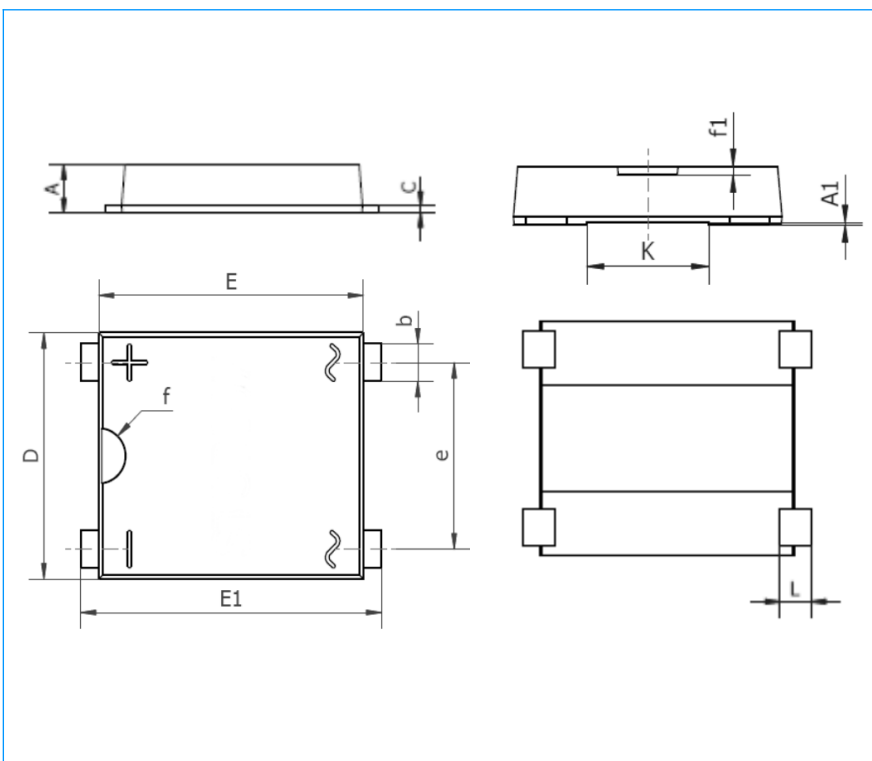
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Rating and Characteristic Curves (Continue)

Fig5. Typical Junction Capacitance



MSBL Package Outline (Unit: inch)

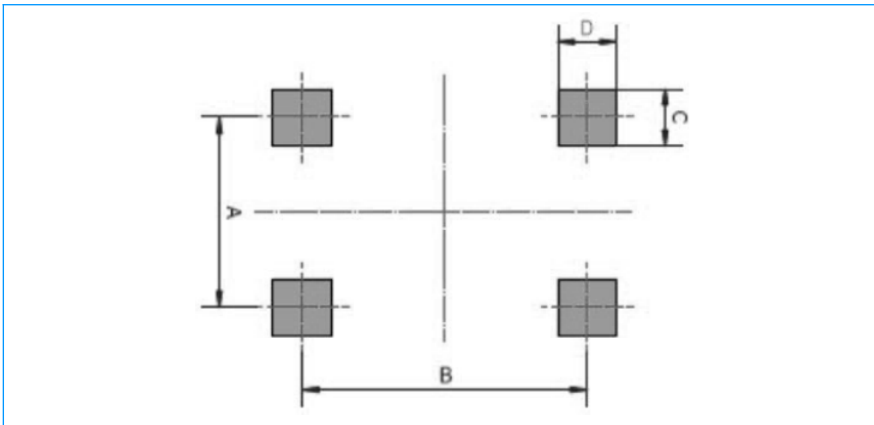


Dim	Min.	Max.
A	1.20	1.60
b	0.90	1.10
c	0.15	0.25
D	6.35	6.85
E	7.05	7.55
E1	8.05	8.55
e	4.75	5.25
f	TYP R0.75	
f1	TYP 0.2	
A1	TYP 0.5	
K	2.75	3.25
L	0.75	1.05

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MSBL Mounting PAD layout (Unit: inch)



Dim	Min.	Max.
A	4.75	5.25
B	7.15	7.65
C	1.50	2.50
D	1.50	2.50

Packaging Information

Part Number	Component Package	Quantity
TMBFR301~TMBFR310	MSBL	3000 PCS