

# TD3F30MB

## Surface Mount Fast Recovery Bridge Rectifier Reverse Voltage - 1000 V Forward Current - 3 A

### Features

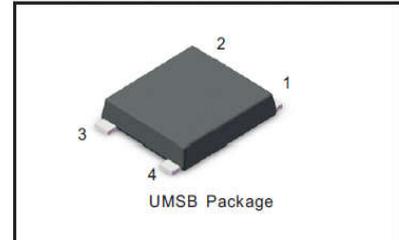
- Glass passivated chip junction
- Fast reverse recovery time
- Designed for Surface Mount Application

### Mechanical Data

- Case: Molded plastic, UMSB
- Terminals: solderable per MIL-STD-750, Method 2026

### PINNING

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



### Absolute Maximum Ratings and Characteristics

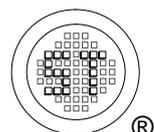
Ratings at 25°C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

Parameter	Symbols	Value	Units
	Marking	FMB30M	-
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	1000	V
Maximum RMS Voltage	$V_{RMS}$	700	V
Maximum DC Blocking Voltage	$V_{DC}$	1000	V
Average Rectified Output Current	$I_{F(AV)}$	3	A
Peak Forward Surge Current 8.3 ms Single Half-sine-wave Superimposed on Rated Load (JEDEC Method)	$I_{FSM}$	100	A
Peak Forward Surge Current 1 ms Single Half-square-wave Superimposed on Rated Load	$I_{FSM}$	180	A
$I^2t$ Rating for fusing (t = 8.3 ms)	$I^2t$	41.5	A <sup>2</sup> S
$I^2t$ Rating for fusing (t = 1 ms)	$I^2t$	16.2	A <sup>2</sup> S
Maximum Forward Voltage at 3 A	$V_F$	1	V
Maximum DC Reverse Current at Rated DC Blocking Voltage at $T_a = 25^\circ\text{C}$	$I_R$	5	$\mu\text{A}$
DC Blocking Voltage at $T_a = 125^\circ\text{C}$		200	
Typical Junction Capacitance <sup>1)</sup>	$C_J$	40	pF
Typical Thermal Resistance <sup>2)</sup>	$R_{\theta JA}$	35	$^\circ\text{C}/\text{W}$
Maximum Reverse Recovery Time <sup>3)</sup>	$t_{rr}$	500	ns
Operating Junction and Storage Temperature Range	$T_j, T_{stg}$	- 55 to + 150	$^\circ\text{C}$

<sup>1)</sup> Measured at 1MHz and applied reverse voltage of 4 V D.C.

<sup>2)</sup> Mounted on glass epoxy PC board with 4 x 1.5cm x1.5cm copper pad.

<sup>3)</sup> Measured with  $I_F = 0.5 \text{ A}$ ,  $I_R = 1 \text{ A}$ ,  $I_{rr} = 0.25 \text{ A}$ .



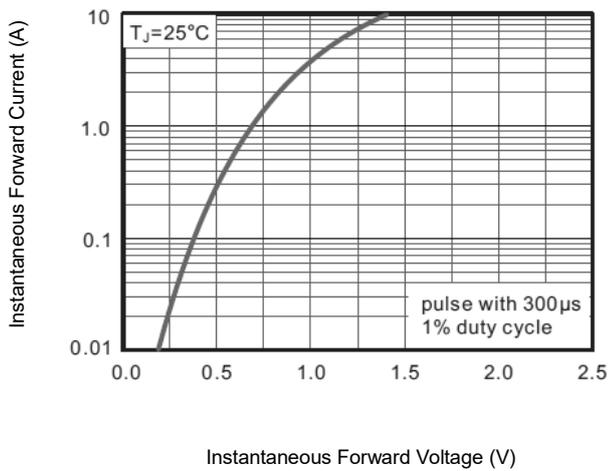


Figure 1. Typical Forward Characteristics

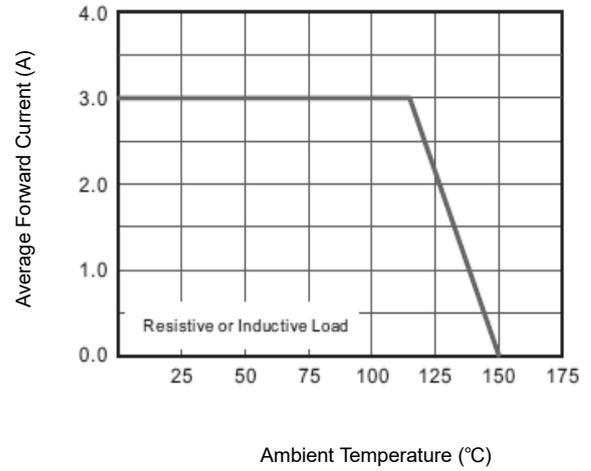


Figure 2. Forward Current Derating Curve

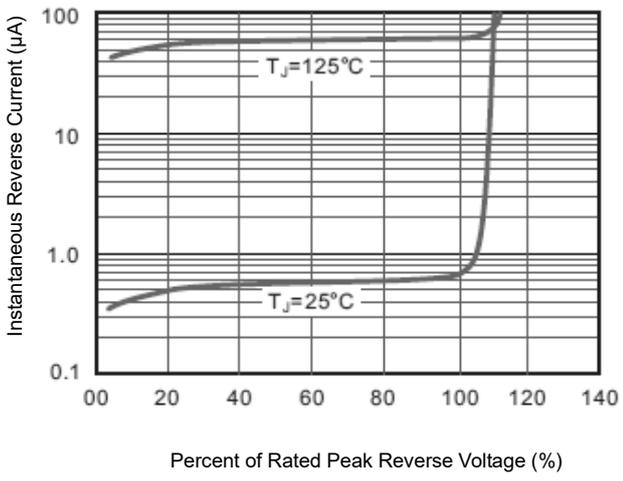


Figure 3. Typical Reverse Characteristics

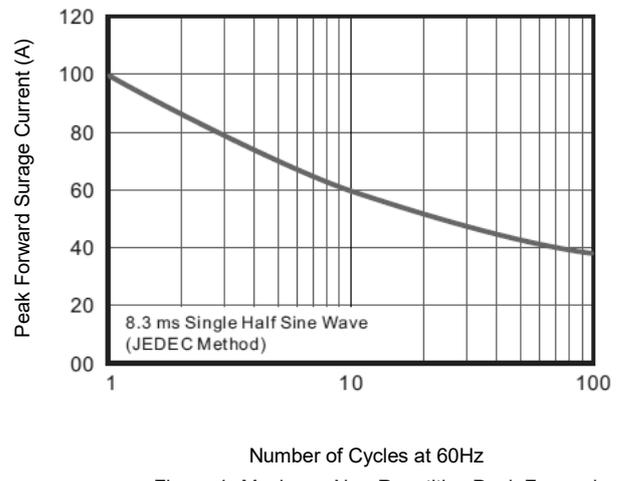


Figure 4. Maximum Non-Repetitive Peak Forward Surge Current

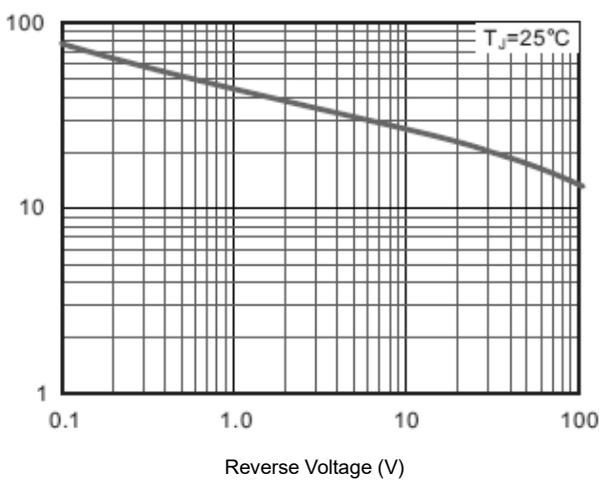
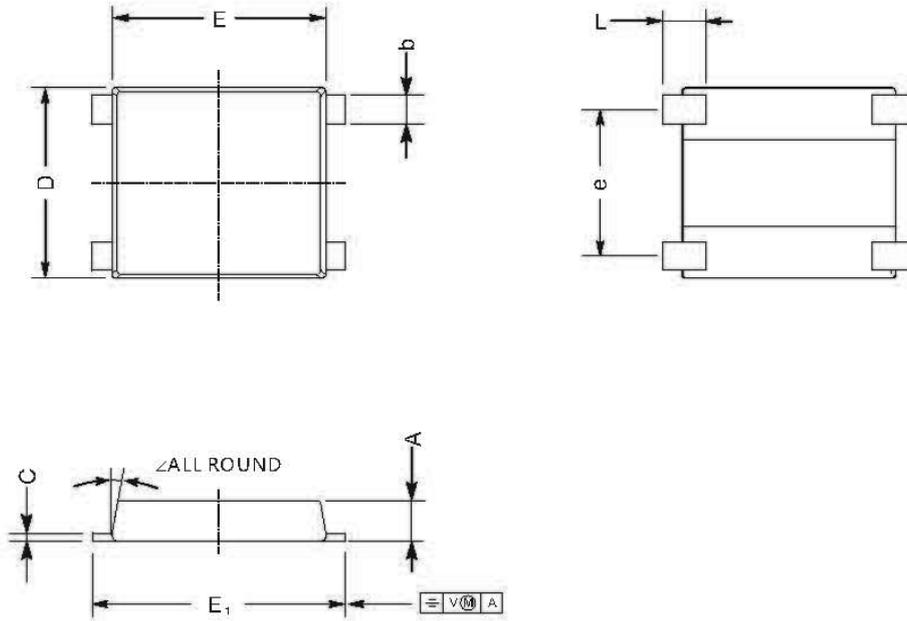


Figure 5. Typical Junction Capacitance

## PACKAGE OUTLINE

UMSB

Plastic surface mounted package; 4 leads



UNIT	A	C	D	E	E <sub>1</sub>	L	e	b	∠
mm	1.5	0.29	7	7.6	8.9	1.6	5.3	1.15	10°
	1.3	0.17	6.2	7.1	7.9	1	4.9	0.95	

### Recommended Soldering Footprint

