

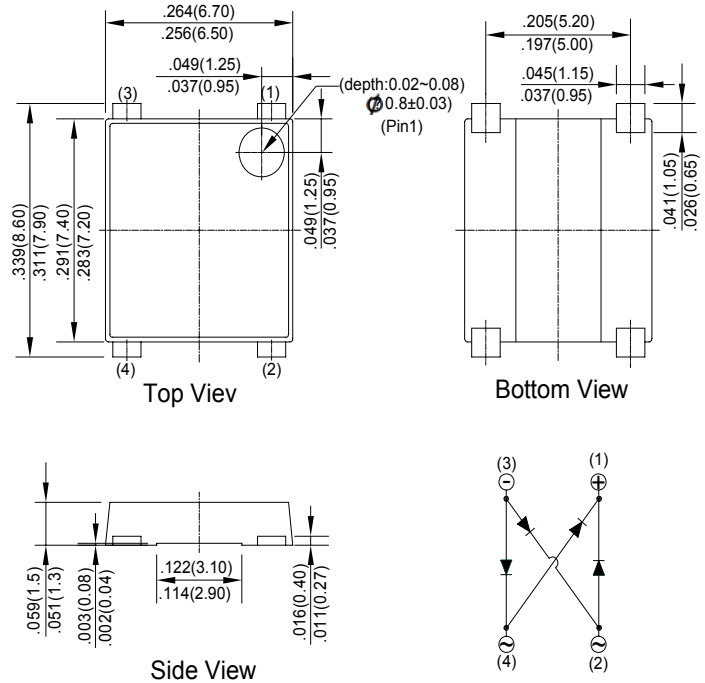


**Features**

- Rating to 1000V PRV
- Compact, thin profile package design
- Ideal for SMT manufacturing
- Reliable robust construction
- UL recognized file#E364304

**Mechanical Data**

- Molding compound meets UL 94 V-0 flammability rating, Halogen-free, RoHS-compliant, and commercial grade
- Polarity indicator: As marked on body
- Weight: 216 mg



**Maximum Ratings & Thermal Characteristics**

Dimensions in millimeters ( 1mm =0.0394" )

Rating at 25°C ambient temperature unless otherwise specified, Resistive or Inductive load, 60 Hz.  
For Capacitive load derate current by 20%.

Parameter	Symbol	TMBF 3005	TMBF 301	TMBF 302	TMBF 304	TMBF 306	TMBF 308	TMBF 310	unit
Maximum repetitive peak reverse voltage	VRRM	50	100	200	400	600	800	1000	V
Maximum RMS bridge input voltage	VRMS	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	VDC	50	100	200	400	600	800	1000	V
Maximum average forward rectified output current at TA=40°C	IF(AV)	3.0							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	IFSM	80							A
Maximum Reverse Recovery Time	TRR	150			250		500		ns
Rating for fusing ( t<8.3ms)	I <sup>2</sup> t	26.56							A <sup>2</sup> sec
Typical thermal resistance per element (1)	ReJA	55							°C / W
Typical junction capacitance per element (2)	C	35.0							pF
Operating junction and storage temperature range	TJ, TSTG	-55 to + 150							°C

**Electrical Characteristics**

Rating at 25°C ambient temperature unless otherwise specified. Resistive or Inductive load, 60Hz.  
For Capacitive load derate by 20 %.

Parameter	Symbol	TMBF 3005	TMBF 301	TMBF 302	TMBF 304	TMBF 306	TMBF 308	TMBF 310	Unit
Maximum instantaneous forward voltage drop per leg at 1.5A	VF	1.05							V
Maximum DC reverse current at rated TA =25°C DC blocking voltage per element TA =125°C	IR	5 500							μA

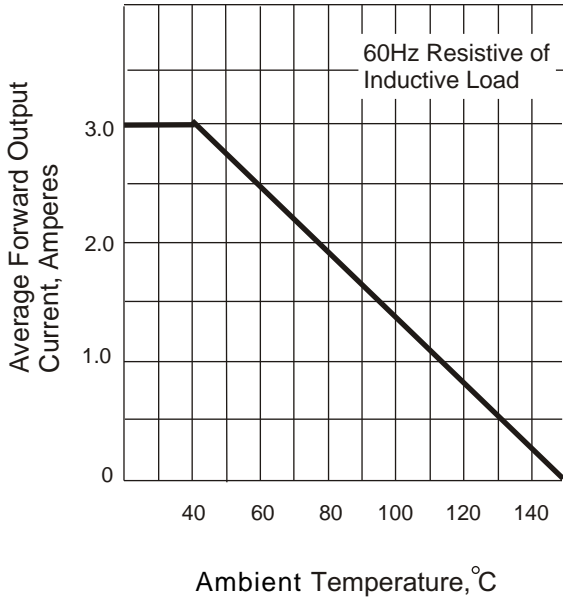
**Notes:** (1) Thermal resistance from Junction to Ambient on P.C.board mounting.  
(2) Measured at 2.0MHz and applied reverse voltage of 4.0 volts.



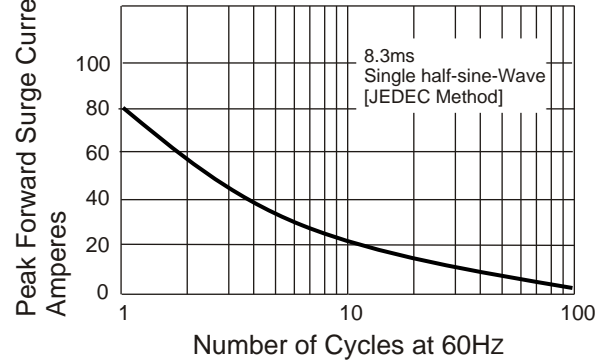
#### Rating and Characteristic Curves ( $T_A=25^\circ\text{C}$ Unless otherwise noted )

#### TMBF3005 thru TMBF310

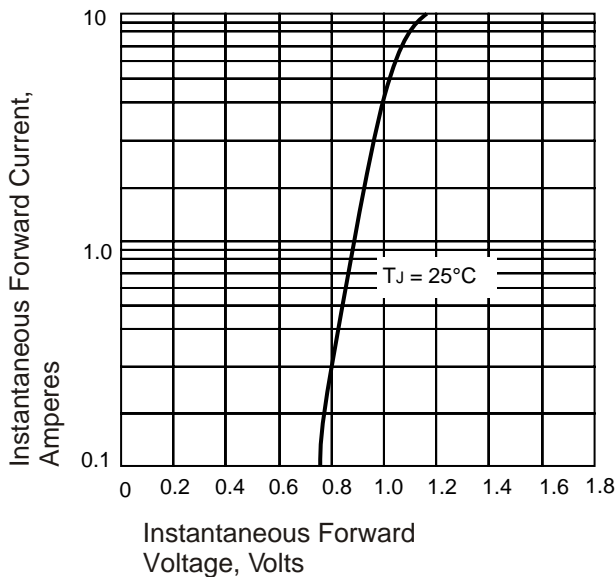
**Fig. 1 Derating Curve for Output Rectified Current**



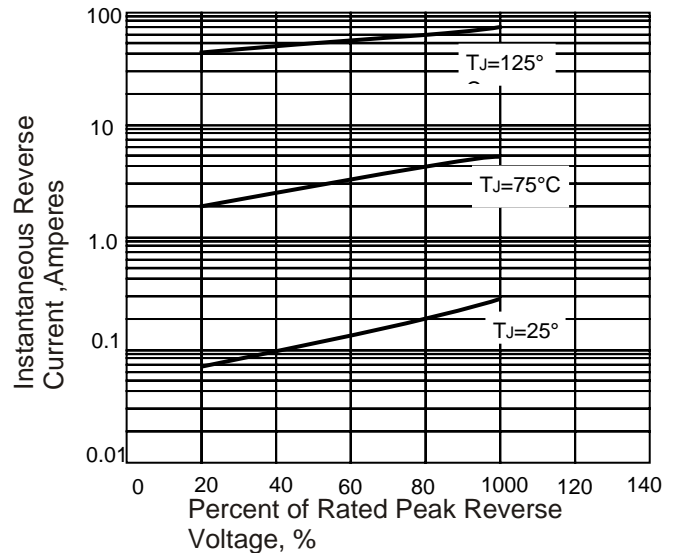
**Fig. 2 Maximum Non-repetitive Peak Forward Surge Current**



**Fig. 3 Typical Instantaneous Forward Characteristics**



**Fig. 4 Typical Revers Characteristics**



**Fig. 5 Typical Junction Capacitance**

