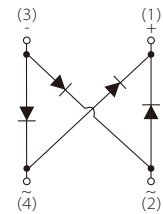


FEATURES

- | Rating to 1000V PRV
- | Compact, thin profile package design
- | Ideal for SMT manufacturing
- | Reliable robust construction



UMSB



Schematic Symbol

MECHANICAL DATA

- | Case: UMSB
- | Terminals: Solderable per MIL-STD-750, Method 2026

APPROVALS

RoHS	Compliance with 2011/65/EU
HF	Compliance with IEC61249-2-21:2003

MAXIMUM RATINGS AND CHARACTERISTICS (T_A=25°C)

Parameter	Symbol	TMBF 3005	TMBF 301	TMBF 302	TMBF 304	TMBF 306	TMBF 308	TMBF 310	Unit
Marking		TMBF 3005	TMBF 301	TMBF 302	TMBF 304	TMBF 306	TMBF 308	TMBF 310	
Maximum repetitive peak reverse voltage	V _{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V _{RMS}	35	70	140	280	420	560	700	
Maximum DC blocking voltage	V _{DC}	50	100	200	400	600	800	1000	
Maximum average forward rectified output current at T _A =40°C	I _{F(AV)}	3.0							A
Peak forward surge current single sine-wave superimposed on rated load (JEDEC Method)	I _{FSM}	80							
Rating for fusing (t<8.3ms)	I ² t	26.56							A ² sec
Maximum DC Reverse Current at Rated DC Blocking Voltage	I _R	5							uA
		500							
Maximum instantaneous forward voltage drop per leg at 1.5A	V _F	1.05							V
Typical junction capacitance per element (2)	C _J	35.0							pF
Typical thermal resistance per element (1)	R _{eJA}	55							°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150							°C

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.

CHARACTERISTIC CURVES

Fig. 1- Derating Curve for Output Rectified Current

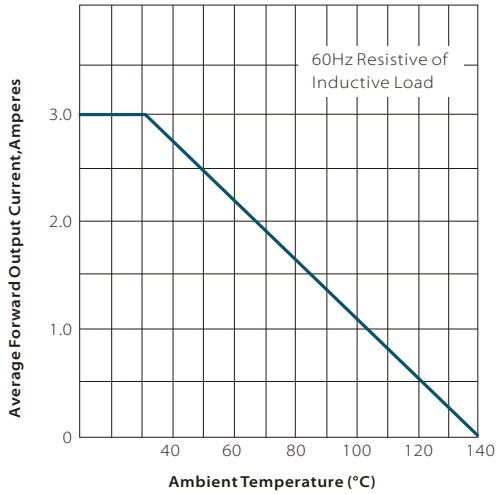


Fig. 2- Maximum Non-repetitive Peak Forward Surge Current

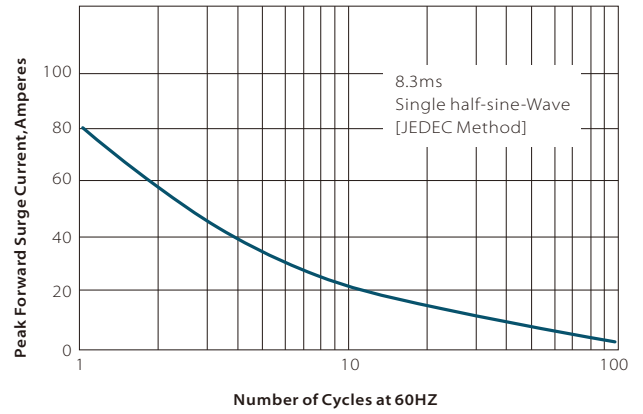


Fig. 3- Typical Instantaneous Forward Characteristics

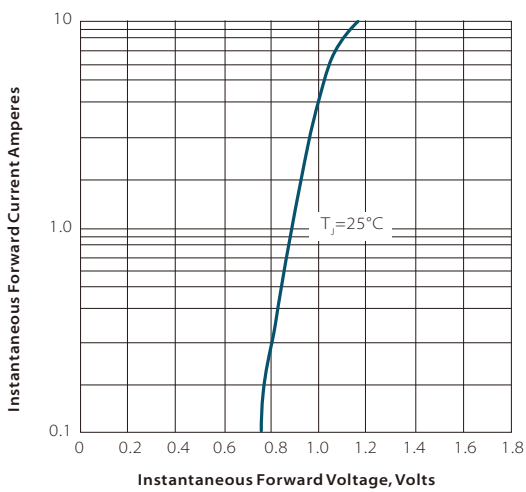


Fig. 4- Typical Revers Characteristics

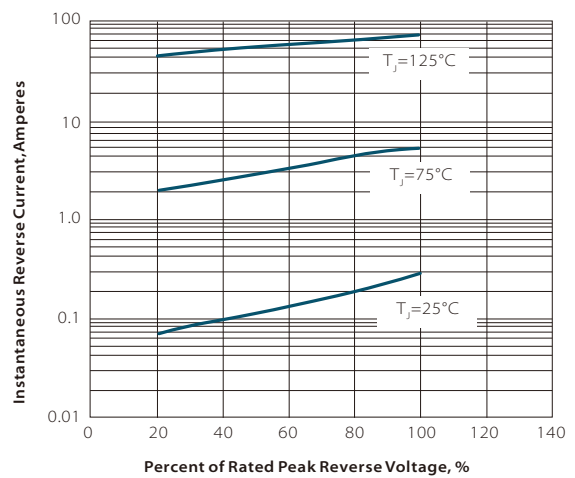
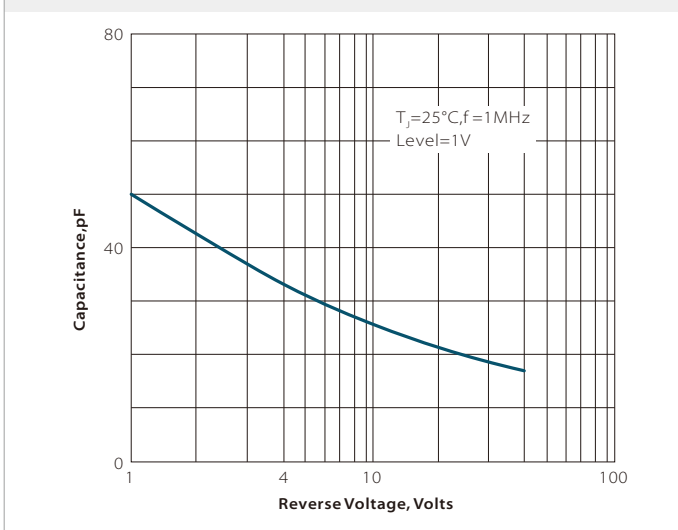
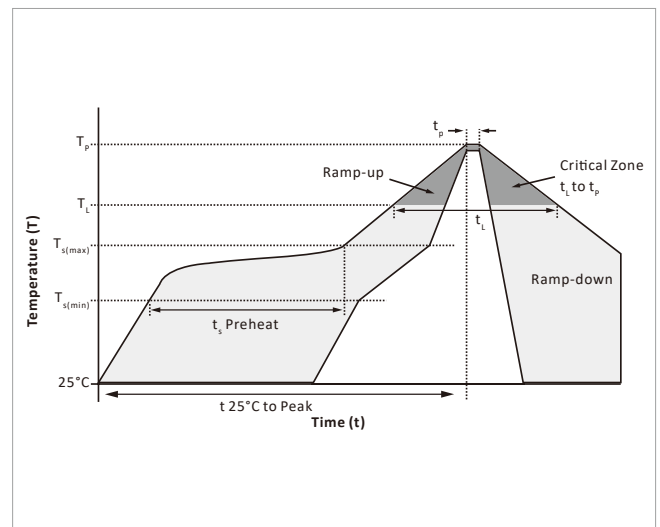


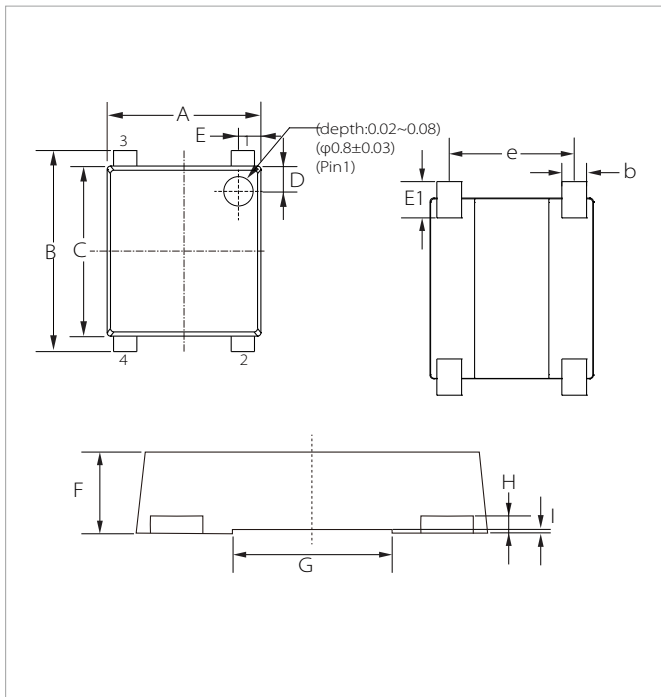
Fig. 5-Typical Junction Capacitance


SOLDERING PARAMETERS

Reflow Condition		Lead-free assembly
Pre Heat	Temperature Max ($T_{s(min)}$)	150°C
	Temperature Max ($T_{s(max)}$)	200°C
	Time (min to max) (t_p)	60 – 180 secs
Average ramp up rate (Liquidus Temp (T_L) to peak)		3°C/second max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/second max
Reflow	Temperature (T_L) (Liquidus)	217°C
	Time (min to max) (t_L)	60 – 150 seconds
Peak Temperature (T_p)		260°C
Time within 5°C of actual peak Temperature (t_p)		20 – 40 seconds
Ramp-down Rate		6°C/second max
Time 25°C to peak Temperature (T_p)		8 minutes max.
Do not exceed		260°C



UMSB PACKAGE INFORMATION



Ref.	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	6.50	6.70	0.256	0.264
B	7.90	8.60	0.311	0.339
C	7.20	7.40	0.283	0.291
D	0.95	1.25	0.037	0.049
E	0.95	1.25	0.037	0.049
E1	0.65	1.05	0.026	0.041
e	5.00	5.20	0.197	0.205
b	0.95	1.15	0.037	0.045
F	1.30	1.50	0.051	0.059
G	2.90	3.10	0.114	0.122
H	0.27	0.40	0.011	0.016
I	0.04	0.08	0.002	0.003

ORDERING INFORMATION

Part Number	Component Package	QTY/Reel	Reel Size
TMBF3005-TMBF310	UMSB	3000PCS	7"

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