

# TB1S~TB10S

## MICRO SURFACE MOUNT GLASS PASSIVATED SINGLE-PHASE BRIDGE RECTIFIER

**VOLTAGE** 100~1000 Volt **CURRENT** 1 Amper

**MICRO DIP / TDI** Unit : inch(mm)



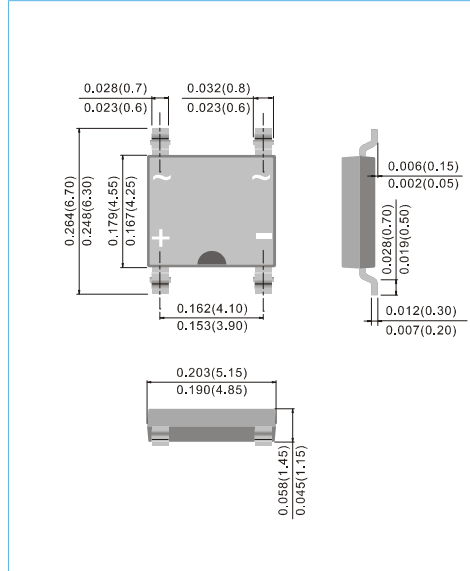
Recognized File #E139973

### FEATURES

- Glass Passivated Chip Junction
- Ideally Suited for Automatic Assembly
- Save Space On Printed Circuit Boards
- Ultra Thin Profile Package for Space Constrained Utilization
- Low Forward Voltage Drop
- Surge Overload Rating to 30A peak
- Plastic Material : UL Flammability Classification Rating 94V-0
- Lead free in compliance with EU RoHS 2011/65/EU directive
- Green molding compound as per IEC61249 Std. . (Halogen Free)

### MECHANICAL DATA

- Case : TDI, Plastic
- Terminals : Solderable per MIL-STD-750, Method 2026
- Polarity : As Marked on case
- Marking : Part number
- Weight : 0.003 ounces, 0.09 grams (Approx.)



### ABSOLUTE MAXIMUM RATINGS (If not specified T<sub>A</sub>=25°C)

PARAMETER	SYMBOL	TB1S	TB2S	TB4S	TB6S	TB8S	TB10S	UNIT
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	100	200	400	600	800	1000	V
Maximum RMS Voltage	V <sub>RMS</sub>	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V <sub>DC</sub>	100	200	400	600	800	1000	V
Average Rectified Forward Current (Note 1)	I <sub>O</sub>	1						A
Peak Surge Forward Current (Note 2)	I <sub>FSM</sub>	30						A
I <sup>2</sup> t Rating for fusing (t<8.3ms)	I <sup>2</sup> t	3.735						A <sup>2</sup> S
Operating Junction Temperature	T <sub>J</sub>	150						°C
Storage Temperature	T <sub>STG</sub>	-55 to +150						°C

### NOTE:

1. 60Hz sine wave, R-load, On FR-4 P.C.B.
2. 60Hz sine wave, Non-repetitive 1cycle peak value.

# TB1S~TB10S

## ELECTRICAL CHARACTERISTICS (If not specified $T_A=25^{\circ}\text{C}$ )

PARAMETER	SYMBOL	CONDITIONS	MAX.	UNIT
Forward Voltage	$V_F$	$I_F=1\text{A}$ , Pulse measurement, Rating of per diode	1	V
Reverse Current	$I_R$	At $V_{RRM}$ , Pulse measurement, Rating of per diode	10	$\mu\text{A}$
Typical Junction capacitance	$C_J$	$V_R=4\text{V}$ , $f=1\text{MHz}$	10	pF
Thermal Resistance	$R_{\theta JC}$	Junction to case (Note 1)	30	$^{\circ}\text{C/W}$
	$R_{\theta JA}$	Junction to ambient (Note 1)	95	

### NOTE:

1. Mounted on  $48\text{cm}^2$  FR-4 PCB.

## RATING AND CHARACTERISTIC CURVES

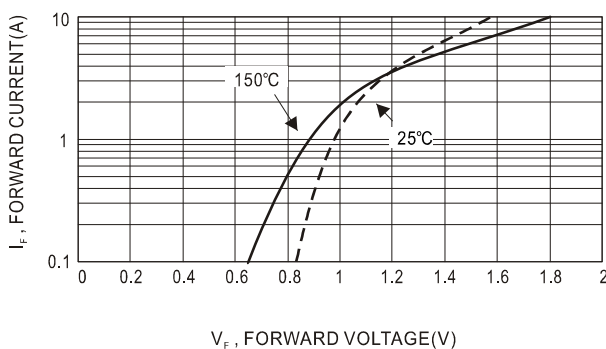


Fig.1 -TYPICAL FORWARD CHARACTERISTICS

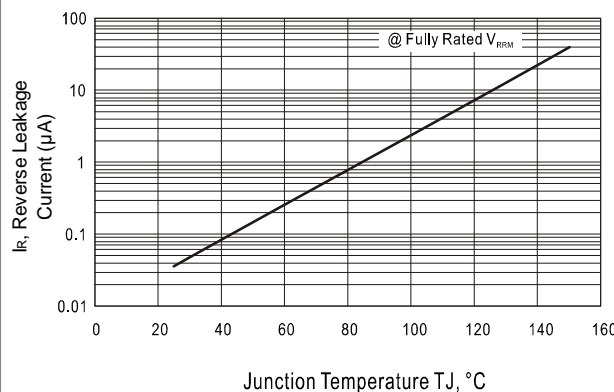


FIG-2 TYPICAL LEAKAGE CURRENT vs JUNCTION TEMPERATURE

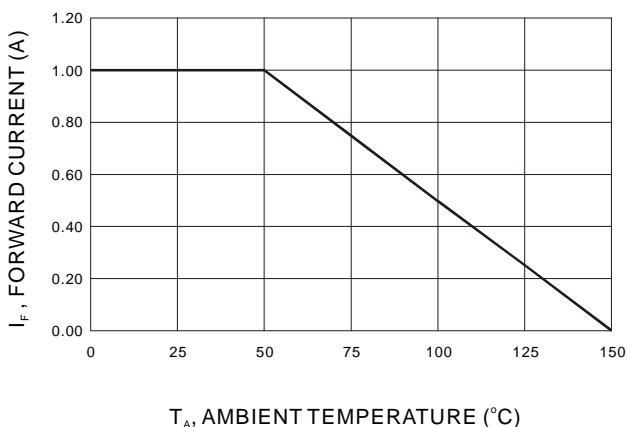
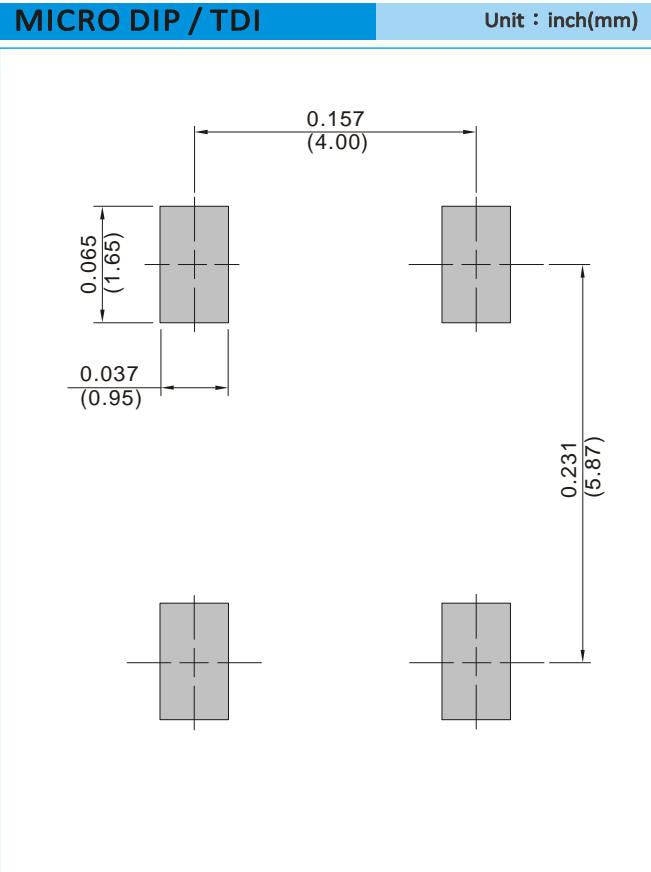


FIG 3- DERATING CURVE

# TB1S~TB10S

## MOUNTING PAD LAYOUT



## ORDER INFORMATION

- Packing information
  - T/R - 4K per 13" plastic Reel
  - T/R - 1K per 7" plastic Reel

# TB1S~TB10S

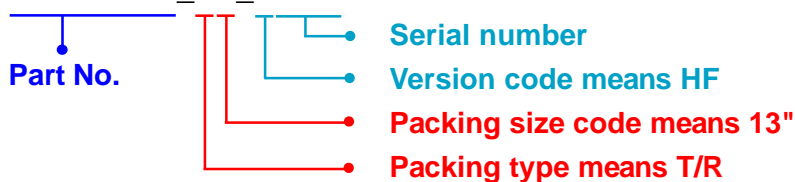
## Part No\_packing code\_Version

TB1S\_R1\_00001

TB1S\_R2\_00001

For example :

RB500V-40\_R2\_00001



Packing Code XX				Version Code XXXXX		
Packing type	1 <sup>st</sup> Code	Packing size code	2 <sup>nd</sup> Code	HF or RoHS	1 <sup>st</sup> Code	2 <sup>nd</sup> ~5 <sup>th</sup> Code
Tape and Ammunition Box (T/B)	A	N/A	0	HF	0	serial number
Tape and Reel (T/R)	R	7"	1	RoHS	1	serial number
Bulk Packing (B/P)	B	13"	2			
Tube Packing (T/P)	T	26mm	X			
Tape and Reel (Right Oriented) (TRR)	S	52mm	Y			
Tape and Reel (Left Oriented) (TRL)	L	PANASERT T/B CATHODE UP (PBCU)	U			
FORMING	F	PANASERT T/B CATHODE DOWN (PBCD)	D			



## TB1S~TB10S

### Disclaimer

- Reproducing and modifying information of the document is prohibited without permission from Panjit International Inc..
- Panjit International Inc. reserves the rights to make changes of the content herein the document anytime without notification. Please refer to our website for the latest document.
- Panjit International Inc. disclaims any and all liability arising out of the application or use of any product including damages incidentally and consequentially occurred.
- Panjit International Inc. does not assume any and all implied warranties, including warranties of fitness for particular purpose, non-infringement and merchantability.
- Applications shown on the herein document are examples of standard use and operation. Customers are responsible in comprehending the suitable use in particular applications. Panjit International Inc. makes no representation or warranty that such applications will be suitable for the specified use without further testing or modification.
- The products shown herein are not designed and authorized for equipments requiring high level of reliability or relating to human life and for any applications concerning life-saving or life-sustaining, such as medical instruments, transportation equipment, aerospace machinery et cetera. Customers using or selling these products for use in such applications do so at their own risk and agree to fully indemnify Panjit International Inc. for any damages resulting from such improper use or sale.
- Since Panjit uses lot number as the tracking base, please provide the lot number for tracking when complaining.