



# TB1S~TB10S

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

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

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



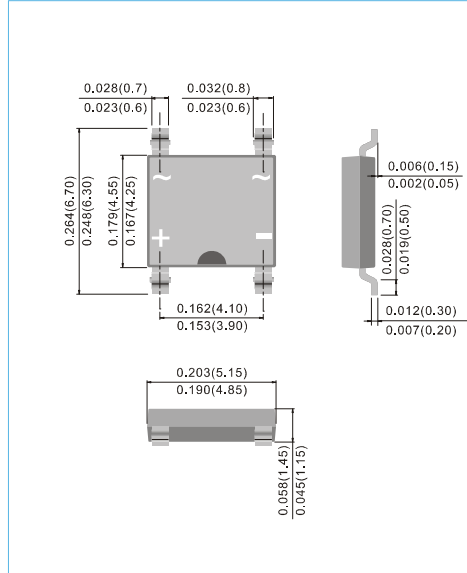
Recognized File #E139973

### 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 $T_A=25^{\circ}\text{C}$ )

PARAMETER	SYMBOL	TB1S	TB2S	TB4S	TB6S	TB8S	TB10S	UNIT
Maximum Recurrent 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
Average Rectified Forward Current (Note 1)	$I_o$	1						A
Peak Surge Forward Current (Note 2)	$I_{FSM}$	30						A
$I^2t$ Rating for fusing ( $t < 8.3\text{ms}$ )	$I^2t$	3.735						$\text{A}^2\text{S}$
Operating Junction Temperature	$T_J$	150						$^{\circ}\text{C}$
Storage Temperature	$T_{STG}$	-55 to +150						$^{\circ}\text{C}$

### NOTE:

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



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## 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

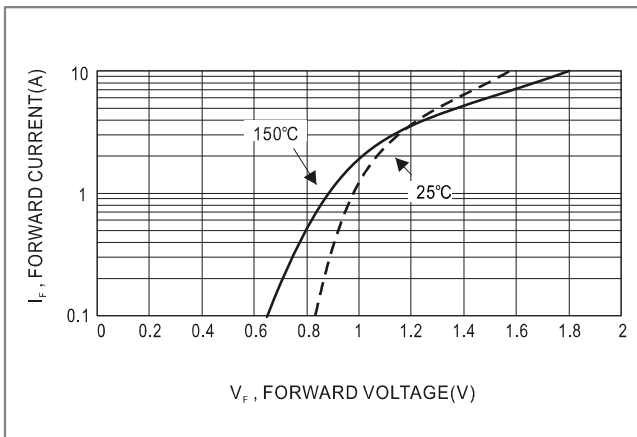


Fig.1 -TYPICAL FORWARD CHARACTERISTICS

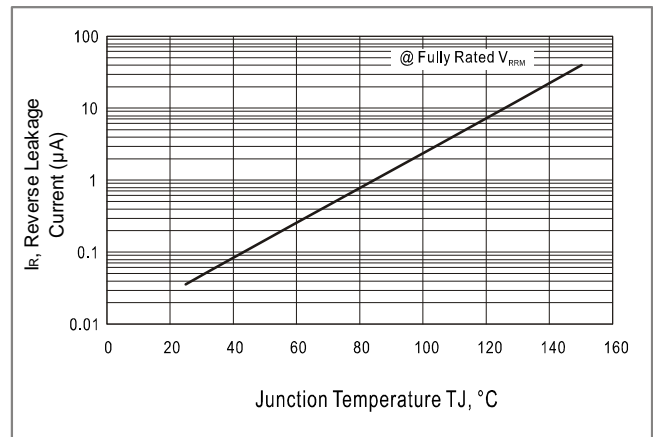


FIG-2 TYPICAL LEAKAGE CURRENT vs JUNCTION TEMPERATURE

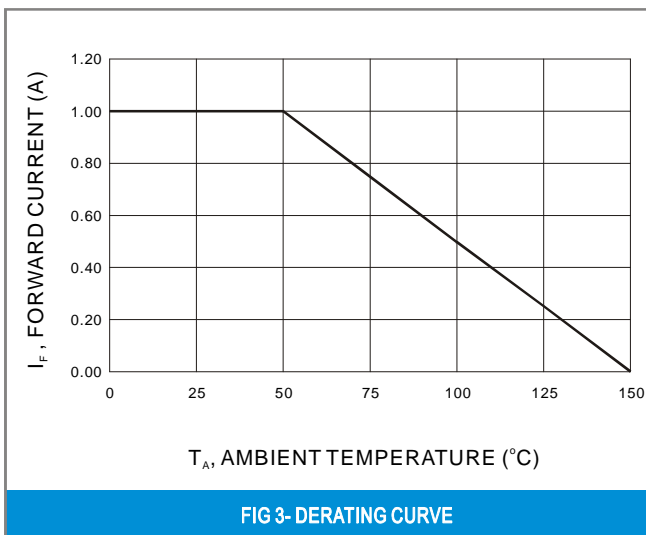
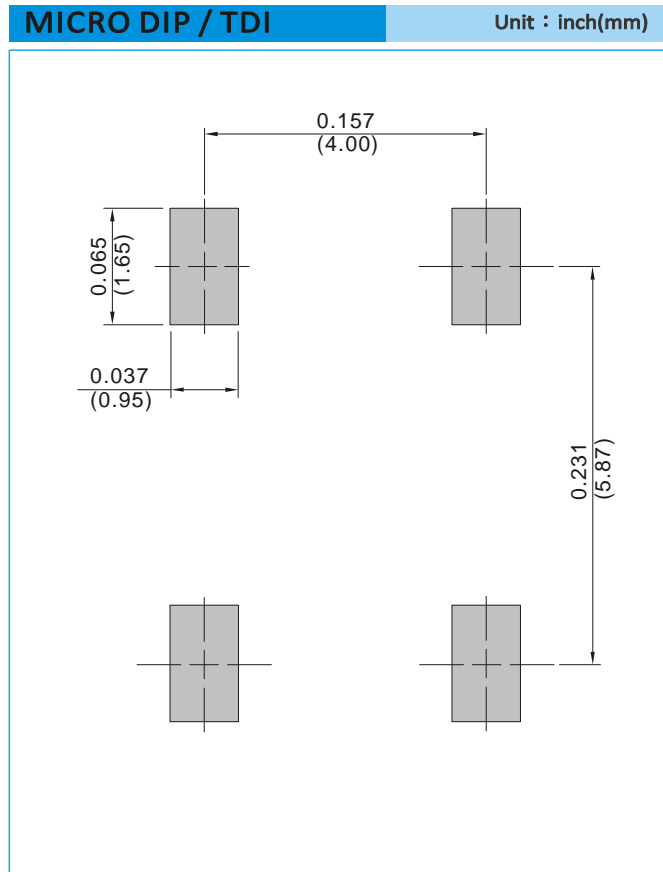


FIG 3- DERATING CURVE



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## MOUNTING PAD LAYOUT



## ORDER INFORMATION

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



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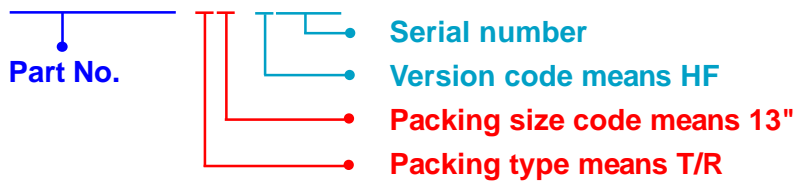
## Part No\_packing code\_Version

TB1S\_R1\_00001

TB1S\_R2\_00001

For example :

**RB500V-40** **R2** **00001**



Packing Code <b>XX</b>				Version Code <b>XXXXX</b>		
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			



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