



E540886

Features

- Halogen Free. "Green" Device (Note 1)
- Glass Passivated Chip Junction
- High Forward Surge Capability
- Epoxy Meets UL 94 V-0 Flammability Rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant (Note 2)("P" Suffix Designates RoHS Compliant. See Ordering Information)

Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}	1000	V
Working Peak Reverse Voltage	V_{RWM}		
DC Blocking Voltage	V_R		
RMS Reverse Voltage	V_{RMS}	700	V
Average Rectified Forward Current @ $T_C=110^{\circ}\text{C}$	$I_{F(AV)}$	10	A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	I_{FSM}	250	A
Non-Repetitive Peak Surge Current @ 1ms Square Wave		500	
Current Squared Time @ $1\text{ms} \leq t \leq 8.3\text{ms}$	I^2t	260	A^2s

Internal Structure

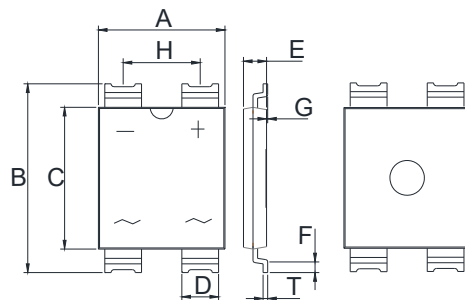
Simplified Outline	Graphic Symbol

Note: 1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.

2. High temperature solder exemption applied, see EU directive annex 7a.

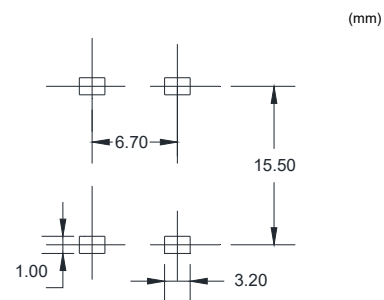
10 Amp Single Phase Bridge Rectifier 1000 Volts

TBN



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.421	0.445	10.70	11.30	
B	0.624	0.656	15.85	16.65	
C	0.461	0.484	11.70	12.30	
D	0.120	0.132	3.05	3.35	
E	0.071	0.087	1.80	2.20	
F	0.028	0.043	0.70	1.10	
G	-	0.008	-	0.20	
H	0.258	0.270	6.55	6.85	
T	0.014	0.022	0.35	0.55	

Suggested Solder Pad Layout



Thermal characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
T _J	Operating Junction Temperature Range		-55		150	°C
T _{stg}	Storage Temperature Range		-55		150	°C
Rth _(J-C)	Thermal Resistance from Junction to Case	Note 1		2		°C/W
Rth _(J-L)	Thermal Resistance from Junction to Lead	Note 1		10		°C/W
Rth _(J-A)	Thermal Resistance from Junction to Ambient	Note 1		50		°C/W

Note:
 1.Device mounted on P.C.B with 30mm*15mm*1.6mm.

Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	V _F	I _F =5A;T _J =25°C			1.0	V
Reverse Current	I _R	at Rated V _R ;T _J =25°C at Rated V _R ;T _J =125°C			5 100	μA
Junction Capacitance	C _J	V _R =4V;f=1MHz;T _J =25°C		85		pF

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

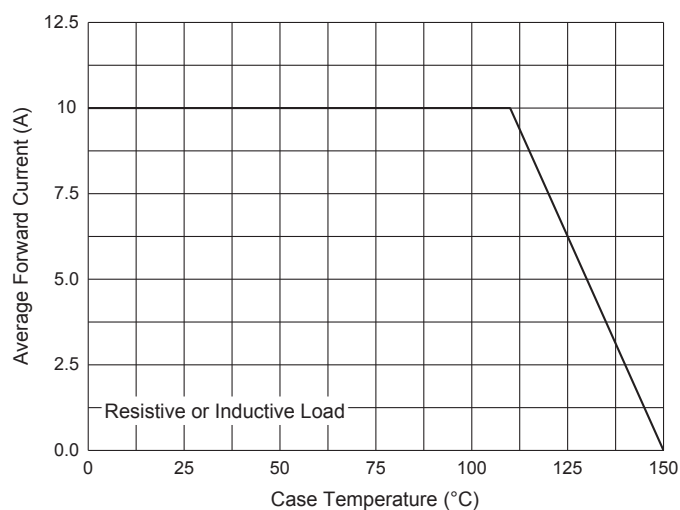


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

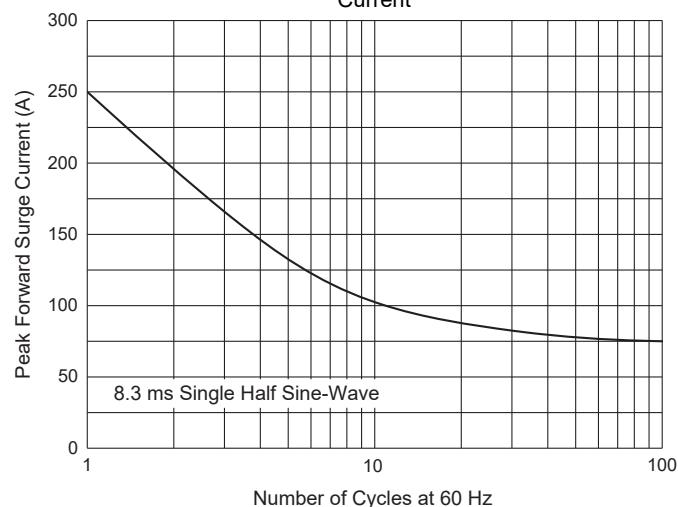


Fig. 3 - Typical Forward Characteristics

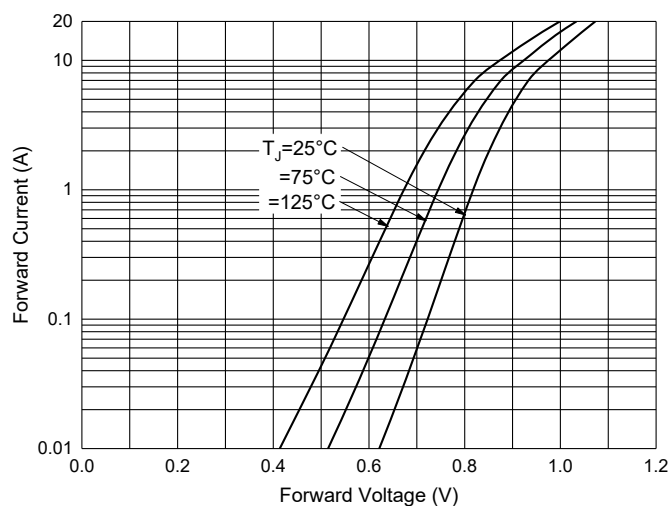


Fig. 4 - Typical Reverse Leakage Characteristics

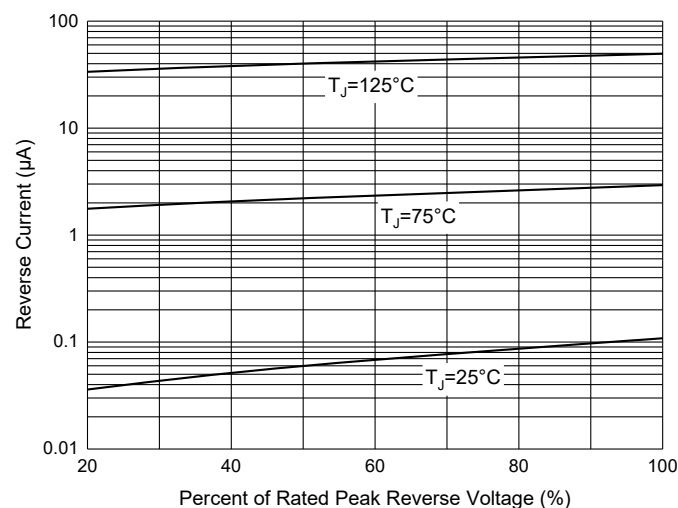
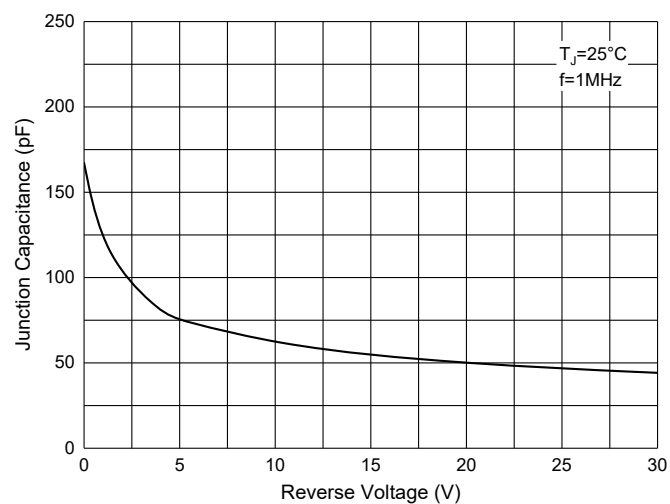


Fig. 5 - Typical Capacitance Characteristics



Ordering Information

Device	Packing
TBN1010-TP	Tape&Reel: 1.5 Kpcs/Reel

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