

	<b>E502650</b>
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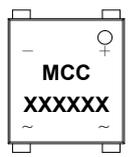
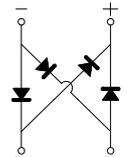
**Features**

- 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)**

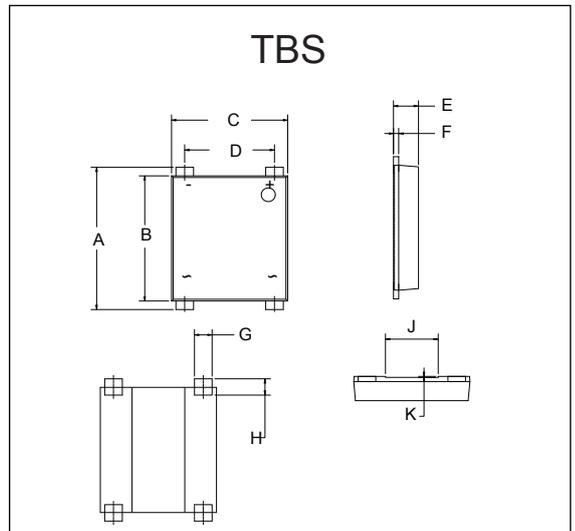
Parameter	Symbol	Value							Unit
		TBS 20A	TBS 20B	TBS 20D	TBS 20G	TBS 20J	TBS 20K	TBS 20M	
Peak Repetitive Reverse Voltage	$V_{RRM}$								V
Working Peak Reverse Voltage	$V_{RWM}$	50	100	200	400	600	800	1000	
DC Blocking Voltage	$V_R$								
RMS Reverse Voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Average Rectified Forward Current @ $T_C=110^\circ\text{C}$	$I_{F(AV)}$	2							A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	$I_{FSM}$	75							A
Non-Repetitive Peak Surge Current @ 1ms Square Wave		150							
Current Squared Time @ $1\text{ms} \leq t \leq 8.3\text{ms}$	$i^2t$	23							A <sup>2</sup> s

Part Number	Marking Code
TBS20A	TBS20A
TBS20B	TBS20B
TBS20D	TBS20D
TBS20G	TBS20G
TBS20J	TBS20J
TBS20K	TBS20K
TBS20M	TBS20M

Marking Diagram	Internal Structure
 <p>XXXX = Marking Code</p>	

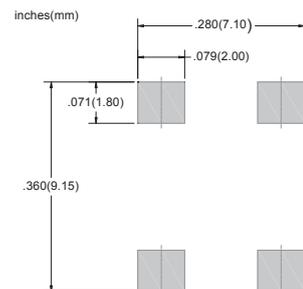
- Note:
1. Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
  2. High temperature solder exemption applied, see EU directive annex 7a.

# 2 Amp Single Phase Bridge Rectifier 50 to 1000 Volts



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.311	0.339	7.90	8.60	
B	0.283	0.291	7.20	7.40	
C	0.256	0.264	6.50	6.70	
D	0.197	0.205	5.00	5.20	
E	0.051	0.059	1.30	1.50	
F	0.011	0.016	0.27	0.40	
G	0.037	0.045	0.95	1.15	
H	0.028	0.041	0.70	1.05	
J	0.114	0.122	2.90	3.10	
K	0.0015	0.003	0.04	0.08	

**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
$R_{th(J-L)}$	Thermal Resistance from Junction to Case	Note 1		10		°C/W
$R_{th(J-A)}$	Thermal Resistance from Junction to Lead	Note 1		15		°C/W
$R_{th(J-A)}$	Thermal Resistance from Junction to Ambient	Note 1		55		°C/W

Note:

1. Device mounted on P.C.B with 35mm\*25mm\*1.7mm.

## Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	$V_F$	$I_F=1.0A; T_J=25^\circ C$			1.0	V
Reverse Current	$I_R$	at Rated $V_R; T_J=25^\circ C$ at Rated $V_R; T_J=125^\circ C$			5 100	uA
Junction Capacitance	$C_J$	$V_R=4V; f=1MHz; T_J=25^\circ C$		25		pF

## Curve Characteristics

Fig. 1 - Forward Current Derating Curve

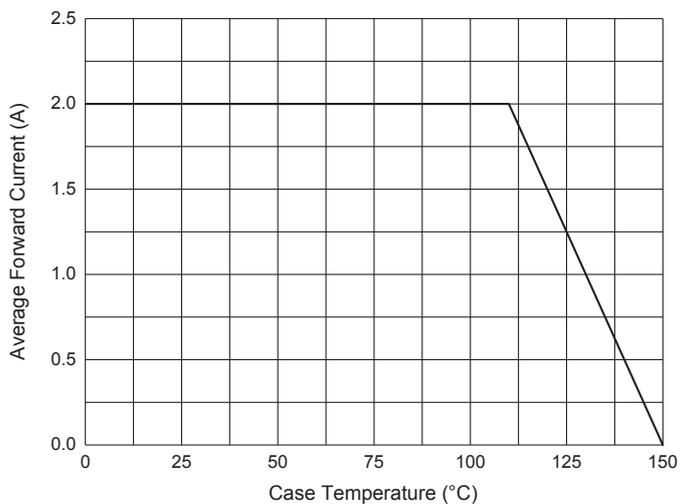


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

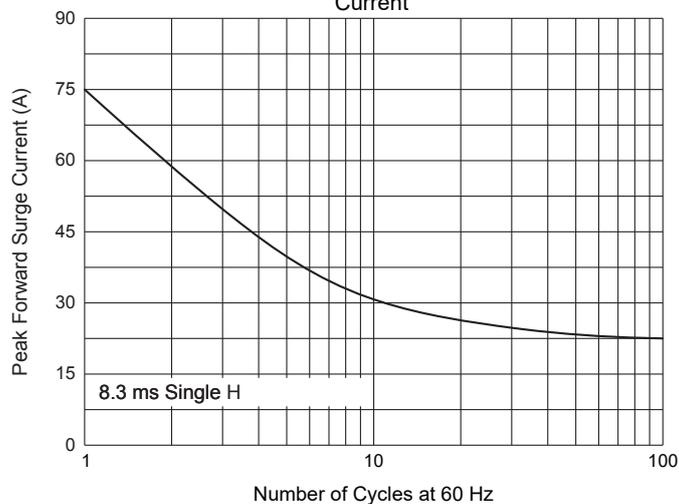


Fig. 3 - Typical Forward Characteristics

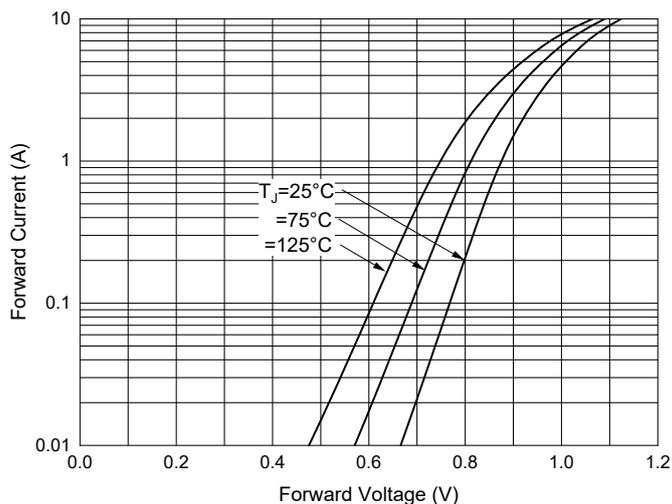


Fig. 4 - Typical Reverse Leakage Characteristics

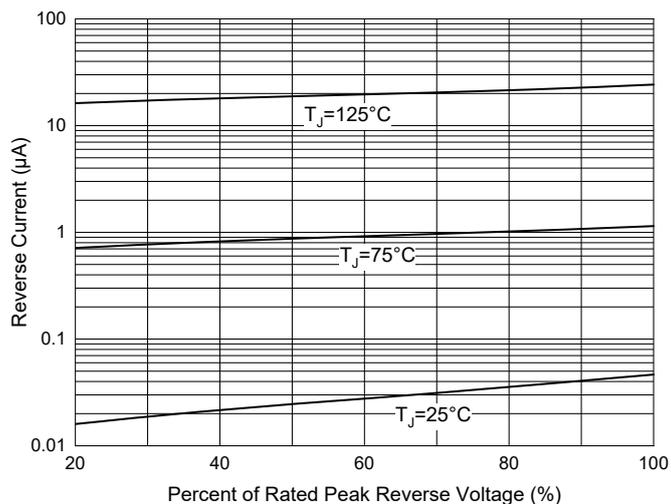
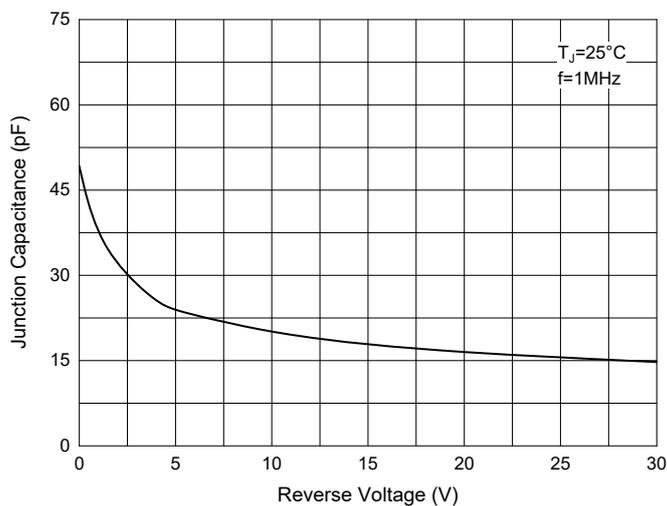


Fig. 5 - Typical Capacitance Characteristics



## Ordering Information

Device	Packing
Part Number-TP	Tape&Reel: 3Kpcs/Reel

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