

### Features

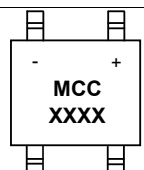
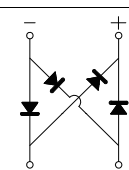
- Halogen Free. "Green" Device (Note 1)
- Glass Passivated Chip Junction
- Moisture Sensitivity Level 1
- Surface Mount Package
- High Temperature Soldering Guaranteed:260°C/10 Second
- Saves Space On Printed Circuit Board
- Epoxy Meets UL 94 V-0 Flammability Rating
- Lead Free Finish/RoHS Compliant (Note 2)("P" Suffix Designates RoHS Compliant. See Ordering Information)

### Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value						Unit
		MBL 1S	MBL 2S	MBL 4S	MBL 6S	MBL 8S	MBL 10S	
Peak Repetitive Reverse Voltage	$V_{RRM}$	100	200	400	600	800	1000	V
Working Peak Reverse Voltage	$V_{RWM}$							
DC Blocking Voltage	$V_R$							
RMS Reverse Voltage	$V_{RMS}$	70	140	280	420	560	700	V
Average Rectified Forward Current @ See Fig.1	$I_{F(AV)}$	0.5(Note 3) 0.8(Note 4)						A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	$I_{FSM}$	35						A
Non-Repetitive Peak Surge Current @ 1ms Square Wave		60						
Current Squared Time @ 1ms ≤ t ≤ 8.3ms	$i^2t$	5.1						A <sup>2</sup> s

### Marking Code

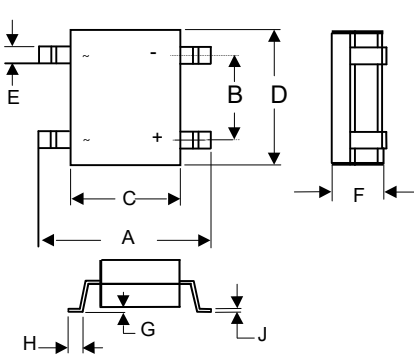
Part Number	Marking Code
MBL1S	BL1S
MBL2S	BL2S
MBL4S	BL4S
MBL6S	BL6S
MBL8S	BL8S
MBL10S	BL10S

Simplified Outline	Graphic Symbol
 <p>XXXX = Marking Code</p>	

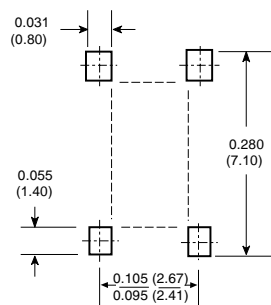
- Note:
- 1.Halogen free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
  - 2.High temperature solder exemption applied, see EU directive annex 7a.
  - 3.On glass epoxy P.C.B. mounted on 0.05 x 0.05"(1.3 x 1.3mm)pads
  - 4.On aluminum substrate P.C.B. with an area of 0.8" x 0.8"(20 x 20mm) mounted on 0.05 x 0.05"(1.3x 1.3mm) solder pad

## 0.5 Amp Single Phase Bridge Rectifier 100 to 1000 Volts

MBLS-1



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.252	0.283	6.40	7.20	
B	0.087	0.102	2.20	2.60	
C	0.142	0.193	3.60	4.90	
D	0.177	0.200	4.55	5.10	
E	0.022	0.033	0.55	0.84	
F	0.045	0.063	1.15	1.60	
G	0.000	0.008	0.00	0.20	
H	0.016	0.043	0.40	1.10	
J	0.004	0.016	0.10	0.35	



### Thermal characteristics

Symbol	Parameter	Conditions	Min	Typ	Max	Unit
T <sub>J</sub>	Operating Junction Temperature Range		-55		150	°C
T <sub>stg</sub>	Storage Temperature Range		-55		150	°C
R <sub>th(J-L)</sub>	Thermal Resistance from Junction to Lead	Note 1		20		°C/W
R <sub>th(J-A)</sub>	Thermal Resistance from Junction to Ambient	Note 1		85		°C/W

Note:

1. On glass epoxy P.C.B. mounted on 0.05 x 0.05" (1.3 x 1.3mm) pads.

### Electrical Characteristics @ 25°C Unless Otherwise Specified(Per Diode)

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =0.4A; T <sub>J</sub> =25°C			1.0	V
Reverse Current	I <sub>R</sub>	at Rated V <sub>R</sub> ; T <sub>J</sub> =25°C at Rated V <sub>R</sub> ; T <sub>J</sub> =125°C			5 100	μA
Junction Capacitance	C <sub>J</sub>	V <sub>R</sub> =4V; f=1MHz; T <sub>J</sub> =25°C		13		pF

## Curve Characteristics

Fig. 1 - Forward Current Derating Curve

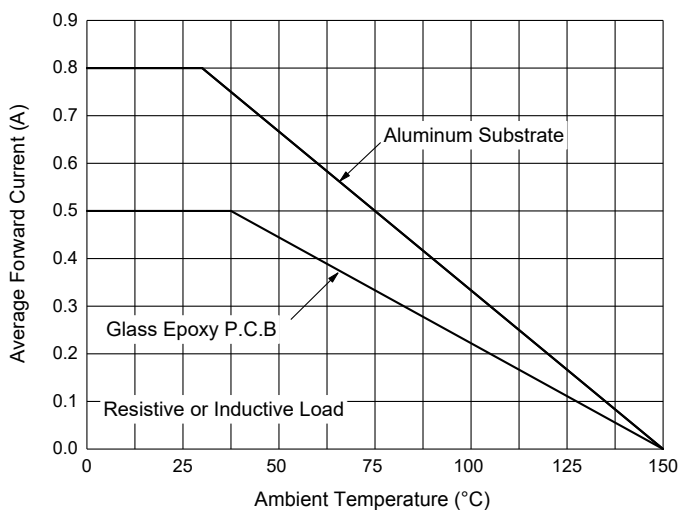


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

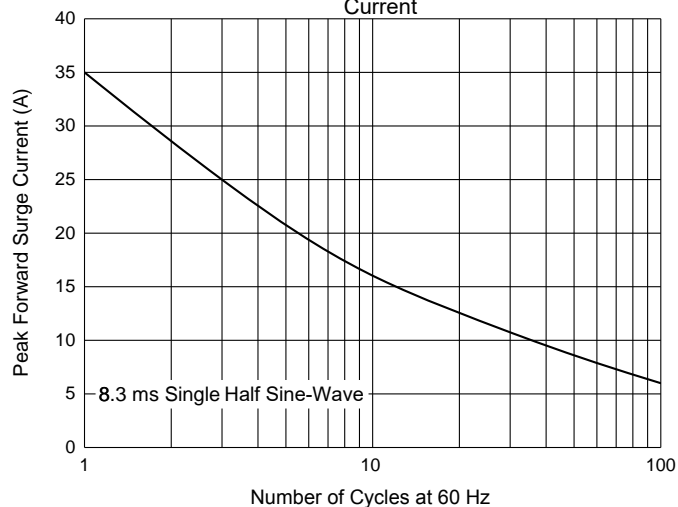


Fig. 3 - Typical Forward Characteristics

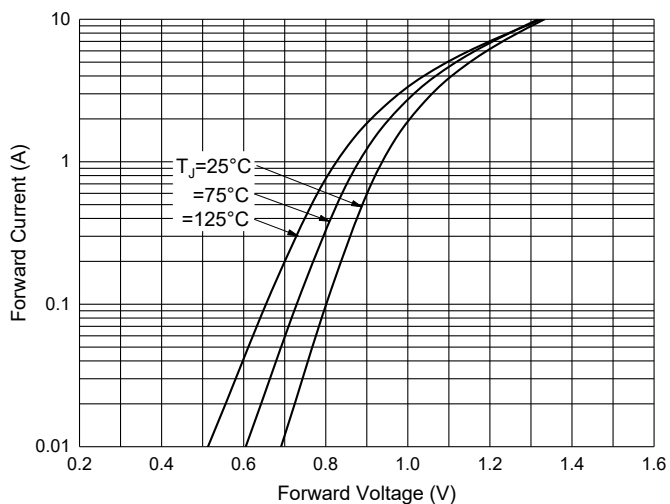


Fig. 4 - Typical Reverse Leakage Characteristics

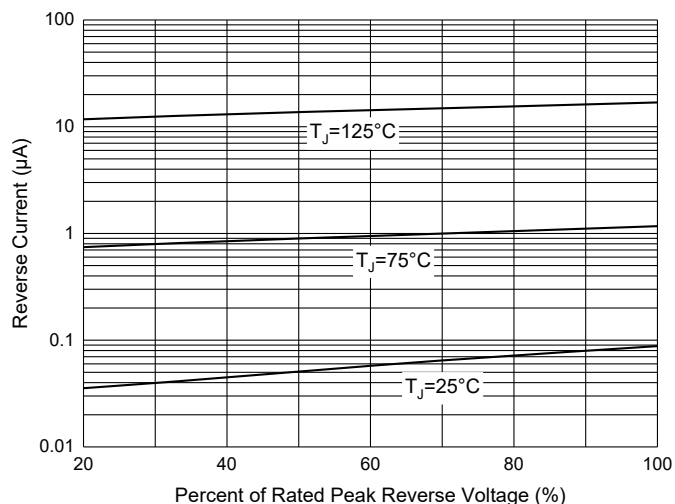
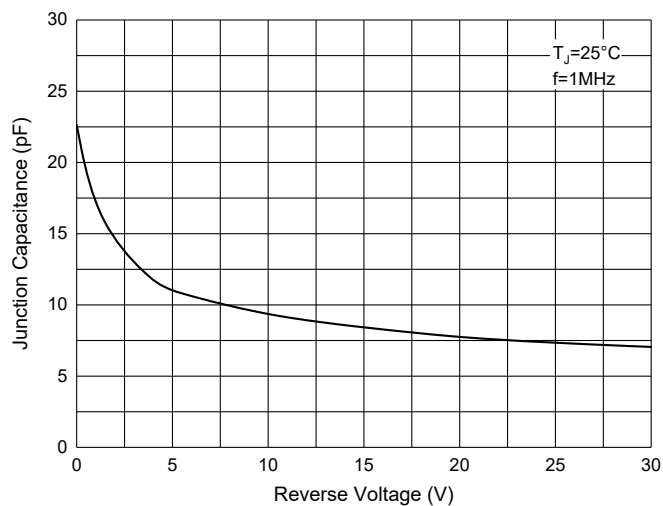


Fig. 5 - Typical Capacitance Characteristics



## Ordering Information

Device	Packing
Part Number-TP	Tape&Reel;4Kpcs/Reel

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