

Features

- Halogen Free Available Upon Request By Adding Suffix "-HF"
- 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 1) ("P" Suffix Designates RoHS Compliant. See Ordering Information)

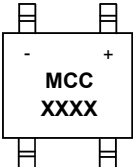
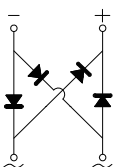
Maximum Ratings @ 25°C (Unless Otherwise Specified)

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 2) 0.8 ^(Note 3)						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 ² t	5.1						A ² s

Marking Code

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

Internal Structure

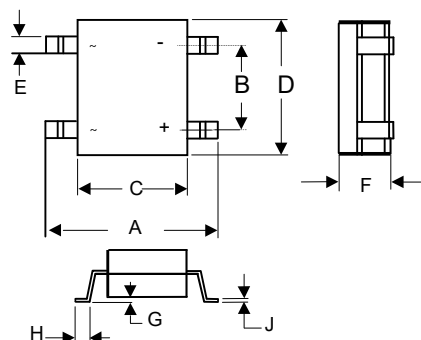
Simplified Outline	Graphic Symbol
 <p>XXXX = Marking Code</p>	

Note:

1. High temperature solder exemption applied, see EU directive annex 7a.
2. On glass epoxy P.C.B. mounted on 0.05 x 0.05" (1.3 x 1.3mm) pads
3. 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" (1.3 x 1.3mm) solder pad

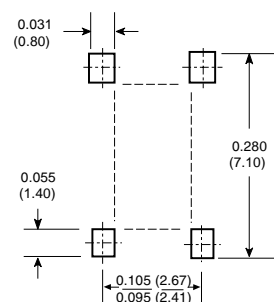
0.5 Amp Single Phase Bridge Rectifier 100 to 1000 Volts

MBLS-1



DIMENSIONS

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_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 Lead	Note 1		20		°C/W
$R_{th(J-A)}$	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_F	$I_F=0.4A; T_J=25^{\circ}C$			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	μA
Junction Capacitance	C_J	$V_R=4V; f=1MHz; T_J=25^{\circ}C$		13		pF

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

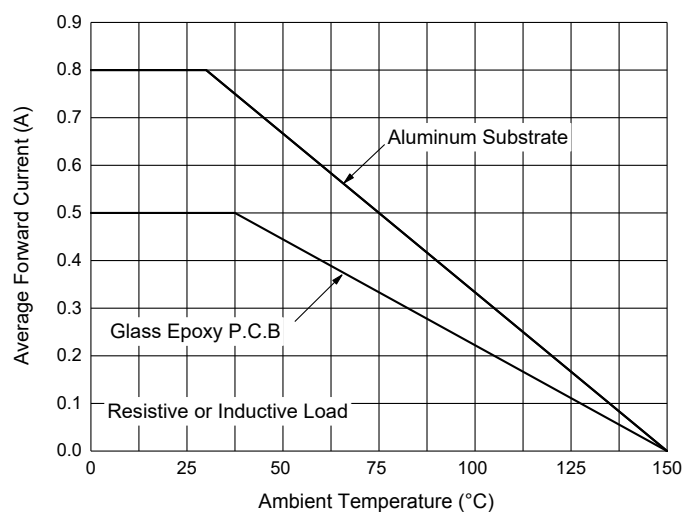


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

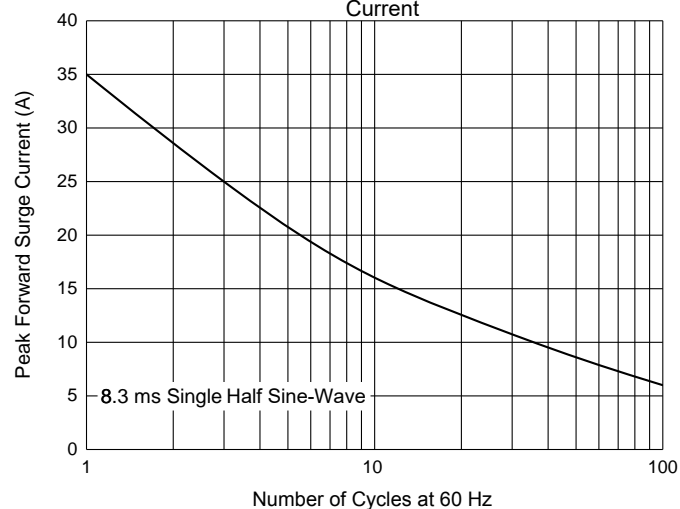


Fig. 3 - Typical Forward Characteristics

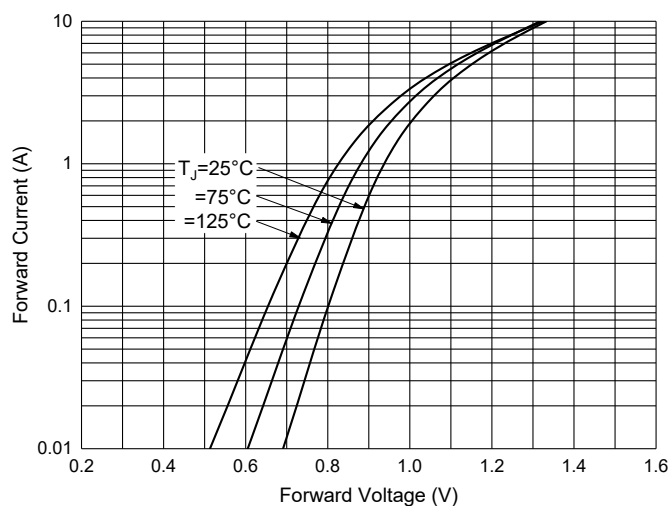


Fig. 4 - Typical Reverse Leakage Characteristics

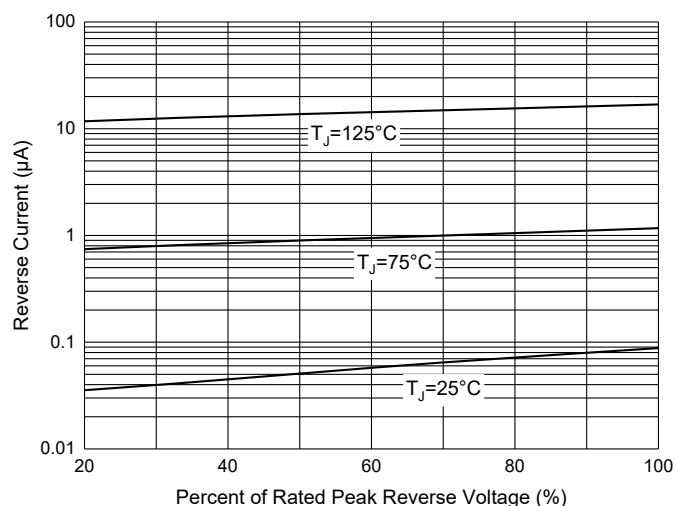
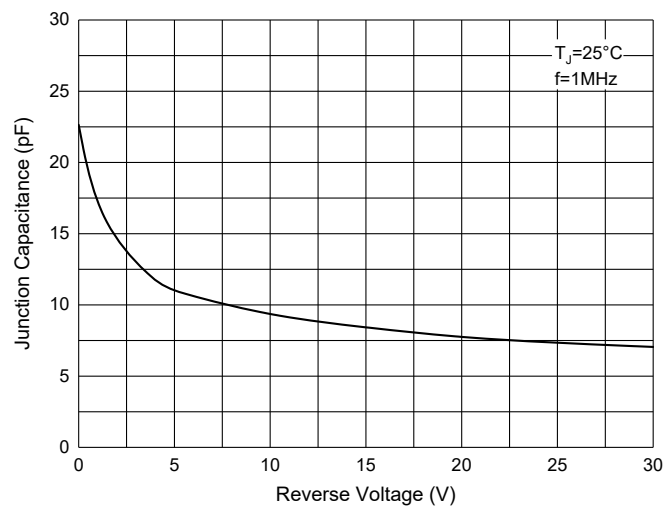


Fig. 5 - Typical Capacitance Characteristics



Ordering Information

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

Note : Adding "-HF" Suffix For Halogen Free, eg. Part Number-TP-HF

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