



### E502650

#### **Features**

- Halogen Free. "Green" Device (Note 1)
- Glass Passivated Chip Junction
- · High Surge Forward Current Capability
- 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	
Peak Repetitive Reverse Voltage	V <sub>RRM</sub>			
Working Peak Reverse Voltage	$V_{RWM}$	1000	٧	
DC Blocking Voltage	$V_R$			
RMS Reverse Voltage	$V_{RMS}$	700	>	
Average Rectified Forward Current @ T <sub>C</sub> =130°C (With Heatsink)		4	A	
Average Rectified Forward Current @ T <sub>a</sub> =25°C (Without Heatsink)	I <sub>F(AV)</sub>	2	A	
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave		135	٨	
Non-Repetitive Peak Surge Current @ 1ms Square Wave	I <sub>FSM</sub>	270	Α	
I²t Rating for Fusing @1ms≤t≤8.3ms	I <sup>2</sup> t	75.6	A <sup>2</sup> s	
Dielectric strength @Terminals to Case, AC 1 Minute	V <sub>dis</sub>	2.0	KV	

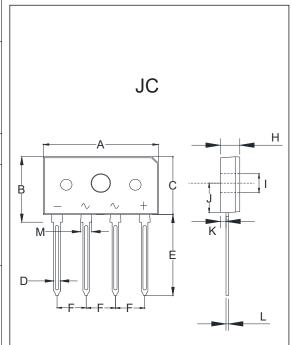
### **Internal Structure**

Simplified Outline	Graphic Symbol		
MCC GBUA4M 🔊			

#### 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.

# 4 Amp Bridge Rectifiers 1000 Volts



DIMENSIONS						
DIM	INCHES		MM		NOTE	
DIIVI	MIN	MAX	MIN	MAX	NOIL	
Α	0.772	0.803	19.60	20.40		
В	0.453	0.484	11.50	12.30		
С	0.398	0.429	10.10	10.90		
D	0.039	0.051	1.00	1.30		
E	0.559	0.591	14.20	15.00		
F	0.192	0.208	4.88	5.28		
Н	0.122	0.146	3.10	3.70		
I	0.116	0.132	2.95	3.35		
J	0.209	0.232	5.30	5.90		
K	0.028	0.051	0.70	1.30		
L	0.012	0.024	0.30	0.60		
М	0.067	0.083	1.70	2.10		



# Thermal characteristics

Symbol	Parameter	Conditions	Min	Тур	Max	Unit
T <sub>J</sub>	Operating Junction Temperature Range		-55		150	°C
T <sub>stg</sub>	Storage Temperature Range		-55		150	°C
Rth <sub>(J-C)</sub>	Thermal Resistance from Junction to Case	Note 1		2.2		°C/W
Rth <sub>(J-A)</sub>	Thermal Resistance from Junction to Ambient	Without Heatsink		30		°C/W

Note:

# **Mechanical Data**

Recommended Mounting Torque: 0.5 N•m

# Electrical Characteristics @ 25°C Unless Otherwise Specified

Parameter	Symbol	Test Conditions	Min	Тур	Max	Unit
Forward Voltage	V <sub>F</sub>	I <sub>F</sub> =2A;T <sub>J</sub> =25°C			1.0	V
Reverse Current	I <sub>R</sub>	at Rated $V_R;T_J$ =25°C at Rated $V_R;T_J$ =125°C			5 100	uA
Junction Capacitance	СЈ	V <sub>R</sub> =4V;f=1MHz;T <sub>J</sub> =25°C		40		pF

<sup>1.</sup>Device mounted on 75mm x 45mm x 5.5mm aluminum plate heatsink.



### **Curve Characteristics**

Fig. 1 - Forward Current Derating Curve 5 Average Forward Current (A) Tc-sensing point With Heatsink 0 ′0 Without Heatsink 0 0 25 50 75 100 125 150 Case Temperature (°C)

Fig. 3 - Typical Forward Characteristics

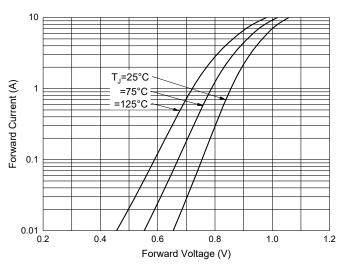


Fig. 5 - Typical Capacitance Characteristics

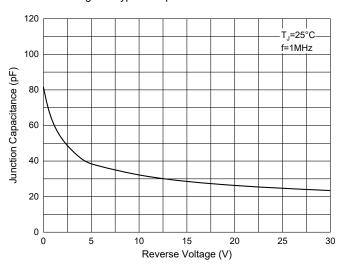


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge

Current

180

(4)

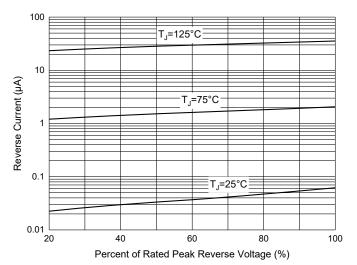
135

90

8.3 ms Single Half Sine-Wave

Number of Cycles at 60 Hz

Fig. 4 - Typical Reverse Leakage Characteristics





### **Ordering Information**

Device	Packing
Part Number-BP	Bulk:25pcs/Tube,625pcs/Box,5000pcs/Carton

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