



E502650

## Features

- Halogen Free. "Green" Device (Note 1)
- Glass Passivated Chip Junction
- Fast Reverse Recovery Time
- 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)

# 8 Amp Fast Recovery Bridge Rectifiers 1000 Volts

## 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 @ $T_C=120^\circ\text{C}$	$I_{F(AV)}$	8	A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	$I_{FSM}$	160	A
Non-Repetitive Peak Surge Current @ 1ms Square Wave		320	
$I^2t$ Rating for Fusing @ $1\text{ms} \leq t \leq 8.3\text{ms}$	$I^2t$	106	$\text{A}^2\text{s}$
Dielectric strength @ Terminals to Case, AC 1 Minute	$V_{dis}$	2	KV

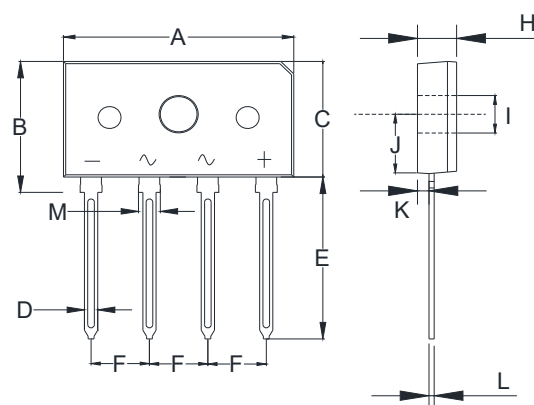
## Internal Structure

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.

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DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.772	0.803	19.60	20.40	
B	0.453	0.484	11.50	12.30	
C	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	
H	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	
M	0.067	0.083	1.70	2.10	

### 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
Rth(J-C)	Thermal Resistance from Junction to Case	Note 1		1.5		°C/W
Rth(J-A)	Thermal Resistance from Junction to Ambient	Without Heatsink		35		°C/W

Note:  
 1.Device mounted on 75mm x 45mm x 5.5mm Aluminum Plate Heatsink.

### Mechanical Data

Recommended Mounting Torque: 5 in-lbs

### 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> =4A;T <sub>J</sub> =25°C		1.05	1.3	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			5 200	μA
Junction Capacitance	C <sub>J</sub>	V <sub>R</sub> =4V;f=1MHz;T <sub>J</sub> =25°C		47		pF
Reverse Recovery Time	t <sub>rr</sub>	I <sub>F</sub> =0.5A; I <sub>R</sub> =1.0A; I <sub>RR</sub> =0.25A;T <sub>J</sub> =25°C			500	nS

## Curve Characteristics

Fig. 1 - Forward Current Derating Curve

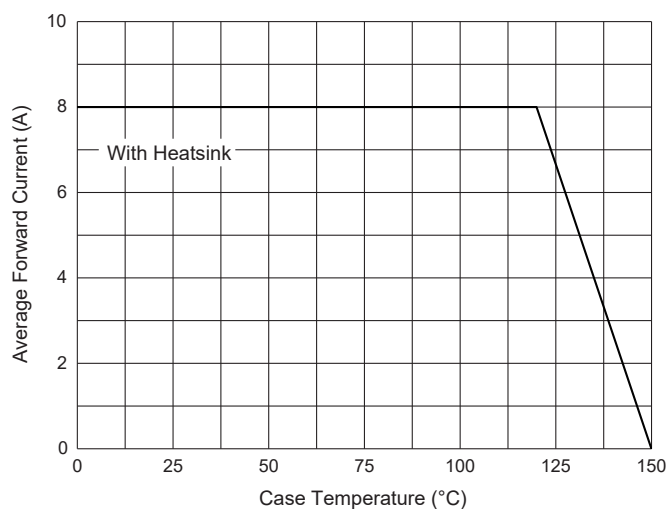


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

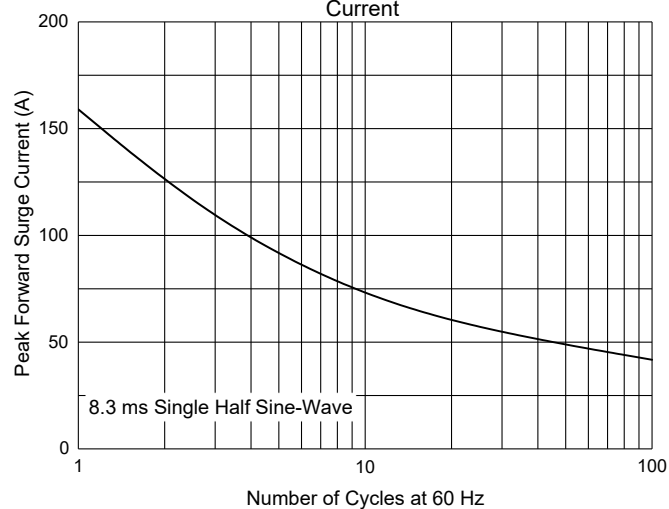


Fig. 3 - Typical Forward Characteristics

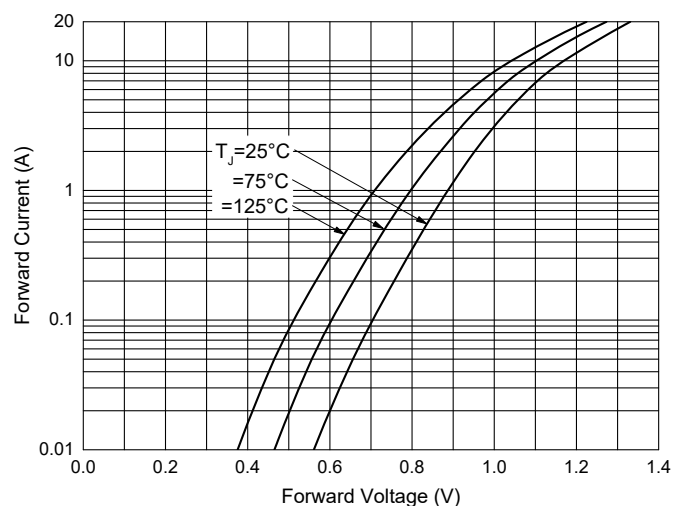


Fig. 4 - Typical Reverse Leakage Characteristics

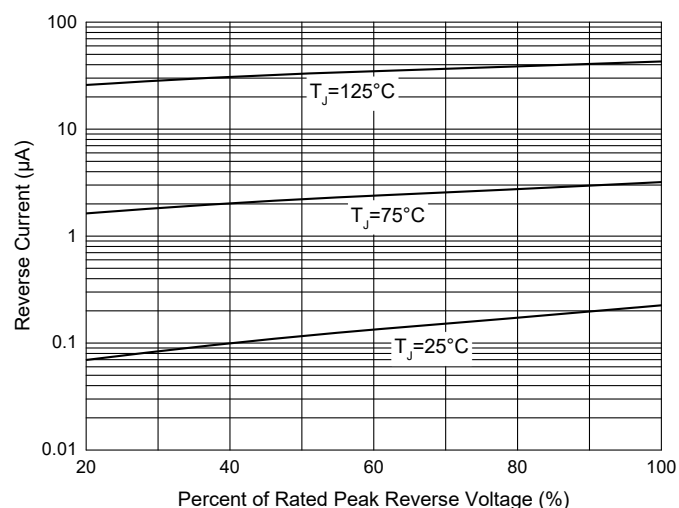
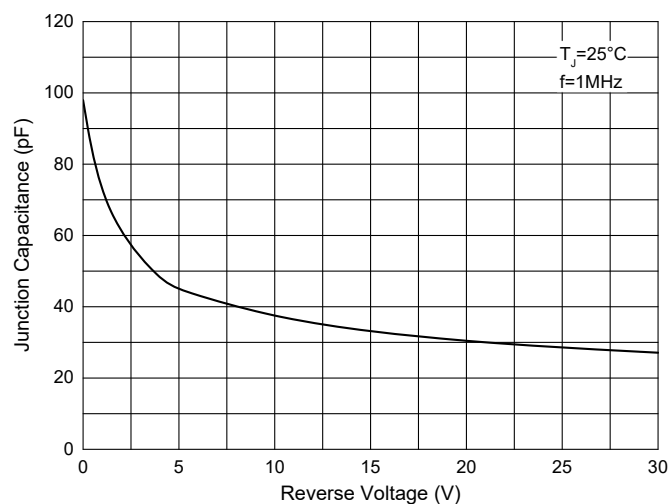


Fig. 5 - Typical Capacitance Characteristics



## Ordering Information

Device	Packing
RGBUA8M-BP	Bulk:25pcs/Tube,625pcs/Box,5000pcs/Carton

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