	E502650

20 Amp Bridge Rectifier 50 to 1000 Volts

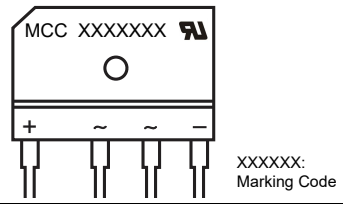
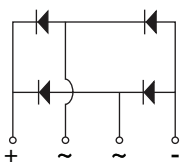
Features

- 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)

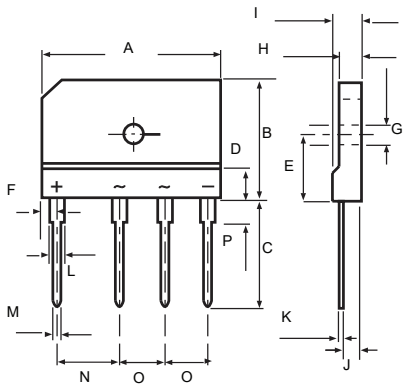
Maximum Ratings @ 25°C (Unless Otherwise Specified)

Parameter	Symbol	Value							Unit
		GBJ 20005	GBJ 2001	GBJ 2002	GBJ 2004	GBJ 2006	GBJ 2008	GBJ 2010	
Peak Repetitive Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Working Peak Reverse Voltage	V_{RWM}								
DC Blocking Voltage	V_R								
RMS Reverse Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Average Rectified Forward Current	$I_{F(AV)}$	20 (T_C=110°C,With Heatsink) 4.0 (T_A=25°C,Without Heatsink)							A
Non-Repetitive Peak Surge Current @ 8.3ms Half Sine Wave	I_{FSM}	240							A
Non-Repetitive Peak Surge Current @ 1ms Square Wave		480							
I^2t Rating for Fusing @1ms≤t≤8.3ms	I^2t	240							A^2s
Dielectric strength @Terminals to Case, AC 1 Minute	V_{dis}	2.5							KV

Part Number	Marking Code
GBJ20005	GBJ20005
GBJ2001	GBJ2001
GBJ2002	GBJ2002
GBJ2004	GBJ2004
GBJ2006	GBJ2006
GBJ2008	GBJ2008
GBJ2010	GBJ2010

Marking Diagram	Internal Structure
	

GBJ



DIMENSIONS					
DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	1.170	1.190	29.70	30.30	
B	0.780	0.800	19.70	20.30	
C	0.670	0.710	17.00	18.00	
D	0.190	0.190	4.70	4.90	
E	0.430	0.440	10.80	11.20	
F	0.090	0.110	2.30	2.70	
G	0.120	0.130	3.10	3.40	
H	0.130	0.150	3.40	3.80	
I	0.170	0.190	4.40	4.80	
J	0.100	0.110	2.50	2.90	
K	0.020	0.030	0.60	0.80	
L	0.080	0.090	2.00	2.40	
M	0.040	0.040	0.90	1.10	
N	0.390	0.400	9.80	10.20	
O	0.290	0.300	7.30	7.70	
P	0.150	0.170	3.80	4.20	

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.

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
$Rth_{(J-C)}$	Thermal Resistance from Junction to Case	Note 1		1		°C/W
$Rth_{(J-A)}$	Thermal Resistance from Junction to Ambient	Without Heatsink		20		°C/W

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

Mechanical Data

Recommended Mounting Torque: 5in·lbs

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

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Forward Voltage	V_F	I_F=10A;T_J=25°C			1.0	V
Reverse Current	I_R	at Rated V_R;T_J=25°C at Rated V_R;T_J=125°C			5 200	uA
Junction Capacitance	C_J	V_R=4V;f=1MHz;T_J=25°C		115		pF

Curve Characteristics

Fig. 1 - Forward Current Derating Curve

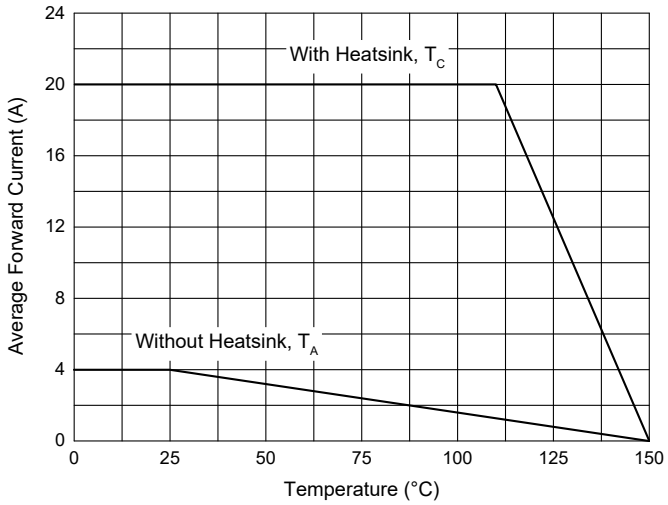


Fig. 2 - Maximum Non-Repetitive Peak Forward Surge Current

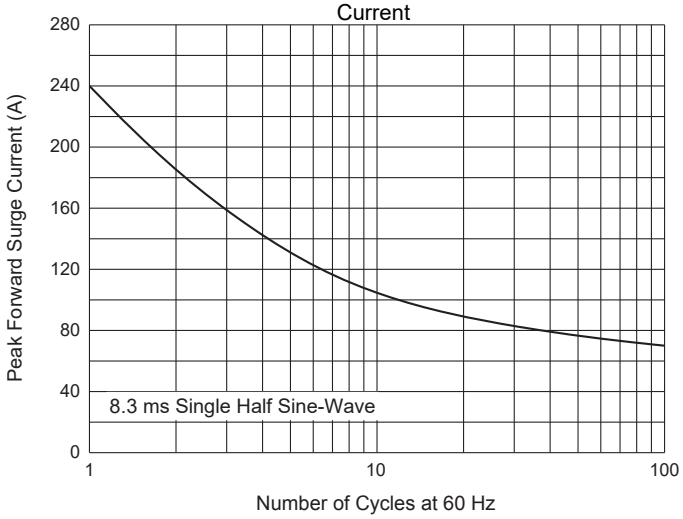


Fig. 3 - Typical Forward Characteristics

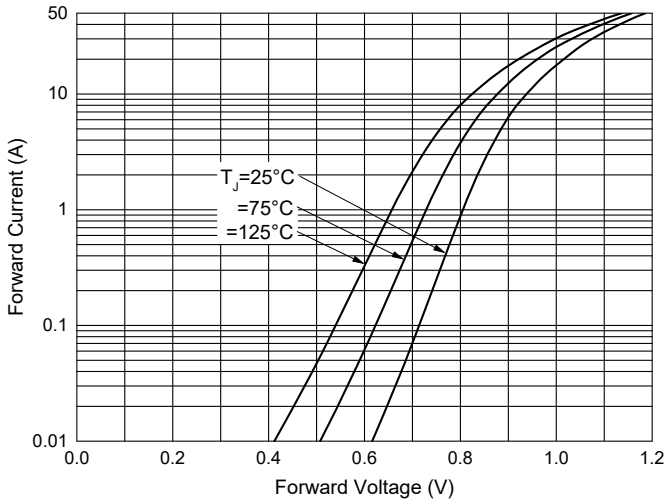


Fig. 4 - Typical Reverse Leakage Characteristics

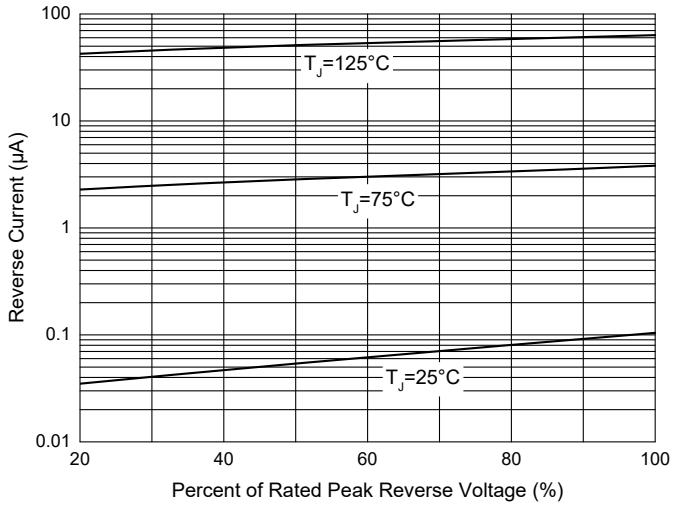
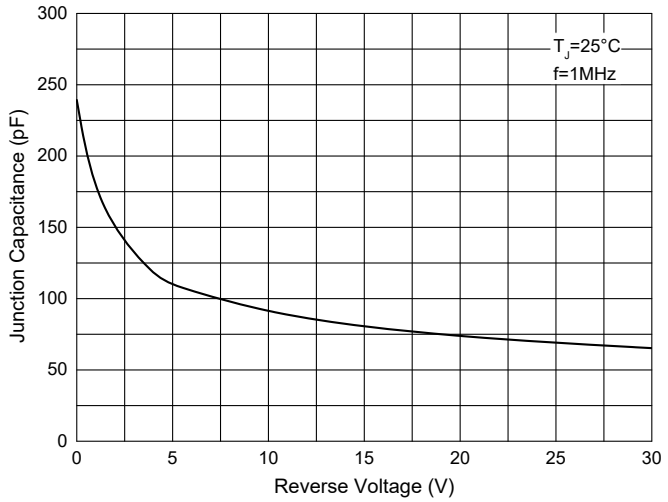


Fig. 5 - Typical Capacitance Characteristics



Ordering Information

Device	Packing
Part Number-BP	Bulk:15pcs/Tube,750pcs/Box,1500pcs/Carton