



Micro Commercial Components



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GBL4005 THRU GBL410

4.0 Amp Glass Passivated Single-Phase Rectifiers 50 to 1000 Volts

Features

- Marking : type number
- High case dielectric strength
- Glass passivated chip junction
- High surge current capability
- Epoxy meets UL 94 V-0 flammability rating
- Moisture Sensitivity Level 1
- Lead Free Finish/RoHS Compliant (NOTE 3) ("P" Suffix designates RoHS Compliant. See ordering information)
- Halogen free available upon request by adding suffix "-HF"

Maximum Ratings

- Operating Temperature: -55°C to $+150^{\circ}\text{C}$
- Storage Temperature: -55°C to $+150^{\circ}\text{C}$
- UL Recognized File # E165989

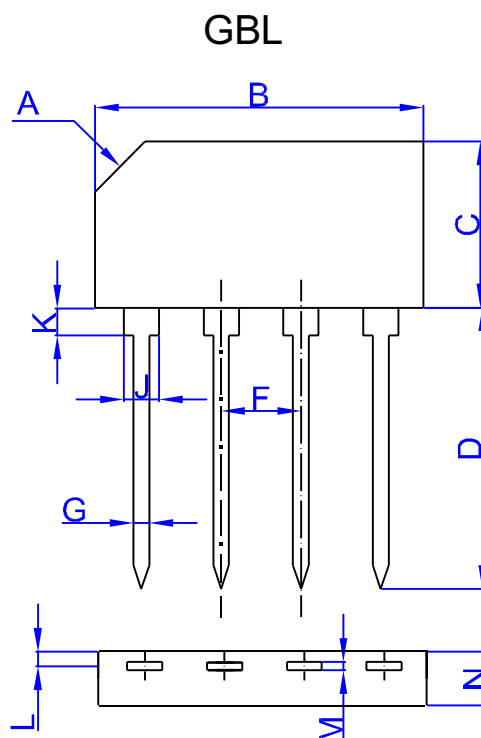
MCC Part Number	Maximum Recurrent Peak Reverse Voltage	Maximum RMS Voltage	Maximum DC Blocking Voltage
GBL4005	50V	35V	50V
GBL401	100V	70V	100V
GBL402	200V	140V	200V
GBL404	400V	280V	400V
GBL406	600V	420V	600V
GBL408	800V	560V	800V
GBL410	1000V	700V	1000V

Electrical Characteristics @ 25°C Unless Otherwise Specified

Maximum Average Forward Current	$I_{F(AV)}$	4.0 A 3.0A	$T_C = 50^{\circ}\text{C}^{(1)}$ $T_A = 40^{\circ}\text{C}^{(2)}$
Peak Forward Surge Current	I_{FSM}	150A	8.3ms, half sine
Rating for fusing	I^2t	$93\text{A}^2\text{sec}$	$t < 8.3\text{ms}$
Maximum Instantaneous Forward Voltage	V_F	1.0V	$I_{FM} = 2.0\text{A};$ $T_A = 25^{\circ}\text{C}$
Maximum DC Reverse Current At Rated DC Blocking Voltage	I_R	5.0uA 500uA	$T_A = 25^{\circ}\text{C}$ $T_A = 125^{\circ}\text{C}$
Typical Junction Capacitance GBL4005-404 GBL406-410	C_J	95pF 40pF	Measured at 1.0MHz, $V_R = 4.0\text{V}$
Typical thermal resistance per leg	$R_{\theta JA}$ $R_{\theta JL}$	22°C/W 3.5°C/W	

Note:

1. Unit mounted on 3.0x3.0x0.11" thick (7.5x7.5x0.3cm) Al. plate
2. Unit mounted on P.C.B. at 0.375" (9.5mm) lead length and 0.5x0.5" (12x12mm) copper pads
3. High Temperature Solder Exemption Applied, see EU Directive Annex Notes 7



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.125	0.125	3.17	3.17	X 45°
B	.768	.823	19.5	20.9	
C	.411	.453	10.4	11.5	
D	.682	.740	17.3	18.8	
F	.189	.209	4.80	5.30	
G	.035	.050	0.90	1.27	
J	.063	.098	1.60	2.50	
K	.060	.106	1.05	2.70	
L	.030	.031	0.76	1.20	
M	.016	.026	0.40	0.66	
N	.128	.146	3.25	3.70	

GBL4005 thru GBL410

Fig. 1 – Derating Curves Output Rectified Current

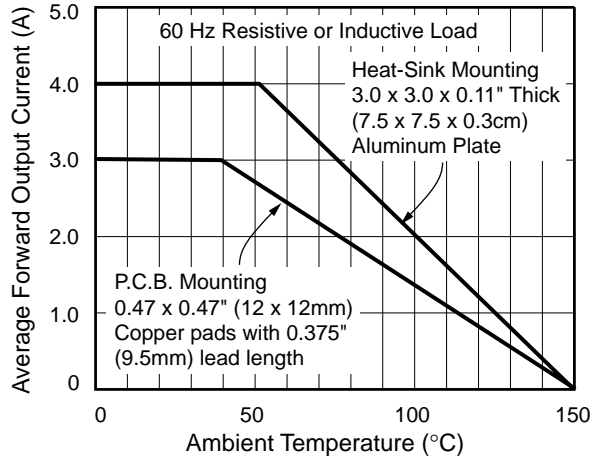


Fig. 2 – Maximum Non-Repetitive Peak Forward Surge Current Per Leg

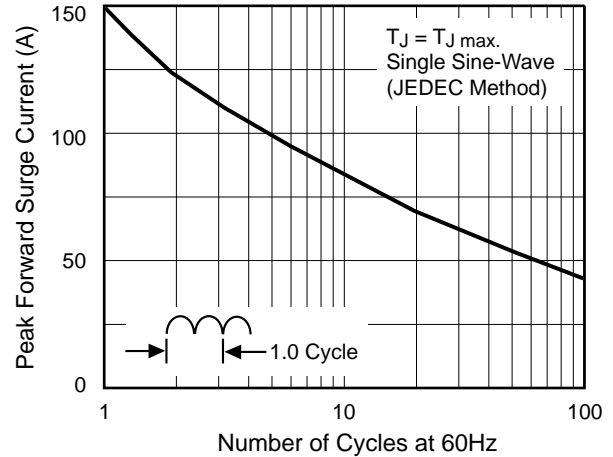


Fig. 3 – Typical Forward Voltage Characteristics Per Leg

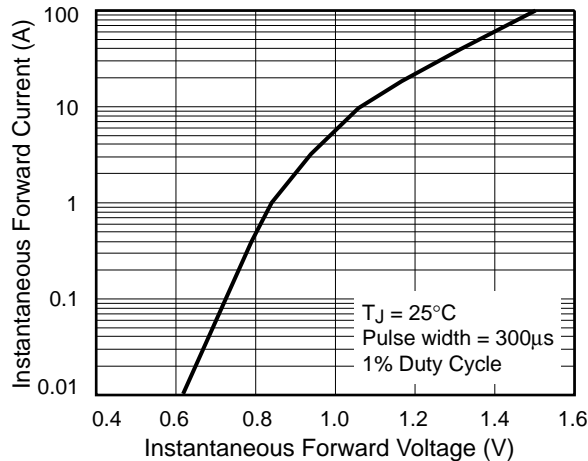


Fig. 4 – Typical Reverse Leakage Characteristics Per Leg

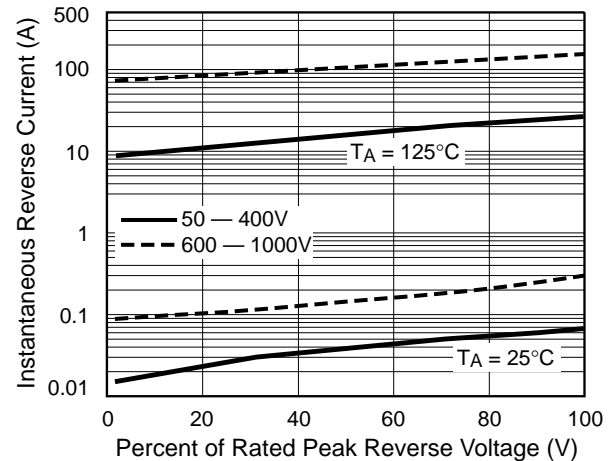


Fig. 5 – Typical Junction Capacitance Per Leg

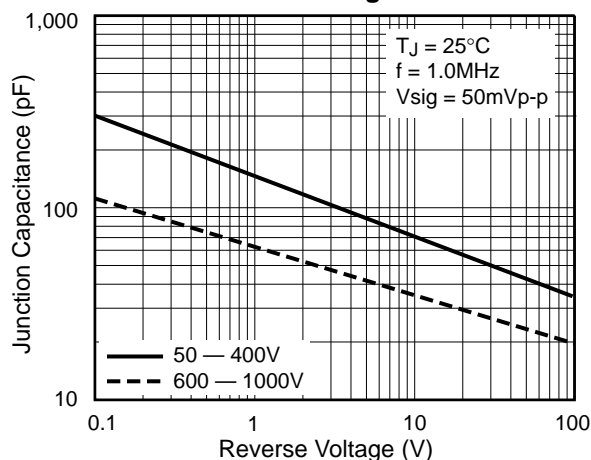
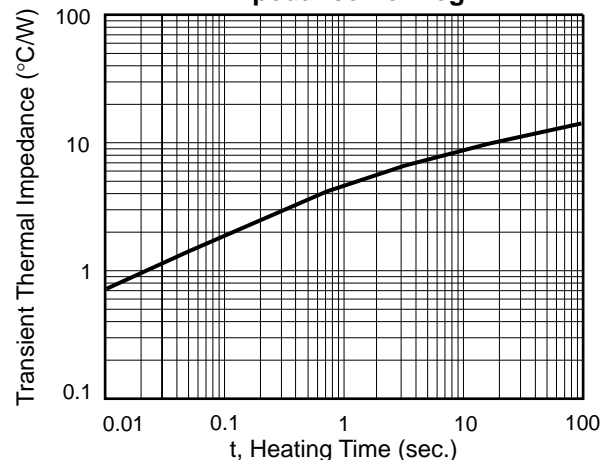


Fig. 6 – Typical Transient Thermal Impedance Per Leg



Ordering Information :

Device	Packing
Part Number-BP	Bulk: 4 Kpcs/Carton

Note : Adding "-HF" suffix for halogen free, eg. Part Number-TP-HF

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