America Semiconductor

GBL005 thru GBL04

V_{RRM} = 50 V - 1000 V

I_F =4 A

Silicon Bridge Rectifier

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Types up to 1000 V V_{RRM}
- Ideal for printed circuit board
- High surge current capability
- High temperature soldering guaranteed: 250°C/ 10 seconds, 0.375(9.5mm) lead length
- Glass passivated chip junction
- High case dielectric strength

GBL Package

Mechanical Data

Case: Molded plastic body over passivated junctions

Weight: 0.071 oz, 2 g

Mounting position: Any

Terminals: Plated leads, solderable per MIL-STD-750 Method 2026 guaranteed

Maximum ratings, at T_j = 25 °C, unless otherwise specified

Parameter	Symbol	Conditions	GBL005	GBL01	GBL02	GBL04	Unit
Repetitive peak reverse voltage	V_{RRM}		50	100	200	400	V
RMS reverse voltage	V_{RMS}		35	70	140	280	V
DC blocking voltage	V_{DC}		50	100	200	400	V
Continuous forward current	I_F	$T_C \leq 25$ °C	4	4	4	4	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	T_C = 25 °C, t_p = 8.3 ms	150	150	150	150	A
Operating temperature	T_j		-55 to 150	-55 to 150	-55 to 150	-55 to 150	°C
Storage temperature	T_{stg}		-55 to 150	-55 to 150	-55 to 150	-55 to 150	°C

Electrical characteristics, at Tj = 25 °C, unless otherwise specified

Parameter	Symbol	Conditions	GBL005	GBL01	GBL02	GBL04	Unit
Diode forward voltage	V_F	I_F = 4 A, T_j = 25 °C	1.1	1.1	1.1	1.1	V
Reverse current	I_R	V_R = 50 V, T_j = 25 °C	5	5	5	5	μA
		V_R = 50 V, T_j = 125 °C	500	500	500	500	
Thermal characteristics							
Thermal resistance, junction - case	R_{thJA}		22.0	22.0	22.0	22.0	°C/W
	R_{thJL}		3.5	3.5	3.5	3.5	

FIG.1-DERATIVE CURVE FOR OUTPUT RECTIFIER CURRENT

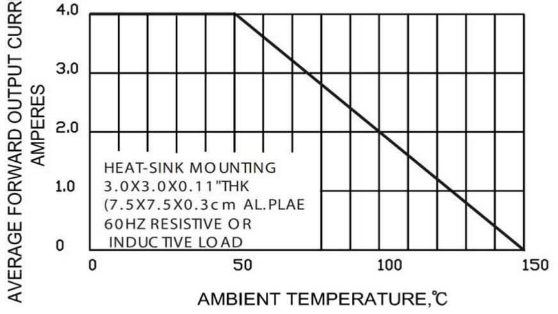

FIG. 2 - MAXIMUN NON-REPETITIVE PEAK FORWARD SURGE CURRENT PER LEG

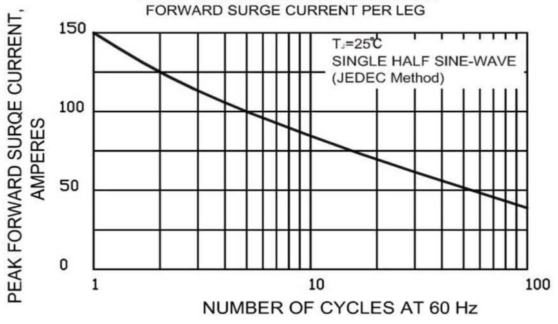

FIG.3-TYPICAL FORWARD CHARACTERISTICS PER LEG

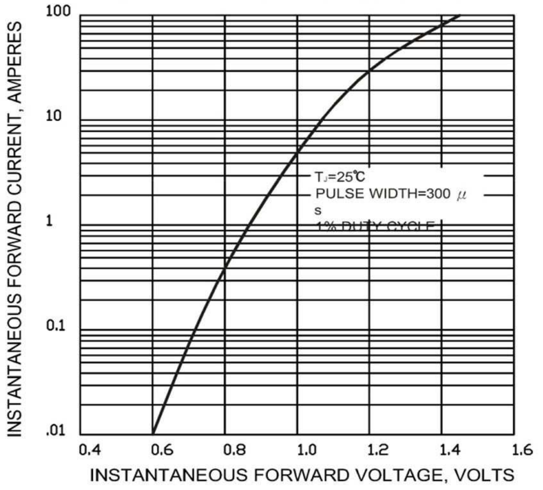

FIG.4-TYPICAL REVERSE CHARACTERISTICS PER LEG

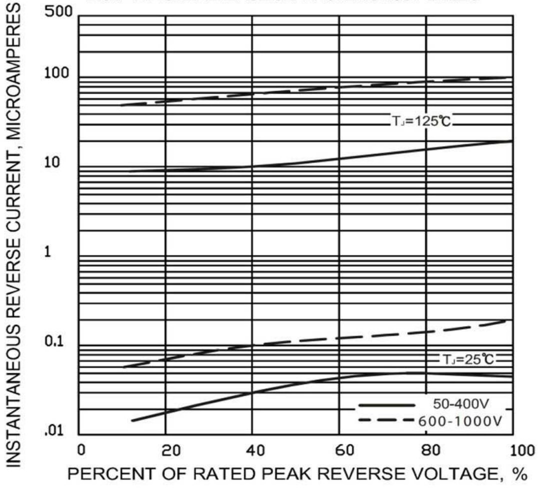

FIG.5-TYPICAL JUNTION CAPACITANCE PER LEG

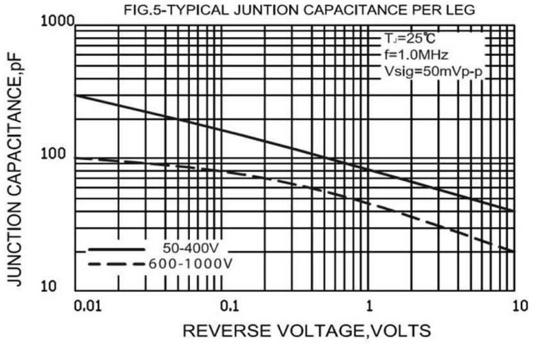

FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE