

GBU1006P

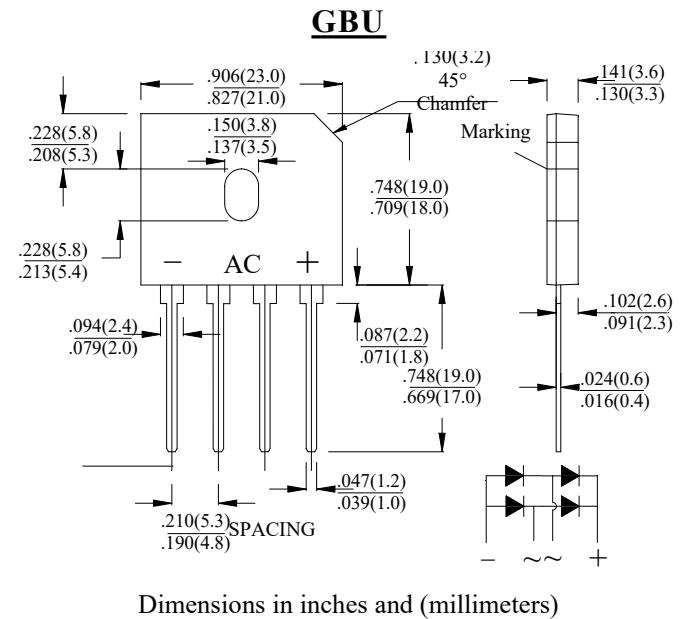
SINGLE PHASE 10.0AMPS.LOW VF BRIDGE RECTIFIERS

FEATURE

- . Low forward drop enhance the efficiency
- . High case dielectric strength
- . Low Reverse Leakage Current
- . High surge current capability
- . Ideal for Printed Circuit Board Applications

MECHANICAL DATA

- . Case: GBU
- . Case Material: Molded Plastic.
UL Flammability Classification Rating 94V-0
- . Terminals: Pure tin plated, Lead free.
Leads solderable per MIL-STD-750, Method 2026.
- . Polarity: Molded on Body
- . Mounting: Through Hole for #6 Screw
- . Mounting Torque: 5.0 in-lbs Maximum
- . Weight: 3.8 grams



MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

Single phase, half wave, 60Hz, resistive or inductive load. For capacitive load, derate current by 20%

Type Number	SYM BOL	GBU1006P		units
Maximum Recurrent Peak Reverse Voltage	V_{RRM}	600		V
Maximum RMS Voltage	V_{RMS}	420		V
Maximum DC blocking Voltage	V_{DC}	600		V
Maximum Average Forward (with heatsink Note2) Rectified Current @ $T_C=100^\circ\text{C}$ (without heatsink)	$I_{F(AV)}$	10.0 2.8		A
Peak Forward Surge Current @ $T_J=25^\circ\text{C}$ 8.3ms single half sine-wave @ $T_J=125^\circ\text{C}$	I_{FSM}	200 170		A
Peak Forward Surge Current @ $T_J=25^\circ\text{C}$ 1.0ms single half sine-wave @ $T_J=125^\circ\text{C}$	I_{FSM}	400 340		A
Maximum Forward Voltage @10.0A DC Drop per element @ 5.0A DC	V_F	Typ 0.90 Typ 0.83	Max 0.95 Max 0.88	V
Maximum DC Reverse Current @ $T_J=25^\circ\text{C}$ at rated DC blocking voltage @ $T_J=125^\circ\text{C}$	I_R	5.0 500.0		μA
I^2t Rating for Fusing (t < 8.3ms)	I^2t	166		A^2Sec
Maximum Reverse Recovery Time (Note 1)	t_{rr}	500		nS
Typical Junction Capacitance (Note 2)	C_J	160		pF
Typical Thermal Resistance (Note 3)	$R_{(JC)}$	2.0		$^\circ\text{C}/\text{W}$
Storage Temperature	T_{STG}	-55 to +150		$^\circ\text{C}$
Operating Junction Temperature	T_J	-55 to +150		$^\circ\text{C}$

Note:

1. Measured at 1.0 MHz and applied reverse voltage of 4.0Vdc
2. Device mounted on 150mm x 150mm x 1.6mm Cu Plate Heatsink.

Ratings and Characteristics Curves

FIG.1-TYPICAL FORWARD CURRENT DERATING CURVE

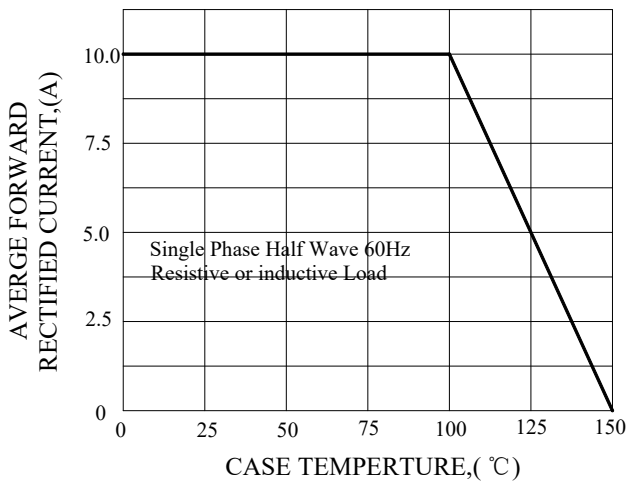


FIG.2-TYPICAL INSTANTANEOUS FORWARD CHARACTERISTICS

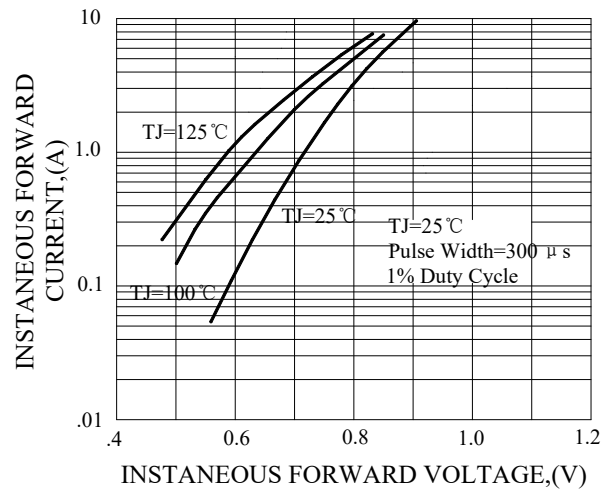


FIG.3-MAXIMUN NON-REPETITIVE FORWARD SURGE CURRENT

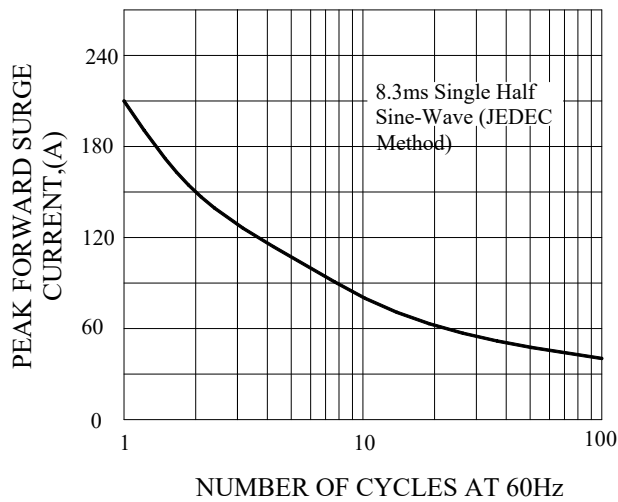


FIG.4-TYPICAL JUNCTION CAPACITANCE

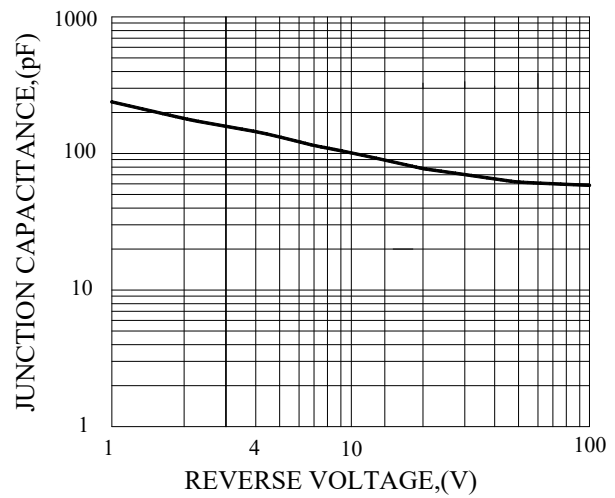


FIG.5-TYPICAL REVERSE CHARACTERISTICS

