

6.0A Single-Phase Silicon Bridge Rectifiers

Features

- This series is UL listed under the Recognized Component Index, file number E142814
- Ideal for printed circuit board mounting
- The plastic material used carries Underwriters Laboratories flammability recognition 94V-0
- Built-in printed circuit board stand-offs
- High case dielectric strength
- High temperature soldering guaranteed:
265°C/5 seconds at 5 lbs(2.3kg) terminals



Mechanical Data

- **Case:** Reliable low cost construction utilizing molded plastic technique
- **Terminals:** Leads solderable per MIL-STD-202, Method 208
- **Mounting Position:** Any

Major Ratings and Characteristics

$I_{F(AV)}$	60 A
V_{RRM}	50 V to 1000 V
I_{FSM}	150 A
V_F	1.1 V
$T_j \text{ max.}$	150 °C

Maximum Ratings & Thermal 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%.

Items	Symbols	GBU 6005	GBU 601	GBU 602	GBU 604	GBU 606	GBU 608	GBU 610	UNIT
Maximum repetitive peak reverse voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS Voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current at $T_C=100^\circ\text{C}$	$I_{(AV)}$	6.0							A
Peak Forward Surge Current, 8.3ms single half-sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	150							A
Operating junction temperature range	T_J	-55 to +150							°C
Storage temperature range	T_{STG}	-55 to +150							°C

Electrical Characteristics ($T_A = 25^\circ\text{C}$ unless otherwise noted)

Items	Test conditions		Symbol	Min	Type	Max	UNIT
Instantaneous forward voltage	$I_F=3.0\text{A}$		V_F	-	-	1.1	V
Reverse current	$V_R=V_{DC}$	$T_A=25^\circ\text{C}$ $T_A=125^\circ\text{C}$	I_R	-	-	10 500	μA

Fig. 1 Derating Curve for Output Rectified Current

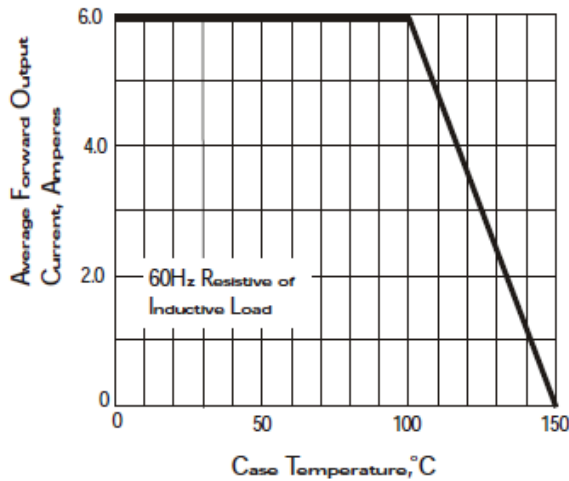


Fig. 2 Maximum Non-repetitive Peak Forward Surge Current

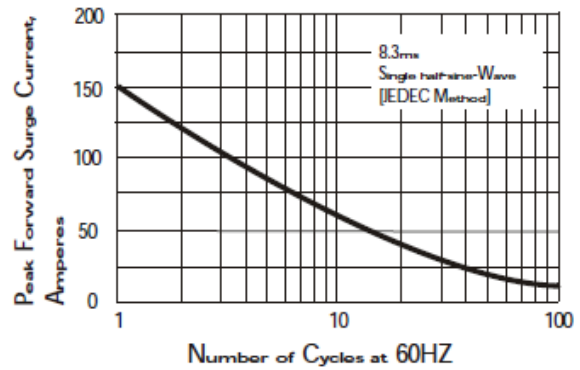


Fig. 3 Typical Instantaneous Forward Characteristics

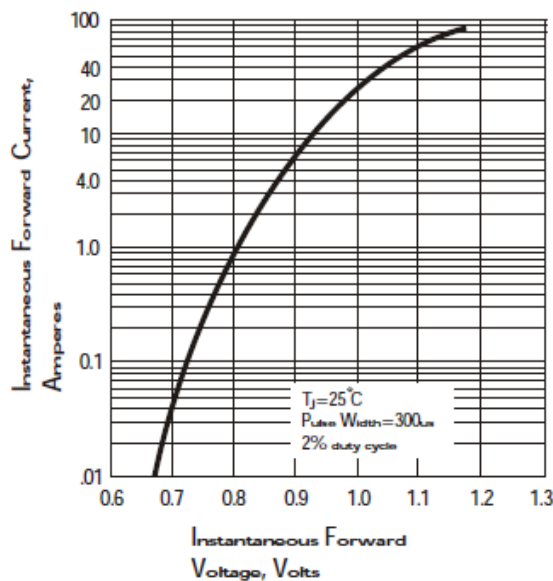


Fig. 4 Typical Reverse Characteristics

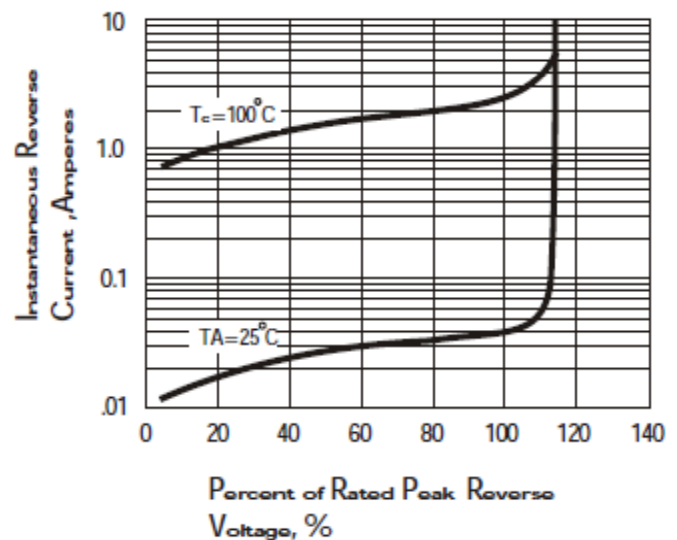
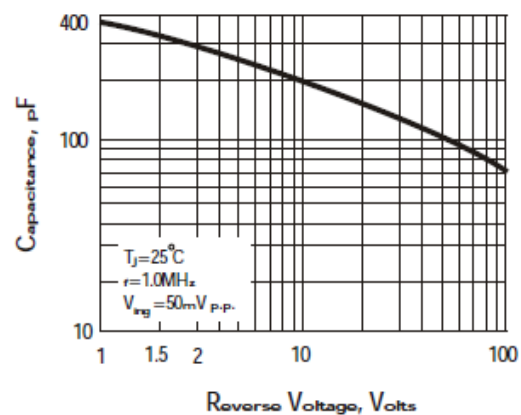
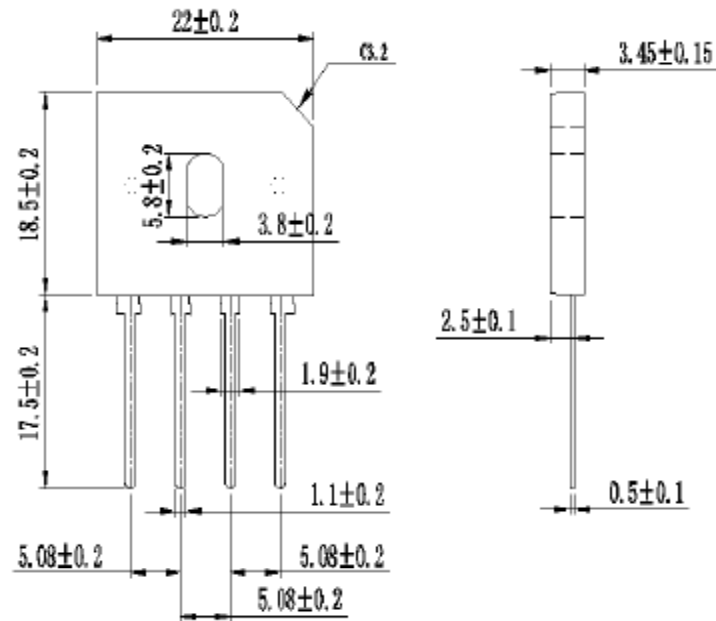


Fig. 5 Typical Junction Capacitance





Dimensions in inches and (millimeters)