



America Semiconductor

**Silicon Bridge
Rectifier**

**GBU6J thru
GBU6M**

$V_{RRM} = 50\text{ V} - 1000\text{ V}$

$I_F = 6\text{ A}$

Features

- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Types up to 1000 V V_{RRM}
- Ideal for printed circuit board
- High surge overload rating
- High temperature soldering guaranteed: 260°C/ 10 seconds, 0.375(9.5mm) lead length
- Glass passivated chip junction
- High case dielectric strength 1500 V_{RMS}

GBU Package



Mechanical Data

Case: Molded plastic body over passivated junctions
 Mounting position: Any
 Terminals: Plated leads, solderable per MIL-STD-750 Method 2026 guaranteed

Maximum ratings, at $T_j = 25\text{ °C}$, unless otherwise specified

Parameter	Symbol	Conditions	GBU6J	GBU6K	GBU6M	Unit
Repetitive peak reverse voltage	V_{RRM}		600	800	1000	V
RMS reverse voltage	V_{RMS}		420	560	700	V
DC blocking voltage	V_{DC}		600	800	1000	V
Continuous forward current	I_F	$T_C \leq 100\text{ °C}$	6	6	6	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	$T_C = 25\text{ °C}$, $t_p = 8.3\text{ ms}$	175	175	175	A
Operating temperature	T_j		-55 to 150	-55 to 150	-55 to 150	°C
Storage temperature	T_{stg}		-55 to 150	-55 to 150	-55 to 150	°C

Electrical characteristics, at $T_j = 25\text{ °C}$, unless otherwise specified

Parameter	Symbol	Conditions	GBU6J	GBU6K	GBU6M	Unit
Diode forward voltage	V_F	$I_F = 6\text{ A}$, $T_j = 25\text{ °C}$	1.1	1.1	1.1	V
Reverse current	I_R	$V_R = 50\text{ V}$, $T_j = 25\text{ °C}$ $V_R = 50\text{ V}$, $T_j = 125\text{ °C}$	5 500	5 500	5 500	μA

Thermal characteristics

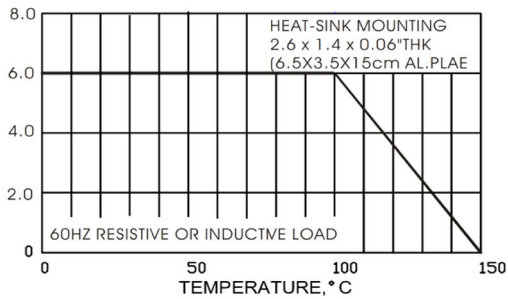
Parameter	Symbol	Conditions	GBU6J	GBU6K	GBU6M	Unit
Thermal resistance, junction - case	R_{thJA}		7.4	7.4	7.4	°C/W
	R_{thJL}		2.2	2.2	2.2	





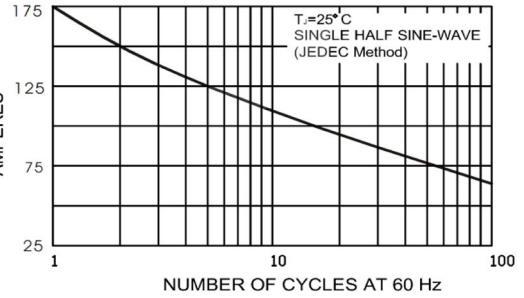
AVERAGE FORWARD OUTPUT CURRENT,
AMPERES

FIG.1-DERATIVE CURVE FOR OUTPUT RECTIFIER CURRENT



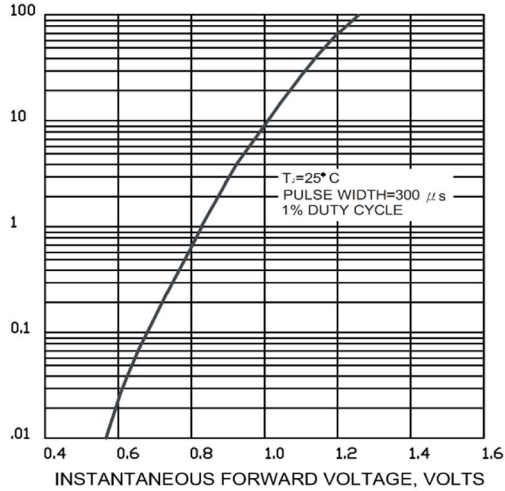
PEAK FORWARD SURGE CURRENT,
AMPERES

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



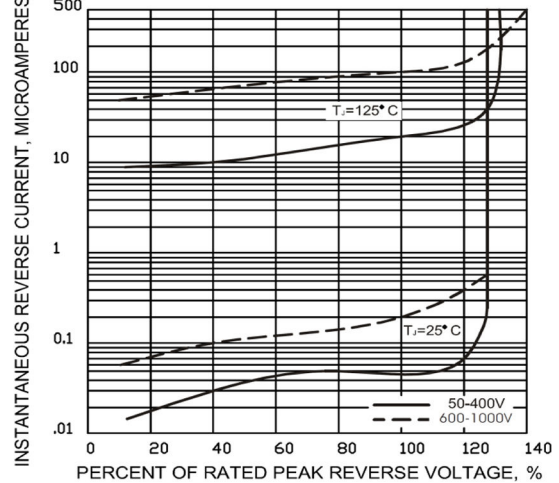
INSTANTANEOUS FORWARD CURRENT, AMPERES

FIG.3-TYPICAL FORWARD CHARACTERISTICS PER LEG



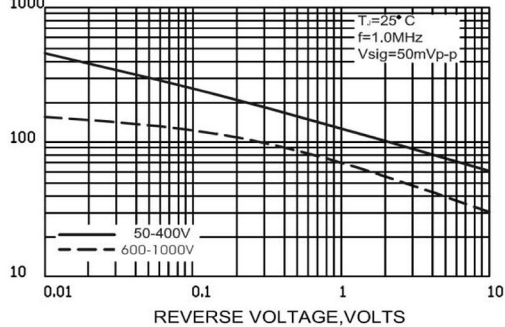
INSTANTANEOUS REVERSE CURRENT, MICROAMPERES

FIG.4-TYPICAL REVERSE CHARACTERISTICS PER LEG



JUNCTION CAPACITANCE, pF

FIG.5-TYPICAL JUNCTION CAPACITANCE PER LEG



TRANSIENT THERMAL IMPEDANCE, °C/W

FIG.6-TYPICAL TRANSIENT THERMAL IMPEDANCE

