



# America Semiconductor

## Silicon Bridge Rectifier

### KBJ2506G thru KBJ2510G

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

$I_F = 25\text{ A}$

#### Features

- Types up to 1000 V  $V_{RRM}$
- Ideal for printed circuit board
- Low forward voltage drop, high current capability
- Plastic package has Underwriters Laboratory Flammability Classification 94V-0
- Reliable, low cost construction utilizing molded plastic technique

#### KBJ Package



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

Parameter	Symbol	Conditions	KBJ2506G	KBJ2508G	KBJ2510G	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	$I_F$	$T_C \leq 110^\circ\text{C}$ , with heatsink	25	25	25	A
		$T_C \leq 110^\circ\text{C}$ , without heatsink	4.2	4.2	4.2	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	$T_C = 25\text{ }^\circ\text{C}$ , $t_p = 8.3\text{ ms}$	350	350	350	A
Operating temperature	$T_j$		-55 to 150	-55 to 150	-55 to 150	$^\circ\text{C}$
Storage temperature	$T_{stg}$		-55 to 150	-55 to 150	-55 to 150	$^\circ\text{C}$

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

Parameter	Symbol	Conditions	KBJ2506G	KBJ2508G	KBJ2510G	Unit
Diode forward voltage	$V_F$	$I_F = 12.5\text{ A}$ , $T_j = 25\text{ }^\circ\text{C}$	1.05	1.05	1.05	V
Reverse current	$I_R$	$V_R = 50\text{ V}$ , $T_j = 25\text{ }^\circ\text{C}$	10	10	10	$\mu\text{A}$
		$V_R = 50\text{ V}$ , $T_j = 125\text{ }^\circ\text{C}$	500	500	500	$\mu\text{A}$

#### Thermal characteristics

Thermal resistance, junction - case	$R_{thJA}$		0.6	0.6	0.6	$^\circ\text{C/W}$
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FIG. 1 - FORWARD CURRENT DERATING CURVE

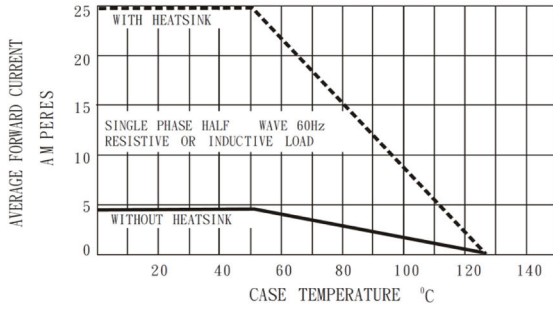


FIG. 2 - MAXIMUM NON-REPETITIVE SURGE CURRENT

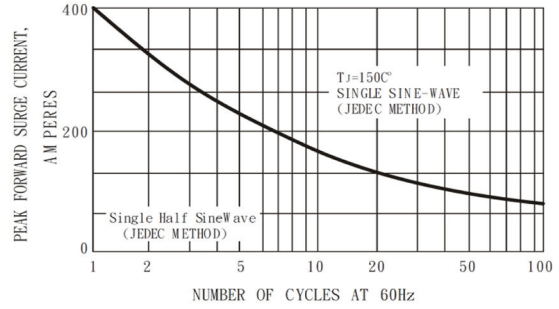


FIG. 3 - TYPICAL JUNCTION CAPACITANCE

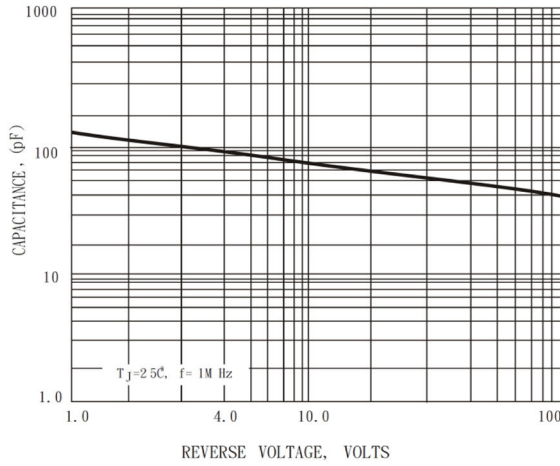


FIG. 4 - TYPICAL FORWARD CHARACTERISTICS

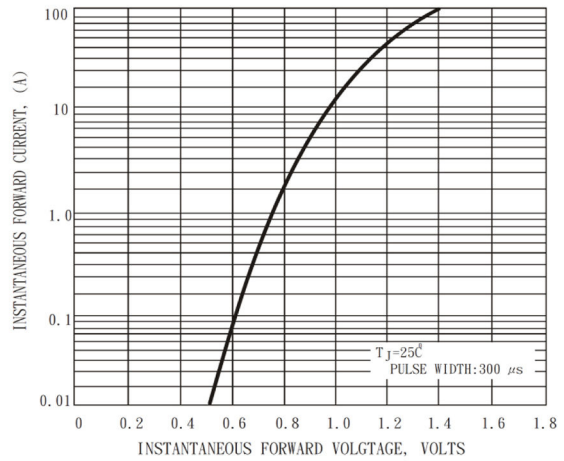


FIG. 5 - TYPICAL REVERSE CHARACTERISTICS

