America Semiconductor

Silicon Bridge Rectifier

KBJ25005G thru KBJ2504G

V_{RRM} = 50 V - 1000 V

I_F =25 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 °C, unless otherwise specified

Parameter	Symbol	Conditions	KBJ25005G	KBJ2501G	KBJ2502G	KBJ2504G	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	$T_C \leq 110°C$, with heatsink $T_C \leq 110°C$, without heatsink	25 4.2	25 4.2	25 4.2	25 4.2	A
Surge non-repetitive forward current, Half Sine Wave	$I_{F,SM}$	T_C = 25 °C, t_p = 8.3 ms	350	350	350	350	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	KBJ25005G	KBJ2501G	KBJ2502G	KBJ2504G	Unit
Diode forward voltage	V_F	I_F = 12.5 A, T_j = 25 °C	1.05	1.05	1.05	1.05	V
Reverse current	I_R	V_R = 50 V, T_j = 25 °C V_R = 50 V, T_j = 125 °C	10 500	10 500	10 500	10 500	µA
Thermal characteristics							
Thermal resistance, junction - case	R_{thJA}		0.6	0.6	0.6	0.6	°C/W

FIG. 1 - FORWARD CURRENT DERATING CURVE

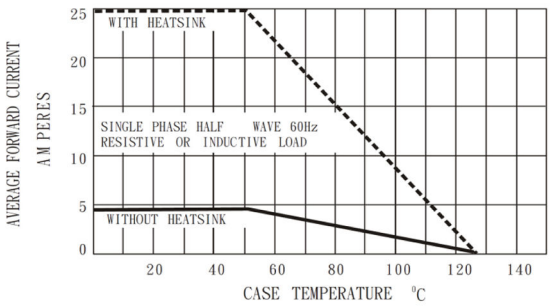

FIG. 2 - MAXIMUM NON-REPETITIVE
SURGE CURRENT

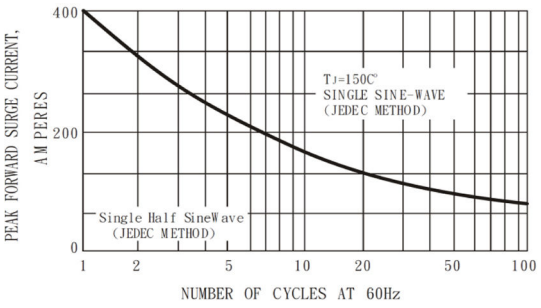

FIG. 3 - TYPICAL JUNCTION CAPACITANCE

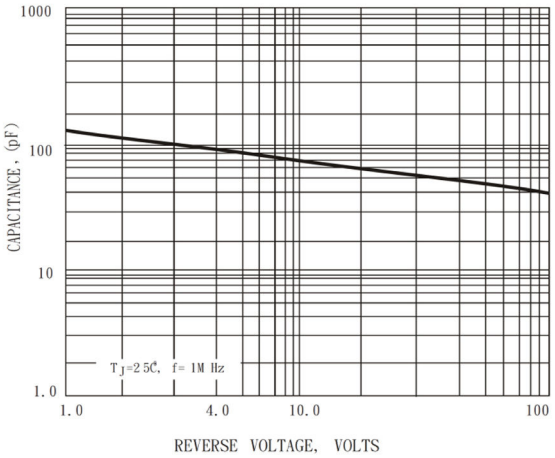

FIG. 4 - TYPICAL FORWARD CHARACTERISTICS

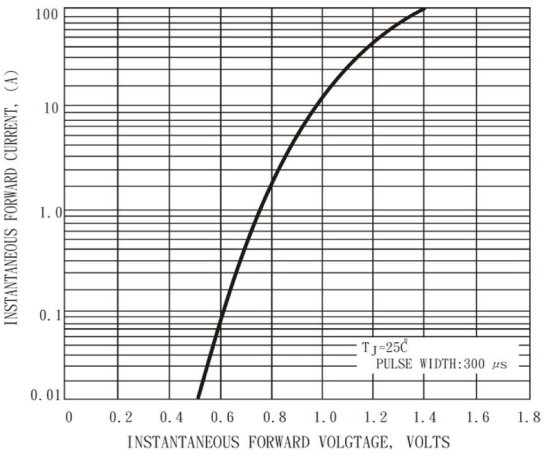

FIG. 5- TYPICAL REVERSE CHARACTERISTICS