GeneSiC™
SEMICONDUCTOR

Single Phase Glass Passivated
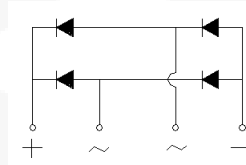# Silicon Bridge Rectifier

V_{RRM} = 50 V - 400 V

I_O = 25 A

Features

• Ideal for printed circuit board
• Low forward voltage drop, high current capability
• Plastic material has Underwriters Laboratory Flammability Classification 94V-0
• Reliable, low cost construction utilizing molded plastic technique
• Types from 50 V to 400 V V_{RRM}
• Not ESD Sensitive

KBJ Package

RoHS COMPLIANT

REACH COMPLIANCE

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
Operating temperature	T_j		-55 to 125	-55 to 125	-55 to 125	-55 to 125	°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

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

Parameter	Symbol	Conditions	KBJ25005G	KBJ2501G	KBJ2502G	KBJ2504G	Unit
Maximum average forward rectified current	I_O	T_c = 110 °C	25	25	25	25	A
		T_a = 25 °C	4.2	4.2	4.2	4.2	
Peak forward surge current	I_{FSM}	8.3 ms single sine-wave	350	350	350	350	A
Maximum instantaneous forward voltage per leg	V_F	I_F = 12.5 A	1.05	1.05	1.05	1.05	V
Maximum reverse current at rated DC blocking voltage per leg	I_R	T_a = 25 °C	10	10	10	10	μA
		T_a = 125 °C	500	500	500	500	

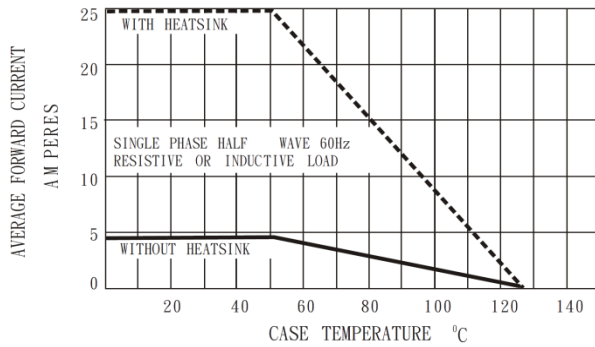FIG. 1 - FORWARD CURRENT DERATING CURVE

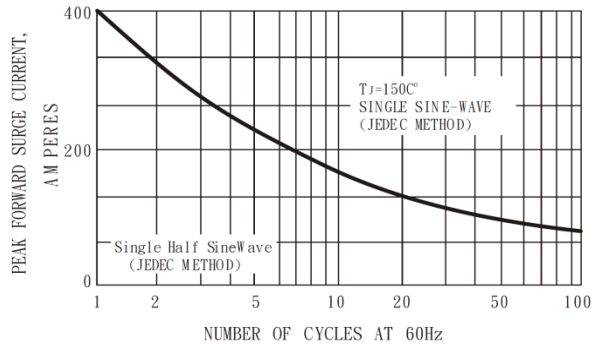FIG. 2 - MAXIMUM NON-REPETITIVE
SURGE CURRENT
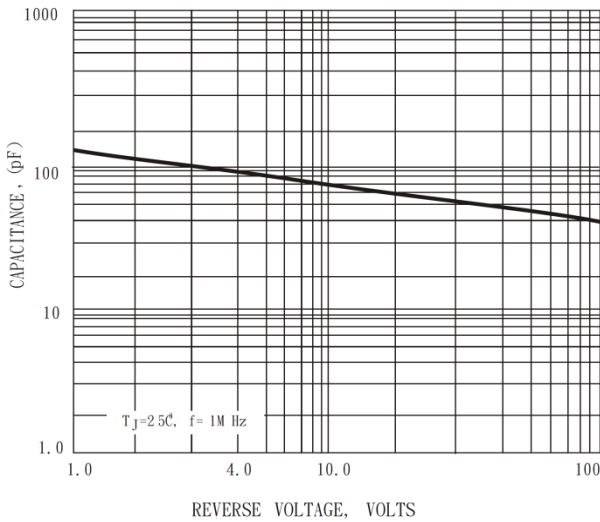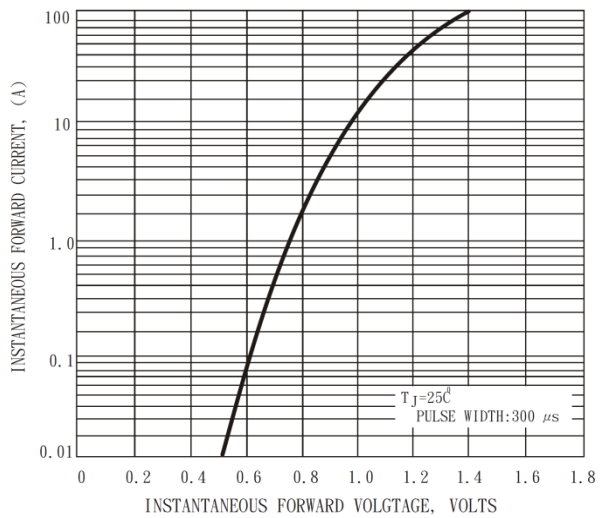
FIG. 3 - TYPICAL JUNCTION CAPACITANCE

FIG. 4 - TYPICAL FORWARD CHARACTERISTICS

FIG. 5 - TYPICAL REVERSE CHARACTERISTICS

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Package dimensions and terminal configuration

Product is marked with part number and terminal configuration.

KBJ

.122(3.1)
.134(3.4)

.972(24.7)
.996(25.3)

.130(3.3)
.147(3.7)

TYP 9

.579(14.7)
.602(15.3)

.366(9.3)
.382(9.7)

+   AC   -

TYP 5

.071(1.8)
.087(2.2)

.053(1.35)
.061(1.55)

.669(17)
.709(18)

.492(12.5)
.531(13.5)

.035(0.9)
.043(1.1)

.287(7.3)
.303(7.7)

.015(0.4)
.024(0.6)

.030(0.75)
.037(0.95)

Dimensions in inches and (millimeters)