## LITEON LITE-ON SEMICONDUCTOR

## KBJ404G thru KBJ410G

## **GLASS PASSIVATED BRIDGE RECTIFIERS**

## REVERSE VOLTAGE - 400 to 1000 Volts FORWARD CURRENT - 4.0 Amperes

## FEATURES

- Rating to 1000V PRV
- Ideal for printed circuit board
- Reliable low cost construction utilizing molded plastic technique
- The plastic material has UL flammability classification 94V-0
- UL recognized file # E95060

### **MECHANICAL DATA**

- Polarity : Symbols molded on body
- Weight : 0.16 ounces, 4.6 grams
- Mounting position : Any



## MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at  $25^{\circ}$ C ambient temperature unless otherwise specified.

CHARACTERISTICS	SYMBOL	KBJ404G	KBJ406G	KBJ408G	KBJ410G	UNIT
Maximum Recurrent Peak Reverse Voltage	VRRM	400	600	800	1000	V
Maximum RMS Voltage	VRMS	280	420	560	700	V
Maximum DC Blocking Voltage	VDC	400	600	800	1000	V
Maximum Average Forward (with heatsink Note 2) Rectified Current @Tc=115°C (without heatsink)	I(AV)	4.0 2.6				A
Peak Forward Surge Current 8.3ms single half sine-wave superimposed on rated load	IFSM	120				А
Maximum forward Voltage @2.0A DC @4.0A DC	VF	1.0 1.1				v
Maximum DC Reverse Current at Rated DC Blocking Voltage@TJ =25°C @TJ =125°C	IR	5.0 500				uA
I <sup>2</sup> t Rating for fusing (t < 8.3ms)	l <sup>2</sup> t	60				A <sup>2</sup> S
Typical Junction Capacitance per element (Note 1)	CJ	40				pF
Typical Thermal Resistance (Note 2)	Re JC	5.5				°C/W
Operating Temperature Range	TJ	-55 to +150				°C
Storage Temperature Range	Тѕтс	-55 to +150				°C

NOTES : 1.Measured at 1.0MHz and applied reverse voltage of 4.0V DC.

2.Device mounted on 75mm x 75mm x 1.6mm Cu Plate Heatsink.

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# RATING AND CHARACTERISTIC CURVES KBJ404G thru KBJ410G

#### FIG.1 - FORWARD CURRENT DERATING CURVE FIG.2 - MAXIMUM NON-REPETITIVE SURGE CURRENT PEAK FORWARD SURGE CURRENT, AMPERES 5.0 180 AVERAGE FORWARD CURRENT AMPERES 160 WITH HEATSINI 4.0 140 120 3.0 WITHOUT HEATSINK 100 80 2.0 60 40 1.0 SINGLE PHASE HALF WAVE 60Hz 20 RESISTIVE OR INDUCTIVE LOAD Single Half-Sine-Wave 0 0.0 1 1 2 5 50 20 40 60 80 100 120 140 100 CASE TEMPERATURE ; C NUMBER OF CYCLES AT 60Hz FIG.3 - TYPICAL JUNCTION CAPACITANCE FIG.4 - TYPICAL FORWARD CHARACTERISTICS 100 100 INSTANTANEOUS FORWARD CURRENT, (A) TJ = 150℃ CAPACITANCE , (pF) 10 10 TJ = 25℃ 1 TJ = 25 C, f= 1MHz PULSE WIDTH 300us 1 0.1 100 1 10 0 0.2 0.4 0.6 1.2 1.6 0.8 1 1.4 REVERSE VOLTAGE , VOLTS INSTANTANEOUS FORWARD VOLTAGE, VOLTS FIG.5 - TYPICAL REVERSE CHARACTERISTICS 1000 INSTANTANEOUS REVERSE CURRENT, (uA) 100 TJ = 150℃ TJ = 125℃ 10 1 TJ = 100℃ 0.1 TJ = 25℃ 0.01 0 20 40 60 80 100 120 PERCENT OF RATED PEAK REVERSE VOLTAGE, (%)

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