



Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

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We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!



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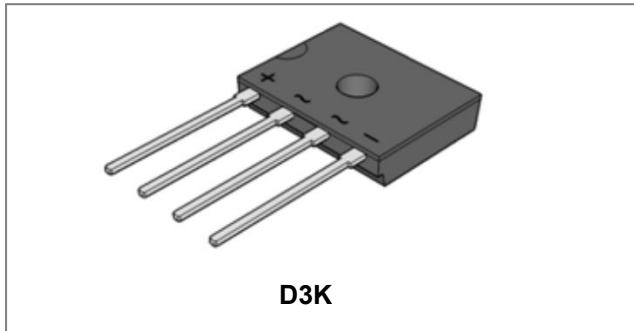
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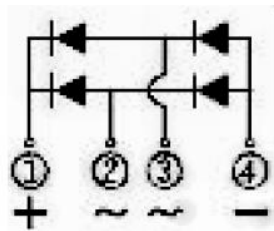
UG4KB05 THRU UG4KB100
Single-Phase 4.0A Glass Passivated Bridge Rectifier



Features

- Glass passivated die construction
- Low forward voltage drop
- High current capability
- High surge current capability
- Designed for surface mount application
- Plastic material-UL flammability 94V-0
- This is a Pb – Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

Circuit Diagram



Mechanical Data

- Case: D3K, Molded plastic
- Terminals: Plated leads solderable per MIL-STD-202, Method 208
- Polarity: as marked on case
- Mounting Position: Any
- Lead Free: For RoHS / Lead Free Version

Maximum Ratings: @T_A=25°C unless otherwise specified

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

| Type Number | Symbol | UG4K B05 | UG4K B10 | UG4K B20 | UG4K B40 | UG4K B60 | UG4K B80 | UG4K B100 | Units |
|--|------------------------------------|------------|----------|----------|----------|----------|----------|-----------|-------|
| Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage | V_{RRM} V_{RWM} V_{DC} | 50 | 100 | 200 | 400 | 600 | 800 | 1000 | V |
| RMS Reverse Voltage | V_{RMS} | 35 | 70 | 140 | 280 | 420 | 560 | 700 | V |
| Average Rectified Output Current Without heat sink @T _A = 30°C With heat sink @T _A = 140°C | I_O | 2.0 4.0 | | | | | | | A |
| Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method) | I_{FSM} | 120 | | | | | | | A |

Electrical Characteristics:

| Type Number | Symbol | UG4K B05 | UG4K B10 | UG4K B20 | UG4K B40 | UG4K B60 | UG4K B80 | UG4K B100 | Units | |
|---|--------|----------|----------|----------|----------|------------|----------|-----------|-------|---------|
| Forward Voltage (per element) * @ $I_F = 4.0A$ | V_F | | | | | 1.1 | | | | V |
| Peak Reverse Current * @ $T_A = 25^\circ C$ At Rated DC Blocking Voltage * @ $T_A = 125^\circ C$ | I_R | | | | | 5.0 500 | | | | μA |
| Typical Junction Capacitance(per leg) (Note 1) | C_J | | | | | 21 | | | | pF |

* Pulse width < 300 μs , duty cycle < 2%

Thermal-Mechanical Specifications:

| Type Number | Symbol | UG4K B05 | UG4K B10 | UG4K B20 | UG4K B40 | UG4K B60 | UG4K B80 | UG4K B100 | Units | |
|--|------------------------------------|----------|----------|----------|----------|-------------|----------|-----------|-------|--------------|
| Typical Thermal Resistance (per leg)(Note 2) | $R_{\theta JA}$ $R_{\theta JL}$ | | | | | 55 15 | | | | $^\circ C/W$ |
| Operating and Storage Temperature Range | T_J, T_{STG} | | | | | -55 to +150 | | | | $^\circ C$ |

Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.
2. Mounted on glass epoxy PC board with 1.3mm² solder pad.

Ratings and Characteristics Curves

Fig. 1 Output Current Derating Curve

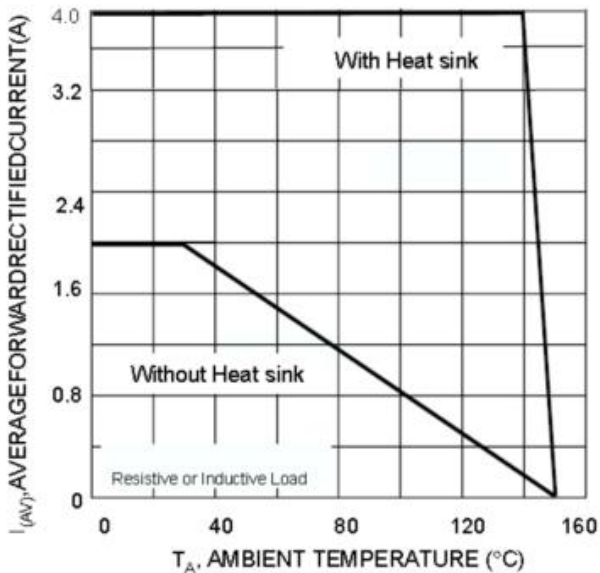


Fig. 2 Typical I Forward Characteristics (per leg)

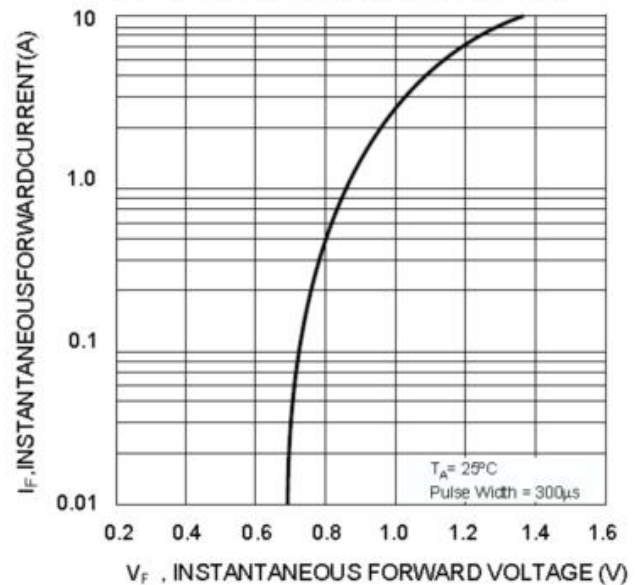


Fig. 3 Maximum Peak Forward Surge Current (per leg)

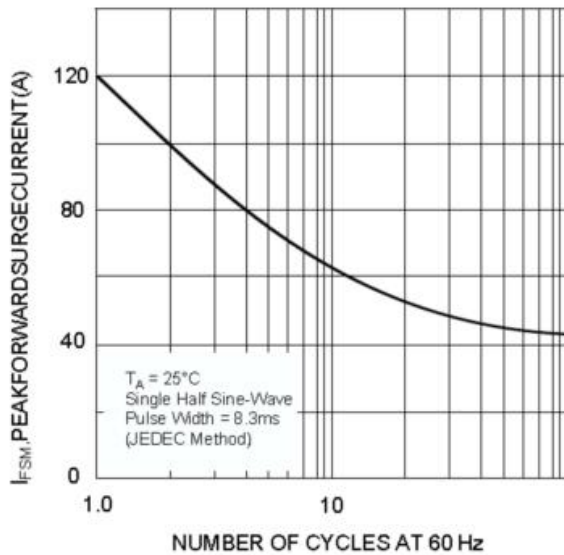


Fig.4 Typical Junction Capacitance Per Diode

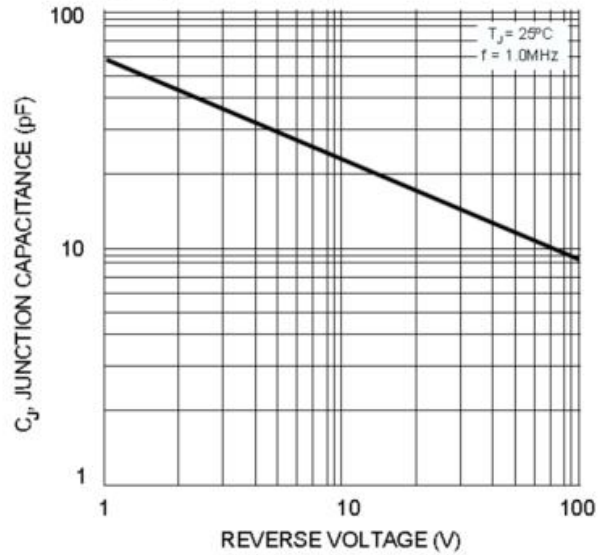
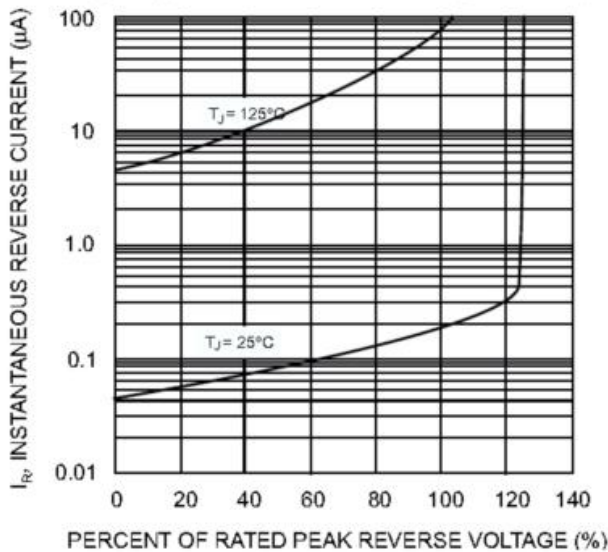


Fig. 5 Typical Reverse Characteristics (per element)

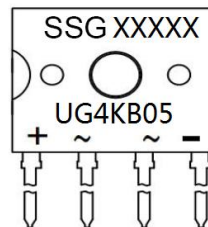


Ordering Information

| Device | Package | Plating | Shipping |
|-----------------------------|--------------|---------|--------------|
| UG4KB05 THRU UG4KB100 | D3K(Pb-Free) | Pure Sn | 37pcs / tube |

For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram

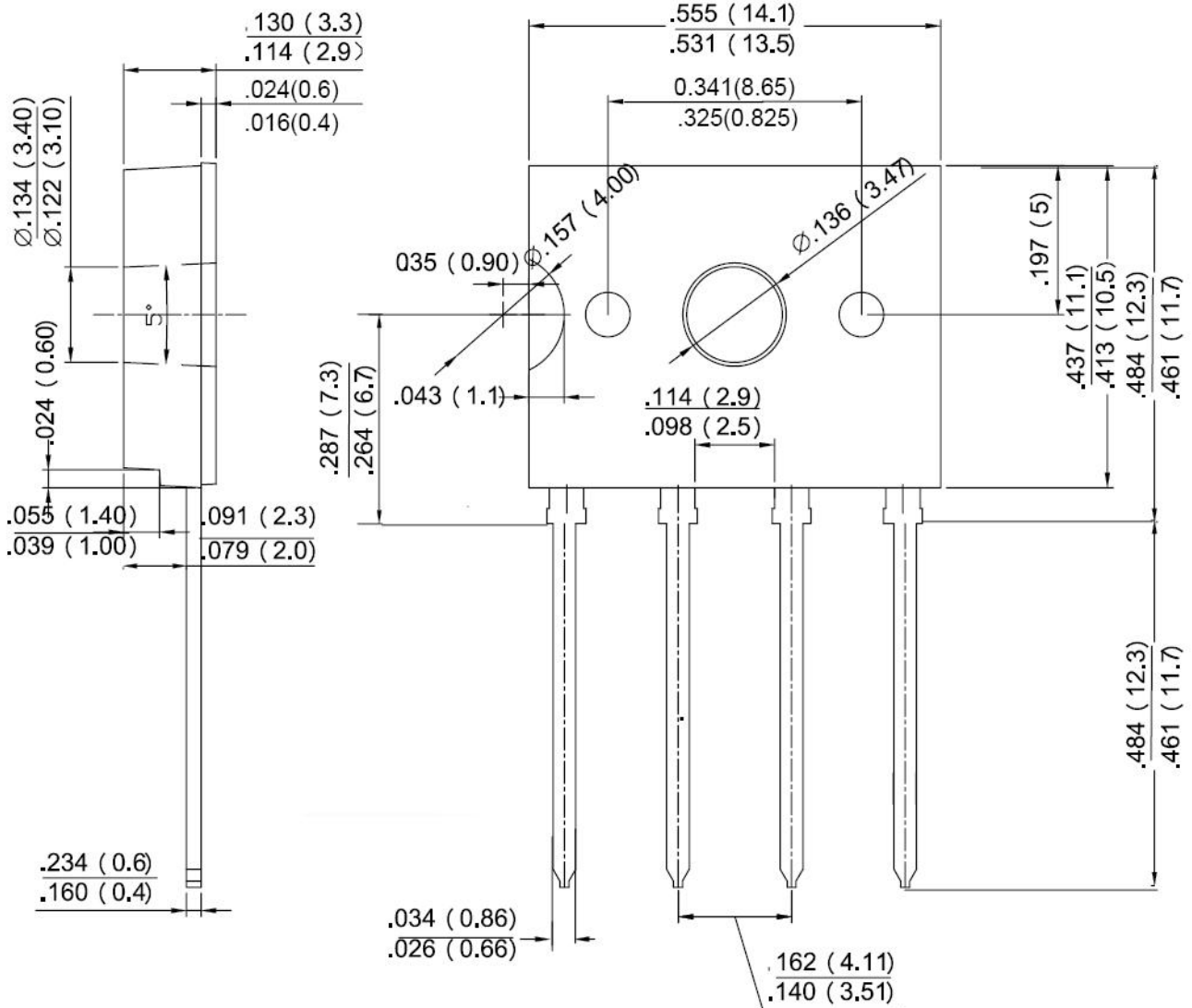


Where XXXXX is YYWWL

SSG = SSG
YY = Year
WW = Week
L = Lot Number
UG4KB05 = Type Number

Cautions: Molding resin
Epoxy resin UL:94V-0

Mechanical Dimensions D3K (Inches/Millimeters)



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