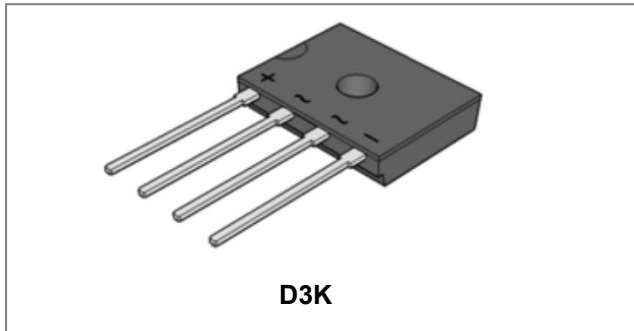


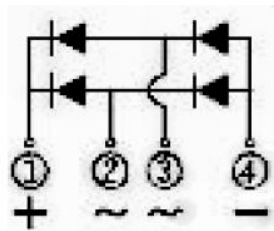
**UG2KB05 THRU UG2KB100**  
**Single-Phase 2.0A Glass Passivated Bridge Rectifier**



**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<sub>A</sub>=25°C unless otherwise specified**

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

Type Number	Symbol	UG2K B05	UG2K B10	UG2K B20	UG2K B40	UG2K B60	UG2K B80	UG2K 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 <sub>A</sub> = 30°C With heat sink @T <sub>A</sub> = 140°C	$I_O$	1.0 2.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	60							A

**Electrical Characteristics:**

Type Number	Symbol	UG2K B05	UG2K B10	UG2K B20	UG2K B40	UG2K B60	UG2K B80	UG2K B100	Units
Forward Voltage (per element) @ $I_F = 2.0A$	$V_F$				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				$\mu A$
Typical Junction Capacitance(per leg) (Note 1)	$C_J$				21				pF

\* Pulse width < 300  $\mu s$ , duty cycle < 2%

**Thermal-Mechanical Specifications:**

Type Number	Symbol	UG2K B05	UG2K B10	UG2K B20	UG2K B40	UG2K B60	UG2K B80	UG2K B100	Units
Typical Thermal Resistance (per leg)	$R_{\theta JA}$ $R_{\theta JL}$				55				$^\circ C/W$
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.

**Ratings and Characteristics Curves**

Fig. 1 Output Current Derating Curve

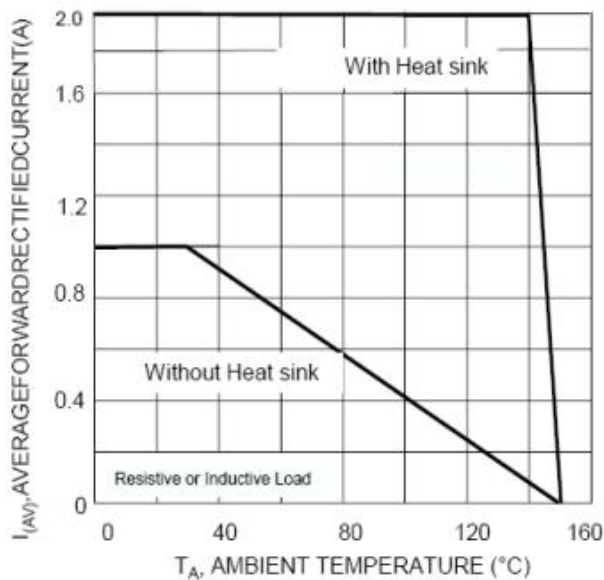


Fig. 2 Typical I Forward Characteristics (per leg)

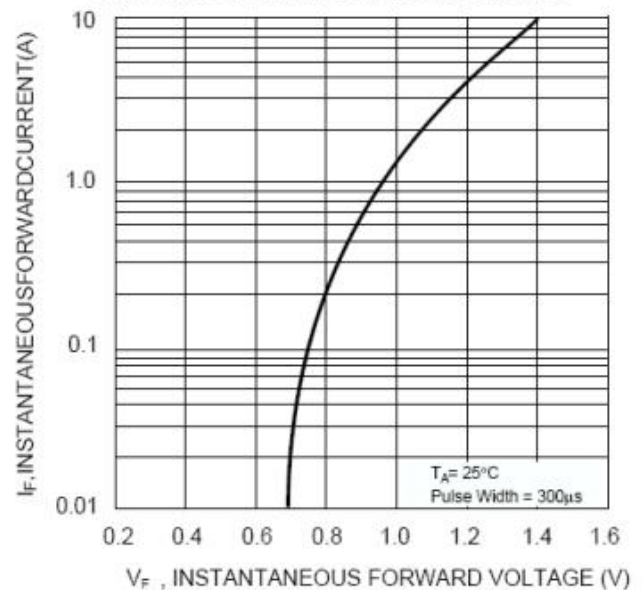


Fig. 3 Maximum Peak Forward Surge Current (per leg)

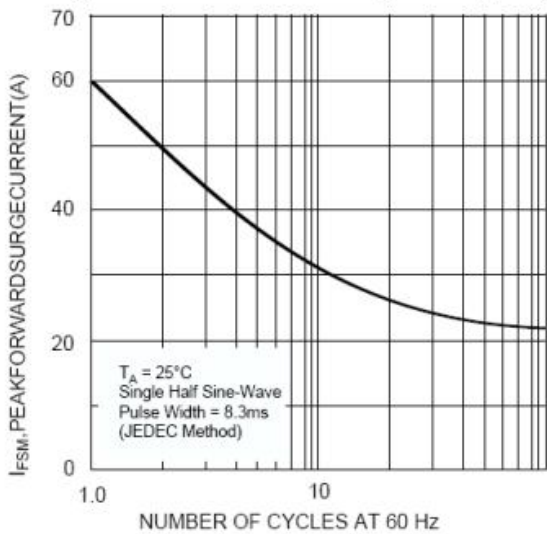


Fig.4 Typical Junction Capacitance Per Diode

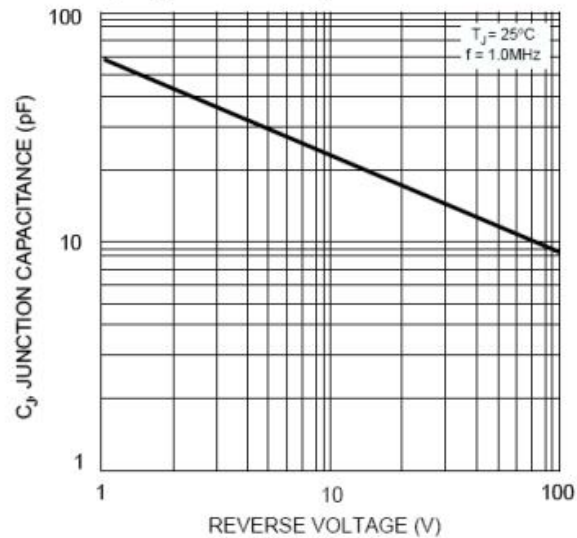
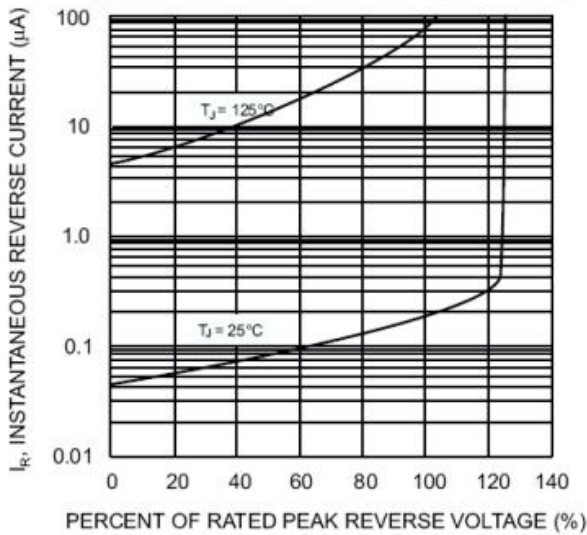


Fig. 5 T typical Reverse Characteristics (per element)

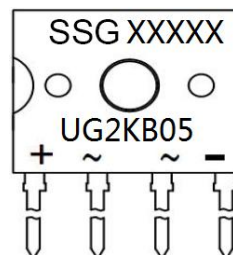


**Ordering Information**

Device	Package	Plating	Shipping
UG2KB05 THRU UG2KB100	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  
UG2KB05 = Type Number

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



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