

**SINGLE-PHASE GLASS PASSIVATED BRIDGE RECTIFIER**

**VOLTAGE RANGE 50 to 1000 Volts    CURRENT 4.0 Ampere**

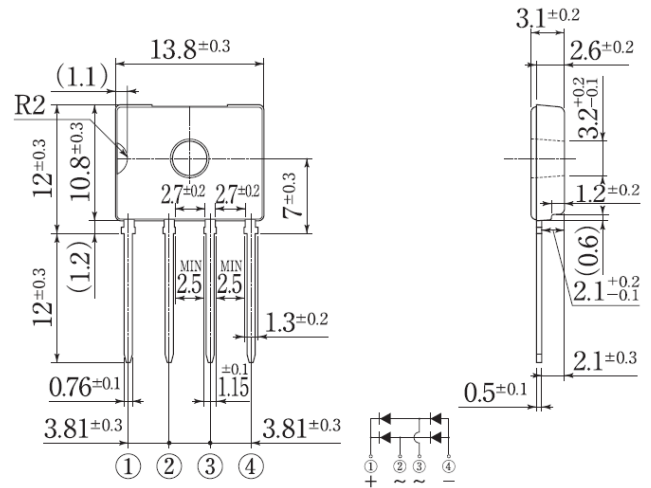
**FEATURES**

- \* High surge current capability
- \* Ideal for printed circuit board
- \* High case dielectric strength
- \* Glass passivated device
- \* RoHS product for packing code suffix "G"
- Halogen free product for packing code suffix "H"

**D3K**

**MECHANICAL DATA**

Case: Molded plastic, D3K  
 Terminal: Plated lead solderable per MIL-STD202E, Method 208C  
 Case: UL-94 Class V-0 recognized Flame Retardant Epoxy  
 Polarity: Polarity symbol marked on body  
 Mounting position: Any



Dimensions in inches and (millimeters)

**MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS**

Ratings at 25°C ambient temperature unless otherwise specified.  
 Single phase half wave, 60Hz, resistive or inductive load.  
 For capacitive load, derate current by 20%

RATINGS	SYMBOL	UG4KB05A	UG4KB10A	UG4KB20A	UG4KB40A	UG4KB60A	UG4KB80A	UG4KB100A	UNIT	
Marking Code		UG4KB05	UG4KB10	UG4KB20	UG4KB40	UG4KB60	UG4KB80	UG4KB100		
Maximum Recurrent Peak Reverse Voltage	V <sub>RRM</sub>	50	100	200	400	600	800	1000	Volts	
Maximum RMS Voltage	V <sub>RMS</sub>	35	70	140	280	420	560	700	Volts	
Maximum DC Blocking Voltage	V <sub>DC</sub>	50	100	200	400	600	800	1000	Volts	
Maximum Average Forward Rectified Current T <sub>c</sub> 138 °C with heatsink	I <sub>O</sub>	4								Amps
Peak Forward Surge Current 8.3 ms single half sine-wave superimposed on rated load (JEDEC method)	I <sub>FSM</sub>	100								Amps
Typical Thermal Resistance (Note 2)	without heatsink	R <sub>θJA</sub>							55	°C/W
	with heatsink	R <sub>θJC</sub>							1.5	
	without heatsink	R <sub>θJL</sub>							15	
Typical Junction Capacitance (Note 1)	C <sub>J</sub>	25								PF
Rating for fusing (3ms ≤ t < 8.3ms)	I <sup>2</sup> t	41								A <sup>2</sup> Sec
Operating Temperature Range	T <sub>J</sub>	-55 to +150								°C
Storage Temperature Range	T <sub>STG</sub>	-55 to +150								°C

CHARACTERISTICS	SYMBOL	UG4KB05A	UG4KB10A	UG4KB20A	UG4KB40A	UG4KB60A	UG4KB80A	UG4KB100A	UNIT	
Maximum Forward Voltage at 2.0A DC	V <sub>F</sub>	1.00								Volts
Maximum Average Reverse Current at Rated DC Blocking Voltage	@T <sub>A</sub> =25°C	10								uAmps
	@T <sub>A</sub> =125°C	500								uAmps

**NOTES:**

- 1- Measured at 1 MHz and applied reverse voltage of 4.0 VDC.
- 2- R<sub>θJA</sub>: Thermal Resistance From Junction to Ambient;  
 R<sub>θJC</sub>: Thermal Resistance From Junction to Case;  
 R<sub>θJL</sub>: Thermal Resistance From Junction to Lead;

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**RATING AND CHARACTERISTIC CURVES**

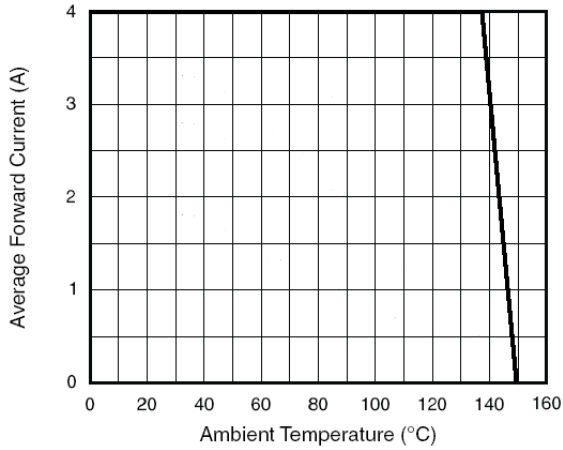


Figure 1. Forward Current Derating Curve

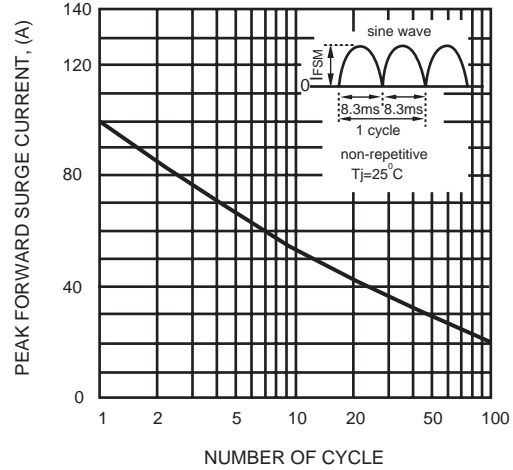


Figure 2: SURGE FORWARD CURRENT CAPABILITY

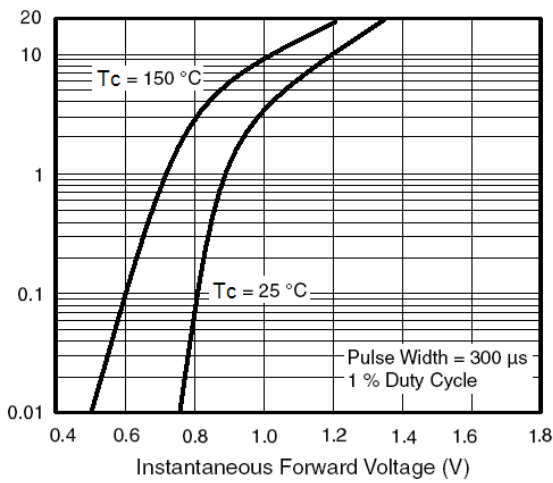


Figure 3. Typical Forward Characteristics Per Diode

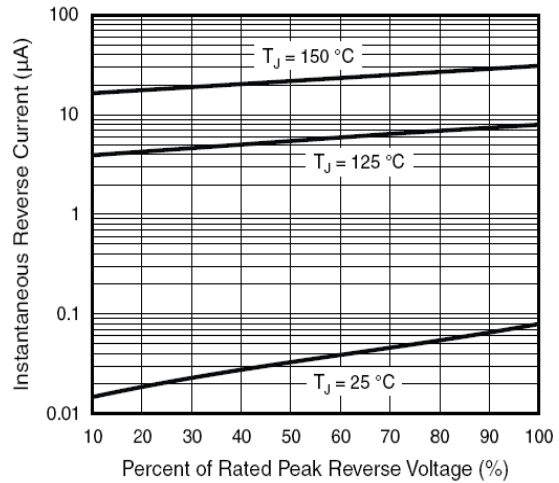


Figure 4. Typical Reverse Leakage Characteristics Per Diode

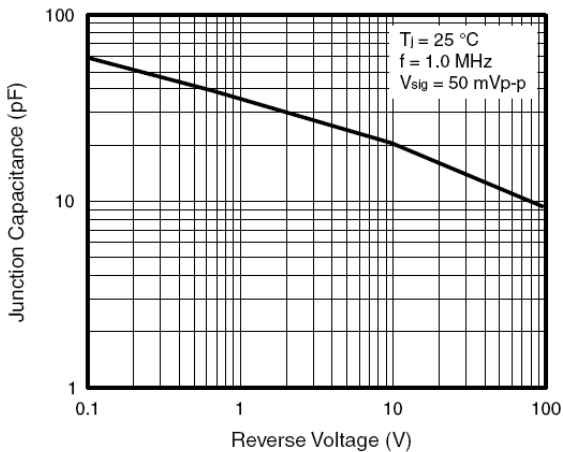


Figure 5. Typical Junction Capacitance Per Diode

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**Ordering Information:**

Device PN	Packing
Part Number - <sup>(1)</sup> G <sup>(2)</sup> -WS	Tube Packing:30pcs/Tube; 2500pcs/Box

**Note:** 1. Packing code: Empty is Tube Packing

2. RoHS product for packing code suffix "G", Halogen free product for packing code suffix "H" .

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