

UG3KB05 THRU UG3KB100

Single-Phase 3.0A Glass Passivated Bridge Rectifier

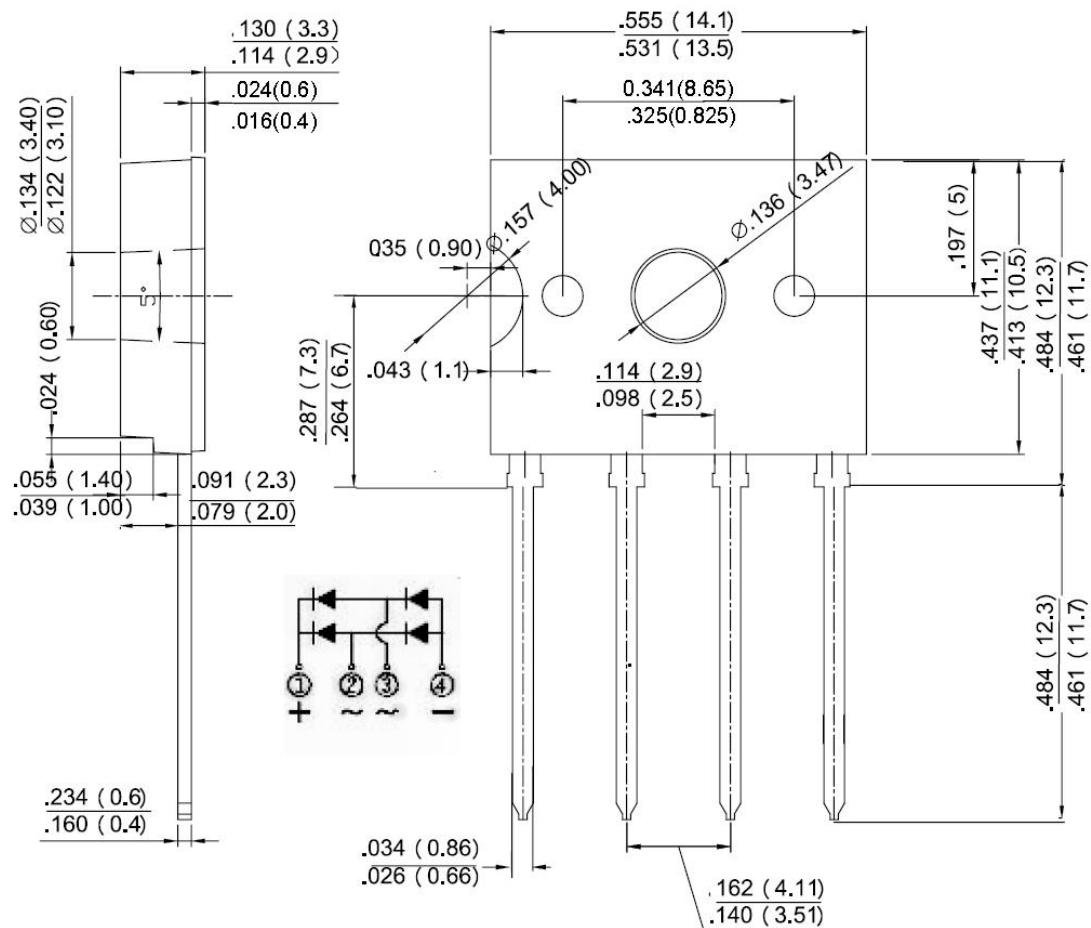
Features:

- 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

Mechanical Data:

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

Mechanical Dimensions: In Inches/mm



D3K

- China - Germany - Korea - Singapore - United States •
- <http://www.smc-diodes.com> - sales@smc-diodes.com •

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

Maximum Ratings:

Type Number	Symbol	UG3K B05	UG3K B10	UG3K B20	UG3K B40	UG3K B60	UG3K B80	UG3K B100	Unit
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 Without heat sink @ $T_A = 30^\circ\text{C}$ Output Current With heat sink @ $T_A = 140^\circ\text{C}$	I_o	1.5 3.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	80							A

Electrical Characteristics:

Type Number	Symbol	UG3K B05	UG3K B10	UG3K B20	UG3K B40	UG3K B60	UG3K B80	UG3K B100	Unit
Forward Voltage (per element) @ $I_F = 3.0\text{A}$	V_F	1.1							V
Peak Reverse Current @ $T_A = 25^\circ\text{C}$ At Rated DC Blocking Voltage @ $T_A = 125^\circ\text{C}$	I_R	5.0 500							μA
Typical Junction Capacitance(per leg) (Note 1)	C_J	21							pF

Thermal-Mechanical Specifications:

Type Number	Symbol	UG3K B05	UG3K B10	UG3K B20	UG3K B40	UG3K B60	UG3K B80	UG3K B100	Unit
Typical Thermal Resistance (per leg)	$R_{\theta JA}$ $R_{\theta JL}$	55 15							$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150							$^\circ\text{C}$

Note: 1. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.

Fig. 1 Output Current Derating Curve

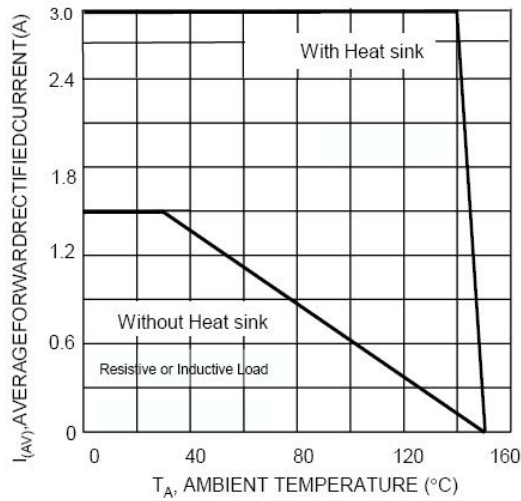


Fig. 2 Typical I Forward Characteristics (per leg)

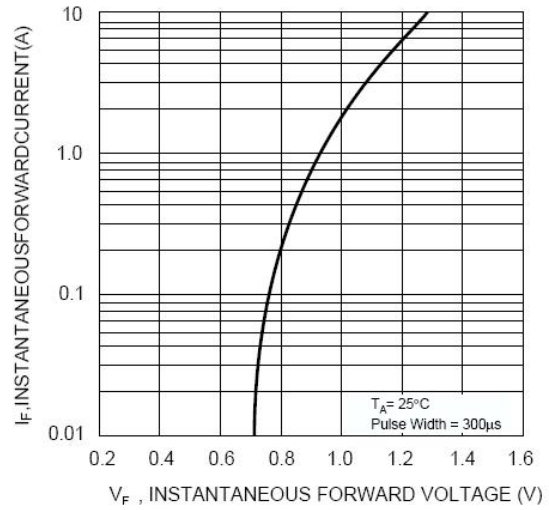


Fig. 3 Maximum Peak Forward Surge Current (per leg)

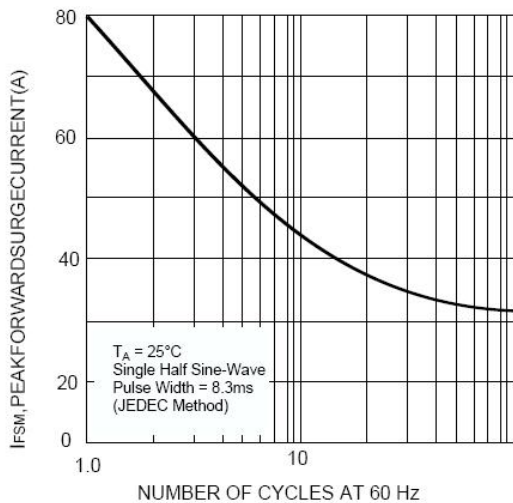


Fig. 4 Typical Junction Capacitance Per Diode

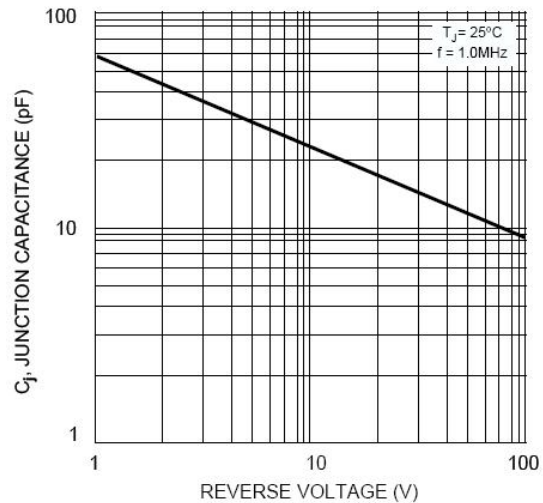
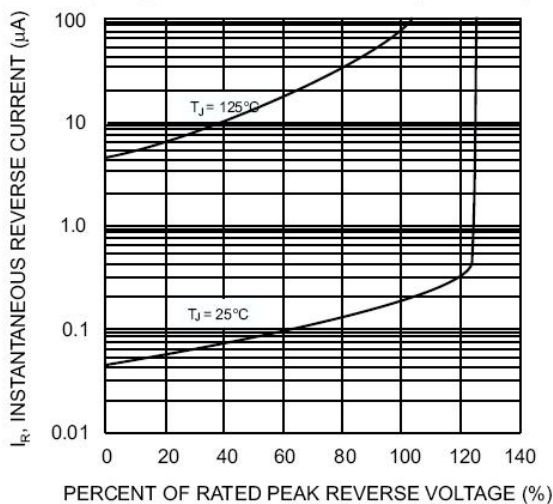


Fig. 5 Typical Reverse Characteristics (per element)



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