



# UG3KB05G THRU UG3KB100G

Reverse Voltage - 50 to 1000 Volts Forward Current - 3.0 Amperes

## SILICON BRIDGE RECTIFIERS

### 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-O

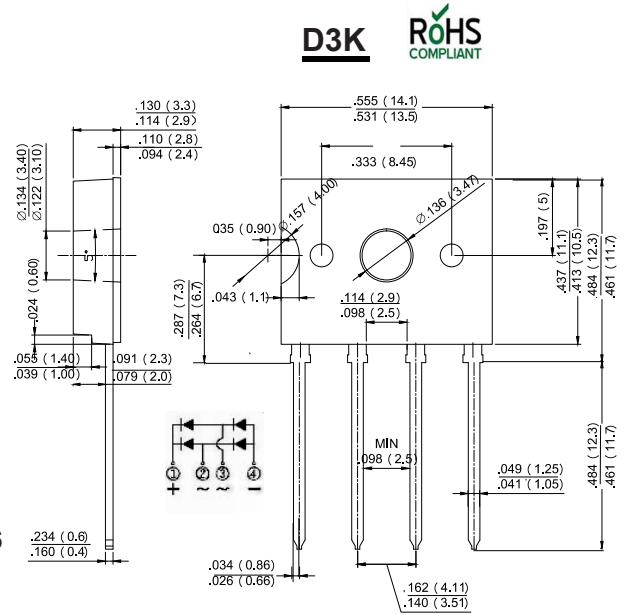
### Mechanical Data

**Case :** D3K Molded plastic body

**Terminals :** Solder plated, solderable per MIL-STD-750, Method 2026

**Polarity :** Polarity symbol marking 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 current derate by 20%.

Parameter	SYMBOLS	UG3K	UG3K	UG3K	UG3K	UG3K	UG3K	UG3K	UNITS
		B05G	B10G	B20G	B40G	B60G	B80G	B100G	
Marking Code		MDD	MDD	MDD	MDD	MDD	MDD	MDD	
		UG3K	UG3K	UG3K	UG3K	UG3K	UG3K	UG3K	
		B05G	B10G	B20G	B40G	B60G	B80G	B100G	
Maximum repetitive peak reverse voltage	$V_{RRM}$	50	100	200	400	600	800	1000	V
Maximum RMS voltage	$V_{RMS}$	35	70	140	280	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	50	100	200	400	600	800	1000	V
Maximum average forward output rectified current at $T_A=40^\circ\text{C}$	$I_{(AV)}$	3.0							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	$I_{FSM}$	80.0							A
Maximum instantaneous forward voltage drop per bridge element at 3.0A	$V_F$	1.1							V
Maximum DC reverse current at rated DC blocking voltage	$I_R$	$T_A=25^\circ\text{C}$							$\mu\text{A}$
		$T_A=100^\circ\text{C}$							$\text{mA}$
Typical Junction Capacitance	$C_J$	21							$\text{pF}$
Typical Thermal Resistance	$R_{\theta JA}$	55							$^\circ\text{C/W}$
	$R_{\theta JL}$	15							
Operating junction temperature range	$T_J$	-55 to +150							$^\circ\text{C}$
storage temperature range	$T_{STG}$	-55 to +150							$^\circ\text{C}$

Note:1. Mounted on glass epoxy PC board with  $1.3\text{mm}^2$  solder pad.

2. Measured at 1.0 MHz and applied reverse voltage of 4.0V D.C.



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## Ratings And Characteristic Curves

Fig. 1 Output Current Derating Curve

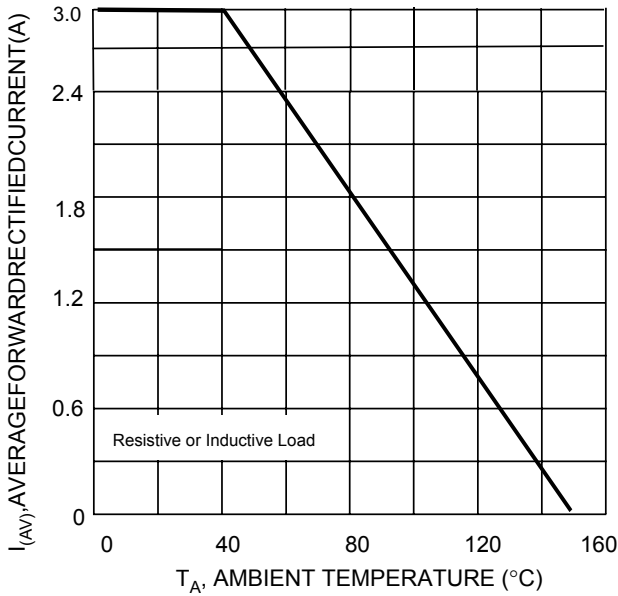


Fig. 2 Typical I Forward Characteristics (per leg)

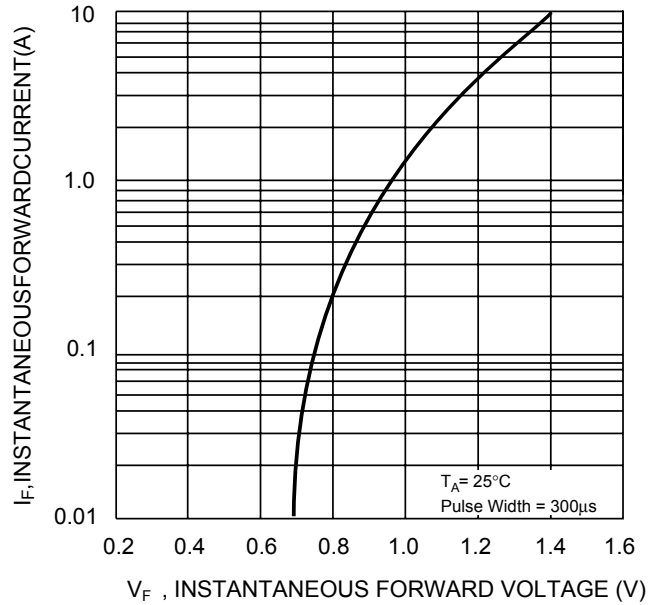


Fig. 3 Maximum Peak Forward Surge Current (per leg)

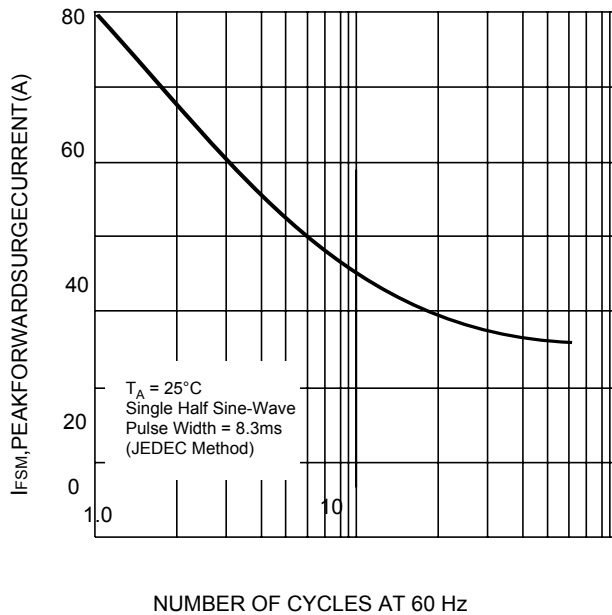
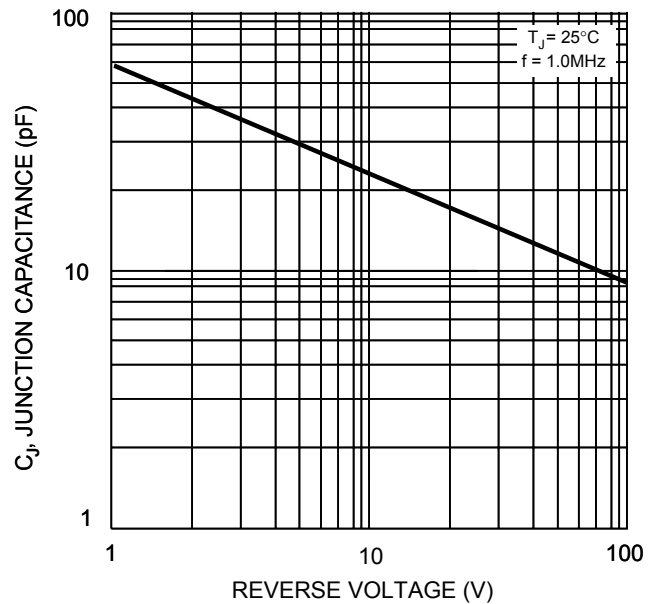


Fig.4 Typical Junction Capacitance Per Diode



The curve above is for reference only.