



# 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

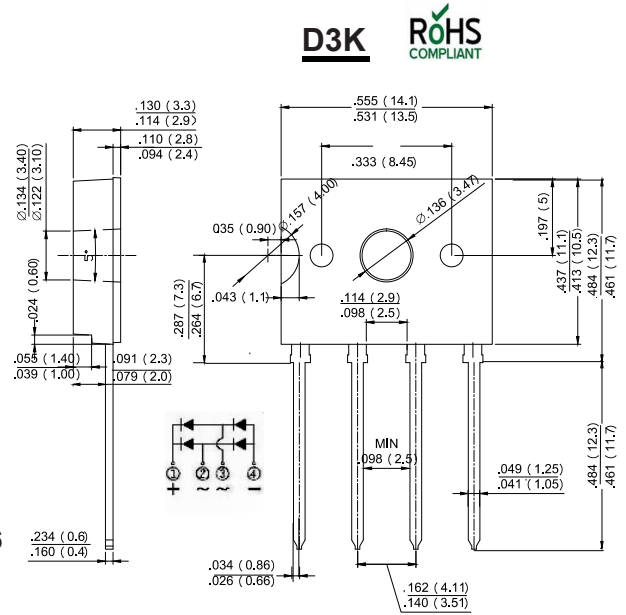
### Mechanical Data

**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	MDD								UNITS
		UG3KB05G	UG3KB10G	UG3KB20G	UG3KB40G	UG3KB60G	UG3KB80G	UG3KB100G		
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	$I_R$	$T_A=25^\circ\text{C}$							$\mu\text{A}$	
		$T_A=100^\circ\text{C}$							mA	
Typical Junction Capacitance	$C_J$	21							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 1.3mm<sup>2</sup> 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

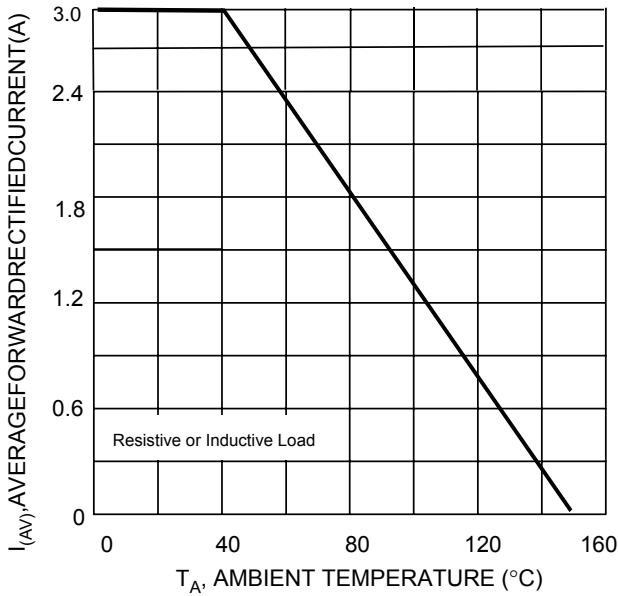


Fig. 2 Typical I Forward Characteristics (per leg)

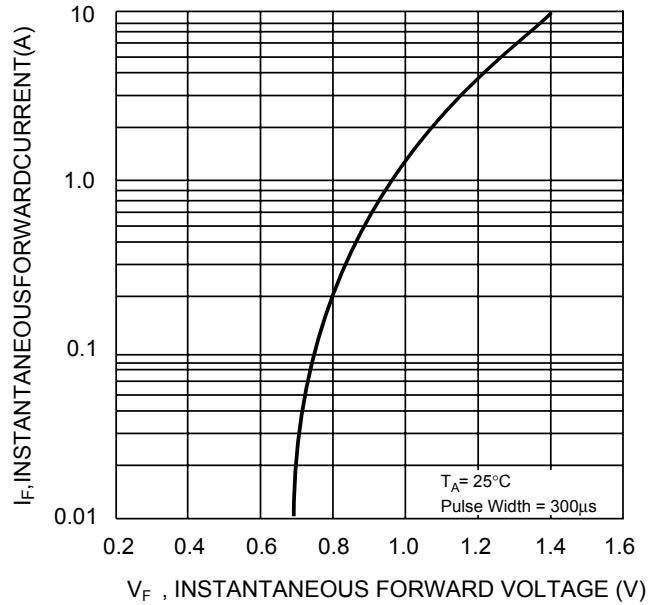


Fig. 3 Maximum Peak Forward Surge Current (per leg)

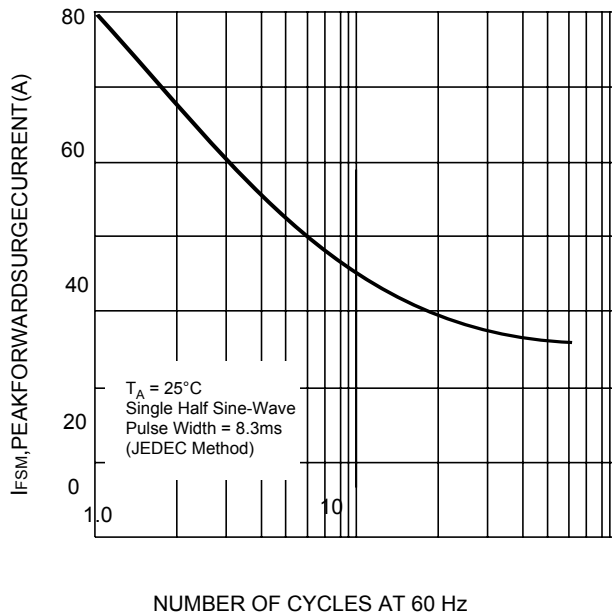
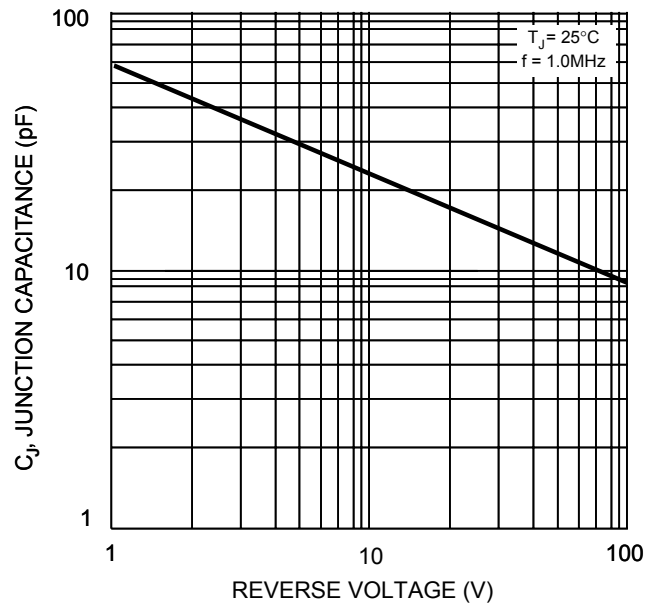


Fig.4 Typical Junction Capacitance Per Diode



The curve above is for reference only.