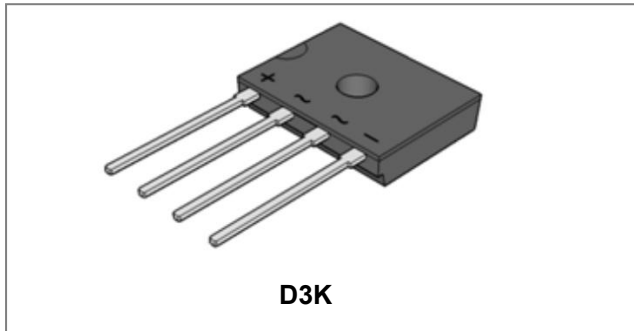




THE DATASHEET OF UG4KB100



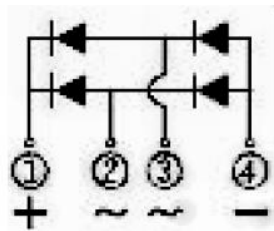
UG4KB05 THRU UG4KB100
Single-Phase 4.0A Glass Passivated Bridge Rectifier



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_A=25°C unless otherwise specified

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

Type Number	Symbol	UG4K B05	UG4K B10	UG4K B20	UG4K B40	UG4K B60	UG4K B80	UG4K 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 _A = 30°C With heat sink @T _A = 140°C	I_O	2.0 4.0							A
Non-Repetitive Peak Forward Surge Current 8.3ms Single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	120							A

Electrical Characteristics:

Type Number	Symbol	UG4K B05	UG4K B10	UG4K B20	UG4K B40	UG4K B60	UG4K B80	UG4K B100	Units	
Forward Voltage (per element) * @ $I_F = 4.0A$	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					5.0 500				μA
Typical Junction Capacitance(per leg) (Note 1)	C_J					21				pF

* Pulse width < 300 μs , duty cycle < 2%

Thermal-Mechanical Specifications:

Type Number	Symbol	UG4K B05	UG4K B10	UG4K B20	UG4K B40	UG4K B60	UG4K B80	UG4K B100	Units	
Typical Thermal Resistance (per leg)(Note 2)	$R_{\theta JA}$ $R_{\theta JL}$					55 15				$^\circ C/W$
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.
2. Mounted on glass epoxy PC board with 1.3mm² solder pad.

Ratings and Characteristics Curves

Fig. 1 Output Current Derating Curve

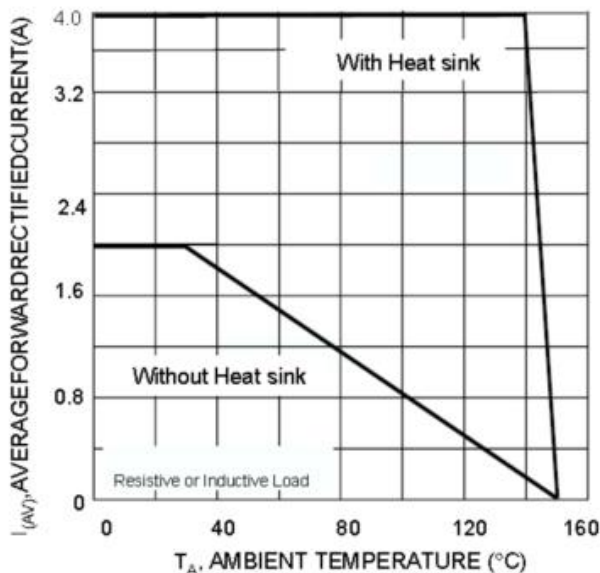


Fig. 2 Typical I Forward Characteristics (per leg)

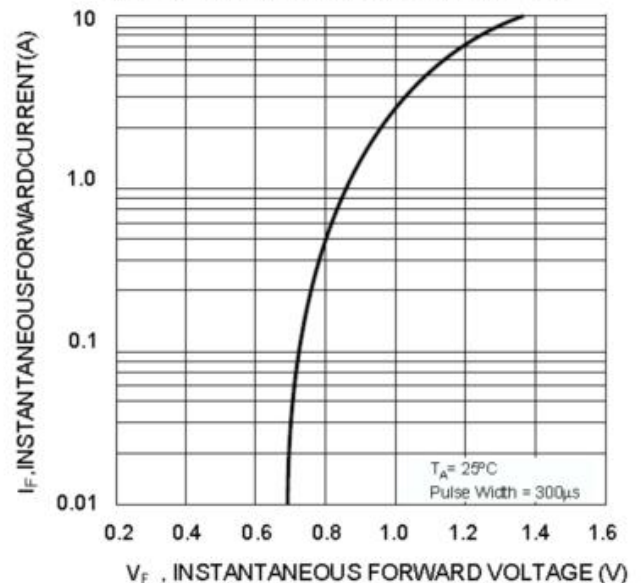


Fig. 3 Maximum Peak Forward Surge Current (per leg)

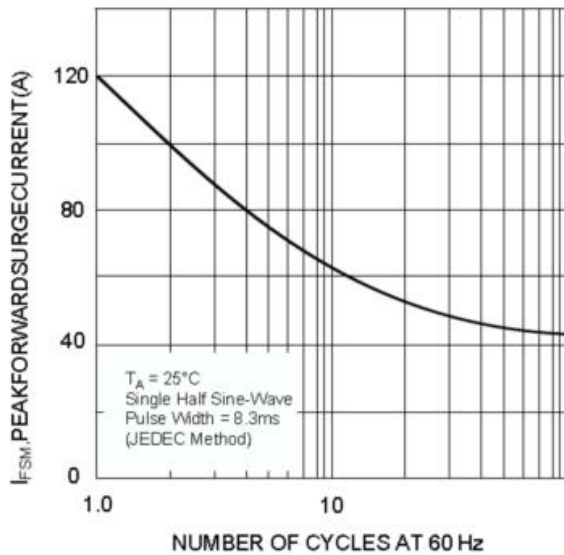


Fig.4 Typical Junction Capacitance Per Diode

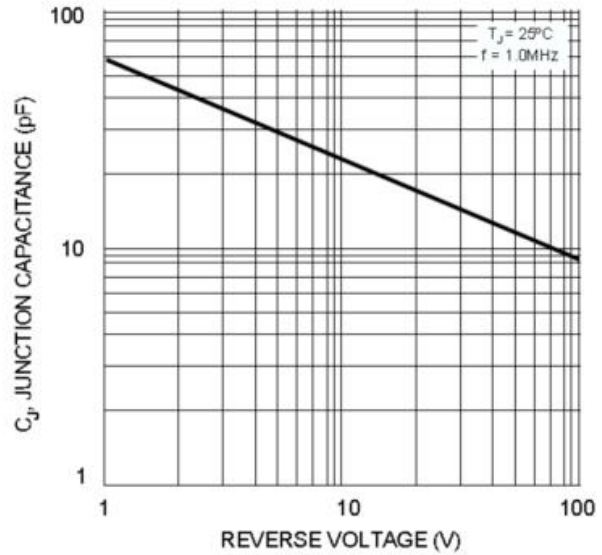
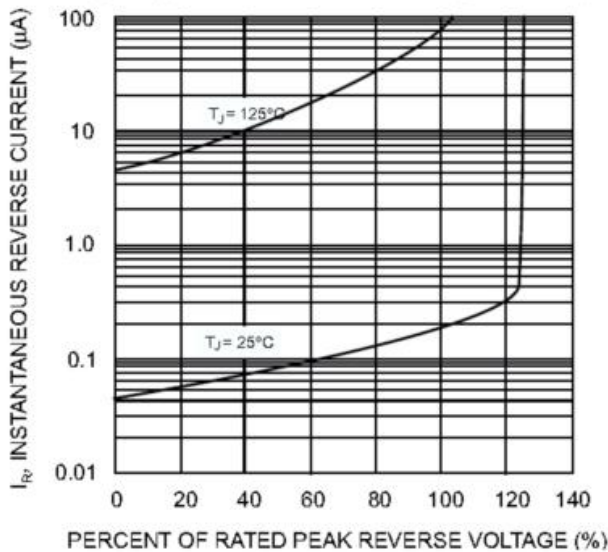


Fig. 5 Typical Reverse Characteristics (per element)

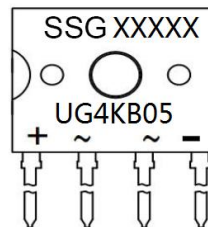


Ordering Information

Device	Package	Plating	Shipping
UG4KB05 THRU UG4KB100	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
UG4KB05 = Type Number

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

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