

## Glass Passivated Bridge Rectifier

### FEATURES

- Ideal for printed circuit board
- High case dielectric strength
- High surge current capability
- UL Recognized File # E-326243
- Compliant to RoHS Directive 2011/65/EU and in accordance to WEEE 2002/96/EC
- Halogen-free according to IEC 61249-2-21

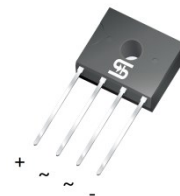
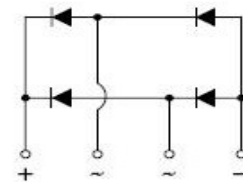
### APPLICATIONS

- Switching mode power supply (SMPS)
- Adapters
- TV
- Monitor

### MECHANICAL DATA

- Case: D3K
- Molding compound meets UL 94V-0 flammability rating
- Packing code with suffix "G" means green compound (halogen-free)
- Terminal : Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 1A whisker test
- Weight: 1.24 g (approximately)
- Mounting Torque: 0.8 N.M max.

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
$V_{RRM}$	600 - 1000	V
$I_{FSM}$	90	A
$T_{J\ MAX}$	150	°C
Package	D3K	
Configuration	Quad	


**D3K**


### ABSOLUTE MAXIMUM RATINGS ( $T_A = 25^\circ\text{C}$ unless otherwise noted)

PARAMETER	SYMBOL	UR3KB60	UR3KB80	UR3KB100	UNIT
Marking code on the device		UR3KB60	UR3KB80	UR3KB100	
Repetitive peak reverse voltage	$V_{RRM}$	600	800	1000	V
Reverse voltage, total rms value	$V_{R(RMS)}$	420	560	700	V
Maximum DC blocking voltage	$V_{DC}$	600	800	1000	
Maximum average forward current 60Hz sine wave resistance load	Without heat sink $T_A=29^\circ\text{C}$	1.2			A
	With heat sink $T_C=140^\circ\text{C}$	3.0			
Surge peak forward current, 8.3 ms single half sine-wave superimposed on rated load	$I_{FSM}$	90			A
$I^2t$ value (of a surge on-state current) <sup>(1)</sup>	$I^2t$	35			$\text{A}^2\text{s}$
Junction temperature	$T_J$	-55 to +150			°C
Storage temperature	$T_{STG}$	-55 to +150			°C

#### Note:

1. Pulse test with PW=8.3 ms

<b>THERMAL PERFORMANCE</b>			
<b>PARAMETER</b>	<b>SYMBOL</b>	<b>LIMIT</b>	<b>UNIT</b>
Junction-to-lead thermal resistance	$R_{\theta JL}$	5.5	°C/W
Junction-to-ambient thermal resistance	$R_{\theta JA}$	13.7	°C/W
Junction-to-case thermal resistance	$R_{\theta JC}$	5.2	°C/W

<b>ELECTRICAL SPECIFICATIONS</b> ( $T_A = 25^\circ\text{C}$ unless otherwise noted)					
<b>PARAMETER</b>	<b>CONDITIONS</b>	<b>SYMBOL</b>	<b>TYP</b>	<b>MAX</b>	<b>UNIT</b>
Forward voltage <sup>(1)</sup>	$I_F = 1.5 \text{ A}, T_J = 25^\circ\text{C}$	$V_F$	-	1.0	V
Reverse current @ rated $V_R$ <sup>(2)</sup>	$T_J = 25^\circ\text{C}$	$I_R$	-	10	$\mu\text{A}$

**Notes:**

1. Pulse test with  $PW=0.3 \text{ ms}$
2. Pulse test with  $PW=30 \text{ ms}$

<b>ORDERING INFORMATION</b>				
<b>PART NO.</b>	<b>PACKING CODE</b>	<b>PACKING CODE SUFFIX</b>	<b>PACKAGE</b>	<b>PACKING</b>
UR3KBx0 (Note 1,2)	C2	G	D3K	1,500 / BOX

**Notes:**

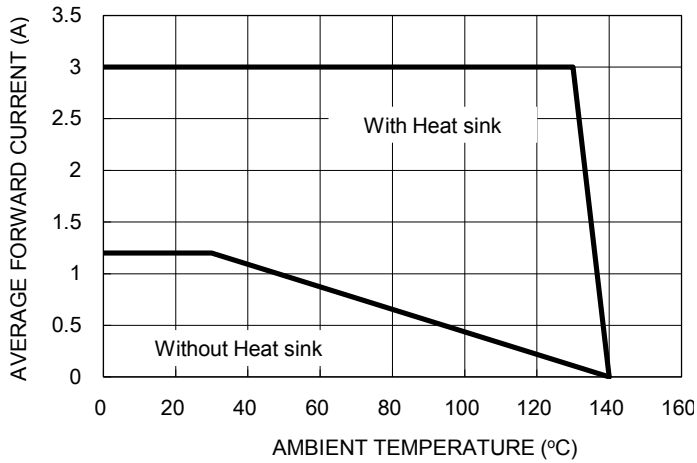
1. "x" defines voltage from 600V (UR3KB60) to 1000V (UR3KB100)
2. Whole series with green compound

<b>EXAMPLE</b>				
<b>PREFERRED P/N</b>	<b>PART NO.</b>	<b>PACKING CODE</b>	<b>PACKING CODE SUFFIX</b>	<b>DESCRIPTION</b>
UR3KB60 C2G	UR3KB60	C2	G	Green compound

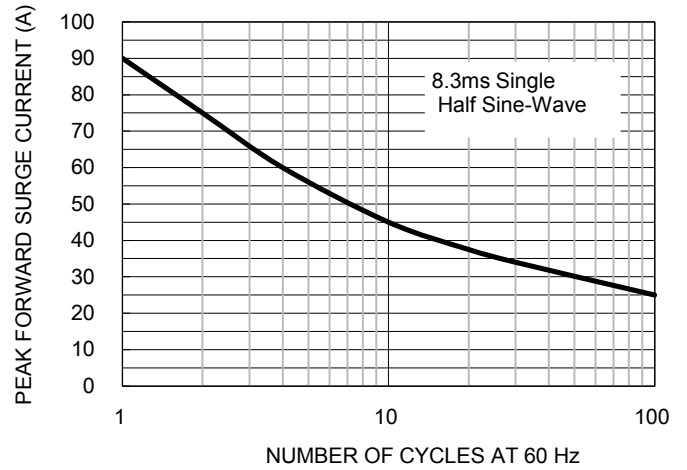
**RATINGS AND CHARACTERISTICS CURVES**

( $T_A = 25^\circ\text{C}$  unless otherwise noted)

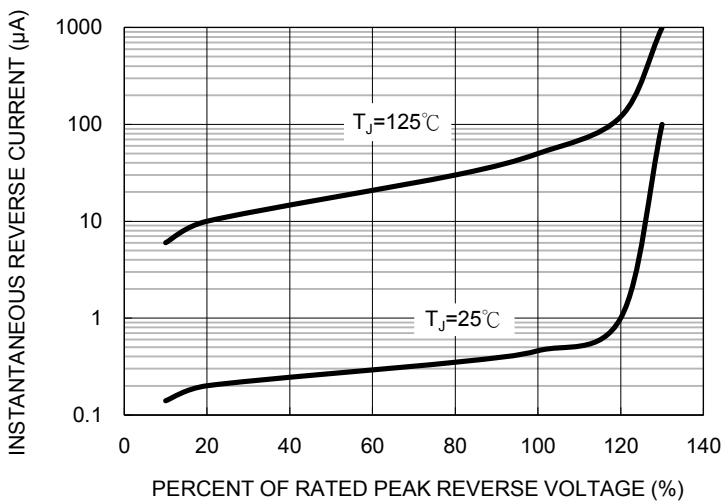
**Fig1. Maximum Derating Curve For Output current**



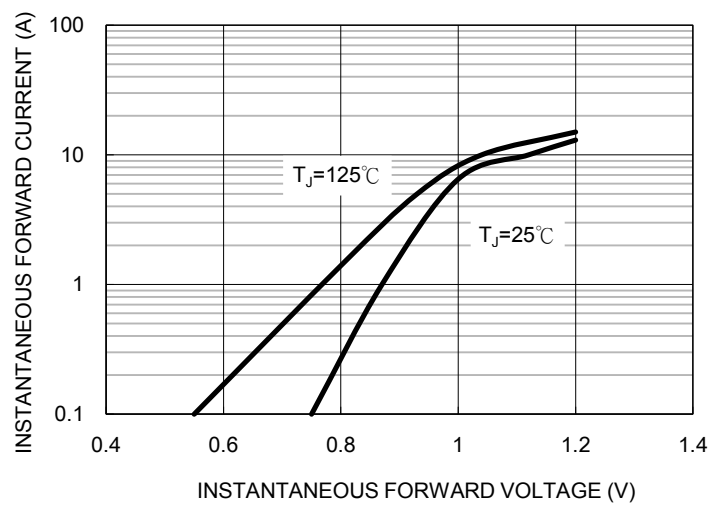
**Fig2. Maximum Forward Surge Current**



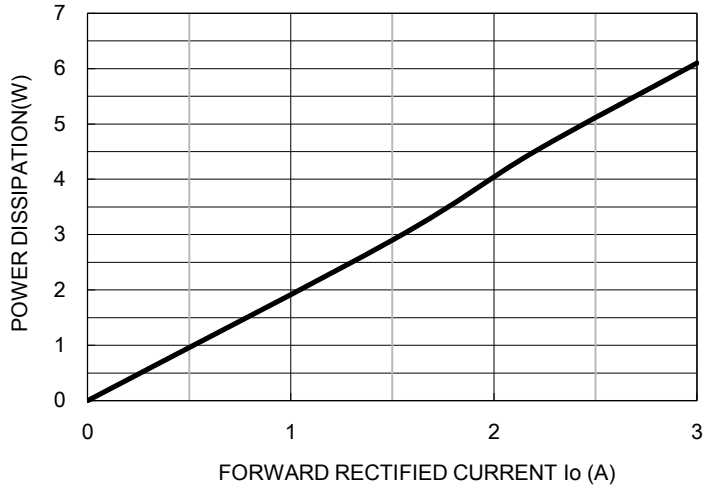
**Fig3. Typical Reverse Characteristics**



**Fig4. Typical Forward Characteristics**

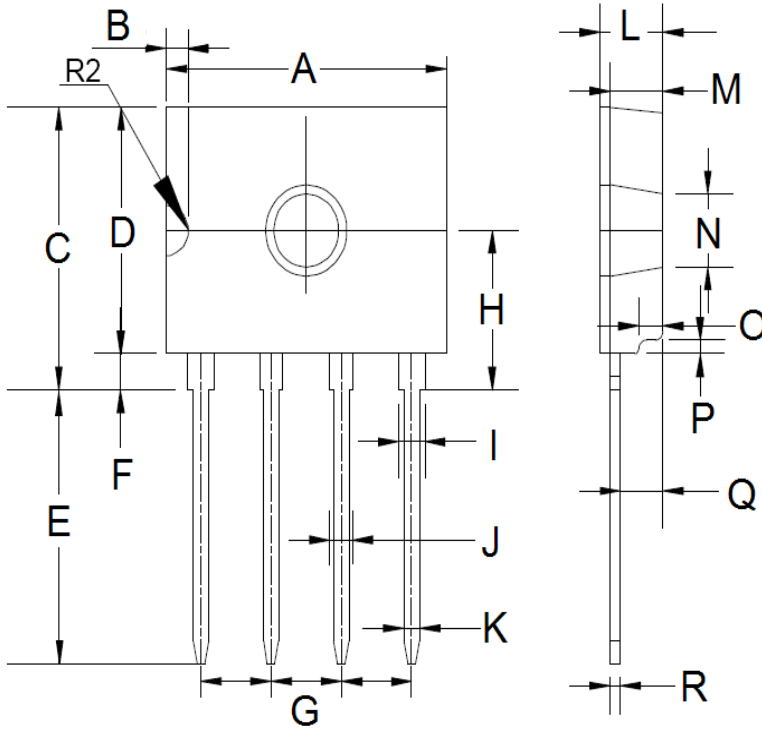


**Fig5. Forward Power Dissipation**



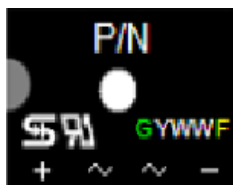
**PACKAGE OUTLINE DIMENSIONS**

D3K



DIM.	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	13.50	14.10	0.531	0.555
B	0.70	1.40	0.028	0.055
C	11.70	12.30	0.461	0.484
D	10.50	11.10	0.413	0.437
E	11.70	12.30	0.461	0.484
F	1.10	1.40	0.043	0.055
G	3.51	4.11	0.138	0.162
H	6.70	7.30	0.264	0.287
I	1.10	1.50	0.043	0.059
J	1.05	1.25	0.041	0.049
K	0.66	0.86	0.026	0.034
L	2.90	3.30	0.114	0.130
M	2.40	2.80	0.094	0.110
N	3.10	3.40	0.122	0.134
O	1.00	1.40	0.039	0.055
P	0.40	0.80	0.016	0.031
Q	1.80	2.40	0.071	0.094
R	0.40	0.60	0.016	0.024

**MARKING DIAGRAM**



- P/N = Marking Code
- G = Green Compound
- YWW = Date Code
- F = Factory Code

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