

4A, 600V - 1000V 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

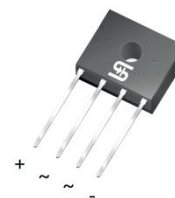
APPLICATIONS

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

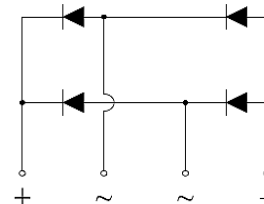
MECHANICAL DATA

- 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
- Mounting Torque: 0.8 Nm maximum
- Polarity: As marked
- Weight: 1.24 g (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
V_{RRM}	600 - 1000	V
$I_{F(AV)}$	4	A
I_{FSM}	135	A
$T_{J\ MAX}$	150	°C
Package	D3K	
Configuration	Quad	



D3K



ABSOLUTE MAXIMUM RATINGS (T _A = 25°C unless otherwise noted)						
PARAMETER		SYMBOL	UR4KB 60-B	UR4KB 80-B	UR4KB 100-B	UNIT
Marking code on the device			UR4KB60	UR4KB80	UR4KB100	
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 =120°C	I _{F(AV)}	2			A
	With heat sink T _C =138°C		4			
Surge peak forward current, 8.3 ms single half sine-wave superimposed on rated load		I _{FSM}	135			A
I ² t value (of a surge on-state current) ⁽¹⁾		I ² t	75			A ² 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

THERMAL PERFORMANCE

PARAMETER	SYMBOL	LIMIT	UNIT
Junction-to-lead thermal resistance	$R_{\theta JL}$	9.3	°C/W
Junction-to-ambient thermal resistance	$R_{\theta JA}$	14.0	°C/W
Junction-to-case thermal resistance	$R_{\theta JC}$	8.2	°C/W

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

PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage ⁽¹⁾	$I_F = 2\text{A}, T_J = 25^\circ\text{C}$	V_F	-	1.0	V
Reverse current @ rated V_R ⁽²⁾	$T_J = 25^\circ\text{C}$	I_R	-	10	μA

Notes:

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

ORDERING INFORMATION

PART NO.	PACKING CODE	PACKING CODE SUFFIX	PACKAGE	PACKING
UR4KBx0-B (Note 1, 2)	C2	G	D3K	1,500 / BOX

Notes:

1. "x" defines voltage from 600V (UR4KB60-B) to 1000V (UR4KB100-B)
2. Whole series with green compound

EXAMPLE

EXAMPLE P/N	PART NO.	PACKING CODE	PACKING CODE SUFFIX	DESCRIPTION
UR4KB60-B C2G	UR4KB60-B	C2	G	Green compound

RATINGS AND CHARACTERISTICS CURVES

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

Fig.1 Maximum Derating Curve For Output current

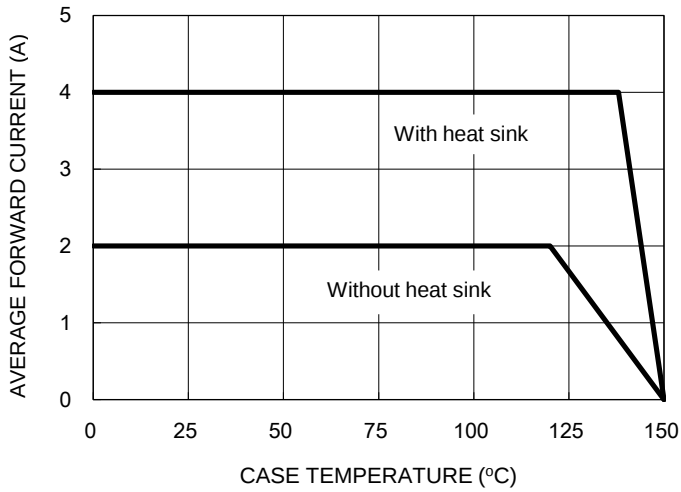


Fig.2 Maximum Forward Surge Current

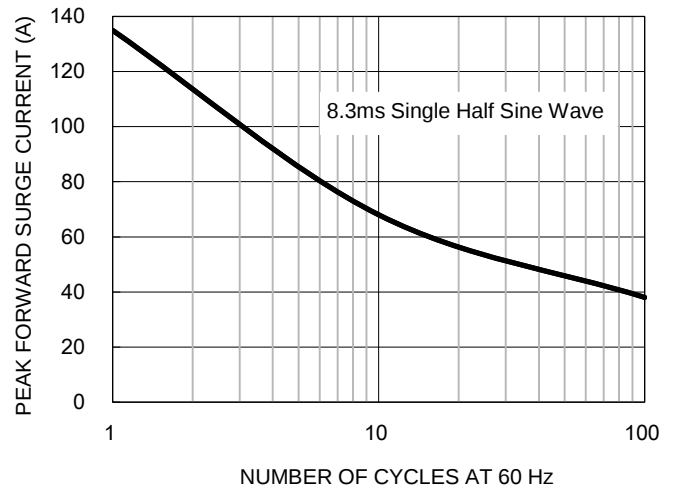


Fig.3 Typical Reverse Characteristics

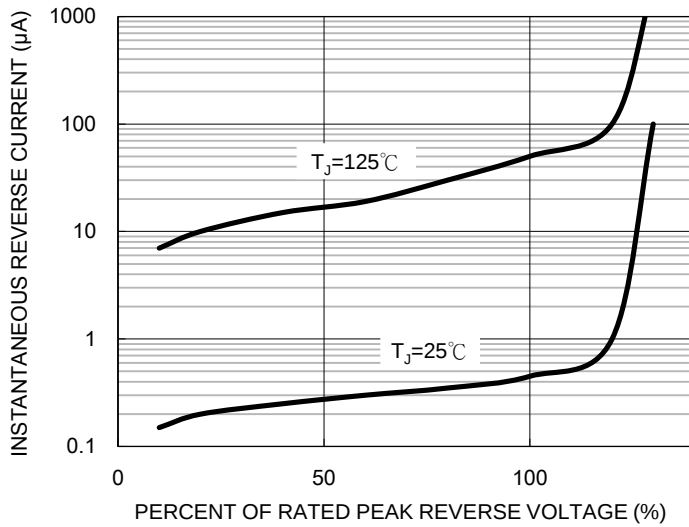
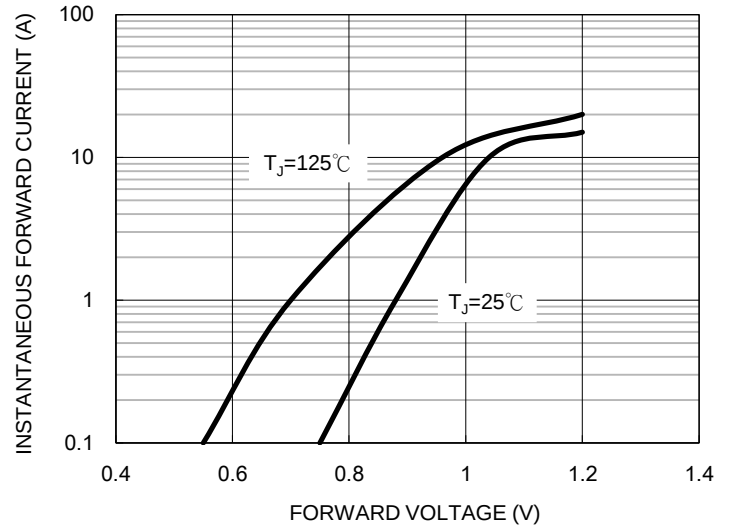


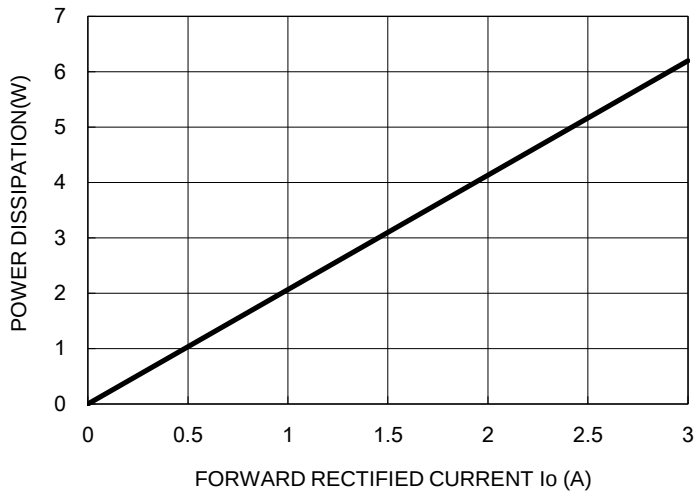
Fig.4 Typical Forward Characteristics



RATINGS AND CHARACTERISTICS CURVES

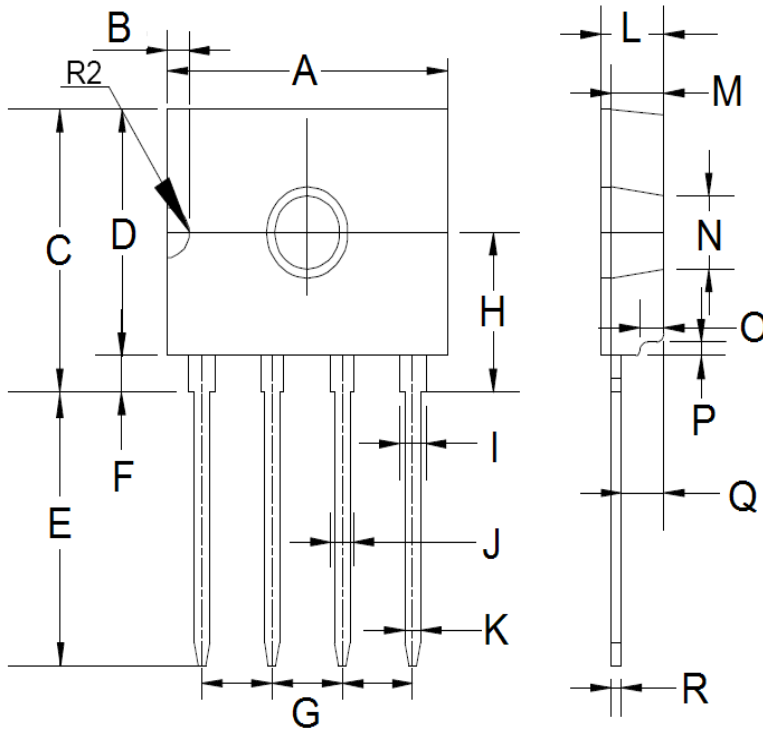
($T_A = 25^\circ\text{C}$ unless otherwise noted)

Fig.5 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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