

3A, 600V - 1000V Standard Bridge Rectifier

FEATURES

- Ideal for printed circuit board
- High case dielectric strength
- High surge current capability
- UL Recognized File # E-326243
- RoHS Compliant
- Halogen-free according to IEC 61249-2-21

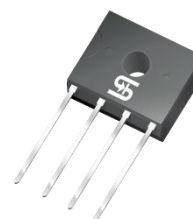
APPLICATIONS

- Switching mode power supply
- Adapters
- Lighting application

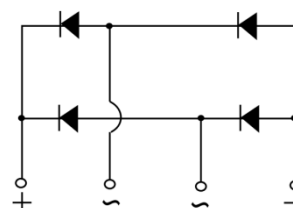
MECHANICAL DATA

- Case: D3K
- Molding compound meets UL 94V-0 flammability rating
- Terminal: Matte tin plated leads, solderable per J-STD-002
- Meet JESD 201 class 1A whisker test
- Mounting torque: 0.80 N·m maximum
- Polarity: As marked
- Weight: 1.24g (approximately)

KEY PARAMETERS		
PARAMETER	VALUE	UNIT
I_F	3	A
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
Forward current	Without heat sink, $T_A = 29^\circ\text{C}$	1.2			A
	With heat sink, $T_C = 140^\circ\text{C}$	3.0			A
Surge peak forward current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	90			A
Rating for fusing ($t < 8.3\text{ms}$)	I^2t	33.61			A^2s
Junction temperature	T_J	- 55 to +150			°C
Storage temperature	T_{STG}	- 55 to +150			°C

THERMAL PERFORMANCE			
PARAMETER	SYMBOL	TYP	UNIT
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

ELECTRICAL SPECIFICATIONS ($T_A = 25^\circ\text{C}$ unless otherwise noted)					
PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage per diode ⁽¹⁾	$I_F = 1.5\text{A}, T_J = 25^\circ\text{C}$	V_F	-	1	V
Reverse current @ rated V_R per diode ⁽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		
ORDERING CODE⁽¹⁾	PACKAGE	PACKING
UR3KBx	D3K	25 / Tube

Notes:

1. "x" defines voltage from 600V(UR3KB60) to 1000V(UR3KB100)

CHARACTERISTICS CURVES

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

Fig.1 Forward Current Derating Curve

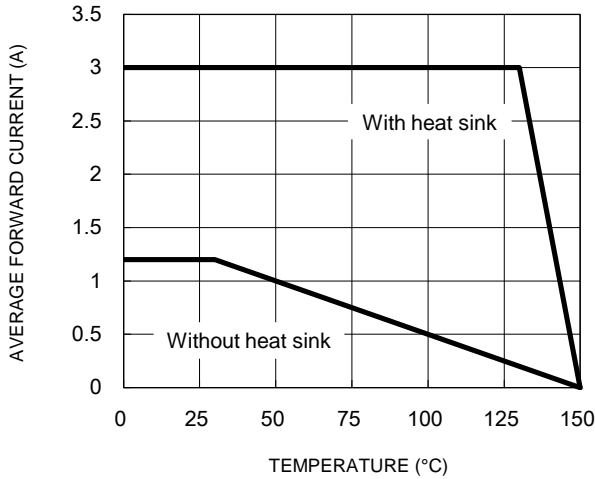


Fig.2 Forward Power Dissipation

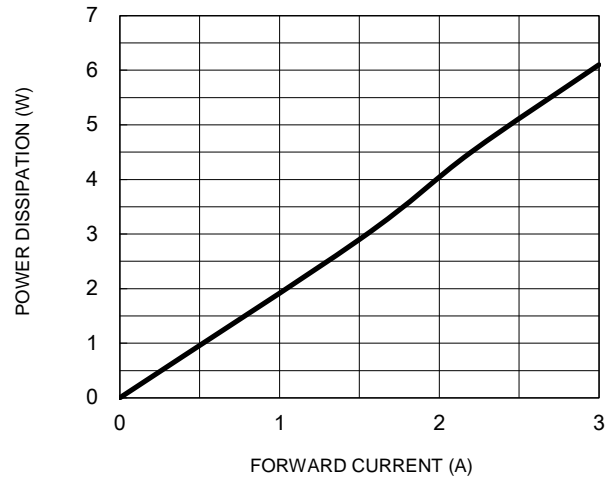


Fig.3 Typical Reverse Characteristics

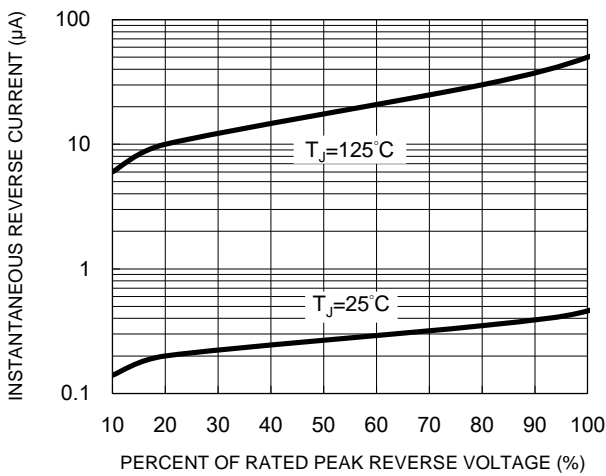


Fig.4 Typical Forward Characteristics

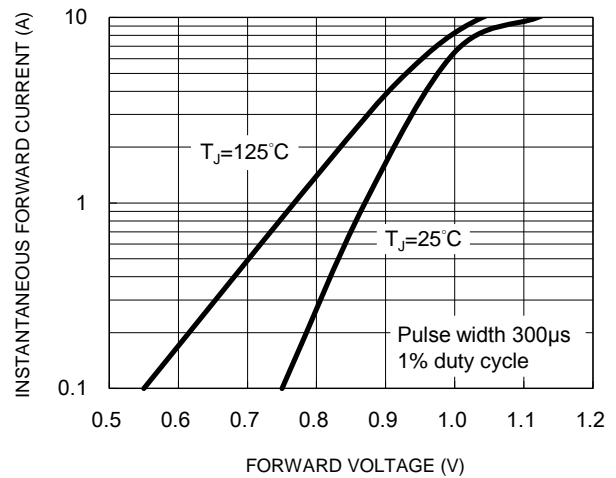
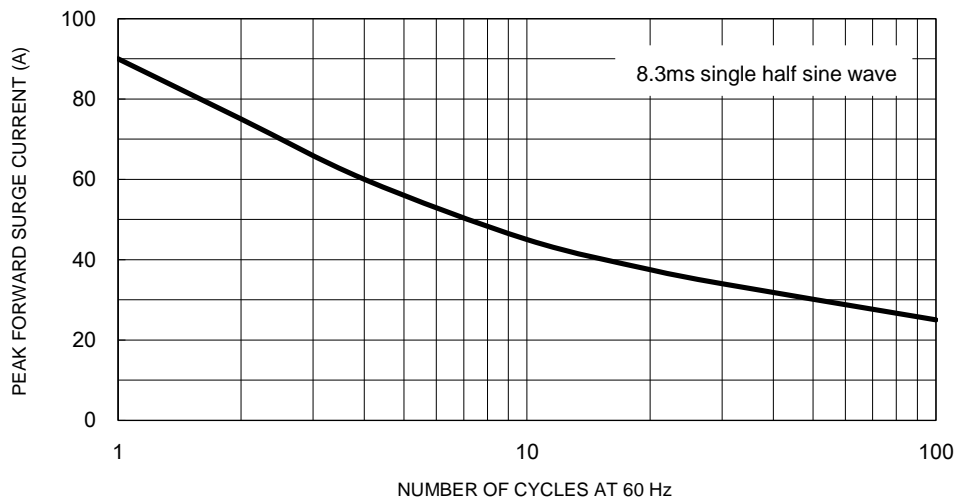
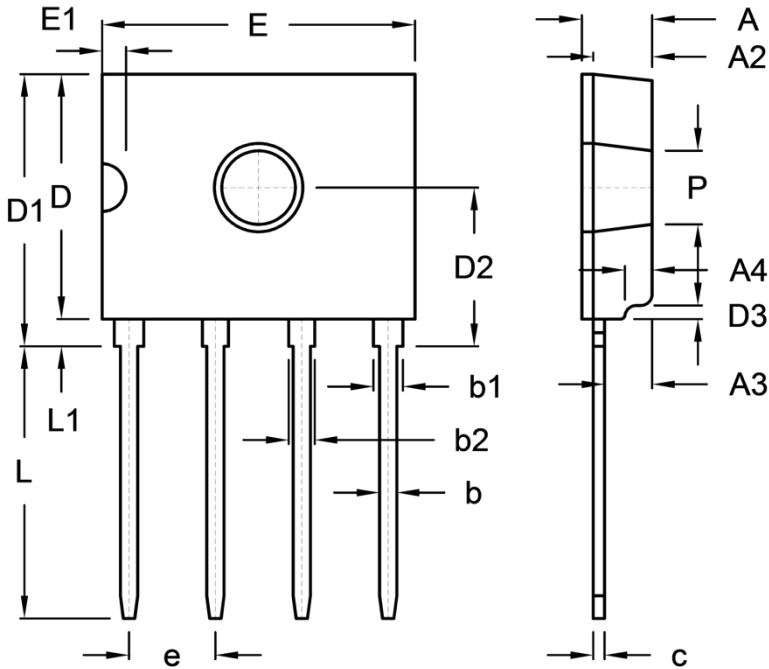


Fig.5 Maximum Non-Repetitive Forward Surge Current



PACKAGE OUTLINE DIMENSIONS

D3K



DIM.	Unit (mm)		Unit (inch)	
	Min.	Max.	Min.	Max.
A	2.90	3.30	0.114	0.130
A2	2.40	2.80	0.094	0.110
A3	1.80	2.40	0.071	0.094
A4	1.00	1.40	0.039	0.055
b	0.66	0.86	0.026	0.034
b1	1.10	1.50	0.043	0.059
b2	1.05	1.25	0.041	0.049
c	0.40	0.60	0.016	0.024
D	10.50	11.10	0.413	0.437
D1	11.70	12.30	0.461	0.484
D2	6.70	7.30	0.264	0.287
D3	0.40	0.80	0.016	0.031
E	13.50	14.10	0.531	0.555
E1	0.70	1.40	0.028	0.055
e	3.51	4.11	0.138	0.162
L	11.70	12.30	0.461	0.484
L1	1.10	1.40	0.043	0.055
P	3.10	3.40	0.122	0.134

MARKING DIAGRAM



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

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