

8A, 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

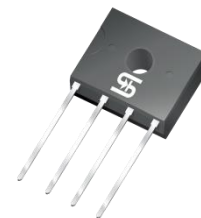
APPLICATIONS

- Switching mode power supply
- Adapters
- Lighting application

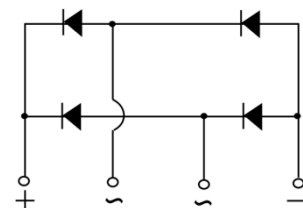
MECHANICAL DATA

- 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	8	A
V_{RRM}	600 - 1000	V
I_{FSM}	170	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	UR8KB60	UR8KB80	UR8KB100	UNIT
Marking code on the device		UR8KB60	UR8KB80	UR8KB100	
Repetitive peak reverse voltage	V_{RRM}	600	800	1000	V
Reverse voltage, total rms value	$V_{R(RMS)}$	420	560	700	V
Forward current	I_F	8			A
Surge peak forward current, 8.3ms single half sine-wave superimposed on rated load	I_{FSM}	170			A
Rating for fusing ($t < 8.3\text{ms}$)	I^2t	119.9			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	$R_{\theta JL}$	13	°C/W
Junction-to-ambient thermal resistance	$R_{\theta JA}$	25	°C/W
Junction-to-case thermal resistance	$R_{\theta JC}$	14	°C/W

Thermal Performance Note: Mounted on heat sink size of 4" x 6" x 0.25" Al-plate

ELECTRICAL SPECIFICATIONS ($T_A = 25^\circ\text{C}$ unless otherwise noted)					
PARAMETER	CONDITIONS	SYMBOL	TYP	MAX	UNIT
Forward voltage per diode ⁽¹⁾	$I_F = 4\text{A}, T_J = 25^\circ\text{C}$	V_F	0.93	1.10	V
	$I_F = 8\text{A}, T_J = 25^\circ\text{C}$		1.00	1.20	V
	$I_F = 4\text{A}, T_J = 125^\circ\text{C}$		0.81	1.00	V
	$I_F = 8\text{A}, T_J = 125^\circ\text{C}$		0.90	1.10	V
Reverse current @ rated V_R per diode ⁽²⁾	$T_J = 25^\circ\text{C}$	I_R	-	10	μA
	$T_J = 125^\circ\text{C}$		-	500	μA
Junction capacitance per diode	1MHz, $V_R = 4.0\text{V}$	C_J	63	-	pF

Notes:

1. Pulse test with PW = 0.3ms
2. Pulse test with PW = 30ms

ORDERING INFORMATION		
ORDERING CODE⁽¹⁾	PACKAGE	PACKING
UR8KBx	D3K	25 / Tube

Notes:

1. "x" defines voltage from 600V(UR8KB60) to 1000V(UR8KB100)

CHARACTERISTICS CURVES

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

Fig.1 Forward Current Derating Curve

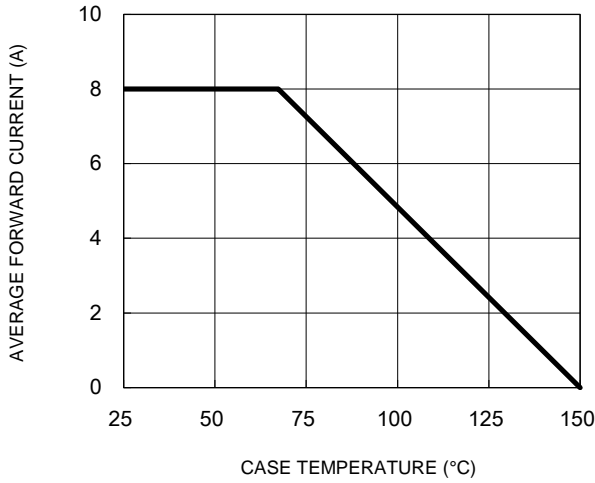


Fig.2 Typical Junction Capacitance

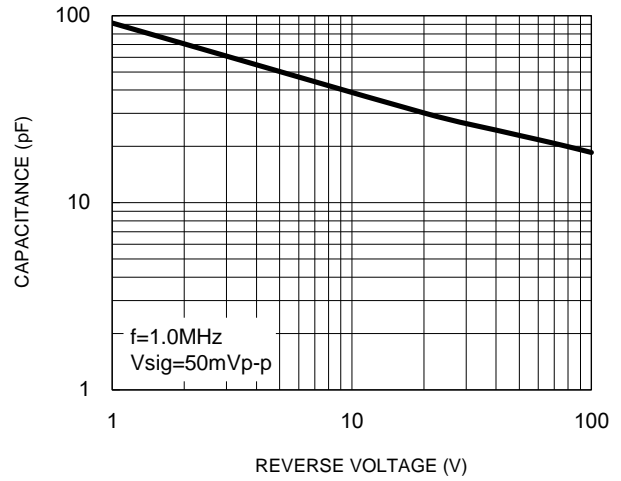


Fig.3 Typical Reverse Characteristics

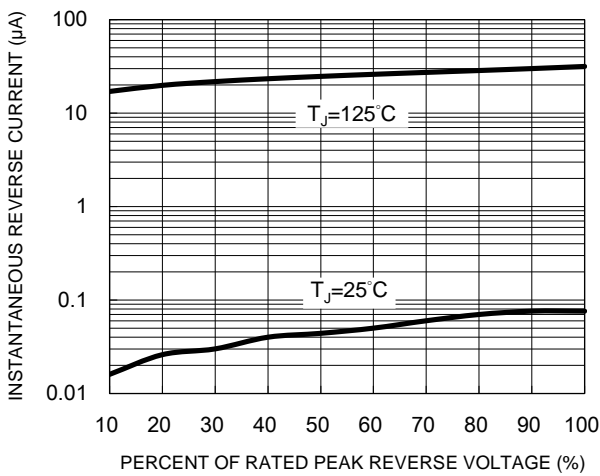
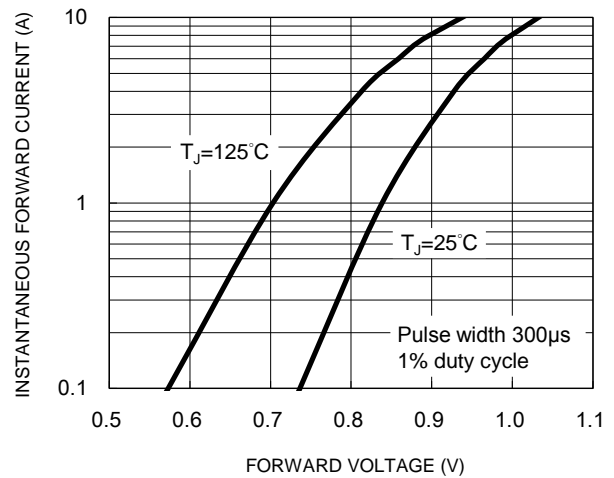
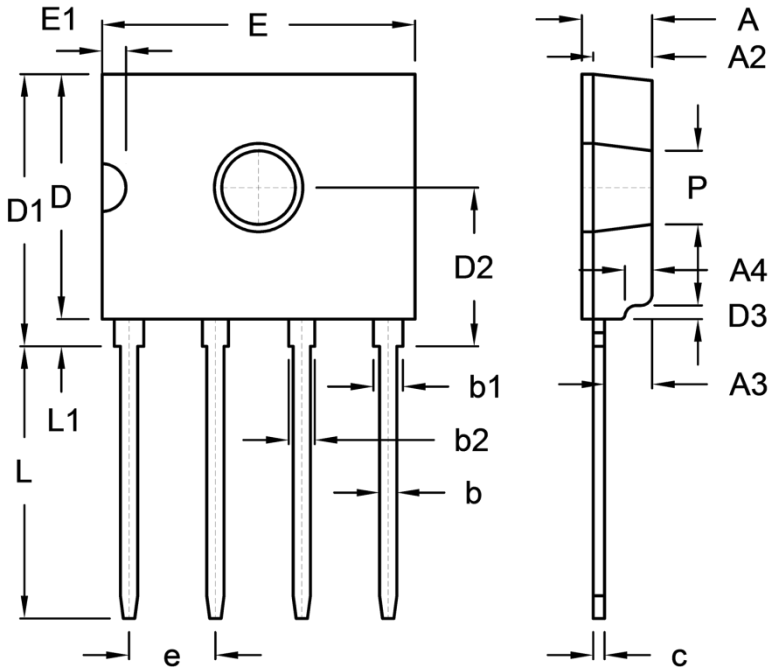


Fig.4 Typical Forward Characteristics



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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