

2A, 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

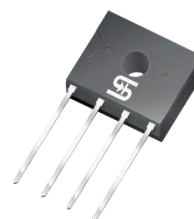
APPLICATIONS

- Switching mode power supply
- Adapters
- Lighting application

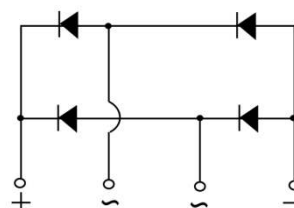
MECHANICAL DATA

- 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 | 2 | A |
| V_{RRM} | 600 - 1000 | V |
| I_{FSM} | 62 | 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 | UR2KB60 | UR2KB80 | UR2KB100 | UNIT |
| Marking code on the device | | UR2KB60 | UR2KB80 | UR2KB100 | |
| 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, $T_A = 25^\circ\text{C}$ | 1.2 | | | A |
| | With heat sink, $T_C = 143^\circ\text{C}$ | 2.0 | | | A |
| Surge peak forward current, 8.3ms single half sine-wave superimposed on rated load | I_{FSM} | 62 | | | A |
| Rating for fusing ($t < 8.3\text{ms}$) | I^2t | 15.95 | | | 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 | $R_{\theta JL}$ | 2.8 | °C/W |
| Junction-to-ambient thermal resistance | $R_{\theta JA}$ | 13.4 | °C/W |
| Junction-to-case thermal resistance | $R_{\theta JC}$ | 2.3 | °C/W |

| ELECTRICAL SPECIFICATIONS ($T_A = 25^\circ\text{C}$ unless otherwise noted) | | | | | |
|---|---|---------------|------------|------------|---------------|
| PARAMETER | CONDITIONS | SYMBOL | TYP | MAX | UNIT |
| Forward voltage per diode ⁽¹⁾ | $I_F = 1\text{A}, T_J = 25^\circ\text{C}$ | V_F | - | 1.05 | 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 |
| UR2KBx | D3K | 25 / Tube |

Notes:

1. "x" defines voltage from 600V(UR2KB60) to 1000V(UR2KB100)

CHARACTERISTICS CURVES

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

Fig.1 Forward Current Derating Curve

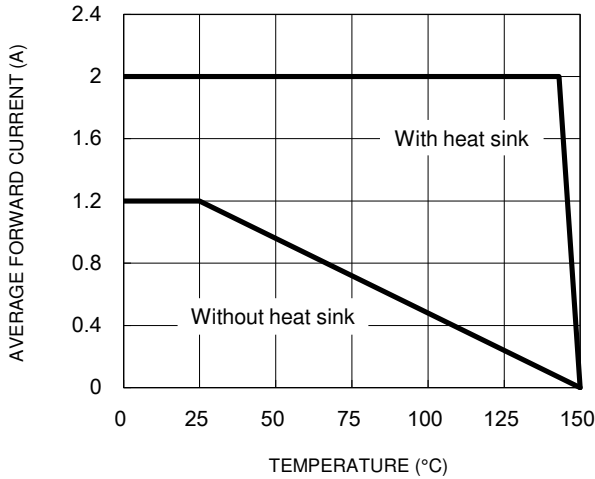


Fig.2 Forward Power Dissipation

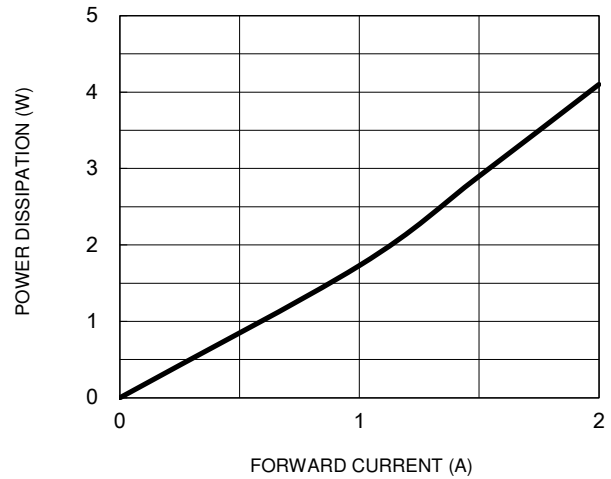


Fig.3 Typical Reverse Characteristics

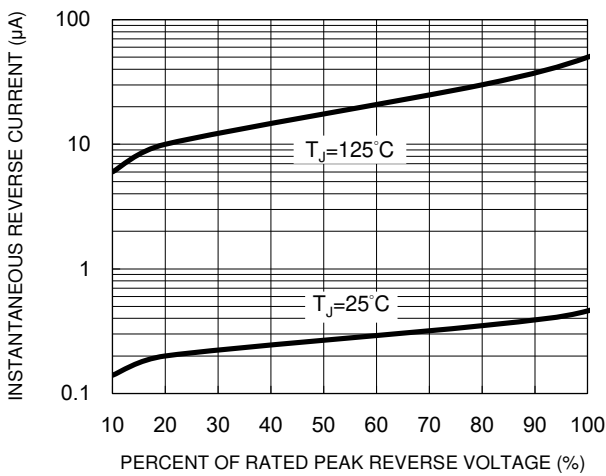


Fig.4 Typical Forward Characteristics

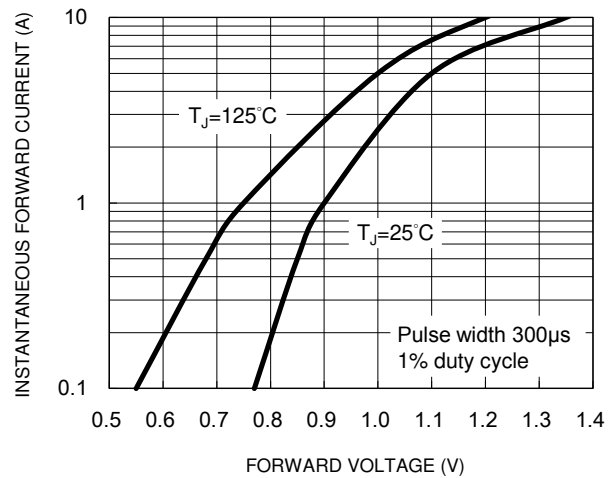
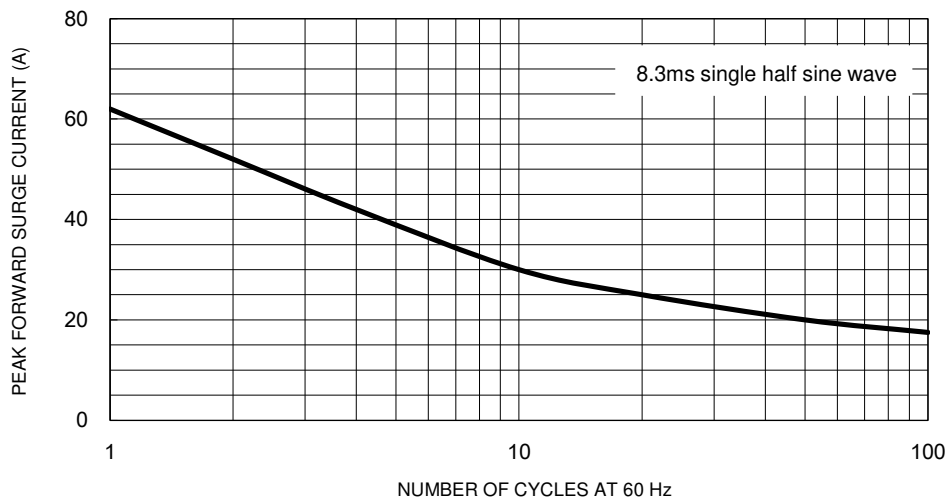
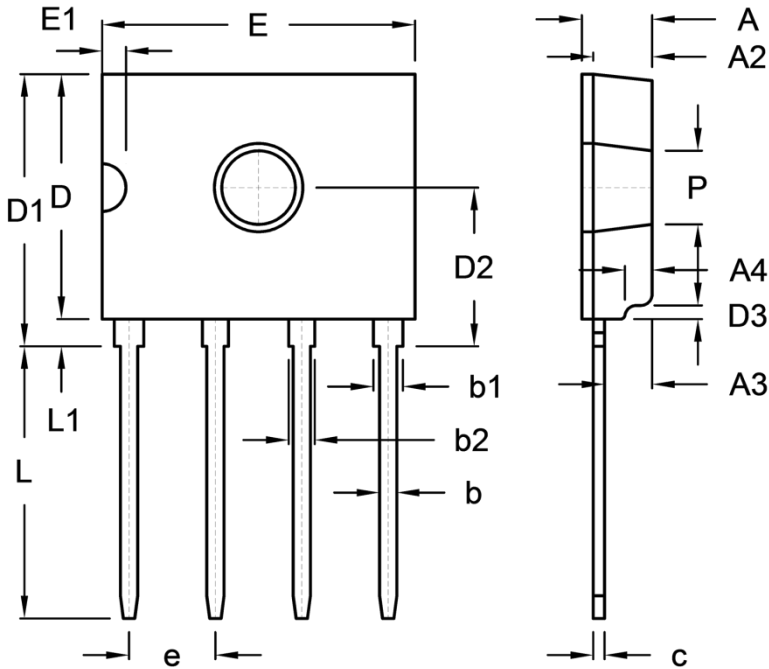


Fig.5 Maximum Non-Repetitive Forward Surge Current



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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