

**4.0A SURFACE MOUNT FAST GLASS PASSIVATED BRIDGE RECTIFIER**
**Product Summary** (@T<sub>A</sub> = +25°C)

V <sub>RRM</sub> (V)	I <sub>O</sub> (A)	V <sub>F</sub> (V)	I <sub>R</sub> (μA)
800	4.0	1.0	10

**Description and Applications**

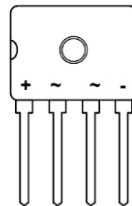
Suitable for AC to DC bridge full wave rectification for LED lighting, adapter, battery charger, home appliances, office equipment, and telecommunication applications.

**Features and Benefits**

- Glass Passivated Die Construction
- High Current Capability
- Ideal for SMT Manufacturing
- Low Forward Voltage Drop
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

**Mechanical Data**

- Case: D3K
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Lead Free Plating (Matte Tin Finish). Solderable per MIL-STD-202, Method 208 (e3)
- Polarity: As Marked on Body
- Mounting Position: Any
- Mounting Torque: 0.8 N.m Max.
- Weight: 0.023 grams (Approximate)

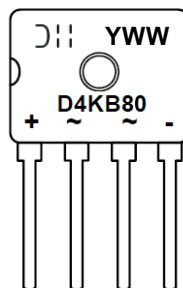


Pin Diagram

**Ordering Information** (Note 4)

Part Number	Compliance	Case	Packaging
D4KB80	Commercial	D3K	37/Tube

- Notes:
1. EU Directive 2002/95/EC (RoHS), 2011/65/EU (RoHS 2) & 2015/863/EU (RoHS 3) compliant. All applicable RoHS exemptions applied.
  2. See <https://www.diodes.com/quality/lead-free/> for more information about Diodes Incorporated's definitions of Halogen- and Antimony-free, "Green" and Lead-free.
  3. Halogen- and Antimony-free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
  4. For packaging details, go to our website at <https://www.diodes.com/design/support/packaging/diodes-packaging/>.

**Marking Information**


- D4KB80= Product Type Marking Code  
 DII= Manufacturers' Code Marking  
 YWW = Date Code Marking  
 Y = Last Digit of Year (ex: 0 = 2020)  
 WW= Week Code (01 to 53)

**Maximum Ratings and Electrical Characteristics** (@T<sub>A</sub> = +25°C, unless otherwise specified.)

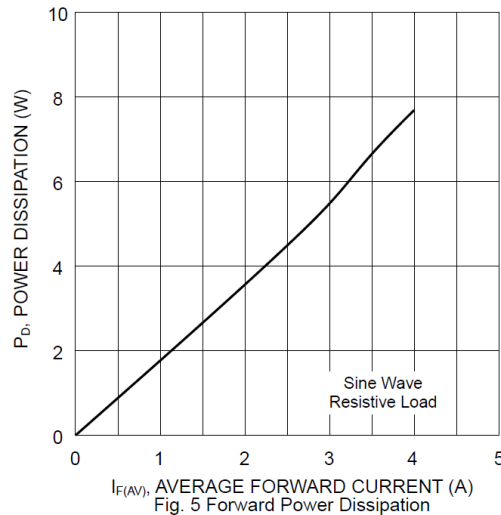
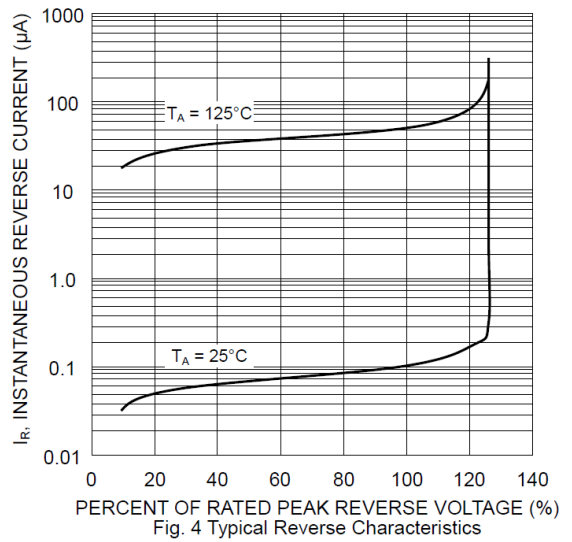
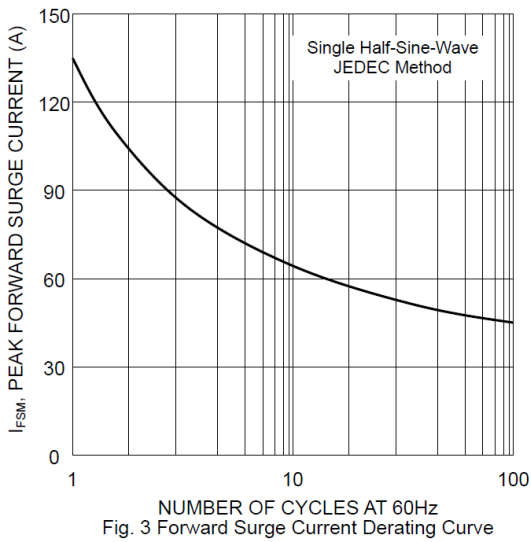
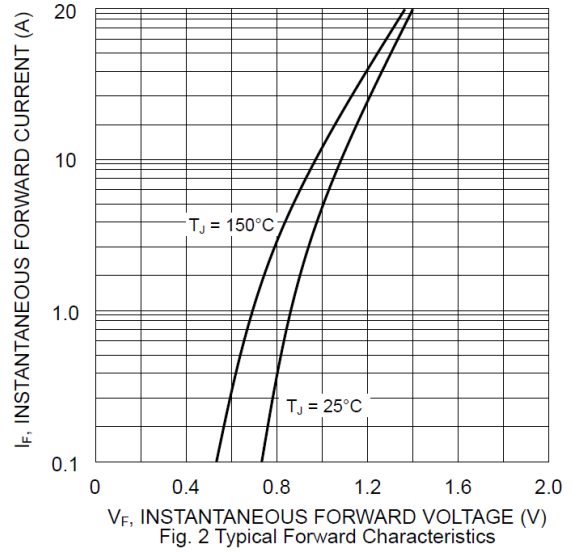
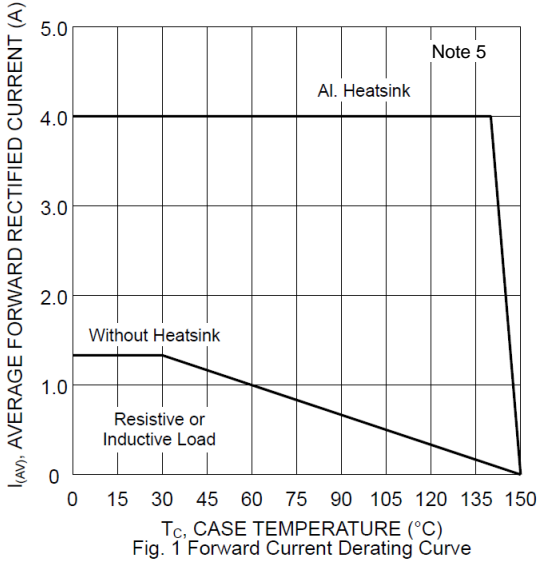
Single phase, half wave, 60Hz, resistive or inductive load.  
For capacitive load, derate current by 20%.

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	800	V
RMS Reverse Voltage	V <sub>R(RMS)</sub>	560	V
Average Rectified Output Current (Note 5) @ T <sub>C</sub> = +140°C (Without Heatsink) @ T <sub>C</sub> = +30°C	I <sub>o</sub>	4.0 1.3	A
Non-Repetitive Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>	135	A
I <sup>2</sup> t Rating for Fusing (1ms < t < 8.3ms)	I <sup>2</sup> t	75	A <sup>2</sup> S
Maximum Forward Voltage (Per Element) @ I <sub>F</sub> = 2.0A	V <sub>FM</sub>	1.0	V
Peak Reverse Current @ T <sub>A</sub> = +25°C At Rated DC Blocking Voltage (Note 6) @ T <sub>A</sub> = +125°C	I <sub>R</sub>	10 500	μA
Typical Total Capacitance (Per Element) (Note 7)	C <sub>T</sub>	17	pF

**Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance, Junction to Case (Note 5) (Per Element)	R <sub>θJC</sub>	1.5	°C/W
Typical Thermal Resistance, Junction to Lead (Per Element)	R <sub>θJL</sub>	55	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	°C

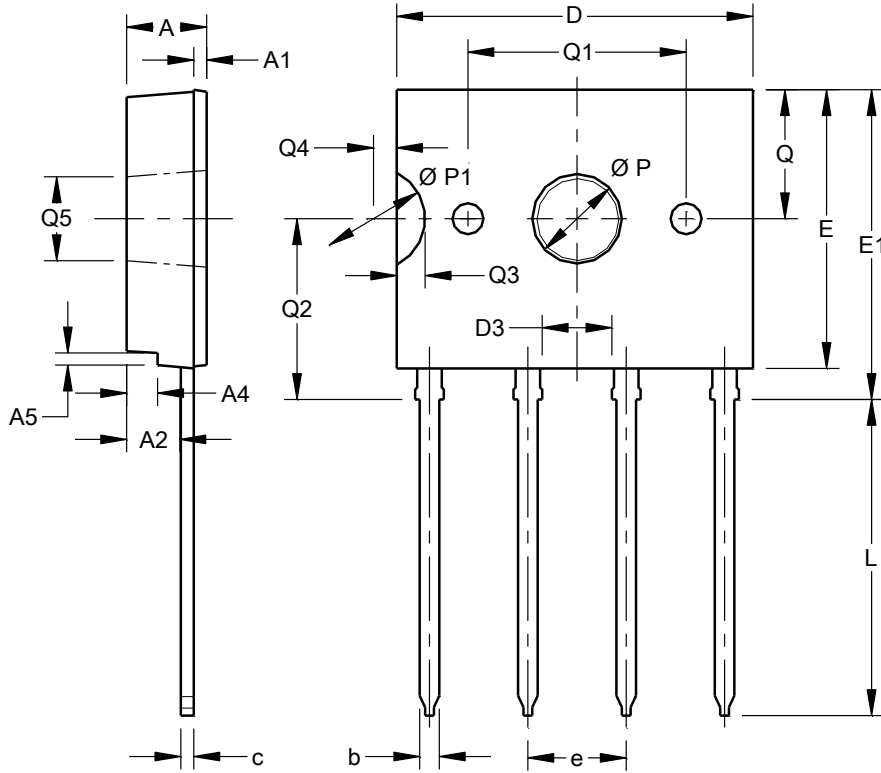
Notes: 5. Device mounted on FR-4 PCB with 75mm x 75mm x 1.6mm aluminum heatsink.  
6. Short duration pulse test used to minimize self-heating effect.  
7. Measured at 1.0MHz and applied reverse voltage of 4.0V D.C.



**Package Outline Dimensions**

Please see <http://www.diodes.com/package-outlines.html> for the latest version.

**D3K**



D3K			
Dim	Min	Max	Typ
A	2.90	3.30	--
A1	0.40	0.60	--
A2	2.00	2.30	--
A4	1.00	1.40	--
A5	--	--	0.60
b	0.66	0.86	--
c	0.40	0.60	--
D	13.50	14.10	--
D3	2.50	2.90	--
E	10.50	11.10	--
E1	11.70	12.30	--
e	3.51	4.11	--
L	11.70	12.30	--
Q	--	--	5.00
Q1	8.255	8.650	--
Q2	6.70	7.30	--
Q3	--	--	1.10
Q4	--	--	0.90
Q5	3.10	3.40	--
ØP	--	--	3.47
ØP1	--	--	4.00
<b>All Dimensions in mm</b>			

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