

4.0A SURFACE MOUNT FAST GLASS PASSIVATED BRIDGE RECTIFIER

Product Summary (@T_A = +25°C)

V _{RRM} (V)	I _O (A)	V _F (V)	I _R (μA)
800	4.0	1.0	10

Description and Applications

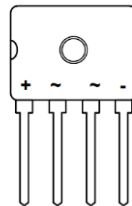
Suitable for AC to DC bridge full wave rectification for LED lighting, adapter, battery charger, home appliances, office equipment, and telecommunication applications.

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)



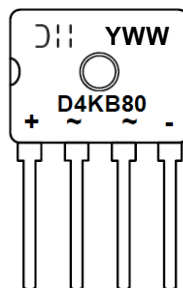
Pin Diagram

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
 D4KB80= 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_A = +25°C, unless otherwise specified.)

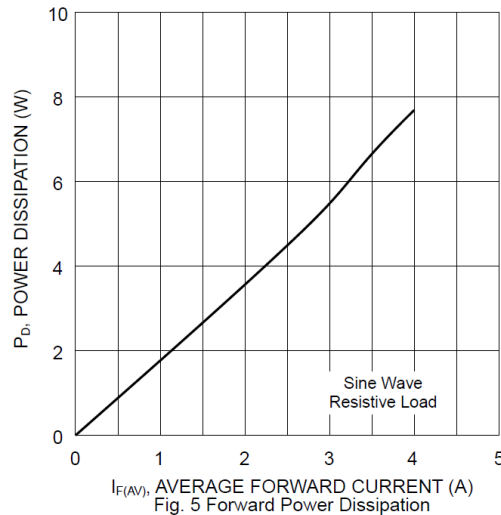
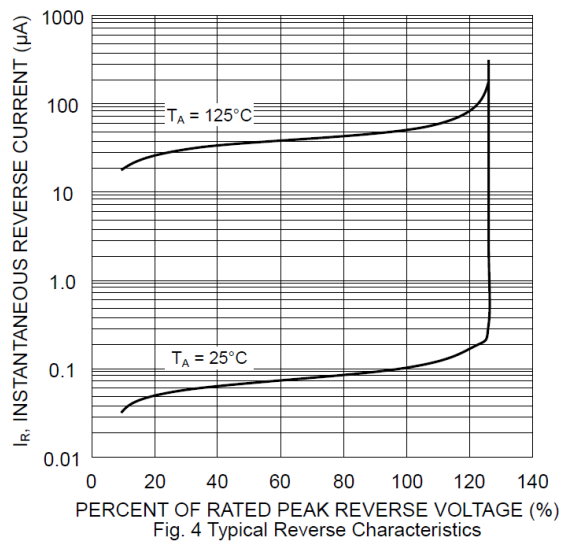
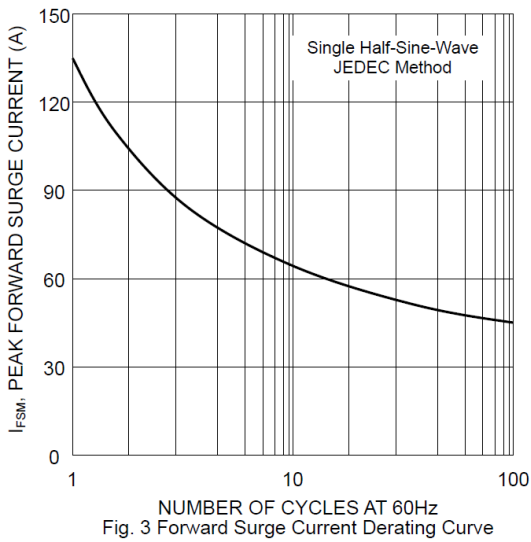
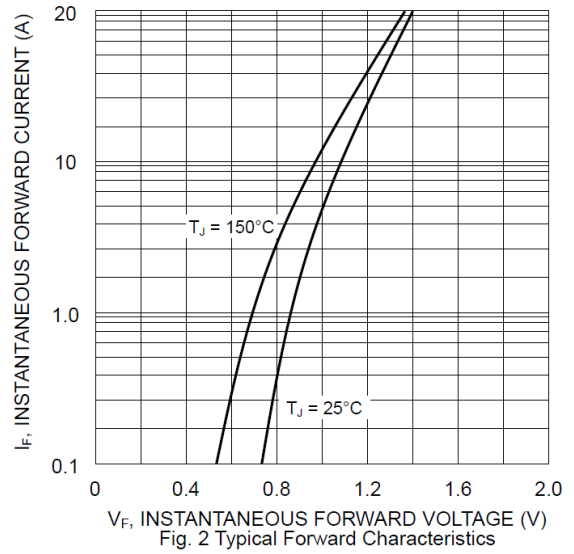
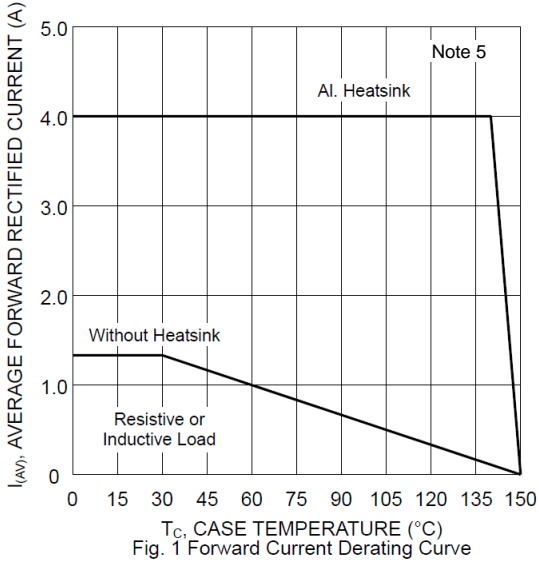
Single phase, half wave, 60Hz, resistive or inductive load.
For capacitive load, derate current by 20%.

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

Thermal Characteristics

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

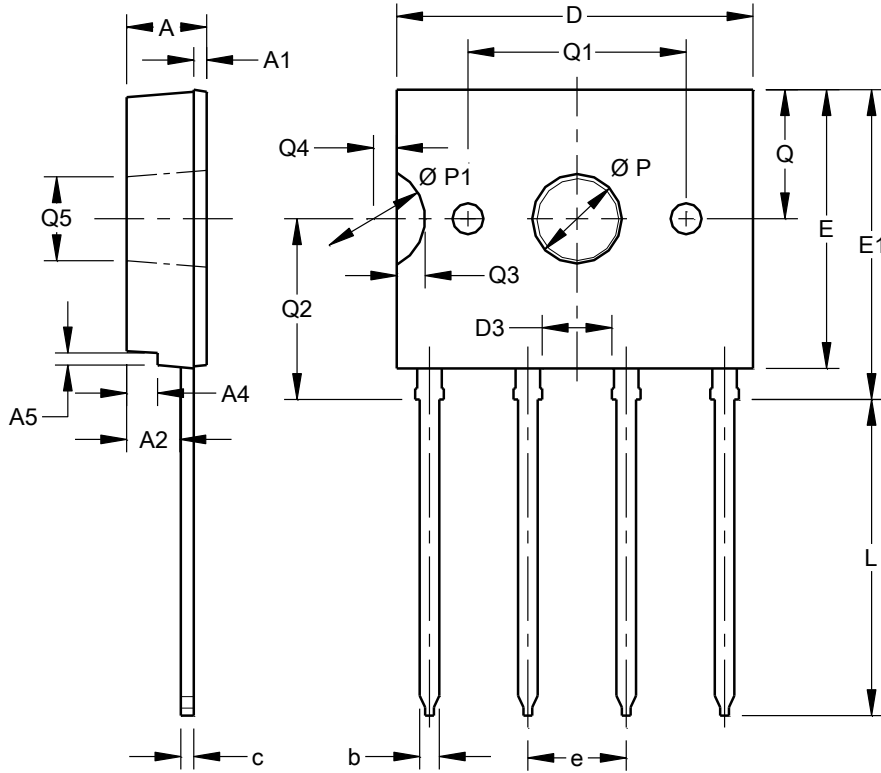
Notes: 5. Device mounted on FR-4 PCB with 75mm x 75mm x 1.6mm aluminum heatsink.
6. Short duration pulse test used to minimize self-heating effect.
7. Measured at 1.0MHz and applied reverse voltage of 4.0V D.C.



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
All Dimensions in mm			

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