

**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)
1000	2	1.0	5

**Description and Applications**

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

**Features and Benefits**

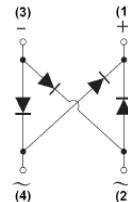
- Glass Passivated Die Construction
- Miniature Package Saves Space on PC Boards
- Low Leakage Current
- Ideal for SMT Manufacturing
- Low Forward Voltage Drop
- Surge Overload Rating to 70A Peak
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

**Mechanical Data**

- Case: DBF
- 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
- Weight: 0.214 grams (Approximate)



Top View



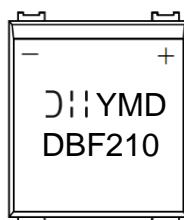
Internal Schematic

**Ordering Information** (Note 4)

Part Number	Compliance	Case	Packaging
DBF210-13	Commercial	DBF	3,000/Tape & Reel

Notes:

1. EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant. All applicable RoHS exemptions applied.
2. See [http://www.diodes.com/quality/lead\\_free.html](http://www.diodes.com/quality/lead_free.html) 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**

DBF210 = Product Type Marking Code

DII = Manufacturers' Code Marking

YMD = Date Code Marking

Y = Last Digit of Year (ex: 7 = 2017)

M = See Month/Code Table Below

D = Day 1~9 = 1~9; Day 10~31 = A~V

Month	Jan	Feb	Mar	Apr	May	Jun	Jul	Aug	Sep	Oct	Nov	Dec
Code	1	2	3	4	5	6	7	8	9	O	N	D

## Maximum Ratings (@ $T_A = +25^\circ\text{C}$ , 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	$V_{RRM}$		
Working Peak Reverse Voltage	$V_{RWM}$	1000	V
DC Blocking Voltage	$V_R$		
RMS Reverse Voltage	$V_R(\text{RMS})$	700	V
Average Rectified Output Current (Note 5) @ $T_C = +110^\circ\text{C}$	$I_O$	2.0	A
Non-Repetitive Peak Forward Surge Current, 8.3ms Single Half Sine-Wave Superimposed on Rated Load	$I_{FSM}$	70	A
$I^2t$ Rating for Fusing (1ms < $t$ < 8.3ms)	$I^2t$	20.34	$\text{A}^2\text{s}$

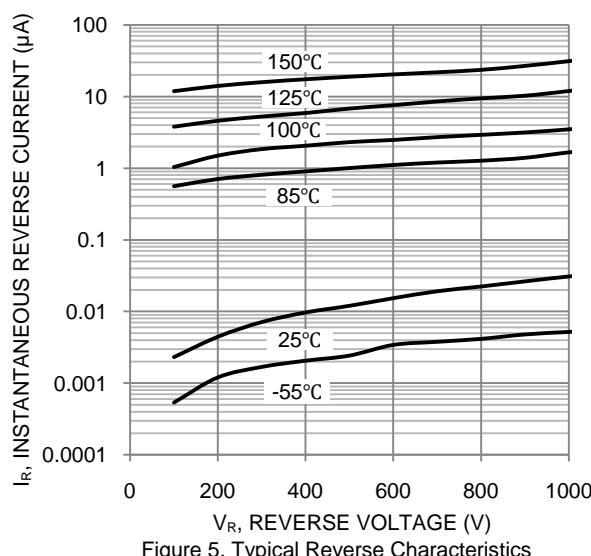
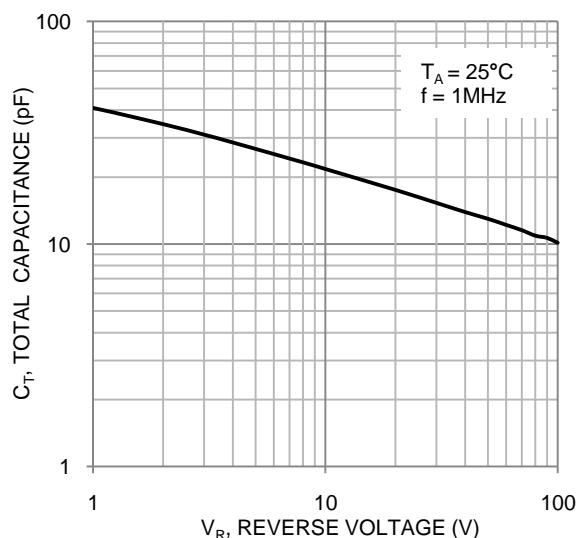
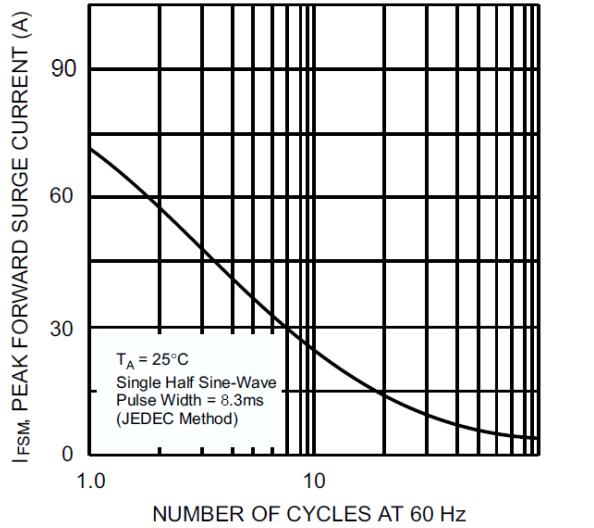
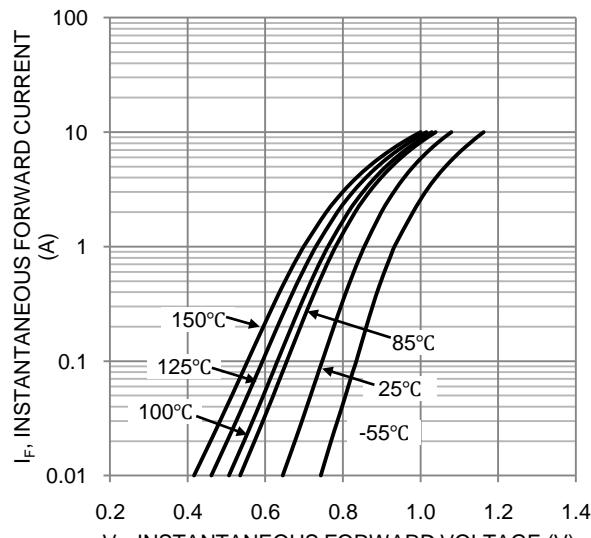
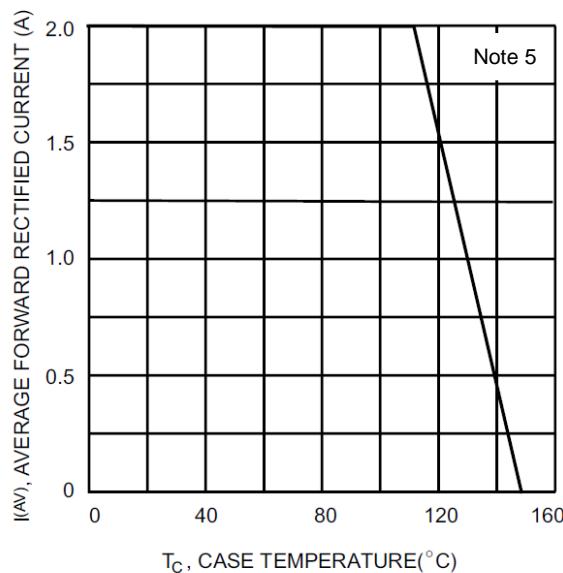
## Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance, Junction to Ambient (Note 6) (Per Element)	$R_{\theta JA}$	50	$^\circ\text{C}/\text{W}$
Typical Thermal Resistance, Junction to Case (Per Element)	$R_{\theta JC}$	10	$^\circ\text{C}/\text{W}$
Operating and Storage Temperature Range	$T_J, T_{STG}$	-55 to +150	$^\circ\text{C}$

## Electrical Characteristics (@ $T_A = +25^\circ\text{C}$ , unless otherwise specified.)

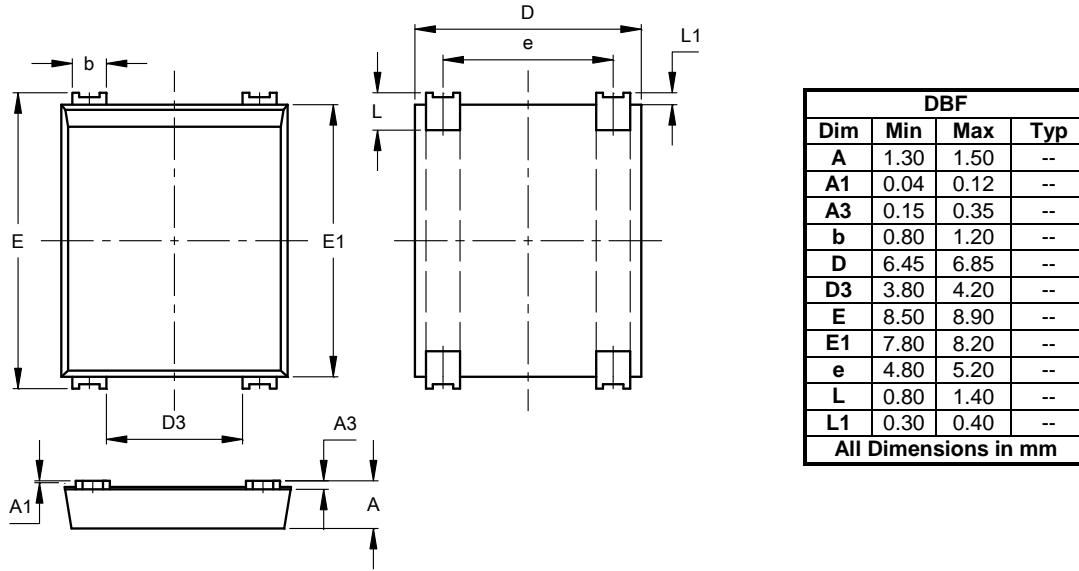
Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 7)	$V_{(BR)R}$	1,000	—	—	V	$I_R = 5\mu\text{A}$
Forward Voltage (Per Element)	$V_F$	—	0.85 0.93	0.95 1.0	V	$I_F = 1\text{A}, T_A = +25^\circ\text{C}$ $I_F = 2\text{A}, T_A = +25^\circ\text{C}$
Leakage Current (Note 7) (Per Element)	$I_R$	—	0.03 11	5 500	$\mu\text{A}$	$V_R = 1,000\text{V}, T_A = +25^\circ\text{C}$ $V_R = 1,000\text{V}, T_A = +125^\circ\text{C}$
Total Capacitance (Per Element)	$C_T$	—	25	—	pF	$V_R = 4\text{V}, f = 1.0\text{MHz}$

Notes: 5. Device mounted on glass epoxy PC board with 1.3mm<sup>2</sup> solder pad.  
 6. Device mounted on glass epoxy substrate with 1oz/in<sup>2</sup>, 15mmx15mm copper pad per pin.  
 7. Short duration pulse test used to minimize self-heating effect.



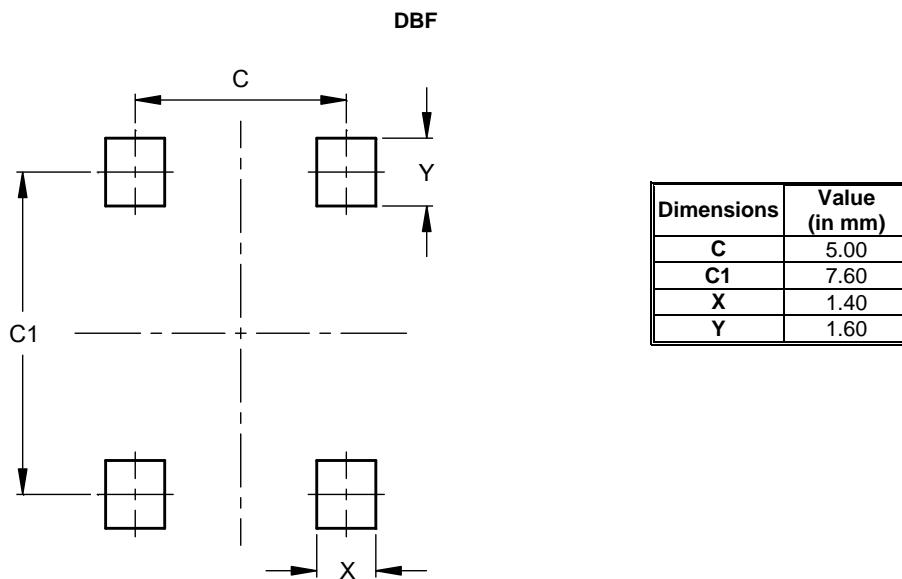
## Package Outline Dimensions

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



## Suggested Pad Layout

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



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