

**1.0A SURFACE MOUNT 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> Max (V)	I <sub>R</sub> Max (μA)
1000	1	1.1	5

**Features and Benefits**

- Glass Passivated Die Construction
- Ideally Suited for Automated Assembly
- Low Profile Package: 1.00mm (Typ)
- Flat Lead Plastic Package
- Low Forward Voltage Drop
- Ultra-Thin Profile for Space Constrained Applications
- **Lead-Free Finish; RoHS Compliant (Notes 1 & 2)**
- **Halogen and Antimony Free. "Green" Device (Note 3)**

**Description and Applications**

The LBS10 is a surface mount glass passivated bridge rectifier. Suitable for AC to DC bridge full wave rectification for AC-DC Power Supply, LED lighting, adapter, battery charger, home appliances, office equipment, and telecommunication applications.

**Mechanical Data**

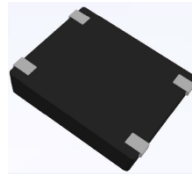
- Case: T-DFN5564-4
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Pure Tin Finish Annealed over Copper Leadframe. Solderable per MIL-STD-202, Method 208 <sup>(e3)</sup>
- Polarity: Marked on Body
- Weight: 0.098 grams (Approximate)

**NEW PRODUCT**

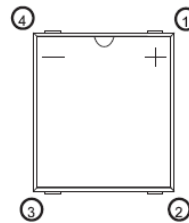
T-DFN5564-4



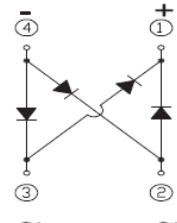
Top View



Bottom View



Pin Diagram

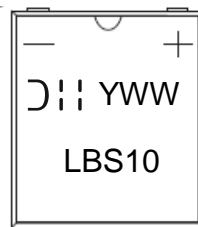


Schematic View

**Ordering Information (Note 4)**

Part Number	Compliance	Case	Packaging
LBS10-13	Commercial	T-DFN5564-4	5,000/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 <http://www.diodes.com/products/packages.html>.

**Marking Information**


- LBS10 = Product Type Marking Code
- DII = Manufacturer's Code Marking
- YWW = Date Code Marking
- Y = Last Digit of Year (ex.: 7 = 2017)
- WW = Week Code (01 to 53)

**Maximum Ratings** (@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	V <sub>RRM</sub>	1000	V
Working Peak Reverse Voltage	V <sub>RWM</sub>		
DC Blocking Voltage	V <sub>RM</sub>		
RMS Reverse Voltage	V <sub>R(RMS)</sub>	700	V
Average Rectified Output Current	I <sub>O</sub>	1.0	A
I <sup>2</sup> t Rating for Fusing (3ms < t < 8.3ms)	I <sup>2</sup> T	3.7	A <sup>2</sup> S
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I <sub>FSM</sub>	30	A

**Thermal Characteristics**

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance, Junction to Case (Note 5)	R <sub>θJC</sub>	22	°C/W
Thermal Resistance Junction to Ambient (Note 5)	R <sub>θJA</sub>	52	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	°C

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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 6)	V <sub>(BR)R</sub>	1,000	—	—	V	I <sub>R</sub> = 5μA
Forward Voltage Drop (Per Element)	V <sub>F</sub>	—	0.98 0.88	1.1 —	V	I <sub>F</sub> = 1A, T <sub>J</sub> = +25°C I <sub>F</sub> = 1A, T <sub>J</sub> = +125°C
Leakage Current (Note 6) (Per Element)	I <sub>R</sub>	—	0.2 11	5 500	μA	V <sub>R</sub> = 1,000V, T <sub>J</sub> = +25°C V <sub>R</sub> = 1,000V, T <sub>J</sub> = +125°C
Total Capacitance (Per Element)	C <sub>T</sub>	—	7	—	pF	V <sub>R</sub> = 4.0V <sub>DC</sub> , f = 1MHz

Notes: 5. Device mounted on Aluminum substrate with 15mm x 15mm x 1.7mm. Please see <http://www.diodes.com/package-outlines.html> for the latest version.  
6. Short duration pulse test used to minimize self-heating effect.

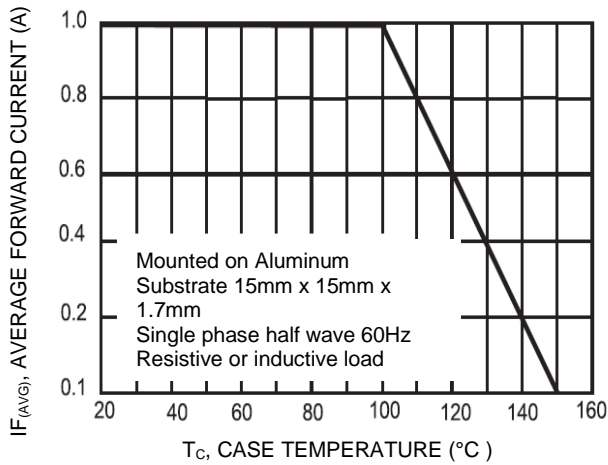


Figure 1. Forward Current Derating Curve

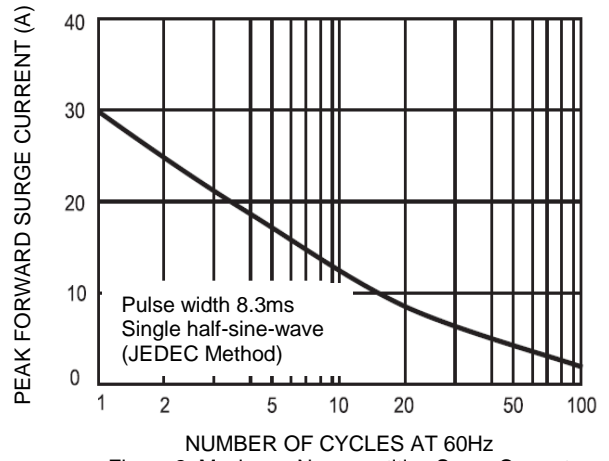


Figure 2. Maximum Non-repetitive Surge Current

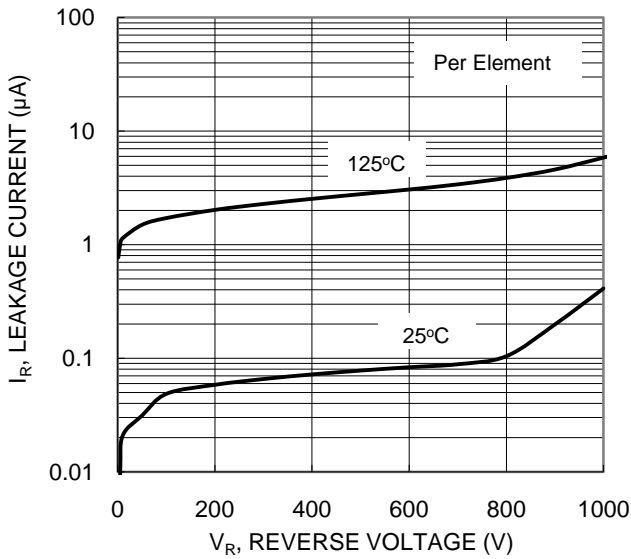


Figure 3. Typical Reverse Characteristics

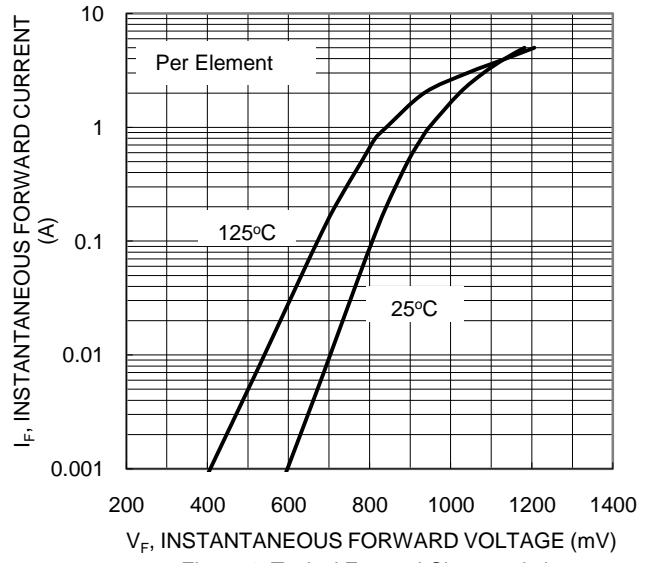


Figure 4. Typical Forward Characteristics

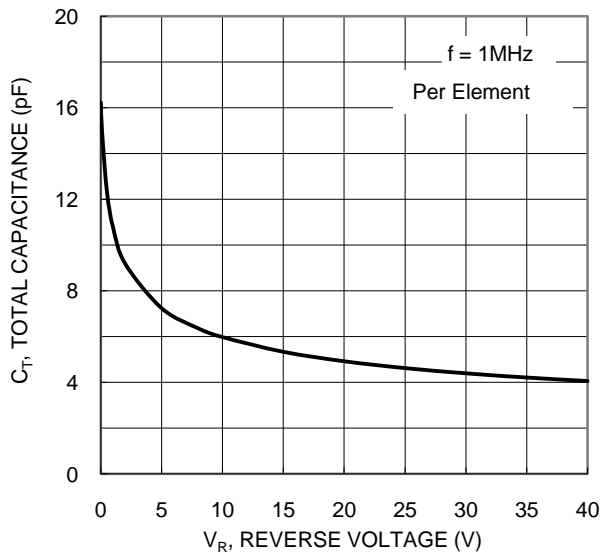
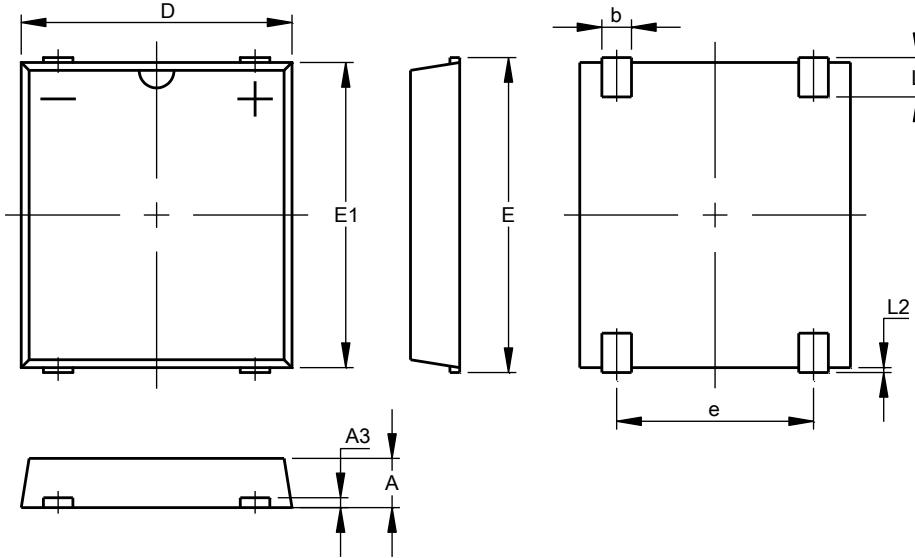


Figure 5. Total Capacitance

**Package Outline Dimensions**

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

T-DFN5564-4



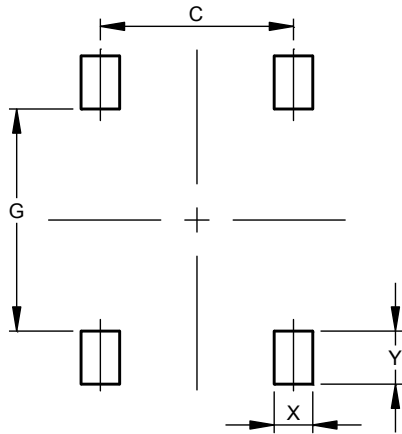
T-DFN5564-4			
Dim	Min	Max	Typ
A	0.90	1.10	--
A3	0.15	0.25	--
b	0.55	0.65	--
D	5.40	5.60	--
E	6.30	6.50	--
E1	6.10	6.30	--
e	3.95	4.05	--
L	0.75	0.85	--
L2	0.05	0.15	--
All Dimensions in mm			

NEW PRODUCT

**Suggested Pad Layout**

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

T-DFN5564-4



Dimensions	Value (in mm)
C	4.00
G	4.60
X	0.80
Y	1.10

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