1.0A SURFACE MOUNT GLASS PASSIVATED BRIDGE RECTIFIER

NEW PRODUCT

Product Summary (@ T_A = +25°C)

V_{RRM} (V)	I_O (A)	V_F Max (V)	I_R 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

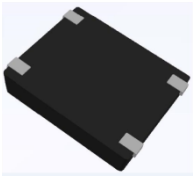
The LBS10 is a surface mount glass passivated bridge rectifier. Suitable for AC to DC bridge full wave rectification for AC-DC Power Supply, LED lighting, adapter, battery charger, home appliances, office equipment, and telecommunication applications.

Mechanical Data

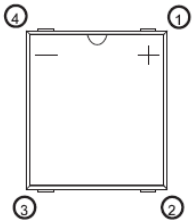
- Case: T-DFN5564-4
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminals: Pure Tin Finish Annealed over Copper Leadframe. Solderable per MIL-STD-202, Method 208 e3
- Polarity: Marked on Body
-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

T-DFN5564-4

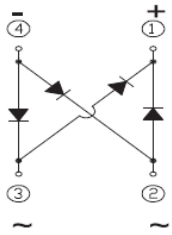
Top View



Bottom View



Pin Diagram



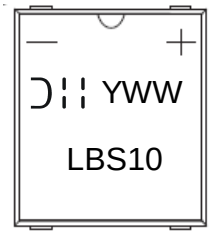
Schematic View

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 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
= Manufacturers' Code Marking
YWW = Date Code Marking
Y = Last Digit of Year (ex.: 7 = 2017)
WW = Week Code (01 to 53)

NEW PRODUCT

Maximum Ratings (@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_{RM}	1000	V
RMS Reverse Voltage	$V_{R(RMS)}$	700	V
Average Rectified Output Current	I_O	1.0	A
I^2t Rating for Fusing (3ms < t < 8.3ms)	I^2T	3.7	A^2S
Non-Repetitive Peak Forward Surge Current 8.3ms Single Half Sine-Wave Superimposed on Rated Load	I_{FSM}	30	A

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Typical Thermal Resistance, Junction to Case (Note 5)	$R_{\theta JC}$	22	°C/W
Thermal Resistance Junction to Ambient (Note 5)	$R_{\theta JA}$	52	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-55 to +150	°C

Electrical Characteristics (@T_A = +25°C, unless otherwise specified.)

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 6)	$V_{(BR)R}$	1,000	—	—	V	I_R = 5μA
Forward Voltage Drop (Per Element)	V_F	—	0.98 0.88	1.1 —	V	I_F = 1A, T_J = +25°C I_F = 1A, T_J = +125°C
Leakage Current (Note 6) (Per Element)	I_R	—	0.2 11	5 500	μA	V_R = 1,000V, T_J = +25°C V_R = 1,000V, T_J = +125°C
Total Capacitance (Per Element)	C_T	—	7	—	pF	V_R = 4.0V_{DC}, 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.

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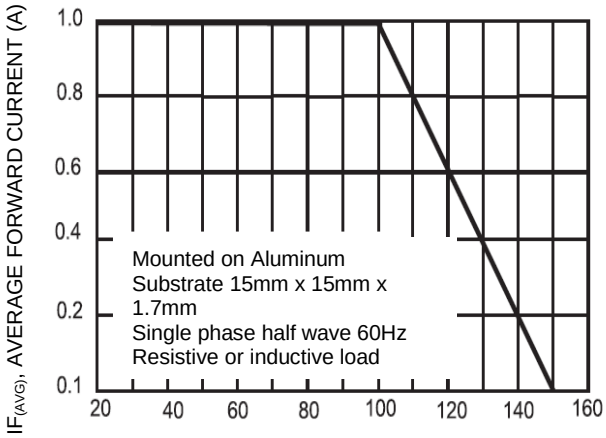

Figure 1. Forward Current Derating Curve

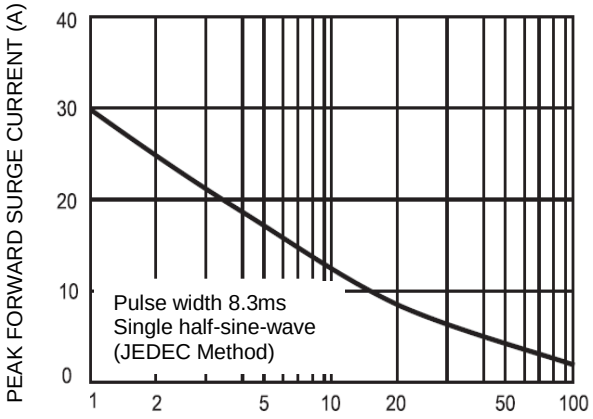

Figure 2. Maximum Non-repetitive Surge Current

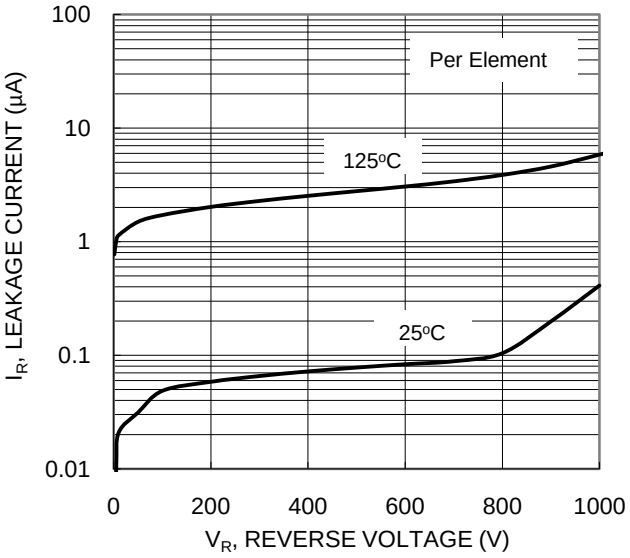

Figure 3. Typical Reverse Characteristics

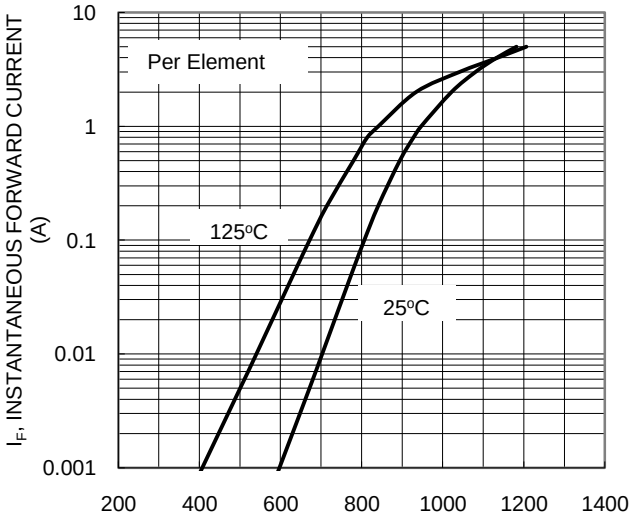

Figure 4. Typical Forward Characteristics

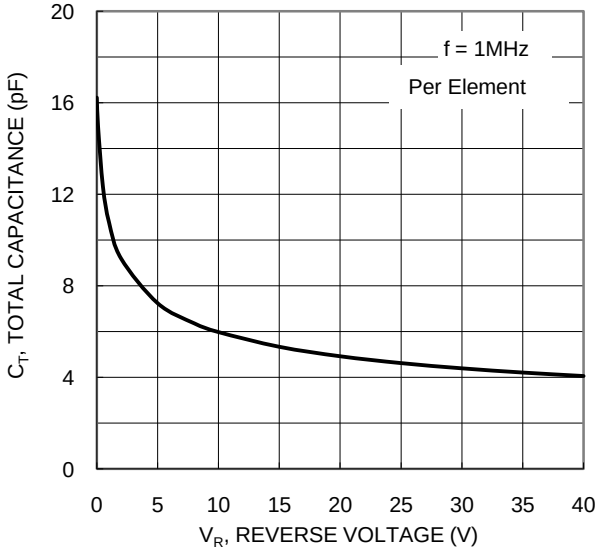

Figure 5. Total Capacitance

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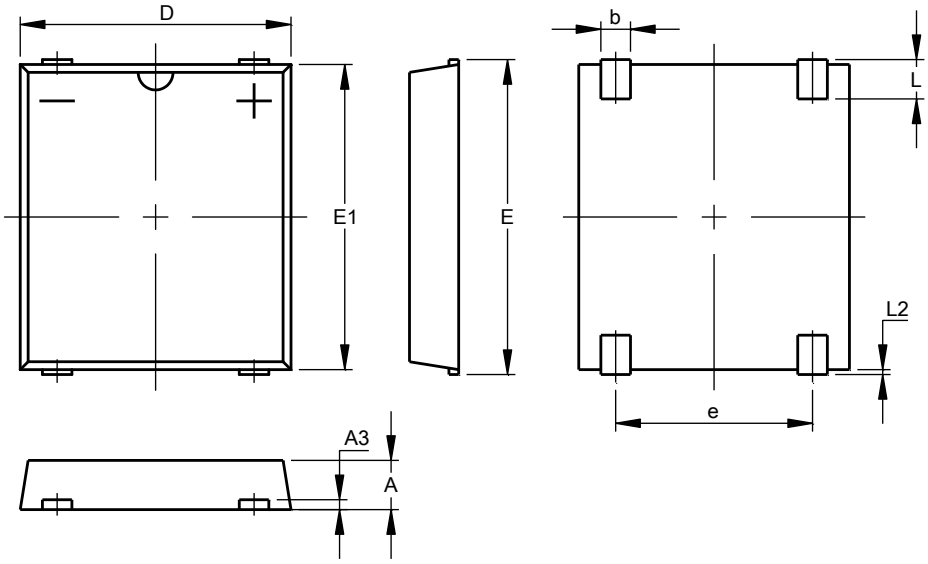
Package Outline Dimensions

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

T-DFN5564-4

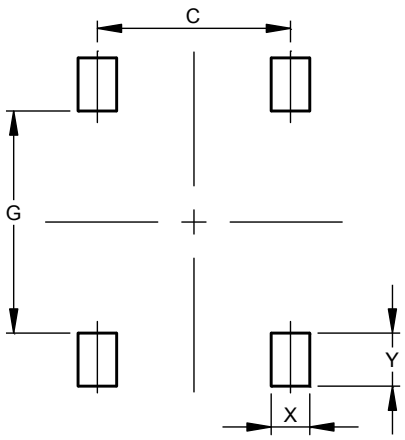


T-DFN5564-4			
Dim	**Min**	**Max**	**Typ**
A	0.90	1.10	--
A3	0.15	0.25	--
b	0.55	0.65	--
D	5.40	5.60	--
E	6.30	6.50	--
E1	6.10	6.30	--
e	3.95	4.05	--
L	0.75	0.85	--
L2	0.05	0.15	--
All Dimensions in mm			

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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