



### 1SS361LPH4

#### SURFACE MOUNT SWITCHING DIODE

#### **Features**

- Fast Switching Speed
- Ultra-Small Leadless Surface Mount Package (1.0 x 0.6mm)
- Ultra-Low Profile Package (0.4mm)
- Low Forward Voltage (Typ of 0.9V)
- Fast Reverse Recovery (Typ of 2 ns)
- Low Capacitance (Typ of 0.63pF)
- Totally Lead-Free & Fully RoHS Compliant (Note 1 & 2)
- Halogen and Antimony Free "Green" Device (Note 3)

#### **Mechanical Data**

- Case: X2-DFN1006-2
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminal Connections: Cathode Bar
- Terminals: Finish NiPdAu over Copper leadframe. Solderable per MIL-STD-202, Method 208 @4
- Weight: 0.0009 grams (approximate)

X2-DFN1006-2



**Bottom View** 

## **Ordering Information** (Note 4)

Part Number	Case	Packaging
1SS361LPH4-7B	X2-DFN1006-2	10,000/Tape & Reel

Notes:

- 1. No purposely added lead. Fully EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant.
- 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**

**6Z** 

6Z = Product Type Marking Code Bar Denotes Cathode Side

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Characteristic	Symbol	Value	Unit
Non-Repetitive Peak Reverse Voltage	$V_{RM}$	85	V
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	80	٧
RMS Reverse Voltage	V <sub>R(RMS)</sub>	57	V
Forward Continuous Current	I <sub>FM</sub>	300	mA
Average Rectified Output Current	lo	100	mA
Non-Repetitive Peak Forward Surge Current @ t = 1.0µs	I <sub>FSM</sub>	2.0	Α

### **Thermal Characteristics**

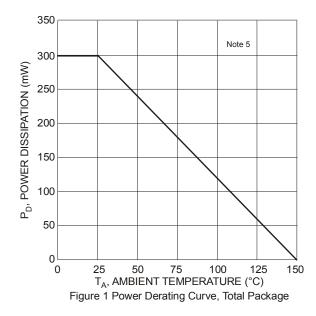
Characteristic	Symbol	Value	Unit
Power Dissipation (Note 5)	P <sub>D</sub>	300	mW
Thermal Resistance Junction to Ambient Air (Note 5)	$R_{ hetaJA}$	417	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-55 to +150	°C

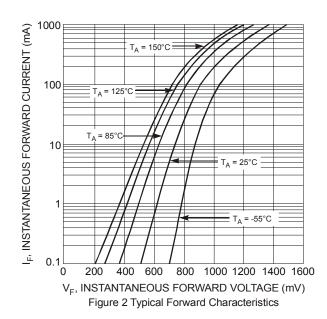
## Electrical Characteristics (@TA = +25°C, unless otherwise specified.)

Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 6)	$V_{(BR)R}$	80	_	_	V	I <sub>R</sub> = 100μA
Forward Voltage	V <sub>F</sub>	_	0.61 0.73 0.90	0.715 0.855 1.20	٧	I <sub>F</sub> = 1.0mA I <sub>F</sub> = 10mA I <sub>F</sub> = 100mA
Leakage Current (Note 6)	I <sub>R</sub>	_	_	0.1 0.5	μΑ μΑ	V <sub>R</sub> = 30V V <sub>R</sub> = 80V
Total Capacitance	C <sub>T</sub>	_	0.63	3.0	pF	V <sub>R</sub> = 0, f = 1.0MHz
Reverse Recovery Time	t <sub>rr</sub>	_	2.0	4.0	ns	$I_F = I_R = 10 \text{mA},$ $I_{rr} = 0.1 \text{ x } I_R, R_L = 100 \Omega$

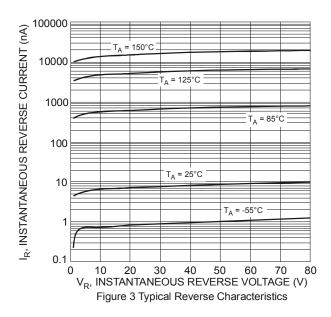
Notes:

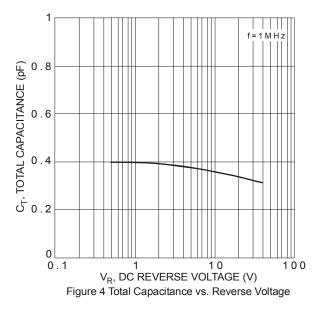
- 5. Part mounted on FR-4 PC board with recommended pad layout, which can be found on our website at http://www.diodes.com.
- 6. Short duration pulse test used to minimize self-heating effect.





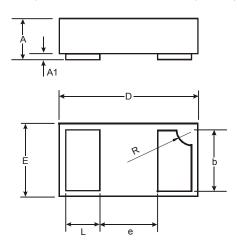






# **Package Outline Dimensions**

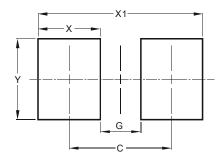
Please see AP02002 at http://www.diodes.com/datasheets/ap02002.pdf for the latest version.



X2-DFN1006-2					
Dim	Min	Max	Тур		
Α	0.34	0.4	0.37		
A1	0	0.05	0.03		
b	0.45	0.55	0.50		
D	0.95	1.075	1.00		
Е	0.55	0.675	0.60		
е			0.40		
L	0.20	0.30	0.25		
R	0.05	0.15	0.10		
All Dimensions in mm					

# **Suggested Pad Layout**

Please see AP02001 at http://www.diodes.com/datasheets/ap02001.pdf for the latest version.



Dimensions	Value (in mm)
С	0.70
G	0.30
Х	0.40
X1	1.10
Υ	0.70



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