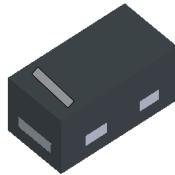


Features

- Ultra-Small Leadless Surface Mount Package (0.6 x 0.3mm)
- Ultra-Low Profile Package (0.3mm)
- Very Low Leakage Current
- Low Capacitance
- Ideal for Compact Battery Powered Portable Electronics
- **Totally Lead-Free & Fully RoHS Compliant (Notes 1 & 2)**
- Halogen and Antimony Free. "Green" Device (Note 3)

Mechanical Data

- Case: X3-DFN0603-2
- 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 Matte Tin Finish over Copper Leadframe (Lead Free Plating). Solderable per MIL-STD-202, Method 208 (e3)
- Weight: 0.2mg (Approximate)



Top View



Bottom View

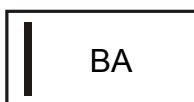
Ordering Information (Note 4)

Part Number	Case	Packaging
BAS116LP3-7	X3-DFN0603-2	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



BA = Product Type Marking Code
Bar Denotes Cathode Side

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

Characteristic	Symbol	Value	Unit
Peak Repetitive Reverse Voltage	V_{RRM}		
Working Peak Reverse Voltage	V_{RWM}	85	V
DC Blocking Voltage	V_R		
RMS Reverse Voltage	$V_{R(\text{RMS})}$	60	V
Forward Continuous Current (Note 5)	I_{FM}	215	mA
Repetitive Peak Forward Current	I_{FRM}	500	mA
Non-Repetitive Peak Forward Surge Current @ $t = 1.0\mu\text{s}$	I_{FSM}	4.0	A
Non-Repetitive Peak Forward Surge Current @ $t = 1.0\text{ms}$		1.0	
Non-Repetitive Peak Forward Surge Current @ $t = 1.0\text{s}$		0.5	

Thermal Characteristics

Characteristic	Symbol	Value	Unit
Power Dissipation (Note 5)	P_D	250	mW
Thermal Resistance Junction to Ambient Air (Note 6)	$R_{\theta JA}$	500	°C/W
Operating and Storage Temperature Range	T_J, T_{STG}	-65 to +150	°C

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

Characteristic	Symbol	Min	Typ	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 6)	$V_{(BR)R}$	85	—	—	V	$I_R = 100\mu\text{A}$
Forward Voltage	V_F	—	0.75 0.9 1.0 1.15	0.95 1.10 1.20 1.35	V	$I_F = 1.0\text{mA}$ $I_F = 10\text{mA}$ $I_F = 50\text{mA}$ $I_F = 150\text{mA}$
Leakage Current (Note 6)	I_R	—	—	10.0 100 500	nA	$V_R = 75\text{V}$ $V_R = 1\text{V}, T_J = +150^\circ\text{C}$ $V_R = 75\text{V}, T_J = +150^\circ\text{C}$
Total Capacitance	C_T	—	1.6	3.0	pF	$V_R = 0, f = 1.0\text{MHz}$
Reverse Recovery Time	t_{rr}	—	120	3000	ns	$I_F = I_R = 10\text{mA}$, $I_{rr} = 0.1 \times I_R, R_L = 100\Omega$

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.

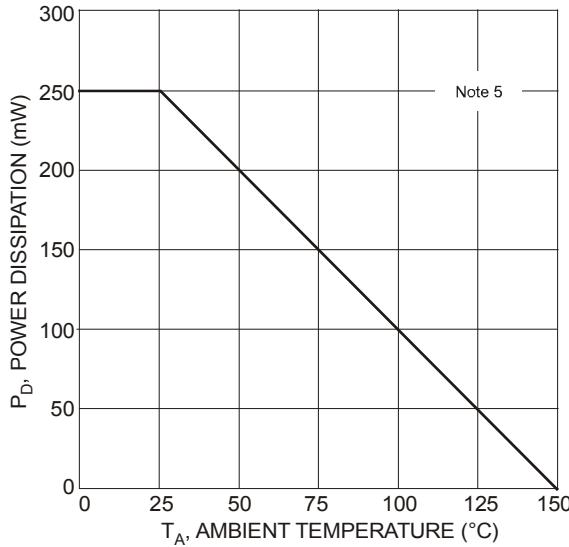


Figure 1 Power Derating Curve, Total Package

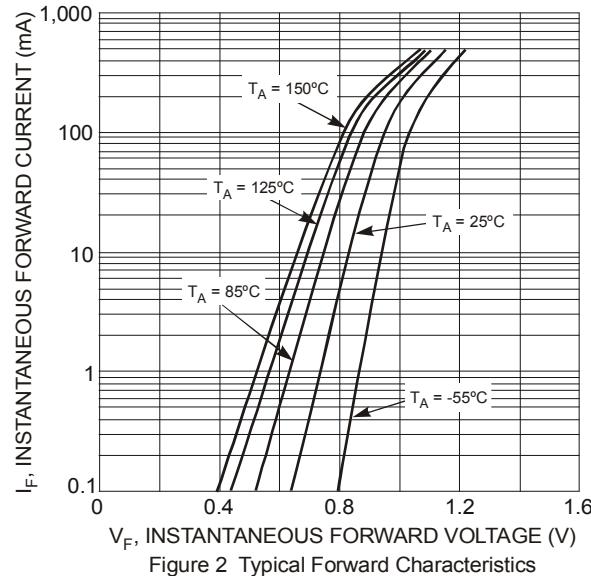


Figure 2 Typical Forward Characteristics

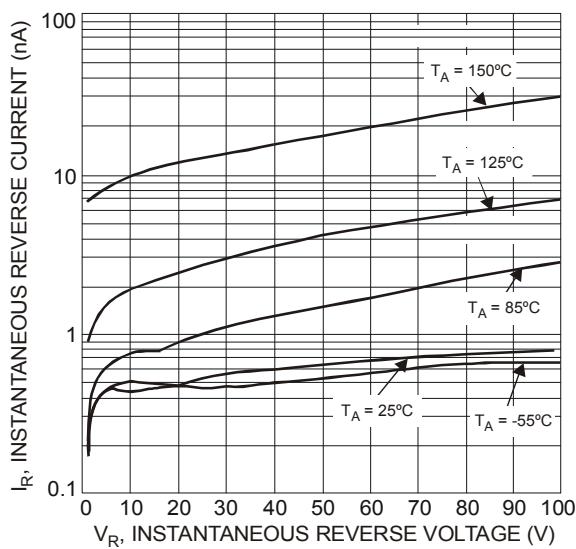


Figure 3 Typical Reverse Characteristics

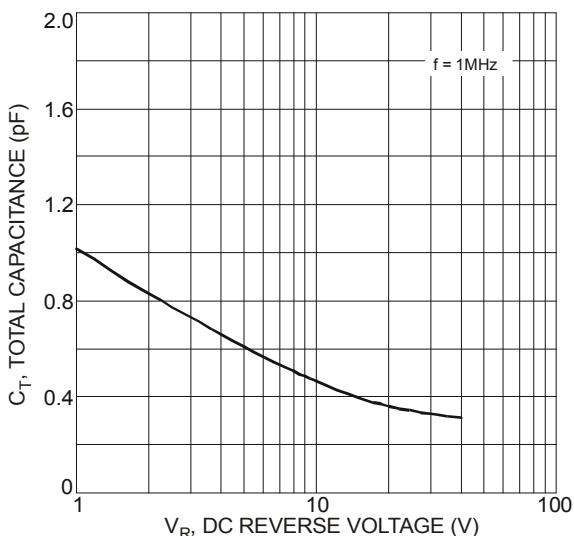
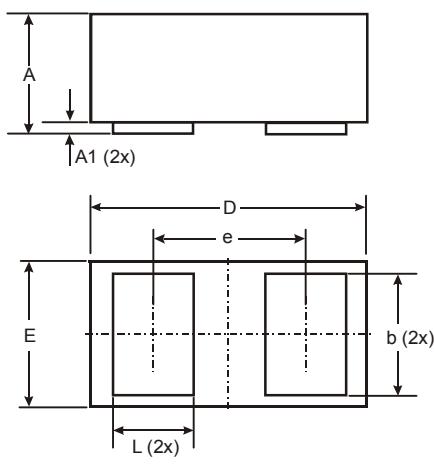


Figure 4 Typical Total Capacitance vs. Reverse Voltage

Package Outline Dimensions

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



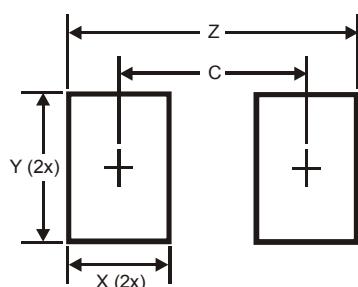
Bottom View

X3-DFN0603-2			
Dim	Min	Max	Typ
A	0.27	0.35	0.30
A1	0.00	0.03	0.02
b	0.19	0.29	0.24
D	0.595	0.645	0.62
E	0.295	0.345	0.32
e	-	-	0.355
L	0.14	0.24	0.19

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)
C	0.380
X	0.230
Y	0.300
Z	0.610

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