



BAS116UDJ

DUAL SURFACE MOUNT SWITCHING DIODE

Features

- Ultra-Small Surface Mount Package (1.0 x 0.8mm)
- Ultra-Low Profile Package (0.45mm)
- Ultra Low Leakage Current (5nA @ V_R = 75V)
- Low Capacitance
- Ideal for Battery Powered Portable Applications
- Lead Free By Design/RoHS Compliant (Note 1)
- Halogen and Antimony Free "Green" Device (Notes 2 & 3)

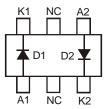
Mechanical Data

- Case: SOT963
- Case Material: Molded Plastic, "Green" Molding Compound. UL Flammability Classification Rating 94V-0
- Moisture Sensitivity: Level 1 per J-STD-020
- Terminal Connections: See Diagram
- Terminals: Finish Matte Tin Annealed over Copper leadframe.
 Solderable per MIL-STD-202, Method 208
- Weight: 0.003 grams (Approximate)

SOT963



Top View



Internal Schematic

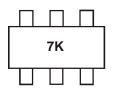
Ordering Information (Note 4)

Part Number	Case	Packaging
BAS116UDJ-7	SOT963	10,000/Tape & Reel

Notes:

- 1. Fully EU Directive 2002/95/EC (RoHS) & 2011/65/EU (RoHS 2) compliant. No purposely added lead.
- 2. Halogen and Antimony free "Green" products are defined as those which contain <900ppm bromine, <900ppm chlorine (<1500ppm total Br + Cl) and <1000ppm antimony compounds.
- 3. Diodes Inc.'s "Green" policy can be found on our website at http://www.diodes.com.
- 4. For packaging details, go to our website at http://www.diodes.com.

Marking Information



7K = Product Type Marking Code



Maximum Ratings @T_A = 25°C unless otherwise specified

Characteristic		Symbol	Value	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage		V _{RRM} V _{RWM} 85 V _R		V
RMS Reverse Voltage		V _{R(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 = 1.0μs @ t = 1.0ms @ t = 1.0s	I _{FSM}	4.0 1.0 0.5	А

Thermal Characteristics

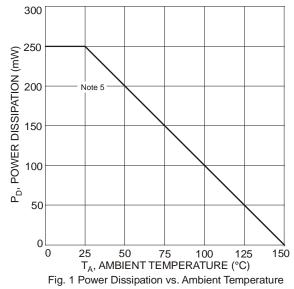
Characteristic	Symbol	Value	Unit
Power Dissipation (Note 5)	P_{D}	250	mW
Thermal Resistance Junction to Ambient Air (Note 5)	$R_{ hetaJA}$	500	°C/W
Operating and Storage Temperature Range	T _J , T _{STG}	-55 to +150	°C

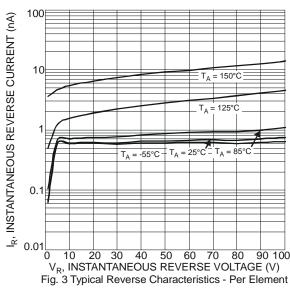
Electrical Characteristics @T_A = 25°C unless otherwise specified

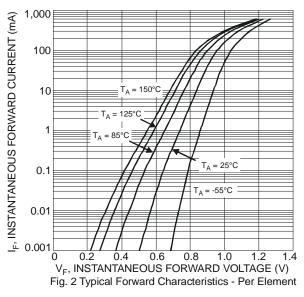
Characteristic	Symbol	Min	Тур	Max	Unit	Test Condition
Reverse Breakdown Voltage (Note 6)	$V_{(BR)R}$	85	_		V	$I_R = 100 \mu A$
Forward Voltage	V _F			0.95 1.05 1.15 1.35	٧	I _F = 1.0mA I _F = 10mA I _F = 50mA I _F = 150mA
Leakage Current (Note 6)	I _R		0.9 16	5.0 500		$V_R = 75V$ $V_R = 75V$, $T_J = 150$ °C
Total Capacitance	C _T		2		pF	$V_R = 0, f = 1.0MHz$
Reverse Recovery Time	t _{rr}		0.12	3.0		$\begin{split} I_F &= I_R = 10 \text{mA}, \\ I_{rr} &= 0.1 \text{ x } I_R, \ R_L = 100 \Omega \end{split}$

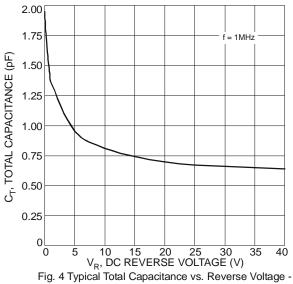
5. Part mounted on FR-4 PC board with recommended pad layout, which can be found on our website at http://www.diodes.com. 6. Short duration pulse test used to minimize self-heating effect. Notes:





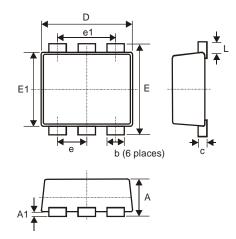






Per Element

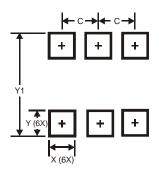
Package Outline Dimensions



SOT963					
Dim	Min	Max	Тур		
Α	0.40	0.50	0.45		
A1	0	0.05	-		
C	0.120	0.180	0.150		
D	0.95	1.05	1.00		
Е	0.95	1.05	1.00		
E1	0.75	0.85	0.80		
┙	0.05	0.15	0.10		
b	0.10	0.20	0.15		
е	0.35 Typ				
e1	0.70 Typ				
All Dimensions in mm					



Suggested Pad Layout



Dimensions	Value (in mm)
С	0.350
Х	0.200
Υ	0.200
Y1	1.100

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