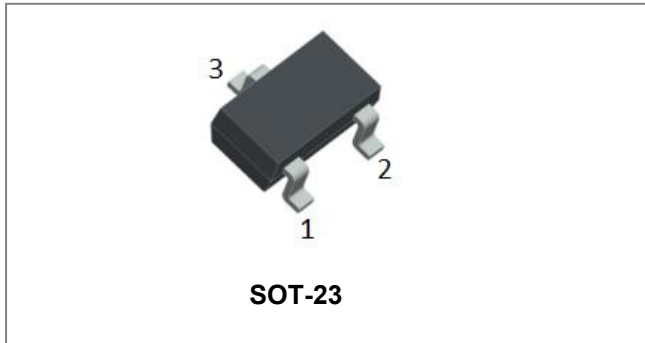


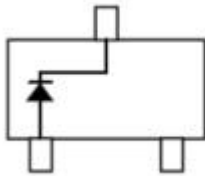
## BAS16 SURFACE MOUNT FAST SWITCHING DIODE



### Features

- High Conductance
- Fast Switching
- Surface Mount Package Ideally Suited for Automatic Insertion
- For General Purpose and Switching
- Plastic Material - UL Recognition Flammability Classification 94V-O
- This is a Pb - Free Device
- All SMC parts are traceable to the wafer lot
- Additional testing can be offered upon request

### Schematic & Pin Configuration



### Mechanical Characteristics

- Case: SOT-23, Molded Plastic
- Terminals: Plated leads Solderable per MIL-STD-202, Method 208
- Polarity: See Diagram
- Weight: 0.008 grams(approx.)
- Mounting Position: Any
- Marking: A6

### Maximum Ratings@T<sub>A</sub>=25°C unless otherwise specified

Characteristic	Symbol	Limits	Units
Non-Repetitive Peak Reverse Voltage	V <sub>RM</sub>	100	V
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V <sub>RRM</sub> V <sub>RWM</sub> V <sub>R</sub>	75	V
Forward Continuous Current(Note 1)	I <sub>F</sub>	300	mA
Average Rectified Output Current(Note 1)	I <sub>o</sub>	200	mA
Peak Forward Surge Current(Note 1) @t<1.0us	I <sub>FSM</sub>	2.0	A
Power Dissipation(Note 1)	P <sub>d</sub>	350	mW
Typical Thermal Resistance, Junction to Ambient Air	R <sub>θJA</sub>	357	°C/W
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +150	°C

**Electrical Characteristics @ $T_A=25^\circ\text{C}$  unless otherwise specified**

Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage*	$V_{(BR)R}$	75	-	V	@ $I_{BR}=100\mu\text{A}$
Forward Voltage*	$V_F$	-	0.855	V	@ $I_F=10\text{mA}$
Reverse Leakage Current*	$I_R$	-	1.0	$\mu\text{A}$	@ $V_R=75\text{V}$
Junction Capacitance	$C_j$	-	2.0	pF	$V_R=0\text{V}$ , $f=1.0\text{MHz}$
Reverse Recovery Time	$t_{rr}$	-	6.0	ns	$I_F=I_R=10\text{mA}$ , $I_{RR}=0.1 \times I_R$ , $R_L=100\Omega$

\* Pulse width < 300  $\mu\text{s}$ , duty cycle < 2%  
Note: 1. Device mounted on fiberglass substrate 40x40x1.5mm

**Ratings and Characteristics Curves**

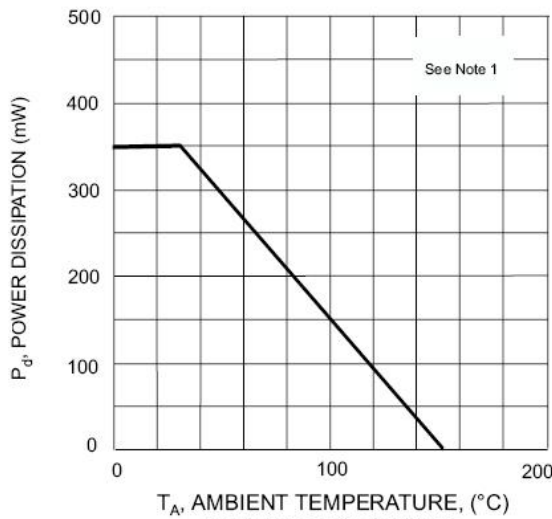


Fig. 1 Power Derating Curve

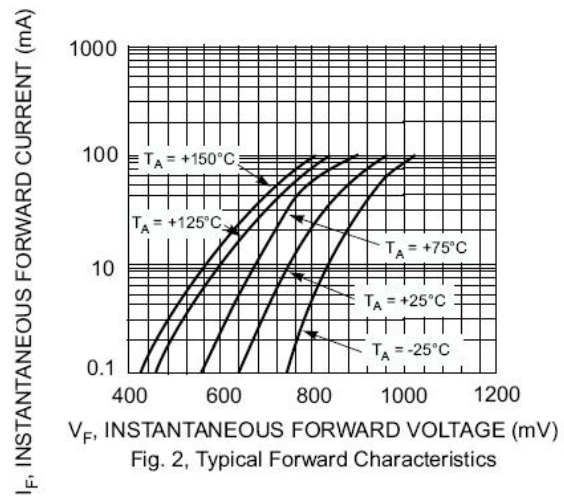


Fig. 2, Typical Forward Characteristics

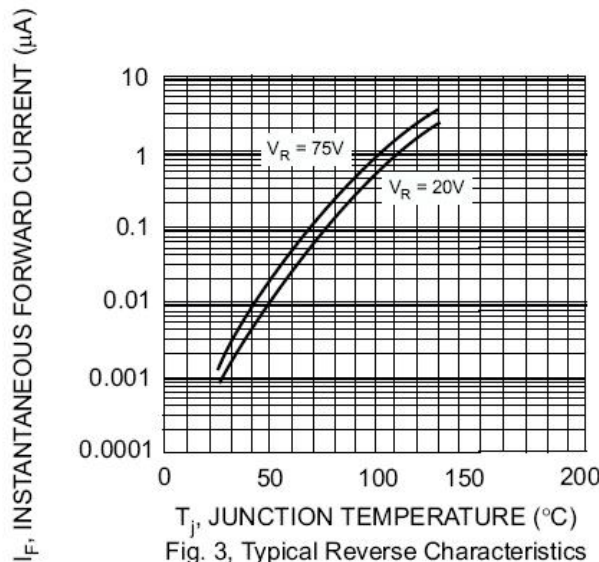
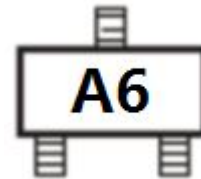


Fig. 3, Typical Reverse Characteristics

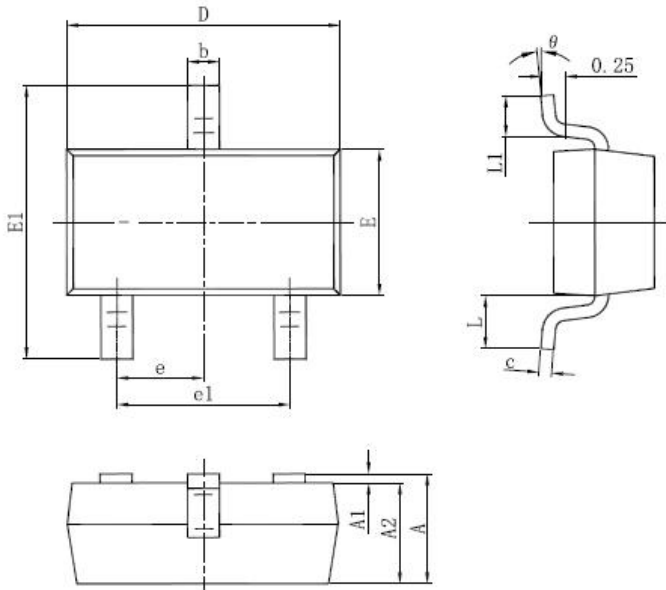
**Ordering Information**

Device	Package	Shipping
BAS16	SOT-23 (Pb-Free)	3000pcs / reel

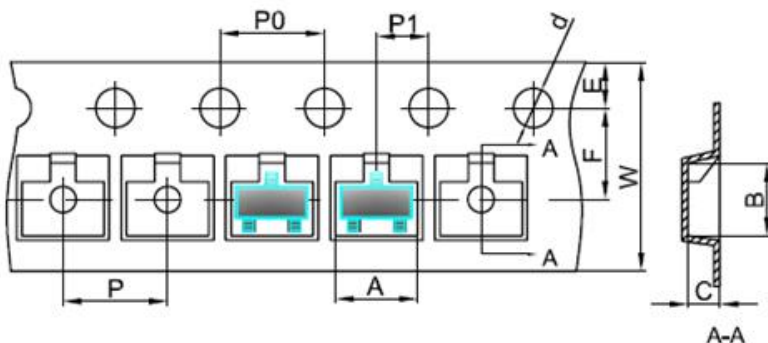
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

**Marking Diagram**


A6 = Marking Code

**Mechanical Dimensions SOT-23**


SYMBOL	Millimeters		Inches	
	MIN.	MAX.	MIN.	MAX.
A	0.890	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.076	0.170	0.003	0.007
D	2.650	3.050	0.104	0.120
E	1.190	1.400	0.047	0.055
E1	2.100	2.550	0.083	0.100
e	0.950 TYP.		0.037 TYP.	
e1	1.780	2.050	0.070	0.081
L	0.550 REF.		0.022 REF.	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

**Carrier Tape Specification SOT-23**


SYMBOL	Millimeters	
	Min.	Max.
A	3.05	3.25
B	2.67	2.87
C	1.12	1.32
d	1.40	1.60
E	1.65	1.85
F	3.40	3.60
P	3.90	4.10
P0	3.90	4.10
P1	1.90	2.10
W	7.90	8.30

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