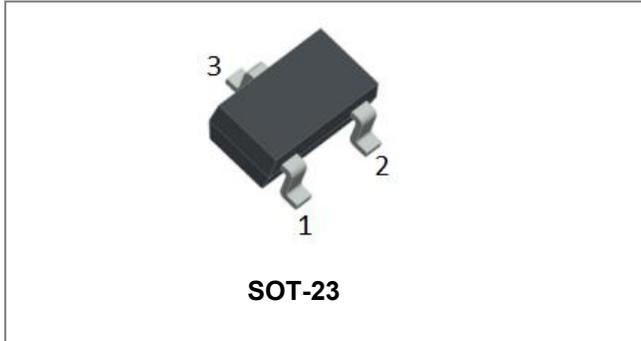


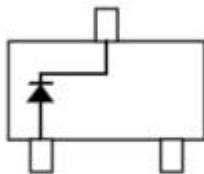
BAS16 SURFACE MOUNT FAST SWITCHING DIODE



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-0
- "-A" is an AEC-Q101 qualified device
- This is a Halogen 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_A=25°C unless otherwise specified

Characteristic	Symbol	Limits	Units
Non-Repetitive Peak Reverse Voltage	V_{RM}	100	V
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	75	V
Forward Continuous Current(Note 1)	I_F	300	mA
Average Rectified Output Current(Note 1)	I_o	200	mA
Peak Forward Surge Current(Note 1) @t<1.0us	I_{FSM}	2.0	A
Power Dissipation(Note 1)	P_d	350	mW
Typical Thermal Resistance, Junction to Ambient Air	$R_{\theta JA}$	357	°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	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	μA	@ $V_R=75\text{V}$
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 μs , duty cycle < 2%
Note: 1. Device mounted on fiberglass substrate 40x40x1.5mm

Ratings and Characteristics Curves

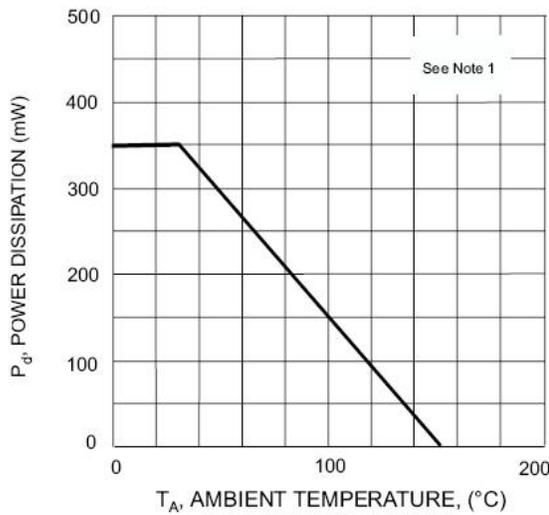


Fig. 1 Power Derating Curve

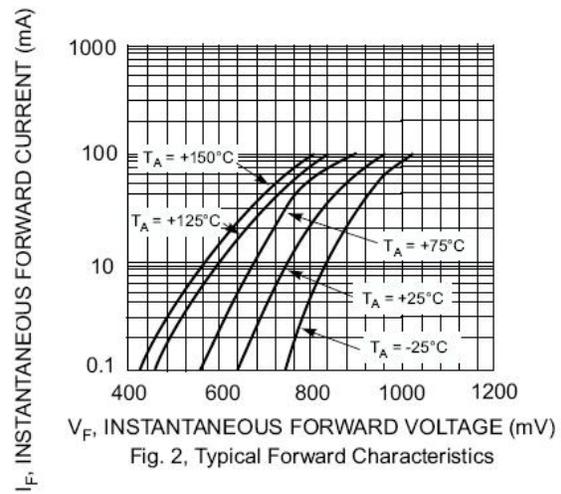


Fig. 2, Typical Forward Characteristics

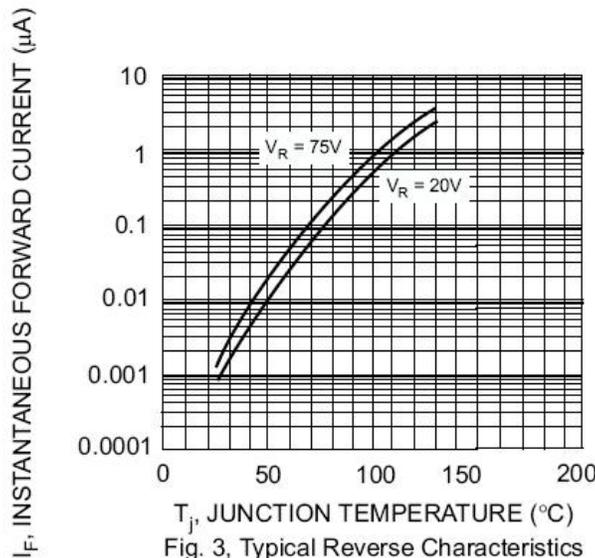


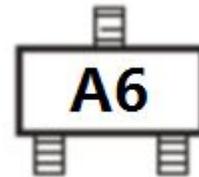
Fig. 3, Typical Reverse Characteristics

Ordering Information

Device	Package	Shipping
BAS16	SOT-23	3000pcs / reel

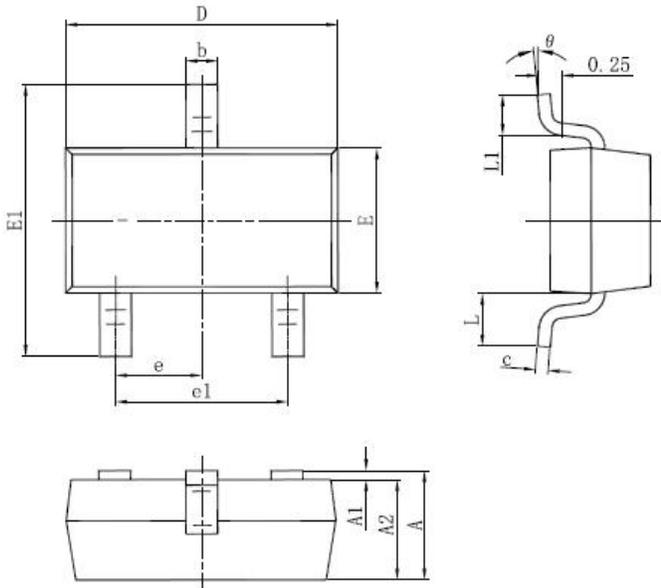
For information on tape and reel specifications, including part orientation and tape sizes, please refer to our tape and reel packaging specification.

Marking Diagram



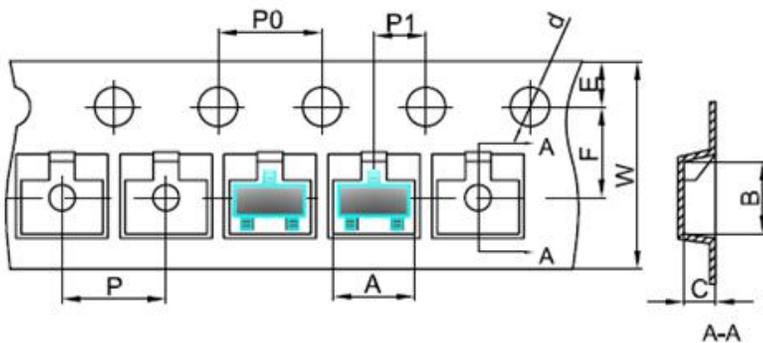
A6 = Marking Code

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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