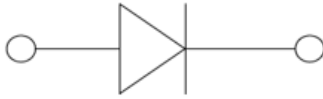


High Speed Switching Diode



SOD123

Features

- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1
- V_{RRM} 100V
- I_{FAV} 300mA
- Part no. with suffix "Q" means AEC-Q101 qualified

Applications

- Extreme fast switches
- Automotive

Mechanical Data

- **Case:** SOD123
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end
- **Marking:** T4 $\otimes$

■ Maximum Ratings ($T_a=25^{\circ}\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	CONDITIONS	VALUE
Repetitive Peak Reverse Voltage	V_{RRM}	V		100
Average Forward Current	I_{FAV}	mA		300
Peak Forward Surge Current	I_{FSM}	A	Pulse width=1 s	0.5
Power Dissipation	P_{tot}	mW		350
Thermal Resistance Junction to Ambient	R_{thJA}	$^{\circ}\text{C/W}$		360
Junction Temperature	T_j	$^{\circ}\text{C}$		-55 to +150
Storage Temperature Range	T_{stg}	$^{\circ}\text{C}$		-55 to +150

■ Electrical Characteristics ($T_a=25^{\circ}\text{C}$ Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	CONDITIONS	MIN	MAX
Forward Voltage	V_F	V	$I_F=1\text{mA}$		0.715
			$I_F=10\text{mA}$		0.855
			$I_F=50\text{mA}$		1.0
			$I_F=150\text{mA}$		1.25
Reverse Current	I_R	μA	$V_R=75\text{V}$		1.0
Breakdown Voltage	V_R	V	$I_R=100\mu\text{A}$	75	
Junction Capacitance	C_j	pF	$V_R=V_F=0\text{V}$, $f=1\text{MHz}$		4
Reverse Recovery Time	t_{rr}	ns	$I_F=10\text{mA}$, $I_{rr}=0.1I_R$, $R_L=100\Omega$		6



BAS16WHQ

■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BAS16WHQ	F2	Approximate 0.010	3000	30000	120000	7" reel

■ Characteristics (Typical)

Fig.1: P_D - T_A

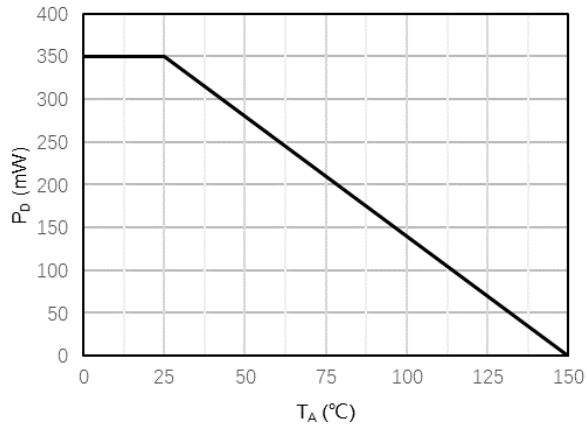


Fig.2: Capacitance Characteristics

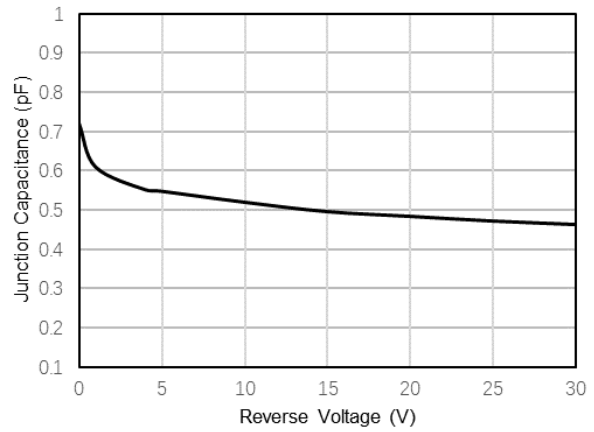


Fig.3: Forward Characteristics

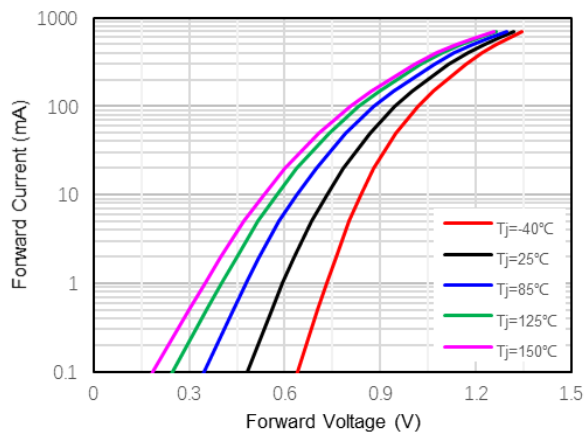
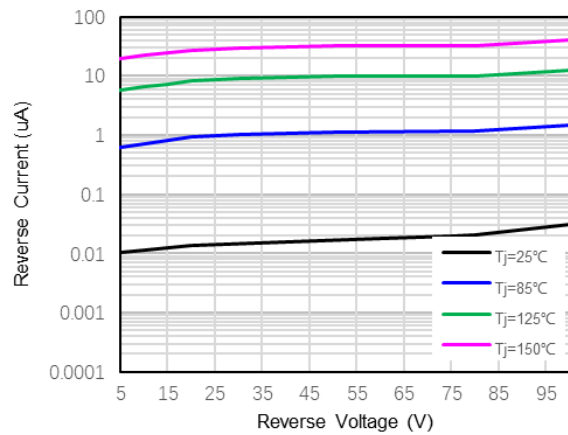


Fig.4: Reverse Characteristics

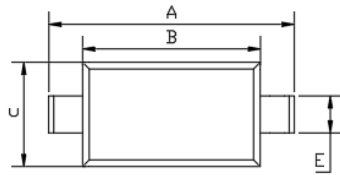




BAS16WHQ

■ Outline Dimensions

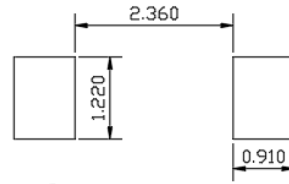
SOD-123



TOP VIEW

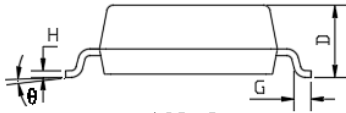


SIDE VIEW



UNIT: mm

SUGGESTED SOLDER PAD LAYOUT



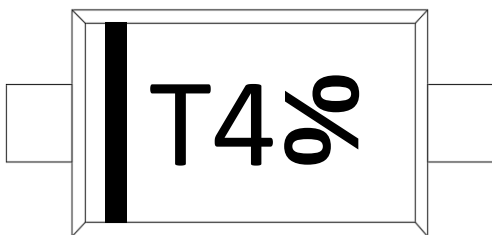
SIDE VIEW

DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MM	MAX
A	0.140	0.152	3.550	3.850
B	0.100	0.112	2.550	2.850
C	0.055	0.071	1.400	1.800
D	0.037	0.053	0.950	1.350
E	0.020	0.028	0.510	0.710
G	0.006	0.018	0.150	0.450
H	0.003	0.010	0.080	0.250
J	0.000	0.006	0.000	0.150
θ	0	8°	0	8°

NOTE:

1. PACKAGE BODY SIZES EXCLUDE MOLD FLASH AND GATE BURRS.
2. TOLERANCE 0.1mm UNLESS OTHERWISE SPECIFIED.
3. THE PAD LAYOUT IS FOR REFERENCE PURPOSES ONLY.

■ Marking Information



Note:

1. All marking is at middle of the product body
2. All marking is in laser marking
3. Body color: Black
4. % is date code rotated 90°counterclockwise

Date Code depending upon production date



BAS16WHQ

Disclaimer

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