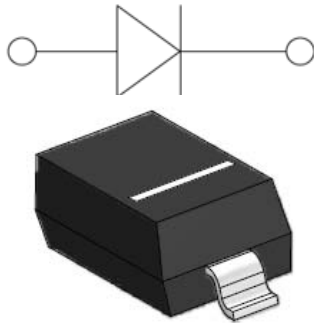


## High Speed Switching Diode



**SOD323**

### Features

- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1
- $V_{RRM}$  100V
- $I_{FAV}$  250mA
- Part no. with suffix "Q" means AEC-Q101 qualified

### Applications

- Extreme fast switches
- Automotive

### Mechanical Data

- **Case:** SOD323
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Polarity:** Cathode line denotes the cathode end
- **Marking:** A6 ·

### ■ 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		250
Peak Forward Surge Current	$I_{FSM}$	A	$t_p=1\mu\text{s}$	2
Power Dissipation	$P_{tot}$	mW		200
Thermal Resistance Junction To Ambient air	$R_{thJA}$	K/W		625
Junction Temperature	$T_j$	$^{\circ}\text{C}$		-55 to +150
Storage Temperature Range	$T_{stg}$	$^{\circ}\text{C}$		-55 to +150



# BAS316Q

## ■ Electrical Characteristics (T<sub>a</sub>=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	CONDITIONS	MIN	MAX
Forward Voltage	V <sub>F</sub>	V	I <sub>F</sub> =1mA		0.715
			I <sub>F</sub> =10mA		0.855
			I <sub>F</sub> =50mA		1.0
			I <sub>F</sub> =150mA		1.25
Reverse Current	I <sub>R</sub>	nA	V <sub>R</sub> =20V		25
	I <sub>R</sub>	μA	V <sub>R</sub> =75V		1.0
Reverse Breakdown Voltage	V <sub>BR</sub>	V	I <sub>R</sub> =100μA	100	
Junction Capacitance	C <sub>j</sub>	pF	V <sub>R</sub> =V <sub>F</sub> =0V, f =1MHz		4
Reverse Recovery Time	t <sub>rr</sub>	ns	I <sub>F</sub> =I <sub>R</sub> =50mA, I <sub>tr</sub> =0.1I <sub>R</sub> , R <sub>L</sub> =100Ω		4

## ■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BAS316Q	F2	Approximate 0.0045	3000	30000	120000	7" reel



## ■ Characteristics (Typical)

Fig.1:  $P_D-T_A$

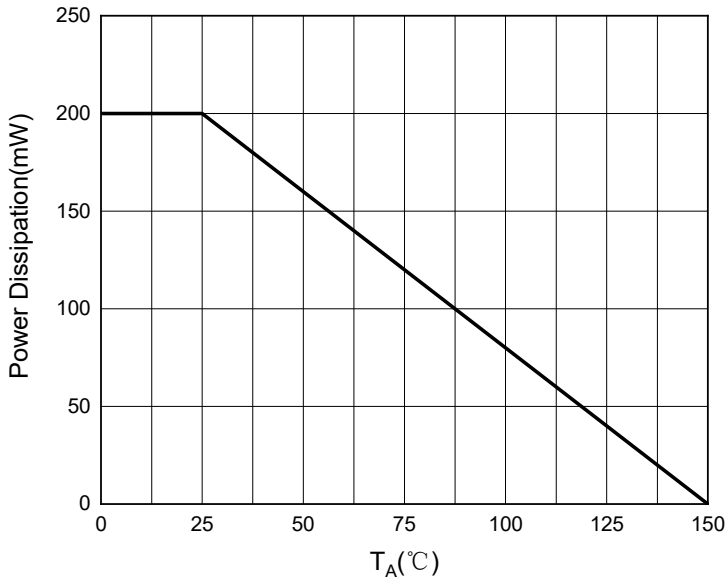


Fig.2: Capacitance Characteristics

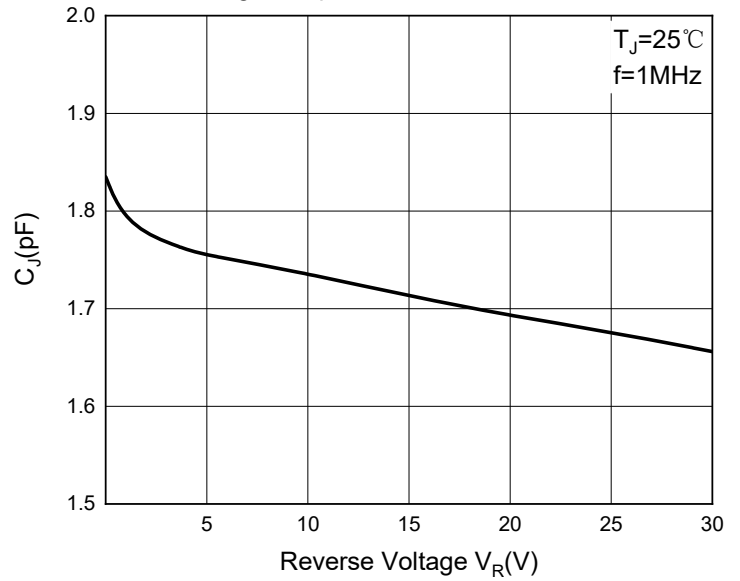


Fig.3: Forward Characteristics

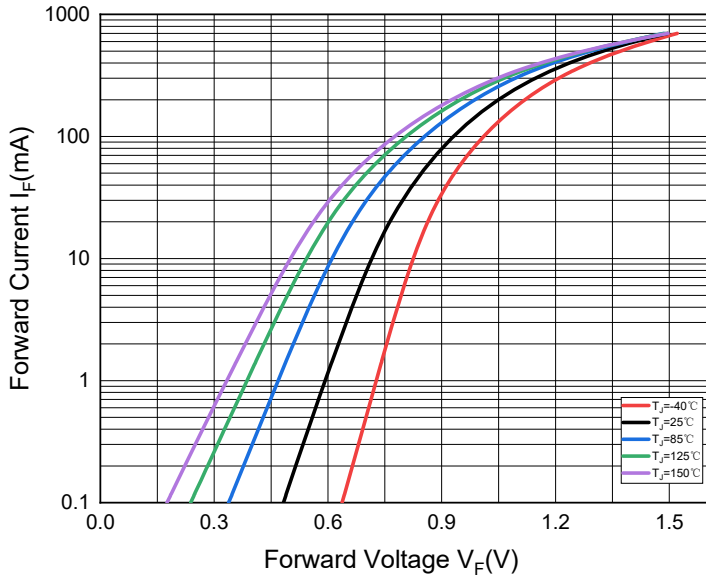
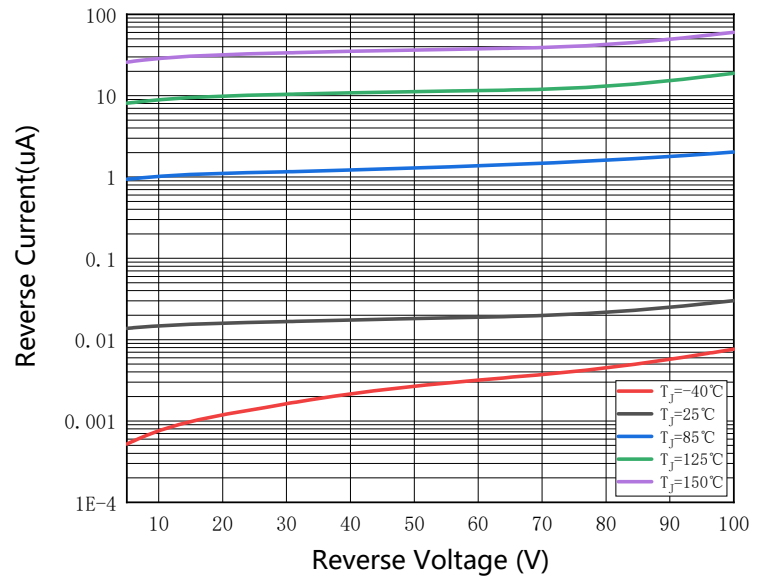
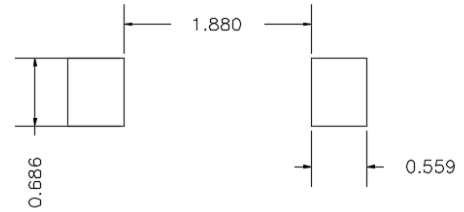
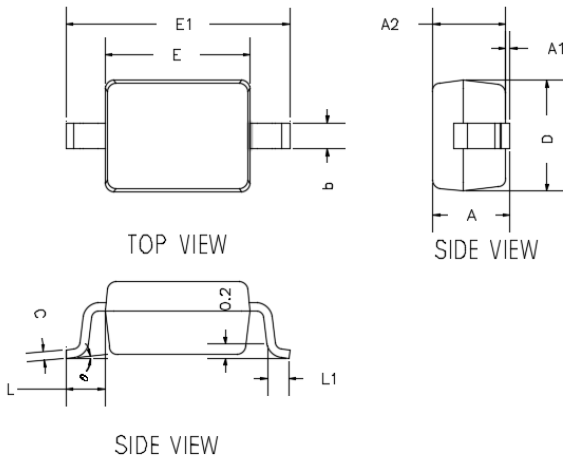


Fig.4: Reverse Characteristics



## ■ Outline Dimensions

SOD-323

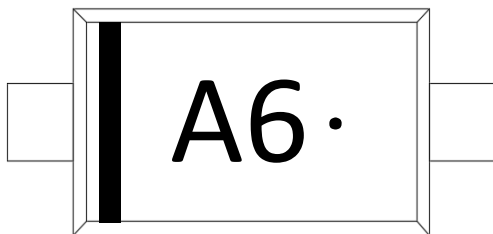


UNIT: mm

SUGGESTED SOLDER PAD LAYOUT

DIMENSIONS				
DIM	INCHES		MM	
	MIN	MAX	MIN	MAX
A	---	0.0393	---	1.0000
A1	0.0000	0.0039	0.0000	0.1000
A2	0.0314	0.0354	0.8000	0.9000
b	0.0098	0.0157	0.2500	0.4000
c	0.0031	0.0059	0.0800	0.1500
D	0.0472	0.0551	1.2000	1.4000
E	0.0629	0.0709	1.6000	1.8000
E1	0.0984	0.1063	2.5000	2.7000
L	0.0187TYP		0.475TYP	
L1	0.0098	0.0157	0.250	0.400
θ	0°	8°	0°	8°

## ■ Marking Information



Note:

1. All marking is at middle of the product body
2. All marking is in laser marking
3. Body color: Black



## BAS316Q

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### Disclaimer

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