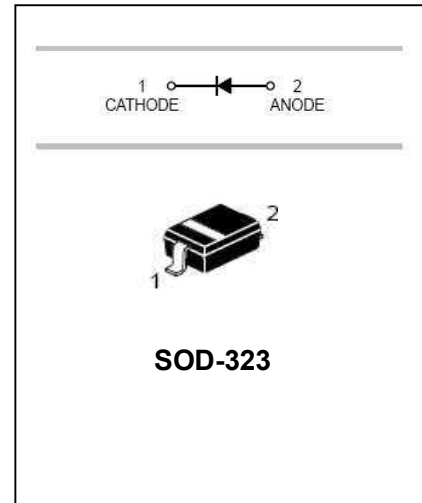


## Silicon Epitaxial Planar Diode

## BAS316

### FEATURES

- Very small plastic SMD package
- High switching speed:max.4ns
- Continuous reverse voltage:max.100v
- Repetitive peak reverse voltage:max.100v
- Repetitive peak forward current:max.500mA



### APPLICATIONS

- Surface mount fast switching diode

### ORDERING INFORMATION

Type No.	Marking	Package Code
BAS316	A6	SOD-323

### MAXIMUM RATING @ Ta=25°C unless otherwise specified

Characteristic	Symbol	Value	Unit
Repetitive peak reverse voltage	$V_{RRM}$	100	V
Continuous Reverse Voltage	$V_R$	100	V
Continuous forward Current	$I_F$	250	mA
Repetitive peak forward current	$I_{FRM}$	500	mA
Non-Repetitive peak forward current	$I_{FSM}$	t=1μs	4
		t=1ms	1
		t=1s	0.5
Power Dissipation, Ts ≤ 90°C	$P_d$	400	mW
Junction and Storage Temperature Range	$T_j, T_{STG}$	-65 to +150	°C
Thermal resistance from junction to solder point	$R_{thj-s}$	150	°C/W
Thermal resistance from junction to ambient	$R_{thj-A}$	500	°C/W
Thermal resistance from junction to case	$R_{thj-c}$	210	°C/W

Silicon Epitaxial Planar Diode

**BAS316**

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Characteristic	Symbol	Min	Max	Unit	Test Condition
Reverse Breakdown Voltage	$V_{(BR)R}$	100	-	V	$I_R=100\mu A$
Forward Voltage	$V_F$		0.715 0.855 1.0 1.25	V	$I_F=1.0mA$ $I_F=10mA$ $I_F=50mA$ $I_F=150mA$
Reverse Current	$I_R$	-	1.0 0.03	$\mu A$	$V_R=75V$ $V_R=25V$
Capacitance between terminals	$C_T$	-	1.5	pF	$V_R=0, f=1.0MHz$
Reverse Recovery Time	$t_{rr}$	-	4.0	ns	$I_F=I_R=10mA, R_L=100\Omega$

TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

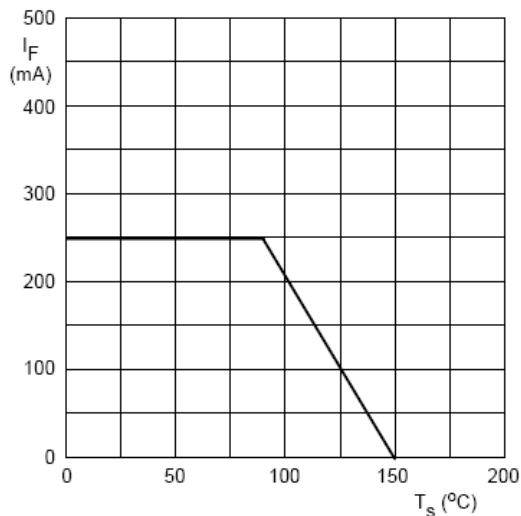


Fig.1 Maximum permissible continuous forward current as a function of soldering point temperature.

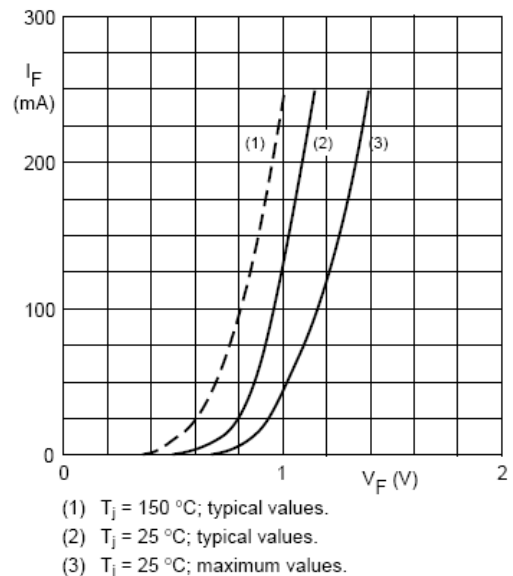


Fig.2 Forward current as a function of forward voltage.

Silicon Epitaxial Planar Diode

**BAS316**

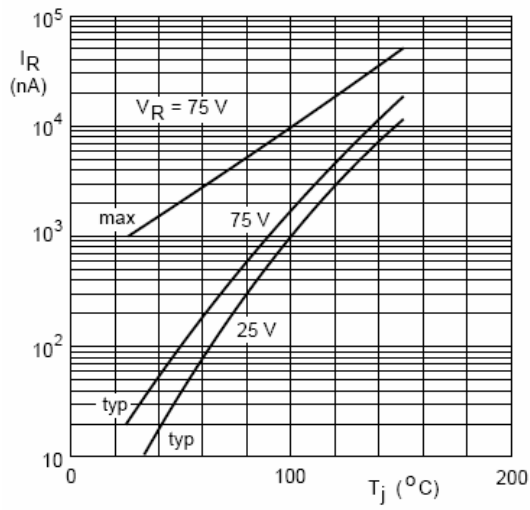
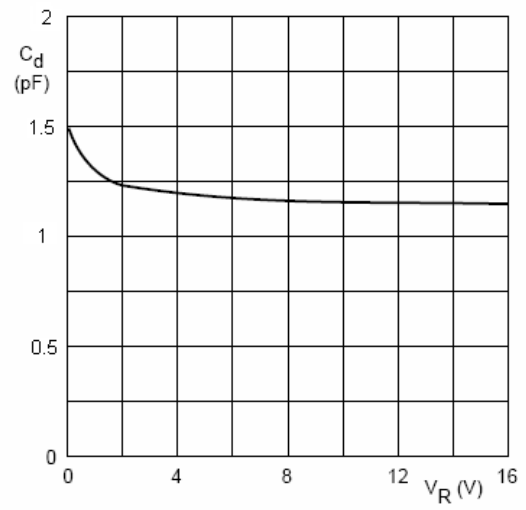


Fig.3 Reverse current as a function of junction temperature.



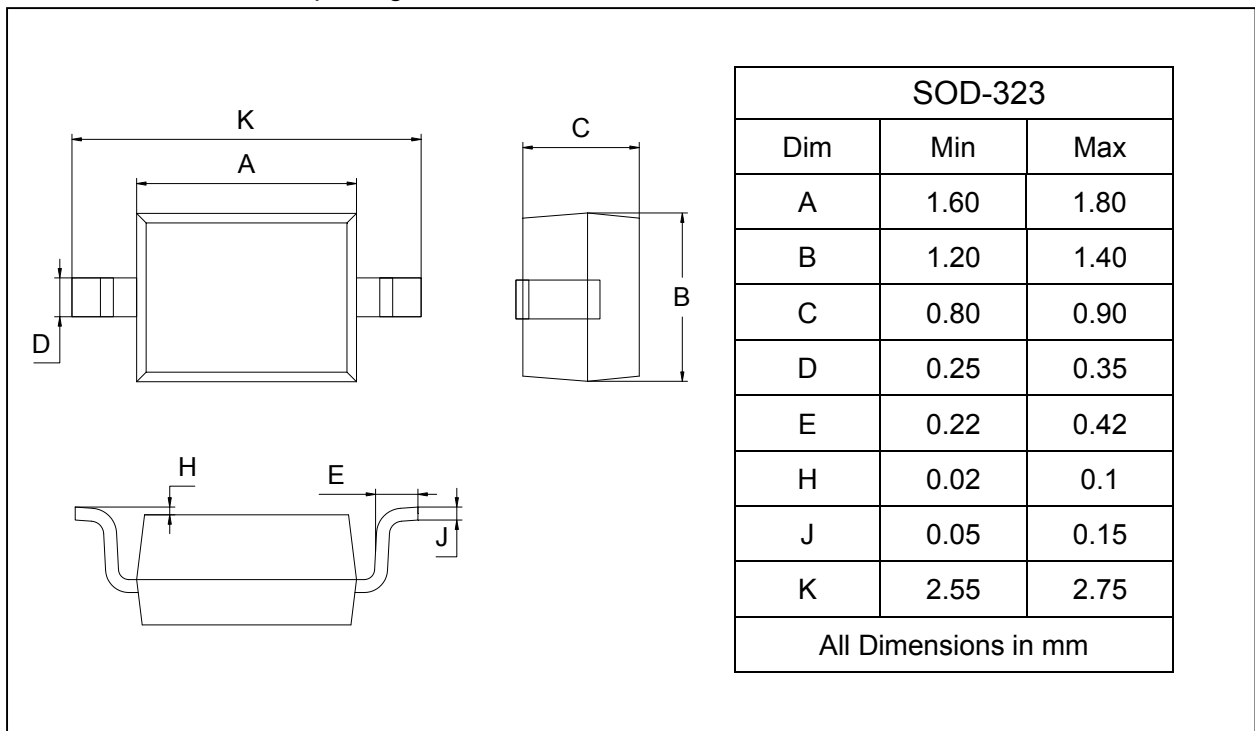
$f = 1 \text{ MHz}; T_j = 25 \text{ }^\circ\text{C}.$

Fig.4 Diode capacitance as a function of reverse voltage; typical values.

PACKAGE OUTLINE

Plastic surface mounted package

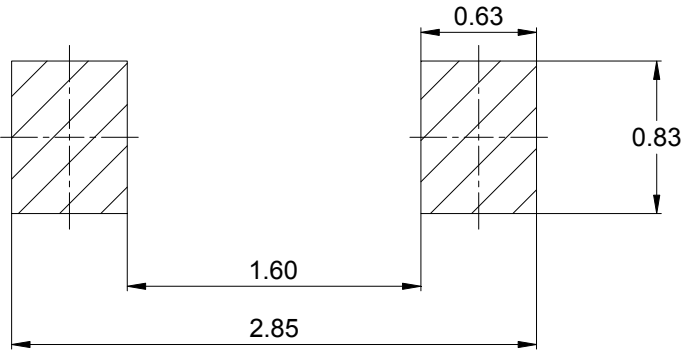
SOD-323



Silicon Epitaxial Planar Diode

**BAS316**

SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

Device	Package	Shipping
BAS316	SOD-323	3000/Tape&Reel