

BAS316

HIGH SPEED DIODE

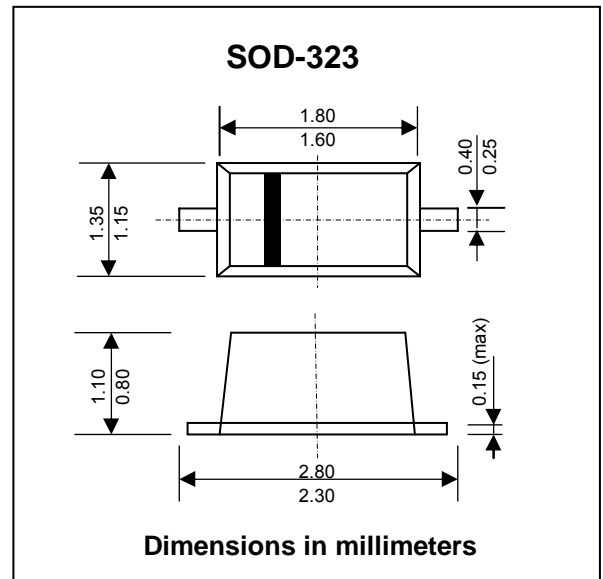
PRV : 100 Volts
Io : 250 mA

FEATURES :

- * Very small plastic SMD package
- * High switching speed: max. 4 ns
- * Continuous reverse voltage: max. 100V
- * Repetitive peak reverse voltage: max. 100V
- * **Pb / RoHS Free**

MECHANICAL DATA :

- * Case : SOD-323 plastic Case
- * Weight : approx. 0.004 g
- * Marking Code : "WD"



Dimensions in millimeters

MAXIMUM RATINGS AND THERMAL CHARACTERISTICS (T_j = 25 °C unless otherwise specified)

Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V _{RRM}	100	V
Maximum Continuous Reverse Voltage	V _R	100	V
Maximum Continuous Forward Current T _S = 90 °C (Note 1)	I _F	250	mA
Maximum Non-repetitive Peak Forward Current (square wave; T _j = 25 °C prior to surge)	I _{FSM}	t = 1 μs	4
		t = 1 ms	1
		t = 1 s	0.5
Total Power Dissipation T _S = 90 °C (Note 1)	P _{tot}	400	mW
Thermal Resistance from Junction to soldering point	R _{th(j-s)}	150	K/W
Junction Temperature Range	T _J	150	°C
Storage Temperature Range	T _{STG}	-65 to +150	°C

ELECTRICAL CHARACTERISTICS (T_j = 25 °C unless otherwise specified)

Parameter	Test Condition	Symbol	Max.	Unit
Forward Voltage	I _F = 1 mA	V _F	715	mV
	I _F = 10 mA		855	mV
	I _F = 50 mA		1.00	V
	I _F = 150 mA		1.25	V
Reverse Current	V _R = 25 V	I _R	30	nA
	V _R = 75 V		1.0	μA
	V _R = 25 V, T _j = 150 °C		30	μA
	V _R = 75 V, T _j = 150 °C		50	μA
Capacitance	V _R = 0 V, f = 1 MHz	C _D	1.5	pF
Reverse Recovery Time	When switched from I _F = 10 mA to I _R = 10mA; R _L = 100 Ω; measure at I _R = 1 mA	T _{rr}	4	ns

Note : (1) T_S is the temperature at the soldering point of the cathode tap.

RATINGS AND CHARACTERISTIC CURVES (BAS316)

FIG.1 - MAXIMUM CONTINUOUS FORWARD CURRENT VS. SOLDERING POINT TEMPERATURE

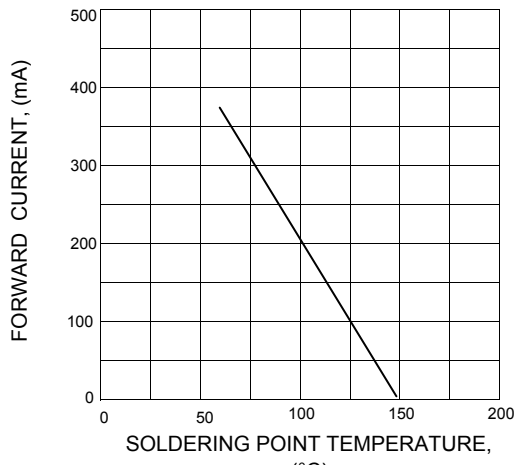


FIG.2 - DIODE CAPACITANCE VS. REVERSE VOLTAGE; TYPICAL VALUES

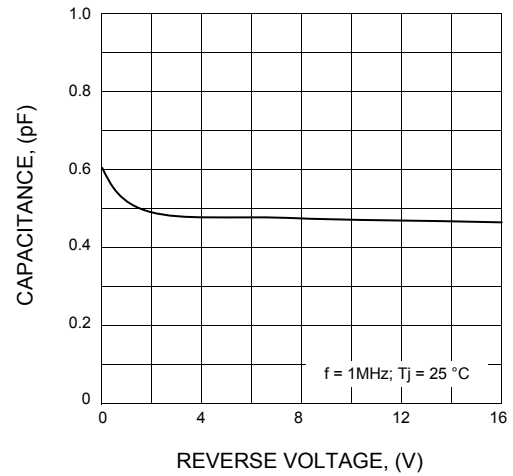


FIG.3 - FORWARD CURRENT VS. FORWARD VOLTAGE ; TYPICAL VALUES

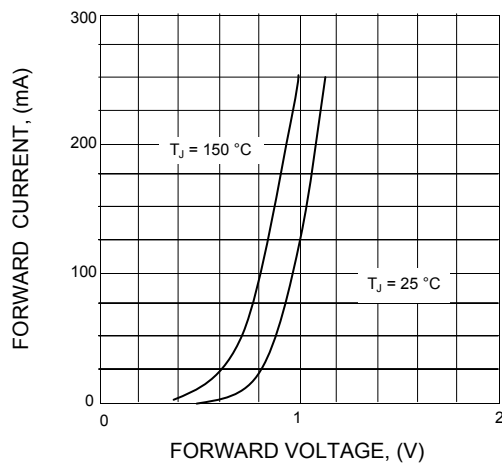


FIG.4 - REVERSE CURRENT VS. JUNCTION TEMPERATURE

