BAS316

HIGH SPEED DIODE

PRV : 100 Volts
Io : 250 mA

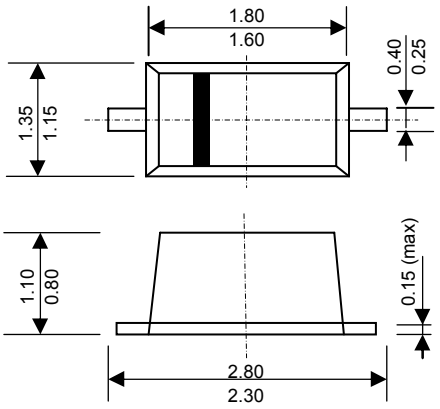
FEATURES :

* 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"

SOD-323



Dimensions in millimeters

MAXIMUM RATINGS AND THERMAL CHARACTERISTICS (Tj = 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 t = 1 µs	I_{FSM}	4	A
(square wave; Tj = 25 °C prior to surge) 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 (Tj = 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 , Tj = 150 °C		30	µA
	V_R = 75 V , Tj = 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	Trr	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 TEMPERATER

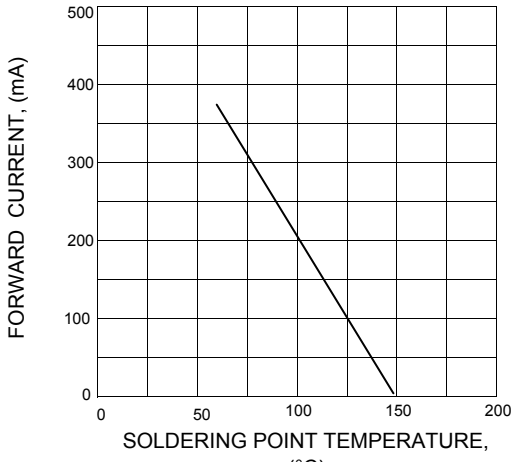


FIG.2 - DIODE CAPACITANCE VS. REVERSE VOLTAGE; TYPICAL VALUES

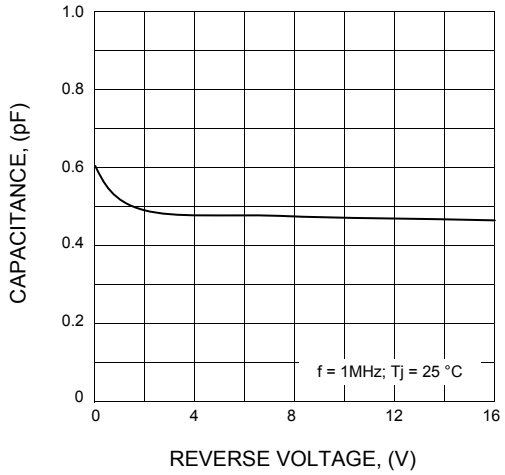


FIG.3 - FORWARD CURRENT VS. FORWARD VOLTAGE ; TYPICAL VALUES

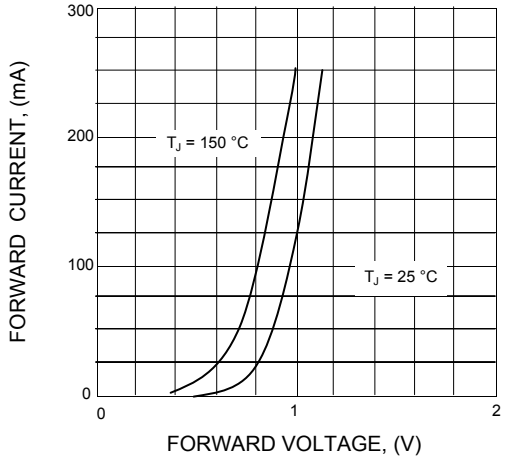


FIG.4 - REVERSE CURRENT VS. JUNCTION TEMPERATURE