

BAS316WS-Q

HIGH SPEED SWITCHING DIODE

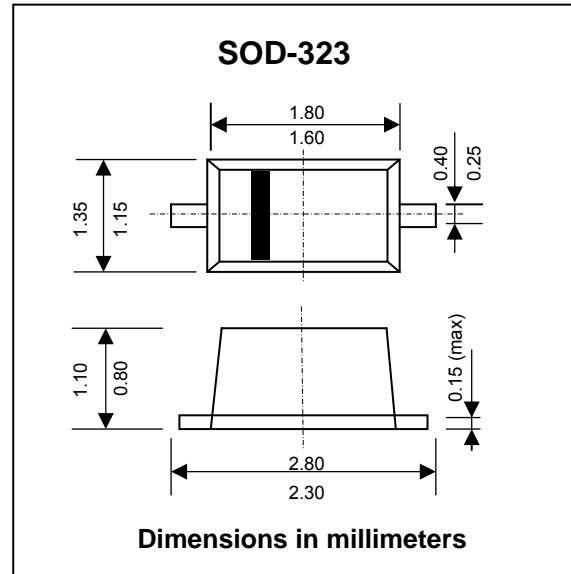
PRV : 100 Volts
Io : 250 mA

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**
- * AEC-Q101 Qualified

MECHANICAL DATA :

- * Case : SOD-323 plastic Case
- * Weight : approx. 0.004 g
- * Marking Code : "W2"



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 $T_S = 90\text{ °C}$ (Note 1)	I_F	250	mA
Maximum Non-repetitive Peak Forward Current (square wave; $T_j = 25\text{ °C}$ prior to surge)	I_{FSM}	$t = 1\ \mu s$	4
		$t = 1\ ms$	1
		$t = 1\ s$	0.5
Total Power Dissipation $T_S = 90\text{ °C}$ (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
	$V_R = 25\ V, T_j = 150\text{ °C}$		30	μA
	$V_R = 75\ V, T_j = 150\text{ °C}$		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 $I_R = 10\ mA$; $R_L = 100\ \Omega$; 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 (BAS316WS-Q)

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

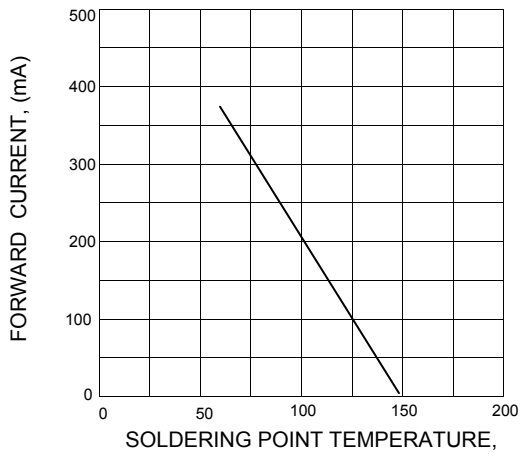


FIG.2 - DIODE CAPACITANCE VS. REVERSE VOLTAGE; TYPICAL VALUES

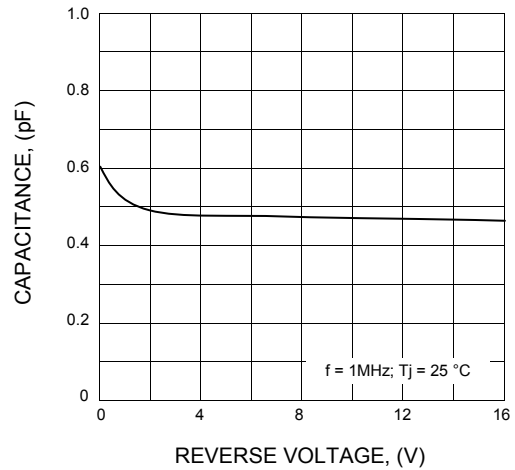


FIG.3 - FORWARD CURRENT VS. FORWARD VOLTAGE ; TYPICAL VALUES

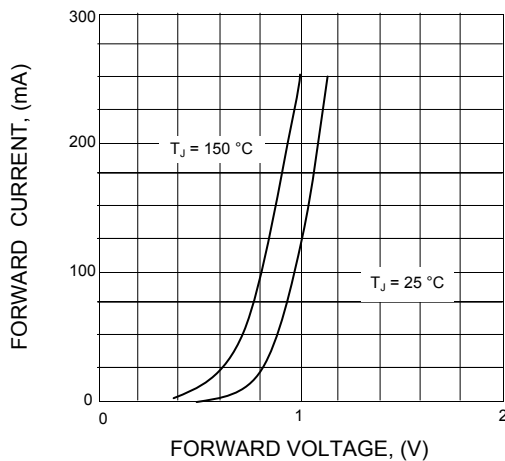


FIG.4 - REVERSE CURRENT VS. JUNCTION TEMPERATURE

