

BAS316WS

HIGH SPEED SWITCHING DIODE

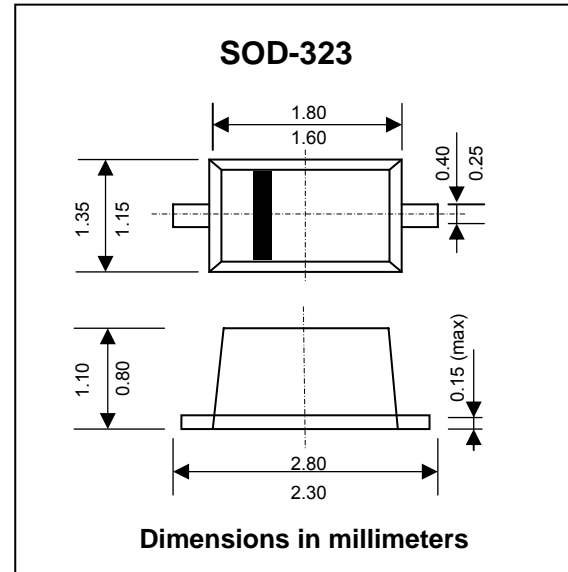
PRV : 100 Volts
Io : 250 mA

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**

MECHANICAL DATA :

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



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 (BAS316WS)

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

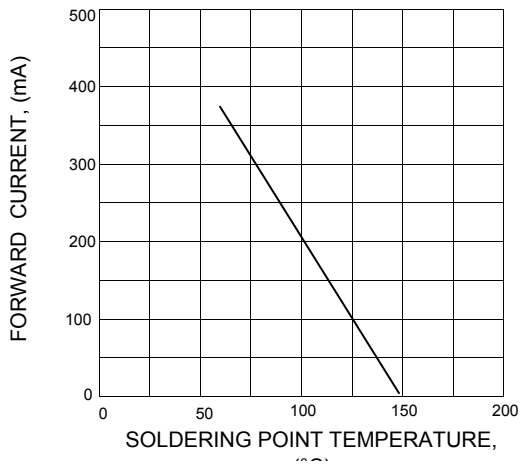


FIG.2 - DIODE CAPACITANCE VS. REVERSE VOLTAGE; TYPICAL VALUES

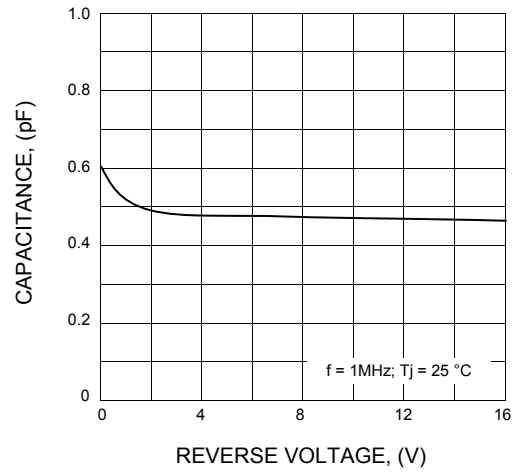


FIG.3 - FORWARD CURRENT VS. FORWARD VOLTAGE ; TYPICAL VALUES

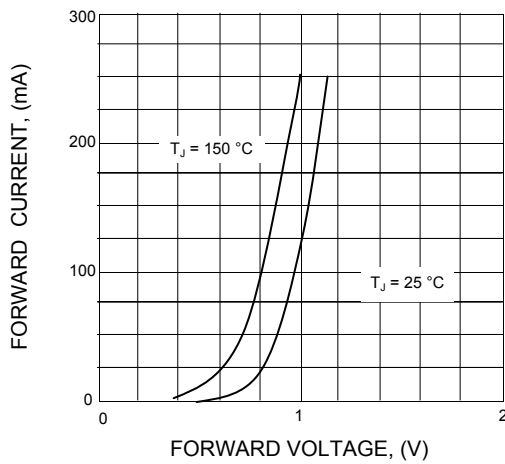


FIG.4 - REVERSE CURRENT VS. JUNCTION TEMPERATURE

