

BAT54WS

SMALL SIGNAL SCHOTTKY DIODE

PRV : 30 Volts

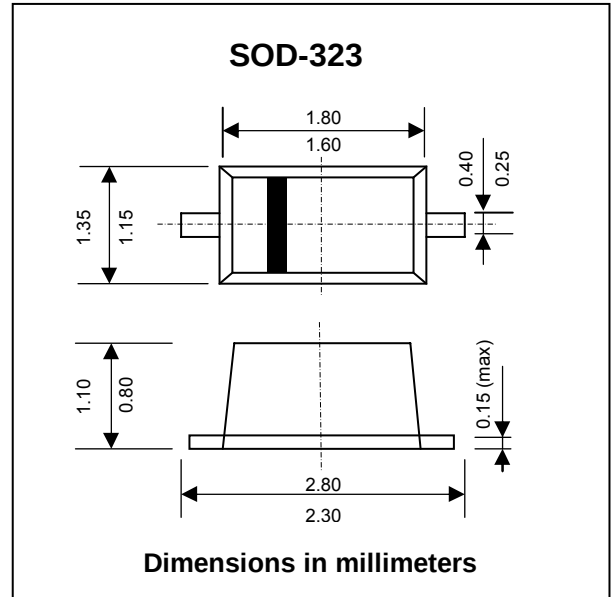
Io : 200 mA

FEATURES :

- * These diodes feature very low turn-on voltage
- * Fast switching
- * These devices are protected by a PN junction guard ring against excessive voltage, such as electrostatic discharges
- * Pb / RoHS Free

MECHANICAL DATA :

- * Case : SOD-323 plastic Case
- * Weight : approx. 0.004 g
- * Marking Code : S1



MAXIMUM RATINGS (Rating at 25 °C ambient temperature unless otherwise specified.)

Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	30	V
Maximum Forward Continuous Current (Note 1)	I_F	200	mA
Maximum Repetitive Peak Forward Current (Note 1)	I_{FRM}	300	mA
Maximum Peak Forward Surge Current at $t_p < 1$ s, (Note 1)	I_{FSM}	600	mA
Total Power Dissipation (Note 1)	P_{tot}	150	mW
Thermal Resistance Junction to Ambient Air (Note 1)	$R_{\theta JA}$	650	K/W
Maximum Junction Temperature	T_J	125	°C
Storage Temperature Range	T_{STG}	-65 to +150	°C

ELECTRICAL CHARACTERISTICS (Rating at 25 °C ambient temperature unless otherwise specified)

Parameter	Test Condition	Symbol	Min.	Typ.	Max.	Unit
Reverse Breakdown Voltage	$I_R = 100 \mu A$ pulses	$V_{(BR)}$	30	-	-	V
Leakage Current (Note 2)	$V_R = 25$ V	I_R	-	-	2	μA
Forward Voltage (Note 2)	$I_F = 0.1$ mA	V_F	-	-	240	mV
	$I_F = 1$ mA	V_F	-	-	320	mV
	$I_F = 10$ mA	V_F	-	-	400	mV
	$I_F = 30$ mA	V_F	-	-	500	mV
	$I_F = 100$ mA	V_F	-	-	800	mV
Diode Capacitance	$V_R = 1$ V, $f = 1$ MHz	C_{tot}	-	-	10	pF
Reverse Recovery Time	$I_F = 10$ mA through $I_R = 10$ mA, to $I_{rr} = 1$ A, $R_L = 100 \Omega$	T_{rr}	-	-	5	ns

Notes :

- (1) Valid provided that electrodes are kept at ambient temperature
- (2) Pulse test $t_p < 300 \mu s$, $\delta < 2\%$

RATINGS AND CHARACTERISTIC CURVES (BAT54WS)

FIG.1 - DERATING CURVE

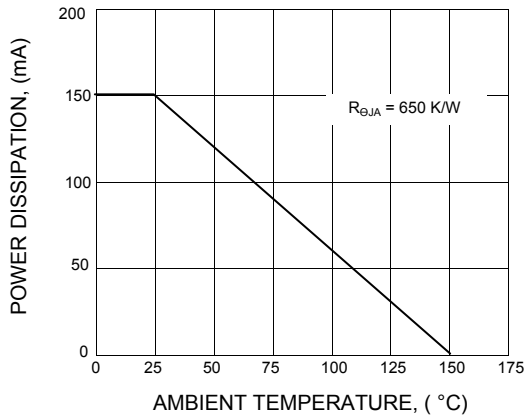


FIG.2 - TYPICAL CAPACITANCE VS. REVERSE VOLTAGE

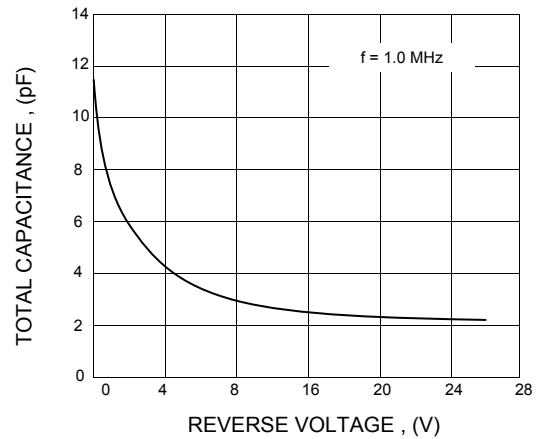


FIG.3 - TYPICAL FORWARD VOLTAGE FORWARD CURRENT AT VARIOUS TEMPERATURE

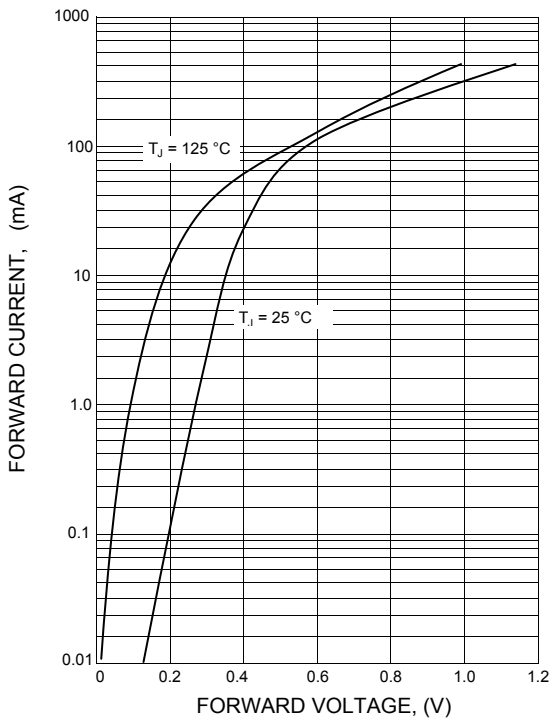


FIG.4 - TYPICAL VARIATION OF REVERSE CURRENT AT VARIOUS TEMPERATURES

