

BAT42WS - BAT43WS

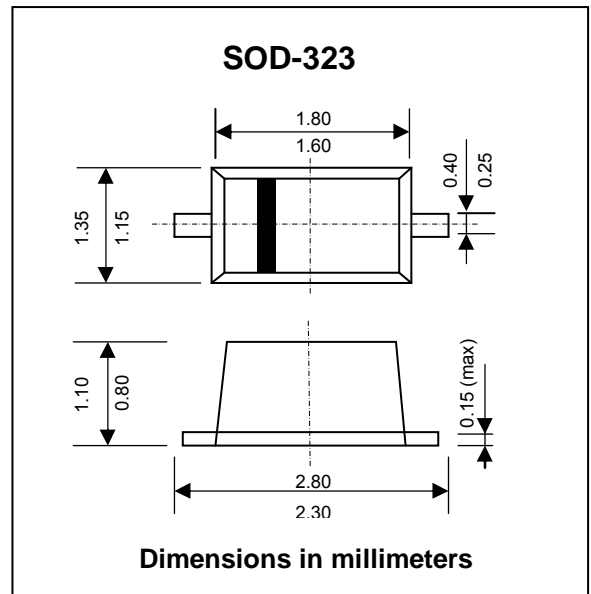
SCHOTTKY BARRIER DIODES

FEATURES :

- * Low forward voltage drop
- * Fast switching
- * Ultra-small surface mount package
- * Pb / RoHS Free

MECHANICAL DATA :

- * Case : SOD-323 plastic Case
- * Weight : approx. 0.004 g
- * BAT42WS Marking Code : X9
- * BAT43WS Marking Code : Y9



Maximum Ratings and Thermal Characteristics (Rating at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	V_{RRM}	30	V
Average Rectified Output Current	I_O	100	mA
Continuous Forward Current	I_F	200	mA
Repetitive Peak Forward Current at $t_p < 1$ s	I_{FRM}	500	mA
Non-repetitive Peak Forward Surge Current at $t_p < 10$ ms	I_{FSM}	4	A
Power Dissipation	P_{tot}	200	mW
Thermal Resistance Junction to Ambient Air	$R_{\theta JA}$	625	°C/W
Junction Temperature	T_J	-55 to + 125	°C
Storage temperature range	T_{STG}	-55 to + 125	°C

Electrical Characteristics ($T_J = 25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 100 \mu\text{A}$ (pulsed)	30	-	-	V
Peak Reverse Current	I_R	$V_R = 25$ V	-	-	0.5	μA
		$V_R = 25$ V, $T_J = 100$ °C	-	-	100	
Forward Voltage Drop	V_F	$I_F = 200$ mA	-	-	1.00	V
		$I_F = 10$ mA	-	-	0.40	
		$I_F = 50$ mA	-	-	0.65	
		$I_F = 2$ mA	0.26	-	0.33	
		$I_F = 15$ mA	-	-	0.45	
Total Capacitance	C_T	$V_R = 1$ V, $f = 1$ MHz	-	-	10	pF
Reverse Recovery Time	T_{rr}	$I_F = 10$ mA, $I_R = 10$ mA, $I_{rr} = 1$ mA, $R_L = 100 \Omega$	-	-	5	ns

RATING AND CHARACTERISTIC CURVES (BAT42WS - BAT43WS)

FIG.1 - FORWARD CURRENT DERATING CURVE

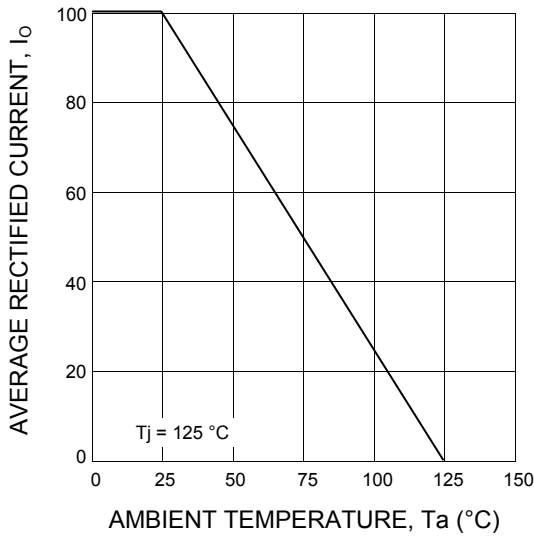


FIG2. - TOTAL CAPACITANCE VS. REVERSE VOLTAGE

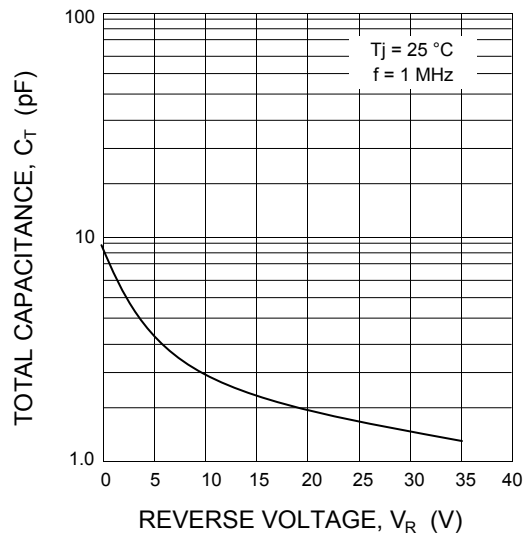


FIG.3 - TYPICAL FORWARD CHARACTERISTICS

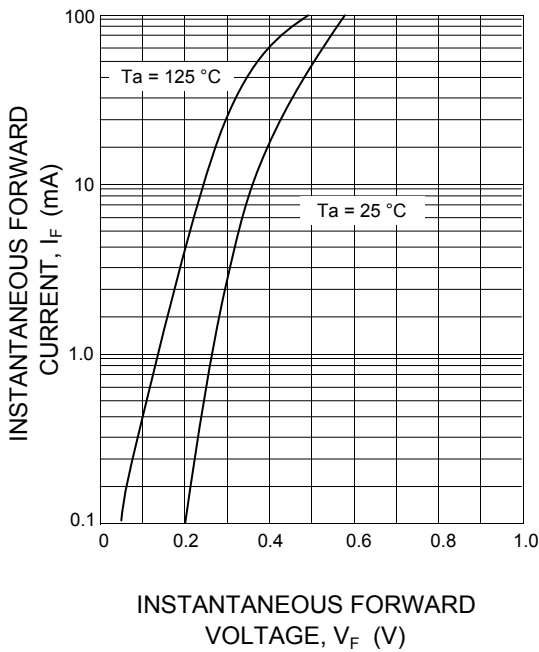


FIG.4 - TYPICAL REVERSE CHARACTERISTICS

