

# BAT42WS - BAT43WS

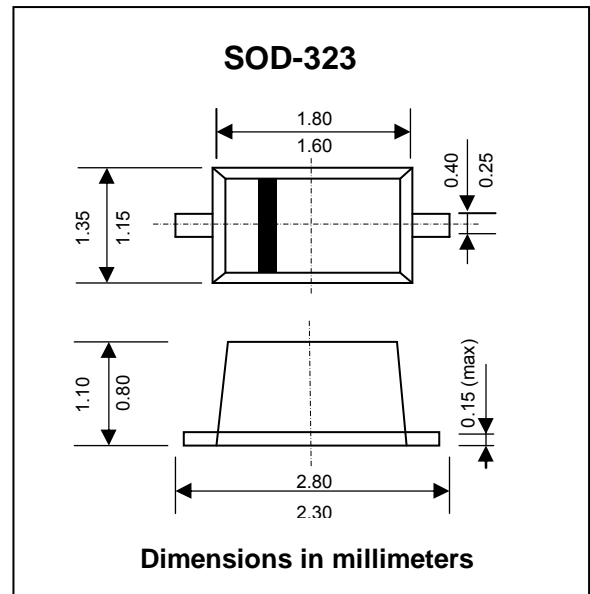
# SCHOTTKY BARRIER DIODES

## 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.)

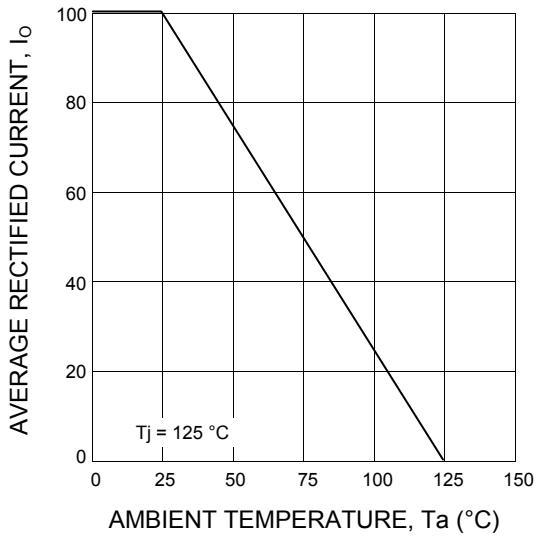
Parameter	Symbol	Value	Unit
Repetitive Peak Reverse Voltage	$V_{RRM}$	30	V
Average Rectified Output Current	$I_O$	100	mA
Continuous Forward Current	$I_F$	200	mA
Repetitive Peak Forward Current at $t_p < 1$ s	$I_{FRM}$	500	mA
Non-repetitive Peak Forward Surge Current at $t_p < 10$ ms	$I_{FSM}$	4	A
Power 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)

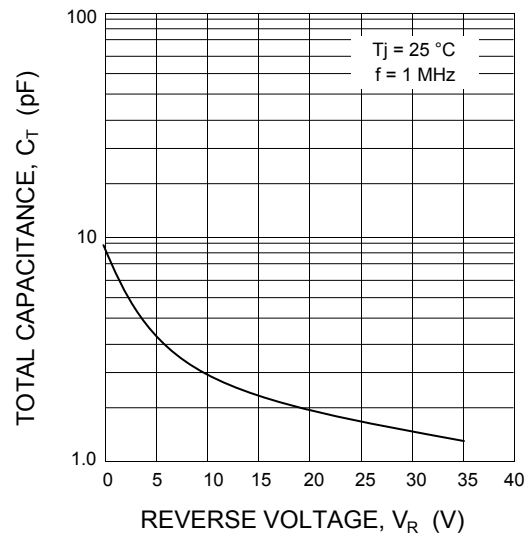
Parameter	Symbol	Test Condition	Min	Typ	Max	Unit
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R = 100 \mu\text{A}$ (pulsed)	30	-	-	V
Peak Reverse Current	$I_R$	$V_R = 25$ V	-	-	0.5	$\mu\text{A}$
		$V_R = 25$ V, $T_J = 100$ °C	-	-	100	
Forward Voltage Drop	$V_F$	$I_F = 200$ mA	-	-	1.00	V
		$I_F = 10$ mA	-	-	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 )

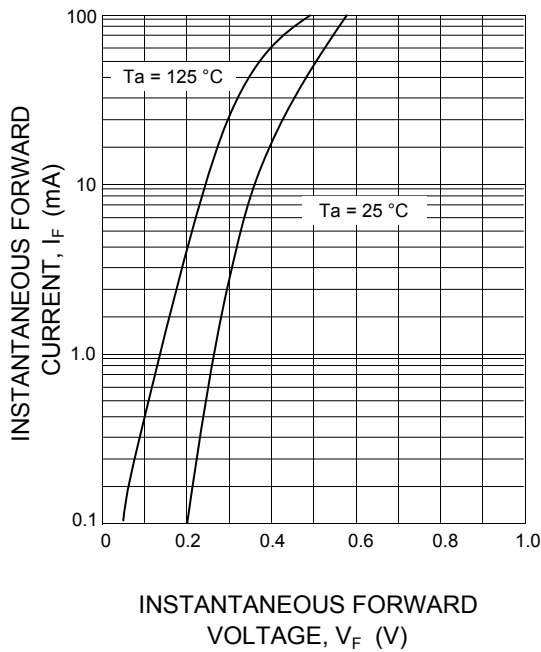
**FIG.1 - FORWARD CURRENT DERATING CURVE**



**FIG2. - TOTAL CAPACITANCE VS. REVERSE VOLTAGE**



**FIG.3 - TYPICAL FORWARD CHARACTERISTICS**



**FIG.4 - TYPICAL REVERSE CHARACTERISTICS**

