



Schottky Barrier Diode

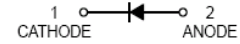
BAT42WS/BAT43WS

FEATURES

- Low Forward drop voltage
- Fast switching
- Ultra-small surface mount package
- Available in lead free version



Lead-free



SOD-323

APPLICATIONS

- Schottky barrier detector and switching diodes

ORDERING INFORMATION

Type No.	Marking	Package Code
BAT42WS	S7	SOD-323
BAT43WS	S8	SOD-323

MAXIMUM RATING @ Ta=25°C unless otherwise specified

Parameter	Symbol	Limits	Unit
Peak Repetitive Peak reverse voltage	V_{RRM}	30	V
Working Peak	V_{RWM}		
DC Reverse Voltage	V_R		
RMS reverse voltage	$V_{R(RMS)}$	21	V
Average rectified output current	I_O	100	mA
Repetitive peak Forward Current @t<1.0s	I_{FRM}	500	mA
Peak Forward Surge Current @<10ms	I_{FSM}	4.0	A
Power Dissipation	P_d	200	mW
Thermal resistance, junction to ambient	$R_{\theta JA}$	625	°C/W
Junction temperature	T_j	125	°C
Storage temperature range	T_{stg}	-55 to +125	°C



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BAT42WS/BAT43WS

ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Conditions	Min.	Typ.	Max.	Unit		
Reverse Breakdown Voltage	$V_{(BR)R}$	$I_R=100\mu A$	30			V		
Forward voltage	All types	V_F	$I_F=200mA$			1.0	V	
		BAT42WS	V_F	$I_F=10mA$			0.4	V
			V_F	$I_F=50mA$			0.65	V
		BAT43WS	V_F	$I_F=2mA$	0.26		0.33	V
		BAT43WS	V_F	$I_F=15mA$			0.45	V
Reverse current	I_R	$V_R=25V$				0.5	μA	
		$V_R=25V, T_J=100^\circ C$				0.1	μA	
Reverse recovery time	t_{rr}	$I_F=10mA, I_R=10mA$ $R_L=100\Omega$			5.0	ns		
Capacitance between terminals	C_T	$V_R=1.0V, f=1MHz$			10	pF		

TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

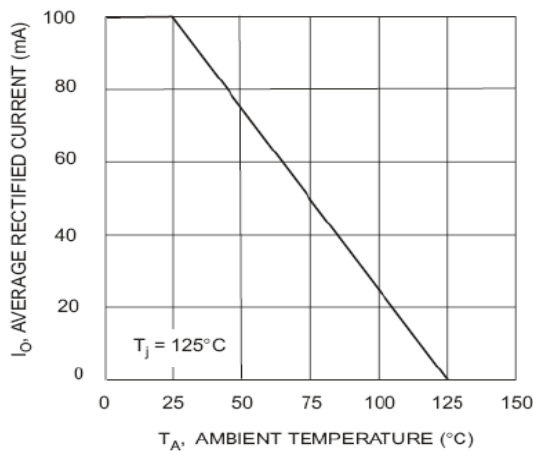


Fig. 1 Forward Current Derating Curve

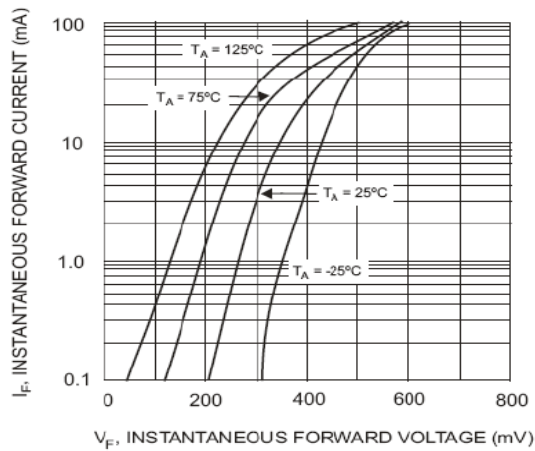


Fig. 2 Typical Forward Characteristics

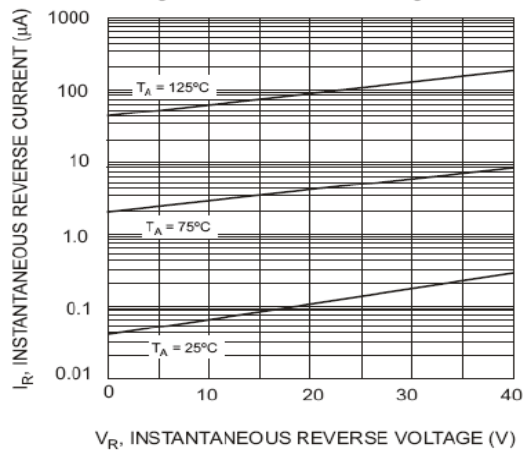


Fig. 3 Typical Reverse Characteristics

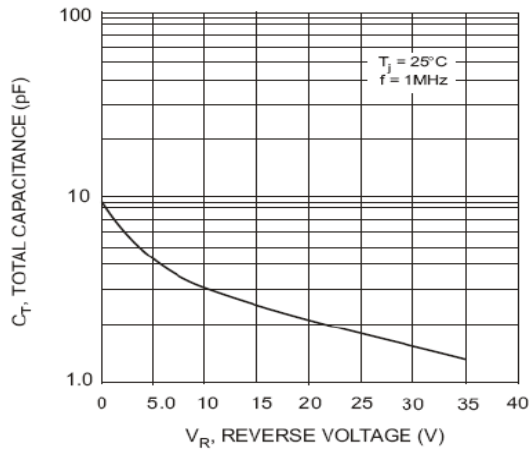


Fig. 4 Total Capacitance vs. Reverse Voltage



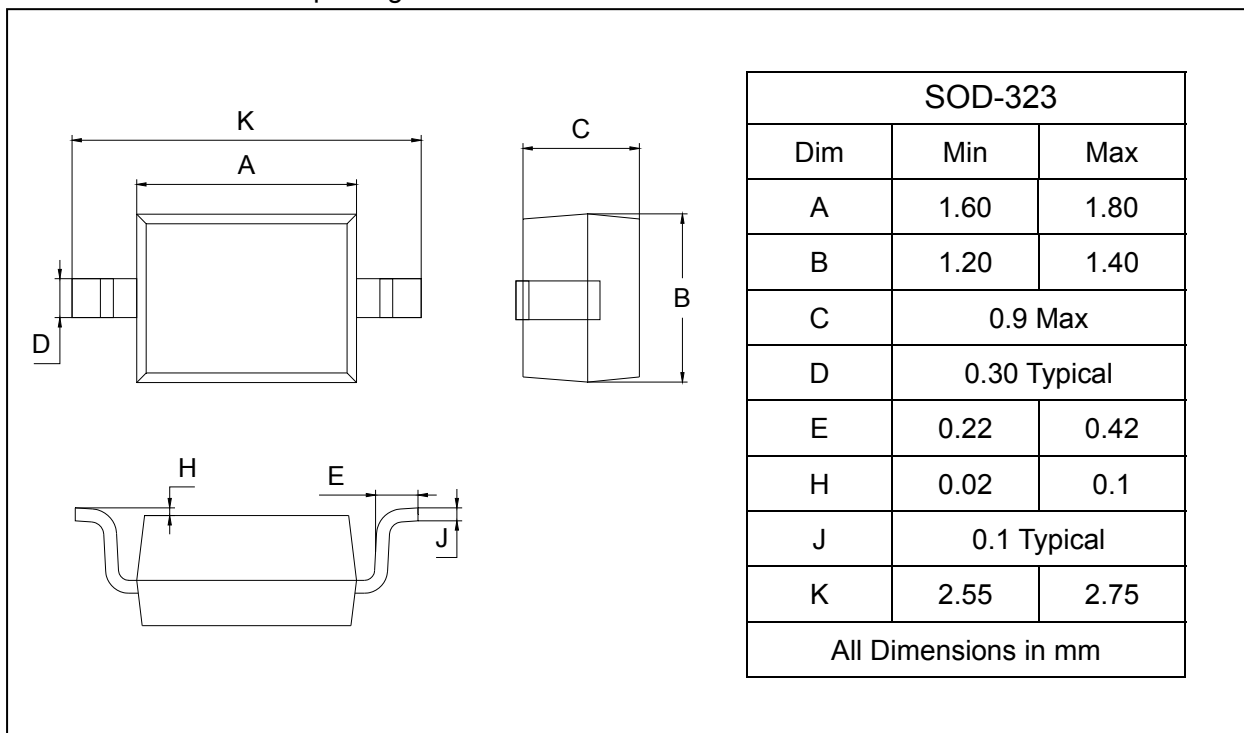
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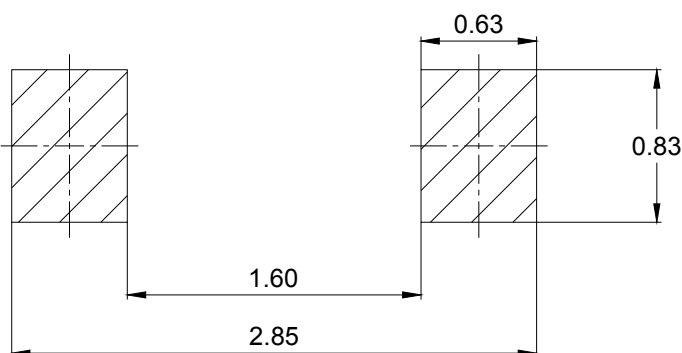
PACKAGE OUTLINE

Plastic surface mounted package

SOD-323



SOLDERING FOOTPRINT



Unit : mm

PACKAGE INFORMATION

Device	Package	Shipping
BAT42WS/BAT43WS	SOD-323	3000/Tape&Reel