

Surface Mount Schottky Barrier Diode

 Lead(Pb)-Free

Features:

- * Low Forward Voltage Drop
- * Fast Switching
- * Ultra-Small Surface Mount Package

Mechanical Data:

- * Case: SOD-323, Plastic
- * Case Material-UL Flammability Rating Classification 94V-0
- * Leads: Solderable per MIL-STD-202, Method 208
- * Polarity: Cathode Band
- * Weight: 0.004 grams(approx.)

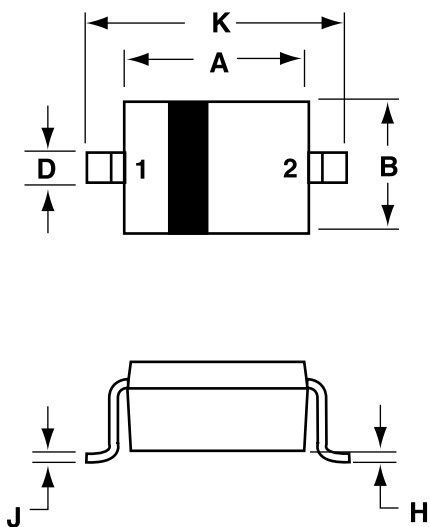
**SCHOTTKY DIODE
200mAMPERS
30VOLTS**



SOD-323

SOD-323 Outline Demensions

Unit:mm



Dim	MILLMETERS	
	Min	Max
A	1.60	1.80
B	1.15	1.35
C	0.80	1.00
D	0.25	0.40
E	0.15 REF	
H	0.00	0.10
J	0.089	0.377
K	2.30	2.70

PIN 1.CATHODE
2.ANODE

Maximum Ratings ($T_A=25^{\circ}\text{C}$ Unless otherwise noted)

Characteristic	Symbol	BAT42WS/BAT43WS	Unit
Peak Repetitive Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	VRRM VRWM VR	30	V
RMS Reverse Voltage	VR(RMS)	21	V
Average Rectified Output Current ⁽¹⁾	IFAV	200	mA
Non-Repetitive Peak Forward Surge Current @ $t < 1.0\text{ms}$	IFSM	4.0	A
Power Dissipation	Pd	200	mW
Thermal Resistance junction to Ambient Air ⁽¹⁾	R θ JA	500	$^{\circ}\text{C}/\text{W}$
Operating & Storage Temperature Range	T _J , T _{STG}	-55 to +125	$^{\circ}\text{C}$

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

Characteristic	Symbol	Min	Max	Unit
Reverse Breakdown Voltage I _R =100 μ A	V _{(BR)R}	30	-	V
Forward Voltage I _F =200mA I _F =10mA I _F =50mA I _F =2.0mA I _F =15mA	Both Types BAT42WS BAT42WS BAT43WS BAT43WS	- - - 0.26 -	1.0 0.40 0.65 0.33 0.45	V
Reverse Current V _R =25V V _R =25V, T _j =100 $^{\circ}\text{C}$	I _R	- -	500 100	nAdc uAdc
Total Capacitance V _R =1.0V, f=1.0MHz	C _T	-	10	PF
Reverse Recovery Time I _F =I _R =10mA I _{rr} =0.1 \times I _R , R _L =100 Ω	T _{rr}	-	5.0	ns

Note:

1. Parts Mounted on FR-4 PC Board with recommended pad layout.

Device Marking

Item	Marking	Equivalent Circuit diagram
BAT42WS	S7	
BAT43WS	S8	

Electrical Characteristic curves(Ta=25 °C)

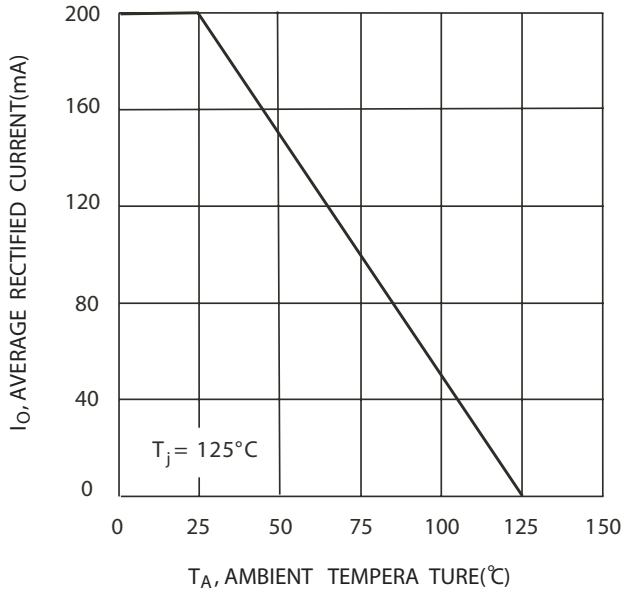


FIG. 1 Forward Current Derating Curve

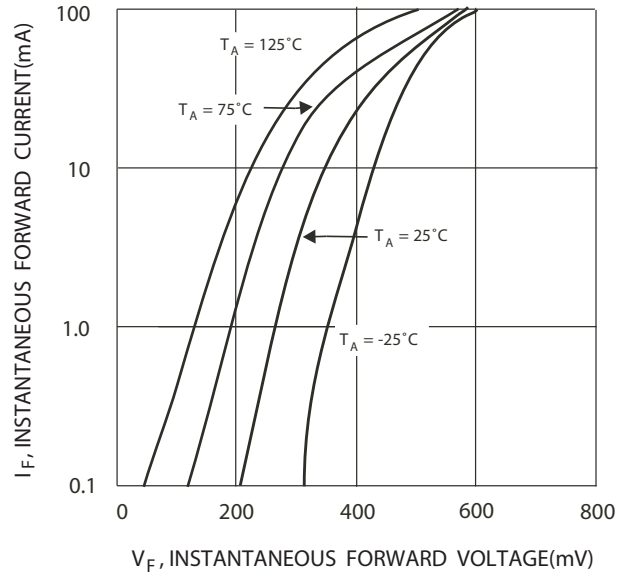


FIG. 2 Typical Forward Characteristics

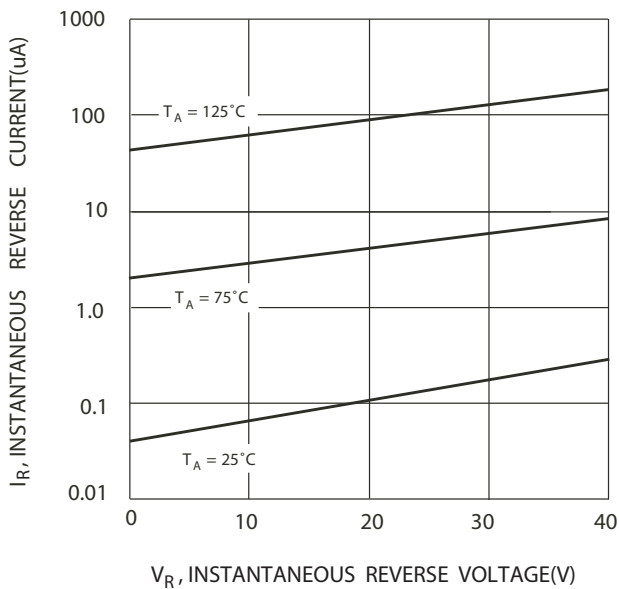


FIG. 3 Typical Reverse Characteristics

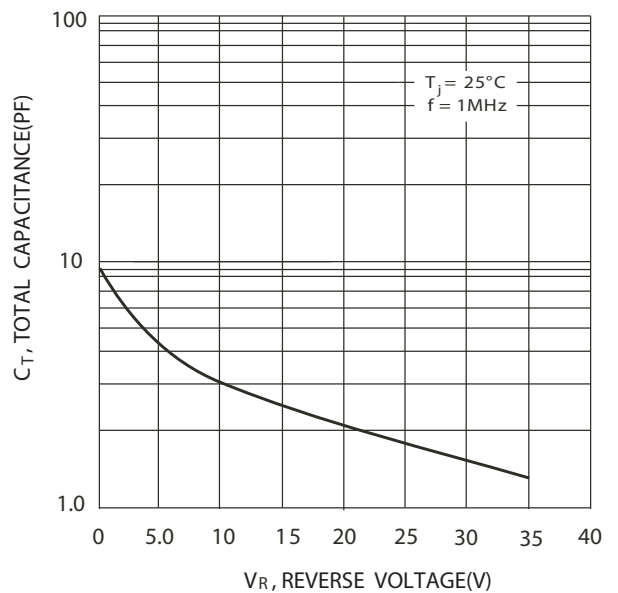


FIG. 4 Total Capacitance vs. Reverse Voltage