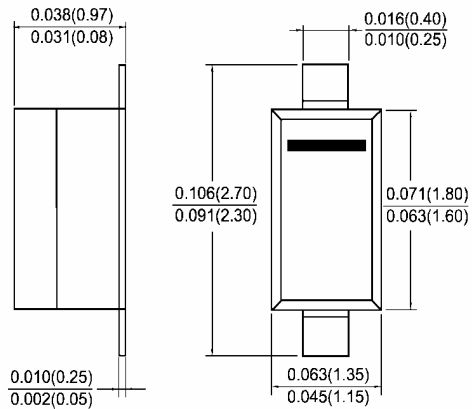


# BAT42WS/BAT43WS

## 0.2W Surface Mount Flat Lead Fast Switching Schottky Barrier Diode

### SOD-323F



### Features

- ✧ Low forward voltage drop
- ✧ Flat Lead SOD-323F small outline plastic package
- ✧ Surface device type mounting
- ✧ Moisture sensitivity level 1
- ✧ Clip bonding construction, good thermal capability
- ✧ RoHS compliant
- ✧ Matte Tin (Sn) lead finish
- ✧ Band indicates cathode

Dimensions in inches and (millimeters)

## Maximum Ratings and Electrical Characteristics

Rating at 25°C ambient temperature unless otherwise specified.

### Maximum Ratings

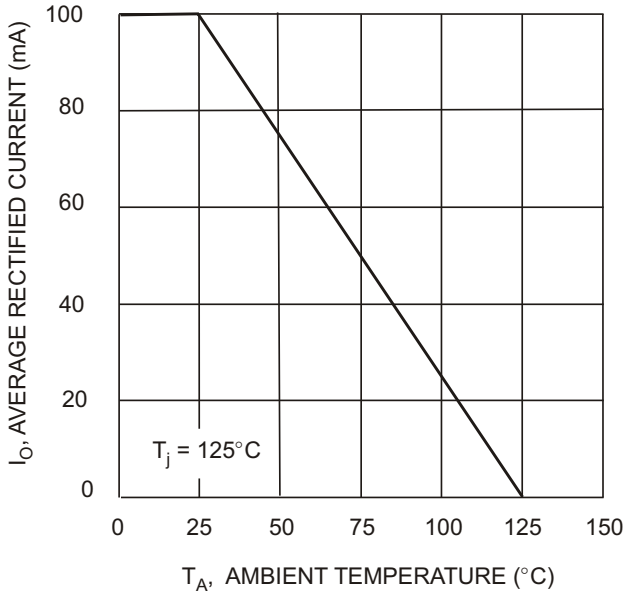
Type Number	Symbol	Value	Units
Power Dissipation	P <sub>d</sub>	200	mW
Repetitive Peak Reverse Voltage	V <sub>RRM</sub>	30	V
Maximum DC Blocking Voltage	V <sub>R</sub>	30	V
Average Rectified Forward Current	I <sub>F(AV)</sub>	200	mA
Peak Forward Surge Current	I <sub>FSM</sub>	4.0	A
Operating and Storage Temperature Range	T <sub>J</sub> , T <sub>STG</sub>	-65 to +125	°C

### Electrical Characteristics

Type Number	Symbol	Min	Max	Units
Breakdown Voltage @ I <sub>R</sub> =100uA	B <sub>V</sub>	30		V
Reverse Leakage Current @ V <sub>R</sub> =25V	I <sub>R</sub>		500	nA
Forward Voltage BAT42WS @ I <sub>F</sub> =200mA BAT42WS @ I <sub>F</sub> =10mA BAT42WS @ I <sub>F</sub> =50mA BAT43WS @ I <sub>F</sub> =200mA BAT43WS @ I <sub>F</sub> =2mA BAT43WS @ I <sub>F</sub> =15mA	V <sub>F</sub>	0.26	1.0 0.4 0.65 1.0 0.33 0.45	V
Junction Capacitance VR=1, f=1.0MHz	C <sub>j</sub>		7(Typ.)	pF
Reverse Recovery Time (Note 1)	t <sub>rr</sub>		5(Typ.)	nS

Note: 1 Reverse Recovery Test Conditions: I<sub>F</sub>=I<sub>R</sub>=10mA, I<sub>rr</sub>=1mA, R<sub>L</sub>=100Ω.

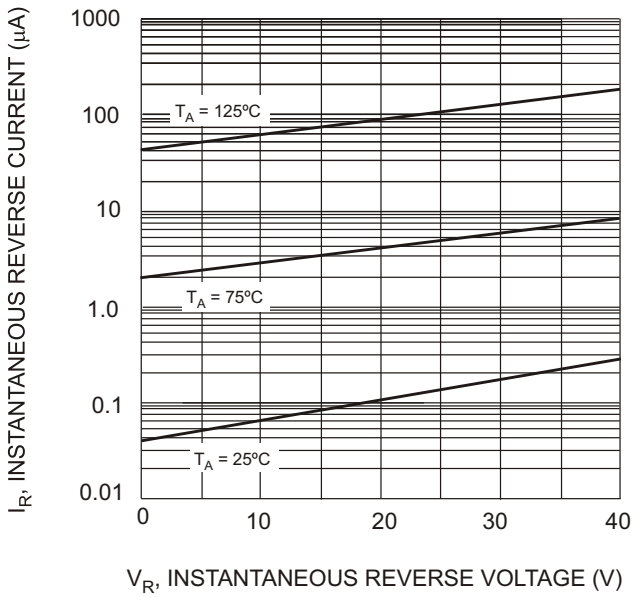
RATINGS AND CHARACTERISTIC CURVES (BAT42WS / BAT43WS)



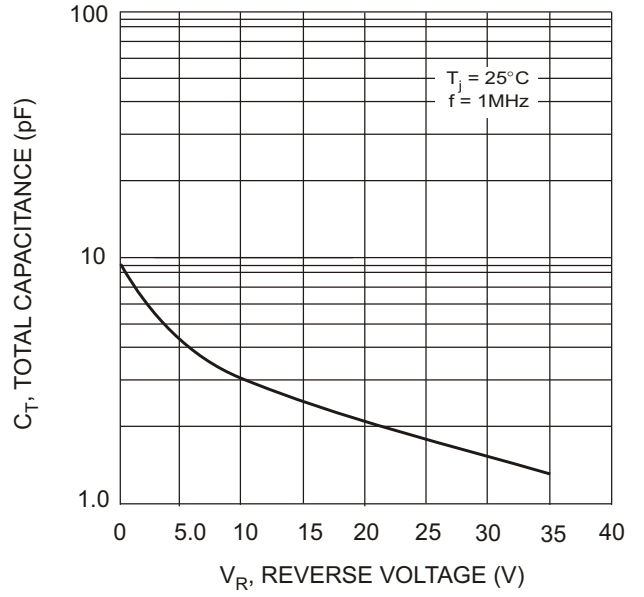
$T_A$ , AMBIENT TEMPERATURE (°C)  
Fig. 1 Forward Current Derating Curve



$V_F$ , INSTANTANEOUS FORWARD VOLTAGE (mV)  
Fig. 2 Typical Forward Characteristics



$V_R$ , INSTANTANEOUS REVERSE VOLTAGE (V)  
Fig. 3 Typical Reverse Characteristics



$V_R$ , REVERSE VOLTAGE (V)  
Fig. 4 Total Capacitance vs. Reverse Voltage