

## ► Features

- High Current Capability
- Low Forward Voltage Drop
- Extremely Fast Switching Speed
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

## ► Applications

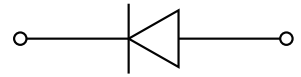
The device is a single rectifier offering low VF and excellent high temperature stability.

## ► Mechanical Data

- Case: SOD-323
- Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Cathode line denotes the cathode end

## ► Maximum Ratings (Ta=25°C Unless otherwise specified)

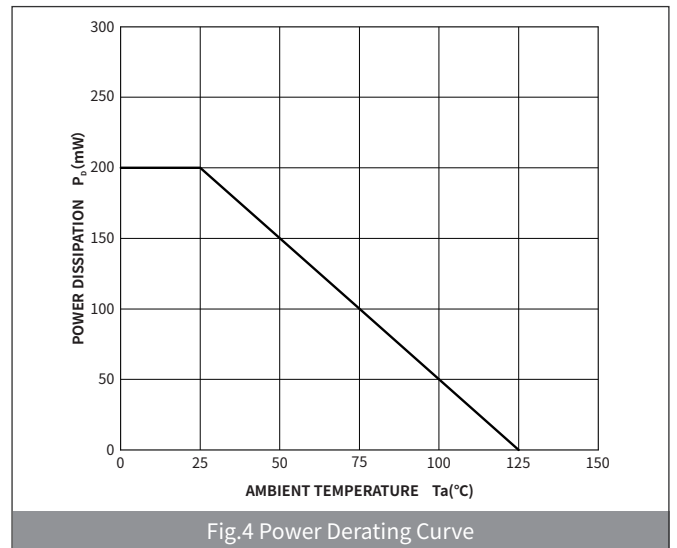
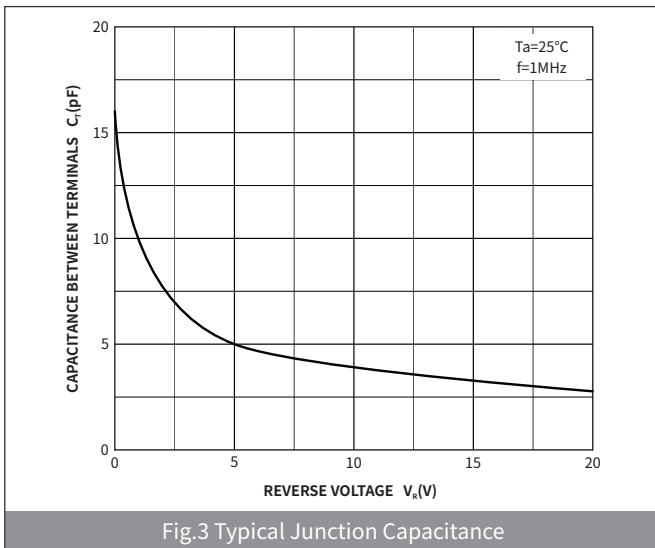
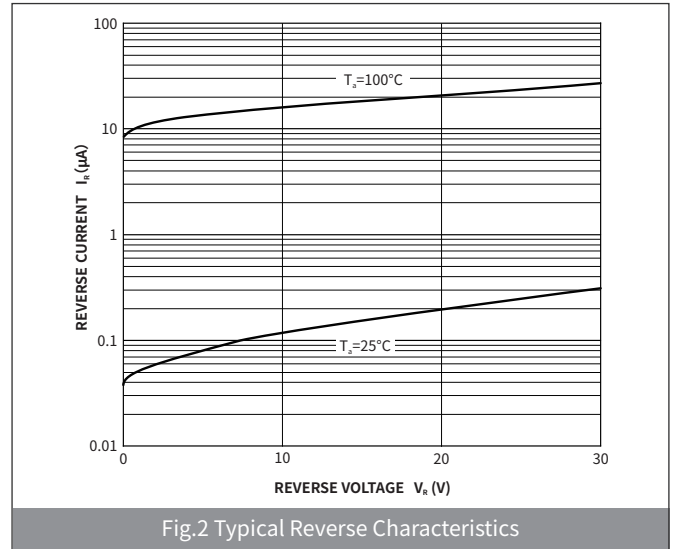
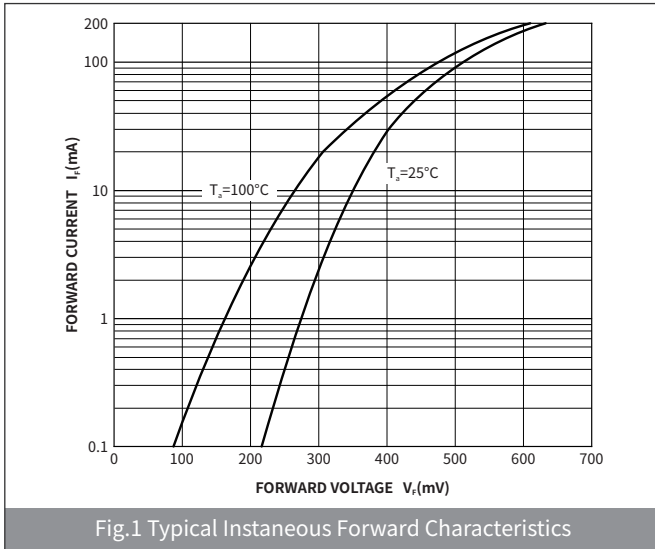
PARAMETER	SYMBOL	UNIT	BAT42WS	BAT43WS
Maximum repetitive peak reverse voltage	$V_{RRM}$	V	30	
Maximum RMS Voltage	$V_{RMS}$	V	21	
Maximum DC blocking Voltage	$V_{DC}$	V	30	
Maximum average forward rectified current	$I_{F(AV)}$	mA	200	
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	$I_{FSM}$	A	4.0	
Power Dissipation	$P_d$	mW	200	
Storage temperature	$T_{stg}$	°C	-55 ~+150	
Junction temperature	$T_j$	°C	125	
Typical Thermal Resistance	$R_{\theta J-A}$	°C /W	500	

**SOD-323**


## ► Electrical Characteristics (Ta=25°C Unless otherwise specified)

PARAMETER		TEST CONDITIONS	SYMBOL	UNIT	Min	Typ	Max
Maximum instantaneous forward voltage	BAT42WS /BAT43WS	$I_F=200mA$	$V_F$	V	—	—	1.0
	BAT42WS	$I_F=10mA$			—	—	0.40
	BAT42WS	$I_F=50mA$			—	—	0.65
	BAT43WS	$I_F=2.0mA$			0.26	—	0.33
	BAT43WS	$I_F=15mA$			—	—	0.45
Maximum reverse current		$V_R=25V$	$I_R$	$\mu A$	—	—	0.5
Capacitance between terminals		$V_R = 1.0V, f = 1MHz$	$C_T$	pF	—	—	10
Maximum reverse recovery time		$I_F=I_R=10mA$ $I_{rr}=0.1 \times I_R, R_L=100\Omega$	$t_{rr}$	ns	—	—	5.0

► **Ratings And Characteristics Curves** ( $T_a=25^\circ\text{C}$  Unless otherwise specified)



### Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SOD-323	R1	0.0048	3000	30000	120000	7"

### Package Outline Dimensions (SOD-323)

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	1.60	1.80	0.063	0.071
B	0.25	0.40	0.010	0.016
C	2.30	2.80	0.091	0.110
D	0.80	1.10	0.031	0.043
D <sub>1</sub>	0.80	0.90	0.031	0.035
E	1.20	1.40	0.047	0.055
F	0.08	0.18	0.003	0.007
L	0.475REF		0.019REF	
L <sub>1</sub>	0.25	0.40	0.010	0.016
H	-	0.14	-	0.006

### Suggested Pad Layout

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
J	0.80	-	0.031	-
K	-	1.40	-	0.055
M	0.80	-	0.031	-