

► Features

- V_R 20V/30V/40V
- $I_{F(AV)}$ 500mA
- For use in low voltage, high frequency inverters
- Free wheeling, and polanty protection applications

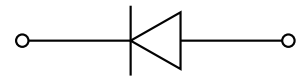
► Applications

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

SOD-323



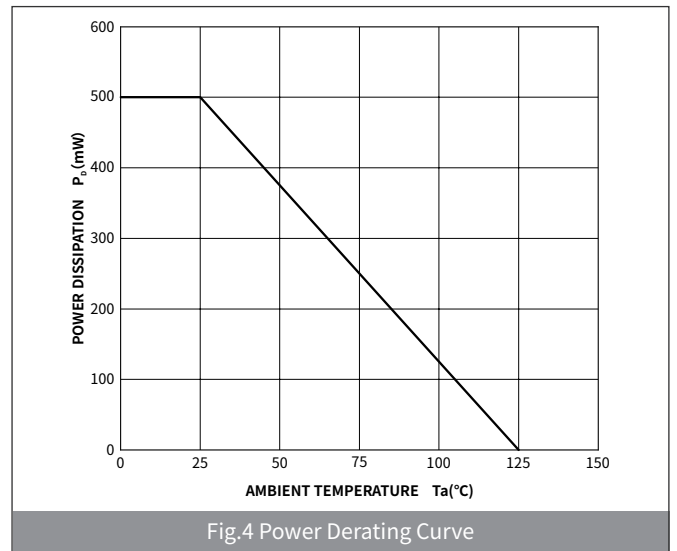
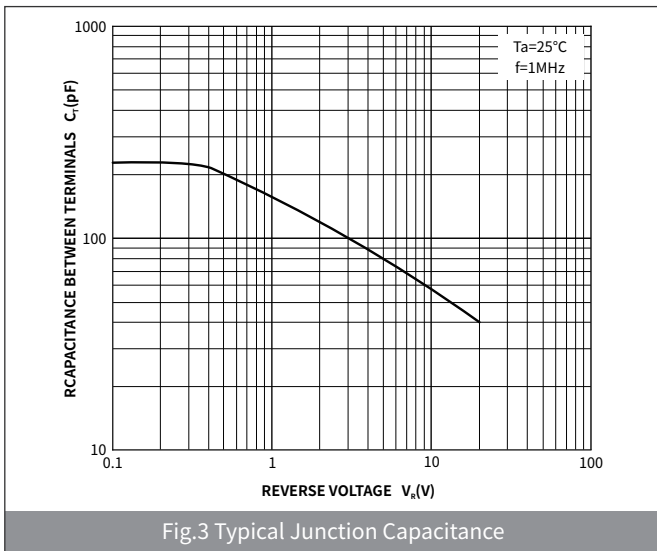
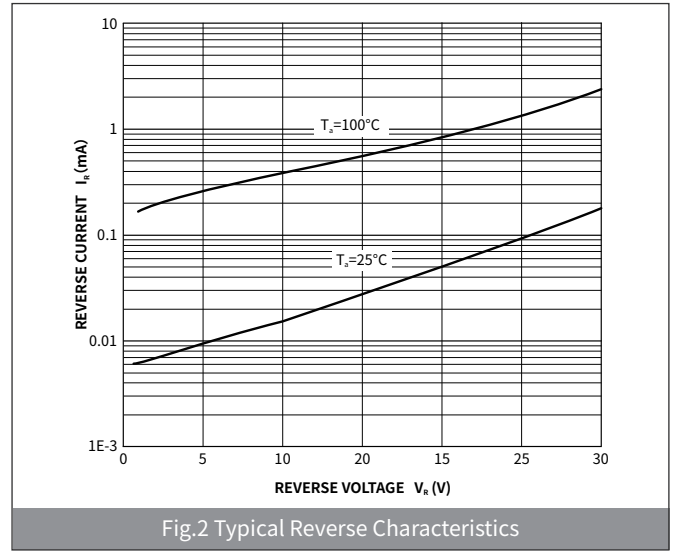
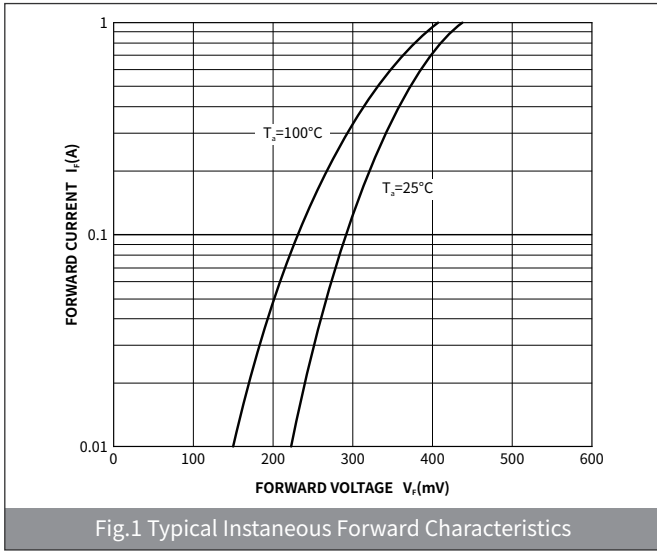
► Maximum Ratings (Ta=25°C Unless otherwise specified)

PARAMETER	SYMBOL	UNIT	B0520WS	B0530WS	B0540WS
Maximum repetitive peak reverse voltage	V_{RRM}	V	20	30	40
Maximum RMS Voltage	V_{RMS}	V	14	21	28
Maximum DC blocking Voltage	V_{DC}	V	20	30	40
Maximum average forward rectified current	$I_{F(AV)}$	mA	500		
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	I_{FSM}	A	5.5		
Power Dissipation	P_d	mW	200		
Storage temperature	T_{stg}	°C	-50 ~+150		
Junction temperature	T_j	°C	125		
Typical Thermal Resistance	$R_{\theta J-A}$	°C /W	500		

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

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	B0520WS	B0530WS	B0540WS
Maximum instantaneous forward voltage	$I_F=0.1A$	V_F	V	0.33	0.375	—
	$I_F=0.5A$			0.39	0.45	0.51
	$I_F=1.0A$			—	—	0.62
Maximum reverse current	$V_R=10V$	I_R	μA	75	—	—
	$V_R=15V$			—	80	—
	$V_R=20V$			250	—	10
	$V_R=30V$			—	500	—
	$V_R=40V$			—	—	20
Capacitance between terminals	$V_R=0V, f=1MHz$	C_T	pF	170		

► **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 ₁	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 ₁	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	-

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