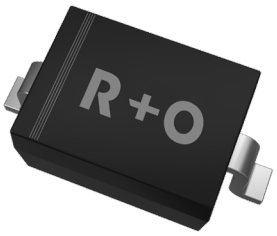
SOD-323 Surface Mount Schottky Barrier Rectifier

Features

- V_R=60V
- $I_{F(AV)}$=1.0A
- High Current Capability
- Low Forward Voltage Drop
- Low IR
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

Reverse Voltage
60 V
Forward Current
1.0 Ampere

SOD-323



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

Function Diagram

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

PARAMETER	SYMBOL	UNIT	VALUE
Maximum repetitive peak reverse voltage	V_{RRM}	V	60
Maximum RMS voltage	V_{RMS}	V	42
Maximum DC blocking voltage	V_{DC}	V	60
Maximum Average Forward Rectified Current	$I_{F(AV)}$	A	1.0
Non-repetitive Peak Forward Surge Current @t=8.3ms Half-sine wave	I_{FSM}	A	10
Power Dissipation	P_D	mW	250
Junction temperature	T_j	°C	-55-+150
Storage temperature range	T_{STG}	°C	-55-+150
Typical thermal resistance	$R_{\theta J-A}$	°C /W	400

Electrical Characteristics (Ta=25°C Unless otherwise noted)

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	Min	Type	Max
Maximum forward voltage	I_F =1.0A	V_F	V	—	—	0.7
Maximum reverse current	V_R=60V	I_R	uA	—	—	100
Capacitance between terminals	V_R = 4V, f = 1MHz	C_T	pF	—	—	120

Ratings And Characteristics Curves (Ta=25°C Unless otherwise specified)

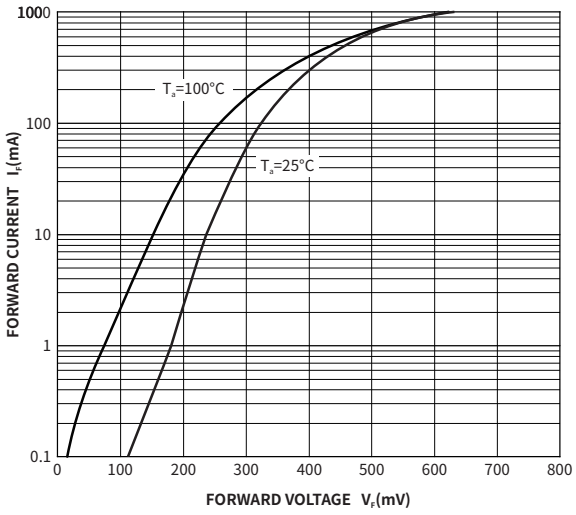


Fig.1 Typical Instaneous Forward Characteristics

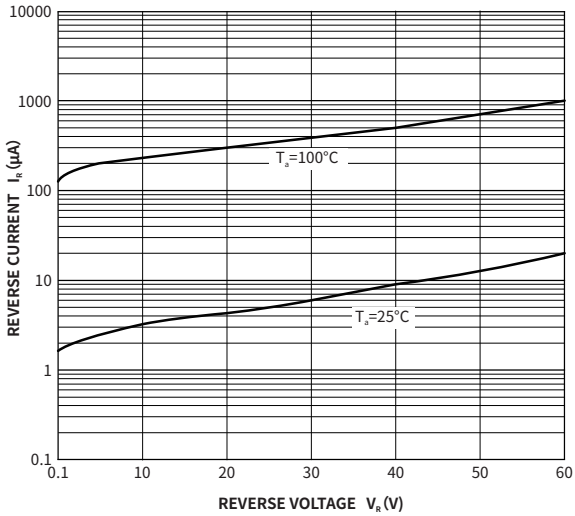


Fig.2 Typical Reverse Characteristics

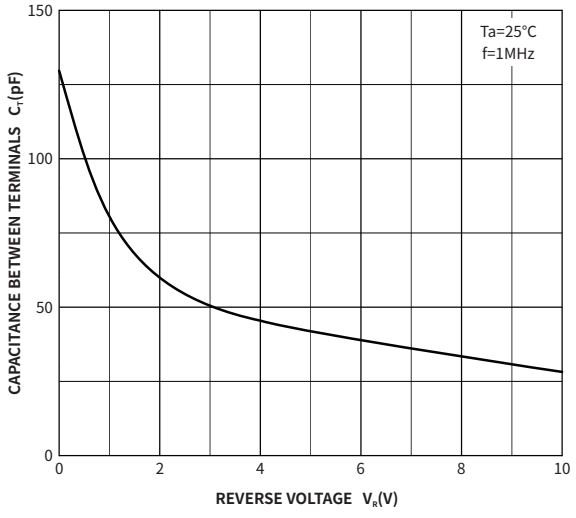


Fig.3 Typical Junction Capacitance

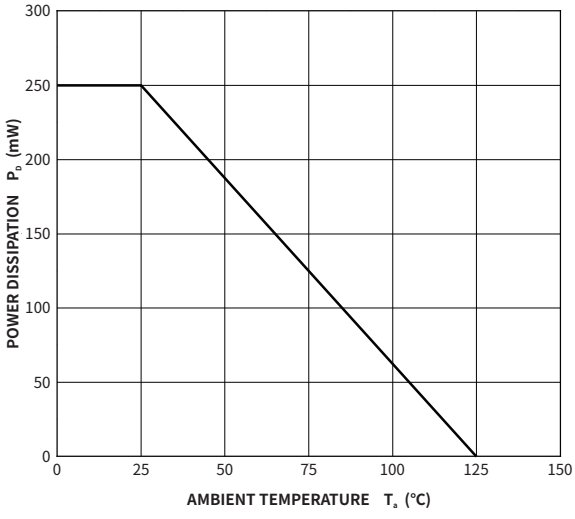
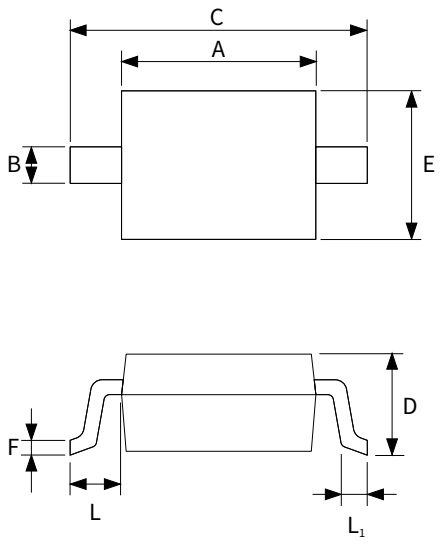


Fig.4 Power Derating Curve

Ordering Information

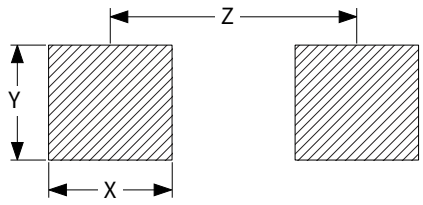
PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SOD-323	R1	0.0048	3000	45000	180000	7''

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.
X	0.65	0.75	0.026	0.030
Y	0.65	0.75	0.026	0.030
Z	2.10	2.20	0.084	0.088