

Features

- High Current Capability
- Low Forward Voltage Drop
- Low IR
- 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

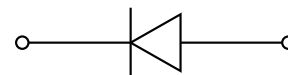
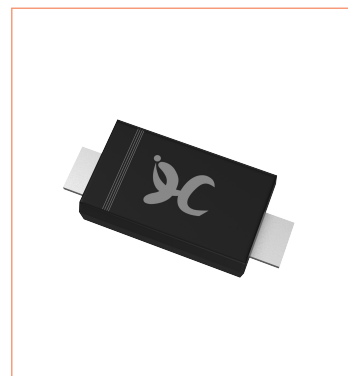
- Case: SOD-523
Molding compound meets UL 94V-0 flammability rating, RoHS-compliant, halogen-free
- Terminals: Solder plated, solderable per MIL-STD-750, Method 2026
- Polarity: Cathode line denotes the cathode end

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

PARAMETER	SYMBOL	UNIT	VALUE
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	V	30
Maximum DC blocking Voltage	V_{DC}	V	21
Maximum average forward rectified current	$I_{F(AV)}$	mA	200
Non-repetitive Peak Forward Surge Current @ t=8.3ms Half-sine wave	I_{FSM}	mA	600
Power Dissipation	P_D	mW	150
Storage temperature	T_{stg}	°C	-50 ~+150
Junction temperature	T_j	°C	125
Typical Thermal Resistance	$R_{\theta J-A}$	°C /W	667

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

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	Min	Typ	Max
Maximum forward voltage	$I_F=0.1mA$	V_F	mV	—	—	240
	$I_F=1.0mA$			—	—	320
	$I_F=10mA$			—	—	400
	$I_F=30mA$			—	—	500
	$I_F=100mA$			—	—	1000
Maximum reverse current	$V_R=25V$	I_R	μA	—	—	2.0

SOD-523


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

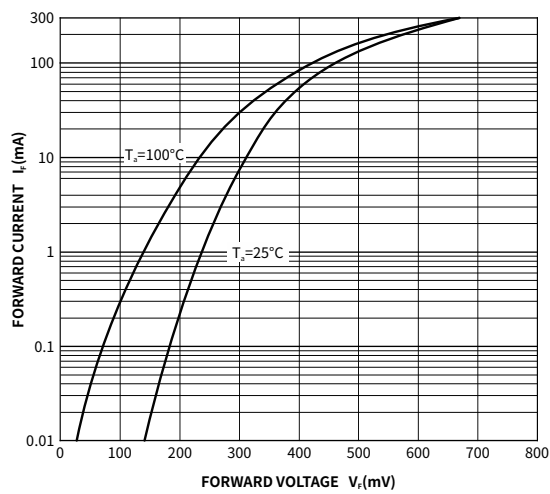


Fig.1 Typical Instantaneous Forward Characteristics

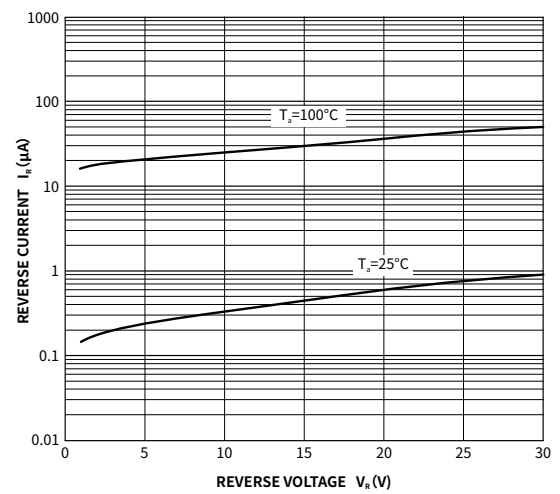


Fig.2 Typical Reverse Characteristics

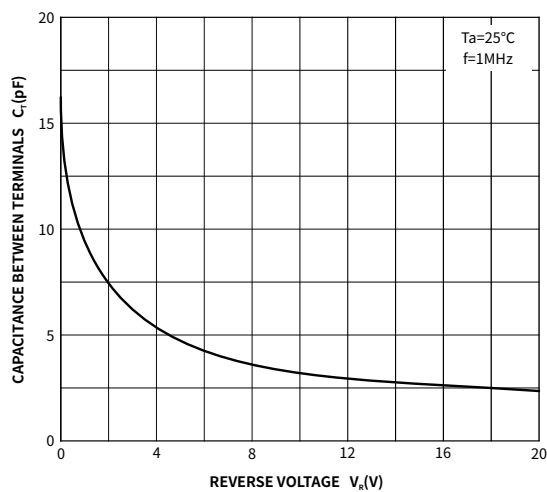


Fig.3 Typical Junction Capacitance

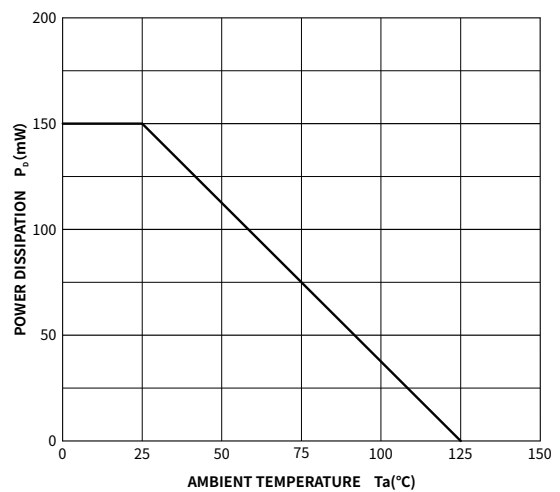


Fig.4 Power Derating Curve

Ordering Information

PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SOD-523	R1	0.002	3000	45000	180000	7"

Package Outline Dimensions (SOD-523)

Symbol	Dimensions			
	Millimeters		Inches	
	Min	Max	Min	Max
A	1.10	1.30	0.044	0.052
B	0.25	0.35	0.01	0.014
C	1.50	1.70	0.06	0.068
D	0.50	0.70	0.02	0.028
E	0.70	0.90	0.028	0.036
F	0.05	0.20	0.002	0.008

Suggested Pad Layout

Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
J	0.60	-	0.023	-
K	-	1.10	-	0.042
M	0.80	-	0.031	-