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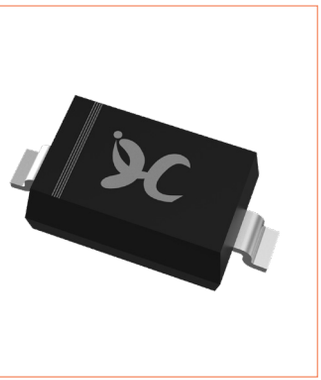
1N4148W

FAST SWITHING DIODES

SOD-123



Features

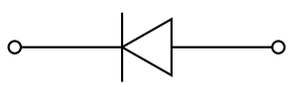
- V_R=100V
- $I_{F(AV)}$=150mA
- Power Dissipation of 400mW
- Fast switching speed
- Meets MSL level 1, per J-STD-020, LF maximum peak of 260°C

Applications

For use in low voltage high frequency circuit signals.

Mechanical Data

- Case: SOD-123
  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	100
Maximum RMS Voltage	V_{RMS}	V	75
Reverse Breakdown voltage @I_R=10μA	$V_{(BR)R}$	V	100
Maximum Average Forward Rectified Current	$I_{F(AV)}$	mA	150
Repetitive peak forward current	I_{FRM}	mA	300
Non-Repetitive Peak forward surge current @t_p=1.0μs	I_{FSM}	A	2.0
Non-Repetitive Peak forward surge current @t_p=1.0s			0.5
Power Dissipation	P_d	mW	400
Storage temperature	T_{stg}	°C	-55 ~+150
Junction temperature	T_j	°C	-55 ~+150
Typical thermal resistance	$R_{\theta J\text{-}A}$	°C /W	315

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

PARAMETER	TEST CONDITIONS	SYMBOL	UNIT	Min	Max
Maximum instantaneous forward voltage	I_F=1.0mA	V_F	V	—	0.715
	I_F=10mA			—	0.855
	I_F=50mA			—	1.0
	I_F=150mA			—	1.25
Reverse Leakage Current	V_R=20V	I_{R1}	nA	—	25
	V_R=75V	I_{R2}	μA	—	1.0
Total capacitance	V_R=0V,f=1MHz	C_T	pF	—	4.0
Maxinum reverse recovery time	I_F=I_R=10mA,I_{rr}=0.1×I_R, R_L=100Ω	T_{rr}	ns	—	4.0

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

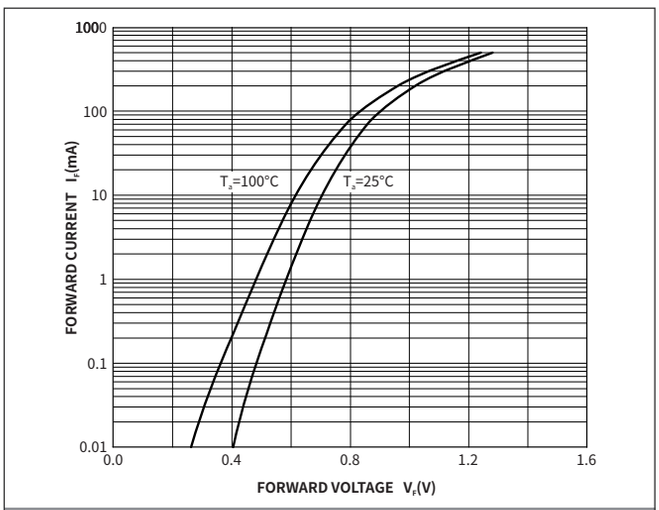


Fig.1 Typical Instaneous Forward Characteristics

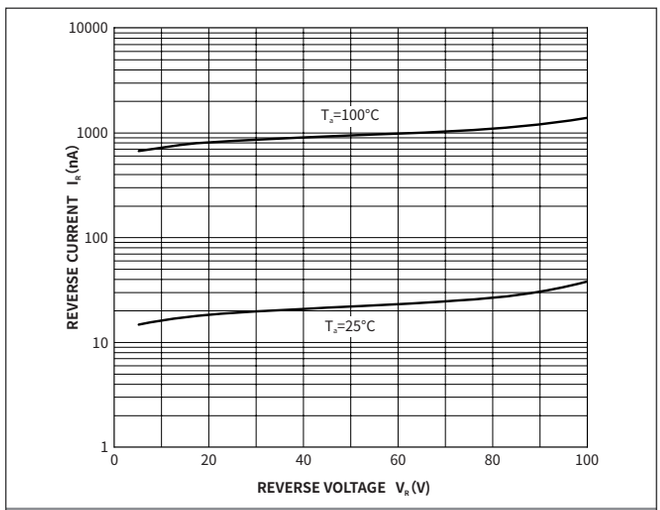


Fig.2 Typical Reverse Characteristics

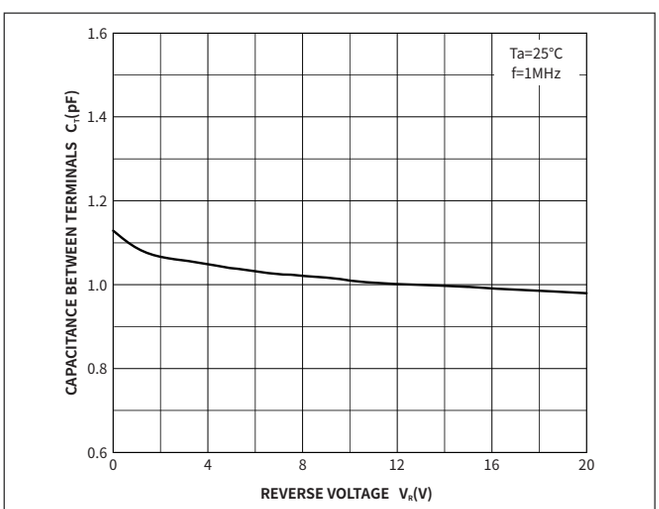


Fig.3 Typical Junction Capacitance

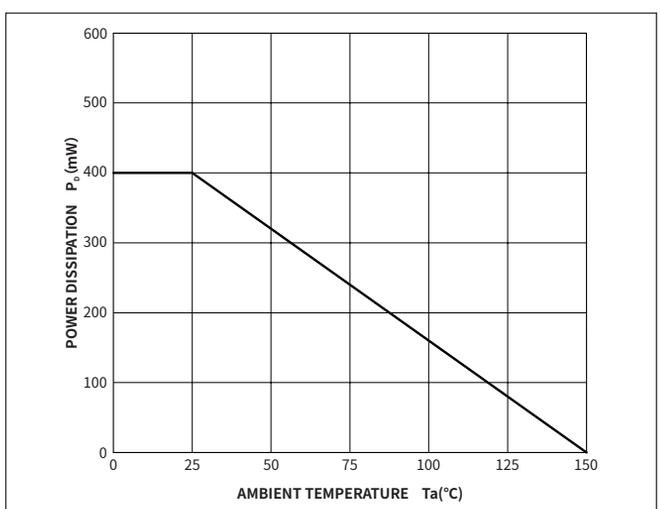
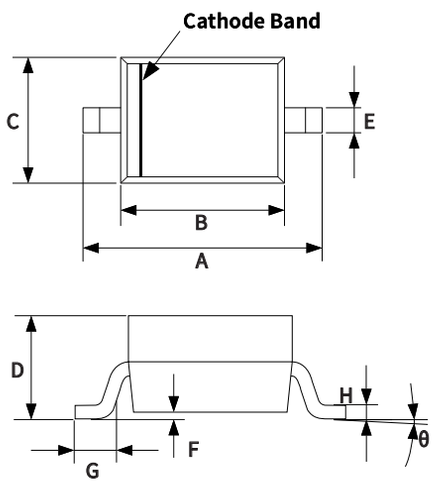


Fig.4 Power Derating Curve

Ordering Information

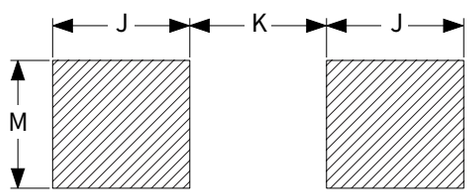
PACKAGE	PACKAGE CODE	UNIT WEIGHT(g)	REEL(pcs)	BOX(pcs)	CARTON(pcs)	DELIVERY MODE
SOD-123	R1	0.012	3000	30000	120000	7''

Package Outline Dimensions (SOD-123)



Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
A	3.55	3.85	0.140	0.152
B	2.55	2.85	0.100	0.112
C	1.40	1.80	0.055	0.071
D	0.95	1.35	0.140	0.152
E	0.51	0.71	0.037	0.053
F	-	0.15	-	0.006
G	0.15	0.45	0.006	0.008
H	0.08	0.25	0.003	0.010
θ	-	8°	-	8°

Suggested Pad Layout



Symbol	Dimensions			
	Millimeters		Inches	
	Min.	Max.	Min.	Max.
J	0.91	-	0.036	-
K	-	2.36	-	0.092
M	1.22	-	0.048	-