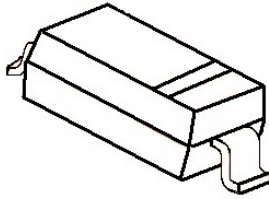


SOD-123

500mW SOD-123 Fast Switching Diode



MARKING:



**Features**

- 4.0nS; Fast Switching Device (TRR <4.0 nS)
- 500mW; Power Dissipation of 500mW
- High Stability and High Reliability
- Low reverse leakage

**Mechanical Data**

- SOD-123 Small Outline Plastic Package
- Polarity: Color band denotes cathode end
- Epoxy UL: 94V-0
- Mounting Position: Any

**Maximum Ratings & Thermal Characteristics** (Ratings at 25°C ambient temperature unless otherwise specified.)

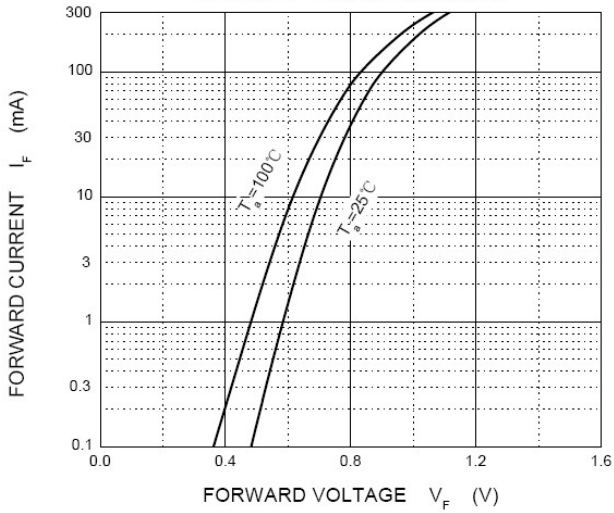
Parameters	Symbol	Value	Unit
Peak Reverse Voltage	V <sub>RM</sub>	100	V
Power Dissipation	P <sub>d</sub>	500	mW
Operating junction temperature	T <sub>j</sub>	150	°C
Storage temperature range	T <sub>STG</sub>	-65-+150	°C
Thermal Resistance from Junction to Ambient	R <sub>θJA</sub>	250	°C/W
	R <sub>θJC</sub>	200	°C/W
Average Rectified Current	I <sub>o</sub>	150	mA
Non-repetitive Peak Forward Current	I <sub>FM</sub>	300	mA
Peak Forward Surge Current @tp=1us; TA=25°C	I <sub>FSM</sub>	2.0	A

Valid provided that electrodes are kept at ambient temperature.

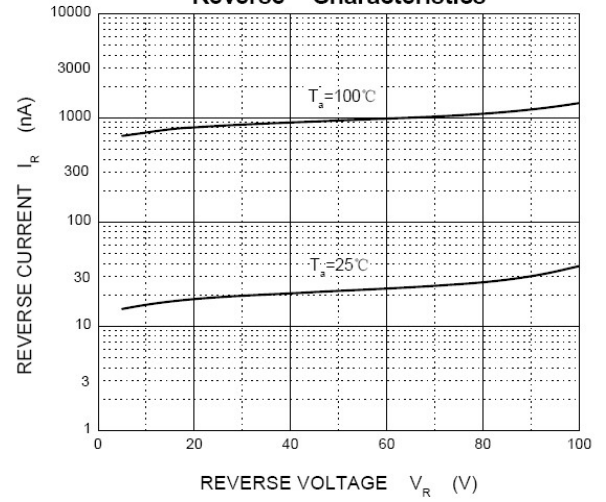
**Electrical Characteristics** (Ratings at 25°C ambient temperature unless otherwise specified).

Symbols	Parameter	Test Condition	Limits		Unit
			Min	Max	
BV	Breakdown Voltage	I <sub>R</sub> =100uA	100		V
I <sub>R</sub>	Reverse Leakage Current	V <sub>R</sub> =20V	---	25	nA
		V <sub>R</sub> =20V T <sub>j</sub> =150°C	---	50	uA
		V <sub>R</sub> =75	---	5	uA
V <sub>F</sub>	Forward Voltage	I <sub>F</sub> =10mA	---	1.00	V
		I <sub>F</sub> =100mA	---	1.25	
TRR	Reverse Recovery Time	I <sub>F</sub> = I <sub>R</sub> = 10mA,	---	4	nS
		I <sub>rr</sub> =0.1X <sub>I</sub> <sub>R</sub>			
		R <sub>L</sub> =100Ω			
C	Capacitance	V <sub>R</sub> =0V, f=1MHZ	---	4	pF

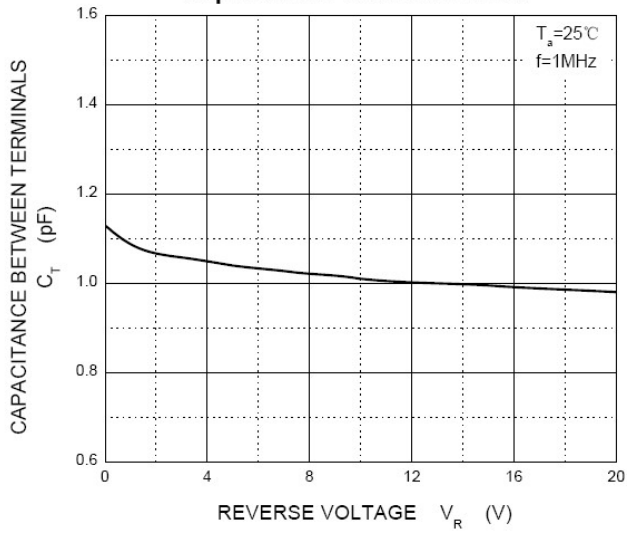
**Forward Characteristics**



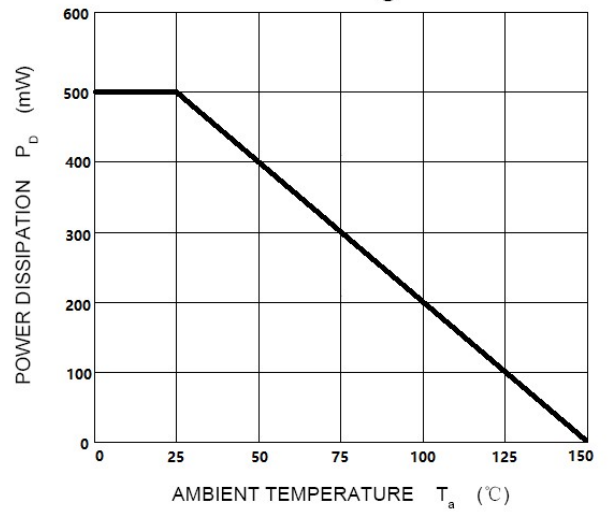
**Reverse Characteristics**



**Capacitance Characteristics**



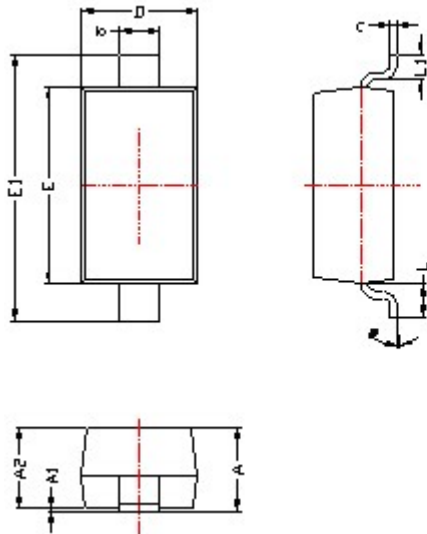
**Power Derating Curve**



1N4148W

SOD-123 PACKAGE OUTLINE

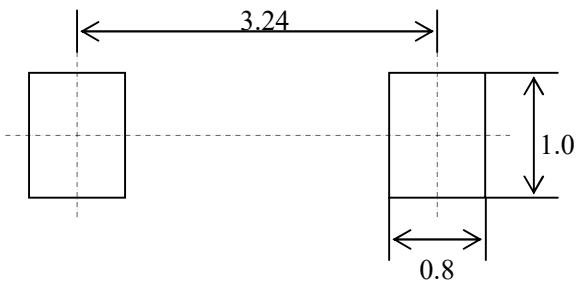
Plastic surface mounted package



SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	1.050	1.250
A1	0.000	0.100
A2	1.050	1.150
b	0.450	0.650
c	0.080	0.150
D	1.500	1.700
E	2.600	2.800
E1	3.550	3.850
L	0.500REF	
L1	0.250	0.450
θ	0°	8°

Precautions: PCB Design

Recommended land dimensions for SOD-123 diode. Electrode patterns for PCBs



Center distance: 3.24

Pin width: 0.55

welding plate width: 1.00

Pin length: 0.50

welding plate length: 0.80

Technical requirement:

1, dimension: 2.70 X 1.60

2: unmark tolerance: ±0.05

3, Unit: mm