

Small Signal Switching Diodes

Reverse Voltage: 100 Volts

Forward Current: 150mAmpere

RoHS Device

Halogen Free



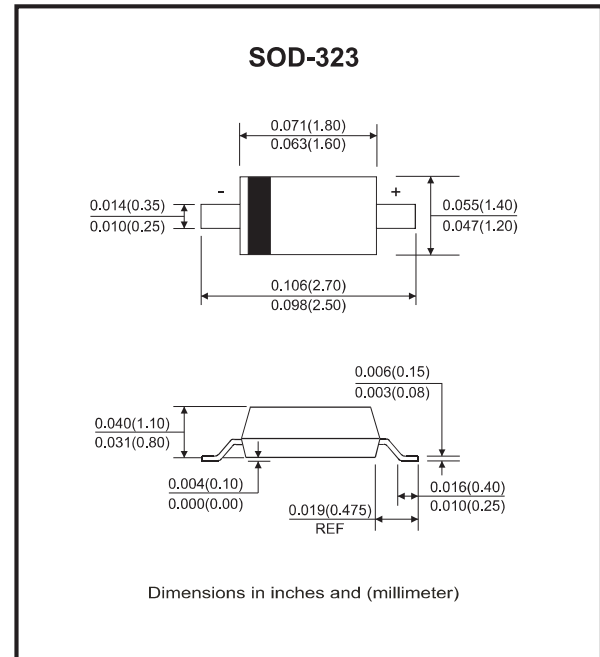
Features

- Fast switching device ($T_{rr} < 4.0\text{nS}$).
- Power dissipation of 200mW.
- High stability and high reliability.
- Low reverse leakage.

Mechanical data

- Case: SOD-323, molded plastic.
- Polarity: Color band denotes cathode end.
- Mounting position: Any.

Circuit Diagram



Maximum Rating (at $T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Peak reverse voltage	V_{RRM}	100	V
RMS reverse voltage	$V_{R(RMS)}$	75	V
Power dissipation	P_D	200	mW
Average rectified current	I_o	150	mA
Non-repetitive peak forward current	I_{FRM}	350	mA
Peak forward surge current @ $t_p=1\mu\text{s}$, $T_A=25^\circ\text{C}$	I_{FSM}	2	A
Thermal resistance from junction to ambient	$R_{\theta JA}$	625	$^\circ\text{C/W}$
Operating junction temperature	T_j	150	$^\circ\text{C}$
Storage temperature range	T_{STG}	-65 to +150	$^\circ\text{C}$

Note: Valid provided that electrodes are kept at ambient temperature.

Electrical Characteristics (at Ta=25°C unless otherwise noted)

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Breakdown voltage	$I_R = 100\mu A$ $I_R = 5\mu A$	B_V	100 75			V
Reverse leakage current	$V_R = 20V$	I_R			25	nA
	$V_R = 75V$				1	μA
Forward voltage	$I_F = 1.0mA$	V_F			0.715	V
	$I_F = 10mA$				0.855	
	$I_F = 50mA$				1.00	
	$I_F = 150mA$				1.25	
Capacitance	$V_R = 0V, f = 1 MHz$	C_T			2	pF
Reverse recovery time	$I_F = I_R = 10mA, R_L = 100\Omega$ $I_{rr} = 0.1 \times I_R$	T_{RR}			4	nS

Rating and Characteristic Curves

Fig.1 - Forward Characteristics

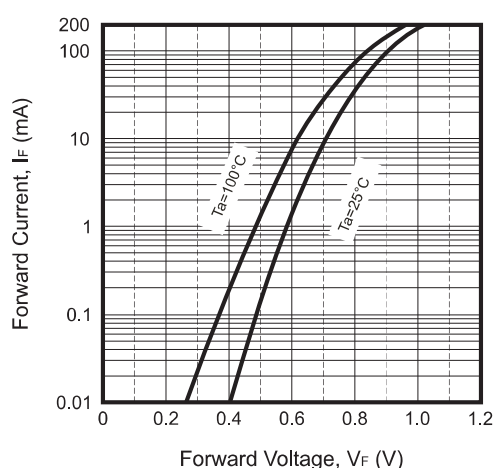


Fig.2 - Reverse Characteristics

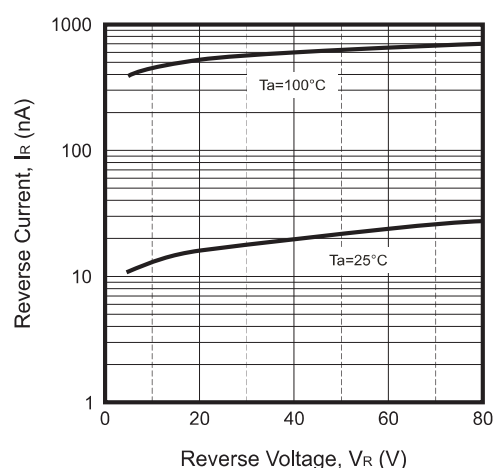


Fig.3 - Capacitance Characteristics

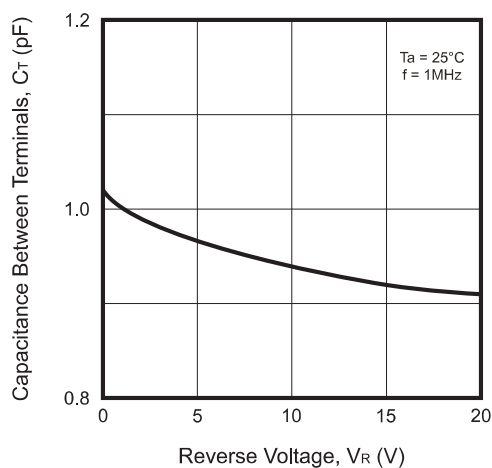
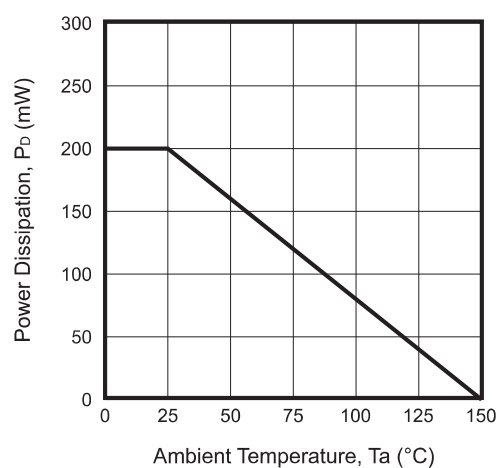


Fig.4 - Power Derating Curve



Company reserves the right to improve product design, functions and reliability without notice.

Rev:1.0

Marking Code

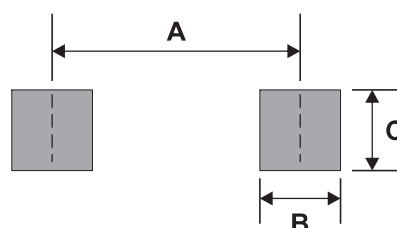
Part Number	Marking Code
1N4148WS	T4



■ = Cathode band

Suggested PAD Layout

SIZE	SOD-323	
	(mm)	(inch)
A	2.15	0.085
B	0.70	0.028
C	0.70	0.028

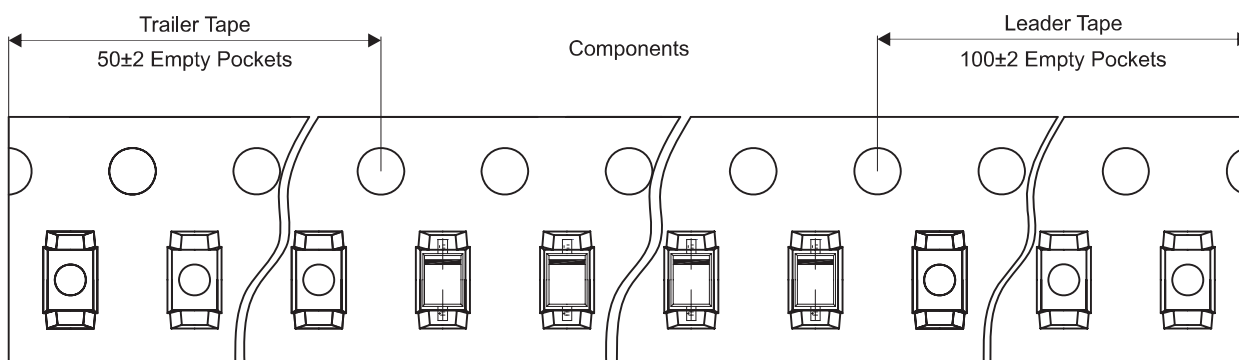
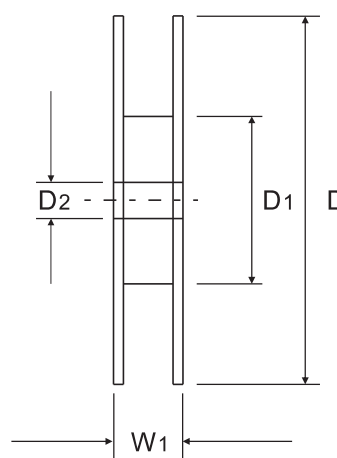
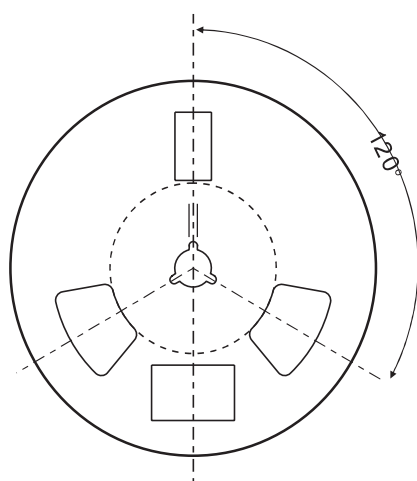
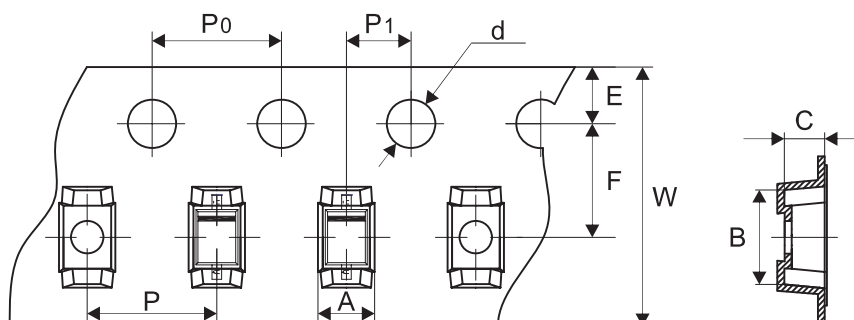


Note: 1. The pad layout is for reference purposes only.

Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOD-323	3,000	7

Reel Taping Specification



SOD-323	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	1.46 ± 0.05	2.90 ± 0.05	1.25 ± 0.05	$1.50 + 0.10$	178.00 ± 2.00	54.40 ± 1.00	13.00 ± 1.00
	(inch)	0.057 ± 0.002	0.114 ± 0.002	0.049 ± 0.002	$0.059 + 0.004$	7.008 ± 0.079	2.142 ± 0.039	0.512 ± 0.039

SOD-323	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	$8.00 + 0.30$ $- 0.10$	12.30 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	$0.315 + 0.012$ $- 0.004$	0.484 ± 0.039