

■ Switching Diodes

FEATURES

- ◆ For surface mounted applications
- ◆ Glass Passivated Chip Junction
- ◆ Fast reverse recovery time
- ◆ Ideal for automated placement
- ◆ Lead free in comply with EU RoHS 2011/65/EU directives

MECHANICAL DATA

- ◆ Case: SOD-323
- ◆ Terminals: Solderable per MIL-STD-750, Method 2026
- ◆ Approx. Weight: 5.48mg / 0.00019oz



Pinning

1.Cathode	2.Anode
SOD-323	

Marking Code

1N4148WS	T4
----------	----

Absolute Maximum Ratings at 25 °C

Parameter	Symbols	1N4148WS	Units
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Maximum RMS voltage	V_{RMS}	75	V
Continuous Forward Current	I_F	300	mA
Non-reptitive Peak Forward Surge Current at 1ms	I_{FSM}	4	A
Total Power Dissipation	P_{tot}	400	mW
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150	°C

Characteristics at $T_a = 25\text{ °C}$

Parameter	Symbols	1N4148WS	Units
Reverse Breakdown Voltage at $I_R = 1\mu A$	$V_{(BR)R}$	75	V
Maximum Forward Voltage	at 1 mA	0.715	V
	at 10 mA	0.855	
	at 50 mA	1.00	
	at 150 mA	1.25	
	at 300 mA	1.50	
Peak Reverse Current	at $V_R = 20V$ $T_j = 25\text{ °C}$	0.025	uA
	at $V_R = 75V$ $T_j = 25\text{ °C}$	1	
	at $V_R = 25V$ $T_j = 150\text{ °C}$	30	
	at $V_R = 75V$ $T_j = 150\text{ °C}$	50	
Typical Junction Capacitance $f = 1MHz, V_R = 4V$	C_j	5	pF
Maximum Reverse Recovery Time	T_{rr} Typical	4	nS

(1) Measured with $I_F = 0.5 A, I_R = 1 A, I_{rr} = 0.25 A$

Fig.1 Power Derating Curve

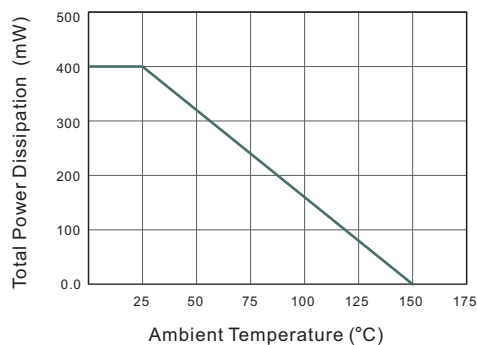


Fig.2 Typical Reverse Characteristics

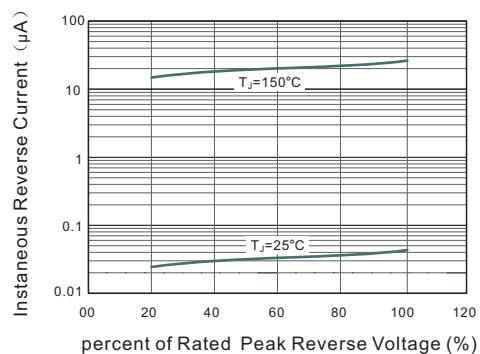


Fig.3 Typical Instaneous Forward Characteristics

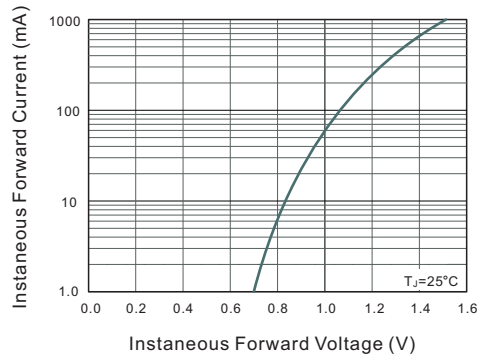
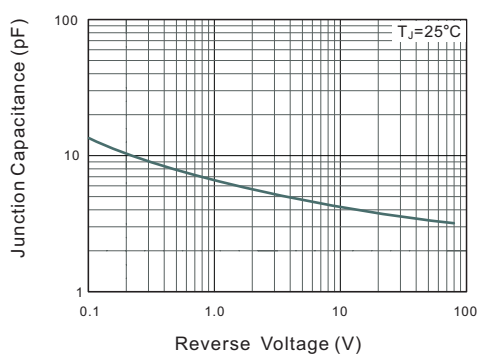


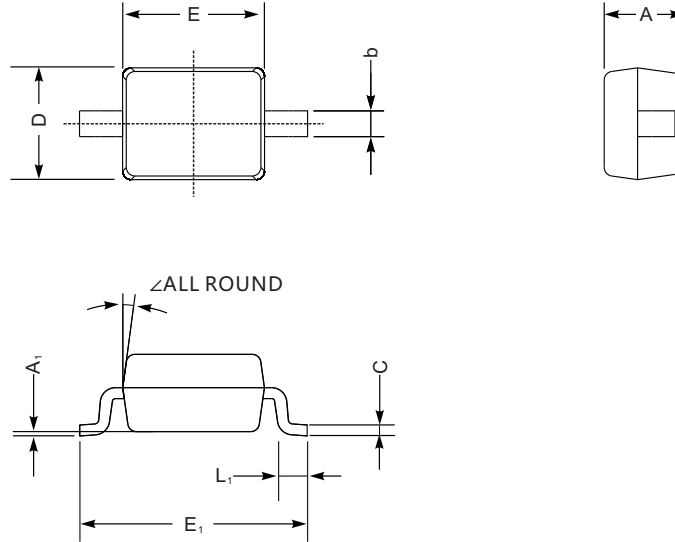
Fig.4 Typical Junction Capacitance



Package Outline

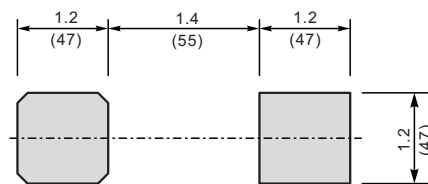
SOD-323

Plastic surface mounted package; 2 leads



UNIT		A	C	D	E	E ₁	b	L ₁	A ₁	∠
mm	max	1.1	0.15	1.4	1.8	2.75	0.4	0.45	0.2	9°
	min	0.8	0.08	1.2	1.4	2.55	0.25	0.2	—	
mil	max	43	5.9	55	70	108	16	16	8	
	min	32	3.1	47	63	100	9.8	7.9	—	

The recommended mounting pad size



Unit: $\frac{\text{mm}}{(\text{mil})}$

Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
SOD-323	Tape/Reel, 7" reel	3000	EIA-481-1