



Fast Switching Diodes

FEATURES

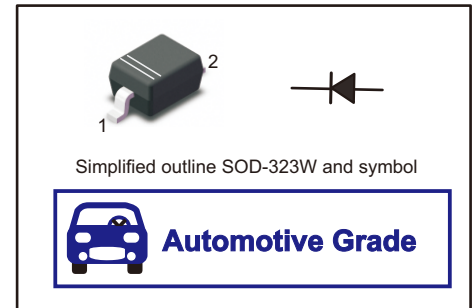
- For surface mounted applications
- Glass Passivated Chip Junction
- Fast reverse recovery time
- Ideal for automated placement
- Lead free in comply with EU RoHS 2011/65/EU directives
- Qualified to AEC-Q101 Standards for High Reliability

MECHANICAL DATA

- Case: SOD-323W
- Terminals: Solderable per MIL-STD-750, Method 2026

PINNING

PIN	DESCRIPTION
1	Cathode
2	Anode



Absolute Maximum Ratings at 25°C

Parameter	Symbol	Value	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	100	V
Maximum RMS Voltage	V_{RMS}	75	V
Average Rectified Forward Current	$I_{F(AV)}$	300	mA
Non-Repetitive Peak Forward Surge Current at 1s at 1ms at 1us	I_{FSM}	0.5 1 4	A
Total Power Dissipation	P_{tot}	400	mW
Typical Thermal Resistance (1)	$R_{\theta JA}$ $R_{\theta JC}$	315 100	°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150	°C

(1) P.C.B. mounted with 5*5mm copper pad areas.

Characteristics at Ta= 25 °C

Parameter	Symbol	Value	Unit
Reverse Breakdown Voltage at $I_R=1\mu A$	$V_{(BR)R}$	100	V
Maximum Forward Voltage at 1 m A at 10 m A at 50 m A at 150 m A	V_F	0.715 0.855 1.00 1.25	V
Peak Reverse Current at $V_R=20V$ $T_j=25^\circ C$ at $V_R=75V$ $T_j=25^\circ C$ at $V_R=25V$ $T_j=150^\circ C$ at $V_R=75V$ $T_j=150^\circ C$	I_R	0.025 1 30 50	μA
Maximum Junction Capacitance $f=1MHz, V_R=0V$	C_j	1.5	pF
Maximum Reverse Recovery Time (2)	t_{rr}	4	ns

(2) Measured with $I_F=I_R=10mA, I_{rr}=0.1 \times I_R, R_L=100\Omega$



Typical Performance Characteristics

Fig.1 Power Derating Curve

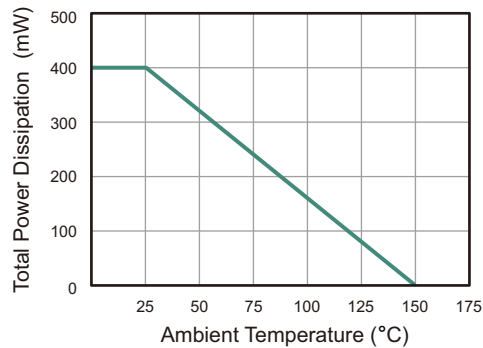


Fig.2 Typical Reverse Characteristics

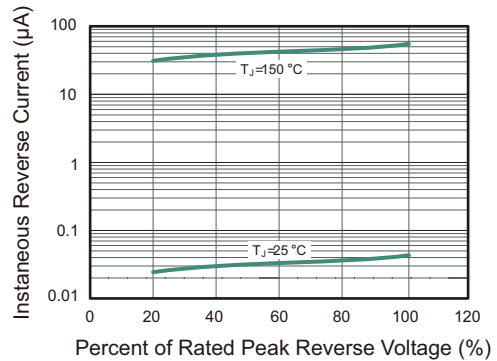


Fig.3 Typical Instaneous Forward Characteristics

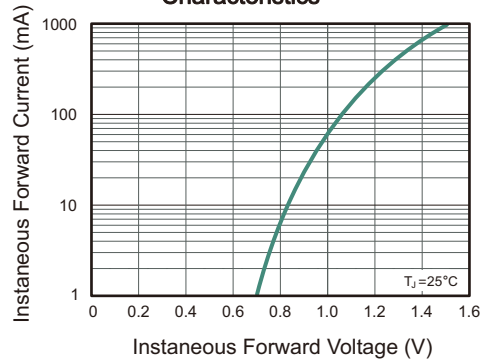
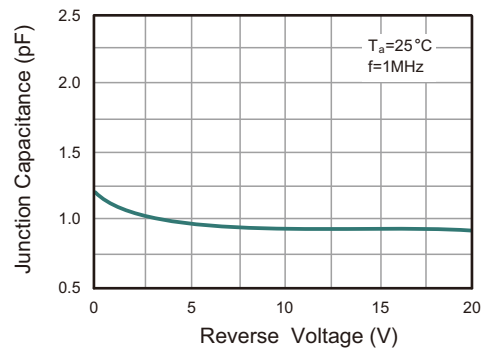


Fig.4 Typical Junction Capacitance

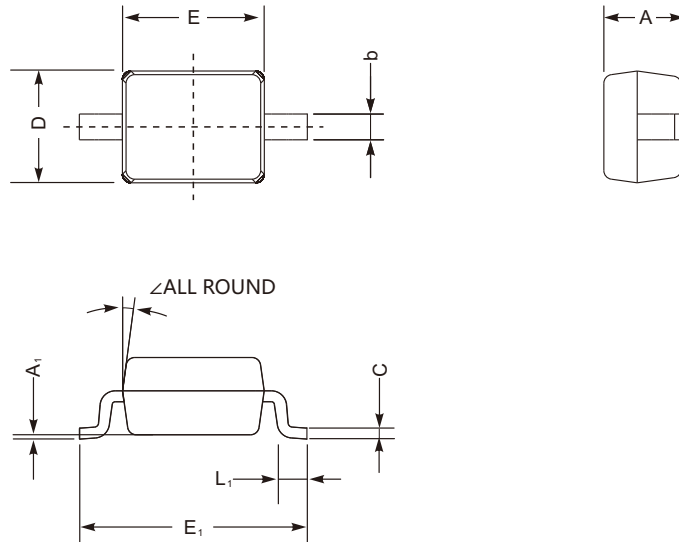




PACKAGE OUTLINE

Plastic surface mounted package; 2 leads

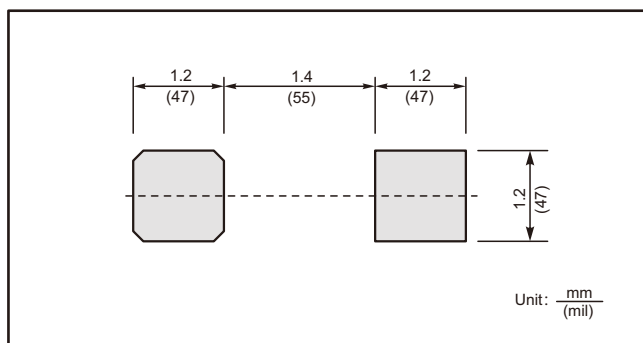
SOD-323W



SOD-323W mechanical data

UNIT		A	C	D	E	E ₁	b	L ₁	A ₁	$\angle$
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	55	100	9.8	7.9	—	

The recommended mounting pad size



Marking

Type number	Marking code
AT-1N4148WB	T4



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