LITE-ON SEMICONDUCTOR

1N4148W

SURFACE MOUNT
FAST SWITCHING DIODE

REVERSE VOLTAGE – 100 Volts
FORWARD CURRENT – 0.15 Amperes

FEATURES

- Fast switching speed
- Ideally suited for automatic insertion
- For general purpose switching applications

MECHANICAL DATA

- Case: SOD-123 plastic
- Case Material: “Green” molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl.), “Halogen-free”
- Moisture sensitivity: Level 1 per J-STD-020D
- Lead free in RoHS 2002/95/EC compliant
- Marking Code : T4
- Weight : 11.67m grams (Approximate)

SOD-123

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25°C ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
Non-repetitive peak reverse voltage	V_{RM}	100	V
Repetitive peak reverse voltage Working peak reverse voltage DC blocking voltage	V_{RRM} V_{RWM} V_R	100	V
Forward continuous current (Note 1)	I_{FM}	300	mA
Average rectified output current (Note 1)	I_O	150	mA
Non-repetitive peak forward current @ t =1.0 us @ t =1.0 s	I_{FSM}	2 1	A
Repetitive peak forward current	I_{FRM}	300	mA
Power dissipation (Note 1)	P_D	357	mW
Operation and storage temperature range	T_J ,T_{STG}	-65 to +150	°C

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	MAX	UNIT
Forward voltage	I_F= 1 mA I_F= 10 mA I_F= 50 mA I_F= 150 mA	V_F	715 855 1000 1250	mV
Reverse leakage current	V_R = 75 V V_R = 20 V	I_R	2500 25	nA
Typical junction capacitance	V_R= 0 V, f= 1MHz	C_D	2	pF

THERMAL CHARACTERISTICS

PARAMETER	SYMBOL	TYP.	UNIT
Typical thermal resistance (Note 1)	$RthJ_A$ $RthJ_C$	290 200	°C/W

DYNAMIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	TYP.	UNIT
Reverse recovery time	I_F = I_R = 10 mA, I_{rr} = 0.1 x I_R, R_L = 100 Ω	T_{RR}	4	ns

Note :
(1) Valid provided that terminals are kept at ambient temperature

Fig.1 - FORWARD CHARACTERISTICS

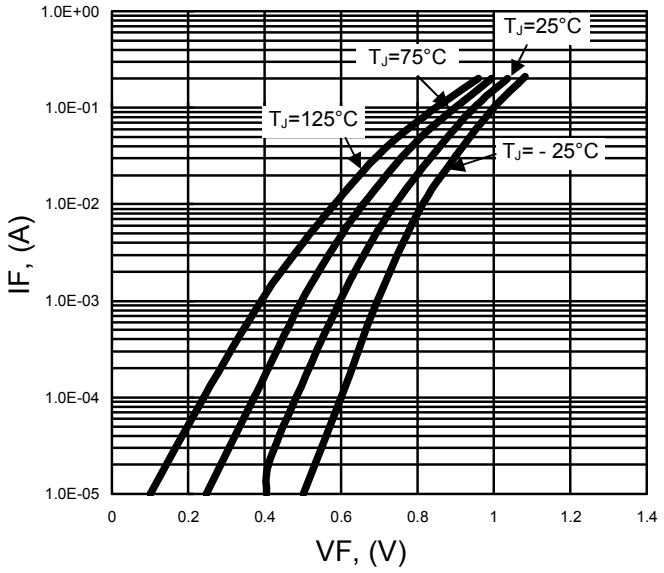


Fig. 2 - REVERSE CHARACTERISTICS

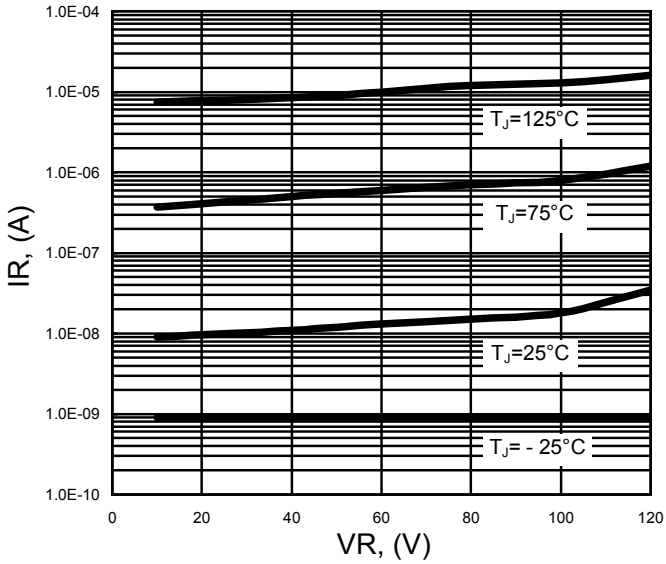
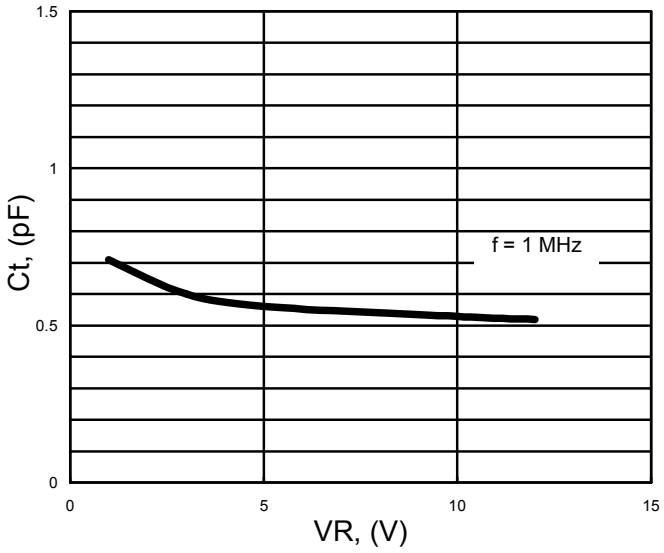


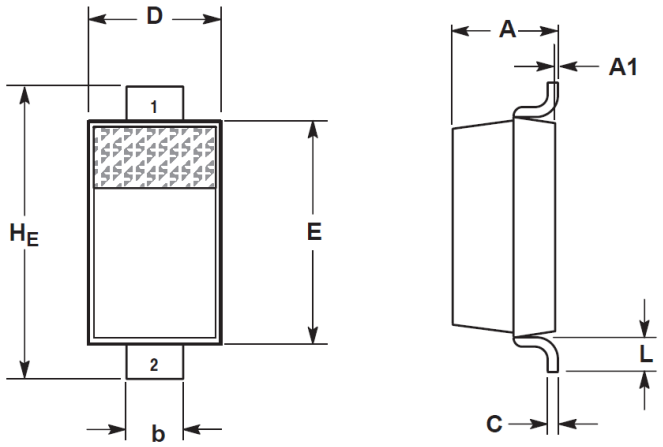
Fig.3 - CAPACITANCE



MECHANICAL INFORMATION
1N4148W

Package Dimensions :

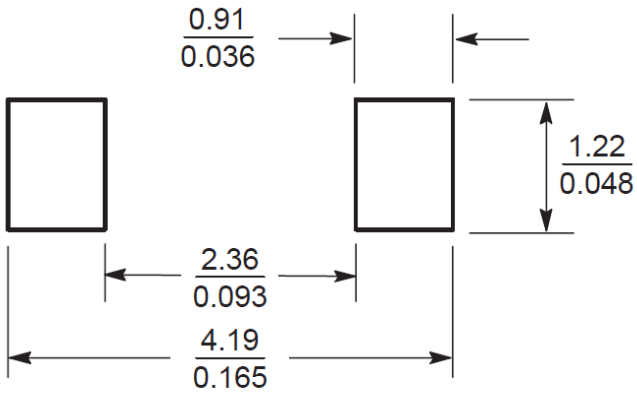
SOD-123



Dim.	INCHES		MILLIMETERS	
	Min.	Max.	Min.	Max.
A	0.037	0.053	0.94	1.35
A1	0.000	0.004	0.00	0.10
b	0.020	0.028	0.51	0.71
C	--	0.006	--	0.15
D	0.055	0.071	1.40	1.80
E	0.100	0.112	2.54	2.84
H_E	0.140	0.152	3.56	3.86
L	0.010	--	0.25	--

Note:
PIN 1. Cathode
PIN 2. Anode

Soldering Pad Layout :



SCALE 10:1 $\left(\frac{mm}{inches}\right)$

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