LITE-ON SEMICONDUCTOR

BAV21W

SURFACE MOUNT
FAST SWITCHING DIODE

REVERSE VOLTAGE – 250 Volts
FORWARD CURRENT – 0.2 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 : JS
- Weight : 11.67m grams (Approximate)

SOD-123

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

Ratings at 25℃ ambient temperature unless otherwise specified.

ABSOLUTE RATINGS

PARAMETER	SYMBOL	VALUE	UNIT
Continuous reverse voltage	V_R	250	V
Peak forward current	I_F	200	mA
Peak Forward Surge current @ t=<=1ms.Duty:25%	I_{FM}	625	mA
Peak Forward Surge current @ t=8/20us	I_{pp}	15	A
Power dissipation @ Ta = 25°C, Derate above 25°C (Note 1)	P_D	250	mW
Operation and storage temperature range	T_J ,T_{STG}	-55 to +150	℃

STATIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	VALUE	UNIT
Forward voltage	I_F= 100 mA I_F= 200 mA	V_F	1000 1250	mV
Reverse breakdown voltage	I_{BR}=100uA	V_{BR}	250	V
Reverse leakage current	V_R = 200V V_R = 200V @ T_J=150°C	I_R	0.1 100	uA
Typical junction capacitance	V_R= 0V, f= 1MHz	C_D	5	pF

THERMAL CHARACTERISTICS

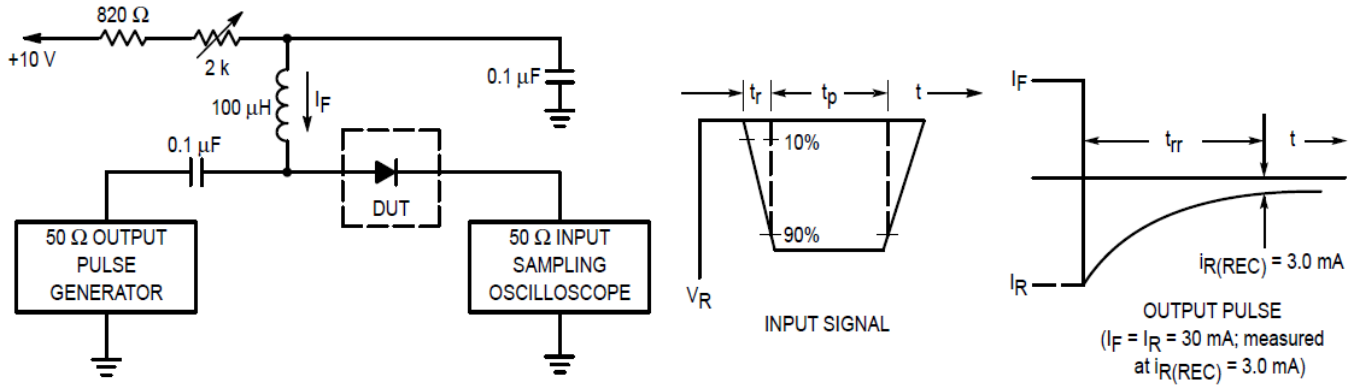
PARAMETER	SYMBOL	TYP.	UNIT
Typical thermal resistance (Note 1)	$RthJ_A$	500	℃/W

DYNAMIC ELECTRICAL CHARACTERISTICS

PARAMETER	TEST CONDITION	SYMBOL	TYP.	UNIT
Reverse recovery time	I_F = I_R = 30mA, R_L = 100Ω	T_{RR}	50	ns

Note :
(1) Device mounted on FR-5 board, minimum pad

FIG.1 - RECOVERY TIME EQUIVALENT TEST CIRCUIT



Notes: 1. A 2.0 kΩ variable resistor adjusted for a Forward Current (I_F) of 30 mA.
2. Input pulse is adjusted so $I_{R(peak)}$ is equal to 30 mA.
3. $t_p \gg t_{rr}$

Fig.2 - FORWARD VOLTAGE

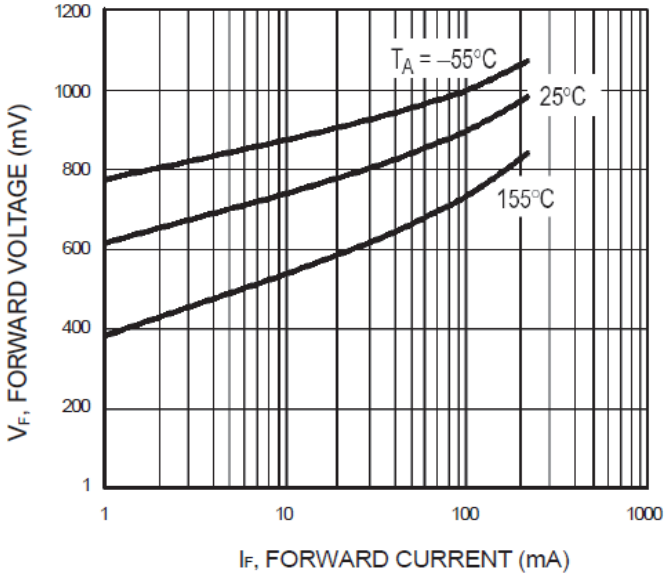


Fig. 3 - REVERSE LEAKAGE

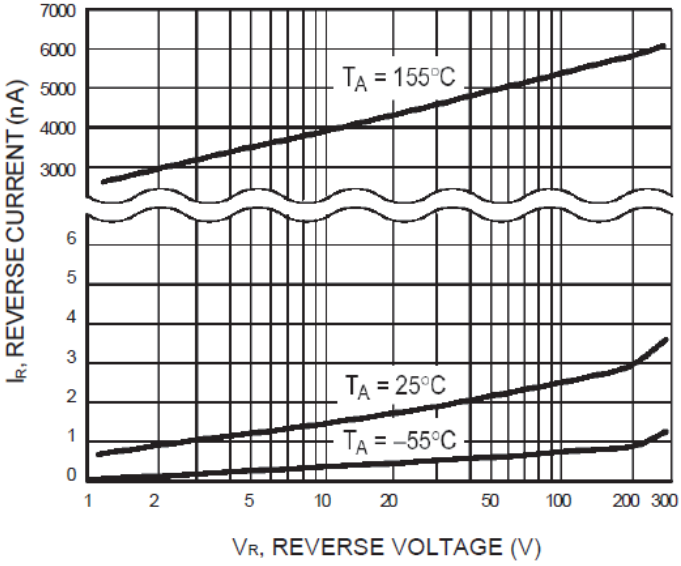
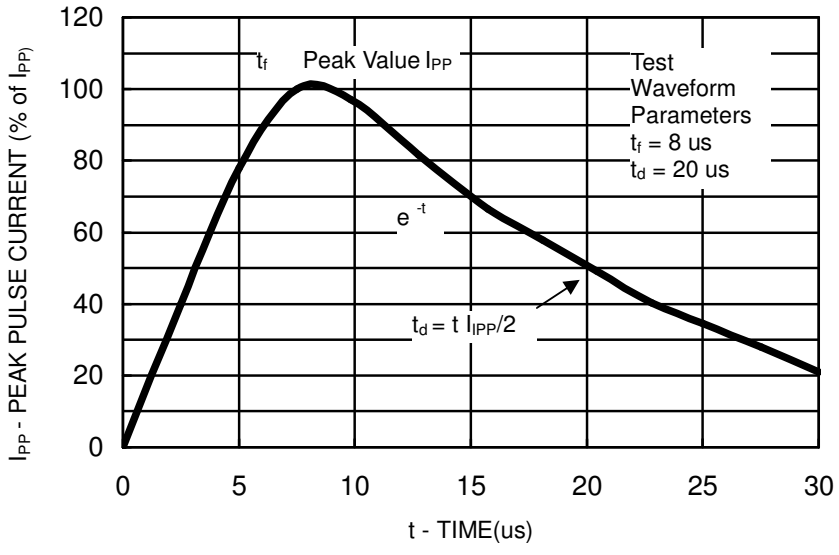


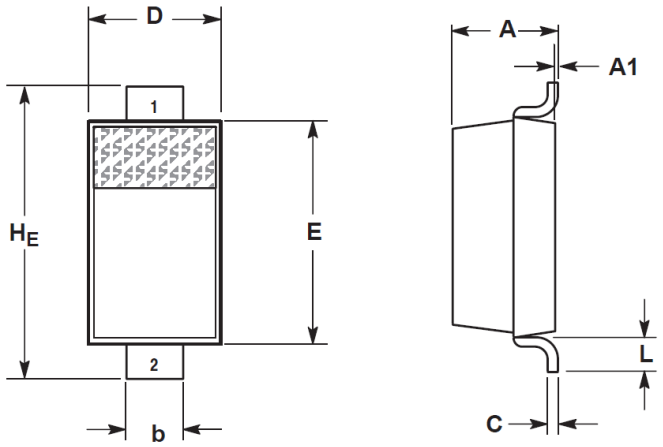
Fig.4 - PULSE WAVEFORM



MECHANICAL INFORMATION
BAV21W

Package Dimensions :

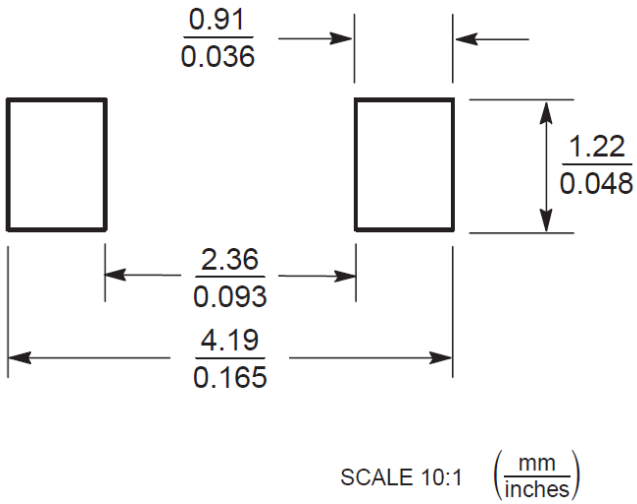
SOD-123



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 $\left(\frac{\text{mm}}{\text{inches}}\right)$

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