



### Features

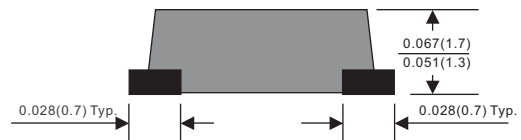
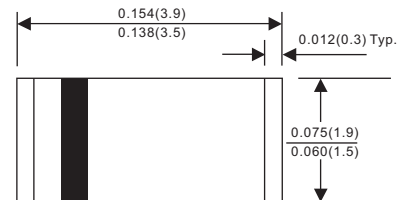
- Batch process design, excellent power dissipation offers better reverse leakage current and thermal resistance.
- Low profile surface mounted application in order to optimize board space.
- Tiny plastic SMD package.
- Low power loss, high efficiency.
- High current capability, low forward voltage drop.
- High surge capability.
- Guardring for overvoltage protection.
- Ultra high-speed switching.
- Silicon epitaxial planar chip, metal silicon junction.
- **Moisture Sensitivity Level 1**

### Mechanical data

- Epoxy : UL94-V0 rated flame retardant
- Case : Molded plastic, SOD-123-L
- Terminals :Plated terminals, solderable per MIL-STD-750, Method 2026
- Polarity : Indicated by cathode band
- Mounting Position : Any
- Weight : Approximated 0.018 gram

### Package outline

SOD-123-L



Dimensions in inches and (millimeters)

### Maximum ratings and Electrical Characteristics (AT $T_A=25^{\circ}\text{C}$ unless otherwise noted)

PARAMETER	CONDITIONS	Symbol	MIN.	TYP.	MAX.	UNIT
Forward rectified current	See Fig.2	$I_o$			1.0	A
Forward surge current	8.3ms single half sine-wave superimposed on rate load (JEDEC methode)	$I_{FSM}$			30	A
Reverse current	$V_R = V_{RRM}$ $T_J = 25^{\circ}\text{C}$	$I_R$			1.0	mA
Diode junction capacitance	f=1MHz and applied 4V DC reverse voltage	$C_j$		130		pF
Storage temperature		$T_{STG}$	-55		+150	$^{\circ}\text{C}$

SYMBOLS	$V_{RRM}^{*1}$ (V)	$V_{RMS}^{*2}$ (V)	$V_R^{*3}$ (V)	$V_F^{*4}$ (V)	Operating temperature $T_J, (^{\circ}\text{C})$
SL12-M	20	14	20	0.38	-55 to +100
SL14-M	40	28	40	0.40	

\*1 Repetitive peak reverse voltage

\*2 RMS voltage

\*3 Continuous reverse voltage

\*4 Maximum forward voltage@ $I_F=1.0\text{A}$

**Rating and characteristic curves**

FIG.1-TYPICAL FORWARD CHARACTERISTICS

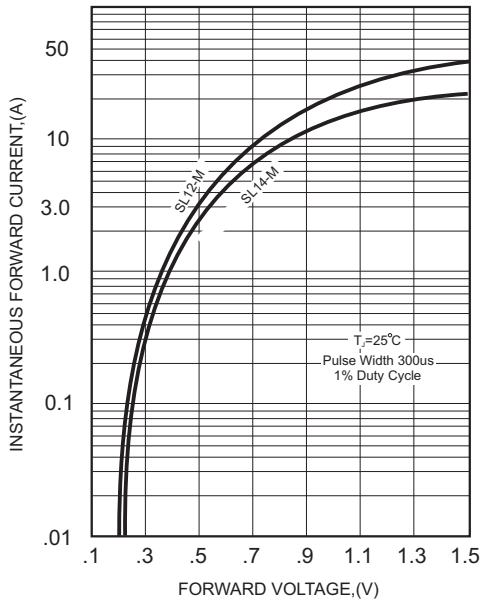


FIG.2-TYPICAL FORWARD CURRENT DERATING CURVE

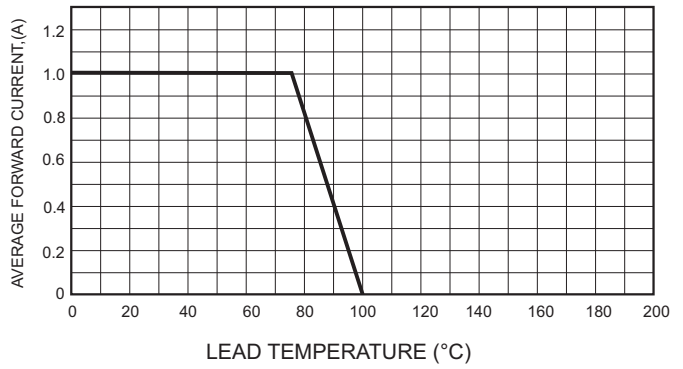


FIG.4-MAXIMUM NON-REPETITIVE FORWARD SURGE CURRENT

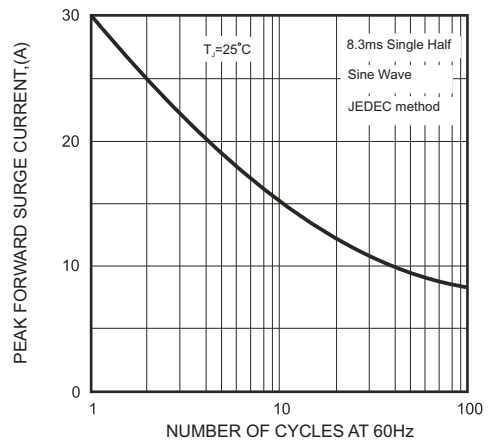


FIG.3 - TYPICAL REVERSE CHARACTERISTICS

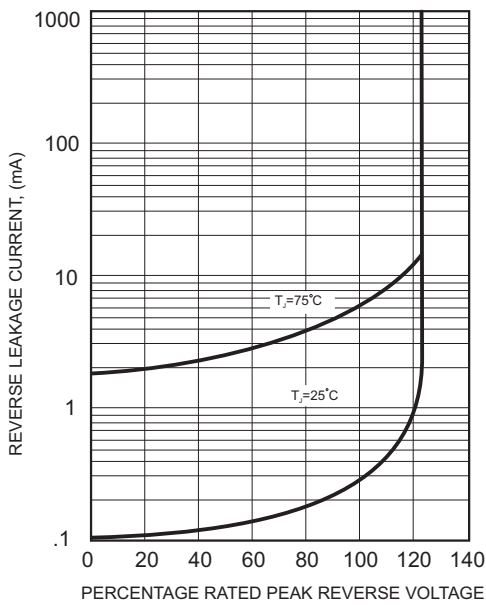
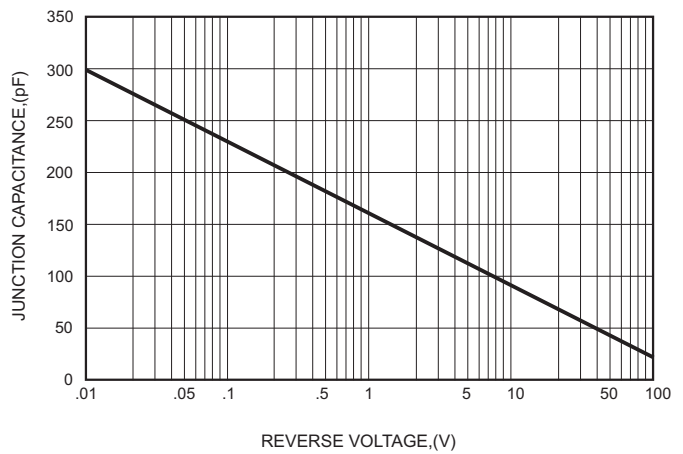


FIG.5-TYPICAL JUNCTION CAPACITANCE





### Pinning information

Pin	Simplified outline	Symbol
Pin1 cathode Pin2 anode		

### Reel packing

PACKAGE	REEL SIZE	REEL (pcs)	COMPONENT SPACING (m/m)	BOX (pcs)	INNER BOX (m/m)	REEL DIA, (m/m)	CARTON SIZE (m/m)	CARTON (pcs)	APPROX. GROSS WEIGHT (kg)
SOD-123-L	7"	2,500	4.0	25,000	183*183*123	178	382*262*387	200,000	9.5

### Marking

Type number	Marking code
SL12-M $\ddot{E}$ /P	L2
SL14-M $\ddot{E}$ /P	L4

Note: M: Package code, SOD-123-L

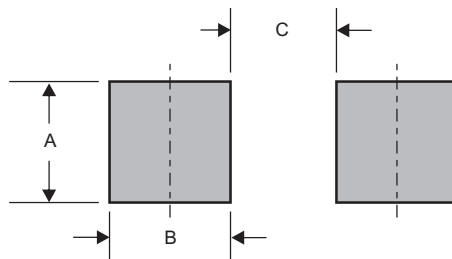
-T: Taping Reel

**Pb-Free package is available**

RoHS product for packing code suffix "G"

Halogen free product for packing code suffix "H"

### Suggested solder pad layout

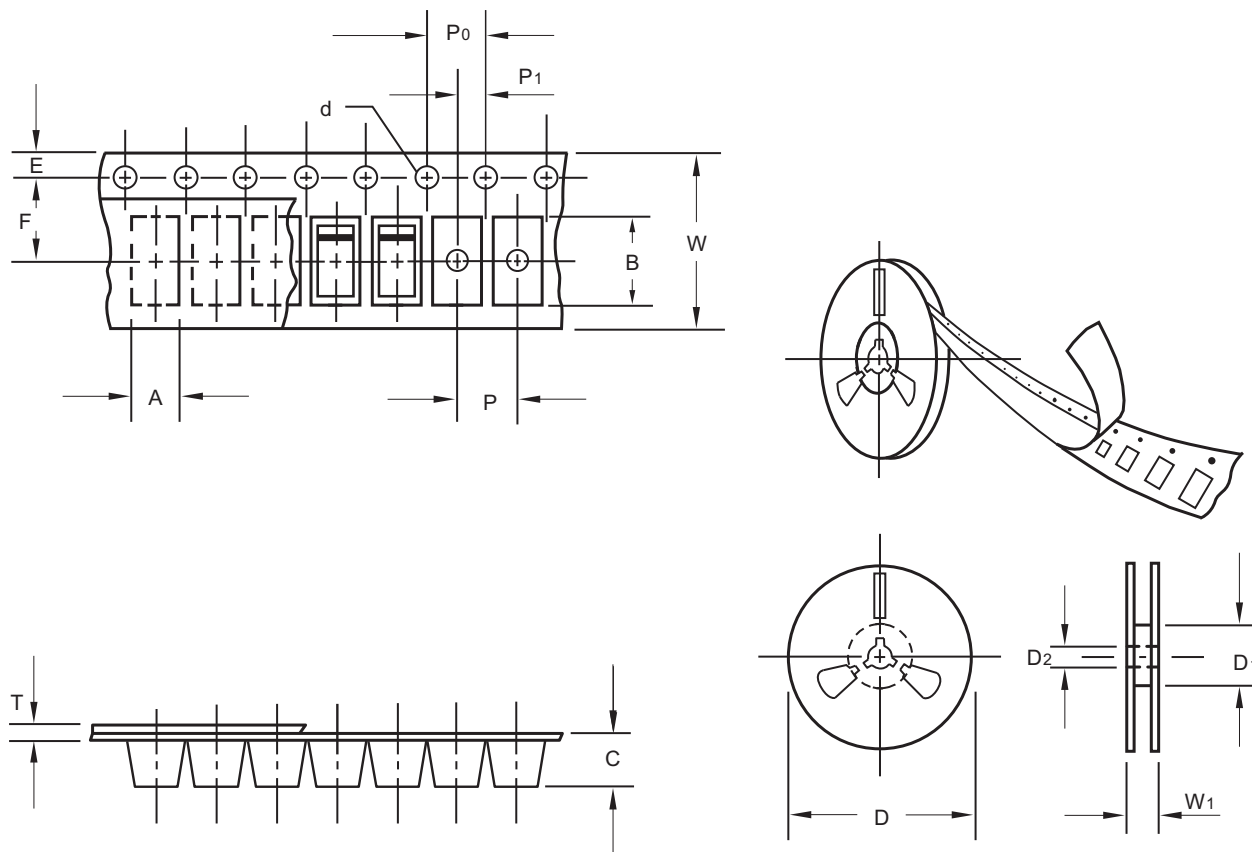


Dimensions in inches and (millimeters)

PACKAGE	A	B	C
SOD-123-L	0.075 (1.90)	0.055 (1.40)	0.075 (1.90)



### Packing information



unit:mm

Item	Symbol	Tolerance	SOD-123-L
Carrier width	A	0.1	1.90
Carrier length	B	0.1	3.90
Carrier depth	C	0.1	1.68
Sprocket hole	d	0.1	1.50
13" Reel outside diameter	D	2.0	-
13" Reel inner diameter	D1	min	-
7" Reel outside diameter	D	2.0	178.00
7" Reel inner diameter	D1	min	62.00
Feed hole diameter	D2	0.5	13.00
Sprocket hole position	E	0.1	1.75
Punch hole position	F	0.1	3.50
Punch hole pitch	P	0.1	4.00
Sprocket hole pitch	P0	0.1	4.00
Embossment center	P1	0.1	2.00
Overall tape thickness	T	0.1	0.23
Tape width	W	0.3	8.00
Reel width	W1	1.0	11.40

Note: Devices are packed in accordance with EIA standard RS-481-A and specifications listed above.