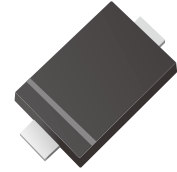


Surface Mount General Purpose Silicon Rectifier

Features

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Ideal for automated placement
- Lead free in comply with EU RoHS 2011/65/EU directives



Mechanical Data

- Case: SOD-123FL
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity: Color band denotes cathode end
- Approx. Weight: 15mg



Ordering Information

Part Number	Shipping	Reel
LT4001L THRU LT4007L-TR3	3000PCS Tape&Reel	7 inches
LT4001L THRU LT4007L-TR12	12000PCS Tape&Reel	13 inches

Maximum Ratings and Electrical Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Single phase half-wave 60 Hz, resistive or inductive load, for capacitive load current derate by 20 %.

Parameter	Symbol	LT4001L	LT4002L	LT4003L	LT4004L	LT4005L	LT4006L	LT4007L	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	200	400	600	800	1000	V
Maximum RMS voltage	V_{RMS}	35	70	140	280	420	560	700	V
Maximum DC Blocking Voltage	V_{DC}	50	100	200	400	600	800	1000	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	1							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	30							A
Maximum Instantaneous Forward Voltage at 1 A	V_F	1.1							V
Maximum DC Reverse Current $T_a = 25^\circ\text{C}$ at Rated DC Blocking Voltage $T_a = 125^\circ\text{C}$	I_R	5 50							μA
Typical Junction Capacitance (NOTE1)	C_j	8(TYP.)							pF
Typical Thermal Resistance (NOTE2)	$R_{\theta JA}$ $R_{\theta JC}$	115 25							$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150							$^\circ\text{C}$

Note:(1) Measured at 1 MHz and applied reverse voltage of 4V D.C.

(2) P.C.B. mounted with 2.0" x 2.0" (5cm x 5cm) copper pad areas.



characteristics Curves

Fig.1 Forward Current Derating Curve

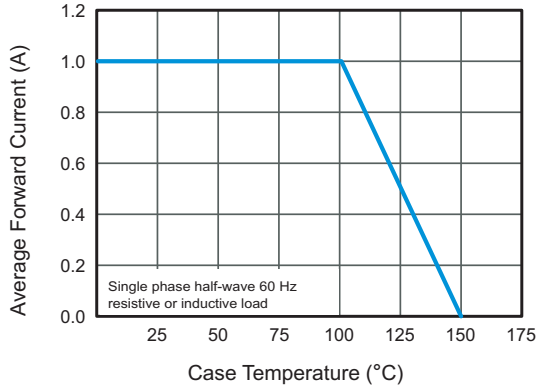


Fig.2 Typical Instaneous Reverse Characteristics

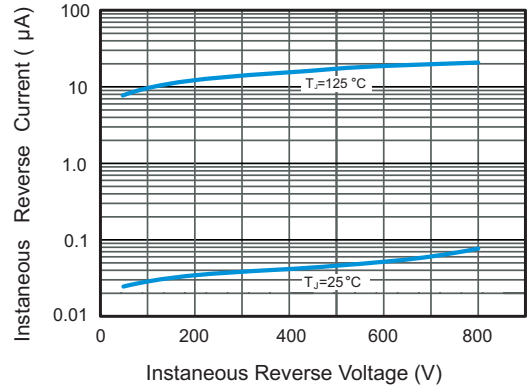


Fig.3 Typical Forward Characteristic

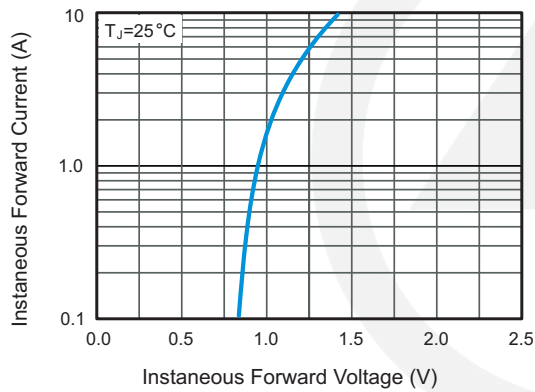


Fig.4 Typical Junction Capacitance

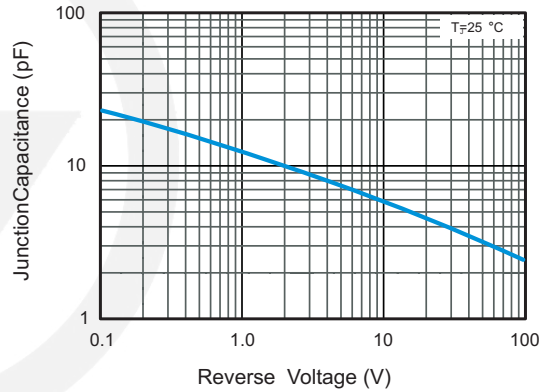
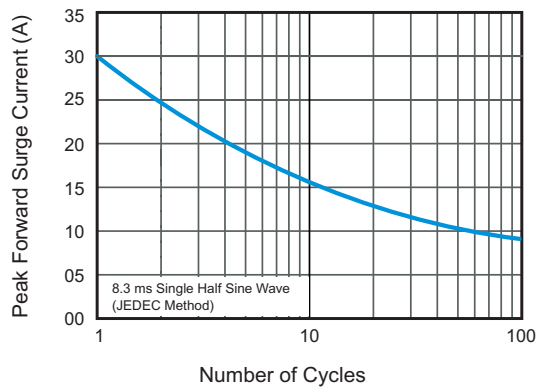
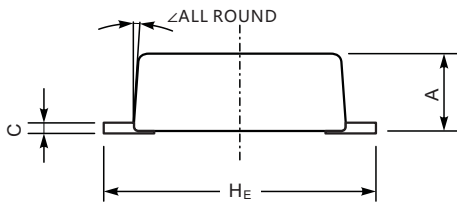


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

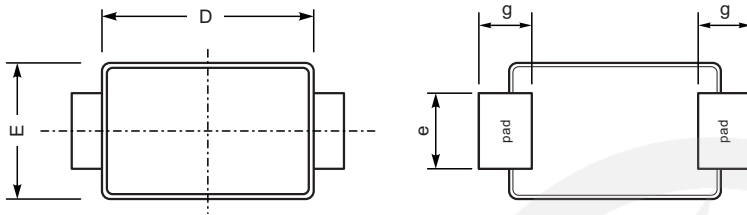


SOD-123FL Package Outline

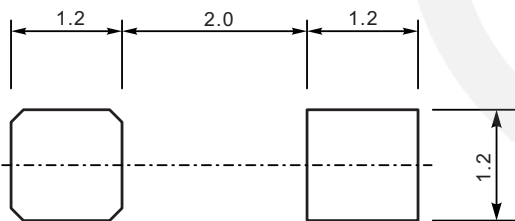
Unit: mm



SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.9	1.35
C	0.12	0.20
D	2.6	2.9
E	1.75	1.95
e	0.8	1.1
g	0.7	0.9
H _E	3.5	3.8
∠	7°	



SOD-123FL Suggested Pad Layout



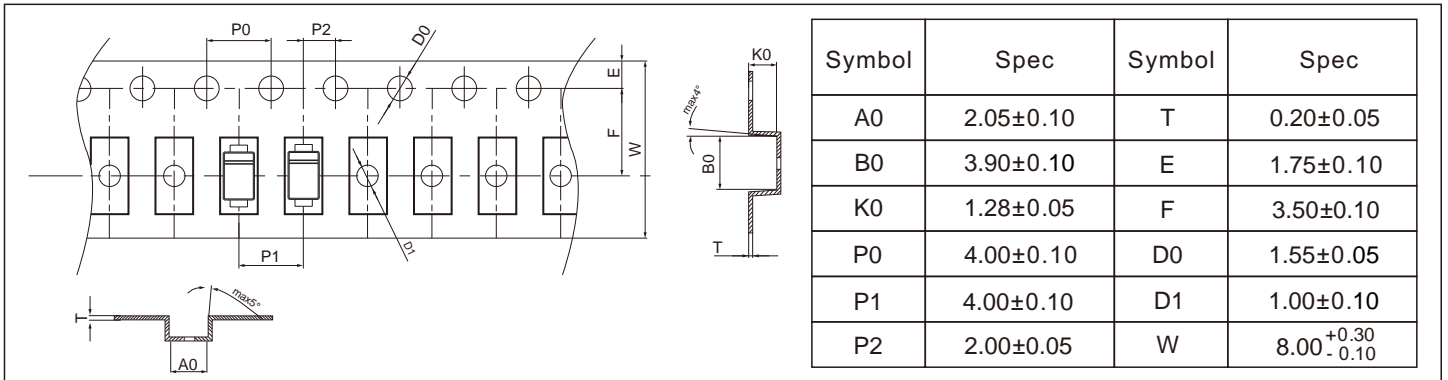
Note:
 1. Controlling dimension: in millimeters.
 2. General tolerance: $\pm 0.05\text{mm}$
 3. The pad layout is for reference purpose only.

Marking

Type number	Marking code
LT4001L	A1
LT4002L	A2
LT4003L	A3
LT4004L	A4
LT4005L	A5
LT4006L	A6
LT4007L	A7

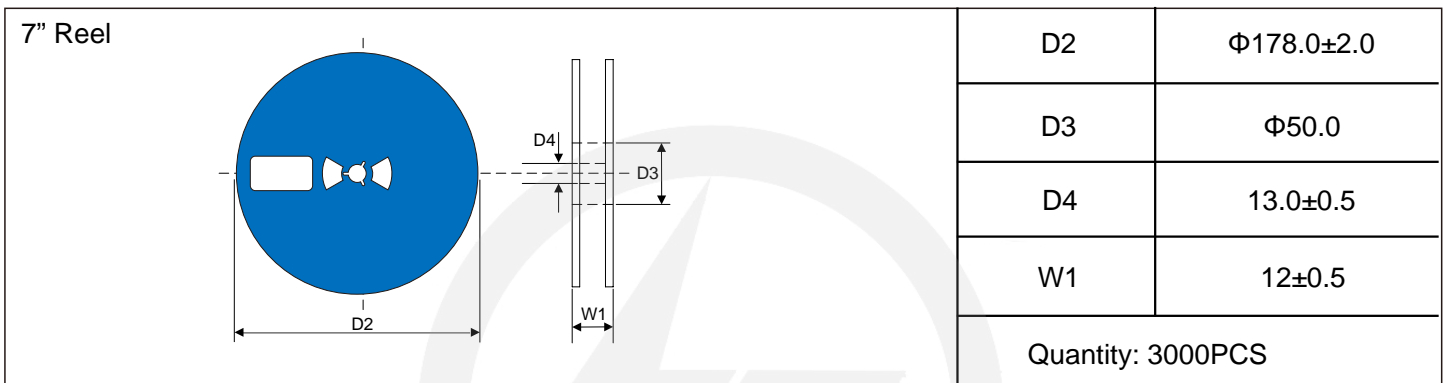
Carrier Tape Dimensions

Unit : mm



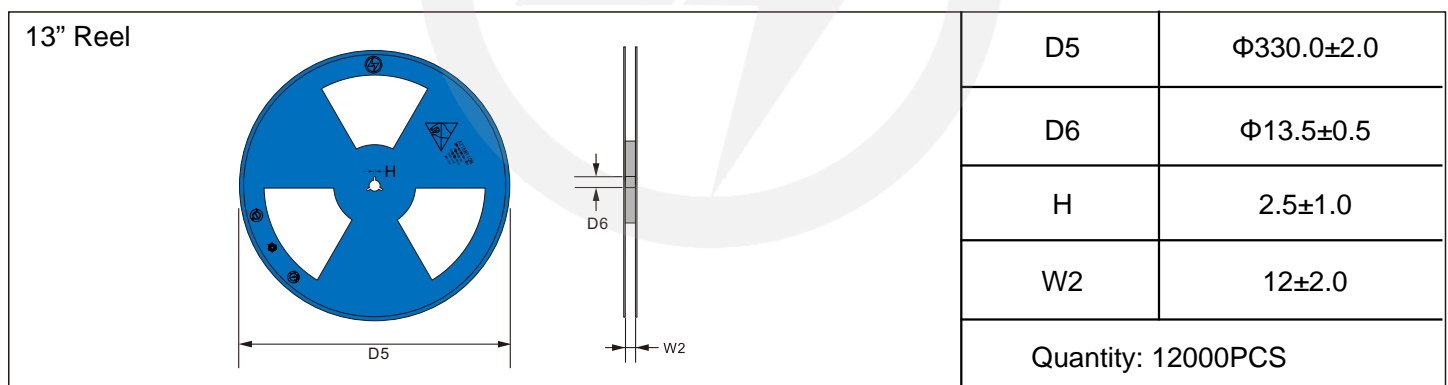
Reel Dimensions

Unit : mm

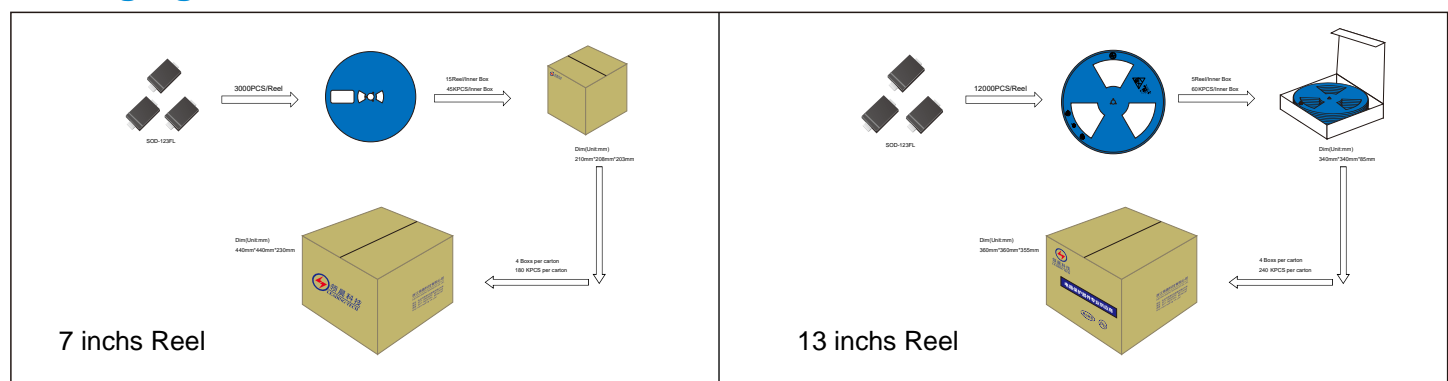


Reel Dimensions

Unit : mm



Packaging





Recommended Soldering Conditions



Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T_L to T_P)	3°C/second max.
Preheat	
-Temperature Min ($T_{S\ min}$)	150°C
-Temperature Max ($T_{S\ max}$)	200°C
-Time (min to max) (t_s)	60-180 seconds
$T_{S\ max}$ to T_L	
-Ramp-up Rate	3°C/second max.
Time maintained above:	
-Temperature (T_L)	217°C
-Time (t_L)	60-150 seconds
Peak Temperature (T_P)	260°C
Time within 5°C of actual Peak Temperature (t_p)	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C to Peak Temperature	8 minutes max.

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Version Update information

Series NO.	Enactment/Revision Date	Effective Date	Version	Revision content	Revision Reason	Revision Person	Note
01	2024.3.5	2024.3.5	3.0	New File	/	Ding	
02	2024.11.28	2024.11.28	3.1	Package size change	/	Ding	
03	2025.08.27	2025.08.27	3.2	Add weight information	/	Ding	