LTGA7

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

Ordering Information

Part Number	Marking	Shipping	Reel
LTGA7-TR3	A7	3000PCS Tape&Reel	7 inchs
LTGA7-TR12	A7	12000PCS Tape&Reel	13 inchs

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	LTGA7	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	1000	V
Maximum RMS voltage	V_{RMS}	700	V
Maximum DC Blocking Voltage	V_{DC}	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°C at Rated DC Blocking Voltage T_a =125°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	°C/W
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150	°C

Note:(1) Measured at 1 MHz and applied reverse voltage of 4V D.C.
(2) P.C.B. mounted with 2.0" × 2.0" (5cm × 5cm) copper pad areas.

Characteristics Curves

Fig.1 Forward Current Derating Curve

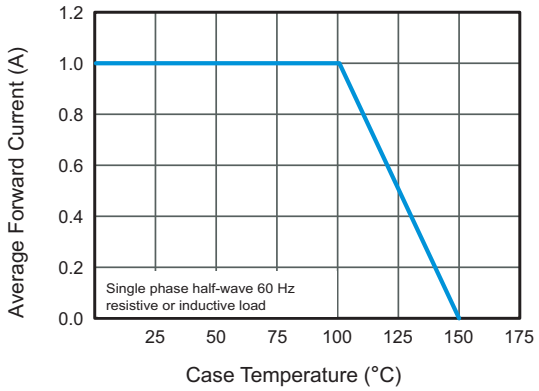


Fig.2 Typical Instaneous Reverse Characteristics

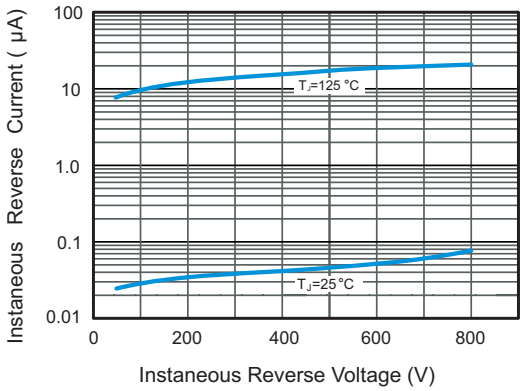


Fig.3 Typical Forward Characteristic

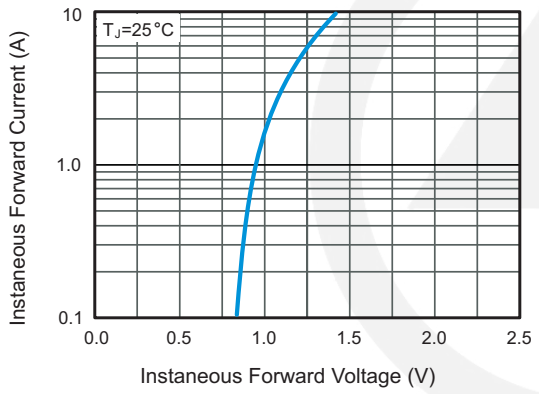


Fig.4 Typical Junction Capacitance

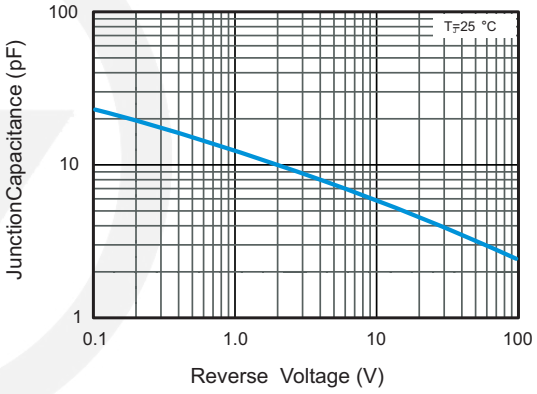
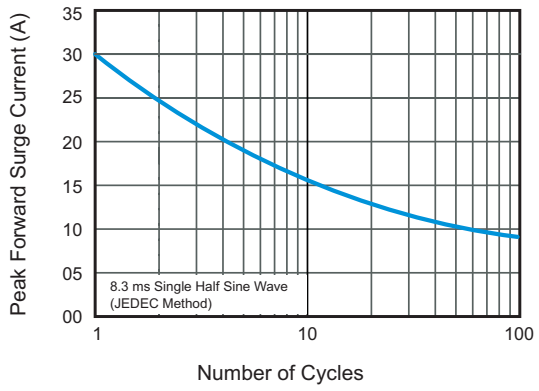
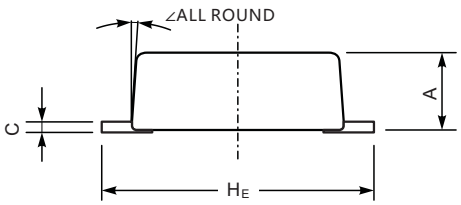


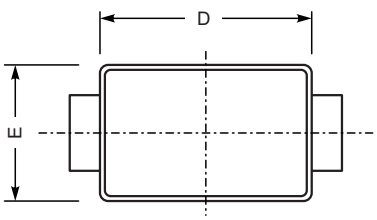
Fig.5 Maximum Non-Repetitive Peak Forward Surge Current

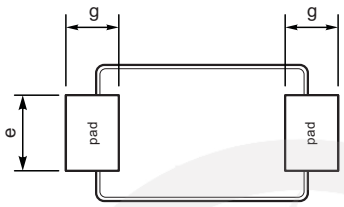


SOD-123FL Package Outline

Unit: mm

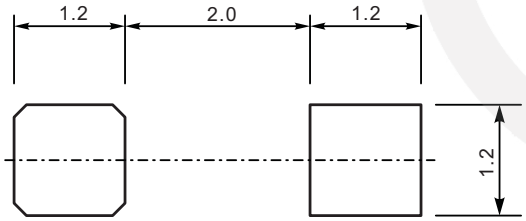






SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.9	1.35
C	0.12	0.20
D	2.6	2.9
E	1.75	1.95
e	0.8	1.1
g	0.7	0.9
H_E	3.5	3.8
∠	7°	

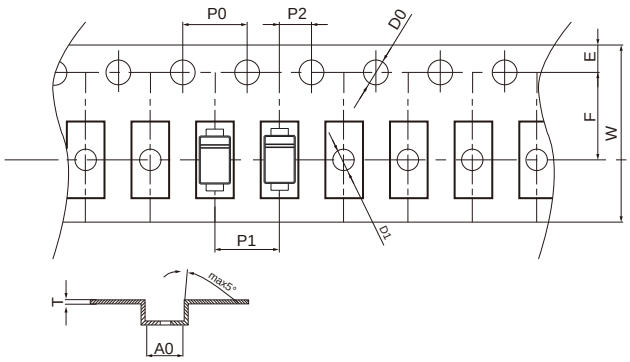
SOD-123FL Suggested Pad Layout



Note:
1.Controlling dimension:in millimeters.
2.General tolerance:± 0.05mm
3.The pad layout is for reference purpose only.

Carrier Tape Dimensions

Unit：mm

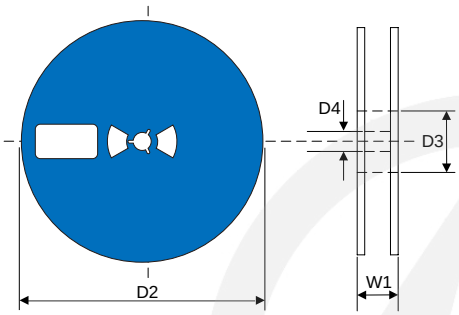


Symbol	Spec	Symbol	Spec
A0	2.05±0.10	T	0.20±0.05
B0	3.90±0.10	E	1.75±0.10
K0	1.28±0.05	F	3.50±0.10
P0	4.00±0.10	D0	1.55±0.05
P1	4.00±0.10	D1	1.00±0.10
P2	2.00±0.05	W	$8.00^{+0.30}_{-0.10}$

Reel Dimensions

Unit：mm

7” Reel

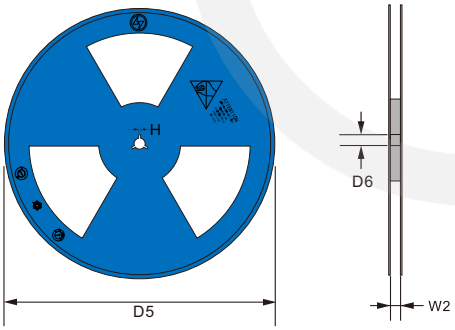


D2	Φ178.0±2.0
D3	Φ50.0
D4	13.0±0.5
W1	12±0.5
Quantity: 3000PCS	

Reel Dimensions

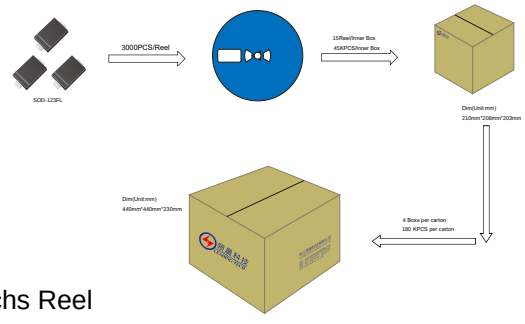
Unit：mm

13” Reel

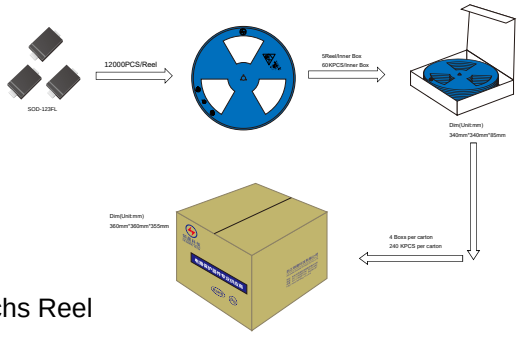


D5	Φ330.0±2.0
D6	Φ13.5±0.5
H	2.5±1.0
W2	12±2.0
Quantity: 12000PCS	

Packaging



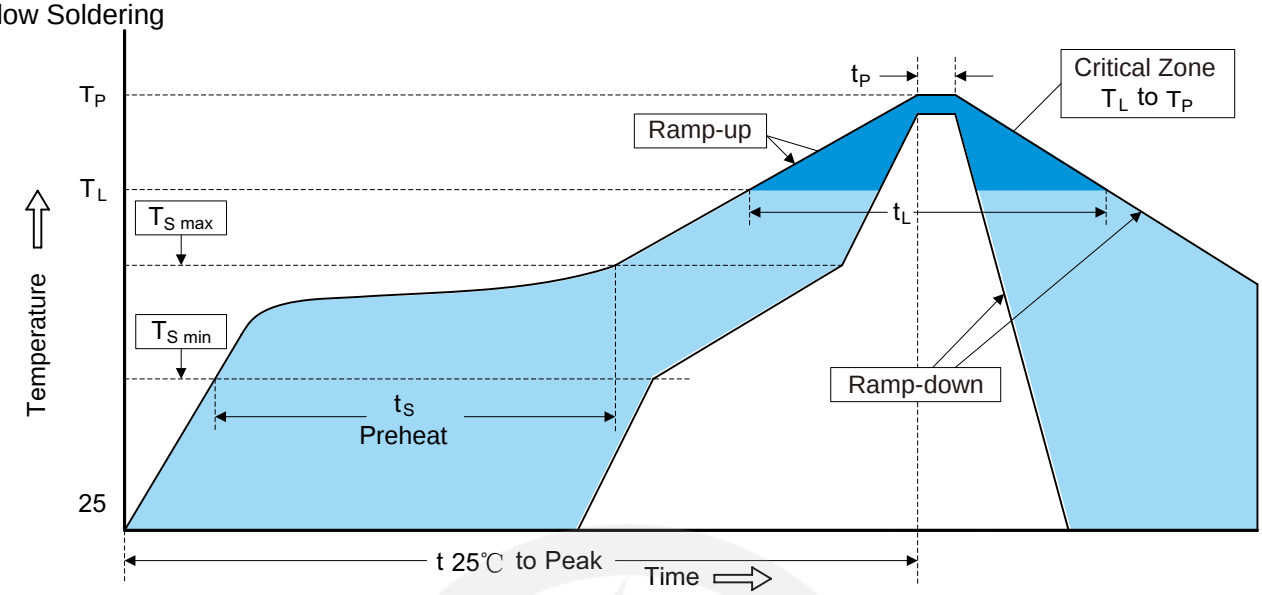
7 inchs Reel



13 inchs Reel

Recommended Soldering Conditions

Reflow Soldering



Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T_L to T_P)	3℃/second max.
Preheat -Temperature Min ($T_{S\ min}$) -Temperature Max ($T_{S\ max}$) -Time (min to max) (t_S)	 150℃ 200℃ 60-180 seconds
$T_{S\ max}$ to T_L -Ramp-up Rate	 3℃/second max.
Time maintained above: -Temperature (T_L) -Time (t_L)	 217℃ 60-150 seconds
Peak Temperature (T_P)	260℃
Time within 5℃ of actual Peak Temperature (t_P)	20-40 seconds
Ramp-down Rate	6℃/second max.
Time 25℃ 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	2024.8.25	2024.8.25	3.0	New File	/	Ding	
02	2025.06.12	2025.06.12	3.1	Update packaging information	/	Ding	