

Surface Mount Superfast Recovery Rectifier

Features

- Easy pick and place
- For surface mounted applications
- Low profile package
- Built-in strain relief
- Superfast recovery times for high efficiency
- 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	Shipping	Reel
LTE2AW THRU LTE2JW -TR3	3000PCS Tape&Reel	7 inchs
LTE2AW THRU LTE2JW -TR12	12000PCS Tape&Reel	13 inchs

Absolute Maximum Ratings and Characteristics

Ratings at 25 °C ambient temperature unless otherwise specified. Single phase, half wave, 60 Hz, resistive or inductive load. For capacitive load, derate current by 20%.

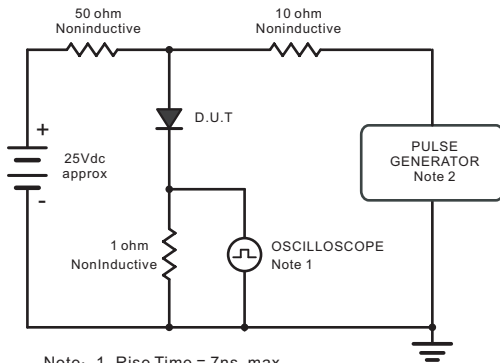
Parameter	Symbol	LTE2AW	LTE2BW	LTE2CW	LTE2DW	LTE2EW	LTE2GW	LTE2JW	Unit
Maximum Repetitive Peak Reverse Voltage	V_{RRM}	50	100	150	200	300	400	600	V
Maximum RMS voltage	V_{RMS}	35	70	105	140	210	280	420	V
Maximum DC Blocking Voltage	V_{DC}	50	100	150	200	300	400	600	V
Maximum Average Forward Rectified Current at $T_c = 125\text{ }^\circ\text{C}$	$I_{F(AV)}$	2							A
Peak Forward Surge Current 8.3 ms Single Half Sine Wave Superimposed on Rated Load	I_{FSM}	50							A
Maximum Forward Voltage at 2 A	V_F	1				1.25		1.68	V
Maximum DC Reverse Current $T_a = 25\text{ }^\circ\text{C}$ at Rated DC Blocking Voltage $T_a = 125\text{ }^\circ\text{C}$	I_R	5 100							μA
Typical Junction Capacitance at $V_R=4\text{V}$, $f=1\text{MHz}$	C_j	30							pF
Maximum Reverse Recovery Time (Note1)	t_{rr}	35							ns
Typical Thermal Resistance (Note2)	$R_{\theta JA}$ $R_{\theta JC}$	75 22							$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_j, T_{stg}	-55 ~ +150							$^\circ\text{C}$

Note: (1) Measured with $I_F = 0.5\text{ A}$, $I_R = 1\text{ A}$, $I_{rr} = 0.25\text{ A}$

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

Characteristics Curve

Fig.1 Reverse Recovery Time Characteristic And Test Circuit Diagram



Note: 1. Rise Time = 7ns, max.
Input Impedance = 1 megohm, 22pF.
2. Rise Time = 10ns, max.
Source Impedance = 50 ohms.

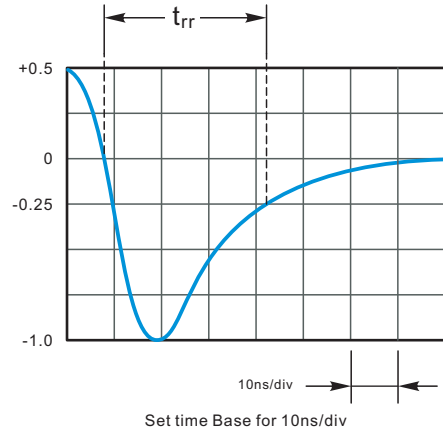


Fig.2 Maximum Average Forward Current Rating

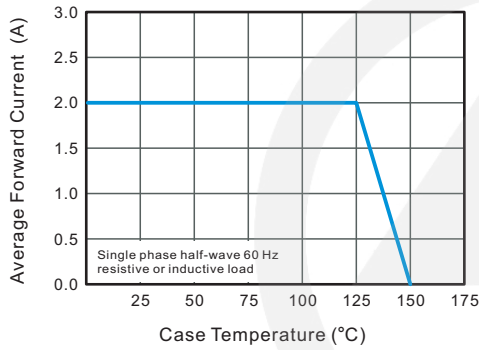


Fig.3 Typical Reverse Characteristics

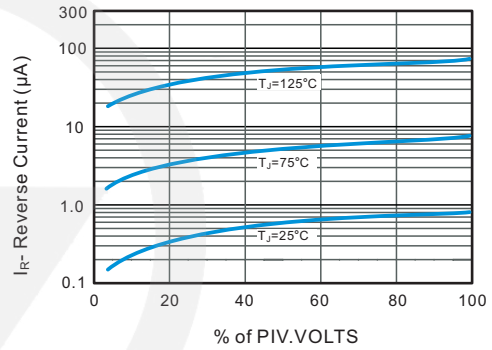


Fig.4 Typical Forward Characteristics

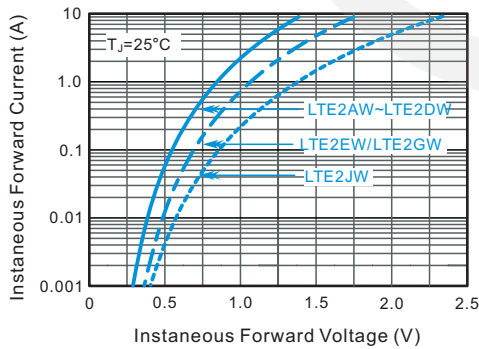


Fig.5 Typical Junction Capacitance

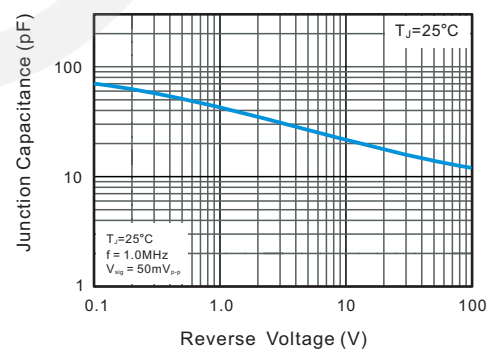
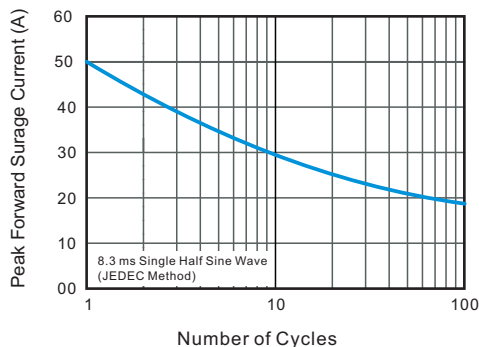
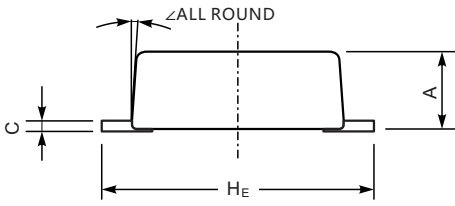


Fig.6 Maximum Non-Repetitive Peak Forward Surge Current

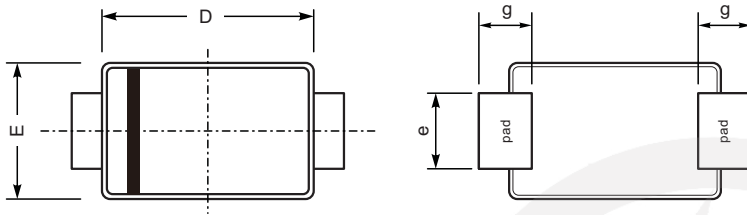


SOD-123FL Package Outline

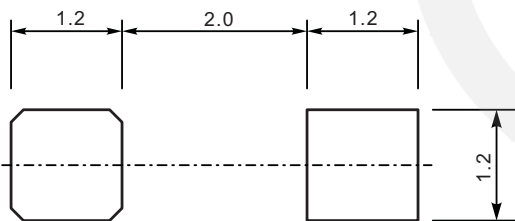
Unit: mm



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
HE	3.5	3.8
∠	7°	



SOD-123FL Suggested Pad Layout



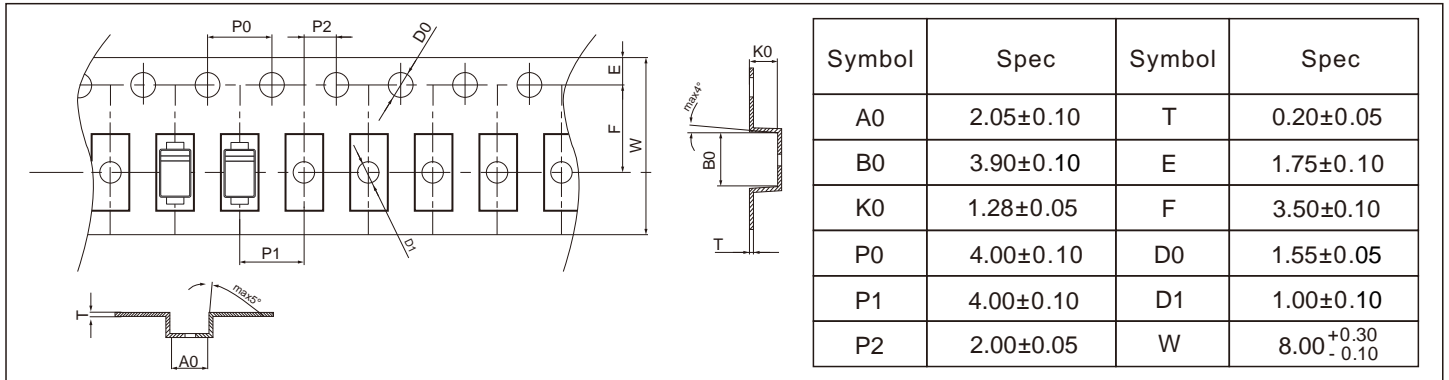
Note:
 1. Controlling dimension: in millimeters.
 2. General tolerance: $\pm 0.05\text{mm}$
 3. The pad layout is for reference purpose only.

Marking

Type number	Marking code
LTE2AW	E2L
LTE2BW	E2L
LTE2CW	E2L
LTE2DW	E2L
LTE2EW	E2M
LTE2GW	E2M
LTE2JW	E2H

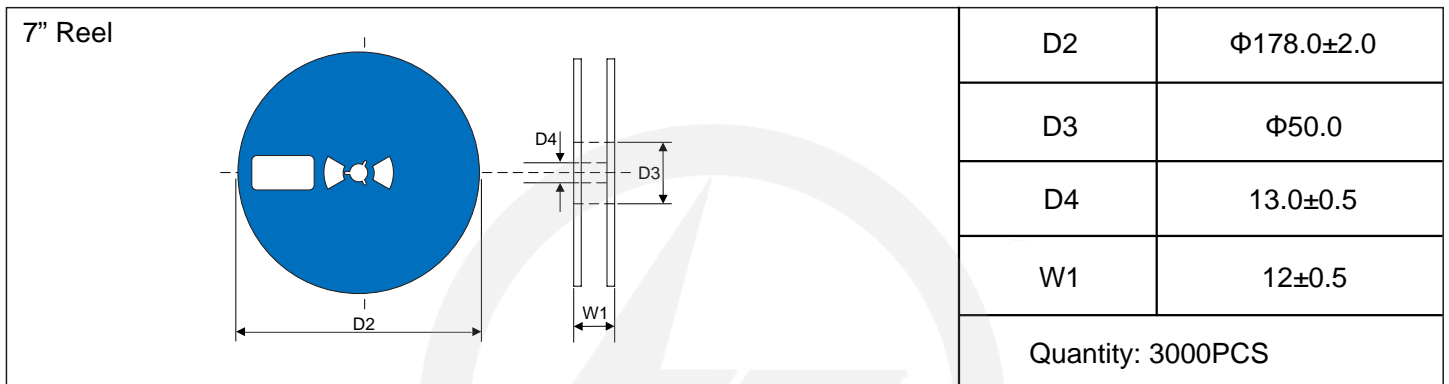
Carrier Tape Dimensions

Unit : mm



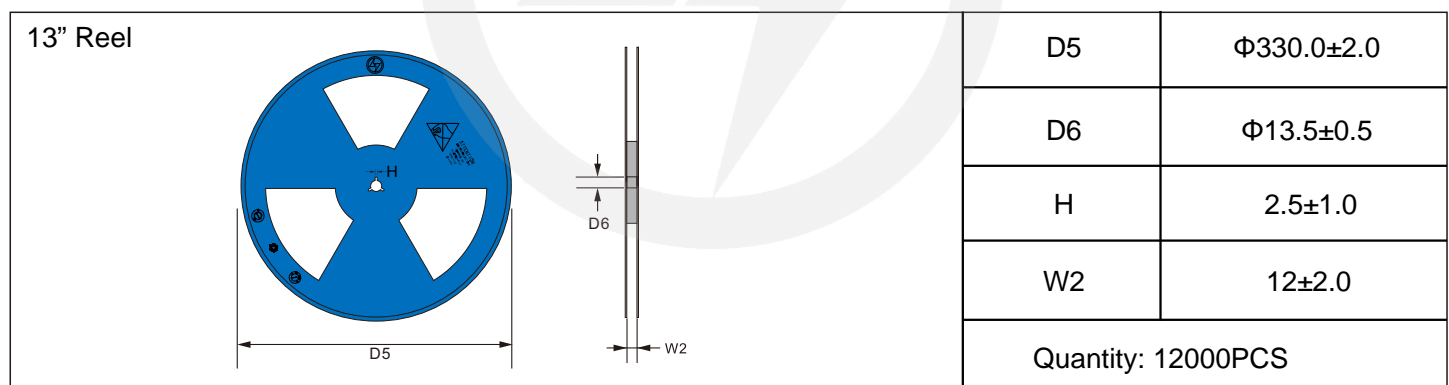
Reel Dimensions

Unit : mm

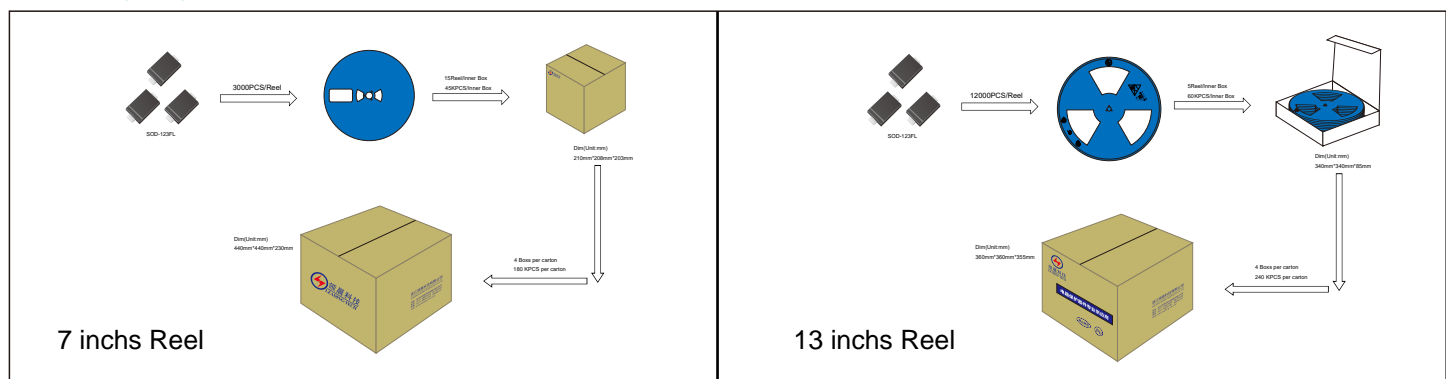


Reel Dimensions

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	2025.06.12	2025.06.12	3.1	Update packaging information	/	Ding	