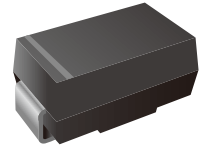


Surface Mount Fast Recovery Rectifiers

Features

- For surface mounted applications
- Low profile package
- Glass Passivated Chip Junction
- Easy to pick and place
- Fast reverse recovery time
- Lead free in comply with EU RoHS 2011/65/EU directives



Mechanical Data

- Case:SMA
- Terminals: leads solderable per MIL-STD-750,Method 2026
- Polarity: Color band denotes cathode end
- Approx. Weight: 60mg
- Moisture Sensitivity Level 1

Ordering Information

Part Number	Shipping	Reel
LTR1A THRU LTR1M-TR7K5	7500PCS Tape&Reel	13 inches

Absolute Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified.

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

Parameter	Symbol	LTR1A	LTR1B	LTR1D	LTR1G	LTR1J	LTR1K	LTR1M	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 @ Fig.1	$I_{F(AV)}$	1							A
Peak forward surge current 8.3ms single half sine-wave superimposed on rated load (JEDEC Method)	I_{FSM}	30							A
Maximum instantaneous forward voltage at 1.0A	V_F	1.3							V
Maximum DC reverse current $T_A=25^\circ\text{C}$ at rated DC reverse voltage $T_A=100^\circ\text{C}$	I_R	5 50							μA
Typical junction capacitance (Note1)	C_j	7					9		pF
Maximum reverse recovery time (Note2)	t_{rr}	150				250	500		ns
Typical thermal resistance (Note3)	$R_{\theta JA}$ $R_{\theta JC}$ $R_{\theta JL}$	100 20 25							$^\circ\text{C/W}$
Operating and Storage Temperature Range	T_j, T_{stg}	-55 to +150							$^\circ\text{C}$

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

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

(3) PCB mounted with 0.2" X 0.2" (5 mm X 5 mm) copper pad areas.



Characteristics Curves

Fig.1 Forward Current Derating Curve

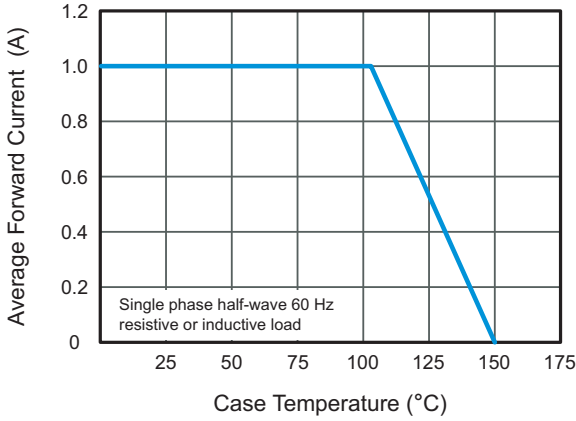


Fig.2 Typical Reverse Characteristics

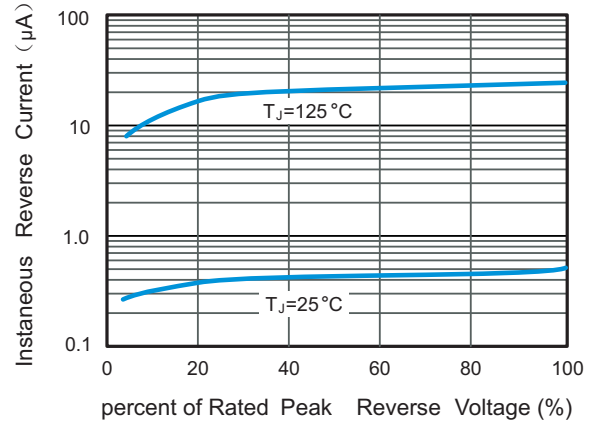


Fig.3 Typical Instantaneous Forward Characteristics

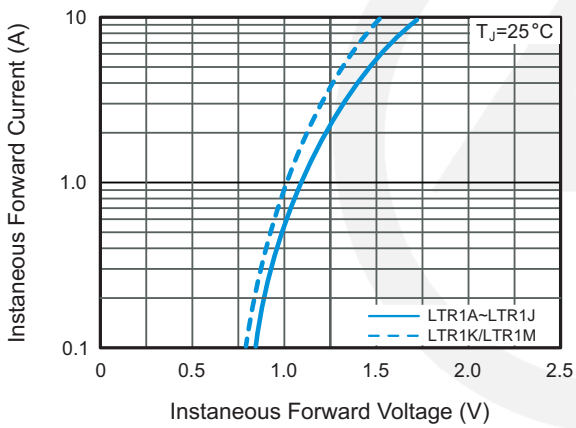


Fig.4 Typical Junction Capacitance

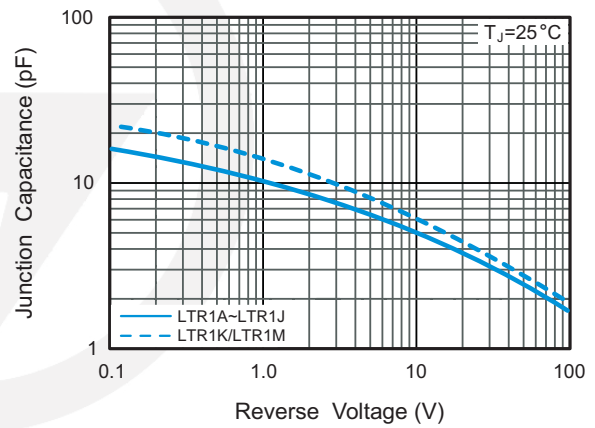
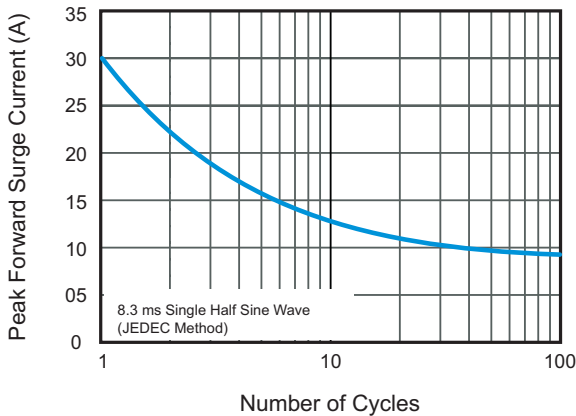
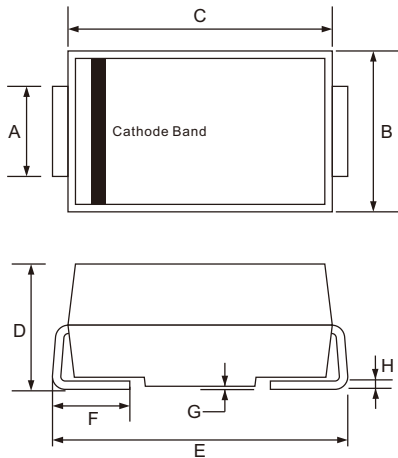


Fig.5 Maximum Non-Repetitive Peak Forward Surge Current



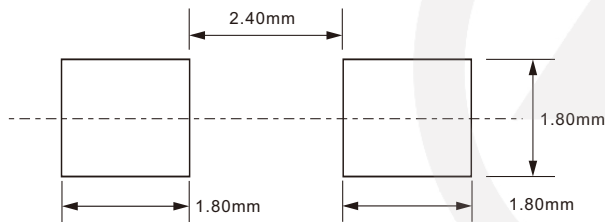
SMA Package Outline



Unit: mm

SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	1.25	1.65
B	2.30	2.79
C	4.00	4.75
D	1.90	2.50
E	4.70	5.28
F	0.76	1.52
G	0.203 TYP.	
H	0.15	0.31

SMA Suggested Pad Layout



Note:

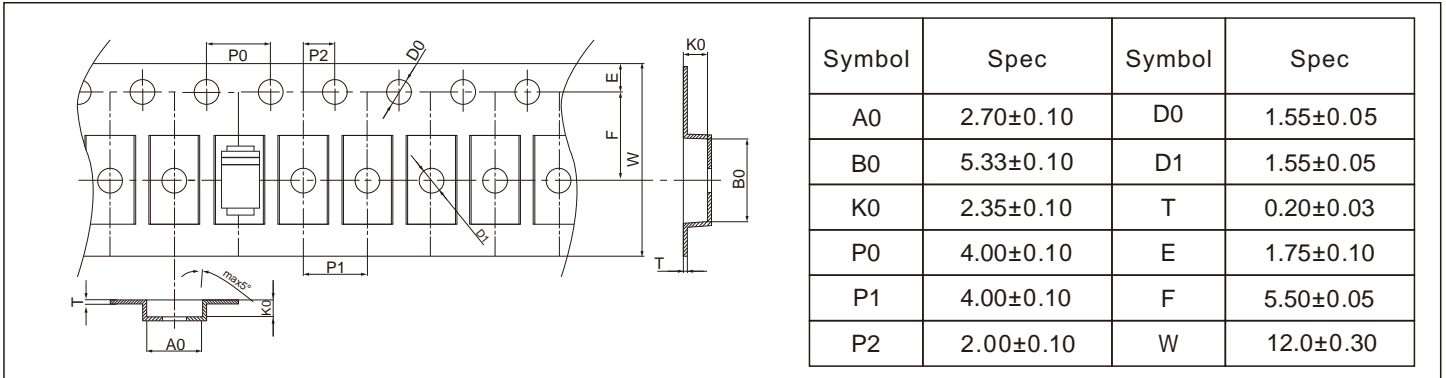
1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$
3. The pad layout is for reference purpose only.

Marking

Type number	Marking code
LTR1A	RS1A
LTR1B	RS1B
LTR1D	RS1D
LTR1G	RS1G
LTR1J	RS1J
LTR1K	RS1K
LTR1M	RS1M or R1M

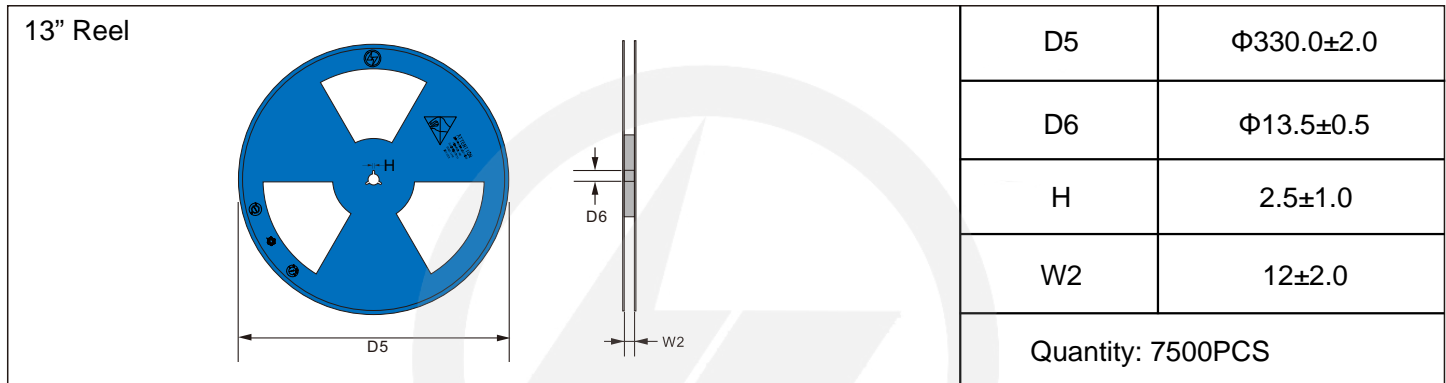
Carrier Tape Dimensions

Unit : mm

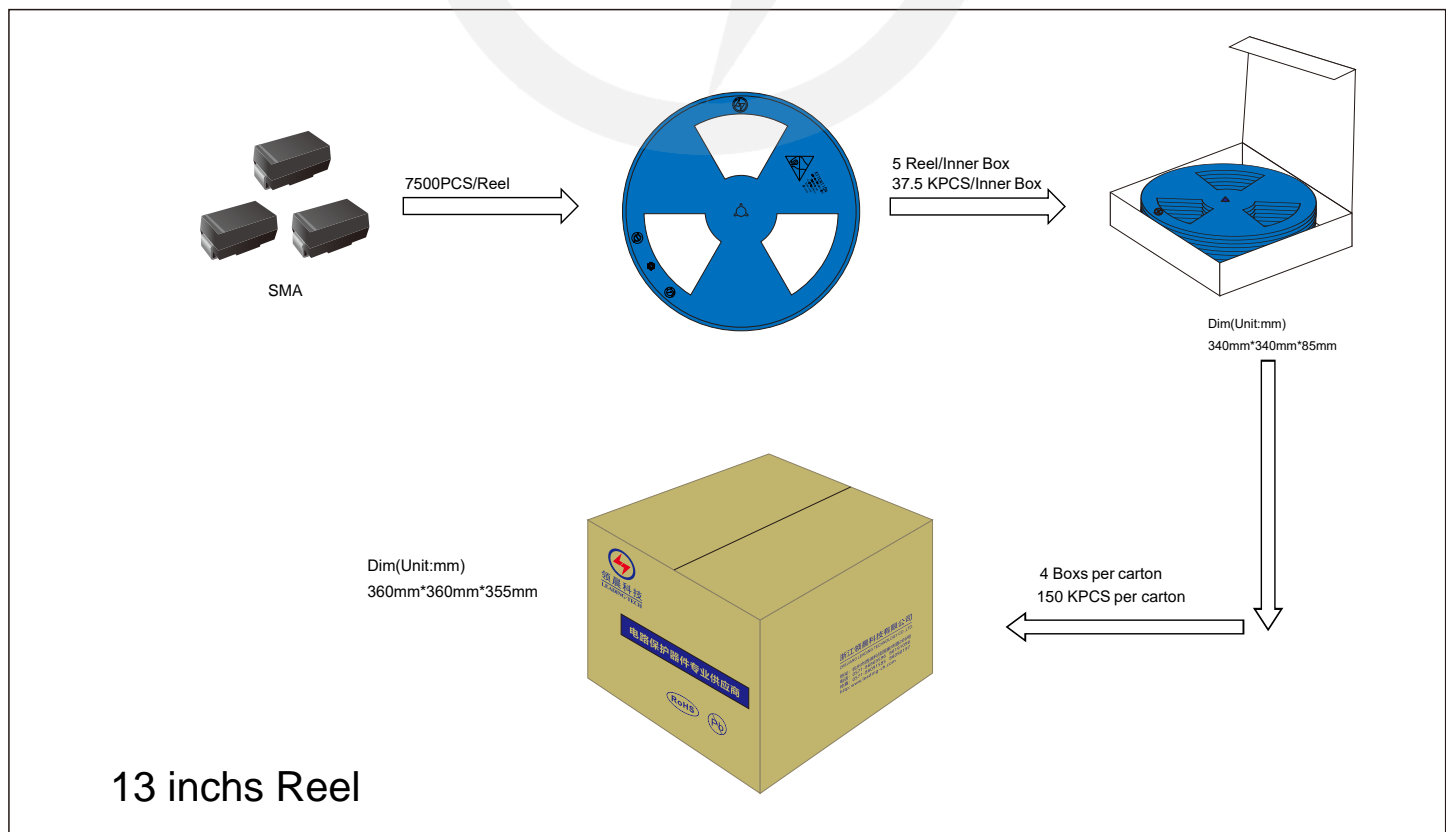


Reel Dimensions

Unit : mm

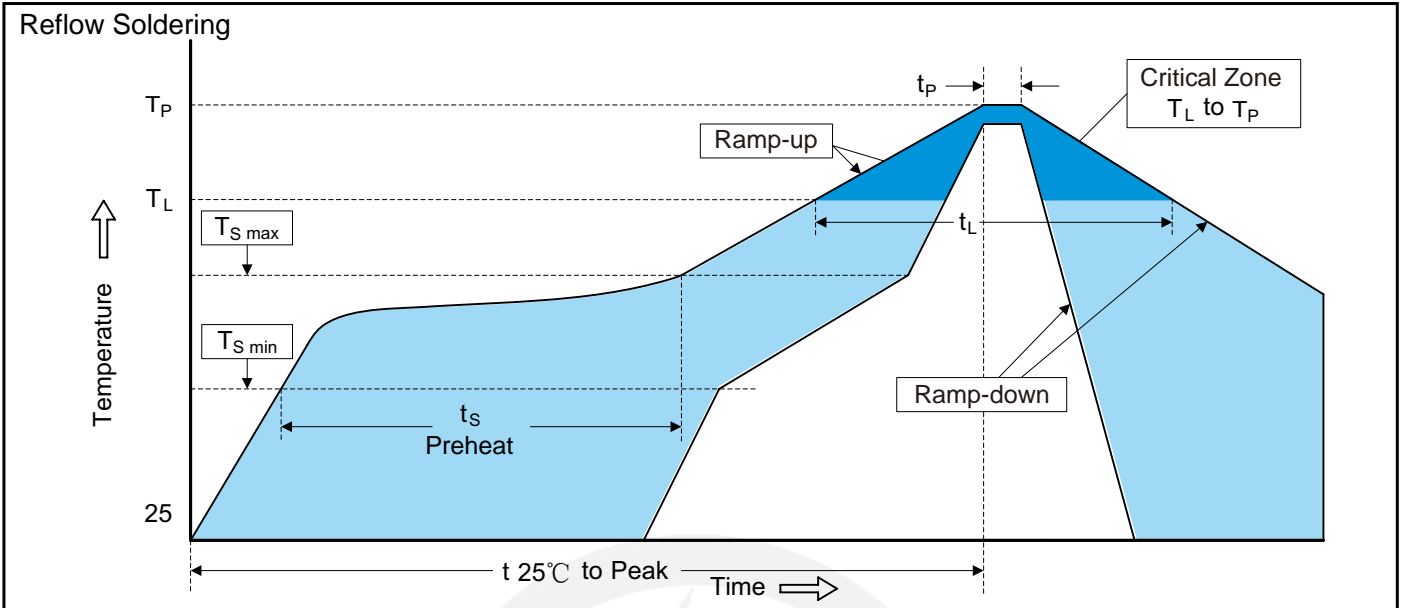


Packaging





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	2024.03.19	2024.03.19	3.0	New file	/	Ding	
02	2025.06.16	2025.06.16	3.1	Update packaging information	/	Ding	
03	2025.08.27	2025.08.27	3.2	Add weight information	/	Ding	
04	2025.11.05	2025.11.05	3.3	Add moisture sensitivity level	/	Ding	
05	2025.12.18	2025.12.18	3.4	Packaging quantity=7500PCS	/	Ding	