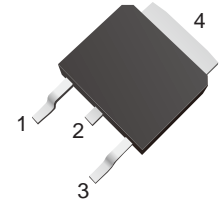


## Schottky Barrier Rectifiers

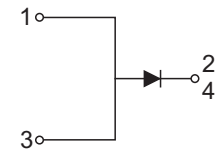
### Features

- Low power loss, high efficiency
- Low forward voltage drop
- High surge capability
- High temperature soldering guaranteed
- Mounting position: any
- Lead free in comply with EU RoHS 2011/65/EU directives



### Ordering Information

Part Number	Marking	Shipping	Reel
LTM10L45DP-TR2K5	10L45DP	2500PCS Tape&Reel	13 inches



### Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified

Parameter	Symbol	LTM10L45DP	Unit
Maximum Recurrent Peak Reverse Voltage	$V_{RRM}$	45	V
Maximum RMS voltage	$V_{RMS}$	32	V
Maximum DC Blocking Voltage	$V_{DC}$	45	V
Maximum Average Forward Rectified Current	$I_{F(AV)}$	10	A
Peak Forward Surge Current, 8.3ms Single Half Sine-wave Superimposed on Rated Load (JEDEC method)	$I_{FSM}$	150	A
Typical Junction Capacitance <sup>(1)</sup>	$C_j$	600	pF
Typical Thermal Resistance <sup>(2)</sup>	$R_{\theta JA}$	35	°C/W
Operating Junction Temperature Range	$T_j$	-55 ~ +150	°C
Storage Temperature Range	$T_{stg}$	-55 ~ +150	°C

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

(2) Mounted on infinite heat sink.

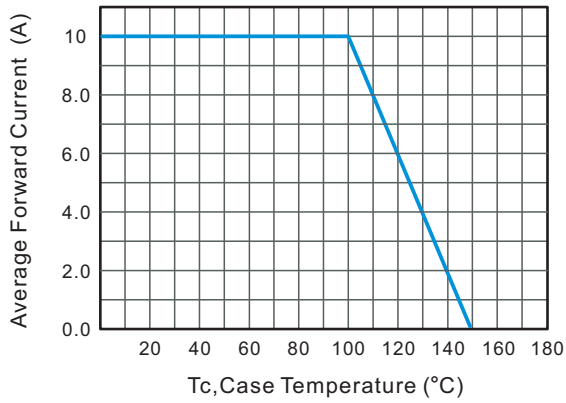
### Maximum Ratings and Electrical Characteristics

Ratings at 25°C ambient temperature unless otherwise specified

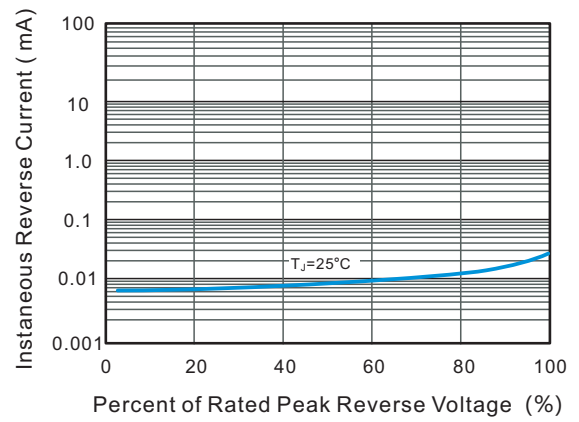
Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Breakdown voltage	$V_{BR}$	$I_R = 0.5mA$	45	-	-	V
Instantaneous forward voltage	$V_F$	$I_F = 10A$ $T_J = 25^\circ C$	-	0.50	0.54	V
Reverse current	$I_R$	$V_R = 32V$	-	5	-	uA
		$V_R = 45V$ $T_J = 25^\circ C$ $T_J = 100^\circ C$	-	-	50	uA mA

**Characteristics Curve**

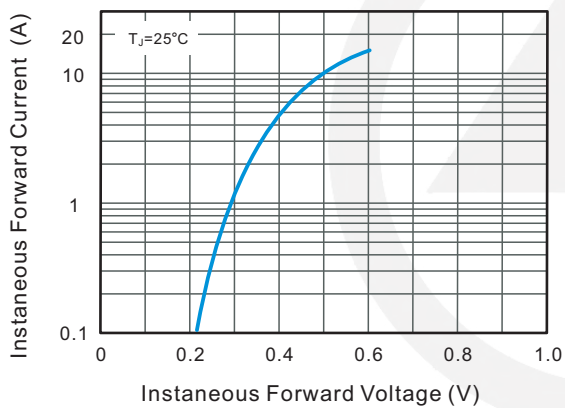
**Fig.1 Typical Forward Current Derating Curve**



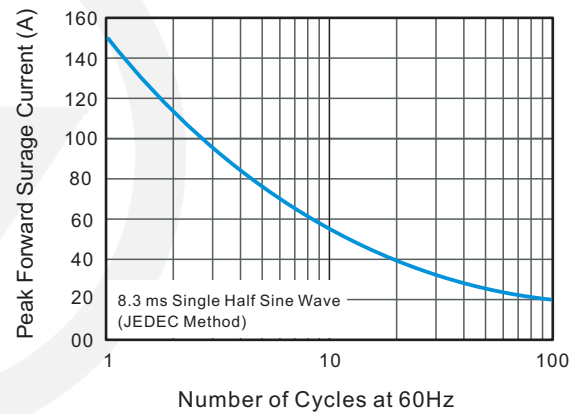
**Fig.2 Typical Reverse Characteristics**



**Fig.3 Typical Forward Characteristic**

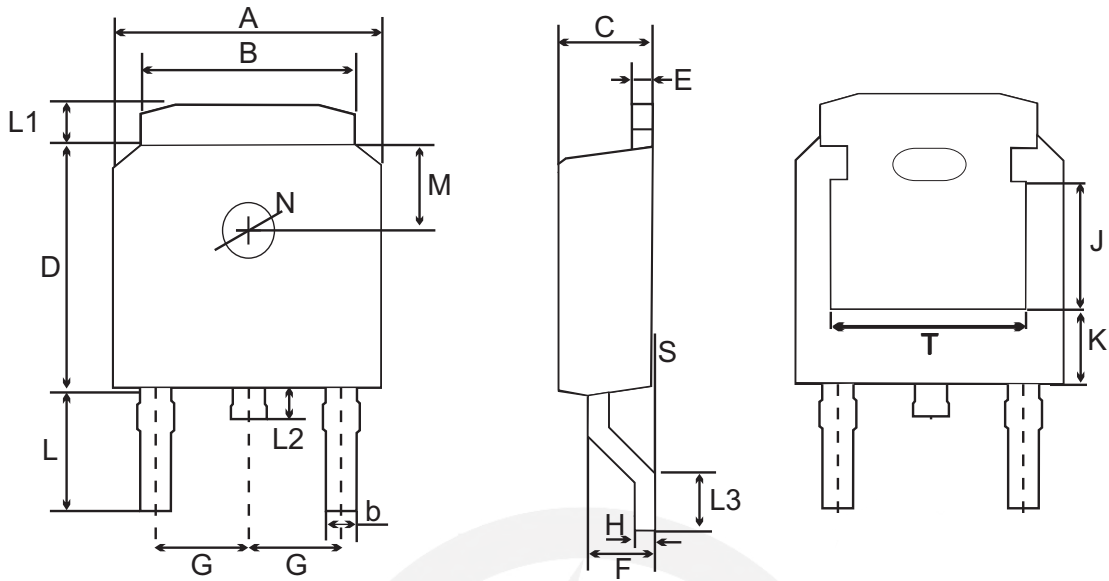


**Fig.4 Maximum Non-Repetitive Peak Forward Surge Current**





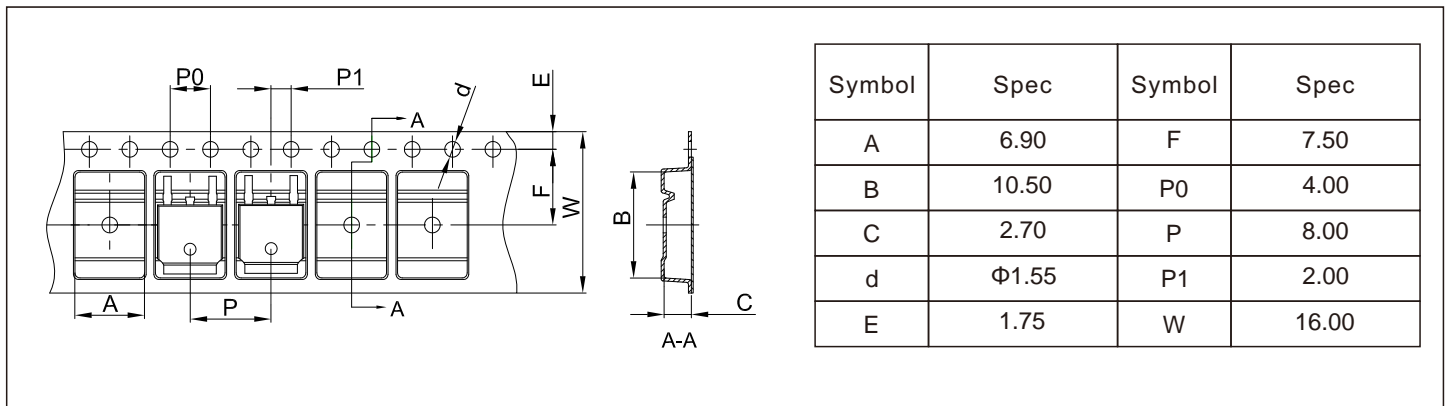
TO-252 Package Outline



UNIT	A	B	b	C	D	E	F	G	H	L	L1	L2	L3	S	M	N	J	K	T	
mm	max	6.7	5.5	0.8	2.5	6.3	0.6	1.8	2.29 TYPICAL	0.55	3.1	1.2	1.0	1.75	0.23	1.8 TYPICAL	1.3 TYPICAL	3.16 ref.	1.80 ref.	4.83 ref.
	typ	6.6	5.3	0.7	2.3	6.1	0.5	1.5		0.50	2.8	1.0	0.8	1.30	0.15					
	min	6.3	5.1	0.3	2.1	5.9	0.4	1.3		0.45	2.7	0.8	0.6	1.00	0.0					

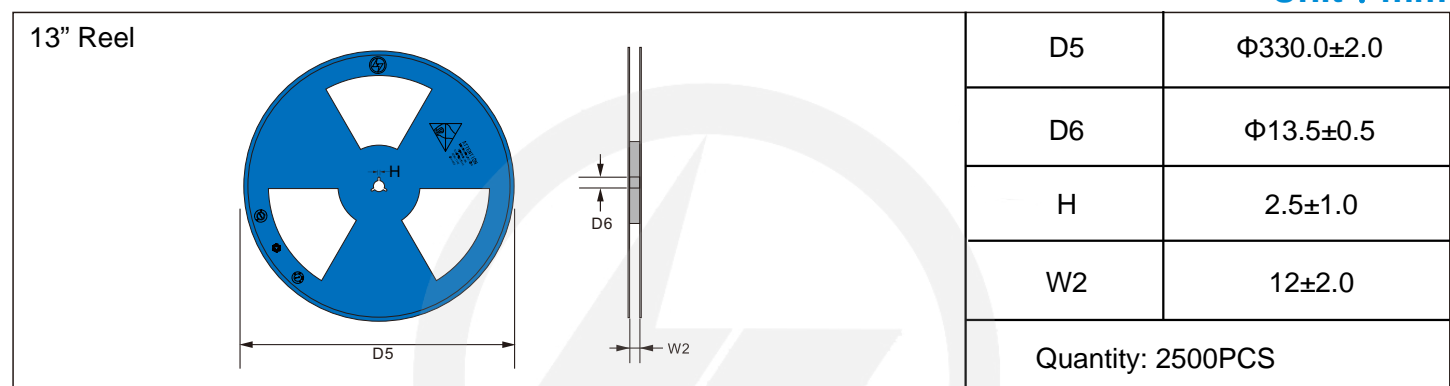
## Carrier Tape Dimensions

Unit : mm

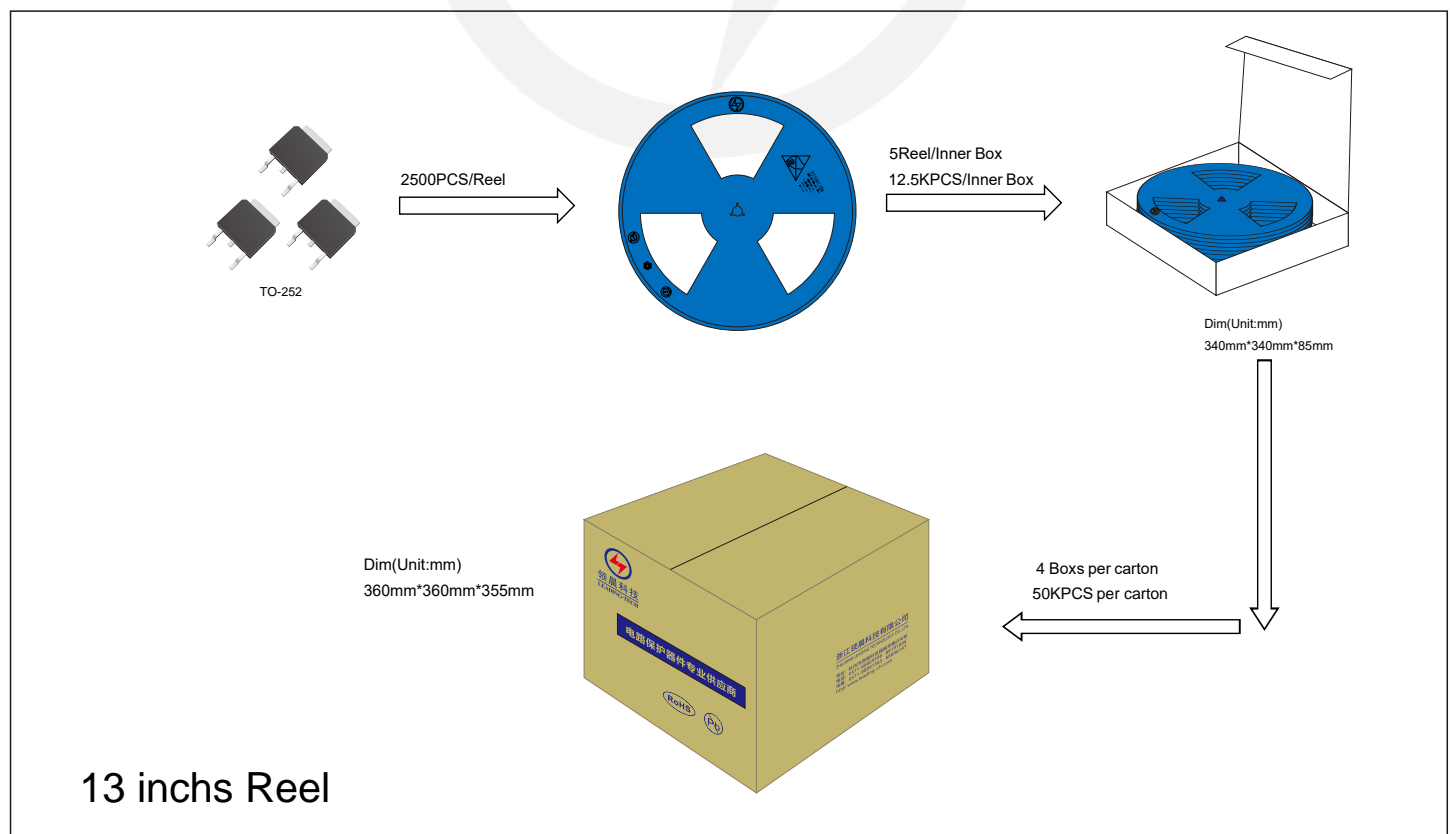


## Reel Dimensions

Unit : mm



## Packaging





Recommended Soldering Conditions



Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T <sub>L</sub> to T <sub>P</sub> )	3°C/second max.
Preheat	
-Temperature Min (T <sub>S min</sub> )	150°C
-Temperature Max (T <sub>S max</sub> )	200°C
-Time (min to max) (t <sub>s</sub> )	60-180 seconds
T <sub>S max</sub> to T <sub>L</sub>	
-Ramp-up Rate	3°C/second max.
Time maintained above:	
-Temperature (T <sub>L</sub> )	217°C
-Time (t <sub>L</sub> )	60-150 seconds
Peak Temperature (T <sub>P</sub> )	260°C
Time within 5°C of actual Peak Temperature (t <sub>p</sub> )	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	2024.9.5	2024.9.5	3.0	New File	/	Ding	
02	2025.06.12	2025.06.12	3.1	Update packaging information	/	Ding	