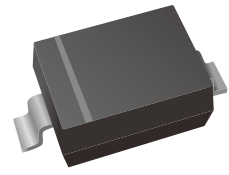


Surface Mount Schottky Barrier Rectifier

Features

- Low Forward Voltage Drop
- Guard Ring Construction for Transient Protection
- High Conductance
- Also Available in Lead Free Version
- Lead free in comply with EU RoHS 2011/65/EU directives



Mechanical Date

- Case:SOD-323
- Terminals: Solderable per MIL-STD-750, Method 2026
- Polarity:Color band denotes cathode end

Ordering Information

Part Number	Shipping	Reel
LT0520S THRU LT0540S-TR3	3000PCS Tape&Reel	7 inchs
LT0520S THRU LT0540S-TR12	12000PCS Tape&Reel	13 inchs

Maximum Ratings and Electrical characteristics

Ratings at 25 °C ambient temperature unless otherwise specified.

Parameter	Symbol	LT0520S	LT0530S	LT0540S	Unit	
Peak Repetitive Reverse Voltage	V_{RRM}	20	30	40	V	
RMS reverse voltage reverse voltage (DC)	V_{RMS}	14	21	28	V	
Maximum DC Blocking Voltage	V_{DC}	20	30	40	V	
Maximum Average Forward Current at Ta=25°C	I_o	0.5			A	
Peak Forward Surge Current, 8.3ms single half sine-wave superimposed on rated load (JEDEC method)	I_{FSM}	5.5			A	
Maximum Instantaneous Forward Voltage	V_F	IF=0.1A	0.33	0.36	—	V
		IF=0.5A	0.39	0.45	0.51	
		IF=1A	—	—	0.62	
Reverse current	I_R	VR=10V	75	—	—	μA
		VR=15V	—	75	—	
		VR=20V	250	100	10	
		VR=30V	—	500	—	
		VR=40V	—	—	20	
Thermal Resistance, Junction to Ambient Air	$R_{\theta JA}$	500			°C/W	
Junction temperature	T_j	-55 ~ +125			°C	
Storage temperature	T_{stg}	-55 ~ +150			°C	



Characteristics Curves

Fig.1 Forward Current Derating Curve

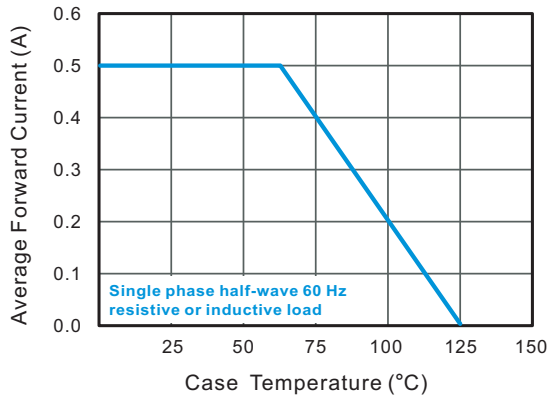


Fig.2 Typical Reverse Characteristics

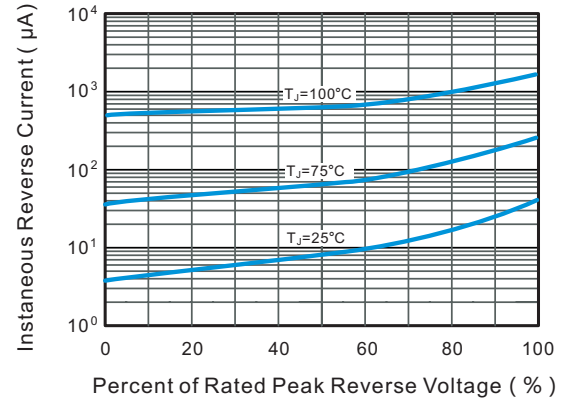


Fig.3 Typical Forward Voltage

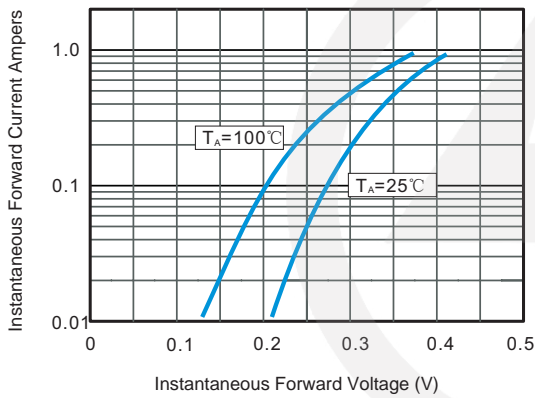


Fig.4 Typical Junction Capacitance

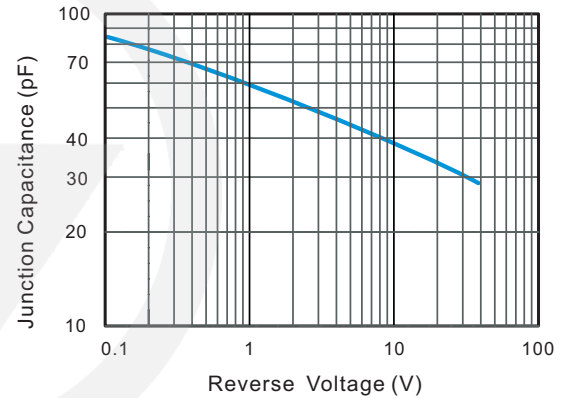
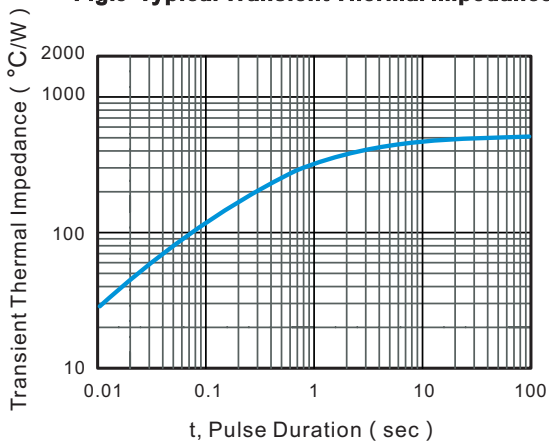


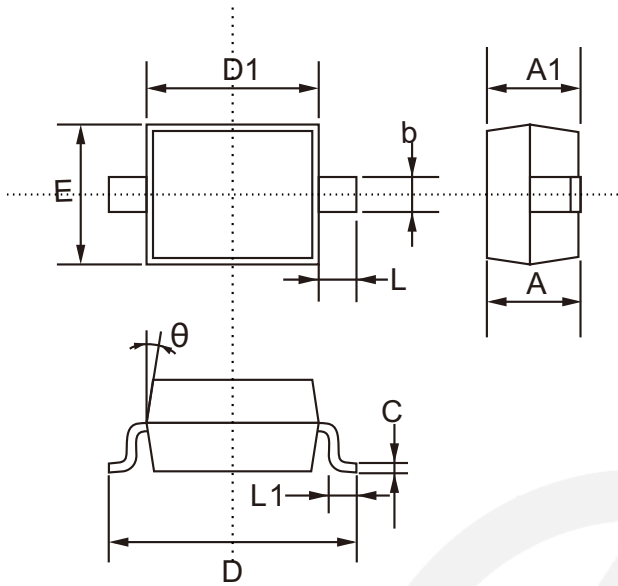
Fig.5 Typical Transient Thermal Impedance





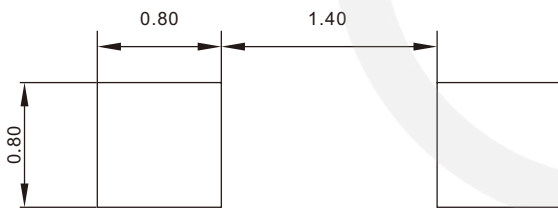
SOD-323 Package Outline

Unit: mm



SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.800	1.100
A1	0.800	0.900
b	0.250	0.400
C	0.080	0.177
D	2.300	2.800
D1	1.400	1.800
E	1.150	1.400
L1	0.100	0.400
L	0.475 TYP.	
θ	8°	

SOD-323 Suggested Pad Layout



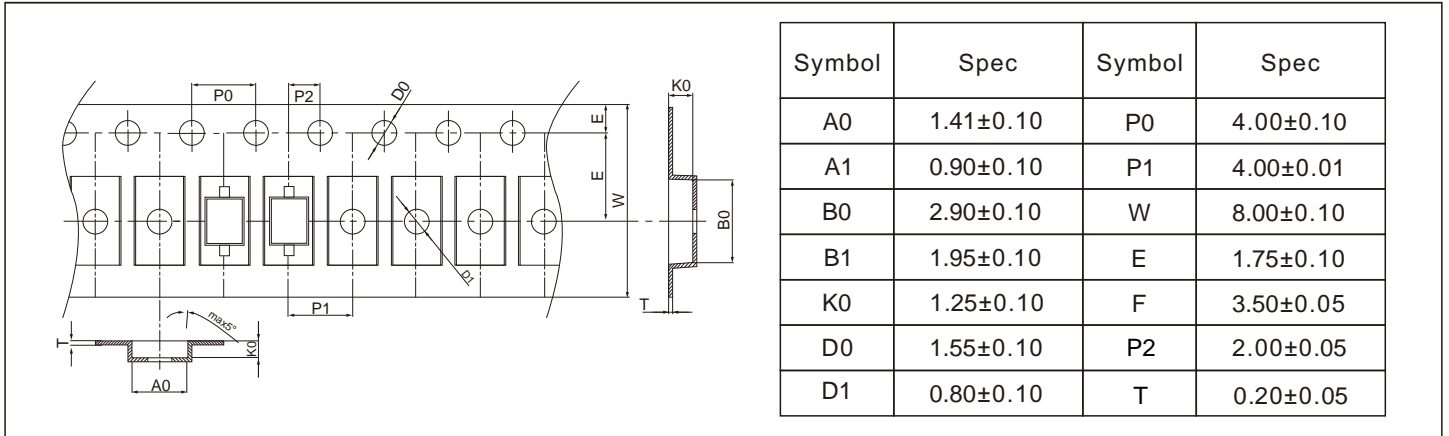
Note:
 1. Controlling dimension: in millimeters.
 2. General tolerance: $\pm 0.05\text{mm}$
 3. The pad layout is for reference purpose only.

Marking

Type number	Marking code
LT0520S	SD
LT0530S	SE
LT0540S	SF

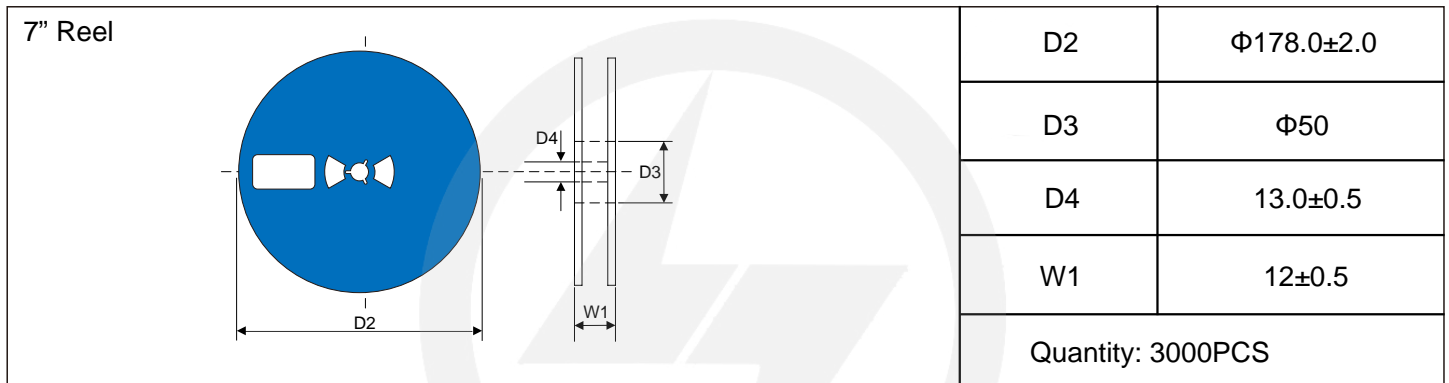
Carrier Tape Dimensions

Unit : mm



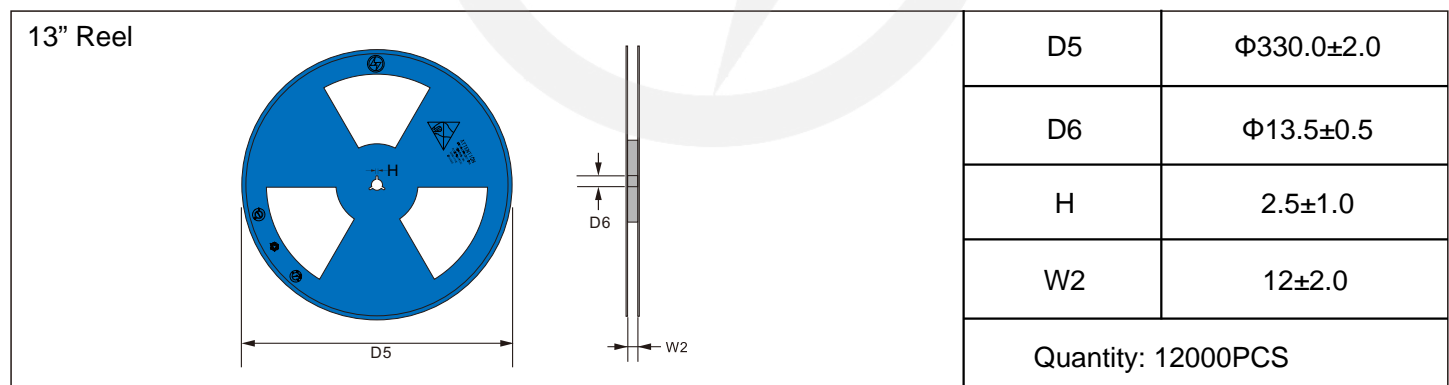
Reel Dimensions

Unit : mm

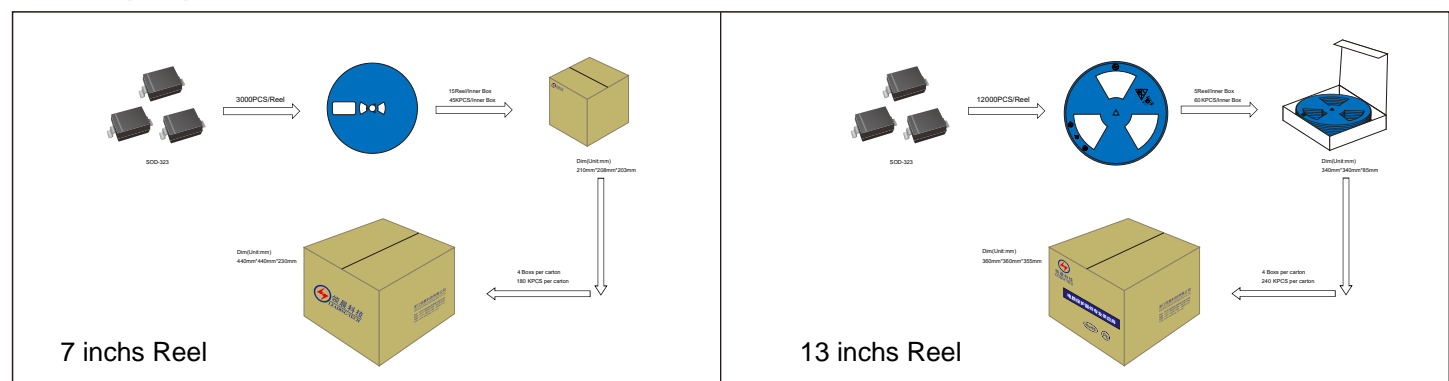


Reel Dimensions

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.

Important Notice and Disclaimer

Leading-Tech reserves the right to make changes to this document and its products and specifications at any time without notice.

Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.

Leading-Tech makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, not does Leading-Tech assume any liability for application assistance or customer product design.

Leading-tech does not warrant or accept any liability with products which are purchase or used for any unintended or unauthorized application.

No license is granted by implication or otherwise under any intellectual property rights of Leading-Tech.

Leading-Tech products are not authorized for use as critical components in life support devices or systems without express written approval of Leading-tech.

Version Update Information

Series NO.	Enactment/Revision Date	Effective Date	Version	Revision content	Revision Reason	Revision Person	Note
01	2024.5.12	2024.5.12	3.0	New File	/	Ding	