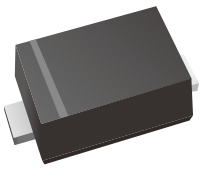
LT103AX

Schottky Barrier Diode

Features



- High Current Capability
- Low Forward Voltage Drop
- Lead free in comply with EU RoHS 2011/65/EU directives

Mechanical Data

- Case:SOD-523
- Polarity:Color band denotes cathode end
- Approx. Weight: 1.4mg
- Mounting Position: Any

Ordering Information

Part Number	Marking	Shipping	Reel
LT103AX -TR3	S4	3000PCS Tape&Reel	7 inchs
LT103AX -TR10	S4	10000PCS Tape&Reel	7 inchs

Maximum Ratings & Thermal Characteristics

(Ratings at 25℃ ambient temperature unless otherwise specified.)

Parameters	Symbol	Value	Unit
Maximum repetitive peak reverse voltage	V_{RRM}	40	V
Maximum RMS voltage	V_{RMS}	28	V
Maximum DC blocking voltage	V_{DC}	40	V
Maximum average forward rectified current	I_{FM}	350	mA
Peak forward surge current 8.3 ms single half sine-wave	I_{FSM}	2	A
Power Dissipation	PD	150	mW
Typical thermal resistance	$R_{\theta JA}$	667	℃/W
Operating junction temperature	T_j	125	℃
Storage temperature range	T_{STG}	-50 to +150	℃

Electrical Characteristics (Ratings at 25℃ ambient temperature unless otherwise specified)

Parameters	Symbol	Test conditions	Min	TYP	Max	Unit
Maximum forward voltage	V_F	IF = 1mA IF = 5mA IF = 20mA IF = 200mA		0.27 0.32	 0.37 0.60	V
Maximum reverse breakdown voltage	VR	IR=100uA	40			V
Maximum reverse current	I_R	VR=30V VR=20V VR=10V			5 2 1	uA
Total capacitance	C_{tot}	VR =0V, f = 1MHz		50		pF
Reverse recovery time	Trr	IF=IR=200mA, Irr=0.1xIR,RL=100Ω		10		ns

Characteristics Curves

Fig.1 Forward Characteristics

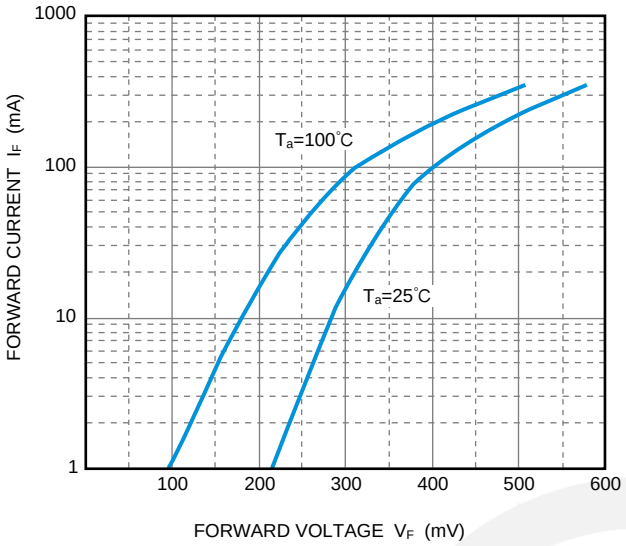


Fig.2 Reverse Characteristics

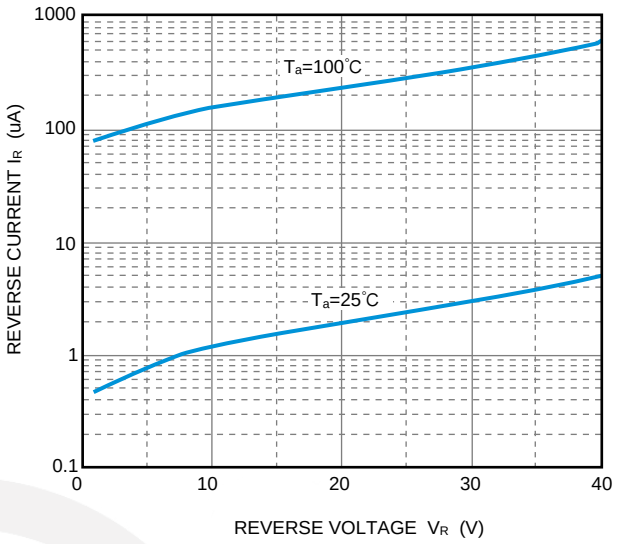


Fig.3 Capacitance Characteristics

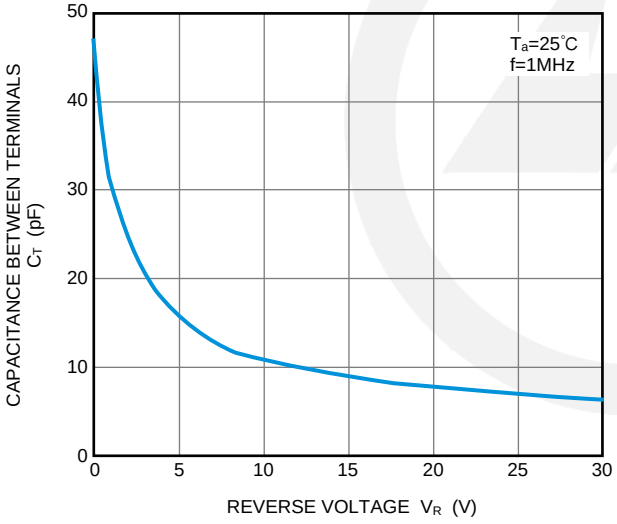
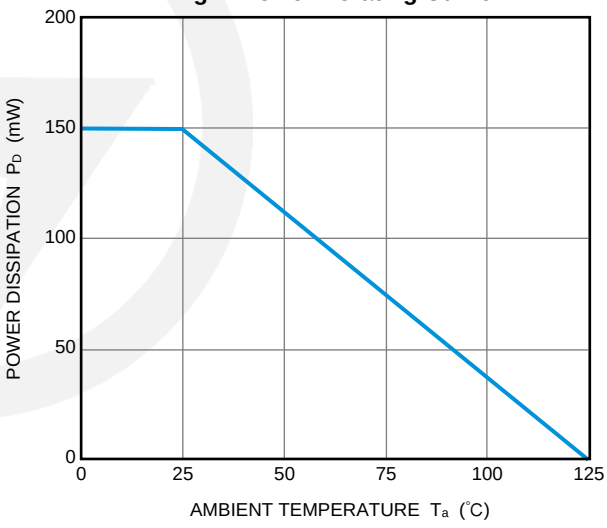
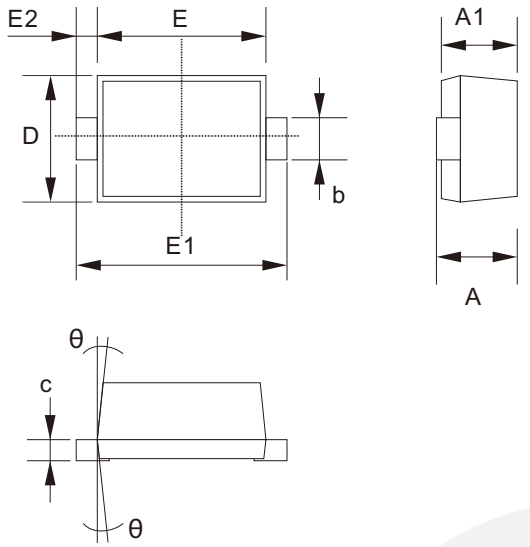


Fig.4 Power Derating Curve



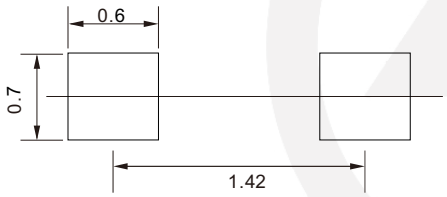
SOD-523 Package Outline



Unit: mm

SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.500	0.770
A1	0.500	0.700
b	0.250	0.380
c	0.070	0.200
D	0.700	0.900
E	1.100	1.300
E1	1.500	1.700
E2	0.200 REF	
θ	7° REF	

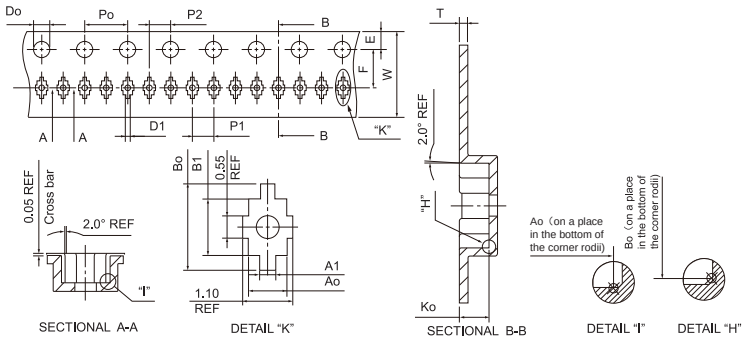
SOD-523 Suggested Pad Layout



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

Carrier Tape Dimensions

Unit：mm

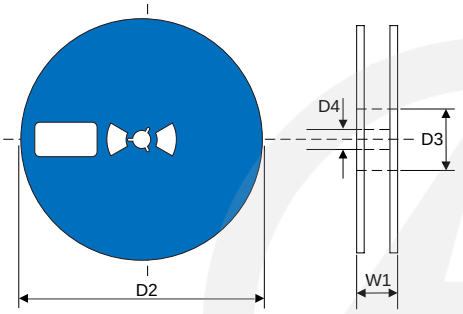


Symbol	Spec	Symbol	Spec
A0	0.90±0.05	P0	4.00±0.10
A1	0.39±0.05	P1	2.00±0.05
B0	1.95±0.10	P2	2.00±0.05
B1	1.30±0.05	D0	1.50 $^{+0.10}_{0}$
K0	0.69±0.05	D1	0.50±0.05
10P0	40.0±0.10	F	3.50±0.05
T	0.18±0.02	W	8.00 $^{+0.30}_{-0.10}$
E	1.75±0.10		

Reel Dimensions

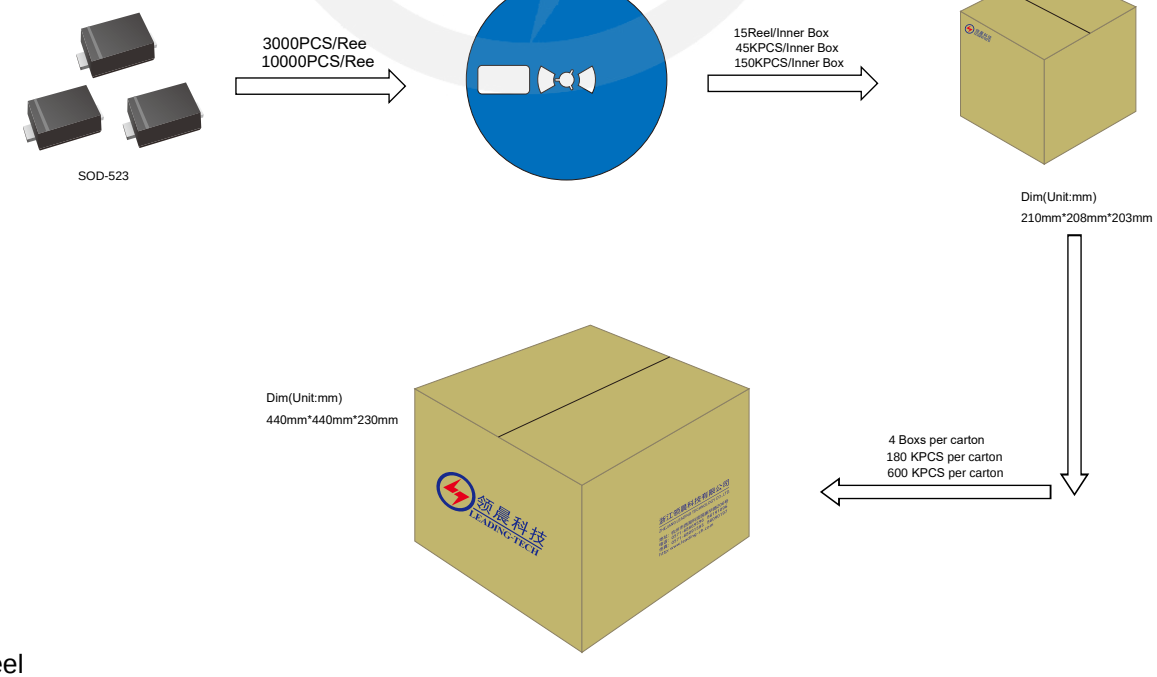
Unit：mm

7” Reel



D2	Φ178.0±2.0
D3	Φ50.0
D4	13.0±0.5
W1	12±0.5
Quantity: 3000/10000PCS	

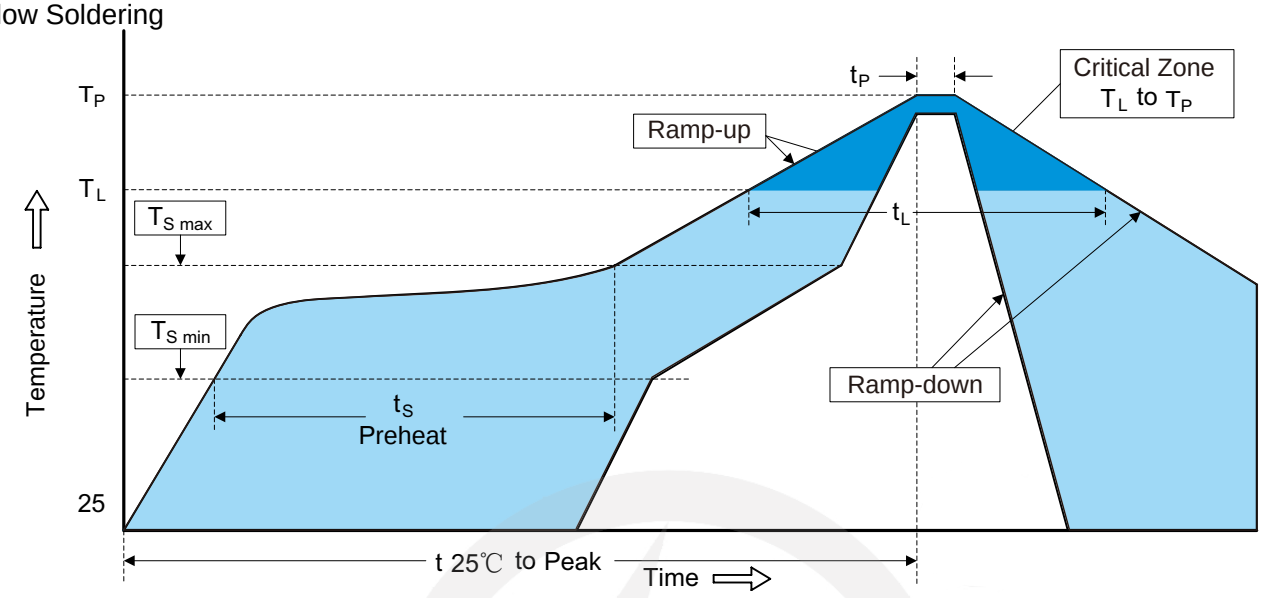
Packaging



7 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	2025.06.05	2025.06.05	3.0	New file	/	Ding	