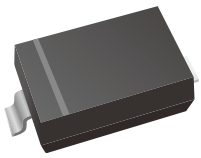
LTS40W

Schottky Barrier Diode

Features



- Low Forward Voltage
- Fast Switching
- Lead free in comply with EU RoHS 2011/65/EU directives

Mechanical Data

- Case: SOD-123
- Polarity: Color band denotes cathode end
- Approx. Weight: 10.5mg

Ordering Information

Part Number	Marking	Shipping	Reel
LTS40W-TR3	43	3000PCS Tape&Reel	7 inchs
LTS40W-TR12	43	12000PCS Tape&Reel	13 inchs

Maximum Ratings (Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
DC Blocking Voltage Working Peak Reverse Voltage Peak Repetitive Peak Reverse Voltage	V_R V_{RWM} V_{RRM}	40	V
Forward continuous current	I_{FM}	200	mA
Non-Repetitive Peak Forward Surge Current @t=8.3ms	I_{FSM}	600	mA
Power Dissipation	P_D	200	mW
Thermal Resistance Junction to Air (1)	R_{thJA}	500	℃/W
Thermal Resistance Junction to Case (1)	R_{thJC}	200	℃/W
Junction Temperature	T_j	125	℃
Storage Temperature Range	T_{stg}	-55 ~ +150	℃

Note 1: The data tested by surface mounted on a 1 inch FR-4 board with 1OZ copper

Electrical Characteristics (Ta=25°C unless otherwise Specified)

Parameter	Symbol	Test conditions	Min	Max	Unit
Reverse breakdown voltage	V_{BR}	I_R=10μA	40		V
Reverse voltage leakage current	I_R	V_R=30V		0.2	uA
Forward voltage	V_F	I_F=1mA I_F=40mA		0.38 1.0	V
Diode capacitance	C_D	V_R=0,f=1MHz		5	pF
Reverse recovery time	trr	I_{rr}=1mA, I_F= I_R=10mA R_L=100Ω		5	ns

Characteristics Curves

Fig.1 Power Derating Curve

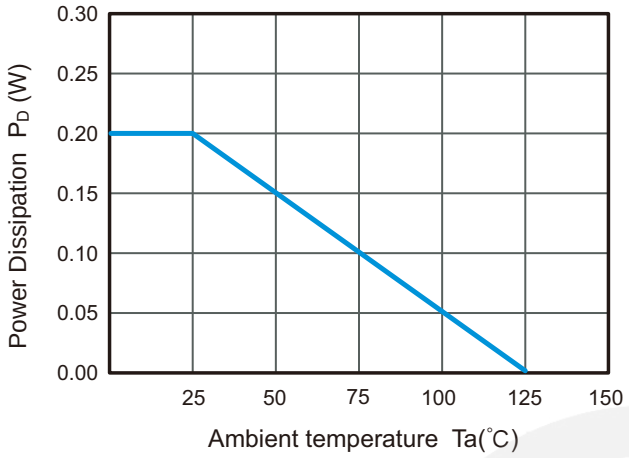


Fig.2 Typical Reverse Characteristics

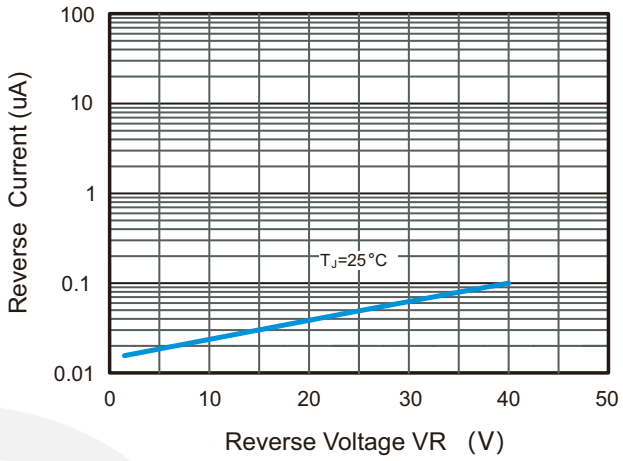


Fig.3 Forward Characteristics

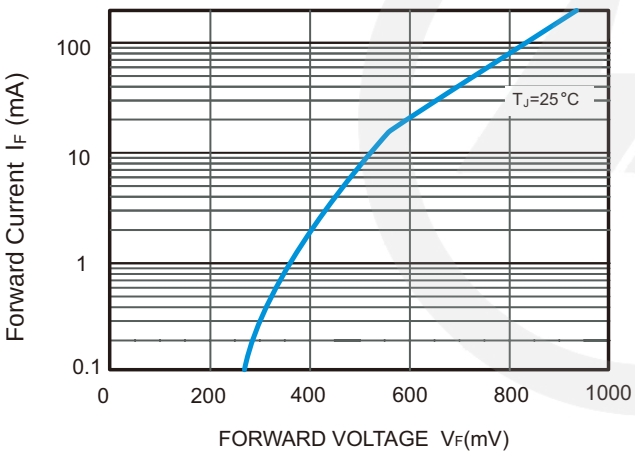
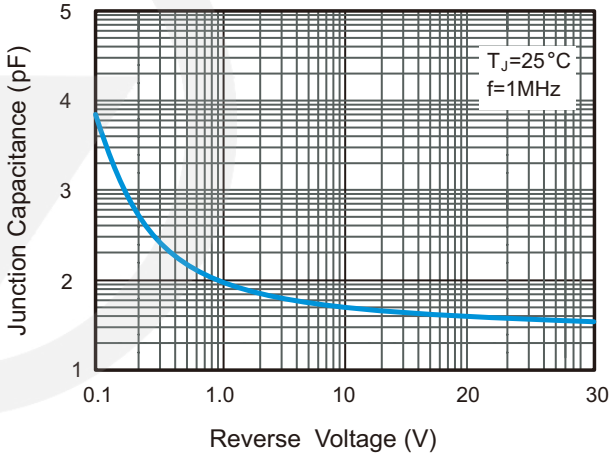
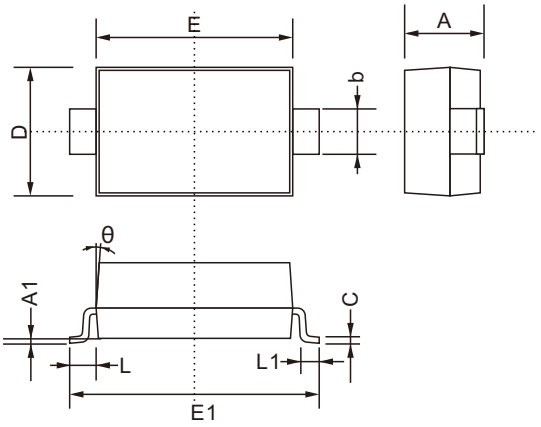


Fig.4 Typical Junction Capacitance



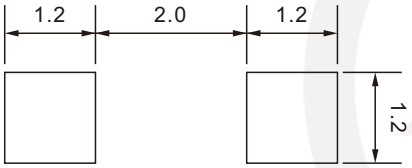
SOD-123 Package Outline



Unit : mm

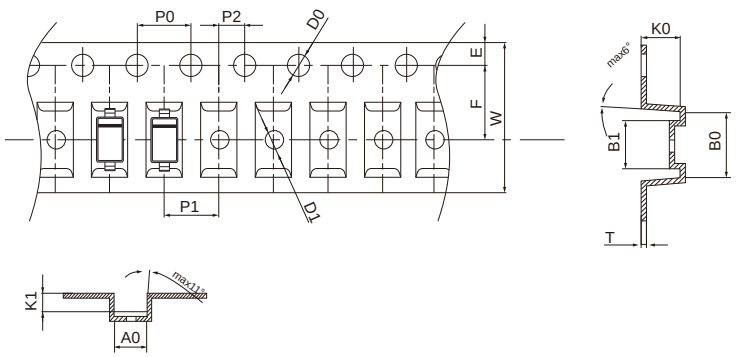
SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.900	1.300
A1	0.000	0.200
b	0.450	0.750
C	0.080	0.230
D	1.500	1.800
E	2.500	2.800
E1	3.550	3.900
L1	0.250	0.450
L	0.5REF	
θ	8°	

SOD-123 Suggested Pad Layout



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

Carrier Tape Dimensions

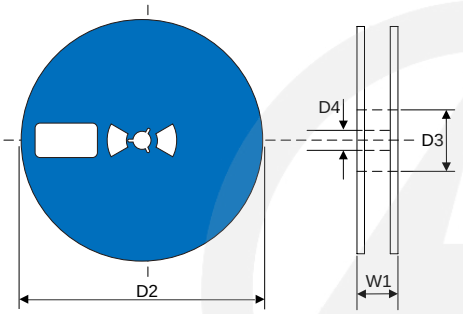


Symbol	Spec	Symbol	Spec
A0	1.75±0.10	P2	2.00±0.05
B0	3.94±0.10	D0	1.55±0.05
B1	2.59±0.10	D1	1.00±0.10
K0	1.47±0.10	T	0.20±0.05
K1	1.30±0.05	E	1.75±0.10
P0	4.00±0.10	F	3.50±0.05
P1	4.00±0.10	W	8.00 $^{+0.30}_{-0.10}$

Reel Dimensions

Unit：mm

7” Reel

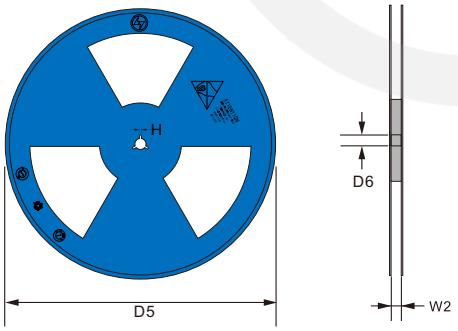


D2	Φ178.0±2.0
D3	Φ50
D4	13.0±0.5
W1	12±0.5
Quantity: 3000PCS	

Reel Dimensions

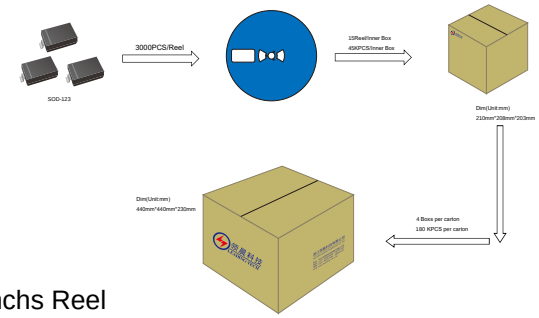
Unit：mm

13” Reel

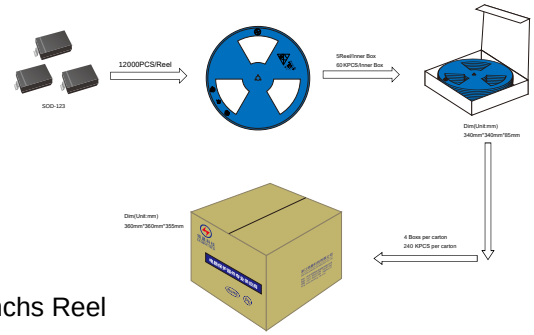


D5	Φ330.0±2.0
D6	Φ13.5±0.5
H	2.5±1.0
W2	12±2.0
Quantity: 12000PCS	

Packaging



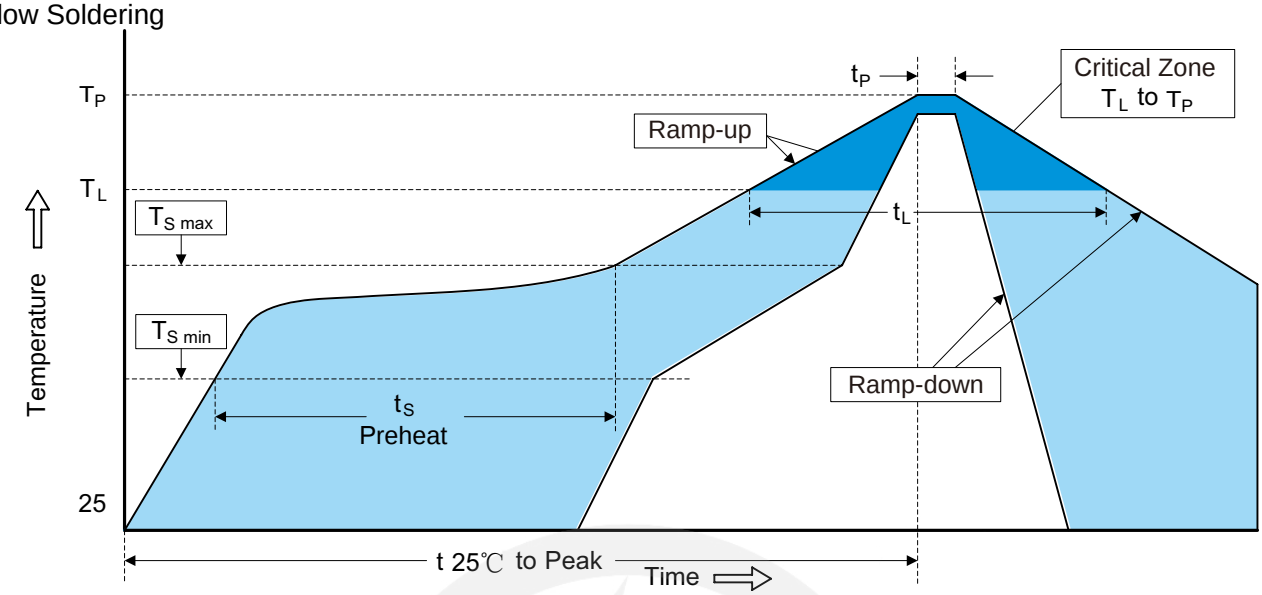
7 inchs Reel



13 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	2025.06.14	2025.06.14	3.0	New file	/	Ding	