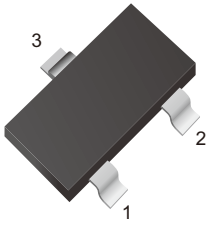
LTS40-04-05-06

Schottky Barrier Diode

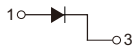
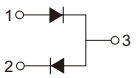
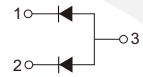
Features

- Low Forward Voltage
- Fast Switching
- Lead free in comply with EU RoHS 2011/65/EU directives
- Moisture Sensitivity Level 1
- ESD：2000V(HBM)



Mechanical Data

- Case: SOT-23
- Approx. Weight: 8.1mg

LTS40	LTS40-04	LTS40-05	LTS40-06
			
MARKING:43	MARKING:44	MARKING:45	MARKING:46

Ordering Information

Part Number	Shipping	Reel
LTS40-04-05-06	3000PCS Tape&Reel	7 inchs

Maximum Ratings (Ta=25℃ 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 to +150	℃
Operating Temperature Range	T_{op}	-55 to +125	℃

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

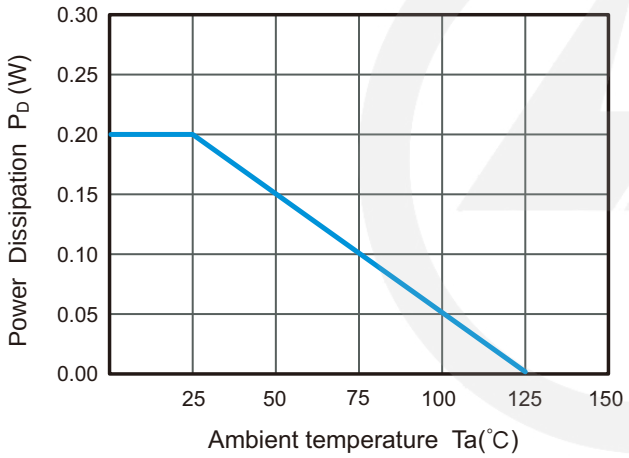


Fig.2 Typical Reverse Characteristics

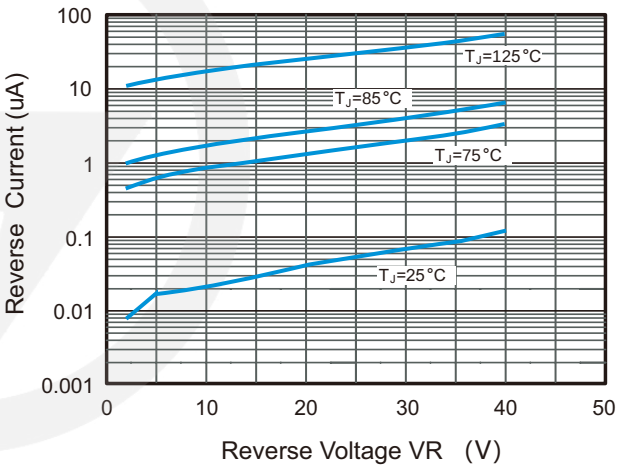


Fig.3 Forward Characteristics

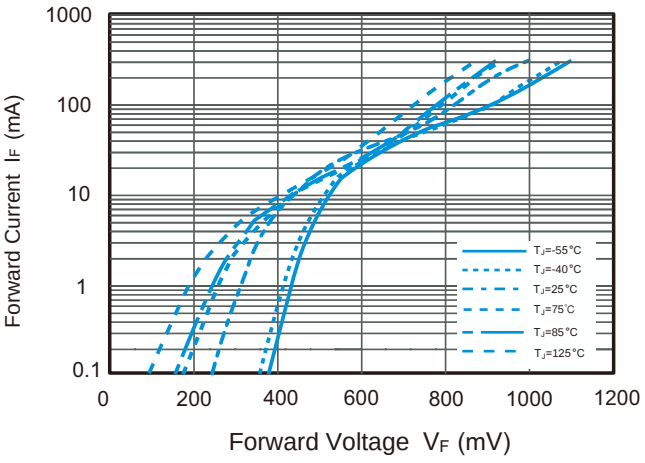
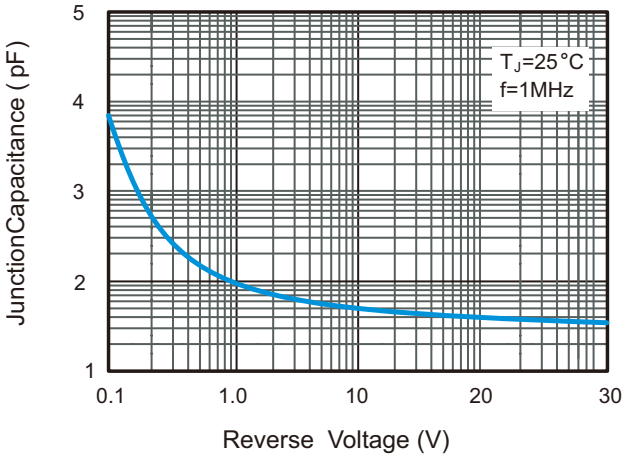
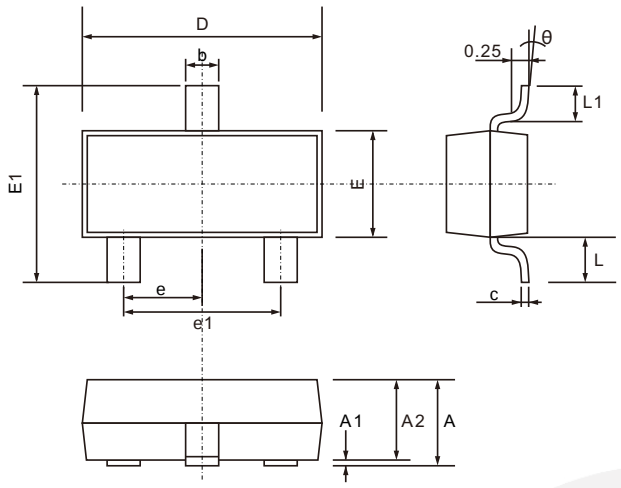


Fig.4 Typical Junction Capacitance



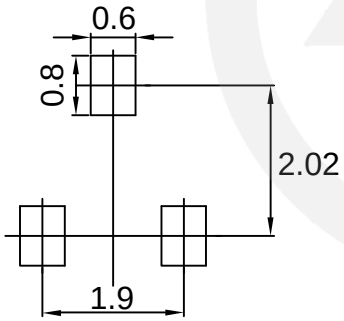
SOT-23 Package Outline



Unit : mm

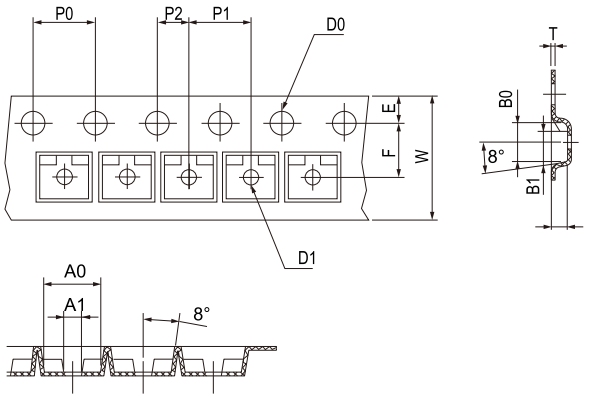
SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.900	1.200
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.200
D	2.700	3.100
E	1.200	1.400
E1	2.200	2.600
e	0.950 TYP.	
e1	1.750	2.050
L	0.550 TYP.	
L1	0.300	0.500
θ	0°	8°

SOT-23 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

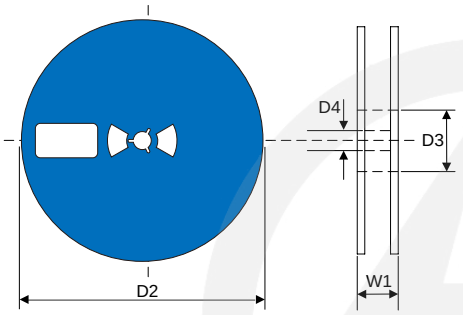


Symbol	Spec	Symbol	Spec
A0	3.15±0.10	P0	4.00±0.05
A1	1.09±0.10	P1	4.00±0.02
B0	2.77±0.10	W	8.00±0.10
B1	2.15±0.10	E	1.75±0.10
K0	1.22±0.10	F	3.50±0.05
D0	1.50±0.10	T	2.00±0.10
D1	1.00±0.10		

Reel Dimensions

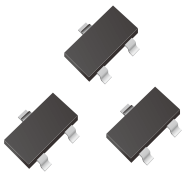
Unit：mm

7” Reel



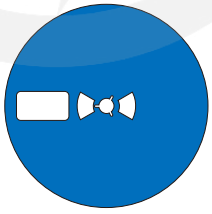
D2	Φ178.0±2.0
D3	Φ50
D4	13.0±0.5
W1	12±0.5
Quantity: 3000PCS	

Packaging

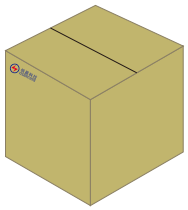


SOT-23

3000PCS/Reel



15Reel/Inner Box
45KPCS/Inner Box



Dim(Unit:mm)
210mm*208mm*203mm

4 Boxs per carton
180 KPCS per carton

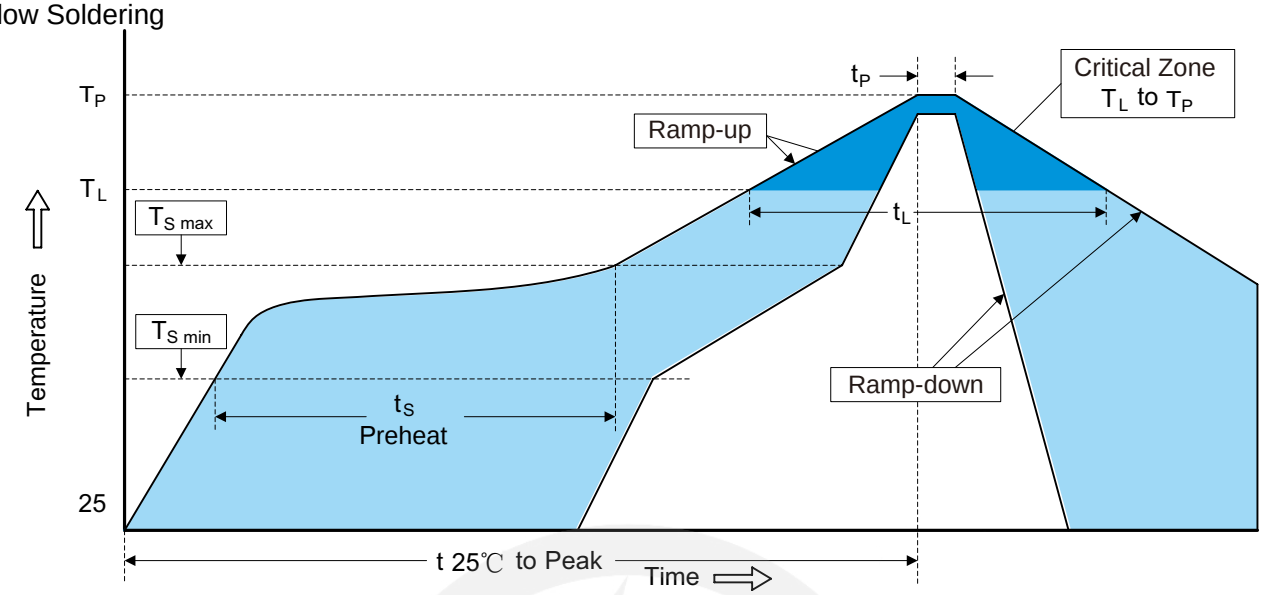


Dim(Unit:mm)
440mm*440mm*230mm

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	2024.03.18	2024.03.18	3.0	New file	/	Ding	
02	2025.03.13	2025.03.13	3.1	Delete V_R=40V I_F=200mA	/	Ding	
03	2026.01.20	2026.01.20	3.2	1. Add Maximum Ratings parameter 2. Add feature description	/	Ding	
04	2026.02.03	2026.02.03	3.3	Modify VF and I_R curves	/	Ding	
05	2026.03.04	2026.03.04	3.4	1.Update Characteristics Curves 2.Package outline E1(max)=2.6mm	/	Ding	