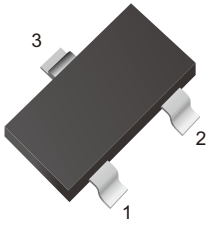
LT23T40-04/05/06

Schottky Barrier Diode

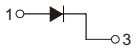
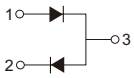
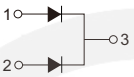
Features

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



Mechanical Data

- Case: SOT-23
- Approx. Weight: 8.1mg
- Mounting Position: Any
- Epoxy UL: 94V-0

LT23T40	LT23T40-04	LT23T40-05	LT23T40-06
			
MARKING:43	MARKING:44	MARKING:45	MARKING:46

Ordering Information

Part Number	Shipping	Reel
LT23T40-04/05/06-TR3	3000PCS Tape&Reel	7 inchs
LT23T40-04/05/06-TR12	12000PCS Tape&Reel	13 inchs

Maximum Ratings (Ta=25℃ unless otherwise noted)

Parameter	Symbol	Limit	Unit
Peak Repetitive Peak Reverse Voltage Working Peak Reverse Voltage DC Blocking Voltage	V_{RRM} V_{RWM} V_R	40	V
Forward Continuous Current	I_{FM}	200	mA
Average Rectified Output Current	I_O	200	mA
Non-Repetitive Peak Forward Surge Current @ t = 8.3ms	I_{FSM}	0.6	A
Power Dissipation	P_D	200	mW
Thermal Resistance Junction to Ambient	$R_{\theta JA}$	500	℃/W
Operating Junction Temperature	T_J	-40 to +125	℃
Storage Temperature	T_{STG}	-55 to +150	℃

Electrical Characteristics (Ta=25℃ 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		200	nA
Forward voltage	V_F	I_F=1mA I_F=40mA		380 1000	mV
Diode capacitance	C_D	V_R=0,f=1MHz		5	pF
Reverse recovery time	t_{rr}	I_{rr}=1mA, I_R=I_F=10mA R_L=100Ω		5	ns

Characteristics Curves

Fig.1 Forward Characteristics

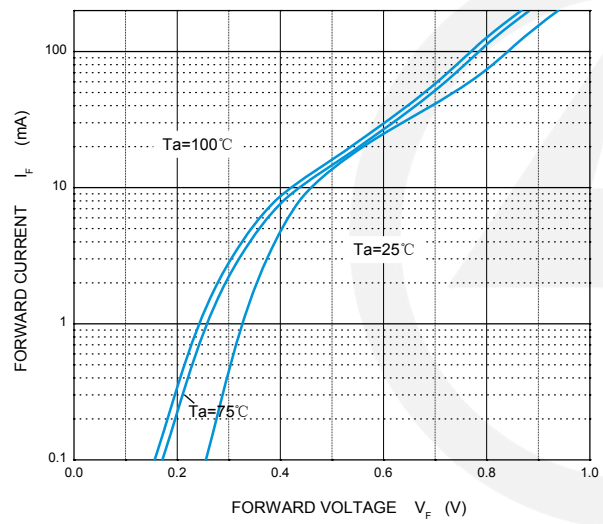


Fig.2 Reverse Characteristics

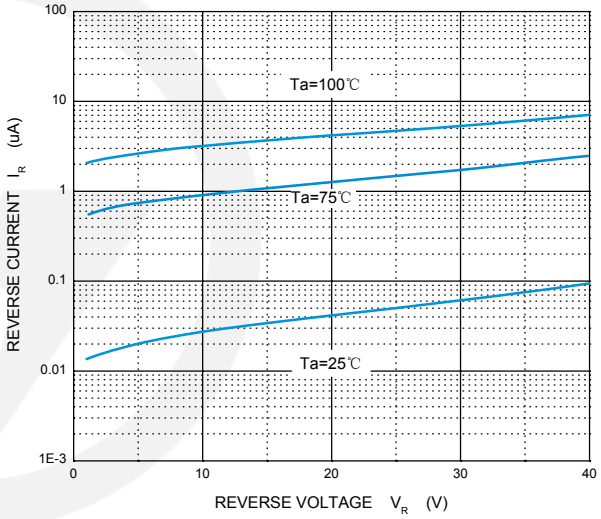


Fig.3 Capacitance Characteristics

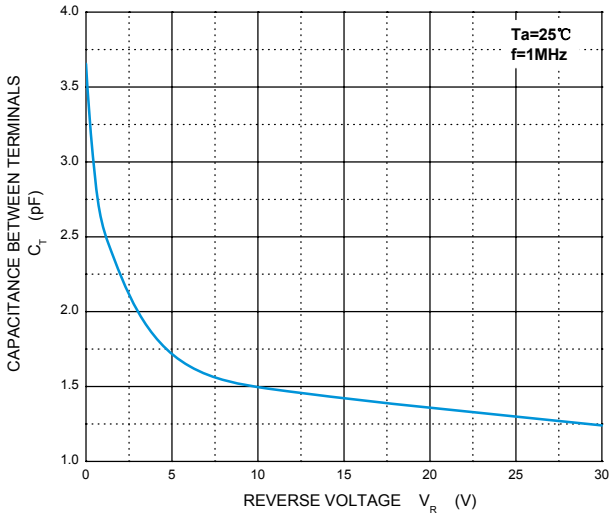
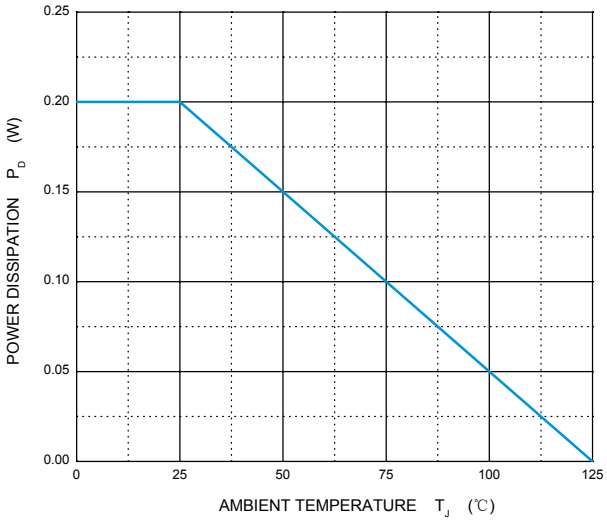
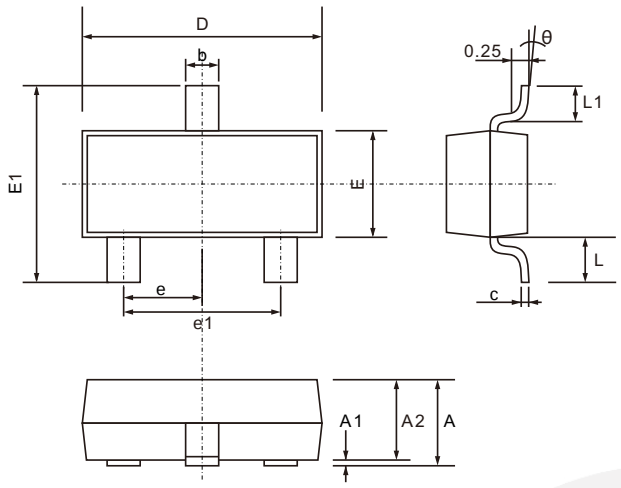


Fig.4 Power Derating Curve



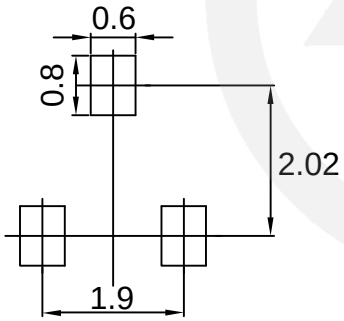
SOT-23 Package Outline



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°

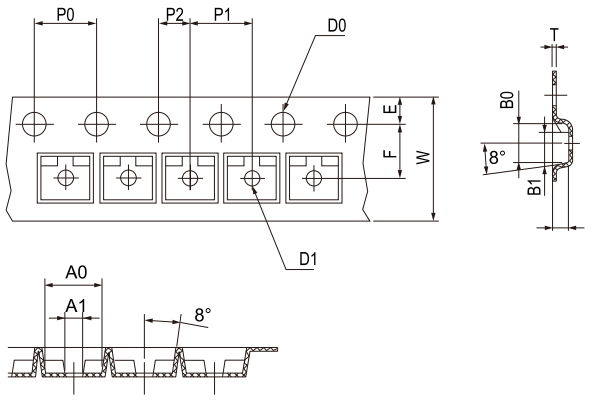
SOT-23 Suggested Pad Layout



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

Carrier Tape Dimensions

Unit：mm

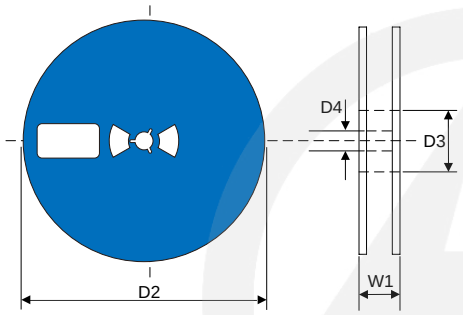


Symbol	Spec	Symbol	Spec
A0	3.15±0.10	P0	4.00±0.05
A1	1.09±0.10	P1	4.00±0.02
B0	2.77±0.10	W	8.00±0.10
B1	2.15±0.10	E	1.75±0.10
K0	1.22±0.10	F	3.50±0.05
D0	1.50±0.10	T	2.00±0.10
D1	1.00±0.10		

Reel Dimensions

Unit：mm

7” Reel

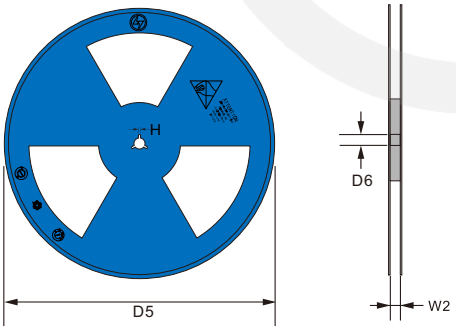


D2	Φ178.0±2.0
D3	Φ50
D4	13.0±0.5
W1	12±0.5
Quantity: 3000PCS	

Reel Dimensions

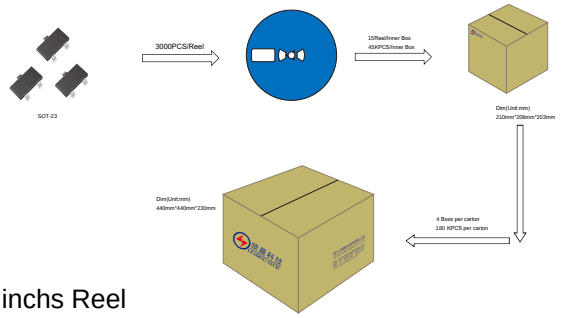
Unit：mm

13” Reel

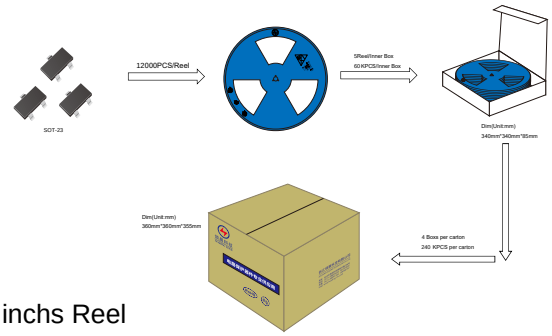


D5	Φ330.0±2.0
D6	Φ13.5±0.5
H	2.5±1.0
W2	12±2.0
Quantity: 12000PCS	

Packaging



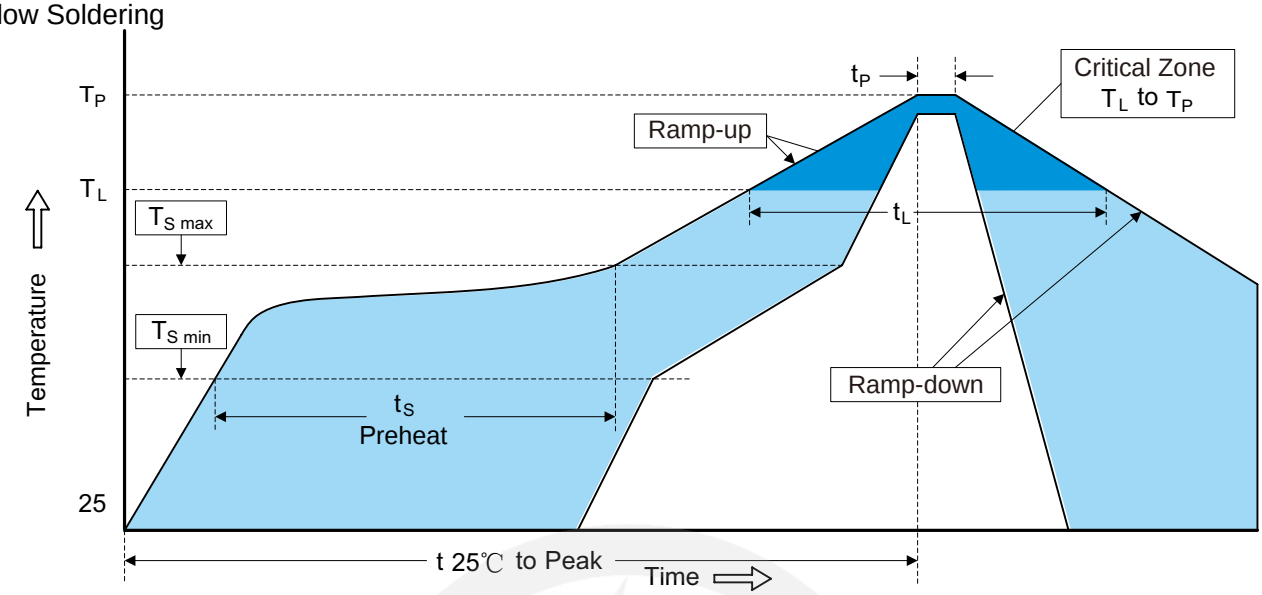
7 inchs Reel



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	2025.07.16	2025.07.16	3.0	New file	/	Ding	
02	2026.03.04	2026.03.04	3.1	Package outline E1(max)=2.6mm	/	Ding	