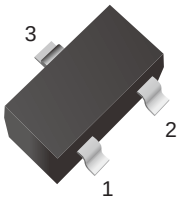
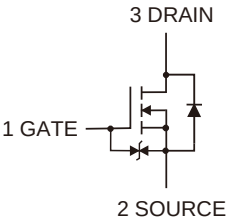
LTM3134KT

N-Channel Mosfet



Features

- High Density Cell Design for Low RDS(ON)
- Voltage Controlled Small Signal Switch
- Small Outline Surface Mount Package
- Lead free in comply with EU RoHS 2011/65/EU directives



Ordering Information

Part Number	Marking	Shipping	Reel
LTM3134KT-TR3	KF	3000PCS Tape&Reel	7 inchs
LTM3134KT-TR8	KF	8000PCS Tape&Reel	7 inchs

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

Symbol	Parameter	Value	Unit
V_{DS}	Drain-Source Voltage	20	V
V_{GS}	Gate-Source Voltage	±12	V
I_D*	Drain Current-Continuous	0.75	A
I_{DM}*	Pulsed Drain Current (V_{GS}=10V, tp=10us)	3	A
P_D	Power Dissipation	0.15	W
$R_{\Theta JA}$	Thermal Resistance From Junction To Ambient	833	℃/W
T_j	Junction Temperature	150	℃
T_{stg}	Storage Temperature	-55～+150	℃

* Surface Mounted on 1 in^2 pad area, t ≤ 10 sec

Electrical Characteristics (@ 25°C Unless Otherwise Specified)

Symbol	Parameter	Test Conditions	Min	Typ	Max	Units
$V_{(BR)DSS}$	Drain-Source Breakdown Voltage	V_{GS}=0V,I_D=250uA	20			V
$V_{GS(th)}$	Gate Threshold Voltage*1	V_{DS}=V_{GS},I_D=250uA	0.35	0.75	1.1	V
I_{GSS}	Gate Leakage Current	V_{DS}=0V,V_{GS}=±10V			±20	uA
I_{DSS}	Drain Leakage Current	V_{DS}=20V,V_{GS}=0V			1	uA
$R_{DS(ON)}$	On-State Resistance*1	V_{GS}=4.5V,I_D=650mA, V_{GS}=2.5V,I_D=550mA, V_{GS}=1.8V,I_D=450mA			0.38 0.45 0.8	Ω
V_{SD}	Diode Forward Voltage*1	V_{GS}=0V,I_S=150mA			1.2	V
gfs	Forward Transconductance	V_{DS}=10V,I_D=800mA	1.0			mS

Dynamic Characteristics*2

Ciss	Input Capacitance	V_{GS}=0V, V_{DS}=16V, f=1MHz			120	pF
Coss	Output Capacitance				20	
Crss	Reverse Transfer Capacitance				15	

Switching Characteristics*2

$t_{d(on)}$	Turn-on Delay Time	V_{DS}=10V ,R_G=10Ω V_{GS}=4.5V,I_D=500mA		6.7		nS
t_r	Turn-on Rise Time			17.3		
$t_{d(off)}$	Turn-off Delay Time			4.8		
t_f	Turn-off Fall Time			7.4		

*1. Pulse Test : Pulse Width≤300 s, Duty Cycle≤0.5%.
*2.These parameters have no way to verify.

Characteristics Curves

Fig.1 Output Characteristics

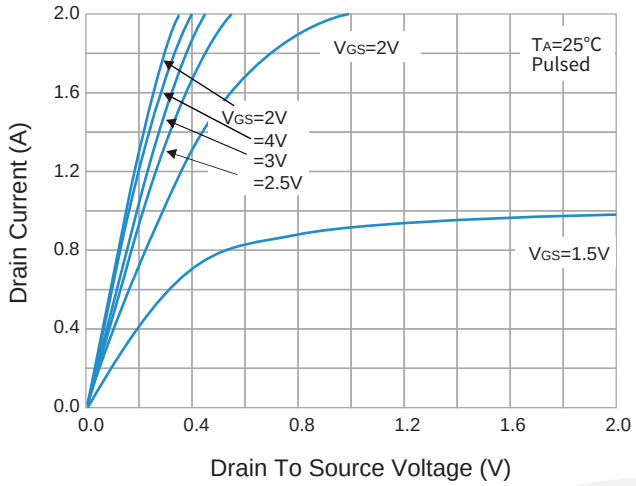


Fig.2 Transfer Characteristics

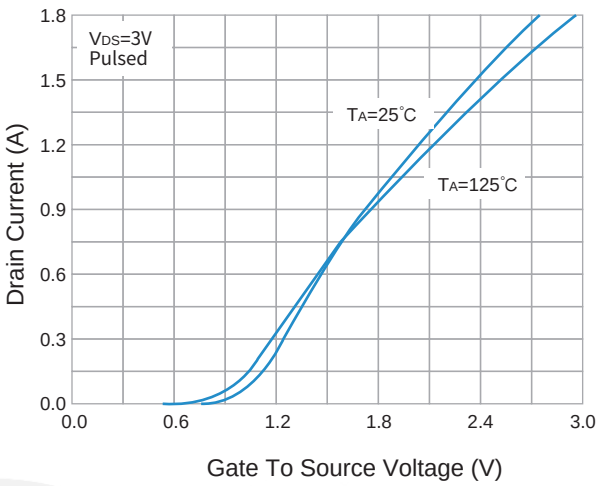


Fig.3 $R_{DS(ON)}$ vs I_D

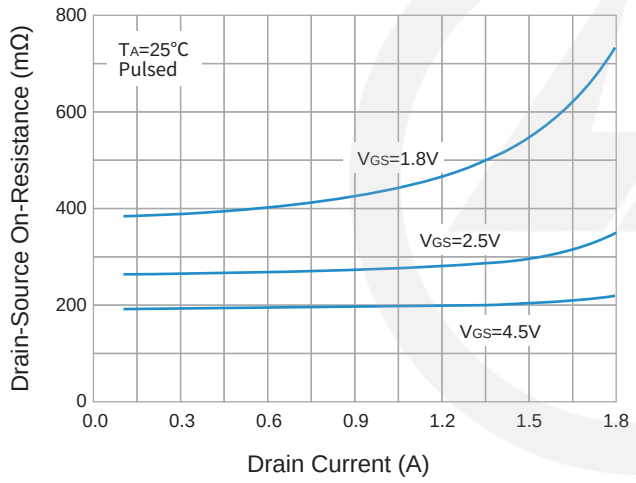


Fig.4 $R_{DS(ON)}$ vs V_{GS}

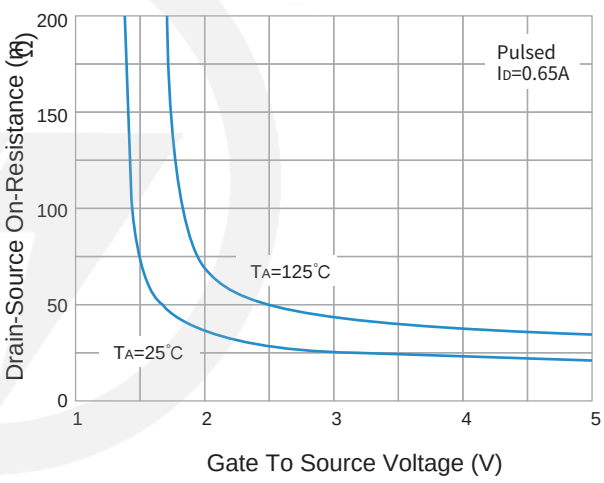


Fig.5 I_S vs V_{SD}

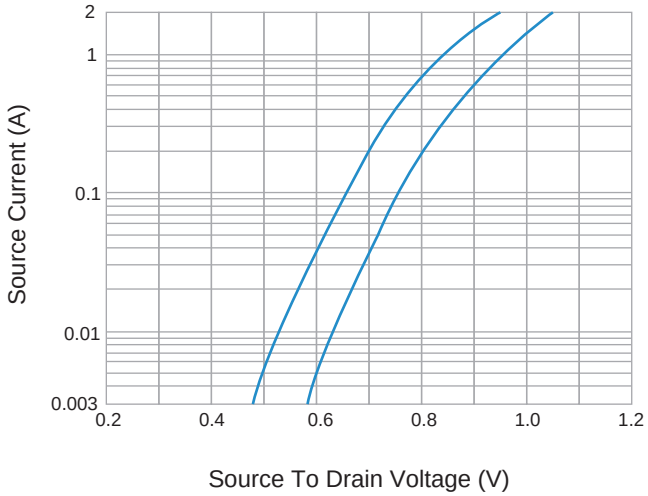
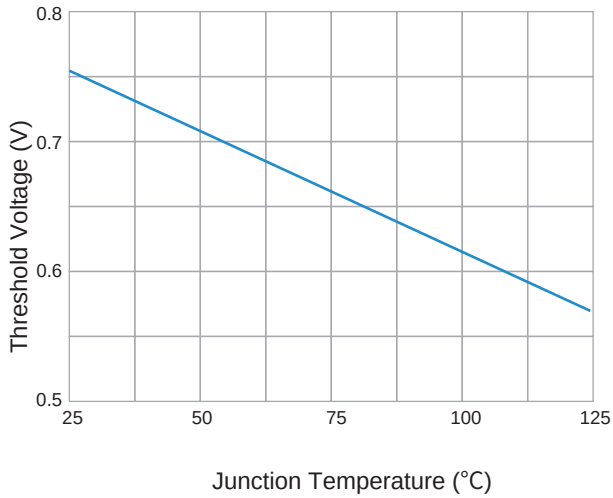
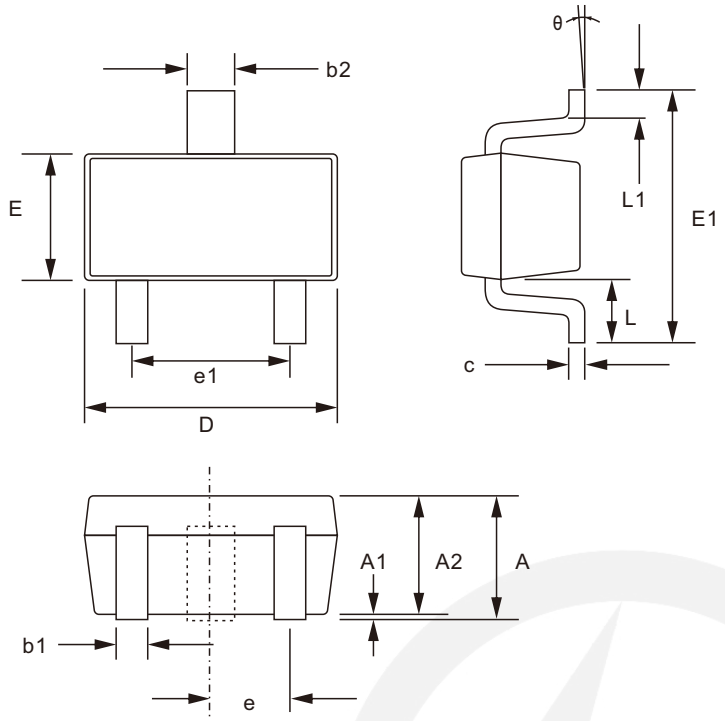


Fig.6 Threshold Voltage



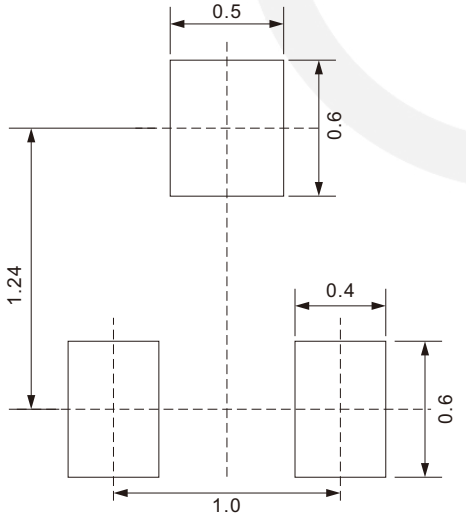
SOT-523 Package Outline



Unit: mm

SYMBOL	DIMENSIONS	
	MIN.	MAX.
A	0.70	0.90
A1	0.00	0.10
A2	0.70	0.80
b1	0.15	0.25
b2	0.25	0.35
c	0.10	0.20
D	1.50	1.70
E	0.70	0.90
E1	1.45	1.75
e	0.50 TYP.	
e1	0.90	1.10
L	0.40 TYP.	
L1	0.10	0.30
θ	0°	8°

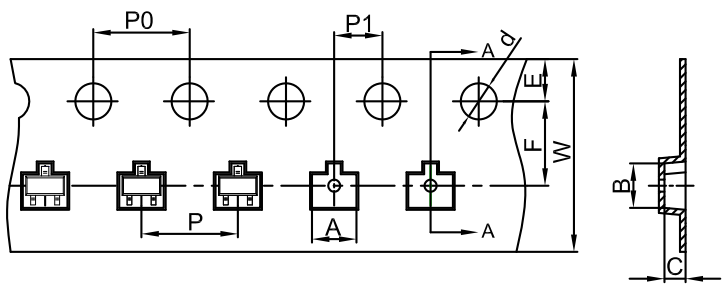
SOT-523 Suggested Pad Layout



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

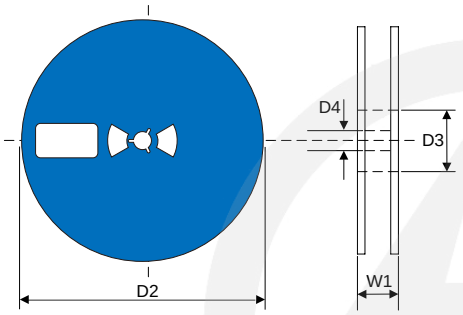


Symbol	Spec	Symbol	Spec
A	1.85	F	3.50
B	1.85	W	8.00
C	0.875	P	4.00
d	Φ1.50	P0	4.00
E	1.75	P1	2.00

Reel Dimensions

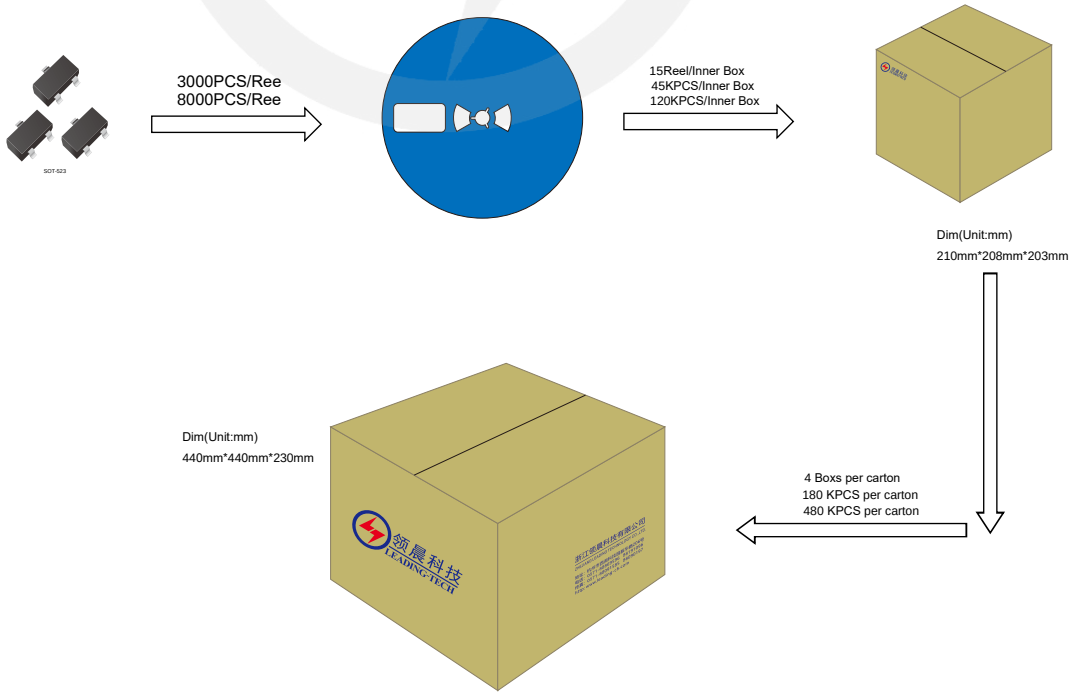
Unit：mm

7” Reel



D2	Φ178.0±2.0
D3	Φ50.0
D4	13.0±0.5
W1	12±0.5
Quantity: 3000/8000PCS	

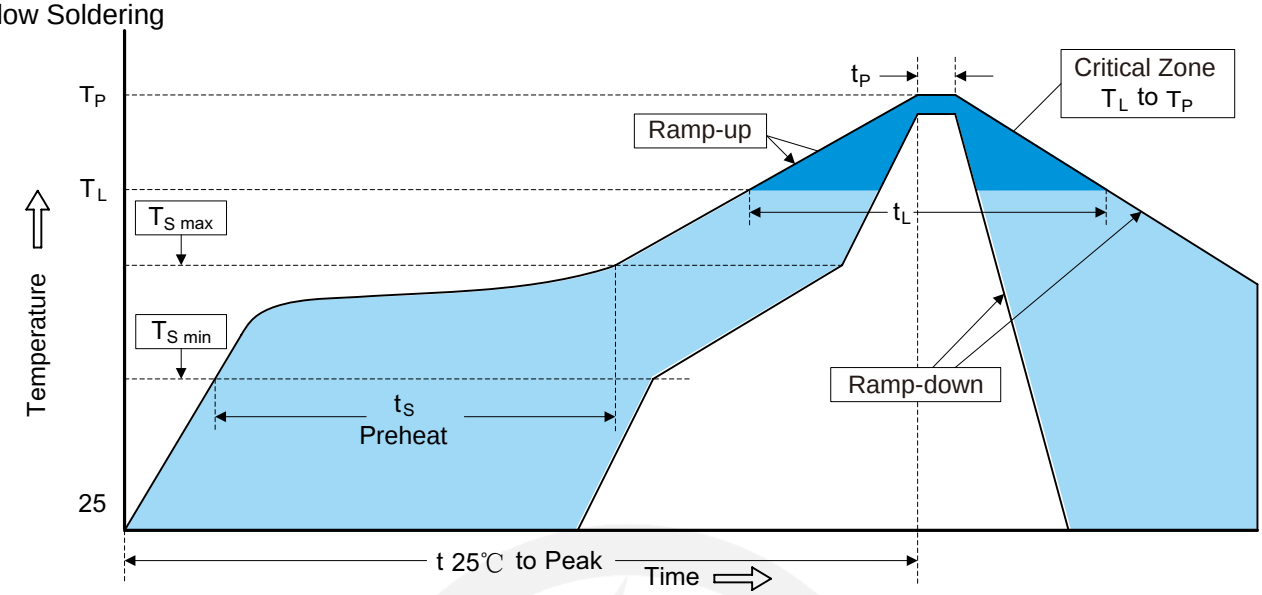
Packaging



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.

Important Notice and Disclaimer

Leading-Tech reverses 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	2024.3.1	2024.3.1	3.0	New File	/	Ding	