

Transistor(PNP)

Features

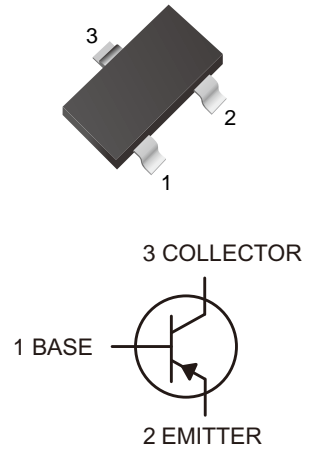
- Power Dissipation of 200mW
- High Stability and High Reliability
- Lead free in comply with EU RoHS 2011/65/EU directives

Mechanical Data

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

Ordering Information

Part Number	Marking	Shipping	Reel
LT2A1037-TR3	FR25. or M6	3000PCS Tape&Reel	7 inches
LT2A1037-TR12	FR25. or M6	12000PCS Tape&Reel	13 inches



Maximum Ratings (Ta=25 unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-60	V
V_{CEO}	Collector-Emitter Voltage	-50	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_C	Collector Current	-150	mA
P_C	Collector Power Dissipation	200	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	625	°C/W
T_J, T_{STG}	Operation Junction and Storage Temperature Range	-55~+150	°C

Electrical characteristics (Ta=25 unless otherwise specified)

Parameter	Symbol	Test condition	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -50\mu A, I_E = 0$	-60			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -1mA, I_B = 0$	-50			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -50\mu A, I_C = 0$	-6			V
Collector cut-off current	I_{CBO}	$V_{CB} = -60V, I_E = 0$			-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -6V, I_C = 0$			-0.1	μA
DC current gain	h_{FE}	$V_{CE} = -6V, I_C = -1mA$	180		390	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -50mA, I_B = -5mA$			-0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -100mA, I_B = -10mA$			-1	V
Transition frequency	f_T	$V_{CE} = -5V, I_C = -10mA$ $f = 30MHz$	150			MHz



Characteristics Curve

Fig.1 Static Characteristic

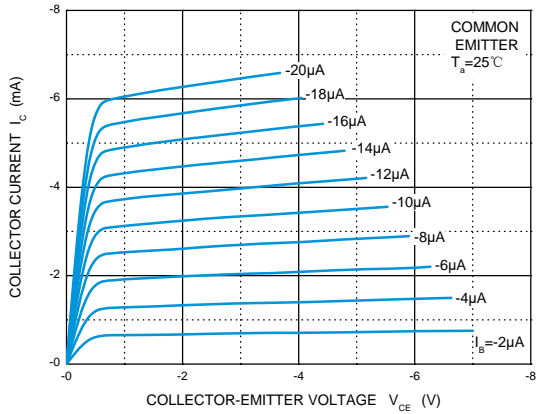


Fig.2 h_{FE} vs I_c

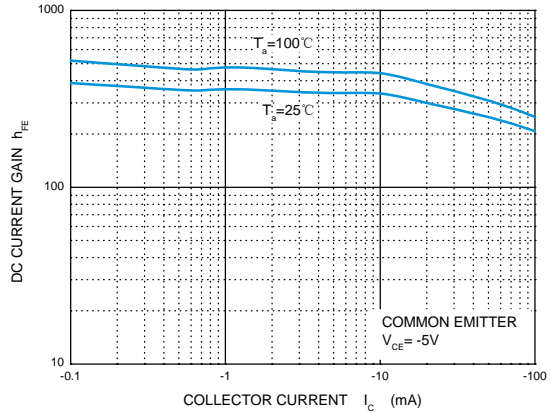


Fig.3 V_{CEsat} vs I_c

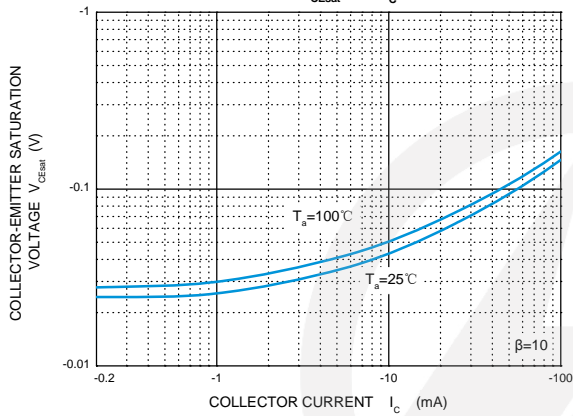


Fig.4 V_{BEsat} vs I_c

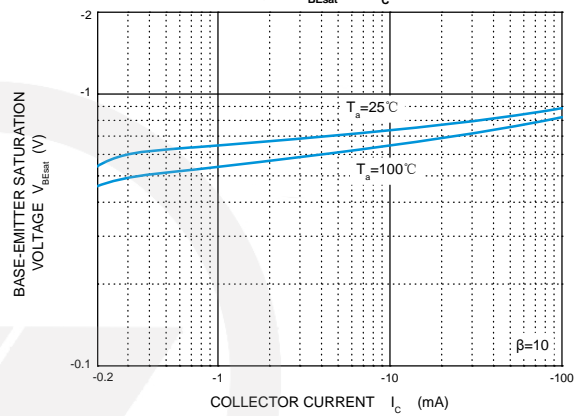


Fig.5 I_c vs V_{BE}

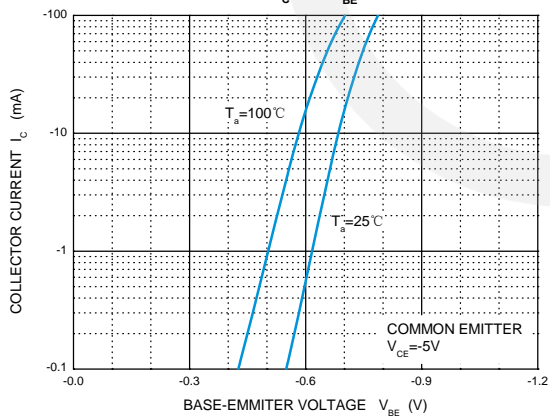


Fig.6 f_T vs I_c

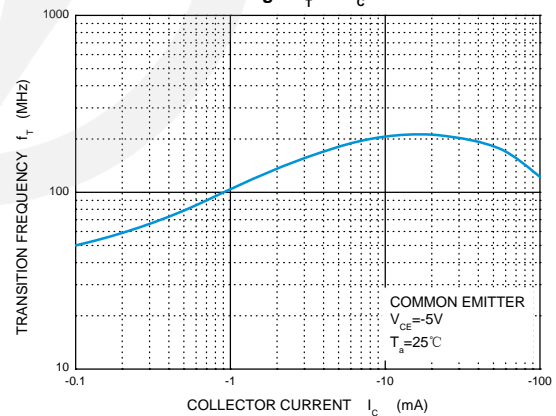


Fig.7 C_{ob}/C_{ib} vs V_{CB}/V_{EB}

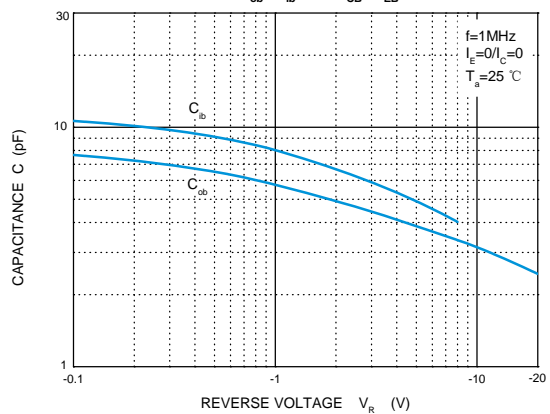
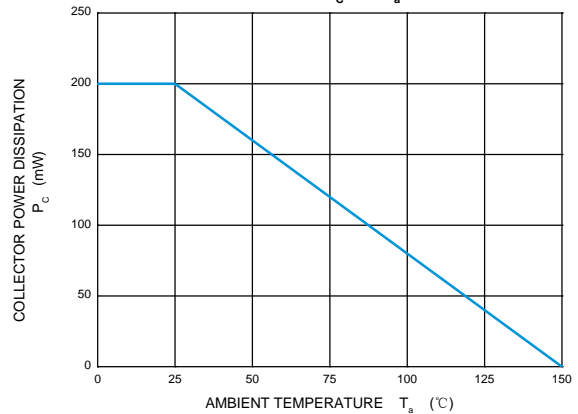


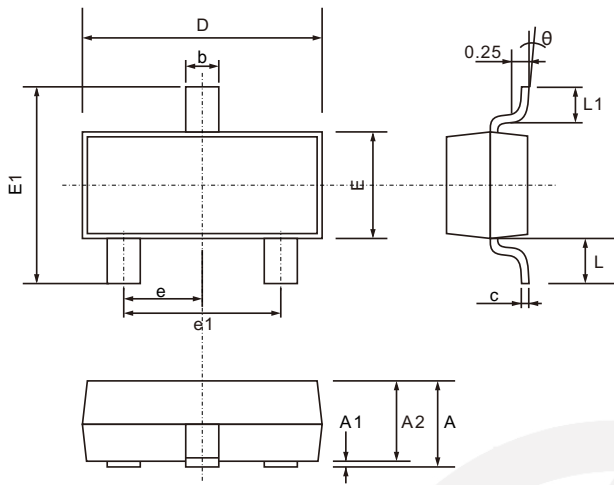
Fig.8 P_C vs T_a





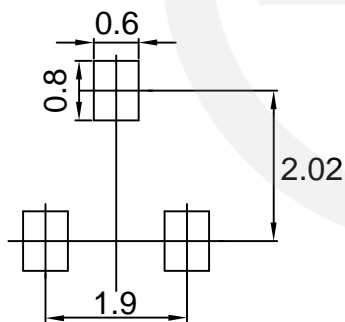
SOT-23 Package Outline

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°

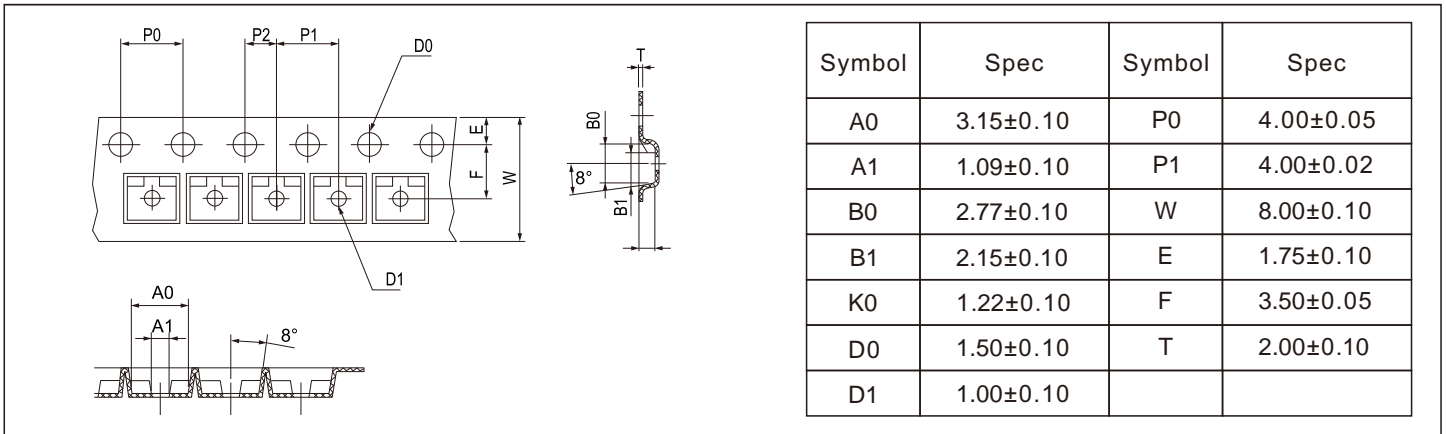
SOT-23 Suggested Pad Layout



- Note:
1. Controlling dimension: in millimeters.
 2. General tolerance: $\pm 0.05\text{mm}$
 3. The pad layout is for reference purpose only.

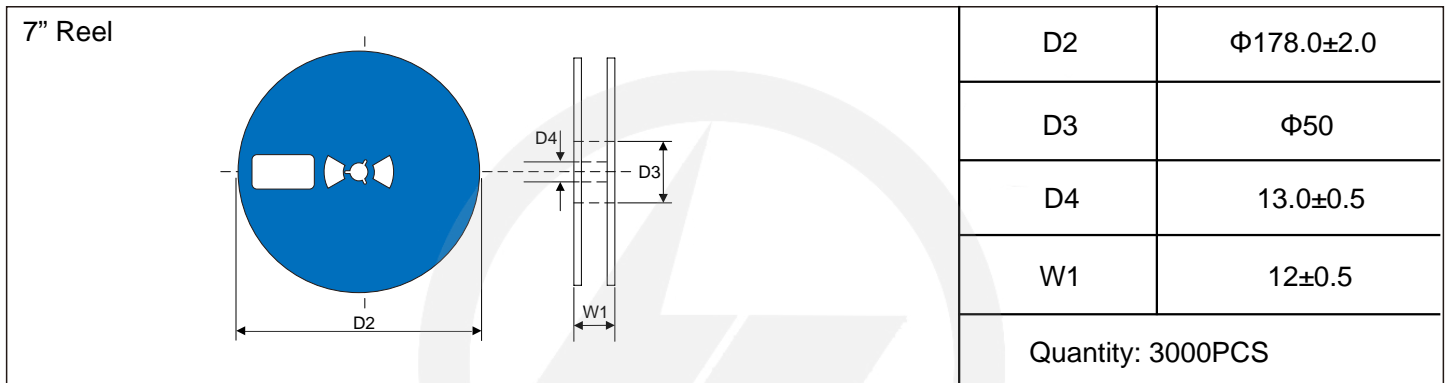
Carrier Tape Dimensions

Unit : mm



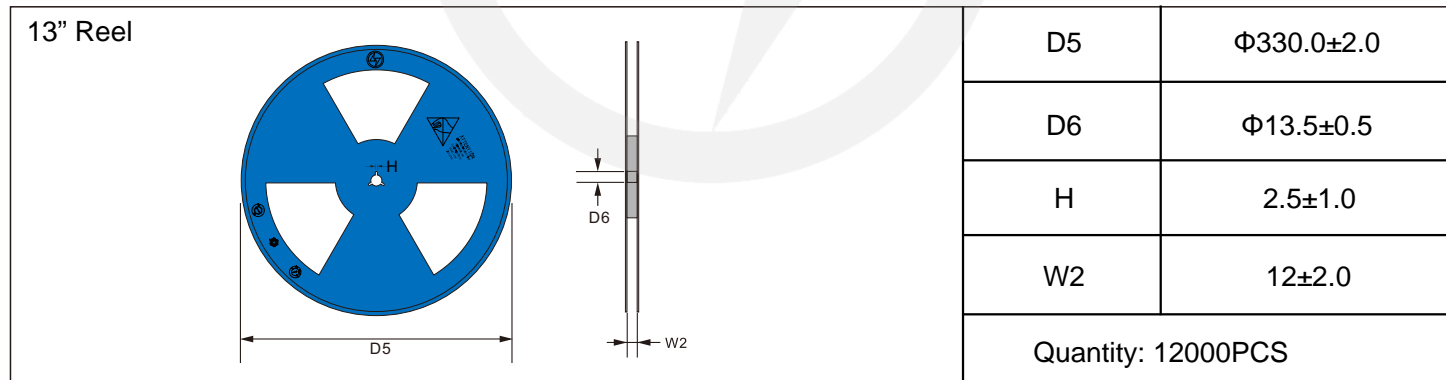
Reel Dimensions

Unit : mm

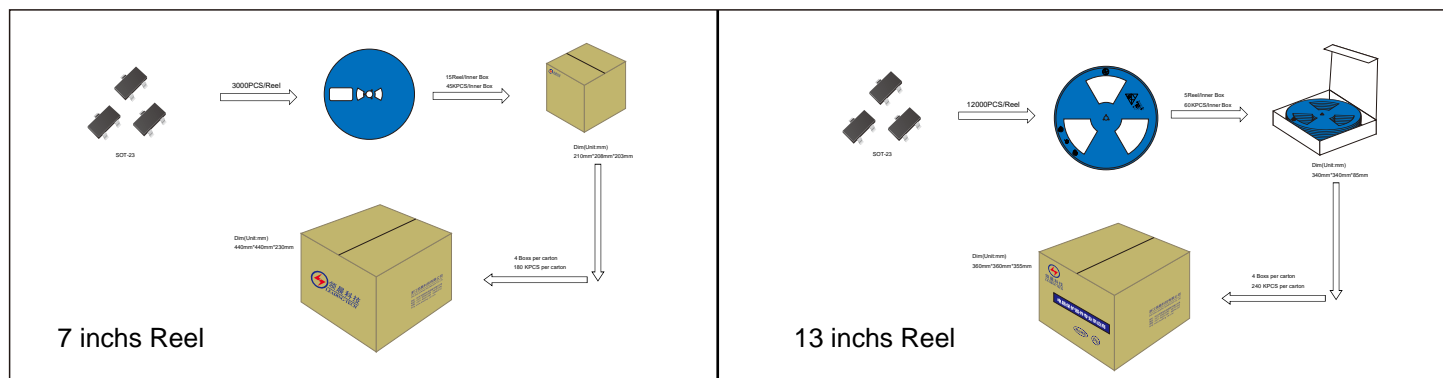


Reel Dimensions

Unit : mm



Packaging





Recommended Soldering Conditions



Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T _L to T _P)	3°C/second max.
Preheat	
-Temperature Min (T _{S min})	150°C
-Temperature Max (T _{S max})	200°C
-Time (min to max) (t _s)	60-180 seconds
T _{S max} to T _L	
-Ramp-up Rate	3°C/second max.
Time maintained above:	
-Temperature (T _L)	217°C
-Time (t _L)	60-150 seconds
Peak Temperature (T _P)	260°C
Time within 5°C of actual Peak Temperature (t _p)	20-40 seconds
Ramp-down Rate	6°C/second max.
Time 25°C 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	2024.03.12	2024.03.12	3.0	New file	/	Ding	
02	2026.03.06	2026.03.06	3.1	Package outline E1(max)=2.6mm	/	Ding	