

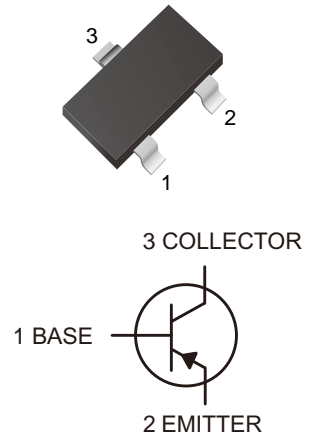
## Transistor(PNP)

### Features

- Ideally suited for automatic insertion
- Epitaxial planar die construction
- Lead free in comply with EU RoHS 2011/65/EU directives

### Ordering Information

Part Number	Shipping	Reel
LT807-TR3	3000PCS Tape&Reel	7 inchs
LT807-TR12	12000PCS Tape&Reel	13 inchs



### Maximum Ratings ( $T_a=25$ unless otherwise noted )

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage	-50	V
$V_{CEO}$	Collector-Emitter Voltage	-45	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current	-500	mA
$P_C$	Collector Power Dissipation	300	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	417	$^{\circ}C/W$
$T_J, T_{STG}$	Junction Temperature and Storage Temperature Range	-55~+150	$^{\circ}C$

### Electrical characteristics ( $T_a=25$ unless otherwise specified )

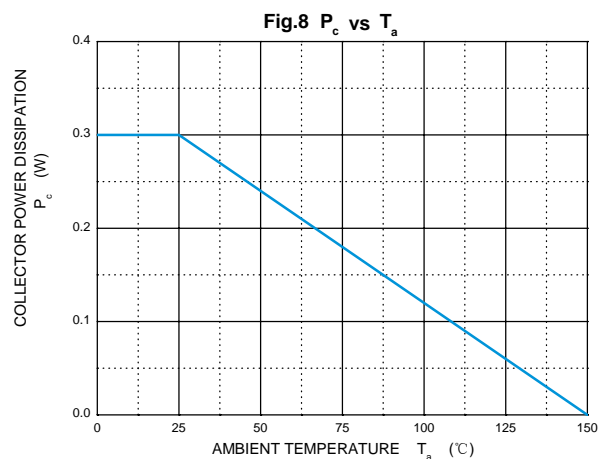
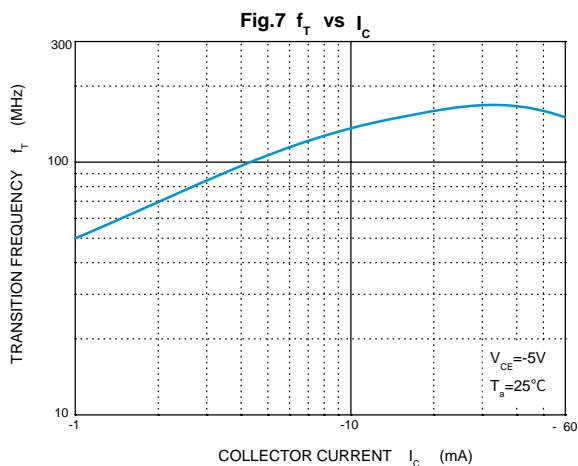
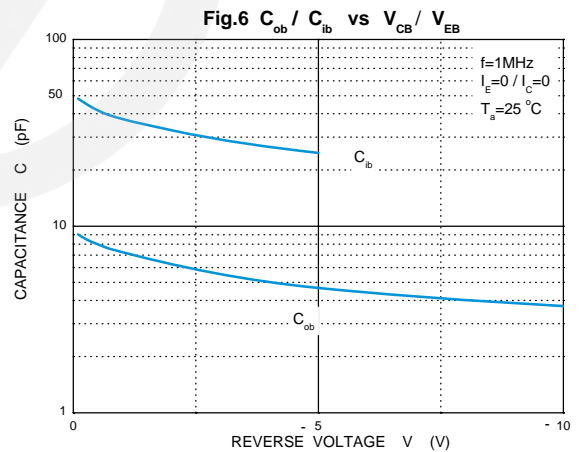
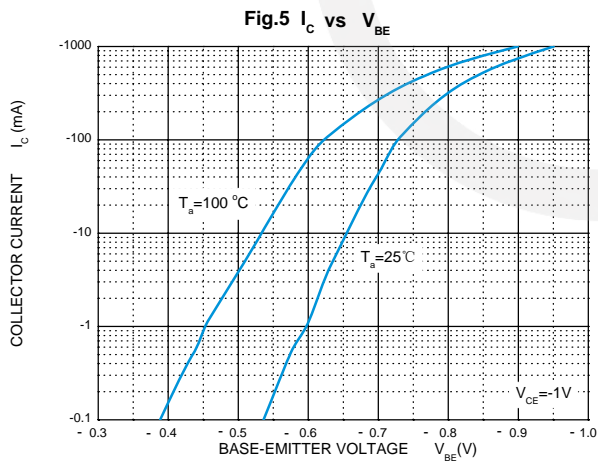
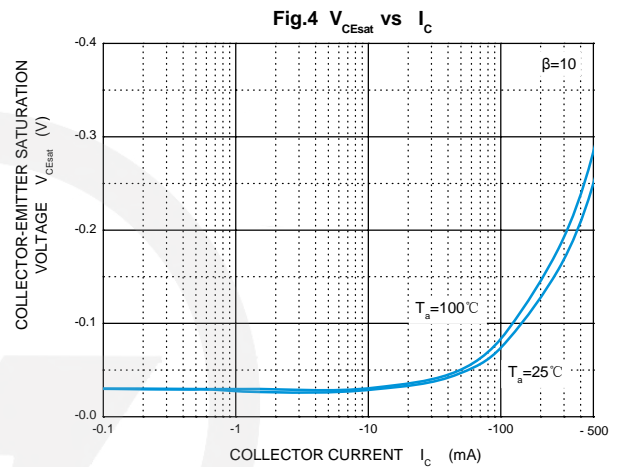
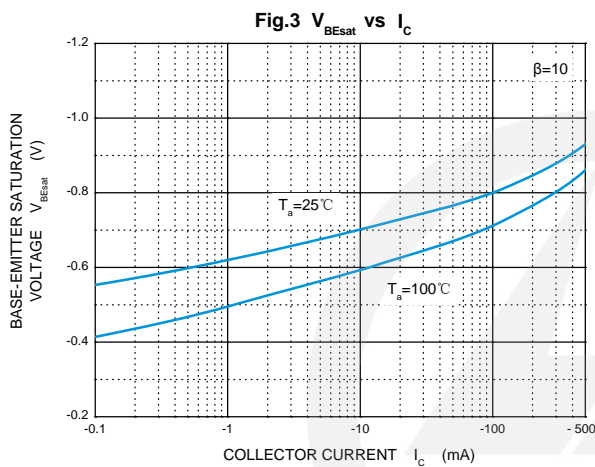
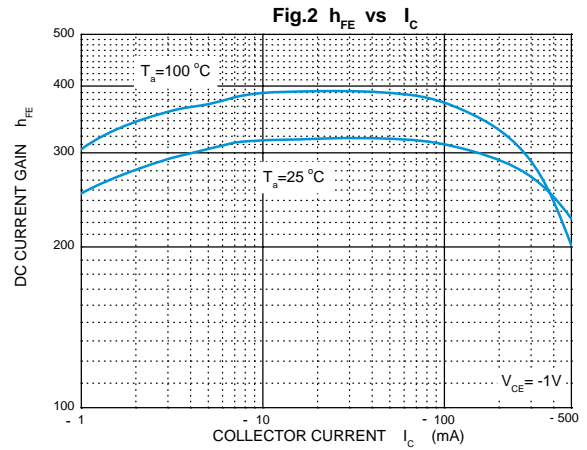
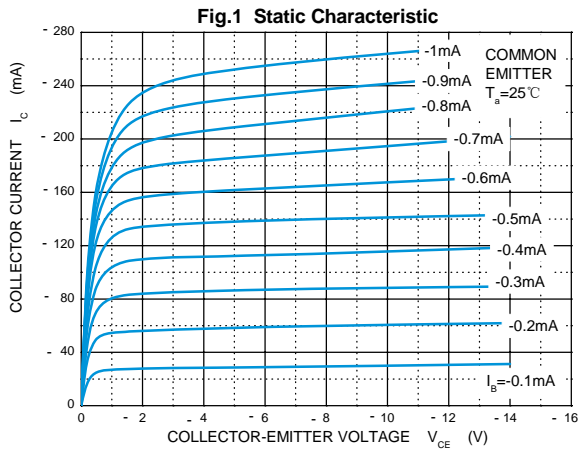
Symbol	Parameter	Test Conditions	A in	Typ	A ax	Unit
$V_{CBO}$	Collector-Base Voltage	$I_C = -10\mu A, I_E = 0$	-50			V
$V_{CEO}$	Collector-Emitter Voltage	$I_C = -10mA, I_B = 0$	-45			V
$V_{EBO}$	Emitter-Base Voltage	$I_E = -1\mu A, I_C = 0$	-5			V
$I_{CBO}$	Collector-Base Current	$V_{CB} = -45V, I_E = 0$			-0.1	$\mu A$
$I_{EBO}$	Emitter-Base Current	$V_{EB} = -4V, I_C = 0$			-0.1	$\mu A$
$h_{FE(1)}$	DC Current Gain	$V_{CE} = -1V, I_C = -100mA$	100		600	
		$V_{CE} = -1V, I_C = -500mA$	40			
$V_{CE(sat)}$	Collector-Emitter Saturation Voltage	$I_C = -500mA, I_B = -50mA$			-0.7	V
$V_{BE(sat)}$	Base-Emitter Saturation Voltage	$I_C = -500mA, I_B = -50mA$			-1.2	V
Output Capacitance		$V_{CB} = -10V, f = 1MHz$		10		pF
$f_T$	Transition Frequency	$V_{CE} = 5V, I_C = 10mA, f = 100MHz$	100			MHz

### Classification Of $h_{FE}$

Rank	LT807-16	LT807-25	LT807-40
Range	100-250	160-400	250-600
Marking	5A	5B	5C



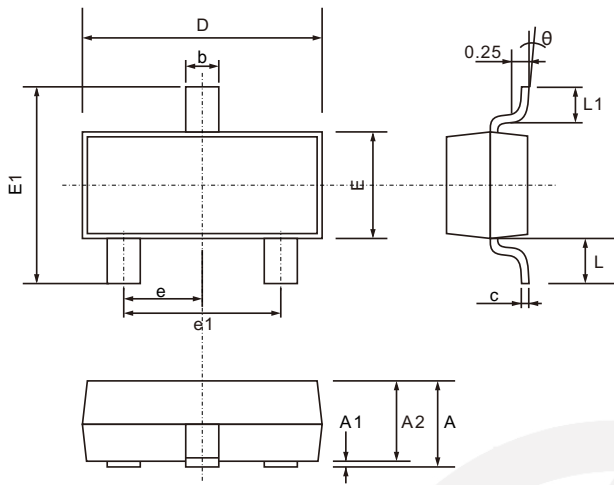
Characteristics Curves





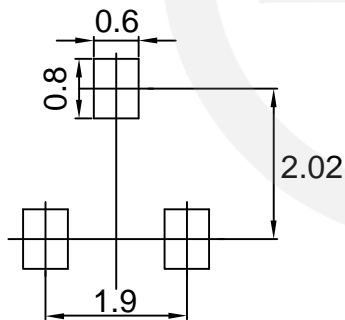
## SOT-23 Package Outline

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
$\theta$	0°	8°

## SOT-23 Suggested Pad Layout

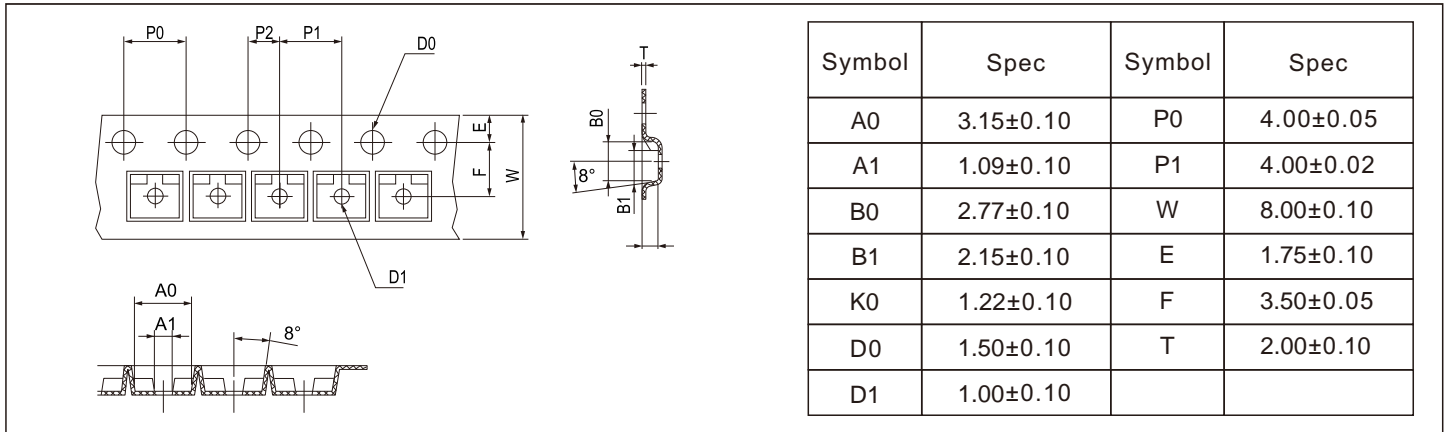


**Note:**

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

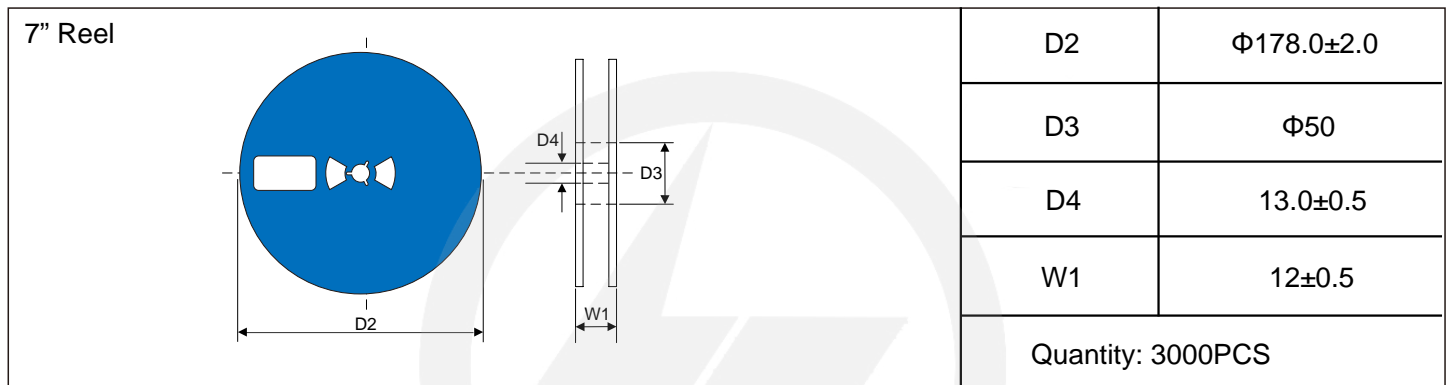
**Carrier Tape Dimensions**

Unit : mm



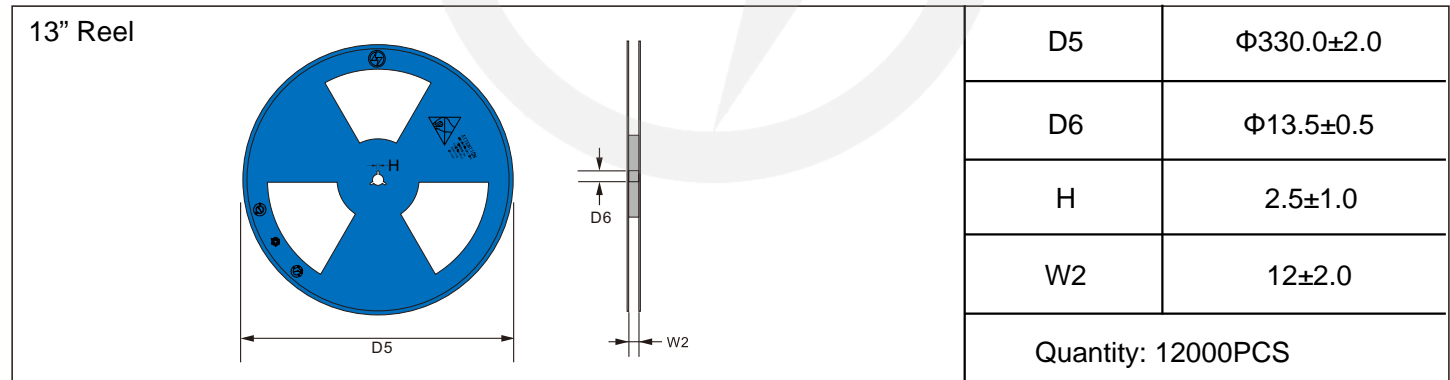
**Reel Dimensions**

Unit : mm

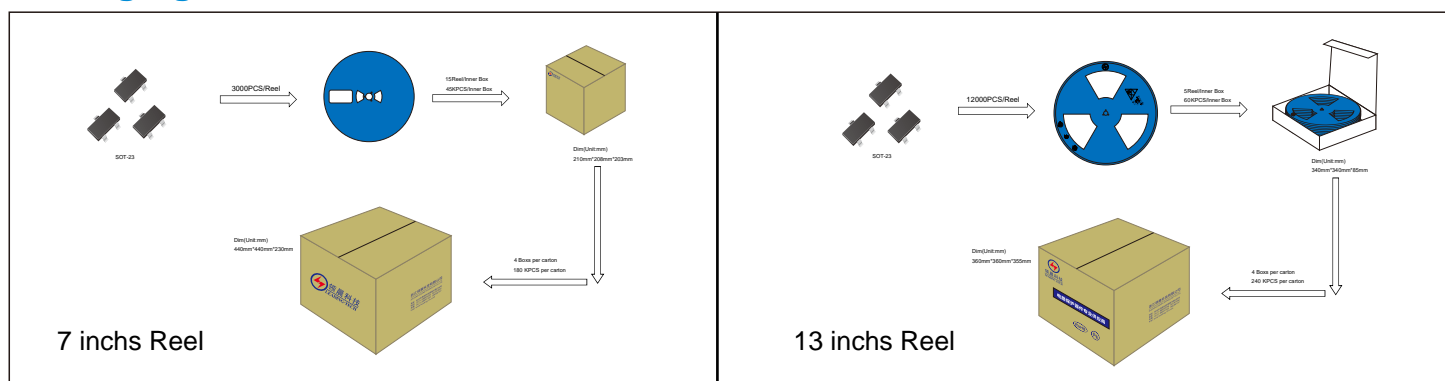


**Reel Dimensions**

Unit : mm



**Packaging**





Recommended Soldering Conditions



Recommended Conditions

Profile Feature	Pb-Free Assembly
Average ramp-up rate (T <sub>L</sub> to T <sub>P</sub> )	3°C/second max.
Preheat	
-Temperature Min (T <sub>S min</sub> )	150°C
-Temperature Max (T <sub>S max</sub> )	200°C
-Time (min to max) (t <sub>s</sub> )	60-180 seconds
T <sub>S max</sub> to T <sub>L</sub>	
-Ramp-up Rate	3°C/second max.
Time maintained above:	
-Temperature (T <sub>L</sub> )	217°C
-Time (t <sub>L</sub> )	60-150 seconds
Peak Temperature (T <sub>P</sub> )	260°C
Time within 5°C of actual Peak Temperature (t <sub>p</sub> )	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	2025.06.17	2025.06.17	3.1	Update packaging information	/	Ding	
03	2026.03.06	2026.03.06	3.2	Package outline E1(max)=2.6mm	/	Ding	