

Transistor(PNP)

Features

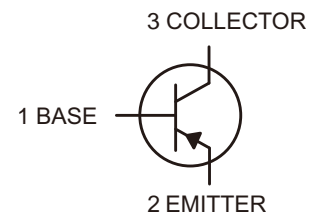
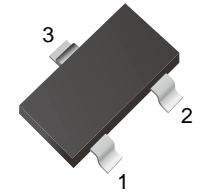
- Collector current $I_C = -1.5A$
- Power amplifier applications
- Lead free in comply with EU RoHS 2011/65/EU directives

Mechanical Data

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

Ordering Information

Part Number	Shipping	Reel
LTSS8550HP/Q-TR3	3000PCS Tape&Reel	7 inches
LTSS8550HP/Q-TR12	12000PCS Tape&Reel	13 inches



Absolute Maximum Ratings ($T_a = 25^\circ C$)

Symbol	Parameter	Value	Unit
V_{CBO}	Collector-Base Voltage	-50	V
V_{CEO}	Collector-Emitter Voltage	-50	V
V_{EBO}	Emitter-Base Voltage	-6	V
I_C	Collector Current	-1.5	A
P_C	Collector Power Dissipation	300	mW
$R_{\theta JA}$	Thermal Resistance From Junction To Ambient	400	$^\circ C/W$
T_J, T_{stg}	Operation Junction And Storage Temperature Range	-55 to +150	$^\circ C$

Electrical Characteristics ($T_a = 25^\circ C$ unless otherwise specified)

Symbol	Parameter	Test conditions	Min	Typ	Max	Unit
$V_{(BR)CBO}$	Collector-base breakdown voltage	$I_C = -100\mu A, I_E = 0$	-50			V
$V_{(BR)CEO}$	Collector-emitter breakdown voltage	$I_C = -2mA, I_B = 0$	-50			V
$V_{(BR)EBO}$	Emitter-base breakdown voltage	$I_E = -100\mu A, I_C = 0$	-6			V
V_{BE}	Base-Emitter Voltage	$V_{CE} = -1V, I_C = -10mA$		-0.66	-1	V
I_{CBO}	Collector cut-off current	$V_{CB} = -40V, I_E = 0$			-100	nA
I_{EBO}	Emitter cut-off current	$V_{EB} = -5V, I_C = 0$			-100	nA
$h_{FE(1)}$	DC current gain(1)	$V_{CE} = -1V, I_C = -100mA$	100		320	
$h_{FE(2)}$	DC current gain(2)	$V_{CE} = -1V, I_C = -800mA$	40			
$V_{CE(sat)}$	Collector-emitter saturation voltage	$I_C = -800mA, I_B = -80mA$			-0.5	V
$V_{BE(sat)}$	Base-emitter saturation voltage				-1.2	V

$h_{FE(1)}$ Classifications & Marking

Rank	LTSS8550HP	LTSS8550HQ
$h_{FE(1)}$	100~200	160~320
Marking	KIO	KIY



Characteristics Curves

Fig.1 HFE-Ic Vce=1V

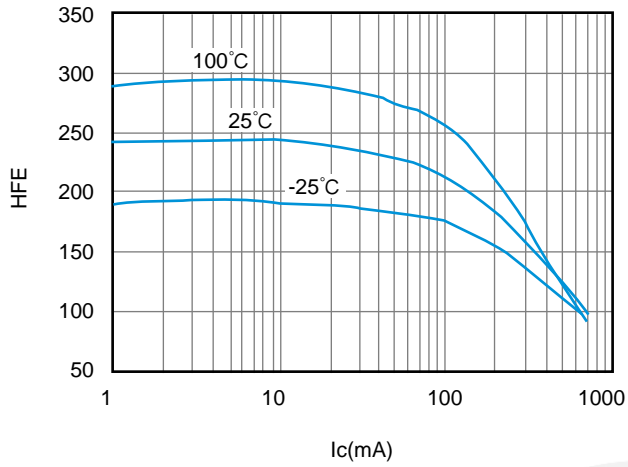


Fig.2 Vcesat-Ic Ic/Ib=10

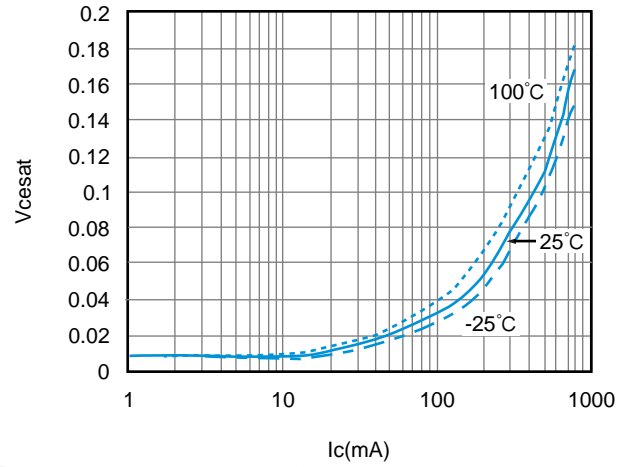


Fig.3 Ic-Vbe

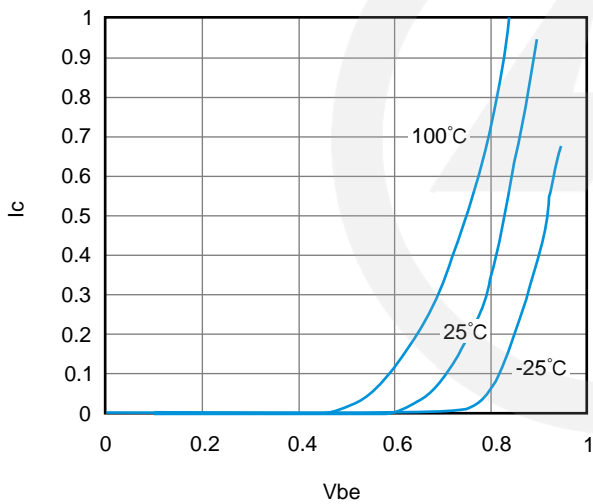
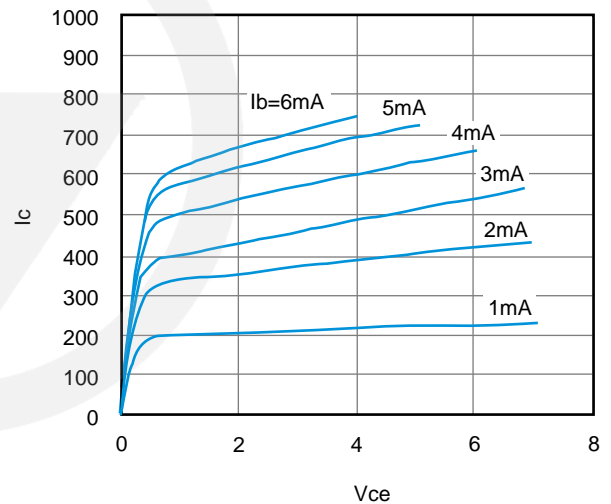


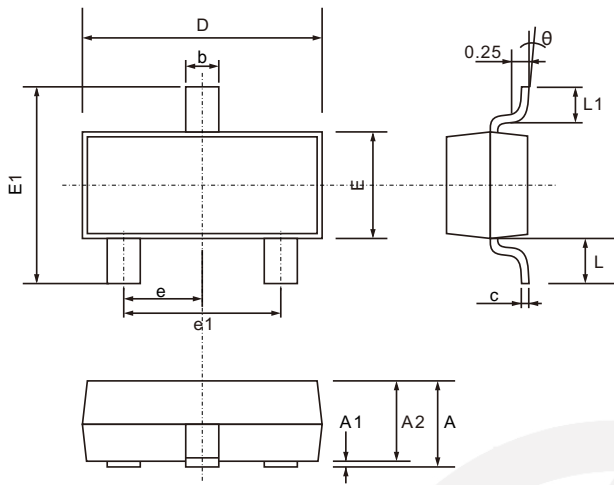
Fig.4 Ic-Vce





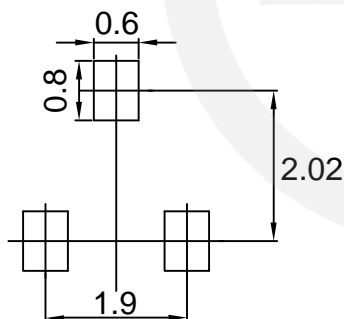
SOT-23 Package Outline

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°

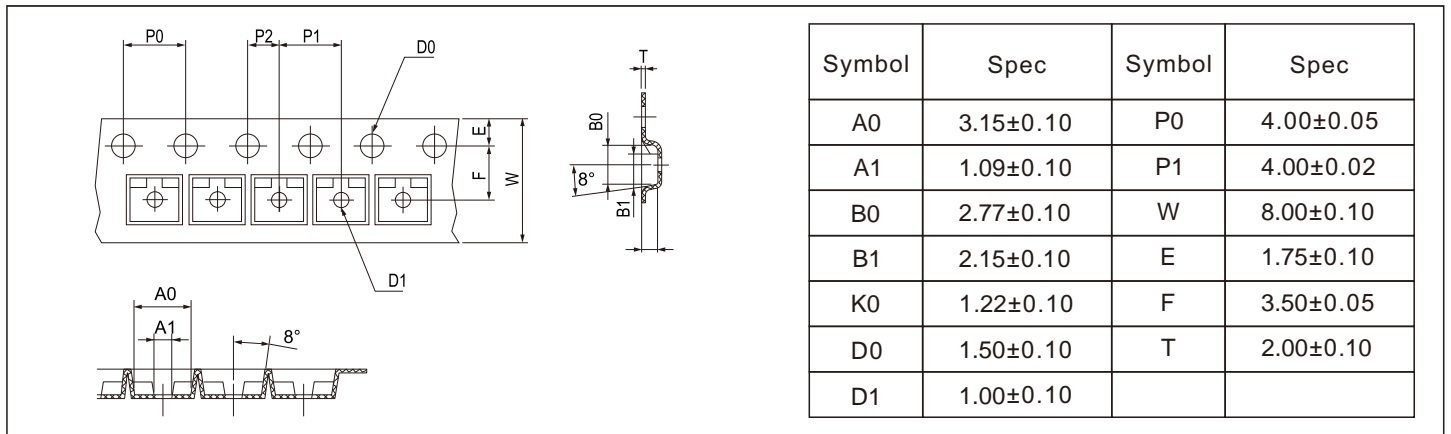
SOT-23 Suggested Pad Layout



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

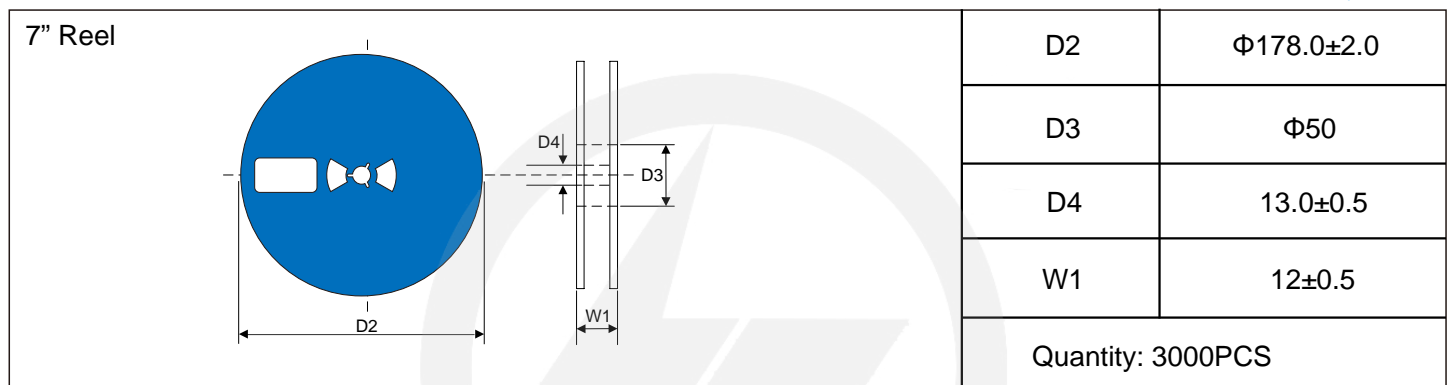
Carrier Tape Dimensions

Unit : mm



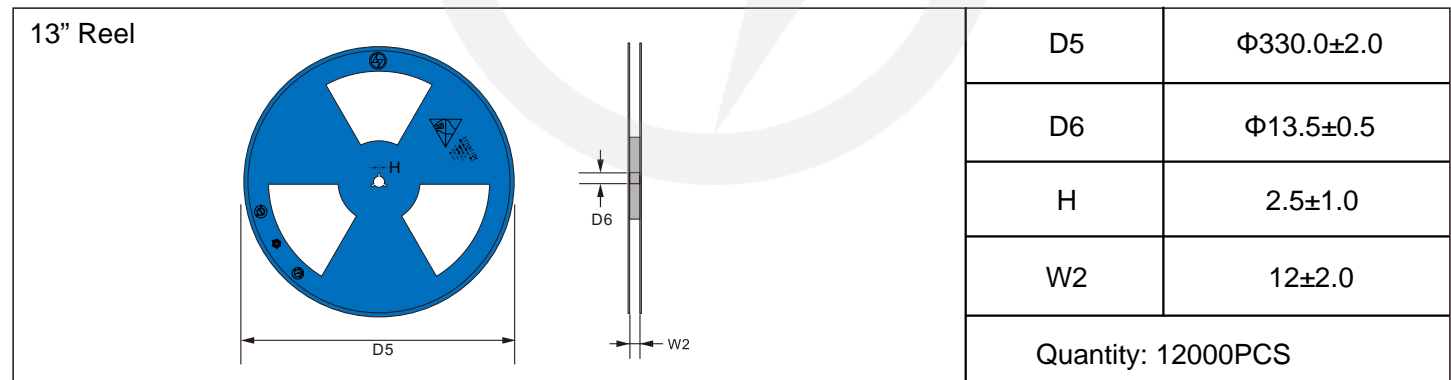
Reel Dimensions

Unit : mm

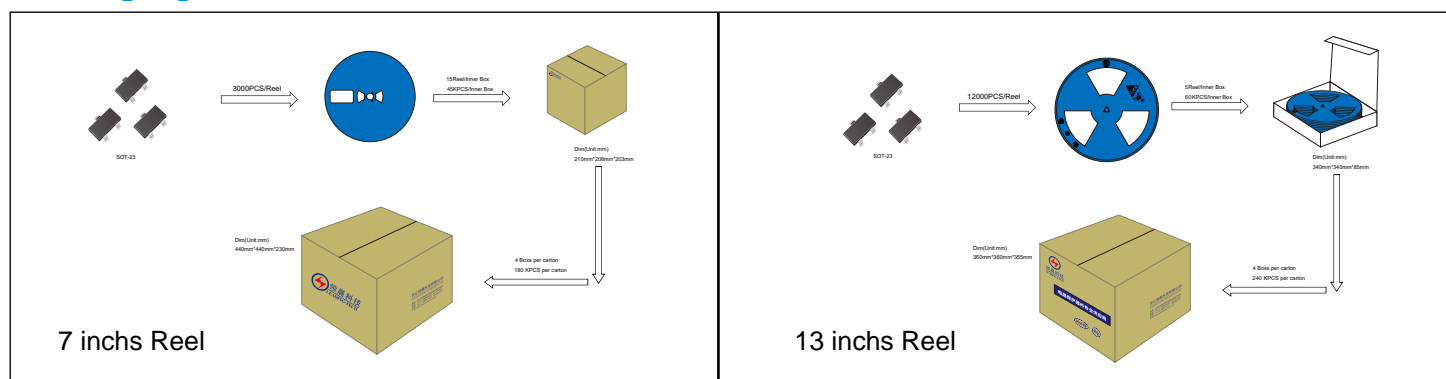


Reel Dimensions

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	2025.07.06	2025.07.06	3.0	New file	/	Ding	
02	2026.03.06	2026.03.06	3.1	Package outline E1(max)=2.6mm	/	Ding	