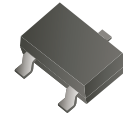


## S8550-L/H/J-HF (PNP)

RoHS Device

Halogen Free



### Features

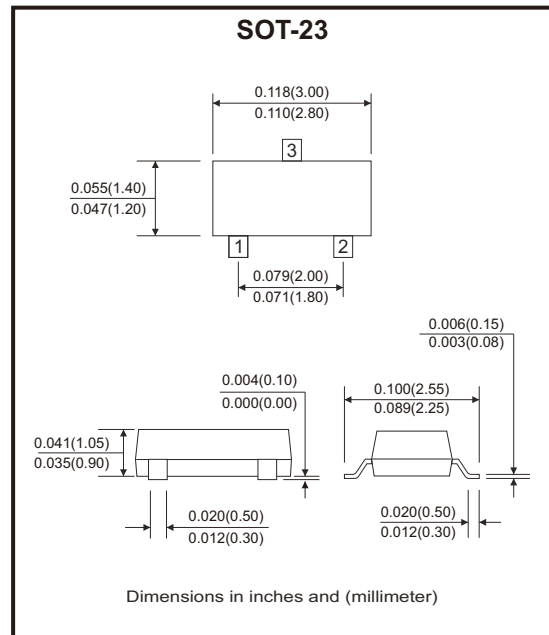
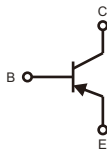
- Collector current:  $I_C = -0.5A$
- High total power dissipation:  $P_C = 0.3W$
- Excellent HFE linearity.

### Mechanical data

- Case: SOT-23, molded plastic.
- Mounting position: Any.

### Circuit Diagram

1. Base
2. Emitter
3. Collector



### Maximum Ratings (at $T_A = 25^\circ C$ unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-base voltage	$V_{CBO}$	-40	V
Collector-emitter voltage	$V_{CEO}$	-25	V
Emitter-base voltage	$V_{EBO}$	-5	V
Collector current-continuous	$I_C$	-0.5	A
Collector power dissipation	$P_C$	0.3	W
Operation junction and storage temperature range	$T_J, T_{STG}$	-55 to +150	$^\circ C$

## Electrical Characteristics (at $T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Conditions	Min	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = -100\mu\text{A}, I_E = 0$	-40		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = -1\text{mA}, I_B = 0$	-25		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = -100\mu\text{A}, I_C = 0$	-5		V
Collector cut-off current	$I_{CBO}$	$V_{CB} = -40\text{V}, I_E = 0$		-0.1	$\mu\text{A}$
Collector cut-off current	$I_{CEO}$	$V_{CE} = -20\text{V}, I_B = 0$		-0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -3\text{V}, I_C = 0$		-0.1	$\mu\text{A}$
DC current gain	$h_{FE(1)}$	$V_{CE} = -1\text{V}, I_C = -50\text{mA}$	120	400	
	$h_{FE(2)}$	$V_{CE} = -1\text{V}, I_C = -500\text{mA}$	50		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -500\text{mA}, I_B = -50\text{mA}$		-0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -500\text{mA}, I_B = -50\text{mA}$		-1.2	V
Transition frequency	$f_T$	$V_{CE} = -6\text{V}, I_C = -20\text{mA}, f = 30\text{MHz}$	150		MHz

## Classification of $h_{FE}$ (1)

Rank	S8550-L-HF	S8550-H-HF	S8550-J-HF
Range	120-200	200-350	300-400

## Rating and Characteristic Curves (S8550-L/H/J-HF)

Fig.1 - Static Characteristic

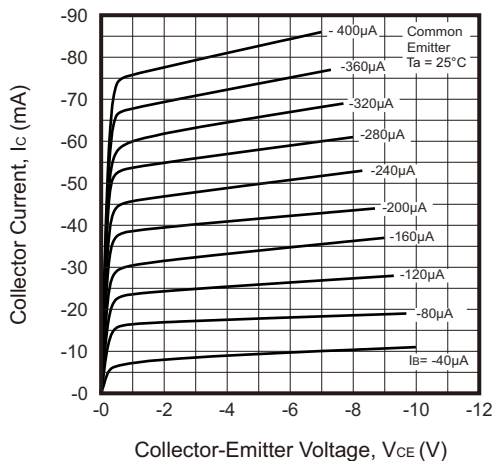
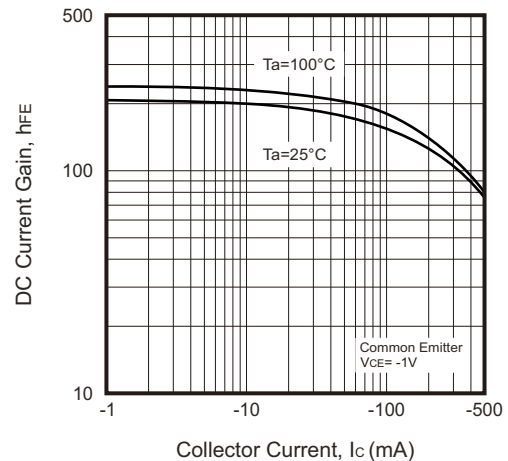


Fig.2 -  $h_{FE} - I_C$



## Rating and Characteristic Curves (S8550-L/H/J-HF)

Fig.3 -  $V_{BEsat} - I_c$

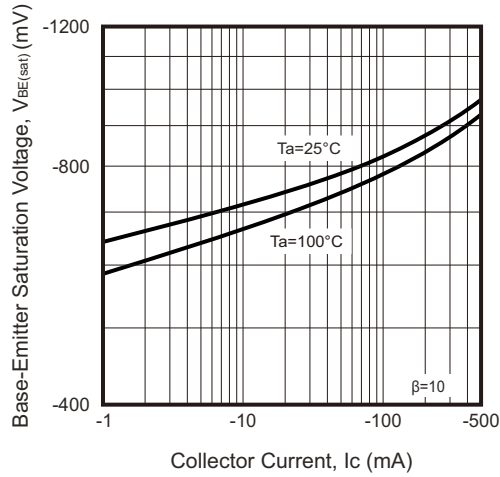


Fig.4 -  $V_{CEsat} - I_c$

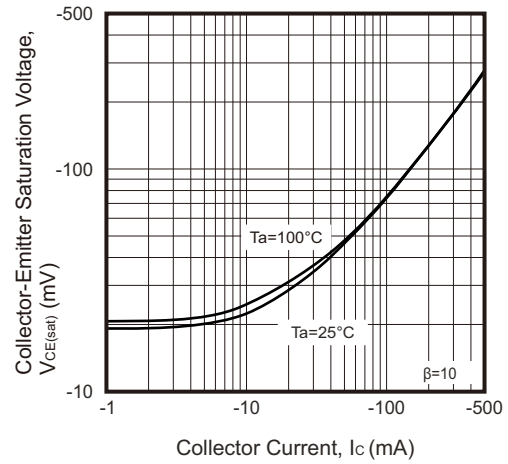


Fig.5 -  $I_c - V_{BE}$

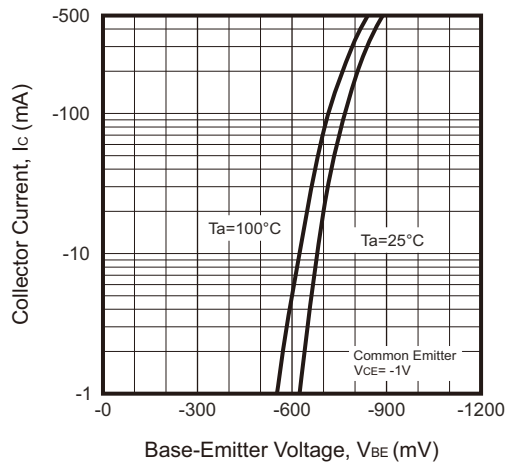


Fig.6 -  $f_T - I_c$

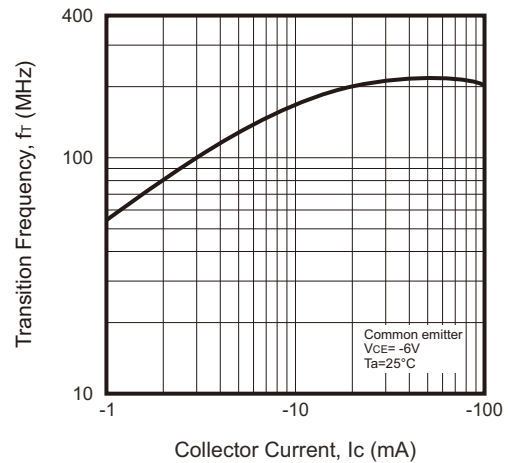


Fig.7 -  $C_{ob}/C_{ib} - V_{CB}/V_{EB}$

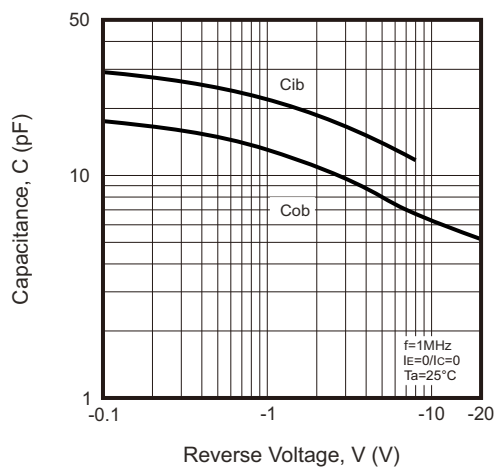
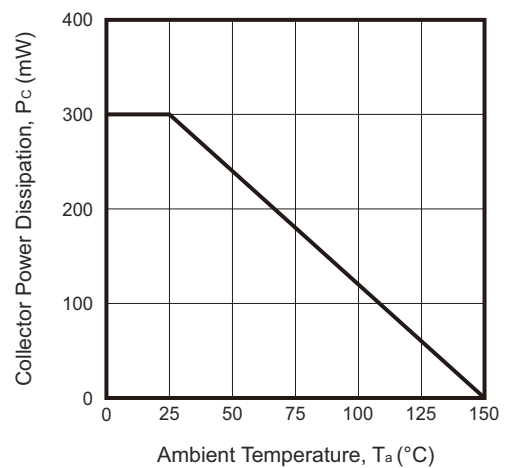
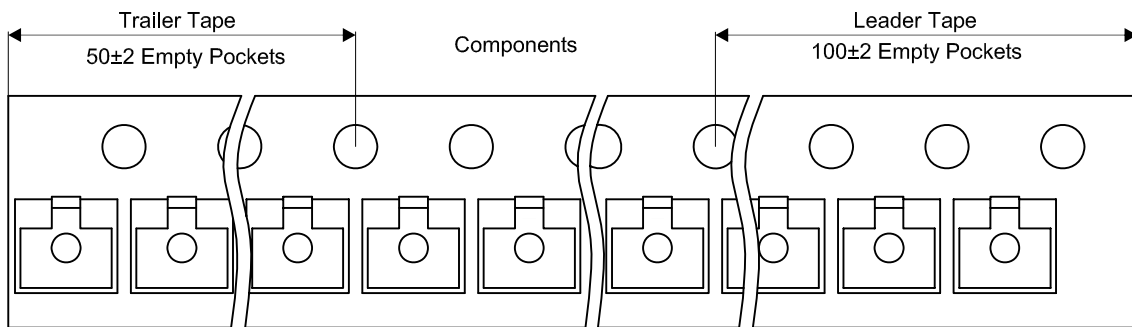
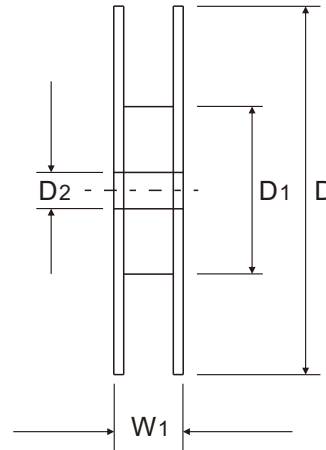
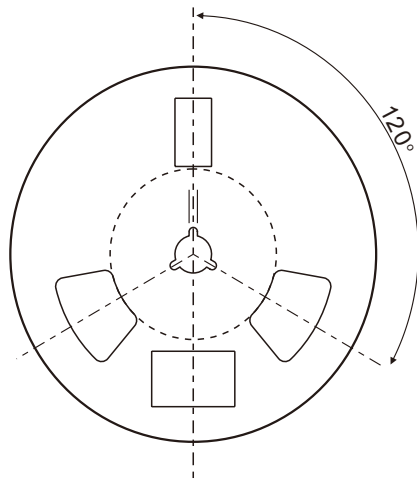
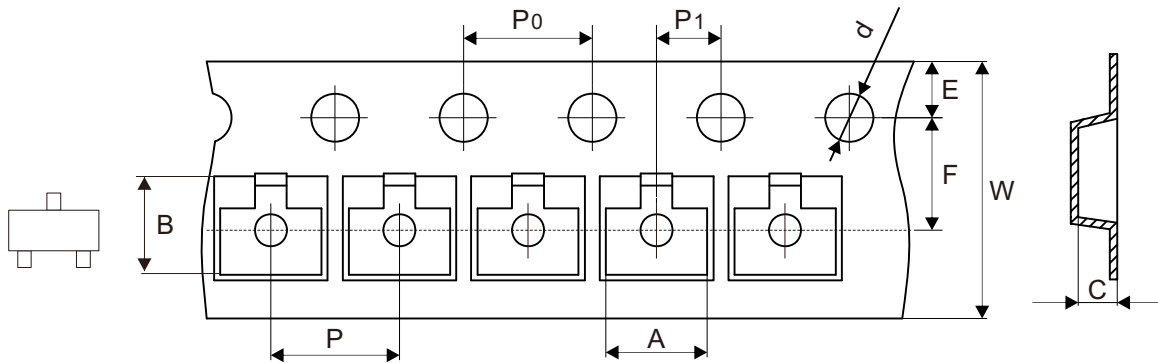


Fig.8 -  $P_c - T_a$



## Reel Taping Specification

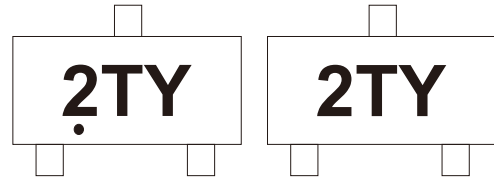


SOT-23	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	$3.15 \pm 0.10$	$2.77 \pm 0.10$	$1.22 \pm 0.10$	$1.50 \pm 0.10$	$178.00 \pm 2.00$	$54.40 \pm 1.00$	$13.00 \pm 1.00$
	(inch)	$0.124 \pm 0.004$	$0.109 \pm 0.004$	$0.048 \pm 0.004$	$0.059 \pm 0.004$	$7.008 \pm 0.079$	$2.142 \pm 0.039$	$0.512 \pm 0.039$

SOT-23	SYMBOL	E	F	P	P <sub>0</sub>	P <sub>1</sub>	W	W <sub>1</sub>
	(mm)	$1.75 \pm 0.10$	$3.50 \pm 0.10$	$4.00 \pm 0.10$	$4.00 \pm 0.10$	$2.00 \pm 0.10$	$8.00 + 0.30 - 0.10$	$12.30 \pm 1.00$
	(inch)	$0.069 \pm 0.004$	$0.138 \pm 0.004$	$0.157 \pm 0.004$	$0.157 \pm 0.004$	$0.079 \pm 0.004$	$0.315 + 0.012 - 0.004$	$0.484 \pm 0.039$

## Marking Code

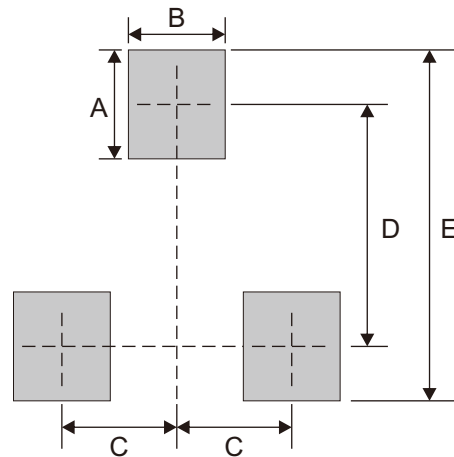
Part Number	Marking Code
S8550-L-HF	2TY
S8550-H-HF	
S8550-J-HF	



Solid dot = Control code

## Suggested P.C.B. PAD Layout

SIZE	SOT-23	
	(mm)	(inch)
A	0.90	0.035
B	0.80	0.031
C	0.95	0.037
D	2.00	0.079
E	2.90	0.114



## Standard Packaging

Case Type	REEL PACK	
	REEL (pcs)	Reel Size (inch)
SOT-23	3,000	7