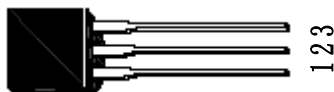
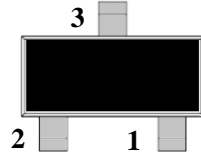


1、Features

- Lead(Pb)-Free
- Collector Current: $I_C=500\text{mA}$
- Collector Power Dissipation: $P_C=0.6\text{W}(T_C=25^\circ\text{C})$
- Complimentary to S8050

2、Pinning information

PIN	Description	Simplified outline	
1	Emitter(E)		
2	Base(B)		
3	Collector(C)		
		TO-92	SOT-23

3、Limiting value

($T_a = 25^\circ\text{C}$ unless otherwise noted).

SYMBOL	PARAMETER		Limit	UNIT
Vcbo	Collector-Base Voltage		-40	V
Vceo	Collector-Emitter Voltage		-25	V
Vebo	Emitter-Base Voltage		-5	V
Ic	Collector Current		-500	mA
Pc	Collector Power Dissipation	TO-92	625	mW
		SOT-23	350	
Tj	Junction Temperature		+150	$^\circ\text{C}$
Tstg	Storage Temperature		-55 to +150	$^\circ\text{C}$

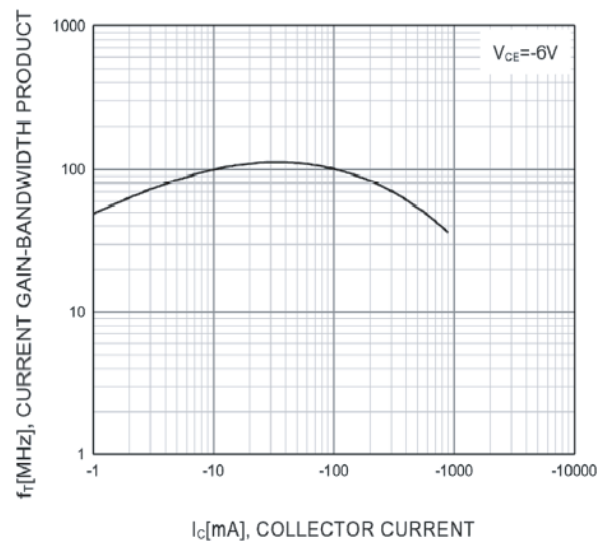
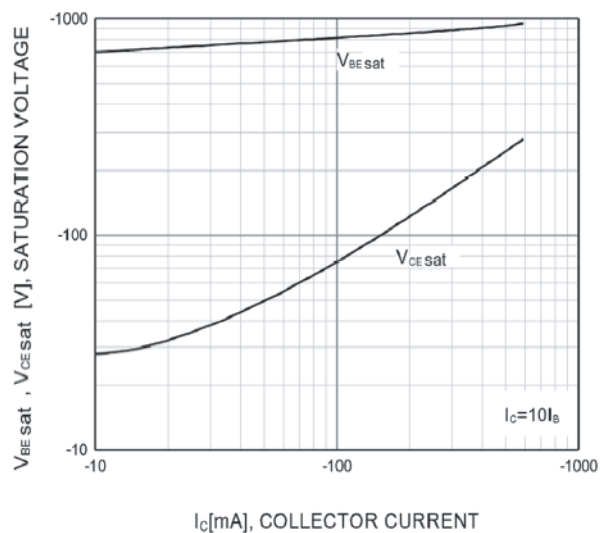
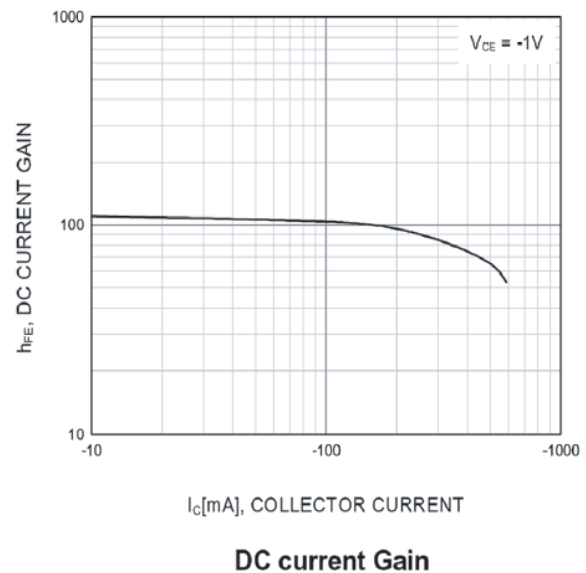
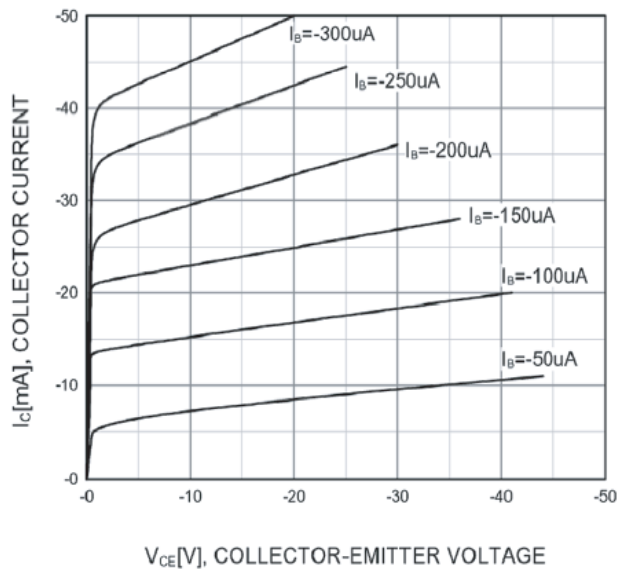
4、Electrical Characteristics ($T_a = 25^\circ\text{C}$ unless otherwise noted)

SYMBOL	PARAMETER	CONDITIONS	MIN	Typ	MAX	UNIT
BVcbo	Collector-Base Breakdown Voltage	$I_C = -100\mu\text{A}, I_B = 0$	-40			V
Bvceo	Collector-Emitter Breakdown Voltage	$I_C = -2\text{mA}, I_E = 0$	-25			V
Bvebo	Emitter-Base Breakdown Voltage	$I_E = -100\mu\text{A}, I_C = 0$	-5			V
Icbo	Collector Cut-off Current	$V_{CB} = -35\text{V}, I_E = 0$			-100	nA
Iebo	Emitter Cut-off Current	$V_{EB} = -5\text{V}, I_C = 0$			-100	nA
Vce(sat)	Collector-Emitter Saturation Voltage	$I_C = -500\text{mA}$ $I_B = -50\text{mA}$			-0.6	V
Vbe(sat)	Base-Emitter Saturation Voltage	$I_C = -500\text{mA}$ $I_B = -50\text{mA}$			-1.2	V
Vbe(on)	Base-Emitter On Voltage	$V_{CE} = -1\text{V}, I_C = -10\text{mA}$			-1.0	V
h_{FE}	DC Current Gain	$V_{CE} = -1\text{V}, I_C = -50\text{mA}$	85		300	
f_T	Current Gain Bandwidth Product	$V_{CE} = -10\text{V}, I_C = -50\text{mA}$	150			MHz
Cob	Output Capacitance	$V_{CB} = -10\text{V}, f = 1\text{MHz}$		9.0		pF

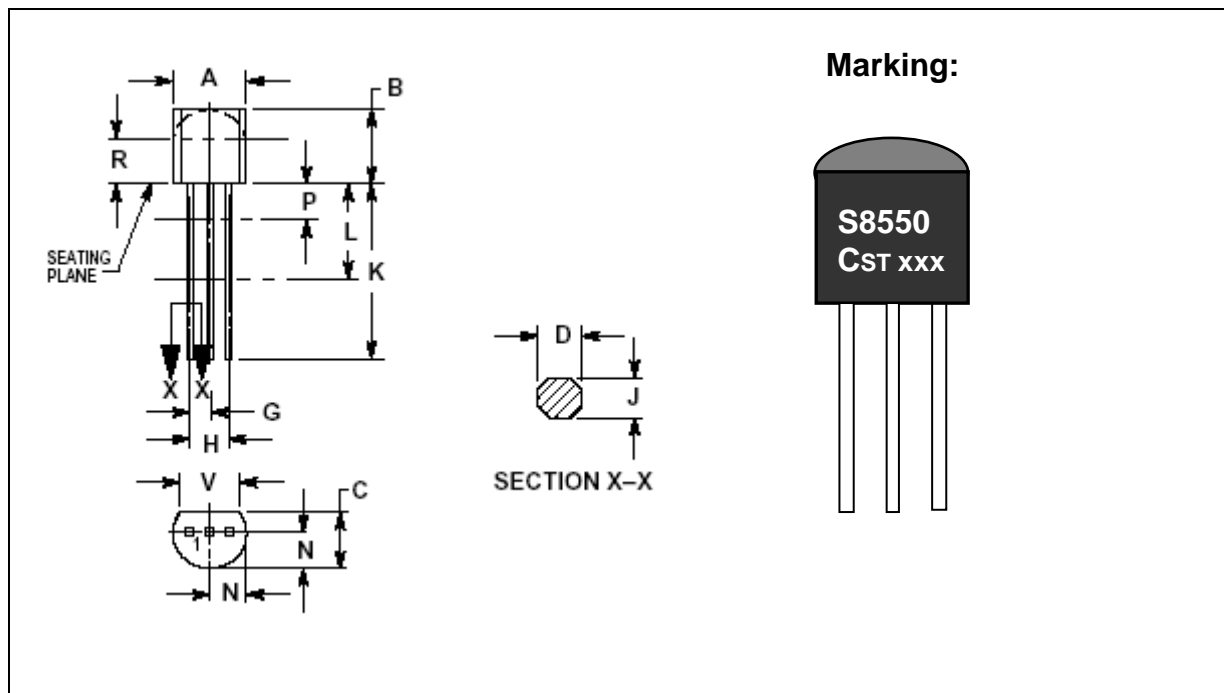
h_{FE} Classification

Rank	B	C	D
Range	85-160	120-200	170-300

5、Electrical Characteristics Curve

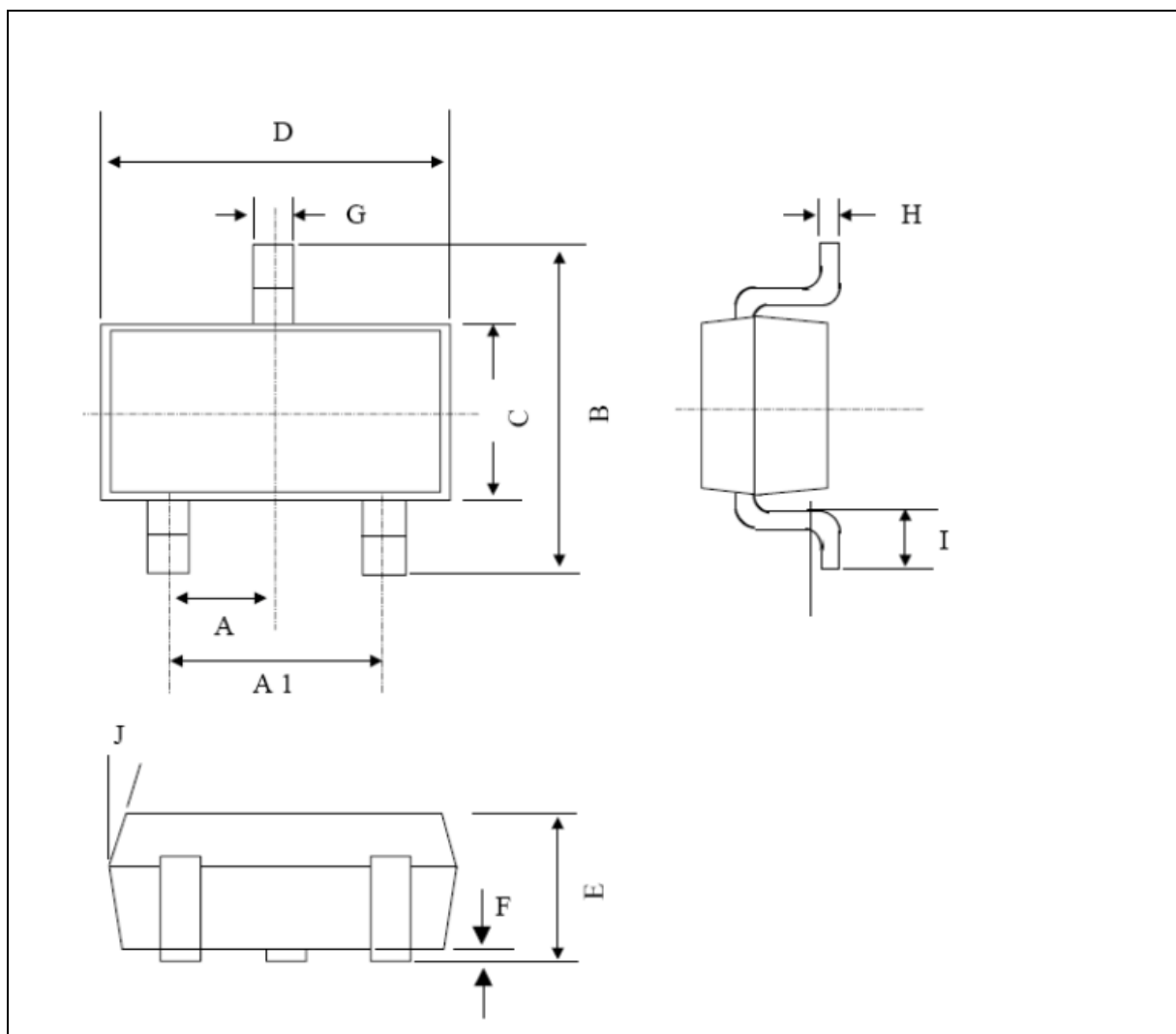


6、Package outline(TO-92)



DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min	Max	Min	Max		Min	Max	Min	Max
A	0.175	0.205	4.45	5.20	K	0.500	-	12.70	-
B	0.170	0.210	4.32	5.33					
C	0.134	0.142	3.40	3.60	N	0.080	0.105	2.04	2.66
D	0.016	0.021	0.407	0.533	P	-	0.100	-	2.54
G	0.045	0.055	1.27	2.41	R	0.079	-	2.00	-
H	0.095	0.105	2.42	2.66	V	0.135	-	3.43	-
J	0.012	0.018	0.30	0.45					

7、Package outline(SOT-23)



DIM	Inches		Milimeters		DIM	Inches		Milimeters	
	Min	Max	Min	Max		Min	Max	Min	Max
A	0.037BSC		0.95BSC		F	0.000	0.004	0.00	0.10
A1	0.074BSC		1.90BSC		G	0.012	0.020	0.30	0.50
B	0.089	0.100	2.25	2.55	H	0.003	0.006	0.08	0.15
C	0.047	0.055	1.20	1.40	I	0.012	0.020	0.30	0.50
D	0.114	0.122	2.9	3.10	J	5°	10°	5°	10°
E	0.039	0.045	0.90	1.15					