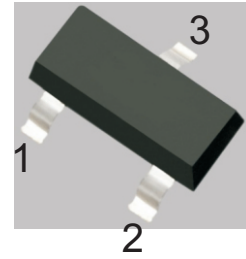


S8050
NPN TRANSISTOR
FEATURES

- Complimentary to S8550
- Collector Current: $I_C=0.5A$

SOT-23

 1.BASE
 2.EMITTER
 3.COLLECTOR

MAXIMUM RATINGS (Ta=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CB0}	40	V
Collector-Emitter Voltage	V_{CEO}	25	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current — Continuous	I_C	500	mA
Collector Power Dissipation	P_C	300	mW
Thermal Resistance From Junction To Ambient	R_{thJA}	417	°C/W
Operation Junction and Storage Temperature Range	T_J, T_{stg}	-55~+150	°C

CLASSIFICATION OF h_{FE1}

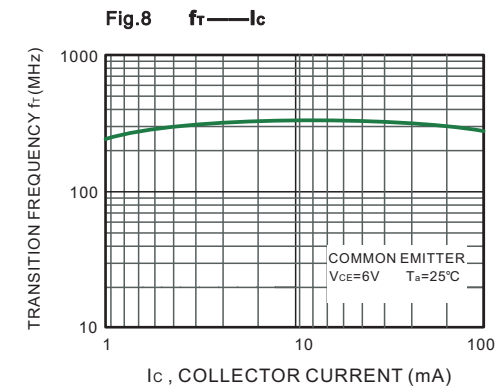
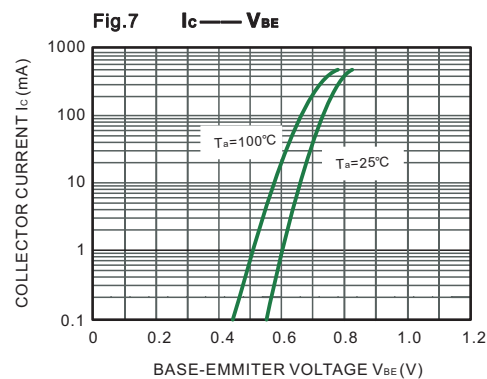
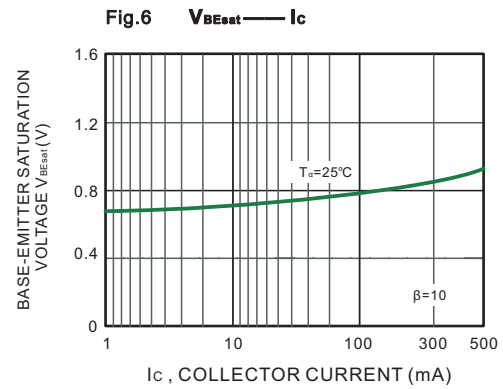
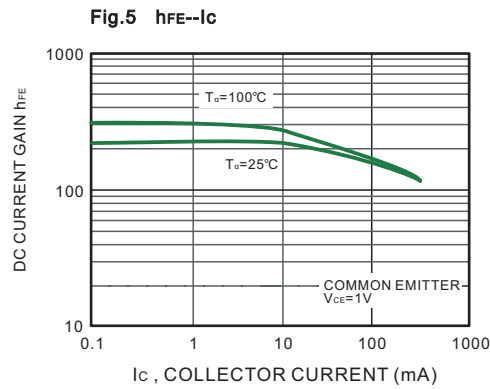
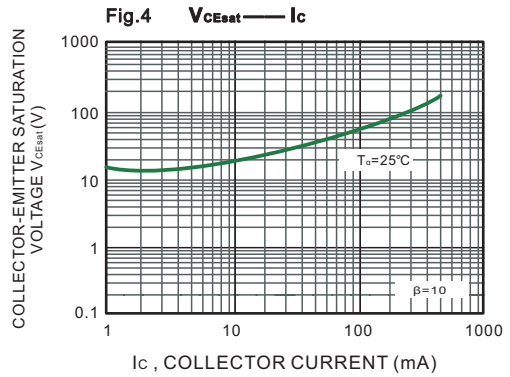
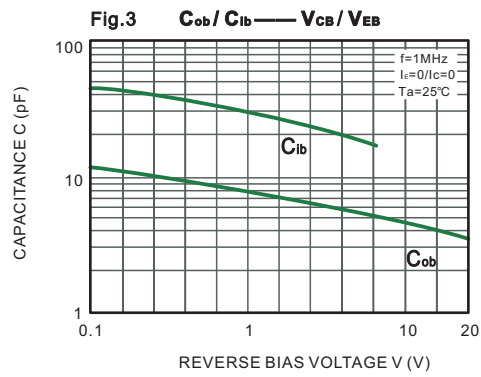
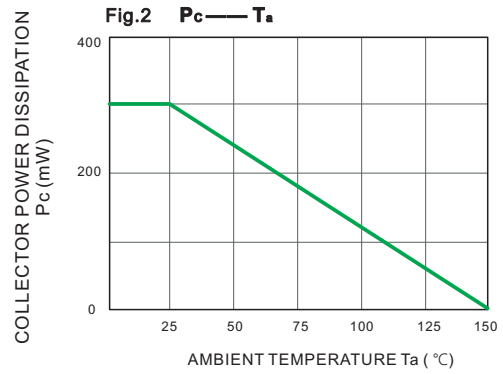
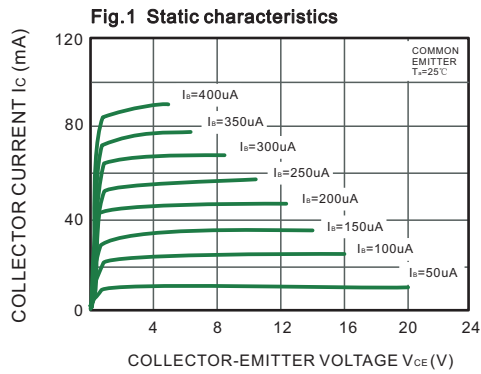
Rank	L	H	J
Range	120-200	200-350	300-400

ELECTRICAL CHARACTERISTICS (TA = 25°C unless otherwise noted.)

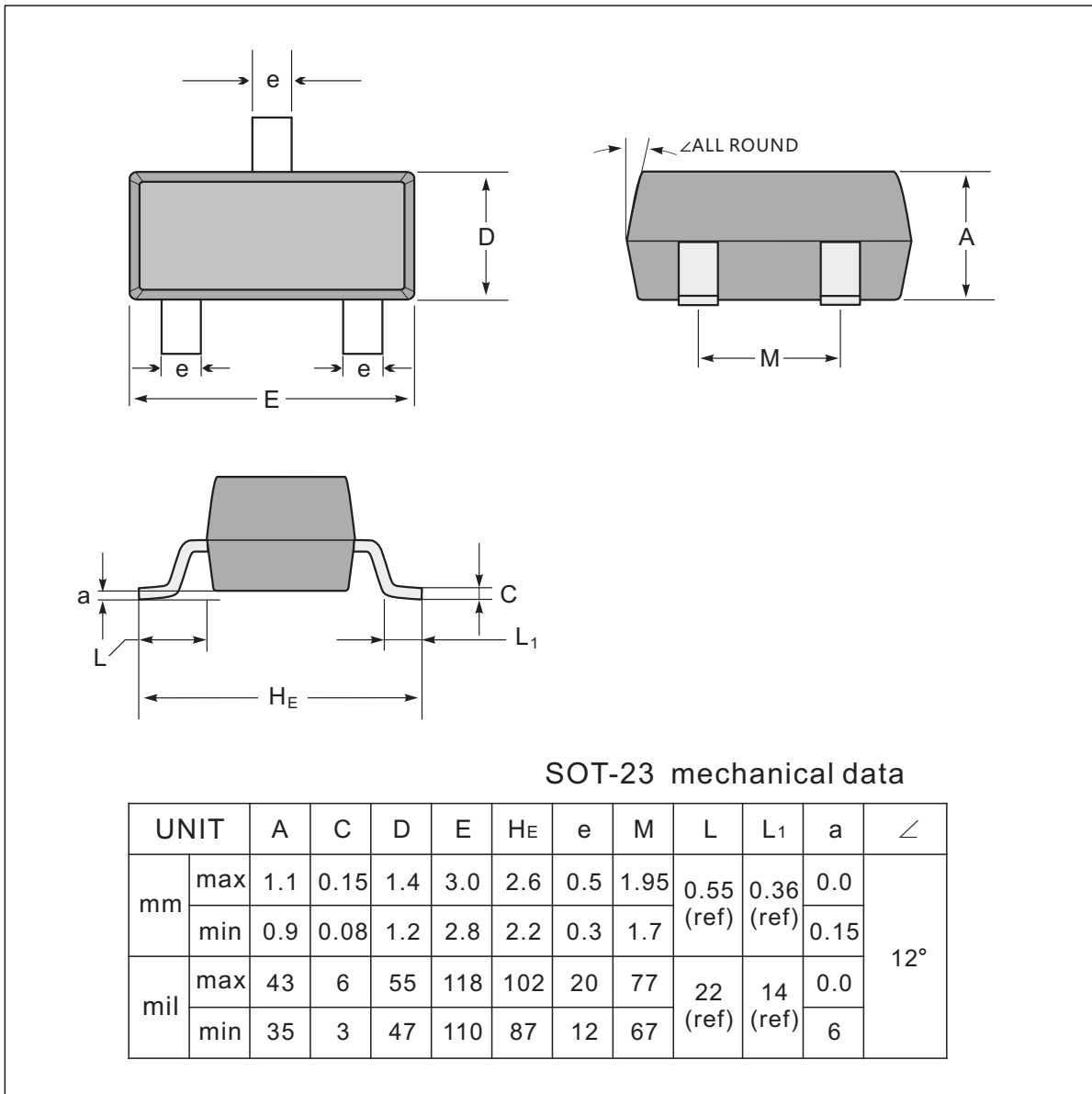
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C = 100\mu A, I_E = 0$	40			V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C = 1\text{ mA}, I_B = 0$	25			V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E = 100\mu A, I_C = 0$	5			V
Collector cut-off current	I_{CBO}	$V_{CB} = 40V, I_E = 0$			0.1	μA
Collector cut-off current	I_{CEO}	$V_{CE} = 20V, I_B = 0$			0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = 5V, I_C = 0$			0.1	μA
DC current gain	h_{FE1}	$V_{CE} = 1V, I_C = 50mA$	120		400	
	h_{FE2}	$V_{CE} = 1V, I_C = 500mA$	50			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500mA, I_B = 50mA$			0.6	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 500mA, I_B = 50mA$			1.2	V
Transition frequency	f_T	$V_{CE} = 6V, I_C = 20mA, f = 30MHz$	150			MHz



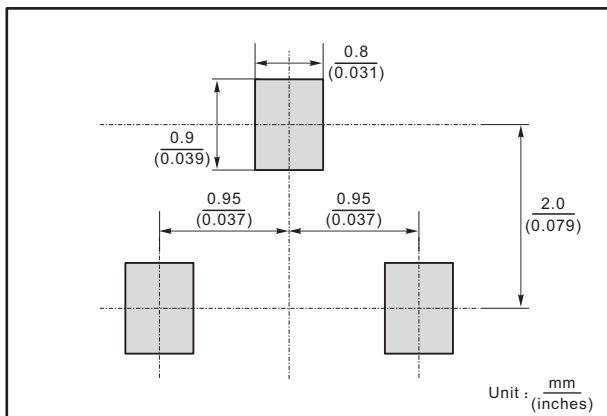
TYPICAL CHARACTERISTICS



SOT-23 Package Outline Dimensions



The recommended mounting pad size

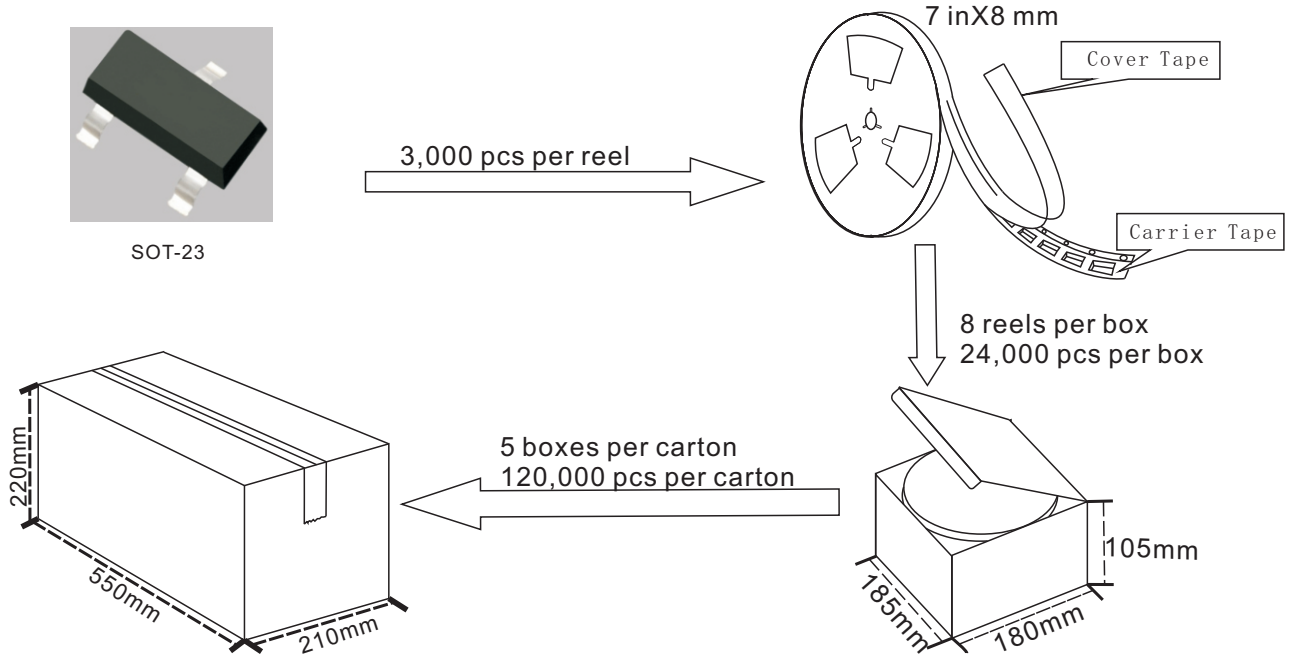


Marking

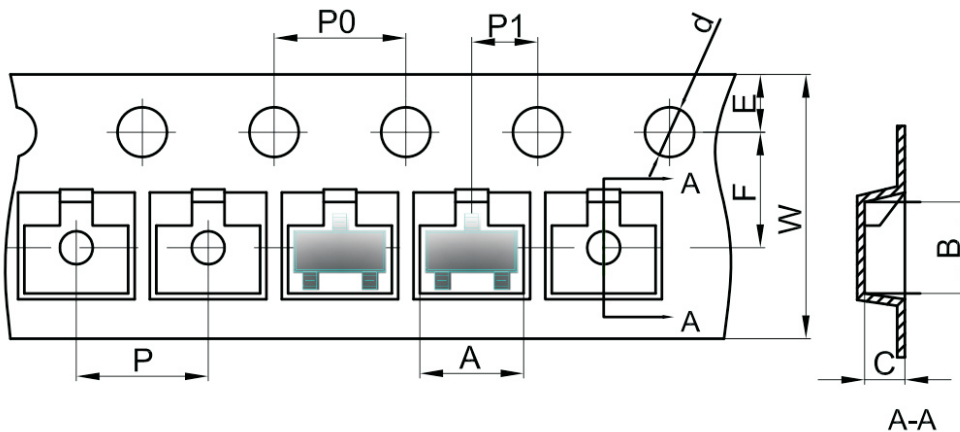
Type number	Marking code
S8050	J3Y

SOT-23 Packing

1. The method of packaging and dimension are shown as below figure. (Dimension in mm)



SOT-23 Embossed Carrier Tape



Dimensions are in millimeter

Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOT-23 Tape Leader and Trailer

