

SS8050-G (NPN)

RoHS Device

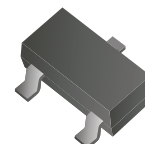
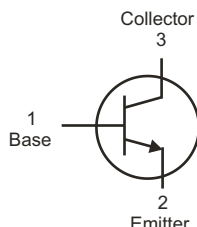


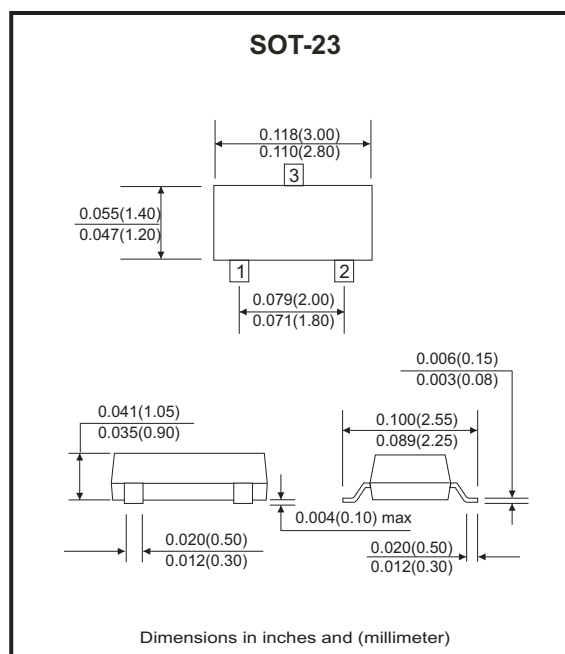
Diagram:

1 : BASE
2 : EMITTER
3 : COLLECTOR



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

Parameter	Symbol	Value	Unit
Collector-Base voltage	V_{CB0}	40	V
Collector-Emitter voltage	V_{CE0}	25	V
Emitter-Base voltage	V_{EB0}	5	V
Collector current	I_C	1.5	A
Collector power dissipation	P_C	300	mW
Thermal resistance from junction to ambient	$R_{\theta JA}$	417	$^{\circ}\text{C/W}$
Junction temperature	T_J	150	$^{\circ}\text{C}$
Storage temperature	T_{stg}	-55~+150	$^{\circ}\text{C}$



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

Parameter	Conditions	Symbol	Min	Typ	Max	Unit
Collector-Base breakdown voltage	$I_C = 100\mu\text{A}$, $I_E = 0$	$V_{(BR)CB0}$	40	-	-	V
Collector-Emitter breakdown voltage	$I_C = 0.1\text{mA}$, $I_B = 0$	$V_{(BR)CE0}$	25	-	-	V
Emitter-Base breakdown voltage	$I_E = 100\mu\text{A}$, $I_C = 0$	$V_{(BR)EB0}$	5	-	-	V
Collector cut-off current	$V_{CB} = 40\text{V}$, $I_E = 0$	I_{CB0}	-	-	0.1	μA
Collector cut-off current	$V_{CE} = 20\text{V}$, $I_E = 0$	I_{CE0}	-	-	0.1	μA
Emitter cut-off current	$V_{EB} = 5\text{V}$, $I_C = 0$	I_{EB0}	-	-	0.1	μA
DC current gain	$V_{CE} = 1\text{V}$, $I_C = 100\text{mA}$	$h_{FE(1)}$	200	-	350	
	$V_{CE} = 1\text{V}$, $I_C = 800\text{mA}$	$h_{FE(2)}$	40	-	-	
Collector-Emitter saturation voltage	$I_C = 800\text{mA}$, $I_B = 80\text{mA}$	$V_{CE(sat)}$	-	-	0.5	V
Base-Emitter saturation voltage	$I_C = 800\text{mA}$, $I_B = 80\text{mA}$	$V_{BE(sat)}$	-	-	1.2	V
Transition frequency	$V_{CE} = 10\text{V}$, $I_C = 50\text{mA}$, $f = 30\text{MHz}$	f_T	100	-	-	MHz

RATING AND CHARACTERISTIC CURVES (SS8050-G)

Fig.1 - Static Characteristic

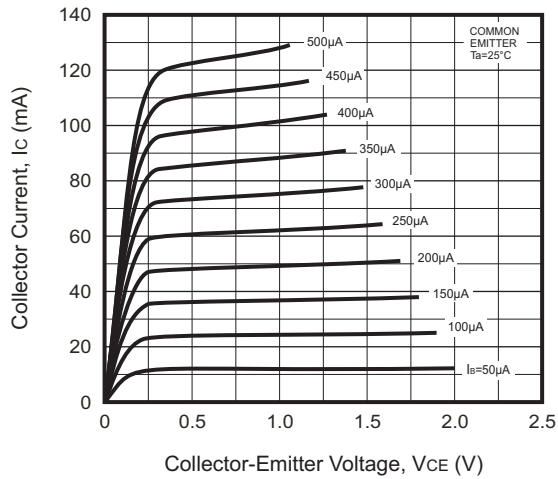


Fig.2 - $h_{FE} - I_c$

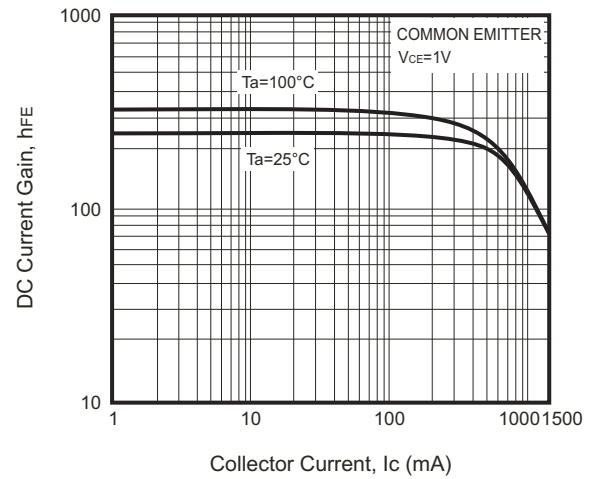


Fig.3 - $V_{CEsat} - I_c$

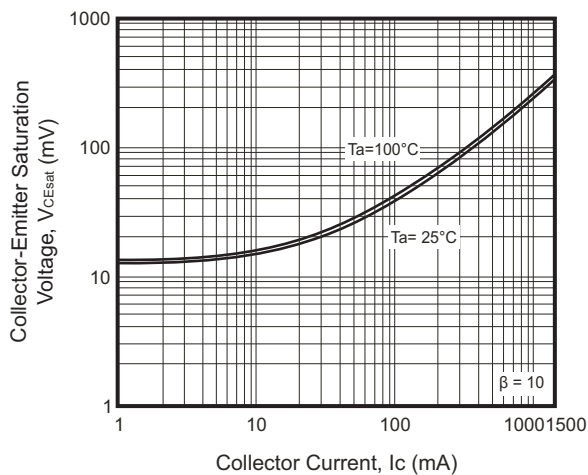


Fig.4 - $V_{BEsat} - I_c$

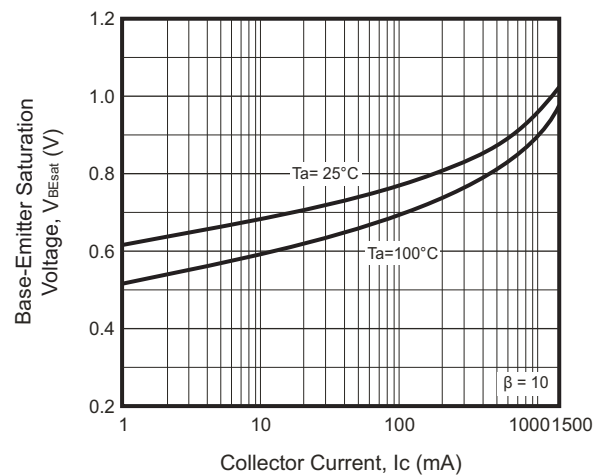


Fig.5 - $V_{BE} - I_c$

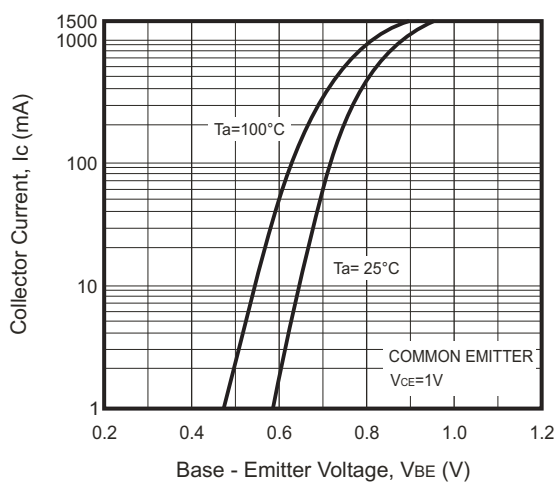
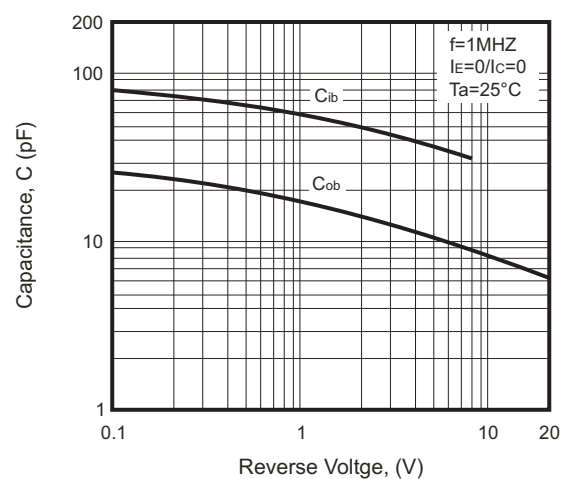


Fig.6 - $C_{ob}/C_{ib} - V_{CB}/V_{EB}$



Company reserves the right to improve product design, functions and reliability without notice.

RATING AND CHARACTERISTIC CURVES (SS8050-G)

Fig.7 - F_T — I_C

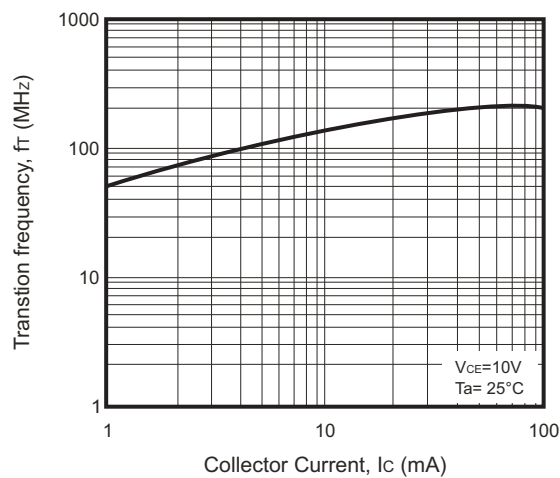
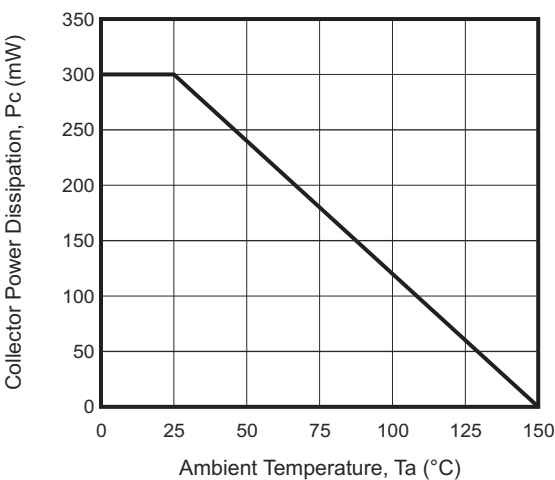
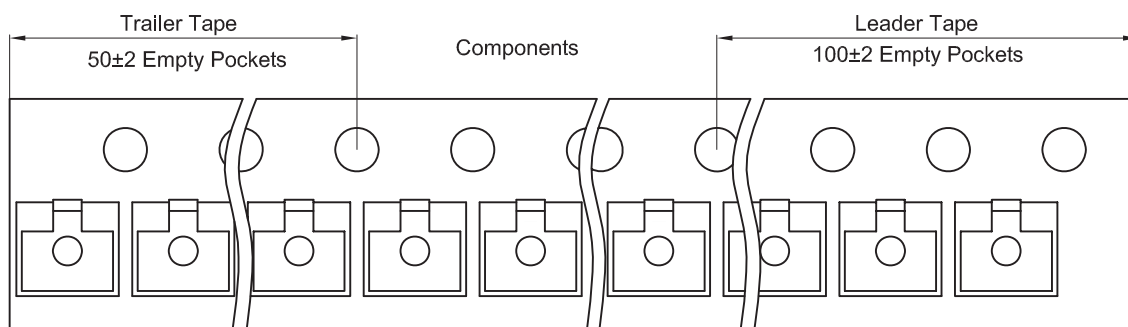
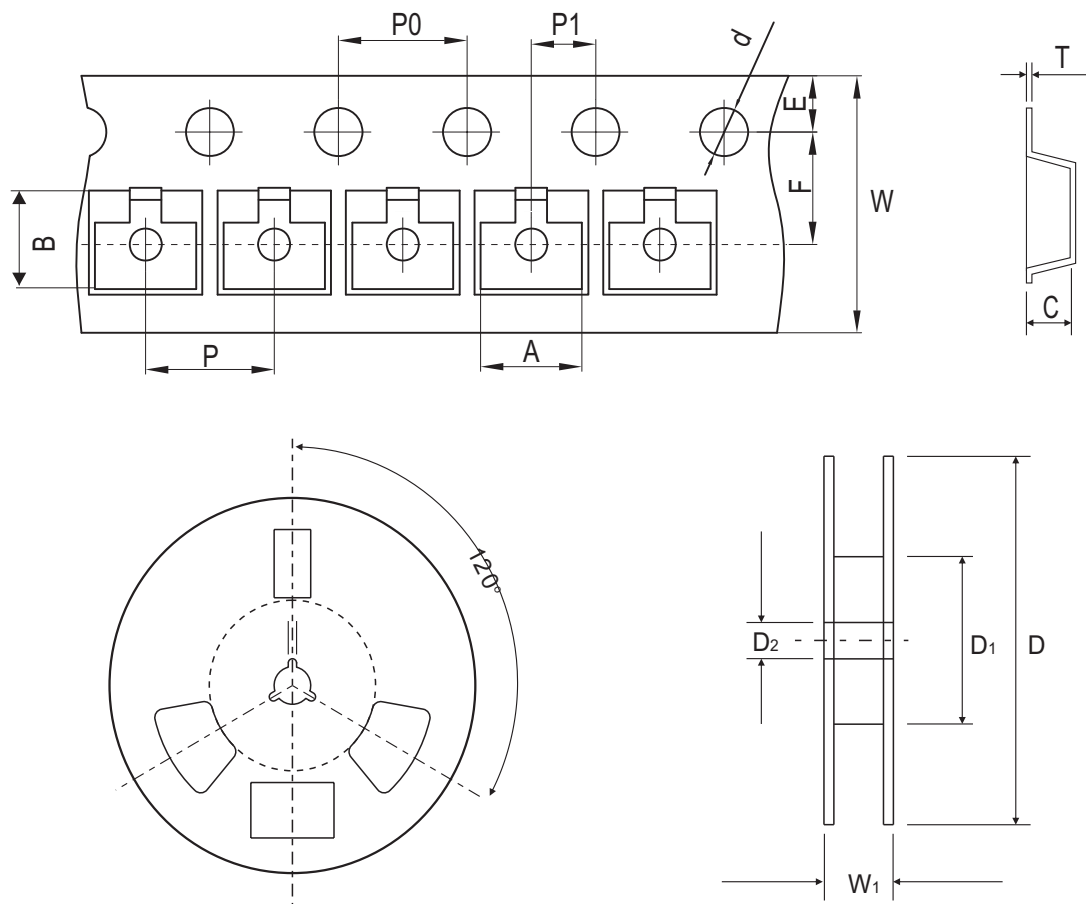


Fig.8 - P_C — T_a



Reel Taping Specification



SOT-23	SYMBOL	A	B	C	d	D	D1	D2
	(mm)	3.15 ± 0.10	2.77 ± 0.10	1.22 ± 0.10	1.50 ± 0.10	178.00 ± 2.00	54.40 ± 1.00	13.00 ± 1.00
	(inch)	0.124 ± 0.004	0.109 ± 0.004	0.048 ± 0.004	0.059 ± 0.004	7.087 ± 0.079	2.142 ± 0.039	0.512 ± 0.039

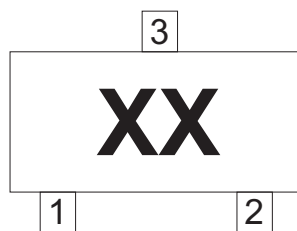
SOT-23	SYMBOL	E	F	P	P0	P1	W	W1
	(mm)	1.75 ± 0.10	3.50 ± 0.10	4.00 ± 0.10	4.00 ± 0.10	2.00 ± 0.10	$8.00 + 0.30 / - 0.10$	12.30 ± 1.00
	(inch)	0.069 ± 0.004	0.138 ± 0.004	0.157 ± 0.004	0.157 ± 0.004	0.079 ± 0.004	$0.315 + 0.012 / - 0.004$	0.484 ± 0.039

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REV: A

Marking Code

Part Number	Marking Code
SS8050-G	Y1



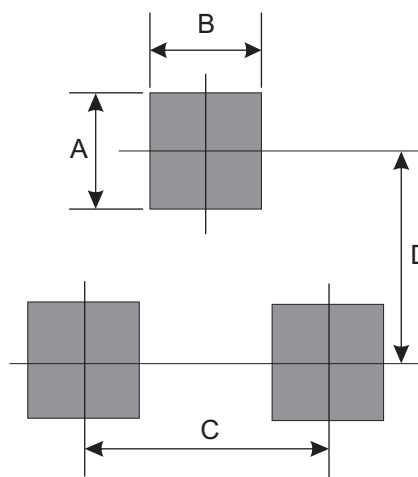
xx = Product type marking code

Suggested PAD Layout

SIZE	SOT-23	
	(mm)	(inch)
A	0.80	0.031
B	0.60	0.024
C	1.90	0.075
D	2.02	0.080

Note:

- 1.General tolerance: $\pm 0.05\text{mm}$.
- 2.The pad layout is for reference purposes only.



Standard Packaging

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