Chipsmall Limited consists of a professional team with an average of over 10 year of expertise in the distribution of electronic components. Based in Hongkong, we have already established firm and mutual-benefit business relationships with customers from,Europe,America and south Asia,supplying obsolete and hard-to-find components to meet their specific needs.

With the principle of “Quality Parts,Customers Priority,Honest Operation,and Considerate Service”,our business mainly focus on the distribution of electronic components. Line cards we deal with include Microchip,ALPS,ROHM,Xilinx,Pulse,ON,Everlight and Freescale. Main products comprise IC,Modules,Potentiometer,IC Socket,Relay,Connector.Our parts cover such applications as commercial,industrial, and automotives areas.

We are looking forward to setting up business relationship with you and hope to provide you with the best service and solution. Let us make a better world for our industry!

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Address: A1208, Overseas Decoration Building, #122 Zhenhua RD., Futian, Shenzhen, China

General Purpose Transistor

SS8050-G (NPN)

RoHS Device

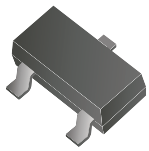
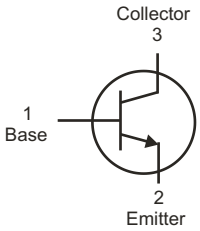
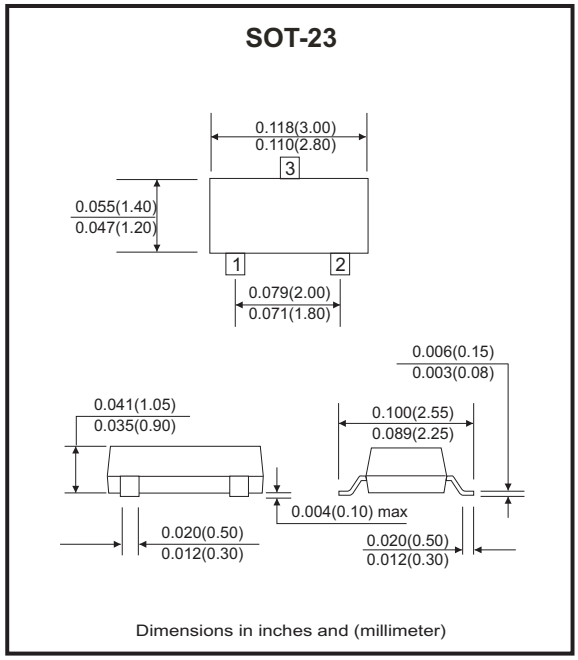


Diagram:

1 : BASE
2 : EMITTER
3 : COLLECTOR





Maximum Ratings (at T_A=25°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	I_C	1.5	A
Collector power dissipation	P_C	300	mW
Thermal resistance from junction to ambient	$R_{\theta JA}$	417	°C/W
Junction temperature	T_J	150	°C
Storage temperature	Tstg	-55~+150	°C

Electrical Characteristics (at T_A=25°C unless otherwise noted)

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

RATING AND CHARACTERISTIC CURVES (SS8050-G)

Fig.1 - Static Characteristic

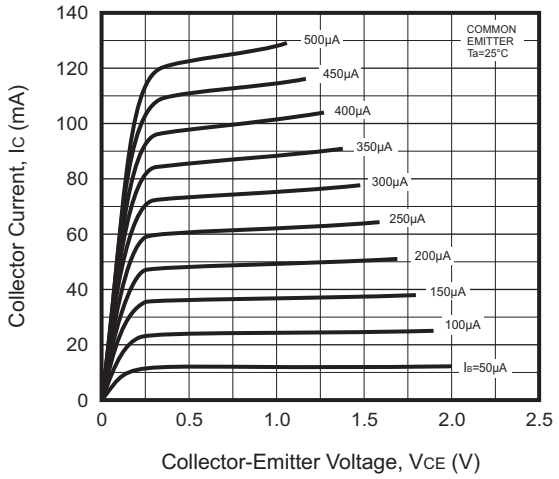


Fig.2 - h_{FE} — I_C

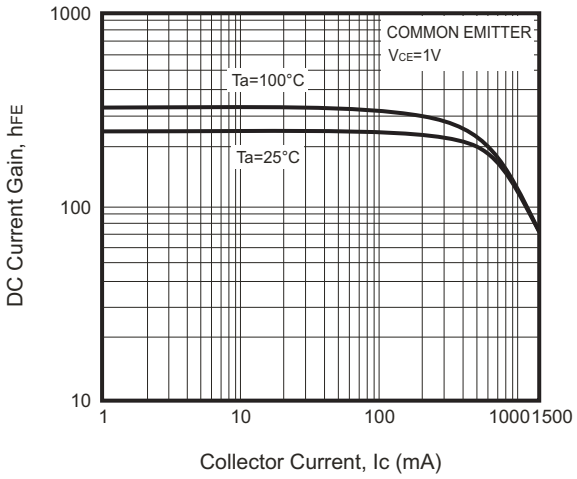


Fig.3 - V_{CEsat} — I_C

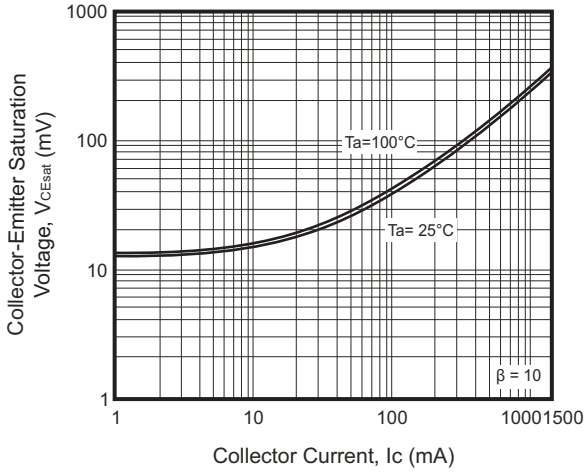


Fig.4 - V_{BEsat} — I_C

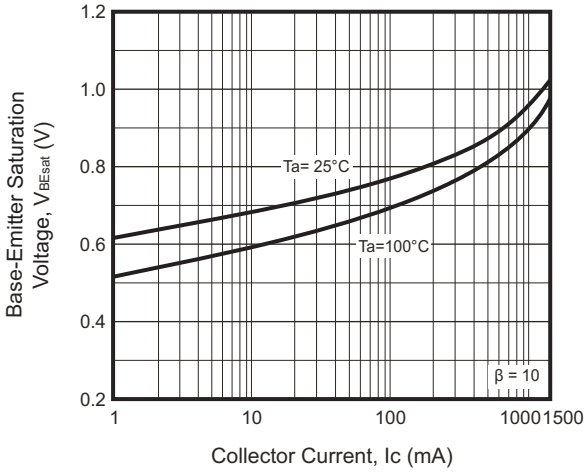


Fig.5 - V_{BE} — I_C

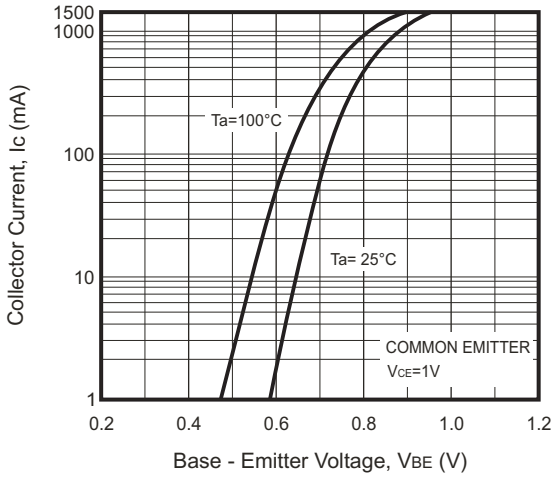
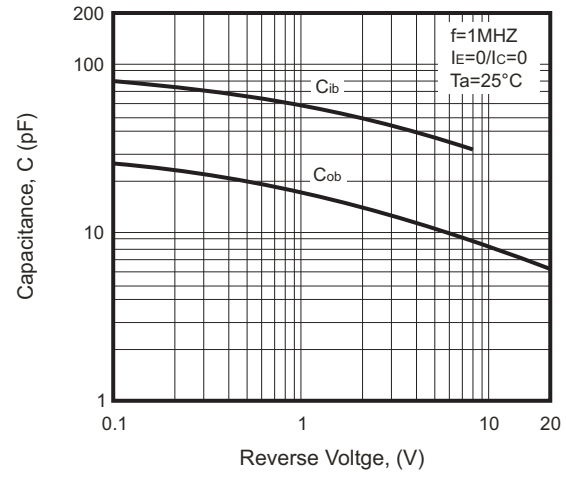


Fig.6 - C_{ob}/C_{ib} — V_{CB}/V_{EB}



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

REV: A

RATING AND CHARACTERISTIC CURVES (SS8050-G)

Fig.7 - F_T — I_C

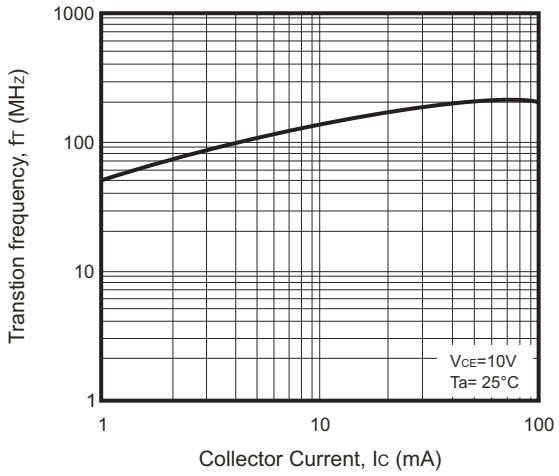
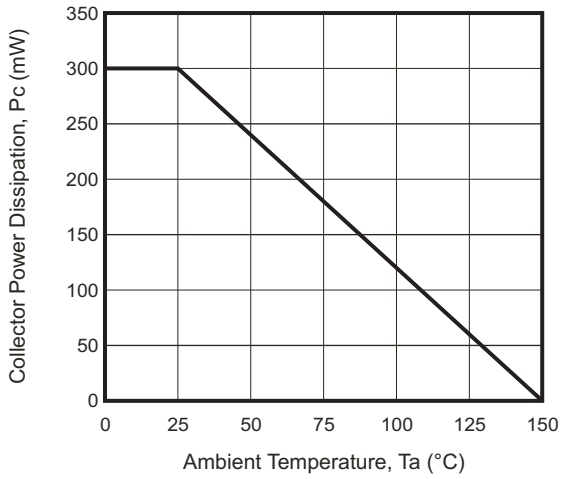
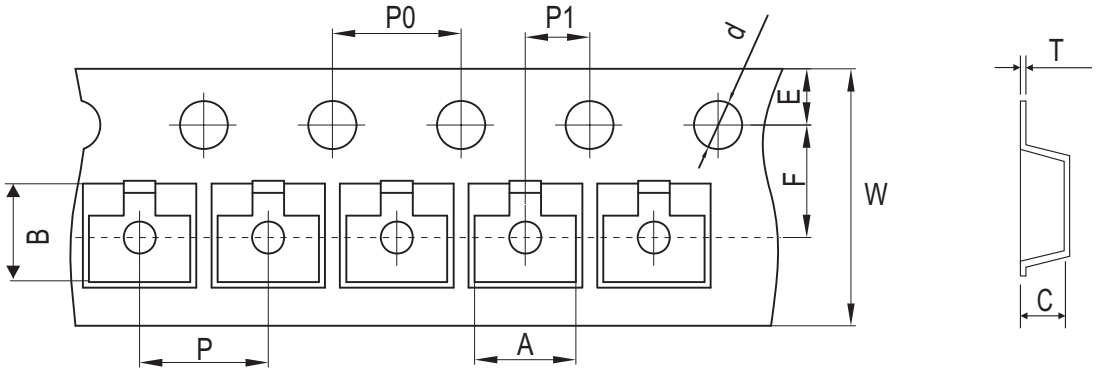
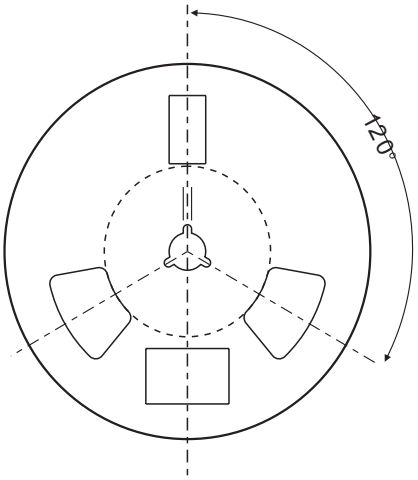


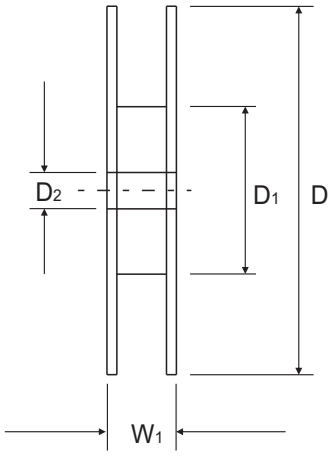
Fig.8 - P_C – Ta

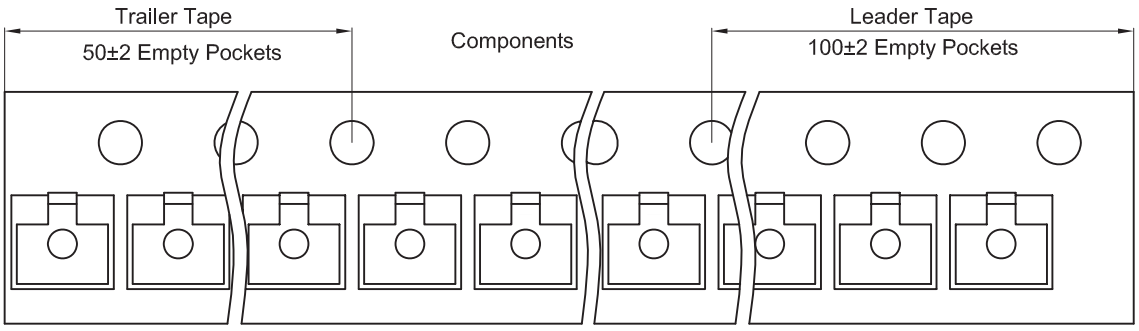


Reel Taping Specification







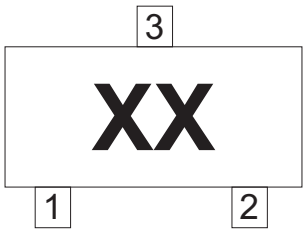


	SYMBOL	A	B	C	d	D	D1	D2
SOT-23	(mm)	3.15 ± 0.10	2.77 ± 0.10	1.22 ± 0.10	1.50 ± 0.10	178.00 ± 2.00	54.40 ± 1.00	13.00 ± 1.00
	(inch)	0.124 ± 0.004	0.109 ± 0.004	0.048 ± 0.004	0.059 ± 0.004	7.087 ± 0.079	2.142 ± 0.039	0.512 ± 0.039

	SYMBOL	E	F	P	P0	P1	W	W1
SOT-23	(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

Marking Code

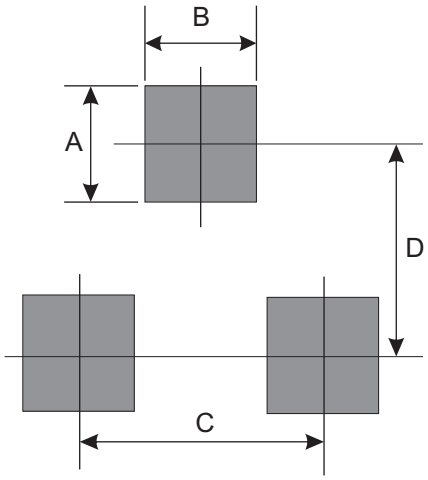
Part Number	Marking Code
SS8050-G	Y1



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: ±0.05mm.
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