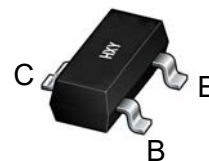




Features

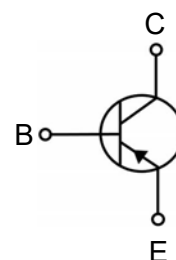
- High current surface mount PNP silicon switching transistor for Load management in portable applications



SOT-23

Package Marking and Ordering Information

Product ID	Pack	Marking	Qty(PCS)
PBSS5120T	SOT-23	589	3000



Maximum Ratings (Ta=25°C unless otherwise noted)

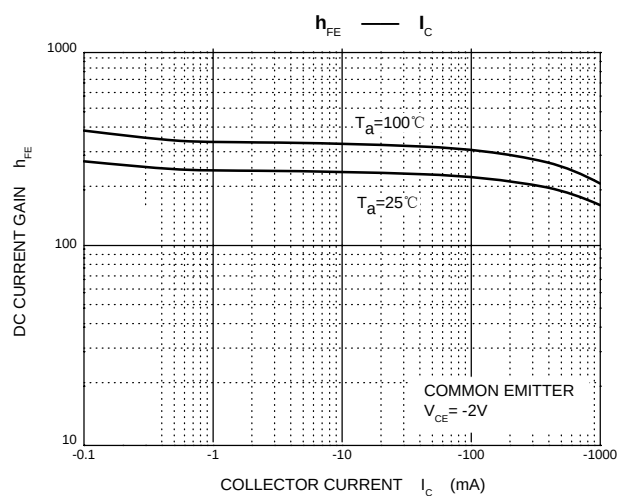
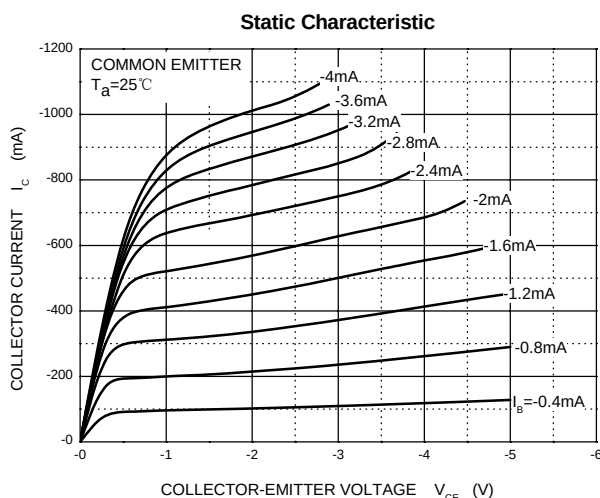
Parameter	Symbol	Limit	Unit
Collector-Base Voltage	V_{CBO}	-50	V
Collector-Emitter Voltage	V_{CEO}	-30	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-1	A
Collector Power Dissipation	P_C	310	mW
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	403	°C/W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{stg}	-55~+150	°C

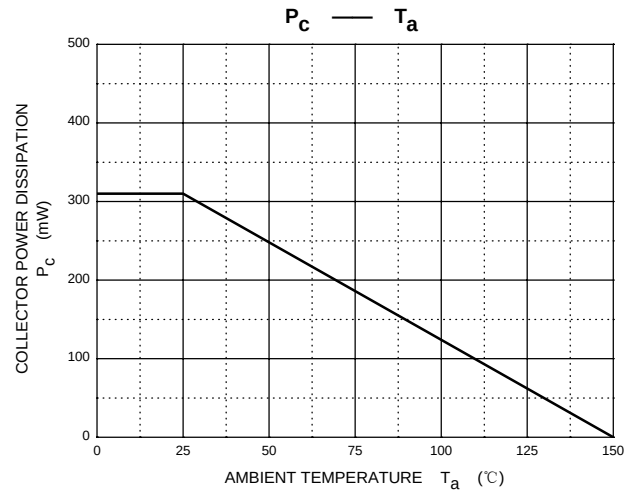
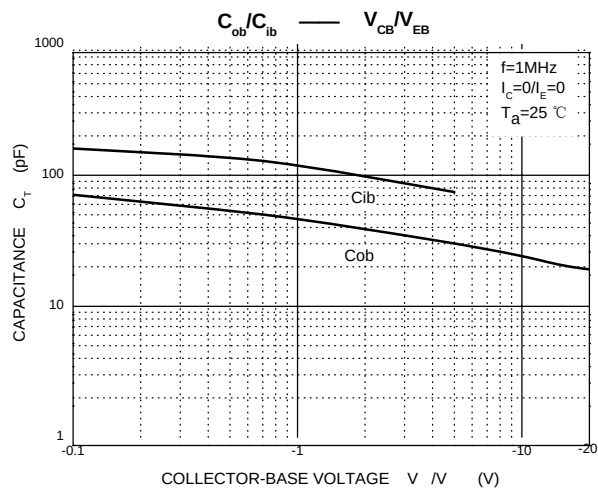
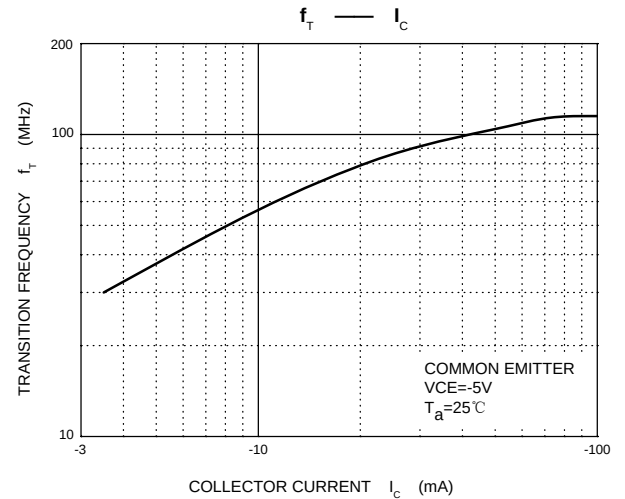
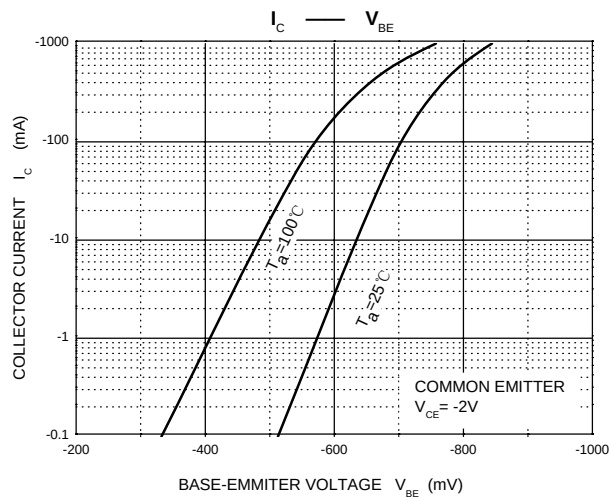
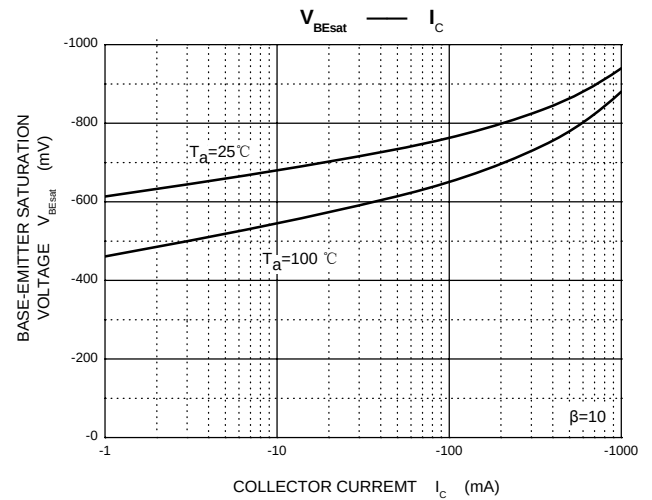
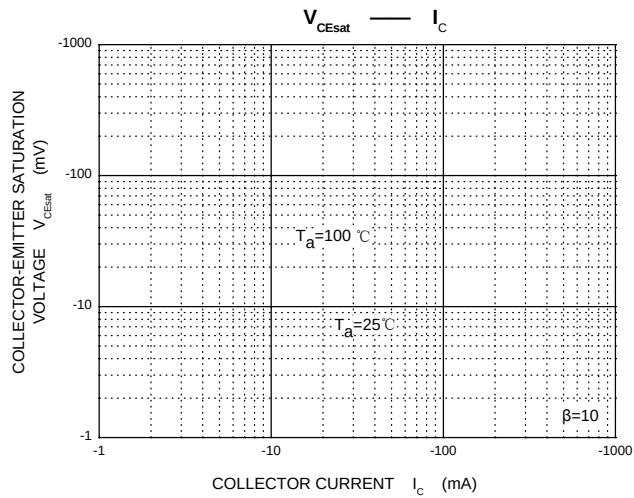


Electrical Characteristics (Ta=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-100\mu A, I_E=0$	-50		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-10mA, I_B=0$	-30		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-100\mu A, I_C=0$	-5		V
Collector cut-off current	I_{CBO}	$V_{CB}=-30V, I_E=0$		-0.1	μA
Collector-emitter cut-off current	I_{CES}	$V_{CES}=-30V$		-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB}=-4V, I_C=0$		-0.1	μA
DC current gain	h_{FE1}	$V_{CE}=-2V, I_C=-1mA$	100		
	h_{FE2}	$V_{CE}=-2V, I_C=-500mA$	100	300	
	h_{FE3}	$V_{CE}=-2V, I_C=-1A$	80		
	h_{FE4}	$V_{CE}=-2V, I_C=-2A$	40		
Collector-emitter saturation voltage	$V_{CE(sat)1}$	$I_C=-500mA, I_B=-50mA$		-0.25	V
	$V_{CE(sat)2}$	$I_C=-1A, I_B=-100mA$		-0.3	V
	$V_{CE(sat)3}$	$I_C=-2A, I_B=-200mA$		-0.65	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C=-1A, I_B=-100mA$		-1.2	V
Base-emitter Turn-on voltage	$V_{BE(on)}$	$V_{CE}=-2V, I_C=-1A$		-1.1	V
Transition frequency	f_T	$V_{CE}=-5V, I_C=-100mA$, $f=100MHz$	100		MHz
Collector Output Capacitance	C_{ob}	$f=1MHz$		15	pF

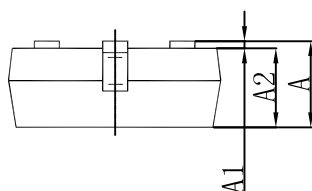
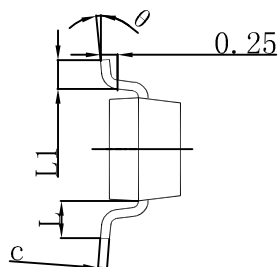
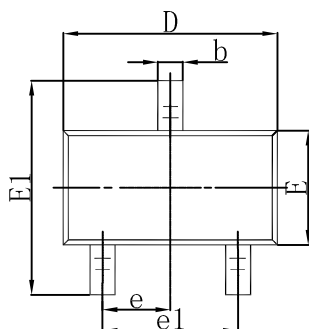
Typical Characteristics





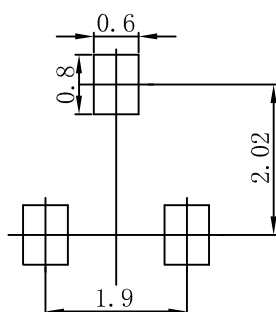


SOT-23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

SOT-23 Suggested Pad Layout

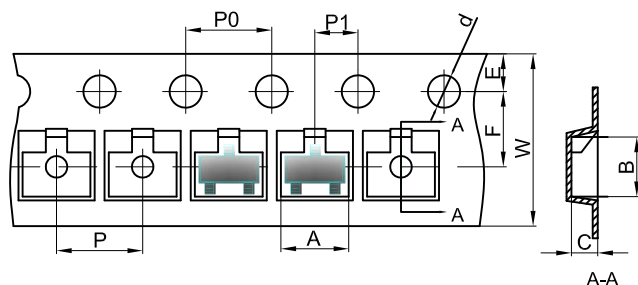


Note:
1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.



SOT-23 Tape and Reel

SOT-23 Embossed Carrier Tape

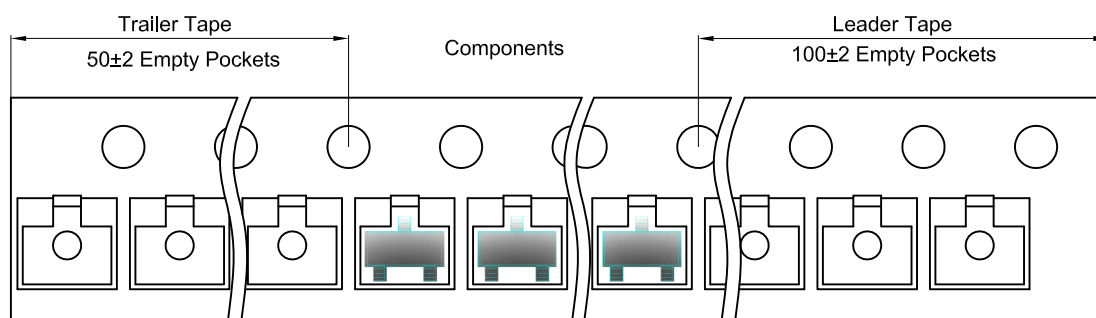


Packaging Description:

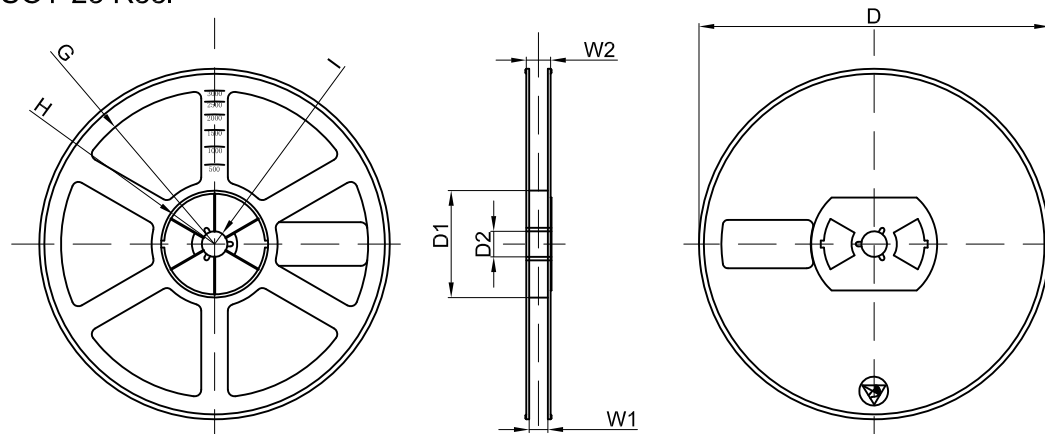
SOT-23 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 17.8cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

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



SOT-23 Reel



Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7"Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

REEL	Reel Size	Box	Box Size(mm)	Carton	Carton Size(mm)	G.W.(kg)
3000 pcs	7 inch	45,000 pcs	203×203×195	180,000 pcs	438×438×220	



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