

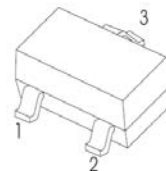
FEATURES

- High Collector Current
- Complementary to SS8050

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

Symbol	Parameter	Value	Unit
V _{CB0}	Collector-Base Voltage	-40	V
V _{CEO}	Collector-Emitter Voltage	-25	V
V _{EB0}	Emitter-Base Voltage	-5	V
I _C	Collector Current	-1.5	A
P _C	Collector Power Dissipation	300	mW
R _{θJA}	Thermal Resistance From Junction To Ambient	417	°C/W
T _J , T _{stg}	Operation Junction and Storage Temperature Range	-55~+150	°C

SOT - 23



1. BASE
2. EMITTER
3. COLLECTOR

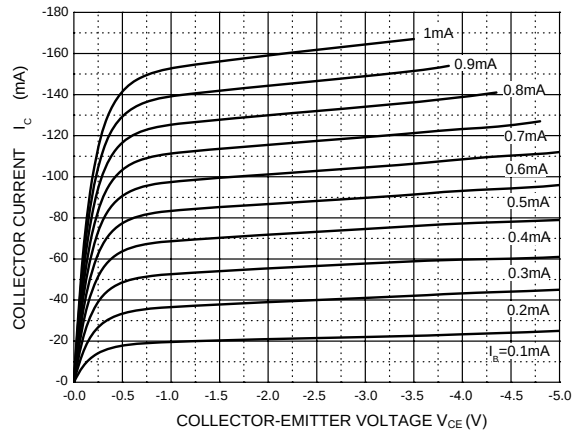
ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V _{(BR)CBO}	I _C =-100μA, I _E =0	-40			V
Collector-emitter breakdown voltage	V _{(BR)CEO}	I _C =-0.1mA, I _B =0	-25			V
Emitter-base breakdown voltage	V _{(BR)EBO}	I _E =-100μA, I _C =0	-5			V
Collector cut-off current	I _{CBO}	V _{CB} =-40V, I _E =0			-100	nA
Collector cut-off current	I _{CEO}	V _{CE} =-20V, I _B =0			-100	nA
Emitter cut-off current	I _{EBO}	V _{EB} =-5V, I _C =0			-100	nA
DC current gain	h _{FE(1)}	V _{CE} =-1V, I _C =-100mA	120		400	
	h _{FE(2)}	V _{CE} =-1V, I _C =-800mA	40			
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =-800mA, I _B =-80mA			-0.5	V
Base-emitter saturation voltage	V _{BE(sat)}	I _C =-800mA, I _B =-80mA			-1.2	V
Base-emitter voltage	V _{BE}	V _{CE} =-1V, I _C =-10mA			-1	V
Transition frequency	f _T	V _{CE} =-10V, I _C =-50mA, f=30MHz	100			MHz
Collector output capacitance	C _{ob}	V _{CB} =-10V, I _E =0, f=1MHz			20	pF

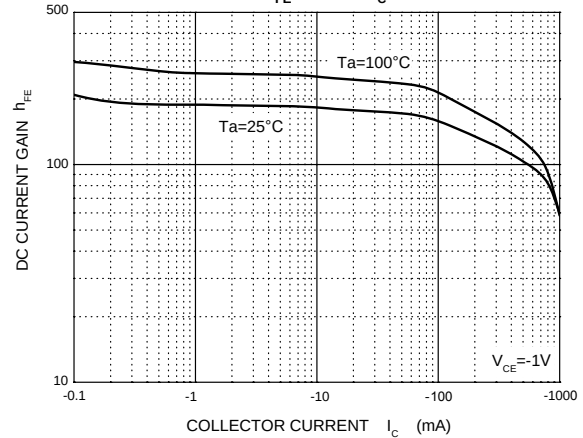
CLASSIFICATION OF h_{FE(1)}

RANK	L	H	J
RANGE	120 - 200	200 - 350	300 - 400
MARKING	Y2		

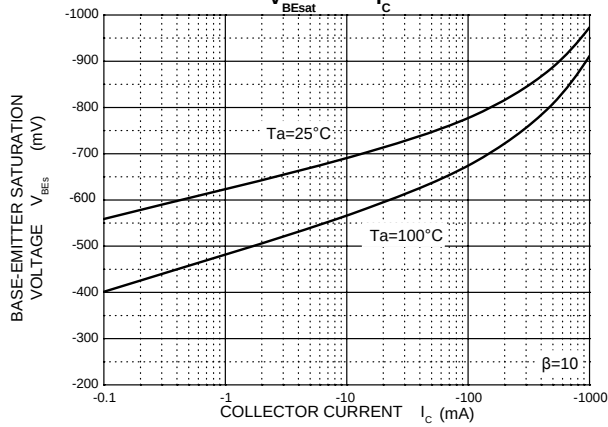
Static Characteristic



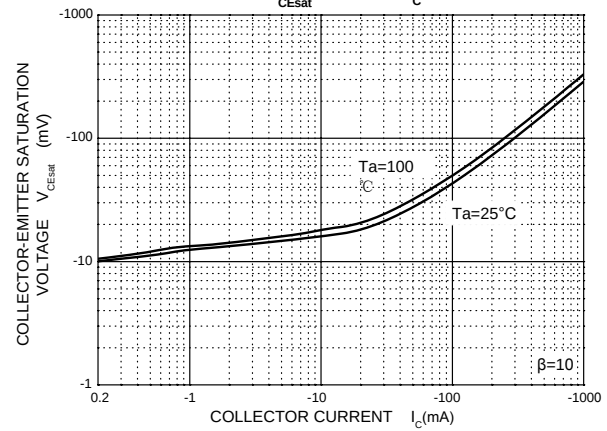
$h_{FE} \text{ — } I_C$



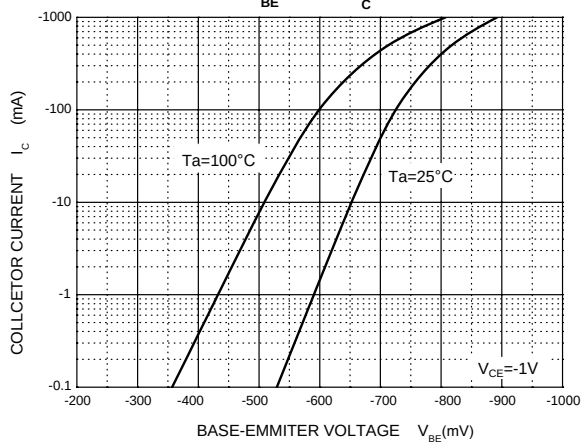
$V_{BEsat} \text{ — } I_C$



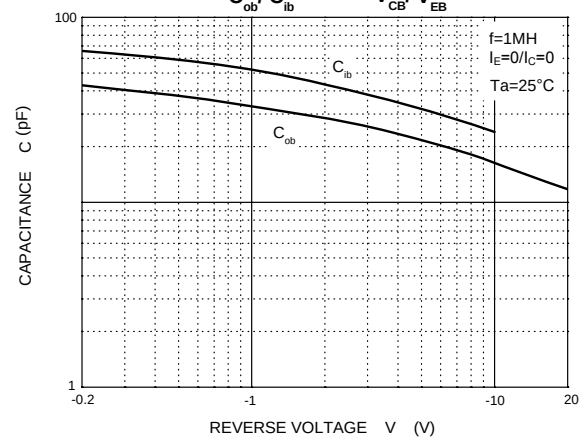
$V_{CEsat} \text{ — } I_C$



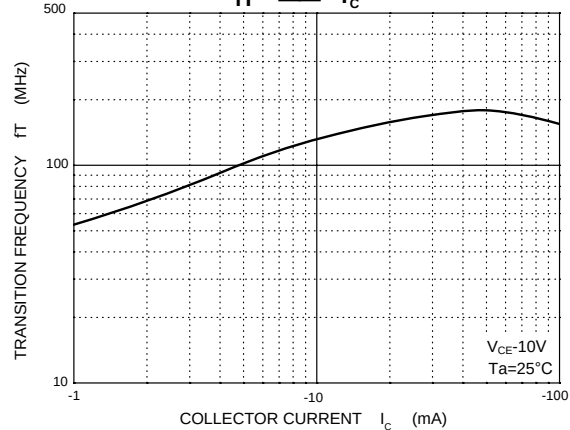
$V_{BE} \text{ — } I_C$



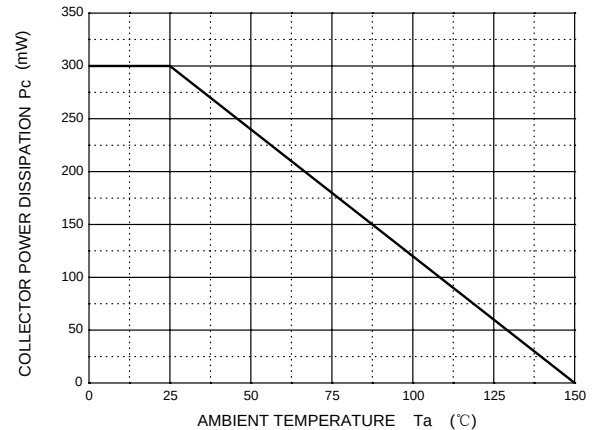
$C_{ob}/C_{ib} \text{ — } V_{CB}/V_{EB}$



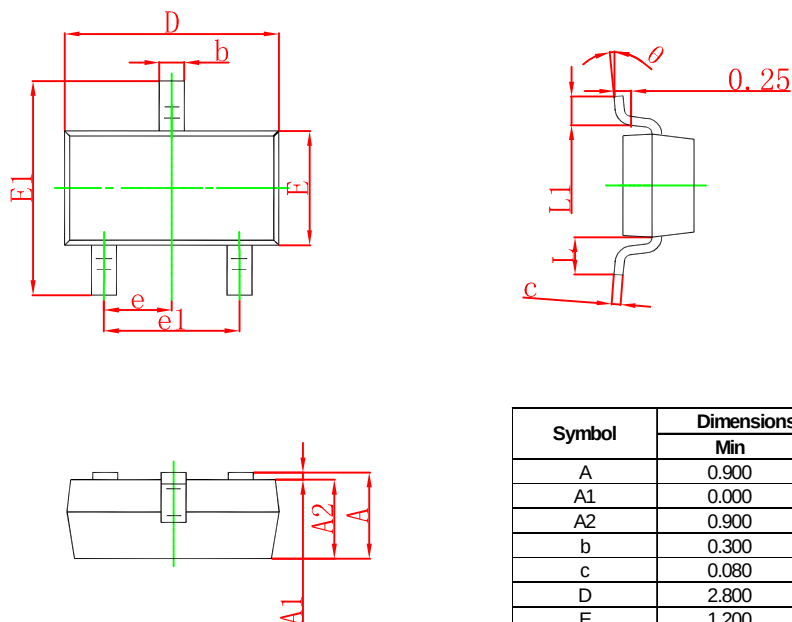
$f_T \text{ — } I_C$



$P_c \text{ — } T_a$

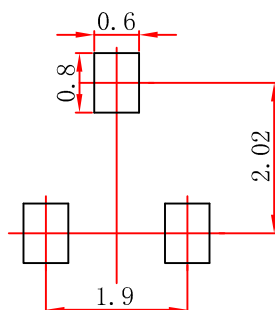


SOT-23 Package Outline Dimensions



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°

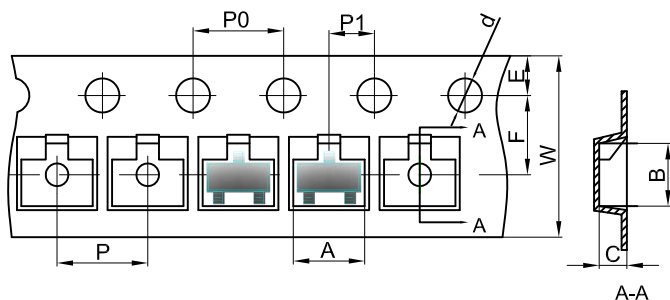
SOT-23 Suggested Pad Layout



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

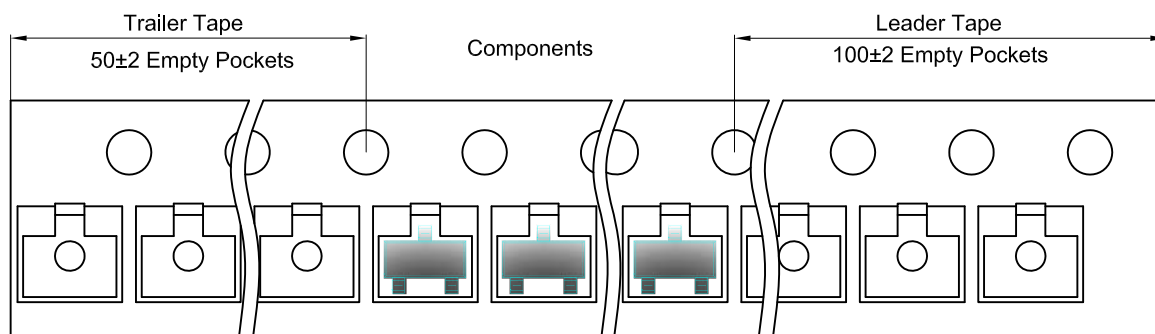


Packaging Description:

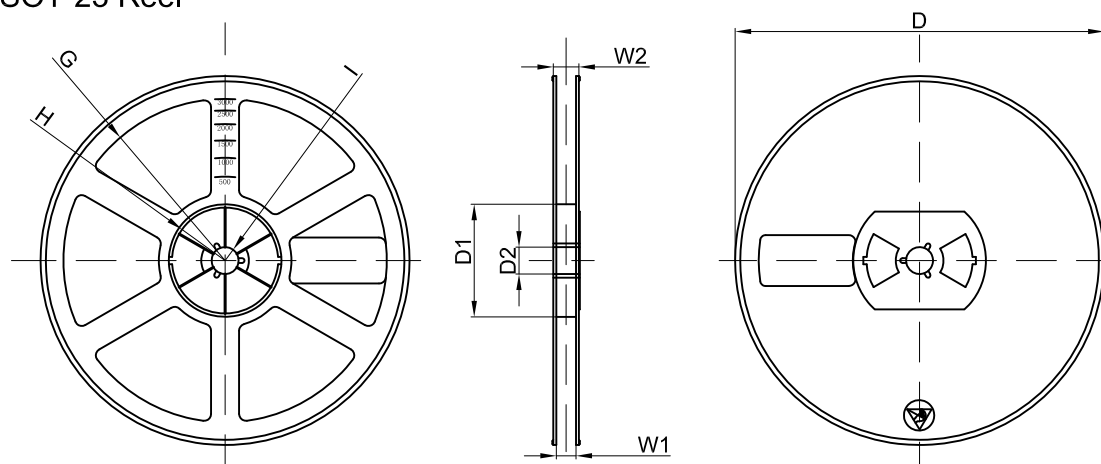
SOT-23 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in 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	