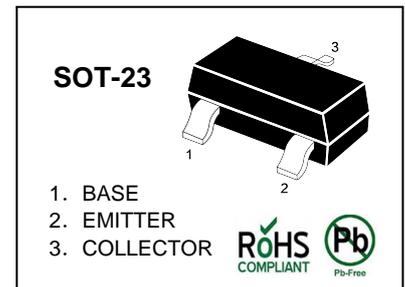


PNP Silicon Epitaxial Planar Transistors

for low frequency amplifier and driver applications



Absolute Maximum Ratings ($T_a = 25\text{ }^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	15	V
Collector Emitter Voltage	$-V_{CEO}$	12	V
Emitter Base Voltage	$-V_{EBO}$	6	V
Collector Current	$-I_C$	2	A
	$-I_{CP}$	4	A
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_J	150	$^\circ\text{C}$
Storage Temperature Range	T_s	-55 to +150	$^\circ\text{C}$

(1) Single pulse, $P_w = 1\text{ ms}$.

Characteristics at $T_{amb} = 25\text{ }^\circ\text{C}$

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $-V_{CE} = 2\text{ V}$, $-I_C = 200\text{ mA}$	h_{FE}	270	-	680	-
Collector Base Breakdown Voltage at $-I_C = 10\text{ }\mu\text{A}$	$-V_{(BR)CBO}$	15	-	-	V
Collector Emitter Breakdown Voltage at $-I_C = 1\text{ mA}$	$-V_{(BR)CEO}$	12	-	-	V
Emitter Base Breakdown Voltage at $-I_E = 10\text{ }\mu\text{A}$	$-V_{(BR)EBO}$	6	-	-	V
Collector Emitter Saturation Voltage at $-I_C = 1\text{ A}$, $-I_B = 50\text{ mA}$	$-V_{CEsat}$	-	-	0.18	V
Collector Cutoff Current at $-V_{CB} = 15\text{ V}$	$-I_{CBO}$	-	-	100	nA
Emitter Cutoff Current at $-V_{EB} = 6\text{ V}$	$-I_{EBO}$	-	-	100	nA
Transition Frequency at $-V_{CE} = 2\text{ V}$, $I_E = 200\text{ mA}$, $f = 100\text{ MHz}$	f_T	-	360	-	MHz
Collector Output Capacitance at $-V_{CB} = 10\text{ V}$, $I_E = 0\text{ mA}$, $f = 1\text{ MHz}$	C_{ob}	-	15	-	pF

Typical Characteristics

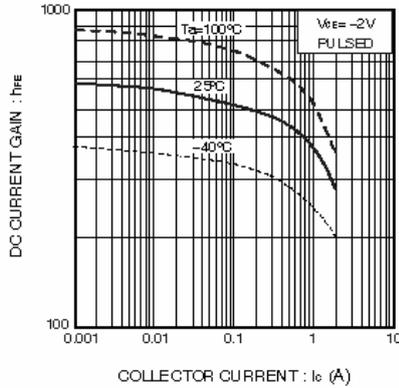


Fig.1 DC current gain vs. collector current

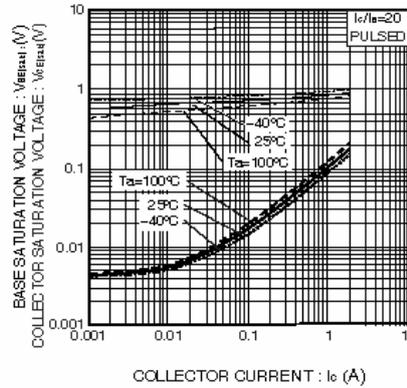


Fig.2 Collector-emitter saturation voltage vs. collector current

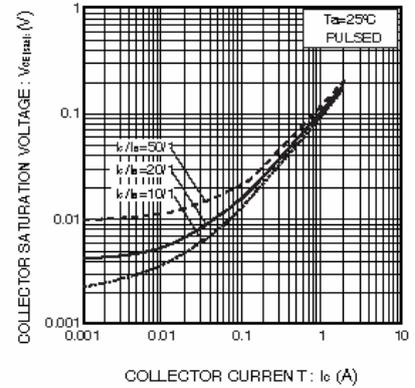


Fig.3 Collector-emitter saturation voltage vs. collector current

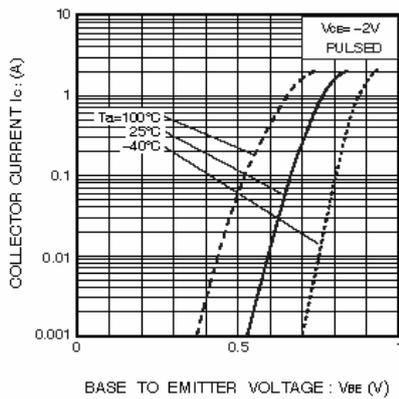


Fig.4 Grounded emitter propagation characteristics

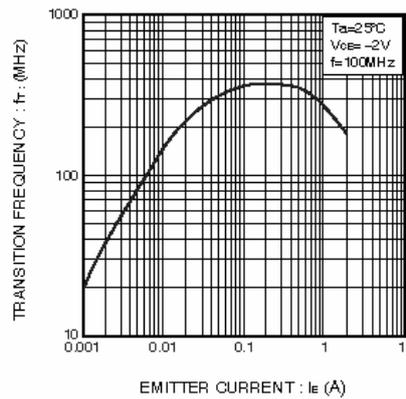


Fig.5 Gain bandwidth product vs. emitter current

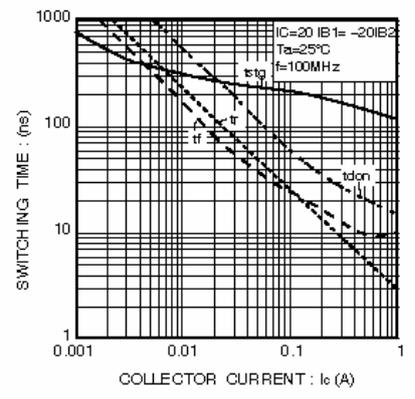


Fig.6 Switching time

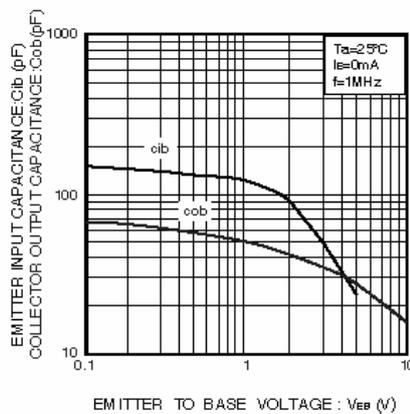
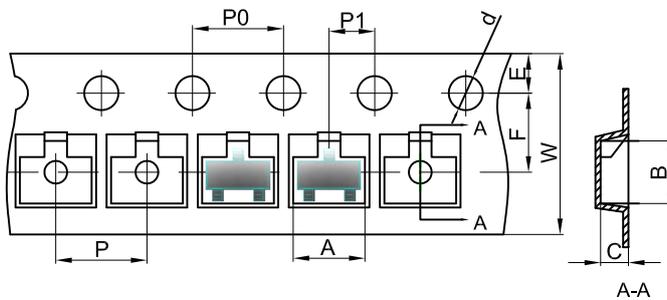


Fig.7 Collector output capacitance vs. collector-base voltage
Emitter input capacitance vs. emitter-base voltage

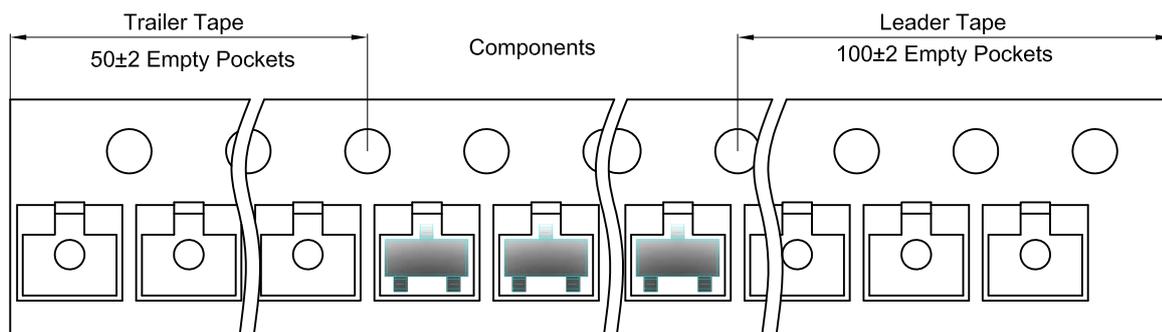
SOT-23 Tape and Reel

SOT-23 Embossed Carrier Tape

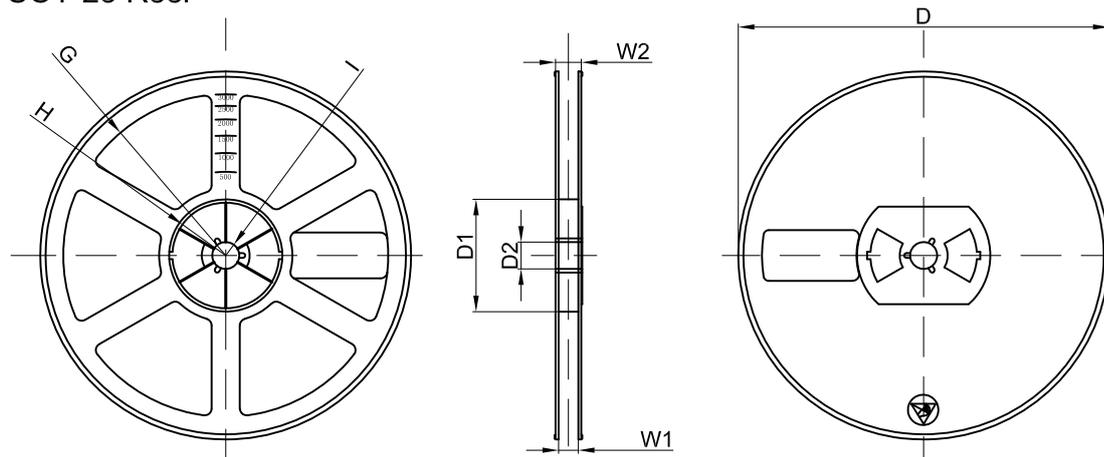


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOT-23 Tape Leader and Trailer



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	



SYMBOL	MILLIMETER	
	MIN	MAX
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950 TYP	
e1	1.800	2.000
L	0.550 REF	
L1	0.300	0.500
θ	0°	8°

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