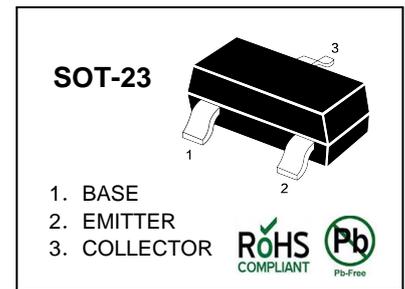


PNP Silicon Epitaxial Planar Transistor

For use in small type equipments, especially recommended or hybrid circuit and other applications

The transistor is subdivided into five groups A, B, C, D and E, according to its DC current gain.



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

Parameter	Symbol	Value	Unit
Collector Base Voltage	$-V_{CBO}$	30	V
Collector Emitter Voltage	$-V_{CEO}$	25	V
Emitter Base Voltage	$-V_{EBO}$	5	V
Collector Current	$-I_C$	700	mA
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	$^\circ\text{C}$
Storage Temperature Range	T_s	- 55 to + 150	$^\circ\text{C}$

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

Parameter	Symbol	Min.	Typ.	Max.	Unit	
DC Current Gain at $-V_{CE} = 1\text{ V}$, $-I_C = 100\text{ mA}$	A	h_{FE}	110	-	180	-
	B	h_{FE}	135	-	220	-
	C	h_{FE}	170	-	270	-
	D	h_{FE}	200	-	320	-
	E	h_{FE}	250	-	400	-
at $-V_{CE} = 1\text{ V}$, $-I_C = 700\text{ mA}$		h_{FE}	50	-	-	-
Collector Base Cutoff Current at $-V_{CB} = 30\text{ V}$	$-I_{CBO}$	-	-	100	nA	
Emitter Base Cutoff Current at $-V_{EB} = 5\text{ V}$	$-I_{EBO}$	-	-	100	nA	
Collector Base Breakdown Voltage at $-I_C = 100\text{ }\mu\text{A}$	$-V_{(BR)CBO}$	30	-	-	V	
Collector Emitter Breakdown Voltage at $-I_C = 1\text{ mA}$	$-V_{(BR)CEO}$	25	-	-	V	
Emitter Base Breakdown Voltage at $-I_E = 100\text{ }\mu\text{A}$	$-V_{(BR)EBO}$	5	-	-	V	
Collector Emitter Saturation Voltage at $-I_C = 700\text{ mA}$, $-I_B = 70\text{ mA}$	$-V_{CE(sat)}$	-	-	0.6	V	
Base Emitter On Voltage at $-V_{CE} = 6\text{ V}$, $-I_C = 10\text{ mA}$	$-V_{BE(on)}$	0.6	-	0.7	V	
Output Capacitance at $-V_{CB} = 6\text{ V}$, $I_E = 0$, $f = 1\text{ MHz}$	C_{ob}	-	17	-	pF	
Transition Frequency at $-V_{CE} = 6\text{ V}$, $-I_C = 10\text{ mA}$	f_T	-	160	-	MHz	

Typical Characteristics

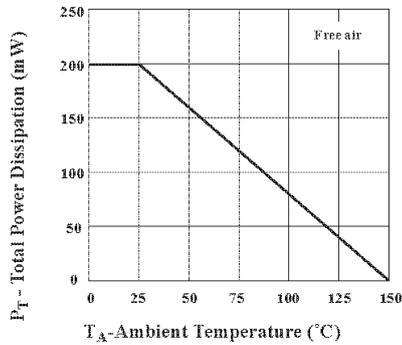


Fig.1 TOTAL POWER DISSIPATION VS. AMBIENT TEMPERATURE

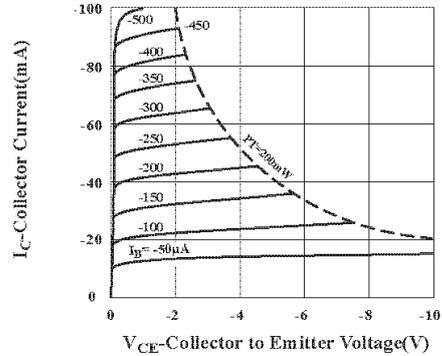


Fig.2 COLLECTOR CURRENT VS. COLLECTOR TO EMITTER VOLTAGE

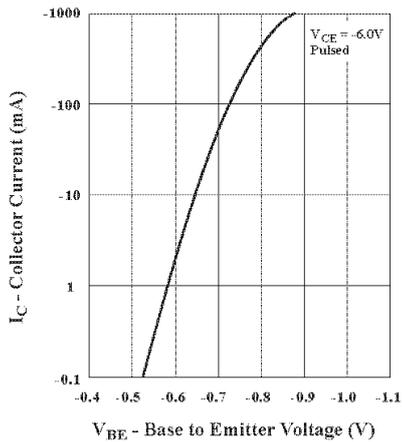


Fig.3 COLLECTOR CURRENT VS. BASE TO EMITTER VOLTAGE

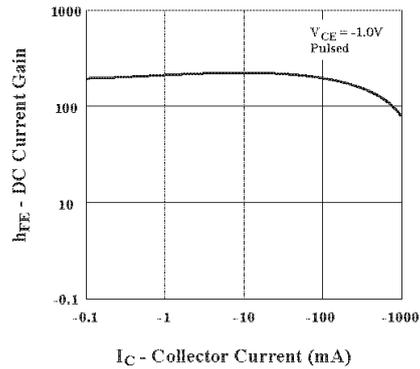


Fig.4 DC CURRENT GAIN VS. COLLECTOR CURRENT

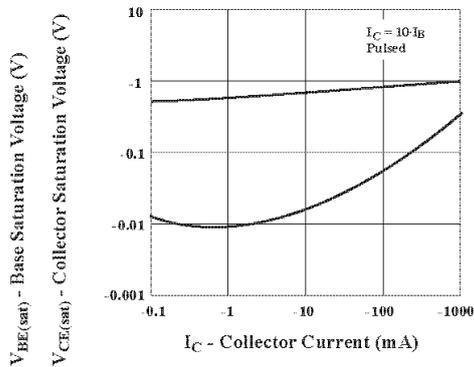


Fig.5 BASE AND COLLECTOR SATURATION VOLTAGE VS. COLLECTOR CURRENT

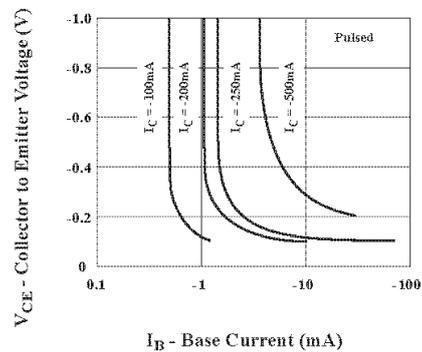
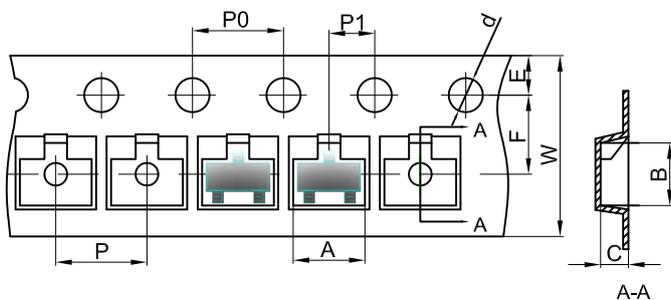


Fig.6 COLLECTOR TO EMITTER VOLTAGE VS. BASE CURRENT

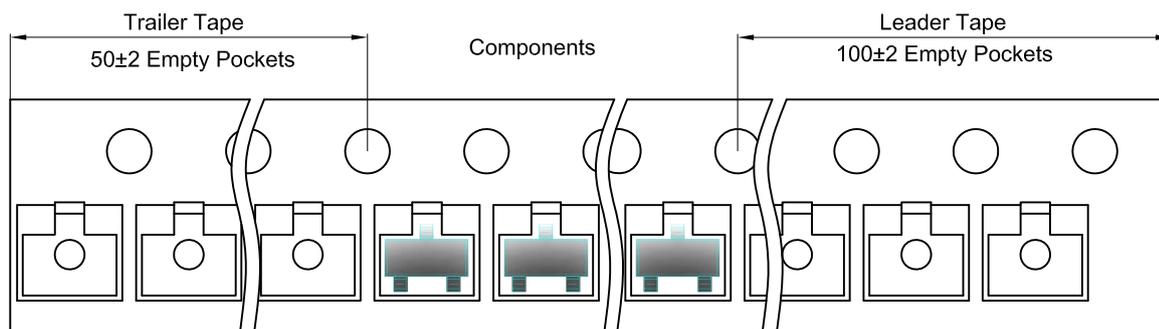
SOT-23 Tape and Reel

SOT-23 Embossed Carrier Tape

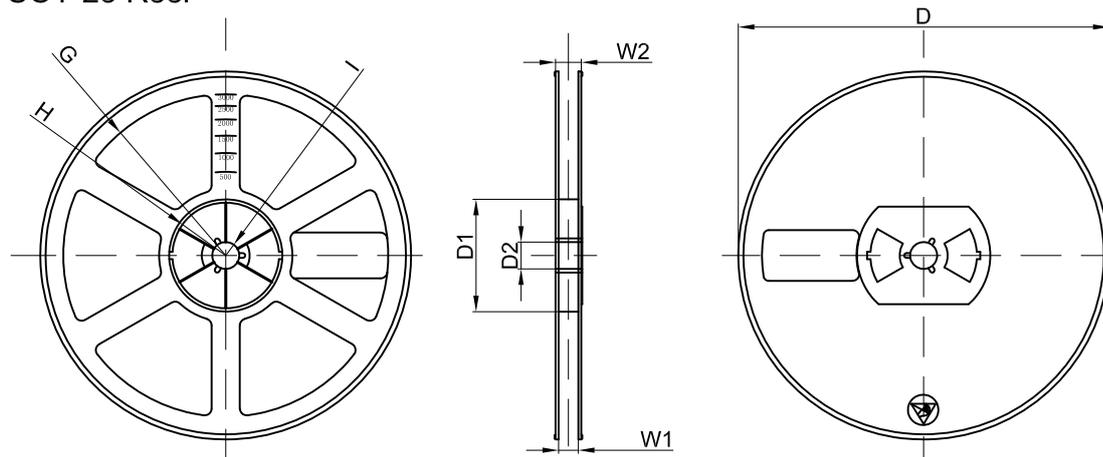


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

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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