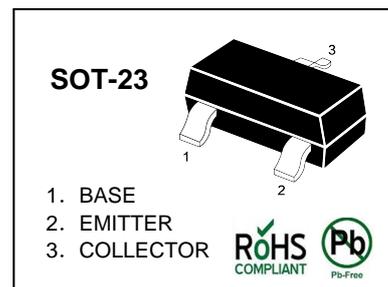


NPN Silicon Epitaxial Planar Transistor

for RF amplifier.

The transistor is subdivided into three groups, R, O and Y, according to its DC current gain.



Absolute Maximum Ratings

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	30	V
Collector-Emitter Voltage	V_{CEO}	20	V
Emitter-Base Voltage	V_{EBO}	4	V
Collector Current	I_C	20	mA
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_s	-55 +150	°C

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

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE}=6V$, $I_C=1mA$ Current Gain Group	R h_{FE}	40	-	80	-
	O h_{FE}	70	-	140	-
	Y h_{FE}	120	-	240	-
Collector Emitter Saturation Voltage at $I_C=10mA$, $I_B=1mA$	$V_{CE(sat)}$	-	-	0.3	V
Collector Cutoff Current at $V_{CB}=30V$	I_{CBO}	-	-	0.5	μA
Emitter Cutoff Current at $V_{EB}=4V$	I_{EBO}	-	-	0.5	μA
Collector Base Breakdown Voltage at $I_C=10\mu A$	$V_{(BR)CBO}$	30	-	-	V
Collector Emitter Breakdown Voltage at $I_C=5mA$	$V_{(BR)CEO}$	20	-	-	V
Emitter Base Breakdown Voltage at $I_E=10\mu A$	$V_{(BR)EBO}$	4	-	-	V
Transition Frequency at $V_{CE}=6V$, $I_E=-1mA$	f_T	-	550	-	MHz
Output Capacitance at $V_{CB}=6V$, $f=1MHz$	C_{OB}	-	1.4	-	pF

Electrical Characteristic Curves

Fig. 1 P_C-I_a

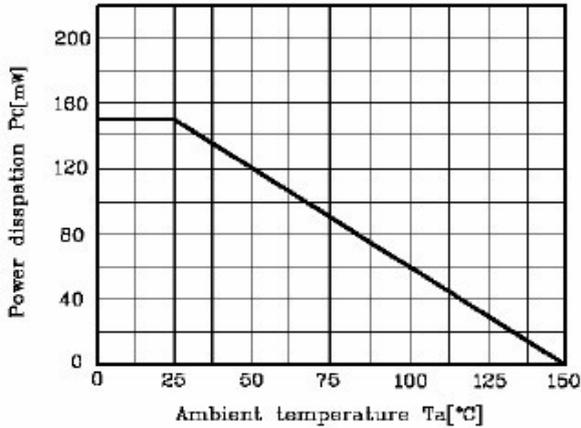


Fig. 2 I_C-V_{CE}

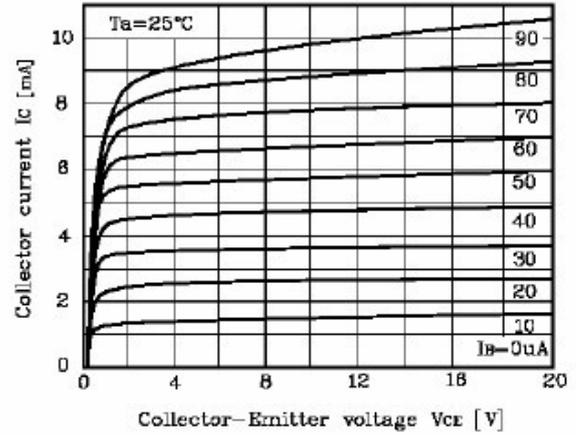


Fig. 3 $h_{FE}-I_C$

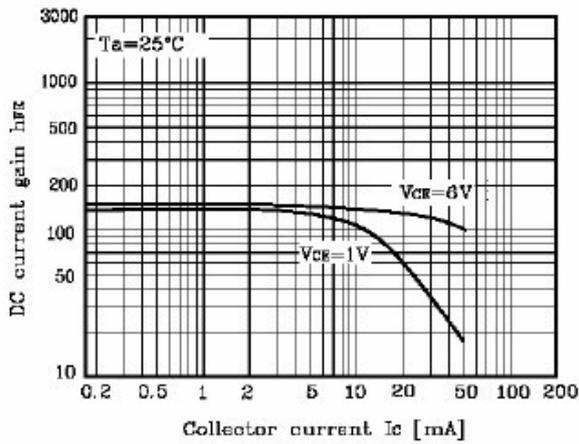


Fig. 4 f_T-I_E

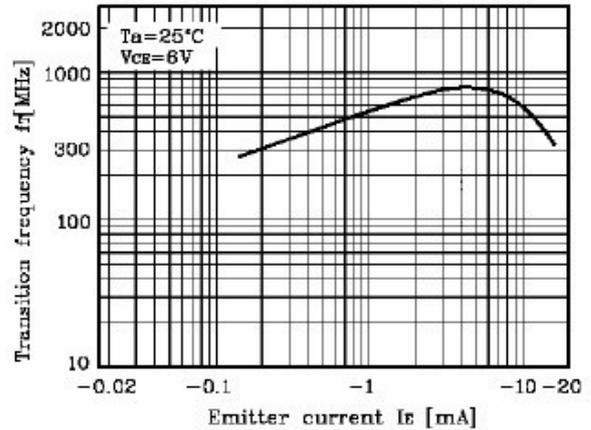


Fig. 5 $C_{ob}-V_{CB}, C_{ib}-V_{EB}$

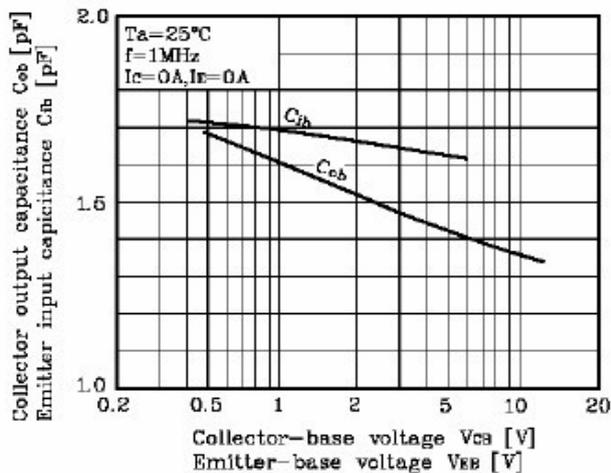
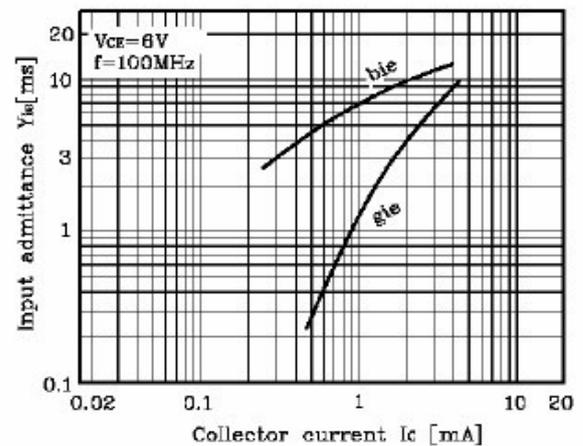


Fig. 6 $Y_{ie}-I_C$



Electrical Characteristic Curves

Fig. 7 I_C - Y_{oe}

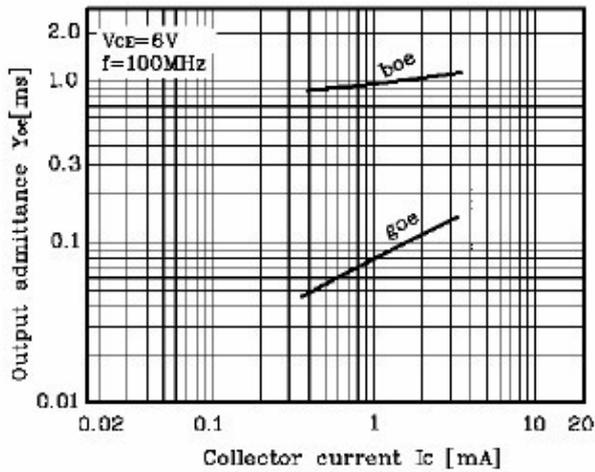


Fig. 8 I_C - Y_{fe}

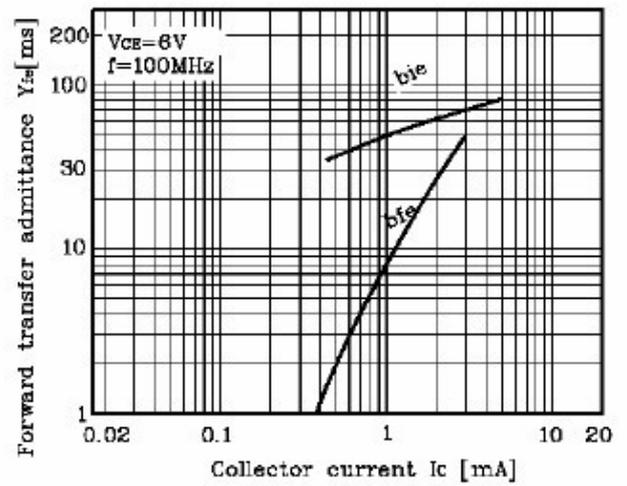
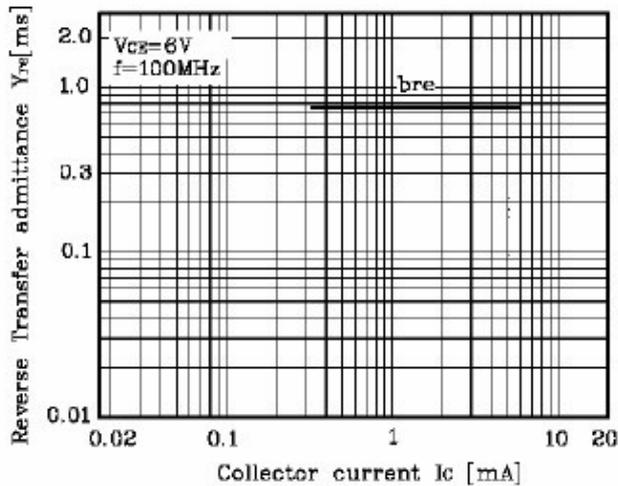
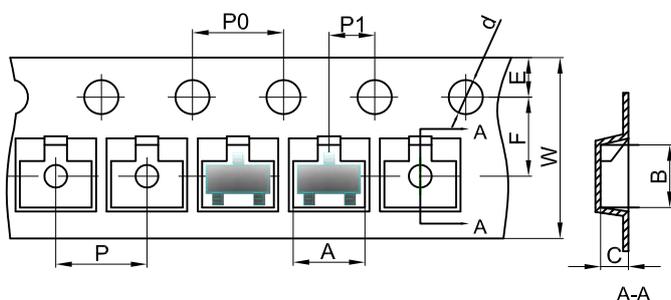


Fig. 9 I_C - Y_{re}



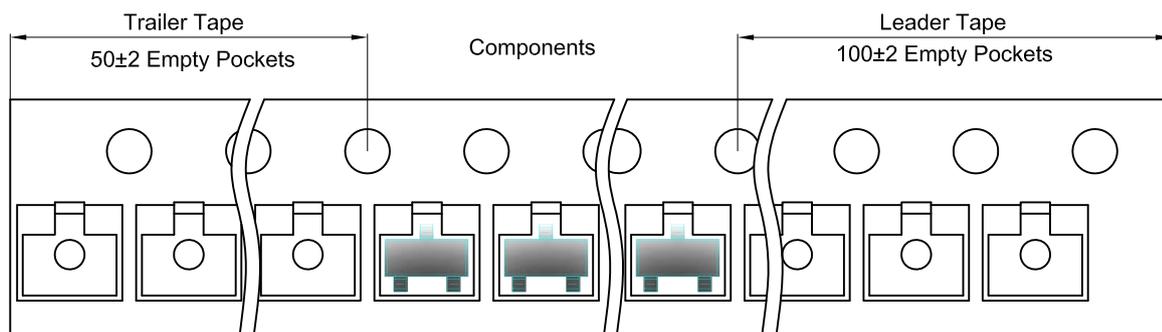
SOT-23 Tape and Reel

SOT-23 Embossed Carrier Tape

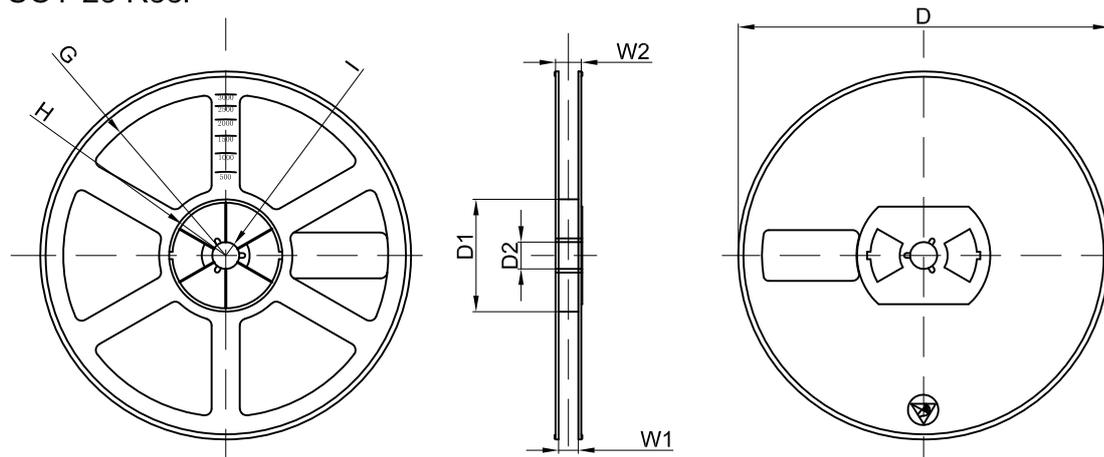


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOT-23 Tape Leader and Trailer

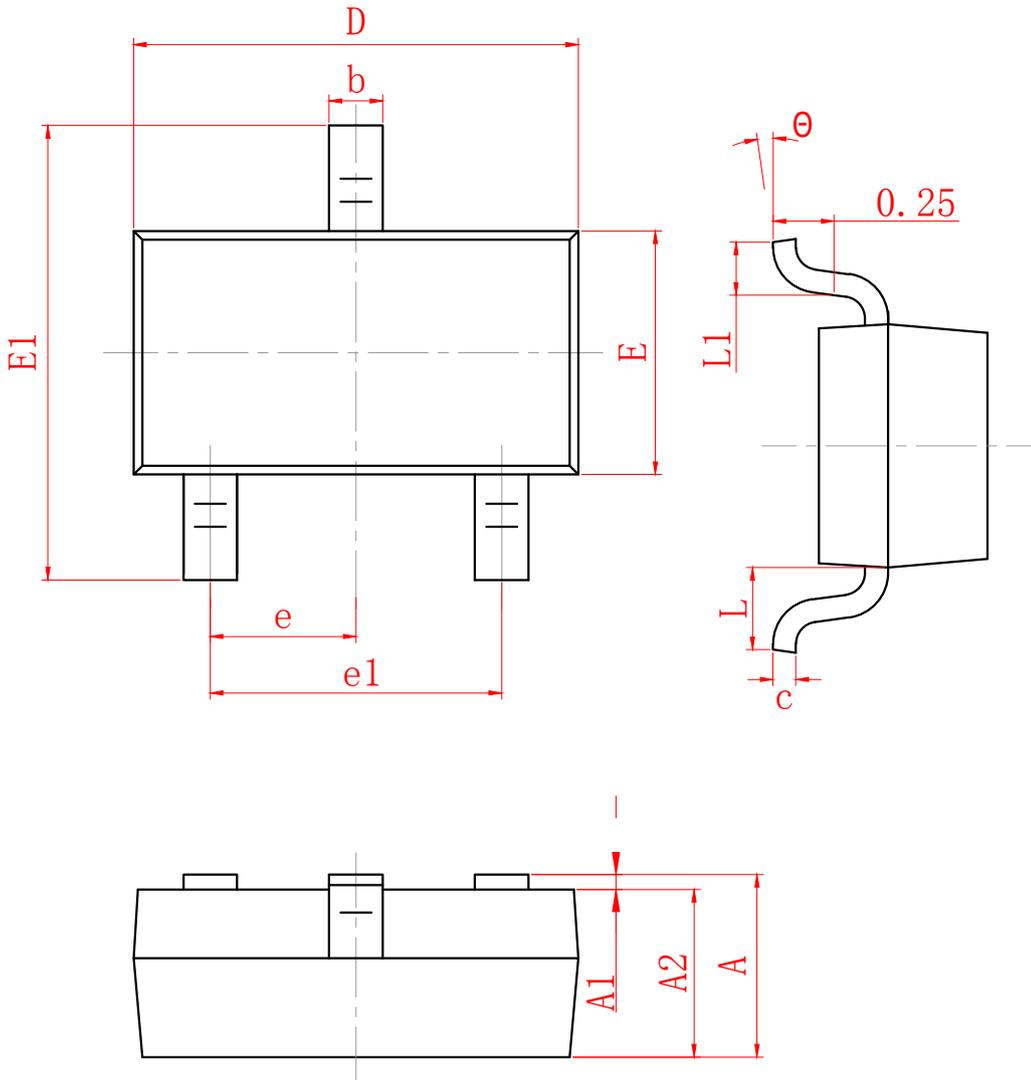


SOT-23 Reel



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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