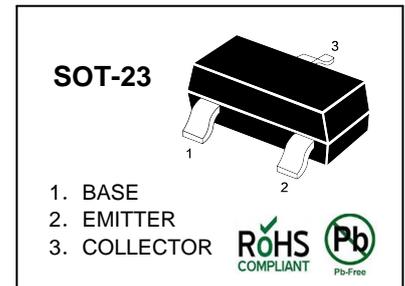


NPN Silicon Epitaxial Planar Transistor

for audio frequency general purpose amplifier applications.

The transistor is subdivided into four groups O, Y, G and L, according to its DC current gain.



Features

- High voltage and high current: $V_{CEO}=50V$, $I_C=150mA(max)$
- High h_{FE} : $h_{FE}=70\sim700$
- Low noise: $NF=1dB(typ.)$, $10dB(max)$
- Small package

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

	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	60	V
Collector Emitter Voltage	V_{CEO}	50	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	150	mA
Base Current	I_B	30	mA
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	125	$^\circ\text{C}$
Storage Temperature Range	T_s	-55 to +125	$^\circ\text{C}$

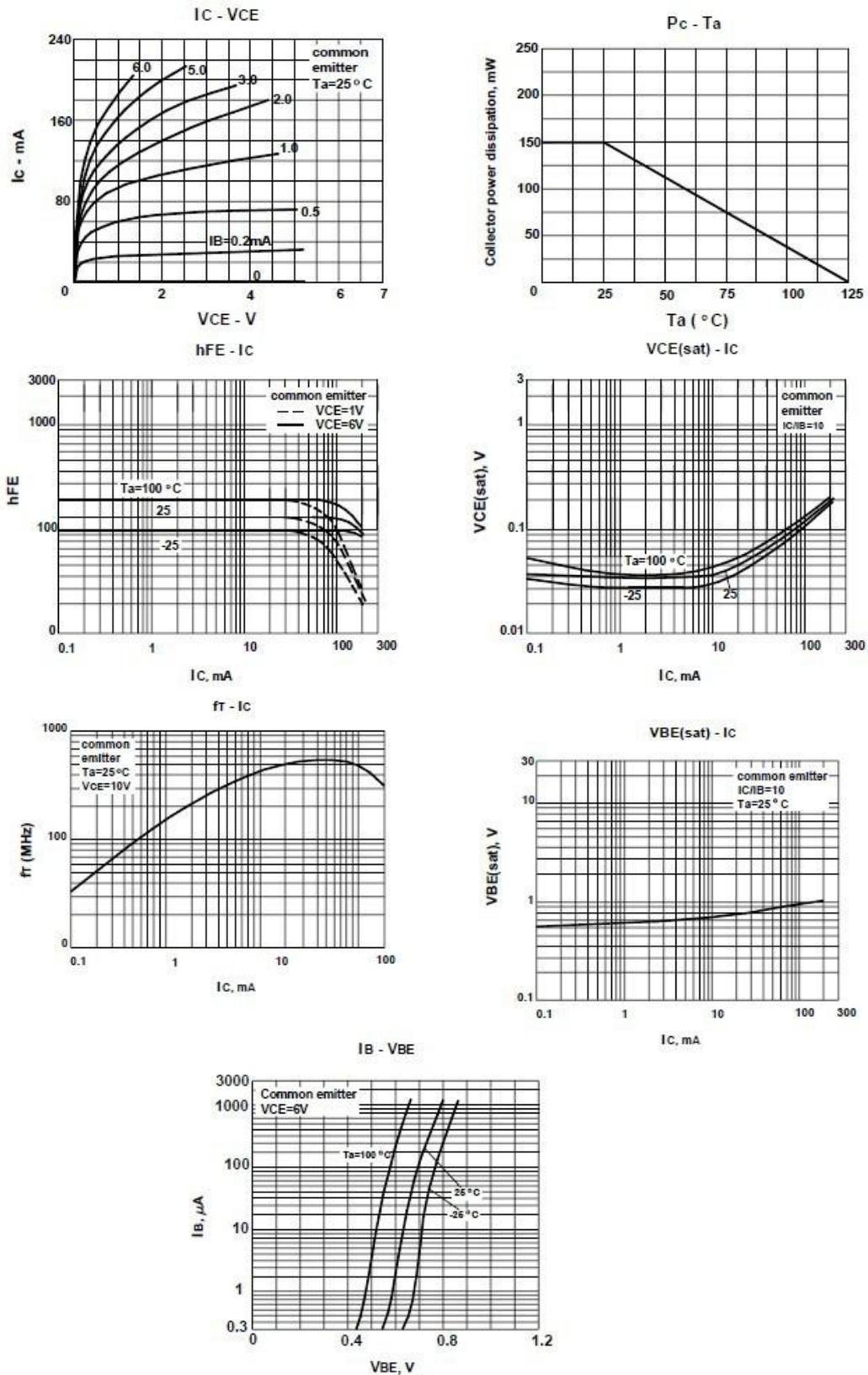
CLASSIFICATION OF h_{FE}

Rank	O	Y	GR	BL
Range	70-140	120-240	200-400	350-700
Marking	LO	LY	LG	LL

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

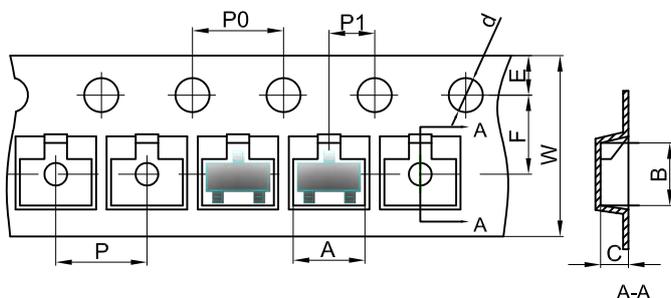
	Symbol	Min.	Typ.	Max.	Unit	
DC Current Gain at $V_{CE}=6\text{V}$, $I_C=2\text{mA}$	O	h_{FE}	70	-	140	-
	Y	h_{FE}	120	-	240	-
	G	h_{FE}	200	-	400	-
	L	h_{FE}	350	-	700	-
Collector Cutoff Current at $V_{CB}=60\text{V}$		I_{CBO}	-	-	0.1	μA
Emitter Cutoff Current at $V_{EB}=5\text{V}$		I_{EBO}	-	-	0.1	μA
Collector Saturation Voltage at $I_C=100\text{mA}$, $I_B=10\text{mA}$		$V_{CE(sat)}$	-	-	0.25	V
Transition Frequency at $V_{CE}=10\text{V}$, $I_C=1\text{mA}$		f_T	80	-	-	MHz
Collector Output Capacitance at $V_{CB}=10\text{V}$, $f=1\text{MHz}$		C_{ob}	-	2	3.5	pF
Noise Figure at $V_{CE}=6\text{V}$, $I_C=0.1\text{mA}$, $f=1\text{KHz}$, $R_g=10\text{K}\Omega$		NF	-	1	10	dB

Typical Characteristics



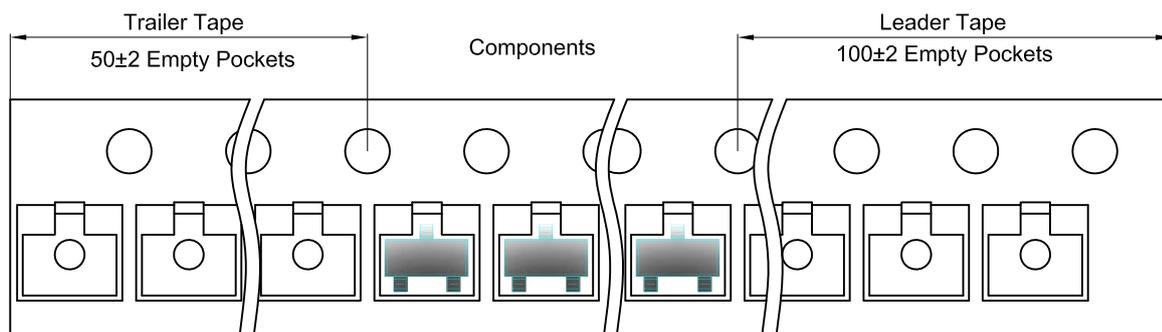
SOT-23 Tape and Reel

SOT-23 Embossed Carrier Tape

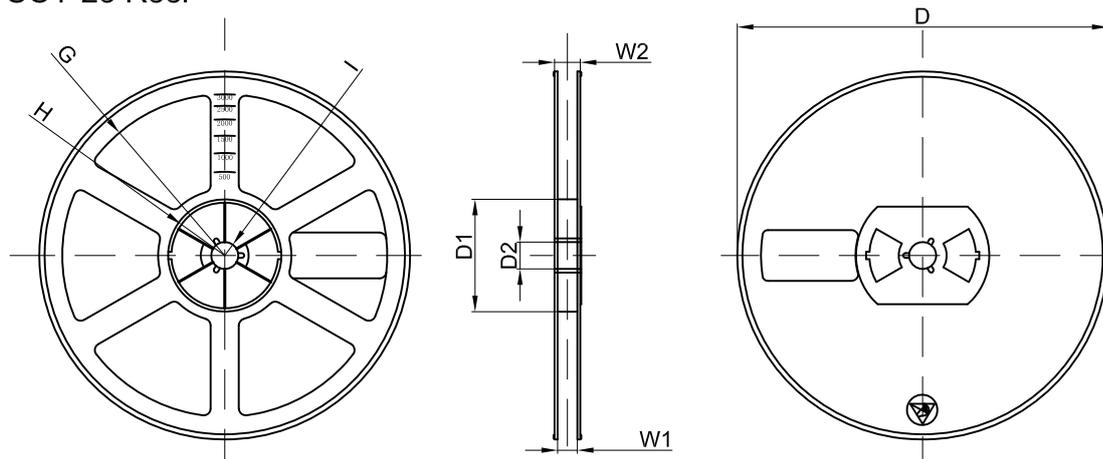


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOT-23 Tape Leader and Trailer

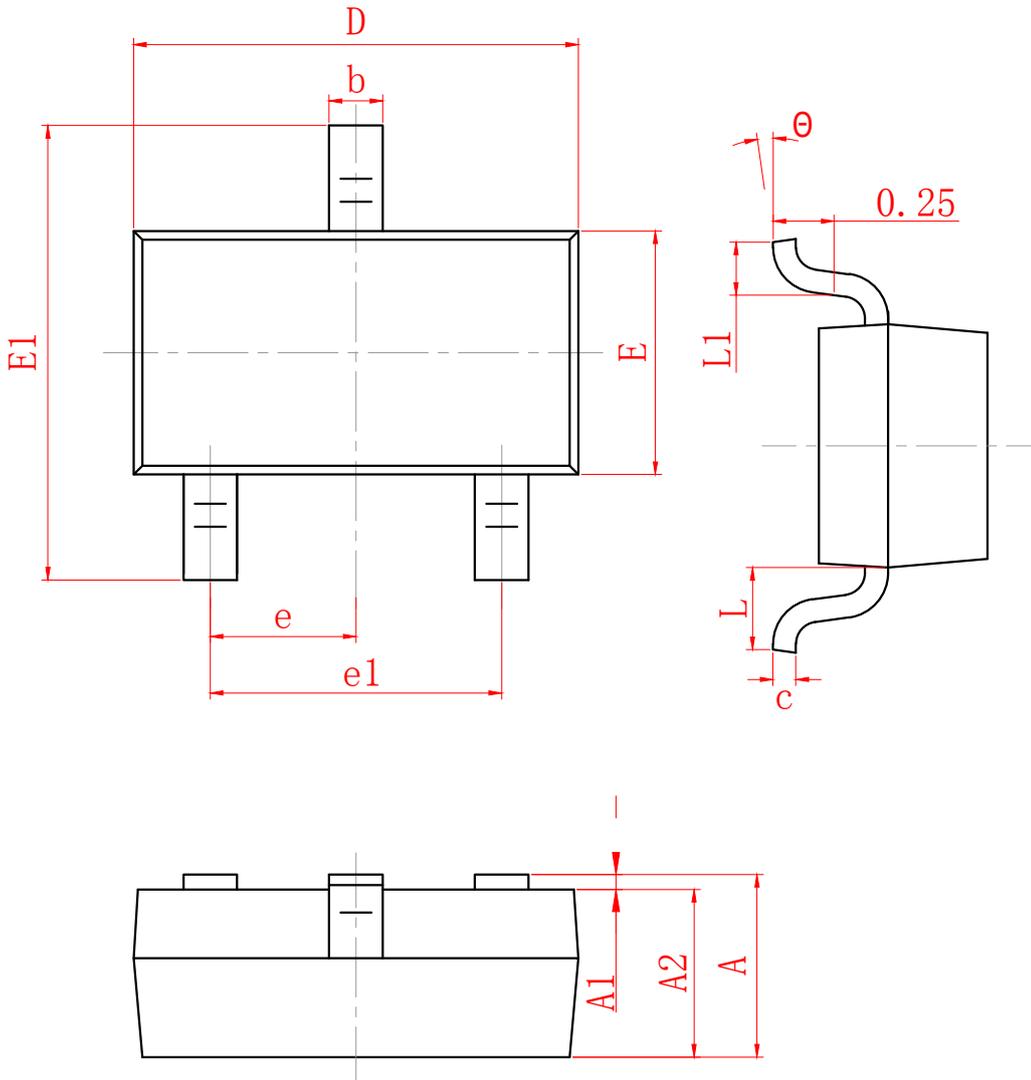


SOT-23 Reel



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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