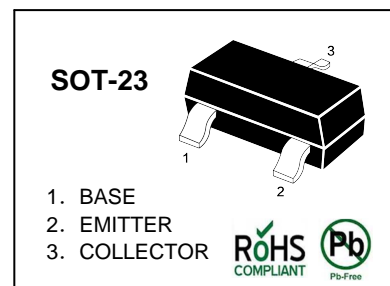


### NPN Silicon Epitaxial Planar Transistor

for switching and AF amplifier applications.

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

On special request, these transistors can be manufactured in different pin configurations.



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

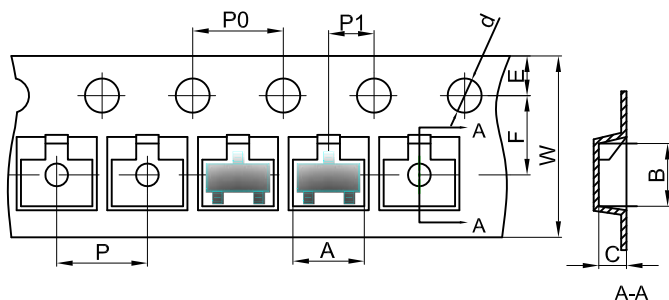
	Symbol	Value	Unit
Collector Base Voltage	$V_{CBO}$	50	V
Collector Emitter Voltage	$V_{CEO}$	50	V
Emitter Base Voltage	$V_{EBO}$	5	V
Collector Current	$I_C$	150	mA
Emitter Current	$I_E$	-150	mA
Power Dissipation	$P_{tot}$	200	mW
Junction Temperature	$T_j$	125	$^{\circ}\text{C}$
Storage Temperature Range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

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

	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE}=6\text{V}$ , $I_C=2\text{mA}$					
Current Gain Group O	$h_{FE}$	70	-	140	-
Y	$h_{FE}$	120	-	240	-
G	$h_{FE}$	200	-	400	-
L	$h_{FE}$	350	-	700	-
Collector Emitter Saturation Voltage at $I_C=100\text{mA}$ , $I_B=10\text{mA}$	$V_{CE(sat)}$	-	-	0.25	V
Collector Cutoff Current at $V_{CB}=50\text{V}$	$I_{CBO}$	-	-	0.1	$\mu\text{A}$
Emitter Cutoff Current at $V_{EB}=5\text{V}$	$I_{EBO}$	-	-	0.1	$\mu\text{A}$
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

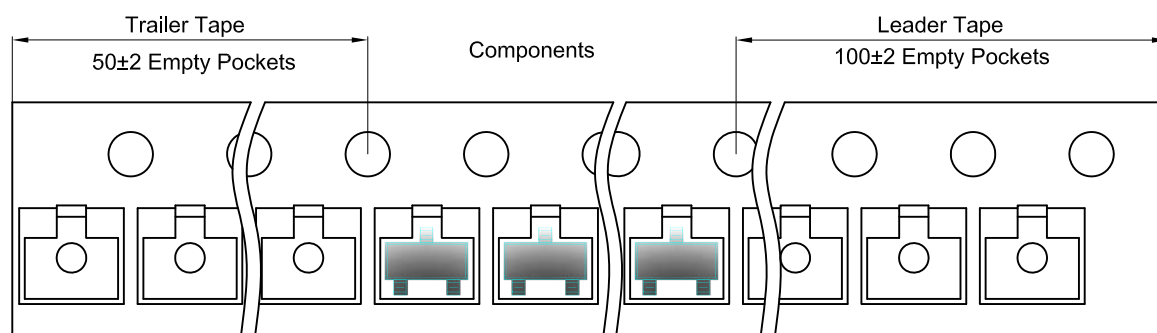
### SOT-23 Tape and Reel

#### SOT-23 Embossed Carrier Tape

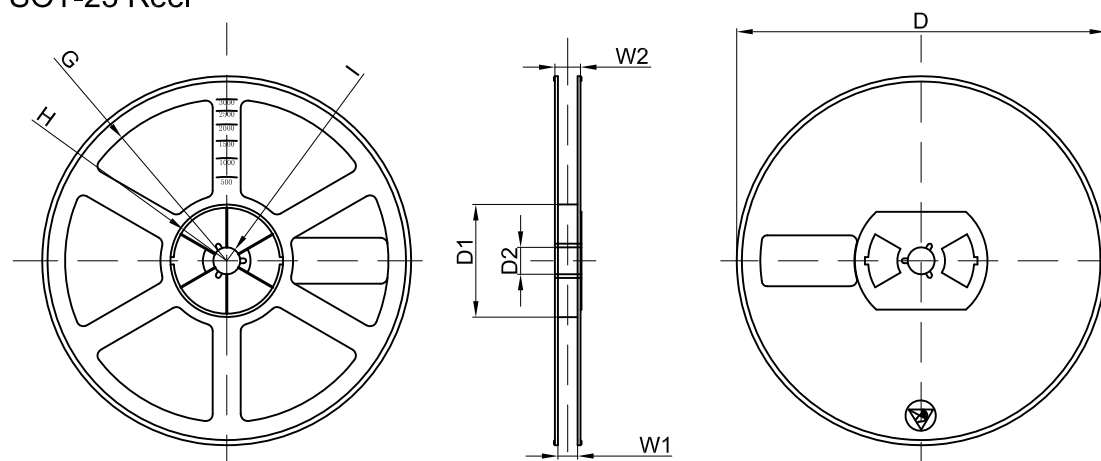


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

#### SOT-23 Tape Leader and Trailer

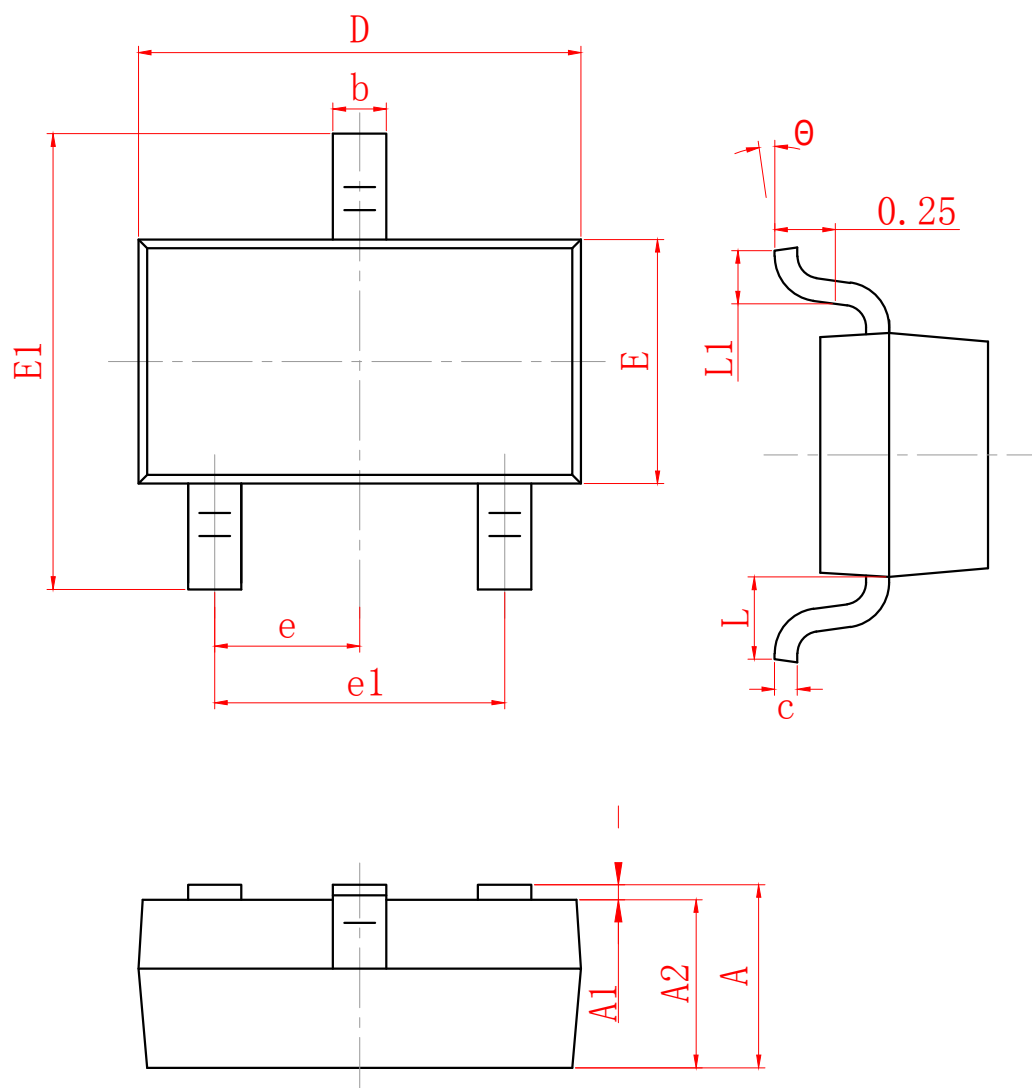


#### SOT-23 Reel



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
$\theta$	0°	8°

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