

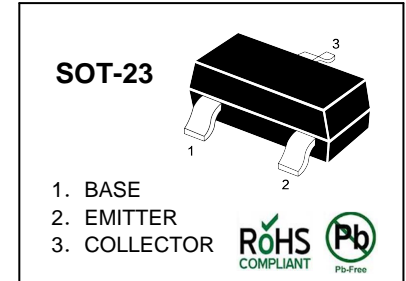
NPN Silicon Epitaxial Planar Transistor

for audio frequency low noise amplifier applications.

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

Features:

- High voltage: $V_{CE0}=120V$
- High h_{FE} : $h_{FE}=200-700$
- Low noise: $NF(2)=0.2dB(typ.), 3dB(max)$
- Small package



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

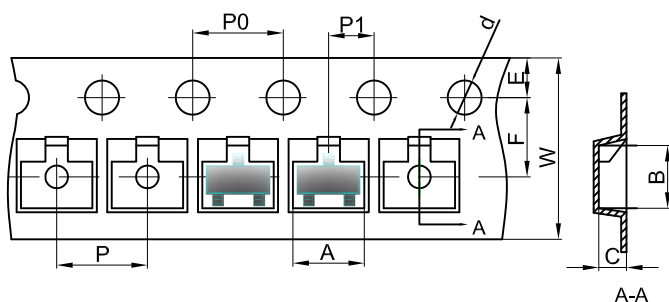
Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	120	V
Collector Emitter Voltage	V_{CEO}	120	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	100	mA
Base Current	I_B	20	mA
Collector Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	125	$^{\circ}C$
Storage Temperature Range	T_s	-55 to +125	$^{\circ}C$

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

Parameter		Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE}=6V$, $I_C=2mA$	G	h_{FE}	200	-	400	-
	L	h_{FE}	350	-	700	-
Collector Emitter Saturation Voltage at $I_C=10mA$, $I_B=1mA$		$V_{CE(sat)}$	-	-	0.3	V
Collector Cut-off Current at $V_{CB}=120V$		I_{CBO}	-	-	0.1	μA
Emitter Cut-off Current at $V_{EB}=5V$		I_{EBO}	-	-	0.1	μA
Transition Frequency at $V_{CE}=6V$, $I_C=1mA$		f_T	-	100	-	MHz
Collector Output Capacitance at $V_{CB}=10V$, $f=1MHz$		C_{OB}	-	4	-	pF
Noise Figure	at $V_{CB}=6V$, $I_C=0.1mA$ $f=100Hz$, $R_G=10K\Omega$	NF	-	0.5	6	dB
	at $V_{CB}=6V$, $I_C=0.1mA$ $f=1KHz$, $R_G=10K\Omega$	NF	-	0.2	3	

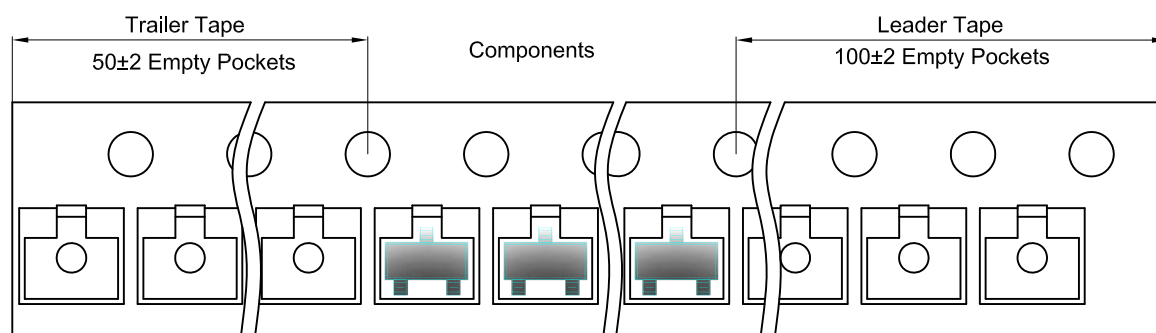
SOT-23 Tape and Reel

SOT-23 Embossed Carrier Tape

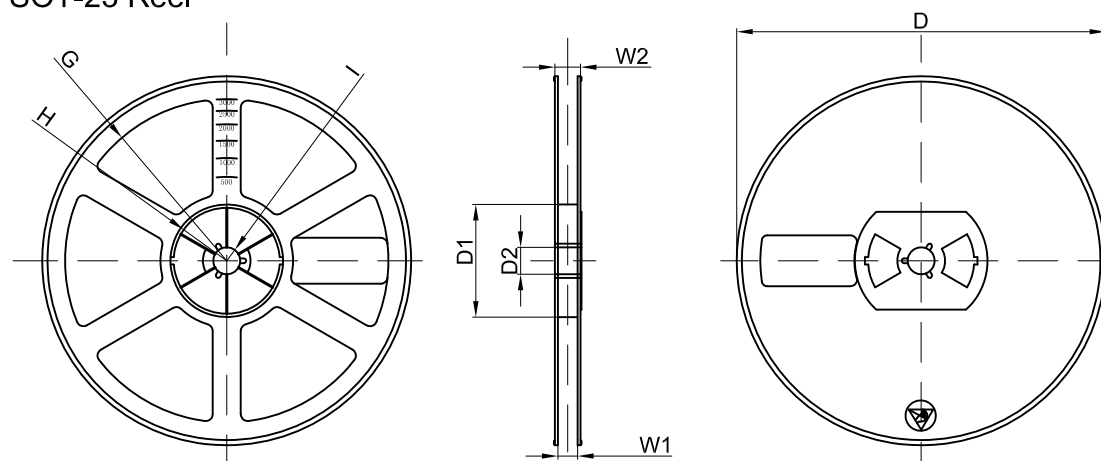


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOT-23 Tape Leader and Trailer

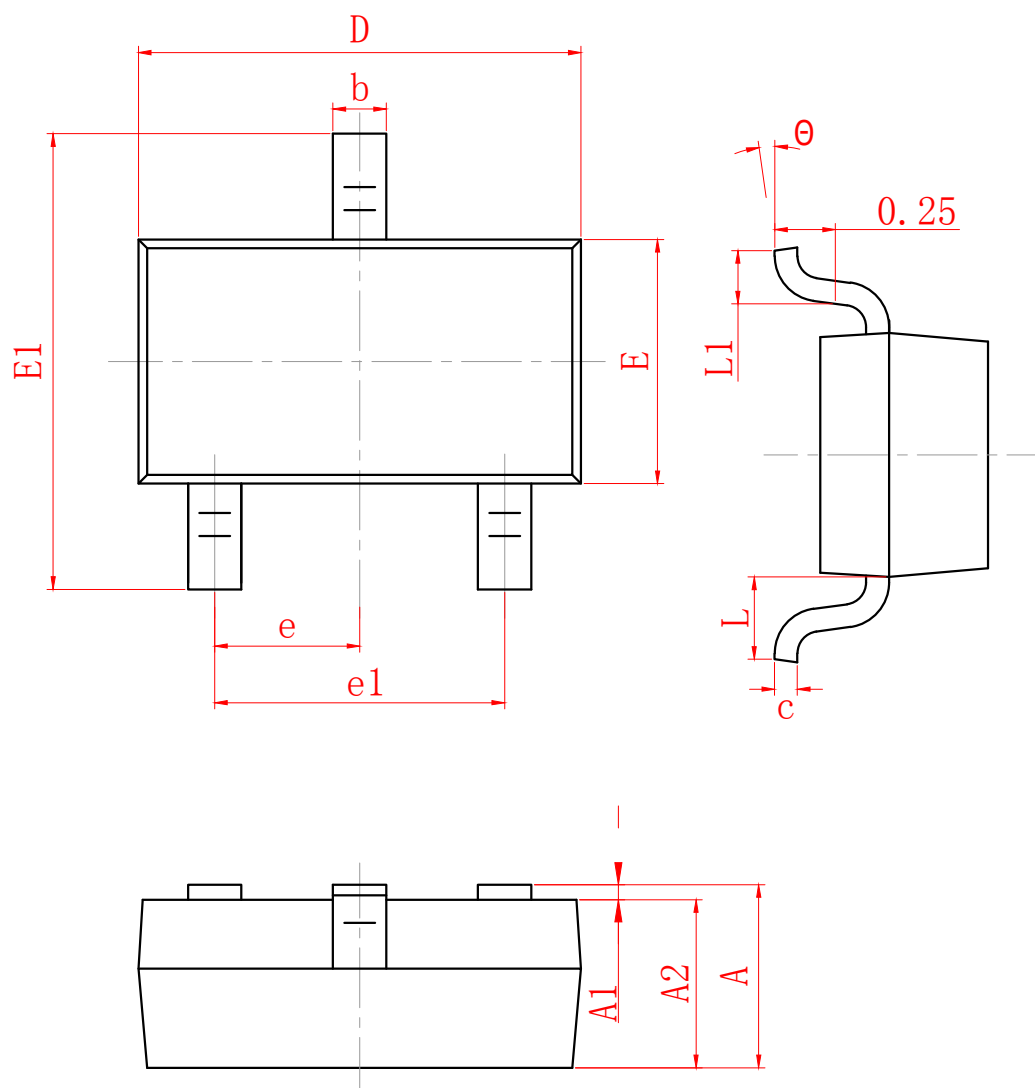


SOT-23 Reel



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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