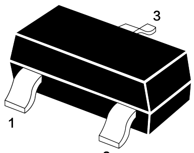
NPN Silicon Epitaxial Planar Transistor

for low frequency power amplifier applications
and power switching application.

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

SOT-23



1. BASE
2. EMITTER
3. COLLECTOR

RoHS COMPLIANT

Pb-Free

Absolute Maximum Ratings (T_a = 25 °C)

Parameter	Symbol	Value	Unit
Collector Base Voltage	V_{CBO}	35	V
Collector Emitter Voltage	V_{CEO}	30	V
Emitter Base Voltage	V_{EBO}	5	V
Collector Current	I_C	800	mA
Base Current	I_B	160	mA
Power Dissipation	P_{tot}	200	mW
Junction Temperature	T_j	150	°C
Storage Temperature Range	T_S	-55 to +150	°C

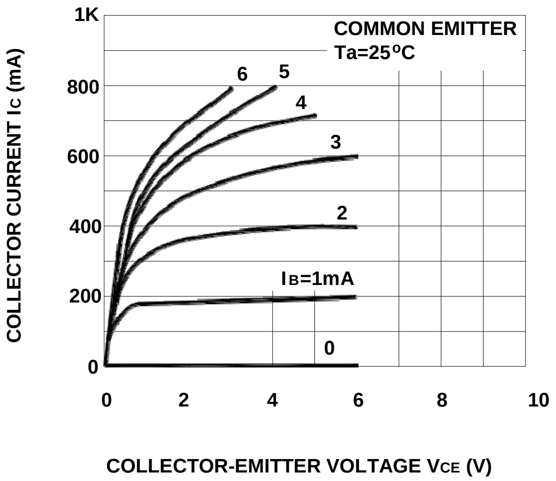
Typical Characteristics

Characteristics at T_{amb}=25 °C

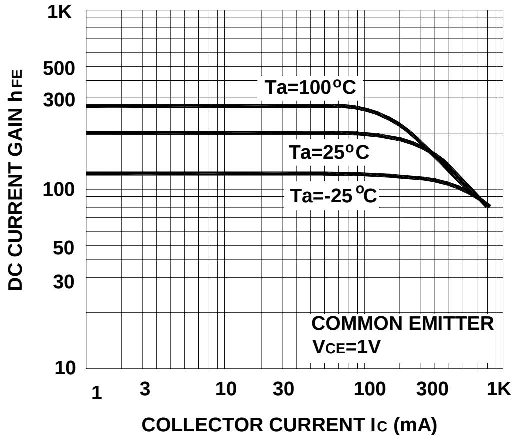
Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at V_{CE}=1V, I_C=100mA Current Gain Group O Y at V_{CE}=1V, I_C=800mA	 h_{FE} h_{FE} h_{FE}	 100 160 40	 - - -	 200 320 -	 - - -
Collector Cutoff Current at V_{CB}=30V	I_{CBO}	-	-	100	nA
Emitter Cutoff Current at V_{EB}=5V	I_{EBO}	-	-	100	nA
Collector Emitter Breakdown Voltage at I_C=10mA	$V_{(BR)CEO}$	30	-	-	V
Emitter Base Breakdown Voltage at I_E=1mA	$V_{(BR)EBO}$	5	-	-	V
Collector Emitter Saturation Voltage at I_C=500mA, I_B=20mA	$V_{CE(sat)}$	-	-	0.5	V
Transition Frequency at V_{CE}=5V, I_C=10mA, f=100MHz	f_T	-	120	-	MHz
Base Emitter Voltage at I_C=10mA, V_{CE}=1V	V_{BE}	0.5	-	0.8	V
Collector Output Capacitance at V_{CB}=10V, f=1MHz	C_{OB}	-	13	-	pF

Typical Characteristics

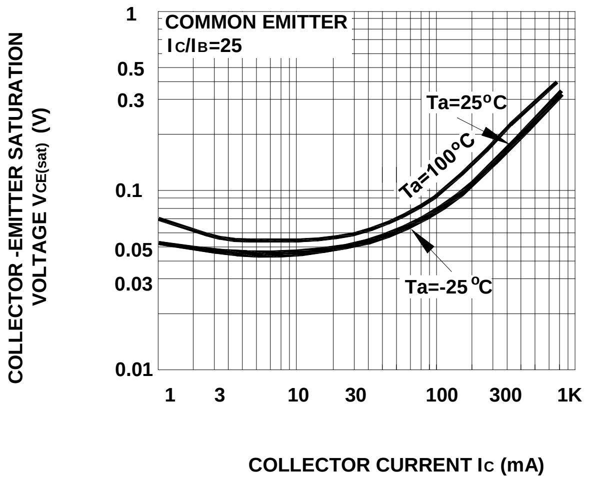
I_C - V_{CE}



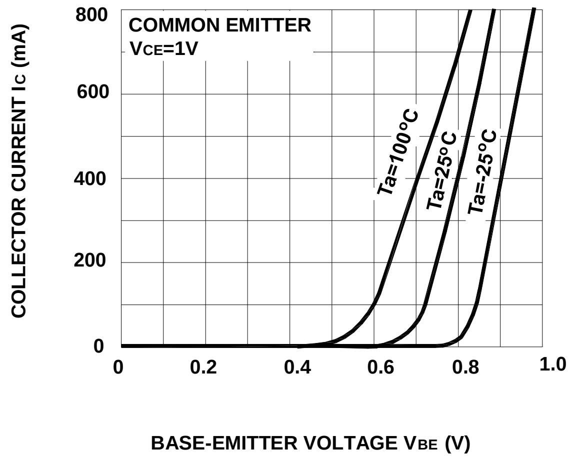
h_{FE} - I_C



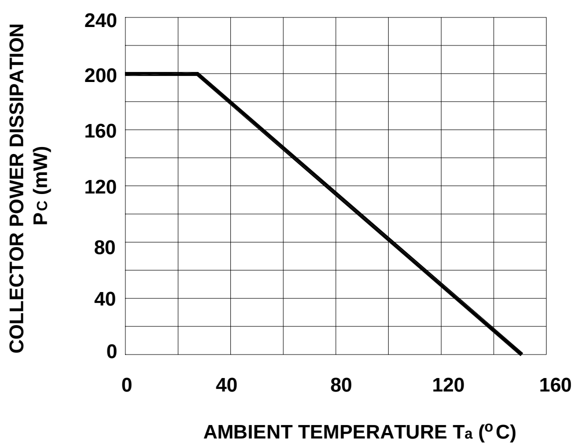
$V_{CE(sat)}$ - I_C



I_C - V_{BE}

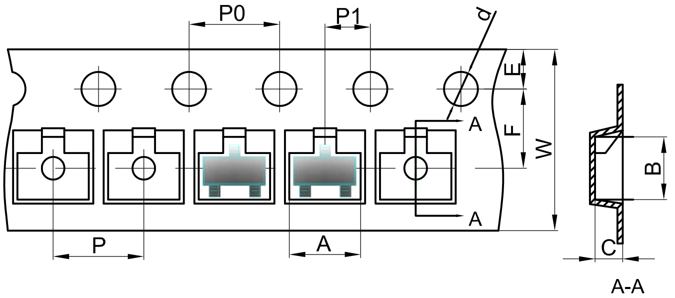


P_C - Ta



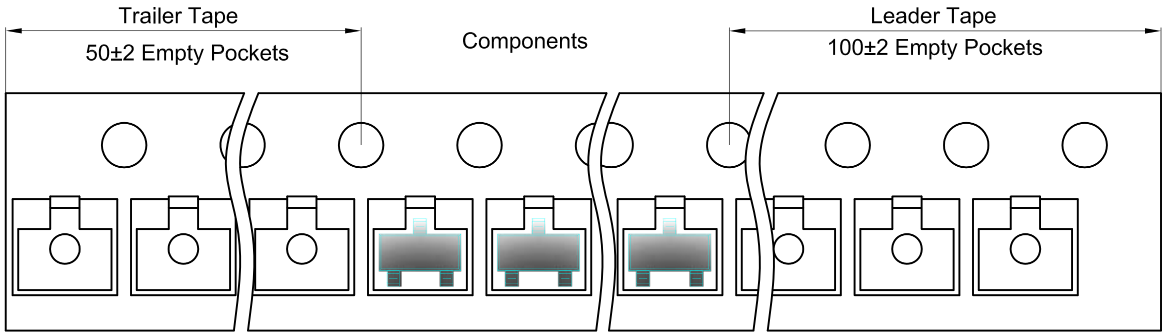
SOT-23 Tape and Reel

SOT-23 Embossed Carrier Tape

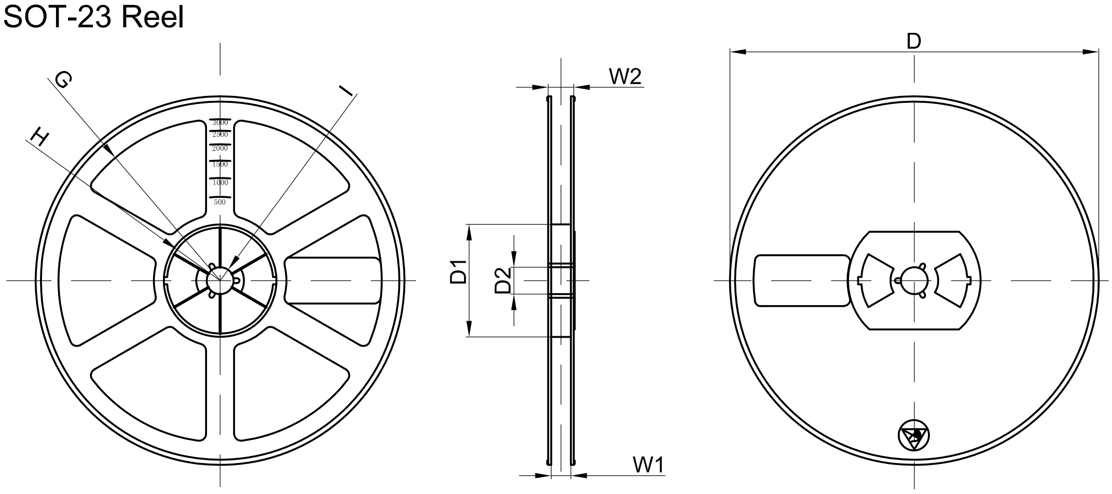


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOT-23 Tape Leader and Trailer

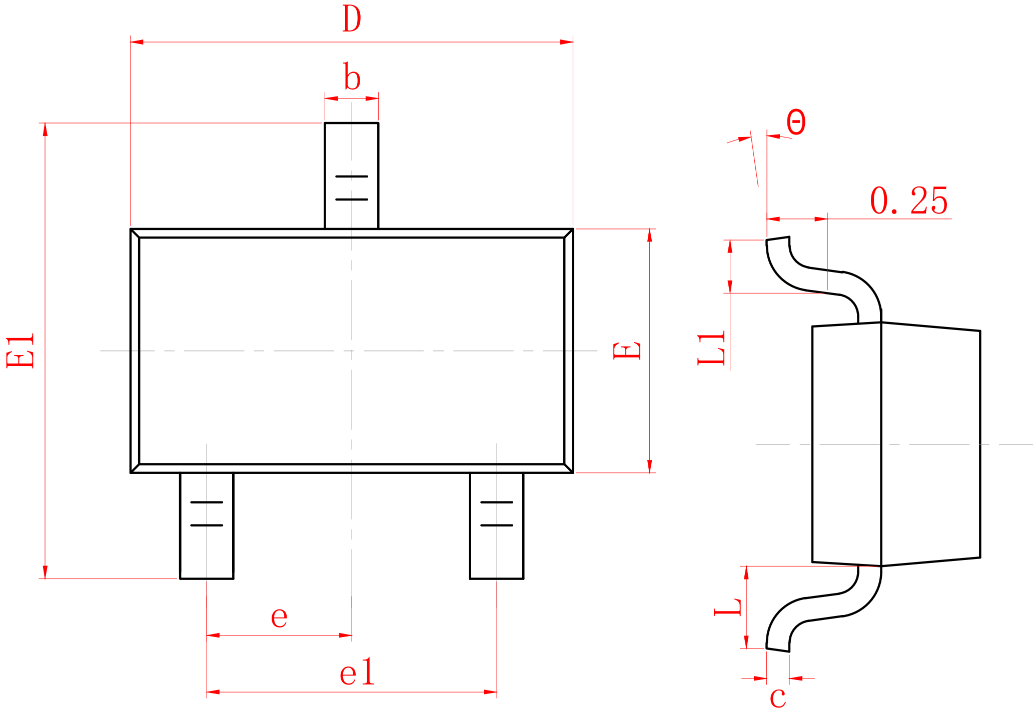


SOT-23 Reel

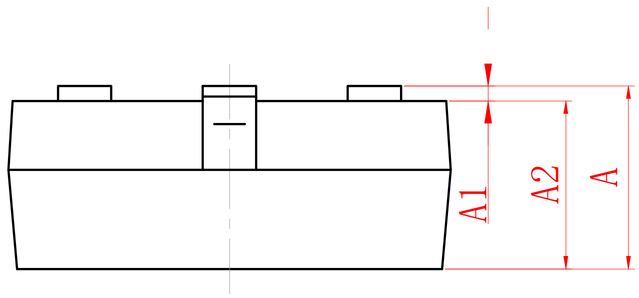


Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7"Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

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°



DISCLAIMER