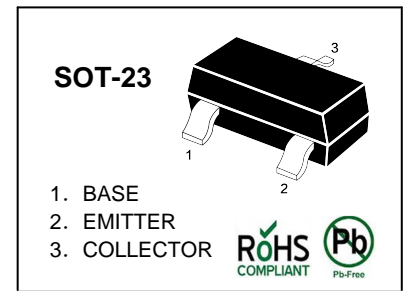## Lastinght

NPN Silicon Epitaxial Planar Transistors

for switching, AF driver and amplifier application,

These transistors are subdivided into three groups
–16, -25, -40 according to their current gain.
As complementary types, the PNP transistors
BC807 and BC808 are recommended.

SOT-23

1. BASE
2. EMITTER
3. COLLECTOR

RoHS COMPLIANT

Pb Pb-Free

Absolute Maximum Ratings $(T_a = 25\ ℃)$

Parameter		Symbol	Value	Unit
Collector Base Voltage	BC817 BC818	V_{CBO}	50 30	V
Collector Emitter Voltage	BC817 BC818	V_{CEO}	45 25	V
Emitter Base Voltage		V_{EBO}	5	V
Collector Current		I_C	500	mA
Power Dissipation		P_{tot}	200	mW
Thermal Resistance , Junction to Ambient		$R_{\theta JA}$	500	K/W
Junction Temperature		T_J	150	℃
Storage Temperature Range		T_s	- 55 to + 150	℃

Electrical Characteristics at $T_a = 25\ ℃$

Parameter	Symbol	Min.	Typ.	Max.	Unit
DC Current Gain at $V_{CE} = 1$ V, $I_C = 100$ mA Current Gain Group -16	h_{FE}	100	-	250	-
-25	h_{FE}	160	-	400	-
- 40	h_{FE}	250	-	600	-
at $V_{CE} = 1$ V, $I_C = 500$ mA	h_{FE}	40	-	-	-
Collector Base Cutoff Current at $V_{CB} = 20$ V	I_{CBO}	-	-	100	nA
Emitter-Base Cutoff Current at $V_{EB} = 5$ V	I_{EBO}	-	-	100	nA
Collector Saturation Voltage at $I_C = 500$ mA, $I_B = 50$ mA	V_{CEsat}	-	-	0.7	V
Base-Emitter Voltage at $I_C = 500$ mA, $V_{CE} = 1$ V	$V_{BE(on)}$	-	-	1.2	V
Gain -Bandwidth Product at $V_{CE} = 5$ V, $I_C = 10$ mA, f = 50 MHz	f_T	100	-	-	MHz
Collector-Base Capacitance at $V_{CB} = 10$ V, f = 1 MHz	C_{CBO}	-	5	-	pF

Typical Characteristics

$h_{FE} - I_C$

$I_C - V_{BE}$

$V_{CE(sat)} - I_C$

Power Dissipation vs Ambient Temperature
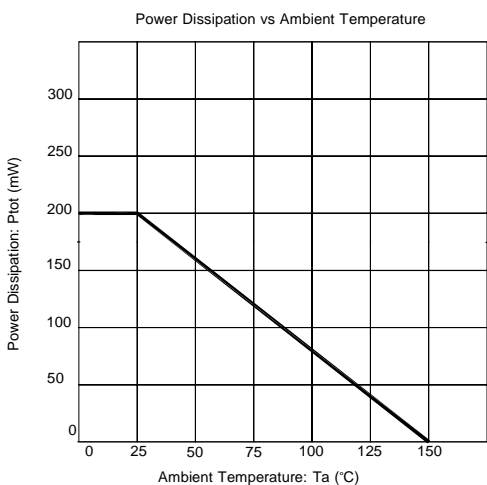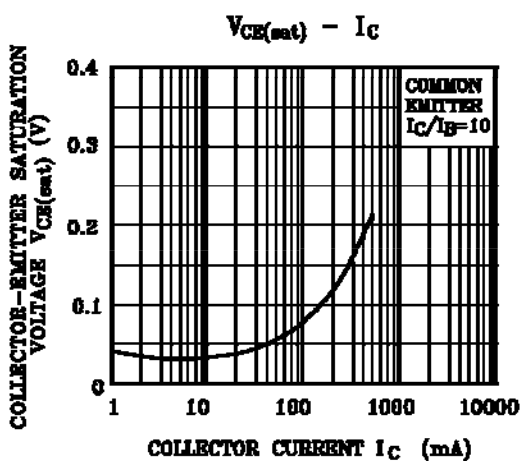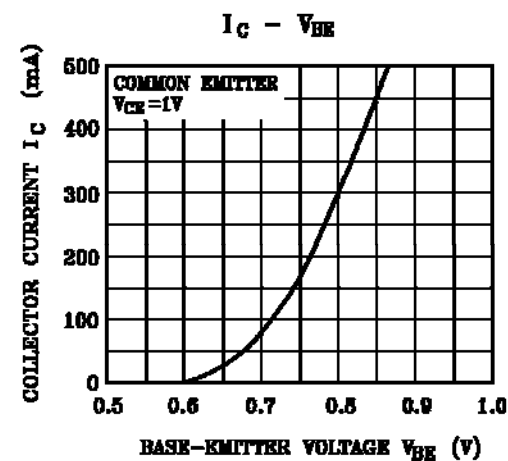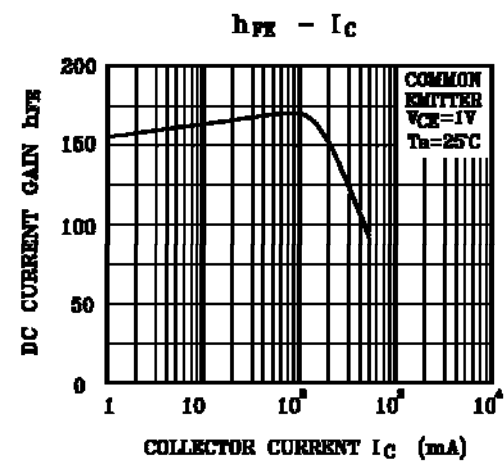
SOT-23 Tape and Reel

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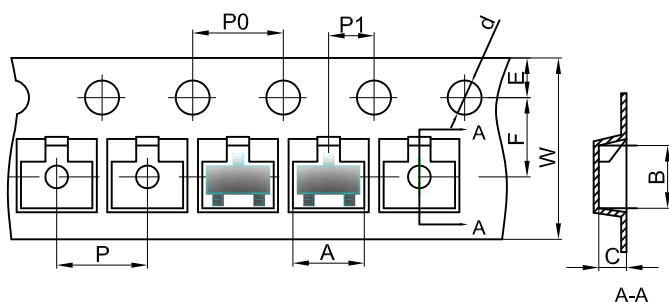
Dimensions are in millimeter									
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOT-23 Tape Leader and Trailer

Trailer Tape
50±2 Empty Pockets

Components

Leader Tape
100±2 Empty Pockets
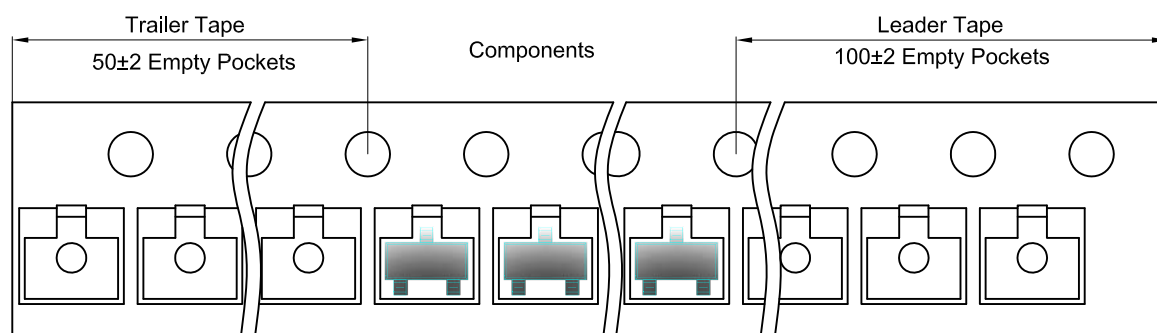
SOT-23 Reel
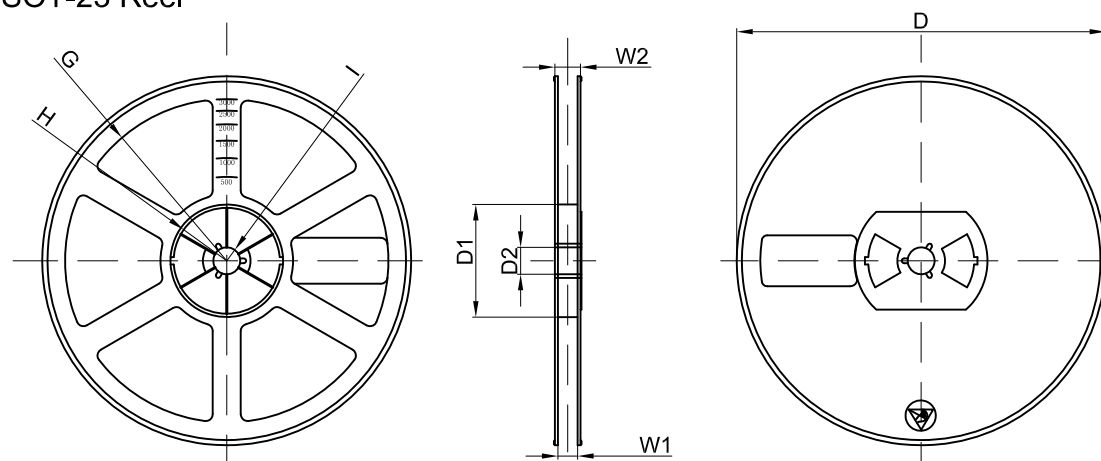
Dimensions are in millimeter								
Reel Option	D	D1	D2	G	H	I	W1	W2
7"Dia	Ø178.00	54.40	13.00	R78.00	R25.60	R6.50	9.50	12.30

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	
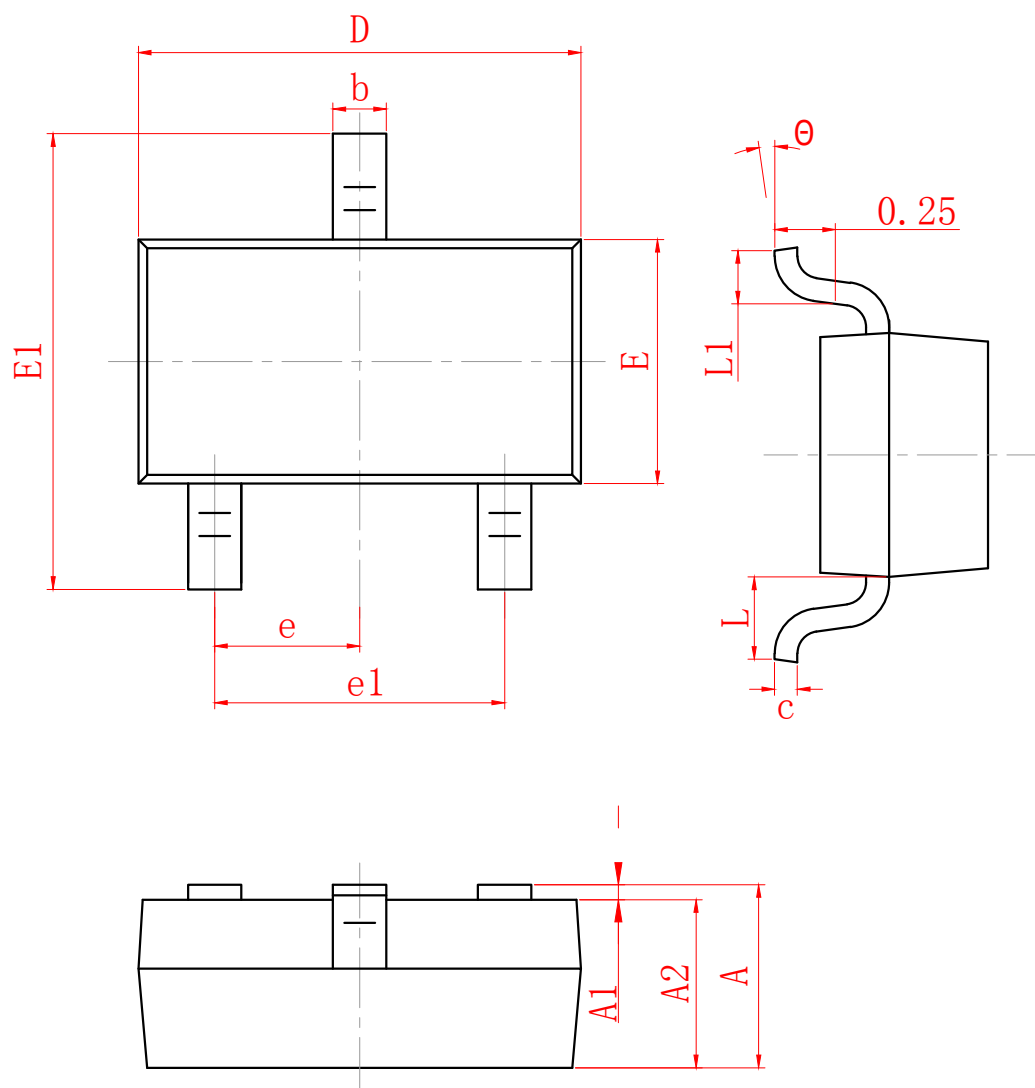
SYMBOL	MILLIMETER	
	MIN	MAX
A	0.900	1.150
A1	0.000	0.100
A2	0.900	1.050
b	0.300	0.500
c	0.080	0.150
D	2.800	3.000
E	1.200	1.400
E1	2.250	2.550
e	0.950 TYP	
e1	1.800	2.000
L	0.550 REF	
L1	0.300	0.500
θ	0°	8°

DISCLAIMER