

TRANSISTOR(NPN)

FEATURES

- Ideally suited for automatic insertion
- For Switching and AF Amplifier Applications

SOT-23



- 1. BASE
- 2. EMITTER
- 3. COLLECTOR

MAXIMUM RATINGS (T_A=25°C unless otherwise noted)

Symbol	Parameter	Value	Units
V _{CB0}	Collector-Base Voltage	BC846	80
		BC847	50
		BC848	30
V _{CEO}	Collector-Emitter Voltage	BC846	65
		BC847	45
		BC848	30
V _{EBO}	Emitter-Base Voltage	6	V
I _C	Collector Current –Continuous	0.1	A
P _C	Collector Power Dissipation	200	mW
T _J	Junction Temperature	150	°C
T _{stg}	Storage Temperature	-65-150	°C

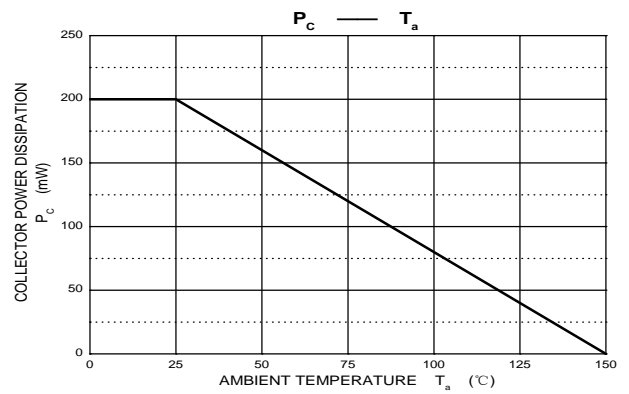
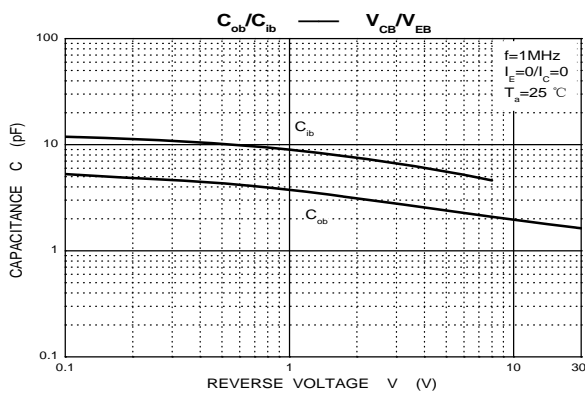
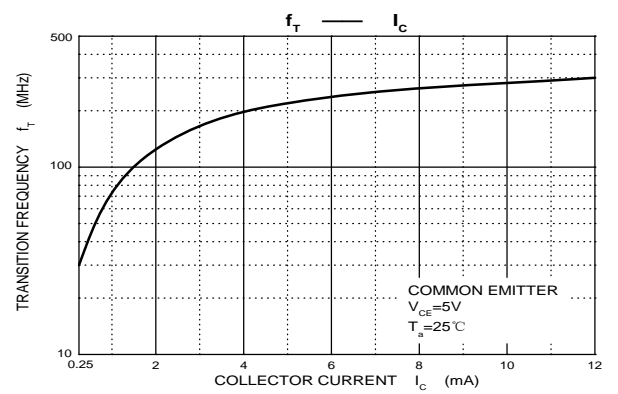
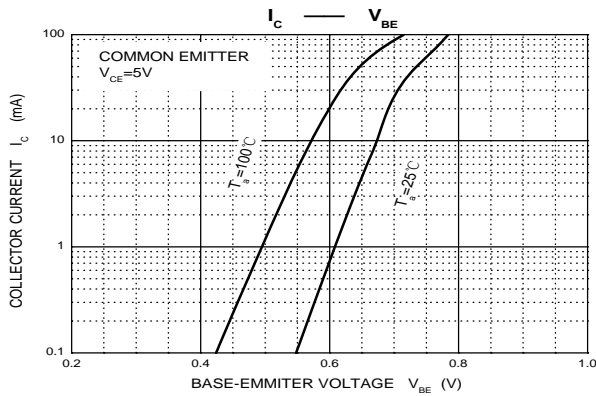
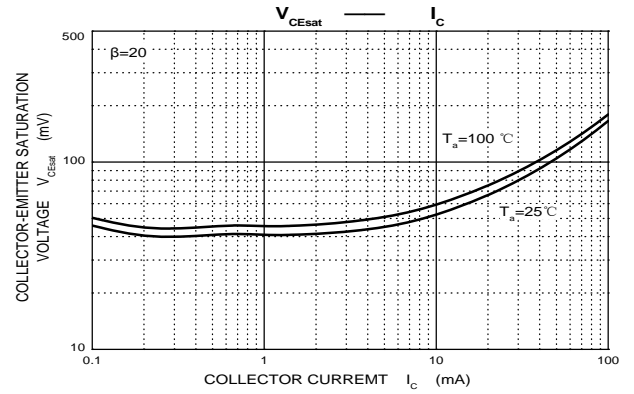
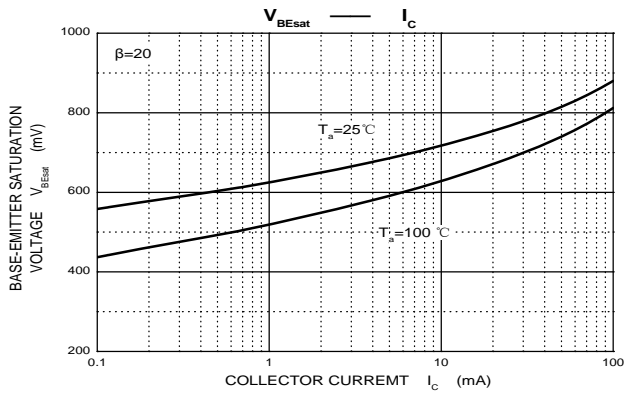
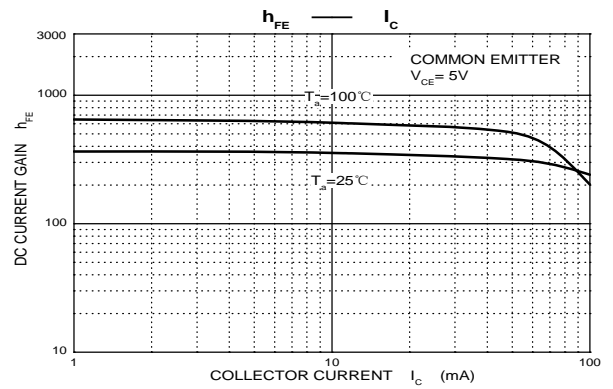
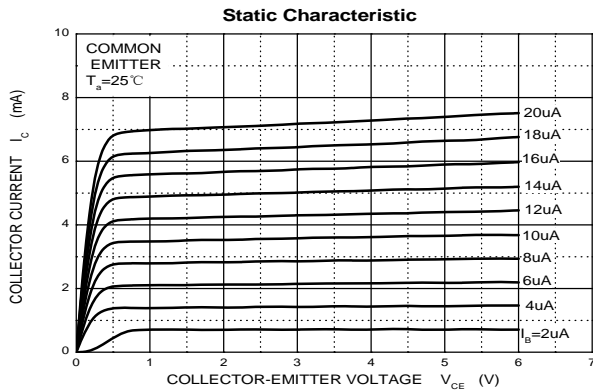
DEVICE MARKING

BC846A=1A; BC846B=1B;
 BC847A=1E; BC847B=1F; BC847C=1G;
 BC848A=1J; BC848B=1K; BC848C=1L

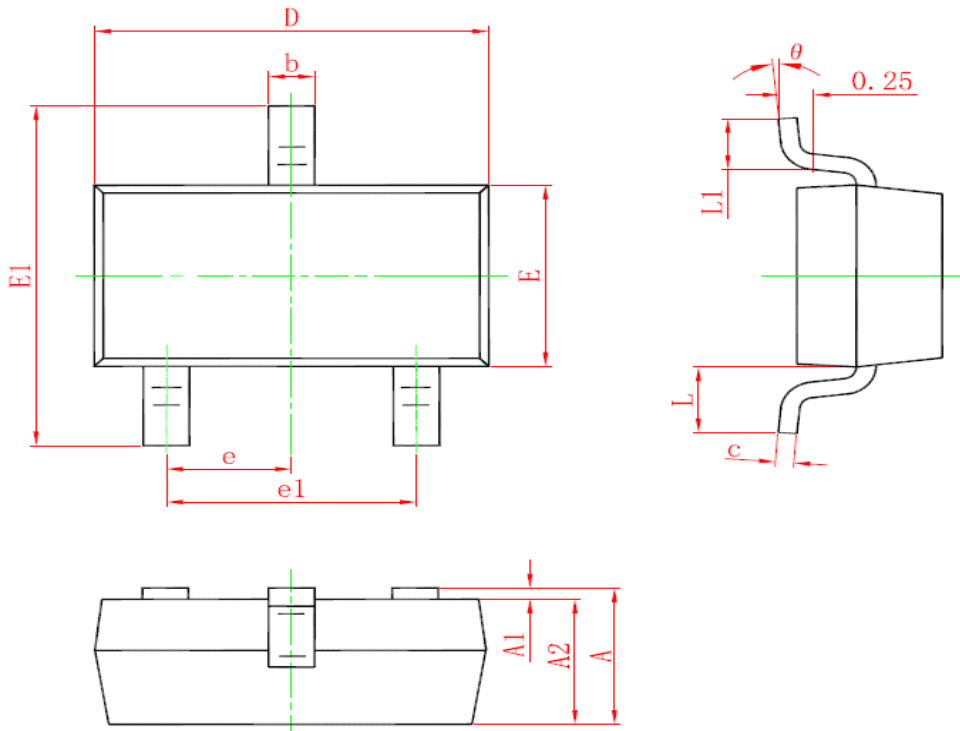
ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN	TYP	MAX	UNIT
Collector-base breakdown voltage	BC846	$I_C = 10\mu A, I_E = 0$	80			V
	BC847		50			
	BC848		30			
Collector-emitter breakdown voltage	BC846	$I_C = 10mA, I_B = 0$	65			V
	BC847		45			
	BC848		30			
Emitter-base breakdown voltage	V_{EBO}	$I_E = 10\mu A, I_C = 0$	6			V
Collector cut-off current	BC846	$V_{CB} = 70V, I_E = 0$				μA
	BC847		$V_{CB} = 50V, I_E = 0$		0.1	
	BC848		$V_{CB} = 30V, I_E = 0$			
Collector cut-off current	BC846	$V_{CE} = 60V, I_B = 0$				μA
	BC847		$V_{CE} = 45V, I_B = 0$		0.1	
	BC848		$V_{CE} = 30V, I_B = 0$			
Emitter cut-off current	I_{EBO}	$V_{EB} = 5V, I_C = 0$			0.1	μA
DC current gain	BC846A,847A,848A	$V_{CE} = 5V, I_C = 2mA$	110		220	
	BC846B,847B,848B		200		450	
	BC847C,BC848C		420		800	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 100mA, I_B = 5mA$			0.5	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 100mA, I_B = 5mA$			1.1	V
Transition frequency	f_T	$V_{CE} = 5V, I_C = 10mA$ $f = 100MHz$	100			MHz
Collector output capacitance	C_{ob}	$V_{CB} = 10V, f = 1MHz$			4.5	pF

Typical Characteristics



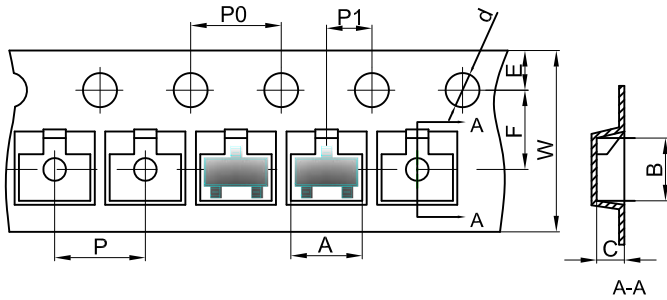
Package Outline Dimensions (Units: mm)



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950TYP		0.037TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.079
θ	0°	8°	0°	8°

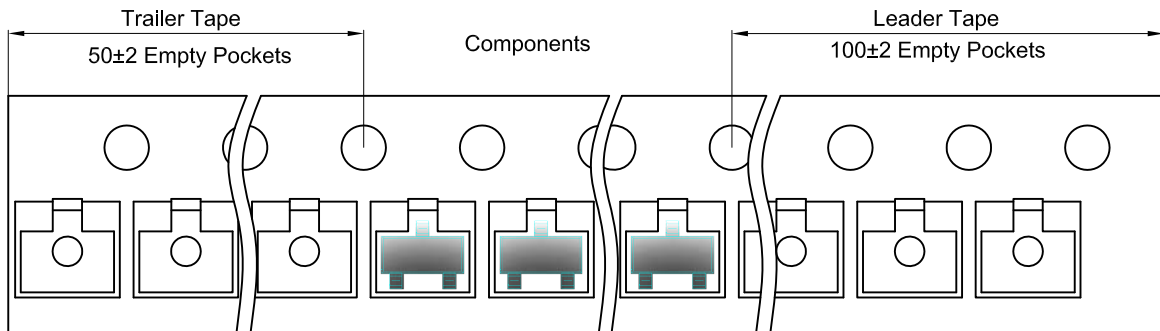
SOT-23 Tape and Reel

SOT-23 Embossed Carrier Tape

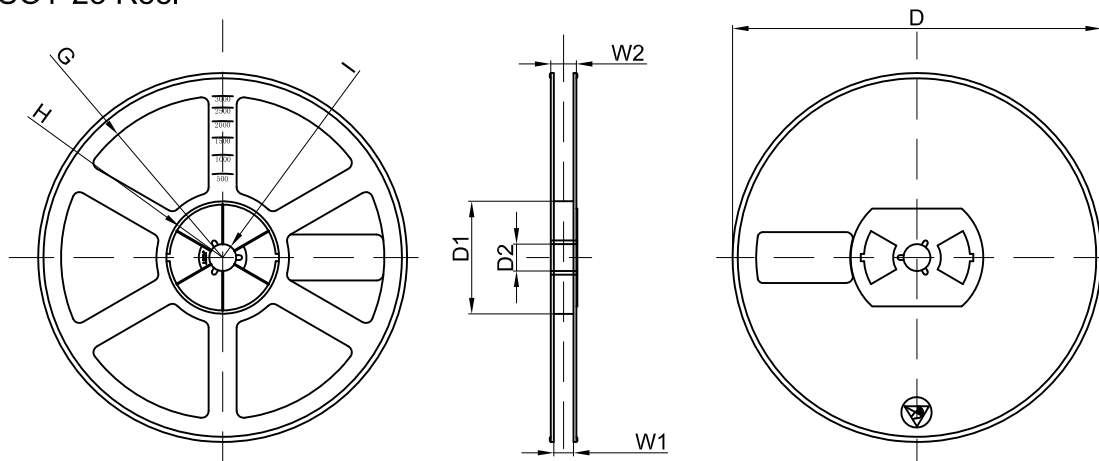


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

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	192x182x182	180,000 pcs	400x385x385	