

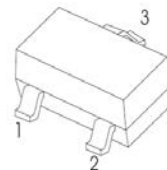


BC846A, B TRANSISTOR (NPN) BC847A, B, C BC848A, B, C

FEATURES

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

SOT-23



1. BASE
2. EMITTER
3. COLLECTOR

MAXIMUM RATINGS ($T_a=25^{\circ}\text{C}$ unless otherwise noted)

Symbol	Parameter	Value	Unit
V_{CB0}	Collector-Base Voltage	BC846	80
		BC847	50
		BC848	30
V_{CE0}	Collector-Emitter Voltage	BC846	65
		BC847	45
		BC848	30
V_{EB0}	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	$^{\circ}\text{C}$
T_{stg}	Storage Temperature	-65-150	$^{\circ}\text{C}$

DEVICE MARKING

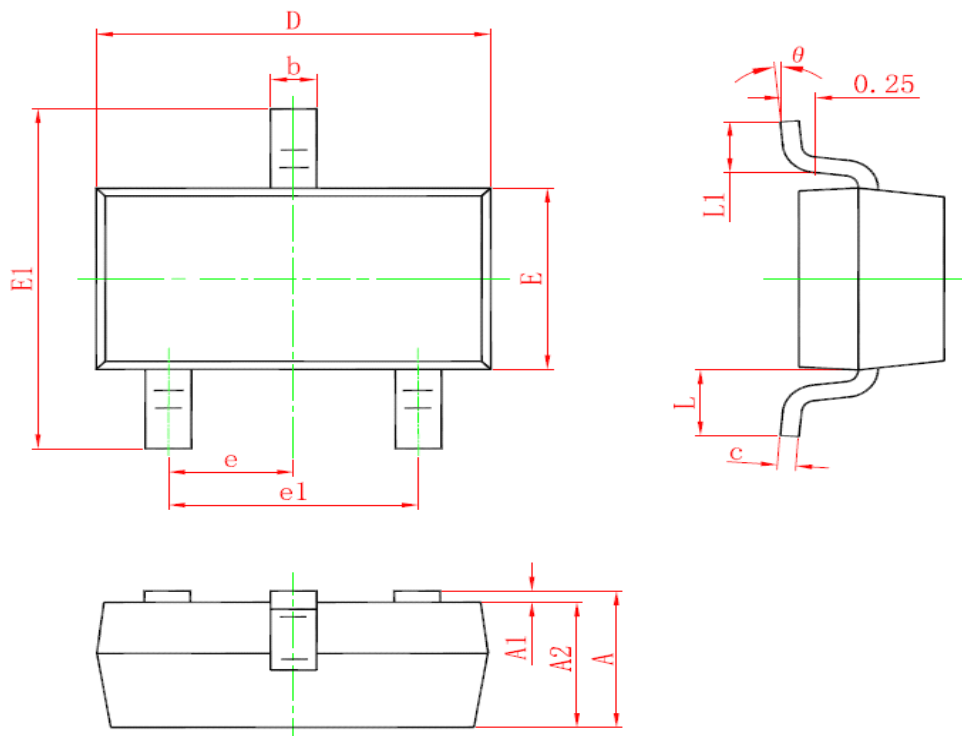
BC846A=1A; BC846B=1B;
BC847A=1E; BC847B=1F; BC847C=1G;
BC848A=1J; BC848B=1K; BC848C=1L



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

Parameter		Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	BC846 BC847 BC848	V _{CBO}	I _C = 10μA, I _E =0	80 50 30			V
Collector-emitter breakdown voltage	BC846 BC847 BC848	V _{CEO}	I _C = 10mA, I _B =0	65 45 30			V
Emitter-base breakdown voltage		V _{EBO}	I _E = 10μA, I _C =0	6			V
Collector cut-off current	BC846 BC847 BC848	I _{CBO}	V _{CB} =70 V, I _E =0 V _{CB} =50 V, I _E =0 V _{CB} =30 V, I _E =0			0.1	μA
Collector cut-off current	BC846 BC847 BC848	I _{CEO}	V _{CE} =60 V, I _B =0 V _{CE} =45 V, I _B =0 V _{CE} =30 V, I _B =0			0.1	μA
Emitter cut-off current		I _{EBO}	V _{EB} =5 V, I _C =0			0.1	μA
DC current gain	BC846A,847A,848A BC846B,847B,848B BC847C,BC848C	h _{FE}	V _{CE} = 5V, I _C = 2mA	110 200 420		220 450 800	
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} = 5 V, I _C = 10mA f=100MHz	100			MHz
Collector output capacitance		C _{ob}	V _{CB} =10V,f=1MHz			4.5	pF

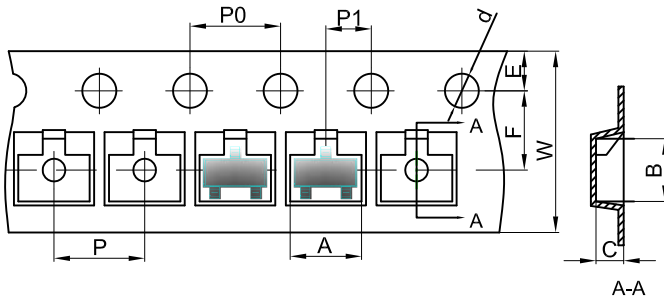
Package Outline Dimensions (Units: mm)



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°

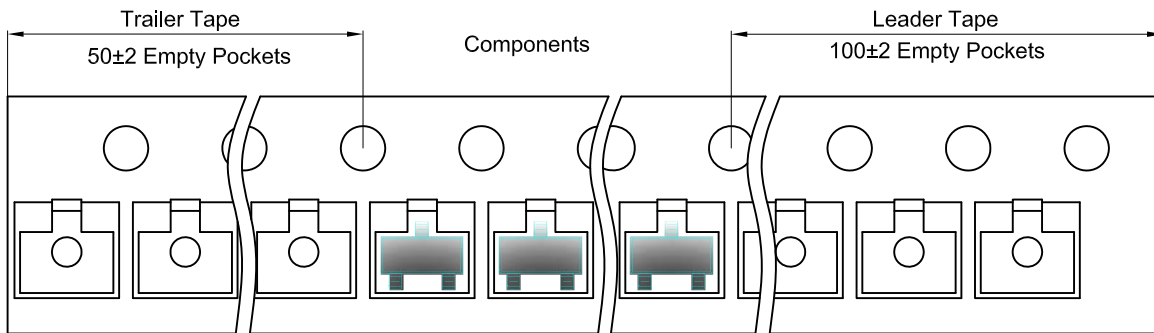
SOT-23 Tape and Reel

SOT-23 Embossed Carrier Tape

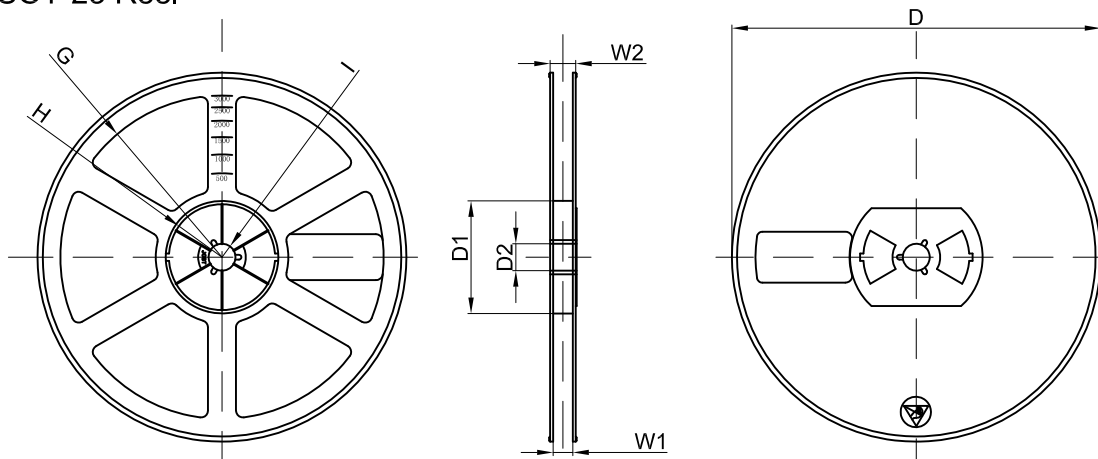


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

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	