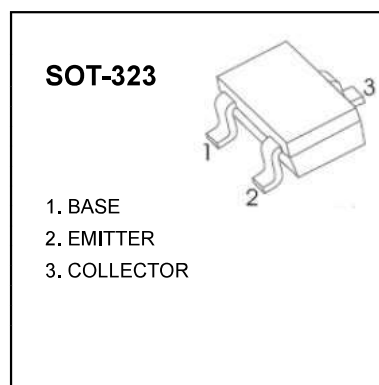


SOT-323 Plastic-Encapsulate Transistors

TRANSISTOR (NPN)

Features:

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



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

Symbol	Parameter		Value	Unit
V _{CBO}	Collector-Base Voltage	BC846W	80	V
		BC847W	50	
		BC848W	30	
V _{CEO}	Collector-Emitter Voltage	BC846W	65	V
		BC847W	45	
		BC848W	30	
V _{EBO}	Emitter-Base Voltage	BC846W	6	V
		BC847W	6	
		BC848W	5	
I _C	Collector Current –Continuous		0.1	A
P _C	Collector Power Dissipation		150	mW
R _{θJA}	Thermal Resistance From Junction To Ambient		833	°C/W
T _J	Junction Temperature		150	°C
T _{stg}	Storage Temperature		-55-150	°C

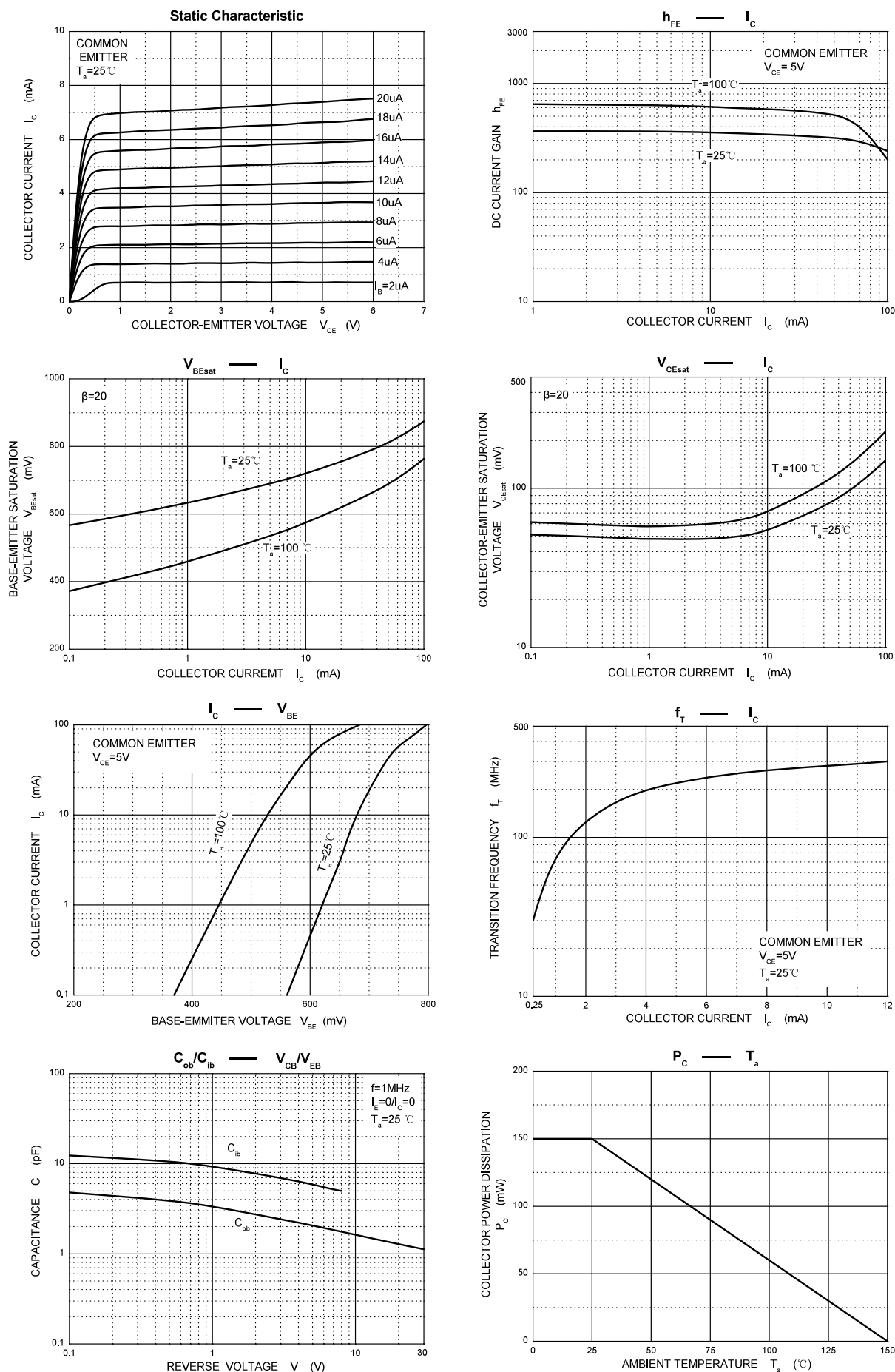
DEVICE MARKING

BC846AW=1A; BC846BW=1B;
 BC847AW=1E; BC847BW=1F; BC847CW=1G;
 BC848AW=1J; BC848BW=1K; BC848CW=1L

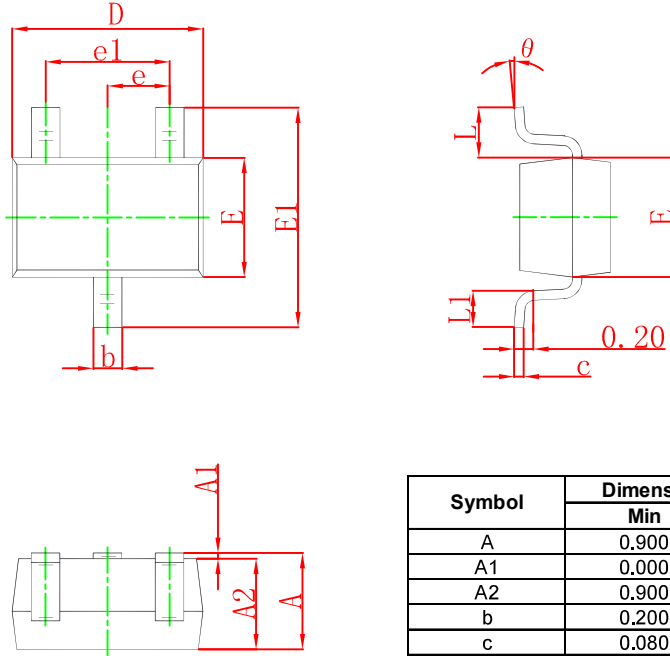
ELECTRICAL CHARACTERISTICS (T_a=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	BC846W BC847W BC848W	V _{CBO}	I _C = 10μA, I _E =0	80 50 30		V
Collector-emitter breakdown voltage	BC846W BC847W BC848W	V _{CEO}	I _C = 10mA, I _B =0	65 45 30		V
Emitter-base breakdown voltage	BC846W BC847W BC848W	V _{EBO}	I _E = 1 μA, I _C =0	6 6 5		V
Collector Cutoff Current		I _{CBO}	V _{CB} =30V			15 nA
DC current gain	BC846AW,847AW,848AW BC846BW,847BW,848BW BC847CW,BC848CW BC846AW,847AW,848AW BC846BW,847BW,848BW BC847CW,BC848CW	h _{FE}	V _{CE} = 5V, I _C = 10μA V _{CE} = 5V, I _C = 2mA		90 150 270	220 450 800
Collector-emitter saturation voltage		V _{CE(sat)}	I _C =10mA, I _B =0.5mA I _C =100mA, I _B = 5mA			0.25 0.6 V
Base-emitter saturation voltage		V _{BE(sat)}	I _C =10mA, I _B =0.5mA I _C =100mA, I _B = 5mA		0.7 0.9	V
Base-emitter voltage		V _{BE(on)}	V _{CE} = 5V, I _C = 2mA V _{CE} = 5V, I _C = 10mA	580	660	700 770 mV
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
Noise figure	BC846AW,847AW,848AW BC846BW,847BW,848BW BC847CW,BC848CW	NF	V _{CE} =5V,I _C =0.2mA, f=1KHz,R _S =2KΩ BW=200Hz			10 10 4 dB

Typical Characteristics

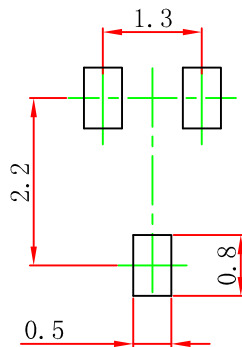


SOT-323 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
theta	0°	8°	0°	8°

SOT-323 Suggested Pad Layout

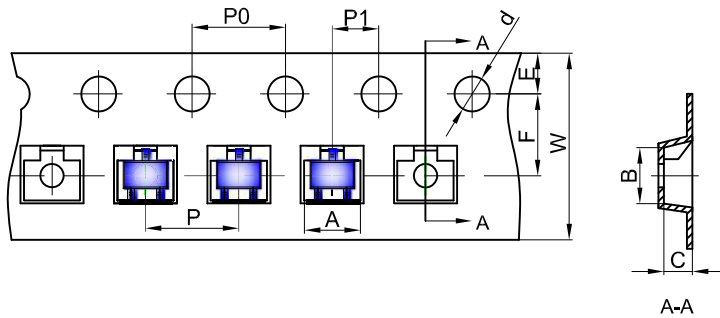


Note:

1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.

SOT-323 Tape and Reel

SOT-323 Embossed Carrier Tape

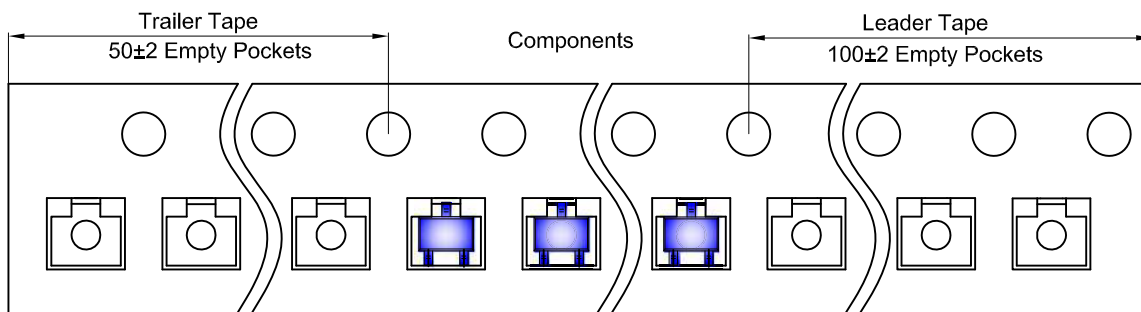


Packaging Description:

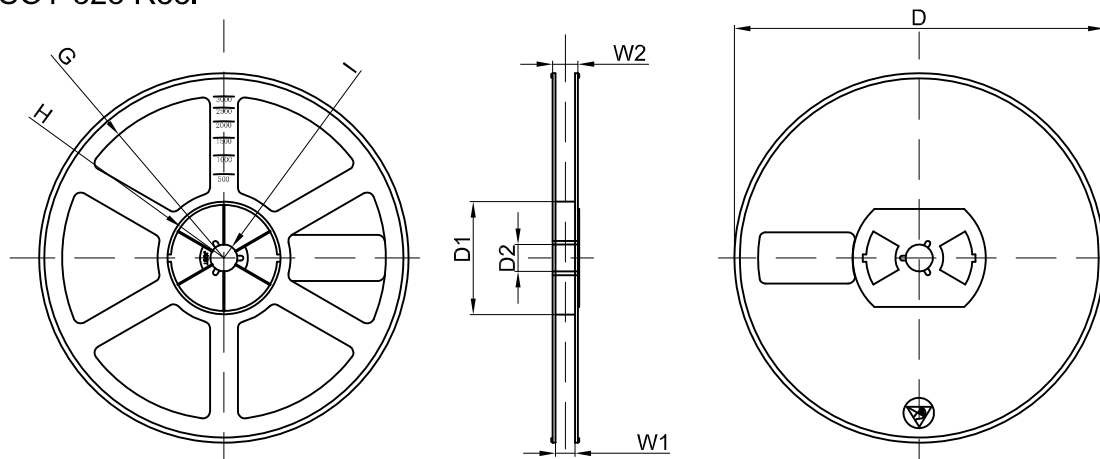
SOT-323 parts are shipped in tape. The carrier tape is made from a dissipative (carbon filled) polycarbonate resin. The cover tape is a multilayer film (Heat Activated Adhesive in nature) primarily composed of polyester film, adhesive layer, sealant, and anti-static sprayed agent. These reeled parts in standard option are shipped with 3,000 units per 7" or 17.8cm diameter reel. The reels are clear in color and is made of polystyrene plastic (anti-static coated).

Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-323	2.25	2.55	1.19	Ø1.55	1.75	3.50	4.00	4.00	2.00	8.00

SOT-323 Tape Leader and Trailer



SOT-323 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	