

SOT-23 Plastic-Encapsulate Transistors

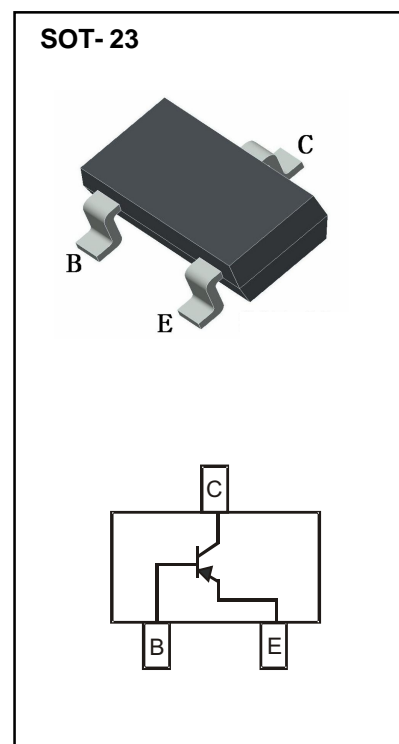
TRANSISTOR(PNP)

Features

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

Marking:

- BC856A=3A;BC856B=3B;
- BC857A=3E;BC857B=3F;BC857C=3G;
- BC858A=3J;BC858B=3K;BC858C=3L;



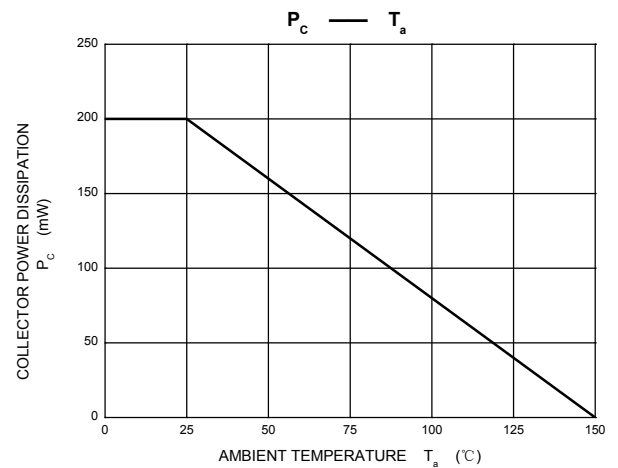
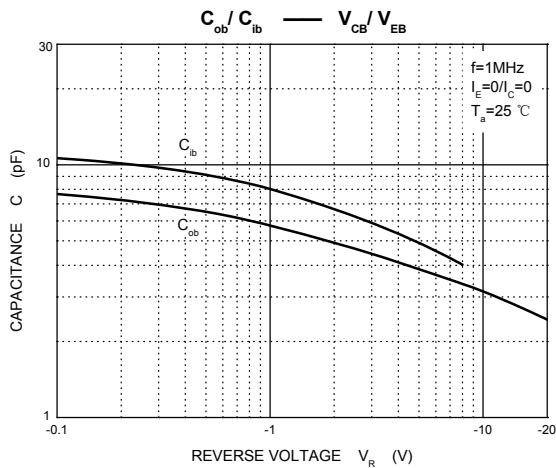
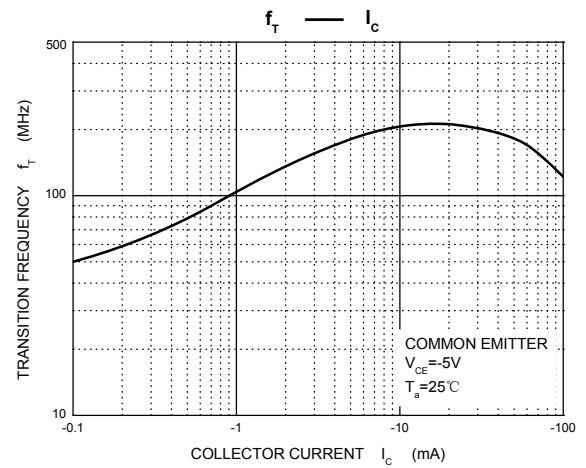
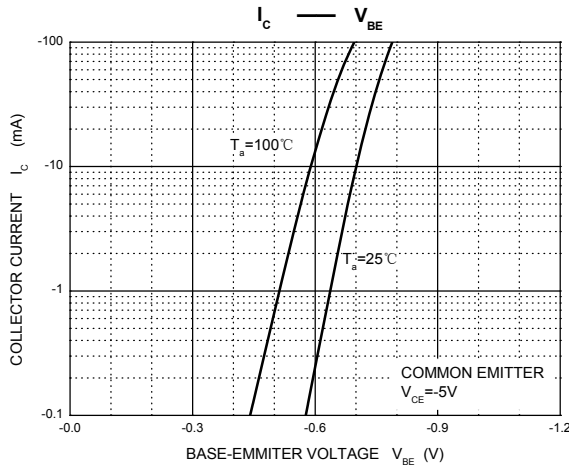
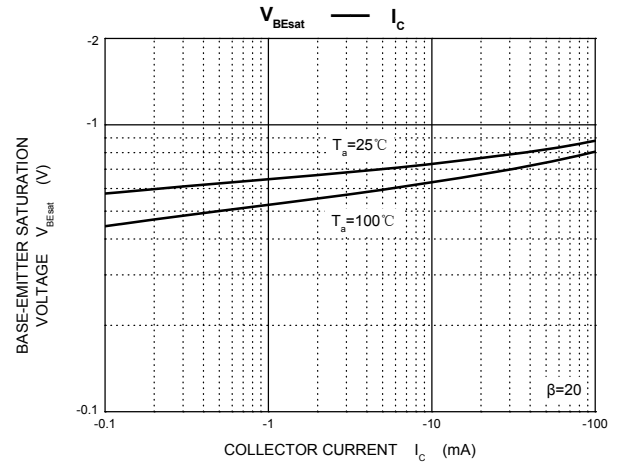
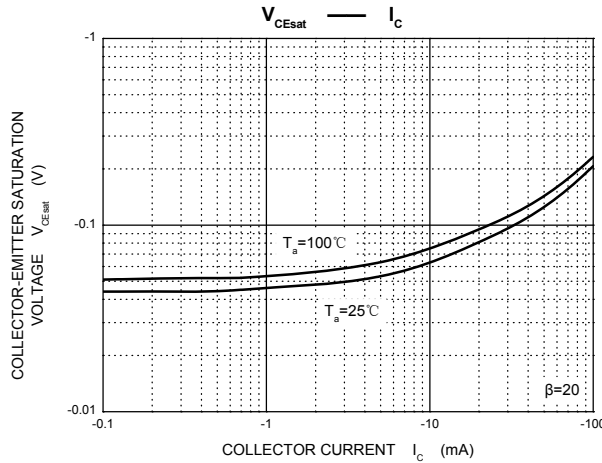
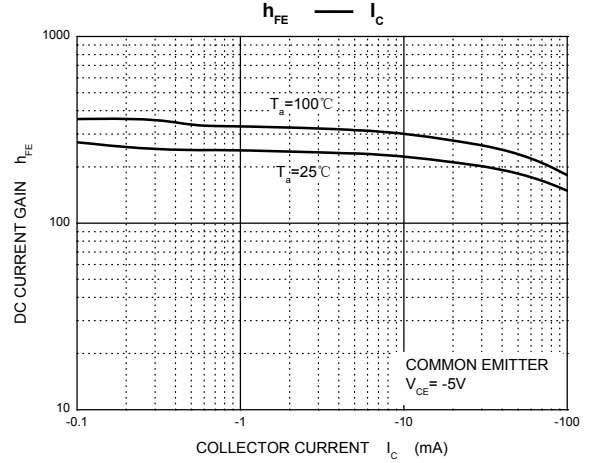
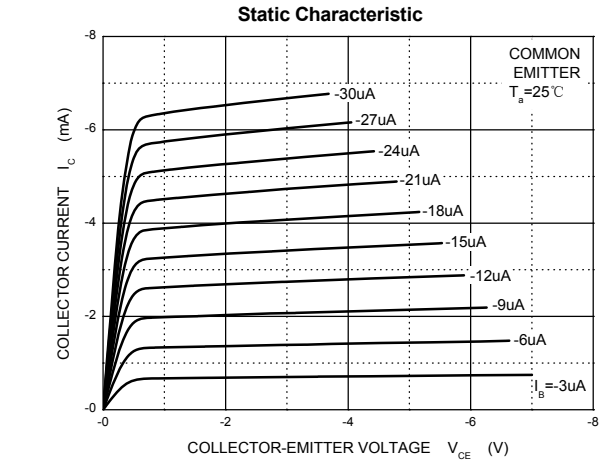
Limiting Values (Absolute Maximum Rating)

Item	Symbol	Unit	Conditions	Value
Collector-Base Voltage	BC856 BC857 BC858	VCBO	V	-80 -50 -30
Collector-Emitter Voltage	BC856 BC857 BC858	VCEO	V	-65 -45 -30
Emitter-Base Voltage		VEBO	V	-5
Collector Current		IC	A	-0.1
Total Device Dissipation		PC	W	0.2
Thermal Resistance From Junction To Ambient		R _{θJA}	°C/W	625
Junction Temperature		T _j	°C	150
Storage Temperature		TSTG	°C	-55 to +150

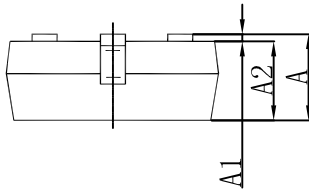
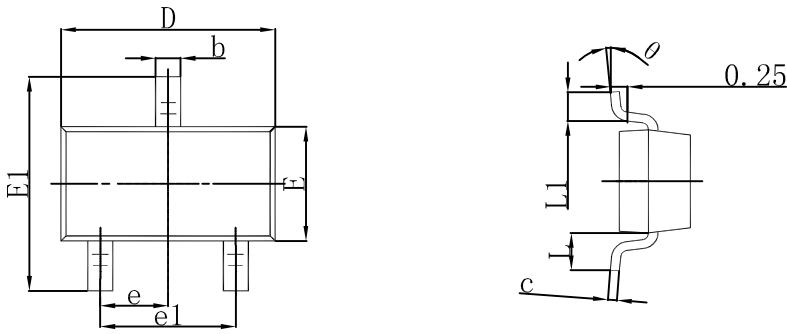
Electrical Characteristics ($T_A=25^\circ\text{C}$ unless otherwise noted)

Parameter	Symbol	Test conditions	Min	Max	Unit	
Collector-base breakdown voltage	BC856	$I_C = -10\mu\text{A}, I_E = 0$	-80		V	
	BC857		-50			
	BC858		-30			
Collector-emitter breakdown voltage	BC856	$I_C = -10\text{mA}, I_B = 0$	-65		V	
	BC857		-45			
	BC858		-30			
Emitter-base breakdown voltage	V_{EBO}	$I_E = -1\mu\text{A}, I_C = 0$	-5		V	
Collector cut-off current	BC856	I_{CBO}	$V_{CB} = -70\text{V}, I_E = 0$		μA	
	BC857		$V_{CB} = -45\text{V}, I_E = 0$	-0.1		
	BC858		$V_{CB} = -25\text{V}, I_E = 0$			
Collector cut-off current	BC856	I_{CEO}	$V_{CE} = -60\text{V}, I_B = 0$		μA	
	BC857		$V_{CE} = -40\text{V}, I_B = 0$	-0.1		
	BC858		$V_{CE} = -25\text{V}, I_B = 0$			
Emitter cut-off current	I_{EBO}	$V_{EB} = -5\text{V}, I_C = 0$		-0.1	μA	
DC current gain	BC856A, 857A, 858A	h_{FE}	$V_{CE} = -5\text{V}, I_C = -2\text{mA}$	125	250	
	BC856B, 857B, 858B			220	475	
	BC857C, BC858C			420	800	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -100\text{mA}, I_B = -5\text{mA}$		-0.5	V	
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -100\text{mA}, I_B = -5\text{mA}$		-1.1	V	
Transition frequency	f_T	$V_{CE} = -5\text{V}, I_C = -10\text{mA}$ $f = 100\text{MHz}$	100		MHz	
Collector capacitance	C_{ob}	$V_{CB} = -10\text{V}, f = 1\text{MHz}$		4.5	pF	

Typical Characteristics

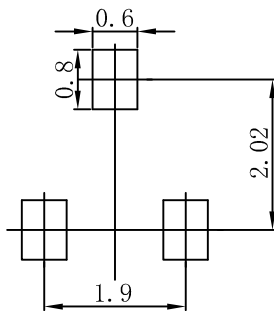


SOT-23 Package Outline Dimensions



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	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
theta	0°	8°	0°	8°

SOT-23 Suggested Pad Layout



Note:

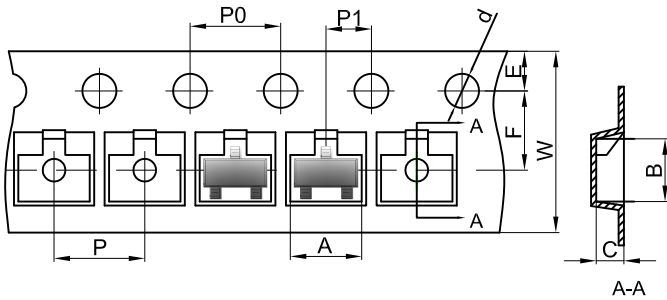
1. Controlling dimension: in millimeters.
2. General tolerance: ± 0.05 mm.
3. The pad layout is for reference purposes only.

NOTICE

JSHD reserve the right to make modifications, enhancements, improvements, corrections or other changes without further notice to any product herein. JSHD does not assume any liability arising out of the application or use of any product described herein.

Reel Taping Specifications For Surface Mount Devices-SOT-23

SOT-23 Embossed Carrier Tape



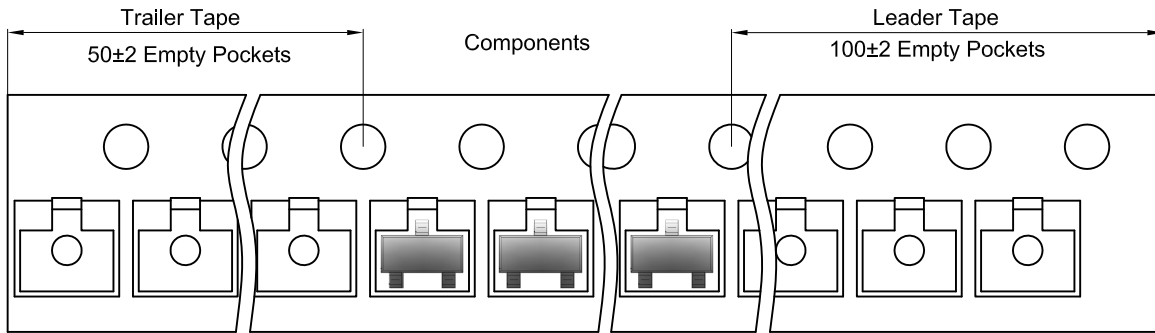
Packaging Description:

SOT-23 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).

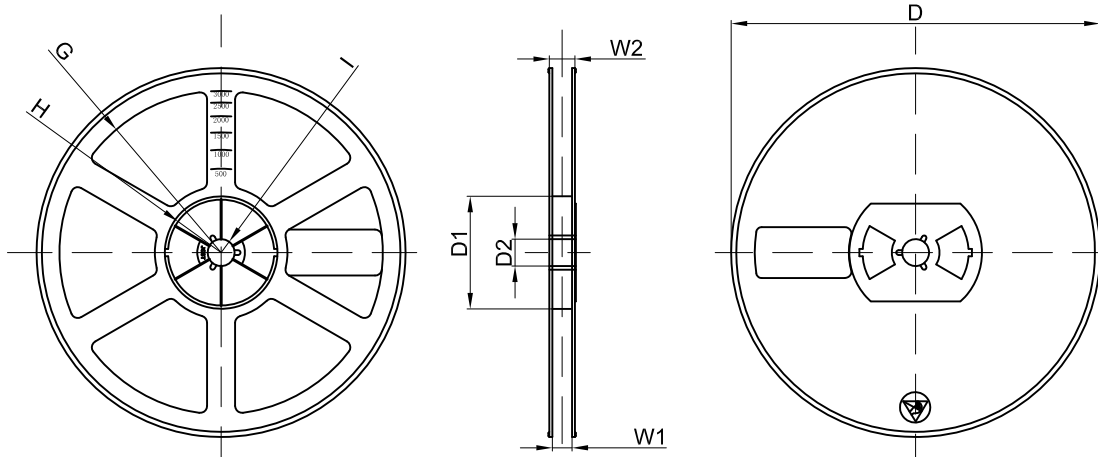
Dimensions are in millimeter

Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-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	438×438×230	

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