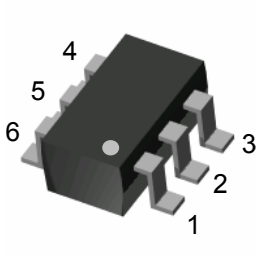
Hottech Semiconductor

BC856DW

BIPOLAR TRANSISTOR (PNP)

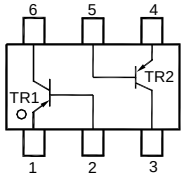


FEATURES

- Low collector capacitance
- Low collector-emitter saturation voltage
- Closely matched current gain
- Reduces number of components and boardspace
- No mutual interference between the transistors.

MECHANICAL DATA

- Case: SOT-363
- Case Material: Molded Plastic. UL flammability
- Classification Rating: 94V-0
- Weight: 0.018 grams (approximate)



1. Emitter 2. Base 3. Collector
4. Emitter 5. Base 6. Collector

SOT-363

■ Absolute Maximum Ratings (T_a = 25℃)

Parameter		Symbol	Value	Unit
Collector Base Voltage	BC856DW	$-V_{CBO}$	80	V
Collector Emitter Voltage	BC856DW	$-V_{CEO}$	65	V
Emitter Base Voltage		$-V_{EBO}$	5	V
Collector Current		$-I_C$	100	mA
Peak Collector Current		$-I_{CM}$	100	mA
Total Power Dissipation		P_{tot}	200	mW
Junction Temperature		T_j	150	℃
Storage Temperature Range		T_{Stg}	- 55 to + 150	℃

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■ Characteristics at T_a = 25℃

Parameter		Symbol	Min.	Max.	Unit
DC Current Gain at $-V_{CE}$ = 5 V, $-I_C$ = 2 mA	BC856ADW BC856BDW BC856CDW	h_{FE} h_{FE} h_{FE}	125 220 420	250 475 800	- - -
Collector Base Voltage at $-I_C$ = 10 µA	BC856DW	$-V_{CBO}$	80	-	V
Collector Emitter Voltage at $-I_C$ = 10 mA	BC856DW	$-V_{CEO}$	65	-	V
Emitter Base Voltage at $-I_E$ = 1 µA		$-V_{EBO}$	5	-	V
Collector Base Cutoff Current at $-V_{CB}$ = 30 V		$-I_{CBO}$	-	15	nA
Emitter Base Cutoff Current at $-V_{EB}$ = 5 V		$-I_{EBO}$	-	100	nA
Collector Emitter Saturation Voltage at $-I_C$ = 10 mA, $-I_B$ = 0.5 mA $-I_C$ = 100 mA, $-I_B$ = 5 mA		$-V_{CE(sat)}$	- -	0.3 0.65	V
Base Emitter Voltage at $-V_{CE}$ = 5 V, $-I_C$ = 2 mA $-V_{CE}$ = 5 V, $-I_C$ = 10 mA		$-V_{BE}$	0.6 -	0.75 0.82	V
Transition Frequency at $-V_{CE}$ = 5 V, $-I_C$ = 10 mA, f = 100 MHz		f_T	100	-	MHz
Output Capacitance at $-V_{CB}$ = 10 V, I_E = 0, f = 1 MHz		C_{ob}	-	4.5	pF

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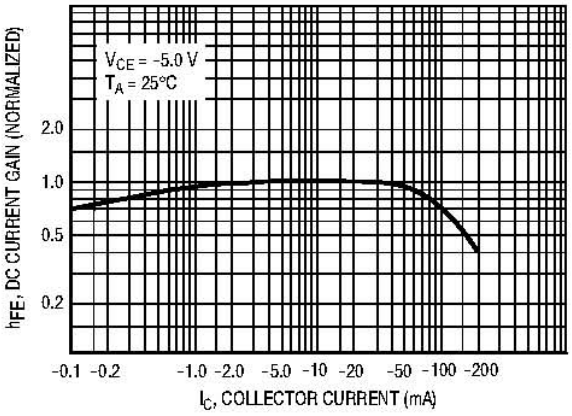
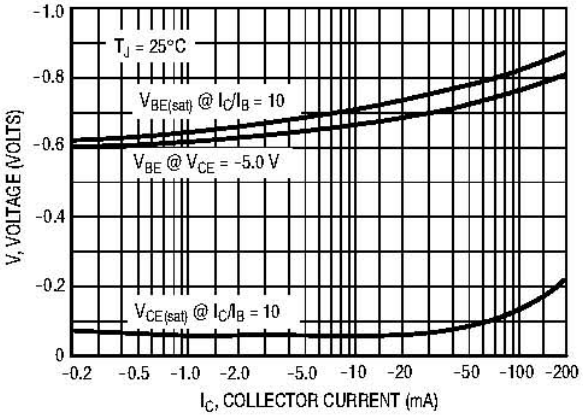
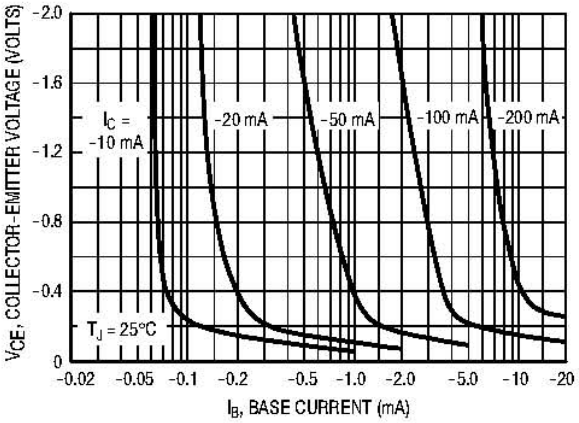


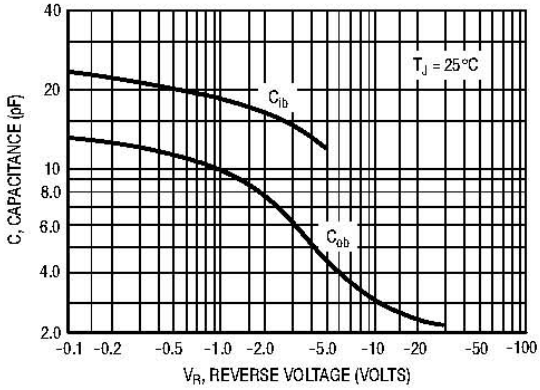
DC Current Gain



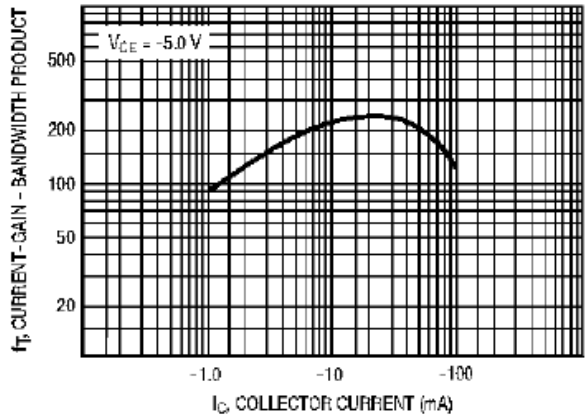
"On" Voltage



Collector Saturation Region



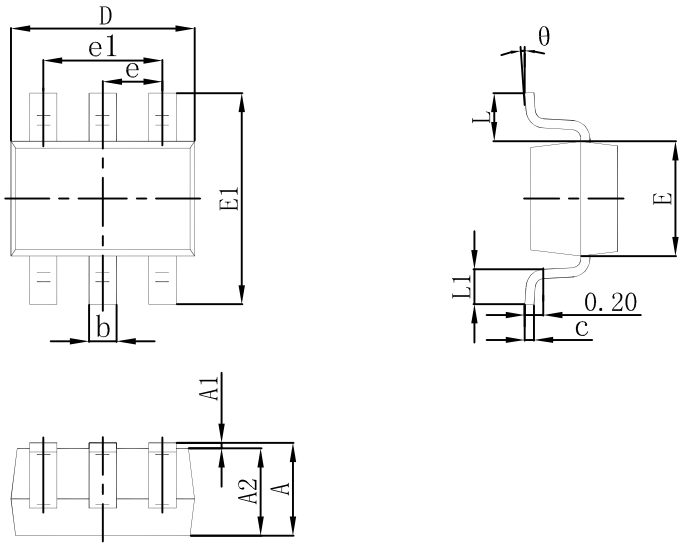
Capacitance



Current–Gain – Bandwidth Product

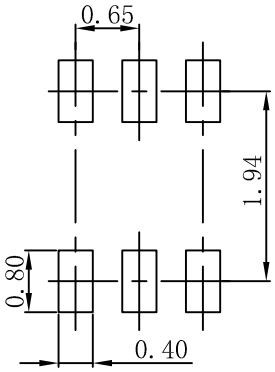
BIPOLAR TRANSISTOR (PNP)

SOT-363 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	0.150	0.350	0.006	0.014
c	0.100	0.150	0.004	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.400	0.085	0.094
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
θ	0°	8°	0°	8°

SOT-363 Suggested Pad Layout



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

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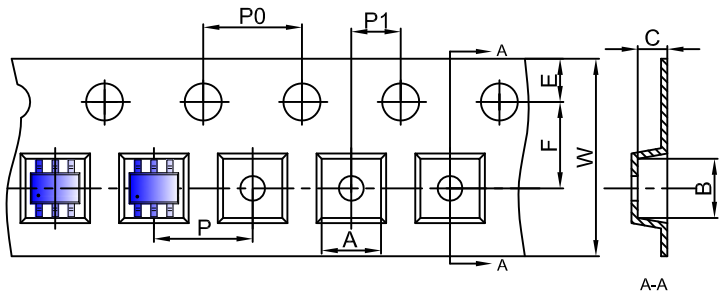
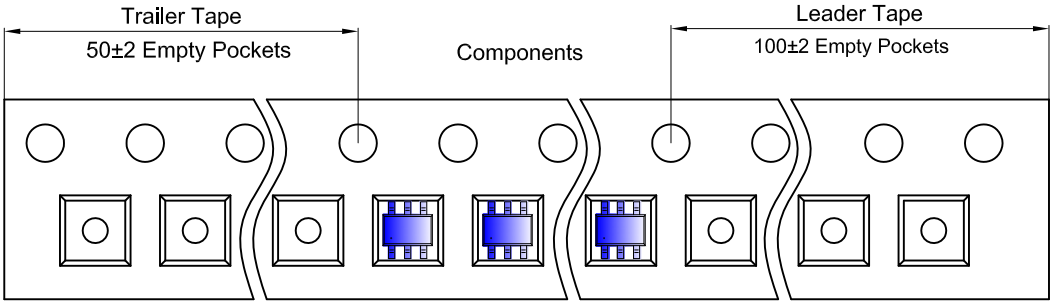
SOT-363 Embossed Carrier Tape

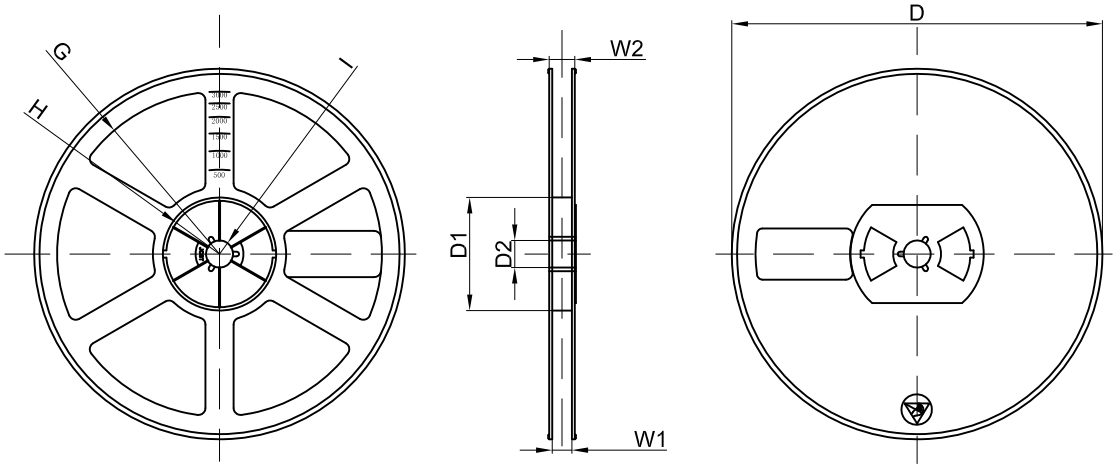


Dimensions are in millimeter										
Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-363	2.25	2.55	1.20	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

SOT-363 Tape Leader and Trailer



SOT-363 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