UMW BC85xB

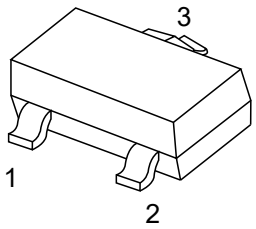
1.Features

- BC856A, B TRANSISTOR (PNP)
  BC857A, B,C
  BC858A, B,C
- Ideally suited for automatic insertion
  For Switching and AF Amplifier Applications

2.Pinning Information

Pin	Symbol	Description
1	B	BASE
2	E	EMITTER
3	C	COLLECTOR

SOT-23



3.Absolute Maximum Ratings T_A= 25°C

Parameter		Symbol	Value	Units
Collector-Base Voltage	BC856	V_{CBO}	-80	V
	BC857		-50	V
	BC858		-30	V
Collector-Emitter Voltage	BC856	V_{CEO}	-65	V
	BC857		-45	V
	BC858		-30	V
Emitter-Base Voltage		V_{EBO}	-5	V
Collector Current -Continuous		I_C	-0.1	A
Collector Power Dissipation		P_C	200	mW
Junction Temperature		T_J	150	°C
Storage Temperature		T_{STG}	-65 to 150	°C

4.Electrical Characteristics T_A= 25°C

Parameter		Symbol	Conditions	Min	Typ	Max	Units
Collector-base breakdown voltage	BC856	V_{CBO}	I_C=-10μA, I_E=0	-80			V
	BC857			-50			V
	BC858			-30			V
Collector-emitter breakdown voltage	BC856	V_{CEO}	I_C=-10mA, I_B=0	-65			V
	BC857			-45			V
	BC858			-30			V
Emitter-base breakdown voltage		V_{EBO}	I_E=-1μA, I_C=0	-5			V
Collector cut-off current	BC856	I_{CBO}	V_{CB}=-70V, I_E=0			-0.1	μA
	BC857		V_{CB}=-45V, I_E=0				
	BC858		V_{CB}=-25V, I_E=0				
Collector cut-off current	BC856	I_{CEO}	V_{CE}=-60V, I_B=0			-0.1	μA
	BC857		V_{CE}=-40V, I_B=0				
	BC858		V_{CE}=-25V, I_B=0				
Emitter cut-off current		I_{EBO}	V_{EB}=-5V, I_C=0			-0.1	μA
DC current gain	BC856A, 857A,858A	h_{FE}	V_{CE}=-5V, I_C=-2mA	125		250	
	BC856B, 857B,858B			220		475	
	BC857C,BC858C			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 capacitance		C_{ob}	V_{CB}=-10V, f=1MHz			4.5	pF

5.1Typical Characterisitics

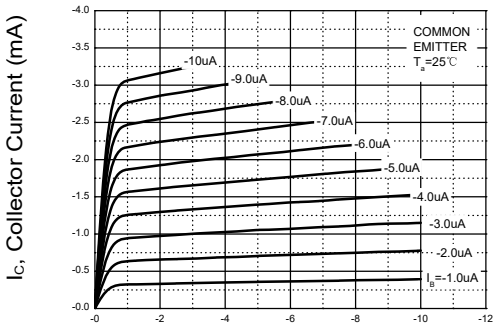


Figure 1: Static Characteristic

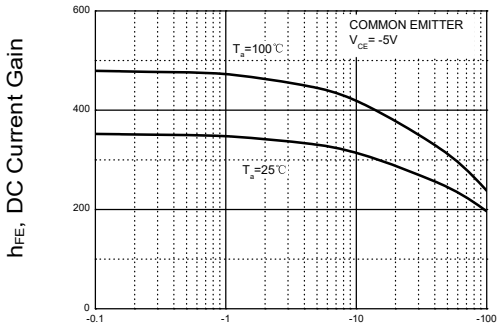


Figure 2: h_{FE} —— I_C

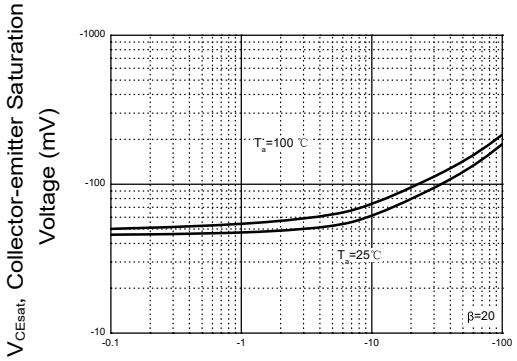


Figure 3: V_{CEsat} —— I_C

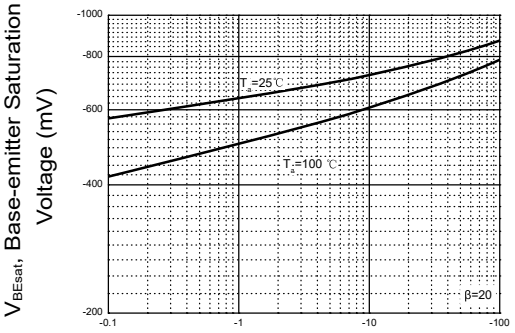


Figure 4: V_{BEsat} —— I_C

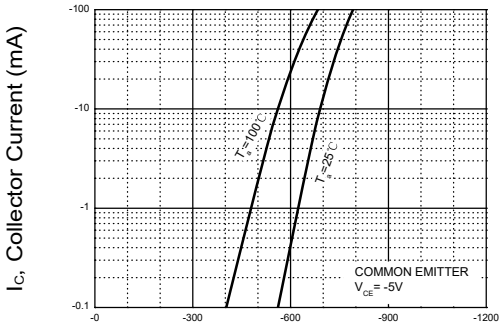


Figure 5: I_C —— V_{BE}

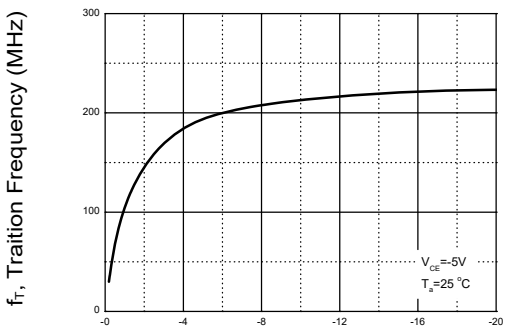


Figure 6: f_T —— I_C

5.2Typical Characterisitics

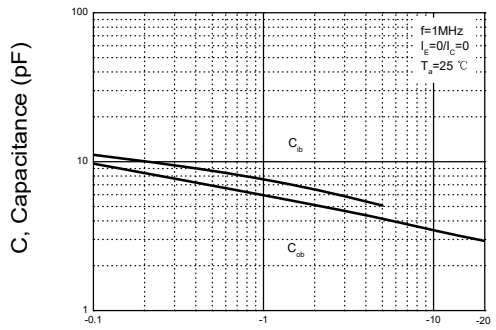


Figure 7: C_{ob}/C_{ib} —— V_{CB}/V_{EB}

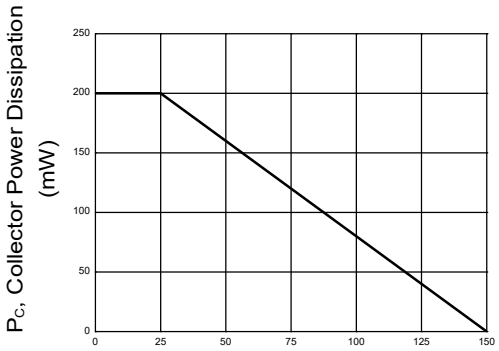
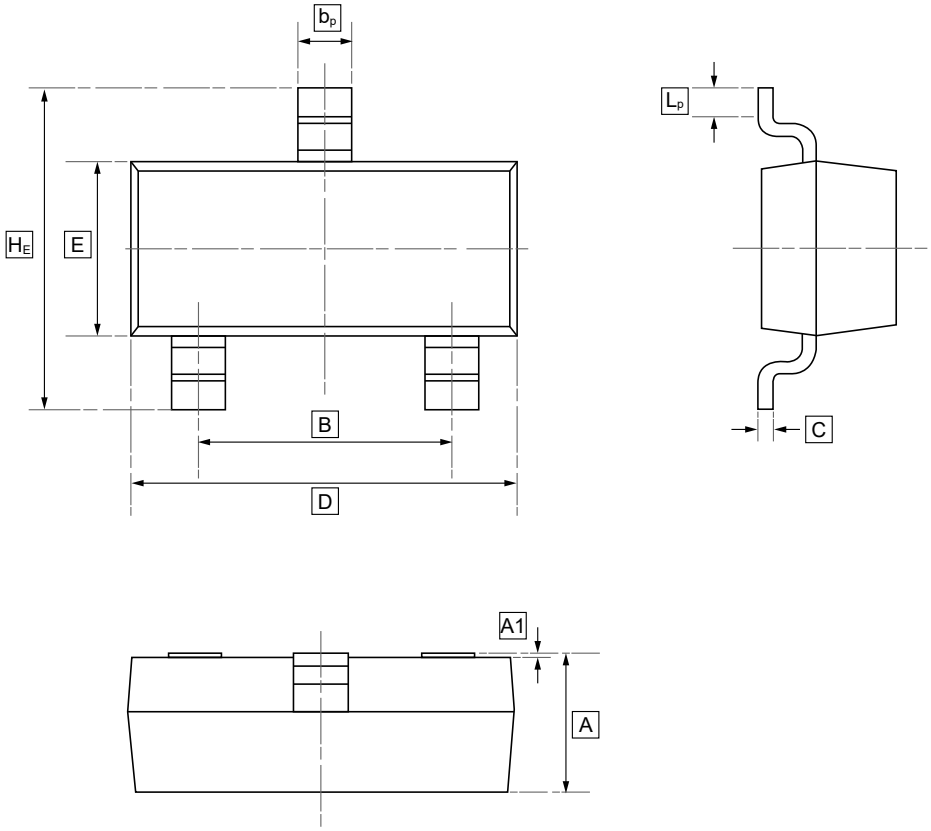


Figure 8: P_C —— T_A

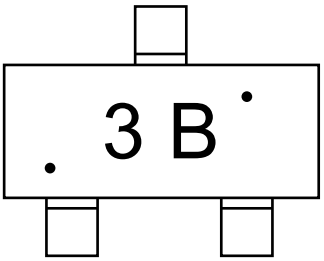
6.SOT-23 Package Outline Dimensions



DIMENSIONS (mm are the original dimensions)

Symbol	A	B	b_p	C	D	E	H_E	A1	L_p
Min	0.95	1.78	0.35	0.08	2.70	1.20	2.20	0.013	0.20
Max	1.40	2.04	0.50	0.19	3.10	1.65	3.00	0.100	0.50

7.Ordering information



Order Code	Marking	Package	Base QTY	Delivery Mode
UMW BC856B	3B	SOT-23	3000	Tape and reel
UMW BC857B	3F	SOT-23	3000	Tape and reel
UMW BC857C	3G	SOT-23	3000	Tape and reel

8.Disclaimer

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