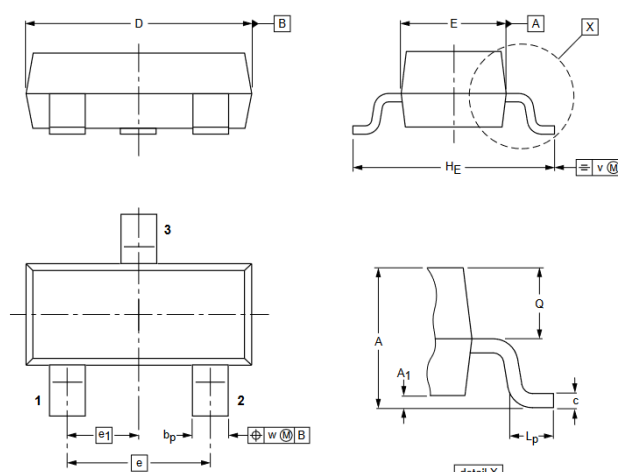


Silicon SMD PNP Epitaxial Transistors

Primary characteristics			
Symbol	Parameter	Value	Unit
V_{CBO}	Collector-base voltage	-30 ~ -80	V
V_{CEO}	Collector-emitter voltage	-30 ~ -65	V
V_{EBO}	Emitter-base voltage	-5	V
P_C	Collector power dissipation	200	mW

Features

- **SOT-23** case for easy automatic insertion.
- Pb-free and **RoHS** compliant
- Epitaxial planar die construction
- Complementary **PNP** type available (BC856 ~ BC858)
- For switching and AF amplifier applications

Case dimensions													
 1 – Base; 2 – Emitter; 3 – Collector													
SOT-23 (TO-236AB)													
Unit	A	A ₁ max	b _p	c	D	E	e	e ₁	H _c	L _p	Q	v	w
mm	1.0 ±0.1	0.1	0.43 ±0.05	0.12 ±0.03	2.9 ±0.1	1.3 ±0.1	1.9	0.95	2.3 ±0.2	0.3 ±0.15	0.5 ±0.05	0.2	0.1

Part numbering system

BC85	7	B
↓	↓	↓
Series code	V_{CBO} classification (see: Absolute maximum ratings)	h_{FE} classification (see: Characteristics)

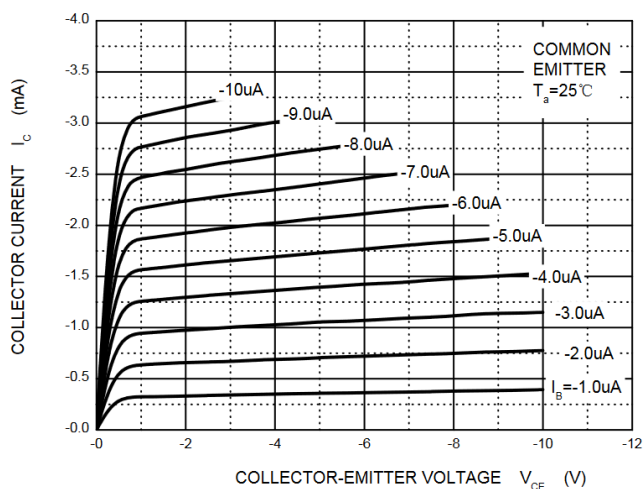
Absolute maximum ratings ($T_a = 25^\circ\text{C}$)

Parameter	Symbol	Value	Unit
Collector-base voltage	V_{CBO}	-80	V
		-50	
		-30	
Collector-emitter voltage	V_{CEO}	-65	V
		-45	
		-30	
Emitter-base voltage	V_{EBO}	-5	V
Collector current	I_C	-100	mA
Power dissipation	P_{tot}	200	mW
Junction temperature	T_J	150	$^\circ\text{C}$
Storage temperature range	T_{STG}	-55 ~ 150	

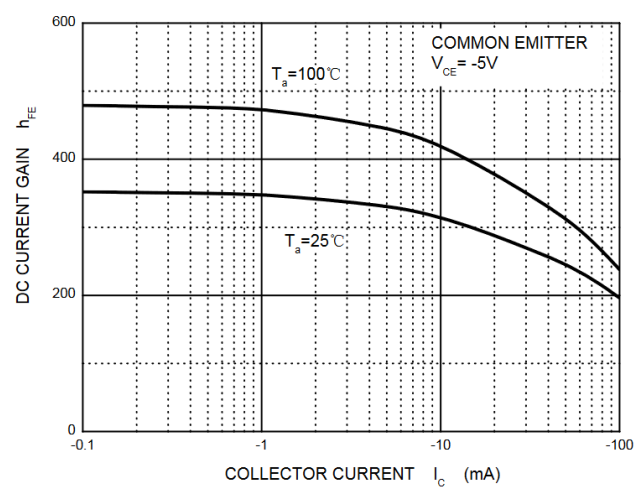
Characteristics (T_a = 25°C)

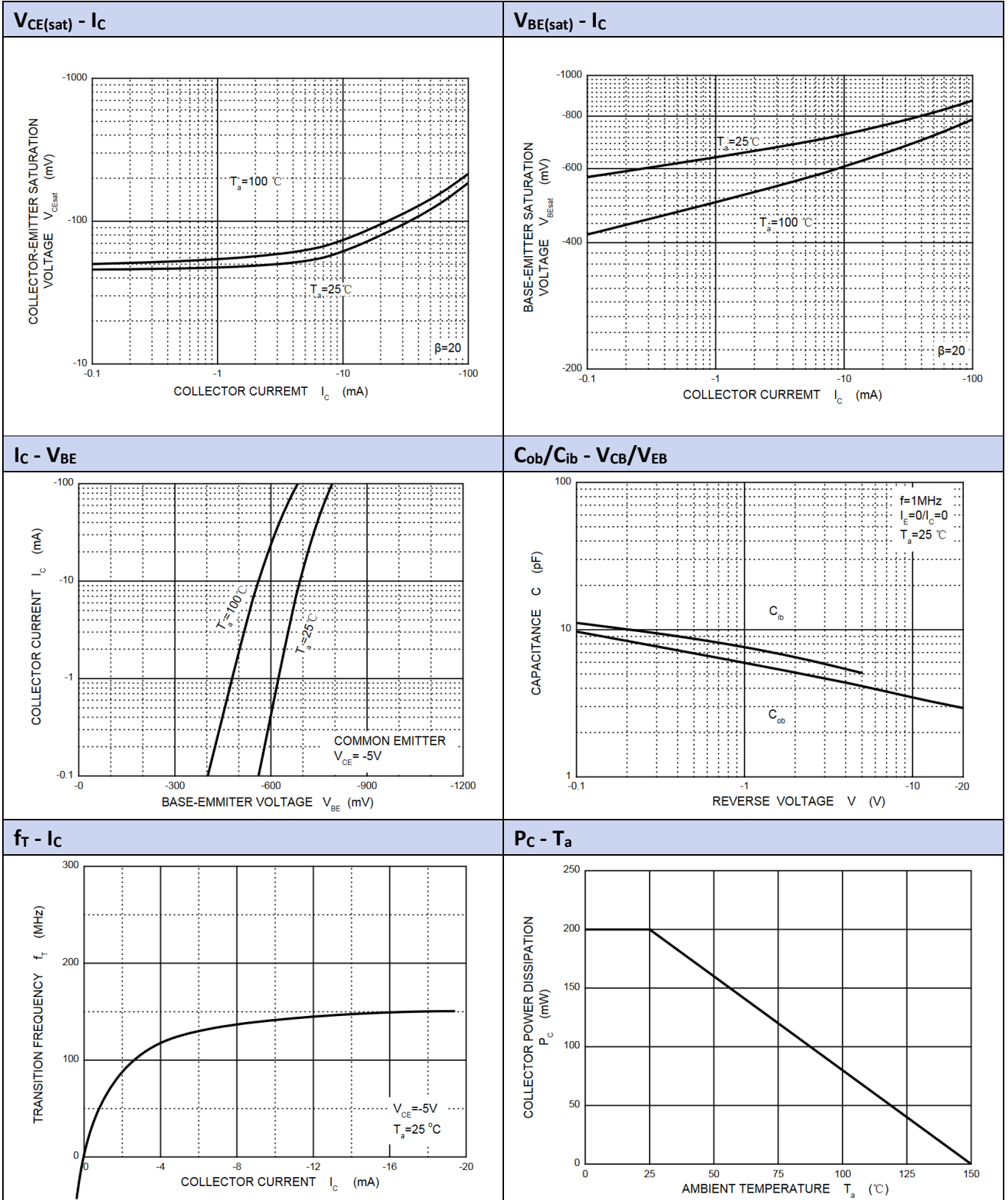
Parameter	Symbol	Test conditions	Value			Unit
			Min	Typ.	Max	
DC current gain	A	-	125	-	250	-
	B		220	-	475	
	C		420	-	800	
Collector-base cutoff current	BC856	V _{CB} =-70V, I _E =0	-	-	-100	nA
	BC857	V _{CB} =-45V, I _E =0				
	BC858	V _{CB} =-25V, I _E =0				
Collector-base breakdown voltage	BC856	I _C =100μA	-80	-	-	V
	BC857		-50	-	-	
	BC858		-30	-	-	
Collector-emitter breakdown voltage	BC856	I _C =2.0mA	-65	-	-	V
	BC857		-45	-	-	
	BC858		-30	-	-	
Emitter-base breakdown voltage	V _{(BR)EBO}	I _C =-100μA, I _C =0	-5.0	-	-	V
Collector-emitter cut-off current	BC856	V _{CE} =-55V, I _E =0	-	-	-1.0	μA
	BC857	V _{CE} =-40V, I _E =0				
	BC858	V _{CE} =-25V, I _E =0				
Emitter cut-off current	I _{EBO}	V _{EB} =-5.0V, I _C =0	-	-	-100	nA
Base-emitter saturation voltage	V _{BE(sat)}	I _B =-5.0mA, I _C =-100mA	-	-	-1.1	V
Collector-emitter saturation voltage	V _{CE(sat)}	I _B =-5.0mA, I _C =-100mA	-	-	-0.5	
Transition frequency	f _T	V _{CE} =-5.0V, I _C =-10mA, f=100MHz	100	-	-	MHz
Collector output capacitance	C _{ob}	V _{CB} =-10V, f=1.0MHz	-	-	4.5	pF

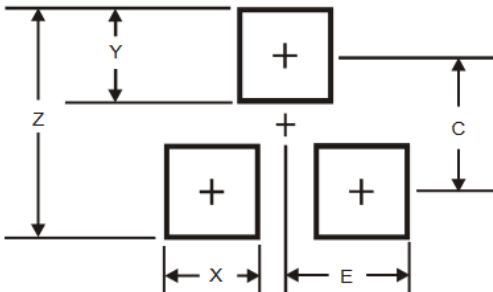
Static characteristic



h_{FE} - I_C





Suggested soldering pad layout					
					
SOT-23 (TO-236AB)					
Pad dimensions					
Unit	Z	X	Y	C	E
mm	2.9	0.8	0.9	2.0	1.35

Ordering information			
Part Number	Package	Shipping Quantity	Dimensions
BC856 ~ BC858	SOT-23 (TO-236AB)	3000 pcs / reel 144 000 pcs / box	--- 400 x 370 x 270 mm

Disclaimer

Akyga semi reserves the right to make changes without notice to any product specification herein, to make corrections, modifications, enhancements or other changes. Akyga semi or anyone on its behalf assumes no responsibility or liability for any errors or inaccuracies. Data sheet specifications and its information contained are intended to provide a product description only. "Typical" parameters which may be included on Akyga semi data sheets and/ or specifications can and do vary in different applications and actual performance may vary over time. Akyga semi does not assume any liability arising out of the application or use of any product or circuit. Akyga semi products are not designed, intended or authorized for use in medical, life-saving implant or other applications intended for life-sustaining or other related applications where a failure or malfunction of component or circuitry may directly or indirectly cause injury or threaten a life without expressed written approval of Akyga semi. Customers using or selling Akyga semi components for use in such applications do so at their own risk and shall agree to fully indemnify Akyga semi and its subsidiaries harmless against all claims, damages and expenditures.