BC856A/B (PNP)
BC857A/B/C (PNP)
BC858A/B/C (PNP)

FEATURES

Ideally suited for automatic insertion

For Switching and AF Amplifier Applications

1. BASE
2. EMITTER
3. COLLECTO

SOT-23

Marking

BC856A	BC856B	BC857A	BC857B
3A	3B	3E	3F

BC857C	BC858A	BC858B	BC858C
3G	3J	3K	3L

MAXIMUM RATINGS (TA=25℃ unless otherwise noted)

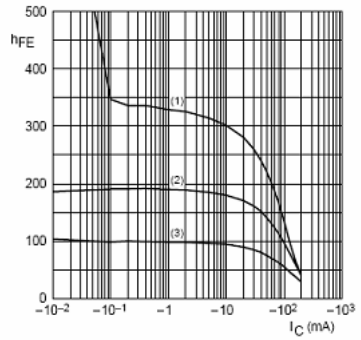
Parameter		Symbol	Value	Unit
Collector-Base Voltage	BC856	V_{CBO}	-80	V
	BC857	V_{CBO}	-50	
	BC858	V_{CBO}	-30	
Collector-Emitter Voltage	BC856	V_{CEO}	-65	V
	BC857	V_{CEO}	-45	
	BC858	V_{CEO}	-30	
Emitter-Base Voltage		V_{EBO}	-5	V
Collector Current -Continuous		I_C	-0.1	A
Collector Power Dissipation		P_C	0.2	W
Junction Temperature		T_J	150	℃
Storage Temperature		Tstg	-55 to +150	℃

ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

Parameter		Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	BC856	V_{CBO}	I_C= -10μA, I_E=0	-80		V
	BC857			-50		
	BC858			-30		
Collector-emitter breakdown voltage	BC856	V_{CEO}	I_C= -10mA, I_B=0	-65		V
	BC857			-45		
	BC858			-30		
Emitter-base breakdown voltage		V_{EBO}	I_E= -1μA, I_C=0	-5		V
Collector cut-off current	BC856	I_{CBO}	V_{CB}= -70 V , I_E=0		-0.1	μA
	BC857		V_{CB}= -45 V , I_E=0			
	BC858		V_{CB}= -25 V , I_E=0			
Collector cut-off current	BC856	I_{CEO}	V_{CE}= -60 V , I_B=0		-0.1	μA
	BC857		V_{CE}= -40 V , I_B=0			
	BC858		V_{CE}= -25 V , I_B=0			
Emitter cut-off current		I_{EBO}	V_{EB}= -5 V , 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= -5 mA		-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}= -5 V, I_C= -10mA f=100MHz	100		MHz
Collector capacitance		C_{ob}	V_{CB}=-10V, f=1MHz		4.5	pF

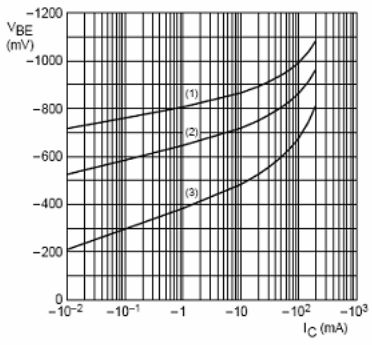
BC856A/B
BC857A/B/C
BC858A/B/C

Typical Characteristics



BC857A; V_{CE} = −5 V.
(1) T_{amb} = 150 °C.
(2) T_{amb} = 25 °C.
(3) T_{amb} = −55 °C.

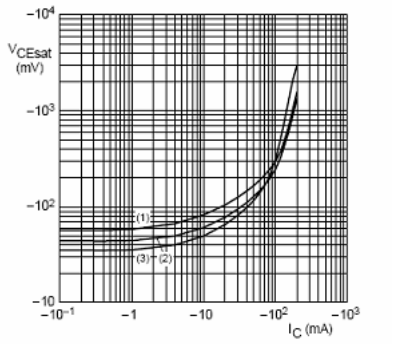
Fig.2 DC current gain as a function of collector current; typical values.



BC857A; V_{CE} = −5 V.
(1) T_{amb} = −55 °C.
(2) T_{amb} = 25 °C.
(3) T_{amb} = 150 °C.

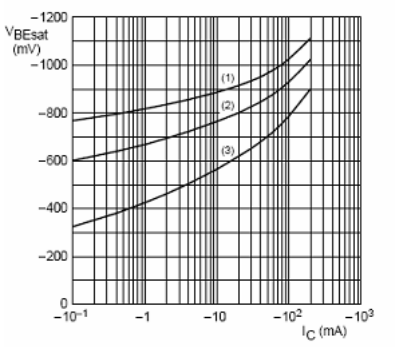
Fig.3 Base-emitter voltage as a function of collector current; typical values.

BC856A/B
BC857A/B/C
BC858A/B/C Typical Characteristics



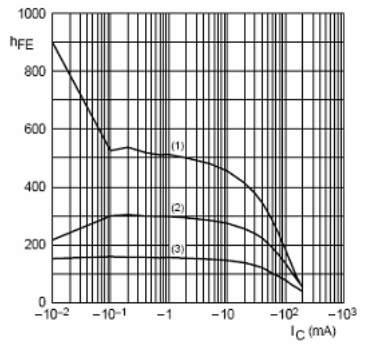
BC857A; $I_C/I_B = 20$.
(1) $T_{amb} = 150$ °C.
(2) $T_{amb} = 25$ °C.
(3) $T_{amb} = -55$ °C.

Fig.4 Collector-emitter saturation voltage as a function of collector current; typical values.



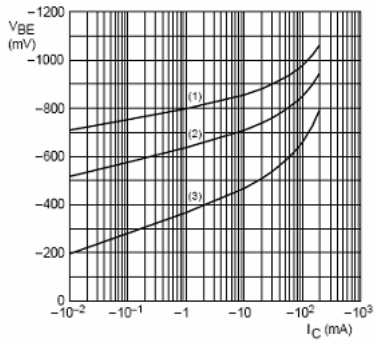
BC857A; $I_C/I_B = 20$.
(1) $T_{amb} = -55$ °C.
(2) $T_{amb} = 25$ °C.
(3) $T_{amb} = 150$ °C.

Fig.5 Base-emitter saturation voltage as a function of collector current; typical values.



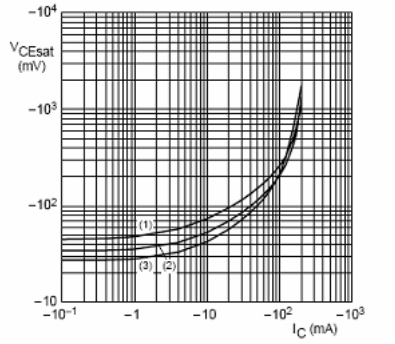
BC857B; $V_{CE} = -5$ V.
(1) $T_{amb} = 150$ °C.
(2) $T_{amb} = 25$ °C.
(3) $T_{amb} = -55$ °C.

Fig.6 DC current gain as a function of collector current; typical values.



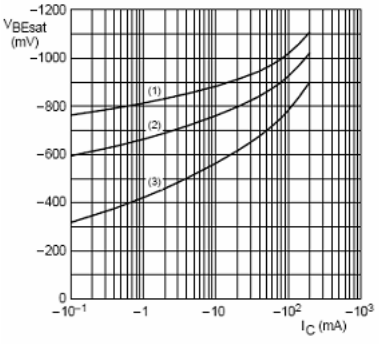
BC857B; $V_{CE} = -5$ V.
(1) $T_{amb} = -55$ °C.
(2) $T_{amb} = 25$ °C.
(3) $T_{amb} = 150$ °C.

Fig.7 Base-emitter voltage as a function of collector current; typical values.



BC857B; $I_C/I_B = 20$.
(1) $T_{amb} = 150$ °C.
(2) $T_{amb} = 25$ °C.
(3) $T_{amb} = -55$ °C.

Fig.8 Collector-emitter saturation voltage as a function of collector current; typical values.



BC857B; $I_C/I_B = 20$.
(1) $T_{amb} = -55$ °C.
(2) $T_{amb} = 25$ °C.
(3) $T_{amb} = 150$ °C.

Fig.9 Base-emitter saturation voltage as a function of collector current; typical values.

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