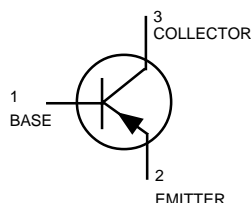


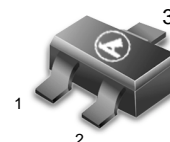
# General Purpose Transistors

PNP Silicon



**BC857BRLT1**

is LRC preferred Device



CASE 318-08, STYLE 6  
SOT-23 (TO-236AB)

## MAXIMUM RATINGS

Rating	Symbol	Value	Unit
Collector-Emitter Voltage	$V_{CEO}$	-50	V
Collector-Base Voltage	$V_{CBO}$	-60	V
Emitter-Base Voltage	$V_{EBO}$	-6.0	V
Collector Current — Continuous	$I_C$	-150	mAdc
Collector power dissipation	$P_C$	0.2	W
Junction temperature	$T_j$	150	°C
Storage temperature	$T_{stg}$	-55 ~ +150	°C

## DEVICE MARKING

BC857BRLT1 =G3F

## ELECTRICAL CHARACTERISTICS ( $T_A = 25^\circ\text{C}$ unless otherwise noted.)

Characteristic	Symbol	Min	Typ	Max	Unit
Collector-Emitter Breakdown Voltage ( $I_C = -1\text{ mA}$ )	$V_{(BR)CEO}$	-50	—	—	V
Emitter-Base Breakdown Voltage ( $I_E = -50\ \mu\text{A}$ )	$V_{(BR)EBO}$	-6	—	—	V
Collector-Base Breakdown Voltage ( $I_C = -50\ \mu\text{A}$ )	$V_{(BR)CBO}$	-60	—	—	V
Collector Cutoff Current ( $V_{CB} = -60\text{ V}$ )	$I_{CBO}$	—	—	-0.1	$\mu\text{A}$
Emitter cutoff current ( $V_{EB} = -6\text{ V}$ )	$I_{EBO}$	—	—	-0.1	$\mu\text{A}$
Collector-emitter saturation voltage ( $I_C / I_B = -50\text{ mA} / -5\text{ mA}$ )	$V_{CE(sat)}$	—	—	-0.5	V
DC current transfer ratio ( $V_{CE} = -6\text{ V}, I_C = -1\text{ mA}$ )	$h_{FE}$	120	—	560	—
Transition frequency ( $V_{CE} = -12\text{ V}, I_E = 2\text{ mA}, f = 30\text{ MHz}$ )	$f_T$	—	140	—	MHz
Output capacitance ( $V_{CB} = -12\text{ V}, I_E = 0\text{ A}, f = 1\text{ MHz}$ )	$C_{ob}$	—	4.0	5.0	pF

$h_{FE}$  values are classified as follows:

*	Q	R	S
$h_{FE}$	120-270	180-390	270-560

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Fig.1 Grounded emitter propagation characteristics

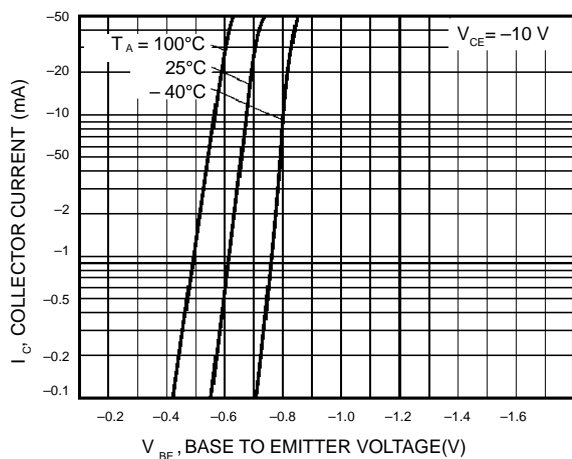


Fig.2 Grounded emitter output characteristics(I)

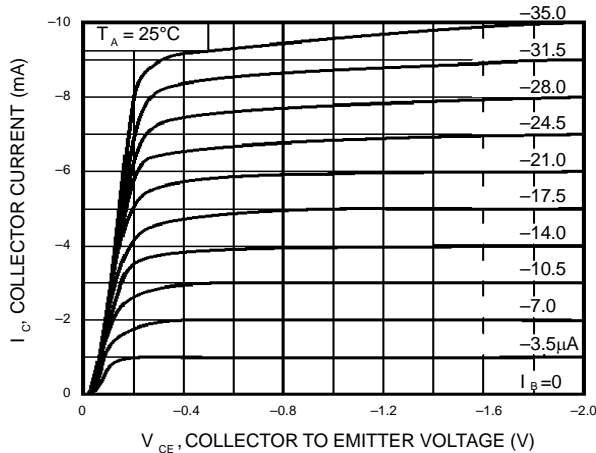


Fig.3 Grounded emitter output characteristics(II)

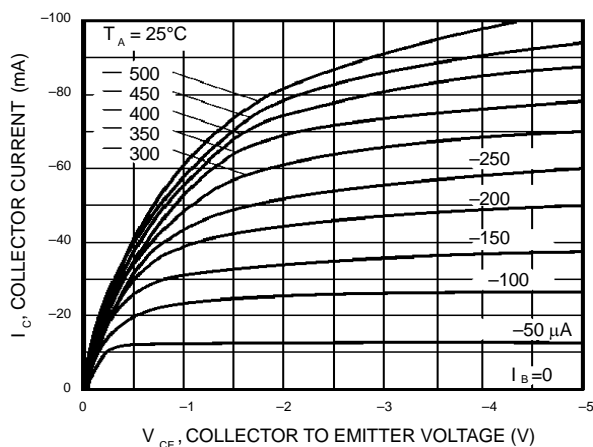


Fig.4 DC current gain vs. collector current (I)

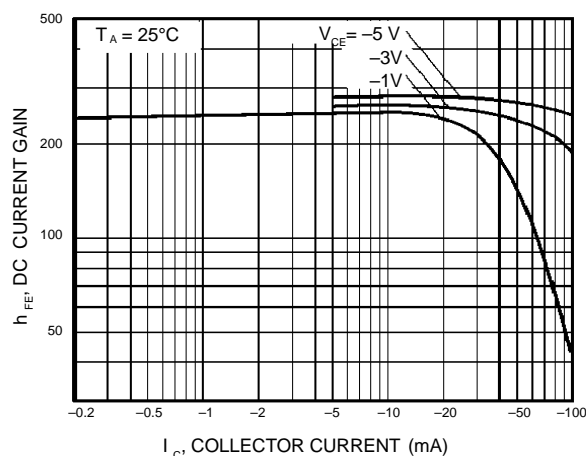


Fig.5 DC current gain vs. collector current (II)

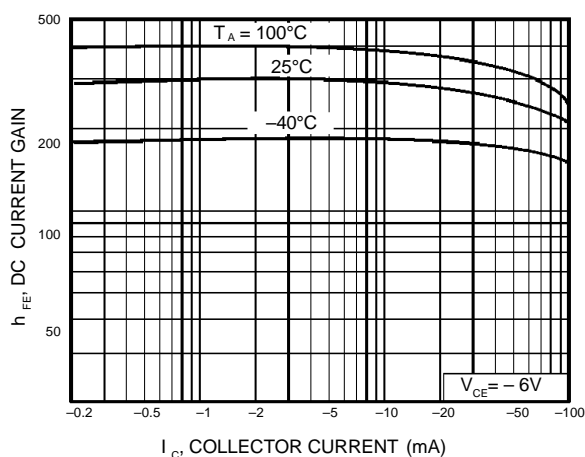
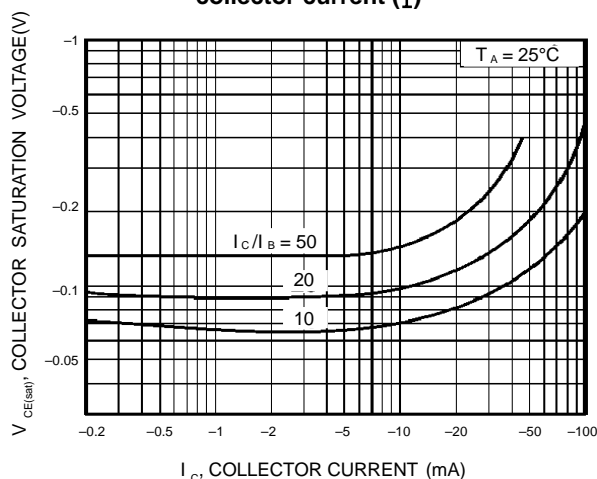


Fig.6 Collector-emitter saturation voltage vs. collector current (I)



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Fig.7 Collector-emitter saturation voltage vs. collector current (I)

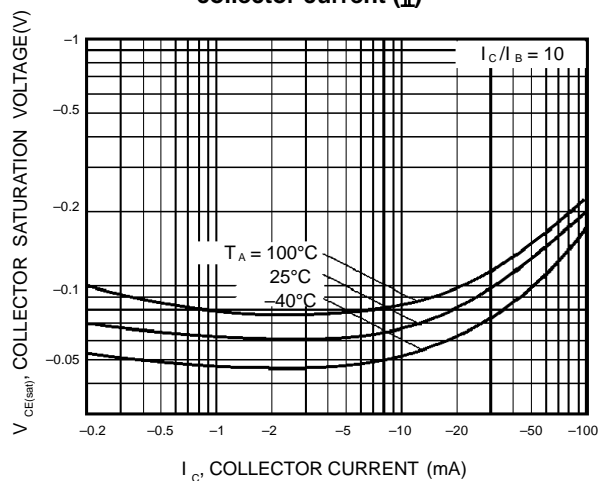


Fig.8 Gain bandwidth product vs. emitter current

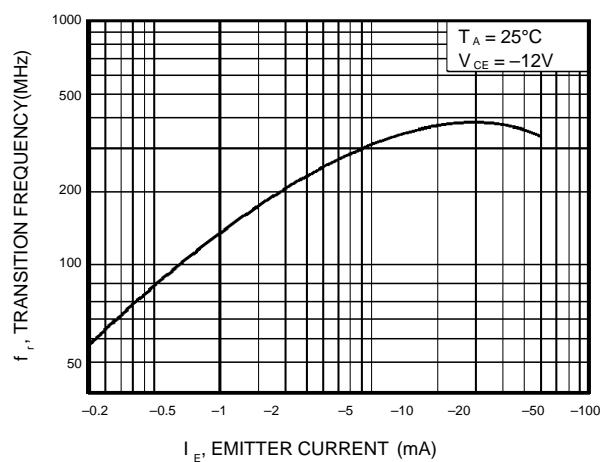
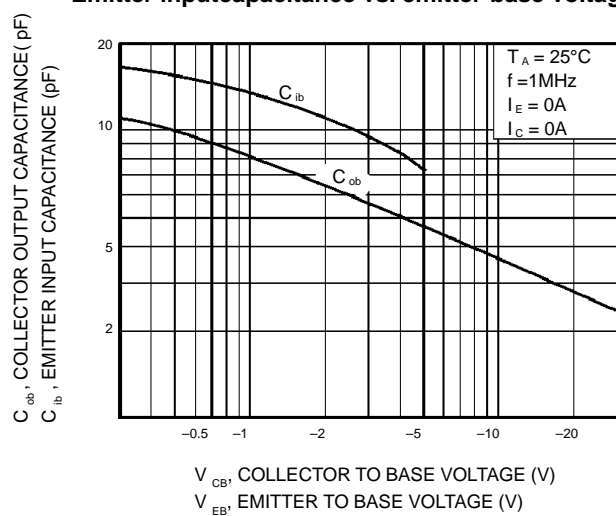


Fig.9 Collector output capacitance vs. collector-base voltage  
Emitter input capacitance vs. emitter-base voltage





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