AUK Semiconductor

BC857

PNP Silicon Transistor

Descriptions

- General purpose application
- Switching application

Features

- High voltage : V_{CEO}=-45V
- Complementary pair with BC847

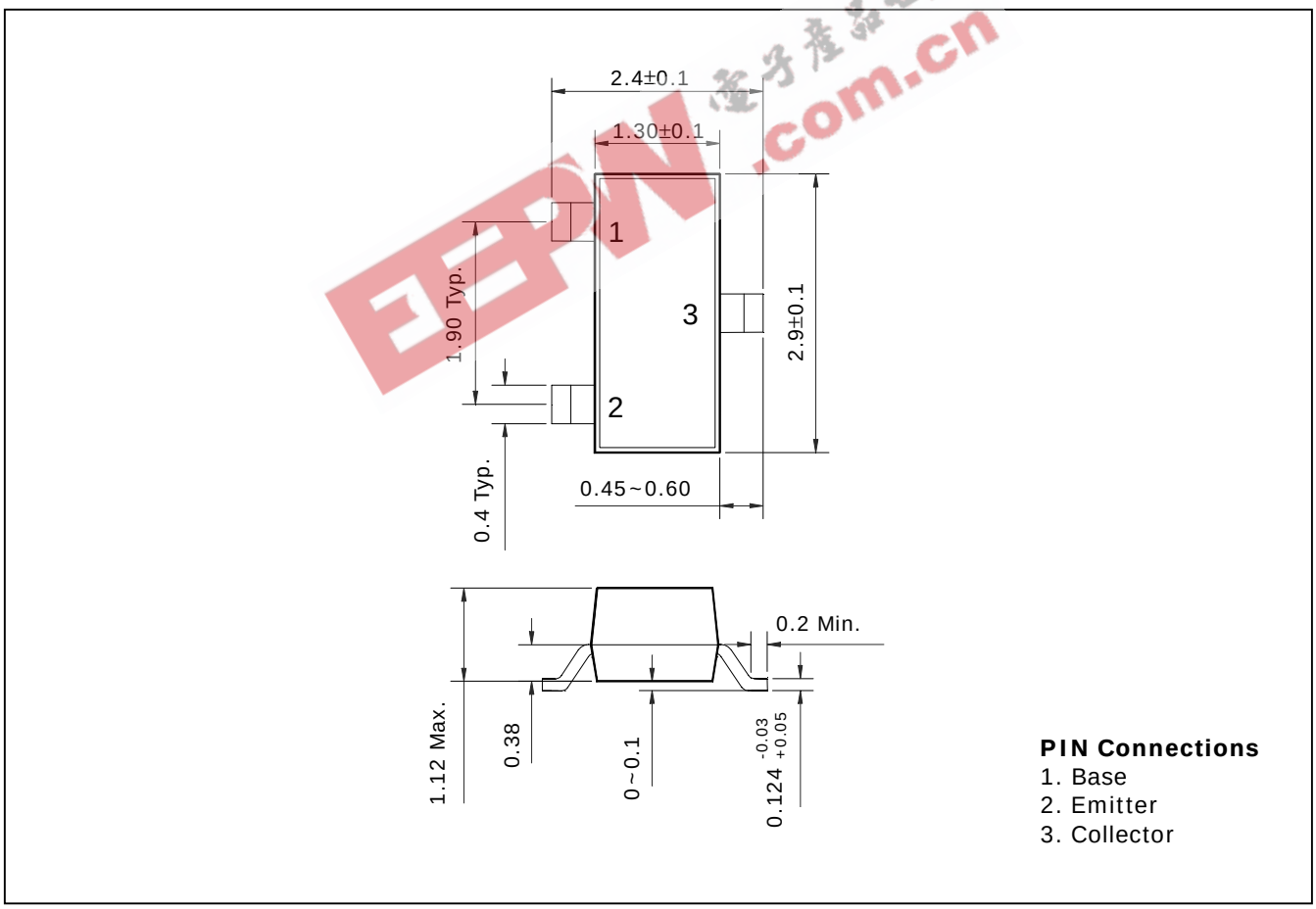
Ordering Information

Type NO.	Marking	Package Code
BC857	UA□	SOT-23

□ : h_{FE} rank

Outline Dimensions

unit : mm



PIN Connections
1. Base
2. Emitter
3. Collector

Absolute maximum ratings (Ta=25°C)

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	V_{CBO}	-50	V
Collector-Emitter voltage	V_{CEO}	-45	V
Emitter-Base voltage	V_{EBO}	-5	V
Collector current	I_C	-100	mA
Collector dissipation	P_C	200	mW
Junction temperature	T_j	150	°C
Storage temperature	T_{stg}	-55~150	°C

Electrical Characteristics (Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Typ.	Max.	Unit
Collector-Emitter breakdown voltage	BV_{CEO}	I_C=-2mA, I_B=0	-45	-	-	V
Base -Emitter turn on voltage	$V_{BE(ON)}$	V_{CE}=-5V, I_C=-2mA	-	-	-700	mV
Base -Emitter saturation voltage	$V_{BE(sat)}$	I_C=-100mA, I_B=-5mA	-	-900	-	mV
Collector-Emitter saturation voltage	$V_{CE(sat)}$	I_C=-100mA, I_B=-5mA	-	-	-650	mV
Collector cut-off current	I_{CBO}	V_{CB}=-35V, I_E=0	-	-	-15	nA
DC current gain	h_{FE}*	V_{CE}=-5V, I_C=-2mA	110	-	800	-
Transition frequency	f_T	V_{CB}=-5V, I_C=-10mA	-	150	-	MHz
Collector output capacitance	C_{ob}	V_{CB}=-10V, I_E=0, f=1MHz	-	-	4.5	pF
Noise Figure	NF	V_{CE}=-5V, I_C=-200μA, f=1KHz,Rg=2KΩ	-	-	10	dB

* : h_{FE} rank / A : 110 ~ 220, B : 200 ~ 450, C : 420 ~ 800

Electrical Characteristic Curves

Fig. 1 P_C-T_a

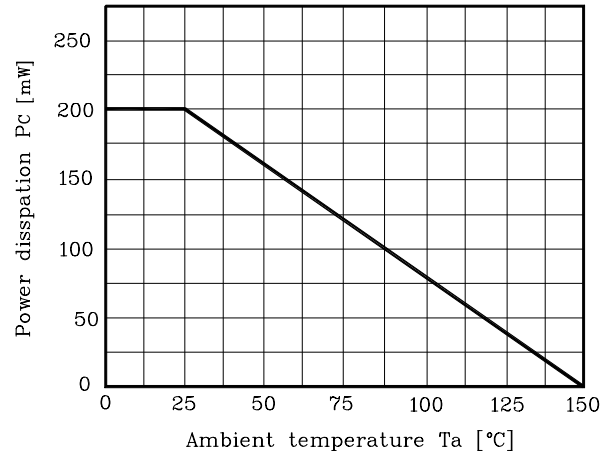


Fig. 2 I_C-V_{BE}

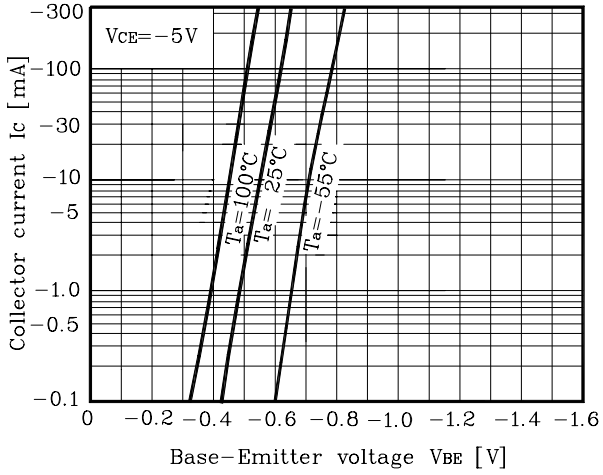


Fig. 3 I_C-V_{CE}

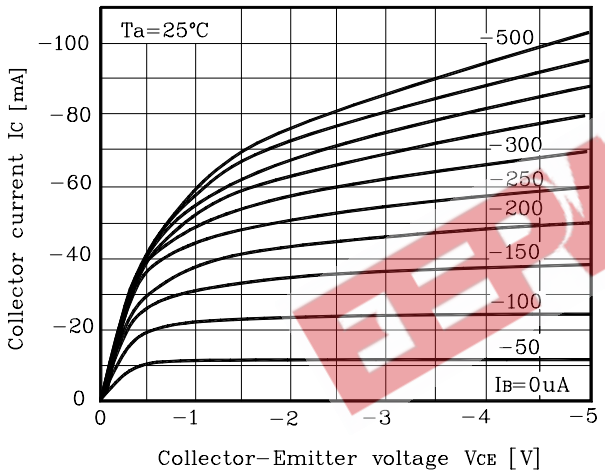


Fig. 4 h_{FE}-I_C

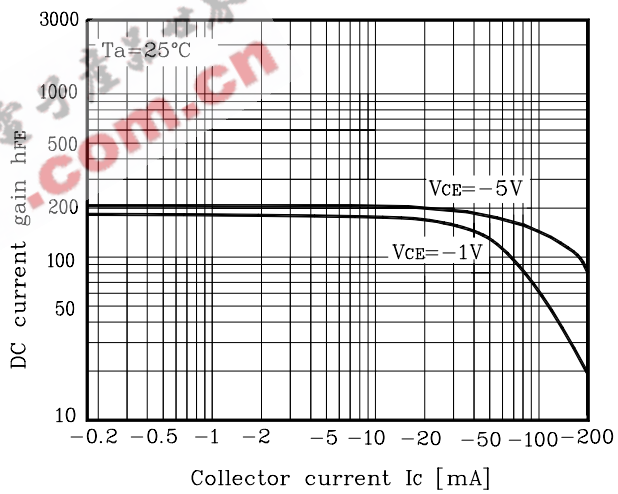


Fig. 5 $V_{CE(sat)}$-I_C