KODENSHI AUK

BC846U

NPN Silicon Transistor

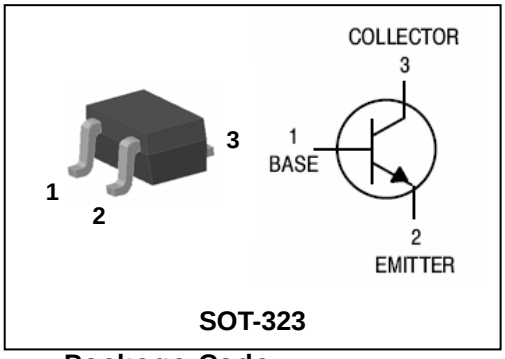
Descriptions

- General purpose application
- Switching application

Features

- High Voltage : V_{CEO}= 55V
- Complementary pair with BC856U

PIN Connection



SOT-323

Ordering Information

Type NO.	Marking	Package Code
BC846U	AS □ □ ① ② ③	SOT-323

①Device Code ②hFE Rank ③Year&Week Code

Absolute maximum ratings (Ta=25°C)

Characteristic	Symbol	Ratings	Unit
Collector-Base voltage	V_{CBO}	80	V
Collector-Emitter voltage	V_{CEO}	55	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= 1mA, I_B= 0	55	-	-	V
Base-Emitter turn on voltage	$V_{BE(ON)}$	V_{CE}= 5V, I_C= 2mA	550	-	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	-	-	600	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_{CE}= 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

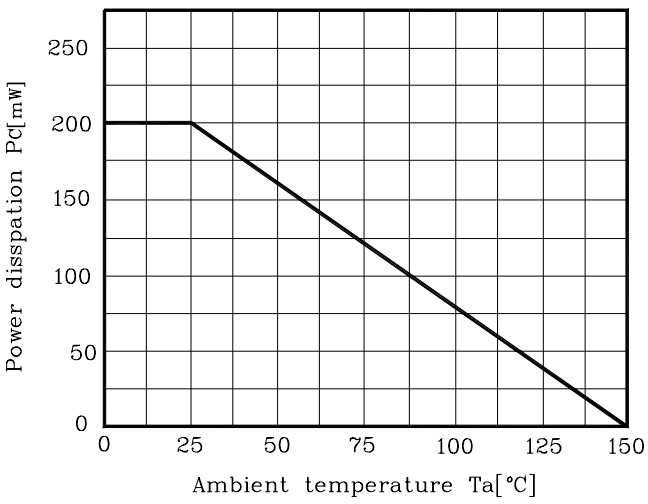


Fig. 2 I_C -V_{BE}

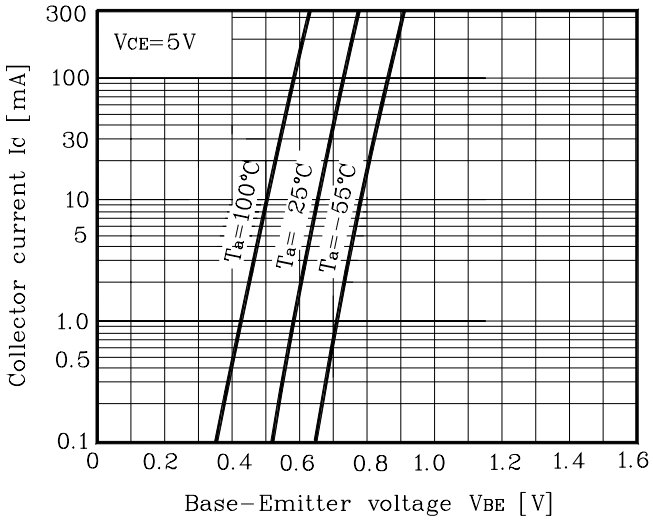


Fig. 3 I_C -V_{CE}

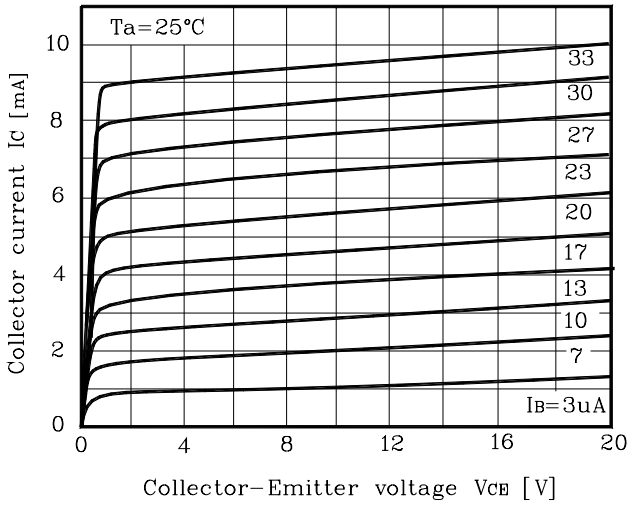


Fig. 4 h_{FE} -I_C

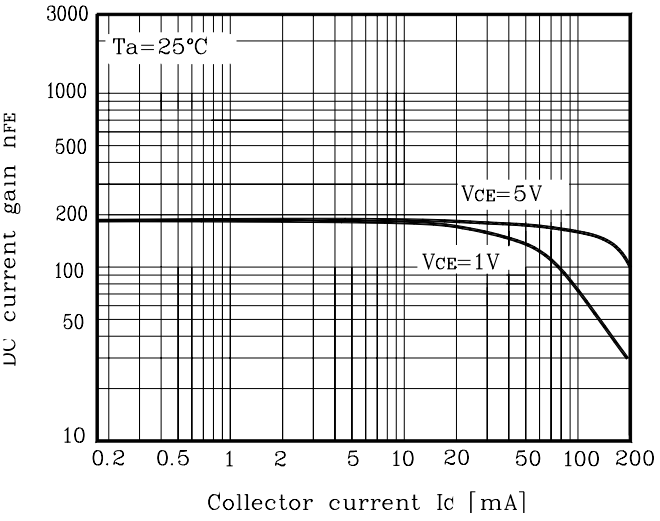
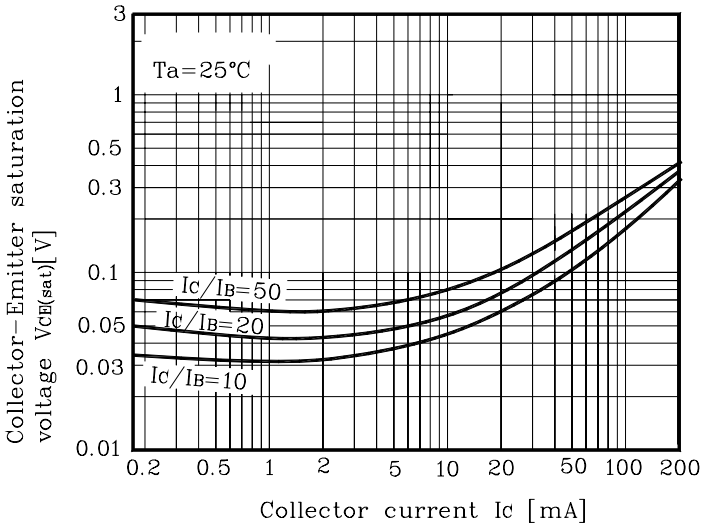
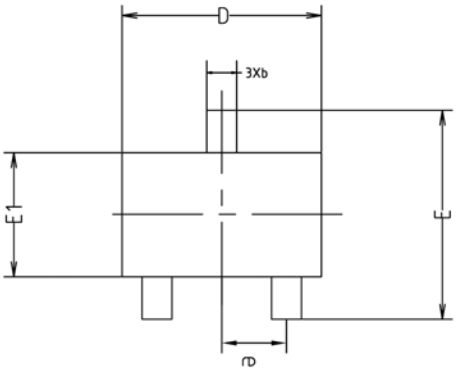
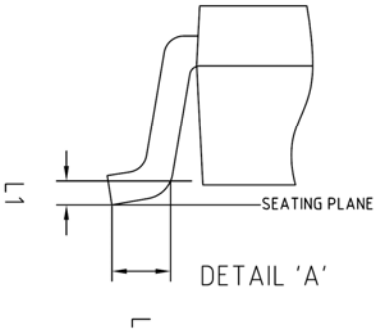


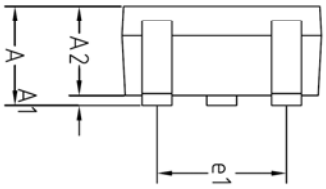
Fig. 5 $V_{CE(sat)}$ -I_C

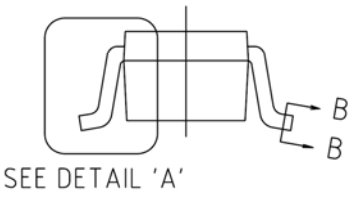


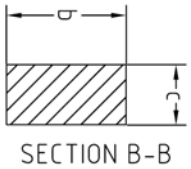
Outline Dimension





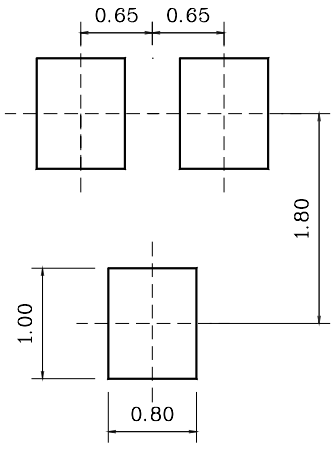






SYMBOL	MILLIMETERS			NOTE
	MINIMUM	NOMINAL	MAXIMUM	
A	0.90	-	1.25	
A1	0.00	-	0.10	
A2	0.85	0.90	0.95	
b	0.30	-	0.40	
c	0.10	-	0.25	
D	1.90	2.00	2.10	
E	1.95	2.10	2.25	
E1	1.15	1.25	1.35	
e	0.65BSC			
e1	1.20	-	1.40	
L	0.10	-	-	
L1	0.12BSC			

※Recommend PCB solder land [Unit: mm]



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