

# **BC856U**

**PNP Silicon Transistor** 

Base

**SOT-323** 

**PIN Connection** 

### **Descriptions**

- General purpose application
- Switching application

#### **Features**

• High voltage : V<sub>CEO</sub>=-55V

• Complementary pair with BC846U

#### **Ordering Information**

Type NO.	Marking	Package Code
BC856U	<u>CV</u> □ □ ① ② ③	SOT-323

①Device Code ②hFE Rank ③Year&Week Code

#### **Absolute maximum ratings**

 $(Ta=25^{\circ}C)$ 

**Emitter** 

Collector

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 <sub>C</sub>	-100	mA
Collector dissipation	P <sub>C</sub>	200	mW
Junction temperature	T <sub>j</sub>	150	°C
Storage temperature	T <sub>stg</sub>	-55~150	°C

## **Electrical Characteristics**

(Ta=25°C)

Characteristic	Symbol	Test Condition	Min.	Тур.	Max.	Unit
Collector-Emitter breakdown voltage	BV <sub>CEO</sub>	$I_C=-1$ mA, $I_B=0$	-55	-	-	V
Base-Emitter turn on voltage	V <sub>BE(ON)</sub>	$V_{CE}$ =-5V, $I_{C}$ =-2mA	-	-	-700	mV
Base-Emitter saturation voltage	V <sub>BE(sat)</sub>	I <sub>C</sub> =-100mA, I <sub>B</sub> =-5mA	-	-900	-	mV
Collector-Emitter saturation voltage	V <sub>CE(sat)</sub>	I <sub>C</sub> =-100mA, I <sub>B</sub> =-5mA	-	-	-650	mV
Collector cut-off current	I <sub>CBO</sub>	$V_{CB} = -35V$ , $I_{E} = 0$	-	-	-15	nA
DC current gain	h <sub>FE</sub> *	$V_{CE}$ =-5V, $I_{C}$ =-2mA	110	-	800	-
Transition frequency	f <sub>T</sub>	$V_{CB}$ =-5V, $I_{C}$ =-10mA	-	150	-	MHz
Collector output capacitance	C <sub>ob</sub>	V <sub>CB</sub> =-10V, I <sub>E</sub> =0, f=1MHz	-	-	4.5	pF
Noise figure	NF	$V_{CE}$ =-5V, $I_{C}$ =-200 $\mu$ A, $f$ =1KHz,Rg=2K $\Omega$	-	-	10	dB

<sup>\* :</sup> h<sub>FE</sub> rank / A : 110 ~ 220, B : 200 ~ 450, C : 420 ~ 800

KSD-T5D036-000

#### **Electrical Characteristic Curves**

Fig. 1 P<sub>C</sub>-T<sub>a</sub>

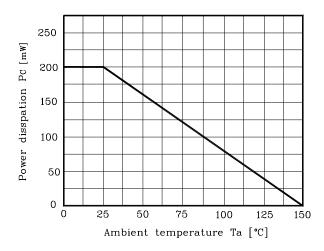


Fig. 3  $I_C$ - $V_{CE}$ 

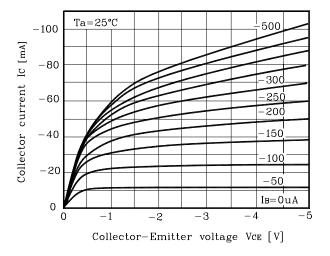


Fig. 5  $V_{\text{CE}(\text{sat})}$  -I  $_{\text{C}}$ 

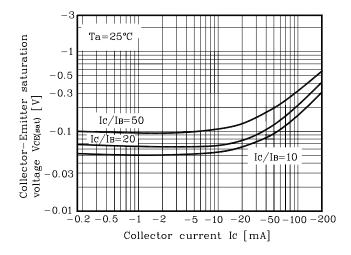


Fig. 2  $I_C$ - $V_{BE}$ 

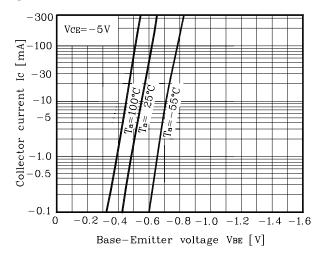
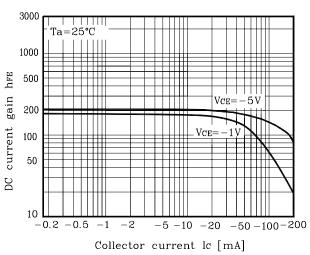


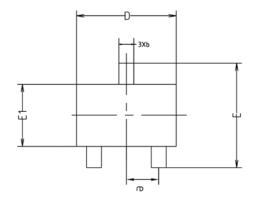
Fig. 4 h<sub>FE</sub>-I<sub>C</sub>

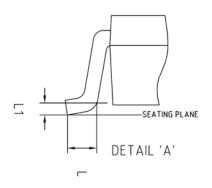


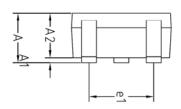
KSD-T5D036-000

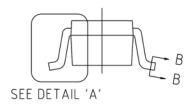
2

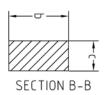
## **Outline Dimension**





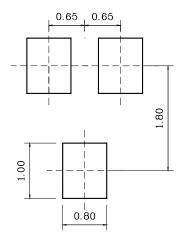






SYMBOL	MILLIMETERS			NOTE	
STRIBUL	MINIMUM	NOMINAL	MAXIMUM	NUIE	
Α	0.90	-	1.25		
A1	0.00	-	0.10		
A2	0.85	0.90	0.95		
Ь	0.30	-	0.40		
С	0.10	-	0.25		
D	1.90	2.00	2.10		
E	1.95	2.10	2.25		
E1	1.15	1.25	1.35		
e	0.65BSC				
e1	1.20	-	1.40		
L	0.10	-	-		
11		0.12BS	۲		

### \*Recommend PCB solder land [Unit: mm]



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