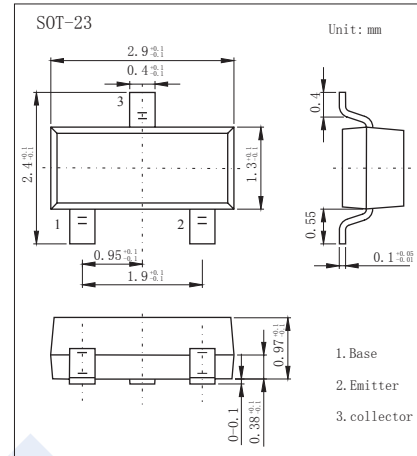


## NPN Transistors

## BC817 (KC817)

## ■ Features

- For general AF applications
- Low collector-emitter saturation voltage
- Complementary types: BC807 (PNP)

■ Absolute Maximum Ratings  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	Rating	Unit
Collector - Base Voltage	$V_{CB0}$	50	V
Collector - Emitter Voltage	$V_{CE0}$	45	
Emitter - Base Voltage	$V_{EB0}$	5	
Collector Current - Continuous	$I_C$	0.5	A
Collector Power Dissipation	$P_C$	0.3	W
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{stg}$	-55 to 150	

■ Electrical Characteristics  $T_a = 25^\circ\text{C}$ 

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	$V_{CB0}$	$I_C = 100 \mu\text{A}, I_E = 0$	50			V
Collector- emitter breakdown voltage	$V_{CE0}$	$I_C = 10 \text{ mA}, I_B = 0$	45			
Emitter - base breakdown voltage	$V_{EB0}$	$I_E = 100 \mu\text{A}, I_C = 0$	5			
Collector-base cut-off current	$I_{CB0}$	$V_{CB} = 45 \text{ V}, I_E = 0$			0.1	$\mu\text{A}$
Emitter cut-off current	$I_{EB0}$	$V_{EB} = 4 \text{ V}, I_C = 0$			0.1	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500 \text{ mA}, I_B = 50 \text{ mA}$			0.7	V
Base - emitter saturation voltage	$V_{BE(sat)}$	$I_C = 500 \text{ mA}, I_B = 50 \text{ mA}$			1.2	
Base - emitter voltage	$V_{BE}$	$V_{CE} = 1 \text{ V}, I_C = 500 \text{ mA}$			1.2	
DC current gain	$h_{FE(1)}$	$V_{CE} = 1 \text{ V}, I_C = 100 \text{ mA}$	100		630	
	$h_{FE(2)}$	$V_{CE} = 1 \text{ V}, I_C = 500 \text{ mA}$	40			
Collector output capacitance	$C_{ob}$	$V_{CB} = 10 \text{ V}, f = 1 \text{ MHz}$		10		pF
Transition frequency	$f_T$	$V_{CE} = 5 \text{ V}, I_C = 10 \text{ mA}, f = 100 \text{ MHz}$	100			MHz

■ Classification of  $h_{FE(1)}$ 

Type	BC817-16	BC817-25	BC817-40
Range	100-250	160-400	250-630
Marking	6A	6B	6C

# BC817 (KC817)

## Typical Characteristics

