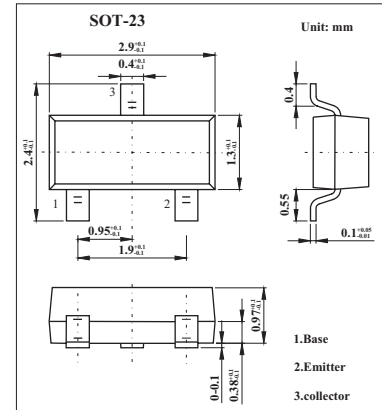


## NPN Silicon AF Transistors

### KC817A(BC817A)

#### ■ Features

- For general AF applications.
- High collector current.
- High current gain.
- Low collector-emitter saturation voltage.



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

Parameter	Symbol	Rating	Unit
Collector-base voltage	$V_{CB0}$	50	V
Collector-emitter voltage	$V_{CEO}$	45	V
Emitter-base voltage	$V_{EBO}$	5	V
Collector current (DC)	$I_C$	500	mA
Peak collector current	$I_{CM}$	1	A
Base current	$I_B$	100	mA
power dissipation	$P_D$	310	mW
Junction temperature	$T_j$	150	$^\circ\text{C}$
Storage temperature	$T_{stg}$	-65 to +150	$^\circ\text{C}$

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

Parameter	Symbol	Testconditions	Min	Typ	Max	Unit
Collector-to-base breakdown voltage	$V_{CB0}$	$I_C = 10 \mu\text{A}, I_E = 0$	50			V
Collector-to-emitter breakdown voltage	$V_{CEO}$	$I_C = 10 \text{mA}, I_B = 0$	45			V
Emitter-to-base breakdown voltage	$V_{EBO}$	$I_E = 10 \mu\text{A}, I_C = 0$	5			V
Collector cutoff current	$I_{CBO}$	$V_{CB} = 25 \text{V}, I_E = 0$			100	nA
		$V_{CB} = 25 \text{V}, I_E = 0, T_A = 150^\circ\text{C}$			50	$\mu\text{A}$
Emitter cutoff current	$I_{EBO}$	$V_{EB} = 4 \text{V}, I_C = 0$			100	nA
DC current gain *	KC817A-16	$I_C = 100 \text{mA}, V_{CE} = -1 \text{V}$	100	160	250	
	KC817A-25		160	250	400	
	KC817A-40		250	350	630	
Collector saturation voltage *	$V_{CE(sat)}$	$I_C = 500 \text{mA}, I_B = 50 \text{mA}$			0.7	V
Base to emitter voltage *	$V_{BE(sat)}$	$I_C = 500 \text{mA}, I_B = 50 \text{mA}$			1.2	V
Collector-base capacitance	$C_{cb}$	$V_{CB} = 10 \text{V}, f = 1 \text{MHz}$		6		pF
Emitter-base capacitance	$C_{eb}$	$V_{EB} = 0.5 \text{V}, f = 1 \text{MHz}$		60		pF
Transition frequency	$f_T$	$I_C = 50 \text{mA}, V_{CE} = 5 \text{V}, f = 100 \text{MHz}$		170		MHz

\* Pulsed:  $PW \leq 350 \mu\text{s}$ , duty cycle  $\leq 2\%$

#### ■ Marking

NO.	KC817A-16	KC817A-25	KC817A-40
Marking	6A	6B	6C