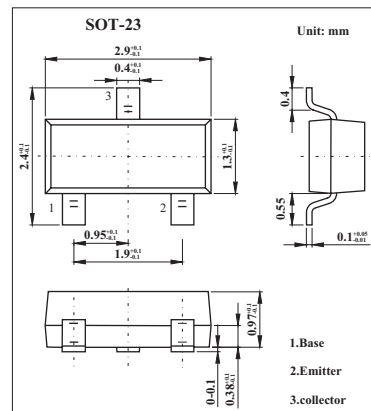


NPN Silicon AF Transistors

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_{CE0}	45	V
Emitter-base voltage	V_{EB0}	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_{CE0}	$I_C = 10\ \text{mA}, I_B = 0$	45			V
Emitter-to-base breakdown voltage	V_{EB0}	$I_E = 10\ \mu\text{A}, I_C = 0$	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	μA
Emitter cutoff current	I_{EBO}	$V_{EB} = 4\ \text{V}, I_C = 0$			100	nA
DC current gain *	KC817A-16	h_{FE} $I_C = 100\ \text{mA}, V_{CE} = -1\ \text{V}$	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