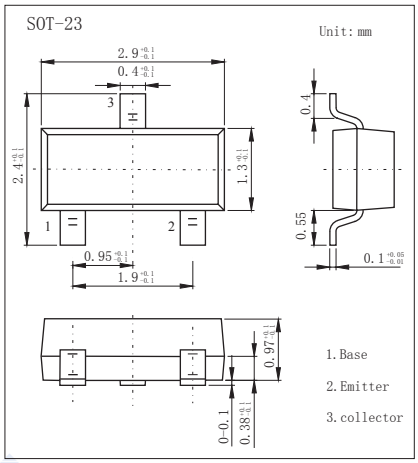
NPN Transistors

BC817A (KC817A)



■ Features

- For general AF applications.
- High collector current.
- High current gain.
- Low collector-emitter saturation voltage.
- Complementary PNP type available(BC807A)

■ Absolute Maximum Ratings Ta = 25℃

Parameter	Symbol	Rating	Unit
Collector-base voltage	V_{CBO}	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	℃
Storage temperature	T_{stg}	-65 to +150	℃

■ Electrical Characteristics Ta = 25℃

Parameter		Symbol	Test conditions	Min	Typ	Max	Unit
Collector to base breakdown voltage		V_{CBO}	I_C = 10 μA, I_E = 0	50			V
Collector to emitter breakdown voltage		V_{CEO}	I_C = 10 mA, I_B = 0	45			V
Emitter to base breakdown voltage		V_{EBO}	I_E = 10 μA, I_C = 0	5			V
Collector cutoff current		I_{CBO}	V_{CB} = 25 V, I_E = 0			100	nA
			V_{CB} = 25 V, I_E = 0 , T_A = 150℃			50	μA
Emitter cutoff current		I_{EBO}	V_{EB} = 4 V, I_C = 0			100	nA
DC current gain *	BC817A-16	h_{FE}	I_C = 100 mA, V_{CE} = -1 V	100	160	250	
	BC817A-25			160	250	400	
	BC817A-40			250	350	630	
Collector saturation voltage *		$V_{CE(sat)}$	I_C = 500 mA, I_B = 50 mA			0.7	V
Base to emitter voltage *		$V_{BE(sat)}$	I_C = 500 mA, I_B = 50 mA			1.2	V
Collector-base capacitance		C_{Cb}	V_{CB} = 10 V, f = 1 MHz		6		pF
Emitter-base capacitance		Ceb	V_{EB} = 0.5 V, f = 1 MHz		60		pF
Transition frequency		f_T	I_C = 50 mA, V_{CE} = 5 V, f = 100 MHz		170		MHz

* Pulsed: PW ≤ 350 us, duty cycle ≤ 2%

■ Classification of h_{fe}

Type	BC817A-16	BC817A-25	BC817A-40
Range	100-250	160-400	250-630
Marking	6A	6B	6C