

PNP Transistors

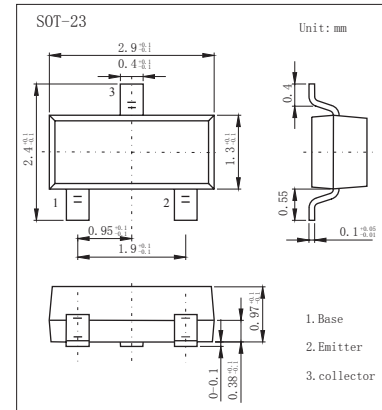
BC807A (KC807A)

■ Features

- For general AF applications.
- High collector current.
- High current gain.
- Low collector-emitter saturation voltage.
- Complementary NPN type available(BC817A)

■ 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}	$I_C = -100\mu\text{A}, I_E = 0$	-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}	$I_E = -100\mu\text{A}, I_C = 0$	-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 *	BC807A-16	h_{FE}	$I_C = -100\text{mA}, V_{CE} = -1\text{V}$	100	160	250	
	BC807A-25			160	250	400	
	BC807A-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}	$V_{CB} = -10\text{V}, f = 1\text{MHz}$		10		pF	
Emitter-base capacitance	C_{eb}	$V_{EB} = -0.5\text{V}, f = 1\text{MHz}$		60		pF	
Transition frequency	f_T	$I_C = -50\text{mA}, V_{CE} = -5\text{V}, f = 100\text{MHz}$		200		MHz	

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

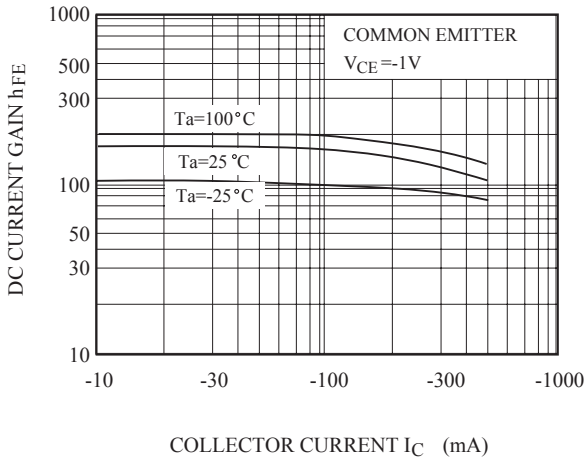
■ Classification of h_{FE}

Type	BC807A-16	BC807A-25	BC807A-40
Range	100-250	160-400	250-630
Marking	5A	5B	5C

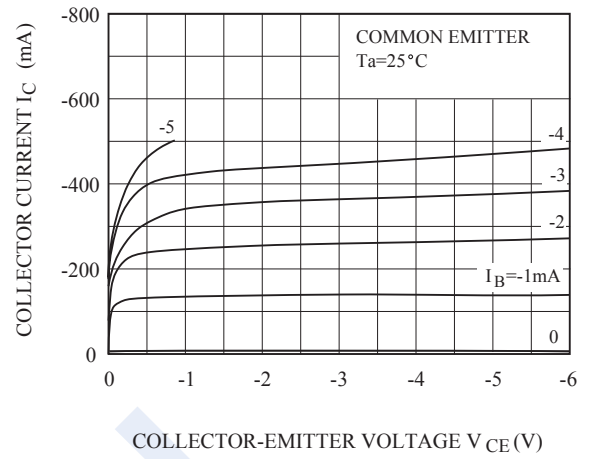
BC807A (KC807A)

■ Typical Characteristics

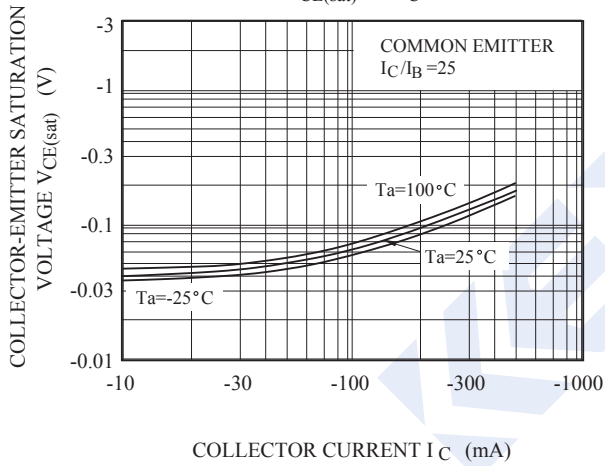
$h_{FE} - I_C$



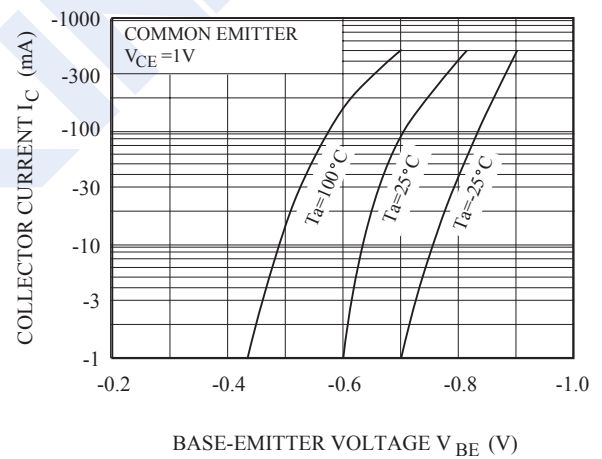
$I_C - V_{CE}$



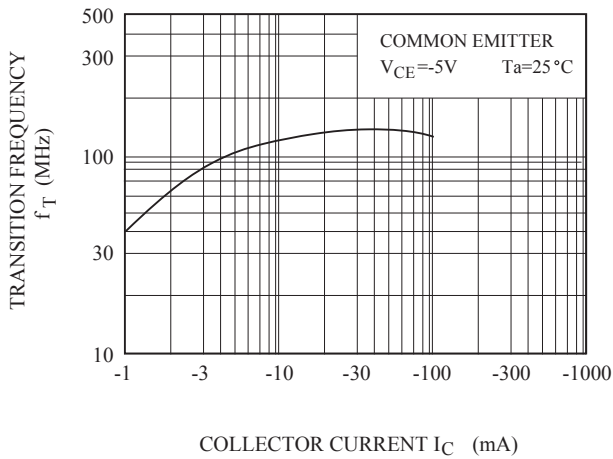
$V_{CE(sat)} - I_C$



$I_C - V_{BE}$



$f_T - I_C$



$P_C - T_a$

