

■ NPN Transistors



■ Simplified outline(SOT-23)

■ Features

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

■ Absolute Maximum Ratings Ta = 25°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	°C
Storage Temperature Range	T _{stg}	-55 to 150	

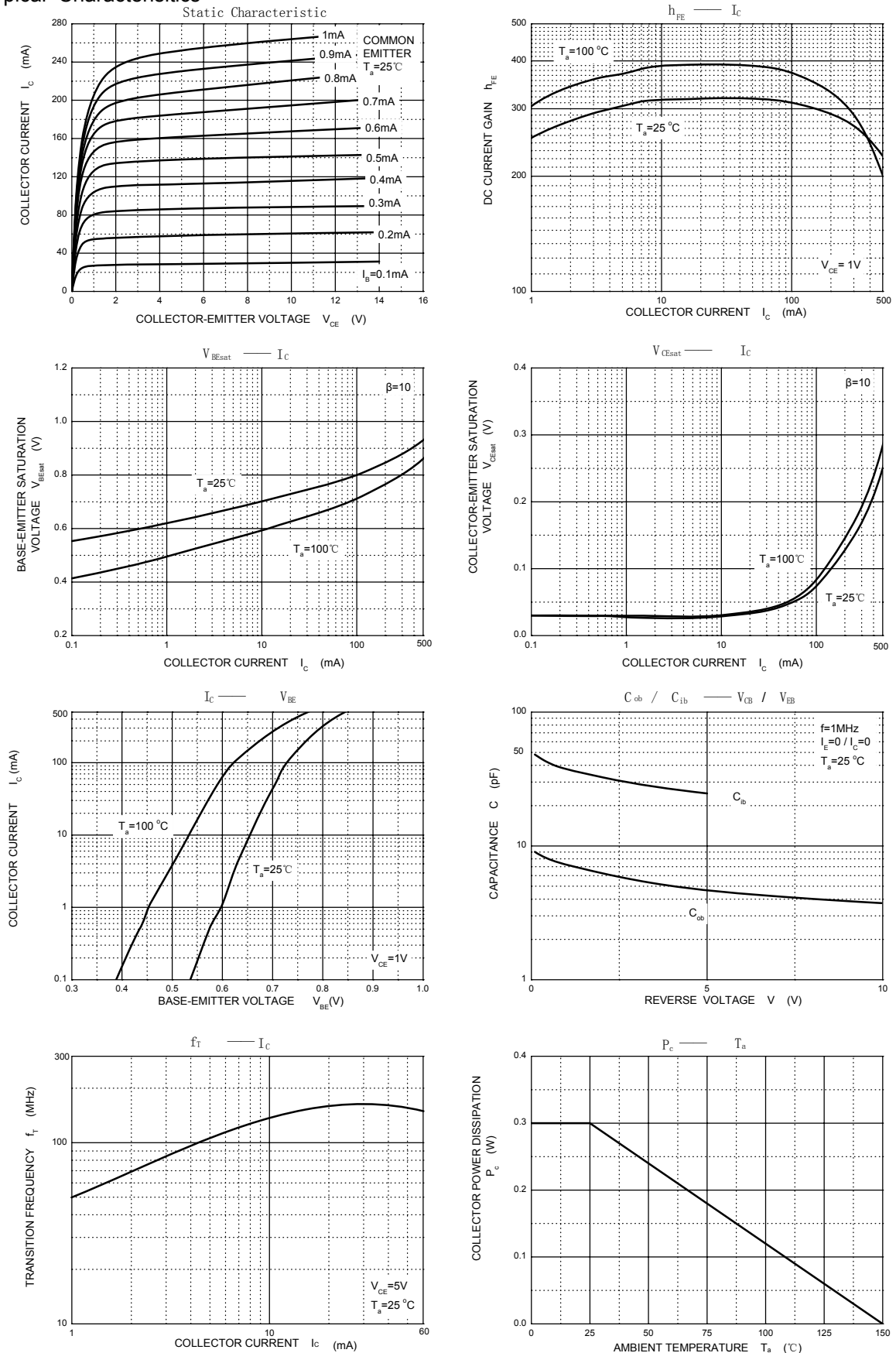
■ Electrical Characteristics Ta = 25°C

Parameter	Symbol	Test Conditions	Min	Typ	Max	Unit
Collector- base breakdown voltage	V _{CB0}	I _c = 100 μA, I _E = 0	50			V
Collector- emitter breakdown voltage	V _{CE0}	I _c = 10 mA, I _B = 0	45			
Emitter - base breakdown voltage	V _{EB0}	I _E = 100 μA, I _C = 0	5			
Collector-base cut-off current	I _{CB0}	V _{CB} = 45 V, I _E = 0			0.1	μA
Emitter cut-off current	I _{EB0}	V _{EB} = 4V, I _C =0			0.1	
Collector-emitter saturation voltage	V _{CE(sat)}	I _C =500 mA, I _B =50mA			0.7	V
Base - emitter saturation voltage	V _{BE(sat)}	I _C = 500 mA, I _B = 50mA			1.2	
Base - emitter voltage	V _{BE}	V _{CE} = 1V, I _C = 500mA			1.2	
DC current gain	h _{FE(1)}	V _{CE} = 1V, I _C = 100mA	100		630	
	h _{FE(2)}	V _{CE} = 1V, I _C = 500mA	40			
Collector output capacitance	C _{ob}	V _{CB} = 10V, f=1MHz		10		pF
Transition frequency	f _t	V _{CE} = 5V, I _C = 10mA, f=100MHz	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

■ Typical Characteristics



Package Outline

SOT-23



DIMENSIONS (mm are the original dimensions)

UNIT	A	A ₁ max.	b _p	c	D	E	e	e ₁	H _E	L _p	Q	v	w
mm	1.1 0.9	0.1	0.48 0.38	0.15 0.09	3.0 2.8	1.4 1.2	1.9	0.95	2.5 2.1	0.45 0.15	0.55 0.45	0.2	0.1

Summary of Packing Options

Package	Packing Description	Packing Quantity	Industry Standard
SOT-23	Tape/Reel, 7" reel	3000	EIA-481-1

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