



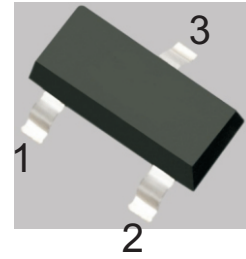
**BC817**

**NPN TRANSISTOR**

**FEATURES**

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

**SOT-23**



1.BASE  
2.EMITTER  
3.COLLECTOR

**MAXIMUM RATINGS (Ta=25°C unless otherwise noted)**

Parameter	Symbol	Value	Unit
Collector-Base Voltage	$V_{CB0}$	50	V
Collector-Emitter Voltage	$V_{CEO}$	45	V
Emitter-Base Voltage	$V_{EBO}$	5	V
Collector Current — Continuous	$I_C$	0.5	A
Collector Power Dissipation	$P_C$	0.3	W
Junction Temperature	$T_J$	150	°C
Storage Temperature	$T_{stg}$	-55~+150	°C

**ELECTRICAL CHARACTERISTICS (TA = 25°C unless otherwise noted.)**

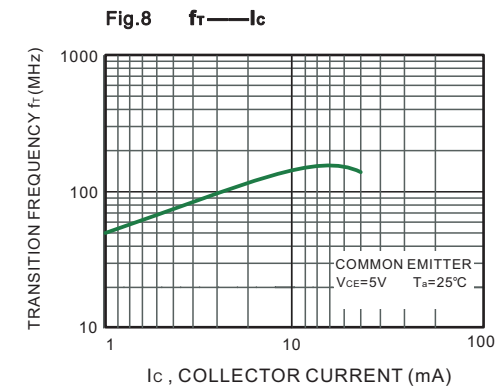
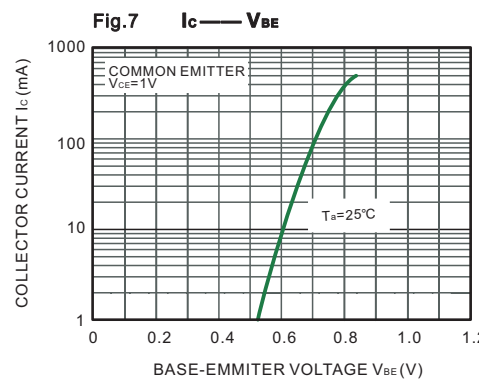
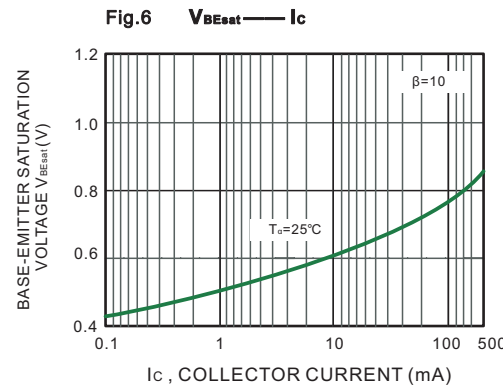
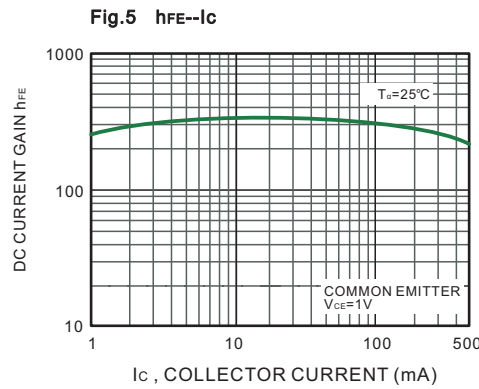
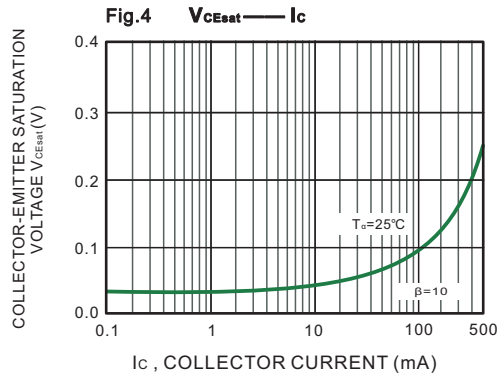
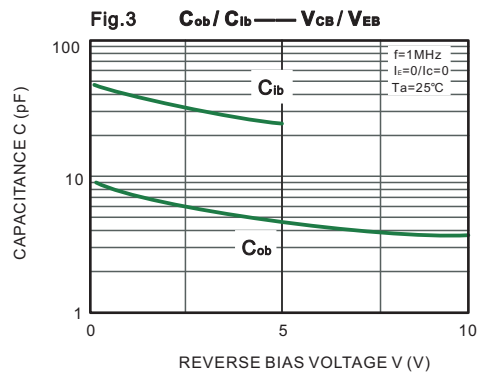
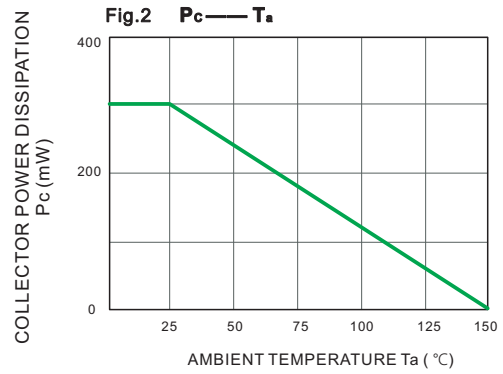
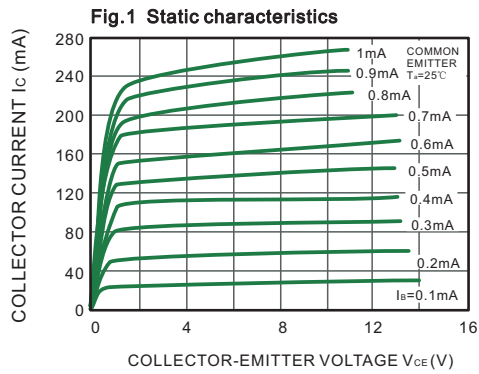
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	$V_{CB0}$	$I_C = 10\mu A, I_E = 0$	50			V
Collector-emitter breakdown voltage	$V_{CEO}$	$I_C = 10mA, I_B = 0$	45			V
Emitter-base breakdown voltage	$V_{EBO}$	$I_E = 1\mu A, I_C = 0$	5			V
Collector cut-off current	$I_{CBO}$	$V_{CB} = 45V, I_E = 0$			0.1	$\mu A$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = 4V, I_C = 0$			0.1	$\mu A$
DC current gain	$h_{FE(1)}$	$V_{CE} = 1V, I_C = 100mA$	100		600	
	$h_{FE(2)}$	$V_{CE} = 1V, I_C = 500mA$	40			
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = 500mA, I_B = 50mA$			0.7	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = 500mA, I_B = 50mA$			1.2	V
Base-emitter voltage	$V_{BE}$	$V_{CE} = 1V, I_C = 500mA$			1.2	V
Collector 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  $h_{FE}$**

Rank	BC817-16	BC817-25	BC817-40
Range	100-250	160-400	250-600
Marking	6A	6B	6C

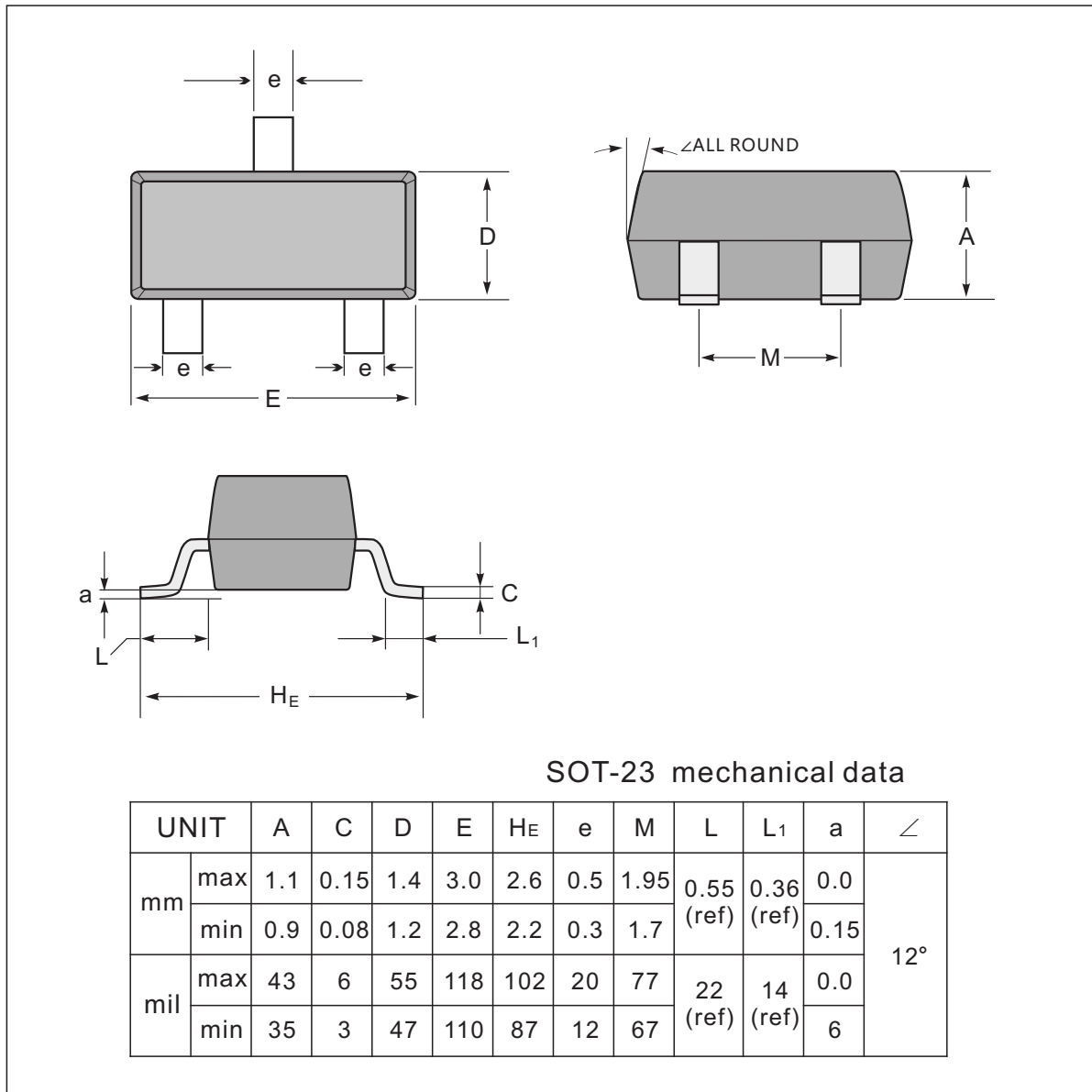


### TYPICAL CHARACTERISTICS

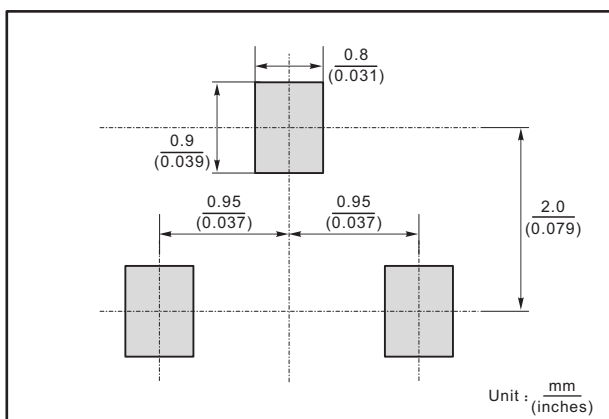




### SOT-23 Package Outline Dimensions



#### The recommended mounting pad size



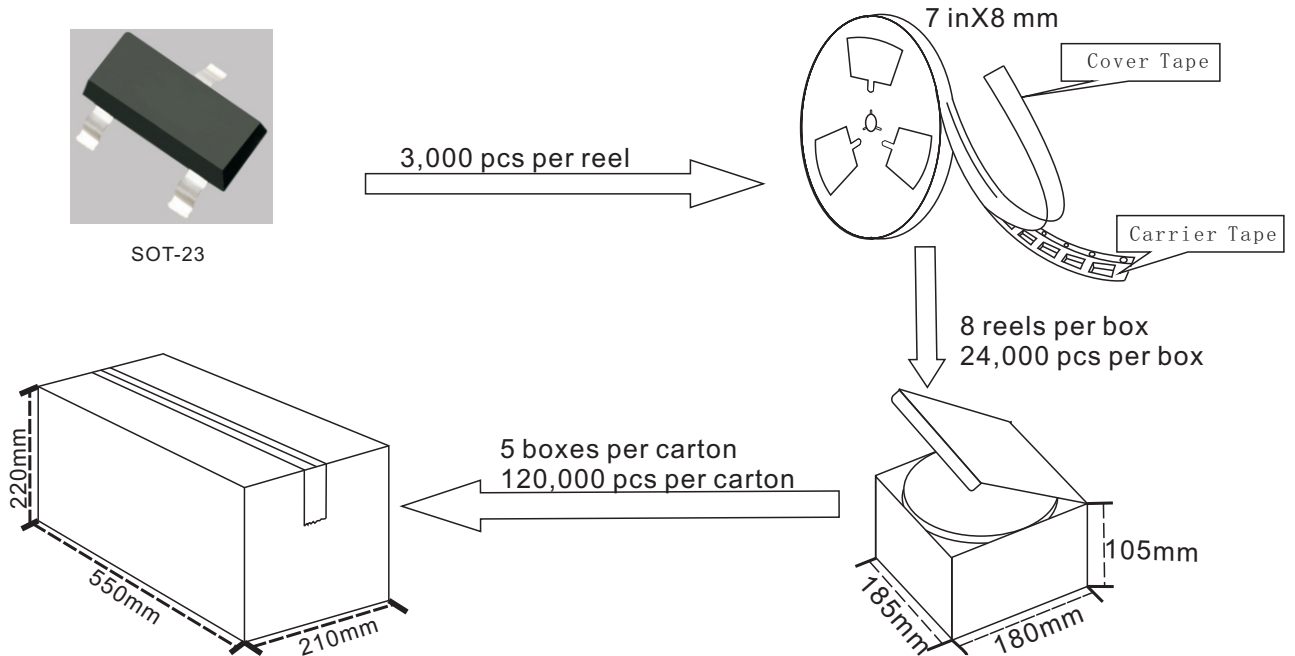
#### Marking

Type number	Marking code
BC817-16	6A
BC817-25	6B
BC817-40	6C

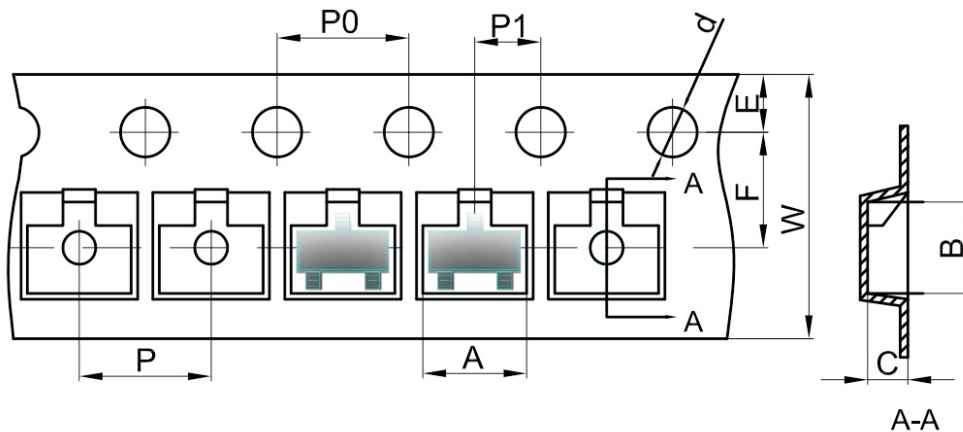


## SOT-23 Packing

1. The method of packaging and dimension are shown as below figure. (Dimension in mm)



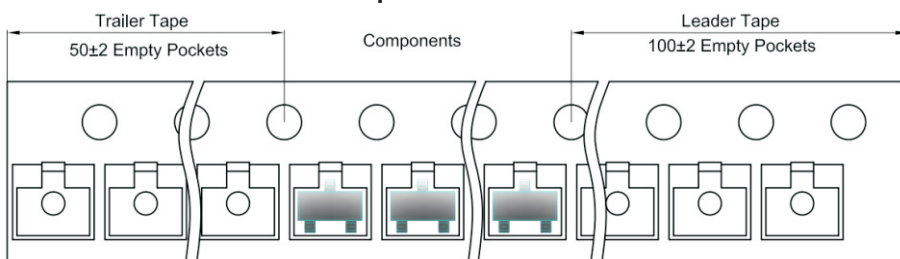
### SOT-23 Embossed Carrier Tape



Dimensions are in millimeter

Pkg type	A	B	C	d	E	F	P0	P	P1	W
SOT-23	3.15	2.77	1.22	Ø1.50	1.75	3.50	4.00	4.00	2.00	8.00

### SOT-23 Tape Leader and Trailer



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