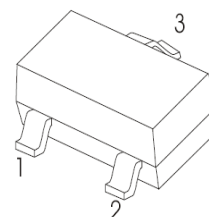


SOT-23 Plastic-Encapsulate Transistor
BC817- 16 TRANSISTOR (NPN)

SOT-23
BC817- 25
BC817- 40
FEATURES

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

1. BASE
2. EMITTER
3. COLLECTOR


MAXIMUM RATINGS (T_a=25°C unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector Base Voltage	V _{CBO}	50	V
Collector Emitter Voltage	V _{CEO}	45	V
Emitter Base Voltage	V _{EBO}	5	V
Collector Current	I _C	0.5	A
Power Dissipation	P _{tot}	300	mW
Thermal Resistance From Junction To Ambient	R _{θJA}	417	°C/W
Junction Temperature	T _j	150	°C
Storage Temperature Range	T _{stg}	- 55 to + 150	°C

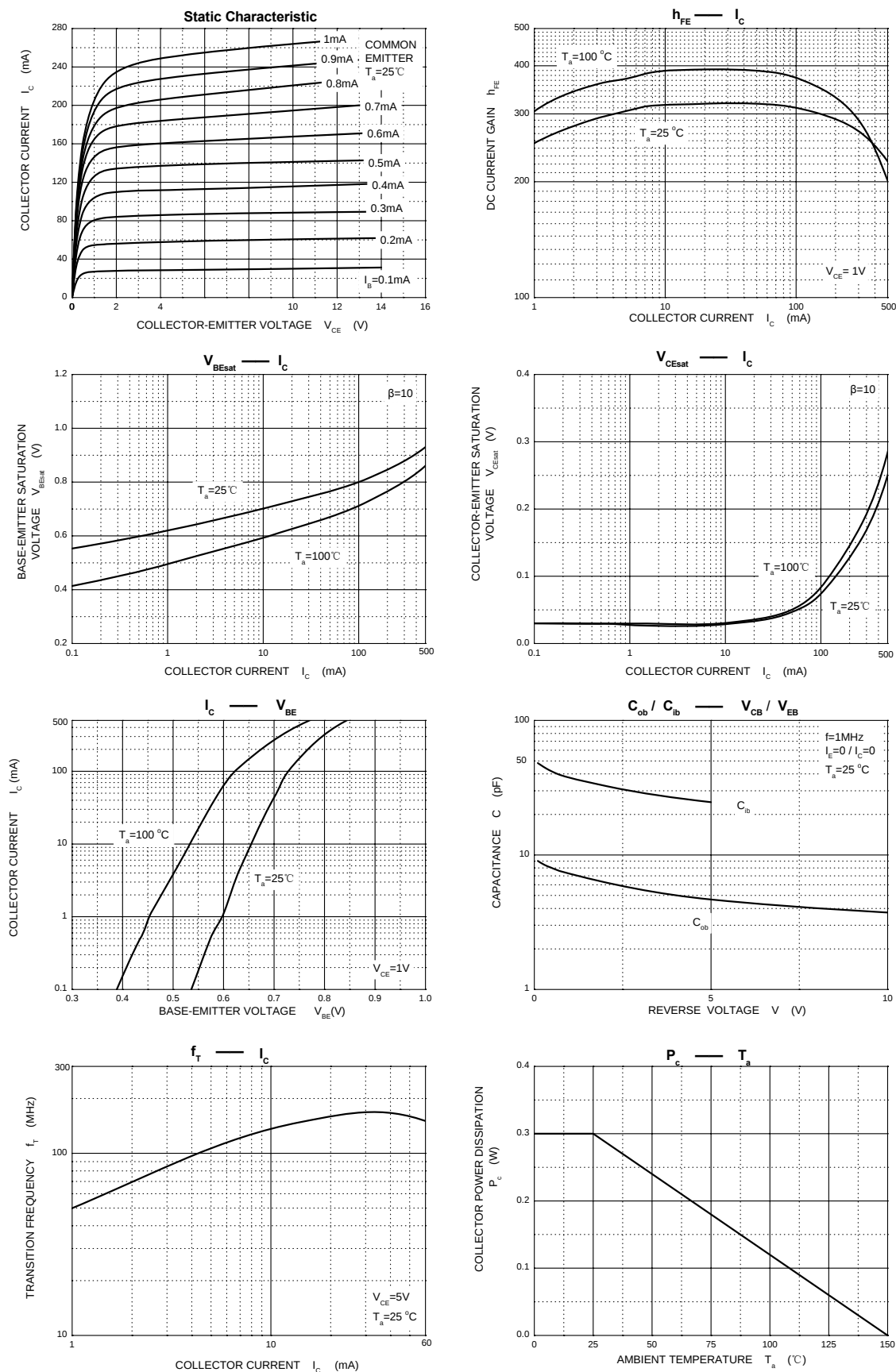
ELECTRICAL CHARACTERISTICS (T_{amb}=25°C unless otherwise specified)

Parameter	Symbol	Test conditions	MIN		MAX	UNIT
Collector-base breakdown voltage	V _{CBO}	I _C = 10μA, 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 = 1μA, I _C =0	5			V
Collector cut-off current	I _{CBO}	V _{CB} = 45 V, I _E =0			0.1	μA
Emitter cut-off current	I _{EBO}	V _{EB} = 4V, I _C =0			0.1	μA
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	
Base-emitter saturation voltage	V _{BE(sat)}	I _C = 500mA, I _B = 50mA			1.2	
Base-emitter voltage	V _{BE}	V _{CE} = 1 V, I _C = 500mA			1.2	
Collector capacitance	C _{ob}	V _{CB} =10V, f=1MHz		10		pF
Transition frequency	f _T	V _{CE} = 5 V, I _C = 10mA f=100MHz	100			MHz

CLASSIFICATION OF h_{FE} (1)

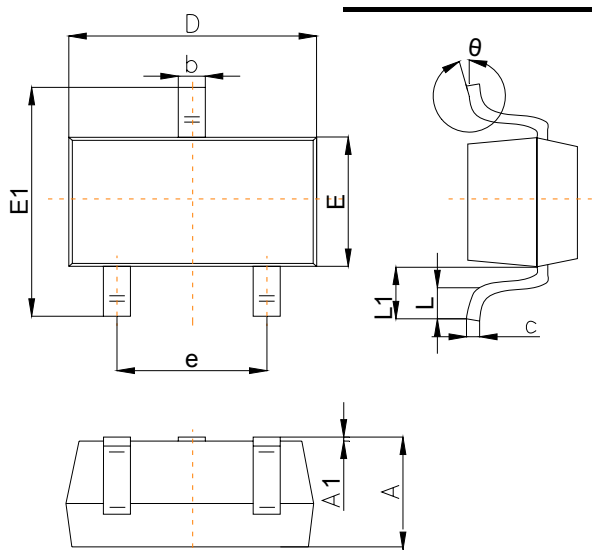
Rank	BC817-16	BC817-25	BC817-40
Range	100-250	160-400	250-600
Marking	6A	6B	6C

Typical Characteristics



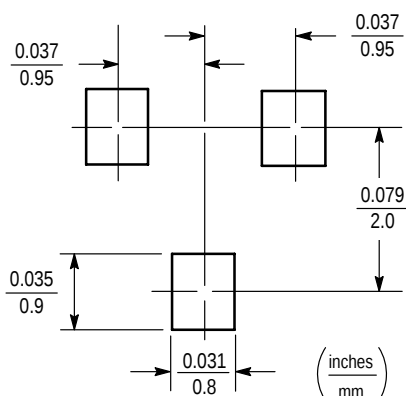
Outlitne Drawing

SOT-23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		
	Min	Typ	Max
A	0.65		1.40
A1	0.00		0.20
b	0.30		0.55
c	0.08		0.20
D	2.70		3.10
E	1.15		1.65
E1	2.10		2.80
e	1.70		2.10
L	0.15		0.50
L1	0.35		0.70
θ	0°		12°

Suggested Pad Layout



Note:

1. Controlling dimension: in/millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.

PACKAGE SPECIFICATIONS

Package	Reel Size	Reel DIA. (mm)	Q'TY/Reel (pcs)	Box Size (mm)	QTY/Box (pcs)	Carton Size (mm)	Q'TY/Carton (pcs)
SOT-23	7'	180	3000	190×190×190	45000	400×400×220	180000
SOT-23	13'	330	10000	340×350×40	30000	370×370×370	240000