FEATURES

For general AF applications

High collector current

High current gain

Low collector-emitter saturation voltage

Complementary types: BC807 (PNP)

BC817-16 (NPN)
BC817-25 (NPN)
BC817-40 (NPN)

1. BASE
2. EMITTER
3. COLLECTO

SOT-23

Marking

BC817-16	BC817-25	BC817-40
6A	6B	6C

MAXIMUM RATINGS (TA=25℃ unless otherwise noted)

Parameter	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	50	V
DCollector-Emitter Voltage	V_{CEO}	45	V
Emitter-Base Voltage	V_{EBO}	5	V
Collector Current -Continuous	I_C	500	mA
Collector Power Dissipation	P_C	300	mW
Junction Temperature	T_J	150	℃
Storage Temperature	Tstg	-55 to +150	℃

ELECTRICAL CHARACTERISTICS (Tamb=25℃ unless otherwise specified)

Parameter	Symbol	Test conditions	Min		Max	Unit
Collector-base breakdown voltage	V_{CB}	I_C= 10μA, I_E=0	50			V
Collector-emitter breakdown voltage	V_{CE}	I_C= 10mA, I_B=0	45			V
Emitter-base breakdown voltage	V_{EB}	I_E= 1μA, I_C=0	5			V
Collector cut-off current	I_{CB}	V_{CB}= 45 V , I_E=0			0.1	μA
Emitter cut-off current	I_{EB}	V_{EB}= 4V, I_C=0			0.1	μA
DC current gain	hFE(1	V_{CE}= 1V, I_C= 100mA	100		600	
	hFE(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_B	V_{CE}= 1 V, I_C= 500mA			1.2	V
Collecter capactiance	C_{ob}	V_{CB}=10V ,f=1MHz		10		pF
Transition frequency	fT	V_{CE}= 5 V, I_C= 10mA f=100MHz	100			MHz

CLASSIFICATION OF h_{FE}

Rank	6A	6B	6C
Range	100-250	160-400	250-600

BC817-16
BC817-25
BC817-40

Typical Characteristics