BC817

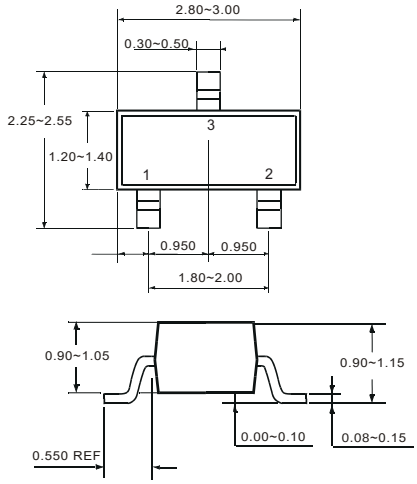
NPN GENERAL PURPOSE TRANSISTOR

VOLTAGE	45 Volt	POWER	300 mWatt

FEATURES

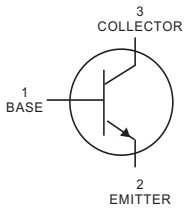
- High collector current
- High current gain
- Low collector-emitter saturation voltage
- Complementary types: BC807 (PNP)
- Lead free in compliance with EU RoHS

SOT-23 Unit:mm



MECHANICAL DATA

- Case Material: Molded Plastic.
- UL Flammability Classification Rating 94V-0



MAXIMUM RATINGS (T_A=25℃ unless otherwise noted)

Parameter	Symbol	Value	Units
Collector - Emitter Voltage	V_{CEO}	45	V
Collector - Base Voltage	V_{CBO}	50	V
Emitter - Base Voltage	V_{EBO}	5	V
Collector Current - Continuous	I_C	500	mA
Collector Dissipation	P_C	300	mW
Thermal resistance junction to ambient	$R_{\theta JA}$	417	°C/W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{STG}	-55~+150	°C

BC817

ELECTRICAL CHARACTERISTICS (T_A=25℃ unless otherwise specified)

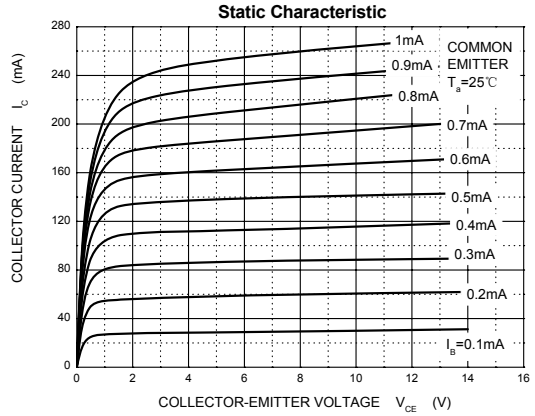
Parameter	Symbol	Test conditions	Min	Typ	Max	Unit
Collector-base breakdown voltage	V_{CBO}	I_C= 10μA, I_E=0	50			V
Collector-emitter breakdown voltage	V_{CEO}	I_C= 10mA, I_B=0	45			V
Emitter-base breakdown voltage	V_{EBO}	I_E= 1μA, I_C=0	5			V
Collector cut-off current	I_{CBO}	V_{CB}= 45 V , I_E=0			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	V
Base-emitter saturation voltage	$V_{BE(sat)}$	I_C= 500mA, I_B= 50mA			1.2	V
Base-emitter voltage	V_{BE}	V_{CE}= 1 V, I_C= 500mA			1.2	V
Collecter capactiance	C_{ob}	V_{CB}=10V ,f=1MHz		10		pF
Transition frequency	f_T	V_{CE}= 5 V, I_C= 10mA f=100MHz	100			MHz

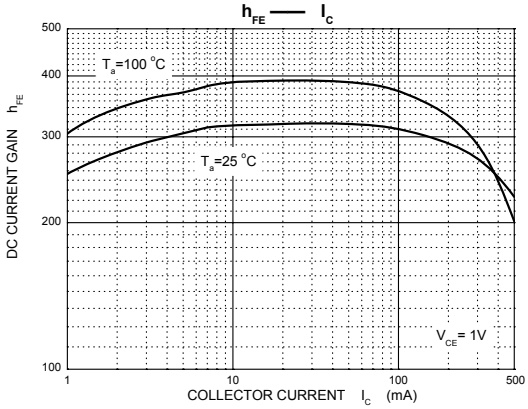
CLASSIFICATION OF $h_{FE\ (1)}$

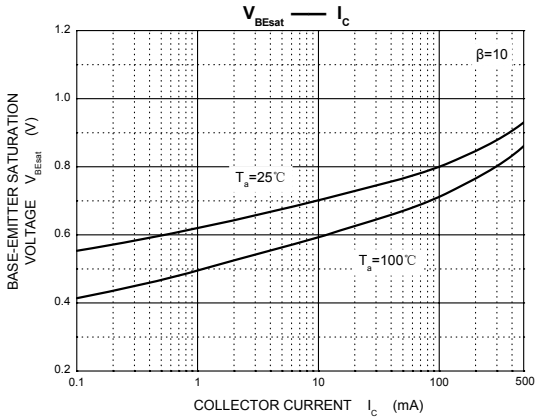
Rank	BC817-16	BC817-25	BC817-40
Range	100-250	160-400	250-600
Marking	6A	6B	6C

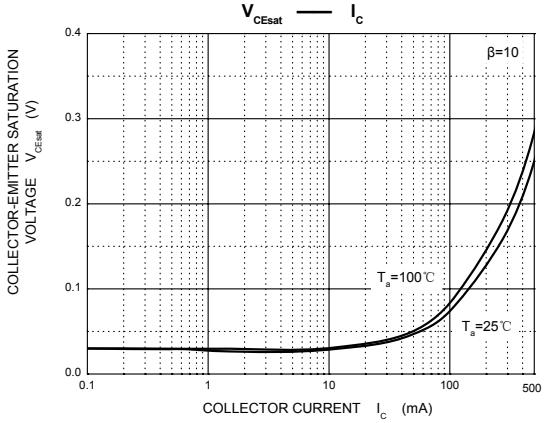
BC817

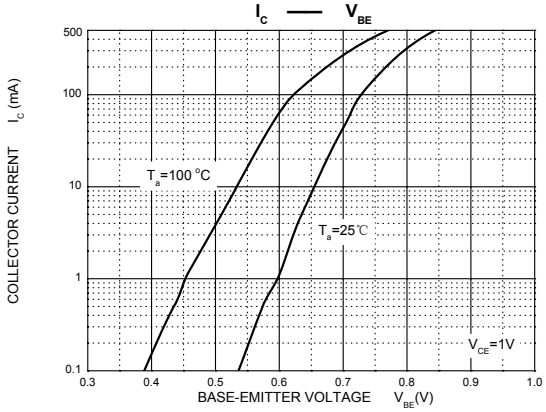
Typical Characteristics

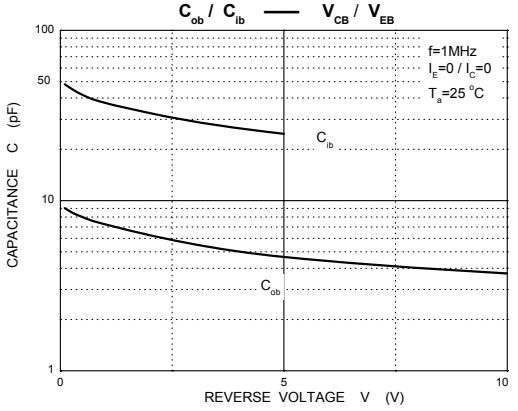


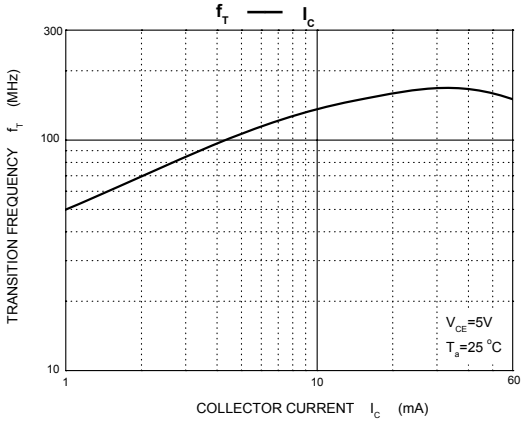


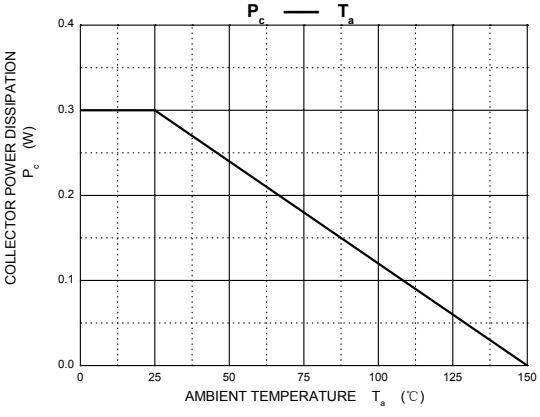




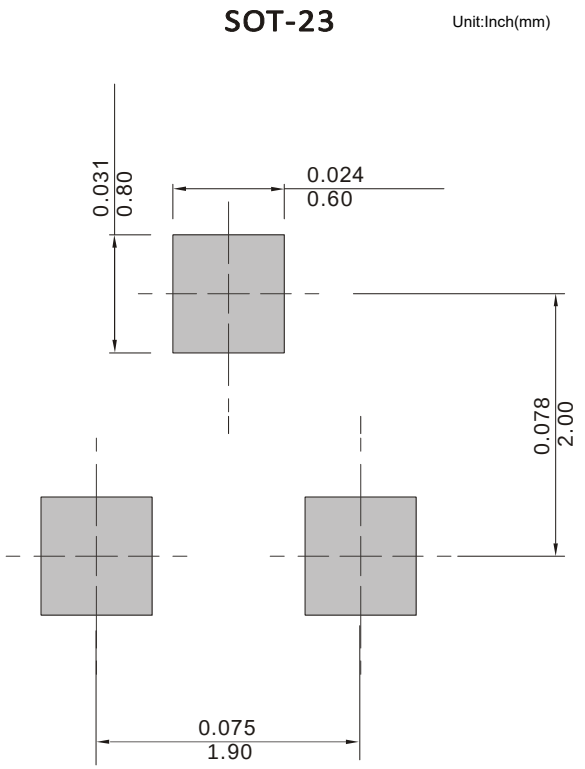








MOUNTING PAD LAYOUT



ORDER INFORMATION

• Packing information

Part Number	Case	Reel Size	QUANTITY
BC817	SOT-23	7 Inch	3000