



# HBC817

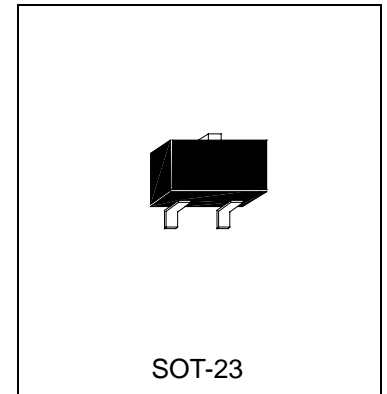
NPN EPITAXIAL PLANAR TRANSISTOR

## Description

The HBC817 is designed for switching and AF amplifier amplification suitable for driver stages and low power output stages.

## Absolute Maximum Ratings

- Maximum Temperatures  
 Storage Temperature ..... -55 to +150 °C  
 Junction Temperature..... +150 °C
- Maximum Power Dissipation  
 Total Power Dissipation (Ta=25°C) ..... 225 mW
- Maximum Voltages and Currents (Ta=25°C)  
 VCES Collector to Base Voltage ..... 50 V  
 VCEO Collector to Emitter Voltage..... 45 V  
 VEBO Emitter to Base Voltage..... 5 V  
 IC Collector Current ..... 800 mA



## Characteristics (Ta=25°C)

Symbol	Min.	Typ.	Max.	Unit	Test Conditions
BVCEO	45	-	-	V	IC=10mA
BVCES	50	-	-	V	IC=100uA
BVEBO	5	-	-	V	IE=100uA
ICES	-	-	100	nA	VCE=25V
IEBO	-	-	100	nA	VEB=4V
*VCE(sat)	-	-	700	mV	IC=500mA, IB=50mA
VBE(on)	-	-	1.2	V	VCE=1V, IC=300mA
*hFE	100	-	630		VCE=1V, IC=100mA
fT	-	100	-	MHz	VCE=5V, IC=10mA. f=100MHz
Cob	-	-	12	pF	VCB=10V, f=1.0MHz, IE=0

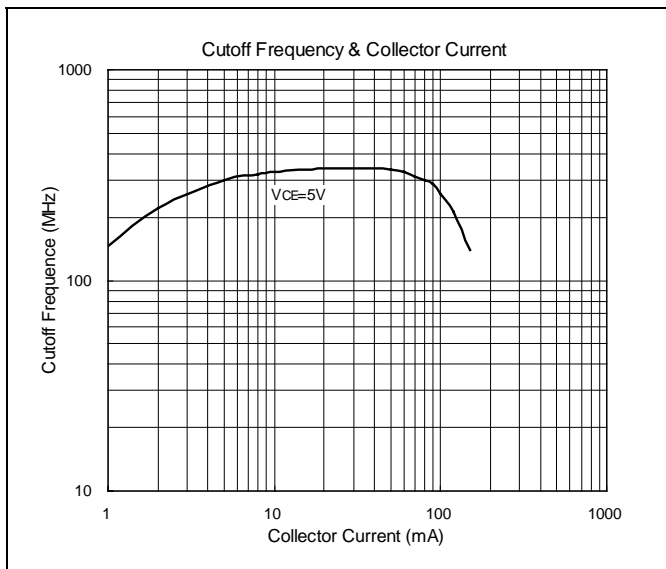
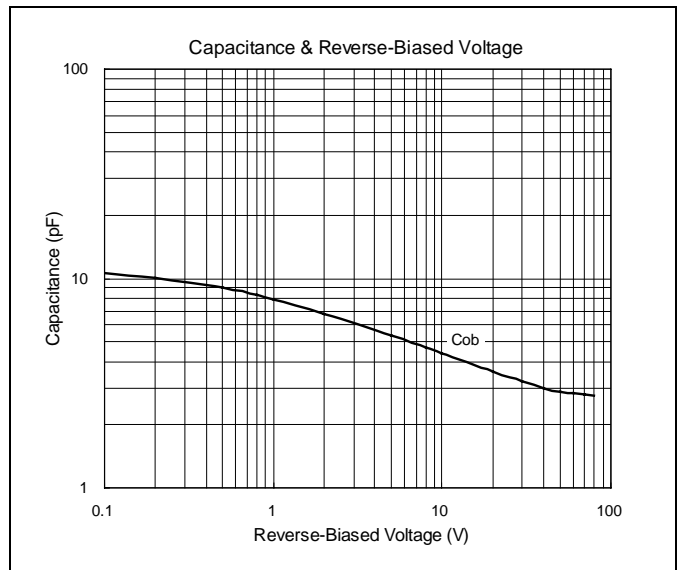
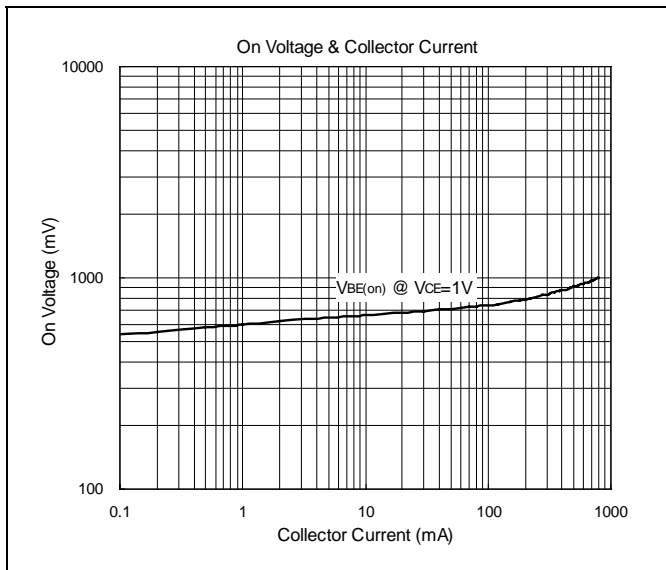
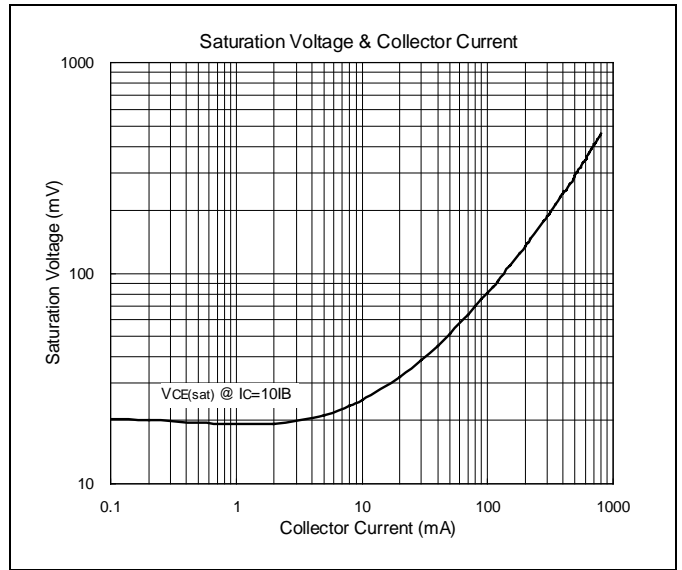
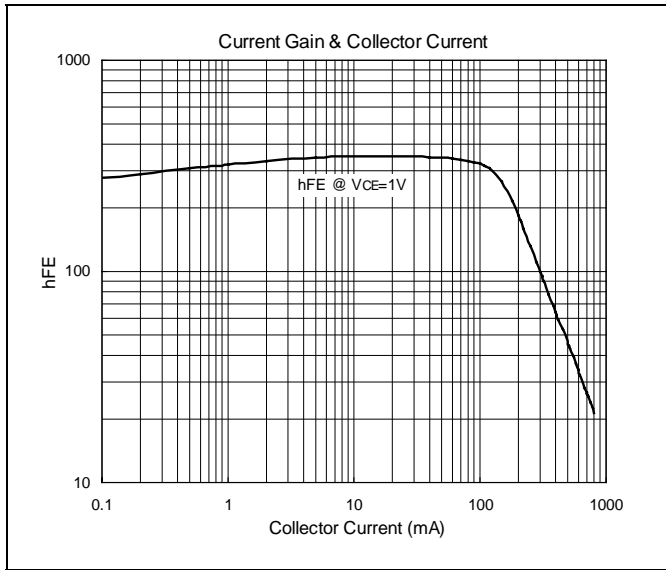
\*Pulse Test: Pulse Width ≤380us, Duty Cycle≤2%

## Classification Of hFE

Rank	8FA(16)	8FB(25)	8FC(40)
hFE	100-250	160-400	250-630

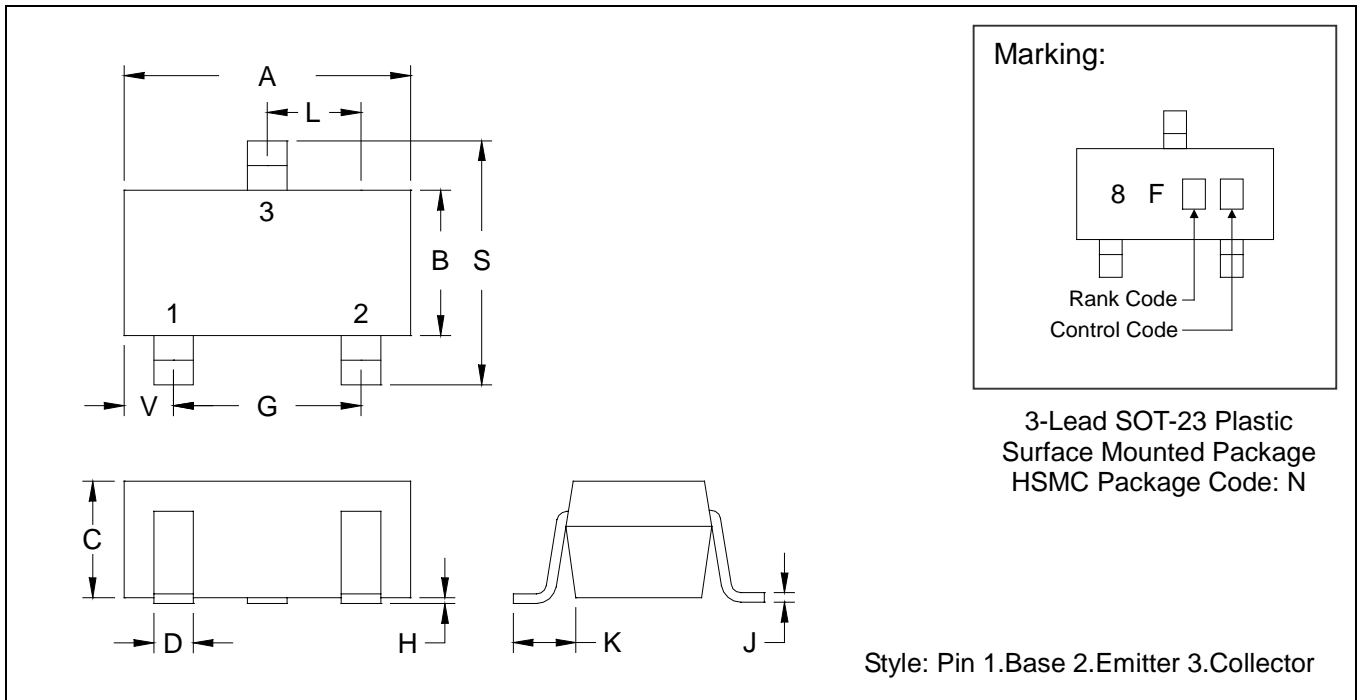


### Characteristics Curve





### SOT-23 Dimension



\*: Typical

DIM	Inches		Millimeters		DIM	Inches		Millimeters	
	Min.	Max.	Min.	Max.		Min.	Max.	Min.	Max.
A	0.1102	0.1204	2.80	3.04	J	0.0034	0.0070	0.085	0.177
B	0.0472	0.0630	1.20	1.60	K	0.0128	0.0266	0.32	0.67
C	0.0335	0.0512	0.89	1.30	L	0.0335	0.0453	0.85	1.15
D	0.0118	0.0197	0.30	0.50	S	0.0830	0.1083	2.10	2.75
G	0.0669	0.0910	1.70	2.30	V	0.0098	0.0256	0.25	0.65
H	0.0005	0.0040	0.013	0.10					

- Notes: 1.Dimension and tolerance based on our Spec. dated Sep. 07,1997.  
 2.Controlling dimension: millimeters.  
 3.Maximum lead thickness includes lead finish thickness, and minimum lead thickness is the minimum thickness of base material.  
 4.If there is any question with packing specification or packing method, please contact your local HSMC sales office.

**Material:**

- Lead: 42 Alloy; solder plating
- Mold Compound: Epoxy resin family, flammability solid burning class: UL94V-0

**Important Notice:**

- All rights are reserved. Reproduction in whole or in part is prohibited without the prior written approval of HSMC.
- HSMC reserves the right to make changes to its products without notice.
- **HSMC semiconductor products are not warranted to be suitable for use in Life-Support Applications, or systems.**
- HSMC assumes no liability for any consequence of customer product design, infringement of patents, or application assistance.

**Head Office And Factory:**

- **Head Office** (Hi-Sincerity Microelectronics Corp.): 10F.,No. 61, Sec. 2, Chung-Shan N. Rd. Taipei Taiwan R.O.C.  
 Tel: 886-2-25212056 Fax: 886-2-25632712, 25368454
- **Factory 1:** No. 38, Kuang Fu S. Rd., Fu-Kou Hsin-Chu Industrial Park Hsin-Chu Taiwan. R.O.C  
 Tel: 886-3-5983621~5 Fax: 886-3-5982931