

## NPN General Purpose Amplifier

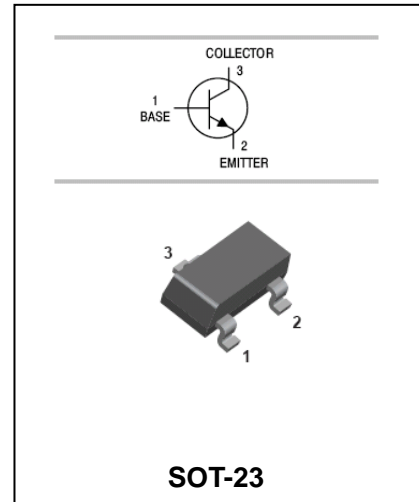
## BC817-16/-25/-40

### FEATURES

- For general AF application.
- Complementary PNP type available BC807.
- High collector current, high current gain.
- Low collector-emitter saturation voltage.



Lead-free



### APPLICATIONS

- General purpose medium power amplifier.
- Switching requiring collector currents up to 1.2mA.

### ORDERING INFORMATION

Type No.	Marking	Package Code
BC817-16	6A	SOT-23
BC817-25	6B	SOT-23
BC817-40	6C	SOT-23

### MAXIMUM RATING @ Ta=25°C unless otherwise specified

Symbol	Parameter	Value	Unit
$V_{CBO}$	Collector-Base Voltage	50	V
$V_{CEO}$	Collector-Emitter Voltage	45	V
$V_{EBO}$	Emitter-Base Voltage	5	V
$I_C$	Collector Current -Continuous	500	mA
$P_C$	Collector Dissipation	300	mW
$T_j, T_{stg}$	Junction and Storage Temperature	-55to+150	°C

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ELECTRICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=10\mu A$ $I_E=0$	50		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=10mA$ $I_B=0$	45		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=1\mu A$ $I_C=0$	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	$h_{FE}$	$V_{CE}=1V$ $I_C=100mA$ $V_{CE}=1V$ $I_C=100mA$	100 40	600	
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
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

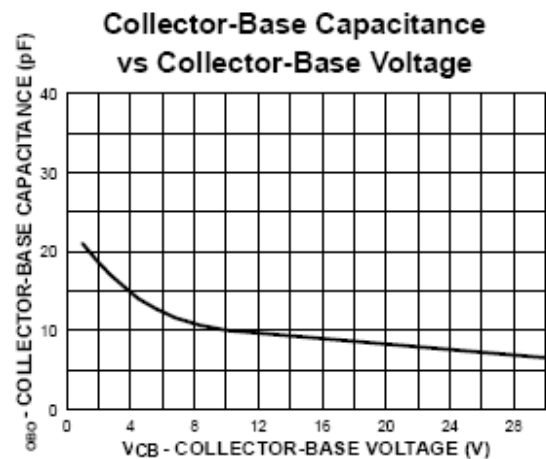
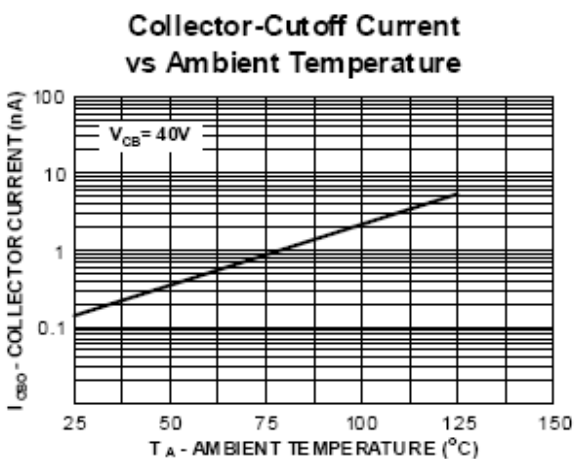
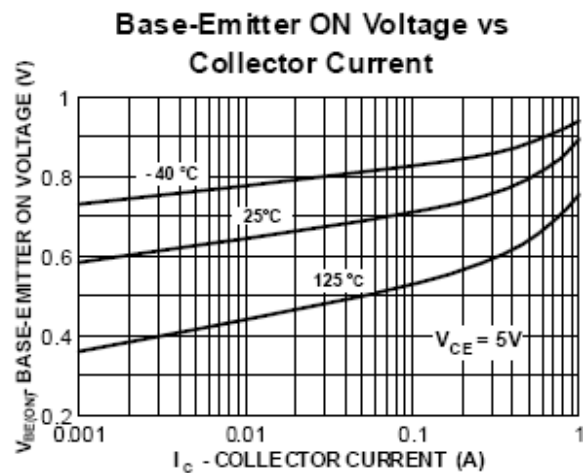
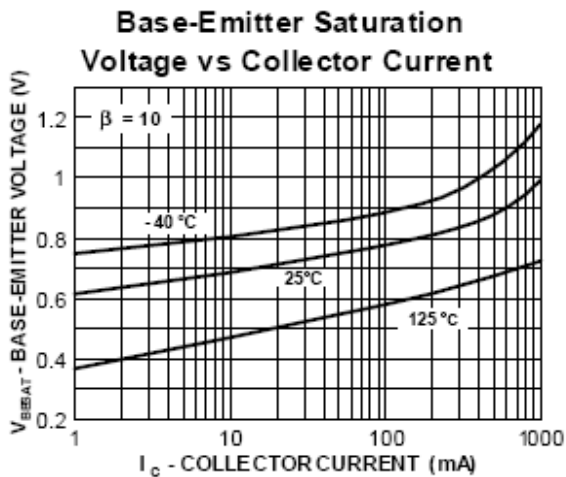
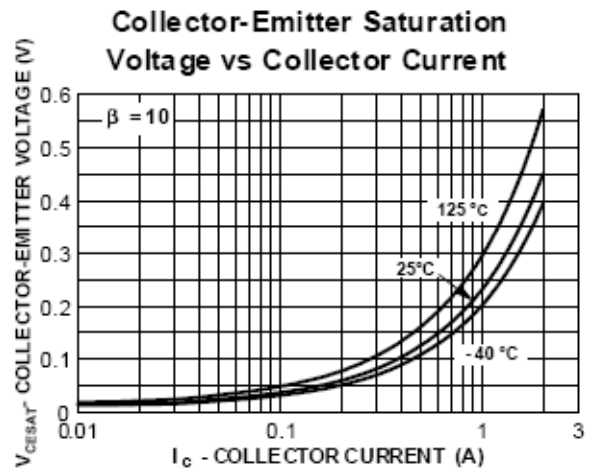
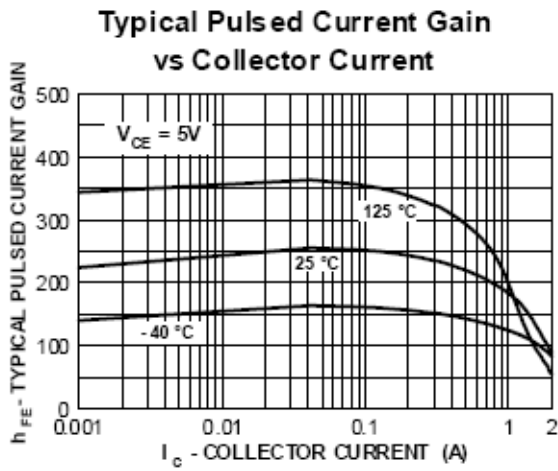
### CLASSIFICATION OF $H_{FE(1)}$

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

TYPICAL CHARACTERISTICS @ Ta=25°C unless otherwise specified

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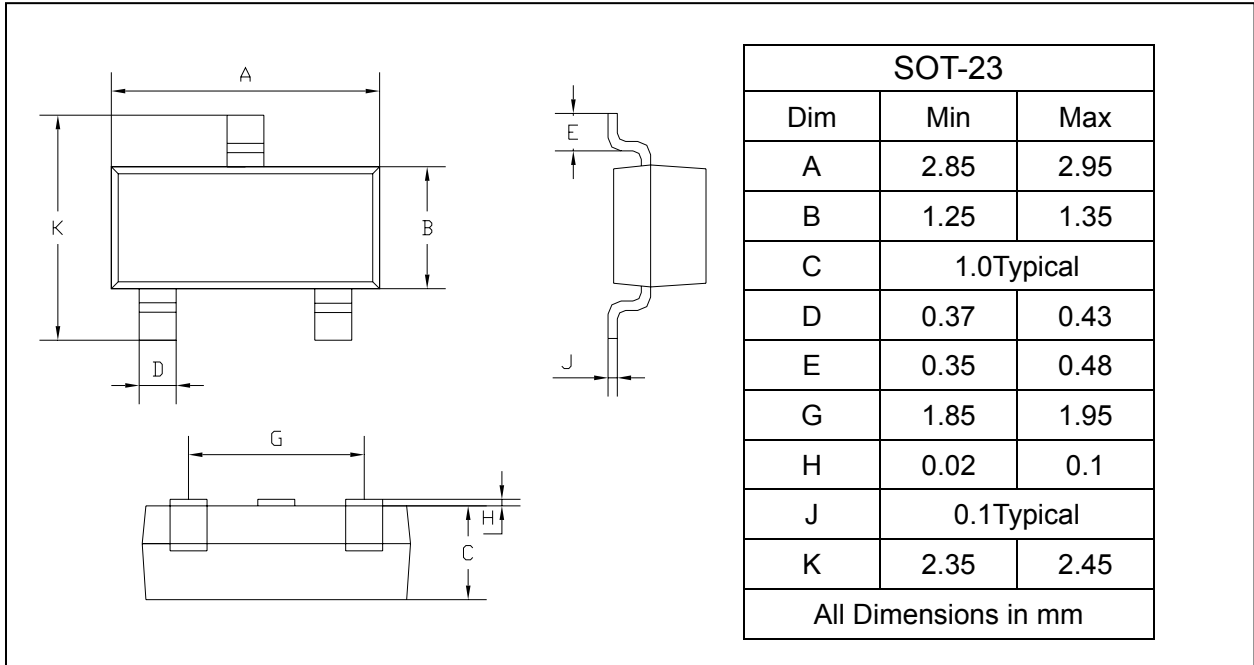
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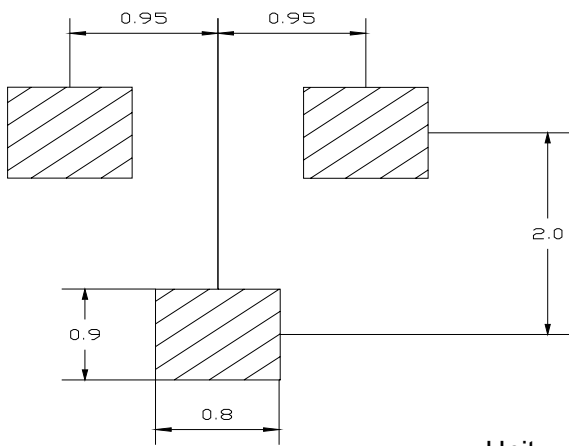
### PACKAGE OUTLINE

Plastic surface mounted package

SOT-23



### SOLDERING FOOTPRINT



Unit: mm

### PACKAGE INFORMATION

Device	Package	Shipping
BC817-16/-25/-40	SOT-23	3000/Tape&Reel