

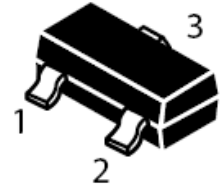
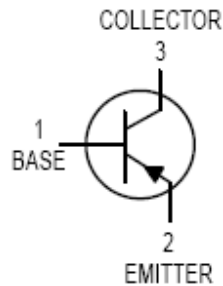
## PNP General Purpose Transistor

### FEATURES

- Ideally suited for automatic insertion
- Epitaxial planar die construction
- Complementary to BC817W

### MECHANICAL DATA

- Case: SOT-323 Plastic
- Case material: "Green" molding compound, UL flammability classification 94V-0, (No Br. Sb. Cl)
- Lead Free in RoHS 2002/95/EC Compliant



### Maximum Ratings @ $T_A = 25^\circ\text{C}$

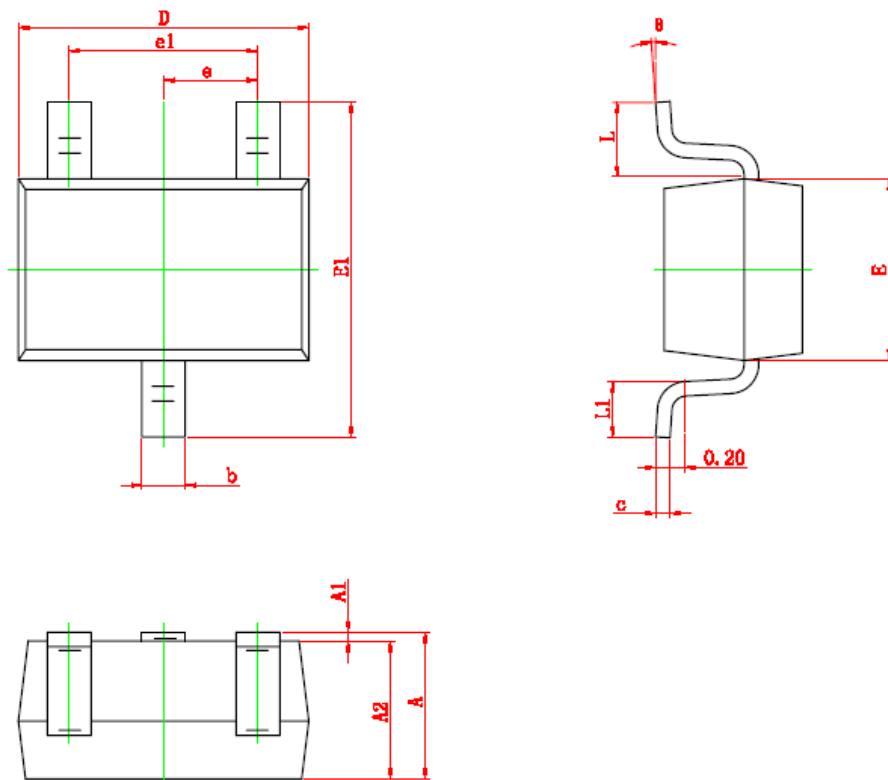
Characteristic	Symbol	Value	Unit
Collector-Base Voltage	$V_{CBO}$	-50	V
Collector-Emitter Voltage	$V_{CEO}$	-45	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Collector Current -Continuous	$I_C$	-500	mA
Collector Power Dissipation	$P_C$	300	mW
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-55~+150	$^\circ\text{C}$

### Electrical Characteristics @ $T_A = 25^\circ\text{C}$ unless otherwise specified

Characteristic	Test Condition	Symbol	Min.	Typ.	Max.	Unit
Collector-base breakdown voltage	$I_C = -10\mu\text{A}, I_E = 0$	$V_{CBO}$	-50			V
Collector-emitter breakdown voltage	$I_C = -10\text{mA}, I_B = 0$	$V_{CEO}$	-45			V
Emitter-base breakdown voltage	$I_E = -1\mu\text{A}, I_C = 0$	$V_{EBO}$	-5			V
Collector-base cut-off current	$V_{CB} = -20\text{V}, I_E = 0$	$I_{CBO}$			-0.1	$\mu\text{A}$
Collector-emitter cut-off current	$V_{CE} = -20\text{V}, I_B = 0$	$I_{CEO}$			-0.2	$\mu\text{A}$
Emitter-base cut-off current	$V_{EB} = -5\text{V}, I_C = 0$	$I_{EBO}$			-0.1	$\mu\text{A}$
DC current gain	$V_{CE} = -1\text{V}, I_C = -100\text{mA}$	$h_{FE}$	100		600	V
Collector-emitter saturation voltage	$I_C = -500\text{mA}, I_B = -50\text{mA}$	$V_{CE(sat)}$	-		-0.7	V
Base-emitter voltage	$I_C = -500\text{mA}, V_{CE} = -1\text{V}$	$V_{BE}$	-		-1.2	V
Transition frequency	$V_{CE} = -5\text{V}, I_C = -10\text{mA}, f = 100\text{MHz}$	$f_T$	80			MHz
Collector output capacitance	$V_{CB} = -10\text{V}, f = 1\text{MHz}$	$C_{ob}$			10	pF

REV. 1, Oct-2010, KSPR02

## SOT-323 Outline Dimension



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
$\theta$	0°	8°	0°	8°

### Device Marking :

Device P/N	Classification of $h_{FE}$	Marking code
BC807-16W	100-250	5A
BC807-25W	160-400	5B
BC807-40W	250-600	5C

Electrical characteristic curves

Fig.1 DC current gain vs. collector current \_BC807W-16

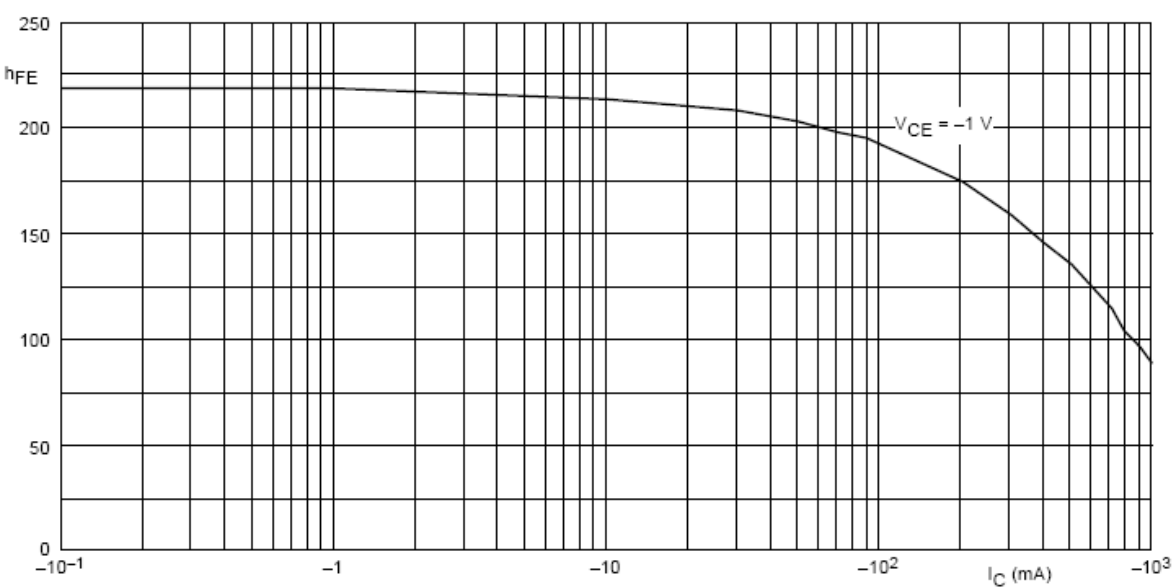


Fig.2 DC current gain vs. collector current \_BC807W-25

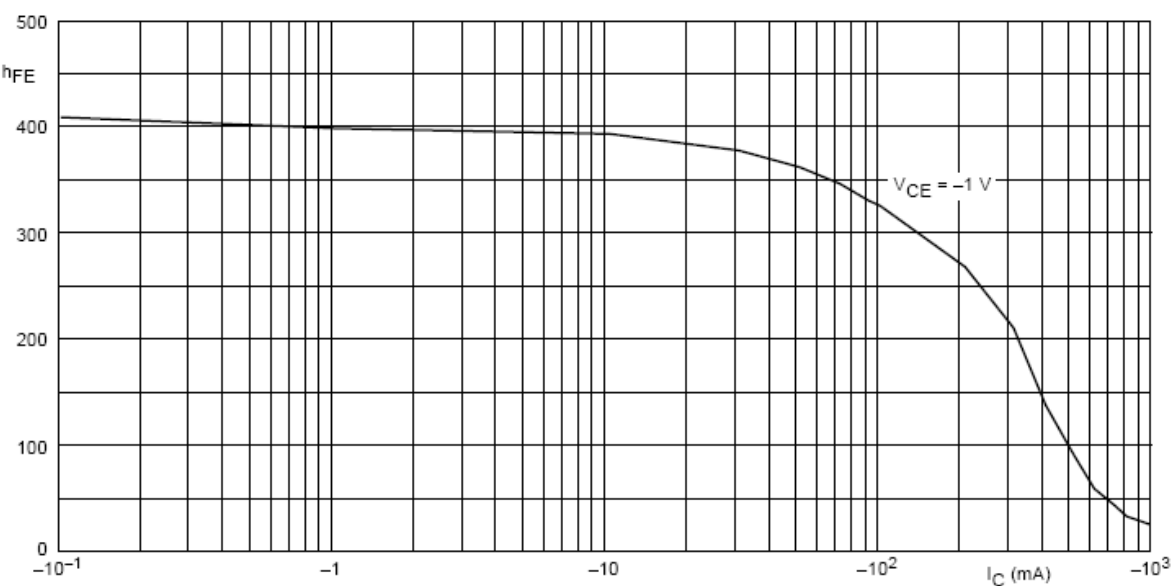
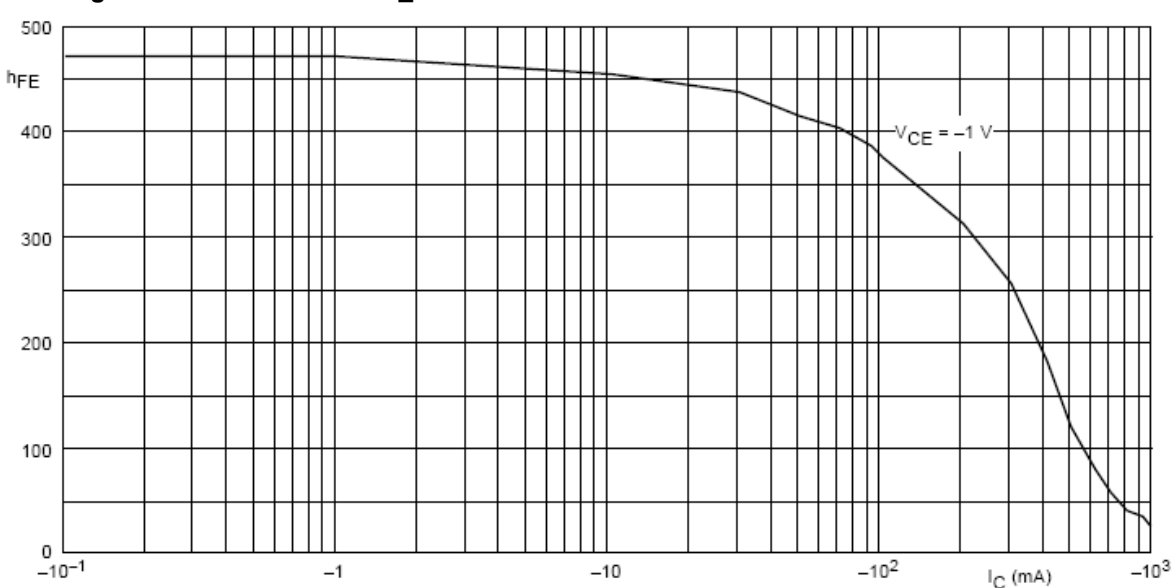


Fig.3 DC current gain vs. collector current \_BC807W-40



## **Important Notice and Disclaimer**

LSC reserves the right to make changes to this document and its products and specifications at any time without notice. Customers should obtain and confirm the latest product information and specifications before final design, purchase or use.

LSC makes no warranty, representation or guarantee regarding the suitability of its products for any particular purpose, nor does LSC assume any liability for application assistance or customer product design. LSC does not warrant or accept any liability with products which are purchased or used for any unintended or unauthorized application.

No license is granted by implication or otherwise under any intellectual property rights of LSC.

LSC products are not authorized for use as critical components in life support devices or systems without express written approval of LSC.