



## Small Signal Transistor

-45V PNP  
SOT23

## Features

- Collector Current :  $I_C = -500\text{mA}$
- Power Dissipation of 300mW
- High Stability and High Reliability



## Mechanical Data

- Case: SOT23 Package
- Case Material: "Green" Molding Compound UL Flammability

Classification Rating 94V-0

- Halogen Free

- High reliability and automotive grade (AEC-Q101 qualified)

Note: Products with logo  or  are made by HY Electronic (Cayman) Limited.

## Ordering Information

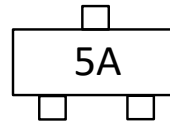
- Package :SOT23
- Reel Size :7 (inches)
- Quantity Per Reel :3,000 pcs
- Quantity One Box :24,000 pcs
- Quantity One Carton :120,000 pcs

## Package Outline

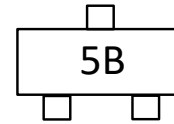


SOT23 Top View

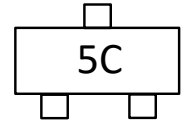
## Marking Information



BC807-16

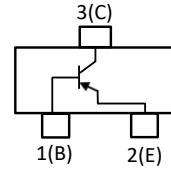


BC807-25



BC807-40

## Device Schematic &amp; PIN Configuration



Pin Assignment

Pin Assignment	
1	Base
2	Emitter
3	Collector

## Maximum Ratings (@TA = +25°C, unless otherwise specified.)

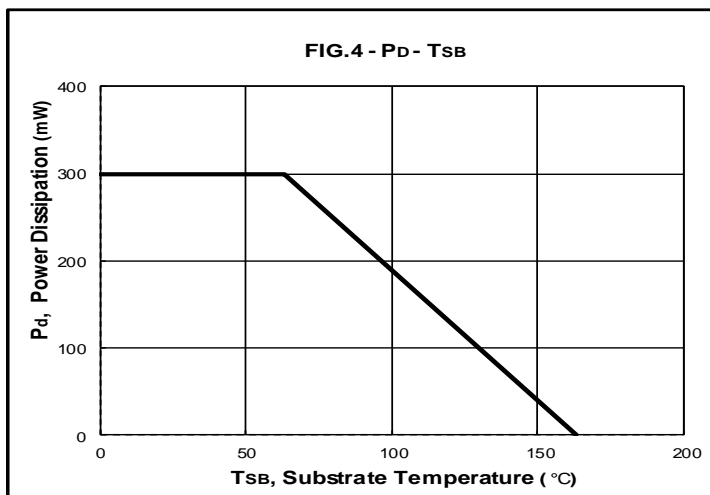
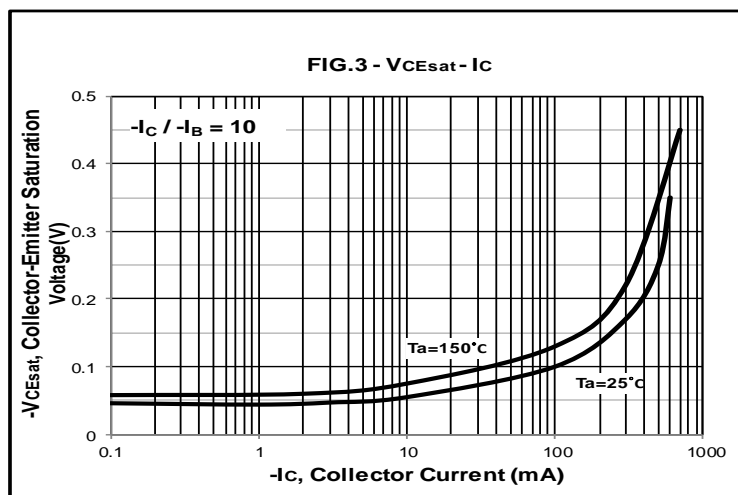
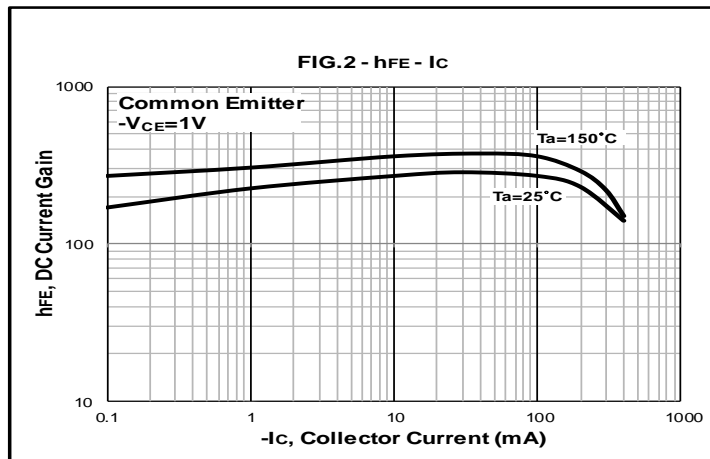
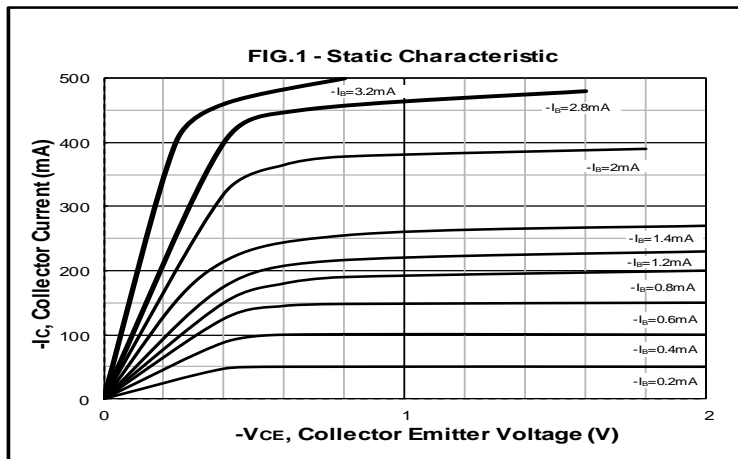
Parameter	Symbol	Value	Unit
Collector-Emitter Voltage	$V_{CEO}$	-45	V
Collector-Base Voltage	$V_{CBO}$	-50	
Emitter-Base Voltage	$V_{EBO}$	-5	
Collector Current-Continuous	$I_C$	-500	mA
Total Device Dissipation	$P_{tot}$	300	mW
Junction Temperature Range	$T_J$	150	°C
Storage Temperature Range	$T_{STG}$	-55 to +150	°C

## Electrical Characteristics(@TA = +25°C, unless otherwise specified.)

Parameter	Test Conditions	Symbol	Min	Max	Unit	
Collector-Emitter Breakdown Voltage	$I_C = -10\text{mA}, I_B = 0$	$V_{CEO}$	-45	-	V	
Collector-Base Breakdown Voltage	$I_C = -10\mu\text{A}, I_E = 0$	$V_{CBO}$	-50	-		
Emitter-Base Breakdown Voltage	$I_E = -1\mu\text{A}, I_C = 0$	$V_{EBO}$	-5	-		
Collector Cut-Off Current	$V_{CB} = -45\text{V}, I_E = 0$	$I_{CBO}$	-	-0.1	$\mu\text{A}$	
Emitter Cut-Off Current	$V_{EB} = -4\text{V}, I_C = 0$	$I_{EBO}$	-	-0.1		
DC Current Gain	$I_C = -100\text{mA}, V_{CE} = -1\text{V}$	$h_{FE}$	BC807-16	100	250	-
			BC807-25	160	400	
			BC807-40	250	600	
Collector-Emitter Saturation Voltage	$I_C = -500\text{mA}, I_B = -50\text{mA}$	$V_{CE(sat)}$	-	-0.7	V	
Base-Emitter Saturation Voltage	$I_C = -500\text{mA}, I_B = -50\text{mA}$	$V_{BE(sat)}$	-	-1.2	V	
Current Gain-Bandwidth Product	$I_C = -10\text{mA}, V_{CE} = -5\text{V}, f = 100\text{MHz}$	$f_T$	100	-	MHz	

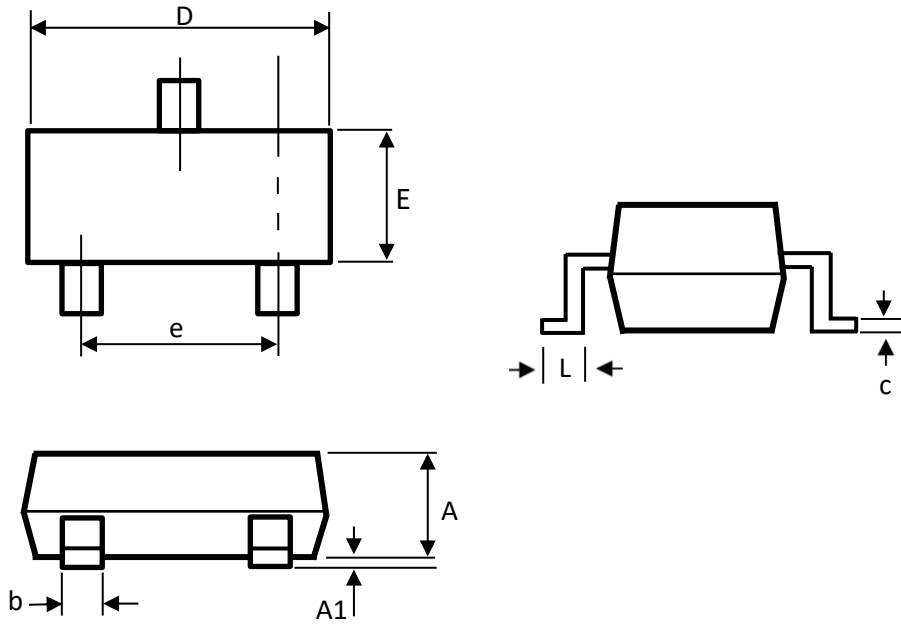


## Rating and Characteristic Curves



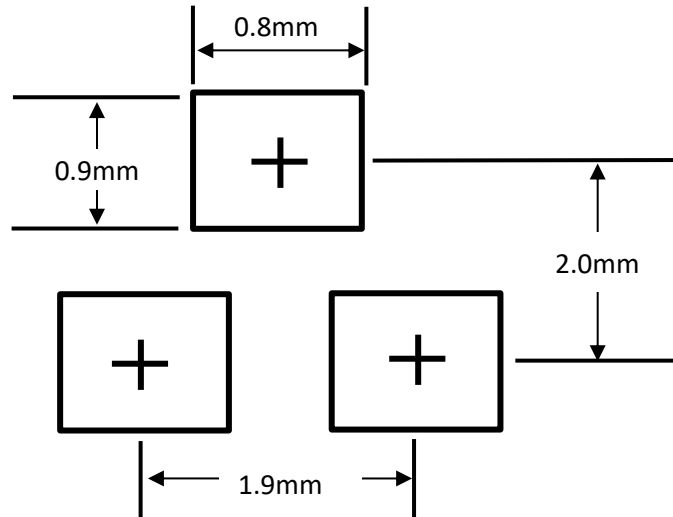


## Package Outline Dimensions



SOT23 Package		
Dim	Min	Max
A	0.890	1.000
A1	0.013	0.100
b	0.370	0.510
c	0.085	0.180
D	2.800	3.000
E	1.200	1.400
e	1.780	2.050
L	0.450	0.610
All Dimensions in mm		

## Suggested Soldering Pad Layout



**Note:**

- 1. The pad layout is for reference purposes only.
- 2. General tolerance  $\pm 0.05\text{mm}$



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