

**0.3 Watts PNP Plastic-Encapsulate Transistors**



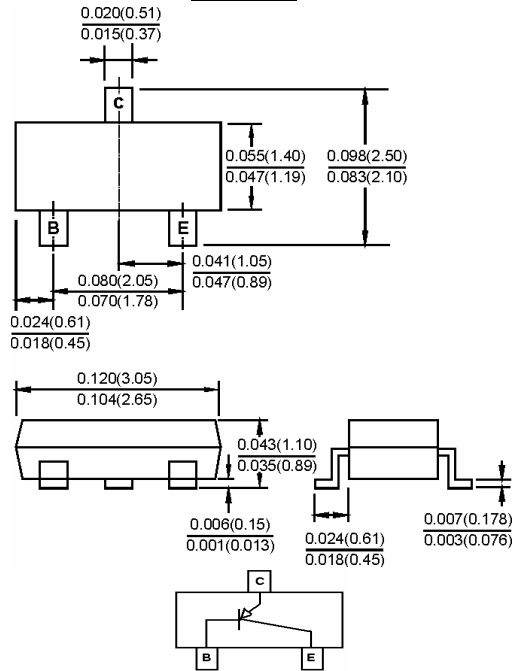
**Features**

- ✧ Ideally suited for automatic insertion
- ✧ Epitaxial planar die construction
- ✧ For switching, AF driver and amplifier applications
- ✧ Complementary NPN type available(BC817)
- ✧ Qualified to AEC-Q101 standards for high reliability

**Mechanical Data**

- ✧ Case: SOT-23, Molded plastic
- ✧ Case material: molded plastic. UL flammability classification rating 94V-0
- ✧ Moisture sensitivity: Level 1 per J-STD-020C
- ✧ Terminals: Solderable per MIL-STD-202, Method 208
- ✧ Lead free plating
- ✧ Marking: -16:5A, -25: 5B, -40: 5C
- ✧ Weight: 0.008 grams(approximate)

**SOT-23**



Dimensions in inches and (millimeters)

**Maximum Ratings  $T_A=25^\circ\text{C}$  unless otherwise specified**

Type Number	Symbol	BC807-16	BC807-25	BC807-40	Units
Collector-base breakdown voltage $I_C=-10\mu\text{A}, I_E=0$	$V_{CB0}$		-50		V
Collector-emitter breakdown voltage $I_C=-10\text{mA}, I_B=0$	$V_{CE0}$		-45		V
Collector current - continuous	$I_C$		-0.5		A
Power dissipation	$P_C$		0.3		W
Emitter-base breakdown voltage $I_E=-1\mu\text{A}, I_C=0$	$V_{EB0}$		-5		V
Collector cut-off current $V_{CB}=-45\text{V}, I_E=0$	$I_{CB0}$		-0.1		$\mu\text{A}$
Collector cut-off current $V_{CE}=-40\text{V}, I_B=0$	$I_{CE0}$		-0.2		$\mu\text{A}$
Emitter cut-off current $V_{EB}=-4\text{V}, I_C=0$	$I_{EB0}$		-0.1		$\mu\text{A}$
Collector-emitter saturation voltage $I_C=-500\text{mA}, I_B=-50\text{mA}$	$V_{CE}(\text{sat})$		-0.7		V
Base-emitter saturation voltage $I_C=-500\text{mA}, I_B=-50\text{mA}$	$V_{BE}(\text{sat})$		-1.2		V
Transition frequency $V_{CE}=-5\text{V}, I_C=-10\text{mA}, f=100\text{MHz}$	$f_T$		100		MHz
Operating and Storage Temperature Range	$T_J, T_{STG}$		-55 to + 150		$^\circ\text{C}$
<b>Type Number</b>	<b>Symbol</b>	<b>Min</b>	<b>Max</b>	<b>Units</b>	
DC current gain	$H_{FE(1)}$	100	250		
807-25		160	400		
807-40		250	600		

RATINGS AND CHARACTERISTIC CURVES(BC807-16, BC807-25, BC807-40)

FIG.1- POWER DERATING CURVE

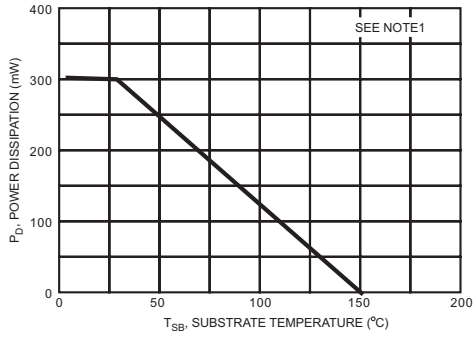


FIG.2- GAIN BANDWIDTH PRODUCT VS COLLECTOR CURRENT

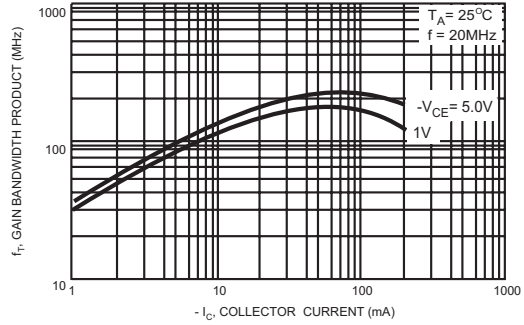


FIG.3- COLLECTOR SAT VOLTAGE VS COLLECTOR CURRENT

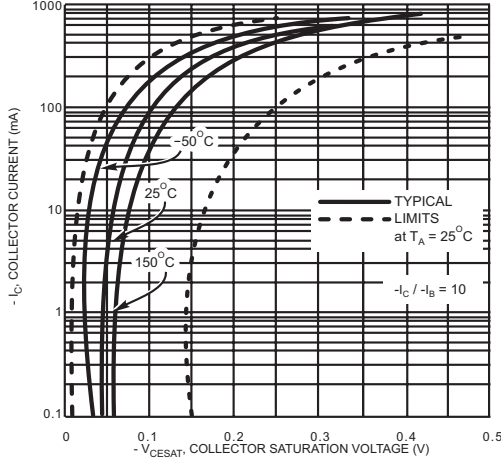


FIG.4- DC CURRENT GAIN VS COLLECTOR CURRENT

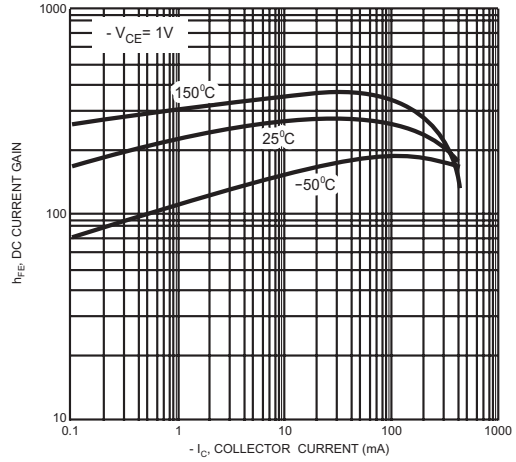


FIG.5- TYPICAL EMITTER-COLLECTOR CHARACTERISTICS

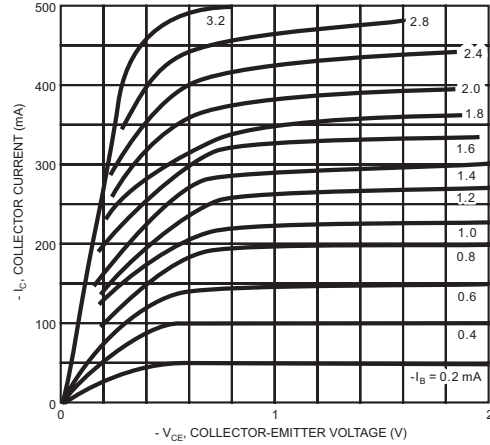


FIG.6- TYPICAL EMITTER-COLLECTOR CHARACTERISTICS

