

0.3 Watts PNP Plastic-Encapsulate Transistors



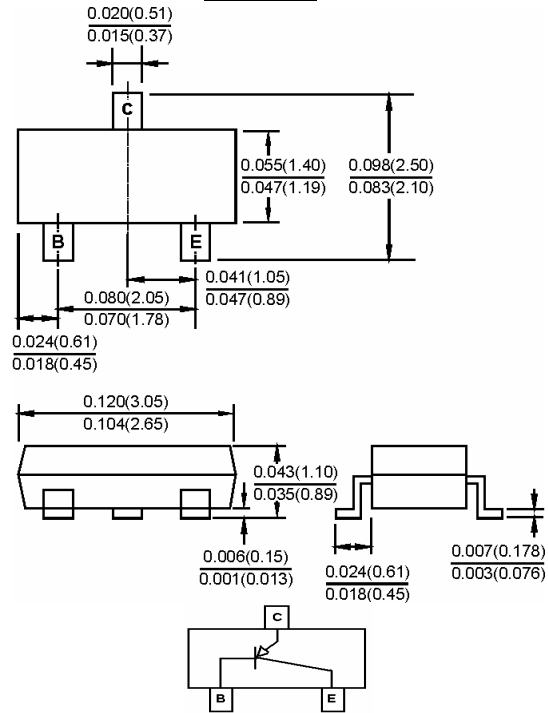
Features

- ✧ 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_{CBO}		-50		V
Collector-emitter breakdown voltage $I_C=-10\text{mA}, I_B=0$	V_{CEO}		-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_{EBO}		-5		V
Collector cut-off current $V_{CB}=-45\text{V}, I_E=0$	I_{CBO}		-0.1		μA
Collector cut-off current $V_{CE}=-40\text{V}, I_B=0$	I_{CEO}		-0.2		μA
Emitter cut-off current $V_{EB}=-4\text{V}, I_C=0$	I_{EBO}		-0.1		μA
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		$^\circ\text{C}$
Type Number	Symbol	Min	Max	Units	
DC current gain $V_{CE}=-1\text{V}, I_C=-100\text{mA}$	$H_{FE(1)}$	807-16	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

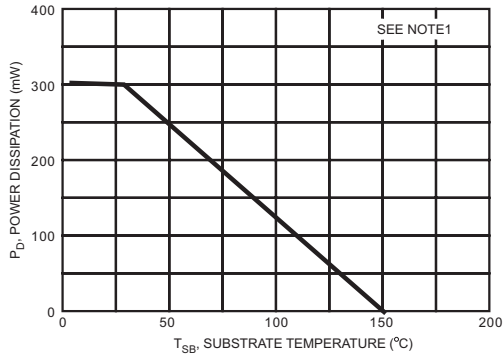


FIG.2- GAIN BANDWIDTH PRODUCT VS COLLECTOR CURRENT

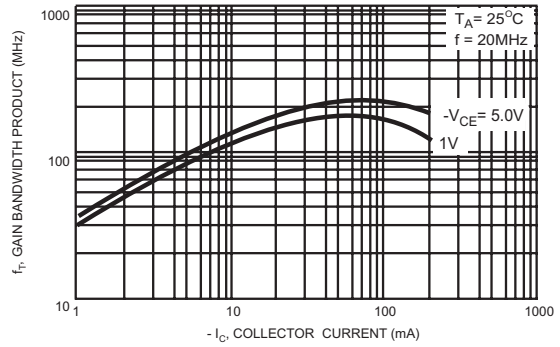


FIG.3-COLLECTOR SAT VOLTAGE VS COLLECTOR CURRENT

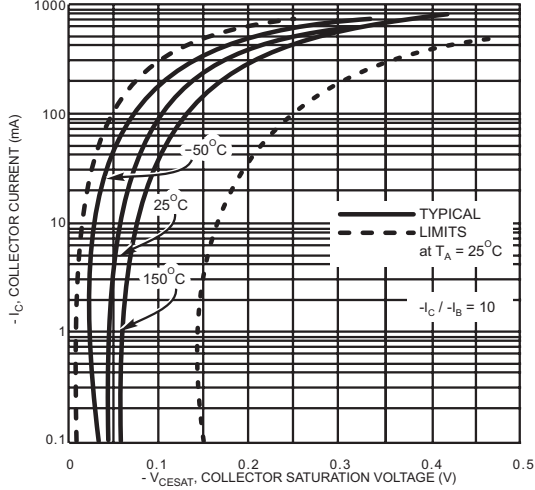


FIG.4- DC CURRENT GAIN VS COLLECTOR CURRENT

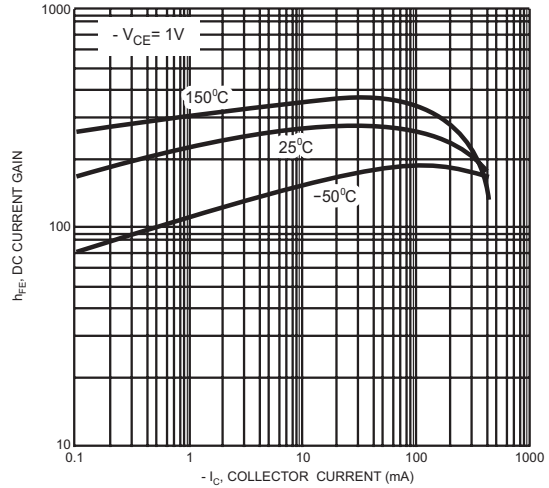


FIG.5- TYPICAL EMITTER-COLLECTOR CHARACTERISTICS

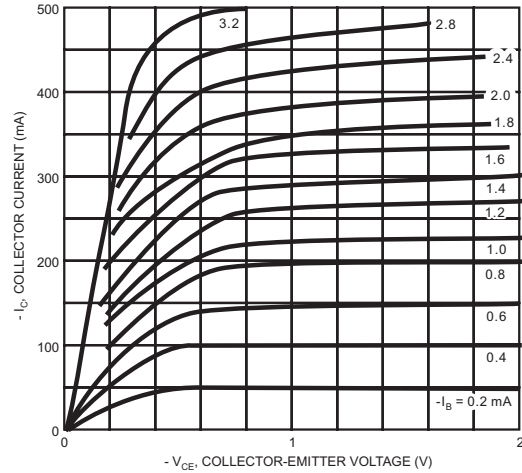


FIG.6- TYPICAL EMITTER-COLLECTOR CHARACTERISTICS

