

SOT-23 Plastic-Encapsulate Transistors**BC807-16** TRANSISTOR (PNP)**BC807-25****BC807-40****FEATURES**

- Ideally suited for automatic insertion
- epitaxial planar die construction
- complementary NPN type available(BC817)

**MARKING: 807-16:5A; 807-25:5B; 807-40:5C****SOT-23**

1. BASE
2. Emitter
3. Collector

**MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$  unless otherwise noted)**

Symbol	Parameter	Value	Units
$V_{CBO}$	Collector-Base Voltage	-50	V
$V_{CEO}$	Collector-Emitter Voltage	-45	V
$V_{EBO}$	Emitter-Base Voltage	-5	V
$I_C$	Collector Current -Continuous	-0.5	A
$P_c$	Collector Power Dissipation	0.3	W
$T_j$	Junction Temperature	150	$^\circ\text{C}$
$T_{stg}$	Storage Temperature	-55-150	$^\circ\text{C}$

**ELECTRICAL CHARACTERISTICS (Tamb=25°C unless otherwise specified)**

Parameter	Symbol	Test conditions	MIN	MAX	UNIT
Collector-base breakdown voltage	$V_{CBO}$	$I_C = -10 \mu\text{A}, I_E = 0$	-50		V
Collector-emitter breakdown voltage	$V_{CEO}$	$I_C = -10\text{mA}, I_B = 0$	-45		V
Emitter-base breakdown voltage	$V_{EBO}$	$I_E = -1 \mu\text{A}, I_C = 0$	-5		V
Collector cut-off current	$I_{CBO}$	$V_{CB} = -45\text{V}, I_E = 0$		-0.1	$\mu\text{A}$
Collector cut-off current	$I_{CEO}$	$V_{CE} = -40\text{V}, I_B = 0$		-0.2	$\mu\text{A}$
Emitter cut-off current	$I_{EBO}$	$V_{EB} = -4 \text{ V}, I_C = 0$		-0.1	$\mu\text{A}$
DC current gain 807-16 807-25 807-40	$h_{FE(1)}$	$V_{CE} = -1\text{V}, I_C = -100\text{mA}$	100 160 250	250 400 600	
Collector-emitter saturation voltage	$V_{CE(\text{sat})}$	$I_C = -500\text{mA}, I_B = -50\text{mA}$		-0.7	V
Base-emitter saturation voltage	$V_{BE(\text{sat})}$	$I_C = -500\text{mA}, I_B = -50\text{mA}$		-1.2	V
Transition frequency	$f_T$	$V_{CE} = -5\text{V}, I_C = -10\text{mA}$ $f = 100\text{MHz}$	100		MHz