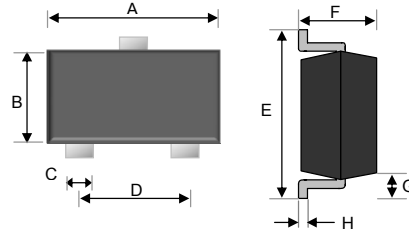


BC807-16/-25/40 0.3 Wats, PNP Plastic-Encapsulate Transistor

SOT-23



Dimensions	Unit (mm)		Unit (inch)	
	Min	Max	Min	Max
A	2.80	3.00	0.110	0.118
B	1.20	1.40	0.047	0.055
C	0.30	0.50	0.012	0.020
D	1.80	2.00	0.071	0.079
E	2.25	2.55	0.089	0.100
F	0.90	1.20	0.035	0.047
G	0.550	REF	0.022	REF
H	0.08	0.19	0.003	0.007

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-Q10 standards for high reliability

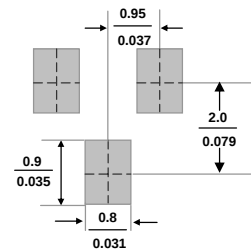
Mechanical Data

- ✧ 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)

Ordering Information

Part No.	Packing Code	Package	Packing
BC807-16/-25/-40	RF	SOT-23	3K / 7" Reel
BC807-16/-25/-40	RFG	SOT-23	3K / 7" Reel

Suggested PAD Layout



Maximum Ratings

Rating at 25°C ambient temperature unless otherwise specified.

Type Number				Symbol	BC807-16	BC807-25	BC807-40	Units
Collector-Base Breakdown Voltage		$I_C = -10\mu A$	$I_E = 0$	V_{CBO}		-50		V
Collector-Emitter Breakdown Voltage		$I_C = -10mA$	$I_B = 0$	V_{CEO}		45		V
Collector current - continuous				I_C		-0.5		A
Power dissipation				P_D		0.3		W
Emitter-Base breakdown voltage		$I_E = -1\mu A$	$I_C = 0$	V_{EBO}		-5		V
Collector Cut-off Current		$V_{CB} = -45V$	$I_E = 0$	I_{CBO}		-0.1		μA
Collector Cut-off Current		$V_{CB} = -40V$	$I_B = 0$	I_{CEO}		-0.2		μA
Emittor Cut-off Current		$V_{EB} = -4V$	$I_C = 0$	I_{EBO}		-0.1		μA
Collector-Emitter saturation voltage		$I_C = -500mA$	$I_B = 50mA$	$V_{CE(sat)}$		-0.7		V
Base-Emitter saturation voltage		$I_C = -500mA$	$I_B = 50mA$	$V_{BE(sat)}$		-1.2		V
Transition frequency		$V_{CE} = -5V$	$I_C = -10mA$	$f = 100MHz$	f_T	100		MHz
Junction Temperature				T_J		150		$^{\circ}C$
Storage Temperature Range				T_{STG}		-55 to + 150		$^{\circ}C$
Type Number				Symbol	Min	Max		Units
DC current gain		807-16		$h_{FE(1)}$	100	250		
		807-25			160	400		
		807-40			250	600		
		$V_{CE} = -1V$	$I_C = -100mA$					

Notes: 1.The suggested land pattern dimensions have been provided for reference only, as actual pad layouts may vary depending on application.

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

FIG.1- POWER DERATING CURVE

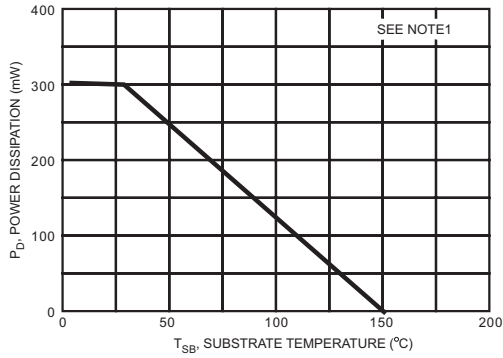


FIG.2- GAIN BANDWIDTH PRODUCT VS COLLECTOR CURRENT

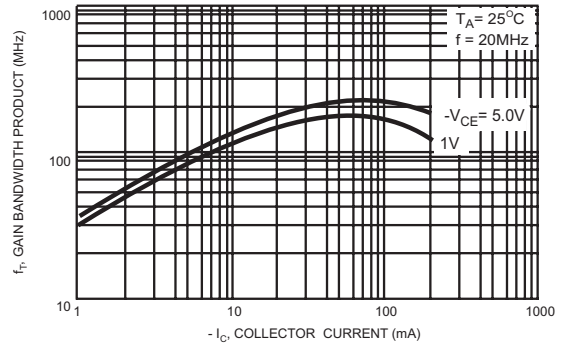


FIG.3-COLLECTOR SAT VOLTAGE VS COLLECTOR CURRENT

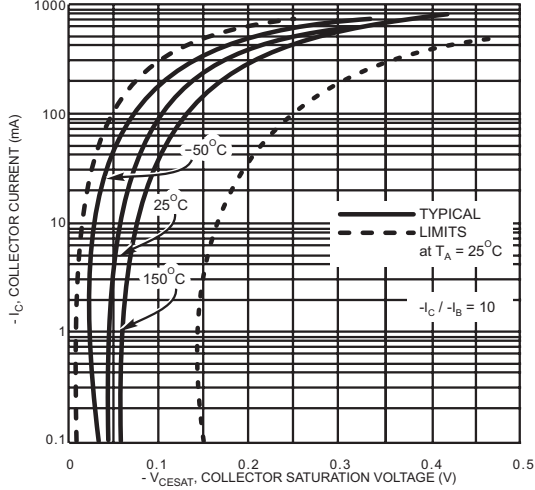


FIG.4- DC CURRENT GAIN VS COLLECTOR CURRENT

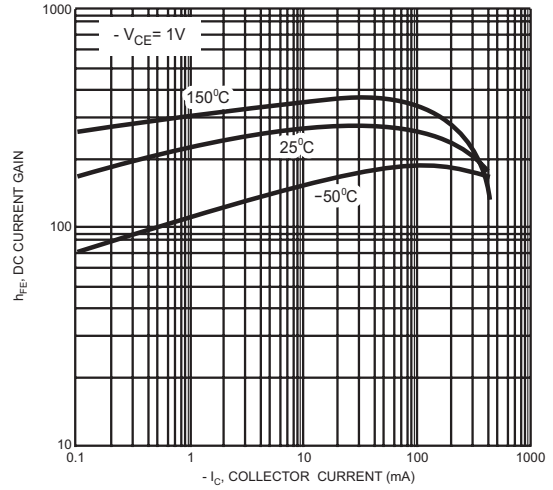


FIG.5- TYPICAL EMITTER-COLLECTOR CHARACTERISTICS

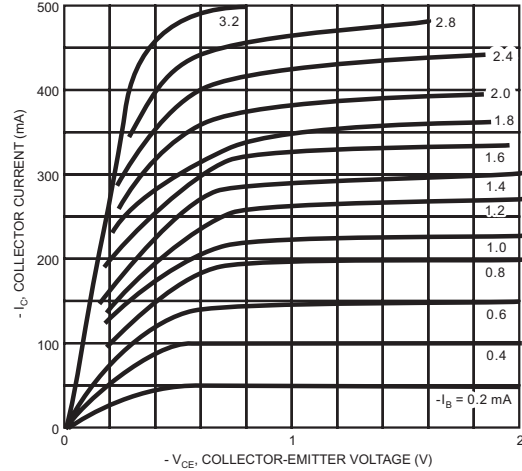


FIG.6- TYPICAL EMITTER-COLLECTOR CHARACTERISTICS

