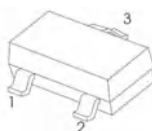


FEATURES

PNP General Purpose

SOT-23



1.BASE
2.EMITTER
3.COLLECTOR

BC807-
16/25/40

5A/5B/5C

MAXIMUM RATINGS AND ELECTRICAL CHARACTERISTICS

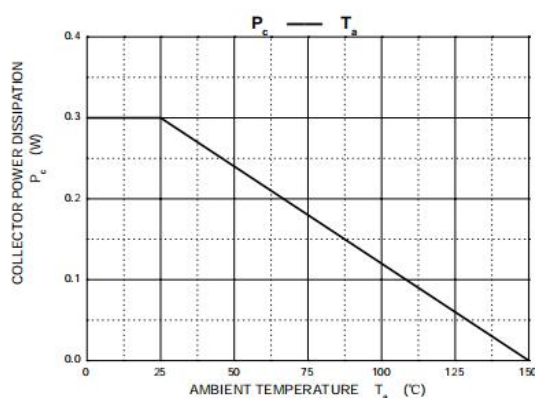
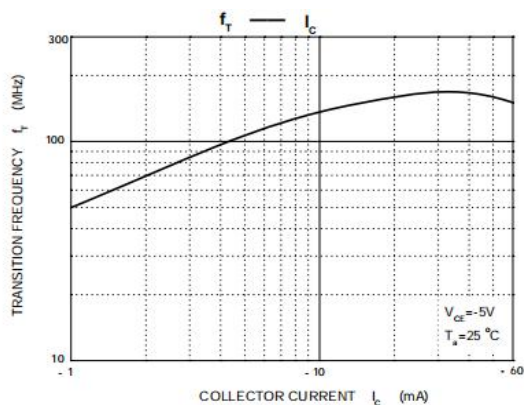
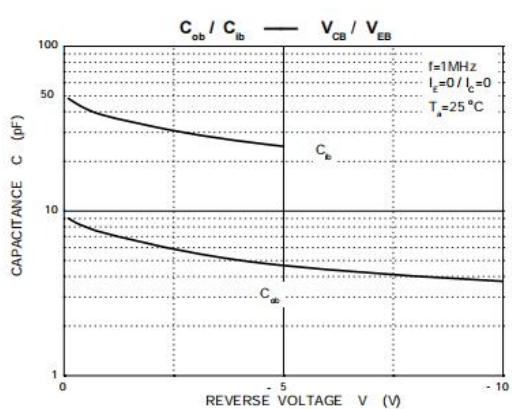
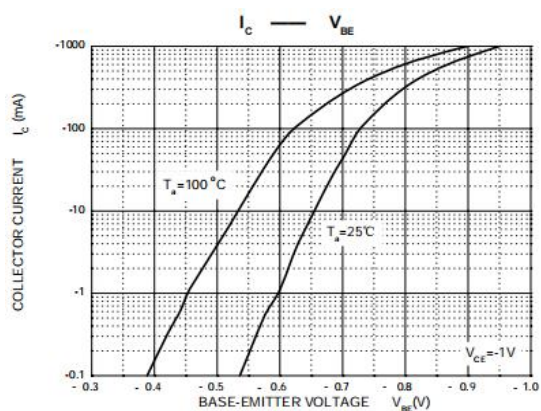
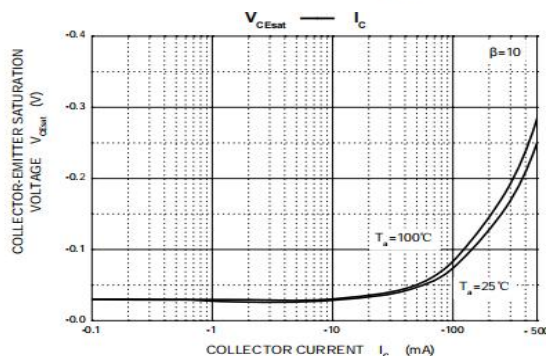
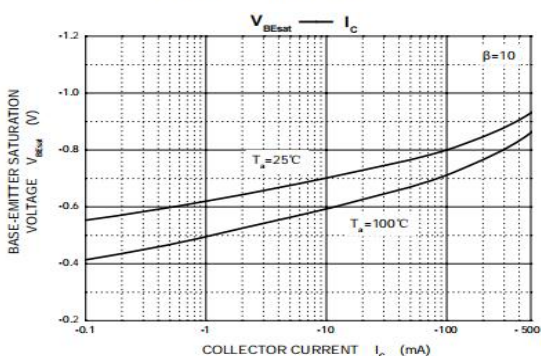
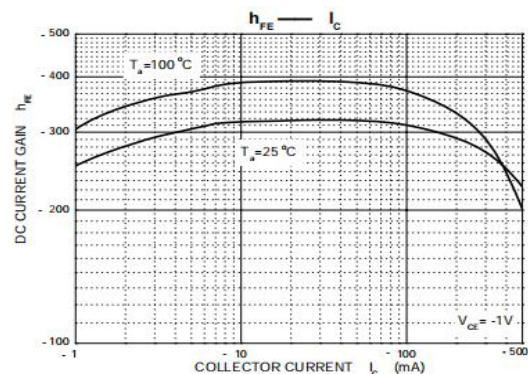
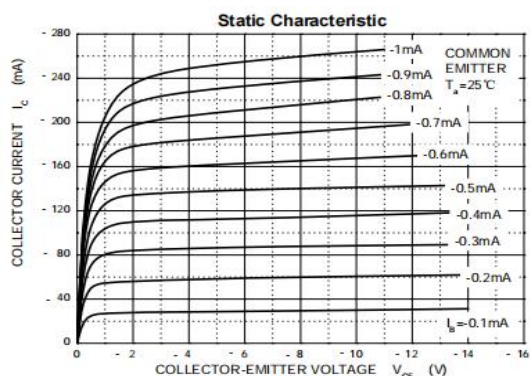
Absolute Maximum Ratings

Characteristic 特性参数	Symbol 符号	BC807- 16/25/40	Unit 单位
Collector-Base Voltage 集电极基极电压	V_{CBO}	-50	V
Collector-Emitter Voltage 集电极发射极电压	V_{CEO}	-45	V
Emitter-Base Voltage 发射极基极电压	V_{EBO}	-5	V
Collector Current 集电极电流	I_C	-500	mA
Power dissipation 耗散功率	$P_C(T_a=25^{\circ}\text{C})$	300	mW
Thermal Resistance Junction-Ambient 热阻	$R_{\theta JA}$	417	$^{\circ}\text{C}/\text{W}$
Junction and Storage Temperature 结温和储藏温度	T_J, T_{stg}	-55to+150 $^{\circ}\text{C}$	

ELECTRICAL CHARACTERISTICS (TA = 25°C unless otherwise noted.)

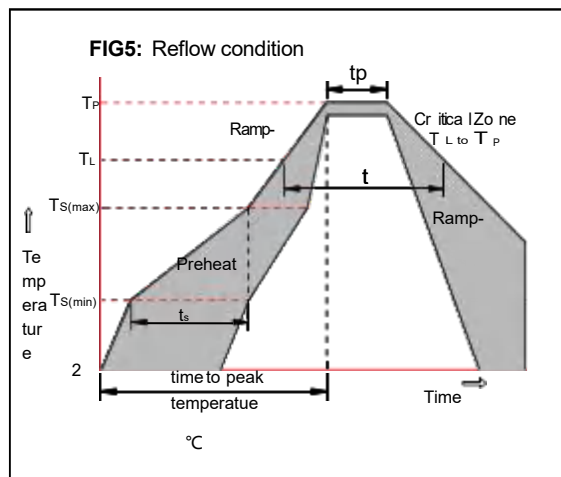
Characteristic 特性参数		Symbol 符号	Min 最小值	Type 典型值	Max 最大值	Unit 单位
Collector-Base Breakdown Voltage 集电极基极击穿电压 (IC = -10μA, IE = 0)	BC807-16/25/40	BV _{CBO}	-50	—	—	V
Collector-Emitter Breakdown Voltage 集电极发射极击穿电压 (IC = -10mA, IB = 0)	BC807-16/25/40	BV _{CEO}	-45	—	—	V
Emitter-Base Breakdown Voltage 发射极基极击穿电压 (IE = -10μA, IC = 0)		BV _{EBO}	-5	—	—	V
Collector-Base Leakage Current 集电极基极漏电流	BC807-16/25/40 (V _{CB} = -50V, IE = 0)	IC _{B0}	—	—	-100	nA
Emitter-Base Leakage Current 发射极基极漏电流 (V _{EB} = -4V, IC = 0)		IE _{B0}	—	—	-100	nA
DC Current Gain 直流电流增益 (V _{CE} = -1V, IC = -100mA)	BC807-16 BC807-25 BC807-40	H _{FE}	100 160 250	—	250 400 600	
DC Current Gain 直流电流增益 (V _{CE} = -1V, IC = -500mA)		H _{FE}	40			
Collector-Emitter Saturation Voltage 集电极发射极饱和压降 (IC = -500mA, IB = -50mA)		V _{CE(sat)}	—	—	-0.7	V
Base-Emitter Saturation Voltage 基极发射极饱和压降 (IC = -500mA, IB = -50mA)		V _{BE(sat)}	—	—	-1.2	V
Base-Emitter On Voltage 基极发射极导通电压 (V _{CE} = -1V, IC = -300mA)		V _{BE(on)}	—	—	-1.2	V
Transition Frequency 特征频率 (V _{CE} = -5V, IC = -10mA)		f _T	100	—	—	MHz
Output Capacitance 输出电容 (V _{CB} = -10V, IE = 0, f = 1MHz)		C _{ob}	—	12	—	pF

RATING AND CHARACTERISTIC CURVES



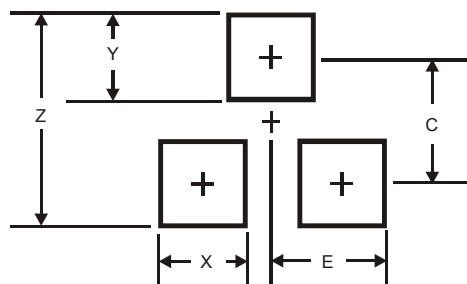
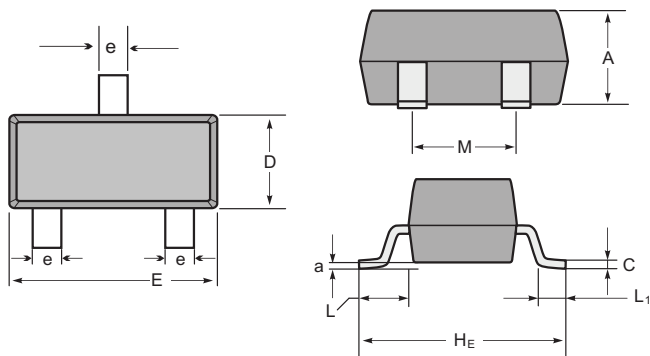
Soldering parameters

Reflow Condition		Pb-Free assembly (see as below)
Pre Heat	-Temperature Min ($T_{s(min)}$)	+150°C
	-Temperature Max($T_{s(max)}$)	+200°C
	-Time (Min to Max) (ts)	60-180 secs.
Average ramp up rate (Liquid us Temp (T_L) to peak)		3°C/sec. Max
$T_{s(max)}$ to T_L - Ramp-up Rate		3°C/sec. Max
Reflow	-Temperature(T_L)(Liquid us)	+217°C
	-Temperature(t_L)	60-150 secs.
Peak Temp (T_P)		+260(+0/-5)°C
Time within 5°C of actual Peak Temp (t_P)		30 secs. Max
Ramp-down Rate		6°C/sec. Max
Time 25°C to Peak Temp (T_P)		8 min. Max
Do not exceed		+260°C



Package Dimensions & Suggested Pad Layout

SOT23



SOT-23 mechanical data

UNIT	A	C	D	E	HE	e	M	L	L1	a
mm	max	1.1	0.15	1.4	3.0	2.6	0.5	1.95	0.55 (ref)	0.36 (ref)
	min	0.9	0.08	1.2	2.8	2.2	0.3	1.7		0.15
mil	max	43	6	55	118	102	20	77	22 (ref)	14 (ref)
	min	35	3	47	110	87	12	67		6

Dimensions	SOT23
Z	2.9
X	0.8
Y	0.9
C	2.0
E	1.35

Tape & reel specification

Technical drawing of a tape reel showing top and side views with dimensions P0, P1, P2, D0, D1, E, F, W, A0, B0, K0, T.

Symbol	Dimension (mm)
P0	4.00±0.10
P1	4.00±0.10
P2	2.00±0.10
D0	1.55±0.10
D1	1.05±0.10
E	1.55±0.10
F	3.60±0.10
W	8.00±0.10
A0	3.80±0.20
B0	3.25±0.20
K0	1.45±0.10
T	0.25±0.05

Technical drawing of a 7 inch Reel showing top and side views with dimensions D2, D3, D4, G, I, W1.

D2	178.0±3.0
D3	55Min.
D4	R24.0±3.0
G	R82.0±3.0
I	13.0±2.0
W1	11.0±3.0
Quantity: 3000PCS	