

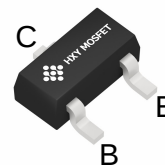


Features

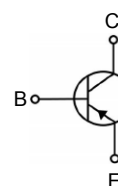
- Collector Current: $I_C = -0.5A$
- Power Dissipation of 300mW

Package Marking and Ordering Information

Product ID	Pack	Qty(PCS)
BC807-16/25/40	SOT-23	3000



SOT-23



Maxmim Ratings (Ta=25 unless otherwise noted)

Parameter	Symbol	Limit	Unit
Collector-Base Voltage	V_{CBO}	-50	V
Collector-Emitter Voltage	V_{CEO}	-45	V
Emitter-Base Voltage	V_{EBO}	-5	V
Collector Current	I_C	-500	mA
Collector Power Dissipation	P_C	300	mW
Thermal Resistance From Junction To Ambient	$R_{\theta JA}$	417	°C/W
Junction Temperature	T_J	150	°C
Storage Temperature	T_{stg}	-55~+150	°C

Classification Of h_{FE}

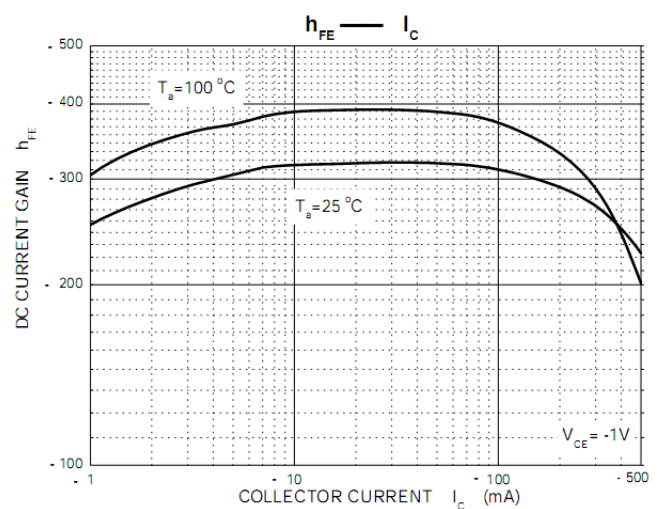
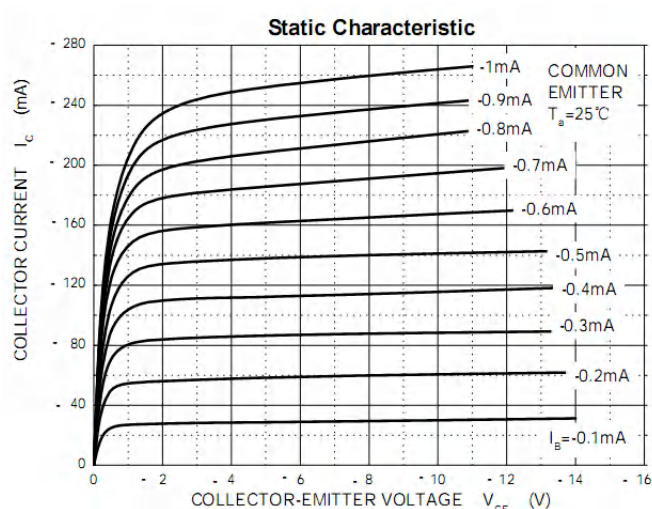
Rank	BC807-16	BC807-25	BC807-40
Range	100-250	160-400	250-600
Marking	5A	5B	5C

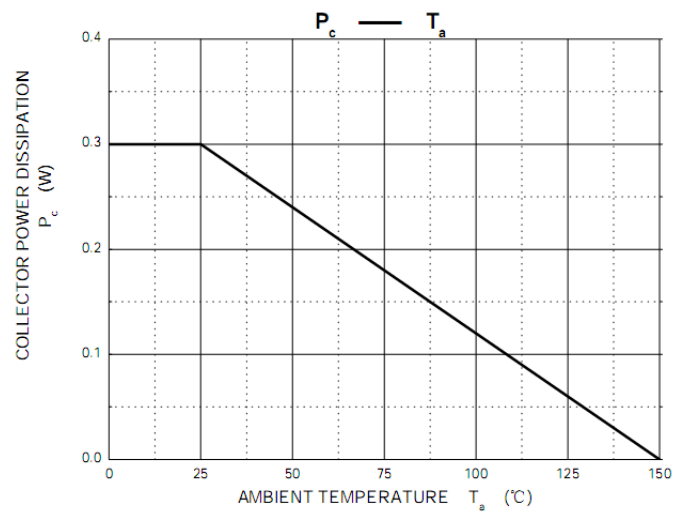
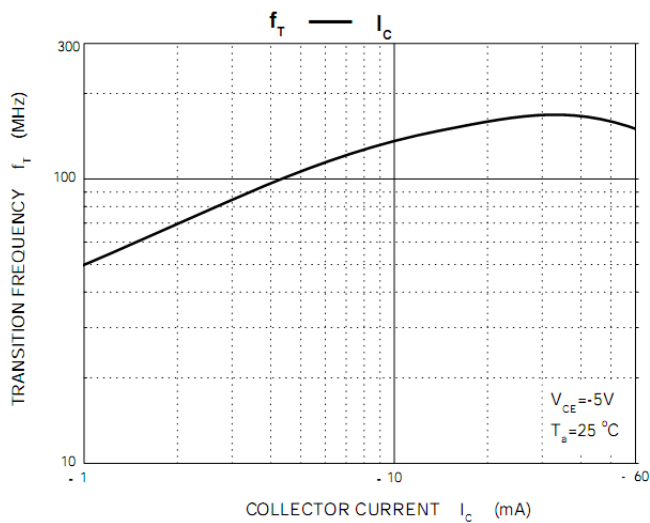
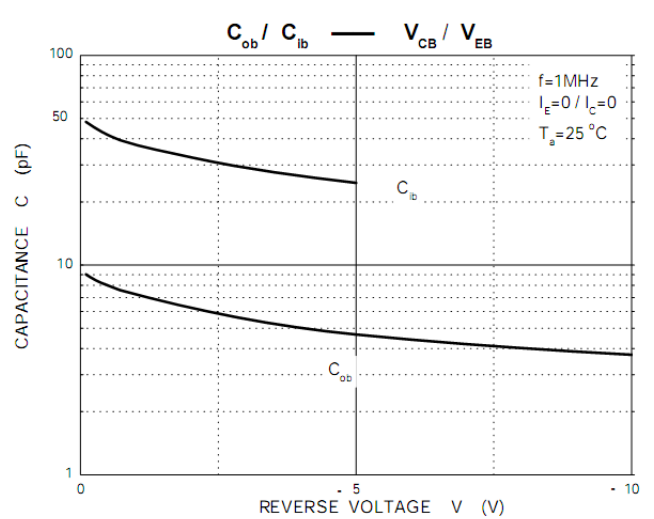
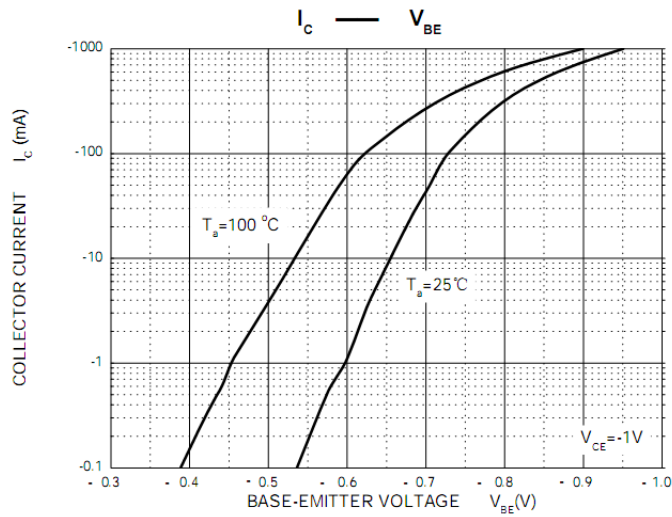
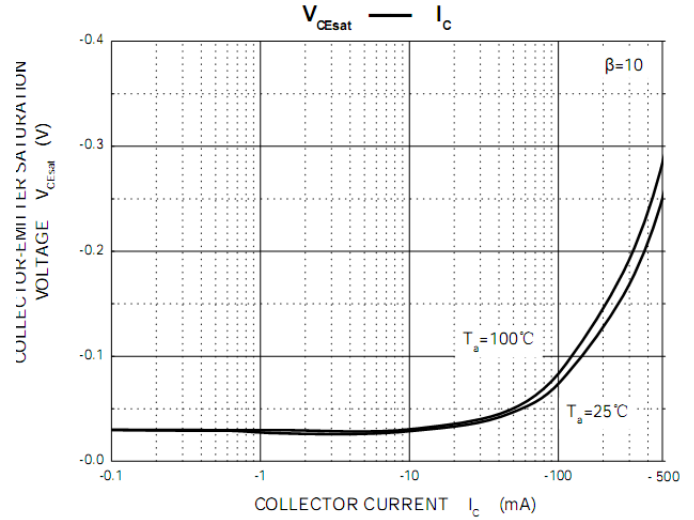
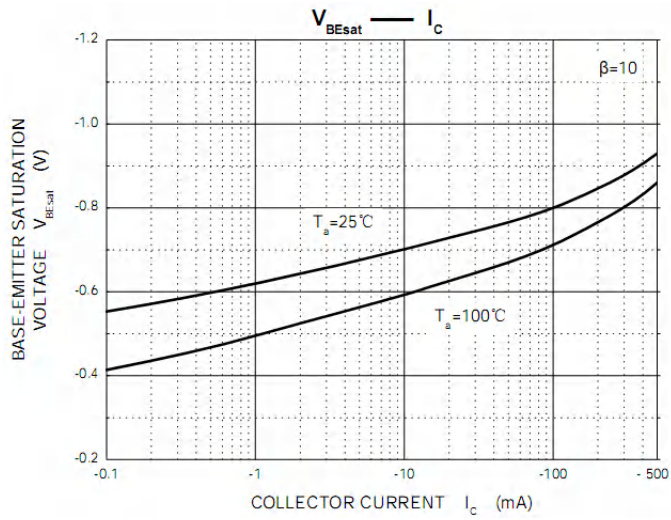


Electrcal Charcteristics ($T_a=25$ unless otherwise specified)

Parameter	Symbol	Test conditions	Min	Max	Unit
Collector-base breakdown voltage	V_{CBO}	$I_C = -10\mu A, I_E$	-50		V
Collector-emitter breakdown voltage	V_{CEO}	$I_C = -10mA, I_B = 0$	-45		V
Emitter-base breakdown voltage	V_{EBO}	$I_E = -1\mu A, I_C = 0$	-5		V
Collector cut-off current	I_{CBO}	$V_{CB} = -45V, I_E = 0$		-0.1	μA
Emitter cut-off current	I_{EBO}	$V_{EB} = -4V, I_C = 0$		-0.1	μA
DC current gain	$h_{FE(1)}$	$V_{CE} = -1V, I_C = -100mA$	100	600	
	$h_{FE(2)}$	$V_{CE} = -1V, I_C = -500mA$	40		
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C = -500mA, I_B = -50mA$		-0.7	V
Base-emitter saturation voltage	$V_{BE(sat)}$	$I_C = -500mA, I_B = -50mA$		-1.2	V
Transition frequency	f_T	$V_{CE} = -5V, I_C = -10mA$ $f = 100MHz$	100		MHz

Typical Characteristics







SOT-23 Package Outline Dimensions



Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.150	0.035	0.045
A1	0.000	0.100	0.000	0.004
A2	0.900	1.050	0.035	0.041
b	0.300	0.500	0.012	0.020
c	0.080	0.150	0.003	0.006
D	2.800	3.000	0.110	0.118
E	1.200	1.400	0.047	0.055
E1	2.250	2.550	0.089	0.100
e	0.950 TYP		0.037 TYP	
e1	1.800	2.000	0.071	0.079
L	0.550 REF		0.022 REF	
L1	0.300	0.500	0.012	0.020
θ	0°	8°	0°	8°

SOT-23 Suggested Pad Layout



Note:

1. Controlling dimension: in millimeters.
2. General tolerance: $\pm 0.05\text{mm}$.
3. The pad layout is for reference purposes only.



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