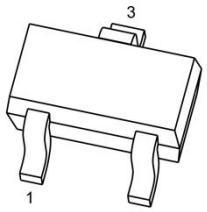
BC807W

Plastic-Encapsulate Transistors (PNP)

General description
SOT-323 Plastic-Encapsulate Transistors (PNP)

FEATURES
- Complementary to BC817W
- Ideally suited for automatic insertion
- Epitaxial planar die construction
- High Stability and High Reliability
- Epoxy UL: 94V-0
- Mounting Position: Any

SOT-323 Package



1. BASE
2. EMITTER
3. COLLECTOR

Maximum Ratings & Thermal Characteristics (Ratings at 25℃ ambient temperature unless otherwise specified.)

Parameters	Symbol	Value	Unit
Collector-Base Voltage	V_{CBO}	-50	V
Collector-Emitter Voltage	V_{CEO}	-45	V
Emitter -Base Voltage	V_{EBO}	-5	V
Collector Current-Continuous	I_C	-500	mA
Collector Power Dissipation	P_C	200	mW
Junction Temperature	T_j	150	℃
Storage Temperature	Tstg	-55-+150	℃
Thermal resistance From junction to ambient	$R_{\theta JA}$	625	℃/W

Electrical Characteristics (Ratings at 25℃ ambient temperature unless otherwise specified).

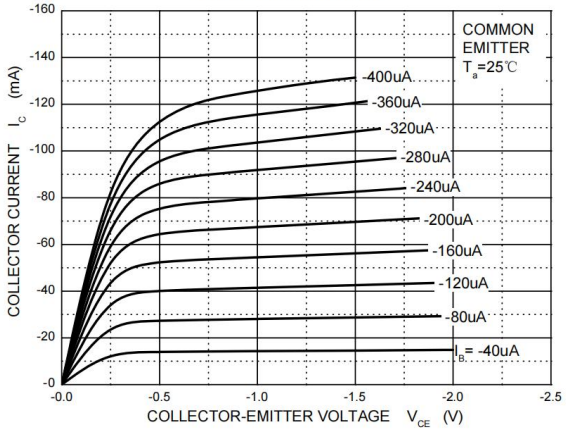
Parameter	Symbols	Test Condition	Limits		Unit
			Min	Max	
Collector-base breakdown voltage	$V_{(BR)CBO}$	I_C=-10uA, I_E=0	-50		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	I_C=-10mA, I_B=0	-45		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	I_E=-1uA, I_C=0	-5		V
Collector cut-off current	I_{CBO}	V_{CB}=-20V, I_E=0		-100	nA
Emitter cut-off current	I_{EBO}	V_{EB}=-5V, I_C=0		-100	nA
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		-0.70	V
Base -emitter saturation voltage	$V_{BE(sat)}$	V_{CE}=-1V,I_C=-500mA		-1.20	V
Transition frequency	f_T	V_{CE}=-5V, I_C=-10mA,f=100MHz	80		MHz
Collector output capacitance	Cob	V_{CB}=-20V, I_E=0 ,f=1MHz		10	pF

CLASSIFICATION OF hFE(1)

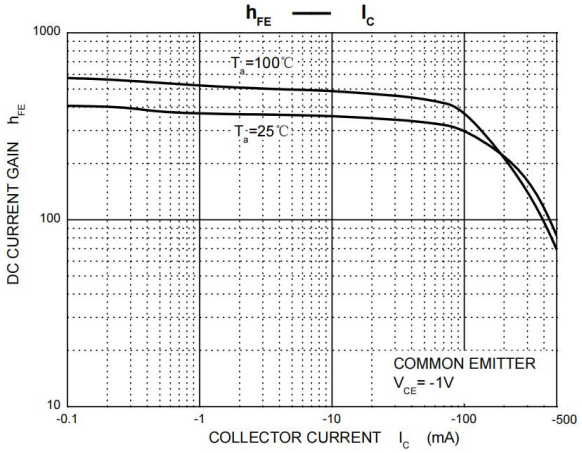
RANK	BC807W-16	BC807W-25	BC807W-40
RANGE	100-250	160-400	250-600
MARKING	5A	5B	5C

RATING AND CHARACTERISTIC CURVES

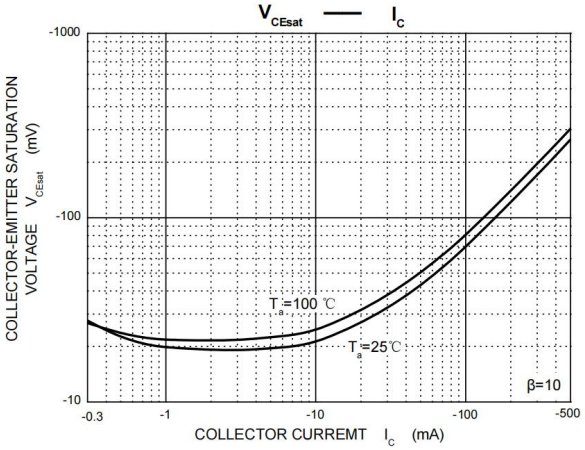
Static Characteristic



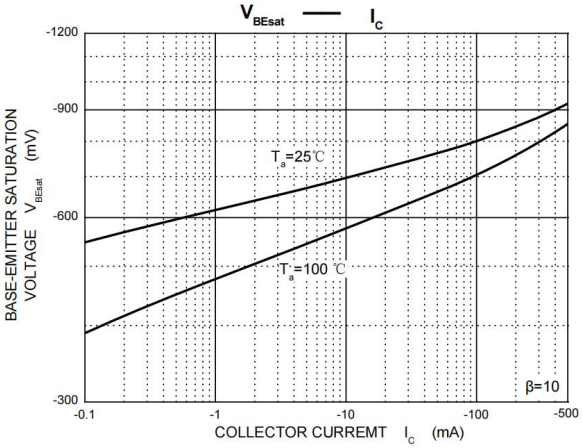
h_{FE} — I_C



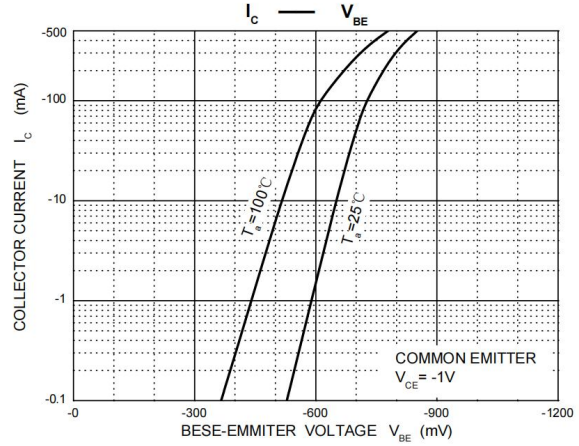
V_{CEsat} — I_C



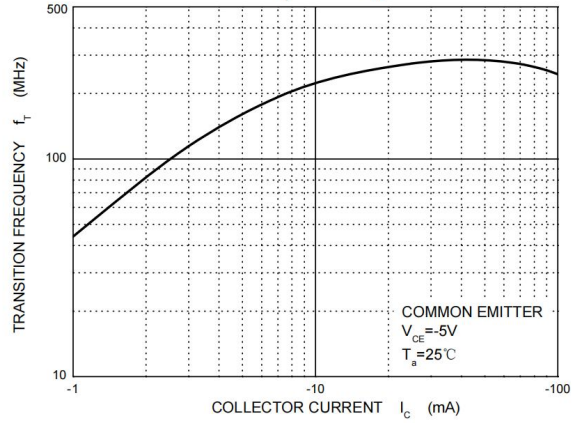
V_{BEsat} — I_C



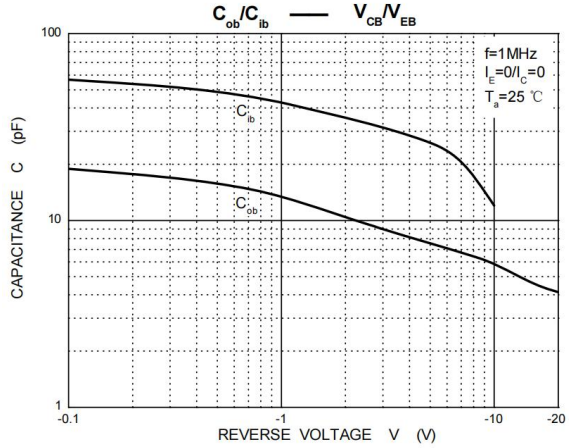
I_C — V_{BE}



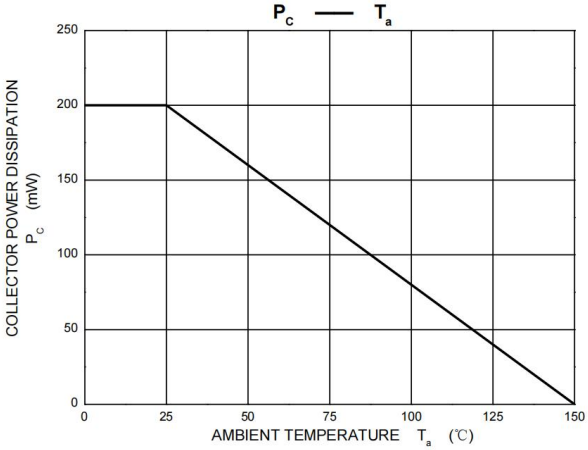
f_T — I_C



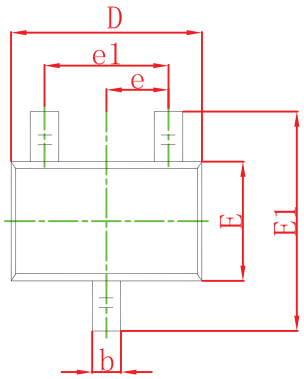
C_{ob}/C_{ib} — V_{CB}/V_{EB}

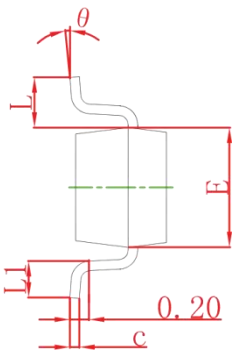


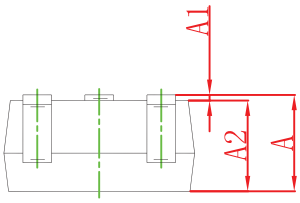
P_C — T_a



SOT-323 PACKAGE OUTLINE Plastic surface mounted package



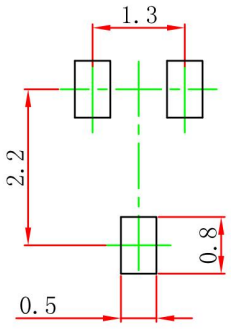




Symbol	Dimensions In Millimeters		Dimensions In Inches	
	Min	Max	Min	Max
A	0.900	1.100	0.035	0.043
A1	0.000	0.100	0.000	0.004
A2	0.900	1.000	0.035	0.039
b	0.200	0.400	0.008	0.016
c	0.080	0.150	0.003	0.006
D	2.000	2.200	0.079	0.087
E	1.150	1.350	0.045	0.053
E1	2.150	2.450	0.085	0.096
e	0.650 TYP		0.026 TYP	
e1	1.200	1.400	0.047	0.055
L	0.525 REF		0.021 REF	
L1	0.260	0.460	0.010	0.018
	0°	8°	0°	8°

Precautions: PCB Design

Recommended land dimensions for SOT-323 diode. Electrode patterns for PCBs



NOTE:
1.Controlling dimension:in millimeters.
2.General tolerance:±0.05mm.
3.The pad layout is for reference purposes only.

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