

General Purpose Transistors PNP Silicon

Features

Marking:

BC856AW=3A	BC856BW=3B	
BC857AW=3E	BC857BW=3F	BC857CW=3G
BC858AW=3J	BC858BW=3K	BC858CW=3L

- Power Dissipation of 150mW
- Ideally suited for automatic insertion
- For switching and AF amplifier applications
- AEC-Q101 qualified (Automotive grade with suffix "Q".)

Maximum Ratings & Thermal Characteristics

(Ratings at 25°C ambient temperature unless otherwise specified.)

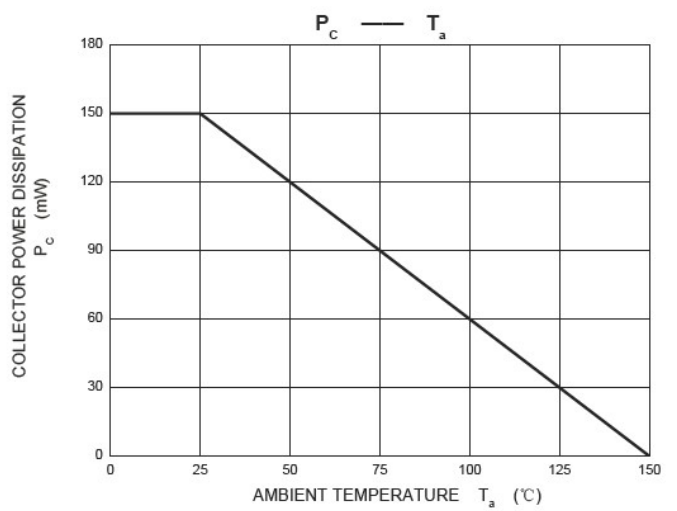
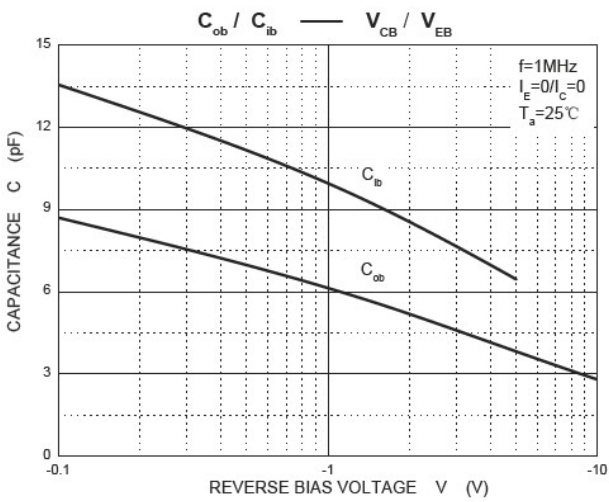
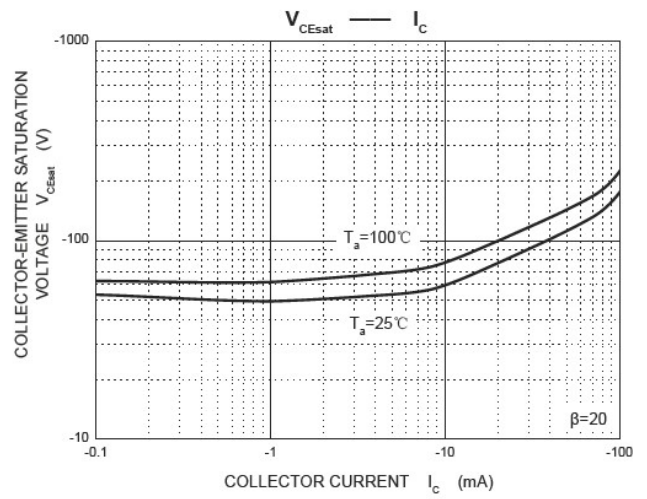
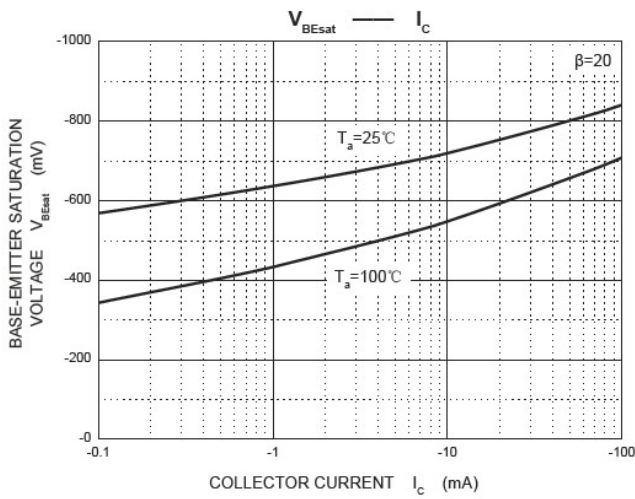
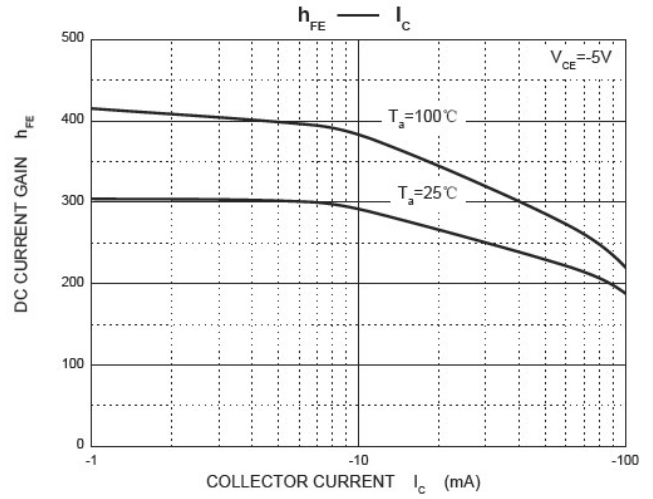
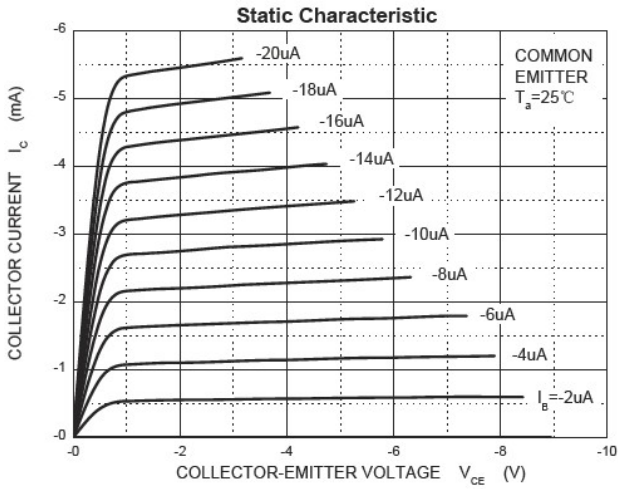
Parameters	Symbol		Value	Unit
Collector-Base Voltage	V_{CBO}	BC856W BC857W BC858W	-80 -50 -30	V
Collector-Emitter Voltage	V_{CEO}	BC856W BC857W BC858W	-65 -45 -30	V
Emitter -Base Voltage	V_{EBO}		-5	V
Collector Current-Continuous	I_C		-100	mA
Collector Power Dissipation	P_C		150	mW
Junction Temperature	T_j		150	°C
Storage Temperature	T_{stg}		-55-+150	°C
Thermal resistance From junction to ambient	$R_{\theta JA}$		833	°C/W

Electrical Characteristics

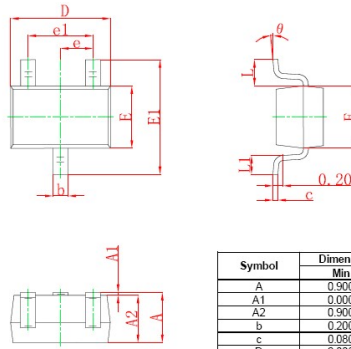
(Ratings at 25°C ambient temperature unless otherwise specified.)

Parameter	Symbols	Test Condition	Limits		Unit
			Min	Max	
Collector-base breakdown voltage	$V_{(BR)CBO}$	$I_C=-10\mu A, I_E=0$ BC856W BC857W BC858W	-80 -50 -30		V
Collector-emitter breakdown voltage	$V_{(BR)CEO}$	$I_C=-10mA, I_B=0$ BC856W BC857W BC858W	-65 -45 -30		V
Emitter-base breakdown voltage	$V_{(BR)EBO}$	$I_E=-1\mu A, I_C=0$	-5		V
Collector cut-off current	I_{CBO}	$V_{CB}=-30V, I_E=0$		-15	nA
DC current gain	h_{FE}	$V_{CE}=-5V,$ $I_C=-2mA$ BC856AW;BC857AW;BC858AW	125	250	
		BC856BW;BC857BW;BC858BW	220	475	
		BC857CW;BC858CW	420	800	
Collector-emitter saturation voltage	$V_{CE(sat)}$	$I_C=-100mA, I_B=-5mA$		-0.65	V
Base -emitter saturation voltage	$V_{BE(sat)}$	$I_C=-100mA, I_B=-5mA$		-1.10	V
Transition frequency	f_T	$V_{CE}=-5V, I_C=-10mA, f=100MHz$	100		MHz
Collector output capacitance	C_{ob}	$V_{CB}=-10V, f=1MHz$		4.5	pF

Typical characteristics



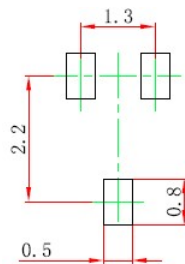
SOT-323 PACKAGE OUTLINE Plastic surface mounted package



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
θ	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: ± 0.05 mm.
3. The pad layout is for reference purposes only.