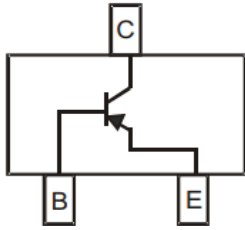


## PNP General Purpose Amplifier



**SOT-323**

### Features

- Epoxy meets UL-94 V-0 flammability rating and halogen free
- Moisture Sensitivity Level 1
- Part no. with suffix "Q" means AEC-Q101 qualified

### Applications

- PNP General purpose switching and amplification

### Mechanical Data

- Case: SOT-323
- Terminals: Tin plated leads, solderable per J-STD-002 and JESD22-B102
- Marking:

BC856AWQ	3A
BC856BWQ	3B
BC857AWQ	3E
BC857BWQ	3F
BC857CWQ	3G
BC858AWQ	3J
BC858BWQ	3K
BC858CWQ	3L

### ■ Maximum Ratings (Ta=25°C unless otherwise noted)

Item	Symbol	Unit	Value	
			BC856	BC857
Collector-Base Voltage	$V_{CBO}$	V	BC856	-80
			BC857	-50
			BC858	-30
Collector-Emitter Voltage	$V_{CEO}$	V	BC856	-65
			BC857	-45
			BC858	-30
Emitter-Base Voltage	$V_{EBO}$	V	-5	
Collector Current -Continuous	$I_C$	mA	-100	
Total Device Dissipation	$P_D$	mW	200	
Junction Temperature	$T_j$	°C	-55 to +150	
Storage Temperature	$T_{STG}$	°C	-55 to +150	



# BC856AWQ THRU BC858CWQ

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## ■ Electrical Characteristics (Ta=25°C unless otherwise noted)

Item	Symbol	Unit	Conditions	Min	Typ	Max
Collector-base breakdown voltage	$V_{CBO}$	V	BC856	$I_C = -10\mu A, I_E = 0$	-80	
			BC857		-50	
			BC858		-30	
Collector-emitter breakdown voltage	$V_{CEO}$	V	BC856	$I_C = -10mA, I_B = 0$	-65	
			BC857		-45	
			BC858		-30	
Emitter-base breakdown voltage	$V_{EBO}$	V	$I_E = -1\mu A, I_C = 0$	-5		
Collector-base cut-off current	$I_{CBO}$	$\mu A$	$V_{CB} = -30V, I_E = 0$			-0.1
Emitter-base cut-off current	$I_{EBO}$	$\mu A$	$V_{EB} = -5V, I_C = 0$			-0.1
DC current gain	$h_{FE}$		BC856AWQ, BC857AWQ, BC858AWQ	$V_{CE} = -5V, I_C = -2mA$	125	250
			BC856BWQ, BC857BWQ, BC858BWQ		220	475
			BC857CWQ, BC858CWQ		420	800
Collector-emitter saturation voltage	$V_{CE(sat)}$	V	$I_C = -100mA, I_B = -5mA$			-0.65
Base-emitter saturation voltage	$V_{BE(sat)}$	V	$I_C = -100mA, I_B = -5mA$			-1.1

## ■ Other Characteristics (Ta=25°C unless otherwise noted)

Item	Symbol	Unit	Conditions	Min	Typ	Max
Transition frequency	$f_T$	MHz	$V_{CE} = -5V, I_C = -10mA, f = 100MHz$	100		

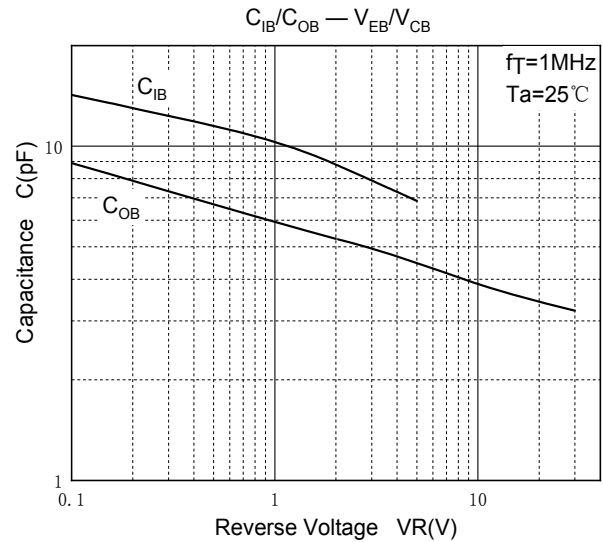
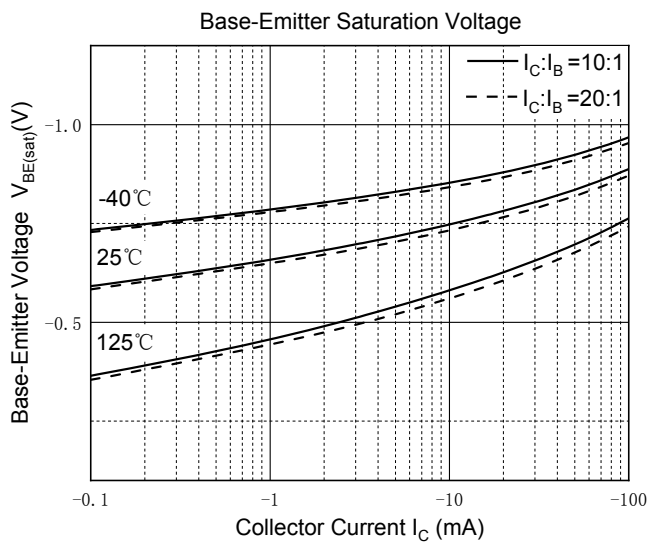
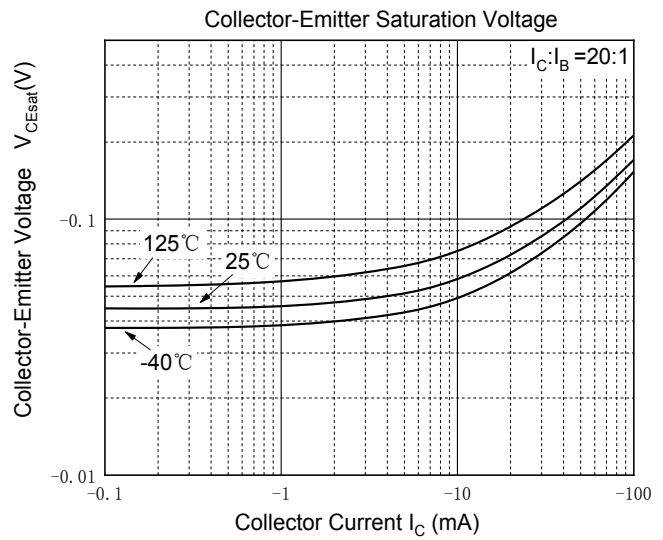
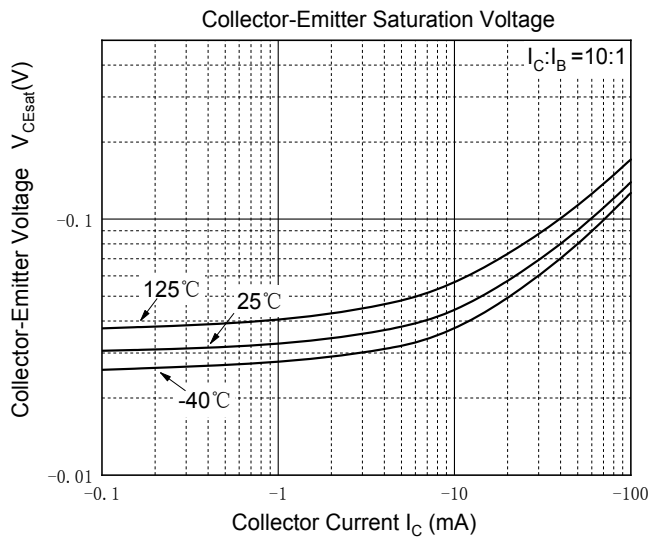
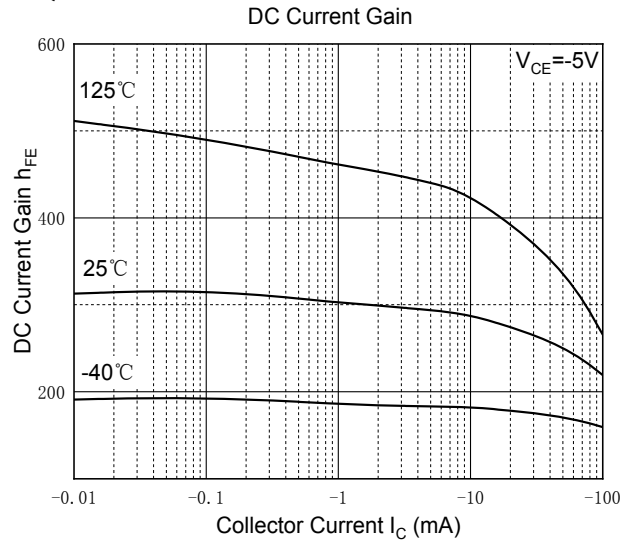
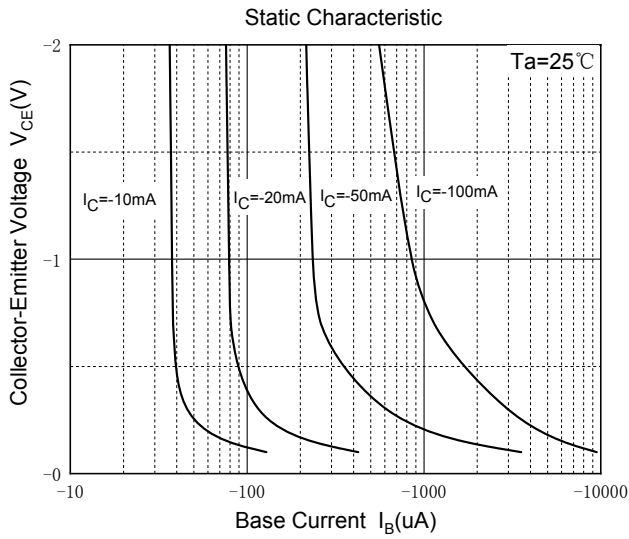
## ■ Ordering Information (Example)

PREFERRED P/N	PACKING CODE	UNIT WEIGHT(g)	MINIMUM PACKAGE(pcs)	INNER BOX QUANTITY(pcs)	OUTER CARTON QUANTITY(pcs)	DELIVERY MODE
BC856AWQ THRU BC858CWQ	F2	Approximate 0.005	3000	30000	120000	7" reel



## ■ Characteristics(Typical)

### BC857BWQ

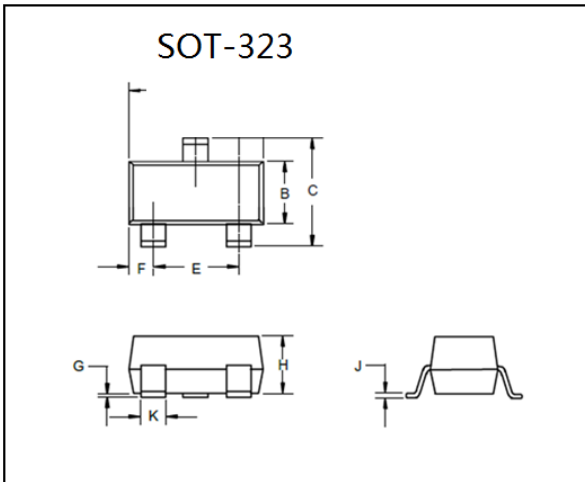




# BC856AWQ THRU BC858CWQ

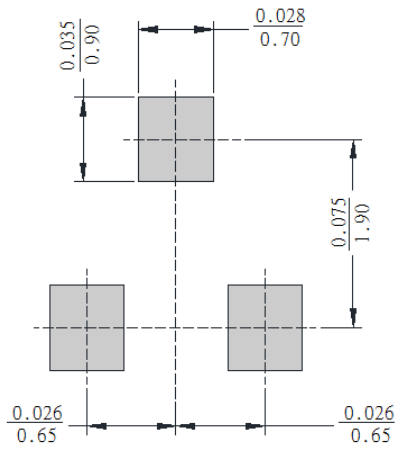
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## ■ SOT-323 Package Outline Dimensions



DIM	INCHES		MM		NOTE
	MIN	MAX	MIN	MAX	
A	0.071	0.087	1.80	2.20	
B	0.045	0.053	1.15	1.35	
C	0.083	0.096	2.10	2.45	
D	0.026Nominal		0.65Nominal		
E	0.047	0.055	1.20	1.40	
F	0.012	0.016	0.30	0.40	
G	0.000	0.004	0.00	0.10	
H	0.035	0.039	0.90	1.00	
J	0.004	0.010	0.10	0.250	
K	0.006	0.016	0.15	0.40	

## ■ SOT-323 Suggested Pad Layout



Unit:  $\frac{\text{inch}}{\text{mm}}$



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