

**BC856 SERIES  
BC857 SERIES  
BC858 SERIES**

**SURFACE MOUNT SILICON  
PNP TRANSISTOR**



**SOT-23 CASE**



[www.centralemi.com](http://www.centralemi.com)

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR BC856, BC857 and BC858 Series devices are silicon PNP transistors manufactured by the epitaxial planar process, epoxy molded in a surface mount package, designed for general purpose switching and amplifier applications.

**MARKING CODE: SEE MARKING CODE TABLE ON FOLLOWING PAGE**

Note: Reverse Lead Codes Available, Add "R" to the end of the Part # and Marking Code.

**MAXIMUM RATINGS:** ( $T_A=25^\circ\text{C}$ )

Collector-Base Voltage
Collector-Emitter Voltage
Emitter-Base Voltage
Continuous Collector Current
Peak Collector Current
Peak Base Current
Power Dissipation
Operating and Storage Junction Temperature
Thermal Resistance

SYMBOL	BC858	BC857	BC856	UNITS
$V_{CBO}$	30	50	80	V
$V_{CEO}$	30	45	65	V
$V_{EBO}$		5.0		V
$I_C$		100		mA
$I_{CM}$		200		mA
$I_{BM}$		200		mA
$P_D$		330		mW
$T_J, T_{stg}$		-55 to +150		$^\circ\text{C}$
$\theta_{JA}$		375		$^\circ\text{C/W}$

**ELECTRICAL CHARACTERISTICS:** ( $T_A=25^\circ\text{C}$  unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNITS
$I_{CBO}$	$V_{CB}=30\text{V}$			15	nA
$I_{CBO}$	$V_{CB}=30\text{V}, T_A=150^\circ\text{C}$			4.0	$\mu\text{A}$
$I_{EBO}$	$V_{EB}=5.0\text{V}$			100	nA
$BV_{CBO}$	$I_C=10\mu\text{A}$ (BC856)	80			V
$BV_{CBO}$	$I_C=10\mu\text{A}$ (BC857)	50			V
$BV_{CBO}$	$I_C=10\mu\text{A}$ (BC858)	30			V
$BV_{CEO}$	$I_C=10\text{mA}$ (BC856)	65			V
$BV_{CEO}$	$I_C=10\text{mA}$ (BC857)	45			V
$BV_{CEO}$	$I_C=10\text{mA}$ (BC858)	30			V
$BV_{EBO}$	$I_E=1.0\mu\text{A}$	5.0			V
$V_{CE(SAT)}$	$I_C=10\text{mA}, I_B=0.5\text{mA}$			0.30	V
$V_{CE(SAT)}$	$I_C=100\text{mA}, I_B=5.0\text{mA}$			0.65	V
$V_{BE(SAT)}$	$I_C=10\text{mA}, I_B=0.5\text{mA}$		0.7		V
$V_{BE(SAT)}$	$I_C=100\text{mA}, I_B=5.0\text{mA}$		0.9		V
$V_{BE(ON)}$	$V_{CE}=5.0\text{V}, I_C=2.0\text{mA}$	0.6		0.75	V
$V_{BE(ON)}$	$V_{CE}=5.0\text{V}, I_C=10\text{mA}$			0.82	V
$f_T$	$V_{CE}=5.0\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	100	200		MHz
$C_{cb}$	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$			4.5	pF

**BC856A**

**BC857A**

**BC858A**

MIN	MAX
110	220

**BC856B**

**BC857B**

**BC858B**

MIN	MAX
220	475

**BC857C**

**BC858C**

MIN	MAX
420	800

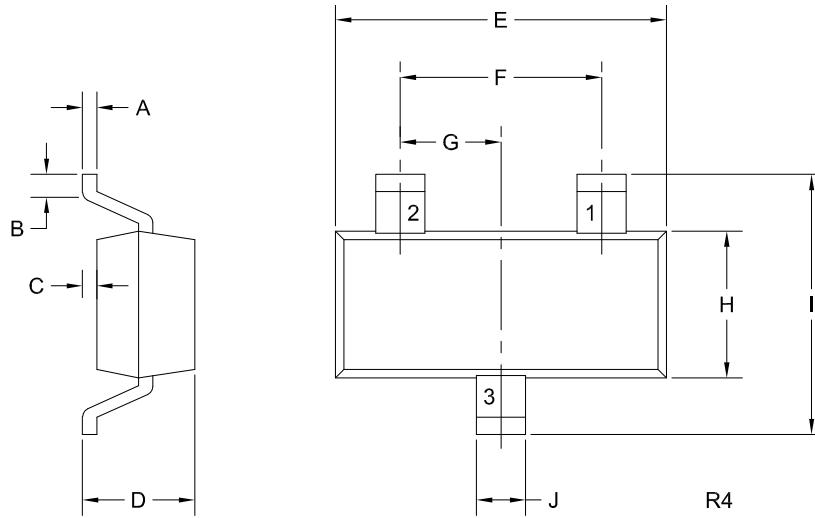
$h_{FE}$   $V_{CE}=5.0\text{V}, I_C=2.0\text{mA}$

BC856 SERIES  
BC857 SERIES  
BC858 SERIES



**SURFACE MOUNT SILICON  
PNP TRANSISTOR**

**SOT-23 CASE - MECHANICAL OUTLINE**



**LEAD CODE:**

STANDARD	*REVERSE
1) Base	1) Emitter
2) Emitter	2) Base
3) Collector	3) Collector

DEVICE	MARKING CODE
BC856A	3A
BC856B	3B
BC857A	3E
BC857B	3F
BC857C	3G
BC858A	3J
BC858B	3K
BC858C	3L

SYMBOL	INCHES		MILLIMETERS	
	MIN	MAX	MIN	MAX
A	0.003	0.007	0.08	0.18
B	0.006	-	0.15	-
C	-	0.005	-	0.13
D	0.035	0.044	0.89	1.12
E	0.110	0.120	2.80	3.05
F	0.075		1.90	
G	0.037		0.95	
H	0.047	0.055	1.19	1.40
I	0.083	0.104	2.10	2.64
J	0.014	0.020	0.35	0.50

SOT-23 (REV: R4)

\* Reverse Lead Codes Available, Add "R" to the end of the Part # and Marking Code.

R3 (22-December 2020)

## OUTSTANDING SUPPORT AND SUPERIOR SERVICES



---

### PRODUCT SUPPORT

Central's operations team provides the highest level of support to insure product is delivered on-time.

- Supply management (Customer portals)
- Inventory bonding
- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

---

### DESIGNER SUPPORT/SERVICES

Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2<sup>nd</sup> day air)
- Online technical data and parametric search
- SPICE models
- Custom electrical curves
- Environmental regulation compliance
- Customer specific screening
- Up-screening capabilities
- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

---

### REQUESTING PRODUCT PLATING

1. If requesting Tin/Lead plated devices, add the suffix " TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix " PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

---

### CONTACT US

#### Corporate Headquarters & Customer Support Team

Central Semiconductor Corp.  
145 Adams Avenue  
Hauppauge, NY 11788 USA  
Main Tel: (631) 435-1110  
Main Fax: (631) 435-1824  
Support Team Fax: (631) 435-3388  
[www.centrasemi.com](http://www.centrasemi.com)

**Worldwide Field Representatives:**  
[www.centrasemi.com/wwreps](http://www.centrasemi.com/wwreps)

**Worldwide Distributors:**  
[www.centrasemi.com/wwdistributors](http://www.centrasemi.com/wwdistributors)

---

For the latest version of Central Semiconductor's **LIMITATIONS AND DAMAGES DISCLAIMER**, which is part of Central's Standard Terms and Conditions of sale, visit: [www.centrasemi.com/terms](http://www.centrasemi.com/terms)