

BC856 SERIES  
BC857 SERIES  
BC858 SERIES

SURFACE MOUNT  
PNP SILICON TRANSISTOR



SOT-23 CASE



www.centrasemi.com

**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR BC856, BC857 and BC858 Series types are PNP Silicon 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<sub>A</sub>=25°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 <sub>CB0</sub>	30	50	80	V
V <sub>CEO</sub>	30	45	65	V
V <sub>EBO</sub>		5.0		V
I <sub>C</sub>		100		mA
I <sub>CM</sub>		200		mA
I <sub>BM</sub>		200		mA
P <sub>D</sub>		350		mW
T <sub>J</sub> , T <sub>stg</sub>		-65 to +150		°C
θ <sub>JA</sub>		357		°C/W

**ELECTRICAL CHARACTERISTICS:** (T<sub>A</sub>=25°C unless otherwise noted)

SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I <sub>CBO</sub>	V <sub>CB</sub> =30V		15	nA
I <sub>CBO</sub>	V <sub>CB</sub> =30V, T <sub>A</sub> =150°C		4.0	μA
I <sub>EBO</sub>	V <sub>EB</sub> =5.0V		100	nA
BV <sub>CB0</sub>	I <sub>C</sub> =10μA (BC858)	30		V
BV <sub>CB0</sub>	I <sub>C</sub> =10μA (BC857)	50		V
BV <sub>CB0</sub>	I <sub>C</sub> =10μA (BC856)	80		V
BV <sub>CEO</sub>	I <sub>C</sub> =10mA (BC858)	30		V
BV <sub>CEO</sub>	I <sub>C</sub> =10mA (BC857)	45		V
BV <sub>CEO</sub>	I <sub>C</sub> =10mA (BC856)	65		V
BV <sub>EBO</sub>	I <sub>E</sub> =10μA	5.0		V
V <sub>CE(SAT)</sub>	I <sub>C</sub> =10mA, I <sub>B</sub> =0.5mA		0.30	V
V <sub>CE(SAT)</sub>	I <sub>C</sub> =100mA, I <sub>B</sub> =5.0mA		0.65	V
V <sub>BE(ON)</sub>	I <sub>C</sub> =2.0mA, V <sub>CE</sub> =5.0V	0.6	0.75	V
V <sub>BE(ON)</sub>	I <sub>C</sub> =10mA, V <sub>CE</sub> =5.0V		0.82	V
f <sub>T</sub>	V <sub>CE</sub> =5.0V, I <sub>C</sub> =10mA, f=100MHz	100		MHz
NF	V <sub>CE</sub> =5.0V, I <sub>C</sub> =200μA, R <sub>S</sub> =2.0KΩ, f=1.0KHz, BW=200Hz		10	dB

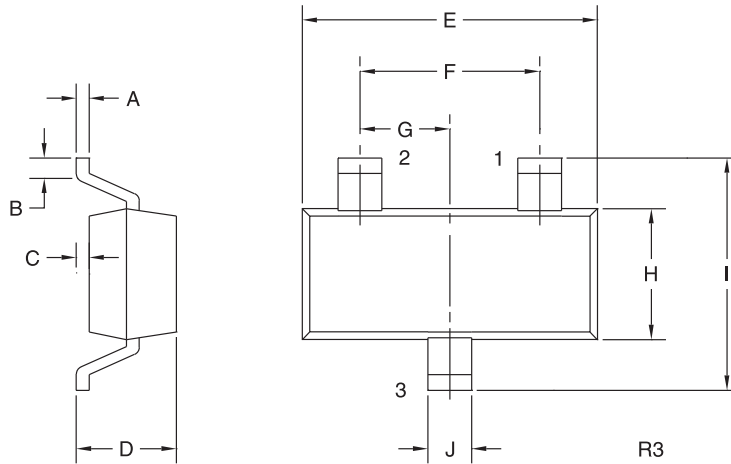
	V <sub>CE</sub> =5.0V, I <sub>C</sub> =2.0mA	BC856A		BC856B		BC857C	
		MIN	MAX	MIN	MAX	MIN	MAX
h <sub>FE</sub>		125	250	220	475	420	800

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**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	DIMENSIONS			
	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	0.043	0.89	1.09
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	0.098	2.10	2.49
J	0.014	0.020	0.35	0.50

SOT-23 (REV: R3)

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

R2 (20-November 2009)