

BC856 SERIES
BC857 SERIES
BC858 SERIES

SURFACE MOUNT
PNP SILICON TRANSISTOR



SOT-23 CASE



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

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		350		mW
T_J, T_{stg}		-65 to +150		$^\circ\text{C}$
θ_{JA}		357		$^\circ\text{C/W}$

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

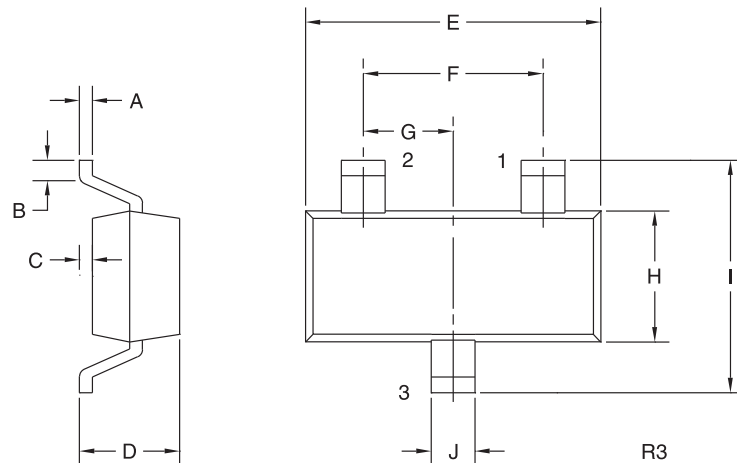
SYMBOL	TEST CONDITIONS	MIN	MAX	UNITS
I_{CBO}	$V_{CB}=30\text{V}$		15	nA
I_{CBO}	$V_{CB}=30\text{V}, T_A=150^\circ\text{C}$		4.0	μA
I_{EBO}	$V_{EB}=5.0\text{V}$		100	nA
BV_{CBO}	$I_C=10\mu\text{A}$ (BC858)	30		V
BV_{CBO}	$I_C=10\mu\text{A}$ (BC857)	50		V
BV_{CBO}	$I_C=10\mu\text{A}$ (BC856)	80		V
BV_{CEO}	$I_C=10\text{mA}$ (BC858)	30		V
BV_{CEO}	$I_C=10\text{mA}$ (BC857)	45		V
BV_{CEO}	$I_C=10\text{mA}$ (BC856)	65		V
BV_{EBO}	$I_E=10\mu\text{A}$	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
$V_{BE(ON)}$	$I_C=2.0\text{mA}, V_{CE}=5.0\text{V}$	0.6	0.75	V
$V_{BE(ON)}$	$I_C=10\text{mA}, V_{CE}=5.0\text{V}$		0.82	V
f_T	$V_{CE}=5.0\text{V}, I_C=10\text{mA}, f=100\text{MHz}$	100		MHz
NF	$V_{CE}=5.0\text{V}, I_C=200\mu\text{A}, R_S=2.0\text{K}\Omega, f=1.0\text{KHz}, BW=200\text{Hz}$		10	dB
		<u>BC856A</u>	<u>BC856B</u>	<u>BC857C</u>
		<u>BC857A</u>	<u>BC857B</u>	<u>BC858C</u>
		<u>BC858A</u>	<u>BC858B</u>	
		MIN MAX	MIN MAX	MIN MAX
h_{FE}	$V_{CE}=5.0\text{V}, I_C=2.0\text{mA}$	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	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)

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- Application notes
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