

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_A=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 _{CB0} | 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 | | °C |
| θ _{JA} | | 357 | | °C/W |

ELECTRICAL CHARACTERISTICS: (T_A=25°C unless otherwise noted)

| SYMBOL | TEST CONDITIONS | MIN | MAX | UNITS |
|----------------------|---|-----|------|-------|
| I _{CBO} | V _{CB} =30V | | 15 | nA |
| I _{CBO} | V _{CB} =30V, T _A =150°C | | 4.0 | μA |
| I _{EBO} | V _{EB} =5.0V | | 100 | nA |
| BV _{CB0} | I _C =10μA (BC858) | 30 | | V |
| BV _{CB0} | I _C =10μA (BC857) | 50 | | V |
| BV _{CB0} | I _C =10μA (BC856) | 80 | | V |
| BV _{CEO} | I _C =10mA (BC858) | 30 | | V |
| BV _{CEO} | I _C =10mA (BC857) | 45 | | V |
| BV _{CEO} | I _C =10mA (BC856) | 65 | | V |
| BV _{EBO} | I _E =10μA | 5.0 | | V |
| V _{CE(SAT)} | I _C =10mA, I _B =0.5mA | | 0.30 | V |
| V _{CE(SAT)} | I _C =100mA, I _B =5.0mA | | 0.65 | V |
| V _{BE(ON)} | I _C =2.0mA, V _{CE} =5.0V | 0.6 | 0.75 | V |
| V _{BE(ON)} | I _C =10mA, V _{CE} =5.0V | | 0.82 | V |
| f _T | V _{CE} =5.0V, I _C =10mA, f=100MHz | 100 | | MHz |
| NF | V _{CE} =5.0V, I _C =200μA, R _S =2.0KΩ, f=1.0KHz, BW=200Hz | | 10 | dB |

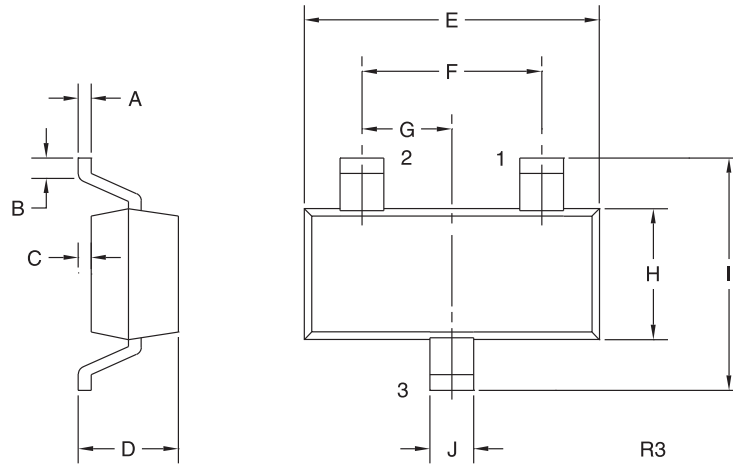
| | V _{CE} =5.0V, I _C =2.0mA | BC856A | | BC856B | | BC857C | |
|-----------------|--|--------|-----|--------|-----|--------|-----|
| | | MIN | MAX | MIN | MAX | MIN | MAX |
| h _{FE} | | 125 | 250 | 220 | 475 | 420 | 800 |

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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)