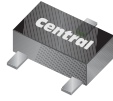


BC856T SERIES
BC857T SERIES

SURFACE MOUNT
PNP SILICON TRANSISTOR

ULTRAmTM



SOT-523 CASE



www.centra-semi.com

DESCRIPTION:

The CENTRAL SEMICONDUCTOR BC856T and BC857T 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

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 | BC857T | BC856T | UNITS |
|----------------|-------------|--------|----------------------|
| V_{CB0} | 50 | 80 | V |
| V_{CEO} | 45 | 65 | V |
| V_{EBO} | | 5.0 | V |
| I_C | | 100 | mA |
| I_{CM} | | 200 | mA |
| I_{BM} | | 100 | mA |
| P_D | | 250 | mW |
| T_J, T_{stg} | -65 to +150 | | $^{\circ}\text{C}$ |
| θ_{JA} | | 500 | $^{\circ}\text{C/W}$ |

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} | $V_{CB}=30\text{V}, T_A=150^{\circ}\text{C}$ | | | 5.0 | μA |
| I_{EBO} | $V_{EB}=5.0\text{V}$ | | | 100 | nA |
| BV_{CBO} | $I_C=10\mu\text{A}$ (BC857T) | 50 | | | V |
| BV_{CBO} | $I_C=10\mu\text{A}$ (BC856T) | 80 | | | V |
| BV_{CEO} | $I_C=10\text{mA}$ (BC857T) | 45 | | | V |
| BV_{CEO} | $I_C=10\text{mA}$ (BC856T) | 65 | | | V |
| BV_{EBO} | $I_E=10\mu\text{A}$ | 5.0 | | | V |
| $V_{CE(SAT)}$ | $I_C=10\text{mA}, I_B=0.5\text{mA}$ | | | 0.20 | V |
| $V_{CE(SAT)}$ | $I_C=100\text{mA}, I_B=5.0\text{mA}$ | | | 0.40 | V |
| $V_{BE(ON)}$ | $I_C=2.0\text{mA}, V_{CE}=5.0\text{V}$ | 0.58 | | 0.70 | V |
| $V_{BE(ON)}$ | $I_C=10\text{mA}, V_{CE}=5.0\text{V}$ | | | 0.77 | V |
| f_T | $V_{CE}=5.0\text{V}, I_C=10\text{mA}, f=100\text{MHz}$ | 100 | | | MHz |
| C_c | $V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$ | | | 2.5 | pF |
| C_e | $V_{EB}=0.5\text{V}, I_C=0, f=1.0\text{MHz}$ | | 10 | | pF |
| NF | $V_{CE}=5.0\text{V}, I_C=200\mu\text{A},$ $R_S=2.0\text{K}\Omega, f=1.0\text{KHz}, \text{BW}=200\text{Hz}$ | | | 10 | dB |

| | | BC856AT | | BC856BT | | BC857CT | |
|----------|--|---------|-----|---------|-----|---------|-----|
| | | 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 |

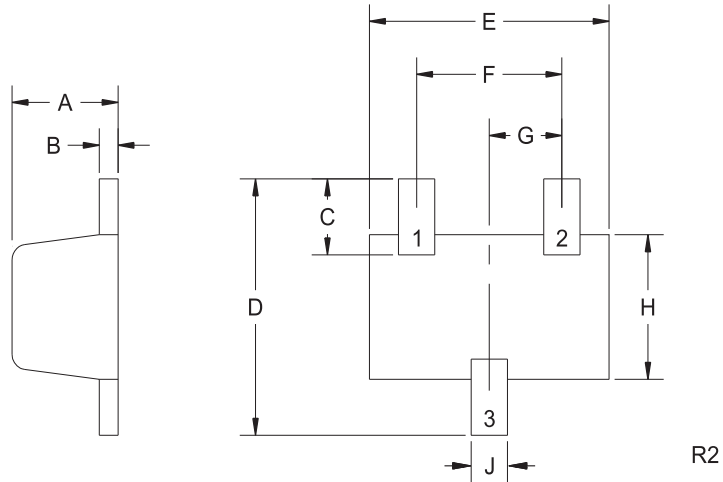
BC856T SERIES
BC857T SERIES

SURFACE MOUNT
PNP SILICON TRANSISTOR



SOT-523 CASE - MECHANICAL OUTLINE

BOTTOM VIEW



LEAD CODE:

- 1) BASE
- 2) EMITTER
- 3) COLLECTOR

| DEVICE | MARKING CODE |
|---------|--------------|
| BC856AT | GT6 |
| BC856BT | GT7 |
| BC857AT | GT8 |
| BC857BT | GT9 |
| BC857CT | GT0 |

| SYMBOL | INCHES | | MILLIMETERS | |
|--------|--------|-------|-------------|------|
| | MIN | MAX | MIN | MAX |
| A | 0.023 | 0.031 | 0.58 | 0.78 |
| B | 0.002 | 0.008 | 0.04 | 0.20 |
| C | 0.013 | 0.021 | 0.34 | 0.54 |
| D | 0.059 | 0.067 | 1.50 | 1.70 |
| E | 0.059 | 0.067 | 1.50 | 1.70 |
| F | 0.035 | 0.043 | 0.90 | 1.10 |
| G | 0.020 | | 0.50 | |
| H | 0.031 | 0.039 | 0.78 | 0.98 |
| J | 0.010 | 0.014 | 0.25 | 0.35 |

SOT-523 (REV: R2)

R1 (20-November 2009)

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 (2nd 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

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.centalsemi.com

Worldwide Field Representatives:
www.centalsemi.com/wwreps

Worldwide Distributors:
www.centalsemi.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.centalsemi.com/terms

Mouser Electronics

Authorized Distributor

Click to View Pricing, Inventory, Delivery & Lifecycle Information:

Central Semiconductor:

[BC857BT](#) [BC856BT TR](#)