



BC856 BC857 BC858

PNP TRANSISTOR

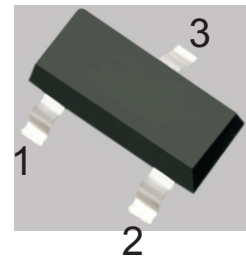
FEATURES

- Ideally suited for automatic insertion
- For Switching and AF Amplifier Applications

MAXIMUM RATINGS (Ta=25°C unless otherwise noted)

| Parameter                                   | Symbol                  | Value             | Unit              |      |
|---|-------------------------|-------------------|-------------------|------|
| Collector-Base Voltage                      | BC856<br>BC857<br>BC858 | V <sub>CB0</sub>  | -80<br>-50<br>-30 | V    |
| Collector-Emitter Voltage                   | BC856<br>BC857<br>BC858 | V <sub>CEO</sub>  | -65<br>-45<br>-30 | V    |
| Emitter-Base Voltage                        |                         | V <sub>EBO</sub>  | -5                | V    |
| Collector Current — Continuous              |                         | I <sub>C</sub>    | -0.1              | A    |
| Collector Power Dissipation                 |                         | P <sub>C</sub>    | 200               | mW   |
| Thermal Resistance From Junction To Ambient |                         | R <sub>thJA</sub> | 625               | °C/W |
| Junction Temperature                        |                         | T <sub>J</sub>    | 150               | °C   |
| Storage Temperature                         |                         | T <sub>stg</sub>  | -65~+150          | °C   |

SOT-23



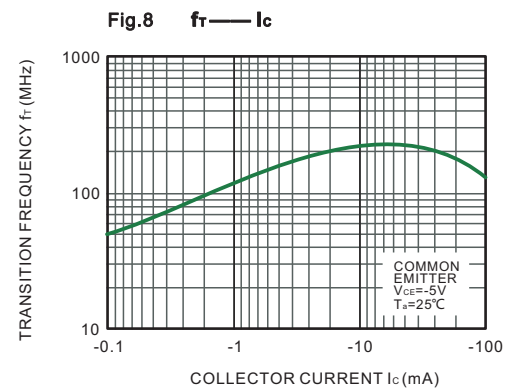
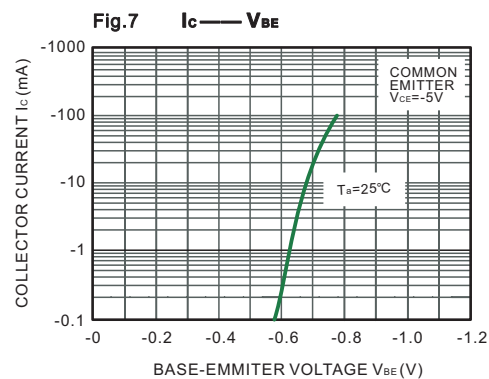
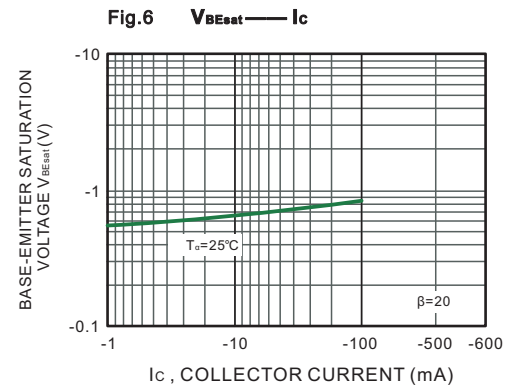
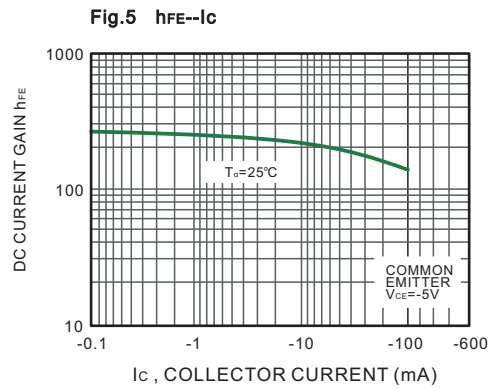
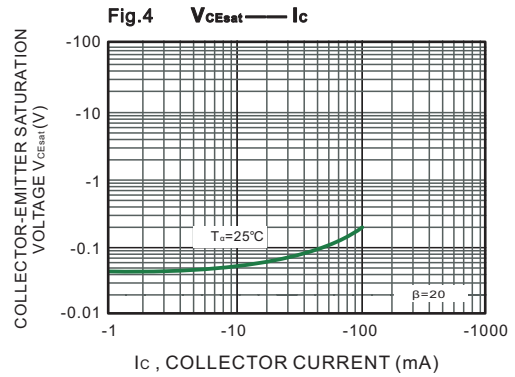
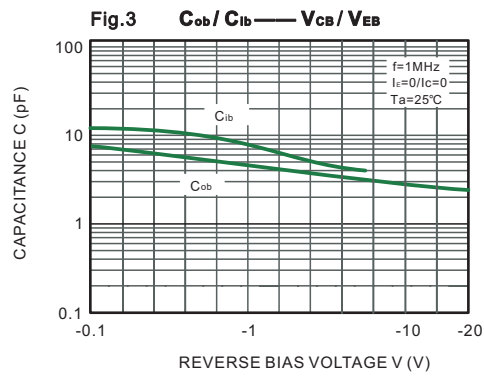
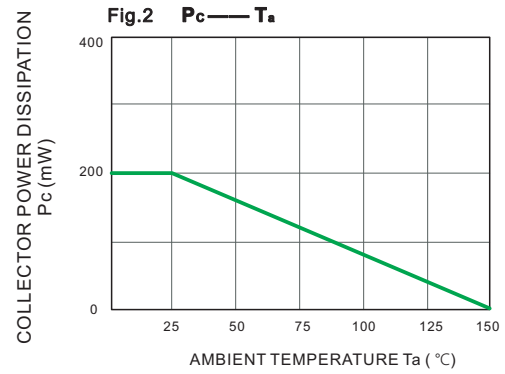
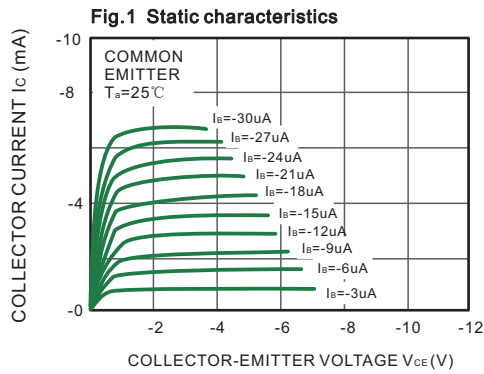
- 1.BASE  
2.EMITTER  
3.COLLECTOR

ELECTRICAL CHARACTERISTICS (TA = 25°C unless otherwise noted.)

| Parameter                            | Symbol   | Test conditions      | Min  | Max               | Unit              |
|--------------------------------------|--|----------------------|--|-------------------|-------------------|
| Collector-base breakdown voltage     | BC856<br>BC857<br>BC858                                    | V <sub>CB0</sub>     | I <sub>C</sub> = -10μA, I <sub>E</sub> = 0   | -80<br>-50<br>-30 | V                 |
| Collector-emitter breakdown voltage  | BC856<br>BC857<br>BC858                                    | V <sub>CEO</sub>     | I <sub>C</sub> = -10mA, I <sub>B</sub> = 0   | -65<br>-45<br>-30 | V                 |
| Emitter-base breakdown voltage       |  | V <sub>EBO</sub>     | I <sub>E</sub> = -1μA, I <sub>C</sub> = 0  | -5                | V                 |
| Collector cut-off current            | BC856<br>BC857<br>BC858                                    | I <sub>CB0</sub>     | V <sub>CB</sub> = -70V, I <sub>E</sub> = 0<br>V <sub>CB</sub> = -45V, I <sub>E</sub> = 0<br>V <sub>CB</sub> = -25V, I <sub>E</sub> = 0 | -0.1              | μA                |
| Collector cut-off current            | BC856<br>BC857<br>BC858                                    | I <sub>CEO</sub>     | V <sub>CE</sub> = -60V, I <sub>B</sub> = 0<br>V <sub>CE</sub> = -40V, I <sub>B</sub> = 0<br>V <sub>CE</sub> = -25V, I <sub>B</sub> = 0 | -0.1              | μA                |
| Emitter cut-off current              |  | I <sub>EBO</sub>     | V <sub>EB</sub> = -5V, I <sub>C</sub> = 0  | -0.1              | μA                |
| DC current gain                      | BC856A, 857A, 858A<br>BC856B, 857B, 858B<br>BC857C, BC858C | h <sub>FE</sub>      | V <sub>CE</sub> = -5V, I <sub>C</sub> = -2mA   | 125<br>220<br>420 | 250<br>475<br>800 |
| Collector-emitter saturation voltage |  | V <sub>CE(sat)</sub> | I <sub>C</sub> = -100mA, I <sub>B</sub> = -5mA   | -0.5              | V                 |
| Base-emitter saturation voltage      |  | V <sub>BE(sat)</sub> | I <sub>C</sub> = -100mA, I <sub>B</sub> = -5mA   | -1.1              | V                 |
| Transition frequency                 |  | f <sub>T</sub>       | V <sub>CE</sub> = -5V,<br>I <sub>C</sub> = -10mA, f = 100MHz   | 100               | MHz               |
| Collector capacitance                |  | C <sub>ob</sub>      | V <sub>CB</sub> = -10V, f = 1MHz   | 4.5               | pF                |

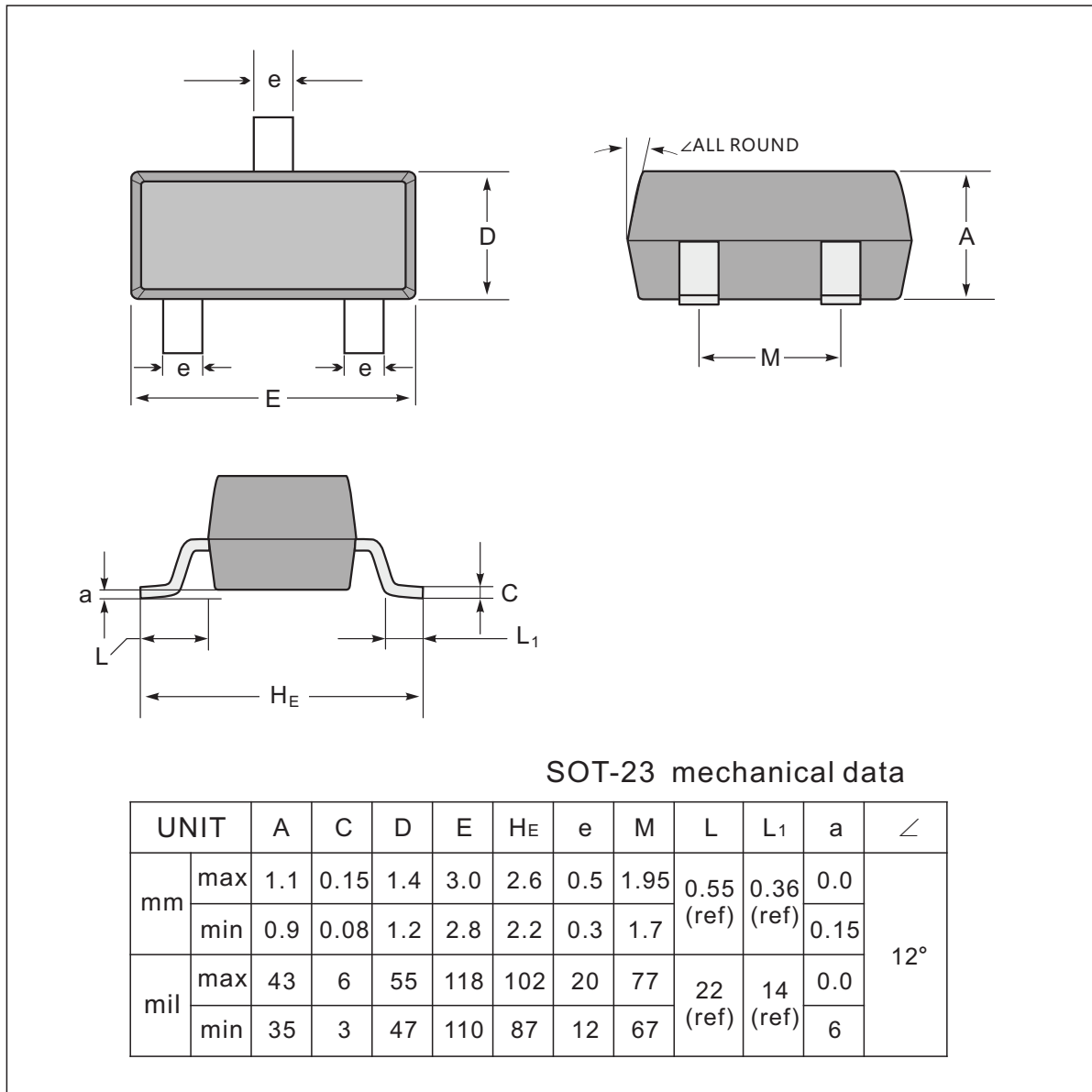


### TYPICAL CHARACTERISTICS

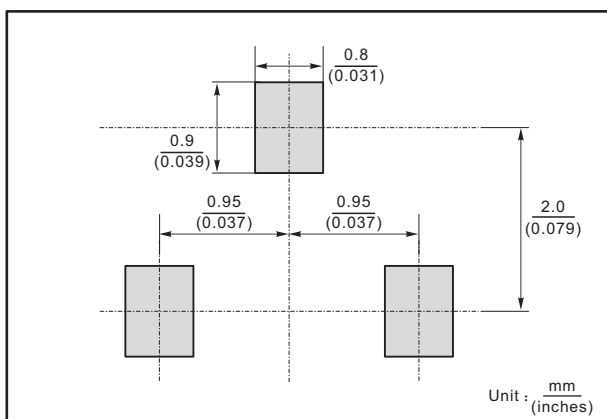




### SOT-23 Package Outline Dimensions



#### The recommended mounting pad size



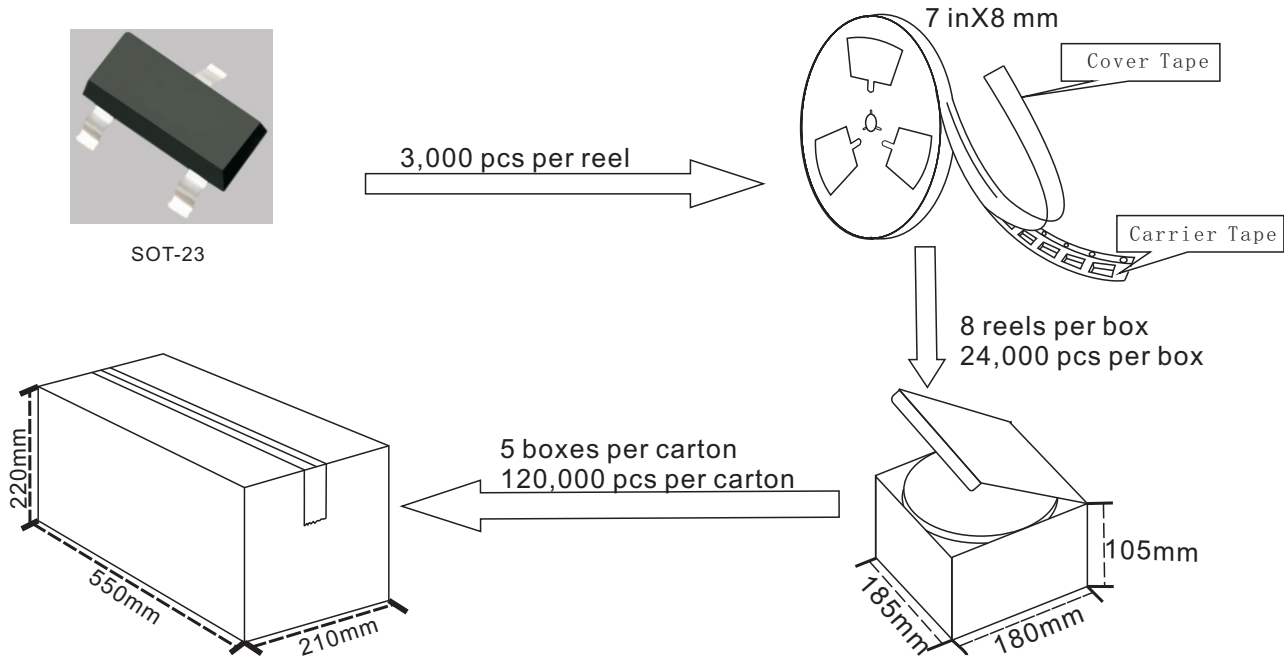
#### Marking

| Type number | Marking code |
|-------------|--------------|
| BC856A      | 3A           |
| BC856B      | 3B           |
| BC857A      | 3E           |
| BC857B      | 3F           |
| BC857C      | 3G           |
| BC858A      | 3J           |
| BC858B      | 3K           |
| BC858C      | 3L           |

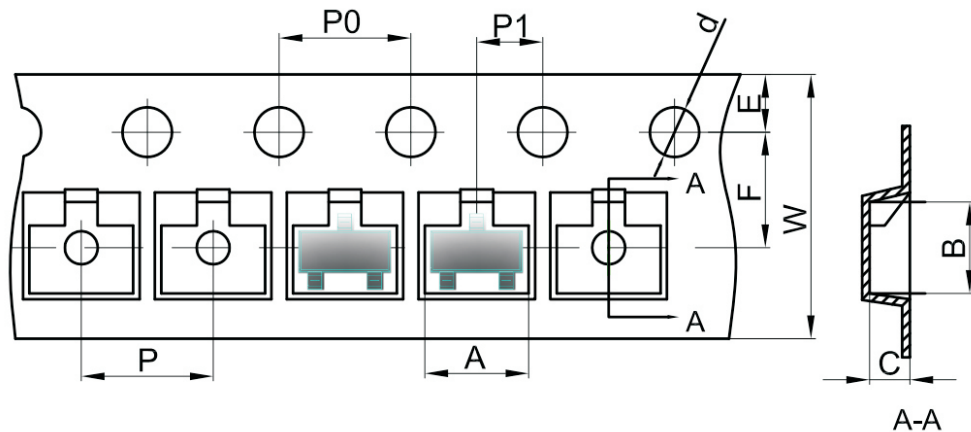


## SOT-23 Packing

1. The method of packaging and dimension are shown as below figure. (Dimension in mm)



### SOT-23 Embossed Carrier Tape



| Dimensions are in millimeter |      |      |      |       |      |      |      |      |      |      |
|------------------------------|------|------|------|-------|------|------|------|------|------|------|
| Pkg type                     | A    | B    | C    | d     | E    | F    | P0   | P    | P1   | W    |
| SOT-23                       | 3.15 | 2.77 | 1.22 | Ø1.50 | 1.75 | 3.50 | 4.00 | 4.00 | 2.00 | 8.00 |

### SOT-23 Tape Leader and Trailer

