# **NPN General Purpose Transistor**

# BC847B / BC847C

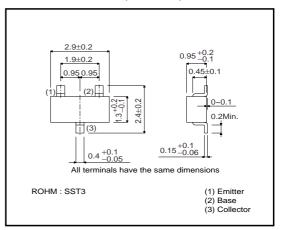
#### Features

- 1) BVcEo < 45V (Ic=1mA)
- 2) Complements the BC857B.

### ● Package, marking, and Packaging specifications

| Part No.                     | BC847B | BC847C |
|------------------------------|--------|--------|
| Packaging type               | SST3   | SST3   |
| Marking                      | G1F    | G1G    |
| Code                         | T116   | T116   |
| Basic ordering unit (pieces) | 3000   | 3000   |

#### ●External dimensions (Units : mm)



#### ● Absolute maximum ratings (Ta=25°C)

| Parameter                   | Symbol Limits |                 | Unit |  |
|-----------------------------|---------------|-----------------|------|--|
| Collector-base voltage      | Vсво          | 50              | V    |  |
| Collector-emitter voltage   | Vceo          | 45              | V    |  |
| Emitter-base voltage        | Vebo 6        |                 | V    |  |
| Collector current           | lc            | 0.1             | A    |  |
| Collector power dissipation | Pc            | 0.2             | w *  |  |
|                             | FC            | 0.35            | ]    |  |
| Junction temperature        | Tj            | 150             | °C   |  |
| Storage temperature         | Tstg          | <b>−55~+150</b> | °C   |  |

<sup>\*</sup> When mounted on a 7×5×0.6mm ceramic board.

## ●Electrical characteristics (Ta=25°C)

| Parameter                            | Symbol               | Min. | Тур. | Max. | Unit | Conditions                    |
|--------------------------------------|----------------------|------|------|------|------|-------------------------------|
| Collector-base breakdown voltage     | ВУсво                | 50   | -    | -    | V    | Ic=50μA                       |
| Collector-emitter breakdown voltage  | BVceo                | 45   | -    | -    | V    | Ic=1mA                        |
| Emitter-base breakdown voltage       | ВУЕВО                | 6    | -    | -    | V    | Iε=50μA                       |
| Collector cutoff current             | 1                    | -    | -    | 15   | nA   | Vcb=30V                       |
|                                      | Ісво                 | _    | -    | 5    | μΑ   | Vcв=30V, Ta=150°С             |
| Collector-emitter saturation voltage | VCE(sat)             | -    | -    | 0.25 | ٧    | Ic/I <sub>B</sub> =10mA/0.5mA |
|                                      |                      | _    | -    | 0.6  |      | Ic/I <sub>B</sub> =100mA/5mA  |
| Base-emitter saturation voltage      | V <sub>BE</sub> (on) | 0.58 | -    | 0.77 | V    | Vce/Ic=5V/10mA                |
| DC current transfer ratio            | hfe                  | 200  | -    | 450  | -    | Vce/Ic=5V/2mA BC847B          |
|                                      |                      | 420  | -    | 800  | -    | Vce/lc=5V/2mA BC847C          |
| Transition frequency                 | f⊤                   | -    | 200  | -    | MHz  | VcE=5V, IE=-20mA, f=100MHz    |
| Collector output capacitance         | Cob                  | _    | 3    | _    | pF   | Vcb=-10V, IE=0, f=1MHz        |
| Emitter input capacitance            | Cib                  | _    | 8    | -    | pF   | Veb=0.5V, Ic=0, f=1MHz        |

#### • Electrical characteristic curves

The electrical characteristic curves for these products are the same as those of UMT222A, SST222A, MMST2222A and PN2222A.



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