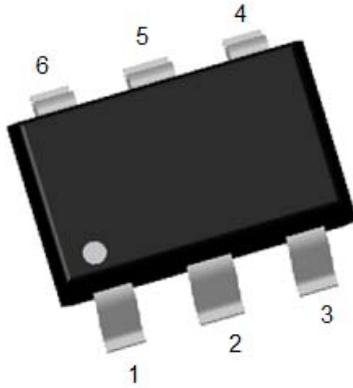


## Dual PNP Small Signal Transistor

- 1、Emitter
- 2、Base
- 3、Collector
- 4、Emitter
- 5、Base
- 6、Collector



**SOT-363**

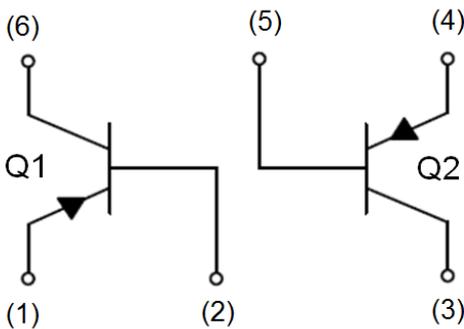
### Features

- Epoxy meets UL-94 V-0 flammability rating
- Surface mount package ideally Suited for Automatic Insertion
- Moisture Sensitivity Level 1
- Part no. with suffix “Q” means AEC-Q101 qualified

### Mechanical Data

- **Package:** SOT-363
- **Terminals:** Tin plated leads, solderable per J-STD-002 and JESD22-B102
- **Marking:** 3F

### ■Equivalent circuit





# BC857BSQ

## ■Maximum Ratings (Ta=25°C Unless otherwise specified)

### Q1&Q2-PNP

| Item                      | Symbol | Unit | Conditions            | Value       |
|---------------------------|--------|------|-----------------------|-------------|
| Collector-Base Voltage    | VCBO   | V    | $I_C=-10\mu A, I_E=0$ | -50         |
| Collector-Emitter Voltage | VCEO   | V    | $I_C=-10mA, I_B=0$    | -45         |
| Emitter-Base Voltage      | VEBO   | V    | $I_E=-10\mu A, I_C=0$ | -5          |
| Collector Current         | IC     | mA   |                       | -100        |
| Total Device Dissipation  | PC     | mW   |                       | 200         |
| Junction Temperature      | Tj     | °C   |                       | -55 to +150 |
| Storage Temperature       | TSTG   | °C   |                       | -55 to +150 |

## ■Electrical Characteristics (Ta=25°C unless otherwise specified)

### Q1&Q2-PNP

| Item                                 | Symbol        | Unit | Conditions                       | Min  | TYP | Max   |
|--------------------------------------|---------------|------|----------------------------------|------|-----|-------|
| Collector-base breakdown voltage     | $V_{(BR)CBO}$ | V    | $I_C=-10\mu A, I_E=0$            | -50  |     |       |
| Collector-emitter breakdown voltage  | $V_{(BR)CEO}$ | V    | $I_C=-10mA, I_B=0$               | -45  |     |       |
| Emitter-base breakdown voltage       | $V_{(BR)EBO}$ | V    | $I_E=-10\mu A, I_C=0$            | -5   |     |       |
| Collector cut-off current            | $I_{CBO}$     | nA   | $V_{CB}=-30V, I_E=0$             |      |     | -100  |
| Emitter-Base Cut-off current         | $I_{EBO}$     | nA   | $V_{EB}=-5V, I_C=0$              |      |     | -100  |
| DC current gain                      | $h_{FE}$      |      | $V_{CE}=-5V, I_C=-2mA$           | 220  |     | 475   |
| Collector-emitter saturation voltage | $V_{CE(sat)}$ | V    | $I_C=-10mA, I_B=-0.5mA$          |      |     | -0.3  |
|                                      |               |      | $I_C=-100mA, I_B=-5mA$           |      |     | -0.65 |
| Baser-emitter saturation voltage     | $V_{BE(sat)}$ | V    | $I_C=-10mA, I_B=-0.5mA$          |      |     | -1    |
|                                      |               |      | $I_C=-100mA, I_B=-5mA$           |      |     | -1.1  |
| Base-emitter Voltage                 | $V_{BE}$      | V    | $V_{CE}=-5V, I_C=-2mA$           | -0.6 |     | -0.75 |
| Transition frequency                 | Ft            | MHz  | $V_{CE}=-5V, I_C=-10mA, f=30MHz$ | 100  |     |       |

## ■ Ordering Information (Example)

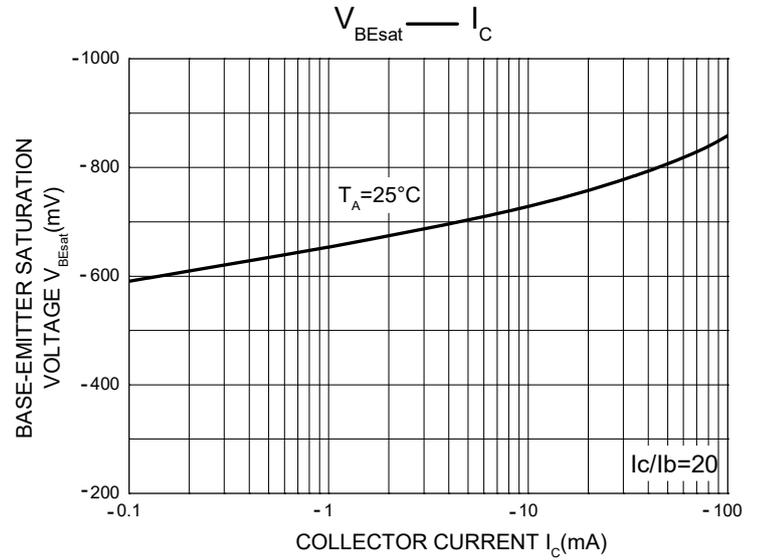
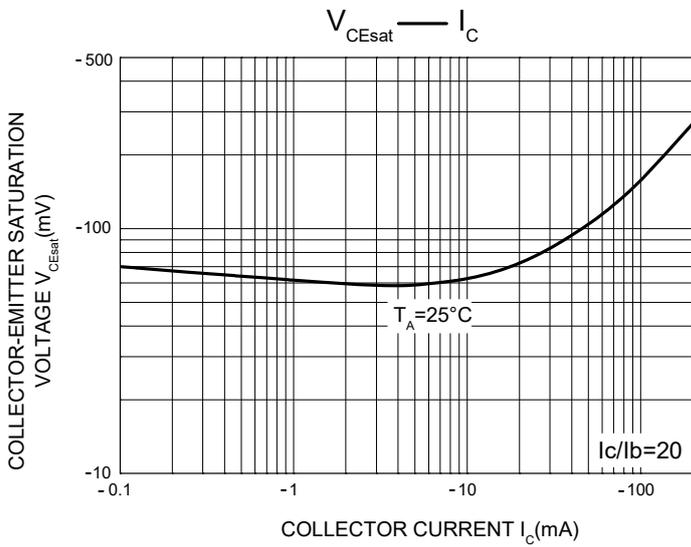
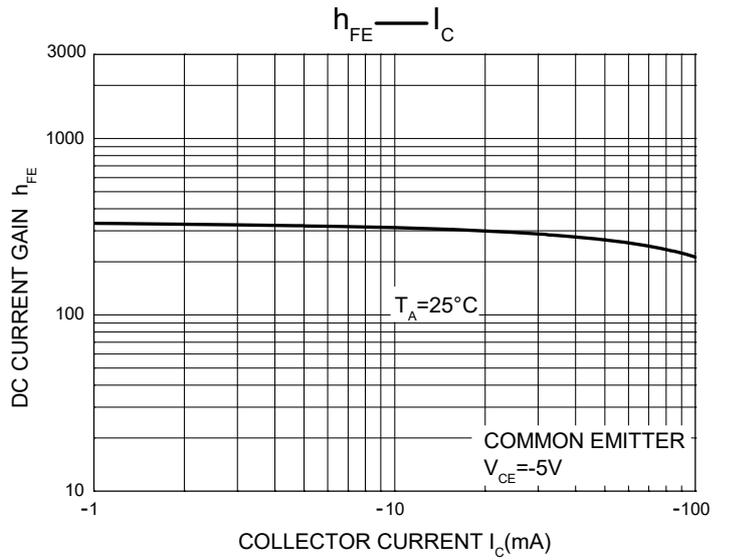
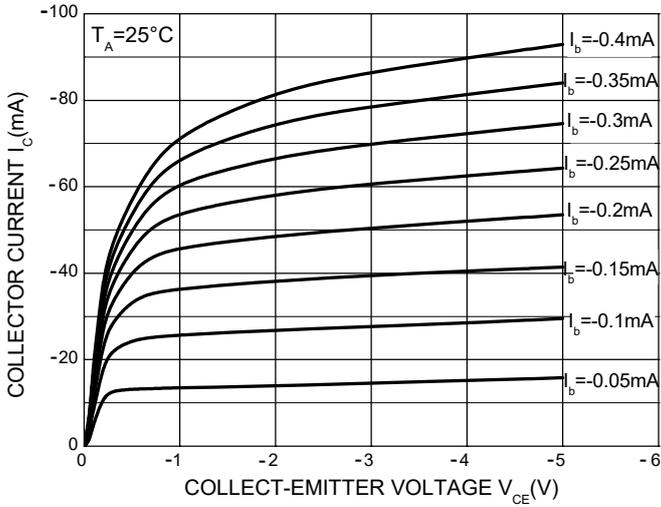
| PREFERED P/N | PACKING CODE | UNIT WEIGHT(g)     | MINIMUM PACKAGE(pcs) | INNER BOX QUANTITY(pcs) | OUTER CARTON QUANTITY(pcs) | DELIVERY MODE |
|--------------|--------------|--------------------|----------------------|-------------------------|----------------------------|---------------|
| BC857BSQ     | F2           | Approximate 0.007g | 3000                 | 30000                   | 120000                     | 7" reel       |



# BC857BSQ

## ■ Characteristics (Typical) Q1&Q2-PNP

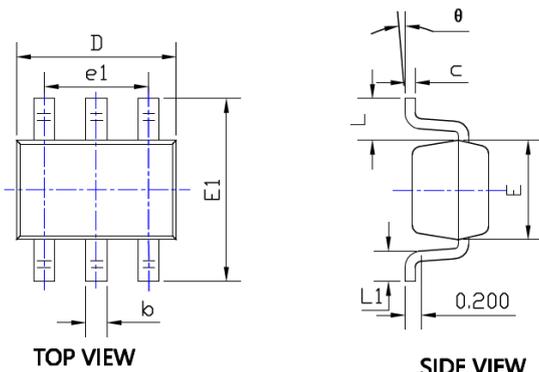
Static Characteristics





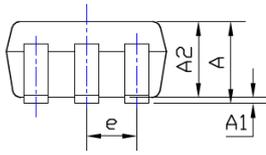
# BC857BSQ

## ■SOT-363 Package Outline Dimensions & Suggested Pad Layout

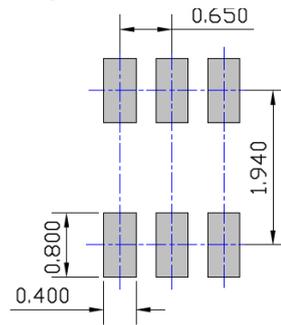


TOP VIEW

SIDE VIEW



SIDE VIEW



UNIT: mm

SUGGESTED SOLDER PAD LAYOUT

| SYMBOL | DIMENSIONS |       |            |       |
|--------|------------|-------|------------|-------|
|        | INCHES     |       | Millimeter |       |
|        | MIN.       | MAX.  | MIN.       | MAX.  |
| A      | 0.035      | 0.043 | 0.900      | 1.100 |
| A1     | 0.000      | 0.004 | 0.000      | 0.100 |
| A2     | 0.035      | 0.039 | 0.900      | 1.000 |
| b      | 0.006      | 0.014 | 0.150      | 0.350 |
| c      | 0.004      | 0.010 | 0.100      | 0.250 |
| D      | 0.071      | 0.087 | 1.800      | 2.200 |
| E      | 0.045      | 0.053 | 1.150      | 1.350 |
| E1     | 0.085      | 0.096 | 2.150      | 2.450 |
| e      | 0.026TYP   |       | 0.650TYP   |       |
| e1     | 0.047      | 0.055 | 1.200      | 1.400 |
| L      | 0.021REF   |       | 0.525REF   |       |
| L1     | 0.010      | 0.018 | 0.260      | 0.460 |
| θ      | 0°         | 8°    | 0°         | 8°    |

**NOTE:**

- 1.PACKAGE BODY SIZES EXCLUDE MOLD FLASH AND GATE BURRS.
- 2.TOLERANCE 0.1mm UNLESS OTHERWISE SPECIFIED.
- 3.THE PAD LAYOUT IS FOR REFERENCE PURPOSES ONLY.



## BC857BSQ

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