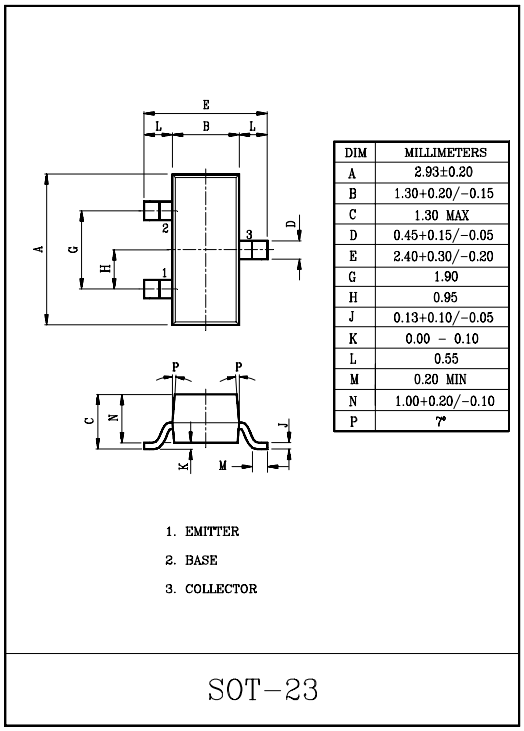
# BC849/850

EPITAXIAL PLANAR NPN TRANSISTOR

GENERAL PURPOSE APPLICATION.
SWITCHING APPLICATION .

FEATURES

- For Complementary With PNP Type BC859/860.




| DIM | MILLIMETERS |
|---|---|
| A | 2.93±0.20 |
| B | 1.30+0.20/−0.15 |
| C | 1.30 MAX |
| D | 0.45+0.15/−0.05 |
| E | 2.40+0.30/−0.20 |
| G | 1.90 |
| H | 0.95 |
| J | 0.13+0.10/−0.05 |
| K | 0.00 − 0.10 |
| L | 0.55 |
| M | 0.20 MIN |
| N | 1.00+0.20/−0.10 |
| P | 7° |

SOT−23

MAXIMUM RATINGS (Ta=25℃)

| CHARACTERISTIC | | SYMBOL | RATING | UNIT |
|---|---|---|---|---|
| Collector-Base Voltage | BC849 | $V_{CBO}$ | 30 | V |
| | BC850 | | 50 | |
| Collector-Emitter Voltage | BC849 | $V_{CEO}$ | 30 | V |
| | BC850 | | 45 | |
| Emitter-Base Voltage | | $V_{EBO}$ | 5 | V |
| Collector Current | | $I_C$ | 100 | mA |
| Collector Power Dissipation | | $P_C$ * | 350 | mW |
| Junction Temperature | | $T_j$ | 150 | ℃ |
| Storage Temperature Range | | $T_{stg}$ | −55∼150 | ℃ |

$P_C$* : Package Mounted On 99.5% Alumina 10×8×0.6mm.

ELECTRICAL CHARACTERISTICS (Ta=25℃)

| CHARACTERISTIC | | SYMBOL | TEST CONDITION | MIN. | TYP. | MAX. | UNIT |
|---|---|---|---|---|---|---|---|
| Collector-Emitter Breakdown Voltage | BC849 | $V_{(BR)CEO}$ | $I_C$=10mA, $I_B$=0 | 30 | - | - | V |
| | BC850 | | | 45 | - | - | |
| Collector-Base Breakdown Voltage | BC849 | $V_{(BR)CBO}$ | $I_C$=10μA, $I_E$=0 | 30 | - | - | V |
| | BC850 | | | 50 | - | - | |
| Emitter-Base Breakdown Voltage | | $V_{(BR)EBO}$ | $I_E$=10μA, $I_C$=0 | 5 | - | - | V |
| Collector Cut-off Current | | $I_{CBO}$ | $V_{CB}$=30V, $I_E$=0 | - | - | 15 | nA |
| DC Current Gain | | $h_{FE}$(Note) | $I_C$=2mA, $V_{CE}$=5V | 200 | - | 800 | |
| Base-Emitter Voltage | | $V_{BE(ON)}$ 1 | $I_C$=2mA, $V_{CE}$=5V | 0.58 | 0.66 | 0.7 | V |
| | | $V_{BE(ON)}$ 2 | $I_C$=10mA, $V_{CE}$=5V | - | - | 0.77 | |
| Collector-Emitter Saturation Voltage | | $V_{CE(sat)}$ 1 | $I_C$=10mA, $I_B$=0.5mA | - | 0.09 | 0.25 | V |
| | | $V_{CE(sat)}$ 2 | $I_C$=100mA, $I_B$=5mA | - | 0.2 | 0.6 | |
| Base-Emitter Saturation Voltage | | $V_{BE(sat)}$ 1 | $I_C$=10mA, $I_B$=0.5mA | - | 0.7 | - | V |
| | | $V_{BE(sat)}$ 2 | $I_C$=100mA, $I_B$=5mA | - | 0.9 | - | |
| Transition Frequency | | $f_T$ | $I_C$=10mA, $V_{CE}$=5V, f=100MHz | - | 300 | - | MHz |
| Collector Output Capacitance | | $C_{ob}$ | $V_{CB}$=10V, $I_E$=0, f=1MHz | - | 2.5 | 4.5 | pF |
| Noise Figure | BC849 | NF | $I_C$=200μA, $V_{CE}$=5V Rg=10kΩ, f=1kHz | - | - | 4.0 | dB |
| | BC850 | | | | | 1.0 | |

Note : $h_{FE}$ Classification B:200∼450, C:420∼800

MARK SPEC

| TYPE | BC849B | BC849C | BC850B | BC850C |
|---|---|---|---|---|
| MARK | 2B | 2C | 2F | 2G |

Marking

