

Micro Commercial Components  
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## 2SB744

### Features

- Capable of 10Watts of Power Dissipation.
- Collector-current 3.0A
- Collector-base Voltage 70V
- Operating and storage junction temperature range: -55°C to +150°C
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0
- Marking: B744

### Maximum Ratings

| Symbol    | Rating                      | Rating      | Unit |
|-----------|-----------------------------|-------------|------|
| $V_{CEO}$ | Collector-Emitter Voltage   | 45          | V    |
| $V_{CBO}$ | Collector-Base Voltage      | 70          | V    |
| $V_{EBO}$ | Emitter-Base Voltage        | 5.0         | V    |
| $I_C$     | Collector Current           | 3.0         | A    |
| $P_C$     | Collector power dissipation | 10          | W    |
| $T_J$     | Junction Temperature        | -55 to +150 | °C   |
| $T_{STG}$ | Storage Temperature         | -55 to +150 | °C   |

### Electrical Characteristics @ 25°C Unless Otherwise Specified

| Symbol | Parameter | Min | Max | Units |
|--------|-----------|-----|-----|-------|
|--------|-----------|-----|-----|-------|

#### OFF CHARACTERISTICS

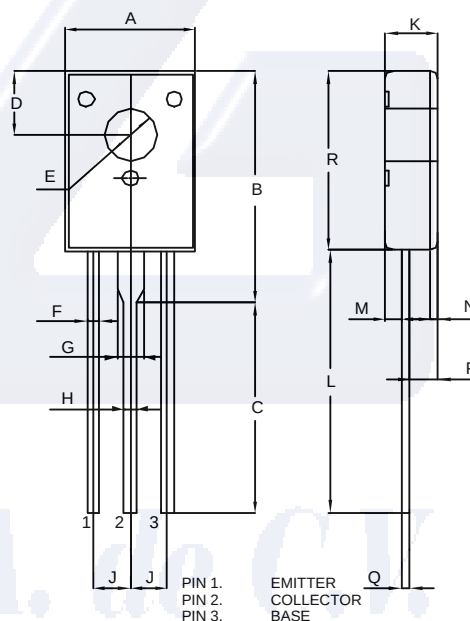
|                |                                                                   |     |     |     |
|----------------|-------------------------------------------------------------------|-----|-----|-----|
| $V_{CEO(SUS)}$ | Collector-Emitter Sustaining Voltage<br>( $I_C=1.0mA$ , $I_B=0$ ) | 45  | --- | Vdc |
| $V_{(BR)CBO}$  | Collector-Base Breakdown Voltage<br>( $I_C=1.0mA$ , $I_E=0$ )     | 70  | --- | Vdc |
| $V_{(BR)EBO}$  | Emitter-Base Breakdown Voltage<br>( $I_E=1.0mA$ , $I_C=0$ )       | 5.0 | --- | Vdc |

#### ON CHARACTERISTICS

|               |                                                                      |     |     |     |
|---------------|----------------------------------------------------------------------|-----|-----|-----|
| $h_{FE(1)}$   | Forward Current Transfer ratio<br>( $I_C=20mA$ , $V_{CE}=5.0V$ )     | 30  | --- | --- |
| $h_{FE(2)}$   | Forward Current Transfer ratio<br>( $I_C=0.5A$ , $V_{CE}=5.0V$ )     | 60  | 320 | --- |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage<br>( $I_C=1.5A$ , $I_B=0.15A$ ) | --- | 2.0 | Vdc |

### PNP Silicon Power Transistor

### TO-126



#### DIMENSIONS

| DIM | INCHES |       | MM    |       | NOTE |
|-----|--------|-------|-------|-------|------|
|     | MIN    | MAX   | MIN   | MAX   |      |
| A   | 0.30   | 0.33  | 7.70  | 8.30  |      |
| B   |        | 0.56  |       | 14.20 |      |
| C   | 0.50   | 0.53  | 12.76 | 13.36 |      |
| D   | 0.15   | 0.16  | 3.80  | 4.0   |      |
| E   | 0.12   | 0.13  | 3.10  | 3.30  |      |
| F   | 0.025  | 0.033 | 0.65  | 0.85  |      |
| G   | 0.06   | 0.07  | 1.50  | 1.70  |      |
| H   | 0.025  | 0.033 | 0.65  | 0.85  |      |
| J   | 0.08   | 0.10  | 2.08  | 2.48  |      |
| K   | 0.12   | 0.14  | 3.05  | 3.45  |      |
| L   | 0.63   | 0.64  | 15.90 | 16.30 |      |
| M   |        | 0.04  |       | 1.0   |      |
| N   |        | 0.02  |       | 0.5   |      |
| P   | 0.06   | 0.08  | 1.55  | 1.95  |      |
| Q   | 0.018  | 0.023 | 0.45  | 0.60  |      |
| R   | 0.43   | 0.44  | 10.80 | 11.20 |      |