

isc Silicon PNP Power Transistor

2SB821

DESCRIPTION

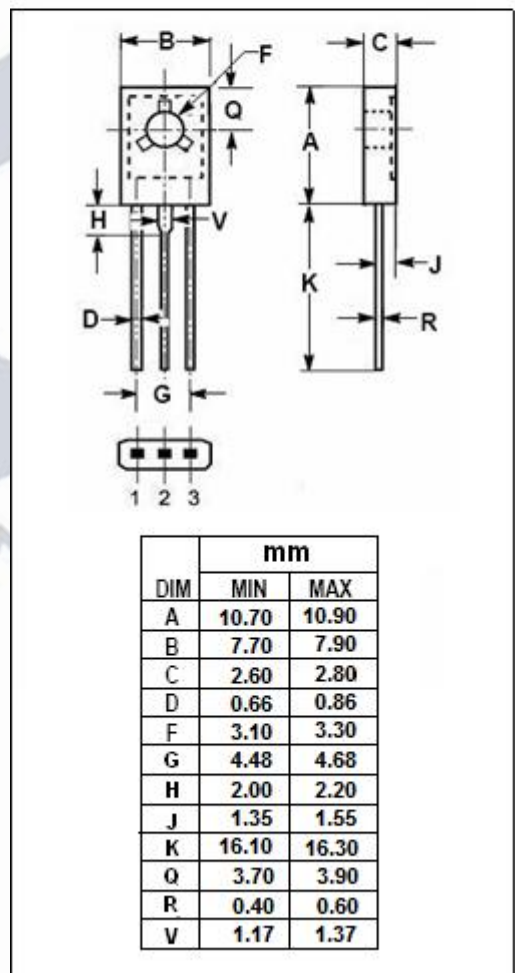
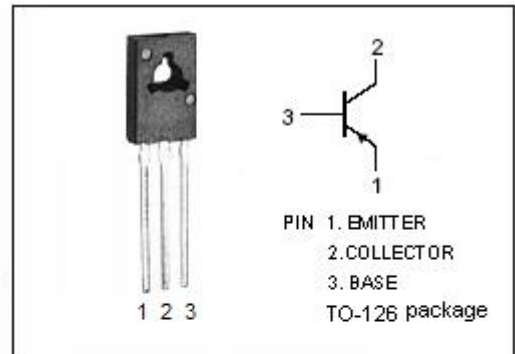
- High Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = -40V(\text{Min})$
- Good Linearity of h_{FE}
- Low Saturation Voltage

APPLICATIONS

- Designed for use in audio amplifier, voltage regulator, DC-DC converter and relay driver.

ABSOLUTE MAXIMUM RATINGS($T_a=25^\circ\text{C}$)

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|---|---------|------------------|
| V_{CBO} | Collector-Base Voltage | -50 | V |
| V_{CEO} | Collector-Emitter Voltage | -40 | V |
| V_{EBO} | Emitter-Base Voltage | -5 | V |
| I_C | Collector Current-Continuous | -300 | mA |
| P_C | Collector Power Dissipation @ $T_C=25^\circ\text{C}$ | 250 | mW |
| T_J | Junction Temperature | 125 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature Range | -55~125 | $^\circ\text{C}$ |



isc Silicon PNP Power Transistor**2SB821****ELECTRICAL CHARACTERISTICS** $T_C=25^\circ\text{C}$ unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|---------------|--------------------------------------|--|-----|------|------|---------------|
| $V_{(BR)CBO}$ | Collector-Base Breakdown Voltage | $I_C= 50\mu\text{A}$; $I_E= 0$ | -50 | | | V |
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage | $I_C= 1\text{mA}$; $I_B= 0$ | -40 | | | V |
| $V_{(BR)EBO}$ | Emitter- Base Breakdown Voltage | $I_E= 50\mu\text{A}$; $I_C= 0$ | -5 | | | V |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C= -50\text{mA}$; $I_B= -5\text{mA}$ | | | -0.5 | V |
| I_{CBO} | Collector Cutoff Current | $V_{CB}= -30\text{V}$; $I_E= 0$ | | | -0.5 | μA |
| I_{EBO} | Emitter Cutoff Current | $V_{EB}= -4\text{V}$; $I_C= 0$ | | | -0.5 | μA |
| h_{FE-1} | DC Current Gain | $I_C= -10\text{mA}$; $V_{CE}= -6\text{V}$ | 120 | | 560 | |
| f_T | Current-Gain—Bandwidth Product | $I_C= -10\text{mA}$; $V_{CE}= -6\text{V}$ | | 100 | | MHz |

◆ **h_{FE-2} Classifications**

| Q | R | S |
|---------|---------|---------|
| 120-270 | 180-390 | 270-560 |