

Silicon PNP Power Transistor

2SB1017

DESCRIPTION

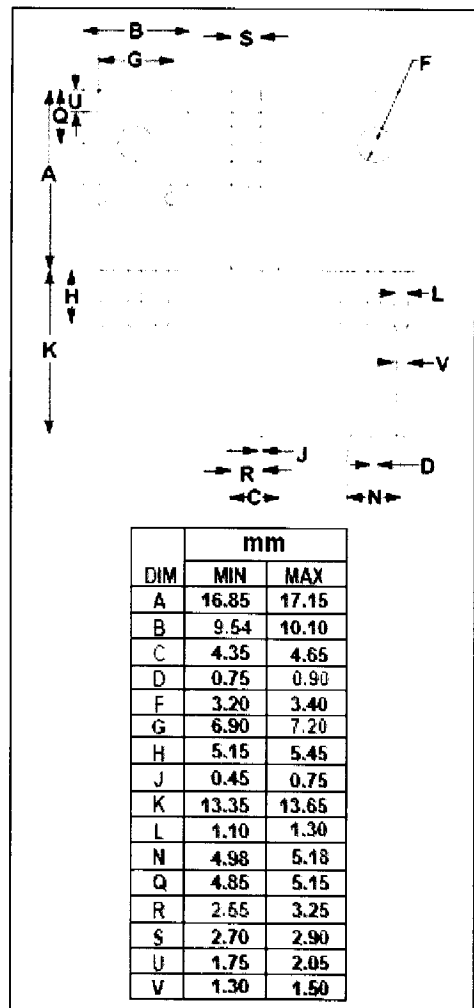
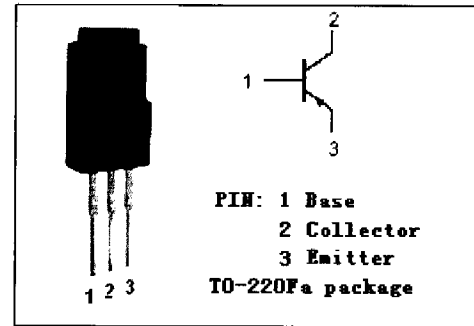
- Low Collector Saturation Voltage-
 : $V_{CE(sat)} = -1.7V(\text{Max})@I_C = -3A$
- Good Linearity of h_{FE}
- Complement to Type 2SD1408

APPLICATIONS

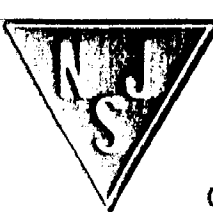
- Designed for power amplifier applications.
- Recommended for 20~25W high-fidelity audio frequency amplifier output stage.

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|---|---------|------------------|
| V_{CBO} | Collector-Base Voltage | -80 | V |
| V_{CEO} | Collector-Emitter Voltage | -80 | V |
| V_{EBO} | Emitter-Base Voltage | -5 | V |
| I_C | Collector Current-Continuous | -4 | A |
| I_B | Base Current-Continuous | -0.4 | A |
| P_C | Collector Power Dissipation @ $T_a=25^\circ\text{C}$ | 2 | W |
| | Collector Power Dissipation @ $T_c=25^\circ\text{C}$ | 25 | |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature Range | -55~150 | $^\circ\text{C}$ |



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However, NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.



Silicon PNP Power Transistor

2SB1017

ELECTRICAL CHARACTERISTICS

$T_C=25^\circ\text{C}$ unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|---------------|--------------------------------------|--|-----|------|------|---------------|
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage | $I_C = -50\text{mA}; I_B = 0$ | -80 | | | V |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C = -3\text{A}; I_B = -0.3\text{A}$ | | | -1.7 | V |
| $V_{BE(on)}$ | Base-Emitter On Voltage | $I_C = -3\text{A}; V_{CE} = -5\text{V}$ | | | -1.5 | V |
| I_{CBO} | Collector Cutoff Current | $V_{CB} = -80\text{V}; I_E = 0$ | | | -30 | μA |
| I_{EBO} | Emitter Cutoff Current | $V_{EB} = -5\text{V}; I_C = 0$ | | | -0.1 | mA |
| h_{FE-1} | DC Current Gain | $I_C = -0.5\text{A}; V_{CE} = -5\text{V}$ | 40 | | 240 | |
| h_{FE-2} | DC Current Gain | $I_C = -3\text{A}; V_{CE} = -5\text{V}$ | 15 | | | |
| C_{OB} | Output Capacitance | $I_E = 0; V_{CB} = -10\text{V}; f = 1\text{MHz}$ | | 130 | | pF |
| f_T | Current-Gain—Bandwidth Product | $I_C = -0.5\text{A}; V_{CE} = -5\text{V}$ | | 9 | | MHz |

◆ h_{FE-1} Classifications

| R | O | Y |
|-------|--------|---------|
| 40-80 | 70-140 | 120-240 |