

isc Silicon PNP Darlington Power Transistor

2SB1022

DESCRIPTION

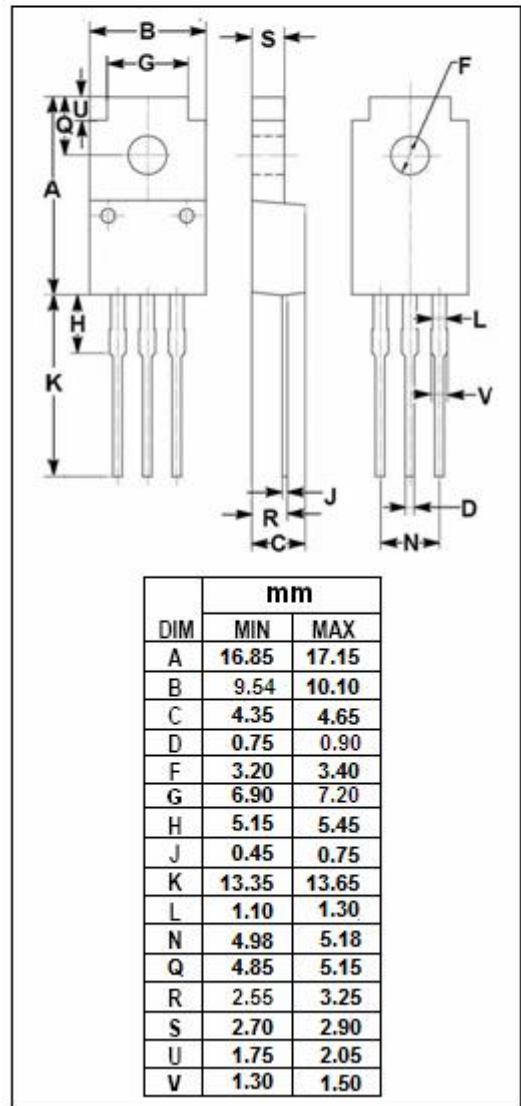
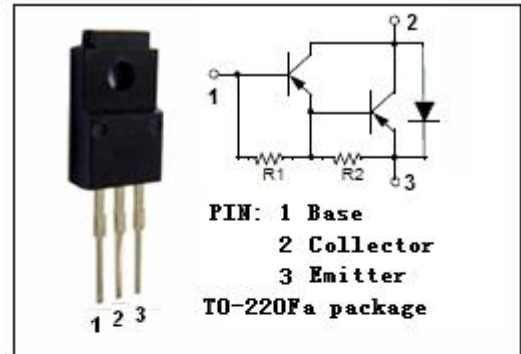
- High DC Current Gain-
: $h_{FE} = 2000(\text{Min.}) @ I_C = -3A$
- Low Collector Saturation Voltage-
: $V_{CE(sat)} = -1.5V(\text{Max}) @ I_C = -3A$
- Good Linearity of h_{FE}
- Complement to Type 2SD1417
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- High power switching applications.
- Hammer drive, pulse motor drive applications.

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|---|---------|------------------|
| V_{CBO} | Collector-Base Voltage | -60 | V |
| V_{CEO} | Collector-Emitter Voltage | -60 | V |
| V_{EBO} | Emitter-Base Voltage | -5 | V |
| I_C | Collector Current-Continuous | -7 | A |
| I_B | Base Current-Continuous | -0.2 | A |
| P_C | Collector Power Dissipation @ $T_a = 25^\circ\text{C}$ | 2 | W |
| | Collector Power Dissipation @ $T_c = 25^\circ\text{C}$ | 30 | |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature Range | -55~150 | $^\circ\text{C}$ |



isc Silicon PNP Darlington Power Transistor**2SB1022****ELECTRICAL CHARACTERISTICS****T_C=25°C unless otherwise specified**

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|-------------------------|--------------------------------------|--|------|------|-------|------|
| V _{(BR)CEO} | Collector-Emitter Breakdown Voltage | I _C = -50mA; I _B = 0 | -60 | | | V |
| V _{CE(sat)} -1 | Collector-Emitter Saturation Voltage | I _C = -3A; I _B = -6mA | | | -1.5 | V |
| V _{CE(sat)} -2 | Collector-Emitter Saturation Voltage | I _C = -7A; I _B = -14mA | | | -2.0 | V |
| V _{BE(sat)} | Base-Emitter Saturation Voltage | I _C = -3A; I _B = -6mA | | | -2.5 | V |
| I _{CBO} | Collector Cutoff Current | V _{CB} = -60V; I _E = 0 | | | -100 | μ A |
| I _{EBO} | Emitter Cutoff Current | V _{EB} = -5V; I _C = 0 | | | -4.0 | mA |
| h _{FE-1} | DC Current Gain | I _C = -3A; V _{CE} = -3V | 2000 | | 15000 | |
| h _{FE-2} | DC Current Gain | I _C = -7A; V _{CE} = -3V | 1000 | | | |

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