

isc Silicon PNP Power Transistor
2SB825
DESCRIPTION

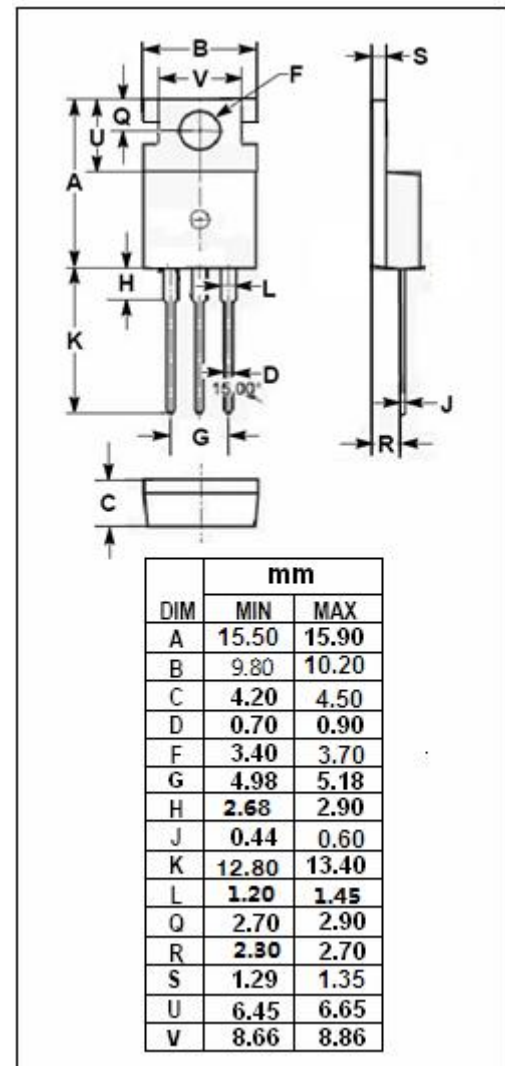
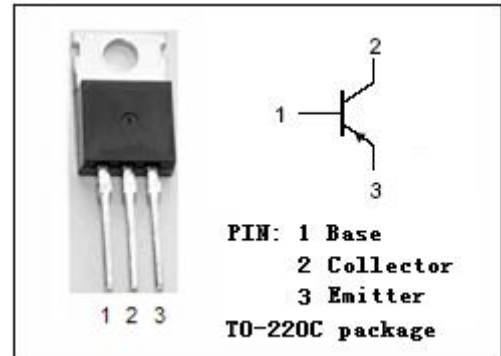
- High Collector Current:: $I_C = -7A$
- Low Collector Saturation Voltage
: $V_{CE(sat)} = -0.4V(\text{Max})@I_C = -4A$
- Wide Area of Safe Operation
- Complement to Type 2SD1061

APPLICATIONS

- Universal high current switching as solenoid driving, high speed inverter and converter.

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 | -50 | V |
| V_{EBO} | Emitter-Base Voltage | -6 | V |
| I_C | Collector Current-Continuous | -7 | A |
| I_{CM} | Collector Current-Peak | -12 | A |
| P_C | Total Power Dissipation @ $T_C = 25^\circ\text{C}$ | 40 | W |
| T_J | Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature Range | -55~150 | $^\circ\text{C}$ |



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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 = -1mA ; R _{BE} = ∞ | -50 | | | V |
| V _{(BR)CBO} | Collector-Base Breakdown Voltage | I _C = -1mA ; I _E = 0 | -60 | | | V |
| V _{(BR)EBO} | Emitter-Base Breakdown Voltage | I _E = -1mA ; I _C = 0 | -6 | | | V |
| V _{CE(sat)} | Collector-Emitter Saturation Voltage | I _C = -4A ; I _B = -0.4A | | | -0.4 | V |
| I _{CBO} | Collector Cutoff Current | V _{CB} = -40V ; I _E = 0 | | | -0.1 | mA |
| I _{EBO} | Emitter Cutoff Current | V _{EB} = -4V ; I _C = 0 | | | -0.1 | mA |
| h _{FE-1} | DC Current Gain | I _C = -1A ; V _{CE} = -2V | 70 | | 280 | |
| h _{FE-2} | DC Current Gain | I _C = -5A ; V _{CE} = -2V | 30 | | | |
| f _T | Current-Gain—Bandwidth Product | I _C = -1A ; V _{CE} = -5V | | 10 | | MHz |

◆ h_{FE-1} Classifications

| Q | R | S |
|--------|---------|---------|
| 70-140 | 100-200 | 140-280 |

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