

isc Silicon NPN Power Transistor
2SD254
DESCRIPTION

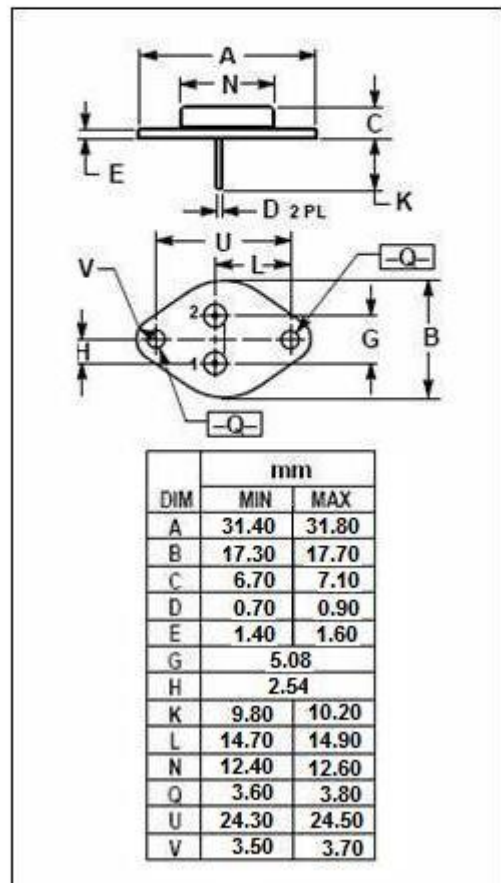
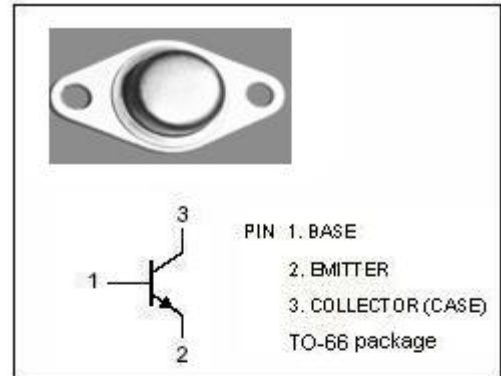
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CE0} = 70V(\text{Min})$
- Collector Power Dissipation-
: $P_C = 20W @ T_C = 25^\circ C$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

- Designed for use in general purpose amplifier and switching applications.

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

| SYMBOL | PARAMETER | VALUE | UNIT |
|-----------|---|---------|------------|
| V_{CBO} | Collector-Base Voltage | 70 | V |
| V_{CEO} | Collector-Emitter Voltage | 70 | V |
| V_{EBO} | Emitter-Base Voltage | 6 | V |
| I_C | Collector Current-Continuous | 3.0 | A |
| I_{CM} | Collector Current-Peak | 5.0 | A |
| I_B | Base Current | 1.0 | A |
| P_C | Collector Power Dissipation@ $T_C = 25^\circ C$ | 20 | W |
| T_J | Junction Temperature | 150 | $^\circ C$ |
| T_{stg} | Storage Temperature | -65~150 | $^\circ C$ |



isc Silicon NPN Power Transistor**2SD254****ELECTRICAL CHARACTERISTICS**T_C=25°C unless otherwise specified

| SYMBOL | PARAMETER | CONDITIONS | MIN | MAX | UNIT |
|------------------------|--------------------------------------|---|-----|-----|------|
| V _{CEQ(SUS)} | Collector-Emitter Sustaining Voltage | I _C = 30mA ; I _B = 0 | 70 | | V |
| V _{CE(sat)-1} | Collector-Emitter Saturation Voltage | I _C = 0.5A; I _B = 50mA | | 1.0 | V |
| V _{CE(sat)-2} | Collector-Emitter Saturation Voltage | I _C = 2A; I _B = 1A | | 2.0 | V |
| V _{BE(on)} | Base-Emitter On Voltage | I _C = 2A; V _{CE} = 4V | | 1.8 | V |
| I _{CBO} | Collector Cutoff Current | V _{CB} = 70V; V _{EB} = 0 | | 0.1 | mA |
| I _{CEO} | Collector Cutoff Current | V _{CE} = 70V; I _B = 0 | | 0.3 | mA |
| I _{EBO} | Emitter Cutoff Current | V _{EB} = 5V; I _C = 0 | | 0.1 | mA |
| h _{FE-1} | DC Current Gain | I _C = 0.5A ; V _{CE} = 2V | 30 | 200 | |
| h _{FE-2} | DC Current Gain | I _C = 2A ; V _{CE} = 2V | 15 | | |
| f _T | Current-Gain—Bandwidth Product | I _C = 0.5A ; V _{CE} = 10V | 10 | | MHz |

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