

isc Silicon NPN Power Transistors
2SC5706
DESCRIPTION

- Collector-Emitter Saturation Voltage-
: $V_{CE(sat)} = 0.135V(\text{Max.})@I_C = 1A$
- Collector-Emitter Breakdown Voltage-
: $V_{(BR)CEO} = 50V(\text{Min})$
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

APPLICATIONS

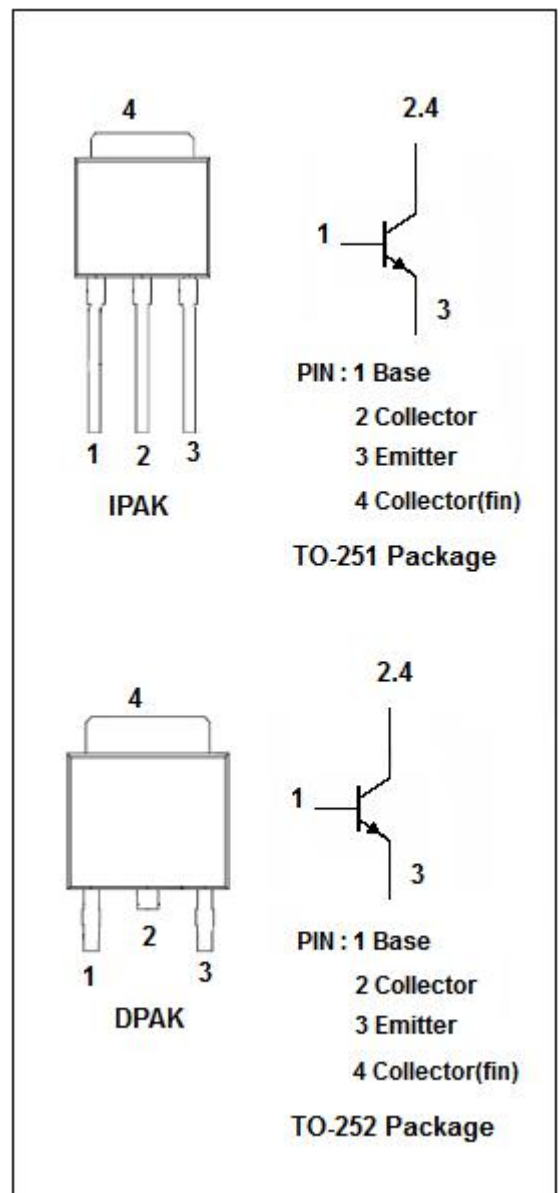
- Relay drivers, lamp drivers, motor drivers

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 | 50 | V |
| V_{EBO} | Emitter-Base Voltage | 6 | V |
| I_C | Collector Current-Continuous | 5 | A |
| I_{CM} | Collector Current-Pulse | 7.5 | A |
| P_C | Collector Power Dissipation @ $T_C=25^\circ\text{C}$ | 15 | W |
| T_j | Max.Junction Temperature | 150 | $^\circ\text{C}$ |
| T_{stg} | Storage Temperature Range | -55~150 | $^\circ\text{C}$ |

THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | MAX | UNIT |
|---------------|--------------------------------------|------|---------------------------|
| $R_{th\ j-c}$ | Thermal Resistance, Junction to Case | 8.33 | $^\circ\text{C}/\text{W}$ |



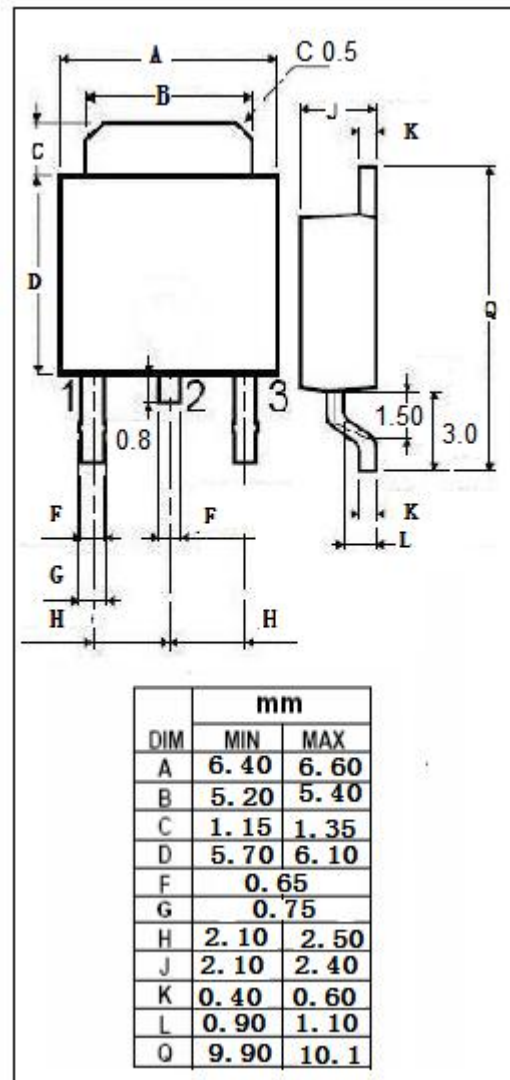
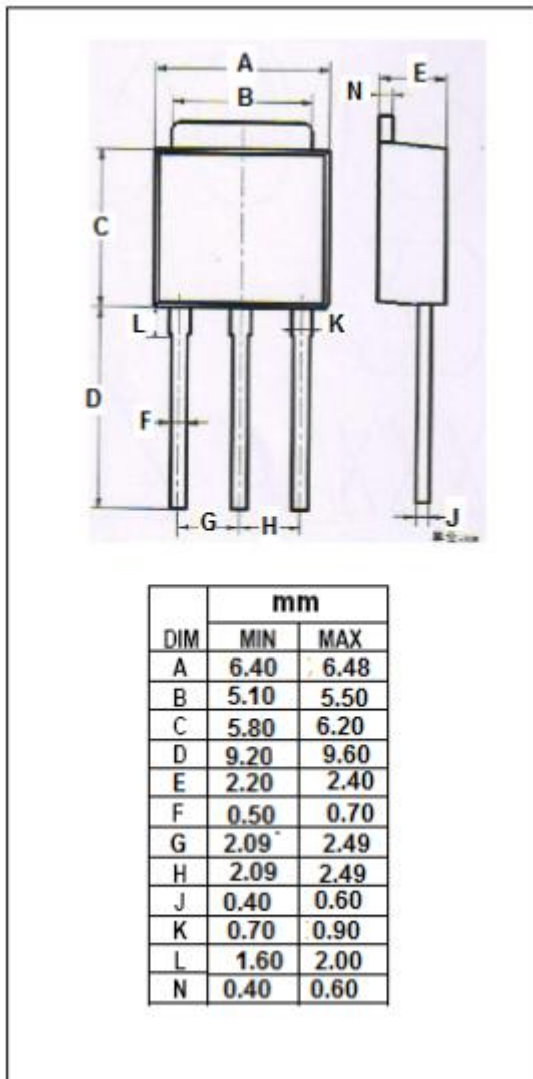
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ELECTRICAL CHARACTERISTICS

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

| SYMBOL | PARAMETER | CONDITIONS | MIN | MAX | UNIT |
|---------------|--------------------------------------|---|-----|---------------|---------------|
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage | $I_C=1\text{mA}; I_B=0$ | 50 | | V |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C=1\text{A}; I_B=50\text{mA}$ $I_C=2.0\text{A}; I_B=100\text{mA}$ | | 0.135 0.24 | V |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage | $I_C=2\text{A}; I_B=100\text{mA}$ | | 1.2 | V |
| I_{CBO} | Collector Cutoff Current | $V_{CE}=40\text{V}; V_{EB}=0$ | | 1 | μA |
| I_{EBO} | Emitter Cutoff Current | $V_{EB}=4\text{V}; I_C=0$ | | 1 | μA |
| h_{FE1} | DC Current Gain | $I_C=0.5\text{A}; V_{CE}=2\text{V}$ | 200 | 560 | |

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OUTLINE DRAWIN


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