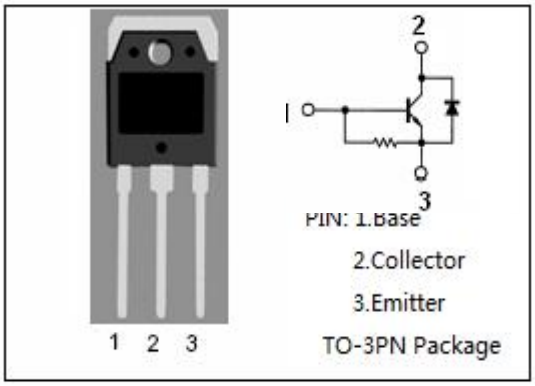
# isc Silicon NPN Power Transistor — 2SD1730

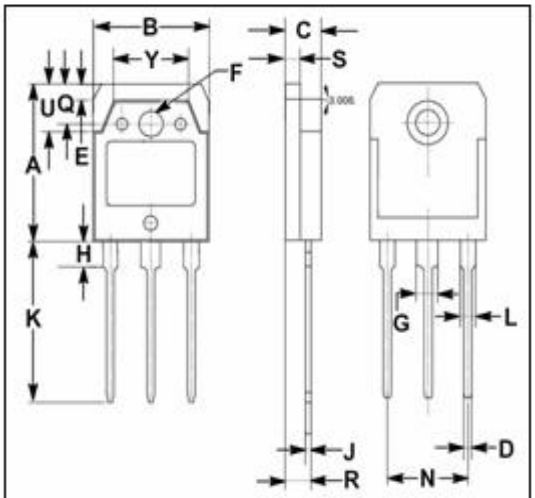



## DESCRIPTION

- High Voltage
- High Switching Speed
- Built-in damper diode
- Wide Area of Safe Operation
- Minimum Lot-to-Lot variations for robust device performance and reliable operation

## APPLICATIONS

- Designed for horizontal deflection output applications.




| DIM | mm MIN | MAX |
|---|---|---|
| A | 19.60 | 20.30 |
| B | 15.50 | 15.70 |
| C | 4.70 | 4.90 |
| D | 0.90 | 1.10 |
| E | 1.90 | 2.10 |
| F | 3.40 | 3.60 |
| G | 2.90 | 3.20 |
| H | 3.20 | 3.40 |
| J | 0.595 | 0.605 |
| K | 19.80 | 20.70 |
| L | 1.90 | 2.20 |
| N | 10.89 | 10.91 |
| Q | 4.90 | 5.10 |
| R | 3.35 | 3.45 |
| S | 1.995 | 2.100 |
| U | 5.90 | 6.20 |
| Y | 9.90 | 10.10 |

## ABSOLUTE MAXIMUM RATINGS ($T_a$=25℃)

| SYMBOL | PARAMETER | VALUE | UNIT |
|---|---|---|---|
| $V_{CBO}$ | Collector-Base Voltage | 1500 | V |
| $V_{CES}$ | Collector-Emitter Voltage | 1500 | V |
| $V_{CEO}$ | Collector-Emitter Voltage | 700 | V |
| $V_{EBO}$ | Emitter-Base Voltage | 7 | V |
| $I_C$ | Collector Current-Continuous | 5 | A |
| $I_{CP}$ | Collector Current-Peak | 15 | A |
| $I_B$ | Base Current- Continuous | 2 | A |
| $P_C$ | Collector Power Dissipation @$T_C$=25℃ | 100 | W |
| $T_j$ | Junction Temperature | 150 | ℃ |
| $T_{stg}$ | Storage Temperature Range | -55-150 | ℃ |

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## ELECTRICAL CHARACTERISTICS

**$T_C$=25℃ unless otherwise specified**

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP | MAX | UNIT |
|---|---|---|---|---|---|---|
| $V_{(BR)EBO}$ | Emitter-Base Breakdown Voltage | $I_E$=200mA; $I_C$= 0 | 7 | | | V |
| $V_{CE(sat)}$ | Collector-Emitter Saturation Voltage | $I_C$= 4A; $I_B$= 1A | | | 8.0 | V |
| $V_{BE(sat)}$ | Base-Emitter Saturation Voltage | $I_C$= 4A; $I_B$= 1A | | | 1.5 | V |
| $h_{FE}$ | DC Current Gain | $I_C$= 1A; $V_{CE}$= 5V | 5 | | 25 | |
| $I_{CBO}$ | Collector Cutoff Current | $V_{CB}$= 750V; $I_E$= 0 | | | 10 | μA |
| | | $V_{CB}$= 1500V; $I_E$= 0 | | | 1.0 | mA |
| $V_{ECF}$ | C-E Diode Forward Voltage | $I_F$= 5A | | | 2.3 | V |
| $f_T$ | Transition Frequency | $I_C$= 1A; $V_{CE}$= 10V | | 2 | | MHz |
| Switching Times, Resistive Load | | | | | | |
| $t_s$ | Storage Time | $I_C$= 4A; $I_{B1}$= 0.8A; $I_{B2}$= 1.6A, $V_{CC}$= 200V | | 1.5 | | μs |
| $t_f$ | Fall Time | | | 0.2 | | μs |

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