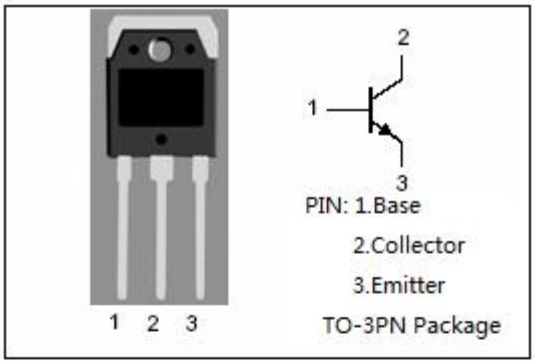
# isc Silicon NPN Power Transistor — MJW21196

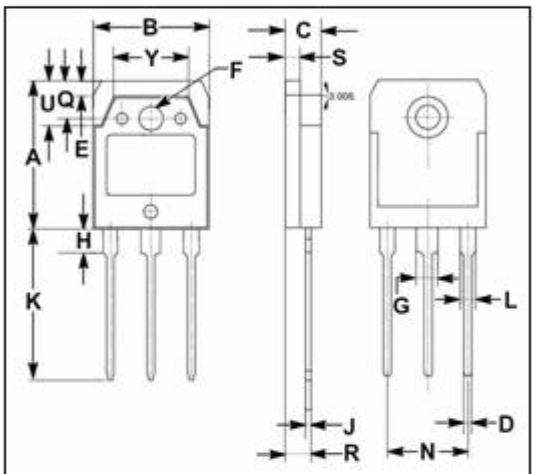
## DESCRIPTION

- Total harmonic distortion characterized
- High DC current gain
- Excellent gain linearity
- High SOA
- Minimum Lot-to-Lot variations for robust device performance and reliable operation




## APPLICATIONS

- The MJW21196 is specifically designed for high power audio output disk head positioners and linear applications




| DIM | mm MIN | mm 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(Ta=25℃)

| SYMBOL | PARAMETER | VALUE | UNIT |
|---|---|---|---|
| $V_{CBO}$ | Collector-Base Voltage | 400 | V |
| $V_{CEO}$ | Collector-Emitter Voltage | 250 | V |
| $V_{EBO}$ | Emitter-Base Voltage | 5 | V |
| $I_C$ | Collector Current-Continuous | 16 | A |
| $I_B$ | Base Current-Continuous | 5.0 | A |
| $P_C$ | Collector Power Dissipation @ $T_C$=25℃ | 200 | W |
| $T_J$ | Junction Temperature | 150 | ℃ |
| $T_{stg}$ | Storage Temperature Range | -65~150 | ℃ |

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## ELECTRICAL CHARACTERISTICS

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

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|---|---|---|---|---|---|---|
| $V_{(BR)CEO}$ | Collector-Emitter Breakdown Voltage | $I_C$= 50mA ; $I_B$= 0 | 250 | | | V |
| $V_{CE(sat)-1}$ | Collector-Emitter Saturation Voltage | $I_C$= 8.0A; $I_B$= 0.8A | | | 1.0 | V |
| $V_{CE(sat)-2}$ | Collector-Emitter Saturation Voltage | $I_C$= 16A; $I_B$= 3.2A | | | 3.0 | V |
| $V_{BE(on)}$ | Base-Emitter On Voltage | $I_C$=8A ; $V_{CE}$= 5V | | | 2.0 | V |
| $I_{CEO}$ | Collector Cutoff Current | $V_{CE}$= 200V ; $I_E$= 0 | | | 100 | μA |
| $I_{EBO}$ | Emitter Cutoff Current | $V_{EB}$= 5V; $I_C$= 0 | | | 50 | μA |
| $h_{FE-1}$ | DC Current Gain | $I_C$= 8A ; $V_{CE}$= 5V | 20 | | 80 | |
| $h_{FE-2}$ | DC Current Gain | $I_C$= 16A ; $V_{CE}$= 5V | 8 | | | |
| $f_T$ | Current-Gain—Bandwidth Product | $I_C$=1A ; $V_{CE}$= 10V | 4 | | | MHz |