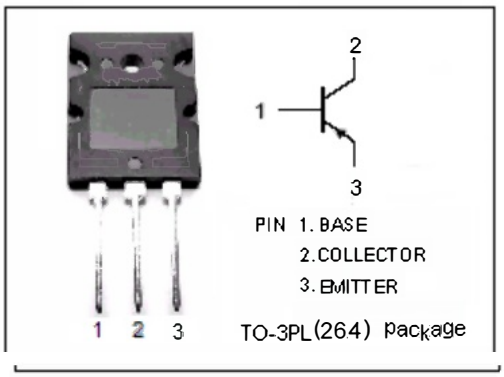
## SPTECH Silicon PNP Power Transistor

## MJL4302A

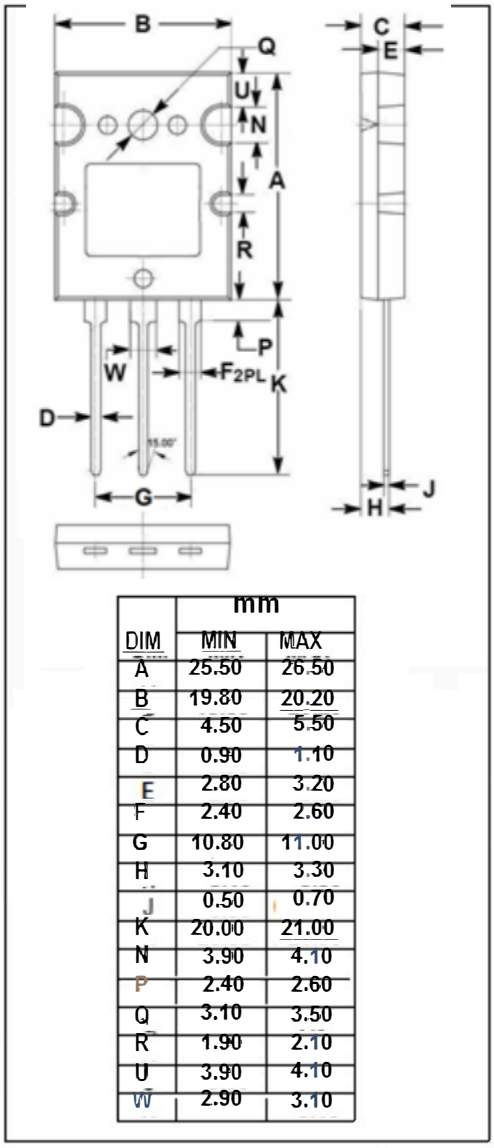



### DESCRIPTION

- Total Harmonic Distortion Characterized
- High DC Current Gain
- High Area of Safe Operation
- Complement to type MJL4281A

### APPLICATIONS

- Designed for high power audio output, disk head positioners and linear applications.




| DIM | mm MIN | MAX |
|---|---|---|
| A | 25.50 | 26.50 |
| B | 19.80 | 20.20 |
| C | 4.50 | 5.50 |
| D | 0.90 | 1.10 |
| E | 2.80 | 3.20 |
| F | 2.40 | 2.60 |
| G | 10.80 | 11.00 |
| H | 3.10 | 3.30 |
| J | 0.50 | 0.70 |
| K | 20.00 | 21.00 |
| N | 3.90 | 4.10 |
| P | 2.40 | 2.60 |
| Q | 3.10 | 3.50 |
| R | 1.90 | 2.10 |
| U | 3.90 | 4.10 |
| W | 2.90 | 3.10 |

### ABSOLUTE MAXIMUM RATINGS(Ta=25℃)

| SYMBOL | PARAMETER | VALUE | UNIT |
|---|---|---|---|
| $V_{CBO}$ | Col ector-Emitter Voltage | -350 | V |
| $V_{CEO}$ | Collector-Emitter Voltage | -350 | V |
| $V_{EBO}$ | Emitter-Base Voltage | -5 | V |
| $I_C$ | Collector Current-Continuous | -16 | A |
| $I_{CM}$ | Collector Current-Pulsed | -30 | A |
| $I_B$ | Base Current-Continuous | -1.5 | A |
| $P_D$ | Total Power Dissipation ($T_C$=25℃) | 230 | W |
| $T_j$ | Junction Temperature | 150 | ℃ |
| $T_{stg}$ | Storage Temperature | -65~150 | ℃ |

### THERMAL CHARACTERISTICS

| SYMBOL | PARAMETER | VALUE | UNIT |
|---|---|---|---|
| $R_{th\ j\text{-}C}$ | ThermalResistance Junction To Case | 0.7 | ℃/W |

# SPTECH Silicon PNP Power Transistor

## ELECTRICAL CHARACTERISTICS

**Tj=25℃ unless otherwise specified**

| SYMBOL | PARAMETER | CONDITIONS | MIN | TYP. | MAX | UNIT |
|---|---|---|---|---|---|---|
| $V_{CEO(SUS)}$ | Collector-Emitter Sustaining Voltage | $I_C$=-100mA; $I_B$=0 | -350 | | | V |
| $V_{CE(sat)-1}$ | Collector-Emitter Saturation Voltage | $I_C$=-8A ;$I_B$=-0.8A | | | -1.0 | V |
| $V_{CE(sat)-2}$ | Collector-Emitter Saturation Voltage | $I_C$=-16A ;$I_B$=-3.2A | | | -4 | V |
| $V_{BE(on)}$ | Base-Emitter On Voltage | $I_C$=-8A ; $V_{CE}$=-5V | | | -1.4 | V |
| $I_{CEO}$ | Collector Cutoff Current | $V_{CE}$=-200V,$I_B$=0 | | | -0.1 | mA |
| $I_{CEX}$ | Collector Cutoff Current | $V_{CE}$= -350V; $V_{BE(off)}$= -1.5V | | | -0.1 | mA |
| $I_{EBO}$ | Emitter Cutoff Current | $V_{EB}$=-5V; $I_C$=0 | | | -1 | μA |
| $h_{FE-1}$ | DC Current Gain | $I_C$=-8A; $V_{CE}$=-5V | 25 | | 160 | |
| $h_{FE-2}$ | DC Current Gain | $I_C$=-16A; $V_{CE}$=-5V | 8 | | | |
| $C_{OB}$ | Collector Capacitance | $I_E$= 0; f=1MHz ; $V_{CB}$=-10V | | | 500 | pF |
| $f_T$ | Current Gain-Bandwidth Product | $I_C$=-1A ;$V_{CE}$=-10V; $f_{test}$=1MHz | 4 | | | MHz |