



Micro Commercial Components

Micro Commercial Components  
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# MJF15030-BS01

## Features

- General-purpose Amplifier and Switching Applications
- No Isolating Washers Required
- Reduced System Cost
- Special Marking: TLC
- Case Material: Molded Plastic. UL Flammability Classification Rating 94V-0

### Maximum Ratings @ 25°C Unless Otherwise Noted

| Symbol         | Rating   | Value     | Unit       |
|----------------|--|-----------|------------|
| $V_{CE0}$      | Collector-Emitter Voltage  | 150       | V          |
| $V_{CBO}$      | Collector-Base Voltage   | 150       | V          |
| $V_{EB}$       | Emitter-Base Voltage   | 5.0       | V          |
| $I_C$          | Collector Current- Continuous - Peak                                 | 8.0<br>16 | A          |
| $I_B$          | Base Current   | 2.0       | A          |
| $P_D$          | Total Power Dissipation*<br>@ $T_C=25^\circ C$<br>@ $T_A=25^\circ C$ | 36<br>2.0 | W          |
| $T_J, T_{STG}$ | Operating and Storage Temperature Range                              | -55~+150  | $^\circ C$ |

### Thermal Characteristics

| Symbol          | Characteristic                        | Max | Unit         |
|-----------------|---------------------------------------|-----|--------------|
| $R_{\theta JC}$ | Thermal Resistance, Junction to Case* | 3.5 | $^\circ C/W$ |

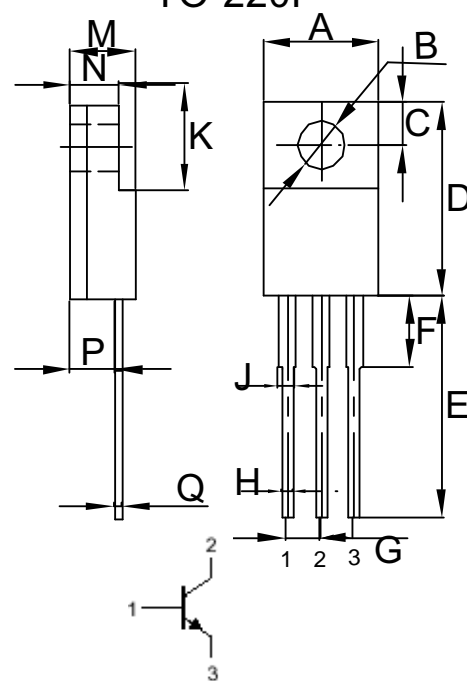
\* Measurement made with thermocouple contacting the bottom insulated mounting surface (in a location beneath the die), the device mounted on a heatsink with thermal grease and a mounting torque of >6 in. lbs.

### Electrical Characteristics @ 25°C Unless Otherwise Noted

| Symbol         | Characteristic   | Min                  | Max  | Unit    |
|----------------|--|----------------------|------|---------|
| $V_{CE0(SUS)}$ | Collector-Emitter Sustaining Voltage<br>( $I_C=10mA, I_B=0$ )  | 150                  | ---- | V       |
| $V_{CE(sat)}$  | Collector-Emitter Saturation Voltage<br>( $I_C=1.0A, I_B=0.1A$ )   |                      | 0.5  | V       |
| $V_{BE}$       | Emitter-Base on Voltage<br>( $I_C=1.0A, V_{CE}=2.0V$ )   |                      | 1.0  | V       |
| $I_{CEO}$      | Collector Cut-off Current<br>( $V_{CE}=150V, I_B=0$ )  | ----                 | 10   | $\mu A$ |
| $I_{CBO}$      | Collector Cut-off Current<br>( $V_{CB}=150V, I_E=0$ )  | ----                 | 10   | $\mu A$ |
| $I_{EBO}$      | Emitter Cut-off Current<br>( $V_{BE}=5.0V, I_C=0$ )  | ----                 | 10   | $\mu A$ |
| $h_{FE}$       | DC Current Gain ( $I_C=0.1A, V_{CE}=2.0V$ )<br>( $I_C=2.0A, V_{CE}=2.0V$ )<br>( $I_C=3.0A, V_{CE}=2.0V$ )<br>( $I_C=4.0A, V_{CE}=2.0V$ ) | 40<br>40<br>40<br>20 | ---- |         |
| $f_T$          | Transition Frequency<br>( $I_C=500mA, V_{CE}=10V$ )  | 30                   | ---- | MHz     |

## Silicon Power Transistors 150 Volts

### TO-220F



| DIM | DIMENSIONS |      |      |       | NOTE |
|-----|------------|------|------|-------|------|
|     | INCHES     |      | MM   |       |      |
| A   | .388       | .407 | 9.85 | 10.35 |      |
| B   | .128       | .145 | 3.25 | 3.55  |      |
| C   | .101       | .111 | 2.57 | 2.83  |      |
| D   | .570       | .610 | 14.9 | 15.5  |      |
| E   | .496       | .520 | 12.6 | 13.2  |      |
| F   | .148       | .167 | 3.75 | 4.25  |      |
| G   | .096       | .101 | 2.44 | 2.57  |      |
| H   | .019       | .029 | .47  | .73   |      |
| J   | .046       | .056 | 1.17 | 1.43  |      |
| K   | .266       | .285 | 6.75 | 7.25  |      |
| M   | .165       | .190 | 4.25 | 4.75  |      |
| N   | .110       | .130 | 2.81 | 3.31  |      |
| P   | .097       | .107 | 2.72 | 2.48  |      |
| Q   | .019       | .029 | .47  | .73   |      |



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