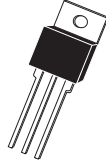


MJE15028 MJE15030 NPN
MJE15029 MJE15031 PNP

**COMPLEMENTARY SILICON
POWER TRANSISTORS**



TO-220 CASE

CentralTM
Semiconductor Corp.

DESCRIPTION:

The CENTRAL SEMICONDUCTOR MJE15028/MJE15029 Series types are Complementary Silicon Power Transistors designed for use in audio amplifier applications.

MARKING: FULL PART NUMBER

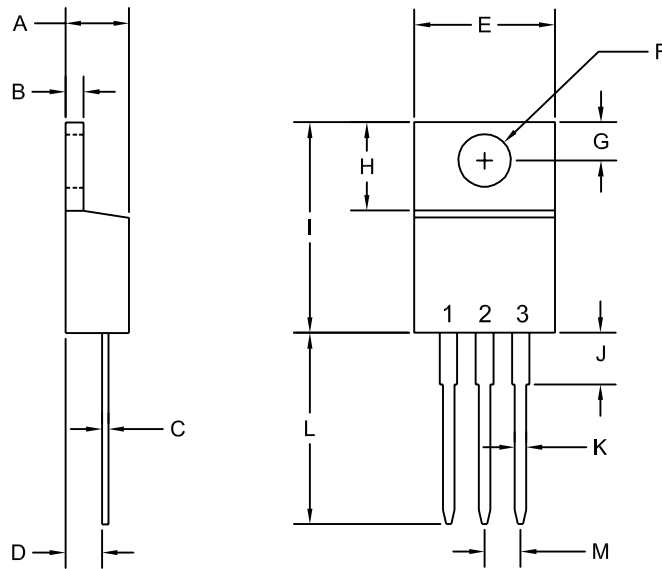
MAXIMUM RATINGS: ($T_A=25^\circ\text{C}$ unless otherwise noted)

| | SYMBOL | MJE15028 MJE15029 | MJE15030 MJE15031 | UNITS |
|--|----------------|------------------------------|------------------------------|--------------------|
| Collector-Base Voltage | V_{CBO} | 120 | 150 | V |
| Collector-Emitter Voltage | V_{CEO} | 120 | 150 | V |
| Emitter-Base Voltage | V_{EBO} | | 5.0 | V |
| Continuous Collector Current | I_C | | 8.0 | A |
| Peak Collector Current | I_{CM} | | 16 | A |
| Base Current | I_B | | 2.0 | A |
| Power Dissipation | P_D | | 2.0 | W |
| Power Dissipation ($T_C=25^\circ\text{C}$) | P_D | | 50 | W |
| Operating and Storage Junction Temperature | T_J, T_{stg} | -65 to +150 | | $^\circ\text{C}$ |
| Thermal Resistance | θ_{JA} | 62.5 | | $^\circ\text{C/W}$ |
| Thermal Resistance | θ_{JC} | 2.5 | | $^\circ\text{C/W}$ |

ELECTRICAL CHARACTERISTICS: ($T_C=25^\circ\text{C}$)

| SYMBOL | TEST CONDITIONS | MIN | MAX | UNITS |
|----------------------|---|------------|------------|---------------|
| I_{CBO} | $V_{CB}=\text{Rated } V_{CBO}$ | | 10 | μA |
| I_{CEO} | $V_{CE}=\text{Rated } V_{CEO}$ | | 100 | μA |
| I_{EBO} | $V_{EB}=5.0\text{V}$ | | 10 | μA |
| BV_{CEO} | $I_C=10\text{mA}$ (MJE15028, MJE15029) | 120 | | V |
| BV_{CEO} | $I_C=10\text{mA}$ (MJE15030, MJE15031) | 150 | | V |
| $V_{CE(\text{SAT})}$ | $I_C=1.0\text{A}, I_B=100\text{mA}$ | | 0.5 | V |
| $V_{BE(\text{ON})}$ | $V_{CE}=2.0\text{V}, I_C=1.0\text{A}$ | | 1.0 | V |
| h_{FE} | $V_{CE}=2.0\text{V}, I_C=100\text{mA}$ | 40 | | |
| h_{FE} | $V_{CE}=2.0\text{V}, I_C=2.0\text{A}$ | 40 | | |
| h_{FE} | $V_{CE}=2.0\text{V}, I_C=3.0\text{A}$ | 40 | | |
| h_{FE} | $V_{CE}=2.0\text{V}, I_C=4.0\text{A}$ | 20 | | |
| f_T | $V_{CE}=10\text{V}, I_C=500\text{mA}, f=10\text{MHz}$ | 30 | | MHz |

TO-220 CASE - MECHANICAL OUTLINE



R2

| SYMBOL | DIMENSIONS | | | |
|---------|------------|-------|-------------|-------|
| | INCHES | | MILLIMETERS | |
| | MIN | MAX | MIN | MAX |
| A | 0.170 | 0.190 | 4.31 | 4.82 |
| B | 0.045 | 0.055 | 1.15 | 1.39 |
| C | 0.013 | 0.026 | 0.33 | 0.65 |
| D | 0.083 | 0.107 | 2.10 | 2.72 |
| E | 0.394 | 0.417 | 10.01 | 10.60 |
| F (DIA) | 0.140 | 0.157 | 3.55 | 4.00 |
| G | 0.100 | 0.118 | 2.54 | 3.00 |
| H | 0.230 | 0.270 | 5.85 | 6.85 |
| I | 0.560 | 0.625 | 14.23 | 15.87 |
| J | - | 0.250 | - | 6.35 |
| K | 0.025 | 0.038 | 0.64 | 0.96 |
| L | 0.500 | 0.579 | 12.70 | 14.70 |
| M | 0.090 | 0.110 | 2.29 | 2.79 |

TO-220 (REV: R2)

LEAD CODE:

- 1) BASE
- 2) COLLECTOR
- 3) EMITTER
- TAB) COLLECTOR

MARKING:

FULL PART NUMBER

R0 (17-February 2009)



OUTSTANDING SUPPORT AND SUPERIOR SERVICES

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- Consolidated shipping options
- Custom bar coding for shipments
- Custom product packing

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Central's applications engineering team is ready to discuss your design challenges. Just ask.

- Free quick ship samples (2nd day air)
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- Special wafer diffusions
- PbSn plating options
- Package details
- Application notes
- Application and design sample kits
- Custom product and package development

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1. If requesting Tin/Lead plated devices, add the suffix "TIN/LEAD" to the part number when ordering (example: 2N2222A TIN/LEAD).
2. If requesting Lead (Pb) Free plated devices, add the suffix "PBFREE" to the part number when ordering (example: 2N2222A PBFREE).

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