

CJD200 NPN  
CJD210 PNP

**SURFACE MOUNT SILICON  
COMPLEMENTARY  
POWER TRANSISTORS**



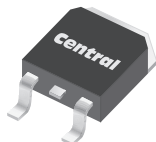
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**DESCRIPTION:**

The CENTRAL SEMICONDUCTOR CJD200 and CJD210 are complementary silicon power transistors manufactured in a surface mount package designed for high current amplifier applications.

**MARKING: FULL PART NUMBER**

**DPAK**  
**POWER!**



**DPAK CASE**

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

|  | <b>SYMBOL</b>  |             | <b>UNITS</b>       |
|--|----------------|-------------|--------------------|
| Collector-Base Voltage                       | $V_{CBO}$      | 40          | V                  |
| Collector-Emitter Voltage                    | $V_{CEO}$      | 25          | V                  |
| Emitter-Base Voltage                         | $V_{EBO}$      | 8.0         | V                  |
| Continuous Collector Current                 | $I_C$          | 5.0         | A                  |
| Peak Collector Current                       | $I_{CM}$       | 10          | A                  |
| Continuous Base Current                      | $I_B$          | 1.0         | A                  |
| Power Dissipation                            | $P_D$          | 12.5        | W                  |
| Power Dissipation ( $T_A=25^\circ\text{C}$ ) | $P_D$          | 1.4         | W                  |
| Operating and Storage Junction Temperature   | $T_J, T_{stg}$ | -65 to +150 | $^\circ\text{C}$   |
| Thermal Resistance                           | $\theta_{JC}$  | 10          | $^\circ\text{C/W}$ |
| Thermal Resistance                           | $\theta_{JA}$  | 89.3        | $^\circ\text{C/W}$ |

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

| <b>SYMBOL</b> | <b>TEST CONDITIONS</b>                                | <b>MIN</b> | <b>MAX</b> | <b>UNITS</b>  |
|---------------|---|------------|------------|---------------|
| $I_{CBO}$     | $V_{CB}=40\text{V}$                                   |            | 100        | nA            |
| $I_{CBO}$     | $V_{CB}=40\text{V}, T_C=125^\circ\text{C}$            |            | 100        | $\mu\text{A}$ |
| $I_{EBO}$     | $V_{EB}=8.0\text{V}$                                  |            | 100        | nA            |
| $BV_{CEO}$    | $I_C=10\text{mA}$                                     | 25         |            | V             |
| $V_{CE(SAT)}$ | $I_C=500\text{mA}, I_B=50\text{mA}$                   |            | 0.3        | V             |
| $V_{CE(SAT)}$ | $I_C=2.0\text{A}, I_B=200\text{mA}$                   |            | 0.75       | V             |
| $V_{CE(SAT)}$ | $I_C=5.0\text{A}, I_B=1.0\text{A}$                    |            | 1.8        | V             |
| $V_{BE(SAT)}$ | $I_C=5.0\text{A}, I_B=1.0\text{A}$                    |            | 2.5        | V             |
| $V_{BE(ON)}$  | $V_{CE}=1.0\text{V}, I_C=2.0\text{A}$                 |            | 1.6        | V             |
| $h_{FE}$      | $V_{CE}=1.0\text{V}, I_C=500\text{mA}$                | 70         |            |               |
| $h_{FE}$      | $V_{CE}=1.0\text{V}, I_C=2.0\text{A}$                 | 45         | 180        |               |
| $h_{FE}$      | $V_{CE}=2.0\text{V}, I_C=5.0\text{A}$                 | 10         |            |               |
| $f_T$         | $V_{CE}=10\text{V}, I_C=100\text{mA}, f=10\text{MHz}$ | 65         |            | MHz           |
| $C_{ob}$      | $V_{CB}=10\text{V}, I_E=0, f=0.1\text{MHz}$ (CJD200)  |            | 80         | pF            |
| $C_{ob}$      | $V_{CB}=10\text{V}, I_E=0, f=0.1\text{MHz}$ (CJD210)  |            | 120        | pF            |

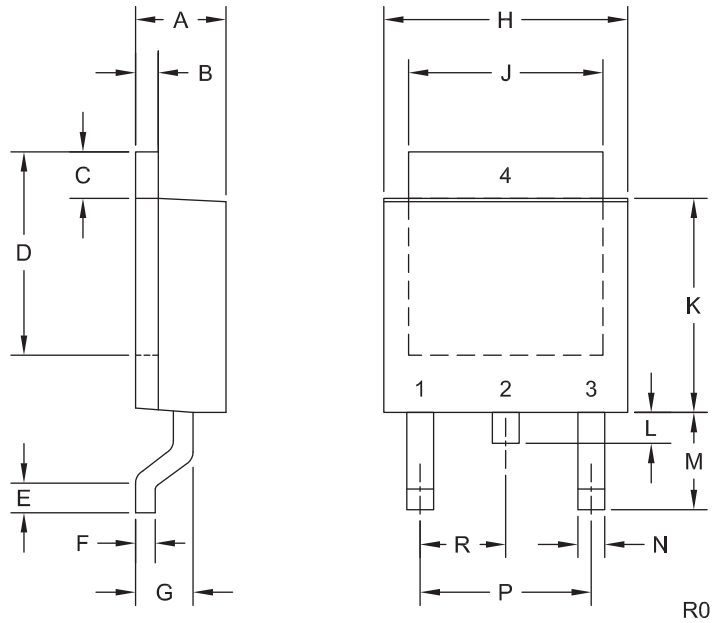
R3 (21-January 2013)

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**DPAK CASE - MECHANICAL OUTLINE**



**LEAD CODE:**

- 1) Base
- 2) Collector
- 3) Emitter
- 4) Collector

**MARKING:**

**FULL PART NUMBER**

| SYMBOL | DIMENSIONS |       |             |      |
|--------|------------|-------|-------------|------|
|        | INCHES     |       | MILLIMETERS |      |
|        | MIN        | MAX   | MIN         | MAX  |
| A      | 0.083      | 0.108 | 2.10        | 2.75 |
| B      | 0.016      | 0.032 | 0.40        | 0.81 |
| C      | 0.035      | 0.063 | 0.89        | 1.60 |
| D      | 0.203      | 0.228 | 5.15        | 5.79 |
| E      | 0.020      | -     | 0.51        | -    |
| F      | 0.018      | 0.024 | 0.45        | 0.60 |
| G      | 0.051      | 0.071 | 1.30        | 1.80 |
| H      | 0.248      | 0.268 | 6.30        | 6.81 |
| J      | 0.197      | 0.217 | 5.00        | 5.50 |
| K      | 0.209      | 0.245 | 5.30        | 6.22 |
| L      | 0.025      | 0.040 | 0.64        | 1.02 |
| M      | 0.090      | 0.115 | 2.30        | 2.91 |
| N      | 0.012      | 0.045 | 0.30        | 1.14 |
| P      | 0.180      |       | 4.60        |      |
| R      | 0.090      |       | 2.30        |      |

DPAK (REV: R0)

R3 (21-January 2013)

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