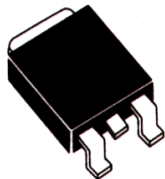




CJD44H11 NPN  
CJD45H11 PNP

COMPLEMENTARY SILICON  
POWER TRANSISTOR

**DPAK** **POWER!**™



DPAK CASE

**Central**™  
**Semiconductor Corp.**

#### DESCRIPTION:

The CENTRAL SEMICONDUCTOR CJD44H11, CJD45H11 types are Complementary Silicon Power Transistors manufactured in a surface mount package designed for switching and power amplifier applications.

#### MAXIMUM RATINGS (T<sub>C</sub>=25°C)

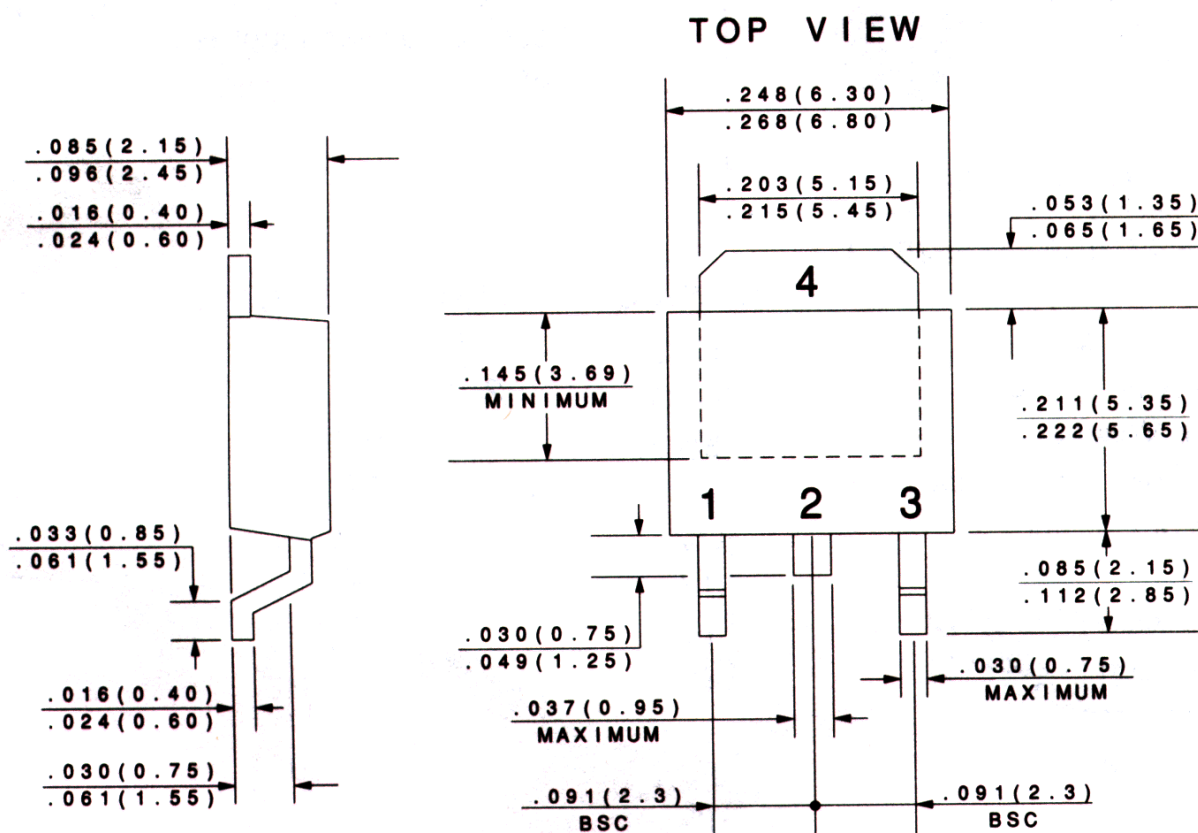
|                                          | SYMBOL                            |             | UNITS |
|------------------------------------------|-----------------------------------|-------------|-------|
| Collector-Emitter Voltage                | V <sub>CEO</sub>                  | 80          | V     |
| Emitter-Base Voltage                     | V <sub>EBO</sub>                  | 5.0         | V     |
| Continuous Collector Current             | I <sub>C</sub>                    | 8.0         | A     |
| Peak Collector Current                   | I <sub>CM</sub>                   | 16          | A     |
| Power Dissipation (T <sub>C</sub> =25°C) | P <sub>D</sub>                    | 20          | W     |
| Power Dissipation (T <sub>A</sub> =25°C) | P <sub>D</sub>                    | 1.75        | W     |
| Operating and Storage                    |                                   |             |       |
| Junction Temperature                     | T <sub>J</sub> , T <sub>stg</sub> | -65 to +150 | °C    |
| Thermal Resistance                       | θ <sub>JC</sub>                   | 6.25        | °C/W  |
| Thermal Resistance                       | θ <sub>JA</sub>                   | 71.4        | °C/W  |

#### ELECTRICAL CHARACTERISTICS (T<sub>C</sub>=25°C unless otherwise noted)

| SYMBOL                          | TEST CONDITIONS                                                 | MIN | TYP | MAX | UNITS |
|---------------------------------|-----------------------------------------------------------------|-----|-----|-----|-------|
| I <sub>CES</sub>                | V <sub>CE</sub> =80V                                            |     |     | 10  | μA    |
| I <sub>EBO</sub>                | V <sub>EB</sub> =5.0V                                           |     |     | 50  | μA    |
| BV <sub>CEO</sub>               | I <sub>C</sub> =30mA                                            | 80  |     |     | V     |
| V <sub>CE(SAT)</sub>            | I <sub>C</sub> =8.0A, I <sub>B</sub> =400mA                     |     |     | 1.0 | V     |
| V <sub>BE(SAT)</sub>            | I <sub>C</sub> =8.0A, I <sub>B</sub> =800mA                     |     |     | 1.5 | V     |
| h <sub>FE</sub>                 | V <sub>CE</sub> =1.0V, I <sub>C</sub> =2.0A                     | 60  |     |     |       |
| h <sub>FE</sub>                 | V <sub>CE</sub> =1.0V, I <sub>C</sub> =4.0A                     | 40  |     |     |       |
| f <sub>T</sub>                  | V <sub>CE</sub> =10V, I <sub>C</sub> =500mA, f=20MHz (CJD44H11) |     | 60  |     | MHz   |
| f <sub>T</sub>                  | V <sub>CE</sub> =10V, I <sub>C</sub> =500mA, f=20MHz (CJD45H11) |     | 50  |     | MHz   |
| C <sub>ob</sub>                 | V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=0.1MHz (CJD44H11)    |     | 120 |     | pF    |
| C <sub>ob</sub>                 | V <sub>CB</sub> =10V, I <sub>E</sub> =0, f=0.1MHz (CJD45H11)    |     | 220 |     | pF    |
| t <sub>d</sub> + t <sub>r</sub> | I <sub>C</sub> =5.0A, I <sub>B1</sub> =500mA (CJD44H11)         |     | 320 |     | ns    |
| t <sub>d</sub> + t <sub>r</sub> | I <sub>C</sub> =5.0A, I <sub>B1</sub> =500mA (CJD45H11)         |     | 150 |     | ns    |

| SYMBOL | TEST CONDITIONS                                         | MIN | TYP | MAX | UNITS |
|--------|---------------------------------------------------------|-----|-----|-----|-------|
| $t_s$  | $I_C=5.0A$ , $I_{B1}=I_{B2}=500mA$ (CJD44H11, CJD45H11) |     | 450 |     | ns    |
| $t_f$  | $I_C=5.0A$ , $I_{B1}=I_{B2}=500mA$ (CJD44H11)           |     | 130 |     | ns    |
| $t_f$  | $I_C=5.0A$ , $I_{B1}=I_{B2}=500mA$ (CJD45H11)           |     | 100 |     | ns    |

All dimensions in inches (mm).



**LEAD CODE:**

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