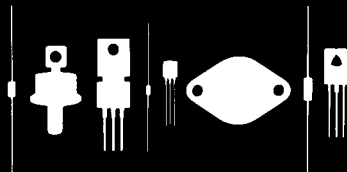


Central  
Semiconductor Corp.  
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145 Adams Avenue  
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**MJE341  
MJE344**

**NPN SILICON  
POWER TRANSISTOR**

**JEDEC TO-126 CASE**

## DESCRIPTION

The CENTRAL SEMICONDUCTOR MJE341, MJE344 types are NPN Silicon Power Transistors designed for amplifier applications requiring high  $f_T$ .

## MAXIMUM RATINGS ( $T_C = 25^\circ\text{C}$ )

|                              | SYMBOL         | MJE341      | MJE344 | UNITS              |
|------------------------------|----------------|-------------|--------|--------------------|
| Collector-Base Voltage       | $V_{CBO}$      | 175         | 200    | V                  |
| Collector-Emitter Voltage    | $V_{CEO}$      | 150         | 200    | V                  |
| Emitter-Base Voltage         | $V_{EBO}$      | 3.0         | 5.0    | V                  |
| Continuous Collector Current | $I_C$          | 500         |        | mA                 |
| Continuous Base Current      | $I_B$          | 250         |        | mA                 |
| Power Dissipation            | $P_D$          | 20          |        | W                  |
| Operating and Storage        |                |             |        |                    |
| Junction Temperature         | $T_J, T_{stg}$ | -65 to +150 |        | $^\circ\text{C}$   |
| Thermal Resistance           | $\theta_{JC}$  | 6.25        |        | $^\circ\text{C/W}$ |

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

| SYMBOL        | TEST CONDITIONS                                             | MJE341 |     | MJE344 |     | UNITS |
|---------------|-------------------------------------------------------------|--------|-----|--------|-----|-------|
|               |                                                             | MIN    | MAX | MIN    | MAX |       |
| $I_{CBO}$     | $V_{CB} = \text{Rated } V_{CBO}$                            |        | 0.3 |        | 0.1 | mA    |
| $I_{CEO}$     | $V_{CE} = \text{Rated } V_{CEO}$                            |        | 1.0 |        | 1.0 | mA    |
| $I_{EBO}$     | $V_{EB} = \text{Rated } V_{EBO}$                            |        | 0.1 |        | 0.1 | mA    |
| $BV_{CEO}$    | $I_C = 1.0\text{mA}$                                        | 150    |     | 200    |     | V     |
| $V_{CE(SAT)}$ | $I_C = 50\text{mA}, I_B = 5.0\text{mA}$                     |        | -   |        | 1.0 | V     |
| $V_{CE(SAT)}$ | $I_C = 150\text{mA}, I_B = 15\text{mA}$                     |        | 2.3 |        | -   | V     |
| $V_{BE(ON)}$  | $V_{CE} = 10\text{V}, I_C = 50\text{mA}$                    |        | 1.0 |        | 1.0 | V     |
| $h_{FE}$      | $V_{CE} = 10\text{V}, I_C = 10\text{mA}$                    | 20     |     | -      |     |       |
| $h_{FE}$      | $V_{CE} = 10\text{V}, I_C = 50\text{mA}$                    | 25     | 200 | 30     | 300 |       |
| $h_{FE}$      | $V_{CE} = 10\text{V}, I_C = 150\text{mA}$                   | 20     |     | -      |     |       |
| $f_T$         | $V_{CE} = 25\text{V}, I_C = 50\text{mA}, f = 10\text{MHz}$  | 15     |     | 15     |     | MHz   |
| $C_{ob}$      | $V_{CB} = 20\text{V}, I_E = 0, f = 100\text{kHz}$           |        | 15  |        | 15  | pF    |
| $h_{fe}$      | $V_{CE} = 10\text{V}, I_C = 50\text{mA}, f = 1.0\text{kHz}$ | 25     |     | 25     |     |       |