

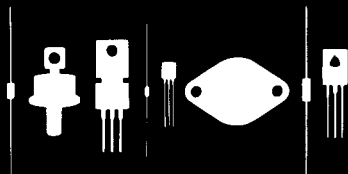
Central  
Semiconductor Corp.

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145 Adams Avenue  
Hauppauge, New York 11788



2N4951  
2N4952  
2N4953  
2N4954

NPN SILICON TRANSISTORS

JEDEC TO-92 CASE (ECB)

## DESCRIPTION

The CENTRAL SEMICONDUCTOR 2N4951 Series types are Epoxy Molded Silicon NPN Transistors designed for use as medium power amplifier and switching applications.

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

|                                               | SYMBOL         |             | UNIT               |
|-----------------------------------------------|----------------|-------------|--------------------|
| Collector-Base Voltage (Except 2N4954)        | $V_{CB0}$      | 60          | V                  |
| Collector-Base Voltage (2N4954 only)          | $V_{CB0}$      | 40          | V                  |
| Collector-Emitter Voltage                     | $V_{CE0}$      | 30          | V                  |
| Emitter-Base Voltage                          | $V_{EB0}$      | 5.0         | V                  |
| Collector Current                             | $I_C$          | 1.0         | A                  |
| Power Dissipation                             | $P_D$          | 625         | mW                 |
| Operating and Storage<br>Junction Temperature | $T_J, T_{stg}$ | -65 TO +150 | $^{\circ}\text{C}$ |

## ELECTRICAL CHARACTERISTICS ( $T_A=25^{\circ}\text{C}$ )

| SYMBOL                        | TEST CONDITIONS                             | MIN                                           | MAX | UNIT |     |
|-------------------------------|---------------------------------------------|-----------------------------------------------|-----|------|-----|
| $I_{CBO}$                     | $V_{CB}=40V$                                |                                               | 50  | nA   |     |
| $BV_{CBO}$ (except<br>2N4954) | $I_C=1.0\mu A$                              | 60                                            |     | V    |     |
| $BV_{CBO}$<br>(2N4954 only)   | $I_C=1.0\mu A$                              | 40                                            |     | V    |     |
| $BV_{CEO}$                    | $I_C=10mA$                                  | 30                                            |     | V    |     |
| $BV_{EBO}$                    | $I_E=1.0\mu A$                              | 5.0                                           |     | V    |     |
| $V_{CE}(SAT)$                 | $I_C=150mA, I_B=15mA$                       |                                               | 0.3 | V    |     |
| $V_{BE}(SAT)$                 | $I_C=150mA, I_B=15mA$                       |                                               | 1.3 | V    |     |
| $C_{ob}$                      | $V_{CB}=10V, f=1.0MHz$                      |                                               | 8.0 | pF   |     |
| $f_T$                         | $V_{CE}=10V, I_C=20mA, f=100MHz$            | 250                                           |     | MHz  |     |
| $t_{off}$                     | $V_{CC}=30V, I_C=150mA, I_{B1}=I_{B2}=15mA$ |                                               | 400 | ns   |     |
| $t_{on}$                      | $V_{CC}=30V, I_C=150mA, I_{B1}=15mA$        |                                               | 40  | ns   |     |
|                               |                                             | <div><div>2N4951</div><div>MINMAX</div></div> |     |      |     |
|                               |                                             | <div><div>2N4952</div><div>MINMAX</div></div> |     |      |     |
|                               |                                             | <div><div>2N4953</div><div>MINMAX</div></div> |     |      |     |
|                               |                                             | <div><div>2N4954</div><div>MINMAX</div></div> |     |      |     |
| $h_{FE}$                      | $V_{CE}=10V, I_C=1.0mA$                     | 20                                            |     | 75   | 20  |
| $h_{FE}$                      | $V_{CE}=10V, I_C=10mA$                      | 40                                            |     | 150  | 40  |
| $h_{FE}$                      | $V_{CE}=10V, I_C=150mA$                     | 60                                            | 200 | 200  | 600 |



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