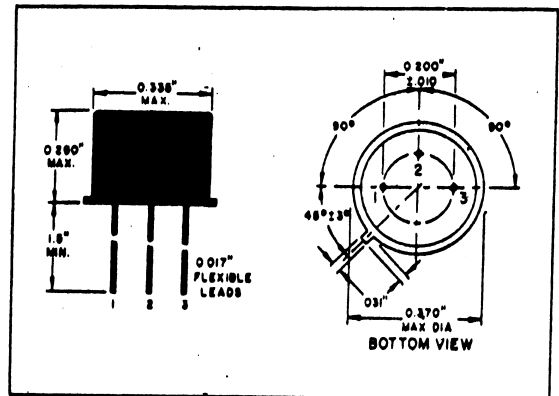


# New Jersey Semi-Conductor Products, Inc.

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2N1034 2N1035  
2N1036 2N1037



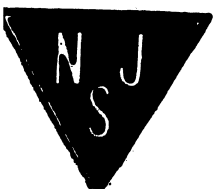
## MECHANICAL DATA

CASE: JEDEC TO-5  
TERMINAL CONNECTIONS:  
Lead 1 Emitter  
Lead 2 Base  
Lead 3 Collector (All leads isolated from case)

## ELECTRICAL DATA

### ABSOLUTE MAXIMUM RATINGS:

|                                        | 2N1034 | 2N1035 | 2N1036 | 2N1037 |                 |
|----------------------------------------|--------|--------|--------|--------|-----------------|
| Collector to Base Voltage $V_{CB0}$    | -50    | -50    | -50    | -50    | volts           |
| Collector to Emitter Voltage $V_{CE0}$ | -40    | -35    | -30    | -35    | volts           |
| Emitter to Base Voltage $V_{EB0}$      | -20    | -20    | -20    | -20    | volts           |
| Total Device Dissipation               |        |        |        |        |                 |
| @ Case Temperature 25°C                | 0.5    | 0.5    | 0.5    | 0.5    | watts           |
| @ Case Temperature 100°C               | 0.3    | 0.3    | 0.3    | 0.3    | watts           |
| @ Free Air Temperature 25°C            | 0.25   | 0.25   | 0.25   | 0.25   | watts           |
| Junction Temperature (Operating)       |        |        |        |        | -65°C to +200°C |
| Storage Temperature                    |        |        |        |        | -65°C to +200°C |



NJ Semi-Conductors reserves the right to change test conditions, parameter limits and package dimensions without notice. Information furnished by NJ Semi-Conductors is believed to be both accurate and reliable at the time of going to press. However NJ Semi-Conductors assumes no responsibility for any errors or omissions discovered in its use. NJ Semi-Conductors encourages customers to verify that datasheets are current before placing orders.

ELECTRICAL CHARACTERISTICS: @ 25°C (unless otherwise noted)

|                                         | SYM.                  | CONDITIONS                                        | 2N1034 |      | 2N1035 |      | 2N1036 |      | 2N1037 |      | UNITS  |
|-----------------------------------------|-----------------------|---------------------------------------------------|--------|------|--------|------|--------|------|--------|------|--------|
|                                         |                       |                                                   | MIN.   | MAX. | MIN.   | MAX. | MIN.   | MAX. | MIN.   | MAX. |        |
| Collector to Base Breakdown Voltage     | BV <sub>CB0</sub>     | I <sub>C</sub> = 100μA                            | -50    | .... | -50    | .... | -50    | .... | -50    | .... | volts  |
| Collector to Emitter Breakdown Voltage  | BV <sub>CE0</sub>     | I <sub>C</sub> = 1mA                              | -40    | .... | -35    | .... | -30    | .... | -35    | .... | volts  |
| Emitter to Base Breakdown Voltage       | BV <sub>EB0</sub>     | I <sub>E</sub> = 100μA                            | -20    | .... | -20    | .... | -20    | .... | -20    | .... | volts  |
| Collector Cutoff Current                | I <sub>CBO1</sub>     | V <sub>CB</sub> = -30V                            | ....   | 1.0  | ....   | 1.0  | ....   | 1.0  | ....   | 1.0  | μA     |
|                                         | I <sub>CBO2</sub>     | V <sub>CB</sub> = -30V,<br>T = 125°C              | ....   | 25.0 | ....   | 25.0 | ....   | 25.0 | ....   | 25.0 | μA     |
| Emitter Cutoff Current                  | I <sub>EB01</sub>     | V <sub>EB</sub> = -20V                            | ....   | 1.0  | ....   | 1.0  | ....   | 1.0  | ....   | 1.0  | μA     |
|                                         | I <sub>EB02</sub>     | V <sub>EB</sub> = -20V,<br>T <sub>A</sub> = 125°C | ....   | 25.0 | ....   | 25.0 | ....   | 25.0 | ....   | 25.0 | μA     |
| Collector to Emitter Saturation Voltage | V <sub>CE</sub> (Sat) | I <sub>C</sub> = 8mA,<br>I <sub>B</sub> = 2mA     | ....   | -0.5 | ....   | -0.4 | ....   | -0.3 | ....   | -0.5 | volts  |
| Input Resistance                        | h <sub>ie</sub>       | V <sub>CE</sub> = -6V,<br>I <sub>C</sub> = 1mA,   | ....   | 3.0  | ....   | 3.0  | ....   | 3.0  | ....   | 3.0  | K ohms |
|                                         |                       | f = 1kc                                           | ....   | 3.0  | ....   | 3.0  | ....   | 3.0  | ....   | 3.0  | ohms   |

ELECTRICAL CHARACTERISTICS (cont.):

|                                          | SYM.             | CONDITIONS                                                   | 2N1034 |      | 2N1035 |      | 2N1036 |      | 2N1037 |      | UNITS |
|------------------------------------------|------------------|--------------------------------------------------------------|--------|------|--------|------|--------|------|--------|------|-------|
|                                          |                  |                                                              | MIN.   | MAX. | MIN.   | MAX. | MIN.   | MAX. | MIN.   | MAX. |       |
| Output Admittance                        | h <sub>oe</sub>  | V <sub>CE</sub> = -6V,<br>I <sub>C</sub> = 1mA,<br>f = 1kc   | ....   | 70   | ....   | 85   | ....   | 100  | ....   | 85   | μmhos |
| Small Signal Current Gain                | h <sub>fe1</sub> | V <sub>CE</sub> = -6V,<br>I <sub>C</sub> = 1mA,<br>f = 1kc   | 9      | 22   | 18     | 42   | 34     | 88   | 9      | 42   | ....  |
| High Frequency Small Signal Current Gain | h <sub>fe2</sub> | V <sub>CE</sub> = -6V,<br>I <sub>C</sub> = 1mA,<br>f = 100kc | 1.5    | .... | 2.0    | .... | 3.0    | .... | 1.5    | .... | ....  |
| Collector Capacitance                    | C <sub>ob</sub>  | V <sub>CE</sub> = -6V,<br>I <sub>C</sub> = 1mA,<br>f = 100kc | ....   | 110  | ....   | 110  | ....   | 110  | ....   | 110  | pf    |
| Noise Figure                             | NF               | f = 1kc,                                                     | ....   | 30   | ....   | 30   | ....   | 30   | ....   | 15   | db    |
|                                          |                  | R <sub>g</sub> = 1kΩ                                         | ....   | 30   | ....   | 30   | ....   | 30   | ....   | 15   | db    |