

# Small Signal Transistors

## TO-18 Case



| TYPE NO. | DESCRIPTION     | BV <sub>CBO</sub><br>(V)<br>MIN | BV <sub>CEO</sub><br>(V)<br>MIN | BV <sub>EBO</sub><br>(V)<br>MIN | I <sub>CBO</sub> @<br>(μA)<br>MAX<br>*ICES<br>**ICEV | V <sub>CB</sub><br>(V) | h <sub>FE</sub> |     | @ I <sub>C</sub><br>(mA) | @ V <sub>CE</sub><br>(V) | V <sub>CE</sub> (SAT) @ I <sub>C</sub><br>(V)<br>MAX | C <sub>ob</sub><br>(pF)<br>MAX | f <sub>T</sub><br>(MHz)<br>MIN | NF<br>(dB)<br>MAX | t <sub>on</sub><br>(ns)<br>MAX | t <sub>off</sub><br>(ns)<br>MAX |
|----------|-----------------|---------------------------------|---------------------------------|---------------------------------|--|------------------------|-----------------|-----|--------------------------|--------------------------|--|--------------------------------|--------------------------------|-------------------|--------------------------------|---------------------------------|
|          |                 |                                 |                                 |                                 |  |                        | MIN             | MAX |                          |                          |  |                                |                                |                   |                                |                                 |
| 2N703    | NPN AMPL/SWITCH | 25                              | 25                              | 5.0                             | --   | --                     | 40              | 100 | 10                       | 10                       | 0.5  | 10                             | 5.0                            | 70                | --                             | --                              |
| 2N706C   | NPN SAT SWITCH  | 40                              | 15                              | 5.0                             | 0.5  | 15                     | 20              | 60  | 10                       | 5.0                      | 0.3  | 30                             | 5.0                            | 200               | --                             | 40                              |
| 2N708    | NPN SAT SWITCH  | 40                              | 15                              | 5.0                             | 0.025  | 20                     | 30              | 120 | 10                       | 1.0                      | 0.4  | 10                             | 6.0                            | 400               | --                             | 40                              |
| 2N709A   | NPN SAT SWITCH  | 15                              | 6.0                             | 4.0                             | 0.005  | 5.0                    | 30              | 90  | 10                       | 0.5                      | 0.3  | 3.0                            | 3.0                            | 900               | --                             | 15                              |
| 2N717    | NPN AMPL/SWITCH | 60                              | 40                              | 5.0                             | --   | --                     | 20              | 60  | 150                      | 10                       | 1.5  | 150                            | 35                             | 40                | --                             | --                              |
| 2N718A   | NPN AMPL/SWITCH | 75                              | 32                              | 7.0                             | 0.01   | 60                     | 40              | 120 | 150                      | 10                       | 1.5  | 150                            | 25                             | 60                | --                             | --                              |
| 2N719A   | NPN AMPL/SWITCH | 120                             | 60                              | 7.0                             | 0.01   | 75                     | 20              | 60  | 150                      | 10                       | 5.0  | 150                            | 15                             | 40                | --                             | --                              |
| 2N720A   | NPN AMPL/SWITCH | 120                             | 80                              | 7.0                             | 0.01   | 90                     | 40              | 120 | 150                      | 10                       | 5.0  | 150                            | 15                             | 50                | --                             | --                              |
| 2N721    | PNP AMPL/SWITCH | 50                              | 35                              | 5.0                             | 1.0  | 30                     | 20              | 45  | 150                      | 10                       | 1.5  | 150                            | 45                             | 50                | --                             | --                              |
| 2N722A   | PNP AMPL/SWITCH | 50                              | 35                              | 5.0                             | 0.10   | 30                     | 30              | 90  | 150                      | 10                       | 1.5  | 150                            | 45                             | 60                | --                             | --                              |
| 2N726    | PNP AMPL/SWITCH | 25                              | 20                              | 5.0                             | 1.0  | 25                     | 15              | 45  | 10                       | 1.0                      | 0.6  | 10                             | 5.0                            | 140               | --                             | --                              |
| 2N727    | PNP AMPL/SWITCH | 25                              | 20                              | 5.0                             | 1.0  | 25                     | 30              | 120 | 10                       | 1.0                      | 0.6  | 10                             | 5.0                            | 140               | --                             | --                              |
| 2N730    | NPN AMPL/SWITCH | 60                              | 35                              | 5.0                             | --   | --                     | 20              | 60  | 150                      | 10                       | 1.5  | 150                            | 35                             | 40                | --                             | --                              |
| 2N731    | NPN AMPL/SWITCH | 60                              | 35                              | 5.0                             | --   | --                     | 40              | 120 | 150                      | 10                       | 1.5  | 150                            | 35                             | 50                | --                             | --                              |
| 2N743A   | NPN SAT SWITCH  | 40                              | 15                              | 5.0                             | --   | --                     | 20              | 60  | 10                       | 5.0                      | 0.6  | 100                            | 4.0                            | 500               | --                             | 12                              |
| 2N744A   | NPN SAT SWITCH  | 40                              | 15                              | 5.0                             | --   | --                     | 40              | 120 | 10                       | 5.0                      | 0.6  | 100                            | 4.0                            | 500               | --                             | 12                              |
| 2N753    | NPN SAT SWITCH  | 25                              | 20                              | 5.0                             | 0.05   | 15                     | 40              | 120 | 10                       | 1.0                      | 0.6  | 10                             | 5.0                            | 200               | --                             | 40                              |
| 2N760A   | NPN LOW NOISE   | 60                              | 60                              | 8.0                             | 0.10   | 30                     | 76              | 333 | 1.0                      | 5.0                      | 1.0  | 10                             | 8.0                            | 50                | --                             | --                              |
| 2N783    | NPN SAT SWITCH  | 40                              | 15                              | 5.0                             | 0.25   | 25                     | 20              | 60  | 10                       | 1.0                      | 0.25   | 10                             | 3.5                            | 200               | --                             | 16                              |
| 2N784A   | NPN SAT SWITCH  | 40                              | 15                              | 5.0                             | --   | --                     | 25              | 150 | 10                       | 5.0                      | 0.19   | 10                             | 3.5                            | 300               | --                             | 20                              |
| 2N834A   | NPN SAT SWITCH  | 40                              | 25                              | 5.0                             | 0.50   | 20                     | 25              | --  | 10                       | 1.0                      | 0.25   | 10                             | 4.0                            | 500               | --                             | 16                              |
| 2N835    | NPN SAT SWITCH  | 25                              | 20                              | 5.0                             | 0.50   | 20                     | 20              | --  | 10                       | 1.0                      | 0.3  | 10                             | 4.0                            | 300               | --                             | 20                              |
| 2N864    | PNP AMPL/SWITCH | 6.0                             | 6.0                             | 6.0                             | 0.10   | 10                     | 25              | 125 | 1.0                      | 6.0                      | 0.1  | 5.0                            | 9.0                            | --                | --                             | --                              |
| 2N865    | PNP AMPL/SWITCH | 10                              | 6.0                             | 6.0                             | 0.10   | 10                     | 100             | 350 | 1.0                      | 6.0                      | 0.1  | 5.0                            | 9.0                            | --                | --                             | --                              |
| 2N869A   | PNP AMPL/SWITCH | 25                              | 18                              | 5.0                             | 0.01   | 15                     | 40              | 120 | 10                       | 5.0                      | 0.15   | 10                             | 6.0                            | 400               | --                             | --                              |
| 2N870    | NPN AMPL/SWITCH | 100                             | 60                              | 7.0                             | 0.01   | 75                     | 20              | 120 | 150                      | 10                       | 5.0  | 150                            | 15                             | 50                | --                             | --                              |
| 2N871    | NPN AMPL/SWITCH | 100                             | 60                              | 7.0                             | 0.01   | 75                     | 100             | 300 | 150                      | 10                       | 5.0  | 150                            | 15                             | 60                | --                             | --                              |
| 2N909    | NPN AMPL SWITCH | 30                              | 25                              | 5.0                             | --   | --                     | 110             | 350 | 50                       | 10                       | 2.0  | 50                             | 25                             | 50                | --                             | --                              |
| 2N910    | NPN AMPL/SWITCH | 100                             | 60                              | 7.0                             | 0.025  | 75                     | 75              | --  | 10                       | 10                       | 1.2  | 50                             | 15                             | 60                | --                             | --                              |
| 2N911    | NPN AMPL/SWITCH | 100                             | 60                              | 7.0                             | 0.025  | 75                     | 35              | --  | 10                       | 10                       | 1.2  | 50                             | 15                             | 50                | --                             | --                              |
| 2N912    | NPN AMPL/SWITCH | 100                             | 60                              | 7.0                             | 0.025  | 75                     | 15              | --  | 10                       | 10                       | 1.2  | 50                             | 15                             | 40                | --                             | --                              |
| 2N914    | NPN SAT SWITCH  | 40                              | 15                              | 5.0                             | 0.025  | 20                     | 30              | 120 | 10                       | 1.0                      | 0.7  | 200                            | 6.0                            | 60                | --                             | 40                              |
| 2N915    | NPN RF/IF OSC   | 70                              | 50                              | 5.0                             | --   | --                     | 50              | 200 | 10                       | 10                       | --   | --                             | 3.5                            | 250               | --                             | --                              |
| 2N916    | NPN RF/IF OSC   | 45                              | 45                              | 5.0                             | --   | --                     | 50              | 200 | 10                       | 10                       | --   | --                             | 6.0                            | 300               | --                             | --                              |
| 2N929A   | NPN LOW NOISE   | 60                              | 45                              | 6.0                             | 0.02   | 45                     | 40              | 120 | 0.01                     | 5.0                      | 0.5  | 10                             | 6.0                            | 45                | 4.0                            | --                              |
| 2N930B   | NPN LOW NOISE   | 60                              | 45                              | 6.0                             | 0.20   | 45                     | 100             | 300 | 0.01                     | 5.0                      | 0.5  | 10                             | 6.0                            | 45                | 3.0                            | --                              |
| 2N947    | NPN SAT SWITCH  | 15                              | 12                              | 3.0                             | --   | --                     | 30              | --  | 10                       | 1.0                      | 0.4  | 5.0                            | 8.0                            | 200               | --                             | 50                              |
| 2N956    | NPN AMPL/SWITCH | 75                              | 50                              | 7.0                             | 0.01   | 60                     | 100             | 300 | 150                      | 10                       | 1.5  | 150                            | 25                             | 70                | --                             | --                              |