

# Small Signal Transistors

## TO-92 Case (Continued)



| TYPE NO. | DESCRIPTION     | LEAD CODE | V <sub>CB0</sub> | V <sub>CEO</sub>      | V <sub>EB0</sub> | I <sub>CB0</sub> @                      | V <sub>CB</sub> | h <sub>FE</sub> |                         | @ V <sub>CE</sub> | @ I <sub>C</sub> | V <sub>CE (SAT)</sub> @ I <sub>C</sub> |      | C <sub>ob</sub>      | f <sub>T</sub> | NF   | t <sub>off</sub> |
|----------|-----------------|-----------|------------------|-----------------------|------------------|-----------------------------------------|-----------------|-----------------|-------------------------|-------------------|------------------|----------------------------------------|------|----------------------|----------------|------|------------------|
|          |                 |           | (V)              | (V)                   | (V)              | (nA)                                    | (V)             | MIN             | *h <sub>FE</sub> (1kHz) | (V)               | (mA)             | (V)                                    | (mA) | (pF)                 | (MHz)          | (dB) |                  |
|          |                 |           | MIN              | *V <sub>CES</sub> MIN | MAX              | *I <sub>CES</sub> *I <sub>CEV</sub> MAX |                 |                 |                         |                   |                  |                                        |      | *C <sub>rb</sub> MAX | *TYP MIN       | MAX  | MAX              |
| MPS3710  | NPN LOW NOISE   | EBC       | 30               | 30                    | 6.0              | 100                                     | 20              | 90              | 330                     | 5.0               | 1.0              | 1.0                                    | 10   | --                   | --             | --   | --               |
| MPS3711  | NPN LOW NOISE   | EBC       | 30               | 30                    | 6.0              | 100                                     | 20              | 180             | 660                     | 1.0               | 1.0              | 1.0                                    | 10   | --                   | --             | --   | --               |
| MPS3721  | NPN LOW NOISE   | EBC       | 18               | 18                    | 5.0              | 500                                     | 18              | 60              | 660                     | 10                | 2.0              | --                                     | --   | 3.5                  | --             | --   | --               |
| MPS3826  | NPN AMPL/SWITCH | EBC       | 60               | 45                    | 4.0              | 100                                     | 30              | 40              | 160                     | 10                | 10               | --                                     | --   | 3.5                  | 200            | --   | --               |
| MPS3827  | NPN AMPL/SWITCH | EBC       | 60               | 45                    | 4.0              | 100                                     | 30              | 100             | 400                     | 10                | 10               | --                                     | --   | 3.5                  | 200            | --   | --               |
| MPS5172  | NPN LOW NOISE   | EBC       | 25               | 25                    | 5.0              | 100                                     | 25              | 100             | 500                     | 10                | 10               | 0.25                                   | 10   | 10                   | 120*           | --   | --               |
| MPS5306  | NPN DARLINGTON  | EBC       | 25               | 25                    | 12               | 100                                     | 25              | 7,000           | 70,000                  | 5.0               | 2.0              | 1.40                                   | 200  | 10                   | 60             | --   | --               |
| MPS5308  | NPN DARLINGTON  | EBC       | 40               | 40                    | 12               | 100                                     | 40              | 7,000           | 70,000                  | 5.0               | 2.0              | 1.40                                   | 200  | 10                   | 60             | --   | --               |
| MPS6507  | NPN RF OSC      | EBC       | 30               | 20                    | 3.0              | 50                                      | 15              | 25              | --                      | 10                | 2.0              | --                                     | --   | 2.5                  | 700            | --   | --               |
| MPS6511  | NPN RF OSC      | EBC       | 30               | 20                    | 3.0              | 50                                      | 15              | 25              | --                      | 10                | 10               | --                                     | --   | 2.5                  | --             | --   | --               |
| MPS6512  | NPN AMPL/SWITCH | EBC       | 40               | 30                    | 4.0              | 50                                      | 30              | 50              | 100                     | 10                | 2.0              | 0.50                                   | 50   | 3.5                  | --             | --   | --               |
| MPS6513  | NPN AMPL/SWITCH | EBC       | 40               | 30                    | 4.0              | 50                                      | 30              | 90              | 180                     | 10                | 2.0              | 0.50                                   | 50   | 3.5                  | --             | --   | --               |
| MPS6514  | NPN AMPL/SWITCH | EBC       | 40               | 25                    | 4.0              | 50                                      | 30              | 150             | 300                     | 10                | 2.0              | 0.50                                   | 50   | 3.5                  | --             | --   | --               |
| MPS6515  | NPN AMPL/SWITCH | EBC       | 40               | 25                    | 4.0              | 50                                      | 30              | 250             | 500                     | 10                | 2.0              | 0.50                                   | 50   | 3.5                  | --             | --   | --               |
| MPS6516  | PNP AMPL/SWITCH | EBC       | 40               | 40                    | 4.0              | 50                                      | 30              | 50              | 100                     | 10                | 2.0              | 0.50                                   | 50   | 4.0                  | --             | --   | --               |
| MPS6517  | PNP AMPL/SWITCH | EBC       | 40               | 40                    | 4.0              | 50                                      | 30              | 90              | 180                     | 10                | 2.0              | 0.50                                   | 50   | 4.0                  | --             | --   | --               |
| MPS6518  | PNP AMPL/SWITCH | EBC       | 40               | 40                    | 4.0              | 50                                      | 30              | 150             | 300                     | 10                | 2.0              | 0.50                                   | 50   | 4.0                  | --             | --   | --               |
| MPS6519  | PNP AMPL/SWITCH | EBC       | 25               | 25                    | 4.0              | 50                                      | 20              | 250             | 500                     | 10                | 2.0              | 0.50                                   | 50   | 4.0                  | --             | --   | --               |
| MPS6520  | NPN LOW NOISE   | EBC       | 40               | 25                    | 4.0              | 50                                      | 30              | 200             | 400                     | 10                | 2.0              | 0.50                                   | 50   | 3.5                  | --             | 3.0  | --               |
| MPS6521  | NPN LOW NOISE   | EBC       | 40               | 25                    | 4.0              | 50                                      | 30              | 300             | 600                     | 10                | 2.0              | 0.50                                   | 50   | 3.5                  | --             | 3.0  | --               |
| MPS6522  | PNP LOW NOISE   | EBC       | 25               | 25                    | 4.0              | 50                                      | 20              | 200             | 400                     | 10                | 2.0              | 0.50                                   | 50   | 3.5                  | --             | 3.0  | --               |
| MPS6523  | PNP LOW NOISE   | EBC       | 25               | 25                    | 4.0              | 50                                      | 20              | 300             | 600                     | 10                | 2.0              | 0.50                                   | 50   | 3.5                  | --             | 3.0  | --               |
| MPS6531  | NPN AMPL/SWITCH | EBC       | 60               | 40                    | 5.0              | 50                                      | 40              | 90              | 270                     | 1.0               | 100              | 0.30                                   | 100  | 5.0                  | --             | --   | --               |
| MPS6532  | NPN AMPL/SWITCH | EBC       | 50               | 30                    | 5.0              | 100                                     | 30              | 30              | --                      | 1.0               | 100              | 0.50                                   | 100  | 5.0                  | --             | --   | --               |
| MPS6534  | PNP AMPL/SWITCH | EBC       | 40               | 40                    | 4.0              | 50                                      | 30              | 90              | 270                     | 1.0               | 100              | 0.30                                   | 100  | 7.0                  | --             | --   | --               |
| MPS6535  | PNP AMPL/SWITCH | EBC       | 30               | 30                    | 4.0              | 50                                      | 30              | 30              | --                      | 1.0               | 100              | 0.50                                   | 100  | 7.0                  | --             | --   | --               |
| MPS6560  | NPN AMPL/SWITCH | EBC       | 25               | 25                    | 5.0              | 100                                     | 20              | 50              | 200                     | 1.0               | 500              | 0.50                                   | 500  | 30                   | 60             | --   | --               |
| MPS6561  | NPN AMPL/SWITCH | EBC       | 20               | 20                    | 4.0              | 100                                     | 20              | 50              | 200                     | 1.0               | 350              | 0.50                                   | 350  | 30                   | 60             | --   | --               |
| MPS6562  | PNP AMPL/SWITCH | EBC       | 25               | 25                    | 5.0              | 100                                     | 20              | 50              | 200                     | 1.0               | 500              | 0.50                                   | 500  | 30                   | 60             | --   | --               |
| MPS6563  | PNP AMPL/SWITCH | EBC       | 20               | 20                    | 4.0              | 100                                     | 20              | 50              | 200                     | 1.0               | 350              | 0.50                                   | 350  | 30                   | 60             | --   | --               |
| MPS6564  | NPN AMPL/SWITCH | EBC       | --               | 45                    | 5.0              | 500                                     | 40              | 25              | --                      | 5.0               | 40               | 0.50                                   | 10   | 4.0                  | --             | --   | --               |
| MPS6566  | NPN AMPL/SWITCH | EBC       | 60               | 45                    | 4.0              | 100                                     | 30              | 100             | 400                     | 10                | 10               | 0.40                                   | 10   | 3.5                  | --             | --   | --               |
| MPS6601  | NPN AMPL/SWITCH | EBC       | 25               | 25                    | 4.0              | 100                                     | 25              | 50              | --                      | 1.0               | 500              | 0.60                                   | 1000 | 50                   | 100            | --   | --               |
| MPS6602  | NPN AMPL/SWITCH | EBC       | 40               | 40                    | 4.0              | 100                                     | 30              | 50              | --                      | 1.0               | 500              | 0.60                                   | 1000 | 50                   | 100            | --   | --               |
| MPS6651  | PNP AMPL/SWITCH | EBC       | 25               | 25                    | 4.0              | 100                                     | 25              | 50              | --                      | 1.0               | 500              | 0.60                                   | 1000 | 50                   | 100            | --   | --               |
| MPS6652  | PNP AMPL/SWITCH | EBC       | 40               | 40                    | 4.0              | 100                                     | 30              | 50              | --                      | 1.0               | 500              | 0.60                                   | 1000 | 50                   | 100            | --   | --               |
| MPS8097  | NPN LOW NOISE   | EBC       | 60               | 40                    | 6.0              | 30                                      | 40              | 250             | 5.0                     | 0.10              | --               | --                                     | --   | 4.0                  | --             | 2.0  | --               |
| MPS8098  | NPN AMPL/SWITCH | EBC       | 60               | 60                    | 6.0              | 100                                     | 60              | 100             | 300                     | 5.0               | 1.0              | 0.30                                   | 100  | 6.0                  | 150            | --   | --               |
| MPS8099  | NPN AMPL/SWITCH | EBC       | 80               | 80                    | 6.0              | 100                                     | 80              | 100             | 300                     | 5.0               | 1.0              | 0.30                                   | 100  | 6.0                  | 150            | --   | --               |
| MPS8598  | PNP AMPL/SWITCH | EBC       | 60               | 60                    | 5.0              | 100                                     | 60              | 100             | 300                     | 5.0               | 1.0              | 0.30                                   | 100  | 8.0                  | 150            | --   | --               |
| MPS8599  | PNP AMPL/SWITCH | EBC       | 80               | 80                    | 5.0              | 100                                     | 80              | 100             | 300                     | 5.0               | 1.0              | 0.30                                   | 100  | 8.0                  | 150            | --   | --               |
| MPSA05   | NPN AMPL/SWITCH | EBC       | 60               | 60                    | 4.0              | 100                                     | 60              | 50              | --                      | 1.0               | 100              | 0.25                                   | 100  | --                   | 100            | --   | --               |
| MPSA06   | NPN AMPL/SWITCH | EBC       | 80               | 80                    | 4.0              | 100                                     | 80              | 50              | --                      | 1.0               | 100              | 0.25                                   | 100  | --                   | 100            | --   | --               |
| MPSA13   | NPN DARLINGTON  | EBC       | 30               | 30*                   | 10               | 100                                     | 30              | 10,000          | --                      | 5.0               | 100              | 1.50                                   | 100  | --                   | 125            | --   | --               |
| MPSA14   | NPN DARLINGTON  | EBC       | 30               | 30*                   | 10               | 100                                     | 30              | 20,000          | --                      | 5.0               | 100              | 1.50                                   | 100  | --                   | 125            | --   | --               |
| MPSA18   | NPN LOW NOISE   | EBC       | 45               | 45                    | 6.5              | 50                                      | 30              | 500             | 1,500                   | 5.0               | 10               | --                                     | --   | 3.0                  | 100            | 1.5  | --               |
| MPSA20   | NPN AMPL/SWITCH | EBC       | --               | 40                    | 4.0              | 100                                     | 30              | 40              | 400                     | 10                | 5.0              | 0.25                                   | 10   | 4.0                  | 125            | --   | --               |

Devices are available lead formed.  
See pages 216 thru 219 for details.  
Also available in Ammopack or Tape & Reel.  
See pages 230 thru 235 for details.