

Small Signal Transistors

TO-39 Case (Continued)



| TYPE NO. | DESCRIPTION | V _{CBO} | V _{CEO} | V _{EBO} | I _{CBO} @ | V _{CB} | h _{FE} | | @ I _C | @ V _{CE} | V _{CE} (SAT) @ I _C | f _T | C _{ob} | t _{on} | t _{off} | NF | |
|----------|------------------|------------------|--------------------------|------------------|--|-----------------|-----------------|-----|------------------|-------------------|--|----------------|-----------------|-----------------|------------------|--------------|------|
| | | (V) | (V) *V _{CER} | (V) | (μA) *I _{CEO} **I _{CES} ***I _{CEV} ****I _{CER} | (V) | MIN | MAX | (mA) | (V) | (V) | (MHz) *TYP | (pF) *TYP | (ns) *TYP | (ns) *TYP | (dB) *TYP | |
| | | MIN | MIN | MIN | | | | | | MAX | MIN | MAX | MAX | MAX | MAX | MAX | |
| 2N5784 | NPN AMPL/SWITCH | 80 | 65 | 5.0 | 10*** | 75 | 20 | 100 | 1,000 | 2.0 | 0.50 | 1,000 | 1.0 | -- | -- | -- | -- |
| 2N5785 | NPN AMPL/SWITCH | 65 | 50 | 5.0 | 10*** | 60 | 20 | 100 | 1,200 | 2.0 | 0.75 | 1,200 | 1.0 | -- | -- | -- | -- |
| 2N5786 | NPN AMPL/SWITCH | 45 | 40 | 3.5 | 10*** | 45 | 20 | 100 | 1,600 | 2.0 | 1.00 | 1,600 | 1.0 | -- | -- | -- | -- |
| 2N5859 | NPN CORE DRIVER | 80 | 40 | 6.0 | 0.25 | 50 | 30 | 120 | 500 | 1.0 | 0.70 | 1,000 | 250 | 7.0 | 35 | 60 | -- |
| 2N5861 | NPN CORE DRIVER | 100 | 50 | 6.0 | 0.30 | 50 | 25 | 100 | 500 | 1.0 | 0.50 | 500 | 200 | 7.0 | 25 | 60 | -- |
| 2N6190 | NPN HIGH CURRENT | 80 | 80 | 6.0 | 10 | 80 | 30 | 120 | 2,000 | 2.0 | 0.70 | 2,000 | 30 | 300 | -- | -- | -- |
| 2N6191 | PNP HIGH CURRENT | 80 | 80 | 6.0 | 10 | 80 | 60 | 240 | 2,000 | 2.0 | 0.70 | 2,000 | 30 | 300 | -- | -- | -- |
| 2N6192 | PNP HIGH CURRENT | 100 | 100 | 6.0 | 10 | 100 | 30 | 120 | 2,000 | 2.0 | 0.70 | 2,000 | 30 | 300 | -- | -- | -- |
| 2N6193 | PNP HIGH CURRENT | 100 | 100 | 6.0 | 10 | 100 | 60 | 240 | 2,000 | 2.0 | 0.70 | 2,000 | 30 | 300 | -- | -- | -- |
| BC140 | NPN AMPL/SWITCH | 80 | 40 | 7.0 | 0.10** | 60 | 40 | 250 | 100 | 1.0 | 1.00 | 1,000 | 50 | 25 | 250 | 850 | -- |
| BC141 | NPN AMPL/SWITCH | 100 | 60 | 7.0 | 0.10** | 60 | 40 | 250 | 100 | 1.0 | 1.00 | 1,000 | 50 | 25 | 250 | 850 | -- |
| BC160 | PNP AMPL/SWITCH | 40 | 40 | 5.0 | 0.10** | 40 | 40 | 250 | 100 | 1.0 | 1.00 | 1,000 | 50 | 30 | 500 | 650 | -- |
| BC161 | PNP AMPL/SWITCH | 60 | 60 | 5.0 | 0.10** | 60 | 40 | 250 | 100 | 1.0 | 1.00 | 1,000 | 50 | 30 | 500 | 650 | -- |
| BC300 | NPN AMPL/SWITCH | 120 | 80 | 7.0 | 0.02 | 60 | 40 | 240 | 150 | 10 | 0.50 | 150 | 100* | 12* | -- | -- | -- |
| BC301 | NPN AMPL/SWITCH | 90 | 60 | 7.0 | 0.02 | 60 | 40 | 240 | 150 | 10 | 0.50 | 150 | 100* | 12* | -- | -- | -- |
| BC302 | NPN AMPL/SWITCH | 60 | 45 | 7.0 | 0.02 | 60 | 40 | 240 | 150 | 10 | 0.50 | 150 | 100* | 12* | -- | -- | -- |
| BC303 | PNP AMPL/SWITCH | 85 | 60 | 6.0 | 0.02 | 60 | 40 | 240 | 150 | 10 | 0.65 | 150 | 100* | 15* | -- | -- | -- |
| BC304 | PNP AMPL/SWITCH | 60 | 45 | 6.0 | 0.02 | 60 | 40 | 240 | 150 | 10 | 0.65 | 150 | 100* | 15* | -- | -- | -- |
| BC440 | NPN AMPL/SWITCH | 50 | 40 | 5.0 | 0.10 | 40 | 40 | 250 | 500 | 4.0 | 1.00 | 1,000 | 50 | -- | -- | -- | -- |
| BC441 | NPN AMPL/SWITCH | 70 | 60 | 5.0 | 0.10 | 40 | 40 | 250 | 500 | 4.0 | 1.00 | 1,000 | 50 | -- | -- | -- | -- |
| BC460 | PNP AMPL/SWITCH | 50 | 40 | 5.0 | 0.10 | 40 | 40 | 250 | 500 | 4.0 | 1.00 | 1,000 | 50 | -- | -- | -- | -- |
| BC461 | PNP AMPL/SWITCH | 70 | 60 | 5.0 | 0.10 | 40 | 40 | 250 | 500 | 4.0 | 1.00 | 1,000 | 50 | -- | -- | -- | -- |
| BCW78 | NPN AMPL/SWITCH | 45 | 45 | 5.0 | 0.02** | 45 | 100 | 630 | 100 | 1.0 | 0.70 | 500 | -- | -- | -- | -- | -- |
| BCW80 | PNP AMPL/SWITCH | 45 | 45 | 5.0 | 0.02** | 45 | 63 | 400 | 100 | 1.0 | 0.70 | 500 | -- | -- | -- | -- | -- |
| BD115 | NPN HIGH VOLTAGE | 250 | 180 | 5.0 | 550* | 200 | 22 | -- | 50 | 100 | 9.00 | 100 | 150* | -- | -- | -- | -- |
| BF178 | NPN AMPL/SWITCH | 185 | 115 | 5.0 | 0.01 | 185 | 20 | -- | 30 | 20 | -- | -- | 120* | -- | -- | -- | -- |
| BF257 | NPN HIGH VOLTAGE | 160 | 160 | 5.0 | 50 | 100 | 25 | -- | 30 | 10 | 1.00 | 30 | 90* | -- | -- | -- | -- |
| BF258 | NPN HIGH VOLTAGE | 250 | 250 | 5.0 | 50 | 200 | 25 | -- | 30 | 10 | 1.00 | 30 | 90* | -- | -- | -- | -- |
| BF259 | NPN HIGH VOLTAGE | 300 | 300 | 5.0 | 50 | 250 | 25 | -- | 30 | 10 | 1.00 | 30 | 90* | -- | -- | -- | -- |
| BF337 | NPN HIGH VOLTAGE | 250 | 200 | 5.0 | 100**** | 200 | 20 | -- | 30 | 10 | -- | -- | -- | -- | -- | -- | -- |
| BFR36 | NPN AMPL/SWITCH | 40 | 30 | 3.0 | 0.15 | 20 | 60 | -- | 70 | 5.0 | -- | -- | 1.0 | -- | -- | -- | 4.0* |
| BFS89 | NPN HIGH VOLTAGE | 300 | 300 | 5.0 | 0.05 | 250 | 25 | -- | 50 | 10 | -- | -- | -- | -- | -- | -- | -- |
| BFS95 | PNP AMPL/SWITCH | 40 | 35 | 6.0 | 0.05 | 30 | 15 | -- | 1,000 | 10 | 0.20 | 150 | -- | -- | -- | -- | -- |
| BFT28C | PNP HIGH VOLTAGE | 300 | 250 | -- | 5.00 | 150 | 20 | -- | 10 | 10 | 5.00 | 30 | 25 | -- | -- | -- | -- |
| BFW16A | NPN AMPL/SWITCH | 40 | 25 | 3.0 | 20 | 20 | 25 | -- | 50 | 5.0 | -- | -- | 1.2* | -- | -- | -- | 6.0 |
| BFW44 | PNP AMPL/SWITCH | 150 | 150 | 6.0 | 0.01 | 100 | 40 | -- | 10 | 10 | 0.50 | 10 | 60 | 7.0 | -- | -- | -- |
| BFX34 | NPN AMPL/SWITCH | 120 | 60 | 6.0 | 10** | 60 | 40 | 150 | 2,000 | 2.0 | 1.00 | 5,000 | 70 | 100 | 600 | 1,200 | -- |
| BFX84 | NPN AMPL/SWITCH | 100 | 60 | 6.0 | 0.50 | 100 | 30 | -- | 150 | 10 | 1.00 | 500 | 50 | 12 | -- | -- | -- |
| BFX85 | NPN AMPL/SWITCH | 100 | 60 | 6.0 | 0.50 | 100 | 70 | -- | 150 | 10 | 1.00 | 500 | 50 | 12 | -- | -- | -- |