

Small Signal Transistors

TO-39 Case (Continued)



| TYPE NO. | DESCRIPTION | V _{CBO} | V _{CEO} | V _{EBO} | I _{CBO} @ (μA) *I _{CEO} **I _{CEV} ***I _{CEV} ****I _{CER} | V _{CB} (V) | h _{FE} | | @ I _C | @ V _{CE} | V _{CE(SAT)} @ I _C | | f _T | C _{ob} | t _{on} | t _{off} | NF |
|----------|------------------|------------------|--------------------------|------------------|--|------------------------|-----------------|-----|------------------|-------------------|---------------------------------------|-------|----------------|-----------------|-----------------|------------------|----|
| | | (V) | (V) | (V) | | | (mA) | (V) | (V) | (mA) | (MHz) | (pF) | (ns) | (ns) | (dB) | | |
| | | MIN | *V _{CER} MIN | MIN | | | MIN | MIN | MAX | MAX | MAX | MIN | MAX | MAX | MAX | MAX | |
| BSY52 | NPN AMPL/SWITCH | 60 | 25 | 5.0 | 0.10 | 30 | 100 | 300 | 150 | 10 | 0.80 | 150 | 130* | 10 | -- | -- | -- |
| BSY53 | NPN AMPL/SWITCH | 75 | 30 | 7.0 | 0.01 | 60 | 40 | 120 | 150 | 10 | 0.60 | 150 | 100* | 10 | -- | -- | -- |
| BSY54 | NPN AMPL/SWITCH | 75 | 30 | 7.0 | 0.01 | 60 | 100 | 300 | 150 | 10 | 0.60 | 150 | 145* | 10 | -- | -- | -- |
| BSY55 | NPN AMPL/SWITCH | 120 | 80 | 7.0 | 0.01 | 90 | 40 | 120 | 150 | 10 | 0.60 | 150 | 100* | 10 | -- | -- | -- |
| BSY56 | NPN AMPL/SWITCH | 120 | 80 | 7.0 | 0.01 | 90 | 100 | 300 | 150 | 10 | 0.60 | 150 | 145* | 10 | -- | -- | -- |
| BSY88 | NPN AMPL/SWITCH | 100 | 60 | 7.0 | 0.01 | 75 | 100 | 300 | 150 | 10 | 0.60 | 150 | -- | -- | -- | -- | -- |
| BUY47 | NPN HIGH CURRENT | 150 | 120 | 6.0 | 10 | 80 | 15 | -- | 5,000 | 5.0 | 1.00 | 5,000 | 90* | 80 | 1,000 | 2,000 | -- |
| BUY48 | NPN HIGH CURRENT | 200 | 170 | 6.0 | 10 | 100 | 15 | -- | 5,000 | 5.0 | 1.00 | 5,000 | 90* | 80 | 1,000 | 2,000 | -- |
| BUY49S | NPN HIGH VOLTAGE | 250 | 200 | 6.0 | 0.1 | 200 | 40 | -- | 500 | 5.0 | 0.20 | 500 | 50 | 30 | 300 | 1,000 | -- |
| BUY68 | NPN HIGH CURRENT | 100 | 60 | 6.0 | 1.00 | 60 | 40 | 250 | 1,000 | 1.0 | 1.00 | 5,000 | 50 | 80 | 350 | 750 | -- |
| MJ420 | NPN HIGH VOLTAGE | 275 | 250 | 6.0 | 100 | 275 | 25 | 250 | 30 | 20 | 5.00 | 30 | 15 | 12 | -- | -- | -- |
| MJ420S | NPN HIGH VOLTAGE | 275 | 250 | 6.0 | 100 | 275 | 25 | 250 | 30 | 20 | 5.00 | 30 | 150 | 12 | -- | -- | -- |
| MJ421 | NPN HIGH VOLTAGE | 350 | 325 | 6.0 | 100 | 350 | 25 | 250 | 30 | 20 | 5.00 | 30 | 15 | 12 | -- | -- | -- |
| MJ421S | NPN HIGH VOLTAGE | 350 | 325 | 6.0 | 100 | 350 | 25 | 250 | 30 | 20 | 5.00 | 30 | 15 | 12 | -- | -- | -- |
| MM420 | NPN HIGH VOLTAGE | 275 | 250 | 6.0 | 100 | 275 | 25 | 250 | 30 | 20 | 5.00 | 30 | 15 | 12 | -- | -- | -- |
| MM421 | NPN HIGH VOLTAGE | 350 | 325 | 6.0 | 100 | 350 | 25 | 250 | 30 | 20 | 5.00 | 30 | 15 | 12 | -- | -- | -- |
| MM3000 | NPN HIGH VOLTAGE | 100 | 100 | 5.0 | 1.00 | 50 | 20 | -- | 10 | 10 | -- | -- | 150 | 7.0 | -- | -- | -- |
| MM3001 | NPN HIGH VOLTAGE | 150 | 150 | 5.0 | 1.00 | 75 | 20 | -- | 10 | 10 | -- | -- | 150 | 7.0 | -- | -- | -- |
| MM3002 | NPN HIGH VOLTAGE | 200 | 200 | 5.0 | 5.00 | 100 | 20 | -- | 10 | 10 | -- | -- | 150 | 15 | -- | -- | -- |
| MM3003 | NPN HIGH VOLTAGE | 250 | 250 | 5.0 | 5.00 | 100 | 20 | -- | 10 | 10 | -- | -- | 150 | 15 | -- | -- | -- |
| MM3005 | NPN AMPL/SWITCH | 80 | 60 | 5.0 | 100 | 60 | 50 | 250 | 150 | 1.0 | 0.35 | 150 | 50 | 15 | -- | -- | -- |
| MM3006 | NPN AMPL/SWITCH | 100 | 80 | 5.0 | 100 | 80 | 50 | 250 | 200 | 1.0 | 0.35 | 150 | 50 | 15 | -- | -- | -- |
| MM3007 | NPN AMPL/SWITCH | 120 | 100 | 5.0 | 100 | 100 | 50 | 250 | 250 | 1.0 | 0.35 | 150 | 50 | 15 | -- | -- | -- |
| MM3008 | NPN HIGH VOLTAGE | 120 | 120 | 6.0 | 0.10 | 120 | 30 | -- | 1.0 | 10 | -- | -- | 50 | 3.0 | -- | -- | -- |
| MM3009 | NPN HIGH VOLTAGE | 180 | 180 | 6.0 | 0.10 | 180 | 30 | -- | 1.0 | 10 | -- | -- | 50 | 3.0 | -- | -- | -- |
| MM4000 | PNP HIGH VOLTAGE | 100 | 100 | 4.0 | 1.00 | 50 | 20 | -- | 10 | 10 | 0.60 | 10 | -- | 6.0 | -- | -- | -- |
| MM4001 | PNP HIGH VOLTAGE | 150 | 150 | 4.0 | 1.00 | 75 | 20 | -- | 10 | 10 | 0.60 | 10 | -- | 10 | -- | -- | -- |
| MM4002 | PNP HIGH VOLTAGE | 200 | 200 | 4.0 | 5.00 | 150 | 20 | -- | 10 | 10 | 5.00 | 10 | -- | 20 | -- | -- | -- |
| MM4003 | PNP HIGH VOLTAGE | 250 | 250 | 4.0 | 5.00 | 150 | 20 | -- | 10 | 10 | 5.00 | 10 | -- | 20 | -- | -- | -- |
| MM5415 | PNP HIGH VOLTAGE | 200 | 200 | 4.0 | 50 | 175 | 30 | 150 | 50 | 10 | 2.50 | 50 | 15 | 25 | -- | -- | -- |
| MM5416 | PNP HIGH VOLTAGE | 350 | 300 | 7.0 | 50 | 280 | 30 | 120 | 50 | 10 | 2.50 | 50 | 15 | 25 | -- | -- | -- |
| SE7001 | NPN HIGHVOLTAGE | 150 | 150 | 5.0 | 0.10 | 75 | 30 | -- | 30 | 10 | 2.00 | 50 | 40 | 9.0 | -- | -- | -- |
| SE7002 | NPN HIGH VOLTAGE | 120 | 120 | 5.0 | 0.10 | 75 | 30 | -- | 30 | 10 | 0.90 | 50 | 40 | 3.5 | -- | -- | -- |
| SE7056 | NPN HIGH VOLTAGE | 300 | 300 | 7.0 | 0.10 | 200 | 40 | 100 | 30 | 10 | 1.00 | 20 | 40 | 3.0 | -- | -- | -- |
| 40327 | NPN HIGH VOLTAGE | 300 | 300* | 5.0 | 0.10 | 150 | 40 | 250 | 20 | 10 | -- | -- | -- | -- | -- | -- | -- |
| 40347 | NPN AMPL/SWITCH | 60 | 40 | 7.0 | 1.00**** | 30 | 20 | 80 | 450 | 4.0 | 1.00 | 450 | -- | -- | -- | -- | -- |
| 40348 | NPN AMPL/SWITCH | 90 | 65 | 7.0 | 1.00**** | 60 | 30 | 125 | 300 | 4.0 | 0.75 | 300 | -- | -- | -- | -- | -- |
| 40406 | PNP AMPL/SWITCH | 50 | 50 | 4.0 | -- | -- | 30 | 200 | 0.1 | 10 | -- | -- | 100* | -- | -- | -- | -- |
| 40408 | NPN AMPL/SWITCH | 50 | 90 | 4.0 | -- | -- | 40 | 200 | 10 | 4.0 | 1.40 | 150 | 100* | -- | -- | -- | -- |
| 40412 | NPN HIGH VOLTAGE | 250 | 250* | 4.0 | 2.00*** | 150 | 40 | -- | 30 | 20 | 0.50 | 10 | 10 | 10 | -- | -- | -- |

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