

# 4. SILICON PNP - LOW POWER TRANSISTORS

IN ORDER OF (1) MAX COLLECTOR DISSIPATION  
(2) fab & (3) TYPE No.

| LINE No. | TYPE No.  | 1 MAX. COLL. DISS. @ 25°C (W) | 2 DERATE IN AIR W/°C | M E A P | T ABS MAX RATINGS @ 25°C |        |      | MAX. l c b o @ MAX Vcb (A) | TYPICAL 'h' PARAMETERS |        |     | COMMON EMITTER |         |              | Cob (F) | STRUC-TURE | DWG # Y200 s/a TO200 Ser. | L C O A D E |
|----------|-----------|-------------------------------|----------------------|---------|--------------------------|--------|------|----------------------------|------------------------|--------|-----|----------------|---------|--------------|---------|------------|---------------------------|-------------|
|          |           |                               |                      |         | V Vcbo                   | V Vceo | V Ic |                            | Vcb (V)                | le (A) | hfe | hoe (mhos)     | hie (Ω) | hre (X.0001) |         |            |                           |             |
| 1        | 2N36711   | 600m                          | 200MΔ                | 3.4m    | SS                       | 60     | 50   | 5.0                        | 600m                   | 10n    | 100 | 10m            | 55      | Δ            |         |            | T05                       | A           |
| 2#       | 2SA730    | 600m                          | 200M                 | 6.0m    | ΔJ                       | 30     | 25   | 5.0                        | 500m                   | 100n   | 100 | 500m           | 90      | †            |         |            | R209                      | B           |
| 3#       | 2SA731    | 600m                          | 200M                 | 6.0m    | ΔJ                       | 30     | 25   | 5.0                        | 500m                   | 100n   | 100 | 500m           | 90      | †            |         |            | R209                      | B           |
| 4#       | 2S8621    | 600m                          | 200M                 | 5.4m    | ΔJ                       | 30     | 25   | 5.0                        | 1.5                    | 100n   | 100 | 500m           | 60      | Δ            |         |            | T092                      | B           |
| 5        | PN2906    | 600m                          | 200M                 | 4.8m    | ΔJ                       | 60     | 40   | 5.0                        | 600m                   | 20n    | 100 | 1.0m           | 25      | Δ            |         |            | T092                      | A           |
| 6        | PN2906A   | 600m                          | 200M                 | 4.8m    | ΔJ                       | 60     | 40   | 5.0                        | 600m                   | 10n    | 100 | 1.0m           | 40      | Δ            |         |            | T092                      | A           |
| 7        | PN2907    | 600m                          | 200M                 | 4.8m    | ΔJ                       | 60     | 60   | 5.0                        | 600m                   | 20n    | 100 | 1.0m           | 50      | Δ            |         |            | T092                      | A           |
| 8        | PN2907A   | 600m                          | 200M                 | 4.8m    | ΔJ                       | 60     | 60   | 5.0                        | 600m                   | 10n    | 100 | 1.0m           | 100     | Δ            |         |            | T092                      | A           |
| 9        | PN3644    | 600m                          | 200MΔ                | 4.8m    | ΔJ                       | 45     | 45   | 5.0                        | 500m                   | 35n    | 100 | 1.0m           | 80      | Δ            |         |            | T092                      | A           |
| 10       | PN3645    | 600m                          | 200MΔ                | 4.8m    | ΔJ                       | 60     | 60   | 5.0                        | 500m                   | 35n    | 100 | 1.0m           | 80      | Δ            |         |            | T092                      | A           |
| 11       | MD982     | 600m                          | 320M                 | 3.4m    | ΔJ                       | 60     | 50   | 5.0                        | 600m                   | 20n    | 100 | 150m           | 60      | †            |         |            | AN                        | PA          |
| 12       | MD7001*   | 600m                          | 320M                 | 3.4m    | ΔJ                       | 50     | 30   | 5.0                        | 600m                   | 100n   | 100 | 1.0m           | 50      | †            |         |            | AN                        | PA          |
| 13       | PN4916    | 600m                          | 400MΔ                | 4.8m    | ΔJ                       | 30     | 30   | 5.0                        | 100m                   | 25n    | 1.0 | 1.0m           | 60      | Δ            |         |            | PL                        | T092        |
| 14       | PN4917    | 600m                          | 450MΔ                | 4.8m    | ΔJ                       | 30     | 30   | 5.0                        | 100m                   | 25n    | 1.0 | 1.0m           | 150     | Δ            |         |            | PL                        | T092        |
| 15       | PN3639    | 600m                          | 500MΔ                | 4.8m    | ΔJ                       | 6.0    | 6.0  | 4.0                        | 80m                    | 10n    | 1.0 | 50m            | 20      | Δ            |         |            | PL                        | T092        |
| 16       | PN3640    | 600m                          | 500MΔ                | 4.8m    | ΔJ                       | 12     | 12   | 4.0                        | 80m                    | 10n    | 1.0 | 50m            | 20      | Δ            |         |            | PL                        | T092        |
| 17       | PN4258    | 600m                          | 700MΔ                | 4.8m    | ΔJ                       | 12     | 12   | 4.5                        | 50m                    | 10n    | 3.0 | 10m            | 30      | Δ            |         |            | PL                        | T092        |
| 18       | PN4258A   | 600m                          | 700MΔ                | 4.8m    | ΔJ                       | 12     | 12   | 4.5                        | 50m                    | 10n    | 3.0 | 10m            | 30      | Δ            |         |            | PL                        | T092        |
| 19       | PN5910    | 600m                          | 700MΔ                | 4.8m    | ΔJ                       | 20     | 20   | 4.5                        | 50m                    | 10n    | 5.0 | 1.0m           | 15      | Δ            |         |            | PL                        | T092        |
| 20#      | BCW92     | 610m                          | 135MΔ                | 4.3m    | ΔJ                       | 50     | 40   | 5.0                        | 800m                   | 30n    | 2.0 | 150m           | 100     | Δ            |         |            | PE                        | R203a       |
| 21#      | BCW92Z    | 610m                          | 135MΔ                | 4.3m    | ΔJ                       | 50     | 40   | 5.0                        | 800m                   | 30n    | 2.0 | 150m           | 100     | Δ            |         |            | PE                        | R203a       |
| 22       | BCW92A    | 610m                          | 135MΔ                | 4.8m    | ΔJ                       | 50     | 40   | 5.0                        | 800m                   | 30n    | 2.0 | 2.0m           | 60      | Δ            |         |            | PE                        | R203a       |
| 23       | BCW92B    | 610m                          | 135MΔ                | 4.8m    | ΔJ                       | 50     | 40   | 5.0                        | 800m                   | 30n    | 2.0 | 2.0m           | 80      | Δ            |         |            | PE                        | R203a       |
| 24       | BCW92KA   | 610m                          | 135MΔ                | 4.8m    | ΔJ                       | 50     | 40   | 5.0                        | 800m                   | 30n    | 2.0 | 2.0m           | 60      | Δ            |         |            | PE                        | R203a       |
| 25       | BCW92KB   | 610m                          | 135MΔ                | 4.8m    | ΔJ                       | 50     | 40   | 5.0                        | 800m                   | 30n    | 2.0 | 2.0m           | 80      | Δ            |         |            | PE                        | R203a       |
| 26#      | BCW93     | 610m                          | 135MΔ                | 4.3m    | ΔJ                       | 70     | 60   | 5.0                        | 800m                   | 30n    | 2.0 | 140m           | 100     | Δ            |         |            | PE                        | R203a       |
| 27#      | BCW93Z    | 610m                          | 135MΔ                | 4.3m    | ΔJ                       | 70     | 60   | 5.0                        | 800m                   | 30n    | 2.0 | 150m           | 100     | Δ            |         |            | PE                        | R203a       |
| 28       | BCW93A    | 610m                          | 135MΔ                | 4.8m    | ΔJ                       | 70     | 60   | 5.0                        | 800m                   | 30n    | 2.0 | 2.0m           | 60      | Δ            |         |            | PE                        | R203a       |
| 29       | BCW93B    | 610m                          | 135MΔ                | 4.8m    | ΔJ                       | 70     | 60   | 5.0                        | 800m                   | 30n    | 2.0 | 2.0m           | 80      | Δ            |         |            | PE                        | R203a       |
| 30       | BCW93KA   | 610m                          | 135MΔ                | 4.8m    | ΔJ                       | 70     | 60   | 5.0                        | 800m                   | 30n    | 2.0 | 2.0m           | 60      | Δ            |         |            | PE                        | R203a       |
| 31       | BCW93KB   | 610m                          | 135MΔ                | 4.8m    | ΔJ                       | 70     | 60   | 5.0                        | 800m                   | 30n    | 2.0 | 2.0m           | 80      | Δ            |         |            | PE                        | R203a       |
| 32#      | 2SA923-11 | 625m                          | 5.0m                 | 5.0m    | ΔJ                       | 200    | 150  | 5.0                        | 200m                   | 200n   | 5.0 | 3.0m           | 150     | †            |         |            | R179e                     | A           |
| 33#      | 2SA923-21 | 625m                          | 5.0m                 | 5.0m    | ΔJ                       | 200    | 175  | 5.0                        | 200m                   | 200n   | 5.0 | 3.0m           | 150     | †            |         |            | R179e                     | A           |
| 34#      | 2SA993    | 625m                          | 5.0m                 | 5.0m    | ΔJ                       | 50     | 50   | 5.0                        | 500m                   | 100n   | 3.0 | 150m           | 100     | Δ            |         |            | E                         | T092        |
| 35       | A8T4058   | 625m                          | 5.0m                 | 5.0m    | SS                       | 30     | 30   | 6.0                        | 30m                    | 100n   | 5.0 | 1.0m           | 45      | Δ            |         |            | PE                        | T092        |
| 36       | A8T4059   | 625m                          | 5.0m                 | 5.0m    | SS                       | 30     | 30   | 6.0                        | 30m                    | 100n   | 5.0 | 1.0m           | 45      | Δ            |         |            | PE                        | T092        |
| 37       | A8T4060   | 625m                          | 5.0m                 | 5.0m    | SS                       | 30     | 30   | 6.0                        | 30m                    | 100n   | 5.0 | 1.0m           | 90      | Δ            |         |            | PE                        | T092        |
| 38       | A8T4061   | 625m                          | 5.0m                 | 5.0m    | SS                       | 30     | 30   | 6.0                        | 30m                    | 100n   | 5.0 | 1.0m           | 180     | Δ            |         |            | PE                        | T092        |
| 39       | A8T4062   | 625m                          | 5.0m                 | 5.0m    | SS                       | 30     | 30   | 6.0                        | 30m                    | 100n   | 5.0 | 1.0m           | 180     | Δ            |         |            | PE                        | T092        |
| 40#      | BC231A    | 625m                          | 5.0m                 | 5.0m    | SS                       | 40     | 30   | 5.0                        | 400m                   | 100n   | 5.0 | 50m            | 100     | Δ            |         |            | PE                        | T092        |
| 41#      | BC231B    | 625m                          | 5.0m                 | 5.0m    | SS                       | 40     | 30   | 5.0                        | 400m                   | 100n   | 5.0 | 50m            | 200     | Δ            |         |            | PE                        | T092        |
| 42       | BC327-10  | 625m                          | 5.4m                 | 5.0m    | ΔJ                       | 45     | 45   | 5.0                        | 800m                   | 100n   | 1.0 | 100m           | 63      | Δ            |         |            | PE                        | T092        |
| 43       | BC328-10  | 625m                          | 5.4m                 | 5.0m    | ΔJ                       | 40     | 25   | 5.0                        | 200m                   | 100n   | 5.0 | 2.5m           | 60      | Δ            |         |            | PE                        | T092        |
| 44#      | BC381     | 625m                          | 5.0m                 | 5.0m    | SS                       | 40     | 25   | 5.0                        | 200m                   | 100n   | 5.0 | 2.5m           | 60      | Δ            |         |            | PE                        | X55c        |
| 45#      | BF397     | 625m                          | 5.0m                 | 5.0m    | SS                       | 90     | 90   | 6.0                        | 100m                   | 50n    | 1.0 | 100m           | 20      | Δ            |         |            | PE                        | R203c       |
| 46#      | BF397Z    | 625m                          | 5.0m                 | 5.0m    | SS                       | 150    | 150  | 6.0                        | 100m                   | 50n    | 1.0 | 100m           | 40      | Δ            |         |            | PE                        | R203c       |
| 47#      | BF398     | 625m                          | 5.0m                 | 5.0m    | SS                       | 150    | 150  | 6.0                        | 100m                   | 50n    | 1.0 | 100m           | 25      | Δ            |         |            | PE                        | R203c       |
| 48#      | BF398Z    | 625m                          | 5.0m                 | 5.0m    | SS                       | 150    | 150  | 6.0                        | 100m                   | 50n    | 1.0 | 100m           | 30      | Δ            |         |            | PE                        | R203c       |
| 49#      | JE9012D   | 625m                          | 5.0m                 | 5.0m    | ΔJ                       | 40     | 20   | 5.0                        | 500m                   | 200n   | 1.0 | 50m            | 64      | Δ            |         |            | †                         | T092        |
| 50#      | JE9012E   | 625m                          | 5.0m                 | 5.0m    | ΔJ                       | 40     | 20   | 5.0                        | 500m                   | 200n   | 1.0 | 50m            | 78      | Δ            |         |            | †                         | T092        |
| 51#      | JE9012F   | 625m                          | 5.0m                 | 5.0m    | ΔJ                       | 40     | 20   | 5.0                        | 500m                   | 200n   | 1.0 | 50m            | 96      | Δ            |         |            | †                         | T092        |
| 52#      | JE9012G   | 625m                          | 5.0m                 | 5.0m    | ΔJ                       | 40     | 20   | 5.0                        | 500m                   | 200n   | 1.0 | 50m            | 118     | Δ            |         |            | †                         | T092        |
| 53       | JE9012H   | 625m                          | 5.0m                 | 5.0m    | ΔJ                       | 40     | 20   | 5.0                        | 500m                   | 200n   | 1.0 | 50m            | 144     | Δ            |         |            | †                         | T092        |
| 54       | JE9015    | 625m                          |                      |         |                          | 50     | 45   | 6.0                        | 100m                   | 50n    | 1.0 | 100m           | 20      | Δ            |         |            | PE                        | R203c       |
| 55       | MPS9466   | 625m                          | 5.0m                 | 5.0m    | ΔJ                       | 50     | 50   | 4.0                        | 600m                   | 100n   | 1.0 | 50m            | 45      | Δ            |         |            | PE                        | T092        |
| 56#      | MPS9484   | 625m                          | 5.0m                 | 5.0m    | ΔJ                       | 25     | 25   | 4.0                        | 100m                   | 100n   | 1.0 | 100m           | 100     | Δ            |         |            | PE                        | T092        |
| 57       | PN6076    | 625m                          | 5.0m                 | 5.0m    | ΔJ                       | 25     | 25   | 4.0                        | 100m                   | 100n   | 1.0 | 100m           | 100     | Δ            |         |            | PE                        | T092        |
| 58       | TIS91     | 625m                          | 5.0m                 | 5.0m    | ΔJ                       | 40     | 40   | 5.0                        | 400m                   | 100n   | 2.0 | 50m            | 100     | Δ            |         |            | PE                        | T092        |
| 59       | TIS93     | 625m                          | 5.0m                 | 5.0m    | ΔJ                       | 40     | 40   | 5.0                        | 400m                   | 100n   | 2.0 | 50m            | 160     | Δ            |         |            | PE                        | T092        |
| 60       | A5T404    | 625m                          | 4.0MΔ                | 5.0m    | SS                       | 25     | 24   | 12                         | 150m                   | 100n   | 15  | 12m            | 30      | Δ            |         |            | PE                        | R203        |
| 61       | A5T404A   | 625m                          | 4.0MΔ                | 5.0m    | SS                       | 40     | 35   | 25                         | 150m                   | 100n   | 15  | 12m            | 30      | Δ            |         |            | PE                        | R203        |
| 62       | A8T404    | 625m                          | 4.0MΔ                | 5.0m    | SS                       | 25     | 24   | 12                         | 150m                   | 100n   | 15  | 12m            | 30      | Δ            |         |            | PE                        | T092        |
| 63       | A8T404A   | 625m                          | 4.0MΔ                | 5.0m    | SS                       | 40     | 35   | 25                         | 150m                   | 100n   | 15  | 12m            | 30      | Δ            |         |            | PE                        | T092        |
| 64       | A5T2604   | 625m                          | 30MΔ                 | 5.0m    | SS                       | 60     | 45   | 6.0                        | 30m                    | 10n    | 5.0 | 1.0m           | 60      | Δ            |         |            | PE                        | R203        |
| 65       | A5T2605   | 625m                          | 30MΔ                 | 5.0m    | SS                       | 60     | 45   | 6.0                        | 30m                    | 10n    | 5.0 | 1.0m           | 150     | Δ            |         |            | PE                        | R203        |
| 66#      | BF692     | 625m                          | 30MΔ                 | 5.0m    | SS                       | 300    | 300  | 5.0                        | 500m                   | 100n   | 1.0 | 30m            | 25      | Δ            |         |            | PE                        | T092        |
| 67#      | BF693     | 625m                          | 30MΔ                 | 5.0m    | SS                       | 200    | 200  | 5.0                        | 500m                   | 100n   | 1.0 | 30m            | 30      | Δ            |         |            | PE                        | T092        |
| 68       | MPS4888   | 625m                          | 30MΔ                 | 5.0m    | ΔJ                       | 150    | 150  | 6.0                        | 100m                   | 50n    | 5.0 | 500m           | 1.5     | Δ            |         |            | PE                        | T092        |
| 69       | MPS5138   | 625m                          | 30MΔ                 | 5.0m    | ΔJ                       | 30     | 30   | 5.0                        | 100m                   | 50n    | 5.0 | 500m           | 1.5     | Δ            |         |            | PE                        | T092        |
| 70#      | MPS151    | 625m                          | 30MΔ                 | 5.0m    | ΔJ                       | 100    | 100  | 6.0                        | 600m                   | 100n   | 5.0 | 50m            | 40      | Δ            |         |            | PE                        | T092        |
| 71       | PN4888    | 625m                          | 30MΔ                 | 5.0m    | ΔJ                       | 150    | 150  | 6.0                        | 100m                   | 50     |     |                |         |              |         |            |                           |             |