

# LOW-POWER SILICON NPN

| Item Number                      | Part Number | Manufacturer | V <sub>(BR)CEO</sub><br>(V) | h <sub>FE</sub> | I <sub>C</sub><br>Max<br>(A) | f <sub>T</sub><br>(Hz) | C <sub>obo</sub><br>Max<br>(F) | I <sub>CBO</sub><br>Max<br>(A) | V <sub>(BR)CBO</sub><br>(V) | P <sub>D</sub><br>Max<br>(W) | Derate<br>at<br>(W/°C) | T <sub>oper</sub><br>Max<br>(°C) | Package<br>Style |
|----------------------------------|-------------|--------------|-----------------------------|-----------------|------------------------------|------------------------|--------------------------------|--------------------------------|-----------------------------|------------------------------|------------------------|----------------------------------|------------------|
| <b>V(BR)CEO ≥ 50 V, (Cont'd)</b> |             |              |                             |                 |                              |                        |                                |                                |                             |                              |                        |                                  |                  |
| -                                | 2SC1815LGR  | Indust Mexi  | 50                          | 400             | 150m                         | 80M                    | 2.0p                           | 100n                           | 60                          | 400m                         | 4.0m                   | 125 J                            | TO-92            |
| -                                | 2SC2458LGR  | ToshibaCorp  | 50                          | 400             | 150m                         | 80M                    | 2.0p                           | 100n                           | 50                          | 200m                         | 2.0m                   | 125 J                            | SPAK             |
| -                                | 2SC3134H6   | Sanyo Elect  | 50                          | 400             | 150m                         | 100M                   | 2.2p                           | 0.1u                           | 60                          | 200m                         |                        | 125 J                            | SOT-23           |
| -                                | 2SC3361S6   | Sanyo Elect  | 50                          | 400             | 150m                         | 100M                   | 2.7p                           | 0.1u                           | 60                          | 150m                         |                        | 125 J                            | SOT-23           |
| 5                                | 2SC734GR    | Indust Mexi  | 50                          | 400             | 150m                         | 140M                   | 13p                            |                                | 50                          | 300m                         |                        |                                  | TO-92            |
| -                                | TEC9014D    | ToshibaCorp  | 50                          | 400             | 150m                         | 150M                   | 2.0p                           | 50n                            | 60                          | 625m                         | 5.0m                   | 150 J                            | TO-92            |
| -                                | 2SD1623T    | Sanyo Elect  | 50                          | 400             | 2.0                          | 150M                   | 12p                            | 100n                           | 60                          | 500m                         |                        | 150 J                            | SOT-89           |
| -                                | TED1402E    | ToshibaCorp  | 50                          | 414             | 150m                         | 175M                   |                                | 100n                           | 60                          | 400m                         | 3.2m                   | 125 J                            | TO-92            |
| -                                | BC182K      | See Index    | 50                          | 450             | 100m                         | 150M                   | 5.0p                           | 15n                            | 60                          | 500m                         | 2.0                    | 125 J                            | TO-92            |
| 10                               | BC182KB     | See Index    | 50                          | 450             | 100m                         | 150M                   | 5.0p                           | 15n                            | 50                          | 500m                         | 2.0                    | 150 J                            | TO-92            |
| -                                | 2SC3311A    | Matsushita   | 50                          | 460             | 100m                         |                        | 3.5p                           | 100n                           | 60                          | 300m                         | 3.0m                   | 125 J                            | TO-92var         |
| -                                | 2SC2960     | Sanyo Elect  | 50                          | 560             | 150m                         | 100M                   | 2.7p                           | 0.1u                           | 60                          | 250m                         |                        | 150                              | SPAKvar          |
| -                                | 2SC2998G    | Sanyo Elect  | 50                          | 560             | 150m                         | 100M                   | 2.7p                           | 0.1u                           | 60                          | 500m                         |                        | 150 J                            | TO-92            |
| -                                | 2SC3114     | Sanyo Elect  | 50                          | 560             | 150m                         | 100M                   | 3.0p                           | 0.1u                           | 60                          | 400m                         |                        | 135 A                            | TO-92            |
| 15                               | 2SD1623U    | Sanyo Elect  | 50                          | 560             | 2.0                          | 150M                   | 12p                            | 100n                           | 60                          | 500m                         |                        | 150 J                            | SOT-89           |
| -                                | 2SD1835     | Sanyo Elect  | 50                          | 560             | 2.0                          | 150M                   | 12p                            | 100n                           | 60                          | 750m                         |                        | 150 J                            | TO-92            |
| -                                | NB012EL     | Natl Semi    | 50                          | 580             | 30m                          | 120M                   | 2.0p                           | 100n                           | 55                          | 600m                         |                        | 150 J                            | TO-92            |
| -                                | NB012EZ     | Natl Semi    | 50                          | 580             | 30m                          | 120M                   | 2.0p                           | 100n                           | 55                          | 600m                         |                        | 150 J                            | TO-92            |
| -                                | NB012FL     | Natl Semi    | 50                          | 580             | 30m                          | 120M                   | 2.0p                           | 100n                           | 55                          | 600m                         |                        | 150 J                            | TO-92            |
| 20                               | NB012FZ     | Natl Semi    | 50                          | 580             | 30m                          | 120M                   | 2.0p                           | 100n                           | 55                          | 600m                         |                        | 150 J                            | TO-92            |
| -                                | NB014EL     | Natl Semi    | 50                          | 580             | 30m                          | 120M                   | 2.0p                           | 50n                            | 55                          | 600m                         |                        | 150 J                            | TO-92            |
| -                                | NB014EZ     | Natl Semi    | 50                          | 580             | 30m                          | 120M                   | 2.0p                           | 50n                            | 55                          | 600m                         |                        | 150 J                            | TO-92            |
| -                                | NB014FL     | Natl Semi    | 50                          | 580             | 30m                          | 120M                   | 2.0p                           | 50n                            | 55                          | 600m                         |                        | 150 J                            | TO-92            |
| -                                | NB014FZ     | Natl Semi    | 50                          | 580             | 30m                          | 120M                   | 2.0p                           | 50n                            | 55                          | 600m                         |                        | 150 J                            | TO-92            |
| 25                               | 2SC1313     | Solid Stlnc  | 50                          | 600             | 100m                         | 100M                   |                                | 100n                           | 50                          | 150m                         | 1.5m                   | 125 J                            | TO-92            |
| -                                | 2SC1843F    | NECElecInc   | 50                          | 600             | 100m                         | 100M                   | 3.0p                           | 100n                           | 60                          | 250m                         |                        | 125 J                            | TO-92            |
| -                                | 2SC3134H7   | Sanyo Elect  | 50                          | 600             | 150m                         | 100M                   | 2.2p                           | 0.1u                           | 60                          | 200m                         |                        | 125 J                            | SOT-23           |
| -                                | 2SC3135     | Sanyo Elect  | 50                          | 600             | 200m                         | 100M                   | 2.5p                           | 0.1u                           | 60                          | 250m                         |                        | 135 A                            | SPAKvar          |
| -                                | 2SC1685     | See Index    | 50                          | 650             | 100m                         | 150M                   | 3.5p                           | 1.0u                           | 60                          | 250m                         | 2.2m                   | 135 J                            | TO-92            |
| 30                               | NB012EV     | Natl Semi    | 50                          | 700             | 30m                          | 120M                   | 2.0p                           | 100n                           | 55                          | 600m                         |                        | 150 J                            | TO-92            |
| -                                | NB012FV     | Natl Semi    | 50                          | 700             | 30m                          | 120M                   | 2.0p                           | 100n                           | 55                          | 600m                         |                        | 150 J                            | TO-92            |
| -                                | NB014EV     | Natl Semi    | 50                          | 700             | 30m                          | 120M                   | 2.0p                           | 50n                            | 55                          | 600m                         |                        | 150 J                            | TO-92            |
| -                                | NB014FV     | Natl Semi    | 50                          | 700             | 30m                          | 120M                   | 2.0p                           | 50n                            | 55                          | 600m                         |                        | 150 J                            | TO-92            |
| 35                               | 2SC732TM-BL | Indust Mexi  | 50                          | 700             | 100m                         | 150M                   | 2.0p                           |                                | 60                          | 400m                         |                        |                                  | TO-92            |
| -                                | 2SC1000G    | ToshibaCorp  | 50                          | 700             | 150m                         | 80M                    | 6.0p                           | 100n                           | 60                          | 400m                         | 4.0m                   | 125 J                            | TO-92            |
| -                                | 2SC1815L-Y  | Indust Mexi  | 50                          | 700             | 150m                         | 80M                    | 2.0p                           |                                | 60                          | 400m                         |                        |                                  | TO-92            |
| -                                | 2SC1815LBL  | Indust Mexi  | 50                          | 700             | 150m                         | 80M                    | 2.0p                           | 100n                           | 60                          | 400m                         | 4.0m                   | 125 J                            | TO-92            |
| -                                | 2SC1815Y    | Indust Mexi  | 50                          | 700             | 150m                         | 80M                    | 2.0p                           |                                | 60                          | 400m                         |                        |                                  | TO-92            |
| 40                               | 2SC2458LBL  | ToshibaCorp  | 50                          | 700             | 150m                         | 80M                    | 2.0p                           | 100n                           | 50                          | 200m                         | 2.0m                   | 125 J                            | SPAK             |
| -                                | KSC945      | Samsung      | 50                          | 700             | 150m                         | 300M                   | 2.5p                           | 100n                           | 60                          | 250m                         |                        | 125 J                            | TO-92            |
| -                                | 2SC1843E    | NECElecInc   | 50                          | 800             | 100m                         | 100M                   | 3.0p                           | 100n                           | 60                          | 250m                         |                        | 125 J                            | TO-92            |
| -                                | BC182C      | Semelab      | 50                          | 900             | 200m                         | 150M                   |                                |                                |                             | 300m                         |                        | 150 S                            | TO-92            |
| -                                | BC182C      | NthAmerSemi  | 50                          | 900             | 200m                         | 150M                   |                                |                                |                             | 300m                         |                        | 150 S                            | TO-92            |
| 45                               | BC182LC     | Semelab      | 50                          | 900             | 200m                         | 150M                   |                                |                                |                             | 300m                         |                        | 150 S                            | TO-92            |
| -                                | 2SC536KNP   | Sanyo Elect  | 50                          | 960             | 100m                         | 100M                   | 45p                            | 1.0u                           | 55                          | 400m                         |                        | 125 J                            | N/A              |
| -                                | 2SC2812     | Sanyo Elect  | 50                          | 960             | 150m                         | 100M                   | 3p                             | 0.1u                           | 55                          | 200m                         |                        | 125                              | SOT-23           |
| -                                | 2SC2925     | Matsushita   | 50                          | 1.0k            | 700m                         |                        | 11p                            | 1.0u                           | 60                          | 750m                         | 6.0m                   | 150 J                            | TO-92            |
| -                                | 2SC3247H    | MitsubiElec  | 50                          | 1.2k            | 1.0                          | 130M                   | 12p                            | 100n                           | 50                          | 900m                         |                        | 150 J                            | MicroTO-92       |
| -                                | 2SC3247J    | MitsubiElec  | 50                          | 1.8k            | 1.0                          | 130M                   | 12p                            | 100n                           | 50                          | 900m                         |                        | 150 J                            | MicroTO-92       |
| 50                               | 2SC3247K    | MitsubiElec  | 50                          | 3.0k            | 1.0                          | 130M                   | 12p                            | 100n                           | 50                          | 900m                         |                        | 150 J                            | MicroTO-92       |
| -                                | 2SD1626     | Sanyo Elect  | 50                          | 3.0k            | 1.5                          | 120M                   |                                | 100n                           | 80                          | 500m                         |                        | 150 S                            | SOT-89           |
| -                                | 2SC3112     | ToshibaCorp  | 50                          | 3.6k            | 150m                         | 100M                   | 3.5p                           | 100n                           | 50                          | 400m                         |                        | 125 J                            | TO-92            |
| -                                | 2SC3113     | ToshibaCorp  | 50                          | 3.6k            | 150m                         | 100M                   | 3.5p                           | 100n                           | 50                          | 200m                         |                        | 125 J                            | SPAK             |
| -                                | 2SD1851     | Sanyo Elect  | 50                          | 5.0k            | 200m                         |                        |                                | 100n                           | 80                          | 200m                         |                        | 150 J                            | TO-236var        |
| 55                               | 2SD1852     | Sanyo Elect  | 50                          | 5.0k            | 200m                         |                        |                                | 100n                           | 80                          | 300m                         |                        | 150 J                            | SPAK             |
| -                                | 2SC3052     | MitsubiElec  | 50                          | 300T            | 200m                         | 200M                   | 2.5p                           | 100n                           | 50                          | 150m                         | 1.5m                   | 125 J                            | SOT-89           |
| -                                | 2N339       | See Index    | 55                          |                 |                              |                        |                                | 1.0u                           | 55                          | 1.0                          |                        | 150 J                            | TO-11            |
| -                                | 2N5189      | See Index    | 55                          | 15              | 2.0                          |                        |                                | 100u                           | 60                          | 800m                         | 4.5m                   | 175 S                            | TO-5             |
| -                                | BC324       | CentralSemi  | 55                          | 20              | 1.0                          | 100M                   | 25p                            |                                | 85                          | 800m                         | 4.5m                   | 175                              | TO-39            |
| 60                               | BC324       | NthAmerSemi  | 55                          | 20              | 1.0                          | 100M                   | 25p                            |                                | 85                          | 800m                         | 4.5m                   | 175                              | TO-39            |
| -                                | BFY56A      | See Index    | 55                          | 40              | 1.0                          | 60M                    |                                | 20n                            |                             | 800m                         |                        | 175 J                            | TO-39            |
| -                                | BCW44       | NthAmerSemi  | 55                          | 40              | 1.0                          | 80M                    | 12p                            | 100n                           | 70                          | 800m                         | 4.5m                   | 175                              | TO-39            |
| -                                | BCW44       | CentralSemi  | 55                          | 40              | 1.0                          | 80M                    | 12p                            | 100n                           | 70                          | 800m                         | 4.5m                   | 175                              | TO-39            |
| 65                               | BC254       | CrimsonSemi  | 55                          | 45              | 30m                          |                        |                                | 100n                           | 100                         | 250m                         | 2.0m                   | 150 S                            | TO-92            |
| -                                | BC255       | NthAmerSemi  | 55                          | 45              | 30m                          |                        |                                | 100n                           | 100                         | 625m                         | 5.0m                   | 150 S                            | TO-92            |
| -                                | BFY56B      | SGS-Ates     | 55                          | 70              | 1.0                          | 80M                    | 12p                            | 50n                            | 80                          | 800m                         | 4.5m                   | 175                              | TO-39            |
| -                                | BSX33       | SGS-Ates     | 55                          | 85              | 1.0                          | 90M                    |                                | 10n                            | 85                          | 500m                         |                        | 175 J                            | TO-18            |
| -                                | BSX33       | NthAmerSemi  | 55                          | 85              | 1.0                          | 90M                    |                                | 10n                            | 85                          | 500m                         |                        | 175 J                            | TO-18            |
| -                                | IT126       | GE/Intersil  | 55                          | 150             | 100m                         |                        | 3.0p                           | 100p                           | 55                          | 400m                         | 2.3m                   | 150 J                            | TO-78            |
| 70                               | 2N4879      | See Index    | 55                          | 175             | 10m                          | 15M                    |                                | 1n                             | 55                          | 300m                         | 1.7m                   | 175 S                            | TO-71            |
| -                                | 2N4099      | SemiconTech  | 55                          | 175             | 10m                          | 150M                   | 800f                           | 100n                           | 55                          | 300m                         | 1.6m                   | 175 S                            | N/A              |
| -                                | 2N4099      | Space Power  | 55                          | 175             | 10m                          | 150M                   | 800f                           | 100n                           | 55                          | 300m                         | 1.6m                   | 175 S                            | N/A              |
| -                                | 2N4100      | See Index    | 55                          | 175             | 10m                          | 150M                   | .8p                            | 10u                            | 55                          | 400m                         | 4.3m                   | 175 S                            | TO-70            |
| 75                               | 2SD661A     | Matsushita   | 55                          | 650             | 100m                         |                        |                                | 100n                           | 55                          | 400m                         | 3.2m                   | 150 J                            | SIP              |
| -                                | 2SC2406     | Matsushita   | 55                          | 700             | 50m                          |                        |                                | 100n                           | 55                          | 200m                         |                        | 125 J                            | SOT-89           |
| -                                | 2SC3312     | Matsushita   | 55                          | 700             | 100m                         |                        | 3.5p                           | 100n                           | 60                          | 300m                         | 3.0m                   | 125 J                            | TO-92var         |
| -                                | 2SC2634     | Matsushita   | 55                          | 700             | 100                          |                        |                                | 100n                           | 60                          | 400m                         | 3.2m                   | 150 J                            | TO-92            |
| -                                | 2SC1072A    | NEC Corp JA  | 56                          | 35              | 700m                         |                        | 3.0p                           |                                | 60                          | 800m                         |                        | 175 J                            | TO-9var          |
| -                                | 2N342       | See Index    | 60                          |                 |                              |                        |                                | 1.0u                           | 60                          | 1.0                          |                        | 150 J                            | TO-11            |
| 80                               | 2N343       | See Index    | 60                          |                 |                              |                        |                                | 1.0u                           | 60                          | 1.0                          |                        | 150 J                            | TO-11            |
| -                                | 2N343A      | See Index    | 60                          |                 | 60m                          |                        |                                | 1.0u                           | 60                          | 1.0                          | 8.0m                   | 150 J                            | TO-11            |
| -                                | PN4945      | Micro Elecs  | 60                          |                 | 500m                         | 60M                    | 20p                            | 50n                            | 80                          | 220m                         |                        | 150 J                            | TO-92            |
| -                                | SML5002     | Semelab      | 60                          |                 | 2.0                          | 50M                    |                                |                                |                             | 400m                         |                        | 175 J                            | TO-46            |
| -                                | SML5007     | Semelab      | 60                          |                 | 2.0                          | 50M                    |                                |                                |                             | 400m                         |                        | 175 J                            | TO-46            |
| 85                               | SML5012     | Semelab      | 60                          |                 | 2.0                          | 50M                    |                                |                                |                             | 400m                         |                        | 175 J                            | TO-46            |
| -                                | TC243       | TeledynCrys  | 60                          | 940m            | 60m                          |                        |                                | 1.0u                           | 60                          | 750m                         | 5.8m                   | 150 J                            | TO-18            |
| -                                | 2N243       | See Index    | 60                          | 940m            | 60m                          |                        |                                | 1.0u                           | 60                          | 750m                         | 5.8m                   | 150 J                            | Can              |
| -                                | TC244       | TeledynCrys  | 60                          | 970m            | 60m                          |                        |                                | 1.0u                           | 60                          | 750m                         | 5.8m                   | 150 J                            | TO-18            |
| -                                | 2N244       | See Index    | 60                          | 970m            | 60m                          |                        |                                | 1.0u                           | 60                          | 750m                         | 5.8m                   | 150 J                            | Can              |
| 90                               | MPS5856     | Motorola     | 60                          | 1.0             | 1.0                          | 100M                   | 15p                            | 100n                           | 60                          | 625m                         | 5.0m                   | 150 J                            | TO-92            |
| -                                | BFT83       | Semelab      | 60                          | 10              | 1.0                          | 150M                   | 6.5p                           | 100n                           | 70                          | 800m                         | 6.4m                   | 150 S                            | TO-92            |
| -                                | TIPP31A     | TaxinstLtd   | 60                          | 10              | 2.0                          |                        |                                | 300u                           | 60                          | 0.8                          |                        | 150 J                            | TO-92            |
| -                                | NS1111      | Swampscott   | 60                          | 10              | 5                            |                        |                                | 1u                             |                             | 500m                         | 3.3m                   | 125                              | TO-18            |
| 95                               | 2N756A      | See Index    | 60                          | 12              | 100m                         | 50M                    | 8.0p                           | 100n                           | 60                          | 500m                         | 2.8m                   | 175 A                            | TO-18            |
| -                                | 2N1105      | See Index    | 60                          | 12              | 500m                         |                        |                                | 10u                            | 60                          | 800m                         | 4.6m                   | 175 S                            | TO-43            |
| -                                | 2N1943      | See Index    | 60                          | 12              | 500m                         |                        |                                | 10u                            | 60                          | 800m                         | 4.5m                   | 175 J                            | TO-5             |
| -                                | 2N2310      | See Index    | 60                          | 12              | 500m                         |                        |                                | 25n                            | 60                          | 350m                         | 2.3m                   | 175 J                            | TO-46            |