

# POWER SILICON NPN

| Item Number                 | Part Number | Manufacturer | I <sub>c</sub> Max (A) | V <sub>(BR)CEO</sub> (V) | h <sub>FE</sub> |      | f <sub>T</sub> (Hz) | I <sub>CEO</sub> Max (A) | t <sub>r</sub> Max (s) | t <sub>f</sub> Max (s) | P <sub>D</sub> Max (W) | T <sub>Oper</sub> Max (°C) | Package Style |
|-----------------------------|-------------|--------------|------------------------|--------------------------|-----------------|------|---------------------|--------------------------|------------------------|------------------------|------------------------|----------------------------|---------------|
|                             |             |              |                        |                          | Min             | Max  |                     |                          |                        |                        |                        |                            |               |
| <b>I(C) ≥ 1 A, (Cont'd)</b> |             |              |                        |                          |                 |      |                     |                          |                        |                        |                        |                            |               |
| -                           | 2N699A      | See Index    | 1.0                    | 80                       | 40              | 120  | 50M                 | 2.0u                     |                        |                        | 2.0                    | 175 J                      | TO-205AD      |
| -                           | 2N699B      | See Index    | 1.0                    | 80                       | 40              | 120  | 50M                 | 2.0u                     |                        |                        | 2.0                    | 175 J                      | TO-205AD      |
| -                           | 2N3665      | See Index    | 1.0                    | 80                       | 40              | 120  | 60M                 | 50n                      |                        |                        | 5.0                    | 175 S                      | TO-5          |
| -                           | TN3020      | Natl Semi    | 1.0                    | 80                       | 40              | 120  | 80M                 | 10n                      |                        |                        | 2.0                    | 140 J                      | TO-237var     |
| 5                           | TN3020      | Micro Elecs  | 1.0                    | 80                       | 40              | 120  | 80M                 | 10n                      |                        |                        | 2.0                    | 140 J                      | TO-237var     |
| -                           | NSD104      | Natl Semi    | 1.0                    | 80                       | 50              | 150  | 60M                 | 100n                     |                        |                        | 1.0                    | 140 J                      | TO-202AA      |
| -                           | 2N2989      | See Index    | 1.0                    | 80                       | 60              | 120  | 30M                 | 30n                      |                        |                        | 1.0                    | 175 C                      | TO-5          |
| -                           | 2N2993      | See Index    | 1.0                    | 80                       | 60              | 120  | 30M                 | 30n                      |                        |                        | 2.0                    | 175 C                      | SiR-10        |
| -                           | 2SC1212A    | Hitachi Ltd  | 1.0                    | 80                       | 60              | 320  | 160M                |                          |                        |                        | 8.0                    |                            | TO-126        |
| -                           | BSX47-10    | See Index    | 1.0                    | 80                       | 63              | 160  | 50M                 | 10n                      | 15n                    | 15n                    | 5.0                    | 175 J                      | TO-205AD      |
| -                           | BCX56-10    | Siemens Akt  | 1.0                    | 80                       | 63              | 160  | 100M                | 100n                     |                        |                        | 1.0                    | 140 J                      | SOT-89        |
| -                           | BD417       | See Index    | 1.0                    | 80                       | 80              | 300  | 75M                 |                          |                        |                        | 2.0                    |                            | TO-220AB      |
| -                           | 2N6552      | See Index    | 1.0                    | 80                       | 80              | 250  | 75M                 | 100n                     |                        |                        | 2.0                    | 140 S                      | TO-202AC      |
| -                           | 2N6731      | See Index    | 1.0                    | 80                       | 100             | 300  | 100n                |                          |                        |                        | 2.0                    | 140 J                      | TO-237var     |
| 15                          | BSX47-16    | Motorola     | 1.0                    | 80                       | 100             | 250  | 50M                 | 10n                      | 15n                    | 15n                    | 5.0                    | 175 J                      | TO-205AD      |
| -                           | BSX47-16    | NthAmerSemi  | 1.0                    | 80                       | 100             | 250  | 50M                 | 10n                      | 15n                    | 15n                    | 5.0                    | 175 J                      | TO-205AD      |
| -                           | 2N3666      | See Index    | 1.0                    | 80                       | 100             | 300  | 60M                 | 50n                      |                        |                        | 5.0                    | 175 S                      | TO-5          |
| -                           | MM3019      | SemiconTech  | 1.0                    | 80                       | 100             | 300  | 80M                 | 10n                      |                        |                        | 1.0                    | 175 J                      | TO-39         |
| -                           | MM3019      | NthAmerSemi  | 1.0                    | 80                       | 100             | 300  | 80M                 | 10n                      |                        |                        | 1.0                    | 175 J                      | TO-39         |
| 20                          | P2N3019     | Motorola     | 1.0                    | 80                       | 100             | 300  | 80M                 | 10n                      |                        |                        | 2.5                    | 140 J                      | TO-226AE      |
| -                           | BCX56-16    | Siemens Akt  | 1.0                    | 80                       | 100             | 250  | 100M                |                          |                        |                        | 1.0                    | 140 J                      | SOT-89        |
| -                           | NSD105      | Natl Semi    | 1.0                    | 80                       | 120             | 360  | 60M                 | 100n                     |                        |                        | 1.0                    | 140 J                      | TO-202AA      |
| -                           | BC618L      | Semelab      | 1.0                    | 80                       | 10k             | 50k  |                     |                          |                        |                        | 1.2                    |                            | TO-92         |
| -                           | 2N2405      | See Index    | 1.0                    | 90                       | 60              | 200  |                     | 10n                      |                        |                        | 1.0                    | 175 S                      | TO-5          |
| 25                          | 2N2405S     | Space Power  | 1.0                    | 90                       | 60              | 200  |                     | 10n                      |                        |                        | 1.0                    | 175 S                      | TO-39         |
| -                           | 2N2405S     | PPC Product  | 1.0                    | 90                       | 60              | 200  |                     | 10n                      |                        |                        | 1.0                    | 175 S                      | TO-39         |
| -                           | DTL1634     | Diode Trans  | 1.0                    | 100                      |                 | 80   | 2.5M                |                          |                        |                        | 105                    |                            | TO-3          |
| -                           | 2N2611      | See Index    | 1.0                    | 100                      | 7.0             | 36   | 4.0M                | 50u                      |                        |                        | 2.0                    | 175 C                      | TO-37var      |
| -                           | SSP58C      | StdSt Indus  | 1.0                    | 100                      | 10              | 50   |                     |                          |                        |                        | 30                     |                            | N/A           |
| 30                          | MJD29C      | Motorola     | 1.0                    | 100                      | 15              | 75   | 3.0M                | 50u                      | 500n                   | 2.0u                   | 15                     | 140 J                      | TO-252var     |
| -                           | TIP29C      | See Index    | 1.0                    | 100                      | 15              | 75   | 3.0M                | 300u                     | 500n                   | 2.0u                   | 2.0                    | 140 J                      | TO-220AB      |
| -                           | DTL1644     | Diode Trans  | 1.0                    | 100                      | 20              | 60   | 2.5M                |                          |                        |                        | 52                     |                            | TO-66         |
| -                           | BD400       | NthAmerSemi  | 1.0                    | 100                      | 20              |      | 65M                 | 10u                      |                        |                        | 1.2                    | 140 S                      | TO-126var     |
| -                           | 2N2201      | See Index    | 1.0                    | 100                      | 25              | 90   | 10M                 | 50u                      |                        |                        | 2.0                    | 175 C                      | TO-37var      |
| 35                          | 2N2202      | See Index    | 1.0                    | 100                      | 25              | 90   | 10M                 | 50u                      |                        |                        | 1.0                    | 175 C                      | Axial         |
| -                           | 2N2203      | See Index    | 1.0                    | 100                      | 25              | 90   | 10M                 | 50u                      |                        |                        | 1.0                    | 175 C                      | Can           |
| -                           | 2N2204      | See Index    | 1.0                    | 100                      | 25              | 90   | 10M                 | 50u                      |                        |                        | 1.0                    | 175 C                      | TO-57         |
| -                           | 2N2988      | See Index    | 1.0                    | 100                      | 25              | 75   | 30M                 | 30n                      |                        |                        | 1.0                    | 175 C                      | TO-5          |
| -                           | 2N2992      | See Index    | 1.0                    | 100                      | 25              | 75   | 30M                 | 30n                      |                        |                        | 2.0                    | 175 C                      | SiR-10        |
| 40                          | 2N2472      | Semicoa      | 1.0                    | 100                      | 30              | 90   | 10M                 | 10u                      |                        |                        | 1.0                    | 175 C                      | TO-37var      |
| -                           | 2N2472      | High Volt    | 1.0                    | 100                      | 30              | 90   | 10M                 | 10u                      |                        |                        | 1.0                    | 175 C                      | TO-37var      |
| -                           | 2N2472      | Space Power  | 1.0                    | 100                      | 30              | 90   | 10M                 | 10u                      |                        |                        | 1.0                    | 175 C                      | TO-37var      |
| -                           | 2N2995      | See Index    | 1.0                    | 100                      | 30              | 100  | 10M                 | 50u                      |                        |                        | 1.5                    | 175 C                      | SiR-10        |
| 45                          | ST110       | SemiconTech  | 1.0                    | 100                      | 30              | 200  | 30M                 | 3.0u                     |                        |                        | 1.0                    | 175 S                      | TO-5          |
| -                           | ST1105      | SemiconTech  | 1.0                    | 100                      | 30              | 200  | 30M                 | 3.0u                     |                        |                        | 2.0                    | 175 S                      | TO-37var      |
| -                           | SVT100-5    | TRW Optron   | 1.0                    | 100                      | 40              |      |                     |                          | 400n                   |                        |                        |                            | TO-3          |
| -                           | DTL1654     | Diode Trans  | 1.0                    | 100                      | 40              | 120  | 2.5M                |                          |                        |                        | 52                     |                            | TO-66         |
| -                           | 2N5681      | See Index    | 1.0                    | 100                      | 40              | 150  | 30M                 | 1.0u                     |                        |                        | 1.0                    | 175 J                      | TO-5          |
| -                           | 2N4001      | See Index    | 1.0                    | 100                      | 40              | 120  | 40M                 | 2.0u                     | 300n                   | 2u                     | 1.0                    | 175 J                      | TO-5          |
| 50                          | BDY66       | NthAmerSemi  | 1.0                    | 100                      | 50              | 300  | 30M                 | 500u                     |                        |                        | 2.0                    | 175 J                      | SiR-10        |
| -                           | NSD106      | Natl Semi    | 1.0                    | 100                      | 50              | 150  | 60M                 | 100n                     |                        |                        | 1.0                    | 140 J                      | TO-202AA      |
| -                           | 2N2990      | See Index    | 1.0                    | 100                      | 60              | 120  | 30M                 | 30n                      |                        |                        | 1.0                    | 175 C                      | TO-5          |
| -                           | 2N2994      | See Index    | 1.0                    | 100                      | 60              | 120  | 30M                 | 30n                      |                        |                        | 2.0                    | 175 C                      | SiR-10        |
| 55                          | 2SC1625O    | Indust Mexi  | 1.0                    | 100                      | 70              | 140  | 30M                 |                          |                        |                        | 15                     |                            | TO-220        |
| -                           | 2N6553      | See Index    | 1.0                    | 100                      | 80              | 250  | 75M                 | 100n                     |                        |                        | 2.0                    | 140 S                      | TO-202AC      |
| -                           | 2SC1625Y    | Indust Mexi  | 1.0                    | 100                      | 120             | 240  | 30M                 |                          |                        |                        | 15                     |                            | TO-220        |
| -                           | 2SC1161     | Solid Stinc  | 1.0                    | 120                      | 30              | 200  | 5.0M                | 5.0u                     |                        |                        | 15                     | 140 J                      | TO-66         |
| -                           | TIP29D      | See Index    | 1.0                    | 120                      | 40              |      | 3.0M                | 300u                     | 500n                   |                        | 2.0                    | 140 J                      | TO-220AB      |
| -                           | 2N5682      | See Index    | 1.0                    | 120                      | 40              | 150  | 30M                 | 1.0u                     |                        |                        | 1.0                    | 175 J                      | TO-5          |
| 60                          | MPSU03      | Semi Inc     | 1.0                    | 120                      | 40              |      | 35M                 | 100n                     |                        |                        | 10                     | 140 J                      | SIP-tab       |
| -                           | MPSU03      | Motorola     | 1.0                    | 120                      | 40              |      | 35M                 | 100n                     |                        |                        | 10                     | 140 J                      | SIP-tab       |
| -                           | MPSU03      | CrimsonSemi  | 1.0                    | 120                      | 40              |      | 35M                 | 100n                     |                        |                        | 10                     | 140 J                      | SIP-tab       |
| -                           | 2SC1624     | Indust Mexi  | 1.0                    | 120                      | 70              | 240  | 30M                 | 1.0u                     |                        |                        | 15                     | 140 J                      | TO-220AB      |
| -                           | 2SC1624     | ToshibaCorp  | 1.0                    | 120                      | 70              | 240  | 30M                 | 1.0u                     |                        |                        | 15                     | 140 J                      | TO-220AB      |
| 65                          | 2SC1624O    | Indust Mexi  | 1.0                    | 120                      | 70              | 140  | 30M                 |                          |                        |                        | 15                     |                            | TO-220        |
| -                           | 2SC1624Y    | Indust Mexi  | 1.0                    | 120                      | 120             | 240  | 30M                 |                          |                        |                        | 15                     |                            | TO-220        |
| -                           | DTL1635     | Diode Trans  | 1.0                    | 125                      |                 | 80   | 2.5M                |                          |                        |                        | 105                    |                            | TO-3          |
| -                           | DTL1645     | Diode Trans  | 1.0                    | 125                      | 20              | 60   | 2.5M                |                          |                        |                        | 52                     |                            | TO-66         |
| -                           | DTL1655     | Diode Trans  | 1.0                    | 125                      | 40              | 120  | 2.5M                |                          |                        |                        | 52                     |                            | TO-63         |
| 70                          | ZTX654      | FerrantiLtd  | 1.0                    | 125                      | 50              |      | 30M                 | 100n                     |                        |                        | 1.0                    | 175 J                      | TO-92         |
| -                           | 2N4271      | See Index    | 1.0                    | 140                      | 20              | 140  | 20M                 | 50n                      |                        |                        | 5.0                    | 175 C                      | TO-5          |
| -                           | TIP29E      | Motorola     | 1.0                    | 140                      | 40              |      | 3.0M                | 300u                     | 500n                   |                        | 2.0                    | 140 J                      | TO-220AB      |
| -                           | TIP29E      | TexInstLtd   | 1.0                    | 140                      | 40              |      | 3.0M                | 300u                     | 500n                   |                        | 2.0                    | 140 J                      | TO-220AB      |
| 75                          | TIP29E      | Texas Instr  | 1.0                    | 140                      | 40              |      | 3.0M                | 300u                     | 500n                   |                        | 2.0                    | 140 J                      | TO-220AB      |
| -                           | DTL1636     | Diode Trans  | 1.0                    | 150                      |                 | 80   | 2.5M                |                          |                        |                        | 105                    |                            | TO-63         |
| -                           | 2N6720      | Space Power  | 1.0                    | 150                      | 10              | 50   |                     | 1.0u                     |                        |                        | 2.0                    | 140 J                      | TO-237var     |
| -                           | 2N6720      | Natl Semi    | 1.0                    | 150                      | 10              | 50   |                     | 1.0u                     |                        |                        | 2.0                    | 140 J                      | TO-237var     |
| -                           | 2N6720      | CrimsonSemi  | 1.0                    | 150                      | 10              | 50   |                     | 1.0u                     |                        |                        | 2.0                    | 140 J                      | TO-237var     |
| -                           | DTL1646     | Diode Trans  | 1.0                    | 150                      | 20              | 60   | 2.5M                |                          |                        |                        | 52                     |                            | TO-66         |
| 80                          | ST11506     | SemiconTech  | 1.0                    | 150                      | 30              |      | 10M                 | 100u                     |                        |                        | 20                     | 140 J                      | TO-66         |
| -                           | 2SC2317     | Sankan Elec  | 1.0                    | 150                      | 30              |      | 10M                 | 100u                     |                        |                        | 30                     | 140 J                      | TO-220        |
| -                           | DTL1656     | Diode Trans  | 1.0                    | 150                      | 40              | 120  | 2.5M                |                          |                        |                        | 52                     |                            | TO-63         |
| -                           | ZTX655      | FerrantiLtd  | 1.0                    | 150                      | 50              |      | 30M                 | 100n                     |                        |                        | 1.0                    | 175 J                      | TO-92         |
| 85                          | 2SD1258     | Matsushita   | 1.0                    | 150                      | 500             | 2.0k | 25M                 | 100u                     |                        |                        | 40                     | 140 J                      | TO-220var     |
| -                           | 2SD1272     | Matsushita   | 1.0                    | 150                      | 500             | 2.0k | 25M                 | 100u                     |                        |                        | 40                     | 140 J                      | SOT-186       |
| -                           | 2SD876      | Matsushita   | 1.0                    | 150                      | 500             | 2.0k | 25M                 | 100u                     |                        |                        | 40                     | 140 J                      | TO-220        |
| -                           | TIP29F      | Motorola     | 1.0                    | 160                      | 40              |      | 3.0M                | 300u                     | 500n                   |                        | 2.0                    | 140 J                      | TO-220AB      |
| -                           | TIP29F      | TexInstLtd   | 1.0                    | 160                      | 40              |      | 3.0M                | 300u                     | 500n                   |                        | 2.0                    | 140 J                      | TO-220AB      |
| -                           | TIP29F      | Texas Instr  | 1.0                    | 160                      | 40              |      | 3.0M                | 300u                     | 500n                   |                        | 2.0                    | 140 J                      | TO-220AB      |
| 90                          | DTL1637     | Diode Trans  | 1.0                    | 175                      |                 | 80   | 2.5M                |                          |                        |                        | 105                    |                            | TO-63         |
| -                           | DTL1647     | Diode Trans  | 1.0                    | 175                      | 20              | 60   | 2.5M                |                          |                        |                        | 52                     |                            | TO-66         |
| -                           | 40346       | See Index    | 1.0                    | 175                      | 25              |      | 10M                 | 5.0u                     |                        |                        | 1.0                    | 175 J                      | TO-5          |
| -                           | 40346L      | SemiconTech  | 1.0                    | 175                      | 25              |      | 10M                 | 5.0u                     |                        |                        | 1.0                    | 175 J                      | TO-5          |
| -                           | 40346S      | SemiconTech  | 1.0                    | 175                      | 25              |      | 10M                 | 5.0u                     |                        |                        | 1.0                    | 175 J                      | TO-39         |
| 95                          | 40346V1     | Diode Trans  | 1.0                    | 175                      | 25              |      | 10M                 | 5.0u                     |                        |                        | 4.0                    | 175 J                      | TO-5var       |
| -                           | 40346V1     | GE Solid St  | 1.0                    | 175                      | 25              |      | 10M                 | 5.0u                     |                        |                        | 4.0                    | 175 J                      | TO-5var       |
| -                           | 40346V1     | SemiconTech  | 1.0                    | 175                      | 25              |      | 10M                 | 5.0u                     |                        |                        | 4.0                    | 175 J                      | TO-5var       |