



**SEMICOA CORPORATION** supports numerous strategic aerospace and Hi Rel programs. Headquartered in Costa Mesa, California, SEMICOA has design, development, fabrication, assembly, and testing facilities in house. For over forty years, SEMICOA has gained the reputation for quality, reliability and delivery. With an emphasis on hi-rel and JANS product, SEMICOA supports such programs as the GPS III, Trident, Hell Fire and the Patriot Missile.

#### **RADIATION HARDNESS ASSURANCE**

SEMICOA recently expanded its Radiation Engineering Section, enhancing the department solely dedicated to supporting customer needs for radiation hardened devices aimed at space applications and the expansion of its product line to include DSCC certified MOSFETs, IGBT, FREDs and other power related products in packaged and die form.

#### **EXPANDING TECHNOLOGIES**

SEMICOA is exploring into new technologies for the automotive, energy, medical, and security industries, while maintaining an excellent reputation for expertise, quality assurance, long term support, hi-rel products, and providing customers with many options and solutions.

#### **EXPERTISE**

SEMICOA has assembled the industry's most experienced designers, engineers, production, packaging, quality control and sales people in the field of power semiconductors.

With the experience and knowledge of SEMICOA's team, we are YOUR technology partner.

#### **CERTIFICATION AND QUALIFICATION**

Our facility has achieved the highest U.S. government qualifications; JANS, MIL-PRF-19500 production of electronic components and is also ISO 9001:2000 with AS 9100:2004 Rev B certification. The manufacturing facility performs discrete and hybrid assembly utilizing innovative techniques and processes. High volume production is performed on dedicated assembly lines to reduce cost and increase throughput at the highest quality levels.

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**Specializing in High Reliability and Radiation Hardened Assured Technology**



●: DSCC Certified  
○: In Development

✓: Awaiting DSCC Certification  
□: Does Not Apply

|             |                    | QUALITY LEVEL - PACKAGED DEVICE |       |        |      |       |       |
|-------------|--------------------|---------------------------------|-------|--------|------|-------|-------|
| PART NUMBER | Slash Sheet Family | JAN                             | JANTX | JANTXV | JANS | JANSR | JANSF |
| 2N720A      | /182-Low Power     | ●                               | ●     | ●      | ○    | ○     | ○     |
| 2N918       | /301-Low Power     | ●                               | ●     | ●      | ●    | ✓     | ○     |
| 2N930       | /253-Low Power     | ●                               | ●     | ●      | ○    | ○     | ○     |
| 2N1893      | /182-Low Power     | ●                               | ●     | ●      | ○    | ○     | ○     |
| 2N1893S     | /182-Low Power     | ●                               | ●     | ●      | ○    | ○     | ○     |
| 2N2060      | /270-Dual          | ●                               | ●     | ●      | ○    | ○     | ○     |
| 2N2218      | /251-Switching     | ●                               | ●     | ●      | ○    | ○     | ○     |
| 2N2218A     | /251-Switching     | ●                               | ●     | ●      | ○    | ○     | ○     |
| 2N2218AL    | /251-Switching     | ●                               | ●     | ●      | ○    | ○     | ○     |
| 2N2219      | /251-Switching     | ●                               | ●     | ●      | ●    | ○     | ○     |
| 2N2219A     | /251-Switching     | ●                               | ●     | ●      | ●    | ✓     | ○     |
| 2N2219AL    | /251-Switching     | ●                               | ●     | ●      | ●    | ✓     | ○     |
| 2N2222A     | /255-Switching     | ●                               | ●     | ●      | ●    | ●     | ○     |
| 2N2369A     | /317-Switching     | ●                               | ●     | ●      | ●    | ●     | ●     |
| 2N2484      | /376-Low Power     | ●                               | ●     | ●      | ●    | ○     | ○     |
| 2N2605      | /354-Low Power     | ●                               | ●     | ●      | ○    | ○     | ○     |
| 2N2857      | /343-Low Power     | ●                               | ●     | ●      | ●    | ●     | ●     |
| 2N2904      | /290-Switching     | ●                               | ●     | ●      | ○    | ○     | ○     |
| 2N2904A     | /290-Switching     | ●                               | ●     | ●      | ○    | ○     | ○     |
| 2N2904AL    | /290-Switching     | ●                               | ●     | ●      | ○    | ○     | ○     |
| 2N2905      | /290-Switching     | ●                               | ●     | ●      | ●    | ○     | ○     |
| 2N2905A     | /290-Switching     | ●                               | ●     | ●      | ●    | ●     | ●     |
| 2N2905AL    | /290-Switching     | ●                               | ●     | ●      | ●    | ●     | ●     |
| 2N2906A     | /291-Switching     | ●                               | ●     | ●      | ●    | ●     | ●     |
| 2N2906AL    | /291-Switching     | ○                               | ○     | ○      | ●    | ●     | ●     |
| 2N2907A     | /291-Switching     | ○                               | ○     | ○      | ●    | ●     | ●     |
| 2N2907AL    | /291-Switching     | ●                               | ●     | ●      | ●    | ●     | ●     |
| 2N2946A     | /382-Low Power     | ●                               | ●     | ●      | ●    | ○     | ○     |
| 2N3019      | /391-Low Power     | ●                               | ●     | ●      | ●    | ○     | ○     |
| 2N3019S     | /391-Low Power     | ●                               | ●     | ●      | ●    | ○     | ○     |
| 2N3057A     | /391-Low Power     | ●                               | ●     | ●      | ●    | ✓     | ○     |
| 2N3227      | /317-Switching     | ●                               | ●     | ●      | ●    | ○     | ○     |

| PACKAGE TYPES |    |     |    | QUALITY LEVEL - BARE DIE |        |         |         |          |          |
|---------------|----|-----|----|--------------------------|--------|---------|---------|----------|----------|
| CASE          | UB | UBC | UA | JANHCB                   | JANKCB | JANKCBR | JANKCBF | Die-Size | Geometry |
| TO-18         | ○  | □   | □  | ○                        | ○      | ○       | ○       | 30x30    | 4500     |
| TO-72         | ●  | □   | □  | ●                        | ●      | ✓       | ○       | 16x16    | 0003     |
| TO-18         | ○  | □   | □  | ○                        | ○      | ○       | ○       | 18x18    | 0307     |
| TO-5          | ○  | □   | □  | ○                        | ○      | ○       | ○       | 30x30    | 4500     |
| TO-39         | □  |     |    | □                        |        |         |         | 30x30    | 4500     |
| TO-77         | ○  | □   | □  | □                        | □      | □       | □       | 20x20    | 0410     |
| TO-39         | ○  | □   | □  | □                        | □      | □       | □       | 20x20    | 0400     |
| TO-39         | ○  | □   | □  | □                        | □      | □       | □       | 20x20    | 0400     |
| TO-5          | □  |     |    | □                        |        |         |         | 20x20    | 0400     |
| TO-39         | ○  | □   | □  | □                        | □      | □       | □       | 20x20    | 0400     |
| TO-39         | ○  | □   | □  | □                        | □      | □       | □       | 20x20    | 0400     |
| TO-5          | □  |     |    | □                        |        |         |         | 20x20    | 0400     |
| TO-18         | ●  | ●   | ✓  | ●                        | ●      | ●       | ○       | 20x20    | 0400     |
| TO-18         | ●  | ●   | ✓  | ●                        | ●      | ✓       | ○       | 16x16    | 0005     |
| TO-18         | ●  | ●   | ✓  | ●                        | ●      | ○       | ○       | 18x18    | 0307     |
| TO-46         | ○  | □   | □  | ○                        | ○      | ○       | ○       | 18x18    | 0220     |
| TO-72         | ●  | □   | □  | ●                        | ●      | ●       | ●       | 16x16    | 0011     |
| TO-39         | ○  | □   | □  | ○                        | ○      | ○       | ○       | 20x20    | 0600     |
| TO-39         | ○  | □   | □  | ○                        | ○      | ○       | ○       | 20x20    | 0600     |
| TO-5          | □  |     |    | □                        |        |         |         | 20x20    | 0600     |
| TO-39         | ○  | □   | □  | ○                        | ○      | ○       | ○       | 20x20    | 0600     |
| TO-39         | ○  | □   | □  | ✓                        | ✓      | ✓       | ○       | 20x20    | 0600     |
| TO-5          | □  |     |    | □                        |        |         |         | 20x20    | 0600     |
| TO-18         | ●  | ●   | ✓  | ○                        | ○      | ●       | ●       | 20x20    | 0600     |
| TO-5          | □  |     |    | □                        |        |         |         | 20X20    | 0600     |
| TO-18         | ●  | ●   | ✓  | ●                        | ●      | ●       | ●       | 20x20    | 0600     |
| TO-5          | □  |     |    | □                        |        |         |         | 20X20    | 0600     |
| TO-46         | ○  | □   | □  | ●                        | ●      | ✓       | ○       | 20x20    | 1317     |
| TO-5          | ○  | □   | □  | ●                        | ●      | ○       | ○       | 30x30    | 4500     |
| TO-39         | □  |     |    | □                        |        |         |         | 30x30    | 4500     |
| TO-46         | ○  | □   | □  | □                        | □      | □       | □       | 30x30    | 4500     |
| TO-18         | ●  | □   | ○  | ●                        | ●      | ○       | ○       | 16x16    | 0005     |



●: DSCC Certified

○: In Development



: Awaiting DSCC Certification



: Does Not Apply

|             |                     | QUALITY LEVEL - PACKAGED DEVICE |       |        |      |       |       | PACKAGE TYPES |    |     |    | QUALITY LEVEL - BARE DIE |       |        |        |          |          |
|-------------|---------------------|---------------------------------|-------|--------|------|-------|-------|---------------|----|-----|----|--------------------------|-------|--------|--------|----------|----------|
| PART NUMBER | Slash Sheet Family  | JAN                             | JANTX | JANTXV | JANS | JANSR | JANSF | CASE          | UB | UBC | UA | JANHC                    | JANKC | JANKCR | JANKCF | Die-Size | Geometry |
| 2N3485A     | /392-Switching      | ●                               | ●     | ●      | ○    | ○     | ○     | TO-46         | ○  |     |    | ○                        | ○     | ○      | ○      | 20x20    | 0600     |
| 2N3486A     | /392-Switching      | ●                               | ●     | ●      | ○    | ○     | ○     | TO-46         | ○  |     |    | ○                        | ○     | ○      | ○      | 20x20    | 0600     |
| 2N3498      | /366-Amplifier      | ●                               | ●     | ●      | ○    | ○     | ○     | TO-39         | ○  |     |    | ○                        | ○     | ○      | ○      | 30x30    | 5620     |
| 2N3498L     | /366-Amplifier      | ●                               | ●     | ●      | ○    | ○     | ○     | TO-5          |    |     |    |                          |       |        |        | 30x30    | 5620     |
| 2N3499      | /366-Amplifier      | ●                               | ●     | ●      | ○    | ○     | ○     | TO-39         | ○  |     |    | ○                        | ○     | ○      | ○      | 30x30    | 5620     |
| 2N3499L     | /366-Amplifier      | ●                               | ●     | ●      | ○    | ○     | ○     | TO-5          |    |     |    |                          |       |        |        | 30x30    | 5620     |
| 2N3500      | /366-Amplifier      | ●                               | ●     | ●      | ○    | ○     | ○     | TO-39         | ○  |     |    | ○                        | ○     | ○      | ○      | 30x30    | 5620     |
| 2N3500L     | /366-Amplifier      | ●                               | ●     | ●      | ○    | ○     | ○     | TO-5          |    |     |    |                          |       |        |        | 30x30    | 5620     |
| 2N3501      | /366-Amplifier      | ●                               | ●     | ●      | ●    | ○     | ○     | TO-39         | ●  |     |    | ●                        | ●     | ○      | ○      | 30x30    | 5620     |
| 2N3501L     | /366-Amplifier      | ●                               | ●     | ●      | ●    | ○     | ○     | TO-5          |    |     |    |                          |       |        |        | 30x30    | 5620     |
| 2N3506      | /349-Switching      | ●                               | ●     | ●      | ●    | ○     | ○     | TO-39         |    |     |    | ○                        | ○     | ○      | ○      | 60x60    | 1506     |
| 2N3506L     | /349-Switching      | ●                               | ●     | ●      | ●    | ○     | ○     | TO-           |    |     |    |                          |       |        |        | 60x60    | 1506     |
| 2N3506A     | /349-Switching      | ●                               | ●     | ●      | ●    | ○     | ○     | TO-39         |    |     |    | ○                        | ○     | ○      | ○      | 60x60    | 1506     |
| 2N3506AL    | /349-Switching      | ●                               | ●     | ●      | ●    | ○     | ○     | TO-5          |    |     |    |                          |       |        |        | 60x60    | 1506     |
| 2N3507      | /349-Switching      | ●                               | ●     | ●      | ●    | ○     | ○     | TO-39         |    |     |    | √                        | √     | ○      | ○      | 60x60    | 1506     |
| 2N3507L     | /349-Switching      | ●                               | ●     | ●      | ●    | ○     | ○     | TO-5          |    |     |    |                          |       |        |        | 60x60    | 1506     |
| 2N3507A     | /349-Switching      | ●                               | ●     | ●      | ●    | ○     | ○     | TO-39         |    |     |    | √                        | √     | ○      | ○      | 60x60    | 1506     |
| 2N3507AL    | /349-Switching      | ●                               | ●     | ●      | ●    | ○     | ○     | TO-5          |    |     |    |                          |       |        |        | 60x60    | 1506     |
| 2N3700      | /391-Low Power      | √                               | ●     | ●      | ●    | √     | ○     | TO-18         | ●  |     |    | ●                        | ●     | √      | ○      | 30x30    | 4500     |
| 2N3735      | /395-Switching      | ●                               | ●     | ●      | ●    | ○     | ○     | TO-39         | ○  |     |    | ○                        | ○     | ○      | ○      | 27x27    | 0806     |
| 2N3735L     | /395-Switching      | ●                               | ●     | ●      | ●    | ○     | ○     | TO-5          |    |     |    |                          |       |        |        | 27x27    | 0806     |
| 2N3737      | /395-Switching      | ●                               | ●     | ●      | ●    | ○     | ○     | TO-46         | ●  |     |    | √                        | √     | ○      | ○      | 27x27    | 0806     |
| 2N3810      | /336-Dual           | ●                               | ●     | ●      | ●    | ○     | ○     | TO-78         | ○  |     |    | √                        | √     | ○      | ○      | 18x18    | 0220     |
| 2N3810L     | /336-Dual           | ●                               | ●     | ●      | ●    | ○     | ○     | TO-78         |    |     |    |                          |       |        |        | 18x18    | 0220     |
| 2N3810U     | /336-Dual           | ●                               | ●     | ●      | ○    | ○     | ○     | 6LCC          |    |     |    |                          |       |        |        | 18x18    | 0220     |
| 2N3811      | /336-Dual           | ●                               | ●     | ●      | ●    | ○     | ○     | TO-78         | ○  |     |    | √                        | √     | ○      | ○      | 18x18    | 0220     |
| 2N3811L     | /336-Dual           | ●                               | ●     | ●      | ●    | ○     | ○     | TO-78         |    |     |    |                          |       |        |        | 18x18    | 0220     |
| 2N3811U     | /336-Dual           | ●                               | ●     | ●      | ○    | ○     | ○     | 6LCC          |    |     |    |                          |       |        |        | 18x18    | 0220     |
| 2N3866      | /398-High-Frequency | ●                               | ●     | ●      | ●    | ○     | ○     | TO-39         | ●  |     |    | √                        | √     | ○      | ○      | 16x20    | 1008     |
| 2N3866A     | /398-High-Frequency | ●                               | ●     | ●      | ●    | ○     | ○     | TO-39         | ●  |     |    | √                        | √     | ○      | ○      | 16x20    | 1008     |
| 2N3960      | /399-Switching      | ●                               | ●     | ●      | ○    | ○     | ○     | TO-18         | ●  |     |    | ○                        | ○     | ○      | ○      | 16x16    | 0003     |
| 2N3996      | /374-Power          | ●                               | ●     | ●      | ○    | ○     | ○     | TO-59         |    |     |    | ○                        | ○     | ○      | ○      | 100x100  | 9201     |
| 2N3997      | /374-Power          | ●                               | ●     | ●      | ○    | ○     | ○     | TO-59         |    |     |    | ○                        | ○     | ○      | ○      | 100x100  | 9201     |



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□: Does Not Apply

| PART NUMBER | Slash Sheet Family   | QUALITY LEVEL - PACKAGED DEVICE |       |        |      |       |       |
|-------------|----------------------|---------------------------------|-------|--------|------|-------|-------|
|             |                      | JAN                             | JANTX | JANTXV | JANS | JANSR | JANSF |
| 2N3998      | /374-Power           | ●                               | ●     | ●      | ○    | ○     | ○     |
| 2N3999      | /374-Power           | ●                               | ●     | ●      | ○    | ○     | ○     |
| 2N4029      | /512-Switching       | ●                               | ●     | ●      | ●    | ✓     | ○     |
| 2N4033      | /512-Switching       | ●                               | ●     | ●      | ●    | ✓     | ○     |
| 2N4150      | /394-Low Power       | ●                               | ●     | ●      | ○    | ○     | ○     |
| 2N4150S     | /394-Low Power       | ●                               | ●     | ●      | ○    | ○     | ○     |
| 2N4261      | /511-Switching       | ●                               | ●     | ●      | ●    | ○     | ○     |
| 2N4449      | /317-Switching       | ●                               | ●     | ●      | ●    | ●     | ●     |
| 2N4957      | /426-Amplifier       | ●                               | ●     | ●      | ○    | ✓     | ✓     |
| 2N5002      | /534-Power           | ●                               | ●     | ●      | ○    | ○     | ○     |
| 2N5003      | /535-Power           | ●                               | ●     | ●      | ○    | ○     | ○     |
| 2N5004      | /534-Power           | ●                               | ●     | ●      | ○    | ○     | ○     |
| 2N5005      | /535-Power           | ●                               | ●     | ●      | ○    | ○     | ○     |
| 2N5109      | /453-Hi-Frequency    | ●                               | ●     | ●      | ●    | ○     | ○     |
| 2N5151      | /545-Power           | ●                               | ●     | ●      | ●    | ✓     | ✓     |
| 2N5151L     | /545-Power           | ●                               | ●     | ●      | ●    | ✓     | ✓     |
| 2N5152      | /544-Power           | ●                               | ●     | ●      | ●    | ●     | ●     |
| 2N5152L     | /544-Power           | ●                               | ●     | ●      | ●    | ●     | ●     |
| 2N5153      | /545-Power           | ●                               | ●     | ●      | ●    | ✓     | ✓     |
| 2N5153L     | /545-Power           | ●                               | ●     | ●      | ●    | ✓     | ✓     |
| 2N5154      | /544-Power           | ●                               | ●     | ●      | ●    | ●     | ●     |
| 2N5154L     | /544-Power           | ●                               | ●     | ●      | ●    | ●     | ●     |
| 2N5237      | /394-Low Power       | ●                               | ●     | ●      | ○    | ○     | ○     |
| 2N5339      | /560-Switching       | ●                               | ●     | ●      | ○    | ○     | ○     |
| 2N5581      | /423-Switching       | ●                               | ●     | ●      | ○    | ○     | ○     |
| 2N5582      | /423-Switching       | ●                               | ●     | ●      | ○    | ○     | ○     |
| 2N5666S     | /455-Power-Switching | ●                               | ●     | ●      | ○    | ○     | ○     |
| 2N6193      | /561-Switching       | ●                               | ●     | ●      | ○    | ○     | ○     |
| 2N6987      | /558-Quad Switching  | ●                               | ●     | ●      | ●    | ✓     | ○     |
| 2N6988      | /558-Quad Switching  | ●                               | ●     | ●      | ●    | ✓     | ○     |
| 2N6989      | /559-Quad Switching  | ●                               | ●     | ●      | ●    | ✓     | ○     |
| 2N6990      | /559-Quad Switching  | ●                               | ●     | ●      | ●    | ✓     | ○     |

| PACKAGE TYPES |    |     |    | QUALITY LEVEL - BARE DIE |       |        |        | Die-Size | Geometry |
|---------------|----|-----|----|--------------------------|-------|--------|--------|----------|----------|
| CASE          | UB | UBC | UA | JANHc                    | JANKC | JANKCR | JANKCF |          |          |
| TO- 59        | □  | □   | □  | ○                        | ○     | ○      | ○      | 100x100  | 9201     |
| TO- 59        | □  | □   | □  | ○                        | ○     | ○      | ○      | 100x100  | 9201     |
| TO- 18        | ○  | □   | ○  | ●                        | ●     | ✓      | ○      | 30x30    | 6700     |
| TO- 39        | ●  | □   | ✓  | ●                        | ●     | ✓      | ○      | 30x30    | 6700     |
| TO- 5         | □  | □   | □  | ○                        | ○     | ○      | ○      | 155x155  | 3101     |
| TO- 39        | □  | □   | □  | □                        | □     | □      | □      | 155x155  | 3101     |
| TO- 72        | ●  | ●   | □  | ○                        | ○     | ○      | ○      | 16x16    | 0014     |
| TO- 46        | ○  | □   | □  | □                        | □     | □      | □      | 16x16    | 0005     |
| TO- 72        | ●  | □   | □  | ○                        | ○     | ✓      | ✓      | 16x16    | 0006     |
| TO- 59        | □  | □   | □  | ○                        | ○     | ○      | ○      | 100x100  | 9202     |
| TO- 59        | □  | □   | □  | ○                        | ○     | ○      | ○      | 100x100  | 9701     |
| TO- 59        | □  | □   | □  | ○                        | ○     | ○      | ○      | 100x100  | 9202     |
| TO- 59        | □  | □   | □  | ○                        | ○     | ○      | ○      | 100x100  | 9701     |
| TO- 39        | ●  | □   | □  | ○                        | ○     | ○      | ○      | 16x20    | 1009     |
| TO- 39        | □  | □   | □  | ○                        | ○     | ○      | ○      | 100x100  | 9702     |
| TO- 5         | □  | □   | □  | □                        | □     | □      | □      | 100x100  | 9702     |
| TO- 39        | □  | □   | □  | ○                        | ○     | ○      | ○      | 100x100  | 9201     |
| TO- 5         | □  | □   | □  | □                        | □     | □      | □      | 100x100  | 9201     |
| TO- 39        | □  | □   | □  | ✓                        | ✓     | ✓      | ✓      | 100x100  | 9702     |
| TO- 5         | □  | □   | □  | □                        | □     | □      | □      | 100x100  | 9702     |
| TO- 39        | □  | □   | □  | ✓                        | ✓     | ✓      | ✓      | 100x100  | 9201     |
| TO- 5         | □  | □   | □  | □                        | □     | □      | □      | 100x100  | 9201     |
| TO- 5         | □  | □   | □  | ○                        | ○     | ○      | ○      | 155x155  | 3111     |
| TO- 39        | □  | □   | □  | ○                        | ○     | ○      | ○      | 100x100  | 9201     |
| TO- 46        | ○  | □   | □  | ○                        | ○     | ○      | ○      | 20x20    | 0400     |
| TO- 46        | ○  | □   | □  | ○                        | ○     | ○      | ○      | 20x20    | 0400     |
| TO- 39        | □  | □   | □  | ○                        | ○     | ○      | ○      | 122x122  | 9920     |
| TO- 39        | □  | □   | □  | ●                        | ●     | ○      | ○      | 100x100  | 9700     |
| Cerdip        | □  | □   | □  | □                        |       |        |        | 20x20    | 0600     |
| 14L FP        | □  | □   | □  |                          |       |        |        | 20x20    | 0600     |
| Cerdip        | □  | □   | □  |                          |       |        |        | 20x20    | 0400     |
| 14L FP        | □  | □   | □  |                          |       |        |        | 20x20    | 0400     |

SEMICOA

# Power Devices

## Resilient to Radiation

TRANSISTORS  
DIODES  
MOSFET  
IGBT

JANSF  
JANSR  
JANTXV  
JANTX  
JANS



JANKCF  
JANKCR  
JANKC  
JANHC

### *Process Technologies*

Bipolar  
Gallium Arsenide  
Silicon Germanium  
Silicon Carbide

Re-established through the Determination of our Customers

## Product Specifications



*Hi Reliability—Assured Delivery*

MIL-PRF-19500  
ISO 9001:2000

| Part Number | Package | Type | VCEO (V) | VCBO (V) | VEBO (V) |
|-------------|---------|------|----------|----------|----------|
| 2N720A      | TO-18   | NPN  | 80       | 120      | 7        |
| 2N0918      | TO-72   | NPN  | 15       | 30       | 3        |
| 2N930       | TO-18   | NPN  | 45       | 60       | 6        |
| 2N1893      | TO-5    | NPN  | 80       | 120      | 7        |
| 2N1893S     | TO-39   | NPN  | 80       | 120      | 7        |
| 2N2060      | TO-77   | NPN  | 60       | 100      | 7        |
| 2N2218      | TO-39   | NPN  | 30       | 60       | 5        |
| 2N2218A     | TO-39   | NPN  | 50       | 75       | 6        |
| 2N2218AL    | TO-5    | NPN  | 50       | 75       | 6        |
| 2N2219      | TO-39   | NPN  | 30       | 60       | 5        |
| 2N2219A     | TO-39   | NPN  | 50       | 75       | 6        |
| 2N2219AL    | TO-5    | NPN  | 50       | 75       | 6        |
| 2N2222A     | TO-18   | NPN  | 50       | 75       | 6        |
| 2N2369A     | TO-18   | NPN  | 15       | 40       | 4.5      |
| 2N2484      | TO-18   | NPN  | 60       | 60       | 6        |
| 2N2605      | TO-46   | PNP  | 60       | 70       | 6        |
| 2N2857      | TO-72   | NPN  | 15       | 30       | 3        |
| 2N2904      | TO-39   | PNP  | 40       | 60       | 5        |
| 2N2904A     | TO-39   | PNP  | 60       | 60       | 5        |
| 2N2904AL    | TO-5    | PNP  | 60       | 60       | 5        |
| 2N2905      | TO-39   | PNP  | 40       | 60       | 5        |
| 2N2905A     | TO-39   | PNP  | 60       | 60       | 5        |
| 2N2905AL    | TO-5    | PNP  | 60       | 60       | 5        |
| 2N2906A     | TO-18   | PNP  | 60       | 60       | 5        |
| 2N2906AL    | TO-5    | PNP  | 60       | 60       | 5        |
| 2N2907A     | TO-18   | PNP  | 60       | 60       | 5        |
| 2N2907AL    | TO-5    | PNP  | 60       | 60       | 5        |
| 2N2946A     | TO-46   | PNP  | -35      | -40      | -40      |
| 2N3019      | TO-5    | NPN  | 80       | 140      | 7        |
| 2N3019S     | TO-39   | NPN  | 80       | 140      | 7        |
| 2N3057A     | TO-46   | NPN  | 80       | 140      | 7        |
| 2N3227      | TO-18   | NPN  | 15       | 40       | 4.5      |

| IC (A) | Power (W) Ta | Rtja (°C/W) | Tstg/Top (°C) | Max HFE | VCE(sat) (V) |
|--------|--------------|-------------|---------------|---------|--------------|
| 0.5    | 0.5          | 325         | -65 to +200   | 120     | 5            |
| 0.05   | 0.2          | x           | -65 to +200   | 200     | 0.4          |
| 0.03   | 0.36         | 485         | -65 to +200   | 600     | 1            |
| 0.5    | 0.8          | 175         | -65 to +200   | 120     | 5            |
| 0.5    | 0.8          | 175         | -65 to +200   | 120     | 5            |
| 0.5    | 0.6          | x           | -65 to +200   | 150     | 0.3          |
| 0.8    | 0.8          | 195         | -65 to +200   | 150     | 0.4          |
| 0.8    | 0.8          | 195         | -65 to +200   | 150     | 0.3          |
| 0.8    | 0.8          | 195         | -65 to +200   | 150     | 0.3          |
| 0.8    | 0.8          | 195         | -65 to +200   | 325     | 0.4          |
| 0.8    | 0.8          | 195         | -65 to +200   | 325     | 0.3          |
| 0.8    | 0.8          | 195         | -65 to +200   | 325     | 0.3          |
| 0.8    | 0.5          | 325         | -65 to +200   | 325     | 0.3          |
| 0.1    | 0.36         | 400         | -65 to +200   | 120     | 0.2          |
| 0.05   | 0.36         | 325         | -65 to +200   | 800     | 0.3          |
| 0.03   | 0.4          | 437         | -65 to +200   | 450     | 0.3          |
| 0.04   | 0.2          | 400         | -65 to +200   | 150     | 0.4          |
| 0.6    | 0.8          | 195         | -65 to +200   | 175     | 0.4          |
| 0.6    | 0.8          | 195         | -65 to +200   | 175     | 0.4          |
| 0.6    | 0.8          | 195         | -65 to +200   | 175     | 0.4          |
| 0.6    | 0.8          | 195         | -65 to +200   | 450     | 0.4          |
| 0.6    | 0.8          | 195         | -65 to +200   | 450     | 0.4          |
| 0.6    | 0.8          | 195         | -65 to +200   | 450     | 0.4          |
| 0.6    | 0.5          | 325         | -65 to +200   | 175     | 0.4          |
| 0.6    | 0.5          | 325         | -65 to +200   | 175     | 0.4          |
| 0.6    | 0.5          | 325         | -65 to +200   | 450     | 0.4          |
| 0.6    | 0.5          | 325         | -65 to +200   | 450     | 0.4          |
| 0.1    | 0.4          | 435         | -65 to +200   | 50      | 0.5          |
| 1      | 0.8          | 175         | -65 to +200   | 300     | 0.2          |
| 1      | 0.8          | 175         | -65 to +200   | 300     | 0.2          |
| 1      | 0.5          | 325         | -65 to +200   | 300     | 0.2          |
| 0.1    | 0.36         | 400         | -65 to +200   | 300     | 0.2          |

| Part Number | Package | Type | VCEO (V) | VCBO (V) | VEBO (V) |
|-------------|---------|------|----------|----------|----------|
| 2N3485A     | TO-46   | PNP  | 60       | 60       | 5        |
| 2N3486A     | TO-46   | PNP  | 60       | 60       | 5        |
| 2N3498      | TO-5    | NPN  | 100      | 100      | 6        |
| 2N3498L     | TO-5    | NPN  | 100      | 100      | 6        |
| 2N3499      | TO-39   | NPN  | 100      | 100      | 6        |
| 2N3499L     | TO-5    | NPN  | 100      | 100      | 6        |
| 2N3500      | TO-39   | NPN  | 150      | 150      | 6        |
| 2N3500L     | TO-5    | NPN  | 150      | 150      | 6        |
| 2N3501      | TO-39   | NPN  | 150      | 150      | 6        |
| 2N3501L     | TO-5    | NPN  | 150      | 150      | 6        |
| 2N3506      | TO-5    | NPN  | 40       | 60       | 5        |
| 2N3506L     | TO-5    | NPN  | 40       | 60       | 5        |
| 2N3506A     | TO-39   | NPN  | 40       | 60       | 5        |
| 2N3506AL    | TO-5    | NPN  | 40       | 60       | 5        |
| 2N3507      | TO-39   | NPN  | 50       | 80       | 5        |
| 2N3507L     | TO-5    | NPN  | 50       | 80       | 5        |
| 2N3507A     | TO-39   | NPN  | 50       | 80       | 5        |
| 2N3507AL    | TO-5    | NPN  | 50       | 80       | 5        |
| 2N3700      | TO-18   | NPN  | 80       | 140      | 7        |
| 2N3735      | TO-39   | NPN  | 40       | 75       | 5        |
| 2N3735L     | TO-5    | NPN  | 40       | 75       | 5        |
| 2N3737      | TO-46   | NPN  | 40       | 75       | 5        |
| 2N3810      | TO-78   | PNP  | 60       | 60       | 5        |
| 2N3810L     | TO-77   | PNP  | 60       | 60       | 5        |
| 2N3810U     | 6LCC    | PNP  | 60       | 60       | 5        |
| 2N3811      | TO-78   | PNP  | 60       | 60       | 5        |
| 2N3811L     | TO-77   | PNP  | 60       | 60       | 5        |
| 2N3811U     | 6LCC    | PNP  | 60       | 60       | 5        |
| 2N3866      | TO-39   | NPN  | 30       | 60       | 3.5      |
| 2N3866A     | TO-39   | NPN  | 30       | 60       | 3.5      |
| 2N3866UB    | Cersot  | NPN  | 30       | 60       | 3.5      |
| 2N3960      | TO-18   | NPN  | 12       | 20       | 4.5      |
| 2N3960UB    | Cersot  | NPN  | 12       | 20       | 4.5      |
| 2N3996      | TO-59   | NPN  | 80       | 100      | 8        |
| 2N3997      | TO-59   | NPN  | 80       | 100      | 8        |

| IC (A) | Power (W) Ta | Rtja (°C/W) | Tstg/Top (°C) | Max HFE | VCE(sat) (V) |
|--------|--------------|-------------|---------------|---------|--------------|
| 0.6    | 0.5          | 325         | -65 to +200   | 120     | 0.4          |
| 0.6    | 0.5          | 325         | -65 to +200   | 300     | 0.4          |
| 0.5    | 1            | 175         | -65 to +200   | 120     | 0.2          |
| 0.5    | 1            | 175         | -65 to +200   | 120     | 0.2          |
| 0.5    | 1            | 175         | -65 to +200   | 300     | 0.2          |
| 0.5    | 1            | 175         | -65 to +200   | 300     | 0.2          |
| 0.3    | 1            | 175         | -65 to +200   | 120     | 0.2          |
| 0.3    | 1            | 175         | -65 to +200   | 120     | 0.2          |
| 0.3    | 1            | 175         | -65 to +200   | 300     | 0.2          |
| 0.3    | 1            | 175         | -65 to +200   | 300     | 0.2          |
| 3      | 1            | 175         | -65 to +200   | 250     | 1            |
| 3      | 1            | 175         | -65 to +200   | 250     | 1            |
| 3      | 1            | 175         | -65 to +200   | 250     | 1            |
| 3      | 1            | 175         | -65 to +200   | 250     | 1            |
| 3      | 1            | 175         | -65 to +200   | 175     | 1            |
| 3      | 1            | 175         | -65 to +200   | 175     | 1            |
| 3      | 1            | 175         | -65 to +200   | 175     | 1            |
| 1      | 0.5          | 325         | -65 to +200   | 300     | 0.2          |
| 1.5    | 1            | 175         | -65 to +200   | 140     | 0.2          |
| 1.5    | 1            | 175         | -65 to +200   | 140     | 0.2          |
| 1.5    | 0.5          | 350         | -65 to +200   | 140     | 0.2          |
| 0.05   | 0.6          | 500         | -65 to +200   | 450     | 0.2          |
| 0.05   | 0.6          | 500         | -65 to +200   | 450     | 0.2          |
| 0.05   | 0.6          | 500         | -65 to +200   | 450     | 0.2          |
| 0.05   | 0.6          | 500         | -65 to +200   | 900     | 0.2          |
| 0.05   | 0.6          | 500         | -65 to +200   | 900     | 0.2          |
| 0.05   | 0.6          | 500         | -65 to +200   | 900     | 0.2          |
| 0.4    | 1            | 175         | -65 to +200   | 200     | 1            |
| 0.4    | 1            | 175         | -65 to +200   | 200     | 1            |
| 0.4    | 0.5          | 325         | -65 to +200   | 200     | 1            |
| 0.05   | 0.4          | x           | -65 to +200   | 300     | 0.2          |
| 0.05   | 0.4          | x           | -65 to +200   | 300     | 0.2          |
| 5      | 2            | x           | -65 to +200   | 120     | 0.25         |
| 5      | 2            | x           | -65 to +200   | 240     | 0.25         |

| Part Number | Package | Type | VCEO (V) | VCBO (V) | VEBO (V) |
|-------------|---------|------|----------|----------|----------|
| 2N3998      | TO-59   | NPN  | 80       | 100      | 8        |
| 2N3999      | TO-59   | NPN  | 80       | 100      | 8        |
| 2N4029      | TO-18   | PNP  | 80       | 80       | 5        |
| 2N4033      | TO-39   | PNP  | 80       | 80       | 5        |
| 2N4150      | TO-5    | NPN  | 70       | 100      | 10       |
| 2N4150S     | TO-39   | NPN  | 70       | 100      | 10       |
| 2N4261      | TO-72   | PNP  | 15       | 15       | 4.5      |
| 2N4449      | TO-46   | NPN  | 20       | 40       | 6        |
| 2N4957      | TO-72   | PNP  | 30       | 30       | 3        |
| 2N5002      | TO-59   | NPN  | 80       | 100      | 5.5      |
| 2N5003      | TO-59   | PNP  | 80       | 100      | 5.5      |
| 2N5004      | TO-59   | NPN  | 80       | 100      | 5.5      |
| 2N5005      | TO-59   | PNP  | 80       | 100      | 5.5      |
| 2N5109      | TO-39   | NPN  | 20       | 40       | 3        |
| 2N5151      | TO-39   | PNP  | 80       | 100      | 5.5      |
| 2N5151L     | TO-5    | PNP  | 80       | 100      | 5.5      |
| 2N5152      | TO-39   | NPN  | 80       | 100      | 5.5      |
| 2N5152L     | TO-5    | NPN  | 80       | 100      | 5.5      |
| 2N5153      | TO-39   | PNP  | 80       | 100      | 5.5      |
| 2N5153L     | TO-5    | PNP  | 80       | 100      | 5.5      |
| 2N5154      | TO-39   | NPN  | 80       | 100      | 5.5      |
| 2N5154L     | TO-5    | NPN  | 80       | 100      | 5.5      |
| 2N5237      | TO-5    | NPN  | 120      | 150      | 10       |
| 2N5339      | TO-39   | NPN  | 100      | 100      | 6        |
| 2N5581      | TO-46   | NPN  | 50       | 75       | 6        |
| 2N5582      | TO-46   | NPN  | 50       | 75       | 6        |
| 2N5666S     | TO-39   | NPN  | 200      | 250      | 6        |
| 2N6193      | TO-39   | PNP  | 100      | 100      | 6        |
| 2N6987      | Cerdip  | PNP  | 60       | 60       | 5        |
| 2N6988      | Cerdip  | PNP  | 60       | 60       | 5        |
| 2N6989      | Cerdip  | NPN  | 50       | 75       | 6        |
| 2N6990      | Cerdip  | NPN  | 50       | 75       | 6        |

| IC (A) | Power (W) Ta | Rtja (°C/W) | Tstg/Top (°C) | Max HFE | VCE(sat) (V) |
|--------|--------------|-------------|---------------|---------|--------------|
| 5      | 2            | x           | -65 to +200   | 120     | 0.25         |
| 5      | 2            | x           | -65 to +200   | 240     | 0.25         |
| 1      | 0.5          | 325         | -65 to +200   | 300     | 0.15         |
| 1      | 0.8          | 195         | -65 to +200   | 300     | 0.15         |
| 10     | 1            | 175         | -65 to +200   | 200     | 0.6          |
| 10     | 1            | 175         | -65 to +200   | 200     | 0.6          |
| 0.03   | 0.2          | 860         | -65 to +200   | 150     | 0.15         |
| 0.1    | 0.36         | 400         | -65 to +200   | 120     | 0.2          |
| 0.03   | 0.2          | x           | -65 to +200   | 165     | x            |
| 5      | 2            | 88          | -65 to +200   | 90      | 0.75         |
| 5      | 2            | 88          | -65 to +200   | 90      | 0.75         |
| 5      | 2            | 88          | -65 to +200   | 200     | 0.75         |
| 5      | 2            | 88          | -65 to +200   | 200     | 0.75         |
| 0.4    | 1            | 175         | -65 to +200   | 150     | 0.5          |
| 2      | 1            | 175         | -65 to +200   | 90      | 0.75         |
| 2      | 1            | 175         | -65 to +200   | 90      | 0.75         |
| 2      | 1            | 175         | -65 to +200   | 90      | 0.75         |
| 2      | 1            | 175         | -65 to +200   | 90      | 0.75         |
| 2      | 1            | 175         | -65 to +200   | 200     | 0.75         |
| 2      | 1            | 175         | -65 to +200   | 200     | 0.75         |
| 2      | 1            | 175         | -65 to +200   | 200     | 0.75         |
| 2      | 1            | 175         | -65 to +200   | 200     | 0.75         |
| 10     | 1            | 175         | -65 to +200   | 225     | 0.6          |
| 5      | 1            | 175         | -65 to +200   | 240     | 0.7          |
| 0.8    | 0.5          | 325         | -65 to +200   | 120     | 0.3          |
| 0.8    | 0.5          | 325         | -65 to +200   | 300     | 0.3          |
| 5      | 1.2          | 145         | -65 to +200   | 120     | 0.4          |
| 5      | 1            | 175         | -65 to +200   | 240     | 0.7          |
| 0.6    | 1.5          | 85          | -65 to +200   | 450     | 0.4          |
| 0.6    | 1            | 175         | -65 to +200   | 450     | 0.4          |
| 0.8    | 1.5          | 85          | -65 to +200   | 325     | 0.3          |
| 0.8    | 1            | 175         | -65 to +200   | 325     | 0.3          |