

COLLECTOR CURRENT = 5 AMPS NPN TYPES

| Device No | Case | VCBO Volts | VCEO (sus) Volts | VEBO Volts | hFE | | VCE | IC | VCE (sat) | VBE (sat) | @ IC | @ IB | θ_{IC} °C/W | Ft MHz |
|-------------|-----------|---------------|---------------------|---------------|-----|-----|-----|----|-----------|-----------|------|------|-----------------------|-----------|
| | | | | | Min | Max | | | | | | | | |
| 2N2150 | TO-111 | 125 | 80 | 8 | 20 | 60 | 5 | 1 | 1.25 | 2 | 1 | .1 | 3.33 | 30 |
| 2N2151 | TO-111 | 125 | 80 | 8 | 40 | 120 | 5 | 1 | 1.25 | 2 | 1 | .1 | 3.33 | 30 |
| 2N2657 | TO-5 | 80 | 60 | 8 | 40 | 120 | 2 | 1 | .5 | 1.5 | 1 | .1 | 25 | 60 |
| 2N2658 | TO-5 | 100 | 80 | 8 | 40 | 120 | 2 | 1 | .5 | 1.5 | 1 | .1 | 25 | 60 |
| 2N2849 | TO-5 | 100 | 80 | 5 | 100 | 300 | 1 | 1 | .4 | 1.2 | 1 | .02 | 25 | 60 |
| 2N2849-1 | TO-5 | 100 | 80 | 5 | 100 | 300 | 1 | 1 | .4 | 1.2 | 1 | .02 | 25 | 60 |
| 2N2849-2 | TO-111 | 100 | 80 | 5 | 100 | 300 | 1 | 1 | .4 | 1.2 | 1 | .02 | 3.33 | 60 |
| 2N2849-3 | TO-5 STUD | 100 | 80 | 5 | 100 | 300 | 1 | 1 | .4 | 1.2 | 1 | .02 | 25 | 60 |
| 2N2850 | TO-5 | 100 | 80 | 5 | 40 | 120 | 1 | 1 | .25 | 1.2 | 1 | .5 | 25 | 60 |
| 2N2850-1 | TO-5 | 100 | 80 | 5 | 40 | 120 | 1 | 1 | .25 | 1.2 | 1 | .5 | 25 | 60 |
| 2N2850-2 | TO-111 | 100 | 80 | 5 | 40 | 120 | 1 | 1 | .25 | 1.2 | 1 | .5 | 3.3 | 60 |
| 2N2850-3 | TO-5 STUD | 100 | 80 | 5 | 40 | 120 | 1 | 1 | .25 | 1.2 | 1 | .5 | 25 | 60 |
| 2N2851 | TO-5 | 100 | 80 | 5 | 40 | 120 | 1 | 1 | .4 | 1.2 | 1 | .5 | 25 | 60 |
| 2N2851-1 | TO-5 | 100 | 80 | 5 | 40 | 120 | 1 | 1 | .4 | 1.2 | 1 | .5 | 25 | 60 |
| 2N2851-2 | TO-111 | 100 | 80 | 5 | 40 | 120 | 1 | 1 | .4 | 1.2 | 1 | .5 | 3.3 | 60 |
| 2N2851-3 | TO-5 STUD | 100 | 80 | 5 | 40 | 120 | 1 | 1 | .4 | 1.2 | 1 | .5 | 25 | 60 |
| 2N2852 | TO-5 | 100 | 80 | 5 | 20 | 60 | 1 | 1 | .4 | 1.2 | 1 | .1 | 25 | 60 |
| 2N2852-1 | TO-5 | 100 | 80 | 5 | 20 | 60 | 1 | 1 | .4 | 1.2 | 1 | .1 | 25 | 60 |
| 2N2852-2 | TO-111 | 100 | 80 | 5 | 20 | 60 | 1 | 1 | .4 | 1.2 | 1 | .1 | 3.3 | 60 |
| 2N2852-3 | TO-5 STUD | 100 | 80 | 5 | 20 | 60 | 1 | 1 | .4 | 1.2 | 1 | .1 | 25 | 60 |
| 2N2853 | TO-5 | 60 | 40 | 5 | 40 | | 1 | 1 | 1.5 | 2 | 5 | .5 | 25 | 60 |
| 2N2853-1 | TO-5 | 60 | 40 | 5 | 40 | | 1 | 1 | 1.5 | 2 | 5 | .5 | 25 | 60 |
| 2N2853-2 | TO-111 | 60 | 40 | 5 | 40 | | 1 | 1 | 1.5 | 2 | 5 | .5 | 3.3 | 60 |
| 2N2853-3 | TO-5 STUD | 60 | 40 | 5 | 40 | | 1 | 1 | 1.5 | 2 | 5 | .5 | 25 | 60 |
| 2N2854 | TO-5 | 60 | 40 | 5 | 100 | 300 | 1 | 1 | .4 | 1.2 | 1 | .02 | 25 | 60 |
| 2N2854-1 | TO-5 | 60 | 40 | 5 | 100 | 300 | 1 | 1 | .4 | 1.2 | 1 | .02 | 25 | 60 |
| 2N2854-2 | TO-111 | 60 | 40 | 5 | 100 | 300 | 1 | 1 | .4 | 1.2 | 1 | .02 | 3.3 | 60 |
| 2N2854-3 | TO-5 STUD | 60 | 40 | 5 | 100 | 300 | 1 | 1 | .4 | 1.2 | 1 | .02 | 25 | 60 |
| 2N2855 | TO-5 | 60 | 40 | 5 | 40 | 120 | 1 | 1 | .4 | 1.2 | 1 | .5 | 25 | 60 |
| 2N2855-1 | TO-5 | 60 | 40 | 5 | 40 | 120 | 1 | 1 | .4 | 1.2 | 1 | .5 | 25 | 60 |
| 2N2855-2 | TO-111 | 60 | 40 | 5 | 40 | 120 | 1 | 1 | .4 | 1.2 | 1 | .5 | 3.3 | 60 |
| 2N2855-3 | TO-5 STUD | 60 | 40 | 5 | 40 | 120 | 1 | 1 | .4 | 1.2 | 1 | .5 | 25 | 60 |
| 2N2856 | TO-5 | 60 | 40 | 5 | 20 | 60 | 1 | 1 | .4 | 1.2 | 1 | .1 | 25 | 60 |
| 2N2856-1 | TO-5 | 60 | 40 | 5 | 20 | 60 | 1 | 1 | .4 | 1.2 | 1 | .1 | 25 | 60 |
| 2N2856-2 | TO-111 | 60 | 40 | 5 | 20 | 60 | 1 | 1 | .4 | 1.2 | 1 | .1 | 3.3 | 60 |
| 2N2856-3 | TO-5 STUD | 60 | 40 | 5 | 20 | 60 | 1 | 1 | .4 | 1.2 | 1 | .1 | 25 | 60 |
| 2N2877 | TO-111 | 80 | 60 | 8 | 20 | 60 | 2 | 1 | .25 | 1.2 | 1 | .1 | 3.33 | 60 |
| 2N2878 | TO-111 | 80 | 60 | 8 | 40 | 120 | 2 | 1 | .25 | 1.2 | 1 | .1 | 3.33 | 60 |
| 2N2879 | TO-111 | 100 | 80 | 8 | 20 | 60 | 2 | 1 | .25 | 1.2 | 1 | .1 | 3.33 | 60 |
| 2N2880 | TO-111 | 100 | 80 | 8 | 40 | 120 | 2 | 1 | .25 | 1.2 | 1 | .1 | 3.33 | 60 |
| JAN 2N2880 | TO-111 | 110 | 80 | 8 | 40 | 120 | 5 | 1 | .25 | 1.2 | 1 | .1 | 3.3 | 60 |
| JTX 2N2880 | TO-111 | 110 | 80 | 8 | 40 | 120 | 5 | 1 | .25 | 1.2 | 1 | .1 | 3.3 | 60 |
| JTXV 2N2880 | TO-111 | 110 | 80 | 8 | 40 | 120 | 5 | 1 | .25 | 1.2 | 1 | .1 | 3.3 | 60 |
| 2N2890 | TO-5 | 100 | 80 | 5 | 30 | 90 | 2 | 1 | .75 | 1.3 | 2 | .2 | 25 | 60 |

COLLECTOR CURRENT = 5 AMPS NPN TYPES—Continued

| Device No | Case | VCBO Volts | VCEO (sus) Volts | VEBO Volts | hFE | | VCE | IC | VCE (sat) | VBE (sat) | @ IC | @ IB | θ_{JC} °C/W | Ft MHz |
|-------------|--------------|---------------|---------------------|---------------|-----|-----|-----|-----|-----------|-----------|------|------|-----------------------|-----------|
| | | | | | Min | Max | | | | | | | | |
| 2N2891 | TO-5 | 100 | 80 | 5 | 50 | 150 | 2 | 1 | .75 | 1.3 | 2 | .2 | 25 | 60 |
| 2N2892 | TO-111 | 100 | 80 | 5 | 30 | 90 | 2 | 1 | .75 | 1.3 | 2 | .2 | 3.3 | 60 |
| 2N2893 | TO-111 | 100 | 80 | 5 | 50 | 150 | 2 | 1 | .75 | 1.3 | 2 | .2 | 3.3 | 60 |
| 2N2984 | TO-5 | 185 | 120 | 8 | 20 | 60 | 5 | 1 | 1.25 | 2 | 2 | .4 | 25 | 60 |
| 2N2985 | TO-5 | 155 | 80 | 8 | 40 | 120 | 5 | 1 | 1.25 | 2 | 2 | .4 | 25 | 60 |
| 2N2986 | TO-5 | 185 | 120 | 8 | 40 | 120 | 5 | 1 | 1.25 | 2 | 2 | .4 | 25 | 60 |
| 2N3016 | TO-5 | 100 | 50 | 4 | 60 | 150 | 5 | 1 | .75 | 1.5 | 5 | .5 | 25 | 60 |
| 2N3017 | TO-5 | 100 | 50 | 4 | 60 | 150 | 5 | 1 | .75 | 1.5 | 5 | .5 | 25 | 60 |
| 2N3018 | STUD TO-61/I | 100 | 50 | 4 | 60 | 150 | 5 | 1 | .75 | 1.5 | 5 | .5 | 1 | 60 |
| 2N3418 | TO-5 | 85 | 60 | 8 | 20 | 60 | 2 | 1 | .5 | 1.4 | 2 | .2 | 25 | 60 |
| JAN 2N3418 | TO-5 | 85 | 60 | 8 | 20 | 60 | 2 | 1 | .5 | 1.4 | 2 | .2 | 25 | 60 |
| JTX 2N3418 | TO-5 | 85 | 60 | 8 | 20 | 60 | 2 | 1 | .5 | 1.4 | 2 | .2 | 25 | 60 |
| JTXV 2N3418 | TO-5 | 85 | 60 | 8 | 20 | 60 | 2 | 1 | .5 | 1.4 | 2 | .2 | 25 | 60 |
| 2N3419 | TO-5 | 125 | 80 | 8 | 20 | 60 | 2 | 1 | .5 | 1.4 | 2 | .2 | 25 | 60 |
| JAN 2N3419 | TO-5 | 125 | 80 | 8 | 20 | 60 | 2 | 1 | .5 | 1.4 | 2 | .2 | 25 | 60 |
| JTX 2N3419 | TO-5 | 125 | 80 | 8 | 20 | 60 | 2 | 1 | .5 | 1.4 | 2 | .2 | 25 | 60 |
| JTXV 2N3419 | TO-5 | 125 | 80 | 8 | 20 | 60 | 2 | 1 | .5 | 1.4 | 2 | .2 | 25 | 60 |
| 2N3420 | TO-5 | 85 | 60 | 8 | 40 | 120 | 2 | 1 | .5 | 1.4 | 2 | .2 | 25 | 60 |
| JAN 2N3420 | TO-5 | 85 | 60 | 8 | 40 | 120 | 2 | 1 | .5 | 1.4 | 2 | .2 | 25 | 60 |
| JTX 2N3420 | TO-5 | 85 | 60 | 8 | 40 | 120 | 2 | 1 | .5 | 1.4 | 2 | .2 | 25 | 60 |
| JTXV 2N3420 | TO-5 | 85 | 60 | 8 | 40 | 120 | 2 | 1 | .5 | 1.4 | 2 | .2 | 25 | 60 |
| 2N3421 | TO-5 | 125 | 80 | 8 | 40 | 120 | 2 | 1 | .5 | 1.4 | 2 | .2 | 25 | 60 |
| JAN 2N3421 | TO-5 | 125 | 80 | 8 | 40 | 120 | 2 | 1 | .5 | 1.4 | 2 | .2 | 25 | 60 |
| JTX 2N3421 | TO-5 | 125 | 80 | 8 | 40 | 120 | 2 | 1 | .5 | 1.4 | 2 | .2 | 25 | 60 |
| JTXV 2N3421 | TO-5 | 125 | 80 | 8 | 40 | 120 | 2 | 1 | .5 | 1.4 | 2 | .2 | 25 | 60 |
| 2N3469 | TO-5 | 35 | 25 | 8 | 100 | | 2 | 1 | .5 | 1.5 | 1 | .1 | 25 | 60 |
| 2N3506 | TO-5 | 60 | 40 | 5 | 40 | 200 | 2 | 1.5 | 1 | 1.4 | 1.5 | .15 | 25 | 60 |
| 2N3507 | TO-5 | 80 | 50 | 5 | 30 | 150 | 2 | 1.5 | 1 | 1.4 | 1.5 | .15 | 25 | 60 |
| 2N3583 | TO-66 | 250 | 175 | 6 | 40 | 200 | 10 | .75 | 5 | 1.4 | 1 | .125 | 5 | 10 |
| 2N3584 | TO-66 | 375 | 250 | 6 | 8 | 80 | 2 | 1 | .75 | 1.4 | 1 | .125 | 5 | 10 |
| 2N3585 | TO-66 | 500 | 300 | 6 | 8 | 80 | 2 | 1 | .75 | 1.4 | 1 | .125 | 5 | 10 |
| 2N3619 | TO-5 | 75 | 40 | 4 | 40 | | 5 | 1 | .75 | 1.3 | 1 | .1 | 25 | 60 |
| 2N3623 | TO-5 | 75 | 40 | 4 | 40 | | 5 | 1 | .75 | 1.3 | 1 | .1 | 25 | 60 |
| 2N3627 | TO-5 | 100 | 50 | 4 | 40 | | 5 | 1 | .75 | 1.3 | 1 | .1 | 25 | 60 |
| 2N3675 | TO-5 | 90 | 55 | 7 | 12 | 60 | 1 | 1 | .8 | 1.8 | 1 | .1 | 25 | 60 |
| 2N3676 | TO-5 | 90 | 90 | 7 | 12 | 60 | 1 | 1 | .8 | 1.8 | 1 | .1 | 25 | 60 |
| 2N3744 | TO-111/I | 60 | 40 | 7 | 20 | 60 | 5 | 1 | .25 | 1.2 | 1 | .1 | 3.33 | 60 |
| 2N3745 | TO-111/I | 80 | 60 | 8 | 20 | 60 | 5 | 1 | .25 | 1.2 | 1 | .1 | 3.33 | 60 |
| 2N3746 | TO-111/I | 100 | 80 | 8 | 20 | 60 | 5 | 1 | .25 | 1.2 | 1 | .1 | 3.33 | 60 |
| 2N3747 | TO-111/I | 60 | 40 | 7 | 40 | 120 | 5 | 1 | .25 | 1.2 | 1 | .1 | 3.33 | 60 |
| 2N3748 | TO-111/I | 80 | 60 | 8 | 40 | 120 | 5 | 1 | .25 | 1.2 | 1 | .1 | 3.33 | 60 |
| 2N3749 | TO-111/I | 100 | 80 | 8 | 40 | 120 | 5 | 1 | .25 | 1.2 | 1 | .1 | 3.33 | 60 |
| JAN 2N3749 | TO-111/I | 110 | 80 | 8 | 40 | 120 | 5 | 1 | .25 | 1.2 | 1 | .1 | 3.33 | 60 |
| JTX 2N3749 | TO-111/I | 110 | 80 | 8 | 40 | 120 | 5 | 1 | .25 | 1.2 | 1 | .1 | 3.33 | 60 |
| JTXV 2N3749 | TO-111/I | 110 | 80 | 8 | 40 | 120 | 5 | 1 | .25 | 1.2 | 1 | .1 | 3.33 | 60 |
| 2N3750 | TO-111/I | 60 | 40 | 7 | 100 | 300 | 5 | 1 | .25 | 1.2 | 1 | .1 | 3.33 | 60 |

COLLECTOR CURRENT = 5 AMPS NPN TYPES—Continued

| Device No | Case | VCBO Volts | VCEO (sus) Volts | VEBO Volts | hFE | | VCE | IC | VCE (sat) | VBE (sat) | @ IC | @ IB | θJC °C/W | Ft MHz |
|-------------|----------|---------------|---------------------|---------------|-----|-----|-----|-----|-----------|-----------|------|------|-------------|-----------|
| | | | | | Min | Max | | | | | | | | |
| 2N3751 | TO-111/1 | 80 | 60 | 8 | 100 | 300 | 5 | 1 | .25 | 1.2 | 1 | .1 | 3.33 | 60 |
| 2N3752 | TO-111/1 | 100 | 80 | 8 | 100 | 300 | 5 | 1 | .25 | 1.2 | 1 | .1 | 3.33 | 60 |
| 2N3850 | TO-111 | 100 | 80 | 5 | 50 | 150 | 1 | 1 | .5 | 1.3 | 2 | .2 | 3.33 | 60 |
| 2N3851 | TO-111 | 100 | 80 | 5 | 30 | 90 | 1 | 1 | .5 | 1.3 | 2 | .2 | 3.33 | 60 |
| 2N3852 | TO-111 | 60 | 40 | 5 | 50 | 150 | 1 | 1 | .5 | 1.3 | 2 | .2 | 3.33 | 60 |
| 2N3853 | TO-111 | 60 | 40 | 5 | 30 | 90 | 1 | 1 | .5 | 1.3 | 2 | .2 | 3.33 | 60 |
| 2N3928 | TO-5 | 80 | 40 | 4 | 40 | 150 | 5 | 1 | .5 | 1.25 | 1 | .1 | 25 | 60 |
| 2N3929 | TO-111 | 80 | 40 | 4 | 40 | 150 | 5 | 1 | .5 | 1.25 | 1 | .1 | 3.33 | 60 |
| 2N3996 | TO-111/1 | 100 | 80 | 8 | 40 | 120 | 2 | 1 | .25 | 1.6 | 1 | .1 | 3.33 | 60 |
| JAN 2N3996 | TO-111/1 | 100 | 80 | 8 | 40 | 120 | 2 | 1 | .25 | 1.6 | 1 | .1 | 3.33 | 60 |
| JTX 2N3996 | TO-111/1 | 100 | 80 | 8 | 40 | 120 | 2 | 1 | .25 | 1.6 | 1 | .1 | 3.33 | 60 |
| JTXV 2N3996 | TO-111/1 | 100 | 80 | 8 | 40 | 120 | 2 | 1 | .25 | 1.6 | 1 | .1 | 3.33 | 60 |
| 2N3997 | TO-111/1 | 100 | 80 | 8 | 80 | 240 | 2 | 1 | .25 | 1.6 | 1 | .1 | 3.33 | 60 |
| JAN 2N3997 | TO-111/1 | 100 | 80 | 8 | 80 | 240 | 2 | 1 | .25 | 1.6 | 1 | .1 | 3.33 | 60 |
| JTX 2N3997 | TO-111/1 | 100 | 80 | 8 | 80 | 240 | 2 | 1 | .25 | 1.6 | 1 | .1 | 3.33 | 60 |
| JTXV 2N3997 | TO-111/1 | 100 | 80 | 8 | 80 | 240 | 2 | 1 | .25 | 1.6 | 1 | .1 | 3.33 | 60 |
| 2N3998 | TO-111 | 100 | 80 | 8 | 40 | 120 | 2 | 1 | .25 | 1.6 | 1 | .1 | 3.33 | 60 |
| JAN 2N3998 | TO-111 | 100 | 80 | 8 | 40 | 120 | 2 | 1 | .25 | 1.6 | 1 | .1 | 3.33 | 60 |
| JTX 2N3998 | TO-111 | 100 | 80 | 8 | 40 | 120 | 2 | 1 | .25 | 1.6 | 1 | .1 | 3.33 | 60 |
| JTXV 2N3998 | TO-111 | 100 | 80 | 8 | 40 | 120 | 2 | 1 | .25 | 1.6 | 1 | .1 | 3.33 | 60 |
| 2N3999 | TO-111 | 100 | 80 | 8 | 80 | 240 | 2 | 1 | .25 | 1.6 | 1 | .1 | 3.33 | 60 |
| JAN 2N3999 | TO-111 | 100 | 80 | 8 | 80 | 240 | 2 | 1 | .25 | 1.6 | 1 | .1 | 3.33 | 60 |
| JTX 2N3999 | TO-111 | 100 | 80 | 8 | 80 | 240 | 2 | 1 | .25 | 1.6 | 1 | .1 | 3.33 | 60 |
| JTXV 2N3999 | TO-111 | 100 | 80 | 8 | 80 | 240 | 2 | 1 | .25 | 1.6 | 1 | .1 | 3.33 | 60 |
| 2N4111 | TO-3 | 100 | 60 | 8 | 40 | 120 | 5 | 2 | 1.5 | 2.2 | 5 | .5 | 1.5 | 70 |
| 2N4112 | TO-3 | 100 | 60 | 8 | 100 | 300 | 5 | 2 | 1.5 | 2.2 | 5 | .5 | 1.5 | 80 |
| 2N4113 | TO-3 | 120 | 80 | 8 | 40 | 120 | 5 | 2 | 1.5 | 2.2 | 5 | .5 | 1.5 | 70 |
| 2N4114 | TO-3 | 120 | 80 | 8 | 100 | 300 | 5 | 2 | 1.5 | 2.2 | 5 | .5 | 1.5 | 80 |
| 2N4115 | TO-111/1 | 120 | 80 | 8 | 40 | 120 | 5 | 2 | .6 | 1.3 | 2 | .2 | 3.33 | 70 |
| 2N4116 | TO-111/1 | 120 | 80 | 8 | 100 | 300 | 5 | 2 | .6 | 1.3 | 2 | .2 | 3.33 | 70 |
| 2N4231 | TO-66 | 40 | 40 | 5 | 25 | 100 | 2 | 1.5 | .7 | 1.4 | 1.5 | .15 | 5 | 60 |
| 2N4232 | TO-66 | 60 | 60 | 5 | 25 | 100 | 2 | 1.5 | .7 | 1.4 | 1.5 | .15 | 5 | 60 |
| 2N4233 | TO-66 | 80 | 80 | 5 | 25 | 100 | 2 | 1.5 | .7 | 1.4 | 1.5 | .15 | 5 | 60 |
| 2N4300 | TO-5 | 100 | 80 | 8 | 30 | 120 | 2 | 1 | .5 | 1.2 | 2 | .2 | 25 | 60 |
| 2N4305 | TO-5 | 120 | 80 | 6 | 50 | 150 | 2 | 1 | 1 | 1.5 | 5 | .5 | 25 | 60 |
| 2N4307 | TO-5 | 100 | 60 | 6 | 50 | 150 | 2 | 1 | 1 | 1.5 | 5 | .5 | 25 | 60 |
| 2N4309 | TO-5 | 120 | 80 | 6 | 50 | 150 | 2 | 1 | 1.4 | 1.8 | 5 | .5 | 25 | 60 |
| 2N4311 | TO-5 | 100 | 60 | 6 | 40 | 120 | 2 | 1 | 1.4 | 1.8 | 5 | .5 | 25 | 60 |
| 2N4895 | TO-5 | 120 | 60 | 6 | 40 | 120 | 2 | 2 | 1 | 1.6 | 5 | .5 | 25 | 50 |
| 2N4896 | TO-5 | 120 | 60 | 6 | 100 | 300 | 2 | 2 | 1 | 1.6 | 5 | .5 | 25 | 80 |
| 2N4897 | TO-5 | 150 | 80 | 6 | 40 | 120 | 2 | 2 | 1 | 1.6 | 5 | .5 | 25 | 50 |
| 2N4915 | TO-3 | 80 | 80 | 5 | 25 | 100 | 2 | 2.5 | .75 | 1.5 | 2.5 | .25 | 2 | 4 |
| 2N4998 | TO-111/1 | 100 | 80 | 6 | 30 | 90 | 5 | 1 | .85 | 1.5 | 2 | .2 | 3.33 | 60 |
| 2N5000 | TO-111/1 | 100 | 80 | 6 | 70 | 200 | 5 | 1 | .85 | 1.5 | 2 | .2 | 3.33 | 60 |

COLLECTOR CURRENT = 5 AMPS NPN TYPES—Continued

| Device No | Case | VCBO Volts | VCEO (sus) Volts | VEBO Volts | hFE | | VCE | IC | VCE (sat) | VBE (sat) | @ IC | @ IB | θJC °C/W | Ft MHz |
|-----------|----------|---------------|---------------------|---------------|-----|-----|-----|-----|-----------|-----------|------|------|-------------|-----------|
| | | | | | Min | Max | | | | | | | | |
| 2N5002 | TO-111/1 | 100 | 80 | 6 | 30 | 90 | 5 | 2.5 | 1.5 | 2.2 | 5 | .5 | 1 | 60 |
| 2N5004 | TO-111/1 | 100 | 80 | 6 | 70 | 200 | 5 | 2.5 | 1.5 | 2.2 | 5 | .5 | 1 | 70 |
| 2N5074 | TO-111/1 | 200 | 200 | 6 | 30 | 110 | 5 | .5 | 2 | 2.2 | 3 | .3 | 3.33 | 60 |
| 2N5075 | TO-111/1 | 200 | 200 | 6 | 90 | 250 | 5 | .5 | 2 | 2.2 | 3 | .3 | 3.33 | 60 |
| 2N5076 | TO-111/1 | 250 | 250 | 6 | 30 | 110 | 5 | .5 | 2 | 2.2 | 3 | .3 | 3.33 | 60 |
| 2N5077 | TO-111/1 | 250 | 250 | 6 | 90 | 250 | 5 | .5 | 2 | 2.2 | 3 | .3 | 3.33 | 60 |
| 2N5148 | TO-5 | 100 | 80 | 6 | 30 | 90 | 5 | 1 | .85 | 1.5 | 2 | .2 | 25 | 50 |
| 2N5150 | TO-5 | 100 | 80 | 6 | 70 | 200 | 5 | 1 | .85 | 1.5 | 2 | .2 | 25 | 60 |
| 2N5284 | TO-111/1 | 120 | 100 | 6 | 30 | 90 | 5 | 2.5 | 1.5 | 2.2 | 5 | .5 | 3 | 60 |
| 2N5285 | TO-111/1 | 120 | 100 | 6 | 70 | 200 | 5 | 2.5 | 1.5 | 2.2 | 5 | .5 | 3 | 60 |
| 2N5336 | TO-39 | 80 | 80 | 6 | 30 | 120 | 2 | 2 | 1.2 | 1.8 | 5 | .5 | 20 | 60 |
| 2N5337 | TO-39 | 80 | 80 | 6 | 60 | 240 | 2 | 2 | 1.2 | 1.8 | 5 | .5 | 20 | 60 |
| 2N5338 | TO-39 | 100 | 100 | 6 | 30 | 120 | 2 | 2 | 1.2 | 1.8 | 5 | .5 | 20 | 60 |
| 2N5339 | TO-39 | 100 | 100 | 6 | 60 | 240 | 2 | 2 | 1.2 | 1.8 | 5 | .5 | 20 | 60 |
| 2N5427 | TO-66 | 80 | 80 | 6 | 30 | 120 | 2 | 2 | .7 | 1.2 | 2 | .2 | 4 | 60 |
| 2N5428 | TO-66 | 80 | 80 | 6 | 60 | 240 | 2 | 2 | .7 | 1.2 | 2 | .2 | 4 | 60 |
| 2N5429 | TO-66 | 100 | 100 | 6 | 30 | 120 | 2 | 2 | .7 | 1.2 | 2 | .2 | 4 | 60 |
| 2N5430 | TO-66 | 100 | 100 | 6 | 60 | 240 | 2 | 2 | .7 | 1.2 | 2 | .2 | 4 | 60 |
| 2N5541 | TO-5 | 175 | 130 | 8 | 30 | 90 | 5 | 5 | .6 | 1.5 | 5 | .5 | 25 | 60 |
| 2N5598 | TO-66 | 80 | 60 | 6 | 70 | 200 | 5 | 1 | .85 | 1.5 | 2 | .2 | 5 | 60 |
| 2N5600 | TO-66 | 100 | 80 | 6 | 30 | 90 | 5 | 1 | .85 | 1.5 | 2 | .2 | 5 | 60 |
| 2N5602 | TO-66 | 100 | 80 | 6 | 70 | 200 | 5 | 1 | .85 | 1.5 | 2 | .2 | 5 | 60 |
| 2N5604 | TO-66 | 120 | 100 | 6 | 30 | 90 | 5 | 1 | .85 | 1.5 | 2 | .2 | 6 | 60 |
| 2N5606 | TO-66 | 80 | 60 | 6 | 30 | 200 | 5 | 2.5 | 1.5 | 2.2 | 5 | .5 | 5 | 60 |
| 2N5608 | TO-66 | 100 | 80 | 6 | 70 | 200 | 5 | 2.5 | 1.5 | 2.2 | 5 | .5 | 5 | 60 |
| 2N5610 | TO-66 | 100 | 80 | 6 | 70 | 200 | 5 | 2.5 | 1.5 | 2.2 | 5 | .5 | 5 | 60 |
| 2N5612 | TO-66 | 120 | 100 | 6 | 30 | 90 | 5 | 2.5 | 1.5 | 2.2 | 5 | .5 | 5 | 60 |
| 2N5614 | TO-3 | 80 | 60 | 6 | 70 | 200 | 5 | 2.5 | 1.5 | 2.2 | 5 | .5 | 3 | 50 |
| 2N5616 | TO-3 | 100 | 80 | 6 | 30 | 90 | 5 | 2.5 | 1.5 | 2.2 | 5 | .5 | 3 | 50 |
| 2N5618 | TO-3 | 100 | 80 | 6 | 70 | 200 | 5 | 2.5 | 1.5 | 2.2 | 5 | .5 | 3 | 50 |
| 2N5620 | TO-3 | 120 | 100 | 6 | 30 | 90 | 5 | 2.5 | 1.5 | 2.2 | 5 | .5 | 3 | 50 |
| 2N5664* | TO-66 | 250 | 200 | 6 | 40 | 120 | 5 | 1 | .4 | 1.2 | 3 | .3 | 3.33 | 60 |
| 2N5665* | TO-66 | 400 | 300 | 6 | 25 | 75 | 5 | 1 | .4 | 1.2 | 3 | .6 | 3.33 | 60 |
| 2N5666* | TO-5 | 250 | 200 | 6 | 40 | 120 | 5 | 1 | .4 | 1.2 | 3 | .3 | 20 | 60 |
| 2N5667* | TO-5 | 400 | 300 | 6 | 25 | 75 | 5 | 1 | .4 | 1.2 | 3 | .6 | 20 | 60 |
| 2N5729 | TO-5 | 100 | 80 | 5 | 30 | 300 | 2 | 2 | 1.5 | 1.5 | 5 | .5 | 20 | 60 |
| 2N5804 | TO-3 | 300 | 225 | 6 | 10 | 100 | 4 | 5 | 2 | 2 | 5 | .5 | 1.6 | 15 |
| 2N5805 | TO-3 | 375 | 300 | 6 | 10 | 100 | 4 | 5 | 2 | 2 | 5 | .5 | 1.6 | 15 |
| 2N5838 | TO-3 | 275 | 250 | 6 | 8 | 40 | 2 | 3 | 1 | 2 | 3 | .275 | 1.75 | 5 |
| 2N5839 | TO-3 | 300 | 275 | 6 | 10 | 50 | 3 | 2 | 1.5 | 2 | 2 | .2 | 1.75 | 5 |
| 2N5840 | TO-3 | 375 | 350 | 6 | 10 | 50 | 3 | 2 | 1.5 | 2 | 2 | .2 | 1.75 | 5 |
| 2N5970 | TO-3 | 80 | 80 | 5 | 20 | 100 | 4 | 1.5 | 2 | 2.5 | 5 | 1.25 | 2 | 4 |
| 2N6233 | TO-66 | 250 | 225 | 6 | 25 | 125 | 5 | 1 | .5 | 1 | 1 | .1 | 3.5 | 20 |
| 2N6234 | TO-66 | 300 | 275 | 6 | 25 | 125 | 5 | 1 | .5 | 1 | 1 | .1 | 3.5 | 20 |
| 2N6235 | TO-66 | 350 | 325 | 6 | 25 | 125 | 5 | 1 | .5 | 1 | 1 | .1 | 3.5 | 20 |

COLLECTOR CURRENT = 5 AMPS PNP TYPES

| Device No | Case | VCBO Volts | VCEO (sus) Volts | VEBO Volts | hFE | | VCE | IC | VCE (sat) | VBE (sat) | @ IC | @ IB | θJC °C/W | Ft MHz |
|-----------|-------|---------------|---------------------|---------------|-----|-----|-----|----|-----------|-----------|------|------|-------------|-----------|
| | | | | | Min | Max | | | | | | | | |
| 2N3021 | TO-3 | 30 | 30 | 4 | 20 | 60 | 2 | 1 | 1.5 | 1.5 | 3 | .3 | 2.3 | 60 |
| 2N3022 | TO-3 | 45 | 45 | 4 | 20 | 60 | 2 | 1 | 1.5 | 1.5 | 3 | .3 | 2.3 | 60 |
| 2N3023 | TO-3 | 60 | 60 | 4 | 20 | 60 | 2 | 1 | 1.5 | 1.5 | 3 | .3 | 2.3 | 60 |
| 2N3024 | TO-3 | 30 | 30 | 4 | 50 | 180 | 2 | 1 | 1 | 1.5 | 3 | .3 | 2.3 | 60 |
| 2N3025 | TO-3 | 45 | 45 | 4 | 50 | 180 | 2 | 1 | 1 | 1.5 | 3 | .3 | 2.3 | 60 |
| 2N3026 | TO-3 | 60 | 60 | 4 | 50 | 180 | 2 | 1 | 1 | 1.5 | 3 | .3 | 2.3 | 60 |
| 2N3163 | TO-61 | 40 | 40 | 10 | 12 | 36 | 3 | 1 | .75 | 1.8 | 1 | .14 | 2 | 60 |
| 2N3164 | TO-61 | 60 | 60 | 10 | 12 | 36 | 3 | 1 | .75 | 1.8 | 1 | .14 | 2 | 60 |
| 2N3165 | TO-61 | 80 | 80 | 10 | 12 | 36 | 3 | 1 | .75 | 1.8 | 1 | .14 | 2 | 60 |
| 2N3166 | TO-61 | 100 | 100 | 10 | 12 | 36 | 3 | 1 | .75 | 1.8 | 1 | .14 | 2 | 60 |

* (JTX & JTXV)

COLLECTOR CURRENT = 5 AMPS PNP TYPES—Continued

| Device No | Case | VCBO Volts | VCE0 (sus) Volts | VEBO Volts | hFE | | VCE | IC | VCE (sat) | VBE (sat) | @ IC | @ IB | θJC °C/W | Ft MHz |
|-----------|----------|---------------|---------------------|---------------|-----|-----|-----|-----|-----------|-----------|------|------|-------------|-----------|
| | | | | | Min | Max | | | | | | | | |
| 2N3171 | TO-3 | 40 | 40 | 10 | 12 | 36 | 3 | 1 | .75 | 1.8 | 1 | .14 | 2.3 | 60 |
| 2N3172 | TO-3 | 60 | 60 | 10 | 12 | 36 | 3 | 1 | .75 | 1.8 | 1 | .14 | 2.3 | 60 |
| 2N3173 | TO-3 | 80 | 80 | 10 | 12 | 36 | 3 | 1 | .75 | 1.8 | 1 | .14 | 2.3 | 60 |
| 2N3174 | TO-3 | 100 | 100 | 10 | 12 | 36 | 3 | 1 | .75 | 1.8 | 1 | .14 | 2.3 | 60 |
| 2N3175 | TO-61 | 40 | 40 | 10 | 10 | 30 | 3 | 2 | 1 | 2 | 2 | .3 | 2 | 60 |
| 2N3176 | TO-61 | 60 | 60 | 10 | 10 | 30 | 3 | 2 | 1 | 2 | 2 | .3 | 2 | 60 |
| 2N3177 | TO-61 | 80 | 80 | 10 | 10 | 30 | 3 | 2 | 1 | 2 | 2 | .3 | 2 | 60 |
| 2N3178 | TO-61 | 100 | 100 | 10 | 10 | 30 | 3 | 2 | 1 | 2 | 2 | .3 | 2 | 60 |
| 2N3183 | TO-3 | 40 | 40 | 10 | 10 | 30 | 3 | 2 | 1 | 2 | 2 | .3 | 2.3 | 60 |
| 2N3184 | TO-3 | 60 | 60 | 10 | 10 | 30 | 3 | 2 | 1 | 2 | 2 | .3 | 2.3 | 60 |
| 2N3185 | TO-3 | 80 | 80 | 10 | 10 | 30 | 3 | 2 | 1 | 2 | 2 | .3 | 2.3 | 60 |
| 2N3186 | TO-3 | 100 | 100 | 10 | 10 | 30 | 3 | 2 | 1 | 2 | 2 | .3 | 2.3 | 60 |
| 2N3187 | TO-61 | 40 | 40 | 10 | 10 | 30 | 3 | 3 | .9 | 1.9 | 3 | .6 | 2 | 60 |
| 2N3188 | TO-61 | 60 | 60 | 10 | 10 | 30 | 3 | 3 | .9 | 1.9 | 3 | .6 | 2 | 60 |
| 2N3189 | TO-61 | 80 | 80 | 10 | 10 | 30 | 3 | 3 | .9 | 1.9 | 3 | .6 | 2 | 60 |
| 2N3190 | TO-61 | 100 | 100 | 10 | 10 | 30 | 3 | 3 | .9 | 1.9 | 3 | .6 | 2 | 60 |
| 2N3195 | TO-3 | 40 | 40 | 10 | 10 | 30 | 3 | 3 | .9 | 1.9 | 3 | .6 | 2.3 | 60 |
| 2N3196 | TO-3 | 60 | 60 | 10 | 10 | 30 | 3 | 3 | .9 | 1.9 | 3 | .6 | 2.3 | 60 |
| 2N3197 | TO-3 | 80 | 80 | 10 | 10 | 30 | 3 | 3 | .9 | 1.9 | 3 | .6 | 2.3 | 60 |
| 2N3198 | TO-3 | 100 | 100 | 10 | 10 | 30 | 3 | 3 | .9 | 1.9 | 3 | .6 | 2.3 | 60 |
| 2N3202 | TO-5 | 40 | 40 | 10 | 20 | 60 | 2 | 1 | .3 | 1.3 | 1 | .1 | 25 | 60 |
| 2N3203 | TO-5 | 60 | 60 | 10 | 20 | 60 | 2 | 1 | .3 | 1.3 | 1 | .1 | 25 | 60 |
| 2N3204 | TO-5 | 80 | 80 | 10 | 20 | 60 | 2 | 1 | .3 | 1.3 | 1 | .1 | 25 | 60 |
| 2N3719 | TO-5 | 40 | 40 | 4 | 25 | 180 | 1 | 1 | 1.5 | 2.3 | 3 | .3 | 25 | 60 |
| 2N3720 | TO-5 | 60 | 60 | 4 | 25 | 180 | 1 | 1 | 1.5 | 2.3 | 3 | .3 | 25 | 60 |
| 2N3867 | TO-5 | 45 | 40 | 4 | 40 | 200 | 2 | 1.5 | .7 | 1.4 | 1.5 | .15 | 25 | 60 |
| 2N3868 | TO-5 | 65 | 60 | 4 | 30 | 150 | 2 | 1.5 | .7 | 1.4 | 1.5 | .15 | 25 | 60 |
| 2N4999 | TO-111/1 | 100 | 80 | 5.5 | 30 | 90 | 5 | 1 | .85 | 1.5 | 2 | .2 | 3.33 | 60 |
| 2N5001 | TO-111/1 | 100 | 80 | 5.5 | 70 | 200 | 5 | 1 | .85 | 1.5 | 2 | .2 | 3.33 | 60 |
| 2N5003 | TO-111/1 | 100 | 80 | 5.5 | 30 | 90 | 5 | 2.5 | 1.5 | 2.2 | 5 | .5 | 3 | 50 |
| 2N5005 | TO-111/1 | 100 | 80 | 5.5 | 70 | 200 | 5 | 2.5 | 1.5 | 2.2 | 5 | .5 | 3 | 50 |
| 2N5147 | TO-5 | 100 | 80 | 5.5 | 30 | 90 | 5 | 1 | .85 | 1.5 | 2 | .2 | 25 | 50 |
| 2N5149 | TO-5 | 100 | 80 | 5.5 | 70 | 200 | 5 | 1 | .85 | 1.5 | 2 | .2 | 25 | 60 |
| 2N5286 | TO-111/1 | 120 | 100 | 5.5 | 30 | 90 | 5 | 2.5 | 1.5 | 2.2 | 5 | .5 | 3 | 50 |
| 2N5287 | TO-111/1 | 120 | 100 | 5.5 | 70 | 200 | 5 | 2.5 | 1.5 | 2.2 | 5 | .5 | 3 | 50 |
| 2N5333 | TO-5 | 100 | 80 | 6 | 30 | 120 | 4 | 1 | 1 | 1.5 | 2 | .2 | 25 | 60 |
| 2N5384 | TO-111/1 | 100 | 80 | 6 | 20 | 80 | 4 | 2 | .6 | 1.5 | 2 | .2 | 3.33 | 60 |
| 2N5385 | TO-111 | 100 | 80 | 6 | 20 | 80 | 4 | 2 | .6 | 1.5 | 2 | .2 | 3.3 | 60 |
| 2N5404 | TO-5 | 80 | 80 | 6 | 20 | 60 | 5 | 2 | .6 | 1.2 | 2 | .2 | 25 | 60 |
| 2N5405 | TO-5 | 100 | 100 | 6 | 20 | 60 | 5 | 2 | .6 | 1.2 | 2 | .2 | 25 | 60 |
| 2N5406 | TO-5 | 80 | 80 | 6 | 40 | 120 | 5 | 2 | .6 | 1.2 | 2 | .2 | 25 | 60 |
| 2N5407 | TO-5 | 100 | 100 | 6 | 40 | 120 | 5 | 2 | .6 | 1.2 | 2 | .2 | 25 | 60 |
| 2N5408 | TO-111/1 | 80 | 80 | 6 | 20 | 60 | 5 | 2 | .6 | 1.2 | 2 | .2 | 3.33 | 60 |
| 2N5409 | TO-111/1 | 100 | 100 | 6 | 20 | 60 | 5 | 2 | .6 | 1.2 | 2 | .2 | 3.33 | 60 |
| 2N5410 | TO-111/1 | 80 | 80 | 6 | 40 | 120 | 5 | 2 | .6 | 1.2 | 2 | .2 | 3.33 | 60 |
| 2N5411 | TO-111/1 | 100 | 100 | 6 | 40 | 120 | 5 | 2 | .6 | 1.2 | 2 | .2 | 3.33 | 60 |
| 2N5597 | TO-66 | 80 | 60 | 5.5 | 70 | 200 | 5 | 1 | .85 | 1.5 | 2 | .2 | 6 | 60 |
| 2N5599 | TO-66 | 100 | 80 | 5.5 | 30 | 90 | 5 | 1 | .85 | 1.5 | 2 | .2 | 6 | 60 |
| 2N5601 | TO-66 | 100 | 80 | 5.5 | 70 | 200 | 5 | 1 | .85 | 1.5 | 2 | .2 | 6 | 60 |
| 2N5603 | TO-66 | 120 | 100 | 5.5 | 30 | 90 | 5 | 1 | .85 | 1.5 | 2 | .2 | 6 | 60 |
| 2N5605 | TO-66 | 80 | 60 | 5.5 | 70 | 200 | 5 | 2.5 | .75 | 1.45 | 2.5 | .25 | 6 | 60 |
| 2N5607 | TO-66 | 100 | 80 | 5.5 | 30 | 90 | 5 | 2.5 | .75 | 1.45 | 2.5 | .25 | 6 | 50 |
| 2N5609 | TO-66 | 100 | 80 | 5.5 | 70 | 200 | 5 | 2.5 | .75 | 1.45 | 2.5 | .25 | 6 | 50 |
| 2N5611 | TO-66 | 120 | 100 | 5.5 | 30 | 90 | 5 | 2.5 | .75 | 1.45 | 2.5 | .25 | 6 | 50 |
| 2N5613 | TO-3 | 80 | 60 | 5.5 | 70 | 200 | 5 | 2.5 | 1.5 | 2.2 | 5 | .5 | 3 | 50 |
| 2N5615 | TO-3 | 100 | 80 | 5.5 | 30 | 90 | 5 | 2.5 | 1.5 | 2.2 | 5 | .5 | 3 | 50 |
| 2N5617 | TO-3 | 100 | 80 | 5.5 | 70 | 200 | 5 | 2.5 | 1.5 | 2.2 | 5 | .5 | 3 | 50 |
| 2N5619 | TO-3 | 120 | 100 | 5.5 | 30 | 90 | 5 | 2.5 | 1.5 | 2.2 | 5 | .5 | 3 | 50 |