

2514096 CRIMSON SEMICONDUCTOR INC

99D 00293 D T-29-01

| DEVICE | TYPE | PACKAGE | BVCFO | BVCBO | BVEBO | ICBO @ VCB | HFE @ VC & IC | | COB | FT | NF | |
|---------|------|---------|---------|---------|---------|------------|---------------|---------|-----|-----|----|---------|
| | | | (V) MIN | (V) MIN | (V) MIN | (-A) MAX | (V) MIN | MAX | | | | (V) MIN |
| 2N1507 | NPN | TO-5 | 30 | 60 | 5 | 500 | 30 | 100-300 | 10 | 150 | 35 | 50 |
| 2N1566 | NPN | TO-5 | 60 | 80 | 5 | 500 | 40 | 60-200 | 5 | 5 | 10 | 60 |
| 2N1613 | NPN | TO-5 | 50 | 75 | 7 | 10 | 60 | 40-120 | 10 | 150 | 25 | 60 |
| 2N1711 | NPN | TO-5 | 50 | 75 | 7 | 10 | 60 | 100-300 | 10 | 150 | 25 | 70 |
| 2N1889 | NPN | TO-5 | 60 | 100 | 7 | 10 | 75 | 40-120 | 10 | 150 | 15 | 50 |
| 2N1890 | NPN | TO-5 | 60 | 100 | 7 | 10 | 75 | 100-300 | 10 | 150 | 15 | 60 |
| 2N1893 | NPN | TO-5 | 80 | 120 | 7 | 10 | 90 | 40-120 | 10 | 150 | 15 | 50 |
| 2N1973 | NPN | TO-5 | 60 | 100 | 7 | 25 | 75 | 75- | 10 | 10 | 15 | 60 |
| 2N1974 | NPN | TO-5 | 60 | 100 | 7 | 25 | 75 | 35- | 10 | 10 | 15 | 50 |
| 2N1975 | NPN | TO-5 | 60 | 100 | 7 | 25 | 75 | 15- | 10 | 10 | 15 | 40 |
| 2N1983 | NPN | TO-5 | 25 | 50 | 5 | 500 | 30 | 70-210 | 5 | 1 | 45 | 40 |
| 2N1984 | NPN | TO-5 | 25 | 50 | 5 | 500 | 30 | 35-100 | 5 | 1 | 45 | 40 |
| 2N1985 | NPN | TO-5 | 25 | 50 | 5 | 500 | 30 | 15-45 | 5 | 1 | 45 | 40 |
| 2N1986 | NPN | TO-5 | 25 | 50 | 5 | 500 | 30 | 60-240 | 10 | 150 | 35 | 40 |
| 2N1987 | NPN | TO-5 | 25 | 50 | 5 | 500 | 30 | 20-80 | 10 | 150 | 35 | 40 |
| 2N1988 | NPN | TO-5 | 45 | 100 | 5 | 500 | 50 | 35-120 | 10 | 30 | 20 | 40 |
| 2N1989 | NPN | TO-5 | 45 | 100 | 5 | 500 | 50 | 20-60 | 10 | 30 | 20 | 40 |
| 2N1990 | NPN | TO-5 | 60 | 100 | 3 | 500 | 75 | 20- | 10 | 30 | 20 | 40 |
| 2N1991 | PNP | TO-5 | 20 | 30 | 5 | 500 | 10 | 15- | 10 | 150 | 45 | 40 |
| 2N2008 | NPN | TO-5 | 110 | 175 | 8 | 50 | 100 | 40-120 | 10 | 50 | 15 | 40 |
| 2N2017 | NPN | TO-39 | 60 | 60 | 8 | 500 | 30 | 50-200 | 10 | 200 | 15 | 60 |
| 2N2049 | NPN | TO-5 | 40 | 75 | 7 | 10 | 60 | 100-300 | 10 | 150 | 25 | 50 |
| 2N2102 | NPN | TO-39 | 65 | 120 | 7 | 2 | 60 | 40-120 | 10 | 150 | 15 | 60 |
| 2N2192 | NPN | TO-39 | 40 | 60 | 5 | 10 | 30 | 100-300 | 10 | 150 | 20 | 50 |
| 2N2193 | NPN | TO-39 | 50 | 80 | 8 | 10 | 60 | 40-120 | 10 | 150 | 20 | 50 |
| 2N2195 | NPN | TO-39 | 25 | 45 | 5 | 100 | 30 | 20- | 10 | 150 | 20 | 50 |
| 2N2205 | NPN | TO-18 | 12 | 25 | 3 | 25 | 15 | 20- | 1 | 10 | 6 | 200 |
| 2N2218 | NPN | TO-5 | 30 | 60 | 5 | 10 | 50 | 40-120 | 10 | 150 | 8 | 250 |
| 2N2218A | NPN | TO-5 | 40 | 75 | 6 | 10 | 60 | 40-120 | 10 | 150 | 8 | 250 |
| 2N2219 | NPN | TO-5 | 30 | 60 | 5 | 10 | 50 | 100-300 | 10 | 150 | 8 | 250 |
| 2N2219A | NPN | TO-5 | 40 | 75 | 6 | 10 | 60 | 100-300 | 10 | 150 | 8 | 300 |
| 2N2221 | NPN | TO-18 | 30 | 60 | 5 | 10 | 50 | 40-120 | 10 | 150 | 8 | 250 |
| 2N2221A | NPN | TO-18 | 40 | 75 | 6 | 10 | 60 | 40-120 | 10 | 150 | 8 | 250 |
| 2N2222 | NPN | TO-18 | 30 | 60 | 5 | 10 | 50 | 100-300 | 10 | 150 | 8 | 250 |
| 2N2222A | NPN | TO-18 | 40 | 75 | 6 | 10 | 60 | 100-300 | 10 | 150 | 8 | 300 |
| 2N2224 | NPN | TO-5 | 40 | 65 | 5 | 10 | 50 | 40-120 | 1 | 150 | 8 | 250 |
| 2N2242 | NPN | TO-18 | 15 | 40 | 5 | 100 | 20 | 40-120 | 1 | 10 | 6 | 250 |
| 2N2243 | NPN | TO-39 | 80 | 120 | 7 | 10 | 60 | 40-120 | 10 | 150 | 15 | 50 |
| 2N2270 | NPN | TO-39 | 45 | 60 | 7 | 50 | 60 | 50-200 | 10 | 150 | 15 | 100 |
| 2N2297 | NPN | TO-5 | 35 | 80 | 7 | 10 | 60 | 40-120 | 10 | 150 | 12 | 60 |
| 2N2303 | NPN | TO-5 | 35 | 50 | 5 | 500 | 30 | 75-200 | 10 | 150 | 45 | 60 |
| 2N2368 | NPN | TO-18 | 15 | 40 | 4.5 | 400 | 20 | 20-60 | 1 | 10 | 4 | 400 |
| 2N2369 | NPN | TO-18 | 15 | 40 | 4.5 | 400 | 20 | 40-120 | 1 | 10 | 4 | 500 |
| 2N2369A | NPN | TO-18 | 15 | 40 | 4.5 | 400 | 20 | 40-120 | 3.5 | 10 | 4 | 500 |
| 2N2405 | NPN | TO-39 | 90 | 120 | 7 | 10 | 90 | 60-200 | 10 | 150 | 15 | 50 |

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| DEVICE | TYPE | PACKAGE | BVCEO | BVCBO | BVEBO | ICBO | VCB | HFE @ | VC & IC | COB | FT | NF | |
|---------|------|------------|---------|---------|---------|----------|-----|-----------|---------|-----|----|------|------|
| | | | (V) MIN | (V) MIN | (V) MIN | (mA) MAX | (V) | MIN - MAX | (V) | | | | (mA) |
| 2N2475 | NPN | TO-18 | 6 | 15 | 4 | 50 | 5 | 30-150 | .4 | 20 | 3 | 600 | |
| 2N2476 | NPN | TO-5 | 20 | 60 | 5 | 200 | 30 | 20- | .4 | 150 | 10 | 250 | |
| 2N2477 | NPN | TO-5 | 20 | 60 | 5 | 200 | 30 | 40- | .4 | 150 | 10 | 250 | |
| 2N2481 | NPN | TO-18 | 15 | 40 | 5 | 50 | 20 | 40-120 | 1 | 10 | 5 | 300 | |
| 2N2483 | NPN | TO-18 | 60 | 60 | 6 | 10 | 45 | 40-120 | 5 | .01 | 6 | 60 | 4 |
| 2N2484 | NPN | TO-18 | 60 | 60 | 6 | 10 | 45 | 100-500 | 5 | .01 | 6 | 60 | 3 |
| 2N2501 | NPN | TO-18 | 20 | 40 | 6 | 25 | 20 | 50-150 | 1 | 10 | 4 | 350 | |
| 2N2509 | NPN | TO-18 | 80 | 125 | 7 | 5 | 100 | 40- | 5 | 10 | 6 | 45 | |
| 2N2510 | NPN | TO-18 | 65 | 100 | 7 | 5 | 80 | 150-500 | 5 | 10 | 6 | 45 | |
| 2N2511 | NPN | TO-18 | 50 | 80 | 7 | 5 | 60 | 240-750 | 5 | 10 | 6 | 45 | |
| 2N2539 | NPN | TO-18 | 30 | 60 | 5 | 250 | 40 | 50-150 | 10 | 150 | 8 | 250 | |
| 2N2540 | NPN | TO-18 | 30 | 60 | 5 | 250 | 40 | 100-300 | 10 | 150 | 8 | 250 | |
| 2N2586 | NPN | TO-18 | 45 | 60 | 6 | 2 | 45 | 120-360 | 5 | .01 | 7 | 45 | |
| 2N2616 | NPN | TO-18 | 15 | 30 | 3 | 10 | 15 | 20- | 1 | 3 | 3 | 600 | |
| 2N2645 | NPN | TO-18 | 40 | 75 | 7 | 10 | 60 | 100-300 | 10 | 150 | 25 | 50 | |
| 2N2696 | PNP | TO-18 | 25 | 25 | 4 | 25 | 10 | 30-130 | 1 | 50 | 20 | 100 | |
| 2N2710 | NPN | TO-18 | 20 | 40 | 5 | 30 | 20 | 40- | 1 | 10 | 4 | 500 | |
| 2N2714 | NPN | TO-92 (74) | 18 | 18 | 5 | 500 | 18 | 75-225 | 4.5 | 2 | 12 | 80 | |
| 2N2801 | PNP | TO-39 | 35 | 50 | 5 | 100 | 25 | 75-225 | 10 | 150 | 25 | 120 | |
| 2N2845 | NPN | TO-18 | 30 | 60 | 5 | 200 | 30 | 30-120 | 10 | 150 | 8 | 250 | |
| 2N2846 | NPN | TO-5 | 30 | 60 | 5 | 200 | 30 | 30-120 | 10 | 150 | 8 | 250 | |
| 2N2847 | NPN | TO-18 | 20 | 60 | 5 | 200 | 30 | 40-140 | 10 | 150 | 8 | 250 | |
| 2N2848 | NPN | TO-5 | 20 | 60 | 5 | 200 | 30 | 40-140 | 10 | 150 | 8 | 250 | |
| 2N2857 | NPN | TO-72 | 15 | 30 | 2.5 | 10 | 15 | 30-150 | 1 | 3 | 1 | 1000 | |
| 2N2868 | NPN | TO-5 | 40 | 60 | 7 | 10 | 30 | 40-120 | 10 | 150 | 20 | 50 | |
| 2N2894 | PNP | TO-18 | 12 | 12 | 4 | 80 | 6 | 40-150 | .5 | 30 | 6 | 400 | |
| 2N2895 | NPN | TO-18 | 65 | 120 | .7 | 2 | 60 | 40-120 | 10 | 150 | 15 | 120 | |
| 2N2896 | NPN | TO-18 | 90 | 140 | 7 | 10 | 90 | 60-200 | 10 | 150 | 15 | 120 | |
| 2N2897 | NPN | TO-18 | 45 | 60 | 7 | 50 | 60 | 50-200 | 10 | 150 | 15 | 100 | |
| 2N2904 | PNP | TO-5 | 40 | 60 | 5 | 20 | 50 | 40-120 | 10 | 150 | 8 | 200 | |
| 2N2904A | PNP | TO-5 | 60 | 60 | 5 | 10 | 50 | 40-120 | 10 | 150 | 8 | 200 | |
| 2N2905 | PNP | TO-5 | 40 | 60 | 5 | 20 | 50 | 100-300 | 10 | 150 | 8 | 200 | |
| 2N2905A | PNP | TO-5 | 60 | 60 | 5 | 10 | 50 | 100-300 | 10 | 150 | 8 | 200 | |
| 2N2906 | PNP | TO-18 | 40 | 60 | 5 | 20 | 50 | 40-120 | 10 | 150 | 8 | 200 | |
| 2N2906A | PNP | TO-18 | 60 | 60 | 5 | 10 | 50 | 40-120 | 10 | 150 | 8 | 200 | |
| 2N2907 | PNP | TO-18 | 40 | 60 | 5 | 20 | 50 | 100-300 | 10 | 150 | 8 | 200 | |
| 2N2907A | PNP | TO-18 | 60 | 60 | 5 | 10 | 50 | 100-300 | 10 | 150 | 8 | 200 | |
| 2N2923 | NPN | TO-92 (74) | 25 | 25 | 5 | 100 | 25 | 90-180 | 10 | 2 | 10 | | |
| 2N2924 | NPN | TO-92 (74) | 25 | 25 | 5 | 100 | 25 | 150-300 | 10 | 2 | 10 | | |
| 2N2925 | NPN | TO-92 (74) | 25 | 25 | 5 | 100 | 25 | 235-470 | 10 | 2 | 10 | | |
| 2N2926 | NPN | TO-92 (74) | 18 | 18 | 5 | 500 | 18 | 35-470 | 10 | 2 | 10 | | |
| 2N3010 | NPN | TO-18 | 6 | 15 | 4 | 100 | 5 | 25-125 | .4 | 10 | 3 | 600 | |
| 2N3011 | NPN | TO-18 | 12 | 30 | 5 | 400 | 20 | 30-120 | .35 | 10 | 4 | 400 | |
| 2N3012 | PNP | TO-18 | 12 | 12 | 4 | 80 | 6 | 30-120 | .5 | 30 | 6 | 400 | |
| 2N3015 | NPN | TO-5 | 30 | 60 | 5 | 200 | 30 | 30-120 | 10 | 150 | 8 | 250 | |

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| DEVICE | TYPE | PACKAGE | BVCEO | BVCBO | BVEBO | ICBO @ VCB | HFE @ VC & IC | | COB | FT | NF | |
|---------|------|------------|---------|---------|---------|--------------|---------------|---------|-----|-----|-----|--------------|
| | | | (V) MIN | (V) MIN | (V) MIN | (mA) MAX (V) | MIN | MAX (V) | | | | (%) (pF) MAX |
| 2N3019 | NPN | TO-5 | 80 | 140 | 7 | 10 | 90 | 100-300 | 10 | 150 | 12 | 100 |
| 2N3020 | NPN | TO-5 | 80 | 140 | 7 | 10 | 90 | 40-120 | 10 | 150 | 12 | 100 |
| 2N3053 | NPN | TO-39 | 40 | 60 | 5 | 250 | 30 | 50-250 | 10 | 150 | 15 | 100 |
| 2N3053A | NPN | TO-39 | 60 | 80 | 5 | 250 | 60 | 50-250 | 10 | 150 | 15 | 100 |
| 2N3072 | PNP | TO-5 | 60 | 60 | 4 | 10 | 30 | 30-130 | 1 | 50 | 10 | 130 |
| 2N3073 | PNP | TO-18 | 60 | 60 | 4 | 10 | 30 | 30-130 | 1 | 50 | 10 | 130 |
| 2N3107 | NPN | TO-5 | 60 | 100 | 7 | 10 | 60 | 100-300 | 1 | 150 | 20 | 70 |
| 2N3108 | NPN | TO-5 | 60 | 100 | 7 | 10 | 60 | 40-120 | 1 | 150 | 20 | 60 |
| 2N3109 | NPN | TO-5 | 40 | 80 | 7 | 10 | 60 | 100-300 | 1 | 150 | 25 | 70 |
| 2N3110 | NPN | TO-5 | 40 | 80 | 7 | 10 | 60 | 40-120 | 1 | 150 | 25 | 60 |
| 2N3114 | NPN | TO-5 | 150 | 150 | 5 | 10 | 100 | 30-120 | 10 | 30 | 9 | 40 |
| 2N3115 | NPN | TO-18 | 20 | 60 | 5 | 25 | 50 | 40-120 | 10 | 150 | 8 | 250 |
| 2N3116 | NPN | TO-18 | 20 | 60 | 5 | 25 | 50 | 100-300 | 10 | 150 | 8 | 250 |
| 2N3117 | NPN | TO-18 | 60 | 60 | 6 | 10 | 45 | 250-500 | 5 | .01 | 4.5 | 60 |
| 2N3120 | PNP | TO-5 | 45 | 45 | 4 | 10 | 30 | 30-130 | 1 | 50 | 10 | 130 |
| 2N3121 | PNP | TO-18 | 45 | 45 | 4 | 10 | 30 | 30-130 | 1 | 50 | 10 | 130 |
| 2N3133 | PNP | TO-5 | 35 | 50 | 4 | 50 | 30 | 40-120 | 10 | 150 | 10 | 200 |
| 2N3134 | PNP | TO-5 | 35 | 50 | 4 | 50 | 30 | 100-300 | 10 | 150 | 10 | 200 |
| 2N3135 | PNP | TO-18 | 35 | 50 | 4 | 50 | 30 | 40-120 | 10 | 150 | 10 | 200 |
| 2N3136 | PNP | TO-18 | 35 | 50 | 4 | 50 | 30 | 100-300 | 10 | 150 | 10 | 200 |
| 2N3209 | PNP | TO-18 | 20 | 20 | 4 | 80 | 10 | 30-120 | .5 | 30 | 5 | 400 |
| 2N3210 | NPN | TO-18 | 15 | 40 | 5 | 10 | 20 | 30-120 | 1 | 10 | 6 | 300 |
| 2N3211 | NPN | TO-18 | 15 | 40 | 5 | 25 | 20 | 50-150 | 1 | 10 | 4 | 350 |
| 2N3227 | NPN | TO-18 | 20 | 40 | 6 | 200 | 20 | 100-300 | 1 | 10 | 4 | 500 |
| 2N3244 | PNP | TO-39 | 40 | 40 | 5 | 50 | 30 | 50-150 | 1 | 500 | 25 | 175 |
| 2N3245 | PNP | TO-39 | 50 | 50 | 5 | 50 | 50 | 30-90 | 1 | 500 | 25 | 150 |
| 2N3246 | PNP | TO-18 | 40 | 60 | 8 | 5 | 40 | 200-600 | 5 | .01 | 5 | 60 |
| 2N3250 | PNP | TO-18 | 40 | 50 | 5 | 20 | 40 | 50-150 | 1 | 10 | 6 | 250 |
| 2N3250A | PNP | TO-18 | 60 | 60 | 5 | 20 | 40 | 50-150 | 1 | 10 | 6 | 250 |
| 2N3251 | PNP | TO-18 | 40 | 50 | 5 | 20 | 40 | 100-300 | 1 | 10 | 6 | 300 |
| 2N3251A | PNP | TO-18 | 60 | 60 | 5 | 20 | 40 | 100-300 | 1 | 10 | 6 | 300 |
| 2N3252 | NPN | TO-5 | 30 | 60 | 5 | 500 | 40 | 30-90 | 1 | 500 | 12 | 200 |
| 2N3253 | NPN | TO-5 | 40 | 75 | 5 | 500 | 60 | 25-75 | 1 | 375 | 12 | 175 |
| 2N3299 | NPN | TO-5 | 30 | 60 | 5 | 10 | 50 | 40-120 | 10 | 150 | 8 | 250 |
| 2N3300 | NPN | TO-5 | 30 | 60 | 5 | 10 | 50 | 100-300 | 10 | 150 | 8 | 250 |
| 2N3301 | NPN | TO-18 | 30 | 60 | 5 | 10 | 50 | 40-120 | 10 | 150 | 8 | 250 |
| 2N3302 | NPN | TO-18 | 30 | 60 | 5 | 10 | 50 | 100-300 | 10 | 150 | 8 | 250 |
| 2N3304 | PNP | TO-92 (72) | 6 | 6 | 4 | 10 | 3 | 30-120 | .3 | 10 | 3.5 | 500 |
| 2N3326 | NPN | TO-39 | 45 | 60 | 5 | 10 | 50 | 40-120 | 10 | 150 | 8 | 250 |
| 2N3390 | NPN | TO-92 (74) | 25 | 25 | 5 | 100 | 18 | 400-800 | 4.5 | 2 | 10 | |
| 2N3391 | NPN | TO-92 (74) | 25 | 25 | 5 | 100 | 18 | 250-500 | 4.5 | 2 | 10 | |
| 2N3391A | NPN | TO-92 (74) | 25 | 25 | 5 | 100 | 18 | 250-500 | 4.5 | 2 | 10 | |
| 2N3392 | NPN | TO-92 (74) | 25 | 25 | 5 | 100 | 18 | 150-300 | 4.5 | 2 | 10 | |
| 2N3393 | NPN | TO-92 (74) | 25 | 25 | 5 | 100 | 18 | 90-180 | 4.5 | 2 | 10 | |
| 2N3394 | NPN | TO-92 (74) | 25 | 25 | 5 | 100 | 18 | 55-110 | 4.5 | 2 | 10 | |

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| DEVICE | TYPE | PACKAGE | BVCEO | BVCBO | BVEBO | ICBO @ VCB | HFE @ | | VC & IC | | COB | FT | NF |
|--------|------|------------|---------|---------|---------|------------|---------|---------|---------|----------|-----|-----|----|
| | | | (V) MIN | (V) MIN | (V) MIN | (mA) MAX | (V) MIN | MAX | (V) MIN | (mA) MAX | | | |
| 2N3395 | NPN | TO-92 (74) | 25 | 25 | 5 | 100 | 18 | 150-500 | 4.5 | 2 | 10 | | |
| 2N3396 | NPN | TO-92 (74) | 25 | 25 | 5 | 100 | 18 | 90-500 | 4.5 | 2 | 10 | | |
| 2N3397 | NPN | TO-92 (74) | 25 | 25 | 5 | 100 | 18 | 55-500 | 4.5 | 2 | 10 | | |
| 2N3398 | NPN | TO-92 (74) | 25 | 25 | 5 | 100 | 18 | 55-800 | 4.5 | 2 | 10 | | |
| 2N3414 | NPN | TO-92 (74) | 25 | 25 | 5 | 100 | 25 | 75-225 | 4.5 | 2 | 10 | | |
| 2N3415 | NPN | TO-92 (74) | 25 | 25 | 5 | 100 | 25 | 180-540 | 4.5 | 2 | 10 | | |
| 2N3416 | NPN | TO-92 (74) | 50 | 50 | 5 | 100 | 25 | 75-225 | 4.5 | 2 | 10 | | |
| 2N3417 | NPN | TO-92 (74) | 50 | 50 | 5 | 100 | 25 | 180-540 | 4.5 | 2 | 10 | | |
| 2N3439 | NPN | TO-5 | 350 | 450 | 7 | 20 | 360 | 40-160 | 10 | 20 | 10 | 15 | |
| 2N3440 | NPN | TO-5 | 250 | 300 | 7 | 20 | 250 | 40-160 | 10 | 20 | 10 | 15 | |
| 2N3444 | NPN | TO-39 | 50 | 80 | 5 | 500 | 60 | 20-60 | 1 | 500 | 12 | 150 | |
| 2N3467 | PNP | TO-39 | 40 | 40 | 5 | 100 | 30 | 40-120 | 1 | 500 | 25 | 175 | |
| 2N3468 | PNP | TO-39 | 50 | 50 | 5 | 100 | 30 | 25-75 | 1 | 500 | 25 | 150 | |
| 2N3478 | NPN | TO-72 | 15 | 30 | 2 | 20 | 1 | 25-120 | 8 | 2 | 1 | 750 | |
| 2N3494 | PNP | TO-39 | 80 | 80 | 4.5 | 100 | 50 | 40- | 10 | 50 | 7 | 200 | |
| 2N3495 | PNP | TO-39 | 120 | 120 | 4.5 | 100 | 90 | 40- | 10 | 50 | 6 | 150 | |
| 2N3496 | PNP | TO-18 | 80 | 80 | 4.5 | 100 | 50 | 40- | 10 | 50 | 7 | 200 | |
| 2N3497 | PNP | TO-18 | 120 | 120 | 4.5 | 100 | 90 | 40- | 10 | 50 | 6 | 150 | |
| 2N3498 | NPN | TO-39 | 100 | 100 | 6 | 50 | 50 | 40-120 | 10 | 150 | 10 | 150 | |
| 2N3499 | NPN | TO-39 | 100 | 100 | 6 | 50 | 50 | 100-300 | 10 | 150 | 10 | 150 | |
| 2N3500 | NPN | TO-39 | 150 | 150 | 6 | 50 | 75 | 40-120 | 10 | 150 | 8 | 150 | |
| 2N3501 | NPN | TO-39 | 150 | 150 | 6 | 50 | 75 | 100-300 | 10 | 150 | 8 | 150 | |
| 2N3502 | PNP | TO-5 | 45 | 45 | 5 | 10 | 30 | 100-300 | 10 | 150 | 8 | 200 | |
| 2N3503 | PNP | TO-5 | 60 | 60 | 5 | 10 | 30 | 100-300 | 10 | 150 | 8 | 200 | |
| 2N3504 | PNP | TO-18 | 45 | 45 | 5 | 10 | 30 | 100-300 | 10 | 150 | 8 | 200 | |
| 2N3505 | PNP | TO-18 | 60 | 60 | 5 | 10 | 30 | 100-300 | 10 | 150 | 8 | 200 | |
| 2N3547 | PNP | TO-18 | 60 | 60 | 6 | 10 | 45 | 100-500 | 5 | 1 | 10 | | |
| 2N3548 | PNP | TO-18 | 45 | 60 | 6 | 10 | 45 | 150-600 | 5 | 1 | 10 | | |
| 2N3549 | PNP | TO-18 | 60 | 60 | 6 | 10 | 45 | 200-800 | 5 | 1 | 10 | | |
| 2N3550 | PNP | TO-18 | 45 | 60 | 6 | 10 | 45 | 300-800 | 5 | 1 | 10 | | |
| 2N3600 | NPN | TO-72 | 15 | 30 | 3 | 10 | 15 | 20-150 | 1 | 3 | 1 | 850 | |
| 2N3634 | PNP | TO-39 | 140 | 140 | 5 | 100 | 100 | 50-150 | 10 | 50 | 10 | 150 | |
| 2N3635 | PNP | TO-39 | 140 | 140 | 5 | 100 | 100 | 100-300 | 10 | 50 | 10 | 200 | |
| 2N3636 | PNP | TO-39 | 175 | 175 | 5 | 100 | 100 | 50-150 | 10 | 50 | 10 | 150 | |
| 2N3637 | PNP | TO-39 | 175 | 175 | 5 | 100 | 100 | 100-300 | 10 | 50 | 10 | 200 | |
| 2N3662 | NPN | TO-92 (74) | 12 | 18 | 3 | 500 | 15 | 20- | 8 | 10 | 1.7 | 700 | |
| 2N3663 | NPN | TO-92 (74) | 12 | 30 | 3 | 500 | 15 | 20- | 8 | 10 | 1.7 | 700 | |
| 2N3665 | NPN | TO-39 | 80 | 120 | 10 | 50 | 60 | 40-120 | 10 | 150 | 12 | 60 | |
| 2N3666 | NPN | TO-39 | 80 | 120 | 10 | 50 | 60 | 100-300 | 10 | 150 | 12 | 60 | |
| 2N3671 | PNP | TO-5 | 50 | 60 | 5 | 10 | 50 | 75-225 | 10 | 150 | 9 | 200 | |
| 2N3672 | PNP | TO-18 | 50 | 60 | 5 | 10 | 50 | 75-225 | 10 | 150 | 9 | 200 | |
| 2N3678 | NPN | TO-5 | 55 | 75 | 6 | 10 | 60 | 40-120 | 10 | 150 | 8 | 250 | |
| 2N3700 | NPN | TO-18 | 80 | 140 | 7 | 10 | 90 | 100-300 | 10 | 150 | 12 | 100 | |
| 2N3701 | NPN | TO-18 | 80 | 140 | 7 | 10 | 90 | 40-120 | 10 | 150 | 12 | 80 | |
| 2N3702 | PNP | TO-92 (74) | 25 | 40 | 5 | 100 | 20 | 60-300 | 5 | 50 | 12 | 100 | |

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| DEVICE | TYPE | PACKAGE | BVCEO | BVCBO | BVEBO | ICBO @ VCB | | HFE @ VC & IC | | COB | FT | NF |
|---------|------|------------|---------|---------|---------|------------|---------|---------------|---------|-----|-----|------|
| | | | (V) MIN | (V) MIN | (V) MIN | (mA) MAX | (V) MIN | (mA) MAX | (V) MIN | | | |
| 2N3703 | PNP | TO-92 (74) | 30 | 50 | 5 | 100 | 20 | 30-150 | 5 | 50 | 12 | 100 |
| 2N3704 | NPN | TO-92 (74) | 30 | 50 | 5 | 100 | 20 | 100-300 | 2 | 50 | 12 | 100 |
| 2N3705 | NPN | TO-92 (74) | 30 | 50 | 5 | 100 | 20 | 50-150 | 2 | 50 | 12 | 100 |
| 2N3706 | NPN | TO-92 (74) | 20 | 40 | 5 | 100 | 20 | 30-600 | 2 | 50 | 12 | 100 |
| 2N3707 | NPN | TO-92 (74) | 30 | 30 | 6 | 100 | 20 | 100-400 | 5 | 1 | | |
| 2N3708 | NPN | TO-92 (74) | 30 | 30 | 6 | 100 | 20 | 45-660 | 5 | 1 | | |
| 2N3709 | NPN | TO-92 (74) | 30 | 30 | 6 | 100 | 20 | 45-165 | 5 | 1 | | |
| 2N3710 | NPN | TO-92 (74) | 30 | 30 | 6 | 100 | 20 | 90-330 | 5 | 1 | | |
| 2N3711 | NPN | TO-92 (74) | 30 | 30 | 6 | 100 | 20 | 180-660 | 5 | 1 | | |
| 2N3721 | NPN | TO-92 (74) | 18 | 18 | 5 | 500 | 18 | 60-660 | 10 | 2 | | |
| 2N3722 | NPN | TO-5 | 60 | 80 | 6 | 500 | 40 | 40-150 | 1 | 100 | 10 | |
| 2N3723 | NPN | TO-5 | 80 | 100 | 6 | 500 | 50 | 40-150 | 1 | 100 | 9 | |
| 2N3724 | NPN | TO-39 | 30 | 50 | 6 | 1.7UA | 40 | 60-150 | 1 | 100 | 12 | 300 |
| 2N3724A | NPN | TO-39 | 30 | 50 | 6 | 500 | 40 | 60-150 | 1 | 100 | 12 | 300 |
| 2N3725 | NPN | TO-39 | 50 | 80 | 6 | 1.7UA | 60 | 60-150 | 1 | 100 | 10 | 300 |
| 2N3725A | NPN | TO-39 | 50 | 80 | 6 | 500 | 60 | 60-150 | 1 | 100 | 10 | 300 |
| 2N3742 | NPN | TO-39 | 300 | 300 | 7 | 200 | 200 | 20-200 | 10 | 30 | 6 | 60 |
| 2N3794 | NPN | TO-92 (74) | 20 | 40 | 5 | 500 | 15 | 100-600 | 10 | 10 | 10 | 100 |
| 2N3799 | PNP | TO-18 | 60 | 60 | 5 | 10 | 50 | 300-900 | 5 | .5 | | |
| 2N3825 | NPN | TO-92 (74) | 15 | 30 | 4 | 100 | 15 | 20- | 10 | 2 | 3.5 | 200 |
| 2N3826 | NPN | TO-92 (74) | 45 | 60 | 4 | 100 | 30 | 40-160 | 10 | 10 | 3.5 | 200 |
| 2N3827 | NPN | TO-92 (74) | 45 | 60 | 4 | 100 | 30 | 100-400 | 10 | 10 | 3.5 | 200 |
| 2N3839 | NPN | TO-72 | 15 | 30 | 2.5 | 10 | 15 | 30-150 | 1 | 3 | 1 | 1000 |
| 2N3858 | NPN | TO-92 (74) | 30 | 30 | 4 | 500 | 18 | 60-120 | 4.5 | 2 | 4 | 90 |
| 2N3858A | NPN | TO-92 (74) | 60 | 60 | 6 | 500 | 18 | 60-120 | 1 | 10 | 4 | 90 |
| 2N3859 | NPN | TO-92 (74) | 30 | 30 | 4 | 500 | 18 | 100-200 | 4.5 | 2 | 4 | 90 |
| 2N3859A | NPN | TO-92 (74) | 60 | 60 | 6 | 500 | 18 | 100-200 | 1 | 10 | 4 | 90 |
| 2N3860 | NPN | TO-92 (74) | 30 | 30 | 4 | 500 | 18 | 150-300 | 4.5 | 2 | 4 | 90 |
| 2N3877 | NPN | TO-92 (74) | 70 | 70 | 4 | 500 | 70 | 20-250 | 4.5 | 2 | | 5 |
| 2N3877A | NPN | TO-92 (74) | 85 | 85 | 4 | 500 | 70 | 20-250 | 4.5 | 2 | | 5 |
| 2N3900 | NPN | TO-92 (74) | 18 | 18 | 5 | 100 | 18 | 250-500 | 4.5 | 2 | | 5 |
| 2N3901 | NPN | TO-92 (74) | 18 | 18 | 5 | 100 | 15 | 350-700 | 4.5 | 2 | | 5 |
| 2N3903 | NPN | TO-92 (72) | 40 | 60 | 6 | 50 | 30 | 50-150 | 1 | 10 | 4 | 250 |
| 2N3904 | NPN | TO-92 (72) | 40 | 60 | 6 | 50 | 30 | 100-300 | 1 | 10 | 4 | 300 |
| 2N3905 | PNP | TO-92 (72) | 40 | 40 | 5 | 50 | 30 | 50-150 | 1 | 10 | 4.5 | 200 |
| 2N3906 | PNP | TO-92 (72) | 40 | 40 | 5 | 50 | 30 | 100-300 | 1 | 10 | 4.5 | 250 |
| 2N3932 | NPN | TO-72 | 20 | 30 | 2.5 | 10 | 15 | 40-150 | 8 | 2 | .55 | 750 |
| 2N3933 | NPN | TO-72 | 30 | 40 | 2.5 | 10 | 15 | 60-200 | 8 | 2 | .55 | 750 |
| 2N3945 | NPN | TO-39 | 50 | 70 | 8 | 40 | 60 | 40-250 | 10 | 150 | 12 | 60 |
| 2N3946 | NPN | TO-18 | 40 | 60 | 6 | 10 | 40 | 50-150 | 1 | 10 | 4 | 250 |
| 2N3947 | NPN | TO-18 | 40 | 60 | 6 | 10 | 40 | 100-300 | 1 | 10 | 4 | 300 |
| 2N3962 | PNP | TO-18 | 60 | 60 | 6 | 10 | 50 | 100-450 | 5 | 1 | 6 | 40 |
| 2N3963 | PNP | TO-18 | 80 | 80 | 6 | 10 | 70 | 100-450 | 5 | 1 | 6 | 40 |
| 2N3964 | PNP | TO-18 | 45 | 45 | 6 | 10 | 40 | 250-600 | 5 | 1 | 6 | 50 |
| 2N3965 | PNP | TO-18 | 60 | 60 | 6 | 10 | 50 | 250-600 | 5 | 1 | 6 | 50 |

2514096 CRIMSON SEMICONDUCTOR INC

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T.29-01

| DEVICE | TYPE | PACKAGE | BVCEO | BVCBO | BVEBO | ICBO | V _{CB} | HFE | VC & IC | | COB | FT | NF |
|--------|------|------------|---------|---------|---------|-------------|-----------------|---------|---------|-----|------|----------|-------|
| | | | (V) MIN | (V) MIN | (V) MIN | (mA) MAX | (V) MIN | MIN | MAX | (V) | (mA) | (pF) MAX | (MHz) |
| 2N4013 | NPN | TO-18 | 30 | 50 | 6 | 1.7 μ A | 40 | 60-150 | 1 | 100 | 12 | 300 | |
| 2N4014 | NPN | TO-18 | 50 | 80 | 6 | 1.7 μ A | 60 | 60-150 | 1 | 100 | 10 | 300 | |
| 2N4026 | PNP | TO-18 | 60 | 60 | 5 | 50 | 50 | 40-120 | 5 | 100 | 20 | 100 | |
| 2N4027 | PNP | TO-18 | 80 | 80 | 5 | 50 | 60 | 40-120 | 5 | 100 | 20 | 100 | |
| 2N4028 | PNP | TO-18 | 60 | 60 | 5 | 50 | 50 | 100-300 | 5 | 100 | 20 | 150 | |
| 2N4029 | PNP | TO-18 | 80 | 80 | 5 | 50 | 60 | 100-300 | 5 | 100 | 20 | 150 | |
| 2N4030 | PNP | TO-5 | 60 | 60 | 5 | 50 | 50 | 40-120 | 5 | 100 | 20 | 100 | |
| 2N4031 | PNP | TO-5 | 80 | 80 | 5 | 50 | 60 | 40-120 | 5 | 100 | 20 | 100 | |
| 2N4032 | PNP | TO-5 | 60 | 60 | 5 | 50 | 50 | 100-300 | 5 | 100 | 20 | 150 | |
| 2N4033 | PNP | TO-5 | 80 | 80 | 5 | 50 | 60 | 100-300 | 5 | 100 | 20 | 150 | |
| 2N4034 | PNP | TO-18 | 40 | 40 | 5 | 15 | 30 | 70-200 | 1 | 10 | 3.5 | 400 | |
| 2N4035 | PNP | TO-18 | 40 | 40 | 5 | 15 | 30 | 150-300 | 1 | 10 | 3.5 | 450 | |
| 2N4036 | PNP | TO-39 | 65 | 90 | 7 | 20 | 60 | 40-140 | 10 | 150 | 30 | 60 | |
| 2N4037 | PNP | TO-39 | 40 | 60 | 7 | 250 | 60 | 50-250 | 10 | 150 | 30 | 60 | |
| 2N4046 | NPN | TO-5 | 30 | 50 | 6 | 1.7 μ A | 40 | 40-150 | 1 | 100 | 12 | 500 | |
| 2N4047 | NPN | TO-5 | 50 | 80 | 6 | 1.7 μ A | 60 | 40-150 | 1 | 100 | 10 | 500 | |
| 2N4058 | PNP | TO-92 (74) | 30 | 30 | 6 | 100 | 20 | 100-400 | 5 | 0.1 | 10 | | 5 |
| 2N4059 | PNP | TO-92 (74) | 30 | 30 | 6 | 100 | 20 | 45-660 | 5 | 1 | 10 | | 5 |
| 2N4060 | PNP | TO-92 (74) | 30 | 30 | 6 | 100 | 20 | 45-165 | 5 | 1 | 10 | | 5 |
| 2N4061 | PNP | TO-92 (74) | 30 | 30 | 6 | 100 | 20 | 90-330 | 5 | 1 | 10 | | 5 |
| 2N4062 | PNP | TO-92 (74) | 30 | 30 | 6 | 100 | 20 | 180-660 | 5 | 1 | 10 | | 5 |
| 2N4123 | NPN | TO-92 (72) | 30 | 40 | 5 | 50 | 20 | 50-150 | 1 | 2 | 4 | 250 | |
| 2N4124 | NPN | TO-92 (72) | 25 | 30 | 5 | 50 | 20 | 120-360 | 1 | 2 | 4 | 300 | |
| 2N4125 | PNP | TO-92 (72) | 30 | 30 | 4 | 50 | 20 | 50-150 | 1 | 2 | 4.5 | 200 | |
| 2N4126 | PNP | TO-92 (72) | 25 | 25 | 4 | 50 | 20 | 120-360 | 1 | 2 | 4.5 | 250 | |
| 2N4207 | PNP | TO-18 | 6 | 6 | 4.5 | 10 | 3 | 50-120 | .3 | 10 | 3 | 650 | |
| 2N4208 | PNP | TO-18 | 12 | 12 | 4.5 | 10 | 6 | 30-120 | .3 | 10 | 3 | 700 | |
| 2N4209 | PNP | TO-18 | 15 | 15 | 4.5 | 10 | 8 | 50-120 | .3 | 10 | 3 | 850 | |
| 2N4234 | PNP | TO-5 | 40 | 40 | 7 | 100 | 40 | 30-150 | 1 | 250 | | | |
| 2N4235 | PNP | TO-5 | 60 | 60 | 7 | 100 | 60 | 30-150 | 1 | 250 | | | |
| 2N4236 | PNP | TO-5 | 80 | 80 | 7 | 100 | 80 | 30-150 | 1 | 250 | | | |
| 2N4237 | NPN | TO-5 | 40 | 50 | 6 | 100 | 50 | 30-150 | 1 | 250 | | | |
| 2N4238 | NPN | TO-5 | 60 | 80 | 6 | 100 | 80 | 30-150 | 1 | 250 | | | |
| 2N4239 | PNP | TO-5 | 80 | 100 | 6 | 100 | 100 | 30-150 | 1 | 250 | | | |
| 2N4259 | NPN | TO-72 | 30 | 40 | 2.5 | 10 | 15 | 60-250 | 8 | 2 | .55 | 750 | |
| 2N4286 | NPN | TO-92 (74) | 25 | 30 | 6 | 50 | 25 | 150-600 | 5 | 1 | 6 | 40 | 5 |
| 2N4287 | NPN | TO-92 (74) | 45 | 45 | 7 | 10 | 30 | 150-600 | 5 | 1 | 6 | 40 | 5 |
| 2N4288 | PNP | TO-92 (74) | 25 | 30 | 6 | 50 | 25 | 150-600 | 5 | 1 | 8 | 40 | 4 |
| 2N4289 | PNP | TO-92 (74) | 45 | 60 | 7 | 10 | 45 | 150-600 | 5 | 1 | 8 | 40 | 4 |
| 2N4290 | PNP | TO-92 (74) | 20 | 30 | 5 | 500 | 20 | 50-300 | 10 | 100 | 10 | 100 | |
| 2N4291 | PNP | TO-92 (74) | 30 | 40 | 6 | 200 | 30 | 100-300 | 10 | 100 | 10 | 100 | |
| 2N4292 | NPN | TO-92 (74) | 15 | 30 | 3 | 500 | 15 | 20- | 1 | 3 | 3.5 | 600 | |
| 2N4293 | NPN | TO-92 (74) | 15 | 30 | 3 | 500 | 15 | 20- | 1 | 3 | 3.5 | 600 | |
| 2N4294 | NPN | TO-92 (74) | 12 | 30 | 4.5 | 400 | 20 | 30-120 | 1 | 10 | 5 | 400 | |
| 2N4295 | NPN | TO-92 (74) | 15 | 40 | 5 | 100 | 20 | 40-120 | 1 | 10 | 4 | 500 | |

2514096 CRIMSON SEMICONDUCTOR INC

99D 00299

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T-29-01

| DEVICE | TYPE | PACKAGE | BVCEO | BVCBO | BVEBO | ICBO @ VCB | HFE @ VC & IC | COB | FT | NF |
|--------|------|------------|---------|---------|---------|--------------|---------------|-----------------|-------|----------|
| | | | (V) MIN | (V) MIN | (V) MIN | (mA) MAX (V) | MIN.-MAX. (V) | (mA) - (pI) MAX | (MHz) | (db) MAX |
| 2N4314 | PNP | TO-39 | 65 | 90 | 7 | 250 | 60 50-250 | 10 150 | 30 | 60 |
| 2N4384 | NPN | TO-18 | 30 | 40 | 5 | 10 | 30 100-500 | 5 .01 | 8 | 30 |
| 2N4386 | NPN | TO-18 | 30 | 40 | 5 | 10 | 30 40-500 | 5 .01 | 8 | 30 |
| 2N4400 | NPN | TO-92 (72) | 40 | 60 | 6 | 100 | 35 50-150 | 1 150 | 6.5 | 200 |
| 2N4401 | NPN | TO-92 (72) | 40 | 60 | 6 | 100 | 35 100-300 | 1 150 | 6.5 | 250 |
| 2N4402 | PNP | TO-92 (72) | 40 | 40 | 5 | 100 | 35 50-150 | 2 150 | 8.5 | 150 |
| 2N4403 | PNP | TO-92 (72) | 40 | 40 | 5 | 100 | 35 100-300 | 2 150 | 8.5 | 200 |
| 2N4404 | PNP | TO-39 | 80 | 80 | 5 | 25 | 60 40-120 | 1 150 | 10 | 200 |
| 2N4405 | PNP | TO-39 | 80 | 80 | 5 | 25 | 60 100-300 | 1 150 | 10 | 200 |
| 2N4409 | NPN | TO-92 (72) | 50 | 80 | 5 | 10 | 60 60-400 | 1 10 | 12 | 60 |
| 2N4410 | NPN | TO-92 (72) | 80 | 120 | 5 | 10 | 100 60-400 | 1 10 | 12 | 60 |
| 2N4424 | NPN | TO-92 (74) | 40 | 40 | 5 | 100 | 25 180-540 | 4.5 2 | | |
| 2N4924 | NPN | TO-39 | 100 | 100 | 5 | 100 | 50 40-120 | 10 150 | 10 | 10 |
| 2N4951 | NPN | TO-92 (74) | 30 | 60 | 5 | 50 | 40 60-200 | 10 150 | 8 | 250 |
| 2N4952 | NPN | TO-92 (74) | 30 | 60 | 5 | 50 | 40 100-300 | 10 150 | 8 | 250 |
| 2N4953 | NPN | TO-92 (74) | 30 | 60 | 5 | 50 | 40 200-600 | 10 150 | 8 | 250 |
| 2N4954 | NPN | TO-92 (74) | 30 | 40 | 5 | 50 | 30 60-600 | 10 150 | 8 | 250 |
| 2N4960 | NPN | TO-39 | 60 | 60 | 6.5 | 10 | 50 100-300 | 10 150 | 15 | 250 |
| 2N4961 | NPN | TO-39 | 80 | 80 | 6.5 | 10 | 50 100-300 | 10 150 | 15 | 250 |
| 2N4962 | NPN | TO-18 | 60 | 60 | 6.5 | 10 | 50 100-300 | 10 150 | 15 | 250 |
| 2N4963 | NPN | TO-18 | 80 | 80 | 6.5 | 10 | 50 100-300 | 10 150 | 15 | 250 |
| 2N4966 | NPN | TO-92 (72) | 40 | 50 | 6 | 25 | 25 40-200 | 5 .01 | 6 | 40 |
| 2N4967 | NPN | TO-92 (72) | 40 | 50 | 6 | 25 | 25 100-600 | 5 .01 | 6 | 40 |
| 2N4968 | NPN | TO-92 (72) | 25 | 30 | 6 | 50 | 25 40-200 | 5 .01 | 6 | 40 |
| 2N5086 | PNP | TO-92 (72) | 50 | 50 | 3 | 50 | 35 150-500 | 5 .1 | 4 | 40 |
| 2N5087 | PNP | TO-92 (72) | 50 | 50 | 3 | 50 | 35 250-800 | 5 .1 | 4 | 40 |
| 2N5088 | NPN | TO-92 (72) | 30 | 35 | 4.5 | 50 | 20 300-900 | 5 .1 | 4 | 50 |
| 2N5089 | NPN | TO-92 (72) | 25 | 30 | 4.5 | 50 | 15 400-1200 | 5 .1 | 4 | 50 |
| 2N5172 | NPN | TO-92 (74) | 25 | 25 | 5 | 100 | 25 100-500 | 10 10 | 10 | |
| 2N5179 | NPN | TO-72 | 12 | 20 | 2.5 | 20 | 15 25-250 | 1 3 | 1 | 900 |
| 2N5180 | NPN | TO-72 | 15 | 30 | 2 | 500 | 8 20-200 | 8 2 | 1 | 650 |
| 2N5189 | NPN | TO-39 | 35 | 60 | 5 | 500 | 30 35- | 1 500 | 12 | 250 |
| 2N5209 | NPN | TO-92 (72) | 50 | 50 | 4.5 | 50 | 35 100-300 | 5 .1 | 4 | 30 |
| 2N5210 | NPN | TO-92 (72) | 50 | 50 | 4.5 | 50 | 35 200-600 | 5 .1 | 4 | 30 |
| 2N5219 | NPN | TO-92 (72) | 15 | 20 | 3 | 100 | 10 35-500 | 10 2 | 4 | 150 |
| 2N5220 | NPN | TO-92 (72) | 15 | 15 | 3 | 100 | 10 30-600 | 10 50 | 10 | 100 |
| 2N5221 | PNP | TO-92 (72) | 15 | 15 | 3 | 100 | 10 30-600 | 10 50 | 15 | 100 |
| 2N5222 | NPN | TO-92 (72) | 15 | 20 | 2 | 100 | 10 20-1500 | 10 4 | 1.3 | 450 |
| 2N5223 | NPN | TO-92 (72) | 20 | 25 | 3 | 100 | 10 50-800 | 10 2 | 4 | 150 |
| 2N5224 | NPN | TO-92 (72) | 12 | 25 | 5 | 500 | 15 40-400 | 1 10 | 4 | 250 |
| 2N5225 | NPN | TO-92 (72) | 25 | 25 | 4 | 300 | 15 30-600 | 10 50 | 20 | 50 |
| 2N5226 | PNP | TO-92 (72) | 25 | 25 | 4 | 300 | 15 50-600 | 10 50 | 20 | 50 |
| 2N5227 | PNP | TO-92 (72) | 30 | 30 | 3 | 100 | 10 50-700 | 10 2 | 5 | 100 |
| 2N5228 | PNP | TO-92 (72) | 5 | 5 | 3 | 100 | 4 30- | .3 10 | 5 | 300 |
| 2N5354 | PNP | TO-92 (74) | 25 | 25 | 4 | 100 | 25 40-120 | 1 50 | 8 | |

2514096 CRIMSON SEMICONDUCTOR INC

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T-29-01

| DEVICE | TYPE | PACKAGE | BVCEO | BVCBO | BVEBO | ICBO | VCB | HFE | VC & IC | | COB | FT | NF |
|---------|------|-------------|---------|---------|---------|----------|---------|---------|----------|----------|----------|----------|-----|
| | | | (V) MIN | (V) MIN | (V) MIN | (mA) MAX | (V) MIN | MIN-MAX | (V) (-A) | (pF) MAX | (MM) MAX | (dB) MAX | |
| 2N5355 | PNP | TO-92 (74) | 25 | 25 | 4 | 100 | 25 | 100-300 | 1 | 50 | 8 | | |
| 2N5365 | PNP | TO-92 (74) | 40 | 40 | 4 | 100 | 40 | 40-120 | 1 | 50 | 8 | | |
| 2N5366 | PNP | TO-92 (74) | 40 | 40 | 4 | 100 | 40 | 100-300 | 1 | 50 | 8 | | |
| 2N5400 | PNP | TO-92 (72) | 120 | 130 | 5 | 100 | 100 | 40-180 | 5 | 10 | 6 | 100 | |
| 2N5401 | PNP | TO-92 (72) | 150 | 160 | 5 | 50 | 120 | 60-240 | 5 | 10 | 6 | 100 | |
| 2N5447 | PNP | TO-92 (77) | 25 | 40 | 5 | 100 | 20 | 60-300 | 5 | 50 | 12 | 100 | |
| 2N5448 | PNP | TO-92 (77) | 30 | 50 | 5 | 100 | 20 | 30-150 | 5 | 50 | 12 | 100 | |
| 2N5449 | NPN | TO-92 (77) | 30 | 50 | 5 | 100 | 20 | 100-300 | 2 | 50 | 12 | 100 | |
| 2N5450 | NPN | TO-92 (77) | 30 | 50 | 5 | 100 | 20 | 50-150 | 2 | 50 | 12 | 100 | |
| 2N5451 | NPN | TO-92 (77) | 20 | 40 | 5 | 100 | 20 | 30-600 | 2 | 50 | 12 | 100 | |
| 2N5550 | NPN | TO-92 (72) | 140 | 160 | 6 | 100 | 100 | 60-250 | 5 | 10 | 6 | 100 | |
| 2N5551 | NPN | TO-92 (72) | 160 | 180 | 6 | 50 | 120 | 80-250 | 5 | 10 | 6 | 100 | |
| 2N5769 | NPN | TO-92 (72) | 15 | 40 | 4.5 | 400 | 20 | 40-120 | 35 | 10 | 4 | 500 | |
| 2N5770 | NPN | TO-92 (72) | 15 | 30 | 4.5 | 10 | 15 | 50-200 | 10 | 8 | 1 | 900 | |
| 2N5771 | PNP | TO-92 (72) | 15 | 15 | 4.5 | 10 | 8 | 50-120 | 3 | 10 | 3 | 850 | |
| 2N5772 | NPN | TO-92 (72) | 15 | 40 | 5 | 500 | 20 | 30-120 | 4 | 30 | 5 | 350 | |
| 2N5845 | NPN | TO-92 (72) | 40 | 50 | 6 | 500 | 40 | 25-150 | 1 | 500 | 9 | 200 | |
| 2N5845A | NPN | TO-92 (72) | 40 | 50 | 6 | 500 | 40 | 35-150 | 1 | 500 | 9 | 250 | |
| 2N6067 | PNP | TO-92 (72) | 40 | 50 | 5 | 500 | 30 | 50-200 | 1 | 100 | 16 | 150 | |
| MPQ2222 | NPN | TO-116 (39) | 40 | 60 | 5 | 50 | 50 | 100- | 10 | 150 | 8 | 200 | |
| MPQ2907 | PNP | TO-116 (39) | 40 | 60 | 5 | 50 | 50 | 100- | 10 | 150 | 8 | 200 | |
| MPQ3467 | PNP | TO-116 (39) | 40 | 40 | 5 | 200 | 30 | 20- | 1 | 500 | 25 | 125 | |
| MPQ3725 | NPN | TO-116 (39) | 40 | 60 | 5 | 500 | 40 | 35-200 | 1 | 100 | 10 | 250 | |
| MPQ3904 | NPN | TO-116 (39) | 40 | 60 | 6 | 50 | 40 | 75- | 1 | 10 | 4 | 250 | |
| MPQ3906 | PNP | TO-116 (39) | 40 | 40 | 5 | 50 | 30 | 75- | 1 | 10 | 4.5 | 200 | |
| MPS2714 | NPN | TO-92 (72) | 18 | 18 | 5 | 500 | 18 | 75-225 | 4.5 | 2 | 12 | 80 | |
| MPS2923 | NPN | TO-92 (72) | 25 | 25 | 5 | 100 | 25 | 90-180 | 10 | 2 | 10 | | |
| MPS2924 | NPN | TO-92 (72) | 25 | 25 | 5 | 100 | 25 | 150-300 | 10 | 2 | 10 | | |
| MPS2925 | NPN | TO-92 (72) | 25 | 25 | 5 | 100 | 25 | 235-470 | 10 | 2 | 10 | | |
| MPS2926 | NPN | TO-92 (72) | 18 | 18 | 5 | 500 | 18 | 35-470 | 10 | 2 | 10 | | |
| MPS3390 | NPN | TO-92 (72) | 25 | 25 | 5 | 100 | 18 | 400-800 | 4.5 | 2 | 10 | | |
| MPS3391 | NPN | TO-92 (72) | 25 | 25 | 5 | 100 | 18 | 250-500 | 4.5 | 2 | 10 | | |
| MPS3392 | NPN | TO-92 (72) | 25 | 25 | 5 | 100 | 18 | 150-300 | 4.5 | 2 | 10 | | |
| MPS3393 | NPN | TO-92 (72) | 25 | 25 | 5 | 100 | 18 | 90-180 | 4.5 | 2 | 10 | | |
| MPS3394 | NPN | TO-92 (72) | 25 | 25 | 5 | 100 | 18 | 55-110 | 4.5 | 2 | 10 | | |
| MPS3395 | NPN | TO-92 (72) | 25 | 25 | 5 | 100 | 18 | 150-500 | 4.5 | 2 | 10 | | |
| MPS3396 | NPN | TO-92 (72) | 25 | 25 | 5 | 100 | 18 | 90-500 | 4.5 | 2 | 10 | | |
| MPS3397 | NPN | TO-92 (72) | 25 | 25 | 5 | 100 | 18 | 55-500 | 4.5 | 2 | 10 | | |
| MPS3398 | NPN | TO-92 (72) | 25 | 25 | 5 | 100 | 18 | 55-800 | 4.5 | 2 | 10 | | |
| MPS3414 | NPN | TO-92 (72) | 25 | 25 | 5 | 100 | 25 | 75-225 | 4.5 | 2 | 10 | | |
| MPS3415 | NPN | TO-92 (72) | 25 | 25 | 5 | 100 | 25 | 180-540 | 4.5 | 2 | 10 | | |
| MPS3416 | NPN | TO-92 (72) | 50 | 50 | 5 | 100 | 25 | 75-225 | 4.5 | 2 | 10 | | |
| MPS3417 | NPN | TO-92 (72) | 50 | 50 | 5 | 100 | 25 | 180-540 | 4.5 | 2 | 10 | | |
| MPS3662 | NPN | TO-92 (72) | 12 | 18 | 3 | 500 | 15 | 20- | 8 | 10 | 1 | 7 | 700 |
| MPS3663 | NPN | TO-92 (72) | 12 | 30 | 3 | 500 | 15 | 20- | 8 | 10 | 1 | 7 | 700 |

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T-29-01

| DEVICE | TYPE PACKAGE | BVCEO | BVCBO | BVEBO | ICBO @ VCB | HFE @ VC & IC | COB | FT | NF |
|----------|----------------|---------|---------|---------|------------|---------------|----------|----------|-------|
| | | (V) MIN | (V) MIN | (V) MIN | (mA) MAX | (V) MIN-MAX | (V) (mA) | (pF) MAX | (MHz) |
| MPS3702 | PNP TO-92 (72) | 25 | 40 | 5 | 100 | 20 60-300 | 5 50 | 12 | 100 |
| MPS3703 | PNP TO-92 (72) | 30 | 50 | 5 | 100 | 20 30-150 | 5 50 | 12 | 100 |
| MPS3704 | NPN TO-92 (72) | 30 | 50 | 5 | 100 | 20 100-300 | 2 50 | 12 | 100 |
| MPS3705 | NPN TO-92 (72) | 30 | 50 | 5 | 100 | 20 50-150 | 2 50 | 12 | 100 |
| MPS3706 | NPN TO-92 (72) | 20 | 40 | 5 | 100 | 20 30-600 | 2 50 | 12 | 100 |
| MPS3707 | NPN TO-92 (72) | 30 | 30 | 6 | 100 | 20 100-400 | 5 1 | | |
| MPS3708 | NPN TO-92 (72) | 30 | 30 | 6 | 100 | 20 45-660 | 5 1 | | |
| MPS3709 | NPN TO-92 (72) | 30 | 30 | 6 | 100 | 20 45-165 | 5 1 | | |
| MPS3710 | NPN TO-92 (72) | 30 | 30 | 6 | 100 | 20 90-330 | 5 1 | | |
| MPS3711 | NPN TO-92 (72) | 30 | 30 | 6 | 100 | 20 180-660 | 5 1 | | |
| MPS3721 | NPN TO-92 (72) | 18 | 18 | 5 | 500 | 18 60-660 | 10 2 | | |
| MPS3794 | NPN TO-92 (72) | 20 | 40 | 5 | 500 | 15 100-600 | 10 10 | 10 | 100 |
| MPS3825 | NPN TO-92 (72) | 15 | 30 | 4 | 100 | 15 20- | 10 2 | 3.5 | 200 |
| MPS3826 | NPN TO-92 (72) | 45 | 60 | 4 | 100 | 30 40-160 | 10 10 | 3.5 | 200 |
| MPS3827 | NPN TO-92 (72) | 45 | 60 | 4 | 100 | 30 100-400 | 10 10 | 3.5 | 200 |
| MPS3858 | NPN TO-92 (72) | 30 | 30 | 4 | 500 | 18 60-120 | 4.5 2 | 4 | 90 |
| MPS3858A | NPN TO-92 (72) | 60 | 60 | 6 | 500 | 18 60-120 | 1 10 | 4 | 90 |
| MPS3859 | NPN TO-92 (72) | 30 | 30 | 4 | 500 | 18 100-200 | 4.5 2 | 4 | 90 |
| MPS3859A | NPN TO-92 (72) | 60 | 60 | 6 | 500 | 18 100-200 | 1 10 | 4 | 90 |
| MPS3860 | NPN TO-92 (72) | 30 | 30 | 4 | 500 | 18 150-300 | 4.5 2 | 4 | 90 |
| MPS3877 | NPN TO-92 (72) | 70 | 70 | 4 | 500 | 70 20-250 | 4.5 2 | | 5 |
| MPS3877A | NPN TO-92 (72) | 85 | 85 | 4 | 500 | 70 20-250 | 4.5 2 | | 5 |
| MPS3900 | NPN TO-92 (72) | 18 | 18 | 5 | 100 | 18 250-500 | 4.5 2 | | 5 |
| MPS3901 | NPN TO-92 (72) | 18 | 18 | 5 | 100 | 15 350-700 | 4.5 2 | | 5 |
| MPS4058 | PNP TO-92 (72) | 30 | 30 | 6 | 100 | 20 100-400 | 5 .1 | 10 | 5 |
| MPS4059 | PNP TO-92 (72) | 30 | 30 | 6 | 100 | 20 45-660 | 5 1 | 10 | 5 |
| MPS4060 | PNP TO-92 (72) | 30 | 30 | 6 | 100 | 20 45-165 | 5 1 | 10 | 5 |
| MPS4061 | PNP TO-92 (72) | 30 | 30 | 6 | 100 | 20 90-330 | 5 1 | 10 | 5 |
| MPS4062 | PNP TO-92 (72) | 30 | 30 | 6 | 100 | 20 180-660 | 5 1 | 10 | 5 |
| MPS4286 | NPN TO-92 (72) | 25 | 30 | 6 | 50 | 25 150-600 | 5 1 | 6 | 40 5 |
| MPS4287 | NPN TO-92 (72) | 45 | 45 | 7 | 10 | 30 150-600 | 5 1 | 6 | 40 5 |
| MPS4288 | PNP TO-92 (72) | 25 | 30 | 6 | 50 | 25 150-600 | 5 1 | 8 | 40 4 |
| MPS4289 | PNP TO-92 (72) | 45 | 60 | 7 | 10 | 45 150-600 | 5 1 | 8 | 40 4 |
| MPS4290 | PNP TO-92 (72) | 20 | 30 | 5 | 500 | 20 50-300 | 10 100 | 10 | 100 |
| MPS4291 | PNP TO-92 (72) | 30 | 40 | 6 | 200 | 30 100-300 | 10 100 | 10 | 100 |
| MPS4292 | NPN TO-92 (72) | 15 | 30 | 3 | 500 | 15 20- | 1 3 | 3.5 | 600 |
| MPS4293 | NPN TO-92 (72) | 15 | 30 | 3 | 500 | 15 20- | 1 3 | 3.5 | 600 |
| MPS4294 | NPN TO-92 (72) | 12 | 30 | 4.5 | 400 | 20 30-120 | 1 10 | 5 | 400 |
| MPS4295 | NPN TO-92 (72) | 15 | 40 | 5 | 100 | 20 40-120 | 1 10 | 4 | 500 |
| MPS4424 | NPN TO-92 (72) | 40 | 40 | 5 | 100 | 25 180-540 | 4.5 2 | | |
| MPS4951 | NPN TO-92 (72) | 30 | 60 | 5 | 50 | 40 60-200 | 10 150 | 8 | 250 |
| MPS4952 | NPN TO-92 (72) | 30 | 60 | 5 | 50 | 40 100-300 | 10 150 | 8 | 250 |
| MPS4953 | NPN TO-92 (72) | 30 | 60 | 5 | 50 | 40 200-600 | 10 150 | 8 | 250 |
| MPS4954 | NPN TO-92 (72) | 30 | 40 | 5 | 50 | 30 60-600 | 10 150 | 8 | 250 |
| MPS5172 | NPN TO-92 (72) | 25 | 25 | 5 | 100 | 25 100-500 | 10 10 | 10 | |

2514096 CRIMSON SEMICONDUCTOR INC

99D 00302 D T-29-01

| DEVICE | TYPE PACKAGE | BVCEO | BVCBO | BVEBO | ICBO @ VCB | HFE @ VC & IC | COB | | FT | NF |
|-----------|----------------|---------|---------|---------|------------|---------------|----------|---------|-----|-------|
| | | (V) MIN | (V) MIN | (V) MIN | (mA) MAX | (V) MIN - MAX | (V) (mA) | (p) MAX | | |
| MPS5354 | PNP TO-92 (72) | 25 | 25 | 4 | 100 | 25 40-120 | 1 | 50 | 8 | |
| MPS5355 | PNP TO-92 (72) | 25 | 25 | 4 | 100 | 25 100-300 | 1 | 50 | 8 | |
| MPS5365 | PNP TO-92 (72) | 40 | 40 | 4 | 100 | 40 40-120 | 1 | 50 | 8 | |
| MPS5366 | PNP TO-92 (72) | 40 | 40 | 4 | 100 | 40 100-300 | 1 | 50 | 8 | |
| MPS6507 | NPN TO-92 (72) | 20 | 20 | 3 | 50 | 15 25- | 10 | 2 | 2.5 | 700 |
| MPS6511 | NPN TO-92 (72) | 20 | 30 | 3 | 50 | 15 25- | 10 | 10 | 2.5 | |
| MPS6512 | NPN TO-92 (72) | 30 | 40 | 4 | 50 | 30 50-100 | 10 | 2 | 3.5 | 250 4 |
| MPS6513 | NPN TO-92 (72) | 30 | 40 | 4 | 50 | 30 90-180 | 10 | 2 | 3.5 | 250 4 |
| MPS6514 | NPN TO-92 (72) | 25 | 40 | 4 | 50 | 30 150-300 | 10 | 2 | 3.5 | 390 4 |
| MPS6515 | NPN TO-92 (72) | 25 | 40 | 4 | 50 | 30 250-500 | 10 | 2 | 3.5 | 390 4 |
| MPS6516 | PNP TO-92 (72) | 40 | 40 | 4 | 50 | 30 50-100 | 10 | 2 | 4 | 200 4 |
| MPS6517 | PNP TO-92 (72) | 40 | 40 | 4 | 50 | 30 90-180 | 10 | 2 | 4 | 200 4 |
| MPS6518 | PNP TO-92 (72) | 40 | 40 | 4 | 50 | 30 150-300 | 10 | 2 | 4 | 340 4 |
| MPS6519 | PNP TO-92 (72) | 25 | 25 | 4 | 50 | 20 250-500 | 10 | 2 | 4 | 340 4 |
| MPS6520 | NPN TO-92 (72) | 25 | 40 | 4 | 50 | 30 200-400 | 10 | 2 | 3.5 | 390 3 |
| MPS6521 | NPN TO-92 (72) | 25 | 40 | 4 | 50 | 30 300-600 | 10 | 2 | 3.5 | 390 3 |
| MPS6522 | PNP TO-92 (72) | 25 | 25 | 4 | 50 | 20 200-400 | 10 | 2 | 3.5 | 340 3 |
| MPS6523 | PNP TO-92 (72) | 25 | 25 | 4 | 50 | 20 300-600 | 10 | 2 | 3.5 | 340 3 |
| MPS6530 | NPN TO-92 (72) | 40 | 60 | 5 | 50 | 40 40-120 | 1 | 100 | 5 | 390 |
| MPS6531 | NPN TO-92 (72) | 40 | 60 | 5 | 50 | 40 90-270 | 1 | 100 | 5 | 390 |
| MPS6532 | NPN TO-92 (72) | 30 | 50 | 5 | 100 | 30 30- | 1 | 100 | 5 | 390 |
| MPS6533 | PNP TO-92 (72) | 40 | 40 | 4 | 50 | 30 40-120 | 1 | 100 | 6 | 260 |
| MPS6534 | PNP TO-92 (72) | 40 | 40 | 4 | 50 | 30 90-270 | 1 | 100 | 6 | 260 |
| MPS6535 | PNP TO-92 (72) | 30 | 30 | 4 | 100 | 20 30- | 1 | 100 | 6 | 260 |
| MPS6539 | NPN TO-92 (72) | 20 | 20 | 3 | 50 | 15 20- | 10 | 4 | 7 | 500 |
| MPS6541 | NPN TO-92 (72) | 20 | 30 | 4 | 50 | 15 25- | 10 | 4 | 1.7 | 600 |
| MPS6548 | NPN TO-92 (72) | 25 | 30 | 3 | 100 | 25 25- | 10 | 4 | 7 | 650 |
| MPS6560 | NPN TO-92 (72) | 25 | 25 | 5 | 100 | 20 50-200 | 1 | 500 | 30 | 60 |
| MPS6561 | NPN TO-92 (72) | 20 | 25 | 5 | 100 | 20 50-200 | 1 | 350 | 30 | 60 |
| MPS6562 | PNP TO-92 (72) | 25 | 25 | 5 | 100 | 20 50-200 | 1 | 500 | 30 | 60 |
| MPS6563 | PNP TO-92 (72) | 20 | 25 | 5 | 100 | 20 50-200 | 1 | 350 | 30 | 60 |
| MPS6564 | NPN TO-92 (72) | 45 | 80 | 5 | 500 | 40 25- | 5 | 10 | 4 | 200 |
| MPS6565 | NPN TO-92 (72) | 45 | 60 | 4 | 100 | 30 40-160 | 10 | 10 | 3.5 | 200 |
| MPS6566 | NPN TO-92 (72) | 45 | 60 | 4 | 100 | 30 100-400 | 10 | 10 | 3.5 | 200 |
| MPS6571 | NPN TO-92 (72) | 20 | 20 | 3 | 50 | 20 250-1000 | 5 | 1 | 4.5 | 50 3 |
| MPS6573 | NPN TO-92 (72) | 35 | 35 | 4 | 100 | 35 200-500 | 5 | 10 | 12 | 100 |
| MPS6574 | NPN TO-92 (72) | 35 | 35 | 4 | 100 | 35 100-300 | 5 | 1 | 12 | 100 |
| MPS6575 | NPN TO-92 (72) | 45 | 45 | 4 | 100 | 45 200-500 | 5 | 10 | 12 | 100 |
| MPS6576 | NPN TO-92 (72) | 45 | 45 | 4 | 100 | 45 100-300 | 5 | 1 | 12 | 100 |
| MPS8097 | NPN TO-92 (72) | 40 | 60 | 6 | 30 | 40 250-700 | 5 | 1 | 4 | 200 2 |
| MPS9410AH | NPN TO-92 (72) | 12 | 20 | 4 | 50 | 10 80-160 | 1 | 50 | | |
| MPS9410AI | NPN TO-92 (72) | 12 | 20 | 4 | 50 | 10 110-220 | 1 | 50 | | |
| MPS9410AJ | NPN TO-92 (72) | 12 | 20 | 4 | 50 | 10 150-300 | 1 | 50 | | |
| MPS9410AK | NPN TO-92 (72) | 12 | 20 | 4 | 50 | 10 200-400 | 1 | 50 | | |
| MPS9411AH | NPN TO-92 (72) | 18 | 25 | 4 | 50 | 15 80-160 | 1 | 50 | | |

2514096 CRIMSON SEMICONDUCTOR INC

99D 00303

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T-29-01

| DEVICE | TYPE | PACKAGE | V _{CEO} (V) MIN. | V _{CB0} (V) MIN. | V _{EB0} (V) MIN. | I _{CB0} (mA) MAX. | V _{CB} (V) MIN.-MAX. | HFE @ (V) MIN.-MAX. | VC & IC (V) (mA) | COB (μ) MAX. | FT (MHz) | NF (dB) MAX. |
|-----------|------|------------|------------------------------|------------------------------|------------------------------|-------------------------------|----------------------------------|------------------------|---------------------|-----------------|-------------|-----------------|
| MPS9411AI | NPN | TO-92 (72) | 18 | 25 | 4 | 50 | 15 | 110-220 | 1 50 | | | |
| MPS9411AJ | NPN | TO-92 (72) | 18 | 25 | 4 | 50 | 15 | 150-300 | 1 50 | | | |
| MPS9411AK | NPN | TO-92 (72) | 18 | 25 | 4 | 50 | 15 | 200-400 | 1 50 | | | |
| MPS9412AH | NPN | TO-92 (72) | 25 | 25 | 4 | 50 | 15 | 80-160 | 1 50 | | | |
| MPS9412AI | NPN | TO-92 (72) | 25 | 25 | 4 | 50 | 15 | 110-220 | 1 50 | | | |
| MPS9412AJ | NPN | TO-92 (72) | 25 | 25 | 4 | 50 | 15 | 150-300 | 1 50 | | | |
| MPS9412AK | NPN | TO-92 (72) | 25 | 25 | 4 | 50 | 15 | 200-400 | 1 50 | | | |
| MPS9416AS | NPN | TO-92 (72) | 18 | 18 | 4 | 50 | 15 | 50-150 | 1 350 | | | |
| MPS9416AT | NPN | TO-92 (72) | 18 | 18 | 4 | 50 | 15 | 100-300 | 1 350 | | | |
| MPS9417AS | NPN | TO-92 (72) | 25 | 25 | 4 | 50 | 15 | 50-150 | 1 350 | | | |
| MPS9417AT | NPN | TO-92 (72) | 25 | 25 | 4 | 50 | 15 | 100-300 | 1 350 | | | |
| MPS9426A | NPN | TO-92 (72) | 18 | 25 | 4 | 100 | 15 | 25- 50 | 6 1.5 | | | 400 |
| MPS9426B | NPN | TO-92 (72) | 18 | 25 | 4 | 100 | 15 | 45- 90 | 6 1.5 | | | 400 |
| MPS9426C | NPN | TO-92 (72) | 18 | 25 | 4 | 100 | 15 | 80-160 | 6 1.5 | | | 400 |
| MPS9427A | NPN | TO-92 (72) | 18 | 25 | 4 | 100 | 15 | 25- 50 | 6 1.5 | | | 550 |
| MPS9427B | NPN | TO-92 (72) | 18 | 25 | 4 | 100 | 15 | 45- 90 | 6 1.5 | | | 550 |
| MPS9427C | NPN | TO-92 (72) | 18 | 25 | 4 | 100 | 15 | 80-160 | 6 1.5 | | | 550 |
| MPS9433G | NPN | TO-92 (72) | 30 | 40 | 4 | 50 | 15 | 60-120 | 1 50 | | | |
| MPS9433H | NPN | TO-92 (72) | 30 | 40 | 4 | 50 | 15 | 60-160 | 1 50 | | | |
| MPS9433I | NPN | TO-92 (72) | 30 | 40 | 4 | 50 | 15 | 110-220 | 1 50 | | | |
| MPS9433J | NPN | TO-92 (72) | 30 | 40 | 4 | 50 | 15 | 150-300 | 1 50 | | | |
| MPS9433S | NPN | TO-92 (72) | 30 | 40 | 4 | 50 | 15 | 60-180 | 1 50 | | | |
| MPS9433T | NPN | TO-92 (72) | 30 | 40 | 4 | 50 | 15 | 100-300 | 1 50 | | | |
| MPS9434F | NPN | TO-92 (72) | 50 | 50 | 4 | 100 | 40 | 45- 90 | 1 50 | | | |
| MPS9434G | NPN | TO-92 (72) | 50 | 50 | 4 | 100 | 40 | 60-120 | 1 50 | | | |
| MPS9434H | NPN | TO-92 (72) | 50 | 50 | 4 | 100 | 40 | 80-160 | 1 50 | | | |
| MPS9434I | NPN | TO-92 (72) | 50 | 50 | 4 | 100 | 40 | 110-220 | 1 50 | | | |
| MPS9434J | NPN | TO-92 (72) | 50 | 50 | 4 | 100 | 40 | 150-300 | 1 50 | | | |
| MPS9434K | NPN | TO-92 (72) | 50 | 50 | 4 | 100 | 40 | 200-400 | 1 50 | | | |
| MPS9434L | NPN | TO-92 (72) | 50 | 50 | 4 | 100 | 40 | 300-600 | 1 50 | | | |
| MPS9434S | NPN | TO-92 (72) | 50 | 50 | 4 | 100 | 40 | 50-150 | 1 50 | | | |
| MPS9434T | NPN | TO-92 (72) | 50 | 50 | 4 | 100 | 40 | 100-300 | 1 50 | | | |
| MPS9434U | NPN | TO-92 (72) | 50 | 50 | 4 | 100 | 40 | 200-600 | 1 50 | | | |
| MPS9460AH | PNP | TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 80-160 | 1 50 | | | |
| MPS9460AI | PNP | TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 110-220 | 1 50 | | | |
| MPS9460AJ | PNP | TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 150-300 | 1 50 | | | |
| MPS9460AK | PNP | TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 200-400 | 1 50 | | | |
| MPS9461AH | PNP | TO-92 (72) | 18 | 25 | 4 | 50 | 15 | 80-160 | 1 50 | | | |
| MPS9461AI | PNP | TO-92 (72) | 18 | 25 | 4 | 50 | 15 | 110-220 | 1 50 | | | |
| MPS9461AJ | PNP | TO-92 (72) | 18 | 25 | 4 | 50 | 15 | 150-300 | 1 50 | | | |
| MPS9461AK | PNP | TO-92 (72) | 18 | 25 | 4 | 50 | 15 | 200-400 | 1 50 | | | |
| MPS9462AH | PNP | TO-92 (72) | 25 | 25 | 4 | 50 | 15 | 80-160 | 1 50 | | | |
| MPS9462AI | PNP | TO-92 (72) | 25 | 25 | 4 | 50 | 15 | 110-220 | 1 50 | | | |
| MPS9462AJ | PNP | TO-92 (72) | 25 | 25 | 4 | 50 | 15 | 150-300 | 1 50 | | | |
| MPS9462AK | PNP | TO-92 (72) | 25 | 25 | 4 | 50 | 15 | 200-400 | 1 50 | | | |

2514096 CRIMSON SEMICONDUCTOR INC

99D 00304

D T-29-01

| DEVICE | TYPE PACKAGE | BVCEO (V) MIN | BVCBO (V) MIN | BVEBO (V) MIN | ICBO (mA) MAX | VCB (V) MIN-MAX | HFE @ | VC & IC | | COB (pF) MAX | FT (MHz) | NF (dB) MAX |
|-----------|----------------|------------------|------------------|------------------|------------------|--------------------|---------|---------|------|-----------------|-------------|----------------|
| | | | | | | | | (V) | (mA) | | | |
| MPS9466AS | PNP TO-92 (72) | 18 | 18 | 4 | 50 | 15 | 50-150 | 1 | 350 | | | |
| MPS9466AT | PNP TO-92 (72) | 18 | 18 | 4 | 50 | 15 | 100-300 | 1 | 350 | | | |
| MPS9467AS | PNP TO-92 (72) | 25 | 25 | 4 | 50 | 15 | 50-150 | 1 | 350 | | | |
| MPS9467AT | PNP TO-92 (72) | 25 | 25 | 4 | 50 | 15 | 100-300 | 1 | 350 | | | |
| MPS9483G | PNP TO-92 (72) | 30 | 40 | 4 | 50 | 15 | 60-120 | 1 | 50 | | | |
| MPS9483H | PNP TO-92 (72) | 30 | 40 | 4 | 50 | 15 | 80-160 | 1 | 50 | | | |
| MPS9483I | PNP TO-92 (72) | 30 | 40 | 4 | 50 | 15 | 110-220 | 1 | 50 | | | |
| MPS9483J | PNP TO-92 (72) | 30 | 40 | 4 | 50 | 15 | 150-300 | 1 | 50 | | | |
| MPS9483S | PNP TO-92 (72) | 30 | 40 | 4 | 50 | 15 | 60-180 | 1 | 50 | | | |
| MPS9483T | PNP TO-92 (72) | 30 | 40 | 4 | 50 | 15 | 100-300 | 1 | 50 | | | |
| MPS9484F | PNP TO-92 (72) | 50 | 50 | 4 | 100 | 40 | 45-90 | 1 | 50 | | | |
| MPS9484G | PNP TO-92 (72) | 50 | 50 | 4 | 100 | 40 | 60-120 | 1 | 50 | | | |
| MPS9484H | PNP TO-92 (72) | 50 | 50 | 4 | 100 | 40 | 80-160 | 1 | 50 | | | |
| MPS9484I | PNP TO-92 (72) | 50 | 50 | 4 | 100 | 40 | 110-220 | 1 | 50 | | | |
| MPS9484J | PNP TO-92 (72) | 50 | 50 | 4 | 100 | 40 | 150-300 | 1 | 50 | | | |
| MPS9484K | PNP TO-92 (72) | 50 | 50 | 4 | 100 | 40 | 200-400 | 1 | 50 | | | |
| MPS9484L | PNP TO-92 (72) | 50 | 50 | 4 | 100 | 40 | 300-600 | 1 | 50 | | | |
| MPS9484S | PNP TO-92 (72) | 50 | 50 | 4 | 100 | 40 | 50-150 | 1 | 50 | | | |
| MPS9484T | PNP TO-92 (72) | 50 | 50 | 4 | 100 | 40 | 100-300 | 1 | 50 | | | |
| MPS9484U | PNP TO-92 (72) | 50 | 50 | 4 | 100 | 40 | 200-600 | 1 | 50 | | | |
| MPS9600D | NPN TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 25-50 | 5 | 1 | 4 | 50 | |
| MPS9600E | NPN TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 35-70 | 5 | 1 | 4 | 50 | |
| MPS9600F | NPN TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 45-90 | 5 | 1 | 4 | 50 | |
| MPS9600G | NPN TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 60-120 | 5 | 1 | 4 | 50 | |
| MPS9600H | NPN TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 80-160 | 5 | 1 | 4 | 50 | |
| MPS9600I | NPN TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 110-220 | 5 | 1 | 4 | 50 | |
| MPS9600J | NPN TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 150-300 | 5 | 1 | 4 | 50 | |
| MPS9600R | NPN TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 25-75 | 5 | 1 | 4 | 50 | |
| MPS9600S | NPN TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 50-150 | 5 | 1 | 4 | 50 | |
| MPS9600T | NPN TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 100-300 | 5 | 1 | 4 | 50 | |
| MPS9601D | NPN TO-92 (72) | 18 | 25 | 4 | 50 | 15 | 25-50 | 5 | 1 | 4 | 50 | |
| MPS9601E | NPN TO-92 (72) | 18 | 25 | 4 | 50 | 15 | 35-70 | 5 | 1 | 4 | 50 | |
| MPS9601F | NPN TO-92 (72) | 18 | 25 | 4 | 50 | 15 | 45-90 | 5 | 1 | 4 | 50 | |
| MPS9601G | NPN TO-92 (72) | 18 | 25 | 4 | 50 | 15 | 60-120 | 5 | 1 | 4 | 50 | |
| MPS9601H | NPN TO-92 (72) | 18 | 25 | 4 | 50 | 15 | 80-160 | 5 | 1 | 4 | 50 | |
| MPS9601I | NPN TO-92 (72) | 18 | 25 | 4 | 50 | 15 | 110-220 | 5 | 1 | 4 | 50 | |
| MPS9601J | NPN TO-92 (72) | 18 | 25 | 4 | 50 | 15 | 150-300 | 5 | 1 | 4 | 50 | |
| MPS9601R | NPN TO-92 (72) | 18 | 25 | 4 | 50 | 15 | 25-75 | 5 | 1 | 4 | 50 | |
| MPS9601S | NPN TO-92 (72) | 18 | 25 | 4 | 50 | 15 | 50-150 | 5 | 1 | 4 | 50 | |
| MPS9601T | NPN TO-92 (72) | 18 | 25 | 4 | 50 | 15 | 100-300 | 5 | 1 | 4 | 50 | |
| MPS9602D | NPN TO-92 (72) | 30 | 30 | 4 | 50 | 15 | 25-50 | 5 | 1 | 4 | 50 | |
| MPS9602E | NPN TO-92 (72) | 30 | 30 | 4 | 50 | 15 | 35-70 | 5 | 1 | 4 | 50 | |
| MPS9602F | NPN TO-92 (72) | 30 | 30 | 4 | 50 | 15 | 45-90 | 5 | 1 | 4 | 50 | |
| MPS9602G | NPN TO-92 (72) | 30 | 30 | 4 | 50 | 15 | 60-120 | 5 | 1 | 4 | 50 | |
| MPS9602H | NPN TO-92 (72) | 30 | 30 | 4 | 50 | 15 | 80-160 | 5 | 1 | 4 | 50 | |

2514096 CRIMSON SEMICONDUCTOR INC

99D 00305 D

T.29-01

| DEVICE | TYPE | PACKAGE | BVCEO | BVCBO | BVEBO | ICBO | @ VCB | HFE @ | VC & IC | COB | FT | NF |
|----------|------|------------|---------|---------|---------|----------|---------|---------|---------|---------------|-------|----------|
| | | | (V) MIN | (V) MIN | (V) MIN | (mA) MAX | (V) MIN | MAX | (V) MIN | (mA) (pI) MAX | (MHz) | (db) MAX |
| MPS9602I | NPN | TO-92 (72) | 30 | 30 | 4 | 50 | 15 | 110-220 | 5 | 1 | 4 | 50 |
| MPS9602J | NPN | TO-92 (72) | 30 | 30 | 4 | 50 | 15 | 150-300 | 5 | 1 | 4 | 50 |
| MPS9602R | NPN | TO-92 (72) | 30 | 30 | 4 | 50 | 15 | 25- 75 | 5 | 1 | 4 | 50 |
| MPS9602S | NPN | TO-92 (72) | 30 | 30 | 4 | 50 | 15 | 50-150 | 5 | 1 | 4 | 50 |
| MPS9602T | NPN | TO-92 (72) | 30 | 30 | 4 | 50 | 15 | 100-300 | 5 | 1 | 4 | 50 |
| MPS9604D | NPN | TO-92 (72) | 18 | 25 | 4 | 50 | 15 | 25- 50 | 5 | 1 | 3 | 80 |
| MPS9604E | NPN | TO-92 (72) | 18 | 25 | 4 | 50 | 15 | 35- 70 | 5 | 1 | 3 | 80 |
| MPS9604F | NPN | TO-92 (72) | 18 | 25 | 4 | 50 | 15 | 45- 90 | 5 | 1 | 3 | 80 |
| MPS9604G | NPN | TO-92 (72) | 18 | 25 | 4 | 50 | 15 | 60-120 | 5 | 1 | 3 | 80 |
| MPS9604H | NPN | TO-92 (72) | 18 | 25 | 4 | 50 | 15 | 80-160 | 5 | 1 | 3 | 80 |
| MPS9604I | NPN | TO-92 (72) | 18 | 25 | 4 | 50 | 15 | 110-220 | 5 | 1 | 3 | 80 |
| MPS9604R | NPN | TO-92 (72) | 18 | 25 | 4 | 50 | 15 | 25- 75 | 5 | 1 | 3 | 80 |
| MPS9604S | NPN | TO-92 (72) | 18 | 25 | 4 | 50 | 15 | 50-150 | 5 | 1 | 3 | 80 |
| MPS9605D | NPN | TO-92 (72) | 30 | 30 | 4 | 50 | 15 | 25- 50 | 5 | 1 | 3 | 80 |
| MPS9605E | NPN | TO-92 (72) | 30 | 30 | 4 | 50 | 15 | 35- 70 | 5 | 1 | 3 | 80 |
| MPS9605F | NPN | TO-92 (72) | 30 | 30 | 4 | 50 | 15 | 45- 90 | 5 | 1 | 3 | 80 |
| MPS9605G | NPN | TO-92 (72) | 30 | 30 | 4 | 50 | 15 | 60-120 | 5 | 1 | 3 | 80 |
| MPS9605H | NPN | TO-92 (72) | 30 | 30 | 4 | 50 | 15 | 80-160 | 5 | 1 | 3 | 80 |
| MPS9605I | NPN | TO-92 (72) | 30 | 30 | 4 | 50 | 15 | 110-220 | 5 | 1 | 3 | 80 |
| MPS9605R | NPN | TO-92 (72) | 30 | 30 | 4 | 50 | 15 | 25- 75 | 5 | 1 | 3 | 80 |
| MPS9605S | NPN | TO-92 (72) | 30 | 30 | 4 | 50 | 15 | 50-150 | 5 | 1 | 3 | 80 |
| MPS9610I | NPN | TO-237 | 25 | 30 | 6 | 100 | 15 | 100-200 | 1 | 50 | | |
| MPS9610J | NPN | TO-237 | 25 | 30 | 6 | 100 | 15 | 150-300 | 1 | 50 | | |
| MPS9625D | NPN | TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 25- 50 | 5 | 1 | 1.8 | 250 |
| MPS9625E | NPN | TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 35- 70 | 5 | 1 | 1.8 | 250 |
| MPS9625F | NPN | TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 45- 90 | 5 | 1 | 1.8 | 250 |
| MPS9625G | NPN | TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 60-120 | 5 | 1 | 1.8 | 250 |
| MPS9625H | NPN | TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 80-160 | 5 | 1 | 1.8 | 250 |
| MPS9625I | NPN | TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 110-220 | 5 | 1 | 1.8 | 250 |
| MPS9625J | NPN | TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 150-300 | 5 | 1 | 1.8 | 250 |
| MPS9625R | NPN | TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 25- 75 | 5 | 1 | 1.8 | 250 |
| MPS9625S | NPN | TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 50-150 | 5 | 1 | 1.8 | 250 |
| MPS9625T | NPN | TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 100-300 | 5 | 1 | 1.8 | 250 |
| MPS9626D | NPN | TO-92 (72) | 30 | 30 | 4 | 50 | 15 | 25- 50 | 5 | 1 | 1.4 | 250 |
| MPS9626E | NPN | TO-92 (72) | 30 | 30 | 4 | 50 | 15 | 35- 70 | 5 | 1 | 1.4 | 250 |
| MPS9626F | NPN | TO-92 (72) | 30 | 30 | 4 | 50 | 15 | 45- 90 | 5 | 1 | 1.4 | 250 |
| MPS9626G | NPN | TO-92 (72) | 30 | 30 | 4 | 50 | 15 | 60-120 | 5 | 1 | 1.4 | 250 |
| MPS9626H | NPN | TO-92 (72) | 30 | 30 | 4 | 50 | 15 | 80-160 | 5 | 1 | 1.4 | 250 |
| MPS9626I | NPN | TO-92 (72) | 30 | 30 | 4 | 50 | 15 | 110-220 | 5 | 1 | 1.4 | 250 |
| MPS9630F | NPN | TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 45- 90 | 5 | 1 | | |
| MPS9630G | NPN | TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 60-120 | 5 | 1 | | |
| MPS9630H | NPN | TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 80-160 | 5 | 1 | | |
| MPS9630I | NPN | TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 110-220 | 5 | 1 | | |
| MPS9630J | NPN | TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 150-300 | 5 | 1 | | |
| MPS9630K | NPN | TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 200-400 | 5 | 1 | | |

2514096 CRIMSON SEMICONDUCTOR INC

99D 00306 D

T-29-01

| DEVICE | TYPE | PACKAGE | BVCEO | BVCBO | BVEBO | ICBO | @ VCB | HFE | @ VC & IC | COB | FT | NF |
|-----------|------|------------|---------|---------|---------|----------|---------|----------|-----------|----------|----------|---------|
| | | | (V) MIN | (V) MIN | (V) MIN | (mA) MAX | (V) MIN | (V) MIN | (mA) MAX | (V) (mA) | (pI) MAX | (MHz) |
| MPS9630L | NPN | TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 300-600 | 5 | 1 | | |
| MPS9630S | NPN | TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 50-150 | 5 | 1 | | |
| MPS9630T | NPN | TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 100-300 | 5 | 1 | | |
| MPS9630U | NPN | TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 200-600 | 5 | 1 | | |
| MPS9631F | NPN | TO-92 (72) | 18 | 25 | 4 | 50 | 15 | 45-90 | 5 | 1 | | |
| MPS9631G | NPN | TO-92 (72) | 18 | 25 | 4 | 50 | 15 | 60-120 | 5 | 1 | | |
| MPS9631H | NPN | TO-92 (72) | 18 | 25 | 4 | 50 | 15 | 80-160 | 5 | 1 | | |
| MPS9631I | NPN | TO-92 (72) | 18 | 25 | 4 | 50 | 15 | 110-220 | 5 | 1 | | |
| MPS9631J | NPN | TO-92 (72) | 18 | 25 | 4 | 50 | 15 | 150-300 | 5 | 1 | | |
| MPS9631K | NPN | TO-92 (72) | 18 | 25 | 4 | 50 | 15 | 200-400 | 5 | 1 | | |
| MPS9631L | NPN | TO-92 (72) | 18 | 25 | 4 | 50 | 15 | 300-600 | 5 | 1 | | |
| MPS9631S | NPN | TO-92 (72) | 18 | 25 | 4 | 50 | 15 | 50-150 | 5 | 1 | | |
| MPS9631T | NPN | TO-92 (72) | 18 | 25 | 4 | 50 | 15 | 100-300 | 5 | 1 | | |
| MPS9631U | NPN | TO-92 (72) | 18 | 25 | 4 | 50 | 15 | 200-600 | 5 | 1 | | |
| MPS9632F | NPN | TO-92 (72) | 30 | 30 | 4 | 50 | 15 | 45-90 | 5 | 1 | | |
| MPS9632G | NPN | TO-92 (72) | 30 | 30 | 4 | 50 | 15 | 60-120 | 5 | 1 | | |
| MPS9632H | NPN | TO-92 (72) | 30 | 30 | 4 | 50 | 15 | 80-160 | 5 | 1 | | |
| MPS9632I | NPN | TO-92 (72) | 30 | 30 | 4 | 50 | 15 | 110-220 | 5 | 1 | | |
| MPS9632J | NPN | TO-92 (72) | 30 | 30 | 4 | 50 | 15 | 150-300 | 5 | 1 | | |
| MPS9632K | NPN | TO-92 (72) | 30 | 30 | 4 | 50 | 15 | 200-400 | 5 | 1 | | |
| MPS9632L | NPN | TO-92 (72) | 30 | 30 | 4 | 50 | 15 | 300-600 | 5 | 1 | | |
| MPS9632S | NPN | TO-92 (72) | 30 | 30 | 4 | 50 | 15 | 50-150 | 5 | 1 | | |
| MPS9632T | NPN | TO-92 (72) | 30 | 30 | 4 | 50 | 15 | 100-300 | 5 | 1 | | |
| MPS9632U | NPN | TO-92 (72) | 30 | 30 | 4 | 50 | 15 | 200-600 | 5 | 1 | | |
| MPS9633A | NPN | TO-92 (72) | 30 | 30 | 5 | 100 | 18 | 250-500 | 5 | 2 | 3.5 | 150 2.5 |
| MPS9633B | NPN | TO-92 (72) | 30 | 30 | 5 | 100 | 18 | 350-700 | 5 | 2 | 3.5 | 150 2.5 |
| MPS9633C | NPN | TO-92 (72) | 30 | 30 | 5 | 100 | 18 | 600-1200 | 5 | 2 | 3.5 | 150 2.5 |
| MPS9633D | NPN | TO-92 (72) | 30 | 30 | 5 | 100 | 18 | 900-1800 | 5 | 2 | 3.5 | 150 2.5 |
| MPS9634A | NPN | TO-92 (72) | 30 | 30 | 5 | 100 | 18 | 250-500 | 5 | 2 | 3.5 | 150 6 |
| MPS9634B | NPN | TO-92 (72) | 30 | 30 | 5 | 100 | 18 | 350-700 | 5 | 2 | 3.5 | 150 6 |
| MPS9634C | NPN | TO-92 (72) | 30 | 30 | 5 | 100 | 18 | 600-1200 | 5 | 2 | 3.5 | 150 6 |
| MPS9634D | NPN | TO-92 (72) | 30 | 30 | 5 | 100 | 18 | 900-1800 | 5 | 2 | 3.5 | 150 6 |
| MPS9635B | NPN | TO-92 (72) | 50 | 50 | 5 | 50 | 50 | 350-700 | 5 | 2 | 3 | 150 1 |
| MPS9635C | NPN | TO-92 (72) | 50 | 50 | 5 | 50 | 50 | 600-1200 | 5 | 2 | 3 | 150 1 |
| MPS9660IP | PNP | TO-237 | 25 | 30 | 6 | 100 | 15 | 100-200 | 1 | 50 | | |
| MPS9660JP | PNP | TO-237 | 25 | 30 | 6 | 100 | 15 | 150-300 | 1 | 50 | | |
| MPS9680F | PNP | TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 45-90 | 5 | 1 | | |
| MPS9680G | PNP | TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 60-120 | 5 | 1 | | |
| MPS9680H | PNP | TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 80-160 | 5 | 1 | | |
| MPS9680I | PNP | TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 110-220 | 5 | 1 | | |
| MPS9680J | PNP | TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 150-300 | 5 | 1 | | |
| MPS9680K | PNP | TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 200-400 | 5 | 1 | | |
| MPS9680L | PNP | TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 300-600 | 5 | 1 | | |
| MPS9680S | PNP | TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 50-150 | 5 | 1 | | |
| MPS9680T | PNP | TO-92 (72) | 12 | 20 | 4 | 50 | 10 | 100-300 | 5 | 1 | | |

2514096 CRIMSON SEMICONDUCTOR INC

99D 00307 D

T-29-01

| DEVICE | TYPE PACKAGE | BVCEO | BVCBO | BVEBO | ICBO @ VCB | HFE @ VC & IC | COB | FT | NF |
|----------|----------------|-------|-------|-------|------------|---------------|-----|-----|-----------|
| | | | | | | | | | |
| MPS9680U | PNP TO-92 (72) | 12 | 20 | 4 | 50 | 10 200- 600 | 5 | 1 | |
| MPS9681F | PNP TO-92 (72) | 18 | 25 | 4 | 50 | 15 45- 90 | 5 | 1 | |
| MPS9681G | PNP TO-92 (72) | 18 | 25 | 4 | 50 | 15 60- 120 | 5 | 1 | |
| MPS9681H | PNP TO-92 (72) | 18 | 25 | 4 | 50 | 15 80- 160 | 5 | 1 | |
| MPS9681I | PNP TO-92 (72) | 18 | 25 | 4 | 50 | 15 110- 220 | 5 | 1 | |
| MPS9681J | PNP TO-92 (72) | 18 | 25 | 4 | 50 | 15 150-300 | 5 | 1 | |
| MPS9681K | PNP TO-92 (72) | 18 | 25 | 4 | 50 | 15 200- 400 | 5 | 1 | |
| MPS9681L | PNP TO-92 (72) | 18 | 25 | 4 | 50 | 15 300- 600 | 5 | 1 | |
| MPS9681S | PNP TO-92 (72) | 18 | 25 | 4 | 50 | 15 50- 150 | 5 | 1 | |
| MPS9681T | PNP TO-92 (72) | 18 | 25 | 4 | 50 | 15 100- 300 | 5 | 1 | |
| MPS9681U | PNP TO-92 (72) | 18 | 25 | 4 | 50 | 15 200- 600 | 5 | 1 | |
| MPS9682F | PNP TO-92 (72) | 30 | 30 | 4 | 50 | 15 45- 90 | 5 | 1 | |
| MPS9682G | PNP TO-92 (72) | 30 | 30 | 4 | 50 | 15 60- 120 | 5 | 1 | |
| MPS9682H | PNP TO-92 (72) | 30 | 30 | 4 | 50 | 15 80- 160 | 5 | 1 | |
| MPS9682I | PNP TO-92 (72) | 30 | 30 | 4 | 50 | 15 110- 220 | 5 | 1 | |
| MPS9682J | PNP TO-92 (72) | 30 | 30 | 4 | 50 | 15 150- 300 | 5 | 1 | |
| MPS9682K | PNP TO-92 (72) | 30 | 30 | 4 | 50 | 15 200- 400 | 5 | 1 | |
| MPS9682L | PNP TO-92 (72) | 30 | 30 | 4 | 50 | 15 300- 600 | 5 | 1 | |
| MPS9682S | PNP TO-92 (72) | 30 | 30 | 4 | 50 | 15 50- 150 | 5 | 1 | |
| MPS9682T | PNP TO-92 (72) | 30 | 30 | 4 | 50 | 15 100- 300 | 5 | 1 | |
| MPS9682U | PNP TO-92 (72) | 30 | 30 | 4 | 50 | 15 200- 600 | 5 | 1 | |
| MPSA05 | NPN TO-92 (72) | 60 | 60 | 4 | 100 | 60 50- | 1 | 100 | 100 |
| MPSA06 | NPN TO-92 (72) | 80 | 80 | 4 | 100 | 80 50- | 1 | 100 | 100 |
| MPSA09 | NPN TO-92 (72) | 50 | 50 | 3 | 100 | 25 100- 600 | 5 | 1 | 5 30 2 |
| MPSA10 | NPN TO-92 (72) | 40 | 40 | 4 | 100 | 30 40- 400 | 10 | 5 | 4 50 |
| MPSA12 | NPN TO-92 (72) | 20* | 20 | 10 | 100 | 15 20K- | 5 | 10 | 8 125 |
| MPSA13 | NPN TO-92 (72) | 30* | 30 | 10 | 100 | 30 5K- | 5 | 10 | 8 125 |
| MPSA14 | NPN TO-92 (72) | 30* | 30 | 10 | 100 | 30 10K- | 5 | 10 | 8 125 |
| MPSA18 | NPN TO-92 (72) | 45 | 45 | 6.5 | 50 | 30 500-1500 | 5 | 10 | 3 100 1.5 |
| MPSA20 | NPN TO-92 (72) | 40 | 40 | 4 | 100 | 30 40- 400 | 10 | 5 | 4 120 |
| MPSA42 | NPN TO-92 (72) | 300 | 300 | 6 | 100 | 200 40- | 10 | 30 | 3 50 |
| MPSA43 | NPN TO-92 (72) | 200 | 200 | 6 | 100 | 160 50- 200 | 10 | 30 | 4 50 |
| MPSA55 | PNP TO-92 (72) | 60 | 60 | 4 | 100 | 60 50- | 1 | 100 | 100 |
| MPSA56 | PNP TO-92 (72) | 80 | 80 | 4 | 100 | 80 50- | 1 | 100 | 100 |
| MPSA62 | PNP TO-92 (72) | 20* | 20 | 8 | 100 | 20 20K- | 5 | 10 | 100 |
| MPSA63 | PNP TO-92 (72) | 30* | 30 | 8 | 100 | 30 5K- | 5 | 10 | 100 |
| MPSA64 | PNP TO-92 (72) | 30* | 30 | 8 | 100 | 30 10K- | 5 | 10 | 100 |
| MPSA65 | PNP TO-92 (72) | 30* | 30 | 8 | 100 | 30 50K- | 5 | 10 | 100 |
| MPSA66 | PNP TO-92 (72) | 30* | 30 | 8 | 100 | 30 75K- | 5 | 10 | 100 |
| MPSA70 | PNP TO-92 (72) | 40 | 40 | 4 | 100 | 30 40- 400 | 10 | 5 | 4 125 |
| MPSA92 | PNP TO-92 (72) | 300 | 300 | 5 | 250 | 200 25- | 10 | 30 | 6 50 |
| MPSA93 | PNP TO-92 (72) | 200 | 200 | 5 | 250 | 160 30- 150 | 10 | 30 | 8 50 |
| MPSL01 | NPN TO-92 (72) | 120 | 140 | 5 | 1μA | 75 50- 300 | 5 | 10 | 8 60 |
| MPSL51 | PNP TO-92 (72) | 100 | 100 | 4 | 1μA | 50 40- 250 | 5 | 50 | 8 60 |

2514096 CRIMSON SEMICONDUCTOR INC

99D 00308 D T-29-01

| DEVICE | TYPE | PACKAGE | BVCEO | BVCBO | BVEBO | ICBO @ VCB | HFE @ VC & IC | COB | | FT | NF |
|--------|------|------------|---------|---------|---------|------------|---------------|----------|----------|-------|----------|
| | | | (V) MIN | (V) MIN | (V) MIN | (mA) MAX | (V) MIN - MAX | (V) (mA) | (pI) MAX | (MHz) | (db) MAX |
| PN656 | NPN | TO-92 (72) | 60 | 60 | 8 | 500 | 30 30- 90 | 10 200 | 13 | 70 | |
| PN697 | NPN | TO-92 (72) | 40 | 60 | 5 | 500 | 30 40-120 | 10 150 | 17 | 80 | |
| PN699 | NPN | TO-92 (72) | 80 | 120 | 5 | 500 | 60 40-120 | 10 150 | 12 | 80 | |
| PN703 | NPN | TO-92 (72) | 25 | 25 | 5 | 500 | 10 40-100 | 5 10 | 6 | 70 | |
| PN706 | NPN | TO-92 (72) | 20 | 25 | 3 | 50 | 15 20- | 1 10 | 6 | 400 | |
| PN708 | NPN | TO-92 (72) | 15 | 40 | 5 | 25 | 20 30-120 | 1 10 | 6 | 300 | |
| PN709 | NPN | TO-92 (72) | 6 | 15 | 4 | 50 | 5 20-120 | .5 10 | 3 | 800 | |
| PN718 | NPN | TO-92 (72) | 40 | 60 | 5 | 500 | 30 40-120 | 10 150 | 17 | 80 | |
| PN720 | NPN | TO-92 (72) | 80 | 120 | 5 | 500 | 60 40-120 | 10 150 | 12 | 80 | |
| PN722 | PNP | TO-92 (72) | 35 | 50 | 5 | 500 | 30 30- 90 | 10 150 | 45 | 60 | |
| PN727 | PNP | TO-92 (72) | 20 | 25 | 5 | 500 | 20 30-120 | 1 10 | 5 | 140 | |
| PN731 | NPN | TO-92 (72) | 40 | 60 | 5 | 500 | 30 40-120 | 10 150 | 35 | 50 | |
| PN743 | NPN | TO-92 (72) | 12 | 20 | 5 | 500 | 20 20- 60 | .35 10 | 5 | 900 | |
| PN744 | NPN | TO-92 (72) | 12 | 20 | 5 | 500 | 20 40-120 | .35 10 | 5 | 900 | |
| PN753 | NPN | TO-92 (72) | 15 | 25 | 5 | 500 | 15 40-120 | 1 10 | 5 | 200 | |
| PN760 | NPN | TO-92 (72) | 45 | 45 | 8 | 200 | 30 76-300 | 5 1 | 8 | 50 | |
| PN760A | NPN | TO-92 (72) | 60 | 60 | 8 | 100 | 30 76-333 | 5 1 | 8 | 50 | |
| PN783 | NPN | TO-92 (72) | 20 | 40 | 5 | 250 | 25 20- 60 | 1 10 | 4 | 200 | |
| PN784 | NPN | TO-92 (72) | 15 | 30 | 5 | 250 | 20 20- | 1 10 | 4 | 200 | |
| PN834 | NPN | TO-92 (72) | 20 | 40 | 5 | 500 | 20 25- | 1 10 | 4 | 350 | |
| PN835 | NPN | TO-92 (72) | 20 | 25 | 3 | 500 | 20 20- | 1 10 | 4 | 300 | |
| PN869 | PNP | TO-92 (72) | 18 | 25 | 5 | 10 | 15 20-120 | 5 10 | 9 | 100 | |
| PN869A | PNP | TO-92 (72) | 18 | 25 | 5 | 10 | 15 40-120 | 5 10 | 6 | 400 | |
| PN870 | NPN | TO-92 (72) | 60 | 100 | 7 | 10 | 75 40-120 | 10 150 | 15 | 50 | |
| PN871 | NPN | TO-92 (72) | 60 | 100 | 7 | 10 | 75 100-300 | 10 150 | 15 | 60 | |
| PN910 | NPN | TO-92 (72) | 60 | 100 | 7 | 25 | 75 75- | 10 10 | 15 | 60 | |
| PN911 | NPN | TO-92 (72) | 60 | 100 | 7 | 25 | 75 35- | 10 10 | 15 | 50 | |
| PN912 | NPN | TO-92 (72) | 60 | 100 | 7 | 25 | 75 15- | 10 10 | 15 | 40 | |
| PN914 | NPN | TO-92 (72) | 15 | 40 | 5 | 25 | 20 30-120 | 1 10 | 6 | 300 | |
| PN915 | NPN | TO-92 (72) | 50 | 70 | 5 | 10 | 60 50-200 | 5 10 | 4 | 250 | |
| PN916 | NPN | TO-92 (72) | 25 | 45 | 5 | 10 | 30 50-200 | 1 10 | 6 | 300 | |
| PN917 | NPN | TO-92 (72) | 15 | 30 | 3 | 1 | 15 20-200 | 1 3 | 3 | 500 | |
| PN918 | NPN | TO-92 (72) | 15 | 30 | 3 | 10 | 15 20-200 | 1 3 | 3 | 600 | |
| PN929 | NPN | TO-92 (72) | 45 | 45 | 5 | 10 | 45 40-120 | 5 .01 | 8 | 30 | 4 |
| PN929A | NPN | TO-92 (72) | 45 | 60 | 6 | 2 | 45 40-120 | 5 .01 | 6 | 45 | 4 |
| PN930 | NPN | TO-92 (72) | 45 | 45 | 5 | 10 | 45 100-300 | 5 .01 | 8 | 30 | 3 |
| PN930A | NPN | TO-92 (72) | 45 | 60 | 6 | 2 | 45 100-300 | 5 .01 | 6 | 45 | 3 |
| PN956 | NPN | TO-92 (72) | 35 | 75 | 7 | 10 | 60 100-300 | 10 150 | 25 | 70 | 8 |
| PN981 | NPN | TO-92 (72) | 80 | 80 | 8 | 1 | 30 36-300 | 5 1 | 5 | 50 | |
| PN995 | PNP | TO-92 (72) | 15 | 20 | 4 | 5 | 15 35-140 | 1 20 | 10 | 100 | |
| PN995A | PNP | TO-92 (72) | 15 | 20 | 4 | 5 | 15 35-140 | 1 1 | 6 | 100 | |
| PN996 | PNP | TO-92 (72) | 12 | 15 | 4 | 5 | 10 35- | 1 20 | 10 | 100 | 6 |
| PN1132 | PNP | TO-92(72) | 35 | 50 | 5 | 500 | 30 30- 90 | 10 150 | 45 | 60 | |
| PN1253 | NPN | TO-92(72) | 20 | 30 | 5 | 500 | 20 30- 90 | 10 150 | 45 | 50 | |
| PN1420 | NPN | TO-92(72) | 30 | 60 | 5 | 500 | 30 100-300 | 10 150 | 35 | 50 | |

* AVAIL:LE ALSO IN TO-237 PACKAGE

2514096 CRIMSON SEMICONDUCTOR INC

99D 00309 D

T-29-01

| DEVICE | TYPE | PACKAGE | BVCEO | BVCBO | BVEBO | ICBO @ | VCB | HFE @ | VC & IC | COB | FT | NF |
|-----------|------|------------|---------|---------|---------|----------|--------------|----------|----------|-------|----------|----|
| | | | (V) MIN | (V) MIN | (V) MIN | (mA) MAX | (V) MIN -MAX | (V) (mA) | (pI) MAX | (MHz) | (db) MAX | |
| * PN1507 | NPN | TO-92 (72) | 30 | 60 | 5 | 500 | 30 | 100-300 | 10 150 | 35 | 50 | |
| * PN1566 | NPN | TO-92 (72) | 60 | 80 | 5 | 500 | 40 | 60-200 | 5 5 | 10 | 60 | |
| * PN1613 | NPN | TO-92 (72) | 50 | 75 | 7 | 10 | 60 | 40-120 | 10 150 | 25 | 60 | 12 |
| * PN1708 | NPN | TO-92 (72) | 12 | 25 | 3 | 25 | 15 | 20- | 1 10 | 6 | 200 | |
| * PN1711 | NPN | TO-92 (72) | 50 | 75 | 7 | 10 | 60 | 100-300 | 10 150 | 25 | 70 | 8 |
| * PN1889 | NPN | TO-92 (72) | 60 | 100 | 7 | 10 | 75 | 40-120 | 10 150 | 15 | 50 | |
| * PN1890 | NPN | TO-92 (72) | 60 | 100 | 7 | 10 | 75 | 100-300 | 10 150 | 15 | 60 | |
| * PN1893 | NPN | TO-92 (72) | 80 | 120 | 7 | 10 | 90 | 40-120 | 10 150 | 15 | 50 | |
| * PN1973 | NPN | TO-92 (72) | 60 | 100 | 7 | 25 | 75 | 75- | 10 10 | 15 | 60 | |
| * PN1974 | NPN | TO-92 (72) | 60 | 100 | 7 | 25 | 75 | 35- | 10 10 | 15 | 50 | |
| * PN1975 | NPN | TO-92 (72) | 60 | 100 | 7 | 25 | 75 | 15- | 10 10 | 15 | 40 | |
| * PN1983 | NPN | TO-92 (72) | 25 | 50 | 5 | 500 | 30 | 70-210 | 5 1 | 45 | 40 | |
| * PN1984 | NPN | TO-92 (72) | 25 | 50 | 5 | 500 | 30 | 35-100 | 5 1 | 45 | 40 | |
| * PN1985 | NPN | TO-92 (72) | 25 | 50 | 5 | 500 | 30 | 15- 45 | 5 1 | 45 | 40 | |
| * PN1986 | NPN | TO-92 (72) | 25 | 50 | 5 | 500 | 30 | 60-240 | 10 150 | 35 | 40 | |
| * PN1987 | NPN | TO-92 (72) | 25 | 50 | 5 | 500 | 30 | 20- 80 | 10 150 | 35 | 40 | |
| * PN1988 | NPN | TO-92 (72) | 45 | 100 | 5 | 500 | 50 | 35-120 | 10 30 | 20 | 40 | |
| * PN1989 | NPN | TO-92 (72) | 45 | 100 | 5 | 500 | 50 | 20- 60 | 10 30 | 20 | 40 | |
| * PN1990 | NPN | TO-92 (72) | 60 | 100 | 3 | 500 | 75 | 20- | 10 30 | 20 | 40 | |
| * PN1991 | PNP | TO-92 (72) | 20 | 30 | 5 | 500 | 10 | 15- | 10 150 | 45 | 40 | |
| * PN2008 | NPN | TO-92 (72) | 110 | 175 | 8 | 50 | 100 | 40-120 | 10 50 | 15 | 40 | |
| * PN2017 | NPN | TO-92 (72) | 60 | 60 | 8 | 500 | 30 | 50-200 | 10 200 | 15 | 60 | |
| * PN2049 | NPN | TO-92 (72) | 40 | 75 | 7 | 10 | 60 | 100-300 | 10 150 | 25 | 50 | |
| * PN2102 | NPN | TO-92 (72) | 65 | 120 | 7 | 2 | 60 | 40-120 | 10 150 | 15 | 60 | |
| * PN2192 | NPN | TO-92 (72) | 40 | 60 | 5 | 10 | 30 | 100-300 | 10 150 | 20 | 50 | |
| * PN2193 | NPN | TO-92 (72) | 50 | 80 | 8 | 10 | 60 | 40-120 | 10 150 | 20 | 50 | |
| * PN2195 | NPN | TO-92 (72) | 25 | 45 | 5 | 100 | 30 | 20- | 10 150 | 20 | 50 | |
| PN2205 | NPN | TO-92 (72) | 12 | 25 | 3 | 25 | 15 | 20- | 1 10 | 6 | 200 | |
| PN2206 | NPN | TO-92 (72) | 12 | 25 | 3 | 25 | 15 | 40-120 | 1 10 | 6 | 200 | |
| * PN2218 | NPN | TO-92 (72) | 30 | 60 | 5 | 10 | 50 | 40-120 | 10 150 | 8 | 250 | |
| * PN2218A | NPN | TO-92 (72) | 40 | 75 | 6 | 10 | 60 | 40-120 | 10 150 | 8 | 250 | |
| * PN2219 | NPN | TO-92 (72) | 30 | 60 | 5 | 10 | 50 | 100-300 | 10 150 | 8 | 250 | |
| * PN2219A | NPN | TO-92 (72) | 40 | 75 | 6 | 10 | 60 | 100-300 | 10 150 | 8 | 300 | |
| PN2221 | NPN | TO-92 (72) | 30 | 60 | 5 | 10 | 50 | 40-120 | 10 150 | 8 | 250 | |
| PN2221A | NPN | TO-92 (72) | 40 | 75 | 6 | 10 | 60 | 40-120 | 10 150 | 8 | 250 | |
| PN2222 | NPN | TO-92 (72) | 30 | 60 | 5 | 10 | 50 | 100-300 | 10 150 | 8 | 250 | |
| PN2222A | NPN | TO-92 (72) | 40 | 75 | 6 | 10 | 60 | 100-300 | 10 150 | 8 | 300 | |
| * PN2224 | NPN | TO-92 (72) | 40 | 65 | 5 | 10 | 50 | 40-120 | 1 150 | 8 | 250 | |
| PN2242 | NPN | TO-92 (72) | 15 | 40 | 5 | 100 | 20 | 20-120 | 1 10 | 6 | 250 | |
| * PN2243 | NPN | TO-92 (72) | 80 | 120 | 7 | 10 | 60 | 40-120 | 10 150 | 15 | 50 | |
| * PN2270 | NPN | TO-92 (72) | 45 | 60 | 7 | 50 | 60 | 50-200 | 10 150 | 15 | 100 | |
| * PN2297 | NPN | TO-92 (72) | 35 | 80 | 7 | 10 | 60 | 40-120 | 10 150 | 12 | 60 | |
| * PN2303 | NPN | TO-92 (72) | 35 | 50 | 5 | 500 | 30 | 75-200 | 10 150 | 45 | 60 | |
| PN2351 | NPN | TO-92 (72) | 50 | 80 | 8 | 10 | 60 | 40-120 | 10 150 | 20 | 50 | |
| PN2352 | NPN | TO-92 (72) | 40 | 60 | 5 | 10 | 50 | 20- 60 | 10 150 | 20 | 50 | |

* AVAILABLE ALSO IN TO-237 PACKAGE

2514096 CRIMSON SEMICONDUCTOR INC

99D 00310

D

T-29-01

| DEVICE | TYPE PACKAGE | BVCEO | BVCBO | BVEBO | ICBO @ VCB | HFE @ VC & IC | | COB | | FT | NF |
|---------|----------------|----------|----------|----------|------------|---------------|---------|----------|----------|----|------|
| | | (VI) MIN | (VI) MIN | (VI) MIN | (mA) MAX | (VI) MIN | MAX | (VI) MIN | (mA) MAX | | |
| PN2353 | NPN TO-92 (72) | 25 | 45 | 5 | 10 | 30 | 20- | 10 | 150 | 20 | 50 |
| PN2368 | NPN TO-92 (72) | 15 | 40 | 4.5 | 400 | 20 | 20- 60 | 1 | 10 | 4 | 400 |
| PN2369 | NPN TO-92 (72) | 15 | 40 | 4.5 | 400 | 20 | 40-120 | 1 | 10 | 4 | 500 |
| PN2369A | NPN TO-92 (72) | 15 | 40 | 4.5 | 400 | 20 | 40-120 | 3.5 | 10 | 4 | 500 |
| PN2405 | NPN TO-92 (72) | 90 | 120 | 7 | 10 | 90 | 60-200 | 10 | 150 | 15 | 50 |
| PN2475 | NPN TO-92 (72) | 6 | 15 | 4 | 50 | 5 | 30-150 | .4 | 20 | 3 | 600 |
| PN2476 | NPN TO-92 (72) | 20 | 60 | 5 | 200 | 30 | 20- | .4 | 150 | 10 | 250 |
| PN2477 | NPN TO-92 (72) | 20 | 60 | 5 | 200 | 30 | 40- | .4 | 150 | 10 | 250 |
| PN2481 | NPN TO-92 (72) | 15 | 40 | 5 | 50 | 20 | 40-120 | 1 | 10 | 5 | 300 |
| PN2483 | NPN TO-92 (72) | 60 | 60 | 6 | 10 | 45 | 40-120 | 5 | .01 | 6 | 60 4 |
| PN2484 | NPN TO-92 (72) | 60 | 60 | 6 | 10 | 45 | 100-500 | 5 | .01 | 6 | 60 3 |
| PN2501 | NPN TO-92 (72) | 20 | 40 | 6 | 25 | 20 | 50-150 | 1 | 10 | 4 | 350 |
| PN2509 | NPN TO-92 (72) | 80 | 125 | 7 | 5 | 100 | 40- | 5 | 10 | 6 | 45 4 |
| PN2510 | NPN TO-92 (72) | 65 | 100 | 7 | 5 | 80 | 150-500 | 5 | 10 | 6 | 45 4 |
| PN2511 | NPN TO-92 (72) | 50 | 80 | 7 | 5 | 60 | 240-750 | 5 | 10 | 6 | 45 4 |
| PN2539 | NPN TO-92 (72) | 30 | 60 | 5 | 250 | 40 | 50-150 | 10 | 150 | 8 | 250 |
| PN2540 | NPN TO-92 (72) | 30 | 60 | 5 | 250 | 40 | 100-300 | 10 | 150 | 8 | 250 |
| PN2586 | NPN TO-92 (72) | 45 | 60 | 6 | 2 | 45 | 120-360 | 5 | .01 | 7 | 45 3 |
| PN2604 | PNP TO-92 (72) | 45 | 60 | 6 | 10 | 45 | 40-120 | 5 | .01 | 10 | 6 3 |
| PN2605 | PNP TO-92 (72) | 45 | 60 | 6 | 10 | 45 | 100-300 | 5 | .01 | 10 | 6 3 |
| PN2616 | NPN TO-92 (72) | 15 | 30 | 3 | 10 | 15 | 20- | 1 | 3 | 3 | 600 |
| PN2645 | NPN TO-92 (72) | 40 | 75 | 7 | 10 | 60 | 100-300 | 10 | 150 | 25 | 50 |
| PN2696 | PNP TO-92 (72) | 25 | 25 | 4 | 25 | 10 | 30-130 | 1 | 50 | 20 | 100 |
| PN2710 | NPN TO-92 (72) | 20 | 40 | 5 | 30 | 20 | 40- | 1 | 10 | 4 | 500 |
| PN2801 | PNP TO-92 (72) | 35 | 50 | 5 | 100 | 25 | 75-225 | 10 | 150 | 25 | 120 |
| PN2845 | NPN TO-92 (72) | 30 | 60 | 5 | 200 | 30 | 30-120 | 10 | 150 | 8 | 250 |
| PN2846 | NPN TO-92 (72) | 30 | 60 | 5 | 200 | 30 | 30-120 | 10 | 150 | 8 | 250 |
| PN2847 | NPN TO-92 (72) | 20 | 60 | 5 | 200 | 30 | 40-140 | 10 | 150 | 8 | 250 |
| PN2848 | NPN TO-92 (72) | 20 | 60 | 5 | 200 | 30 | 40-140 | 10 | 150 | 8 | 250 |
| PN2857 | NPN TO-92 (72) | 15 | 30 | 2.5 | 10 | 15 | 30-150 | 1 | 3 | 1 | 1000 |
| PN2868 | NPN TO-92 (72) | 40 | 60 | 7 | 10 | 30 | 40-120 | 10 | 150 | 20 | 50 |
| PN2894 | PNP TO-92 (72) | 12 | 12 | 4 | 80 | 6 | 40-150 | .5 | 30 | 6 | 400 |
| PN2895 | NPN TO-92 (72) | 65 | 120 | 7 | 2 | 60 | 40-120 | 10 | 150 | 15 | 120 |
| PN2896 | NPN TO-92 (72) | 90 | 140 | 7 | 10 | 90 | 60-200 | 10 | 150 | 15 | 120 |
| PN2897 | NPN TO-92 (72) | 45 | 60 | 7 | 50 | 60 | 50-200 | 10 | 150 | 15 | 100 |
| PN2904 | PNP TO-92 (72) | 40 | 60 | 5 | 20 | 50 | 40-120 | 10 | 150 | 8 | 200 |
| PN2904A | PNP TO-92 (72) | 60 | 60 | 5 | 10 | 50 | 40-120 | 10 | 150 | 8 | 200 |
| PN2905 | PNP TO-92 (72) | 40 | 60 | 5 | 20 | 50 | 100-300 | 10 | 150 | 8 | 200 |
| PN2905A | PNP TO-92 (72) | 60 | 60 | 5 | 10 | 50 | 100-300 | 10 | 150 | 8 | 200 |
| PN2906 | PNP TO-92 (72) | 40 | 60 | 5 | 20 | 50 | 40-120 | 10 | 150 | 8 | 200 |
| PN2906A | PNP TO-92 (72) | 60 | 60 | 5 | 10 | 50 | 40-120 | 10 | 150 | 8 | 200 |
| PN2907 | PNP TO-92 (72) | 40 | 60 | 5 | 20 | 50 | 100-300 | 10 | 150 | 8 | 200 |
| PN2907A | PNP TO-92 (72) | 60 | 60 | 5 | 10 | 50 | 100-300 | 10 | 150 | 8 | 200 |
| PN3009 | NPN TO-92 (72) | 15 | 40 | 5 | 500 | 20 | 30-120 | .4 | 30 | 5 | 350 |
| PN3010 | NPN TO-92 (72) | 6 | 15 | 4 | 100 | 5 | 25-125 | .4 | 10 | 3 | 600 |

* AVAILABLE ALSO IN TO-237 PACKAGE

2514096 CRIMSON SEMICONDUCTOR INC

99D 00311 D

T-29-01

| DEVICE | TYPE PACKAGE | BVCEO | BVCBO | BVEBO | ICBO @ VCB | HFE @ VC & IC | | COB | FT | NF | |
|-----------|----------------|----------|---------|----------|------------|---------------|---------|-----|-----|-----|----------|
| | | (VI MIN) | (V MIN) | (VI MIN) | (mA) MAX | (VI MIN) | MAX | | | | (VI (mA) |
| PN3011 | NPN TO-92 (72) | 12 | 30 | 5 | 400 | 20 | 30-120 | .35 | 10 | 4 | 400 |
| PN3012 | PNP TO-92 (72) | 12 | 12 | 4 | 80 | 6 | 30-120 | .5 | 30 | 6 | 400 |
| PN3013 | NPN TO-92 (72) | 15 | 40 | 5 | 300 | 20 | 30-120 | .4 | 30 | 5 | 350 |
| PN3014 | NPN TO-92 (72) | 20 | 40 | 5 | 300 | 20 | 30-120 | .4 | 30 | 5 | 350 |
| PN3015 | NPN TO-92 (72) | 30 | 60 | 5 | 200 | 30 | 30-120 | 10 | 150 | 8 | 250 |
| * PN3019 | NPN TO-92 (72) | 80 | 140 | 7 | 10 | 90 | 100-300 | 10 | 150 | 12 | 100 |
| * PN3020 | NPN TO-92 (72) | 80 | 140 | 7 | 10 | 90 | 40-120 | 10 | 150 | 12 | 100 |
| * PN3053 | NPN TO-92 (72) | 40 | 60 | 5 | 250 | 30 | 50-250 | 10 | 150 | 15 | 100 |
| * PN3053A | NPN TO-92 (72) | 60 | 80 | 5 | 250 | 60 | 50-250 | 10 | 150 | 15 | 100 |
| PN3056 | NPN TO-92 (72) | 60 | 100 | 7 | 10 | 60 | 40-120 | 10 | 150 | 12 | 80 |
| PN3056A | NPN TO-92 (72) | 80 | 140 | 7 | 10 | 90 | 40-120 | 10 | 150 | 12 | 80 |
| PN3057 | NPN TO-92 (72) | 60 | 100 | 7 | 10 | 60 | 100-300 | 10 | 150 | 12 | 100 |
| PN3057A | NPN TO-92 (72) | 80 | 140 | 7 | 10 | 90 | 100-300 | 10 | 150 | 12 | 100 |
| * PN3072 | PNP TO-92 (72) | 60 | 60 | 4 | 10 | 30 | 30-130 | 1 | 50 | 10 | 130 |
| PN3073 | PNP TO-92 (72) | 60 | 60 | 4 | 10 | 30 | 30-130 | 1 | 50 | 10 | 130 |
| * PN3107 | NPN TO-92 (72) | 60 | 100 | 7 | 10 | 60 | 100-300 | 1 | 150 | 20 | 70 |
| * PN3108 | NPN TO-92 (72) | 60 | 100 | 7 | 10 | 60 | 40-120 | 1 | 150 | 20 | 60 |
| * PN3109 | NPN TO-92 (72) | 40 | 80 | 7 | 10 | 60 | 100-300 | 1 | 150 | 25 | 70 |
| * PN3110 | NPN TO-92 (72) | 40 | 80 | 7 | 10 | 60 | 40-120 | 1 | 150 | 25 | 60 |
| * PN3114 | NPN TO-92 (72) | 150 | 150 | 5 | 10 | 100 | 30-120 | 10 | 30 | 9 | 40 |
| PN3115 | NPN TO-92 (72) | 20 | 60 | 5 | 25 | 50 | 40-120 | 10 | 150 | 8 | 250 |
| PN3116 | NPN TO-92 (72) | 20 | 60 | 5 | 25 | 50 | 100-300 | 10 | 150 | 8 | 250 |
| PN3117 | NPN TO-92 (72) | 60 | 60 | 6 | 10 | 45 | 250-500 | 5 | .01 | 4.5 | 60 |
| * PN3120 | PNP TO-92 (72) | 45 | 45 | 4 | 10 | 30 | 30-130 | 1 | 50 | 10 | 130 |
| PN3121 | PNP TO-92 (72) | 45 | 45 | 4 | 10 | 30 | 30-130 | 1 | 50 | 10 | 130 |
| * PN3133 | PNP TO-92 (72) | 35 | 50 | 4 | 50 | 30 | 40-120 | 10 | 150 | 10 | 200 |
| * PN3134 | PNP TO-92 (72) | 35 | 50 | 4 | 50 | 30 | 100-300 | 10 | 150 | 10 | 200 |
| PN3135 | PNP TO-92 (72) | 35 | 50 | 4 | 50 | 30 | 40-120 | 10 | 150 | 10 | 200 |
| PN3136 | PNP TO-92 (72) | 35 | 50 | 4 | 50 | 30 | 100-300 | 10 | 150 | 10 | 200 |
| PN3209 | PNP TO-92 (72) | 20 | 20 | 4 | 80 | 10 | 30-120 | .5 | 30 | 5 | 400 |
| PN3210 | NPN TO-92 (72) | 15 | 40 | 5 | 10 | 20 | 30-120 | 1 | 10 | 6 | 300 |
| PN3211 | NPN TO-92 (72) | 15 | 40 | 5 | 25 | 20 | 50-150 | 1 | 10 | 4 | 350 |
| PN3227 | NPN TO-92 (72) | 20 | 40 | 6 | 200 | 20 | 100-300 | 1 | 10 | 4 | 500 |
| * PN3244 | PNP TO-92 (72) | 40 | 40 | 5 | 50 | 30 | 50-150 | 1 | 500 | 25 | 175 |
| * PN3245 | PNP TO-92 (72) | 50 | 50 | 5 | 50 | 50 | 30-90 | 1 | 500 | 25 | 150 |
| PN3246 | NPN TO-92 (72) | 40 | 60 | 8 | 5 | 40 | 200-600 | 5 | .01 | 5 | 60 |
| PN3250 | PNP TO-92 (72) | 40 | 50 | 5 | 20 | 40 | 50-150 | 1 | 10 | 6 | 250 |
| PN3250A | PNP TO-92 (72) | 60 | 60 | 5 | 20 | 40 | 50-150 | 1 | 10 | 6 | 250 |
| PN3251 | PNP TO-92 (72) | 40 | 50 | 5 | 20 | 40 | 100-300 | 1 | 10 | 6 | 300 |
| PN3251A | PNP TO-92 (72) | 60 | 60 | 5 | 20 | 40 | 100-300 | 1 | 10 | 6 | 300 |
| * PN3252 | NPN TO-92 (72) | 30 | 60 | 5 | 500 | 40 | 30-90 | 1 | 500 | 12 | 200 |
| * PN3253 | NPN TO-92 (72) | 40 | 75 | 5 | 500 | 60 | 25-75 | 1 | 375 | 12 | 175 |
| * PN3299 | NPN TO-92 (72) | 30 | 60 | 5 | 10 | 50 | 40-120 | 10 | 150 | 8 | 250 |
| * PN3300 | NPN TO-92 (72) | 30 | 60 | 5 | 10 | 50 | 100-300 | 10 | 150 | 8 | 250 |
| PN3301 | NPN TO-92 (72) | 30 | 60 | 5 | 10 | 50 | 40-120 | 10 | 150 | 8 | 250 |

* AVAILABLE ALSO IN TO-237 PACKAGE

2514096 CRIMSON SEMICONDUCTOR INC

99D 00312 D

T-29-01

| DEVICE | TYPE | PACKAGE | BVCEO | BVCBO | BVEBO | ICBO @ VCB | HFE @ | | VC & IC | | COB | FT | NF |
|----------|------|------------|---------|---------|---------|------------|---------|---------|---------|------|----------|-------|----------|
| | | | (V) MIN | (V) MIN | (V) MIN | (mA) MAX | (V) MIN | (V) MAX | (V) | (mA) | (pI) MAX | (MHz) | (dB) MAX |
| PN3302 | NPN | TO-92 (72) | 30 | 60 | 5 | 10 | 50 | 100-300 | 10 | 150 | 8 | 250 | |
| * PN3326 | NPN | TO-92 (72) | 45 | 60 | 5 | 10 | 50 | 40-120 | 10 | 150 | 8 | 250 | |
| * PN3439 | NPN | TO-92 (72) | 350 | 450 | 7 | 20 | 360 | 40-160 | 10 | 20 | 10 | 15 | |
| * PN3440 | NPN | TO-92 (72) | 250 | 300 | 7 | 20 | 250 | 40-160 | 10 | 20 | 10 | 15 | |
| * PN3444 | NPN | TO-92 (72) | 50 | 80 | 5 | 500 | 60 | 20-60 | 1 | 500 | 12 | 150 | |
| PN3457 | PNP | TO-92 (72) | 6 | 6 | 4 | 10 | 3 | 30-120 | 3 | 10 | 5.5 | 500 | |
| * PN3467 | PNP | TO-92 (72) | 40 | 40 | 5 | 100 | 30 | 40-120 | 1 | 500 | 25 | 175 | |
| * PN3468 | PNP | TO-92 (72) | 50 | 50 | 5 | 100 | 30 | 25-75 | 1 | 500 | 25 | 150 | |
| PN3478 | NPN | TO-92 (72) | 15 | 30 | 2 | 20 | 1 | 25-120 | 8 | 2 | 1 | 750 | |
| * PN3494 | PNP | TO-92 (72) | 80 | 80 | 4.5 | 100 | 50 | 40- | 10 | 50 | 7 | 200 | |
| * PN3495 | PNP | TO-92 (72) | 120 | 120 | 4.5 | 100 | 90 | 40- | 10 | 50 | 6 | 150 | |
| PN3496 | PNP | TO-92 (72) | 80 | 80 | 4.5 | 100 | 50 | 40- | 10 | 50 | 7 | 200 | |
| PN3497 | PNP | TO-92 (72) | 120 | 120 | 4.5 | 100 | 90 | 40- | 10 | 50 | 6 | 150 | |
| * PN3498 | NPN | TO-92 (72) | 100 | 100 | 6 | 50 | 50 | 40-120 | 10 | 150 | 10 | 150 | |
| * PN3499 | NPN | TO-92 (72) | 100 | 100 | 6 | 50 | 50 | 100-300 | 10 | 150 | 10 | 150 | |
| * PN3500 | NPN | TO-92 (72) | 150 | 150 | 6 | 50 | 75 | 40-120 | 10 | 150 | 8 | 150 | |
| * PN3501 | NPN | TO-92 (72) | 150 | 150 | 6 | 50 | 75 | 100-300 | 10 | 150 | 8 | 150 | |
| * PN3502 | PNP | TO-92 (72) | 45 | 45 | 5 | 10 | 30 | 100-300 | 10 | 150 | 8 | 200 | |
| * PN3503 | PNP | TO-92 (72) | 60 | 60 | 5 | 10 | 30 | 100-300 | 10 | 150 | 8 | 200 | |
| PN3504 | PNP | TO-92 (72) | 45 | 45 | 5 | 10 | 30 | 100-300 | 10 | 150 | 8 | 200 | |
| PN3505 | PNP | TO-92 (72) | 60 | 60 | 5 | 10 | 30 | 100-300 | 10 | 150 | 8 | 200 | |
| PN3547 | PNP | TO-92 (72) | 60 | 60 | 6 | 10 | 45 | 100-500 | 5 | 1 | 10 | | |
| PN3548 | PNP | TO-92 (72) | 45 | 60 | 6 | 10 | 45 | 150-600 | 5 | 1 | 10 | | |
| PN3549 | PNP | TO-92 (72) | 60 | 60 | 6 | 10 | 45 | 200-800 | 5 | 1 | 10 | | |
| PN3550 | PNP | TO-92 (72) | 45 | 60 | 6 | 10 | 45 | 300-800 | 5 | 1 | 10 | | |
| PN3563 | NPN | TO-92 (72) | 15 | 30 | 2 | 50 | 15 | 20-200 | 10 | 8 | 1.7 | 600 | |
| PN3564 | NPN | TO-92 (72) | 15 | 30 | 4 | 50 | 15 | 20-500 | 10 | 15 | 3.5 | 400 | |
| PN3565 | NPN | TO-92 (72) | 25 | 30 | 6 | 50 | 25 | 150-600 | 10 | 1 | 4 | 40 | |
| PN3566 | NPN | TO-92 (72) | 30 | 40 | 5 | 50 | 20 | 150-600 | 10 | 10 | 25 | 40 | |
| PN3567 | NPN | TO-92 (72) | 40 | 80 | 5 | 50 | 40 | 40-120 | 1 | 150 | 20 | 60 | |
| PN3568 | NPN | TO-92 (72) | 60 | 80 | 5 | 50 | 40 | 40-120 | 1 | 150 | 20 | 60 | |
| PN3569 | NPN | TO-92 (72) | 40 | 80 | 5 | 50 | 40 | 100-300 | 1 | 150 | 20 | 60 | |
| PN3576 | PNP | TO-92 (72) | 15 | 20 | 5 | 10 | 15 | 40-120 | .5 | 10 | 4.5 | 400 | |
| PN3600 | NPN | TO-92 (72) | 15 | 30 | 3 | 10 | 15 | 20-150 | 1 | 3 | 1 | 850 | |
| * PN3634 | PNP | TO-92 (72) | 140 | 140 | 5 | 100 | 100 | 50-150 | 10 | 50 | 10 | 150 | |
| * PN3635 | PNP | TO-92 (72) | 140 | 140 | 5 | 100 | 100 | 100-300 | 10 | 50 | 10 | 200 | |
| * PN3636 | PNP | TO-92 (72) | 175 | 175 | 5 | 100 | 100 | 50-150 | 10 | 50 | 10 | 150 | |
| * PN3637 | PNP | TO-92 (72) | 175 | 175 | 5 | 100 | 100 | 100-300 | 10 | 50 | 10 | 200 | |
| PN3638 | PNP | TO-92 (72) | 25 | 25 | 4 | 35 | 15 | 30- | 1 | 50 | 20 | 100 | |
| PN3638A | PNP | TO-92 (72) | 25 | 25 | 4 | 35 | 15 | 100- | 1 | 50 | 10 | 150 | |
| PN3639 | PNP | TO-92 (72) | 6 | 6 | 4 | 10 | 3 | 30-120 | .3 | 10 | 3.5 | 300 | |
| PN3640 | PNP | TO-92 (72) | 12 | 12 | 4 | 10 | 6 | 30-120 | .3 | 10 | 3.5 | 300 | |
| PN3641 | NPN | TO-92 (72) | 30 | 60 | 5 | 50 | 50 | 40-120 | 10 | 150 | 8 | 250 | |
| PN3642 | NPN | TO-92 (72) | 45 | 60 | 5 | 50 | 50 | 40-120 | 10 | 150 | 8 | 250 | |

* AVAILABLE ALSO IN TO-237 PACKAGE

2514096 CRIMSON SEMICONDUCTOR INC

99D 00313 D T-29-01

| DEVICE | TYPE | PACKAGE | BVCEO | BVCBO | BVEBO | ICBO | VCB | HFE @ | VC & IC | | COB | FT | NF |
|---------|------|------------|---------|---------|---------|-----------|-----|----------|---------|------|----------|-------|----------|
| | | | (V) MIN | (V) MIN | (V) MIN | (mA) MAX. | (V) | MIN.-MAX | (V) | (mA) | (pI) MAX | (MHz) | (db) MAX |
| PN3643 | NPN | TO-92 (72) | 30 | 60 | 5 | 50 | 50 | 100-300 | 10 | 150 | 8 | 250 | |
| PN3644 | PNP | TO-92 (72) | 45 | 45 | 5 | 35 | 30 | 100-300 | 10 | 150 | 8 | 200 | |
| PN3645 | PNP | TO-92 (72) | 60 | 60 | 5 | 35 | 50 | 100-300 | 10 | 150 | 8 | 200 | |
| PN3646 | NPN | TO-92 (72) | 15 | 40 | 5 | 500 | 20 | 30-120 | .4 | 30 | 5 | 350 | |
| PN3665 | NPN | TO-92 (72) | 80 | 120 | 10 | 50 | 60 | 40-120 | 10 | 150 | 12 | 60 | |
| PN3666 | NPN | TO-92 (72) | 80 | 120 | 10 | 50 | 60 | 100-300 | 10 | 150 | 12 | 60 | |
| PN3673 | PNP | TO-92 (72) | 50 | 60 | 5 | 10 | 50 | 75-225 | 10 | 150 | 9 | 200 | |
| PN3678 | NPN | TO-92 (72) | 55 | 75 | 6 | 10 | 60 | 40-120 | 10 | 150 | 8 | 250 | |
| PN3691 | NPN | TO-92 (72) | 20 | 35 | 4 | 50 | 15 | 40-160 | 1 | 10 | 3.5 | 200 | |
| PN3692 | NPN | TO-92 (72) | 20 | 35 | 4 | 50 | 15 | 100-400 | 1 | 10 | 3.5 | 200 | |
| PN3693 | NPN | TO-92 (72) | 45 | 45 | 4 | 50 | 35 | 40-160 | 10 | 10 | 3.5 | 200 | |
| PN3694 | NPN | TO-92 (72) | 45 | 45 | 4 | 50 | 35 | 100-400 | 10 | 10 | 3.5 | 200 | |
| PN3700 | NPN | TO-92 (72) | 80 | 140 | 7 | 10 | 90 | 100-300 | 10 | 150 | 12 | 100 | |
| PN3701 | NPN | TO-92 (72) | 80 | 140 | 7 | 10 | 90 | 40-120 | 10 | 150 | 12 | 80 | |
| PN3722 | NPN | TO-92 (72) | 60 | 80 | 6 | 500 | 40 | 40-150 | 1 | 100 | 10 | | |
| PN3723 | NPN | TO-92 (72) | 80 | 100 | 6 | 500 | 50 | 40-150 | 1 | 100 | 9 | | |
| PN3724 | NPN | TO-92 (72) | 30 | 50 | 6 | 1.7uA | 40 | 60-150 | 1 | 100 | 12 | 300 | |
| PN3724A | NPN | TO-92 (72) | 30 | 50 | 6 | 500 | 40 | 60-150 | 1 | 100 | 12 | 300 | |
| PN3725 | NPN | TO-92 (72) | 50 | 80 | 6 | 1.7uA | 60 | 60-150 | 1 | 100 | 10 | 300 | |
| PN3725A | NPN | TO-92 (72) | 50 | 80 | 6 | 500 | 60 | 60-150 | 1 | 100 | 10 | 300 | |
| PN3742 | NPN | TO-92 (72) | 300 | 300 | 7 | 200 | 200 | 20-200 | 10 | 30 | 6 | 60 | |
| PN3799 | PNP | TO-92 (72) | 60 | 60 | 5 | 10 | 50 | 300-900 | 5 | .5 | | | |
| PN3839 | NPN | TO-92 (72) | 15 | 30 | 2.5 | 10 | 15 | 30-150 | 1 | 3 | 1 | 1000 | |
| PN3932 | NPN | TO-92 (72) | 20 | 30 | 2.5 | 10 | 15 | 40-150 | 8 | 2 | .55 | 750 | |
| PN3933 | NPN | TO-92 (72) | 30 | 40 | 2.5 | 10 | 15 | 60-200 | 8 | 2 | .55 | 750 | |
| PN3945 | NPN | TO-92 (72) | 50 | 70 | 8 | 40 | 60 | 40-250 | 10 | 150 | 12 | 60 | |
| PN3946 | NPN | TO-92 (72) | 40 | 60 | 6 | 10 | 40 | 50-150 | 1 | 10 | 4 | 250 | |
| PN3947 | NPN | TO-92 (72) | 40 | 60 | 6 | 10 | 40 | 100-300 | 1 | 10 | 4 | 300 | |
| PN3962 | PNP | TO-92 (72) | 60 | 60 | 6 | 10 | 50 | 100-450 | 5 | 1 | 6 | 40 | |
| PN3963 | PNP | TO-92 (72) | 80 | 80 | 6 | 10 | 70 | 100-450 | 5 | 1 | 6 | 40 | |
| PN3964 | PNP | TO-92 (72) | 45 | 45 | 6 | 10 | 40 | 250-600 | 5 | 1 | 6 | 50 | |
| PN3965 | PNP | TO-92 (72) | 60 | 60 | 6 | 10 | 50 | 250-600 | 5 | 1 | 6 | 50 | |
| PN4013 | NPN | TO-92 (72) | 30 | 50 | 6 | 1.7uA | 40 | 60-150 | 1 | 100 | 12 | 300 | |
| PN4014 | NPN | TO-92 (72) | 50 | 80 | 6 | 1.7uA | 60 | 60-150 | 1 | 100 | 10 | 300 | |
| PN4026 | PNP | TO-92 (72) | 60 | 60 | 5 | 50 | 50 | 40-120 | 5 | 100 | 20 | 100 | |
| PN4027 | PNP | TO-92 (72) | 80 | 80 | 5 | 50 | 60 | 40-120 | 5 | 100 | 20 | 150 | |
| PN4028 | PNP | TO-92 (72) | 60 | 60 | 5 | 50 | 50 | 100-300 | 5 | 100 | 20 | 150 | |
| PN4029 | PNP | TO-92 (72) | 80 | 80 | 5 | 50 | 60 | 100-300 | 5 | 100 | 20 | 150 | |
| PN4030 | PNP | TO-92 (72) | 60 | 60 | 5 | 50 | 50 | 40-120 | 5 | 100 | 20 | 100 | |
| PN4031 | PNP | TO-92 (72) | 80 | 80 | 5 | 50 | 60 | 40-120 | 5 | 100 | 20 | 100 | |
| PN4032 | PNP | TO-92 (72) | 60 | 60 | 5 | 50 | 50 | 100-300 | 5 | 100 | 20 | 150 | |
| PN4033 | PNP | TO-92 (72) | 80 | 80 | 5 | 50 | 60 | 100-300 | 5 | 100 | 20 | 150 | |
| PN4034 | PNP | TO-92 (72) | 40 | 40 | 5 | 15 | 30 | 70-200 | 1 | 10 | 3.5 | 400 | |
| PN4035 | PNP | TO-92 (72) | 40 | 40 | 5 | 15 | 30 | 150-300 | 1 | 10 | 3.5 | 400 | |
| PN4036 | PNP | TO-92 (72) | 65 | 90 | 7 | 20 | 60 | 40-140 | 10 | 150 | 30 | 60 | |

* AVAILABLE ALSO IN TO-237 PACKAGE

2514096 CRIMSON SEMICONDUCTOR INC

99D 00314

D

T-29-01

| DEVICE | TYPE | PACKAGE | BVCEO | BVCBO | BVEBO | ICBO | VCB | HFE | VC & IC | | COB | FT | NF |
|----------|------|------------|---------|---------|---------|----------|---------|---------|---------|-----|------|----------|-------|
| | | | (V) MIN | (V) MIN | (V) MIN | (mA) MAX | (V) MIN | MIN | MAX | (V) | (mA) | (pI) MAX | (MHz) |
| * PN4037 | PNP | TO-92 (72) | 40 | 60 | 7 | 250 | 60 | 50-250 | 10 | 150 | 30 | 60 | |
| * PN4046 | NPN | TO-92 (72) | 30 | 50 | 6 | 1.7uA | 40 | 40-150 | 1 | 100 | 12 | 500 | |
| * PN4047 | NPN | TO-92 (72) | 50 | 80 | 6 | 1.7uA | 60 | 40-150 | 1 | 100 | 10 | 500 | |
| PN4121 | PNP | TO-92 (72) | 40 | 40 | 5 | 25 | 30 | 70-200 | 1 | 10 | 4.5 | 400 | |
| PN4122 | PNP | TO-92 (72) | 40 | 40 | 5 | 25 | 30 | 150-300 | 1 | 10 | 4.5 | 450 | |
| PN4140 | NPN | TO-92 (72) | 30 | 60 | 5 | 100 | 35 | 40-120 | 10 | 150 | 8 | 250 | |
| PN4141 | NPN | TO-92 (72) | 30 | 60 | 5 | 100 | 35 | 100-300 | 10 | 150 | 8 | 250 | |
| PN4142 | PNP | TO-92 (72) | 40 | 60 | 5 | 100 | 35 | 40-120 | 10 | 150 | 8 | 200 | |
| PN4143 | PNP | TO-92 (72) | 40 | 60 | 5 | 100 | 35 | 100-300 | 10 | 150 | 8 | 200 | |
| PN4207 | PNP | TO-92 (72) | 6 | 6 | 4.5 | 10 | 3 | 50-120 | .3 | 10 | 3 | 650 | |
| PN4208 | PNP | TO-92 (72) | 12 | 12 | 4.5 | 10 | 6 | 30-120 | .3 | 10 | 3 | 700 | |
| PN4209 | PNP | TO-92 (72) | 15 | 15 | 1.5 | 10 | 8 | 50-120 | .3 | 10 | 3 | 850 | |
| * PN4234 | PNP | TO-92 (72) | 40 | 40 | 7 | 100 | 40 | 30-150 | 1 | 250 | | | |
| * PN4235 | PNP | TO-92 (72) | 60 | 60 | 7 | 100 | 60 | 30-150 | 1 | 250 | | | |
| * PN4236 | PNP | TO-92 (72) | 80 | 80 | 7 | 100 | 80 | 30-150 | 1 | 250 | | | |
| PN4237 | NPN | TO-92 (72) | 40 | 50 | 6 | 100 | 50 | 30-150 | 1 | 250 | | | |
| * PN4238 | NPN | TO-92 (72) | 60 | 80 | 6 | 100 | 80 | 30-150 | 1 | 250 | | | |
| * PN4239 | NPN | TO-92 (72) | 80 | 100 | 6 | 100 | 100 | 30-150 | 1 | 250 | | | |
| PN4248 | PNP | TO-92 (72) | 40 | 40 | 5 | 10 | 40 | 50- | 5 | .1 | 6 | 40 | 3 |
| PN4249 | PNP | TO-92 (72) | 60 | 60 | 5 | 10 | 40 | 100-300 | 5 | .1 | 6 | 40 | 3 |
| PN4250 | PNP | TO-92 (72) | 40 | 40 | 5 | 10 | 40 | 250-700 | 5 | .1 | 6 | 50 | 2 |
| PN4250A | PNP | TO-92 (72) | 60 | 60 | 5 | 10 | 50 | 250-700 | 5 | .1 | 6 | 50 | 3 |
| PN4257 | PNP | TO-92 (72) | 6 | 6 | 4.5 | 10 | 3 | 30-120 | .3 | 10 | 3 | 500 | |
| PN4258 | PNP | TO-92 (72) | 12 | 12 | 4.5 | 10 | 6 | 30-120 | .3 | 10 | 3 | 700 | |
| PN4259 | NPN | TO-92 (72) | 30 | 40 | 2.5 | 10 | 15 | 60-250 | 8 | 2 | .55 | 750 | |
| PN4274 | NPN | TO-92 (72) | 12 | 30 | 4.5 | 400 | 20 | 35-120 | 1 | 10 | 4 | 400 | |
| PN4275 | NPN | TO-92 (72) | 15 | 40 | 4.5 | 400 | 20 | 35-120 | 1 | 10 | 4 | 400 | |
| PN4313 | PNP | TO-92 (72) | 12 | 12 | 4.5 | 50 | 10 | 30-120 | .5 | 30 | 4.5 | 700 | |
| * PN4314 | PNP | TO-92 (72) | 65 | 90 | 7 | 250 | 60 | 50-250 | 10 | 150 | 30 | 60 | |
| PN4354 | PNP | TO-92 (72) | 60 | 60 | 5 | 50 | 50 | 50-500 | 10 | 10 | 30 | 100 | |
| PN4355 | PNP | TO-92 (72) | 60 | 60 | 5 | 50 | 50 | 100-400 | 10 | 10 | 30 | 100 | |
| PN4356 | PNP | TO-92 (72) | 80 | 80 | 5 | 50 | 50 | 50-250 | 10 | 10 | 30 | 100 | |
| PN4384 | NPN | TO-92 (72) | 40 | 30 | 5 | 10 | 30 | 100-500 | 5 | .01 | 8 | 30 | |
| PN4386 | NPN | TO-92 (72) | 40 | 30 | 5 | 10 | 30 | 40-500 | 5 | .01 | 8 | 30 | |
| * PN4404 | PNP | TO-92 (72) | 80 | 80 | 5 | 25 | 60 | 40-120 | 1 | 150 | 10 | 200 | |
| PN4405 | PNP | TO-92 (72) | 80 | 80 | 5 | 25 | 60 | 100-300 | 1 | 150 | 10 | 200 | |
| * PN4888 | PNP | TO-92 (72) | 150 | 150 | 6 | 50 | 100 | 40-400 | 10 | 10 | 4 | 30 | |
| PN4889 | PNP | TO-92 (72) | 150 | 150 | 6 | 10 | 100 | 80-300 | 10 | 10 | 4 | 40 | |
| PN4916 | PNP | TO-92 (72) | 30 | 30 | 5 | 25 | 15 | 70-200 | 1 | 10 | 4.5 | 400 | |
| PN4917 | PNP | TO-92 (72) | 30 | 30 | 5 | 25 | 15 | 150-300 | 1 | 10 | 4.5 | 450 | |
| PN4944 | NPN | TO-92 (72) | 40 | 80 | 5 | 50 | 40 | 40-120 | 1 | 150 | 25 | 60 | |
| PN4945 | NPN | TO-92 (72) | 60 | 80 | 5 | 50 | 40 | 40-120 | 1 | 150 | 25 | 60 | |
| PN4946 | NPN | TO-92 (72) | 40 | 80 | 5 | 50 | 40 | 100-300 | 1 | 150 | 25 | 60 | |
| * PN4960 | NPN | TO-92 (72) | 60 | 60 | 6.5 | 10 | 50 | 100-300 | 10 | 150 | 15 | 250 | |
| * PN4961 | NPN | TO-92 (72) | 80 | 80 | 6.5 | 10 | 50 | 100-300 | 10 | 150 | 15 | 250 | |

* AVAILABLE ALSO IN TO-237 PACKAGE

2514096 CRIMSON SEMICONDUCTOR INC

99D 00315 D

T-29-01

| DEVICE | TYPE | PACKAGE | BVCEO | BVCBO | BVEBO | ICBO @ VCB | | HFE @ VC & IC | | COB | FT | NF | |
|--------|------|------------|---------|---------|---------|------------|---------|---------------|---------|-----|-----|-----|----------|
| | | | (V) MIN | (V) MIN | (V) MIN | (mA) MAX | (V) MIN | MAX | (V) MIN | | | | (mA) MAX |
| PN4962 | NPN | TO-92 (72) | 60 | 60 | 6.5 | 10 | 50 | 100-300 | 10 | 150 | 15 | 250 | |
| PN4963 | NPN | TO-92 (72) | 80 | 80 | 6.5 | 10 | 50 | 100-300 | 10 | 150 | 15 | 250 | |
| PN5126 | NPN | TO-92 (72) | 20 | 20 | 3 | 50 | 10 | 20-350 | 10 | 4 | 1.6 | 300 | |
| PN5127 | NPN | TO-92 (72) | 12 | 20 | 3 | 50 | 10 | 15-300 | 10 | 2 | 3.5 | 150 | |
| PN5128 | NPN | TO-92 (72) | 12 | 15 | 3 | 50 | 10 | 35-350 | 10 | 50 | 10 | 200 | |
| PN5129 | NPN | TO-92 (72) | 12 | 15 | 3 | 50 | 10 | 35-350 | 10 | 50 | 10 | 200 | |
| PN5130 | NPN | TO-92 (72) | 12 | 30 | 1 | 50 | 10 | 15-250 | 10 | 8 | 1.7 | 450 | |
| PN5131 | NPN | TO-92 (72) | 15 | 20 | 3 | 50 | 10 | 30-500 | 1 | 10 | 6 | 100 | |
| PN5132 | NPN | TO-92 (72) | 20 | 20 | 3 | 50 | 10 | 30-400 | 10 | 10 | 3.5 | 200 | |
| PN5133 | NPN | TO-92 (72) | 18 | 20 | 3 | 50 | 15 | 60-1000 | 5 | 1 | 5 | 40 | 4 |
| PN5134 | NPN | TO-92 (72) | 10 | 20 | 3.5 | 400 | 15 | 20-150 | 1 | 10 | 4 | 250 | |
| PN5135 | NPN | TO-92 (72) | 25 | 30 | 4 | 300 | 15 | 50-600 | 10 | 10 | 25 | 40 | |
| PN5136 | NPN | TO-92 (72) | 20 | 30 | 3 | 100 | 20 | 20-400 | 1 | 150 | 35 | 40 | |
| PN5137 | NPN | TO-92 (72) | 20 | 30 | 3 | 100 | 20 | 20-400 | 1 | 150 | 35 | 40 | |
| PN5138 | PNP | TO-92 (72) | 30 | 30 | 5 | 10 | 20 | 50-800 | 10 | 1 | 7 | 30 | 4 |
| PN5139 | PNP | TO-92 (72) | 20 | 20 | 5 | 50 | 15 | 40- | 1 | 10 | 5 | 300 | |
| PN5140 | PNP | TO-92 (72) | 5 | 5 | 4 | 50 | 3 | 20-140 | 1 | 10 | 5 | 400 | |
| PN5141 | PNP | TO-92 (72) | 6 | 6 | 4 | 100 | 4 | 25- | 2 | 10 | 7 | 300 | |
| PN5142 | PNP | TO-92 (72) | 20 | 20 | 4 | 35 | 12 | 30- | 1 | 50 | 10 | 100 | |
| PN5143 | PNP | TO-92 (72) | 20 | 20 | 4 | 35 | 12 | 30- | 1 | 50 | 10 | 100 | |
| PN5179 | NPN | TO 92 (72) | 12 | 20 | 2.5 | 20 | 15 | 25-250 | 1 | 3 | 1 | 900 | |
| PN5180 | NPN | TO 92 (72) | 15 | 30 | 2 | 500 | 8 | 20-200 | 8 | 2 | 1 | 650 | |
| PN5189 | NPN | TO-92 (72) | 35 | 60 | 5 | 500 | 30 | 35- | 1 | 500 | 12 | 250 | |

* AVAILABLE ALSO IN TO-237 PACKAGE

2514096 CRIMSON SEMICONDUCTOR INC

99D 00316 D

T-29-01

| DEVICE | TYPE | PACKAGE | BVCEO (V) MIN | BVCBO (V) MIN | BVEBO (V) MIN | ICBO (mA) MAX | VCB (V) MIN | HFE @ MIN | VC & IC (mA) MAX | COB (pf) MAX | FT (MHz) | NF (dB) MAX | |
|----------|------|------------|------------------|------------------|------------------|------------------|----------------|--------------|---------------------|-----------------|-------------|----------------|----|
| BC107 | NPN | TO-18 | 45 | 50 | 6 | 15 | 50 | 120-460 | 5 | 2 | 4.5 | 150 | 10 |
| BC107A | NPN | TO-18 | 45 | 50 | 6 | 15 | 50 | 120-220 | 5 | 2 | 4.5 | 150 | 10 |
| BC107B | NPN | TO-18 | 45 | 50 | 6 | 15 | 50 | 180-460 | 5 | 2 | 4.5 | 150 | 10 |
| BC108 | NPN | TO-18 | 20 | 30 | 5 | 15 | 30 | 120-800 | 5 | 2 | 4.5 | 150 | 10 |
| BC108A | NPN | TO-18 | 20 | 30 | 5 | 15 | 30 | 120-220 | 5 | 2 | 4.5 | 150 | 10 |
| BC108B | NPN | TO-18 | 20 | 30 | 5 | 15 | 30 | 180-460 | 5 | 2 | 4.5 | 150 | 10 |
| BC108C | NPN | TO-18 | 20 | 30 | 5 | 15 | 30 | 380-800 | 5 | 2 | 4.5 | 150 | 10 |
| BC109 | NPN | TO-18 | 20 | 30 | 5 | 15 | 30 | 180-800 | 5 | 2 | 4.5 | 150 | 4 |
| BC109B | NPN | TO-18 | 20 | 30 | 5 | 15 | 30 | 180-460 | 5 | 2 | 4.5 | 150 | 4 |
| BC109C | NPN | TO-18 | 20 | 30 | 5 | 15 | 30 | 380-800 | 5 | 2 | 4.5 | 150 | 4 |
| BC140 | NPN | TO-39 | 40 | 80 | 7 | 100 | 60 | 40-400 | 1 | 100 | 25 | 50 | |
| BC140-6 | NPN | TO-39 | 40 | 80 | 7 | 100 | 60 | 40-100 | 1 | 100 | 25 | 50 | |
| BC140-10 | NPN | TO-39 | 40 | 80 | 7 | 100 | 60 | 63-160 | 1 | 100 | 25 | 50 | |
| BC140-16 | NPN | TO-39 | 40 | 80 | 7 | 100 | 60 | 100-250 | 1 | 100 | 25 | 50 | |
| BC140-25 | NPN | TO-39 | 40 | 80 | 7 | 100 | 60 | 160-400 | 1 | 100 | 25 | 50 | |
| BC141 | NPN | TO-39 | 60 | 100 | 7 | 100 | 60 | 40-400 | 1 | 100 | 25 | 50 | |
| BC141-6 | NPN | TO-39 | 60 | 100 | 7 | 100 | 60 | 40-100 | 1 | 100 | 25 | 50 | |
| BC141-10 | NPN | TO-39 | 60 | 100 | 7 | 100 | 60 | 63-160 | 1 | 100 | 25 | 50 | |
| BC141-16 | NPN | TO-39 | 60 | 100 | 7 | 100 | 60 | 100-250 | 1 | 100 | 25 | 50 | |
| BC141-25 | NPN | TO-39 | 60 | 100 | 7 | 100 | 60 | 160-400 | 1 | 100 | 25 | 50 | |
| BC160 | PNP | TO-39 | 40 | 40 | 5 | 100 | 40 | 40-400 | 1 | 100 | 30 | 50 | |
| BC160-6 | PNP | TO-39 | 40 | 40 | 5 | 100 | 40 | 40-100 | 1 | 100 | 30 | 50 | |
| BC160-10 | PNP | TO-39 | 40 | 40 | 5 | 100 | 40 | 63-160 | 1 | 100 | 30 | 50 | |
| BC160-16 | PNP | TO-39 | 40 | 40 | 5 | 100 | 40 | 100-250 | 1 | 100 | 30 | 50 | |
| BC160-25 | PNP | TO-39 | 40 | 40 | 5 | 100 | 40 | 160-400 | 1 | 100 | 30 | 50 | |
| BC161 | PNP | TO-39 | 60 | 60 | 5 | 100 | 60 | 40-400 | 1 | 100 | 30 | 50 | |
| BC161-6 | PNP | TO-39 | 60 | 60 | 5 | 100 | 60 | 40-100 | 1 | 100 | 30 | 50 | |
| BC161-10 | PNP | TO-39 | 60 | 60 | 5 | 100 | 60 | 63-160 | 1 | 100 | 30 | 50 | |
| BC161-16 | PNP | TO-39 | 60 | 60 | 5 | 100 | 60 | 100-250 | 1 | 100 | 30 | 50 | |
| BC161-25 | PNP | TO-39 | 60 | 60 | 5 | 100 | 60 | 160-400 | 1 | 100 | 30 | 50 | |
| BC167 | NPN | TO-92 (74) | 45 | 50 | 6 | 15 | 50 | 120-460 | 5 | 2 | 4.5 | 150 | 10 |
| BC167A | NPN | TO-92 (74) | 45 | 50 | 6 | 15 | 50 | 120-220 | 5 | 2 | 4.5 | 150 | 10 |
| BC167B | NPN | TO-92 (74) | 45 | 50 | 6 | 15 | 50 | 180-460 | 5 | 2 | 4.5 | 150 | 10 |
| BC168 | NPN | TO-92 (74) | 20 | 30 | 5 | 15 | 30 | 120-800 | 5 | 2 | 4.5 | 150 | 10 |
| BC168A | NPN | TO-92 (74) | 20 | 30 | 5 | 15 | 30 | 120-220 | 5 | 2 | 4.5 | 150 | 10 |
| BC168B | NPN | TO-92 (74) | 20 | 30 | 5 | 15 | 30 | 180-460 | 5 | 2 | 4.5 | 150 | 10 |
| BC168C | NPN | TO-92 (74) | 20 | 30 | 5 | 15 | 30 | 380-800 | 5 | 2 | 4.5 | 150 | 10 |
| BC169 | NPN | TO-92 (74) | 20 | 30 | 5 | 15 | 30 | 180-800 | 5 | 2 | 4.5 | 150 | 4 |
| BC169B | NPN | TO-92 (74) | 20 | 30 | 5 | 15 | 30 | 180-460 | 5 | 2 | 4.5 | 150 | 4 |
| BC169C | NPN | TO-92 (74) | 20 | 30 | 5 | 15 | 30 | 380-800 | 5 | 2 | 4.5 | 150 | 4 |
| BC177 | PNP | TO-18 | 45 | 50 | 5 | 15 | 50 | 120-460 | 5 | 2 | 4.5 | 150 | 10 |
| BC177A | PNP | TO-18 | 45 | 50 | 5 | 15 | 50 | 120-220 | 5 | 2 | 4.5 | 150 | 10 |
| BC177B | PNP | TO-18 | 45 | 50 | 5 | 15 | 50 | 180-460 | 5 | 2 | 4.5 | 150 | 10 |
| BC178 | PNP | TO-18 | 20 | 30 | 5 | 15 | 30 | 120-800 | 5 | 2 | 4.5 | 150 | 10 |
| BC178A | PNP | TO-18 | 20 | 30 | 5 | 15 | 30 | 120-220 | 5 | 2 | 4.5 | 150 | 10 |

2514096 CRIMSON SEMICONDUCTOR INC

99D 00317 D

T-29-01

| DEVICE | TYPE | PACKAGE | BVCEO | BVCBO | BVEBO | ICBO | VCB | HFE @ | | VC & IC | | COB | FT | NF |
|---------|------|------------|---------|---------|---------|----------|-----|---------|-----|---------|------|----------|-------|----------|
| | | | (V) MIN | (V) MIN | (V) MIN | (mA) MAX | (V) | MIN | MAX | (V) | (mA) | (pI) MAX | (MHz) | (db) MAX |
| BC178B | PNP | TO-18 | 25 | 30 | 5 | 15 | 30 | 180-460 | 5 | 2 | 4.5 | 150 | 10 | |
| BC178C | PNP | TO-18 | 25 | 30 | 5 | 15 | 30 | 380-800 | 5 | 2 | 4.5 | 150 | 10 | |
| BC179 | PNP | TO-18 | 20 | 25 | 5 | 15 | 25 | 180-800 | 5 | 2 | 4.5 | 150 | 4 | |
| BC179B | PNP | TO-18 | 20 | 25 | 5 | 15 | 25 | 180-460 | 5 | 2 | 4.5 | 150 | 4 | |
| BC178C | PNP | TO-18 | 20 | 25 | 5 | 15 | 25 | 380-800 | 5 | 2 | 4.5 | 150 | 4 | |
| BC182K | NPN | TO-92 (77) | 50 | 60 | 5 | 15 | 50 | 120-460 | 5 | 2 | 4.5 | 150 | 10 | |
| BC182KA | NPN | TO-92 (77) | 50 | 60 | 5 | 15 | 50 | 120-220 | 5 | 2 | 4.5 | 150 | 10 | |
| BC182KB | NPN | TO-92 (77) | 50 | 60 | 5 | 15 | 50 | 180-460 | 5 | 2 | 4.5 | 150 | 10 | |
| BC183K | NPN | TO-92 (77) | 30 | 45 | 5 | 15 | 30 | 120-800 | 5 | 2 | 4.5 | 150 | 10 | |
| BC183KA | NPN | TO-92 (77) | 30 | 45 | 5 | 15 | 30 | 120 220 | 5 | 2 | 4.5 | 150 | 10 | |
| BC183KB | NPN | TO-92 (77) | 30 | 45 | 5 | 15 | 30 | 180-460 | 5 | 2 | 4.5 | 150 | 10 | |
| BC183KC | NPN | TO-92 (77) | 30 | 45 | 5 | 15 | 30 | 380-800 | 5 | 2 | 4.5 | 150 | 10 | |
| BC184K | NPN | TO-92 (77) | 30 | 45 | 5 | 15 | 30 | 180 800 | 5 | 2 | 4.5 | 150 | 4 | |
| BC184KB | NPN | TO-92 (77) | 30 | 45 | 5 | 15 | 30 | 180 460 | 5 | 2 | 4.5 | 150 | 4 | |
| BC184KC | NPN | TO-92 (77) | 30 | 45 | 5 | 15 | 30 | 380 800 | 5 | 2 | 4.5 | 150 | 4 | |
| BC182L | NPN | TO-92 (74) | 50 | 60 | 5 | 15 | 50 | 120-460 | 5 | 2 | 4.5 | 150 | 10 | |
| BC182LA | NPN | TO-92 (74) | 50 | 60 | 5 | 15 | 50 | 120 220 | 5 | 2 | 4.5 | 150 | 10 | |
| BC182LB | NPN | TO-92 (74) | 50 | 60 | 5 | 15 | 50 | 180 460 | 5 | 2 | 4.5 | 150 | 10 | |
| BC183L | NPN | TO-92 (74) | 30 | 45 | 5 | 15 | 30 | 120-800 | 5 | 2 | 4.5 | 150 | 10 | |
| BC183LA | NPN | TO-92 (74) | 30 | 45 | 5 | 15 | 30 | 120-220 | 5 | 2 | 4.5 | 150 | 10 | |
| BC183LB | NPN | TO 92 (74) | 30 | 45 | 5 | 15 | 30 | 180 460 | 5 | 2 | 4.5 | 150 | 10 | |
| BC183LC | NPN | TO 92 (74) | 30 | 45 | 5 | 15 | 30 | 380-800 | 5 | 2 | 4.5 | 150 | 10 | |
| BC184L | NPN | TO 92 (74) | 30 | 45 | 5 | 15 | 30 | 180-800 | 5 | 2 | 4.5 | 150 | 4 | |
| BC184LB | NPN | TO 92 (74) | 30 | 45 | 5 | 15 | 30 | 180 460 | 5 | 2 | 4.5 | 150 | 4 | |
| BC184LC | NPN | TO 92 (74) | 30 | 45 | 5 | 15 | 30 | 380 800 | 5 | 2 | 4.5 | 150 | 4 | |
| BC212K | PNP | TO 92 (77) | 50 | 60 | 5 | 15 | 50 | 120 460 | 5 | 2 | 4.5 | 150 | 10 | |
| BC212KA | PNP | TO 92 (77) | 50 | 60 | 5 | 15 | 50 | 120 220 | 5 | 2 | 4.5 | 150 | 10 | |
| BC212KB | PNP | TO 92 (77) | 50 | 60 | 5 | 15 | 50 | 180-460 | 5 | 2 | 4.5 | 150 | 10 | |
| BC213K | PNP | TO 92 (77) | 30 | 45 | 5 | 15 | 30 | 120-800 | 5 | 2 | 4.5 | 150 | 10 | |
| BC213KA | PNP | TO 92 (77) | 30 | 45 | 5 | 15 | 30 | 120-220 | 5 | 2 | 4.5 | 150 | 10 | |
| BC213KB | PNP | TO 92 (77) | 30 | 45 | 5 | 15 | 30 | 180-460 | 5 | 2 | 4.5 | 150 | 10 | |
| BC213KC | PNP | TO 92 (77) | 30 | 45 | 5 | 15 | 30 | 380-800 | 5 | 2 | 4.5 | 150 | 10 | |
| BC214K | PNP | TO 92 (77) | 30 | 45 | 5 | 15 | 30 | 180-800 | 5 | 2 | 4.5 | 150 | 4 | |
| BC214KB | PNP | TO 92 (77) | 30 | 45 | 5 | 15 | 30 | 180-460 | 5 | 2 | 4.5 | 150 | 4 | |
| BC214KC | PNP | TO-92 (77) | 30 | 45 | 5 | 15 | 30 | 380-800 | 5 | 2 | 4.5 | 150 | 4 | |
| BC212L | PNP | TO-92 (74) | 50 | 60 | 5 | 15 | 50 | 120-460 | 5 | 2 | 4.5 | 150 | 10 | |
| BC212LA | PNP | TO-92 (74) | 50 | 60 | 5 | 15 | 50 | 120-220 | 5 | 2 | 4.5 | 150 | 10 | |
| BC212LB | PNP | TO-92 (74) | 50 | 60 | 5 | 15 | 50 | 180-460 | 5 | 2 | 4.5 | 150 | 10 | |
| BC213L | PNP | TO-92 (74) | 30 | 45 | 5 | 15 | 30 | 120-800 | 5 | 2 | 4.5 | 150 | 10 | |
| BC213LA | PNP | TO-92 (74) | 30 | 45 | 5 | 15 | 30 | 120-220 | 5 | 2 | 4.5 | 150 | 10 | |
| BC213LB | PNP | TO-92 (74) | 30 | 45 | 5 | 15 | 30 | 180-460 | 5 | 2 | 4.5 | 150 | 10 | |
| BC213LC | PNP | TO-92 (74) | 30 | 45 | 5 | 15 | 30 | 380-800 | 5 | 2 | 4.5 | 150 | 10 | |
| BC214L | PNP | TO-92 (74) | 30 | 45 | 5 | 15 | 30 | 180-800 | 5 | 2 | 4.5 | 150 | 4 | |
| BC214LB | PNP | TO-92 (74) | 30 | 45 | 5 | 15 | 30 | 180-460 | 5 | 2 | 4.5 | 150 | 4 | |
| BC214LC | PNP | TO-92 (74) | 30 | 45 | 5 | 15 | 30 | 380-800 | 5 | 2 | 4.5 | 150 | 4 | |

2514096 CRIMSON SEMICONDUCTOR INC

99D 00318 D T-29-01

| DEVICE | TYPE PACKAGE | BVCEO | BVCBO | BVEBO | ICBO | VCB | HFE @ | VC & IC | | COB | FT | NF |
|--------|----------------|---------|---------|---------|----------|---------|--------------|---------|------|----------|-------|----------|
| | | (V) MIN | (V) MIN | (V) MIN | (mA) MAX | (V) MIN | (V) MIN -MAX | (V) | (mA) | (pI) MAX | (MHz) | (db) MAX |
| BC237 | NPN TO-92 (77) | 45 | 50 | 6 | 15 | 50 | 110-450 | 5 | 2 | 4.5 | 150 | 10 |
| BC237A | NPN TO-92 (77) | 45 | 50 | 6 | 15 | 50 | 110-220 | 5 | 2 | 4.5 | 150 | 10 |
| BC237B | NPN TO-92 (77) | 45 | 50 | 6 | 15 | 50 | 200-450 | 5 | 2 | 4.5 | 150 | 10 |
| BC238 | NPN TO-92 (77) | 20 | 30 | 5 | 15 | 30 | 110-800 | 5 | 2 | 4.5 | 150 | 10 |
| BC238A | NPN TO-92 (77) | 20 | 30 | 5 | 15 | 30 | 110-220 | 5 | 2 | 4.5 | 150 | 10 |
| BC238B | NPN TO-92 (77) | 20 | 30 | 5 | 15 | 30 | 200-450 | 5 | 2 | 4.5 | 150 | 10 |
| BC238C | NPN TO-92 (77) | 20 | 30 | 5 | 15 | 30 | 420-800 | 5 | 2 | 4.5 | 150 | 10 |
| BC239 | NPN TO-92 (77) | 20 | 30 | 5 | 15 | 30 | 200-800 | 5 | 2 | 4.5 | 150 | 4 |
| BC239B | NPN TO-92 (77) | 20 | 30 | 5 | 15 | 30 | 200-450 | 5 | 2 | 4.5 | 150 | 4 |
| BC239C | NPN TO-92 (77) | 20 | 30 | 5 | 15 | 30 | 420-800 | 5 | 2 | 4.5 | 150 | 4 |
| BC257 | PNP TO-92 (74) | 45 | 50 | 5 | 15 | 50 | 120-460 | 5 | 2 | 6 | 130 | 10 |
| BC257A | PNP TO-92 (74) | 45 | 50 | 5 | 15 | 50 | 120-220 | 5 | 2 | 6 | 130 | 10 |
| BC257B | PNP TO-92 (74) | 45 | 50 | 5 | 15 | 50 | 180-460 | 5 | 2 | 6 | 130 | 10 |
| BC258 | PNP TO-92 (74) | 25 | 30 | 5 | 15 | 30 | 120-800 | 5 | 2 | 6 | 130 | 10 |
| BC258A | PNP TO-92 (74) | 25 | 30 | 5 | 15 | 30 | 120-220 | 5 | 2 | 6 | 130 | 10 |
| BC258B | PNP TO-92 (74) | 25 | 30 | 5 | 15 | 30 | 180-460 | 5 | 2 | 6 | 130 | 10 |
| BC258C | PNP TO-92 (74) | 25 | 30 | 5 | 15 | 30 | 380-800 | 5 | 2 | 6 | 130 | 10 |
| BC259 | PNP TO-92 (74) | 20 | 25 | 5 | 15 | 25 | 180-800 | 5 | 2 | 6 | 130 | 4 |
| BC259B | PNP TO-92 (74) | 20 | 25 | 5 | 15 | 25 | 180-460 | 5 | 2 | 6 | 130 | 4 |
| BC259C | PNP TO-92 (74) | 20 | 25 | 5 | 15 | 25 | 380-800 | 5 | 2 | 6 | 130 | 4 |
| BC286 | NPN TO-5 | 60 | 70 | 5 | 20 | 30 | 20-180 | 2 | 500 | 12 | 100 | |
| BC287 | PNP TO-5 | 60 | 60 | 5 | 50 | 30 | 20-200 | 2 | 500 | 13 | 200 | |
| BC307 | PNP TO-92 (77) | 45 | 50 | 5 | 15 | 50 | 110-450 | 5 | 2 | 6 | 130 | 10 |
| BC307A | PNP TO-92 (77) | 45 | 50 | 5 | 15 | 50 | 110-220 | 5 | 2 | 6 | 130 | 10 |
| BC307B | PNP TO-92 (77) | 45 | 60 | 5 | 15 | 50 | 200-450 | 5 | 2 | 6 | 130 | 10 |
| BC308 | PNP TO-92 (77) | 25 | 30 | 5 | 15 | 30 | 110-800 | 5 | 2 | 6 | 130 | 10 |
| BC308A | PNP TO-92 (77) | 25 | 30 | 5 | 15 | 30 | 110-220 | 5 | 2 | 6 | 130 | 10 |
| BC308B | PNP TO-92 (77) | 25 | 30 | 5 | 15 | 30 | 200-450 | 5 | 2 | 6 | 130 | 10 |
| BC308C | PNP TO-92 (77) | 25 | 30 | 5 | 15 | 30 | 420-800 | 5 | 2 | 6 | 130 | 10 |
| BC309 | PNP TO-92 (77) | 20 | 25 | 5 | 15 | 25 | 200-800 | 5 | 2 | 6 | 130 | 4 |
| BC309B | PNP TO-92 (77) | 20 | 25 | 5 | 15 | 25 | 200-450 | 5 | 2 | 6 | 130 | 4 |
| BC309C | PNP TO-92 (77) | 20 | 25 | 5 | 15 | 25 | 420-800 | 5 | 2 | 6 | 130 | 4 |
| BC317 | NPN TO-92 (72) | 45 | 50 | 6 | 30 | 20 | 110-450 | 5 | 2 | 4 | 100 | 6 |
| BC317A | NPN TO-92 (72) | 45 | 50 | 6 | 30 | 20 | 110-220 | 5 | 2 | 4 | 100 | 6 |
| BC317B | NPN TO-92 (72) | 45 | 50 | 6 | 30 | 20 | 200-450 | 5 | 2 | 4 | 100 | 6 |
| BC318 | NPN TO-92 (72) | 30 | 40 | 5 | 30 | 20 | 110-800 | 5 | 2 | 4 | 100 | 6 |
| BC318A | NPN TO-92 (72) | 30 | 40 | 5 | 30 | 20 | 110-220 | 5 | 2 | 4 | 100 | 6 |
| BC318B | NPN TO-92 (72) | 30 | 40 | 5 | 30 | 20 | 200-450 | 5 | 2 | 4 | 100 | 6 |
| BC318C | NPN TO-92 (72) | 30 | 40 | 5 | 30 | 20 | 420-800 | 5 | 2 | 4 | 100 | 6 |
| BC319 | NPN TO-92 (72) | 20 | 30 | 5 | 30 | 20 | 200-800 | 5 | 2 | 4 | 100 | 4 |
| BC319B | NPN TO-92 (72) | 20 | 30 | 5 | 30 | 20 | 200-450 | 5 | 2 | 4 | 100 | 4 |
| BC319C | NPN TO-92 (72) | 20 | 30 | 5 | 30 | 20 | 420-800 | 5 | 2 | 4 | 100 | 4 |
| BC320 | PNP TO-92 (72) | 45 | 50 | 6 | 30 | 20 | 110-450 | 5 | 2 | 4 | 100 | 6 |
| BC320A | PNP TO-92 (72) | 45 | 50 | 6 | 30 | 20 | 110-220 | 5 | 2 | 4 | 100 | 6 |
| BC320B | PNP TO-92 (72) | 45 | 50 | 6 | 30 | 20 | 200-450 | 5 | 2 | 4 | 100 | 6 |

2514096 CRIMSON SEMICONDUCTOR INC

99D 00319

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T-29-01

| DEVICE | TYPE | PACKAGE | BVCEO (V) MIN | BVCBO (V) MIN | BVEBO (V) MIN | ICBO (mA) MAX | VCB (V) MIN -MAX | HFE @ VC & IC (V) (mA) | COB (pI) MAX | FT (MHz) | NF (db) MAX |
|----------|------|------------|------------------|------------------|------------------|------------------|---------------------|---------------------------|-----------------|-------------|----------------|
| BC321 | PNP | TO-92 (72) | 30 | 40 | 5 | 30 | 20 110-800 | 5 2 | 4 | 100 | 6 |
| BC321A | PNP | TO-92 (72) | 30 | 40 | 5 | 30 | 20 110-220 | 5 2 | 4 | 100 | 6 |
| BC321B | PNP | TO-92 (72) | 30 | 40 | 5 | 30 | 20 200-450 | 5 2 | 4 | 100 | 6 |
| BC321C | PNP | TO-92 (72) | 30 | 40 | 5 | 30 | 20 420-800 | 5 2 | 4 | 100 | 6 |
| BC322 | PNP | TO-92 (72) | 20 | 30 | 5 | 30 | 20 200-800 | 5 2 | 4 | 100 | 4 |
| BC322B | PNP | TO-92 (72) | 20 | 30 | 5 | 30 | 20 200-450 | 5 2 | 4 | 100 | 4 |
| BC322C | PNP | TO-92 (72) | 20 | 30 | 5 | 30 | 20 420-800 | 5 2 | 4 | 100 | 4 |
| BC327 | PNP | TO-92 (77) | 45 | 50 | 5 | 100 | 45 100-630 | 1 100 | 12 | 100 | |
| BC327-16 | PNP | TO-92 (77) | 45 | 50 | 5 | 100 | 45 100-250 | 1 100 | 12 | 100 | |
| BC327-25 | PNP | TO-92 (77) | 45 | 50 | 5 | 100 | 45 160-400 | 1 100 | 12 | 100 | |
| BC327-40 | PNP | TO-92 (77) | 45 | 50 | 5 | 100 | 45 250-630 | 1 100 | 12 | 100 | |
| BC328 | PNP | TO-92 (77) | 25 | 30 | 5 | 100 | 25 100-630 | 1 100 | 12 | 100 | |
| BC328-16 | PNP | TO-92 (77) | 25 | 30 | 5 | 100 | 25 100-250 | 1 100 | 12 | 100 | |
| BC328-25 | PNP | TO-92 (77) | 25 | 30 | 5 | 100 | 25 160-400 | 1 100 | 12 | 100 | |
| BC328-40 | PNP | TO-92 (77) | 25 | 30 | 5 | 100 | 25 250-630 | 1 100 | 12 | 100 | |
| BC337 | NPN | TO-92 (77) | 45 | 50 | 5 | 100 | 45 100-630 | 1 100 | 12 | 100 | |
| BC337-16 | NPN | TO-92 (77) | 45 | 50 | 5 | 100 | 45 100-250 | 1 100 | 12 | 100 | |
| BC337-25 | NPN | TO-92 (77) | 45 | 50 | 5 | 100 | 45 160-400 | 1 100 | 12 | 100 | |
| BC337-40 | NPN | TO-92 (77) | 45 | 50 | 5 | 100 | 45 250-630 | 1 100 | 12 | 100 | |
| BC338 | NPN | TO-92 (77) | 25 | 30 | 5 | 100 | 25 100-630 | 1 100 | 12 | 100 | |
| BC338-16 | NPN | TO-92 (77) | 25 | 30 | 5 | 100 | 25 100-250 | 1 100 | 12 | 100 | |
| BC338-25 | NPN | TO-92 (77) | 25 | 30 | 5 | 100 | 25 160-400 | 1 100 | 12 | 100 | |
| BC338-40 | NPN | TO-92 (77) | 25 | 30 | 5 | 100 | 25 250-630 | 1 100 | 12 | 100 | |
| BC413 | NPN | TO-92 (77) | 30 | 45 | 5 | 15 | 30 180-800 | 5 2 | 4 | 150 | 4 |
| BC413B | NPN | TO-92 (77) | 30 | 45 | 5 | 15 | 30 180-460 | 5 2 | 4 | 150 | 4 |
| BC413C | NPN | TO-92 (77) | 30 | 45 | 5 | 15 | 30 380-800 | 5 2 | 4 | 150 | 4 |
| BC414 | NPN | TO-92 (77) | 45 | 50 | 5 | 15 | 30 180-800 | 5 2 | 4 | 150 | 4 |
| BC414B | NPN | TO-92 (77) | 45 | 50 | 5 | 15 | 30 180-460 | 5 2 | 4 | 150 | 4 |
| BC414C | NPN | TO-92 (77) | 45 | 50 | 5 | 15 | 30 380-800 | 5 2 | 4 | 150 | 4 |
| BC415 | PNP | TO-92 (77) | 35 | 45 | 5 | 15 | 30 120-800 | 5 2 | 4.5 | 150 | 4 |
| BC415A | PNP | TO-92 (77) | 35 | 45 | 5 | 15 | 30 120-220 | 5 2 | 4.5 | 150 | 4 |
| BC415B | PNP | TO-92 (77) | 35 | 45 | 5 | 15 | 30 180-460 | 5 2 | 4.5 | 150 | 4 |
| BC415C | PNP | TO-92 (77) | 35 | 45 | 5 | 15 | 30 380-800 | 5 2 | 4.5 | 150 | 4 |
| BC416 | PNP | TO-92 (77) | 45 | 50 | 5 | 15 | 30 120-800 | 5 2 | 4.5 | 150 | 4 |
| BC416A | PNP | TO-92 (77) | 45 | 50 | 5 | 15 | 30 120-220 | 5 2 | 4.5 | 150 | 4 |
| BC416B | PNP | TO-92 (77) | 45 | 50 | 5 | 15 | 30 180-460 | 5 2 | 4.5 | 150 | 4 |
| BC416C | PNP | TO-92 (77) | 45 | 50 | 5 | 15 | 30 380-800 | 5 2 | 4.5 | 150 | 4 |
| BC485 | NPN | TO-92 (77) | 45 | 45 | 5 | 100 | 30 60-400 | 2 100 | 7 | 100 | |
| BC485A | NPN | TO-92 (77) | 45 | 45 | 5 | 100 | 30 100-250 | 2 100 | 7 | 100 | |
| BC485B | NPN | TO-92 (77) | 45 | 45 | 5 | 100 | 30 160-400 | 2 100 | 7 | 100 | |
| BC485L | NPN | TO-92 (77) | 45 | 45 | 5 | 100 | 30 60-150 | 2 100 | 7 | 100 | |
| BC486 | PNP | TO-92 (77) | 45 | 45 | 5 | 100 | 30 60-400 | 2 100 | 7 | 100 | |
| BC486A | PNP | TO-92 (77) | 45 | 45 | 5 | 100 | 30 100-250 | 2 100 | 7 | 100 | |
| BC486B | PNP | TO-92 (77) | 45 | 45 | 5 | 100 | 30 160-400 | 2 100 | 7 | 100 | |
| BC486L | PNP | TO-92 (77) | 45 | 45 | 5 | 100 | 30 60-150 | 2 100 | 7 | 100 | |

2514096 CRIMSON SEMICONDUCTOR INC

99D 00320 D T-29-61

| DEVICE | TYPE | PACKAGE | BVCEO | BVCBO | BVEBO | ICBO | VCB | HFE | VC & IC | COB | FT | NF | |
|----------|------|------------|---------|---------|---------|----------|---------|---------------|---------|------|----------|-------|----------|
| | | | (V) MIN | (V) MIN | (V) MIN | (mA) MAX | (V) MIN | (V) MIN - MAX | (V) | (mA) | (pF) MAX | (MHz) | (dB) MAX |
| BC527 | PNP | TO-92 (72) | 60 | 60 | 6 | 100 | 40 | 40-400 | 1 | 100 | 15 | 100 | |
| BC527-6 | PNP | TO-92 (72) | 60 | 60 | 6 | 100 | 40 | 40-100 | 1 | 100 | 15 | 100 | |
| BC527-10 | PNP | TO-92 (72) | 60 | 60 | 6 | 100 | 40 | 63-160 | 1 | 100 | 15 | 100 | |
| BC527-16 | PNP | TO-92 (72) | 60 | 60 | 6 | 100 | 40 | 100-250 | 1 | 100 | 15 | 100 | |
| BC527-25 | PNP | TO-92 (72) | 60 | 60 | 6 | 100 | 40 | 160-400 | 1 | 100 | 15 | 100 | |
| BC528 | PNP | TO-92 (72) | 80 | 80 | 6 | 10 | 60 | 40-400 | 1 | 100 | 15 | 100 | |
| BC528-6 | PNP | TO-92 (72) | 80 | 80 | 6 | 10 | 60 | 40-100 | 1 | 100 | 15 | 100 | |
| BC528-10 | PNP | TO-92 (72) | 80 | 80 | 6 | 10 | 60 | 63-160 | 1 | 100 | 15 | 100 | |
| BC528-16 | PNP | TO-92 (72) | 80 | 80 | 6 | 10 | 60 | 100-250 | 1 | 100 | 15 | 100 | |
| BC528-25 | PNP | TO-92 (72) | 80 | 80 | 6 | 10 | 60 | 160-400 | 1 | 100 | 15 | 100 | |
| BC529 | PNP | TO-92 (72) | 30 | 50 | 6 | 100 | 30 | 60-300 | 5 | 50 | 12 | 100 | |
| BC530 | PNP | TO-92 (72) | 120 | 130 | 6 | 100 | 100 | 40-180 | 5 | 10 | 6 | 50 | |
| BC531 | PNP | TO-92 (72) | 150 | 160 | 6 | 50 | 120 | 60-240 | 5 | 10 | 6 | 50 | |
| BC532 | PNP | TO-92 (72) | 140 | 160 | 6 | 100 | 100 | 60-250 | 5 | 10 | 6 | 50 | |
| BC533 | NPN | TO-92 (72) | 160 | 180 | 6 | 50 | 120 | 80-250 | 5 | 10 | 6 | 50 | |
| BC537 | NPN | TO-92 (72) | 60 | 60 | 6 | 100 | 40 | 40-400 | 1 | 100 | 15 | 100 | |
| BC537-6 | NPN | TO-92 (72) | 60 | 60 | 6 | 100 | 40 | 40-100 | 1 | 100 | 15 | 100 | |
| BC537-10 | NPN | TO-92 (72) | 60 | 60 | 6 | 100 | 40 | 63-160 | 1 | 100 | 15 | 100 | |
| BC537-16 | NPN | TO-92 (72) | 60 | 60 | 6 | 100 | 40 | 100-250 | 1 | 100 | 15 | 100 | |
| BC537-25 | NPN | TO-92 (72) | 60 | 60 | 6 | 100 | 40 | 160-400 | 1 | 100 | 15 | 100 | |
| BC538 | NPN | TO-92 (72) | 80 | 80 | 6 | 10 | 60 | 40-400 | 1 | 100 | 15 | 100 | |
| BC538-6 | NPN | TO-92 (72) | 80 | 80 | 6 | 10 | 60 | 40-100 | 1 | 100 | 15 | 100 | |
| BC538-10 | NPN | TO-92 (72) | 80 | 80 | 6 | 10 | 60 | 63-160 | 1 | 100 | 15 | 100 | |
| BC538-16 | NPN | TO-92 (72) | 80 | 80 | 6 | 10 | 60 | 100-250 | 1 | 100 | 15 | 100 | |
| BC538-25 | NPN | TO-92 (72) | 80 | 80 | 6 | 10 | 60 | 160-400 | 1 | 100 | 15 | 100 | |
| BC546 | NPN | TO-92 (77) | 65 | 80 | 6 | 15 | 30 | 110-450 | 5 | 2 | 4.5 | 200 | 10 |
| BC546A | NPN | TO-92 (77) | 65 | 80 | 6 | 15 | 30 | 110-220 | 5 | 2 | 4.5 | 200 | 10 |
| BC546B | NPN | TO-92 (77) | 65 | 80 | 6 | 15 | 30 | 200-450 | 5 | 2 | 4.5 | 200 | 10 |
| BC547 | NPN | TO-92 (77) | 45 | 50 | 6 | 15 | 30 | 110-800 | 5 | 2 | 4.5 | 200 | 10 |
| BC547A | NPN | TO-92 (77) | 45 | 50 | 6 | 15 | 30 | 110-220 | 5 | 2 | 4.5 | 200 | 10 |
| BC547B | NPN | TO-92 (77) | 45 | 50 | 6 | 15 | 30 | 200-450 | 5 | 2 | 4.5 | 200 | 10 |
| BC547C | NPN | TO-92 (77) | 45 | 50 | 6 | 15 | 30 | 420-800 | 5 | 2 | 4.5 | 200 | 10 |
| BC548 | NPN | TO-92 (77) | 30 | 30 | 5 | 15 | 30 | 110-800 | 5 | 2 | 4.5 | 200 | 10 |
| BC548A | NPN | TO-92 (77) | 30 | 30 | 5 | 15 | 30 | 110-220 | 5 | 2 | 4.5 | 200 | 10 |
| BC548B | NPN | TO-92 (77) | 30 | 30 | 5 | 15 | 30 | 200-450 | 5 | 2 | 4.5 | 200 | 10 |
| BC548C | NPN | TO-92 (77) | 30 | 30 | 5 | 15 | 30 | 420-800 | 5 | 2 | 4.5 | 200 | 10 |
| BC549 | NPN | TO-92 (77) | 30 | 30 | 5 | 15 | 30 | 200-800 | 5 | 2 | 4.5 | 200 | 4 |
| BC549B | NPN | TO-92 (77) | 30 | 30 | 5 | 15 | 30 | 200-450 | 5 | 2 | 4.5 | 200 | 4 |
| BC549C | NPN | TO-92 (77) | 30 | 30 | 5 | 15 | 30 | 420-800 | 5 | 2 | 4.5 | 200 | 4 |
| BC550 | NPN | TO-92 (77) | 45 | 50 | 5 | 15 | 30 | 200-800 | 5 | 2 | 4.5 | 200 | 4 |
| BC550B | NPN | TO-92 (77) | 45 | 50 | 5 | 15 | 30 | 200-450 | 5 | 2 | 4.5 | 200 | 4 |
| BC550C | NPN | TO-92 (77) | 45 | 50 | 5 | 15 | 30 | 420-800 | 5 | 2 | 4.5 | 200 | 4 |
| BC556 | PNP | TO-92 (77) | 65 | 80 | 5 | 15 | 30 | 110-450 | 5 | 2 | 4.5 | 150 | 10 |
| BC556A | PNP | TO-92 (77) | 65 | 80 | 5 | 15 | 30 | 110-220 | 5 | 2 | 4.5 | 150 | 10 |
| BC556B | PNP | TO-92 (77) | 65 | 80 | 5 | 15 | 30 | 200-450 | 5 | 2 | 4.5 | 150 | 10 |

2514096 CRIMSON SEMICONDUCTOR INC

99D 00321 D

T-29-01

| DEVICE | TYPE | PACKAGE | BVCEO | BVCBO | BVEBO | ICBO @ VCB | HFE @ VC & IC | | COB | FT | NF | | |
|----------|------|------------|---------|---------|---------|------------|---------------|---------|-----|-----|-----|-----|------|
| | | | (V) MIN | (V) MIN | (V) MIN | (mA) MAX | (V) MIN | MAX | | | | (V) | (mA) |
| BC557 | PNP | TO-92 (77) | 45 | 50 | 5 | 15 | 30 | 110-450 | 5 | 2 | 4.5 | 150 | 10 |
| BC557A | PNP | TO-92 (77) | 45 | 50 | 5 | 15 | 30 | 110-220 | 5 | 2 | 4.5 | 150 | 10 |
| BC557B | PNP | TO-92 (77) | 45 | 50 | 5 | 15 | 30 | 200-450 | 5 | 2 | 4.5 | 150 | 10 |
| BC558 | PNP | TO-92 (77) | 30 | 30 | 5 | 15 | 30 | 110-800 | 5 | 2 | 4.5 | 150 | 10 |
| BC558A | PNP | TO-92 (77) | 30 | 30 | 5 | 15 | 30 | 110-220 | 5 | 2 | 4.5 | 150 | 10 |
| BC558B | PNP | TO-92 (77) | 30 | 30 | 5 | 15 | 30 | 200-450 | 5 | 2 | 4.5 | 150 | 10 |
| BC558C | PNP | TO-92 (77) | 30 | 30 | 5 | 15 | 30 | 420-800 | 5 | 2 | 4.5 | 150 | 10 |
| BC559 | PNP | TO-92 (77) | 30 | 30 | 5 | 15 | 30 | 110-800 | 5 | 2 | 4.5 | 150 | 4 |
| BC559A | PNP | TO-92 (77) | 30 | 30 | 5 | 15 | 30 | 110-220 | 5 | 2 | 4.5 | 150 | 4 |
| BC559B | PNP | TO-92 (77) | 30 | 30 | 5 | 15 | 30 | 200-450 | 5 | 2 | 4.5 | 150 | 4 |
| BC559C | PNP | TO-92 (77) | 30 | 30 | 5 | 15 | 30 | 420-800 | 5 | 2 | 4.5 | 150 | 4 |
| BC560 | PNP | TO-92 (77) | 45 | 50 | 5 | 15 | 30 | 110-800 | 5 | 2 | 4.5 | 150 | 4 |
| BC560A | PNP | TO-92 (77) | 45 | 50 | 5 | 15 | 30 | 110-220 | 5 | 2 | 4.5 | 150 | 4 |
| BC560B | PNP | TO-92 (77) | 45 | 50 | 5 | 15 | 30 | 200-450 | 5 | 2 | 4.5 | 150 | 4 |
| BC560C | PNP | TO-92 (77) | 45 | 50 | 5 | 15 | 30 | 420-800 | 5 | 2 | 4.5 | 150 | 4 |
| BC635 | NPN | TO-92 (74) | 45 | 45 | 5 | 100 | 30 | 40-250 | 2 | 150 | | 100 | |
| BC636 | PNP | TO-92 (74) | 45 | 45 | 5 | 100 | 30 | 40-250 | 2 | 150 | | 100 | |
| BC637 | NPN | TO-92 (74) | 60 | 60 | 5 | 100 | 30 | 40-160 | 2 | 150 | | 100 | |
| BC638 | PNP | TO-92 (74) | 60 | 60 | 5 | 100 | 30 | 40-160 | 2 | 150 | | 100 | |
| BC728 | PNP | TO-92 (72) | 25 | 30 | 5 | 10 | 25 | 63-630 | 1 | 100 | 20 | | |
| BC728-10 | PNP | TO-92 (72) | 25 | 30 | 5 | 10 | 25 | 63-160 | 1 | 100 | 20 | | |
| BC728-16 | PNP | TO-92 (72) | 25 | 30 | 5 | 10 | 25 | 100-250 | 1 | 100 | 20 | | |
| BC728-25 | PNP | TO-92 (72) | 25 | 30 | 5 | 10 | 25 | 160-400 | 1 | 100 | 20 | | |
| BC728-40 | PNP | TO-92 (72) | 25 | 30 | 5 | 10 | 25 | 250-630 | 1 | 100 | 20 | | |
| BC738 | NPN | TO-92 (72) | 25 | 30 | 5 | 10 | 25 | 63-630 | 1 | 100 | 20 | | |
| BC738-10 | NPN | TO-92 (72) | 25 | 30 | 5 | 10 | 25 | 63-160 | 1 | 100 | 20 | | |
| BC738-16 | NPN | TO-92 (72) | 25 | 30 | 5 | 10 | 25 | 100-250 | 1 | 100 | 20 | | |
| BC738-25 | NPN | TO-92 (72) | 25 | 30 | 5 | 10 | 25 | 160-400 | 1 | 100 | 20 | | |
| BC738-40 | NPN | TO-92 (72) | 25 | 30 | 5 | 10 | 25 | 250-630 | 1 | 100 | 20 | | |
| BCX58 | NPN | TO-92 (72) | 32 | 32 | 7 | 10 | 32 | 120-630 | 5 | 2 | 4.5 | 125 | 6 |
| BCX58-7 | NPN | TO-92 (72) | 32 | 32 | 7 | 10 | 32 | 120-220 | 5 | 2 | 4.5 | 125 | 6 |
| BCX58-8 | NPN | TO-92 (72) | 32 | 32 | 7 | 10 | 32 | 180-310 | 5 | 2 | 4.5 | 125 | 6 |
| BCX58-9 | NPN | TO-92 (72) | 32 | 32 | 7 | 10 | 32 | 250-460 | 5 | 2 | 4.5 | 125 | 6 |
| BCX58-10 | NPN | TO-92 (72) | 32 | 32 | 7 | 10 | 32 | 380-630 | 5 | 2 | 4.5 | 125 | 6 |
| BCX59 | NPN | TO-92 (72) | 45 | 45 | 7 | 10 | 45 | 120-630 | 5 | 2 | 4.5 | 125 | 6 |
| BCX59-7 | NPN | TO-92 (72) | 45 | 45 | 7 | 10 | 45 | 120-220 | 5 | 2 | 4.5 | 125 | 6 |
| BCX59-8 | NPN | TO-92 (72) | 45 | 45 | 7 | 10 | 45 | 180-310 | 5 | 2 | 4.5 | 125 | 6 |
| BCX59-9 | NPN | TO-92 (72) | 45 | 45 | 7 | 10 | 45 | 250-460 | 5 | 2 | 4.5 | 125 | 6 |
| BCX59-10 | NPN | TO-92 (72) | 45 | 45 | 7 | 10 | 45 | 380-630 | 5 | 2 | 4.5 | 125 | 6 |
| BCX73 | NPN | TO-92 (72) | 32 | 60 | 5 | 20 | 32 | 100-630 | 1 | 100 | 12 | 100 | |
| BCX73-16 | NPN | TO-92 (72) | 32 | 60 | 5 | 20 | 32 | 100-250 | 1 | 100 | 12 | 100 | |
| BCX73-25 | NPN | TO-92 (72) | 32 | 60 | 5 | 20 | 32 | 160-400 | 1 | 100 | 12 | 100 | |
| BCX73-40 | NPN | TO-92 (72) | 32 | 60 | 5 | 20 | 32 | 250-630 | 1 | 100 | 12 | 100 | |
| BCX74 | NPN | TO-92 (72) | 45 | 75 | 5 | 20 | 45 | 100-630 | 1 | 100 | 12 | 100 | |
| BCX74-16 | NPN | TO-92 (72) | 45 | 75 | 5 | 20 | 45 | 100-250 | 1 | 100 | 12 | 100 | |

2514096 CRIMSON SEMICONDUCTOR INC

99D 00322 D' T-29-01

| DEVICE | TYPE PACKAGE | BVCEO | BVCBO | BVEBO | ICBO | VCB | HFE | VC & IC | COB | FT | NF |
|----------|----------------|---------|---------|---------|----------|---------------|--------------|----------|-------|----------|----|
| | | (V) MIN | (V) MIN | (V) MIN | (mA) MAX | (V) MIN - MAX | (V) (mA) (p) | (p) MAX | (MHz) | (db) MAX | |
| BCX74-25 | NPN TO-92 (72) | 45 | 75 | 5 | 20 | 45 | 160-400 | 1 100 | 12 | 100 | |
| BCX74-40 | NPN TO-92 (72) | 45 | 75 | 5 | 20 | 45 | 250-630 | 1 100 | 12 | 100 | |
| BCX75 | PNP TO-92 (72) | 32 | 60 | 5 | 20 | 32 | 100-630 | 1 100 | 18 | 100 | |
| BCX75-16 | PNP TO-92 (72) | 32 | 60 | 5 | 20 | 32 | 100-250 | 1 100 | 18 | 100 | |
| BCX75-25 | PNP TO-92 (72) | 32 | 60 | 5 | 20 | 32 | 160-400 | 1 100 | 18 | 100 | |
| BCX75-40 | PNP TO-92 (72) | 32 | 60 | 5 | 20 | 32 | 250-630 | 1 100 | 18 | 100 | |
| BCX76 | PNP TO-92 (72) | 45 | 75 | 5 | 20 | 45 | 100-630 | 1 100 | 18 | 100 | |
| BCX76-16 | PNP TO-92 (72) | 45 | 75 | 5 | 20 | 45 | 100-250 | 1 100 | 18 | 100 | |
| BCX76-25 | PNP TO-92 (72) | 45 | 75 | 5 | 20 | 45 | 160-400 | 1 100 | 18 | 100 | |
| BCX76-40 | PNP TO-92 (72) | 45 | 75 | 5 | 20 | 45 | 250-630 | 1 100 | 18 | 100 | |
| BCX78 | PNP TO-92 (72) | 32 | 32 | 5 | 10 | 32 | 120-630 | 5 2 4.5 | 200 | 6 | |
| BCX78- 7 | PNP TO-92 (72) | 32 | 32 | 5 | 10 | 32 | 120-220 | 5 2 4.5 | 200 | 6 | |
| BCX78- 8 | PNP TO-92 (72) | 32 | 32 | 5 | 10 | 32 | 180-310 | 5 2 4.5 | 200 | 6 | |
| BCX78- 9 | PNP TO-92 (72) | 32 | 32 | 5 | 10 | 32 | 250-460 | 5 2 4.5 | 200 | 6 | |
| BCX78-10 | PNP TO-92 (72) | 32 | 32 | 5 | 10 | 32 | 380-630 | 5 2 4.5 | 200 | 6 | |
| BCX79 | PNP TO-92 (72) | 45 | 45 | 5 | 10 | 45 | 120-630 | 5 2 4.5 | 200 | 6 | |
| BCX79- 7 | PNP TO-92 (72) | 45 | 45 | 5 | 10 | 45 | 120-220 | 5 2 4.5 | 200 | 6 | |
| BCX79- 8 | PNP TO-92 (72) | 45 | 45 | 5 | 10 | 45 | 180-310 | 5 2 4.5 | 200 | 6 | |
| BCX79- 9 | PNP TO-92 (72) | 45 | 45 | 5 | 10 | 45 | 250-460 | 5 2 4.5 | 200 | 6 | |
| BCX79-10 | PNP TO-92 (72) | 45 | 45 | 5 | 10 | 45 | 380-630 | 5 2 4.5 | 200 | 6 | |
| BCY58 | NPN TO-18 | 32 | 32 | 7 | 10 | 32 | 120-630 | 5 2 4.5 | 125 | 6 | |
| BCY58- 7 | NPN TO-18 | 32 | 32 | 7 | 10 | 32 | 120-220 | 5 2 4.5 | 125 | 6 | |
| BCY58- 8 | NPN TO-18 | 32 | 32 | 7 | 10 | 32 | 180-310 | 5 2 4.5 | 125 | 6 | |
| BCY58- 9 | NPN TO-18 | 32 | 32 | 7 | 10 | 32 | 250-460 | 5 2 4.5 | 125 | 6 | |
| BCY58-10 | NPN TO-18 | 32 | 32 | 7 | 10 | 32 | 380-630 | 5 2 4.5 | 125 | 6 | |
| BCY59 | NPN TO-18 | 45 | 45 | 7 | 10 | 45 | 120-630 | 5 2 4.5 | 125 | 6 | |
| BCY59- 7 | NPN TO-18 | 45 | 45 | 7 | 10 | 45 | 120-220 | 5 2 4.5 | 125 | 6 | |
| BCY59- 8 | NPN TO-18 | 45 | 45 | 7 | 10 | 45 | 180-310 | 5 2 4.5 | 125 | 6 | |
| BCY59- 9 | NPN TO-18 | 45 | 45 | 7 | 10 | 45 | 250-460 | 5 2 4.5 | 125 | 6 | |
| BCY59-10 | NPN TO-18 | 45 | 45 | 7 | 10 | 45 | 380-630 | 5 2 4.5 | 125 | 6 | |
| BCY78 | PNP TO-18 | 32 | 32 | 5 | 10 | 32 | 120-630 | 5 2 4.5 | 200 | 6 | |
| BCY78- 7 | PNP TO-18 | 32 | 32 | 5 | 10 | 32 | 120-220 | 5 2 4.5 | 200 | 6 | |
| BCY78- 8 | PNP TO-18 | 32 | 32 | 5 | 10 | 32 | 180-310 | 5 2 4.5 | 200 | 6 | |
| BCY78- 9 | PNP TO-18 | 32 | 32 | 5 | 10 | 32 | 250-460 | 5 2 4.5 | 200 | 6 | |
| BCY78-10 | PNP TO-18 | 32 | 32 | 5 | 10 | 32 | 380-630 | 5 2 4.5 | 200 | 6 | |
| BCY79 | PNP TO-18 | 45 | 45 | 5 | 10 | 45 | 120-630 | 5 2 4.5 | 200 | 6 | |
| BCY79- 7 | PNP TO-18 | 45 | 45 | 5 | 10 | 45 | 120-220 | 5 2 4.5 | 200 | 6 | |
| BCY79- 8 | PNP TO-18 | 45 | 45 | 5 | 10 | 45 | 180-310 | 5 2 4.5 | 200 | 6 | |
| BCY79- 9 | PNP TO-18 | 45 | 45 | 5 | 10 | 45 | 250-460 | 5 2 4.5 | 200 | 6 | |
| BCY79-10 | PNP TO-18 | 45 | 45 | 5 | 10 | 45 | 380-630 | 5 2 4.5 | 200 | 6 | |
| BF198 | NPN TO-92 (72) | 30 | 40 | 4 | 100 | 40 | 26- | 10 4 .4 | 400 | | |
| BF199 | NPN TO-92 (72) | 25 | 40 | 4 | 100 | 40 | 38- | 10 7 .4 | 550 | | |
| BF240 | NPN TO-92 (72) | 40 | 40 | 4 | 100 | 20 | 67-222 | 10 1 .4 | 400 | | |
| BF241 | NPN TO-92 (72) | 40 | 40 | 4 | 100 | 20 | 36-125 | 10 1 .4 | 400 | | |
| BF254 | NPN TO-92 (72) | 20 | 30 | 5 | 100 | 20 | 67-220 | 10 1 .85 | 260 | | |

2514096 CRIMSON SEMICONDUCTOR INC

99D 00323

D

T-29-01

| DEVICE | TYPE PACKAGE | BVCEO | BVCBO | BVEBO | ICBO @ VCB | HFE @ VC & IC | VC & IC | | COB | FT | NF | |
|----------|----------------|---------|---------|---------|------------|---------------|---------|------|----------|-------|----------|---|
| | | (V) MIN | (V) MIN | (V) MIN | (mA) MAX | (V) MIN -MAX | (V) | (mA) | (pI) MAX | (MHz) | (db) MAX | |
| BF255 | NPN TO-92 (72) | 90 | 30 | 5 | 100 | 20 | 36-125 | 10 | 1 | .85 | 200 | |
| BF257 | NPN TO-39 | 160 | 160 | 5 | 50 | 100 | 25- | 10 | 30 | 5.5 | 90 | |
| BF258 | NPN TO-39 | 250 | 250 | 5 | 50 | 200 | 25- | 10 | 30 | 5.5 | 90 | |
| BF259 | NPN TO-39 | 300 | 300 | 5 | 50 | 250 | 25- | 10 | 30 | 5.5 | 90 | |
| BF297 | NPN TO-92 (72) | 160 | 160 | 5 | 50 | 100 | 30-150 | 10 | 30 | 5.5 | 95 | |
| BF298 | NPN TO-92 (72) | 250 | 250 | 5 | 50 | 200 | 30-150 | 10 | 30 | 5.5 | 95 | |
| BF299 | NPN TO-92 (72) | 300 | 300 | 5 | 50 | 250 | 30-150 | 10 | 30 | 5.5 | 95 | |
| BF336 | NPN TO-39 | 180 | 185 | 5 | 50 | 100 | 20-100 | 10 | 30 | 5.5 | 80 | |
| BF337 | NPN TO-39 | 200 | 250 | 5 | 50 | 200 | 20-100 | 10 | 30 | 5.5 | 80 | |
| BF338 | NPN TO-39 | 225 | 300 | 5 | 50 | 250 | 20-100 | 10 | 30 | 5.5 | 80 | |
| BF397 | PNP TO-92 (72) | 90 | 90 | 6 | 100 | 90 | 40-250 | 10 | 10 | | | |
| BF398 | PNP TO-92 (72) | 150 | 150 | 6 | 100 | 120 | 30-200 | 10 | 10 | | | |
| BF411 | NPN TO-92 (72) | 90 | 110 | 5 | 100 | 90 | 30- | 10 | 10 | | | |
| BF412 | NPN TO-92 (72) | 130 | 150 | 5 | 100 | 120 | 30- | 10 | 10 | | | |
| BF413 | NPN TO-92 (72) | 170 | 200 | 5 | 100 | 150 | 30- | 10 | 10 | | | |
| BFX37 | PNP TO-18 | 60 | 60 | 6 | 20 | 50 | 70-300 | 5 | .01 | 6 | 40 | 3 |
| BFX38 | PNP TO-5 | 55 | 55 | 5 | 50 | 40 | 85- | 5 | 100 | 20 | 100 | |
| BFX39 | PNP TO-5 | 55 | 55 | 5 | 50 | 40 | 40- | 5 | 100 | 20 | 100 | |
| BFX40 | PNP TO-5 | 75 | 75 | 5 | 50 | 50 | 85- | 5 | 100 | 20 | 100 | |
| BFX41 | PNP TO-5 | 75 | 75 | 5 | 50 | 50 | 40- | 5 | 100 | 20 | 100 | |
| BFY65 | PNP TO-18 | 45 | 45 | 6 | 10 | 40 | 120- | 5 | 1 | 6.5 | | 3 |
| BFY84 | NPN TO-39 | 60 | 100 | 5 | 500 | 100 | 30- | 10 | 150 | 12 | 50 | |
| BFY87 | PNP TO-39 | 50 | 50 | 4 | 500 | 50 | 40- | 10 | 150 | 12 | 100 | |
| BFY39 | PNP TO-18 | 25 | 45 | 5 | 50 | 30 | 35-400 | 10 | 10 | 5 | 150 | |
| BFY39-1 | NPN TO-18 | 25 | 45 | 5 | 50 | 30 | 35-110 | 10 | 10 | 5 | 150 | |
| BFY39-2 | NPN TO-18 | 25 | 45 | 5 | 50 | 30 | 100-200 | 10 | 10 | 5 | 150 | |
| BFY39-3 | NPN TO-18 | 25 | 45 | 5 | 50 | 30 | 180-400 | 10 | 10 | 5 | 150 | |
| BFY50 | NPN TO-39 | 35 | 80 | 6 | 500 | 80 | 30- | 10 | 150 | 12 | 60 | |
| BFY51 | NPN TO-39 | 30 | 60 | 6 | 500 | 60 | 40- | 10 | 150 | 12 | 60 | |
| BFY52 | NPN TO-39 | 20 | 40 | 6 | 500 | 40 | 60- | 10 | 150 | 12 | 60 | |
| BFY72 | NPN TO-39 | 28 | 50 | 5 | 20 | 40 | 40-150 | 10 | 150 | 8 | 250 | |
| BFY76 | NPN TO-18 | 45 | 45 | 6 | 20 | 30 | 30-200 | 5 | .01 | 6 | | |
| BSX45 | NPN TO-39 | 40 | 80 | 7 | 30 | 60 | 40-250 | 1 | 100 | 20 | 60 | |
| BSX45-6 | NPN TO-39 | 40 | 80 | 7 | 30 | 60 | 40-100 | 1 | 100 | 20 | 60 | |
| BSX45-10 | NPN TO-39 | 40 | 80 | 7 | 30 | 60 | 63-160 | 1 | 100 | 20 | 60 | |
| BSX45-16 | NPN TO-39 | 40 | 80 | 7 | 30 | 60 | 100-250 | 1 | 100 | 20 | 60 | |
| BSX46 | NPN TO-39 | 60 | 100 | 7 | 10 | 60 | 40-250 | 1 | 100 | 20 | 60 | |
| BSX46-6 | NPN TO-39 | 60 | 100 | 7 | 10 | 60 | 40-100 | 1 | 100 | 20 | 60 | |
| BSX46-10 | NPN TO-39 | 60 | 100 | 7 | 10 | 60 | 63-160 | 1 | 100 | 20 | 60 | |
| BSX46-16 | NPN TO-39 | 60 | 100 | 7 | 10 | 60 | 100-250 | 1 | 100 | 20 | 60 | |
| BSY51 | NPN TO-5 | 25 | 60 | 5 | 100 | 30 | 40-120 | 10 | 150 | 9 | 130 | |
| BSY52 | NPN TO-5 | 25 | 60 | 5 | 100 | 30 | 100-300 | 10 | 150 | 9 | 130 | |
| BSY53 | NPN TO-5 | 30 | 75 | 7 | 10 | 60 | 40-120 | 10 | 150 | 9 | 150 | |
| BSY54 | NPN TO-5 | 30 | 75 | 7 | 10 | 60 | 100-300 | 10 | 150 | 9 | 150 | |
| BSY95A | NPN TO-18 | 15 | 20 | 5 | 50 | 16 | 50-200 | .35 | 10 | 6 | 200 | |

2514096 CRIMSON SEMICONDUCTOR INC

99D 00324 D

T-29-01

| DEVICE | TYPE PACKAGE | BVCEO | BVCBO | BVEBO | ICBO @ VCB | HFE @ VC & IC | COB | FT | NF |
|---------|----------------|---------|---------|---------|------------|----------------|-------------------|-------|----------|
| | | (V) MIN | (V) MIN | (V) MIN | (mA) MAX | (V) MIN - MAX | (V) (mA) (pF) MAX | (MHz) | (dB) MAX |
| CS1402A | NPN TO-92 (72) | 20 | 25 | 4 | 20 | 10 100- 165 5 | 2 3.5 | 125 | 4 |
| CS1402B | NPN TO-92 (72) | 20 | 25 | 4 | 20 | 10 150- 225 5 | 2 3.5 | 125 | 4 |
| CS1402C | NPN TO-92 (72) | 20 | 25 | 4 | 20 | 10 202- 318 5 | 2 3.5 | 125 | 4 |
| CS1402D | NPN TO-92 (72) | 20 | 25 | 4 | 20 | 10 290- 450 5 | 2 3.5 | 125 | 4 |
| CS1402E | NPN TO-92 (72) | 20 | 25 | 4 | 20 | 10 410- 810 5 | 2 3.5 | 125 | 4 |
| CS1502A | NPN TO-92 (72) | 20 | 20 | 4 | 50 | 18 36- 55 10 | 1 1.7 | 600 | 5 |
| CS1502B | NPN TO-92 (72) | 20 | 20 | 4 | 50 | 18 48- 75 10 | 1 1.7 | 600 | 5 |
| CS1502C | NPN TO-92 (72) | 20 | 20 | 4 | 50 | 18 66- 100 10 | 1 1.7 | 600 | 5 |
| CS1502D | NPN TO-92 (72) | 20 | 20 | 4 | 50 | 18 84- 127 10 | 1 1.7 | 600 | 5 |
| CS1502E | NPN TO-92 (72) | 20 | 20 | 4 | 50 | 18 105- 210 10 | 1 1.7 | 600 | 5 |
| CS1602A | PNP TO-92 (72) | 20 | 25 | 4 | 20 | 10 70- 105 5 | 2 6 | 200 | 4 |
| CS1602B | PNP TO-92 (72) | 20 | 25 | 4 | 20 | 10 90- 135 5 | 2 6 | 200 | 4 |
| CS1602C | PNP TO-92 (72) | 20 | 25 | 4 | 20 | 10 125- 190 5 | 2 6 | 200 | 4 |
| CS1602D | PNP TO-92 (72) | 20 | 25 | 4 | 20 | 10 170- 260 5 | 2 6 | 200 | 4 |
| CS1602E | PNP TO-92 (72) | 20 | 25 | 4 | 20 | 10 223- 475 5 | 2 6 | 200 | 4 |
| CS1702K | NPN TO-92 (72) | 25 | 25 | 5 | 500 | 18 106- 150 1 | 100 20 | 150 | |
| CS1702L | NPN TO-92 (72) | 25 | 25 | 5 | 500 | 18 132- 188 1 | 100 20 | 150 | |
| CS1702M | NPN TO-92 (72) | 25 | 25 | 5 | 500 | 18 170- 233 1 | 100 20 | 150 | |
| CS1702N | NPN TO-92 (72) | 25 | 25 | 5 | 500 | 18 213- 300 1 | 100 20 | 150 | |
| CS1702O | NPN TO-92 (72) | 25 | 25 | 5 | 500 | 18 250- 1 100 | 20 | 150 | |
| CS1802K | PNP TO-92 (72) | 25 | 25 | 5 | 500 | 18 106- 150 1 | 100 35 | 100 | |
| CS1802L | PNP TO-92 (72) | 25 | 25 | 5 | 500 | 18 132- 188 1 | 100 35 | 100 | |
| CS1802M | PNP TO-92 (72) | 25 | 25 | 5 | 500 | 18 170- 233 1 | 100 35 | 100 | |
| CS1802N | PNP TO-92 (72) | 25 | 25 | 5 | 500 | 18 213- 300 1 | 100 35 | 100 | |
| CS1802O | PNP TO-92 (72) | 25 | 25 | 5 | 500 | 18 250- 1 100 | 35 | 100 | |
| CS8050B | NPN TO-92 (72) | 25 | 30 | 5 | 500 | 20 85- 160 1 | 100 20 | 150 | |
| CS8050C | NPN TO-92 (72) | 25 | 30 | 5 | 500 | 20 120- 200 1 | 100 20 | 150 | |
| CS8050D | NPN TO-92 (72) | 25 | 30 | 5 | 500 | 20 160- 300 1 | 100 20 | 150 | |
| CS8550B | PNP TO-92 (72) | 25 | 30 | 5 | 500 | 20 85- 160 1 | 100 35 | 100 | |
| CS8550C | PNP TO-92 (72) | 25 | 30 | 5 | 500 | 20 120- 200 1 | 100 35 | 100 | |
| CS8550D | PNP TO-92 (72) | 25 | 30 | 5 | 500 | 20 160- 300 1 | 100 35 | 100 | |
| CS9011D | NPN TO-92 (72) | 18 | 18 | 3 | 50 | 18 29- 44 5 | 1 3.5 | 250 | 4 |
| CS9011E | NPN TO-92 (72) | 18 | 18 | 3 | 50 | 18 40- 59 5 | 1 3.5 | 250 | 4 |
| CS9011F | NPN TO-92 (72) | 18 | 18 | 3 | 50 | 18 54- 80 5 | 1 3.5 | 250 | 4 |
| CS9011G | NPN TO-92 (72) | 18 | 18 | 3 | 50 | 18 72- 108 5 | 1 3.5 | 250 | 4 |
| CS9011H | NPN TO-92 (72) | 18 | 18 | 3 | 50 | 18 97- 146 5 | 1 3.5 | 250 | 4 |
| CS9011I | NPN TO-92 (72) | 18 | 18 | 3 | 50 | 18 132- 198 5 | 1 3.5 | 250 | 4 |
| CS9011J | NPN TO-92 (72) | 18 | 18 | 3 | 50 | 18 182- 273 5 | 1 3.5 | 250 | 4 |
| CS9012D | PNP TO-92 (72) | 25 | 25 | 3 | 500 | 18 64- 91 1 | 50 12 | 200 | 6 |
| CS9012E | PNP TO-92 (72) | 25 | 25 | 3 | 500 | 18 78- 112 1 | 50 12 | 200 | 6 |
| CS9012F | PNP TO-92 (72) | 25 | 25 | 3 | 500 | 18 96- 135 1 | 50 12 | 200 | 6 |
| CS9012G | PNP TO-92 (72) | 25 | 25 | 3 | 500 | 18 118- 166 1 | 50 12 | 200 | 6 |
| CS9012H | PNP TO-92 (72) | 25 | 25 | 3 | 500 | 18 144- 202 1 | 50 12 | 200 | 6 |
| CS9012I | PNP TO-92 (72) | 25 | 25 | 3 | 500 | 18 182- 305 1 | 50 12 | 200 | 6 |
| CS9012J | PNP TO-92 (72) | 25 | 25 | 3 | 500 | 18 278- 465 1 | 50 12 | 200 | 6 |

2514096 CRIMSON SEMICONDUCTOR INC

99D 00325 D

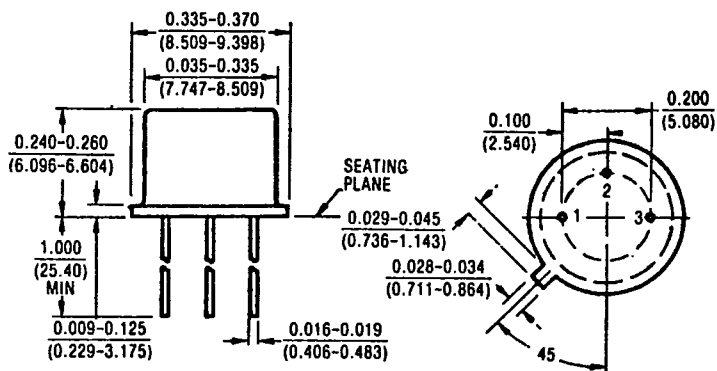
T-29-01

| DEVICE | TYPE PACKAGE | BVCEO | BVCBO | BVEBO | ICBO @ VCB | | HFE @ VC & IC | | COB | FT | NF | |
|----------|----------------|---------|---------|---------|------------|--------------|---------------|-------|-----|-----|-----|-------|
| | | (V) MIN | (V) MIN | (V) MIN | (mA) MAX | (V) MIN -MAX | (V) (mA) (p) | (MAX) | | | | (MHz) |
| CS9013D | NPN TO-92 (72) | 25 | 25 | 3 | 500 | 18 | 64- 91 | 1 | 50 | 10 | 200 | 6 |
| CS9013E | NPN TO-92 (72) | 25 | 25 | 3 | 500 | 18 | 78- 112 | 1 | 50 | 10 | 200 | 6 |
| CS9013F | NPN TO-92 (72) | 25 | 25 | 3 | 500 | 18 | 96- 135 | 1 | 50 | 10 | 200 | 6 |
| CS9013G | NPN TO-92 (72) | 25 | 25 | 3 | 500 | 18 | 118- 166 | 1 | 50 | 10 | 200 | 6 |
| CS9013H | NPN TO-92 (72) | 25 | 25 | 3 | 500 | 18 | 144- 202 | 1 | 50 | 10 | 200 | 6 |
| CS9013I | NPN TO-92 (72) | 25 | 25 | 3 | 500 | 18 | 182- 305 | 1 | 50 | 10 | 200 | 6 |
| CS9013J | NPN TO-92 (72) | 25 | 25 | 3 | 500 | 18 | 278- 465 | 1 | 50 | 10 | 200 | 6 |
| CS9014A | NPN TO-92 (72) | 18 | 18 | 3 | 50 | 18 | 60- 150 | 5 | 1 | 3.5 | 125 | 4 |
| CS9014B | NPN TO-92 (72) | 18 | 18 | 3 | 50 | 18 | 100- 300 | 5 | 1 | 3.5 | 125 | 4 |
| CS9014C | NPN TO-92 (72) | 18 | 18 | 3 | 50 | 18 | 200- 600 | 5 | 1 | 3.5 | 125 | 4 |
| CS9014D | NPN TO-92 (72) | 18 | 18 | 3 | 50 | 18 | 400-1000 | 5 | 1 | 3.5 | 125 | 4 |
| CS9014D1 | NPN TO-92 (72) | 18 | 18 | 3 | 50 | 18 | 400- 630 | 5 | 1 | 3.5 | 125 | 4 |
| CS9014D2 | NPN TO-92 (72) | 18 | 18 | 3 | 50 | 18 | 570- 840 | 5 | 1 | 3.5 | 125 | 4 |
| CS9014D3 | NPN TO-92 (72) | 18 | 18 | 3 | 50 | 18 | 760-1000 | 5 | 1 | 3.5 | 125 | 4 |
| CS9014E | NPN TO-92 (72) | 18 | 18 | 3 | 50 | 18 | 800- | 5 | 1 | 3.5 | 125 | 4 |
| CS9015A | PNP TO-92 (72) | 18 | 18 | 3 | 50 | 18 | 60- 150 | 5 | 1 | 6 | 200 | 4 |
| CS9015B | PNP TO-92 (72) | 18 | 18 | 3 | 50 | 18 | 100- 300 | 5 | 1 | 6 | 200 | 4 |
| CS9015C | PNP TO-92 (72) | 18 | 18 | 3 | 50 | 18 | 200- 600 | 5 | 1 | 6 | 200 | 4 |
| CS9015D | PNP TO-92 (72) | 18 | 18 | 3 | 50 | 18 | 400-1000 | 5 | 1 | 6 | 200 | 4 |
| CS9015D1 | PNP TO-92 (72) | 18 | 18 | 3 | 50 | 18 | 400- 630 | 5 | 1 | 6 | 200 | 4 |
| CS9015D2 | PNP TO-92 (72) | 18 | 18 | 3 | 50 | 18 | 570- 840 | 5 | 1 | 6 | 200 | 4 |
| CS9015D3 | PNP TO-92 (72) | 18 | 18 | 3 | 50 | 18 | 760-1000 | 5 | 1 | 6 | 200 | 4 |
| CS9015E | PNP TO-92 (72) | 18 | 18 | 3 | 50 | 18 | 800- | 5 | 1 | 6 | 200 | 4 |
| CS9018D | NPN TO-92 (72) | 12 | 15 | 3 | 50 | 15 | 29- 44 | 5 | 1 | 1.7 | 600 | 5 |
| CS9018E | NPN TO-92 (72) | 12 | 15 | 3 | 50 | 15 | 40- 59 | 5 | 1 | 1.7 | 600 | 5 |
| CS9018F | NPN TO-92 (72) | 12 | 15 | 3 | 50 | 15 | 54- 80 | 5 | 1 | 1.7 | 600 | 5 |
| CS9018G | NPN TO-92 (72) | 12 | 15 | 3 | 50 | 15 | 72- 108 | 5 | 1 | 1.7 | 600 | 5 |
| CS9018H | NPN TO-92 (72) | 12 | 15 | 3 | 50 | 15 | 97- 146 | 5 | 1 | 1.7 | 600 | 5 |
| CS9018I | NPN TO-92 (72) | 12 | 15 | 3 | 50 | 15 | 132- 198 | 5 | 1 | 1.7 | 600 | 5 |
| CS9018J | NPN TO-92 (72) | 12 | 15 | 3 | 50 | 15 | 182- 273 | 5 | 1 | 1.7 | 600 | 5 |
| CSBD135 | NPN TO-237 | 25 | 30 | 5 | 100 | 20 | 40- 250 | 2 | 150 | 20 | 150 | |
| CSBD135A | NPN TO-237 | 25 | 30 | 5 | 100 | 20 | 40- 100 | 2 | 150 | 20 | 150 | |
| CSBD135B | NPN TO-237 | 25 | 30 | 5 | 100 | 20 | 63- 160 | 2 | 150 | 20 | 150 | |
| CSBD135C | NPN TO-237 | 25 | 30 | 5 | 100 | 20 | 100- 250 | 2 | 150 | 20 | 150 | |
| CSBD135D | NPN TO-237 | 25 | 30 | 5 | 100 | 20 | 160- 350 | 2 | 150 | 20 | 150 | |
| CSBD136 | PNP TO-237 | 25 | 30 | 5 | 100 | 20 | 40- 250 | 2 | 150 | 35 | 100 | |
| CSBD136A | PNP TO-237 | 25 | 30 | 5 | 100 | 20 | 40- 100 | 2 | 150 | 35 | 100 | |
| CSBD136B | PNP TO-237 | 25 | 30 | 5 | 100 | 20 | 63- 160 | 2 | 150 | 35 | 100 | |
| CSBD136C | PNP TO-237 | 25 | 30 | 5 | 100 | 20 | 100- 250 | 2 | 150 | 35 | 100 | |
| CSBD136D | PNP TO-237 | 25 | 30 | 5 | 100 | 20 | 160- 350 | 2 | 150 | 35 | 100 | |

2514096 CRIMSON SEMICONDUCTOR INC
 99D 00326 D T.29.01
PACKAGE OUTLINES

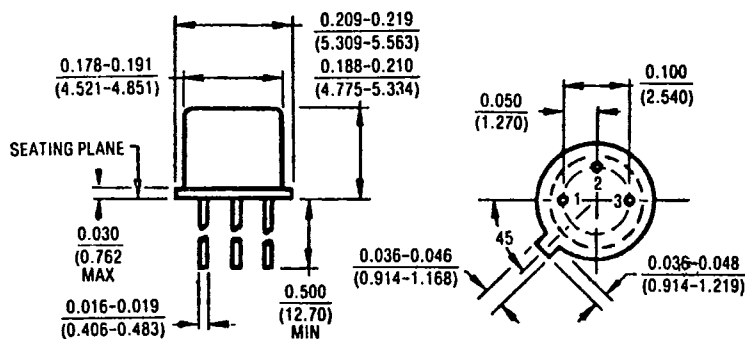
T0-5

| PIN | T |
|-----|---|
| 1 | E |
| 2 | B |
| 3 | C |



T0-18

| PIN | T |
|-----|---|
| 1 | E |
| 2 | B |
| 3 | C |



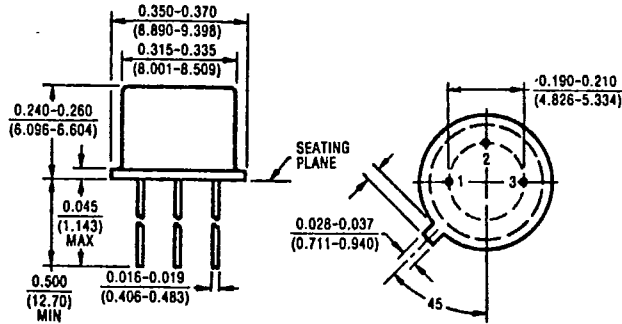
2514096 CRIMSON SEMICONDUCTOR INC

99D 00327 D T-29-01

PACKAGE OUTLINES

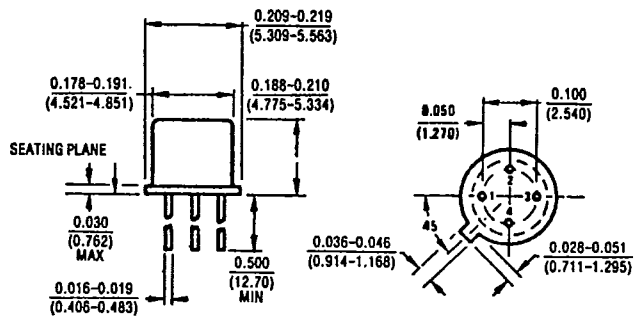
TO-39

| PN | T |
|----|---|
| 1 | E |
| 2 | B |
| 3 | C |



TO-72

| PN | T |
|----|-----|
| 1 | E |
| 2 | B |
| 3 | C |
| 4 | GND |



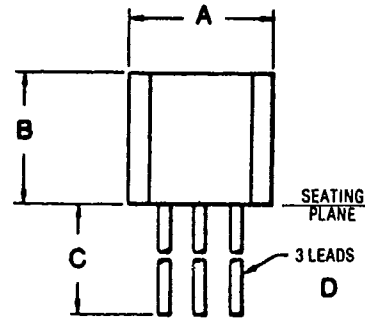
2514096 CRIMSON SEMICONDUCTOR INC

99D 00328 D T-29-01

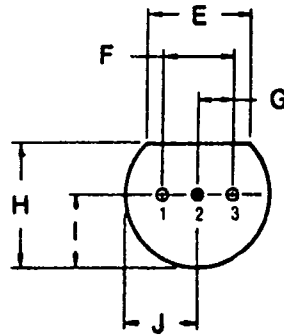
PACKAGE OUTLINES

TO-92 (72, 74, 75, 76, 77, 78)

| # | N | L | P | O | K | M |
|----|----|----|----|----|----|----|
| PN | 72 | 74 | 75 | 76 | 77 | 78 |
| 1 | E | E | B | B | C | C |
| 2 | B | C | C | E | B | E |
| 3 | C | B | E | C | E | B |



| DIM. | INCHES | | MILLIMETRES | | |
|------|--------|-----------|-------------|------|-------|
| | MIN. | TYP. MAX. | MIN. | TYP. | MAX. |
| A | .175 | .205 | 4.45 | | 5.20 |
| B | .170 | .210 | 4.32 | | 5.33 |
| C | .500 | | 12.70 | | |
| D | .016 | .019 | 0.406 | | 0.483 |
| E | .135 | | .343 | | |
| F | | .100 | | 2.54 | |
| G | | .050 | | 1.27 | |
| H | .125 | .165 | 3.18 | | 4.19 |
| I | .080 | .105 | 2.03 | | 2.67 |
| J | .080 | .105 | 2.03 | | 2.67 |



TO-237 (TO-92 PLUS)

| PN | T |
|----|---|
| 1 | E |
| 2 | B |
| 3 | C |

