

NPN - METAL CAN - SWITCHING AND GENERAL PURPOSE (Cont'd.)

| TYPE NO. | V _{CB} | V _{CE} | V _{EB} | h _{FE} | at | I _C | V _{CE} | V _{CE(s)} at I _B | I _C | f _T | C _{ob} | I _{CB0} at V _{CB} | CASE | | |
|----------|-----------------|-----------------|-----------------|-----------------|-----|----------------|-----------------|--------------------------------------|----------------|----------------|-----------------|-------------------------------------|-------|-----|-------|
| | V | V | V | min | max | mA | V | V | mA | mA | MHz | pF | | μA | V |
| 2N910 | 100 | 60 | 7 | 75 | — | 10 | 10 | 1.2 | 5 | 50 | 60 | 15 | .025 | 75 | TO-18 |
| 2N911 | 100 | 60 | 7 | 35 | — | 10 | 10 | 1.2 | 5 | 50 | 50 | 15 | .025 | 75 | TO-18 |
| 2N912 | 100 | 60 | 7 | 15 | — | 10 | 10 | 1.2 | 5 | 50 | 40 | 15 | .025 | 75 | TO-18 |
| 2N956 | 75 | 50 | 7 | 100 | 300 | 150 | 10 | 1.5 | 15 | 150 | 70 | 25 | .01 | 60 | TO-18 |
| 2N1052 | 200 | 155 | 6 | 20 | 80 | 200 | 6 | 5 | 20 | 200 | 8 | 50 | 10 | 200 | TO-5 |
| 2N1053 | 180 | 135 | 6 | 20 | 80 | 200 | 6 | 5 | 20 | 200 | 8 | 50 | 10 | 180 | TO-5 |
| 2N1054 | 125 | 115 | 6 | 20 | 20 | 200 | 6 | 4 | 20 | 200 | 8 | 50 | 5 | 125 | TO-5 |
| 2N1055 | 100 | 100 | 6 | 20 | 80 | 50 | 6 | 2 | 5 | 50 | 3 | — | 15 | 100 | TO-5 |
| 2N1116 | 60 | 60 | 6 | 40 | 150 | 500 | 6 | 5 | 50 | 500 | 6 | 80 | 15 | 60 | TO-5 |
| 2N1117 | 60 | 60 | 6 | 40 | 150 | 200 | 6 | 4 | 20 | 200 | 4 | — | 15 | 60 | TO-5 |
| 2N1420 | 60 | 30 | 5 | 100 | 300 | 150 | 10 | 1.5 | 15 | 150 | 50 | 35 | 1 | 30 | TO-5 |
| 2N1420A | 30 | 28 | 7 | 100 | 300 | 150 | 10 | 1.5 | 15 | 150 | 60 | 25 | — | — | TO-5 |
| 2N1445 | 120 | 120 | 8 | 20 | 80 | 200 | 10 | 4 | 40 | 200 | — | — | 10 | 120 | TO-5 |
| 2N1479 | 60 | 40 | 12 | 20 | 60 | 200 | 4 | 1.4 | 20 | 200 | 1.5 | — | 10 | 30 | TO-5 |
| 2N1480 | 100 | 55 | 12 | 20 | 60 | 200 | 4 | 1.4 | 20 | 200 | 1.5 | — | 10 | 30 | TO-5 |
| 2N1481 | 60 | 40 | 12 | 35 | 100 | 200 | 4 | 1.4 | 10 | 200 | 1.5 | — | 10 | 30 | TO-5 |
| 2N1482 | 100 | 55 | 12 | 35 | 100 | 200 | 4 | 1.4 | 10 | 200 | 1.5 | — | 10 | 30 | TO-5 |
| 2N1507 | 60 | 25 | 5 | 100 | 300 | 150 | 10 | 1.5 | 15 | 150 | 50 | 35 | — | — | TO-5 |
| 2N1572 | 125 | 80 | 5 | 15 | 50 | 5 | 5 | 1 | 2 | 10 | 30 | 10 | 1 | 40 | TO-5 |
| 2N1573 | 125 | 80 | 5 | 30 | 100 | 5 | 5 | 1 | 2 | 10 | 60 | 10 | 1 | 40 | TO-5 |
| 2N1574 | 125 | 80 | 5 | 60 | 200 | 5 | 5 | 1 | 2 | 10 | 60 | 10 | 1 | 40 | TO-5 |
| 2N1613 | 75 | 40 | 7 | 40 | 120 | 150 | 10 | 1.5 | 15 | 150 | 60 | 25 | .01 | 60 | TO-5 |
| 2N1613A | 75 | 40 | 7 | 40 | 120 | 150 | 10 | 1.0 | 15 | 150 | 60 | 25 | — | — | TO-5 |
| 2N1613B | 120 | 50 | 7 | 40 | 120 | 150 | 10 | 0.2 | 15 | 150 | 60 | 10 | — | — | TO-5 |
| 2N1615 | 100 | 100 | 8 | 25 | — | 5 | 10 | 5 | 5 | 50 | 5 | — | 2 | 60 | TO-5 |
| 2N1700 | 60 | 40 | 6 | 20 | 80 | 100 | 4 | 10 | 10 | 100 | — | 100 | 500 | 60 | TO-5 |
| 2N1711 | 75 | 50 | 7 | 100 | 300 | 150 | 10 | 1.5 | 15 | 150 | 70 | 25 | 0.010 | 60 | TO-5 |
| 2N1711A | 35 | 32 | 7 | 100 | 300 | 150 | 10 | 1.0 | 15 | 150 | 70 | 25 | — | — | TO-5 |
| 2N1711B | 120 | 50 | 7 | 100 | 300 | 150 | 10 | 0.2 | 15 | 150 | 70 | 10 | — | — | TO-5 |
| 2N1714 | 60 | 60 | 6 | 20 | 60 | 200 | 5 | 2 | 20 | 200 | 16 | 50 | 2 | 60 | TO-5 |
| 2N1715 | 100 | 100 | 6 | 20 | 60 | 200 | 5 | 2 | 20 | 200 | 16 | 50 | 2 | 60 | TO-5 |
| 2N1716 | 60 | 60 | 6 | 40 | 120 | 200 | 5 | 2 | 20 | 200 | 16 | 50 | 2 | 60 | TO-5 |
| 2N1717 | 100 | 100 | 6 | 40 | 120 | 200 | 5 | 2 | 20 | 200 | 16 | 50 | — | — | TO-5 |
| 2N1889 | 100 | 60 | 7 | 40 | 120 | 150 | 10 | 5.0 | 15 | 150 | 50 | 15 | .01 | 75 | TO-5 |
| 2N1890 | 100 | 60 | 7 | 100 | 300 | 150 | 10 | 5.0 | 15 | 150 | 60 | 15 | .01 | 75 | TO-5 |
| 2N1893 | 120 | 80 | 7 | 40 | 120 | 150 | 10 | 5 | 15 | 150 | 50 | 15 | .01 | 90 | TO-5 |
| 2N1893A | 140 | 80 | 7 | 40 | 120 | 150 | 10 | 2.0 | 15 | 150 | 100 | 8 | — | — | TO-5 |
| 2N1972 | 60 | 25 | 5 | 110 | 350 | 50 | 10 | 2 | 5 | 50 | 50 | 35 | 1 | 30 | TO-5 |
| 2N1973 | 100 | 60 | 7 | 75 | — | 10 | 10 | 1.2 | 5 | 50 | 60 | 15 | .025 | 75 | TO-5 |
| 2N1974 | 100 | 60 | 7 | 35 | — | 10 | 10 | 1.2 | 5 | 50 | 50 | 15 | .025 | 75 | TO-5 |
| 2N1975 | 100 | 60 | 7 | 15 | — | 10 | 10 | 1.2 | 5 | 50 | 40 | 15 | .025 | 75 | TO-5 |
| 2N1983 | 50 | 25 | 5 | 70 | 240 | 5 | 5 | .25 | .5 | 5 | 40 | 45 | 5 | 30 | TO-5 |
| 2N1984 | 50 | 25 | 5 | 35 | 120 | 5 | 5 | .25 | .5 | 5 | 40 | 45 | 5 | 30 | TO-5 |
| 2N1985 | 50 | 25 | 5 | 15 | 80 | 5 | 5 | .25 | .5 | 5 | 40 | 45 | 5 | 30 | TO-5 |
| 2N1986 | 50 | 25 | 5 | 60 | 240 | 150 | 10 | 1.5 | 15 | 150 | 40 | 35 | 5 | 30 | TO-5 |
| 2N1987 | 50 | 25 | 5 | 20 | 80 | 150 | 10 | 1.5 | 15 | 150 | 40 | 35 | 5 | 30 | TO-5 |
| 2N1988 | 100 | 45 | 5 | 35 | 120 | 30 | 10 | 2.0 | 3 | 30 | 40 | 20 | 5 | 50 | TO-5 |
| 2N1989 | 100 | 45 | 5 | 20 | 60 | 30 | 10 | 2.0 | 3 | 30 | 40 | 20 | 5 | 50 | TO-5 |
| 2N1990 | 60 | 60 | 3 | 20 | — | 30 | 10 | 0.5 | 0.2 | 2 | — | — | — | — | TO-5 |
| 2N2017 | 60 | 60 | 8 | 50 | 200 | 200 | 10 | 2.0 | 20 | 200 | — | — | 10 | 30 | TO-39 |
| 2N2049 | 75 | 40 | 7 | 100 | 300 | 150 | 10 | .4 | 1 | 10 | 50 | 25 | .01 | 60 | TO-5 |
| 2N2102 | 120 | 65 | 7 | 40 | 120 | 150 | 10 | 0.5 | 15 | 150 | 60 | 10 | .002 | 60 | TO-5 |
| 2N2102A | 120 | 65 | 7 | 40 | 120 | 150 | 10 | 0.3 | 15 | 150 | 60 | 15 | — | — | TO-5 |
| 2N2106 | 60 | 60 | 8 | 12 | 36 | 200 | 10 | 5 | 40 | 200 | — | — | 10 | 30 | TO-5 |
| 2N2107 | 60 | 60 | 8 | 30 | 90 | 200 | 10 | 2 | 40 | 200 | — | — | 10 | 30 | TO-5 |
| 2N2192 | 60 | 40 | 5 | 100 | 300 | 150 | 10 | .35 | 15 | 150 | 50 | 20 | .01 | 30 | TO-5 |
| 2N2192A | 60 | 40 | 5 | 100 | 300 | 150 | 10 | .25 | 15 | 150 | 50 | 20 | .01 | 30 | TO-5 |
| 2N2192B | 60 | 40 | 5 | 100 | 300 | 150 | 10 | .18 | 15 | 150 | 50 | 20 | .01 | 30 | TO-5 |
| 2N2193 | 80 | 50 | 8 | 40 | 120 | 150 | 10 | — | 15 | 150 | 50 | 20 | .01 | 60 | TO-5 |
| 2N2193A | 80 | 50 | 8 | 40 | 120 | 150 | 10 | — | 15 | 150 | 50 | 20 | .01 | 60 | TO-5 |
| 2N2193B | 80 | 50 | 8 | 40 | 120 | 150 | 10 | 0.18 | 15 | 150 | 50 | 20 | — | — | TO-5 |
| 2N2194 | 60 | 40 | 5 | 20 | 60 | 150 | 10 | — | 15 | 150 | 50 | 20 | .01 | 30 | TO-5 |
| 2N2194A | 60 | 40 | 5 | 20 | 60 | 150 | 10 | — | 15 | 150 | 50 | 20 | .01 | 30 | TO-5 |
| 2N2194B | 60 | 40 | 5 | 20 | 60 | 150 | 10 | .18 | 15 | 150 | 50 | 20 | .01 | 30 | TO-5 |
| 2N2195 | 45 | 25 | 5 | 20 | — | 150 | 10 | .35 | 15 | 150 | 50 | 20 | .10 | 30 | TO-5 |
| 2N2195A | 45 | 25 | 5 | 20 | — | 150 | 10 | .25 | 15 | 150 | 50 | 20 | .10 | 30 | TO-5 |
| 2N2195B | 45 | 25 | 5 | 20 | — | 150 | 10 | .18 | 15 | 150 | 50 | 20 | .10 | 30 | TO-5 |
| 2N2217 | 60 | 30 | 5 | 20 | 60 | 150 | 10 | 0.4 | 15 | 150 | 250 | 8 | 0.01 | 50 | TO-5 |
| 2N2218 | 60 | 30 | 5 | 40 | 120 | 150 | 10 | 0.4 | 15 | 150 | 250 | 8 | 0.01 | 50 | TO-5 |
| 2N2218A | 75 | 40 | 6 | 40 | 120 | 150 | 10 | 0.3 | 15 | 150 | 250 | 8 | 0.01 | 60 | TO-5 |

CASE OUTLINE DRAWINGS

D



CASE A

CBR1 Series
CBR2 Series



CASE B

CBR1-L Series
CBR2-L Series



CASE C

CBR3-P Series



CASE D

CBR4-L Series



CASE E

CBR8 Series



CASE F

CBR10 Series, CBR25 Series
CBR12 Series, CBR30 Series

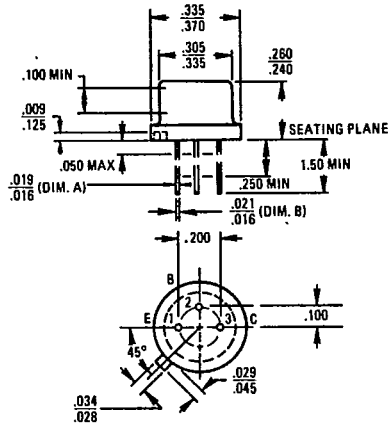
All Dimensions in Inches (Millimeters)

Drawings Not To Scale

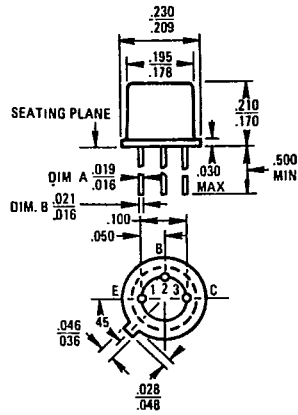
f

MECHANICAL OUTLINE DRAWINGS

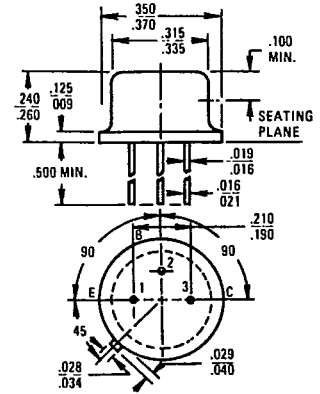
TO-5



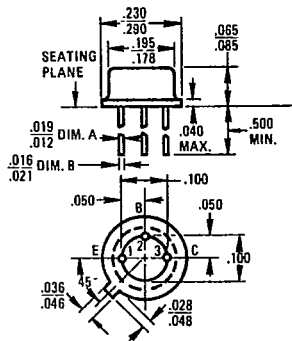
TO-18



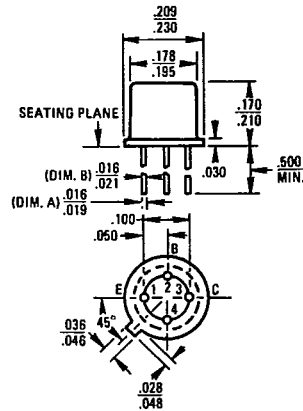
TO-39



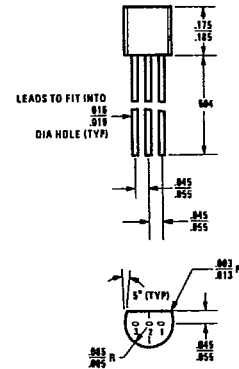
TO-46



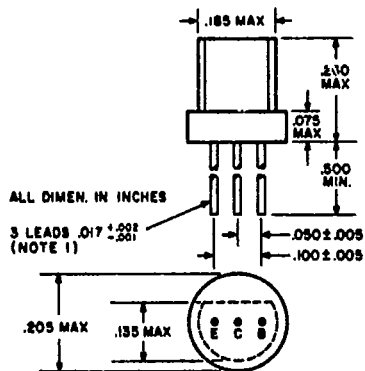
TO-72



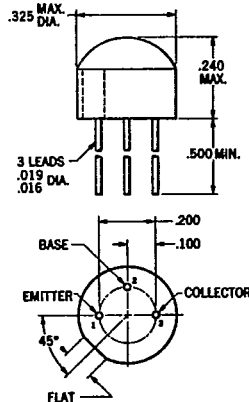
TO-92



TO-98



TO-105



TO-106

