

TO-220 Power Package Transistors (NPN)

| Maximum Ratings | | | | | | Electrical Characteristics (Ta=25°C, Unless Otherwise Specified) | | | | | | | | | | | | | | | | | |
|-----------------|--------------------------|--------------------------|--------------------------|-----------------------------|--------------------|------------------------------------------------------------------|--------------------------------------|---------------------------|----------------------------------------|---------------------|----------------------------------------------------|--------------------|---------------------|------------------------------|------------------------------|------------------------------|--------------------|--------------------------|--------------------------|--------------------------|--------------------------|--------------------------|---------------------|
| Type No. | V _{CEO} (V) Min | V _{CE0} (V) Min | V _{EBO} (V) Min | P _D (W) @Tc=25°C | I _C (A) | I _{CEO} (μA) Max | V _{CB} (V) @ I _C | I _{CES} (μA) Max | V _{CE} (V) @ I _{CES} | h _{FE} Min | h _{FE} @ I _C & V _{CE} | I _C (A) | V _{CE} (V) | V _{CE(SAT)} (V) Max | V _{BE(SAT)} (V) Min | V _{BE(SAT)} (V) Max | I _C (A) | C _{ob} (pF) Max | C _{ob} (pF) Typ | f _t (MHz) Min | f _t (MHz) Typ | f _t (MHz) Max | I _C (mA) |
| BD243B | 80 | 80 | 5 | 65 | 6 | | | 400 | 80 | 30 15 | 30 15 | 0.3 3 | 4 4 | 1.5 | | | 6 | | | 3 | | | 500 |
| BD243C | 100 | 100 | 5 | 65 | 6 | | | 400 | 100 | 30 15 | 30 15 | 0.3 3 | 4 4 | 1.5 | | | 6 | | | 3 | | | 500 |
| BD949 | 60 | 60 | 5 | 40 | 5 | 50 | 60 | | | 40 20 | 40 20 | 0.5 2 | 4 4 | 1 | | | 2 | | | 3 | | | 500 |
| BD951 | 80 | 80 | 5 | 40 | 5 | 50 | 80 | | | 40 20 | 40 20 | 0.5 2 | 4 4 | 1 | | | 2 | | | 3 | | | 500 |
| BD953 | 100 | 100 | 5 | 40 | 5 | 50 | 100 | | | 40 20 | 40 20 | 0.5 2 | 4 4 | 1 | | | 2 | | | 3 | | | 500 |
| BD955 | 120 | 120 | 5 | 40 | 5 | 50 | 120 | | | 40 20 | 40 20 | 0.5 2 | 4 4 | 1 | | | 2 | | | 3 | | | 500 |
| BU406 | 400 | 200 | 6 | 60 | 7 | | | 100 | 250 | | | | | 1 | | 1.2 | 5 | 80 | | 10 | | | 500 |
| BU407 | 330 | 150 | 6 | 60 | 7 | | | 100 | 200 | | | | | 1 | | 1.3 | 5 | 80 | | 10 | | | 500 |
| BU505 | ##1500 | 700 | 5 | 10 | 2.5 | | | 1000 | 1500 | 2 | | 2 | 5 | 5 | | 1.5 | 2 | | 65 | | 7.5 | | 100 |
| BU508AT | 1500 | 700 | | 56 | 8 | | | 1000 | 1500 | | | | | 1 | | 1.3 | 0.01 | | 125 | | 7 | | 100 |
| BUL45 | ##700 | 400 | 9 | 100 | 5 | | | 10 | 700 | 16 7 7 | 40 | 1 2 0.01 | 5 1 5 | 0.25 0.4 | | 1.2 1.3 | 1 2 | 75 | 45 | 12 | | | 500 |
| BUT11 | ##850 | 400 | 9 | 100 | 5 | | | 1000 | 850 | | | | | 1.5 | | 1.3 | 3 | | | | | | |
| BUV46 | ##850 | 400 | 7 | 70 | 5 | | | 300 | 850 | | | | | 1.5 5 | | 1.3 | 2.5 3.5 | | | | | | |
| CD3968 | 500 | 400 | 5 | 40 | 1 | | | 1000 | 500 | 30 10 | 150 | 0.3 1 | 10 10 | 1 | | | 1 | | | 10 | | | 200 |
| CSD1025 | 350 | 250 | 7 | 35 | 6 | 100 | 300 | | | 2500 1500 | | 2 4 | 3 3 | 2 | | | 4 | | 35 | | | | |
| MJE13005 | 700 | ##400 | 9 | 75 | 4 | | | \$1000 | 700 | 10 8 | 60 40 | 1 2 | 5 5 | 0.5 0.6 1 | | 1.2 1.6 | 1 2 4 | | | 4 | | | 500 |
| MJE13007 | 700 | ##400 | 9 | 80 | 8 | | | \$1000 | 700 | 8 5 | 60 30 | 2 5 | 5 5 | 1 2 3 | | 1.2 1.6 | 2 5 8 | | 110 | 4 | | | 500 |
| MJE3055T | 70 | 60 | 5 | 75 | 10 | 1000 | 70 | | | 20 5 | 100 | 4 10 | 4 4 | 1.1 8 | | | 4 10 | | | 2 | | | 500 |
| SJE1349 | 73 | 63 | 7 | 65 | 6 | 300 | 63 | 300 | 73 | 43 | | 4 | 4 | 1.07 3 | | | 4 10 | | | 20 | | | 500 |
| TIP110 | 60 | 60 | 5 | 50 | 2 | 1000 | 30 | | | 1000 500 | | 1 2 | 4 4 | 2.5 | | | 2 | | | | | | |
| TIP111 | 80 | 80 | 5 | 50 | 2 | 1000 | 40 | | | 1000 500 | | 1 2 | 4 4 | 2.5 | | | 2 | | | | | | |
| TIP112 | 100 | 100 | 5 | 50 | 2 | 1000 | 50 | | | 1000 500 | | 1 2 | 4 4 | 2.5 | | | 2 | | | | | | |

NOTE : V_{CE(SAT)}
 \$ NOTE : I_{CEV}
 # NOTE : V_{CEV}