

# Medium Power Amplifiers and Switches

| TYPE NO. | POLARITY | CASE    | MAXIMUM RATINGS |           |               | $H_{FE}$ |       |            |              | $V_{CE(SAT)}$ |           | $f_T$ min (MHz) | $C_{ob}$ max (pF) | COMPLEMENTARY TYPE |
|----------|----------|---------|-----------------|-----------|---------------|----------|-------|------------|--------------|---------------|-----------|-----------------|-------------------|--------------------|
|          |          |         | $P_d$ (mW)      | $I_C$ (A) | $V_{CEO}$ (V) | min      | max   | $I_C$ (mA) | $V_{CE}$ (V) | max (V)       | $I_C$ (A) |                 |                   |                    |
| 2N5816   | N        | TO-92F  | 625             | 0.75      | 40            | 100      | 200   | 2          | 2            | 0.75          | 0.5       | 120             | 15                | 2N5817             |
| 2N5817   | P        | TO-92F  | 625             | 0.75      | 40            | 100      | 200   | 2          | 2            | 0.75          | 0.5       | 120             | 15                | 2N5816             |
| 2N5818   | N        | TO-92F  | 625             | 0.75      | 40            | 150      | 300   | 2          | 2            | 0.75          | 0.5       | 135             | 15                | 2N5819             |
| 2N5819   | P        | TO-92F  | 625             | 0.75      | 40            | 150      | 300   | 2          | 2            | 0.75          | 0.5       | 135             | 15                | 2N5818             |
| 2N5820   | N        | TO-92F  | 625             | 1         | 60            | 60       | 120   | 2          | 2            | 0.75          | 0.5       | 140+            | 15                | 2N5821             |
| 2N5821   | P        | TO-92F  | 625             | 1         | 60            | 60       | 120   | 2          | 2            | 0.75          | 0.5       | 140+            | 15                | 2N5820             |
| 2N5822   | N        | TO-92F  | 625             | 1         | 60            | 100      | 200   | 2          | 2            | 0.75          | 0.5       | 400+            | 15                | 2N5823             |
| 2N5823   | P        | TO-92F  | 625             | 1         | 60            | 100      | 200   | 2          | 2            | 0.75          | 0.5       | 140+            | 15                | 2N5822             |
| 2N6428   | N        | TO-92A  | 625             | 0.2       | 50            | 200      | —     | 2          | 5            | 0.6           | 0.1       | 100             | 3                 | —                  |
| 2N6714   | N        | TO-237A | 1200 ●          | 2         | 30            | 50       | 250   | 1000       | 1            | 0.5           | 0.1       | 50              | —                 | 2N6726             |
| 2N6715   | N        | TO-237A | 1200 ●          | 2         | 40            | 50       | 250   | 1000       | 1            | 0.5           | 1         | 50              | —                 | 2N6727             |
| 2N6716   | N        | TO-237A | 1200 ●          | 2         | 60            | 50       | 250   | 250        | 1            | 0.35          | 0.25      | 50              | —                 | 2N6728             |
| 2N6726   | P        | TO-237A | 1200 ●          | 2         | 30            | 50       | 250   | 1000       | 1            | 0.5           | 0.1       | 50              | —                 | 2N6714             |
| 2N6727   | P        | TO-237A | 1200 ●          | 2         | 40            | 50       | 250   | 1000       | 1            | 0.5           | 1         | 50              | —                 | 2N6715             |
| 2N6728   | P        | TO-237A | 1200 ●          | 2         | 60            | 50       | 250   | 250        | 1            | 0.35          | 0.25      | 50              | —                 | 2N6716             |
| 2N6732   | P        | TO-237A | 1200 ●          | 1         | 80            | 100      | 300   | 350        | 2            | 0.35          | 0.35      | 50              | —                 | —                  |
| 2SA497   | P        | TO-39   | 600             | 0.8       | 80            | 40       | 240 # | 200        | 2            | 0.8           | 0.2       | 70+             | 33+               | 2SC497             |
| 2SA498   | P        | TO-39   | 600             | 0.8       | 50            | 40       | 240 # | 200        | 2            | 0.8           | 0.2       | 70+             | 33+               | 2SC498             |
| 2SA503   | P        | TO-39   | 800             | 0.6       | 50            | 30       | 300 # | 150        | 2            | 0.5           | 0.15      | 50              | 30                | 2SC503             |
| 2SA504   | P        | TO-39   | 800             | 0.6       | 30            | 30       | 300 # | 150        | 2            | 0.5           | 0.15      | 50              | 30                | 2SC504             |
| 2SA532   | P        | TO-39   | 500             | 0.2       | 50            | 40       | 320 # | 50         | 6            | 1.5           | 0.1       | 100+            | —                 | —                  |
| 2SA539   | P        | TO-92B  | 250             | 0.2       | 45            | 50       | 232 # | 50         | 1            | 0.5           | 0.15      | 100             | 5.5+              | 2SC815             |
| 2SA544   | P        | TO-39   | 750             | 0.2       | 45            | 40       | 200 # | 10         | 10           | 0.4           | 0.03      | 80              | 7                 | —                  |
| 2SA562   | P        | TO-92B  | 500             | 0.5       | 30            | 70       | 400 # | 100        | 1            | 0.25          | 0.1       | 150+            | 15                | —                  |
| 2SA606   | P        | TO-39   | 700             | 0.7       | 80            | 40       | 200 # | 200        | 5            | 2             | 0.5       | 50              | 50                | —                  |
| 2SA642   | P        | TO-92B  | 250             | 0.3       | 15            | 65       | 400   | 50         | 1            | 0.6           | 0.3       | 180+            | 30                | 2SD227             |
| 2SA643   | P        | TO-92B  | 500             | 0.5       | 20            | 60       | 285 # | 100        | 1            | 0.6           | 0.5       | 110+            | 30                | 2SD261             |
| 2SA659   | P        | TO-92B  | 300             | 0.2       | 50            | 40       | 320 # | 50         | 6            | 1.5           | 0.1       | 90+             | —                 | 2SC1175            |
| 2SA683   | P        | TO-92B  | 750             | 1         | 25            | 60       | 340 # | 500        | 10           | 0.4           | 0.5       | 200+            | 30                | 2SC1383            |
| 2SA708   | P        | TO-39   | 800             | 0.7       | 60            | 80       | 240 # | 50         | 2            | 0.7           | 0.5       | 100+            | 25+               | —                  |
| 2SA719   | P        | TO-92B  | 400             | 0.5       | 25            | 60       | 340 # | 150        | 10           | 0.6           | 0.5       | 160+            | 15                | 2SC1317            |
| 2SA720   | P        | TO-92B  | 400             | 0.5       | 50            | 60       | 340 # | 150        | 10           | 0.6           | 0.5       | 160+            | 15                | 2SC1318            |
| 2SA723   | P        | TO-92B  | 250             | 0.5       | 20            | 60       | 285 # | 100        | 1            | 0.6           | 0.5       | 110+            | —                 | 2SD327             |
| 2SA733   | P        | TO-92B  | 250             | 0.1       | 40            | 60       | 600 # | 1          | 6            | 0.5           | 0.03      | 50              | 12                | 2SC945             |
| 2SA817   | P        | TO-92B  | 600             | 0.3       | 80            | 70       | 240 # | 50         | 2            | 0.4           | 0.2       | 100+            | 17+               | 2SC1627            |
| 2SA817A  | P        | TO-92B  | 800             | 0.4       | 80            | 130      | —     | 50         | 5            | 0.2+          | 0.15      | 100             | 14                | —                  |
| 2SA890   | P        | TO-92A  | 625             | 0.5       | 25            | 60       | 340 # | 150        | 10           | 0.6           | 0.5       | 200+            | 15                | 2SC1851            |
| 2SA891   | P        | TO-92A  | 625             | 0.5       | 50            | 60       | 340 # | 150        | 10           | 0.6           | 0.5       | 200+            | 15                | 2SC1852            |
| 2SA950   | P        | TO-92B  | 600             | 0.8       | 25            | 100      | 320 # | 100        | 1            | 0.7           | 0.5       | 120+            | 19+               | 2SC2120            |
| 2SA952   | P        | TO-92B  | 600             | 0.7       | 25            | 90       | 400 # | 100        | 1            | 0.6           | 0.7       | 50              | 25                | —                  |
| 2SB504A  | P        | TO-92B  | 1500 ▲          | 2         | 80            | 40       | 300   | 500        | 2            | 1             | 1         | —               | —                 | —                  |
| 2SB560   | P        | TO-92B  | 750             | 0.7       | 80            | 60       | 320 # | 50         | 5            | 0.8           | 0.5       | 100+            | 15+               | 2SD438             |
| 2SB564   | P        | TO-39   | 1000            | 1         | 25            | 90       | 400   | 100        | 1            | 0.35          | 1         | —               | —                 | 2SD471             |
| 2SB598   | P        | TO-92B  | 500             | 1         | 20            | 60       | 560 # | 50         | 2            | 0.5           | 0.5       | 180+            | 15+               | 2SD545             |
| 2SB621   | P        | TO-92B  | 750             | 1         | 25            | 85       | 340 # | 500        | 10           | 0.4           | 0.5       | 200+            | 30                | 2SD592             |
| 2SB621A  | P        | TO-92B  | 750             | 1         | 50            | 85       | 340 # | 500        | 10           | 0.4           | 0.5       | 200+            | 30                | 2SD592A            |
| 2SC32    | N        | TO-39   | 750             | 0.2       | 25            | 40       | 110   | 10         | 10           | 0.5           | 0.03      | 120             | 7                 | —                  |
| 2SC497   | N        | TO-39   | 600             | 0.8       | 80            | 40       | 240 # | 200        | 2            | 0.8           | 0.2       | 50+             | 15+               | 2SA497             |
| 2SC498   | N        | TO-39   | 600             | 0.8       | 50            | 40       | 240 # | 200        | 2            | 0.8           | 0.2       | 15+             | 15+               | 2SA498             |
| 2SC503   | N        | TO-39   | 800             | 0.6       | 30            | 30       | 300 # | 150        | 2            | 0.5           | 0.15      | 15              | 30                | 2SA503             |
| 2SC504   | N        | TO-39   | 800             | 0.6       | 30            | 30       | 300 # | 150        | 2            | 0.5           | 0.15      | 50              | 30                | 2SA504             |
| 2SC815   | N        | TO-92B  | 250             | 0.2       | 45            | 50       | 232 # | 50         | 1            | 0.5           | 0.15      | 100             | 8                 | 2SA539             |
| 2SC875   | N        | TO-39   | 500             | 0.2       | 75            | 40       | 320 # | 50         | 6            | 1.5           | 0.1       | 170+            | 5+                | —                  |
| 2SC876   | N        | TO-39   | 500             | 0.2       | 50            | 40       | 320 # | 50         | 6            | 1.5           | 0.1       | 170+            | 5+                | —                  |
| 2SC933   | N        | TO-92B  | 300             | 0.3       | 30            | 40       | 560 # | 20         | 6            | —             | —         | —               | —                 | —                  |

#  $H_{FE}$  groupings available    ▲  $T_c = 25^\circ C$     + Typical value    ●  $P_{totp}$