

Transistors, General

| Type      | Polarity | Material | P <sub>tot</sub> Max. (mW) | f <sub>T</sub> Typ. (MHz) | Absolute Max. Ratings |                      |                      |                     | h <sub>FE</sub> |       |      | T <sub>j</sub> Max. (°C) | C <sub>OB</sub> Max. (pF) | Case Outline | Lead Info. | Manufacturer |
|-----------|----------|----------|----------------------------|---------------------------|-----------------------|----------------------|----------------------|---------------------|-----------------|-------|------|--------------------------|---------------------------|--------------|------------|--------------|
|           |          |          |                            |                           | V <sub>CEO</sub> (V)  | V <sub>CE0</sub> (V) | V <sub>EB0</sub> (V) | I <sub>C</sub> (mA) | Min.            | at mA | Max. |                          |                           |              |            |              |
| BD190     | PNP      | Si       | 40W                        | 2                         | -70                   | -60                  | -5                   | 4A                  | 40              | 500   | 236  | 150                      | -                         | TO-126       | 20         | AEG          |
| BD201     | NPN      | Si       | 60W                        | 3                         | 60                    | 45                   | 5                    | 8A                  | 30              | 2     | -    | 150                      | -                         | TO-220       | 21         | AEG,M,N      |
| BD202     | PNP      | Si       | 60W                        | 3                         | -60                   | -45                  | -5                   | 8A                  | 30              | 2     | -    | 150                      | -                         | TO-220       | 21         | AEG,M,N      |
| BD203     | NPN      | Si       | 60W                        | 3                         | 60                    | 60                   | 5                    | 8A                  | 30              | 3     | -    | 150                      | -                         | TO-220       | 21         | AEG,M        |
| BD204     | PNP      | Si       | 60W                        | 3                         | -60                   | -60                  | -5                   | 8A                  | 30              | 3     | -    | 150                      | -                         | TO-220       | 21         | AEG,M        |
| BD215     | NPN      | Si       | 2.1W                       | 10                        | 300                   | 300                  | 6                    | 500                 | 40              | 100   | -    | 175                      | -                         | -            | 02         | SGS          |
| BD216     | NPN      | Si       | 2.1W                       | 10                        | 300                   | 200                  | 6                    | 1A                  | 40              | 100   | 150  | 175                      | -                         | -            | 02         | SGS          |
| BD226     | NPN      | Si       | 12.5W                      | 125                       | 45                    | 45                   | 5                    | 1.5A                | 40              | 150   | 250  | 150                      | -                         | TO-126       | 20         | M            |
| BD227     | PNP      | Si       | 12.5W                      | 50                        | -45                   | -45                  | -5                   | 1.5A                | 40              | 150   | 250  | 150                      | -                         | TO-126       | 20         | M            |
| BD228     | NPN      | Si       | 12.5W                      | 125                       | 60                    | 60                   | 5                    | 1.5A                | 40              | 150   | 160  | 150                      | -                         | TO-126       | 20         | M            |
| BD229     | PNP      | Si       | 12.5W                      | 50                        | -60                   | -60                  | -5                   | 1.5A                | 40              | 150   | 160  | 150                      | -                         | TO-126       | 20         | M            |
| BD230     | NPN      | Si       | 12.5W                      | 125                       | 100                   | 80                   | 5                    | 1.5A                | 40              | 150   | 160  | 150                      | -                         | TO-126       | 20         | M            |
| BD231     | PNP      | Si       | 12.5W                      | 50                        | -100                  | -80                  | -5                   | 1.5A                | 40              | 150   | 160  | 150                      | -                         | TO-126       | 20         | M            |
| BD232     | NPN      | Si       | 15W                        | 20                        | 500                   | 300                  | 5                    | 250                 | 25              | 50    | 150  | 125                      | -                         | TO-126       | 20         | M            |
| BD233     | NPN      | Si       | 25W                        | 3                         | 45                    | 45                   | 5                    | 2A                  | 40              | 150   | -    | 150                      | -                         | TO-126       | 20         | AEG,M,N,SGS  |
| BD234     | PNP      | Si       | 25W                        | 3                         | -45                   | -45                  | -5                   | 2A                  | 40              | 150   | -    | 150                      | -                         | TO-126       | 20         | AEG,M,N      |
| BD235     | NPN      | Si       | 25W                        | 3                         | 60                    | 60                   | 5                    | 2A                  | 40              | 150   | -    | 150                      | -                         | TO-126       | 20         | AEG,M,N,SGS  |
| BD236     | PNP      | Si       | 25W                        | 3                         | -60                   | -60                  | -5                   | 2A                  | 40              | 150   | -    | 150                      | -                         | TO-126       | 20         | AEG,M,N      |
| BD237     | NPN      | Si       | 25W                        | 3                         | 80                    | 80                   | 5                    | 2A                  | 40              | 150   | -    | 150                      | -                         | TO-126       | 20         | AEG,M,N,SGS  |
| BD238     | PNP      | Si       | 25W                        | 3                         | 55                    | 45                   | 5                    | 4A                  | 40              | 200   | -    | 150                      | -                         | TO-220       | 21         | Fe,N,RCA,TI  |
| BD239     | NPN      | Si       | 30W                        | 3                         | 55                    | 45                   | 5                    | 4A                  | 40              | 200   | -    | 150                      | -                         | TO-220       | 21         | Fe,N,RCA,TI  |
| BD239A    | NPN      | Si       | 30W                        | 3                         | 70                    | 60                   | 5                    | 4A                  | 40              | 200   | -    | 150                      | -                         | TO-220       | 21         | Fe,N,RCA,TI  |
| BD239B    | NPN      | Si       | 30W                        | 3                         | 90                    | 80                   | 5                    | 4A                  | 40              | 200   | -    | 150                      | -                         | TO-220       | 21         | Fe,N,RCA,TI  |
| BD239C    | NPN      | Si       | 30W                        | 3                         | 115                   | 100                  | 5                    | 4A                  | 40              | 200   | -    | 150                      | -                         | TO-220       | 21         | Fe,N,RCA,TI  |
| BD240     | PNP      | Si       | 30W                        | 3                         | -55                   | -45                  | -5                   | 4A                  | 40              | 200   | -    | 150                      | -                         | TO-220       | 21         | Fe,N,RCA,TI  |
| BD240A    | PNP      | Si       | 30W                        | 3                         | -70                   | -60                  | -5                   | 4A                  | 40              | 200   | -    | 150                      | -                         | TO-220       | 21         | Fe,N,RCA,TI  |
| BD240B    | PNP      | Si       | 30W                        | 3                         | -90                   | -80                  | -5                   | 4A                  | 40              | 200   | -    | 150                      | -                         | TO-220       | 21         | Fe,N,RCA,TI  |
| BD240C    | PNP      | Si       | 30W                        | 3                         | -115                  | -100                 | -5                   | 4A                  | 40              | 200   | -    | 150                      | -                         | TO-220       | 21         | Fe,N,RCA,TI  |
| BD241     | NPN      | Si       | 40W                        | 3                         | 55                    | 45                   | 5                    | 5A                  | 25              | 1A    | -    | 150                      | -                         | TO-220       | 21         | Fe,N,RCA,TI  |
| BD241A    | NPN      | Si       | 40W                        | 3                         | 70                    | 60                   | 5                    | 5A                  | 25              | 1A    | -    | 150                      | -                         | TO-220       | 21         | Fe,N,RCA,TI  |
| BD241B    | NPN      | Si       | 40W                        | 3                         | 90                    | 80                   | 5                    | 5A                  | 25              | 1A    | -    | 150                      | -                         | TO-220       | 21         | Fe,N,RCA,TI  |
| BD241C    | NPN      | Si       | 40W                        | 3                         | 115                   | 100                  | 5                    | 5A                  | 25              | 1A    | -    | 150                      | -                         | TO-220       | 21         | Fe,N,RCA,TI  |
| BD242     | PNP      | Si       | 40W                        | 3                         | -55                   | -45                  | -5                   | 5A                  | 25              | 1A    | -    | 150                      | -                         | TO-220       | 21         | Fe,N,RCA,TI  |
| BD242A    | PNP      | Si       | 40W                        | 3                         | -70                   | -60                  | -5                   | 5A                  | 25              | 1A    | -    | 150                      | -                         | TO-220       | 21         | Fe,N,RCA,TI  |
| BD242B    | PNP      | Si       | 40W                        | 3                         | -90                   | -80                  | -5                   | 5A                  | 25              | 1A    | -    | 150                      | -                         | TO-220       | 21         | Fe,N,RCA,TI  |
| BD242C    | PNP      | Si       | 40W                        | 3                         | -115                  | -100                 | -5                   | 5A                  | 25              | 1A    | -    | 150                      | -                         | TO-220       | 21         | Fe,N,RCA,TI  |
| BD243     | NPN      | Si       | 65W                        | 3                         | 55                    | 45                   | 5                    | 6.5A                | 30              | 300   | -    | 150                      | -                         | TO-220       | 21         | Fe,RCA,TI    |
| BD243A    | NPN      | Si       | 65W                        | 3                         | 70                    | 60                   | 5                    | 6.5A                | 30              | 300   | -    | 150                      | -                         | TO-220       | 21         | Fe,RCA,TI    |
| BD243B    | NPN      | Si       | 65W                        | 3                         | 90                    | 80                   | 5                    | 6.5A                | 30              | 300   | -    | 150                      | -                         | TO-220       | 21         | Fe,RCA,TI    |
| BD243C    | NPN      | Si       | 65W                        | 3                         | 115                   | 100                  | 5                    | 6.5A                | 30              | 300   | -    | 150                      | -                         | TO-220       | 21         | Fe,RCA,TI    |
| BD244     | PNP      | Si       | 65W                        | 3                         | -55                   | -45                  | -5                   | 6.5A                | 30              | 300   | -    | 150                      | -                         | TO-220       | 21         | Fe,RCA,TI    |
| BD244A    | PNP      | Si       | 65W                        | 3                         | -70                   | -60                  | -5                   | 6.5A                | 30              | 300   | -    | 150                      | -                         | TO-220       | 21         | Fe,RCA,TI    |
| BD244B    | PNP      | Si       | 65W                        | 3                         | -90                   | -80                  | -5                   | 6.5A                | 30              | 300   | -    | 150                      | -                         | TO-220       | 21         | Fe,RCA,TI    |
| BD244C    | PNP      | Si       | 65W                        | 3                         | -115                  | -100                 | -5                   | 6.5A                | 30              | 300   | -    | 150                      | -                         | TO-220       | 21         | Fe,RCA,TI    |
| BD277     | PNP      | Si       | 70W                        | 10                        | -45                   | -45                  | -4                   | 7A                  | 30              | 1.75A | 150  | 150                      | -                         | TO-220       | 22         | RCA          |
| BD278     | NPN      | Si       | 75W                        | 0.8                       | 55                    | 45                   | 5                    | 10A                 | 15              | 4A    | 75   | 150                      | -                         | TO-220       | 21         | RCA          |
| BD278A    | NPN      | Si       | 75W                        | 0.8                       | 55                    | 45                   | 5                    | 10A                 | 30              | 2A    | -    | 150                      | -                         | TO-220       | 21         | RCA          |
| BD281     | NPN      | Si       | 36W                        | 3                         | 22                    | 22                   | 5                    | 4A                  | 85              | 500   | 350  | 150                      | -                         | TO-126       | 20         | SGS          |
| BD283     | NPN      | Si       | 36W                        | 3                         | 32                    | 32                   | 5                    | 4A                  | 85              | 500   | 350  | 150                      | -                         | TO-126       | 20         | SGS          |
| BD285     | NPN      | Si       | 36W                        | 3                         | 45                    | 45                   | 5                    | 4A                  | 20              | 3A    | -    | 150                      | -                         | TO-126       | 20         | SGS          |
| BD370A    | PNP      | Si       | 40W                        | 50                        | -80                   | -45                  | -                    | 1A                  | 40              | 100   | 400  | 150                      | 30                        | TO-92+       | 13         | N            |
| BD370A-10 | PNP      | Si       | 40W                        | 50                        | -80                   | -45                  | -                    | 1A                  | 63              | 100   | 160  | 150                      | 30                        | TO-92+       | 13         | N            |
| BD370A-16 | PNP      | Si       | 40W                        | 50                        | -80                   | -45                  | -                    | 1A                  | 100             | 100   | 250  | 150                      | 30                        | TO-92+       | 13         | N            |
| BD370A-25 | PNP      | Si       | 40W                        | 50                        | -80                   | -45                  | -                    | 1A                  | 160             | 100   | 400  | 150                      | 30                        | TO-92+       | 13         | N            |
| BD370B    | PNP      | Si       | 40W                        | 50                        | -80                   | -60                  | -                    | 1A                  | 40              | 100   | 400  | 150                      | 30                        | TO-92+       | 13         | N            |
| BD370B-10 | PNP      | Si       | 40W                        | 50                        | -80                   | -60                  | -                    | 1A                  | 63              | 100   | 160  | 150                      | 30                        | TO-92+       | 13         | N            |
| BD370B-16 | PNP      | Si       | 40W                        | 50                        | -80                   | -60                  | -                    | 1A                  | 100             | 100   | 250  | 150                      | 30                        | TO-92+       | 13         | N            |
| BD370B-25 | PNP      | Si       | 40W                        | 50                        | -80                   | -60                  | -                    | 1A                  | 160             | 100   | 400  | 150                      | 30                        | TO-92+       | 13         | N            |
| BD370C    | PNP      | Si       | 40W                        | 50                        | -80                   | -80                  | -                    | 1A                  | 40              | 100   | 400  | 150                      | 30                        | TO-92+       | 13         | N            |
| BD370C-6  | PNP      | Si       | 40W                        | 50                        | -80                   | -80                  | -                    | 1A                  | 40              | 100   | 100  | 150                      | 30                        | TO-92+       | 13         | N            |
| BD370C-10 | PNP      | Si       | 40W                        | 50                        | -80                   | -80                  | -                    | 1A                  | 63              | 100   | 160  | 150                      | 30                        | TO-92+       | 13         | N            |
| BD370C-16 | PNP      | Si       | 40W                        | 50                        | -80                   | -80                  | -                    | 1A                  | 100             | 100   | 250  | 150                      | 30                        | TO-92+       | 13         | N            |
| BD370D    | PNP      | Si       | 40W                        | 50                        | -80                   | -100                 | -                    | 1A                  | 40              | 100   | 40   | 150                      | 30                        | TO-92+       | 13         | N            |
| BD370D-6  | PNP      | Si       | 40W                        | 50                        | -80                   | -100                 | -                    | 1A                  | 40              | 100   | 100  | 150                      | 30                        | TO-92+       | 13         | N            |
| BD370D-10 | PNP      | Si       | 40W                        | 50                        | -80                   | -100                 | -                    | 1A                  | 63              | 100   | 160  | 150                      | 30                        | TO-92+       | 13         | N            |
| BD371A    | NPN      | Si       | 40W                        | 50                        | 80                    | 45                   | -                    | 1A                  | 40              | 100   | 400  | 150                      | 30                        | TO-92+       | 13         | N            |
| BD371A-10 | NPN      | Si       | 40W                        | 50                        | 80                    | 45                   | -                    | 1A                  | 63              | 100   | 160  | 150                      | 30                        | TO-92+       | 13         | N            |
| BD371A-16 | NPN      | Si       | 40W                        | 50                        | 80                    | 45                   | -                    | 1A                  | 100             | 100   | 250  | 150                      | 30                        | TO-92+       | 13         | N            |
| BD371A-25 | NPN      | Si       | 40W                        | 50                        | 80                    | 45                   | -                    | 1A                  | 160             | 100   | 400  | 150                      | 30                        | TO-92+       | 13         | N            |
| BD371B    | NPN      | Si       | 40W                        | 50                        | 80                    | 60                   | -                    | 1A                  | 40              | 100   | 400  | 150                      | 30                        | TO-92+       | 13         | N            |