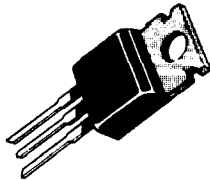


PLASTIC POWER

PLASTIC POWER TRANSISTOR SELECTOR CHART (TO-220 PACKAGE)

| V_{CE0} Volts | I_C 3 Amps (TIP) I_C 4 Amps (BD) | | 5 Amps | | 7 Amps | | 7 Amps | | \geq 10 Amps |
|--------------------|---|------------------|------------------|------------------|--------|--------|------------------|------------------|-------------------|
| | NPN | PNP | NPN | PNP | NPN | PNP | NPN | PNP | NPN |
| 30 | | | | | 2N6288 | 2N6111 | | | |
| 40 | TIP29 | TIP30 | TIP31 | TIP32 | | | TIP41 | TIP42 | 2N6103 |
| 45 | BD239 | BD240 | BD241 | BD242 | | | BD243 | BD244 | |
| 50 | | | | | 2N6290 | 2N6109 | | | |
| 60 | BD239A TIP29A | BD240A TIP30A | BD241A TIP31A | BD242A TIP32A | | | BD243A TIP41A | BD244A TIP42A | 2N6099 FGT3055 |
| 70 | | | | | 2N6292 | 2N6107 | | | |
| 80 | BD239B TIP29B | BD240B TIP30B | BD241B TIP31B | BD242B TIP32B | | | BD243B TIP41B | BD244B TIP42B | 2N6101 |
| 100 | BD239C TIP29C | BD240C TIP30C | BD241C TIP31C | BD242C TIP32C | | | BD243C TIP41C | BD244C TIP42C | |
| P_{tot} | 30W | 30W | 40W | 40W | 40W | 40W | 65W | 65W | 75W note 1 |

Note 1: Refer to the Diffused Junction transistor section for more details of the devices in these columns.



TO-220

NPN PLASTIC POWER

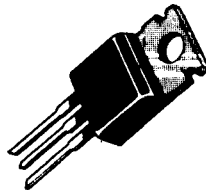
TABLE 2 – NPN EPITAXIAL BASE TRANSISTORS

The transistors shown in this table are designed for general purpose power applications and offer good switching and saturation performance with an excellent safe operating area in the popular TO-220 plastic package.

The devices are listed in order of decreasing Collector Current ($I_C(\max)$), Breakdown Voltages, Power Dissipation (P_{tot}) etc.

| Type | $I_C(\max)$ A | V_{CER} V | V_{CEO} V | h_{FE} | | at I_C A | P_{tot} at T_{case} = 25°C W | PNP Complement |
|--------|------------------|----------------|----------------|----------|------|------------------|---|-------------------|
| | | | | Min. | Max. | | | |
| BD243C | 6.5 | 115 | 100 | 15 | — | 3 | 65 | BD244C |
| TIP41C | 7 | 100 | 100 | 15 | 150 | 3 | 65 | TIP42C |
| BD243B | 6.5 | 90 | 80 | 15 | — | 3 | 65 | BD244B |
| TIP41B | 7 | 80 | 80 | 15 | 150 | 3 | 65 | TIP42B |
| 2N6292 | 7 | 80* | 70 | 30 | 150 | 2 | 40 | 2N6107 |
| BD243A | 6.5 | 70 | 60 | 15 | — | 3 | 65 | BD244A |
| TIP41A | 7 | 60 | 60 | 15 | 150 | 3 | 65 | TIP42A |
| 2N6290 | 7 | 60* | 50 | 30 | 150 | 2.5 | 40 | 2N6109 |
| BD243 | 6.5 | 55 | 45 | 15 | — | 3 | 65 | BD244 |
| TIP41 | 7 | 40 | 40 | 15 | 150 | 3 | 65 | TIP42 |
| 2N6288 | 7 | 40* | 30 | 30 | 150 | 3 | 40 | 2N6111 |
| BD241C | 5 | 115 | 100 | 10 | — | 3 | 40 | BD242C |
| TIP31C | 5 | 100 | 100 | 10 | 50 | 3 | 40 | TIP32C |
| BD241B | 5 | 90 | 80 | 10 | — | 3 | 40 | BD242B |
| TIP31B | 5 | 80 | 80 | 10 | 50 | 3 | 40 | TIP32B |
| BD241A | 5 | 70 | 60 | 10 | — | 3 | 40 | BD242A |
| TIP31A | 5 | 60 | 60 | 10 | 50 | 3 | 40 | TIP32A |
| BD241 | 5 | 55 | 45 | 10 | — | 3 | 40 | BD242 |
| TIP31 | 5 | 40 | 40 | 10 | 50 | 3 | 40 | TIP32 |
| BD239C | 4 | 115 | 100 | 15 | — | 1 | 30 | BD240C |
| TIP29C | 3 | 100 | 100 | 15 | 150 | 1 | 30 | TIP30C |
| BD239B | 4 | 90 | 80 | 15 | — | 1 | 30 | BD240B |
| TIP29B | 3 | 80 | 80 | 15 | 150 | 1 | 30 | TIP30B |
| BD239A | 4 | 70 | 60 | 15 | — | 1 | 30 | BD240A |
| TIP29A | 3 | 60 | 60 | 15 | 150 | 1 | 30 | TIP30A |
| BD239 | 4 | 55 | 45 | 15 | — | 1 | 30 | BD240 |
| TIP29 | 3 | 40 | 40 | 15 | 150 | 1 | 30 | TIP30 |

* V_{CEX}



TO-220

PNP PLASTIC POWER

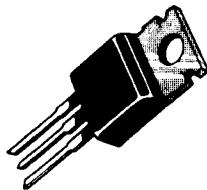
TABLE 3 – PNP EPITAXIAL BASE TRANSISTORS

The transistors shown in this table are designed for general purpose power applications and offer good switching and saturation performance with an excellent safe operating area in the popular TO-220 plastic package.

The devices are listed in order of decreasing Collector Current ($I_C(\max)$), Breakdown Voltages, Power Dissipation (P_{tot}) etc.

| Type | $I_C(\max)$ A | V_{CER} V | V_{CEO} V | h_{FE} | | at I_C A | P_{tot} at $T_{case} = 25^\circ C$ W | PNP Complement |
|--------|------------------|----------------|----------------|----------|------|------------------|--|-------------------|
| | | | | Min. | Max. | | | |
| BD244C | 6.5 | 115 | 100 | 15 | — | 3 | 65 | BD243C |
| TIP42C | 7 | 100 | 100 | 15 | 150 | 3 | 65 | TIP41C |
| BD244B | 6.5 | 90 | 80 | 15 | — | 3 | 65 | BD243B |
| TIP42B | 7 | 80 | 80 | 15 | 150 | 3 | 65 | TIP41B |
| 2N6107 | 7 | 80* | 70 | 30 | 150 | 2 | 40 | 2N6292 |
| BD244A | 6.5 | 70 | 60 | 15 | — | 3 | 65 | BD243A |
| TIP42A | 7 | 60 | 60 | 15 | 150 | 3 | 65 | TIP41A |
| 2N6109 | 7 | 60* | 50 | 30 | 150 | 2.5 | 40 | 2N6290 |
| BD244 | 6.5 | 55 | 45 | 15 | — | 3 | 65 | BD243 |
| TIP42 | 7 | 40 | 40 | 15 | 150 | 3 | 65 | TIP41 |
| 2N6111 | 7 | 40* | 30 | 30 | 150 | 3 | 40 | 2N6288 |
| BD242C | 5 | 115 | 100 | 10 | — | 3 | 40 | BD241C |
| TIP32C | 5 | 100 | 100 | 10 | 50 | 3 | 40 | TIP31C |
| BD242B | 5 | 90 | 80 | 10 | — | 3 | 40 | BD241B |
| TIP32B | 5 | 80 | 80 | 10 | 50 | 3 | 40 | TIP31B |
| BD242A | 5 | 70 | 60 | 10 | — | 3 | 40 | BD241A |
| TIP32A | 5 | 60 | 60 | 10 | 50 | 3 | 40 | TIP31A |
| BD242 | 5 | 55 | 45 | 10 | — | 3 | 40 | BD241 |
| TIP32 | 5 | 40 | 40 | 10 | 50 | 3 | 40 | TIP31 |
| BD240C | 4 | 115 | 100 | 15 | — | 1 | 30 | BD239C |
| TIP30C | 3 | 100 | 100 | 15 | 150 | 1 | 30 | TIP29C |
| BD240B | 4 | 90 | 80 | 15 | — | 1 | 30 | BD239B |
| TIP30B | 3 | 80 | 80 | 15 | 150 | 1 | 30 | TIP29B |
| BD240A | 4 | 70 | 60 | 15 | — | 1 | 30 | BD239A |
| TIP30A | 3 | 60 | 60 | 15 | 150 | 1 | 30 | TIP29A |
| BD240 | 4 | 55 | 45 | 15 | — | 1 | 30 | BD239 |
| TIP30 | 3 | 40 | 40 | 15 | 150 | 1 | 30 | TIP29 |

* V_{CEX}



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