

**COMPLEMENTARY SILICON PLASTIC POWER TRANSISTORS**
**ABSOLUTE MAXIMUM RATINGS ( $T_a=25^\circ\text{C}$ )**

|                                                    | TIP41 | 41A | 41B         | 41C |                  |
|----------------------------------------------------|-------|-----|-------------|-----|------------------|
|                                                    | TIP42 | 42A | 42B         | 42C |                  |
| COLLECTOR-BASE VOLTAGE                             | 40    | 60  | 80          | 100 | V                |
| COLLECTOR-EMITTER VOLTAGE                          | 40    | 60  | 80          | 100 | V                |
| EMITTER-BASE VOLTAGE                               |       |     | 5.0         |     | V                |
| COLLECTOR CURRENT (DC)                             |       |     | 6.0         |     | A                |
| (PEAK)                                             |       |     | 10.0        |     | A                |
| TOTAL POWER DISSIPATION ( $T_c=25^\circ\text{C}$ ) |       |     | 65          |     | W                |
| ( $T_a=25^\circ\text{C}$ )                         |       |     | 1.75        |     | W                |
| JUNCTION TEMPERATURE                               |       |     | 150         |     | $^\circ\text{C}$ |
| STORAGE TEMPERATURE                                |       |     | -55 to +150 |     | $^\circ\text{C}$ |

**ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$ )**

|                                             |                       | MIN. | MAX. |     |
|---------------------------------------------|-----------------------|------|------|-----|
| COLLECTOR-EMITTER VOLTAGE                   | $V_{CEO}$             |      |      |     |
| ( $I_C=30\text{mA}$ , $I_B=0$ )             | TIP41, TIP42          | 40   |      | V   |
|                                             | TIP41A, TIP42A        | 60   |      | V   |
|                                             | TIP41B, TIP42B        | 80   |      | V   |
|                                             | TIP41C, TIP42C        | 100  |      | V   |
| COLLECTOR CUTOFF CURRENT                    | $I_{CEO}$             |      |      |     |
| ( $V_{CE}=30\text{V}$ , $I_B=0$ )           | TIP41, 41A, 42, 42A   |      | 0.7  | mA  |
| ( $V_{CE}=60\text{V}$ , $I_B=0$ )           | TIP41B, 41C, 42B, 41C |      | 0.7  | mA  |
| COLLECTOR CUTOFF CURRENT                    | $I_{CES}$             |      |      |     |
| ( $V_{CE}=40\text{V}$ , $V_{EB}=0$ )        | TIP41, TIP42          |      | 0.4  | mA  |
| ( $V_{CE}=60\text{V}$ , $V_{EB}=0$ )        | TIP41A, TIP42A        |      | 0.4  | mA  |
| ( $V_{CE}=80\text{V}$ , $V_{EB}=0$ )        | TIP41B, TIP42B        |      | 0.4  | mA  |
| ( $V_{CE}=100\text{V}$ , $V_{EB}=0$ )       | TIP41C, TIP42C        |      | 0.4  | mA  |
| EMITTER CUTOFF CURRENT                      | $I_{EBO}$             |      |      |     |
| ( $V_{BE}=5\text{V}$ , $I_C=0$ )            |                       |      | 1.0  | mA  |
| DC CURRENT GAIN                             | $h_{FE}$              |      |      |     |
| ( $V_{CE}=4\text{V}$ , $I_C=0.3\text{A}$ )  |                       | 30   |      |     |
| ( $V_{CE}=4\text{V}$ , $I_C=3.0\text{A}$ )  |                       | 20   | 100  |     |
| COLLECTOR-EMITTER SATURATION                | $V_{CE}(\text{SAT})$  |      |      |     |
| ( $I_C=6\text{A}$ , $I_B=0.6\text{A}$ )     |                       |      | 1.8  | V   |
| BASE-EMITTER ON VOLTAGE                     | $V_{BE}(\text{ON})$   |      |      |     |
| ( $V_{CE}=4\text{V}$ , $I_C=6\text{A}$ )    |                       |      | 2.0  | V   |
| GAIN-BAND WIDTH PRODUCT                     | $f_T$                 |      |      |     |
| ( $V_{CE}=10\text{V}$ , $I_C=0.5\text{A}$ ) |                       | 3    |      | MHz |

**OUTLINE DIMENSION**


