



## BD237

## NPN EPITAXIAL SILICON TRANSISTOR

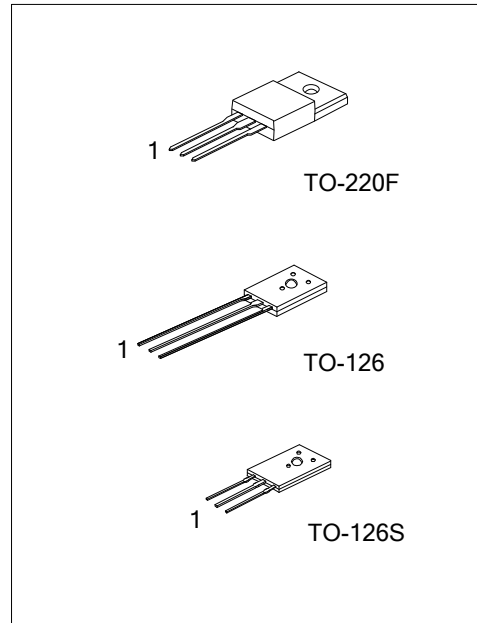
### 80V NPN TRANSISTORS

#### DESCRIPTION

The UTC **BD237** is an NPN transistor. it uses UTC's advanced technology to provide customers with high collector-emitter breakdown voltage, etc.

#### FEATURES

- \* Complement to UTC **BD238** respectively
- \* High collector-emitter breakdown voltage



#### ORDERING INFORMATION

| Ordering Number |                | Package | Pin Assignment |   |   | Packing |
|-----------------|----------------|---------|----------------|---|---|---------|
| Lead Free       | Halogen Free   |         | 1              | 2 | 3 |         |
| BD237L-T60-K    | BD237G-T60-K   | TO-126  | E              | C | B | Bulk    |
| BD237L-T6S-K    | BD237G-T6S-K   | TO-126S | E              | C | B | Bulk    |
| BD237L-TF3-T    | BD237G-TF3-T   | TO-220F | E              | C | B | Tube    |
| BD237L-TF3-F-T  | BD237G-TF3-F-T | TO-220F | B              | C | E | Tube    |

Note: Pin assignment: E: Emitter B: Base C: Collector

|                       |  |
|-----------------------|--|
| <p>BD237G-TF3-F-K</p> | <p>(1) K: Bulk, T: Tube<br/>                 (2) refer to Pin Assignment<br/>                 (3) T60: TO-126, T6S: TO-126S, TF3: TO-220F<br/>                 (4) G: Halogen Free and Lead Free, L: Lead Free</p> |
|-----------------------|--|

#### MARKING

| TO-220F | TO-126 / TO-126S |
|---------|------------------|
|         |                  |

■ ABSOLUTE MAXIMUM RATINGS ( $T_A=25^\circ\text{C}$ , unless otherwise noted)

| PARAMETER                    | SYMBOL         | RATINGS    | UNIT             |
|------------------------------|----------------|------------|------------------|
| Collector-Base Voltage       | $V_{CBO}$      | 100        | V                |
| Collector-Emitter Voltage    | $V_{CEO}$      | 80         | V                |
| Emitter-Base Voltage         | $V_{EBO}$      | 5          | V                |
| Continuous Collector Current | $I_C$          | 2          | A                |
| Collector Dissipation        | TO-126/TO-126S | 1.25       | W                |
|                              | TO-220F        | 1.6        | W                |
| Junction Temperature         | $T_J$          | +150       | $^\circ\text{C}$ |
| Storage Temperature Range    | $T_{STG}$      | -65 ~ +150 | $^\circ\text{C}$ |

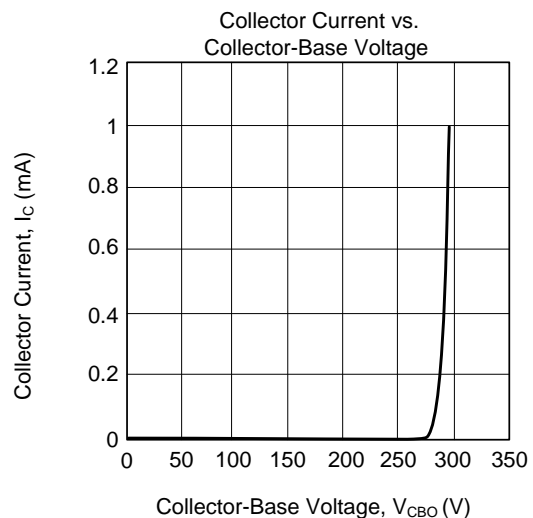
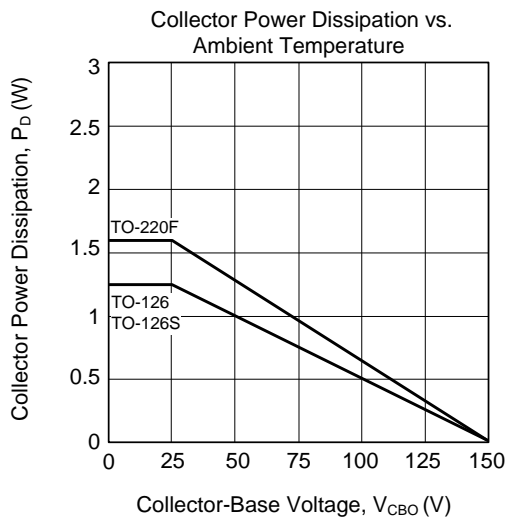
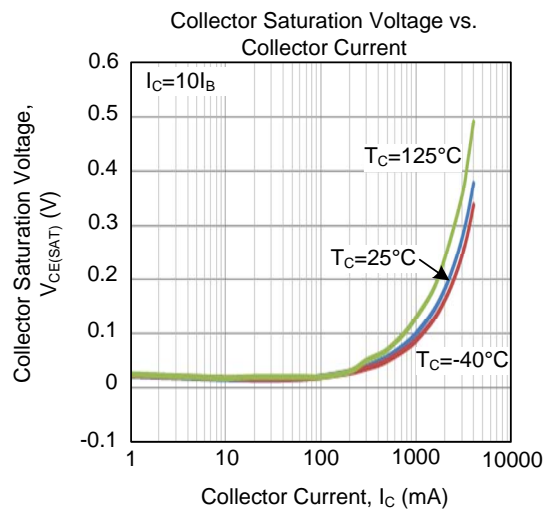
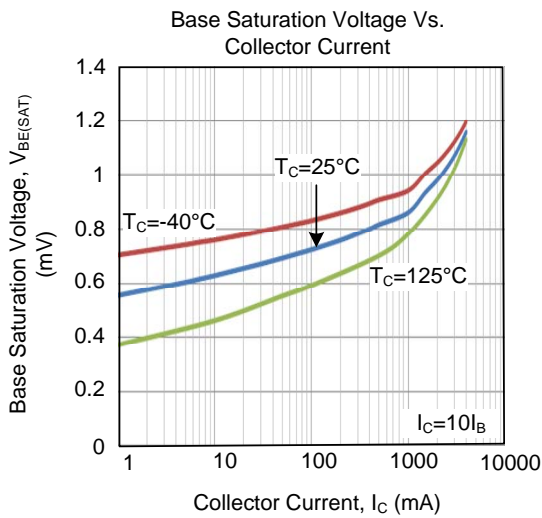
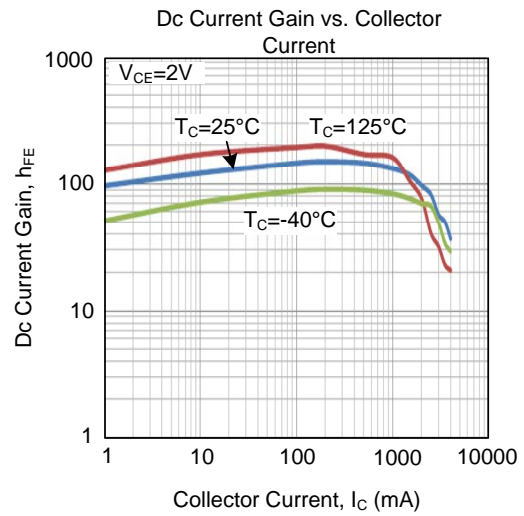
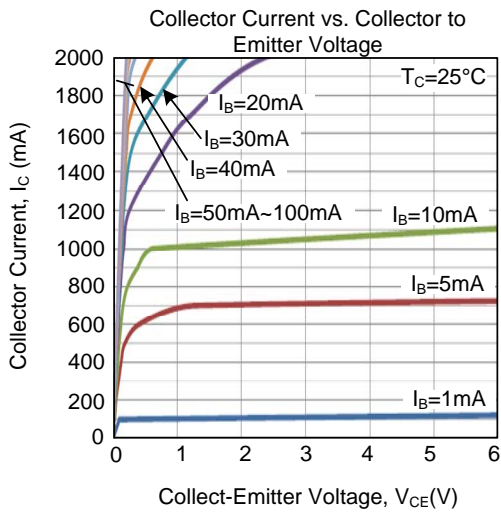
Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged.

Absolute maximum ratings are stress ratings only and functional device operation is not implied.

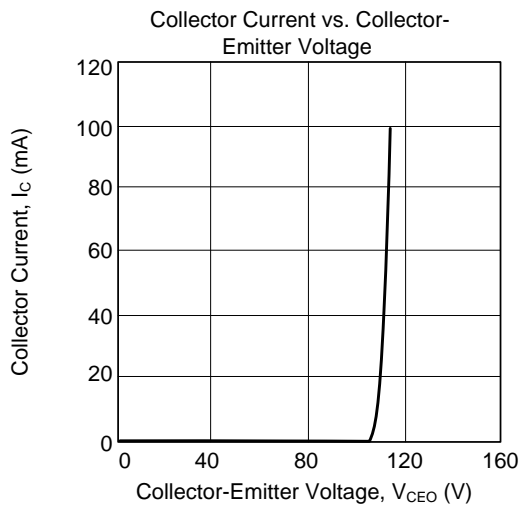
■ ELECTRICAL CHARACTERISTICS ( $T_A=25^\circ\text{C}$ , unless otherwise specified)

| PARAMETER                            | SYMBOL        | TEST CONDITIONS                                       | MIN | TYP | MAX | UNIT          |
|--------------------------------------|---------------|---|-----|-----|-----|---------------|
| Collector-Base Breakdown Voltage     | $BV_{CBO}$    | $I_C=1\text{mA}, I_E=0$                               | 100 |     |     | V             |
| Collector-Emitter Breakdown Voltage  | $BV_{CEO}$    | $I_C=100\text{mA}, I_B=0$                             | 80  |     |     | V             |
| Emitter-Base Breakdown Voltage       | $BV_{EBO}$    | $I_E=1\text{mA}, I_C=0$                               | 5   |     |     | V             |
| Collector Cut-Off Current            | $I_{CBO}$     | $V_{CB}=100\text{V}, I_E=0$                           |     |     | 100 | $\mu\text{A}$ |
| Emitter Cut-Off Current              | $I_{EBO}$     | $V_{EB}=5\text{V}, I_C=0$                             |     |     | 1   | mA            |
| Collector-Emitter Saturation Voltage | $V_{CE(sat)}$ | $I_C=1\text{A}, I_B=100\text{mA}$                     |     |     | 0.6 | V             |
| DC Current Gain                      | $h_{FE}(1)$   | $I_C=150\text{mA}, V_{CE}=2\text{V}$                  | 40  |     |     |               |
|                                      | $h_{FE}(2)$   | $I_C=1\text{A}, V_{CE}=2\text{V}$                     | 25  |     |     |               |
| Transition Frequency                 | $f_T$         | $I_C=250\text{mA}, V_{CE}=10\text{V}, f=10\text{MHz}$ | 3   |     |     | MHz           |

## TYPICAL CHARACTERISTICS



■ TYPICAL CHARACTERISTICS (Cont.)



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