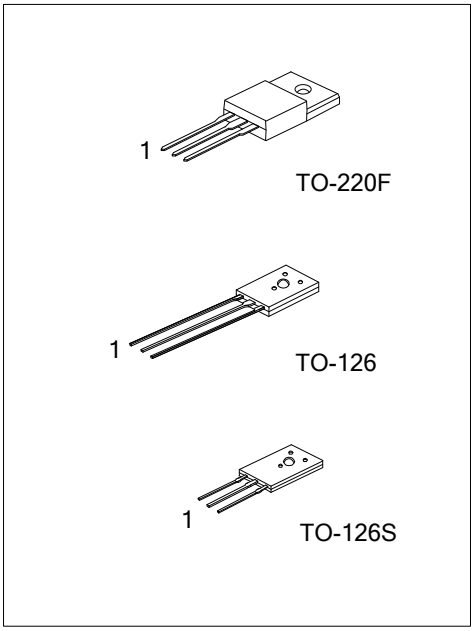
# BD237

***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

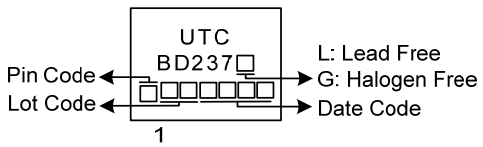
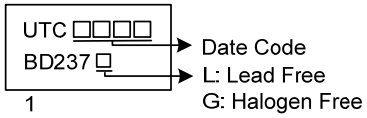
## ■ ORDERING INFORMATION

| 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

| | |
|---|---|
| BD237G-TF3-F-K<br>(1) Packing Type<br>(2) Pin Assignment<br>(3) Package Type<br>(4) Green Package | (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 |

## ■ MARKING

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

## ■ ABSOLUTE MAXIMUM RATINGS ($T_A$=25°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 | $P_C$ | 1.25 | W |
| | TO-220F | | 1.6 | W |
| Junction Temperature | | $T_J$ | +150 | °C |
| Storage Temperature Range | | $T_{STG}$ | -65 ~ +150 | °C |

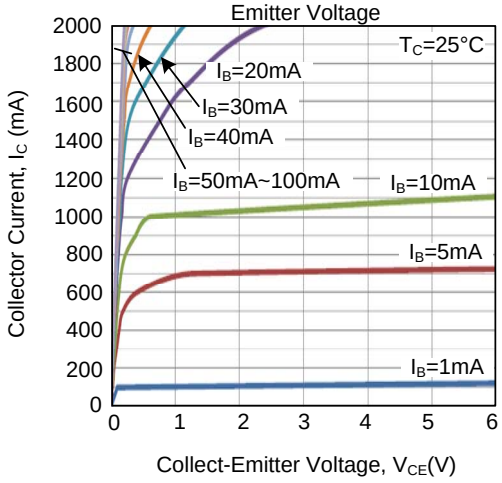
Note: Absolute maximum ratings are those values beyond which the device could be permanently damaged. Absolute maximum ratings are stress ratings only and functional device operation is not implied.

## ■ ELECTRICAL CHARACTERISTICS ($T_A$ =25°C, unless otherwise specified)

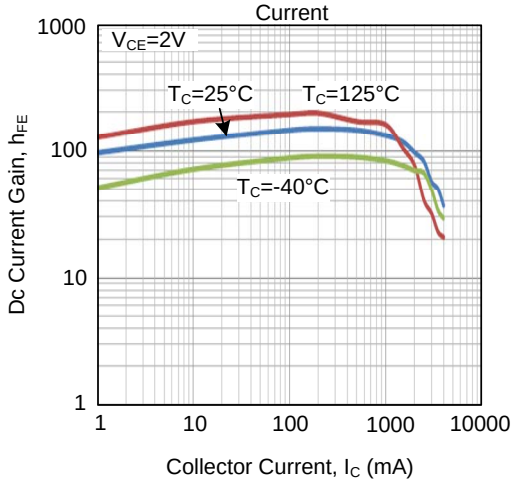
| PARAMETER | SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNIT |
|---|---|---|---|---|---|---|
| Collector-Base Breakdown Voltage | $BV_{CBO}$ | $I_C$=1mA, $I_E$=0 | 100 | | | V |
| Collector-Emitter Breakdown Voltage | $BV_{CEO}$ | $I_C$=100mA, $I_B$=0 | 80 | | | V |
| Emitter-Base Breakdown Voltage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

## ■ TYPICAL CHARACTERISTICS

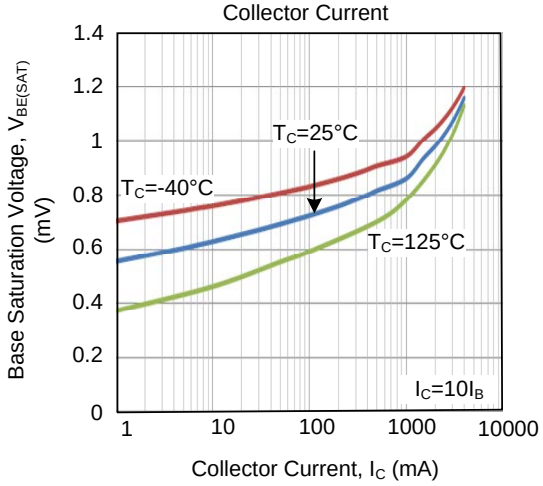
Collector Current vs. Collector to Emitter Voltage



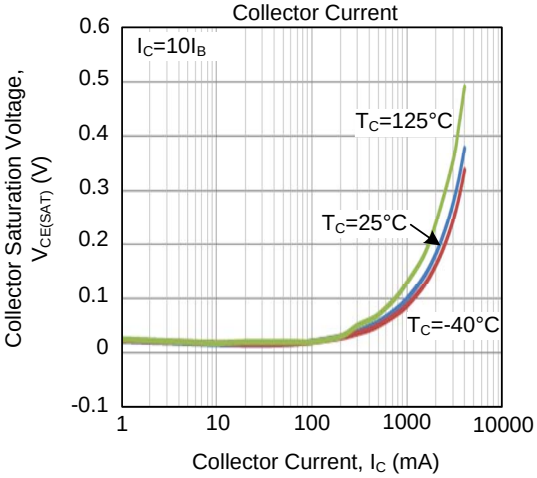

Dc Current Gain vs. Collector Current



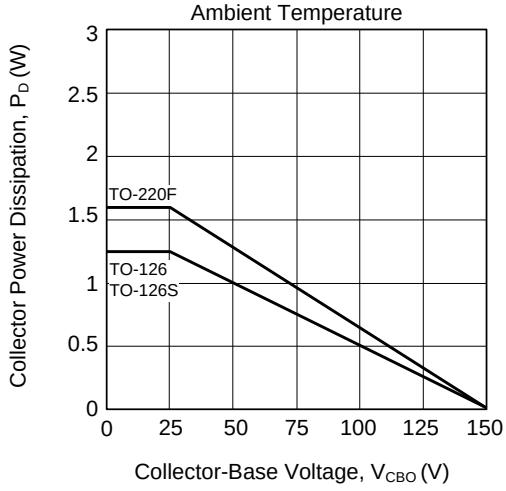

Base Saturation Voltage Vs. Collector Current



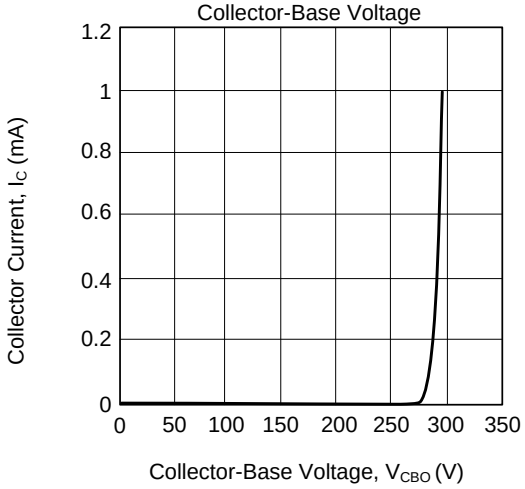

Collector Saturation Voltage vs. Collector Current




Collector Power Dissipation vs. Ambient Temperature




Collector Current vs. Collector-Base Voltage



## ■ TYPICAL CHARACTERISTICS (Cont.)