



BD435

Preliminary

NPN EPITAXIAL SILICON TRANSISTOR

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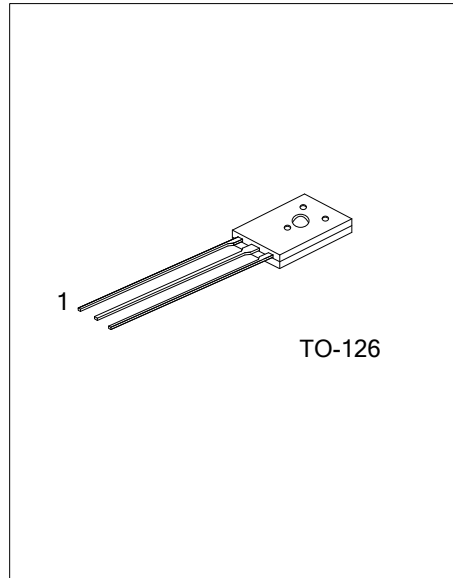
DESCRIPTION

The UTC **BD435** is a NPN epitaxial silicon transistor, it uses UTC's advanced technology to provide the customers with high DC current gain, etc.

The UTC **BD435** is suitable for medium power linear and switching applications.

FEATURES

* High DC current gain



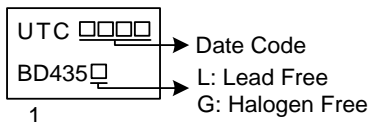
ORDERING INFORMATION

| Ordering Number | | Package | Pin Assignment | | | Packing |
|-----------------|--------------|---------|----------------|---|---|---------|
| Lead Free | Halogen Free | | 1 | 2 | 3 | |
| BD435L-T60-K | BD435G-T60-K | TO-126 | B | C | E | Bulk |
| BD435L-T60-K | BD435G-T60-K | TO-126 | B | C | E | Bulk |

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

| | |
|--|--|
| <p>BD435G-T60-K</p> <p>(1) Packing Type (2) Package Type (3) Green Package</p> | <p>(1) K: Bulk (2) T60: TO-126 (3) G: Halogen Free and Lead Free, L: Lead Free</p> |
|--|--|

MARKING



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

| PARAMETER | SYMBOL | RATINGS | UNIT |
|--|-----------|------------|------------------|
| Collector-Base Voltage | V_{CBO} | 32 | V |
| Collector-Emitter Voltage | V_{CEO} | 32 | V |
| Collector-Emitter Voltage | V_{CES} | 32 | V |
| Emitter-Base Voltage | V_{EBO} | 5 | V |
| Collector Current (DC) | I_C | 4 | A |
| Collector Current (Pulse) (Note 1) | I_{CP} | 7 | A |
| Base Current | I_B | 1 | A |
| Collector Dissipation ($T_C=25^\circ\text{C}$) | P_C | 36 | W |
| Junction Temperature | T_J | +150 | $^\circ\text{C}$ |
| Storage Temperature | 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** ($T_C=25^\circ\text{C}$, unless otherwise noted)

| PARAMETER | SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNIT |
|---|----------------|---|-----|-----|-----|---------------|
| Collector-Emitter Sustaining Voltage | $V_{CEO(SUS)}$ | $I_C=100\text{mA}$, $I_B=0\text{A}$ | 32 | | | V |
| Collector Cut-Off Current | I_{CBO} | $V_{CB}=32\text{V}$, $I_E=0$ | | | 100 | μA |
| Collector Cut-Off Current | I_{CEO} | $V_{CE}=32\text{V}$, $V_{BE}=0$ | | | 100 | μA |
| Emitter Cut-Off Current | I_{EBO} | $V_{EB}=5\text{V}$, $I_C=0$ | | | 1 | mA |
| DC Current Gain (Note 1) | h_{FE} | $V_{CE}=5\text{V}$, $I_C=10\text{mA}$ | 40 | 130 | | |
| | | $V_{CE}=1\text{V}$, $I_C=500\text{mA}$ | 85 | 140 | | |
| | | $V_{CE}=1\text{V}$, $I_C=2\text{A}$ | 50 | | | |
| Collector-Emitter Saturation Voltage (Note 1) | $V_{CE(SAT)}$ | $I_C=2\text{A}$, $I_B=0.2\text{A}$ | | 0.2 | 0.5 | V |
| Base-Emitter ON Voltage (Note 1) | $V_{BE(ON)}$ | $V_{CE}=1\text{V}$, $I_C=2\text{A}$ | | | 1.1 | V |
| Current Gain Bandwidth Product | f_T | $V_{CE}=1\text{V}$, $I_C=250\text{mA}$ | 3 | | | MHz |

Note: Pulse Test: $P_W=300\mu\text{s}$, duty Cycle=1.5% Pulsed

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