



BU407

NPN SILICON TRANSISTOR

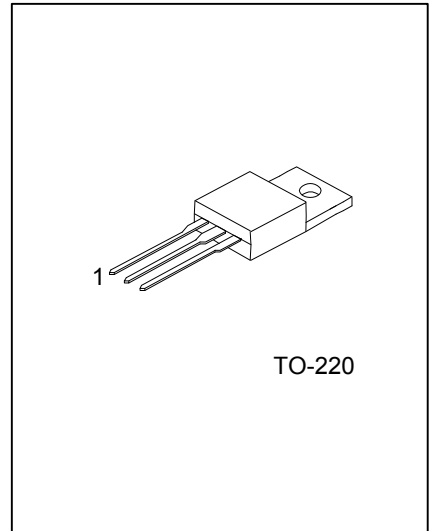
NPN EPITAXIAL PLANAR TRANSISTOR

DESCRIPTION

The UTC **BU407** is a NPN epitaxial planar transistor, designed for use in TV Horizontal output and switching applications.

FEATURES

* High breakdown voltage



Lead-free: BU407L
Halogen-free: BU407G

ORDERING INFORMATION

| Ordering Number | | | Package | Pin Assignment | | | Packing |
|-----------------|-------------------|----------------|---------|----------------|---|---|---------|
| Normal | Lead Free Plating | Halogen Free | | 1 | 2 | 3 | |
| BU407-x-TA3-T | BU407L-x-TA3-T | BU407G-x-TA3-T | TO-220 | B | C | E | Tube |

| | |
|--|---|
| <p>BU407L-x-AE3-T</p> <p>(1)Packing Type (2)Package Type (3)Rank (4)Lead Plating</p> | <p>(1) T: Tube (2) TA3: TO-220 (3) x: refer to Classification of h_{FE2} (4) G: Halogen Free, L: Lead Free, Blank: Pb/Sn</p> |
|--|---|

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

| PARAMETER | SYMBOL | RATINGS | UNIT |
|--|-----------|------------|------------------|
| Collector Base Voltage | V_{CBO} | 330 | V |
| Collector to Emitter Voltage | V_{CEO} | 150 | V |
| Emitter to Base Voltage | V_{EBO} | 6 | V |
| Collector Current | I_C | 7 | A |
| Base Current | I_B | 4 | A |
| Collector Dissipation ($T_a=25^\circ\text{C}$) | P_C | 60 | W |
| Junction Temperature | T_J | 150 | $^\circ\text{C}$ |
| Storage Temperature | T_{STG} | -55 ~ +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.

■ THERMAL DATA

| PARAMETER | SYMBOL | MIN | TYP | MAX | UNIT |
|---------------------|---------------|-----|-----|------|--------------------|
| Junction to Ambient | θ_{JA} | | | 70 | $^\circ\text{C/W}$ |
| Junction to Case | θ_{JC} | | | 2.08 | $^\circ\text{C/W}$ |

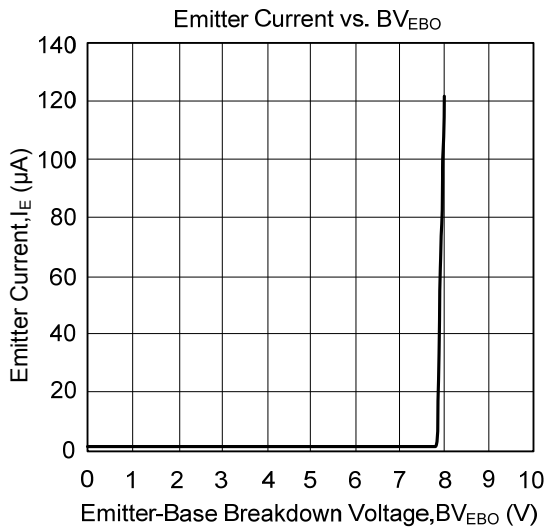
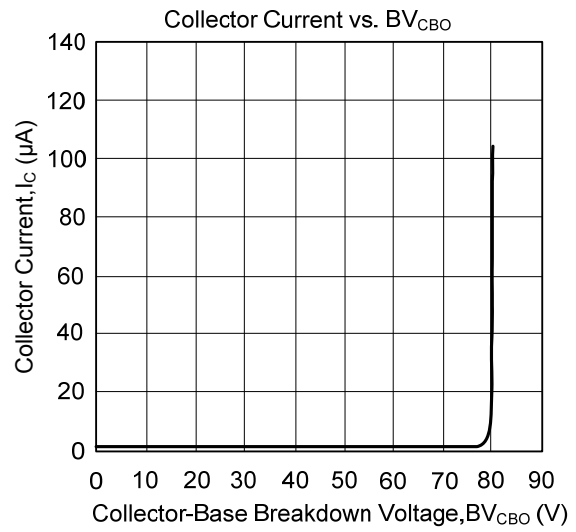
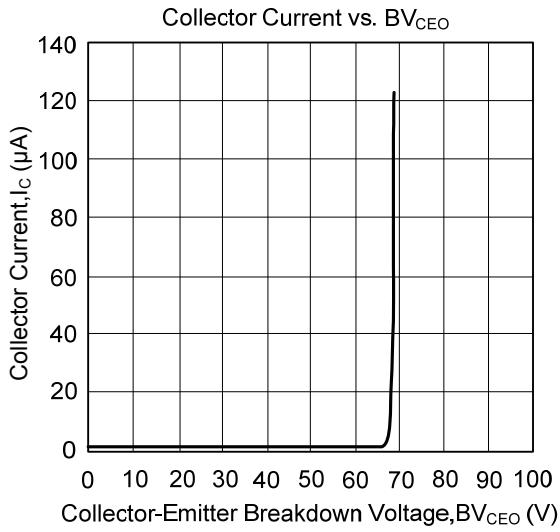
■ ELECTRICAL CHARACTERISTICS ($T_a=25^\circ\text{C}$, unless otherwise specified)

| PARAMETER | SYMBOL | TEST CONDITIONS | MIN | TYP | MAX | UNIT |
|--------------------------------------|---------------|---|-----|-----|-----|------|
| Collector Emitter Sustaining Voltage | BV_{CEO} | $I_C=100\text{ mA}, I_B=0$ | 150 | | | V |
| Collector-Emitter Saturation Voltage | $V_{CE(SAT)}$ | $I_C=5\text{ A}, I_B=0.5\text{ A}$ | | | 1 | V |
| Base-Emitter On Voltage | $V_{BE(SAT)}$ | | | | 1.2 | V |
| Collect Cutoff Current' | I_{CES} | $V_{CE}=400\text{ V}$ | | | 5 | mA |
| Emitter Cutoff Current | I_{EBO} | $V_{BE}=6\text{ V}, I_C=0$ | | | 1 | mA |
| DC Current Gain | h_{FE1} | $I_C=500\text{ mA}, V_{CE}=5\text{ V}$ | 25 | | | |
| | h_{FE2} | $I_C=2\text{ A}, V_{CE}=5\text{ V}$ | 35 | | 200 | |
| | h_{FE3} | $I_C=5\text{ A}, V_{CE}=5\text{ V}$ | 10 | | | |
| Current Gain Bandwidth Product | f_T | $I_C=500\text{ mA}, V_{CE}=10\text{ V}, f=1\text{ MHz}$ | 10 | | | MHz |

■ CLASSIFICATION OF h_{FE2}

| RANK | B | C | D |
|-------|-------|--------|---------|
| RANGE | 35-85 | 75-125 | 115-200 |

■ TYPICAL CHARACTERISTICS



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