



# BU407

## NPN SILICON TRANSISTOR

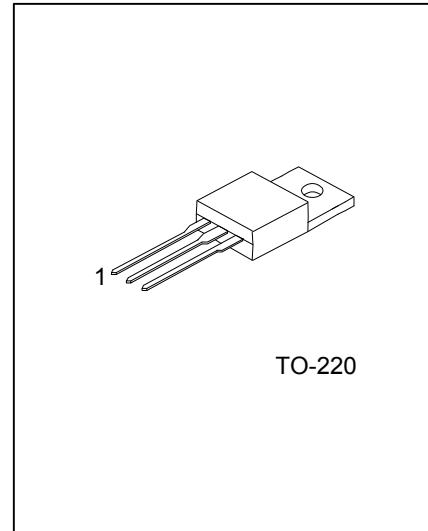
### NPN EPITAXIAL PLANAR TRANSISTOR

#### 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 <math>h_{FE2}</math> (4) G: Halogen Free, L: Lead Free, Blank: Pb/Sn</p>
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■ 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	$\theta_{JA}$			70	$^\circ\text{C/W}$
Junction to Case	$\theta_{JC}$			2.08	$^\circ\text{C/W}$

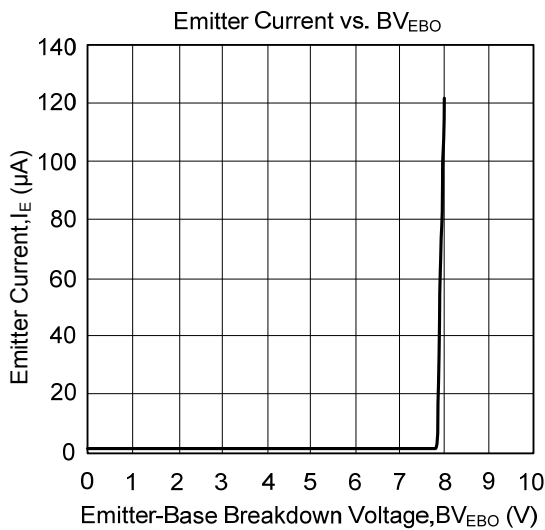
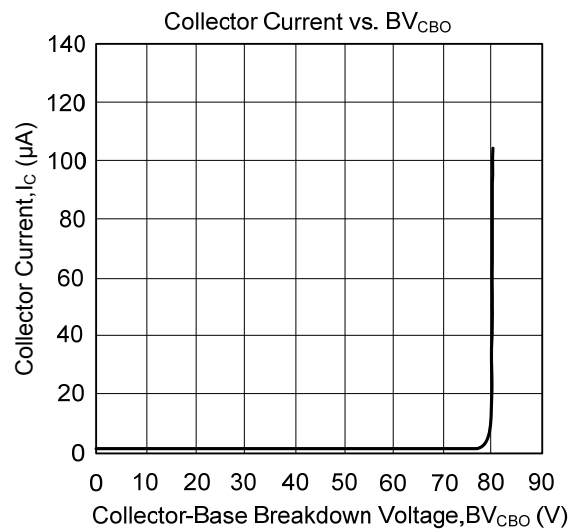
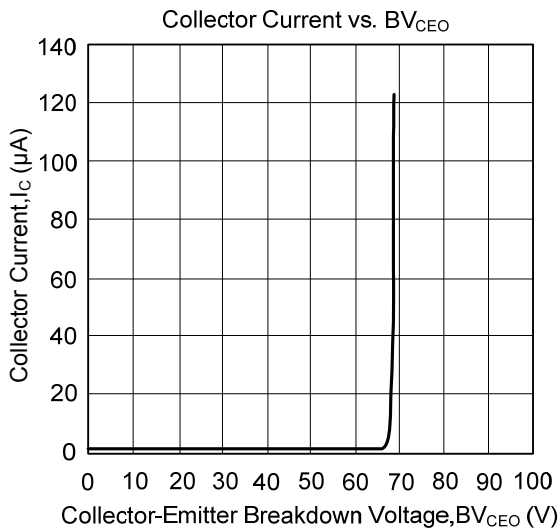
■ ELECTRICAL CHARACTERISTICS ( $T_a=25^\circ\text{C}$ , unless otherwise specified)

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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