



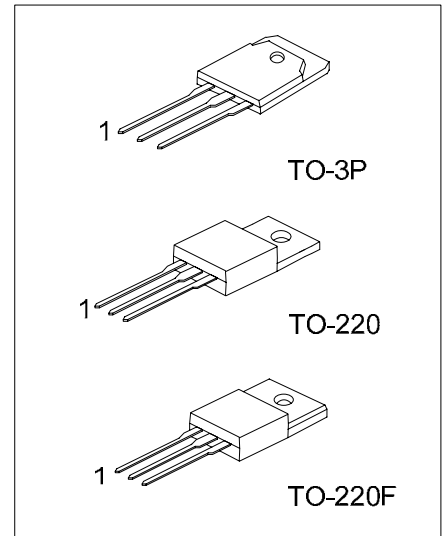
BU406

NPN PLANAR TRANSISTOR

SILICON NPN SWITCHING TRANSISTOR

■ DESCRIPTION

The UTC **BU406** is a NPN epitaxial planar transistor. It is a fast switching device for use in horizontal deflection output stages of large screens MTV receivers with 110 CRT.



*Pb-free plating product number: BU406L

■ ORDERING INFORMATION

Order Number		Package	Pin Assignment			Packing
Normal	Lead Free Plating		1	2	3	
BU406-x-TA3-T	BU406L-x-TA3-T	TO-220	B	C	E	Tube
BU406-x-TF3-T	BU406L-x-TF3-T	TO-220F	B	C	E	Tube
BU406-x-T3P-T	BU406L-x-T3P-T	TO-3P	B	C	E	Tube

<p>BU406L-x-TA3-T</p>	<p>(1) T: Tube (2) TA3: TO:220, TF3: TO-220F, T3P: TO-3P (3) x: refer to Classification of h_{FE} (4) L: Lead Free Plating, Blank: Pb/Sn</p>
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■ ABSOLUTE MAXIMUM RATING

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage ($I_E=0$)	V_{CBO}	400	V
Collector-Emitter Voltage ($V_{BE}=-1.5V$)	V_{CEV}	400	V
Collector-Emitter Voltage ($I_B=0$)	V_{CEO}	200	V
Emitter-Base Voltage ($I_C=0$)	V_{EBO}	6	V
Collector Current	I_C	7	A
Collector Peak Current (repetitive)	I_{CM}	10	A
Collector Peak Current ($t_p=10ms$)	I_{CM}	15	A
Base Current	I_B	4	A
Collector Dissipation ($T_C \leq 25$)	P_C	60	W
Junction Temperature	T_J	150	
Storage Temperature	T_{STG}	-65 ~ +150	

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	RATINGS	UNIT
Thermal Resistance, Junction to Ambient	θ_{JA}	70	/W
Thermal Resistance, Junction to Case	θ_{JC}	2.08	/W

■ ELECTRICAL CHARACTERISTICS ($T_a=25$)

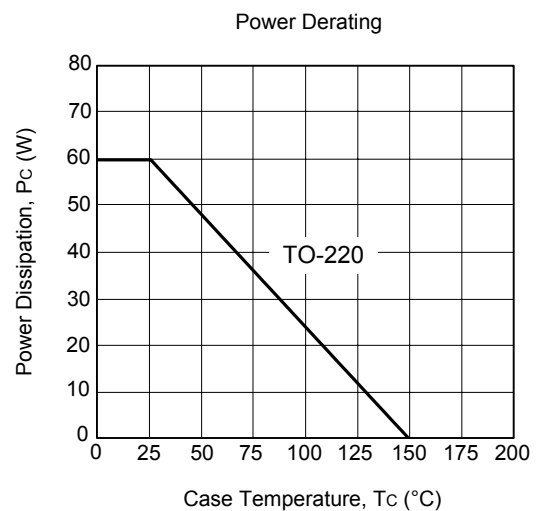
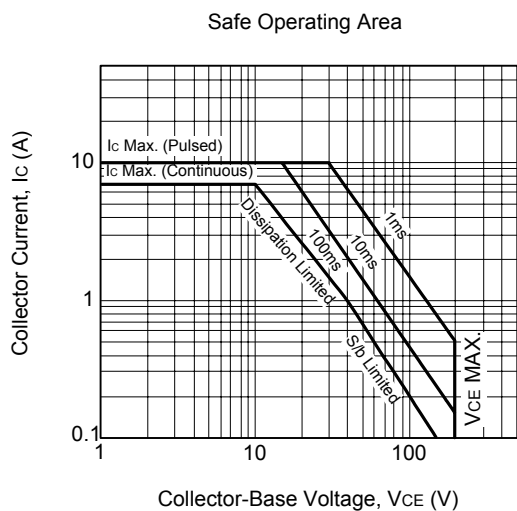
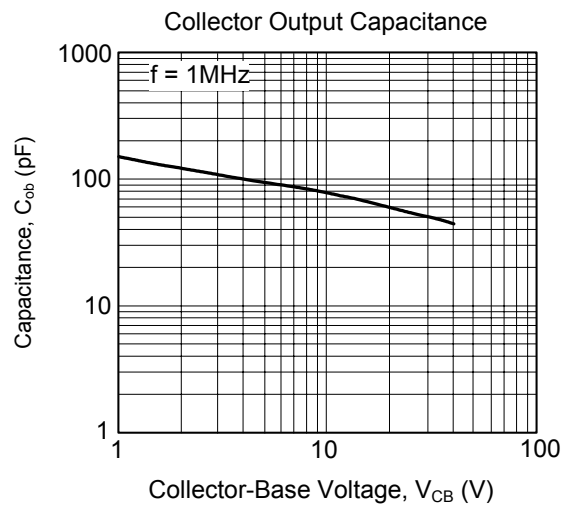
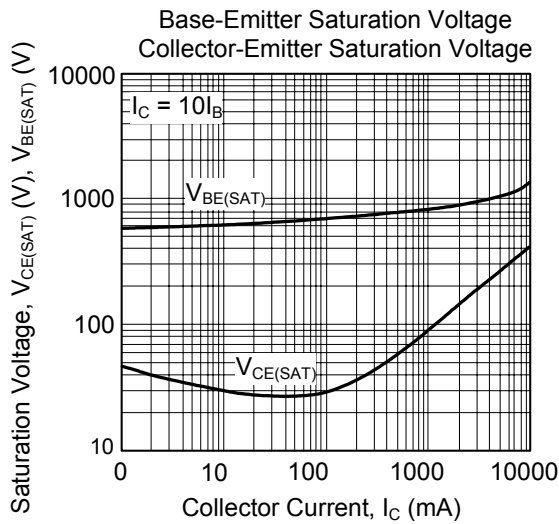
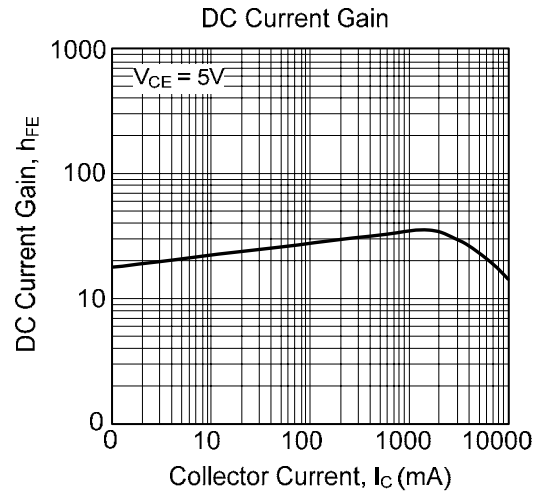
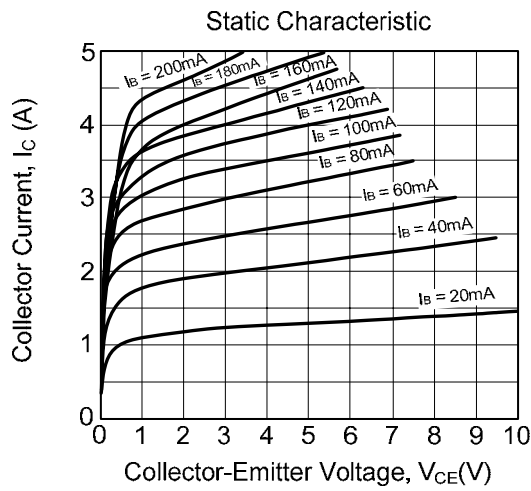
PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collect Cutoff Current ($V_{BE}=0$)	I_{CES}	$V_{CE}=400V$			5	mA
		$V_{CE}=250V$ $T_C=150^\circ C$			100	μA
		$V_{CE}=250V$			1	mA
Emitter Cut-off Current ($I_C=0$)	I_{EBO}	$V_{BE}=6V$			1	mA
Collector-Emitter Saturation Voltage	$V_{CE(SAT)*}$	$I_C=5A, I_B=0.5A$			1	V
Base-Emitter Saturation Voltage	$V_{BE(SAT)*}$	$I_C=5A, I_B=0.5A$			1.2	V
DC Current Gain	h_{FE}	$V_{CE}=10V, I_C=500mA$	70		240	
Transition Frequency	f_T	$I_C=500mA, V_{CE}=10V$	10			MHz
Turn-off Time	t_{OFF}	$I_C=5A, I_B=0.5A$			0.75	μs
Second Breakdown Collector Current	$I_{s/b}$	$V_{CE}=40V, t=10ms$		4		A

* Pulse duration=300 μs , duty cycle 1.5%

■ CLASSIFICATION OF h_{FE}

RANK	A	B
RANGE	70 ~ 120	110 ~ 240

TYPICAL CHARACTERISTICS



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