



BU406S

NPN PLANAR TRANSISTOR

NPN EXPITAXIAL PLANAR TRANSISTOR

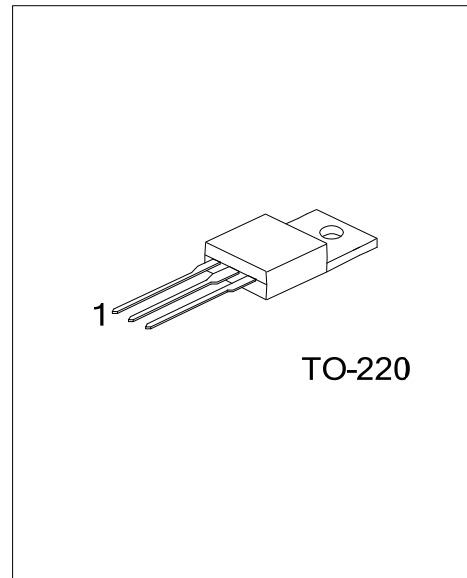
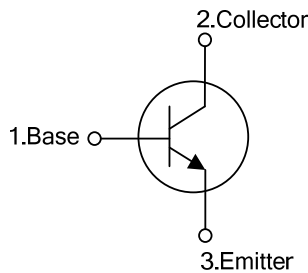
■ DESCRIPTION

The UTC **BU406S** is a NPN epitaxial planar transistor, designed for using in general purpose amplifier and switching applications.

■ FEATURES

* High voltage

■ SYMBOL



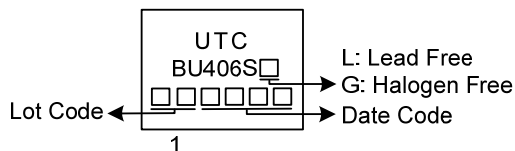
■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
BU406SL-TA3-T	BU406SG-TA3-T	TO-220	B	C	E	Tube

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

<p>BU406SG-TA3-T</p> <p>(1) Packing Type (2) Package Type (3) Green Package</p>	<p>(1) T: Tube (2) TA3: TO-220 (3) G: Halogen Free and Lead Free, L: Lead Free</p>
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■ MARKING



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

PARAMETER	SYMBOL	RATING	UNIT
Collector Base Voltage	V_{CBO}	200	V
Collector to Emitter Voltage	V_{CEO}	110	V
Emitter-Base Voltage	V_{EBO}	6	V
Collector Current	DC	7	A
	Pulse	10	A
Base Current	I_B	2	A
Collector Dissipation	$T_A=25^\circ\text{C}$	2	W
	$T_C=25^\circ\text{C}$	65	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 ($T_A=25^\circ\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Emitter Base Breakdown Voltage	BV_{EBO}	$I_E=100\mu\text{A}, I_C=0$	5			V
Collector Base Breakdown Voltage	BV_{CBO}	$I_C=100\mu\text{A}, I_E=0$	200			V
Collector Emitter Sustaining Voltage (Note)	BV_{CEO}	$I_C=30\text{mA}, I_B=0$	110			V
Collector Cutoff Current	I_{CEO}	$V_{CE}=110\text{V}, I_B=0$			100	μA
Collector Cutoff Current	I_{CES}	$V_{CE}=200\text{V}, V_{EB}=0$			100	μA
		$V_{CE}=150\text{V}, V_{EB}=0$			50	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=6\text{V}, I_C=0$			1	mA
Collector-Emitter Saturation Voltage (Note)	$V_{CE(SAT)}$	$I_C=5\text{A}, I_B=0.5\text{A}$		0.22	0.5	V
Base Emitter On Voltage	$V_{BE(ON)}$	$V_{CE}=5\text{V}, I_C=5\text{A}$		1.05	1.5	V
DC Current Gain (Note)	h_{FE1}	$V_{CE}=5\text{V}, I_C=500\text{mA}$	60		120	
	h_{FE2}	$V_{CE}=5\text{V}, I_C=2\text{A}$	50			
Current Gain Bandwidth Product	f_T	$V_{CE}=10\text{V}, I_C=500\text{mA}, f=1\text{MHz}$	10			MHz
Turn-Off Time	t_{OFF}	$I_C=5\text{A}, I_B=500\text{mA}$			0.7	μs

Note: Pulse Test: $P_W \leq 300\mu\text{s}$, Duty Cycle $\leq 2\%$.

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