



**UP1620**

Preliminary

**PNP EPITAXIAL SILICON TRANSISTOR**

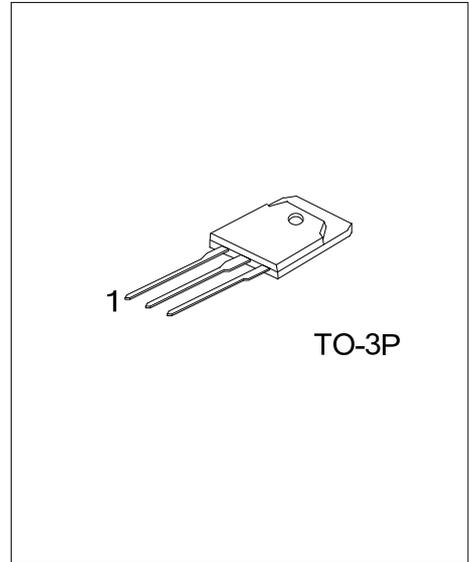
**PNP SILICON POWER TRANSISTOR**

■ DESCRIPTION

The UTC **UP1620** is a silicon PNP silicon power transistor, it uses UTC's advanced technology to provide the customers with high collector-emitter breakdown voltage and ultra-high DC current gain, etc.

■ FEATURES

- \* High collector-emitter breakdown voltage
- \* Ultra-high DC current gain



■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
UP1620L-x-T3P-T	UP1620G-x-T3P-T	TO-3P	B	C	E	Tube

Note: Pin Assignment: A: Anode, K: Cathode

<p>UP1620L-x-T3P-T</p> <p>(1) Packing Type (2) Package Type (3) Rank (4) Lead Free</p>	<p>(1) T: Tube (2) T3P: TO-3P (3) x: refer to Classification of <math>h_{FE}</math> (4) L: Lead Free, G: Halogen Free</p>
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■ MARKING INFORMATION

PACKAGE MARKING	
TO-3P	<p>UTC UP1620 □ □□□□□ → Data Code Lot Code ← □□□□ 1</p> <p>L: Lead Free G: Halogen Free</p>

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

PARAMETER SYMBOL		RATINGS	UNIT
Collector-Base Voltage	$V_{CBO}$	-160	V
Collector-Emitter Voltage	$V_{CEO}$	-150	V
Emitter-Base Voltage	$V_{EBO}$	-5	V
Collector Current	$I_C$	-10	A
Base Current	$I_B$	-1	A
Collector Power Dissipation ( $T_C=25^\circ\text{C}$ ) $P_c$		150	W
Junction Temperature	$T_J$	150	$^\circ\text{C}$
Storage Temperature	$T_{STG}$	$\sim+150$	$^\circ\text{C}$

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
Collector Cut-Off Current	$I_{CBO}$	$V_{CB}=-160\text{V}$ , $I_E=0\text{A}$			-100	$\mu\text{A}$
Emitter Cut-Off Current	$I_{EBO}$	$V_{EB}=-5\text{V}$ , $I_C=0\text{A}$			-100	$\mu\text{A}$
Collector-Emitter Voltage	$V_{CEO}$	$I_C=-30\text{mA}$			-150	V
DC Current Gain	$h_{FE}$	$V_{CE}=-4\text{V}$ , $I_C=-7\text{A}$	0		30000	
Collector-Emitter Saturation Voltage	$V_{CE(sat)}$	$I_C=-7\text{A}$ , $I_B=-7\text{mA}$			-2.5	V
Base-Emitter Saturation Voltage	$V_{BE(sat)}$	$I_C=-7\text{A}$ , $I_B=-7\text{mA}$			-3.0	V
Current Gain Bandwidth Product	$f_T$	$V_{CE}=-12\text{V}$ , $I_E=-2\text{A}$		50		MHz
Output Capacitance	$C_{ob}$	$V_{CB}=-10\text{V}$ , $f=1\text{MHz}$ , $I_E=0\text{A}$		230		pF

■ CLASSIFICATION OF  $h_{FE}$

RANK	O	P	Y
RANGE	5000 ~ 12000	6500 ~ 20000	15000 ~ 30000

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