



UP1620

Preliminary

PNP EPITAXIAL SILICON TRANSISTOR

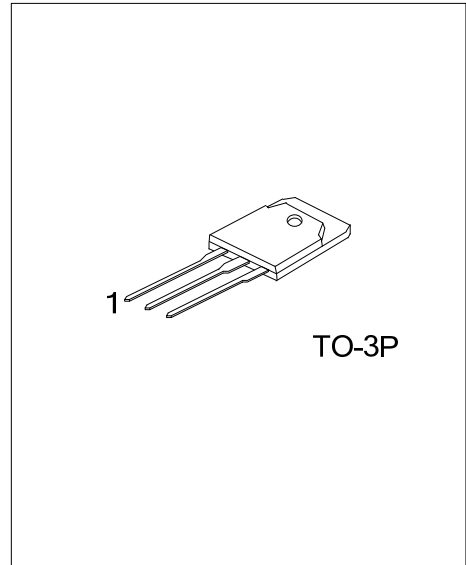
PNP SILICON POWER TRANSISTOR

■ 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 h_{FE} (4) L: Lead Free, G: Halogen Free</p>
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■ MARKING INFORMATION

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

■ 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	μA
Emitter Cut-Off Current	I_{EBO}	$V_{EB}=-5\text{V}$, $I_C=0\text{A}$			-100	μA
Collector-Emitter Voltage	V_{CEO}	$I_C=-30\text{mA}$	-150			V
DC Current Gain	h_{FE}	$V_{CE}=-4\text{V}$, $I_C=-7\text{A}$	5000		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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