

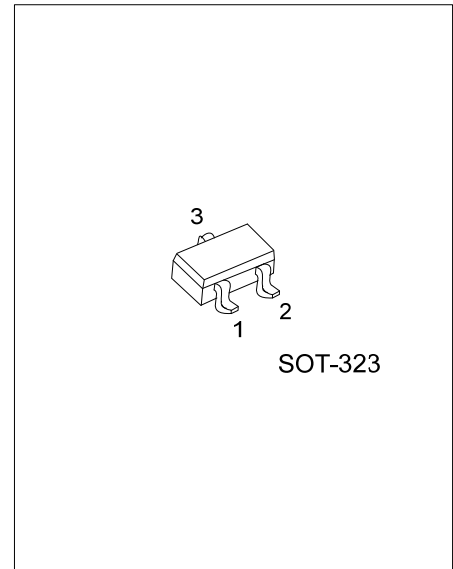


UP2316

Preliminary

PNP SILICON TRANSISTOR

BIPOLAR TRANSISTOR SILICON PNP EPITAXIAL TYPE (BIAS RESISTOR BUILT-IN TRANSISTOR)



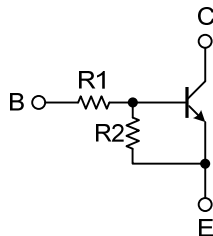
DESCRIPTION

The UTC **UP2316** is a transistor with low saturation voltage. It provides customers with very low on-state losses that makes it ideal for applications, such as driving and power management functions and DC-DC circuits.

FEATURES

* The integrated bias resistor reduces the number of external parts required, making it possible to reduce system size and assembly time.

EQUIVALENT CIRCUIT



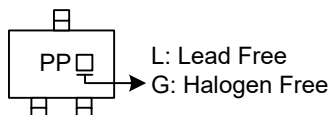
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
UP2316L-AL3-R	UP2316G-AL3-R	SOT-323	B	E	C	Tape Reel

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

<p>UP2316G-AL3-R</p> <ul style="list-style-type: none"> (1) Packing Type (2) Package Type (3) Green Package 	<ul style="list-style-type: none"> (1) R: Tape Reel (2) AA3: SOT-223 (3) G: Halogen Free and Lead Free, L: Lead Free
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MARKING



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

PARAMETER	SYMBOL	RATINGS	UNIT
Collector-Base Voltage	V_{CBO}	-50	V
Collector-Emitter Voltage	V_{CEO}	-50	V
Emitter-Base Voltage	V_{EBO}	-7	V
Continuous Collector Current	I_C	-100	mA
Collector power dissipation	P_c	100	mW
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-Base Breakdown Voltage	BV_{CBO}	$I_C=-100\mu\text{A}$	-50			V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$I_C=-10\text{mA}$	-50			V
Collector Cut-off Current	I_{CBO}	$V_{CB}=-50\text{V}, I_E=0\text{mA}$			-100	nA
Collector Cut-off Current	I_{CEO}	$V_{CB}=-50\text{V}, I_E=0\text{mA}$			-500	nA
Emitter Cut-off Current	I_{EBO}	$V_{EB}=-7\text{V}, I_C=0\text{mA}$	-0.36		-0.68	mA
Collector-Emitter Saturation Voltage	$V_{CE(SAT)}$	$I_C=-5\text{mA}, I_B=-0.25\text{mA}$		-0.1	-0.3	V
DC Current Gain	h_{FE}	$V_{CE}=-5\text{V}, I_C=-10\text{mA}$	50			
Input Voltage	$V_{IN(ON)}$	$V_{CE}=-0.2\text{V}, I_C=-5\text{mA}$	-0.8		-2.5	V
	$V_{IN(OFF)}$	$V_{CE}=-5.0\text{V}, I_C=-0.1\text{mA}$	-0.3		-1.1	V
Transition Frequency	f_T	$V_{CE}=-10\text{V}, I_C=-5\text{mA}$		250		MHz
Output Capacitance	C_{ob}	$V_{CB}=-10\text{V}, I_E=0\text{mA}, f=1\text{MHz}$		3.0		pF
Input Resistance	R_1		3.29	4.7	6.11	k Ω
Resistance Ratio	R_2/R_1		1.7	2.1	2.6	
Resistance Ratio	R_1/R_2			0.47		

Note: Pulse test: $t_P \leq 300\mu\text{s}$, Duty cycle $\leq 2\%$.

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