



## UPA806

Preliminary

**NPN SILICON TRANSISTOR**

### NPN SILICON HIGH FREQUENCY TRANSISTOR

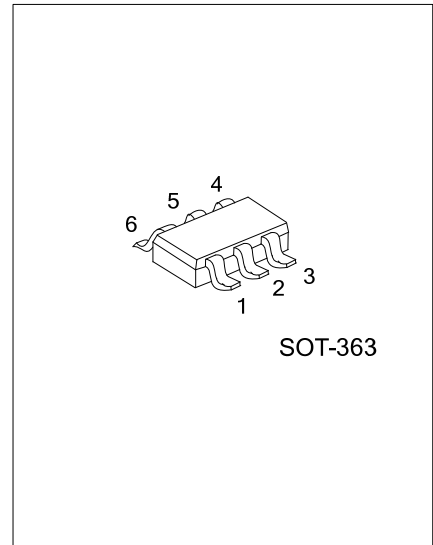
#### DESCRIPTION

The UTC **UPA806** is NPN silicon high frequency transistor, it uses UTC's advanced technology to provide customers with high gain, high gain bandwidth and low noise figure, etc.

The UTC **UPA806** is suited for various hand-held wireless applications.

#### FEATURES

- \* High Gain
- \* Low Noise Figure
- \* High Gain Bandwidth
- \* Excellent Low Voltage, Low Current Performance



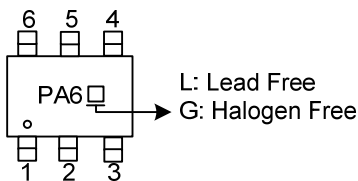
#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment						Packing
Lead Free	Halogen Free		1	2	3	4	5	6	
UPA806L-AL6-R	UPA806G-AL6-R	SOT-363	E2	B2	C1	E1	B1	C2	Tape Reel

Note: Pin Assignment: G: Gate D: Drain S: Source

<p>UPA806G-AL6-R</p>	<p>(1) R: Tape Reel</p> <p>(2) AL6: SOT-363</p> <p>(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	RATINGS	UNIT
Collector to Base Voltage	$V_{CBO}$	9	V
Collector to Emitter Voltage	$V_{CEO}$	6	V
Emitter to Base Voltage	$V_{EBO}$	2	V
Collector Current	$I_C$	30	mA
Total Power Dissipation	$P_D$	200	mW
Junction Temperature	$T_J$	+150	$^\circ\text{C}$
Storage Temperature Range	$T_{STG}$	-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
Collector Cutoff Current	$I_{CBO}$	$V_{CB}=5\text{V}, I_E=0$			0.1	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=1\text{V}, I_C=0$			0.1	$\mu\text{A}$
Forward Current Gain (Note 1)	$h_{FE}$	$V_{CE}=3\text{V}, I_C=10\text{mA}$	75	100	150	
Gain Bandwidth	$f_T$	$V_{CE}=3\text{V}, I_C=10\text{mA}, f=2\text{GHz}$		12		GHz
Feedback Capacitance (Note 2)	$C_{re}$	$V_{CB}=3\text{V}, I_E=0, f=1\text{MHz}$		0.4	0.7	pF

Notes: 1. Pulsed measurement, pulse width  $\leq 350\mu\text{s}$ , duty cycle  $\leq 2\%$

2. The emitter terminal should be connected to the ground terminal of the 3 terminal capacitance bridge.

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