



## 2SC5006

## NPN EPITAXIAL SILICON TRANSISTOR

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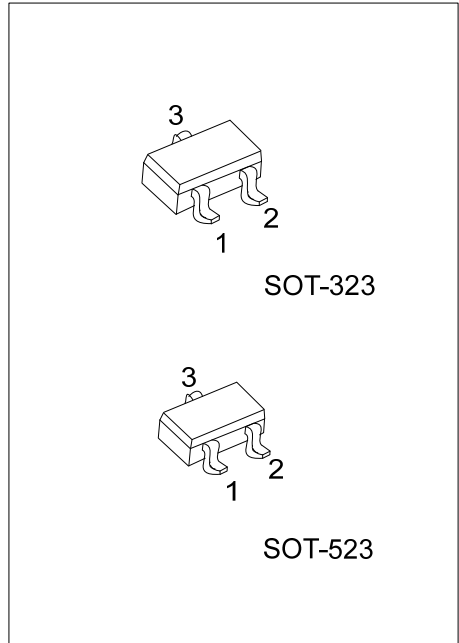
#### DESCRIPTION

The UTC **2SC5006** is an NPN epitaxial transistor; it uses UTC's advanced technology to provide the customers with low noise figure, high DC current gain and high current capability achieve a very wide dynamic range and excellent linearity.

The UTC **2SC5006** is suitable for low noise and small signal amplifiers from VHF band to UHF band.

#### FEATURES

- \* High DC current gain
- \* High current capability
- \* Low noise figure



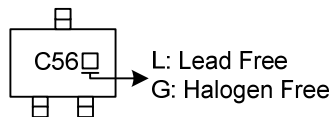
#### ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen-Free		1	2	3	
2SC5006L-AL3-R	2SC5006G-AL3-R	SOT-323	B	E	C	Tape Reel
2SC5006L-AN3-R	2SC5006G-AN3-R	SOT-523	B	E	C	Tape Reel

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

<p>2SC5006G-AL3-R</p> <p>(1) Packing Type (2) Package Type (3) Green Package</p>	<p>(1) R: Tape Reel (2) AL3: SOT-323, AN3: SOT-523 (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-Base Voltage		$V_{CBO}$	20	V
Collector-Emitter Voltage		$V_{CEO}$	12	V
Emitter-Base Voltage		$V_{EBO}$	3.0	V
Collector Current		$I_C$	100	mA
Power Dissipation	SOT-323	$P_D$	200	mW
	SOT-523		125	mW
Junction Temperature		$T_J$	+150	$^\circ\text{C}$
Storage Temperature		$T_{STG}$	-60 ~ +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	$I_{CBO}$	$V_{CB}=10\text{V}, I_E=0$			1.0	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=1\text{V}, I_C=0$			1.0	$\mu\text{A}$
DC Current Gain	$h_{FE}$	$V_{CE}=3\text{V}, I_C=7\text{mA}$ (Note 1)	80		160	
Transition Frequency	$f_T$	$V_{CE}=3\text{V}, I_C=7\text{mA}, f=1\text{GHz}$		4.5		GHz
Feedback Capacitance	$C_{re}$	$V_{CB}=3\text{V}, I_E=0, f=1.0\text{MHz}$ (Note 2)		0.7		pF

Notes: 1. Pulse measurement  $P_W \leq 350\mu\text{s}$ , duty cycle  $\leq 2\%$ .

2. The emitter terminal and the case shall be connected to the guard terminal of the three-terminal capacitance bridge.

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