



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

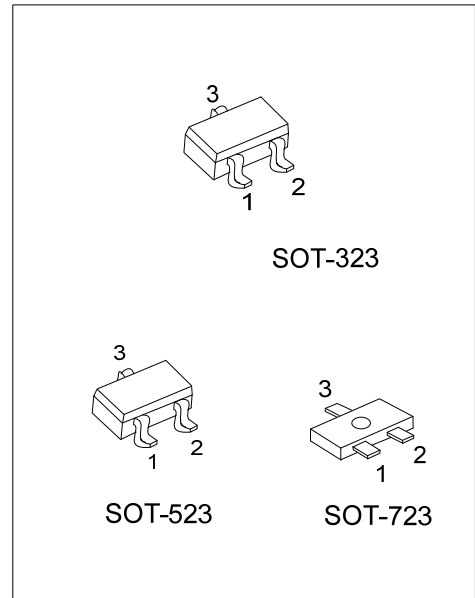
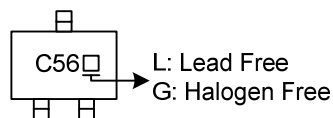
ORDERING INFORMATION

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
2SC5006L-AQ3-R	2SC5006G-AQ3-R	SOT-723	B	E	C	Tape Reel

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

<p>2SC5006G-AL3-R</p> <p>(1) Packing Type</p> <p>(2) Package Type</p> <p>(3) Green Package</p>	<p>(1) R: Tape Reel</p> <p>(2) AL3: SOT-323, AN3: SOT-523, AQ3: SOT-723</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-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
	SOT-723		100	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.

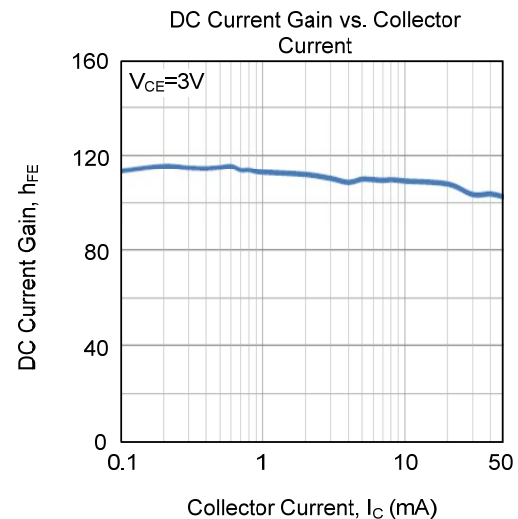
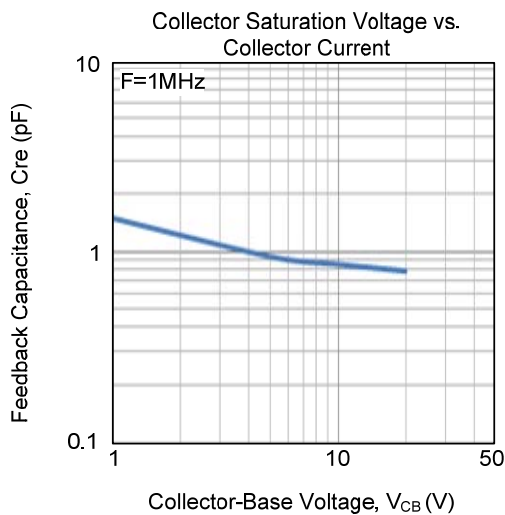
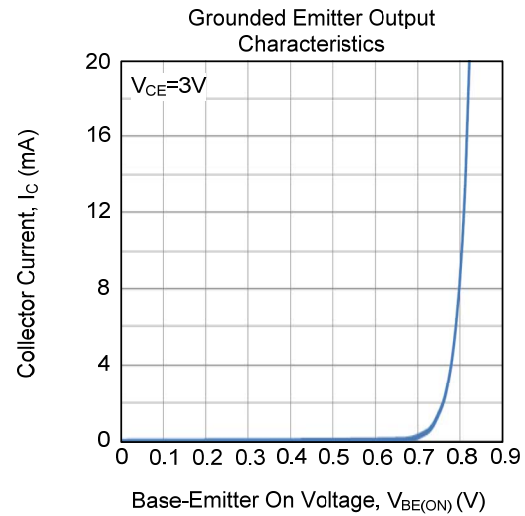
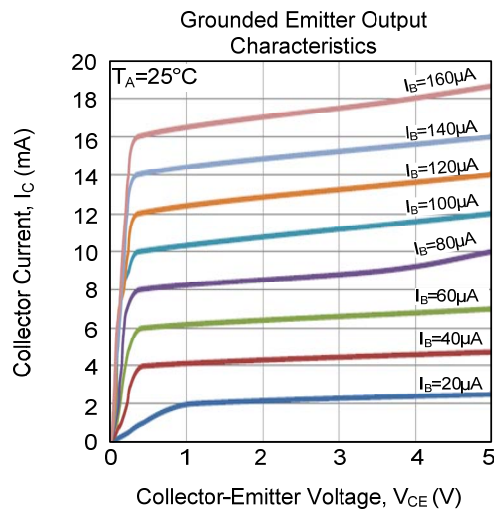
■ ELECTRICAL CHARACTERISTICS ($T_A=25^{\circ}\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Cut-Off Current	I_{CBO}	$V_{CB}=10\text{V}$, $I_E=0$			1.0	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=1\text{V}$, $I_C=0$			1.0	μA
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)		1.0		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 ground terminal of the three-terminal capacitance bridge.

TYPICAL CHARACTERISTICS



UTC assumes no responsibility for equipment failures that result from using products at values that exceed, even momentarily, rated values (such as maximum ratings, operating condition ranges, or other parameters) listed in products specifications of any and all UTC products described or contained herein. UTC products are not designed for use in life support appliances, devices or systems where malfunction of these products can be reasonably expected to result in personal injury. Reproduction in whole or in part is prohibited without the prior written consent of the copyright owner. UTC reserves the right to make changes to information published in this document, including without limitation specifications and product descriptions, at any time and without notice. This document supersedes and replaces all information supplied prior to the publication hereof.