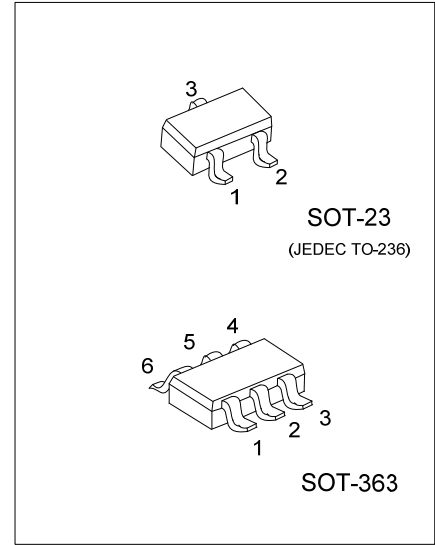




**2SC3583**

**NPN EPITAXIAL SILICON TRANSISTOR**

**MICROWAVE LOW NOISE  
AMPLIFIER NPN SILICON  
EPITAXIAL TRANSISTOR**



■ DESCRIPTION

The UTC **2SC3853** is an NPN epitaxial transistor; it uses UTC's advanced technology to provide the customers with high current gain and high current capability, etc.

■ FEATURES

- \* High current gain
- \* High current capability

■ ORDERING INFORMATION

Ordering Number		Package	Pin Assignment						Packing
Lead Free	Halogen Free		1	2	3	4	5	6	
2SC3583L-x-AE3-R	2SC3583G-x-AE3-R	SOT-23	B	E	C	-	-	-	Tape Reel
2SC3583L-x-AL6-R	2SC3583G-x-AL6-R	SOT-363	E1	B1	C2	E2	B2	C1	Tape Reel

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

<p>2SC3583G-x-AE3-R</p>	<p>(1) Packing Type (2) Package Type (3) Rank (4) Green Package</p>	<p>(1) R: Tape Reel (2) AE3: SOT-23, AL6: SOT-363 (3) x: refer to Classification of h<sub>FE</sub> (4) G: Halogen Free and Lead Free, L: Lead Free</p>
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■ MARKING

SOT-23-3/SOT-323	SOT-363
<p>L: Lead Free G: Halogen Free</p>	<p>L: Lead Free G: Halogen Free</p>



■ 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		$V_{CEO}$	10	V
Emitter-Base Voltage		$V_{EBO}$	1.5	V
Collector Current		$I_C$	65	mA
Power Dissipation	SOT-23	$P_D$	200	mW
	SOT-363		125	mW
Junction Temperature		$T_J$	+150	$^\circ\text{C}$
Storage Temperature		$T_{STG}$	-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 Cut-Off Current	$I_{CBO}$	$V_{CB}=10\text{V}, I_E=0$			1.0	$\mu\text{A}$
Emitter Cutoff Current	$I_{EBO}$	$V_{EB}=1\text{V}, I_E=0$			1.0	$\mu\text{A}$
DC Current Gain	$h_{FE}$ (Note 1)	$V_{CE}=8\text{V}, I_C=20\text{mA}$	50	100	250	
Transition Frequency	$f_T$	$V_{CE}=8\text{V}, I_C=20\text{mA}$		9		GHz
Feed-Back Capacitance	$C_{re}$ (Note 2)	$V_{CB}=10\text{V}, I_E=0, f=1.0\text{MHz}$		0.35		pF

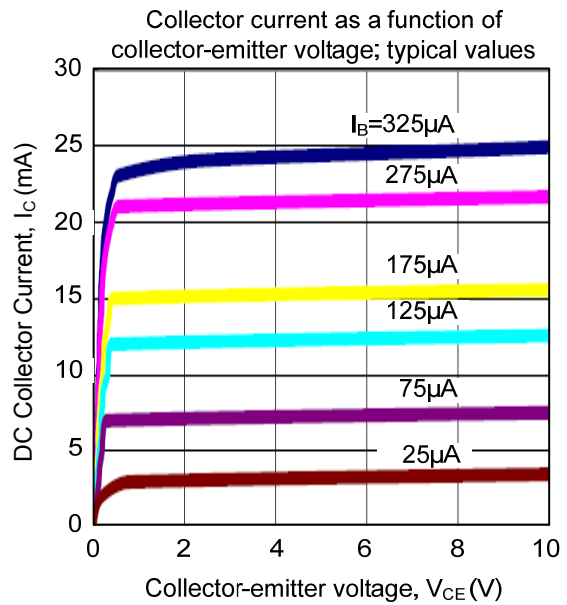
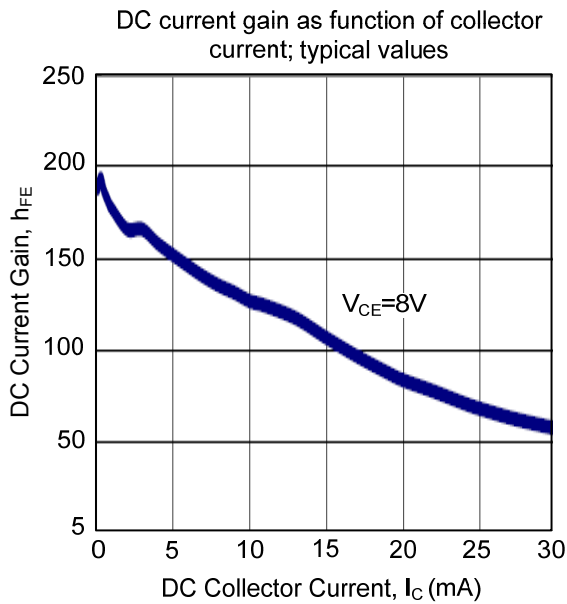
Notes: 1. Pulsed measurement, pulse width  $\leq 350\mu\text{s}$ , duty cycle  $\leq 2\%$

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

■ CLASSIFICATION OF  $h_{FE}$

RANK	Q	R	S
RANGE	50 ~ 100	80 ~ 160	125 ~ 250

■ 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.