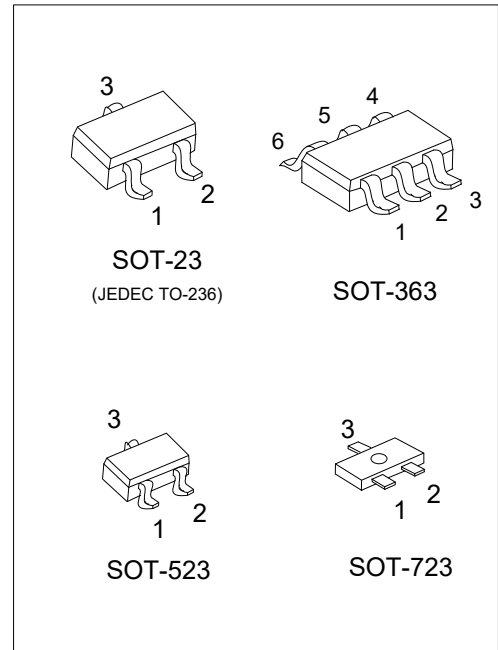


**2SC3583****NPN EPITAXIAL SILICON TRANSISTOR****MICROWAVE LOW NOISE
AMPLIFIER NPN SILICON
EPITAXIAL TRANSISTOR****DESCRIPTION**

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-AN3-R	2SC3583G-x-AN3-R	SOT-523	B	E	C	-	-	-	Tape Reel
2SC3583L-x-AQ3-R	2SC3583G-x-AQ3-R	SOT-723	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

2SC3583G-x-AE3-R (1) Packing Type (2) Package Type (3) Rank (4) Green Package	(1) R: Tape Reel (2) AE3: SOT-23, AN3: SOT-523, AQ3: SOT-723 AL6: SOT-363 (3) x: refer to Classification of h_{FE} (4) G: Halogen Free and Lead Free, L: Lead Free
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MARKING

SOT-23-3 / SOT-523 / SOT-723	SOT-363
L: Lead Free G: Halogen Free	L: Lead Free G: Halogen Free

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

PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		V_{CB0}	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		150	mW
	SOT-523		125	mW
	SOT-723		100	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	μA
Emitter Cutoff Current	I_{EBO}	$V_{EB}=1\text{V}, I_E=0$			1.0	μA
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)	$V_{CB}=10\text{V}, I_E=0, f=1\text{MHz}$		0.35		pF

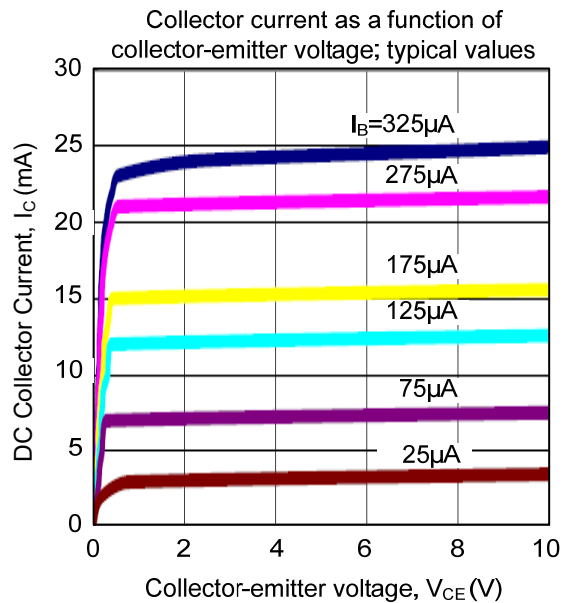
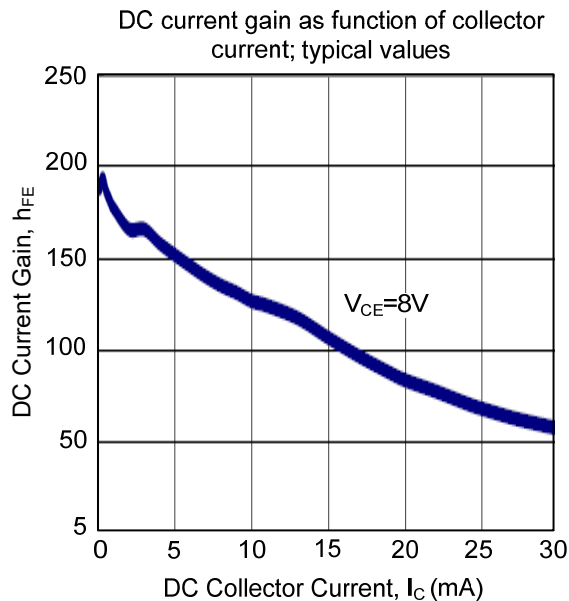
Notes: 1. Pulsed measurement, pulse width $\leq 350\mu\text{s}$, duty cycle $\leq 2\%$

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

■ **CLASSIFICATION OF h_{FE}**

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

■ TYPICAL CHARACTERISTICS



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