



UFS540

NPN SILICON TRANSISTOR

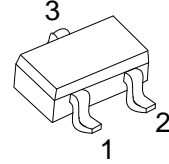
NPN 9GHz WIDEBAND TRANSISTOR

DESCRIPTION

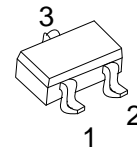
The UTC **UFS540** are NPN silicon planar transistor, It is intended for RF wideband amplifier applications such as satellite TV systems and RF portable communication equipment with signal frequencies up to 2 GHz.

FEATURES

- * High power gain
- * Low noise figure
- * High transition frequency
- * Gold metallization ensures excellent reliability



SOT-23
(JEDEC TO-236)



SOT-323

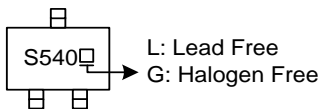
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
UFS540L-AE3-R	UFS540G-AE3-R	SOT-23	B	E	C	Tape Reel
UFS540L-AL3-R	UFS540G-AL3-R	SOT-323	B	E	C	Tape Reel

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

<p>UFS540G-AE3-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) AE3: SOT-23, AL3: SOT-323</p> <p>(3) G: Halogen Free and Lead Free, L: Lead Free</p>
--	---

MARKING



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

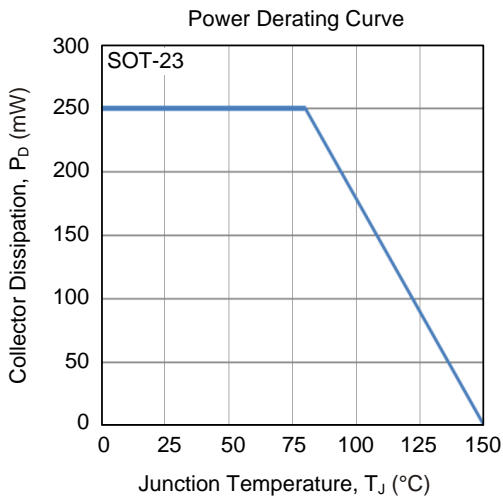
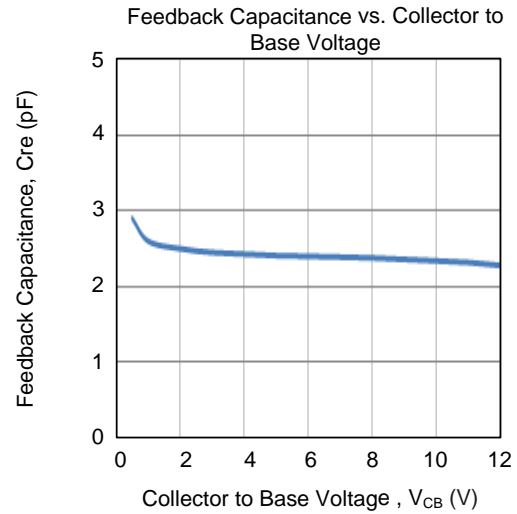
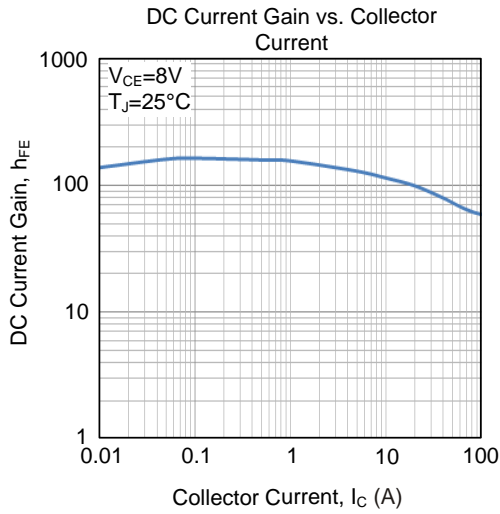
PARAMETER		SYMBOL	RATINGS	UNIT
Collector-Base Voltage		BV_{CB0}	20	V
Collector-emitter voltage		BV_{CEO}	14	V
Emitter-Base Voltage		BV_{EBO}	2.5	V
Collector Current		I_C	120	mA
Collector Dissipation	SOT-23	P_C	250	mW
	SOT-323		200	mW
Junction Temperature		T_J	+150	$^{\circ}\text{C}$
Storage Temperature		T_{STG}	-50 ~ +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** ($T_J=25^{\circ}\text{C}$, unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector-Base Breakdown Voltage	BV_{CB0}	Open Emitter			20	V
Collector-Emitter Breakdown Voltage	BV_{CEO}	$R_{BE}=0$			14	V
Emitter-Base Breakdown Voltage	BV_{EBO}	Open Collector			2.5	V
DC Collector Current	I_C				120	mA
Collector Cut-off Current	I_{CBO}	$I_C=40\text{mA}$, $V_{CE}=8\text{V}$			50	nA
DC Current Gain	h_{FE}	$I_C=40\text{mA}$, $V_{CE}=8\text{V}$	60	120	250	
Emitter Capacitance	C_e	$I_C=i_C=0$, $V_{EB}=0.5\text{V}$, $f=1\text{MHz}$		2.8		pF
Collector Capacitance	C_c	$I_E=i_e=0$, $V_{CB}=8\text{V}$, $f=1\text{MHz}$		3.4		pF
Feedback Capacitance	C_{re}	$I_C=0$, $V_{CB}=8\text{V}$, $f=1\text{MHz}$		2.4		pF
Transition Frequency	f_T	$I_C=40\text{mA}$, $V_{CE}=8\text{V}$, $f=1\text{GHz}$, $T_A=25^{\circ}\text{C}$		9		GHz

■ 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.