



BFR93A

Preliminary

NPN EPITAXIAL SILICON TRANSISTOR

ISC SILICON NPN RF TRANSISTOR

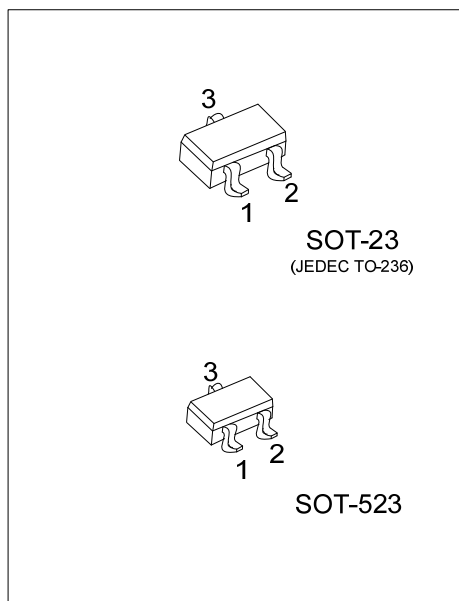
DESCRIPTION

The UTC **BFR93A** is an isc silicon NPN RF transistor, it uses UTC's advanced technology to provide customers with high power gain and low noise figure, etc.

The UTC **BFR93A** is designed for use in RF wideband amplifiers and oscillators.

FEATURES

- * High Power Gain
- * Low Noise Figure
- * High Current Gain Bandwidth Product



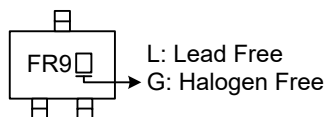
ORDERING INFORMATION

Ordering Number		Package	Pin Assignment			Packing
Lead Free	Halogen Free		1	2	3	
BFR93AL-AE3-R	BFR93AG-AE3-R	SOT-23	B	E	C	Tape Reel
BFR93AL-AN3-R	BFR93AG-AN3-R	SOT-523	B	E	C	Tape Reel

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

<p>BFR93AG-AE3-R</p> <p>(1) Packing Type (2) Package Type (3) Green Package</p>	<p>(1) R: Tape Reel (2) AE3: SOT-23, 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 to Base Voltage		V_{CBO}	15	V
Collector to Emitter Voltage		V_{CEO}	12	V
Emitter to Base Voltage		V_{EBO}	2	V
Collector Current Continuous		I_C	35	mA
Collector Power Dissipation ($T_C=25^{\circ}\text{C}$)	SOT-23	P_C	0.3	W
	SOT-523		0.2	W
Junction Temperature		T_J	+175	$^{\circ}\text{C}$
Storage Temperature Range		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 ($T_C=25^{\circ}\text{C}$ unless otherwise specified)

PARAMETER	SYMBOL	TEST CONDITIONS	MIN	TYP	MAX	UNIT
Collector Cutoff Current	I_{CBO}	$V_{CB}=5\text{V}$, $I_E=0$			0.05	μA
DC Current Gain	h_{FE}	$I_C=30\text{mA}$, $V_{CE}=5\text{V}$	40			
Current Gain Bandwidth Product	f_T	$I_C=30\text{mA}$, $V_{CE}=5\text{V}$, $f=500\text{MHz}$	4.5	6		GHz
Feedback Frequency	C_{re}	$I_E=0$, $V_{CE}=5\text{V}$, $f=1\text{MHz}$		1.6		pF

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