

Silicon NPN RF Transistor

BFR93AW

DESCRIPTION

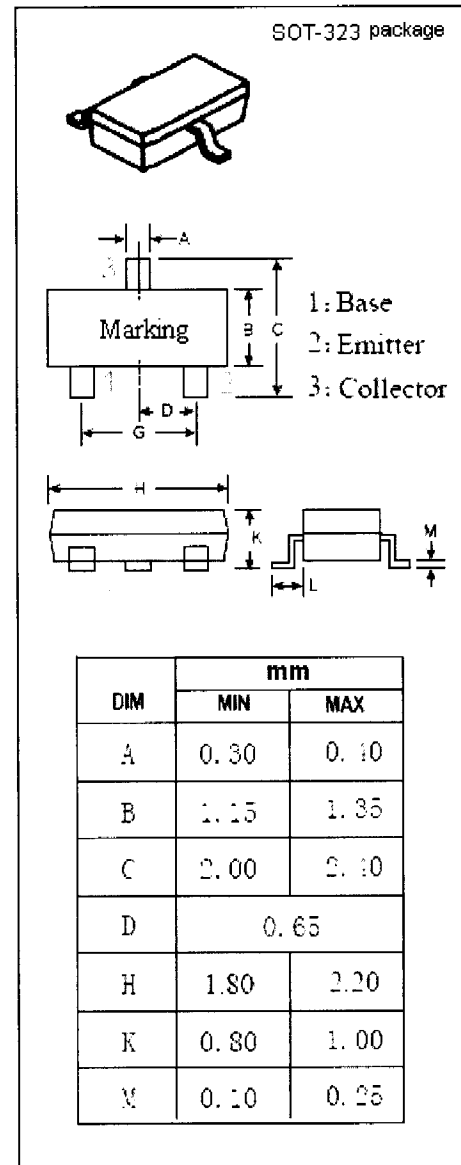
- High Power Gain
- High Current Gain Bandwidth Product
- Low Noise Figure

APPLICATIONS

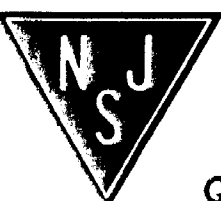
- Designed for use in RF amplifiers, mixers and oscillators with signal frequencies up to 1 GHz.

ABSOLUTE MAXIMUM RATINGS (T_a=25°C)

SYMBOL	PARAMETER	VALUE	UNIT
V _{CB0}	Collector-Base Voltage	15	V
V _{CEO}	Collector-Emitter Voltage	12	V
V _{EB0}	Emitter-Base Voltage	2	V
I _c	Collector Current-Continuous	35	mA
P _c	Collector Power Dissipation @T _c =25°C	0.3	W
T _J	Junction Temperature	175	°C
T _{stg}	Storage Temperature Range	-65~150	°C



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ELECTRICAL CHARACTERISTICS

$T_C=25^\circ\text{C}$ unless otherwise specified

SYMBOL	PARAMETER	CONDITIONS	MIN	TYP.	MAX	UNIT
I_{CBO}	Collector Cutoff Current	$V_{CB}= 5V; I_E= 0$			0.05	μA
h_{FE}	DC Current Gain	$I_C= 30\text{mA}; V_{CE}= 5V$	40			
f_T	Current-Gain—Bandwidth Product	$I_C= 30\text{mA}; V_{CE}= 5V; f= 500\text{MHz}$	4	5		GHz
C_{OB}	Output Capacitance	$I_E= 0; V_{CB}= 5V; f= 1\text{MHz}$		0.7		pF
C_{re}	Feedback Frequency	$I_E= 0; V_{CB}= 5V; f= 1\text{MHz}$		0.6		pF
NF	Noise Figure	$I_C= 5\text{mA}; V_{CE}= 8V; f= 1\text{GHz}$		1.5		dB
NF	Noise Figure	$I_C= 5\text{mA}; V_{CE}= 8V; f= 2\text{GHz}$		2.1		dB

