

NPN 6 GHz wideband transistor

BFR93AW

N AMER PHILIPS/DISCRETE

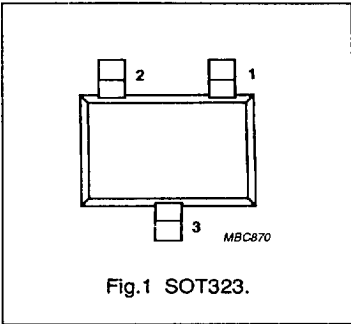
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FEATURES

- High power gain
- Low noise figure
- Gold metallization ensures excellent reliability
- SOT323 (S-mini) envelope.

PINNING

PIN	DESCRIPTION
Code: R2	
1	base
2	emitter
3	collector



DESCRIPTION

Silicon NPN transistor in a plastic SOT323 envelope. It is designed for use in RF amplifiers, mixers and oscillators with signal frequencies up to 1 GHz. The BFR93AW uses the same crystal as the SOT23 version, BFR93A.

QUICK REFERENCE DATA

SYMBOL	PARAMETER	CONDITIONS	MIN.	TYP.	MAX.	UNIT
V_{CBO}	collector-base voltage		—	—	15	V
V_{CEO}	collector-emitter voltage		—	—	12	V
I_C	DC collector current		—	—	35	mA
P_{tot}	total power dissipation	up to $T_s = 93\text{ }^{\circ}\text{C}$ (note 1)	—	—	300	mW
h_{FE}	DC current gain	$I_C = 30\text{ mA}$; $V_{CE} = 5\text{ V}$	40	90	—	
f_T	transition frequency	$I_C = 30\text{ mA}$; $V_{CE} = 5\text{ V}$	4.5	6	—	GHz
G_{UM}	maximum unilateral power gain	$I_C = 30\text{ mA}$; $V_{CE} = 8\text{ V}$; $f = 1\text{ GHz}$	—	16	—	dB
F	noise figure	$I_C = 5\text{ mA}$; $V_{CE} = 8\text{ V}$; $f = 1\text{ GHz}$	—	1.9	—	dB
$R_{th\ j-s}$	thermal resistance from junction to soldering point	note 1	—	—	190	K/W
T_j	junction temperature		—	—	150	$^{\circ}\text{C}$

Note

1. T_s is the temperature at the soldering point of the collector tab.