

TOSHIBA Bipolar Linear Integrated Circuit Silicon Monolithic

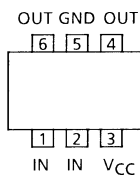
TA4000F

VHF~UHF Wide Band Amplifier Applications

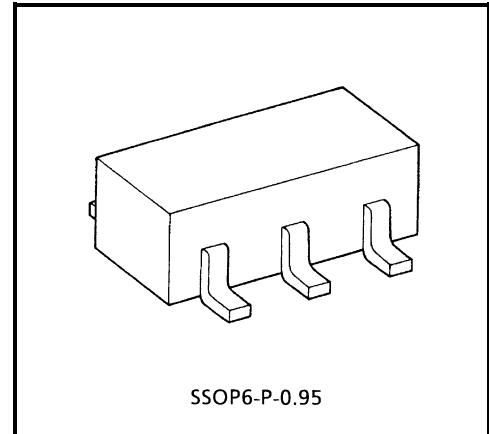
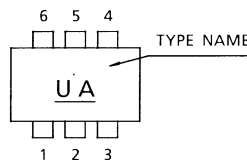
Features

- Band width : 700 MHz (min) @3dB down
- Low noise: 4dB (typ.) @f = 400 MHz
- Small package

Pin Assignment (top view)



Marking



Weight: 0.014 g (typ.)

Maximum Ratings (Ta = 25°C)

Characteristic	Symbol	Rating	Unit
Supply voltage	V _{CC}	6	V
Total power dissipation	P _D (Note1)	300	mW
Operating temperature	T _{opr}	-40~85	°C
Storage temperature	T _{stg}	-55~125	°C

Note 1: When mounted on the glass epoxy board of 2.5 cm² × 1.6 t

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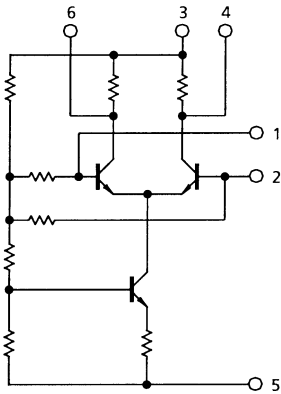
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Electrical Characteristics (Ta = 25°C)

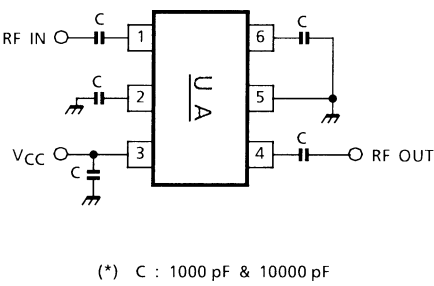
Characteristics	Symbol	Test Circuit	Test Condition	Min	Typ.	Max	Unit
Circuit current	I_{CC}	—	$V_{CC} = 5\text{ V}$, non carrier	9	12	15	mA
Gain	$ S_{21} ^2$	1	$V_{CC} = 5\text{ V}$, $f = 400\text{ MHz}$	11	15	18	dB
Noise figure	NF	1	$V_{CC} = 5\text{ V}$, $f = 400\text{ MHz}$	—	4	7	dB
Band width	BW	1	$V_{CC} = 5\text{ V}$ (Note 2)	0.7	1.3	—	GHz
Maximum output level	P_O	1	$V_{CC} = 5\text{ V}$, $f = 400\text{ MHz}$ $P_{in} = -10\text{ dBmW}$	-8	-2	—	dBmW

Note 2: Frequency of 3dB down from $|S_{21}|^2$ (at $f = 400\text{ MHz}$)

Equivalent Circuit



RF Measure Circuit 1



(*) C : 1000 pF & 10000 pF

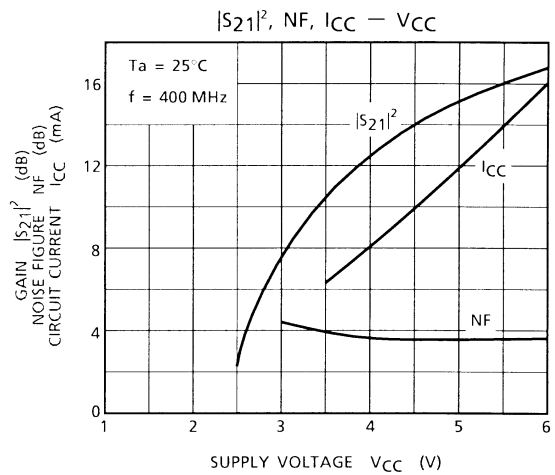
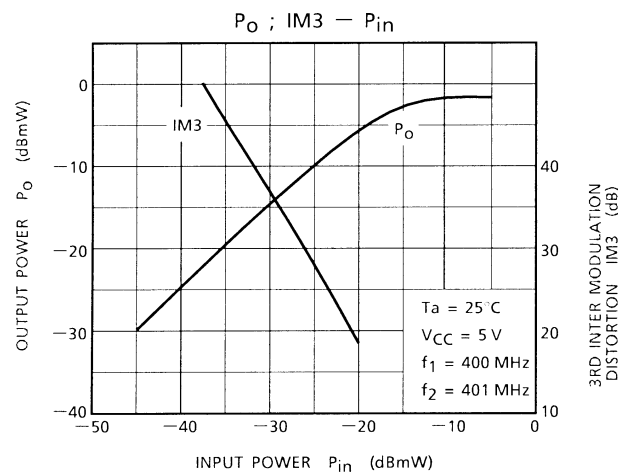
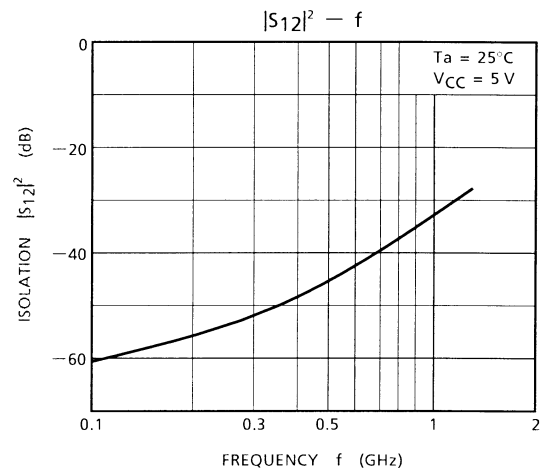
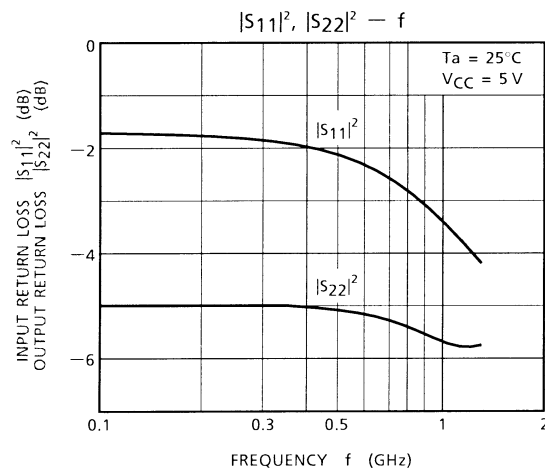
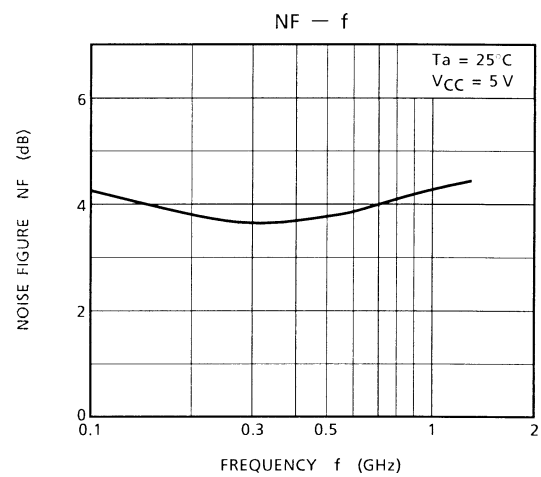
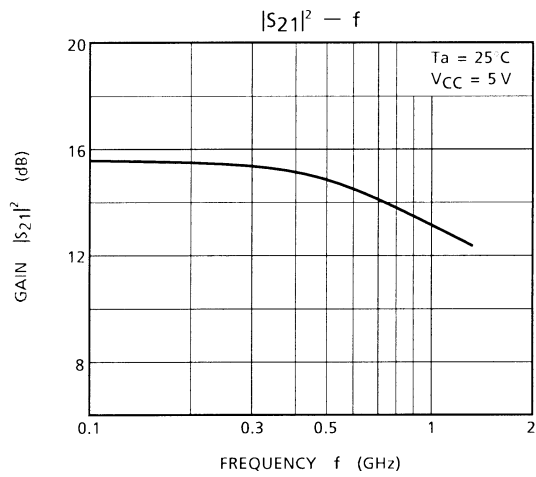
Notice

The circuits and measurements contained in this document are given only in the context of as examples of applications for these products.

Moreover, these example application circuits are not intended for mass production, since the high-frequency characteristics (the AC characteristics) of these devices will be affected by the external components which the customer uses, by the design of the circuit and by various other conditions.

It is the responsibility of the customer to design external circuits which correctly implement the intended application, and to check the characteristics of the design.

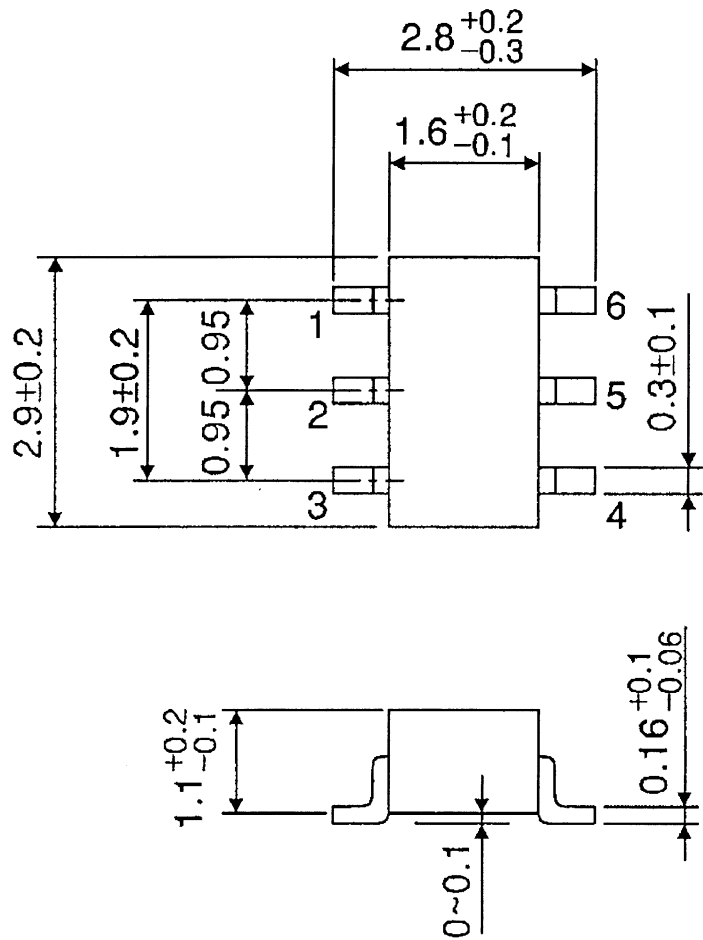
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Package Dimensions

SSOP6-P-0.95

Unit : mm



Weight : 0.014 g (Typ.)