

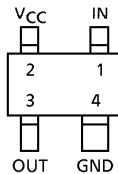
TA4001F

VHF UHF WIDE BAND AMPLIFIER

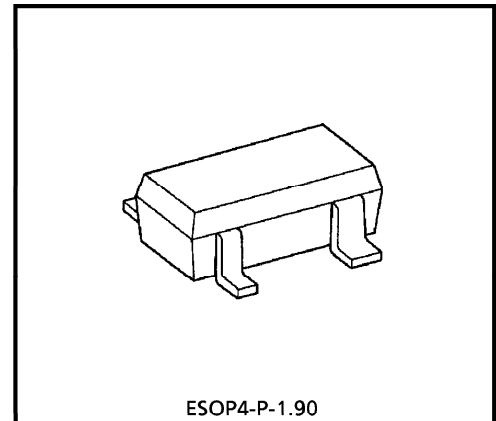
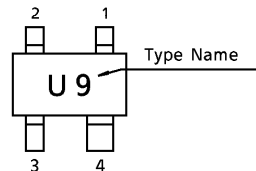
FEATURES

- Band Width 2.4 GHz (Typ.) (3 dB down)
- High Gain : $|S_{21}|^2 = 12.5$ dB (Typ.) ($f = 500$ MHz)
- 50Ω Input and Output Impedance
- Small Package

PIN ASSIGNMENT (TOP VIEW)



MARKING



ESOP4-P-1.90

Weight : 0.013 g (Typ.)

MAXIMUM RATINGS (Ta = 25°C)

CHARACTERISTIC	SYMBOL	RATING	UNIT
Supply Voltage	V _{CC}	6	V
Total Power Dissipation	P _D (*)	300	mW
Operating Temperature	T _{opr}	-40~85	°C
Storage Temperature	T _{stg}	-55~125	°C

(*) : When mounted glass epoxy of 2.5 cm² × 1.6 t

ELECTRICAL CHARACTERISTICS (Ta = 25°C)

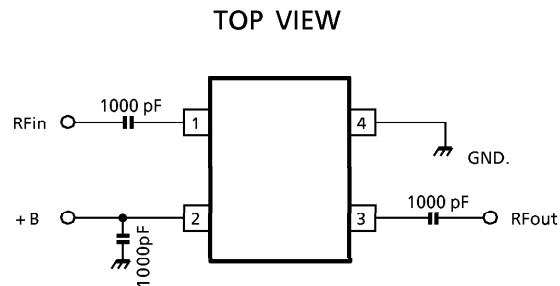
CHARACTERISTIC	SYMBOL	TEST CIRCUIT	TEST CONDITION	MIN.	TYP.	MAX.	UNIT
Circuit Current	I _{CC}	—	V _{CC} = 5 V, Non carrier	14	18	24	mA
Insertion Gain	$ S_{21} ^2$	1	V _{CC} = 5 V, f = 500 MHz	9	12.5	16	dB
Band Width	BW	1	V _{CC} = 5 V (Note 1)	1.9	2.4	—	GHz
Noise Figure	NF	1	V _{CC} = 5 V, f = 500 MHz	—	5.2	7	dB
Input Return Loss	$ S_{11} ^2$	1	V _{CC} = 5 V, f = 500 MHz	—	-18	—	dB
Output Return Loss	$ S_{22} ^2$	1	V _{CC} = 5 V, f = 500 MHz	—	-21	—	dB
Isolation	$ S_{12} ^2$	1	V _{CC} = 5 V, f = 500 MHz	—	-22	—	dB
Maximum Output Level	P _O	1	V _{CC} = 5 V, f = 500 MHz, Pin = 0 dBmW	—	2	—	dBmW

(Note 1) : BW is frequency of 3 dB down from $|S_{21}|^2$ at 500 MHz.

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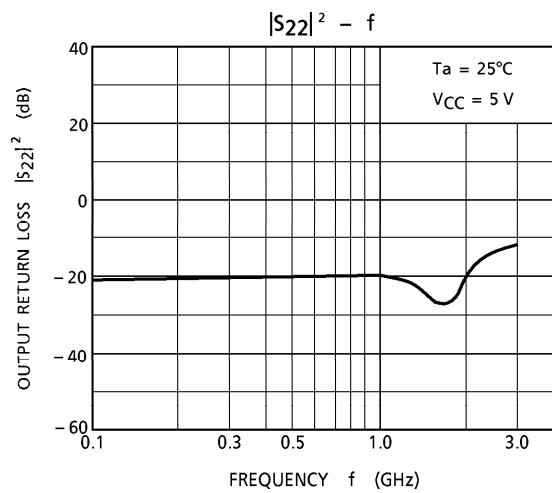
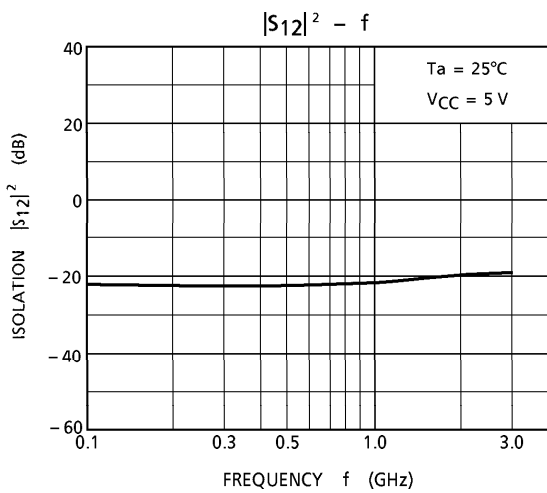
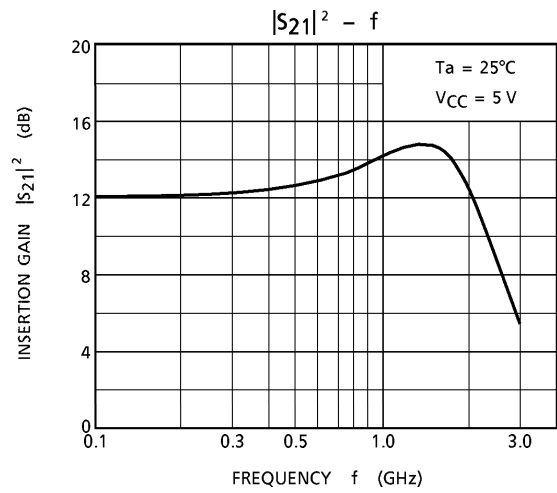
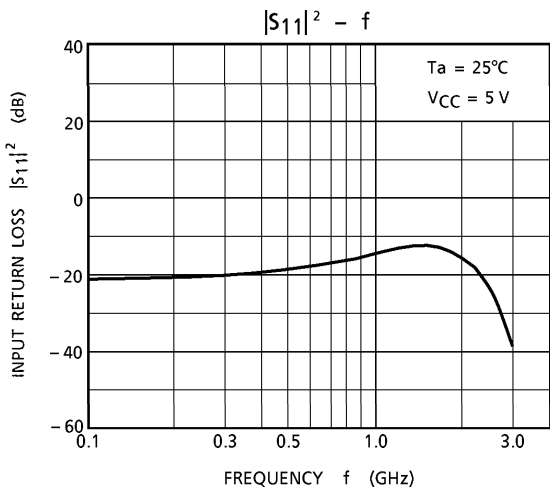
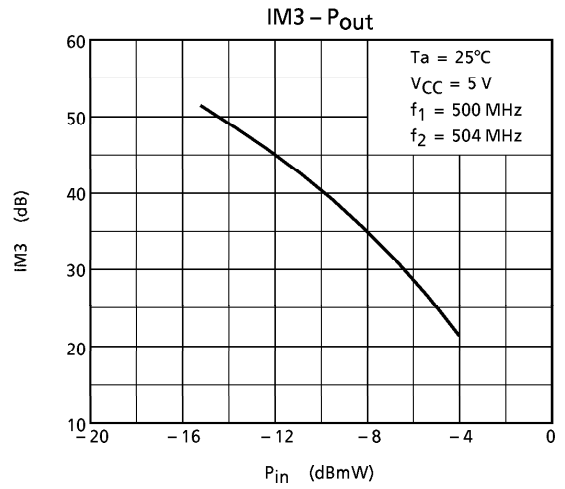
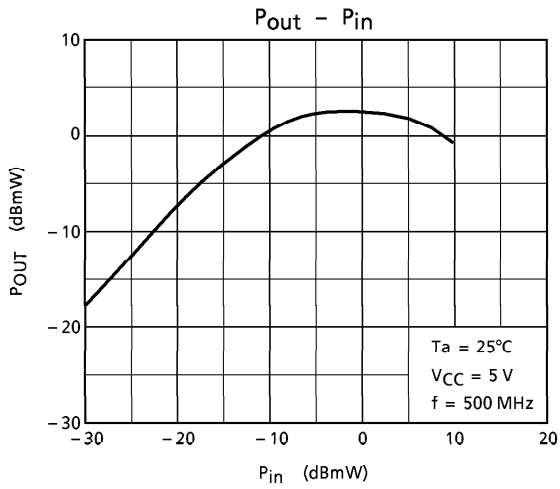
TEST CIRCUIT 1

**NOTICE**

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

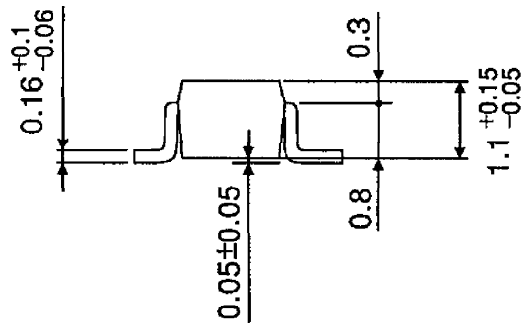
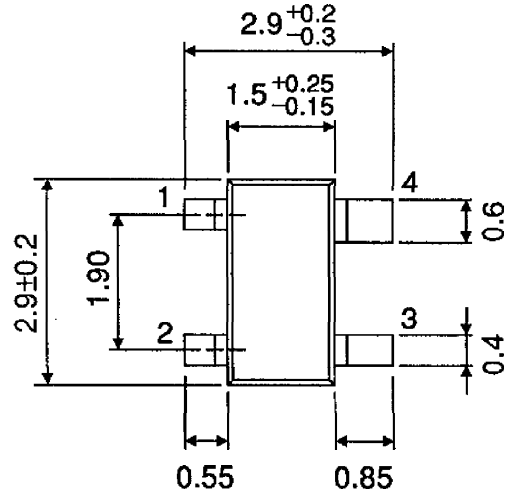
Moreover, these example application circuits are not intended for mass production, since the high-frequency characteristics (the AC characteristics) of these devices will be affected by the external components which the customer uses, by the design of the circuit and by various other conditions. It is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

TOSHIBA assume no responsibility for the integrity of customer circuit designs or applications.



PACKAGE DIMENSIONS
ESOP4-P-1.90

Unit : mm



Weight : 0.013 g (Typ.)