

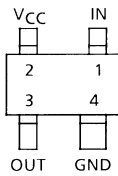
TA4001F

VHF~UHF Wide Band Amplifier

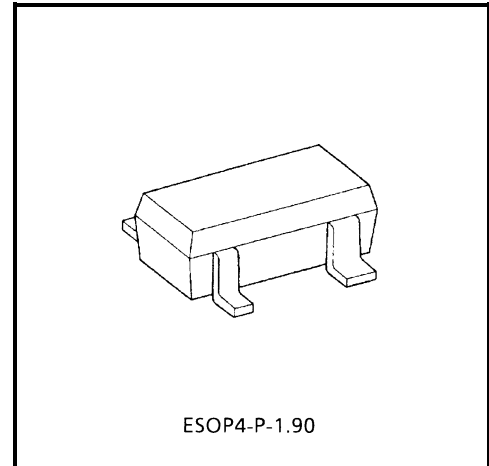
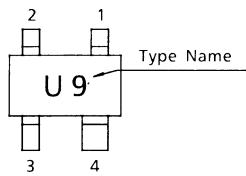
Features

- Band width: 2.4 GHz (typ.) (3dB down)
- High gain: $|S_{21}|^2 = 12.5\text{dB}$ (typ.) ($f = 500\text{MHz}$)
- 50 Ω Input and output impedance
- Small package

Pin Assignment (top view)



Marking



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 (Note1) | 300 | mW |
| Operating temperature | T _{opr} | -40~85 | °C |
| Storage temperature | T _{stg} | -55~125 | °C |

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

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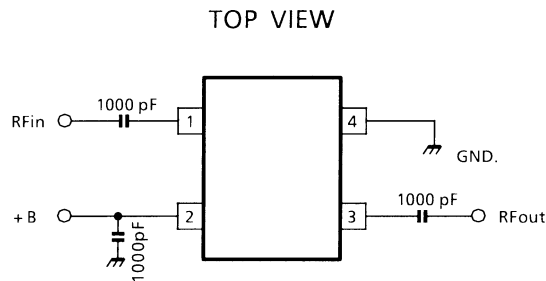
• The information contained herein is subject to change without notice.

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 | 14 | 18 | 24 | mA |
| Insertion gain | $ S_{21} ^2$ | 1 | $V_{CC} = 5\text{ V}$, $f = 500\text{ MHz}$ | 9 | 12.5 | 16 | dB |
| Band width | BW | 1 | $V_{CC} = 5\text{ V}$ (Note 2) | 1.9 | 2.4 | — | GHz |
| Noise figure | NF | 1 | $V_{CC} = 5\text{ V}$, $f = 500\text{ MHz}$ | — | 5.2 | 7 | dB |
| Input return loss | $ S_{11} ^2$ | 1 | $V_{CC} = 5\text{ V}$, $f = 500\text{ MHz}$ | — | -18 | — | dB |
| Output return loss | $ S_{22} ^2$ | 1 | $V_{CC} = 5\text{ V}$, $f = 500\text{ MHz}$ | — | -21 | — | dB |
| Isolation | $ S_{12} ^2$ | 1 | $V_{CC} = 5\text{ V}$, $f = 500\text{ MHz}$ | — | -22 | — | dB |
| Maximum output level | P_O | 1 | $V_{CC} = 5\text{ V}$, $f = 500\text{ MHz}$, $P_{in} = 0\text{ dBmW}$ | — | 2 | — | dBmW |

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

Test Circuit 1



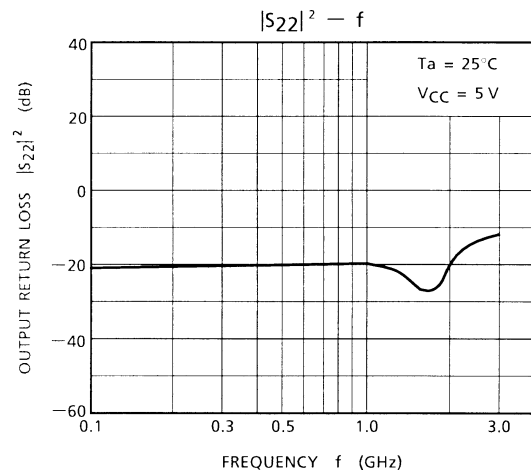
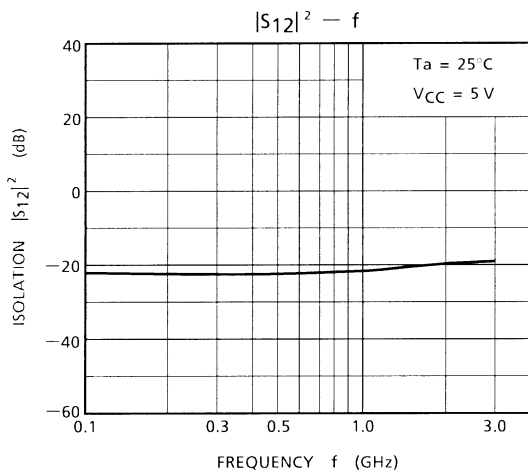
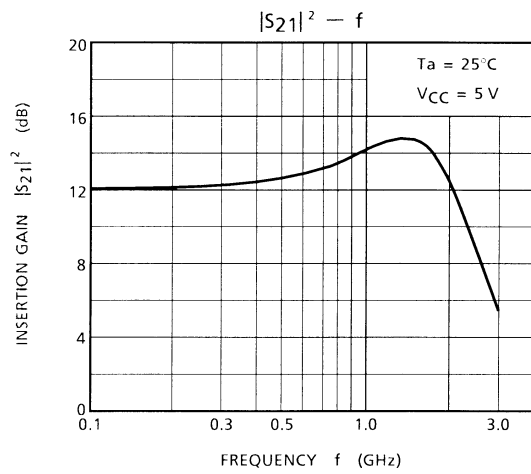
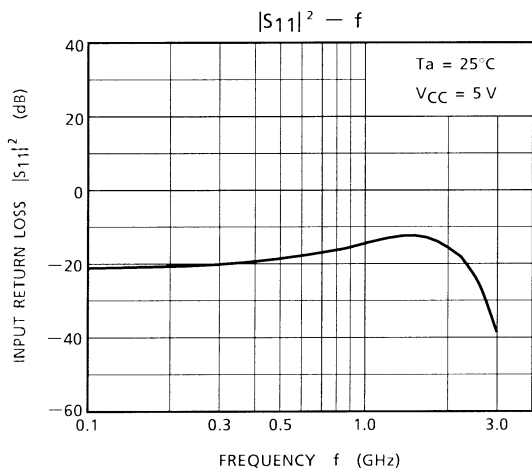
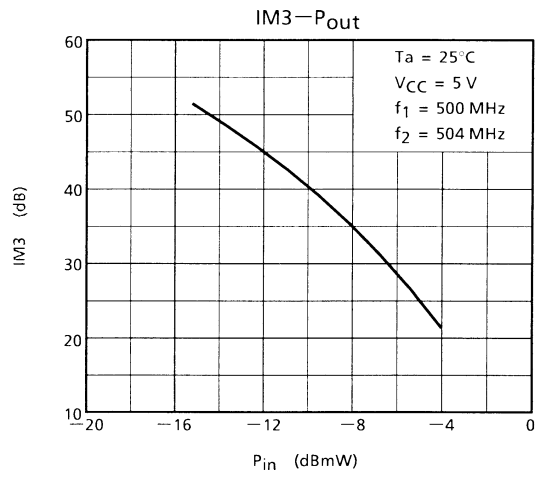
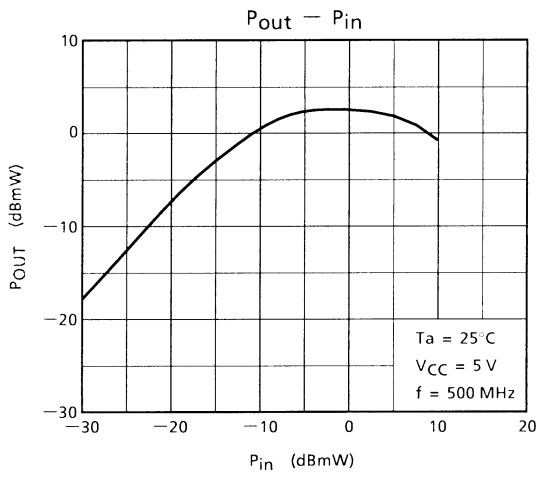
Notice

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.

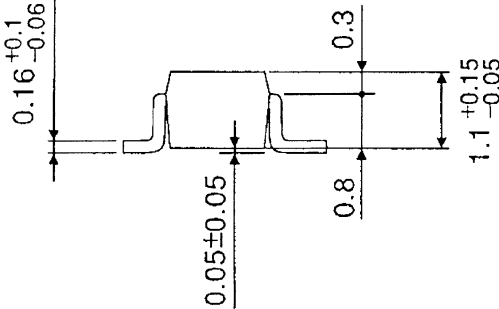
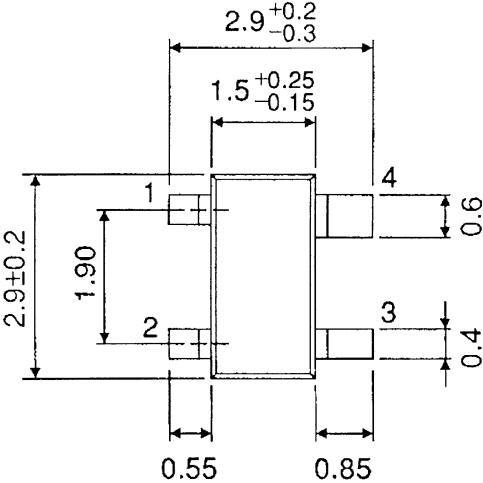
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Package Dimensions

ESOP4-P-1.90

Unit : mm



Weight : 0.013 g (Typ.)