

Features

- Frequency: 0.2GHz~2.6GHz
- Gain: 21dB
- Output P₁dB: 20.5dBm
- Supply Voltage: +5V@90mA
- Die Size: 1.3mm×1.25mm×0.1mm

Typical Applications

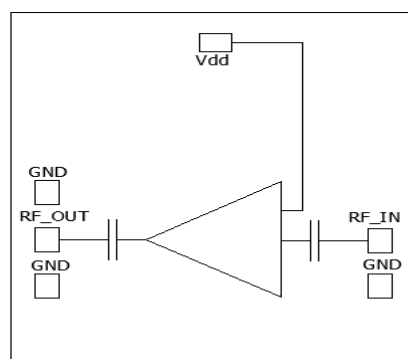
- Radar and ECM
- RF/ Microwave radio
- Military and Space
- Test and Measurement
- Fiber Optics

General Description

XT3004 is a GaAs MMIC Low Noise Amplifier die which operates between 0.2GHz~2.6GHz. The amplifier can provide 21dB gain, 20.5dBm Output P₁dB, 3dB noise figure from a 90mA supply current.

The chip offers full passivation for increased reliability and moisture protection. This amplifier is the perfect alternative to higher cost hybrid amplifiers.

Functional Diagram



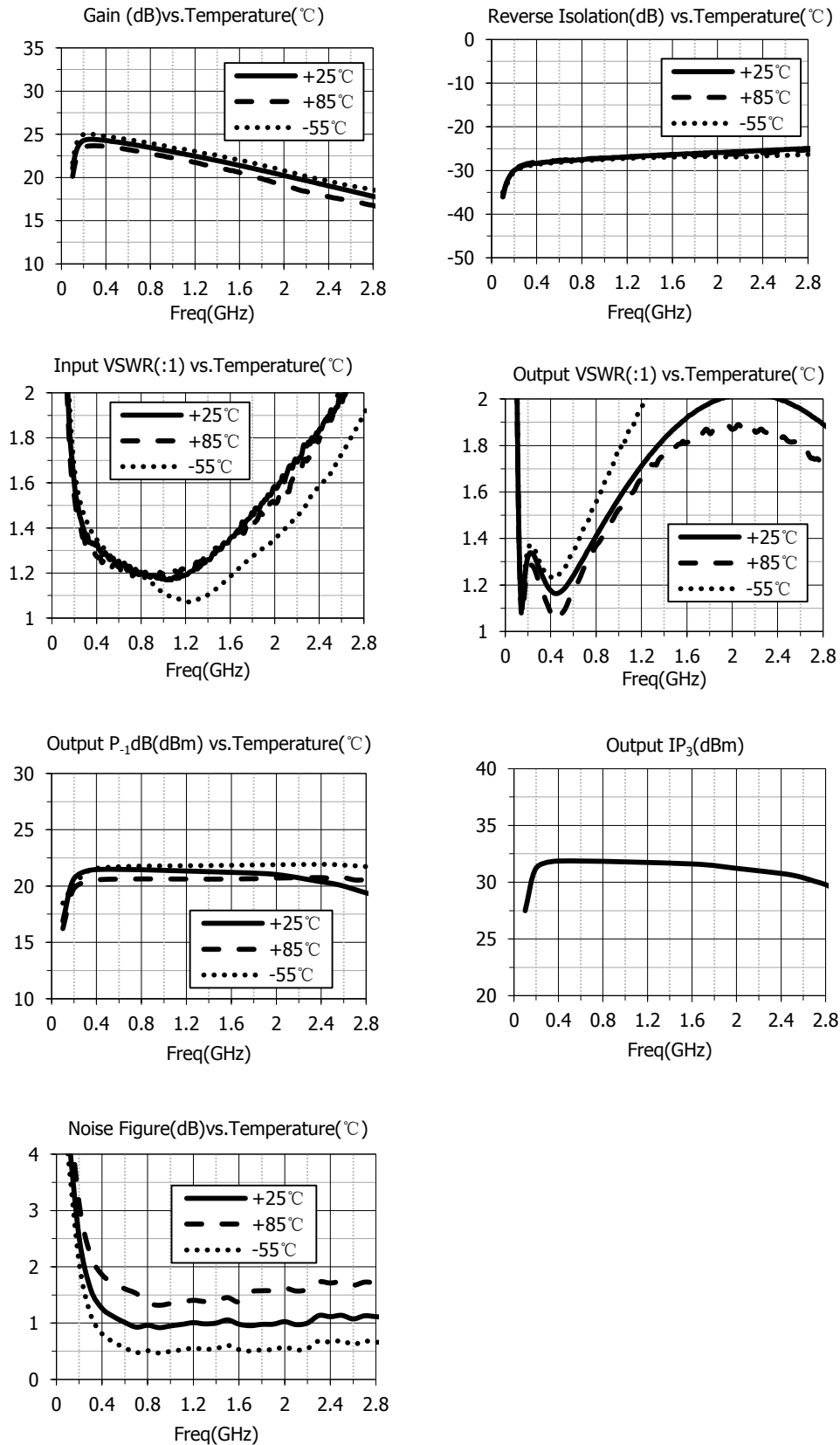
Electrical Performance (T_A=25°C, V_D=+5V, I_D=90mA, Z₀=50Ω)

Parameter	Min.	Typ.	Max.	Units
Frequency Range	0.2~2.6			GHz
Gain	—	21	—	dB
Gain Flatness	—	5.5	—	dB
Reverse Isolation	—	-25	—	dB
Input/Output VSWR	—	1.8	—	:1
Noise Figure	—	1.3	—	dB
Output Power for 1 dB Compression (OP ₁ dB)	—	20.5	—	dBm
Output Third Order Intercept (OIP ₃)	—	31	—	dBm
Supply Current(I _D)	—	90	—	mA

Absolute Maximum Ratings

Maximum Input Power	+18dBm	Operating Temperature	-55°C~+125°C
Channel Temperature	+150°C	Storage Temperature	-65°C~+150°C

Typical Performance Curve



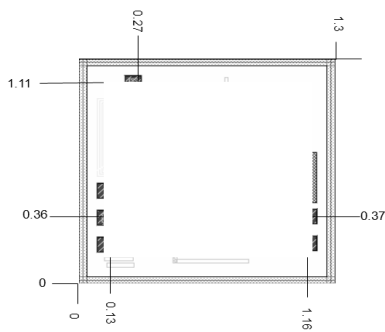
XT3004



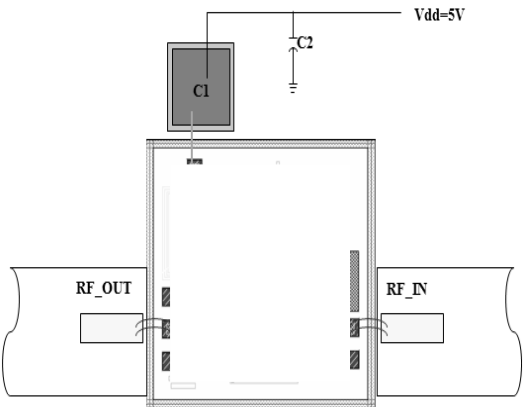
GaAs MMIC Low Noise Amplifier
0.2~2.6GHz

Rev 2.0

Die Outline
(all dimensions in mm)



Assembly Diagram



Components List

Reference Des.	Value	Part Number	Manuf.	Size
C1	300pF	—	RADVISTA	Chip
C2	10nF	GRM155R71H103KA88D	MURATA	0402

Attention:

GaAs MMIC devices are susceptible to damage from Electrostatic Discharge. Proper precautions should be observed during handling, assembly and test.



Chengdu Fairchild Technology Co., Ltd.

Add.: 4F, Block B, No.98 Tiancai road, Hi-Tech(West)Zone, Chengdu.

Cel.: 18381641733 Tel.: +86-28-8792 9948, +86-28-8793 2498 Fax: 028-8793 3348

E-mail: sales@fairchild-tech.com Web.: www.fairchild-tech.com

WeChat: R18381641733.