

XT3908Q3



GaAs MMIC Driver Amplifier
100~2000MHz

Rev 1.1

Features

- Frequency: 100~2000MHz
- Gain: 15dB
- Output P₁dB: 25.5dBm@1GHz
- Supply Voltage: +5~+8V
- Package Size: 3mm x3mm x1.1mm

Typical Applications

- Microwave radio including point to point communication
- Telecommunication
- Weather radar
- Optical communication
- Test instrumentation
- SatCom
- VSAT
- Military and Aerospace

General Description

XT3908Q3 is a GaAs MMIC driver amplifier which operates between 100~2000MHz. The amplifier provides 15dB of gain, 25.5dBm Output P₁dB while requiring 100mA from a +5V supply voltage. QFN 3x3mm surface mount package..

Electrical Performance (T_A=25°C, V_D=+5V, I_D=100mA, Z₀=50Ω)

Parameter	Min.	Typ.	Max.	Units
Frequency Range	100~2000			MHz
Small Signal Gain	12	15	—	dB
Gain Flatness	—	±1	±1.5	dB
Reverse Isolation	—	-22	—	dB
Input VSWR /Output VSWR	—	1.5	2.5	: 1
Noise Figure	—	4	—	dB
Output P ₁ dB	24	26.5	—	dBm
Output IP ₃	—	37	—	dBm
Supply Current(I _D)	—	100	180	mA

Absolute Maximum Ratings

Maximum Input Power	+18dBm	Operating Temperature	-55°C~+85°C
Channel Temperature	+150°C	Storage Temperature	-65°C~+150°C
Maximum V _D	+9V	Maximum V _G	-1.2V

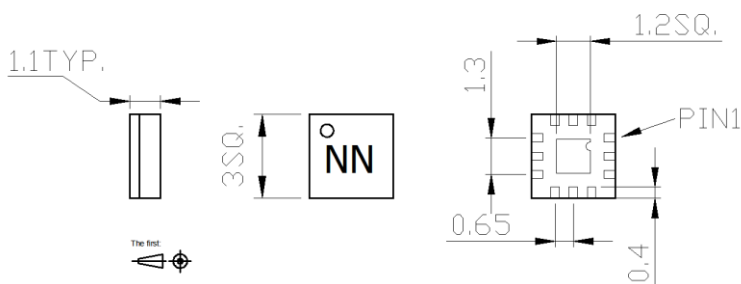
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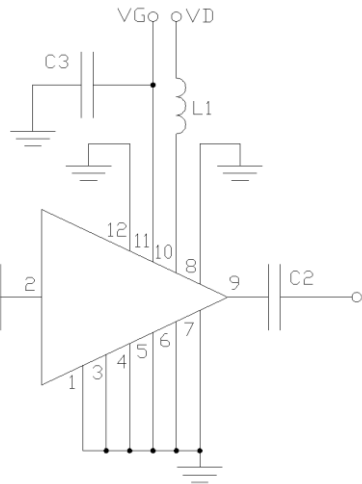
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Die Outline (all dimensions in mm)



Assembly Diagram



Pin Definition

Pin No.	Func.	Pin No.	Func.
1	GND	8	GND
2	RFIN	9	RFOUT
3	GND	10	VD
4	GND	11	VG
5	GND	12	GND
6	GND		
7	GND		

Components List

Reference Des.	Value	Part Number	Manuf.	Size
C1、C2	0.01uF	GRM155R61A103KED	MURATA	0402
C3	1μF	GRM188R61A105KED	AVX	0603
L1	—	Depending on frequency	—	—

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.