

SAC3073

GaAs MMIC Low Noise Amplifier
0.7~2.6GHz

Rev 1.1

Features

- Frequency: 0.7~2.6GHz
- Gain: 21dB
- Noise Figure: 1dB
- Output P_{-1dB}: 18dBm
- Power Supply: +5V/75mA
- Die Size: 1.18mm×1.21mm×0.1mm

Typical Applications

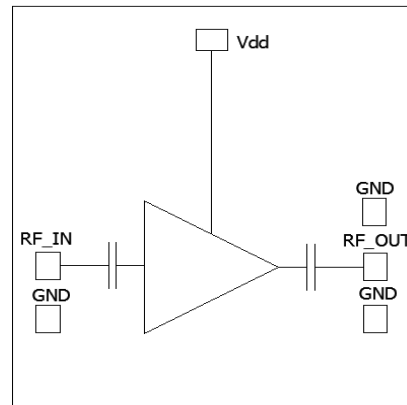
- Wide Band Receiver
- High Density MCM
- EW

General Description

SAC3073 is a GaAs MMIC low noise amplifier die which operates between 0.7~2.6GHz. The amplifier can provide 21dB gain, 18dBm Output P_{-1dB} and 1dB noise figure.

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=75mA, Z₀=50Ω)

Parameter	Min.	Typ.	Max.	Units
Frequency Range	0.7 ~ 2.6			GHz
Gain	17	21	24	dB
Gain Flatness	—	±1.5	—	dB
Input VSWR	—	1.8	2.4	:1
Output VSWR	—	1.5	2	:1
Noise Figure	—	1	1.3	dB
Output P _{-1dB}	16	18	—	dBm
Supply Current(I _D)	—	75	—	mA

Absolute Maximum Ratings

Maximum Input Power	+15dBm	Operating Temperature	-55°C~+85°C
Channel Temperature	+150°C	Storage Temperature	-65°C~+150°C

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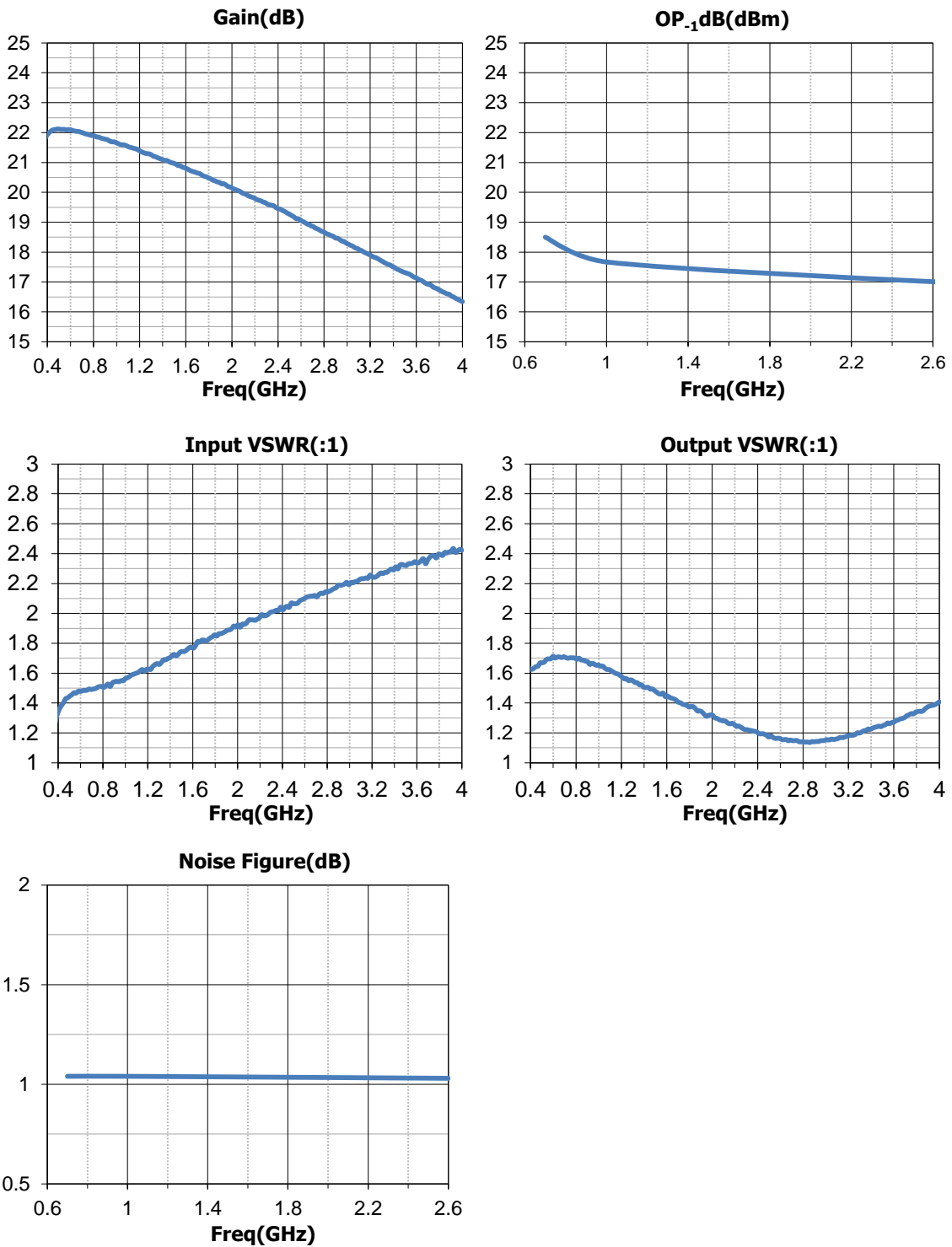
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Typical Performance Curve



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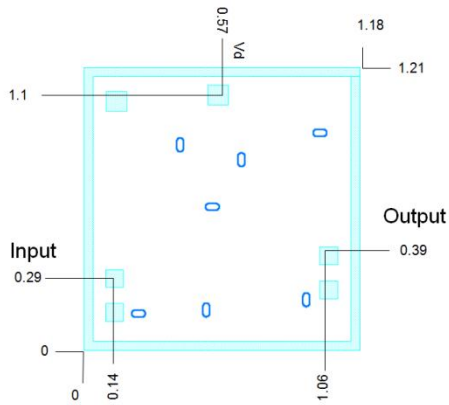
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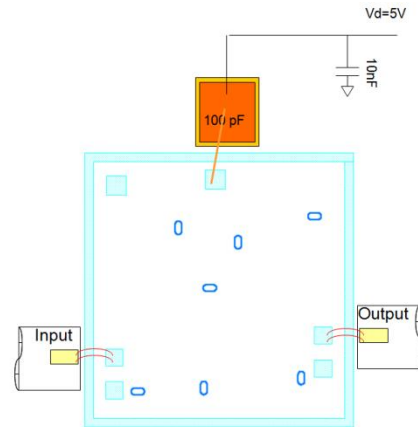
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Outline (All dimensions in mm)



Assembly Diagram



Components List

Reference Des.	Value	Part Number	Manuf.	Size
C1	100pF	CHIP CAPACITOR	MURATA	—
C2	10nF	GRM155R71H103KA88D	COILCRAFT	0402

Attention:

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