MICROARRAY TECHNOLOGIES

HG126F-1

GaAs MMIC DRIVER AMPLIFIER, 6 - 18GHz

Features

Freq: 6～18GHz

Gain: 26.5dB

Noise Figure: 4dB

Output Power for 1 dB Compression:21dBm

Supply Voltage: +5V

Supply Current: 110mA

Chip Size:1.52mm×1.04mm×0.1mm

General Description

The HG126F-1 is a GaAs pHEMT MMIC Driver Amplifier that is operating from 6 to 18GHz. The amplifier has been optimized to provide 26.5dB gain, 4dB noise figure and 21dBm output power for 1dB compression.

Electrical Specifications(T_A=25℃,Vdd= +5V).

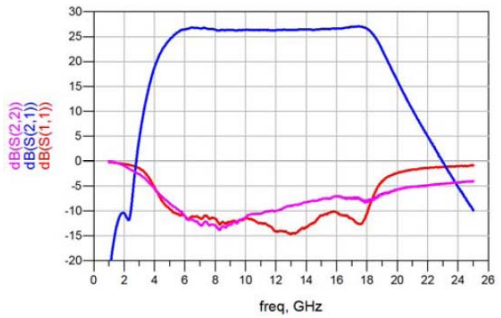
Parameter	Min.	Typ.	Max.
Freq(GHz)		6～18	
Gain (dB)	—	26.5	—
Gain Flatness (dB)	—	±0.5	—
Input Return Loss (dB)	—	12	—
Output Return Loss (dB)	—	10	—
Noise Figure(dB)	—	4	—
Output Power for 1 dB Compression(dBm)	—	21	—

Absolute Maximum Ratings

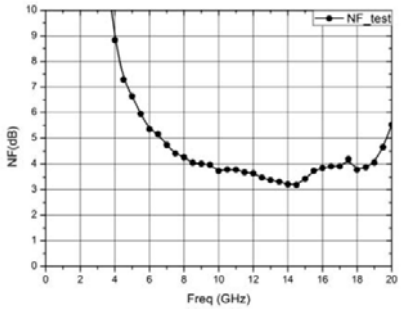
Supply Voltage	+5.5V
RF Input Power	+20dBm
Operating Temperature	-55℃～125℃
Storage Temperature	-65℃～150℃

Measured Performance

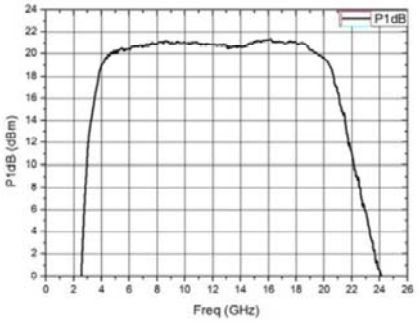
Gain



Noise Figure

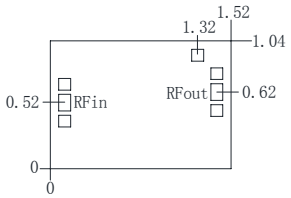


Output Power for 1dB Compression

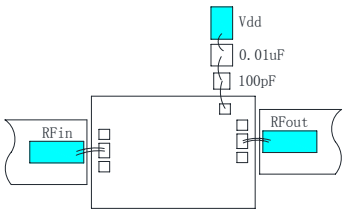


Supply Voltage(V)	4.5	5	5.5
Current(mA)	100	110	123

Outline Drawing (mm)



Assembly Diagram



Notes:

1. The chip should be stored in a dry and nitrogen environment, and used in a clean environment.
2. GaAs material is brittle, can not touch the surface of the chip, must be careful when using.
3. The chip is welding with conductive adhesive or alloy (alloy temperature should not exceed 300℃, and no more than 30 sec.), and should make it fully grounded.
4. The chip microwave port and substrate gap is not exceeding 0.05mm, with Φ25μm double gold wire bonding, suggested length of gold wire 250～400μm.
5. Chip microwave port with a DC blocking capacitor.
6. The chip is sensitive to static electricity, and should be protected against static electricity during storage and use.

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