

**Measured Performance**
**Features**

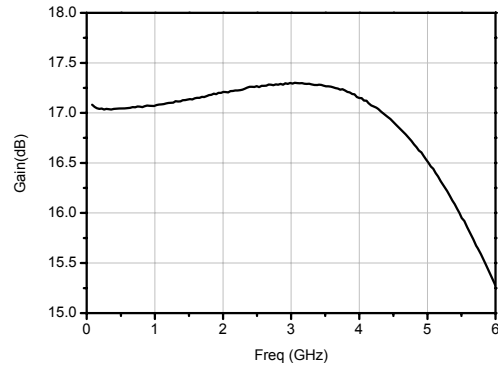
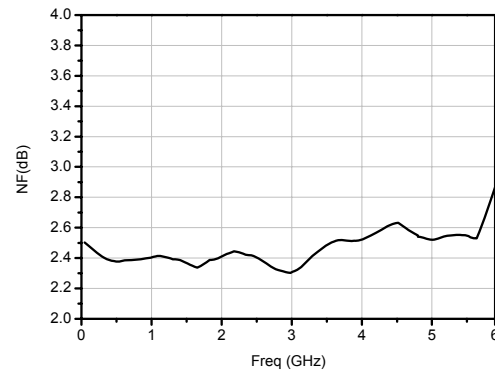
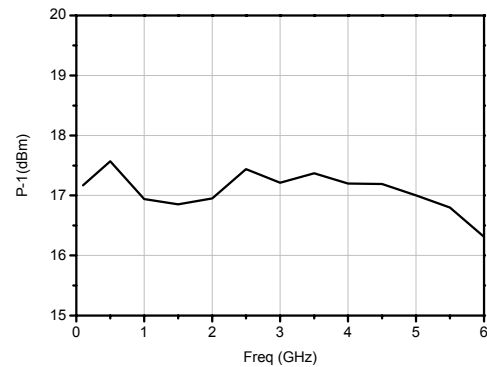
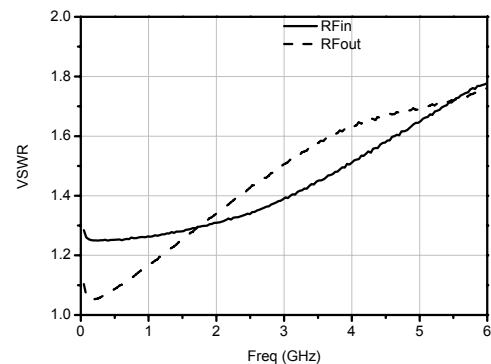
Freq: DC~6GHz  
 Gain: 17dB@4GHz  
 Noise Figure: 2.5dB  
 Output Power for 1 dB Compression: 17dBm  
 Supply Voltage: +5V  
 Supply Current: 50mA  
 Chip Size:0.9mm×0.7mm×0.1mm

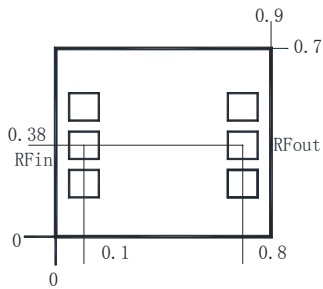
**General Description**

The HG114FH is a GaAs pHEMT MMIC Low Noise Amplifier operating between DC and 6GHz. The LNA has been optimized to provide 17dB gain, 2.5dB noise figure and 17dBm output power for 1dB compression.

**Electrical Specifications( $T_A=25^\circ\text{C}$ ,  $V_{dd}=+5\text{V}$ ).**

Parameter	Freq.(GHz)	Min.	Typ.	Max.
Freq(GHz)	DC~6			
Gain (dB)	4GHz	—	17	—
	6GHz	—	15	—
Gain Flatness (dB)	DC~6GHz	—	$\pm 1$	—
Input VSWR	0.1GHz	—	1.3	—
	1GHz	—	1.3	—
	2GHz	—	1.3	—
	3GHz	—	1.4	—
	4GHz	—	1.5	—
	6GHz	—	1.8	—
Output VSWR	0.1GHz	—	1.05	—
	1GHz	—	1.2	—
	2GHz	—	1.3	—
	3GHz	—	1.5	—
	4GHz	—	1.6	—
	6GHz	—	1.8	—
Noise Figure(dB)	DC~6GHz	—	2.4	—
Output Power for 1 dB Compression(dBm)	DC~6GHz	—	17	—

**Gain**

**Noise Figure**

**Output Power for 1dB Compression**

**VSWR**


**Outline Drawing (mm)**

**Absolute Maximum Ratings**

Supply Voltage	+5.5V
RF Input Power	+18dBm
Operating Temperature	-55°C ~ 125°C
Storage Temperature	-65°C ~ 150°C

**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°C, 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  $\Phi 25\mu\text{m}$  double gold wire bonding, suggested length of gold wire 250~400 $\mu\text{m}$ .
5. Chip microwave port without DC blocking capacitor.
6. The chip is sensitive to static electricity, and should be protected against static electricity during storage and use.

**Assembly Diagram**
