Performance Characteristics:

- Frequency band: 2~20GHz
- Noise factor: 2.5dB
- Gain: 15dB
- P1dB: +15dBm
- Self-biased power supply: +5V@65mA
- Input/Output :50ohm match
- Chip size: 3mm x 1.3mm x 0.1mm

Product Description :

CW-LN362 is a GaAs MMIC low noise amplifier chip with a frequency range covering 2 to 20 GHZ and a noise factor of 2.5dB.

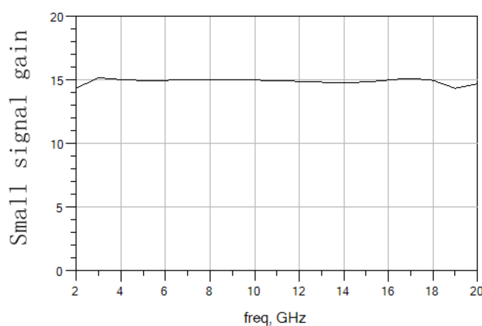
Electrical parameters : (T_A=25℃ , VD=+5V , IDD=65mA)

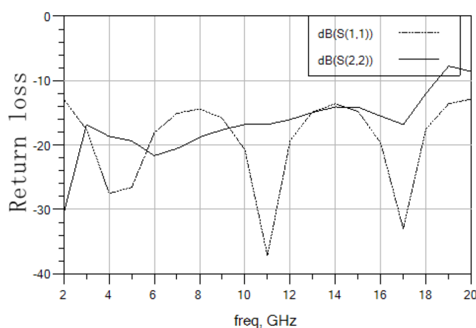
Indicators	Minimum	Typical value	Maximum value	Minimum	Typical value	Maximum value	Minimum	Typical value	Maximum value	Units
Frequency range		2~6			6~12			12~20		GHz
Gain	-	14.8	-	-	14.9	-	-	15	-	dB
Gain flatness	-	±0.2	-	-	±0.2	-	-	±0.2	-	dB
Input return loss	-	25	-	-	18	-	-	15	-	dB
Output return loss	-	20	-	-	18	-	-	15	-	dB
Output power 1dB compression point	-	15	-	-	14.5	-	-	14	-	dBm
Output IP3	-	25	-	-	24.5	-	-	24	-	dBm
Saturated	-	17	-	-	16.5	-	-	16	-	dBm
Noise factor	-	2.5	-	-	2.0	-	-	2.5	-	dB
Working current	-	65	-	-	65	-	-	65	-	mA

Use limiting parameters :

Input power	+15dBm
Storage temperature	-65℃~150℃
Service temperature	-55℃~85℃

Typical curve :





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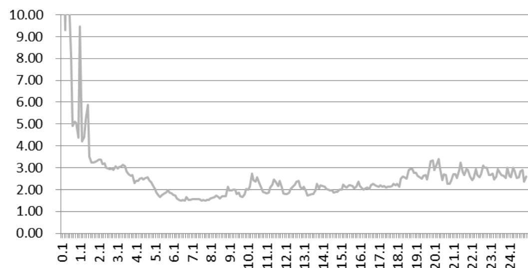
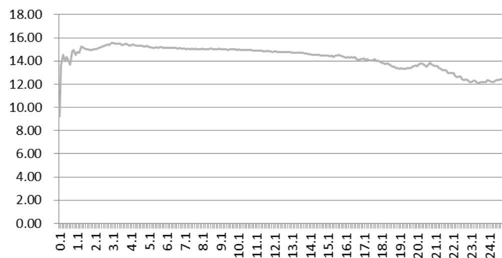
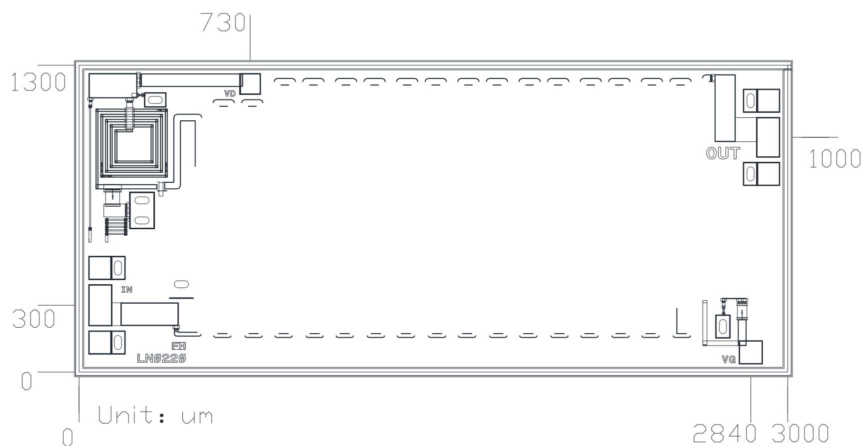


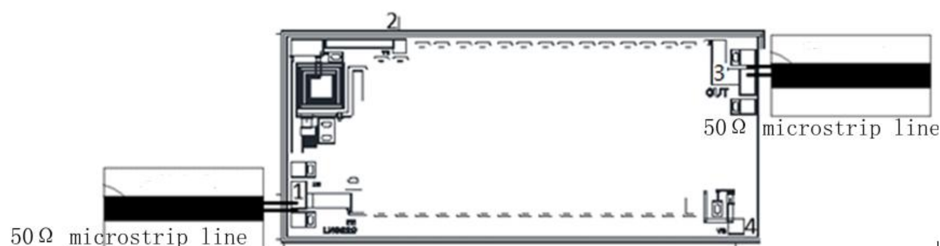
P-1dB



Dimensional drawing： (unit mm)



Suggested assembly drawing:



Pad Description: 3mil assembly clearance

Pad number	Function	Description
1	IN	The pad is AC coupled with a matching value of 50ohm
2	VD	The pad provides the amplifier's power supply voltage and requires an external 100pF and 0.01uF bypass capacitor with the pad to 100pF capacitor bonding wire controlled within 500um
3	OUT	The pad is AC coupled and matches up to 50ohm
4	VG	The pad can be adjusted chip gain, suspended during normal use, and can be connected to 0-0.5V voltage if you need to increase the gain, or -035-0V voltage if you need to decrease the gain
Back of the chip	GND	The back of the chip must be connected to the RF/DC ground

Instructions:

Storage: The chip must be placed in a container with electrostatic protection and stored in a nitrogen environment.

Cleaning treatment: The bare chip must be operated and used in a purified environment. It is forbidden to use liquid cleaning agent to clean the chip.

Electrostatic protection: Strictly comply with the ESD protection requirements to avoid electrostatic damage to the components.

General operation: Use vacuum chuck or precision pointed tweezers to pick up the chip.Avoid touching the surface of the chip with tools or fingers during handling.

Mounting operation: The chip can be installed using AuSn solder eutectic welding or conductive adhesive bonding process.The mounting surface must be clean and flat.

Bonding operation: Input and output with 2 (recommended diameter of 25um gold wire) bonding wire, bonding wire length less than 250um is optimal.It is recommended to use the smallest possible ultrasonic energy.Bonding begins at the pressure point on the chip and ends at the package (or substrate).